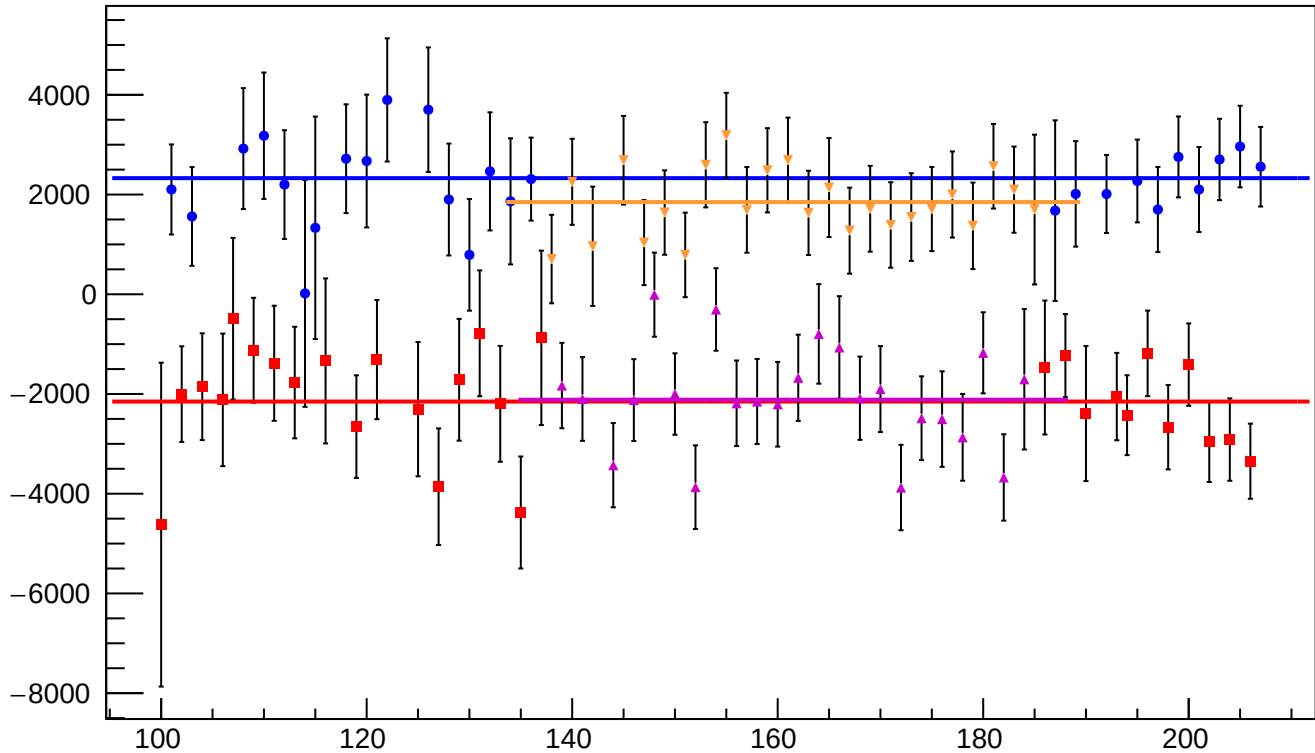


# reg\_asym\_us\_avg\_mean vs Slug



Right In: 2329.333+/-200.138

$\chi^2/\text{NDF}$ : 10.0/25

Left Out: 1849.592+/-180.739

$\chi^2/\text{NDF}$ : 12.8/23

Right Out: -2151.692+/-195.057

$\chi^2/\text{NDF}$ : 20.6/28

Left In: -2114.442+/-182.028

$\chi^2/\text{NDF}$ : 31.1/22

+ sign 2065.091+/-134.137

$\chi^2/\text{NDF}$ : 26.0/49

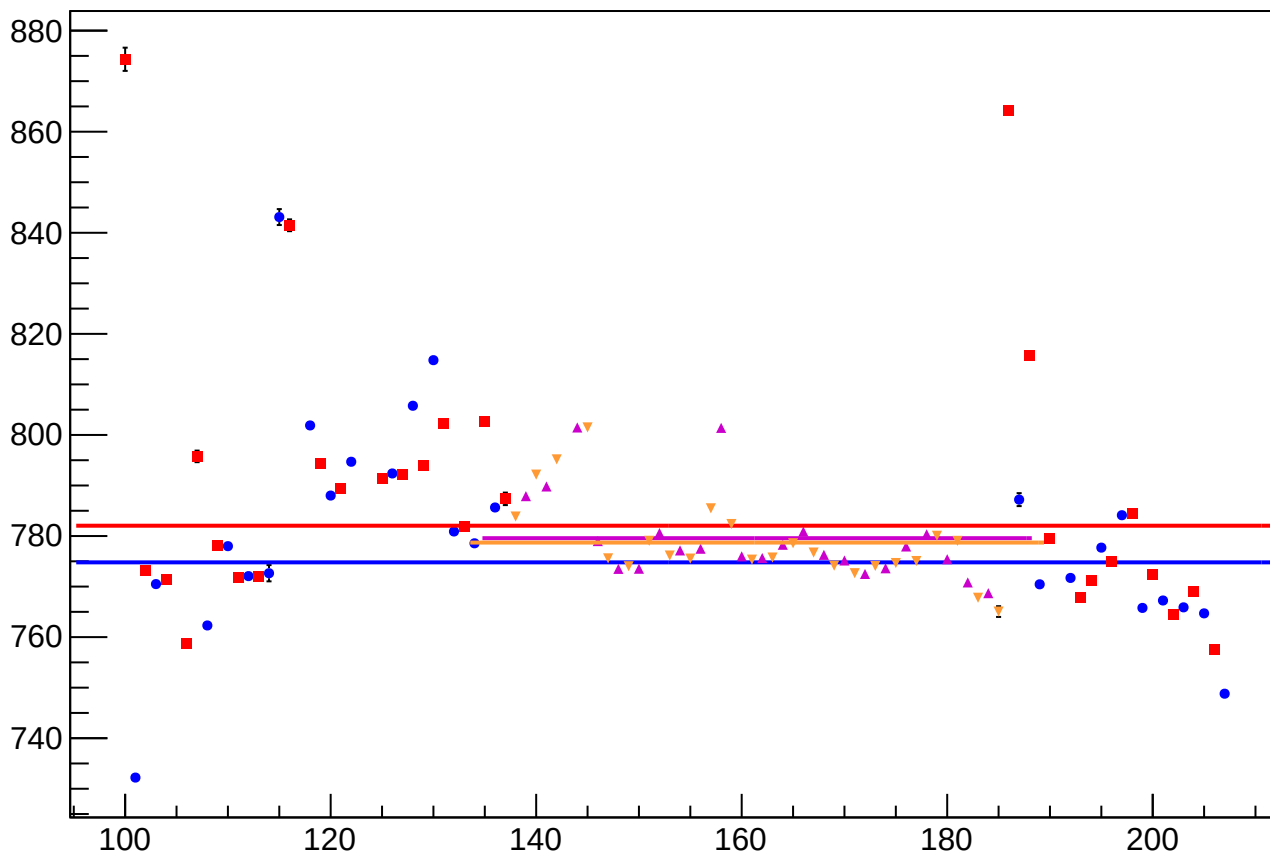
All: -49.938+/-94.474

$\chi^2/\text{NDF}$ : 571.0/101

- sign -2131.781+/-133.081

$\chi^2/\text{NDF}$ : 51.7/51

# reg\_asym\_us\_avg\_rms vs Slug



Right In: 774.791 $\pm$ 0.142  $\chi^2$ /NDF: 16921.1/25

Left Out: 778.708 $\pm$ 0.128  $\chi^2$ /NDF:3389.8/23

Right Out: 782.043 $\pm$ 0.138  $\chi^2$ /NDF: 23306.7/28

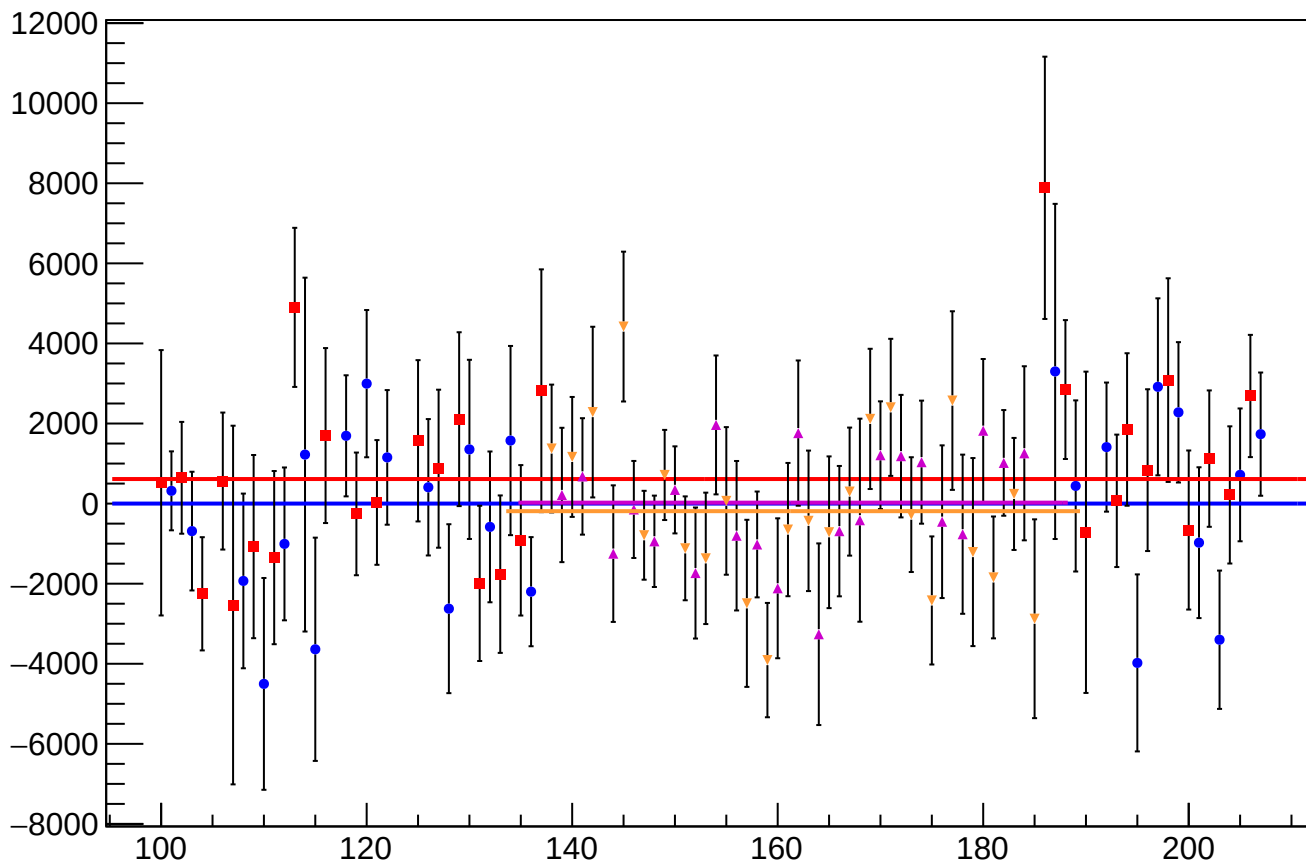
Left In: 779.575 $\pm$ 0.129  $\chi^2$ /NDF:4172.9/22

+ sign 776.949 $\pm$ 0.095  $\chi^2$ /NDF: 20732.9/49

All: 778.851 $\pm$ 0.067  $\chi^2$ /NDF: 49181.8/101

- sign 780.724 $\pm$ 0.094  $\chi^2$ /NDF: 27650.7/51

asym\_us\_avg\_reg\_correction\_mean vs Slug



Right In:  $0.704 \pm 354.758$   $\chi^2/\text{NDF}$ : 29.3/25

Left Out:  $-189.006 \pm 327.675$   $\chi^2/\text{NDF}$ : 29.6/23

Right Out:  $613.570 \pm 359.644$   $\chi^2/\text{NDF}$ : 27.1/28

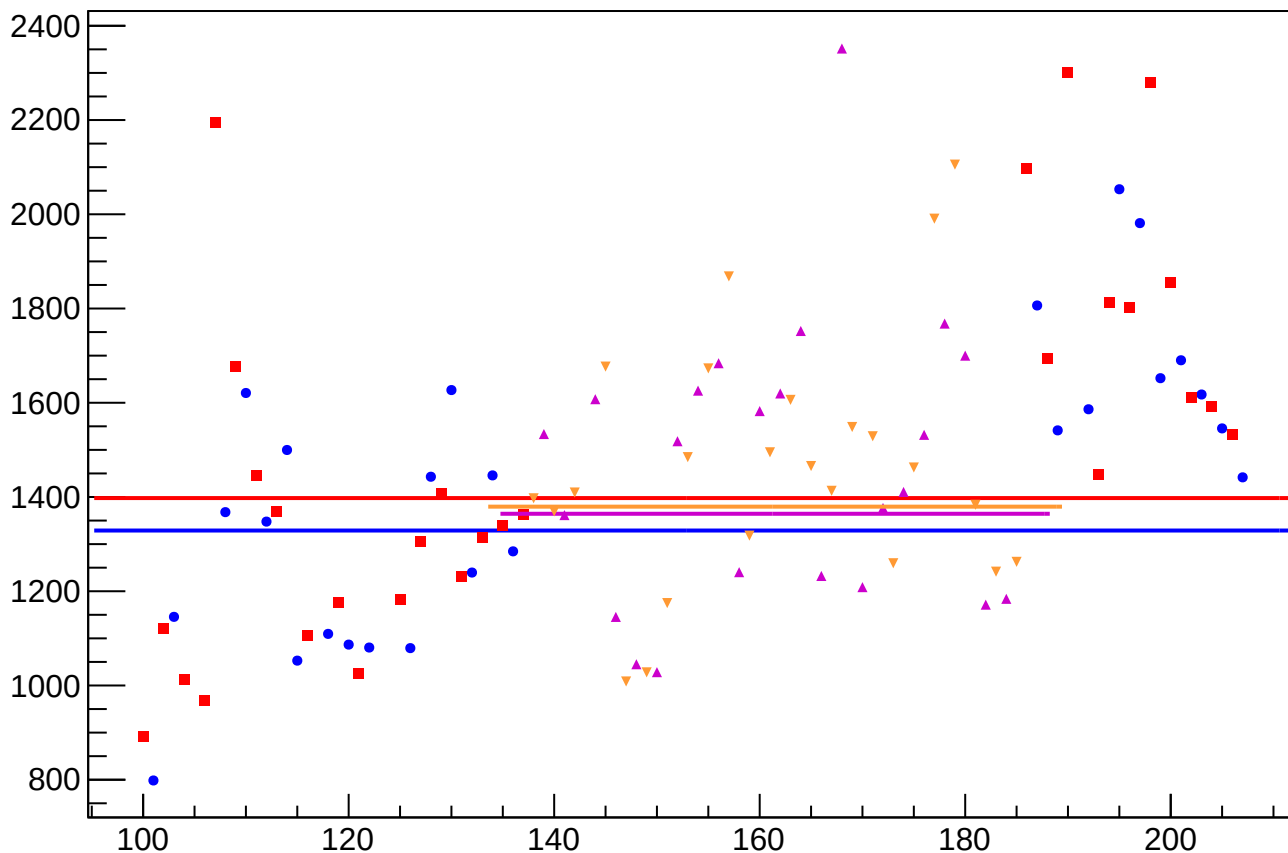
Left In:  $23.750 \pm 325.809$   $\chi^2/\text{NDF}$ : 13.5/22

+ sign  $-101.668 \pm 240.707$   $\chi^2/\text{NDF}$ : 59.0/49

All:  $93.363 \pm 170.471$   $\chi^2/\text{NDF}$ : 102.4/101

- sign  $289.616 \pm 241.460$   $\chi^2/\text{NDF}$ : 42.0/51

# asym\_us\_avg\_reg\_correction\_rms vs Slug



Right In: 1328.861+/-0.251  $\chi^2/\text{NDF}$ : 1601521.0/25

Left Out: 1379.536+/-0.232  $\chi^2/\text{NDF}$ : 1158468.5/23

Right Out: 1397.734+/-0.254  $\chi^2/\text{NDF}$ : 1581559.1/28

Left In: 1364.412+/-0.230  $\chi^2/\text{NDF}$ : 1312299.5/22

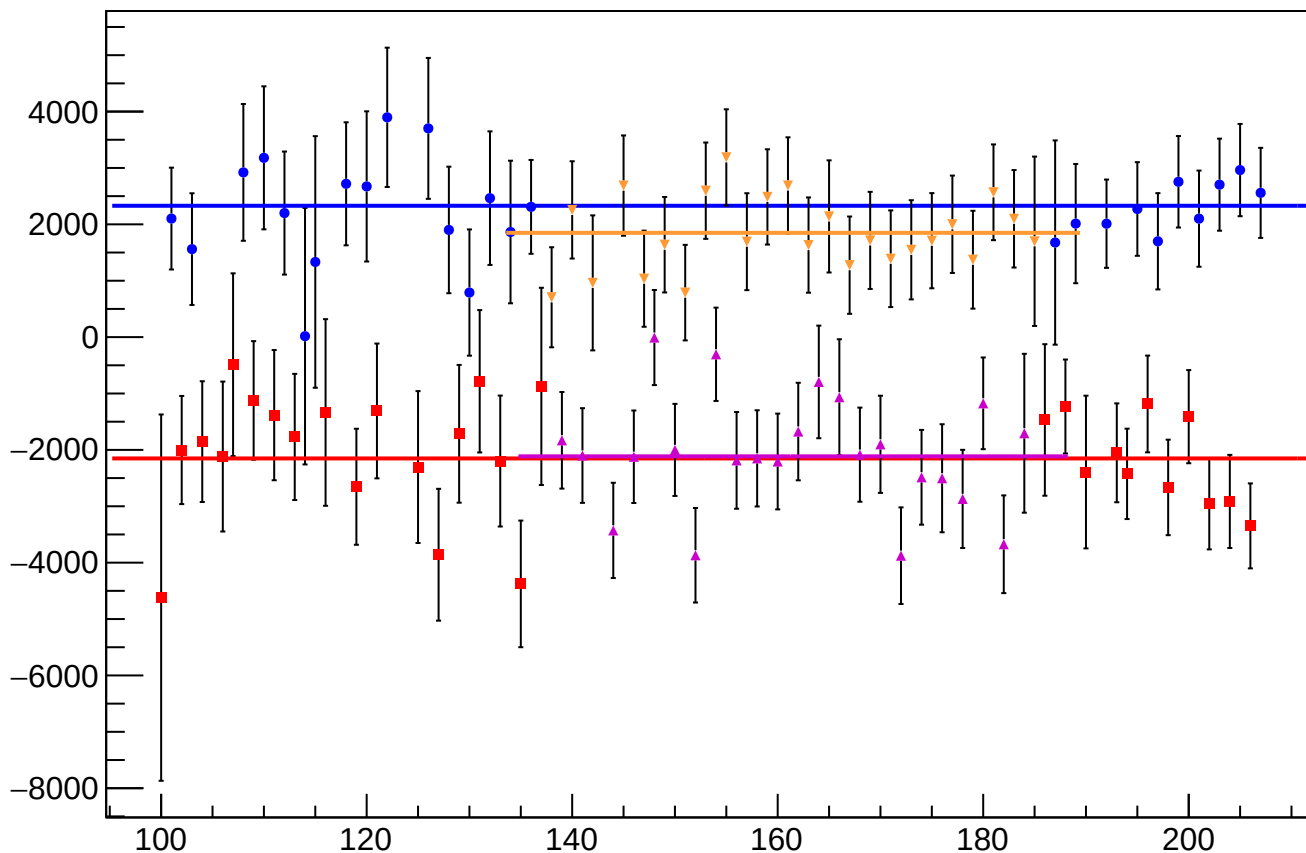
+ sign 1356.206+/-0.170  $\chi^2/\text{NDF}$ : 2782011.0/49

All: 1367.783+/-0.121  $\chi^2/\text{NDF}$ : 5694580.7/10

- sign 1379.432+/-0.171  $\chi^2/\text{NDF}$ : 2903288.6/51



# cor\_asym\_us\_avg\_mean vs Slug



Right In: 2329.333 $\pm$ 200.138  $\chi^2$ /NDF: 10.0/25

Left Out: 1849.592 $\pm$ 180.739  $\chi^2$ /NDF:12.8/23

Right Out: -2151.692 $\pm$ 195.057  $\chi^2$ /NDF: 20.6/28

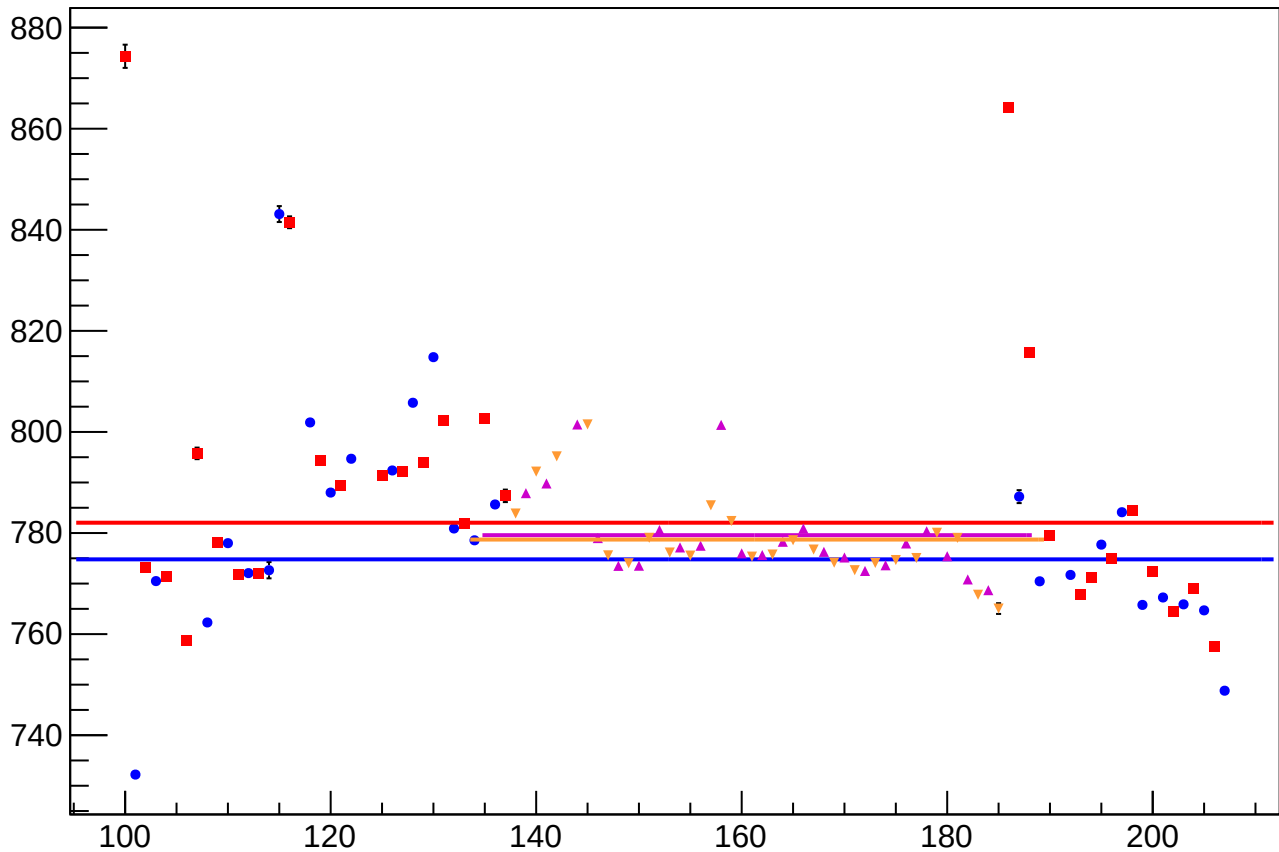
Left In: -2114.442 $\pm$ 182.028  $\chi^2$ /NDF:31.1/22

+ sign 2065.091 $\pm$ 134.137  $\chi^2$ /NDF: 26.0/49

All: -49.938 $\pm$ 94.474  $\chi^2$ /NDF: 571.0/101

- sign -2131.781 $\pm$ 133.081  $\chi^2$ /NDF: 51.7/51

# cor\_asym\_us\_avg\_rms vs Slug



Right In: 774.791 $\pm$ 0.142  $\chi^2$ /NDF: 16921.1/25

Left Out: 778.708 $\pm$ 0.128  $\chi^2$ /NDF:3389.8/23

Right Out: 782.043 $\pm$ 0.138  $\chi^2$ /NDF: 23306.7/28

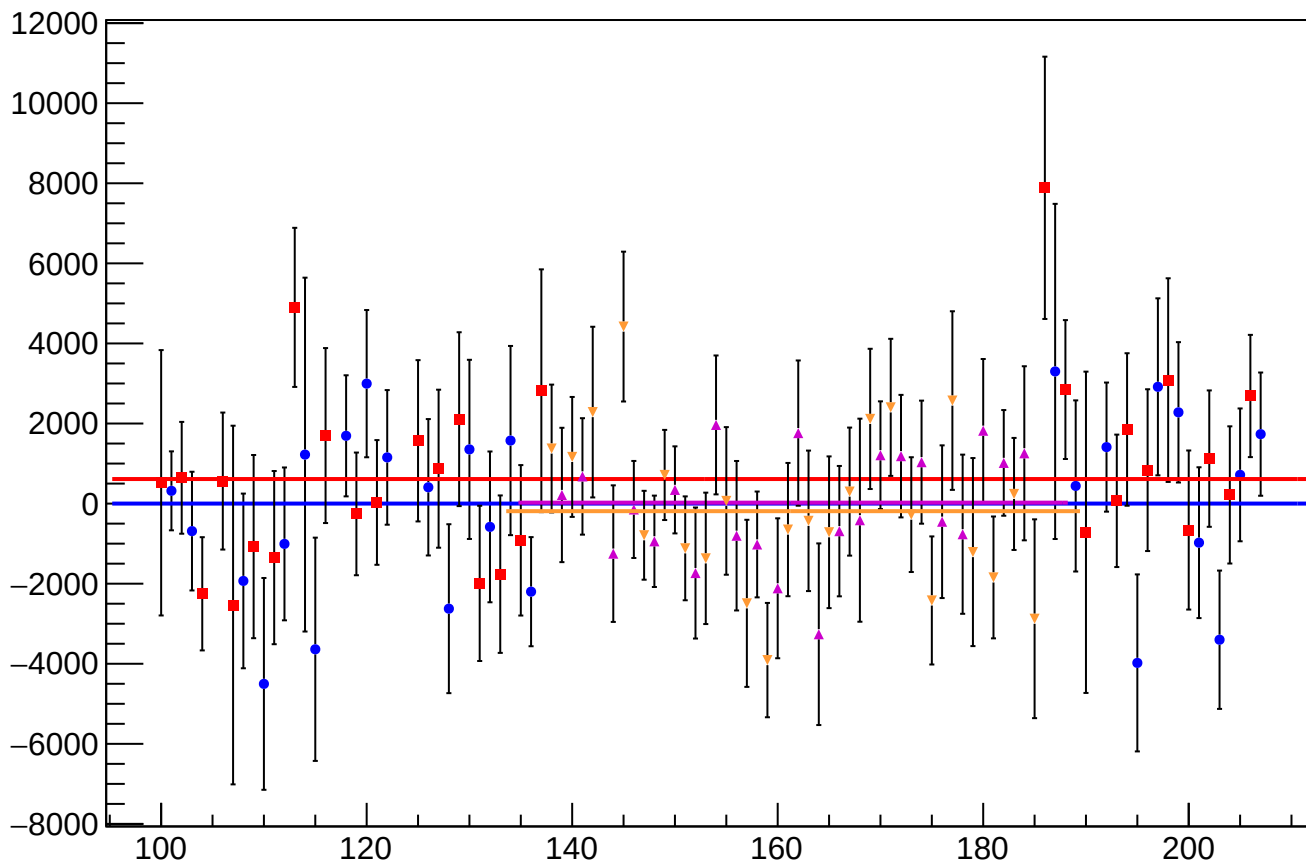
Left In: 779.575 $\pm$ 0.129  $\chi^2$ /NDF:4172.9/22

+ sign 776.949 $\pm$ 0.095  $\chi^2$ /NDF: 20732.9/49

All: 778.851 $\pm$ 0.067  $\chi^2$ /NDF: 49181.8/101

- sign 780.724 $\pm$ 0.094  $\chi^2$ /NDF: 27650.7/51

# asym\_us\_avg\_cor\_correction\_mean vs Slug



Right In:  $0.704 \pm 354.758$   $\chi^2/\text{NDF}$ : 29.3/25

Left Out:  $-189.006 \pm 327.675$   $\chi^2/\text{NDF}$ : 29.6/23

Right Out:  $613.570 \pm 359.644$   $\chi^2/\text{NDF}$ : 27.1/28

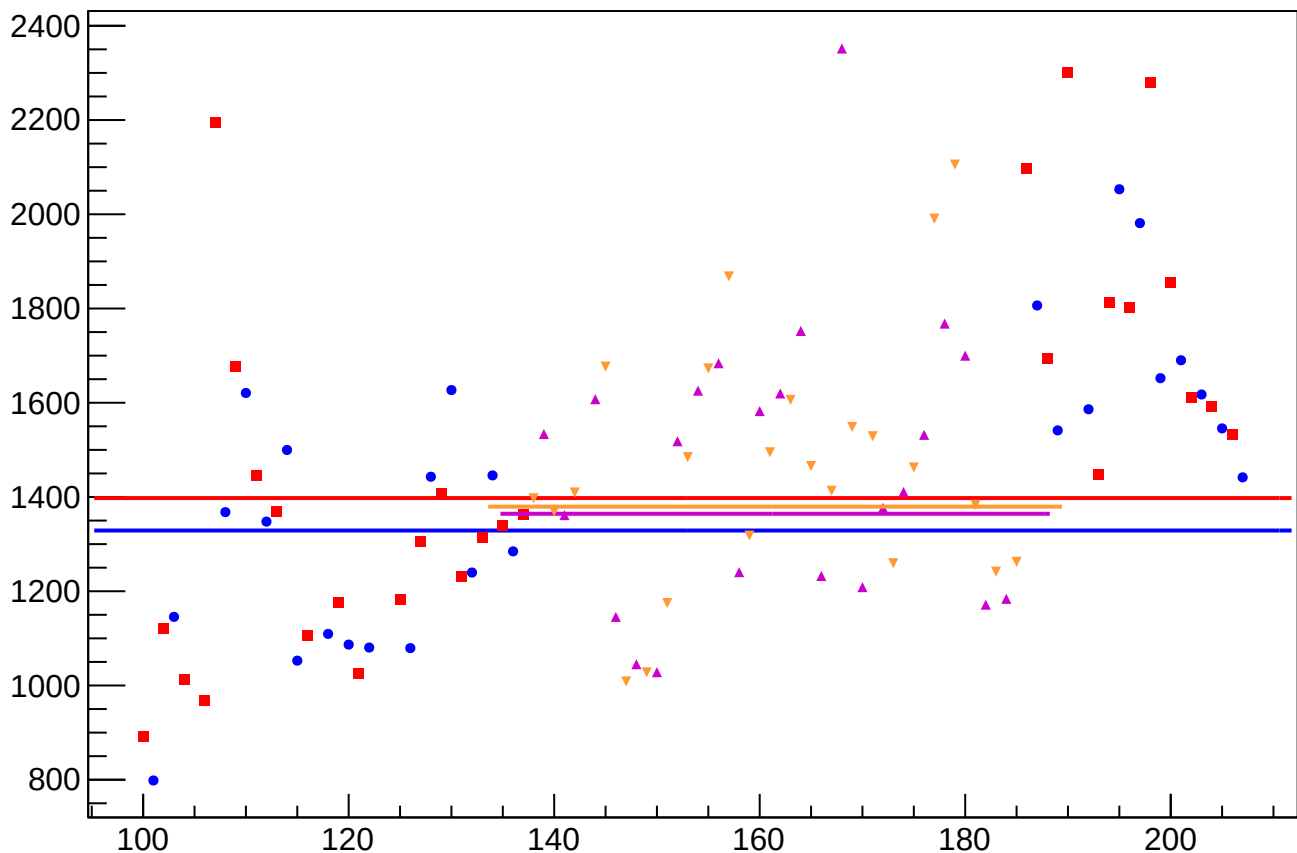
Left In:  $23.750 \pm 325.809$   $\chi^2/\text{NDF}$ : 13.5/22

+ sign  $-101.668 \pm 240.707$   $\chi^2/\text{NDF}$ : 59.0/49

All:  $93.363 \pm 170.471$   $\chi^2/\text{NDF}$ : 102.4/101

- sign  $289.616 \pm 241.460$   $\chi^2/\text{NDF}$ : 42.0/51

# asym\_us\_avg\_cor\_correction\_rms vs Slug



Right In: 1328.861 $\pm$ 0.251  $\chi^2$ /NDF: 1601521.0/25

Left Out: 1379.536 $\pm$ 0.232  $\chi^2$ /NDF: 1158468.5/23

Right Out: 1397.734 $\pm$ 0.254  $\chi^2$ /NDF: 1581559.1/28

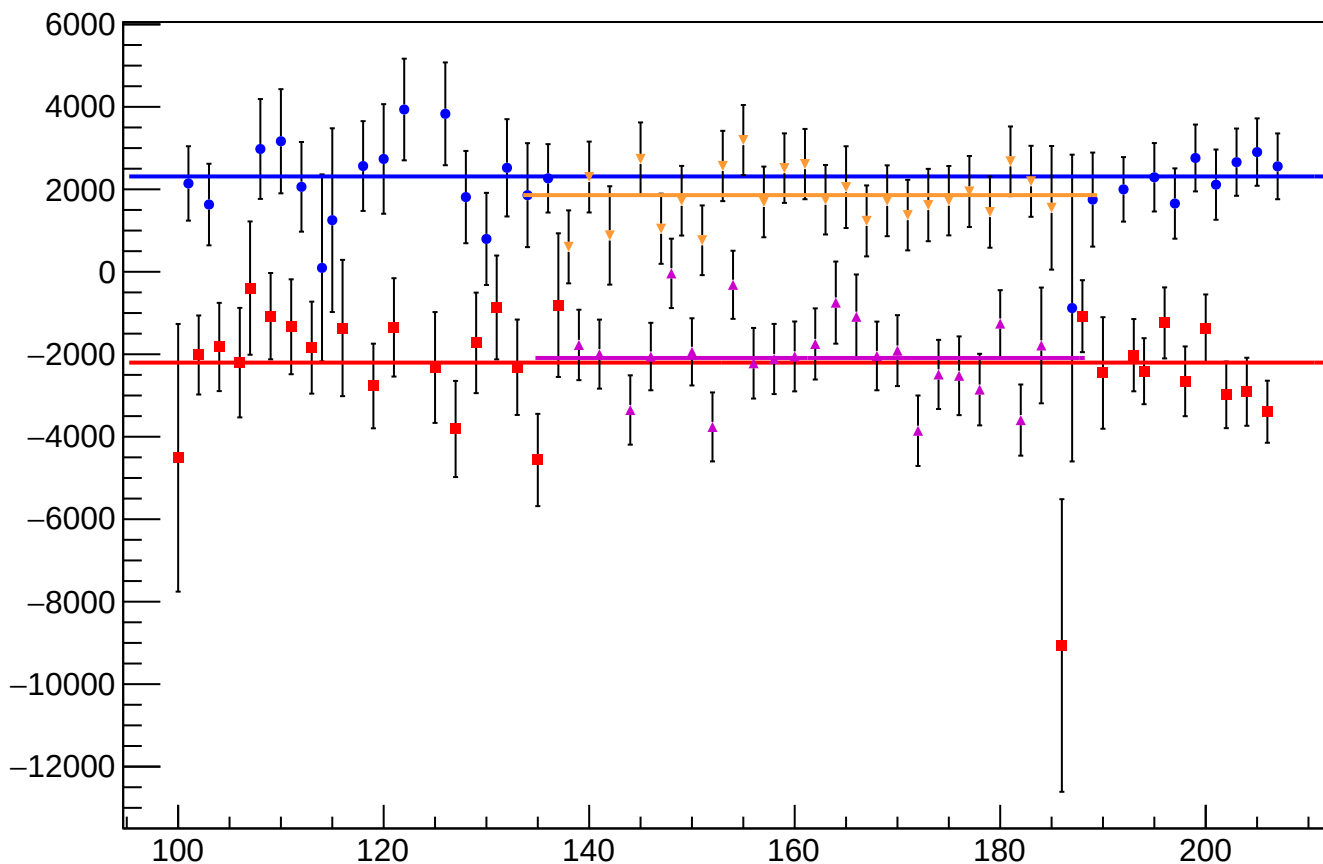
Left In: 1364.412 $\pm$ 0.230  $\chi^2$ /NDF: 1312299.5/22

+ sign 1356.206 $\pm$ 0.170  $\chi^2$ /NDF: 2782011.0/49

All: 1367.783 $\pm$ 0.121  $\chi^2$ /NDF: 5694580.7/10

- sign 1379.432 $\pm$ 0.171  $\chi^2$ /NDF: 2903288.6/51

# overload\_cor\_asym\_us\_avg\_mean vs Slug



Right In: 2312.441+/-201.261  $\chi^2$ /NDF: 11.0/25

Left Out: 1859.528+/-180.231  $\chi^2$ /NDF:13.5/23

Right Out: -2202.298+/-197.075  $\chi^2$ /NDF: 25.4/28

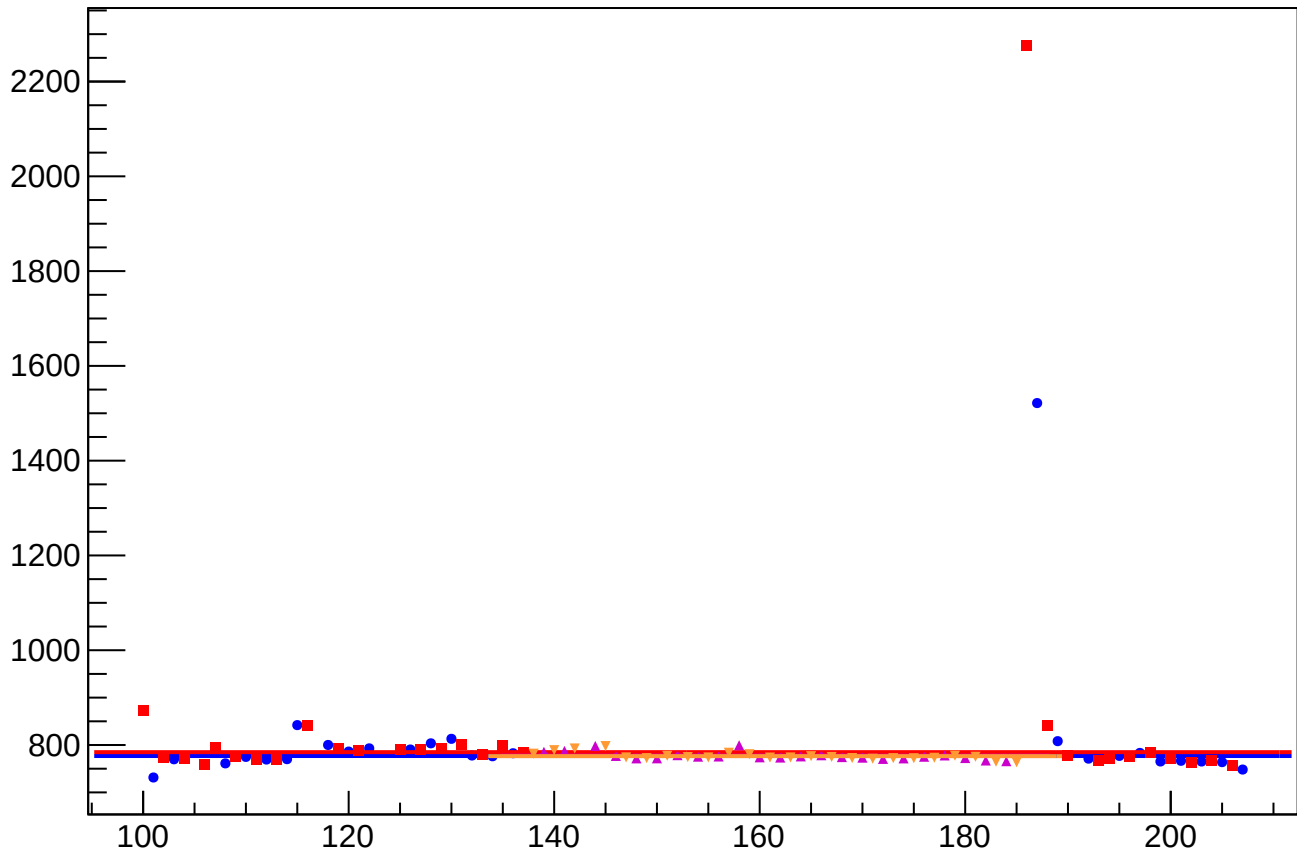
Left In: -2089.493+/-181.523  $\chi^2$ /NDF:29.6/22

+ sign 2061.093+/-134.264  $\chi^2$ /NDF: 27.3/49

All: -51.825+/-94.673  $\chi^2$ /NDF: 575.1/101

- sign -2141.269+/-133.516  $\chi^2$ /NDF: 55.2/51

# overload\_cor\_asym\_us\_avg\_rms vs Slug



Right In: 776.774 $\pm$ 0.142  $\chi^2$ /NDF: 98324.6/25

Left Out: 776.523 $\pm$ 0.127  $\chi^2$ /NDF:3137.1/23

Right Out: 784.918 $\pm$ 0.139  $\chi^2$ /NDF: 375825.4/28

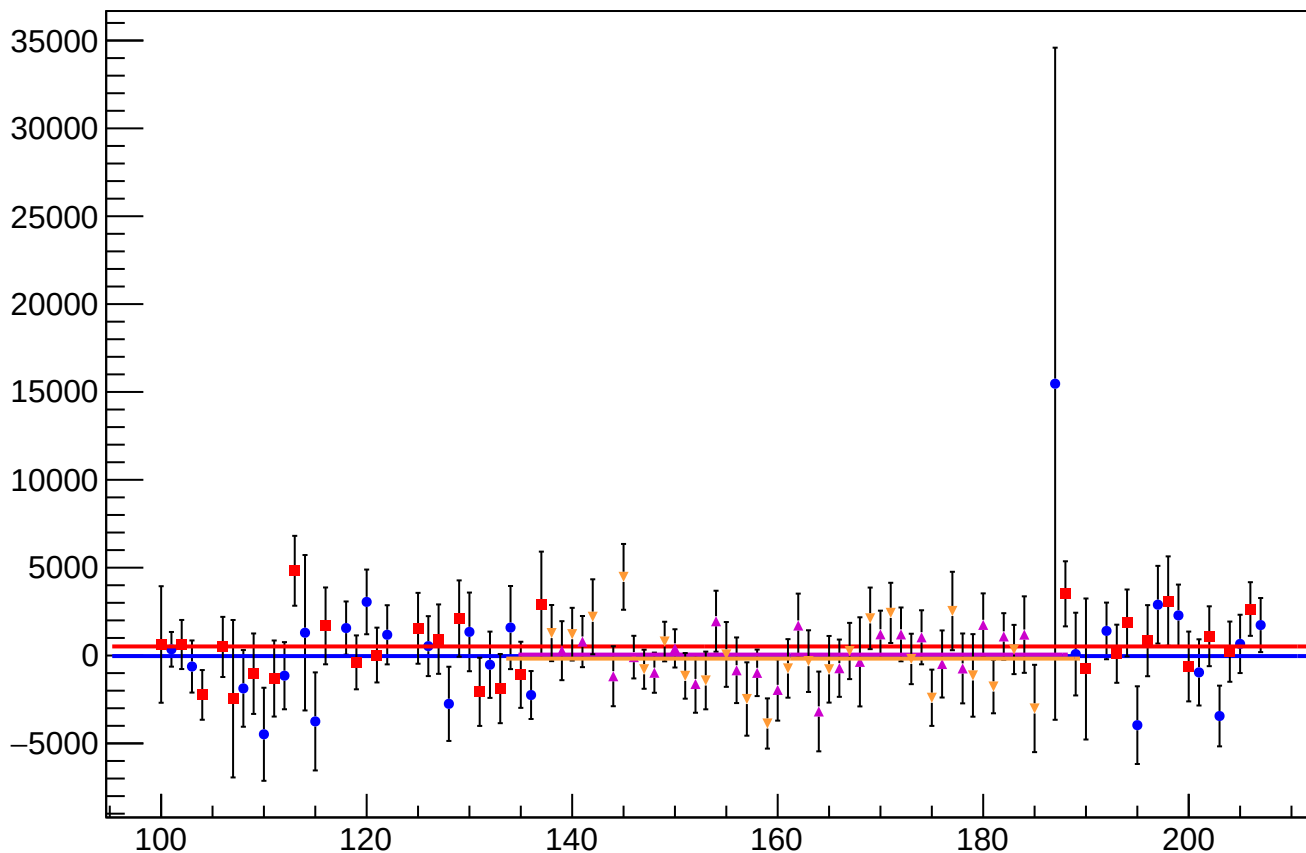
Left In: 777.413 $\pm$ 0.128  $\chi^2$ /NDF:4062.1/22

+ sign 776.635 $\pm$ 0.095  $\chi^2$ /NDF: 101463.5/49

All: 778.758 $\pm$ 0.067  $\chi^2$ /NDF: 483914.9/101

- sign 780.857 $\pm$ 0.094  $\chi^2$ /NDF: 381456.7/51

asym\_us\_avg\_overload\_cor\_correction\_mean vs Slug



Right In:  $-31.488 \pm 357.108$   $\chi^2/\text{NDF}$ : 29.5/25

Left Out:  $-174.932 \pm 327.991$   $\chi^2/\text{NDF}$ : 29.6/23

Right Out:  $516.855 \pm 363.048$   $\chi^2/\text{NDF}$ : 23.0/27

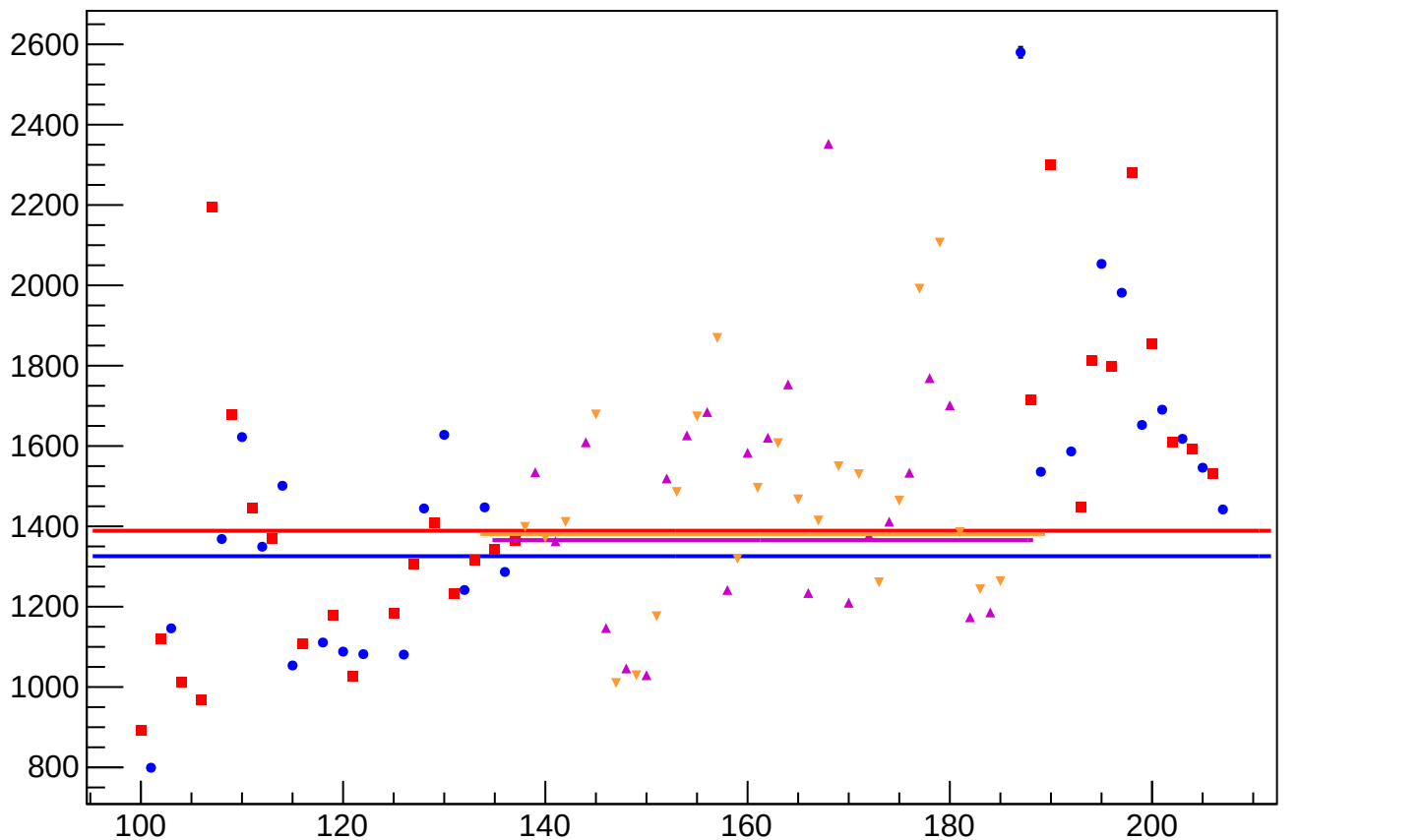
Left In:  $52.820 \pm 326.124$   $\chi^2/\text{NDF}$ : 13.0/22

+ sign  $-109.296 \pm 241.563$   $\chi^2/\text{NDF}$ : 59.2/49

All:  $74.576 \pm 171.181$   $\chi^2/\text{NDF}$ : 97.3/100

- sign  $260.047 \pm 242.612$   $\chi^2/\text{NDF}$ : 36.9/50

asym\_us\_avg\_overload\_cor\_correction\_rms vs Slug



Right In: 1325.717 $\pm$ 0.253  $\chi^2$ /NDF: 1575555.3/25

Left Out: 1380.952 $\pm$ 0.232  $\chi^2$ /NDF:1155437.6/23

Right Out: 1389.046 $\pm$ 0.257  $\chi^2$ /NDF: 1482955.6/27

Left In: 1365.811 $\pm$ 0.231  $\chi^2$ /NDF:1308862.5/22

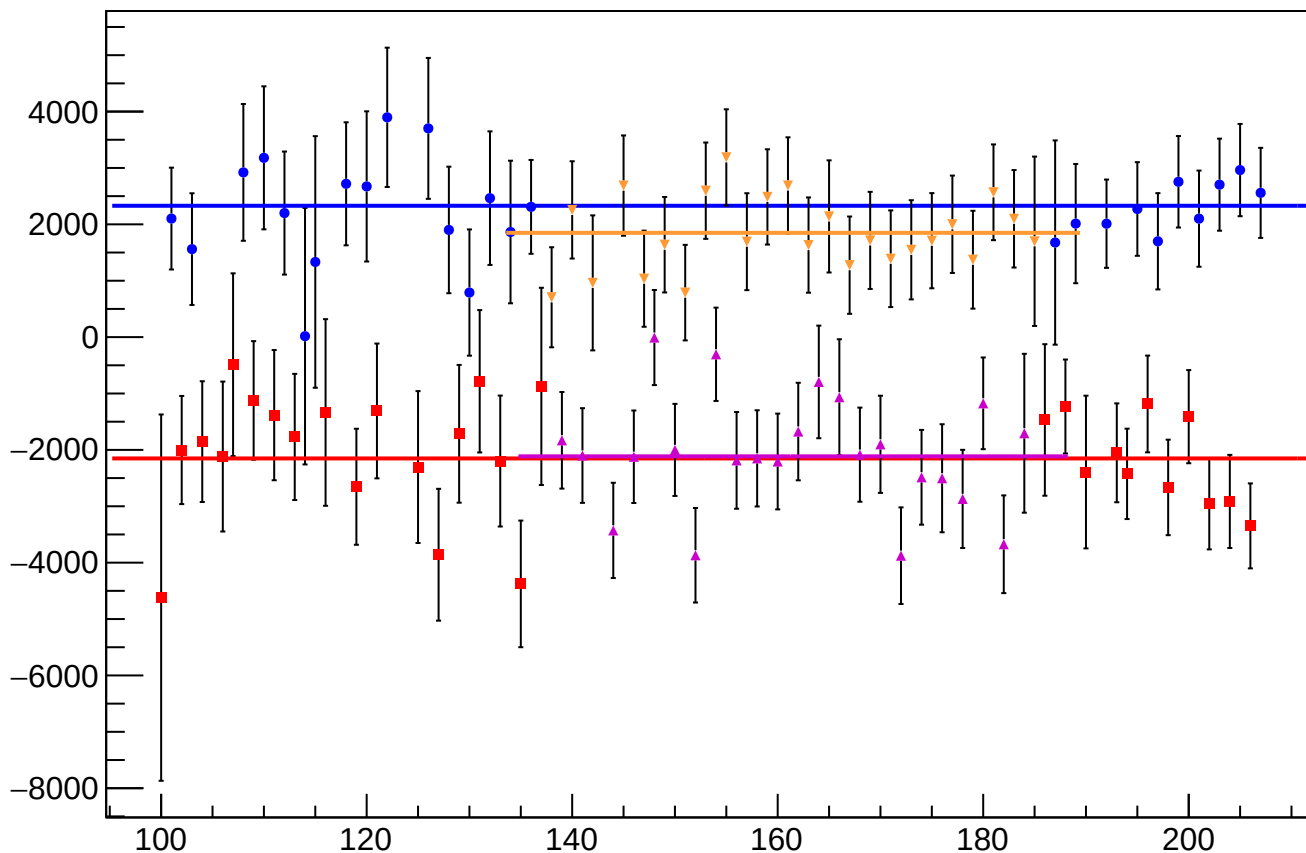
+ sign 1355.678 $\pm$ 0.171  $\chi^2$ /NDF: 2756947.1/49

All: 1365.888 $\pm$ 0.121  $\chi^2$ /NDF: 5560476.4/10

- sign 1376.187 $\pm$ 0.172  $\chi^2$ /NDF: 2796351.7/50



# eigen\_cor\_asym\_us\_avg\_mean vs Slug



Right In: 2329.333 $\pm$ 200.138  $\chi^2$ /NDF: 10.0/25

Left Out: 1849.592 $\pm$ 180.739  $\chi^2$ /NDF:12.8/23

Right Out: -2151.692 $\pm$ 195.057  $\chi^2$ /NDF: 20.6/28

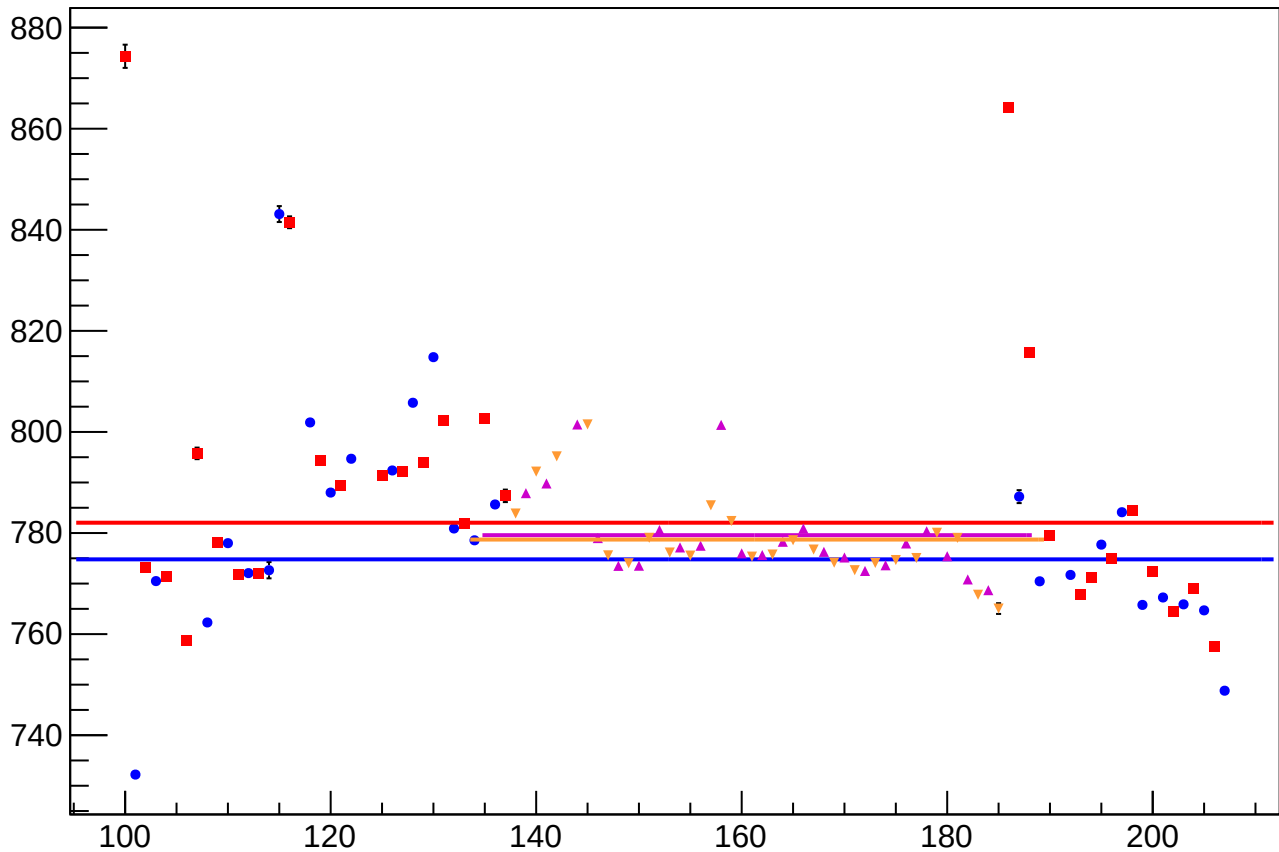
Left In: -2114.442 $\pm$ 182.028  $\chi^2$ /NDF:31.1/22

+ sign 2065.091 $\pm$ 134.137  $\chi^2$ /NDF: 26.0/49

All: -49.938 $\pm$ 94.474  $\chi^2$ /NDF: 571.0/101

- sign -2131.781 $\pm$ 133.081  $\chi^2$ /NDF: 51.7/51

# eigen\_cor\_asym\_us\_avg\_rms vs Slug



Right In: 774.791 $\pm$ 0.142  $\chi^2$ /NDF: 16921.1/25

Left Out: 778.708 $\pm$ 0.128  $\chi^2$ /NDF: 3389.8/23

Right Out: 782.043 $\pm$ 0.138  $\chi^2$ /NDF: 23306.7/28

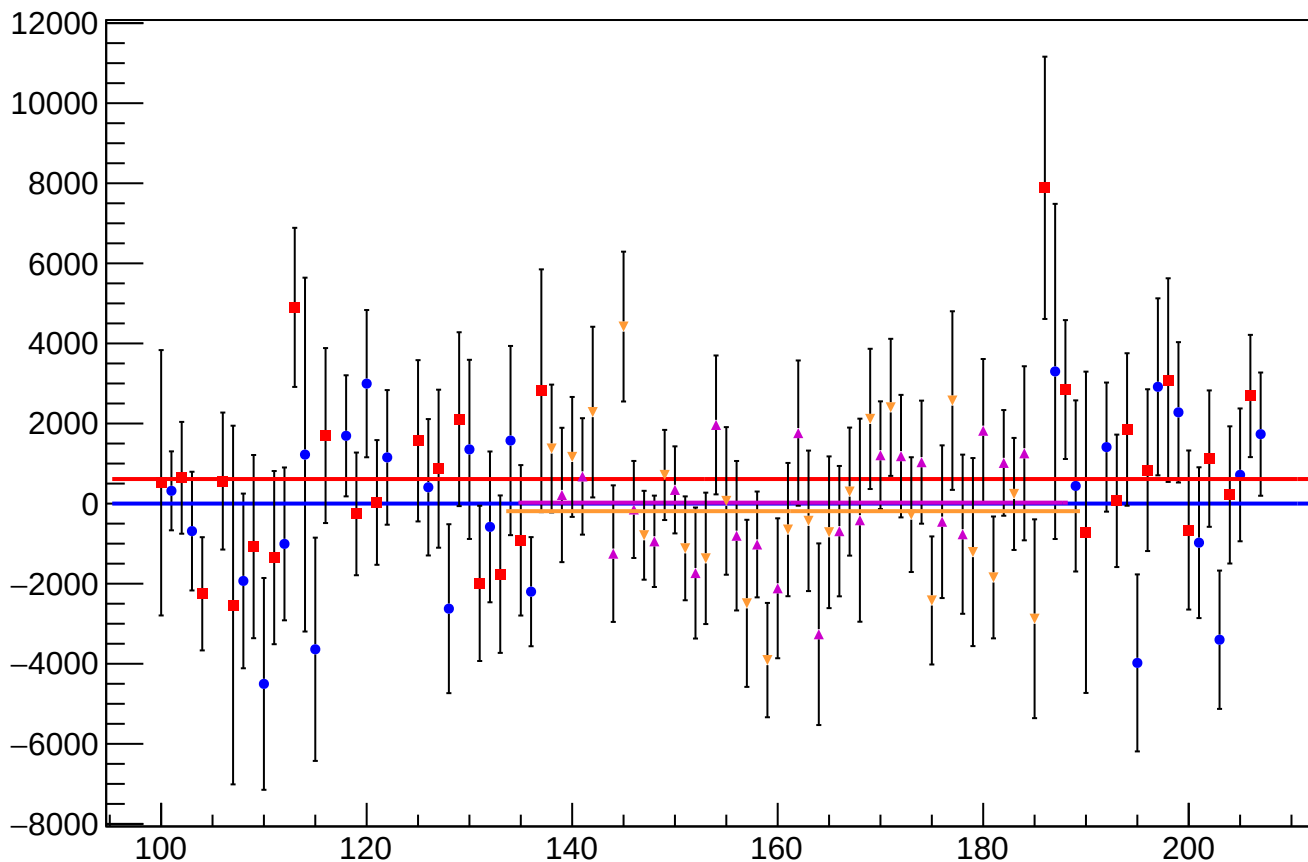
Left In: 779.575 $\pm$ 0.129  $\chi^2$ /NDF: 4172.9/22

+ sign 776.949 $\pm$ 0.095  $\chi^2$ /NDF: 20732.9/49

All: 778.851 $\pm$ 0.067  $\chi^2$ /NDF: 49181.8/101

- sign 780.724 $\pm$ 0.094  $\chi^2$ /NDF: 27650.7/51

asym\_us\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In:  $0.704 \pm 354.758$   $\chi^2/\text{NDF}$ : 29.3/25

Left Out:  $-189.006 \pm 327.675$   $\chi^2/\text{NDF}$ : 29.6/23

Right Out:  $613.570 \pm 359.644$   $\chi^2/\text{NDF}$ : 27.1/28

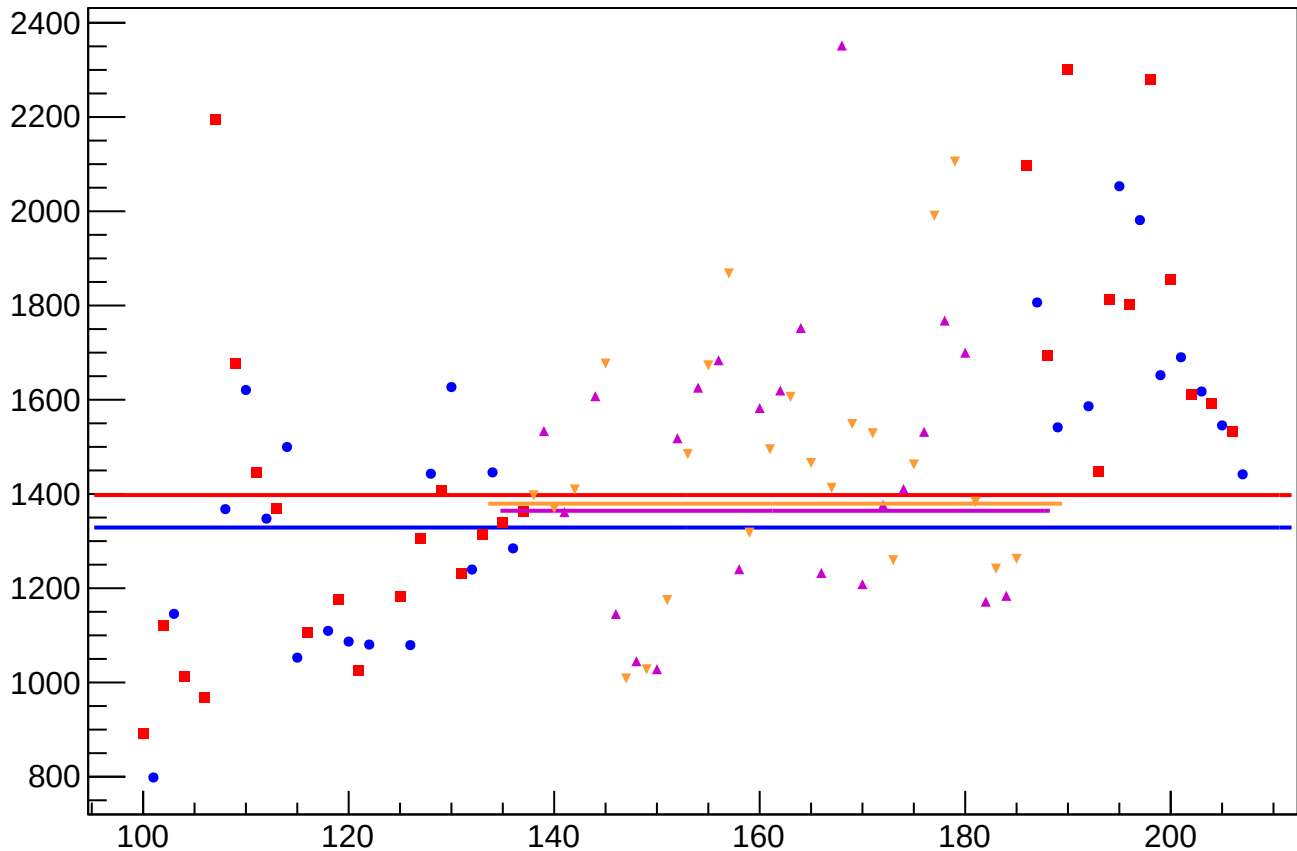
Left In:  $23.750 \pm 325.809$   $\chi^2/\text{NDF}$ : 13.5/22

+ sign  $-101.668 \pm 240.707$   $\chi^2/\text{NDF}$ : 59.0/49

All:  $93.363 \pm 170.471$   $\chi^2/\text{NDF}$ : 102.4/101

- sign  $289.616 \pm 241.460$   $\chi^2/\text{NDF}$ : 42.0/51

asym\_us\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 1328.861+/-0.251  $\chi^2/\text{NDF}$ : 1601521.0/25

Left Out: 1379.536+/-0.232  $\chi^2/\text{NDF}$ : 1158468.5/23

Right Out: 1397.734+/-0.254  $\chi^2/\text{NDF}$ : 1581559.1/28

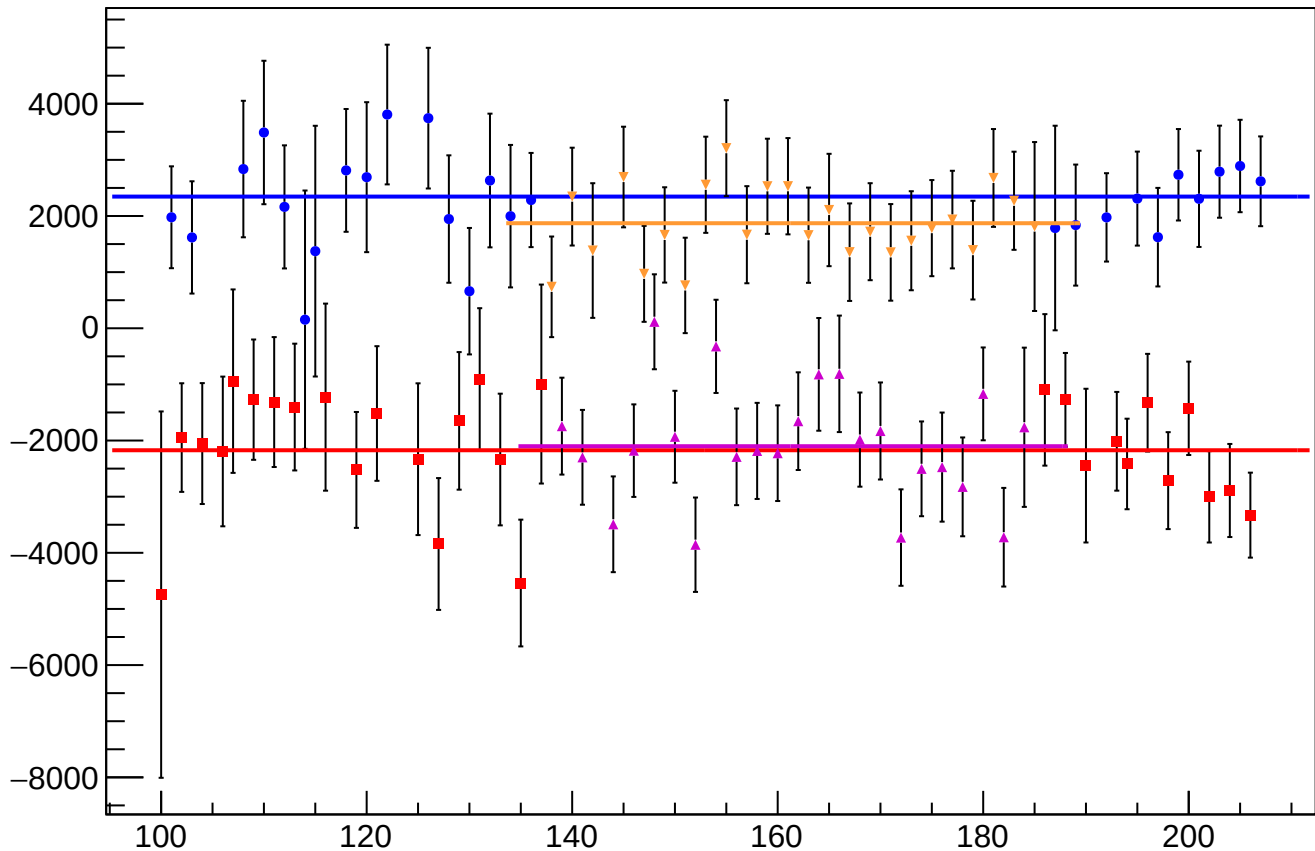
Left In: 1364.412+/-0.230  $\chi^2/\text{NDF}$ : 1312299.5/22

+ sign 1356.206+/-0.170  $\chi^2/\text{NDF}$ : 2782011.0/49

All: 1367.783+/-0.121  $\chi^2/\text{NDF}$ : 5694580.7/10

- sign 1379.432+/-0.171  $\chi^2/\text{NDF}$ : 2903288.6/51

# dit\_asym\_us\_avg\_mean vs Slug



Right In: 2345.918 $\pm$ 201.586  $\chi^2/\text{NDF}$ : 10.4/25

Left Out: 1871.457 $\pm$ 181.976  $\chi^2/\text{NDF}$ :12.5/23

Right Out: -2172.985 $\pm$ 196.472  $\chi^2/\text{NDF}$ : 20.0/28

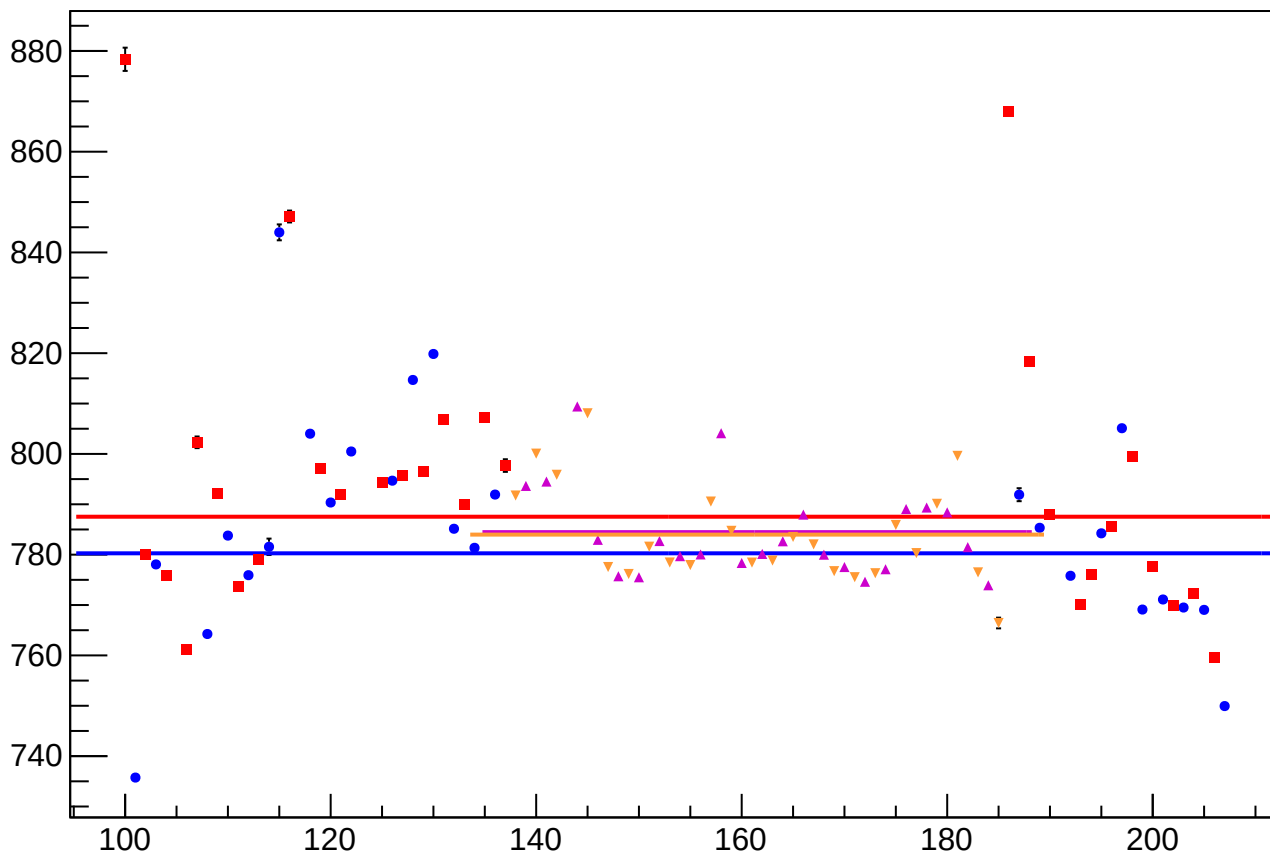
Left In: -2101.047 $\pm$ 183.179  $\chi^2/\text{NDF}$ :31.8/22

+ sign 2084.494 $\pm$ 135.079  $\chi^2/\text{NDF}$ : 26.0/49

All: -42.229 $\pm$ 95.125  $\chi^2/\text{NDF}$ : 569.5/101

- sign -2134.500 $\pm$ 133.980  $\chi^2/\text{NDF}$ : 51.8/51

# dit\_asym\_us\_avg\_rms vs Slug



Right In:  $780.268 \pm 0.143$   $\chi^2/\text{NDF}$ : 19459.3/25

Left Out:  $783.982 \pm 0.129$   $\chi^2/\text{NDF}$ : 4928.0/23

Right Out:  $787.533 \pm 0.139$   $\chi^2/\text{NDF}$ : 23483.4/28

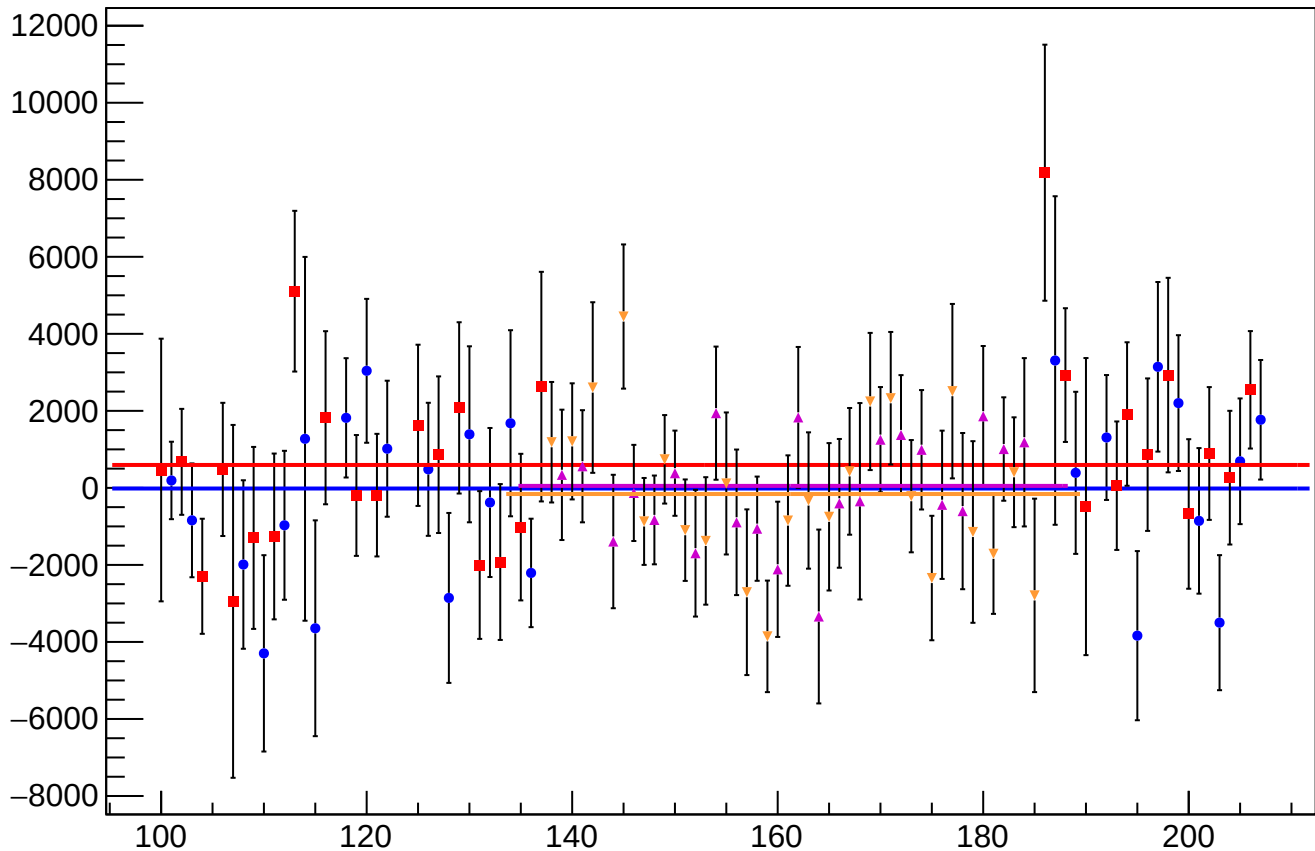
Left In:  $784.473 \pm 0.130$   $\chi^2/\text{NDF}$ : 4927.7/22

+ sign  $782.314 \pm 0.096$   $\chi^2/\text{NDF}$ : 24761.3/49

All:  $784.119 \pm 0.067$   $\chi^2/\text{NDF}$ : 54140.7/101

- sign  $785.896 \pm 0.095$   $\chi^2/\text{NDF}$ : 28670.7/51

# asym\_us\_avg\_dit\_correction\_mean vs Slug



Right In:  $-16.222 \pm 359.428$   $\chi^2/\text{NDF}$ : 29.1/25

Left Out:  $-159.275 \pm 332.190$   $\chi^2/\text{NDF}$ : 29.1/23

Right Out:  $595.415 \pm 363.743$   $\chi^2/\text{NDF}$ : 27.2/28

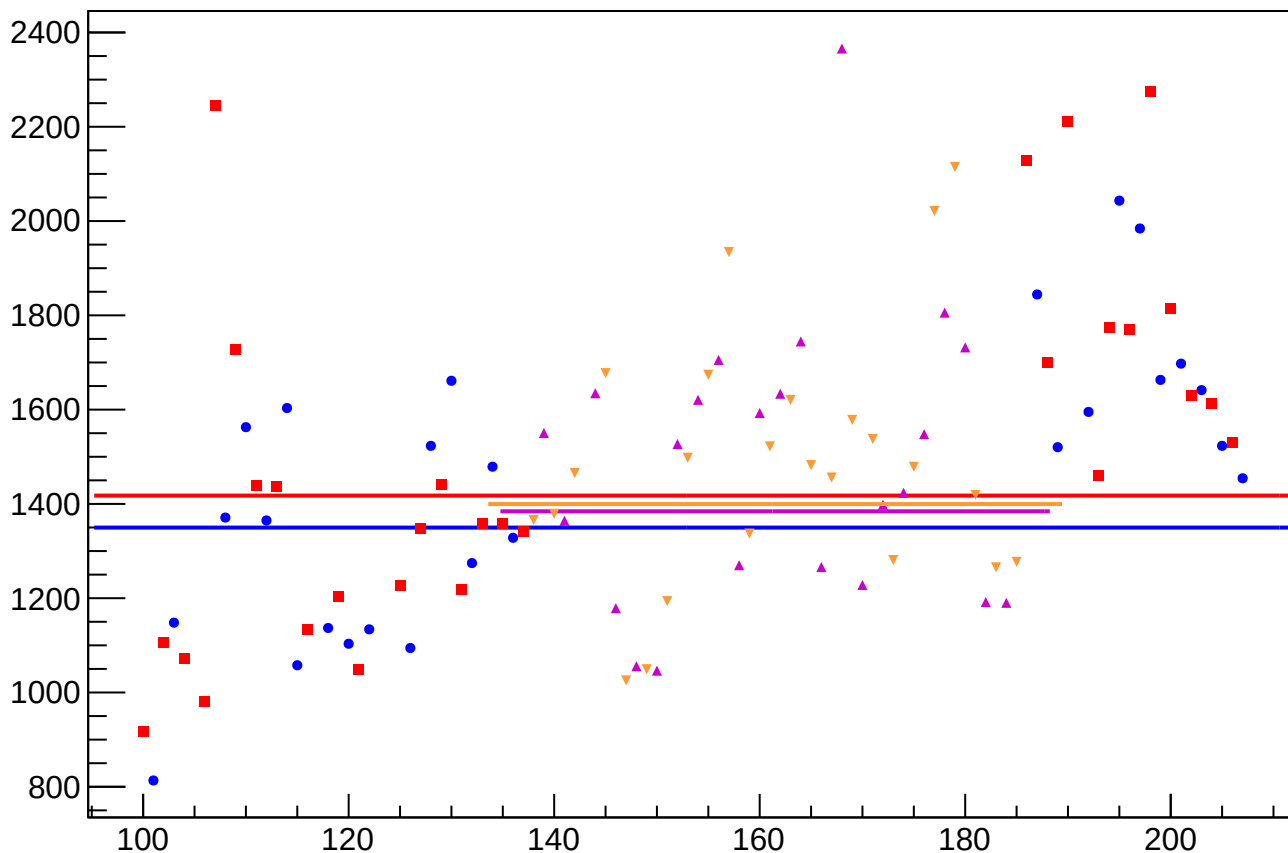
Left In:  $51.975 \pm 330.206$   $\chi^2/\text{NDF}$ : 13.4/22

+ sign  $-93.374 \pm 243.956$   $\chi^2/\text{NDF}$ : 58.3/49

All:  $101.632 \pm 172.691$   $\chi^2/\text{NDF}$ : 101.4/101

- sign  $297.493 \pm 244.490$   $\chi^2/\text{NDF}$ : 41.8/51

# asym\_us\_avg\_dit\_correction\_rms vs Slug



Right In:  $1349.779 \pm 0.254$   $\chi^2/\text{NDF}$ : 1522190.5/25

Left Out:  $1399.717 \pm 0.235$   $\chi^2/\text{NDF}$ : 1136350.2/23

Right Out:  $1417.663 \pm 0.257$   $\chi^2/\text{NDF}$ : 1449826.6/28

Left In:  $1384.333 \pm 0.233$   $\chi^2/\text{NDF}$ : 1269936.6/22

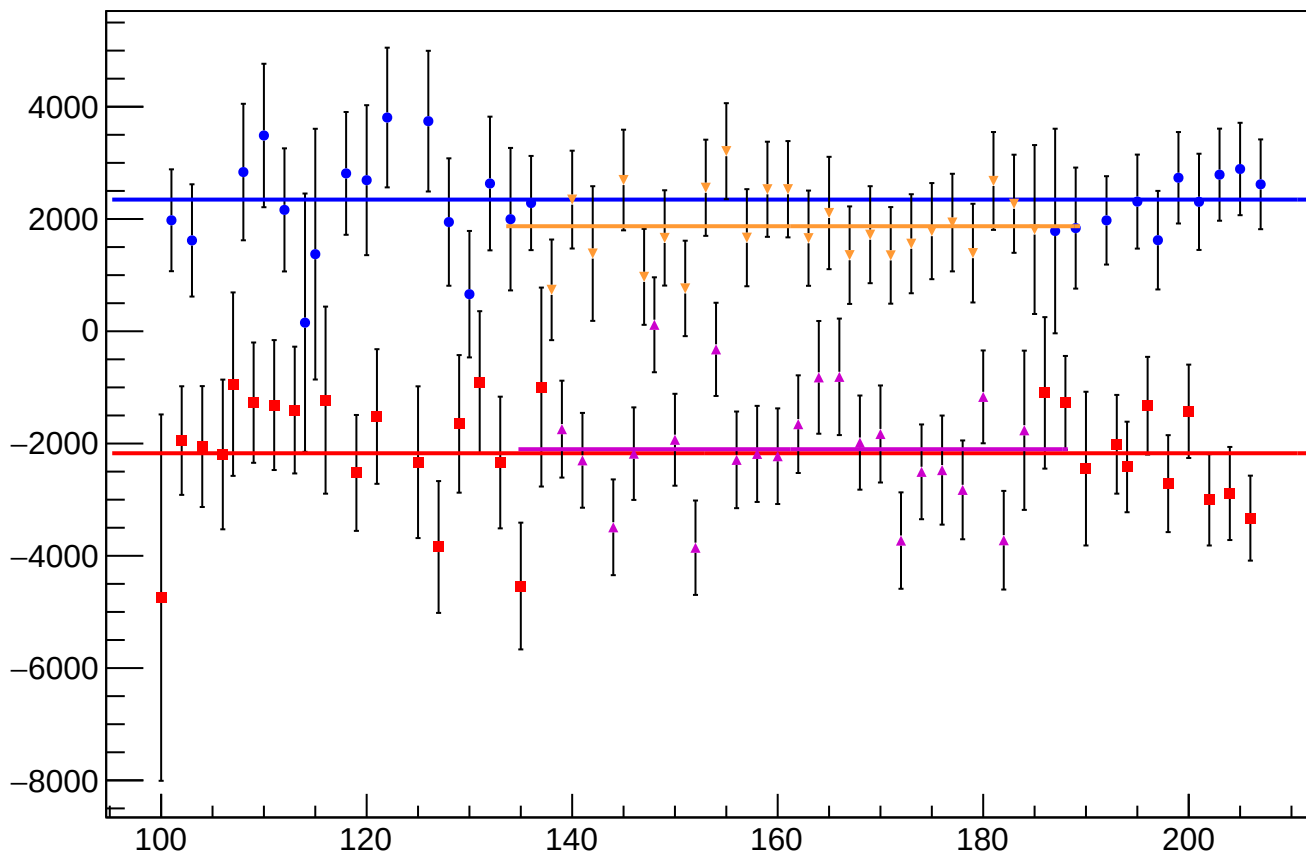
+ sign  $1376.712 \pm 0.173$   $\chi^2/\text{NDF}$ : 2679362.1/49

All:  $1388.027 \pm 0.122$   $\chi^2/\text{NDF}$ : 5416954.9/10

- sign  $1399.391 \pm 0.173$   $\chi^2/\text{NDF}$ : 2728969.0/51



# eigen\_dit\_asym\_us\_avg\_mean vs Slug



Right In: 2345.918 $\pm$ 201.586  $\chi^2$ /NDF: 10.4/25

Left Out: 1871.455 $\pm$ 181.976  $\chi^2$ /NDF:12.5/23

Right Out: -2172.982 $\pm$ 196.472  $\chi^2$ /NDF: 20.0/28

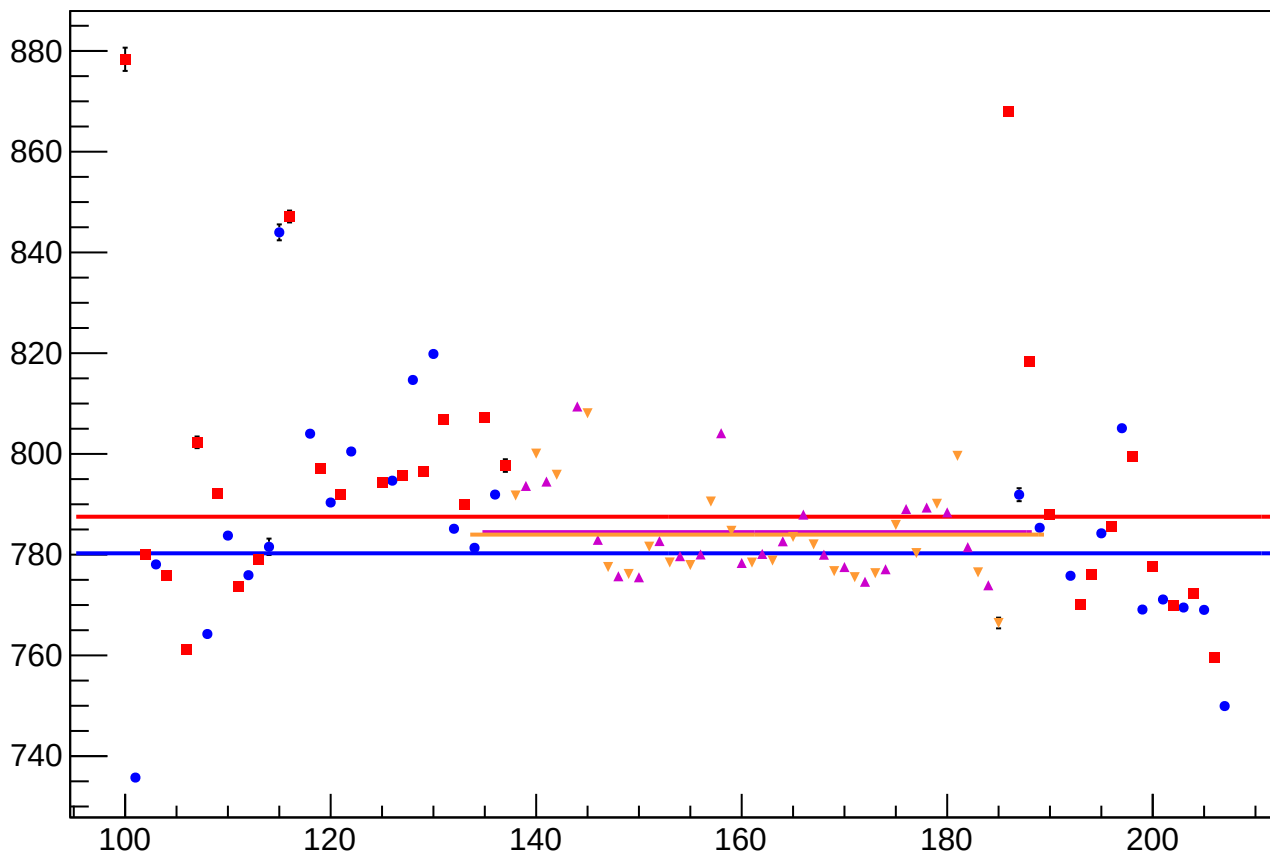
Left In: -2101.047 $\pm$ 183.179  $\chi^2$ /NDF:31.8/22

+ sign 2084.492 $\pm$ 135.079  $\chi^2$ /NDF: 26.0/49

All: -42.229 $\pm$ 95.125  $\chi^2$ /NDF: 569.5/101

- sign -2134.499 $\pm$ 133.980  $\chi^2$ /NDF: 51.8/51

# eigen\_dit\_asym\_us\_avg\_rms vs Slug



Right In:  $780.268 \pm 0.143$   $\chi^2/\text{NDF}$ : 19459.2/25

Left Out:  $783.982 \pm 0.129$   $\chi^2/\text{NDF}$ : 4928.0/23

Right Out:  $787.533 \pm 0.139$   $\chi^2/\text{NDF}$ : 23483.4/28

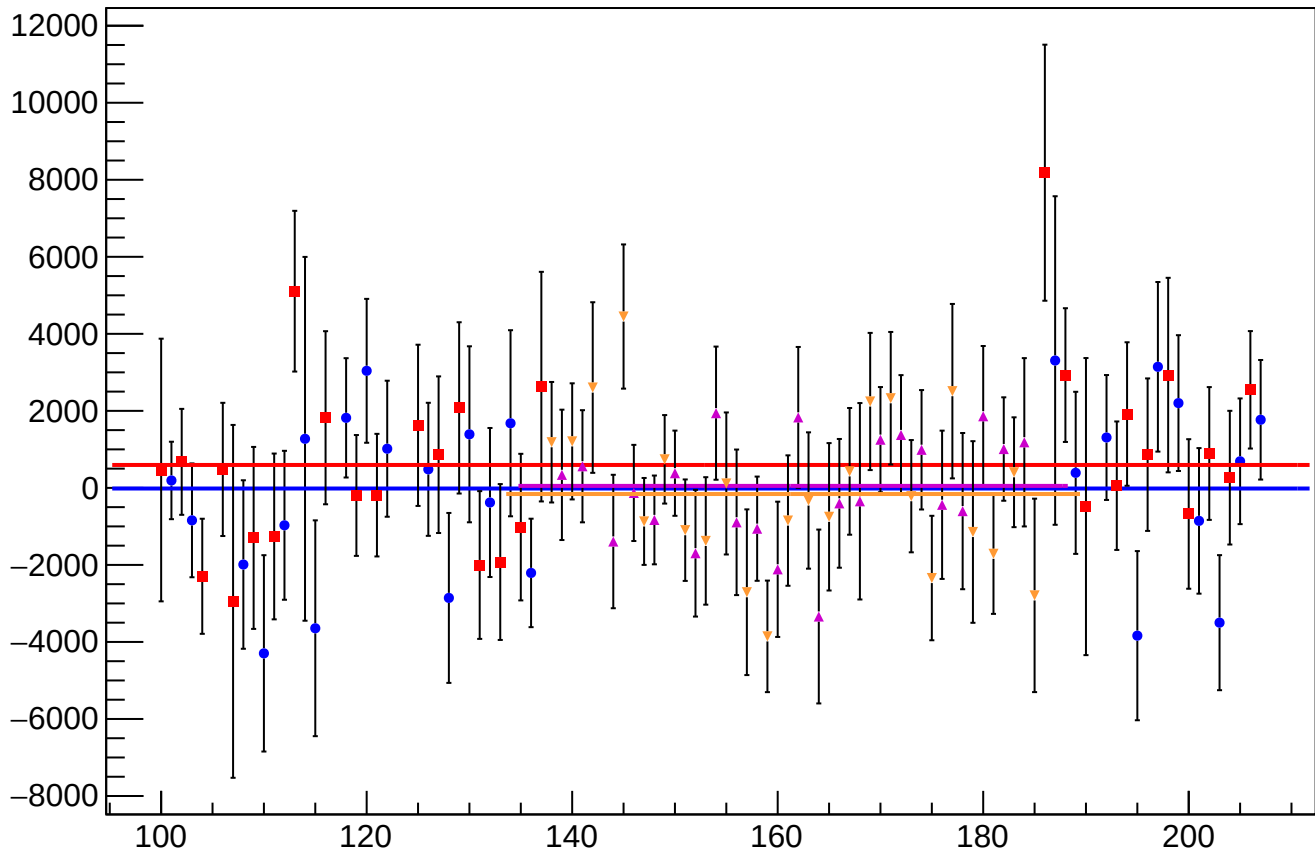
Left In:  $784.473 \pm 0.130$   $\chi^2/\text{NDF}$ : 4927.7/22

+ sign  $782.314 \pm 0.096$   $\chi^2/\text{NDF}$ : 24761.2/49

All:  $784.119 \pm 0.067$   $\chi^2/\text{NDF}$ : 54140.6/101

- sign  $785.896 \pm 0.095$   $\chi^2/\text{NDF}$ : 28670.6/51

asym\_us\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In: -16.222 $\pm$ 359.428  $\chi^2$ /NDF: 29.1/25

Left Out: -159.278 $\pm$ 332.191  $\chi^2$ /NDF: 29.1/23

Right Out: 595.412 $\pm$ 363.743  $\chi^2$ /NDF: 27.2/28

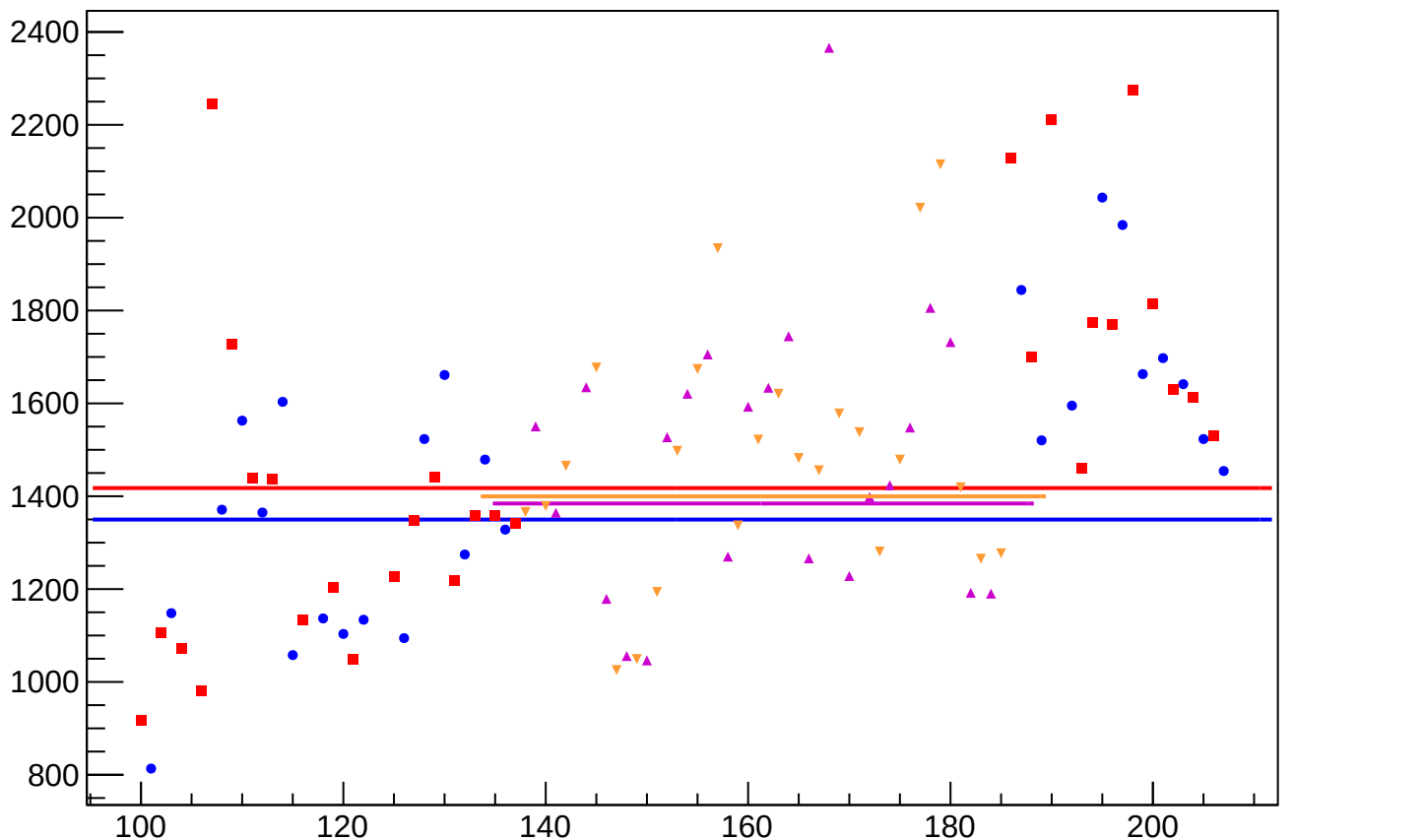
Left In: 51.975 $\pm$ 330.207  $\chi^2$ /NDF: 13.4/22

+ sign -93.375 $\pm$ 243.956  $\chi^2$ /NDF: 58.3/49

All: 101.631 $\pm$ 172.691  $\chi^2$ /NDF: 101.4/101

- sign 297.492 $\pm$ 244.490  $\chi^2$ /NDF: 41.8/51

asym\_us\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 1349.778 $\pm$ 0.254  $\chi^2$ /NDF: 1522207.5/25

Left Out: 1399.720 $\pm$ 0.235  $\chi^2$ /NDF:1136351.3/23

Right Out: 1417.661 $\pm$ 0.257  $\chi^2$ /NDF: 1449845.2/28

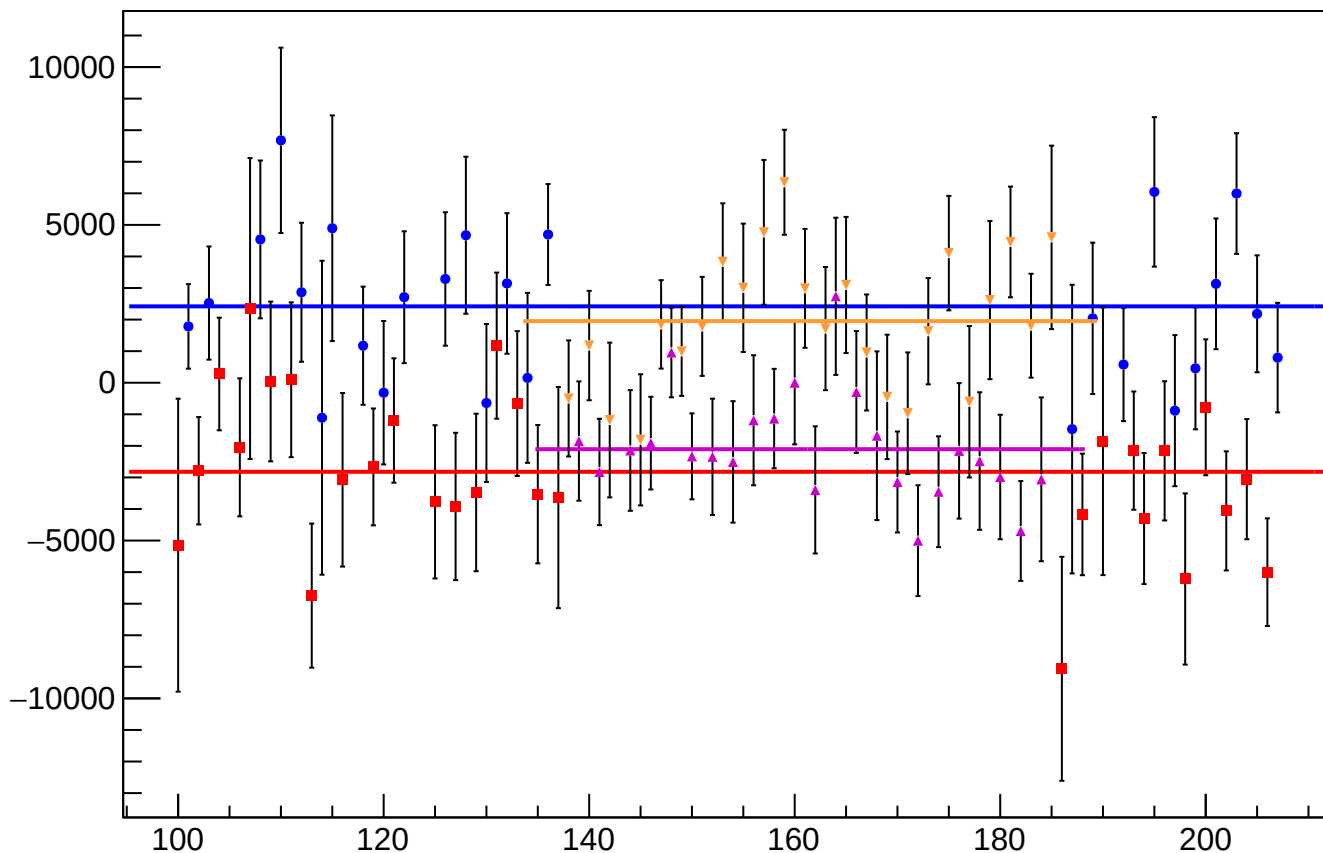
Left In: 1384.336 $\pm$ 0.233  $\chi^2$ /NDF:1269937.1/22

+ sign 1376.712 $\pm$ 0.173  $\chi^2$ /NDF: 2679383.7/49

All: 1388.027 $\pm$ 0.122  $\chi^2$ /NDF: 5416992.9/10

- sign 1399.392 $\pm$ 0.173  $\chi^2$ /NDF: 2728985.5/51

# asym\_us\_avg\_mean vs Slug



Right In: 2419.467 $\pm$ 417.460  $\chi^2$ /NDF: 24.0/25

Left Out: 1952.406 $\pm$ 380.269  $\chi^2$ /NDF: 27.4/23

Right Out: -2821.570 $\pm$ 418.229  $\chi^2$ /NDF: 26.1/28

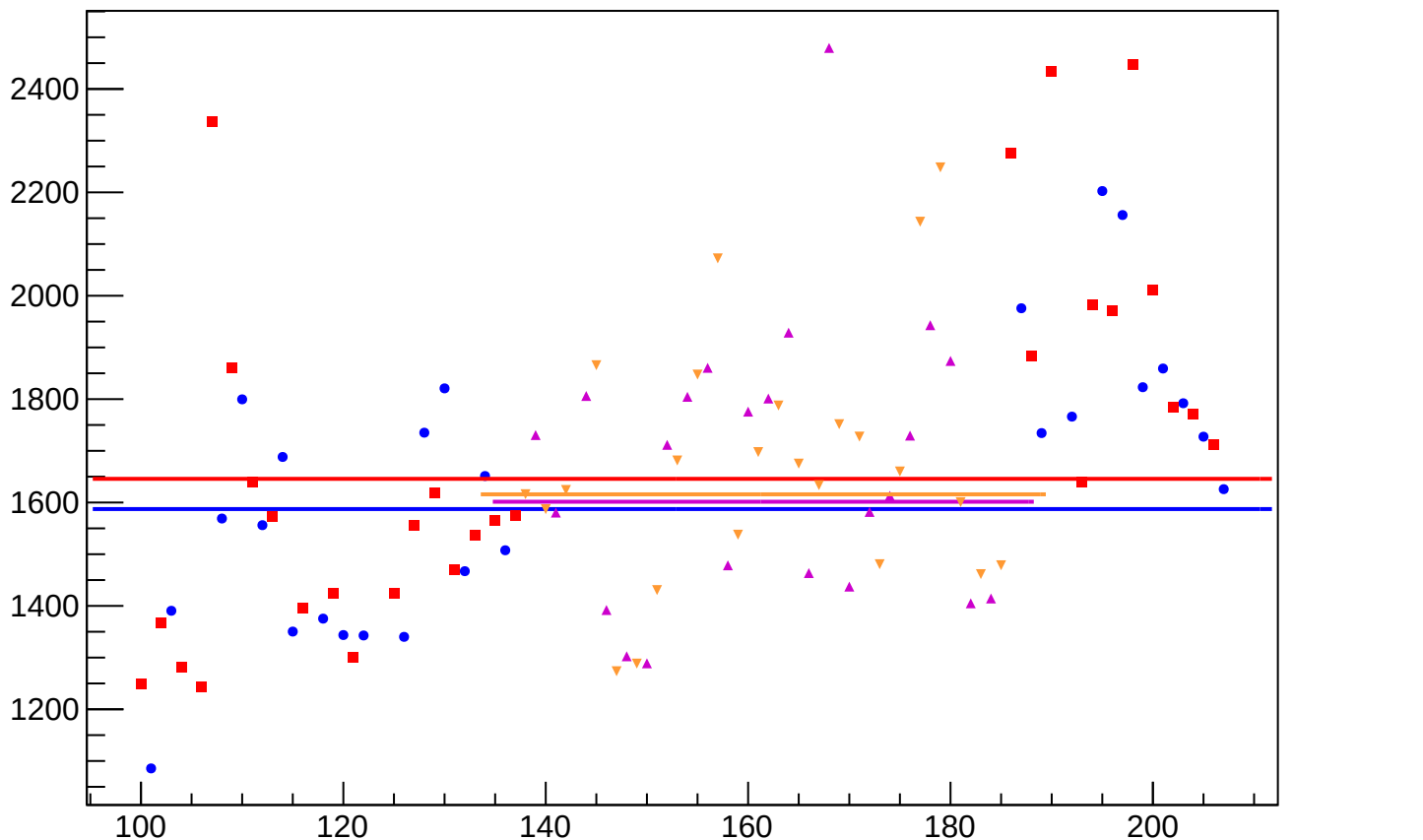
Left In: -2105.415 $\pm$ 379.051  $\chi^2$ /NDF: 18.6/22

+ sign 2164.209 $\pm$ 281.121  $\chi^2$ /NDF: 52.1/49

All: -134.214 $\pm$ 198.691  $\chi^2$ /NDF: 232.0/101

- sign -2428.386 $\pm$ 280.861  $\chi^2$ /NDF: 46.3/51

# asym\_us\_avg\_rms vs Slug



Right In: 1587.367+/-0.295  $\chi^2/\text{NDF}$ : 854585.7/25

Left Out: 1615.853+/-0.269  $\chi^2/\text{NDF}$ : 694353.3/23

Right Out: 1645.799+/-0.296  $\chi^2/\text{NDF}$ : 935970.0/28

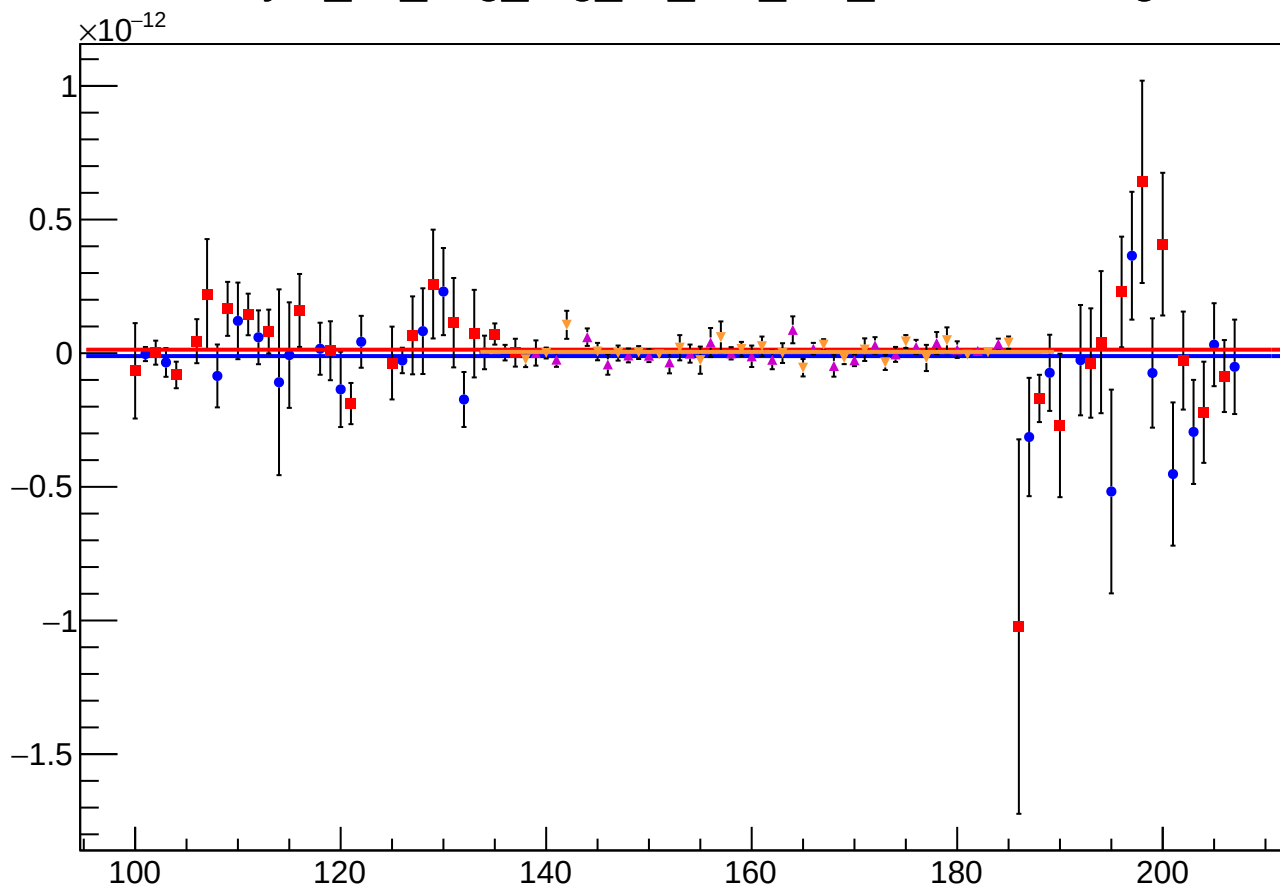
Left In: 1601.496+/-0.268  $\chi^2/\text{NDF}$ : 793722.6/22

+ sign 1602.935+/-0.199  $\chi^2/\text{NDF}$ : 1554028.6/49

All: 1612.214+/-0.140  $\chi^2/\text{NDF}$ : 3300395.8/100

- sign 1621.476+/-0.199  $\chi^2/\text{NDF}$ : 1742013.6/51

asym\_us\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 20.0/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 21.0/23

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 39.1/28

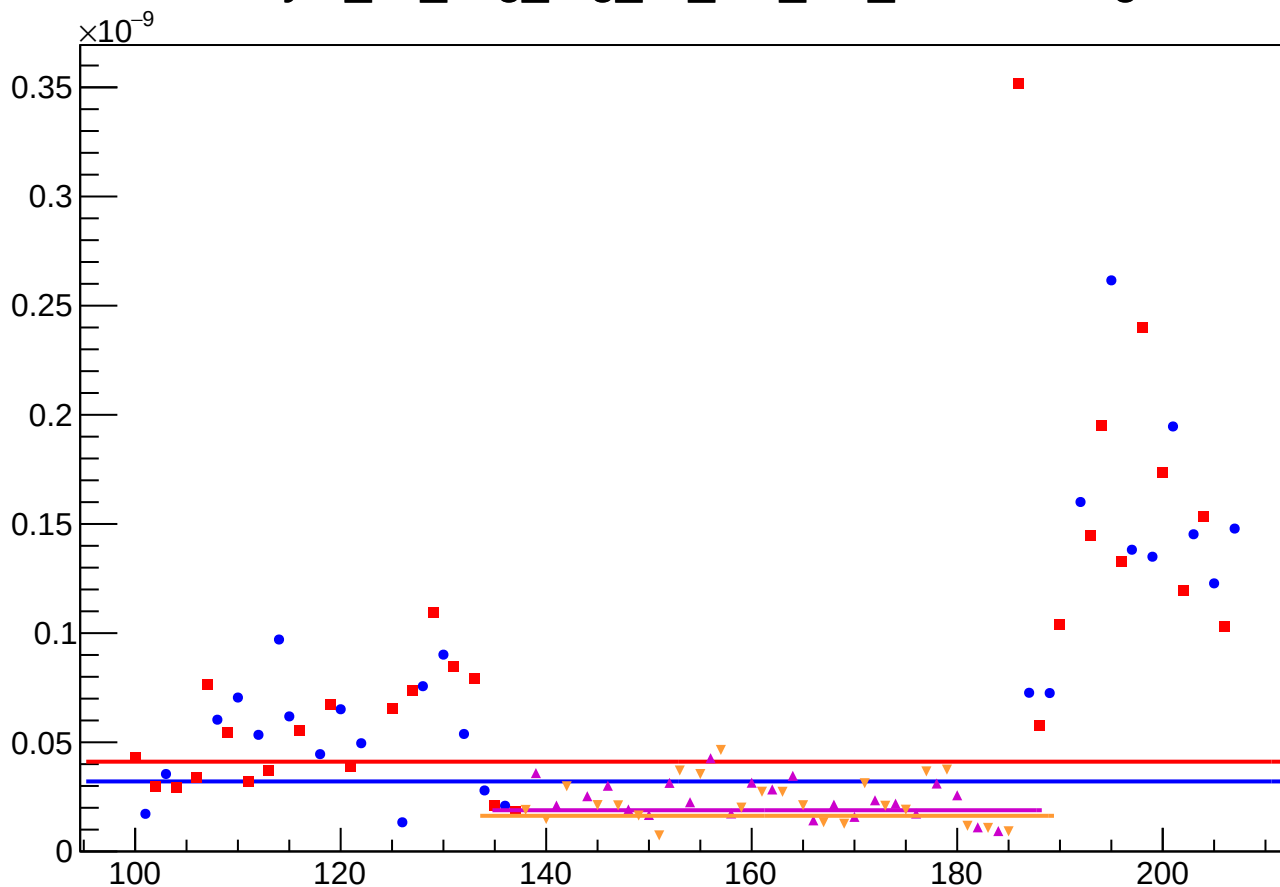
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 19.4/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 42.0/49

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 100.8/101

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 58.7/51

# asym\_us\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7994021.9/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 4263140.7/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 6731799.4/28

Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 3256130.1/22

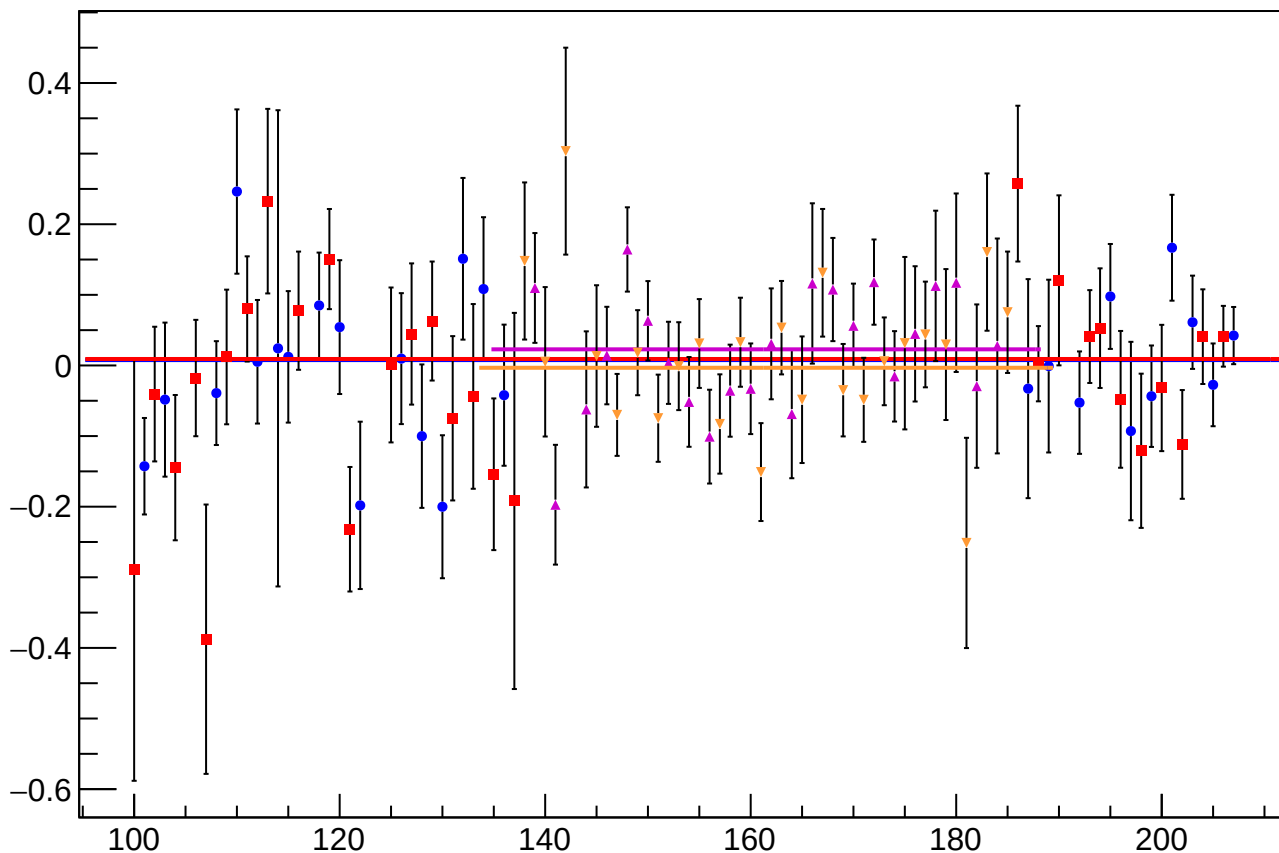
+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 14274591.0/49

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 27577824.2/101

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 12975888.1/51



asym\_us\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.008 \pm 0.016$   $\chi^2/\text{NDF}$ : 31.8/25

Left Out:  $-0.003 \pm 0.015$   $\chi^2/\text{NDF}$ : 25.9/23

Right Out:  $0.009 \pm 0.016$   $\chi^2/\text{NDF}$ : 39.7/28

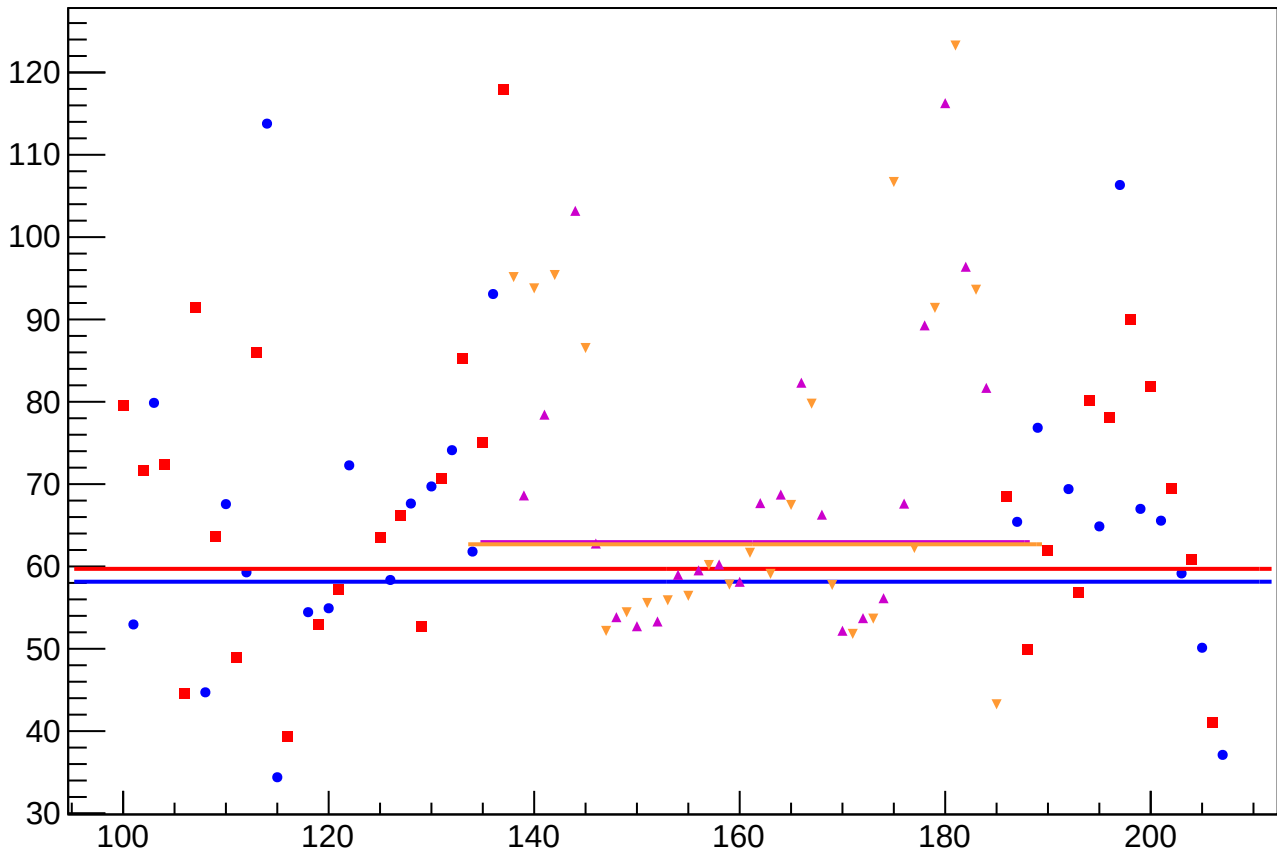
Left In:  $0.023 \pm 0.015$   $\chi^2/\text{NDF}$ : 29.0/22

+ sign  $0.002 \pm 0.011$   $\chi^2/\text{NDF}$ : 57.9/49

All:  $0.009 \pm 0.008$   $\chi^2/\text{NDF}$ : 127.8/101

- sign  $0.016 \pm 0.011$   $\chi^2/\text{NDF}$ : 69.0/51

# asym\_us\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In:  $58.146 \pm 0.011$   $\chi^2/\text{NDF}: 1754507.5/25$

Left Out:  $62.694 \pm 0.011$   $\chi^2/\text{NDF}: 1939401.0/23$

Right Out:  $59.709 \pm 0.011$   $\chi^2/\text{NDF}: 1672264.0/28$

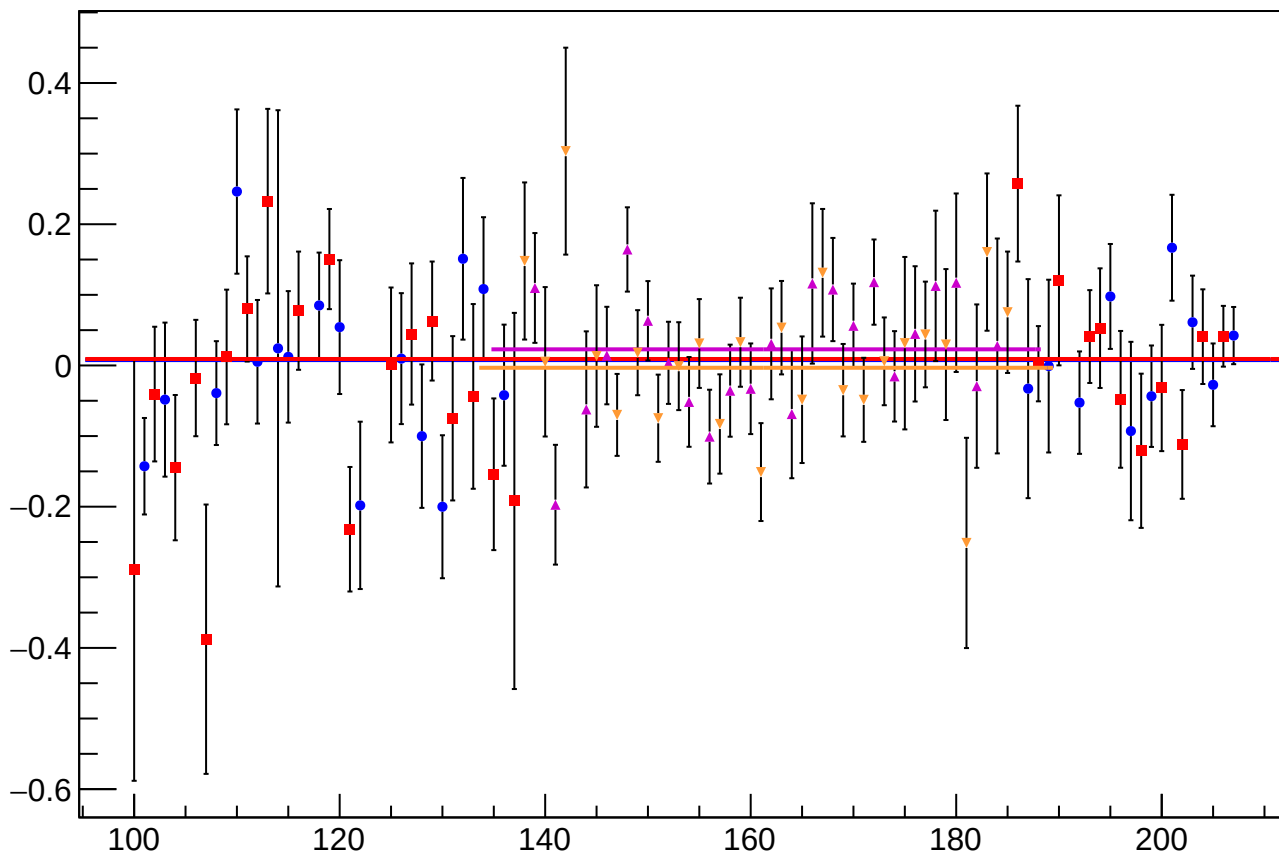
Left In:  $62.956 \pm 0.011$   $\chi^2/\text{NDF}: 1430426.1/22$

+ sign  $60.525 \pm 0.008$   $\chi^2/\text{NDF}: 3776129.3/49$

All:  $60.959 \pm 0.006$   $\chi^2/\text{NDF}: 6927183.4/101$

- sign  $61.388 \pm 0.008$   $\chi^2/\text{NDF}: 3145079.7/51$

asym\_us\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.008 \pm 0.016$   $\chi^2/\text{NDF}$ : 31.8/25

Left Out:  $-0.003 \pm 0.015$   $\chi^2/\text{NDF}$ : 25.9/23

Right Out:  $0.009 \pm 0.016$   $\chi^2/\text{NDF}$ : 39.7/28

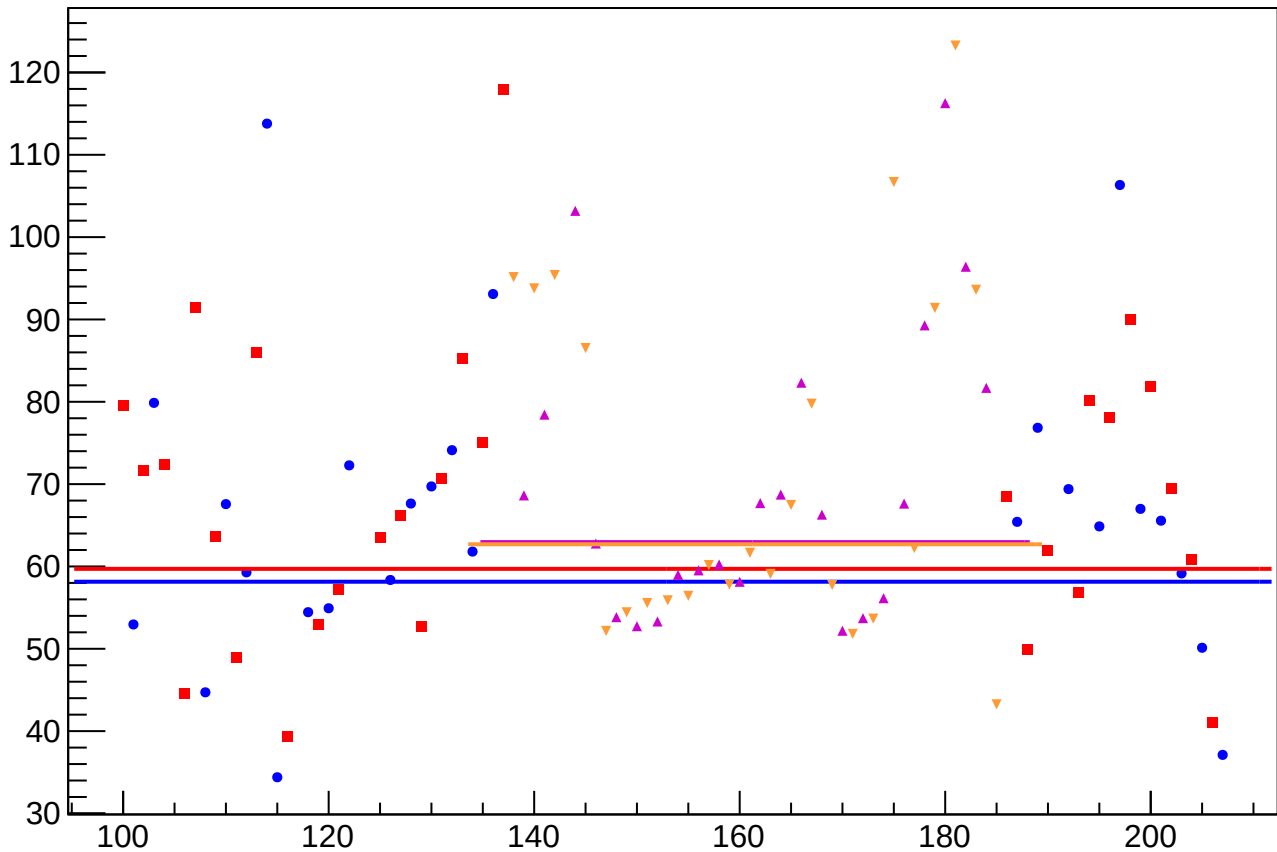
Left In:  $0.023 \pm 0.015$   $\chi^2/\text{NDF}$ : 29.0/22

+ sign  $0.002 \pm 0.011$   $\chi^2/\text{NDF}$ : 57.9/49

All:  $0.009 \pm 0.008$   $\chi^2/\text{NDF}$ : 127.8/101

- sign  $0.016 \pm 0.011$   $\chi^2/\text{NDF}$ : 69.0/51

asym\_us\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 58.146 $\pm$ 0.011  $\chi^2$ /NDF: 1754507.5/25

Left Out: 62.694 $\pm$ 0.011  $\chi^2$ /NDF:1939401.0/23

Right Out: 59.709 $\pm$ 0.011  $\chi^2$ /NDF: 1672264.0/28

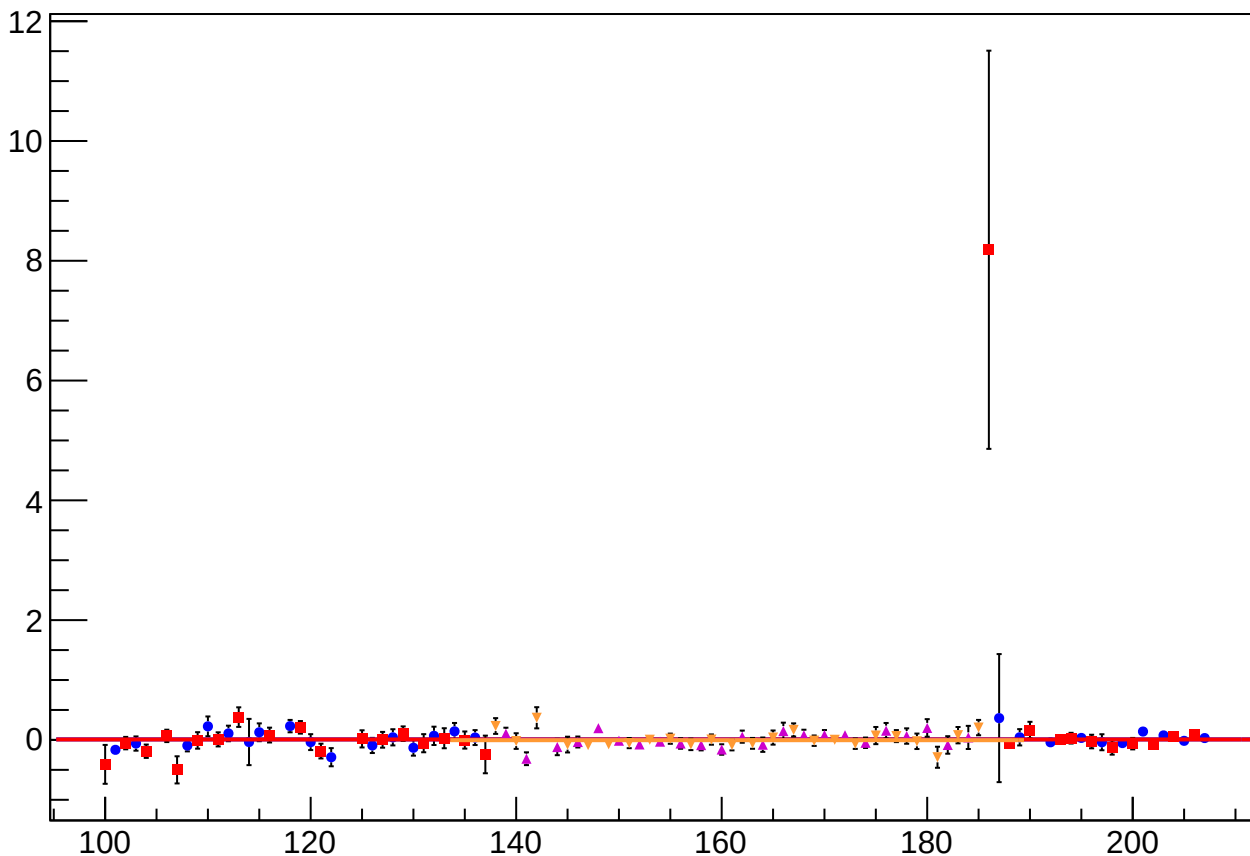
Left In: 62.956 $\pm$ 0.011  $\chi^2$ /NDF:1430426.1/22

+ sign 60.525 $\pm$ 0.008  $\chi^2$ /NDF: 3776129.3/49

All: 60.959 $\pm$ 0.006  $\chi^2$ /NDF: 6927183.4/101

- sign 61.388 $\pm$ 0.008  $\chi^2$ /NDF: 3145079.7/51

asym\_us\_avg\_dit\_vs\_overload\_cor\_diff\_mean vs Slug



Right In: 0.009 $\pm$ 0.020  $\chi^2$ /NDF: 25.5/25

Left Out: -0.004 $\pm$ 0.021  $\chi^2$ /NDF: 21.4/23

Right Out: 0.007 $\pm$ 0.020  $\chi^2$ /NDF: 38.0/28

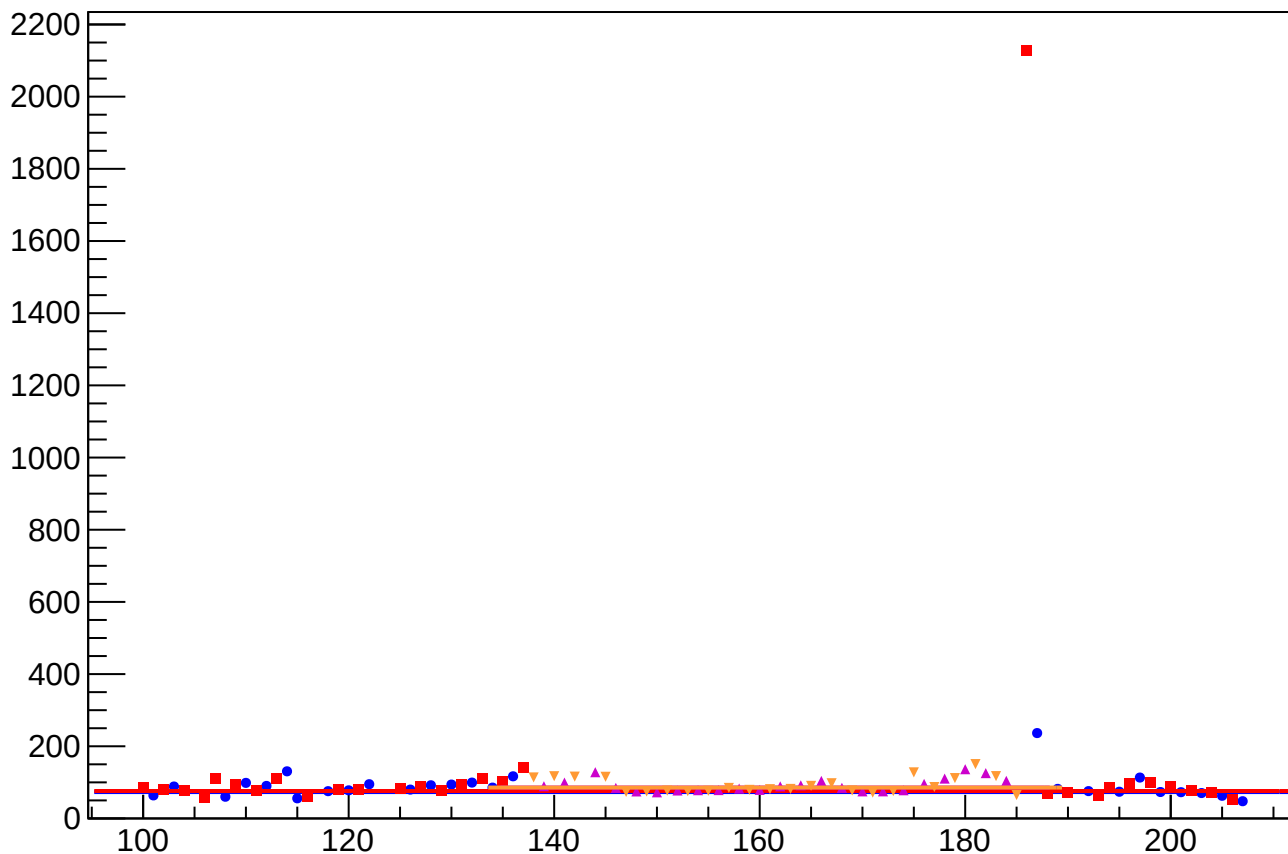
Left In: -0.002 $\pm$ 0.021  $\chi^2$ /NDF: 30.5/22

+ sign 0.002 $\pm$ 0.014  $\chi^2$ /NDF: 47.0/49

All: 0.003 $\pm$ 0.010  $\chi^2$ /NDF: 115.7/101

- sign 0.003 $\pm$ 0.014  $\chi^2$ /NDF: 68.7/51

asym\_us\_avg\_dit\_vs\_overload\_cor\_diff\_rms vs Slug



Right In: 73.116 $\pm$ 0.014  $\chi^2$ /NDF: 1472874.8/25

Left Out: 85.650 $\pm$ 0.015  $\chi^2$ /NDF:1352748.5/23

Right Out: 76.056 $\pm$ 0.014  $\chi^2$ /NDF: 1951305.4/28

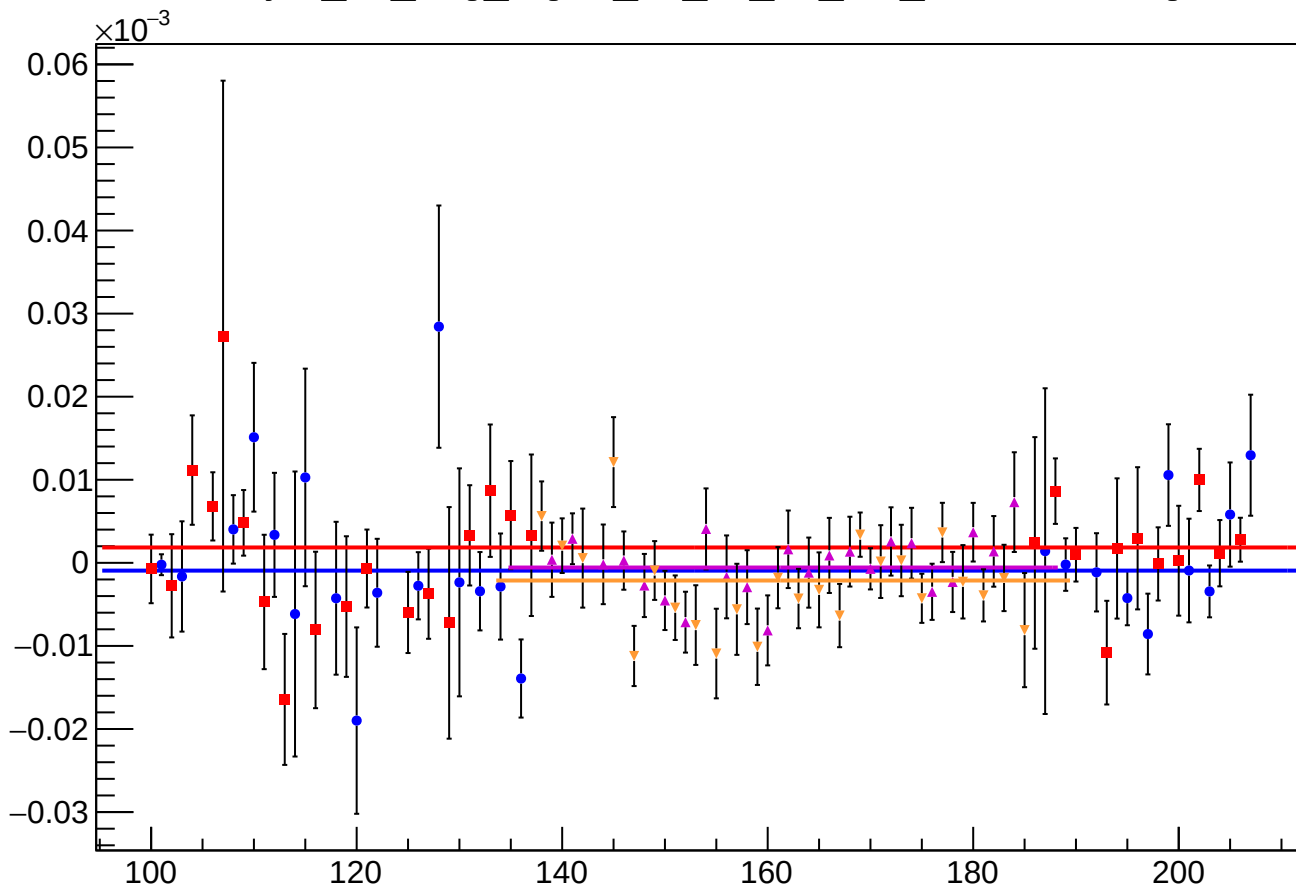
Left In: 85.679 $\pm$ 0.015  $\chi^2$ /NDF:995870.4/22

+ sign 79.219 $\pm$ 0.010  $\chi^2$ /NDF: 3202531.0/49

All: 79.991 $\pm$ 0.007  $\chi^2$ /NDF: 6382289.2/101

- sign 80.765 $\pm$ 0.010  $\chi^2$ /NDF: 3168308.4/51

asym\_us\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 33.8/25

Left Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 37.4/23

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 31.3/28

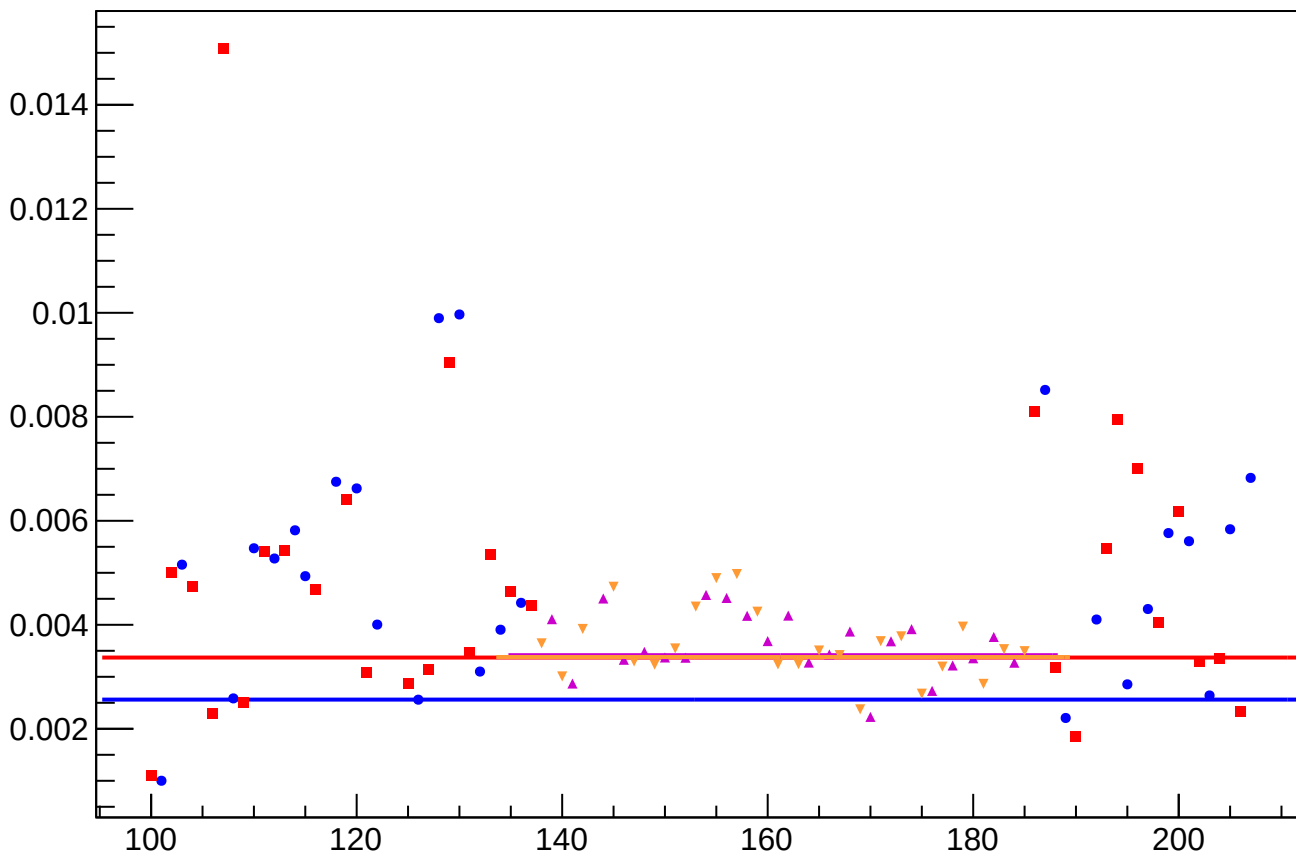
Left In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 16.6/22

+ sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 72.3/49

All: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 129.3/101

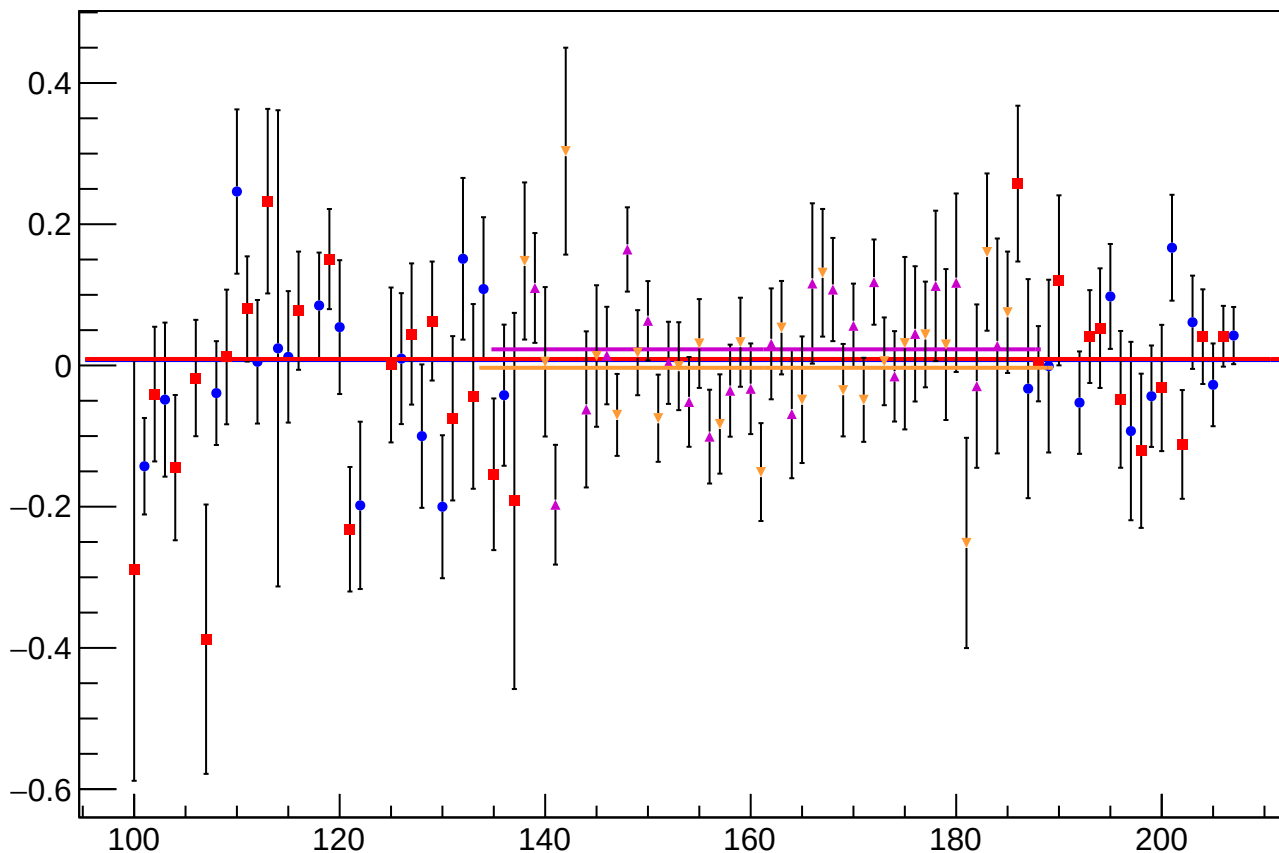
- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 51.5/51

# asym\_us\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug





asym\_us\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.008 \pm 0.016$   $\chi^2/\text{NDF}$ : 31.8/25

Left Out:  $-0.003 \pm 0.015$   $\chi^2/\text{NDF}$ : 25.9/23

Right Out:  $0.009 \pm 0.016$   $\chi^2/\text{NDF}$ : 39.7/28

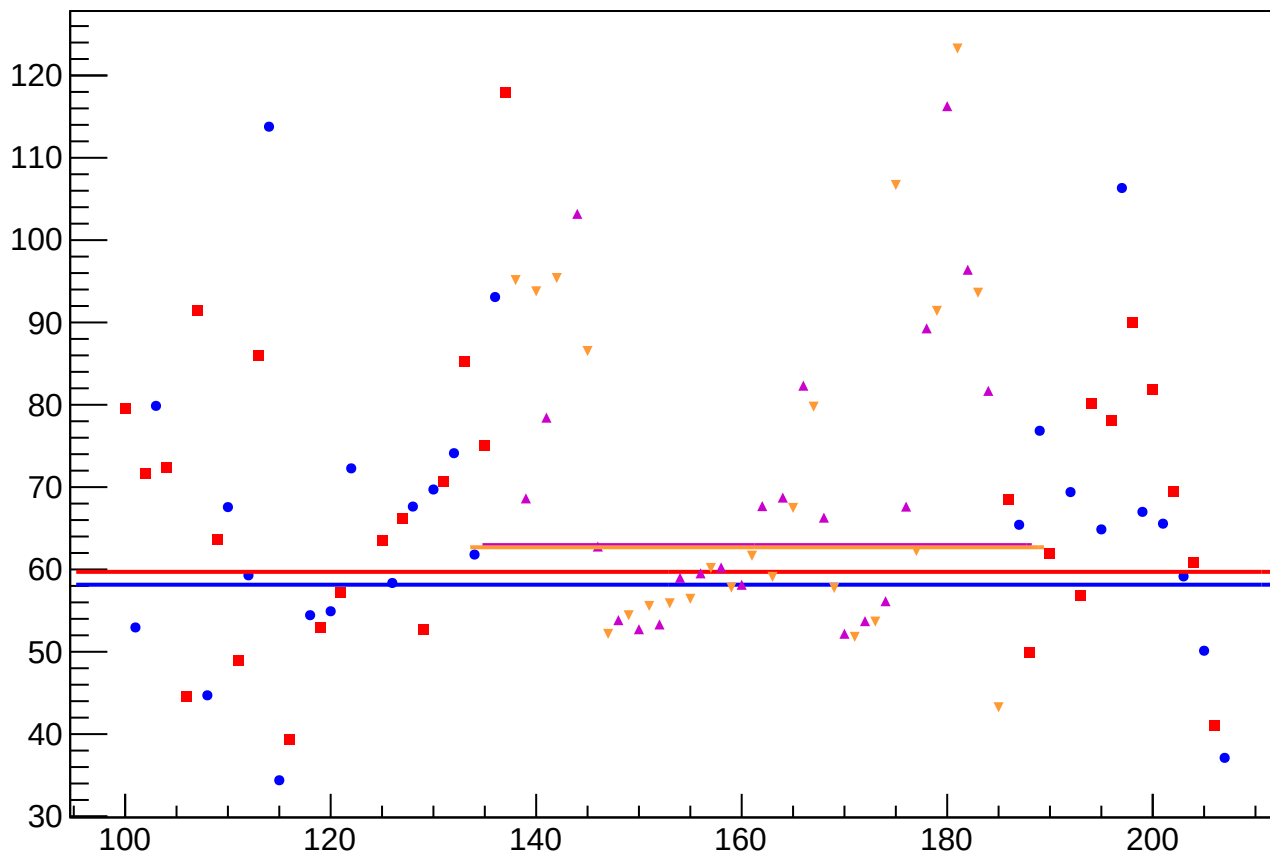
Left In:  $0.023 \pm 0.015$   $\chi^2/\text{NDF}$ : 29.0/22

+ sign  $0.002 \pm 0.011$   $\chi^2/\text{NDF}$ : 57.9/49

All:  $0.009 \pm 0.008$   $\chi^2/\text{NDF}$ : 127.8/101

- sign  $0.016 \pm 0.011$   $\chi^2/\text{NDF}$ : 69.0/51

asym\_us\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 58.146 $\pm$ 0.011  $\chi^2$ /NDF: 1754359.0/25

Left Out: 62.694 $\pm$ 0.011  $\chi^2$ /NDF:1939383.4/23

Right Out: 59.709 $\pm$ 0.011  $\chi^2$ /NDF: 1672106.0/28

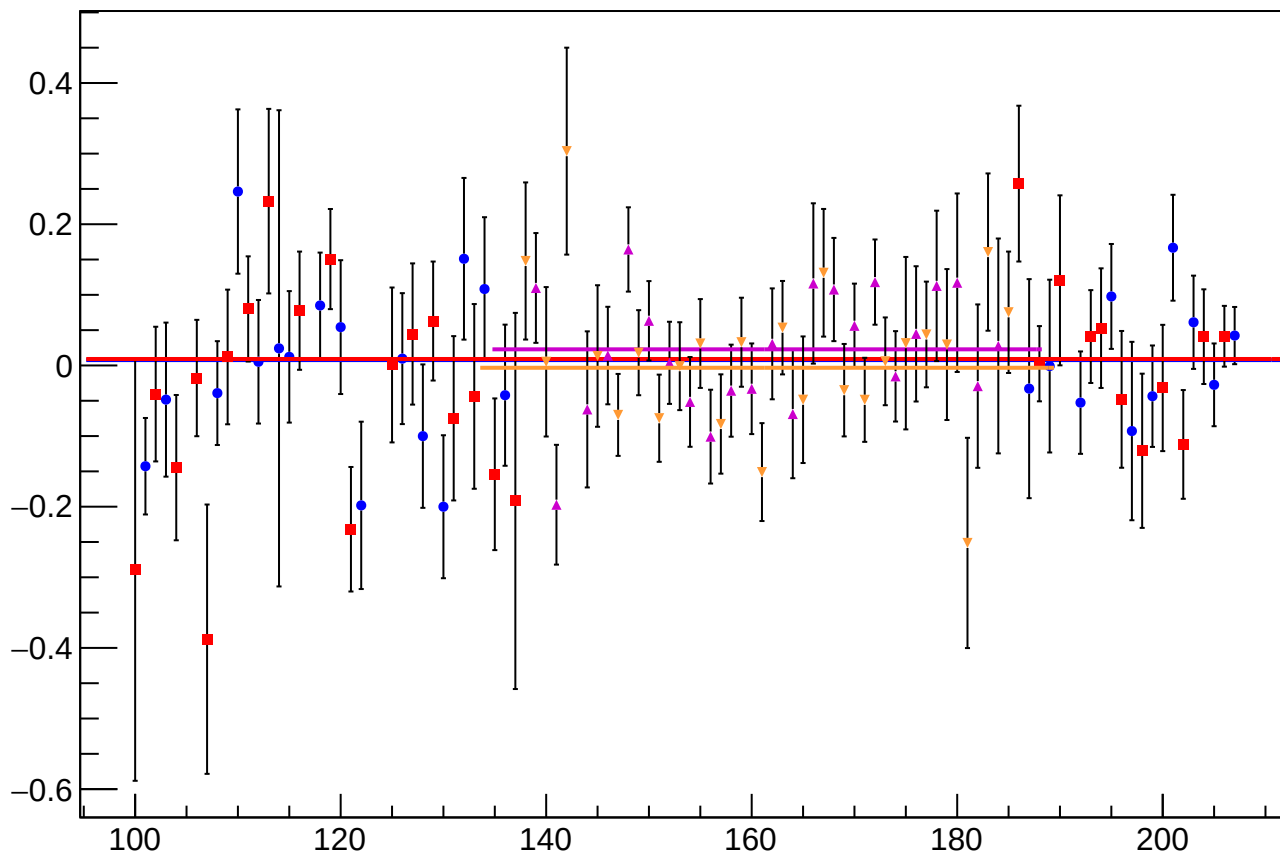
Left In: 62.956 $\pm$ 0.011  $\chi^2$ /NDF:1430401.4/22

+ sign 60.525 $\pm$ 0.008  $\chi^2$ /NDF: 3775970.7/49

All: 60.959 $\pm$ 0.006  $\chi^2$ /NDF: 6926856.6/101

- sign 61.388 $\pm$ 0.008  $\chi^2$ /NDF: 3144916.2/51

asym\_us\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.008 \pm 0.016$   $\chi^2/\text{NDF}$ : 31.8/25

Left Out:  $-0.003 \pm 0.015$   $\chi^2/\text{NDF}$ : 25.9/23

Right Out:  $0.009 \pm 0.016$   $\chi^2/\text{NDF}$ : 39.7/28

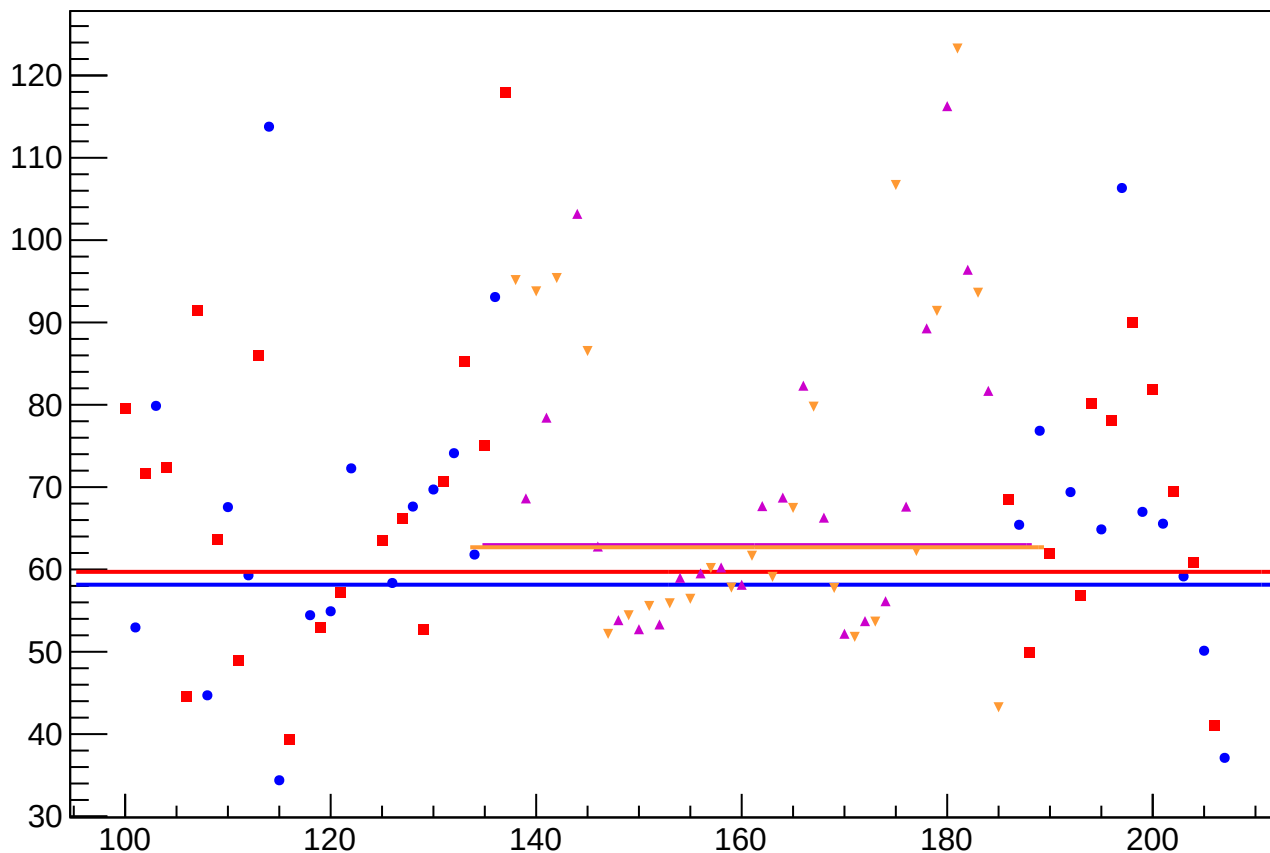
Left In:  $0.023 \pm 0.015$   $\chi^2/\text{NDF}$ : 29.0/22

+ sign  $0.002 \pm 0.011$   $\chi^2/\text{NDF}$ : 57.9/49

All:  $0.009 \pm 0.008$   $\chi^2/\text{NDF}$ : 127.8/101

- sign  $0.016 \pm 0.011$   $\chi^2/\text{NDF}$ : 69.0/51

asym\_us\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 58.146 $\pm$ 0.011  $\chi^2$ /NDF: 1754359.0/25

Left Out: 62.694 $\pm$ 0.011  $\chi^2$ /NDF:1939383.4/23

Right Out: 59.709 $\pm$ 0.011  $\chi^2$ /NDF: 1672106.0/28

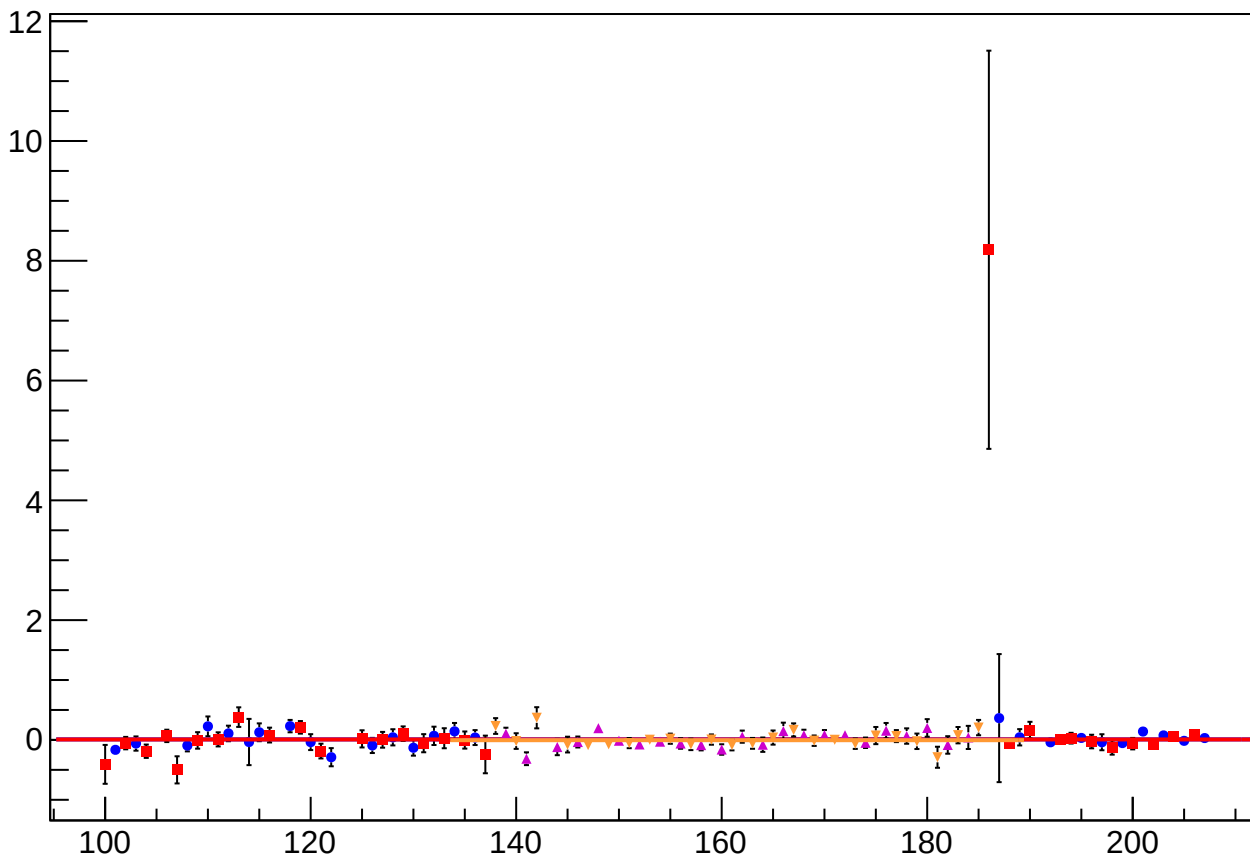
Left In: 62.956 $\pm$ 0.011  $\chi^2$ /NDF:1430401.4/22

+ sign 60.525 $\pm$ 0.008  $\chi^2$ /NDF: 3775970.7/49

All: 60.959 $\pm$ 0.006  $\chi^2$ /NDF: 6926856.6/101

- sign 61.388 $\pm$ 0.008  $\chi^2$ /NDF: 3144916.2/51

asym\_us\_avg\_eigen\_dit\_vs\_overload\_cor\_diff\_mean vs Slug



Right In:  $0.009 \pm 0.020$   $\chi^2/\text{NDF}$ : 25.5/25

Left Out:  $-0.004 \pm 0.021$   $\chi^2/\text{NDF}$ : 21.4/23

Right Out:  $0.007 \pm 0.020$   $\chi^2/\text{NDF}$ : 38.0/28

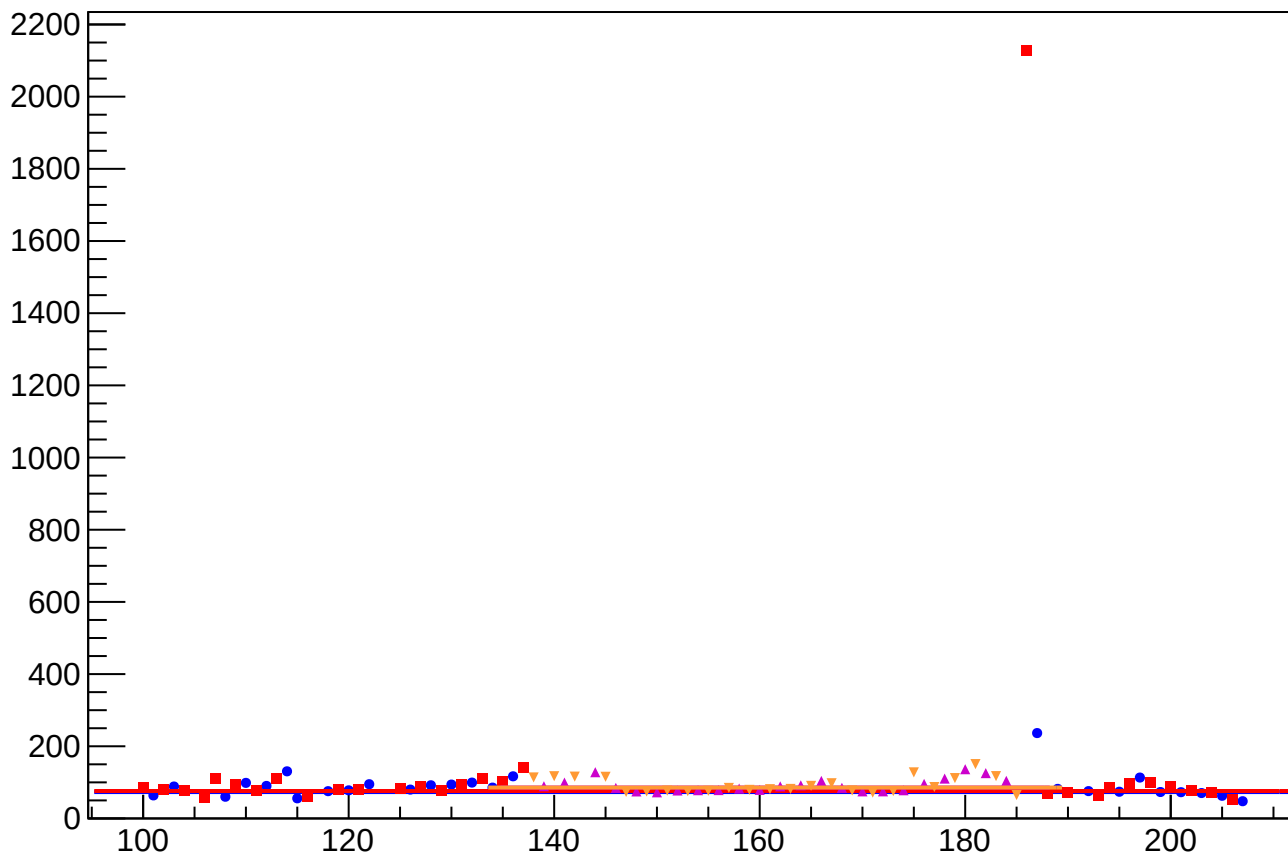
Left In:  $-0.002 \pm 0.021$   $\chi^2/\text{NDF}$ : 30.5/22

+ sign  $0.002 \pm 0.014$   $\chi^2/\text{NDF}$ : 47.0/49

All:  $0.003 \pm 0.010$   $\chi^2/\text{NDF}$ : 115.7/101

- sign  $0.003 \pm 0.014$   $\chi^2/\text{NDF}$ : 68.7/51

asym\_us\_avg\_eigen\_dit\_vs\_overload\_cor\_diff\_rms vs Slug



Right In: 73.116 $\pm$ 0.014  $\chi^2$ /NDF: 1472741.3/25

Left Out: 85.651 $\pm$ 0.015  $\chi^2$ /NDF:1352738.9/23

Right Out: 76.056 $\pm$ 0.014  $\chi^2$ /NDF: 1951210.3/28

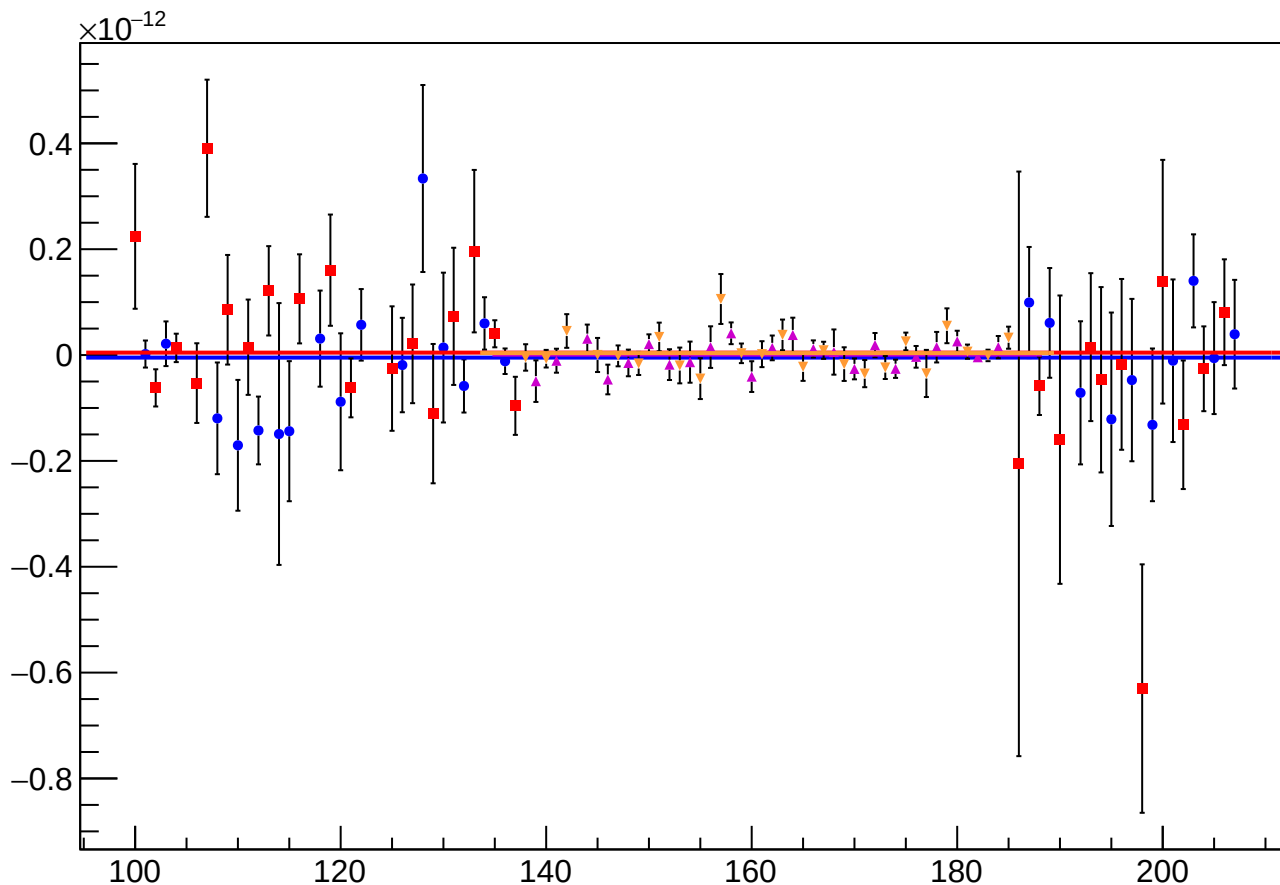
Left In: 85.679 $\pm$ 0.015  $\chi^2$ /NDF:995860.8/22

+ sign 79.220 $\pm$ 0.010  $\chi^2$ /NDF: 3202389.4/49

All: 79.991 $\pm$ 0.007  $\chi^2$ /NDF: 6382059.5/101

- sign 80.765 $\pm$ 0.010  $\chi^2$ /NDF: 3168224.8/51

asym\_us\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 23.3/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 25.0/23

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 42.9/28

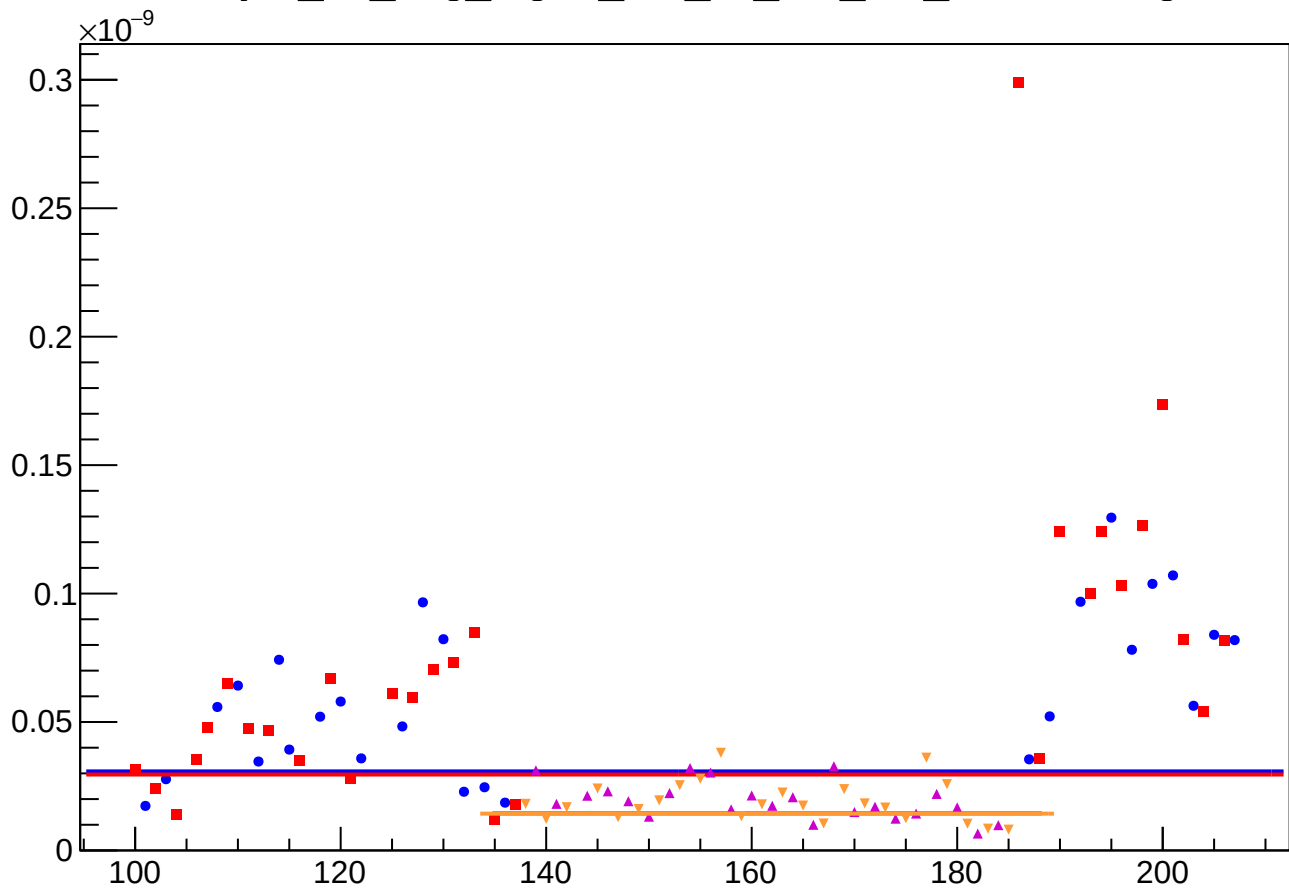
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 23.6/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 48.7/49

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 115.4/101

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 66.6/51

asym\_us\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 5730694.2/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 3611096.1/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7907480.8/28

Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 4256069.8/22

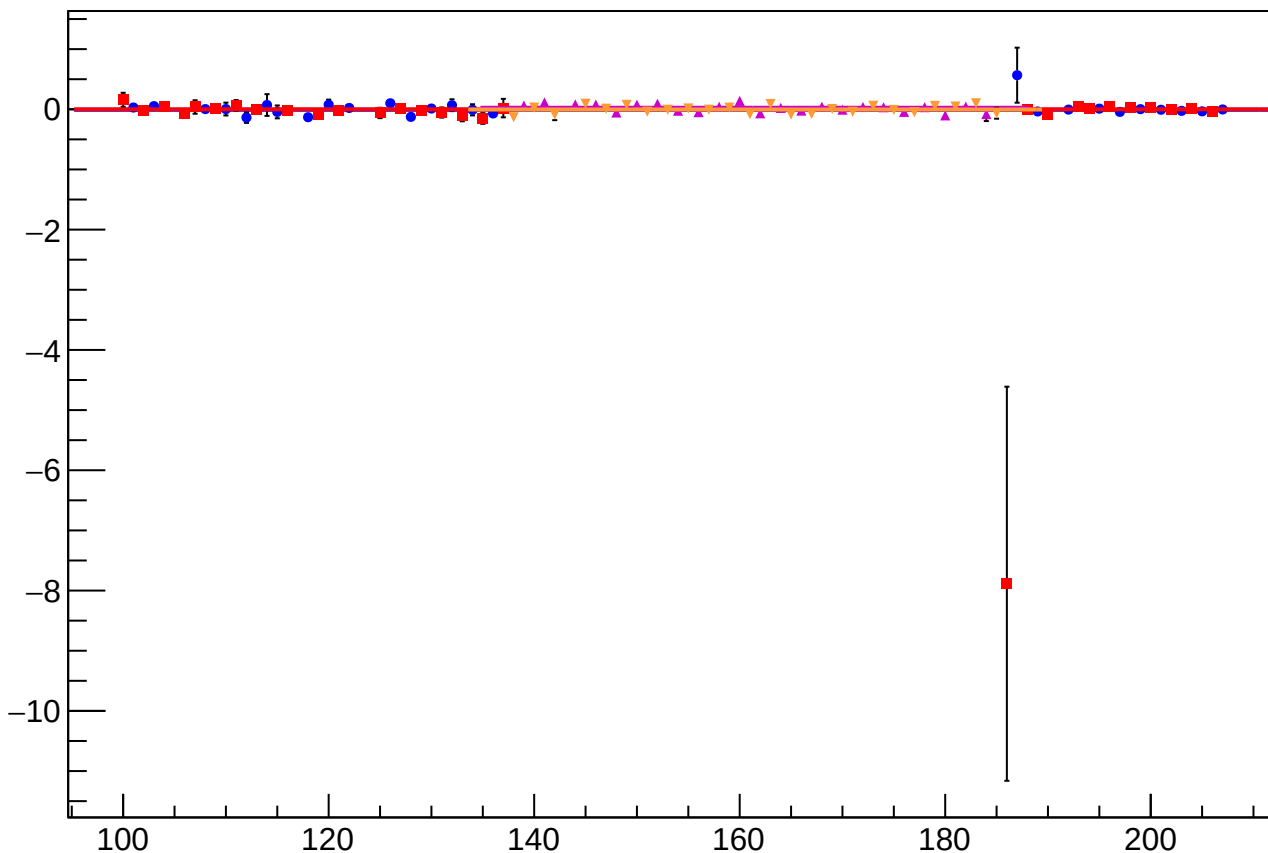
+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 12429300.1/49

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 27199164.8/101

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 14769841.1/51



asym\_us\_avg\_overload\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.007 \pm 0.009$   $\chi^2/\text{NDF}$ : 20.8/25

Left Out:  $-0.003 \pm 0.012$   $\chi^2/\text{NDF}$ : 23.1/23

Right Out:  $-0.001 \pm 0.008$   $\chi^2/\text{NDF}$ : 32.4/28

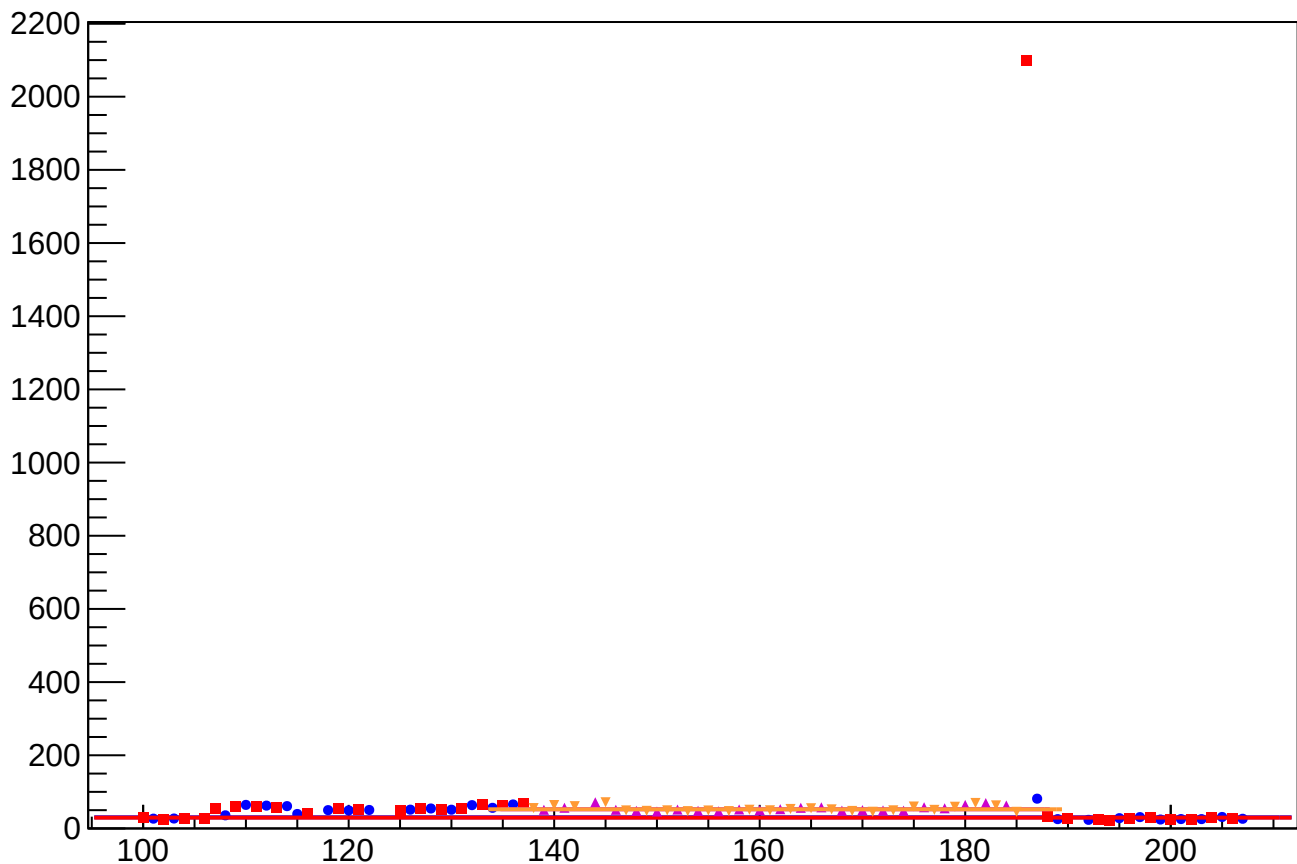
Left In:  $0.025 \pm 0.013$   $\chi^2/\text{NDF}$ : 24.3/22

+ sign  $-0.006 \pm 0.007$   $\chi^2/\text{NDF}$ : 44.0/49

All:  $0.001 \pm 0.005$   $\chi^2/\text{NDF}$ : 105.6/101

- sign  $0.007 \pm 0.007$   $\chi^2/\text{NDF}$ : 59.7/51

asym\_us\_avg\_overload\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 30.443+/-0.006  $\chi^2/\text{NDF}$ : 2836680.1/25

Left Out: 52.367+/-0.009  $\chi^2/\text{NDF}$ : 522031.5/23

Right Out: 29.568+/-0.006  $\chi^2/\text{NDF}$ : 3831822.1/28

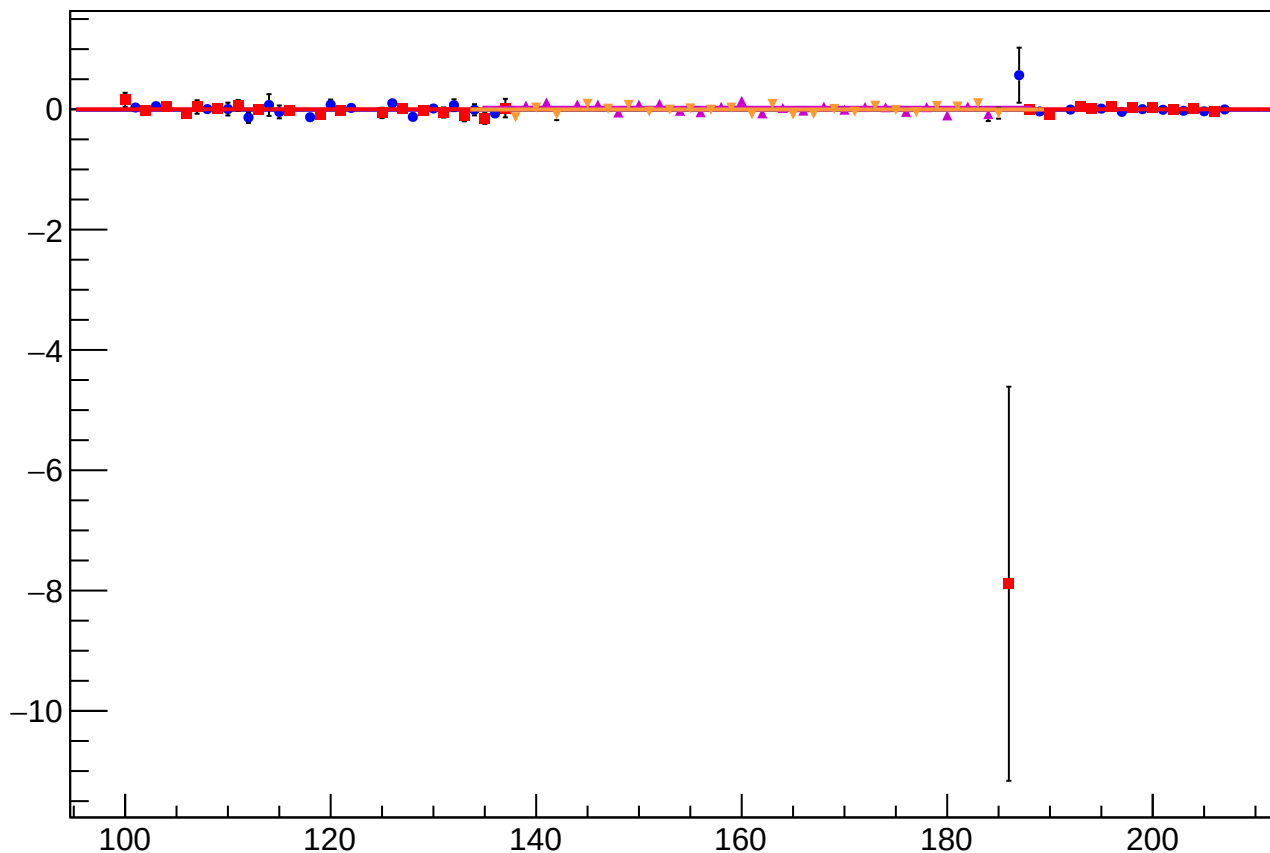
Left In: 52.484+/-0.009  $\chi^2/\text{NDF}$ : 445297.7/22

+ sign 37.535+/-0.005  $\chi^2/\text{NDF}$ : 7573617.3/49

All: 36.951+/-0.003  $\chi^2/\text{NDF}$ : 16584377.9/101

- sign 36.405+/-0.005  $\chi^2/\text{NDF}$ : 8984353.0/51

asym\_us\_avg\_overload\_cor\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.007 \pm 0.009$   $\chi^2/\text{NDF}$ : 20.8/25

Left Out:  $-0.003 \pm 0.012$   $\chi^2/\text{NDF}$ : 23.1/23

Right Out:  $-0.001 \pm 0.008$   $\chi^2/\text{NDF}$ : 32.4/28

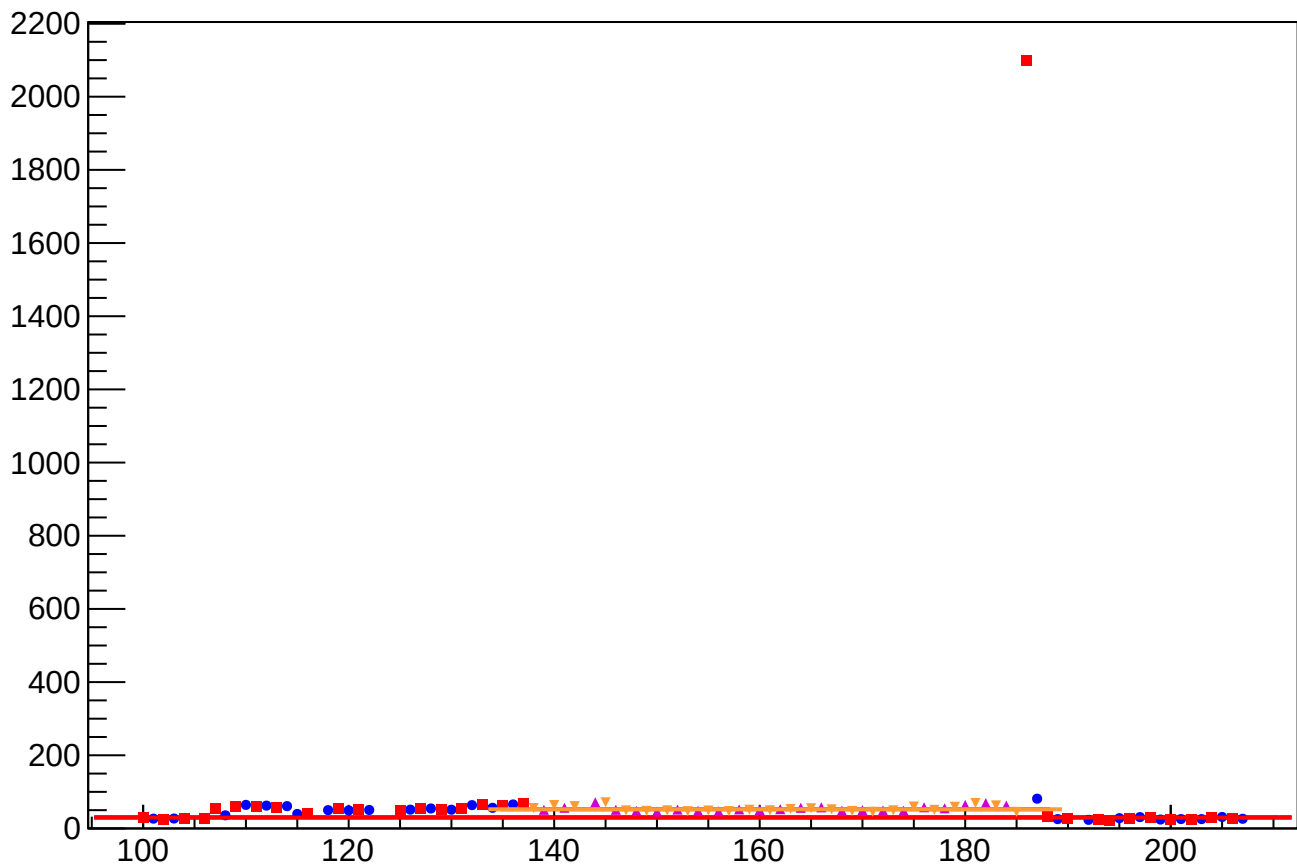
Left In:  $0.025 \pm 0.013$   $\chi^2/\text{NDF}$ : 24.3/22

+ sign  $-0.006 \pm 0.007$   $\chi^2/\text{NDF}$ : 44.0/49

All:  $0.001 \pm 0.005$   $\chi^2/\text{NDF}$ : 105.6/101

- sign  $0.007 \pm 0.007$   $\chi^2/\text{NDF}$ : 59.7/51

asym\_us\_avg\_overload\_cor\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 30.443+/-0.006  $\chi^2/\text{NDF}$ : 2836680.1/25

Left Out: 52.367+/-0.009  $\chi^2/\text{NDF}$ : 522031.5/23

Right Out: 29.568+/-0.006  $\chi^2/\text{NDF}$ : 3831822.1/28

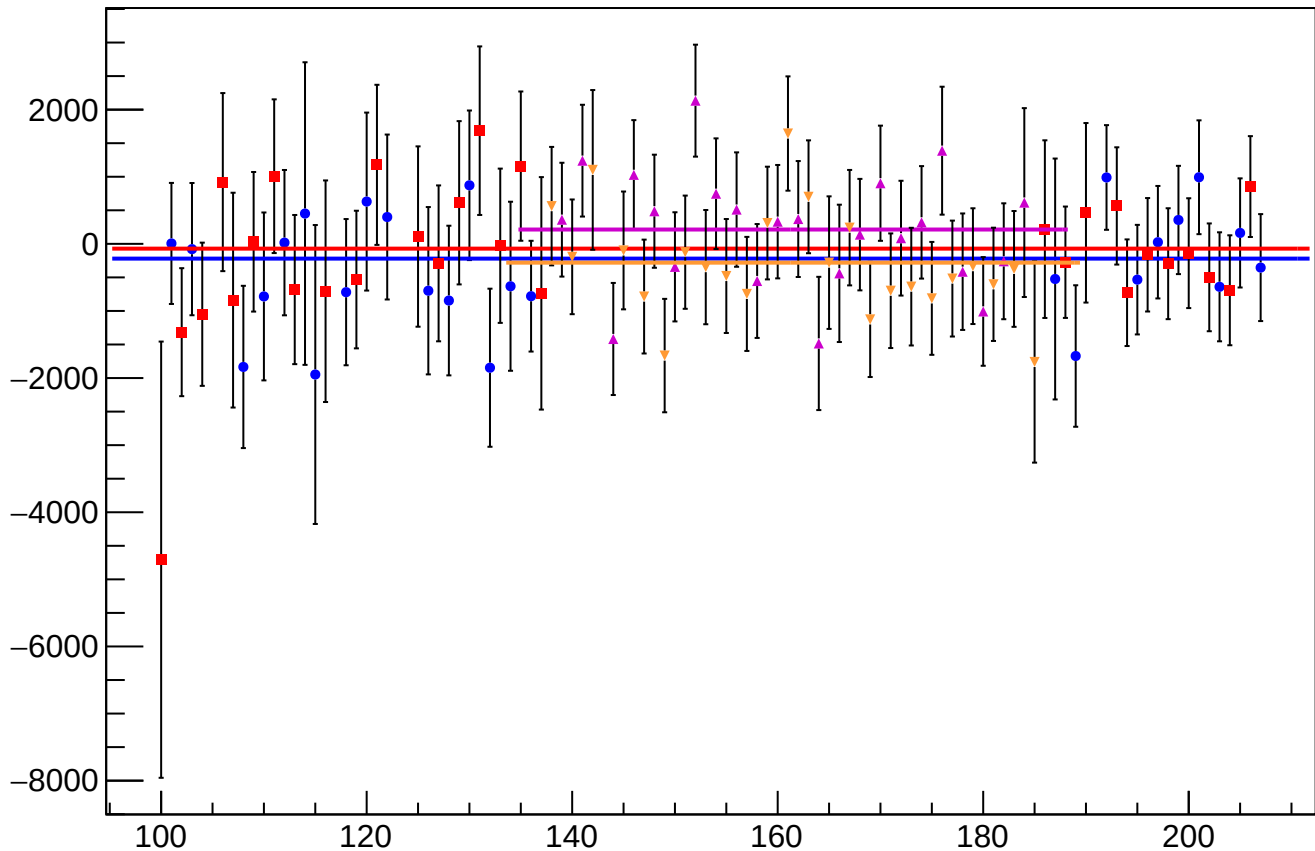
Left In: 52.484+/-0.009  $\chi^2/\text{NDF}$ : 445297.7/22

+ sign 37.535+/-0.005  $\chi^2/\text{NDF}$ : 7573617.3/49

All: 36.951+/-0.003  $\chi^2/\text{NDF}$ : 16584377.9/101

- sign 36.405+/-0.005  $\chi^2/\text{NDF}$ : 8984353.0/51

# reg\_asym\_us\_dd\_mean vs Slug



Right In:  $-219.969 \pm 198.879$   $\chi^2/\text{NDF}$ : 15.2/25

Left Out:  $-280.364 \pm 179.881$   $\chi^2/\text{NDF}$ : 16.1/23

Right Out:  $-71.352 \pm 193.556$   $\chi^2/\text{NDF}$ : 15.7/28

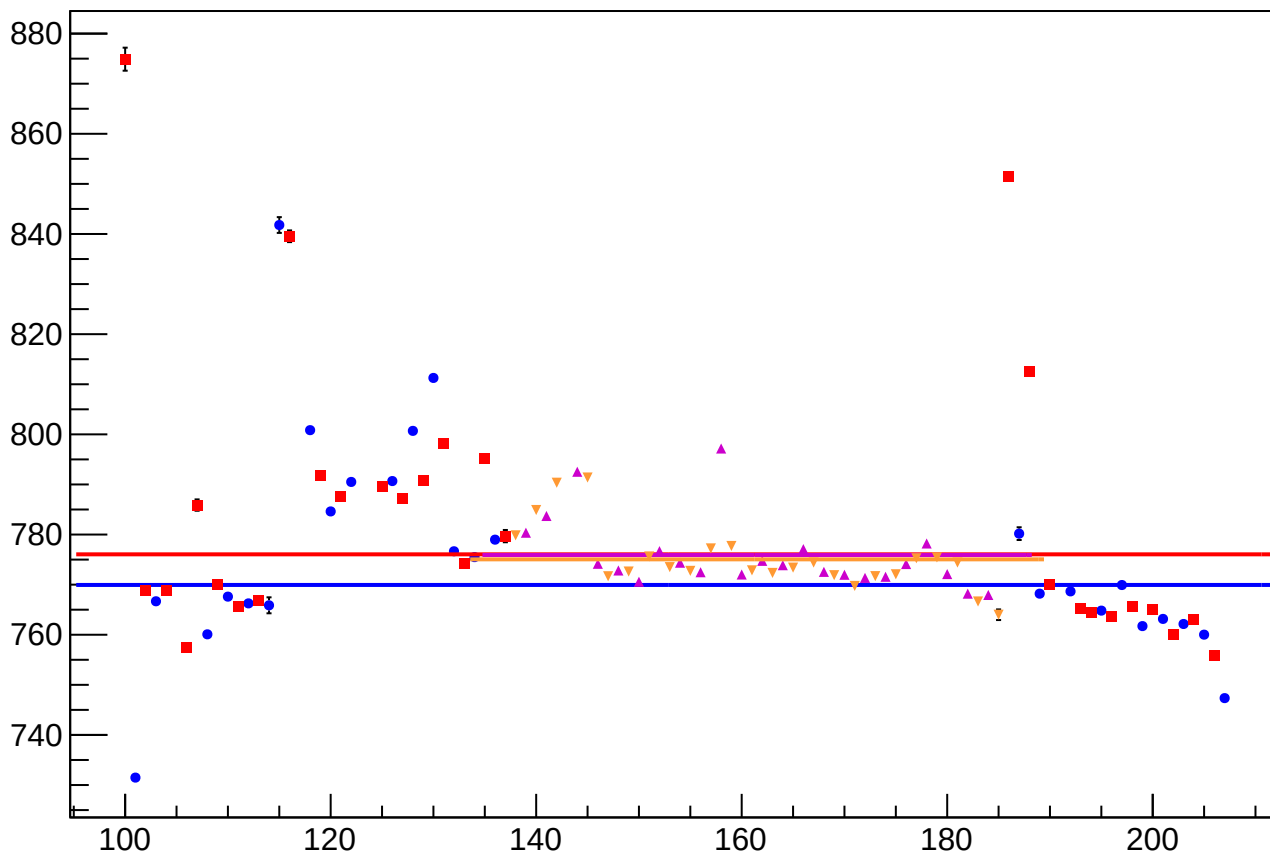
Left In:  $213.425 \pm 181.168$   $\chi^2/\text{NDF}$ : 22.4/22

+ sign  $-253.188 \pm 133.407$   $\chi^2/\text{NDF}$ : 31.3/49

All:  $-84.943 \pm 93.928$   $\chi^2/\text{NDF}$ : 73.7/101

- sign  $80.441 \pm 132.268$   $\chi^2/\text{NDF}$ : 39.2/51

# reg\_asym\_us\_dd\_rms vs Slug



Right In: 769.940 $\pm$ 0.141  $\chi^2$ /NDF: 16067.0/25

Left Out: 775.050 $\pm$ 0.127  $\chi^2$ /NDF:1951.3/23

Right Out: 776.051 $\pm$ 0.137  $\chi^2$ /NDF: 23444.3/28

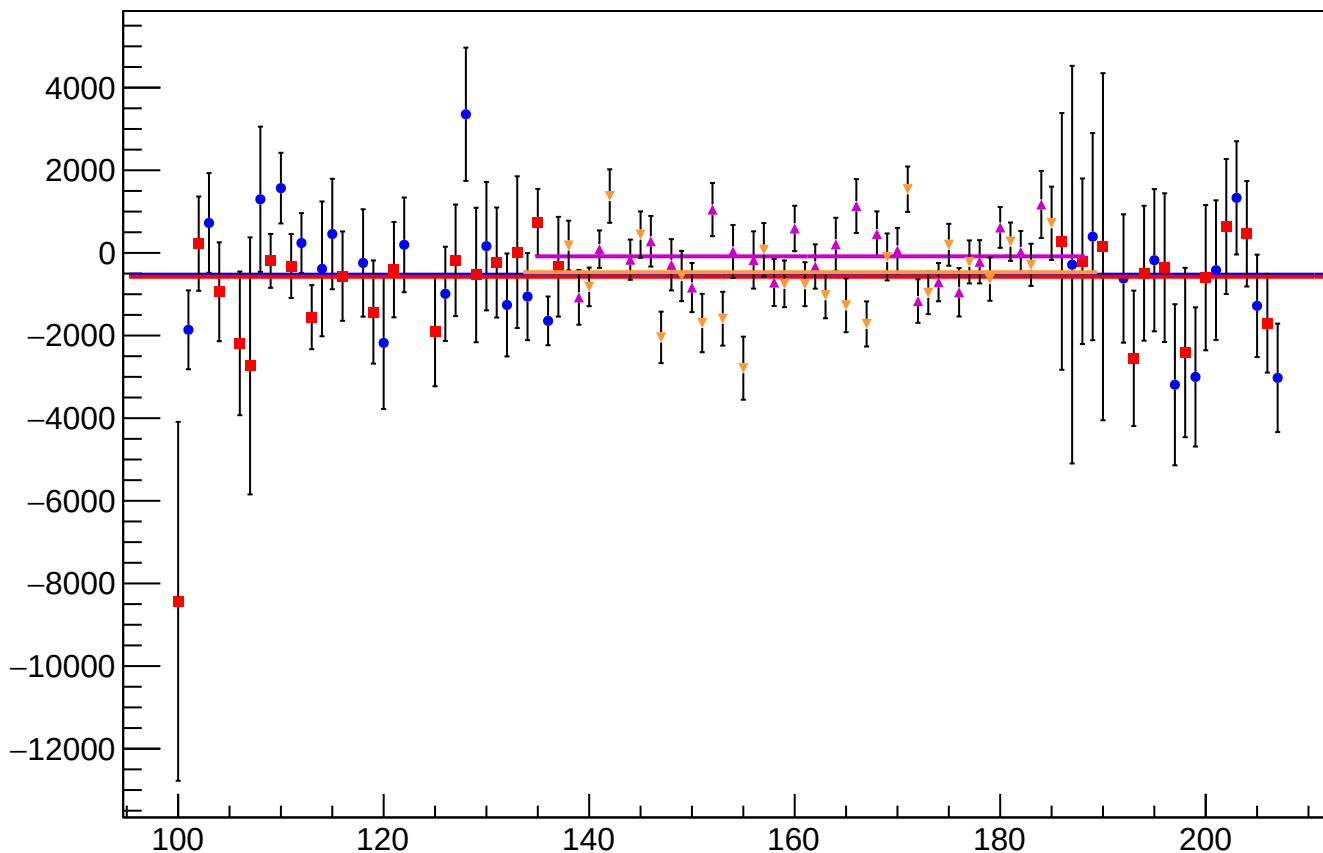
Left In: 775.922 $\pm$ 0.128  $\chi^2$ /NDF:2973.0/22

+ sign 772.751 $\pm$ 0.094  $\chi^2$ /NDF: 18744.4/49

All: 774.380 $\pm$ 0.066  $\chi^2$ /NDF: 45753.9/101

- sign 775.982 $\pm$ 0.094  $\chi^2$ /NDF: 26417.7/51

# asym\_us\_dd\_reg\_correction\_mean vs Slug



Right In:  $-526.860 \pm 237.406$   $\chi^2/\text{NDF}$ : 33.7/25

Left Out:  $-467.151 \pm 116.712$   $\chi^2/\text{NDF}$ : 64.4/23

Right Out:  $-576.963 \pm 234.498$   $\chi^2/\text{NDF}$ : 16.2/28

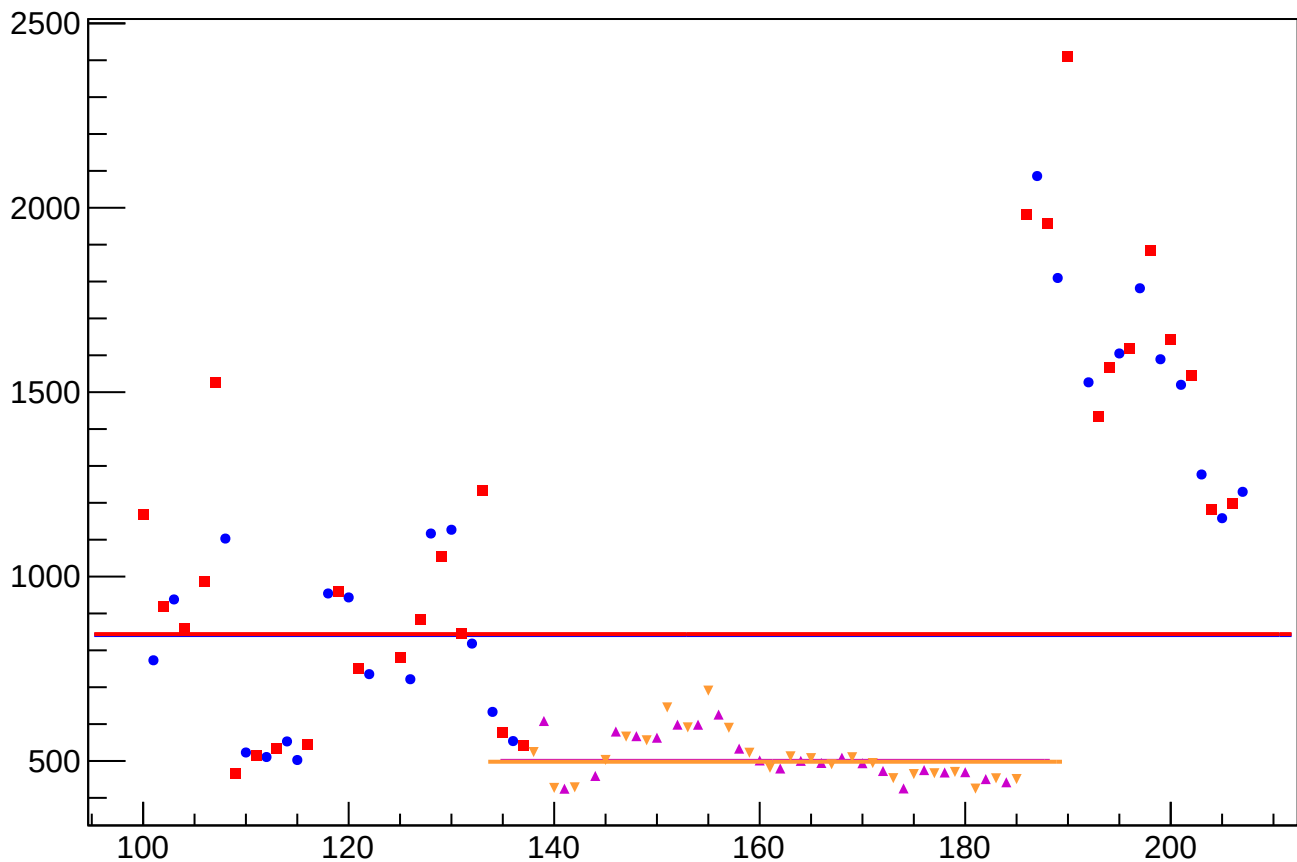
Left In:  $-83.154 \pm 117.808$   $\chi^2/\text{NDF}$ : 28.1/22

+ sign  $-478.773 \pm 104.740$   $\chi^2/\text{NDF}$ : 98.2/49

All:  $-331.469 \pm 74.249$   $\chi^2/\text{NDF}$ : 150.0/101

- sign  $-182.669 \pm 105.270$   $\chi^2/\text{NDF}$ : 47.9/51

# asym\_us\_dd\_reg\_correction\_rms vs Slug



Right In: 841.450+/-0.168  $\chi^2/\text{NDF}$ : 4600546.1/25

Left Out: 497.966+/-0.083  $\chi^2/\text{NDF}$ : 526993.3/23

Right Out: 844.053+/-0.166  $\chi^2/\text{NDF}$ : 5935208.2/28

Left In: 500.307+/-0.083  $\chi^2/\text{NDF}$ : 477388.4/22

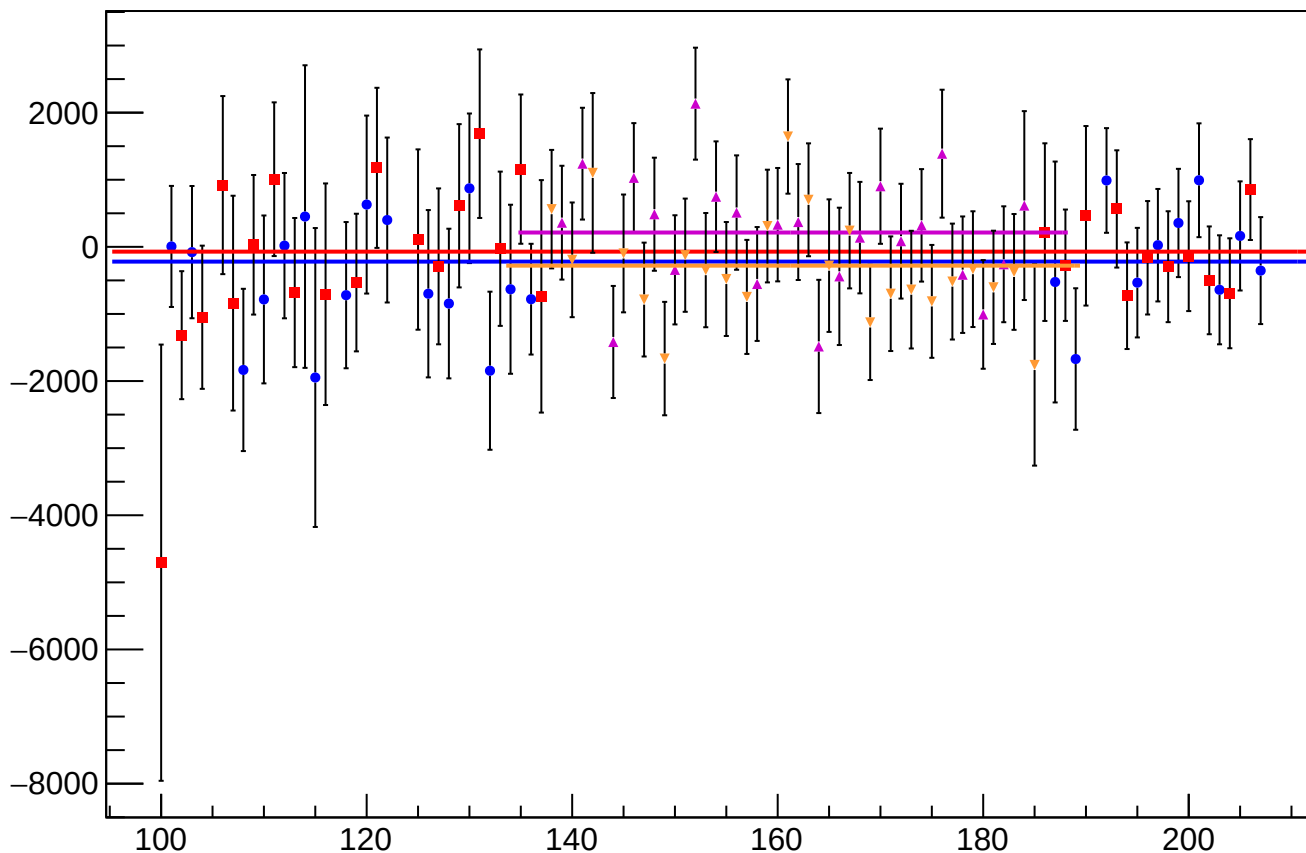
+ sign 564.823+/-0.074  $\chi^2/\text{NDF}$ : 8499237.6/49

All: 567.190+/-0.053  $\chi^2/\text{NDF}$ : 18345431.8/10

- sign 569.581+/-0.074  $\chi^2/\text{NDF}$ : 9844141.1/51



# cor\_asym\_us\_dd\_mean vs Slug



Right In:  $-219.969 \pm 198.879$   $\chi^2/\text{NDF}$ : 15.2/25

Left Out:  $-280.364 \pm 179.881$   $\chi^2/\text{NDF}$ : 16.1/23

Right Out:  $-71.352 \pm 193.556$   $\chi^2/\text{NDF}$ : 15.7/28

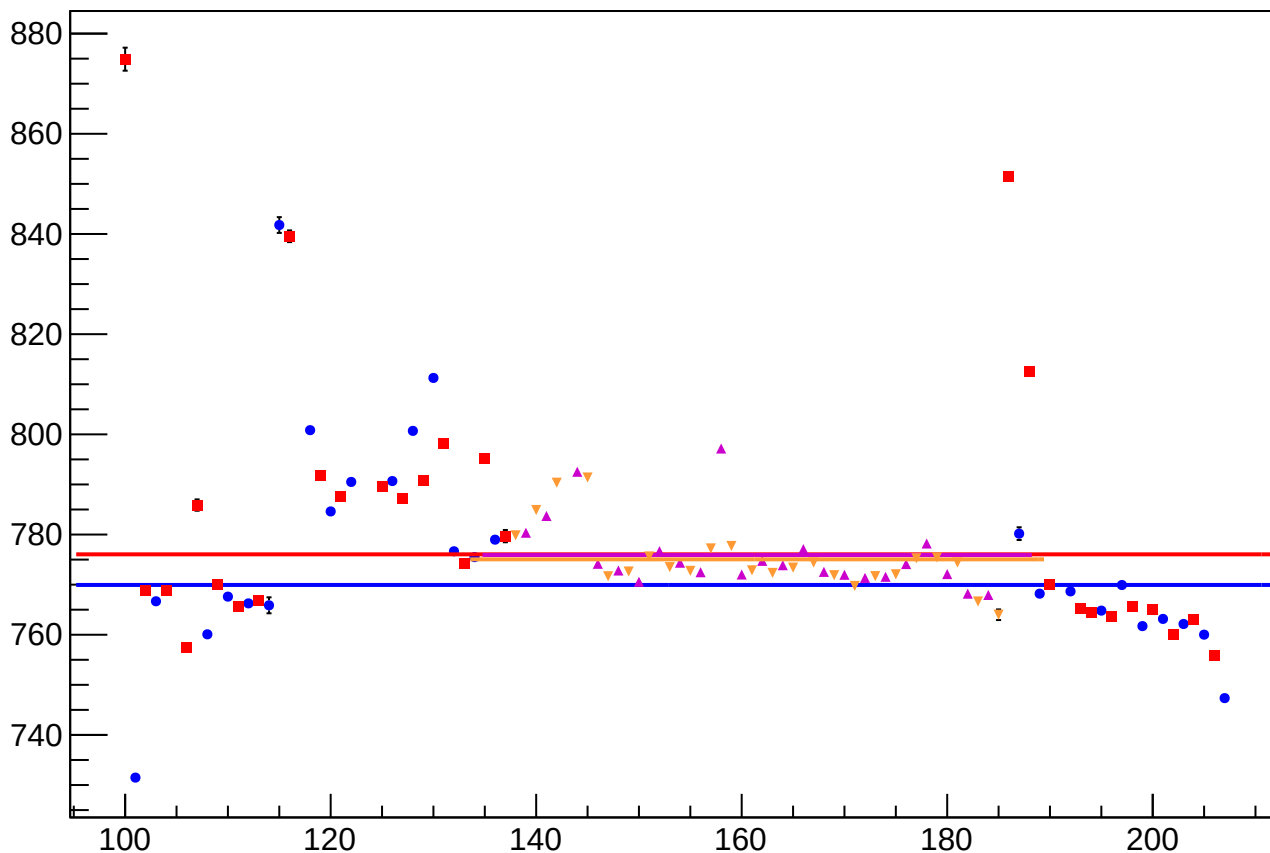
Left In:  $213.425 \pm 181.168$   $\chi^2/\text{NDF}$ : 22.4/22

+ sign  $-253.188 \pm 133.407$   $\chi^2/\text{NDF}$ : 31.3/49

All:  $-84.943 \pm 93.928$   $\chi^2/\text{NDF}$ : 73.7/101

- sign  $80.441 \pm 132.268$   $\chi^2/\text{NDF}$ : 39.2/51

# cor\_asym\_us\_dd\_rms vs Slug



Right In:  $769.940 \pm 0.141$   $\chi^2/\text{NDF}: 16067.0/25$

Left Out:  $775.050 \pm 0.127$   $\chi^2/\text{NDF}: 1951.3/23$

Right Out:  $776.051 \pm 0.137$   $\chi^2/\text{NDF}: 23444.3/28$

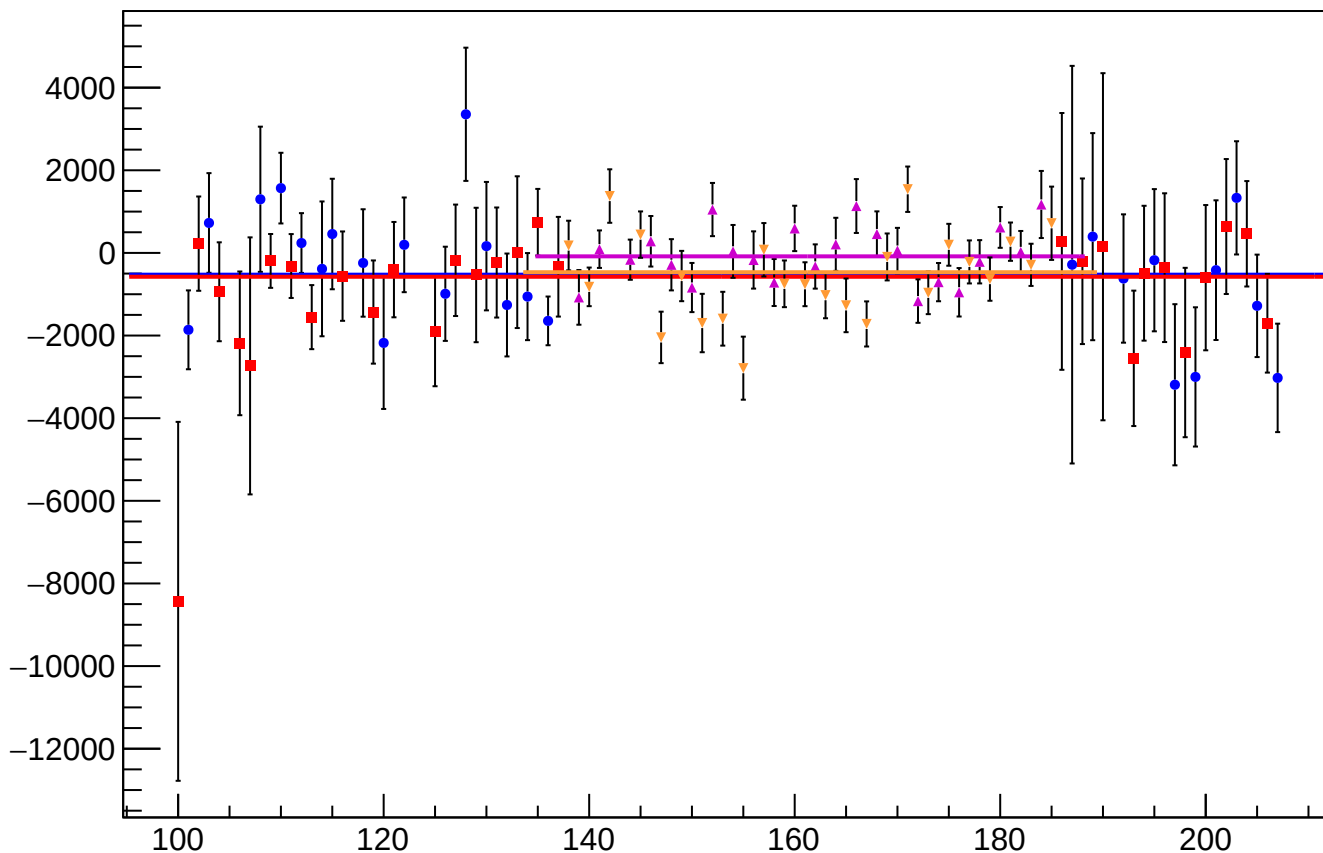
Left In:  $775.922 \pm 0.128$   $\chi^2/\text{NDF}: 2973.0/22$

+ sign  $772.751 \pm 0.094$   $\chi^2/\text{NDF}: 18744.4/49$

All:  $774.380 \pm 0.066$   $\chi^2/\text{NDF}: 45753.9/101$

- sign  $775.982 \pm 0.094$   $\chi^2/\text{NDF}: 26417.7/51$

# asym\_us\_dd\_cor\_correction\_mean vs Slug



Right In:  $-526.860 \pm 237.406$   $\chi^2/\text{NDF}$ : 33.7/25

Left Out:  $-467.151 \pm 116.712$   $\chi^2/\text{NDF}$ : 64.4/23

Right Out:  $-576.963 \pm 234.498$   $\chi^2/\text{NDF}$ : 16.2/28

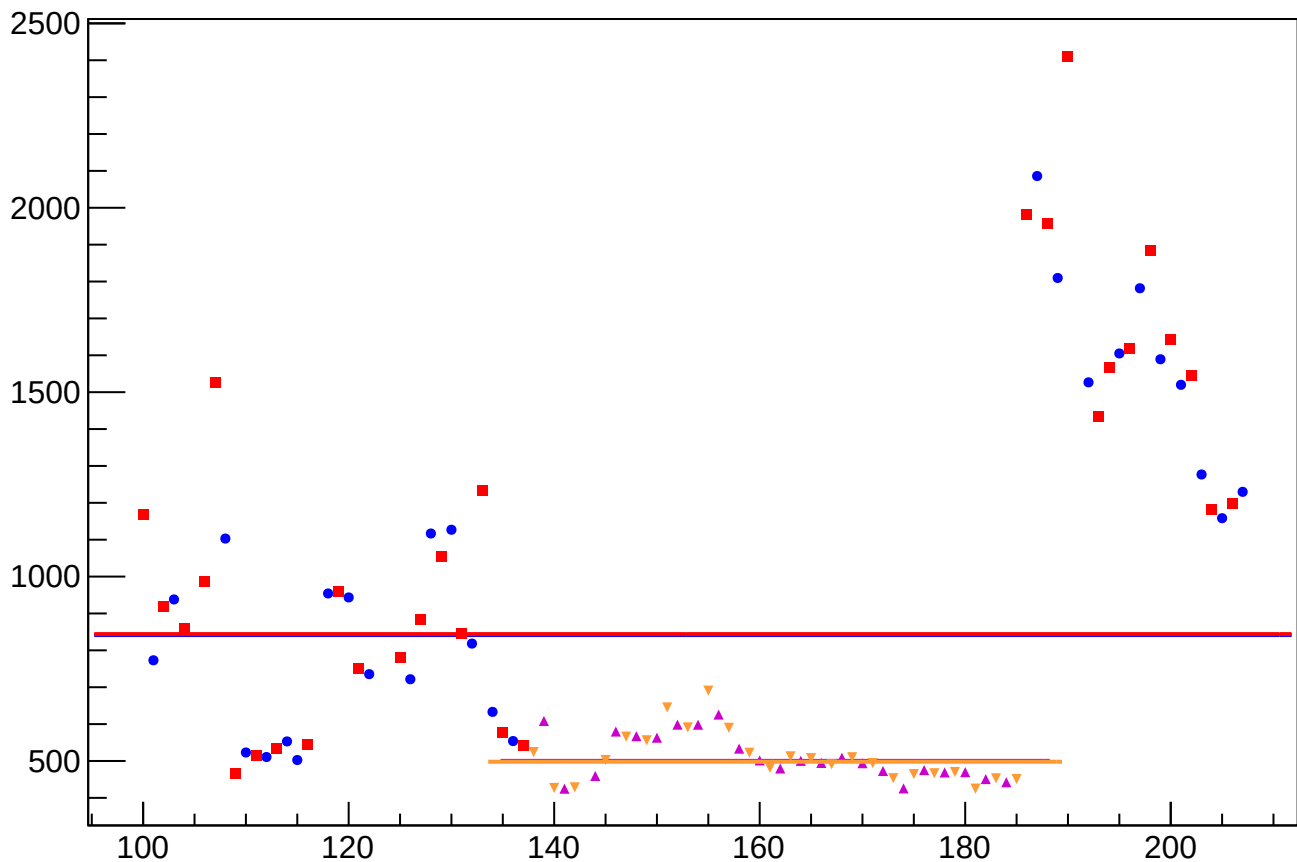
Left In:  $-83.154 \pm 117.808$   $\chi^2/\text{NDF}$ : 28.1/22

+ sign  $-478.773 \pm 104.740$   $\chi^2/\text{NDF}$ : 98.2/49

All:  $-331.469 \pm 74.249$   $\chi^2/\text{NDF}$ : 150.0/101

- sign  $-182.669 \pm 105.270$   $\chi^2/\text{NDF}$ : 47.9/51

# asym\_us\_dd\_cor\_correction\_rms vs Slug



Right In: 841.450+/-0.168  $\chi^2/\text{NDF}$ : 4600546.1/25

Left Out: 497.966+/-0.083  $\chi^2/\text{NDF}$ : 526993.3/23

Right Out: 844.053+/-0.166  $\chi^2/\text{NDF}$ : 5935208.2/28

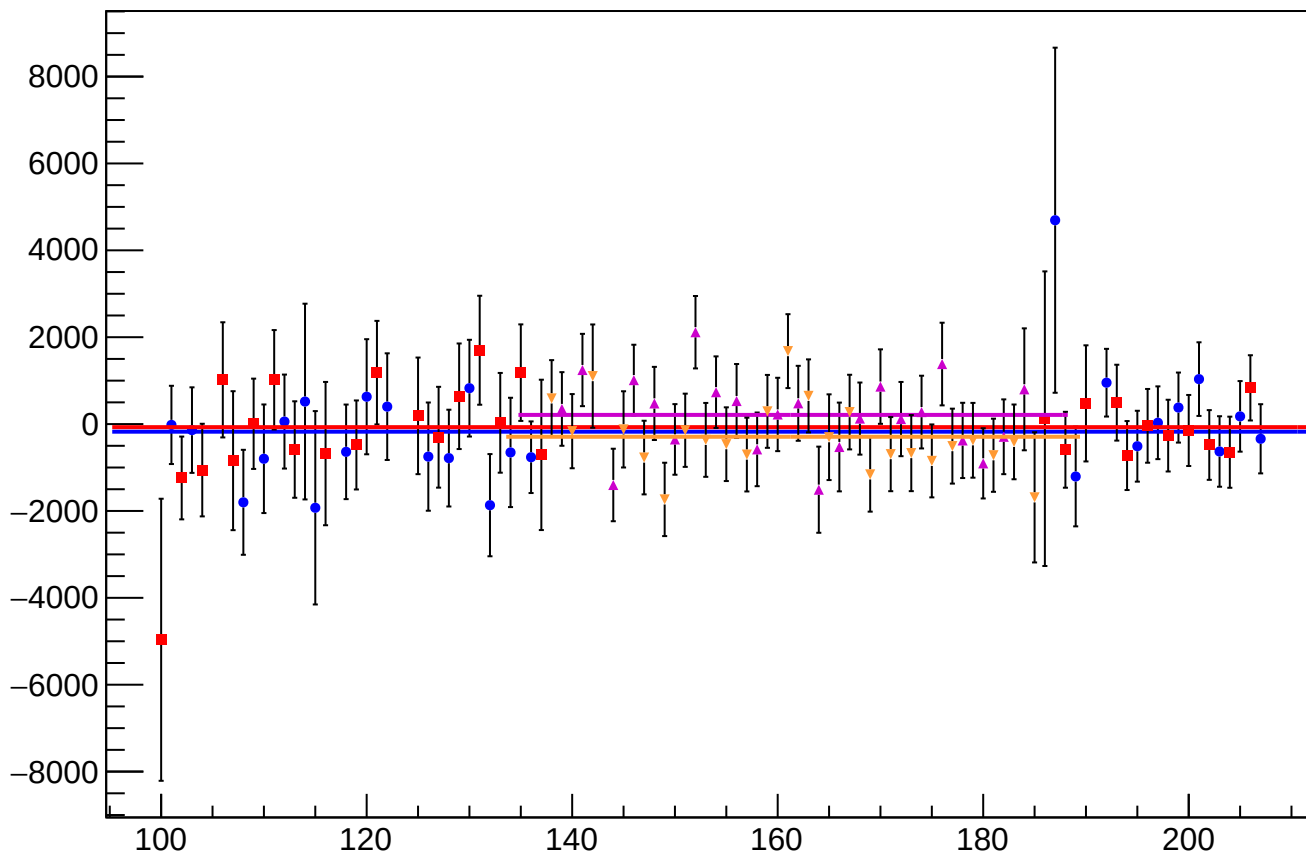
Left In: 500.307+/-0.083  $\chi^2/\text{NDF}$ : 477388.4/22

+ sign 564.823+/-0.074  $\chi^2/\text{NDF}$ : 8499237.6/49

All: 567.190+/-0.053  $\chi^2/\text{NDF}$ : 18345431.8/10

- sign 569.581+/-0.074  $\chi^2/\text{NDF}$ : 9844141.1/51

# overload\_cor\_asym\_us\_dd\_mean vs Slug



Right In:  $-174.973 \pm 200.249$   $\chi^2/\text{NDF}: 15.4/25$

Left Out:  $-292.036 \pm 179.670$   $\chi^2/\text{NDF}: 16.6/23$

Right Out:  $-70.702 \pm 195.766$   $\chi^2/\text{NDF}: 15.8/28$

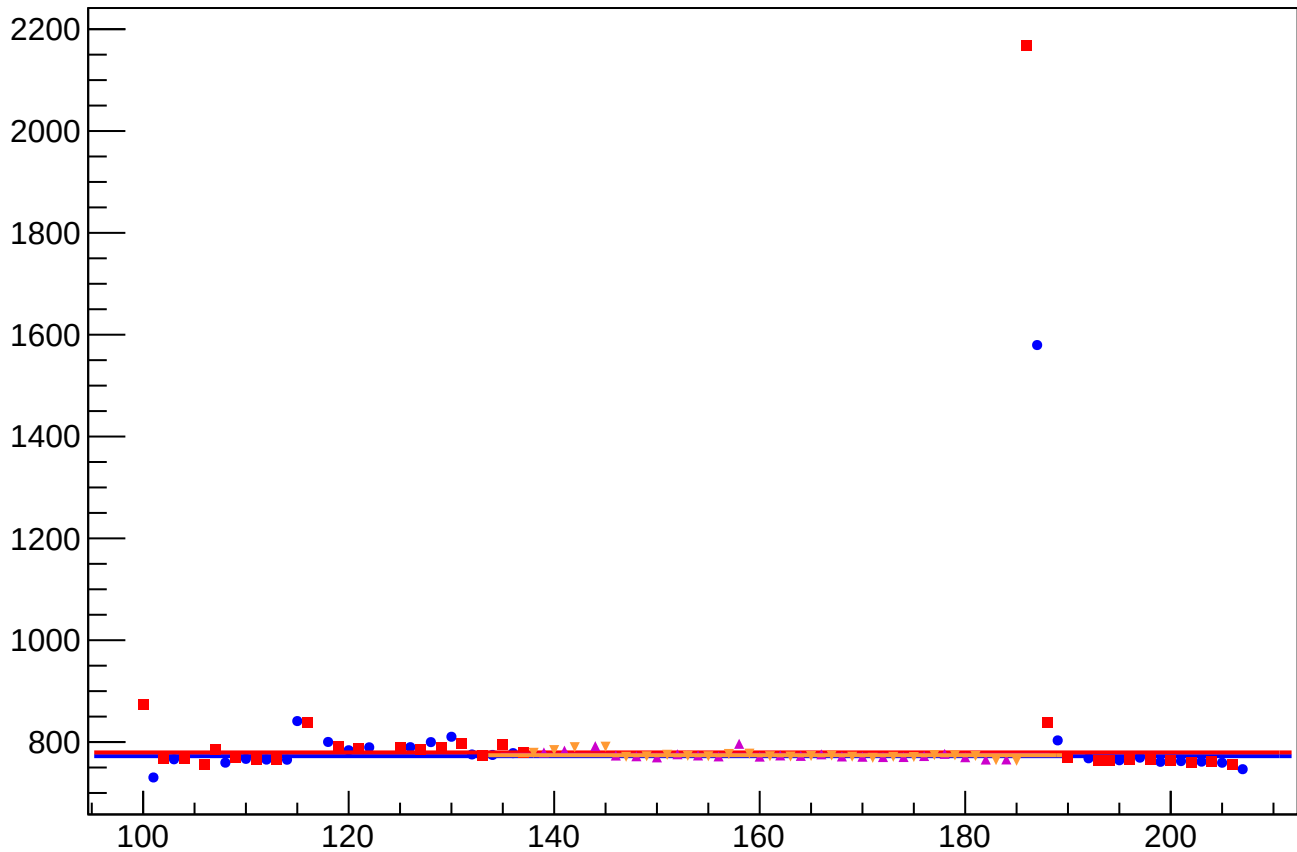
Left In:  $211.238 \pm 180.951$   $\chi^2/\text{NDF}: 22.1/22$

+ sign  $-239.827 \pm 133.732$   $\chi^2/\text{NDF}: 32.2/49$

All:  $-78.219 \pm 94.260$   $\chi^2/\text{NDF}: 74.1/101$

- sign  $81.339 \pm 132.881$   $\chi^2/\text{NDF}: 39.1/51$

# overload\_cor\_asym\_us\_dd\_rms vs Slug



Right In: 772.300 $\pm$ 0.142  $\chi^2$ /NDF: 100556.2/25

Left Out: 774.142 $\pm$ 0.127  $\chi^2$ /NDF: 2060.4/23

Right Out: 779.624 $\pm$ 0.138  $\chi^2$ /NDF: 359188.8/28

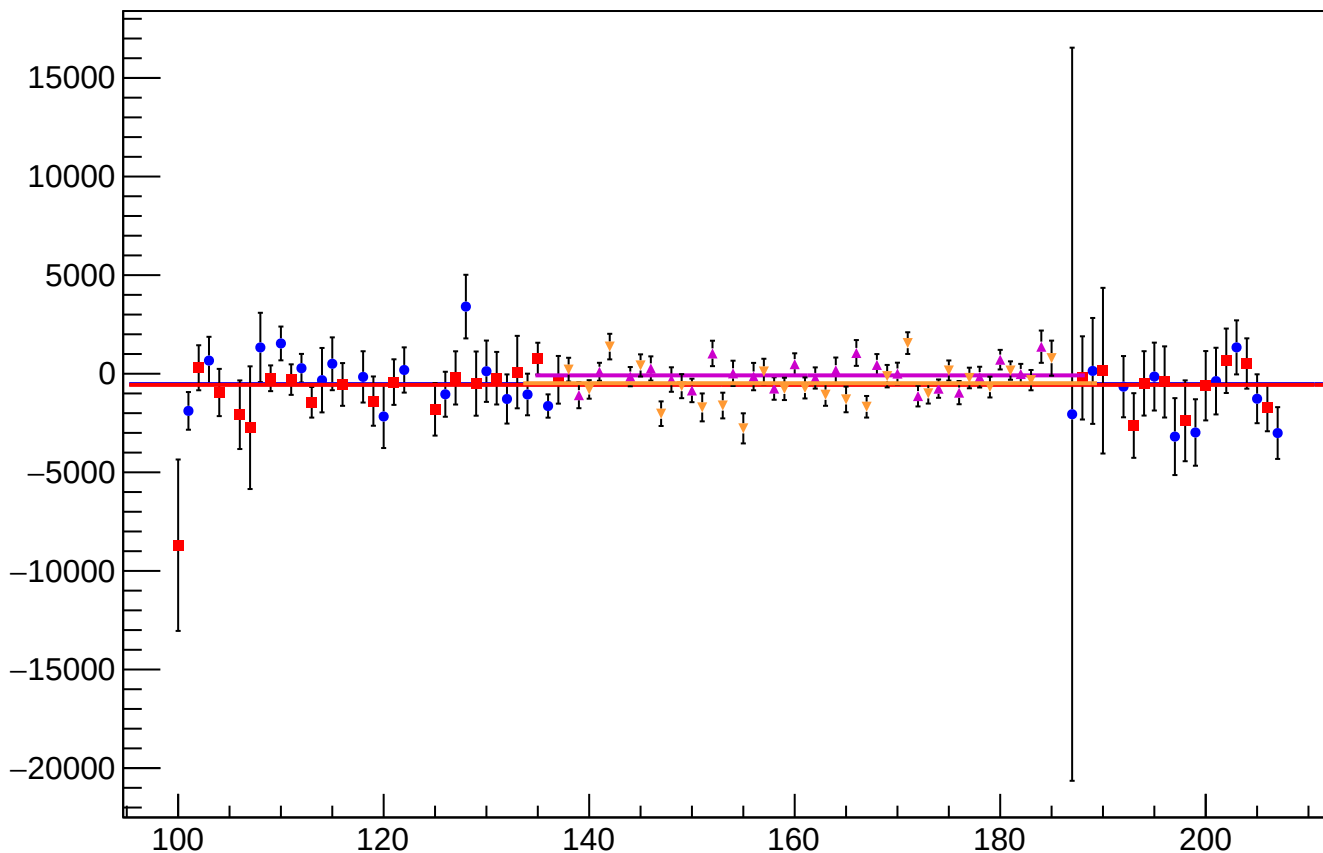
Left In: 774.990 $\pm$ 0.128  $\chi^2$ /NDF: 3148.2/22

+ sign 773.320 $\pm$ 0.095  $\chi^2$ /NDF: 102710.3/49

All: 775.235 $\pm$ 0.067  $\chi^2$ /NDF: 466466.4/101

- sign 777.125 $\pm$ 0.094  $\chi^2$ /NDF: 362941.5/51

asym\_us\_dd\_overload\_cor\_correction\_mean vs Slug



Right In: -525.516+/-238.100  $\chi^2$ /NDF: 33.6/25

Left Out: -481.314+/-117.092  $\chi^2$ /NDF:63.5/23

Right Out: -564.590+/-235.628  $\chi^2$ /NDF: 16.1/27

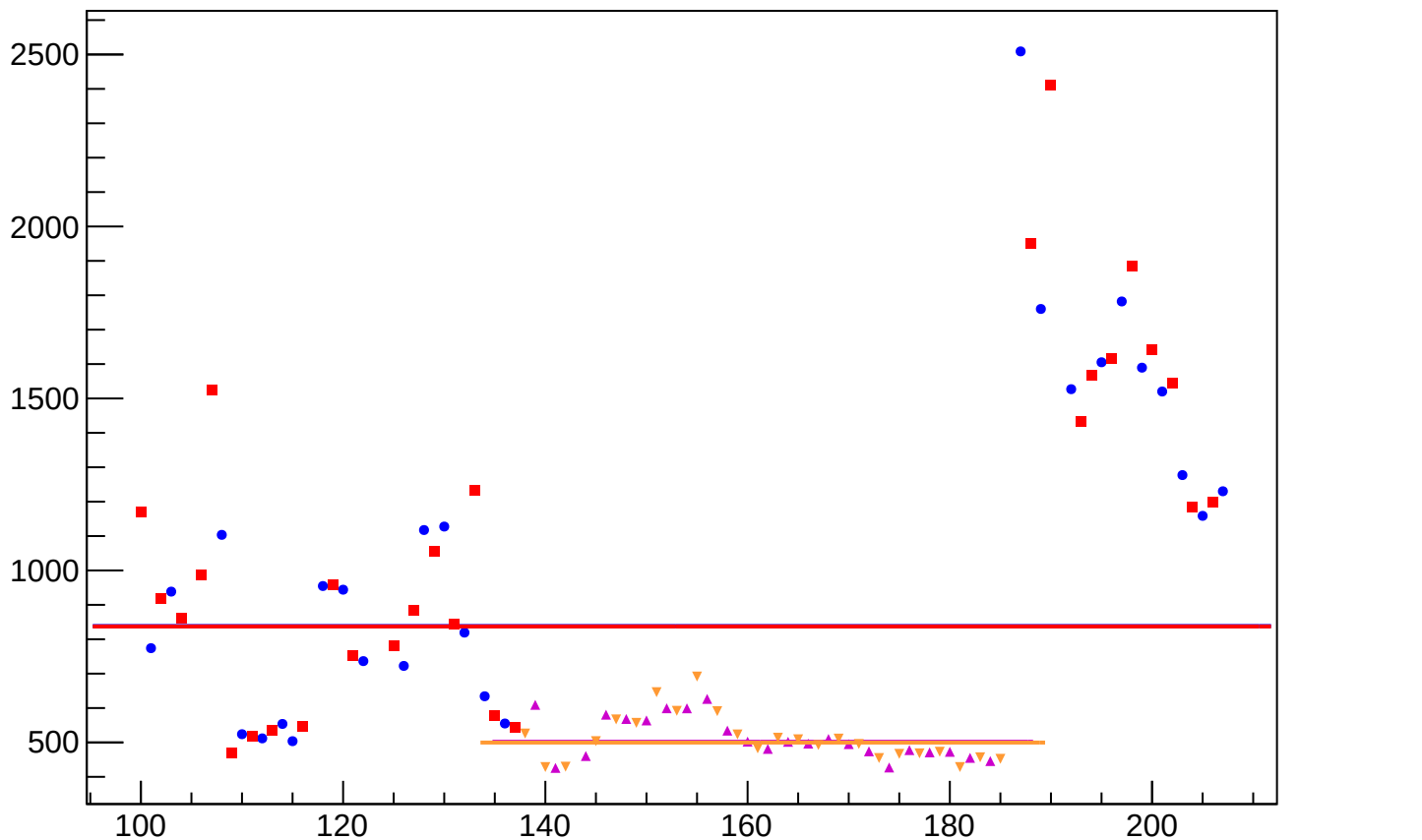
Left In: -83.196+/-118.194  $\chi^2$ /NDF:28.2/22

+ sign -489.922+/-105.073  $\chi^2$ /NDF: 97.2/49

All: -335.792+/-74.500  $\chi^2$ /NDF: 149.2/100

- sign -179.972+/-105.648  $\chi^2$ /NDF: 47.6/50

asym\_us\_dd\_overload\_cor\_correction\_rms vs Slug



Right In: 838.413 $\pm$ 0.168  $\chi^2$ /NDF: 4404249.8/25

Left Out: 499.670 $\pm$ 0.083  $\chi^2$ /NDF: 516314.6/23

Right Out: 837.150 $\pm$ 0.167  $\chi^2$ /NDF: 5575691.3/27

Left In: 502.026 $\pm$ 0.084  $\chi^2$ /NDF: 467449.2/22

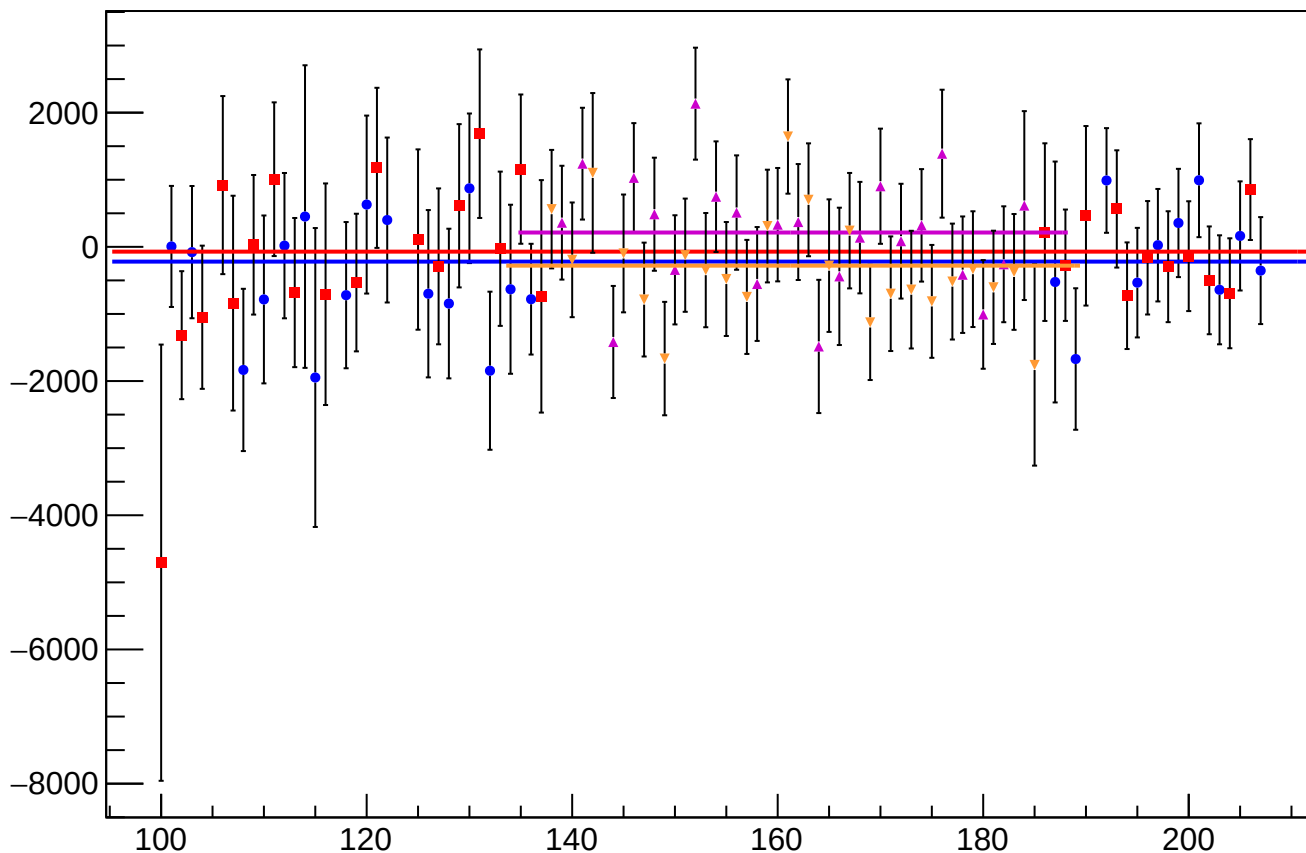
+ sign 565.638 $\pm$ 0.074  $\chi^2$ /NDF: 8180315.2/49

All: 567.507 $\pm$ 0.053  $\chi^2$ /NDF: 17457046.0/10

- sign 569.397 $\pm$ 0.075  $\chi^2$ /NDF: 9275458.3/50



# eigen\_cor\_asym\_us\_dd\_mean vs Slug



Right In:  $-219.969 \pm 198.879$   $\chi^2/\text{NDF}$ : 15.2/25

Left Out:  $-280.364 \pm 179.881$   $\chi^2/\text{NDF}$ : 16.1/23

Right Out:  $-71.352 \pm 193.556$   $\chi^2/\text{NDF}$ : 15.7/28

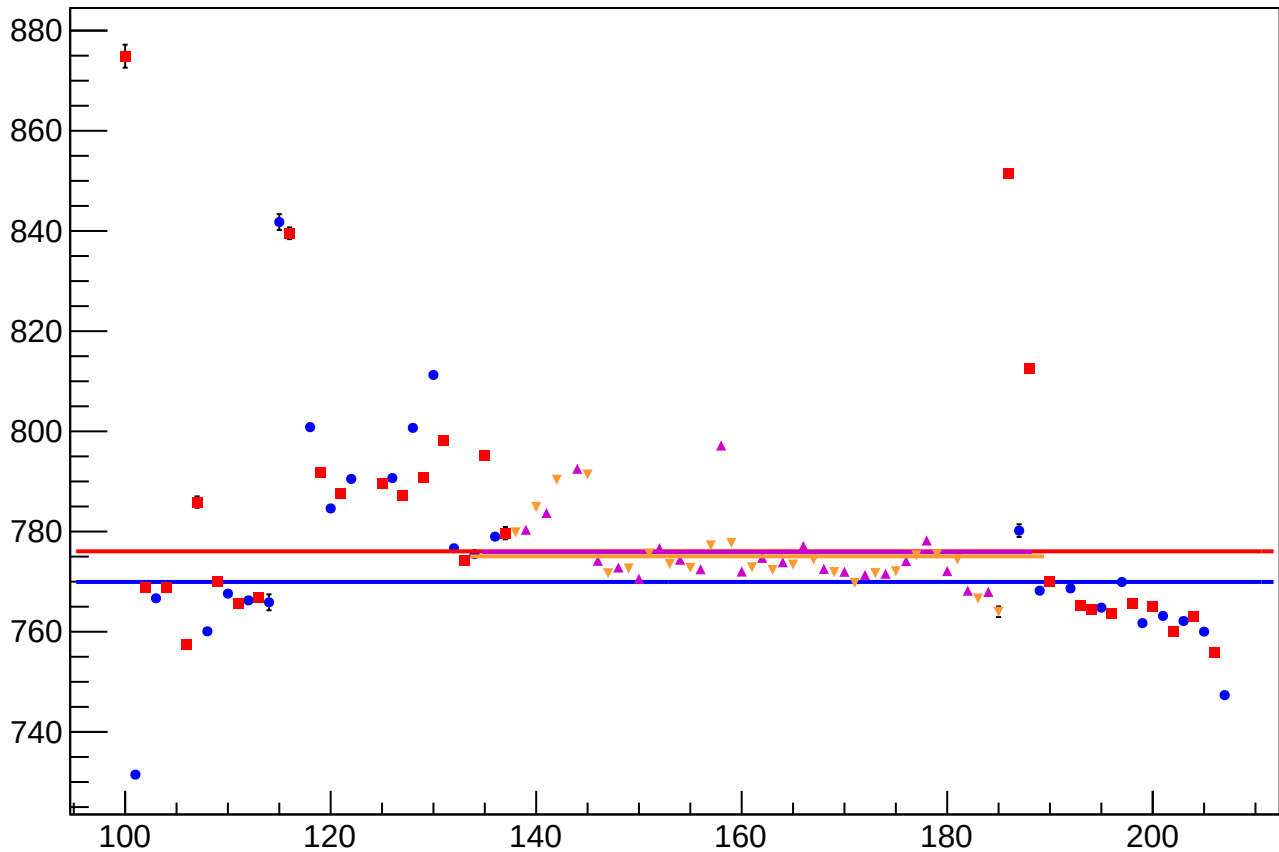
Left In:  $213.425 \pm 181.168$   $\chi^2/\text{NDF}$ : 22.4/22

+ sign  $-253.188 \pm 133.407$   $\chi^2/\text{NDF}$ : 31.3/49

All:  $-84.943 \pm 93.928$   $\chi^2/\text{NDF}$ : 73.7/101

- sign  $80.441 \pm 132.268$   $\chi^2/\text{NDF}$ : 39.2/51

# eigen\_cor\_asym\_us\_dd\_rms vs Slug



Right In:  $769.940 \pm 0.141$   $\chi^2/\text{NDF}: 16067.0/25$

Left Out:  $775.050 \pm 0.127$   $\chi^2/\text{NDF}: 1951.3/23$

Right Out:  $776.051 \pm 0.137$   $\chi^2/\text{NDF}: 23444.3/28$

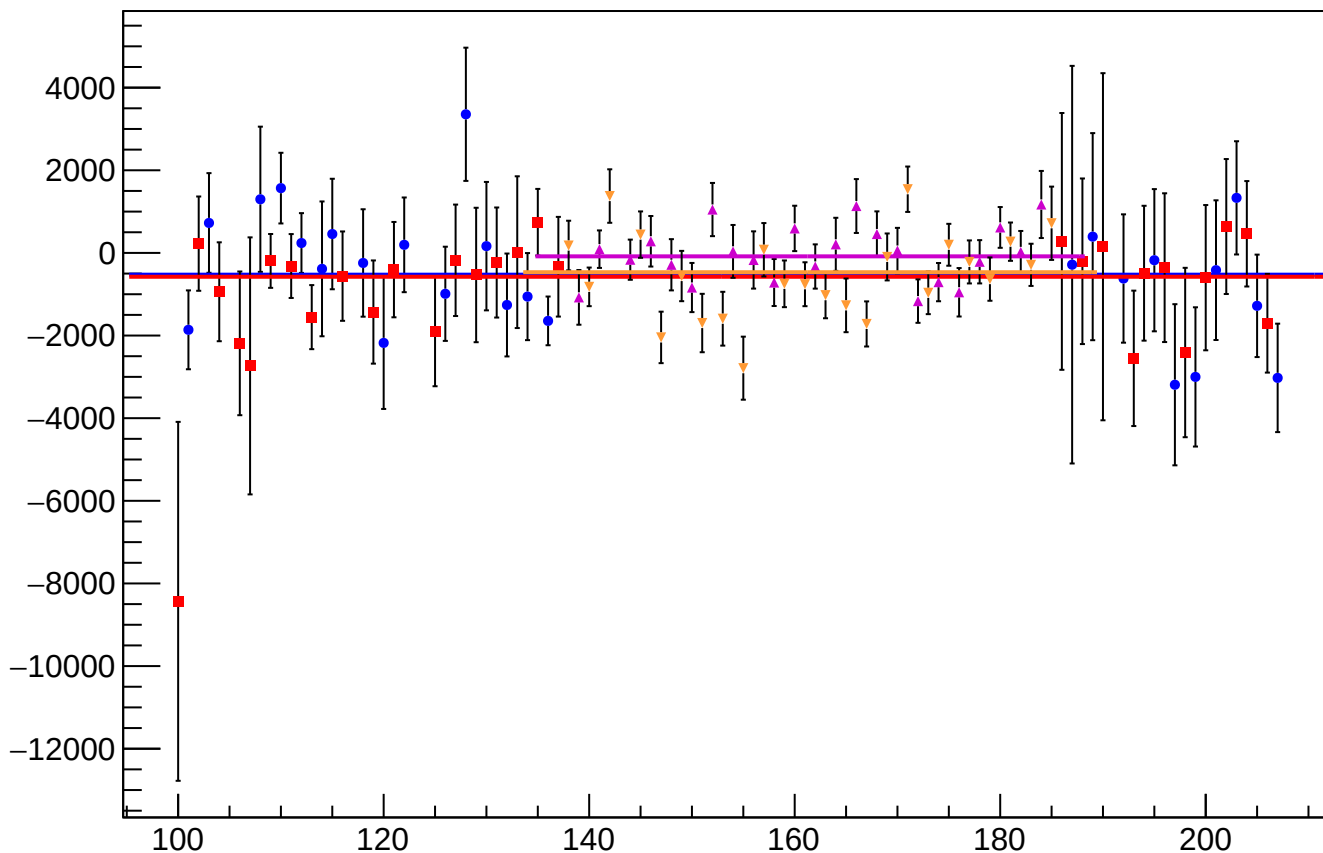
Left In:  $775.922 \pm 0.128$   $\chi^2/\text{NDF}: 2973.0/22$

+ sign  $772.751 \pm 0.094$   $\chi^2/\text{NDF}: 18744.4/49$

All:  $774.380 \pm 0.066$   $\chi^2/\text{NDF}: 45753.9/101$

- sign  $775.982 \pm 0.094$   $\chi^2/\text{NDF}: 26417.7/51$

asym\_us\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-526.860 \pm 237.406$   $\chi^2/\text{NDF}$ : 33.7/25

Left Out:  $-467.151 \pm 116.712$   $\chi^2/\text{NDF}$ : 64.4/23

Right Out:  $-576.963 \pm 234.498$   $\chi^2/\text{NDF}$ : 16.2/28

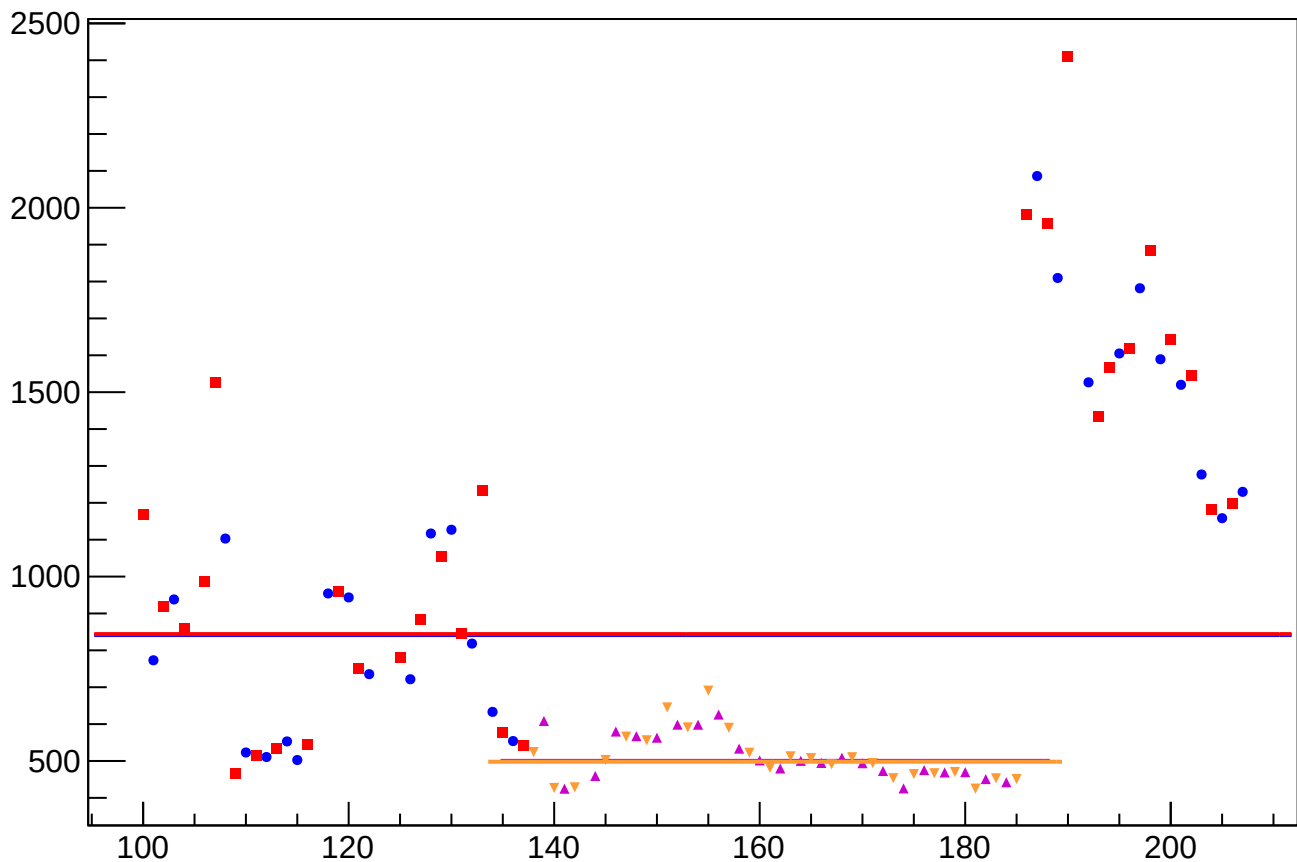
Left In:  $-83.154 \pm 117.808$   $\chi^2/\text{NDF}$ : 28.1/22

+ sign  $-478.773 \pm 104.740$   $\chi^2/\text{NDF}$ : 98.2/49

All:  $-331.469 \pm 74.249$   $\chi^2/\text{NDF}$ : 150.0/101

- sign  $-182.669 \pm 105.270$   $\chi^2/\text{NDF}$ : 47.9/51

asym\_us\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 841.450+/-0.168  $\chi^2/\text{NDF}$ : 4600546.1/25

Left Out: 497.966+/-0.083  $\chi^2/\text{NDF}$ : 526993.3/23

Right Out: 844.053+/-0.166  $\chi^2/\text{NDF}$ : 5935208.2/28

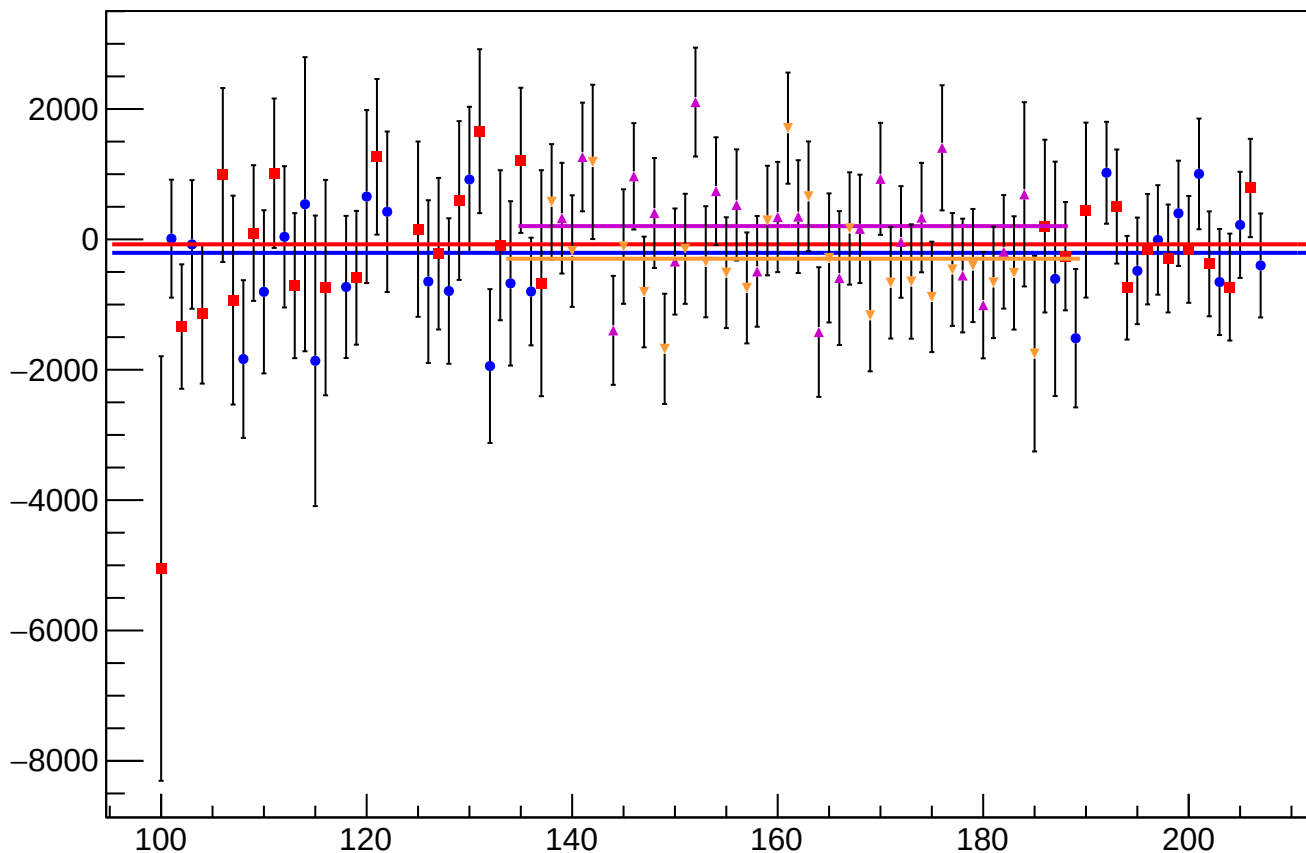
Left In: 500.307+/-0.083  $\chi^2/\text{NDF}$ : 477388.4/22

+ sign 564.823+/-0.074  $\chi^2/\text{NDF}$ : 8499237.6/49

All: 567.190+/-0.053  $\chi^2/\text{NDF}$ : 18345431.8/10

- sign 569.581+/-0.074  $\chi^2/\text{NDF}$ : 9844141.1/51

# dit\_asym\_us\_dd\_mean vs Slug



Right In:  $-206.670 \pm 199.141$   $\chi^2/\text{NDF}: 15.4/25$

Left Out:  $-296.771 \pm 180.280$   $\chi^2/\text{NDF}: 16.7/23$

Right Out:  $-75.748 \pm 193.810$   $\chi^2/\text{NDF}: 16.2/28$

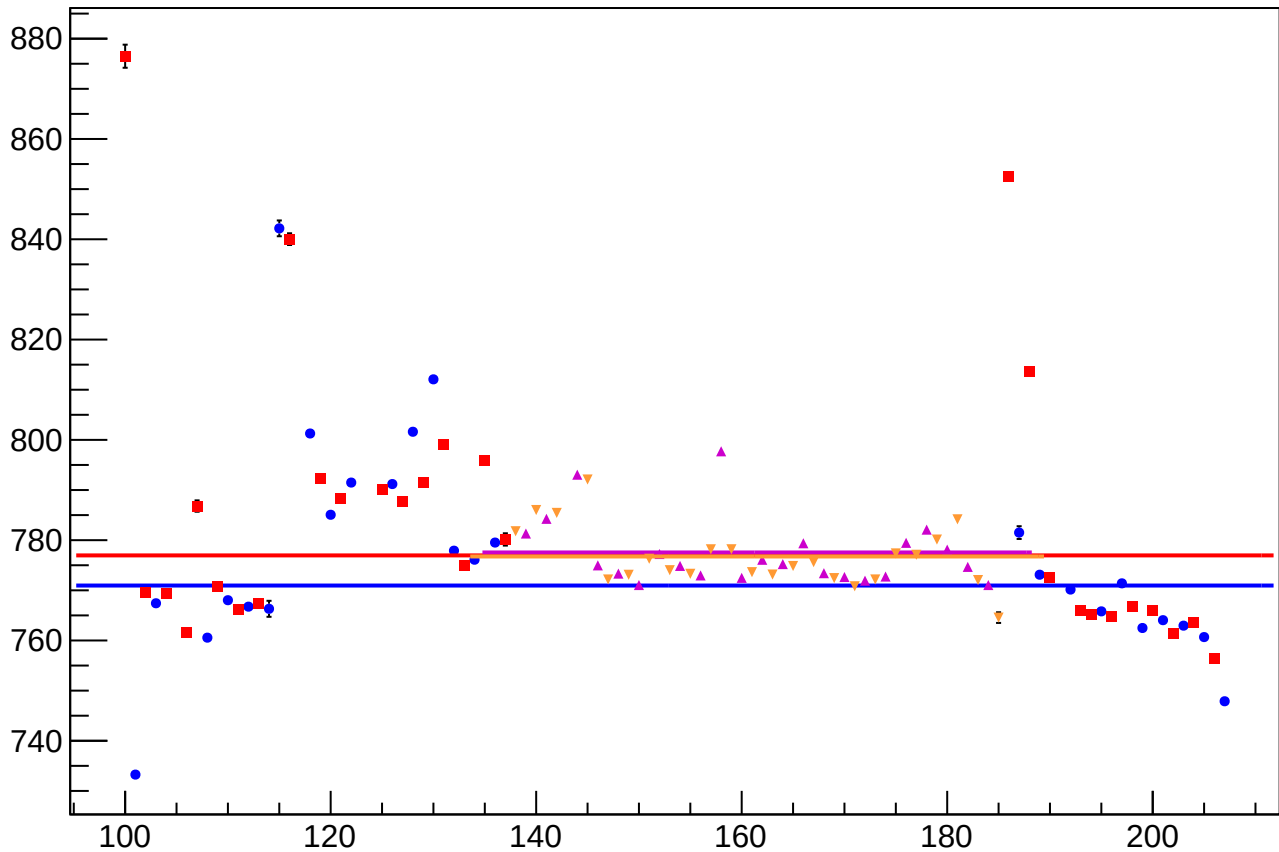
Left In:  $203.339 \pm 181.548$   $\chi^2/\text{NDF}: 22.1/22$

+ sign  $-256.188 \pm 133.649$   $\chi^2/\text{NDF}: 32.2/49$

All:  $-90.218 \pm 94.094$   $\chi^2/\text{NDF}: 74.7/101$

- sign  $72.902 \pm 132.497$   $\chi^2/\text{NDF}: 39.4/51$

# dit\_asym\_us\_dd\_rms vs Slug



Right In: 770.955 $\pm$ 0.141  $\chi^2$ /NDF: 15837.8/25

Left Out: 776.751 $\pm$ 0.127  $\chi^2$ /NDF:1826.3/23

Right Out: 776.964 $\pm$ 0.137  $\chi^2$ /NDF: 23251.2/28

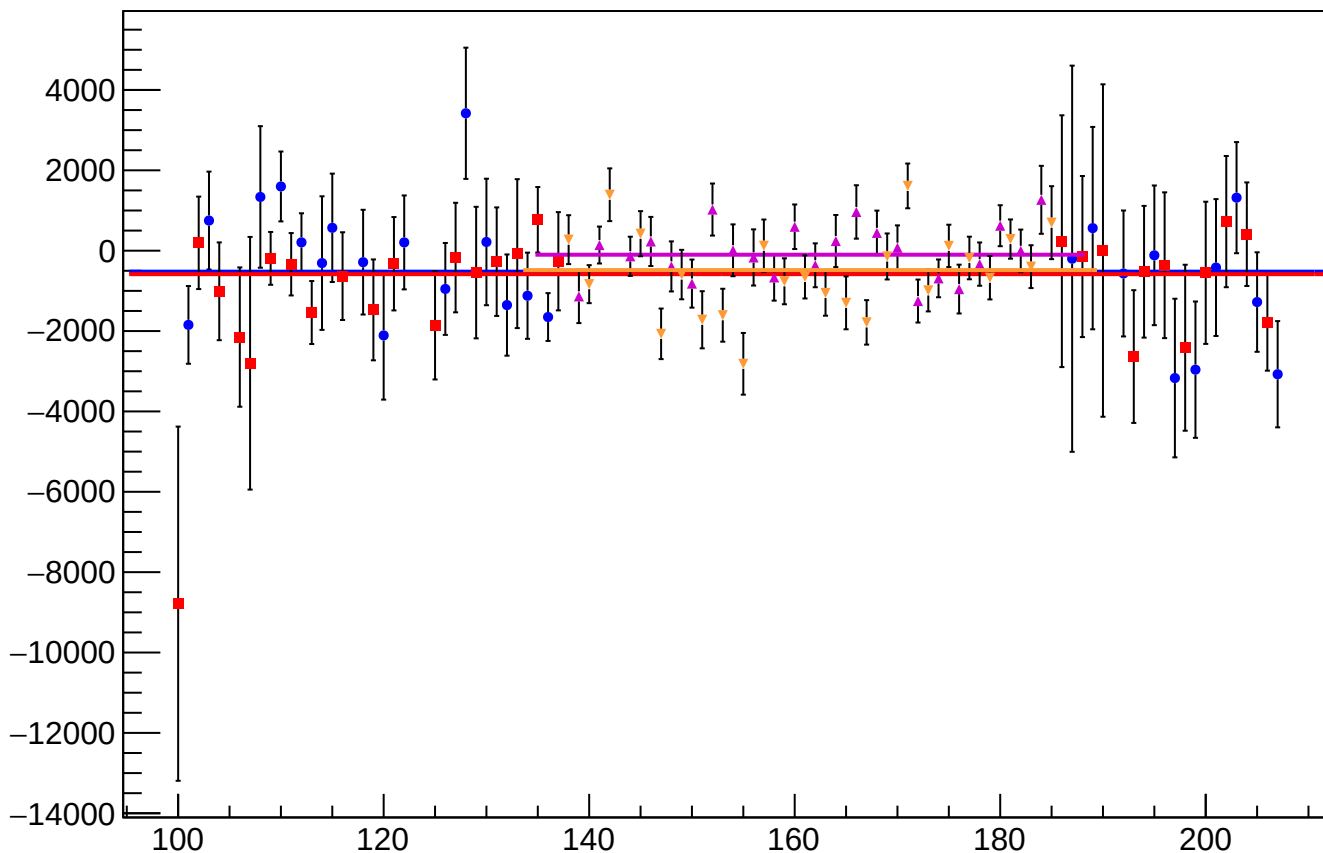
Left In: 777.550 $\pm$ 0.128  $\chi^2$ /NDF:2750.7/22

+ sign 774.140 $\pm$ 0.095  $\chi^2$ /NDF: 18595.1/49

All: 775.722 $\pm$ 0.067  $\chi^2$ /NDF: 45162.1/101

- sign 777.276 $\pm$ 0.094  $\chi^2$ /NDF: 26011.7/51

# asym\_us\_dd\_dit\_correction\_mean vs Slug



Right In:  $-522.110 \pm 239.577$   $\chi^2/\text{NDF}$ : 33.6/25

Left Out:  $-482.886 \pm 118.805$   $\chi^2/\text{NDF}$ : 65.1/23

Right Out:  $-584.023 \pm 236.490$   $\chi^2/\text{NDF}$ : 16.5/28

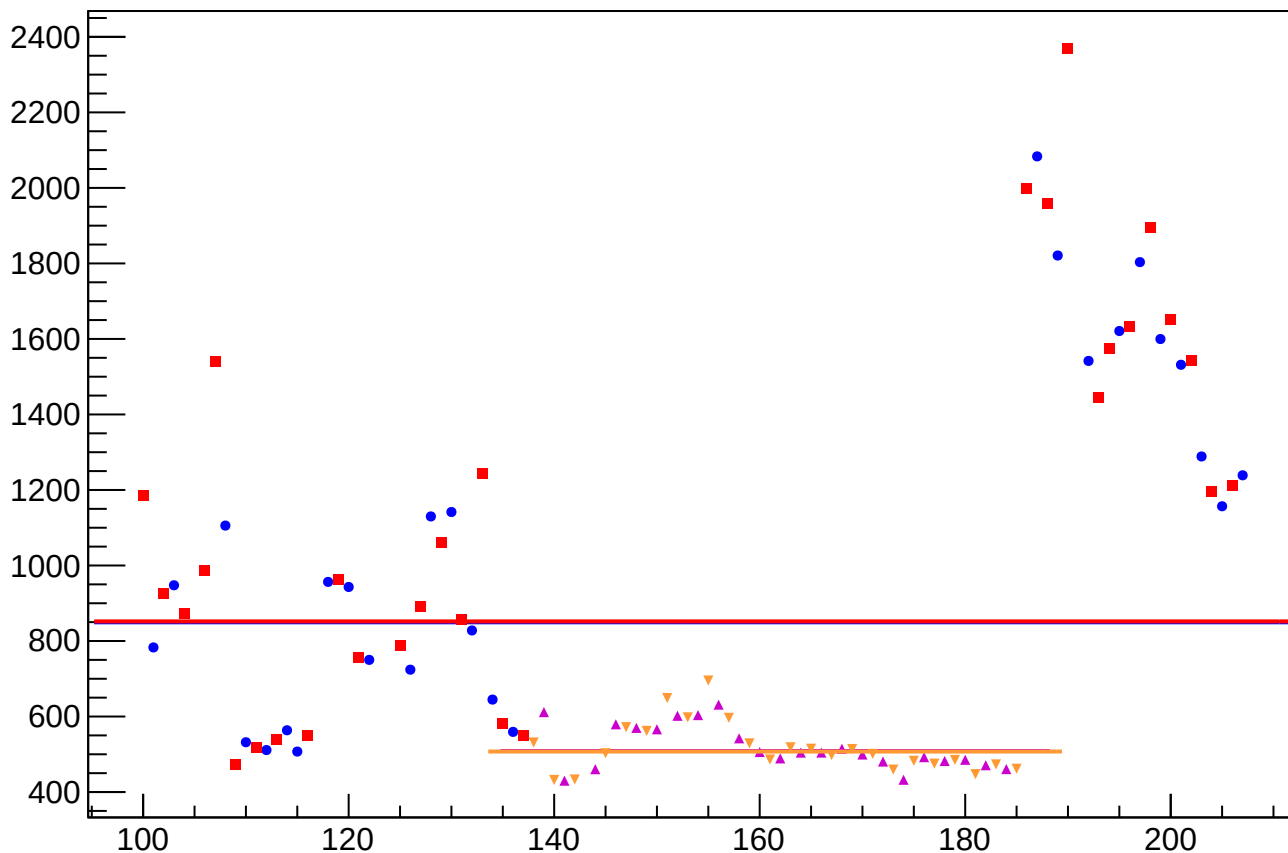
Left In:  $-99.985 \pm 119.677$   $\chi^2/\text{NDF}$ : 27.4/22

+ sign  $-490.628 \pm 106.437$   $\chi^2/\text{NDF}$ : 98.8/49

All:  $-345.122 \pm 75.384$   $\chi^2/\text{NDF}$ : 149.8/101

- sign  $-198.671 \pm 106.782$   $\chi^2/\text{NDF}$ : 47.2/51

# asym\_us\_dd\_dit\_correction\_rms vs Slug



Right In: 849.544+/-0.169  $\chi^2/\text{NDF}$ : 4583635.8/25

Left Out: 507.319+/-0.084  $\chi^2/\text{NDF}$ : 473982.3/23

Right Out: 851.915+/-0.167  $\chi^2/\text{NDF}$ : 5897448.3/28

Left In: 508.638+/-0.085  $\chi^2/\text{NDF}$ : 432447.1/22

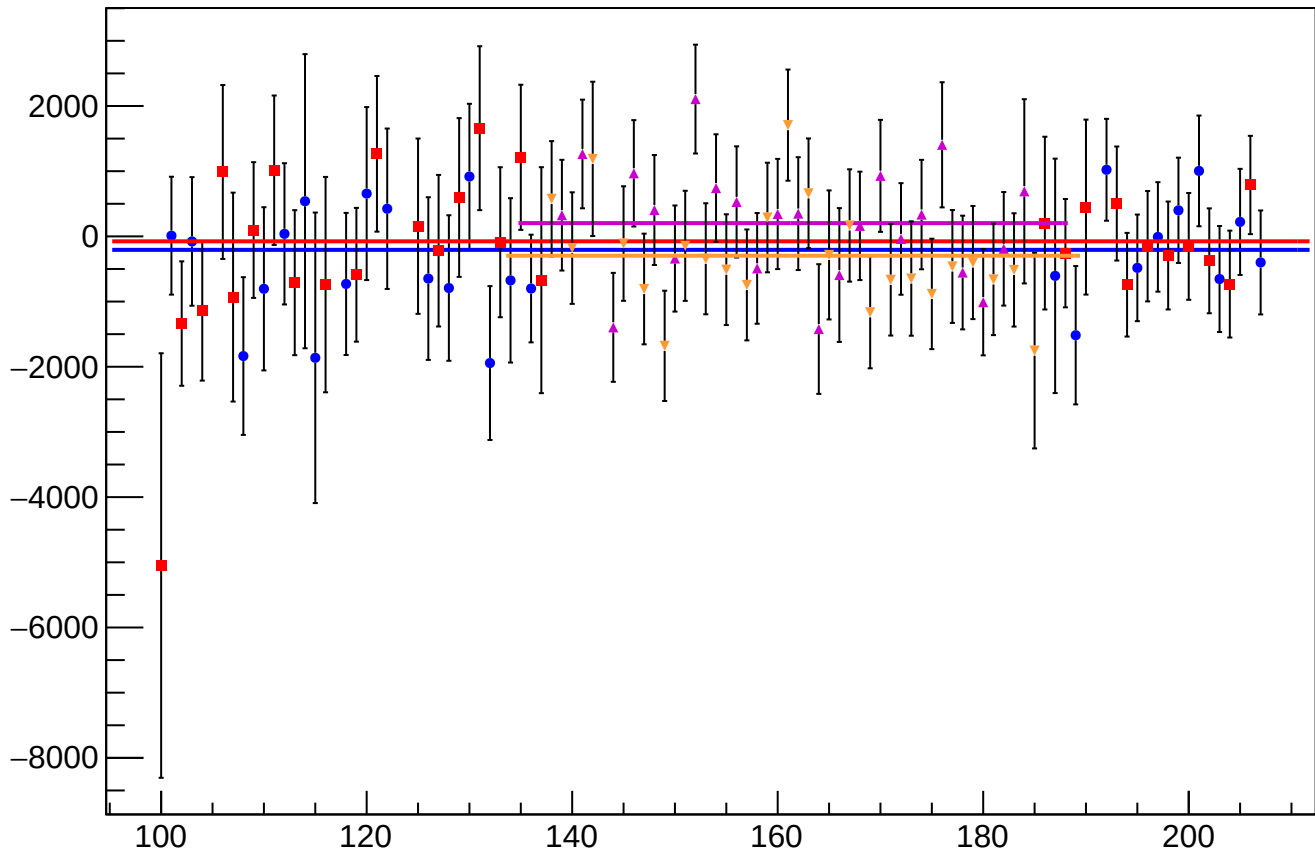
+ sign 574.866+/-0.075  $\chi^2/\text{NDF}$ : 8333092.3/49

All: 576.740+/-0.053  $\chi^2/\text{NDF}$ : 18019078.7/10

- sign 578.625+/-0.076  $\chi^2/\text{NDF}$ : 9684742.8/51



# eigen\_dit\_asym\_us\_dd\_mean vs Slug



Right In:  $-206.670 \pm 199.141$   $\chi^2/\text{NDF}$ : 15.4/25

Left Out:  $-296.771 \pm 180.280$   $\chi^2/\text{NDF}$ : 16.7/23

Right Out:  $-75.749 \pm 193.810$   $\chi^2/\text{NDF}$ : 16.2/28

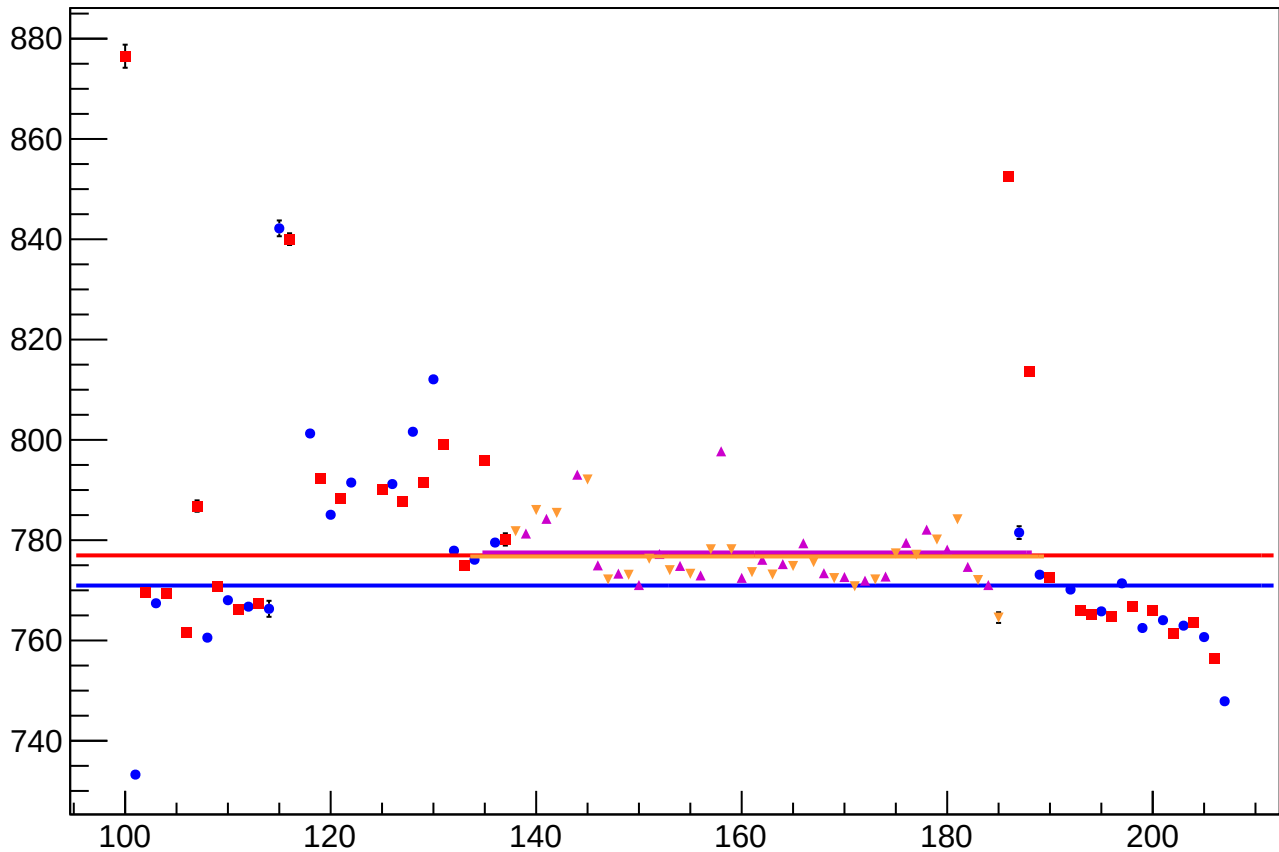
Left In:  $203.338 \pm 181.548$   $\chi^2/\text{NDF}$ : 22.1/22

+ sign  $-256.188 \pm 133.649$   $\chi^2/\text{NDF}$ : 32.2/49

All:  $-90.219 \pm 94.094$   $\chi^2/\text{NDF}$ : 74.7/101

- sign  $72.902 \pm 132.497$   $\chi^2/\text{NDF}$ : 39.4/51

# eigen\_dit\_asym\_us\_dd\_rms vs Slug



Right In: 770.955 $\pm$ 0.141  $\chi^2$ /NDF: 15837.8/25

Left Out: 776.751 $\pm$ 0.127  $\chi^2$ /NDF: 1826.3/23

Right Out: 776.964 $\pm$ 0.137  $\chi^2$ /NDF: 23251.2/28

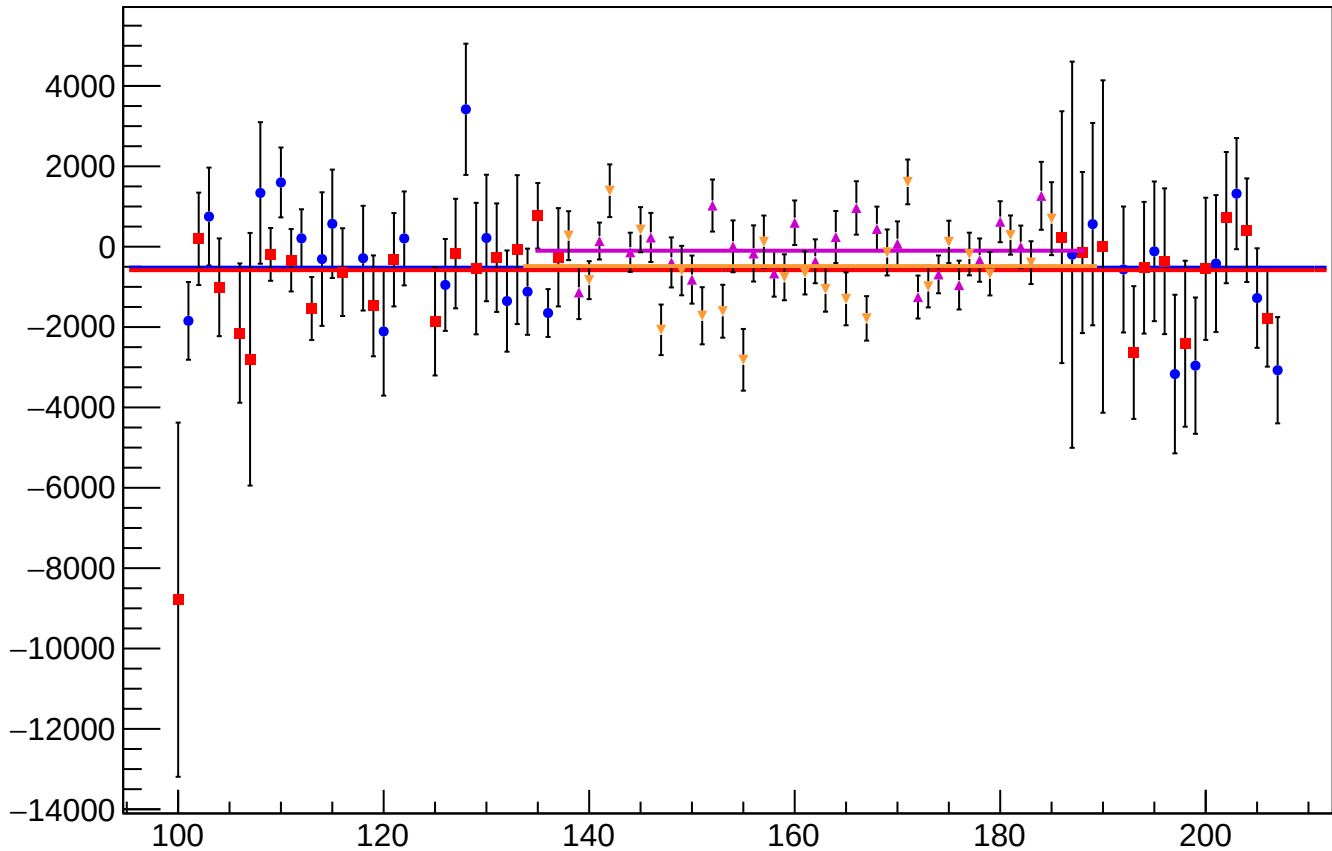
Left In: 777.550 $\pm$ 0.128  $\chi^2$ /NDF: 2750.7/22

+ sign 774.140 $\pm$ 0.095  $\chi^2$ /NDF: 18595.1/49

All: 775.722 $\pm$ 0.067  $\chi^2$ /NDF: 45162.0/101

- sign 777.276 $\pm$ 0.094  $\chi^2$ /NDF: 26011.6/51

# asym\_us\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-522.105 \pm 239.576$   $\chi^2/\text{NDF}$ : 33.6/25

Left Out:  $-482.886 \pm 118.806$   $\chi^2/\text{NDF}$ : 65.1/23

Right Out:  $-584.022 \pm 236.489$   $\chi^2/\text{NDF}$ : 16.5/28

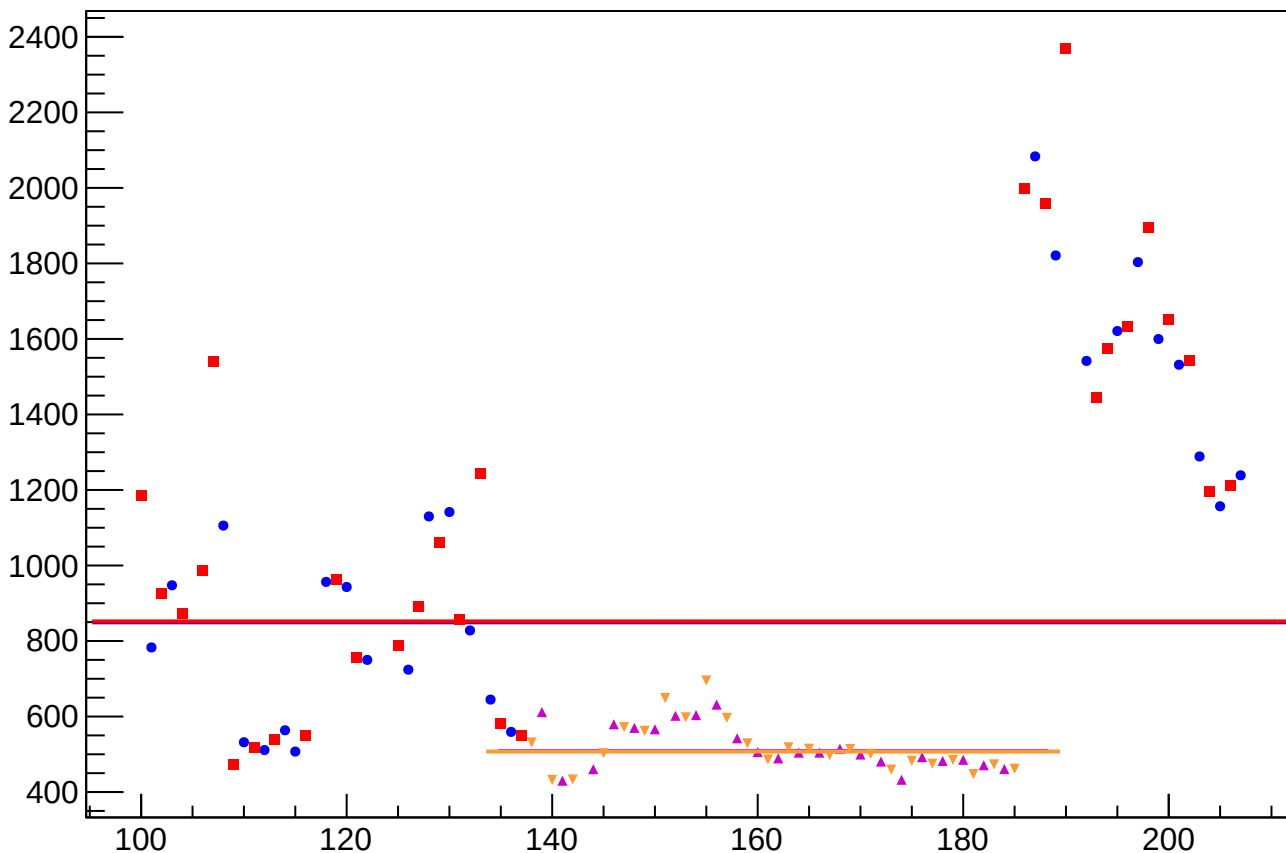
Left In:  $-99.985 \pm 119.677$   $\chi^2/\text{NDF}$ : 27.4/22

+ sign  $-490.627 \pm 106.437$   $\chi^2/\text{NDF}$ : 98.8/49

All:  $-345.122 \pm 75.384$   $\chi^2/\text{NDF}$ : 149.8/101

- sign  $-198.671 \pm 106.782$   $\chi^2/\text{NDF}$ : 47.2/51

# asym\_us\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 849.540 $\pm$ 0.169  $\chi^2$ /NDF: 4583692.7/25

Left Out: 507.319 $\pm$ 0.084  $\chi^2$ /NDF: 473992.3/23

+ sign 574.866 $\pm$ 0.075  $\chi^2$ /NDF: 8333100.9/49

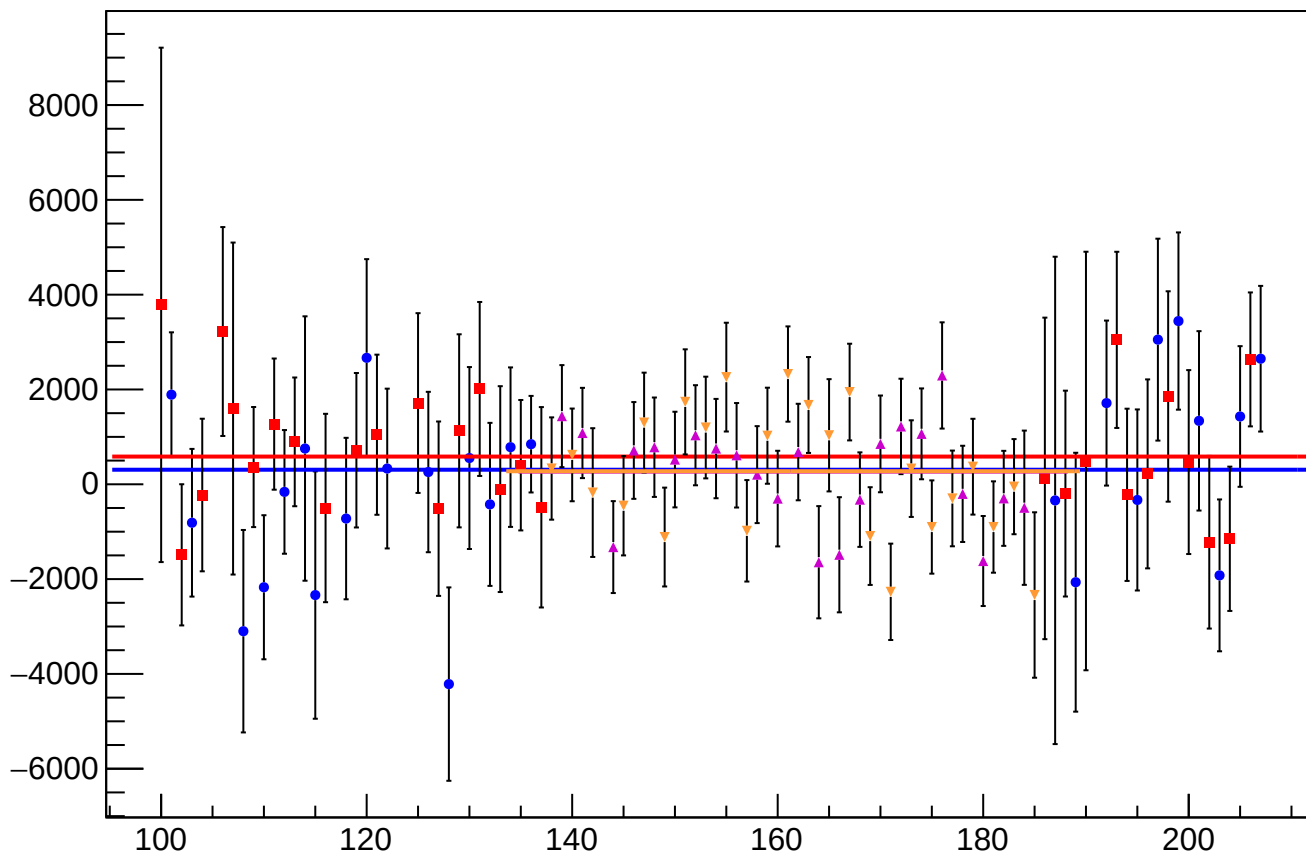
Right Out: 851.911 $\pm$ 0.167  $\chi^2$ /NDF: 5897509.6/28

All: 576.739 $\pm$ 0.053  $\chi^2$ /NDF: 18019110.1/10

- sign 578.625 $\pm$ 0.076  $\chi^2$ /NDF: 9684765.8/51

Left In: 508.638 $\pm$ 0.085  $\chi^2$ /NDF: 432461.7/22

# asym\_us\_dd\_mean vs Slug



Right In: 307.109+/-337.480  $\chi^2/\text{NDF}$ : 26.6/25

Left Out: 275.181+/-216.290  $\chi^2/\text{NDF}$ : 33.6/23

Right Out: 584.633+/-337.069  $\chi^2/\text{NDF}$ : 13.4/28

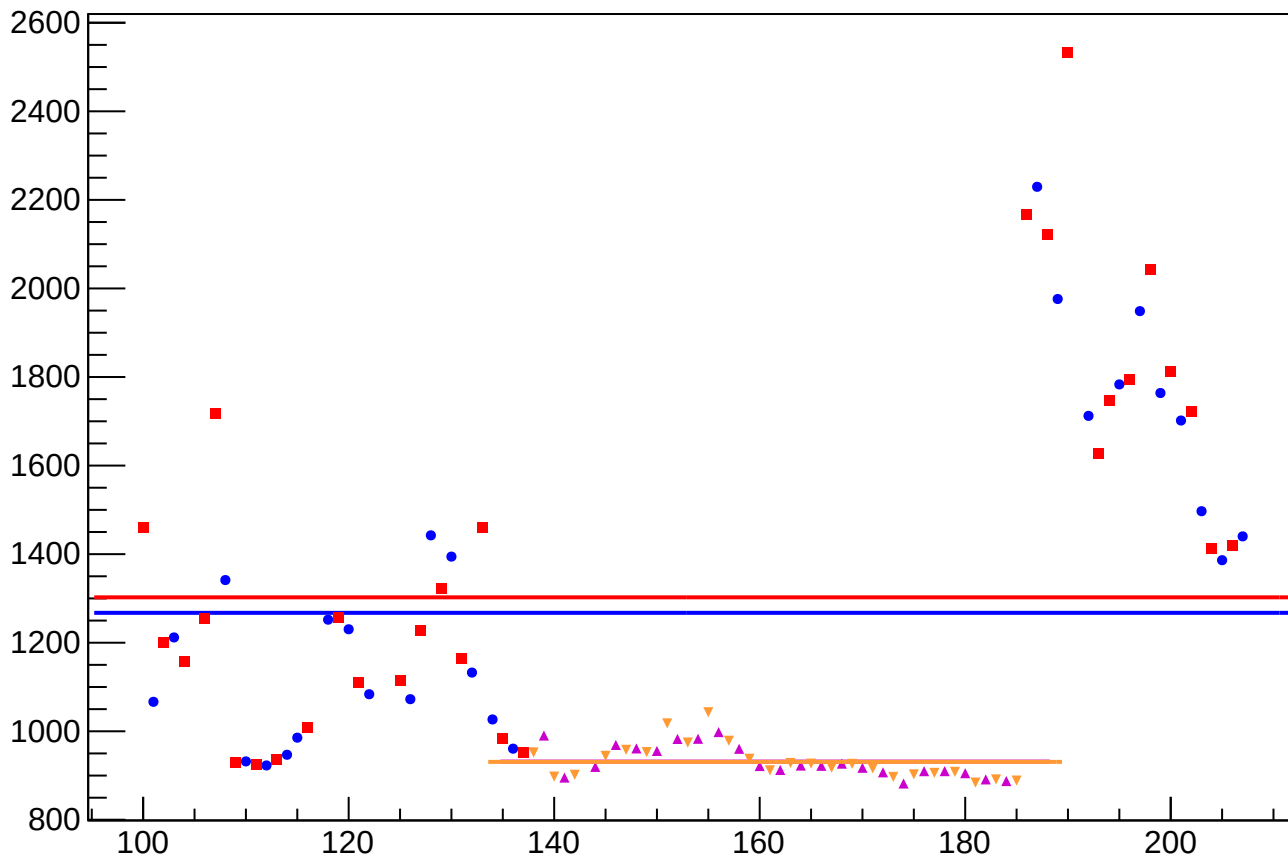
Left In: 267.059+/-217.685  $\chi^2/\text{NDF}$ : 21.4/22

+ sign 284.477+/-182.100  $\chi^2/\text{NDF}$ : 60.3/49

All: 322.344+/-129.034  $\chi^2/\text{NDF}$ : 95.7/101

- sign 360.529+/-182.865  $\chi^2/\text{NDF}$ : 35.4/51

# asym\_us\_dd\_rms vs Slug



Right In: 1267.490+/-0.239  $\chi^2/\text{NDF}$ : 1659310.9/25

Left Out: 930.922+/-0.153  $\chi^2/\text{NDF}$ : 61953.0/23

Right Out: 1302.499+/-0.238  $\chi^2/\text{NDF}$ : 2167962.8/28

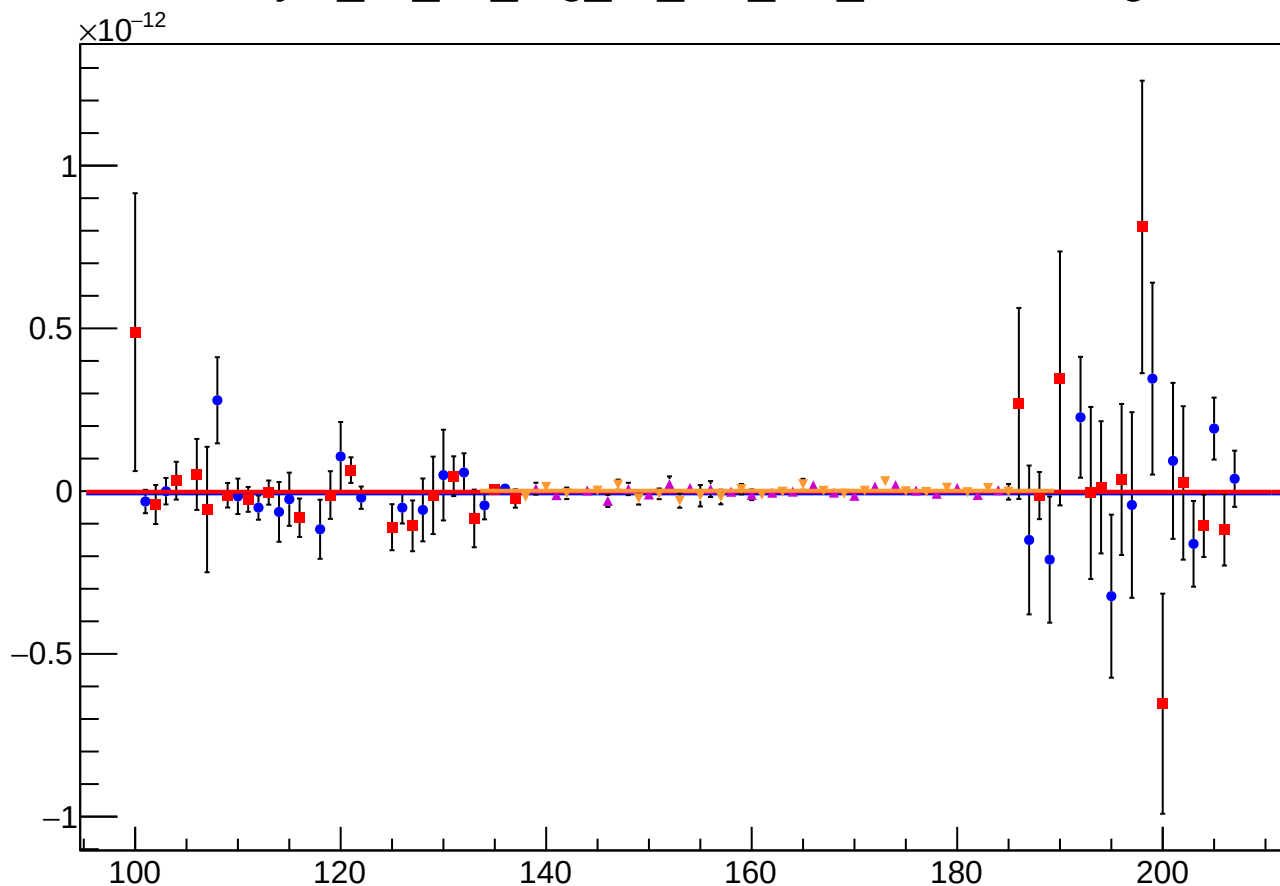
Left In: 931.562+/-0.154  $\chi^2/\text{NDF}$ : 48916.1/22

+ sign 1028.916+/-0.129  $\chi^2/\text{NDF}$ : 3131299.5/49

All: 1034.802+/-0.091  $\chi^2/\text{NDF}$ : 7061597.8/10

- sign 1040.738+/-0.129  $\chi^2/\text{NDF}$ : 3926101.7/51

# asym\_us\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 26.2/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 25.7/23

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 25.3/28

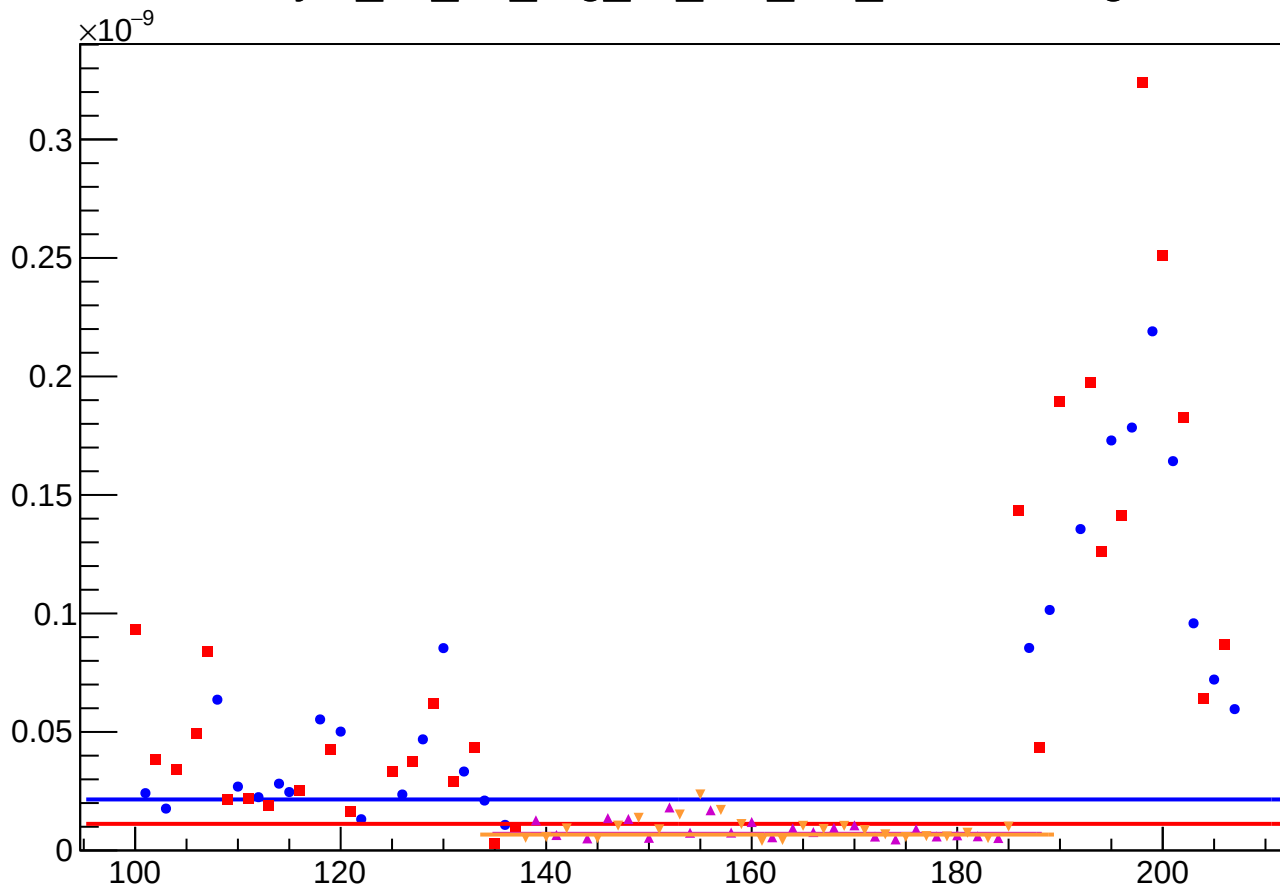
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 22.1/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 52.5/49

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 100.1/101

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 47.5/51

# asym\_us\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 8229946.1/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2928195.0/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 13342783.4/28

Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2443418.1/22

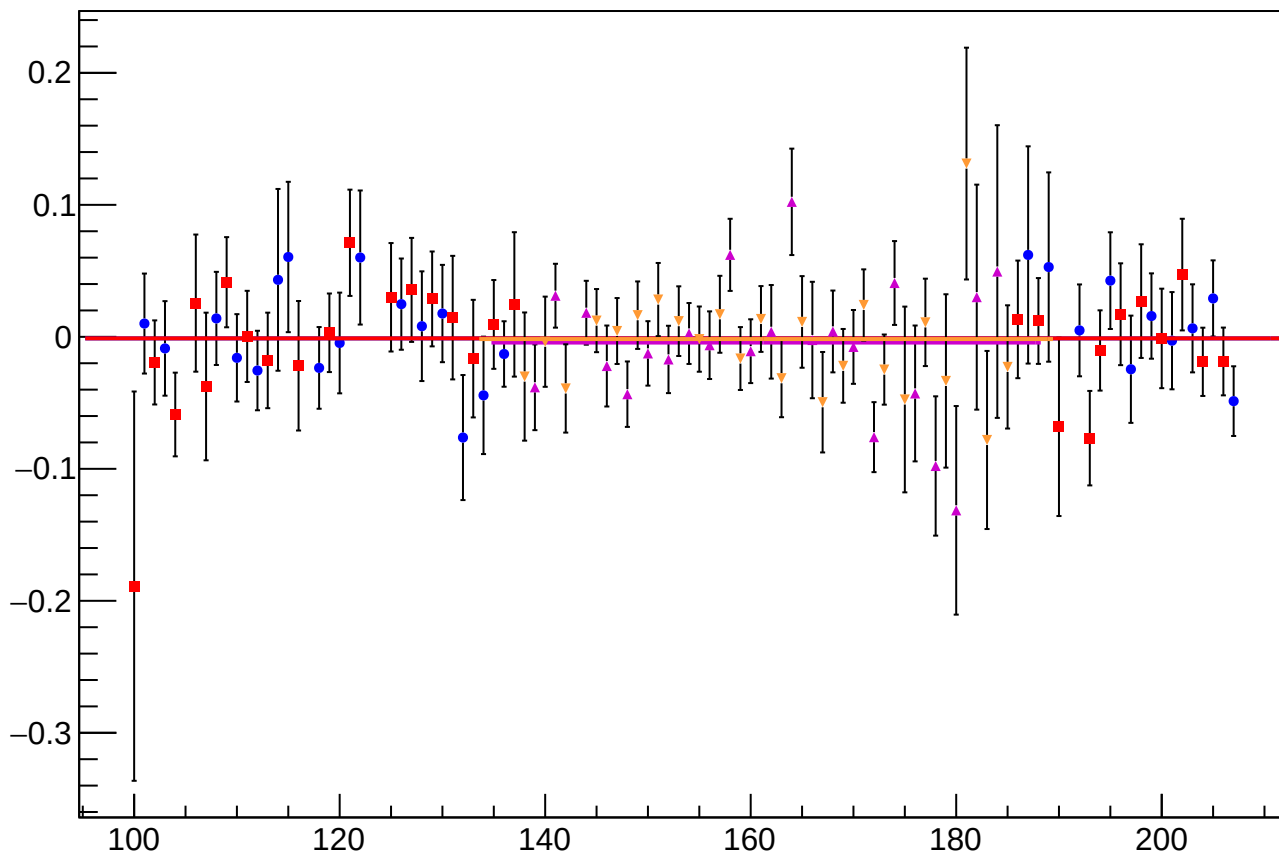
+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 15324572.2/49

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 31726403.9/101

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 16401829.5/51



# asym\_us\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.001 \pm 0.007$   $\chi^2/\text{NDF}$ : 16.9/25

Left Out:  $-0.002 \pm 0.006$   $\chi^2/\text{NDF}$ : 14.6/23

Right Out:  $-0.001 \pm 0.007$   $\chi^2/\text{NDF}$ : 22.5/28

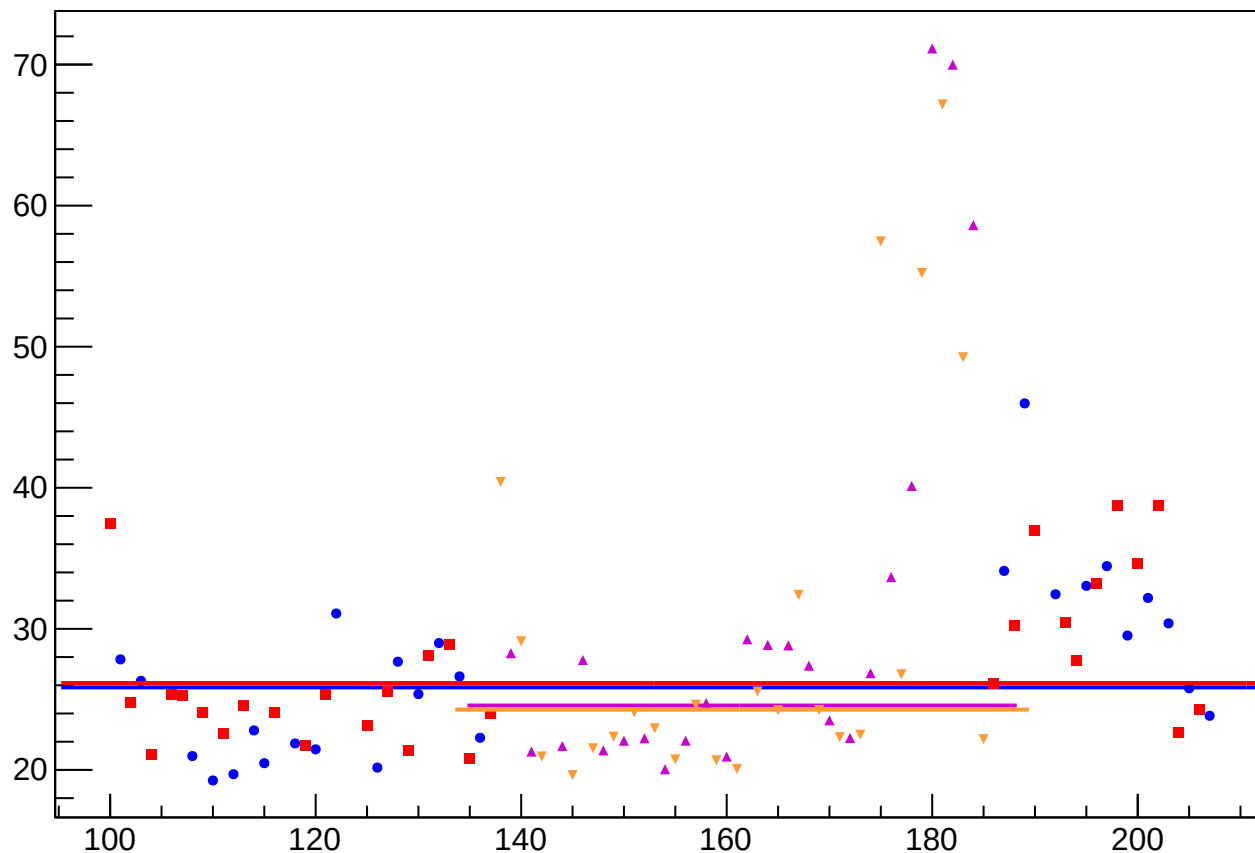
Left In:  $-0.004 \pm 0.006$   $\chi^2/\text{NDF}$ : 36.5/22

+ sign  $-0.001 \pm 0.005$   $\chi^2/\text{NDF}$ : 31.5/49

All:  $-0.002 \pm 0.003$   $\chi^2/\text{NDF}$ : 90.8/101

- sign  $-0.003 \pm 0.005$   $\chi^2/\text{NDF}$ : 59.2/51

# asym\_us\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In:  $25.850 \pm 0.005$   $\chi^2/\text{NDF}: 968535.4/25$

Left Out:  $24.275 \pm 0.004$   $\chi^2/\text{NDF}: 2310679.0/23$

Right Out:  $26.160 \pm 0.005$   $\chi^2/\text{NDF}: 941946.3/28$

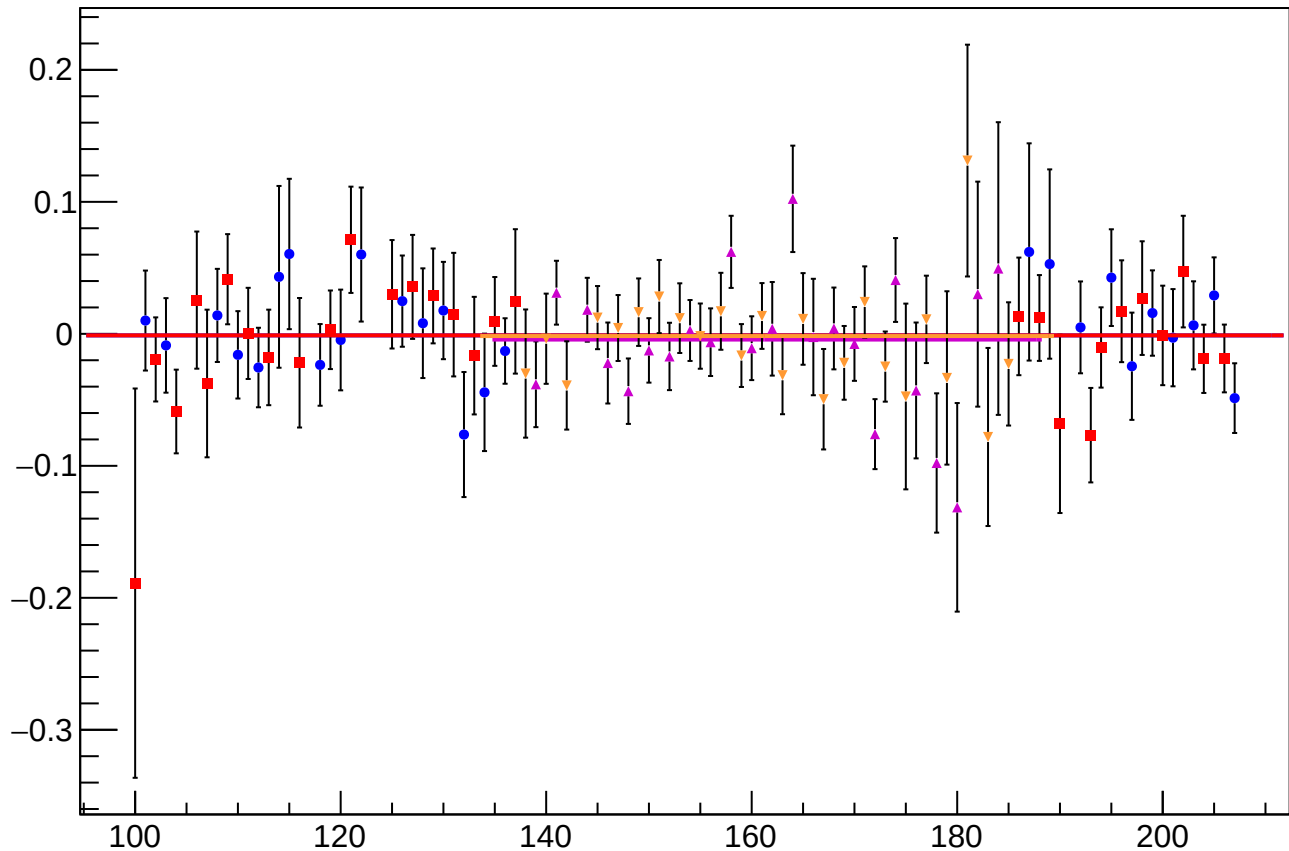
Left In:  $24.565 \pm 0.005$   $\chi^2/\text{NDF}: 2132914.4/22$

+ sign  $24.965 \pm 0.003$   $\chi^2/\text{NDF}: 3333350.4/49$

All:  $25.130 \pm 0.002$   $\chi^2/\text{NDF}: 6469857.9/101$

- sign  $25.292 \pm 0.003$   $\chi^2/\text{NDF}: 3131727.8/51$

asym\_us\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.001 \pm 0.007$   $\chi^2/\text{NDF}$ : 16.9/25

Left Out:  $-0.002 \pm 0.006$   $\chi^2/\text{NDF}$ : 14.6/23

Right Out:  $-0.001 \pm 0.007$   $\chi^2/\text{NDF}$ : 22.5/28

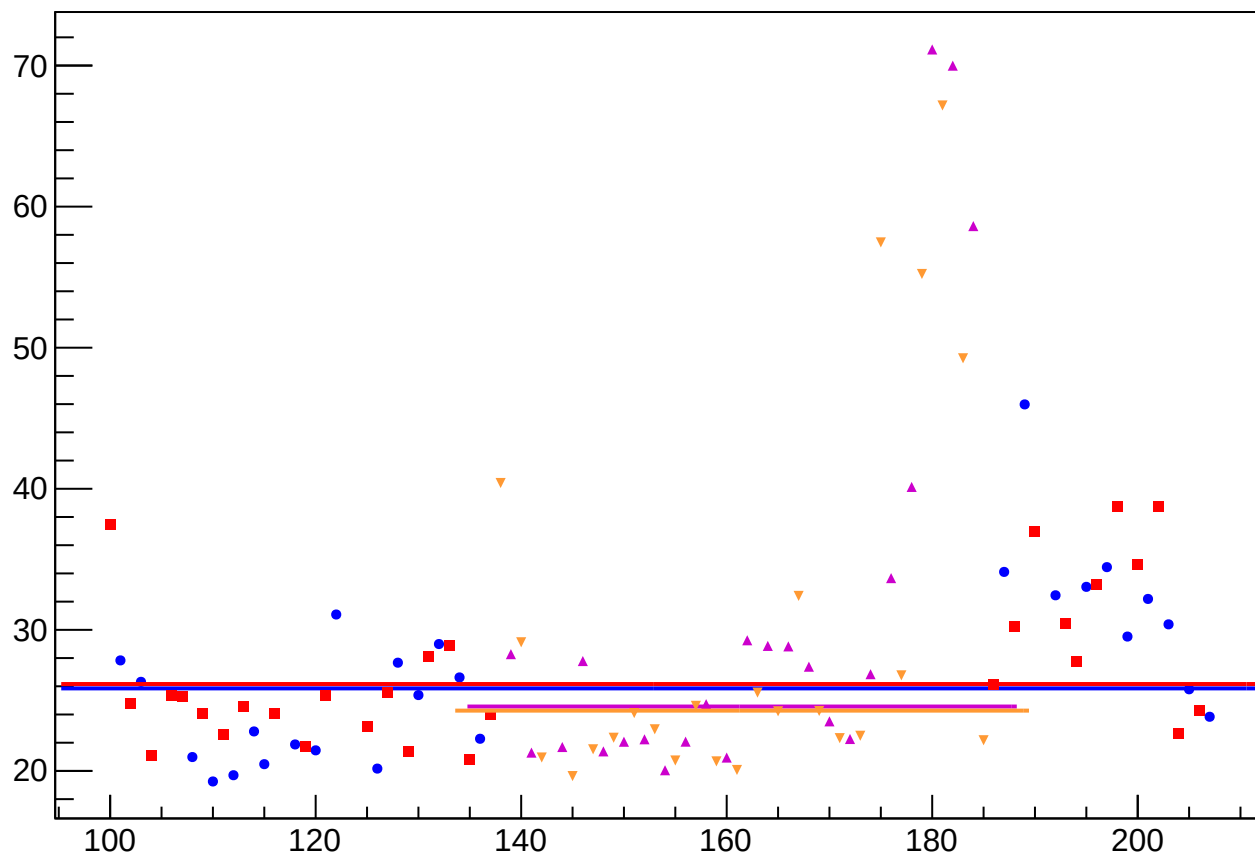
Left In:  $-0.004 \pm 0.006$   $\chi^2/\text{NDF}$ : 36.5/22

+ sign  $-0.001 \pm 0.005$   $\chi^2/\text{NDF}$ : 31.5/49

All:  $-0.002 \pm 0.003$   $\chi^2/\text{NDF}$ : 90.8/101

- sign  $-0.003 \pm 0.005$   $\chi^2/\text{NDF}$ : 59.2/51

asym\_us\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In:  $25.850 \pm 0.005$   $\chi^2/\text{NDF}: 968535.4/25$

Left Out:  $24.275 \pm 0.004$   $\chi^2/\text{NDF}: 2310679.0/23$

Right Out:  $26.160 \pm 0.005$   $\chi^2/\text{NDF}: 941946.3/28$

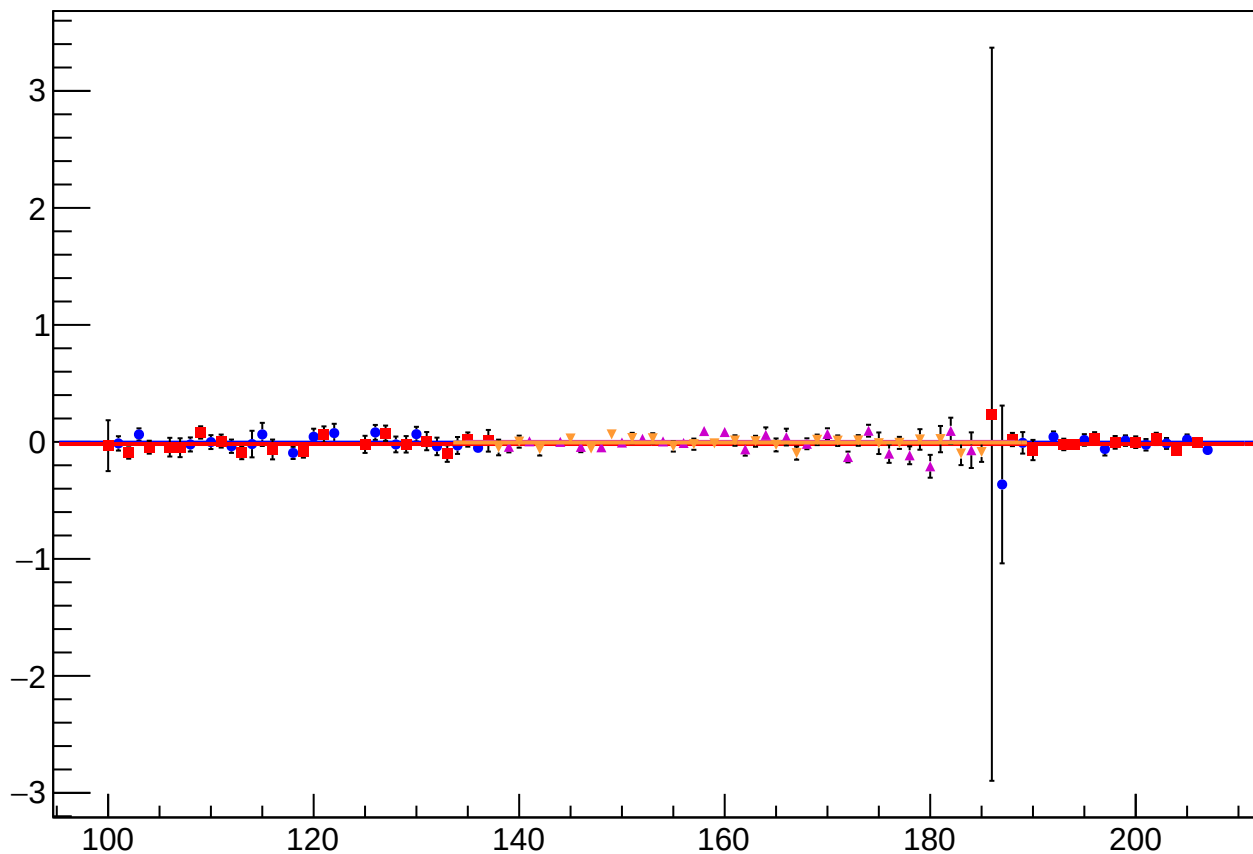
Left In:  $24.565 \pm 0.005$   $\chi^2/\text{NDF}: 2132914.4/22$

+ sign  $24.965 \pm 0.003$   $\chi^2/\text{NDF}: 3333350.4/49$

All:  $25.130 \pm 0.002$   $\chi^2/\text{NDF}: 6469857.9/101$

- sign  $25.292 \pm 0.003$   $\chi^2/\text{NDF}: 3131727.8/51$

asym\_us\_dd\_dit\_vs\_overload\_cor\_diff\_mean vs Slug



Right In:  $-0.006 \pm 0.011$   $\chi^2/\text{NDF}$ : 17.1/25

Left Out:  $-0.005 \pm 0.010$   $\chi^2/\text{NDF}$ : 13.9/23

Right Out:  $-0.018 \pm 0.011$   $\chi^2/\text{NDF}$ : 20.1/28

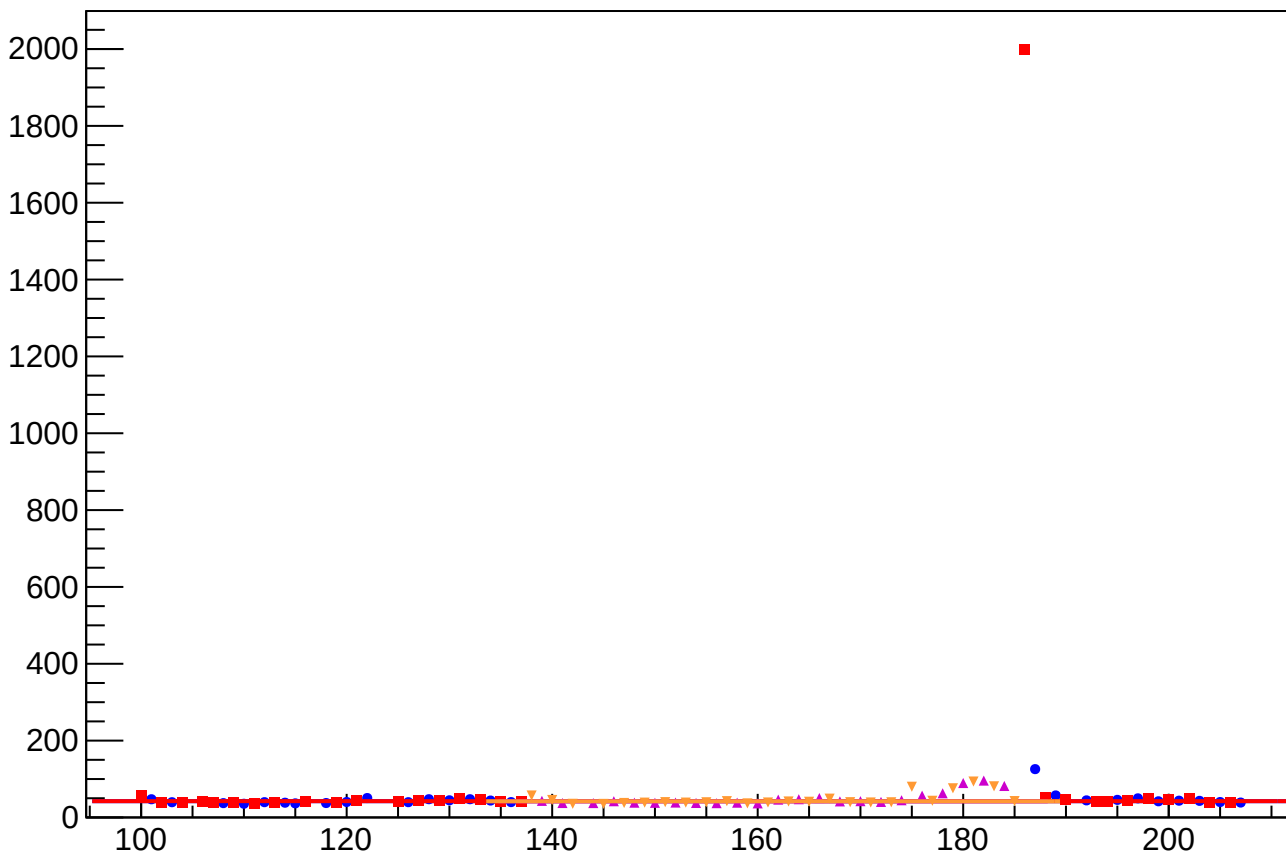
Left In:  $-0.000 \pm 0.010$   $\chi^2/\text{NDF}$ : 37.9/22

+ sign  $-0.006 \pm 0.008$   $\chi^2/\text{NDF}$ : 31.0/49

All:  $-0.007 \pm 0.005$   $\chi^2/\text{NDF}$ : 90.5/101

- sign  $-0.009 \pm 0.008$   $\chi^2/\text{NDF}$ : 59.4/51

asym\_us\_dd\_dit\_vs\_overload\_cor\_diff\_rms vs Slug



Right In: 42.334+/-0.008  $\chi^2/\text{NDF}$ : 299401.1/25

Left Out: 42.088+/-0.007  $\chi^2/\text{NDF}$ : 1716047.0/23

Right Out: 42.435+/-0.008  $\chi^2/\text{NDF}$ : 1059292.5/28

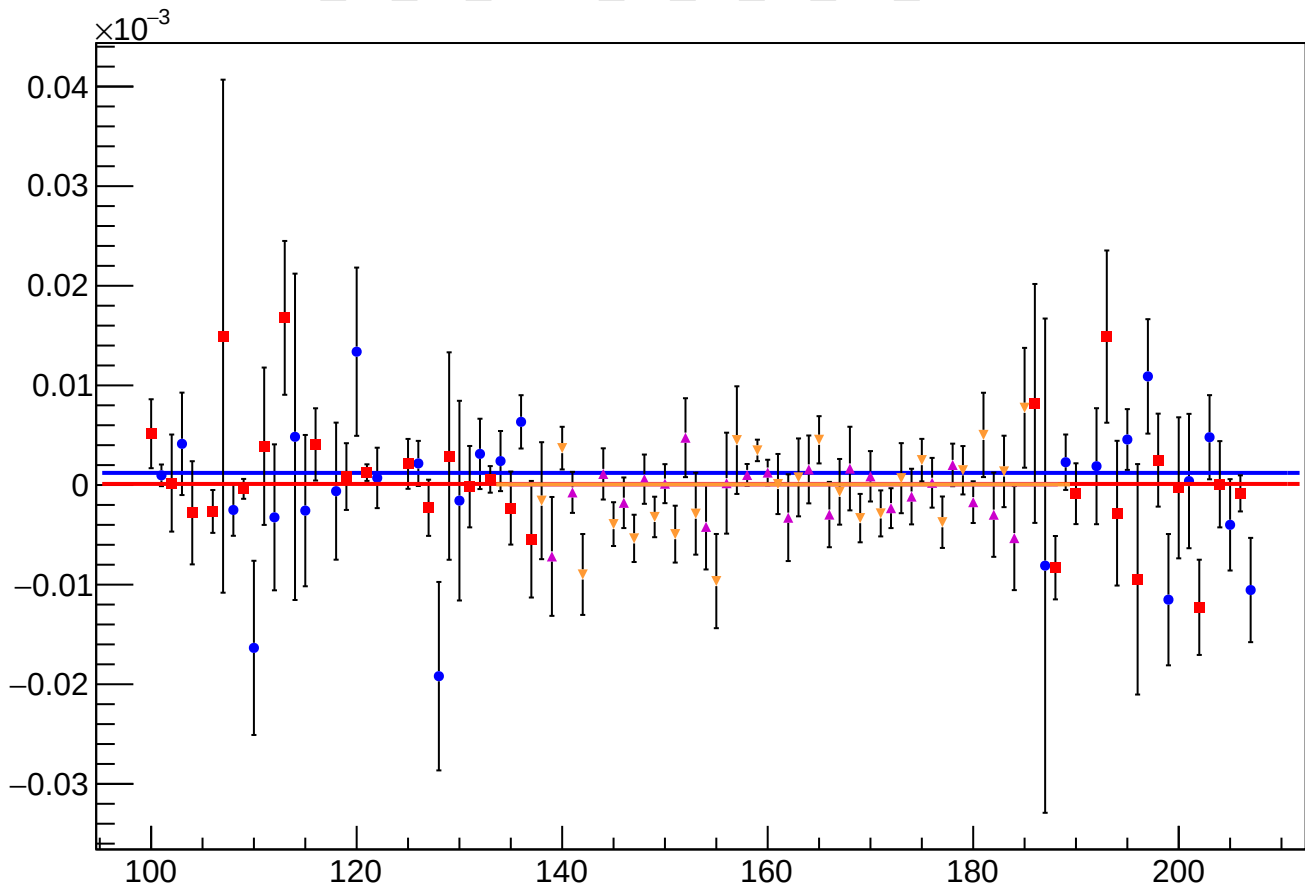
Left In: 42.078+/-0.007  $\chi^2/\text{NDF}$ : 1543505.8/22

+ sign 42.200+/-0.005  $\chi^2/\text{NDF}$ : 2015957.6/49

All: 42.224+/-0.004  $\chi^2/\text{NDF}$ : 4619902.3/101

- sign 42.246+/-0.005  $\chi^2/\text{NDF}$ : 2603909.0/51

asym\_us\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 33.5/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:51.7/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 34.1/28

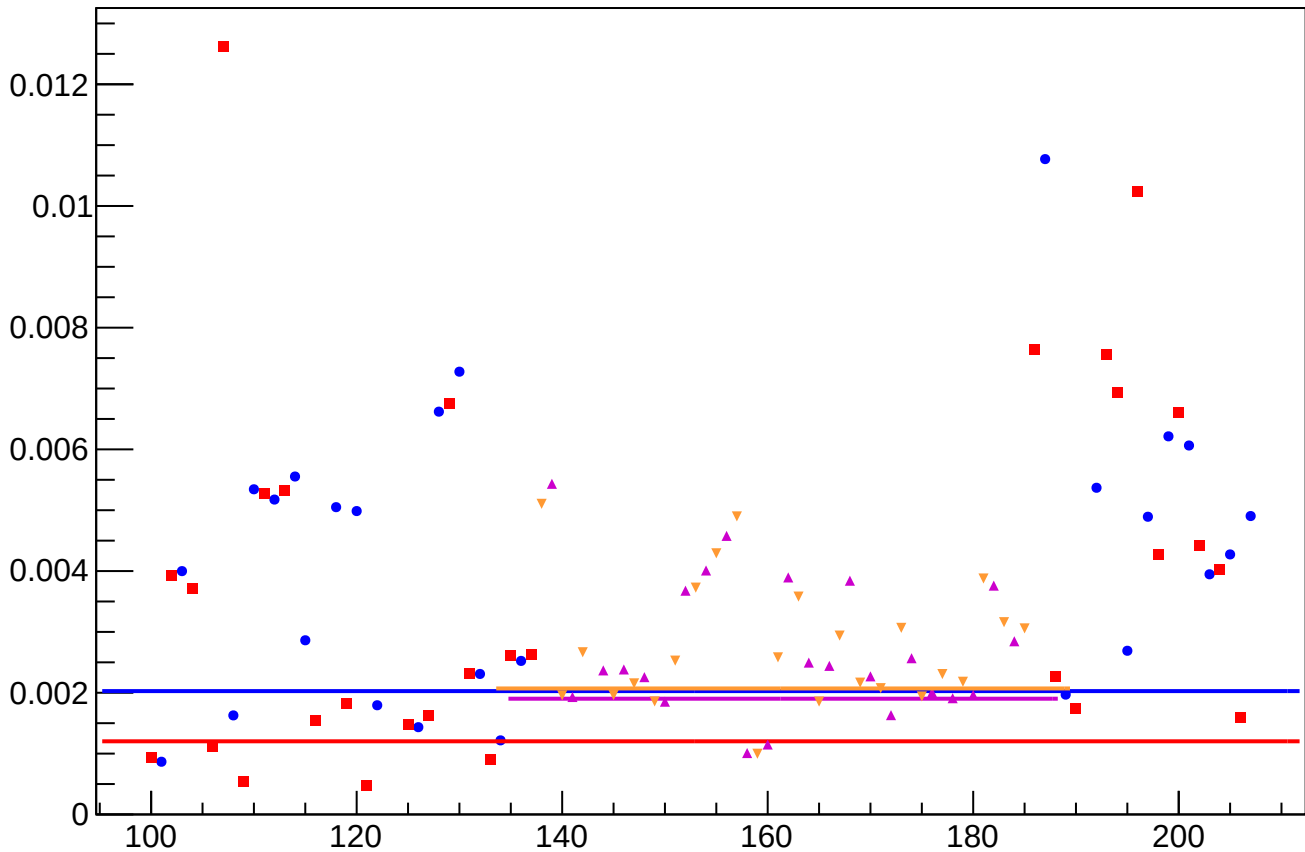
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:13.0/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 87.0/49

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 134.8/101

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 47.1/51

# asym\_us\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In:  $0.002 \pm 0.000$   $\chi^2/\text{NDF}$ : 9947222.2/25

Left Out:  $0.002 \pm 0.000$   $\chi^2/\text{NDF}$ : 5263163.7/23

Right Out:  $0.001 \pm 0.000$   $\chi^2/\text{NDF}$ : 14700381.7/28

Left In:  $0.002 \pm 0.000$   $\chi^2/\text{NDF}$ : 5935945.7/22

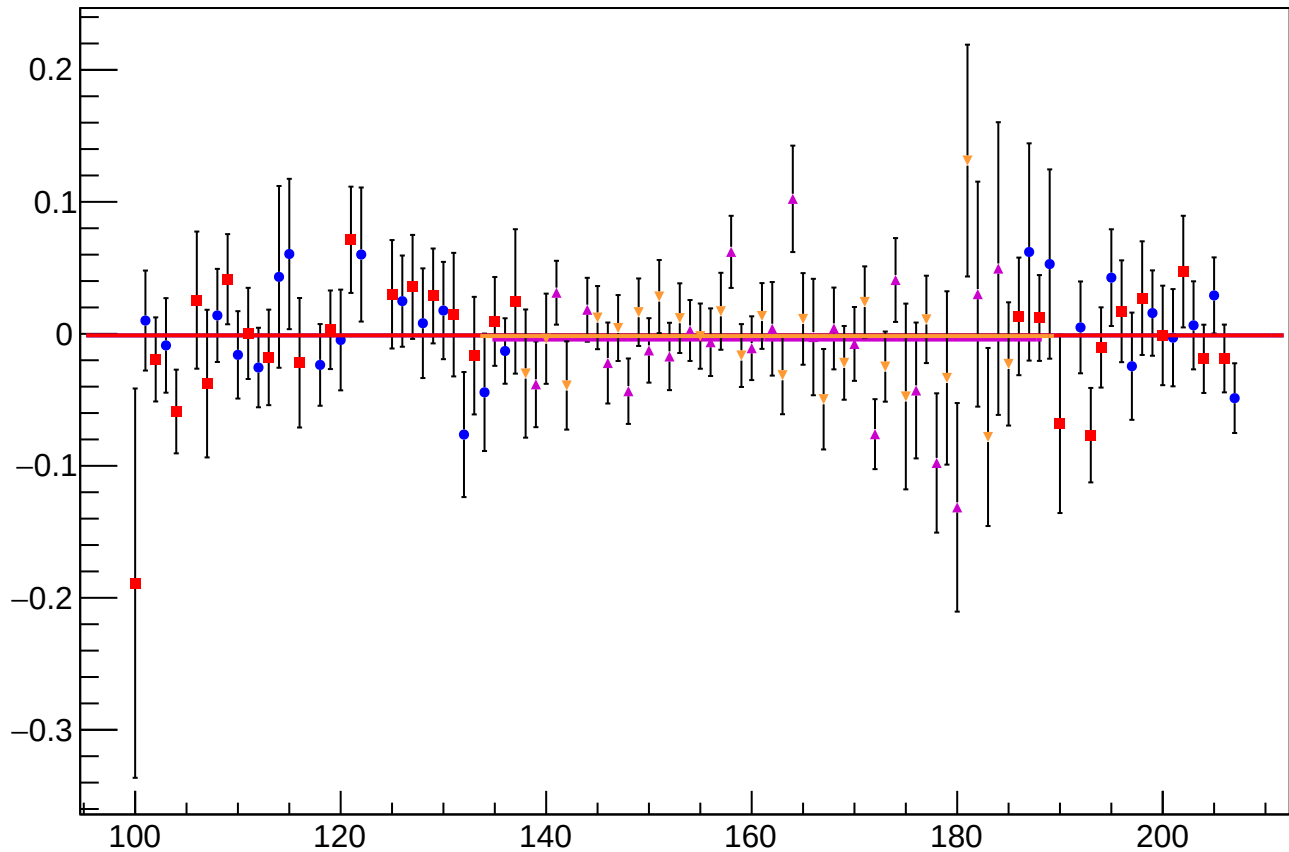
+ sign  $0.002 \pm 0.000$   $\chi^2/\text{NDF}$ : 15215653.4/49

All:  $0.002 \pm 0.000$   $\chi^2/\text{NDF}$ : 39989826.7/101

- sign  $0.002 \pm 0.000$   $\chi^2/\text{NDF}$ : 22798490.0/51



# asym\_us\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.001 \pm 0.007$   $\chi^2/\text{NDF}$ : 16.9/25

Left Out:  $-0.002 \pm 0.006$   $\chi^2/\text{NDF}$ : 14.6/23

Right Out:  $-0.001 \pm 0.007$   $\chi^2/\text{NDF}$ : 22.5/28

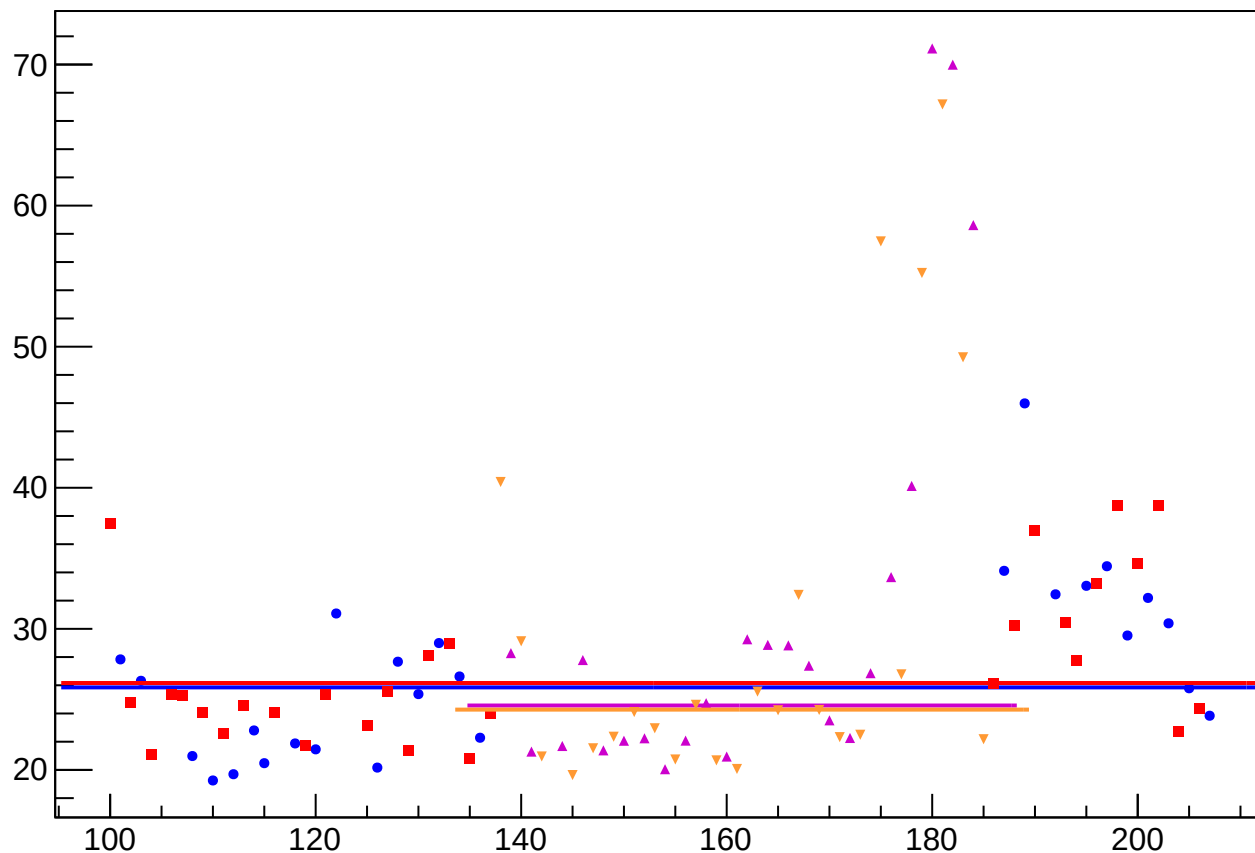
Left In:  $-0.004 \pm 0.006$   $\chi^2/\text{NDF}$ : 36.5/22

+ sign  $-0.001 \pm 0.005$   $\chi^2/\text{NDF}$ : 31.5/49

All:  $-0.002 \pm 0.003$   $\chi^2/\text{NDF}$ : 90.8/101

- sign  $-0.003 \pm 0.005$   $\chi^2/\text{NDF}$ : 59.2/51

# asym\_us\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In:  $25.850 \pm 0.005$   $\chi^2/\text{NDF}: 968510.7/25$

Left Out:  $24.275 \pm 0.004$   $\chi^2/\text{NDF}: 2310684.7/23$

Right Out:  $26.160 \pm 0.005$   $\chi^2/\text{NDF}: 941849.5/28$

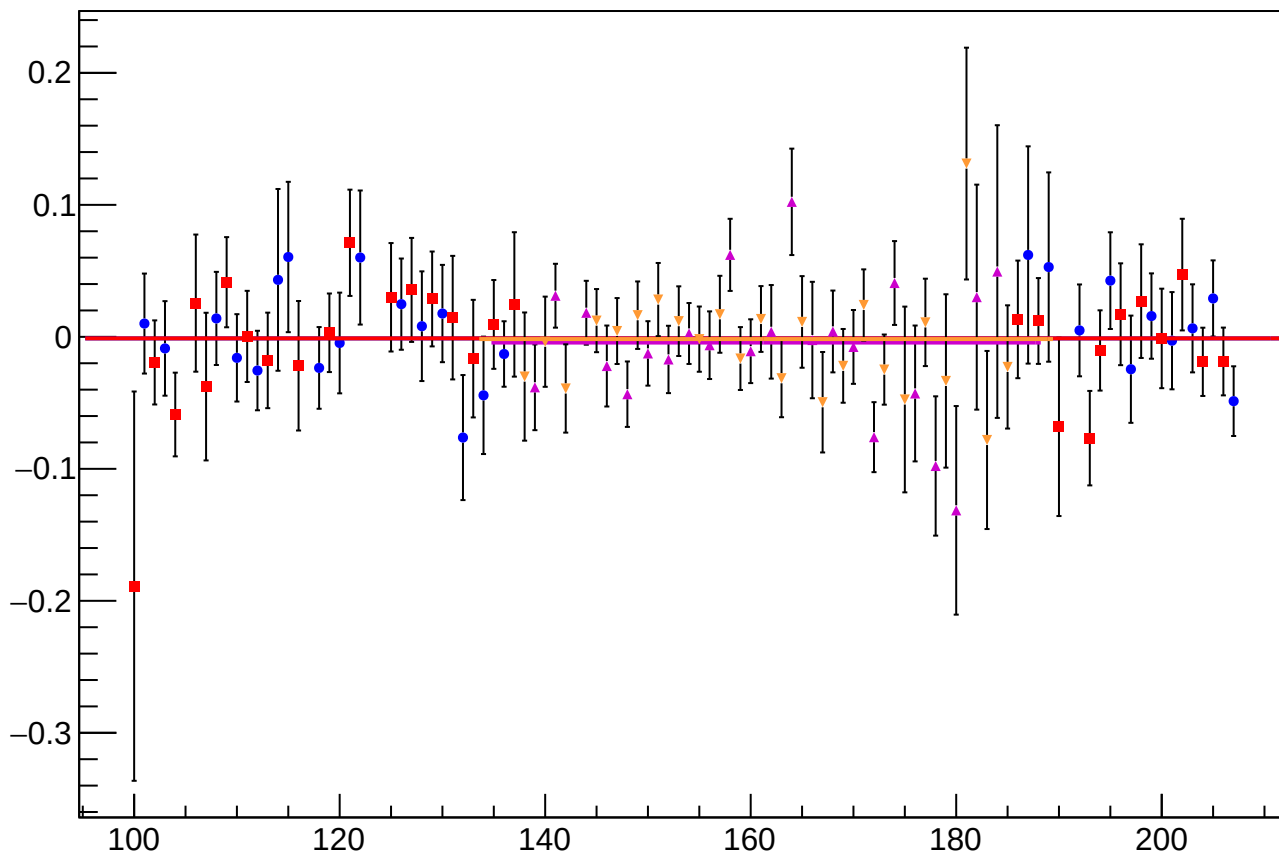
Left In:  $24.565 \pm 0.005$   $\chi^2/\text{NDF}: 2132779.0/22$

+ sign  $24.965 \pm 0.003$   $\chi^2/\text{NDF}: 3333303.8/49$

All:  $25.130 \pm 0.002$   $\chi^2/\text{NDF}: 6469594.0/101$

- sign  $25.293 \pm 0.003$   $\chi^2/\text{NDF}: 3131497.9/51$

asym\_us\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.001 \pm 0.007$   $\chi^2/\text{NDF}$ : 16.9/25

Left Out:  $-0.002 \pm 0.006$   $\chi^2/\text{NDF}$ : 14.6/23

Right Out:  $-0.001 \pm 0.007$   $\chi^2/\text{NDF}$ : 22.5/28

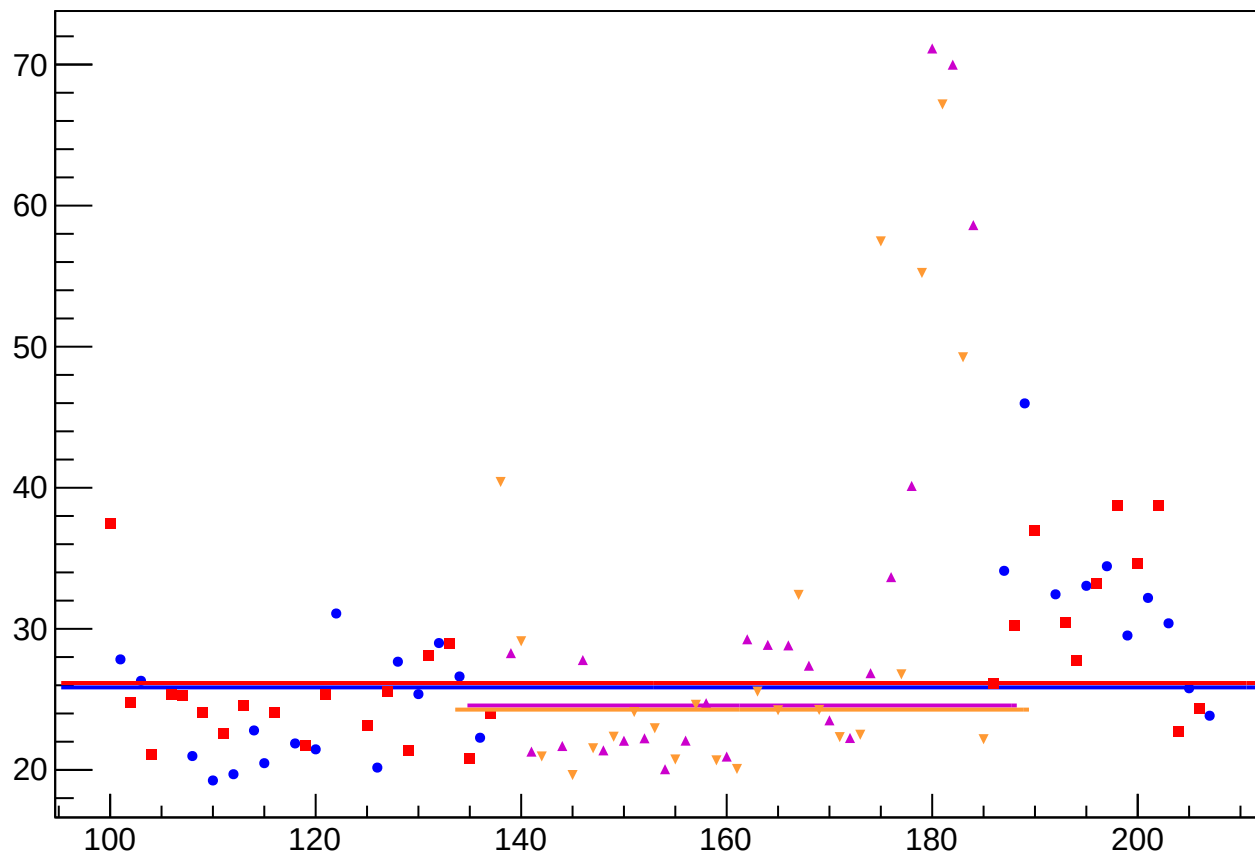
Left In:  $-0.004 \pm 0.006$   $\chi^2/\text{NDF}$ : 36.5/22

+ sign  $-0.001 \pm 0.005$   $\chi^2/\text{NDF}$ : 31.5/49

All:  $-0.002 \pm 0.003$   $\chi^2/\text{NDF}$ : 90.8/101

- sign  $-0.003 \pm 0.005$   $\chi^2/\text{NDF}$ : 59.2/51

asym\_us\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 25.850 $\pm$ 0.005  $\chi^2$ /NDF: 968510.7/25

Left Out: 24.275 $\pm$ 0.004  $\chi^2$ /NDF: 2310684.7/23

Right Out: 26.160 $\pm$ 0.005  $\chi^2$ /NDF: 941849.5/28

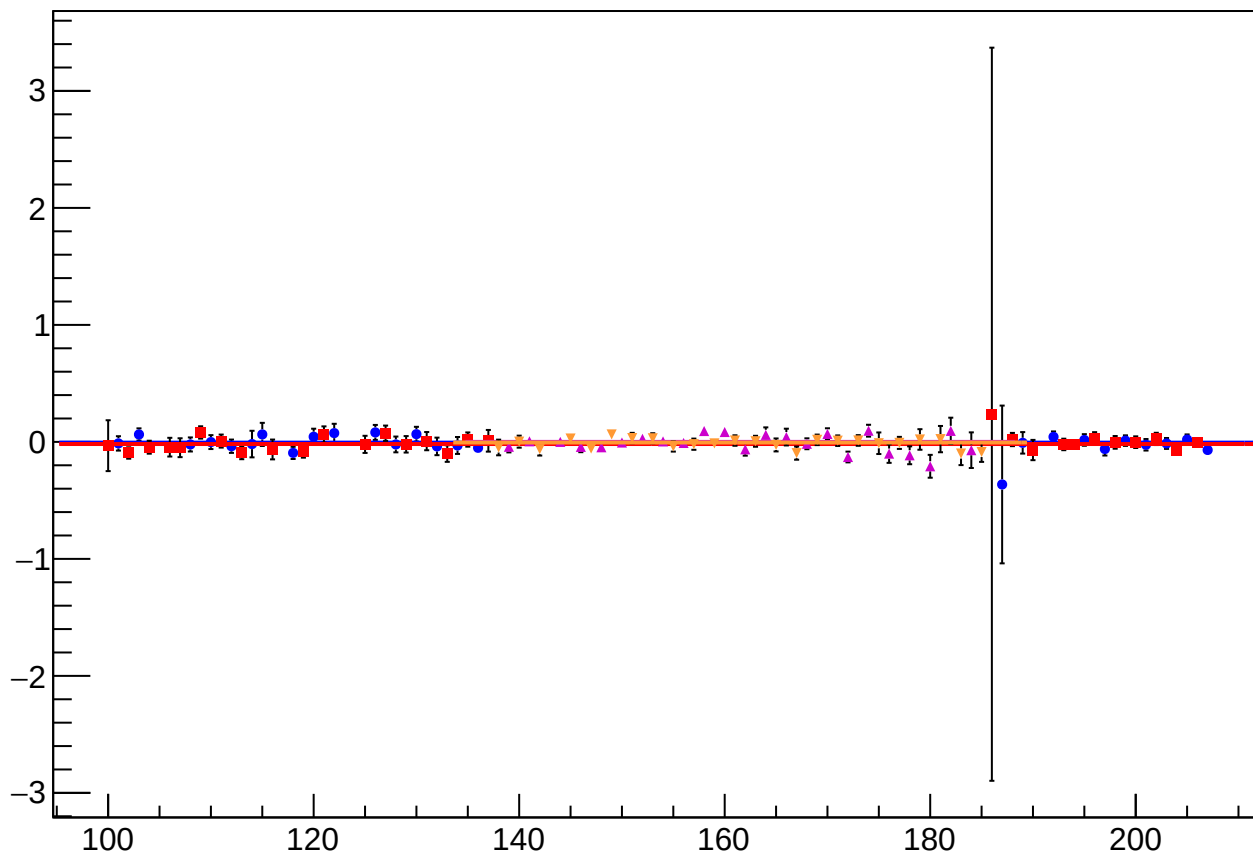
Left In: 24.565 $\pm$ 0.005  $\chi^2$ /NDF: 2132779.0/22

+ sign 24.965 $\pm$ 0.003  $\chi^2$ /NDF: 3333303.8/49

All: 25.130 $\pm$ 0.002  $\chi^2$ /NDF: 6469594.0/101

- sign 25.293 $\pm$ 0.003  $\chi^2$ /NDF: 3131497.9/51

asym\_us\_dd\_eigen\_dit\_vs\_overload\_cor\_diff\_mean vs Slug



Right In:  $-0.006 \pm 0.011$   $\chi^2/\text{NDF}$ : 17.1/25

Left Out:  $-0.005 \pm 0.010$   $\chi^2/\text{NDF}$ : 13.9/23

Right Out:  $-0.018 \pm 0.011$   $\chi^2/\text{NDF}$ : 20.1/28

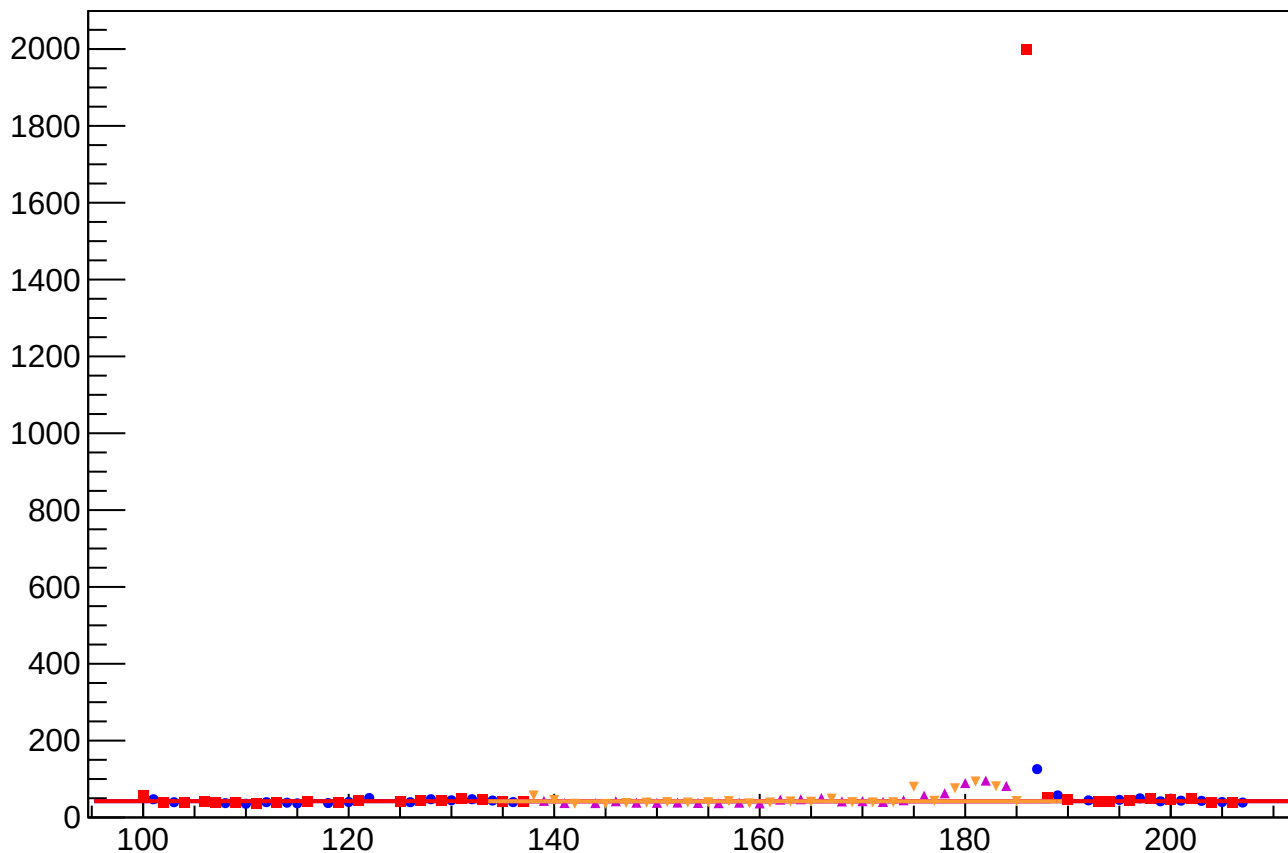
Left In:  $-0.000 \pm 0.010$   $\chi^2/\text{NDF}$ : 37.9/22

+ sign  $-0.006 \pm 0.008$   $\chi^2/\text{NDF}$ : 31.0/49

All:  $-0.007 \pm 0.005$   $\chi^2/\text{NDF}$ : 90.5/101

- sign  $-0.009 \pm 0.008$   $\chi^2/\text{NDF}$ : 59.4/51

asym\_us\_dd\_eigen\_dit\_vs\_overload\_cor\_diff\_rms vs Slug



Right In: 42.334 $\pm$ 0.008  $\chi^2$ /NDF: 299354.4/25

Left Out: 42.088 $\pm$ 0.007  $\chi^2$ /NDF: 1716037.6/23

Right Out: 42.435 $\pm$ 0.008  $\chi^2$ /NDF: 1059279.5/28

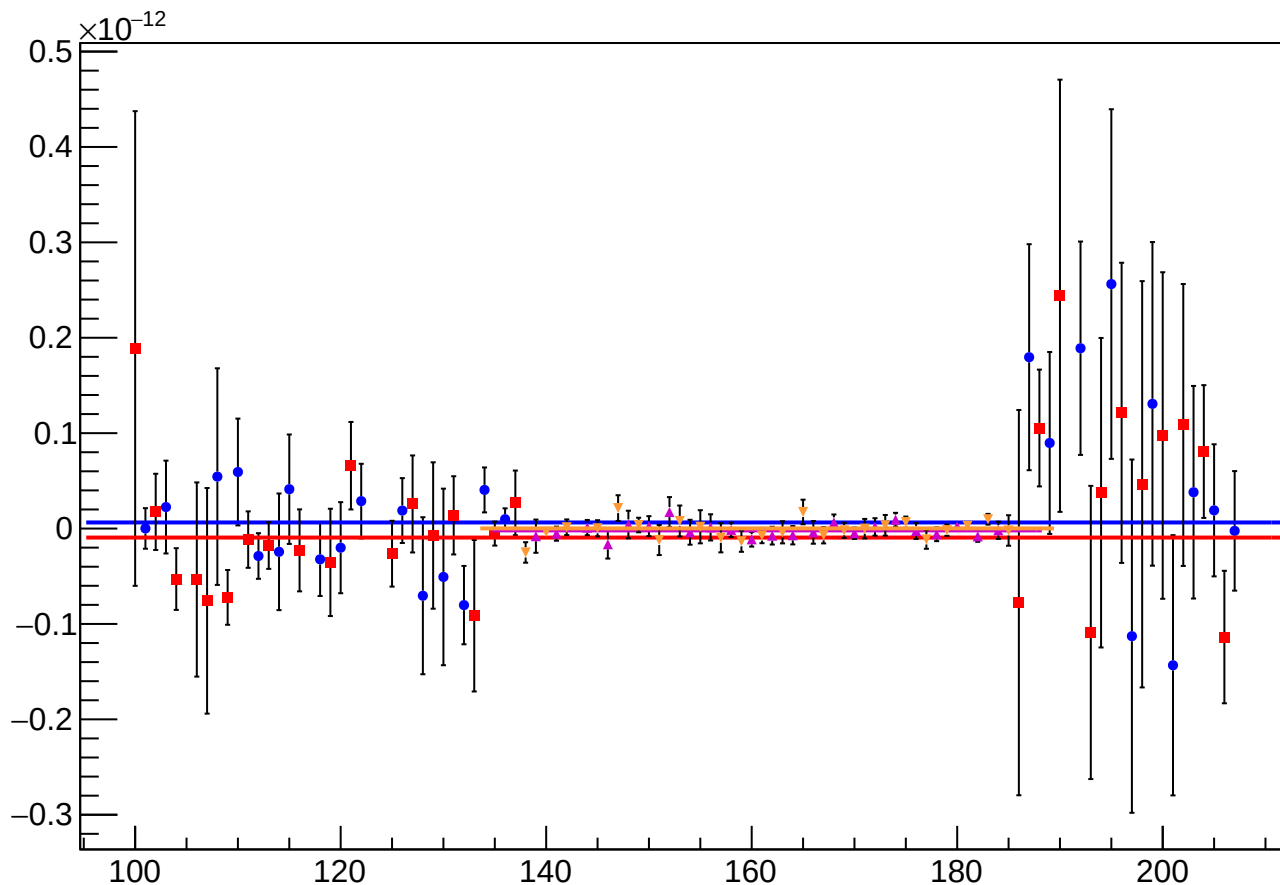
Left In: 42.078 $\pm$ 0.007  $\chi^2$ /NDF: 1543481.3/22

+ sign 42.201 $\pm$ 0.005  $\chi^2$ /NDF: 2015901.1/49

All: 42.224 $\pm$ 0.004  $\chi^2$ /NDF: 4619808.1/101

- sign 42.246 $\pm$ 0.005  $\chi^2$ /NDF: 2603871.1/51

asym\_us\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 23.4/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 21.2/23

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 25.8/28

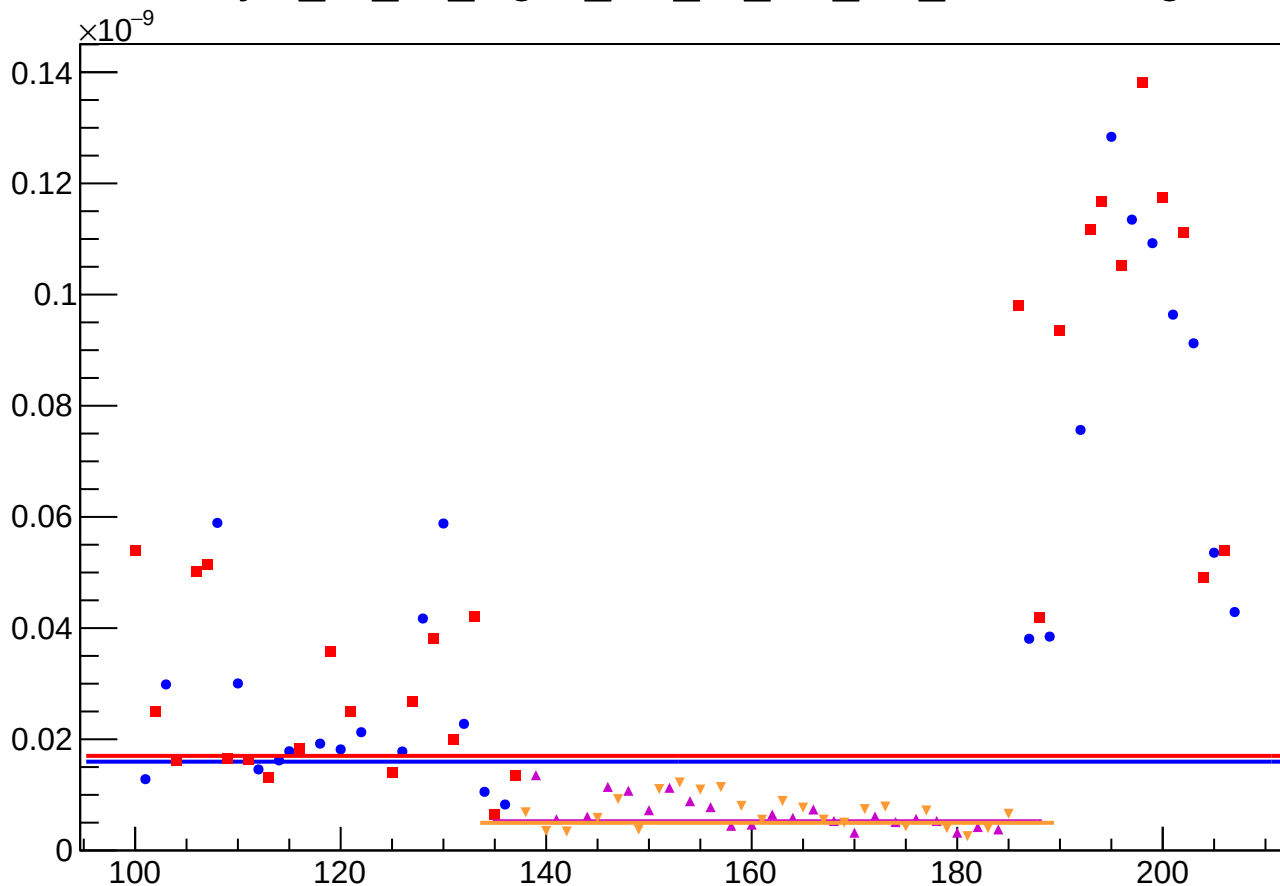
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 11.7/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 45.3/49

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 85.2/101

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 38.5/51

# asym\_us\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7622351.0/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3536964.4/23

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8894617.1/28

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2618852.5/22

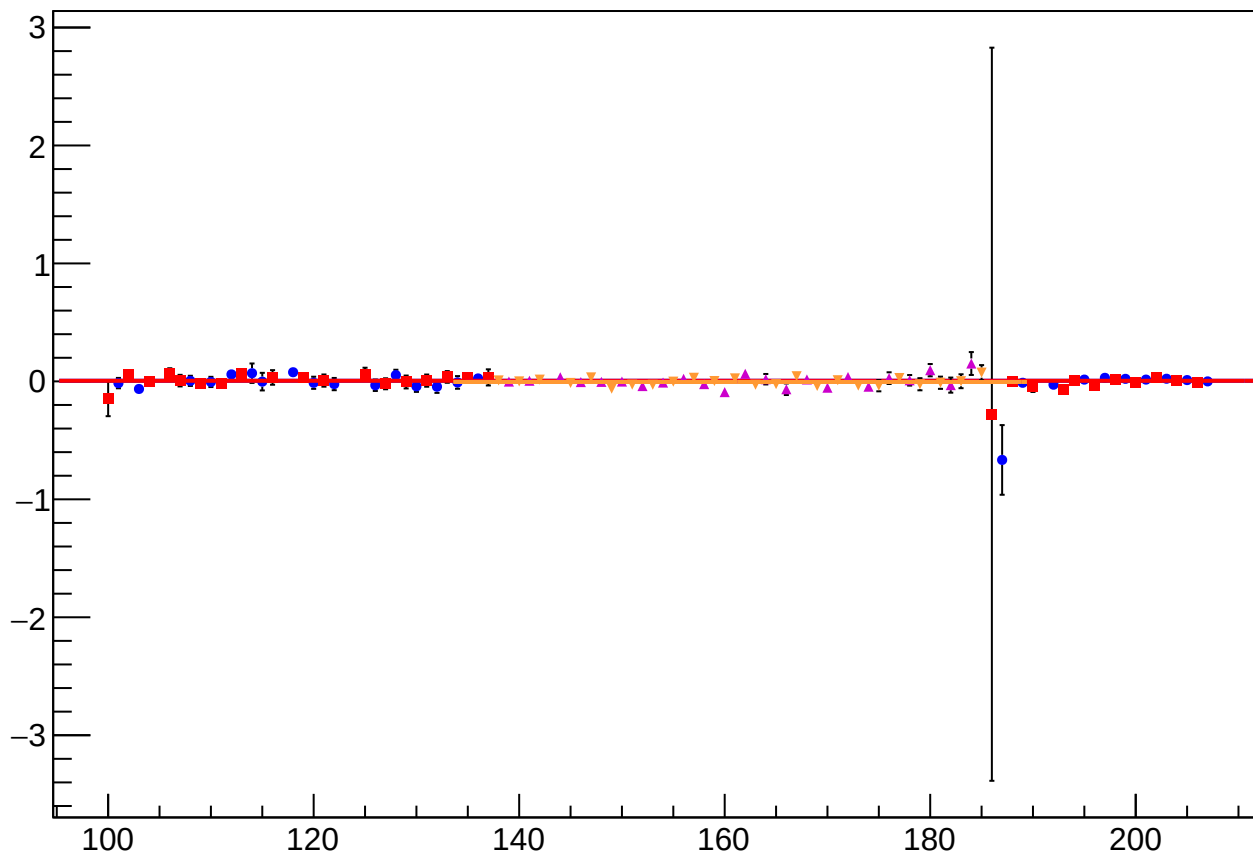
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 15596451.4/49

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 31725090.5/101

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 16095371.8/51



asym\_us\_dd\_overload\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.005 $\pm$ 0.007  $\chi^2$ /NDF: 24.2/25

Left Out: -0.005 $\pm$ 0.007  $\chi^2$ /NDF:16.7/23

Right Out: 0.005 $\pm$ 0.007  $\chi^2$ /NDF: 22.7/28

Left In: -0.004 $\pm$ 0.007  $\chi^2$ /NDF:31.2/22

+ sign -0.000 $\pm$ 0.005  $\chi^2$ /NDF: 41.9/49

All: 0.000 $\pm$ 0.004  $\chi^2$ /NDF: 96.7/101

- sign 0.001 $\pm$ 0.005  $\chi^2$ /NDF: 54.8/51

asym\_us\_dd\_overload\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 27.043 $\pm$ 0.005  $\chi^2$ /NDF: 329517.7/25

Left Out: 28.781 $\pm$ 0.005  $\chi^2$ /NDF: 1170605.8/23

Right Out: 26.374 $\pm$ 0.005  $\chi^2$ /NDF: 1105968.1/28

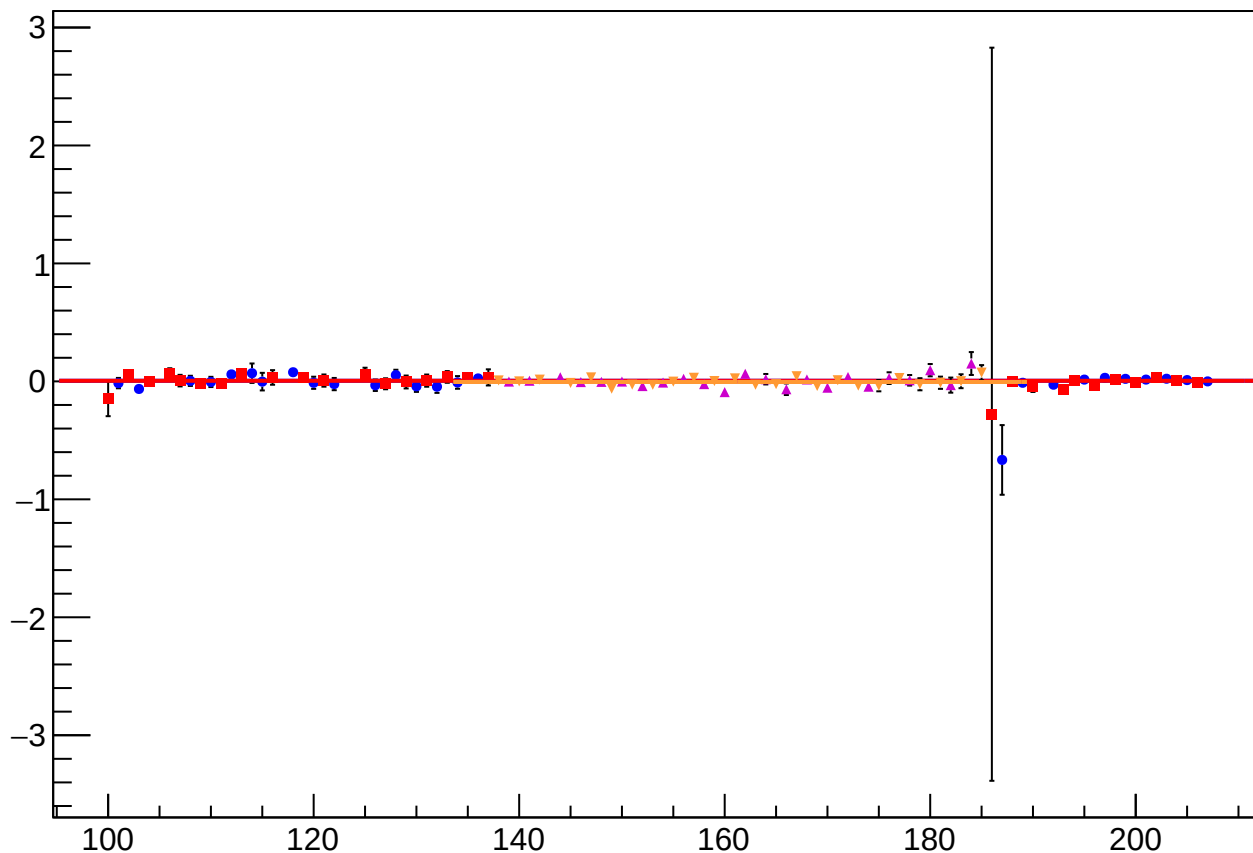
Left In: 29.255 $\pm$ 0.005  $\chi^2$ /NDF: 1140337.0/22

+ sign 27.943 $\pm$ 0.004  $\chi^2$ /NDF: 1558583.1/49

All: 27.858 $\pm$ 0.003  $\chi^2$ /NDF: 3971478.1/101

- sign 27.775 $\pm$ 0.004  $\chi^2$ /NDF: 2411778.1/51

asym\_us\_dd\_overload\_cor\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.005 $\pm$ 0.007  $\chi^2$ /NDF: 24.2/25

Left Out: -0.005 $\pm$ 0.007  $\chi^2$ /NDF:16.7/23

Right Out: 0.005 $\pm$ 0.007  $\chi^2$ /NDF: 22.7/28

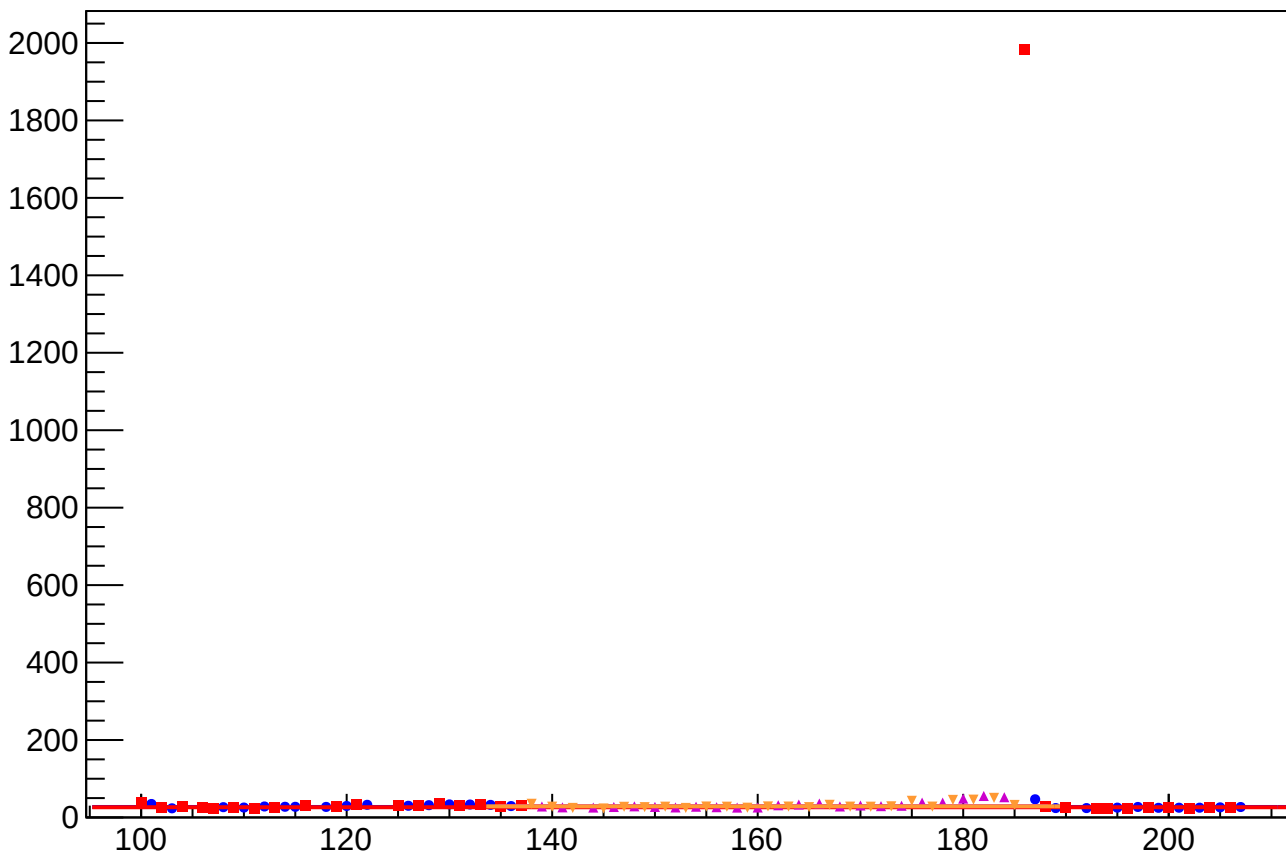
Left In: -0.004 $\pm$ 0.007  $\chi^2$ /NDF:31.2/22

+ sign -0.000 $\pm$ 0.005  $\chi^2$ /NDF: 41.9/49

All: 0.000 $\pm$ 0.004  $\chi^2$ /NDF: 96.7/101

- sign 0.001 $\pm$ 0.005  $\chi^2$ /NDF: 54.8/51

asym\_us\_dd\_overload\_cor\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 27.043+/-0.005  $\chi^2/\text{NDF}$ : 329517.7/25

Left Out: 28.781+/-0.005  $\chi^2/\text{NDF}$ : 1170605.8/23

Right Out: 26.374+/-0.005  $\chi^2/\text{NDF}$ : 1105968.1/28

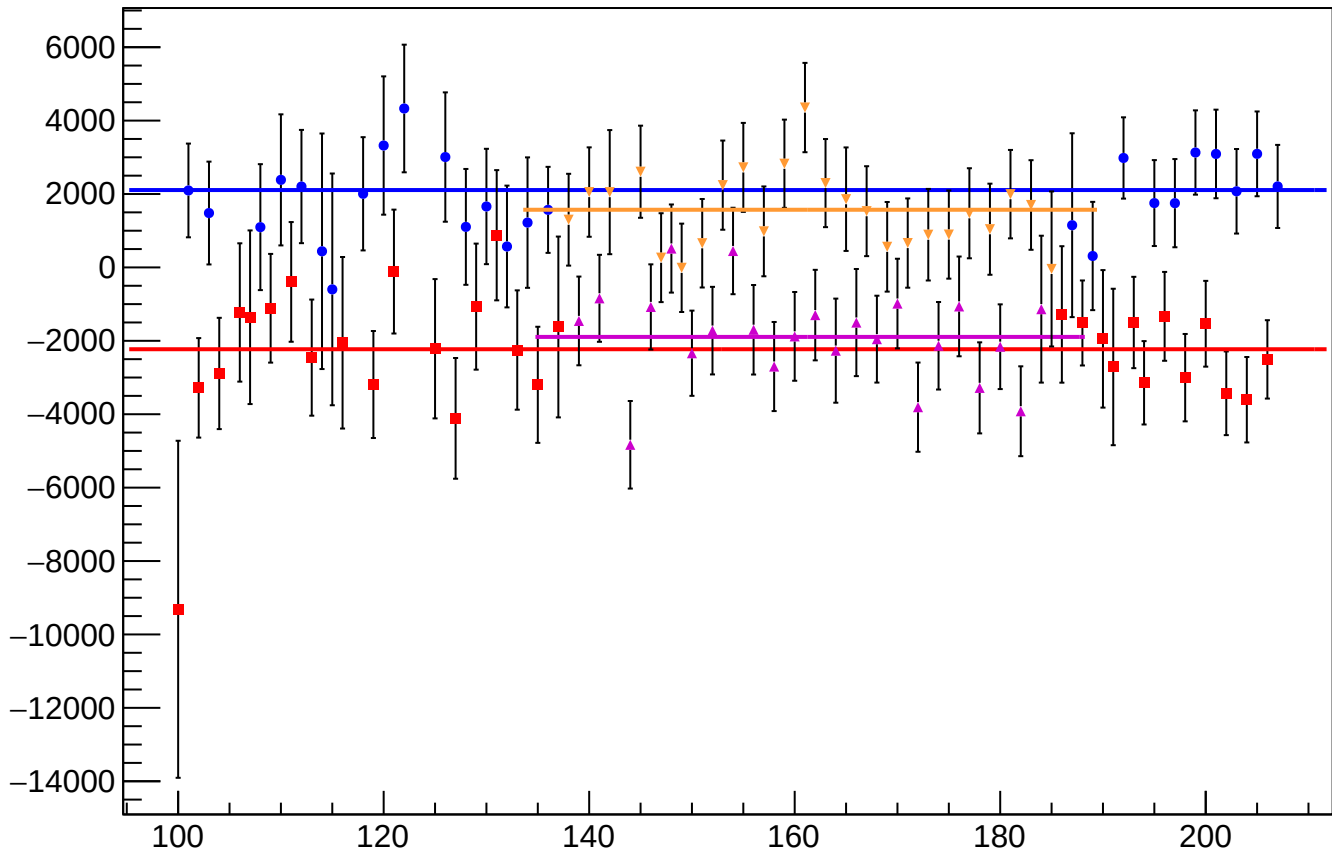
Left In: 29.255+/-0.005  $\chi^2/\text{NDF}$ : 1140337.0/22

+ sign 27.943+/-0.004  $\chi^2/\text{NDF}$ : 1558583.1/49

All: 27.858+/-0.003  $\chi^2/\text{NDF}$ : 3971478.1/101

- sign 27.775+/-0.004  $\chi^2/\text{NDF}$ : 2411778.1/51

# reg\_asym\_usl\_mean vs Slug



Right In: 2107.973 $\pm$ 282.293  $\chi^2$ /NDF: 10.3/25

Left Out: 1571.055 $\pm$ 256.536  $\chi^2$ /NDF: 15.4/23

Right Out: -2229.210 $\pm$ 272.803  $\chi^2$ /NDF: 18.3/29

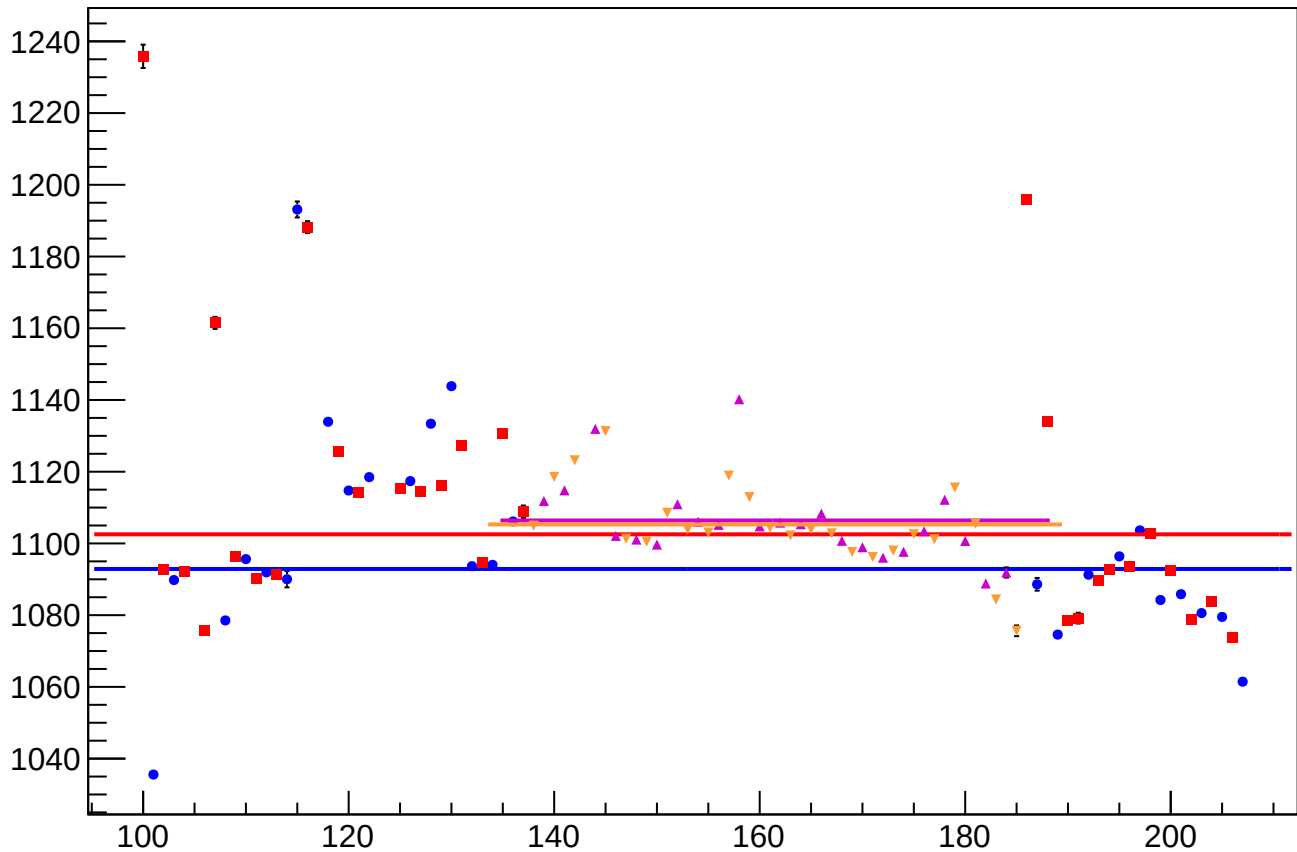
Left In: -1893.347 $\pm$ 258.339  $\chi^2$ /NDF: 24.1/22

+ sign 1813.907 $\pm$ 189.853  $\chi^2$ /NDF: 27.7/49

All: -142.411 $\pm$ 133.435  $\chi^2$ /NDF: 280.7/102

- sign -2052.139 $\pm$ 187.578  $\chi^2$ /NDF: 43.2/52

# reg\_asym\_usl\_rms vs Slug



Right In: 1092.881 $\pm$ 0.200  $\chi^2$ /NDF: 15101.4/25

Left Out: 1105.294 $\pm$ 0.181  $\chi^2$ /NDF:3161.8/23

Right Out: 1102.541 $\pm$ 0.193  $\chi^2$ /NDF: 19031.8/29

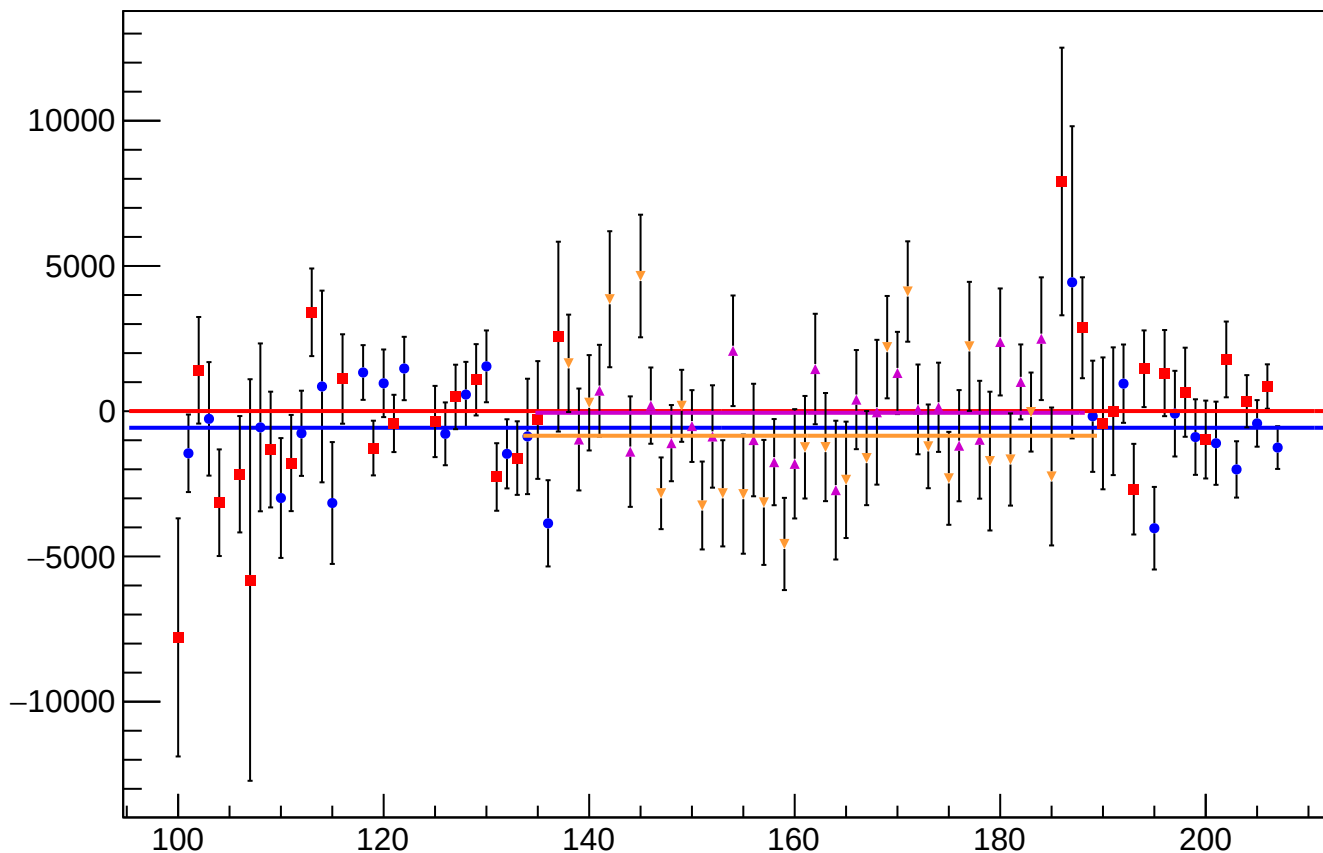
Left In: 1106.405 $\pm$ 0.183  $\chi^2$ /NDF:3776.4/22

+ sign 1099.680 $\pm$ 0.134  $\chi^2$ /NDF: 20381.1/49

All: 1102.159 $\pm$ 0.094  $\chi^2$ /NDF: 44074.6/102

- sign 1104.578 $\pm$ 0.133  $\chi^2$ /NDF: 23019.7/52

# asym\_usl\_reg\_correction\_mean vs Slug



Right In:  $-570.057 \pm 252.072$   $\chi^2/\text{NDF}$ : 33.8/25

Left Out:  $-844.649 \pm 347.346$   $\chi^2/\text{NDF}$ : 44.2/23

Right Out:  $5.118 \pm 257.051$   $\chi^2/\text{NDF}$ : 40.0/29

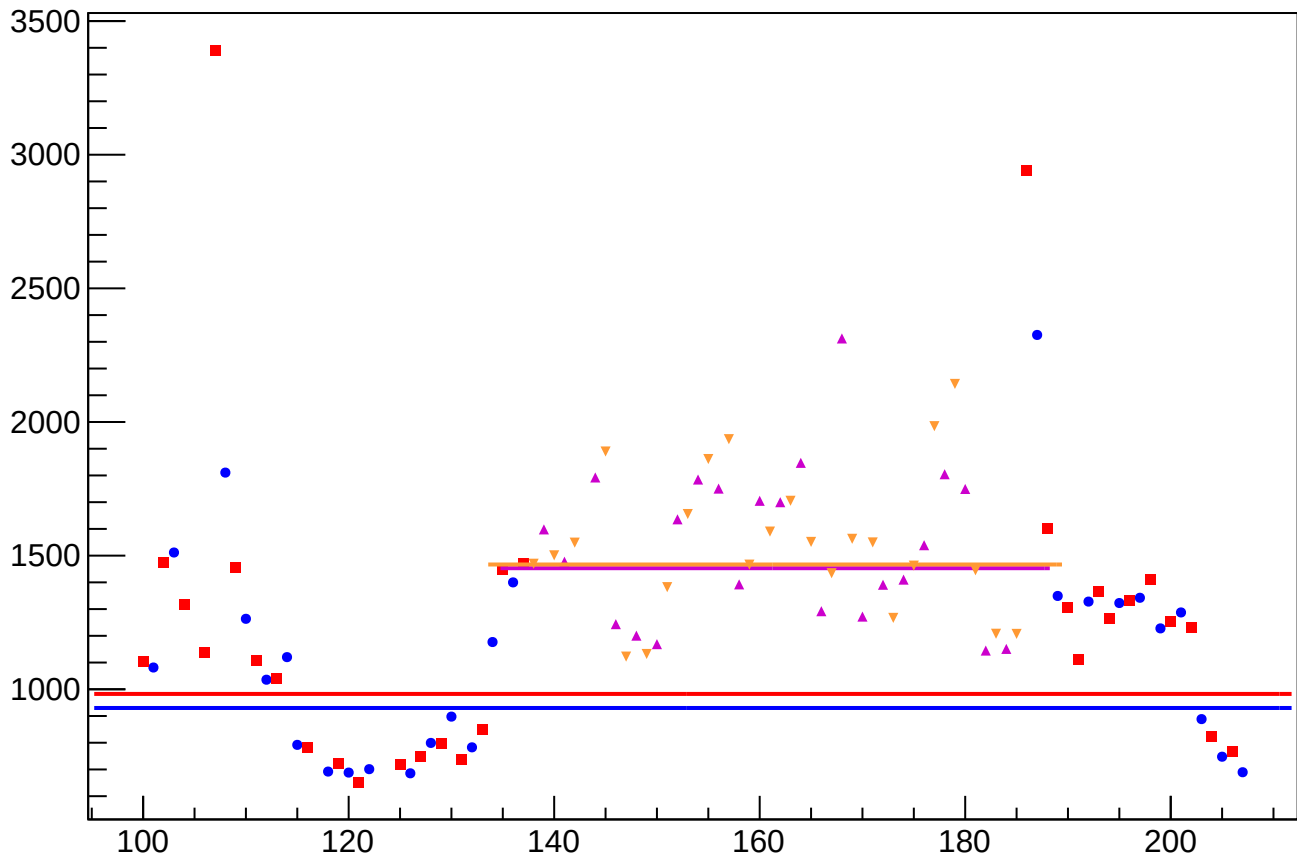
Left In:  $-54.347 \pm 345.962$   $\chi^2/\text{NDF}$ : 13.0/22

+ sign  $-664.784 \pm 204.011$   $\chi^2/\text{NDF}$ : 78.4/49

All:  $-344.077 \pm 145.071$   $\chi^2/\text{NDF}$ : 136.5/102

- sign  $-16.034 \pm 206.332$   $\chi^2/\text{NDF}$ : 53.1/52

# asym\_usl\_reg\_correction\_rms vs Slug



Right In: 929.999 $\pm$ 0.178  $\chi^2$ /NDF: 2425336.9/25

Left Out: 1466.846 $\pm$ 0.246  $\chi^2$ /NDF:1043303.8/23

Right Out: 982.583 $\pm$ 0.182  $\chi^2$ /NDF: 3008928.2/29

Left In: 1452.983 $\pm$ 0.245  $\chi^2$ /NDF:1129567.2/22

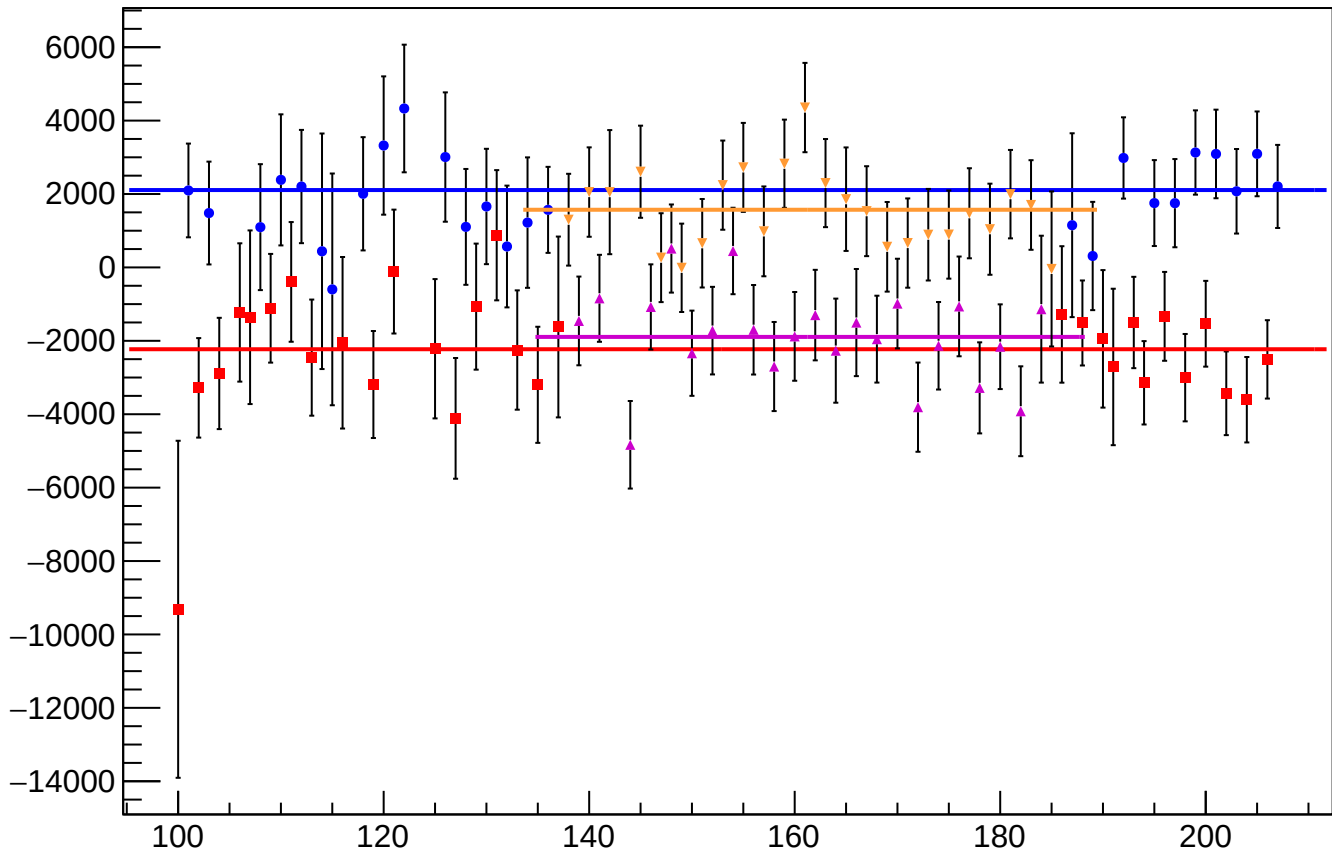
+ sign 1115.196 $\pm$ 0.144  $\chi^2$ /NDF: 6598070.4/49

All: 1132.352 $\pm$ 0.103  $\chi^2$ /NDF: 13147500.1/100

- sign 1149.900 $\pm$ 0.146  $\chi^2$ /NDF: 6520819.6/52



# cor\_asym\_usl\_mean vs Slug



Right In: 2107.973 $\pm$ 282.293  $\chi^2$ /NDF: 10.3/25

Left Out: 1571.055 $\pm$ 256.536  $\chi^2$ /NDF: 15.4/23

Right Out: -2229.202 $\pm$ 272.803  $\chi^2$ /NDF: 18.3/29

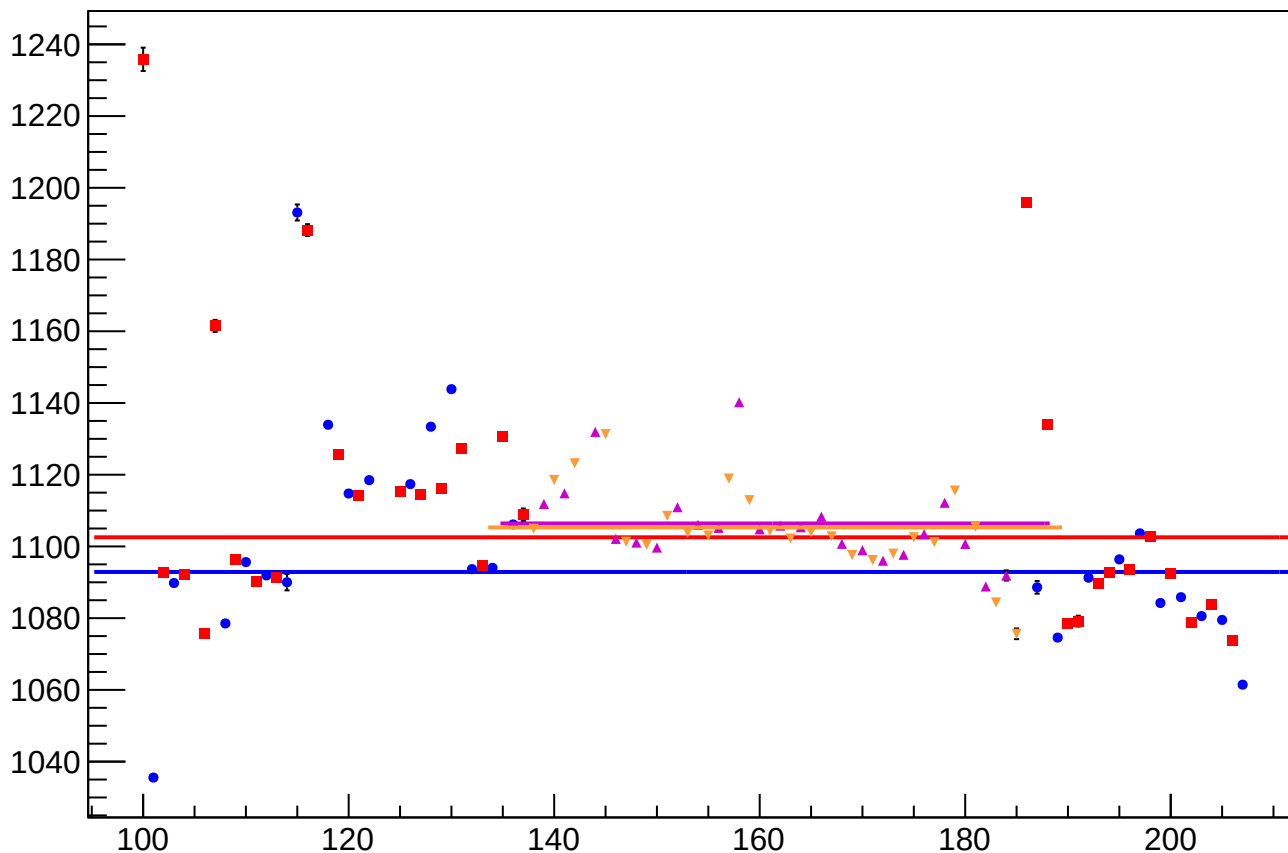
Left In: -1893.347 $\pm$ 258.339  $\chi^2$ /NDF: 24.1/22

+ sign 1813.907 $\pm$ 189.853  $\chi^2$ /NDF: 27.7/49

All: -142.409 $\pm$ 133.435  $\chi^2$ /NDF: 280.7/102

- sign -2052.135 $\pm$ 187.578  $\chi^2$ /NDF: 43.2/52

# cor\_asym\_usl\_rms vs Slug



Right In: 1092.881 $\pm$ 0.200  $\chi^2$ /NDF: 15101.4/25

Left Out: 1105.294 $\pm$ 0.181  $\chi^2$ /NDF:3161.8/23

Right Out: 1102.541 $\pm$ 0.193  $\chi^2$ /NDF: 19031.8/29

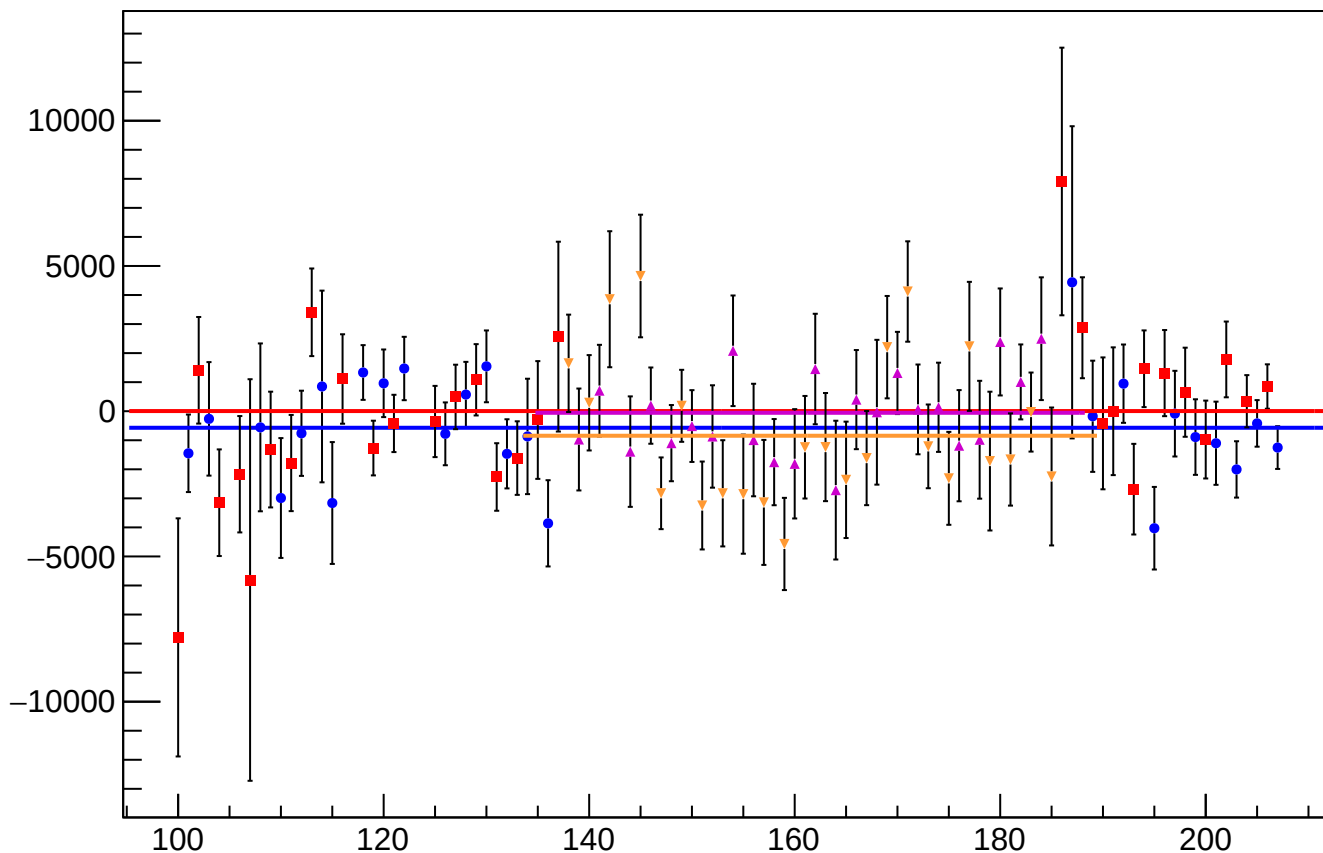
Left In: 1106.405 $\pm$ 0.183  $\chi^2$ /NDF:3776.4/22

+ sign 1099.680 $\pm$ 0.134  $\chi^2$ /NDF: 20381.1/49

All: 1102.159 $\pm$ 0.094  $\chi^2$ /NDF: 44074.6/102

- sign 1104.578 $\pm$ 0.133  $\chi^2$ /NDF: 23019.7/52

# asym\_usl\_cor\_correction\_mean vs Slug



Right In:  $-570.057 \pm 252.072$   $\chi^2/\text{NDF}: 33.8/25$

Left Out:  $-844.649 \pm 347.346$   $\chi^2/\text{NDF}: 44.2/23$

Right Out:  $5.118 \pm 257.051$   $\chi^2/\text{NDF}: 40.0/29$

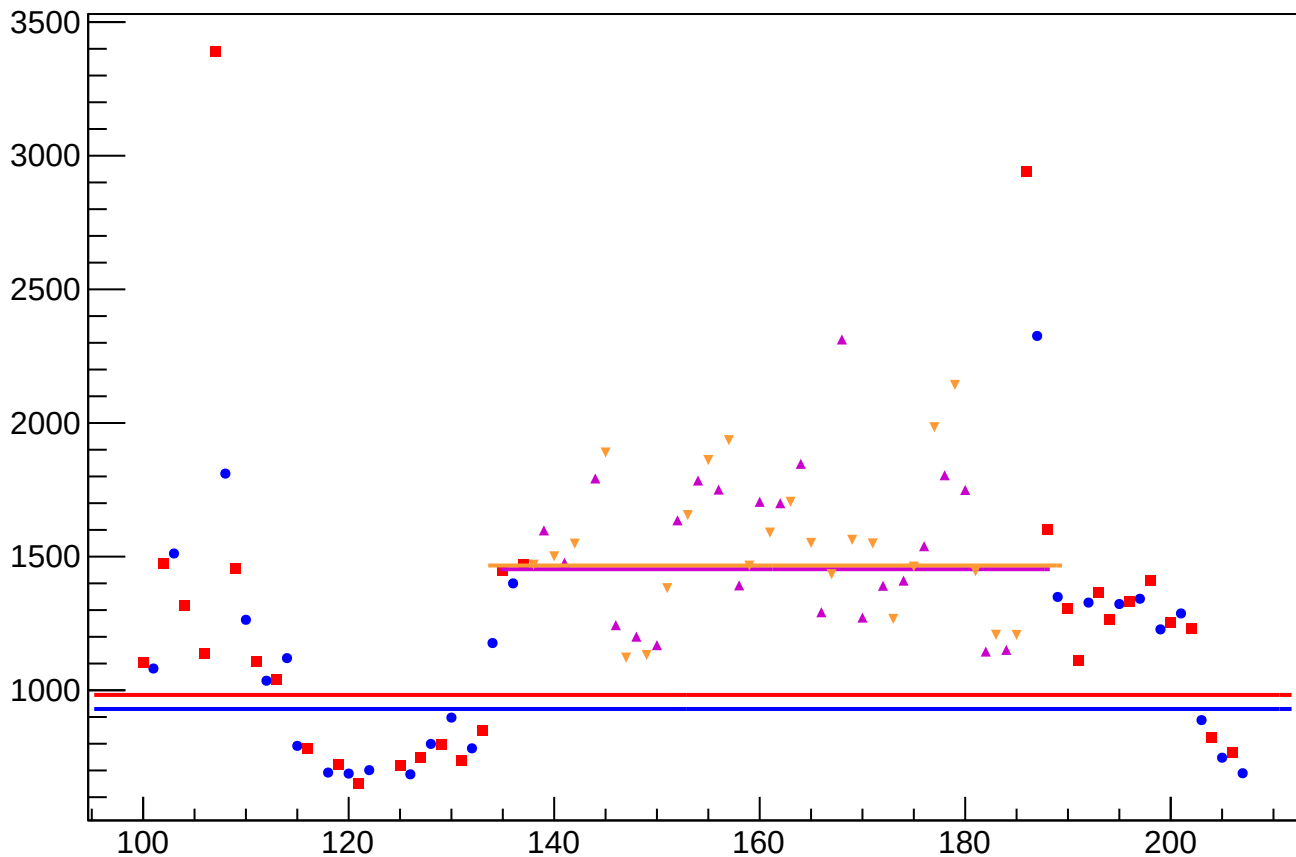
Left In:  $-54.347 \pm 345.962$   $\chi^2/\text{NDF}: 13.0/22$

+ sign  $-664.784 \pm 204.011$   $\chi^2/\text{NDF}: 78.4/49$

All:  $-344.076 \pm 145.071$   $\chi^2/\text{NDF}: 136.5/102$

- sign  $-16.033 \pm 206.332$   $\chi^2/\text{NDF}: 53.1/52$

# asym\_usl\_cor\_correction\_rms vs Slug



Right In: 929.999 $\pm$ 0.178  $\chi^2$ /NDF: 2425336.9/25

Left Out: 1466.846 $\pm$ 0.246  $\chi^2$ /NDF:1043303.8/23

Right Out: 982.583 $\pm$ 0.182  $\chi^2$ /NDF: 3008927.0/29

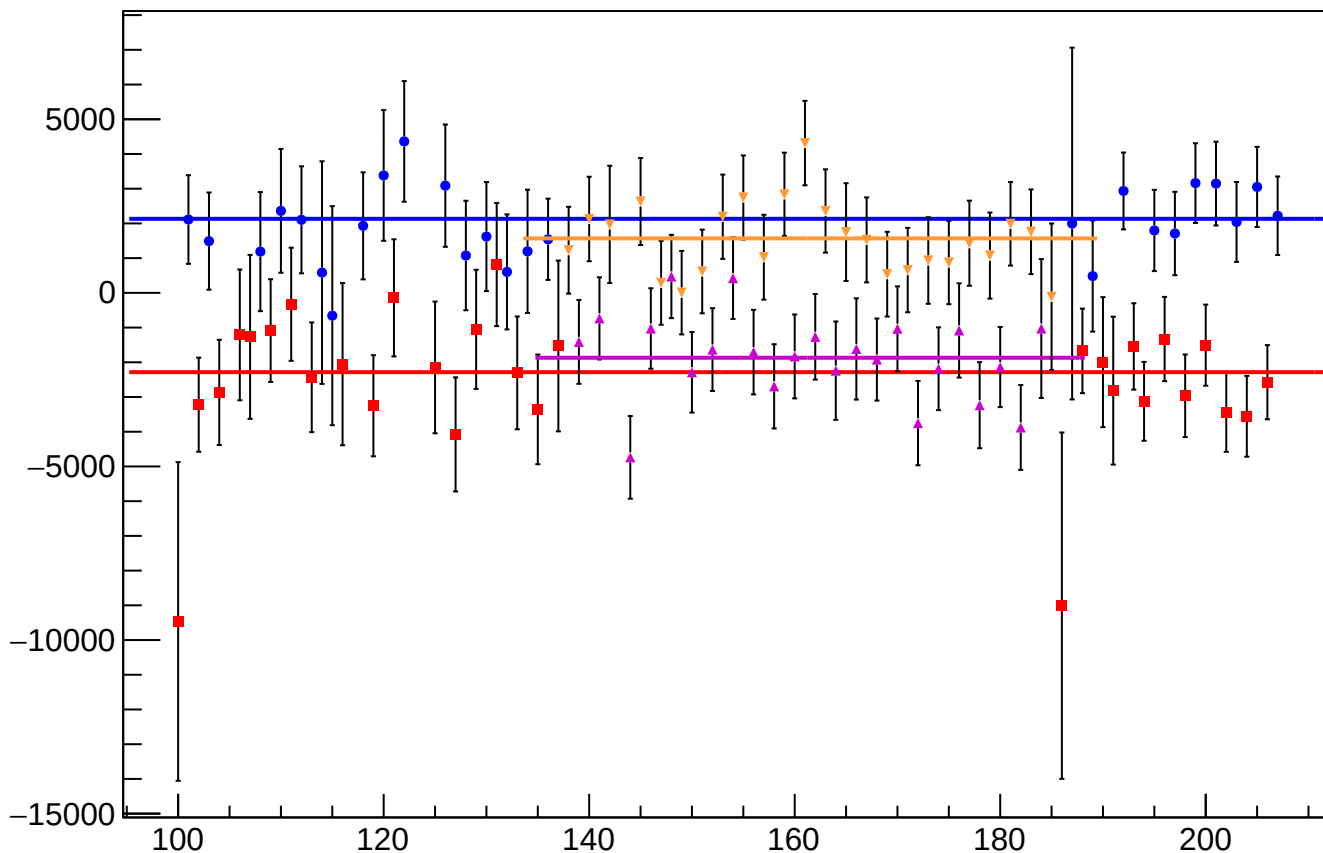
Left In: 1452.983 $\pm$ 0.245  $\chi^2$ /NDF:1129567.2/22

+ sign 1115.196 $\pm$ 0.144  $\chi^2$ /NDF: 6598070.4/49

All: 1132.352 $\pm$ 0.103  $\chi^2$ /NDF: 13147500.3/100

- sign 1149.900 $\pm$ 0.146  $\chi^2$ /NDF: 6520820.0/52

# overload\_cor\_asym\_usl\_mean vs Slug



Right In: 2132.495 $\pm$ 284.249  $\chi^2$ /NDF: 9.8/25

Left Out: 1568.786 $\pm$ 256.294  $\chi^2$ /NDF:15.4/23

Right Out: -2284.393 $\pm$ 275.974  $\chi^2$ /NDF: 19.8/29

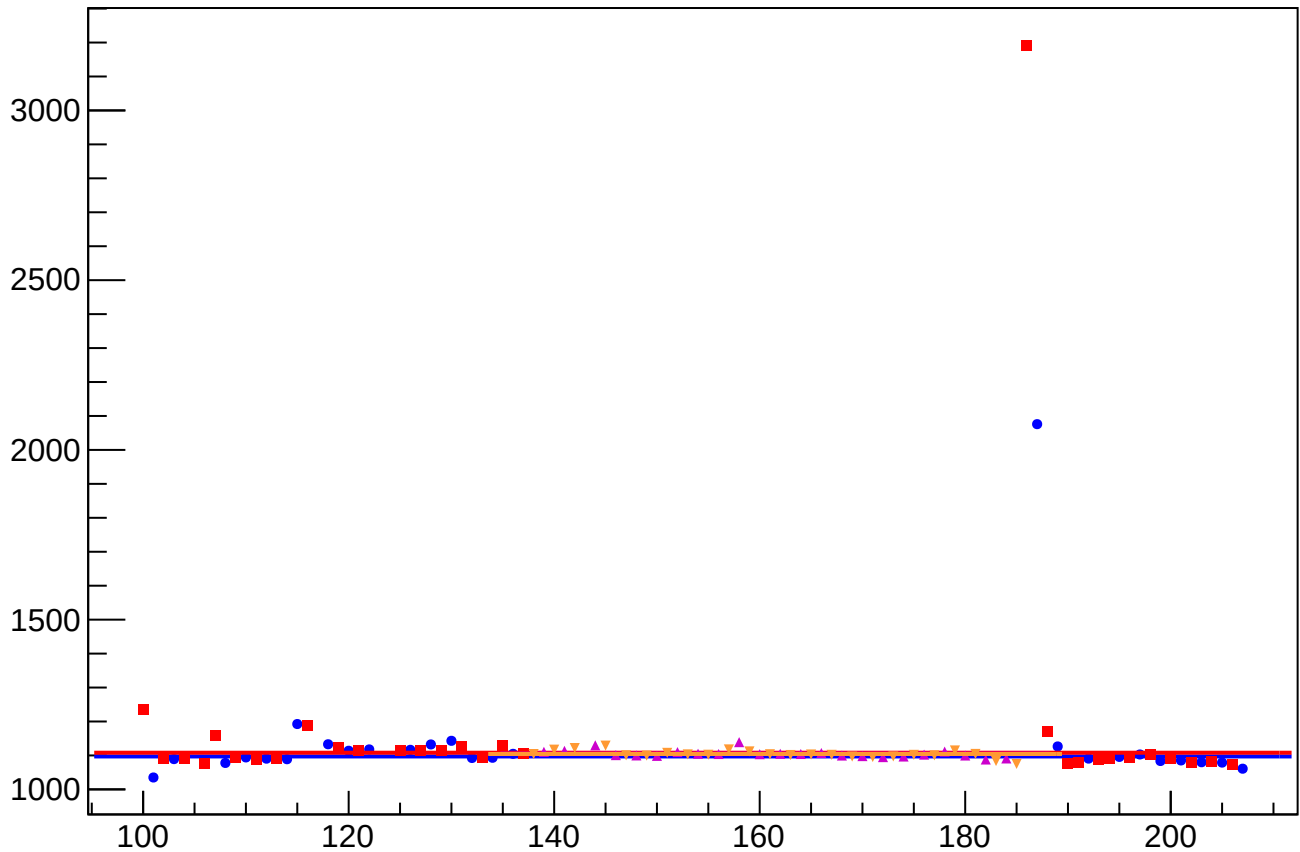
Left In: -1869.342 $\pm$ 258.099  $\chi^2$ /NDF:23.4/22

+ sign 1821.565 $\pm$ 190.345  $\chi^2$ /NDF: 27.4/49

All: -139.569 $\pm$ 133.940  $\chi^2$ /NDF: 282.1/102

- sign -2062.992 $\pm$ 188.506  $\chi^2$ /NDF: 44.4/52

# overload\_cor\_asym\_usl\_rms vs Slug



Right In: 1097.016 $\pm$ 0.201  $\chi^2$ /NDF: 90416.8/25

Left Out: 1104.258 $\pm$ 0.181  $\chi^2$ /NDF:2999.2/23

Right Out: 1108.020 $\pm$ 0.195  $\chi^2$ /NDF: 368440.3/29

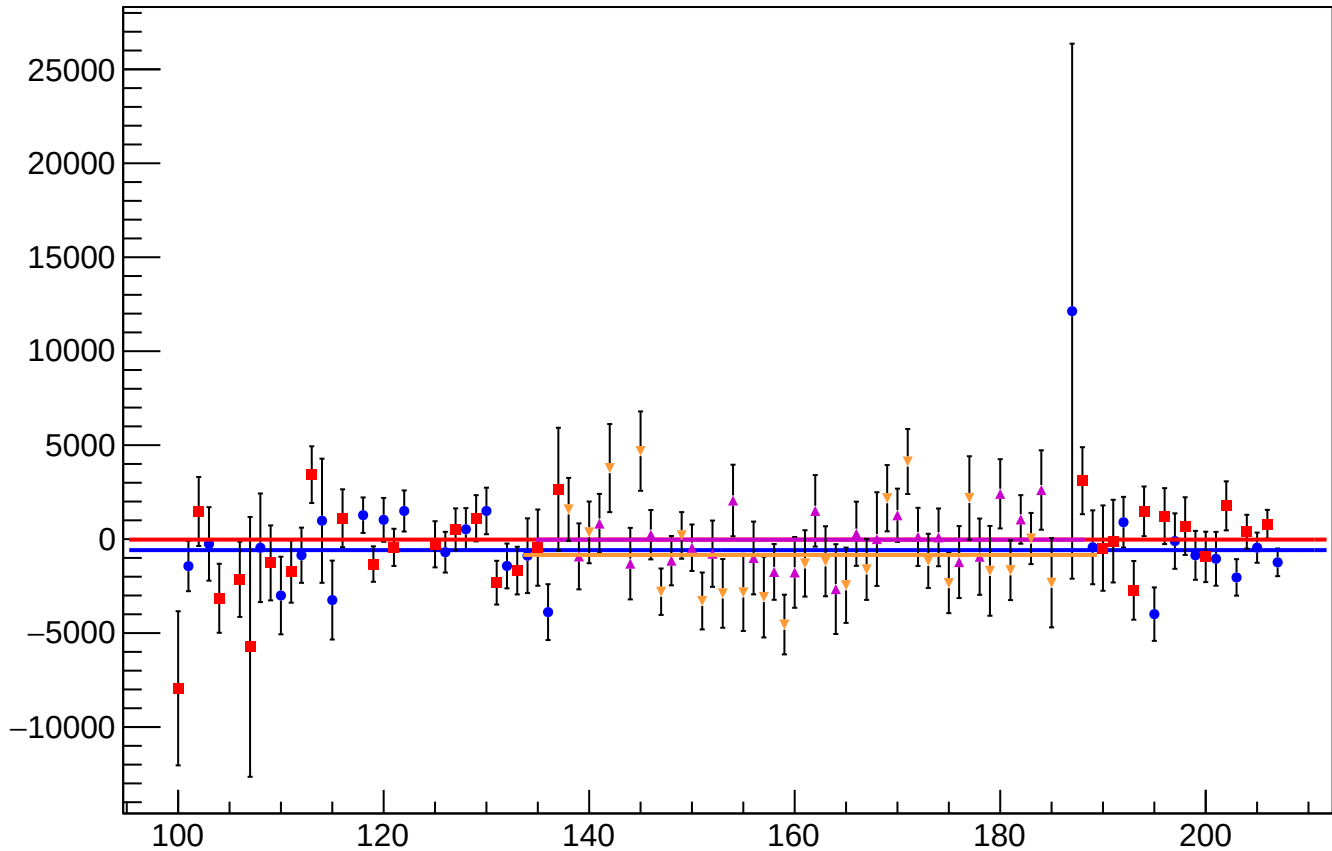
Left In: 1105.380 $\pm$ 0.183  $\chi^2$ /NDF:3661.0/22

+ sign 1101.011 $\pm$ 0.135  $\chi^2$ /NDF: 94132.1/49

All: 1103.839 $\pm$ 0.095  $\chi^2$ /NDF: 467205.5/102

- sign 1106.612 $\pm$ 0.133  $\chi^2$ /NDF: 372198.9/52

# asym\_usl\_overload\_cor\_correction\_mean vs Slug



Right In:  $-585.983 \pm 252.730$   $\chi^2/\text{NDF}$ : 33.4/25

Left Out:  $-843.280 \pm 347.538$   $\chi^2/\text{NDF}$ : 44.0/23

Right Out:  $-24.837 \pm 257.899$   $\chi^2/\text{NDF}$ : 37.9/28

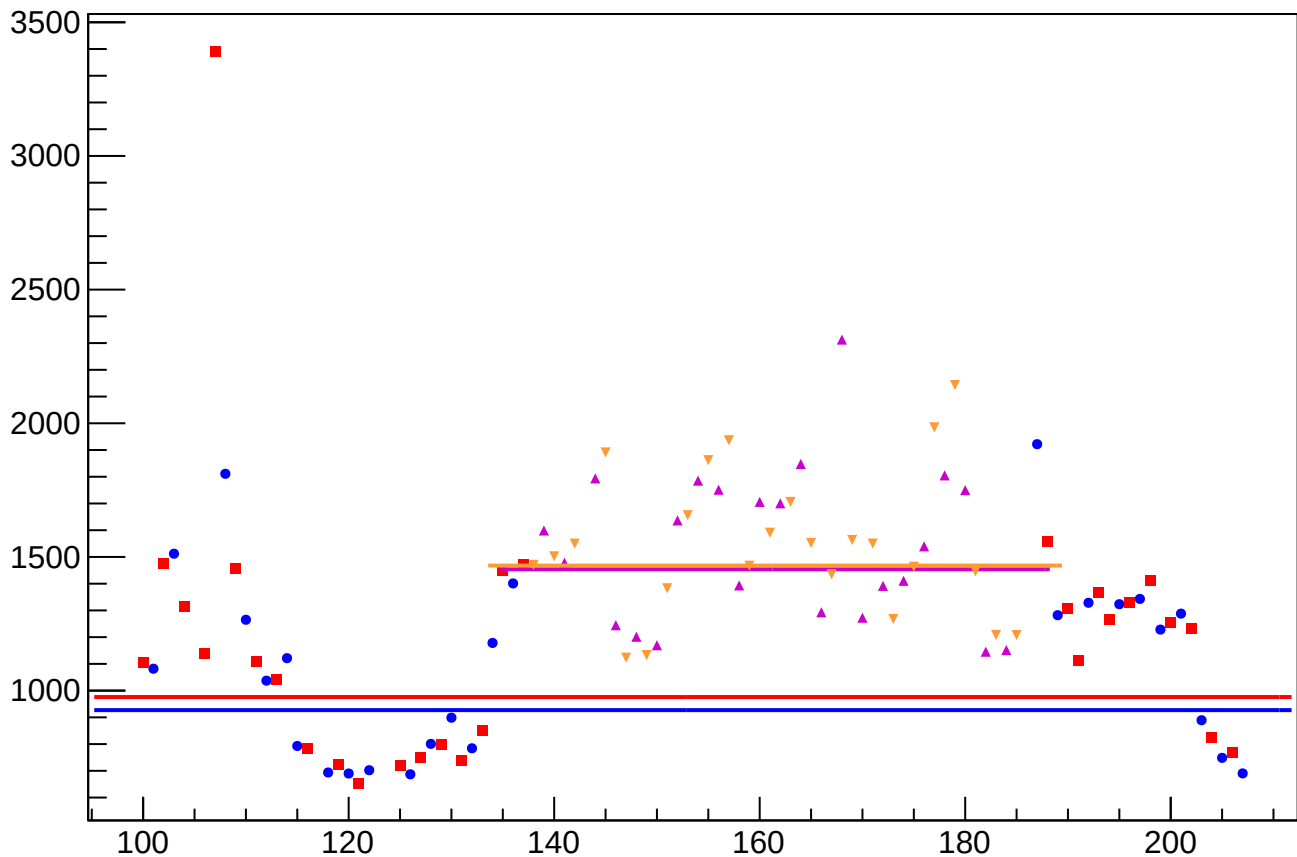
Left In:  $-31.387 \pm 346.155$   $\chi^2/\text{NDF}$ : 13.1/22

+ sign  $-674.982 \pm 204.399$   $\chi^2/\text{NDF}$ : 77.8/49

All:  $-354.878 \pm 145.377$   $\chi^2/\text{NDF}$ : 133.7/101

- sign  $-27.175 \pm 206.811$   $\chi^2/\text{NDF}$ : 50.9/51

# asym\_usl\_overload\_cor\_correction\_rms vs Slug



Right In: 927.000+/-0.179     $\chi^2/\text{NDF}$ : 2260233.9/25

Left Out: 1467.697+/-0.246     $\chi^2/\text{NDF}$ : 1041877.5/23

Right Out: 975.944+/-0.182     $\chi^2/\text{NDF}$ : 2589679.2/28

Left In: 1453.834+/-0.245     $\chi^2/\text{NDF}$ : 1127997.5/22

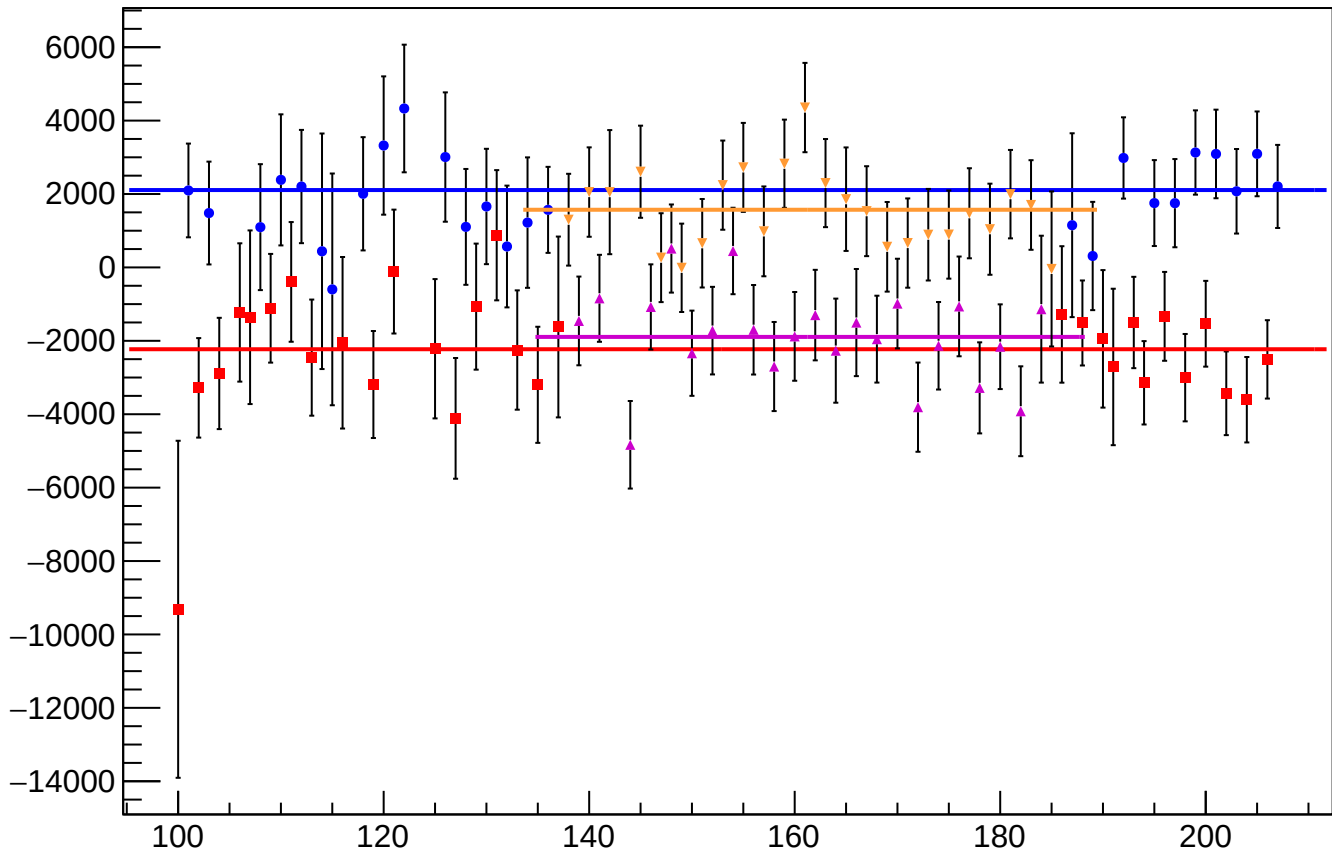
+ sign 1114.028+/-0.145     $\chi^2/\text{NDF}$ : 6468591.7/49

All: 1130.086+/-0.103     $\chi^2/\text{NDF}$ : 12662512.5/100

- sign 1146.526+/-0.146     $\chi^2/\text{NDF}$ : 6168937.9/51



# eigen\_cor\_asym\_usl\_mean vs Slug



Right In: 2107.973 $\pm$ 282.293  $\chi^2$ /NDF: 10.3/25

Left Out: 1571.055 $\pm$ 256.536  $\chi^2$ /NDF: 15.4/23

Right Out: -2229.202 $\pm$ 272.803  $\chi^2$ /NDF: 18.3/29

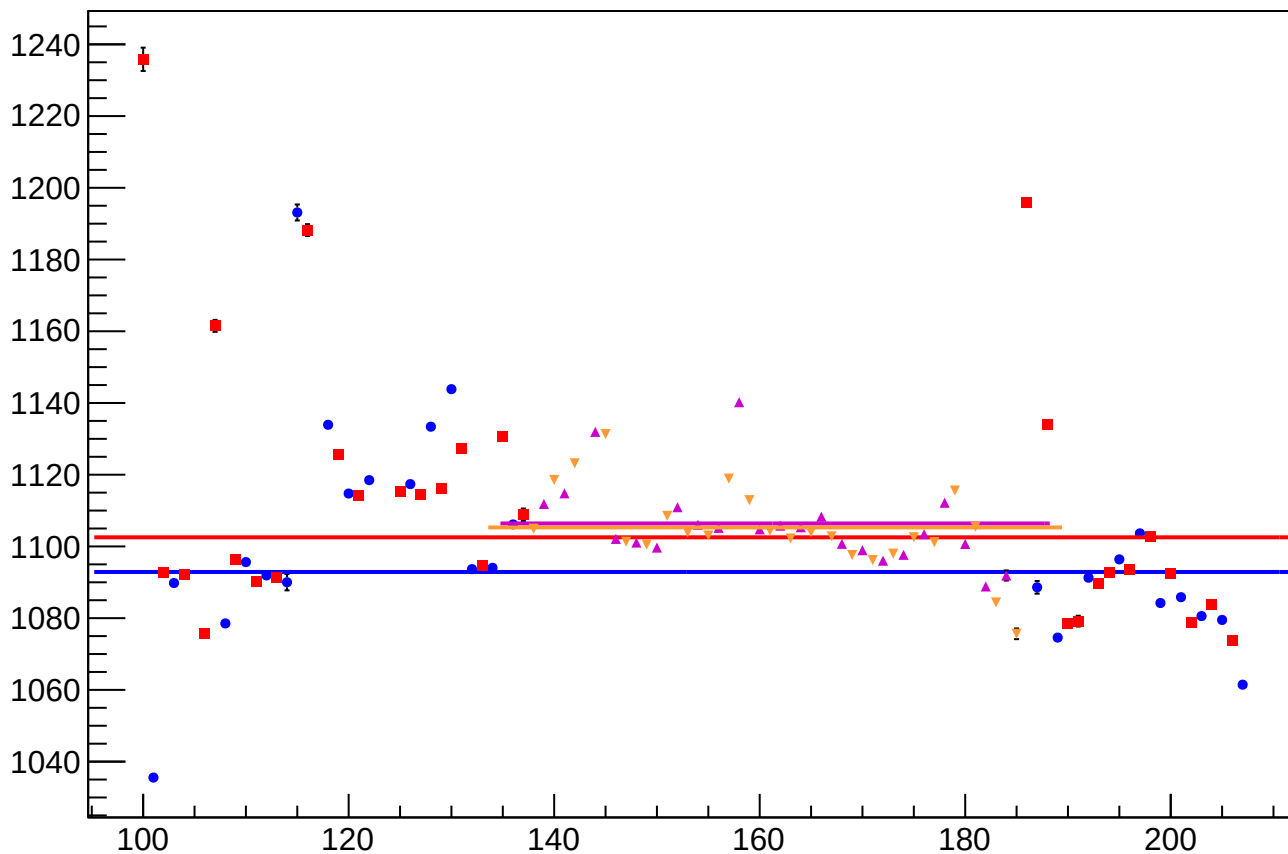
Left In: -1893.347 $\pm$ 258.339  $\chi^2$ /NDF: 24.1/22

+ sign 1813.907 $\pm$ 189.853  $\chi^2$ /NDF: 27.7/49

All: -142.409 $\pm$ 133.435  $\chi^2$ /NDF: 280.7/102

- sign -2052.135 $\pm$ 187.578  $\chi^2$ /NDF: 43.2/52

# eigen\_cor\_asym\_usl\_rms vs Slug



Right In: 1092.881 $\pm$ 0.200  $\chi^2$ /NDF: 15101.4/25

Left Out: 1105.294 $\pm$ 0.181  $\chi^2$ /NDF:3161.8/23

Right Out: 1102.541 $\pm$ 0.193  $\chi^2$ /NDF: 19031.8/29

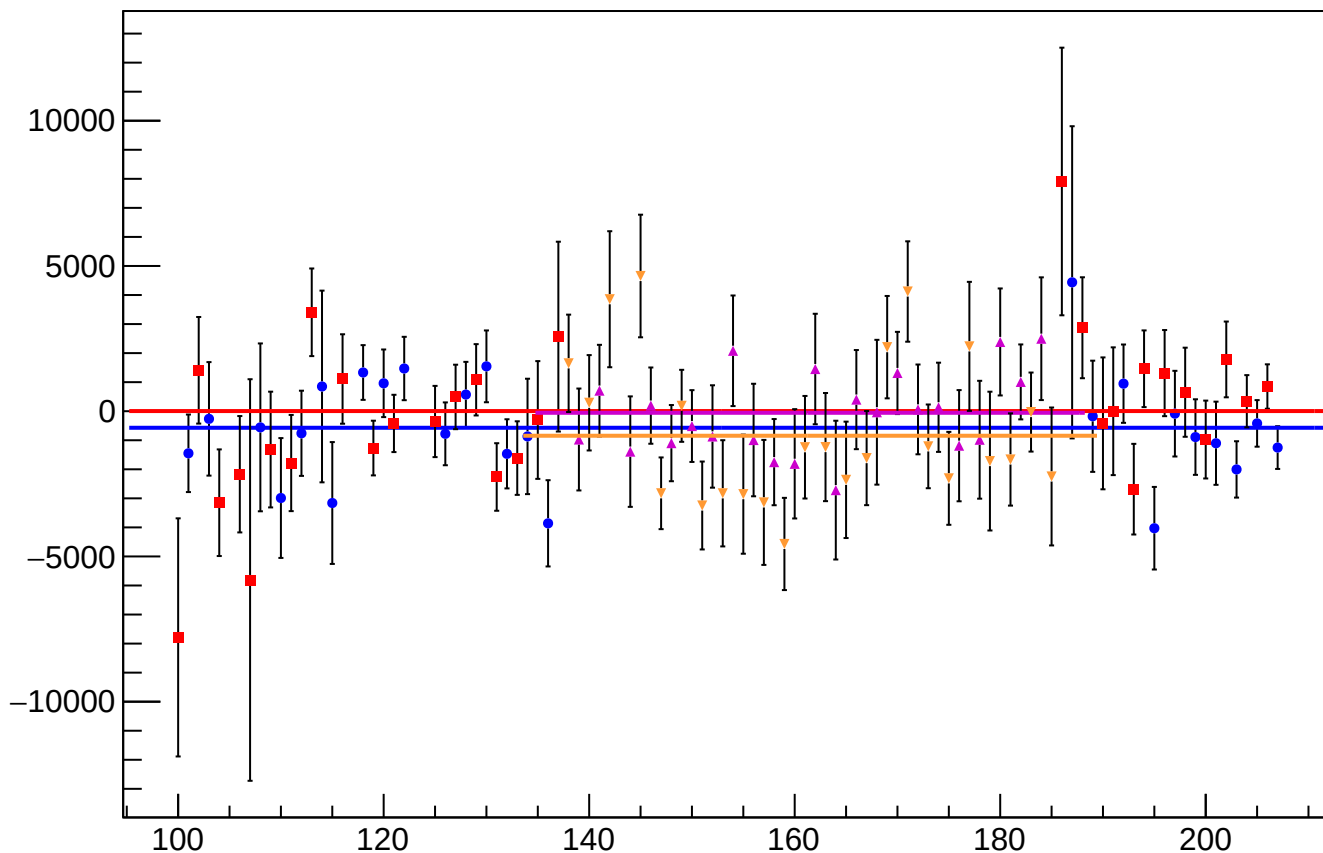
Left In: 1106.405 $\pm$ 0.183  $\chi^2$ /NDF:3776.4/22

+ sign 1099.680 $\pm$ 0.134  $\chi^2$ /NDF: 20381.1/49

All: 1102.159 $\pm$ 0.094  $\chi^2$ /NDF: 44074.6/102

- sign 1104.578 $\pm$ 0.133  $\chi^2$ /NDF: 23019.7/52

# asym\_usl\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-570.057 \pm 252.072$   $\chi^2/\text{NDF}: 33.8/25$

Left Out:  $-844.649 \pm 347.346$   $\chi^2/\text{NDF}: 44.2/23$

Right Out:  $5.118 \pm 257.051$   $\chi^2/\text{NDF}: 40.0/29$

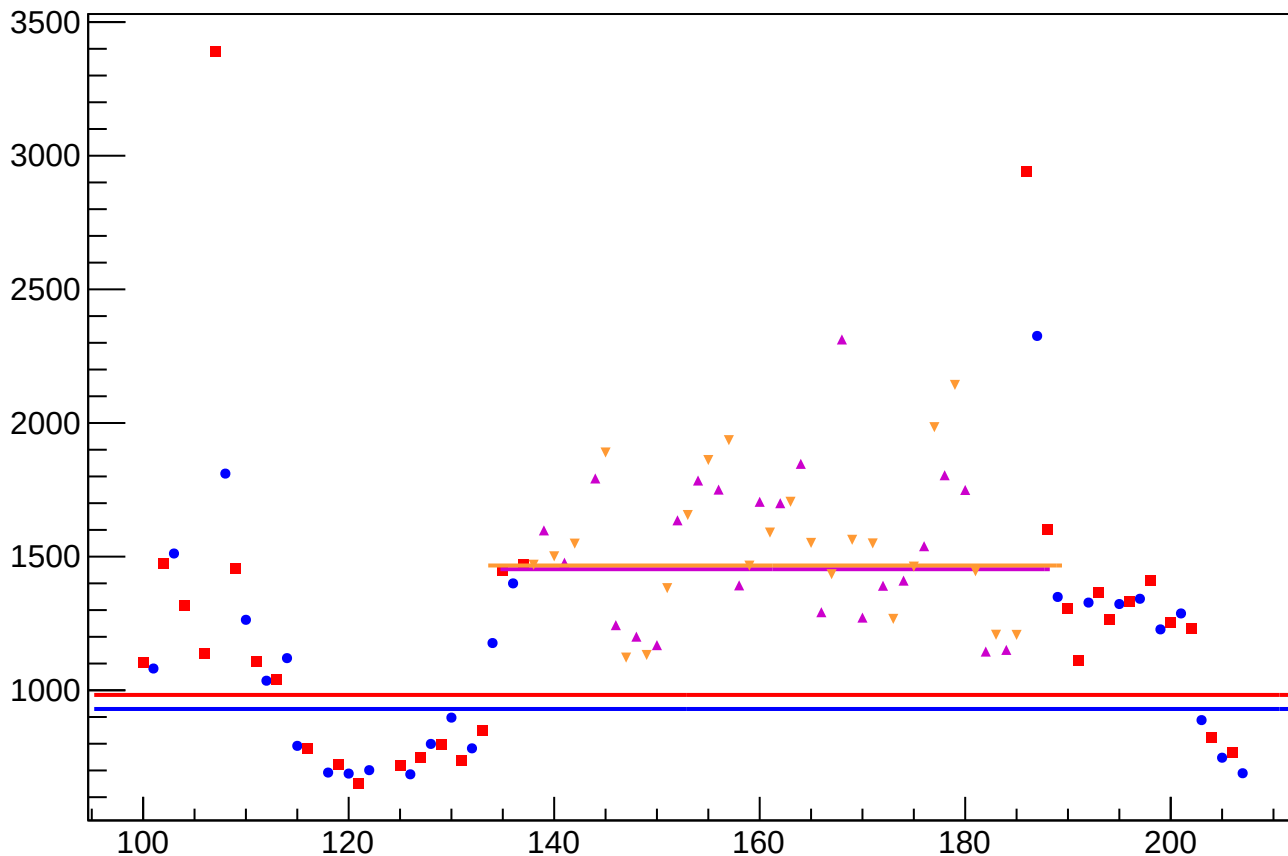
Left In:  $-54.347 \pm 345.962$   $\chi^2/\text{NDF}: 13.0/22$

+ sign  $-664.784 \pm 204.011$   $\chi^2/\text{NDF}: 78.4/49$

All:  $-344.076 \pm 145.071$   $\chi^2/\text{NDF}: 136.5/102$

- sign  $-16.033 \pm 206.332$   $\chi^2/\text{NDF}: 53.1/52$

asym\_usl\_eigen\_cor\_correction\_rms vs Slug



Right In: 929.999 $\pm$ 0.178  $\chi^2$ /NDF: 2425336.9/25

Left Out: 1466.846 $\pm$ 0.246  $\chi^2$ /NDF:1043303.8/23

Right Out: 982.583 $\pm$ 0.182  $\chi^2$ /NDF: 3008927.0/29

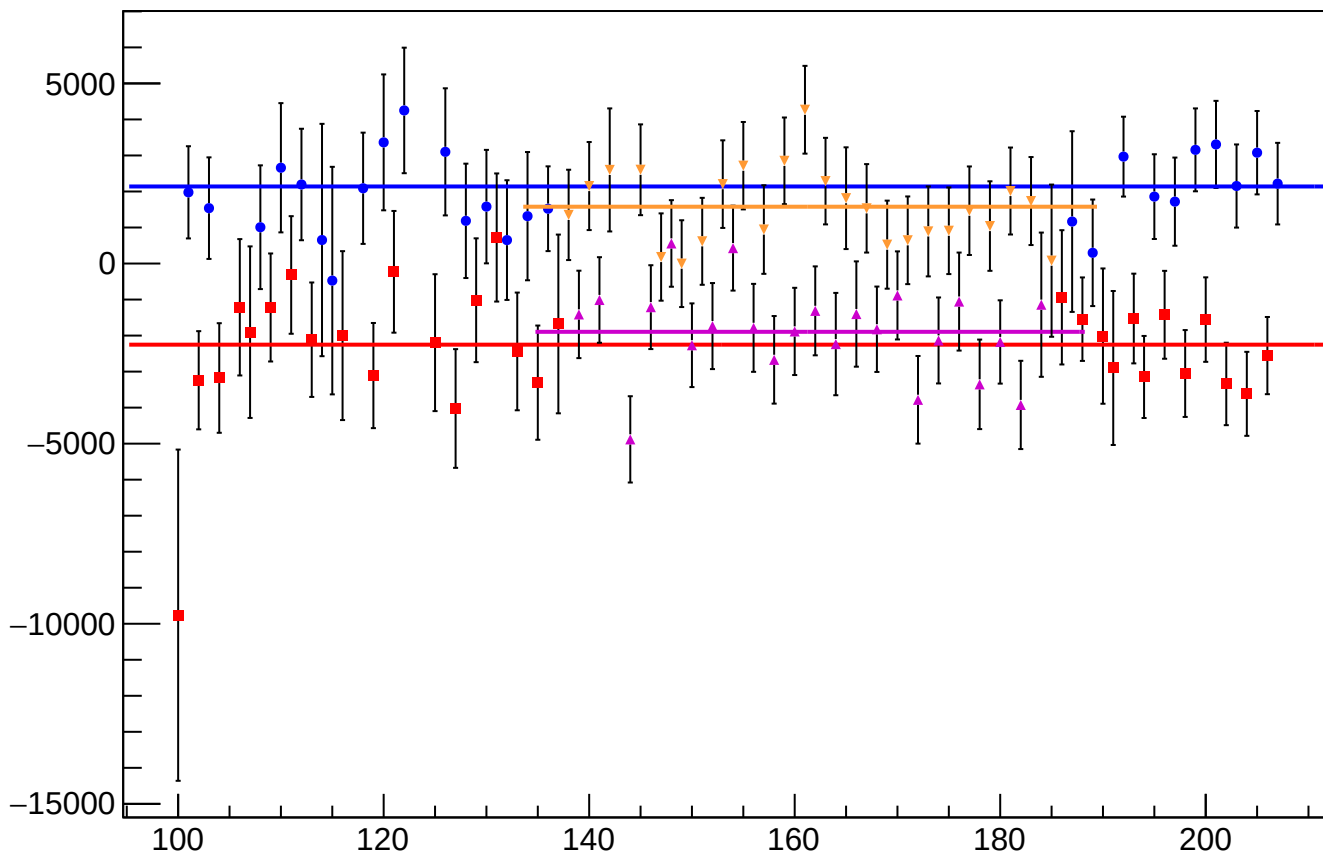
Left In: 1452.983 $\pm$ 0.245  $\chi^2$ /NDF:1129567.2/22

+ sign 1115.196 $\pm$ 0.144  $\chi^2$ /NDF: 6598070.4/49

All: 1132.352 $\pm$ 0.103  $\chi^2$ /NDF: 13147500.3/100

- sign 1149.900 $\pm$ 0.146  $\chi^2$ /NDF: 6520820.0/52

# dit\_asym\_usl\_mean vs Slug



Right In:  $2139.319 \pm 283.237$   $\chi^2/\text{NDF}$ : 10.4/25

Left Out:  $1577.402 \pm 257.003$   $\chi^2/\text{NDF}$ : 15.5/23

Right Out:  $-2252.298 \pm 273.858$   $\chi^2/\text{NDF}$ : 18.1/29

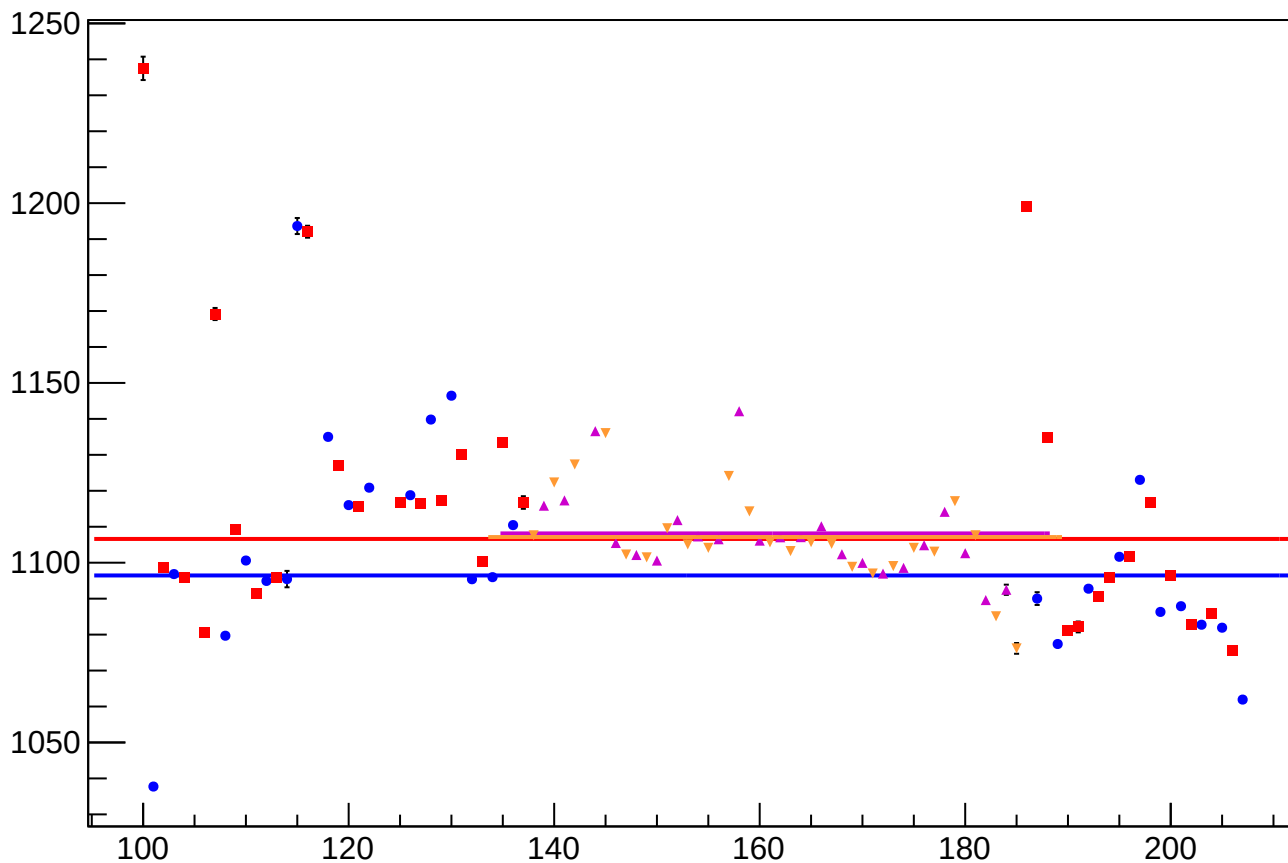
Left In:  $-1895.548 \pm 258.750$   $\chi^2/\text{NDF}$ : 24.1/22

+ sign  $1831.138 \pm 190.329$   $\chi^2/\text{NDF}$ : 28.1/49

All:  $-139.502 \pm 133.780$   $\chi^2/\text{NDF}$ : 283.0/102

- sign  $-2063.811 \pm 188.078$   $\chi^2/\text{NDF}$ : 43.1/52

# dit\_asym\_usl\_rms vs Slug



Right In: 1096.452 $\pm$ 0.200  $\chi^2$ /NDF: 16332.9/25

Left Out: 1107.127 $\pm$ 0.182  $\chi^2$ /NDF: 3783.7/23

Right Out: 1106.607 $\pm$ 0.194  $\chi^2$ /NDF: 18865.6/29

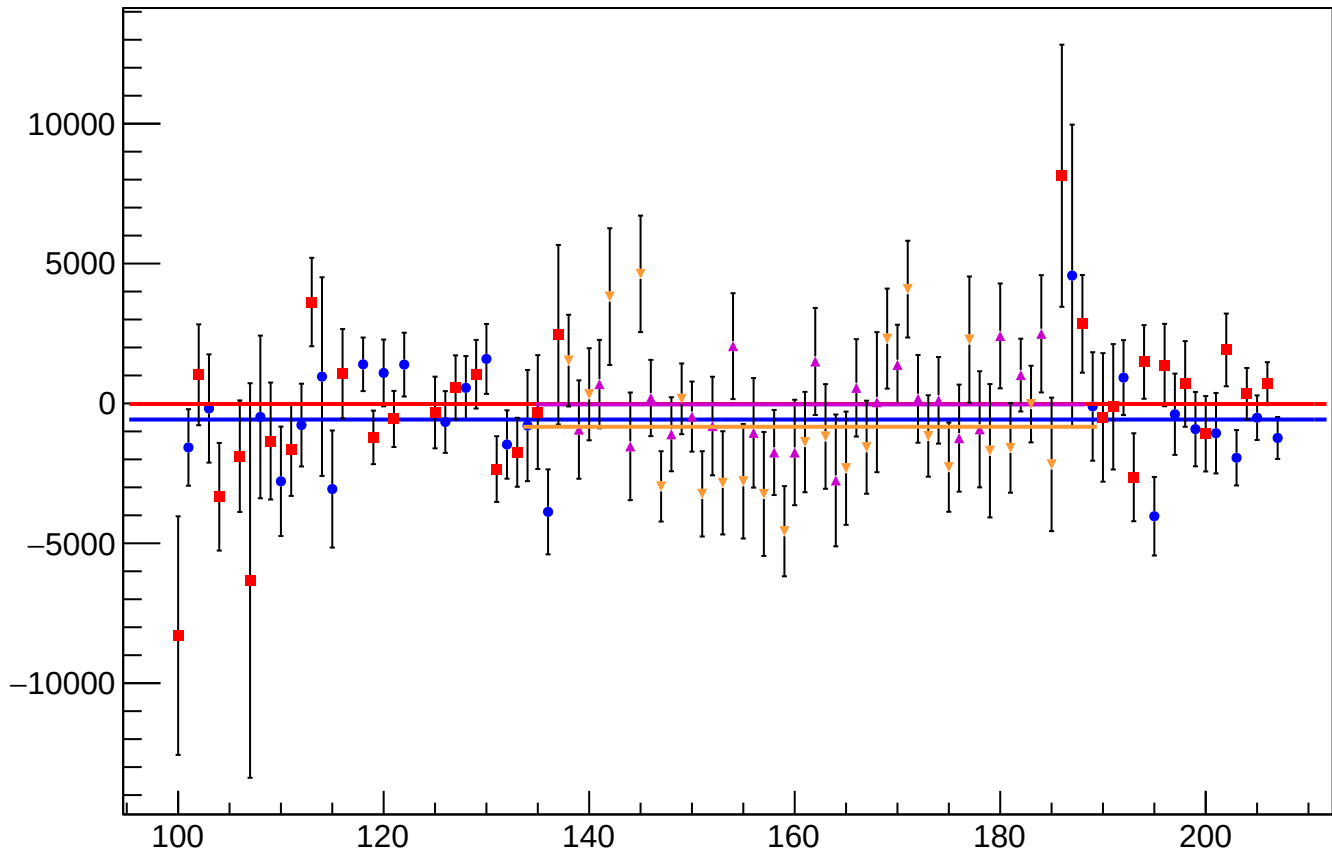
Left In: 1108.145 $\pm$ 0.183  $\chi^2$ /NDF: 4190.5/22

+ sign 1102.306 $\pm$ 0.135  $\chi^2$ /NDF: 21674.6/49

All: 1104.894 $\pm$ 0.095  $\chi^2$ /NDF: 45494.5/102

- sign 1107.420 $\pm$ 0.133  $\chi^2$ /NDF: 23089.5/52

# asym\_usl\_dit\_correction\_mean vs Slug



Right In: -575.969 $\pm$ 255.078  $\chi^2$ /NDF: 33.1/25

Left Out: -835.288 $\pm$ 350.615  $\chi^2$ /NDF:43.6/23

Right Out: -19.401 $\pm$ 259.981  $\chi^2$ /NDF: 40.2/29

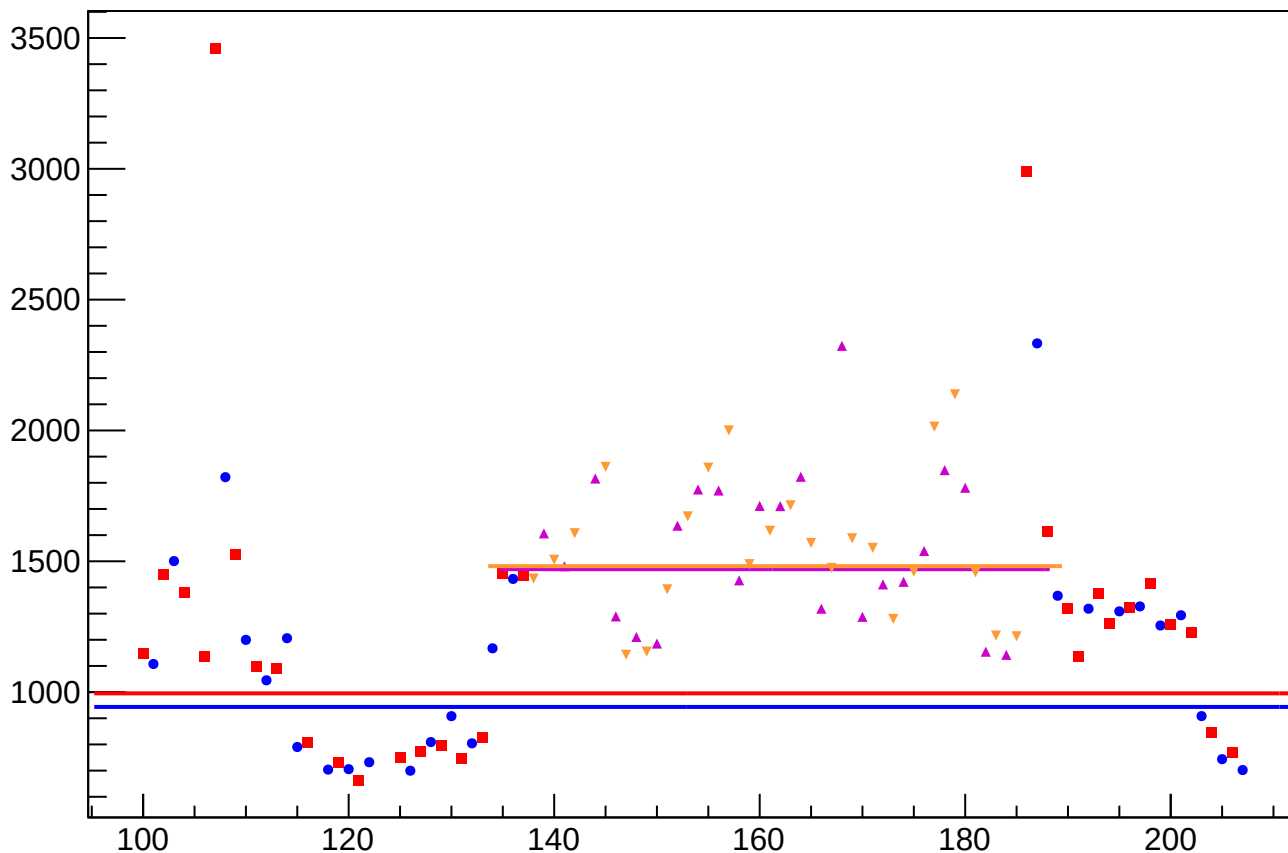
Left In: -35.516 $\pm$ 349.636  $\chi^2$ /NDF:13.1/22

+ sign -665.718 $\pm$ 206.267  $\chi^2$ /NDF: 77.0/49

All: -349.071 $\pm$ 146.680  $\chi^2$ /NDF: 135.1/102

- sign -25.139 $\pm$ 208.626  $\chi^2$ /NDF: 53.3/52

# asym\_usl\_dit\_correction\_rms vs Slug



Right In: 943.365 $\pm$ 0.180  $\chi^2/\text{NDF}$ : 2326912.5/25

Left Out: 1481.543 $\pm$ 0.248  $\chi^2/\text{NDF}$ : 1017463.8/23

Right Out: 995.254 $\pm$ 0.184  $\chi^2/\text{NDF}$ : 2954011.2/29

Left In: 1469.907 $\pm$ 0.247  $\chi^2/\text{NDF}$ : 1095056.5/22

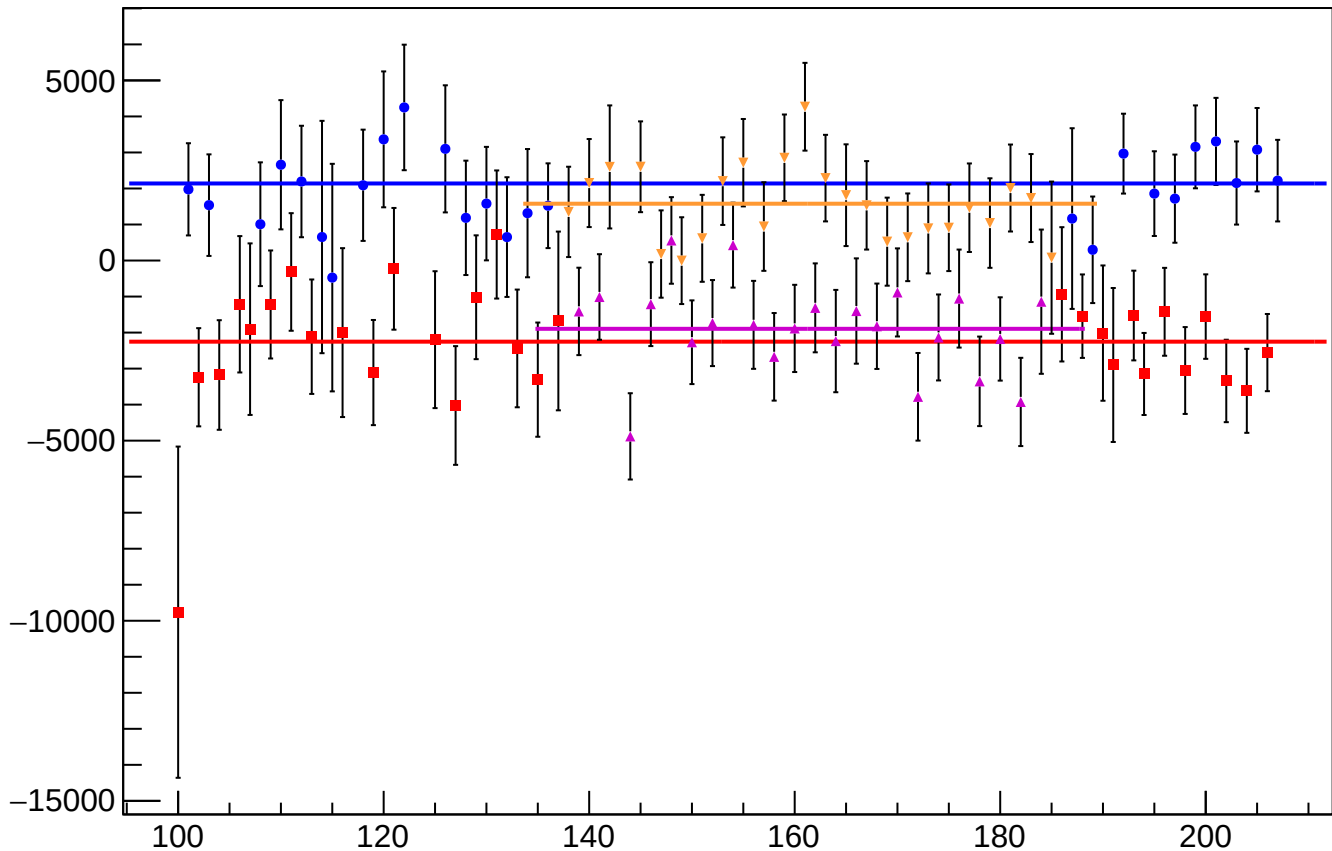
+ sign 1129.627 $\pm$ 0.146  $\chi^2/\text{NDF}$ : 6425683.0/49

All: 1146.743 $\pm$ 0.104  $\chi^2/\text{NDF}$ : 12876197.5/100

- sign 1164.252 $\pm$ 0.148  $\chi^2/\text{NDF}$ : 6422656.5/52



# eigen\_dit\_asym\_usl\_mean vs Slug



Right In:  $2139.319 \pm 283.237$   $\chi^2/\text{NDF}$ : 10.4/25

Left Out:  $1577.399 \pm 257.003$   $\chi^2/\text{NDF}$ : 15.5/23

Right Out:  $-2252.297 \pm 273.858$   $\chi^2/\text{NDF}$ : 18.1/29

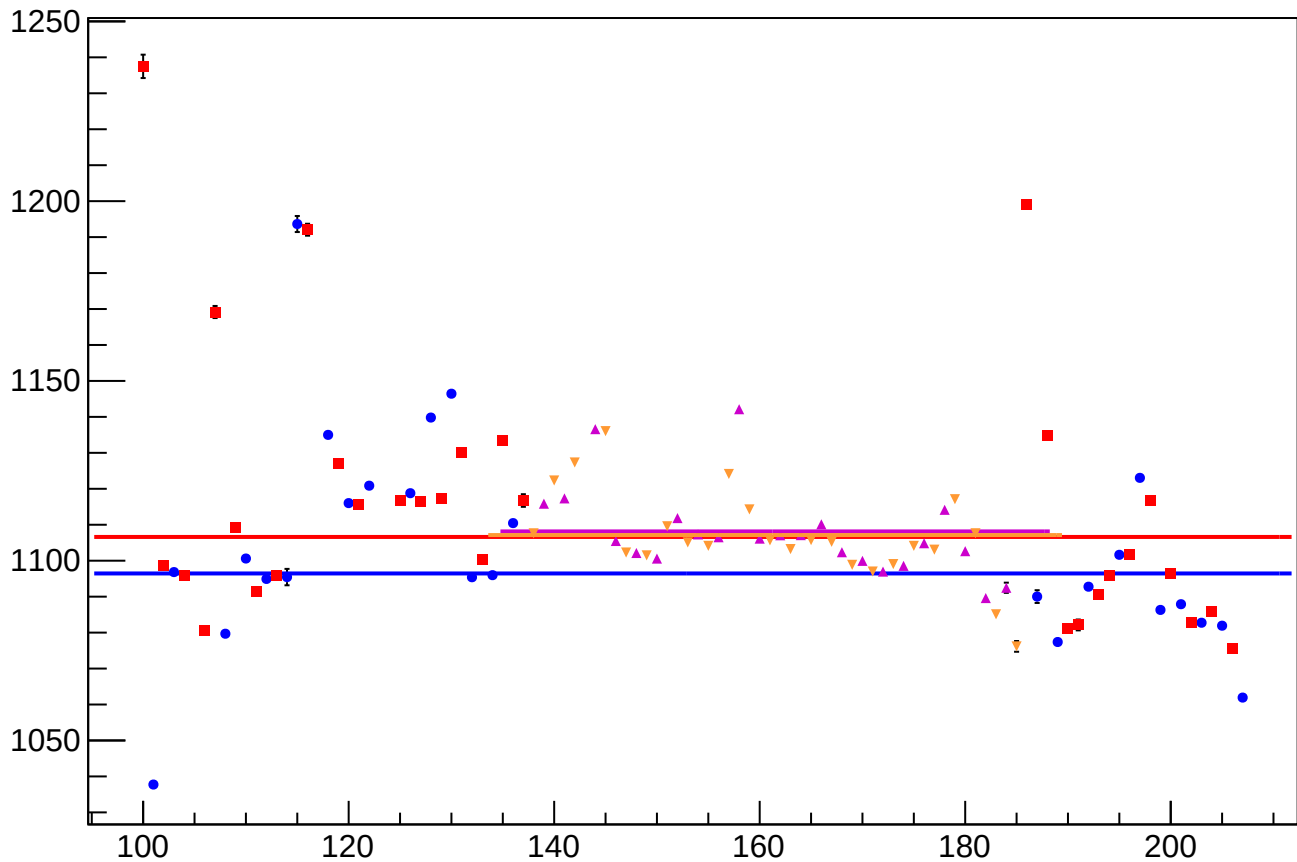
Left In:  $-1895.549 \pm 258.750$   $\chi^2/\text{NDF}$ : 24.1/22

+ sign  $1831.136 \pm 190.329$   $\chi^2/\text{NDF}$ : 28.1/49

All:  $-139.503 \pm 133.780$   $\chi^2/\text{NDF}$ : 283.0/102

- sign  $-2063.811 \pm 188.078$   $\chi^2/\text{NDF}$ : 43.1/52

# eigen\_dit\_asym\_usl\_rms vs Slug



Right In: 1096.452 $\pm$ 0.200  $\chi^2$ /NDF: 16332.9/25

Left Out: 1107.127 $\pm$ 0.182  $\chi^2$ /NDF: 3783.7/23

Right Out: 1106.607 $\pm$ 0.194  $\chi^2$ /NDF: 18865.6/29

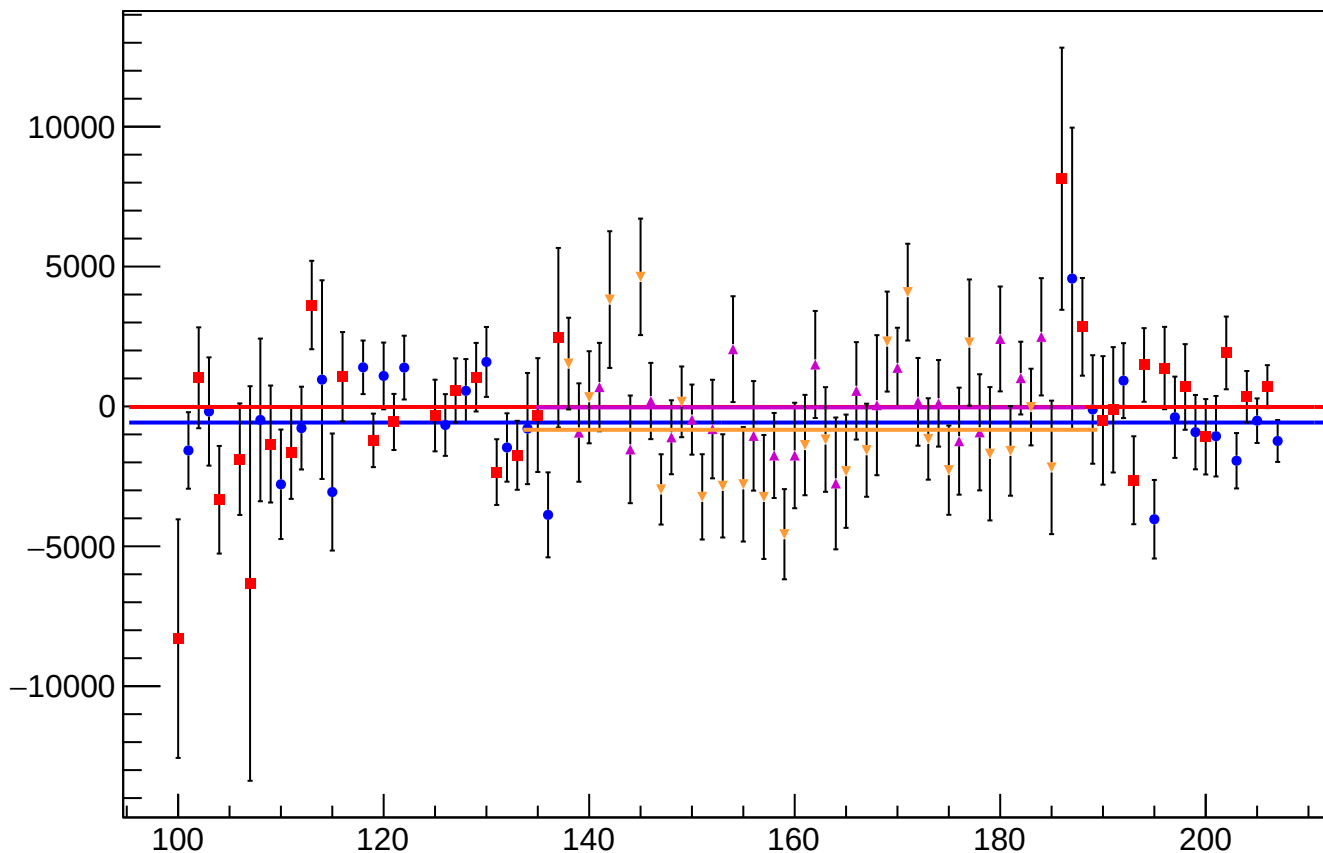
Left In: 1108.145 $\pm$ 0.183  $\chi^2$ /NDF: 4190.5/22

+ sign 1102.306 $\pm$ 0.135  $\chi^2$ /NDF: 21674.7/49

All: 1104.893 $\pm$ 0.095  $\chi^2$ /NDF: 45494.4/102

- sign 1107.420 $\pm$ 0.133  $\chi^2$ /NDF: 23089.4/52

# asym\_usl\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-575.966 \pm 255.078$   $\chi^2/\text{NDF}$ : 33.1/25

Left Out:  $-835.291 \pm 350.615$   $\chi^2/\text{NDF}$ : 43.6/23

Right Out:  $-19.402 \pm 259.980$   $\chi^2/\text{NDF}$ : 40.2/29

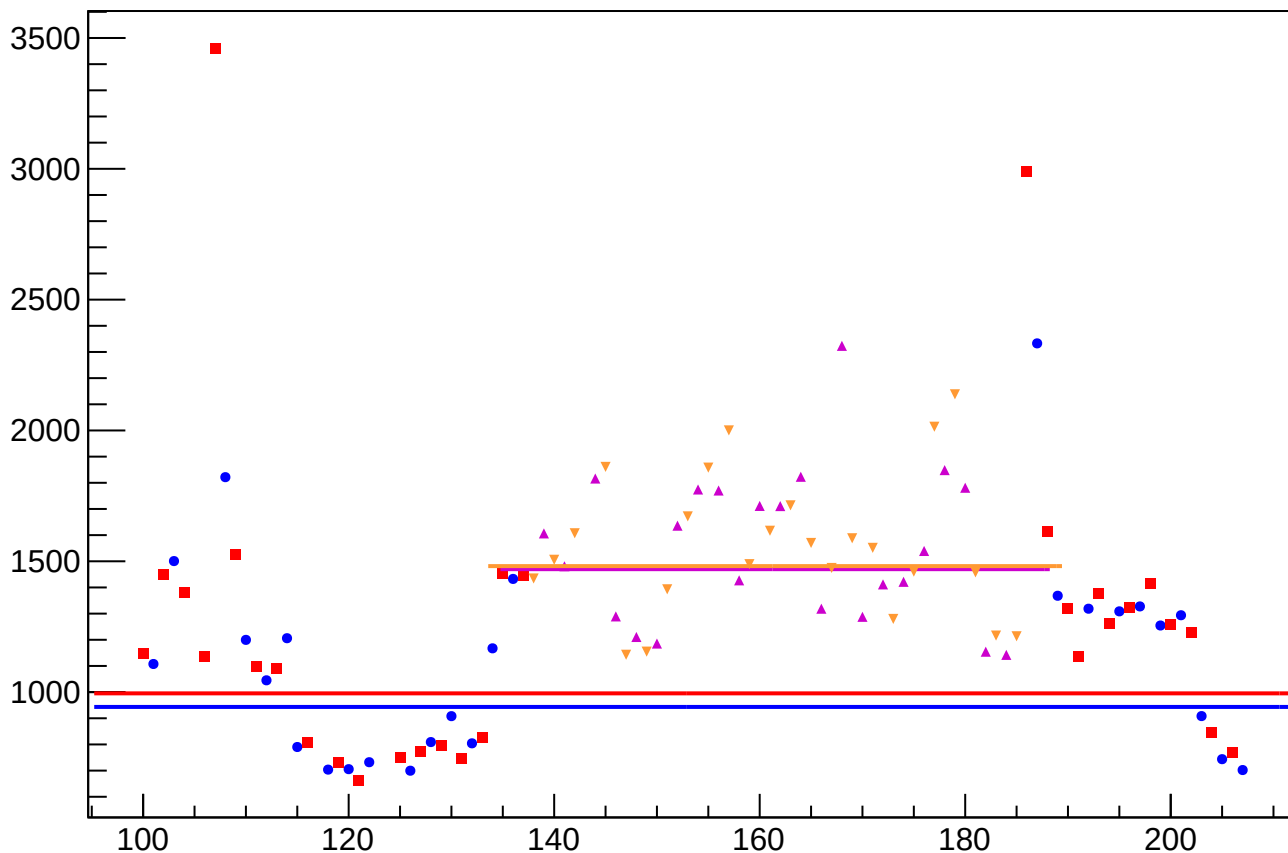
Left In:  $-35.516 \pm 349.636$   $\chi^2/\text{NDF}$ : 13.1/22

+ sign  $-665.718 \pm 206.267$   $\chi^2/\text{NDF}$ : 77.0/49

All:  $-349.071 \pm 146.680$   $\chi^2/\text{NDF}$ : 135.1/102

- sign  $-25.139 \pm 208.626$   $\chi^2/\text{NDF}$ : 53.3/52

# asym\_usl\_eigen\_dit\_correction\_rms vs Slug



Right In: 943.364 $\pm$ 0.180  $\chi^2$ /NDF: 2326917.1/25

Left Out: 1481.545 $\pm$ 0.248  $\chi^2$ /NDF:1017460.8/23

Right Out: 995.253 $\pm$ 0.184  $\chi^2$ /NDF: 2954020.7/29

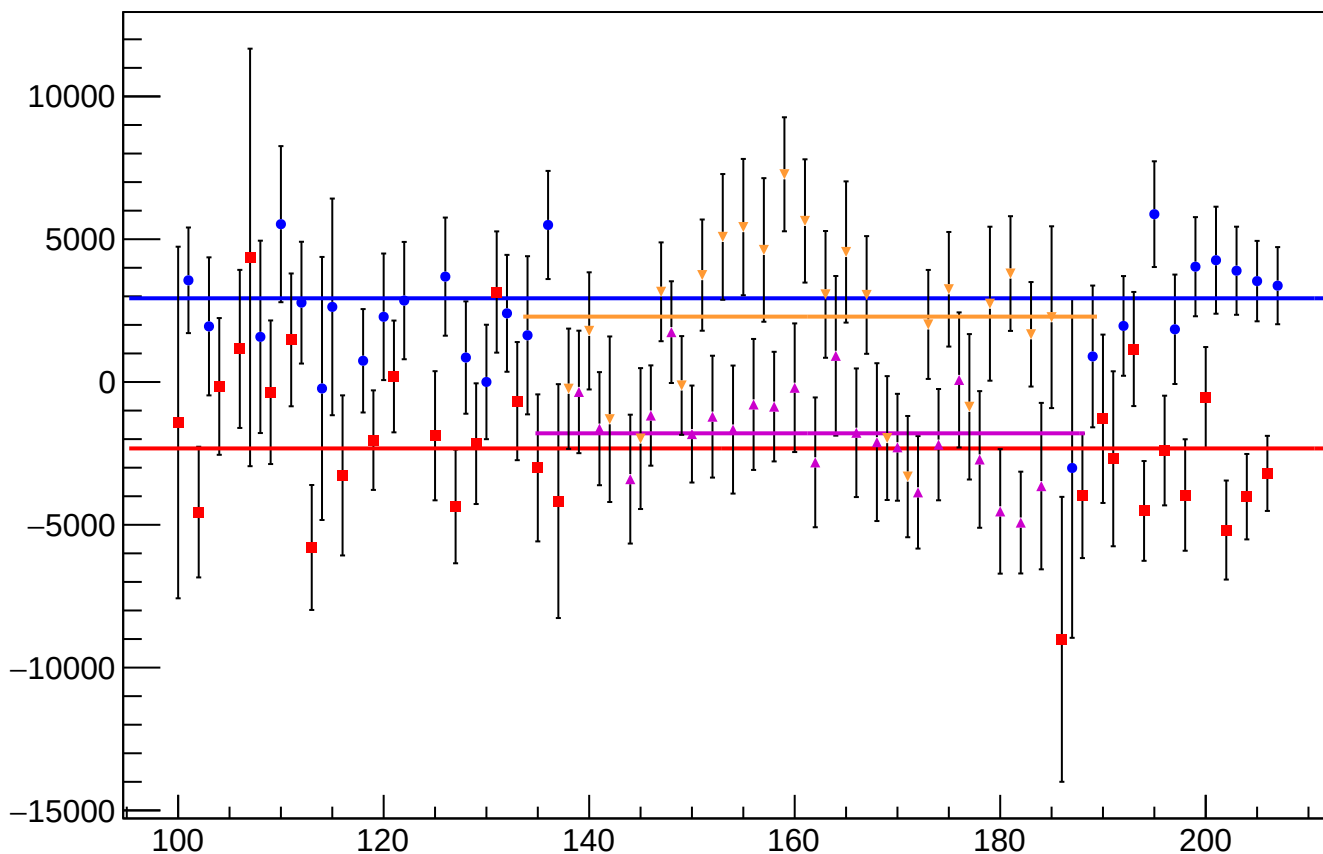
Left In: 1469.908 $\pm$ 0.247  $\chi^2$ /NDF:1095054.0/22

+ sign 1129.627 $\pm$ 0.146  $\chi^2$ /NDF: 6425708.8/49

All: 1146.742 $\pm$ 0.104  $\chi^2$ /NDF: 12876255.5/100

- sign 1164.251 $\pm$ 0.148  $\chi^2$ /NDF: 6422689.1/52

# asym\_usl\_mean vs Slug



Right In:  $2931.900 \pm 397.474$   $\chi^2/\text{NDF}$ : 15.3/25

Left Out:  $2289.701 \pm 439.328$   $\chi^2/\text{NDF}$ : 36.0/23

Right Out:  $-2325.659 \pm 395.070$   $\chi^2/\text{NDF}$ : 33.7/29

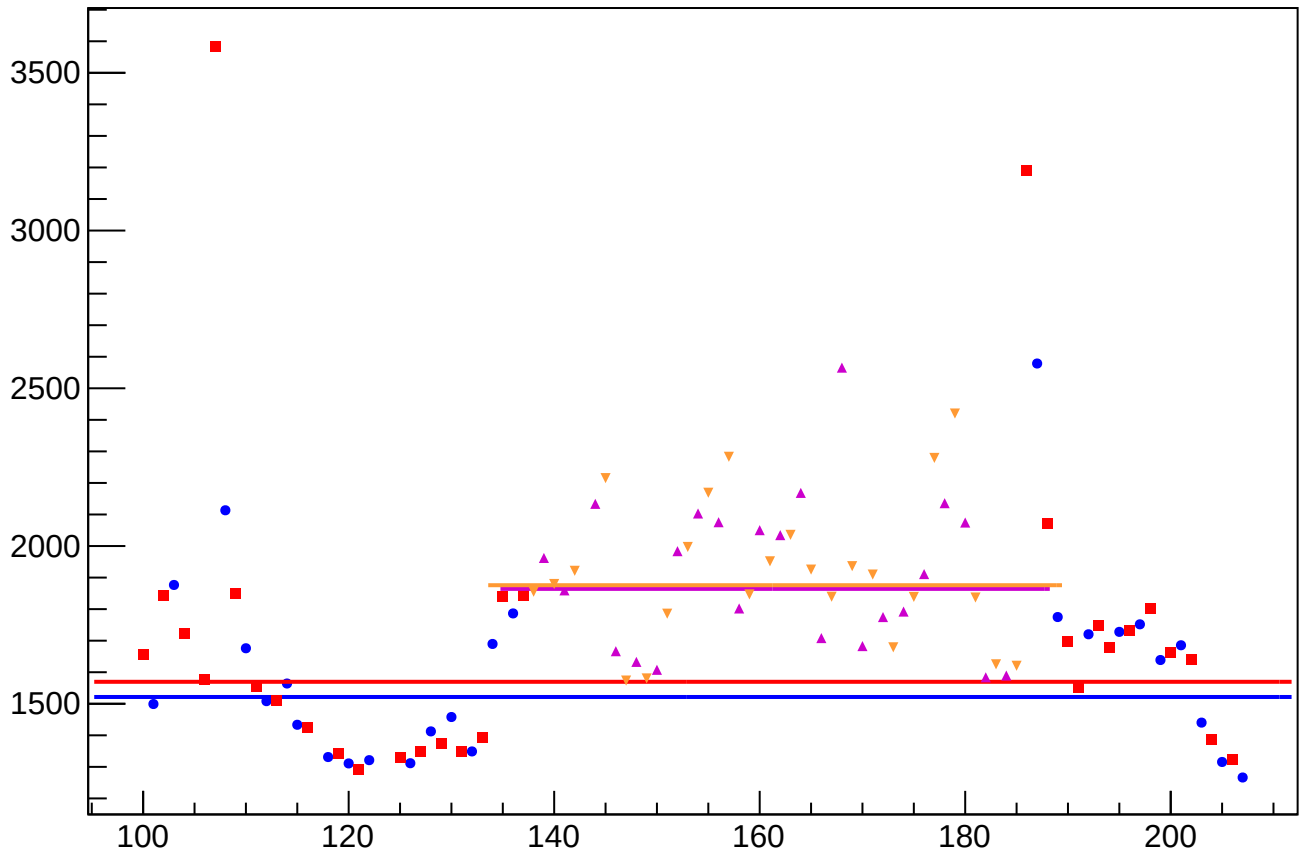
Left In:  $-1796.308 \pm 439.143$   $\chi^2/\text{NDF}$ : 14.2/22

+ sign  $2642.841 \pm 294.746$   $\chi^2/\text{NDF}$ : 52.5/49

All:  $268.624 \pm 208.048$   $\chi^2/\text{NDF}$ : 230.6/102

- sign  $-2088.872 \pm 293.706$   $\chi^2/\text{NDF}$ : 48.8/52

# asym\_usl\_rms vs Slug



Right In: 1521.530+/-0.281  $\chi^2$ /NDF: 569537.4/25

Left Out: 1875.818+/-0.311  $\chi^2$ /NDF: 472556.0/23

Right Out: 1569.661+/-0.279  $\chi^2$ /NDF: 922155.2/29

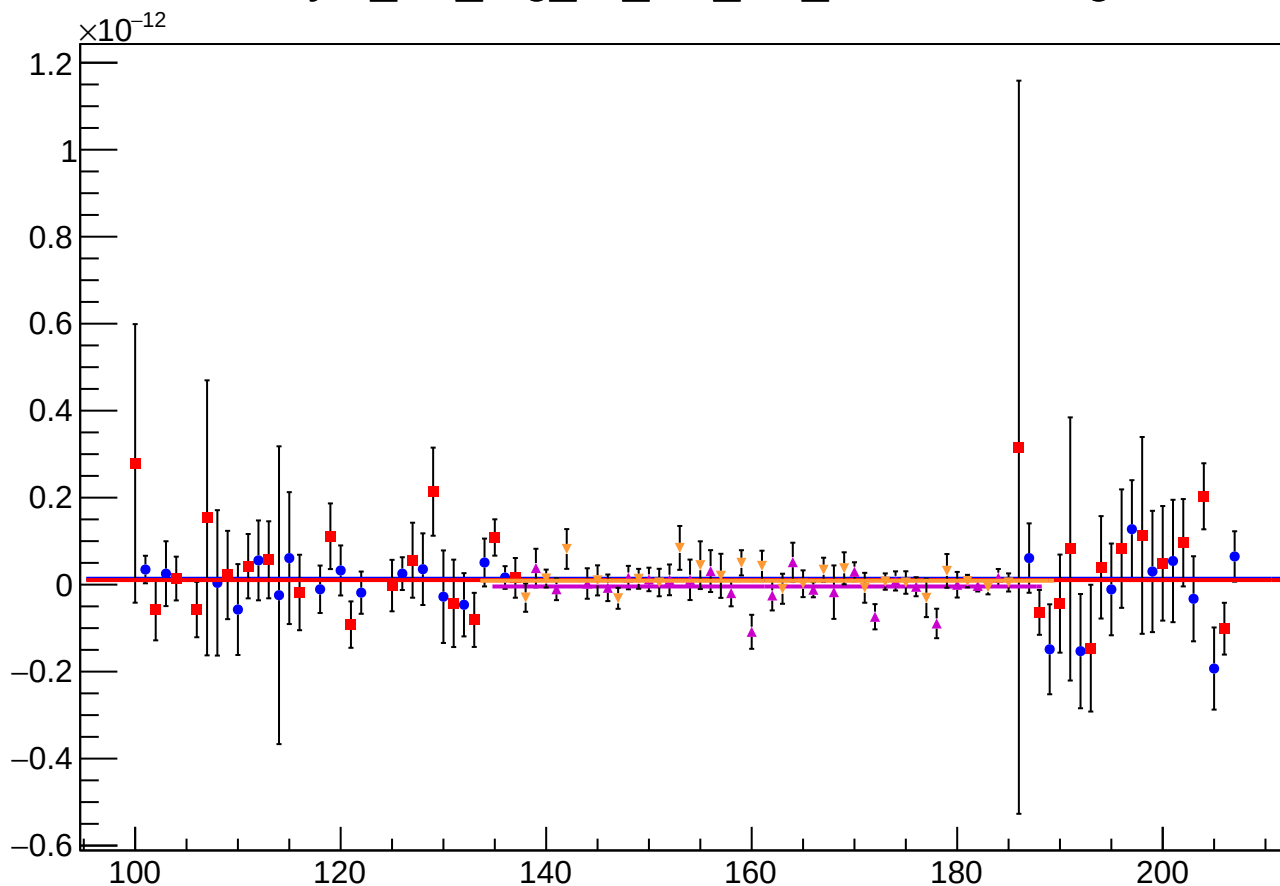
Left In: 1864.162+/-0.311  $\chi^2$ /NDF: 510600.5/22

+ sign 1680.998+/-0.208  $\chi^2$ /NDF: 1757317.9/49

All: 1691.233+/-0.147  $\chi^2$ /NDF: 3692009.8/10

- sign 1701.396+/-0.208  $\chi^2$ /NDF: 1929885.7/52

# asym\_usl\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 14.8/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:16.6/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 36.3/29

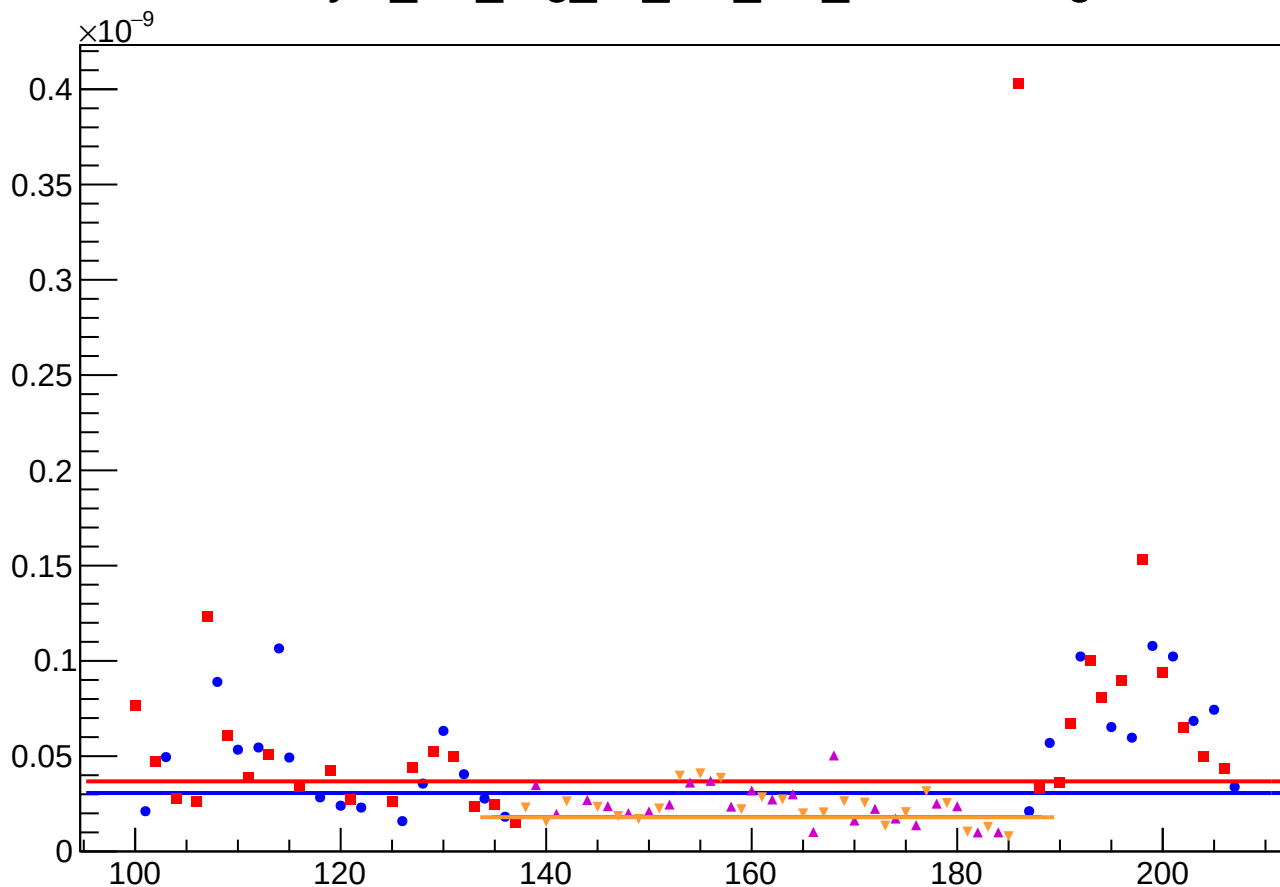
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:28.1/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 31.5/49

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 99.8/102

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 65.4/52

# asym\_usl\_reg\_vs\_cor\_diff\_rms vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 4959340.2/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 3491055.7/23

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 3974767.8/29

Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 4180182.9/22

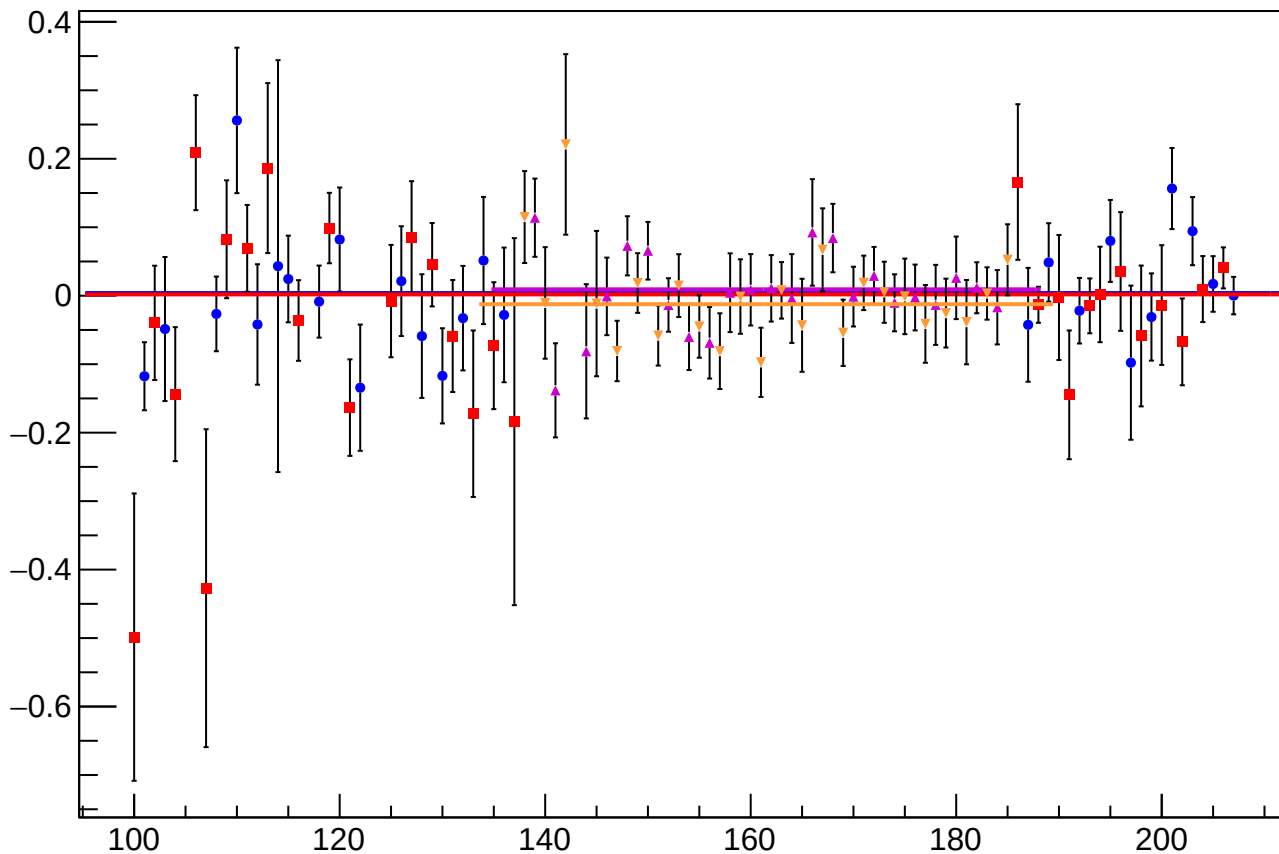
+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 10223737.2/49

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 21504283.3/102

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 11269067.6/52



# asym\_usl\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.004 $\pm$ 0.012  $\chi^2$ /NDF: 34.1/25

Left Out: -0.012 $\pm$ 0.010  $\chi^2$ /NDF: 21.9/23

Right Out: 0.002 $\pm$ 0.012  $\chi^2$ /NDF: 45.0/29

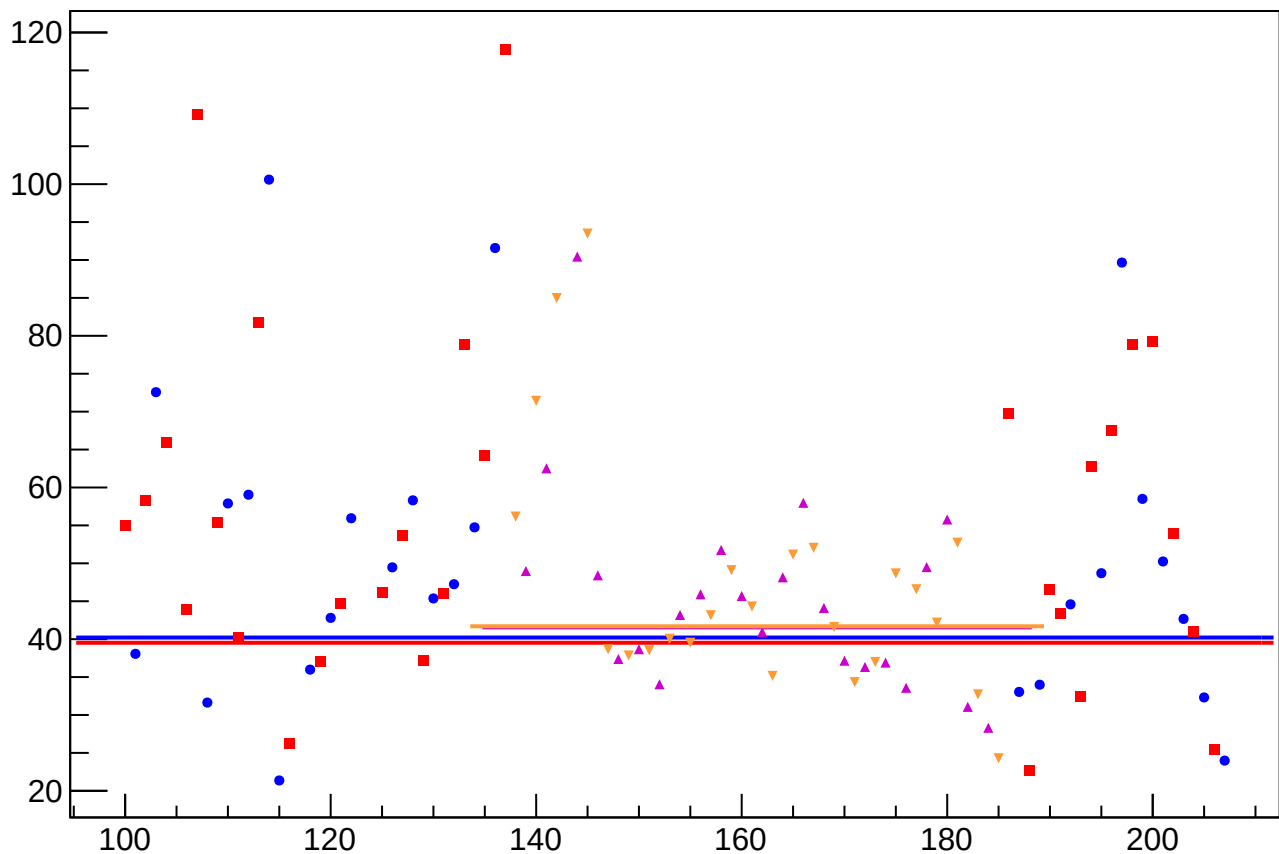
Left In: 0.009 $\pm$ 0.010  $\chi^2$ /NDF: 21.9/22

+ sign -0.005 $\pm$ 0.008  $\chi^2$ /NDF: 57.1/49

All: 0.000 $\pm$ 0.006  $\chi^2$ /NDF: 125.3/102

- sign 0.006 $\pm$ 0.008  $\chi^2$ /NDF: 67.2/52

# asym\_usl\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 40.213+/-0.008  $\chi^2/\text{NDF}$ : 2937017.8/25

Left Out: 41.694+/-0.007  $\chi^2/\text{NDF}$ : 1821790.0/23

Right Out: 39.525+/-0.008  $\chi^2/\text{NDF}$ : 4183972.2/29

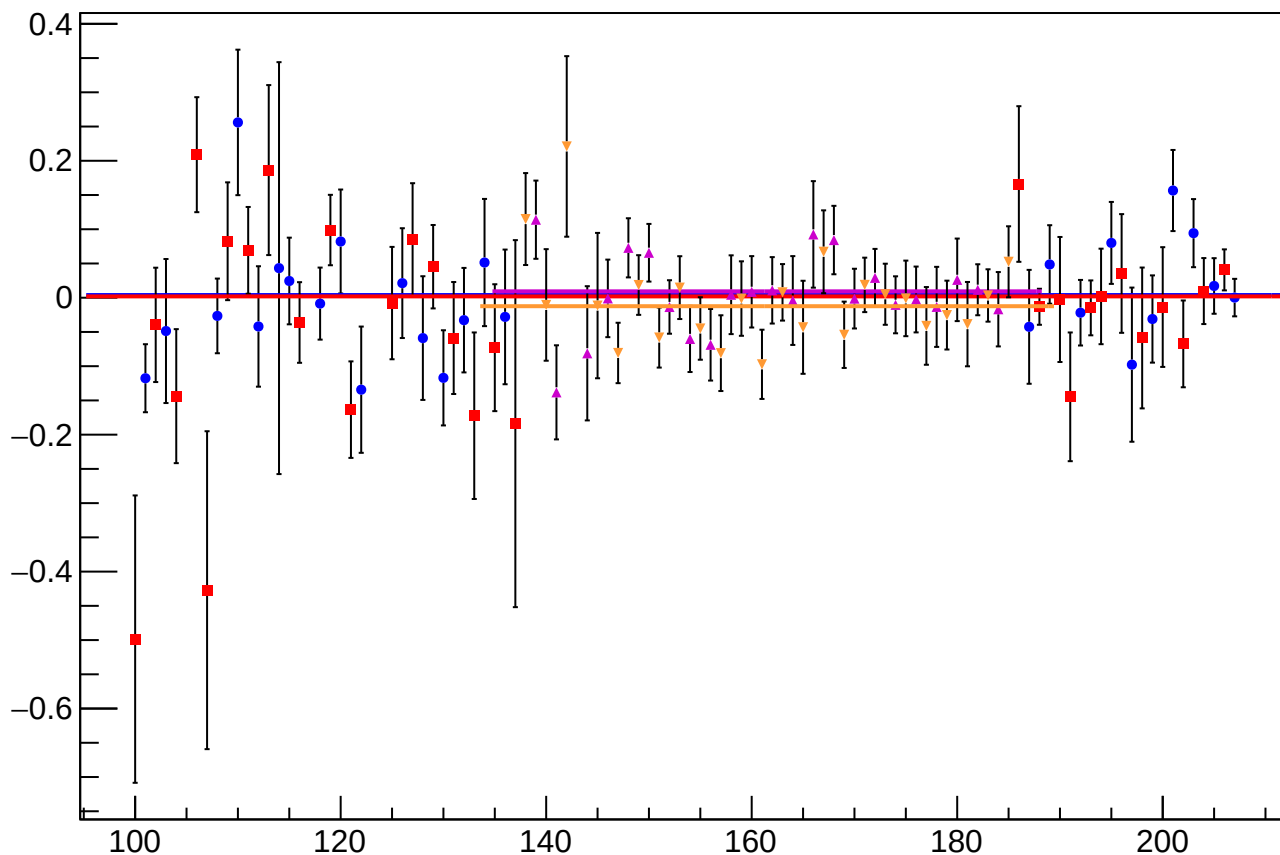
Left In: 41.550+/-0.007  $\chi^2/\text{NDF}$ : 1612979.7/22

+ sign 41.052+/-0.006  $\chi^2/\text{NDF}$ : 4776115.2/49

All: 40.844+/-0.004  $\chi^2/\text{NDF}$ : 10609263.9/102

- sign 40.643+/-0.006  $\chi^2/\text{NDF}$ : 5830428.7/52

# asym\_usl\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.004 \pm 0.012$   $\chi^2/\text{NDF}$ : 34.1/25

Left Out:  $-0.012 \pm 0.010$   $\chi^2/\text{NDF}$ : 21.9/23

Right Out:  $0.002 \pm 0.012$   $\chi^2/\text{NDF}$ : 45.0/29

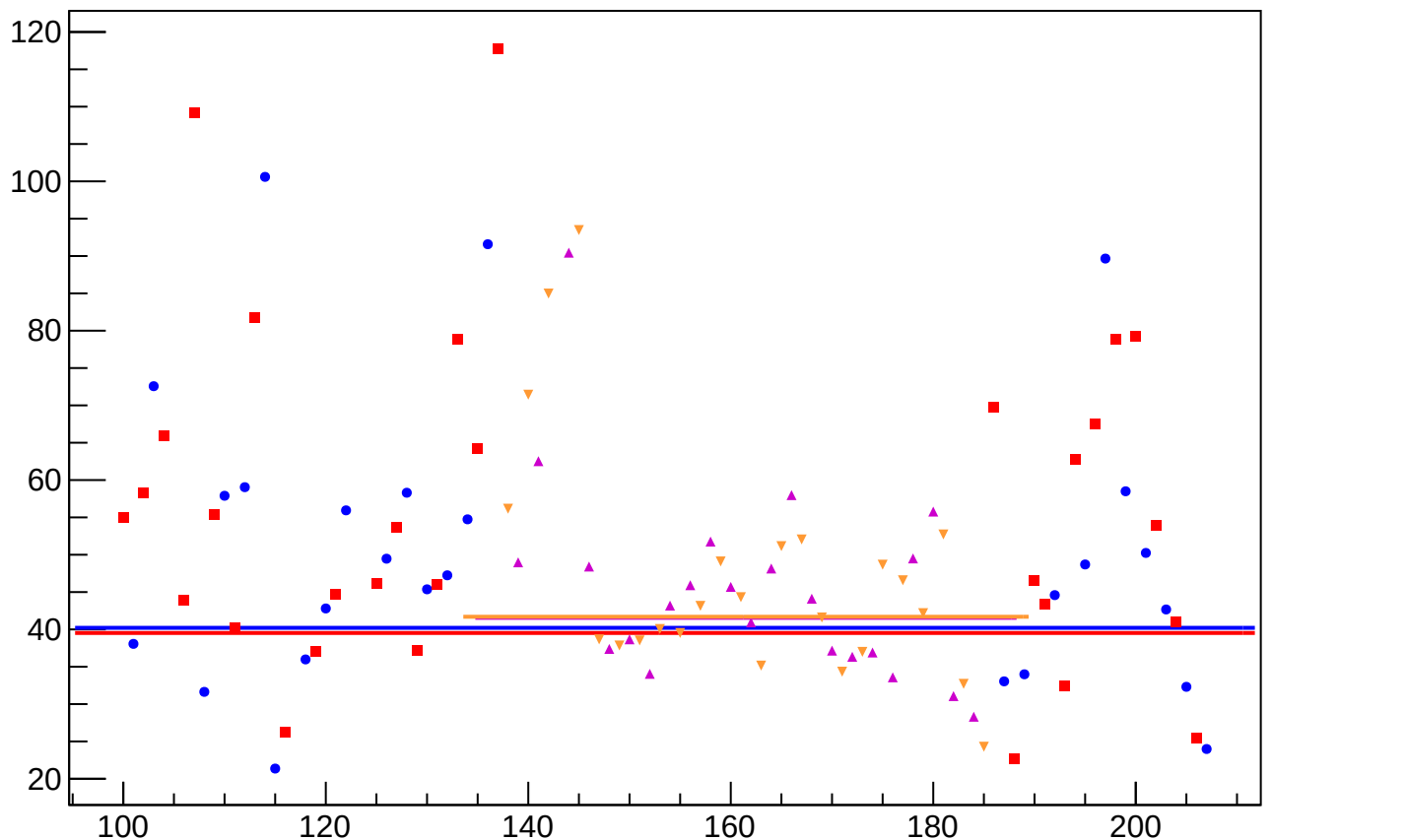
Left In:  $0.009 \pm 0.010$   $\chi^2/\text{NDF}$ : 21.9/22

+ sign  $-0.005 \pm 0.008$   $\chi^2/\text{NDF}$ : 57.1/49

All:  $0.000 \pm 0.006$   $\chi^2/\text{NDF}$ : 125.3/102

- sign  $0.006 \pm 0.008$   $\chi^2/\text{NDF}$ : 67.2/52

# asym\_usl\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 40.213+/-0.008  $\chi^2/\text{NDF}$ : 2937017.8/25

Left Out: 41.694+/-0.007  $\chi^2/\text{NDF}$ : 1821790.0/23

Right Out: 39.525+/-0.008  $\chi^2/\text{NDF}$ : 4183972.2/29

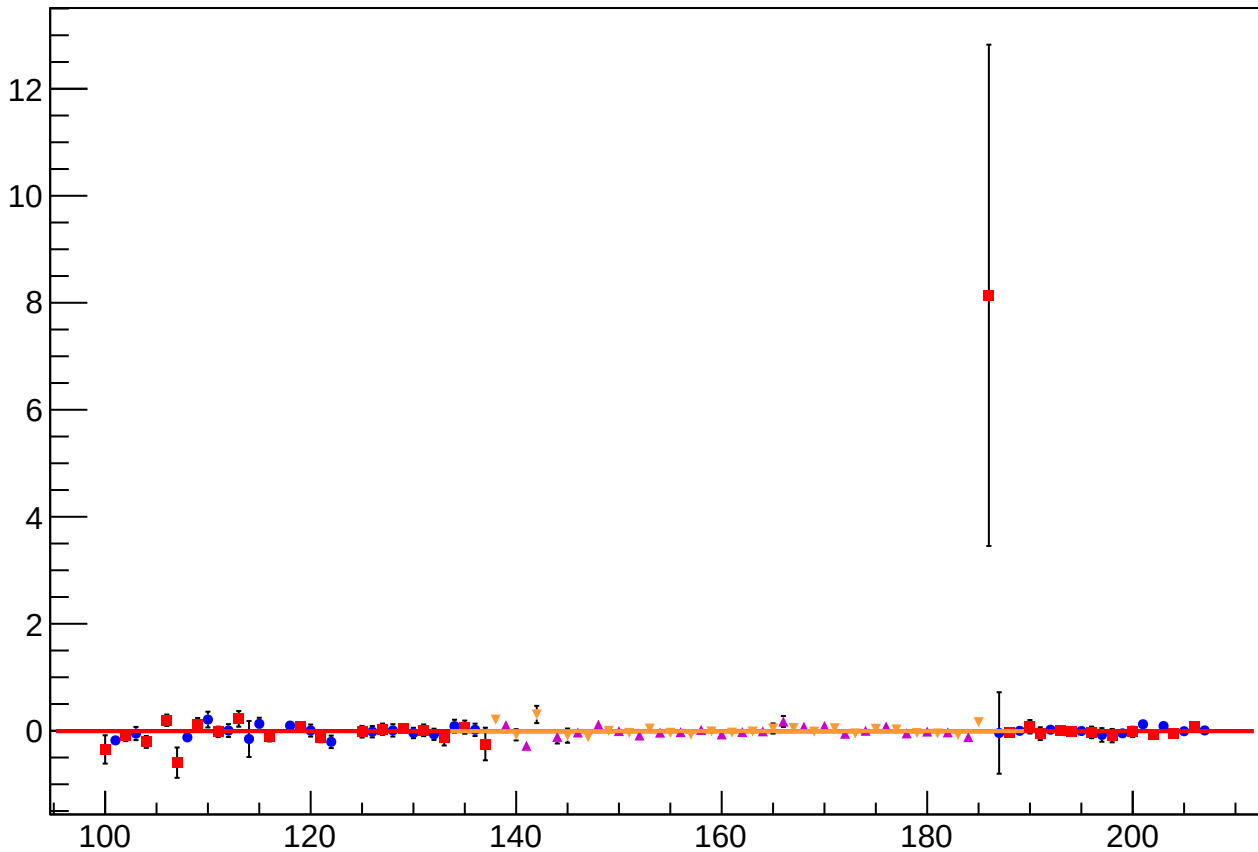
Left In: 41.550+/-0.007  $\chi^2/\text{NDF}$ : 1612979.7/22

+ sign 41.052+/-0.006  $\chi^2/\text{NDF}$ : 4776115.2/49

All: 40.844+/-0.004  $\chi^2/\text{NDF}$ : 10609263.9/102

- sign 40.643+/-0.006  $\chi^2/\text{NDF}$ : 5830428.7/52

asym\_usl\_dit\_vs\_overload\_cor\_diff\_mean vs Slug



Right In:  $-0.005 \pm 0.017$   $\chi^2/\text{NDF}$ : 24.5/25

Left Out:  $-0.007 \pm 0.015$   $\chi^2/\text{NDF}$ : 23.7/23

Right Out:  $-0.008 \pm 0.017$   $\chi^2/\text{NDF}$ : 32.2/29

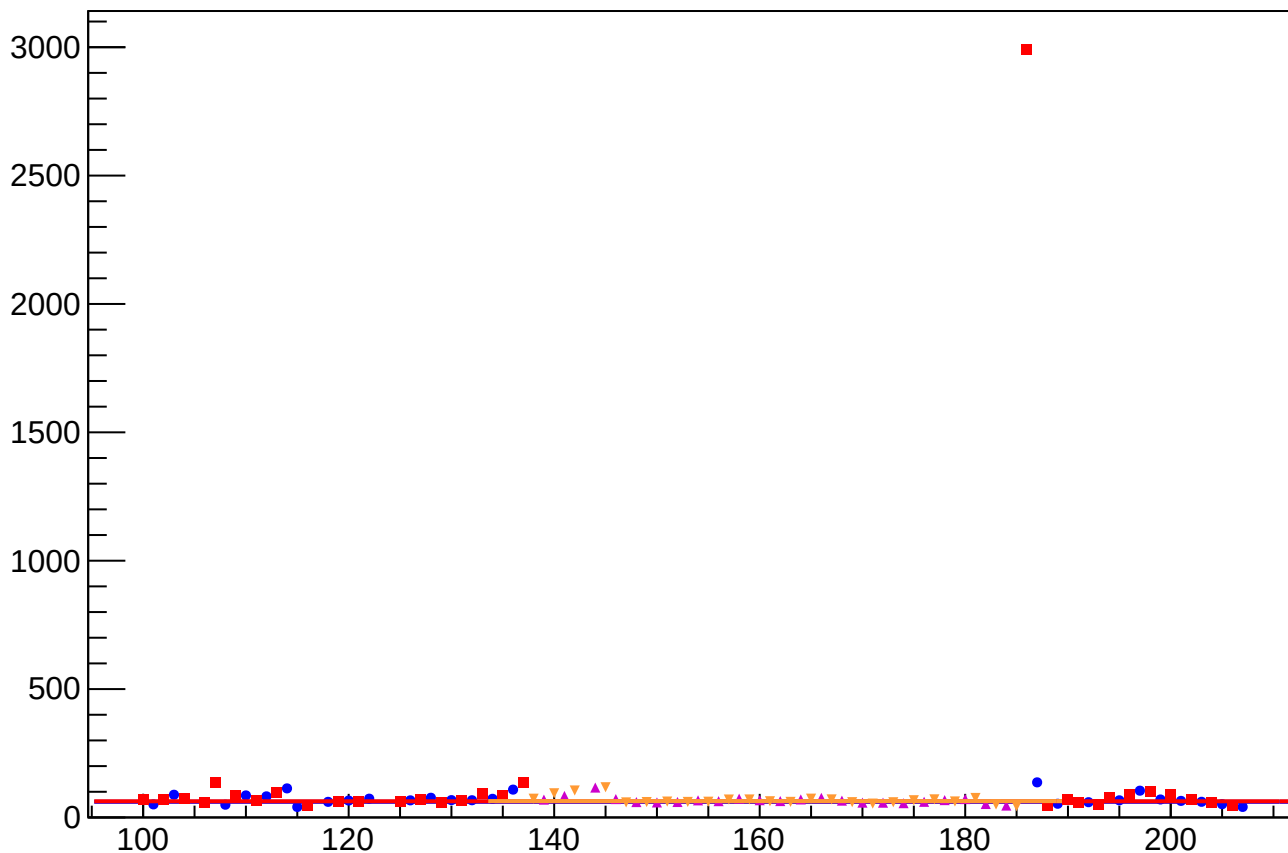
Left In:  $-0.008 \pm 0.015$   $\chi^2/\text{NDF}$ : 28.1/22

+ sign  $-0.006 \pm 0.011$   $\chi^2/\text{NDF}$ : 48.2/49

All:  $-0.007 \pm 0.008$   $\chi^2/\text{NDF}$ : 108.5/102

- sign  $-0.008 \pm 0.011$   $\chi^2/\text{NDF}$ : 60.4/52

asym\_usl\_dit\_vs\_overload\_cor\_diff\_rms vs Slug



Right In: 60.945+/-0.012  $\chi^2/\text{NDF}$ : 1612169.2/25

Left Out: 63.779+/-0.011  $\chi^2/\text{NDF}$ : 1078823.1/23

Right Out: 63.022+/-0.012  $\chi^2/\text{NDF}$ : 2552126.7/29

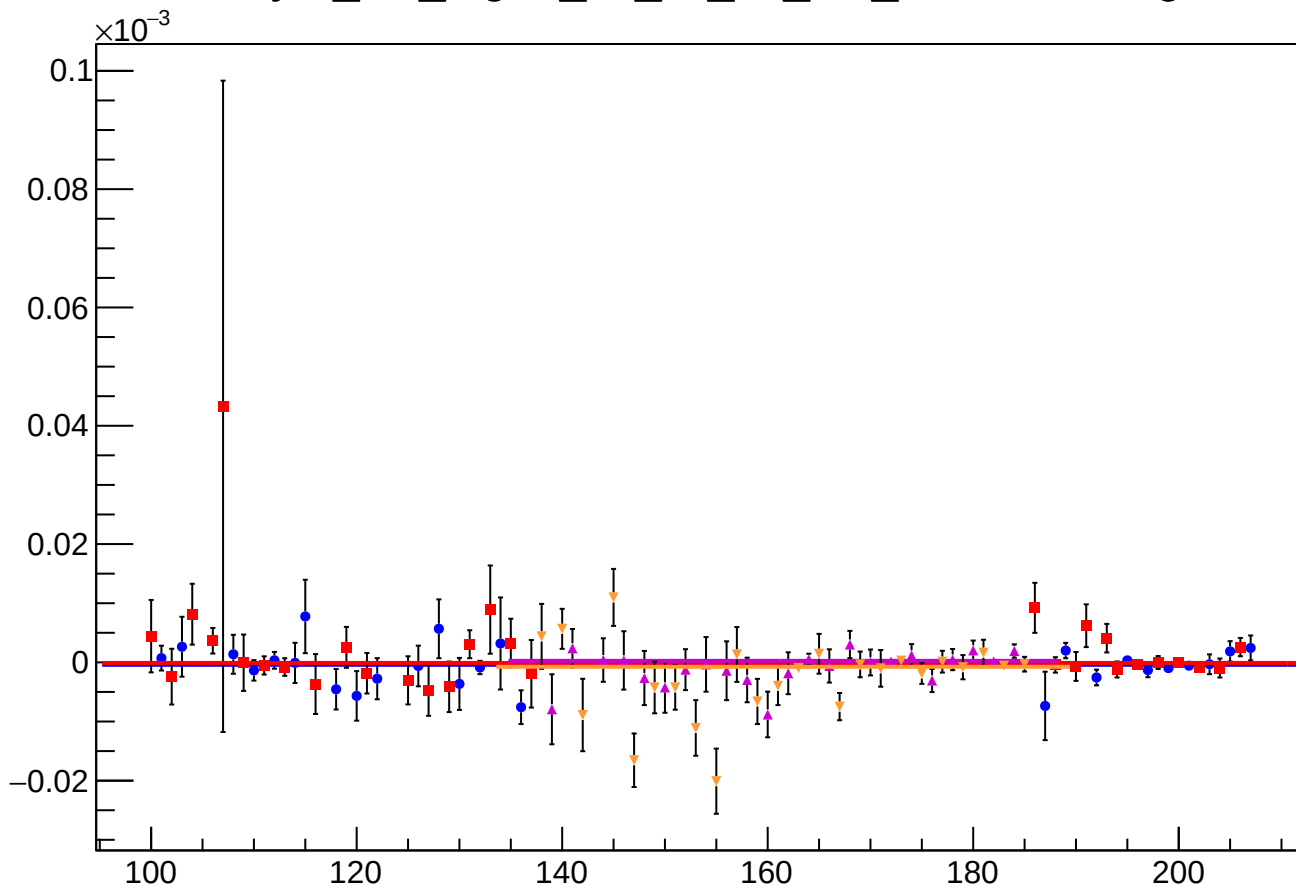
Left In: 64.036+/-0.011  $\chi^2/\text{NDF}$ : 838789.3/22

+ sign 62.510+/-0.008  $\chi^2/\text{NDF}$ : 2721281.3/49

All: 63.043+/-0.006  $\chi^2/\text{NDF}$ : 6124754.3/102

- sign 63.580+/-0.008  $\chi^2/\text{NDF}$ : 3394768.9/52

# asym\_usl\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 30.5/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 60.0/23

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 31.6/29

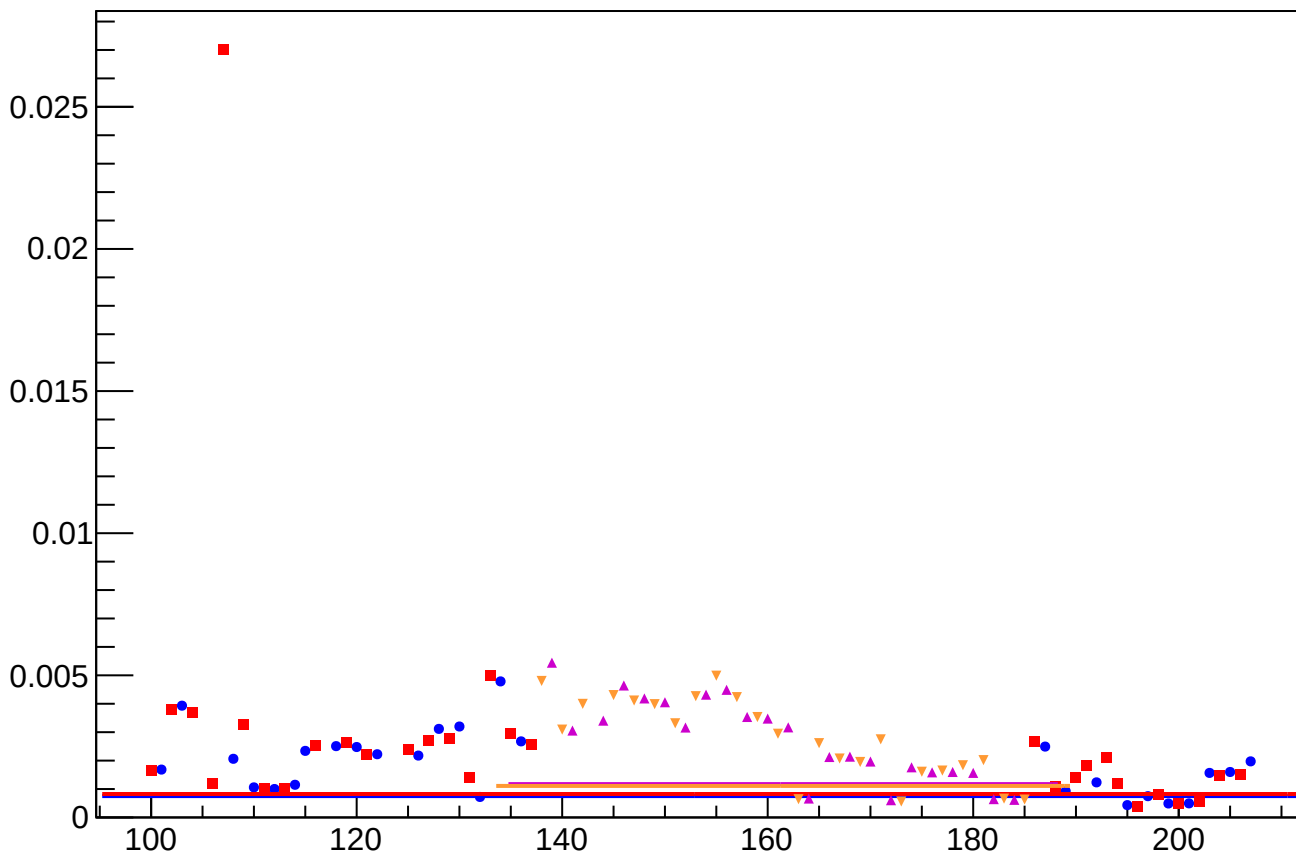
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 18.8/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 91.1/49

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 145.7/102

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 51.1/52

# asym\_usl\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 9697474.2/25

Left Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ :15160045.8/23

Right Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 10566712.2/29

Left In: 0.001+/-0.000  $\chi^2/\text{NDF}$ :14252589.1/22

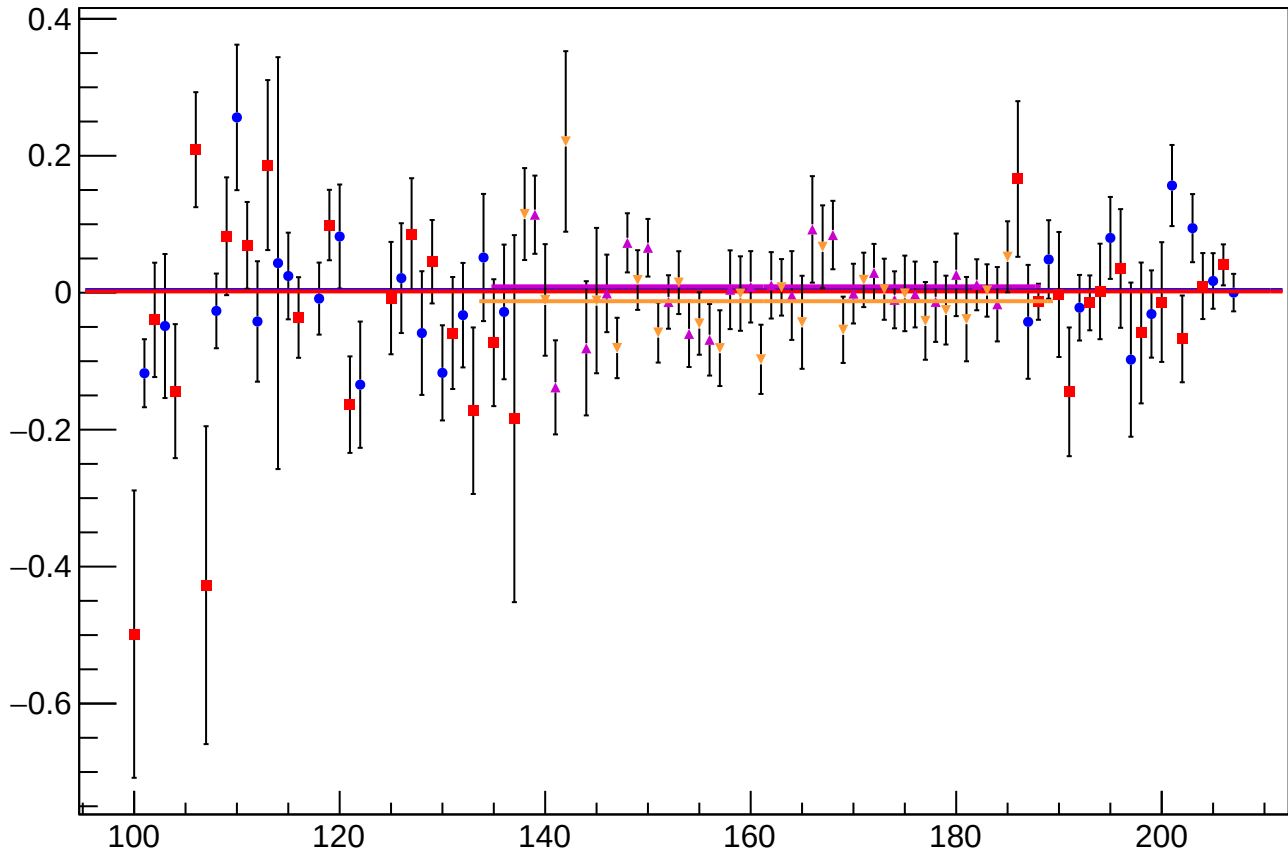
+ sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 26290647.3/49

All: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 52442949.0/102

- sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 26025525.7/52



# asym\_usl\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.004 \pm 0.012$   $\chi^2/\text{NDF}$ : 34.1/25

Left Out:  $-0.012 \pm 0.010$   $\chi^2/\text{NDF}$ : 21.9/23

Right Out:  $0.002 \pm 0.012$   $\chi^2/\text{NDF}$ : 45.0/29

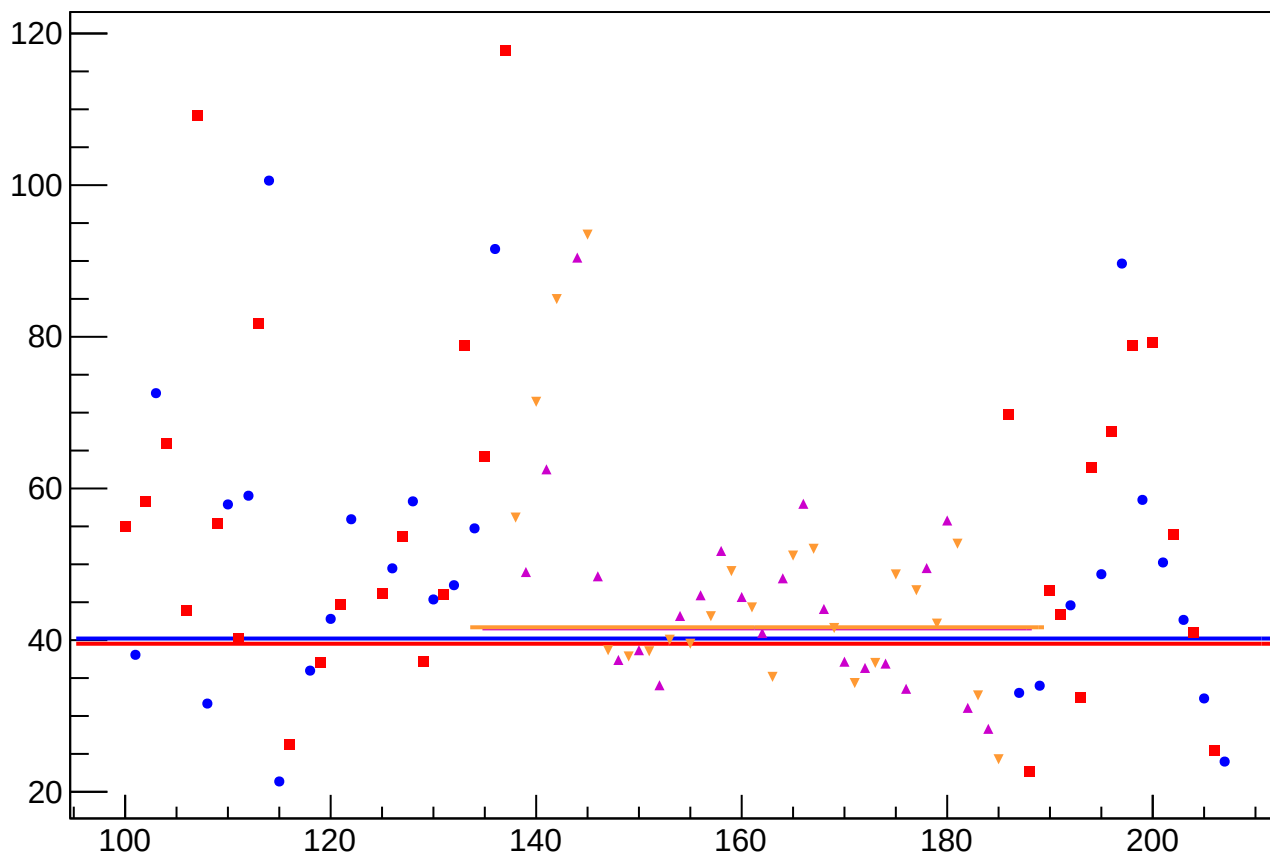
Left In:  $0.009 \pm 0.010$   $\chi^2/\text{NDF}$ : 21.9/22

+ sign  $-0.005 \pm 0.008$   $\chi^2/\text{NDF}$ : 57.1/49

All:  $0.000 \pm 0.006$   $\chi^2/\text{NDF}$ : 125.3/102

- sign  $0.006 \pm 0.008$   $\chi^2/\text{NDF}$ : 67.2/52

# asym\_usl\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 40.212 $\pm$ 0.008  $\chi^2$ /NDF: 2936994.3/25

Left Out: 41.695 $\pm$ 0.007  $\chi^2$ /NDF:1821753.6/23

Right Out: 39.525 $\pm$ 0.008  $\chi^2$ /NDF: 4183874.0/29

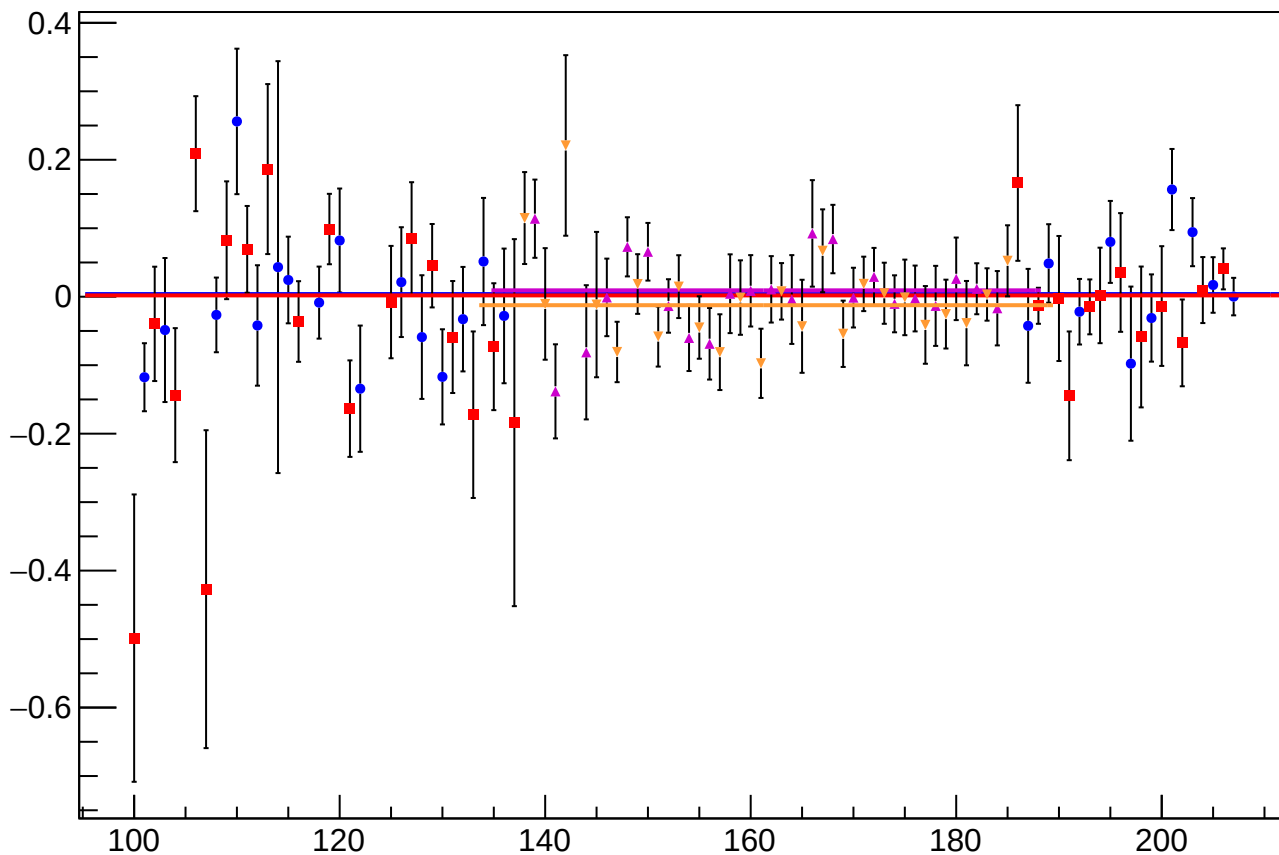
Left In: 41.551 $\pm$ 0.007  $\chi^2$ /NDF:1612941.1/22

+ sign 41.052 $\pm$ 0.006  $\chi^2$ /NDF: 4776061.8/49

All: 40.844 $\pm$ 0.004  $\chi^2$ /NDF: 10609084.1/102

- sign 40.643 $\pm$ 0.006  $\chi^2$ /NDF: 5830303.7/52

asym\_usl\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.004 \pm 0.012$   $\chi^2/\text{NDF}$ : 34.1/25

Left Out:  $-0.012 \pm 0.010$   $\chi^2/\text{NDF}$ : 21.9/23

Right Out:  $0.002 \pm 0.012$   $\chi^2/\text{NDF}$ : 45.0/29

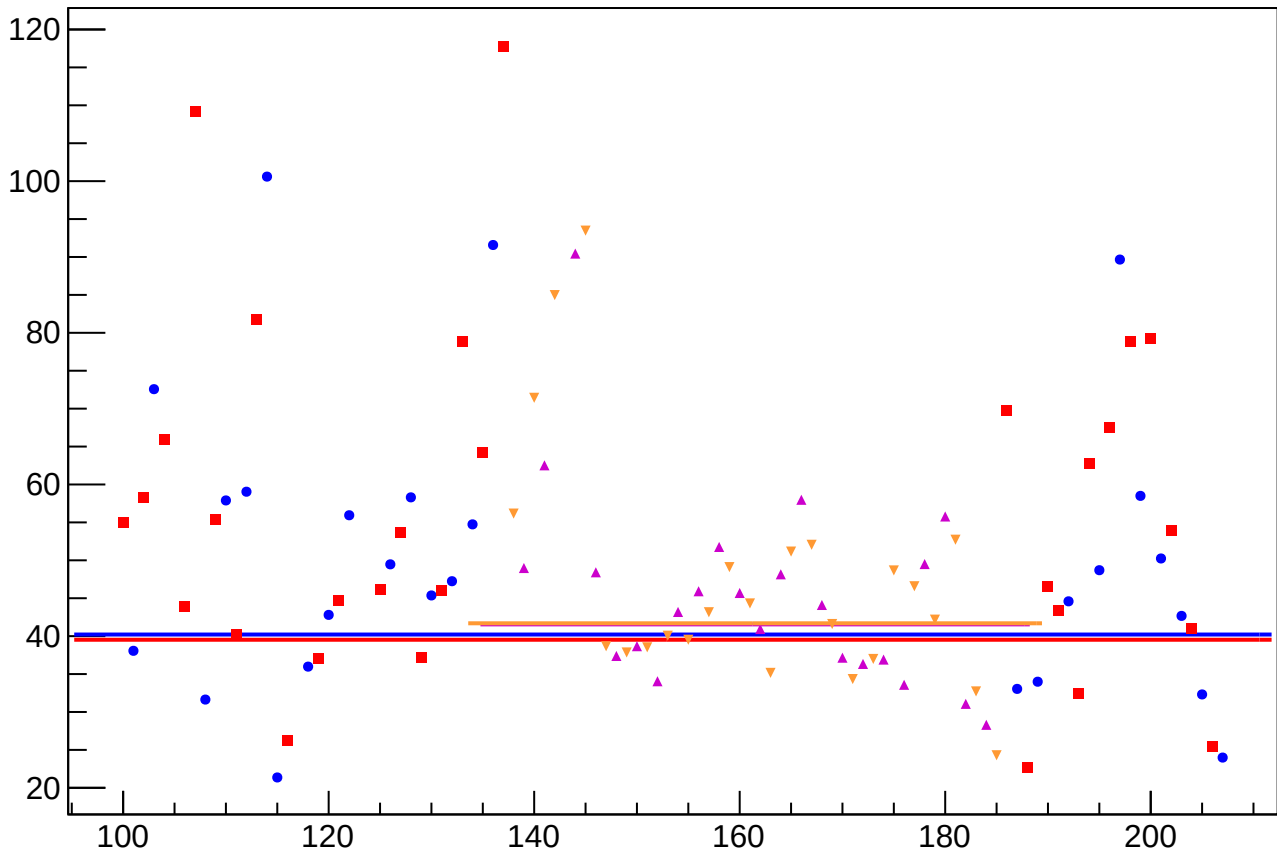
Left In:  $0.009 \pm 0.010$   $\chi^2/\text{NDF}$ : 21.9/22

+ sign  $-0.005 \pm 0.008$   $\chi^2/\text{NDF}$ : 57.1/49

All:  $0.000 \pm 0.006$   $\chi^2/\text{NDF}$ : 125.3/102

- sign  $0.006 \pm 0.008$   $\chi^2/\text{NDF}$ : 67.2/52

asym\_usl\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 40.212 $\pm$ 0.008  $\chi^2$ /NDF: 2936994.3/25

Left Out: 41.695 $\pm$ 0.007  $\chi^2$ /NDF:1821753.6/23

Right Out: 39.525 $\pm$ 0.008  $\chi^2$ /NDF: 4183874.0/29

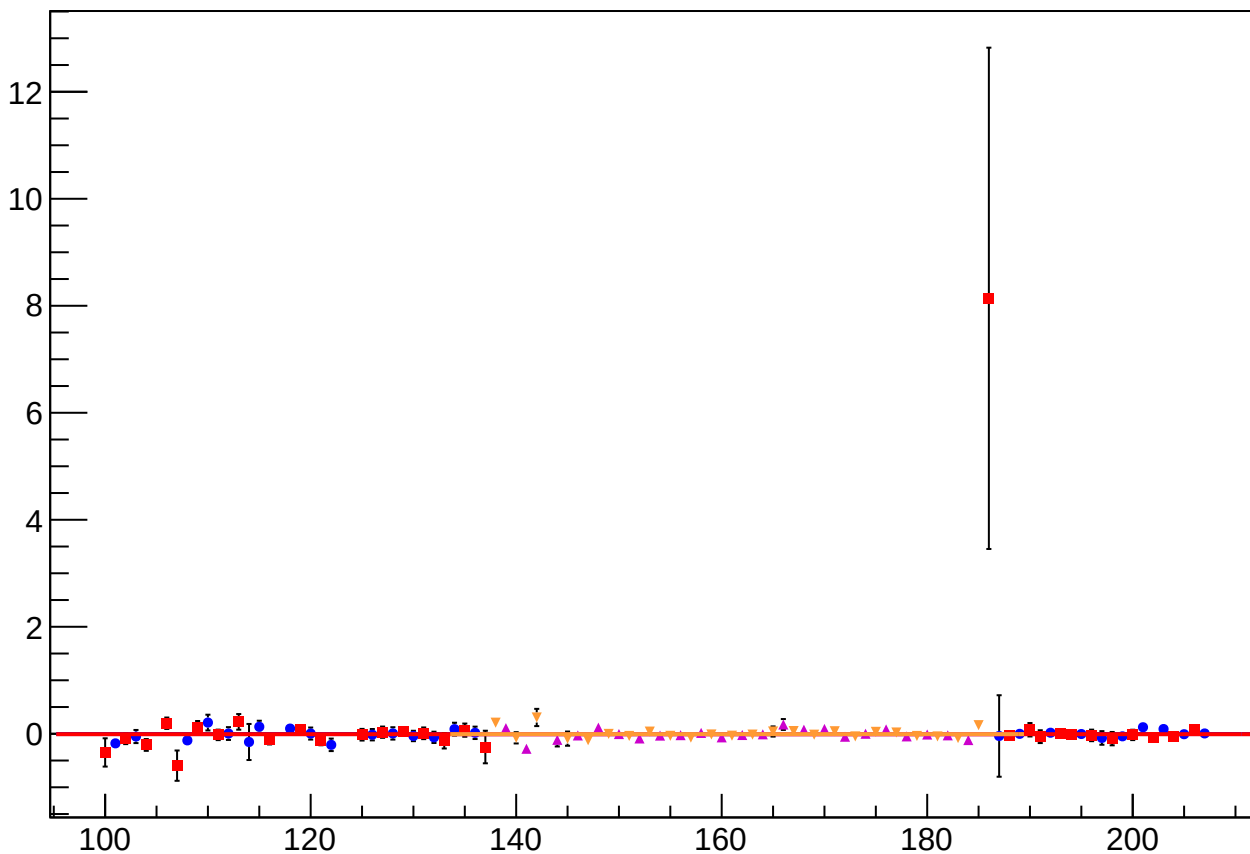
Left In: 41.551 $\pm$ 0.007  $\chi^2$ /NDF:1612941.1/22

+ sign 41.052 $\pm$ 0.006  $\chi^2$ /NDF: 4776061.8/49

All: 40.844 $\pm$ 0.004  $\chi^2$ /NDF: 10609084.1/102

- sign 40.643 $\pm$ 0.006  $\chi^2$ /NDF: 5830303.7/52

asym\_usl\_eigen\_dit\_vs\_overload\_cor\_diff\_mean vs Slug



Right In:  $-0.005 \pm 0.017$   $\chi^2/\text{NDF}$ : 24.5/25

Left Out:  $-0.007 \pm 0.015$   $\chi^2/\text{NDF}$ : 23.7/23

Right Out:  $-0.008 \pm 0.017$   $\chi^2/\text{NDF}$ : 32.2/29

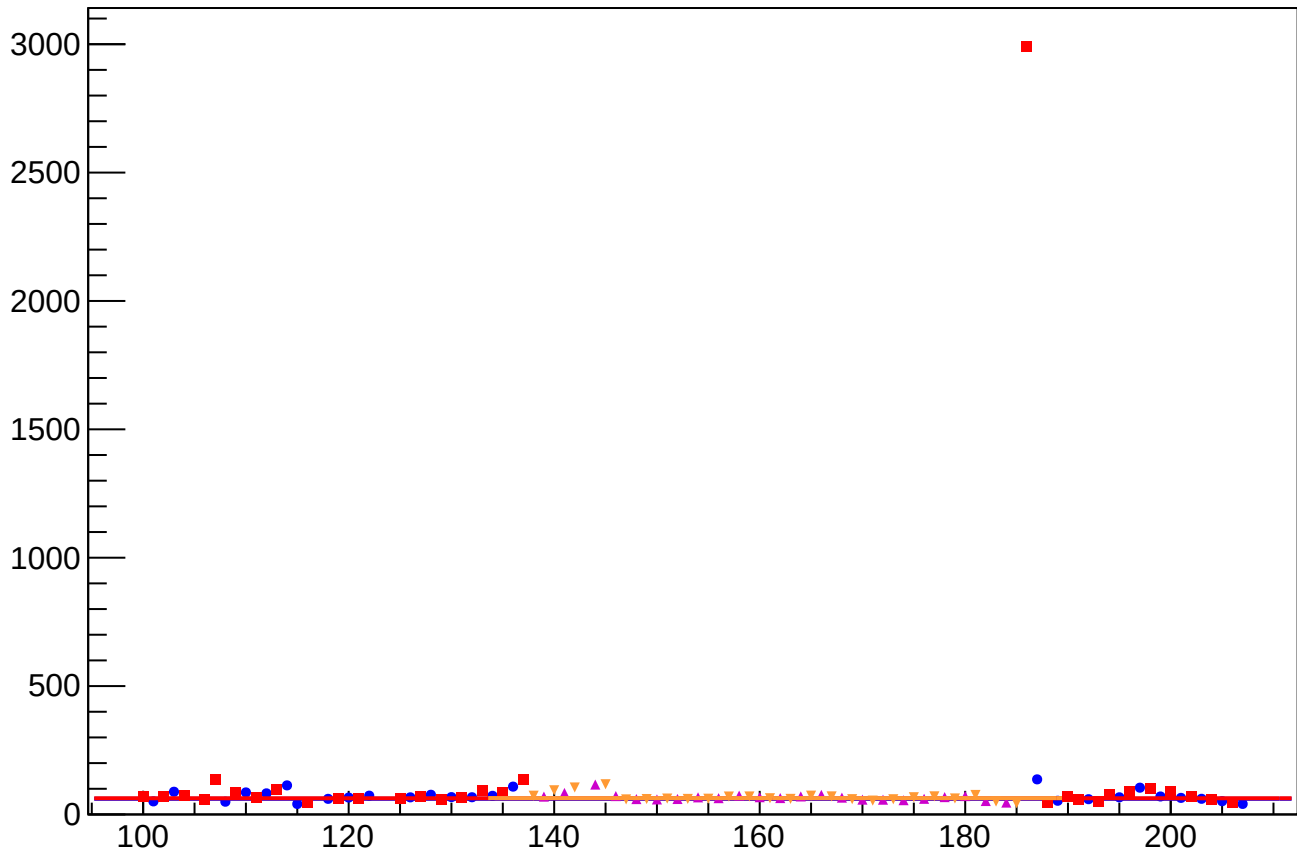
Left In:  $-0.008 \pm 0.015$   $\chi^2/\text{NDF}$ : 28.1/22

+ sign  $-0.006 \pm 0.011$   $\chi^2/\text{NDF}$ : 48.2/49

All:  $-0.007 \pm 0.008$   $\chi^2/\text{NDF}$ : 108.5/102

- sign  $-0.008 \pm 0.011$   $\chi^2/\text{NDF}$ : 60.4/52

asym\_usl\_eigen\_dit\_vs\_overload\_cor\_diff\_rms vs Slug



Right In: 60.945+/-0.012     $\chi^2/\text{NDF}$ : 1612153.8/25

Left Out: 63.779+/-0.011     $\chi^2/\text{NDF}$ : 1078810.5/23

Right Out: 63.022+/-0.012     $\chi^2/\text{NDF}$ : 2552099.9/29

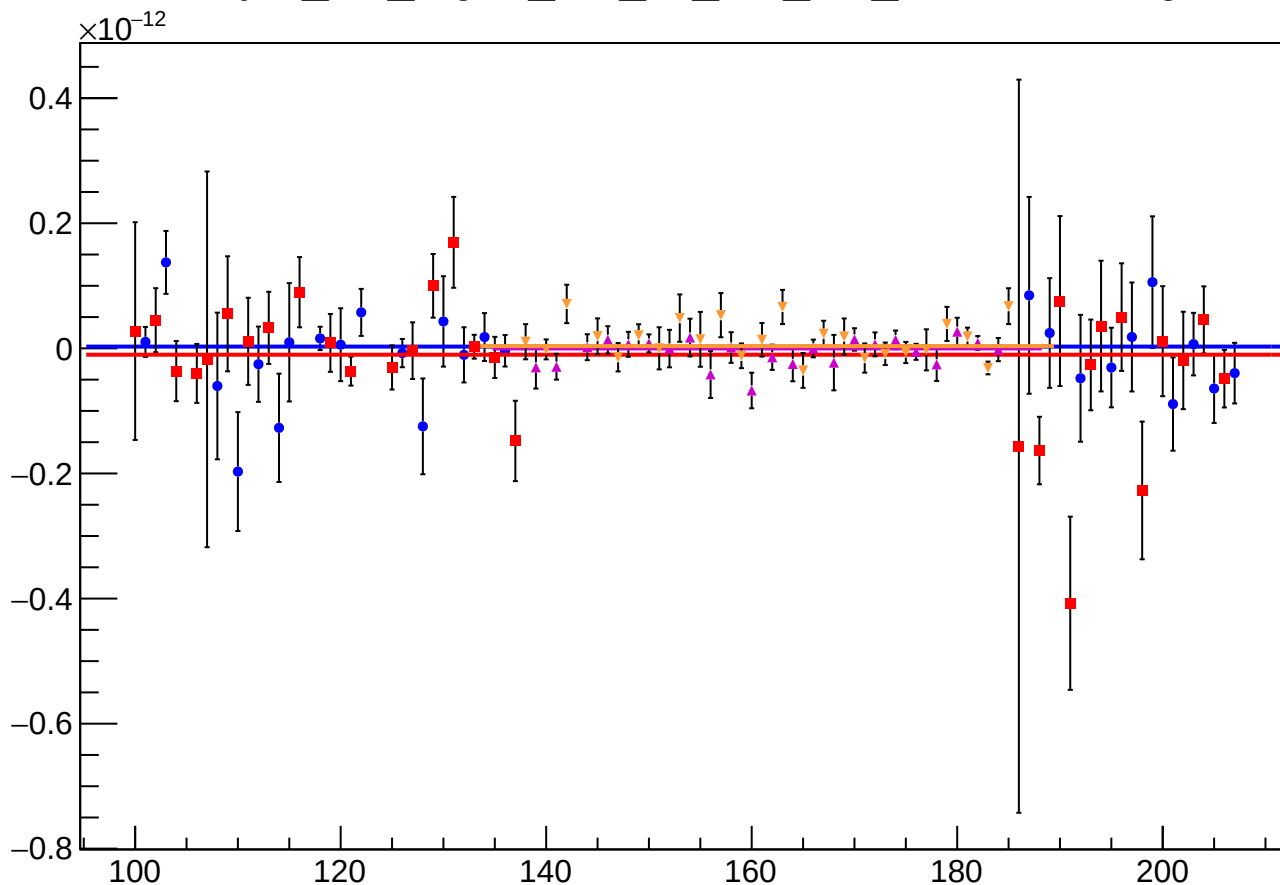
Left In: 64.036+/-0.011     $\chi^2/\text{NDF}$ : 838784.5/22

+ sign 62.510+/-0.008     $\chi^2/\text{NDF}$ : 2721257.4/49

All: 63.043+/-0.006     $\chi^2/\text{NDF}$ : 6124701.4/102

- sign 63.580+/-0.008     $\chi^2/\text{NDF}$ : 3394740.2/52

# asym\_usl\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 26.3/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 40.6/23

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 47.1/29

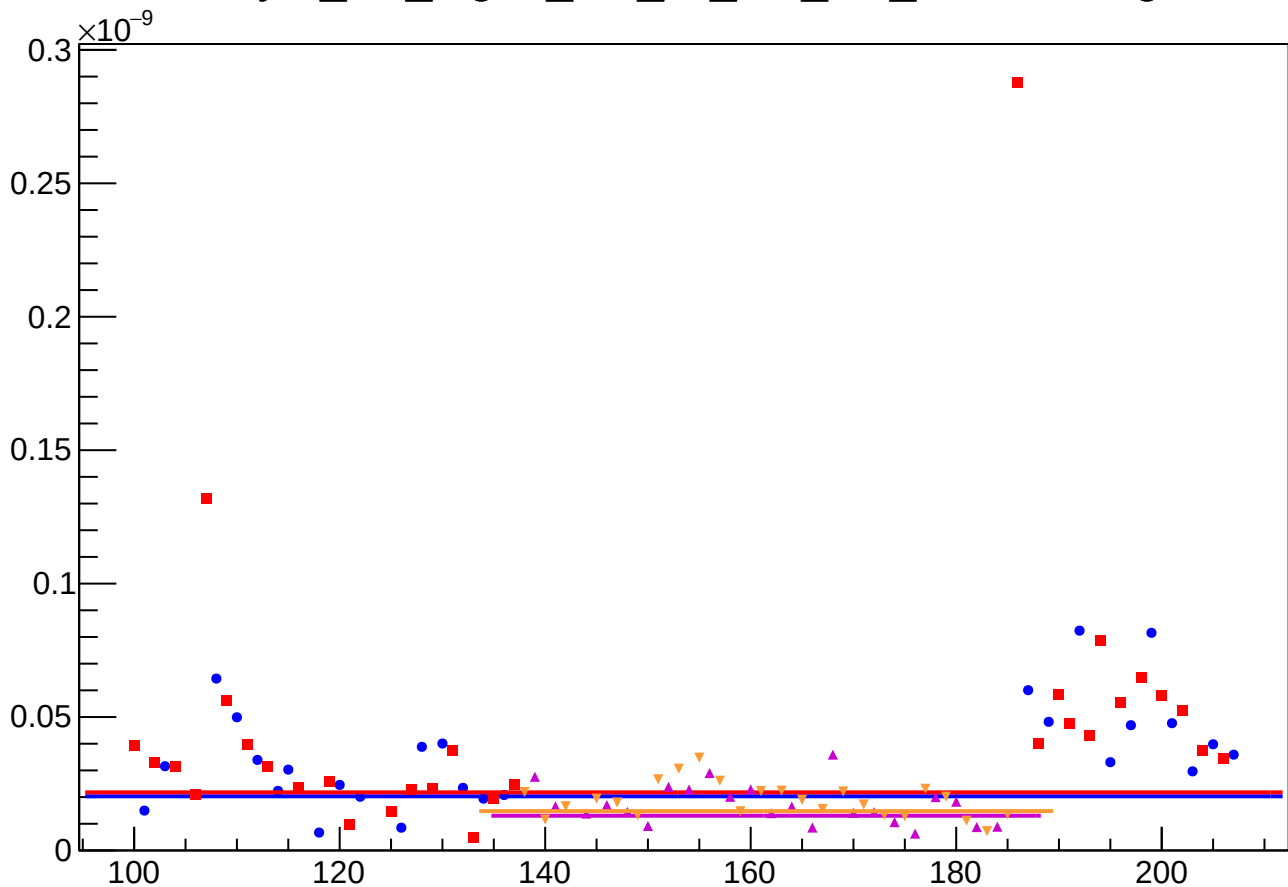
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 17.1/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 66.9/49

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 133.1/102

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 65.3/52

asym\_usl\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5516968.0/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3531388.4/23

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6448676.3/29

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3925910.3/22

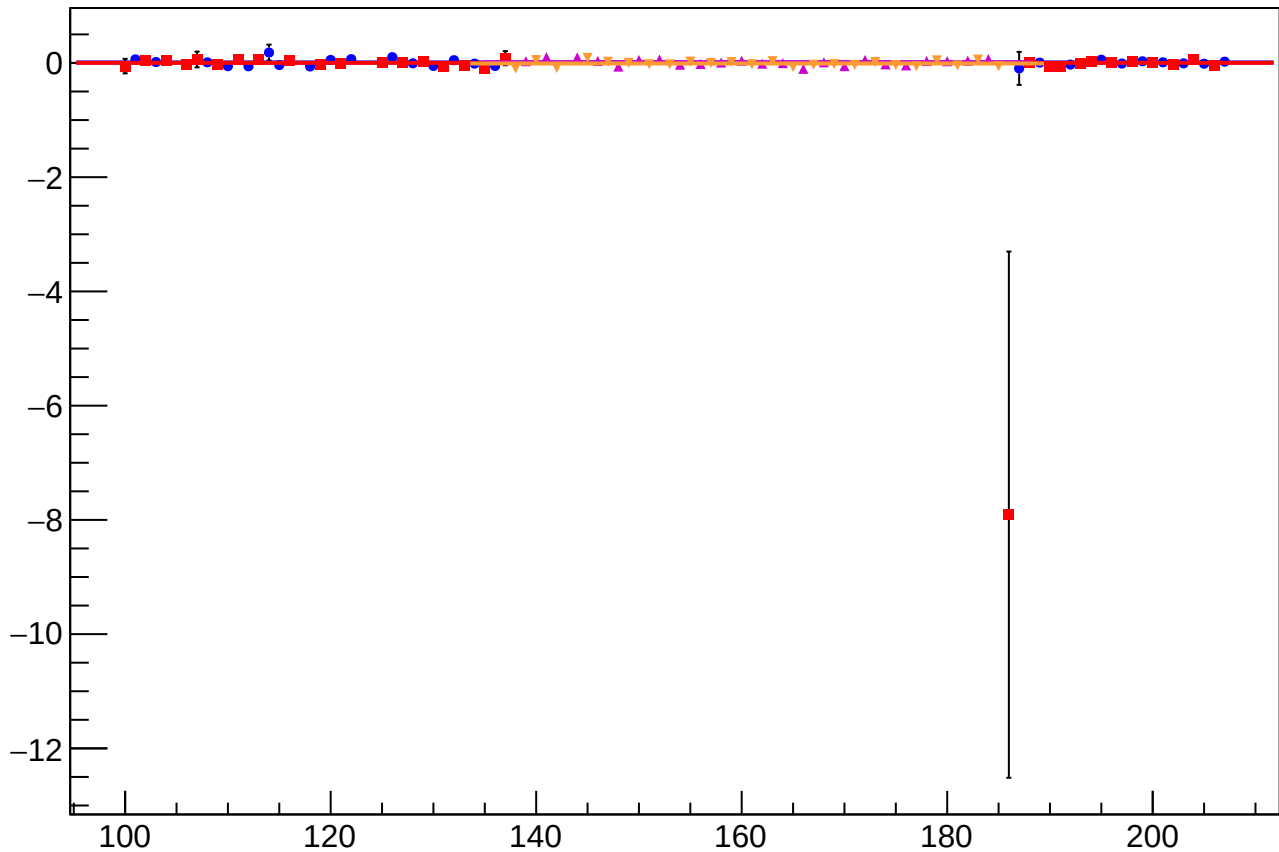
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9721760.1/49

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 21823103.4/102

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11961150.4/52



asym\_usl\_overload\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.008 \pm 0.009$   $\chi^2/\text{NDF}$ : 19.5/25

Left Out:  $-0.010 \pm 0.009$   $\chi^2/\text{NDF}$ : 19.4/23

Right Out:  $0.002 \pm 0.008$   $\chi^2/\text{NDF}$ : 24.4/29

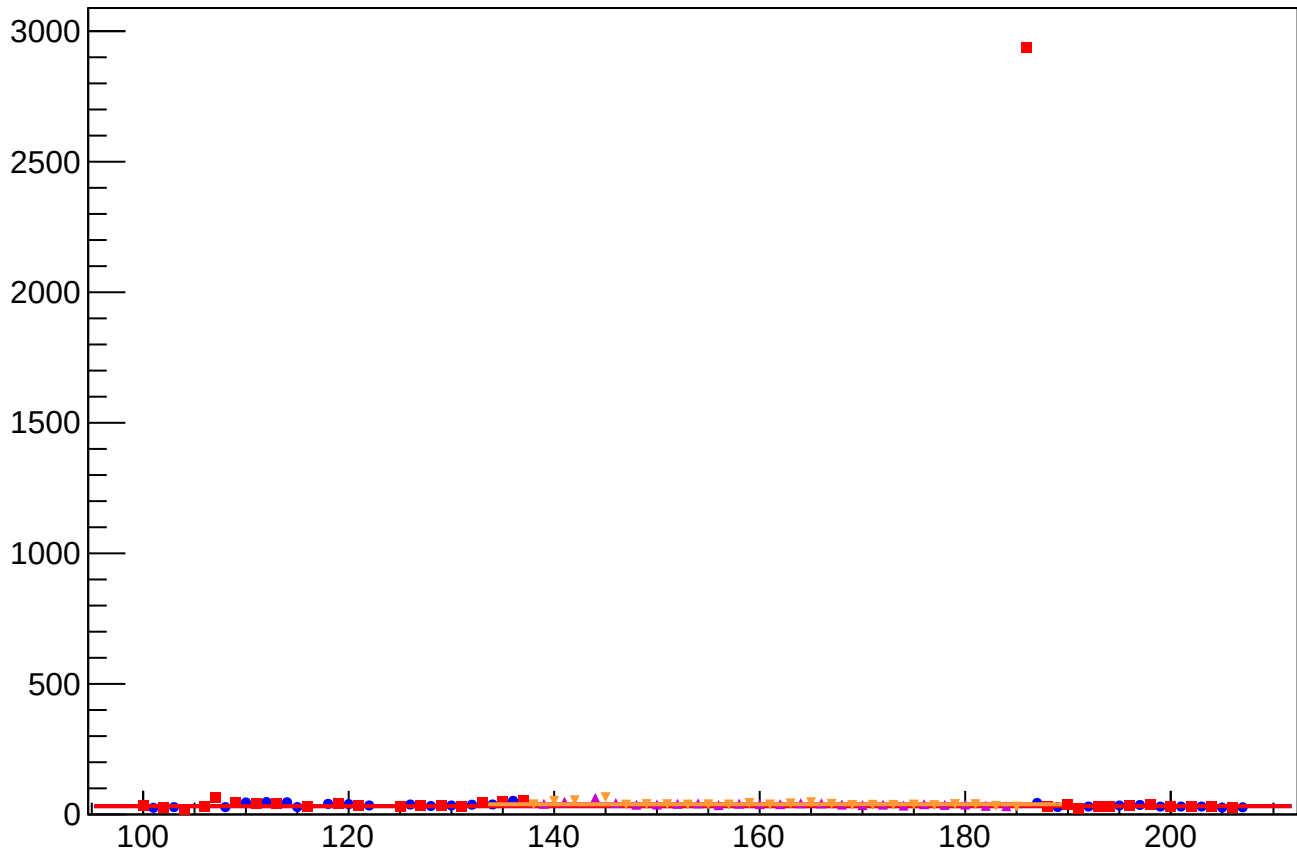
Left In:  $0.011 \pm 0.010$   $\chi^2/\text{NDF}$ : 23.3/22

+ sign  $0.000 \pm 0.006$   $\chi^2/\text{NDF}$ : 40.9/49

All:  $0.003 \pm 0.005$   $\chi^2/\text{NDF}$ : 89.4/102

- sign  $0.006 \pm 0.006$   $\chi^2/\text{NDF}$ : 48.1/52

# asym\_usl\_overload\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 31.748+/-0.006     $\chi^2/\text{NDF}$ : 880996.3/25

Left Out: 38.972+/-0.007     $\chi^2/\text{NDF}$ : 624525.1/23

Right Out: 31.755+/-0.006     $\chi^2/\text{NDF}$ : 1959363.4/29

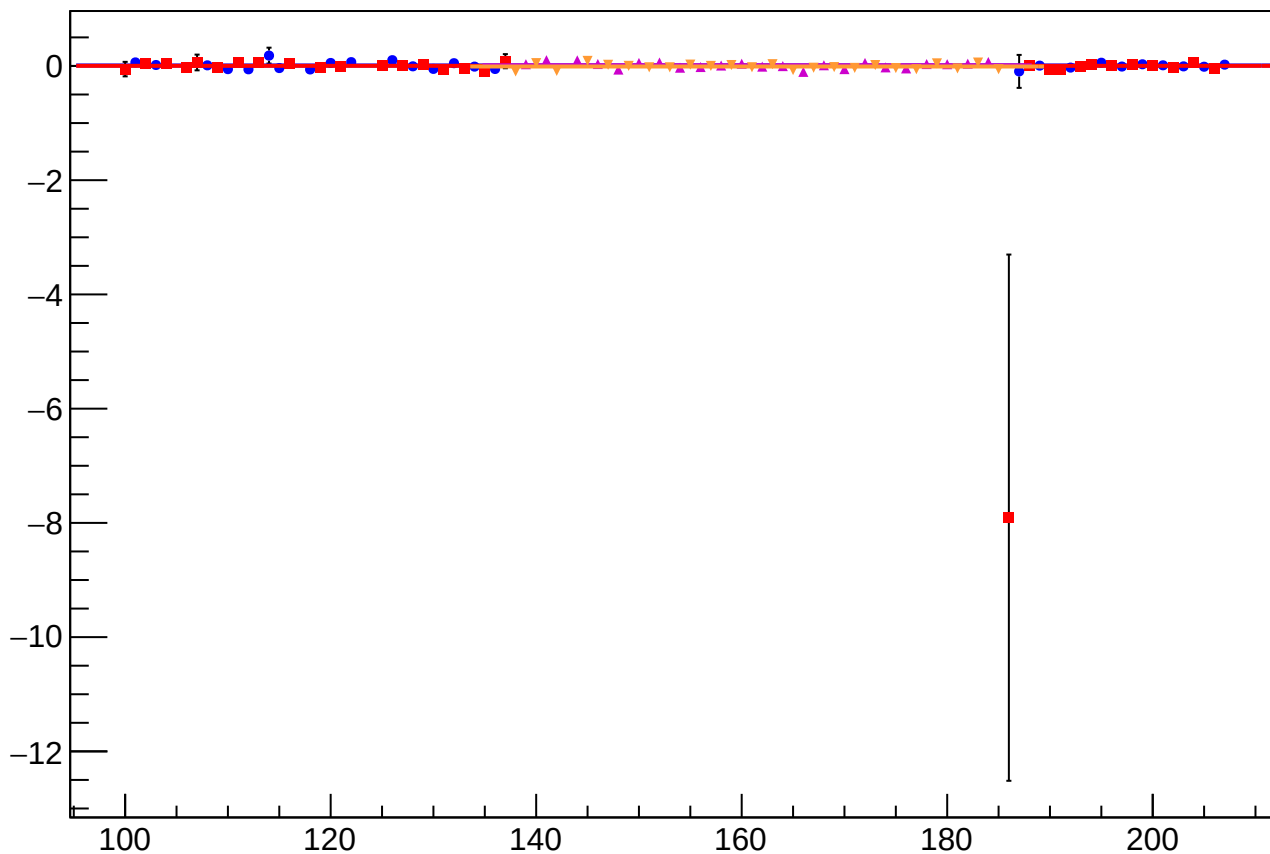
Left In: 39.179+/-0.007     $\chi^2/\text{NDF}$ : 521827.1/22

+ sign 35.086+/-0.005     $\chi^2/\text{NDF}$ : 2132466.0/49

All: 35.057+/-0.003     $\chi^2/\text{NDF}$ : 5287787.4/102

- sign 35.030+/-0.004     $\chi^2/\text{NDF}$ : 3155244.2/52

asym\_usl\_overload\_cor\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.008 $\pm$ 0.009  $\chi^2$ /NDF: 19.5/25

Left Out: -0.010 $\pm$ 0.009  $\chi^2$ /NDF:19.4/23

Right Out: 0.002 $\pm$ 0.008  $\chi^2$ /NDF: 24.4/29

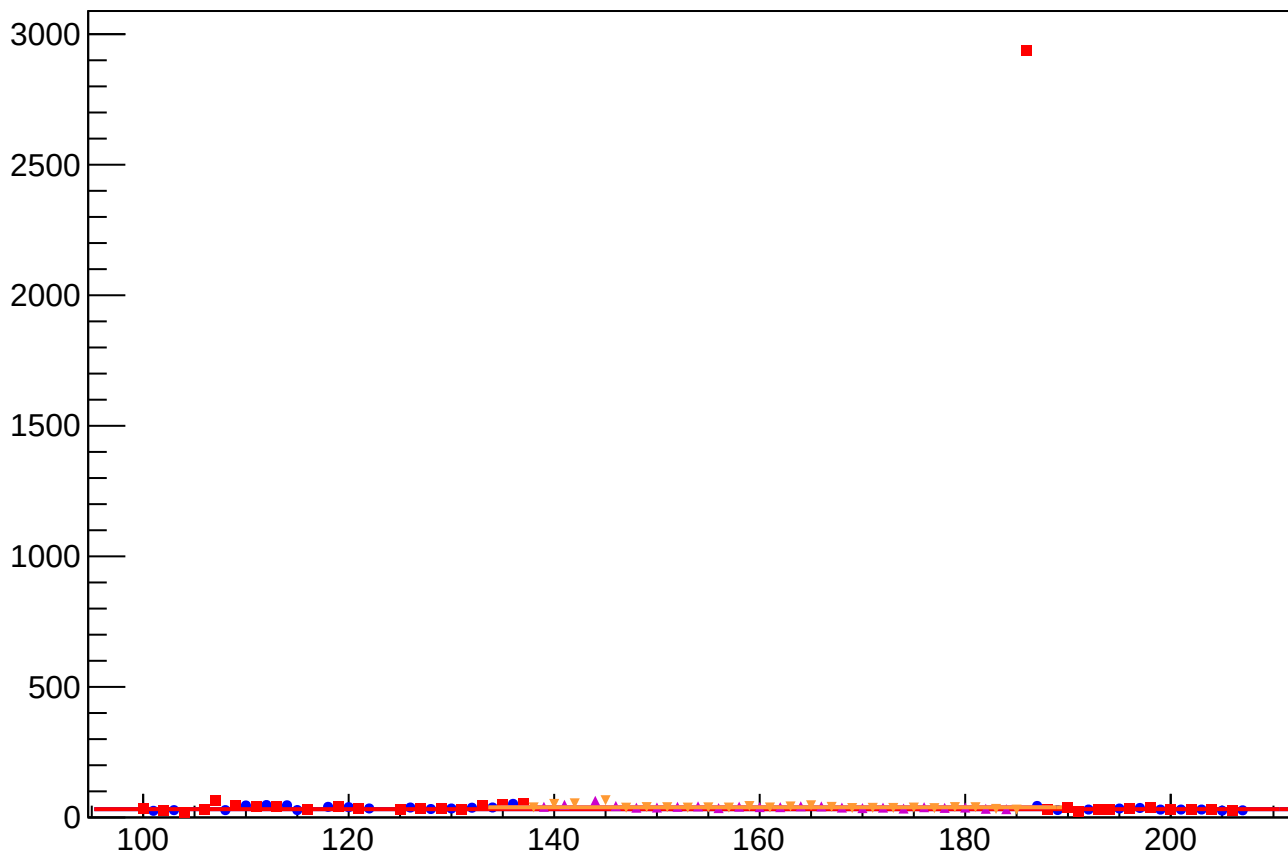
Left In: 0.011 $\pm$ 0.010  $\chi^2$ /NDF:23.3/22

+ sign 0.000 $\pm$ 0.006  $\chi^2$ /NDF: 40.9/49

All: 0.003 $\pm$ 0.005  $\chi^2$ /NDF: 89.4/102

- sign 0.006 $\pm$ 0.006  $\chi^2$ /NDF: 48.1/52

asym\_usl\_overload\_cor\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 31.748 $\pm$ 0.006  $\chi^2$ /NDF: 880996.3/25

Left Out: 38.972 $\pm$ 0.007  $\chi^2$ /NDF: 624525.1/23

Right Out: 31.755 $\pm$ 0.006  $\chi^2$ /NDF: 1959363.4/29

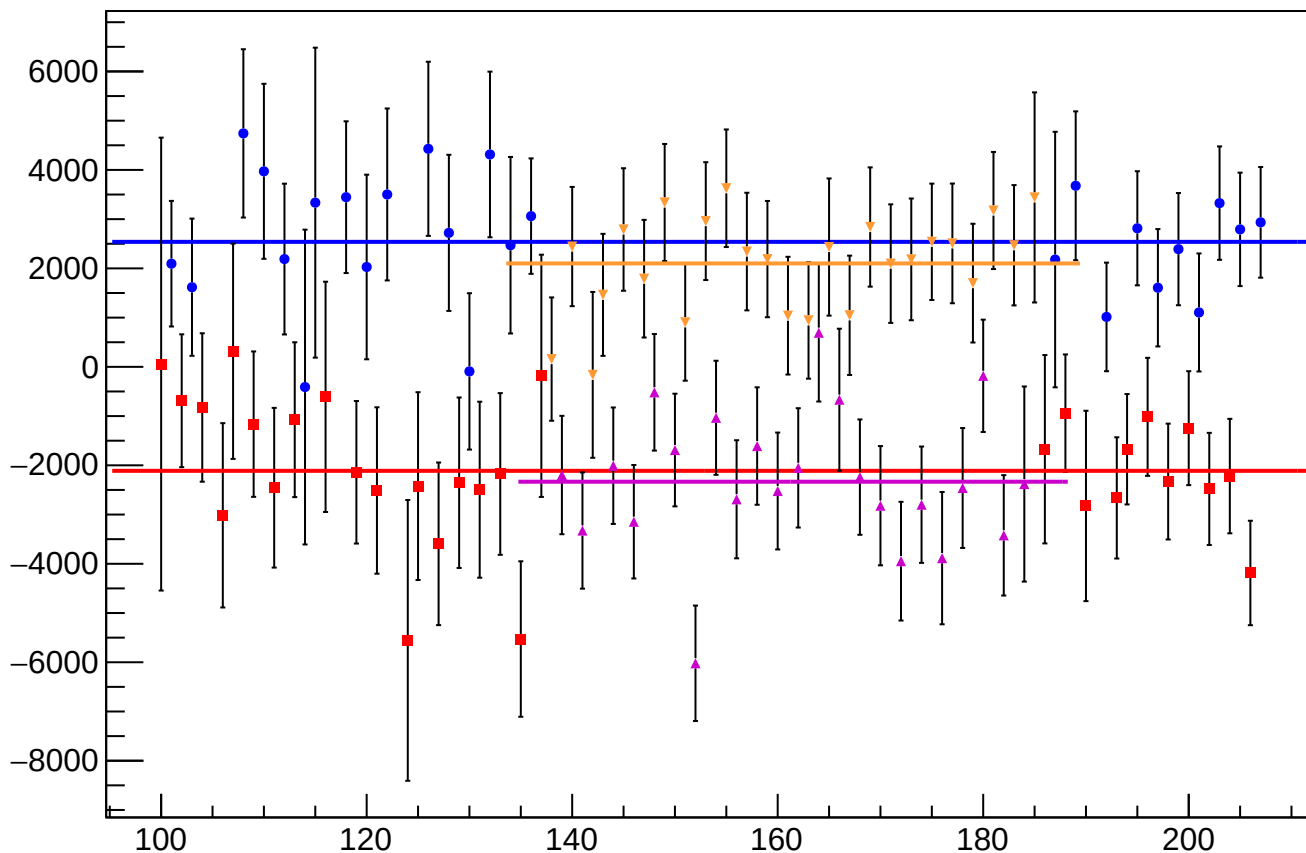
Left In: 39.179 $\pm$ 0.007  $\chi^2$ /NDF: 521827.1/22

+ sign 35.086 $\pm$ 0.005  $\chi^2$ /NDF: 2132466.0/49

All: 35.057 $\pm$ 0.003  $\chi^2$ /NDF: 5287787.4/102

- sign 35.030 $\pm$ 0.004  $\chi^2$ /NDF: 3155244.2/52

# reg\_asym\_usr\_mean vs Slug



Right In: 2539.016 $\pm$ 281.997  $\chi^2$ /NDF: 15.0/25

Left Out: 2100.398 $\pm$ 248.306  $\chi^2$ /NDF:13.8/24

Right Out: -2111.860 $\pm$ 273.212  $\chi^2$ /NDF: 19.4/29

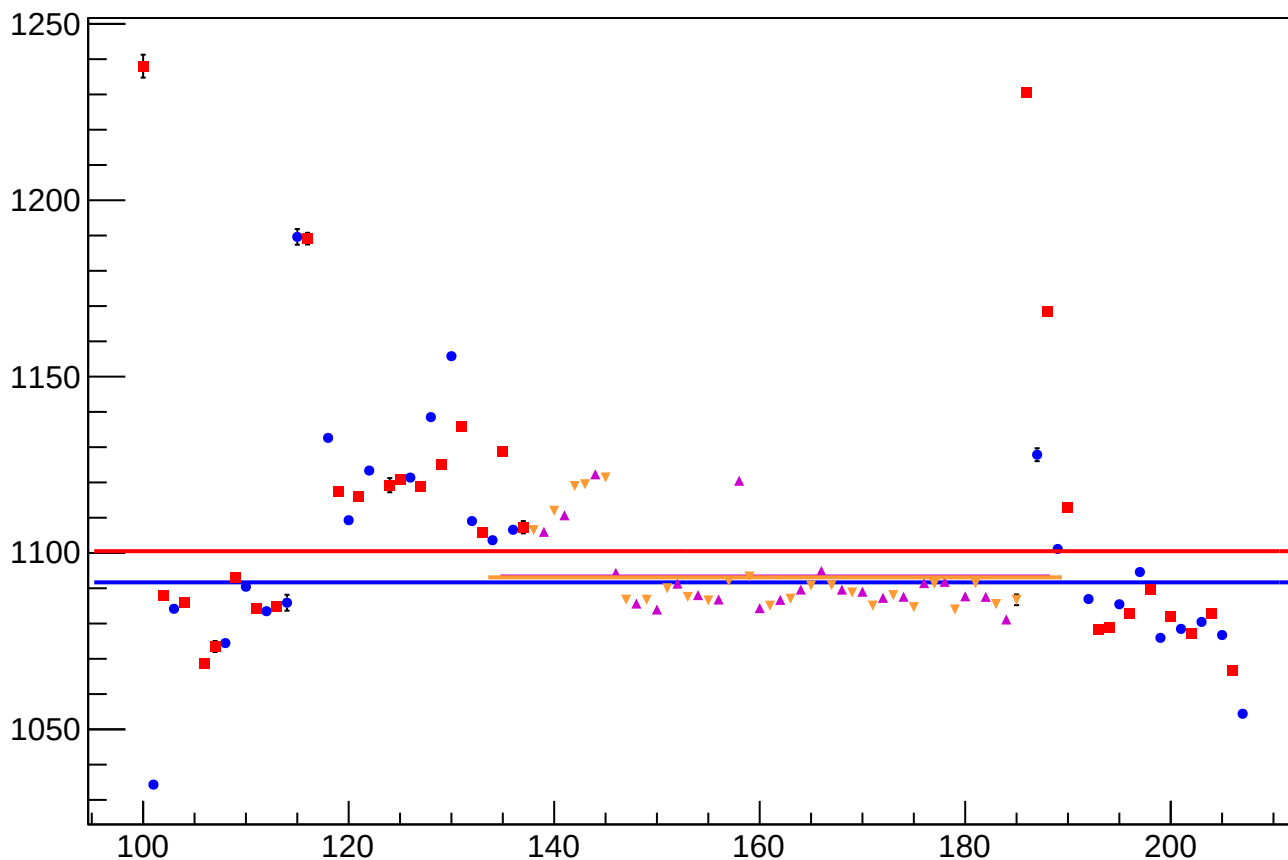
Left In: -2332.954 $\pm$ 255.284  $\chi^2$ /NDF:29.5/22

+ sign 2291.953 $\pm$ 186.358  $\chi^2$ /NDF: 30.2/50

All: 33.105 $\pm$ 131.836  $\chi^2$ /NDF: 373.6/103

- sign -2229.899 $\pm$ 186.529  $\chi^2$ /NDF: 49.3/52

# reg\_asym\_usr\_rms vs Slug



Right In: 1091.671 $\pm$ 0.199  $\chi^2$ /NDF: 18665.8/25

Left Out: 1093.102 $\pm$ 0.176  $\chi^2$ /NDF: 3983.2/24

Right Out: 1100.514 $\pm$ 0.193  $\chi^2$ /NDF: 30888.6/29

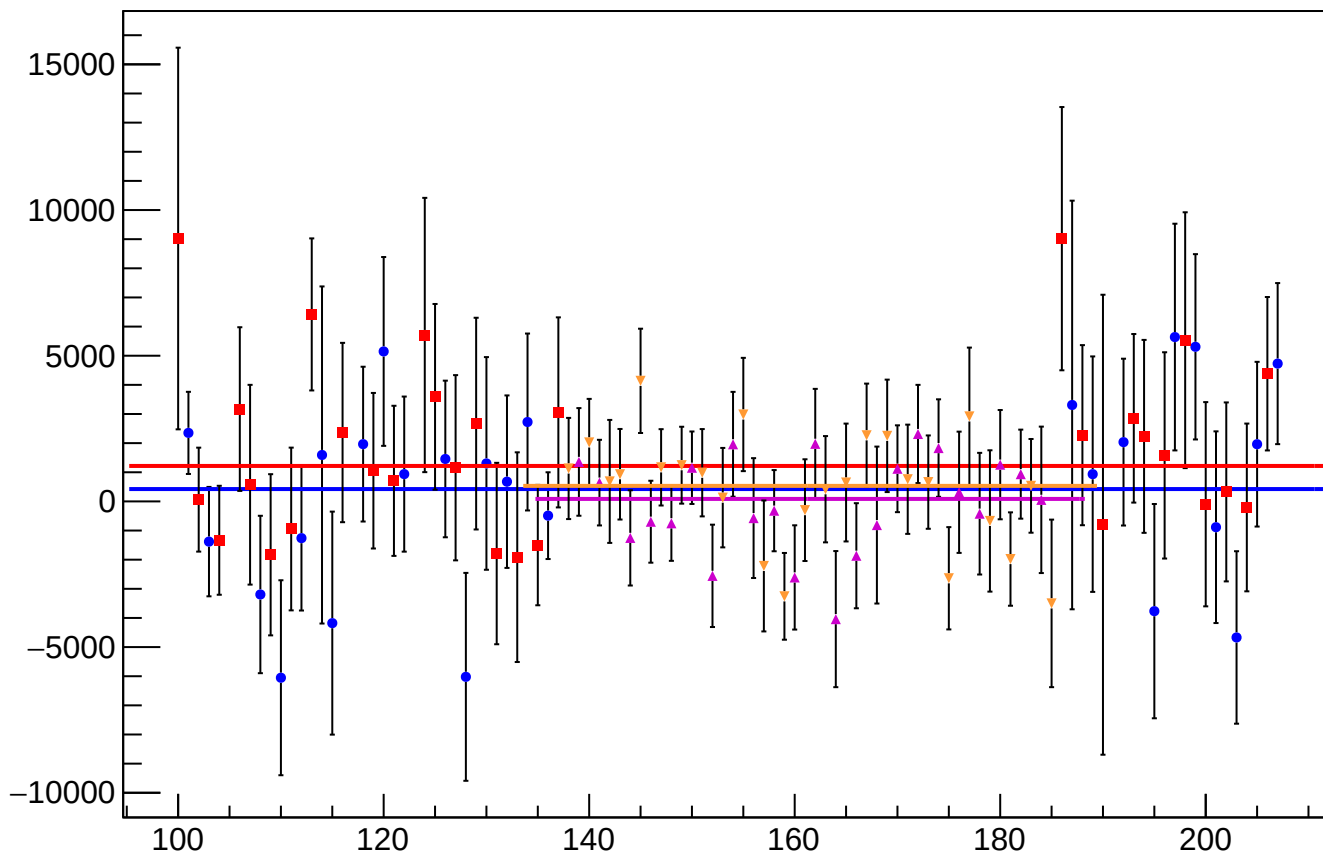
Left In: 1093.338 $\pm$ 0.181  $\chi^2$ /NDF: 3725.7/22

+ sign 1092.477 $\pm$ 0.132  $\chi^2$ /NDF: 22678.0/50

All: 1094.578 $\pm$ 0.093  $\chi^2$ /NDF: 58537.9/103

- sign 1096.683 $\pm$ 0.132  $\chi^2$ /NDF: 35350.9/52

# asym\_usr\_reg\_correction\_mean vs Slug



Right In:  $423.766 \pm 532.799$   $\chi^2/\text{NDF}: 29.0/25$

Left Out:  $532.982 \pm 347.223$   $\chi^2/\text{NDF}: 26.4/24$

Right Out:  $1216.966 \pm 540.011$   $\chi^2/\text{NDF}: 22.0/29$

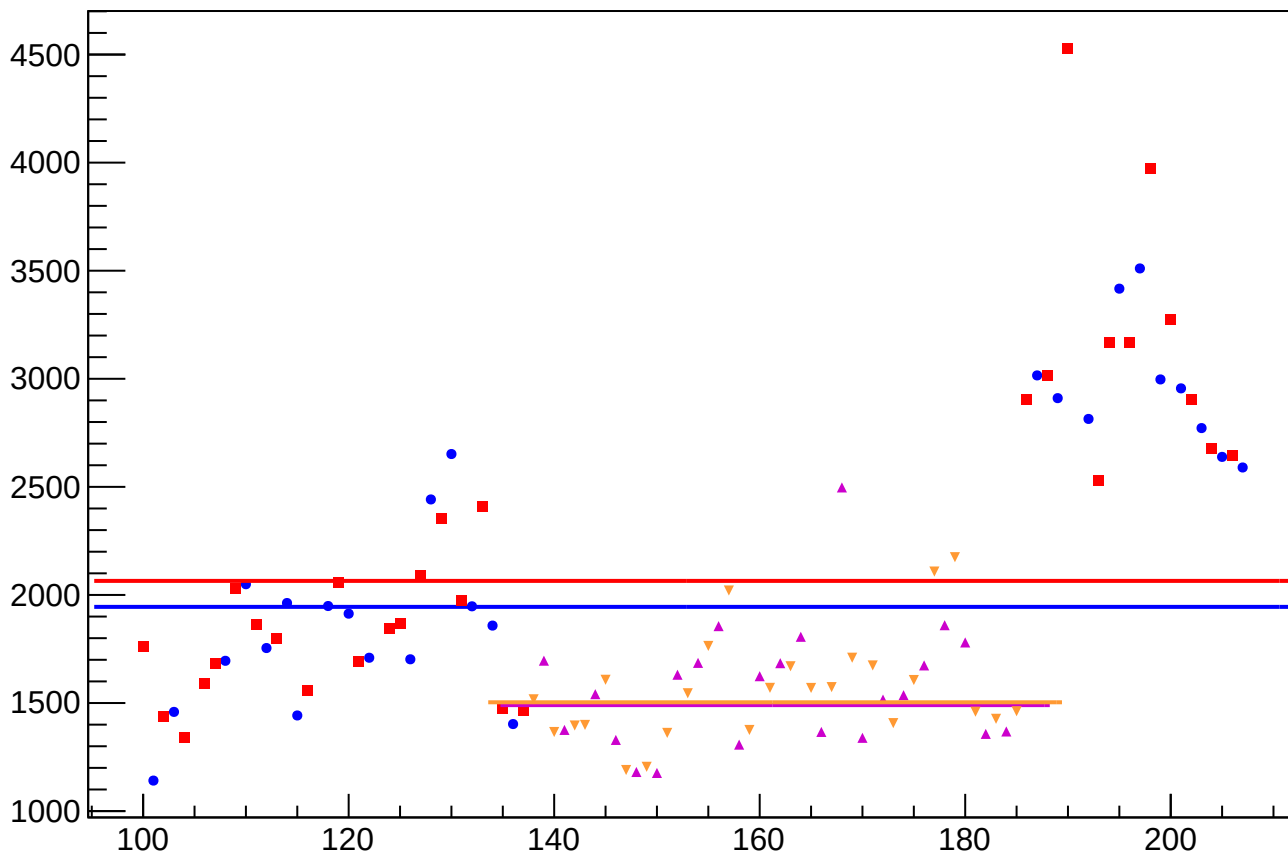
Left In:  $85.329 \pm 353.933$   $\chi^2/\text{NDF}: 18.1/22$

+ sign  $500.425 \pm 290.901$   $\chi^2/\text{NDF}: 55.5/50$

All:  $463.554 \pm 207.484$   $\chi^2/\text{NDF}: 98.7/103$

- sign  $425.376 \pm 296.018$   $\chi^2/\text{NDF}: 43.1/52$

# asym\_usr\_reg\_correction\_rms vs Slug



Right In: 1944.824+/-0.377  $\chi^2/\text{NDF}$ : 3045300.5/25

Left Out: 1503.437+/-0.246  $\chi^2/\text{NDF}$ : 799670.9/24

Right Out: 2065.009+/-0.382  $\chi^2/\text{NDF}$ : 2912594.2/29

Left In: 1490.314+/-0.250  $\chi^2/\text{NDF}$ : 968221.5/22

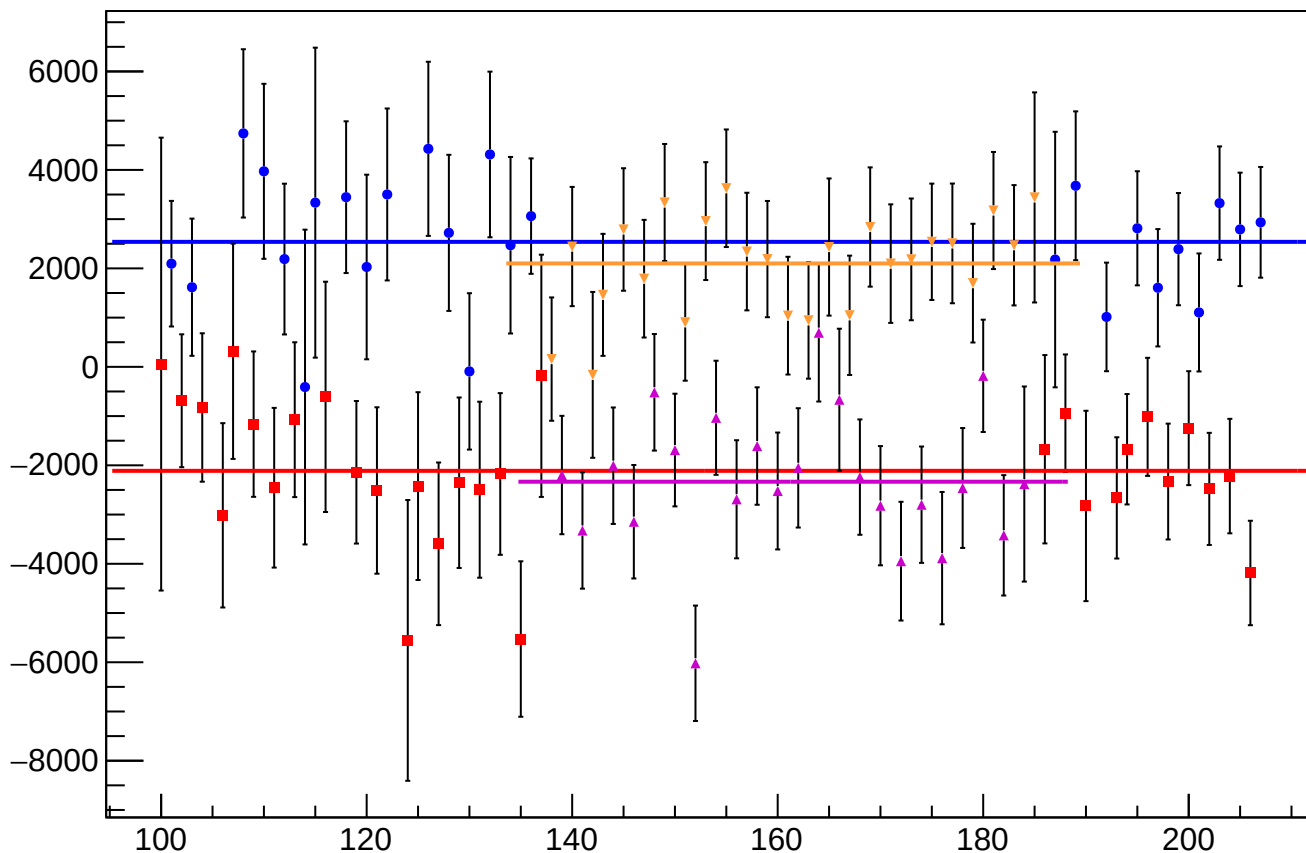
+ sign 1635.015+/-0.206  $\chi^2/\text{NDF}$ : 4808394.0/50

All: 1648.766+/-0.147  $\chi^2/\text{NDF}$ : 10282809.3/102

- sign 1663.005+/-0.209  $\chi^2/\text{NDF}$ : 5465318.7/52



# cor\_asym\_usr\_mean vs Slug



Right In: 2539.016 $\pm$ 281.997  $\chi^2/\text{NDF}$ : 15.0/25

Left Out: 2100.398 $\pm$ 248.306  $\chi^2/\text{NDF}$ : 13.8/24

Right Out: -2111.860 $\pm$ 273.212  $\chi^2/\text{NDF}$ : 19.4/29

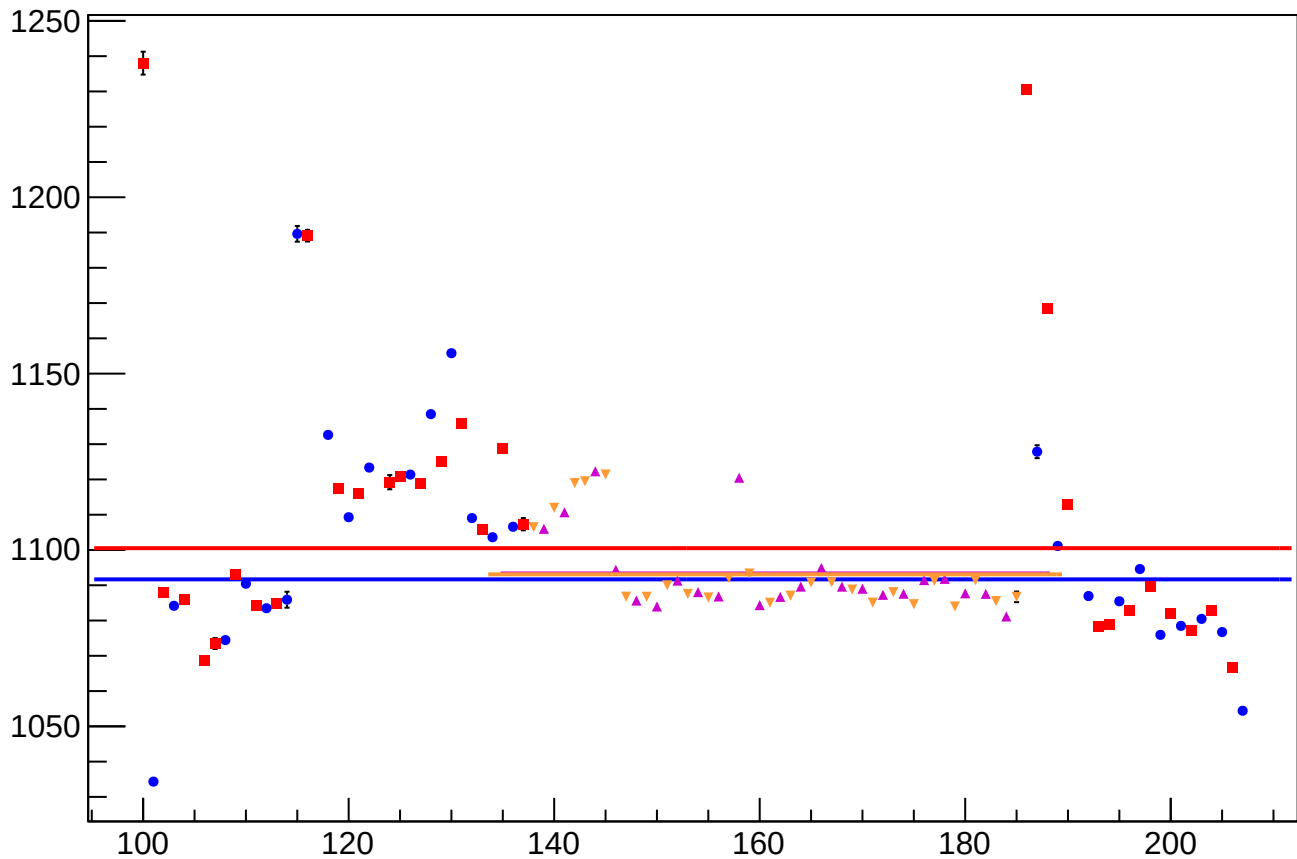
Left In: -2332.954 $\pm$ 255.284  $\chi^2/\text{NDF}$ : 29.5/22

+ sign 2291.953 $\pm$ 186.358  $\chi^2/\text{NDF}$ : 30.2/50

All: 33.105 $\pm$ 131.836  $\chi^2/\text{NDF}$ : 373.6/103

- sign -2229.899 $\pm$ 186.529  $\chi^2/\text{NDF}$ : 49.3/52

# cor\_asym\_usr\_rms vs Slug



Right In: 1091.671 $\pm$ 0.199  $\chi^2$ /NDF: 18665.8/25

Left Out: 1093.102 $\pm$ 0.176  $\chi^2$ /NDF: 3983.2/24

Right Out: 1100.514 $\pm$ 0.193  $\chi^2$ /NDF: 30888.6/29

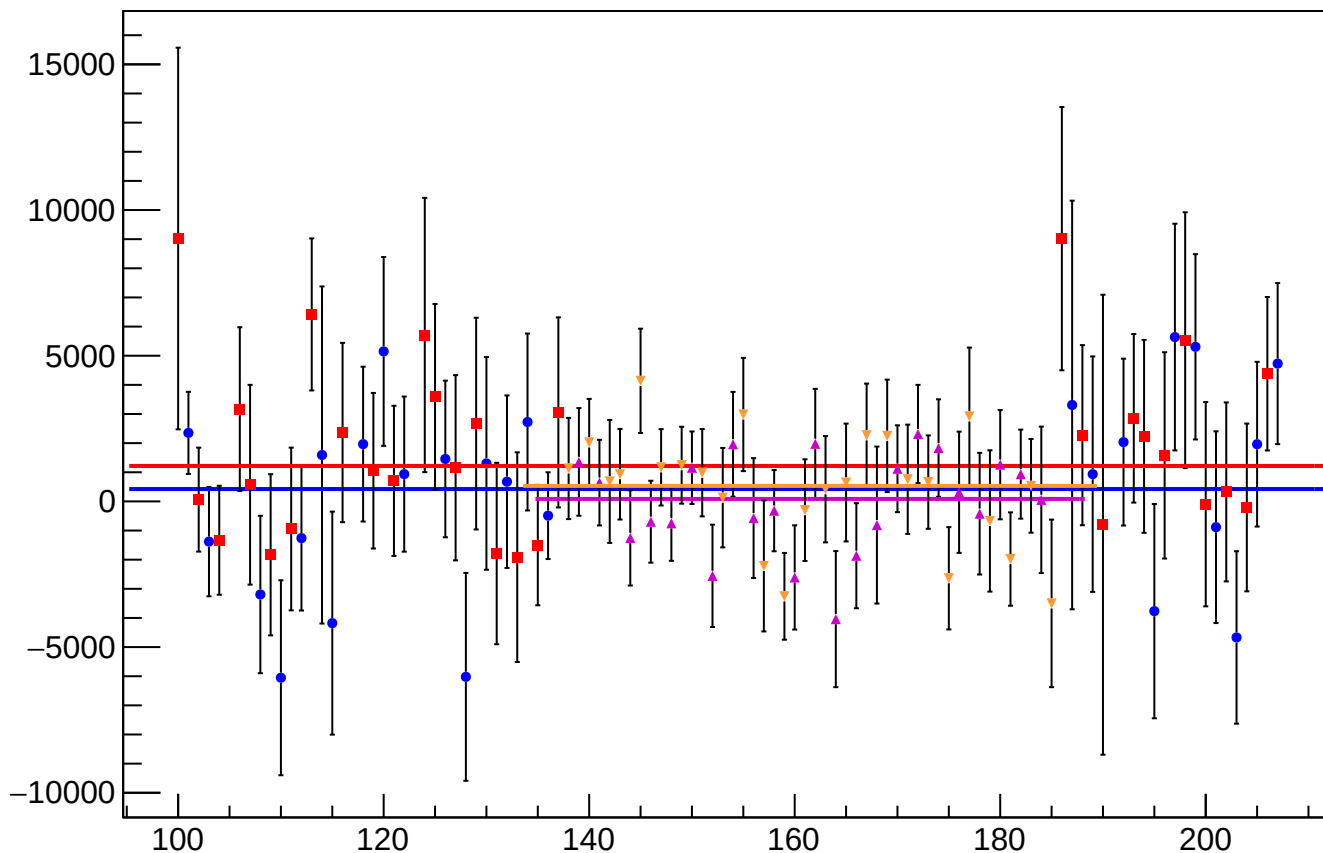
Left In: 1093.338 $\pm$ 0.181  $\chi^2$ /NDF: 3725.7/22

+ sign 1092.477 $\pm$ 0.132  $\chi^2$ /NDF: 22678.0/50

All: 1094.578 $\pm$ 0.093  $\chi^2$ /NDF: 58537.9/103

- sign 1096.683 $\pm$ 0.132  $\chi^2$ /NDF: 35350.9/52

# asym\_usr\_cor\_correction\_mean vs Slug



Right In:  $423.766 \pm 532.799$   $\chi^2/\text{NDF}: 29.0/25$

Left Out:  $532.982 \pm 347.223$   $\chi^2/\text{NDF}: 26.4/24$

Right Out:  $1216.966 \pm 540.011$   $\chi^2/\text{NDF}: 22.0/29$

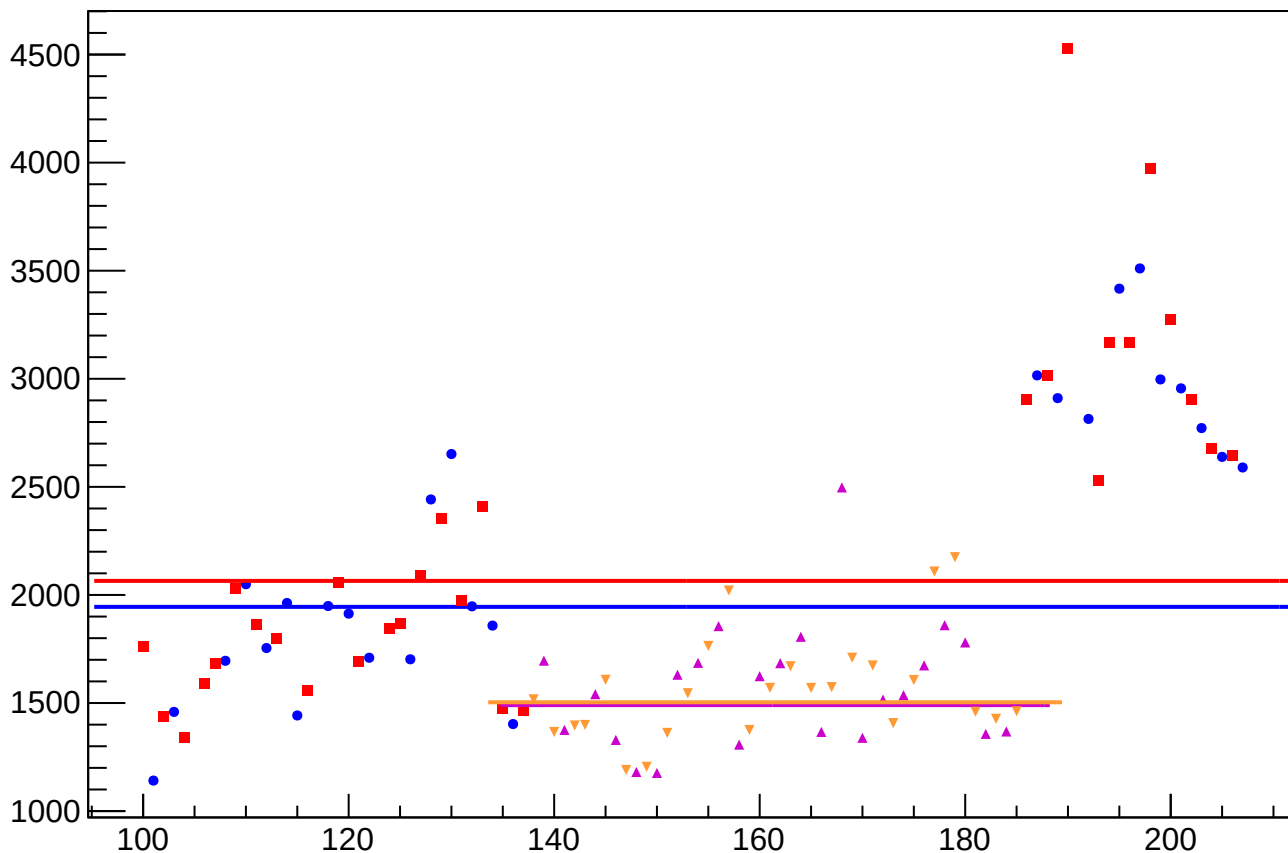
Left In:  $85.329 \pm 353.933$   $\chi^2/\text{NDF}: 18.1/22$

+ sign  $500.425 \pm 290.901$   $\chi^2/\text{NDF}: 55.5/50$

All:  $463.554 \pm 207.484$   $\chi^2/\text{NDF}: 98.7/103$

- sign  $425.376 \pm 296.018$   $\chi^2/\text{NDF}: 43.1/52$

# asym\_usr\_cor\_correction\_rms vs Slug



Right In: 1944.824+/-0.377  $\chi^2/\text{NDF}$ : 3045300.5/25

Left Out: 1503.437+/-0.246  $\chi^2/\text{NDF}$ : 799670.9/24

Right Out: 2065.009+/-0.382  $\chi^2/\text{NDF}$ : 2912594.2/29

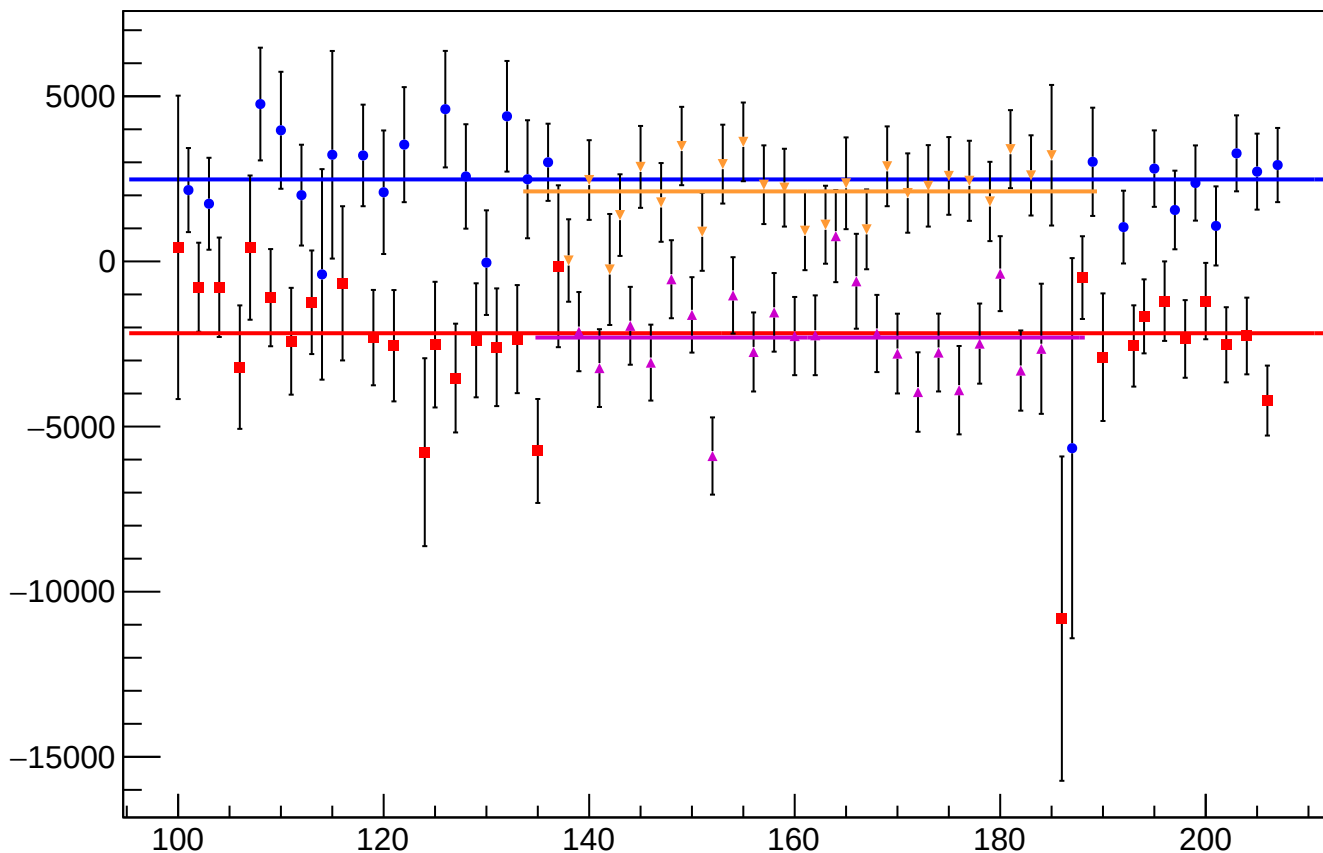
Left In: 1490.314+/-0.250  $\chi^2/\text{NDF}$ : 968221.5/22

+ sign 1635.015+/-0.206  $\chi^2/\text{NDF}$ : 4808394.0/50

All: 1648.766+/-0.147  $\chi^2/\text{NDF}$ : 10282809.3/100

- sign 1663.005+/-0.209  $\chi^2/\text{NDF}$ : 5465318.7/52

# overload\_cor\_asym\_usr\_mean vs Slug



Right In: 2482.386 $\pm$ 283.575  $\chi^2$ /NDF: 16.5/25

Left Out: 2119.973 $\pm$ 247.544  $\chi^2$ /NDF: 15.1/24

Right Out: -2174.309 $\pm$ 275.913  $\chi^2$ /NDF: 24.1/29

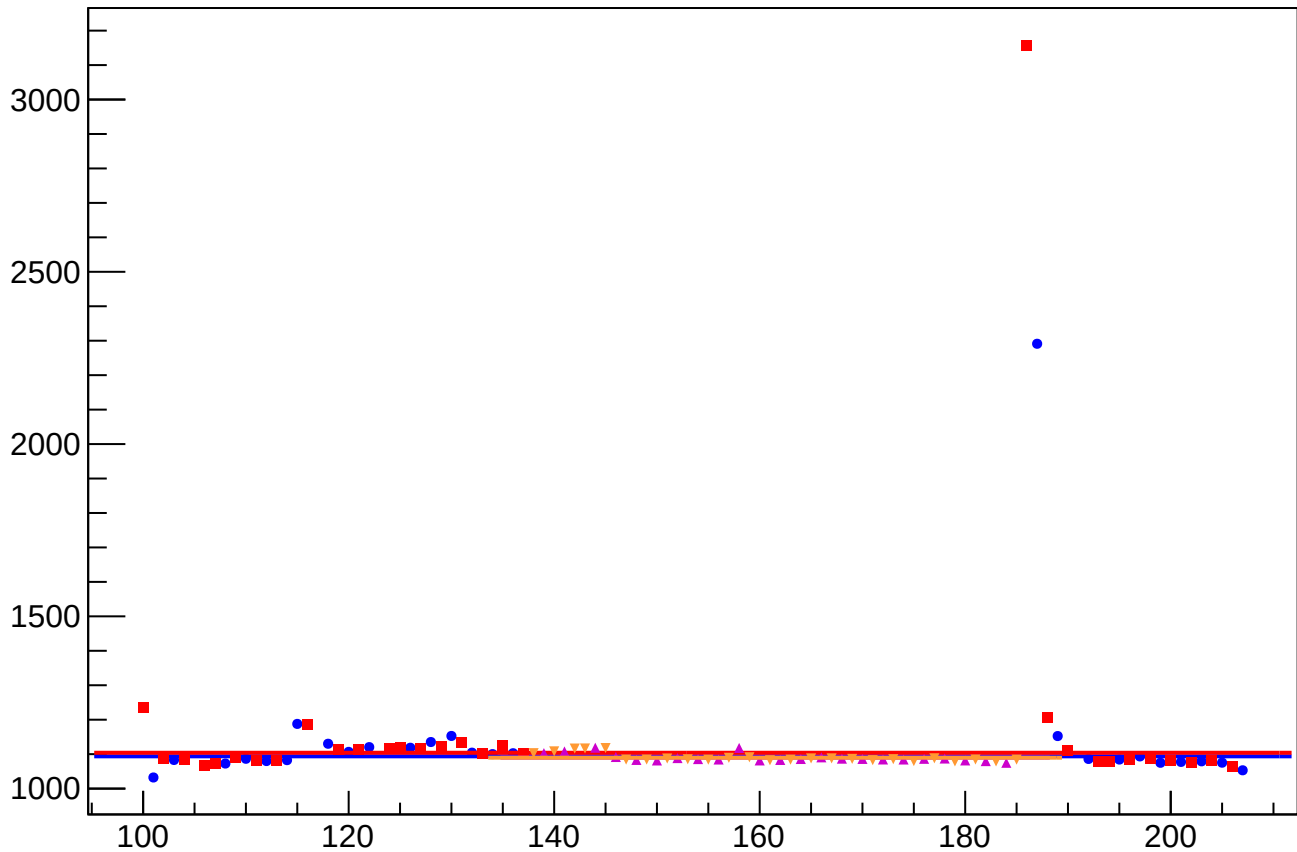
Left In: -2305.411 $\pm$ 254.497  $\chi^2$ /NDF: 28.5/22

+ sign 2276.706 $\pm$ 186.486  $\chi^2$ /NDF: 32.5/50

All: 22.854 $\pm$ 132.072  $\chi^2$ /NDF: 378.3/103

- sign -2245.145 $\pm$ 187.070  $\chi^2$ /NDF: 52.7/52

# overload\_cor\_asym\_usr\_rms vs Slug



Right In: 1093.713+/-0.201  $\chi^2/\text{NDF}$ : 107299.0/25

Left Out: 1089.744+/-0.175  $\chi^2/\text{NDF}$ : 4057.6/24

Right Out: 1104.026+/-0.195  $\chi^2/\text{NDF}$ : 379152.2/29

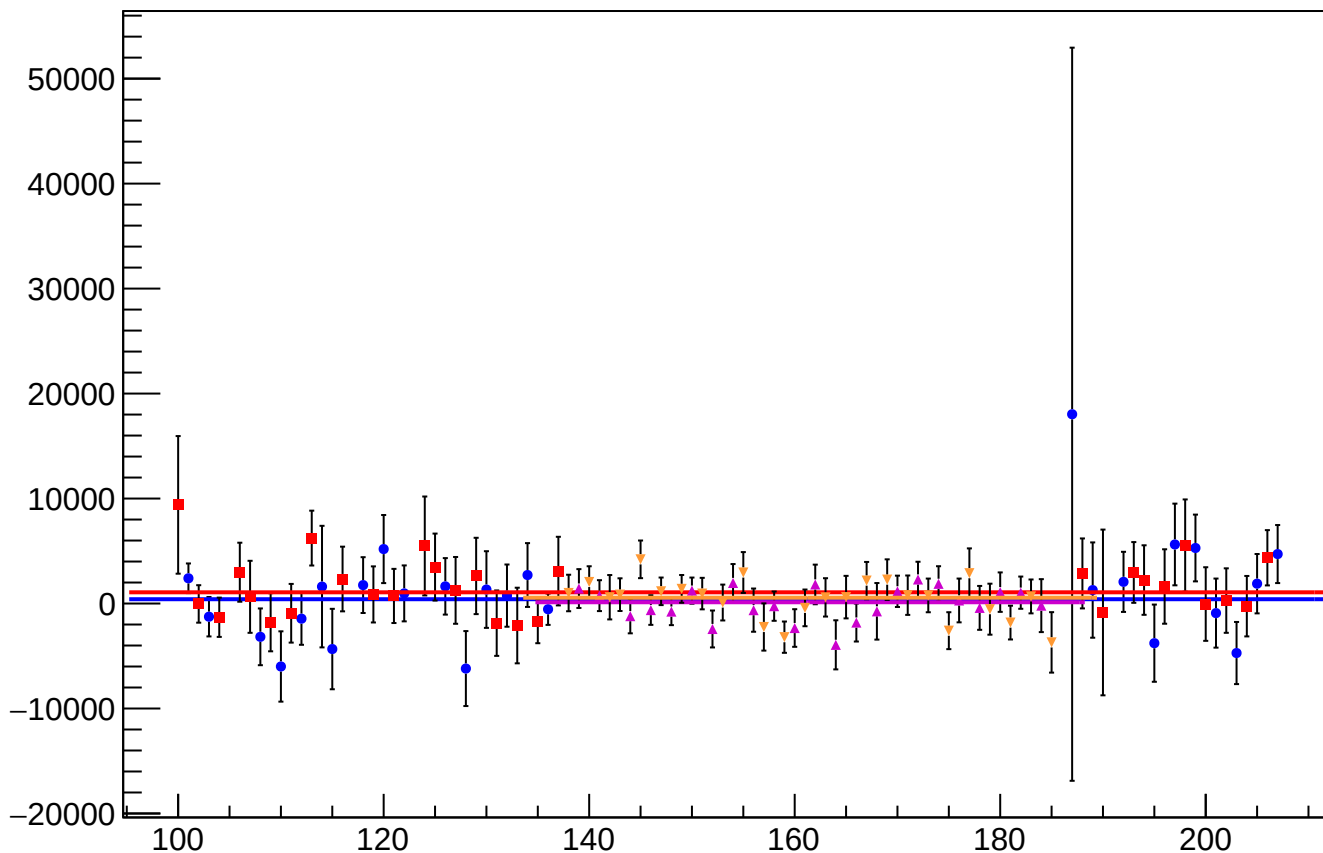
Left In: 1089.964+/-0.180  $\chi^2/\text{NDF}$ : 3896.0/22

+ sign 1091.460+/-0.132  $\chi^2/\text{NDF}$ : 111579.0/50

All: 1093.937+/-0.093  $\chi^2/\text{NDF}$ : 498141.6/103

- sign 1096.428+/-0.132  $\chi^2/\text{NDF}$ : 385855.0/52

asym\_usr\_overload\_cor\_correction\_mean vs Slug



Right In: 410.204 $\pm$ 535.779  $\chi^2$ /NDF: 29.4/25

Left Out: 553.759 $\pm$ 347.813  $\chi^2$ /NDF: 26.1/24

Right Out: 1068.686 $\pm$ 545.517  $\chi^2$ /NDF: 19.1/28

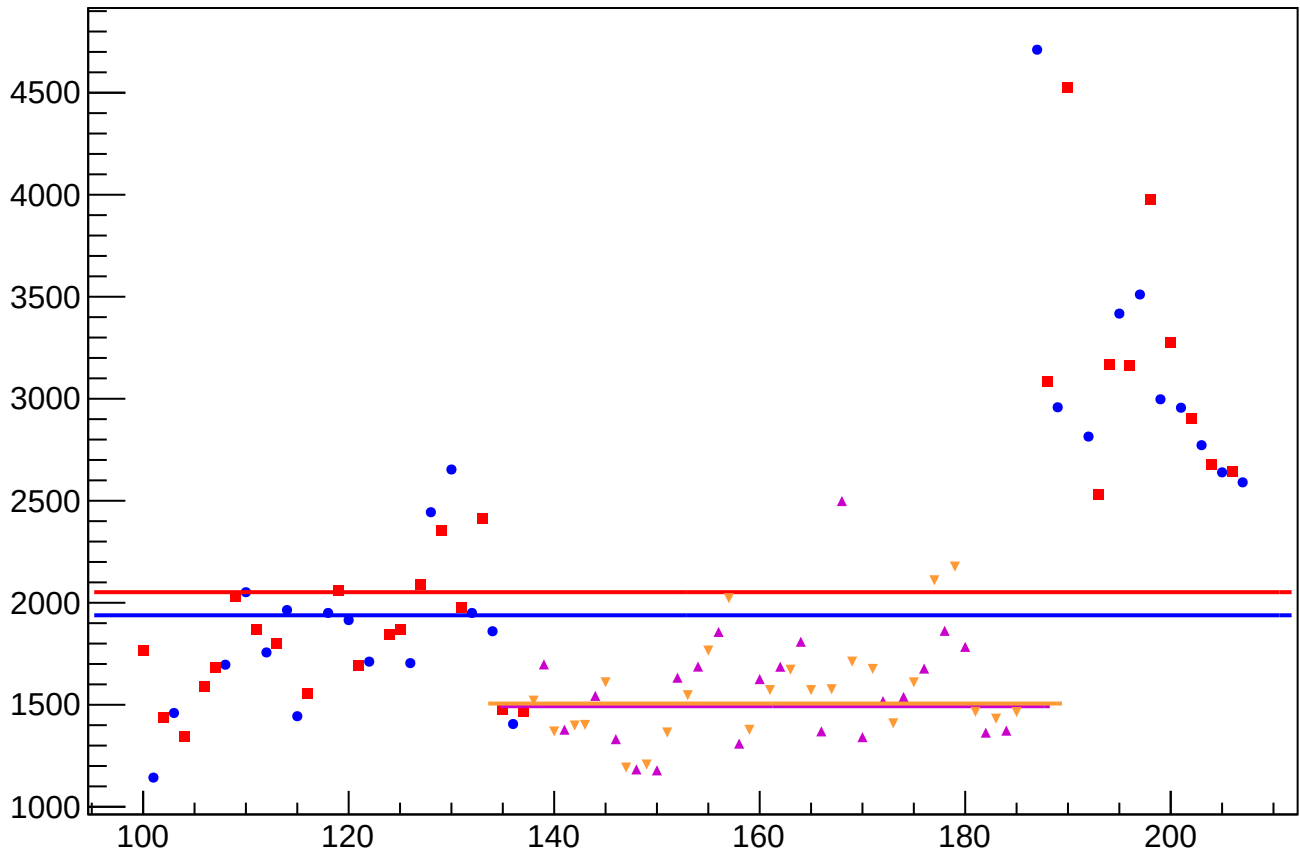
Left In: 121.420 $\pm$ 354.540  $\chi^2$ /NDF: 17.1/22

+ sign 511.198 $\pm$ 291.732  $\chi^2$ /NDF: 55.6/50

All: 457.979 $\pm$ 208.217  $\chi^2$ /NDF: 94.0/102

- sign 402.719 $\pm$ 297.273  $\chi^2$ /NDF: 38.4/51

# asym\_usr\_overload\_cor\_correction\_rms vs Slug



Right In: 1938.661+/-0.379  $\chi^2/\text{NDF}$ : 2986513.7/25

Left Out: 1506.103+/-0.246  $\chi^2/\text{NDF}$ : 796401.8/24

Right Out: 2051.976+/-0.386  $\chi^2/\text{NDF}$ : 2829809.8/28

Left In: 1492.976+/-0.251  $\chi^2/\text{NDF}$ : 964358.0/22

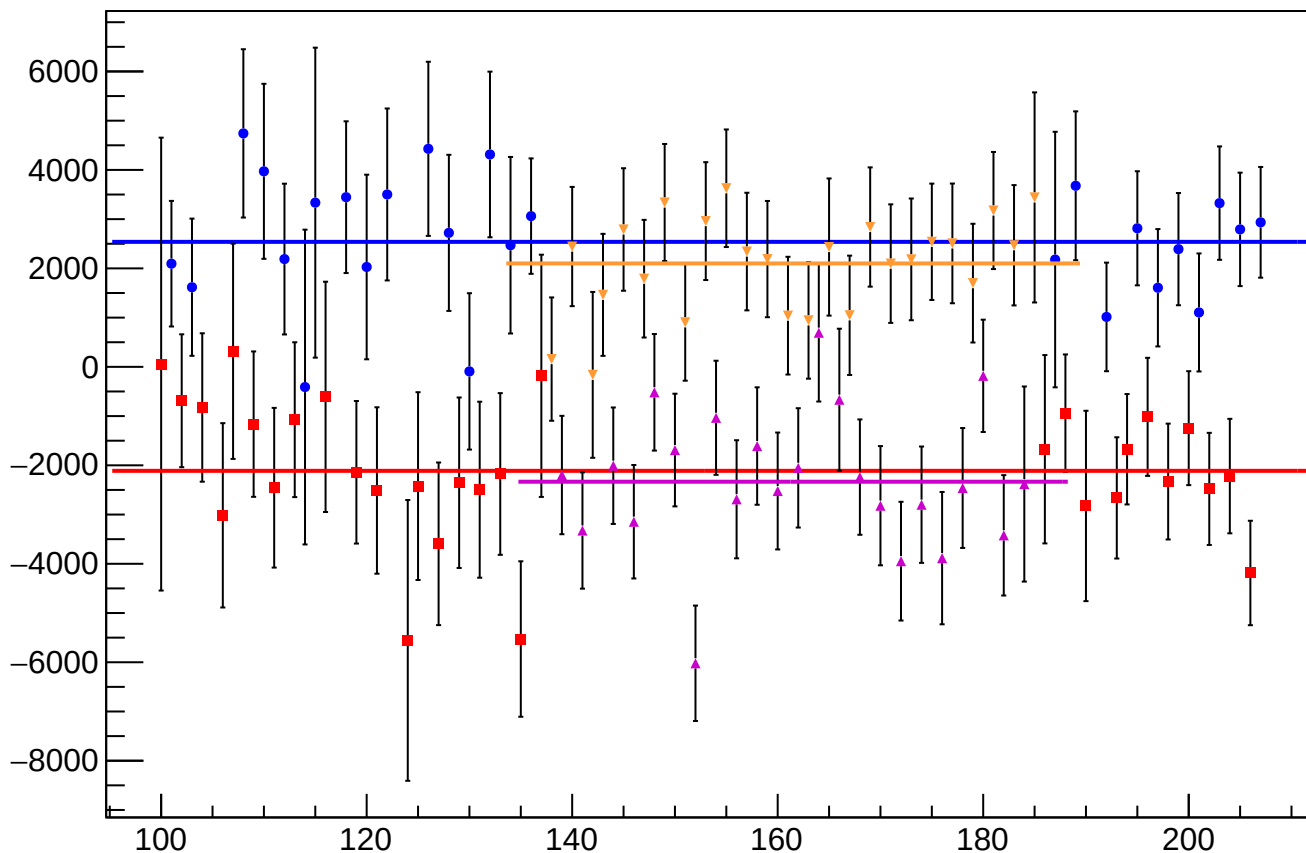
+ sign 1634.348+/-0.206  $\chi^2/\text{NDF}$ : 4700028.1/50

All: 1646.430+/-0.147  $\chi^2/\text{NDF}$ : 9977636.2/10

- sign 1658.976+/-0.210  $\chi^2/\text{NDF}$ : 5270615.3/51



# eigen\_cor\_asym\_usr\_mean vs Slug



Right In: 2539.016 $\pm$ 281.997  $\chi^2$ /NDF: 15.0/25

Left Out: 2100.398 $\pm$ 248.306  $\chi^2$ /NDF:13.8/24

Right Out: -2111.860 $\pm$ 273.212  $\chi^2$ /NDF: 19.4/29

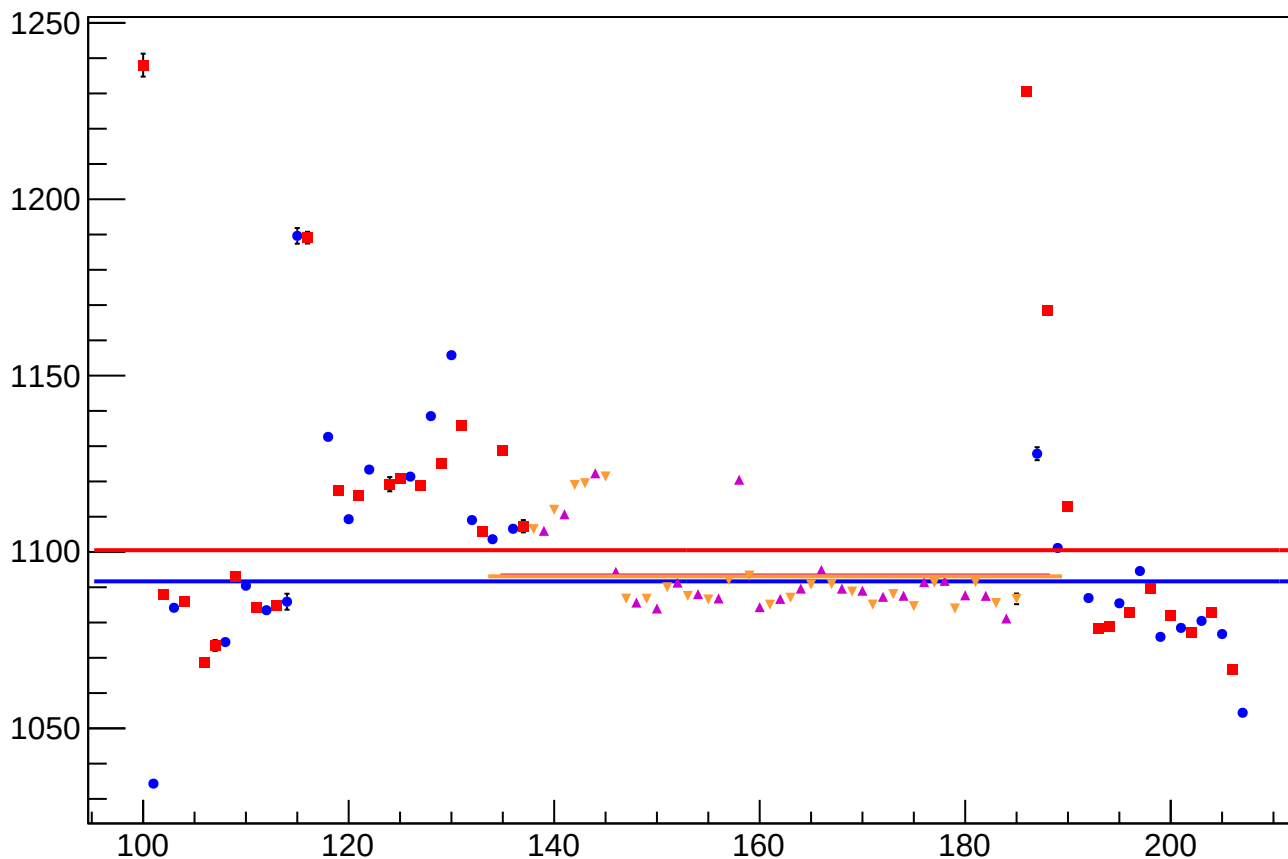
Left In: -2332.954 $\pm$ 255.284  $\chi^2$ /NDF:29.5/22

+ sign 2291.953 $\pm$ 186.358  $\chi^2$ /NDF: 30.2/50

All: 33.105 $\pm$ 131.836  $\chi^2$ /NDF: 373.6/103

- sign -2229.899 $\pm$ 186.529  $\chi^2$ /NDF: 49.3/52

# eigen\_cor\_asym\_usr\_rms vs Slug



Right In: 1091.671+/-0.199  $\chi^2/\text{NDF}$ : 18665.8/25

Left Out: 1093.102+/-0.176  $\chi^2/\text{NDF}$ : 3983.2/24

Right Out: 1100.514+/-0.193  $\chi^2/\text{NDF}$ : 30888.6/29

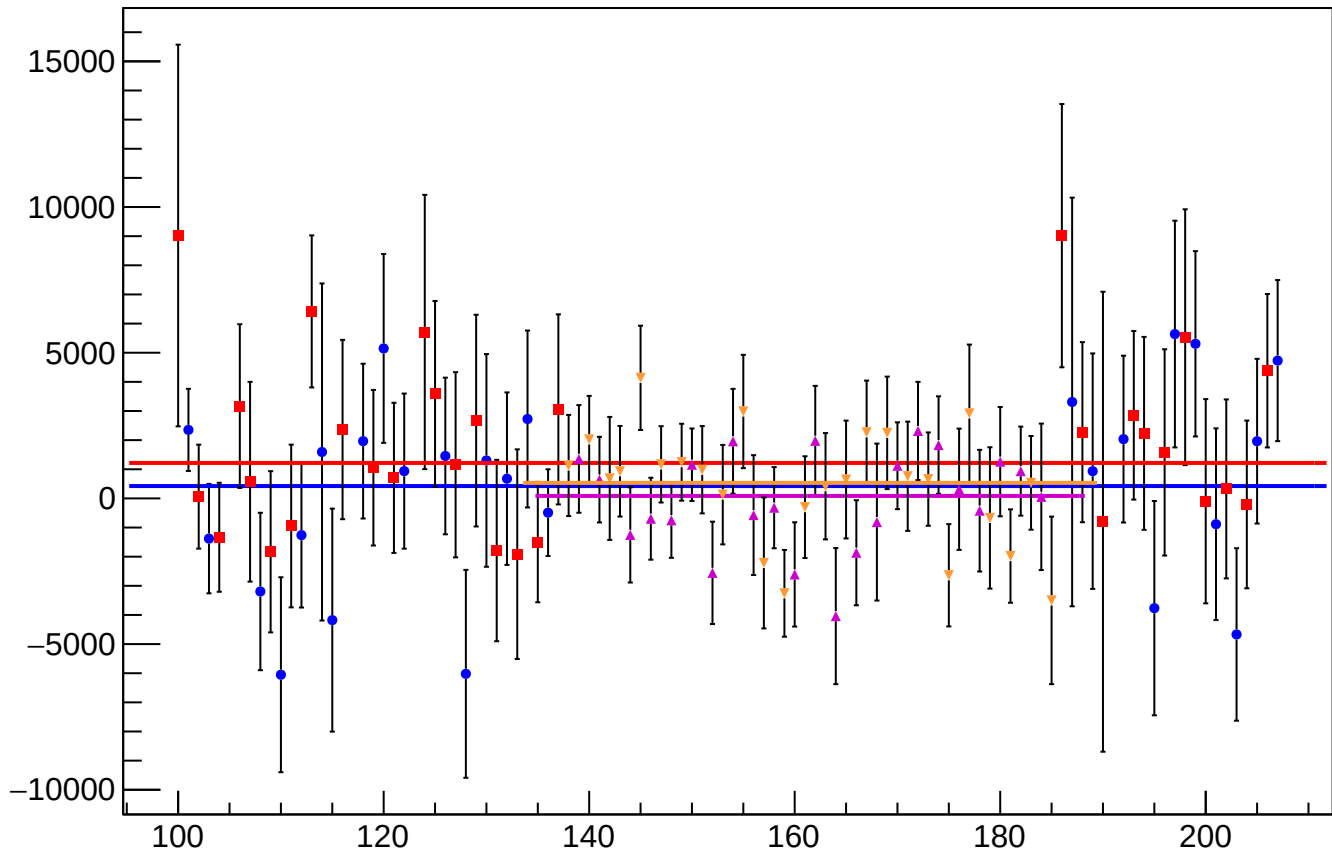
Left In: 1093.338+/-0.181  $\chi^2/\text{NDF}$ : 3725.7/22

+ sign 1092.477+/-0.132  $\chi^2/\text{NDF}$ : 22678.0/50

All: 1094.578+/-0.093  $\chi^2/\text{NDF}$ : 58537.9/103

- sign 1096.683+/-0.132  $\chi^2/\text{NDF}$ : 35350.9/52

# asym\_usr\_eigen\_cor\_correction\_mean vs Slug



Right In: 423.766 $\pm$ 532.799  $\chi^2/\text{NDF}$ : 29.0/25

Left Out: 532.982 $\pm$ 347.223  $\chi^2/\text{NDF}$ : 26.4/24

Right Out: 1216.966 $\pm$ 540.011  $\chi^2/\text{NDF}$ : 22.0/29

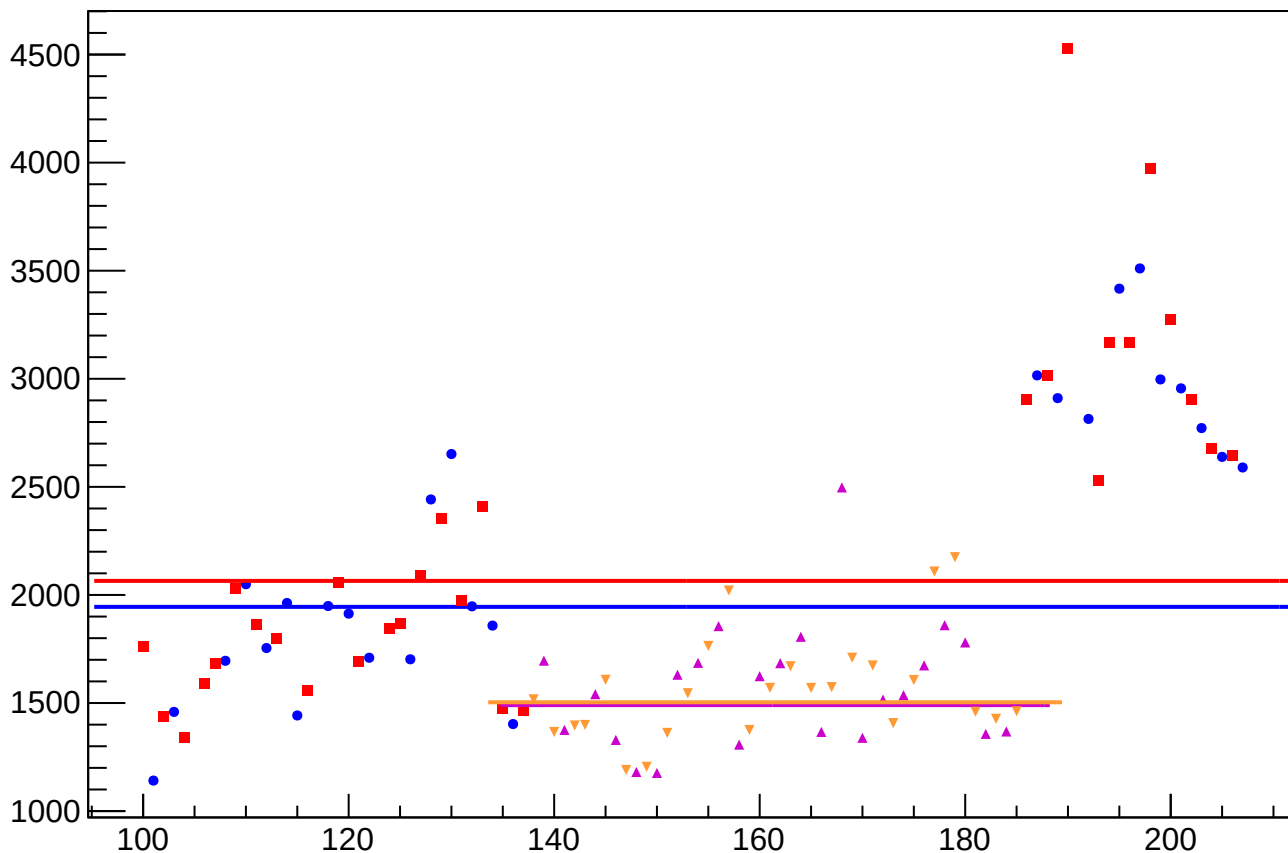
Left In: 85.329 $\pm$ 353.933  $\chi^2/\text{NDF}$ : 18.1/22

+ sign 500.425 $\pm$ 290.901  $\chi^2/\text{NDF}$ : 55.5/50

All: 463.554 $\pm$ 207.484  $\chi^2/\text{NDF}$ : 98.7/103

- sign 425.376 $\pm$ 296.018  $\chi^2/\text{NDF}$ : 43.1/52

# asym\_usr\_eigen\_cor\_correction\_rms vs Slug



Right In: 1944.824+/-0.377  $\chi^2/\text{NDF}$ : 3045300.5/25

Left Out: 1503.437+/-0.246  $\chi^2/\text{NDF}$ : 799670.9/24

Right Out: 2065.009+/-0.382  $\chi^2/\text{NDF}$ : 2912594.2/29

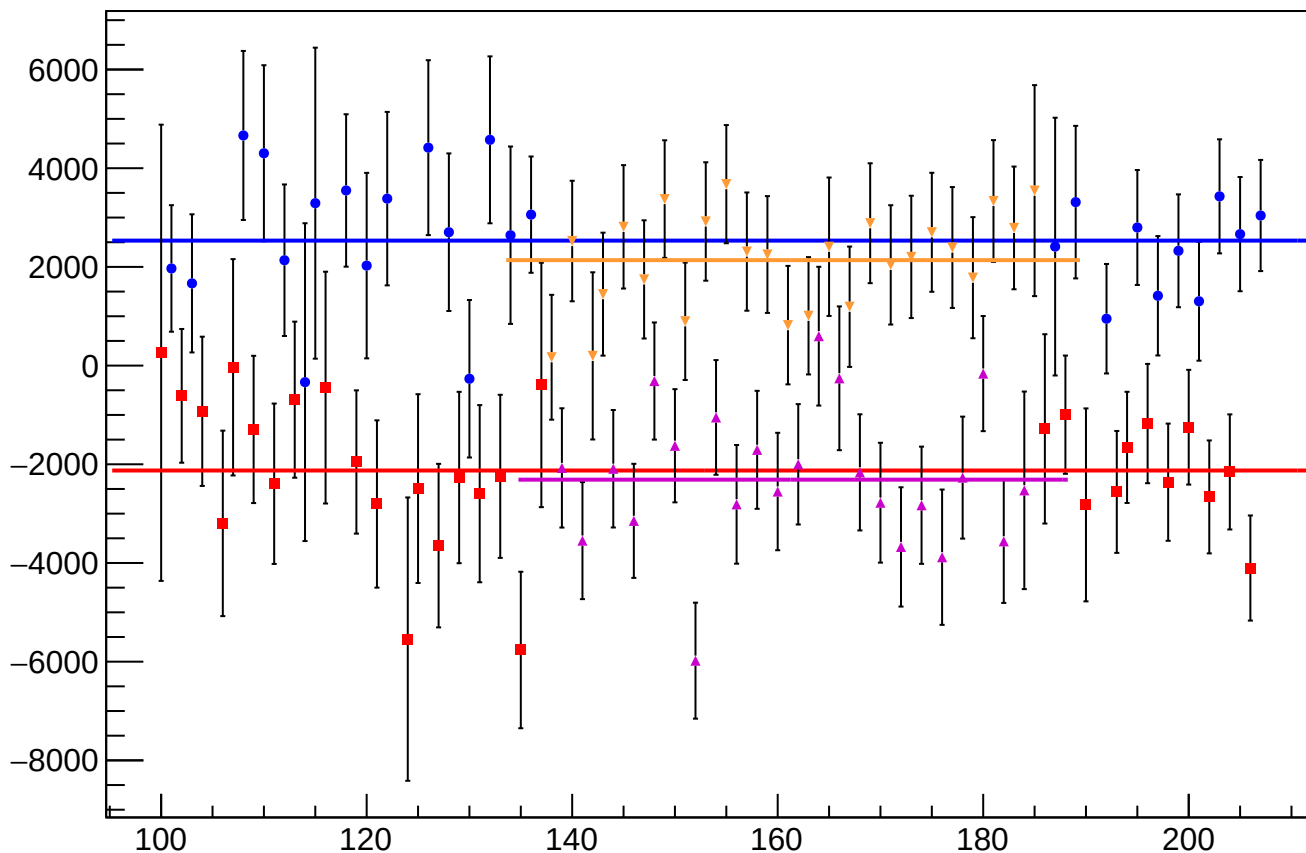
Left In: 1490.314+/-0.250  $\chi^2/\text{NDF}$ : 968221.5/22

+ sign 1635.015+/-0.206  $\chi^2/\text{NDF}$ : 4808394.0/50

All: 1648.766+/-0.147  $\chi^2/\text{NDF}$ : 10282809.3/102

- sign 1663.005+/-0.209  $\chi^2/\text{NDF}$ : 5465318.7/52

# dit\_asym\_usr\_mean vs Slug



Right In:  $2532.731 \pm 283.528$   $\chi^2/\text{NDF}: 15.7/25$

Left Out:  $2137.184 \pm 250.195$   $\chi^2/\text{NDF}: 13.9/24$

Right Out:  $-2126.027 \pm 274.554$   $\chi^2/\text{NDF}: 19.8/29$

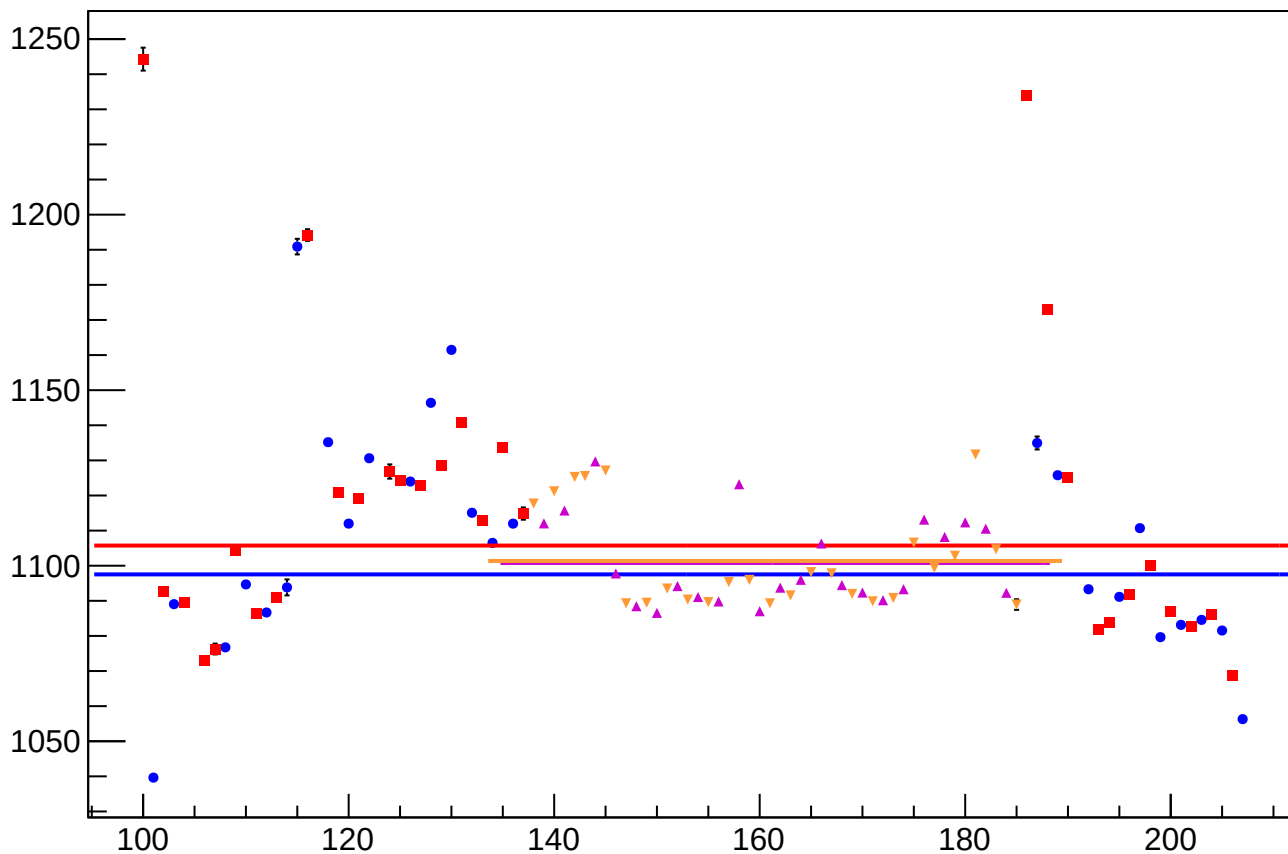
Left In:  $-2311.761 \pm 257.036$   $\chi^2/\text{NDF}: 29.9/22$

+ sign  $2310.350 \pm 187.598$   $\chi^2/\text{NDF}: 30.8/50$

All:  $43.169 \pm 132.666$   $\chi^2/\text{NDF}: 372.9/103$

- sign  $-2225.008 \pm 187.639$   $\chi^2/\text{NDF}: 49.9/52$

# dit\_asym\_usr\_rms vs Slug



Right In: 1097.527+/-0.200  $\chi^2/\text{NDF}$ : 19912.3/25

Left Out: 1101.353+/-0.177  $\chi^2/\text{NDF}$ : 5950.6/24

Right Out: 1105.740+/-0.194  $\chi^2/\text{NDF}$ : 30709.4/29

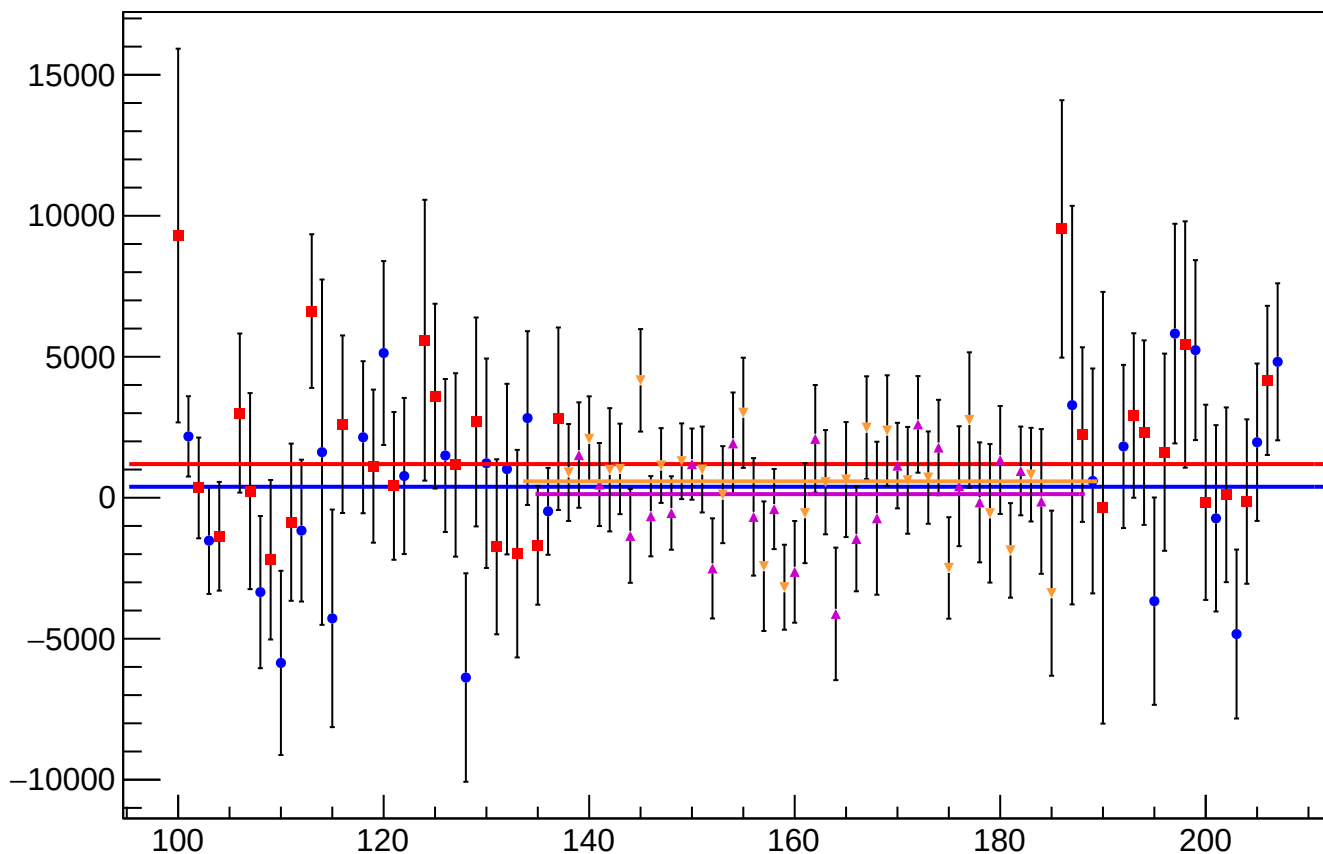
Left In: 1100.792+/-0.182  $\chi^2/\text{NDF}$ : 4641.7/22

+ sign 1099.678+/-0.133  $\chi^2/\text{NDF}$ : 26067.7/50

All: 1101.391+/-0.094  $\chi^2/\text{NDF}$ : 62098.3/103

- sign 1103.104+/-0.133  $\chi^2/\text{NDF}$ : 35697.2/52

# asym\_usr\_dit\_correction\_mean vs Slug



Right In: 389.318 $\pm$ 539.488  $\chi^2$ /NDF: 29.1/25

Left Out: 581.427 $\pm$ 353.389  $\chi^2$ /NDF: 25.4/24

Right Out: 1194.398 $\pm$ 546.718  $\chi^2$ /NDF: 22.1/29

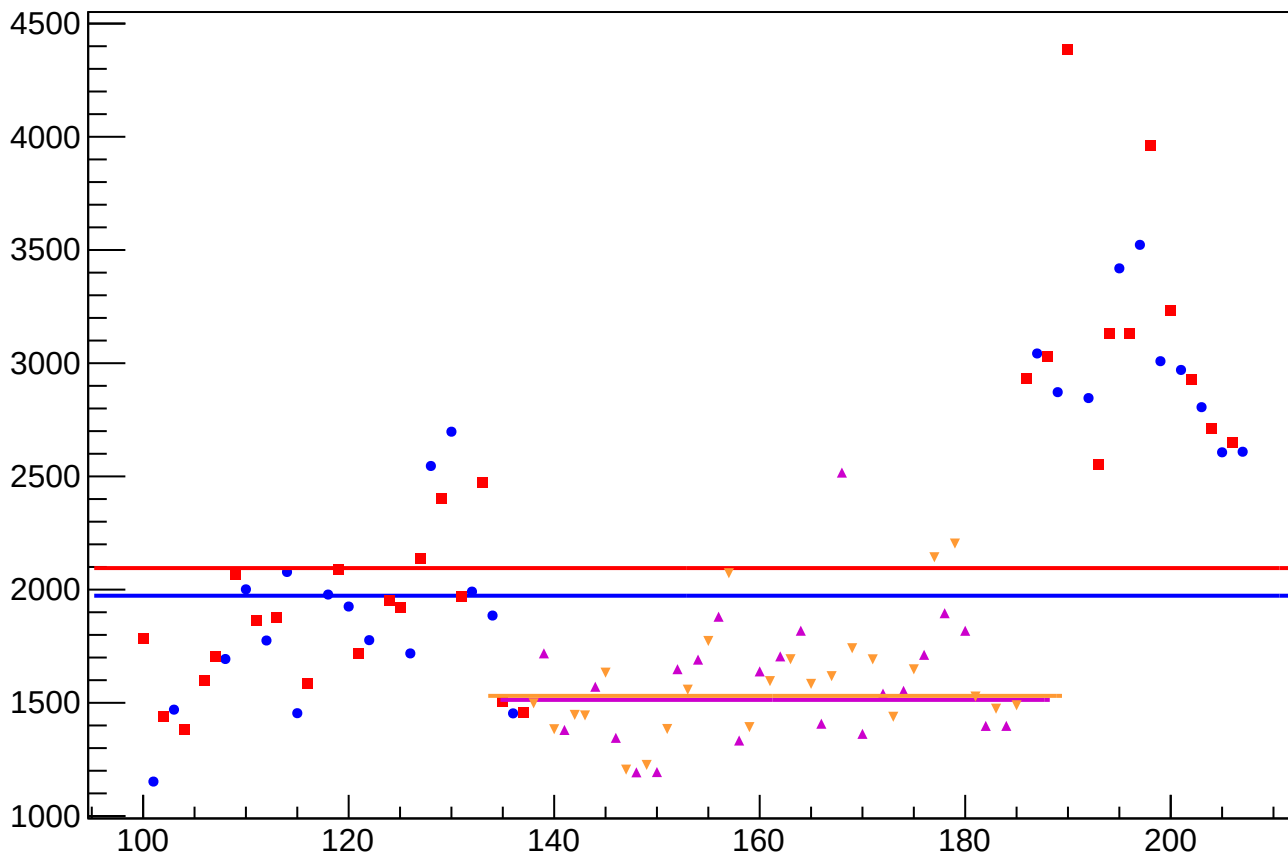
Left In: 128.769 $\pm$ 359.128  $\chi^2$ /NDF: 17.9/22

+ sign 523.746 $\pm$ 295.613  $\chi^2$ /NDF: 54.5/50

All: 487.426 $\pm$ 210.620  $\chi^2$ /NDF: 97.2/103

- sign 449.980 $\pm$ 300.162  $\chi^2$ /NDF: 42.6/52

# asym\_usr\_dit\_correction\_rms vs Slug



Right In: 1973.051 $\pm$ 0.381  $\chi^2$ /NDF: 2968500.7/25

Left Out: 1530.764 $\pm$ 0.250  $\chi^2$ /NDF: 795634.5/24

Right Out: 2095.111 $\pm$ 0.387  $\chi^2$ /NDF: 2792090.9/29

Left In: 1512.947 $\pm$ 0.254  $\chi^2$ /NDF: 957059.5/22

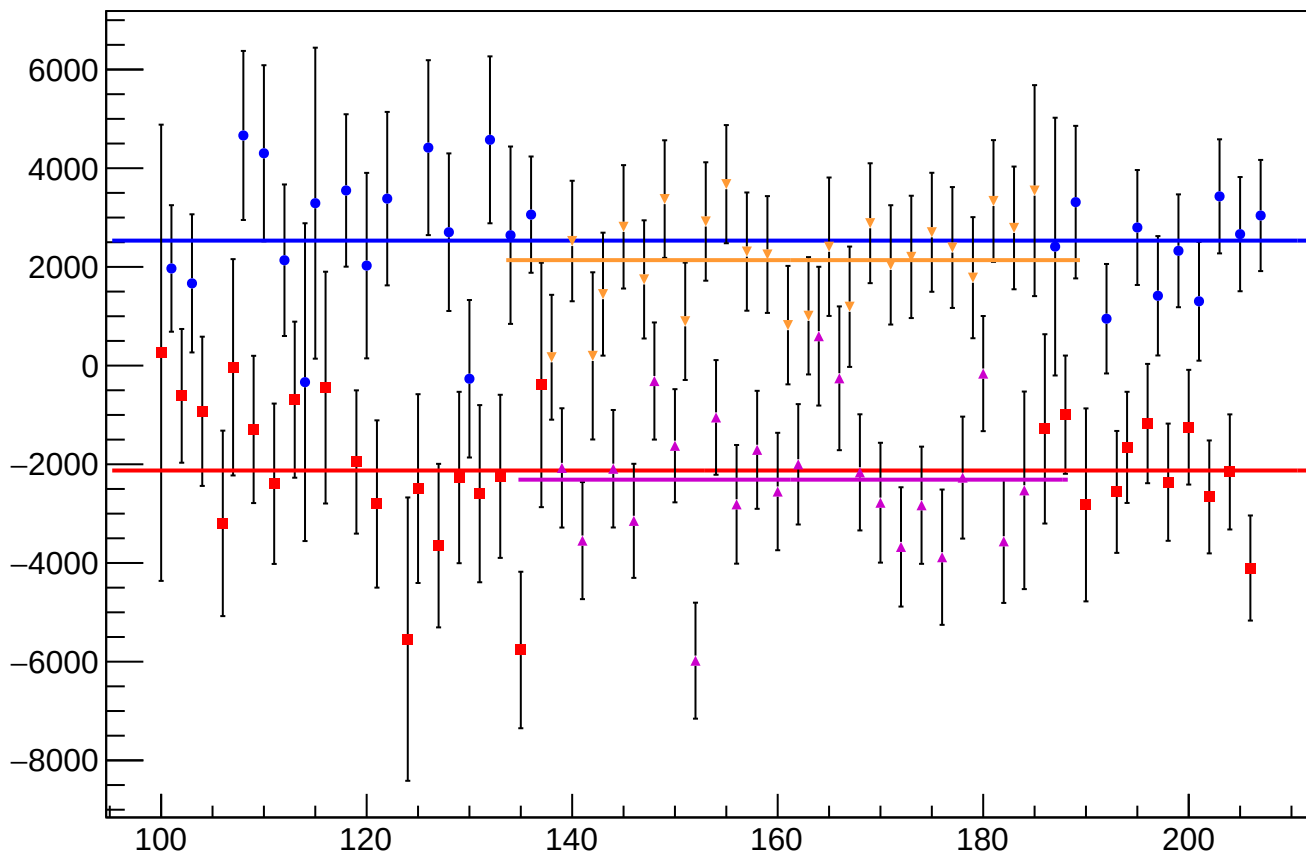
+ sign 1663.561 $\pm$ 0.209  $\chi^2$ /NDF: 4704760.5/50

All: 1675.805 $\pm$ 0.149  $\chi^2$ /NDF: 10045061.0/100

- sign 1688.428 $\pm$ 0.212  $\chi^2$ /NDF: 5333332.7/52



# eigen\_dit\_asym\_usr\_mean vs Slug



Right In: 2532.731+/-283.528  $\chi^2/\text{NDF}$ : 15.7/25

Left Out: 2137.182+/-250.195  $\chi^2/\text{NDF}$ : 13.9/24

Right Out: -2126.025+/-274.554  $\chi^2/\text{NDF}$ : 19.8/29

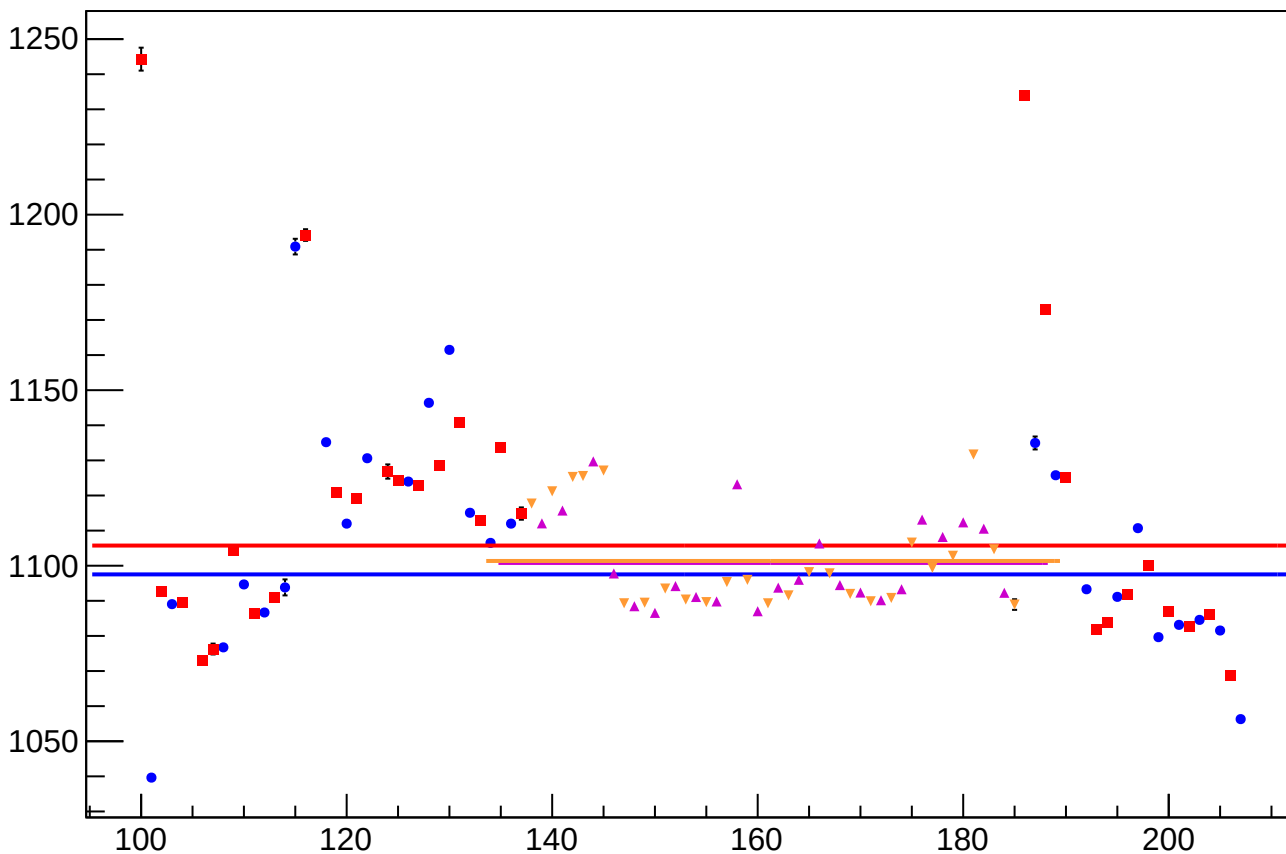
Left In: -2311.761+/-257.036  $\chi^2/\text{NDF}$ : 29.9/22

+ sign 2310.349+/-187.598  $\chi^2/\text{NDF}$ : 30.8/50

All: 43.169+/-132.666  $\chi^2/\text{NDF}$ : 372.9/103

- sign -2225.007+/-187.639  $\chi^2/\text{NDF}$ : 49.9/52

# eigen\_dit\_asym\_usr\_rms vs Slug



Right In: 1097.527+/-0.200  $\chi^2/\text{NDF}$ : 19912.1/25

Left Out: 1101.353+/-0.177  $\chi^2/\text{NDF}$ : 5950.6/24

Right Out: 1105.740+/-0.194  $\chi^2/\text{NDF}$ : 30709.3/29

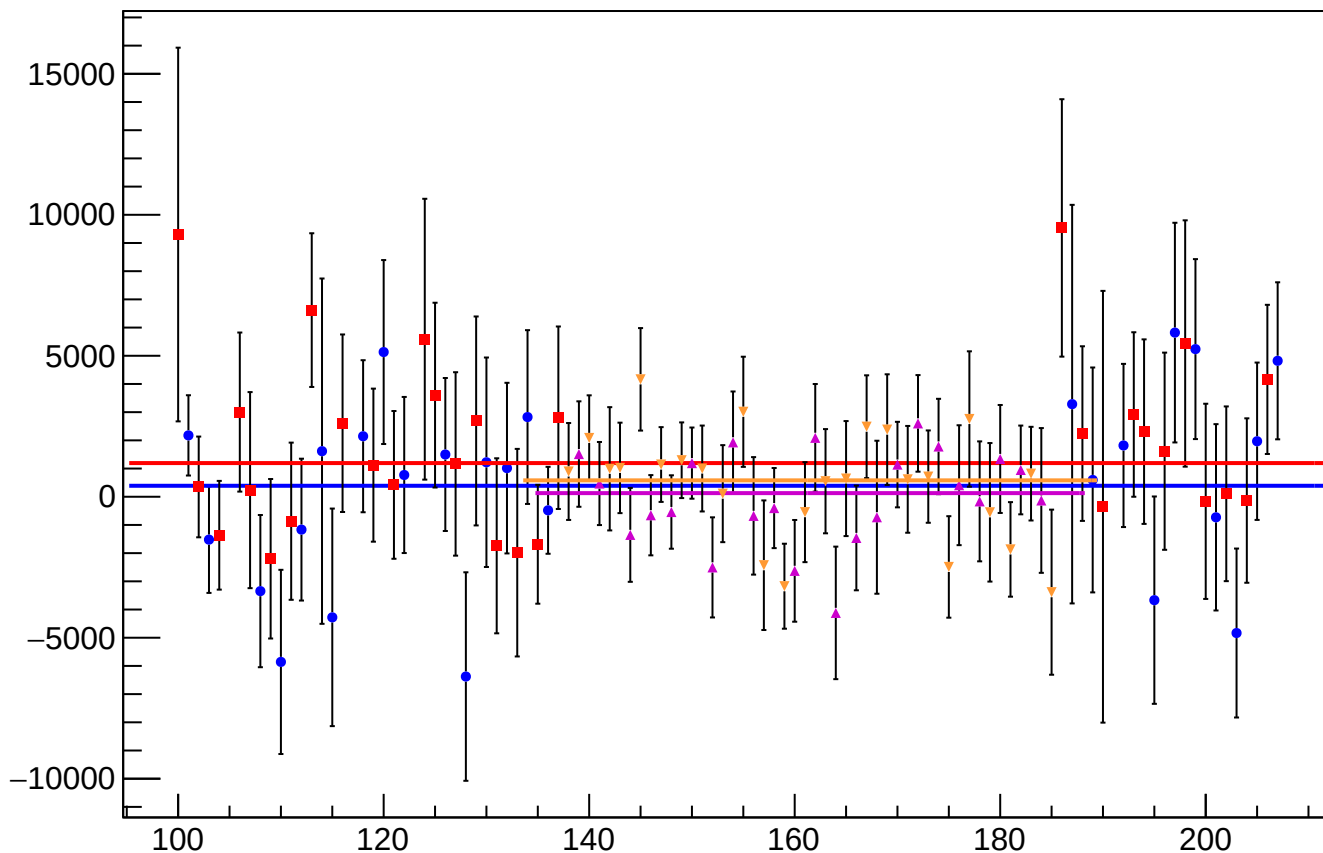
Left In: 1100.792+/-0.182  $\chi^2/\text{NDF}$ : 4641.7/22

+ sign 1099.678+/-0.133  $\chi^2/\text{NDF}$ : 26067.5/50

All: 1101.391+/-0.094  $\chi^2/\text{NDF}$ : 62098.0/103

- sign 1103.104+/-0.133  $\chi^2/\text{NDF}$ : 35697.2/52

# asym\_usr\_eigen\_dit\_correction\_mean vs Slug



Right In: 389.314 $\pm$ 539.488  $\chi^2$ /NDF: 29.1/25

Left Out: 581.426 $\pm$ 353.390  $\chi^2$ /NDF: 25.4/24

Right Out: 1194.399 $\pm$ 546.718  $\chi^2$ /NDF: 22.1/29

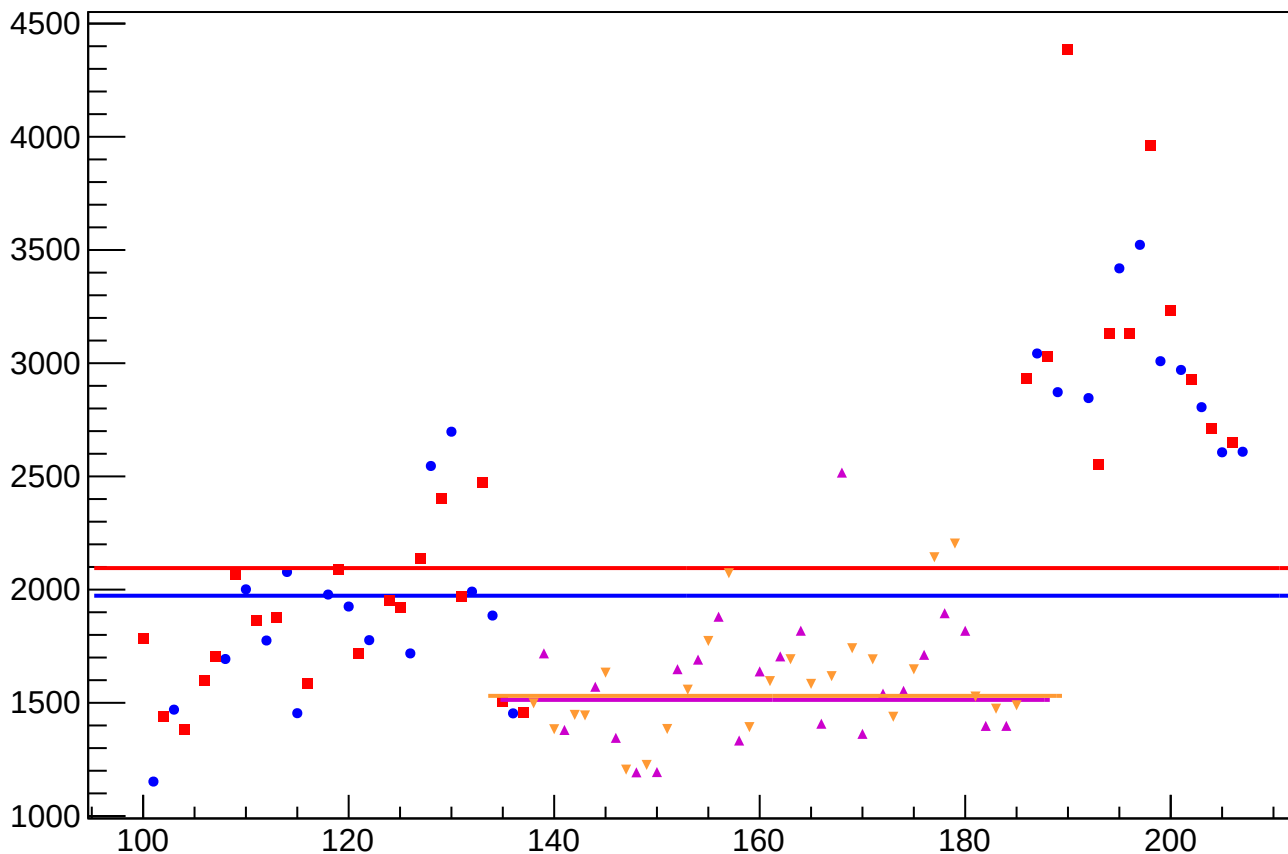
Left In: 128.769 $\pm$ 359.129  $\chi^2$ /NDF: 17.9/22

+ sign 523.744 $\pm$ 295.614  $\chi^2$ /NDF: 54.5/50

All: 487.426 $\pm$ 210.620  $\chi^2$ /NDF: 97.2/103

- sign 449.982 $\pm$ 300.162  $\chi^2$ /NDF: 42.6/52

# asym\_usr\_eigen\_dit\_correction\_rms vs Slug



Right In: 1973.050+/-0.381  $\chi^2/\text{NDF}$ : 2968507.4/25

Left Out: 1530.768+/-0.250  $\chi^2/\text{NDF}$ : 795638.4/24

Right Out: 2095.110+/-0.387  $\chi^2/\text{NDF}$ : 2792089.1/29

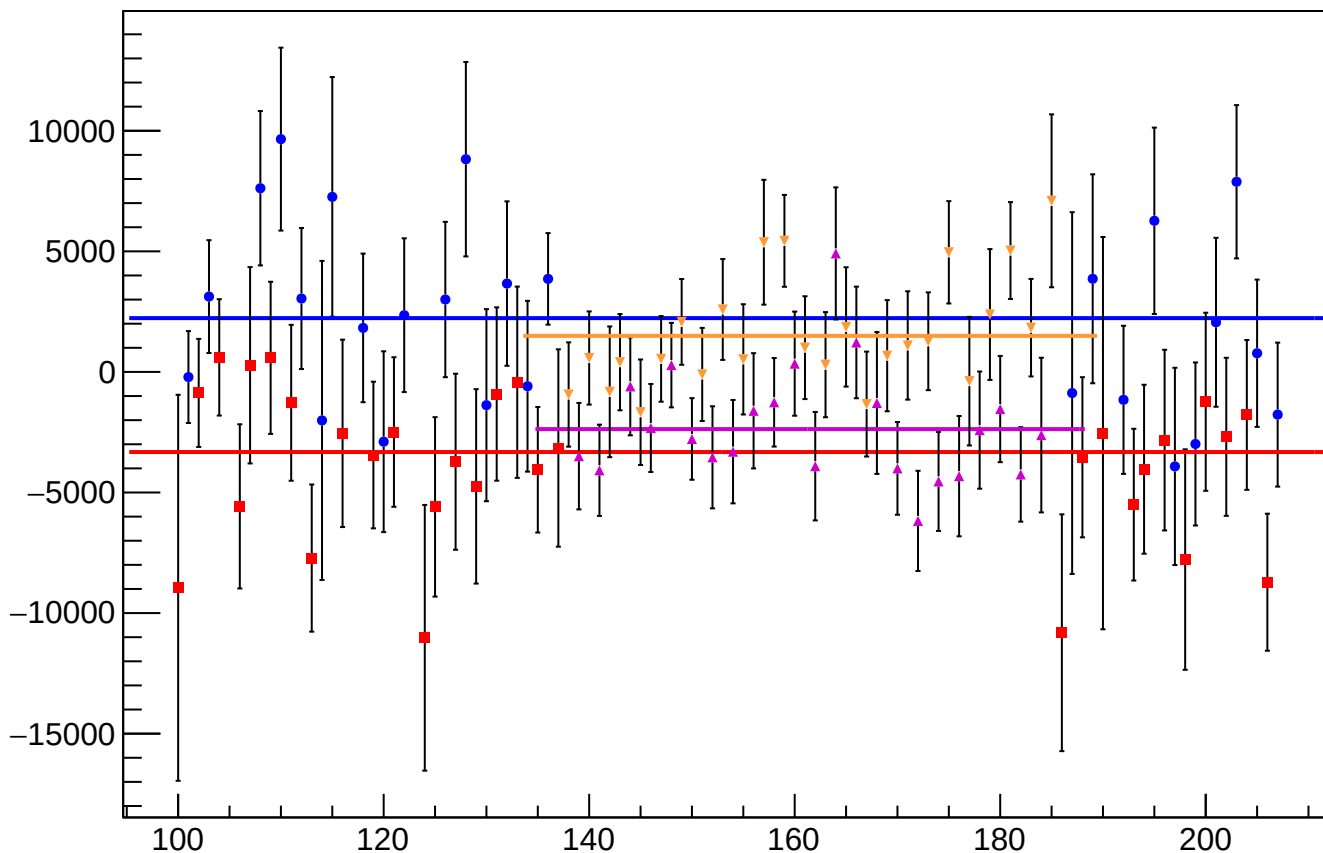
Left In: 1512.951+/-0.254  $\chi^2/\text{NDF}$ : 957065.2/22

+ sign 1663.564+/-0.209  $\chi^2/\text{NDF}$ : 4704746.6/50

All: 1675.807+/-0.149  $\chi^2/\text{NDF}$ : 10045022.5/100

- sign 1688.430+/-0.212  $\chi^2/\text{NDF}$ : 5333308.0/52

# asym\_usr\_mean vs Slug



Right In: 2230.725 $\pm$ 627.971  $\chi^2$ /NDF: 29.4/25

Left Out: 1495.022 $\pm$ 433.196  $\chi^2$ /NDF: 23.8/24

Right Out: -3321.867 $\pm$ 626.433  $\chi^2$ /NDF: 21.3/29

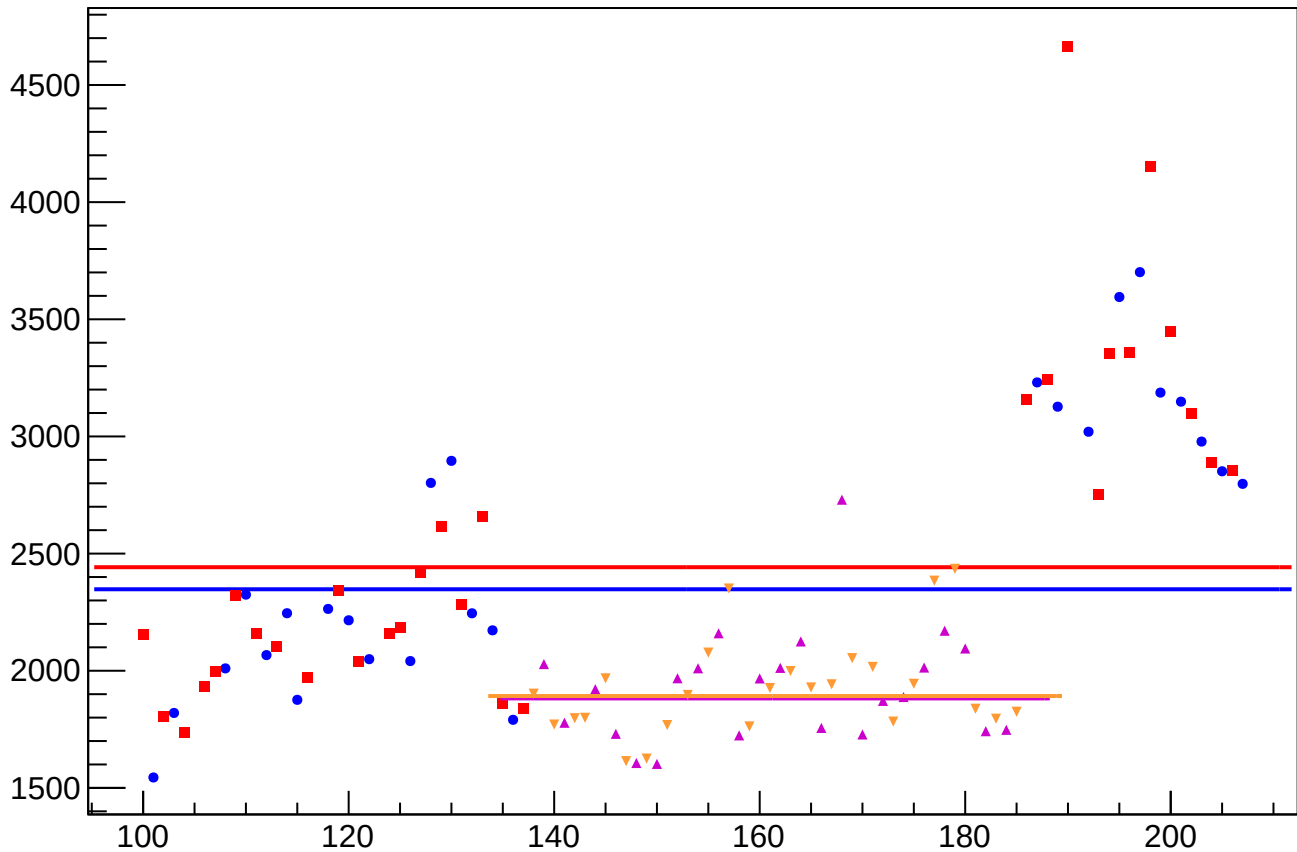
Left In: -2370.694 $\pm$ 442.952  $\chi^2$ /NDF: 23.7/22

+ sign 1732.238 $\pm$ 356.583  $\chi^2$ /NDF: 54.1/50

All: -446.450 $\pm$ 253.921  $\chi^2$ /NDF: 176.3/103

- sign -2687.749 $\pm$ 361.670  $\chi^2$ /NDF: 46.5/52

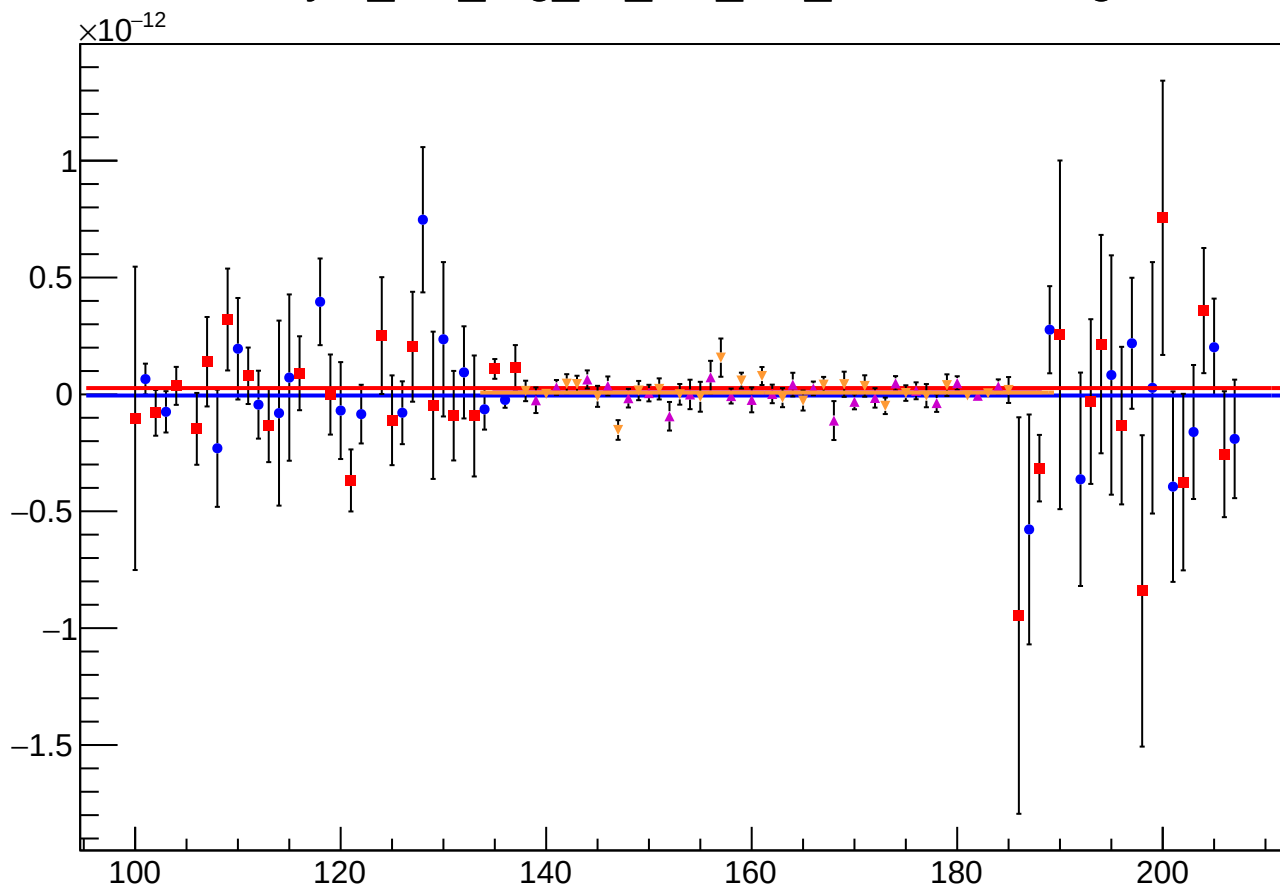
# asym\_usr\_rms vs Slug



Right In:  $2347.734 \pm 0.444$   $\chi^2/\text{NDF}$ : 1820291.2/25  
 Left Out:  $1892.117 \pm 0.306$   $\chi^2/\text{NDF}$ : 389648.0/24  
 Right Out:  $2441.893 \pm 0.443$   $\chi^2/\text{NDF}$ : 1859908.7/29  
 Left In:  $1881.892 \pm 0.313$   $\chi^2/\text{NDF}$ : 462659.6/22

+ sign  $2039.023 \pm 0.252$   $\chi^2/\text{NDF}$ : 2923288.0/50  
 All:  $2053.581 \pm 0.180$   $\chi^2/\text{NDF}$ : 6318159.3/10  
 - sign  $2068.557 \pm 0.256$   $\chi^2/\text{NDF}$ : 3388108.5/52

# asym\_usr\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 24.1/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 32.4/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 36.7/29

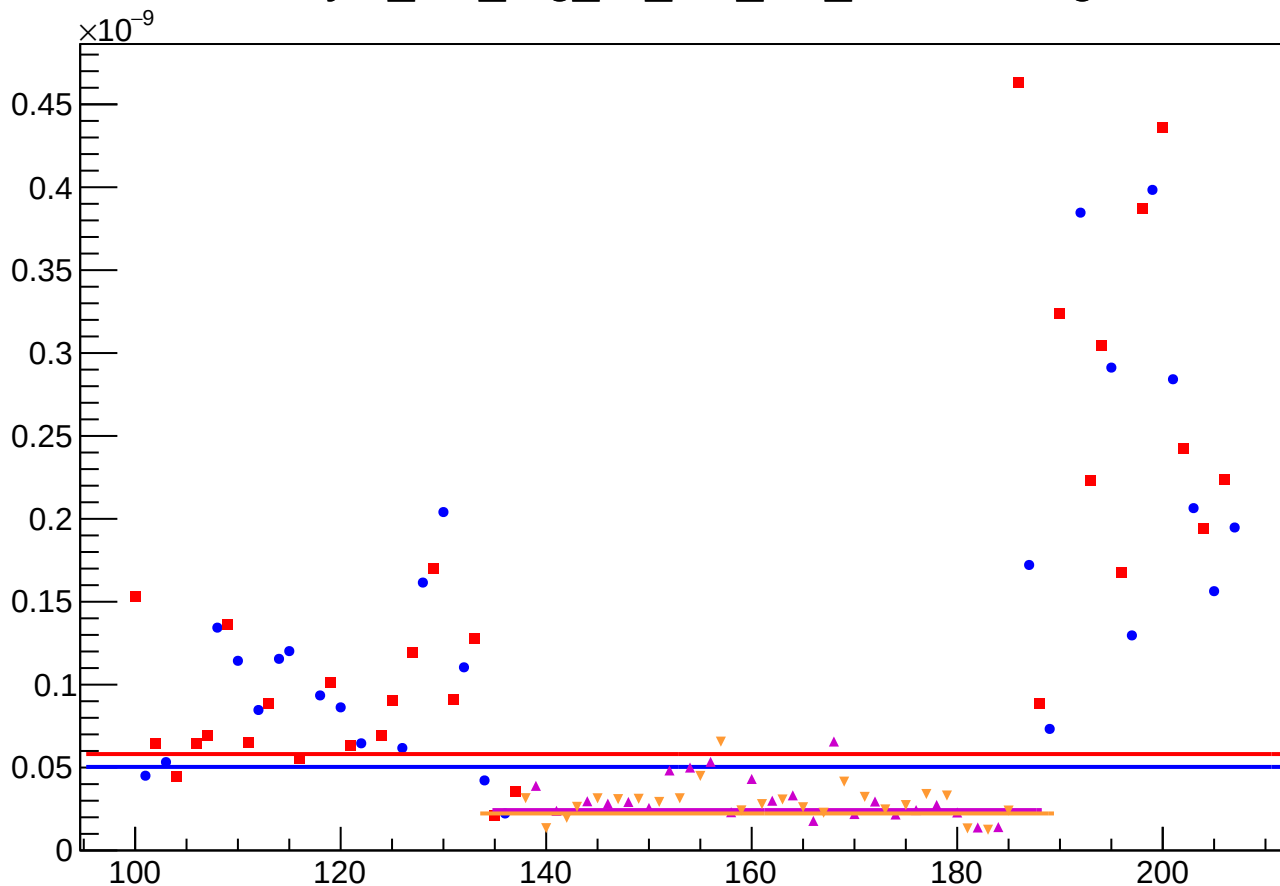
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 19.1/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 56.8/50

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 113.1/103

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 56.2/52

# asym\_usr\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8246366.3/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3629538.0/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7940836.5/29

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3124271.4/22

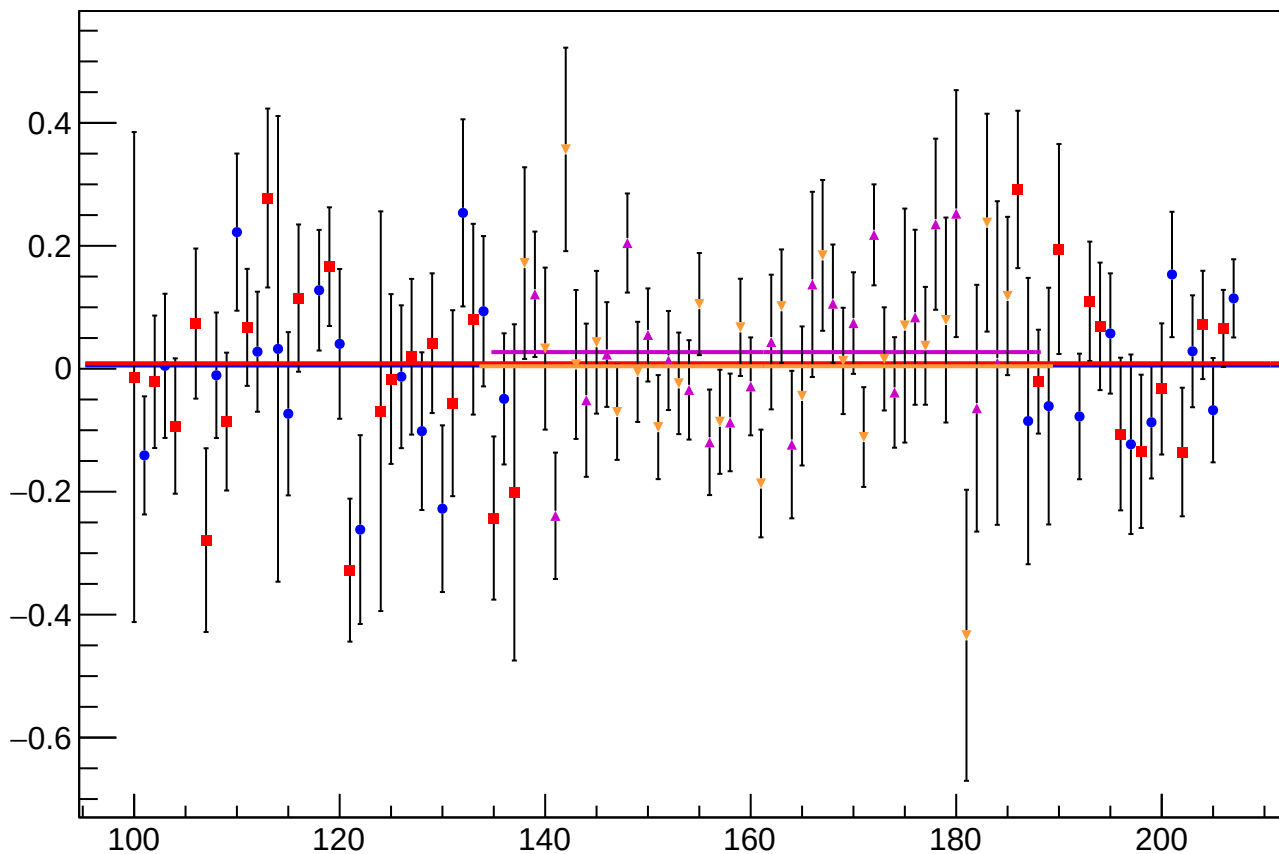
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14502976.3/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 28819355.5/103

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14192970.4/52



# asym\_usr\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.005 $\pm$ 0.022  $\chi^2$ /NDF: 26.3/25

Left Out: 0.004 $\pm$ 0.020  $\chi^2$ /NDF: 28.2/24

Right Out: 0.009 $\pm$ 0.021  $\chi^2$ /NDF: 39.2/29

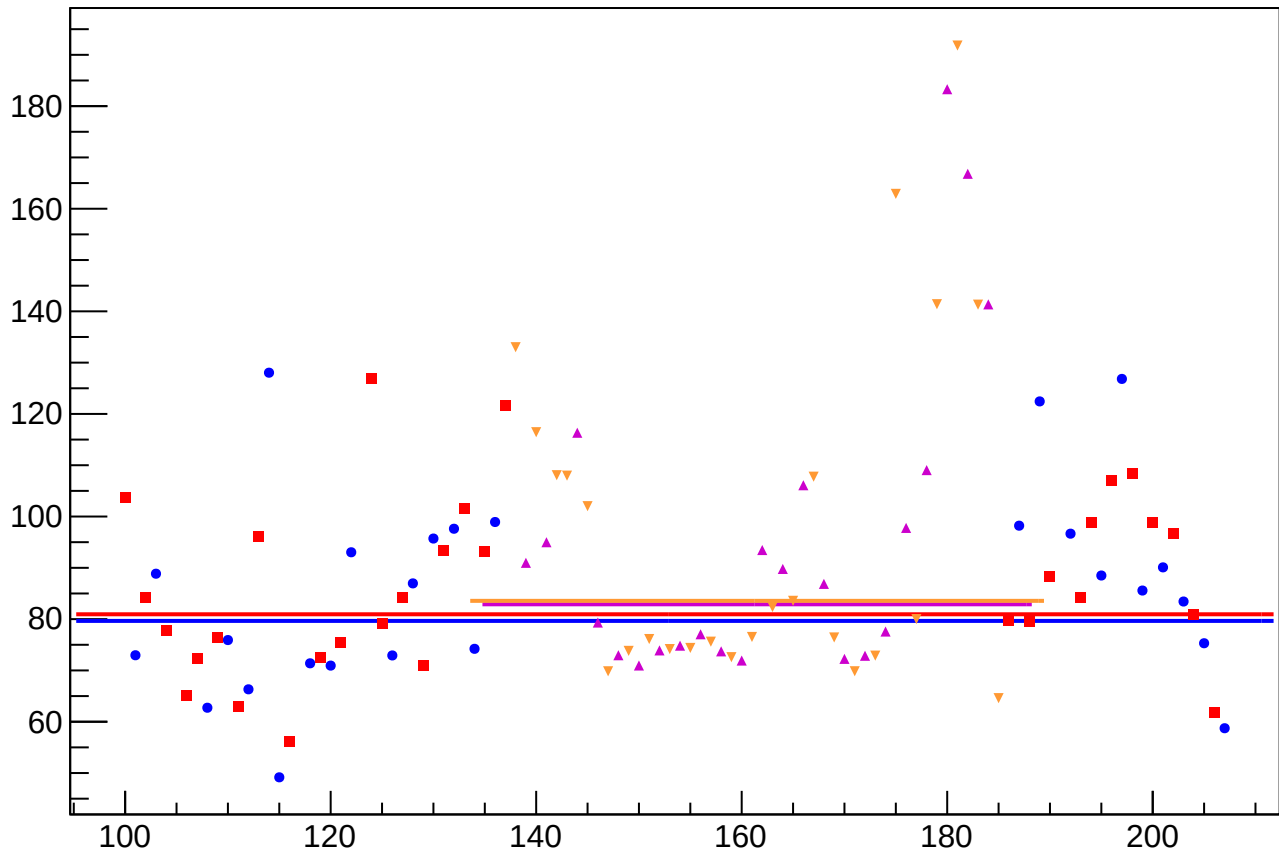
Left In: 0.027 $\pm$ 0.021  $\chi^2$ /NDF: 32.0/22

+ sign 0.005 $\pm$ 0.015  $\chi^2$ /NDF: 54.4/50

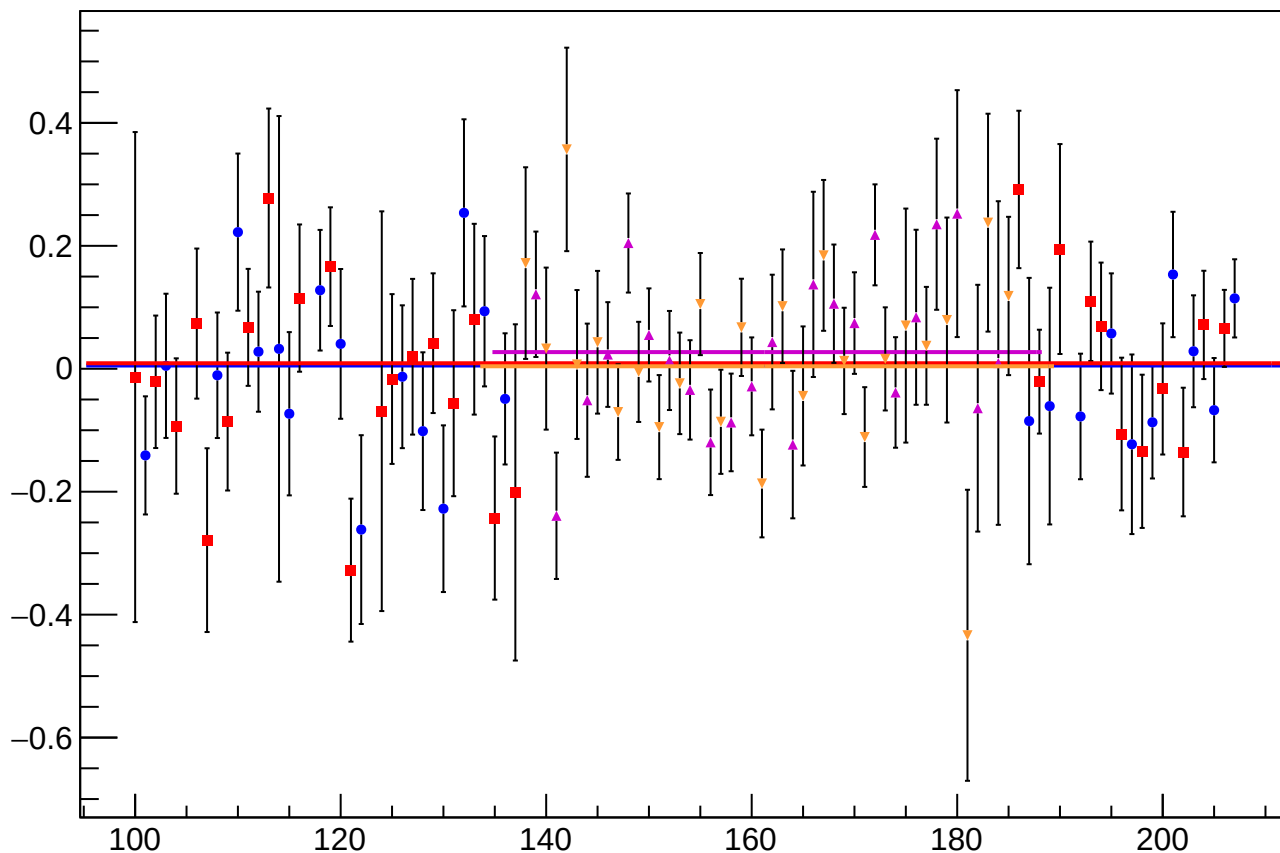
All: 0.012 $\pm$ 0.010  $\chi^2$ /NDF: 126.4/103

- sign 0.018 $\pm$ 0.015  $\chi^2$ /NDF: 71.5/52

# asym\_usr\_dit\_vs\_cor\_diff\_rms vs Slug



# asym\_usr\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.005 $\pm$ 0.022  $\chi^2/\text{NDF}$ : 26.3/25

Left Out: 0.004 $\pm$ 0.020  $\chi^2/\text{NDF}$ : 28.2/24

Right Out: 0.009 $\pm$ 0.021  $\chi^2/\text{NDF}$ : 39.2/29

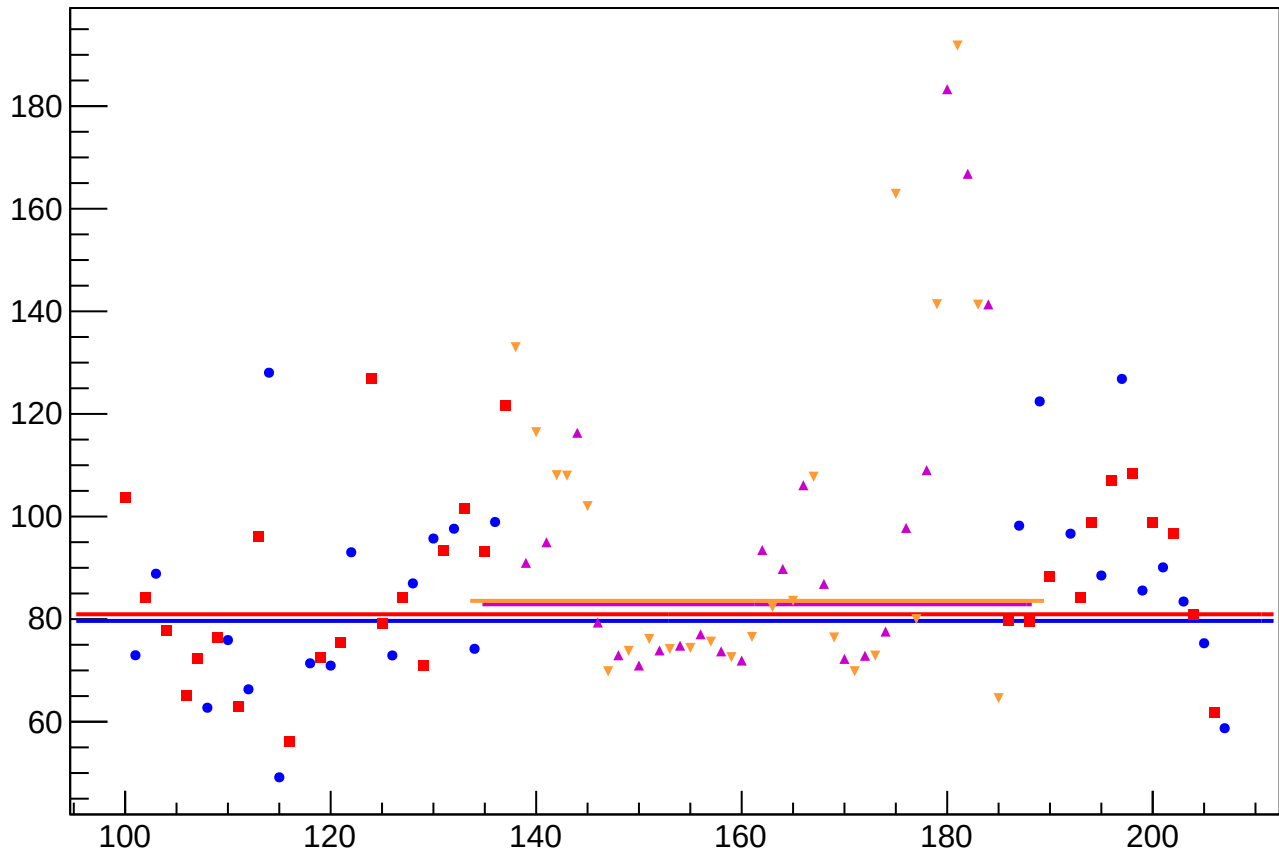
Left In: 0.027 $\pm$ 0.021  $\chi^2/\text{NDF}$ : 32.0/22

+ sign 0.005 $\pm$ 0.015  $\chi^2/\text{NDF}$ : 54.4/50

All: 0.012 $\pm$ 0.010  $\chi^2/\text{NDF}$ : 126.4/103

- sign 0.018 $\pm$ 0.015  $\chi^2/\text{NDF}$ : 71.5/52

# asym\_usr\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 79.654 $\pm$ 0.015  $\chi^2$ /NDF: 1078210.2/25

Left Out: 83.564 $\pm$ 0.014  $\chi^2$ /NDF:2172931.4/24

Right Out: 80.946 $\pm$ 0.015  $\chi^2$ /NDF: 957065.7/29

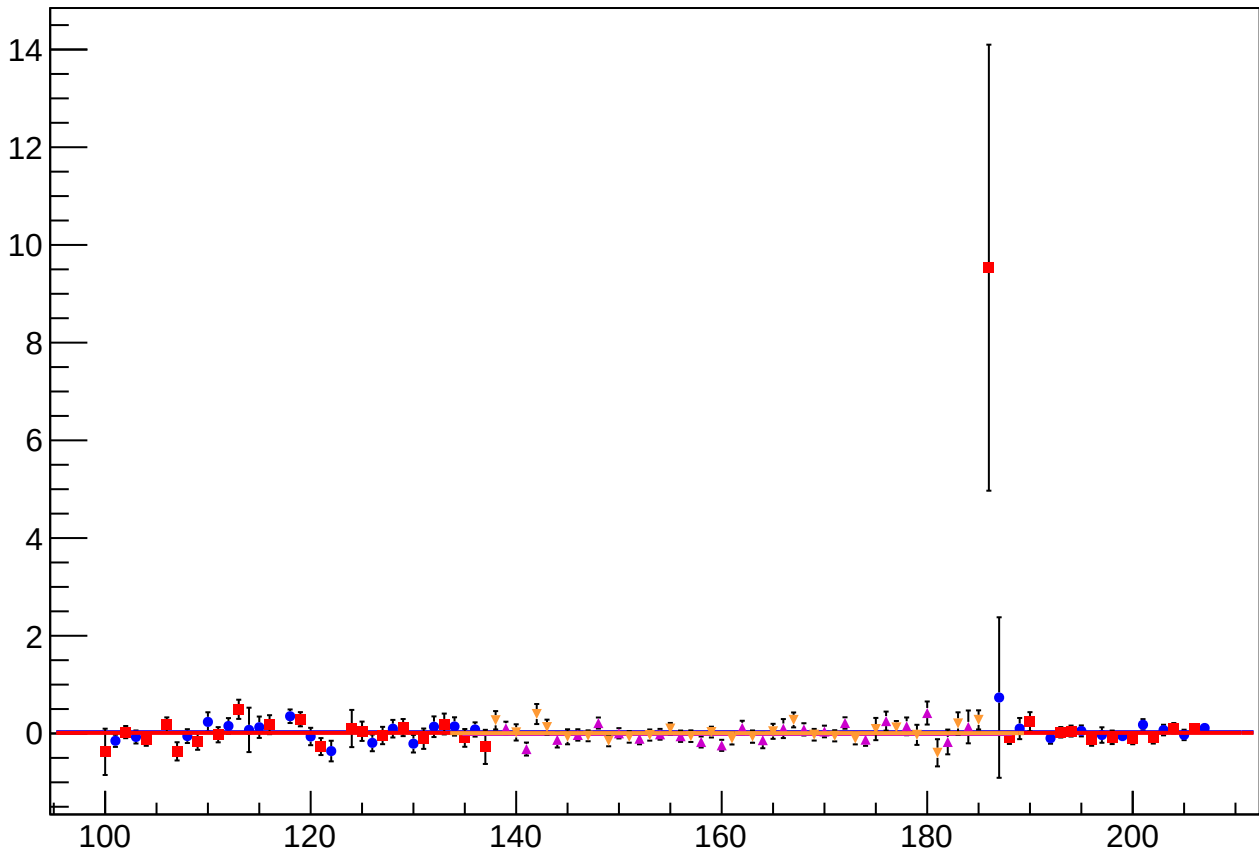
Left In: 82.891 $\pm$ 0.015  $\chi^2$ /NDF:1573003.1/22

+ sign 81.739 $\pm$ 0.010  $\chi^2$ /NDF: 3285769.7/50

All: 81.841 $\pm$ 0.007  $\chi^2$ /NDF: 5824768.2/103

- sign 81.941 $\pm$ 0.010  $\chi^2$ /NDF: 2538811.2/52

asym\_usr\_dit\_vs\_overload\_cor\_diff\_mean vs Slug



Right In:  $0.027 \pm 0.028$   $\chi^2/\text{NDF}$ : 23.8/25

Left Out:  $0.006 \pm 0.028$   $\chi^2/\text{NDF}$ : 21.3/24

Right Out:  $0.012 \pm 0.027$   $\chi^2/\text{NDF}$ : 35.6/29

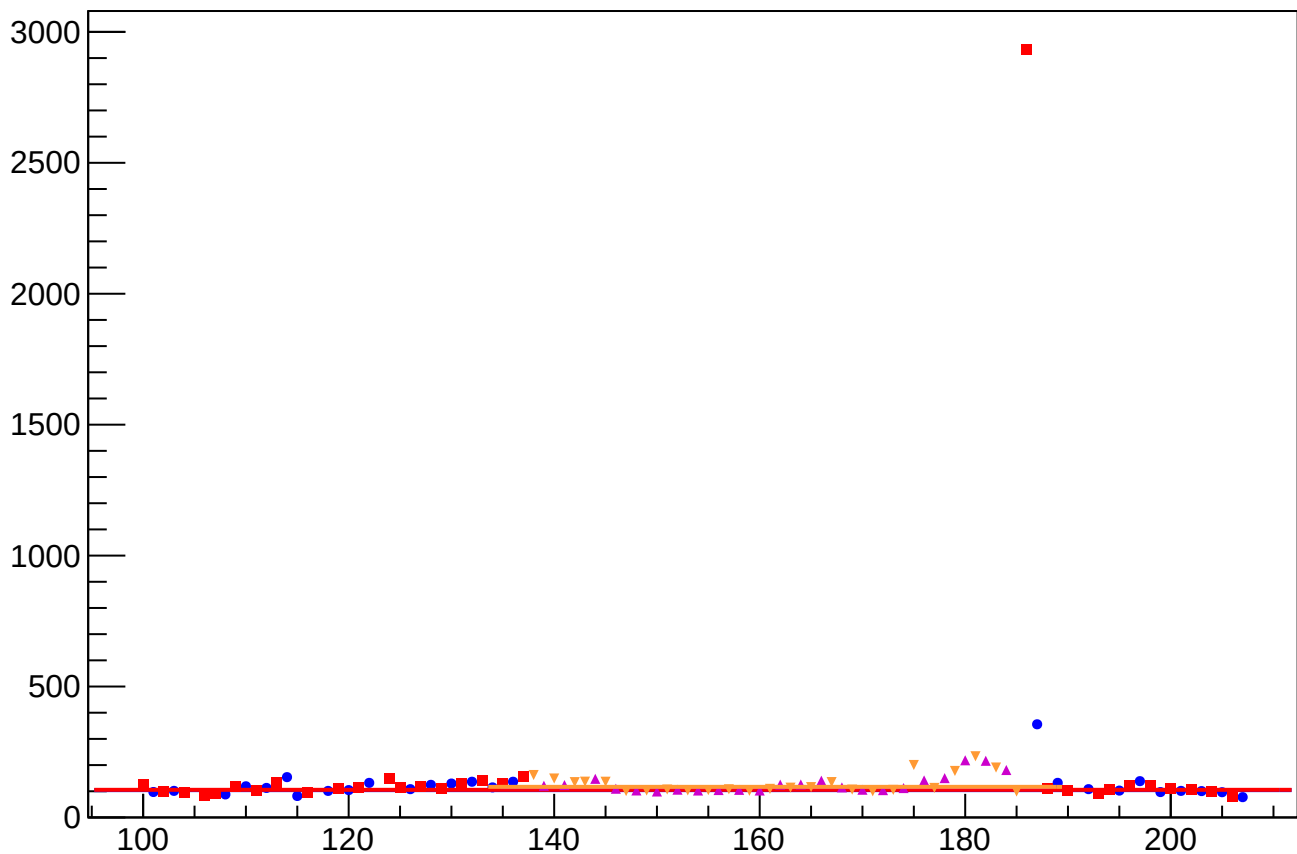
Left In:  $-0.010 \pm 0.028$   $\chi^2/\text{NDF}$ : 31.3/22

+ sign  $0.016 \pm 0.020$   $\chi^2/\text{NDF}$ : 45.4/50

All:  $0.009 \pm 0.014$   $\chi^2/\text{NDF}$ : 112.9/103

- sign  $0.001 \pm 0.020$   $\chi^2/\text{NDF}$ : 67.2/52

# asym\_usr\_dit\_vs\_overload\_cor\_diff\_rms vs Slug



Right In: 104.348 $\pm$ 0.020  $\chi^2$ /NDF: 752615.9/25

Left Out: 116.880 $\pm$ 0.020  $\chi^2$ /NDF: 1596935.1/24

Right Out: 105.501 $\pm$ 0.019  $\chi^2$ /NDF: 1397442.4/29

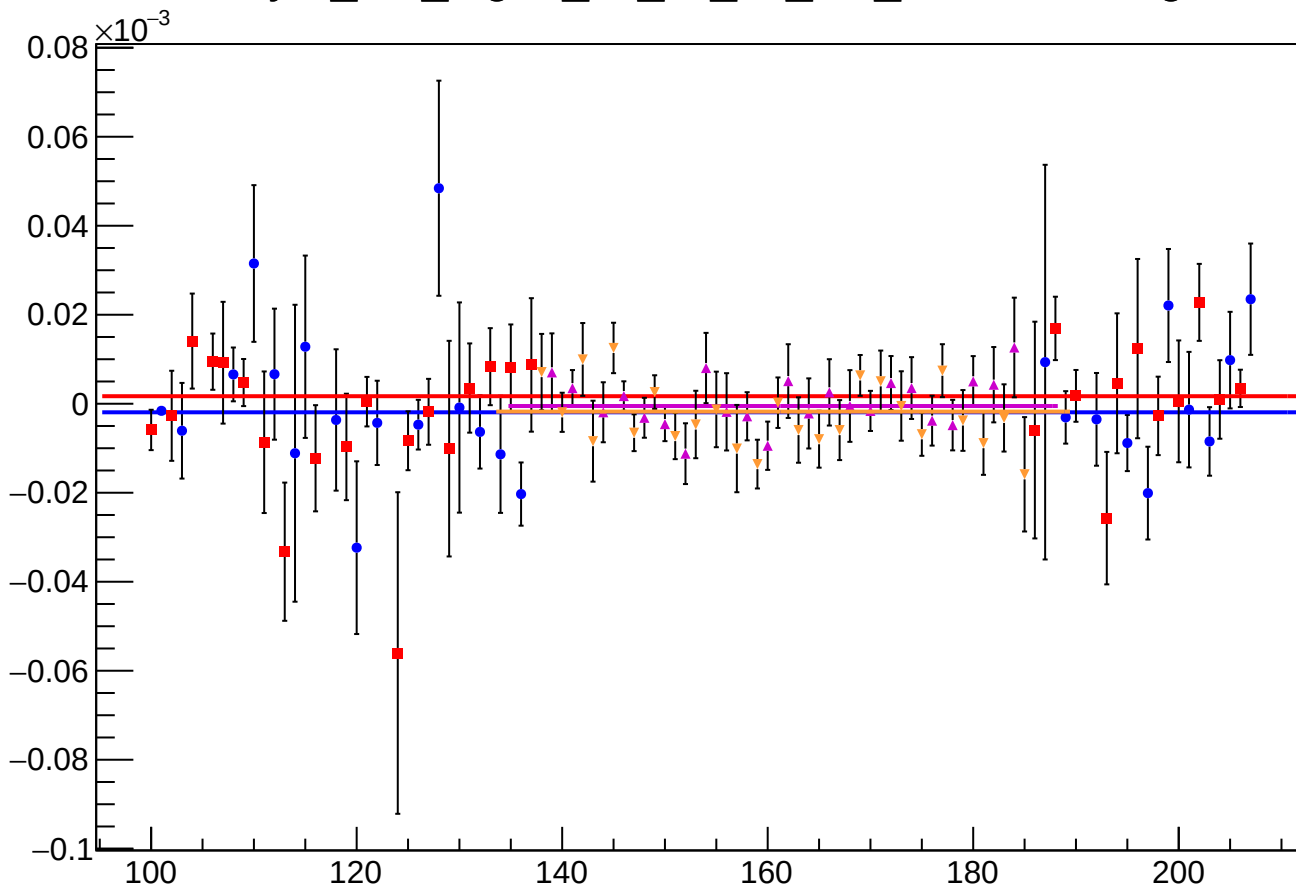
Left In: 115.858 $\pm$ 0.020  $\chi^2$ /NDF: 1231382.1/22

+ sign 110.694 $\pm$ 0.014  $\chi^2$ /NDF: 2550688.8/50

All: 110.612 $\pm$ 0.010  $\chi^2$ /NDF: 5318664.9/103

- sign 110.531 $\pm$ 0.014  $\chi^2$ /NDF: 2767907.6/52

asym\_usr\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2$ /NDF: 35.3/25

Left Out: -0.000+/-0.000  $\chi^2$ /NDF:31.1/24

Right Out: 0.000+/-0.000  $\chi^2$ /NDF: 35.6/29

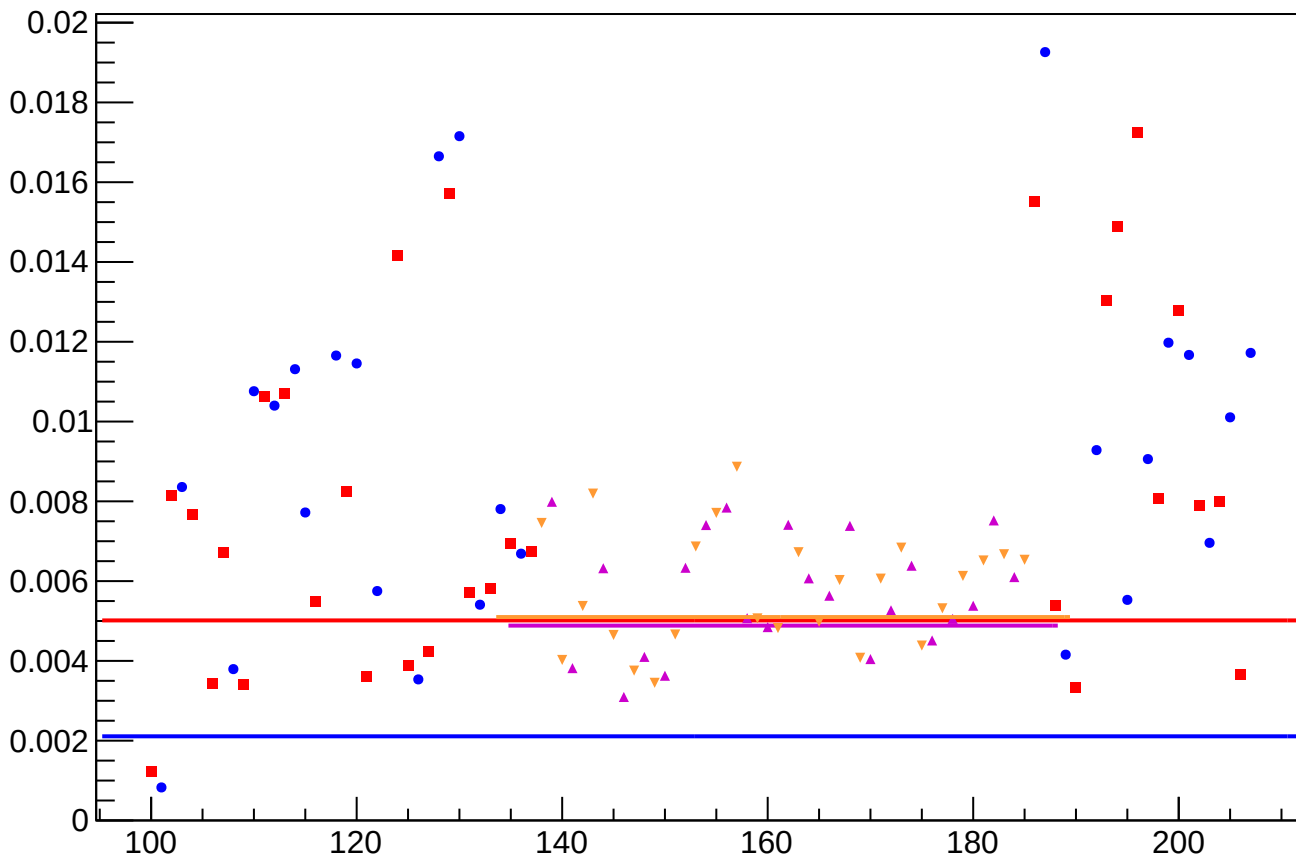
Left In: -0.000+/-0.000  $\chi^2$ /NDF:15.6/22

+ sign -0.000+/-0.000  $\chi^2$ /NDF: 66.4/50

All: -0.000+/-0.000  $\chi^2$ /NDF: 122.3/103

- sign 0.000+/-0.000  $\chi^2$ /NDF: 52.5/52

# asym\_usr\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 18250409.0/25

Left Out: 0.005 $\pm$ 0.000  $\chi^2$ /NDF:2378649.6/24

Right Out: 0.005 $\pm$ 0.000  $\chi^2$ /NDF: 7776429.2/29

Left In: 0.005 $\pm$ 0.000  $\chi^2$ /NDF:2725463.9/22

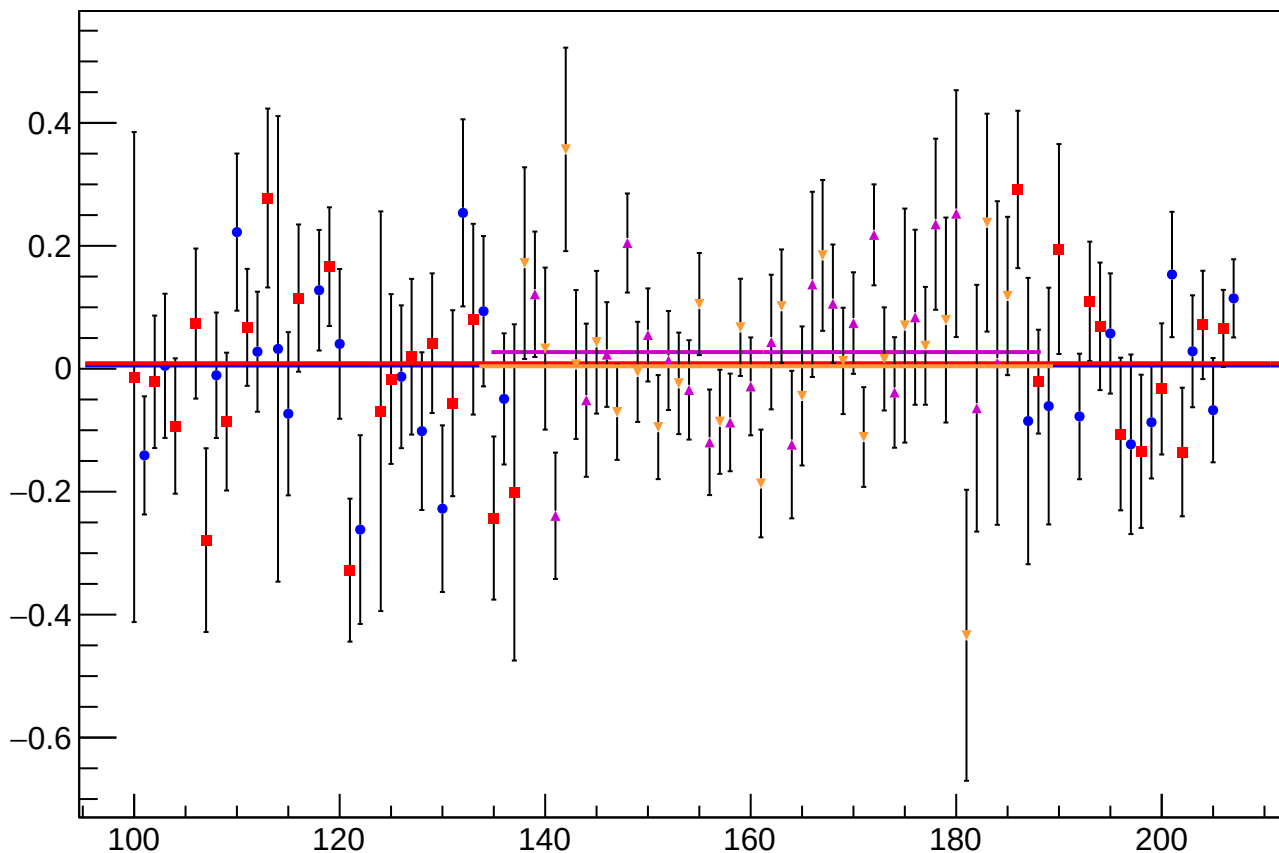
+ sign 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 28331785.7/50

All: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 43038121.1/103

- sign 0.005 $\pm$ 0.000  $\chi^2$ /NDF: 10510954.8/52



# asym\_usr\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.005 $\pm$ 0.022  $\chi^2$ /NDF: 26.3/25

Left Out: 0.004 $\pm$ 0.020  $\chi^2$ /NDF: 28.2/24

Right Out: 0.009 $\pm$ 0.021  $\chi^2$ /NDF: 39.2/29

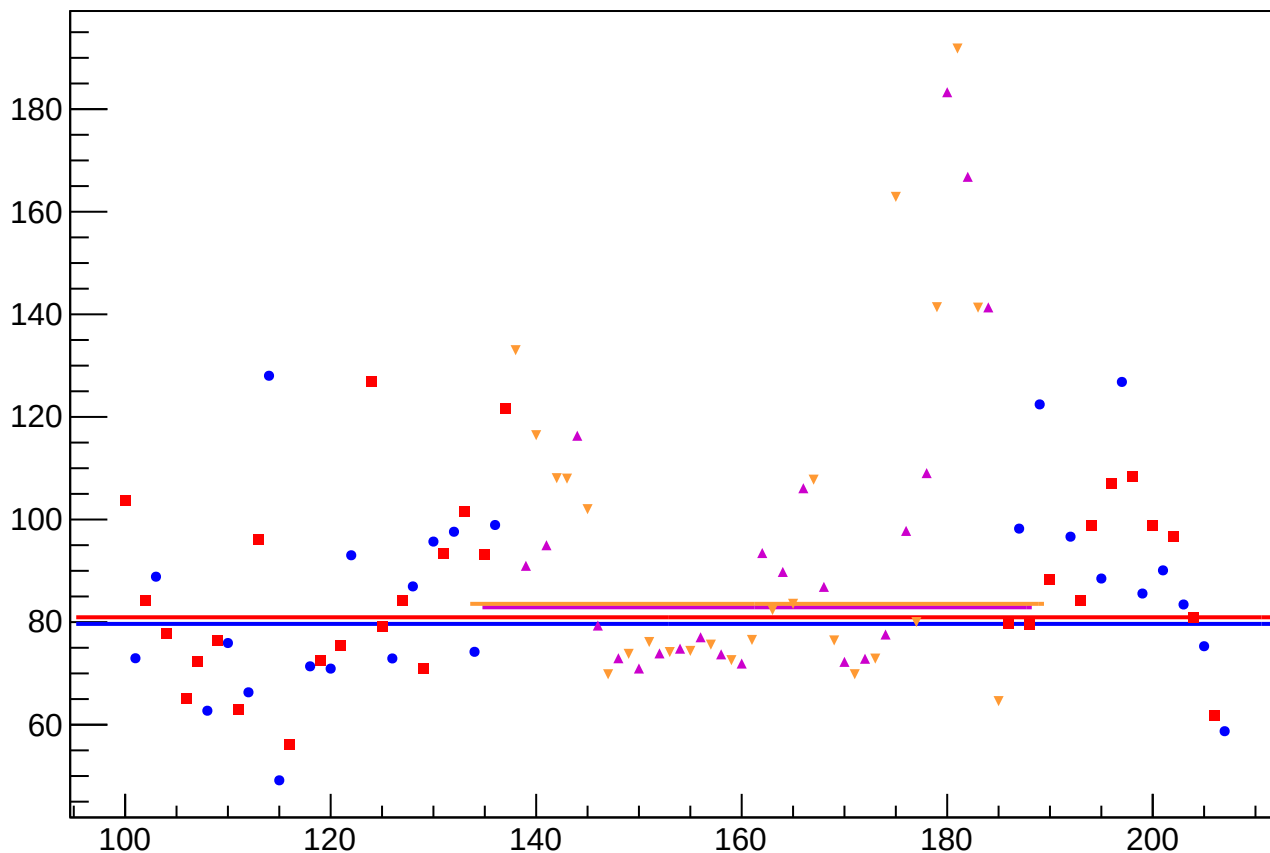
Left In: 0.027 $\pm$ 0.021  $\chi^2$ /NDF: 32.0/22

+ sign 0.005 $\pm$ 0.015  $\chi^2$ /NDF: 54.4/50

All: 0.012 $\pm$ 0.010  $\chi^2$ /NDF: 126.4/103

- sign 0.018 $\pm$ 0.015  $\chi^2$ /NDF: 71.5/52

# asym\_usr\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 79.654 $\pm$ 0.015  $\chi^2/\text{NDF}$ : 1078120.3/25

Left Out: 83.565 $\pm$ 0.014  $\chi^2/\text{NDF}$ : 2172921.0/24

Right Out: 80.945 $\pm$ 0.015  $\chi^2/\text{NDF}$ : 957018.3/29

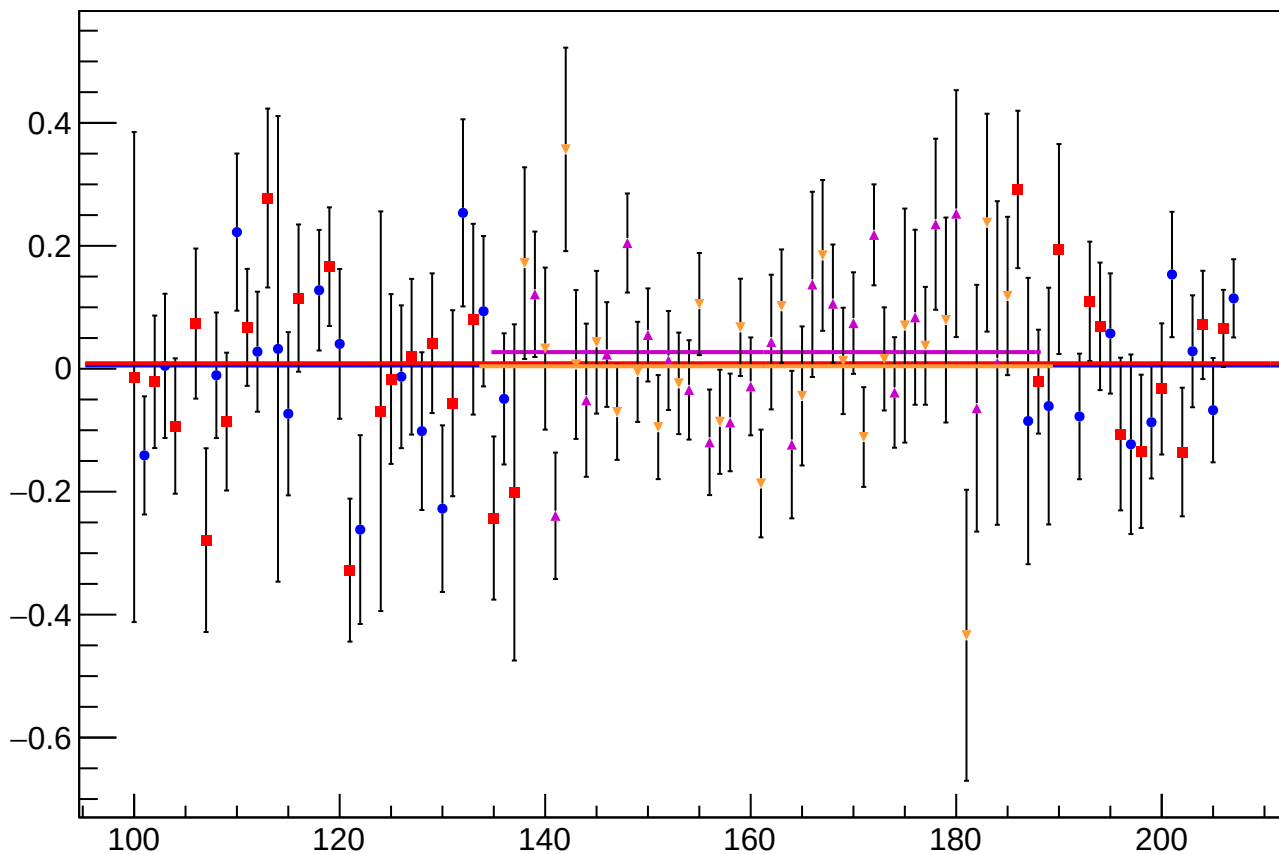
Left In: 82.891 $\pm$ 0.015  $\chi^2/\text{NDF}$ : 1572981.0/22

+ sign 81.740 $\pm$ 0.010  $\chi^2/\text{NDF}$ : 3285679.6/50

All: 81.841 $\pm$ 0.007  $\chi^2/\text{NDF}$ : 5824618.4/103

- sign 81.941 $\pm$ 0.010  $\chi^2/\text{NDF}$ : 2538752.5/52

asym\_usr\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.005 \pm 0.022$   $\chi^2/\text{NDF}$ : 26.3/25

Left Out:  $0.004 \pm 0.020$   $\chi^2/\text{NDF}$ : 28.2/24

Right Out:  $0.009 \pm 0.021$   $\chi^2/\text{NDF}$ : 39.2/29

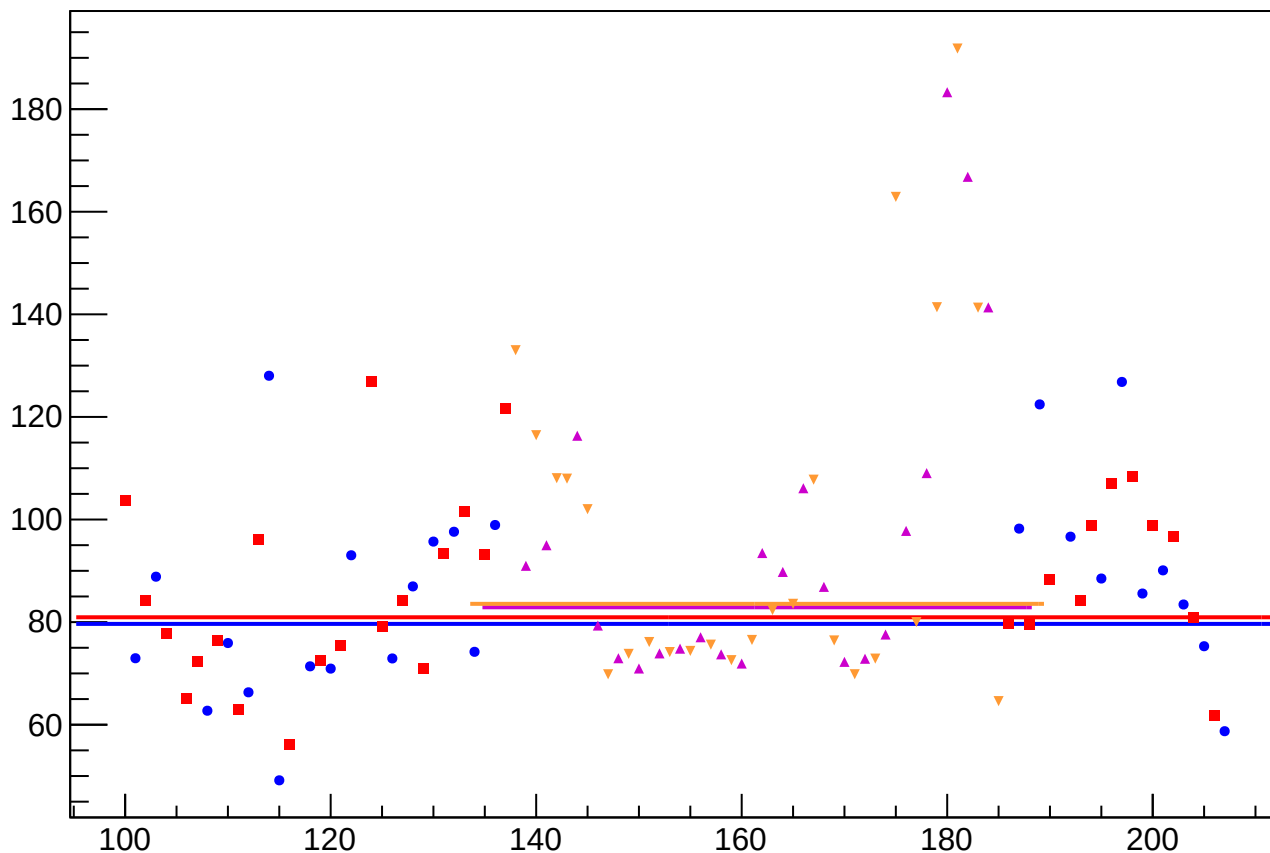
Left In:  $0.027 \pm 0.021$   $\chi^2/\text{NDF}$ : 32.0/22

+ sign  $0.005 \pm 0.015$   $\chi^2/\text{NDF}$ : 54.4/50

All:  $0.012 \pm 0.010$   $\chi^2/\text{NDF}$ : 126.4/103

- sign  $0.018 \pm 0.015$   $\chi^2/\text{NDF}$ : 71.5/52

asym\_usr\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 79.654 $\pm$ 0.015  $\chi^2$ /NDF: 1078120.3/25

Left Out: 83.565 $\pm$ 0.014  $\chi^2$ /NDF: 2172921.0/24

Right Out: 80.945 $\pm$ 0.015  $\chi^2$ /NDF: 957018.3/29

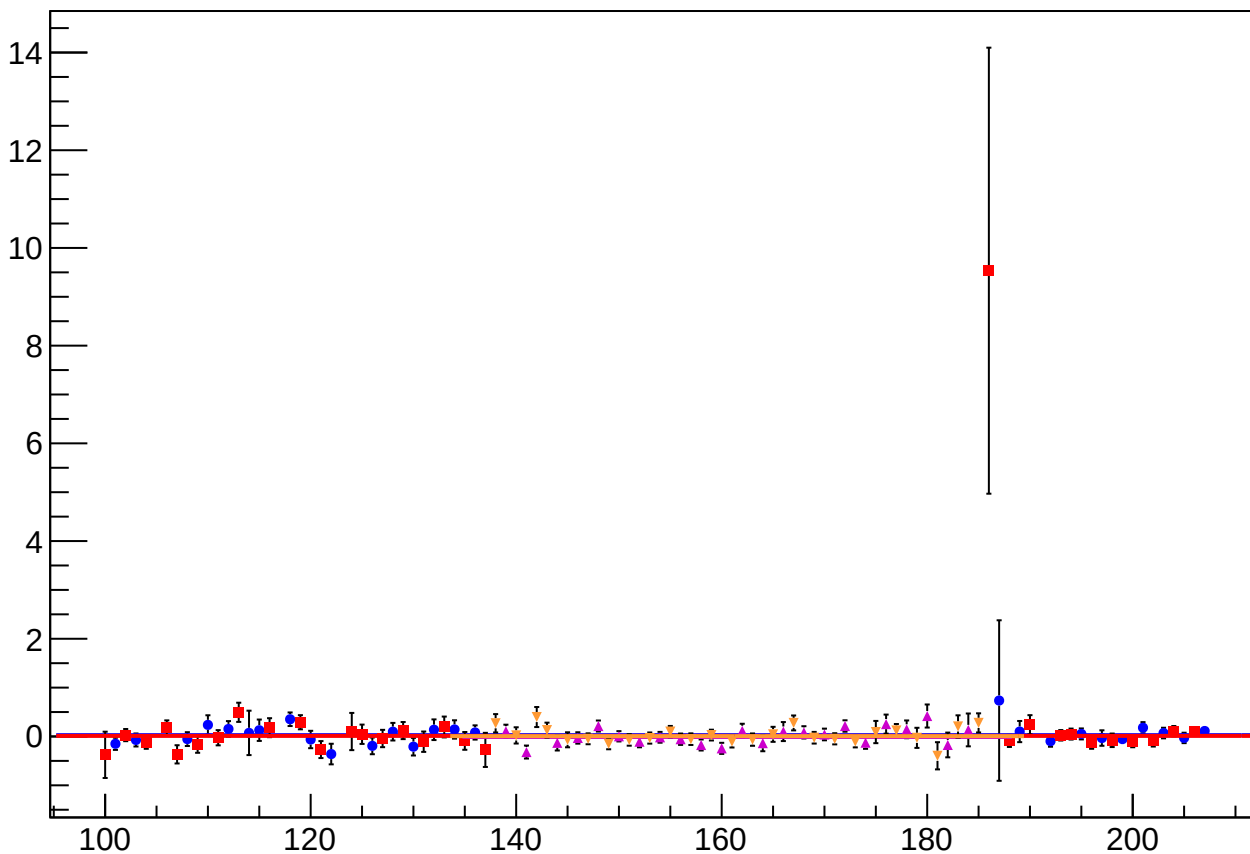
Left In: 82.891 $\pm$ 0.015  $\chi^2$ /NDF: 1572981.0/22

+ sign 81.740 $\pm$ 0.010  $\chi^2$ /NDF: 3285679.6/50

All: 81.841 $\pm$ 0.007  $\chi^2$ /NDF: 5824618.4/103

- sign 81.941 $\pm$ 0.010  $\chi^2$ /NDF: 2538752.5/52

asym\_usr\_eigen\_dit\_vs\_overload\_cor\_diff\_mean vs Slug



Right In:  $0.027 \pm 0.028$   $\chi^2/\text{NDF}$ : 23.8/25

Left Out:  $0.006 \pm 0.028$   $\chi^2/\text{NDF}$ : 21.3/24

Right Out:  $0.012 \pm 0.027$   $\chi^2/\text{NDF}$ : 35.6/29

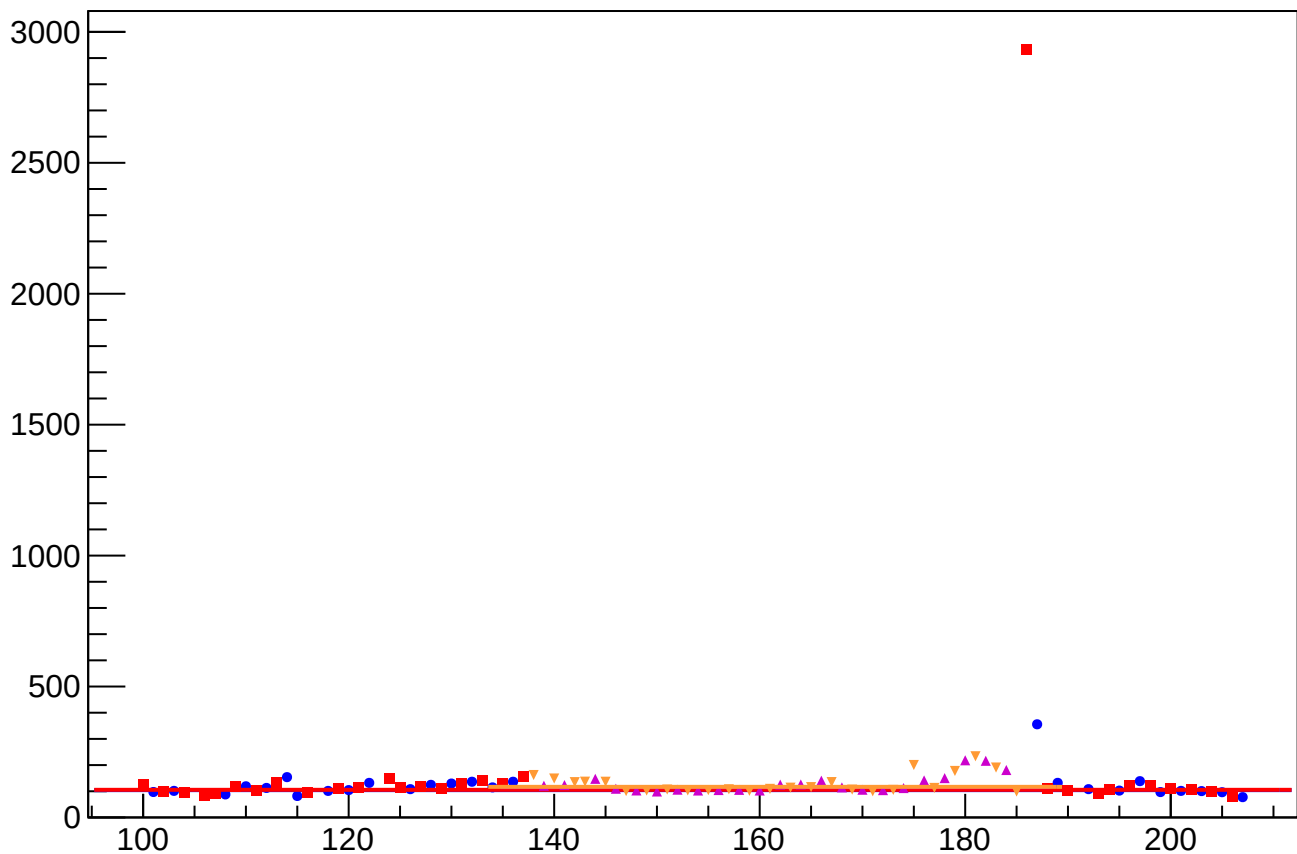
Left In:  $-0.010 \pm 0.028$   $\chi^2/\text{NDF}$ : 31.3/22

+ sign  $0.016 \pm 0.020$   $\chi^2/\text{NDF}$ : 45.4/50

All:  $0.009 \pm 0.014$   $\chi^2/\text{NDF}$ : 112.9/103

- sign  $0.001 \pm 0.020$   $\chi^2/\text{NDF}$ : 67.2/52

asym\_usr\_eigen\_dit\_vs\_overload\_cor\_diff\_rms vs Slug



Right In: 104.348 $\pm$ 0.020  $\chi^2$ /NDF: 752511.0/25

Left Out: 116.880 $\pm$ 0.020  $\chi^2$ /NDF: 1596928.7/24

Right Out: 105.501 $\pm$ 0.019  $\chi^2$ /NDF: 1397375.7/29

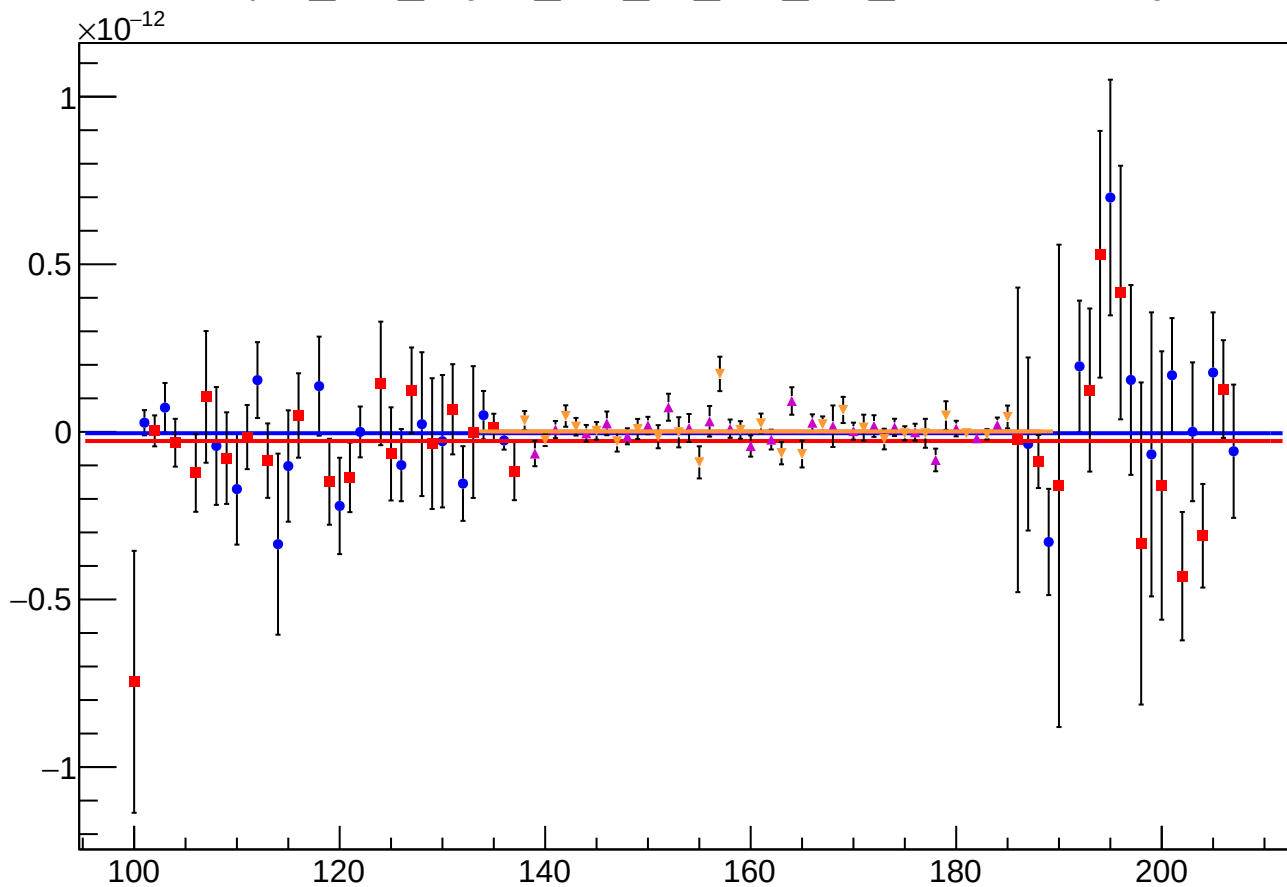
Left In: 115.858 $\pm$ 0.020  $\chi^2$ /NDF: 1231371.8/22

+ sign 110.695 $\pm$ 0.014  $\chi^2$ /NDF: 2550584.6/50

All: 110.613 $\pm$ 0.010  $\chi^2$ /NDF: 5318499.7/103

- sign 110.531 $\pm$ 0.014  $\chi^2$ /NDF: 2767846.4/52

# asym\_usr\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 25.3/25$

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 36.6/24$

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 26.8/29$

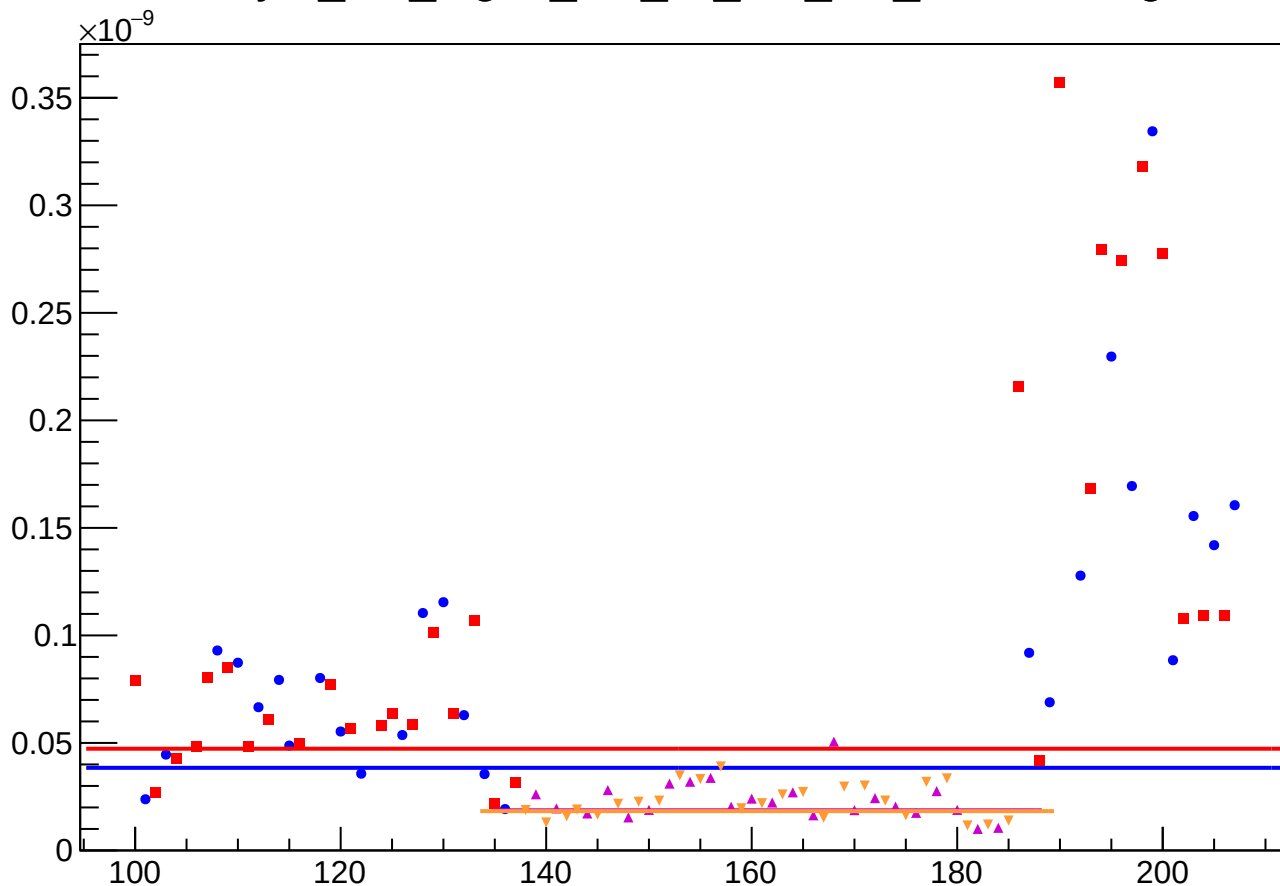
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 26.7/22$

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 62.0/50$

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 117.6/103$

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 55.4/52$

# asym\_usr\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7517863.6/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3029080.3/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6935831.7/29

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2908977.5/22

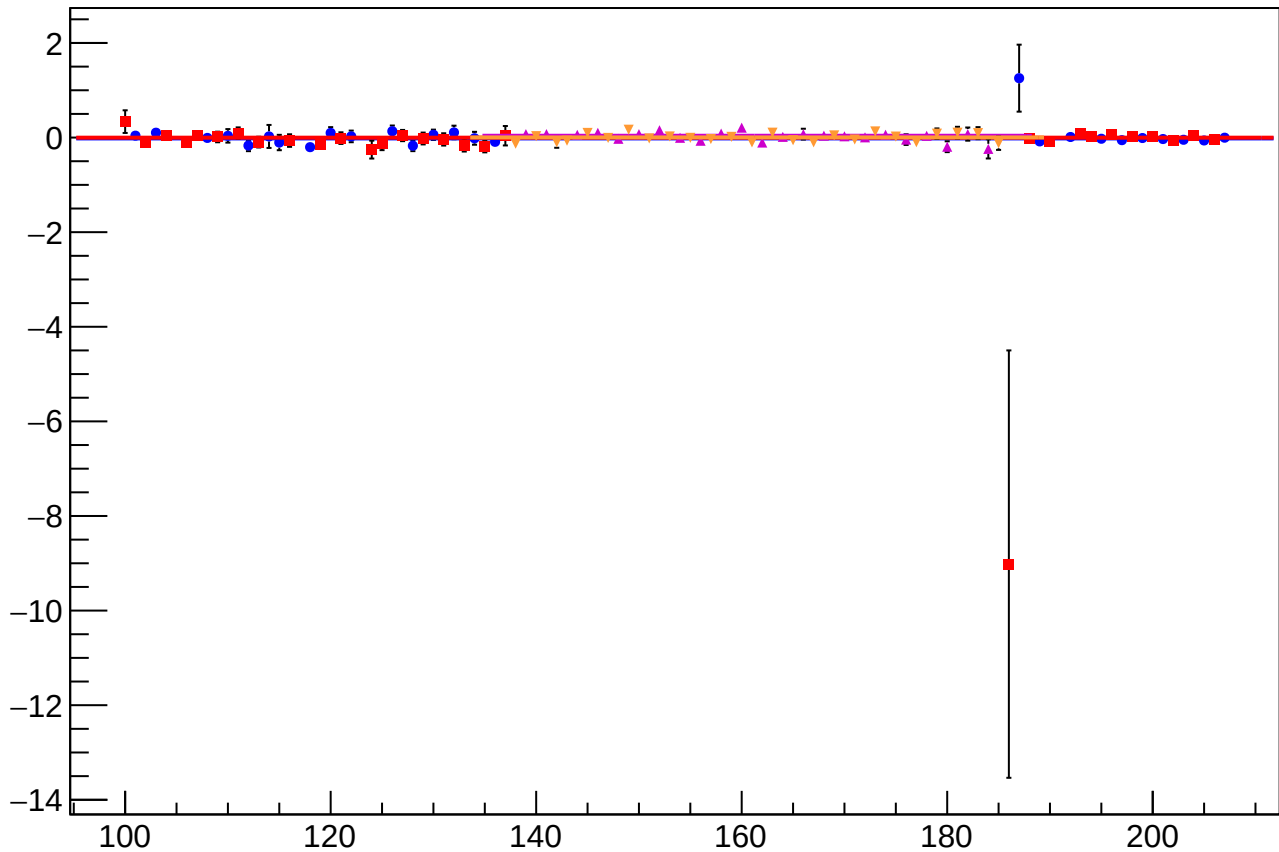
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13010572.4/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 26763892.4/103

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13732677.9/52



asym\_usr\_overload\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.018 \pm 0.014$   $\chi^2/\text{NDF}$ : 23.9/25

Left Out:  $0.003 \pm 0.017$   $\chi^2/\text{NDF}$ : 21.5/24

Right Out:  $-0.002 \pm 0.012$   $\chi^2/\text{NDF}$ : 36.4/29

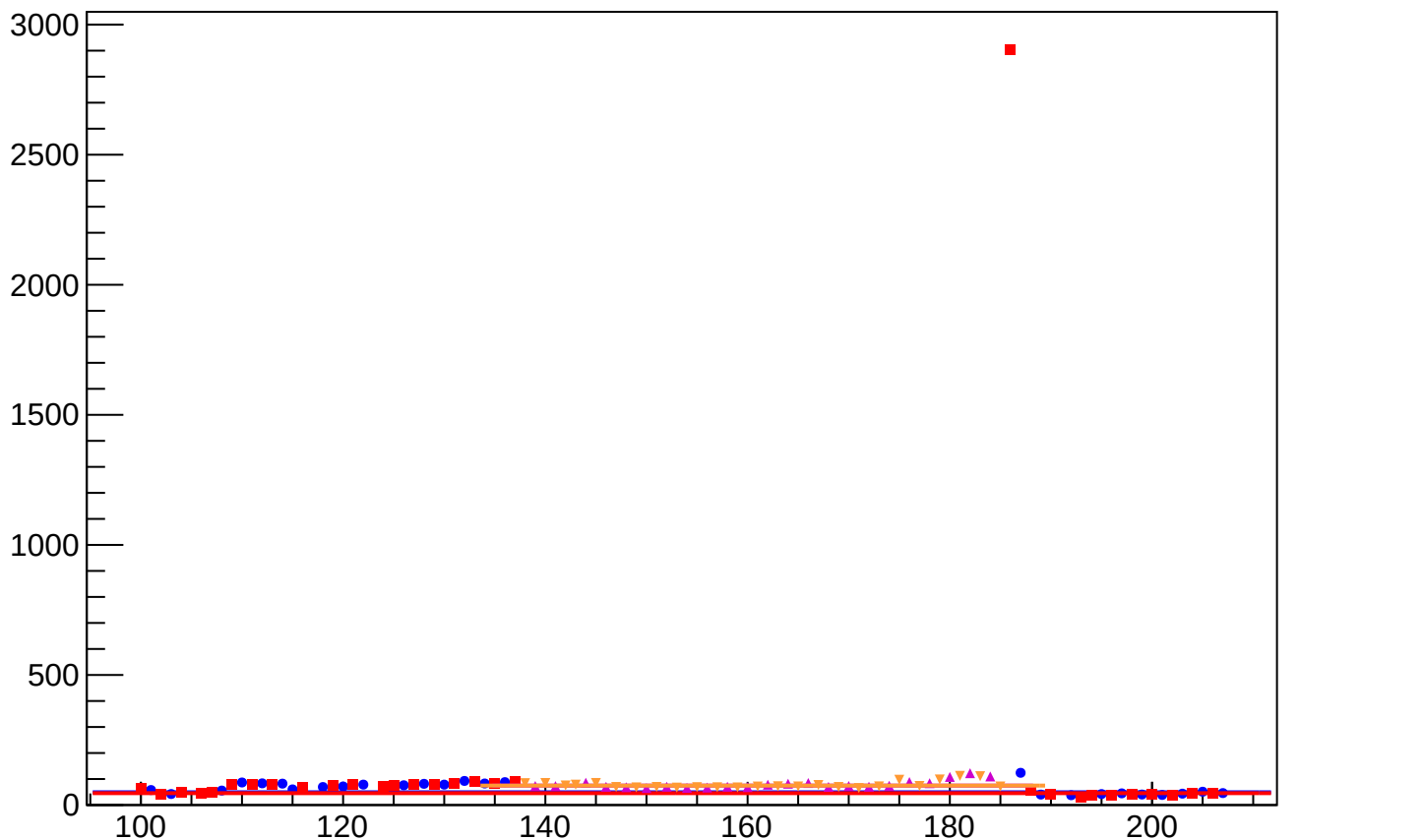
Left In:  $0.038 \pm 0.018$   $\chi^2/\text{NDF}$ : 21.6/22

+ sign  $-0.010 \pm 0.011$   $\chi^2/\text{NDF}$ : 46.3/50

All:  $0.001 \pm 0.007$   $\chi^2/\text{NDF}$ : 109.8/103

- sign  $0.011 \pm 0.010$   $\chi^2/\text{NDF}$ : 61.5/52

# asym\_usr\_overload\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 49.021+/-0.010  $\chi^2$ /NDF: 2248571.6/25

Left Out: 74.749+/-0.012  $\chi^2$ /NDF: 744366.0/24

Right Out: 45.672+/-0.009  $\chi^2$ /NDF: 3611315.6/29

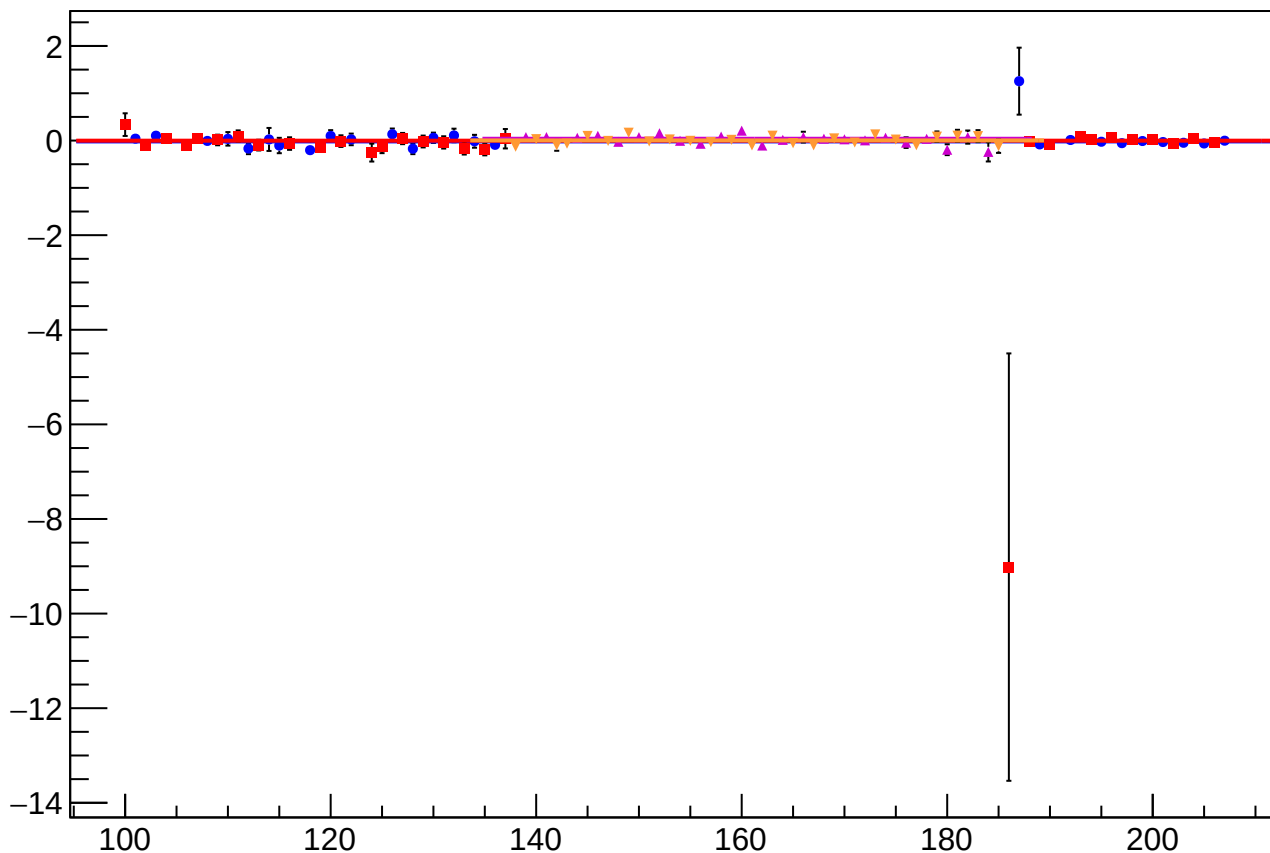
Left In: 74.601+/-0.013  $\chi^2$ /NDF: 713751.1/22

+ sign 58.766+/-0.008  $\chi^2$ /NDF: 5701295.9/50

All: 56.880+/-0.005  $\chi^2$ /NDF: 13664564.1/103

- sign 55.161+/-0.007  $\chi^2$ /NDF: 7845019.0/52

asym\_usr\_overload\_cor\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.018 \pm 0.014$   $\chi^2/\text{NDF}$ : 23.9/25

Left Out:  $0.003 \pm 0.017$   $\chi^2/\text{NDF}$ : 21.5/24

Right Out:  $-0.002 \pm 0.012$   $\chi^2/\text{NDF}$ : 36.4/29

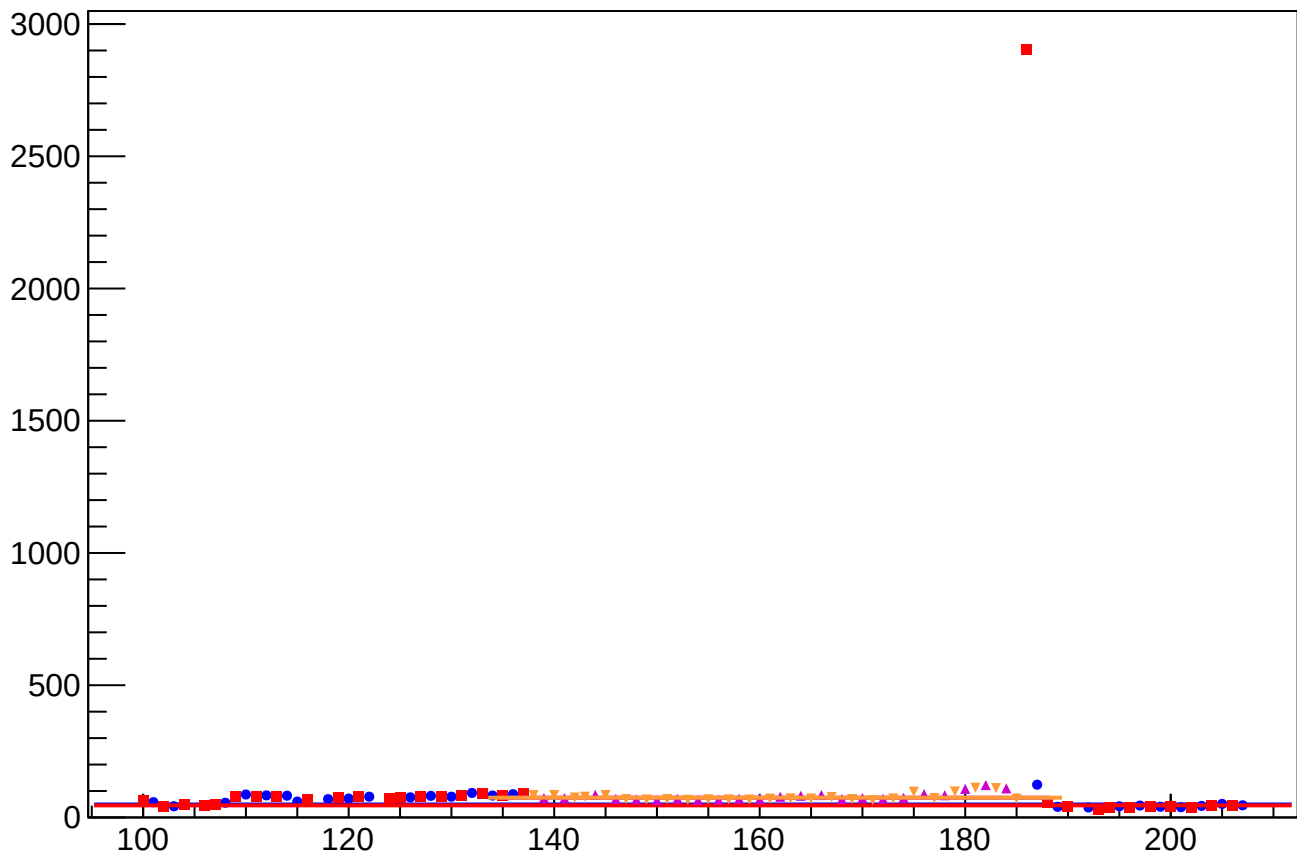
Left In:  $0.038 \pm 0.018$   $\chi^2/\text{NDF}$ : 21.6/22

+ sign  $-0.010 \pm 0.011$   $\chi^2/\text{NDF}$ : 46.3/50

All:  $0.001 \pm 0.007$   $\chi^2/\text{NDF}$ : 109.8/103

- sign  $0.011 \pm 0.010$   $\chi^2/\text{NDF}$ : 61.5/52

asym\_usr\_overload\_cor\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 49.021+/-0.010  $\chi^2/\text{NDF}$ : 2248571.6/25

Left Out: 74.749+/-0.012  $\chi^2/\text{NDF}$ : 744366.0/24

Right Out: 45.672+/-0.009  $\chi^2/\text{NDF}$ : 3611315.6/29

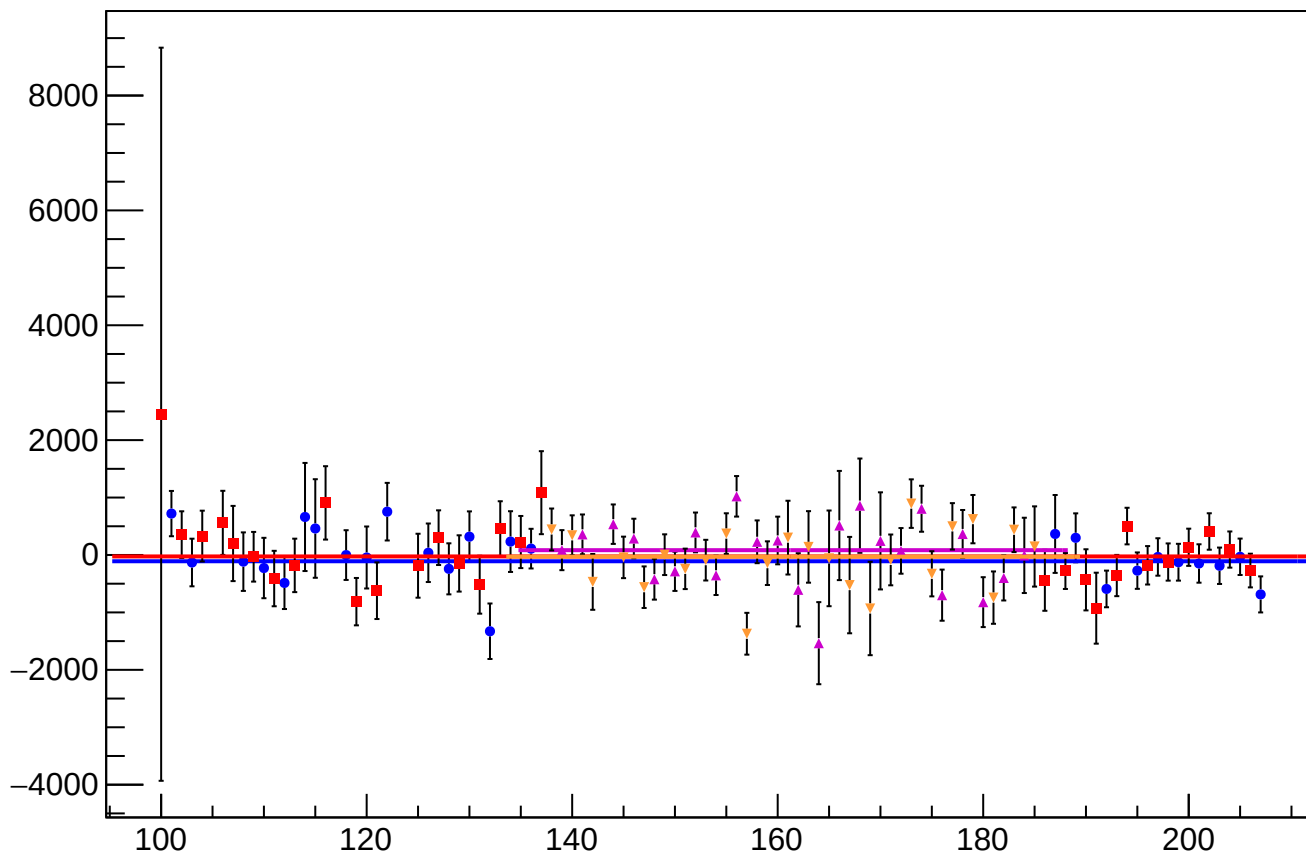
Left In: 74.601+/-0.013  $\chi^2/\text{NDF}$ : 713751.1/22

+ sign 58.766+/-0.008  $\chi^2/\text{NDF}$ : 5701295.9/50

All: 56.880+/-0.005  $\chi^2/\text{NDF}$ : 13664564.1/103

- sign 55.161+/-0.007  $\chi^2/\text{NDF}$ : 7845019.0/52

# asym\_dsl\_mean vs Slug



Right In:  $-109.330 \pm 80.135$   $\chi^2/\text{NDF}$ : 25.2/25

Left Out:  $-29.346 \pm 86.530$   $\chi^2/\text{NDF}$ : 36.6/23

Right Out:  $-25.367 \pm 77.271$   $\chi^2/\text{NDF}$ : 27.0/29

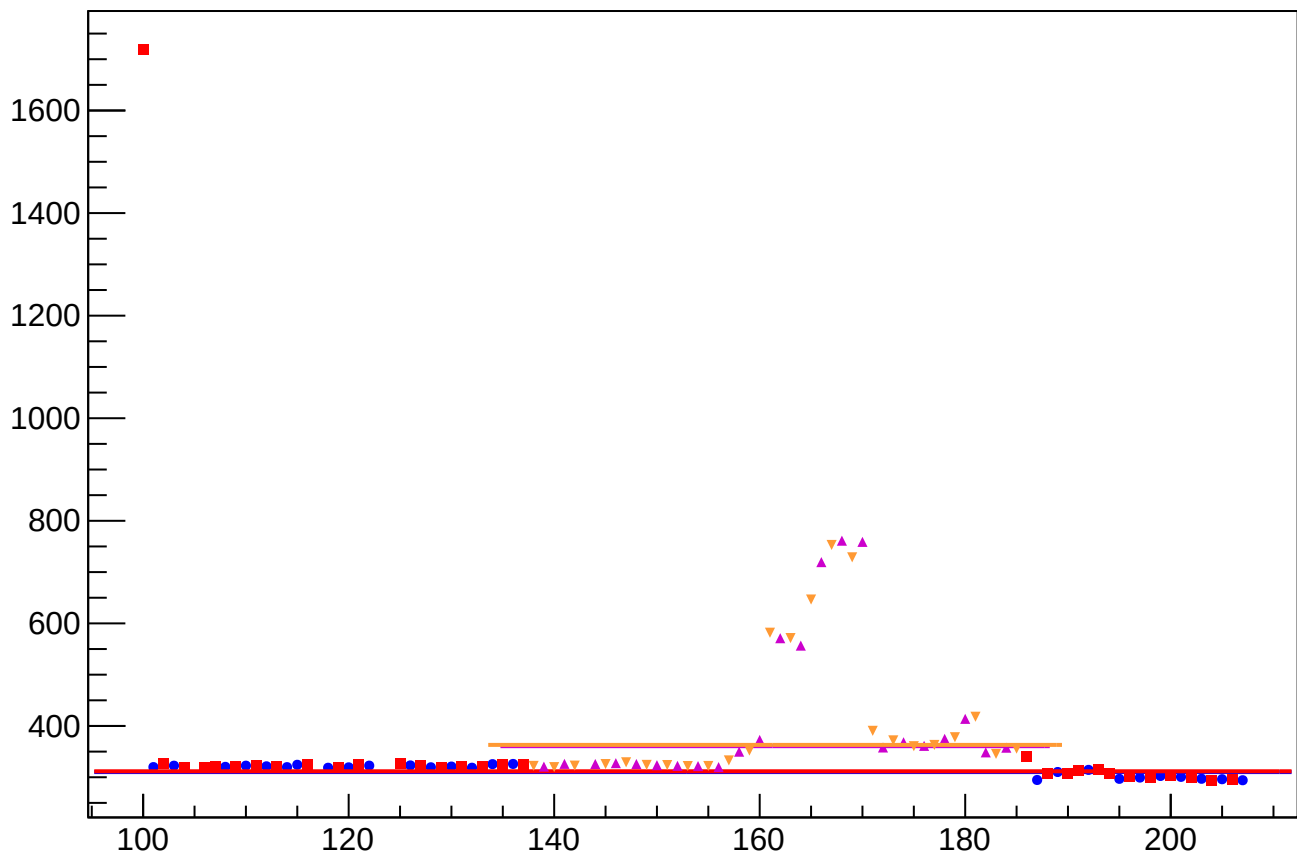
Left In:  $83.719 \pm 86.476$   $\chi^2/\text{NDF}$ : 35.8/22

+ sign  $-72.402 \pm 58.795$   $\chi^2/\text{NDF}$ : 62.2/49

All:  $-23.705 \pm 41.152$   $\chi^2/\text{NDF}$ : 127.2/102

- sign  $23.064 \pm 57.619$   $\chi^2/\text{NDF}$ : 63.7/52

# asym\_dsl\_rms vs Slug



Right In: 310.071 $\pm$ 0.057  $\chi^2$ /NDF: 41499.4/25

Left Out: 363.079 $\pm$ 0.061  $\chi^2$ /NDF:1795570.0/23

Right Out: 311.647 $\pm$ 0.055  $\chi^2$ /NDF: 142782.4/29

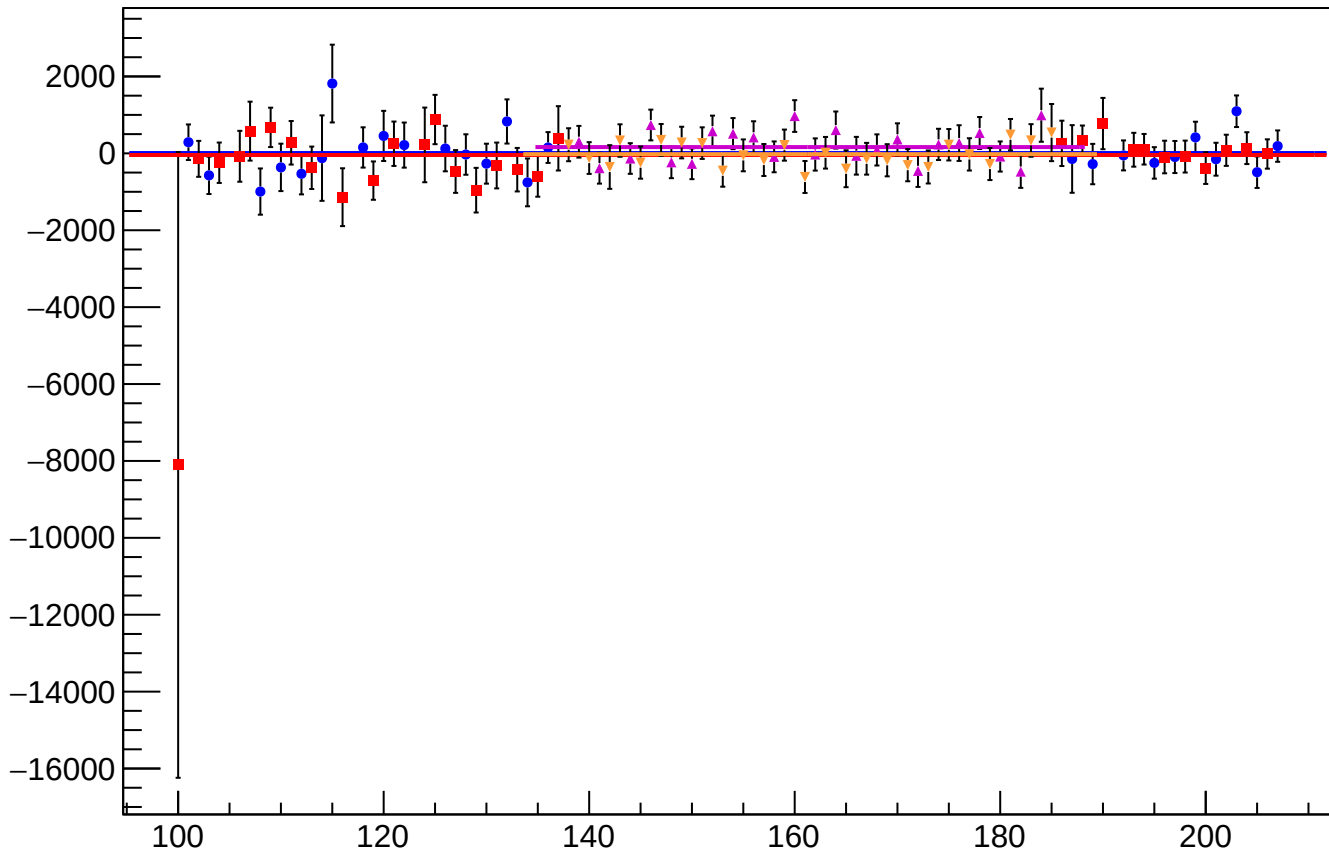
Left In: 360.585 $\pm$ 0.061  $\chi^2$ /NDF:1817691.0/22

+ sign 334.544 $\pm$ 0.042  $\chi^2$ /NDF: 2241107.2/49

All: 333.947 $\pm$ 0.029  $\chi^2$ /NDF: 4558146.5/102

- sign 333.374 $\pm$ 0.041  $\chi^2$ /NDF: 2316635.0/52

# asym\_dsr\_mean vs Slug



Right In:  $7.772 \pm 98.487$   $\chi^2/\text{NDF}$ : 24.5/25

Left Out:  $-21.061 \pm 85.620$   $\chi^2/\text{NDF}$ : 12.6/24

Right Out:  $-43.348 \pm 94.905$   $\chi^2/\text{NDF}$ : 19.8/29

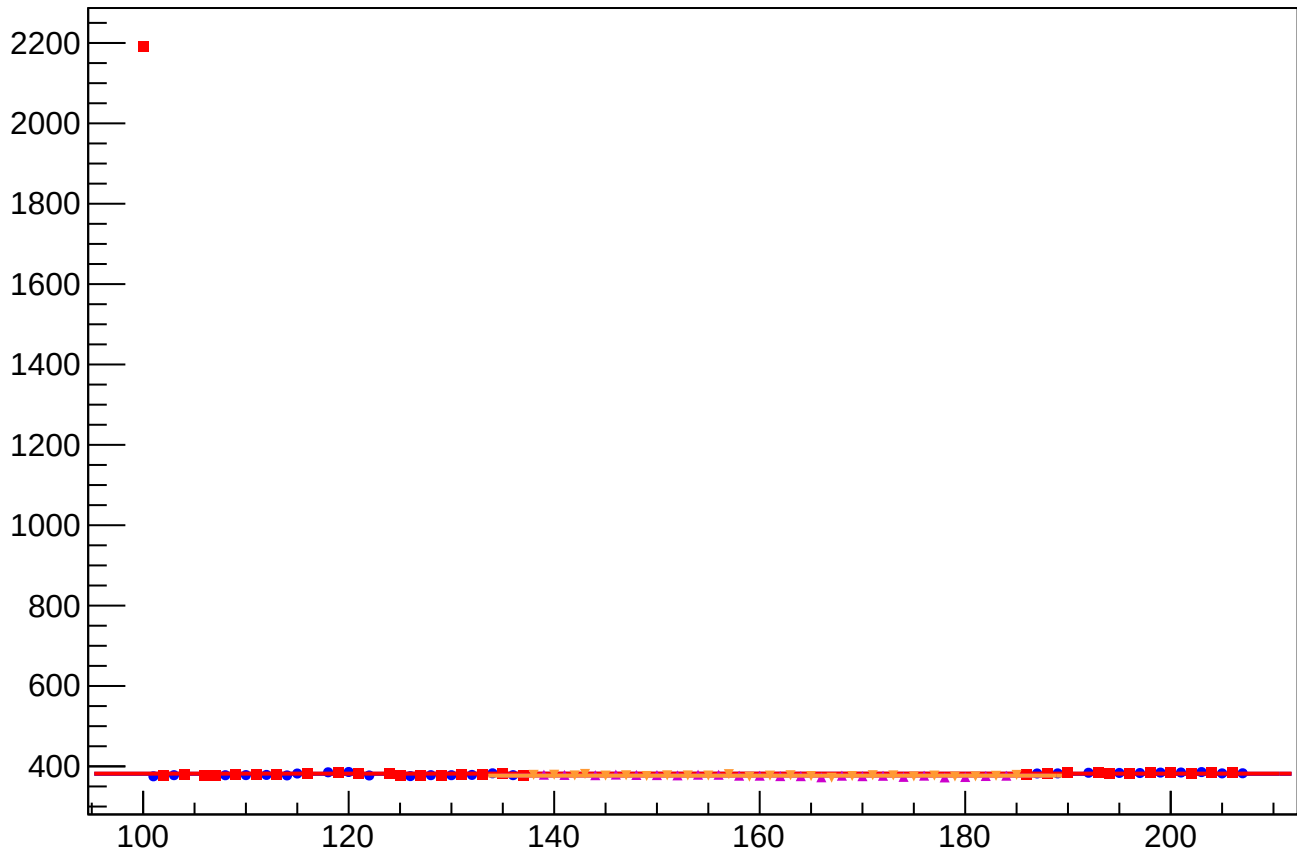
Left In:  $162.992 \pm 87.991$   $\chi^2/\text{NDF}$ : 21.8/22

+ sign  $-8.650 \pm 64.616$   $\chi^2/\text{NDF}$ : 37.1/50

All:  $29.534 \pm 45.658$   $\chi^2/\text{NDF}$ : 81.9/103

- sign  $67.610 \pm 64.525$   $\chi^2/\text{NDF}$ : 44.1/52

# asym\_dsr\_rms vs Slug



Right In: 381.384 $\pm$ 0.070  $\chi^2$ /NDF: 2173.4/25

Left Out: 376.906 $\pm$ 0.061  $\chi^2$ /NDF:1058.3/24

Right Out: 381.919 $\pm$ 0.067  $\chi^2$ /NDF: 100665.9/29

Left In: 376.846 $\pm$ 0.062  $\chi^2$ /NDF:1074.1/22

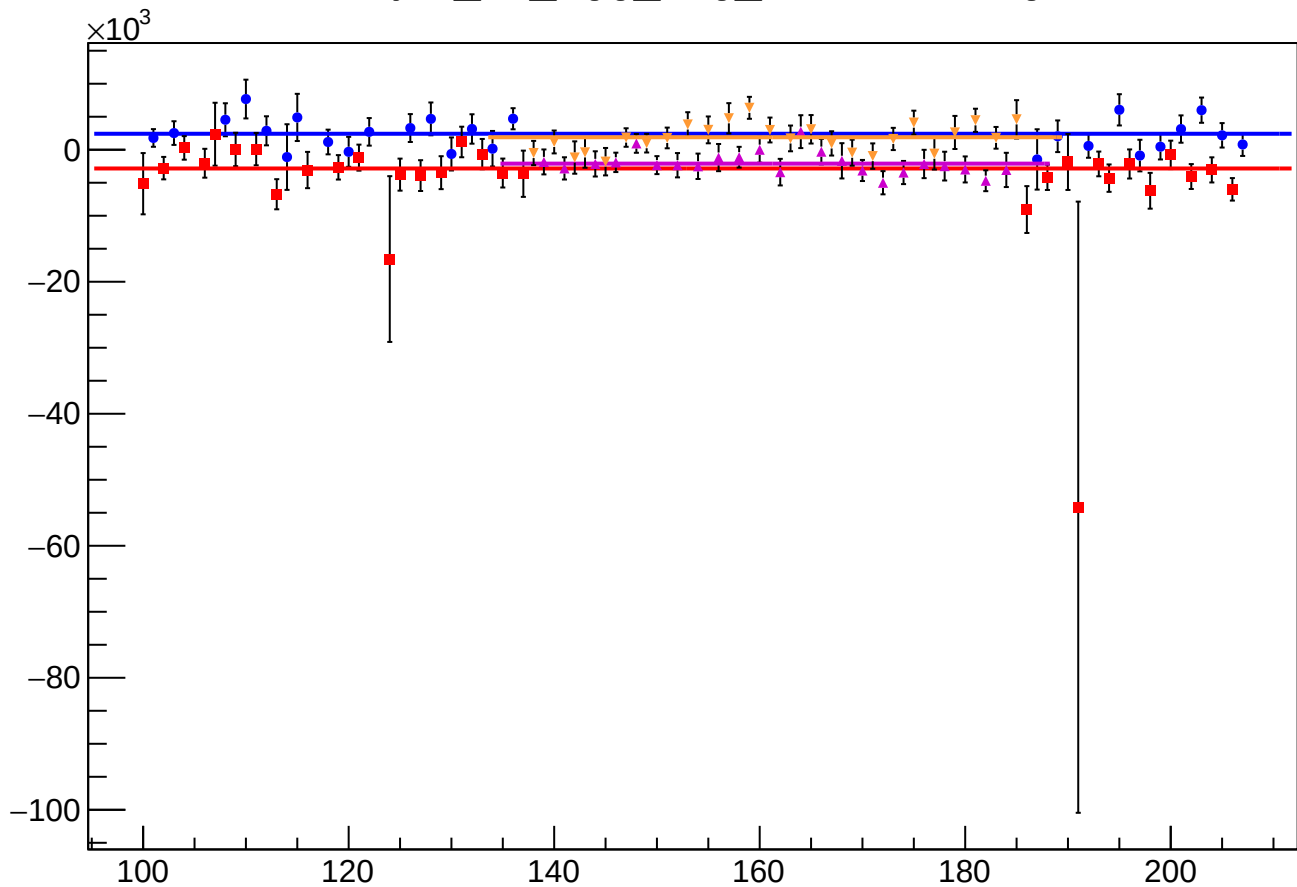
+ sign 378.834 $\pm$ 0.046  $\chi^2$ /NDF: 5587.0/50

All: 379.013 $\pm$ 0.032  $\chi^2$ /NDF: 110430.4/103

- sign 379.191 $\pm$ 0.046  $\chi^2$ /NDF: 104812.8/52



# asym\_us\_agg\_avg\_mean vs Slug



Right In:  $2419.467 \pm 417.460$   $\chi^2/\text{NDF}$ : 24.0/25

Left Out:  $1891.201 \pm 375.290$   $\chi^2/\text{NDF}$ : 28.4/24

Right Out:  $-2840.979 \pm 417.980$   $\chi^2/\text{NDF}$ : 28.6/30

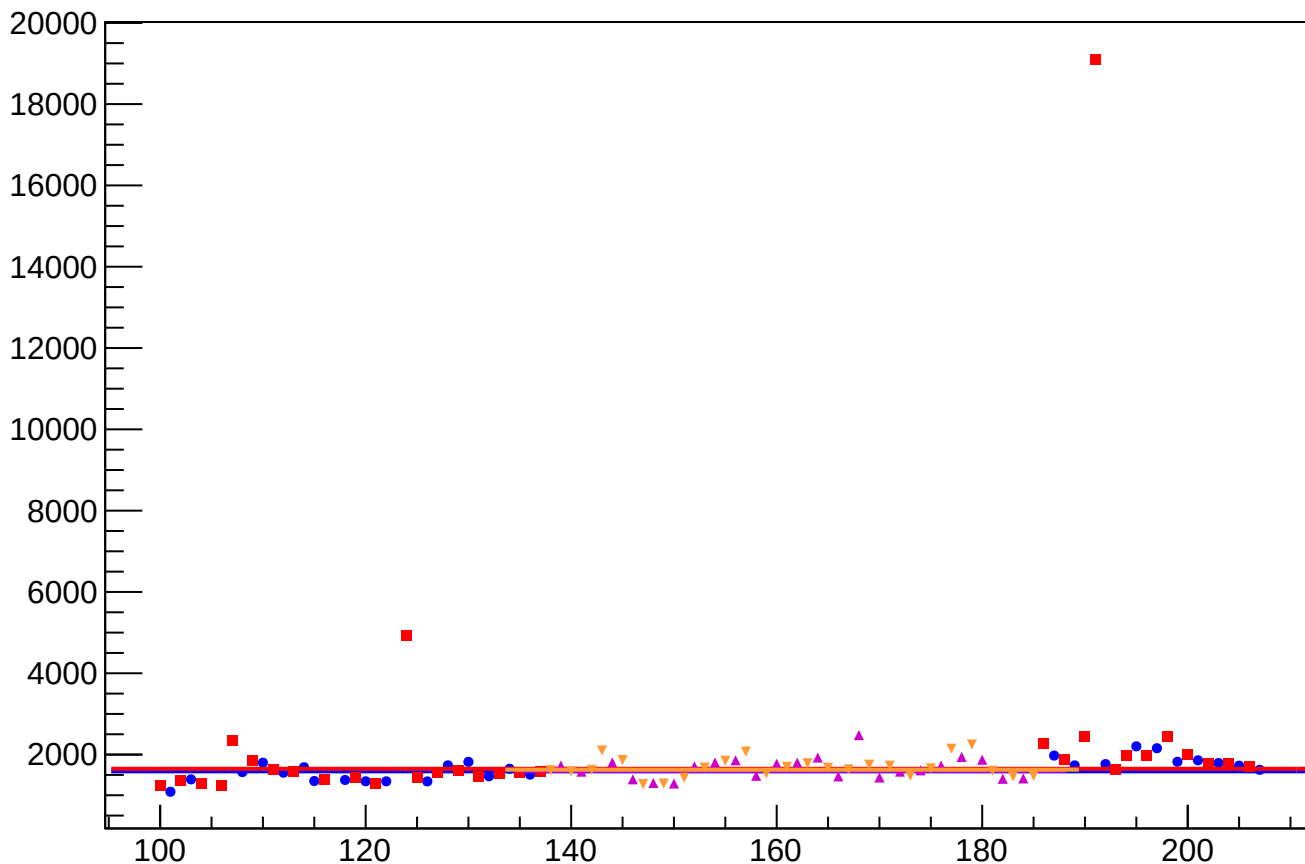
Left In:  $-2105.415 \pm 379.051$   $\chi^2/\text{NDF}$ : 18.6/22

+ sign  $2127.312 \pm 279.092$   $\chi^2/\text{NDF}$ : 53.3/50

All:  $-141.209 \pm 197.944$   $\chi^2/\text{NDF}$ : 235.0/104

- sign  $-2437.356 \pm 280.786$   $\chi^2/\text{NDF}$ : 48.9/53

# asym\_us\_agg\_avg\_rms vs Slug



Right In: 1587.367+/-0.295  $\chi^2/\text{NDF}$ : 854585.7/25

Left Out: 1628.479+/-0.265  $\chi^2/\text{NDF}$ : 779094.7/24

Right Out: 1650.871+/-0.296  $\chi^2/\text{NDF}$ : 1358899.2/30

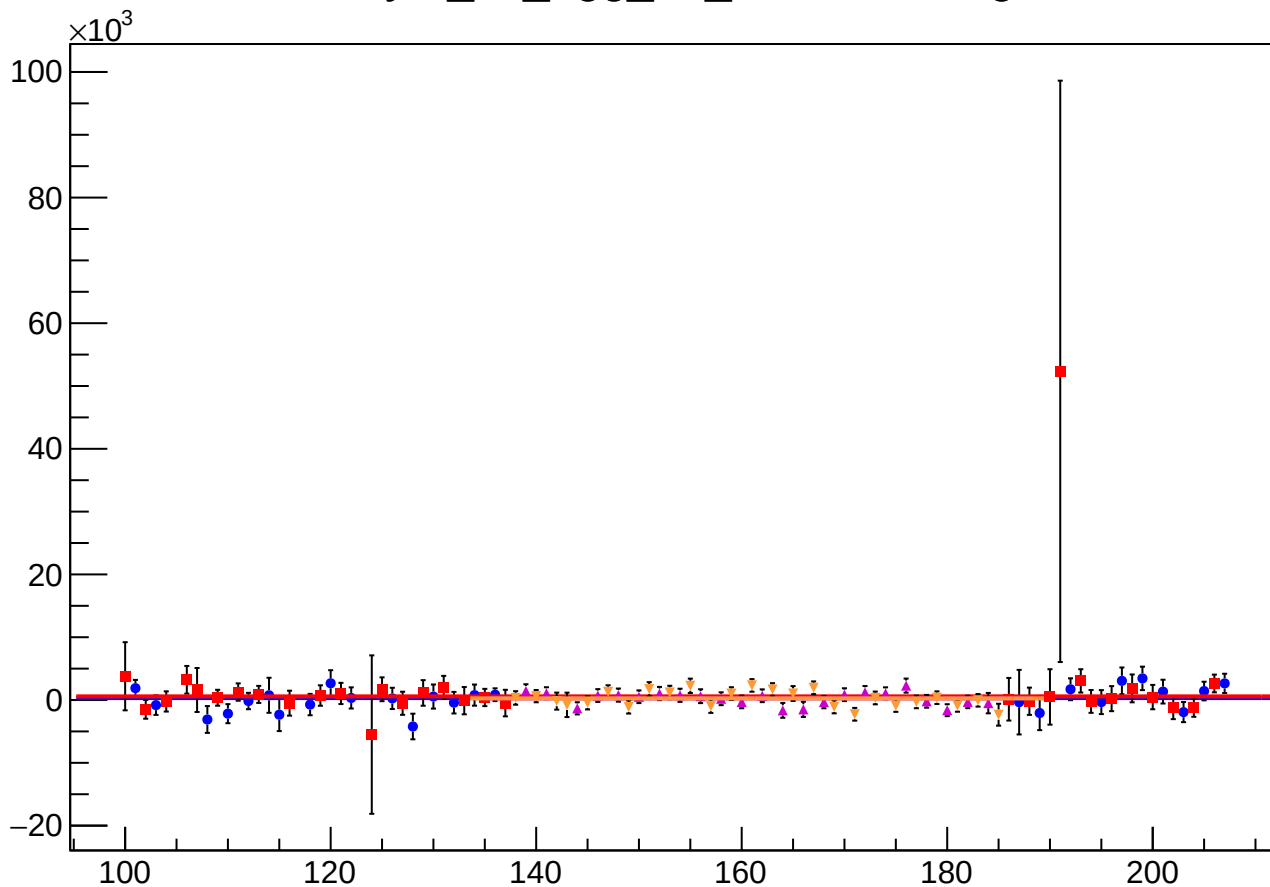
Left In: 1601.496+/-0.268  $\chi^2/\text{NDF}$ : 793722.6/22

+ sign 1610.104+/-0.197  $\chi^2/\text{NDF}$ : 1644407.7/50

All: 1616.899+/-0.140  $\chi^2/\text{NDF}$ : 3814729.5/100

- sign 1623.778+/-0.199  $\chi^2/\text{NDF}$ : 2167935.8/53

# asym\_us\_agg\_dd\_mean vs Slug



Right In: 307.109 $\pm$ 337.480  $\chi^2$ /NDF: 26.6/25

Left Out: 262.383 $\pm$ 214.962  $\chi^2$ /NDF:33.9/24

Right Out: 583.032 $\pm$ 336.940  $\chi^2$ /NDF: 14.9/30

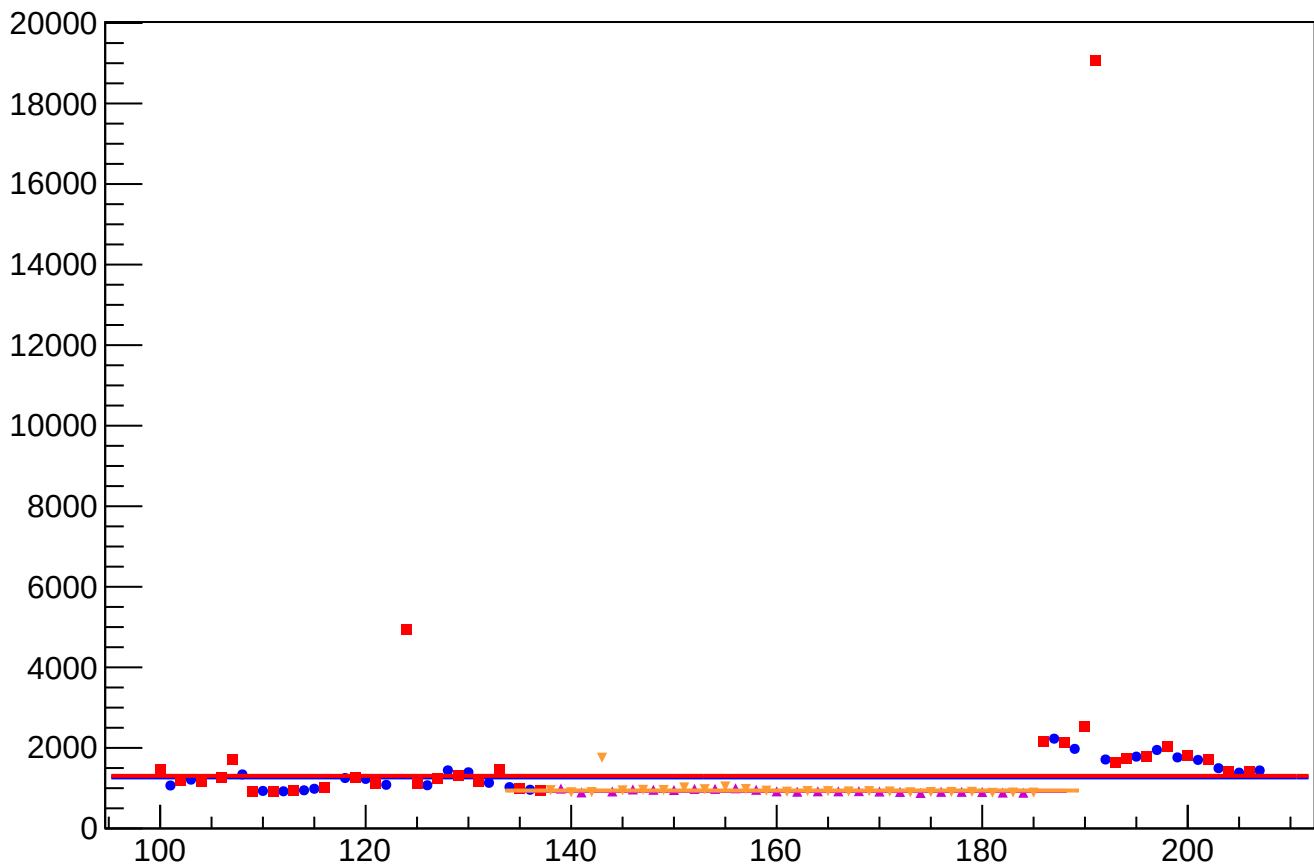
Left In: 267.059 $\pm$ 217.685  $\chi^2$ /NDF:21.4/22

+ sign 275.292 $\pm$ 181.306  $\chi^2$ /NDF: 60.5/50

All: 317.341 $\pm$ 128.743  $\chi^2$ /NDF: 97.5/104

- sign 360.108 $\pm$ 182.845  $\chi^2$ /NDF: 36.8/53

# asym\_us\_agg\_dd\_rms vs Slug



Right In: 1267.490+/-0.239  $\chi^2/\text{NDF}$ : 1659310.9/25

Left Out: 941.013+/-0.152  $\chi^2/\text{NDF}$ : 417710.2/24

Right Out: 1306.054+/-0.238  $\chi^2/\text{NDF}$ : 2632952.9/30

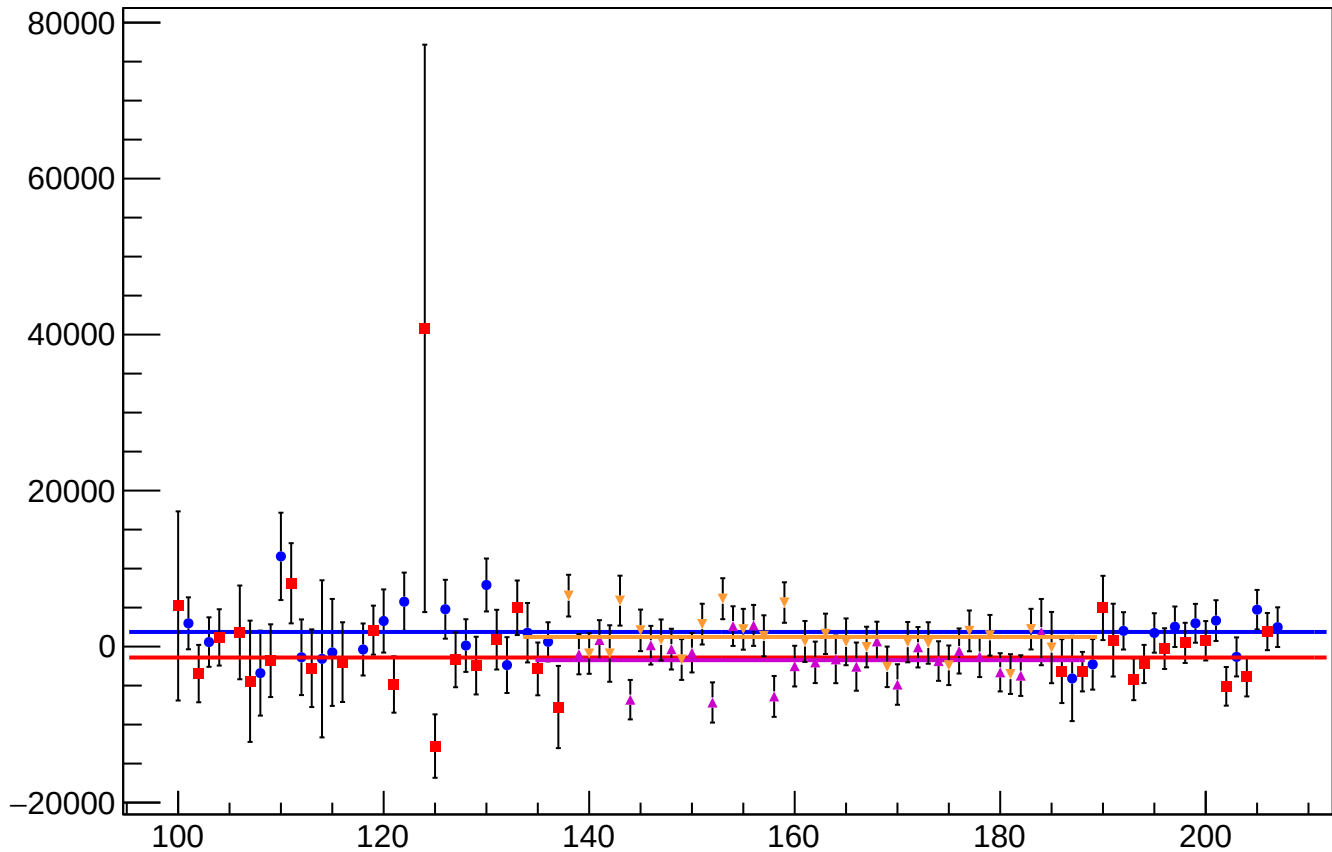
Left In: 931.562+/-0.154  $\chi^2/\text{NDF}$ : 48916.1/22

+ sign 1035.242+/-0.128  $\chi^2/\text{NDF}$ : 3408515.0/50

All: 1038.515+/-0.091  $\chi^2/\text{NDF}$ : 7834779.4/10

- sign 1041.843+/-0.129  $\chi^2/\text{NDF}$ : 4424949.7/53

# reg\_asym\_atl1\_mean vs Slug



Right In: 1875.705 $\pm$ 633.909  $\chi^2/\text{NDF}$ : 18.6/25

Left Out: 1234.728 $\pm$ 541.289  $\chi^2/\text{NDF}$ : 23.9/24

Right Out: -1401.871 $\pm$ 619.418  $\chi^2/\text{NDF}$ : 32.9/30

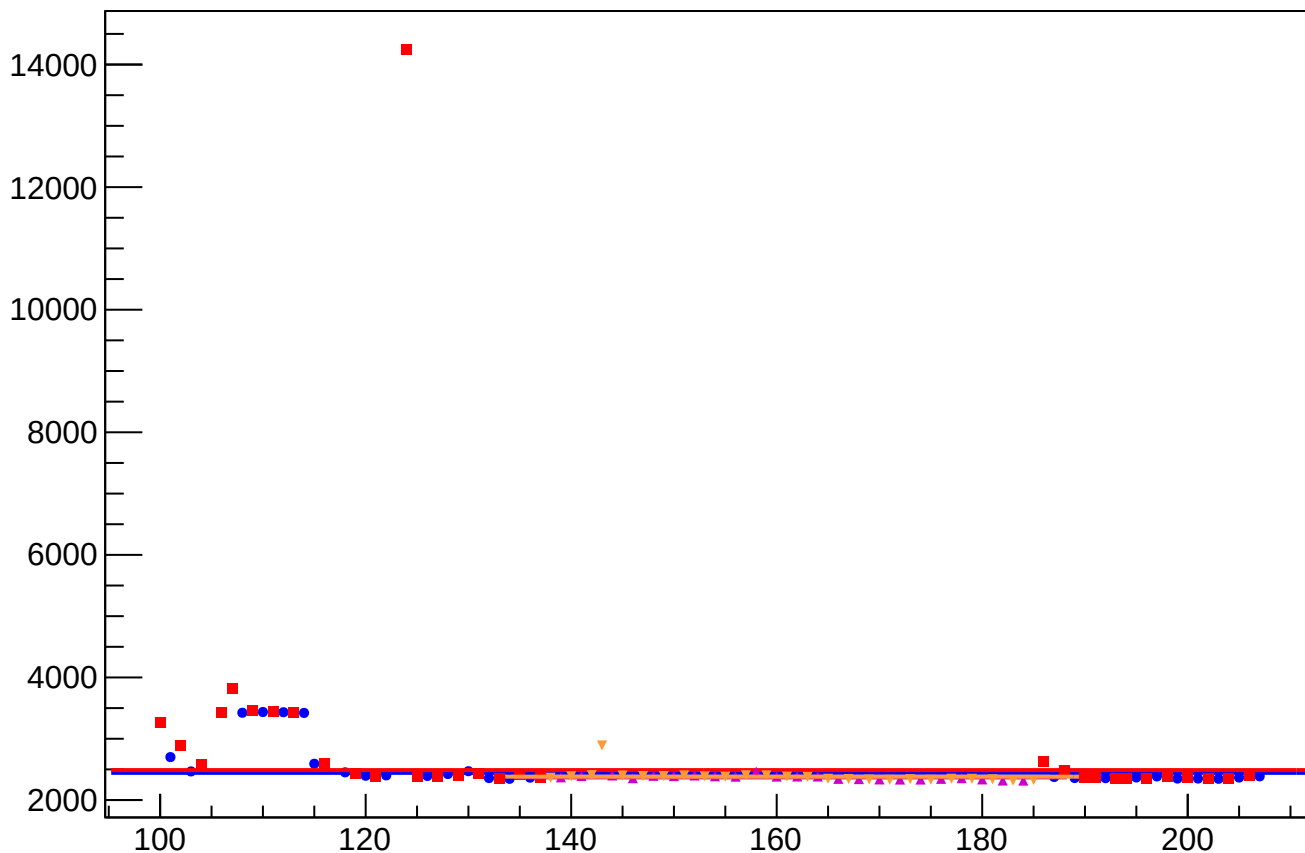
Left In: -1741.730 $\pm$ 553.254  $\chi^2/\text{NDF}$ : 24.4/22

+ sign 1505.012 $\pm$ 411.638  $\chi^2/\text{NDF}$ : 43.1/50

All: -39.241 $\pm$ 291.421  $\chi^2/\text{NDF}$ : 128.7/104

- sign -1590.915 $\pm$ 412.626  $\chi^2/\text{NDF}$ : 57.4/53

# reg\_asym\_atl1\_rms vs Slug



Right In: 2443.738 $\pm$ 0.448  $\chi^2$ /NDF: 266256.2/25

Left Out: 2381.235 $\pm$ 0.383  $\chi^2$ /NDF: 57623.2/24

Right Out: 2488.504 $\pm$ 0.438  $\chi^2$ /NDF: 633512.6/30

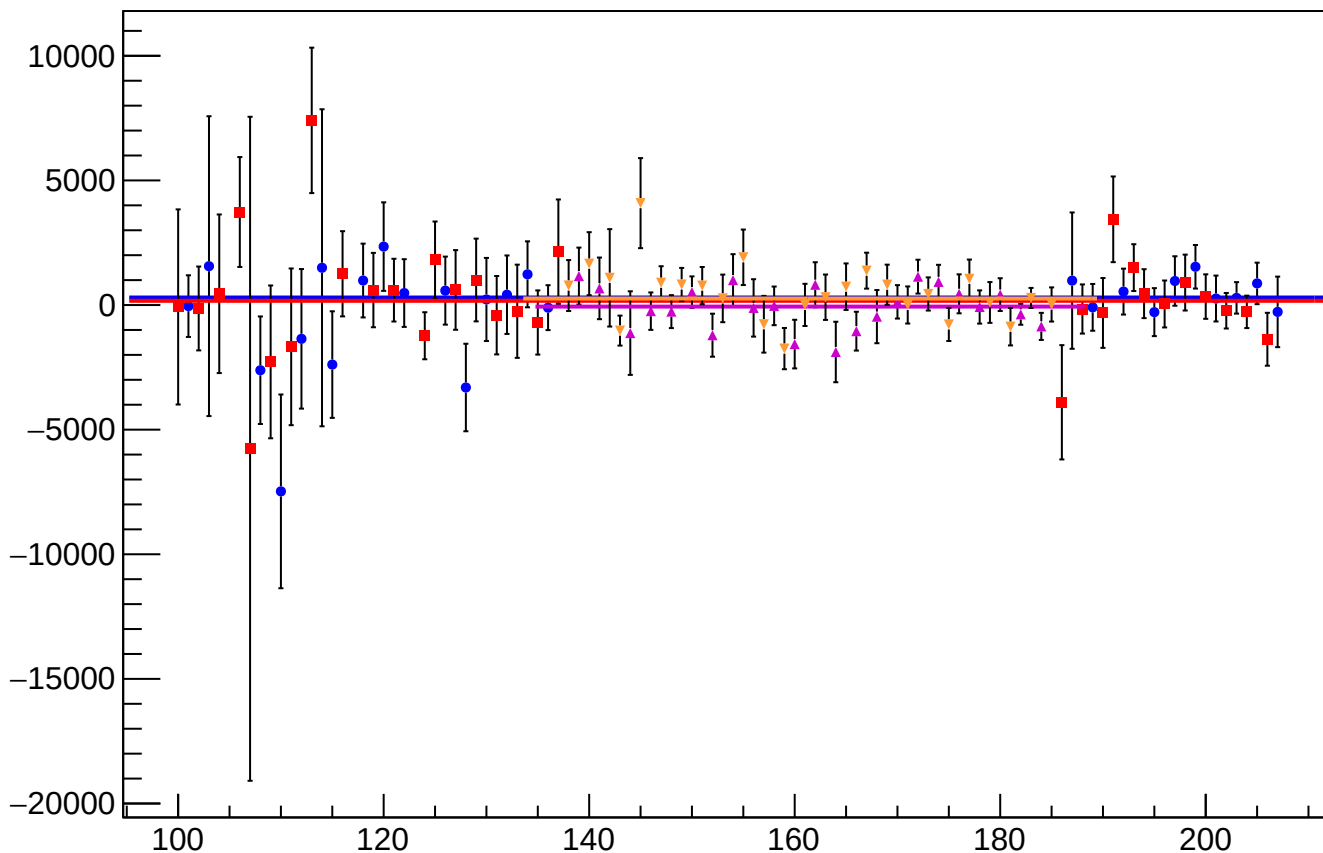
Left In: 2369.384 $\pm$ 0.391  $\chi^2$ /NDF: 7034.0/22

+ sign 2407.591 $\pm$ 0.291  $\chi^2$ /NDF: 335124.1/50

All: 2414.900 $\pm$ 0.206  $\chi^2$ /NDF: 1018078.0/10

- sign 2422.245 $\pm$ 0.292  $\chi^2$ /NDF: 681689.7/53

# asym\_atl1\_reg\_correction\_mean vs Slug



Right In: 301.801+/-238.660  $\chi^2/\text{NDF}$ : 18.2/25

Left Out: 261.877+/-154.009  $\chi^2/\text{NDF}$ : 31.1/24

Right Out: 169.929+/-229.853  $\chi^2/\text{NDF}$ : 28.3/30

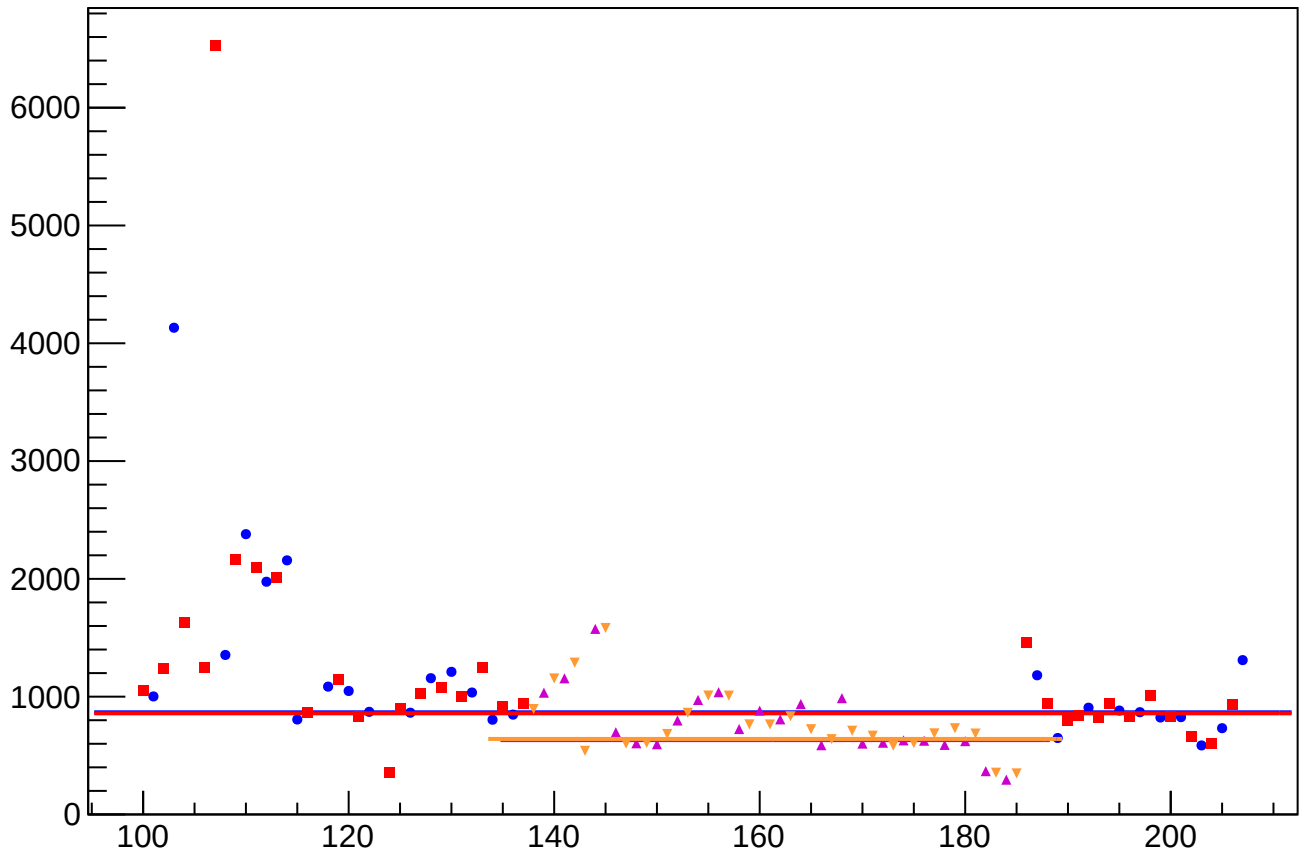
Left In: -61.960+/-157.394  $\chi^2/\text{NDF}$ : 22.0/22

+ sign 273.614+/-129.405  $\chi^2/\text{NDF}$ : 49.3/50

All: 143.303+/-91.665  $\chi^2/\text{NDF}$ : 102.3/104

- sign 12.063+/-129.865  $\chi^2/\text{NDF}$ : 50.9/53

# asym\_atl1\_reg\_correction\_rms vs Slug



Right In:  $867.086 \pm 0.169$   $\chi^2/\text{NDF}$ : 2439705.7/25

Left Out:  $641.156 \pm 0.109$   $\chi^2/\text{NDF}$ : 3474860.7/24

Right Out:  $858.442 \pm 0.163$   $\chi^2/\text{NDF}$ : 3133378.6/30

Left In:  $631.199 \pm 0.111$   $\chi^2/\text{NDF}$ : 3975438.6/22

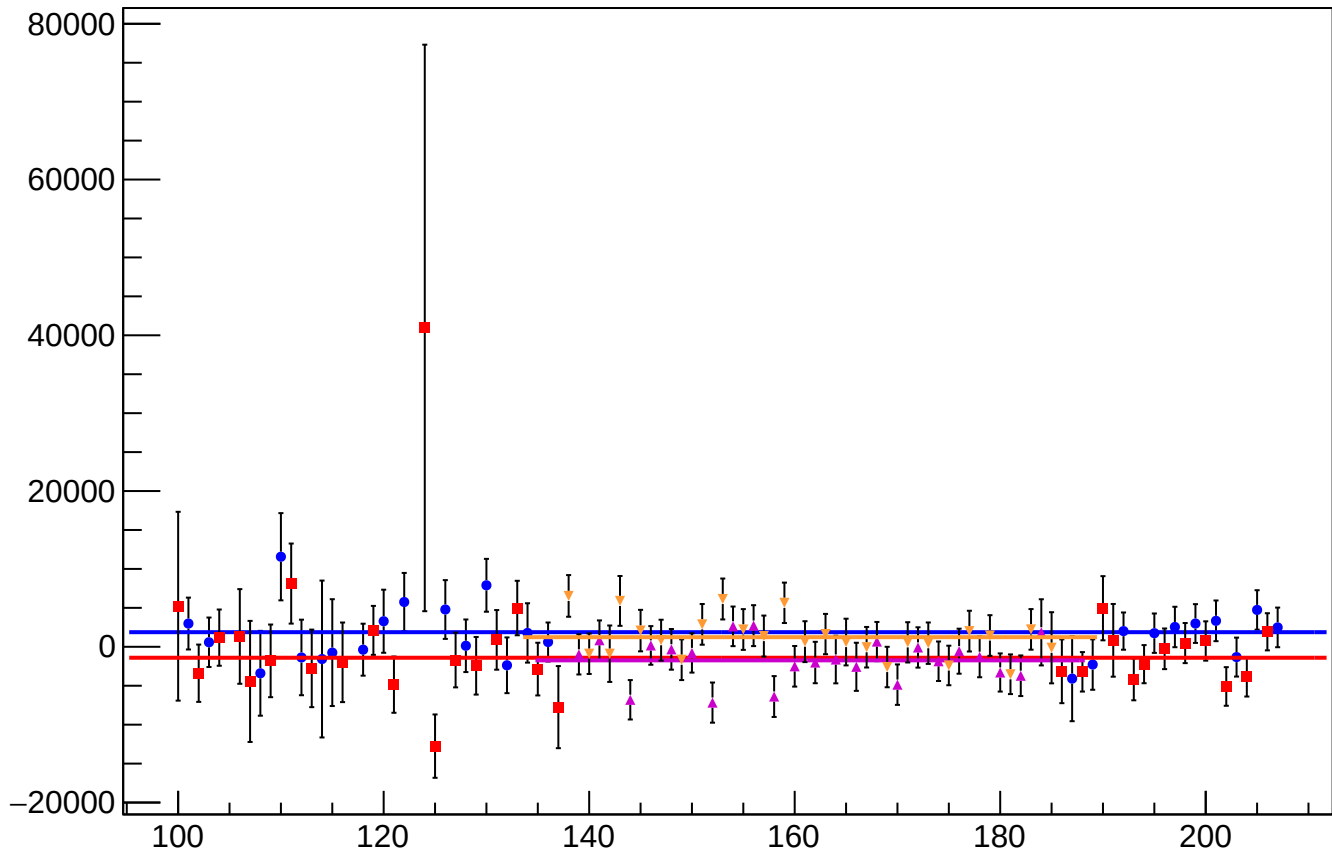
+ sign  $707.579 \pm 0.092$   $\chi^2/\text{NDF}$ : 7179952.5/50

All:  $705.665 \pm 0.065$   $\chi^2/\text{NDF}$ : 15620477.6/10

- sign  $703.738 \pm 0.092$   $\chi^2/\text{NDF}$ : 8439647.4/53



# cor\_asym\_atl1\_mean vs Slug



Right In:  $1875.950 \pm 633.909$   $\chi^2/\text{NDF}$ : 18.6/25

Left Out:  $1234.706 \pm 541.289$   $\chi^2/\text{NDF}$ : 23.9/24

Right Out:  $-1405.712 \pm 619.492$   $\chi^2/\text{NDF}$ : 32.8/30

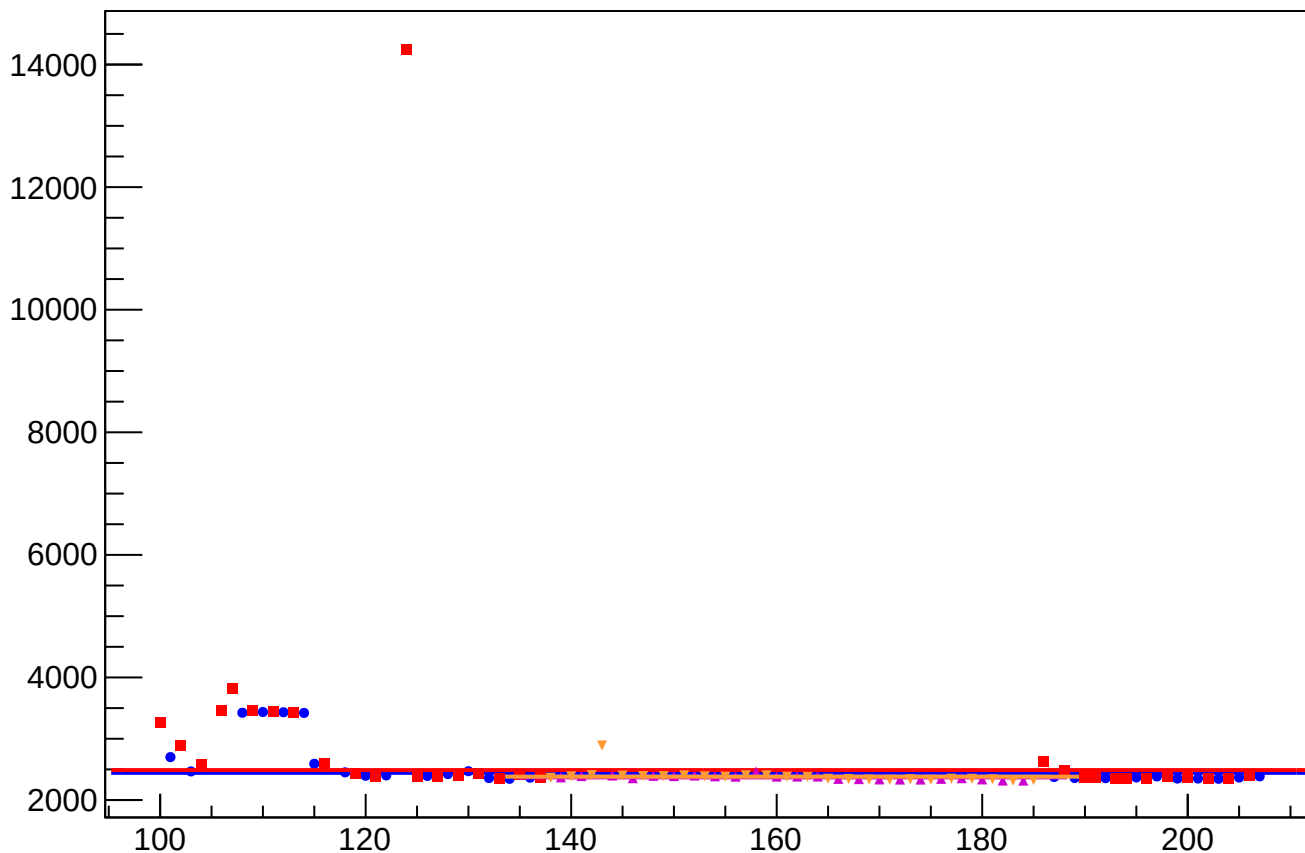
Left In:  $-1741.784 \pm 553.254$   $\chi^2/\text{NDF}$ : 24.4/22

+ sign  $1505.102 \pm 411.638$   $\chi^2/\text{NDF}$ : 43.1/50

All:  $-39.988 \pm 291.429$   $\chi^2/\text{NDF}$ : 128.6/104

- sign  $-1592.670 \pm 412.648$   $\chi^2/\text{NDF}$ : 57.3/53

# cor\_asym\_atl1\_rms vs Slug



Right In: 2443.738 $\pm$ 0.448  $\chi^2$ /NDF: 266256.2/25

Left Out: 2381.235 $\pm$ 0.383  $\chi^2$ /NDF: 57623.2/24

Right Out: 2488.686 $\pm$ 0.438  $\chi^2$ /NDF: 636423.7/30

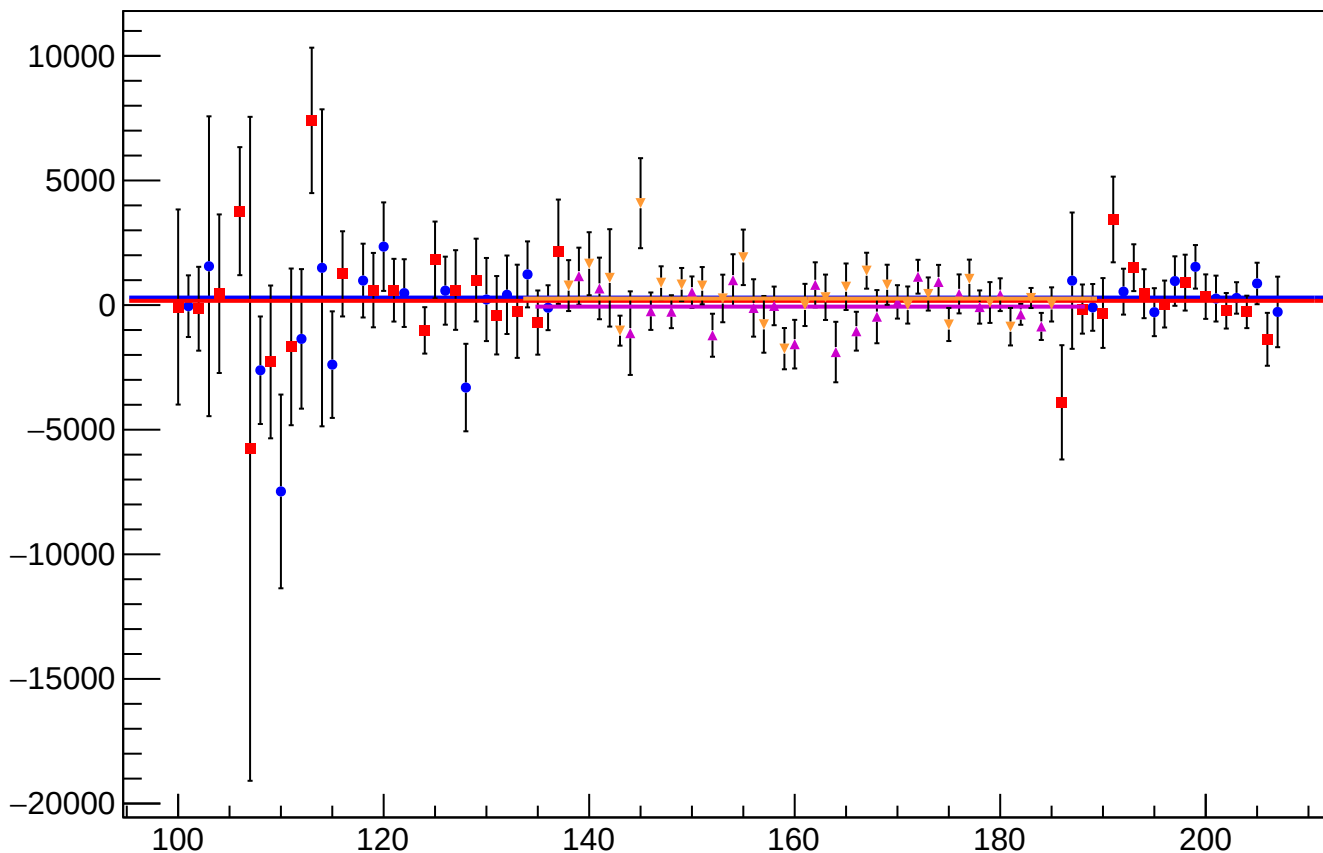
Left In: 2369.384 $\pm$ 0.391  $\chi^2$ /NDF: 7034.0/22

+ sign 2407.591 $\pm$ 0.291  $\chi^2$ /NDF: 335124.1/50

All: 2414.937 $\pm$ 0.206  $\chi^2$ /NDF: 1021122.0/10

- sign 2422.318 $\pm$ 0.292  $\chi^2$ /NDF: 684721.0/53

# asym\_atl1\_cor\_correction\_mean vs Slug



Right In: 301.693 $\pm$ 238.659  $\chi^2$ /NDF: 18.2/25

Left Out: 262.160 $\pm$ 154.012  $\chi^2$ /NDF:31.1/24

Right Out: 170.801 $\pm$ 230.001  $\chi^2$ /NDF: 27.0/30

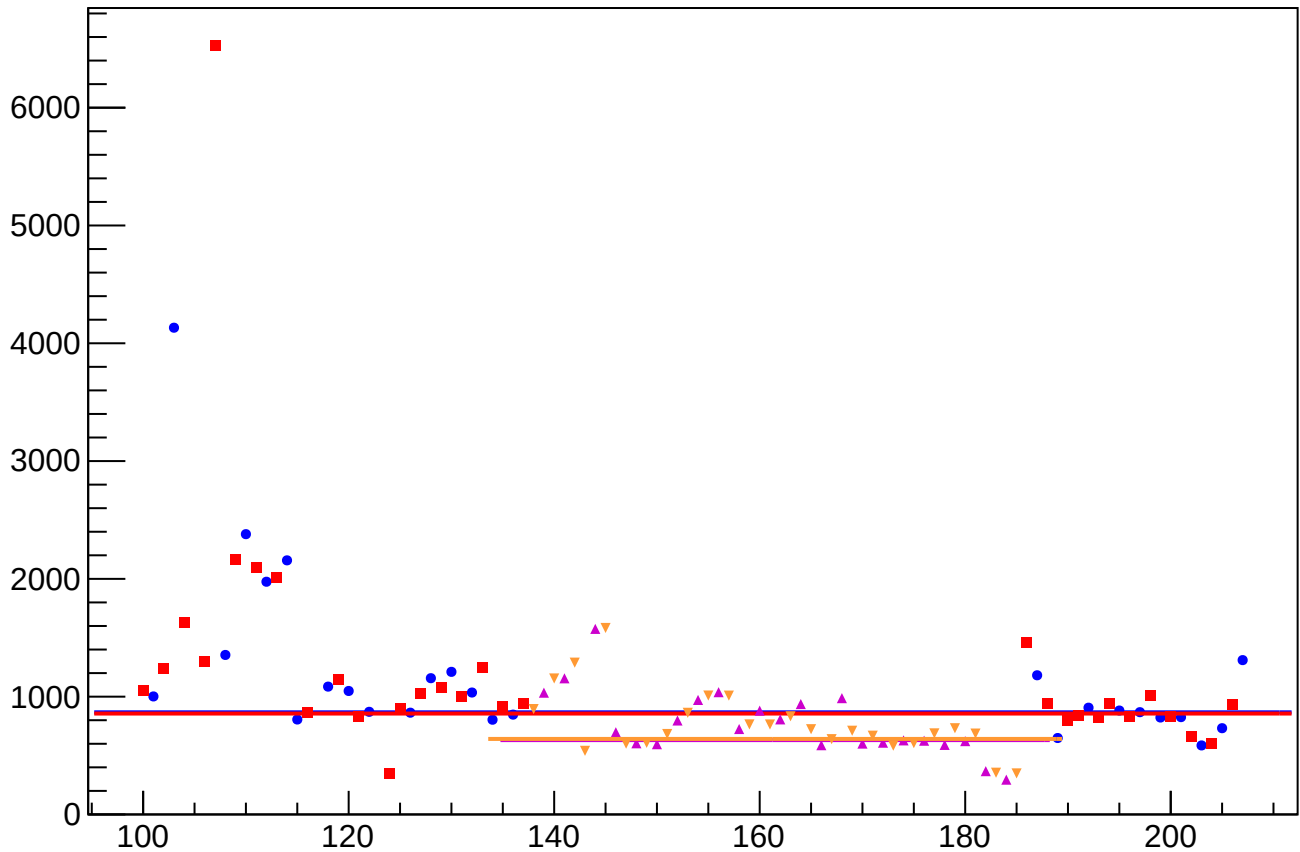
Left In: -61.976 $\pm$ 157.393  $\chi^2$ /NDF:22.0/22

+ sign 273.783 $\pm$ 129.406  $\chi^2$ /NDF: 49.3/50

All: 143.513 $\pm$ 91.675  $\chi^2$ /NDF: 101.1/104

- sign 12.265 $\pm$ 129.891  $\chi^2$ /NDF: 49.7/53

# asym\_atl1\_cor\_correction\_rms vs Slug



Right In:  $867.085 \pm 0.169$   $\chi^2/\text{NDF}$ : 2439726.3/25

Left Out:  $641.169 \pm 0.109$   $\chi^2/\text{NDF}$ : 3474589.1/24

Right Out:  $856.638 \pm 0.163$   $\chi^2/\text{NDF}$ : 3154776.8/30

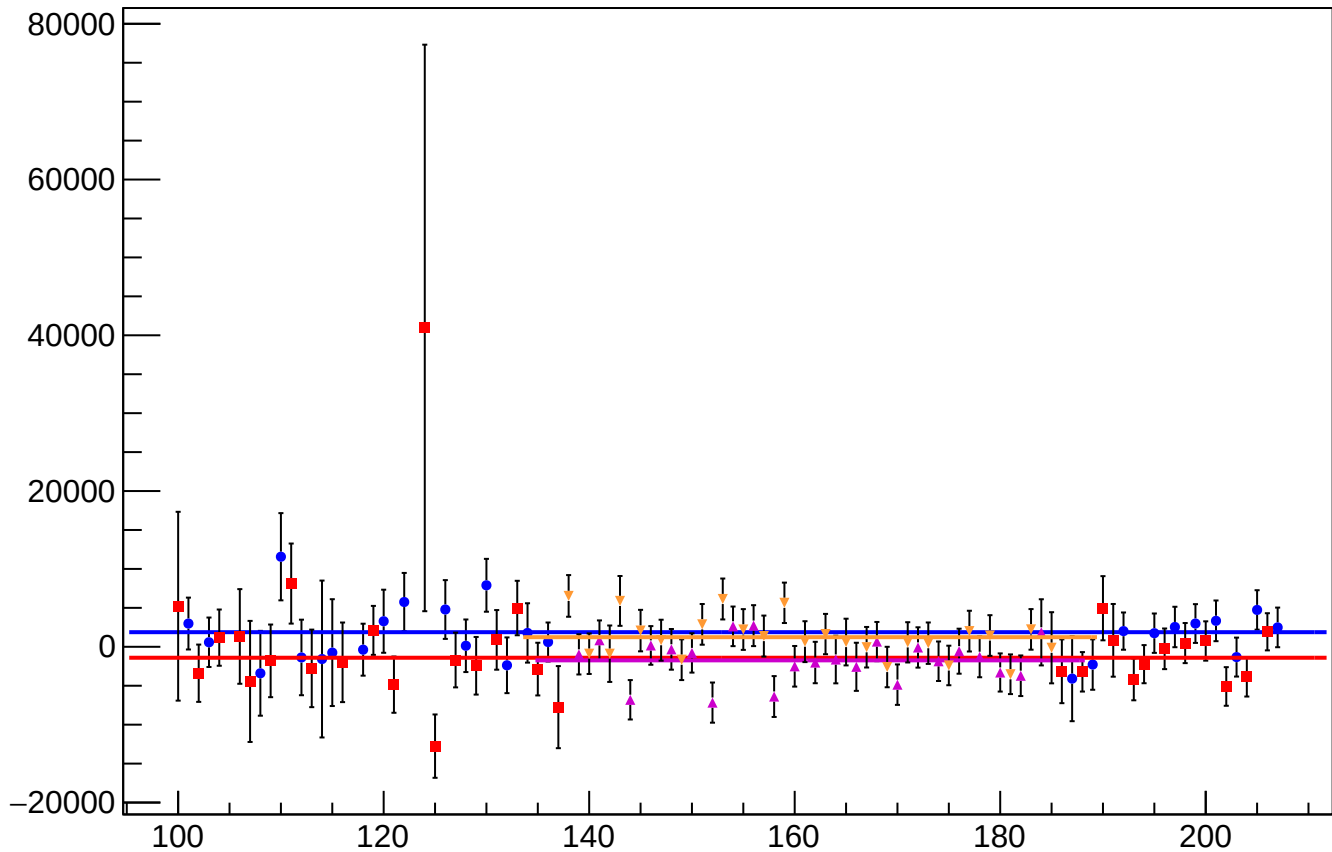
Left In:  $631.196 \pm 0.111$   $\chi^2/\text{NDF}$ : 3975563.1/22

+ sign  $707.589 \pm 0.092$   $\chi^2/\text{NDF}$ : 7179538.3/50

All:  $705.352 \pm 0.065$   $\chi^2/\text{NDF}$ : 15619742.9/100

- sign  $703.097 \pm 0.092$   $\chi^2/\text{NDF}$ : 8439004.2/53

# eigen\_cor\_asym\_atl1\_mean vs Slug



Right In:  $1875.950 \pm 633.909$   $\chi^2/\text{NDF}$ : 18.6/25

Left Out:  $1234.706 \pm 541.289$   $\chi^2/\text{NDF}$ : 23.9/24

Right Out:  $-1405.712 \pm 619.492$   $\chi^2/\text{NDF}$ : 32.8/30

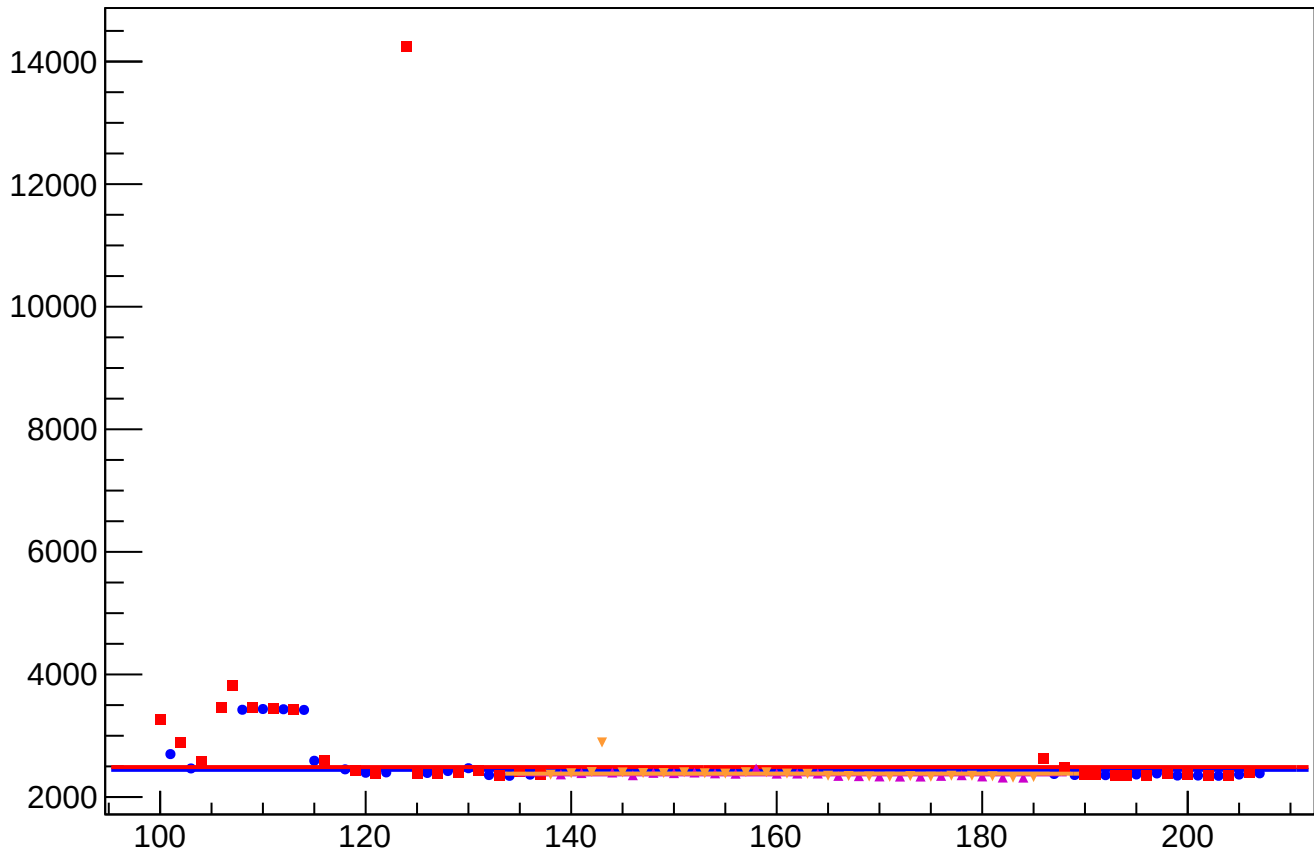
Left In:  $-1741.784 \pm 553.254$   $\chi^2/\text{NDF}$ : 24.4/22

+ sign  $1505.102 \pm 411.638$   $\chi^2/\text{NDF}$ : 43.1/50

All:  $-39.988 \pm 291.429$   $\chi^2/\text{NDF}$ : 128.6/104

- sign  $-1592.670 \pm 412.648$   $\chi^2/\text{NDF}$ : 57.3/53

# eigen\_cor\_asym\_atl1\_rms vs Slug



Right In: 2443.738 $\pm$ 0.448  $\chi^2$ /NDF: 266256.2/25

Left Out: 2381.235 $\pm$ 0.383  $\chi^2$ /NDF: 57623.2/24

Right Out: 2488.686 $\pm$ 0.438  $\chi^2$ /NDF: 636423.7/30

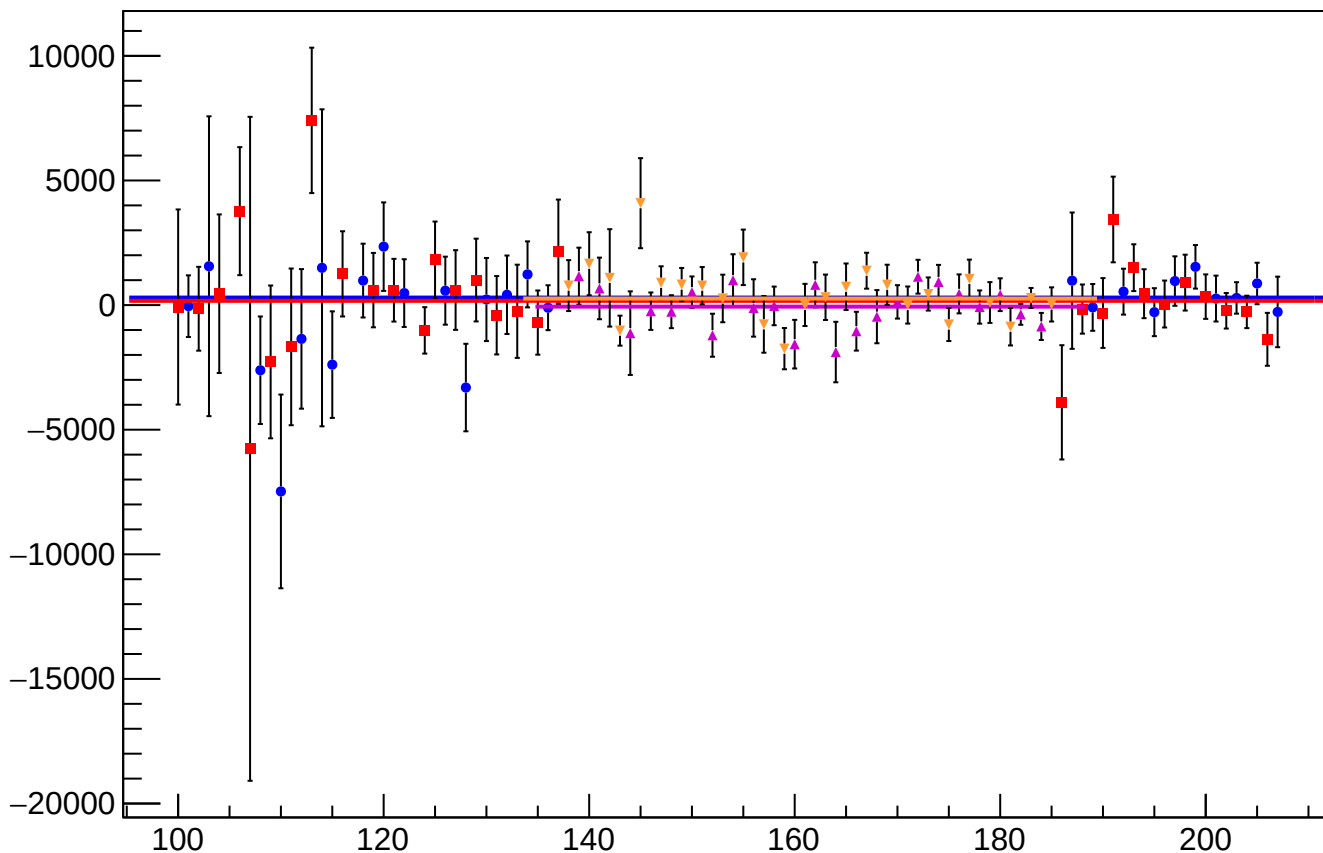
Left In: 2369.384 $\pm$ 0.391  $\chi^2$ /NDF: 7034.0/22

+ sign 2407.591 $\pm$ 0.291  $\chi^2$ /NDF: 335124.1/50

All: 2414.937 $\pm$ 0.206  $\chi^2$ /NDF: 1021122.0/10

- sign 2422.318 $\pm$ 0.292  $\chi^2$ /NDF: 684721.0/53

# asym\_atl1\_eigen\_cor\_correction\_mean vs Slug



Right In: 301.693 $\pm$ 238.659  $\chi^2$ /NDF: 18.2/25

Left Out: 262.160 $\pm$ 154.012  $\chi^2$ /NDF:31.1/24

Right Out: 170.801 $\pm$ 230.001  $\chi^2$ /NDF: 27.0/30

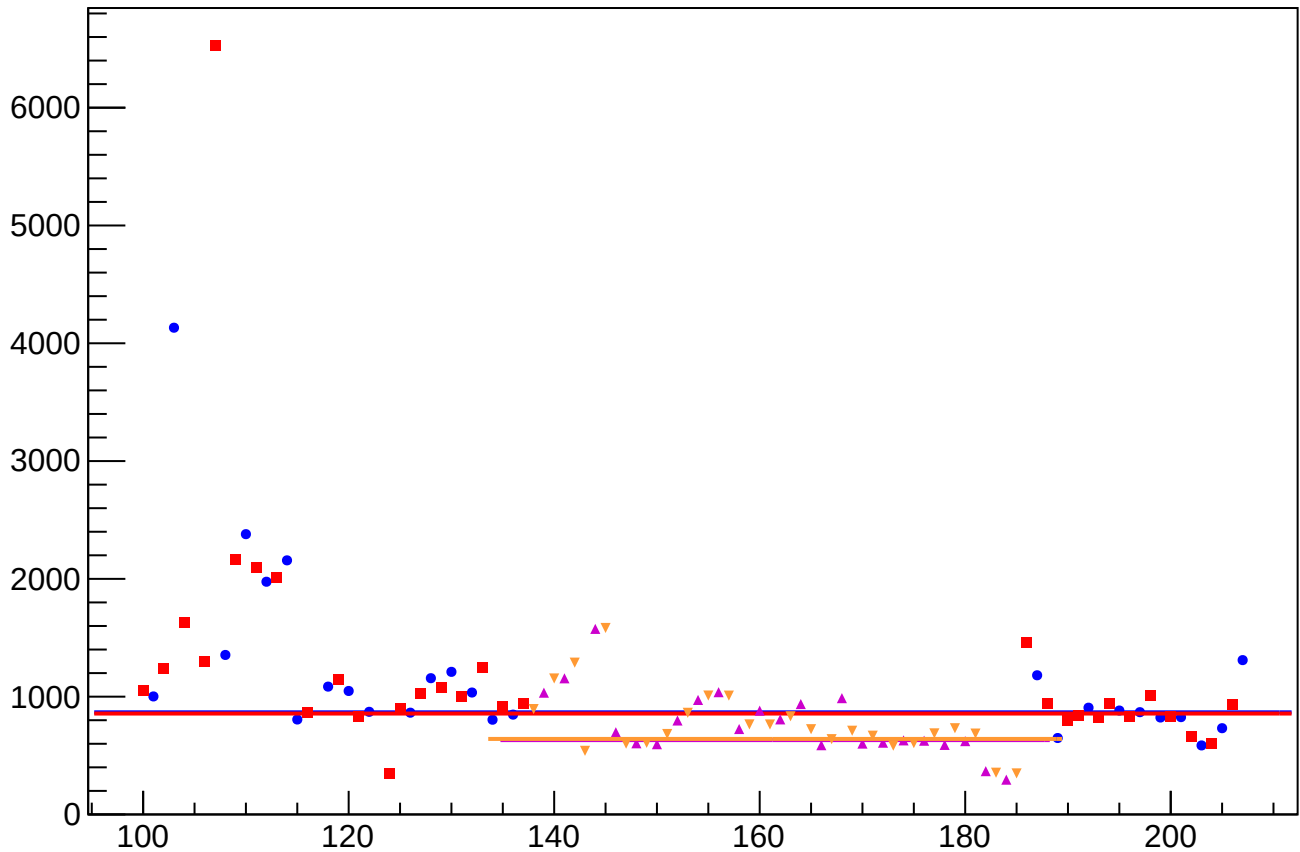
Left In: -61.976 $\pm$ 157.393  $\chi^2$ /NDF:22.0/22

+ sign 273.783 $\pm$ 129.406  $\chi^2$ /NDF: 49.3/50

All: 143.513 $\pm$ 91.675  $\chi^2$ /NDF: 101.1/104

- sign 12.265 $\pm$ 129.891  $\chi^2$ /NDF: 49.7/53

# asym\_atl1\_eigen\_cor\_correction\_rms vs Slug



Right In:  $867.085 \pm 0.169$   $\chi^2/\text{NDF}$ : 2439726.3/25

Left Out:  $641.169 \pm 0.109$   $\chi^2/\text{NDF}$ : 3474589.1/24

Right Out:  $856.638 \pm 0.163$   $\chi^2/\text{NDF}$ : 3154776.8/30

Left In:  $631.196 \pm 0.111$   $\chi^2/\text{NDF}$ : 3975563.1/22

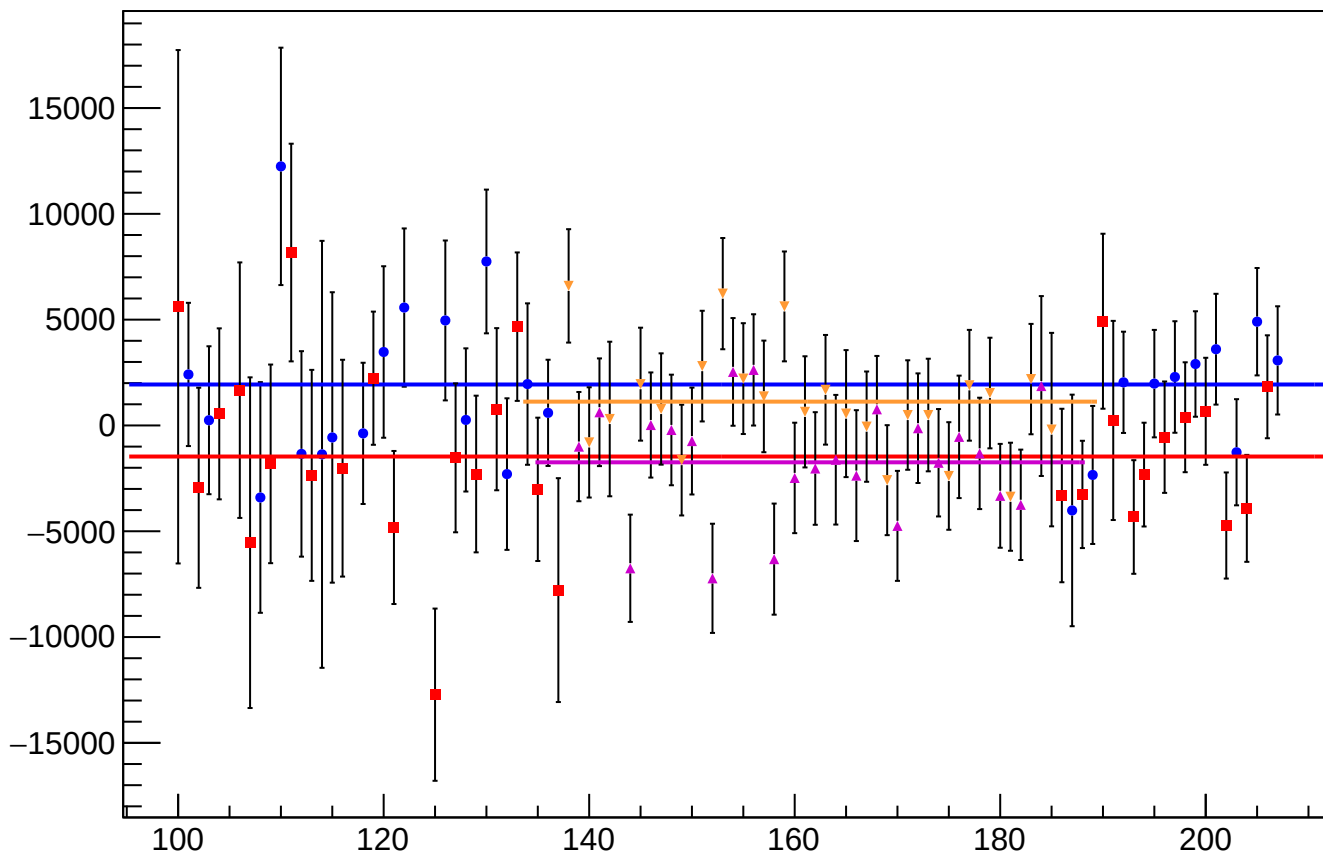
+ sign  $707.589 \pm 0.092$   $\chi^2/\text{NDF}$ : 7179538.3/50

All:  $705.352 \pm 0.065$   $\chi^2/\text{NDF}$ : 15619742.9/100

- sign  $703.097 \pm 0.092$   $\chi^2/\text{NDF}$ : 8439004.2/53



# dit\_asym\_atl1\_mean vs Slug



Right In:  $1935.564 \pm 638.225$   $\chi^2/\text{NDF}$ : 19.0/25

Left Out:  $1125.562 \pm 549.834$   $\chi^2/\text{NDF}$ : 21.2/23

Right Out:  $-1468.648 \pm 627.517$   $\chi^2/\text{NDF}$ : 30.1/29

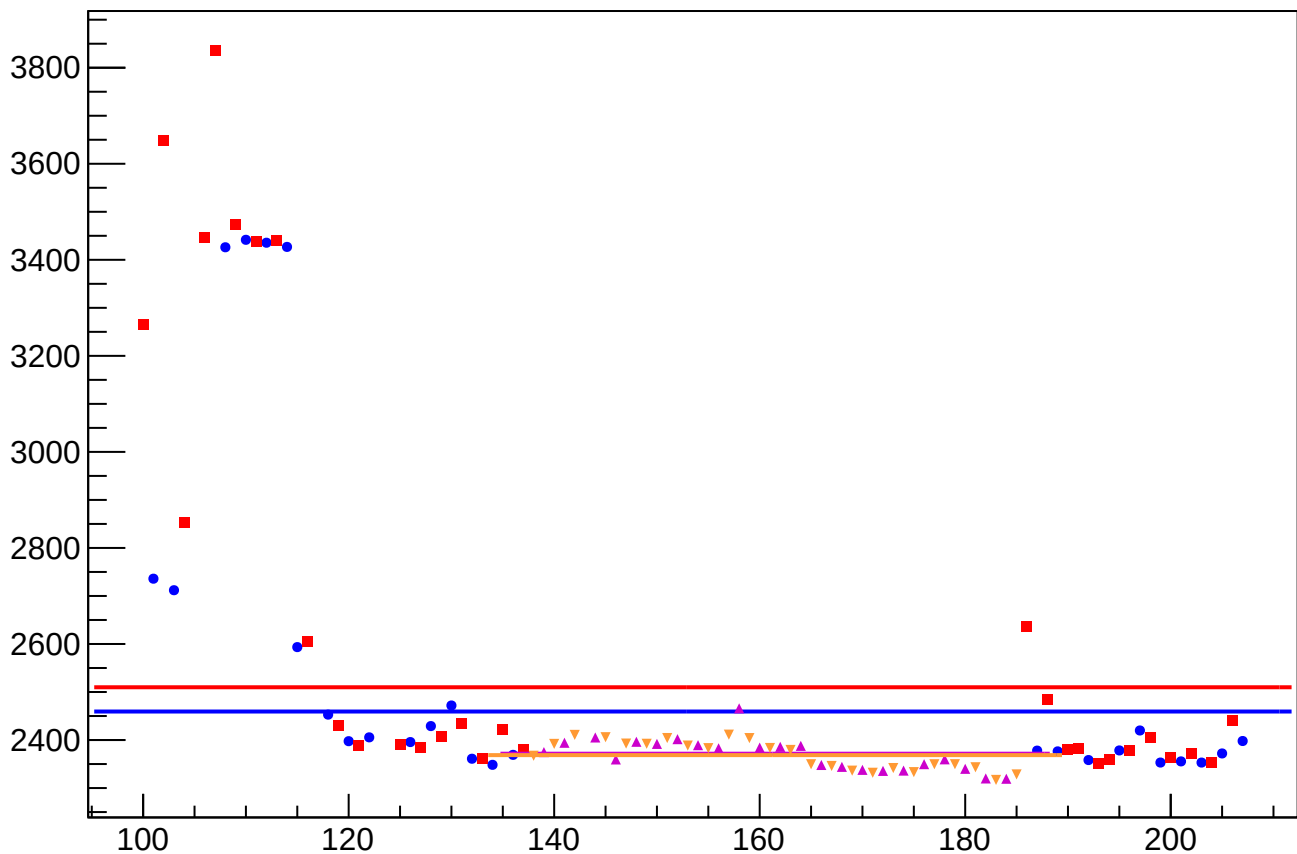
Left In:  $-1742.304 \pm 553.755$   $\chi^2/\text{NDF}$ : 23.8/22

+ sign  $1470.631 \pm 416.566$   $\chi^2/\text{NDF}$ : 41.2/49

All:  $-80.992 \pm 294.074$   $\chi^2/\text{NDF}$ : 122.7/102

- sign  $-1622.498 \pm 415.206$   $\chi^2/\text{NDF}$ : 53.9/52

# dit\_asym\_atl1\_rms vs Slug



Right In: 2459.366 $\pm$ 0.451  $\chi^2$ /NDF: 277194.6/25

Left Out: 2368.569 $\pm$ 0.389  $\chi^2$ /NDF: 5571.3/23

Right Out: 2509.871 $\pm$ 0.444  $\chi^2$ /NDF: 530441.8/29

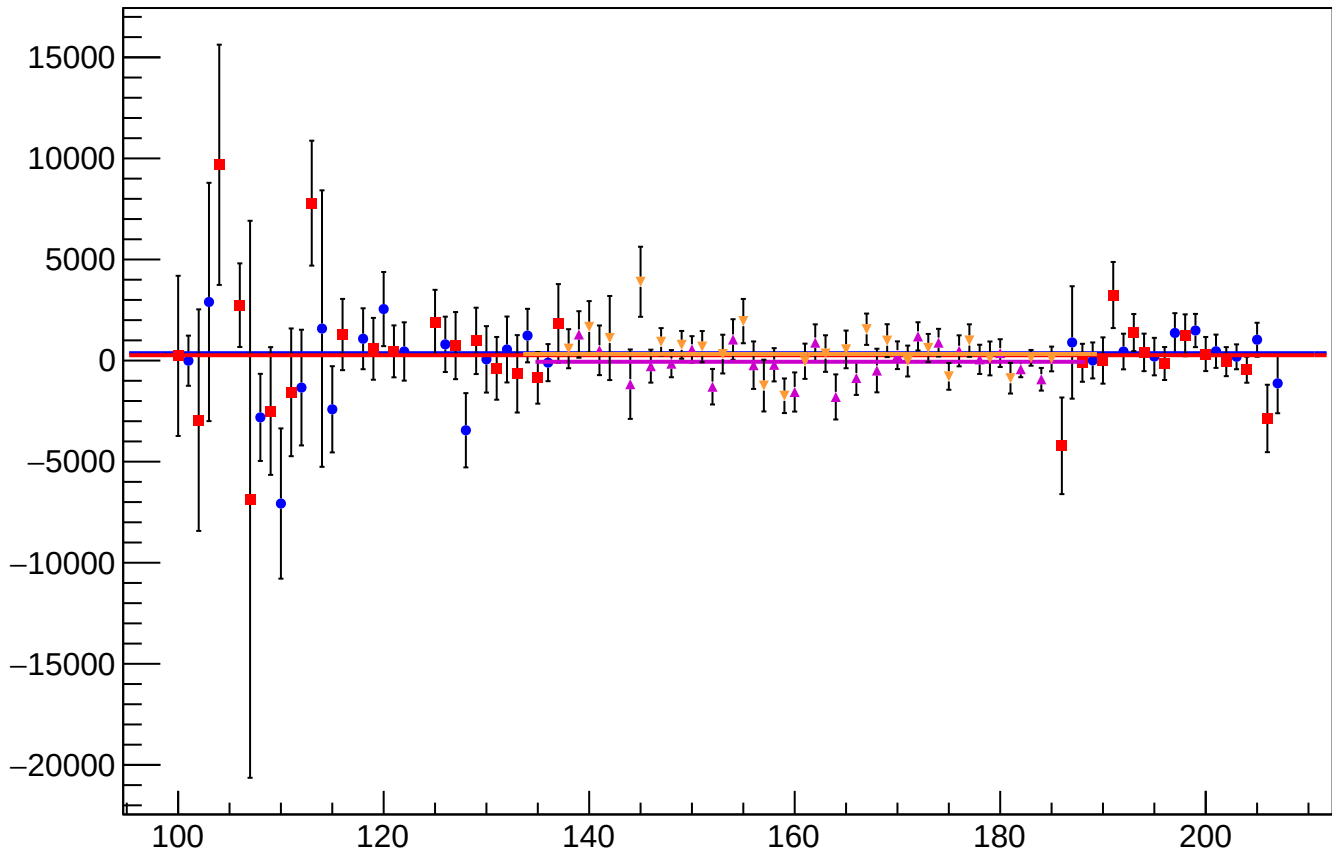
Left In: 2371.518 $\pm$ 0.392  $\chi^2$ /NDF: 7053.5/22

+ sign 2407.249 $\pm$ 0.295  $\chi^2$ /NDF: 306000.1/49

All: 2419.710 $\pm$ 0.208  $\chi^2$ /NDF: 901719.8/102

- sign 2432.089 $\pm$ 0.294  $\chi^2$ /NDF: 592152.4/52

# asym\_atl1\_dit\_correction\_mean vs Slug



Right In:  $364.265 \pm 234.143$   $\chi^2/\text{NDF}$ : 20.2/25

Left Out:  $325.955 \pm 160.041$   $\chi^2/\text{NDF}$ : 26.8/23

Right Out:  $264.735 \pm 235.273$   $\chi^2/\text{NDF}$ : 29.8/29

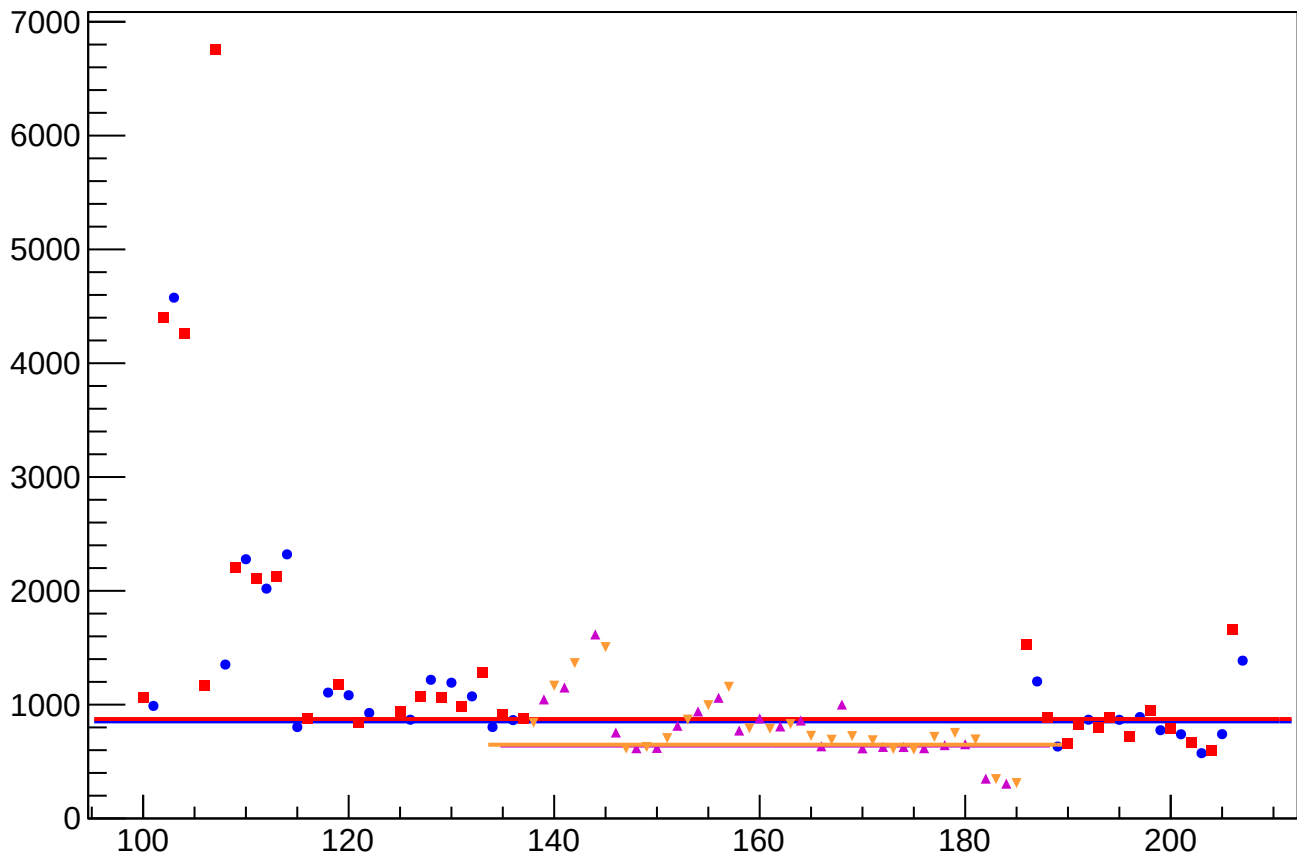
Left In:  $-59.619 \pm 159.669$   $\chi^2/\text{NDF}$ : 22.7/22

+ sign  $338.154 \pm 132.126$   $\chi^2/\text{NDF}$ : 47.0/49

All:  $190.399 \pm 93.424$   $\chi^2/\text{NDF}$ : 103.3/102

- sign  $42.662 \pm 132.117$   $\chi^2/\text{NDF}$ : 53.8/52

# asym\_atl1\_dit\_correction\_rms vs Slug



Right In:  $852.898 \pm 0.166$   $\chi^2/\text{NDF}$ : 2869303.1/25

Left Out:  $648.100 \pm 0.113$   $\chi^2/\text{NDF}$ : 3886991.8/23

Right Out:  $873.559 \pm 0.166$   $\chi^2/\text{NDF}$ : 4442068.4/29

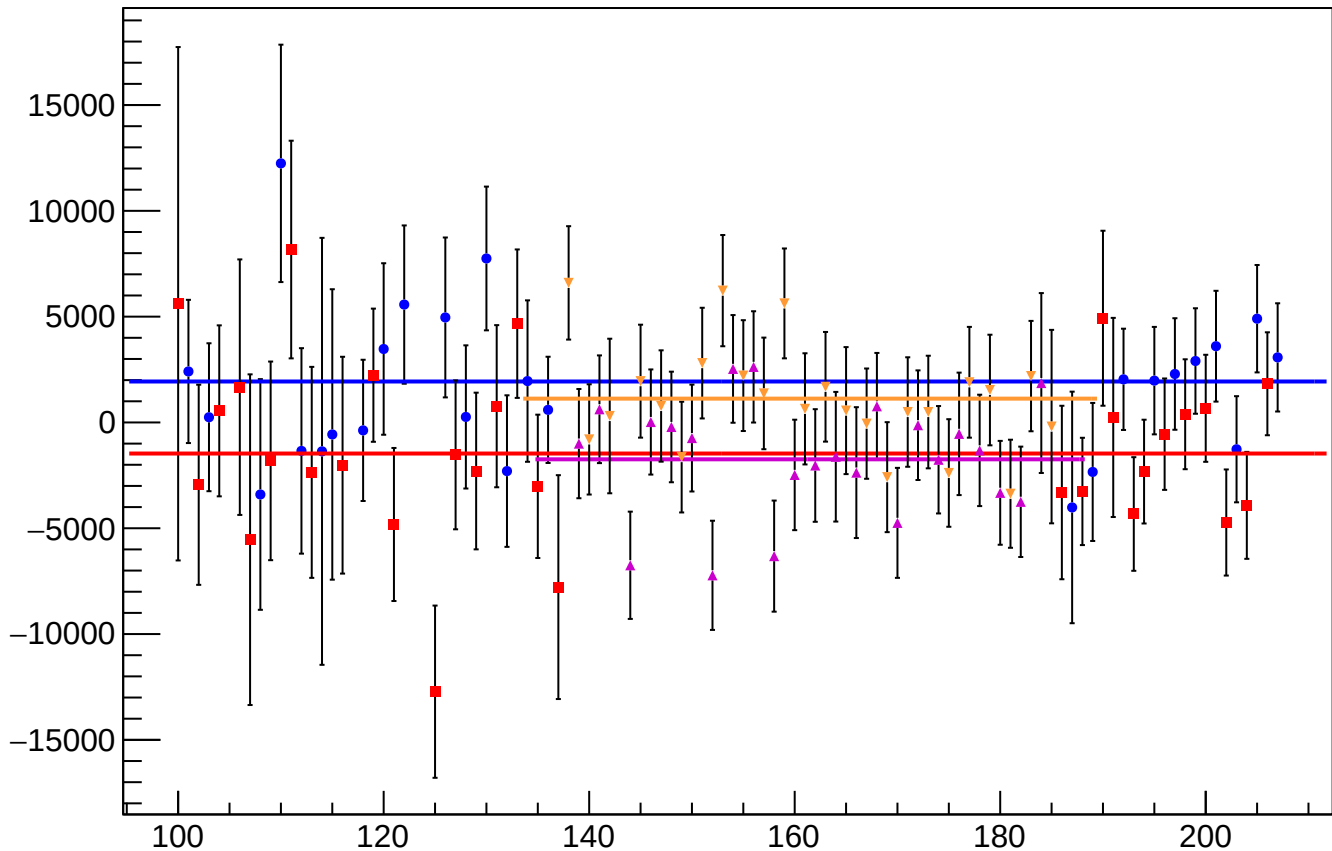
Left In:  $640.422 \pm 0.113$   $\chi^2/\text{NDF}$ : 4128760.4/22

+ sign  $713.314 \pm 0.093$   $\chi^2/\text{NDF}$ : 7799161.2/49

All:  $713.626 \pm 0.066$   $\chi^2/\text{NDF}$ : 17714582.5/10

- sign  $713.939 \pm 0.093$   $\chi^2/\text{NDF}$ : 9915399.0/52

# eigen\_dit\_asym\_atl1\_mean vs Slug



Right In:  $1935.562 \pm 638.225$   $\chi^2/\text{NDF}$ : 19.0/25

Left Out:  $1125.562 \pm 549.834$   $\chi^2/\text{NDF}$ : 21.2/23

Right Out:  $-1468.648 \pm 627.517$   $\chi^2/\text{NDF}$ : 30.1/29

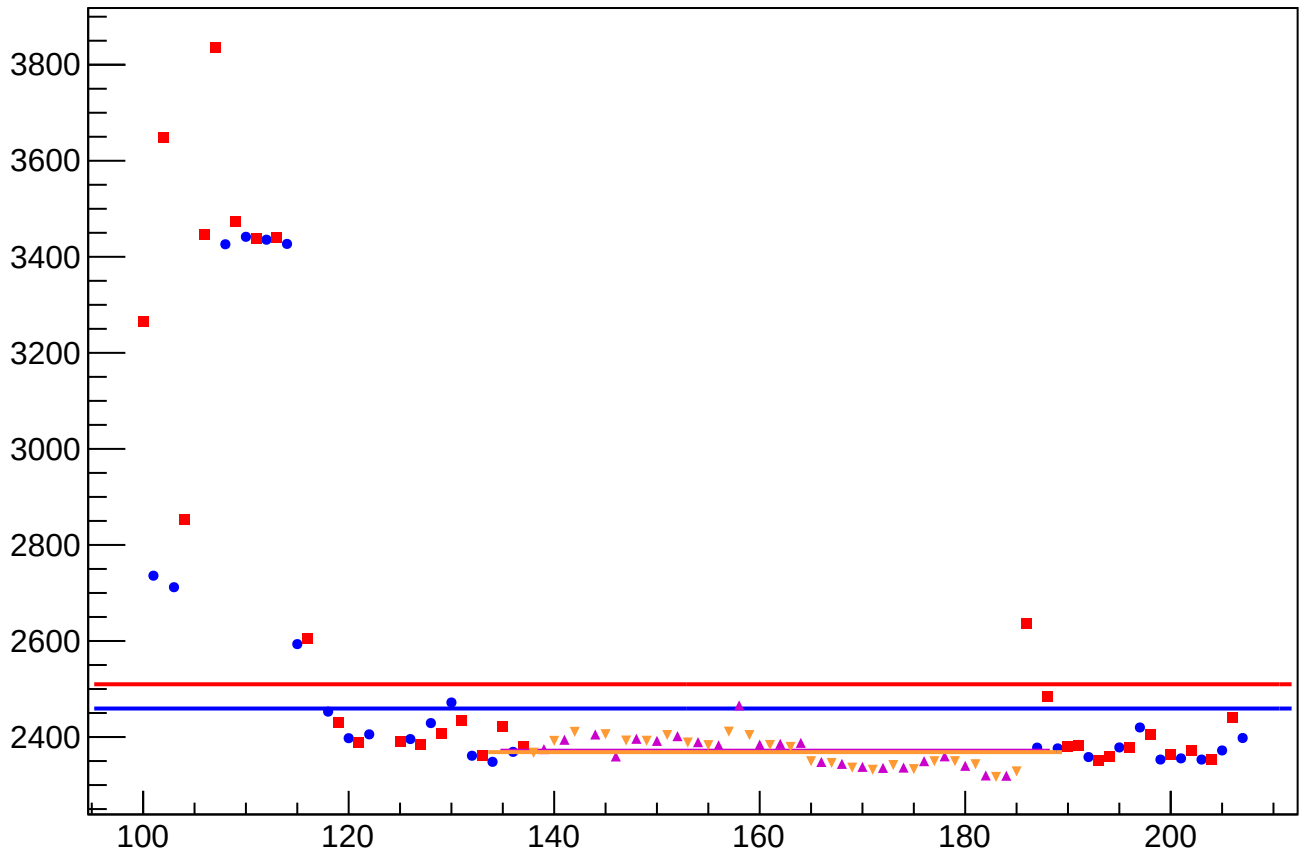
Left In:  $-1742.305 \pm 553.755$   $\chi^2/\text{NDF}$ : 23.8/22

+ sign  $1470.630 \pm 416.566$   $\chi^2/\text{NDF}$ : 41.2/49

All:  $-80.992 \pm 294.074$   $\chi^2/\text{NDF}$ : 122.7/102

- sign  $-1622.498 \pm 415.206$   $\chi^2/\text{NDF}$ : 53.9/52

# eigen\_dit\_asym\_atl1\_rms vs Slug



Right In: 2459.366 $\pm$ 0.451  $\chi^2$ /NDF: 277194.1/25

Left Out: 2368.569 $\pm$ 0.389  $\chi^2$ /NDF: 5571.3/23

Right Out: 2509.871 $\pm$ 0.444  $\chi^2$ /NDF: 530440.9/29

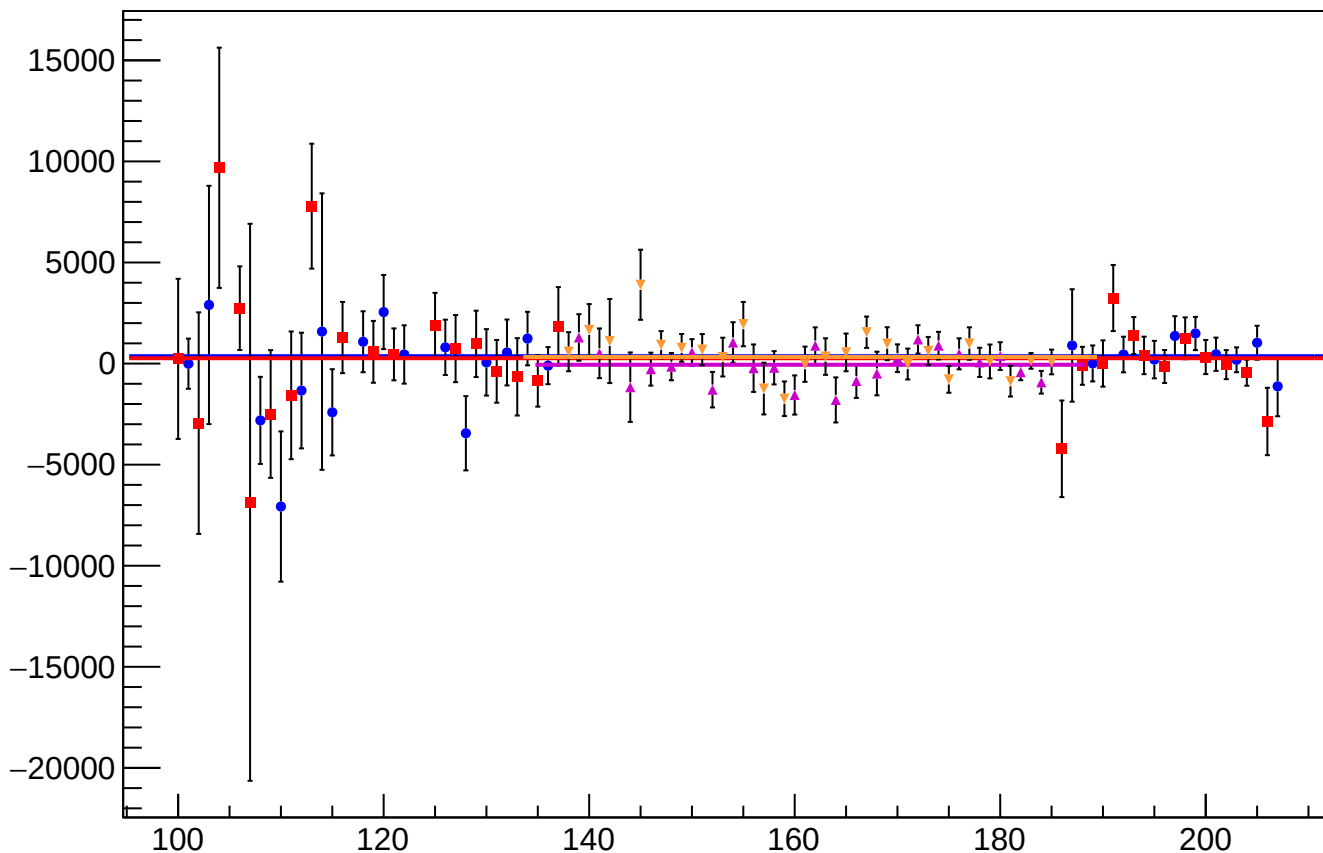
Left In: 2371.518 $\pm$ 0.392  $\chi^2$ /NDF: 7053.5/22

+ sign 2407.249 $\pm$ 0.295  $\chi^2$ /NDF: 305999.6/49

All: 2419.710 $\pm$ 0.208  $\chi^2$ /NDF: 901718.3/102

- sign 2432.089 $\pm$ 0.294  $\chi^2$ /NDF: 592151.5/52

# asym\_atl1\_eigen\_dit\_correction\_mean vs Slug



Right In:  $364.264 \pm 234.143$   $\chi^2/\text{NDF}$ : 20.2/25

Left Out:  $325.955 \pm 160.042$   $\chi^2/\text{NDF}$ : 26.8/23

Right Out:  $264.736 \pm 235.273$   $\chi^2/\text{NDF}$ : 29.8/29

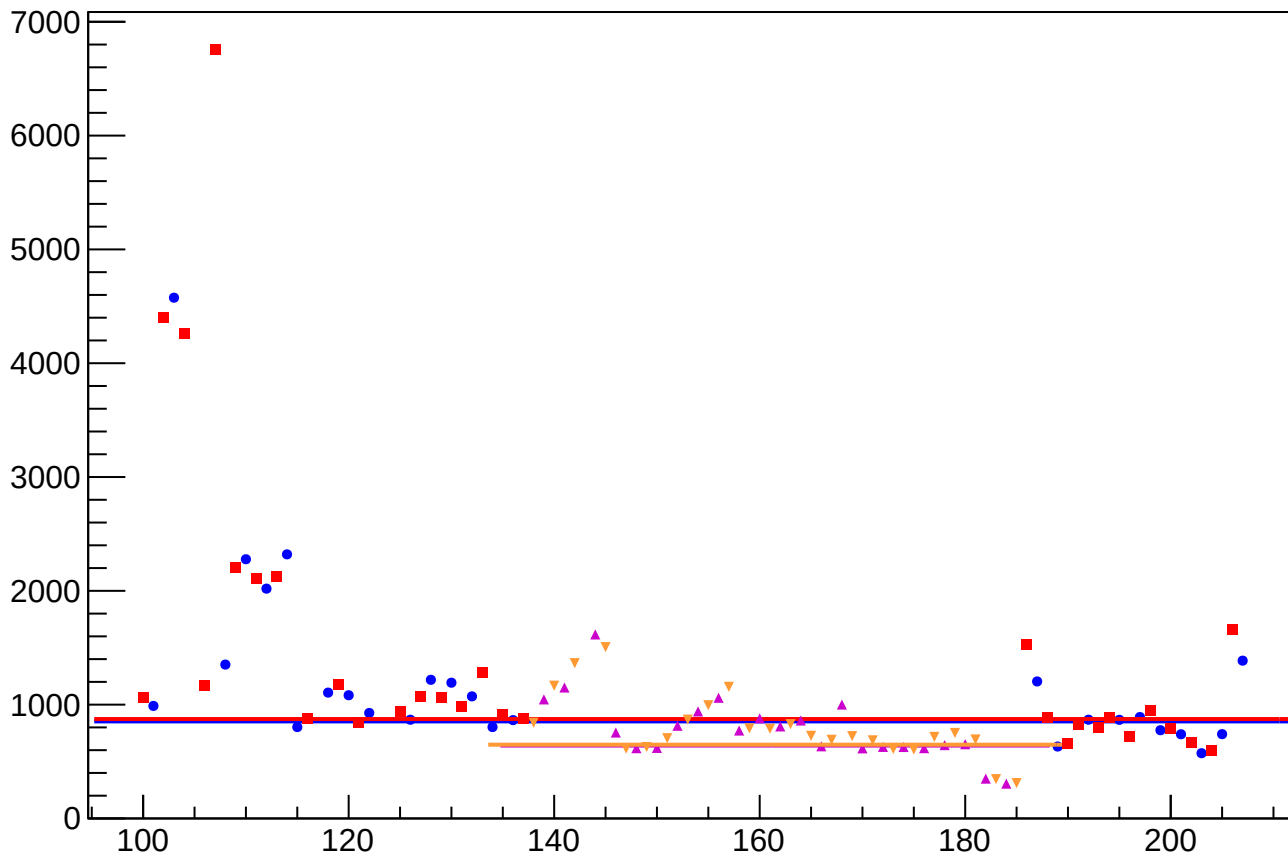
Left In:  $-59.619 \pm 159.670$   $\chi^2/\text{NDF}$ : 22.7/22

+ sign  $338.153 \pm 132.126$   $\chi^2/\text{NDF}$ : 47.0/49

All:  $190.398 \pm 93.424$   $\chi^2/\text{NDF}$ : 103.3/102

- sign  $42.662 \pm 132.118$   $\chi^2/\text{NDF}$ : 53.8/52

# asym\_atl1\_eigen\_dit\_correction\_rms vs Slug



Right In:  $852.898 \pm 0.166$   $\chi^2/\text{NDF}: 2869304.9/25$

Left Out:  $648.101 \pm 0.113$   $\chi^2/\text{NDF}: 3887001.9/23$

Right Out:  $873.559 \pm 0.166$   $\chi^2/\text{NDF}: 4442072.7/29$

Left In:  $640.423 \pm 0.113$   $\chi^2/\text{NDF}: 4128774.2/22$

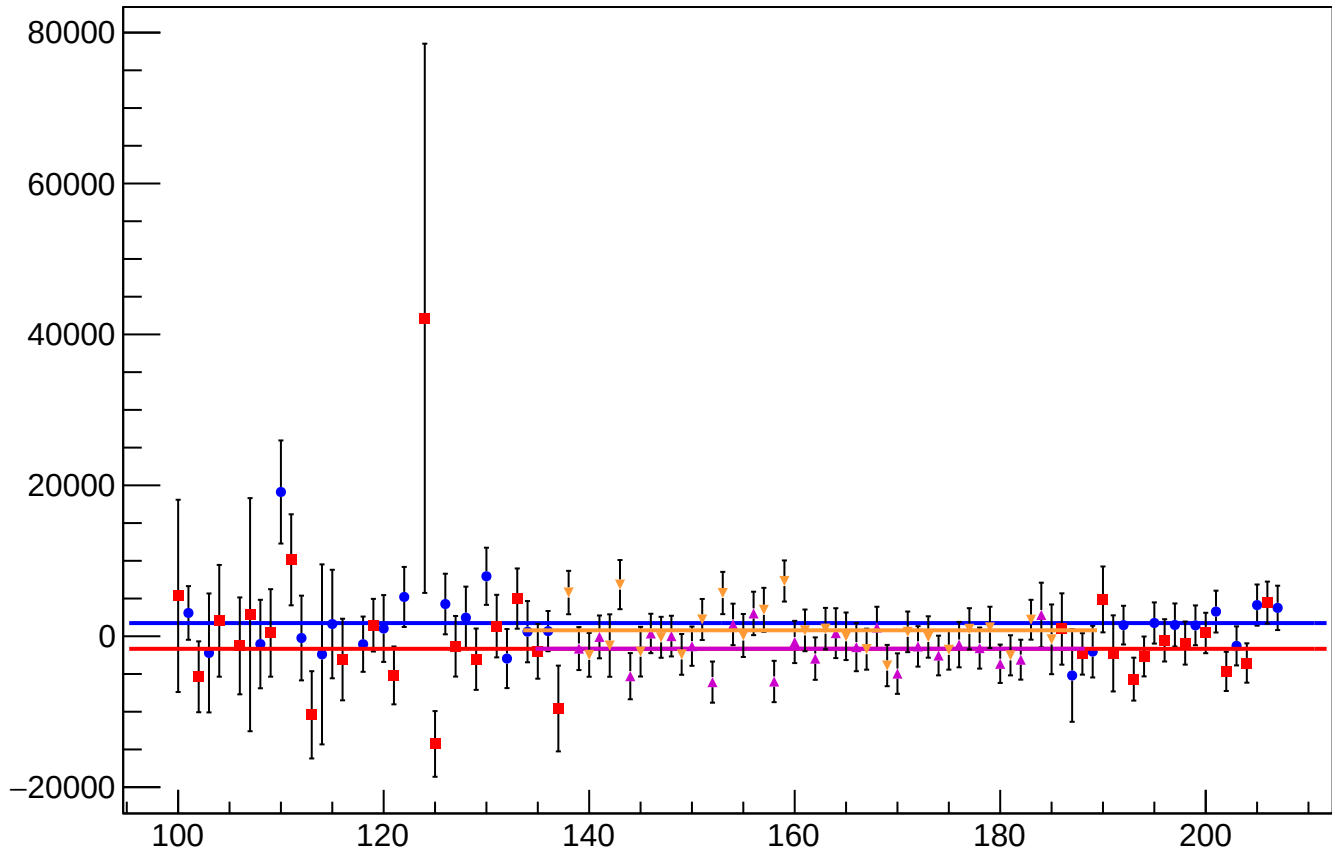
+ sign  $713.315 \pm 0.093$   $\chi^2/\text{NDF}: 7799159.8/49$

All:  $713.627 \pm 0.066$   $\chi^2/\text{NDF}: 17714586.6/100$

- sign  $713.939 \pm 0.093$   $\chi^2/\text{NDF}: 9915404.4/52$



# asym\_atl1\_mean vs Slug



Right In: 1746.709 $\pm$ 699.423  $\chi^2$ /NDF: 18.9/25

Left Out: 791.438 $\pm$ 573.266  $\chi^2$ /NDF: 27.1/24

Right Out: -1664.306 $\pm$ 686.290  $\chi^2$ /NDF: 36.7/30

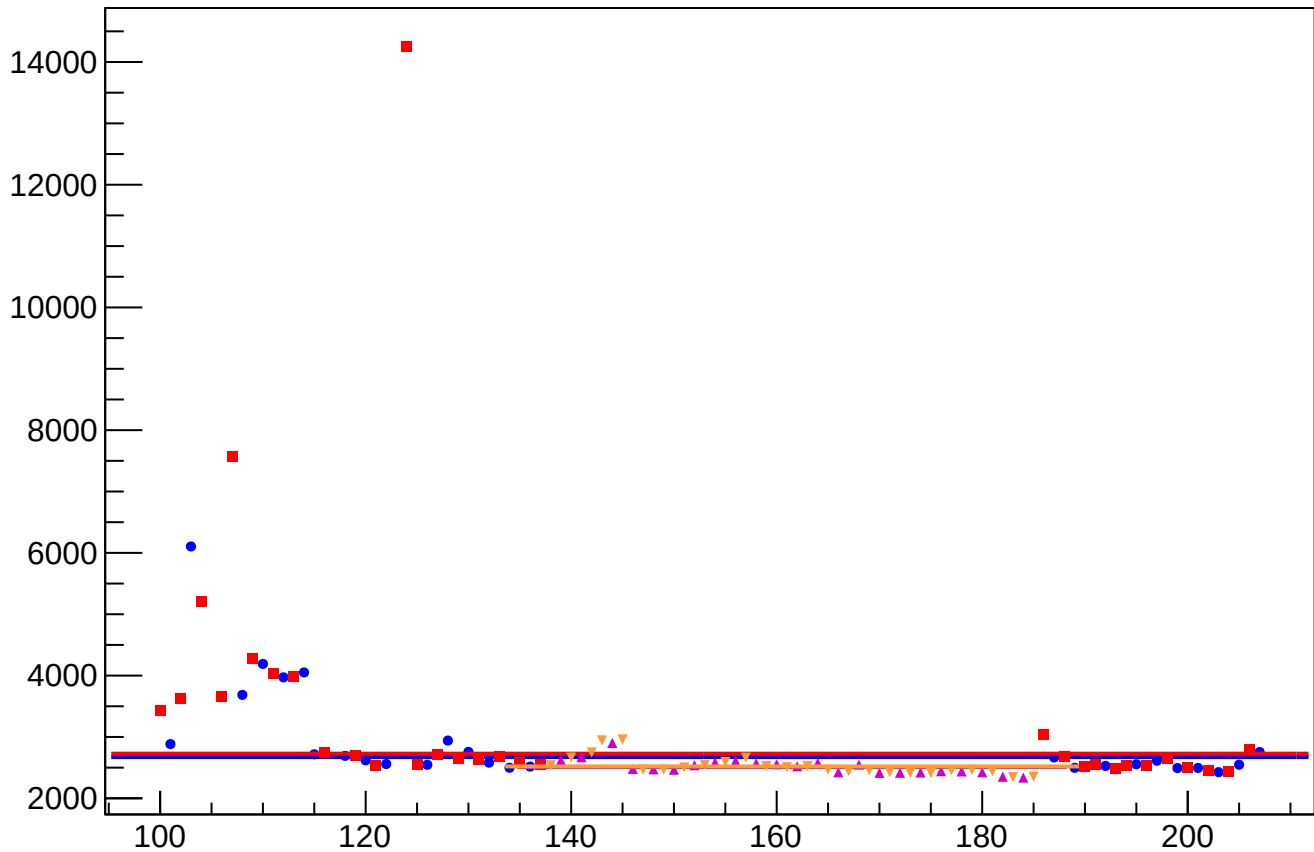
Left In: -1654.626 $\pm$ 586.767  $\chi^2$ /NDF: 17.3/22

+ sign 1175.303 $\pm$ 443.369  $\chi^2$ /NDF: 47.2/50

All: -233.379 $\pm$ 314.429  $\chi^2$ /NDF: 121.5/104

- sign -1658.714 $\pm$ 445.982  $\chi^2$ /NDF: 54.1/53

# asym\_atl1\_rms vs Slug



Right In: 2672.115+/-0.495  $\chi^2$ /NDF: 761180.6/25

Left Out: 2519.516+/-0.405  $\chi^2$ /NDF:115204.3/24

Right Out: 2727.469+/-0.485  $\chi^2$ /NDF: 1204787.2/30

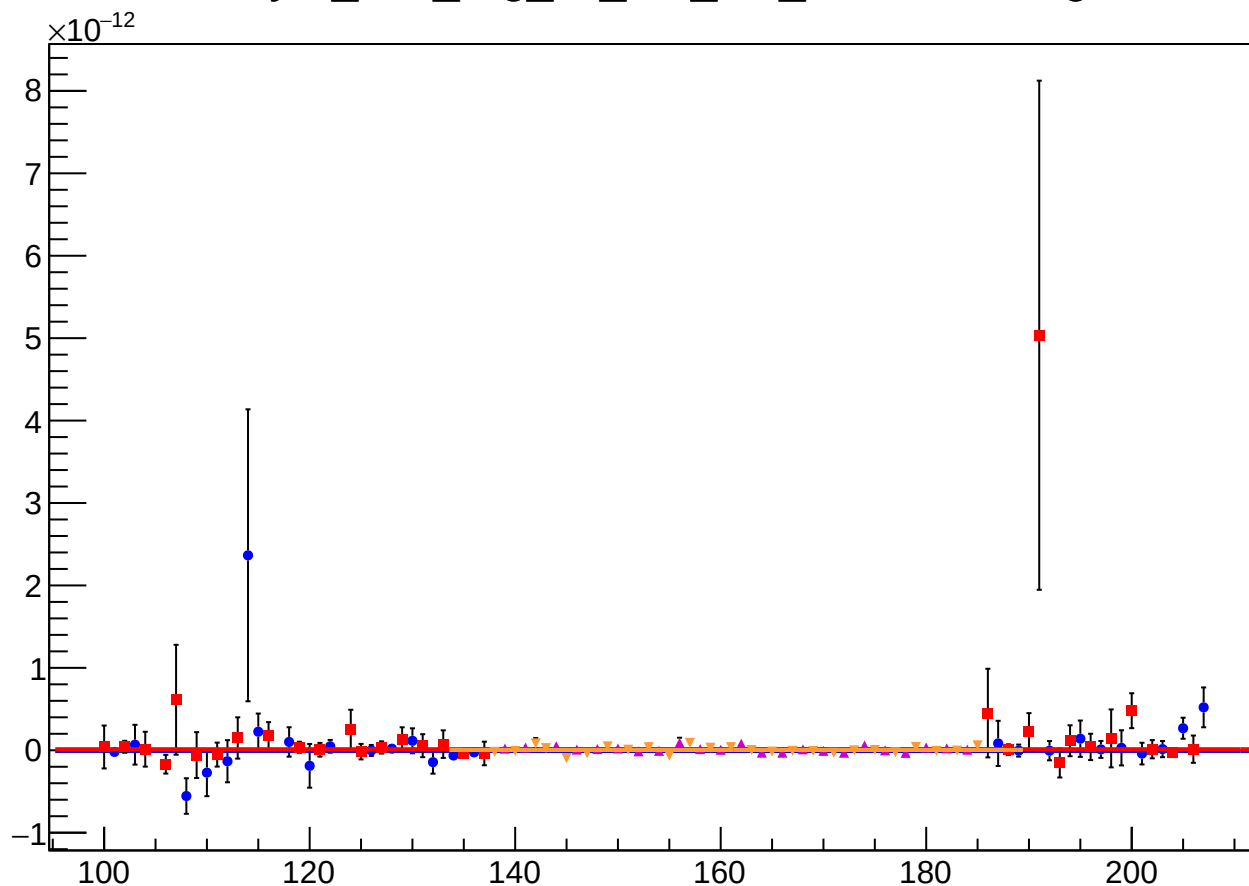
Left In: 2510.156+/-0.415  $\chi^2$ /NDF:73771.4/22

+ sign 2580.836+/-0.314  $\chi^2$ /NDF: 933332.7/50

All: 2591.320+/-0.222  $\chi^2$ /NDF: 2329989.5/10

- sign 2601.927+/-0.315  $\chi^2$ /NDF: 1394407.2/53

# asym\_atl1\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 26.0/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 28.8/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 19.1/30

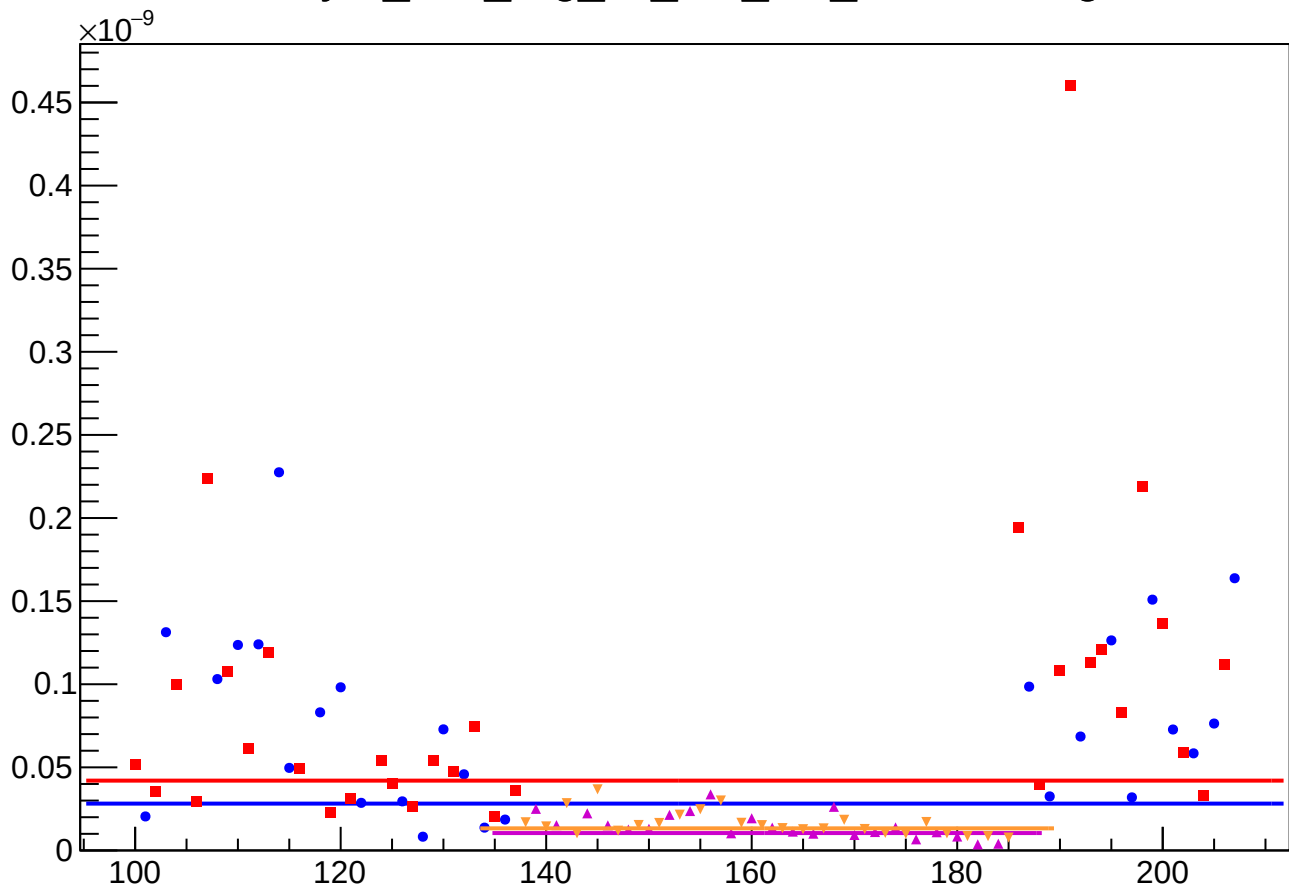
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 32.3/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 55.4/50

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 109.3/104

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 51.3/53

# asym\_atl1\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 5371152.7/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1472019.5/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 3948845.0/30

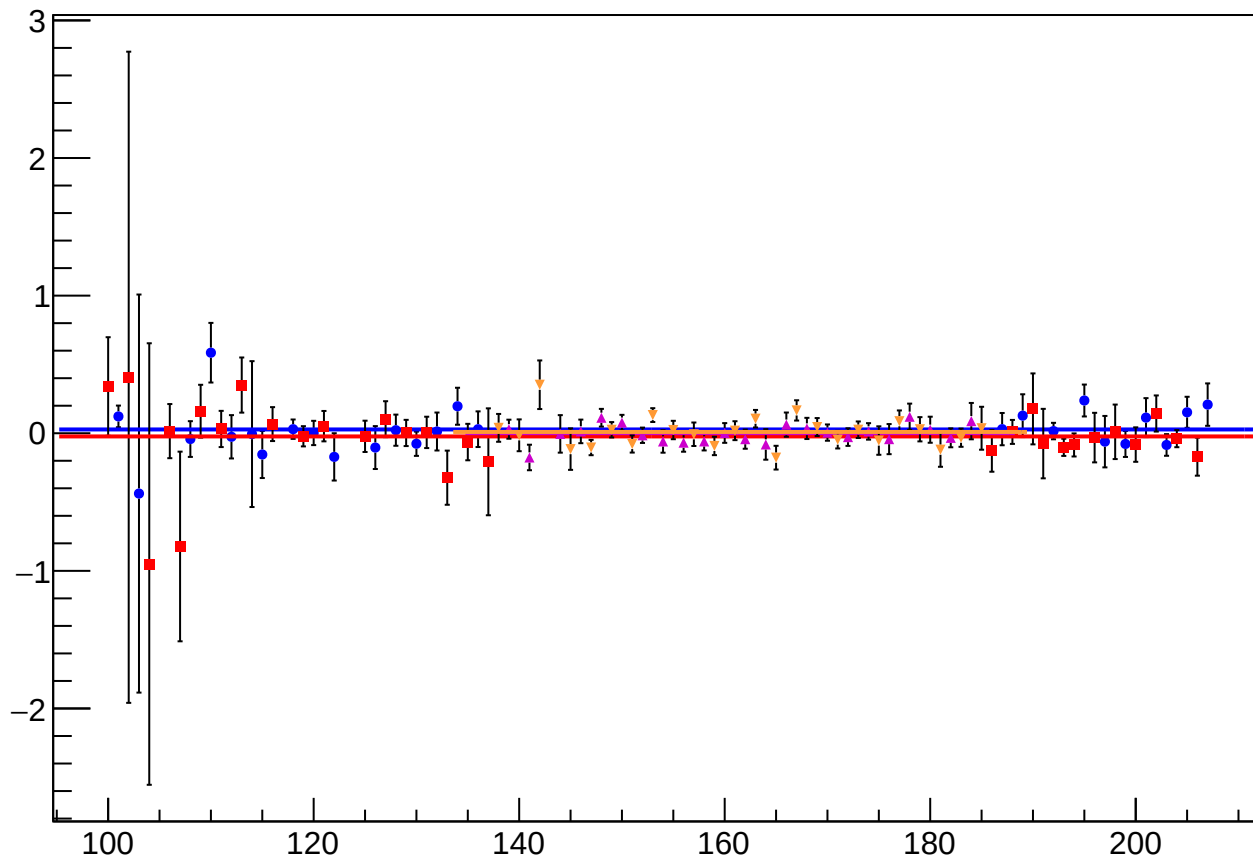
Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2813965.8/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 8458936.2/50

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 20194575.0/104

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 11439257.9/53

# asym\_atl1\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.028 \pm 0.022$   $\chi^2/\text{NDF}$ : 25.1/25

Left Out:  $0.009 \pm 0.015$   $\chi^2/\text{NDF}$ : 34.7/23

Right Out:  $-0.023 \pm 0.022$   $\chi^2/\text{NDF}$ : 18.5/29

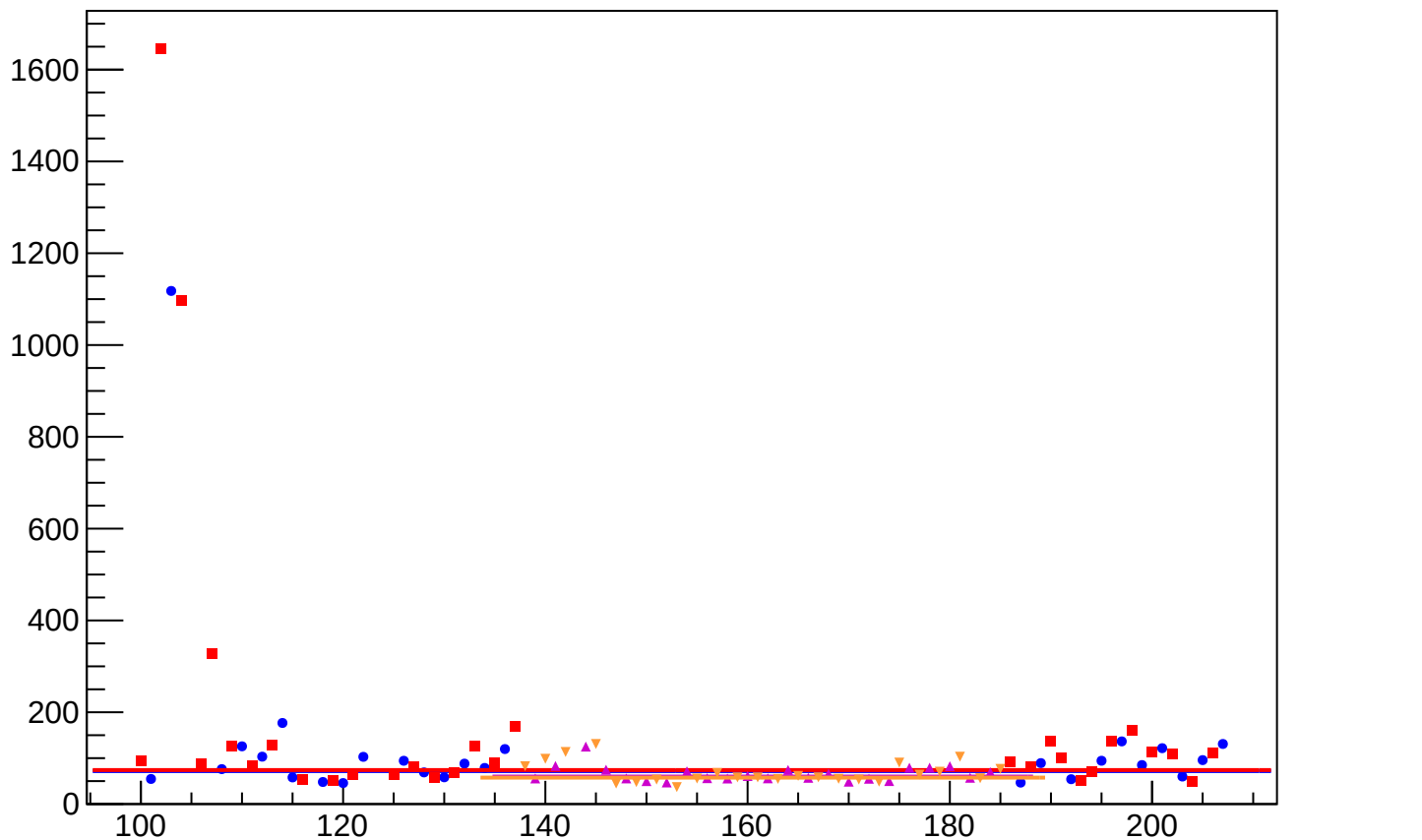
Left In:  $0.001 \pm 0.015$   $\chi^2/\text{NDF}$ : 15.6/22

+ sign  $0.015 \pm 0.012$   $\chi^2/\text{NDF}$ : 60.2/49

All:  $0.004 \pm 0.009$   $\chi^2/\text{NDF}$ : 96.6/102

- sign  $-0.007 \pm 0.013$   $\chi^2/\text{NDF}$ : 34.9/52

# asym\_atl1\_dit\_vs\_cor\_diff\_rms vs Slug



Right In:  $71.905 \pm 0.016$   $\chi^2/\text{NDF}: 3626370.3/25$

Left Out:  $57.606 \pm 0.011$   $\chi^2/\text{NDF}: 2213142.2/23$

Right Out:  $74.064 \pm 0.016$   $\chi^2/\text{NDF}: 4817074.0/29$

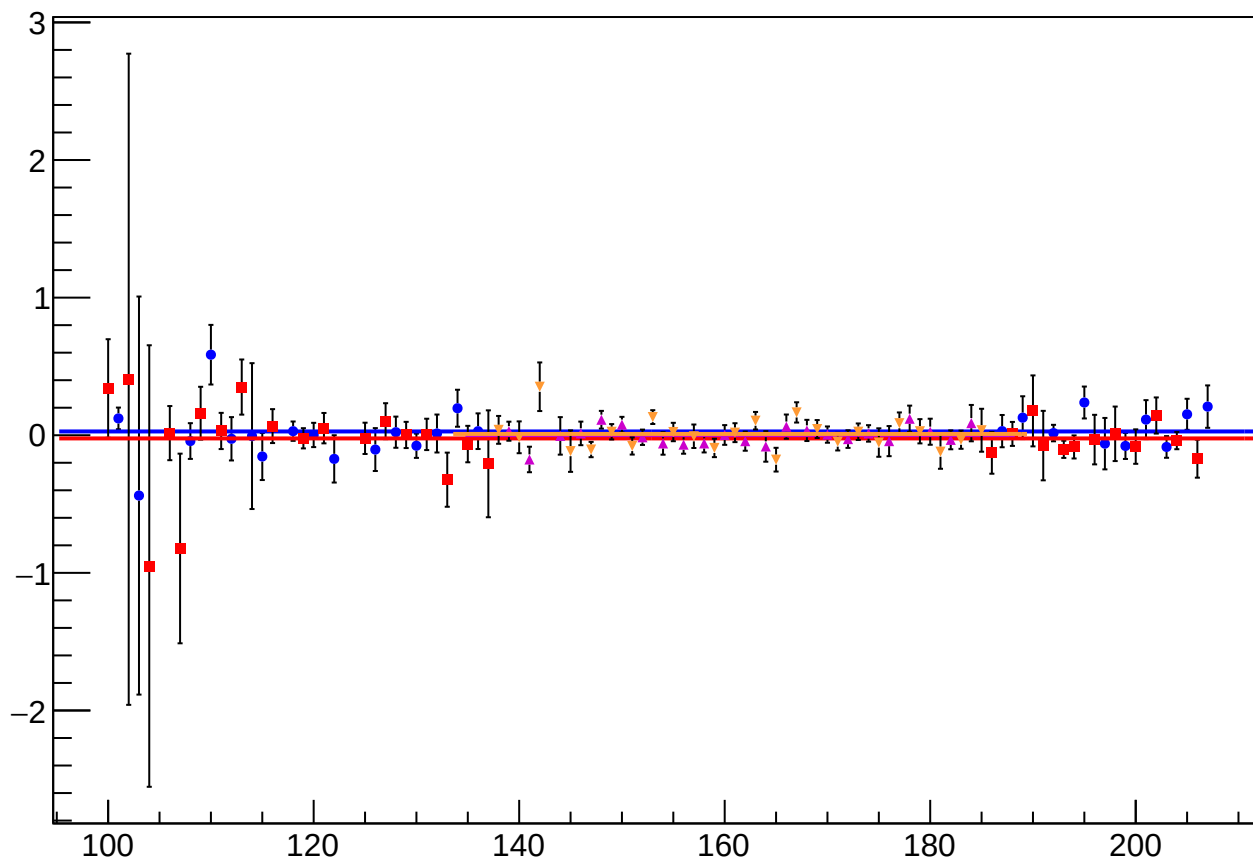
Left In:  $59.828 \pm 0.011$   $\chi^2/\text{NDF}: 1340700.1/22$

+ sign  $62.149 \pm 0.009$   $\chi^2/\text{NDF}: 6408815.1/49$

All:  $63.262 \pm 0.006$   $\chi^2/\text{NDF}: 13144422.2/102$

- sign  $64.424 \pm 0.009$   $\chi^2/\text{NDF}: 6703066.2/52$

# asym\_atl1\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.028 \pm 0.022$   $\chi^2/\text{NDF}$ : 25.1/25

Left Out:  $0.009 \pm 0.015$   $\chi^2/\text{NDF}$ : 34.7/23

Right Out:  $-0.023 \pm 0.022$   $\chi^2/\text{NDF}$ : 18.5/29

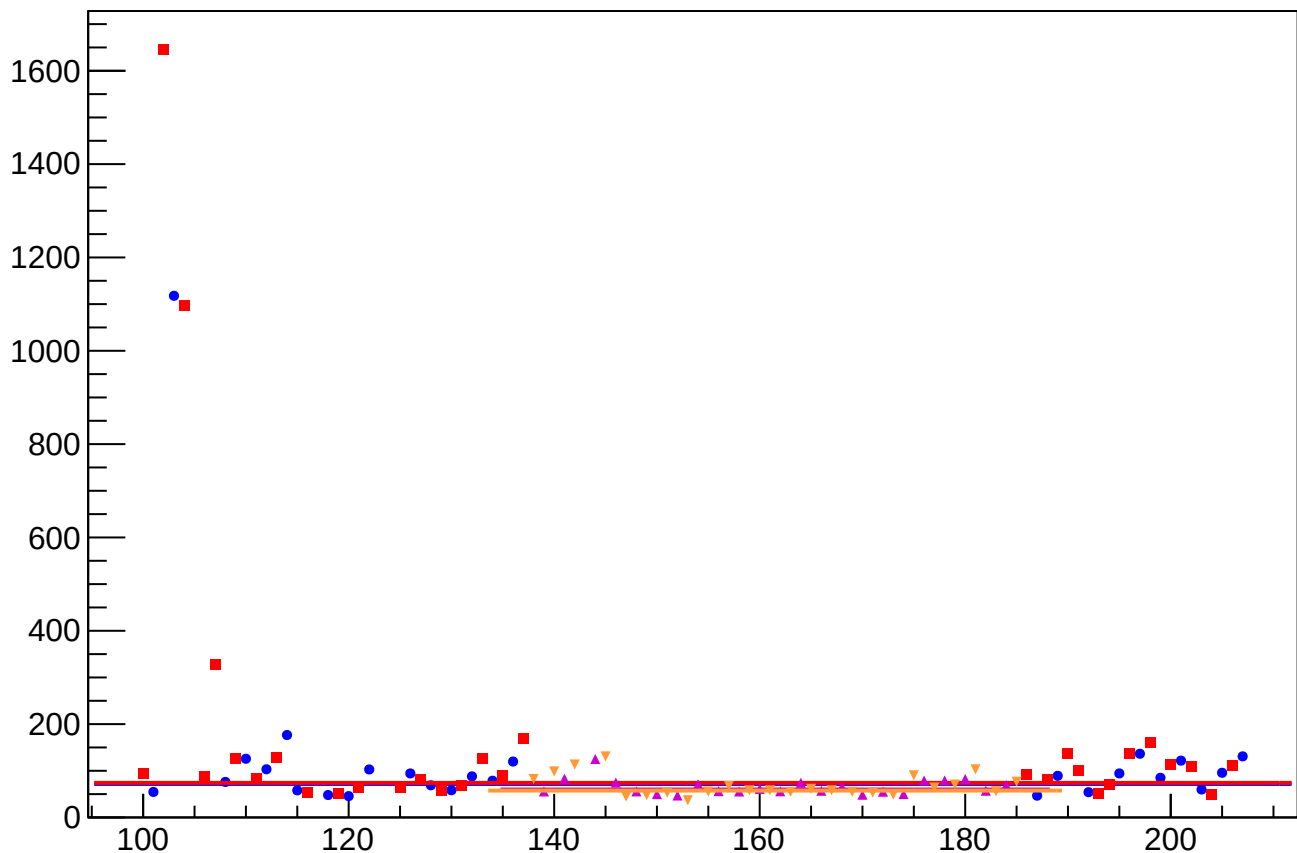
Left In:  $0.001 \pm 0.015$   $\chi^2/\text{NDF}$ : 15.6/22

+ sign  $0.015 \pm 0.012$   $\chi^2/\text{NDF}$ : 60.2/49

All:  $0.004 \pm 0.009$   $\chi^2/\text{NDF}$ : 96.6/102

- sign  $-0.007 \pm 0.013$   $\chi^2/\text{NDF}$ : 34.9/52

# asym\_atl1\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 71.905 $\pm$ 0.016  $\chi^2$ /NDF: 3626370.3/25

Left Out: 57.606 $\pm$ 0.011  $\chi^2$ /NDF: 2213142.2/23

Right Out: 74.064 $\pm$ 0.016  $\chi^2$ /NDF: 4817074.0/29

Left In: 59.828 $\pm$ 0.011  $\chi^2$ /NDF: 1340700.1/22

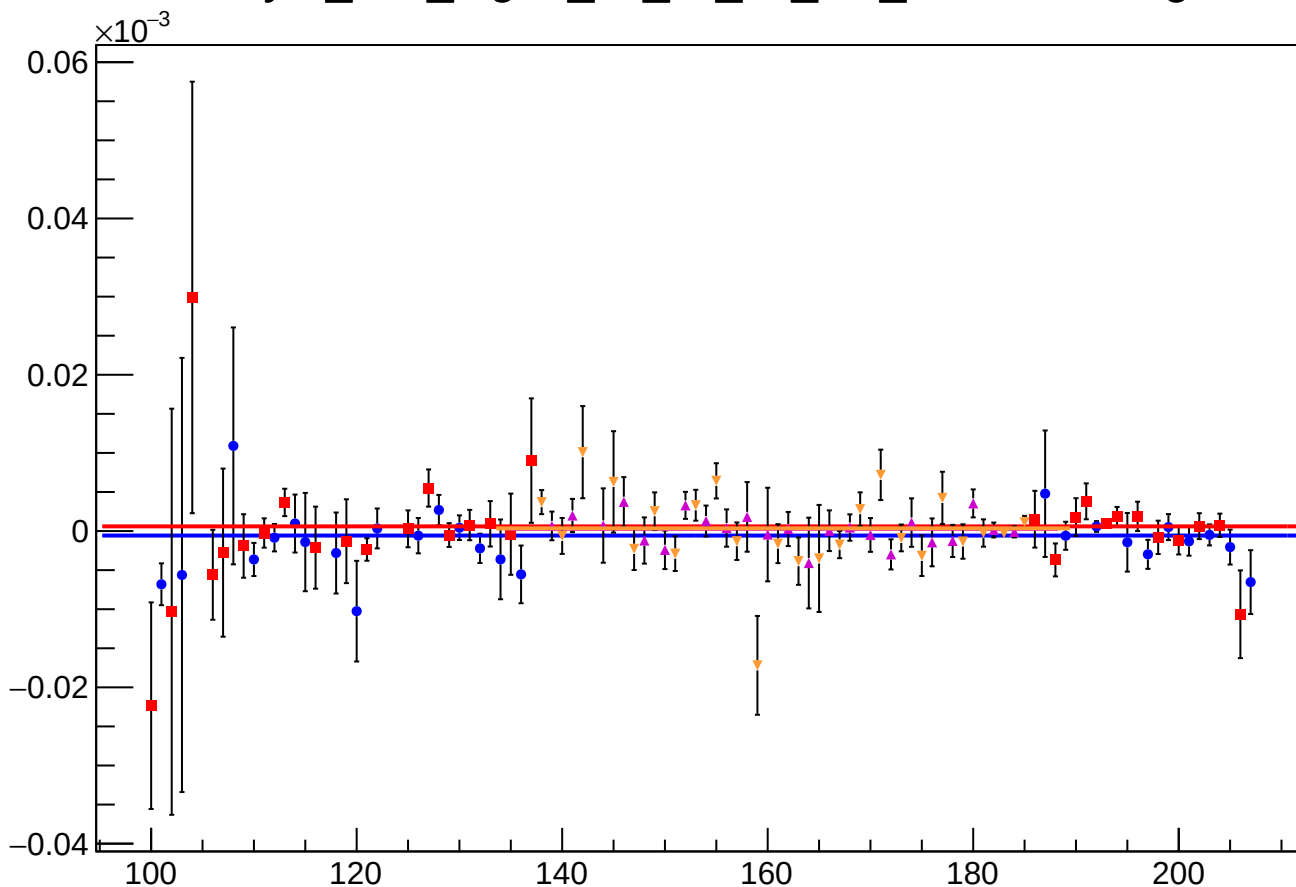
+ sign 62.149 $\pm$ 0.009  $\chi^2$ /NDF: 6408815.1/49

All: 63.262 $\pm$ 0.006  $\chi^2$ /NDF: 13144422.2/102

- sign 64.424 $\pm$ 0.009  $\chi^2$ /NDF: 6703066.2/52



asym\_atl1\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 25.3/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:46.8/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 33.4/29

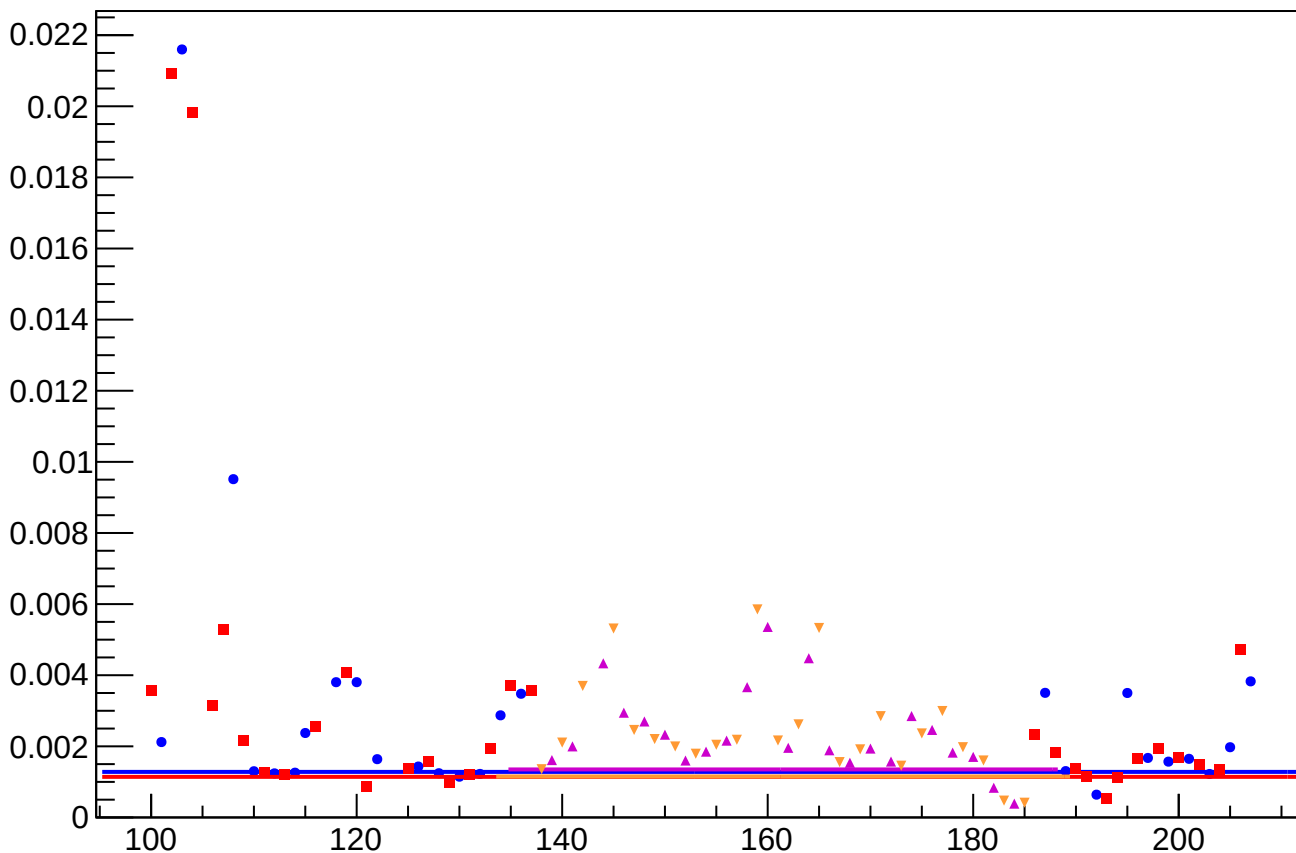
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:14.9/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 75.2/49

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 125.8/102

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 48.7/52

# asym\_atl1\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 7467623.3/25

Left Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ :13242273.9/23

Right Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 8640973.9/29

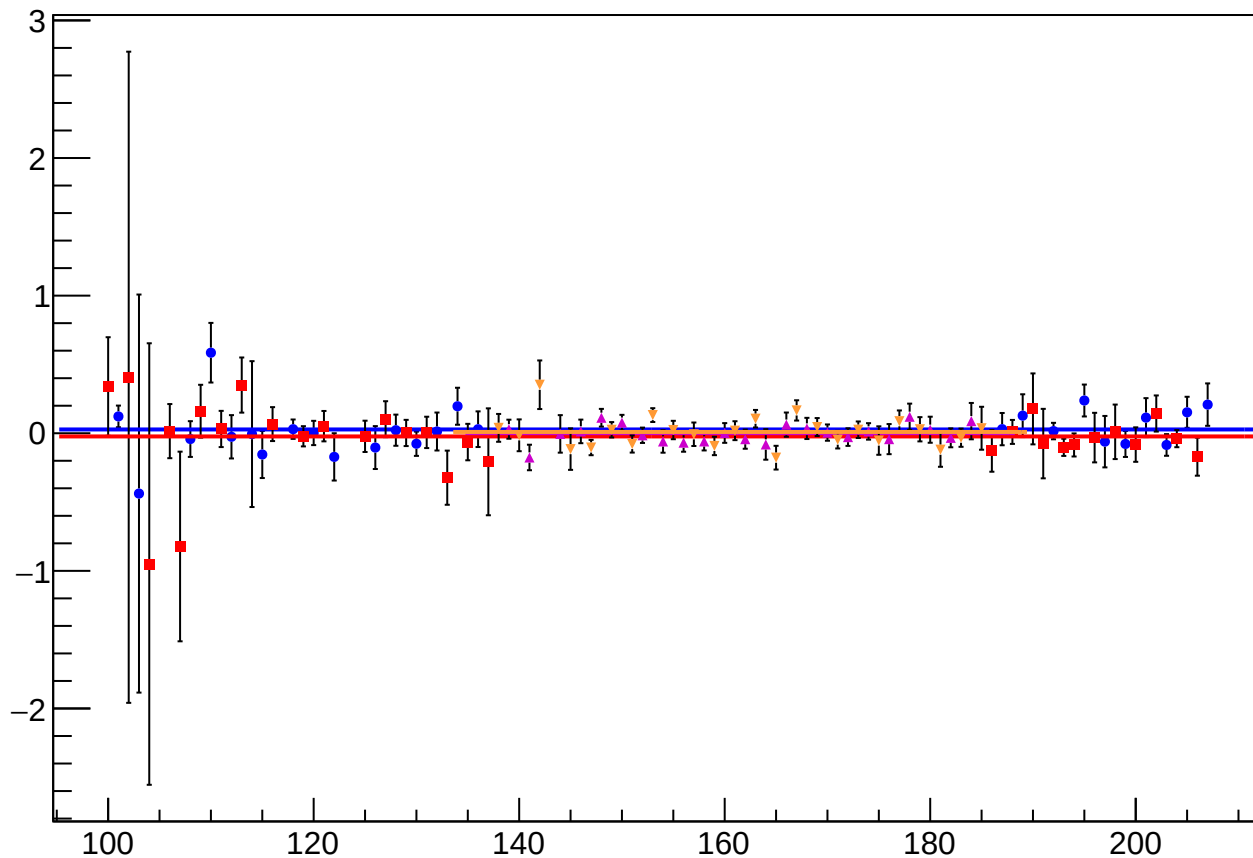
Left In: 0.001+/-0.000  $\chi^2/\text{NDF}$ :10247159.8/22

+ sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 20837429.7/49

All: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 40062784.9/102

- sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 19212256.9/52

# asym\_atl1\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.028 \pm 0.022$   $\chi^2/\text{NDF}$ : 25.1/25

Left Out:  $0.009 \pm 0.015$   $\chi^2/\text{NDF}$ : 34.7/23

Right Out:  $-0.023 \pm 0.022$   $\chi^2/\text{NDF}$ : 18.5/29

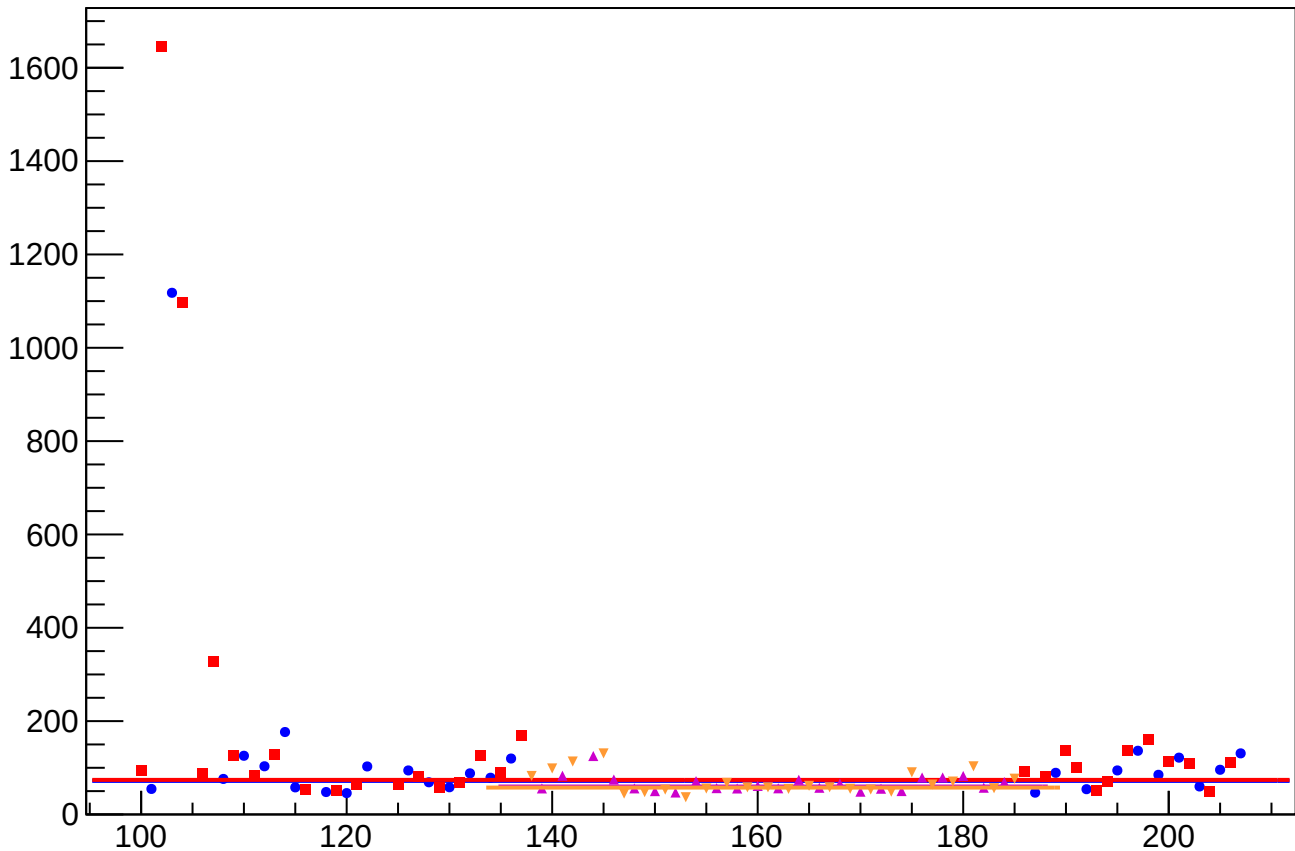
Left In:  $0.001 \pm 0.015$   $\chi^2/\text{NDF}$ : 15.6/22

+ sign  $0.015 \pm 0.012$   $\chi^2/\text{NDF}$ : 60.2/49

All:  $0.004 \pm 0.009$   $\chi^2/\text{NDF}$ : 96.6/102

- sign  $-0.007 \pm 0.013$   $\chi^2/\text{NDF}$ : 34.9/52

# asym\_atl1\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 71.905 $\pm$ 0.016  $\chi^2$ /NDF: 3626530.7/25

Left Out: 57.606 $\pm$ 0.011  $\chi^2$ /NDF: 2213216.3/23

Right Out: 74.064 $\pm$ 0.016  $\chi^2$ /NDF: 4817173.1/29

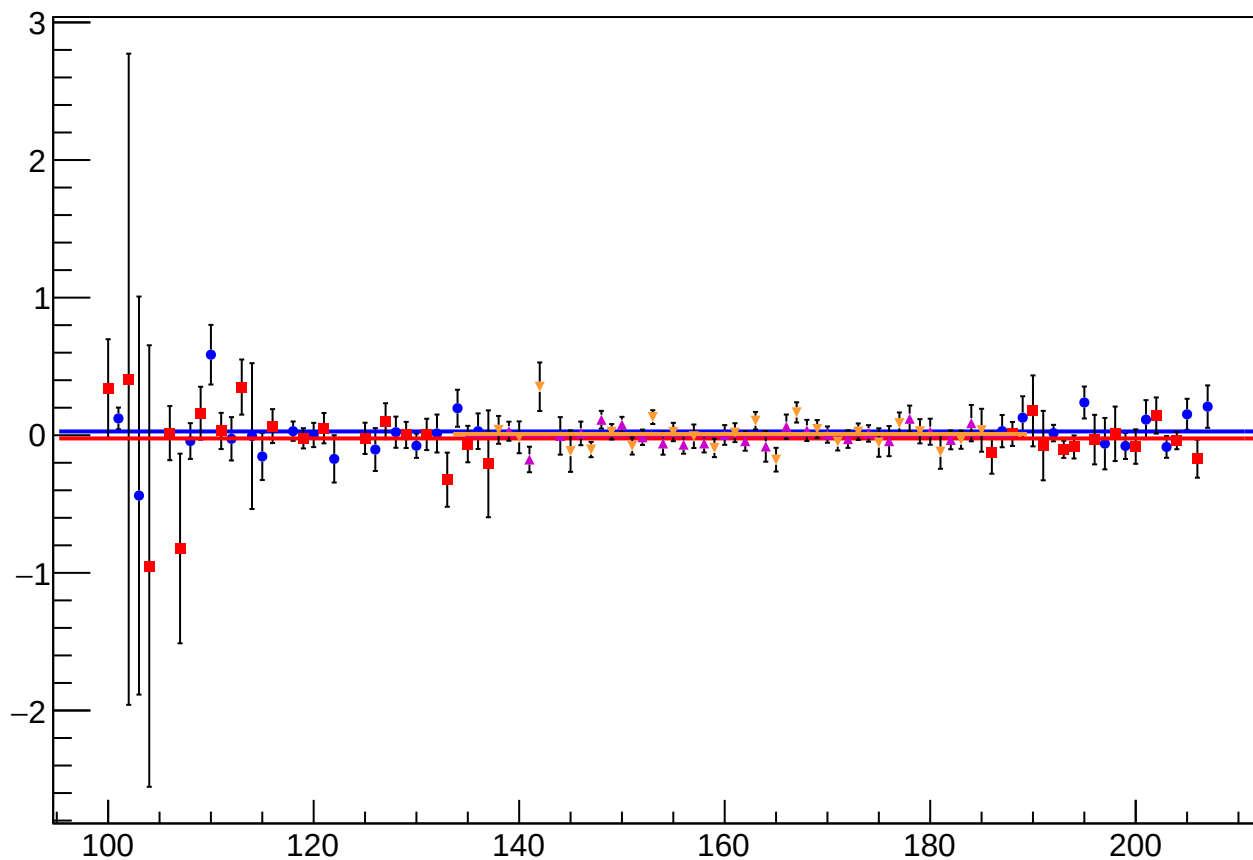
Left In: 59.828 $\pm$ 0.011  $\chi^2$ /NDF: 1340684.6/22

+ sign 62.149 $\pm$ 0.009  $\chi^2$ /NDF: 6409001.8/49

All: 63.262 $\pm$ 0.006  $\chi^2$ /NDF: 13144658.1/102

- sign 64.424 $\pm$ 0.009  $\chi^2$ /NDF: 6703110.1/52

asym\_atl1\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.028 \pm 0.022$   $\chi^2/\text{NDF}$ : 25.1/25

Left Out:  $0.009 \pm 0.015$   $\chi^2/\text{NDF}$ : 34.7/23

Right Out:  $-0.023 \pm 0.022$   $\chi^2/\text{NDF}$ : 18.5/29

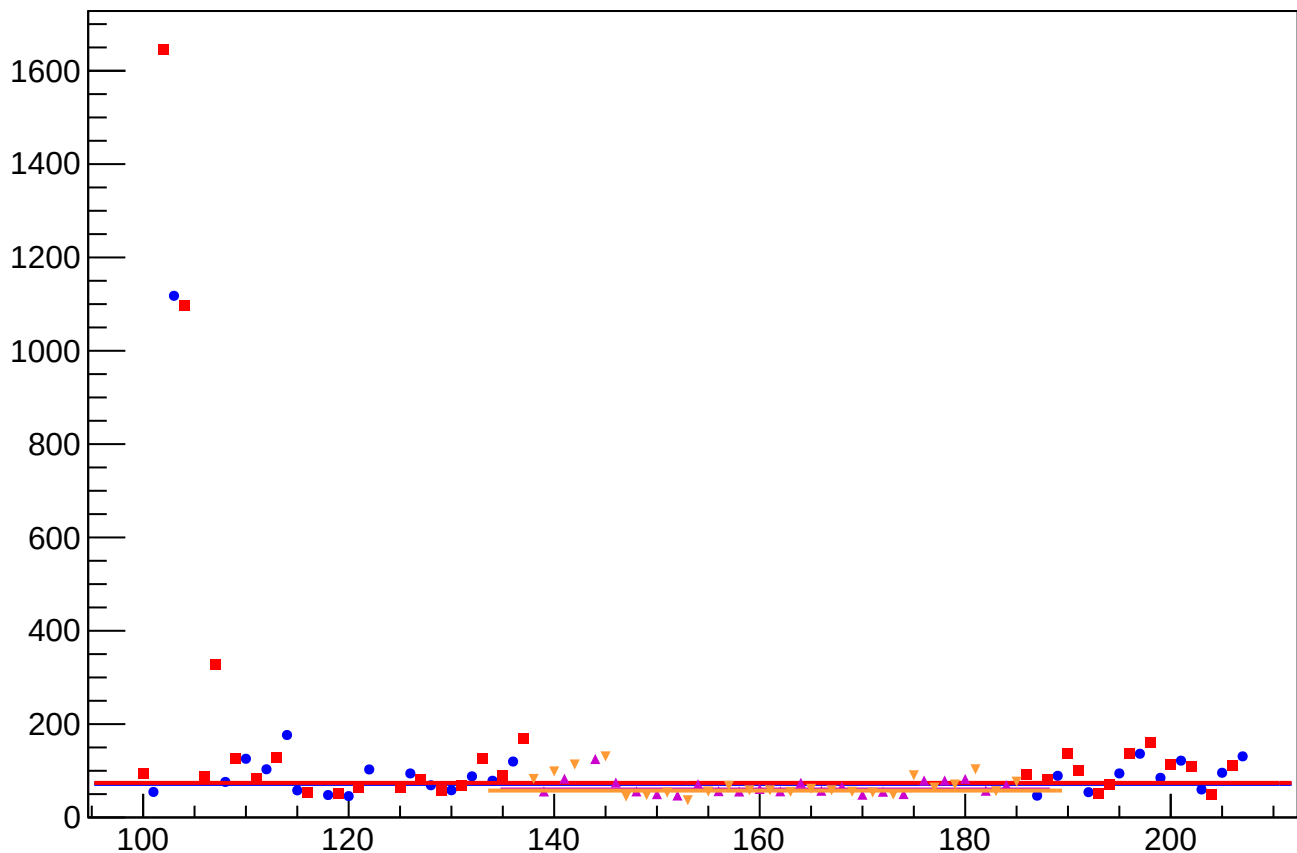
Left In:  $0.001 \pm 0.015$   $\chi^2/\text{NDF}$ : 15.6/22

+ sign  $0.015 \pm 0.012$   $\chi^2/\text{NDF}$ : 60.2/49

All:  $0.004 \pm 0.009$   $\chi^2/\text{NDF}$ : 96.6/102

- sign  $-0.007 \pm 0.013$   $\chi^2/\text{NDF}$ : 34.9/52

asym\_atl1\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 71.905 $\pm$ 0.016  $\chi^2$ /NDF: 3626530.7/25

Left Out: 57.606 $\pm$ 0.011  $\chi^2$ /NDF: 2213216.3/23

Right Out: 74.064 $\pm$ 0.016  $\chi^2$ /NDF: 4817173.1/29

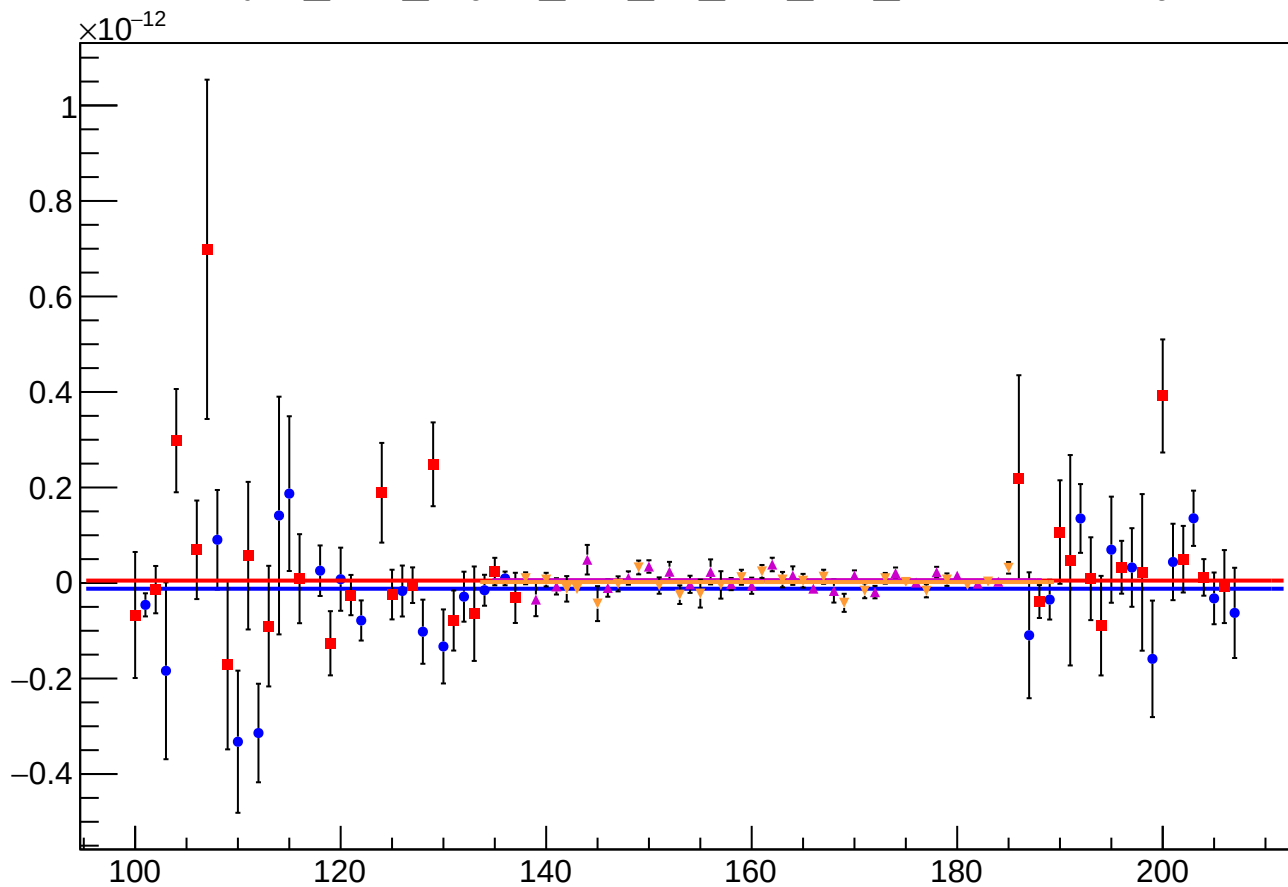
Left In: 59.828 $\pm$ 0.011  $\chi^2$ /NDF: 1340684.6/22

+ sign 62.149 $\pm$ 0.009  $\chi^2$ /NDF: 6409001.8/49

All: 63.262 $\pm$ 0.006  $\chi^2$ /NDF: 13144658.1/102

- sign 64.424 $\pm$ 0.009  $\chi^2$ /NDF: 6703110.1/52

# asym\_atl1\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 43.3/25$

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 31.9/24$

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 48.1/30$

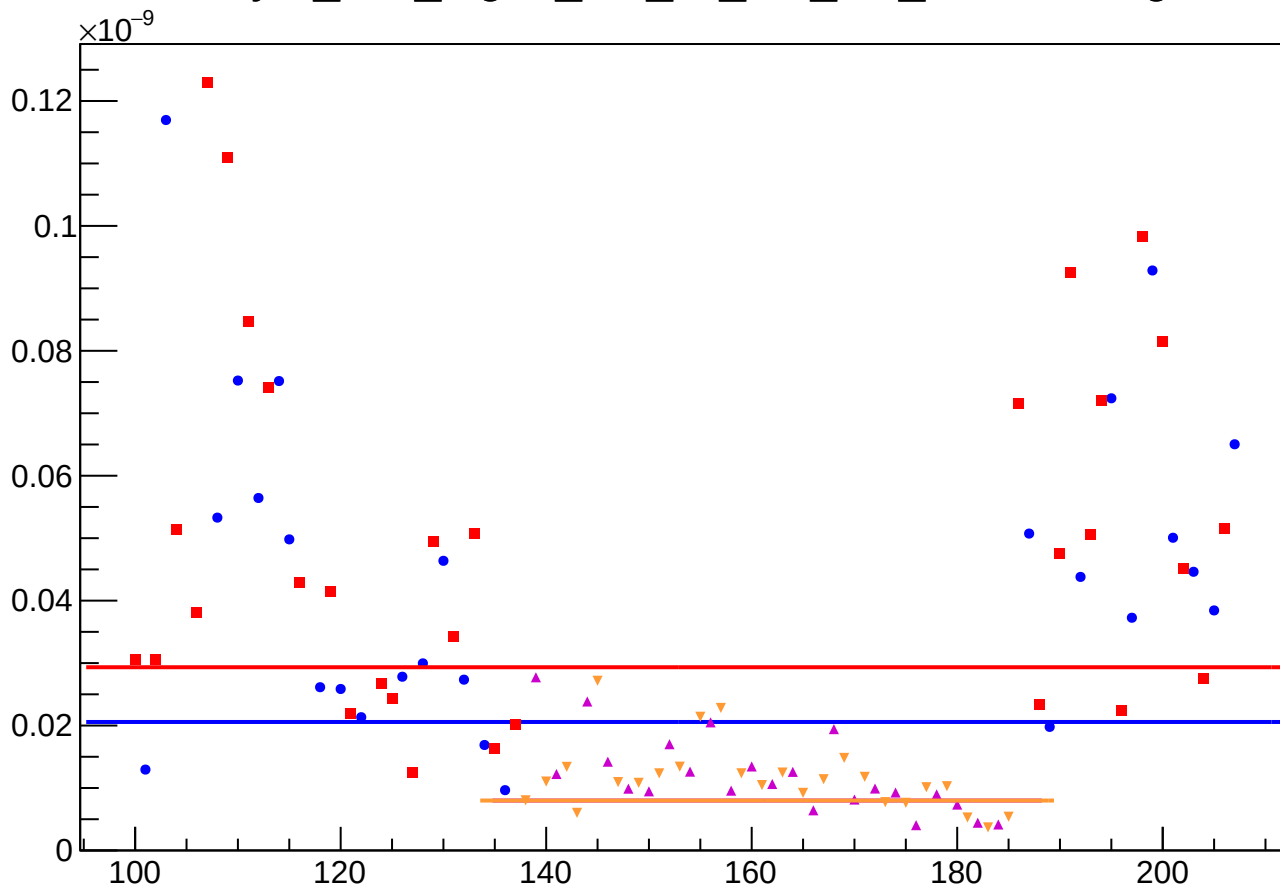
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 32.6/22$

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 77.4/50$

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 160.0/104$

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 80.7/53$

asym\_atl1\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 5956458.2/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 4887759.5/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 4307329.4/30

Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 5188583.5/22

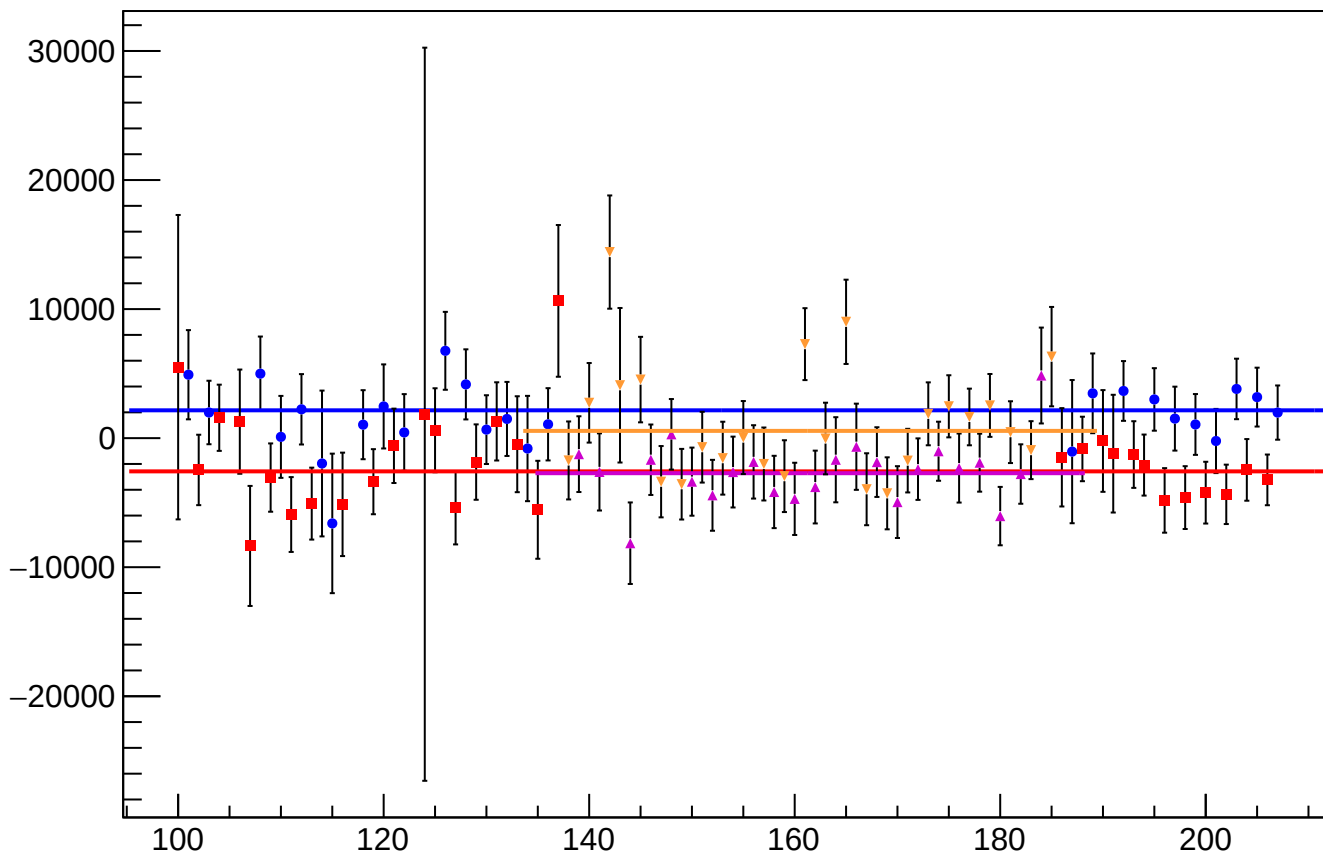
+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 14399483.8/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 30506574.7/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 16103635.1/53



# reg\_asym\_atl2\_mean vs Slug



Right In: 2156.316 $\pm$ 549.537  $\chi^2$ /NDF: 12.6/25

Left Out: 562.390 $\pm$ 557.316  $\chi^2$ /NDF:43.9/24

Right Out: -2574.419 $\pm$ 531.049  $\chi^2$ /NDF: 22.4/30

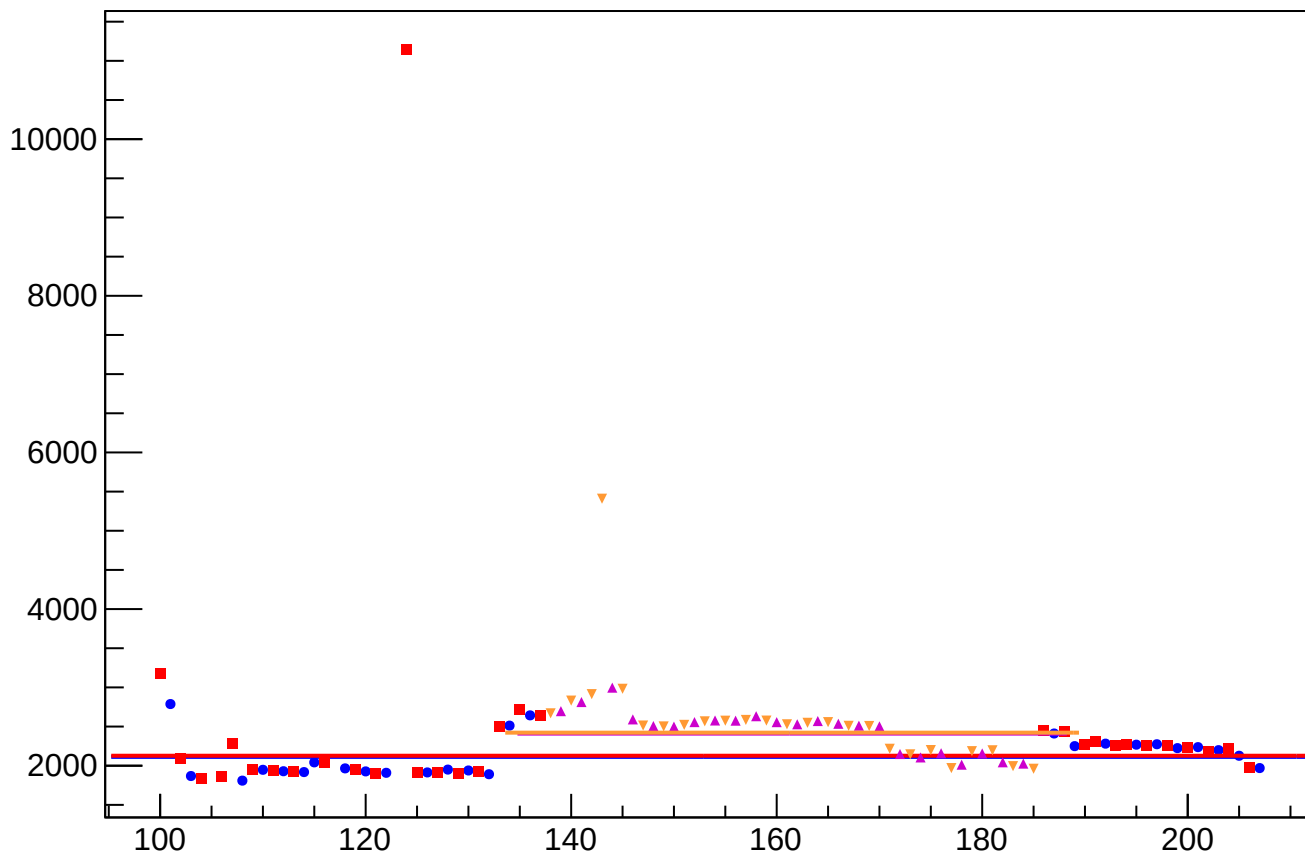
Left In: -2716.200 $\pm$ 566.202  $\chi^2$ /NDF:14.3/22

+ sign 1370.555 $\pm$ 391.303  $\chi^2$ /NDF: 60.7/50

All: -655.523 $\pm$ 275.281  $\chi^2$ /NDF: 150.5/104

- sign -2640.772 $\pm$ 387.340  $\chi^2$ /NDF: 36.7/53

# reg\_asym\_atl2\_rms vs Slug



Right In: 2112.864 $\pm$ 0.389  $\chi^2$ /NDF: 342806.5/25

Left Out: 2422.152 $\pm$ 0.394  $\chi^2$ /NDF: 952857.9/24

Right Out: 2127.372 $\pm$ 0.376  $\chi^2$ /NDF: 525864.2/30

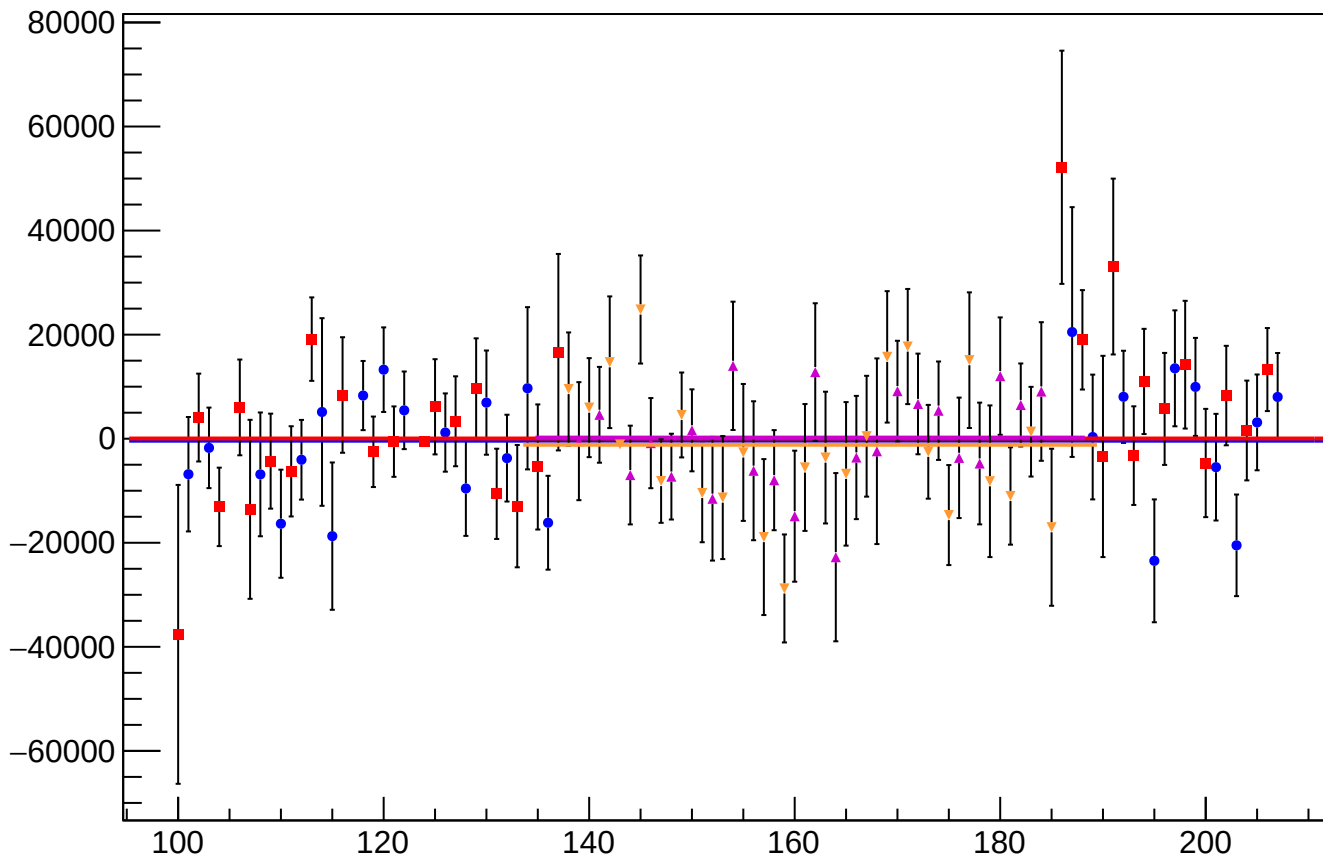
Left In: 2409.820 $\pm$ 0.400  $\chi^2$ /NDF: 428364.2/22

+ sign 2265.334 $\pm$ 0.277  $\chi^2$ /NDF: 1607973.5/50

All: 2262.416 $\pm$ 0.195  $\chi^2$ /NDF: 2827198.6/10

- sign 2259.556 $\pm$ 0.274  $\chi^2$ /NDF: 1219004.9/53

# asym\_atl2\_reg\_correction\_mean vs Slug



Right In:  $-374.266 \pm 1868.611$   $\chi^2/\text{NDF}: 29.3/25$

Left Out:  $-1158.214 \pm 757.797$   $\chi^2/\text{NDF}: 31.9/24$

Right Out:  $36.237 \pm 746.138$   $\chi^2/\text{NDF}: 38.8/30$

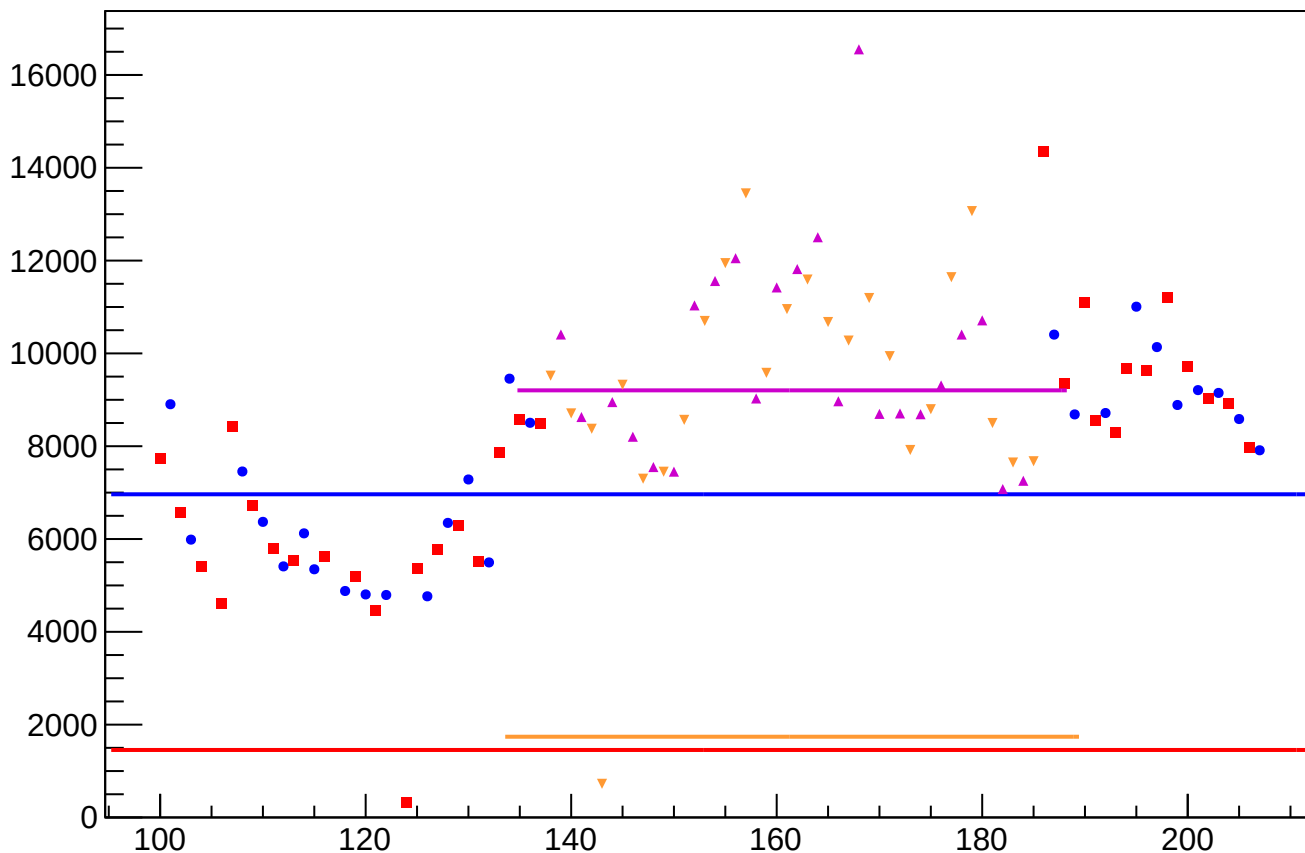
Left In:  $209.655 \pm 2195.058$   $\chi^2/\text{NDF}: 13.4/22$

+ sign  $-1047.493 \pm 702.247$   $\chi^2/\text{NDF}: 61.4/50$

All:  $-499.927 \pm 498.040$   $\chi^2/\text{NDF}: 114.8/104$

- sign  $54.199 \pm 706.441$   $\chi^2/\text{NDF}: 52.2/53$

# asym\_atl2\_reg\_correction\_rms vs Slug



Right In: 6964.073+/-1.321  $\chi^2/\text{NDF}$ : 2000982.8/25

Left Out: 1739.692+/-0.536  $\chi^2/\text{NDF}$ : 27734045.9/24

Right Out: 1454.148+/-0.528  $\chi^2/\text{NDF}$ : 24894957.3/30

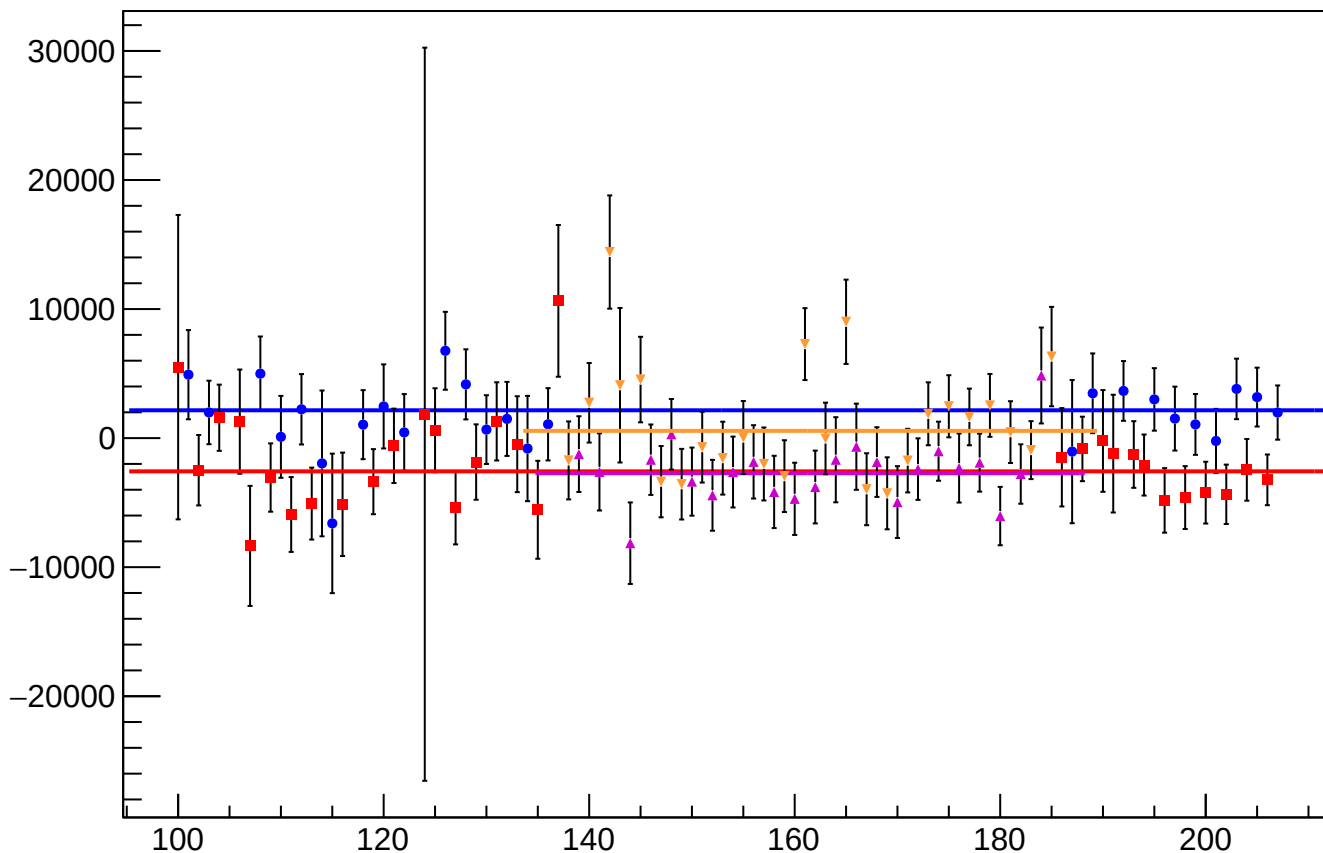
Left In: 9203.758+/-1.552  $\chi^2/\text{NDF}$ : 1272066.5/22

+ sign 2477.558+/-0.497  $\chi^2/\text{NDF}$ : 43160713.6/50

All: 2367.847+/-0.352  $\chi^2/\text{NDF}$ : 91772527.5/100

- sign 2256.823+/-0.500  $\chi^2/\text{NDF}$ : 48513601.0/53

# cor\_asym\_atl2\_mean vs Slug



Right In:  $2156.282 \pm 549.537$   $\chi^2/\text{NDF}$ : 12.6/25

Left Out:  $562.392 \pm 557.316$   $\chi^2/\text{NDF}$ : 43.9/24

Right Out:  $-2575.313 \pm 531.052$   $\chi^2/\text{NDF}$ : 22.4/30

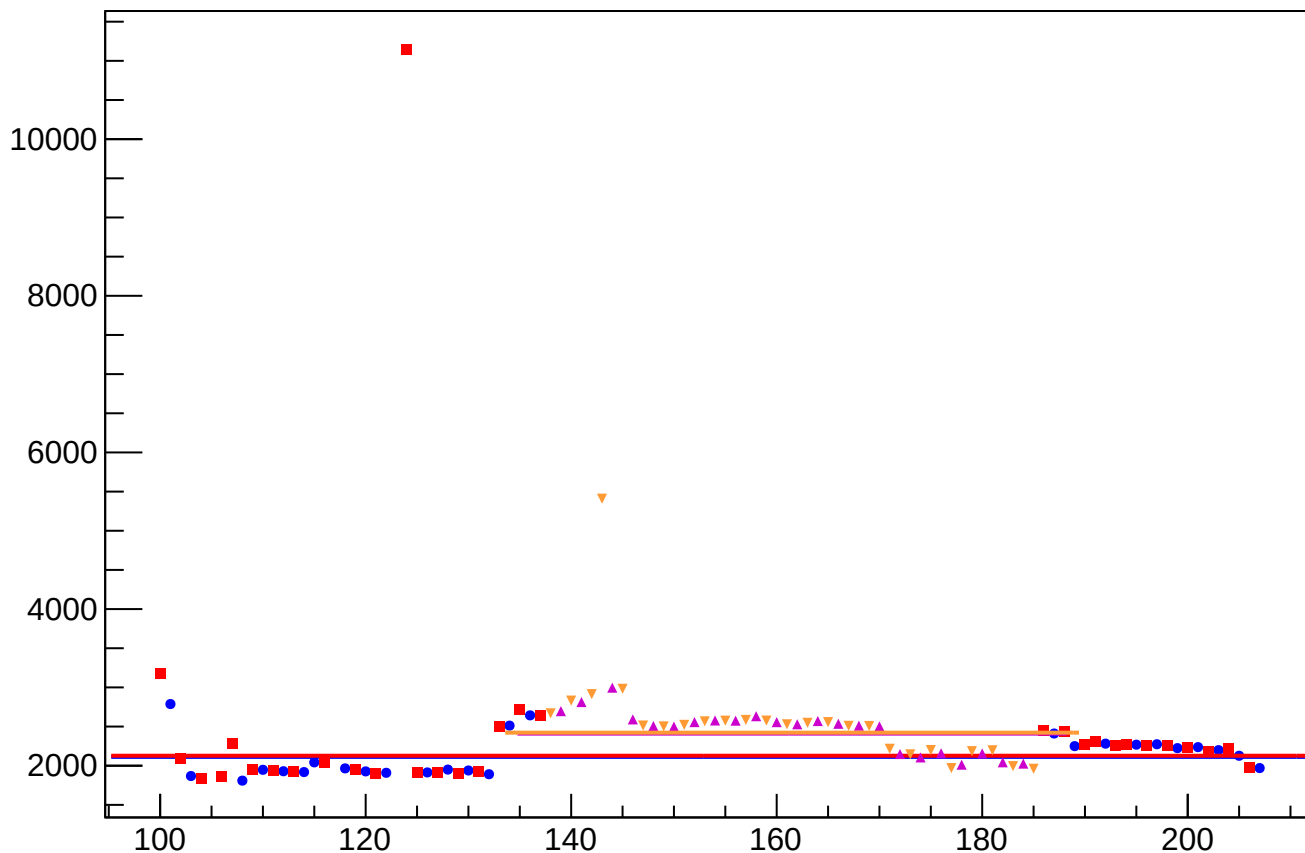
Left In:  $-2716.163 \pm 566.202$   $\chi^2/\text{NDF}$ : 14.3/22

+ sign  $1370.539 \pm 391.303$   $\chi^2/\text{NDF}$ : 60.7/50

All:  $-655.757 \pm 275.281$   $\chi^2/\text{NDF}$ : 150.5/104

- sign  $-2641.230 \pm 387.341$   $\chi^2/\text{NDF}$ : 36.7/53

# cor\_asym\_atl2\_rms vs Slug



Right In: 2112.864 $\pm$ 0.389  $\chi^2$ /NDF: 342806.4/25

Left Out: 2422.152 $\pm$ 0.394  $\chi^2$ /NDF:952857.9/24

Right Out: 2127.383 $\pm$ 0.376  $\chi^2$ /NDF: 525859.2/30

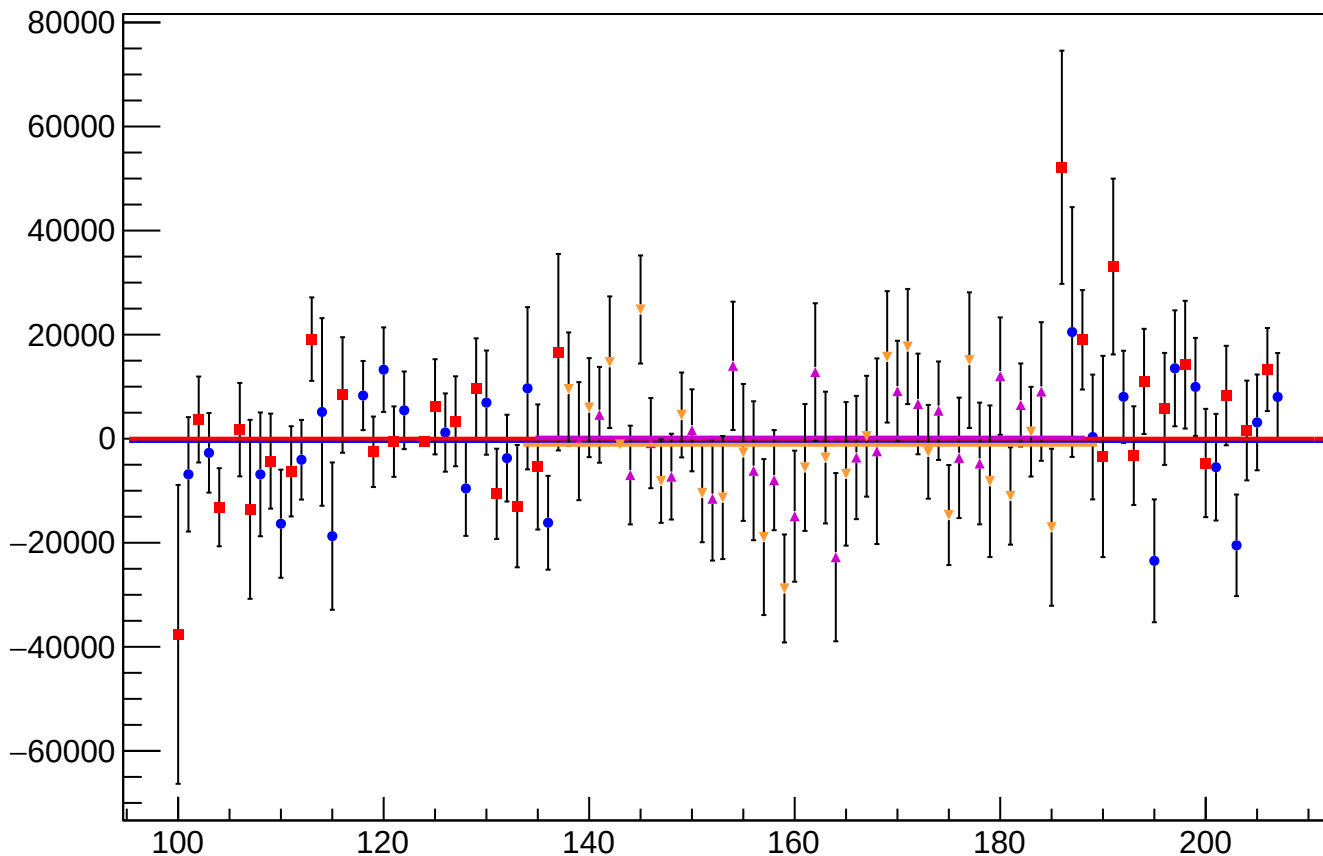
Left In: 2409.820 $\pm$ 0.400  $\chi^2$ /NDF:428364.2/22

+ sign 2265.334 $\pm$ 0.277  $\chi^2$ /NDF: 1607973.6/50

All: 2262.419 $\pm$ 0.195  $\chi^2$ /NDF: 2827170.1/10

- sign 2259.563 $\pm$ 0.274  $\chi^2$ /NDF: 1218976.8/53

# asym\_atl2\_cor\_correction\_mean vs Slug



Right In:  $-433.935 \pm 1867.313$   $\chi^2/\text{NDF}$ : 29.3/25

Left Out:  $-1157.974 \pm 757.732$   $\chi^2/\text{NDF}$ : 31.9/24

Right Out:  $4.374 \pm 745.827$   $\chi^2/\text{NDF}$ : 38.4/30

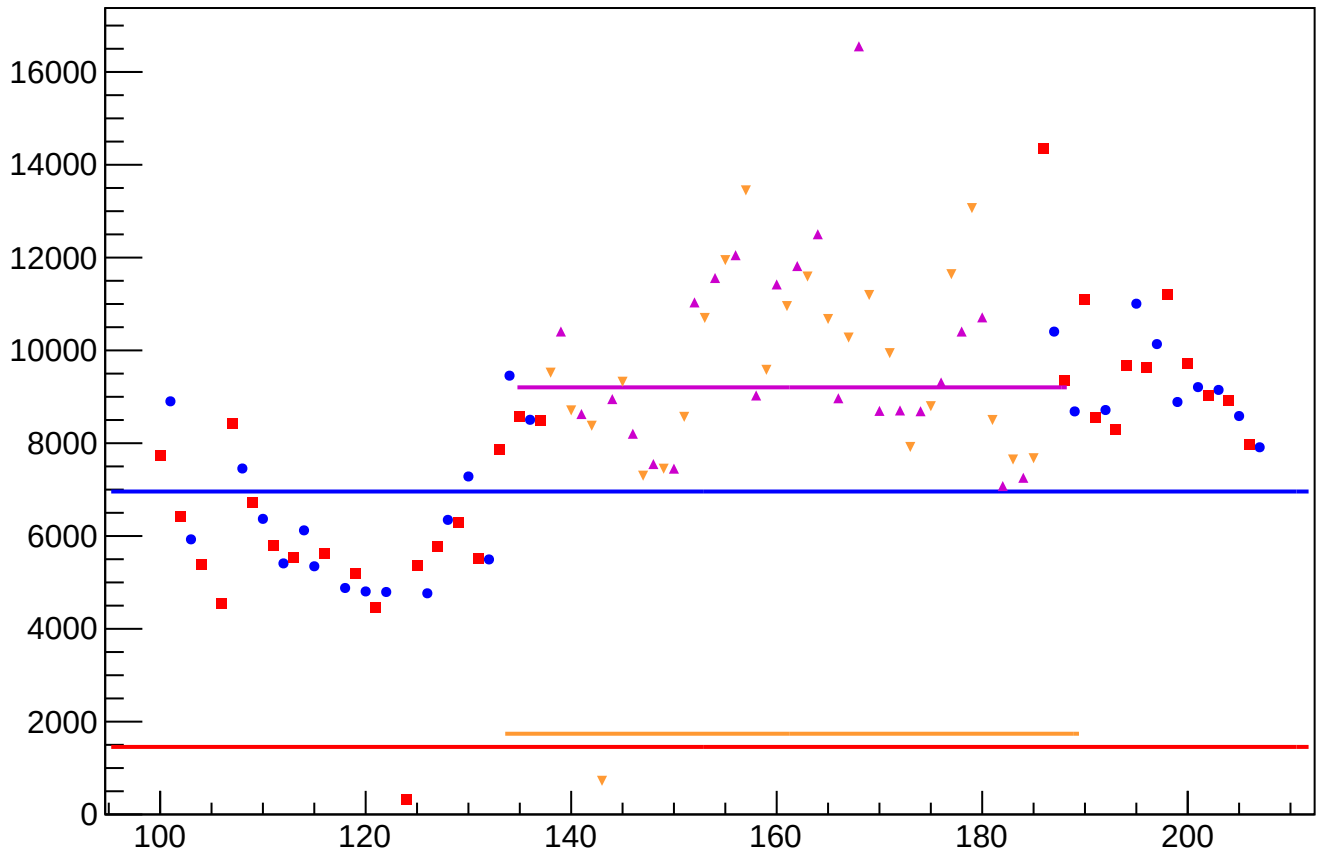
Left In:  $209.500 \pm 2195.055$   $\chi^2/\text{NDF}$ : 13.4/22

+ sign  $-1055.607 \pm 702.127$   $\chi^2/\text{NDF}$ : 61.4/50

All:  $-518.111 \pm 497.904$   $\chi^2/\text{NDF}$ : 114.4/104

- sign  $25.604 \pm 706.177$   $\chi^2/\text{NDF}$ : 51.8/53

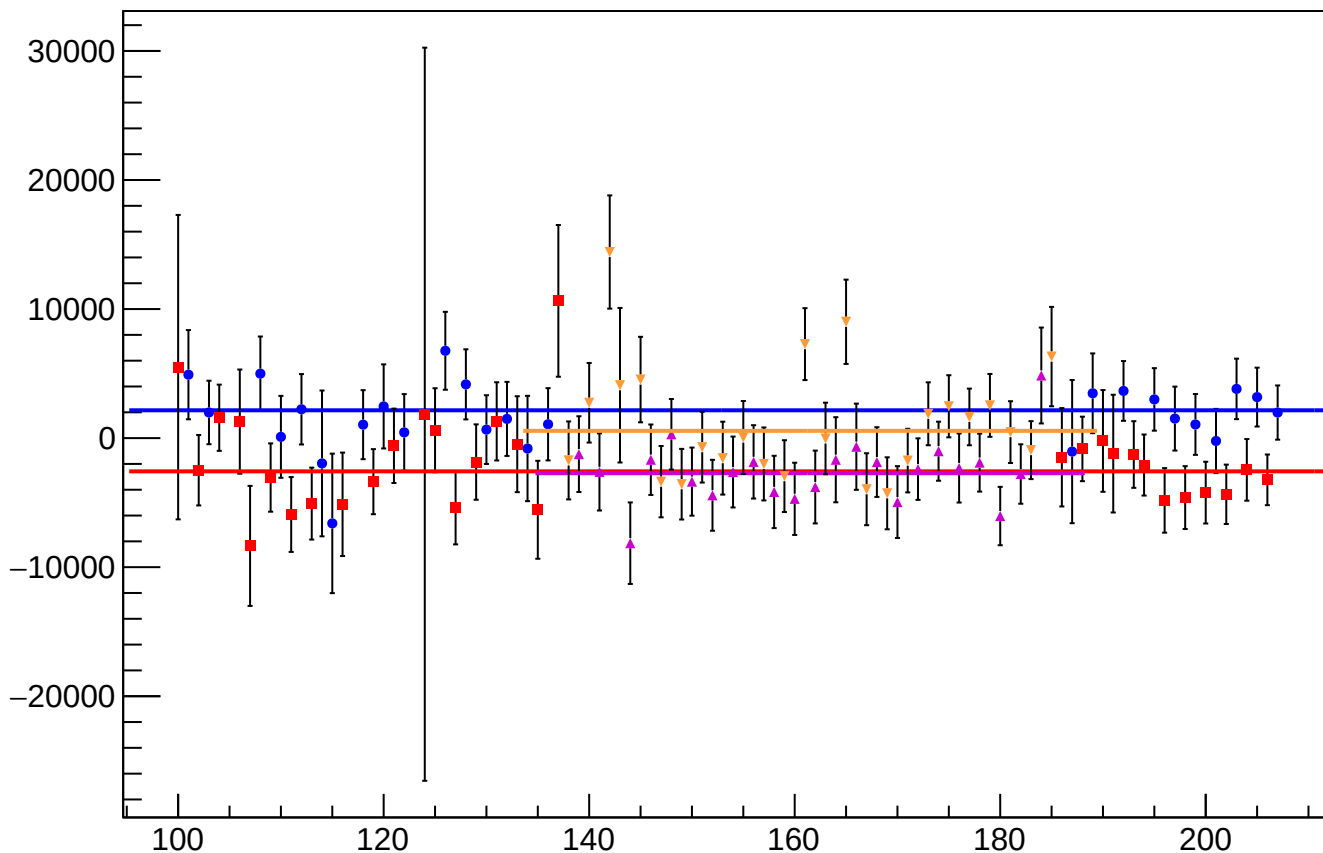
# asym\_atl2\_cor\_correction\_rms vs Slug



|                             |                                     |                         |                                     |
|-----------------------------|-------------------------------------|-------------------------|-------------------------------------|
| Right In: 6959.204+/-1.320  | $\chi^2/\text{NDF}$ : 2005653.5/25  | + sign 2477.441+/-0.496 | $\chi^2/\text{NDF}$ : 43158946.3/50 |
| Left Out: 1739.457+/-0.536  | $\chi^2/\text{NDF}$ : 27735092.1/24 | All: 2368.020+/-0.352   | $\chi^2/\text{NDF}$ : 91756339.2/1  |
| Right Out: 1455.386+/-0.527 | $\chi^2/\text{NDF}$ : 24886264.5/30 | - sign 2257.333+/-0.499 | $\chi^2/\text{NDF}$ : 48499684.0/53 |
| Left In: 9203.744+/-1.552   | $\chi^2/\text{NDF}$ : 1272079.0/22  |                         |                                     |



# eigen\_cor\_asym\_atl2\_mean vs Slug



Right In: 2156.282 $\pm$ 549.537  $\chi^2$ /NDF: 12.6/25

Left Out: 562.392 $\pm$ 557.316  $\chi^2$ /NDF:43.9/24

Right Out: -2575.313 $\pm$ 531.052  $\chi^2$ /NDF: 22.4/30

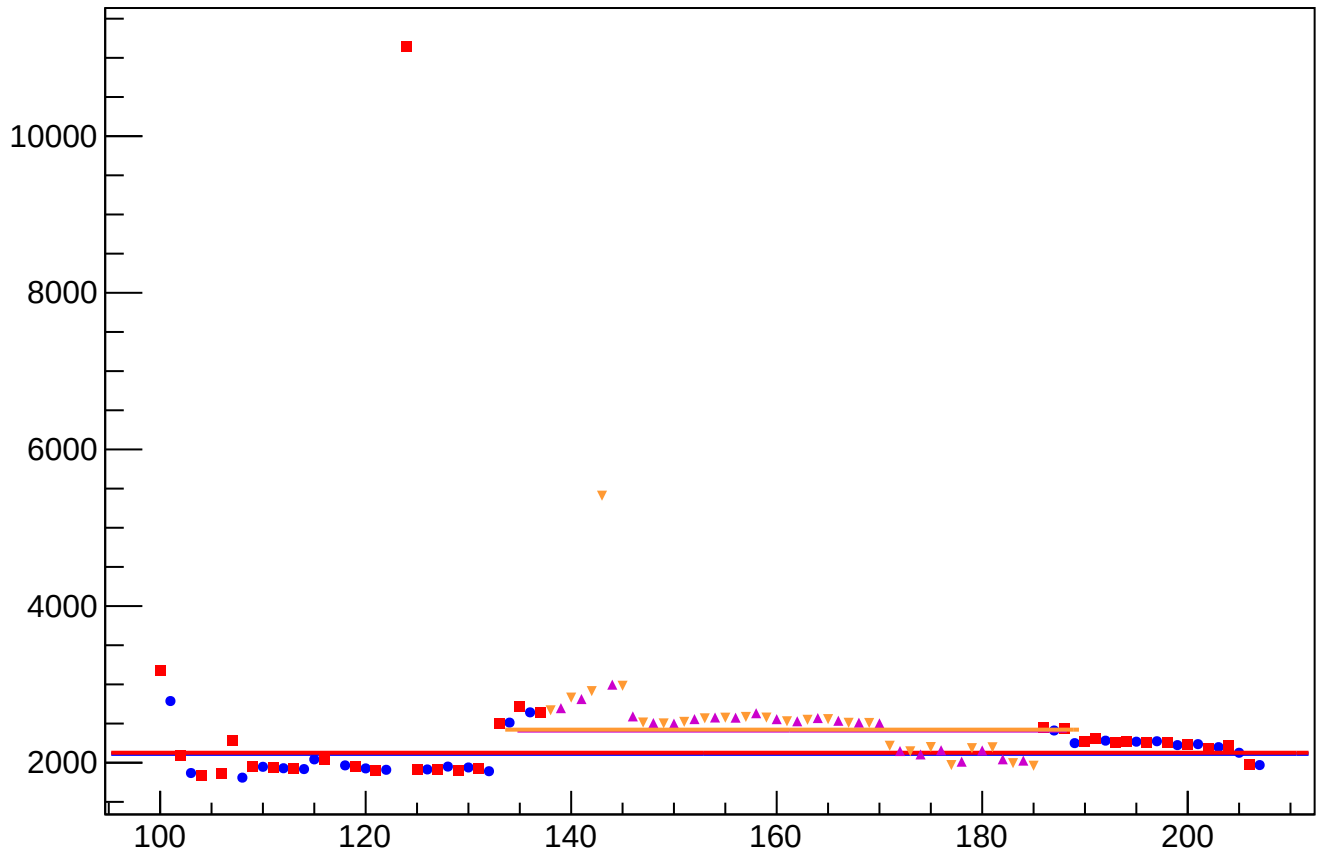
Left In: -2716.163 $\pm$ 566.202  $\chi^2$ /NDF:14.3/22

+ sign 1370.539 $\pm$ 391.303  $\chi^2$ /NDF: 60.7/50

All: -655.757 $\pm$ 275.281  $\chi^2$ /NDF: 150.5/104

- sign -2641.230 $\pm$ 387.341  $\chi^2$ /NDF: 36.7/53

# eigen\_cor\_asym\_atl2\_rms vs Slug



Right In: 2112.864 $\pm$ 0.389  $\chi^2$ /NDF: 342806.4/25

Left Out: 2422.152 $\pm$ 0.394  $\chi^2$ /NDF: 952857.9/24

Right Out: 2127.383 $\pm$ 0.376  $\chi^2$ /NDF: 525859.2/30

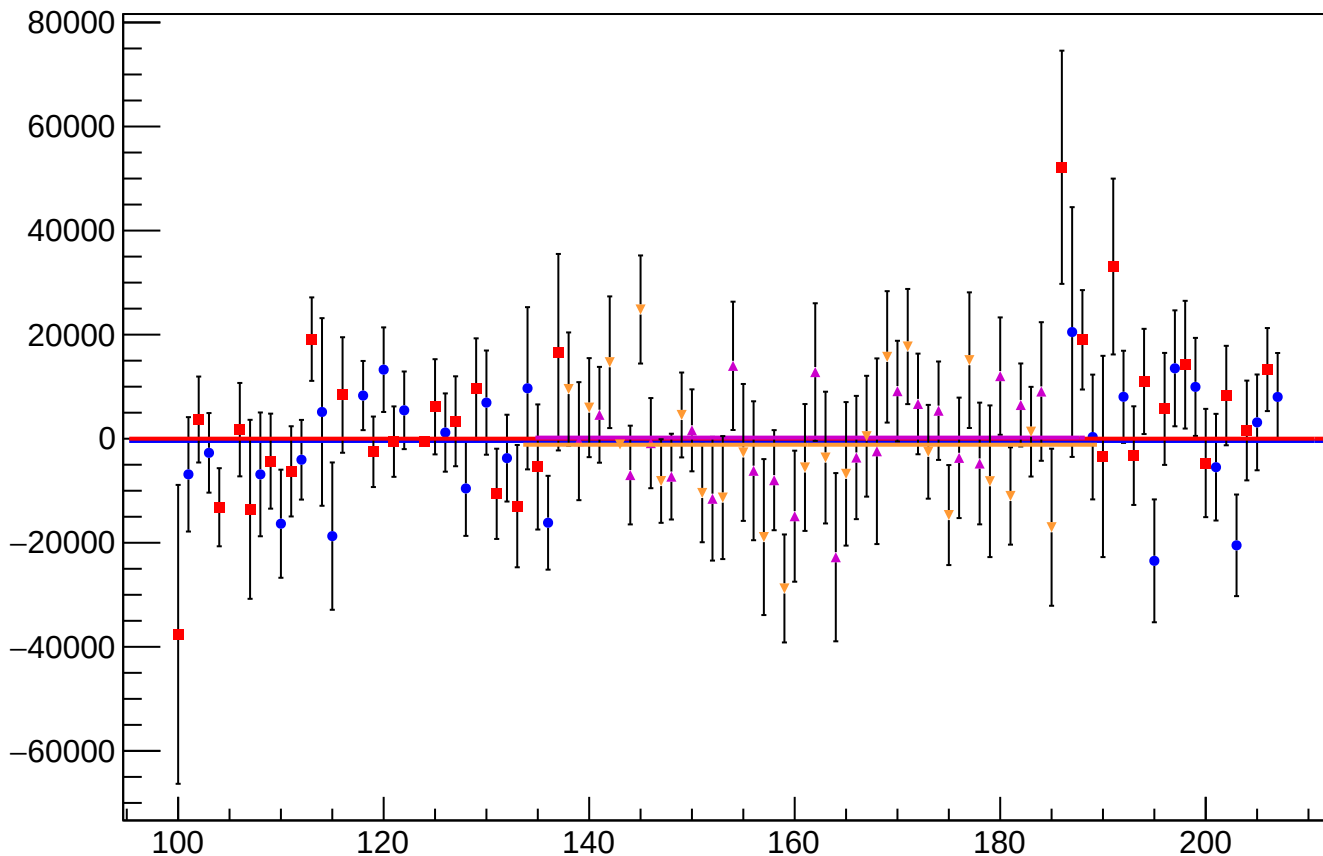
Left In: 2409.820 $\pm$ 0.400  $\chi^2$ /NDF: 428364.2/22

+ sign 2265.334 $\pm$ 0.277  $\chi^2$ /NDF: 1607973.6/50

All: 2262.419 $\pm$ 0.195  $\chi^2$ /NDF: 2827170.1/100

- sign 2259.563 $\pm$ 0.274  $\chi^2$ /NDF: 1218976.8/53

# asym\_atl2\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-433.935 \pm 1867.313$   $\chi^2/\text{NDF}$ : 29.3/25

Left Out:  $-1157.974 \pm 757.732$   $\chi^2/\text{NDF}$ : 31.9/24

Right Out:  $4.374 \pm 745.827$   $\chi^2/\text{NDF}$ : 38.4/30

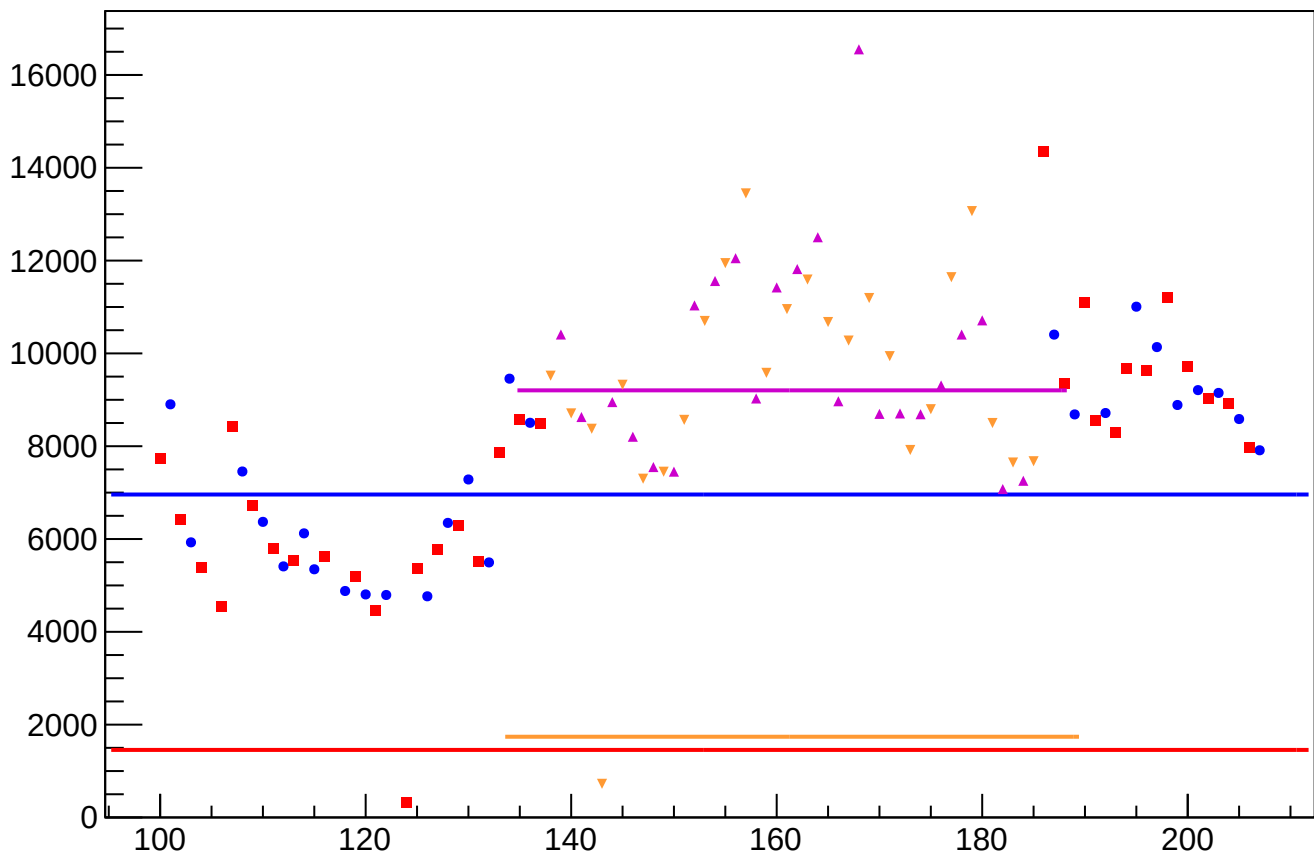
Left In:  $209.500 \pm 2195.055$   $\chi^2/\text{NDF}$ : 13.4/22

+ sign  $-1055.607 \pm 702.127$   $\chi^2/\text{NDF}$ : 61.4/50

All:  $-518.111 \pm 497.904$   $\chi^2/\text{NDF}$ : 114.4/104

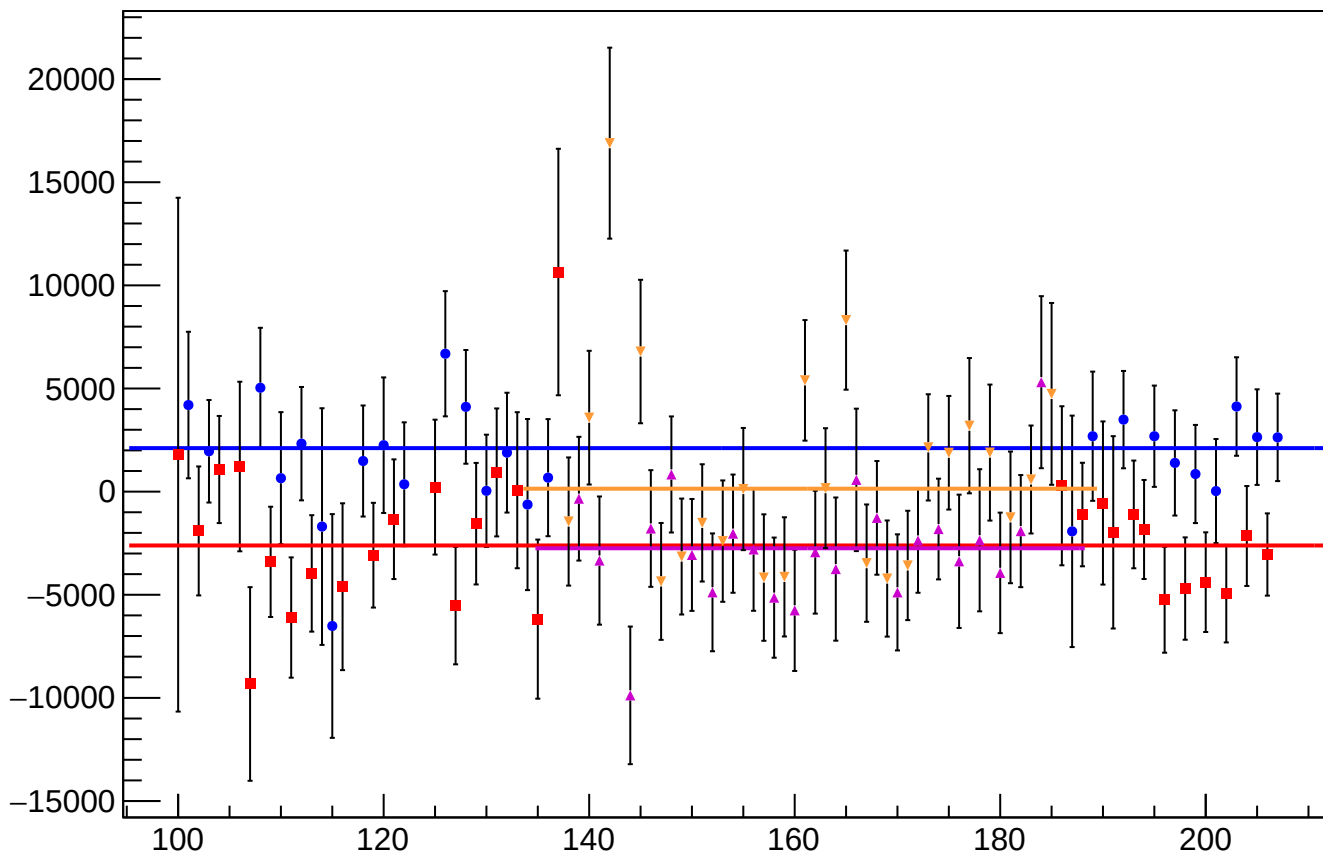
- sign  $25.604 \pm 706.177$   $\chi^2/\text{NDF}$ : 51.8/53

# asym\_atl2\_eigen\_cor\_correction\_rms vs Slug



|                             |                                     |                         |                                     |
|-----------------------------|-------------------------------------|-------------------------|-------------------------------------|
| Right In: 6959.204+/-1.320  | $\chi^2/\text{NDF}$ : 2005653.5/25  | + sign 2477.441+/-0.496 | $\chi^2/\text{NDF}$ : 43158946.3/50 |
| Left Out: 1739.457+/-0.536  | $\chi^2/\text{NDF}$ : 27735092.1/24 | All: 2368.020+/-0.352   | $\chi^2/\text{NDF}$ : 91756339.2/1  |
| Right Out: 1455.386+/-0.527 | $\chi^2/\text{NDF}$ : 24886264.5/30 | - sign 2257.333+/-0.499 | $\chi^2/\text{NDF}$ : 48499684.0/53 |
| Left In: 9203.744+/-1.552   | $\chi^2/\text{NDF}$ : 1272079.0/22  |                         |                                     |

# dit\_asym\_atl2\_mean vs Slug



Right In:  $2109.614 \pm 557.111$   $\chi^2/\text{NDF}$ : 11.8/25

Left Out:  $142.497 \pm 615.731$   $\chi^2/\text{NDF}$ : 45.8/23

Right Out:  $-2610.162 \pm 540.450$   $\chi^2/\text{NDF}$ : 21.8/29

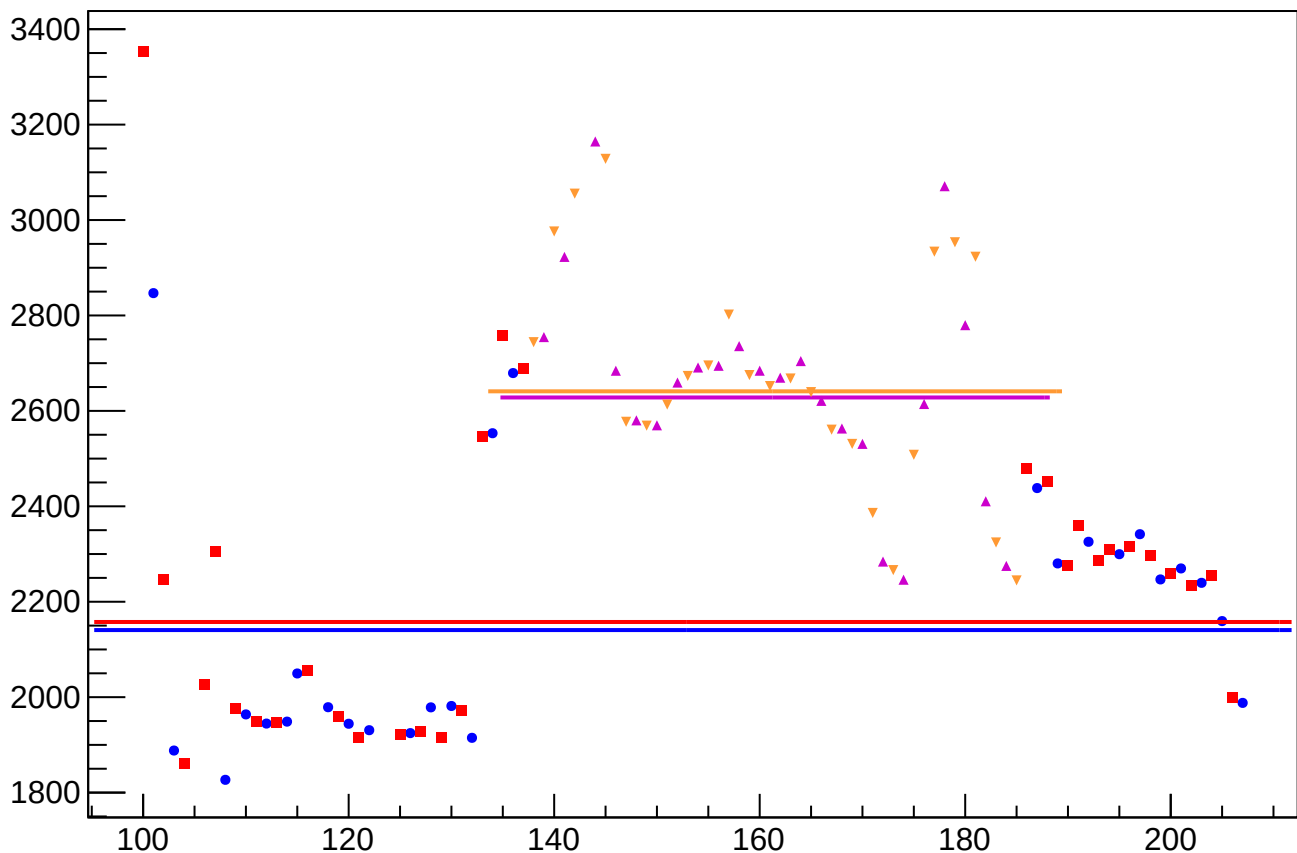
Left In:  $-2745.982 \pm 616.123$   $\chi^2/\text{NDF}$ : 15.4/22

+ sign  $1224.129 \pm 413.111$   $\chi^2/\text{NDF}$ : 63.3/49

All:  $-754.948 \pm 289.672$   $\chi^2/\text{NDF}$ : 145.7/102

- sign  $-2669.224 \pm 406.291$   $\chi^2/\text{NDF}$ : 37.3/52

# dit\_asym\_atl2\_rms vs Slug



Right In: 2140.641 $\pm$ 0.394  $\chi^2$ /NDF: 359808.4/25

Left Out: 2640.990 $\pm$ 0.435  $\chi^2$ /NDF: 253402.6/23

Right Out: 2157.585 $\pm$ 0.382  $\chi^2$ /NDF: 333058.8/29

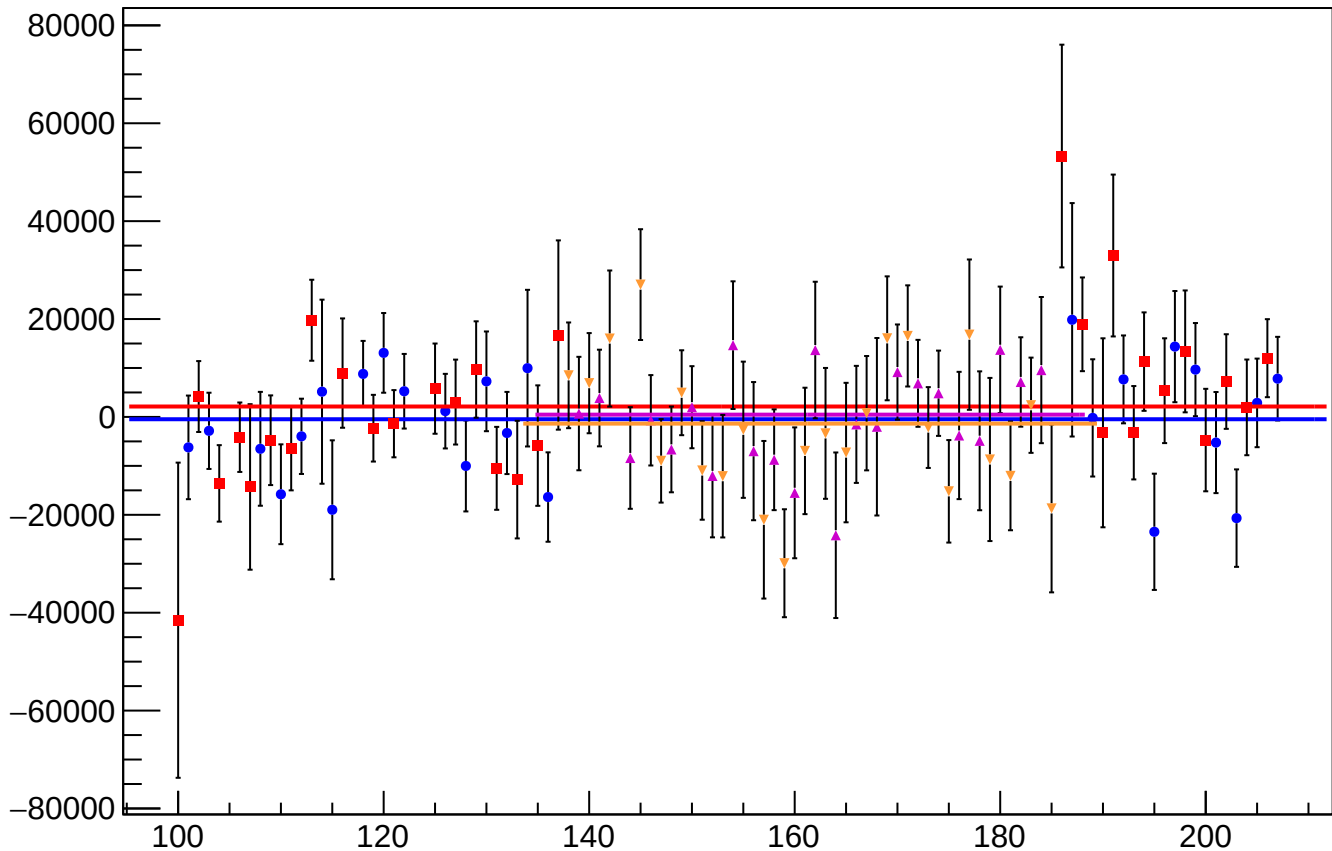
Left In: 2628.113 $\pm$ 0.436  $\chi^2$ /NDF: 237507.6/22

+ sign 2365.870 $\pm$ 0.292  $\chi^2$ /NDF: 1339390.6/49

All: 2363.913 $\pm$ 0.205  $\chi^2$ /NDF: 2569690.4/10

- sign 2362.023 $\pm$ 0.287  $\chi^2$ /NDF: 1230211.6/52

# asym\_atl2\_dit\_correction\_mean vs Slug



Right In:  $-472.616 \pm 1882.103$   $\chi^2/\text{NDF}$ : 28.9/25

Left Out:  $-1366.840 \pm 2326.289$   $\chi^2/\text{NDF}$ : 31.3/23

Right Out:  $2127.965 \pm 1774.940$   $\chi^2/\text{NDF}$ : 36.4/29

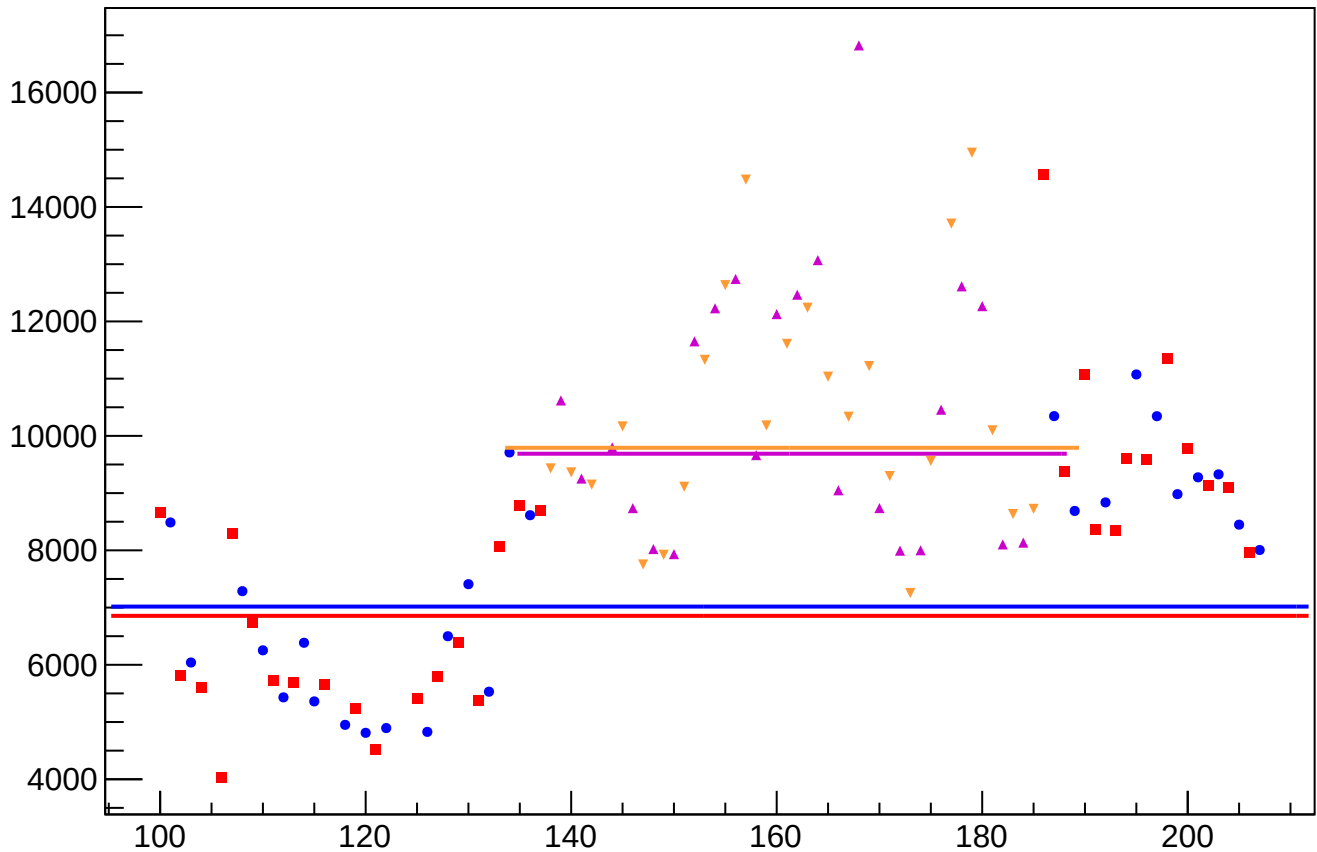
Left In:  $463.775 \pm 2314.478$   $\chi^2/\text{NDF}$ : 13.1/22

+ sign  $-826.385 \pm 1463.188$   $\chi^2/\text{NDF}$ : 60.3/49

All:  $387.194 \pm 1014.726$   $\chi^2/\text{NDF}$ : 111.4/102

- sign  $1511.679 \pm 1408.455$   $\chi^2/\text{NDF}$ : 49.8/52

# asym\_atl2\_dit\_correction\_rms vs Slug



Right In: 7017.297+/-1.331  $\chi^2/\text{NDF}$ : 1971670.2/25

Left Out: 9792.234+/-1.645  $\chi^2/\text{NDF}$ : 1219062.5/23

Right Out: 6855.438+/-1.255  $\chi^2/\text{NDF}$ : 2583801.4/29

Left In: 9688.179+/-1.637  $\chi^2/\text{NDF}$ : 1378173.6/22

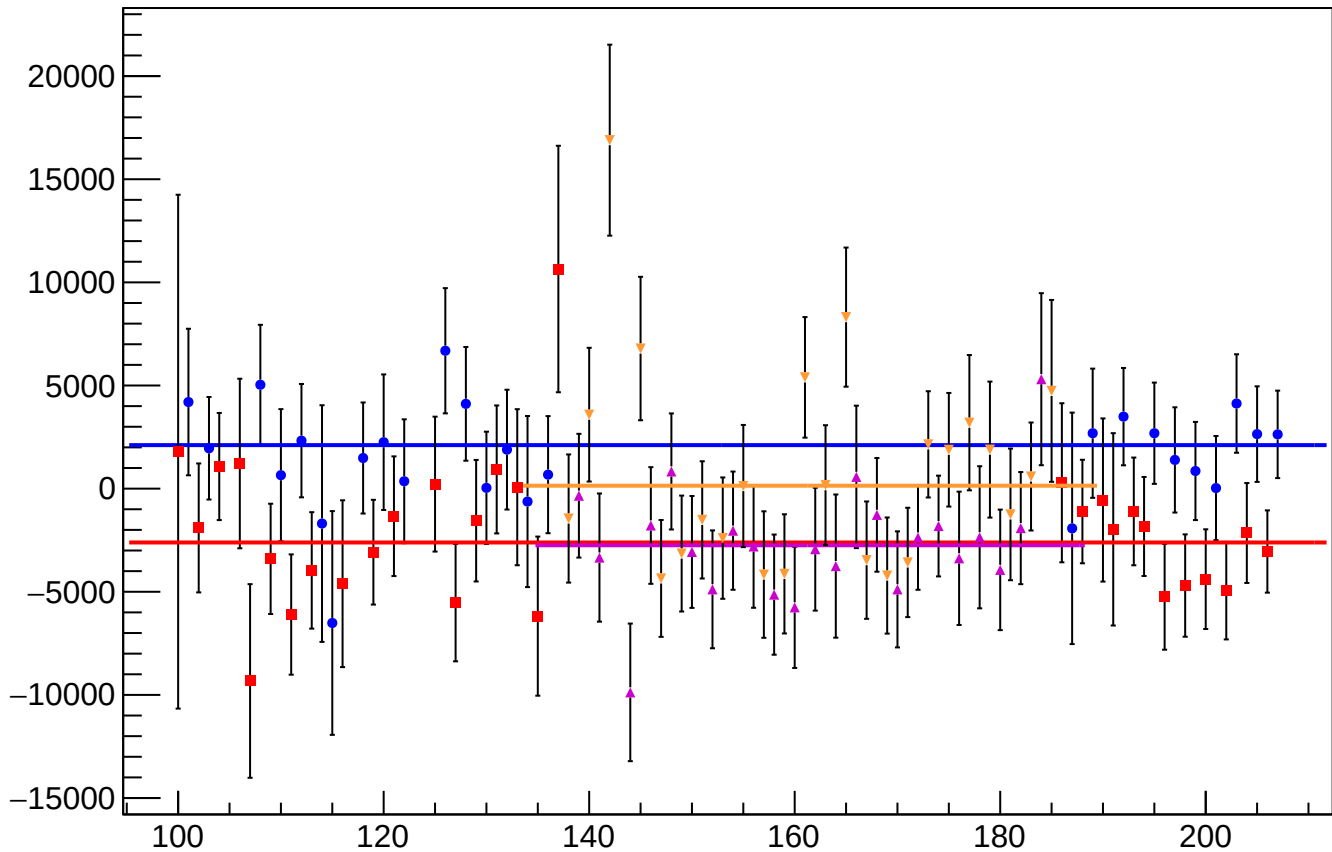
+ sign 8115.104+/-1.035  $\chi^2/\text{NDF}$ : 4910708.3/49

All: 8005.771+/-0.718  $\chi^2/\text{NDF}$ : 10780694.4/100

- sign 7904.464+/-0.996  $\chi^2/\text{NDF}$ : 5848472.0/52



# eigen\_dit\_asym\_atl2\_mean vs Slug



Right In:  $2109.615 \pm 557.111$   $\chi^2/\text{NDF}$ : 11.8/25

Left Out:  $142.487 \pm 615.732$   $\chi^2/\text{NDF}$ : 45.8/23

Right Out:  $-2610.160 \pm 540.450$   $\chi^2/\text{NDF}$ : 21.8/29

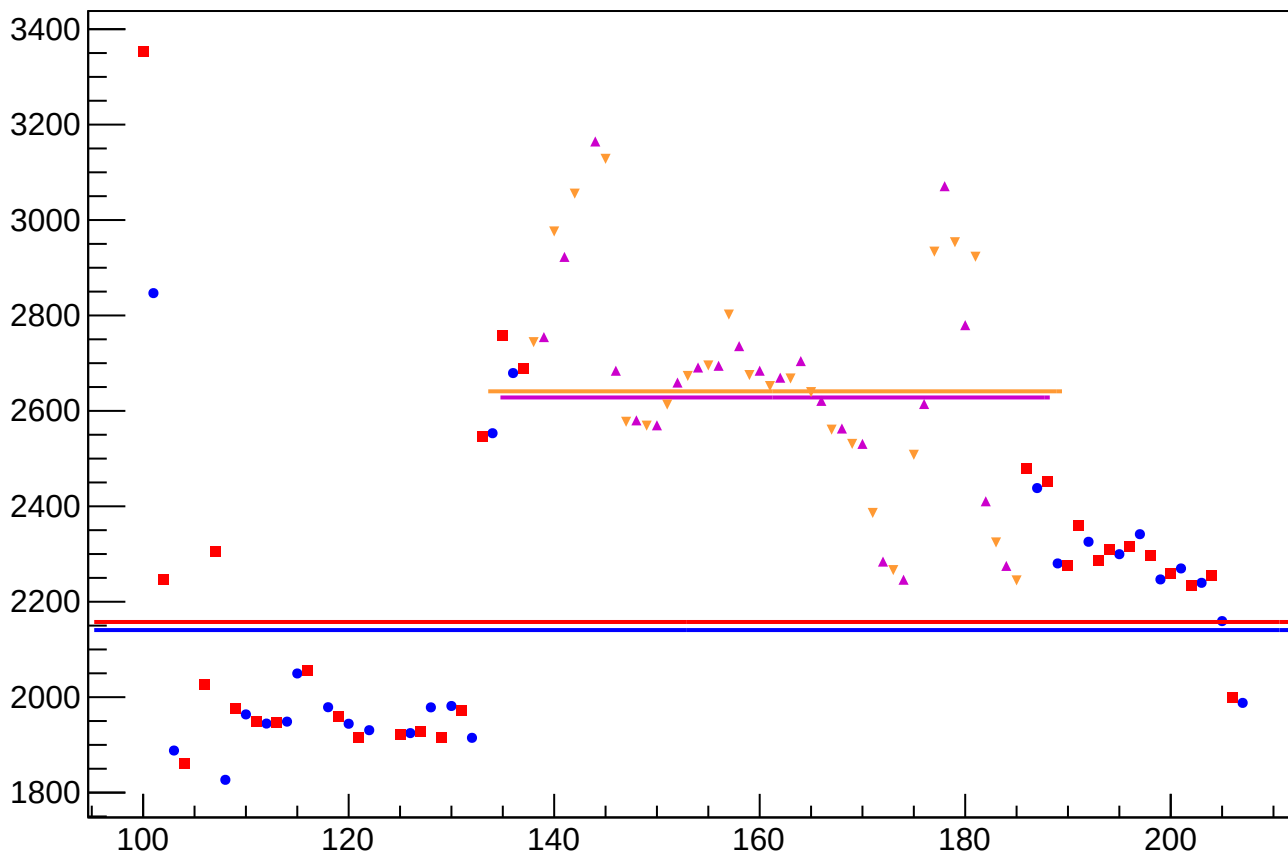
Left In:  $-2745.980 \pm 616.124$   $\chi^2/\text{NDF}$ : 15.4/22

+ sign  $1224.126 \pm 413.111$   $\chi^2/\text{NDF}$ : 63.3/49

All:  $-754.949 \pm 289.672$   $\chi^2/\text{NDF}$ : 145.7/102

- sign  $-2669.221 \pm 406.291$   $\chi^2/\text{NDF}$ : 37.3/52

# eigen\_dit\_asym\_atl2\_rms vs Slug



Right In: 2140.641+/-0.394  $\chi^2/\text{NDF}$ : 359808.3/25

Left Out: 2640.993+/-0.435  $\chi^2/\text{NDF}$ : 253411.8/23

Right Out: 2157.585+/-0.382  $\chi^2/\text{NDF}$ : 333059.6/29

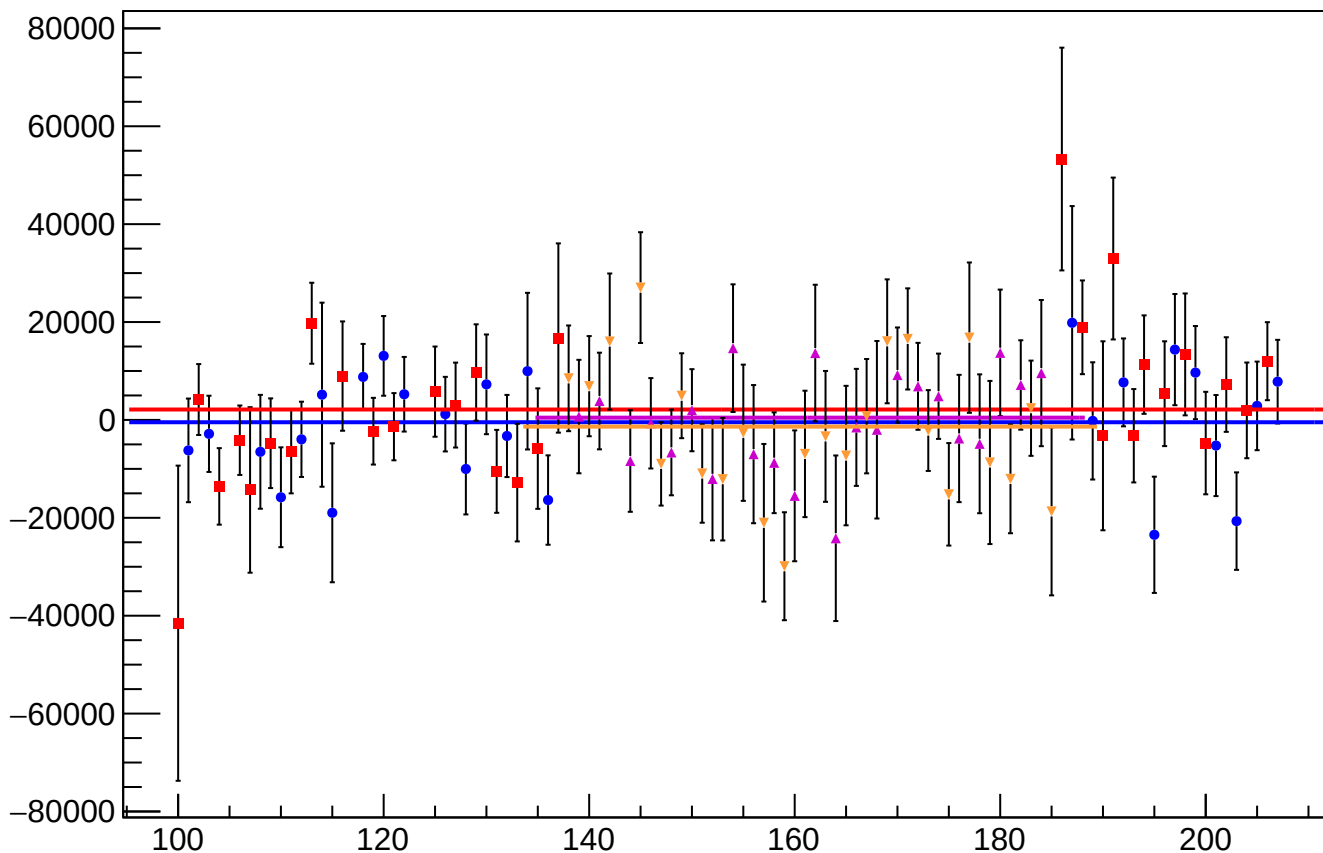
Left In: 2628.116+/-0.436  $\chi^2/\text{NDF}$ : 237516.8/22

+ sign 2365.871+/-0.292  $\chi^2/\text{NDF}$ : 1339405.1/49

All: 2363.914+/-0.205  $\chi^2/\text{NDF}$ : 2569720.2/10

- sign 2362.023+/-0.287  $\chi^2/\text{NDF}$ : 1230226.9/52

# asym\_atl2\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-472.608 \pm 1882.101$   $\chi^2/\text{NDF}$ : 28.9/25

Left Out:  $-1366.849 \pm 2326.293$   $\chi^2/\text{NDF}$ : 31.3/23

Right Out:  $2127.950 \pm 1774.937$   $\chi^2/\text{NDF}$ : 36.4/29

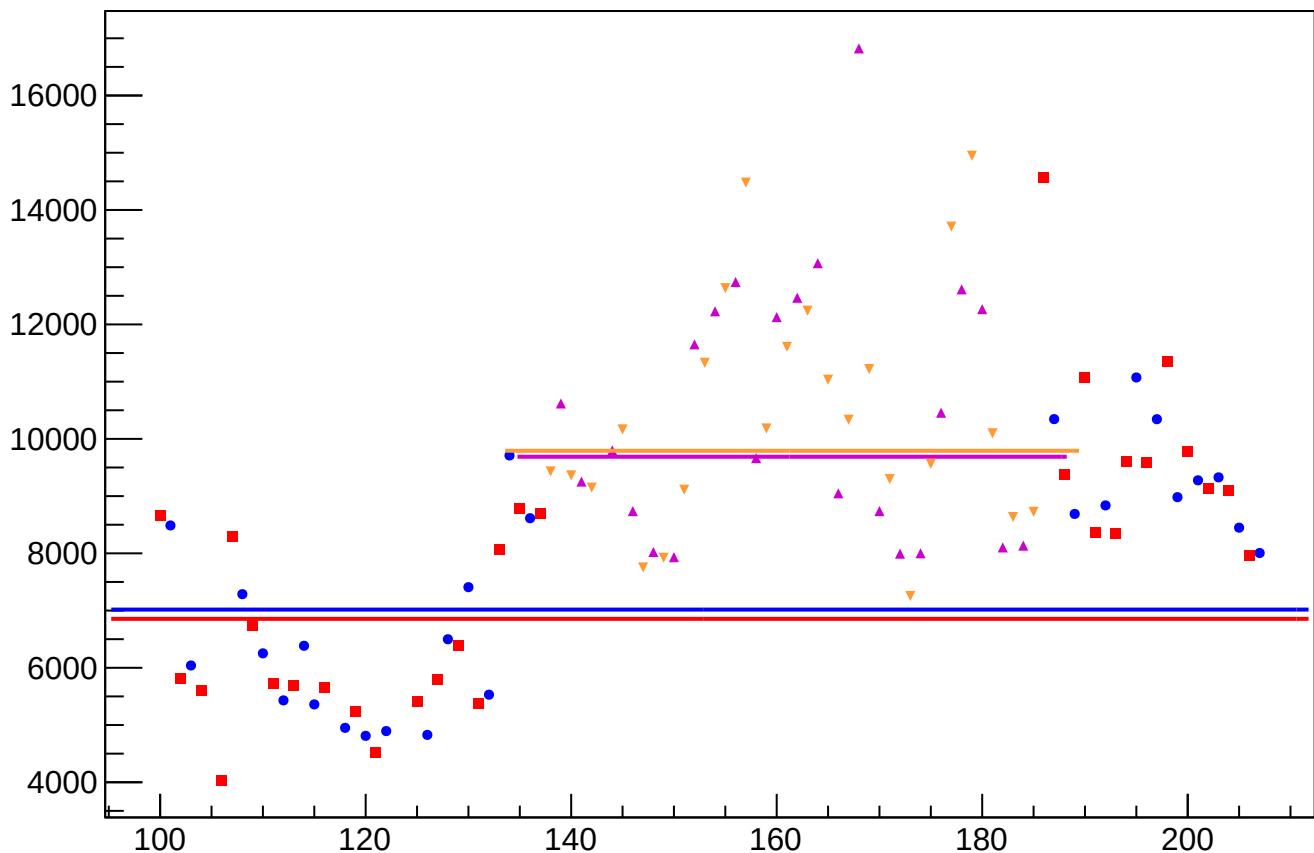
Left In:  $463.777 \pm 2314.482$   $\chi^2/\text{NDF}$ : 13.1/22

+ sign  $-826.382 \pm 1463.188$   $\chi^2/\text{NDF}$ : 60.3/49

All:  $387.193 \pm 1014.726$   $\chi^2/\text{NDF}$ : 111.4/102

- sign  $1511.673 \pm 1408.454$   $\chi^2/\text{NDF}$ : 49.8/52

# asym\_atl2\_eigen\_dit\_correction\_rms vs Slug



Right In: 7017.284+/-1.331  $\chi^2/\text{NDF}$ : 1971707.6/25

Left Out: 9792.251+/-1.645  $\chi^2/\text{NDF}$ : 1219062.8/23

Right Out: 6855.425+/-1.255  $\chi^2/\text{NDF}$ : 2583834.3/29

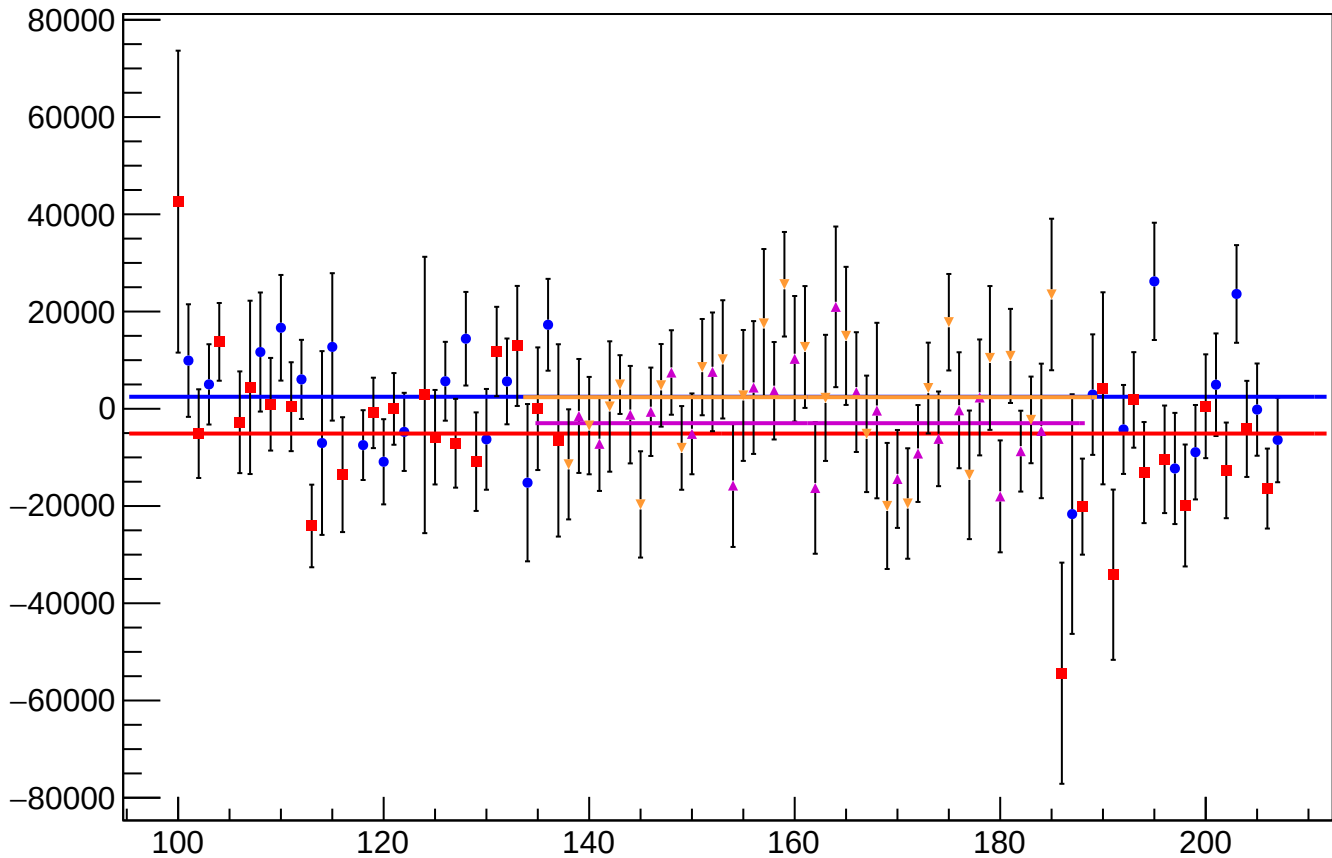
Left In: 9688.194+/-1.637  $\chi^2/\text{NDF}$ : 1378175.1/22

+ sign 8115.099+/-1.035  $\chi^2/\text{NDF}$ : 4910781.5/49

All: 8005.765+/-0.718  $\chi^2/\text{NDF}$ : 10780838.0/101

- sign 7904.458+/-0.996  $\chi^2/\text{NDF}$ : 5848542.2/52

# asym\_atl2\_mean vs Slug



Right In: 2471.088+/-1964.635  $\chi^2/\text{NDF}$ : 28.9/25

Left Out: 2387.857+/-2136.530  $\chi^2/\text{NDF}$ : 29.7/24

Right Out: -5095.723+/-1891.326  $\chi^2/\text{NDF}$ : 37.0/30

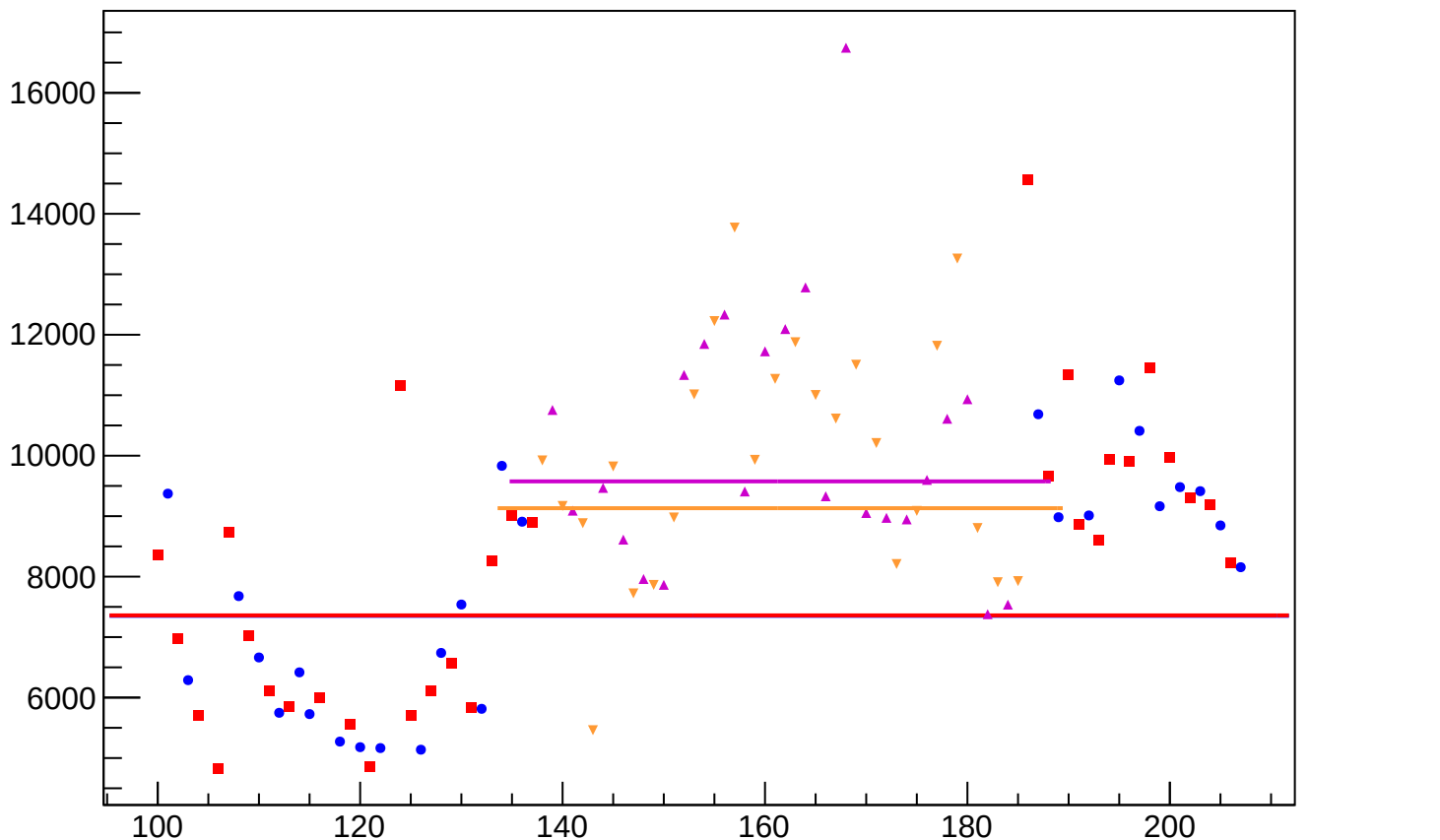
Left In: -2963.537+/-2278.927  $\chi^2/\text{NDF}$ : 13.0/22

+ sign 2432.955+/-1446.164  $\chi^2/\text{NDF}$ : 58.7/50

All: -875.385+/-1025.841  $\chi^2/\text{NDF}$ : 119.7/104

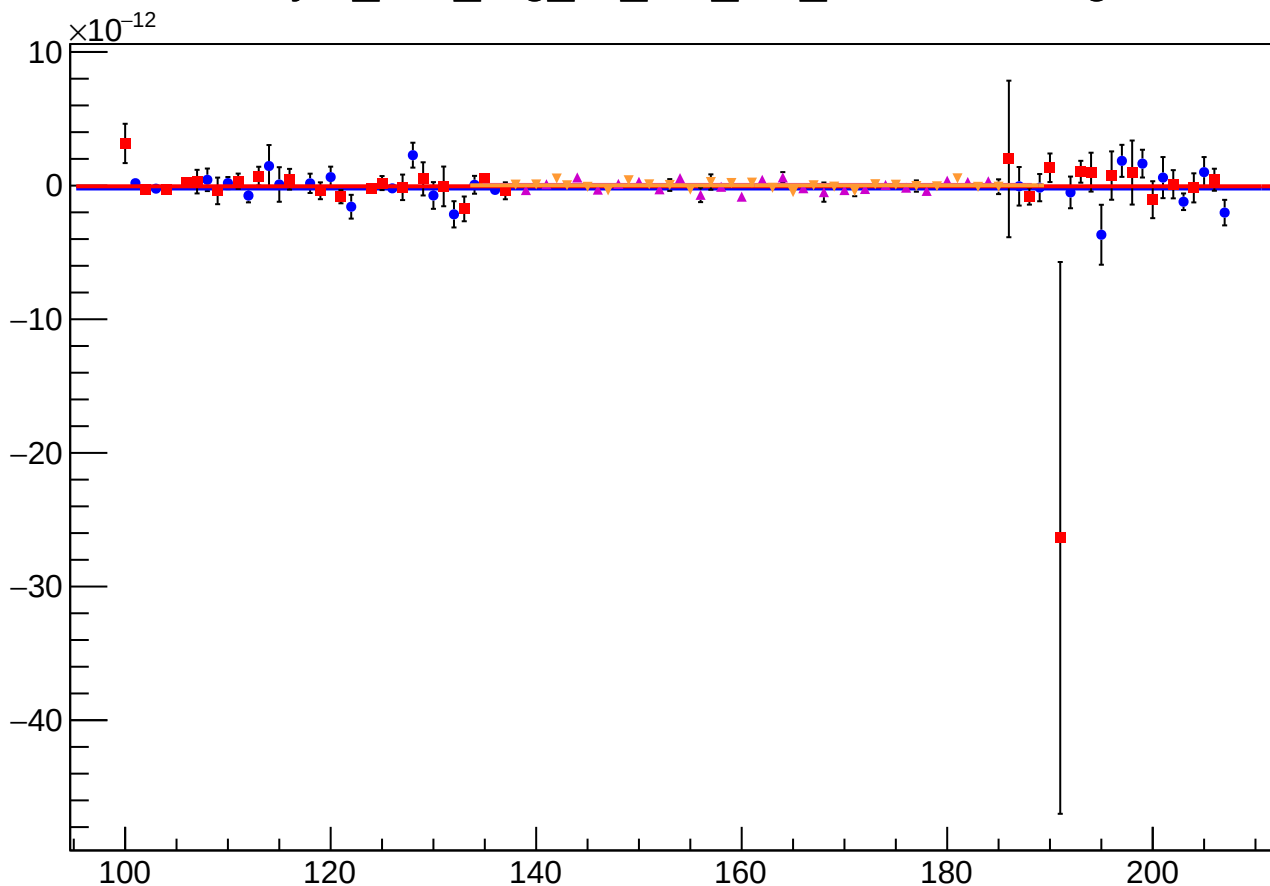
- sign -4226.107+/-1455.398  $\chi^2/\text{NDF}$ : 50.5/53

# asym\_atl2\_rms vs Slug



|                             |                                    |                         |                                    |
|-----------------------------|------------------------------------|-------------------------|------------------------------------|
| Right In: 7352.069+/-1.389  | $\chi^2/\text{NDF}$ : 1758689.2/25 | + sign 8167.430+/-1.023 | $\chi^2/\text{NDF}$ : 4322233.8/50 |
| Left Out: 9131.714+/-1.511  | $\chi^2/\text{NDF}$ : 1811661.2/24 | All: 8214.952+/-0.725   | $\chi^2/\text{NDF}$ : 8728055.5/10 |
| Right Out: 7359.320+/-1.337 | $\chi^2/\text{NDF}$ : 2127962.8/30 | - sign 8263.083+/-1.029 | $\chi^2/\text{NDF}$ : 4401474.8/53 |
| Left In: 9575.233+/-1.611   | $\chi^2/\text{NDF}$ : 1153802.3/22 |                         |                                    |

# asym\_atl2\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 37.2/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 17.9/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 29.3/30

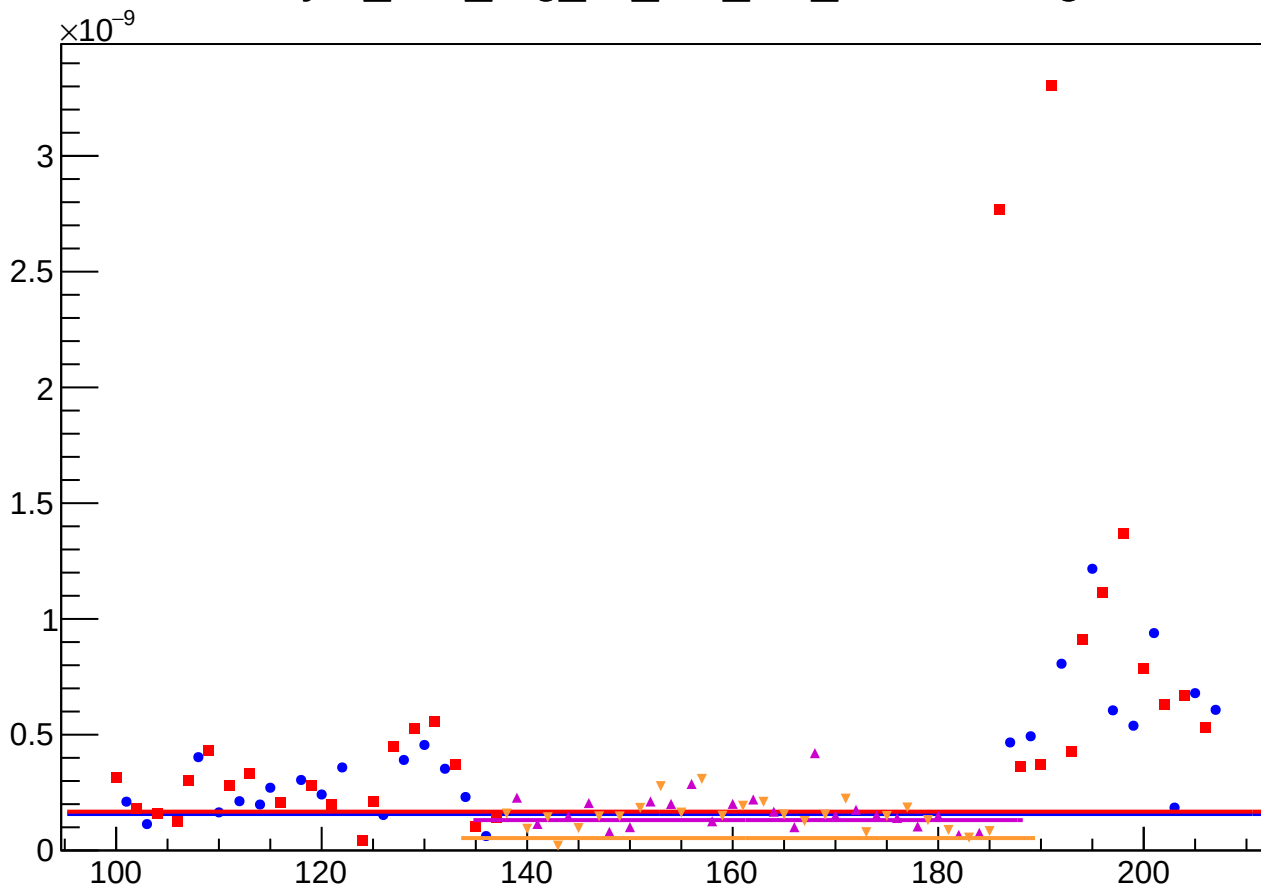
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 36.8/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 61.3/50

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 128.3/104

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 66.9/53

# asym\_atl2\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5192853.8/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7244510.4/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6626185.3/30

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1904207.4/22

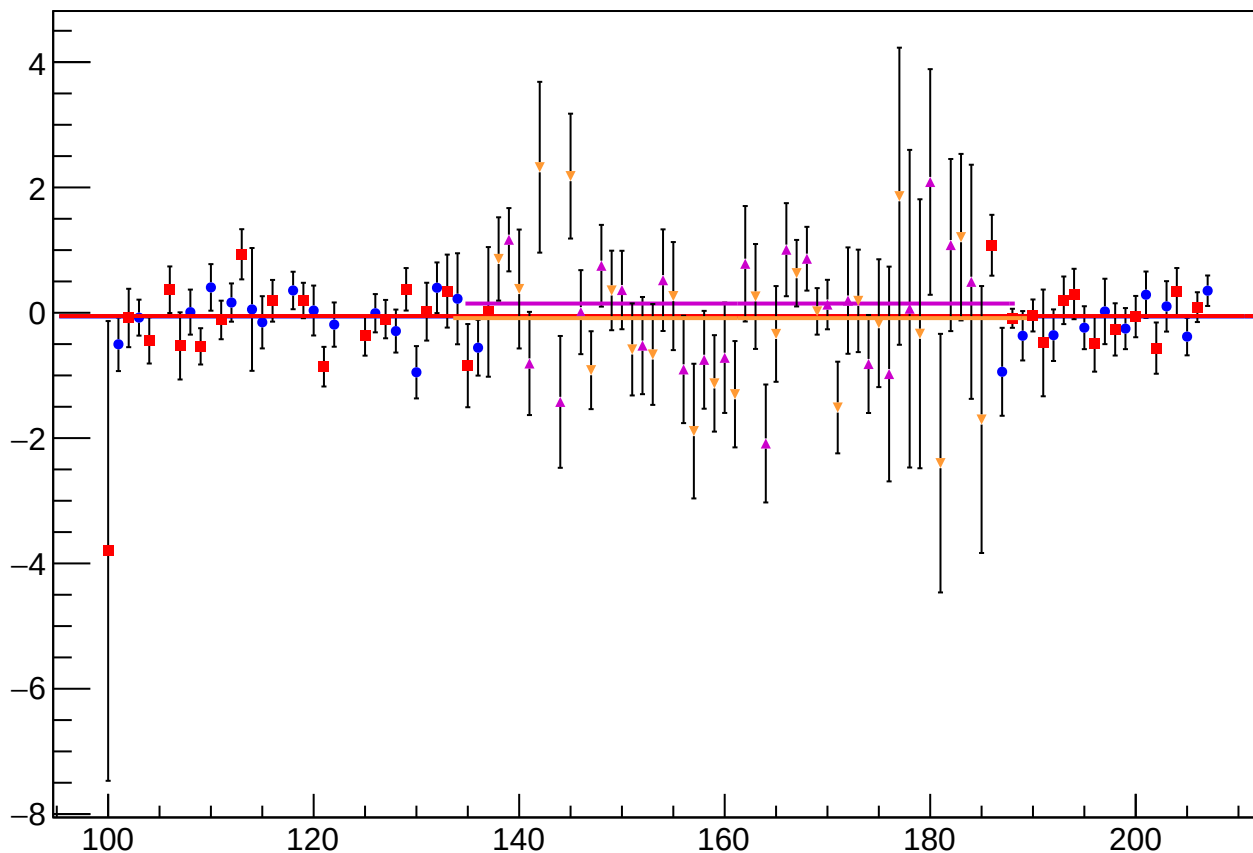
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14762074.7/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 27512646.7/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8763902.6/53



# asym\_atl2\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.059 \pm 0.072$   $\chi^2/\text{NDF}$ : 21.5/25

Left Out:  $-0.085 \pm 0.161$   $\chi^2/\text{NDF}$ : 30.2/23

Right Out:  $-0.052 \pm 0.063$   $\chi^2/\text{NDF}$ : 36.6/29

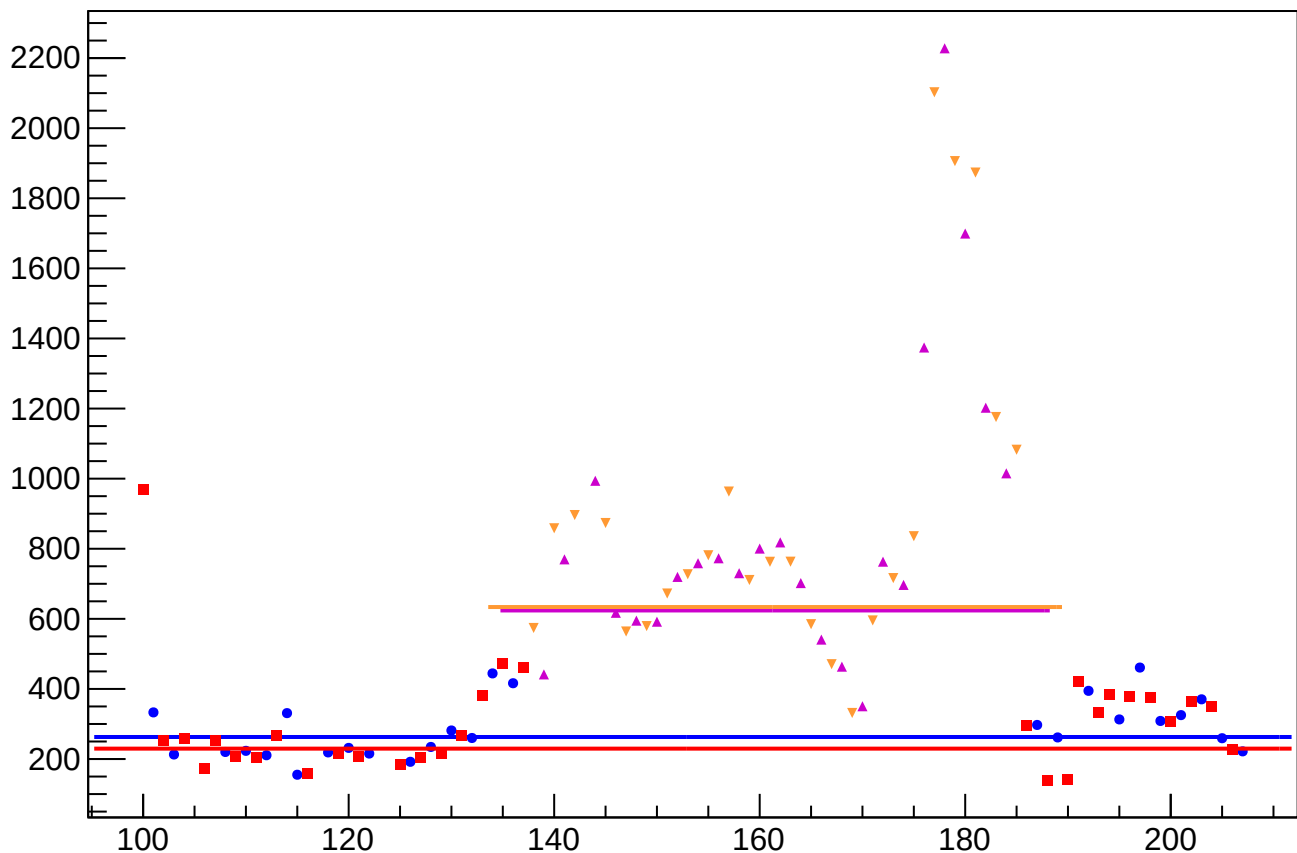
Left In:  $0.147 \pm 0.158$   $\chi^2/\text{NDF}$ : 26.4/22

+ sign  $-0.063 \pm 0.066$   $\chi^2/\text{NDF}$ : 51.8/49

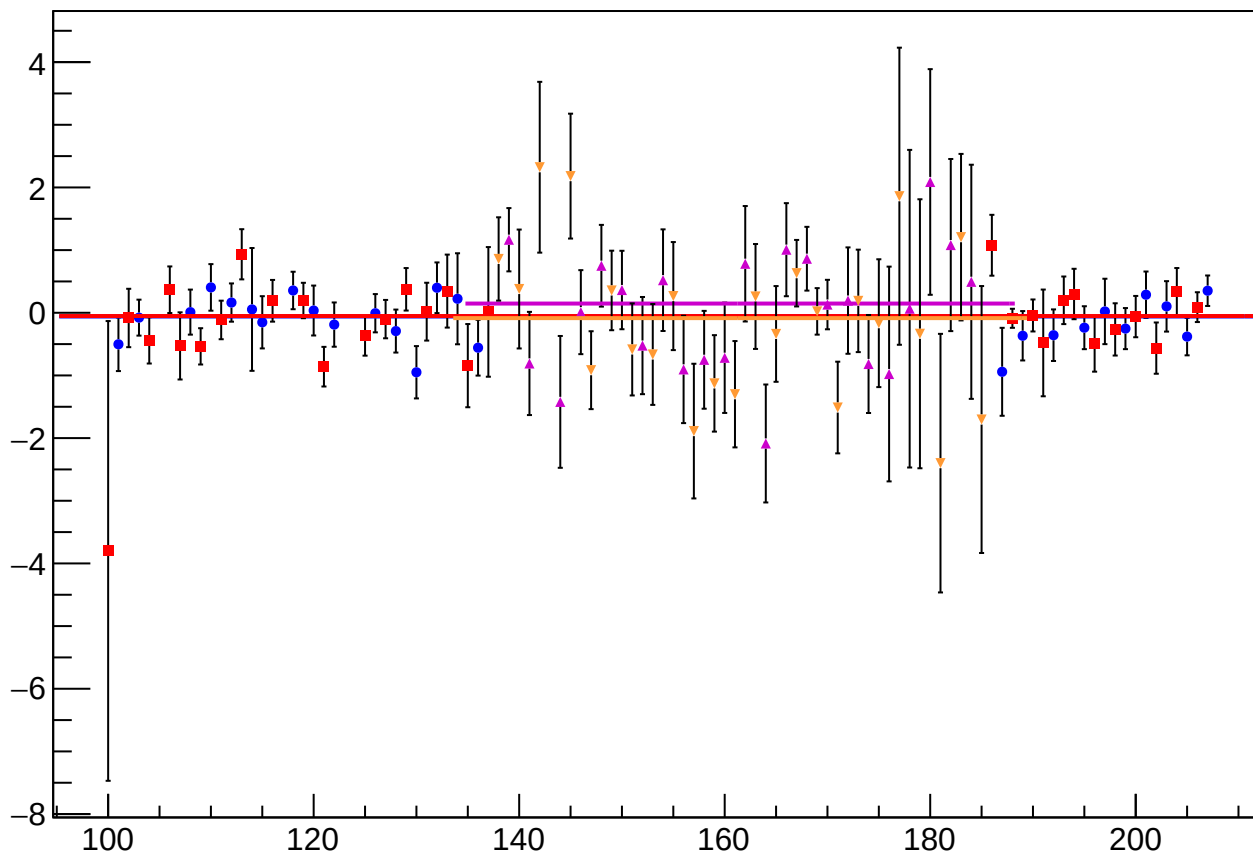
All:  $-0.042 \pm 0.044$   $\chi^2/\text{NDF}$ : 116.4/102

- sign  $-0.025 \pm 0.059$   $\chi^2/\text{NDF}$ : 64.4/52

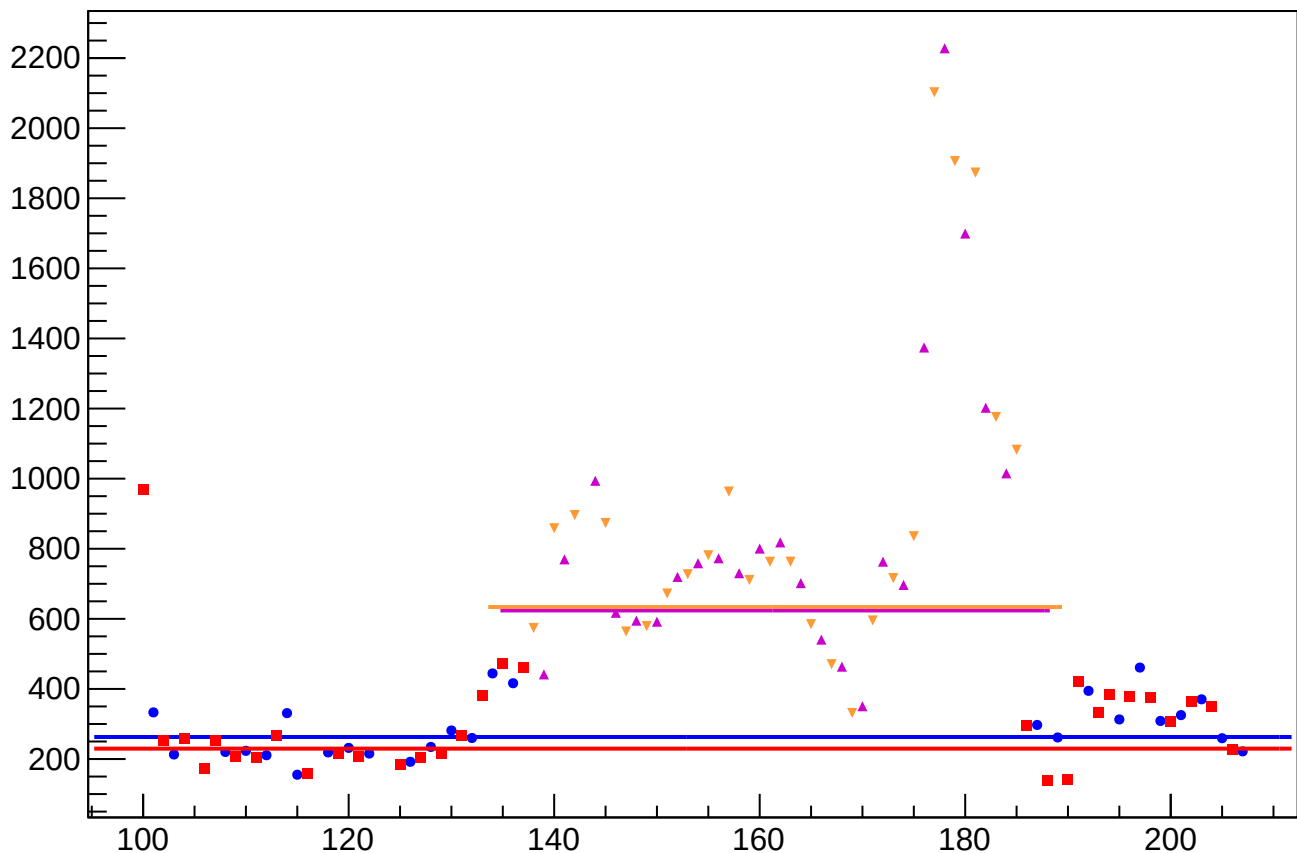
# asym\_atl2\_dit\_vs\_cor\_diff\_rms vs Slug



# asym\_atl2\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



# asym\_atl2\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 262.865+/-0.051  $\chi^2/\text{NDF}$ : 1782173.9/25

Left Out: 633.674+/-0.114  $\chi^2/\text{NDF}$ : 4994105.8/23

Right Out: 229.645+/-0.045  $\chi^2/\text{NDF}$ : 3409348.7/29

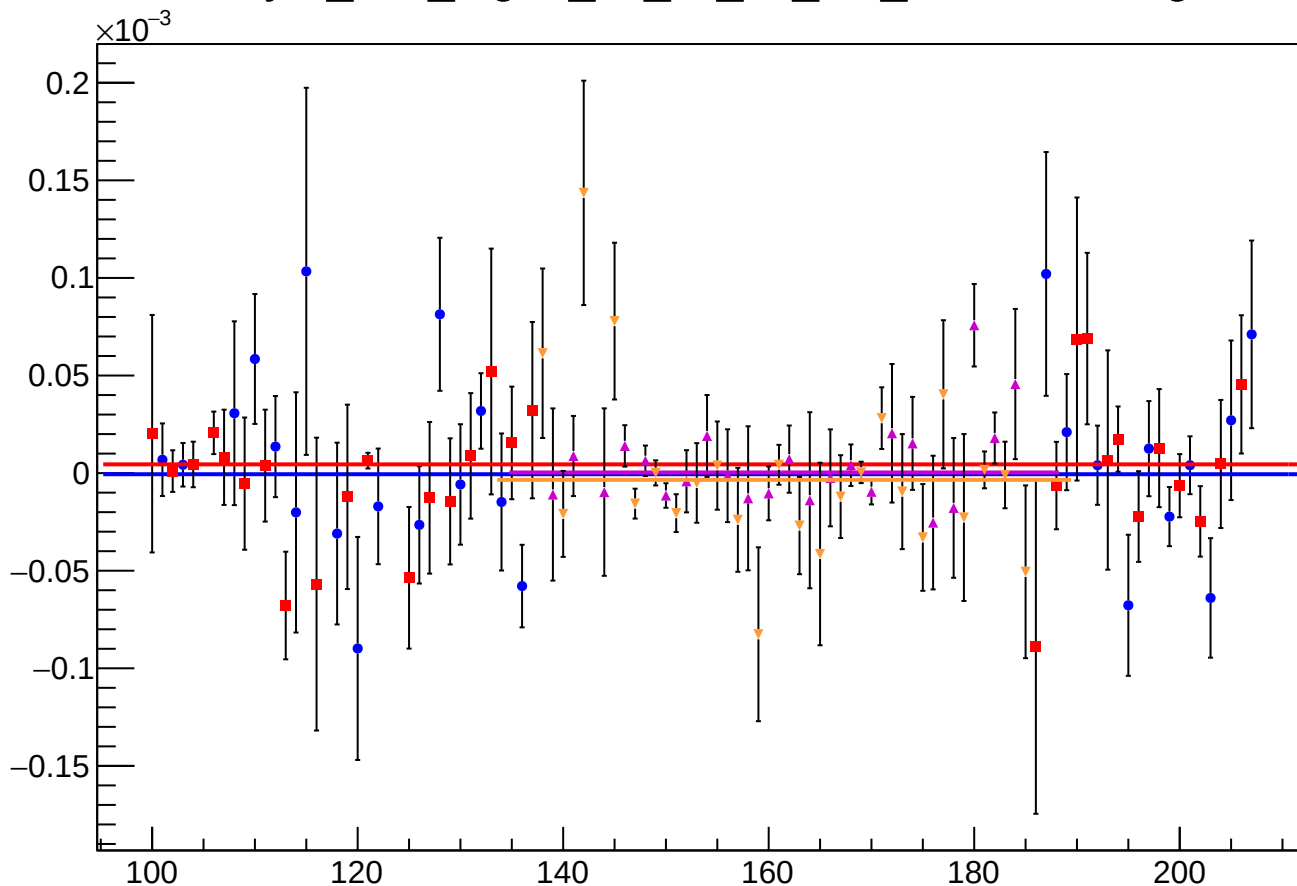
Left In: 623.916+/-0.112  $\chi^2/\text{NDF}$ : 4541431.8/22

+ sign 324.873+/-0.047  $\chi^2/\text{NDF}$ : 15564111.8/49

All: 301.853+/-0.031  $\chi^2/\text{NDF}$ : 34666838.5/10

- sign 283.719+/-0.041  $\chi^2/\text{NDF}$ : 18667928.6/52

# asym\_atl2\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 40.3/25

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:34.3/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 25.4/29

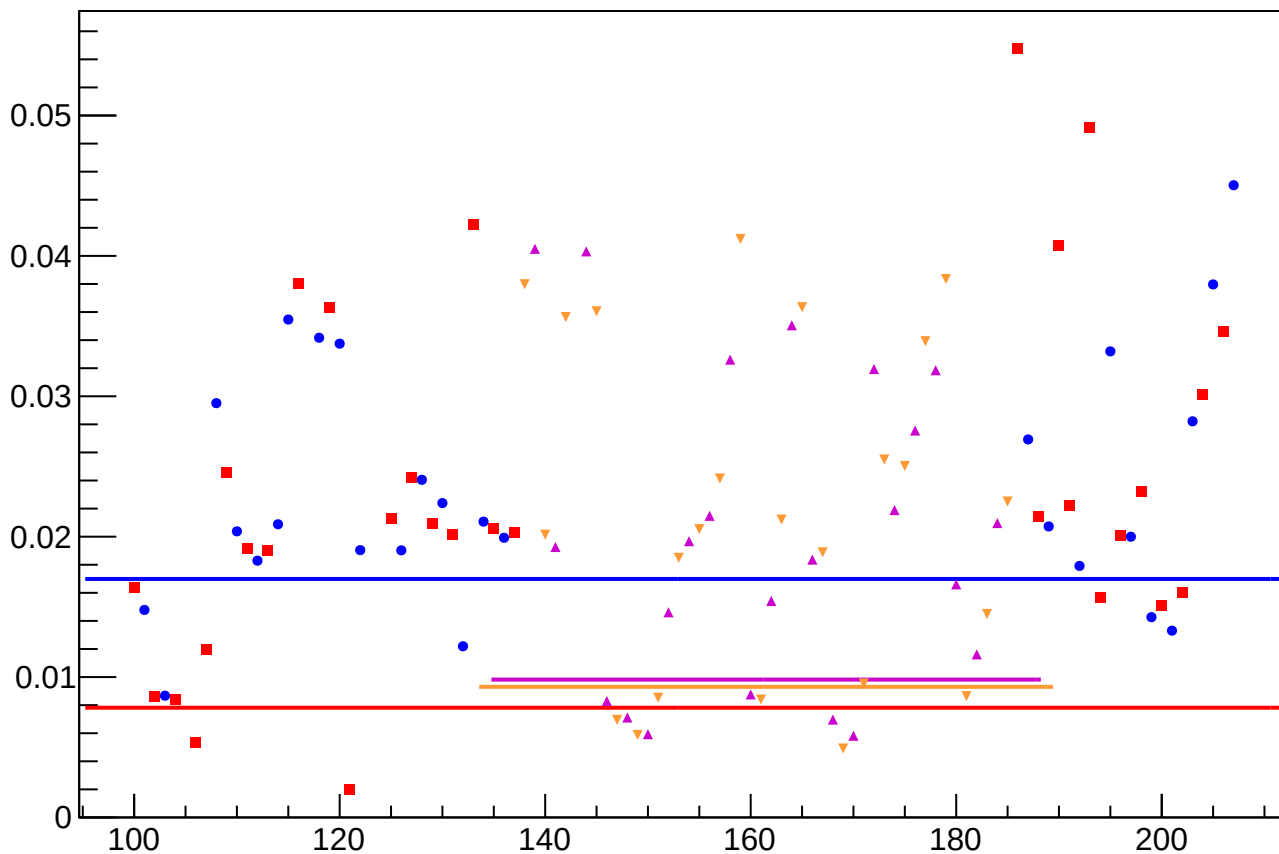
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:27.9/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 74.9/49

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 131.8/102

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 54.3/52

# asym\_atl2\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.017 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 4355642.0/25

Left Out: 0.009 $\pm$ 0.000  $\chi^2/\text{NDF}$ :12224529.3/23

Right Out: 0.008 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 16427957.1/29

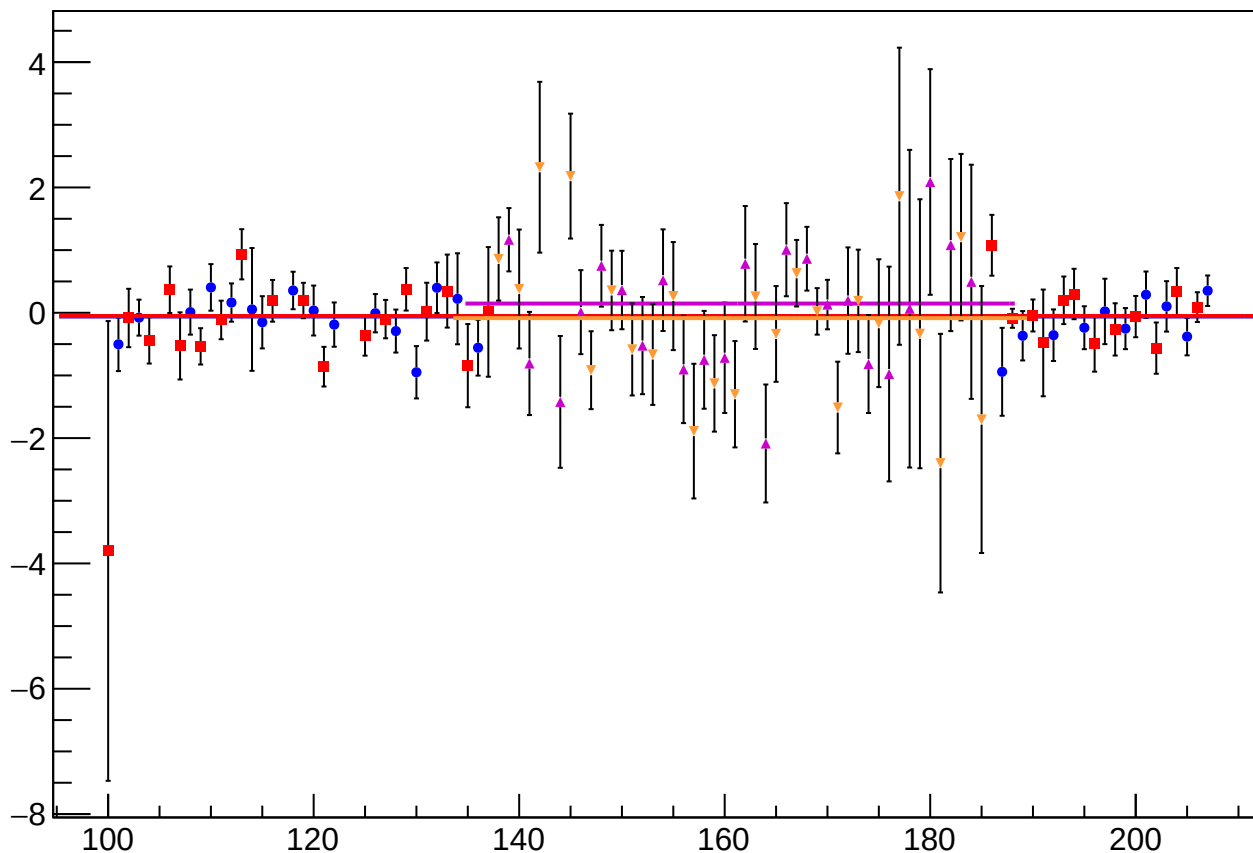
Left In: 0.010 $\pm$ 0.000  $\chi^2/\text{NDF}$ :10307261.6/22

+ sign 0.011 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 20333604.7/49

All: 0.010 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 48619747.2/102

- sign 0.009 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 27207298.5/52

# asym\_atl2\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.059 \pm 0.072$   $\chi^2/\text{NDF}$ : 21.5/25

Left Out:  $-0.085 \pm 0.161$   $\chi^2/\text{NDF}$ : 30.2/23

Right Out:  $-0.052 \pm 0.063$   $\chi^2/\text{NDF}$ : 36.6/29

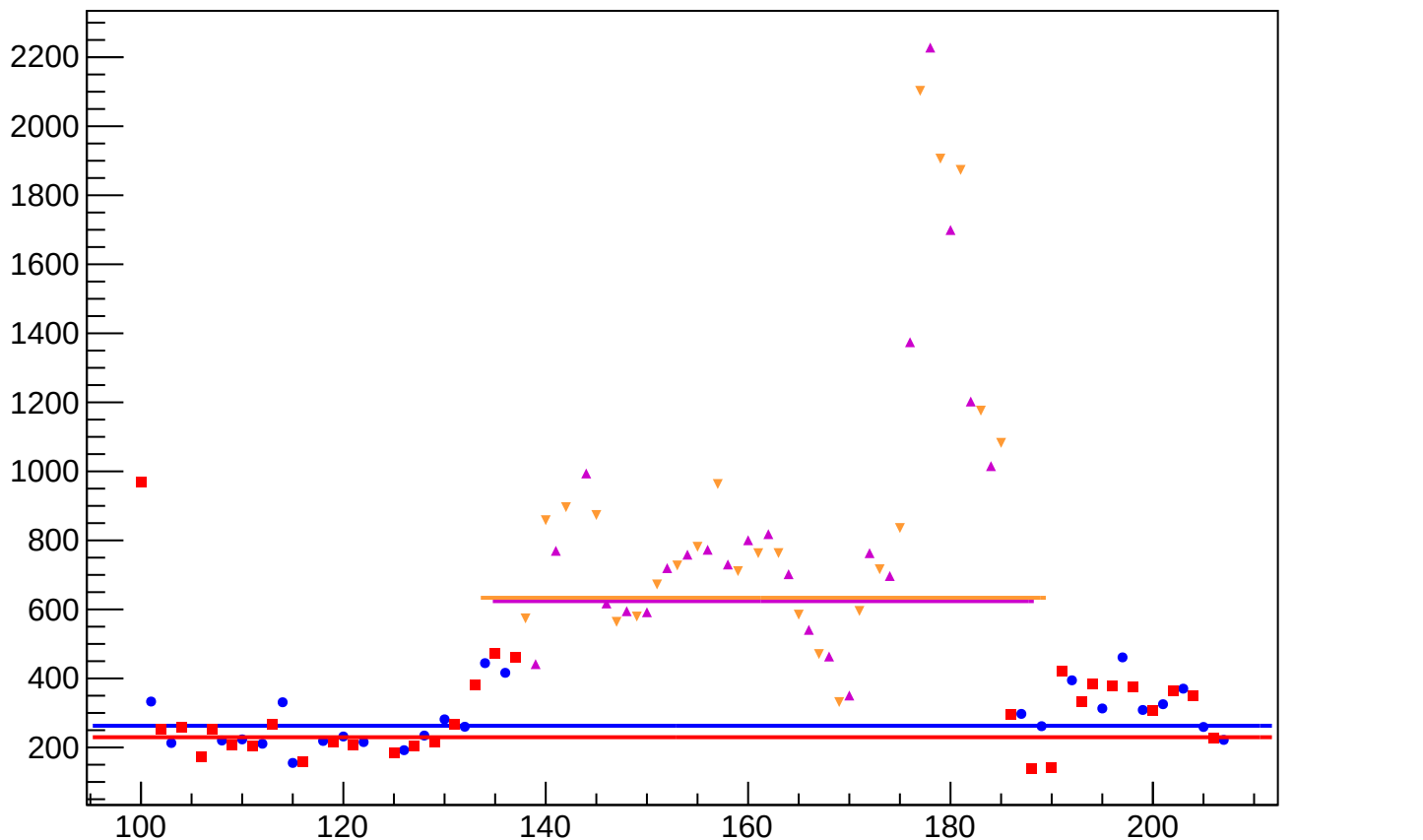
Left In:  $0.147 \pm 0.158$   $\chi^2/\text{NDF}$ : 26.4/22

+ sign  $-0.063 \pm 0.066$   $\chi^2/\text{NDF}$ : 51.8/49

All:  $-0.042 \pm 0.044$   $\chi^2/\text{NDF}$ : 116.4/102

- sign  $-0.025 \pm 0.059$   $\chi^2/\text{NDF}$ : 64.4/52

# asym\_atl2\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In:  $262.866 \pm 0.051$   $\chi^2/\text{NDF}$ : 1782151.7/25

Left Out:  $633.678 \pm 0.114$   $\chi^2/\text{NDF}$ : 4994172.5/23

Right Out:  $229.643 \pm 0.045$   $\chi^2/\text{NDF}$ : 3409511.7/29

Left In:  $623.922 \pm 0.112$   $\chi^2/\text{NDF}$ : 4541413.9/22

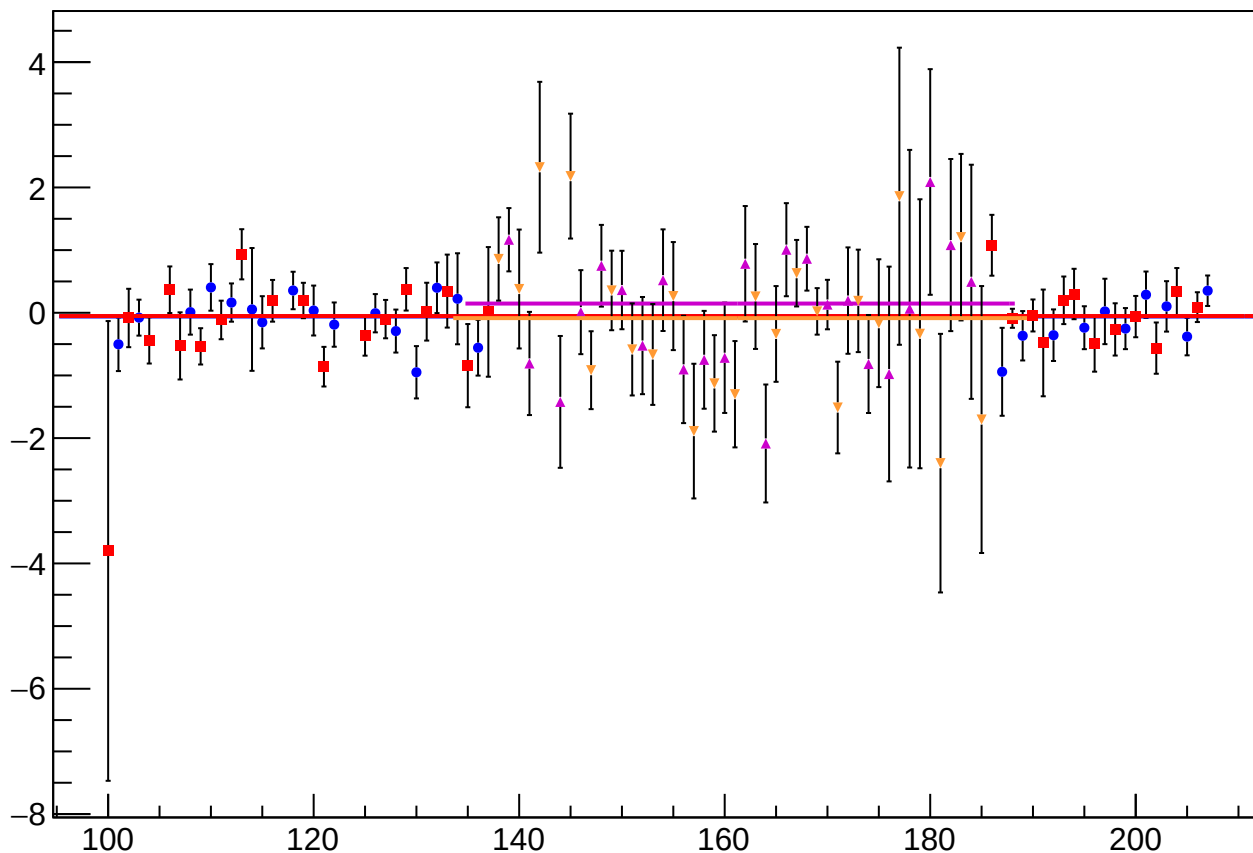
+ sign  $324.874 \pm 0.047$   $\chi^2/\text{NDF}$ : 15564174.8/49

All:  $301.852 \pm 0.031$   $\chi^2/\text{NDF}$ : 34667380.1/10

- sign  $283.717 \pm 0.041$   $\chi^2/\text{NDF}$ : 18668341.6/52



asym\_atl2\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.059 \pm 0.072$   $\chi^2/\text{NDF}$ : 21.5/25

Left Out:  $-0.085 \pm 0.161$   $\chi^2/\text{NDF}$ : 30.2/23

Right Out:  $-0.052 \pm 0.063$   $\chi^2/\text{NDF}$ : 36.6/29

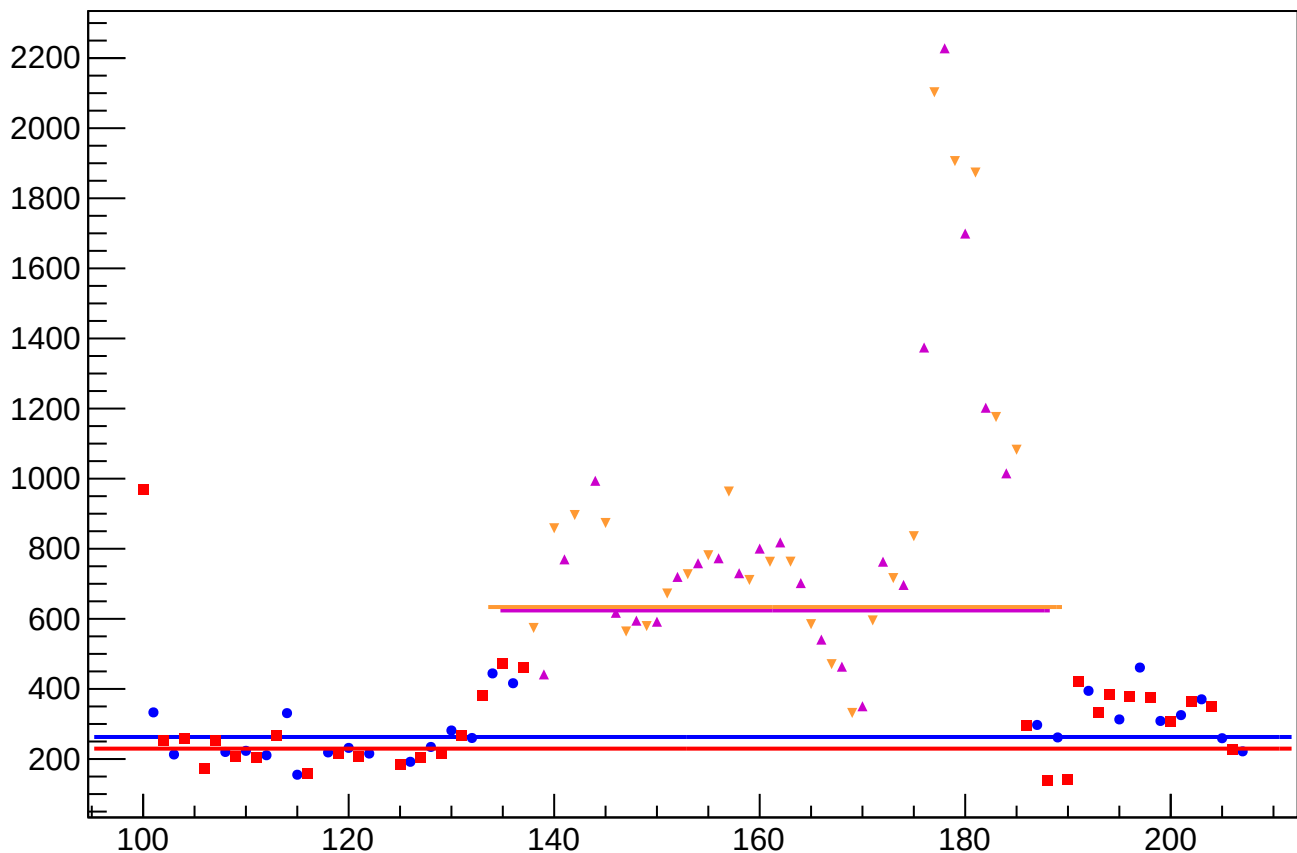
Left In:  $0.147 \pm 0.158$   $\chi^2/\text{NDF}$ : 26.4/22

+ sign  $-0.063 \pm 0.066$   $\chi^2/\text{NDF}$ : 51.8/49

All:  $-0.042 \pm 0.044$   $\chi^2/\text{NDF}$ : 116.4/102

- sign  $-0.025 \pm 0.059$   $\chi^2/\text{NDF}$ : 64.4/52

asym\_atl2\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 262.866 $\pm$ 0.051  $\chi^2$ /NDF: 1782151.7/25

Left Out: 633.678 $\pm$ 0.114  $\chi^2$ /NDF: 4994172.5/23

Right Out: 229.643 $\pm$ 0.045  $\chi^2$ /NDF: 3409511.7/29

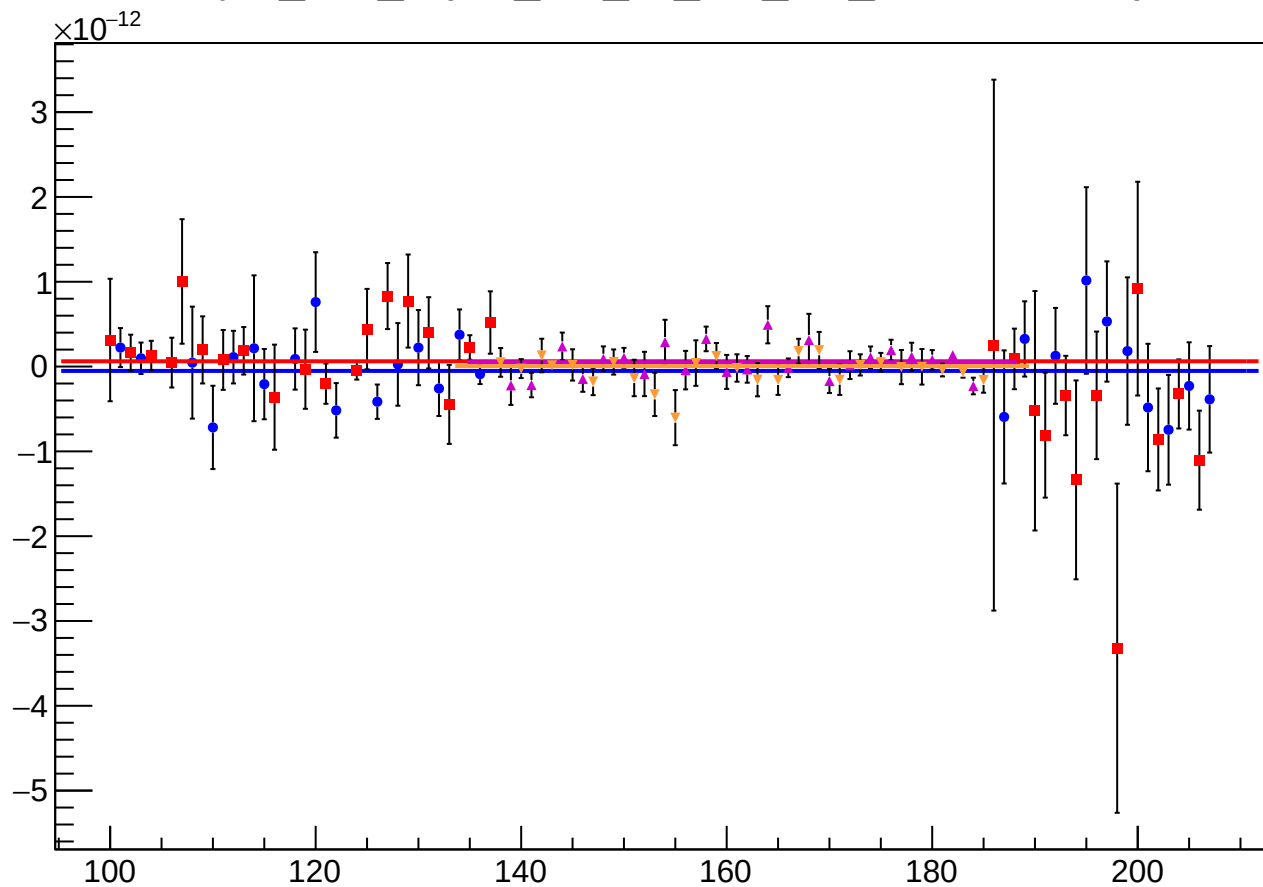
Left In: 623.922 $\pm$ 0.112  $\chi^2$ /NDF: 4541413.9/22

+ sign 324.874 $\pm$ 0.047  $\chi^2$ /NDF: 15564174.8/49

All: 301.852 $\pm$ 0.031  $\chi^2$ /NDF: 34667380.1/10

- sign 283.717 $\pm$ 0.041  $\chi^2$ /NDF: 18668341.6/52

# asym\_atl2\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 19.7/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 15.8/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 30.8/30

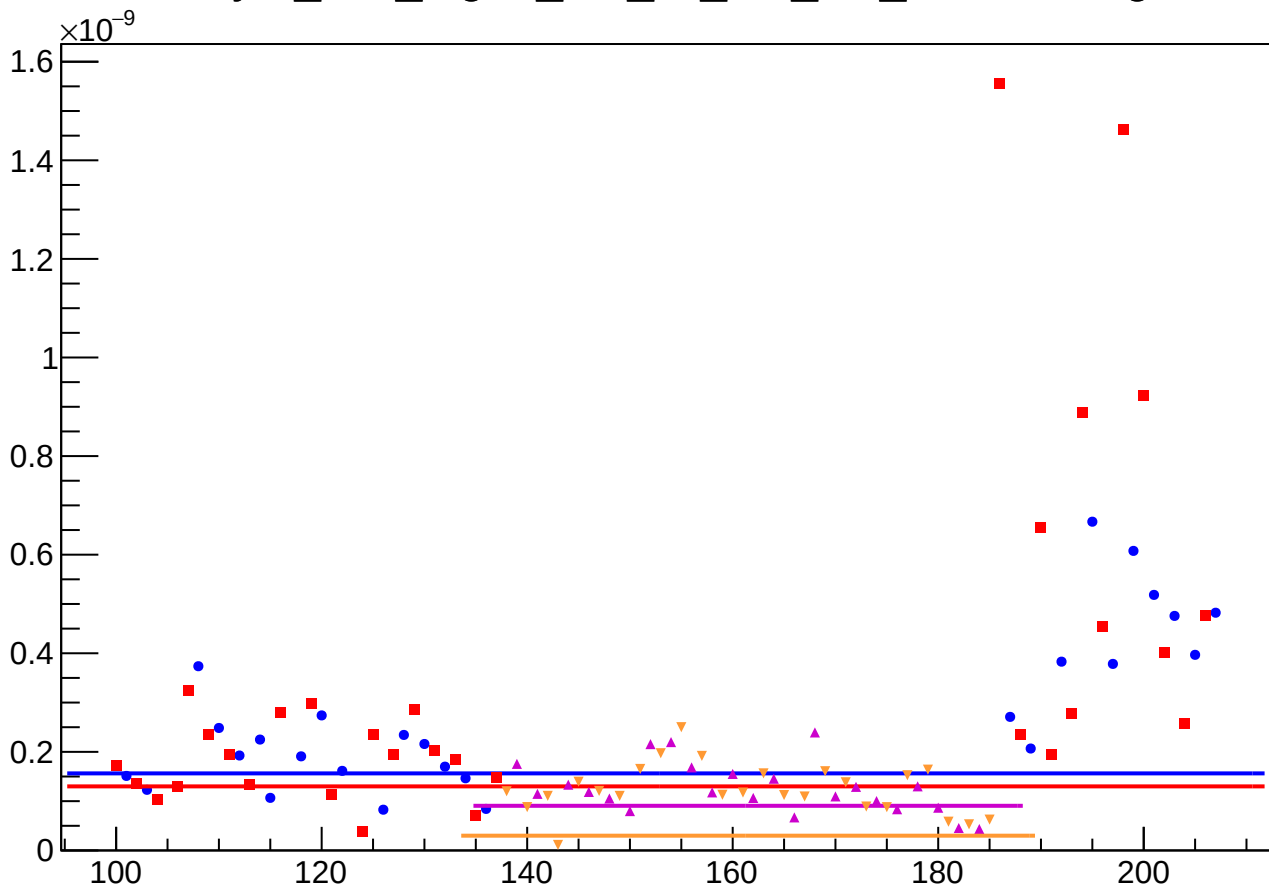
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 33.4/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 36.2/50

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 103.6/104

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 64.2/53

asym\_atl2\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5119143.2/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 17263498.2/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8292203.0/30

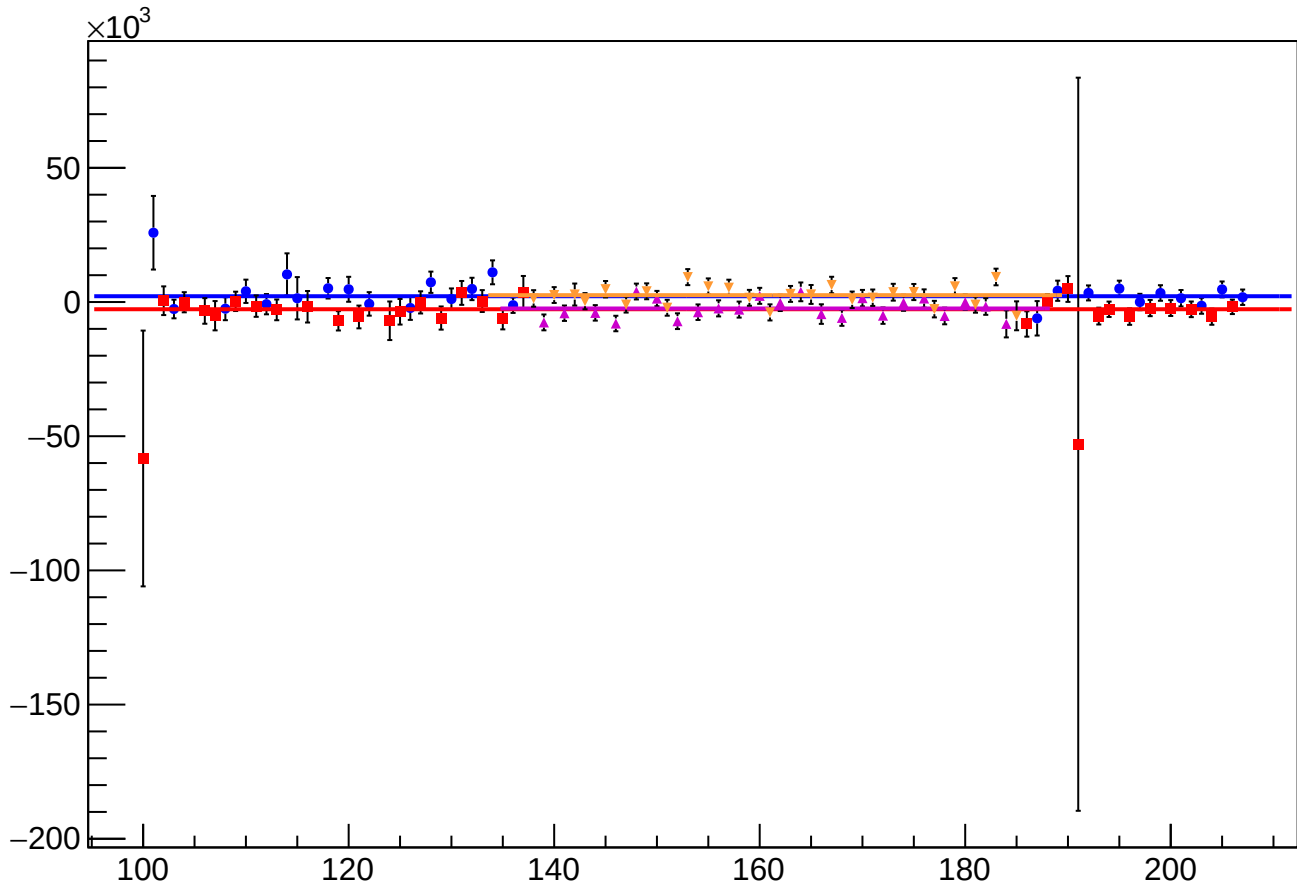
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4716343.8/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 29839580.3/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 53506787.1/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13796862.8/53

# reg\_asym\_atr1\_mean vs Slug



Right In: 2162.211 $\pm$ 726.987  $\chi^2$ /NDF: 23.8/25

Left Out: 2556.827 $\pm$ 621.829  $\chi^2$ /NDF: 31.6/24

Right Out: -2685.249 $\pm$ 697.119  $\chi^2$ /NDF: 18.1/30

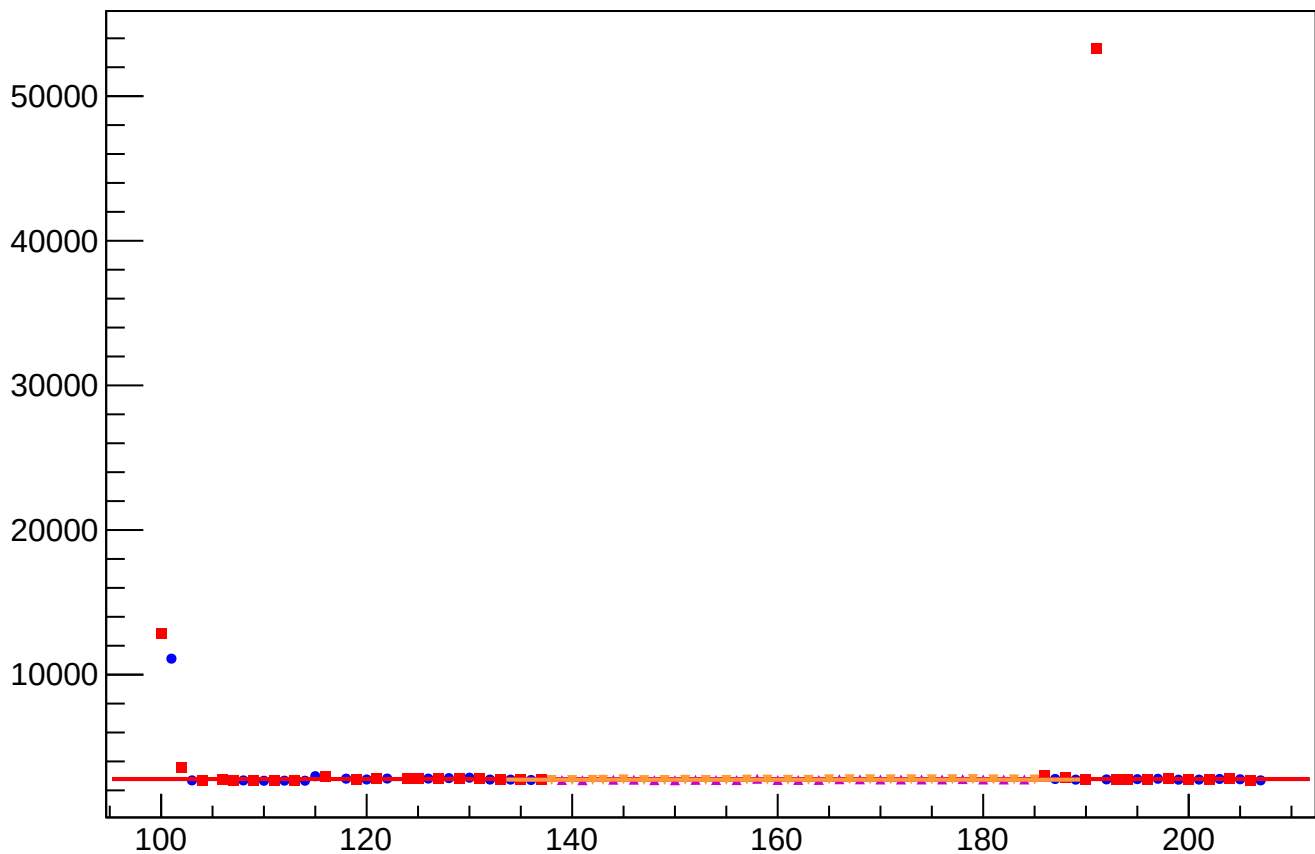
Left In: -2408.320 $\pm$ 639.726  $\chi^2$ /NDF: 31.4/22

+ sign 2390.099 $\pm$ 472.546  $\chi^2$ /NDF: 55.5/50

All: -78.697 $\pm$ 333.714  $\chi^2$ /NDF: 159.5/104

- sign -2534.917 $\pm$ 471.341  $\chi^2$ /NDF: 49.6/53

# reg\_asym\_atr1\_rms vs Slug



Right In: 2779.049 $\pm$ 0.514  $\chi^2$ /NDF: 750431.9/25

Left Out: 2737.519 $\pm$ 0.440  $\chi^2$ /NDF: 2317.5/24

Right Out: 2787.166 $\pm$ 0.493  $\chi^2$ /NDF: 481393.9/30

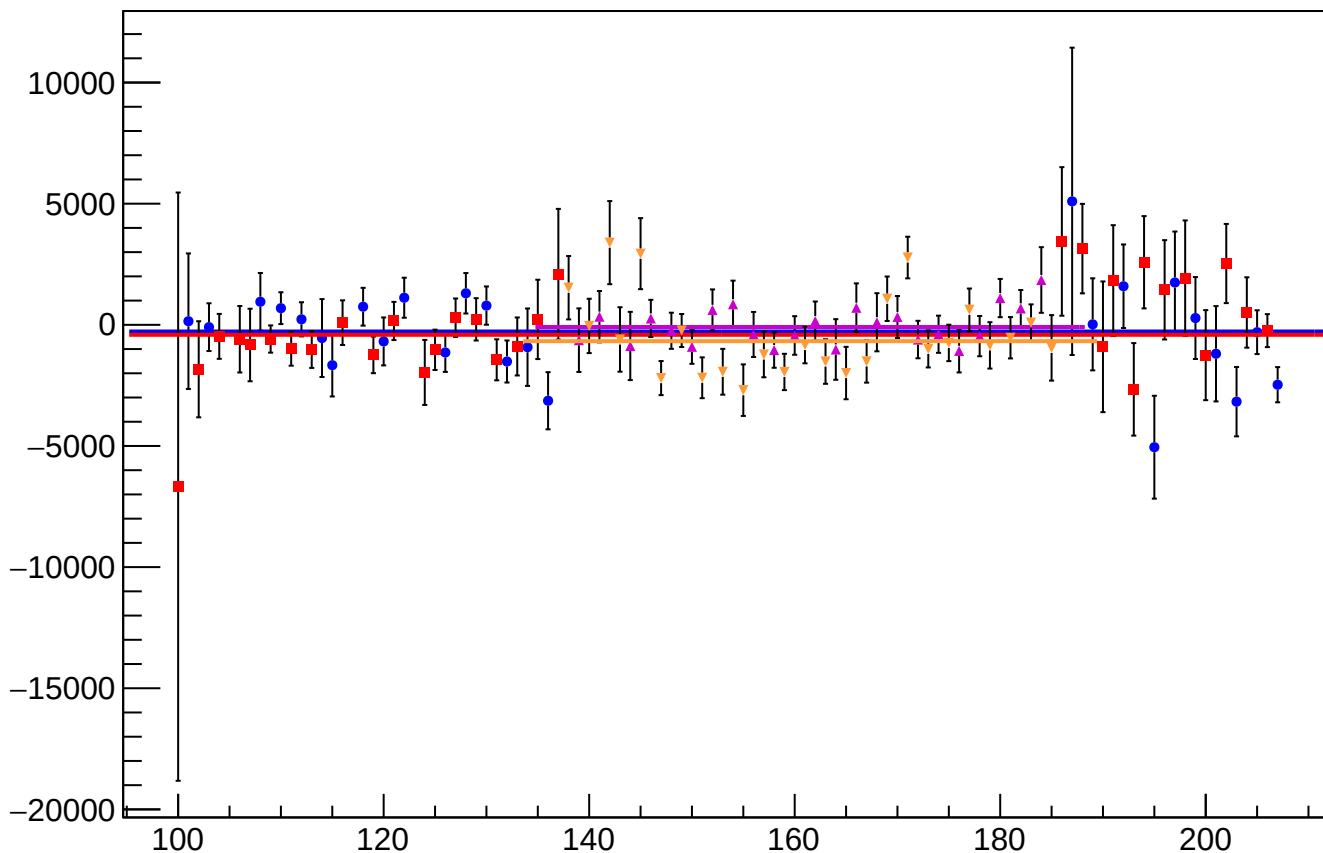
Left In: 2739.863 $\pm$ 0.452  $\chi^2$ /NDF: 3362.0/22

+ sign 2755.065 $\pm$ 0.334  $\chi^2$ /NDF: 756518.6/50

All: 2758.285 $\pm$ 0.236  $\chi^2$ /NDF: 1246458.5/10

- sign 2761.487 $\pm$ 0.333  $\chi^2$ /NDF: 489754.8/53

# asym\_atr1\_reg\_correction\_mean vs Slug



Right In:  $-275.956 \pm 205.643$   $\chi^2/\text{NDF}$ : 45.8/25

Left Out:  $-673.693 \pm 181.230$   $\chi^2/\text{NDF}$ : 58.4/24

Right Out:  $-411.405 \pm 194.502$   $\chi^2/\text{NDF}$ : 26.1/30

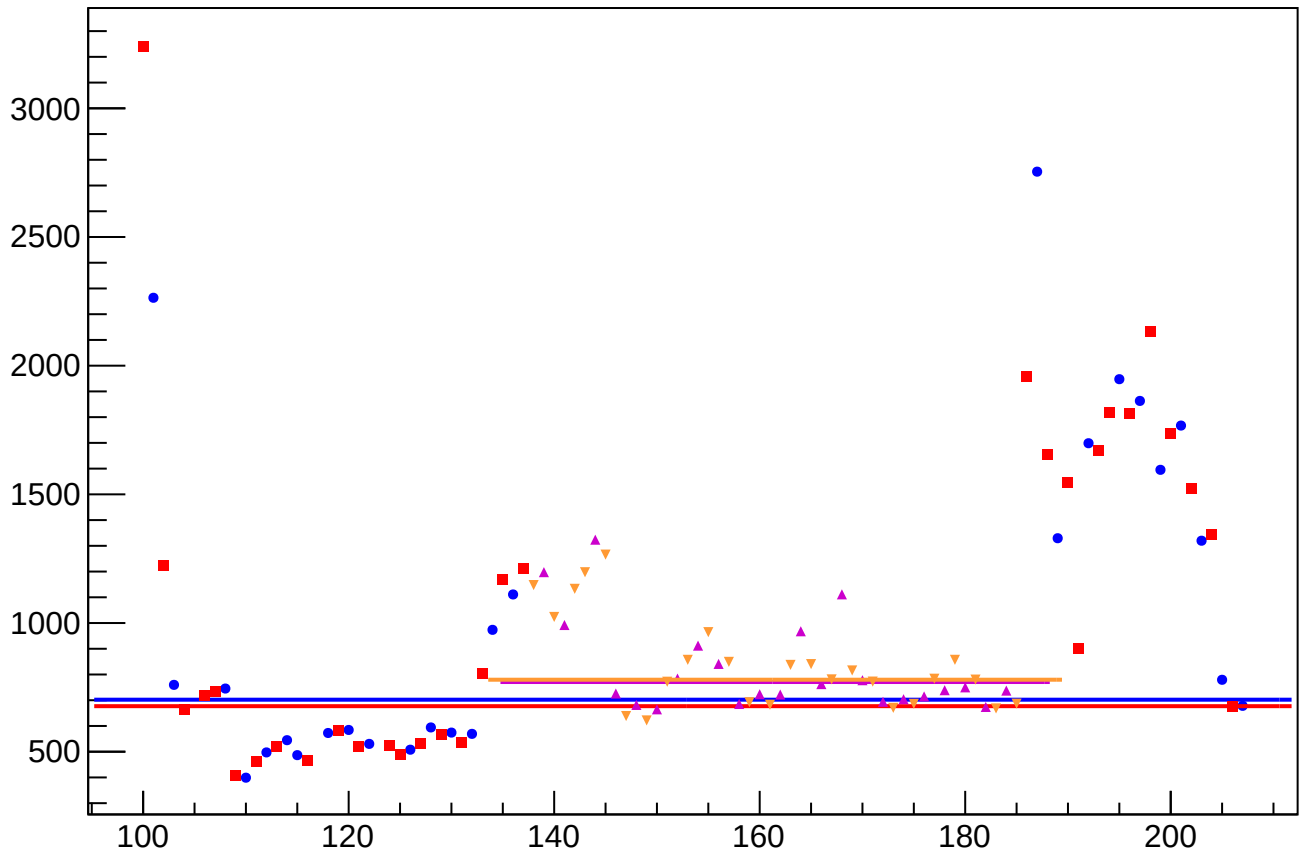
Left In:  $-89.519 \pm 183.491$   $\chi^2/\text{NDF}$ : 14.8/22

+ sign  $-499.823 \pm 135.965$   $\chi^2/\text{NDF}$ : 106.3/50

All:  $-368.063 \pm 95.248$   $\chi^2/\text{NDF}$ : 150.4/104

- sign  $-241.094 \pm 133.471$   $\chi^2/\text{NDF}$ : 42.3/53

# asym\_atr1\_reg\_correction\_rms vs Slug



Right In: 702.100+/-0.145     $\chi^2/\text{NDF}$ : 5946721.1/25

Left Out: 779.715+/-0.128     $\chi^2/\text{NDF}$ :1243743.5/24

Right Out: 676.922+/-0.138     $\chi^2/\text{NDF}$ : 7127013.8/30

Left In: 770.795+/-0.130     $\chi^2/\text{NDF}$ :1076354.9/22

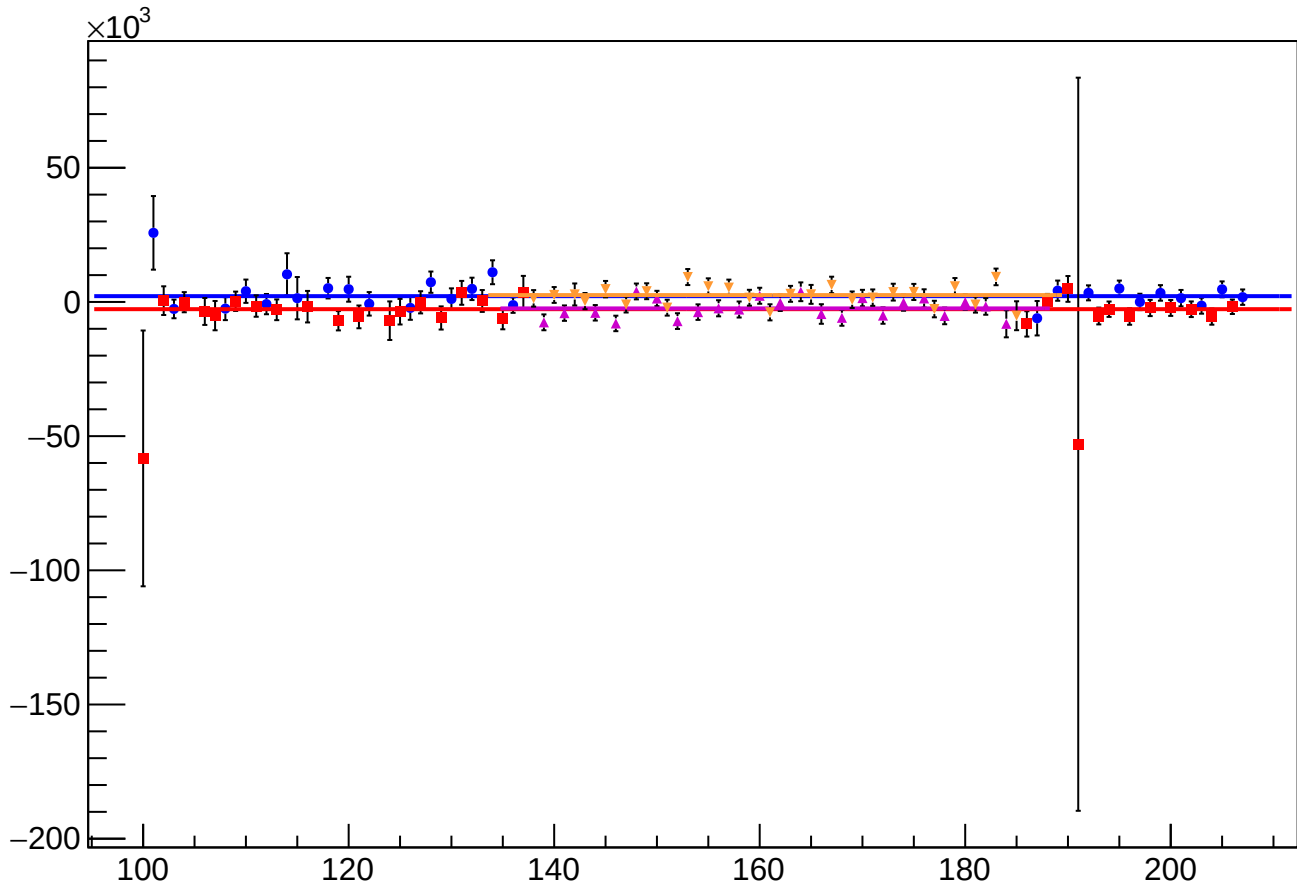
+ sign 745.786+/-0.096     $\chi^2/\text{NDF}$ : 7350821.3/50

All: 736.010+/-0.067     $\chi^2/\text{NDF}$ : 15820985.2/10

- sign 726.590+/-0.094     $\chi^2/\text{NDF}$ : 8449863.3/53



# cor\_asym\_atr1\_mean vs Slug



Right In:  $2161.905 \pm 726.987$   $\chi^2/\text{NDF}$ : 23.8/25

Left Out:  $2556.787 \pm 621.829$   $\chi^2/\text{NDF}$ : 31.6/24

Right Out:  $-2688.474 \pm 697.846$   $\chi^2/\text{NDF}$ : 18.1/30

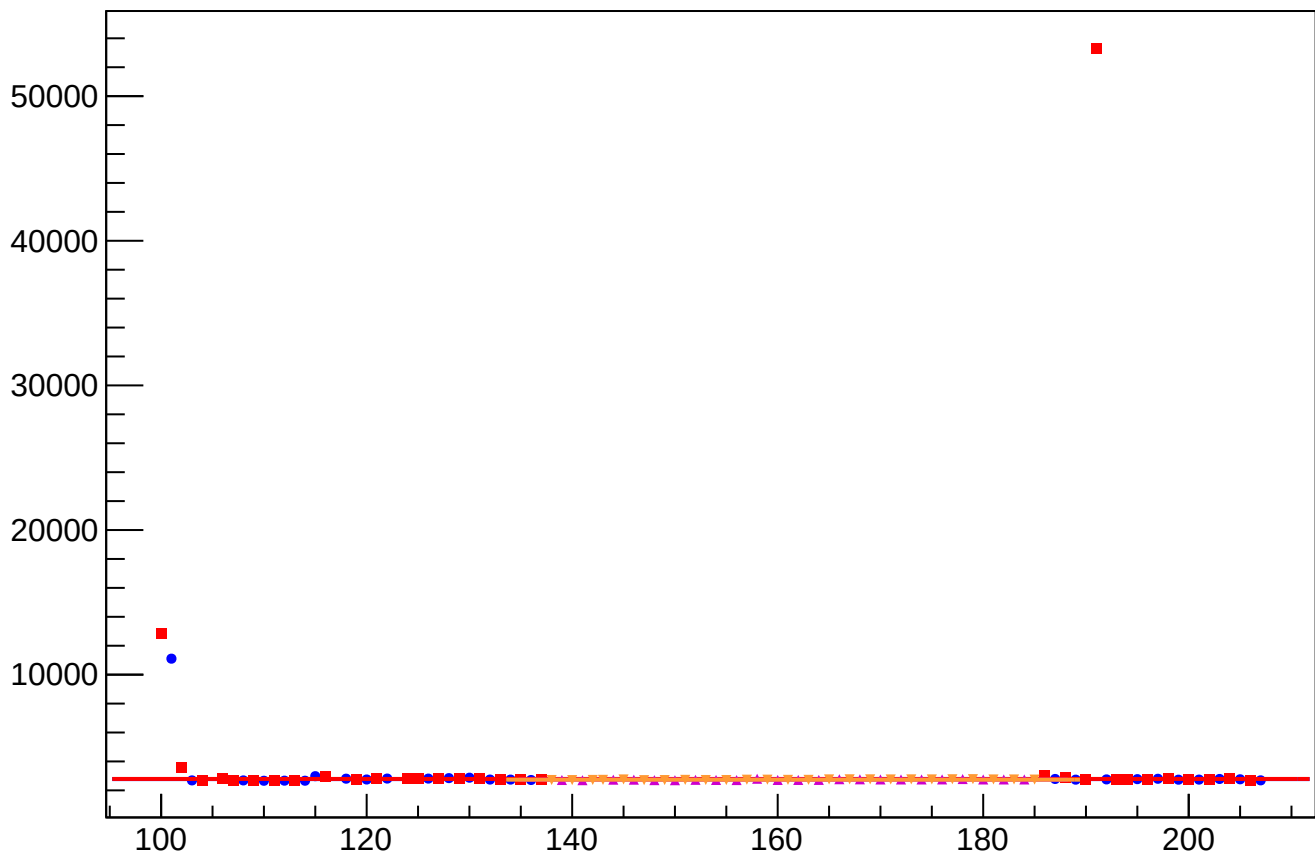
Left In:  $-2408.461 \pm 639.726$   $\chi^2/\text{NDF}$ : 31.4/22

+ sign  $2389.946 \pm 472.546$   $\chi^2/\text{NDF}$ : 55.5/50

All:  $-78.306 \pm 333.793$   $\chi^2/\text{NDF}$ : 159.5/104

- sign  $-2536.324 \pm 471.565$   $\chi^2/\text{NDF}$ : 49.6/53

# cor\_asym\_atr1\_rms vs Slug



Right In: 2779.049 $\pm$ 0.514  $\chi^2$ /NDF: 750431.0/25

Left Out: 2737.519 $\pm$ 0.440  $\chi^2$ /NDF: 2317.5/24

Right Out: 2789.575 $\pm$ 0.493  $\chi^2$ /NDF: 481201.7/30

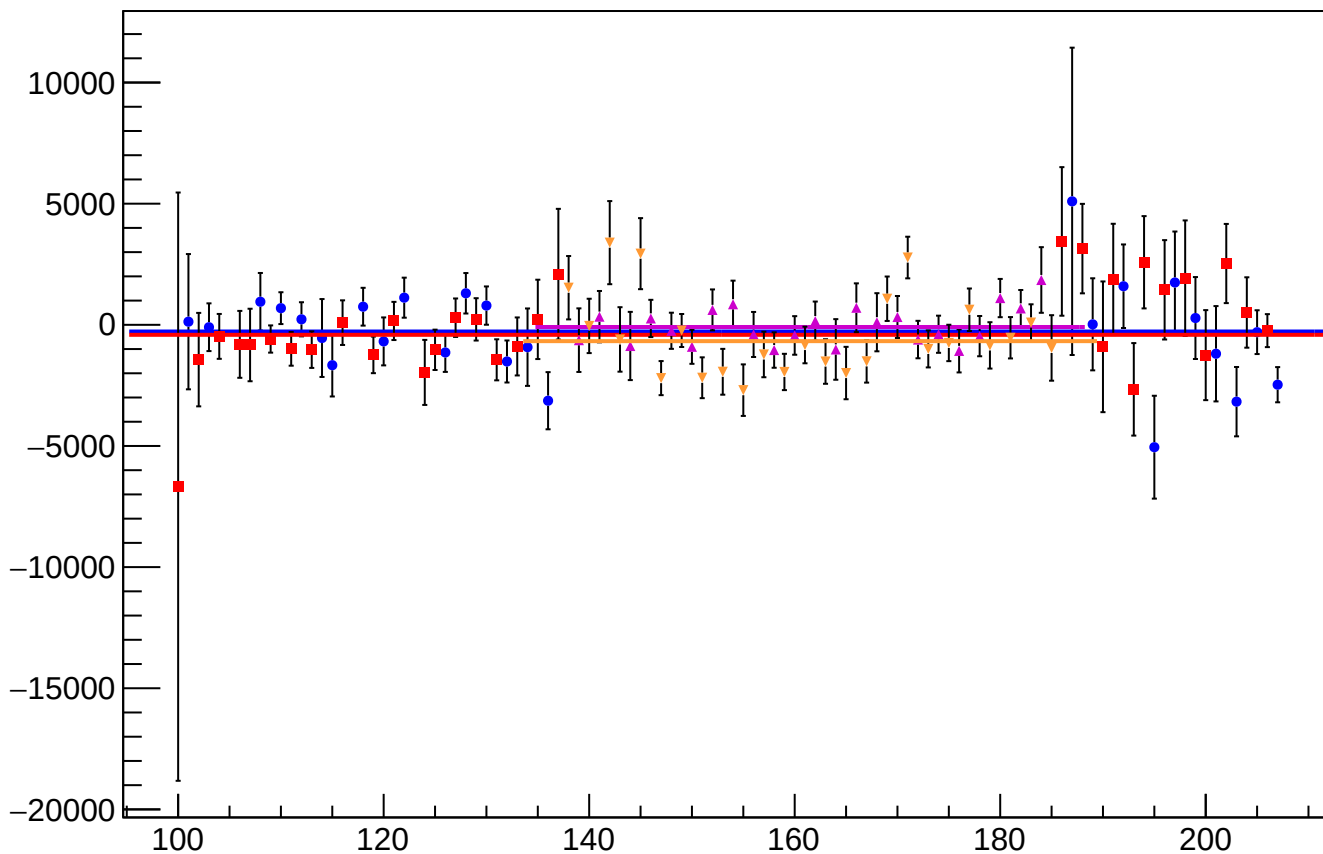
Left In: 2739.863 $\pm$ 0.452  $\chi^2$ /NDF: 3362.0/22

+ sign 2755.065 $\pm$ 0.334  $\chi^2$ /NDF: 756517.7/50

All: 2758.822 $\pm$ 0.236  $\chi^2$ /NDF: 1246848.5/10

- sign 2762.563 $\pm$ 0.333  $\chi^2$ /NDF: 490078.5/53

# asym\_atr1\_cor\_correction\_mean vs Slug



Right In: -275.934 $\pm$ 205.635  $\chi^2$ /NDF: 45.8/25

Left Out: -673.608 $\pm$ 181.230  $\chi^2$ /NDF: 58.4/24

Right Out: -412.194 $\pm$ 194.474  $\chi^2$ /NDF: 25.9/30

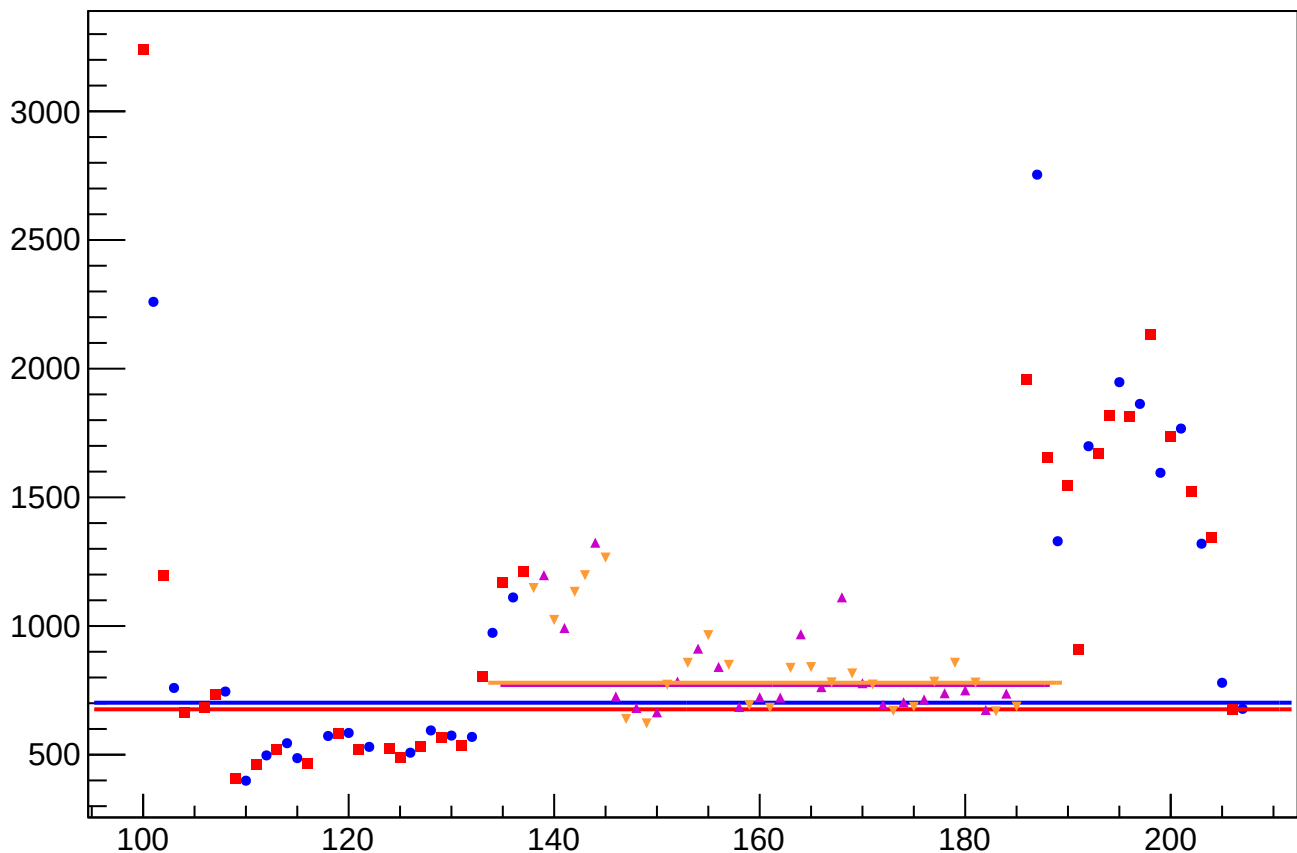
Left In: -89.643 $\pm$ 183.492  $\chi^2$ /NDF: 14.8/22

+ sign -499.759 $\pm$ 135.963  $\chi^2$ /NDF: 106.3/50

All: -368.260 $\pm$ 95.244  $\chi^2$ /NDF: 150.3/104

- sign -241.555 $\pm$ 133.462  $\chi^2$ /NDF: 42.2/53

# asym\_atr1\_cor\_correction\_rms vs Slug



Right In: 702.089+/-0.145     $\chi^2/\text{NDF}$ : 5945823.0/25

Left Out: 779.713+/-0.128     $\chi^2/\text{NDF}$ :1243769.6/24

Right Out: 676.312+/-0.138     $\chi^2/\text{NDF}$ : 7121008.9/30

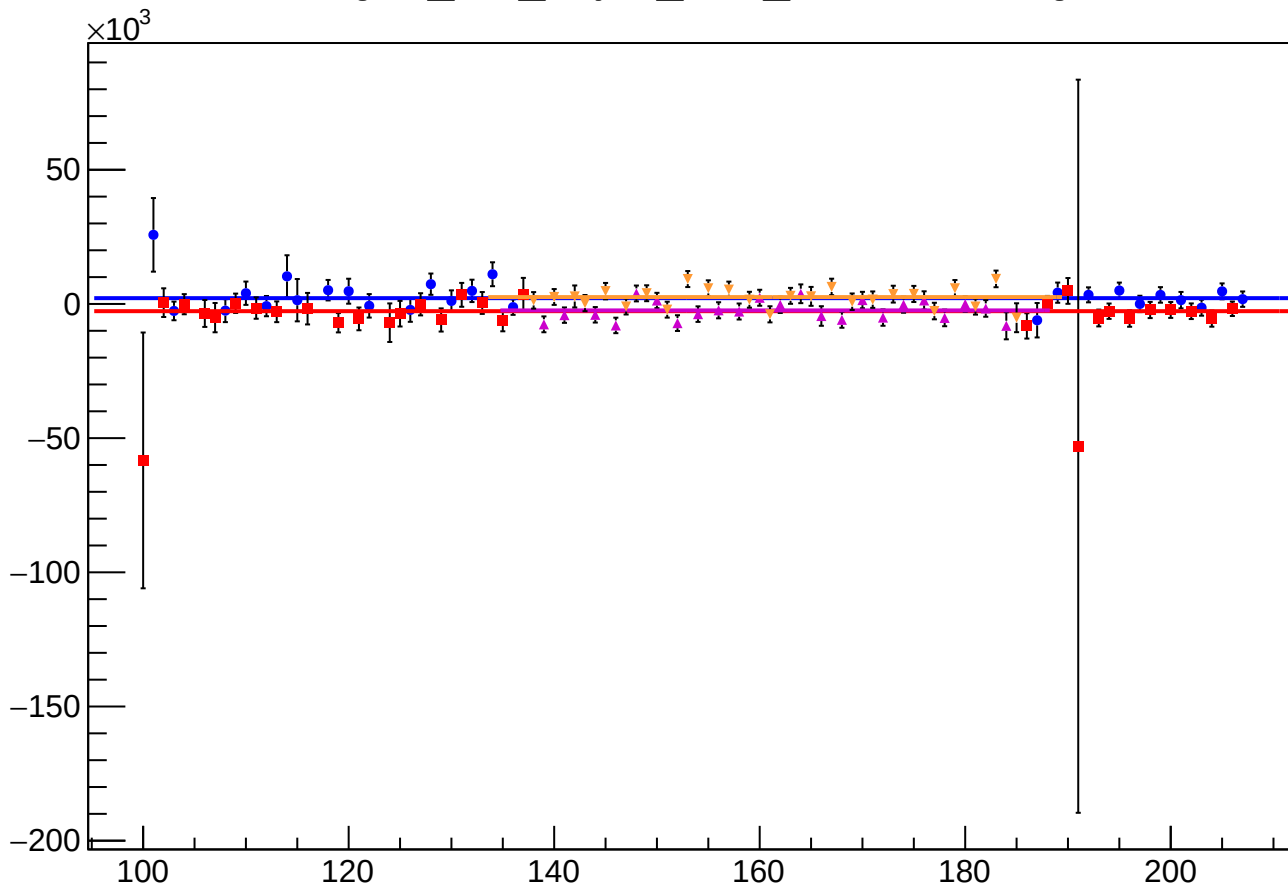
Left In: 770.799+/-0.130     $\chi^2/\text{NDF}$ :1076291.1/22

+ sign 745.779+/-0.096     $\chi^2/\text{NDF}$ : 7349991.9/50

All: 735.858+/-0.067     $\chi^2/\text{NDF}$ : 15817965.2/100

- sign 726.298+/-0.094     $\chi^2/\text{NDF}$ : 8447064.1/53

# eigen\_cor\_asym\_atr1\_mean vs Slug



Right In: 2161.905 $\pm$ 726.987  $\chi^2$ /NDF: 23.8/25

Left Out: 2556.787 $\pm$ 621.829  $\chi^2$ /NDF:31.6/24

Right Out: -2688.474 $\pm$ 697.846  $\chi^2$ /NDF: 18.1/30

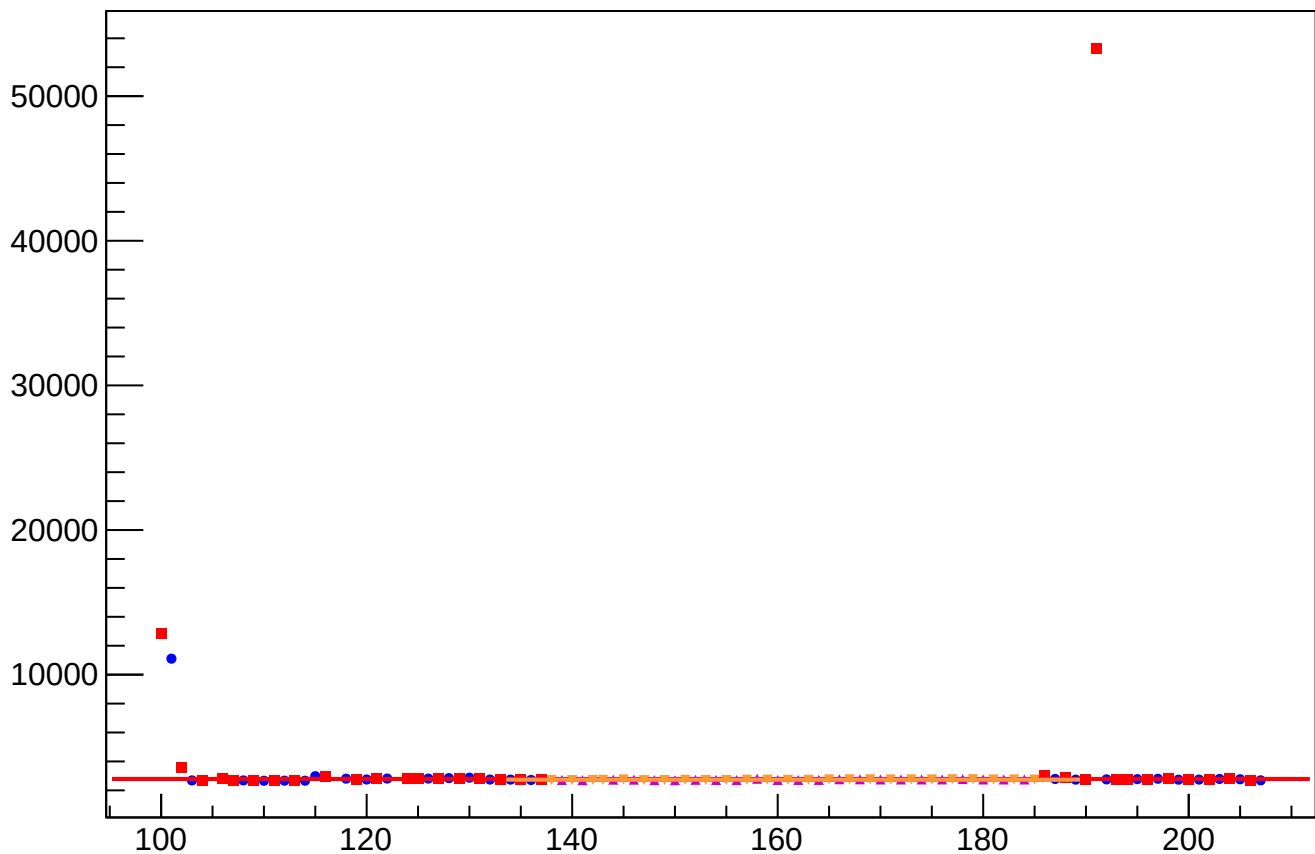
Left In: -2408.461 $\pm$ 639.726  $\chi^2$ /NDF:31.4/22

+ sign 2389.946 $\pm$ 472.546  $\chi^2$ /NDF: 55.5/50

All: -78.306 $\pm$ 333.793  $\chi^2$ /NDF: 159.5/104

- sign -2536.324 $\pm$ 471.565  $\chi^2$ /NDF: 49.6/53

# eigen\_cor\_asym\_atr1\_rms vs Slug



Right In: 2779.049+/-0.514     $\chi^2/\text{NDF}$ : 750431.0/25

Left Out: 2737.519+/-0.440     $\chi^2/\text{NDF}$ : 2317.5/24

Right Out: 2789.575+/-0.493     $\chi^2/\text{NDF}$ : 481201.7/30

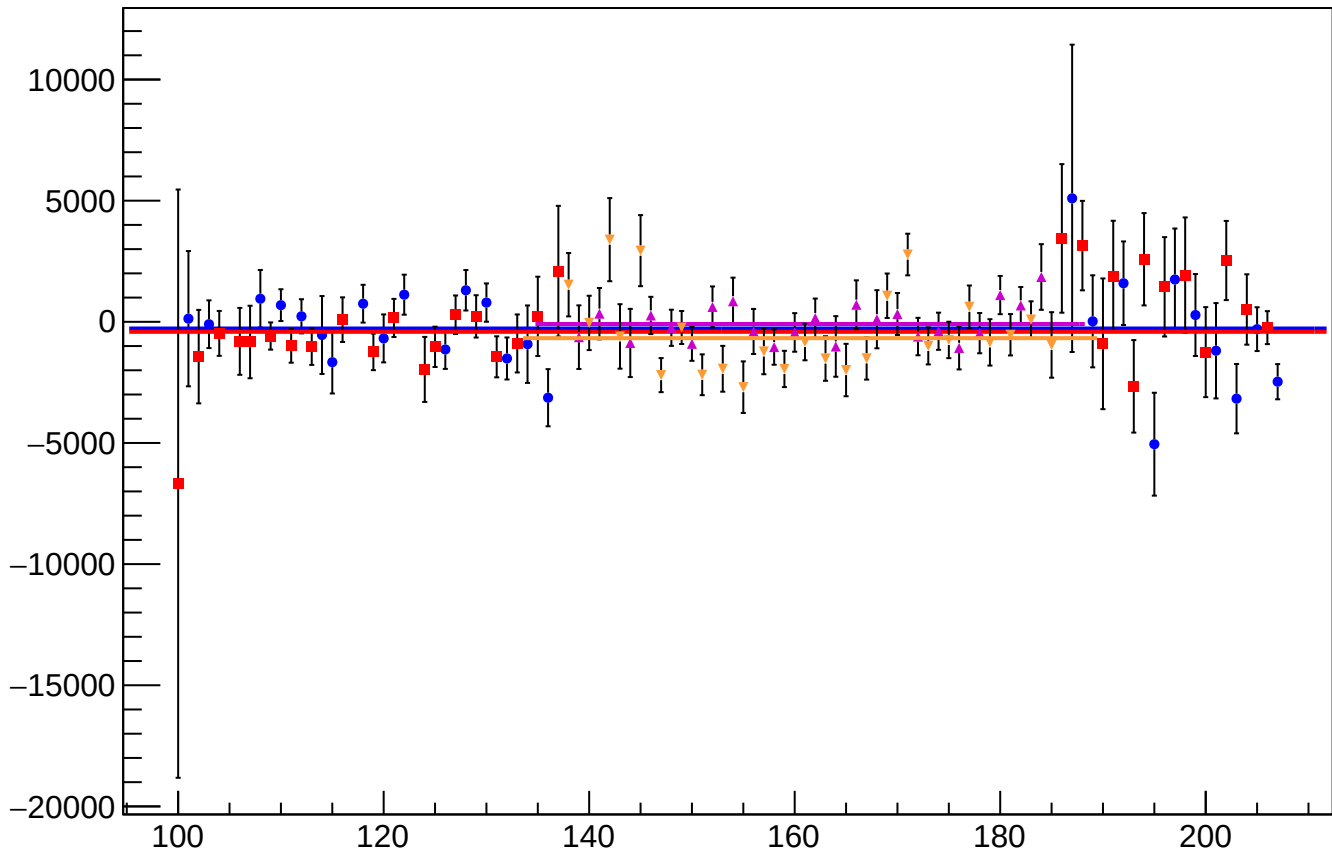
Left In: 2739.863+/-0.452     $\chi^2/\text{NDF}$ : 3362.0/22

+ sign 2755.065+/-0.334     $\chi^2/\text{NDF}$ : 756517.7/50

All: 2758.822+/-0.236     $\chi^2/\text{NDF}$ : 1246848.5/100

- sign 2762.563+/-0.333     $\chi^2/\text{NDF}$ : 490078.5/53

# asym\_atr1\_eigen\_cor\_correction\_mean vs Slug



Right In: -275.934+/-205.635  $\chi^2/\text{NDF}$ : 45.8/25

Left Out: -673.608+/-181.230  $\chi^2/\text{NDF}$ : 58.4/24

Right Out: -412.194+/-194.474  $\chi^2/\text{NDF}$ : 25.9/30

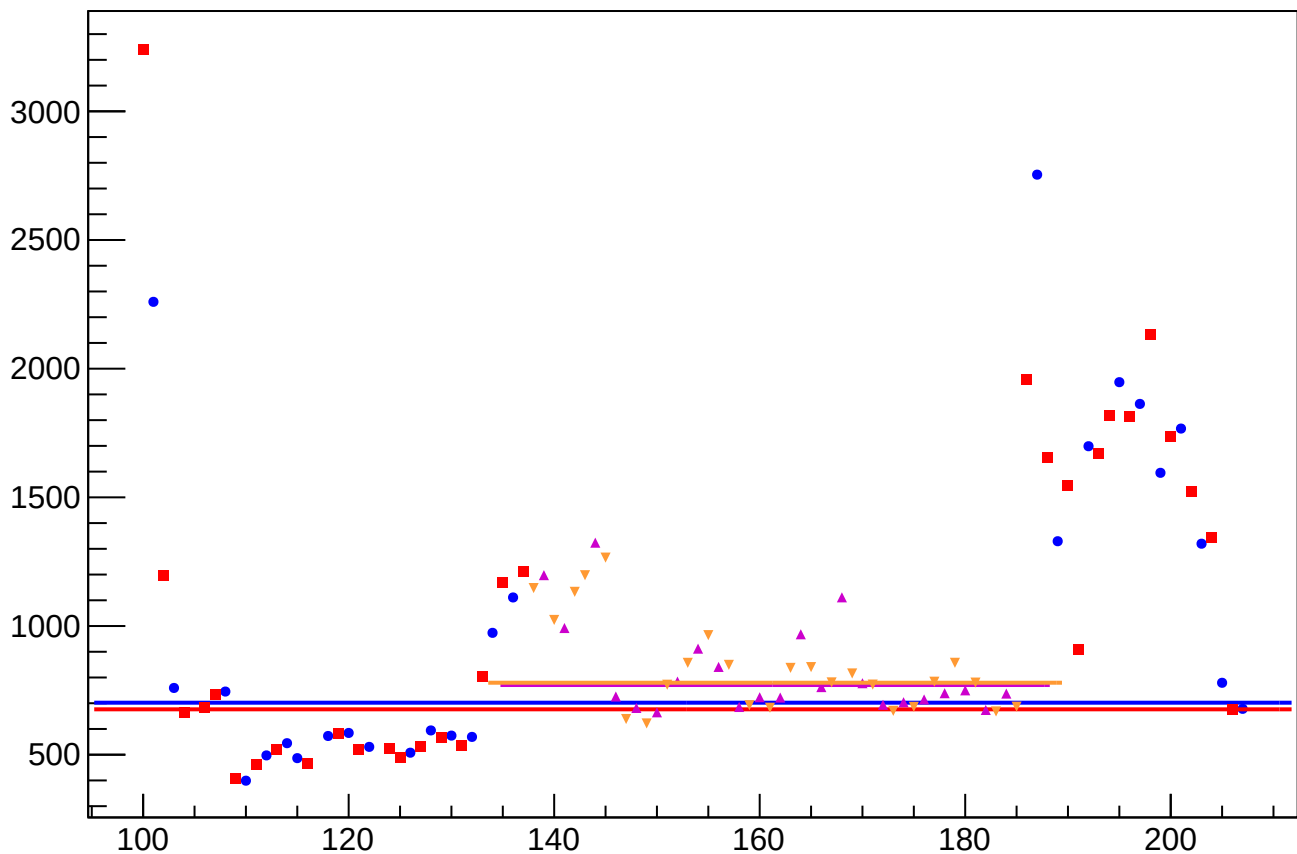
Left In: -89.643+/-183.492  $\chi^2/\text{NDF}$ : 14.8/22

+ sign -499.759+/-135.963  $\chi^2/\text{NDF}$ : 106.3/50

All: -368.260+/-95.244  $\chi^2/\text{NDF}$ : 150.3/104

- sign -241.555+/-133.462  $\chi^2/\text{NDF}$ : 42.2/53

# asym\_atr1\_eigen\_cor\_correction\_rms vs Slug



Right In: 702.089 $\pm$ 0.145  $\chi^2/\text{NDF}$ : 5945823.0/25

Left Out: 779.713 $\pm$ 0.128  $\chi^2/\text{NDF}$ : 1243769.6/24

Right Out: 676.312 $\pm$ 0.138  $\chi^2/\text{NDF}$ : 7121008.9/30

Left In: 770.799 $\pm$ 0.130  $\chi^2/\text{NDF}$ : 1076291.1/22

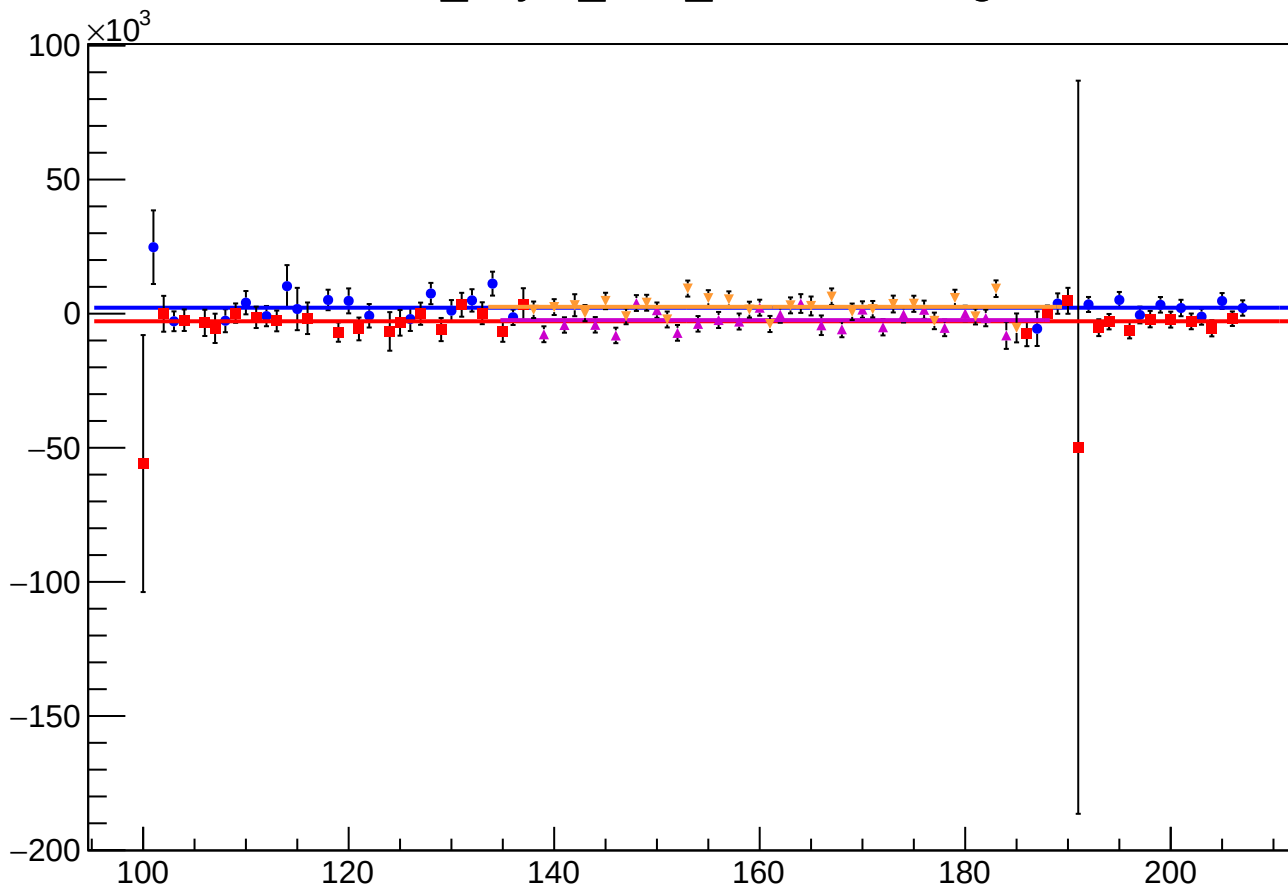
+ sign 745.779 $\pm$ 0.096  $\chi^2/\text{NDF}$ : 7349991.9/50

All: 735.858 $\pm$ 0.067  $\chi^2/\text{NDF}$ : 15817965.2/100

- sign 726.298 $\pm$ 0.094  $\chi^2/\text{NDF}$ : 8447064.1/53



dit\_asym\_atr1\_mean vs Slug



Right In: 2220.178 $\pm$ 731.220  $\chi^2$ /NDF: 23.5/25

Left Out: 2545.043 $\pm$ 622.236  $\chi^2$ /NDF:31.9/24

Right Out: -2834.004 $\pm$ 703.627  $\chi^2$ /NDF: 17.2/30

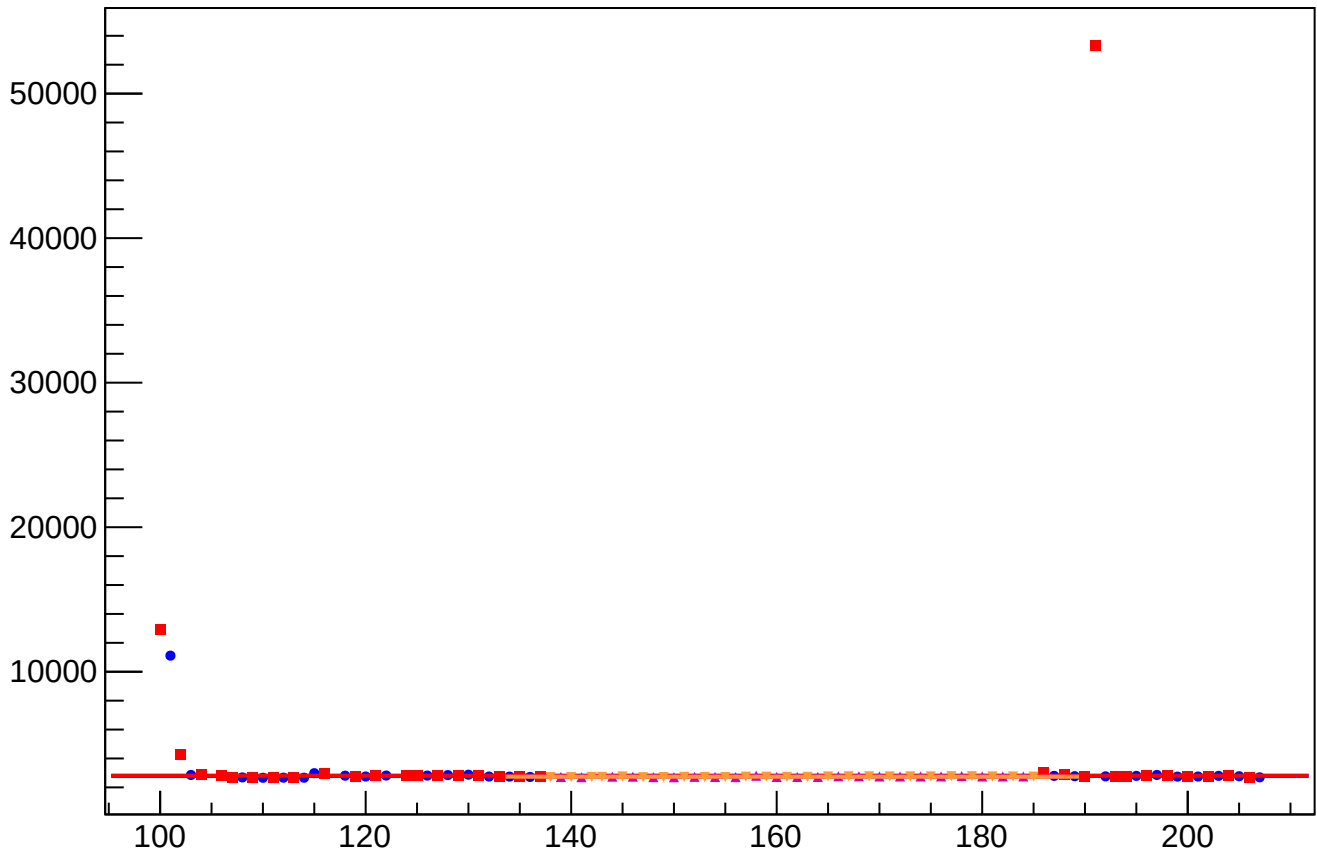
Left In: -2406.858 $\pm$ 640.084  $\chi^2$ /NDF:31.8/22

+ sign 2408.601 $\pm$ 473.882  $\chi^2$ /NDF: 55.6/50

All: -97.953 $\pm$ 334.944  $\chi^2$ /NDF: 160.7/104

- sign -2600.277 $\pm$ 473.482  $\chi^2$ /NDF: 49.2/53

# dit\_asym\_atr1\_rms vs Slug



Right In: 2795.055+/-0.517  $\chi^2/\text{NDF}$ : 750079.0/25

Left Out: 2739.304+/-0.440  $\chi^2/\text{NDF}$ : 2322.3/24

Right Out: 2806.493+/-0.498  $\chi^2/\text{NDF}$ : 534747.7/30

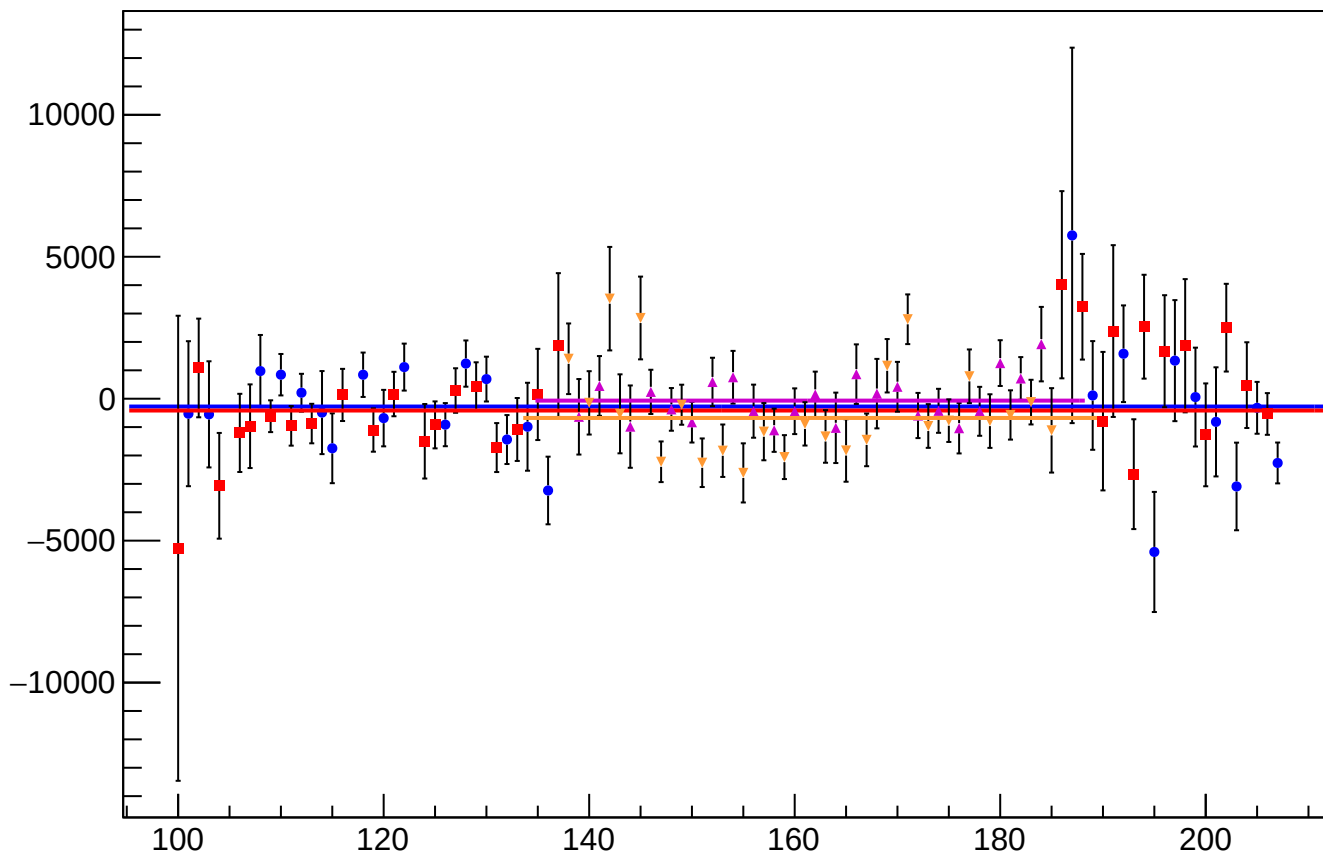
Left In: 2741.391+/-0.453  $\chi^2/\text{NDF}$ : 3369.6/22

+ sign 2762.719+/-0.335  $\chi^2/\text{NDF}$ : 759144.7/50

All: 2766.798+/-0.237  $\chi^2/\text{NDF}$ : 1306926.6/10

- sign 2770.870+/-0.335  $\chi^2/\text{NDF}$ : 547485.8/53

# asym\_atr1\_dit\_correction\_mean vs Slug



Right In:  $-275.817 \pm 208.646$   $\chi^2/\text{NDF}$ : 43.8/25

Left Out:  $-678.226 \pm 185.004$   $\chi^2/\text{NDF}$ : 56.2/24

Right Out:  $-416.000 \pm 196.514$   $\chi^2/\text{NDF}$ : 29.7/30

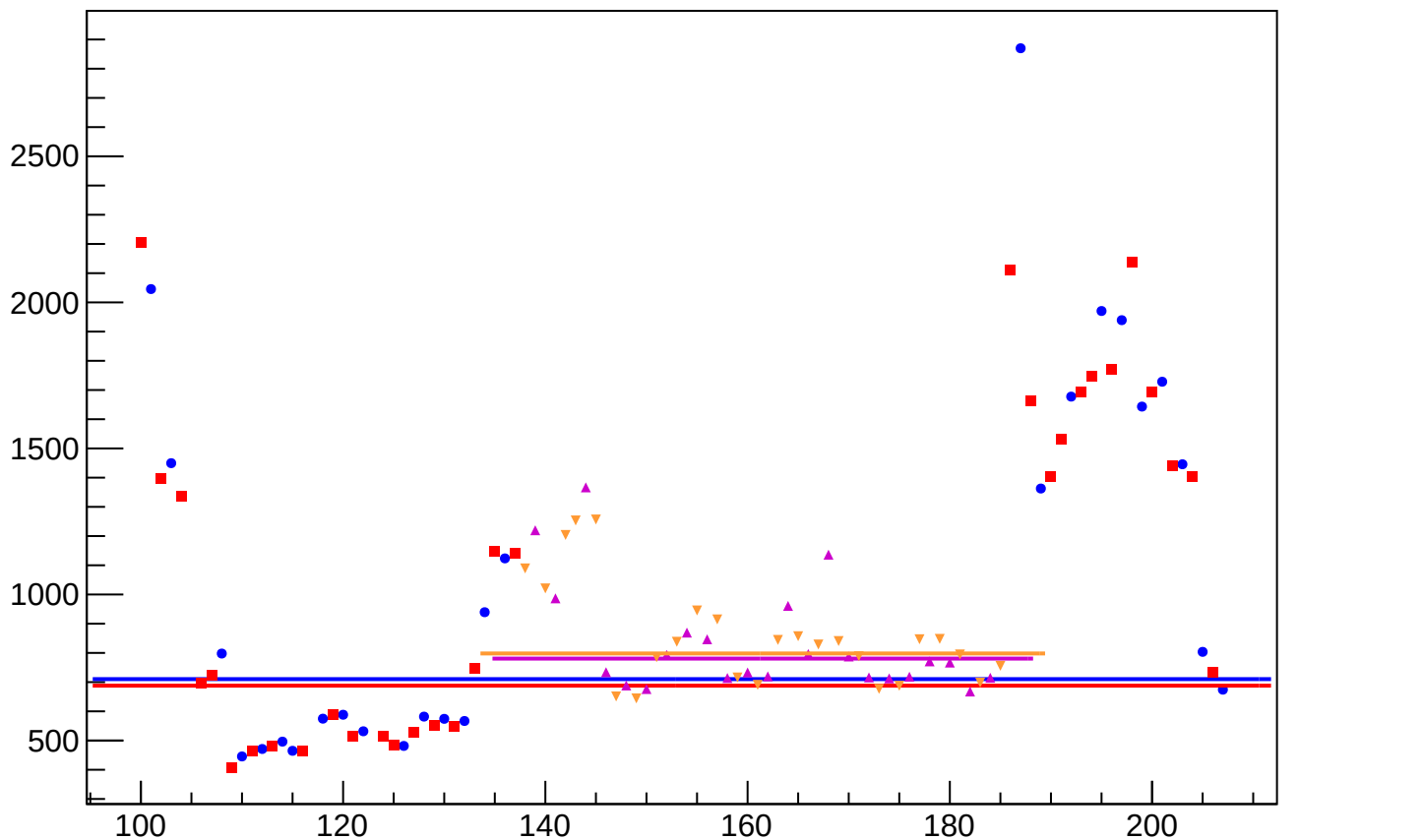
Left In:  $-67.156 \pm 185.436$   $\chi^2/\text{NDF}$ : 15.8/22

+ sign  $-501.103 \pm 138.425$   $\chi^2/\text{NDF}$ : 102.1/50

All:  $-362.778 \pm 96.600$   $\chi^2/\text{NDF}$ : 151.2/104

- sign  $-231.468 \pm 134.869$   $\chi^2/\text{NDF}$ : 47.2/53

# asym\_atr1\_dit\_correction\_rms vs Slug



Right In: 710.283 $\pm$ 0.148  $\chi^2$ /NDF: 6405778.1/25

Left Out: 798.091 $\pm$ 0.131  $\chi^2$ /NDF:1168352.1/24

Right Out: 687.894 $\pm$ 0.139  $\chi^2$ /NDF: 7724029.5/30

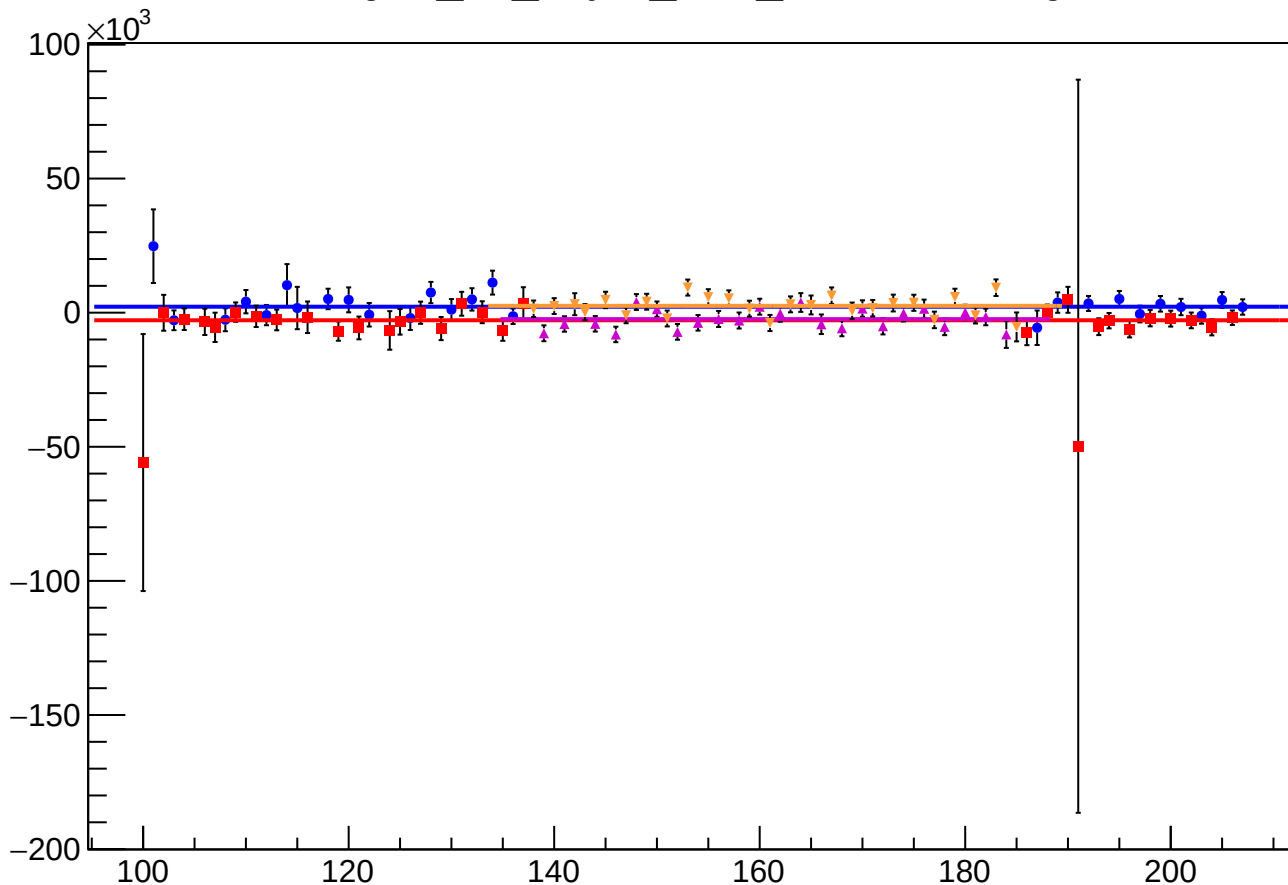
Left In: 780.525 $\pm$ 0.131  $\chi^2$ /NDF:1064827.5/22

+ sign 759.442 $\pm$ 0.098  $\chi^2$ /NDF: 7772439.6/50

All: 747.875 $\pm$ 0.068  $\chi^2$ /NDF: 16823591.9/10

- sign 736.894 $\pm$ 0.095  $\chi^2$ /NDF: 9023929.1/53

# eigen\_dit\_asym\_atr1\_mean vs Slug



Right In:  $2220.178 \pm 731.220$   $\chi^2/\text{NDF}$ : 23.5/25

Left Out:  $2545.044 \pm 622.236$   $\chi^2/\text{NDF}$ : 31.9/24

Right Out:  $-2834.002 \pm 703.627$   $\chi^2/\text{NDF}$ : 17.2/30

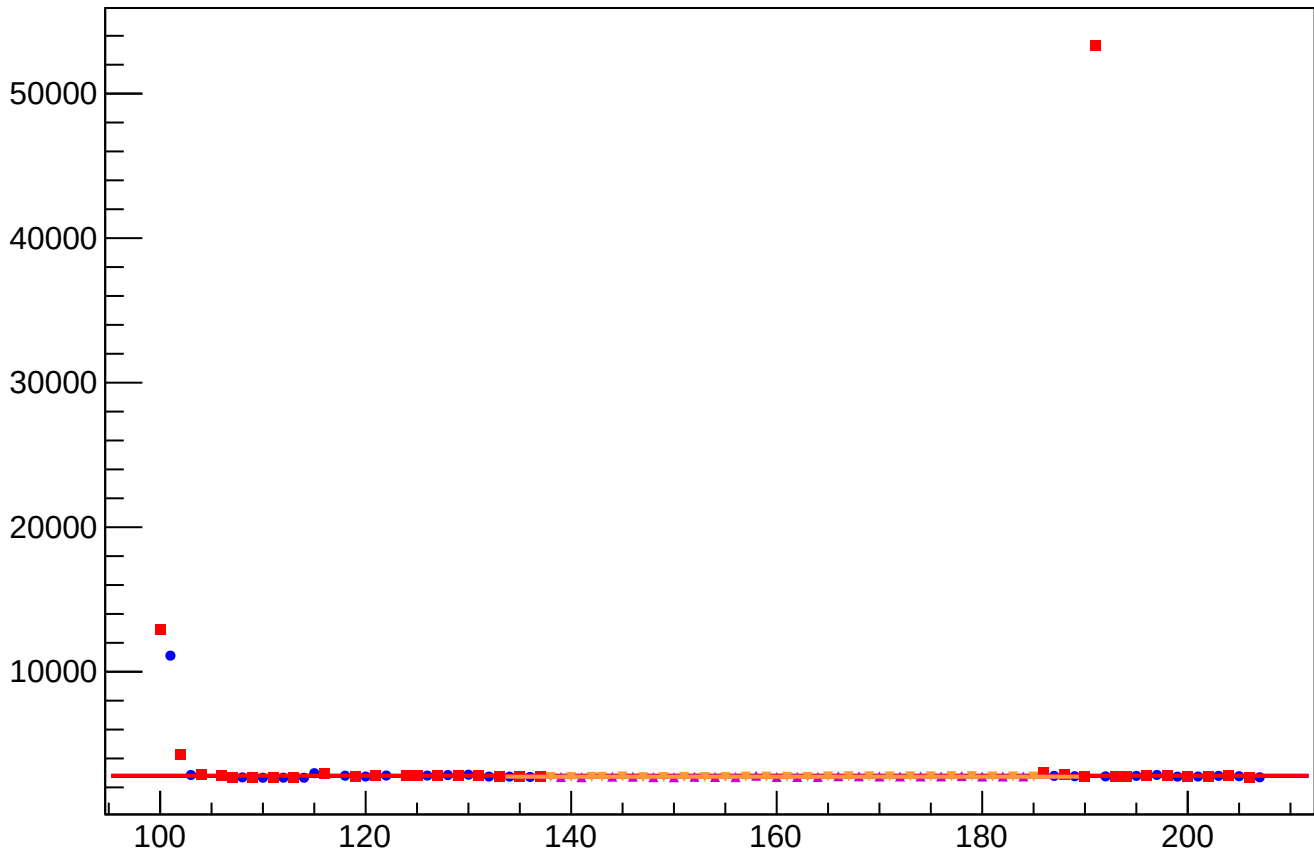
Left In:  $-2406.858 \pm 640.084$   $\chi^2/\text{NDF}$ : 31.8/22

+ sign  $2408.602 \pm 473.882$   $\chi^2/\text{NDF}$ : 55.6/50

All:  $-97.953 \pm 334.944$   $\chi^2/\text{NDF}$ : 160.7/104

- sign  $-2600.276 \pm 473.482$   $\chi^2/\text{NDF}$ : 49.2/53

# eigen\_dit\_asym\_atr1\_rms vs Slug



Right In: 2795.055+/-0.517  $\chi^2/\text{NDF}$ : 750079.0/25

Left Out: 2739.304+/-0.440  $\chi^2/\text{NDF}$ : 2322.3/24

Right Out: 2806.493+/-0.498  $\chi^2/\text{NDF}$ : 534747.5/30

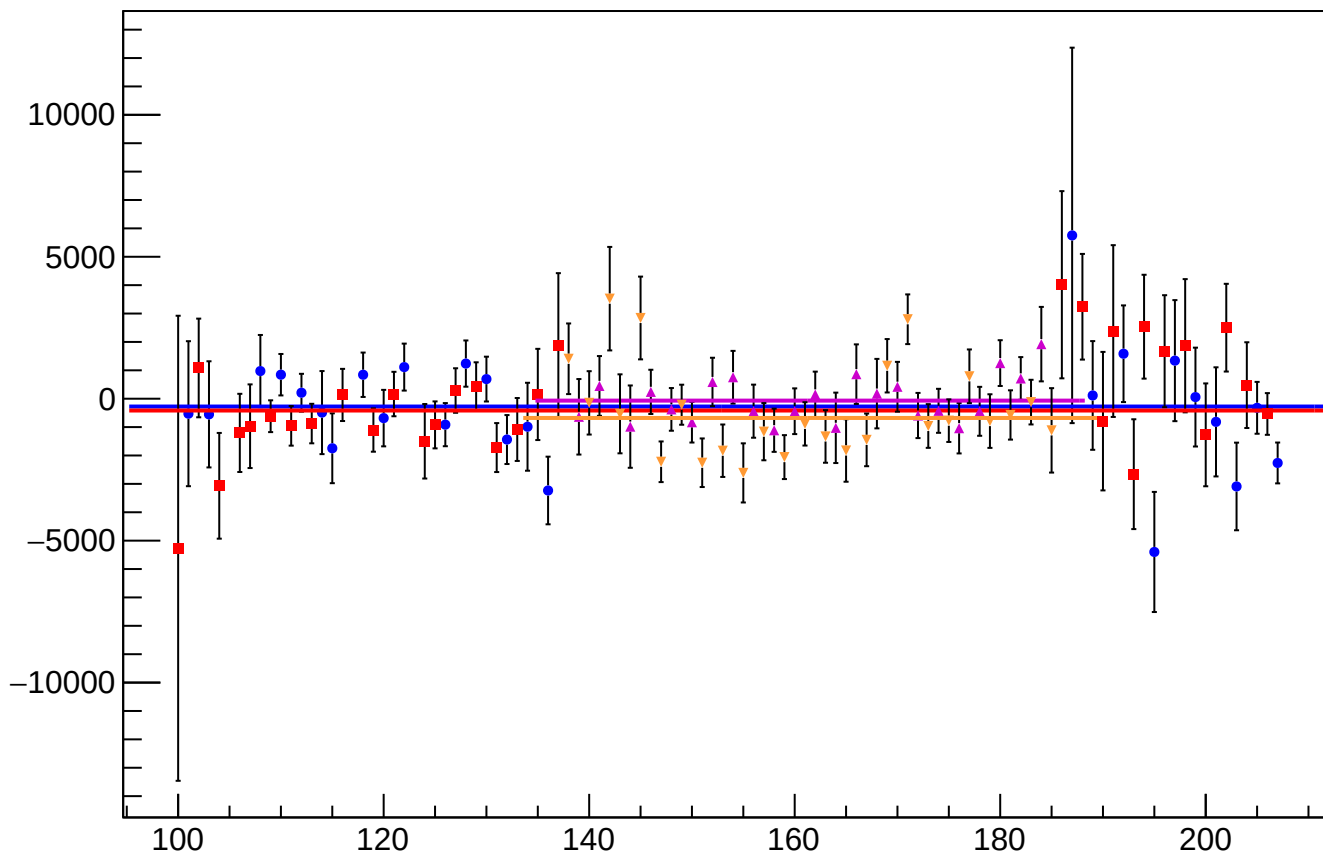
Left In: 2741.391+/-0.453  $\chi^2/\text{NDF}$ : 3369.6/22

+ sign 2762.719+/-0.335  $\chi^2/\text{NDF}$ : 759144.7/50

All: 2766.798+/-0.237  $\chi^2/\text{NDF}$ : 1306926.3/10

- sign 2770.870+/-0.335  $\chi^2/\text{NDF}$ : 547485.6/53

# asym\_atr1\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-275.817 \pm 208.646$   $\chi^2/\text{NDF}: 43.8/25$

Left Out:  $-678.227 \pm 185.004$   $\chi^2/\text{NDF}: 56.2/24$

Right Out:  $-416.000 \pm 196.514$   $\chi^2/\text{NDF}: 29.7/30$

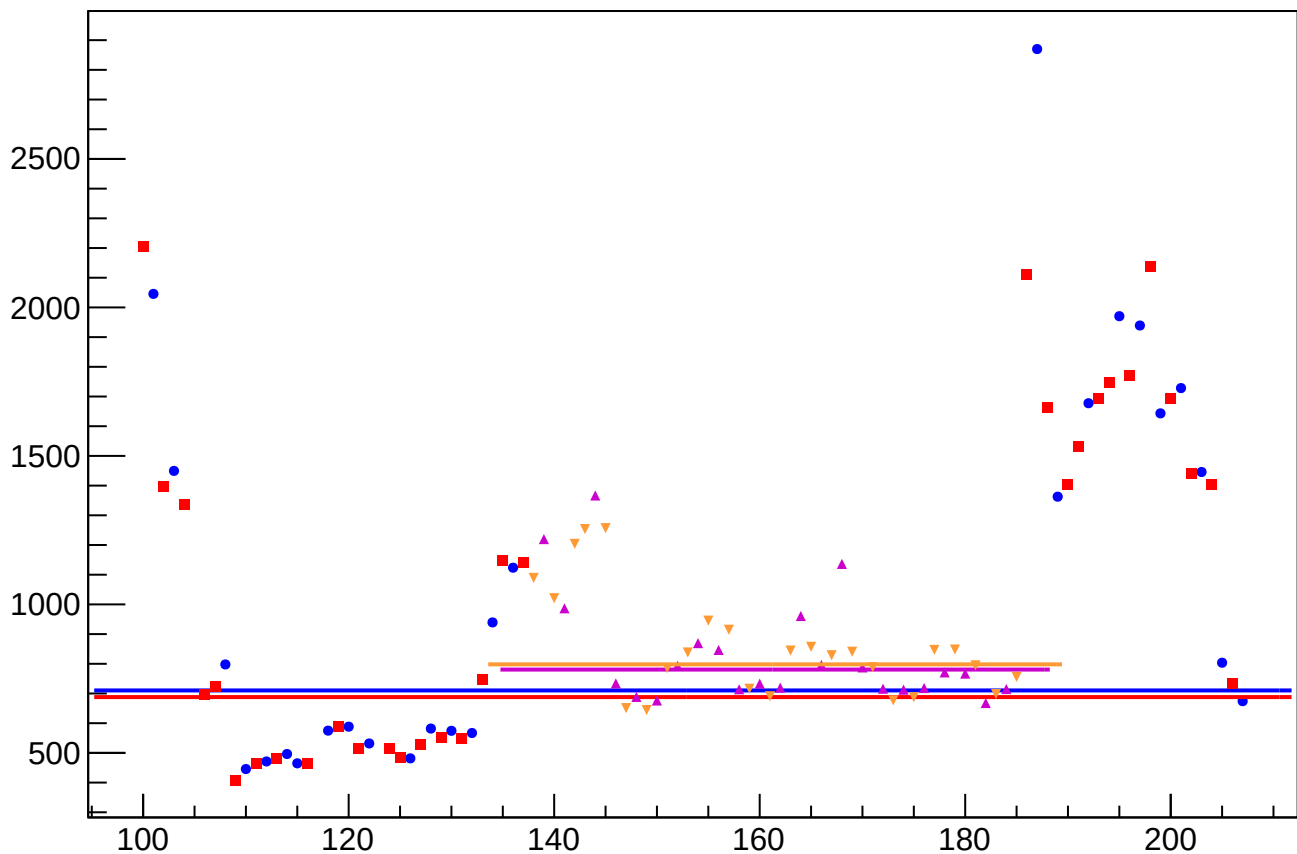
Left In:  $-67.157 \pm 185.436$   $\chi^2/\text{NDF}: 15.8/22$

+ sign  $-501.103 \pm 138.425$   $\chi^2/\text{NDF}: 102.1/50$

All:  $-362.778 \pm 96.600$   $\chi^2/\text{NDF}: 151.2/104$

- sign  $-231.469 \pm 134.869$   $\chi^2/\text{NDF}: 47.2/53$

asym\_atr1\_eigen\_dit\_correction\_rms vs Slug



Right In: 710.284+/-0.148  $\chi^2/\text{NDF}$ : 6405775.2/25

Left Out: 798.092+/-0.131  $\chi^2/\text{NDF}$ :1168353.9/24

Right Out: 687.894+/-0.139  $\chi^2/\text{NDF}$ : 7724033.4/30

Left In: 780.525+/-0.131  $\chi^2/\text{NDF}$ :1064830.7/22

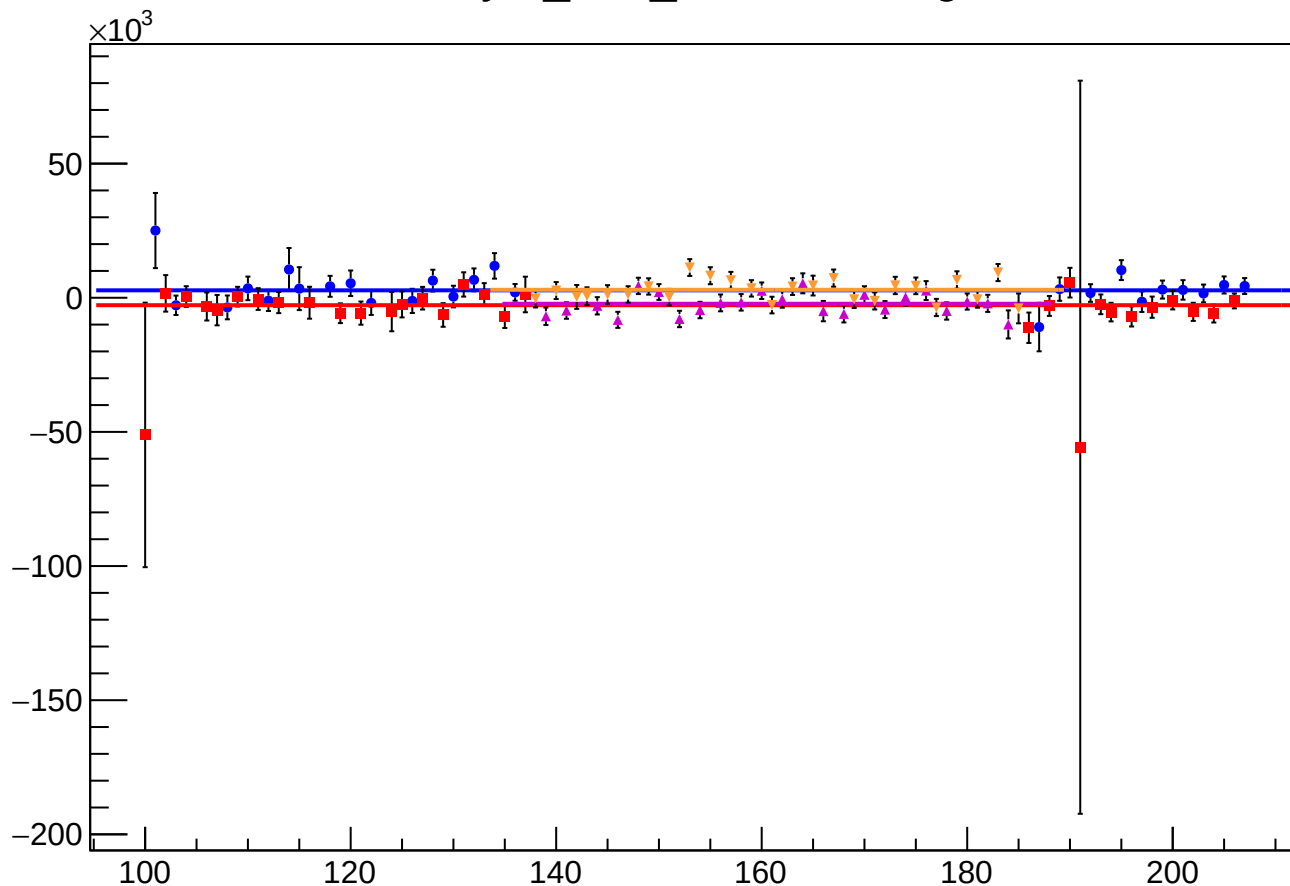
+ sign 759.442+/-0.098  $\chi^2/\text{NDF}$ : 7772436.5/50

All: 747.875+/-0.068  $\chi^2/\text{NDF}$ : 16823594.7/10

- sign 736.894+/-0.095  $\chi^2/\text{NDF}$ : 9023934.4/53



# asym\_atr1\_mean vs Slug



Right In: 2771.197 $\pm$ 794.727  $\chi^2$ /NDF: 25.6/25

Left Out: 2969.337 $\pm$ 653.286  $\chi^2$ /NDF:35.7/24

Right Out: -2771.734 $\pm$ 770.876  $\chi^2$ /NDF: 19.4/30

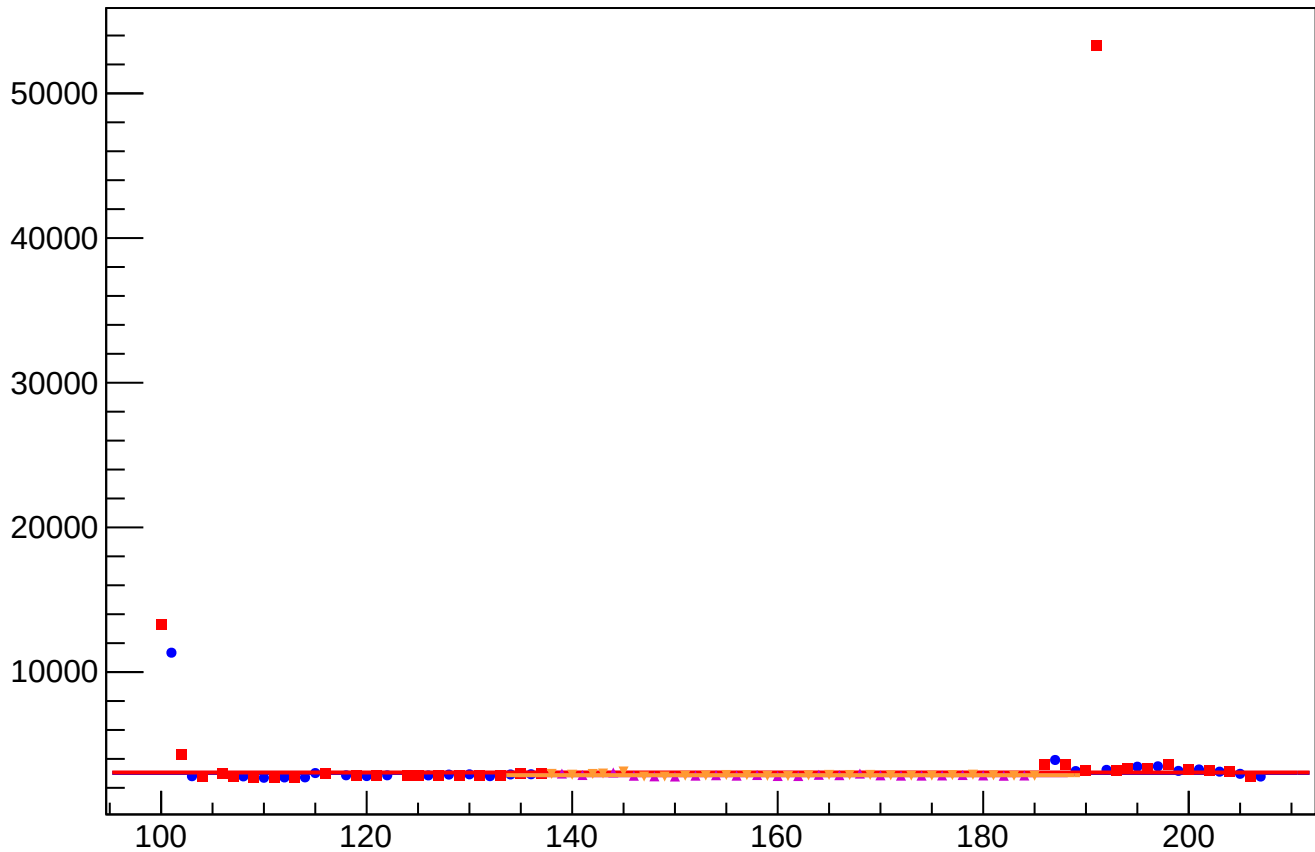
Left In: -2237.495 $\pm$ 670.327  $\chi^2$ /NDF:33.8/22

+ sign 2889.438 $\pm$ 504.664  $\chi^2$ /NDF: 61.3/50

All: 217.155 $\pm$ 357.264  $\chi^2$ /NDF: 171.0/104

- sign -2467.523 $\pm$ 505.833  $\chi^2$ /NDF: 53.4/53

# asym\_atr1\_rms vs Slug



Right In: 3028.506+/-0.562  $\chi^2/\text{NDF}$ : 883359.4/25

Left Out: 2874.933+/-0.462  $\chi^2/\text{NDF}$ :21788.8/24

Right Out: 3059.914+/-0.545  $\chi^2/\text{NDF}$ : 733799.4/30

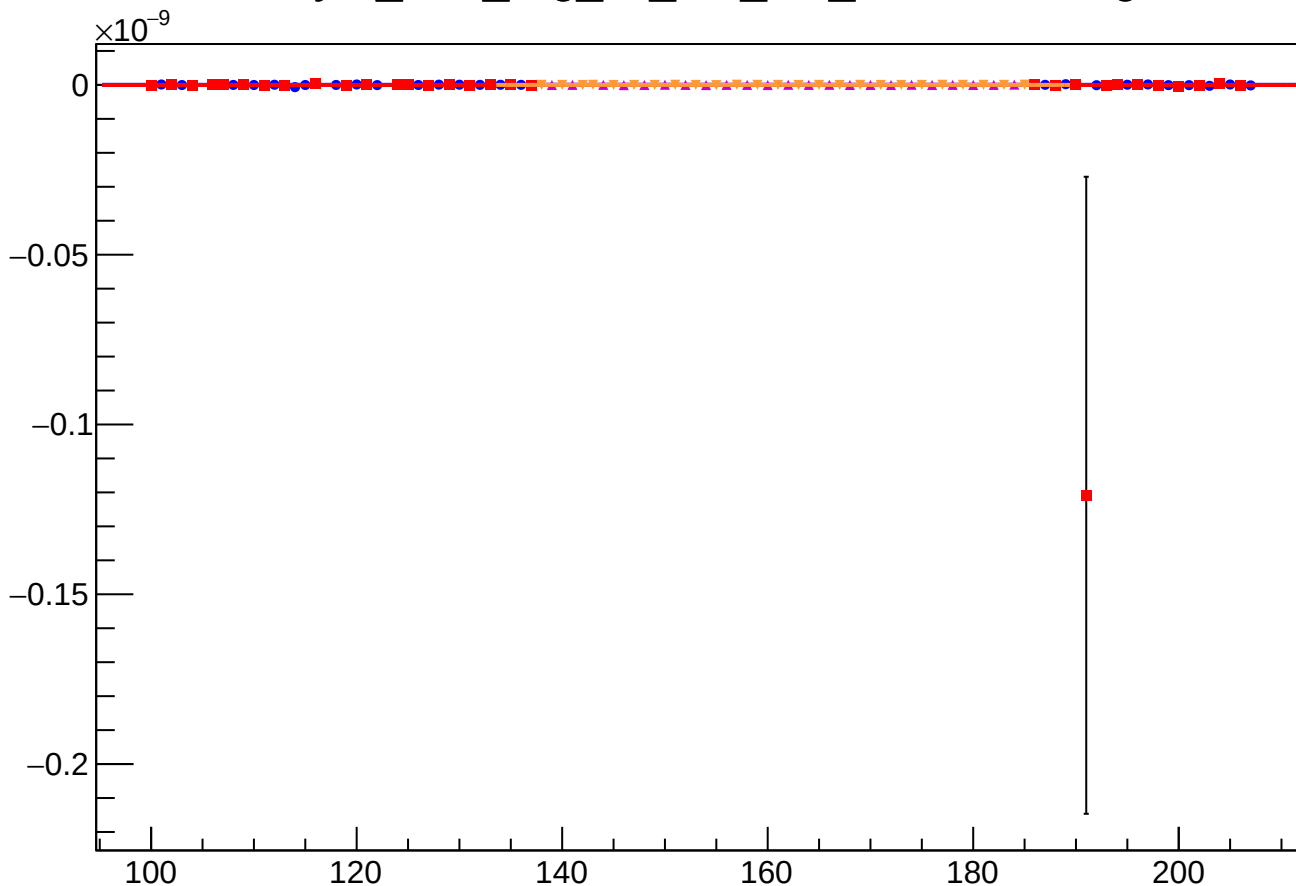
Left In: 2870.153+/-0.474  $\chi^2/\text{NDF}$ :17687.5/22

+ sign 2936.861+/-0.357  $\chi^2/\text{NDF}$ : 949716.1/50

All: 2944.342+/-0.253  $\chi^2/\text{NDF}$ : 1771095.2/10

- sign 2951.859+/-0.358  $\chi^2/\text{NDF}$ : 820497.9/53

# asym\_atr1\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 22.0/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14.4/24

Right Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 40.1/30

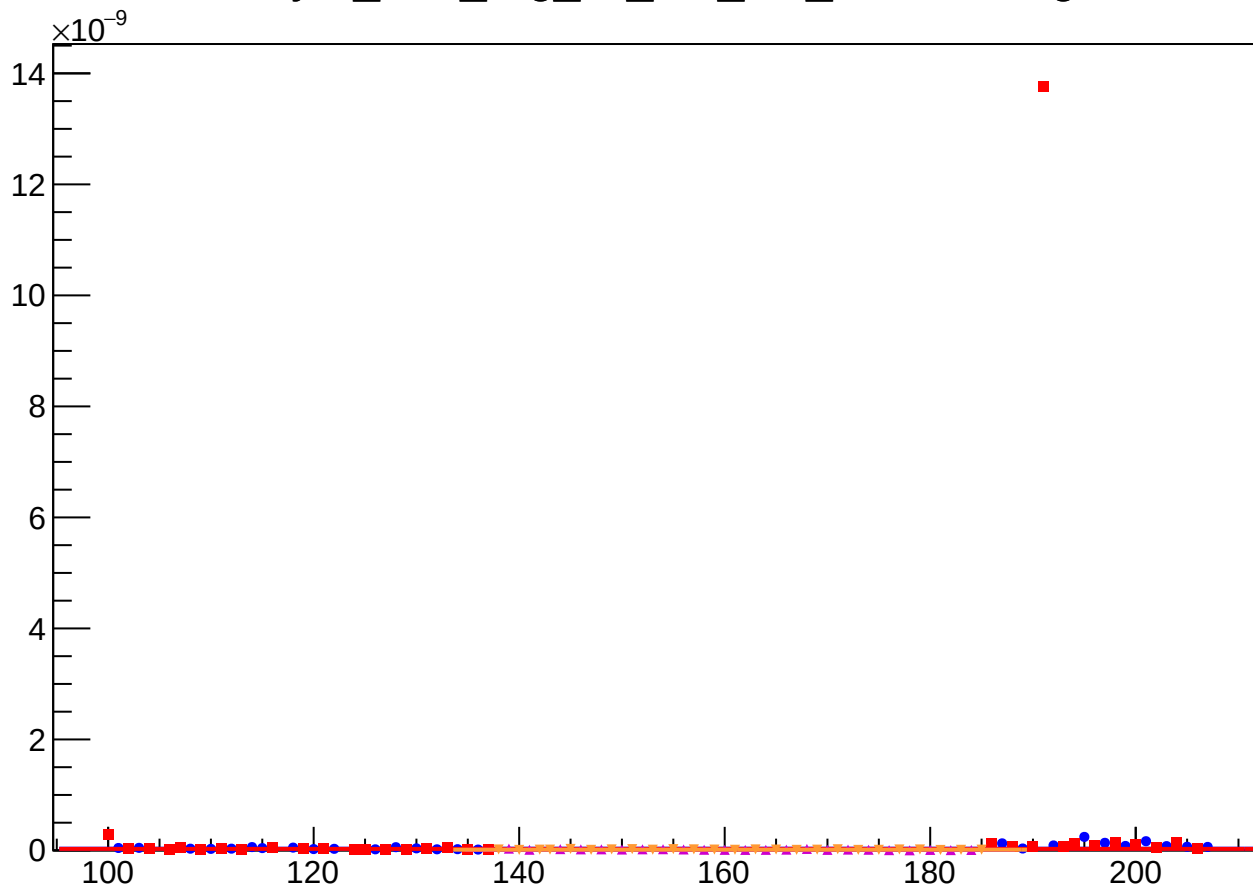
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 27.9/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 37.2/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 106.7/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 69.4/53

# asym\_atr1\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 3840730.5/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:1210269.4/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 3508270.9/30

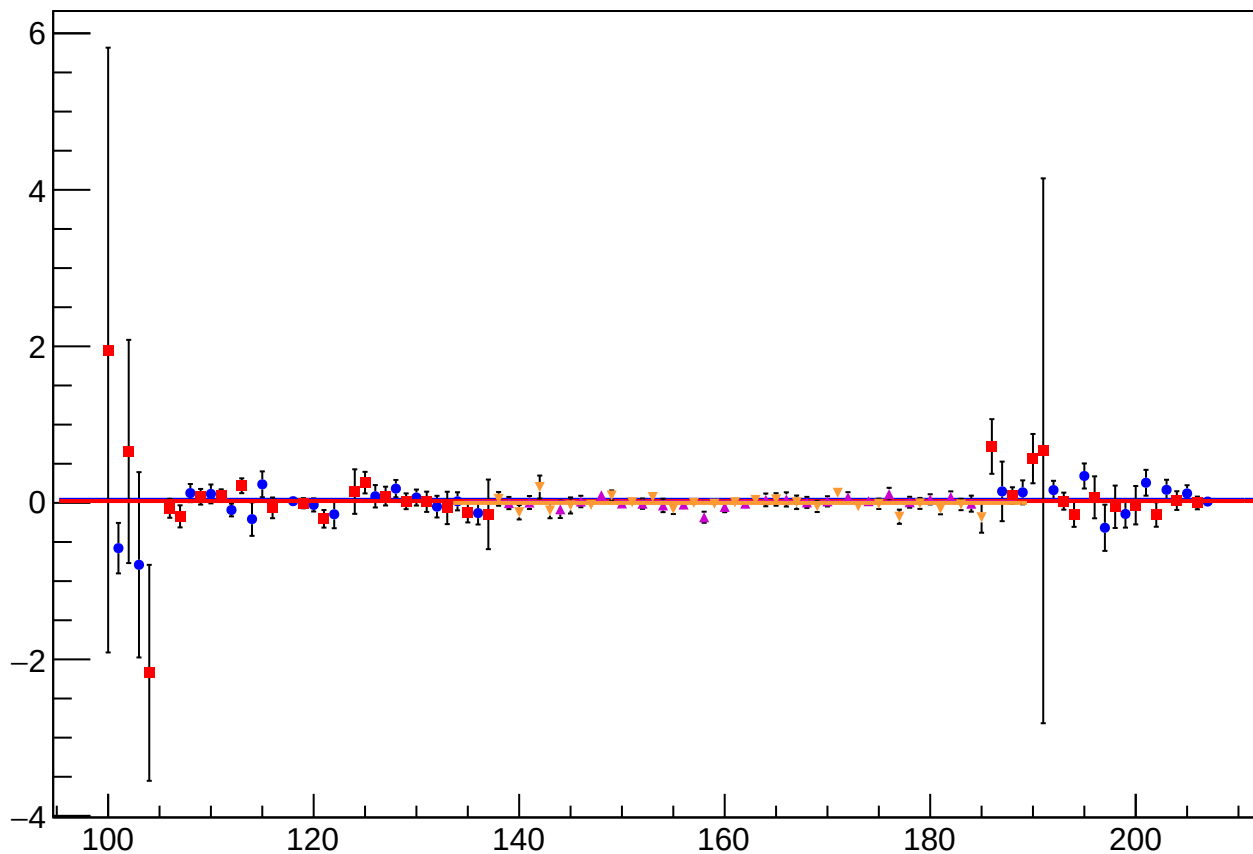
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:3166775.9/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 7295557.3/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 16714332.4/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 9127473.7/53

# asym\_atr1\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.039 $\pm$ 0.022  $\chi^2$ /NDF: 27.0/25

Left Out: -0.000 $\pm$ 0.014  $\chi^2$ /NDF:22.6/24

Right Out: 0.023 $\pm$ 0.024  $\chi^2$ /NDF: 30.8/30

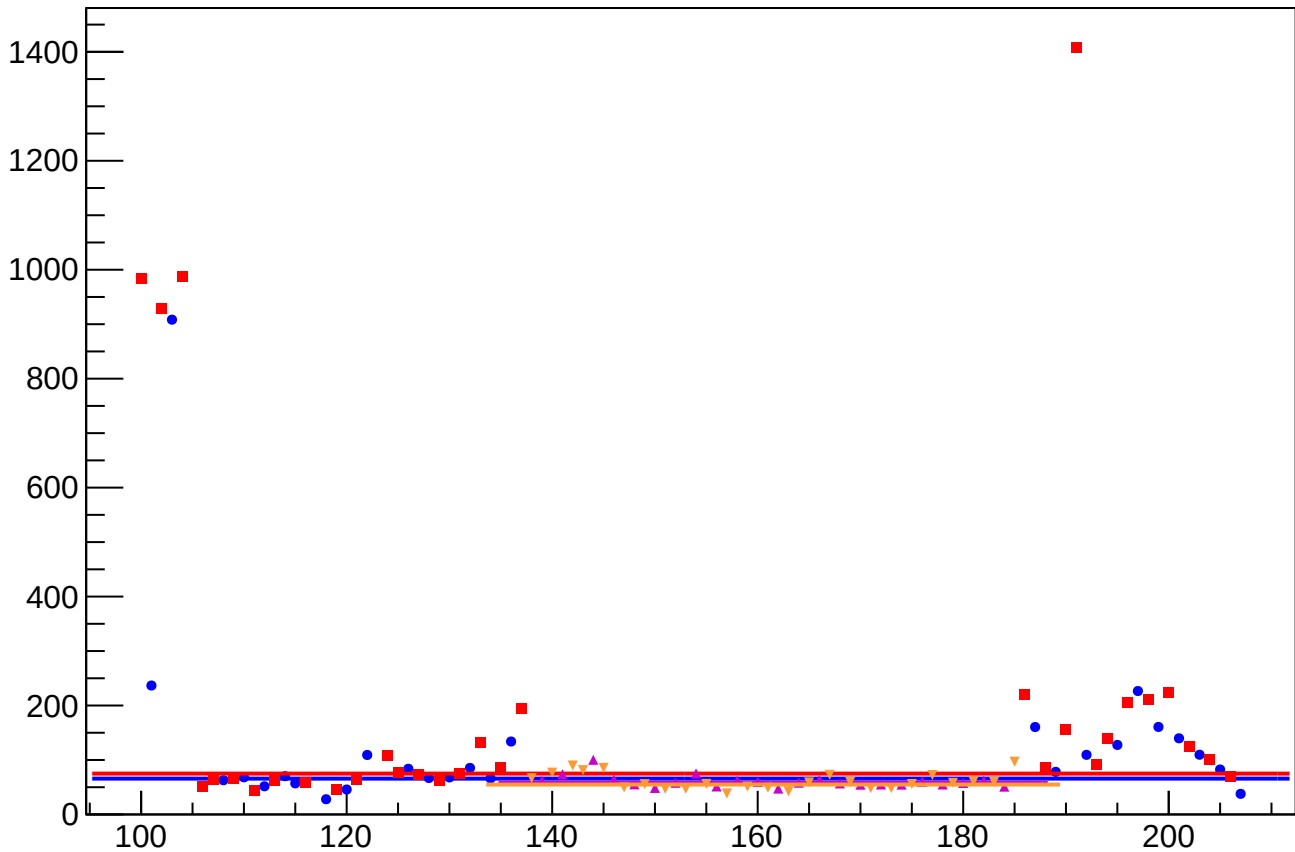
Left In: 0.008 $\pm$ 0.015  $\chi^2$ /NDF:15.5/22

+ sign 0.011 $\pm$ 0.012  $\chi^2$ /NDF: 51.8/50

All: 0.012 $\pm$ 0.009  $\chi^2$ /NDF: 98.4/104

- sign 0.012 $\pm$ 0.013  $\chi^2$ /NDF: 46.6/53

# asym\_atr1\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 65.794+/-0.016  $\chi^2/\text{NDF}$ : 6474186.9/25

Left Out: 54.931+/-0.010  $\chi^2/\text{NDF}$ : 1297647.2/24

Right Out: 74.993+/-0.017  $\chi^2/\text{NDF}$ : 6236318.7/30

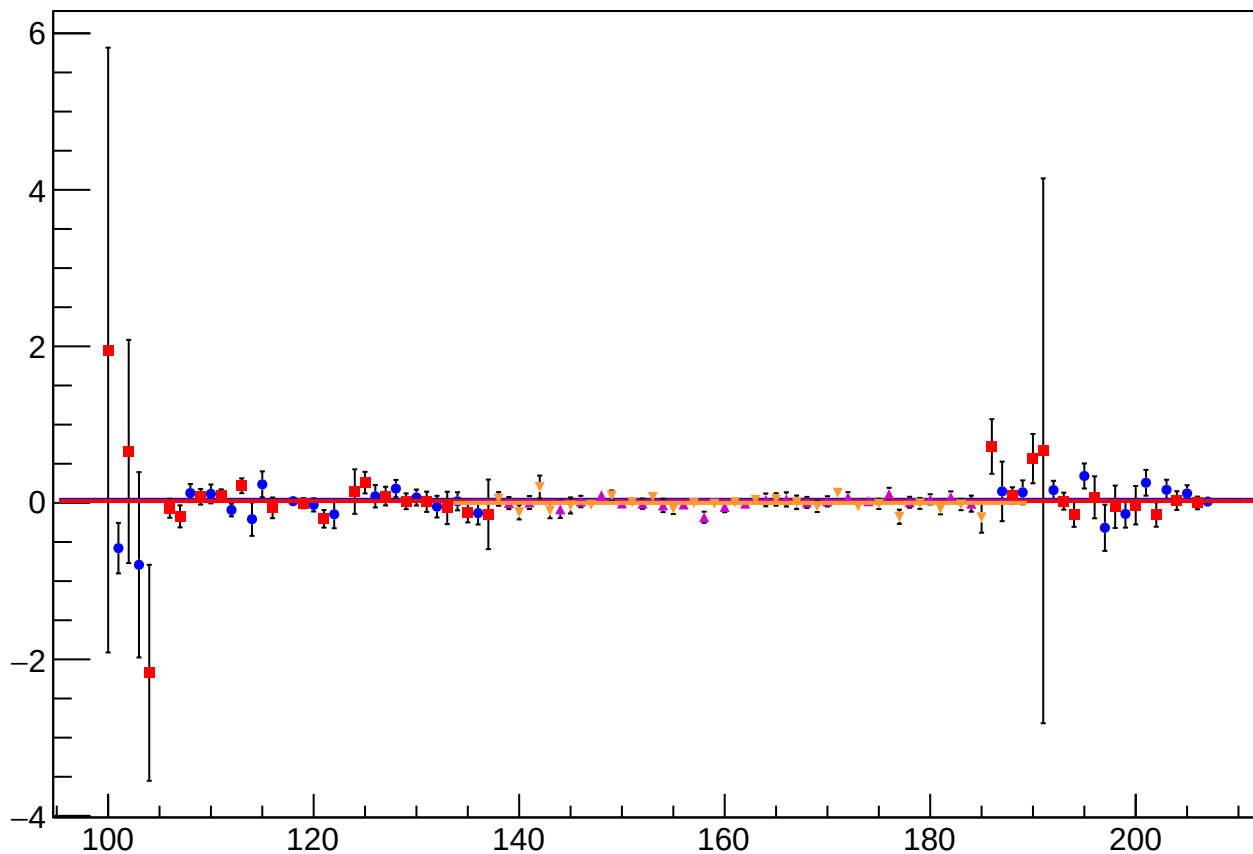
Left In: 58.138+/-0.010  $\chi^2/\text{NDF}$ : 657436.9/22

+ sign 58.019+/-0.008  $\chi^2/\text{NDF}$ : 8109592.4/50

All: 60.354+/-0.006  $\chi^2/\text{NDF}$ : 15900313.8/104

- sign 62.939+/-0.009  $\chi^2/\text{NDF}$ : 7629098.5/53

# asym\_atr1\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.039 $\pm$ 0.022  $\chi^2$ /NDF: 27.0/25

Left Out: -0.000 $\pm$ 0.014  $\chi^2$ /NDF:22.6/24

Right Out: 0.023 $\pm$ 0.024  $\chi^2$ /NDF: 30.8/30

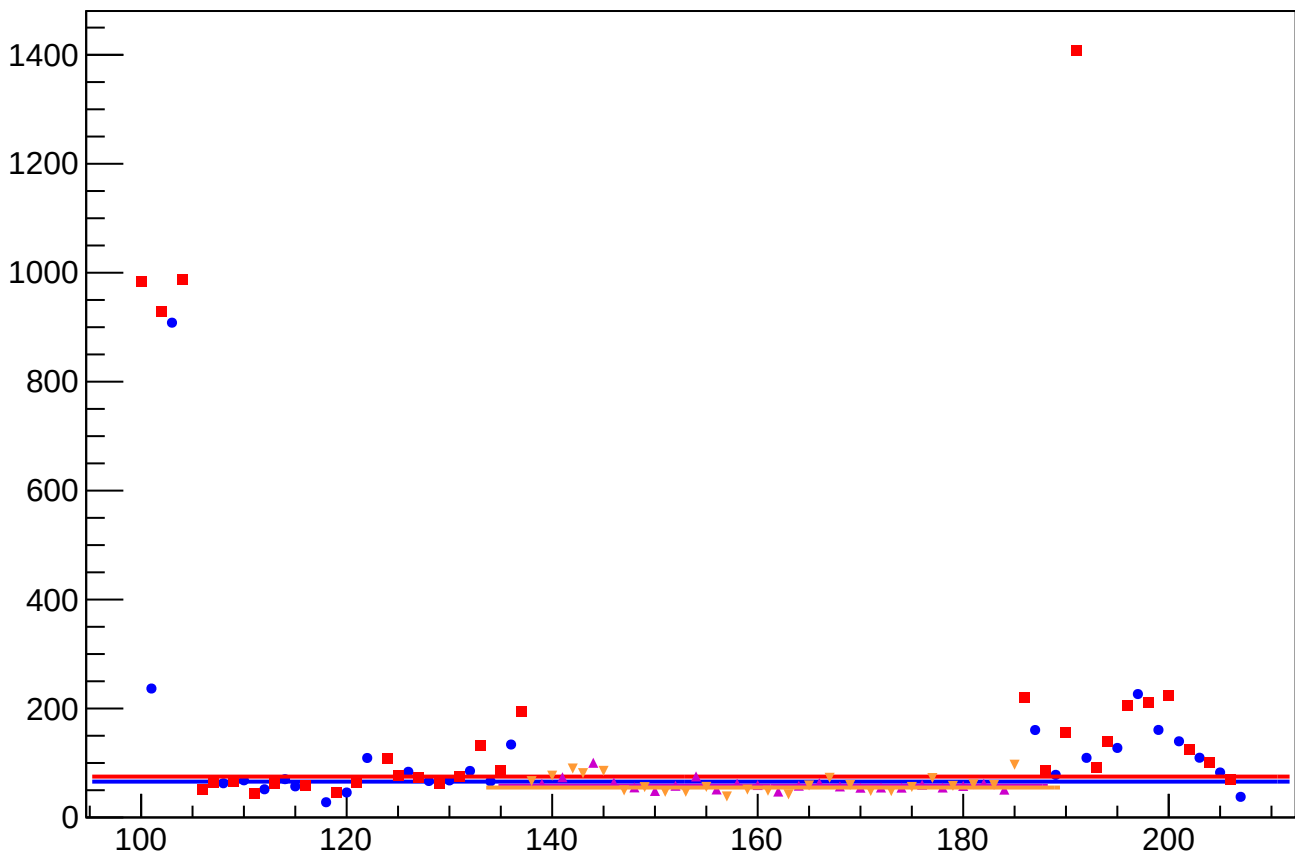
Left In: 0.008 $\pm$ 0.015  $\chi^2$ /NDF:15.5/22

+ sign 0.011 $\pm$ 0.012  $\chi^2$ /NDF: 51.8/50

All: 0.012 $\pm$ 0.009  $\chi^2$ /NDF: 98.4/104

- sign 0.012 $\pm$ 0.013  $\chi^2$ /NDF: 46.6/53

# asym\_atr1\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 65.794 $\pm$ 0.016  $\chi^2$ /NDF: 6474186.9/25

Left Out: 54.931 $\pm$ 0.010  $\chi^2$ /NDF: 1297647.2/24

Right Out: 74.993 $\pm$ 0.017  $\chi^2$ /NDF: 6236318.7/30

Left In: 58.138 $\pm$ 0.010  $\chi^2$ /NDF: 657436.9/22

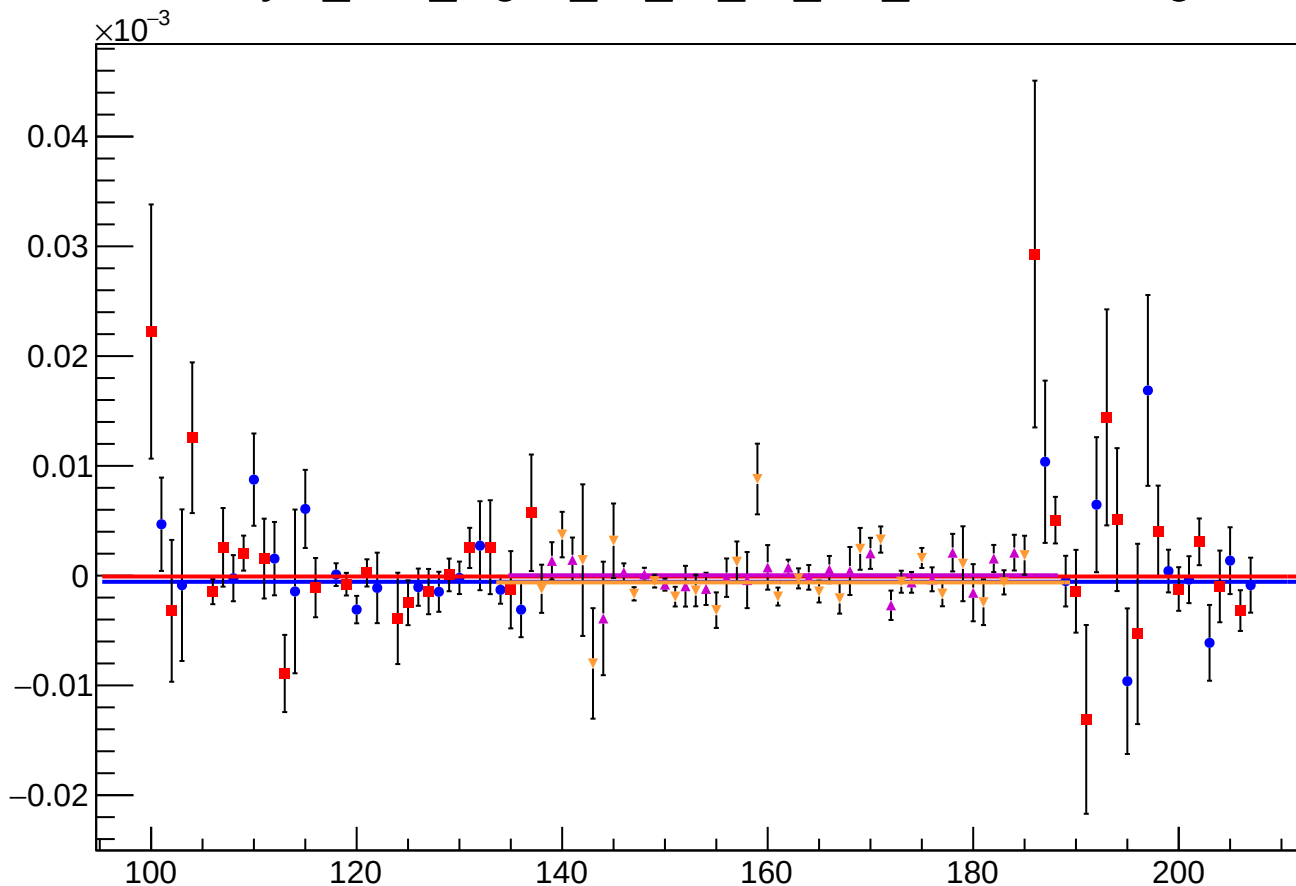
+ sign 58.019 $\pm$ 0.008  $\chi^2$ /NDF: 8109592.4/50

All: 60.354 $\pm$ 0.006  $\chi^2$ /NDF: 15900313.8/104

- sign 62.939 $\pm$ 0.009  $\chi^2$ /NDF: 7629098.5/53



# asym\_atr1\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2$ /NDF: 29.9/25

Left Out: -0.000+/-0.000  $\chi^2$ /NDF:52.8/24

Right Out: -0.000+/-0.000  $\chi^2$ /NDF: 46.1/30

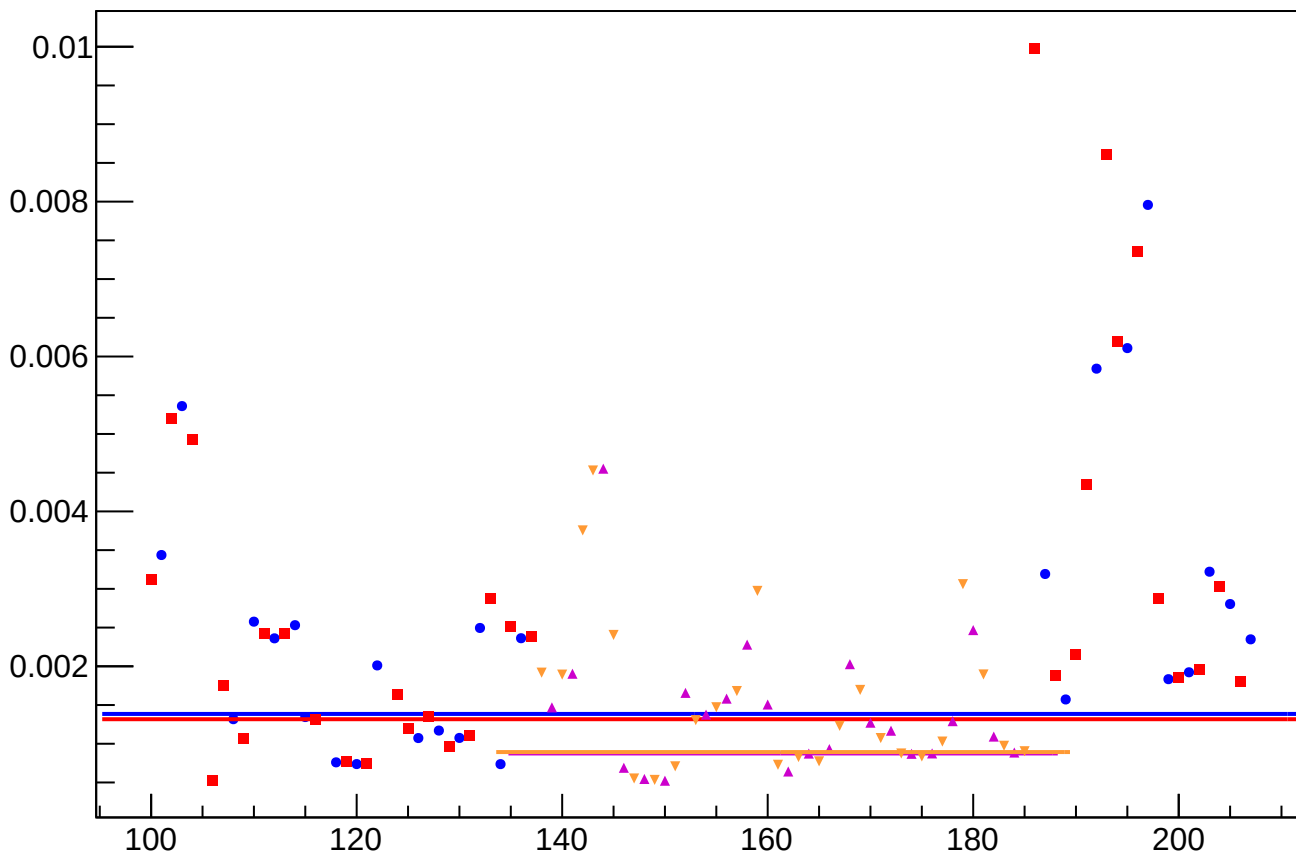
Left In: 0.000+/-0.000  $\chi^2$ /NDF:18.2/22

+ sign -0.000+/-0.000  $\chi^2$ /NDF: 82.7/50

All: -0.000+/-0.000  $\chi^2$ /NDF: 151.5/104

- sign 0.000+/-0.000  $\chi^2$ /NDF: 64.3/53

# asym\_atr1\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 8881613.6/25

Left Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 7739119.9/24

Right Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 10179972.1/30

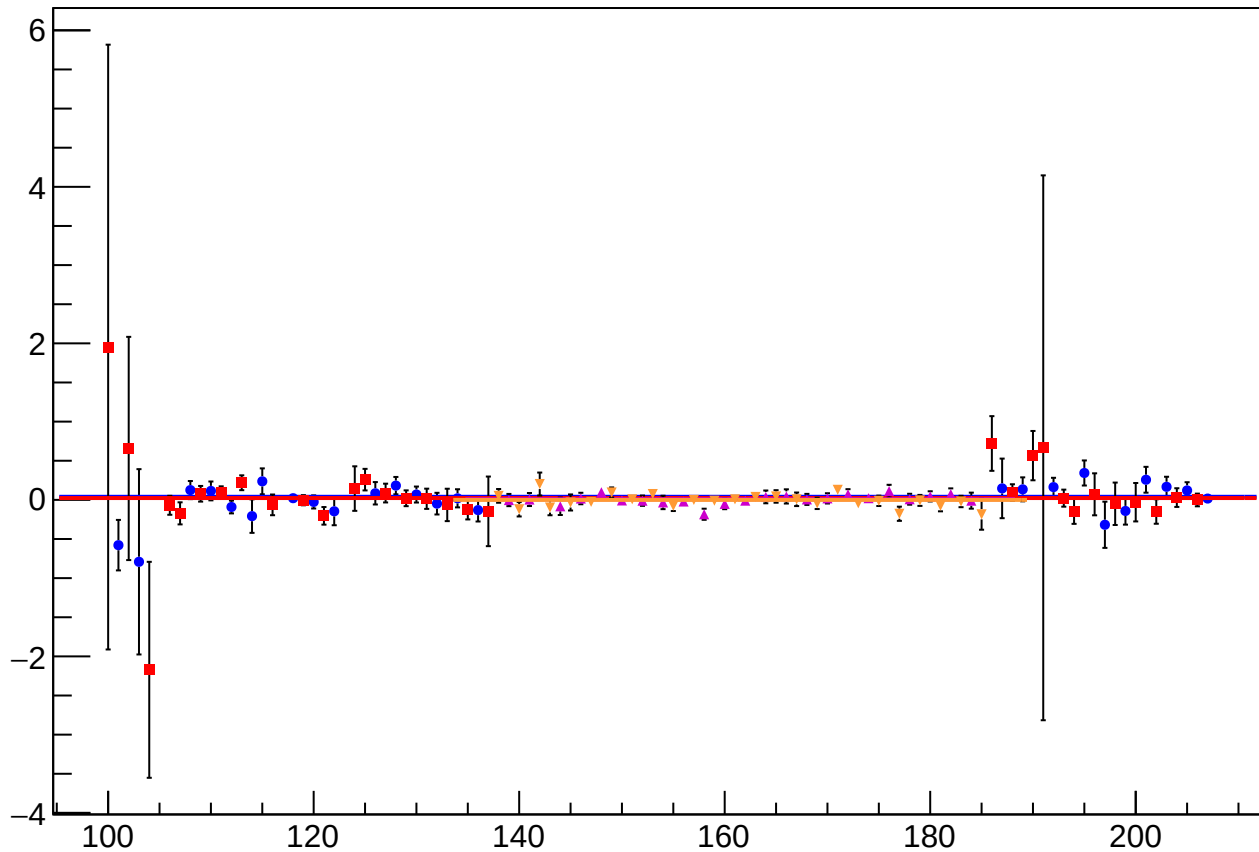
Left In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 6963716.3/22

+ sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 18604323.1/50

All: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 37491830.5/104

- sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 18879769.5/53

# asym\_atr1\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.039 $\pm$ 0.022  $\chi^2$ /NDF: 27.0/25

Left Out: -0.000 $\pm$ 0.014  $\chi^2$ /NDF:22.6/24

Right Out: 0.023 $\pm$ 0.024  $\chi^2$ /NDF: 30.8/30

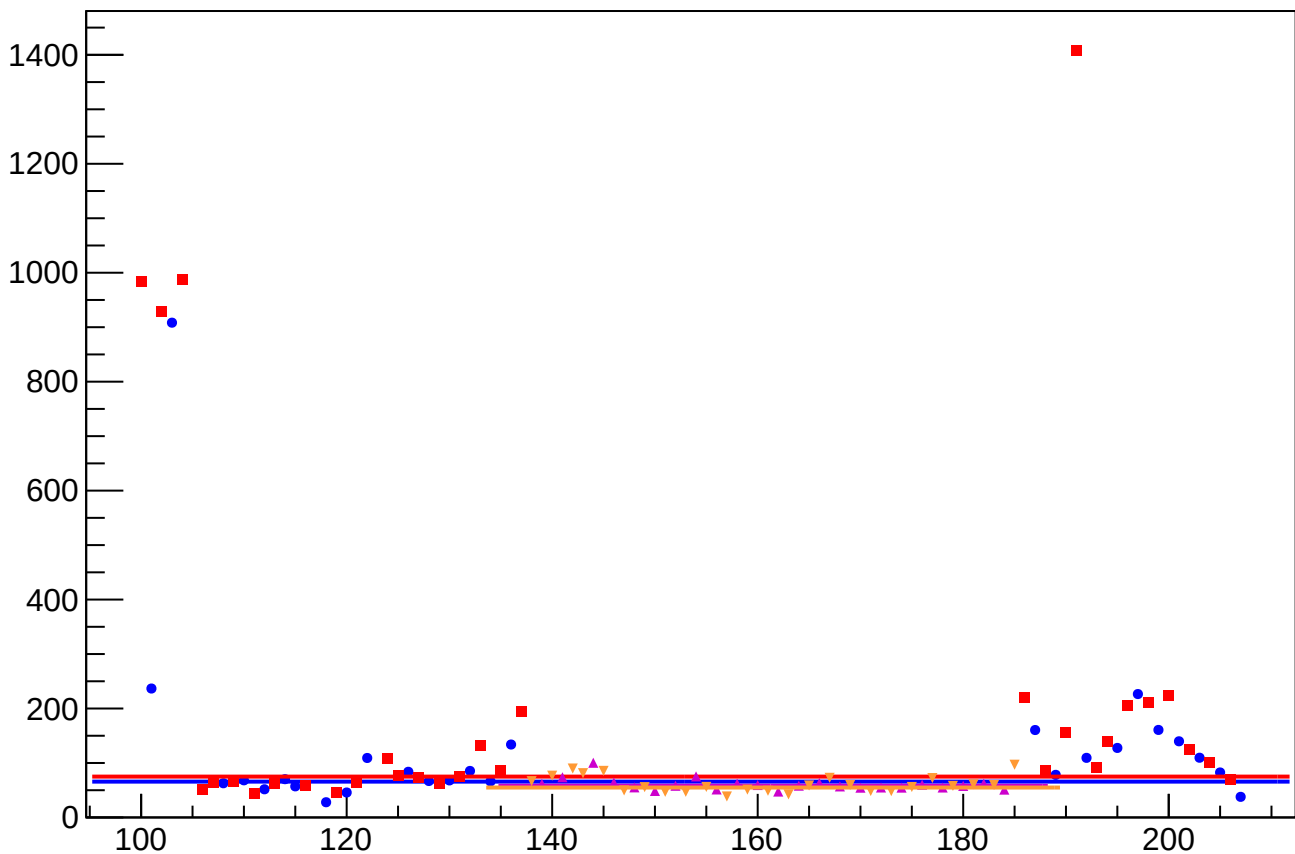
Left In: 0.008 $\pm$ 0.015  $\chi^2$ /NDF:15.5/22

+ sign 0.011 $\pm$ 0.012  $\chi^2$ /NDF: 51.8/50

All: 0.012 $\pm$ 0.009  $\chi^2$ /NDF: 98.4/104

- sign 0.012 $\pm$ 0.013  $\chi^2$ /NDF: 46.6/53

# asym\_atr1\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 65.793+/-0.016  $\chi^2/\text{NDF}$ : 6474423.5/25

Left Out: 54.930+/-0.010  $\chi^2/\text{NDF}$ : 1297722.9/24

Right Out: 74.993+/-0.017  $\chi^2/\text{NDF}$ : 6236345.7/30

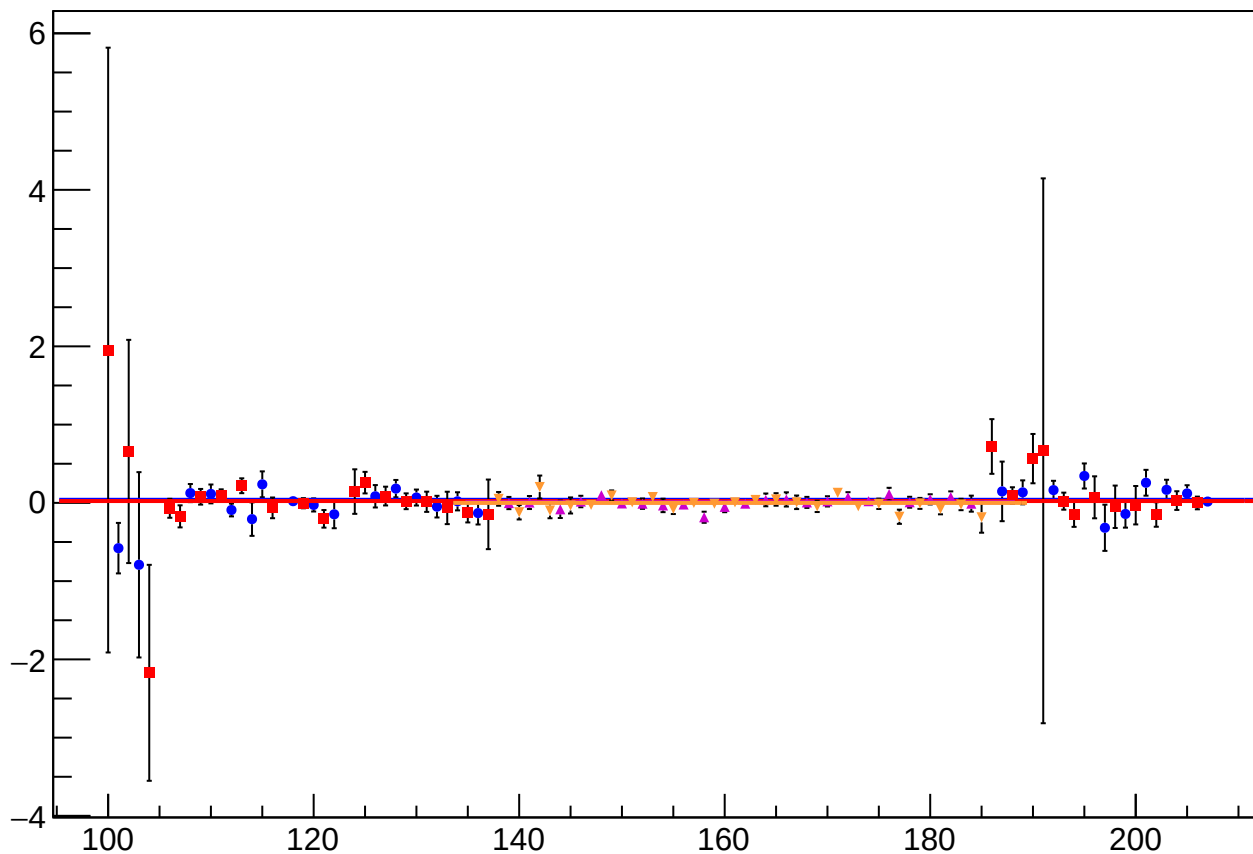
Left In: 58.138+/-0.010  $\chi^2/\text{NDF}$ : 657460.3/22

+ sign 58.018+/-0.008  $\chi^2/\text{NDF}$ : 8109857.8/50

All: 60.354+/-0.006  $\chi^2/\text{NDF}$ : 15900653.4/104

- sign 62.939+/-0.009  $\chi^2/\text{NDF}$ : 7629130.6/53

asym\_atr1\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.039 $\pm$ 0.022  $\chi^2$ /NDF: 27.0/25

Left Out: -0.000 $\pm$ 0.014  $\chi^2$ /NDF:22.6/24

Right Out: 0.023 $\pm$ 0.024  $\chi^2$ /NDF: 30.8/30

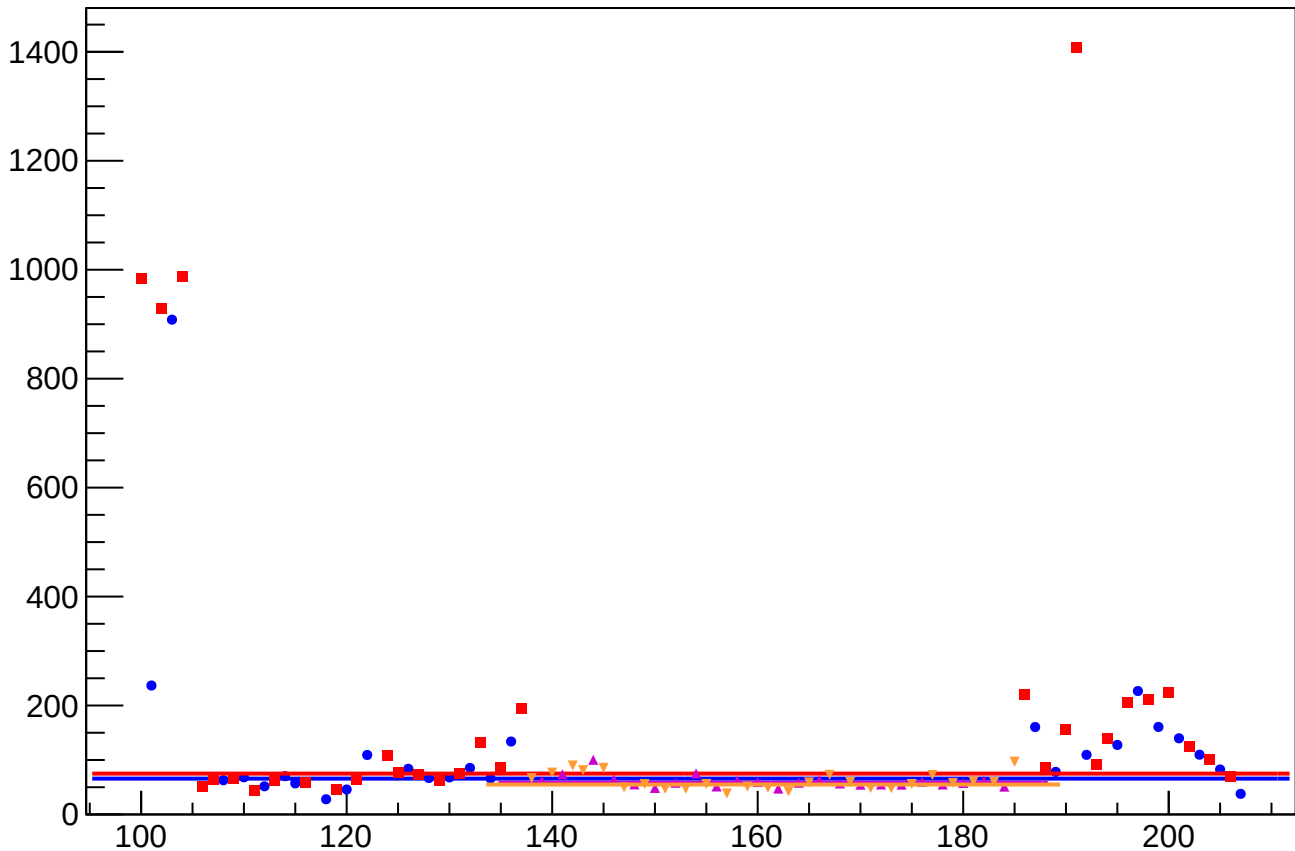
Left In: 0.008 $\pm$ 0.015  $\chi^2$ /NDF:15.5/22

+ sign 0.011 $\pm$ 0.012  $\chi^2$ /NDF: 51.8/50

All: 0.012 $\pm$ 0.009  $\chi^2$ /NDF: 98.4/104

- sign 0.012 $\pm$ 0.013  $\chi^2$ /NDF: 46.6/53

asym\_atr1\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In:  $65.793 \pm 0.016$   $\chi^2/\text{NDF}$ : 6474423.5/25

Left Out:  $54.930 \pm 0.010$   $\chi^2/\text{NDF}$ : 1297722.9/24

Right Out:  $74.993 \pm 0.017$   $\chi^2/\text{NDF}$ : 6236345.7/30

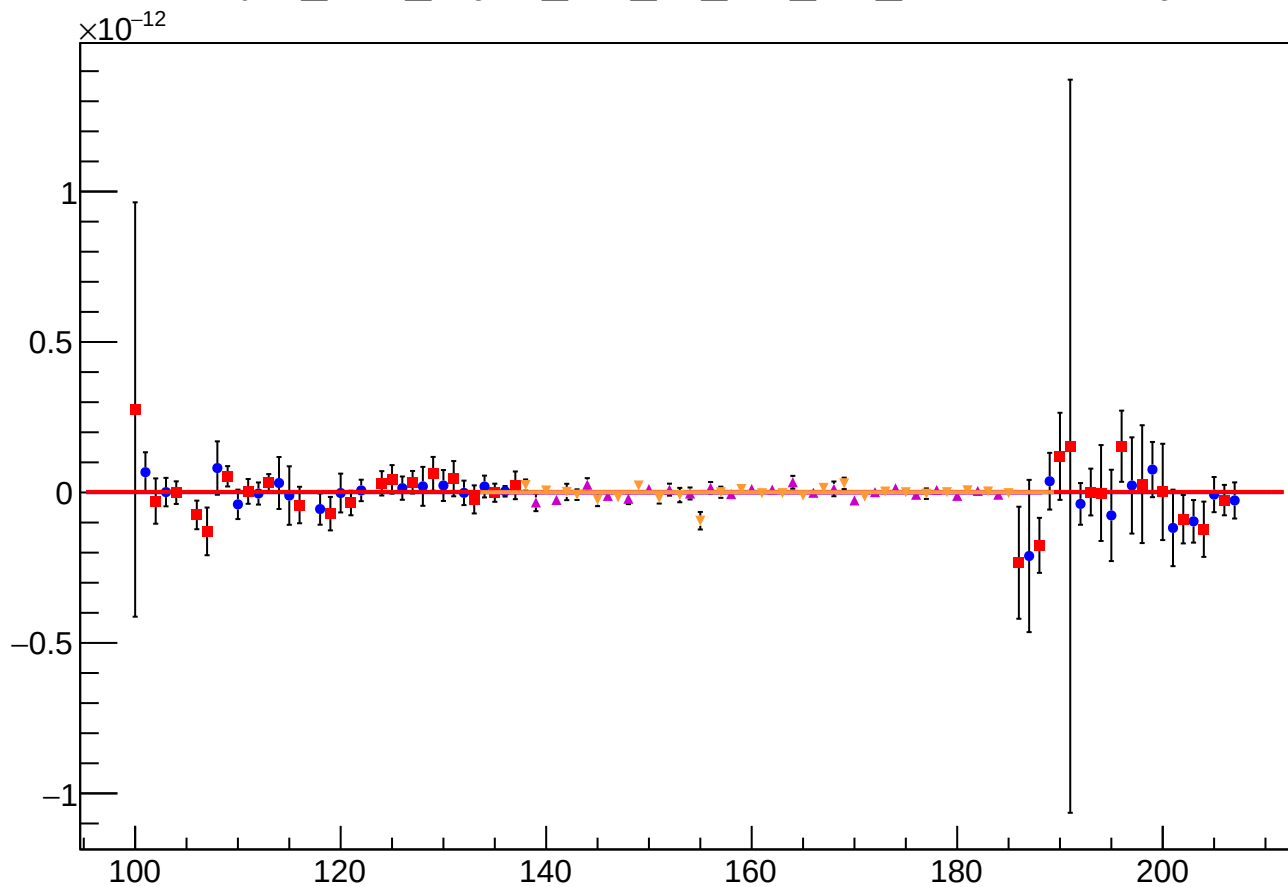
Left In:  $58.138 \pm 0.010$   $\chi^2/\text{NDF}$ : 657460.3/22

+ sign  $58.018 \pm 0.008$   $\chi^2/\text{NDF}$ : 8109857.8/50

All:  $60.354 \pm 0.006$   $\chi^2/\text{NDF}$ : 15900653.4/104

- sign  $62.939 \pm 0.009$   $\chi^2/\text{NDF}$ : 7629130.6/53

# asym\_atr1\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 9.6/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 25.3/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 27.5/30

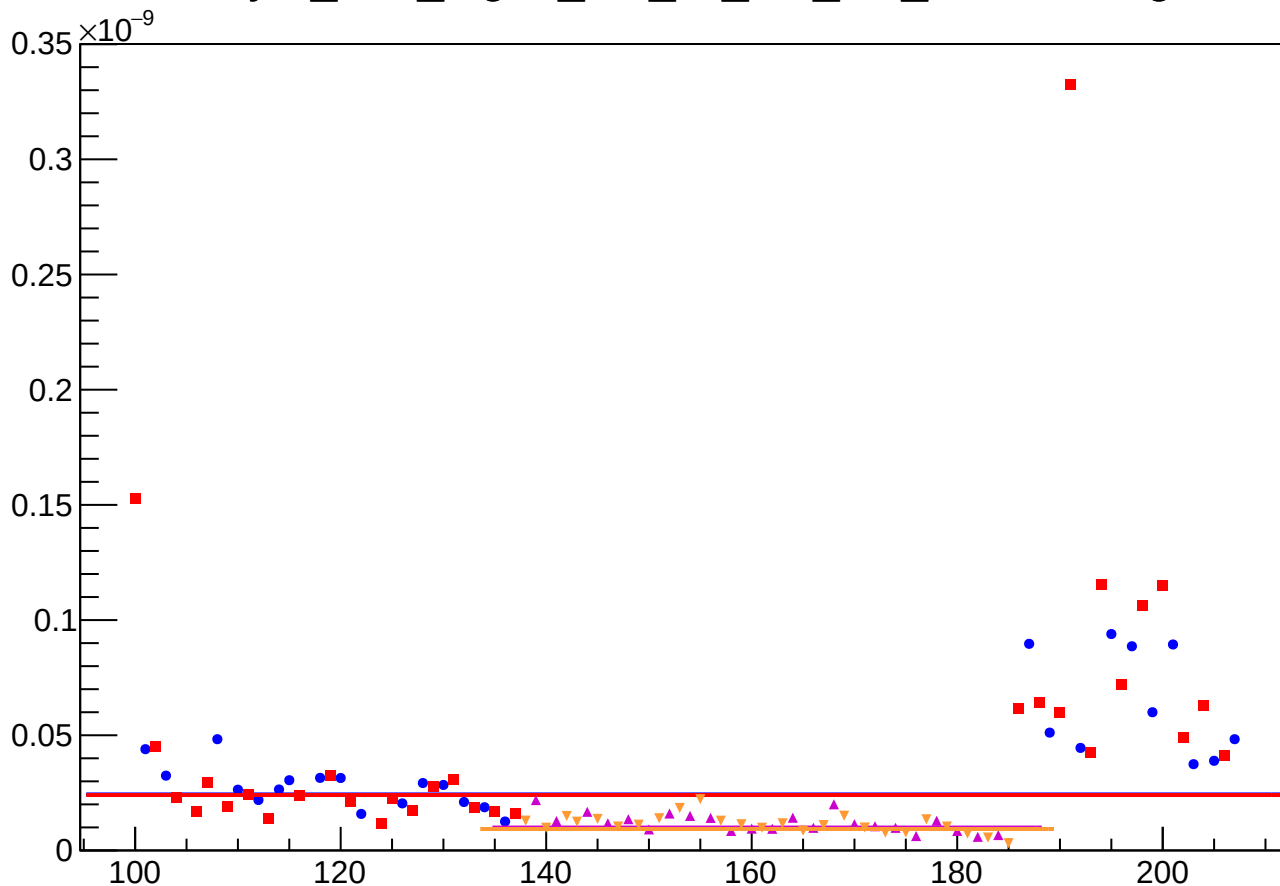
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 20.2/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 35.0/50

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 82.8/104

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 47.8/53

asym\_atr1\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4134132.5/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3070809.2/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4716829.2/30

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2573277.3/22

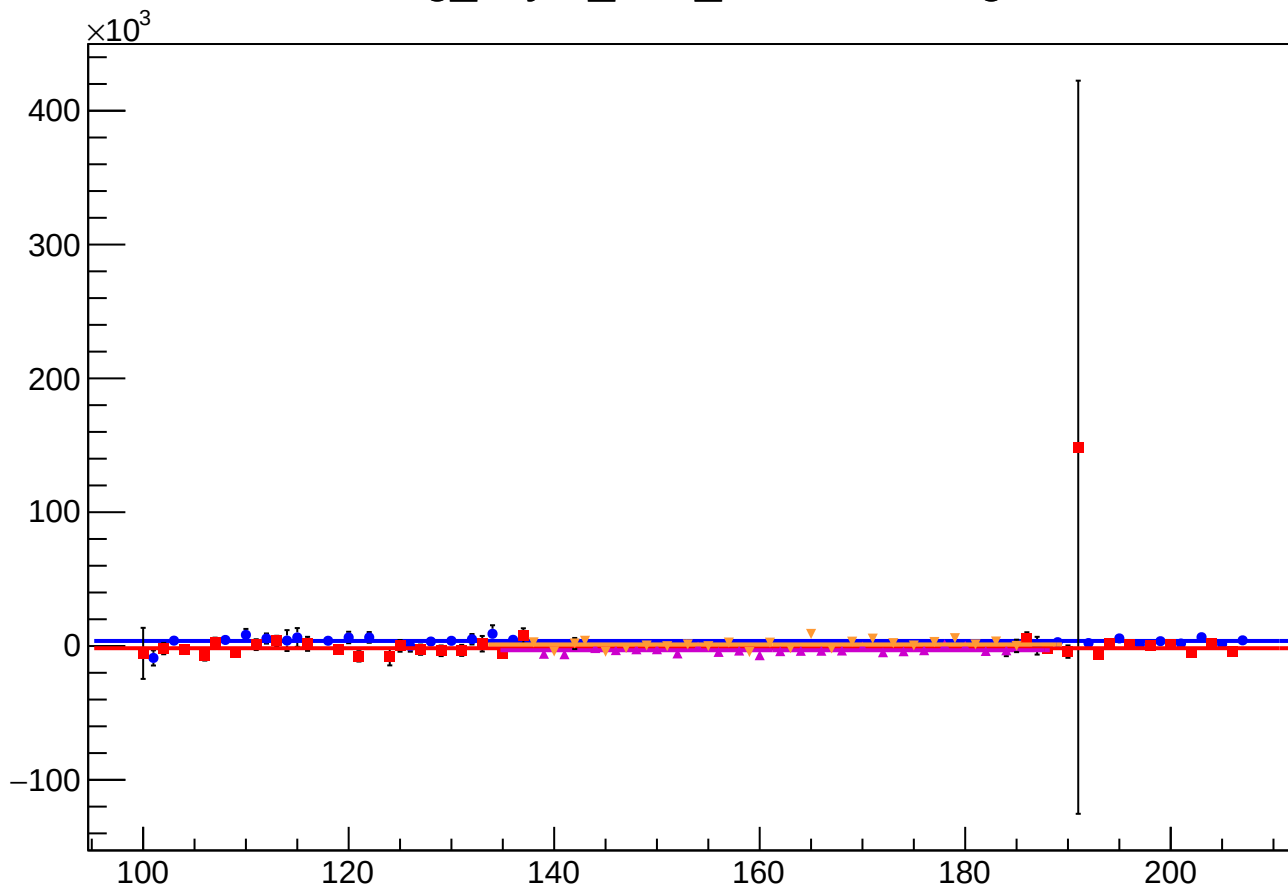
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11725730.5/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 23082500.2/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11291409.3/53



# reg\_asym\_atr2\_mean vs Slug



Right In: 3789.982+/-683.162  $\chi^2/\text{NDF}$ : 13.0/25

Left Out: 1188.836+/-556.242  $\chi^2/\text{NDF}$ : 31.1/24

Right Out: -1636.039+/-656.311  $\chi^2/\text{NDF}$ : 27.8/30

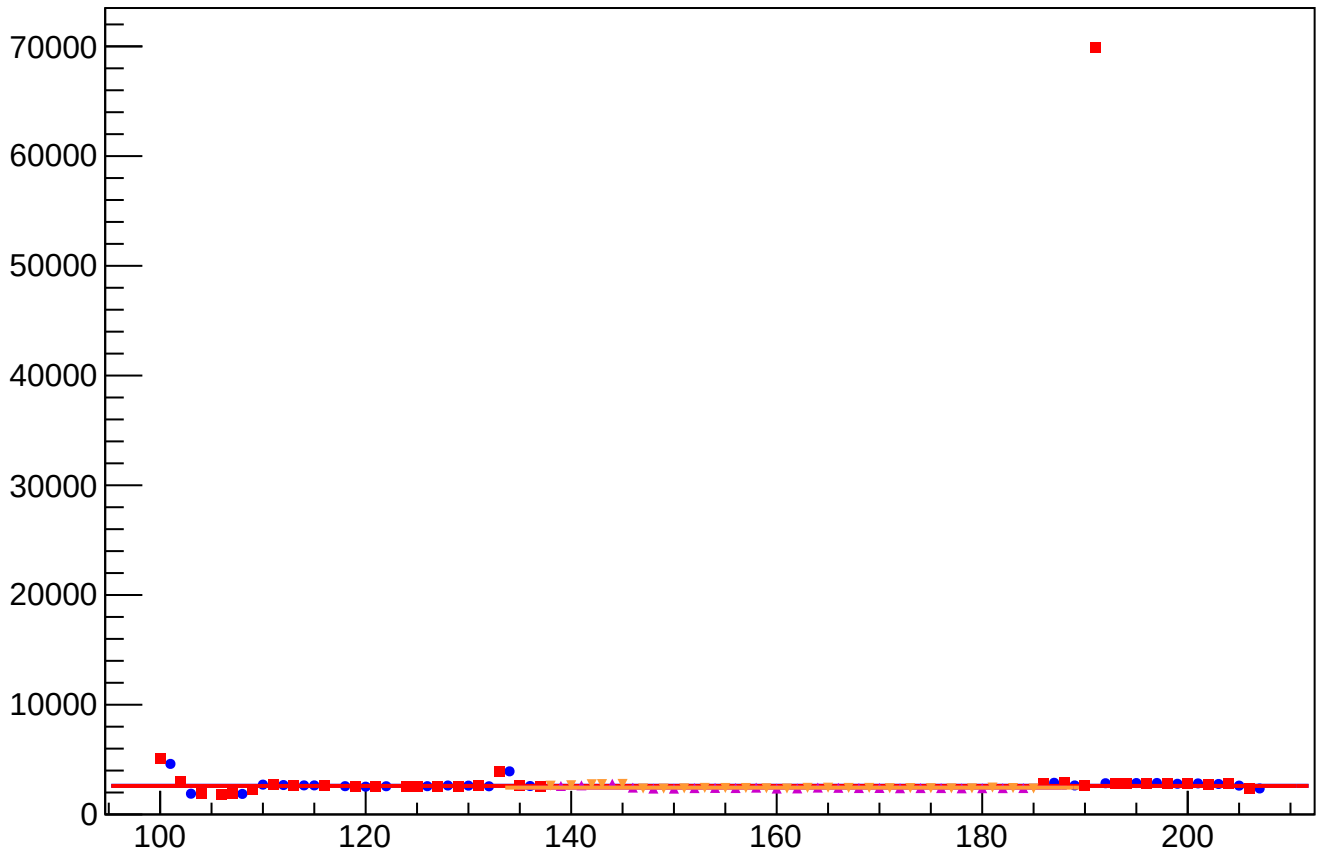
Left In: -3147.419+/-569.221  $\chi^2/\text{NDF}$ : 12.7/22

+ sign 2225.805+/-431.344  $\chi^2/\text{NDF}$ : 52.8/50

All: -143.665+/-304.537  $\chi^2/\text{NDF}$ : 156.4/104

- sign -2498.592+/-430.019  $\chi^2/\text{NDF}$ : 43.5/53

# reg\_asym\_atr2\_rms vs Slug



Right In: 2612.571+/-0.483  $\chi^2/\text{NDF}$ : 720966.3/25

Left Out: 2445.826+/-0.393  $\chi^2/\text{NDF}$ : 90014.8/24

Right Out: 2599.291+/-0.464  $\chi^2/\text{NDF}$ : 754901.9/30

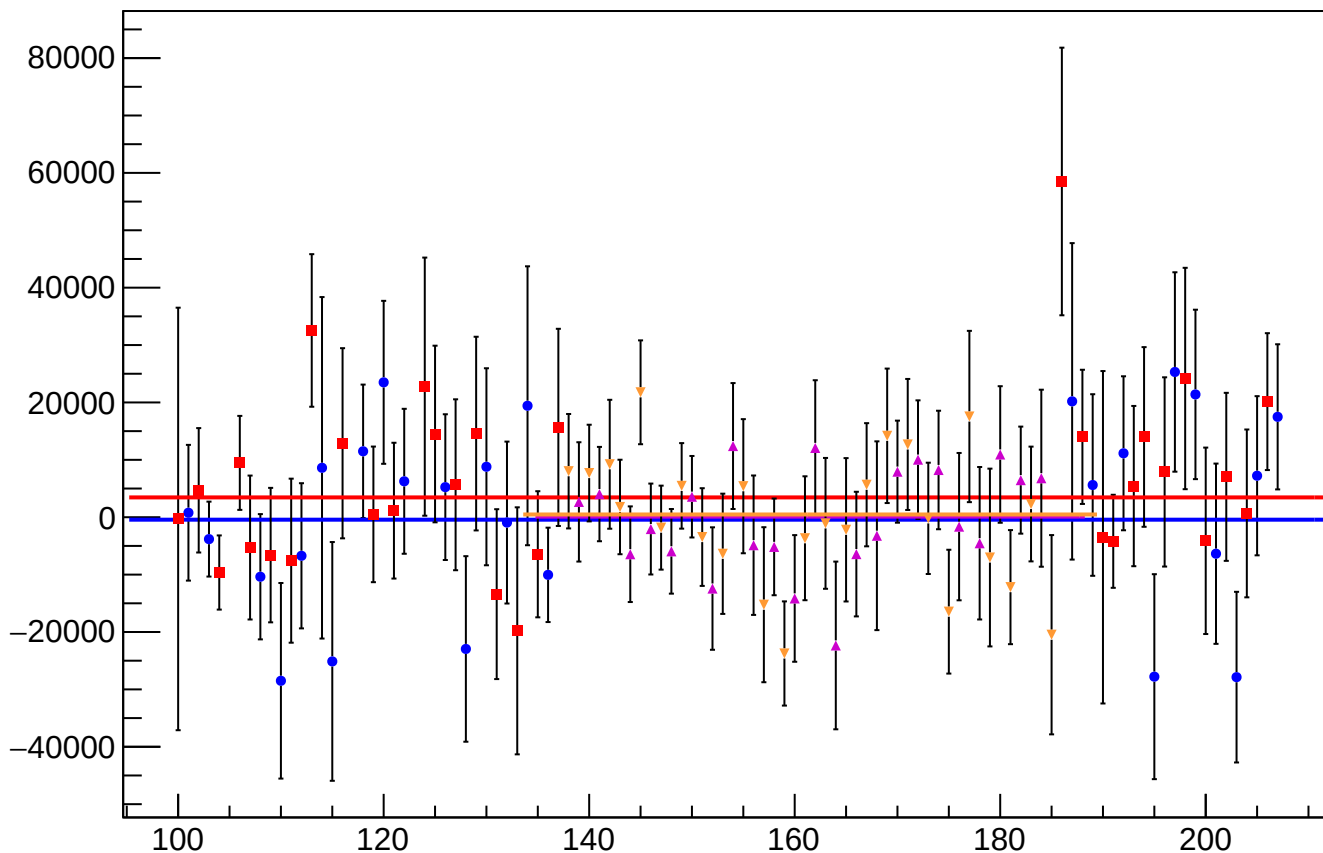
Left In: 2435.950+/-0.403  $\chi^2/\text{NDF}$ : 59189.9/22

+ sign 2512.300+/-0.305  $\chi^2/\text{NDF}$ : 882630.3/50

All: 2509.176+/-0.215  $\chi^2/\text{NDF}$ : 1767630.3/100

- sign 2506.072+/-0.304  $\chi^2/\text{NDF}$ : 884790.9/53

# asym\_atr2\_reg\_correction\_mean vs Slug



Right In:  $-429.416 \pm 2602.414$   $\chi^2/\text{NDF}$ : 28.2/25

Left Out:  $477.187 \pm 2035.969$   $\chi^2/\text{NDF}$ : 27.4/24

Right Out:  $3452.601 \pm 2330.086$   $\chi^2/\text{NDF}$ : 28.5/30

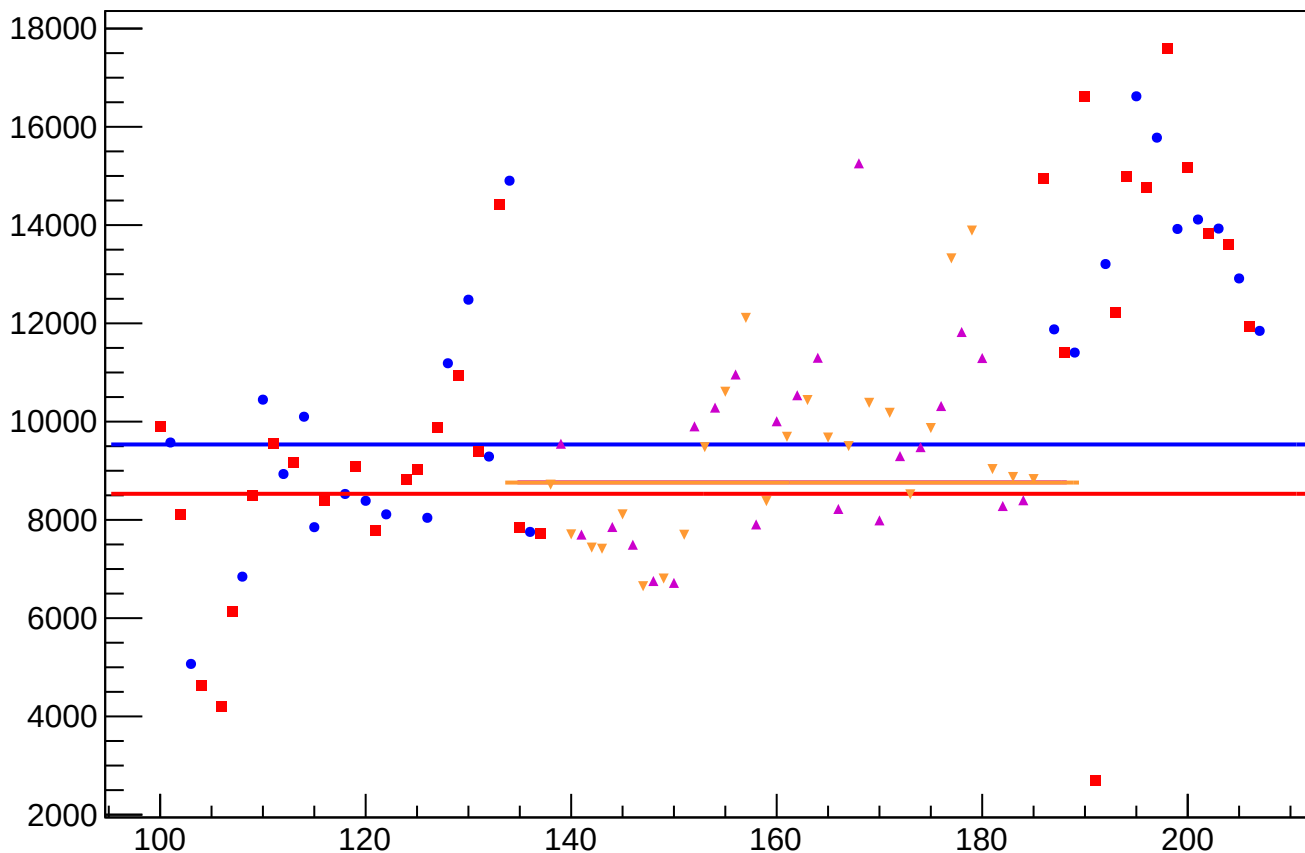
Left In:  $104.954 \pm 2090.899$   $\chi^2/\text{NDF}$ : 14.5/22

+ sign  $132.974 \pm 1603.546$   $\chi^2/\text{NDF}$ : 55.7/50

All:  $887.530 \pm 1116.764$   $\chi^2/\text{NDF}$ : 100.3/104

- sign  $1598.189 \pm 1556.203$   $\chi^2/\text{NDF}$ : 44.1/53

# asym\_atr2\_reg\_correction\_rms vs Slug



Right In: 9535.169+/-1.840  $\chi^2/\text{NDF}$ : 2907121.7/25

Left Out: 8759.635+/-1.440  $\chi^2/\text{NDF}$ : 1222238.0/24

Right Out: 8530.906+/-1.648  $\chi^2/\text{NDF}$ : 5294195.5/30

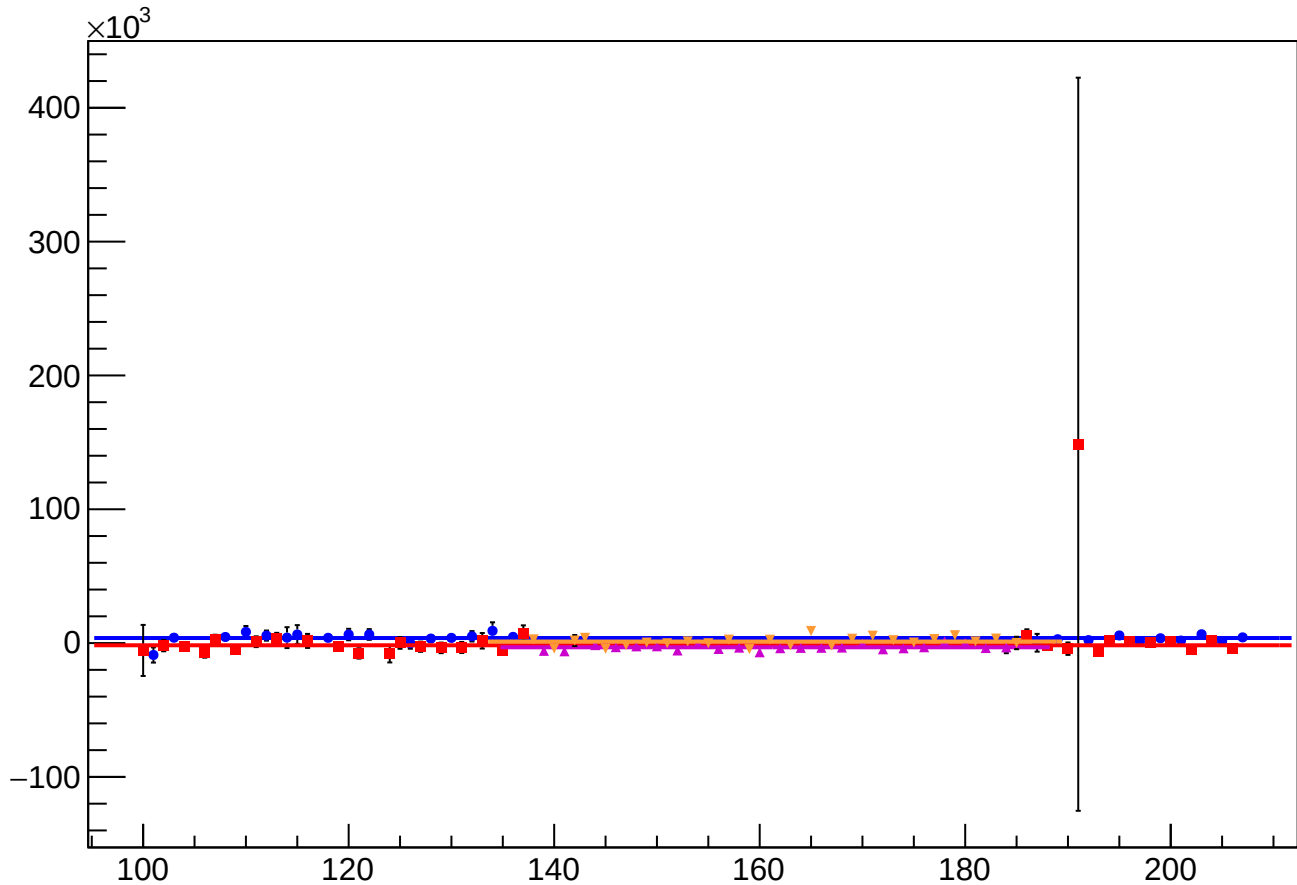
Left In: 8764.138+/-1.478  $\chi^2/\text{NDF}$ : 1291698.9/22

+ sign 9054.084+/-1.134  $\chi^2/\text{NDF}$ : 4239538.8/50

All: 8851.192+/-0.790  $\chi^2/\text{NDF}$ : 10898707.2/100

- sign 8660.104+/-1.100  $\chi^2/\text{NDF}$ : 6596994.6/53

# cor\_asym\_atr2\_mean vs Slug



Right In: 3789.813 $\pm$ 683.162  $\chi^2$ /NDF: 13.0/25

Left Out: 1188.666 $\pm$ 556.242  $\chi^2$ /NDF: 31.1/24

Right Out: -1636.380 $\pm$ 656.314  $\chi^2$ /NDF: 27.8/30

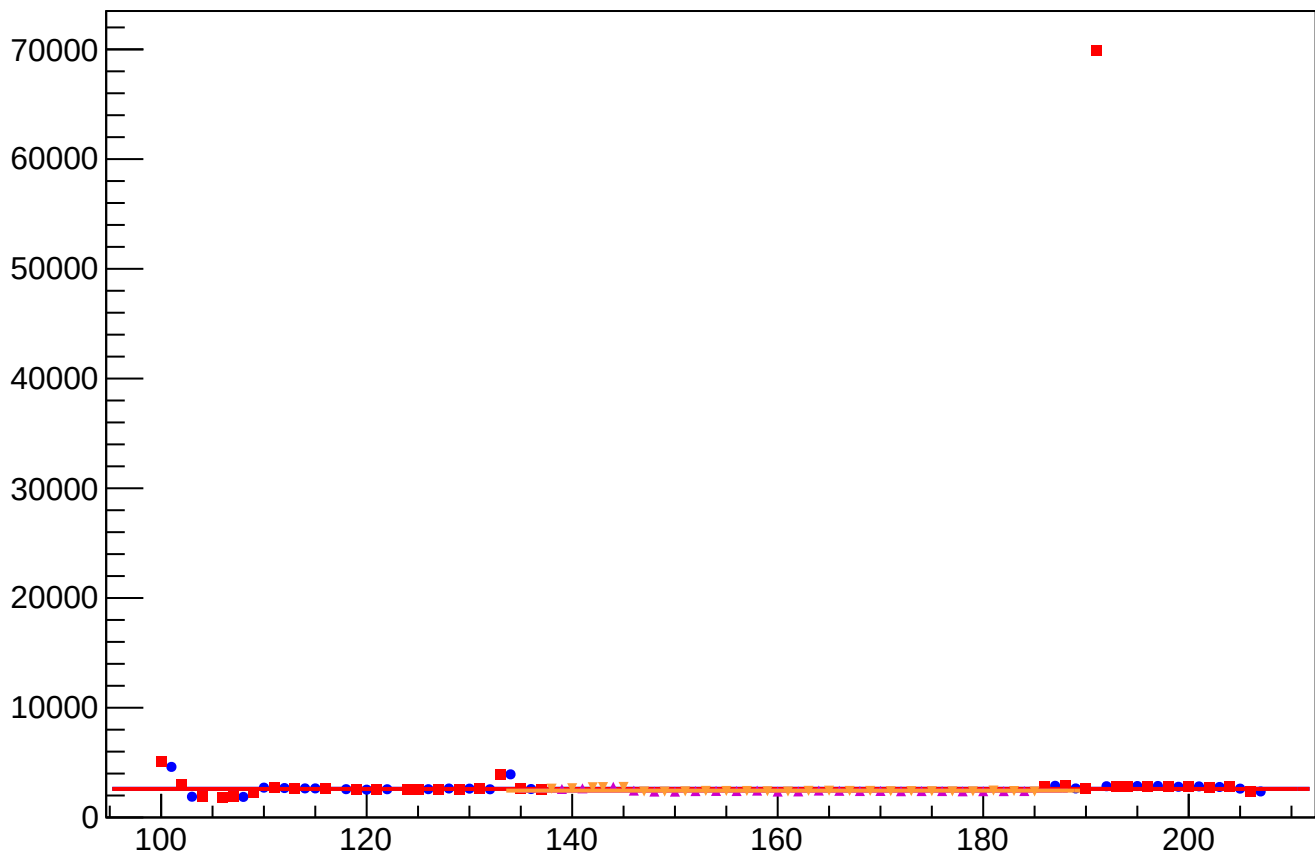
Left In: -3147.222 $\pm$ 569.221  $\chi^2$ /NDF: 12.7/22

+ sign 2225.635 $\pm$ 431.344  $\chi^2$ /NDF: 52.8/50

All: -143.764 $\pm$ 304.537  $\chi^2$ /NDF: 156.4/104

- sign -2498.629 $\pm$ 430.019  $\chi^2$ /NDF: 43.5/53

# cor\_asym\_atr2\_rms vs Slug



Right In: 2612.571+/-0.483  $\chi^2/\text{NDF}$ : 720963.6/25

Left Out: 2445.826+/-0.393  $\chi^2/\text{NDF}$ : 90014.8/24

Right Out: 2599.305+/-0.464  $\chi^2/\text{NDF}$ : 754829.5/30

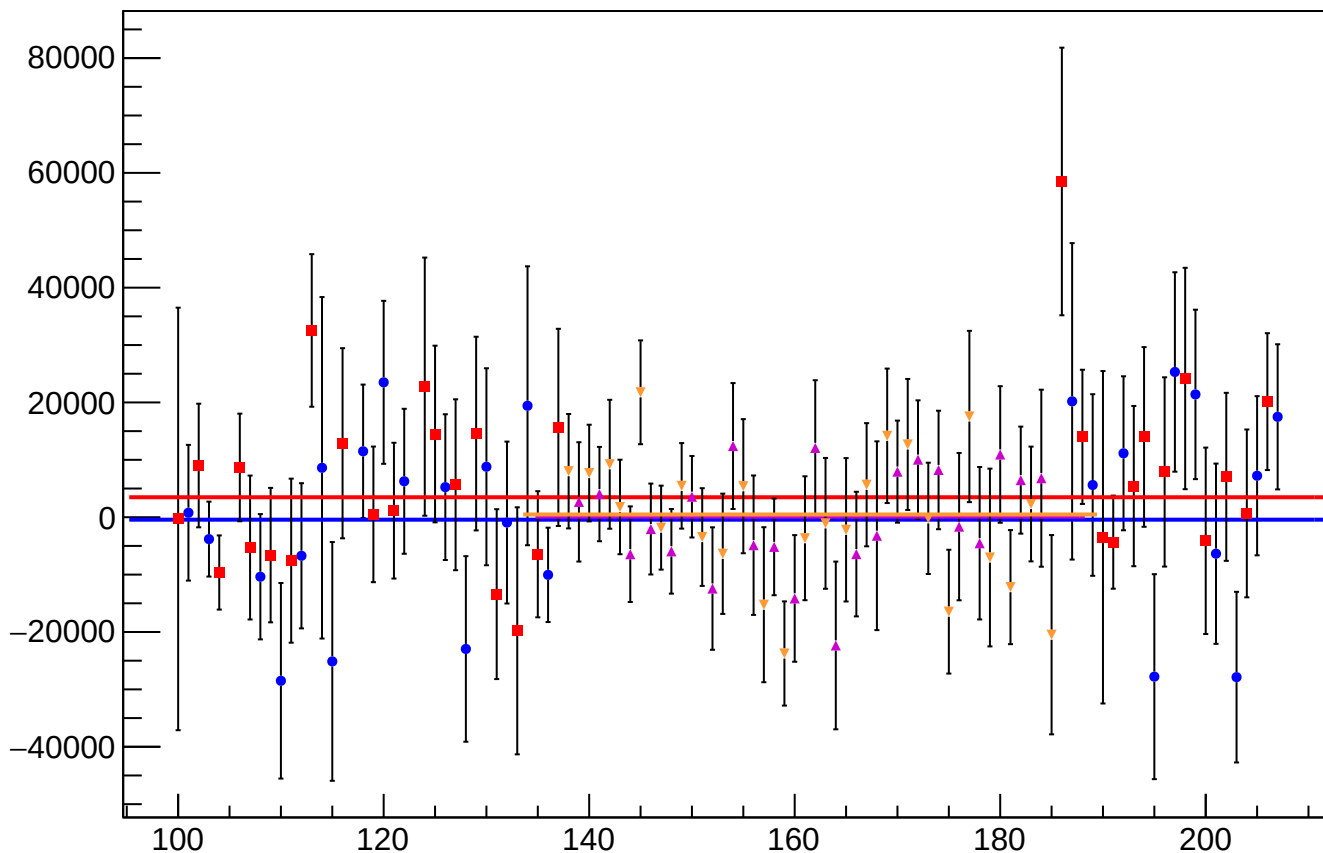
Left In: 2435.950+/-0.403  $\chi^2/\text{NDF}$ : 59189.9/22

+ sign 2512.300+/-0.305  $\chi^2/\text{NDF}$ : 882628.0/50

All: 2509.179+/-0.215  $\chi^2/\text{NDF}$ : 1767566.7/10

- sign 2506.077+/-0.304  $\chi^2/\text{NDF}$ : 884729.9/53

# asym\_atr2\_cor\_correction\_mean vs Slug



Right In:  $-429.072 \pm 2602.468$   $\chi^2/\text{NDF}: 28.2/25$

Left Out:  $477.198 \pm 2035.967$   $\chi^2/\text{NDF}: 27.4/24$

Right Out:  $3479.674 \pm 2352.245$   $\chi^2/\text{NDF}: 28.6/30$

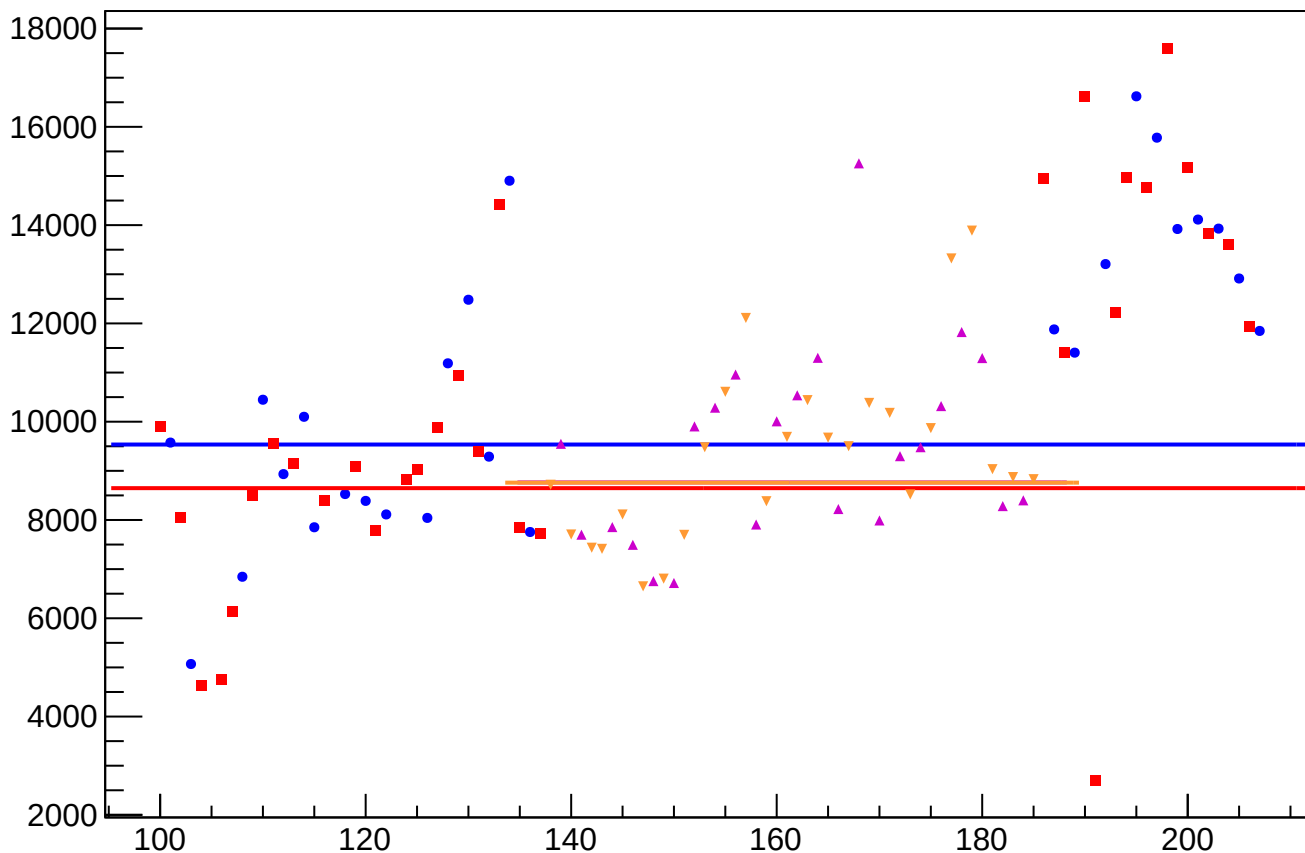
Left In:  $105.025 \pm 2090.897$   $\chi^2/\text{NDF}: 14.5/22$

+ sign  $133.121 \pm 1603.557$   $\chi^2/\text{NDF}: 55.7/50$

All:  $882.659 \pm 1119.181$   $\chi^2/\text{NDF}: 100.3/104$

- sign  $1594.535 \pm 1562.752$   $\chi^2/\text{NDF}: 44.2/53$

# asym\_atr2\_cor\_correction\_rms vs Slug



Right In: 9535.464+/-1.840  $\chi^2/\text{NDF}$ : 2906581.1/25

Left Out: 8759.625+/-1.440  $\chi^2/\text{NDF}$ : 1222248.8/24

Right Out: 8647.821+/-1.663  $\chi^2/\text{NDF}$ : 5052463.1/30

Left In: 8764.132+/-1.478  $\chi^2/\text{NDF}$ : 1291700.3/22

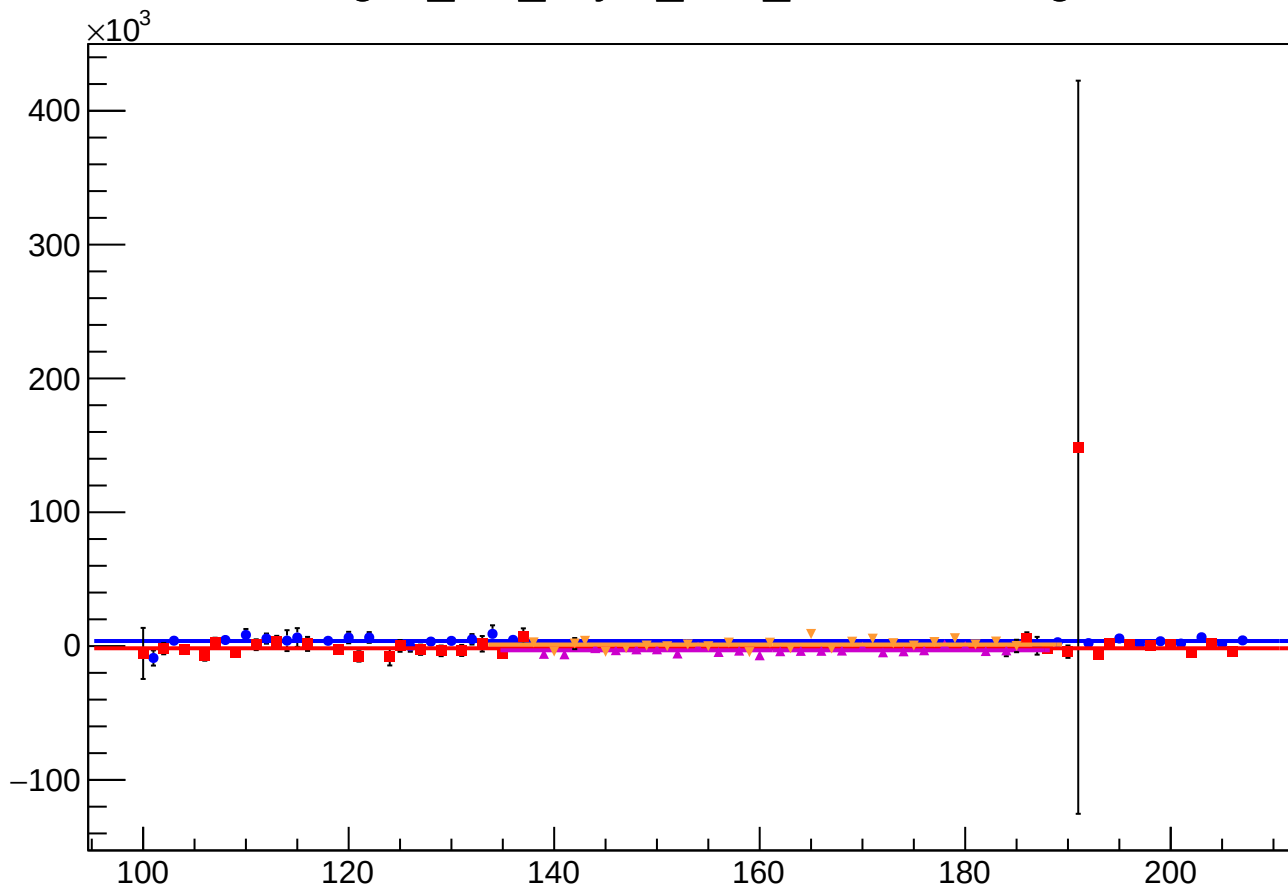
+ sign 9054.183+/-1.134  $\chi^2/\text{NDF}$ : 4239093.0/50

All: 8879.090+/-0.791  $\chi^2/\text{NDF}$ : 10632480.1/1

- sign 8712.795+/-1.105  $\chi^2/\text{NDF}$ : 6346895.1/53



# eigen\_cor\_asym\_atr2\_mean vs Slug



Right In: 3789.813 $\pm$ 683.162  $\chi^2/\text{NDF}$ : 13.0/25

Left Out: 1188.666 $\pm$ 556.242  $\chi^2/\text{NDF}$ : 31.1/24

Right Out: -1636.380 $\pm$ 656.314  $\chi^2/\text{NDF}$ : 27.8/30

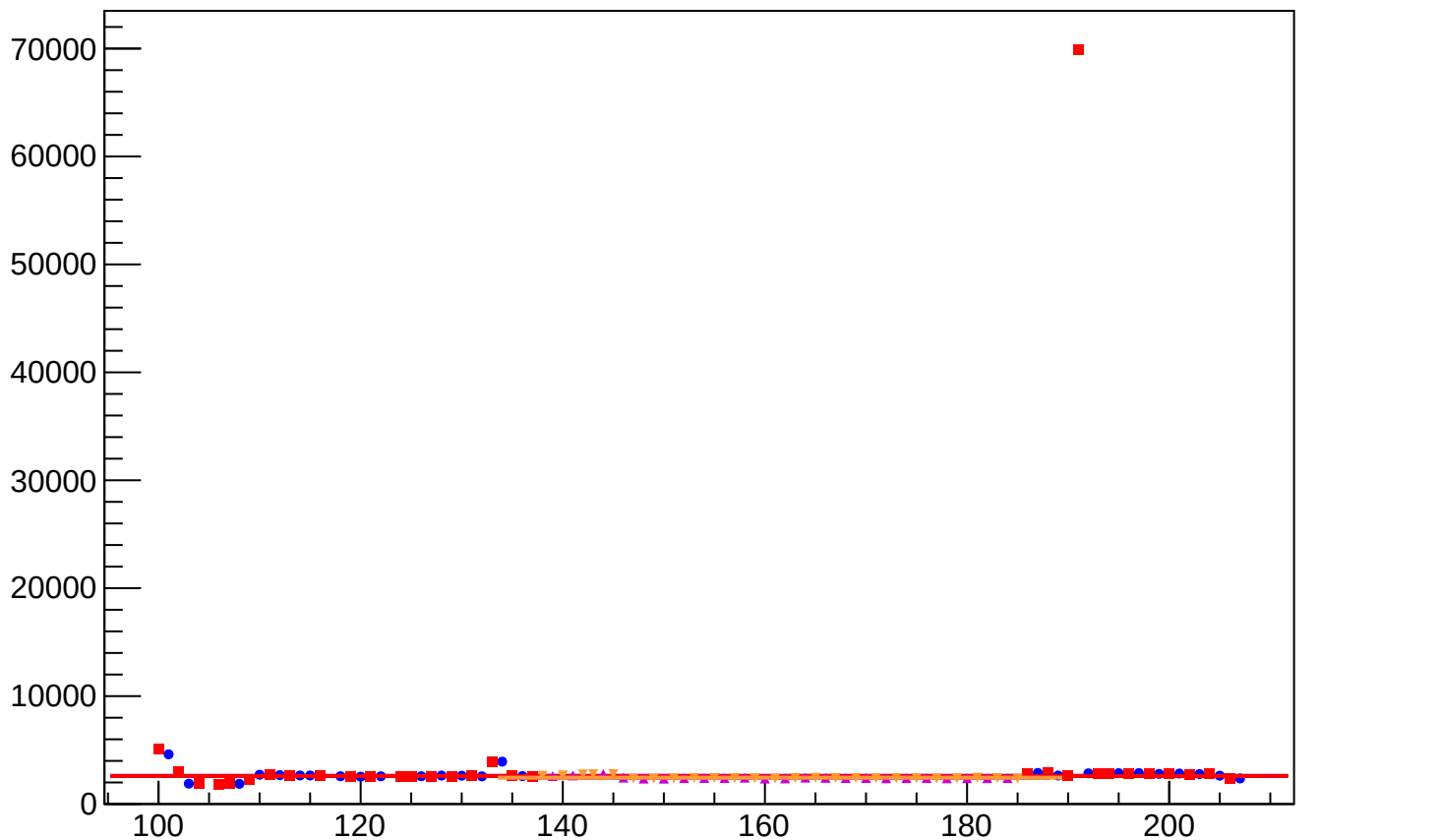
Left In: -3147.222 $\pm$ 569.221  $\chi^2/\text{NDF}$ : 12.7/22

+ sign 2225.635 $\pm$ 431.344  $\chi^2/\text{NDF}$ : 52.8/50

All: -143.764 $\pm$ 304.537  $\chi^2/\text{NDF}$ : 156.4/104

- sign -2498.629 $\pm$ 430.019  $\chi^2/\text{NDF}$ : 43.5/53

# eigen\_cor\_asym\_atr2\_rms vs Slug



Right In: 2612.571+/-0.483  $\chi^2/\text{NDF}$ : 720963.6/25

Left Out: 2445.826+/-0.393  $\chi^2/\text{NDF}$ : 90014.8/24

Right Out: 2599.305+/-0.464  $\chi^2/\text{NDF}$ : 754829.5/30

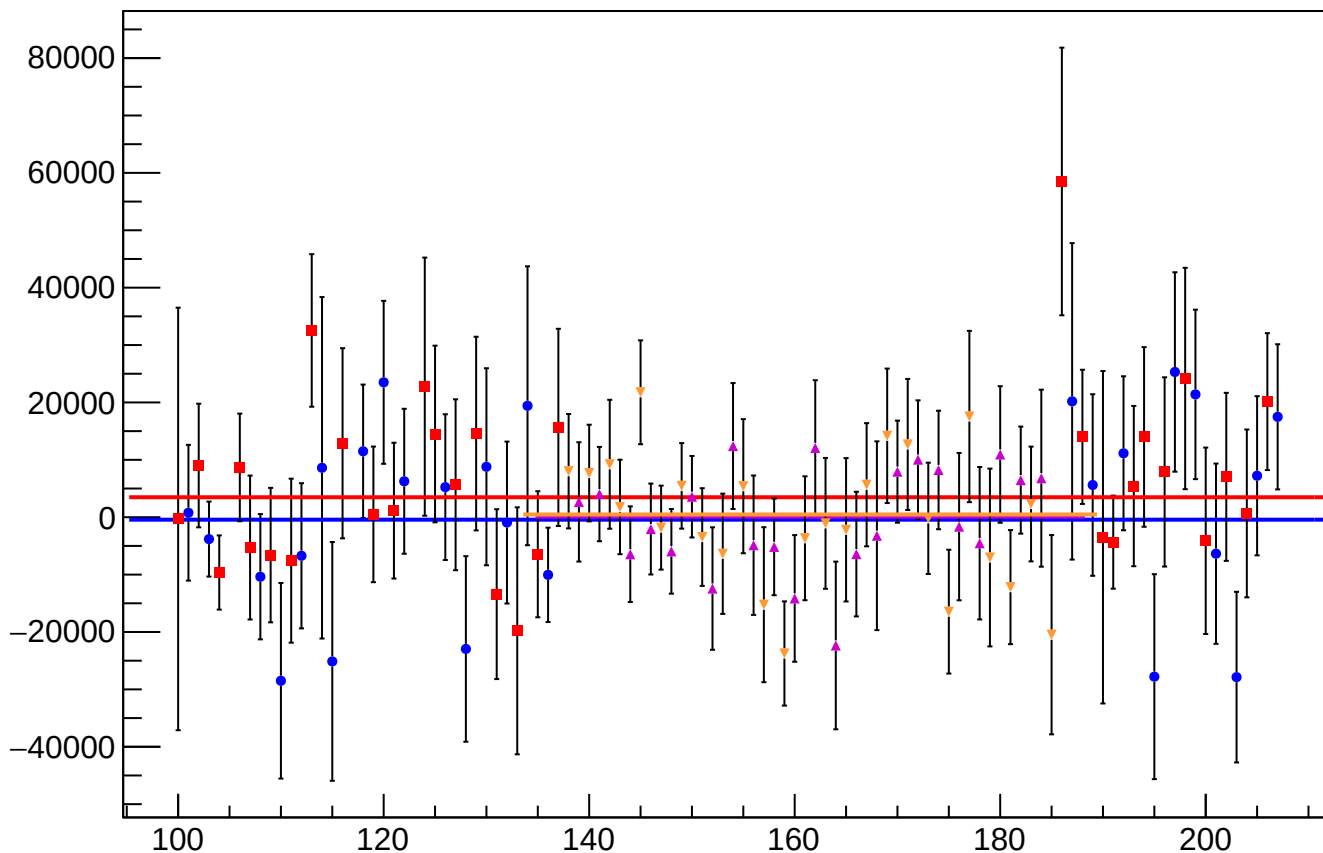
Left In: 2435.950+/-0.403  $\chi^2/\text{NDF}$ : 59189.9/22

+ sign 2512.300+/-0.305  $\chi^2/\text{NDF}$ : 882628.0/50

All: 2509.179+/-0.215  $\chi^2/\text{NDF}$ : 1767566.7/10

- sign 2506.077+/-0.304  $\chi^2/\text{NDF}$ : 884729.9/53

# asym\_atr2\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-429.072 \pm 2602.468$   $\chi^2/\text{NDF}: 28.2/25$

Left Out:  $477.198 \pm 2035.967$   $\chi^2/\text{NDF}: 27.4/24$

Right Out:  $3479.674 \pm 2352.245$   $\chi^2/\text{NDF}: 28.6/30$

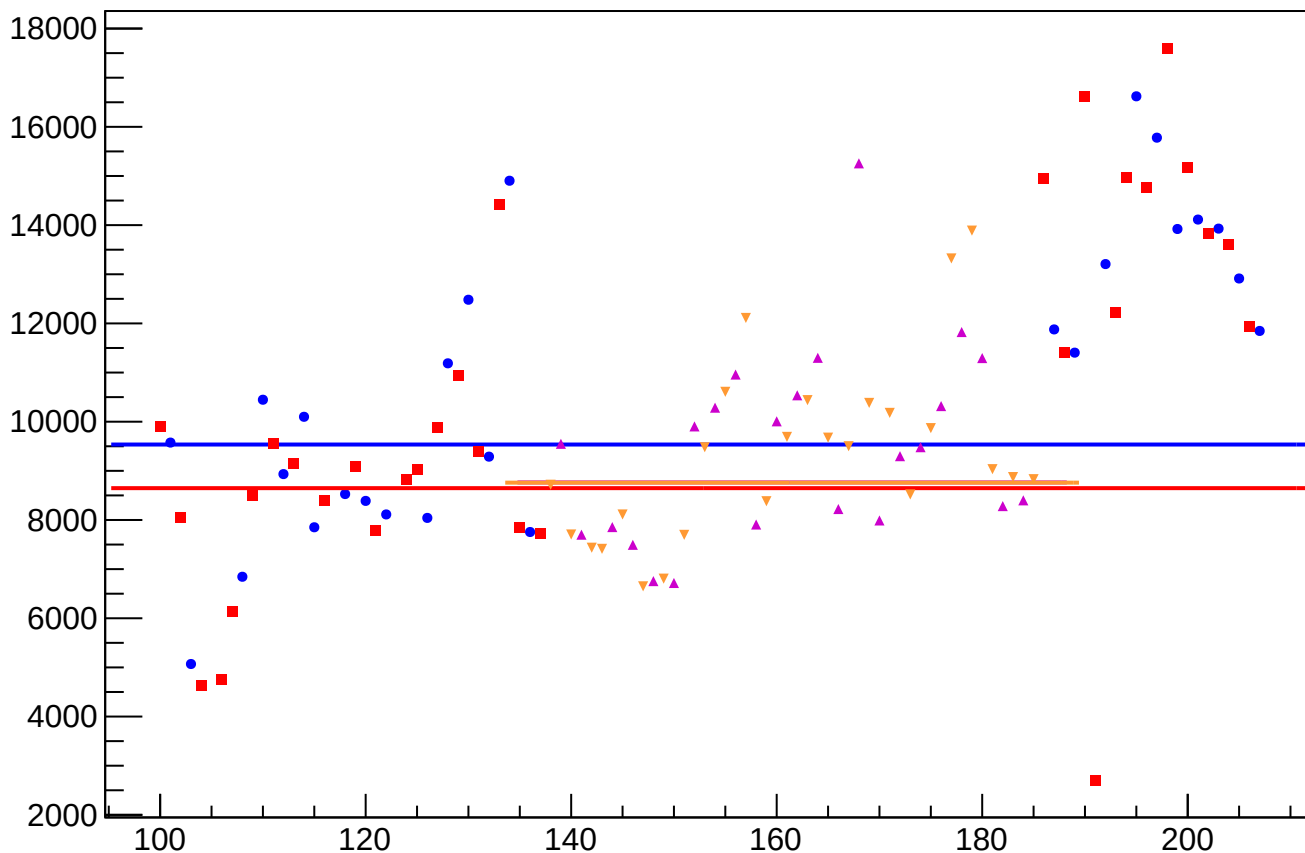
Left In:  $105.025 \pm 2090.897$   $\chi^2/\text{NDF}: 14.5/22$

+ sign  $133.121 \pm 1603.557$   $\chi^2/\text{NDF}: 55.7/50$

All:  $882.659 \pm 1119.181$   $\chi^2/\text{NDF}: 100.3/104$

- sign  $1594.535 \pm 1562.752$   $\chi^2/\text{NDF}: 44.2/53$

# asym\_atr2\_eigen\_cor\_correction\_rms vs Slug



Right In: 9535.464+/-1.840  $\chi^2/\text{NDF}$ : 2906581.1/25

Left Out: 8759.625+/-1.440  $\chi^2/\text{NDF}$ : 1222248.8/24

Right Out: 8647.821+/-1.663  $\chi^2/\text{NDF}$ : 5052463.1/30

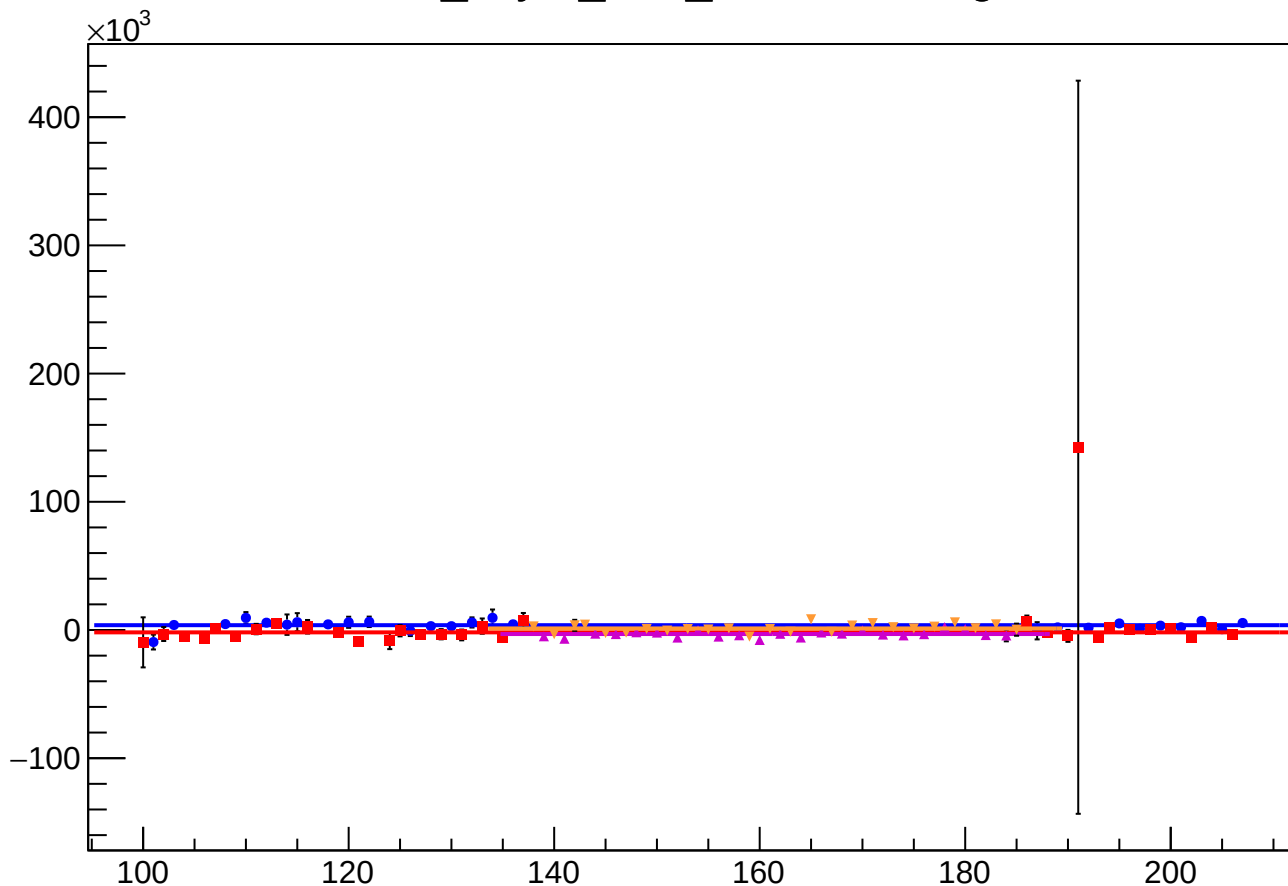
Left In: 8764.132+/-1.478  $\chi^2/\text{NDF}$ : 1291700.3/22

+ sign 9054.183+/-1.134  $\chi^2/\text{NDF}$ : 4239093.0/50

All: 8879.090+/-0.791  $\chi^2/\text{NDF}$ : 10632480.1/1

- sign 8712.795+/-1.105  $\chi^2/\text{NDF}$ : 6346895.1/53

# dit\_asym\_atr2\_mean vs Slug



Right In:  $3753.196 \pm 704.420$   $\chi^2/\text{NDF}$ : 15.4/25

Left Out:  $1213.875 \pm 579.693$   $\chi^2/\text{NDF}$ : 26.8/24

Right Out:  $-1850.492 \pm 678.747$   $\chi^2/\text{NDF}$ : 31.6/30

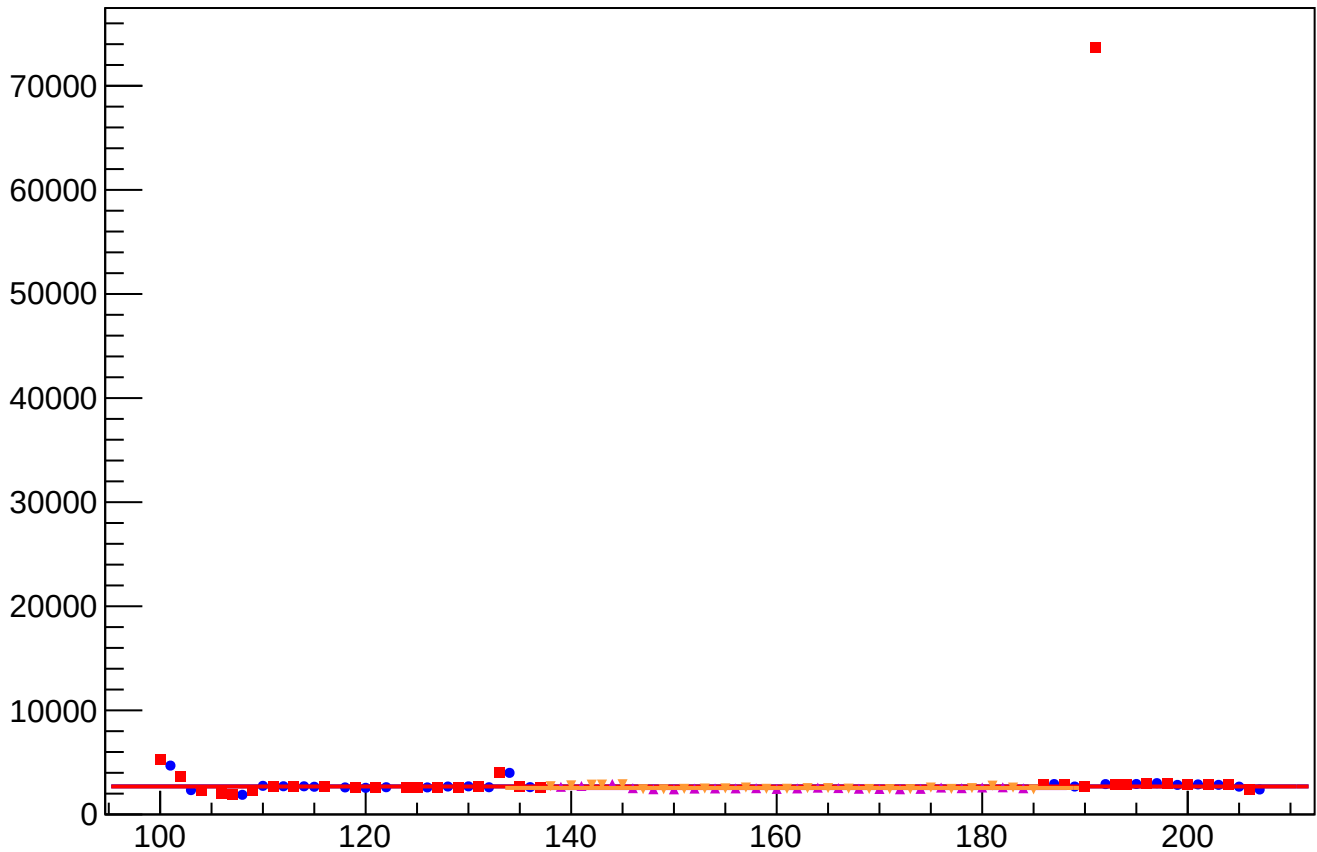
Left In:  $-3150.265 \pm 592.116$   $\chi^2/\text{NDF}$ : 16.5/22

+ sign  $2239.194 \pm 447.613$   $\chi^2/\text{NDF}$ : 50.0/50

All:  $-182.348 \pm 316.008$   $\chi^2/\text{NDF}$ : 158.5/104

- sign  $-2588.570 \pm 446.195$   $\chi^2/\text{NDF}$ : 50.2/53

# dit\_asym\_atr2\_rms vs Slug



Right In: 2699.561 $\pm$ 0.498  $\chi^2$ /NDF: 583654.2/25

Left Out: 2547.154 $\pm$ 0.410  $\chi^2$ /NDF: 117298.5/24

Right Out: 2686.823 $\pm$ 0.480  $\chi^2$ /NDF: 666855.1/30

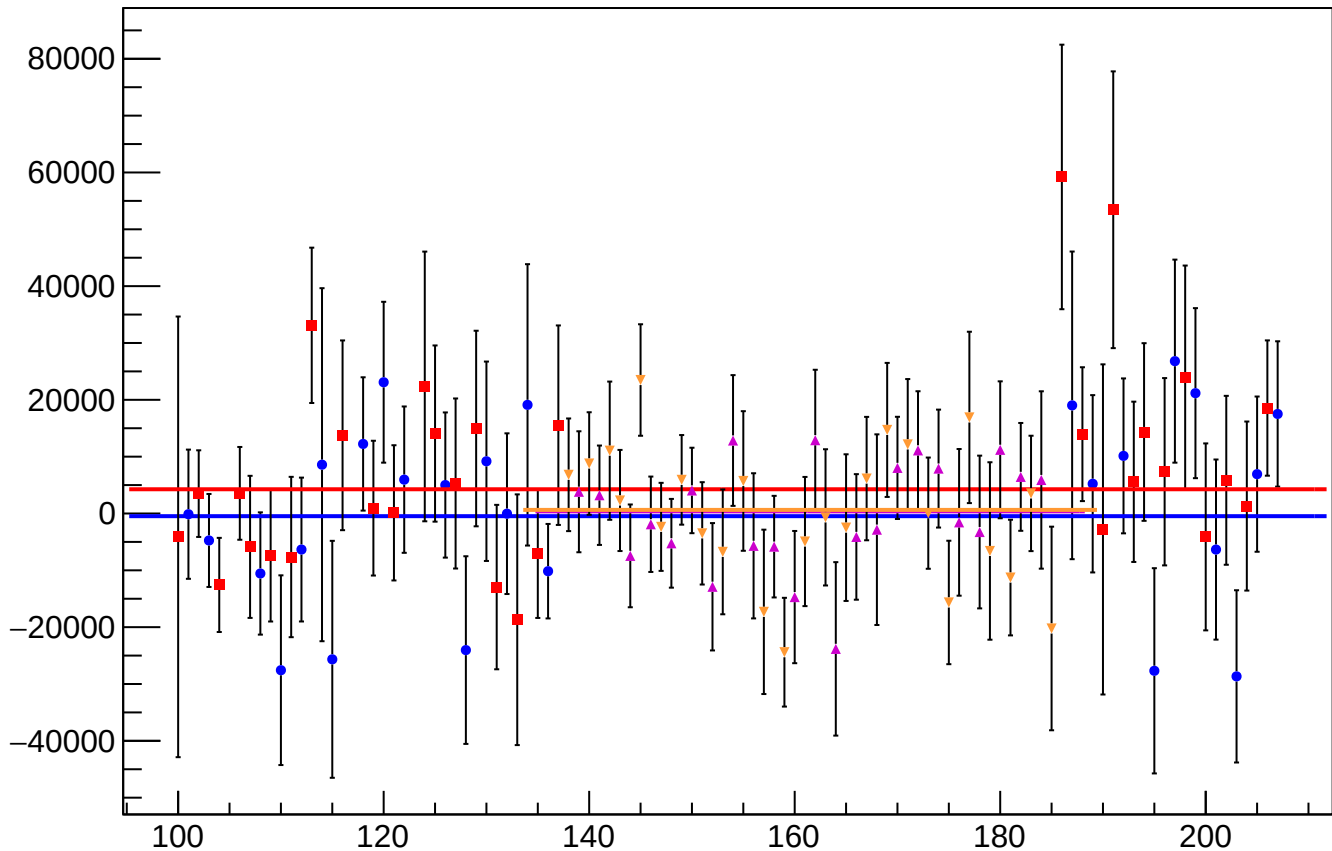
Left In: 2532.772 $\pm$ 0.419  $\chi^2$ /NDF: 68441.1/22

+ sign 2608.693 $\pm$ 0.317  $\chi^2$ /NDF: 756771.9/50

All: 2604.014 $\pm$ 0.223  $\chi^2$ /NDF: 1551025.8/10

- sign 2599.367 $\pm$ 0.315  $\chi^2$ /NDF: 793818.4/53

# asym\_atr2\_dit\_correction\_mean vs Slug



Right In:  $-471.805 \pm 2688.931$   $\chi^2/\text{NDF}: 28.1/25$

Left Out:  $631.360 \pm 2123.101$   $\chi^2/\text{NDF}: 26.7/24$

Right Out:  $4263.194 \pm 2437.798$   $\chi^2/\text{NDF}: 30.4/30$

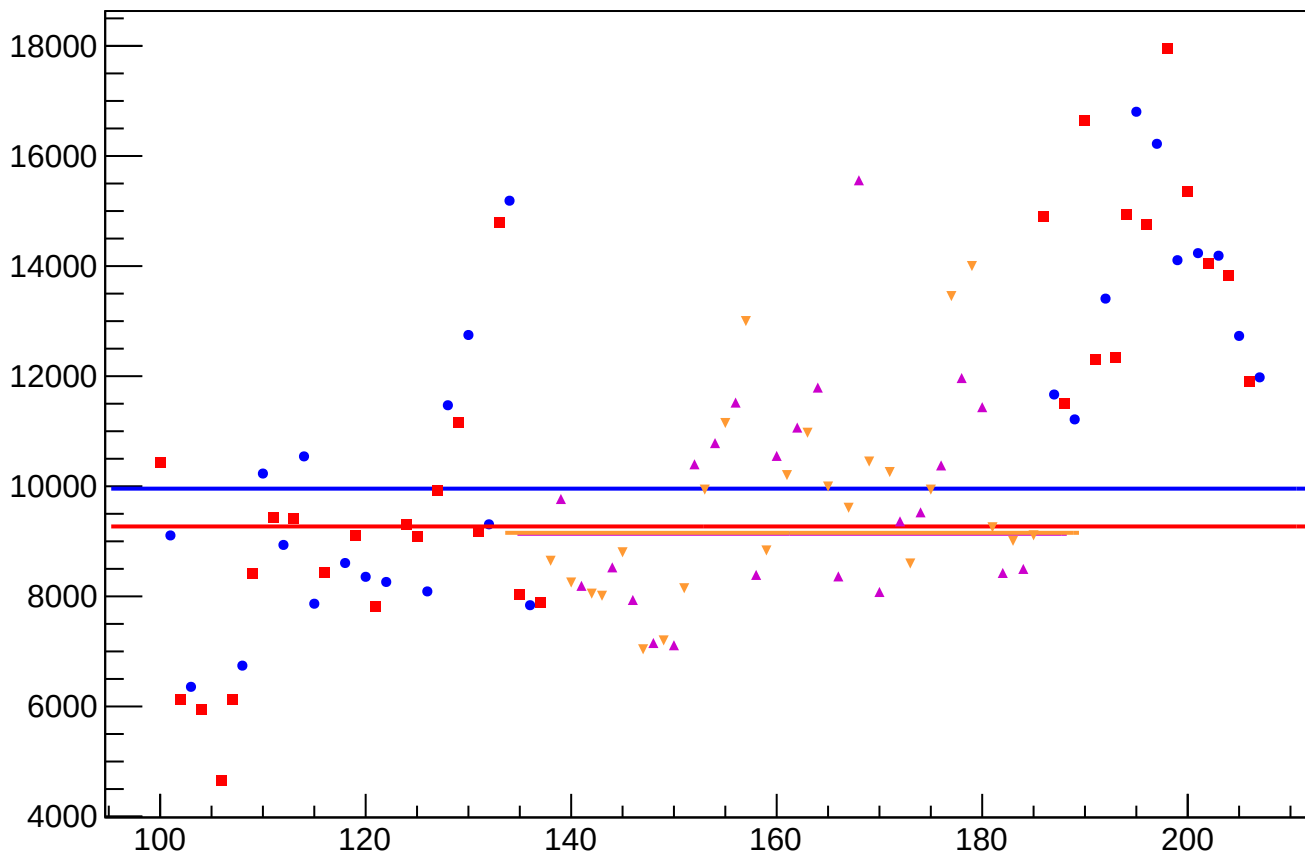
Left In:  $377.922 \pm 2176.347$   $\chi^2/\text{NDF}: 14.2/22$

+ sign  $207.726 \pm 1666.307$   $\chi^2/\text{NDF}: 54.8/50$

All:  $1179.048 \pm 1162.829$   $\chi^2/\text{NDF}: 101.6/104$

- sign  $2101.111 \pm 1623.505$   $\chi^2/\text{NDF}: 46.1/53$

# asym\_atr2\_dit\_correction\_rms vs Slug



Right In: 9957.103+/-1.901  $\chi^2/\text{NDF}$ : 2303241.4/25

Left Out: 9154.688+/-1.501  $\chi^2/\text{NDF}$ : 1072073.9/24

Right Out: 9270.175+/-1.724  $\chi^2/\text{NDF}$ : 3750438.7/30

Left In: 9137.576+/-1.539  $\chi^2/\text{NDF}$ : 1172792.2/22

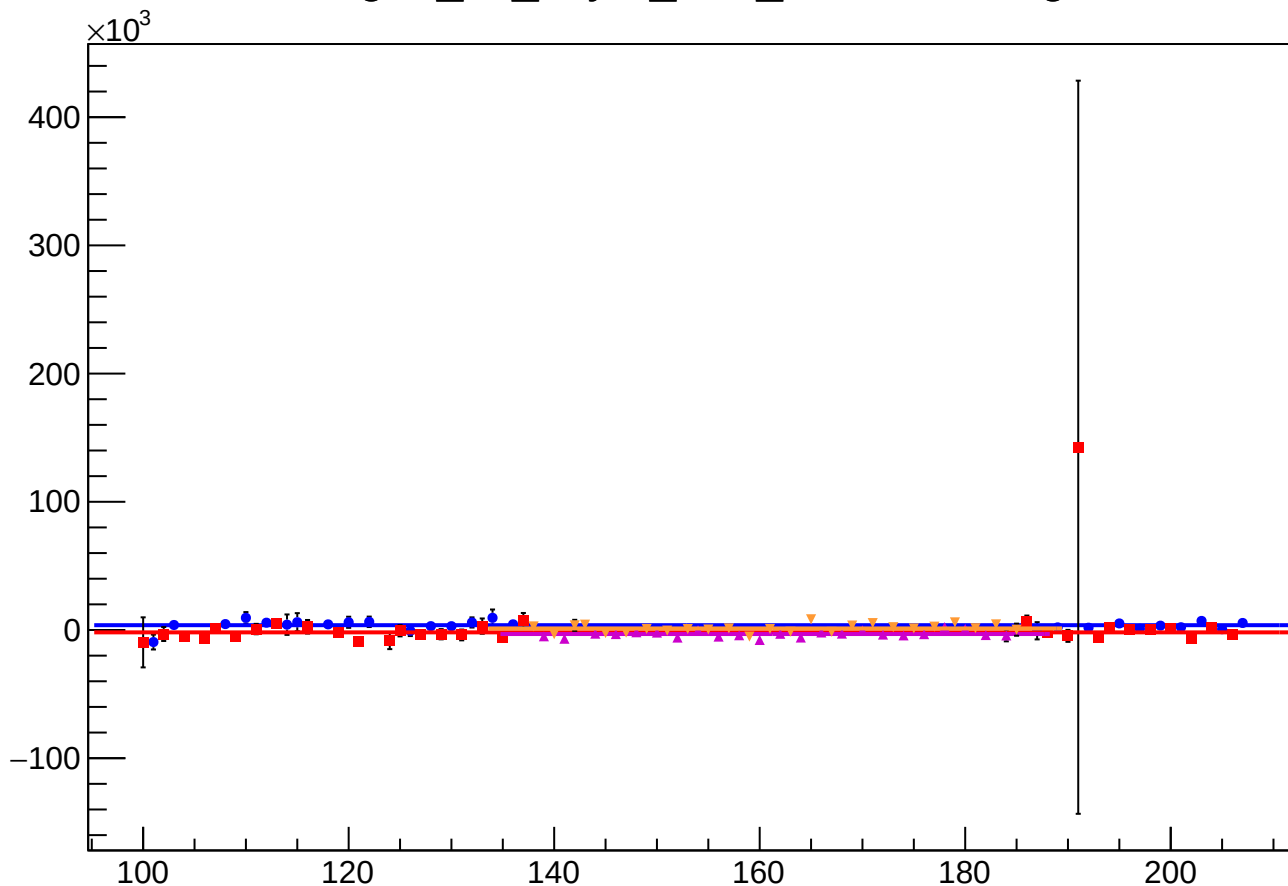
+ sign 9462.829+/-1.178  $\chi^2/\text{NDF}$ : 3485022.9/50

All: 9326.142+/-0.822  $\chi^2/\text{NDF}$ : 8437780.0/10

- sign 9196.386+/-1.148  $\chi^2/\text{NDF}$ : 4926523.7/53



# eigen\_dit\_asym\_atr2\_mean vs Slug



Right In: 3753.193+/-704.420  $\chi^2/\text{NDF}$ : 15.4/25

Left Out: 1213.864+/-579.693  $\chi^2/\text{NDF}$ : 26.8/24

Right Out: -1850.492+/-678.747  $\chi^2/\text{NDF}$ : 31.6/30

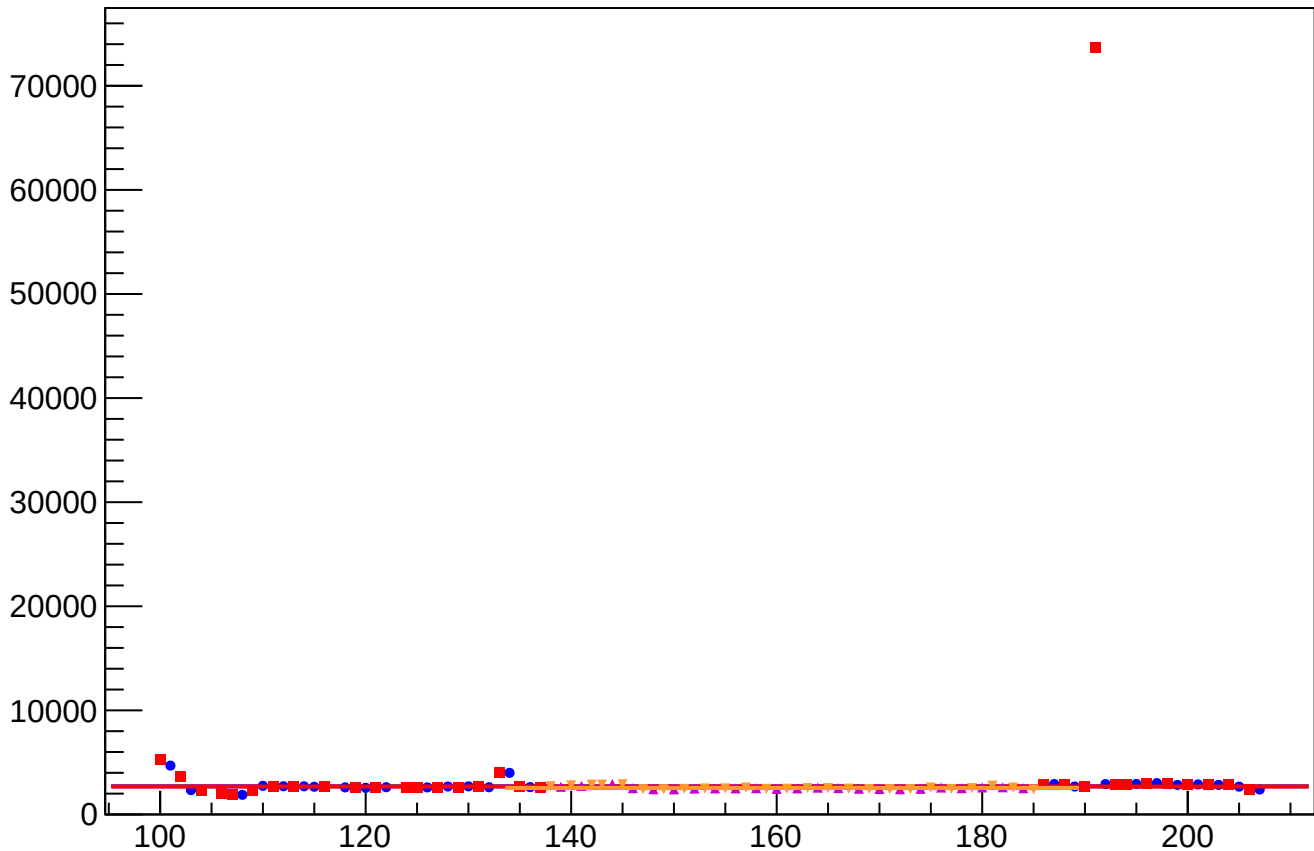
Left In: -3150.264+/-592.117  $\chi^2/\text{NDF}$ : 16.5/22

+ sign 2239.187+/-447.613  $\chi^2/\text{NDF}$ : 50.0/50

All: -182.350+/-316.008  $\chi^2/\text{NDF}$ : 158.5/104

- sign -2588.569+/-446.195  $\chi^2/\text{NDF}$ : 50.2/53

# eigen\_dit\_asym\_atr2\_rms vs Slug



Right In: 2699.561+/-0.498     $\chi^2/\text{NDF}$ : 583654.7/25

Left Out: 2547.156+/-0.410     $\chi^2/\text{NDF}$ : 117298.5/24

Right Out: 2686.823+/-0.480     $\chi^2/\text{NDF}$ : 666855.3/30

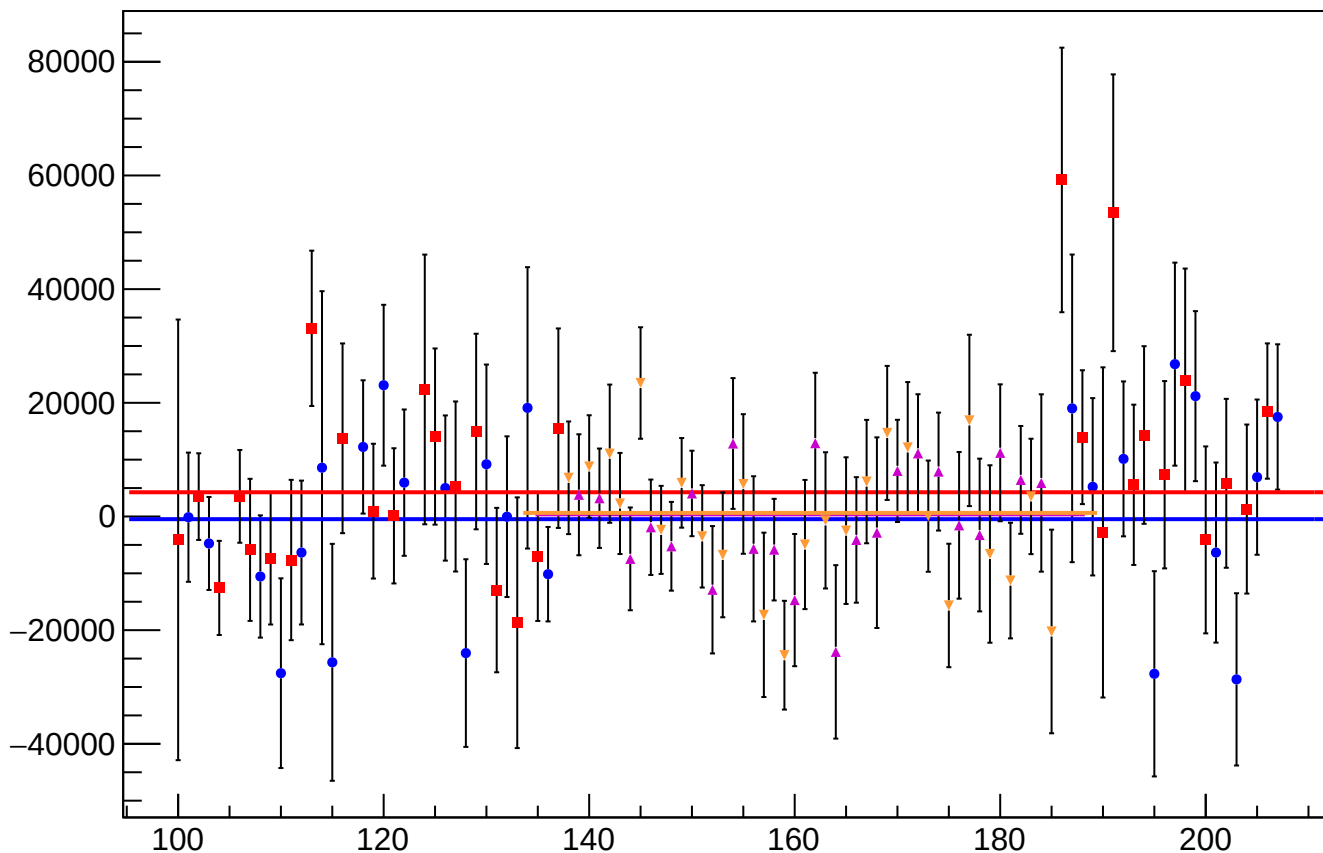
Left In: 2532.774+/-0.419     $\chi^2/\text{NDF}$ : 68440.8/22

+ sign 2608.693+/-0.317     $\chi^2/\text{NDF}$ : 756770.9/50

All: 2604.015+/-0.223     $\chi^2/\text{NDF}$ : 1551023.3/100

- sign 2599.368+/-0.315     $\chi^2/\text{NDF}$ : 793817.0/53

# asym\_atr2\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-471.787 \pm 2688.929$   $\chi^2/\text{NDF}: 28.1/25$

Left Out:  $631.356 \pm 2123.104$   $\chi^2/\text{NDF}: 26.7/24$

Right Out:  $4263.183 \pm 2437.796$   $\chi^2/\text{NDF}: 30.4/30$

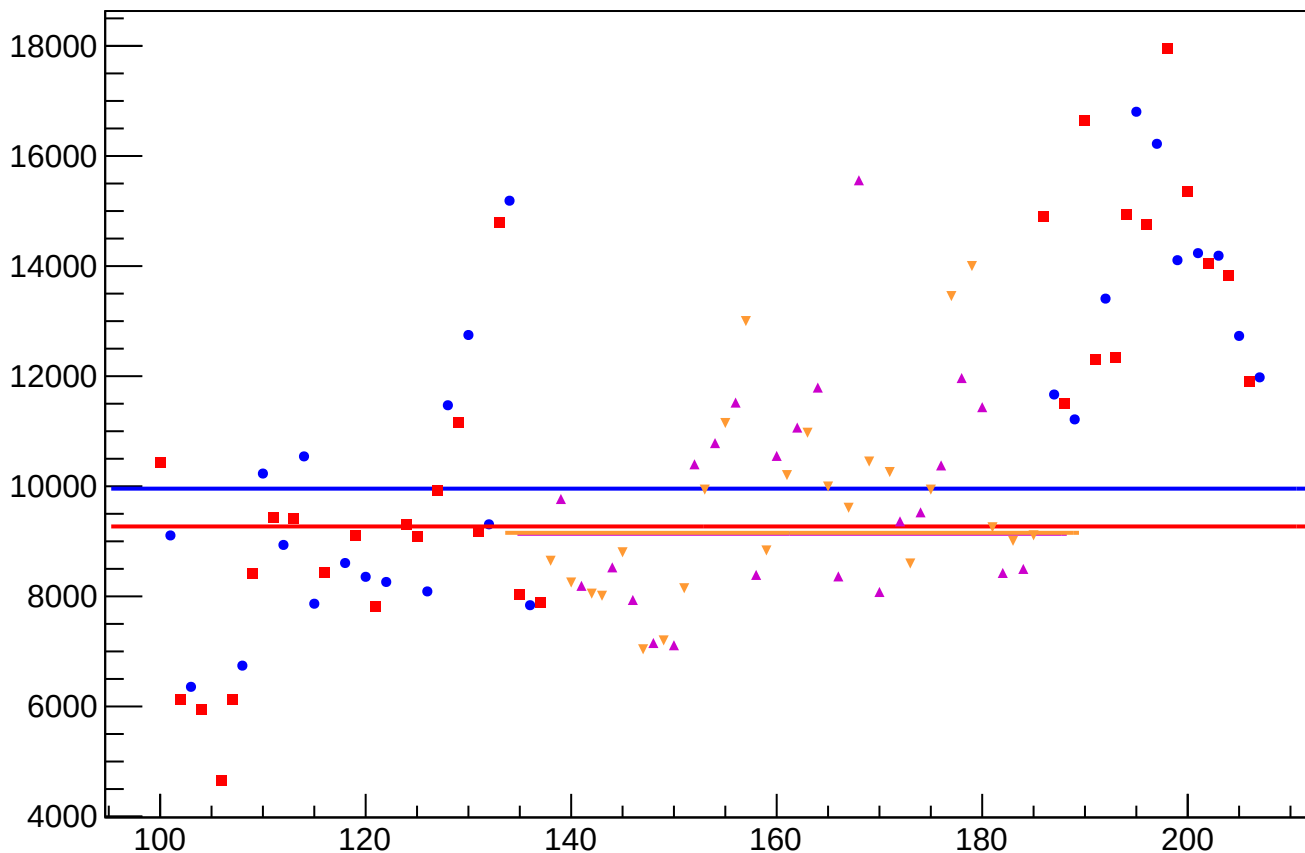
Left In:  $377.927 \pm 2176.350$   $\chi^2/\text{NDF}: 14.2/22$

+ sign  $207.729 \pm 1666.308$   $\chi^2/\text{NDF}: 54.8/50$

All:  $1179.051 \pm 1162.829$   $\chi^2/\text{NDF}: 101.6/104$

- sign  $2101.114 \pm 1623.505$   $\chi^2/\text{NDF}: 46.1/53$

# asym\_atr2\_eigen\_dit\_correction\_rms vs Slug



Right In:  $9957.095 \pm 1.901$   $\chi^2/\text{NDF}: 2303252.2/25$

Left Out:  $9154.703 \pm 1.501$   $\chi^2/\text{NDF}: 1072075.9/24$

Right Out:  $9270.164 \pm 1.724$   $\chi^2/\text{NDF}: 3750454.4/30$

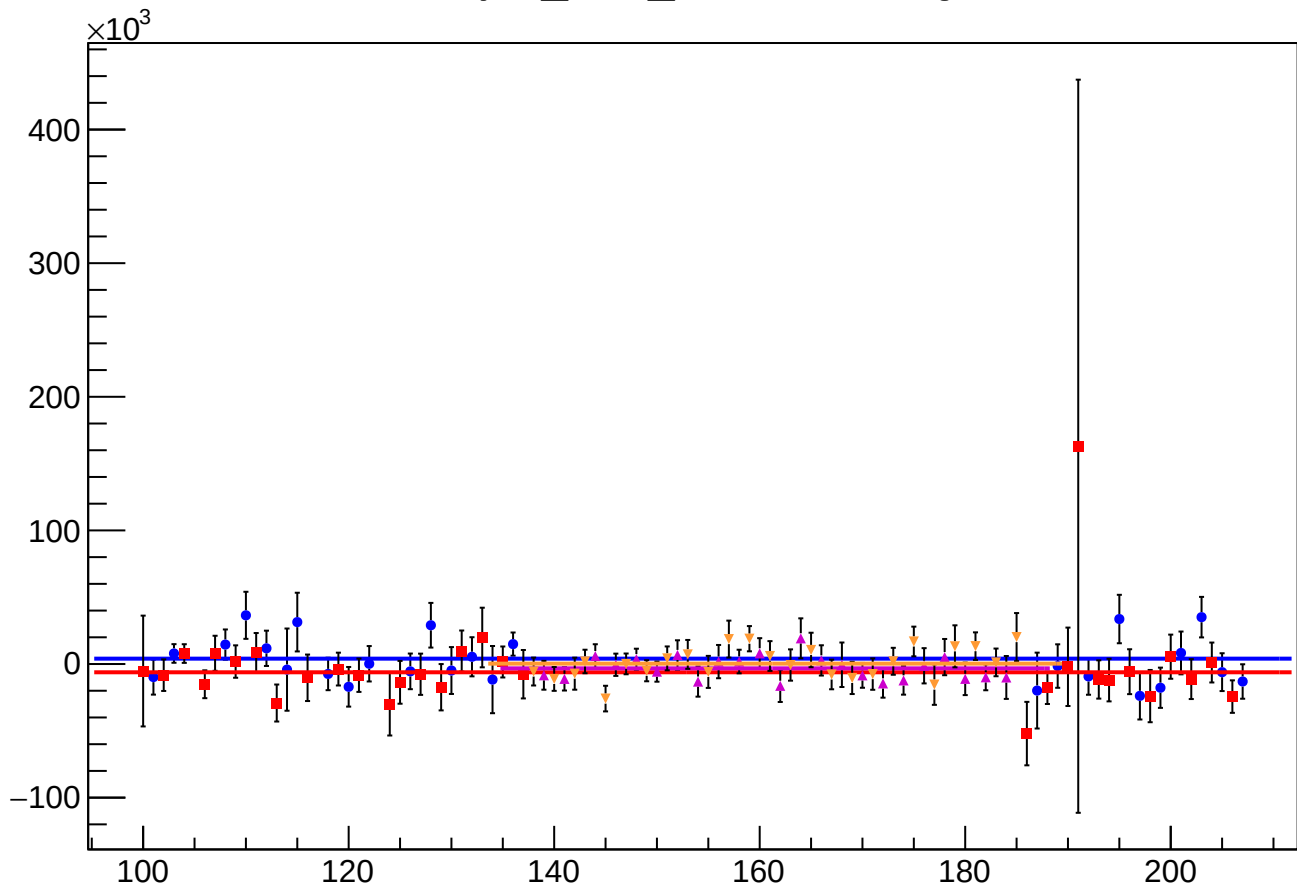
Left In:  $9137.590 \pm 1.539$   $\chi^2/\text{NDF}: 1172796.0/22$

+ sign  $9462.836 \pm 1.178$   $\chi^2/\text{NDF}: 3485029.7/50$

All:  $9326.147 \pm 0.822$   $\chi^2/\text{NDF}: 8437805.8/10$

- sign  $9196.389 \pm 1.148$   $\chi^2/\text{NDF}: 4926542.0/53$

# asym\_atr2\_mean vs Slug



Right In: 4021.931 $\pm$ 2716.546  $\chi^2$ /NDF: 31.2/25

Left Out: 295.038 $\pm$ 2125.383  $\chi^2$ /NDF: 26.3/24

Right Out: -6186.200 $\pm$ 2579.088  $\chi^2$ /NDF: 24.1/30

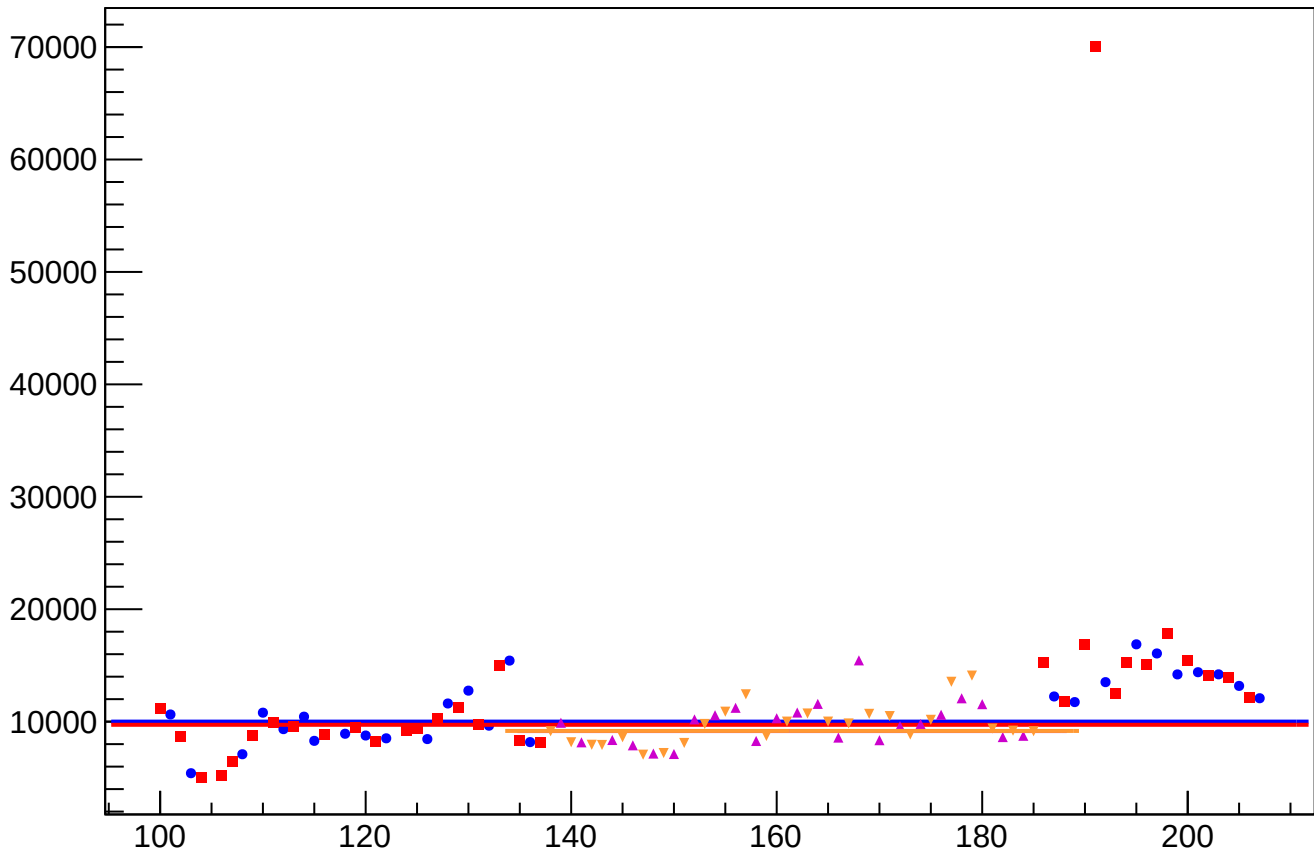
Left In: -3233.667 $\pm$ 2179.845  $\chi^2$ /NDF: 13.6/22

+ sign 1710.143 $\pm$ 1673.932  $\chi^2$ /NDF: 58.7/50

All: -1393.713 $\pm$ 1180.423  $\chi^2$ /NDF: 103.9/10

- sign -4463.966 $\pm$ 1664.847  $\chi^2$ /NDF: 38.4/53

# asym\_atr2\_rms vs Slug



Right In:  $10003.189 \pm 1.921$   $\chi^2/\text{NDF}: 2659237.7/25$

Left Out:  $9172.826 \pm 1.503$   $\chi^2/\text{NDF}: 1056946.9/24$

Right Out:  $9720.062 \pm 1.824$   $\chi^2/\text{NDF}: 3577132.4/30$

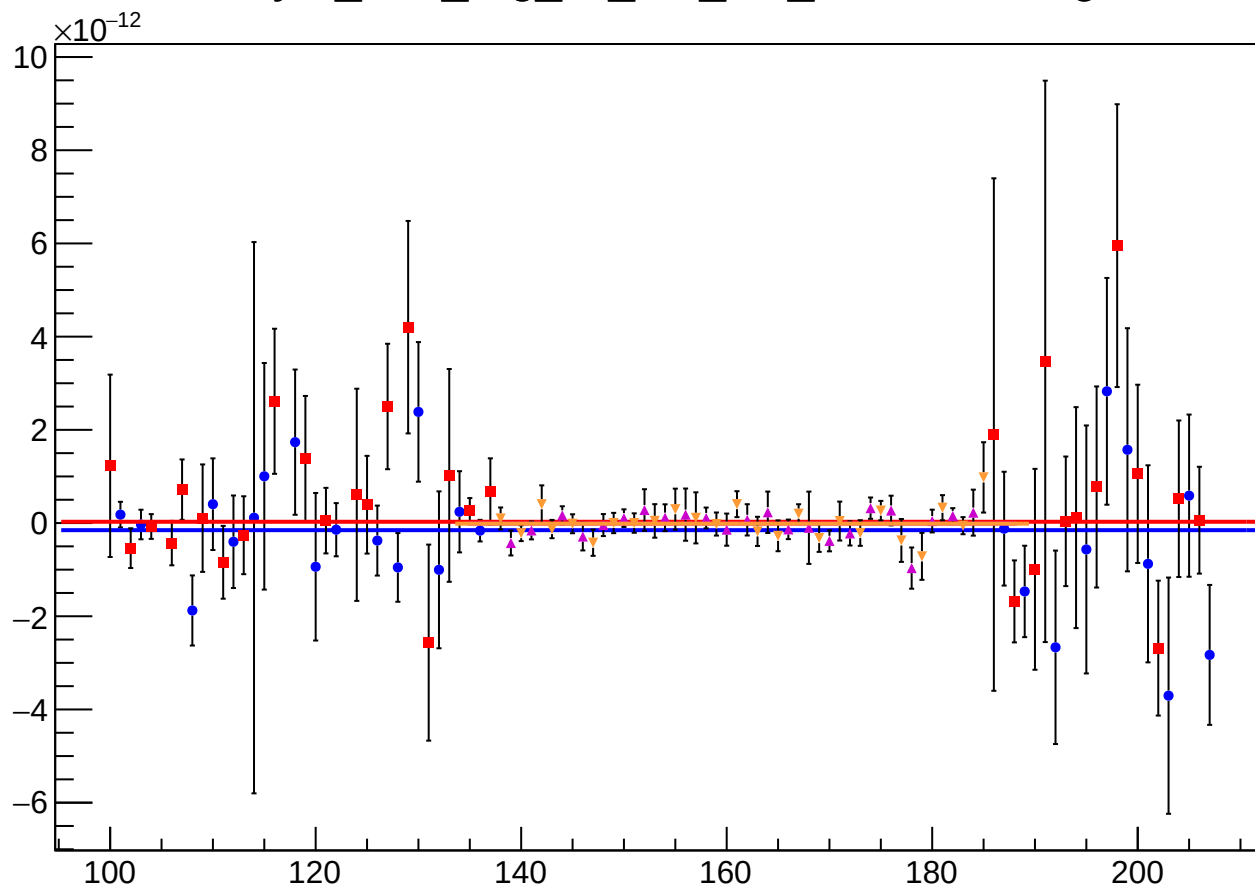
Left In:  $9162.276 \pm 1.541$   $\chi^2/\text{NDF}: 1127533.4/22$

+ sign  $9488.116 \pm 1.184$   $\chi^2/\text{NDF}: 3832098.0/50$

All:  $9441.157 \pm 0.835$   $\chi^2/\text{NDF}: 8594463.0/100$

- sign  $9394.708 \pm 1.177$   $\chi^2/\text{NDF}: 4759234.2/53$

# asym\_atr2\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 24.5/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 19.4/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 32.0/30

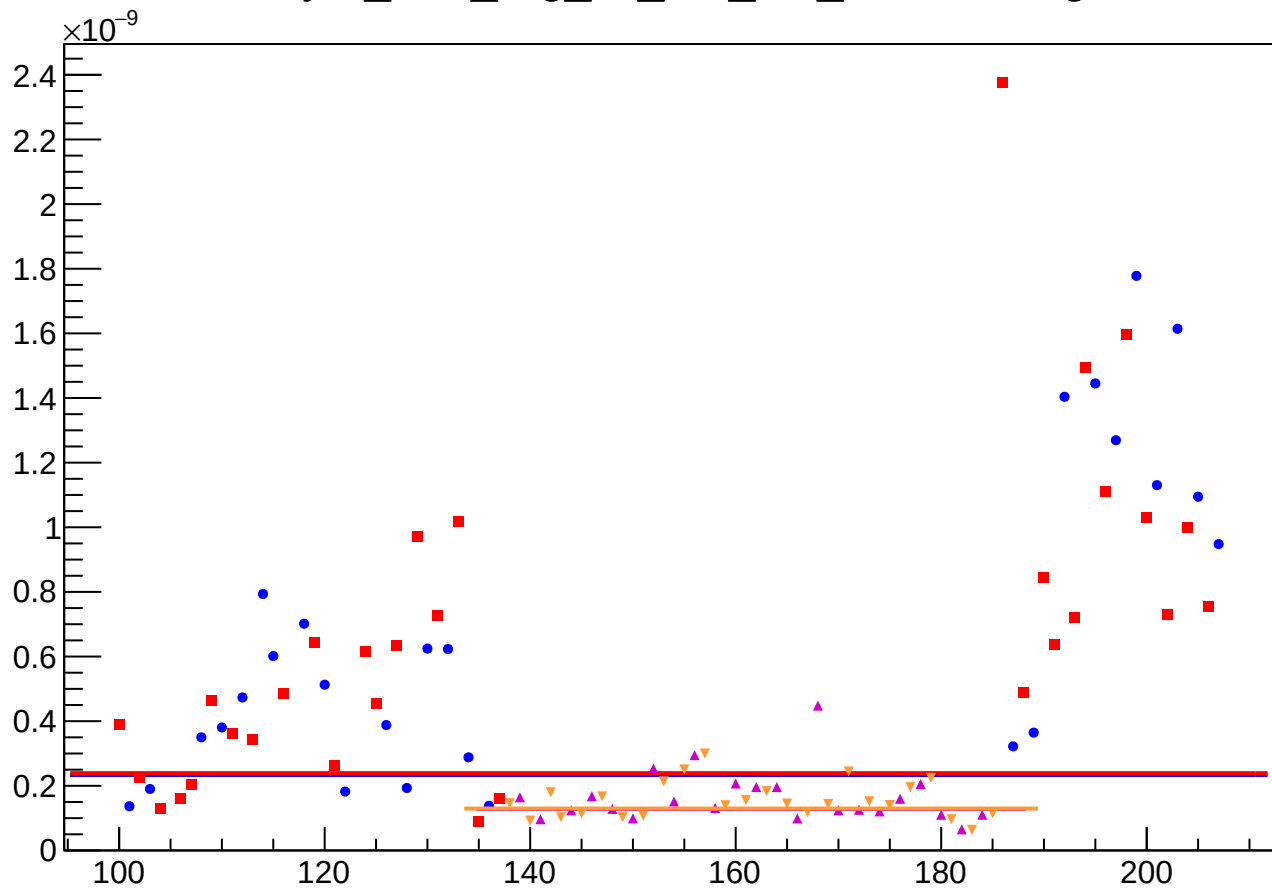
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 19.2/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 44.8/50

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 96.2/104

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 51.2/53

# asym\_atr2\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5553748.5/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :1390522.6/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5841616.3/30

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :1516080.8/22

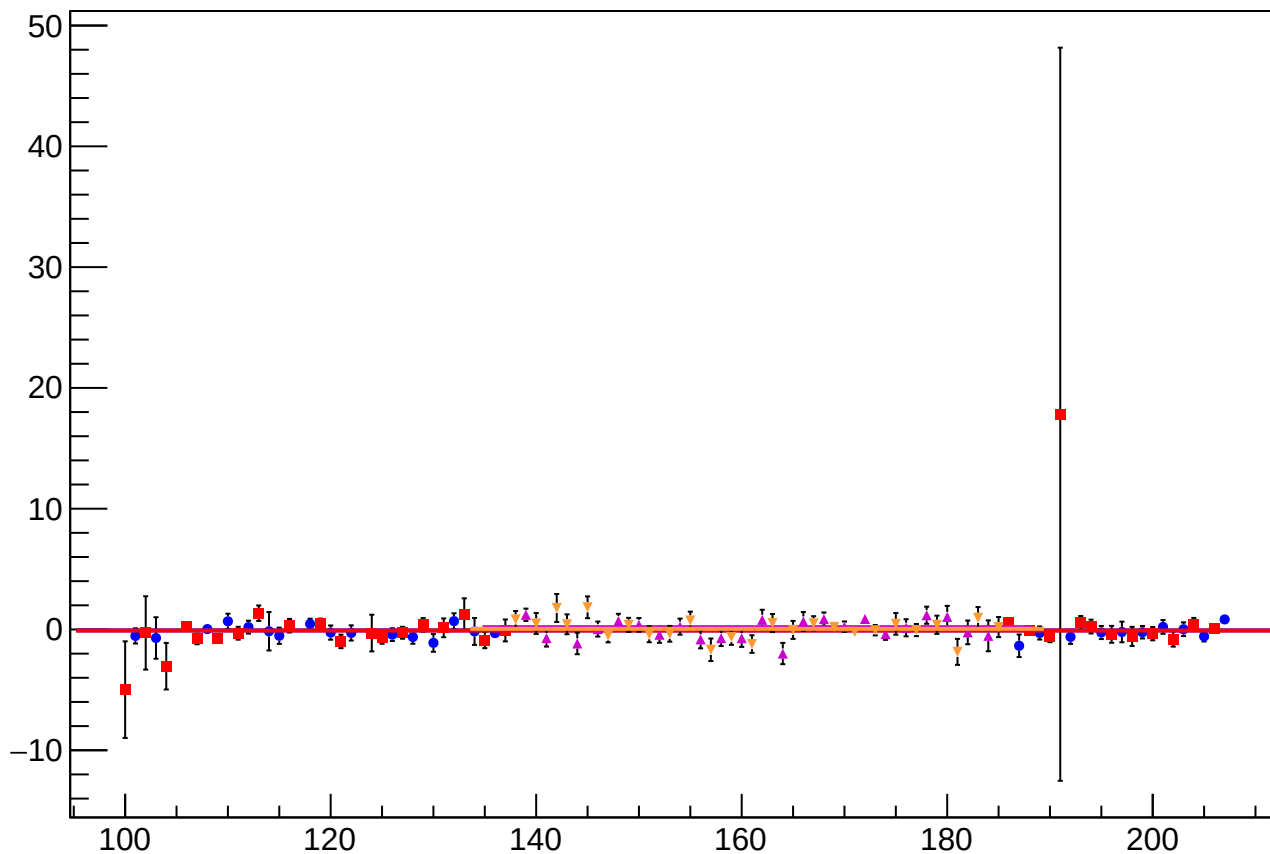
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8031203.8/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 16572877.6/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8541664.0/53



# asym\_atr2\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.078 \pm 0.109$   $\chi^2/\text{NDF}$ : 21.7/25

Left Out:  $0.054 \pm 0.130$   $\chi^2/\text{NDF}$ : 24.7/24

Right Out:  $-0.086 \pm 0.093$   $\chi^2/\text{NDF}$ : 34.0/30

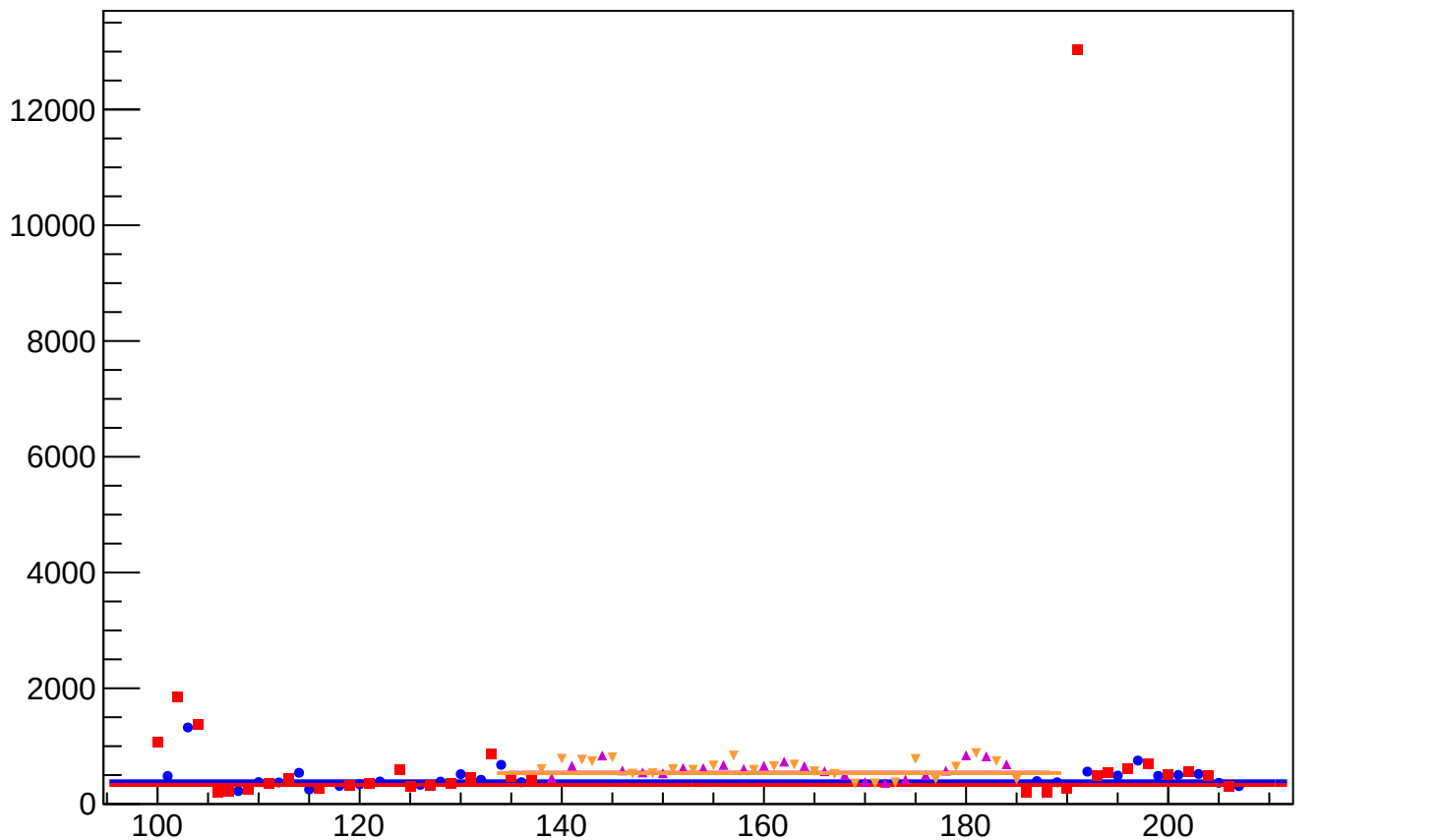
Left In:  $0.191 \pm 0.133$   $\chi^2/\text{NDF}$ : 31.1/22

+ sign  $-0.024 \pm 0.083$   $\chi^2/\text{NDF}$ : 47.0/50

All:  $-0.008 \pm 0.056$   $\chi^2/\text{NDF}$ : 115.1/104

- sign  $0.005 \pm 0.076$   $\chi^2/\text{NDF}$ : 68.1/53

# asym\_atr2\_dit\_vs\_cor\_diff\_rms vs Slug



Right In:  $393.000 \pm 0.077$   $\chi^2/\text{NDF}$ : 2424612.7/25

Left Out:  $535.943 \pm 0.092$   $\chi^2/\text{NDF}$ : 2749736.4/24

Right Out:  $330.168 \pm 0.066$   $\chi^2/\text{NDF}$ : 5467568.0/30

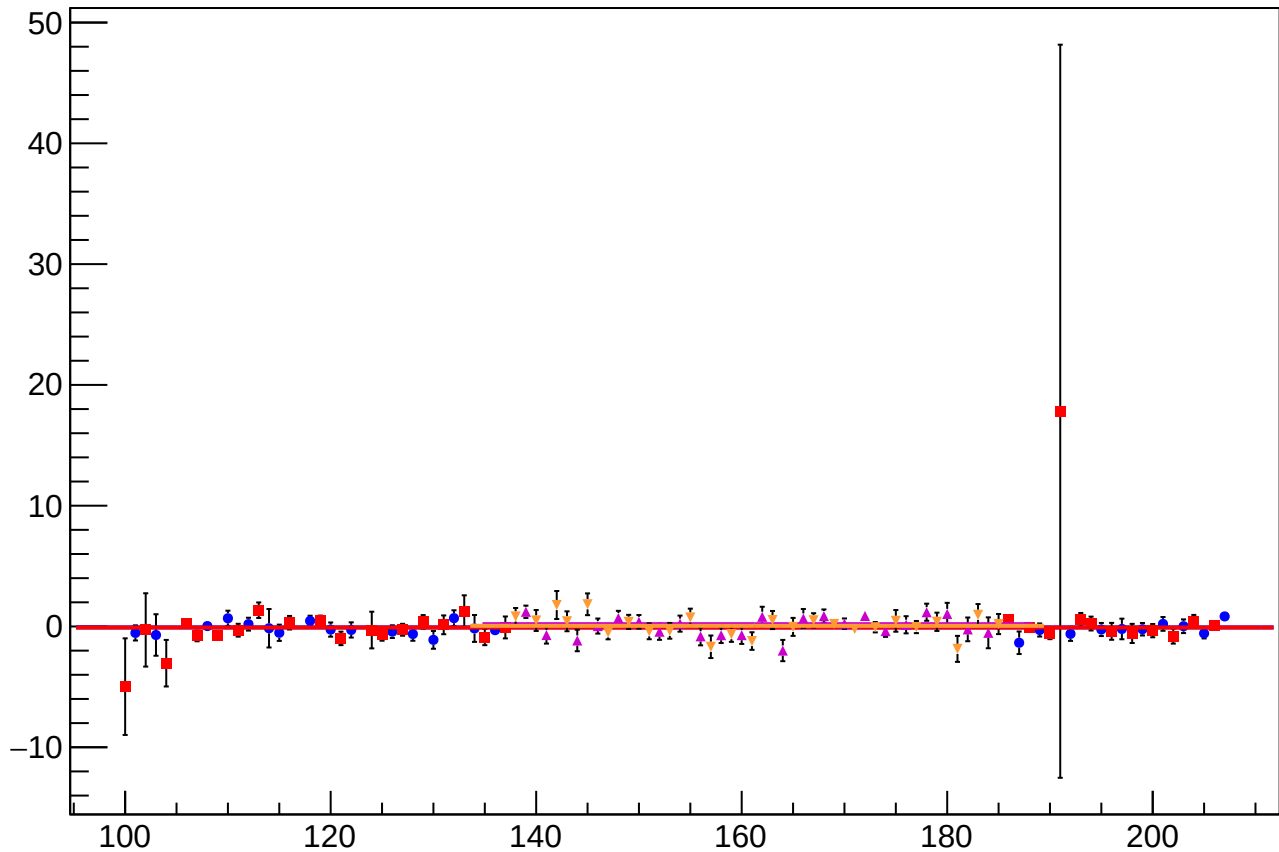
Left In:  $540.804 \pm 0.094$   $\chi^2/\text{NDF}$ : 1904998.0/22

+ sign  $452.210 \pm 0.059$   $\chi^2/\text{NDF}$ : 6601759.6/50

All:  $423.565 \pm 0.040$   $\chi^2/\text{NDF}$ : 17767297.8/10

- sign  $399.505 \pm 0.054$   $\chi^2/\text{NDF}$ : 10730874.9/53

# asym\_atr2\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.078 \pm 0.109$   $\chi^2/\text{NDF}$ : 21.7/25

Left Out:  $0.054 \pm 0.130$   $\chi^2/\text{NDF}$ : 24.7/24

Right Out:  $-0.086 \pm 0.093$   $\chi^2/\text{NDF}$ : 34.0/30

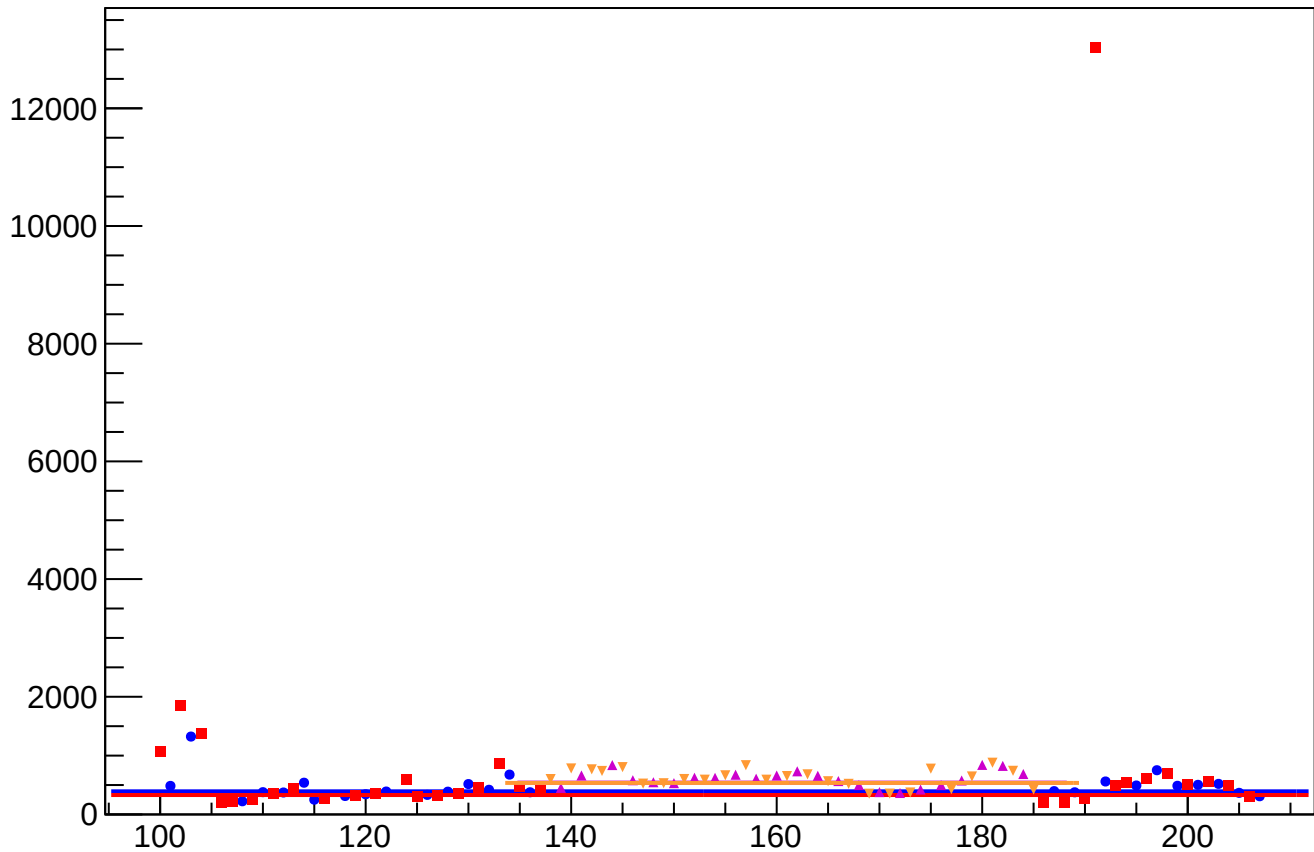
Left In:  $0.191 \pm 0.133$   $\chi^2/\text{NDF}$ : 31.1/22

+ sign  $-0.024 \pm 0.083$   $\chi^2/\text{NDF}$ : 47.0/50

All:  $-0.008 \pm 0.056$   $\chi^2/\text{NDF}$ : 115.1/104

- sign  $0.005 \pm 0.076$   $\chi^2/\text{NDF}$ : 68.1/53

# asym\_atr2\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 393.000 $\pm$ 0.077  $\chi^2$ /NDF: 2424612.7/25

Left Out: 535.943 $\pm$ 0.092  $\chi^2$ /NDF: 2749736.4/24

Right Out: 330.168 $\pm$ 0.066  $\chi^2$ /NDF: 5467568.0/30

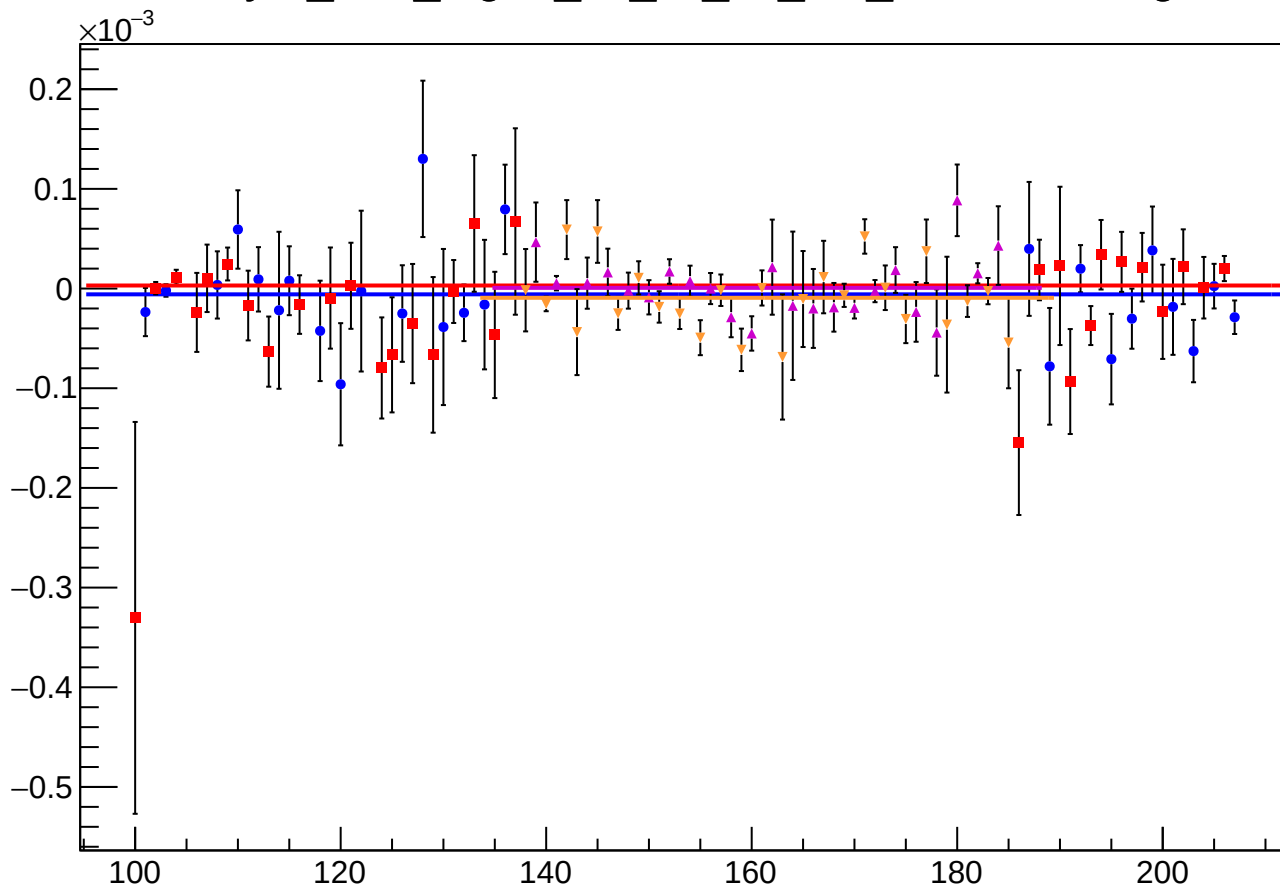
Left In: 540.804 $\pm$ 0.094  $\chi^2$ /NDF: 1904998.0/22

+ sign 452.210 $\pm$ 0.059  $\chi^2$ /NDF: 6601759.6/50

All: 423.565 $\pm$ 0.040  $\chi^2$ /NDF: 17767297.8/10

- sign 399.505 $\pm$ 0.054  $\chi^2$ /NDF: 10730874.9/53

# asym\_atr2\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 26.5/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 45.2/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 34.9/30

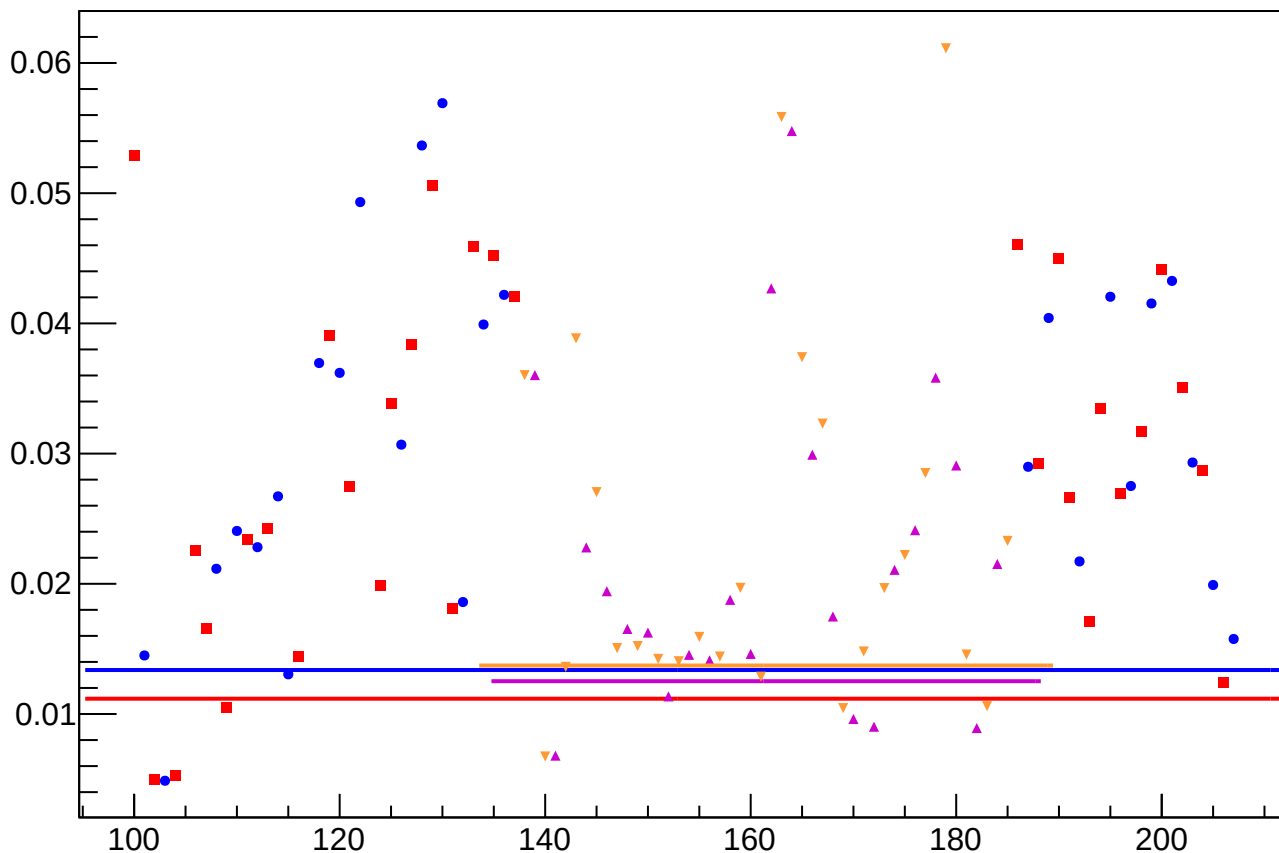
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 30.0/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 72.0/50

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 143.7/104

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 65.1/53

# asym\_atr2\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.013 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 12246034.9/25

Left Out: 0.014 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7717157.8/24

Right Out: 0.011 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 14111318.2/30

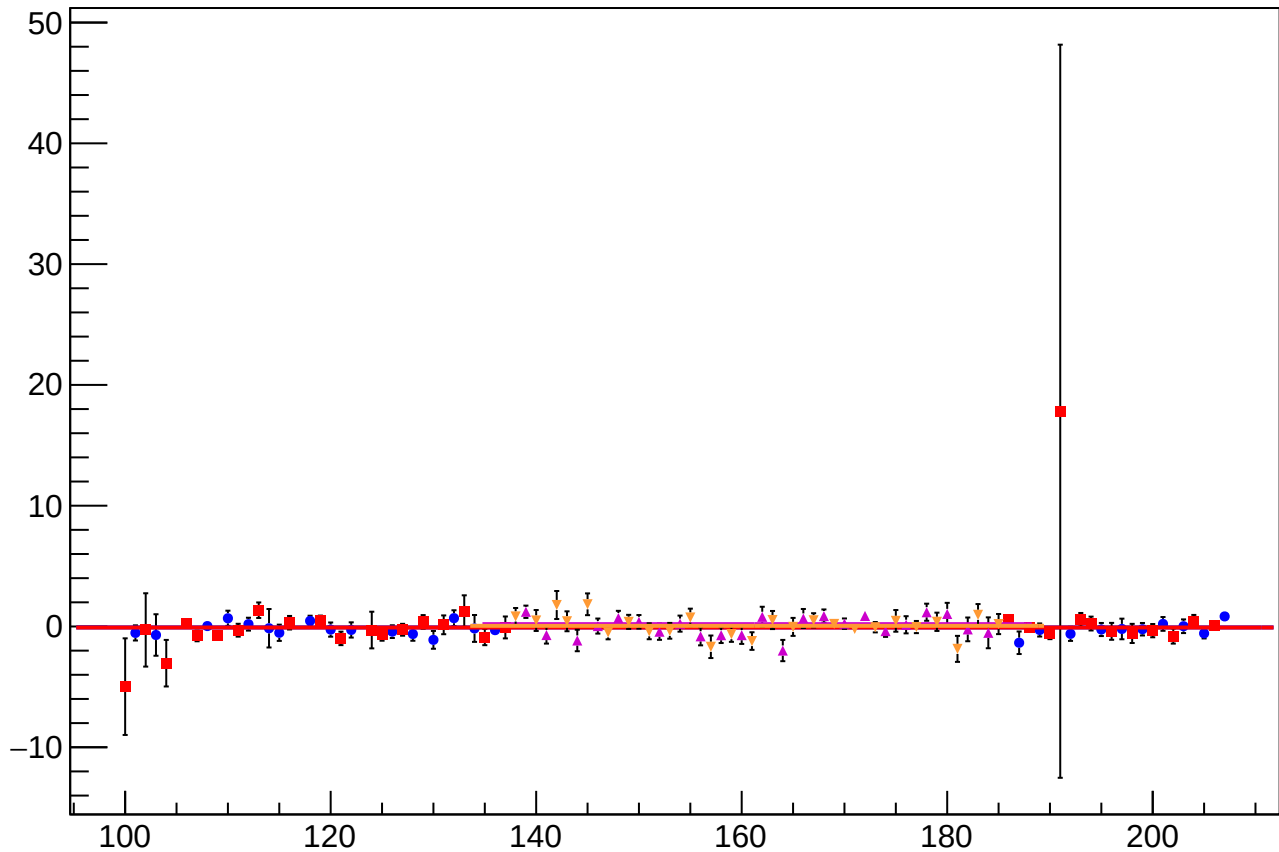
Left In: 0.013 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7121524.7/22

+ sign 0.014 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 19970101.4/50

All: 0.013 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 41736968.5/104

- sign 0.012 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 21373012.9/53

# asym\_atr2\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.078 \pm 0.109$   $\chi^2/\text{NDF}$ : 21.7/25

Left Out:  $0.054 \pm 0.130$   $\chi^2/\text{NDF}$ : 24.7/24

Right Out:  $-0.086 \pm 0.093$   $\chi^2/\text{NDF}$ : 34.0/30

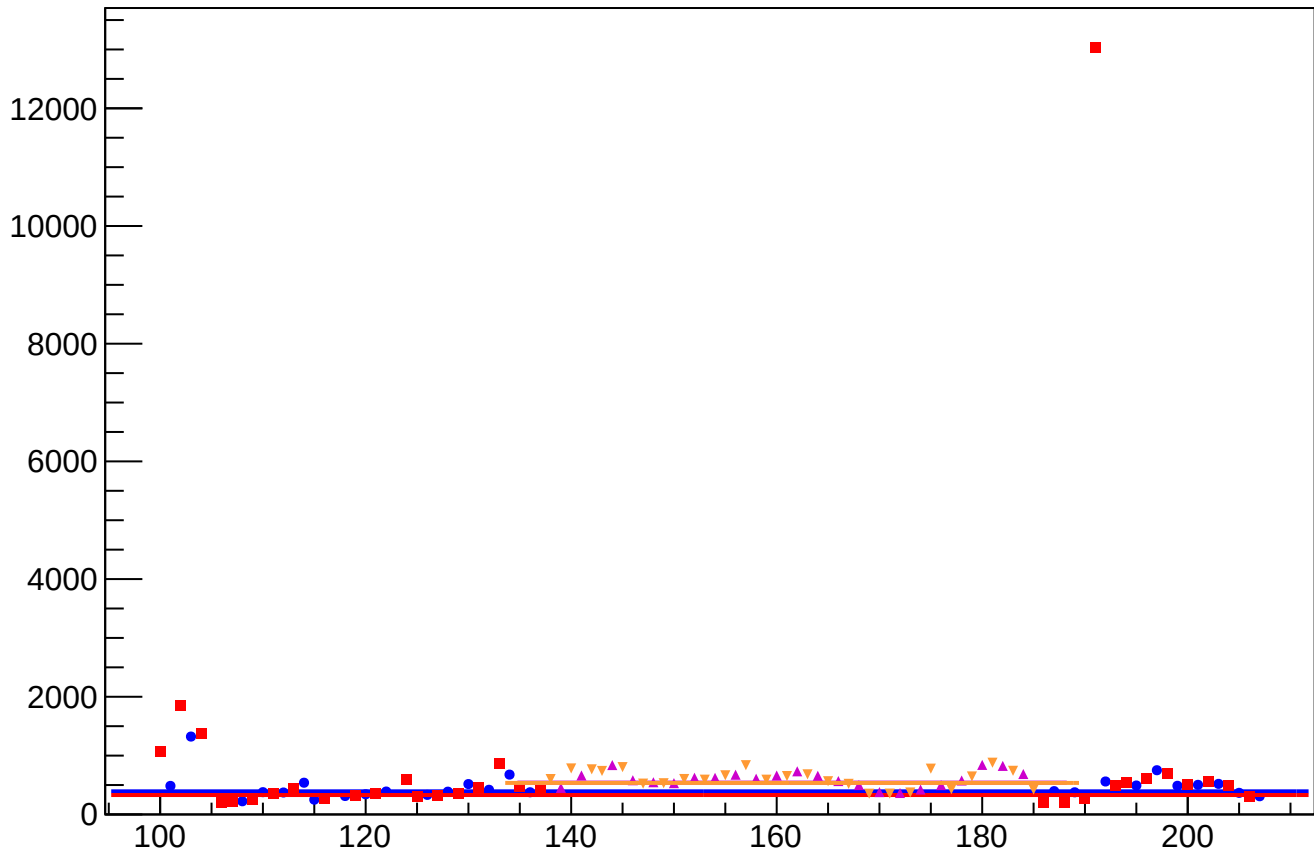
Left In:  $0.191 \pm 0.133$   $\chi^2/\text{NDF}$ : 31.1/22

+ sign  $-0.024 \pm 0.083$   $\chi^2/\text{NDF}$ : 47.0/50

All:  $-0.008 \pm 0.056$   $\chi^2/\text{NDF}$ : 115.1/104

- sign  $0.005 \pm 0.076$   $\chi^2/\text{NDF}$ : 68.1/53

# asym\_atr2\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 392.998 $\pm$ 0.077  $\chi^2$ /NDF: 2424643.8/25

Left Out: 535.948 $\pm$ 0.092  $\chi^2$ /NDF: 2749816.2/24

Right Out: 330.168 $\pm$ 0.066  $\chi^2$ /NDF: 5467548.9/30

Left In: 540.809 $\pm$ 0.094  $\chi^2$ /NDF: 1905035.9/22

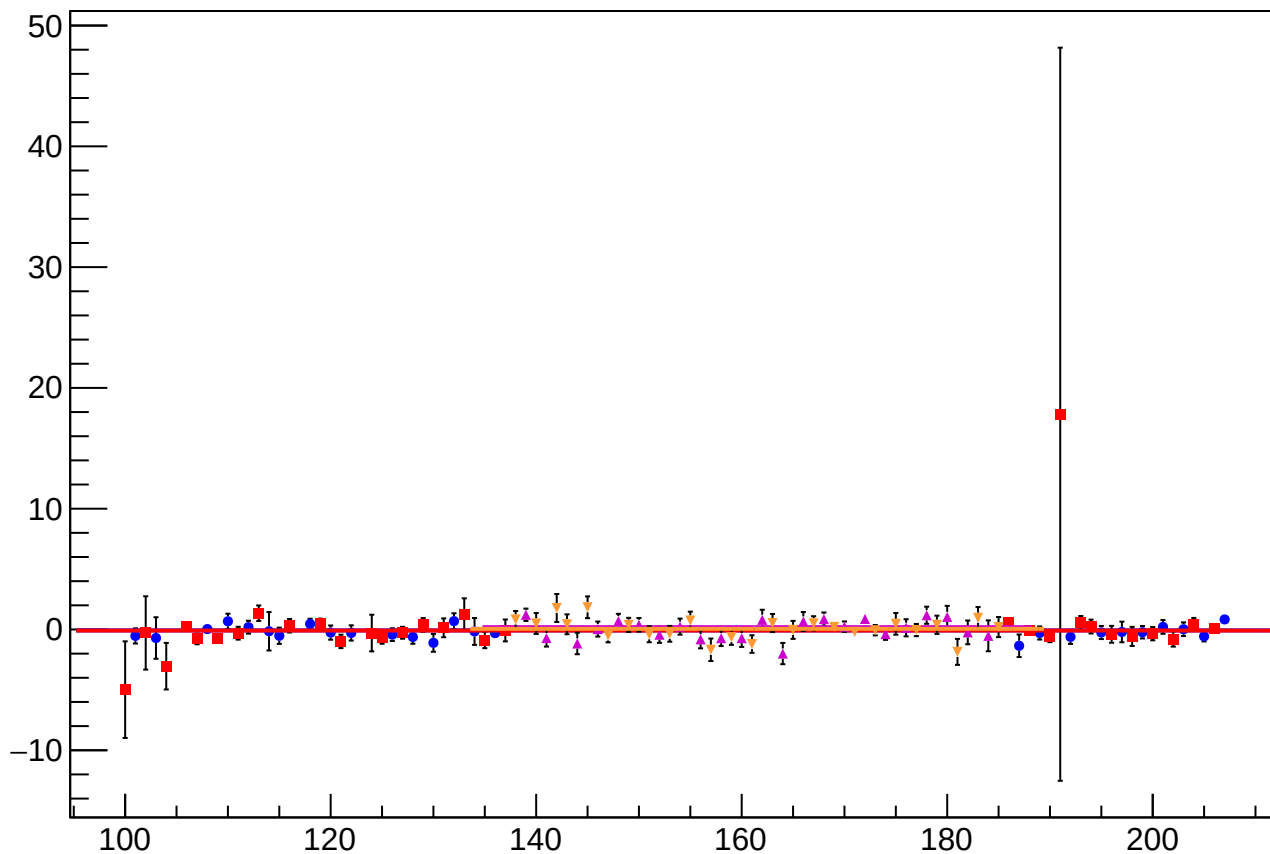
+ sign 452.209 $\pm$ 0.059  $\chi^2$ /NDF: 6602007.2/50

All: 423.565 $\pm$ 0.040  $\chi^2$ /NDF: 17767649.2/10

- sign 399.506 $\pm$ 0.054  $\chi^2$ /NDF: 10731006.1/53



asym\_atr2\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.078 \pm 0.109$   $\chi^2/\text{NDF}$ : 21.7/25

Left Out:  $0.054 \pm 0.130$   $\chi^2/\text{NDF}$ : 24.7/24

Right Out:  $-0.086 \pm 0.093$   $\chi^2/\text{NDF}$ : 34.0/30

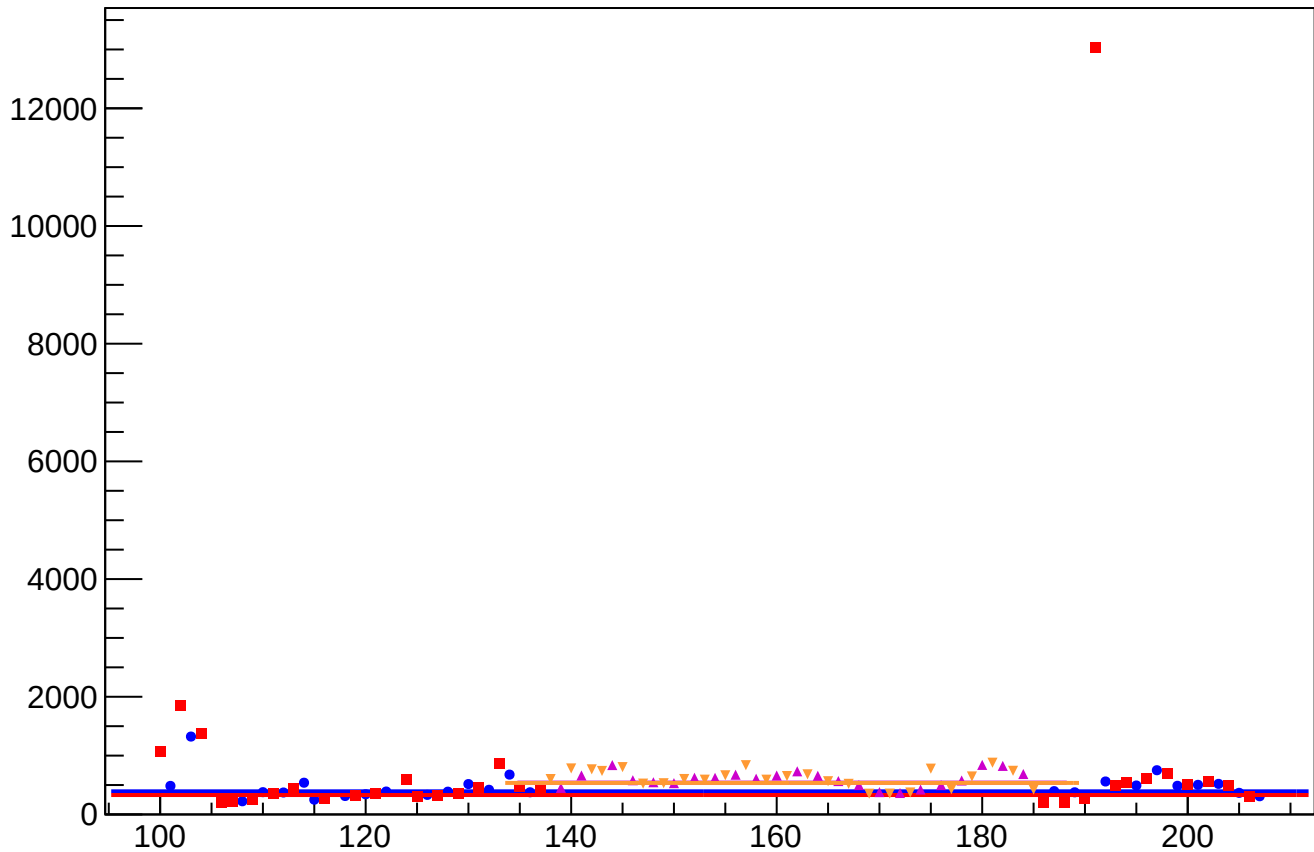
Left In:  $0.191 \pm 0.133$   $\chi^2/\text{NDF}$ : 31.1/22

+ sign  $-0.024 \pm 0.083$   $\chi^2/\text{NDF}$ : 47.0/50

All:  $-0.008 \pm 0.056$   $\chi^2/\text{NDF}$ : 115.1/104

- sign  $0.005 \pm 0.076$   $\chi^2/\text{NDF}$ : 68.1/53

asym\_atr2\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 392.998 $\pm$ 0.077  $\chi^2$ /NDF: 2424643.8/25

Left Out: 535.948 $\pm$ 0.092  $\chi^2$ /NDF: 2749816.2/24

Right Out: 330.168 $\pm$ 0.066  $\chi^2$ /NDF: 5467548.9/30

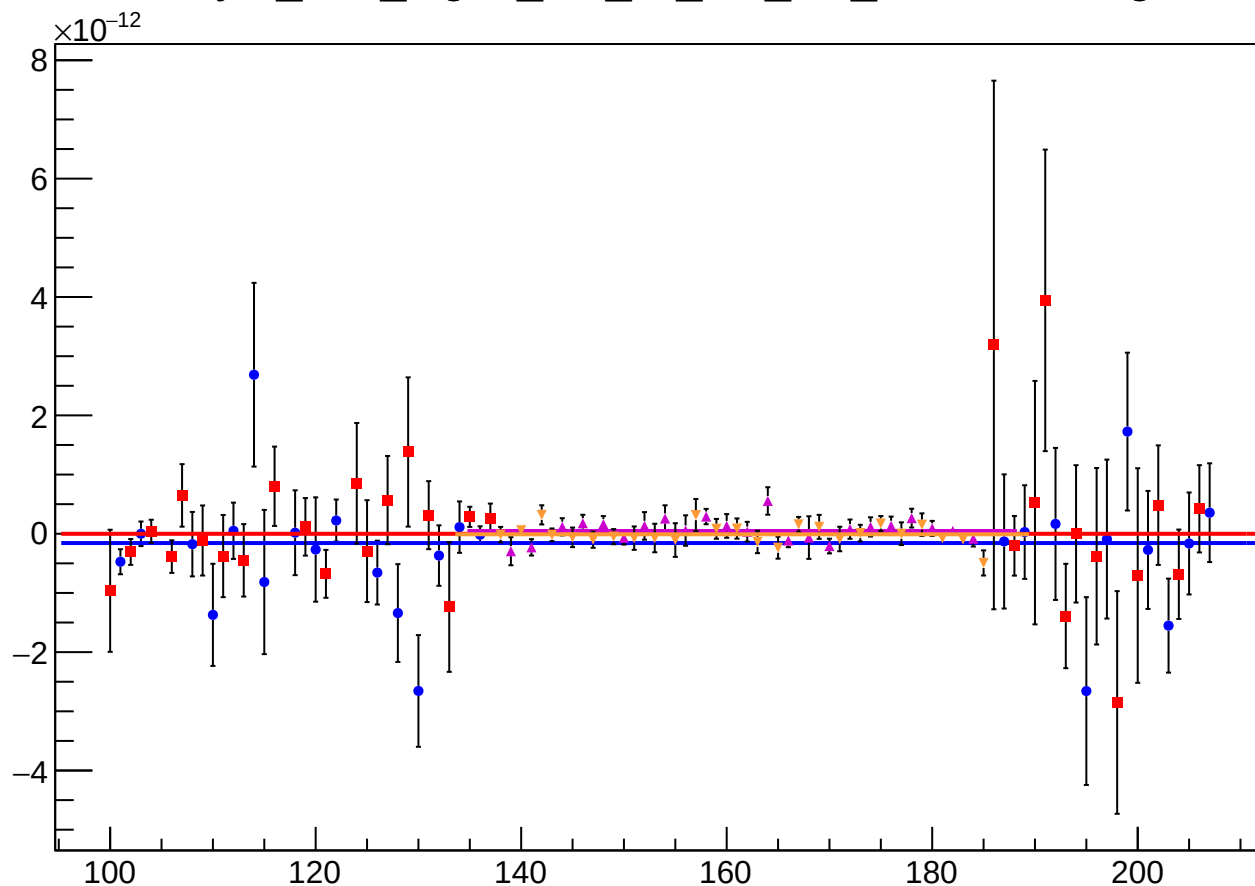
Left In: 540.809 $\pm$ 0.094  $\chi^2$ /NDF: 1905035.9/22

+ sign 452.209 $\pm$ 0.059  $\chi^2$ /NDF: 6602007.2/50

All: 423.565 $\pm$ 0.040  $\chi^2$ /NDF: 17767649.2/10

- sign 399.506 $\pm$ 0.054  $\chi^2$ /NDF: 10731006.1/53

# asym\_atr2\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 29.4/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 22.1/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 29.0/30

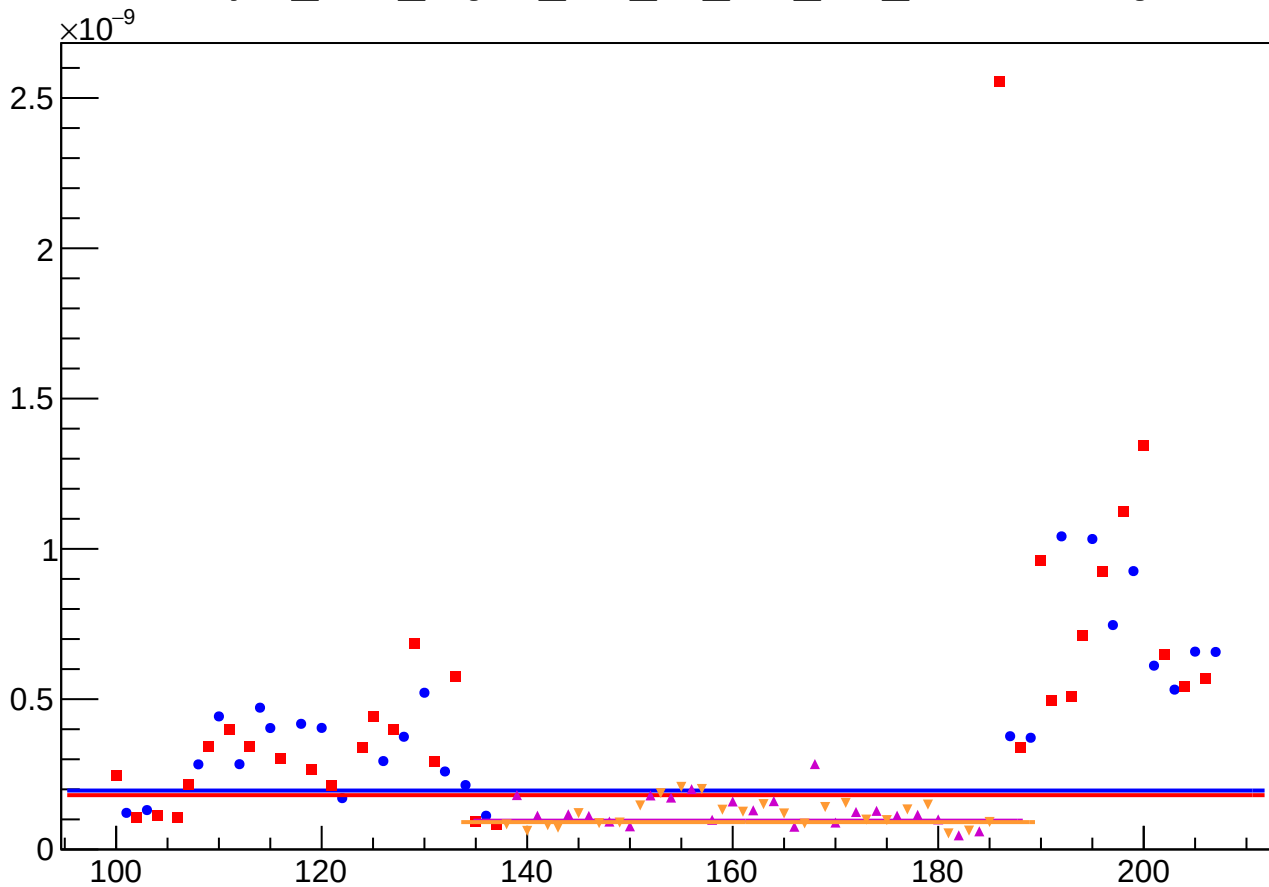
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 28.2/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 54.2/50

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 114.6/104

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 57.5/53

asym\_atr2\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6682723.2/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3367730.2/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8175786.3/30

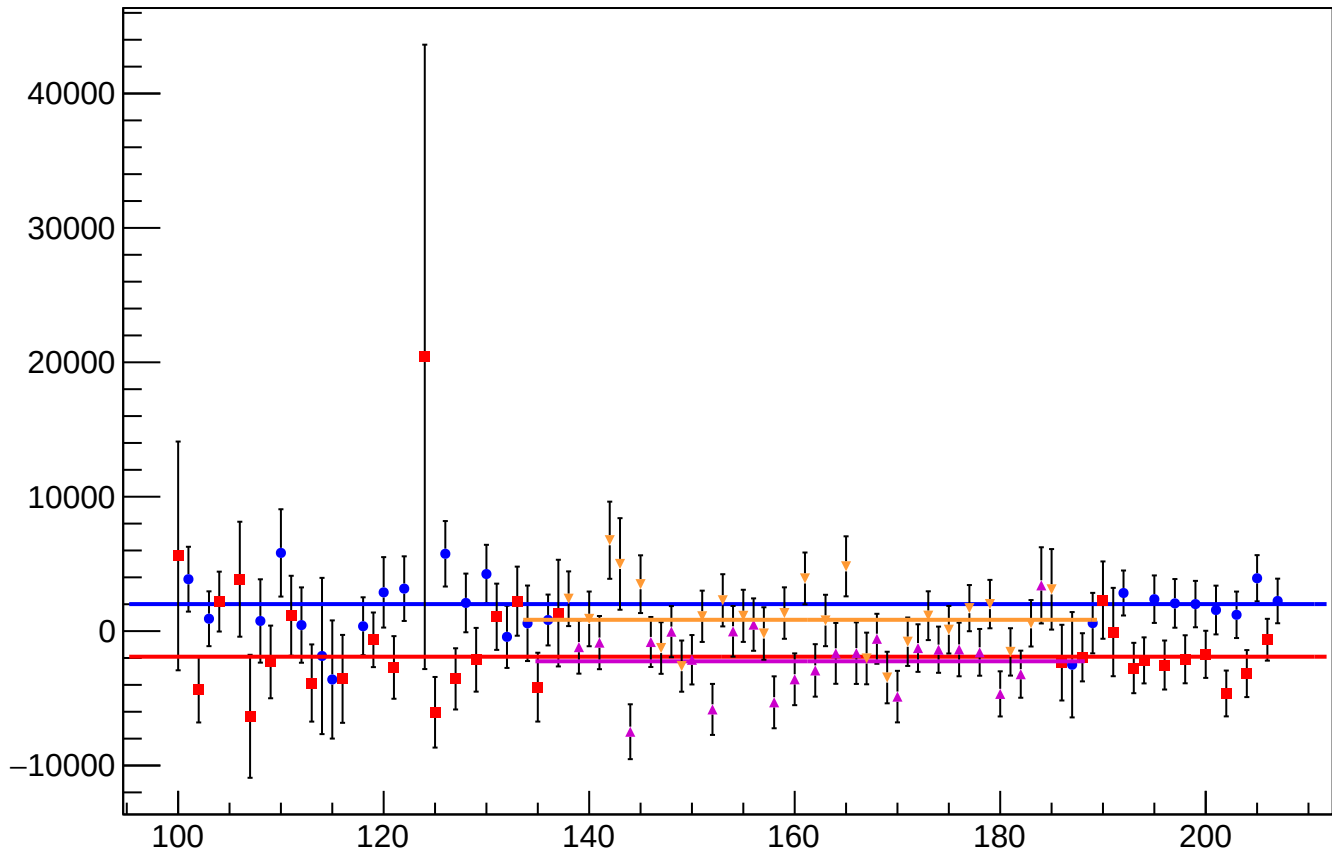
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3905784.1/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12863384.7/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 26949038.2/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14057414.2/53

# reg\_asym\_atl\_avg\_mean vs Slug



Right In: 2010.123+/-428.079  $\chi^2/\text{NDF}$ : 14.5/25

Left Out: 841.572+/-394.444  $\chi^2/\text{NDF}$ : 30.4/24

Right Out: -1904.318+/-417.940  $\chi^2/\text{NDF}$ : 26.2/30

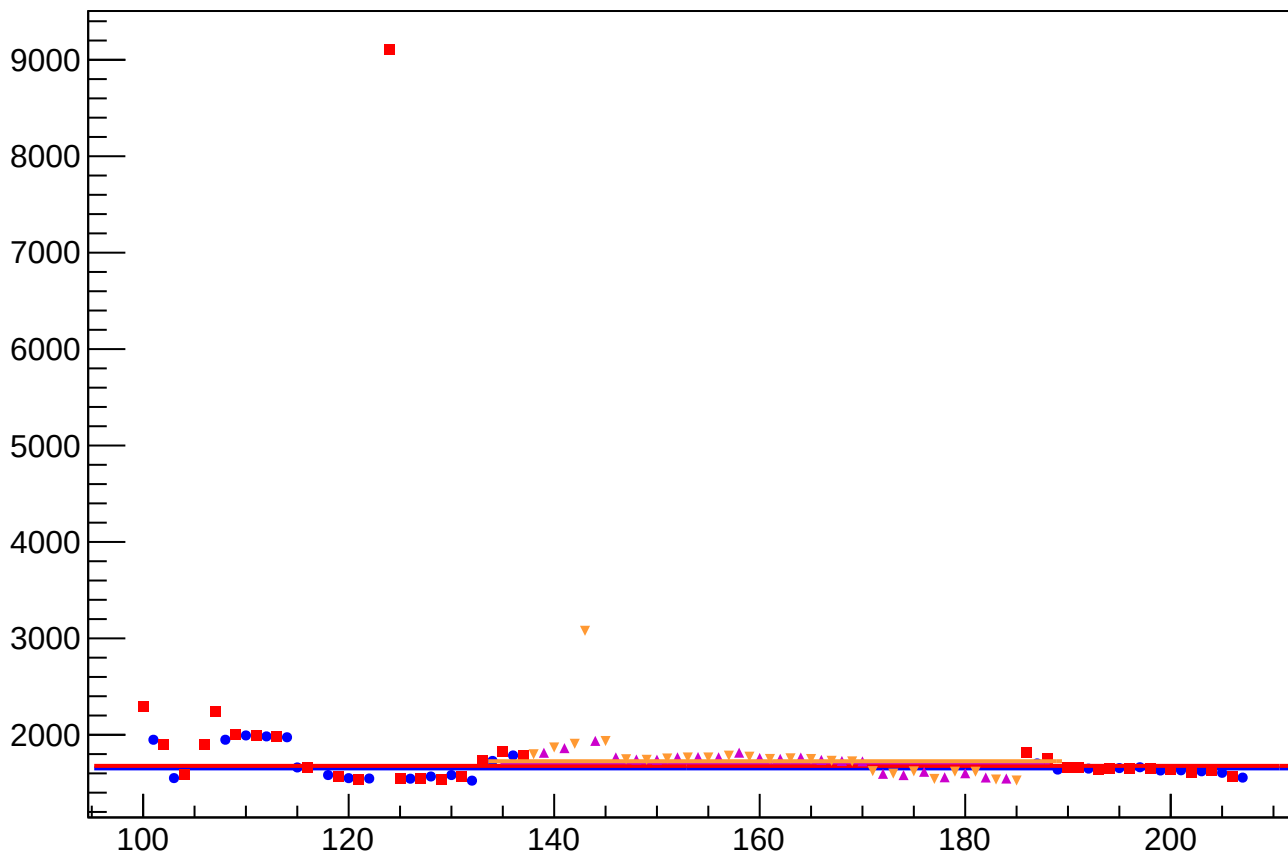
Left In: -2245.041+/-400.753  $\chi^2/\text{NDF}$ : 29.4/22

+ sign 1378.143+/-290.077  $\chi^2/\text{NDF}$ : 48.9/50

All: -356.721+/-204.826  $\chi^2/\text{NDF}$ : 176.2/104

- sign -2081.829+/-289.261  $\chi^2/\text{NDF}$ : 56.0/53

# reg\_asym\_atl\_avg\_rms vs Slug



Right In: 1651.583+/-0.303  $\chi^2/\text{NDF}$ : 154840.3/25

Left Out: 1726.058+/-0.279  $\chi^2/\text{NDF}$ : 454930.8/24

Right Out: 1677.914+/-0.295  $\chi^2/\text{NDF}$ : 417810.7/30

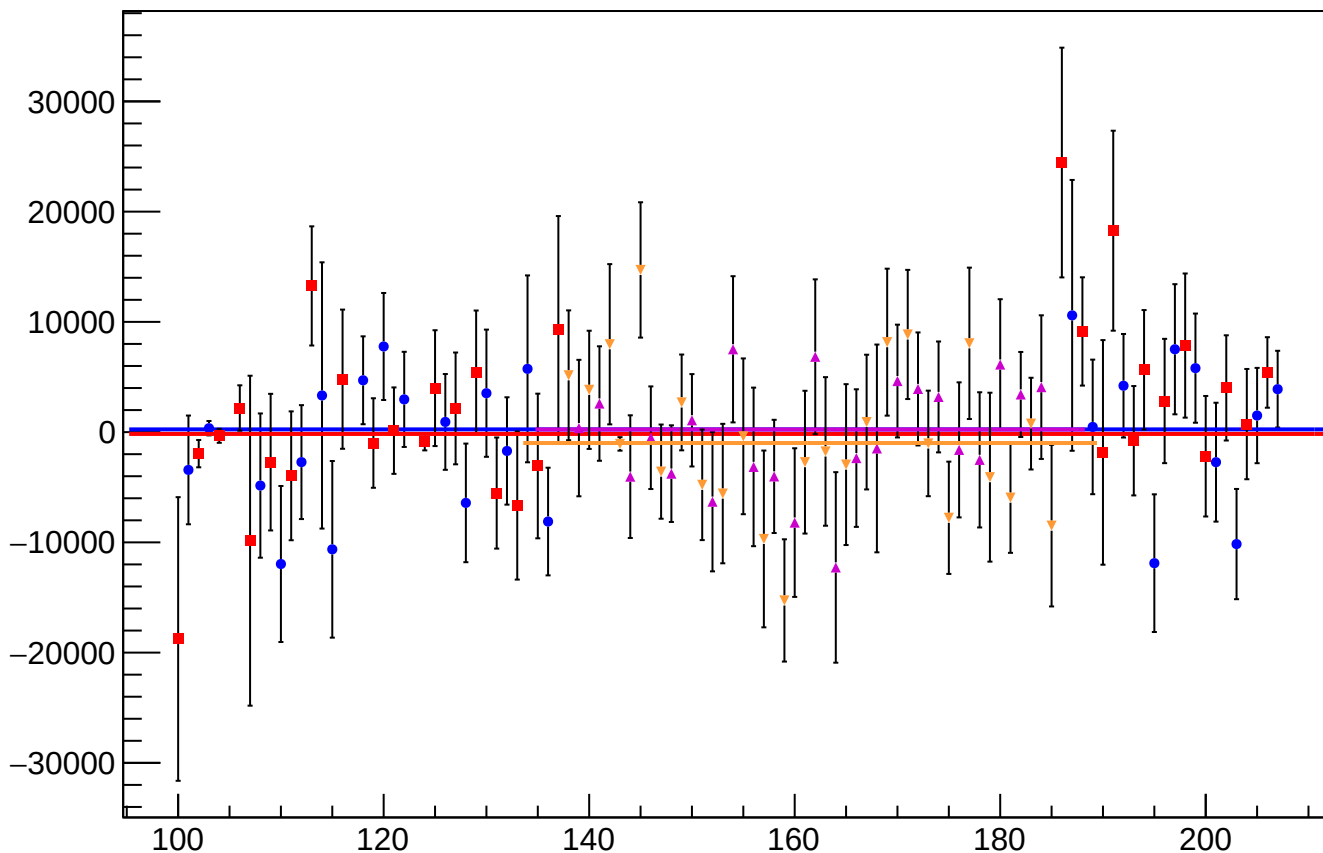
Left In: 1713.156+/-0.283  $\chi^2/\text{NDF}$ : 129290.6/22

+ sign 1691.861+/-0.205  $\chi^2/\text{NDF}$ : 642509.9/50

All: 1694.058+/-0.145  $\chi^2/\text{NDF}$ : 1197264.1/100

- sign 1696.239+/-0.204  $\chi^2/\text{NDF}$ : 554525.6/53

# asym\_atl\_avg\_reg\_correction\_mean vs Slug



Right In: 248.119+/-555.424  $\chi^2/\text{NDF}$ : 29.6/25

Left Out: -987.621+/-541.250  $\chi^2/\text{NDF}$ : 30.8/24

Right Out: -165.265+/-409.645  $\chi^2/\text{NDF}$ : 39.5/30

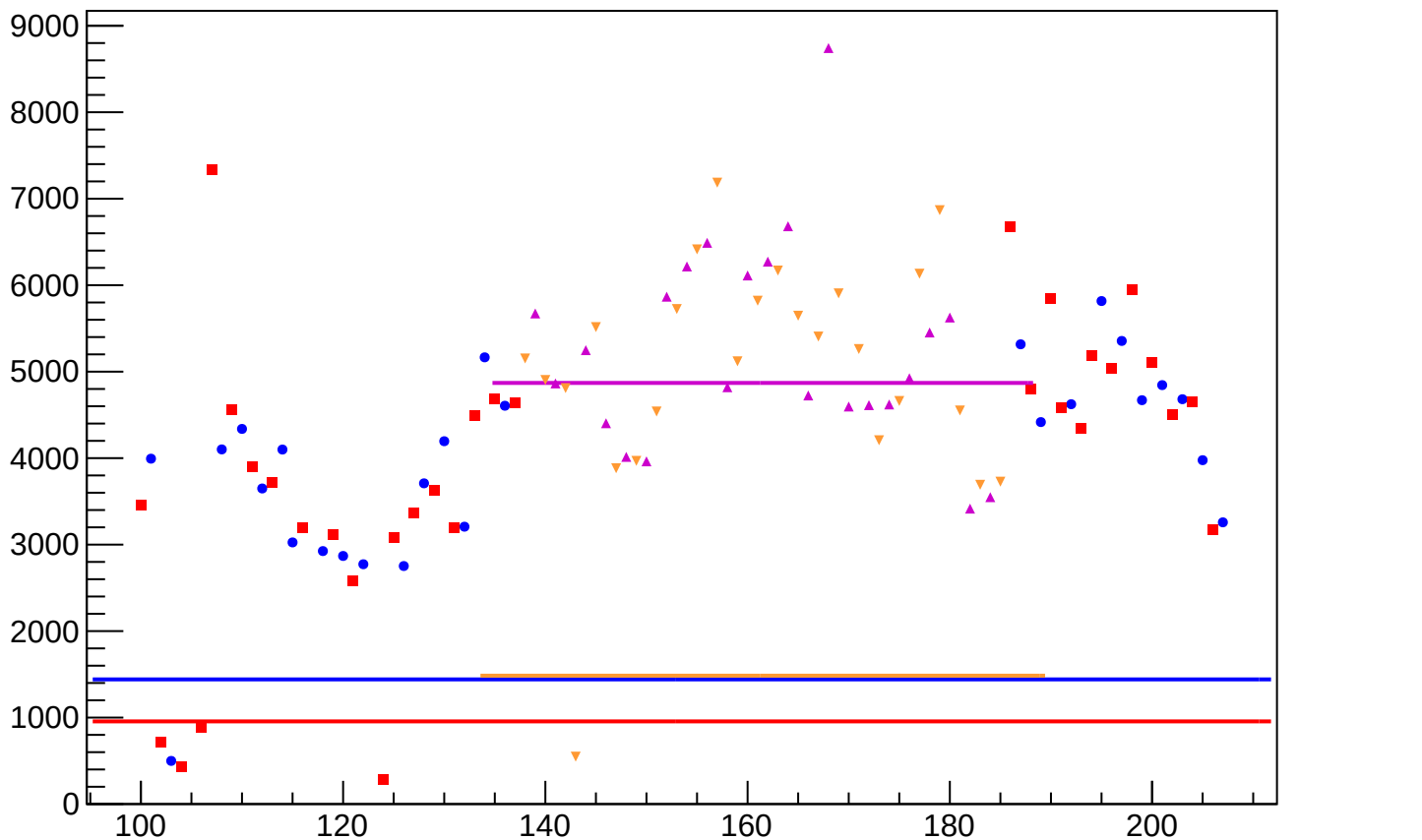
Left In: 239.582+/-1165.046  $\chi^2/\text{NDF}$ : 13.5/22

+ sign -385.720+/-387.636  $\chi^2/\text{NDF}$ : 63.0/50

All: -252.815+/-273.680  $\chi^2/\text{NDF}$ : 116.4/104

- sign -120.721+/-386.452  $\chi^2/\text{NDF}$ : 53.2/53

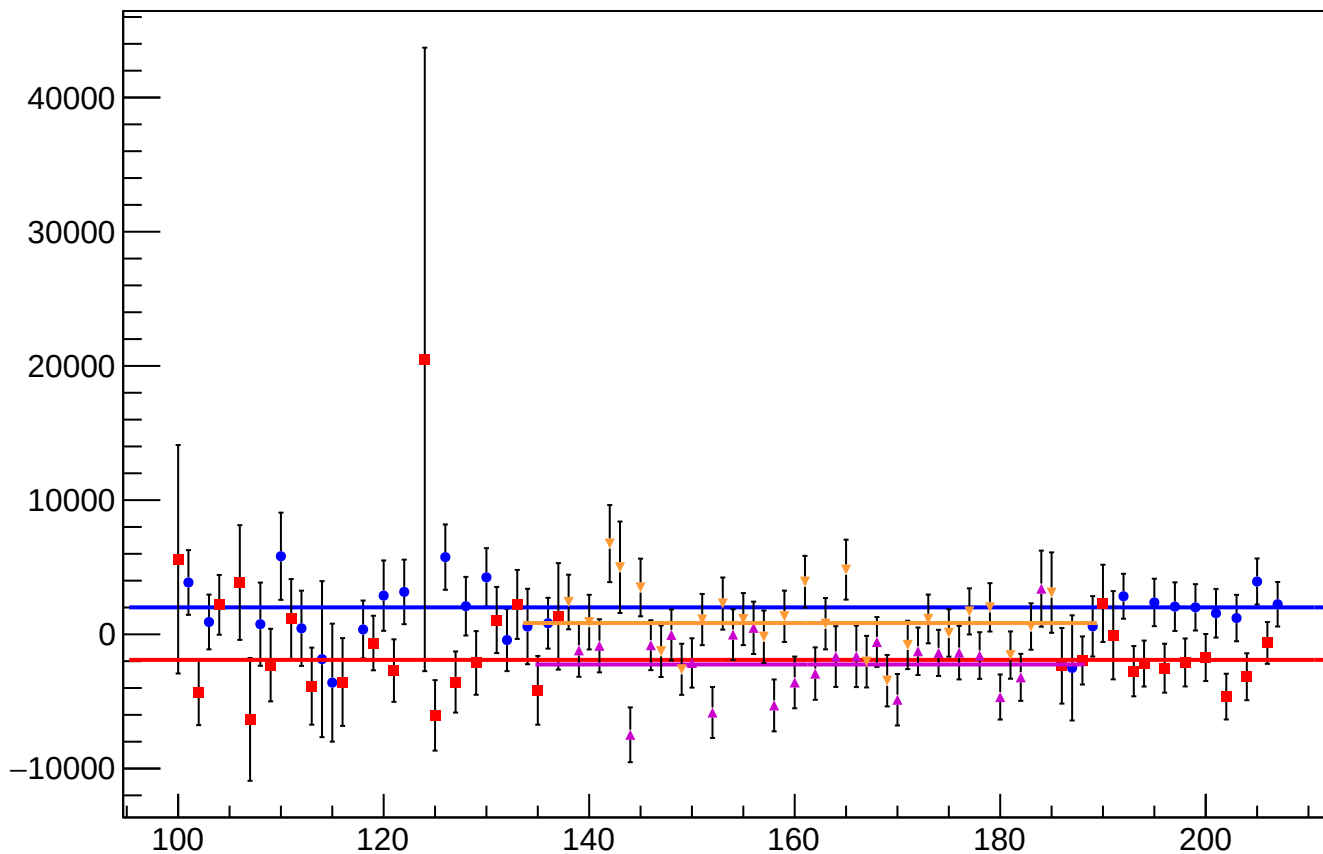
# asym\_atl\_avg\_reg\_correction\_rms vs Slug



|                            |                                     |                         |                                     |
|----------------------------|-------------------------------------|-------------------------|-------------------------------------|
| Right In: 1441.505+/-0.393 | $\chi^2/\text{NDF}$ : 16191632.0/25 | + sign 1463.591+/-0.274 | $\chi^2/\text{NDF}$ : 39422743.3/50 |
| Left Out: 1484.563+/-0.383 | $\chi^2/\text{NDF}$ : 23224946.4/24 | All: 1424.993+/-0.194   | $\chi^2/\text{NDF}$ : 81736790.6/1  |
| Right Out: 956.014+/-0.290 | $\chi^2/\text{NDF}$ : 20714291.9/30 | - sign 1386.631+/-0.273 | $\chi^2/\text{NDF}$ : 42274510.2/53 |
| Left In: 4869.707+/-0.824  | $\chi^2/\text{NDF}$ : 1474225.9/22  |                         |                                     |



# cor\_asym\_atl\_avg\_mean vs Slug



Right In:  $2010.169 \pm 428.079$   $\chi^2/\text{NDF}: 14.5/25$

Left Out:  $841.564 \pm 394.444$   $\chi^2/\text{NDF}: 30.4/24$

Right Out:  $-1903.283 \pm 417.942$   $\chi^2/\text{NDF}: 26.2/30$

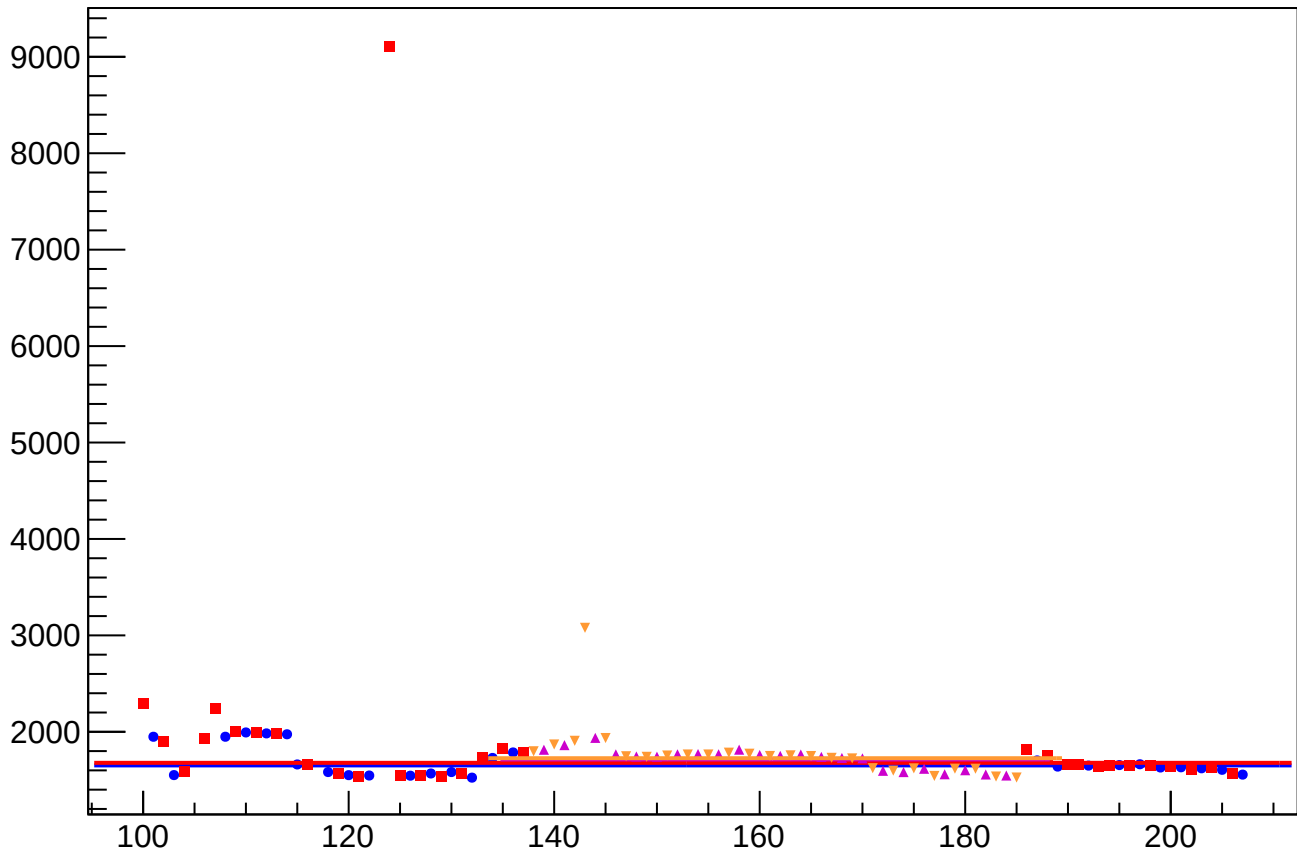
Left In:  $-2245.061 \pm 400.753$   $\chi^2/\text{NDF}: 29.4/22$

+ sign  $1378.159 \pm 290.077$   $\chi^2/\text{NDF}: 48.9/50$

All:  $-356.466 \pm 204.826$   $\chi^2/\text{NDF}: 176.2/104$

- sign  $-2081.344 \pm 289.261$   $\chi^2/\text{NDF}: 56.0/53$

# cor\_asym\_atl\_avg\_rms vs Slug



Right In: 1651.583 $\pm$ 0.303  $\chi^2$ /NDF: 154840.3/25

Left Out: 1726.058 $\pm$ 0.279  $\chi^2$ /NDF: 454930.8/24

Right Out: 1678.252 $\pm$ 0.295  $\chi^2$ /NDF: 419877.6/30

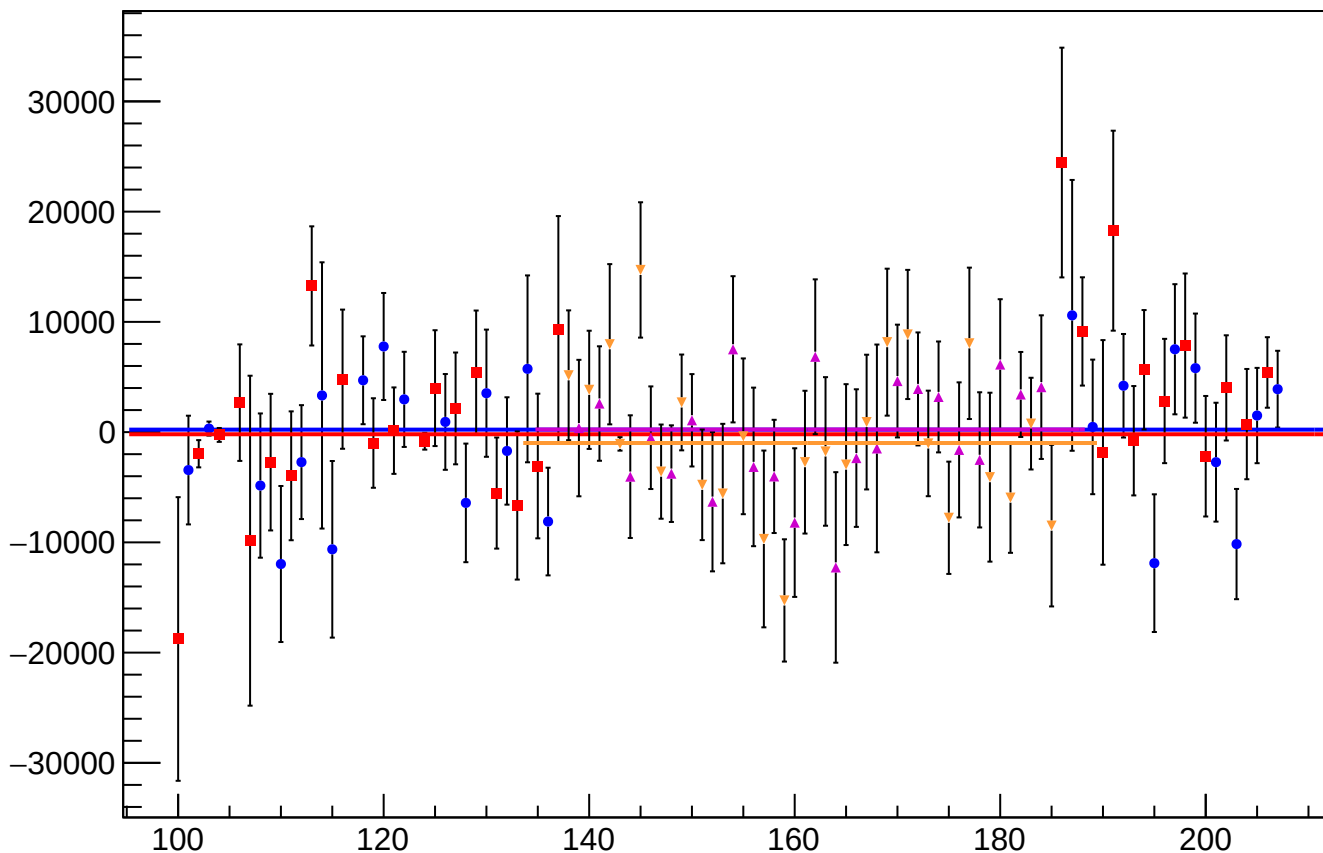
Left In: 1713.156 $\pm$ 0.283  $\chi^2$ /NDF: 129290.6/22

+ sign 1691.861 $\pm$ 0.205  $\chi^2$ /NDF: 642510.0/50

All: 1694.141 $\pm$ 0.145  $\chi^2$ /NDF: 1199205.4/10

- sign 1696.405 $\pm$ 0.204  $\chi^2$ /NDF: 556449.1/53

# asym\_atl\_avg\_cor\_correction\_mean vs Slug



Right In: 225.975 $\pm$ 545.249  $\chi^2$ /NDF: 29.6/25

Left Out: -987.291 $\pm$ 541.232  $\chi^2$ /NDF:30.8/24

Right Out: -193.596 $\pm$ 414.874  $\chi^2$ /NDF: 38.3/30

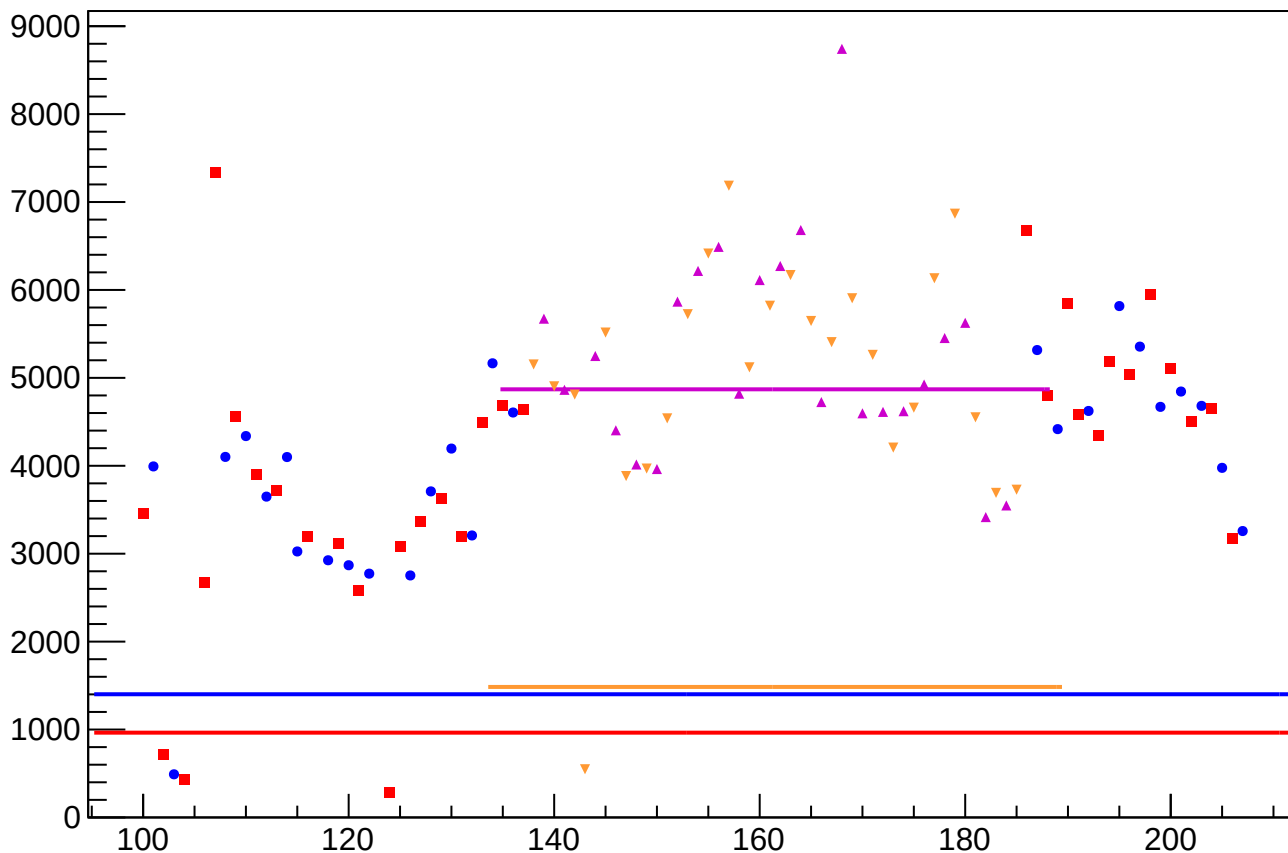
Left In: 239.478 $\pm$ 1165.045  $\chi^2$ /NDF:13.5/22

+ sign -385.144 $\pm$ 384.121  $\chi^2$ /NDF: 62.9/50

All: -267.082 $\pm$ 273.957  $\chi^2$ /NDF: 115.1/104

- sign -144.859 $\pm$ 390.833  $\chi^2$ /NDF: 52.0/53

# asym\_atl\_avg\_cor\_correction\_rms vs Slug



Right In: 1401.337+/-0.386  $\chi^2/\text{NDF}$ : 16473463.3/25

Left Out: 1484.485+/-0.383  $\chi^2/\text{NDF}$ : 23225570.5/24

Right Out: 964.518+/-0.293  $\chi^2/\text{NDF}$ : 20960776.7/30

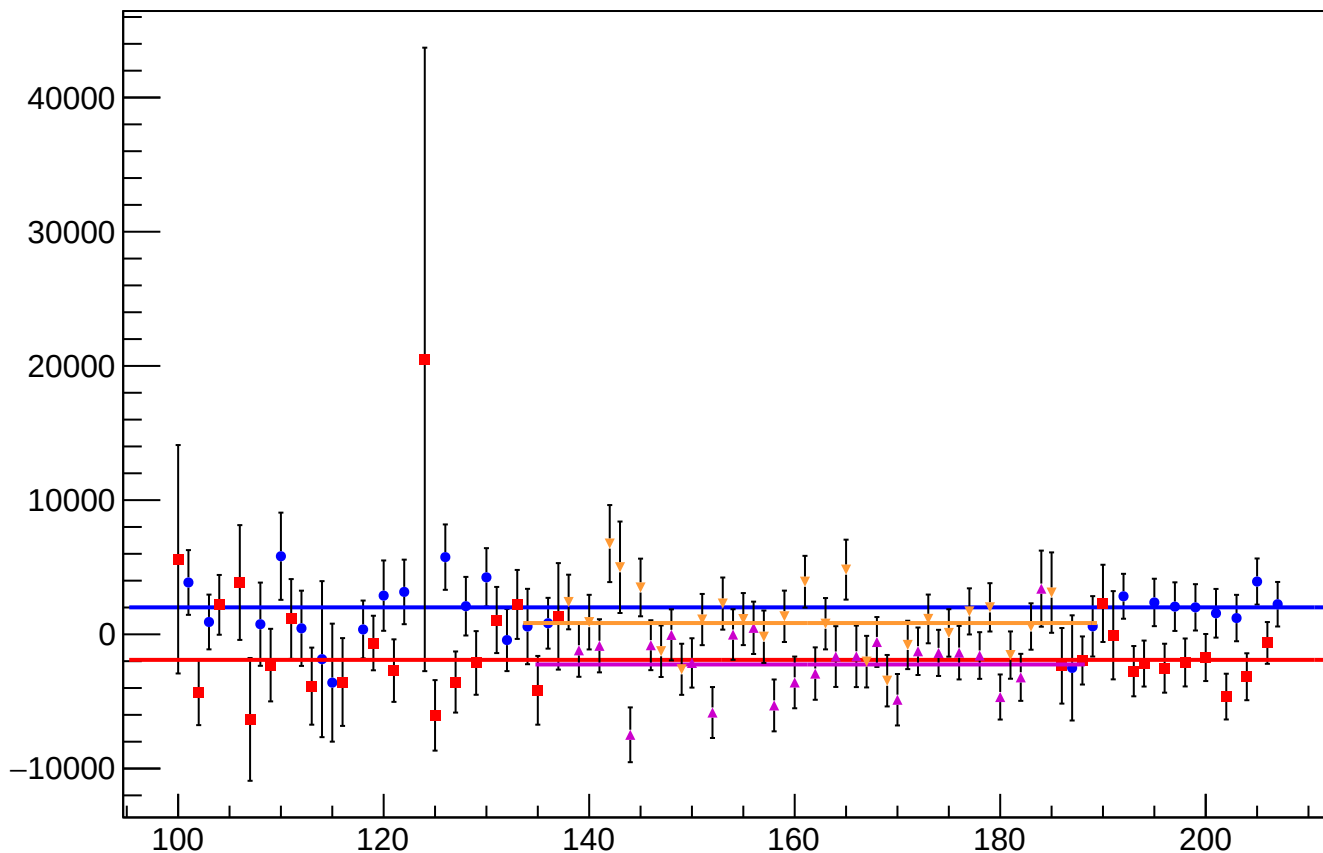
Left In: 4869.699+/-0.824  $\chi^2/\text{NDF}$ : 1474252.6/22

+ sign 1443.218+/-0.272  $\chi^2/\text{NDF}$ : 39722460.3/50

All: 1423.947+/-0.194  $\chi^2/\text{NDF}$ : 82110123.8/100

- sign 1403.996+/-0.276  $\chi^2/\text{NDF}$ : 42377417.9/53

# eigen\_cor\_asym\_atl\_avg\_mean vs Slug



Right In:  $2010.169 \pm 428.079$   $\chi^2/\text{NDF}$ : 14.5/25

Left Out:  $841.564 \pm 394.444$   $\chi^2/\text{NDF}$ : 30.4/24

Right Out:  $-1903.283 \pm 417.942$   $\chi^2/\text{NDF}$ : 26.2/30

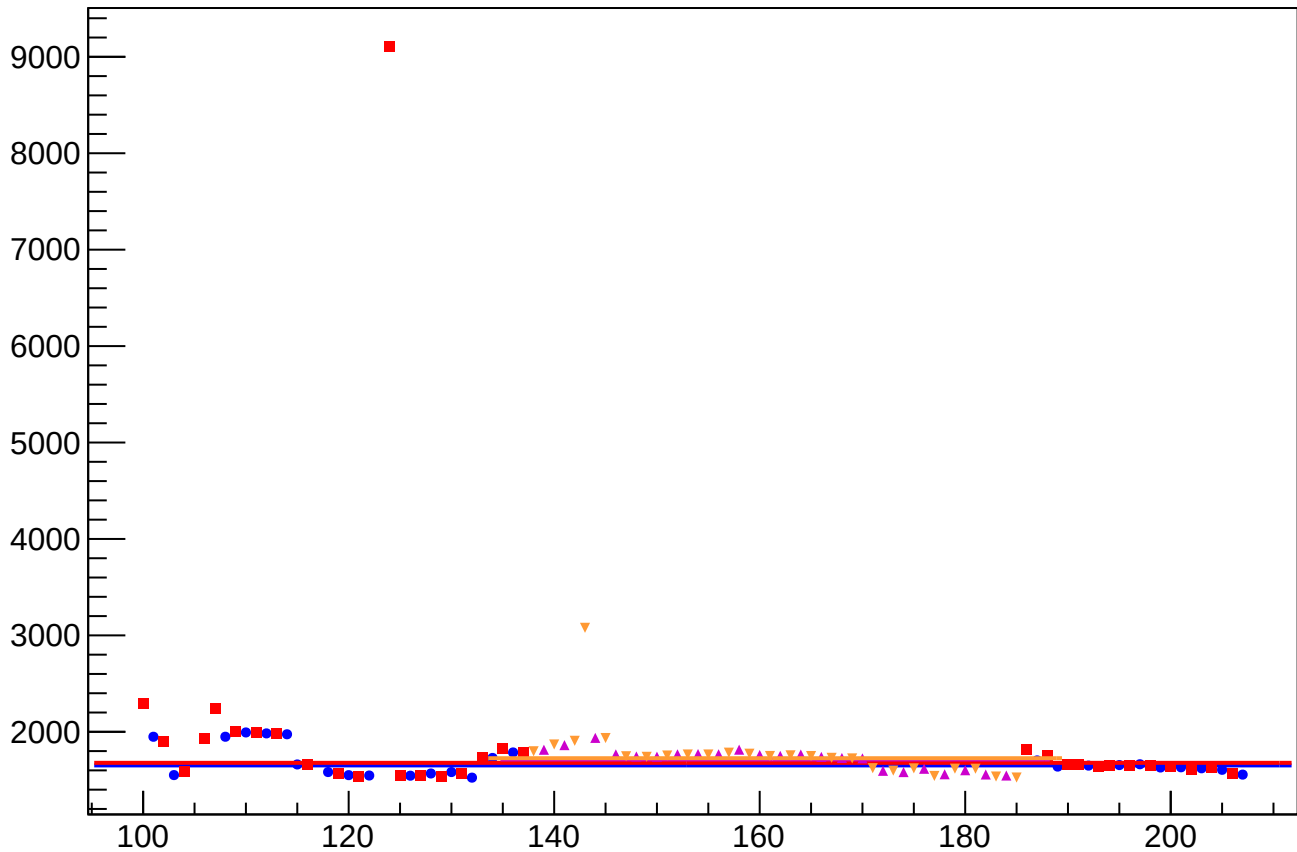
Left In:  $-2245.061 \pm 400.753$   $\chi^2/\text{NDF}$ : 29.4/22

+ sign  $1378.159 \pm 290.077$   $\chi^2/\text{NDF}$ : 48.9/50

All:  $-356.466 \pm 204.826$   $\chi^2/\text{NDF}$ : 176.2/104

- sign  $-2081.344 \pm 289.261$   $\chi^2/\text{NDF}$ : 56.0/53

# eigen\_cor\_asym\_atl\_avg\_rms vs Slug



Right In: 1651.583+/-0.303  $\chi^2/\text{NDF}$ : 154840.3/25

Left Out: 1726.058+/-0.279  $\chi^2/\text{NDF}$ : 454930.8/24

Right Out: 1678.252+/-0.295  $\chi^2/\text{NDF}$ : 419877.6/30

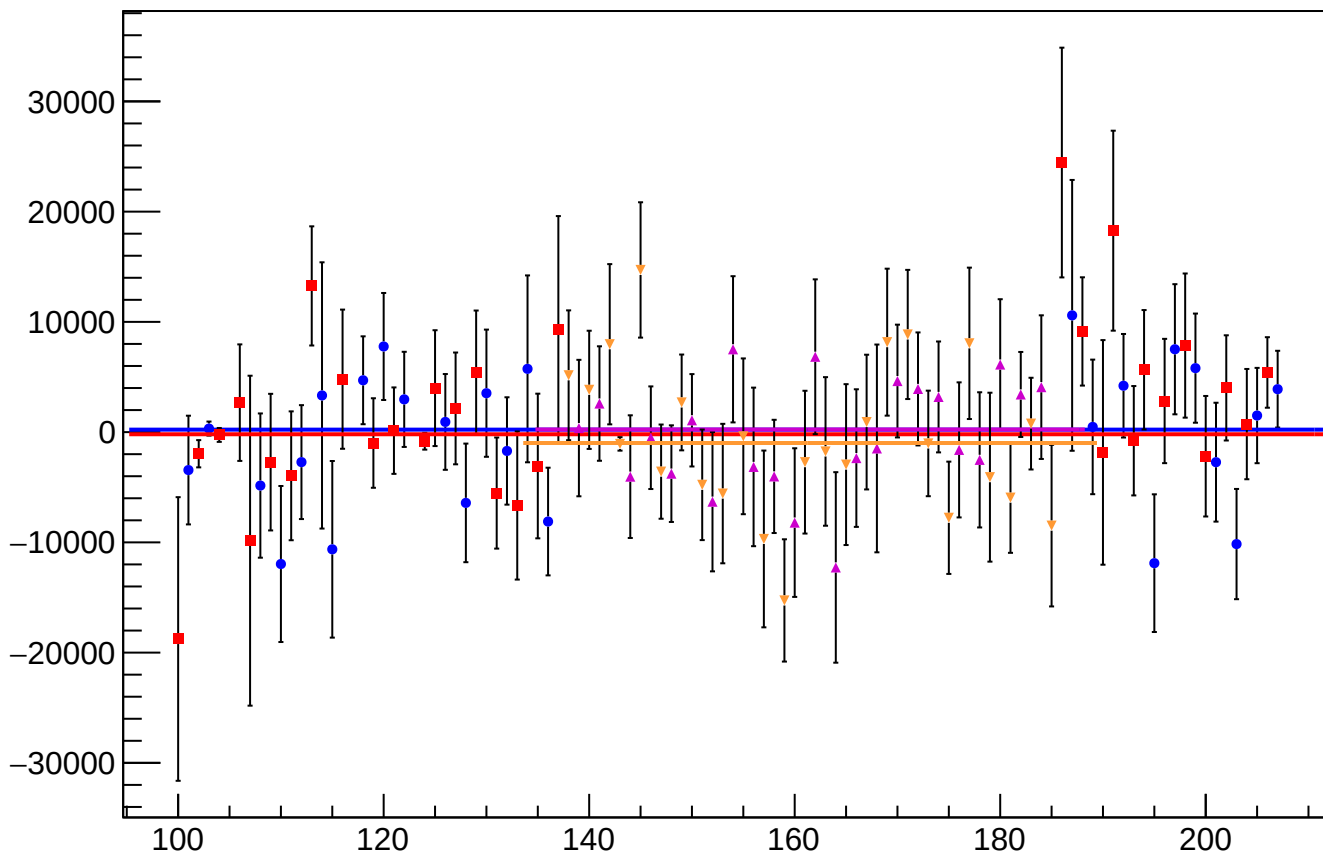
Left In: 1713.156+/-0.283  $\chi^2/\text{NDF}$ : 129290.6/22

+ sign 1691.861+/-0.205  $\chi^2/\text{NDF}$ : 642510.0/50

All: 1694.141+/-0.145  $\chi^2/\text{NDF}$ : 1199205.4/100

- sign 1696.405+/-0.204  $\chi^2/\text{NDF}$ : 556449.1/53

asym\_atl\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In: 225.975 $\pm$ 545.249  $\chi^2$ /NDF: 29.6/25

Left Out: -987.291 $\pm$ 541.232  $\chi^2$ /NDF:30.8/24

Right Out: -193.596 $\pm$ 414.874  $\chi^2$ /NDF: 38.3/30

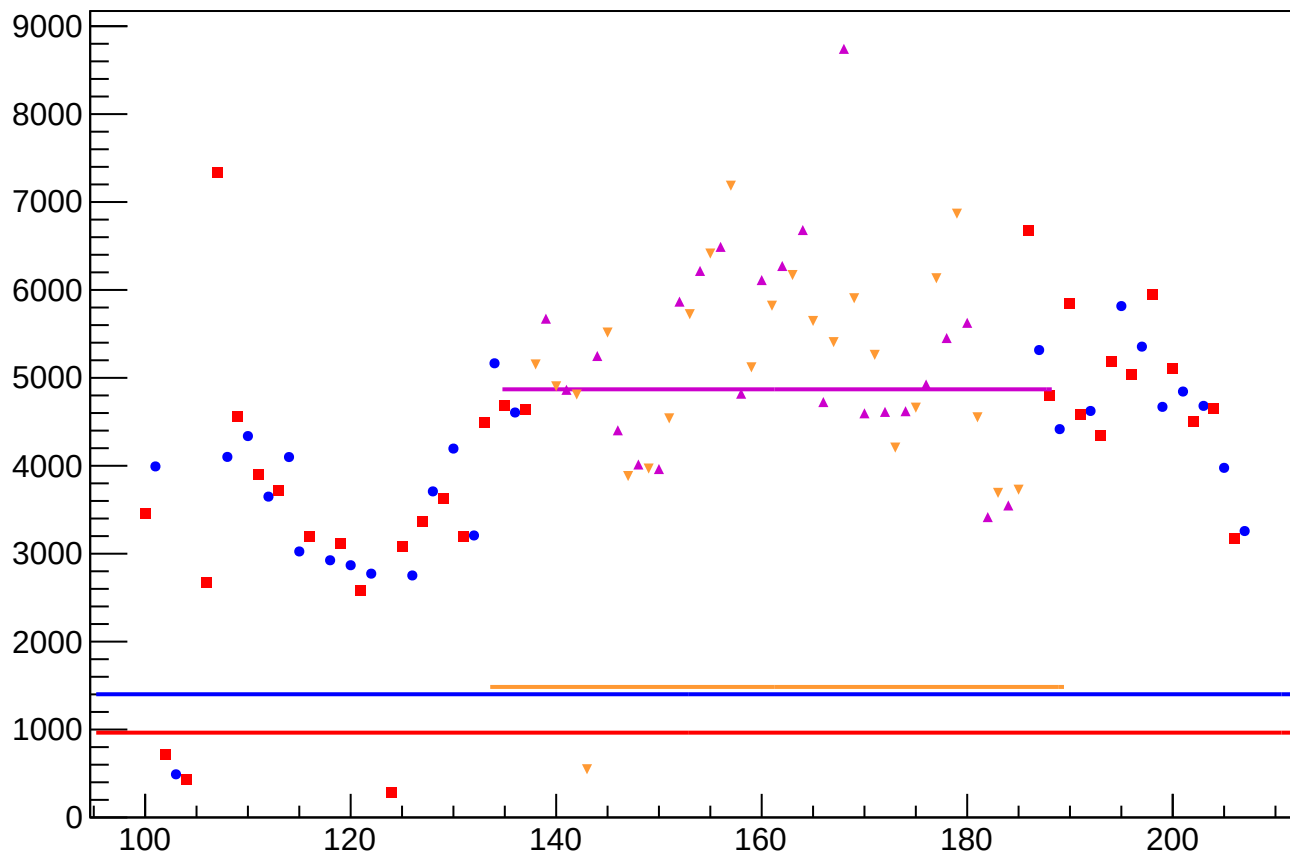
Left In: 239.478 $\pm$ 1165.045  $\chi^2$ /NDF:13.5/22

+ sign -385.144 $\pm$ 384.121  $\chi^2$ /NDF: 62.9/50

All: -267.082 $\pm$ 273.957  $\chi^2$ /NDF: 115.1/104

- sign -144.859 $\pm$ 390.833  $\chi^2$ /NDF: 52.0/53

asym\_atl\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 1401.337+/-0.386  $\chi^2/\text{NDF}$ : 16473463.3/25

Left Out: 1484.485+/-0.383  $\chi^2/\text{NDF}$ : 23225570.5/24

Right Out: 964.518+/-0.293  $\chi^2/\text{NDF}$ : 20960776.7/30

Left In: 4869.699+/-0.824  $\chi^2/\text{NDF}$ : 1474252.6/22

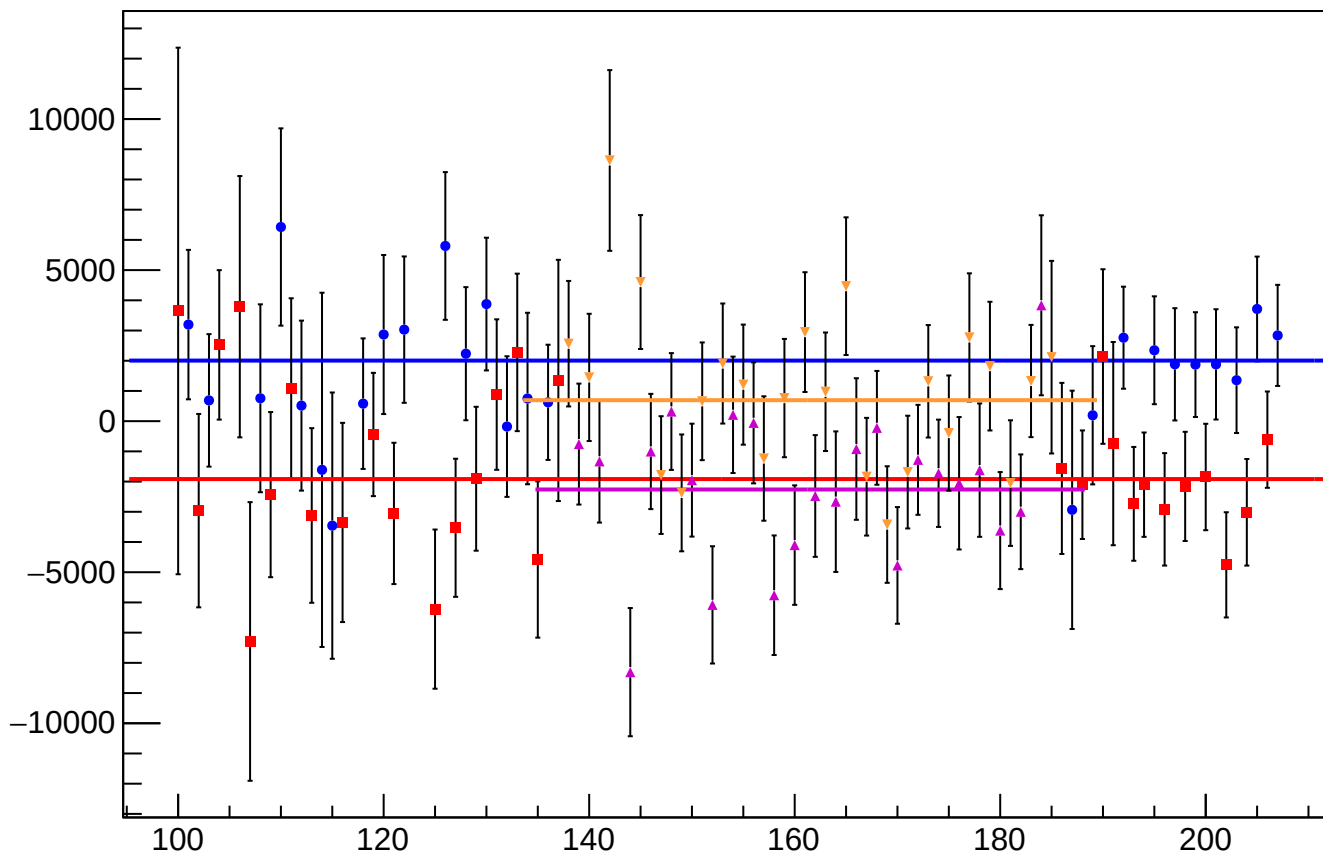
+ sign 1443.218+/-0.272  $\chi^2/\text{NDF}$ : 39722460.3/50

All: 1423.947+/-0.194  $\chi^2/\text{NDF}$ : 82110123.8/100

- sign 1403.996+/-0.276  $\chi^2/\text{NDF}$ : 42377417.9/53



# dit\_asym\_atl\_avg\_mean vs Slug



Right In: 2005.323 $\pm$ 433.260  $\chi^2$ /NDF: 14.1/25

Left Out: 694.317 $\pm$ 418.051  $\chi^2$ /NDF:32.2/23

Right Out: -1916.555 $\pm$ 425.986  $\chi^2$ /NDF: 24.1/29

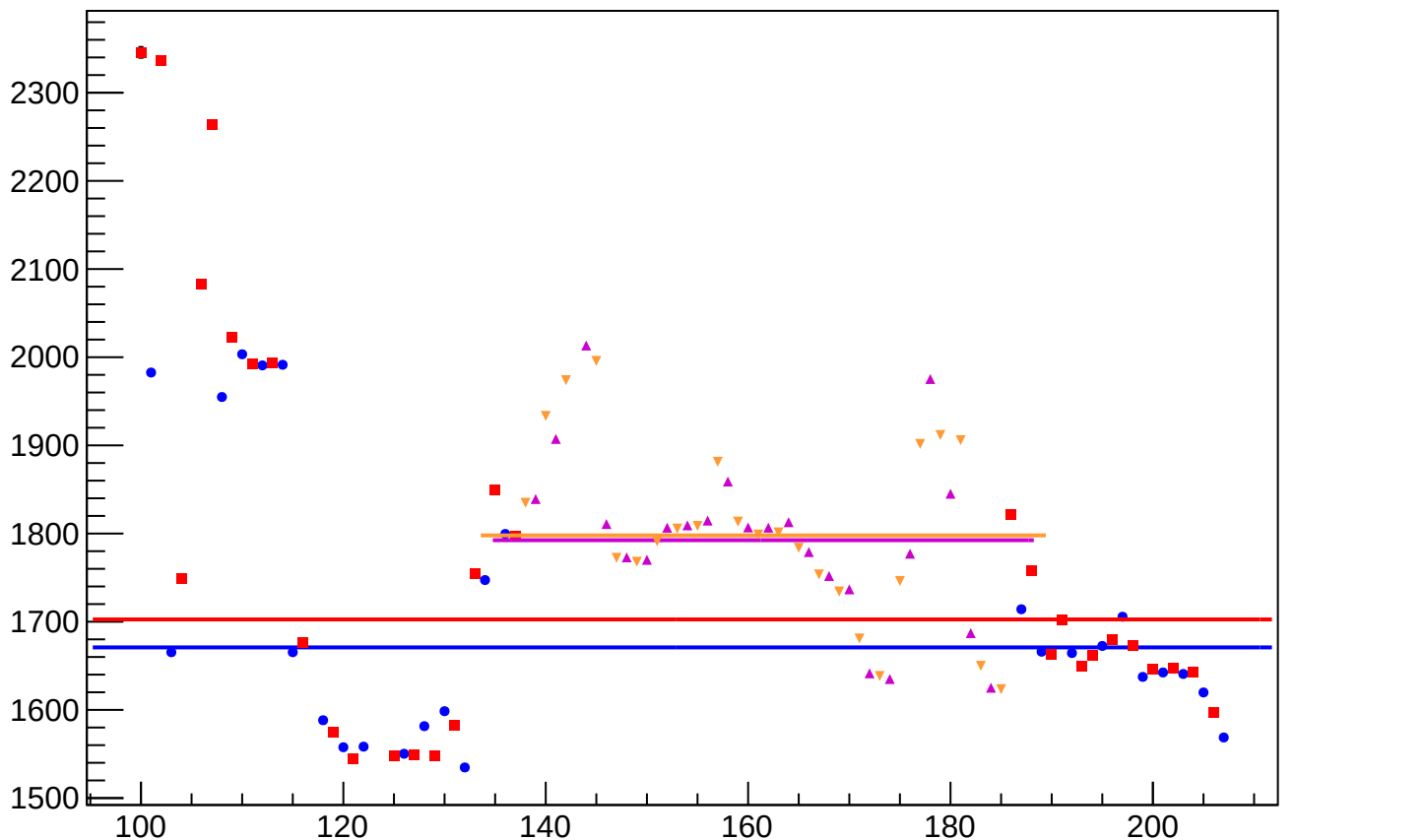
Left In: -2261.767 $\pm$ 419.177  $\chi^2$ /NDF:30.4/22

+ sign 1326.406 $\pm$ 300.840  $\chi^2$ /NDF: 51.0/49

All: -394.502 $\pm$ 211.994  $\chi^2$ /NDF: 170.9/102

- sign -2091.942 $\pm$ 298.781  $\chi^2$ /NDF: 54.9/52

# dit\_asym\_atl\_avg\_rms vs Slug



Right In: 1670.878+/-0.306  $\chi^2/\text{NDF}$ : 151707.5/25

Left Out: 1797.909+/-0.296  $\chi^2/\text{NDF}$ : 98002.1/23

Right Out: 1702.611+/-0.301  $\chi^2/\text{NDF}$ : 283777.8/29

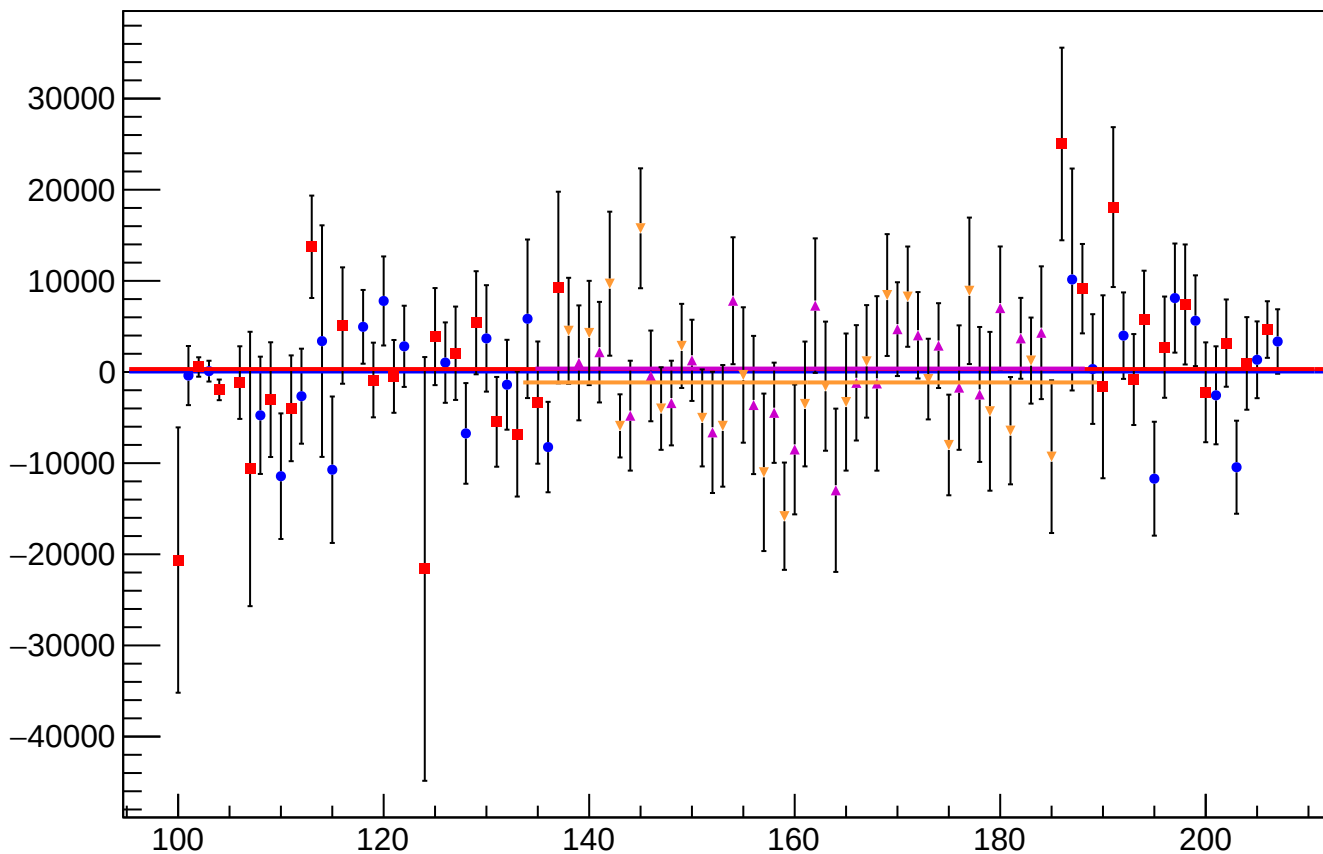
Left In: 1792.450+/-0.296  $\chi^2/\text{NDF}$ : 92875.2/22

+ sign 1736.662+/-0.213  $\chi^2/\text{NDF}$ : 338746.7/49

All: 1742.479+/-0.150  $\chi^2/\text{NDF}$ : 762122.2/102

- sign 1748.212+/-0.211  $\chi^2/\text{NDF}$ : 421890.8/52

# asym\_atl\_avg\_dit\_correction\_mean vs Slug



Right In: 55.591+/-764.668  $\chi^2/\text{NDF}$ : 28.5/25

Left Out: -1144.405+/-1164.458  $\chi^2/\text{NDF}$ : 32.6/24

Right Out: 323.560+/-621.202  $\chi^2/\text{NDF}$ : 37.6/30

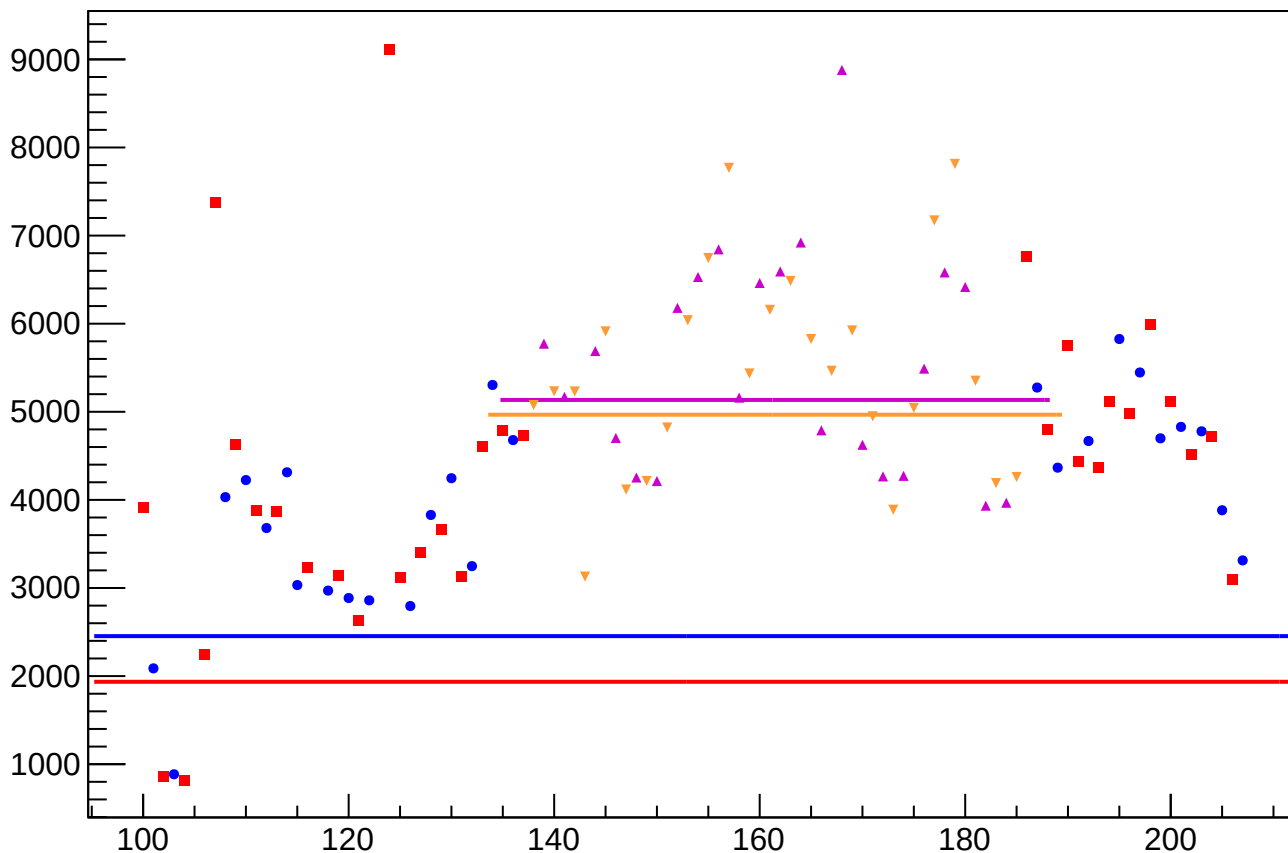
Left In: 374.927+/-1228.699  $\chi^2/\text{NDF}$ : 13.3/22

+ sign -305.962+/-639.175  $\chi^2/\text{NDF}$ : 61.8/50

All: 59.268+/-418.799  $\chi^2/\text{NDF}$ : 113.3/104

- sign 334.017+/-554.378  $\chi^2/\text{NDF}$ : 50.9/53

# asym\_atl\_avg\_dit\_correction\_rms vs Slug



Right In: 2453.556+/-0.541  $\chi^2/\text{NDF}$ : 8663014.7/25

Left Out: 4966.879+/-0.823  $\chi^2/\text{NDF}$ : 1917937.7/24

Right Out: 1935.574+/-0.439  $\chi^2/\text{NDF}$ : 13272260.7/30

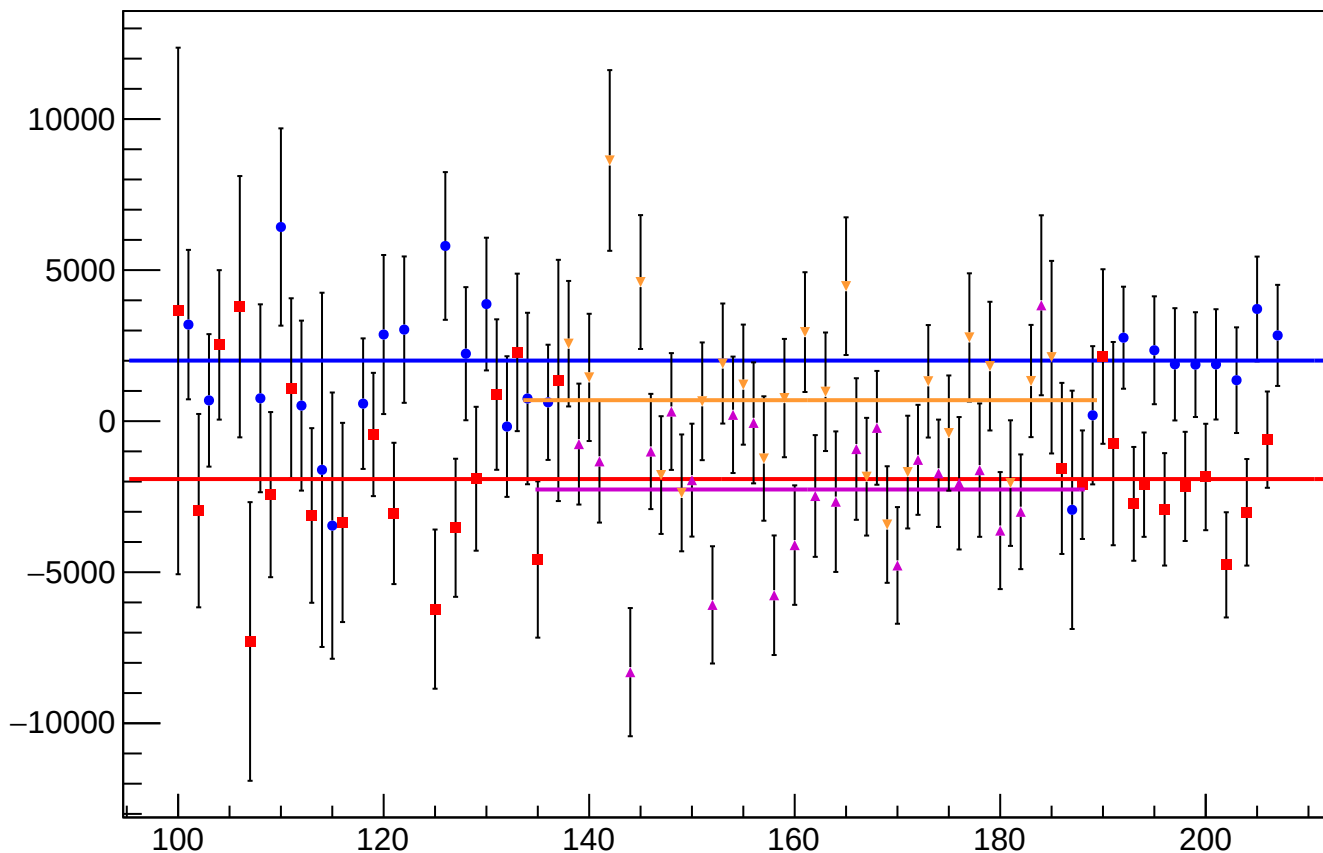
Left In: 5134.445+/-0.869  $\chi^2/\text{NDF}$ : 1487075.9/22

+ sign 3210.808+/-0.452  $\chi^2/\text{NDF}$ : 17090823.0/50

All: 2854.681+/-0.296  $\chi^2/\text{NDF}$ : 43734471.6/100

- sign 2586.778+/-0.392  $\chi^2/\text{NDF}$ : 25555716.9/53

# eigen\_dit\_asym\_atl\_avg\_mean vs Slug



Right In:  $2005.320 \pm 433.259$   $\chi^2/\text{NDF}$ : 14.1/25

Left Out:  $694.313 \pm 418.051$   $\chi^2/\text{NDF}$ : 32.2/23

Right Out:  $-1916.551 \pm 425.986$   $\chi^2/\text{NDF}$ : 24.1/29

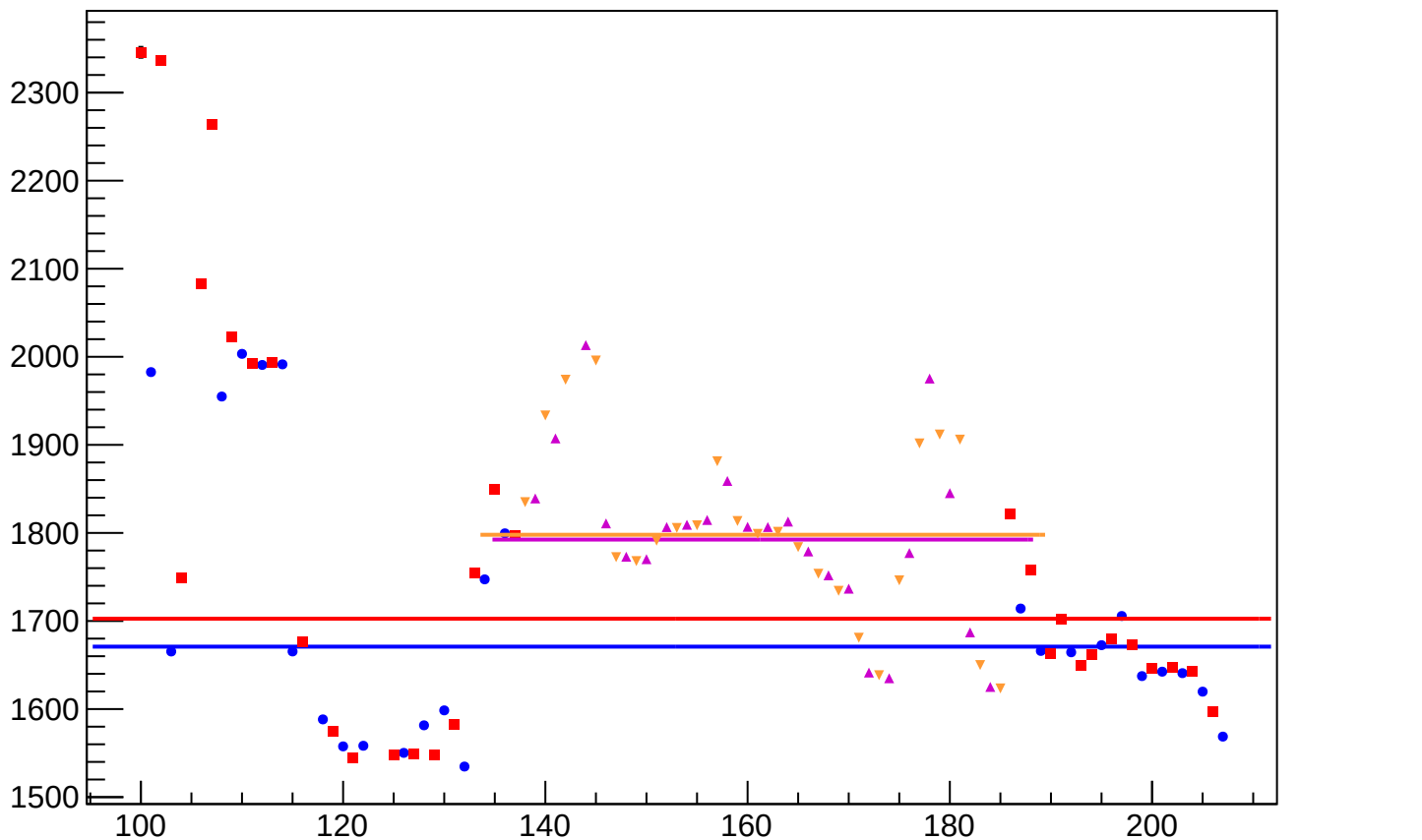
Left In:  $-2261.767 \pm 419.177$   $\chi^2/\text{NDF}$ : 30.4/22

+ sign  $1326.403 \pm 300.840$   $\chi^2/\text{NDF}$ : 51.0/49

All:  $-394.503 \pm 211.994$   $\chi^2/\text{NDF}$ : 170.9/102

- sign  $-2091.940 \pm 298.781$   $\chi^2/\text{NDF}$ : 54.9/52

# eigen\_dit\_asym\_atl\_avg\_rms vs Slug



Right In: 1670.877+/-0.306  $\chi^2/\text{NDF}$ : 151707.7/25

Left Out: 1797.911+/-0.296  $\chi^2/\text{NDF}$ : 98005.5/23

Right Out: 1702.611+/-0.301  $\chi^2/\text{NDF}$ : 283777.1/29

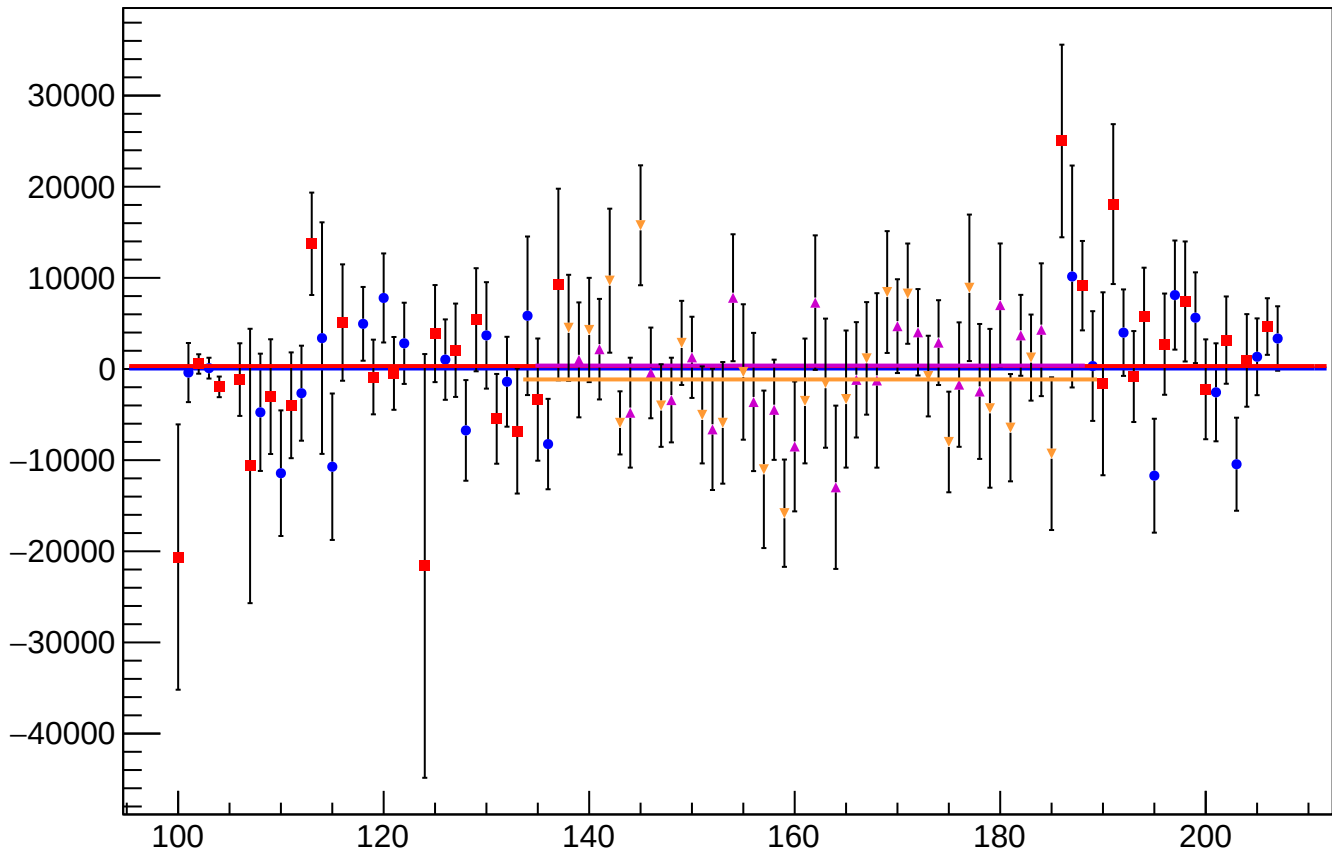
Left In: 1792.451+/-0.296  $\chi^2/\text{NDF}$ : 92878.6/22

+ sign 1736.663+/-0.213  $\chi^2/\text{NDF}$ : 338752.3/49

All: 1742.480+/-0.150  $\chi^2/\text{NDF}$ : 762131.8/102

- sign 1748.212+/-0.211  $\chi^2/\text{NDF}$ : 421894.9/52

asym\_atl\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In:  $55.593 \pm 764.665$   $\chi^2/\text{NDF}$ : 28.5/25

Left Out:  $-1144.411 \pm 1164.460$   $\chi^2/\text{NDF}$ : 32.6/24

Right Out:  $323.551 \pm 621.198$   $\chi^2/\text{NDF}$ : 37.6/30

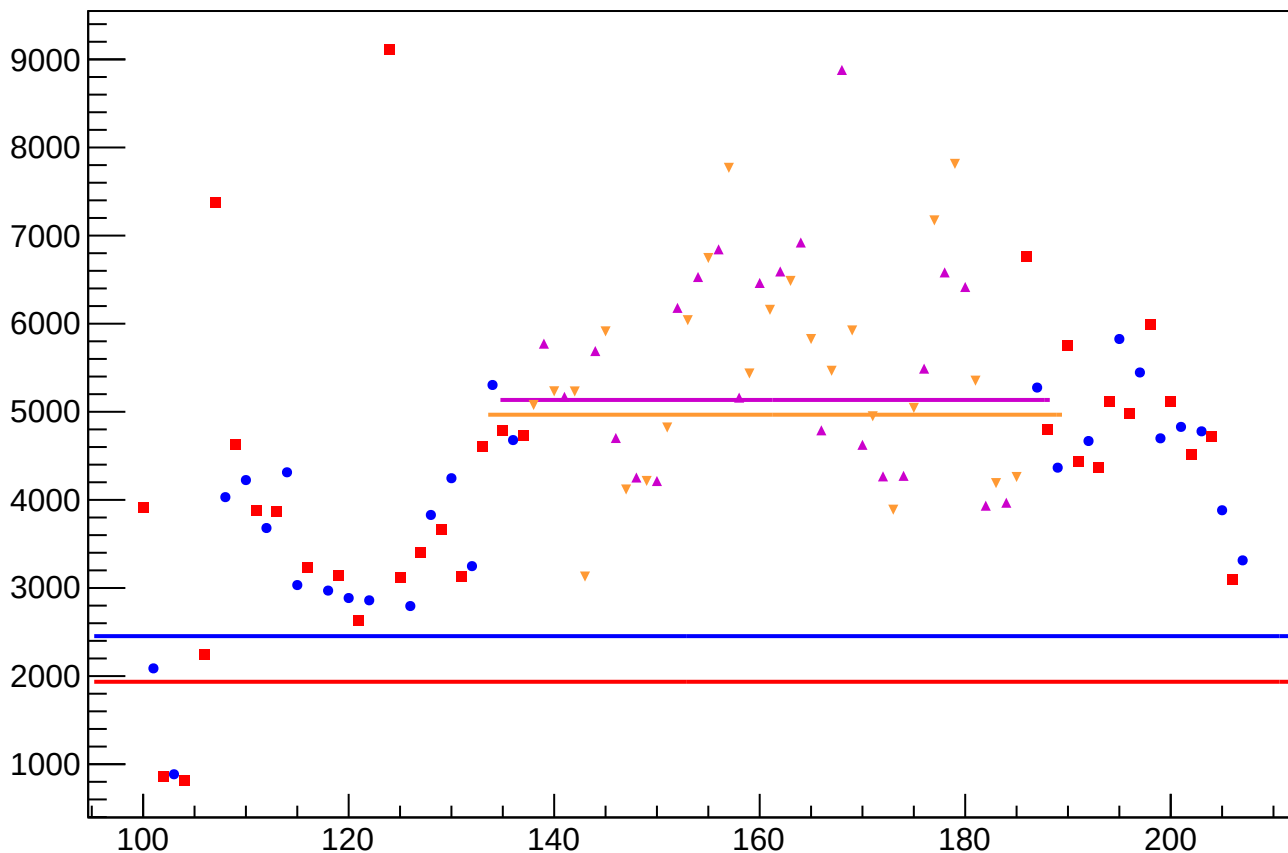
Left In:  $374.928 \pm 1228.701$   $\chi^2/\text{NDF}$ : 13.3/22

+ sign  $-305.959 \pm 639.174$   $\chi^2/\text{NDF}$ : 61.8/50

All:  $59.265 \pm 418.798$   $\chi^2/\text{NDF}$ : 113.3/104

- sign  $334.010 \pm 554.375$   $\chi^2/\text{NDF}$ : 50.9/53

asym\_atl\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 2453.539 $\pm$ 0.541  $\chi^2$ /NDF: 8663128.8/25

Left Out: 4966.886 $\pm$ 0.823  $\chi^2$ /NDF:1917943.9/24

Right Out: 1935.556 $\pm$ 0.439  $\chi^2$ /NDF: 13272382.5/30

Left In: 5134.453 $\pm$ 0.869  $\chi^2$ /NDF:1487077.8/22

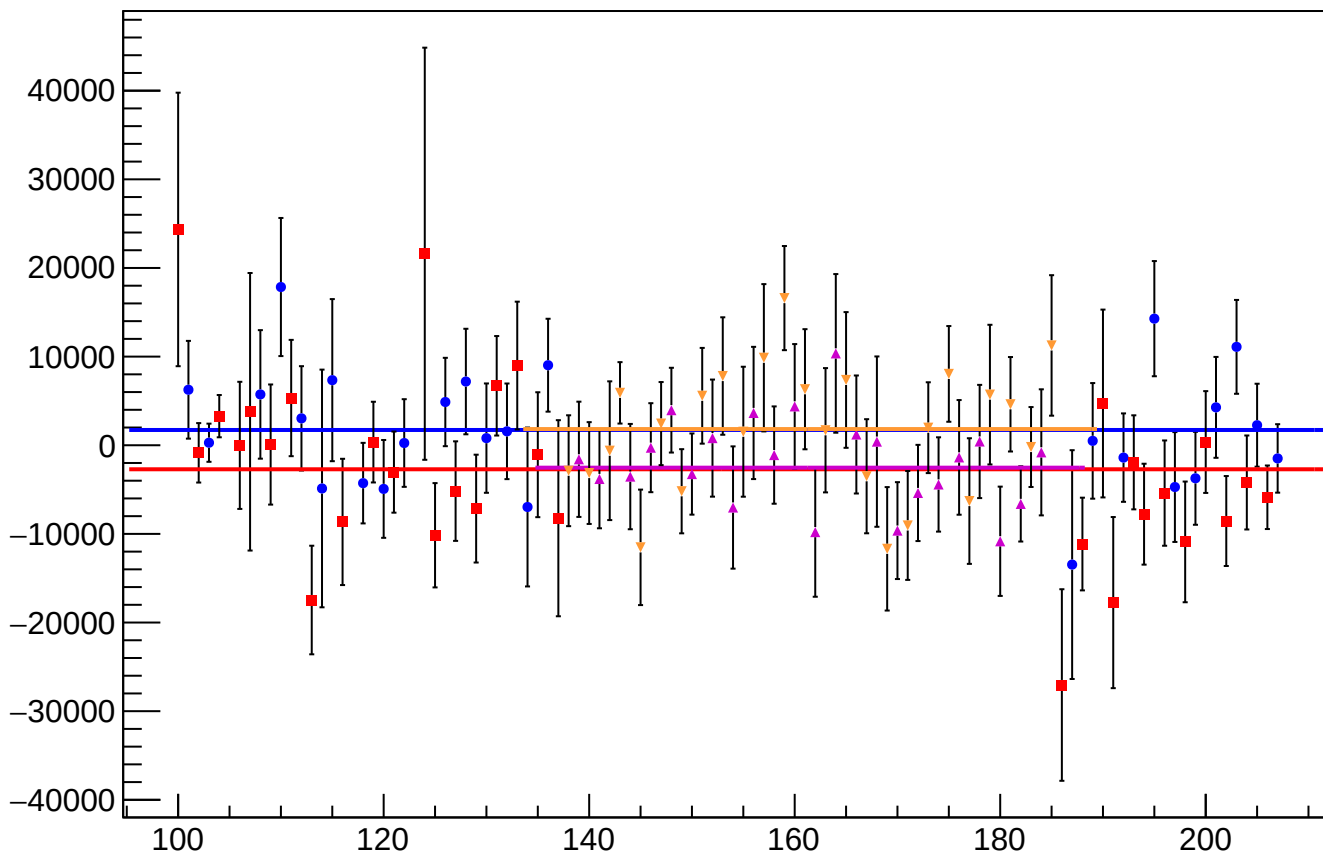
+ sign 3210.792 $\pm$ 0.452  $\chi^2$ /NDF: 17091077.3/50

All: 2854.661 $\pm$ 0.296  $\chi^2$ /NDF: 43735042.0/1

- sign 2586.758 $\pm$ 0.392  $\chi^2$ /NDF: 25556013.5/53



# asym\_atl\_avg\_mean vs Slug



Right In: 1722.620+/-1017.531  $\chi^2/\text{NDF}$ : 25.6/25

Left Out: 1826.201+/-1172.478  $\chi^2/\text{NDF}$ : 31.1/24

Right Out: -2710.516+/-993.806  $\chi^2/\text{NDF}$ : 43.3/30

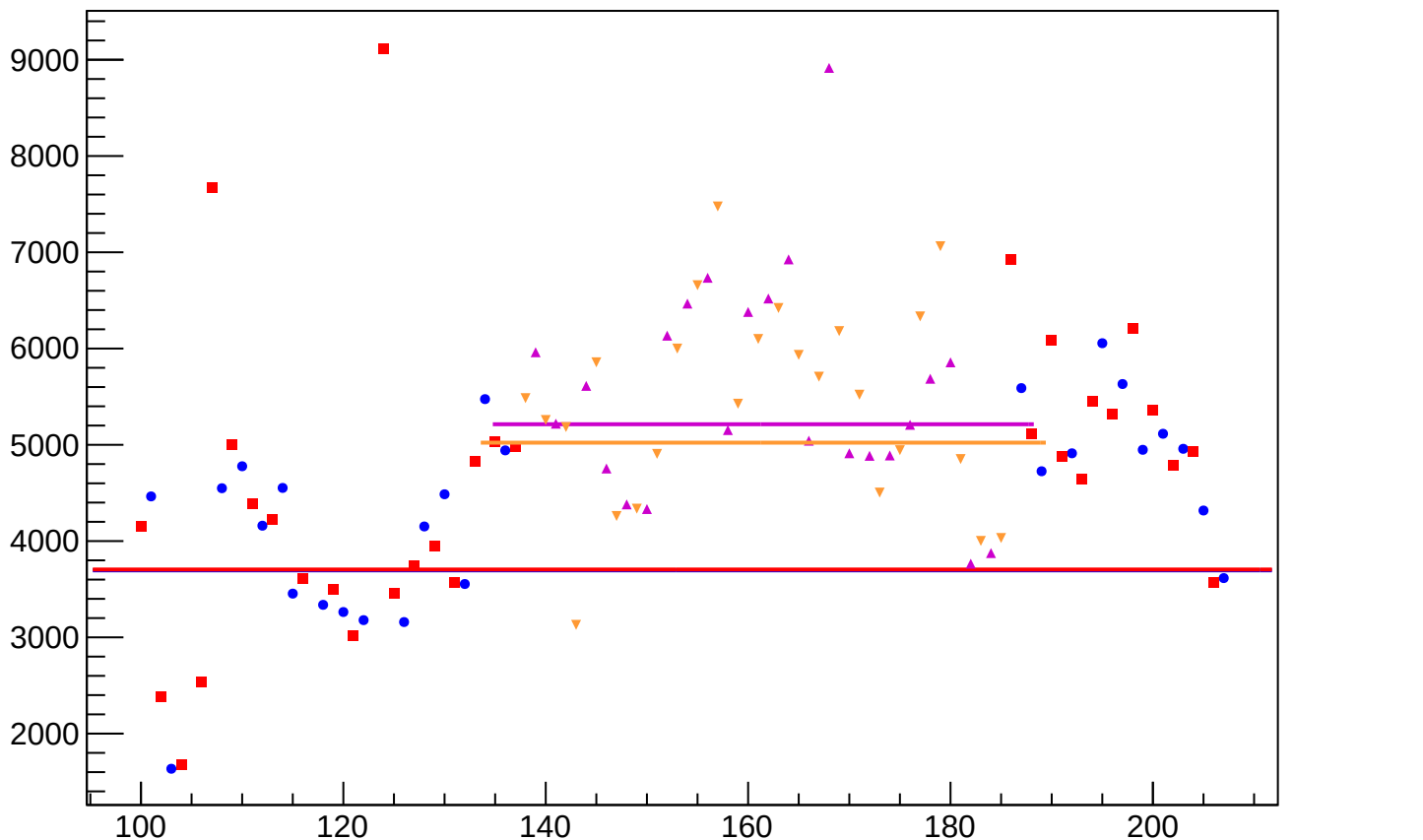
Left In: -2529.501+/-1242.040  $\chi^2/\text{NDF}$ : 13.2/22

+ sign 1767.119+/-768.488  $\chi^2/\text{NDF}$ : 56.7/50

All: -414.997+/-546.032  $\chi^2/\text{NDF}$ : 129.5/104

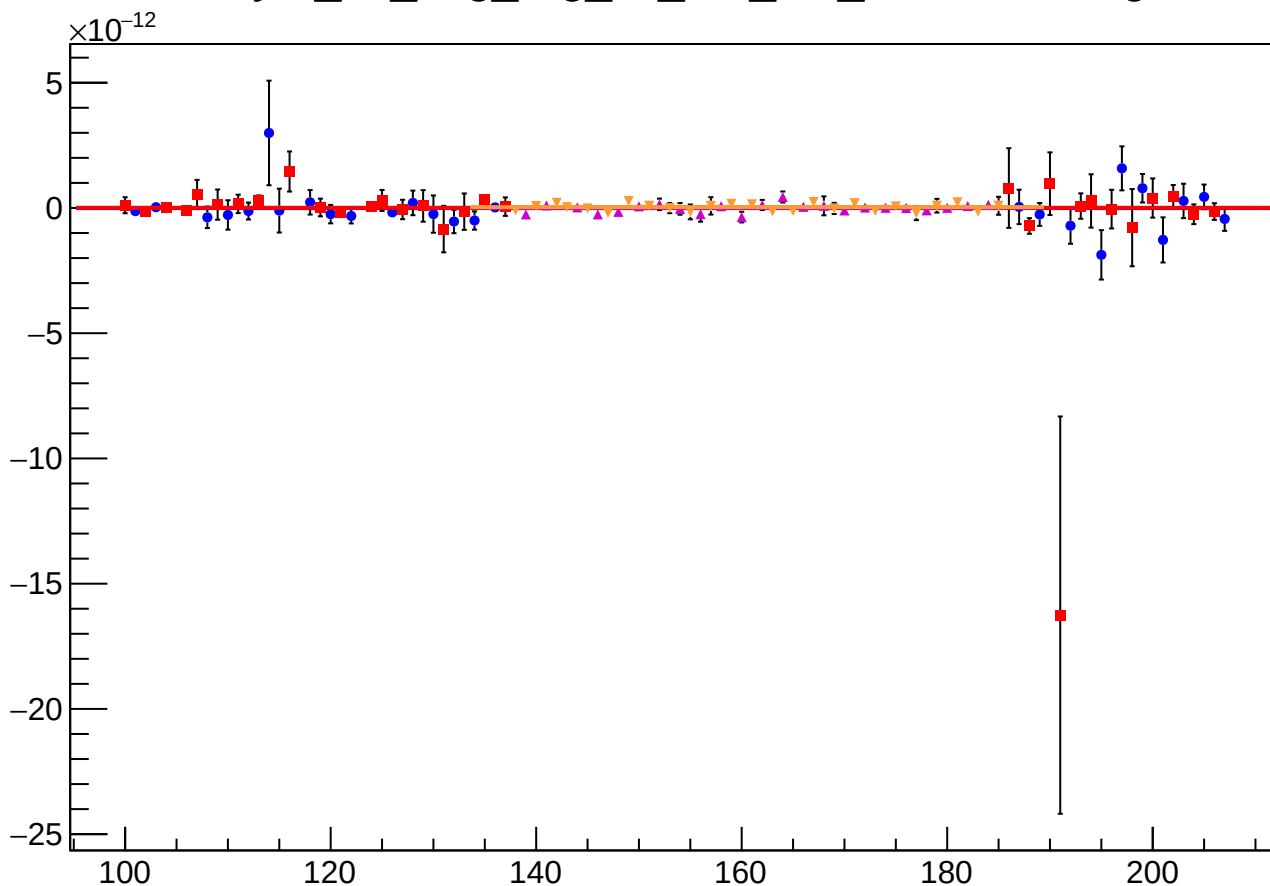
- sign -2639.861+/-775.979  $\chi^2/\text{NDF}$ : 56.5/53

# asym\_atl\_avg\_rms vs Slug



|                                 |                             |                             |                               |
|---------------------------------|-----------------------------|-----------------------------|-------------------------------|
| Right In: 3696.094 $\pm$ 0.720  | $\chi^2$ /NDF: 3326205.5/25 | + sign 4265.878 $\pm$ 0.543 | $\chi^2$ /NDF: 6462612.9/50   |
| Left Out: 5022.407 $\pm$ 0.829  | $\chi^2$ /NDF: 1676611.8/24 | All: 4276.081 $\pm$ 0.385   | $\chi^2$ /NDF: 13414953.5/100 |
| Right Out: 3704.591 $\pm$ 0.696 | $\chi^2$ /NDF: 3914331.5/30 | - sign 4286.357 $\pm$ 0.545 | $\chi^2$ /NDF: 6951632.9/53   |
| Left In: 5213.625 $\pm$ 0.878   | $\chi^2$ /NDF: 1223192.9/22 |                             |                               |

asym\_atl\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 24.5/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:25.0/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 27.6/30

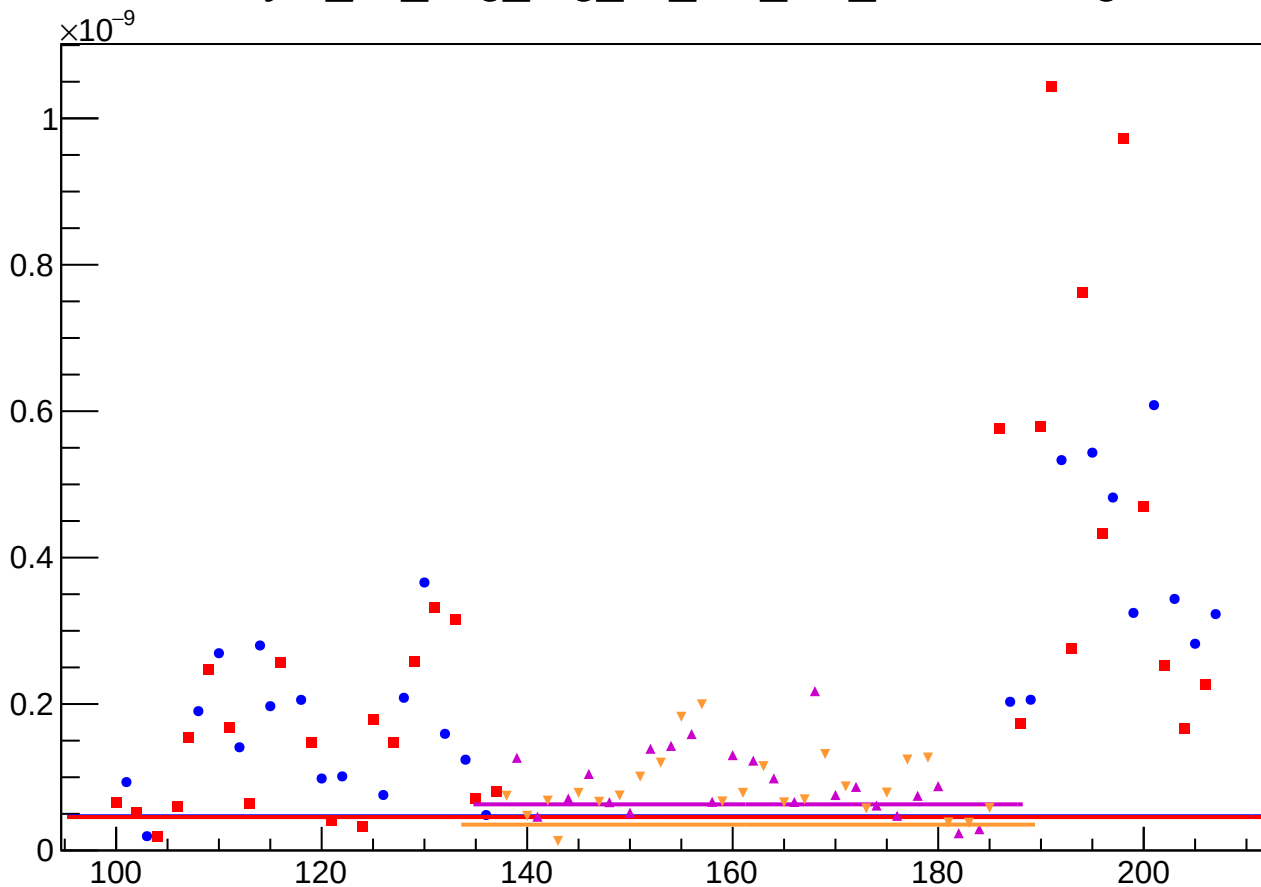
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:19.1/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 50.4/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 97.4/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 46.8/53

# asym\_atl\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8028961.3/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6511119.5/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8127847.8/30

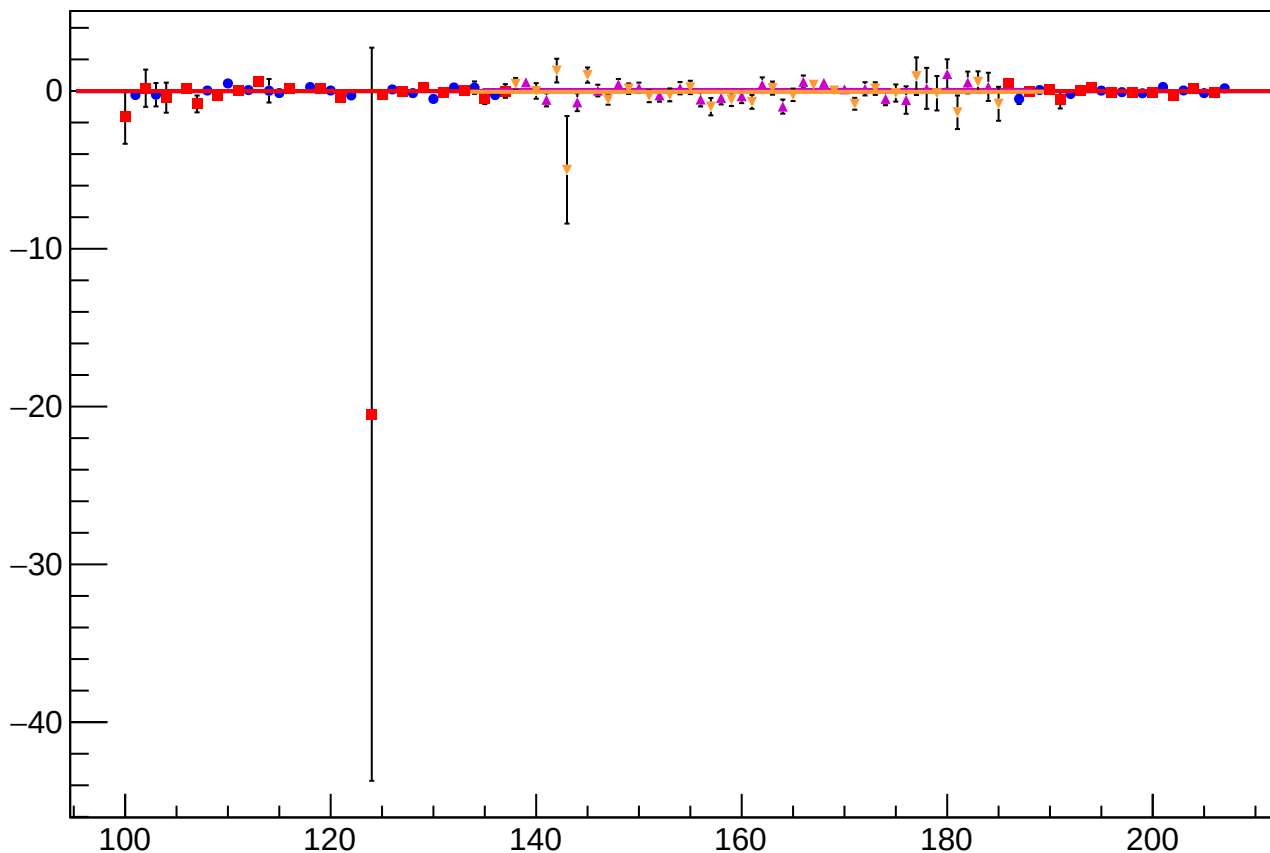
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2934305.1/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14719578.2/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 27012745.6/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11400602.4/53

# asym\_atl\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.015 \pm 0.041$   $\chi^2/\text{NDF}$ : 26.2/25

Left Out:  $-0.054 \pm 0.085$   $\chi^2/\text{NDF}$ : 33.1/24

Right Out:  $-0.006 \pm 0.036$   $\chi^2/\text{NDF}$ : 32.4/30

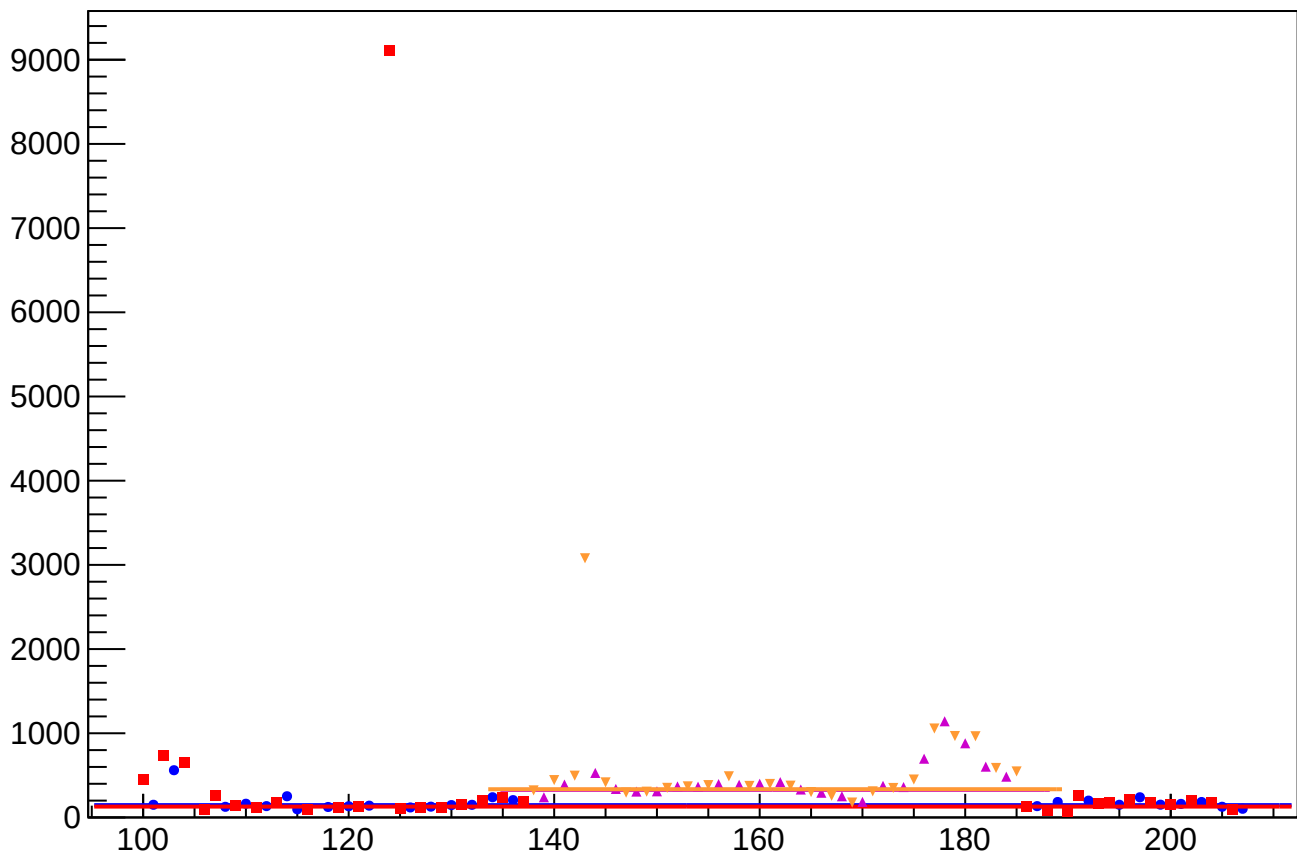
Left In:  $0.063 \pm 0.083$   $\chi^2/\text{NDF}$ : 28.0/22

+ sign  $-0.023 \pm 0.037$   $\chi^2/\text{NDF}$ : 59.5/50

All:  $-0.007 \pm 0.025$   $\chi^2/\text{NDF}$ : 120.8/104

- sign  $0.005 \pm 0.033$   $\chi^2/\text{NDF}$ : 61.0/53

# asym\_atl\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 146.416+/-0.029  $\chi^2/\text{NDF}$ : 1885885.1/25

Left Out: 335.166+/-0.060  $\chi^2/\text{NDF}$ : 5852083.8/24

Right Out: 129.095+/-0.026  $\chi^2/\text{NDF}$ : 4196747.6/30

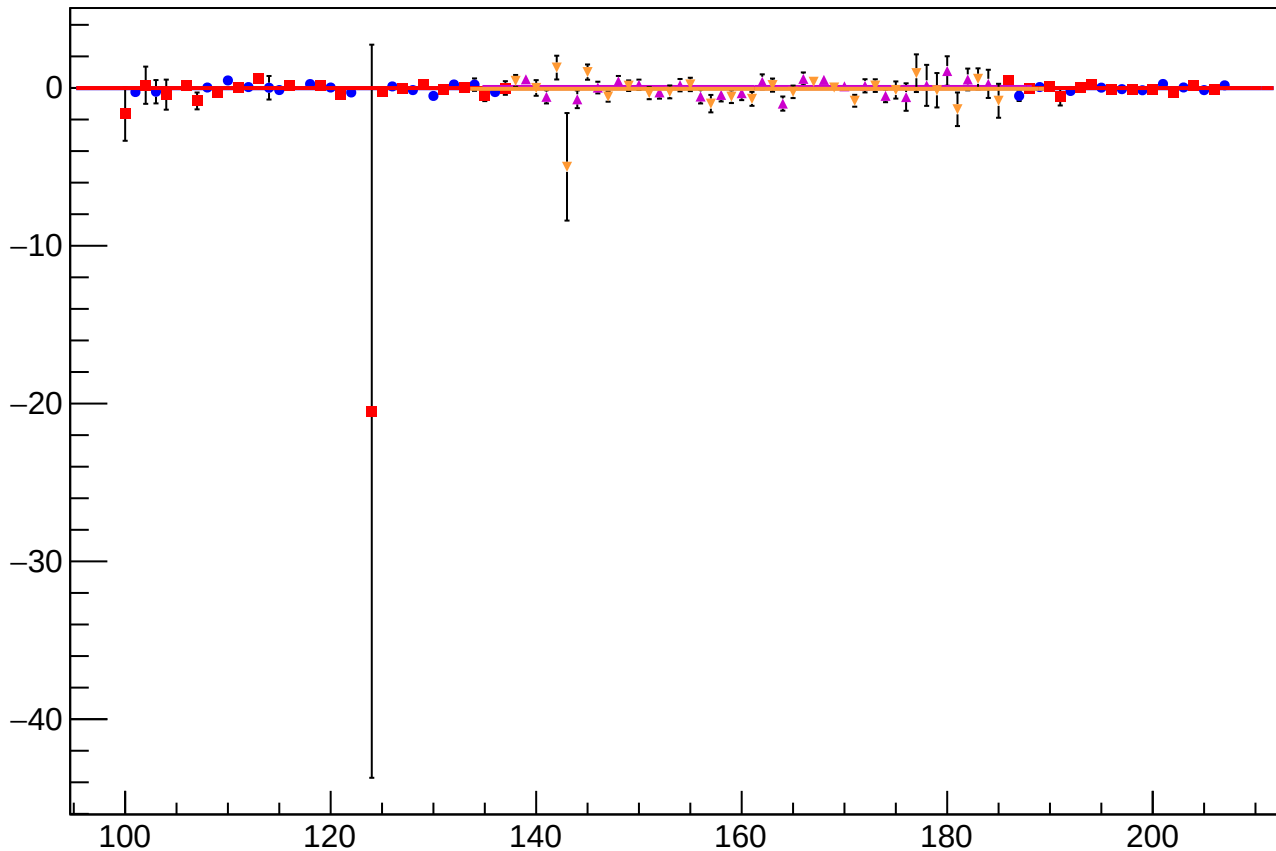
Left In: 327.572+/-0.059  $\chi^2/\text{NDF}$ : 4153081.9/22

+ sign 182.321+/-0.026  $\chi^2/\text{NDF}$ : 15797771.7/50

All: 170.824+/-0.018  $\chi^2/\text{NDF}$ : 34135413.3/10

- sign 161.413+/-0.024  $\chi^2/\text{NDF}$ : 17984599.6/53

asym\_atl\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.015 \pm 0.041$   $\chi^2/\text{NDF}$ : 26.2/25

Left Out:  $-0.054 \pm 0.085$   $\chi^2/\text{NDF}$ : 33.1/24

Right Out:  $-0.006 \pm 0.036$   $\chi^2/\text{NDF}$ : 32.4/30

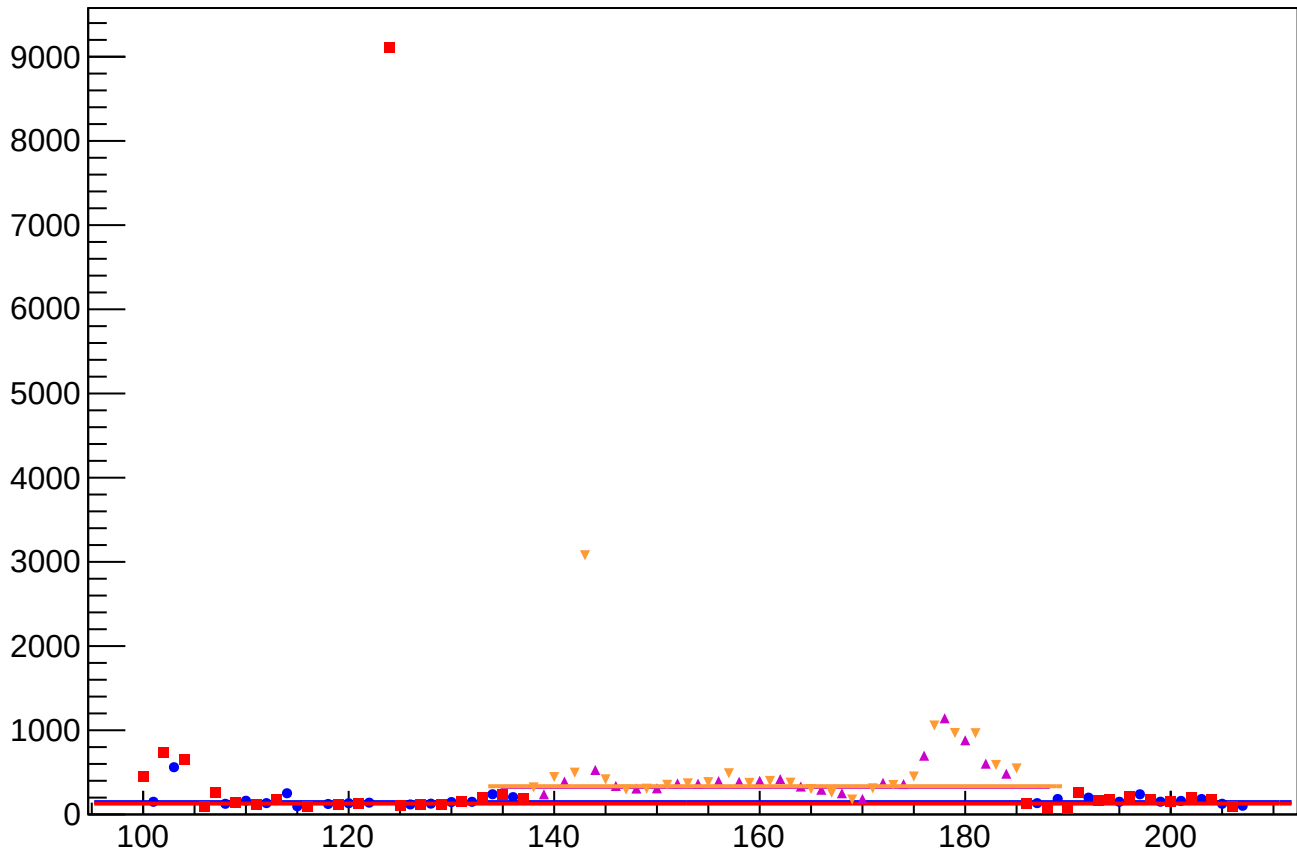
Left In:  $0.063 \pm 0.083$   $\chi^2/\text{NDF}$ : 28.0/22

+ sign  $-0.023 \pm 0.037$   $\chi^2/\text{NDF}$ : 59.5/50

All:  $-0.007 \pm 0.025$   $\chi^2/\text{NDF}$ : 120.8/104

- sign  $0.005 \pm 0.033$   $\chi^2/\text{NDF}$ : 61.0/53

asym\_atl\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 146.416 $\pm$ 0.029  $\chi^2$ /NDF: 1885885.1/25

Left Out: 335.166 $\pm$ 0.060  $\chi^2$ /NDF: 5852083.8/24

Right Out: 129.095 $\pm$ 0.026  $\chi^2$ /NDF: 4196747.6/30

Left In: 327.572 $\pm$ 0.059  $\chi^2$ /NDF: 4153081.9/22

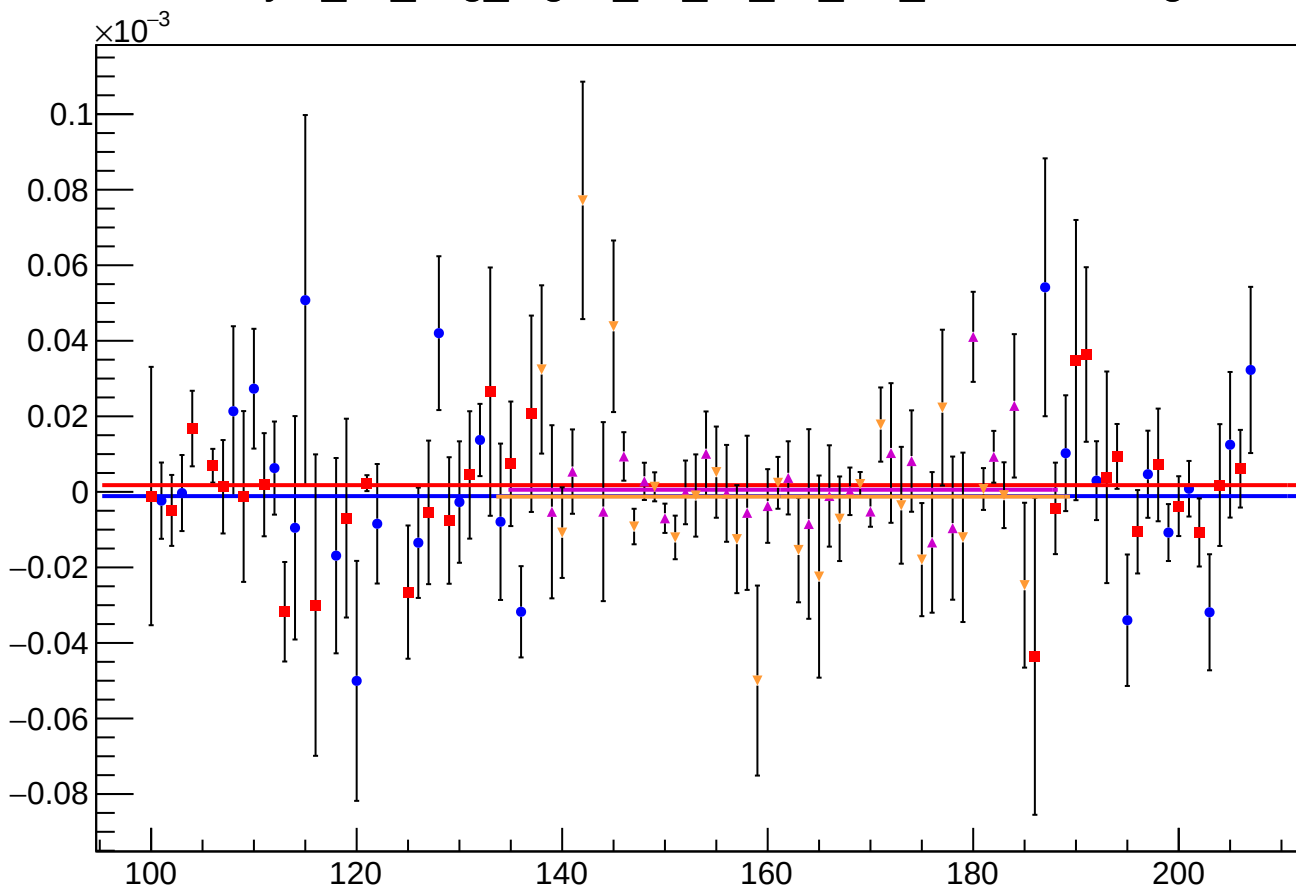
+ sign 182.321 $\pm$ 0.026  $\chi^2$ /NDF: 15797771.7/50

All: 170.824 $\pm$ 0.018  $\chi^2$ /NDF: 34135413.3/10

- sign 161.413 $\pm$ 0.024  $\chi^2$ /NDF: 17984599.6/53



asym\_atl\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 38.6/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 35.7/23

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 24.9/29

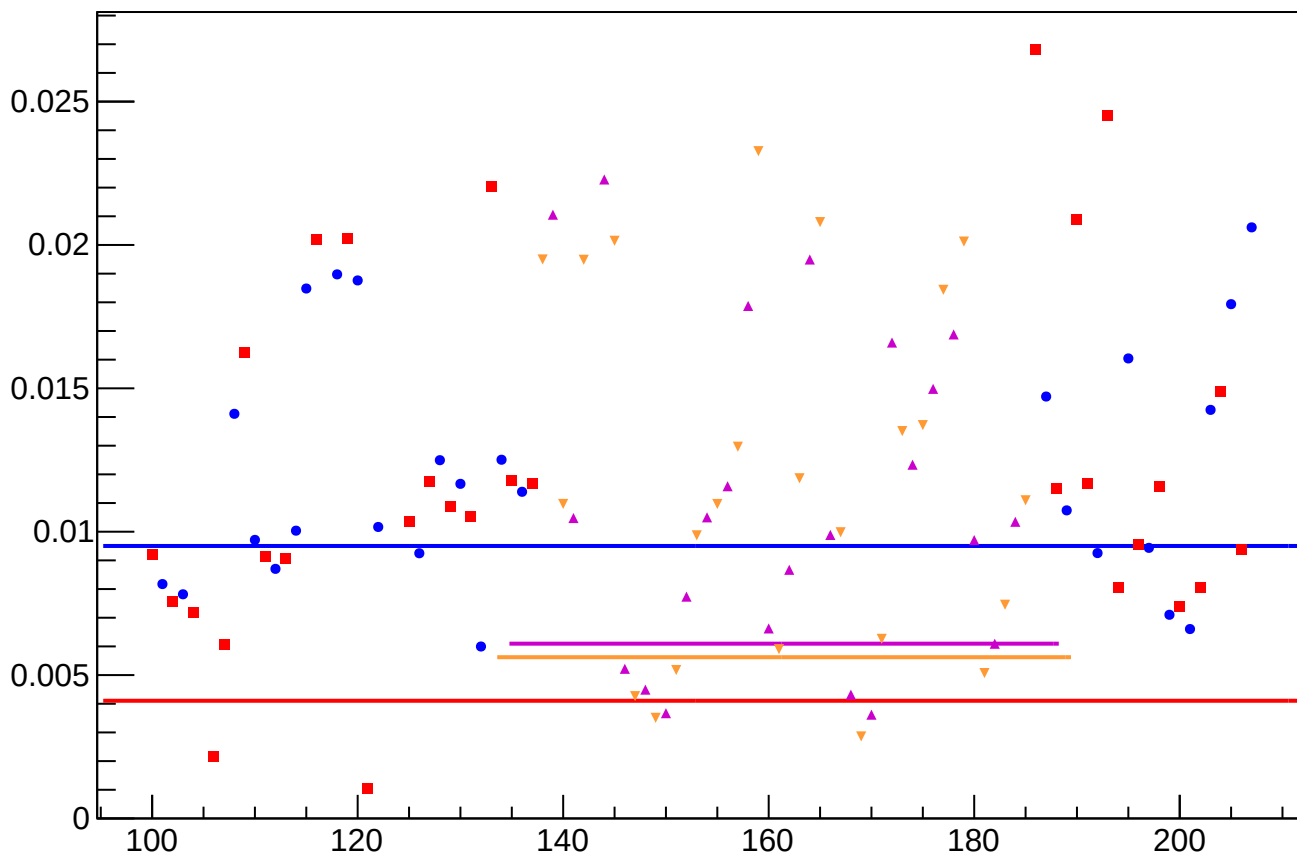
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 25.5/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 74.3/49

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 126.8/102

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 50.7/52

asym\_atl\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.010+/-0.000  $\chi^2/\text{NDF}$ : 3072646.4/25

Left Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ :11183743.0/23

Right Out: 0.004+/-0.000  $\chi^2/\text{NDF}$ : 16292635.5/29

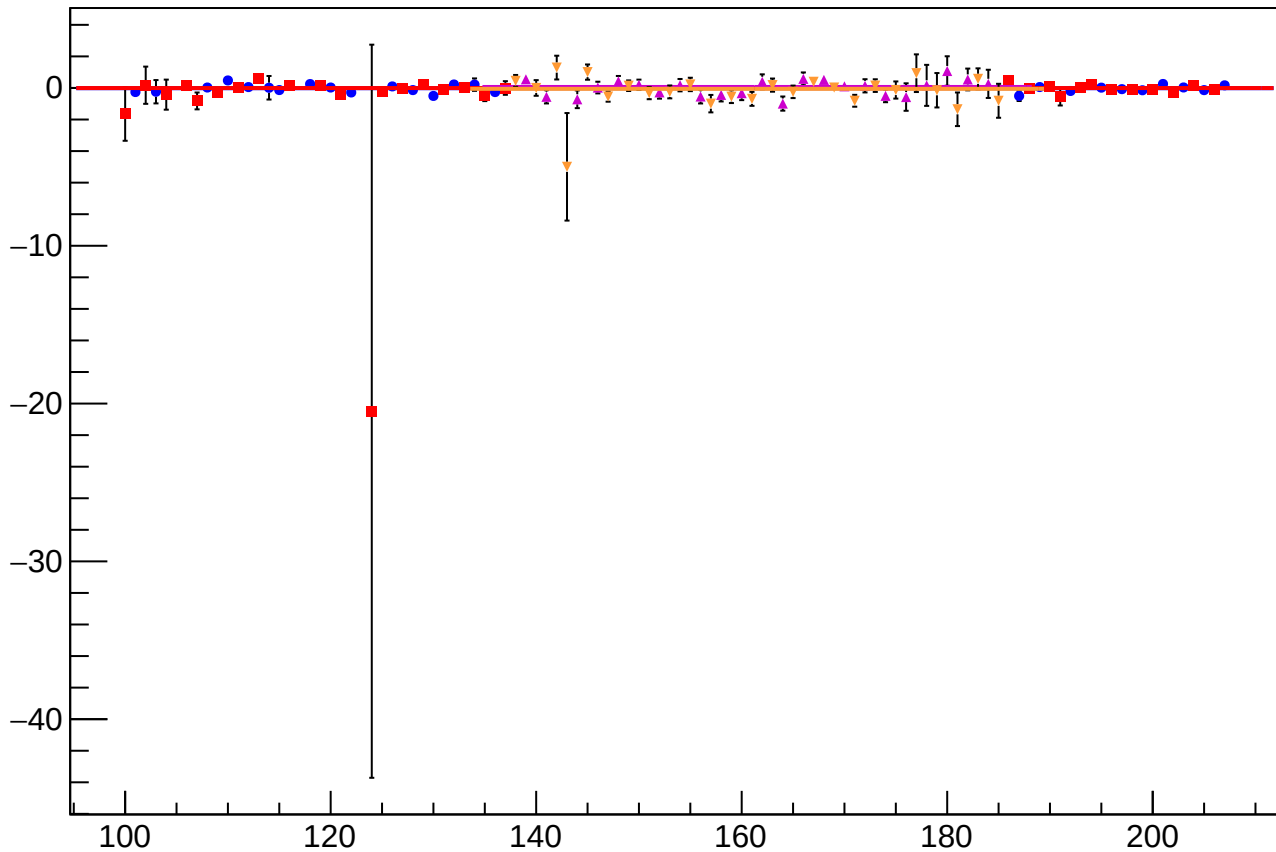
Left In: 0.006+/-0.000  $\chi^2/\text{NDF}$ :8798992.3/22

+ sign 0.007+/-0.000  $\chi^2/\text{NDF}$ : 17364286.4/49

All: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 45671257.5/102

- sign 0.005+/-0.000  $\chi^2/\text{NDF}$ : 26563234.7/52

asym\_atl\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.015 \pm 0.041$   $\chi^2/\text{NDF}$ : 26.2/25

Left Out:  $-0.054 \pm 0.085$   $\chi^2/\text{NDF}$ : 33.1/24

Right Out:  $-0.006 \pm 0.036$   $\chi^2/\text{NDF}$ : 32.4/30

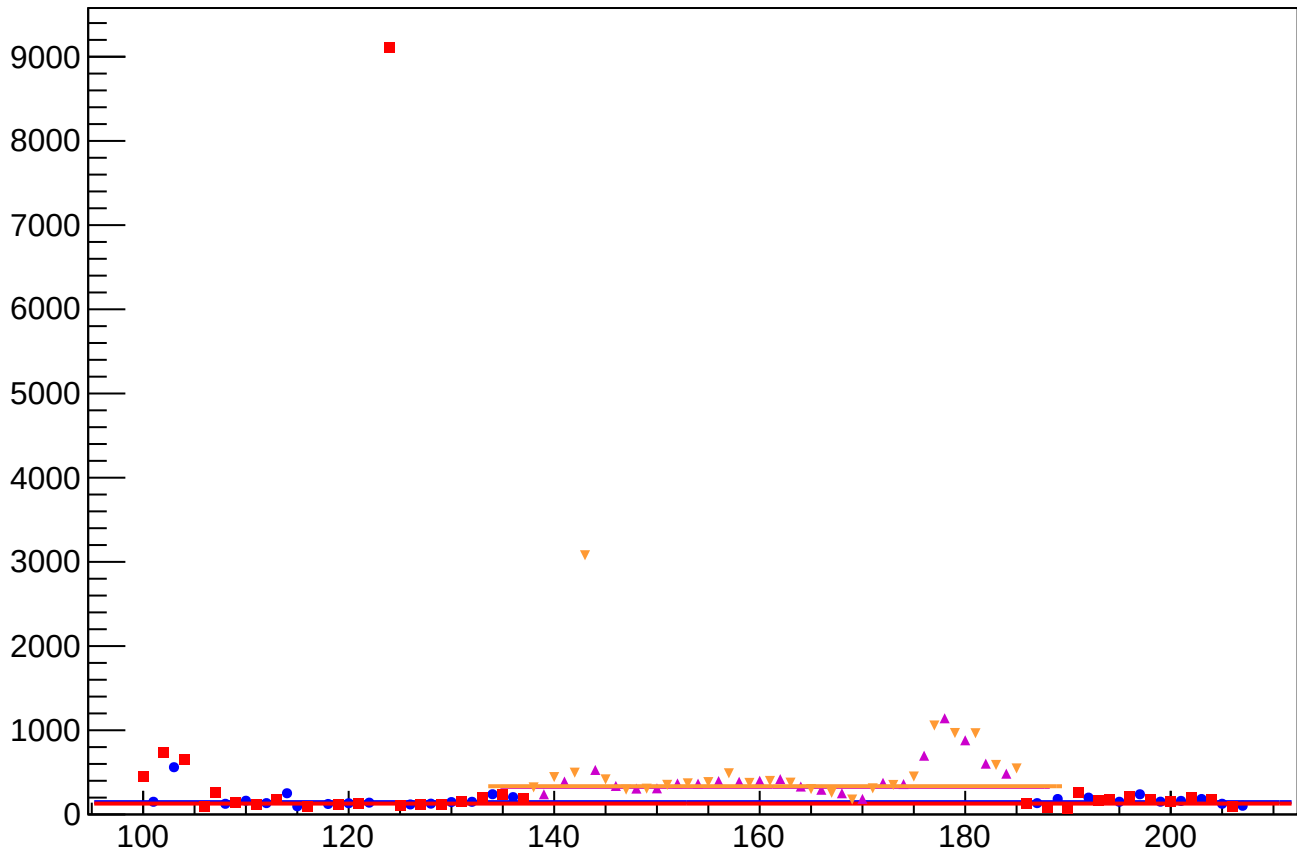
Left In:  $0.063 \pm 0.083$   $\chi^2/\text{NDF}$ : 28.0/22

+ sign  $-0.023 \pm 0.037$   $\chi^2/\text{NDF}$ : 59.5/50

All:  $-0.007 \pm 0.025$   $\chi^2/\text{NDF}$ : 120.8/104

- sign  $0.005 \pm 0.033$   $\chi^2/\text{NDF}$ : 61.0/53

asym\_atl\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 146.412 $\pm$ 0.029  $\chi^2$ /NDF: 1886139.0/25

Left Out: 335.168 $\pm$ 0.060  $\chi^2$ /NDF: 5852151.8/24

Right Out: 129.093 $\pm$ 0.026  $\chi^2$ /NDF: 4196880.0/30

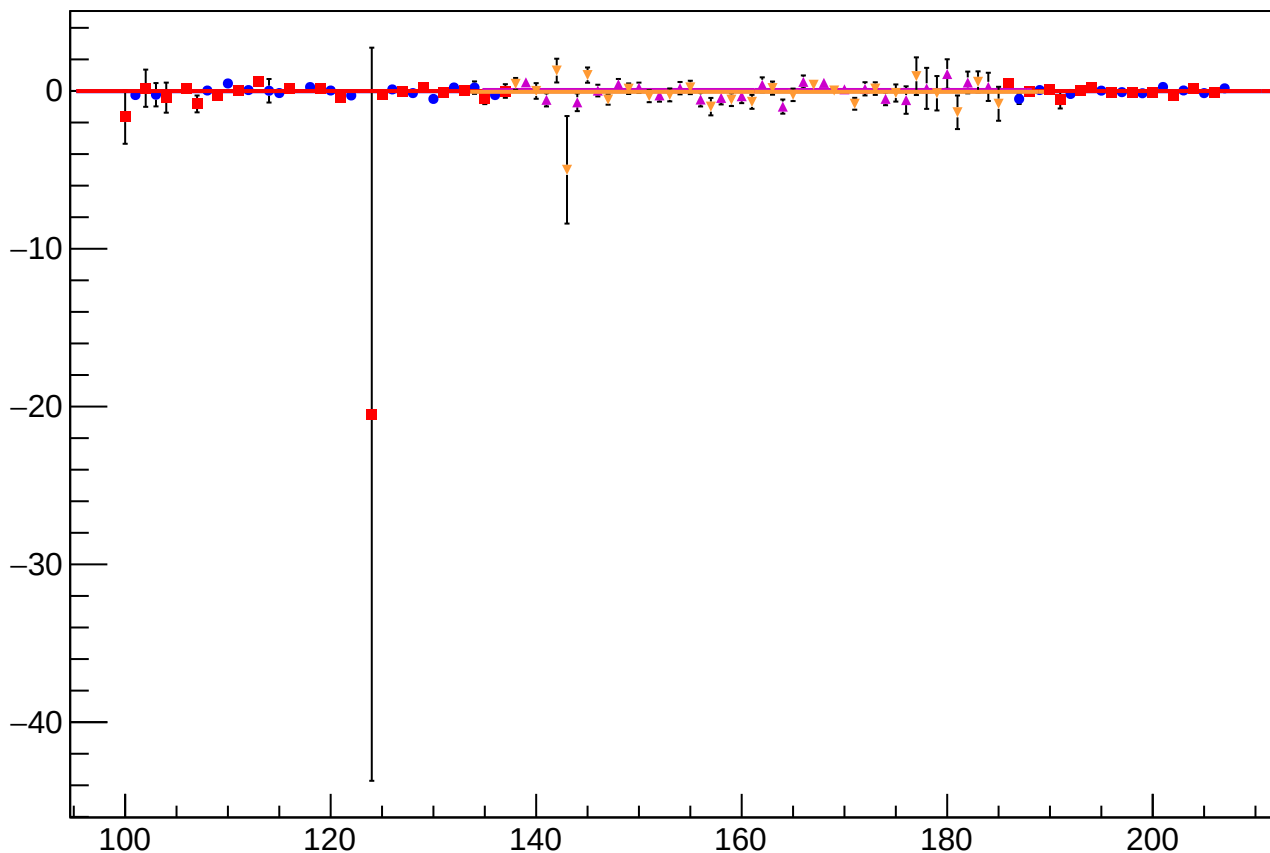
Left In: 327.575 $\pm$ 0.059  $\chi^2$ /NDF: 4153087.6/22

+ sign 182.317 $\pm$ 0.026  $\chi^2$ /NDF: 15798555.6/50

All: 170.821 $\pm$ 0.018  $\chi^2$ /NDF: 34136681.9/10

- sign 161.411 $\pm$ 0.024  $\chi^2$ /NDF: 17985128.6/53

asym\_atl\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.015 \pm 0.041$   $\chi^2/\text{NDF}$ : 26.2/25

Left Out:  $-0.054 \pm 0.085$   $\chi^2/\text{NDF}$ : 33.1/24

Right Out:  $-0.006 \pm 0.036$   $\chi^2/\text{NDF}$ : 32.4/30

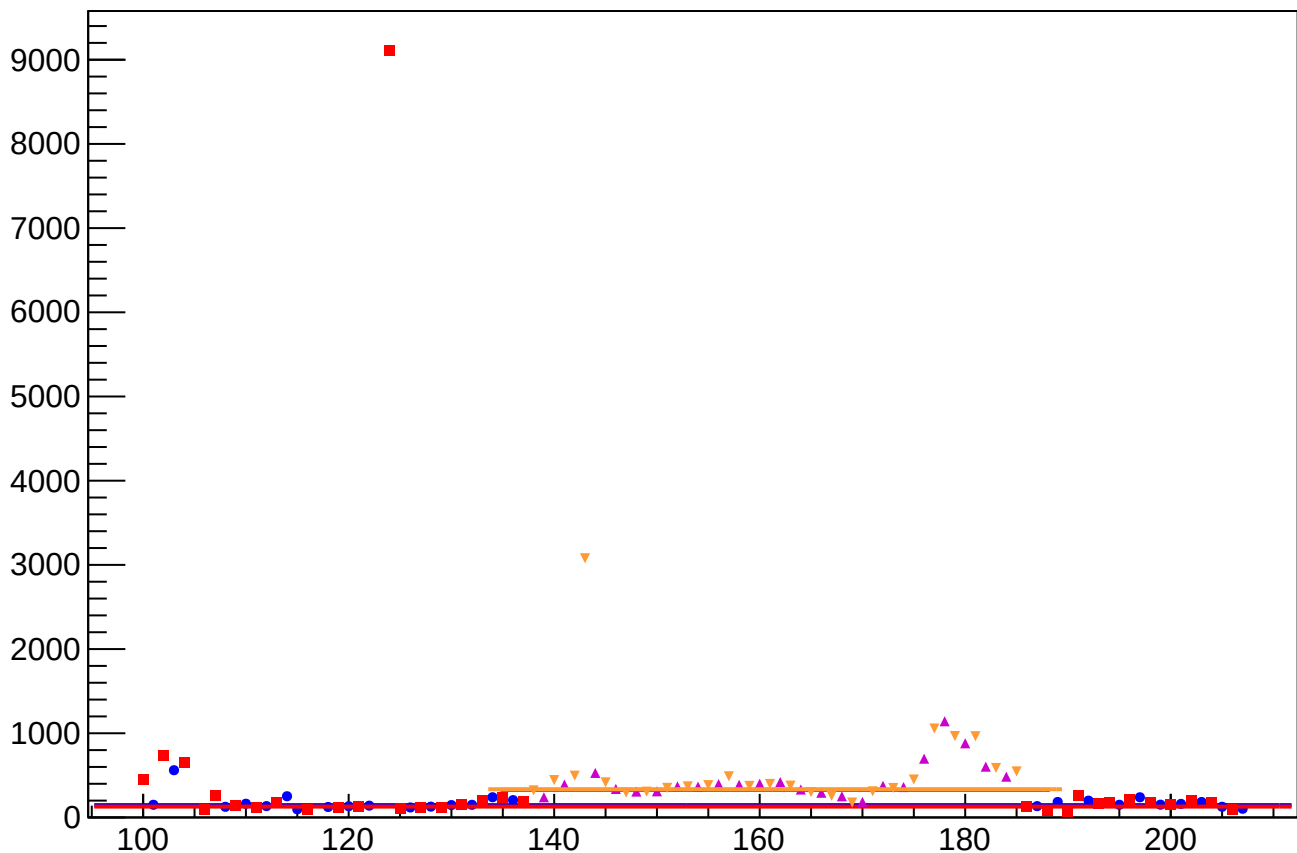
Left In:  $0.063 \pm 0.083$   $\chi^2/\text{NDF}$ : 28.0/22

+ sign  $-0.023 \pm 0.037$   $\chi^2/\text{NDF}$ : 59.5/50

All:  $-0.007 \pm 0.025$   $\chi^2/\text{NDF}$ : 120.8/104

- sign  $0.005 \pm 0.033$   $\chi^2/\text{NDF}$ : 61.0/53

asym\_atl\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 146.412 $\pm$ 0.029  $\chi^2$ /NDF: 1886139.0/25

Left Out: 335.168 $\pm$ 0.060  $\chi^2$ /NDF: 5852151.8/24

Right Out: 129.093 $\pm$ 0.026  $\chi^2$ /NDF: 4196880.0/30

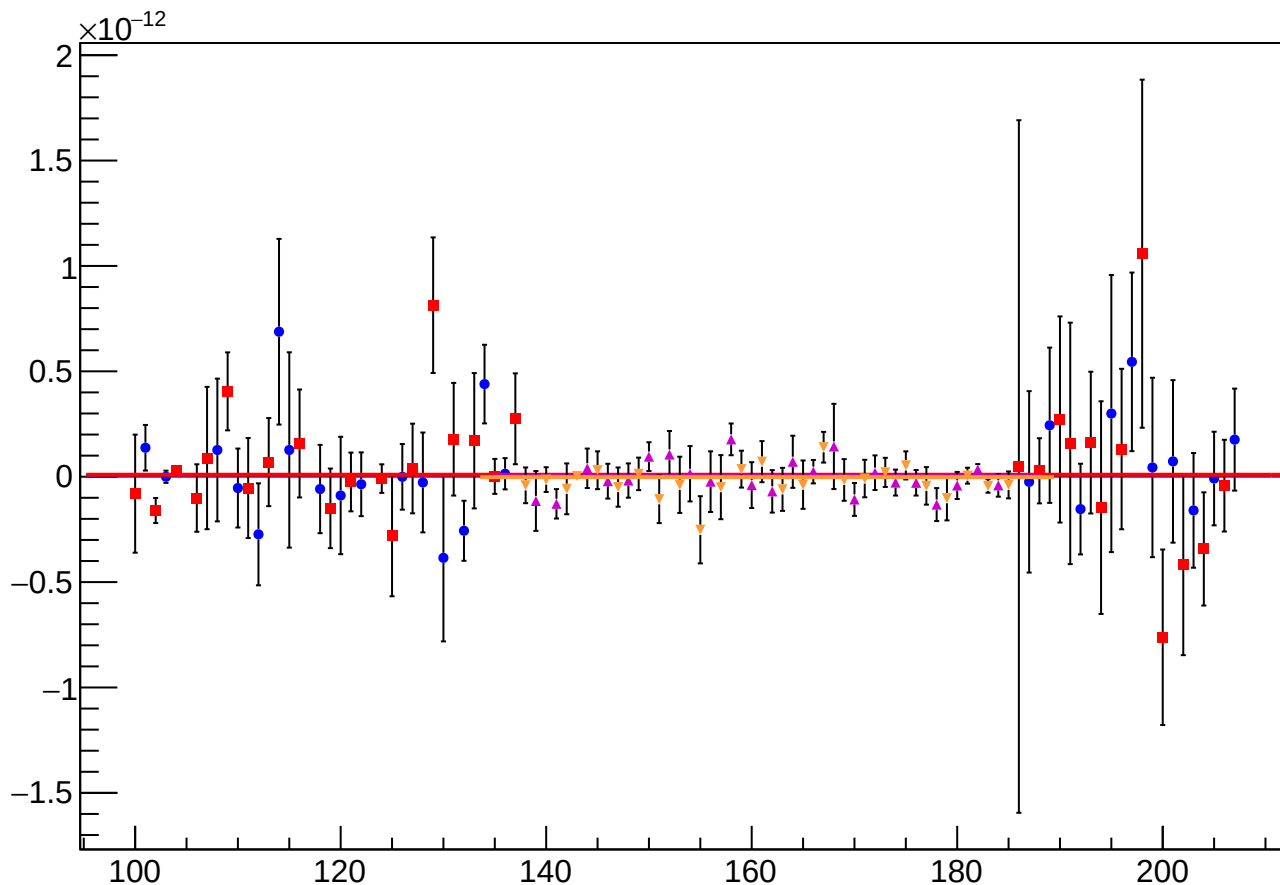
Left In: 327.575 $\pm$ 0.059  $\chi^2$ /NDF: 4153087.6/22

+ sign 182.317 $\pm$ 0.026  $\chi^2$ /NDF: 15798555.6/50

All: 170.821 $\pm$ 0.018  $\chi^2$ /NDF: 34136681.9/10

- sign 161.411 $\pm$ 0.024  $\chi^2$ /NDF: 17985128.6/53

asym\_atl\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 19.3/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 13.6/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 33.7/30

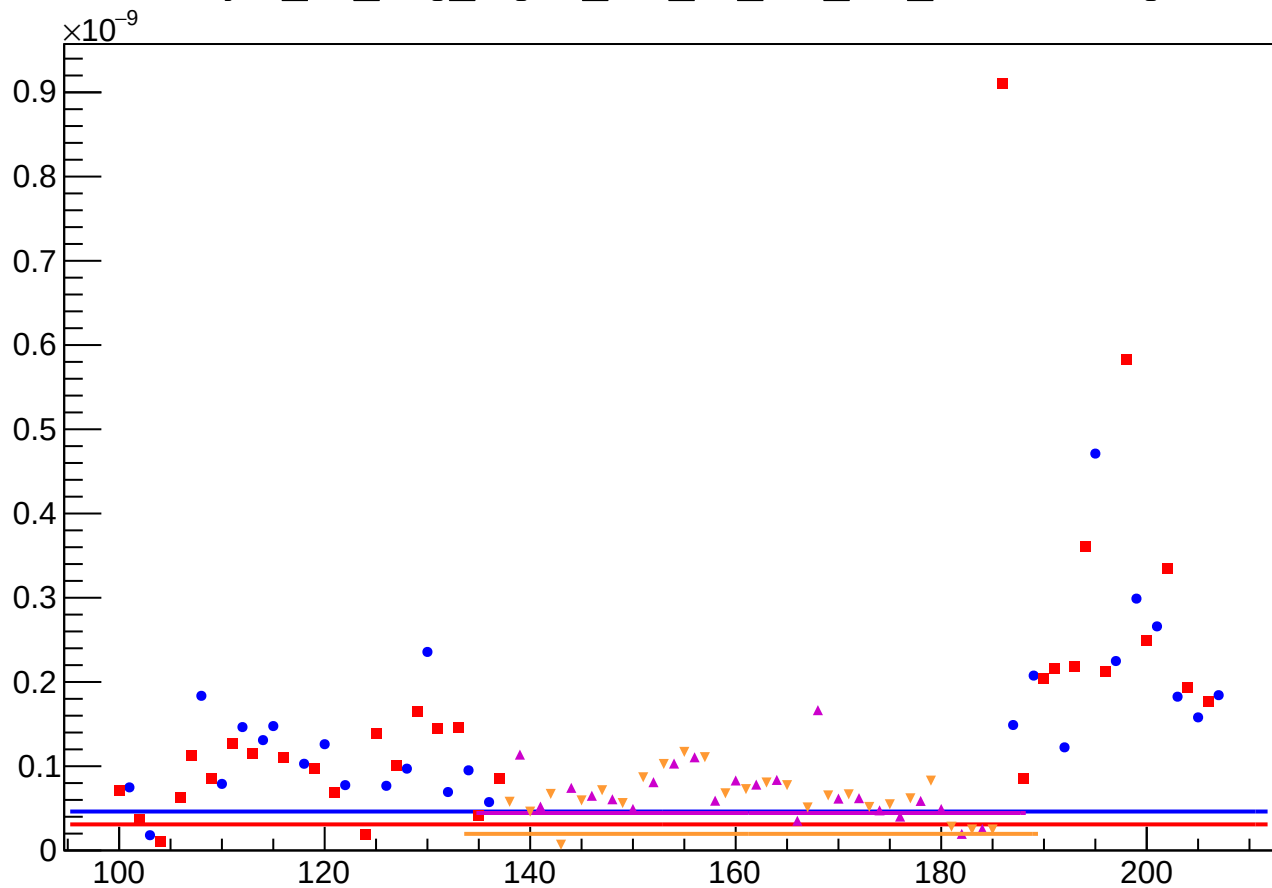
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 22.5/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 33.0/50

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 89.5/104

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 56.3/53

asym\_atl\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9146434.3/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14888228.9/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12191228.4/30

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5919814.1/22

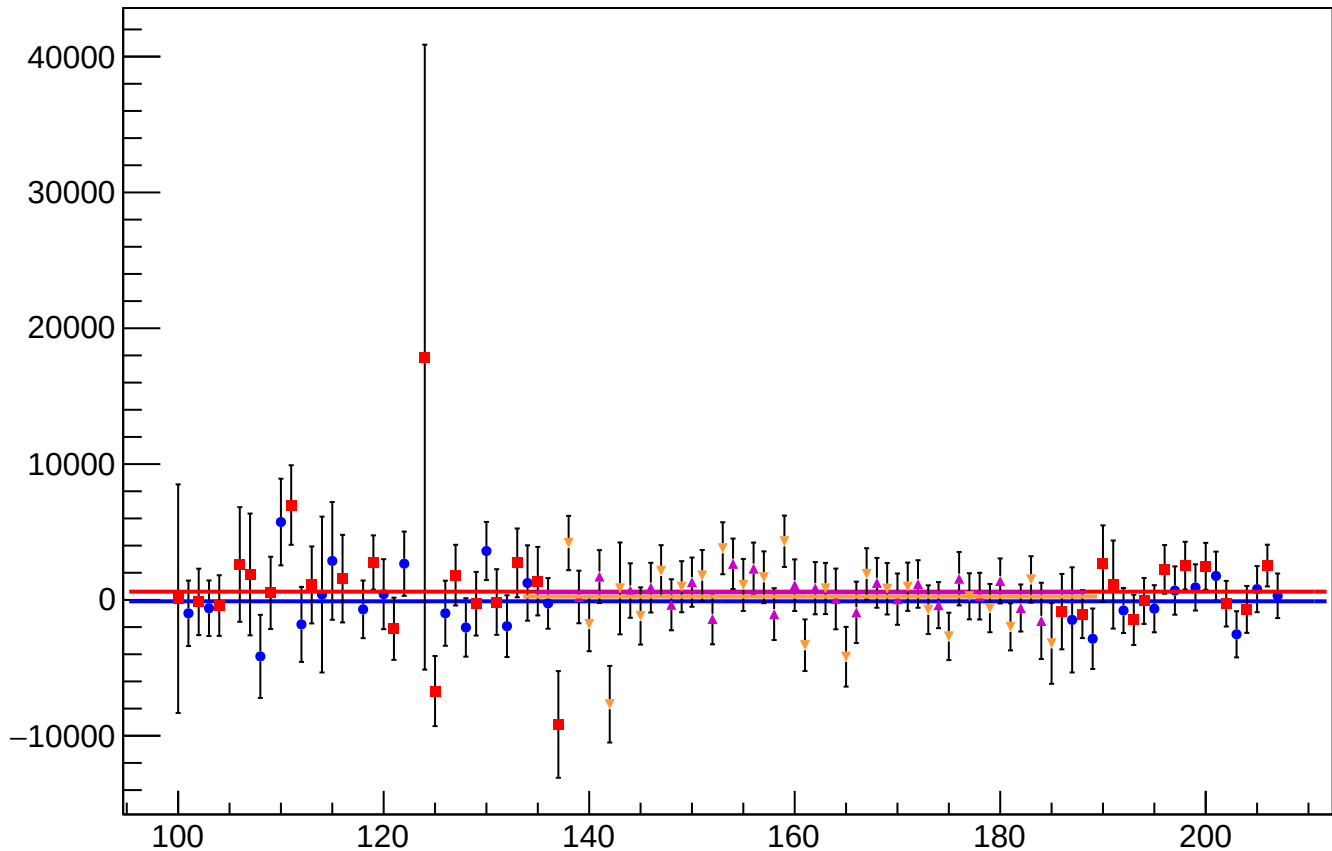
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 26345563.6/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 48126268.4/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 18800815.6/53



# reg\_asym\_atl\_dd\_mean vs Slug



Right In:  $-100.460 \pm 422.406$   $\chi^2/\text{NDF}$ : 18.4/25

Left Out:  $248.233 \pm 388.827$   $\chi^2/\text{NDF}$ : 39.6/24

Right Out:  $610.329 \pm 412.154$   $\chi^2/\text{NDF}$ : 32.9/30

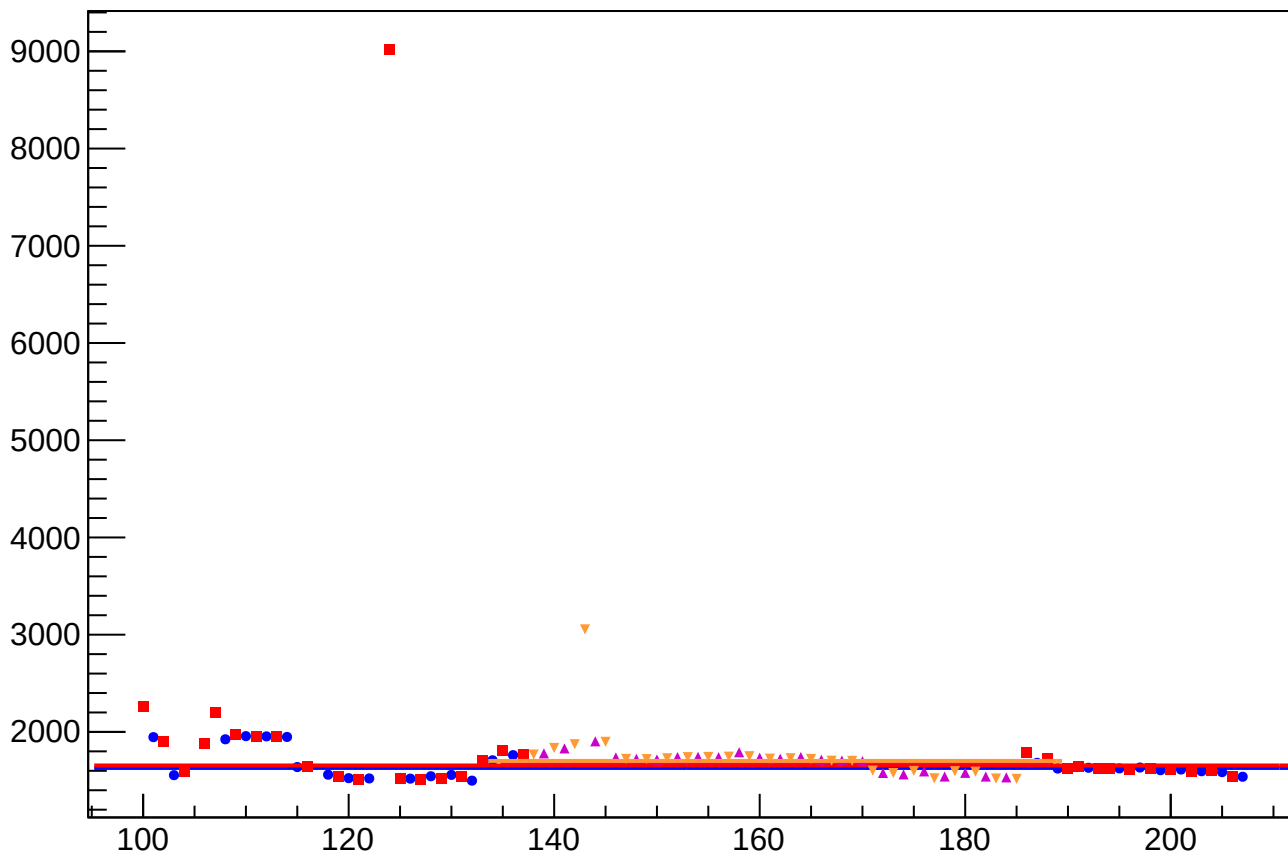
Left In:  $559.995 \pm 395.112$   $\chi^2/\text{NDF}$ : 7.5/22

+ sign  $88.295 \pm 286.078$   $\chi^2/\text{NDF}$ : 58.4/50

All:  $336.941 \pm 201.984$   $\chi^2/\text{NDF}$ : 100.3/104

- sign  $584.100 \pm 285.221$   $\chi^2/\text{NDF}$ : 40.4/53

# reg\_asym\_atl\_dd\_rms vs Slug



Right In: 1629.678 $\pm$ 0.299  $\chi^2$ /NDF: 157074.0/25

Left Out: 1701.583 $\pm$ 0.275  $\chi^2$ /NDF: 452379.1/24

Right Out: 1654.755 $\pm$ 0.291  $\chi^2$ /NDF: 421663.0/30

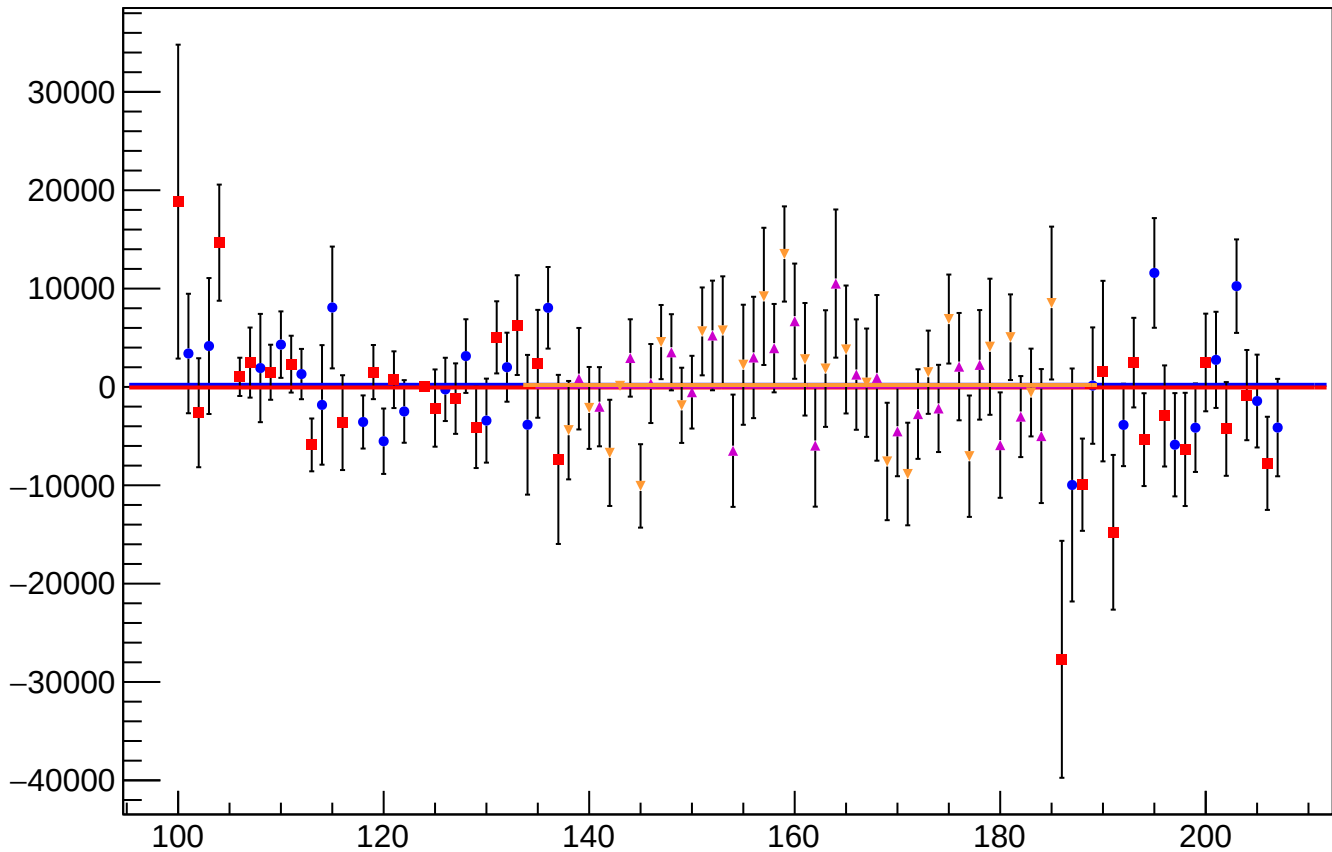
Left In: 1689.259 $\pm$ 0.279  $\chi^2$ /NDF: 122317.9/22

+ sign 1668.602 $\pm$ 0.202  $\chi^2$ /NDF: 640824.7/50

All: 1670.659 $\pm$ 0.143  $\chi^2$ /NDF: 1192330.8/10

- sign 1672.701 $\pm$ 0.201  $\chi^2$ /NDF: 551299.9/53

# asym\_atl\_dd\_reg\_correction\_mean vs Slug



Right In: 215.912 $\pm$ 826.211  $\chi^2$ /NDF: 29.0/25

Left Out: 193.503 $\pm$ 343.131  $\chi^2$ /NDF:33.9/24

Right Out: -56.438 $\pm$ 316.846  $\chi^2$ /NDF: 41.2/30

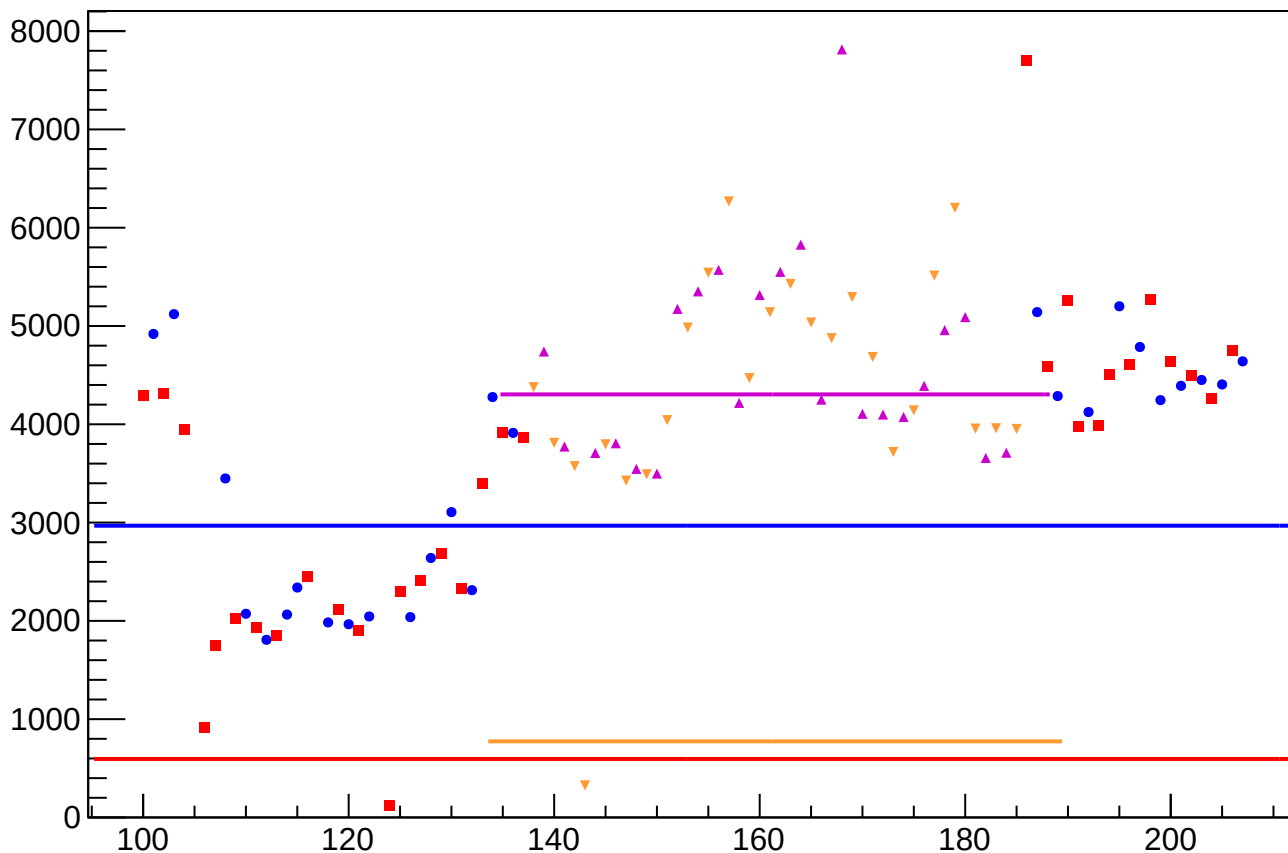
Left In: 28.728 $\pm$ 1025.481  $\chi^2$ /NDF:13.3/22

+ sign 196.800 $\pm$ 316.889  $\chi^2$ /NDF: 62.9/50

All: 68.275 $\pm$ 218.895  $\chi^2$ /NDF: 117.7/104

- sign -49.017 $\pm$ 302.725  $\chi^2$ /NDF: 54.5/53

# asym\_atl\_dd\_reg\_correction\_rms vs Slug



Right In: 2968.255+/-0.584  $\chi^2/\text{NDF}$ : 3892564.2/25

Left Out: 774.232+/-0.243  $\chi^2/\text{NDF}$ : 28085586.8/24

Right Out: 595.145+/-0.224  $\chi^2/\text{NDF}$ : 25194610.8/30

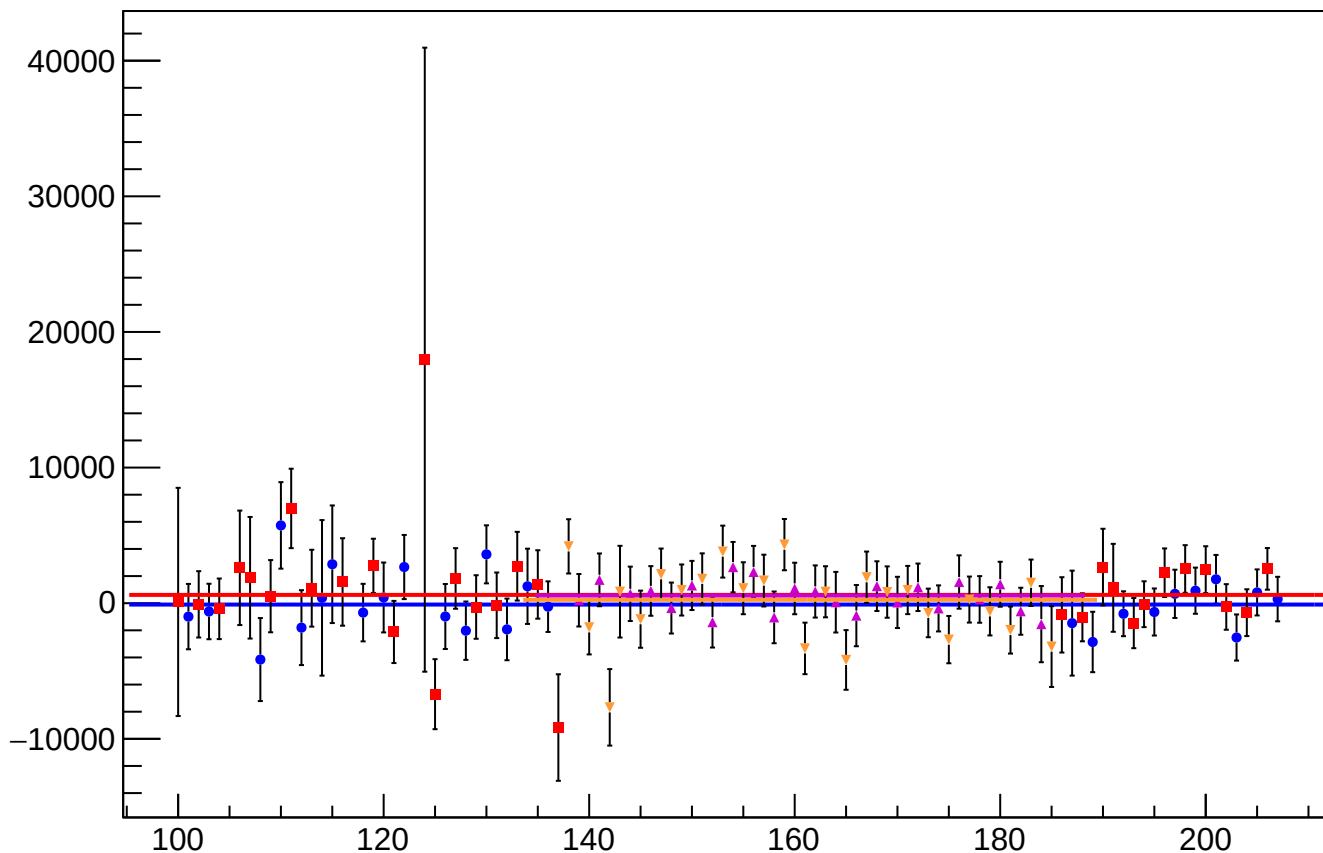
Left In: 4304.007+/-0.725  $\chi^2/\text{NDF}$ : 1216578.1/22

+ sign 1096.988+/-0.224  $\chi^2/\text{NDF}$ : 44007022.1/50

All: 1003.590+/-0.155  $\chi^2/\text{NDF}$ : 94631786.9/53

- sign 918.354+/-0.214  $\chi^2/\text{NDF}$ : 50292473.6/53

# cor\_asym\_atl\_dd\_mean vs Slug



Right In:  $-100.400 \pm 422.406$   $\chi^2/\text{NDF}$ : 18.4/25

Left Out:  $248.216 \pm 388.827$   $\chi^2/\text{NDF}$ : 39.6/24

Right Out:  $612.135 \pm 412.156$   $\chi^2/\text{NDF}$ : 32.9/30

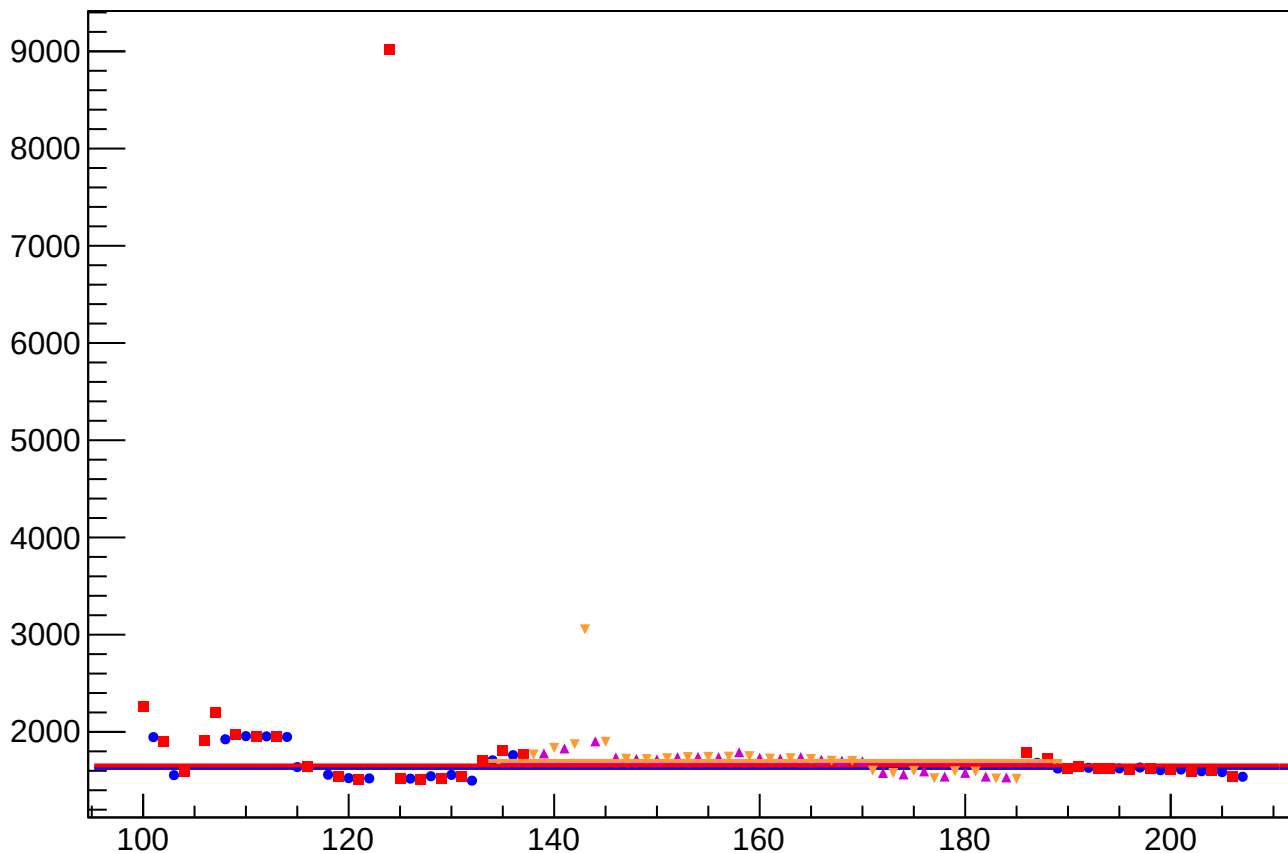
Left In:  $559.960 \pm 395.112$   $\chi^2/\text{NDF}$ : 7.5/22

+ sign  $88.313 \pm 286.078$   $\chi^2/\text{NDF}$ : 58.4/50

All:  $337.374 \pm 201.984$   $\chi^2/\text{NDF}$ : 100.3/104

- sign  $584.946 \pm 285.221$   $\chi^2/\text{NDF}$ : 40.4/53

# cor\_asym\_atl\_dd\_rms vs Slug



Right In: 1629.678+/-0.299  $\chi^2/\text{NDF}$ : 157073.9/25

Left Out: 1701.583+/-0.275  $\chi^2/\text{NDF}$ : 452379.0/24

Right Out: 1655.075+/-0.291  $\chi^2/\text{NDF}$ : 423740.9/30

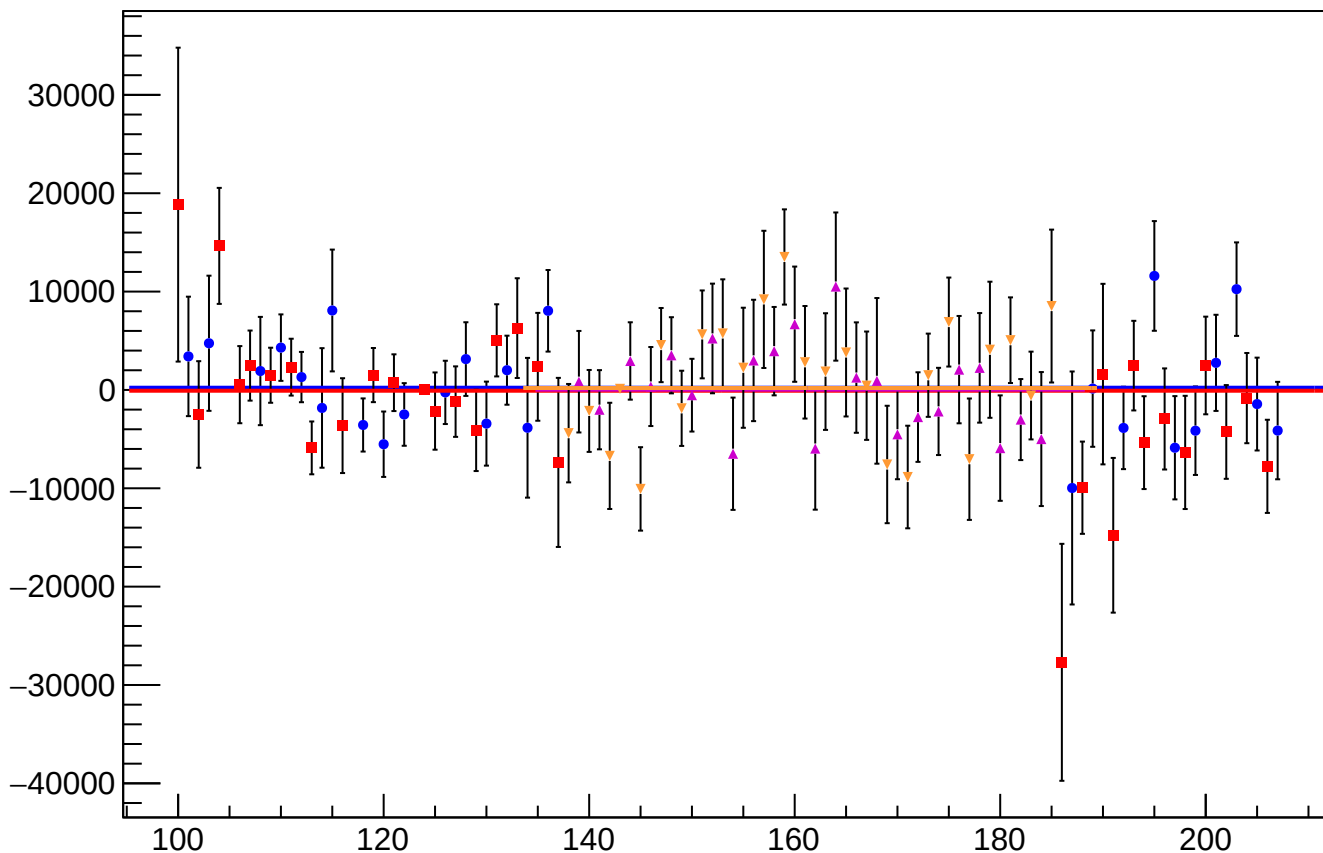
Left In: 1689.259+/-0.279  $\chi^2/\text{NDF}$ : 122317.9/22

+ sign 1668.602+/-0.202  $\chi^2/\text{NDF}$ : 640824.7/50

All: 1670.738+/-0.143  $\chi^2/\text{NDF}$ : 1194288.0/10

- sign 1672.859+/-0.202  $\chi^2/\text{NDF}$ : 553241.0/53

# asym\_atl\_dd\_cor\_correction\_mean vs Slug



Right In: 225.257 $\pm$ 826.136  $\chi^2$ /NDF: 29.1/25

Left Out: 193.916 $\pm$ 343.107  $\chi^2$ /NDF:33.9/24

Right Out: -79.962 $\pm$ 309.373  $\chi^2$ /NDF: 40.9/30

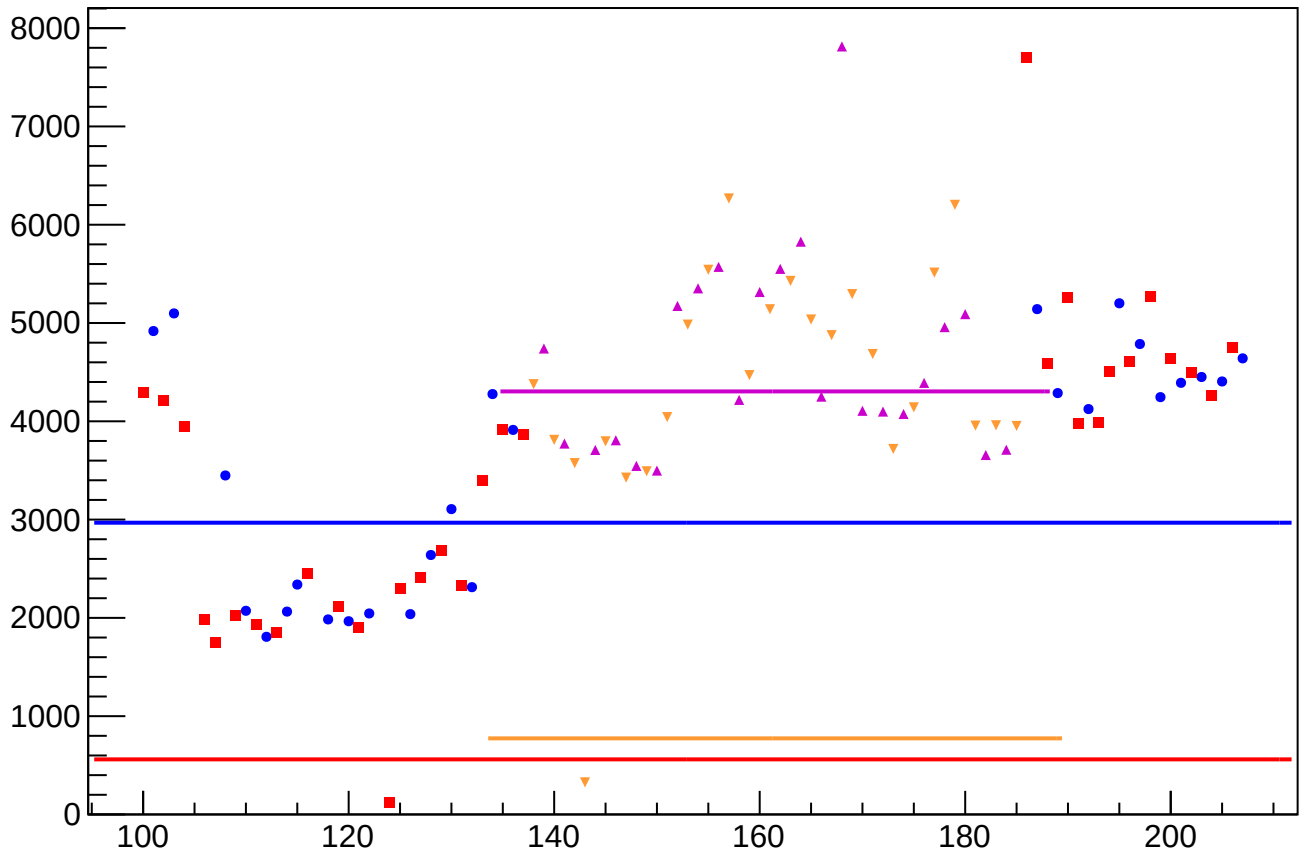
Left In: 28.766 $\pm$ 1025.480  $\chi^2$ /NDF:13.3/22

+ sign 198.526 $\pm$ 316.866  $\chi^2$ /NDF: 63.0/50

All: 54.740 $\pm$ 216.378  $\chi^2$ /NDF: 117.6/104

- sign -70.892 $\pm$ 296.188  $\chi^2$ /NDF: 54.2/53

# asym\_atl\_dd\_cor\_correction\_rms vs Slug



Right In: 2968.279+/-0.584  $\chi^2/\text{NDF}$ : 3890640.1/25

Left Out: 774.143+/-0.243  $\chi^2/\text{NDF}$ :28086455.1/24

Right Out: 560.474+/-0.219  $\chi^2/\text{NDF}$ : 25752415.6/30

Left In: 4304.001+/-0.725  $\chi^2/\text{NDF}$ :1216572.3/22

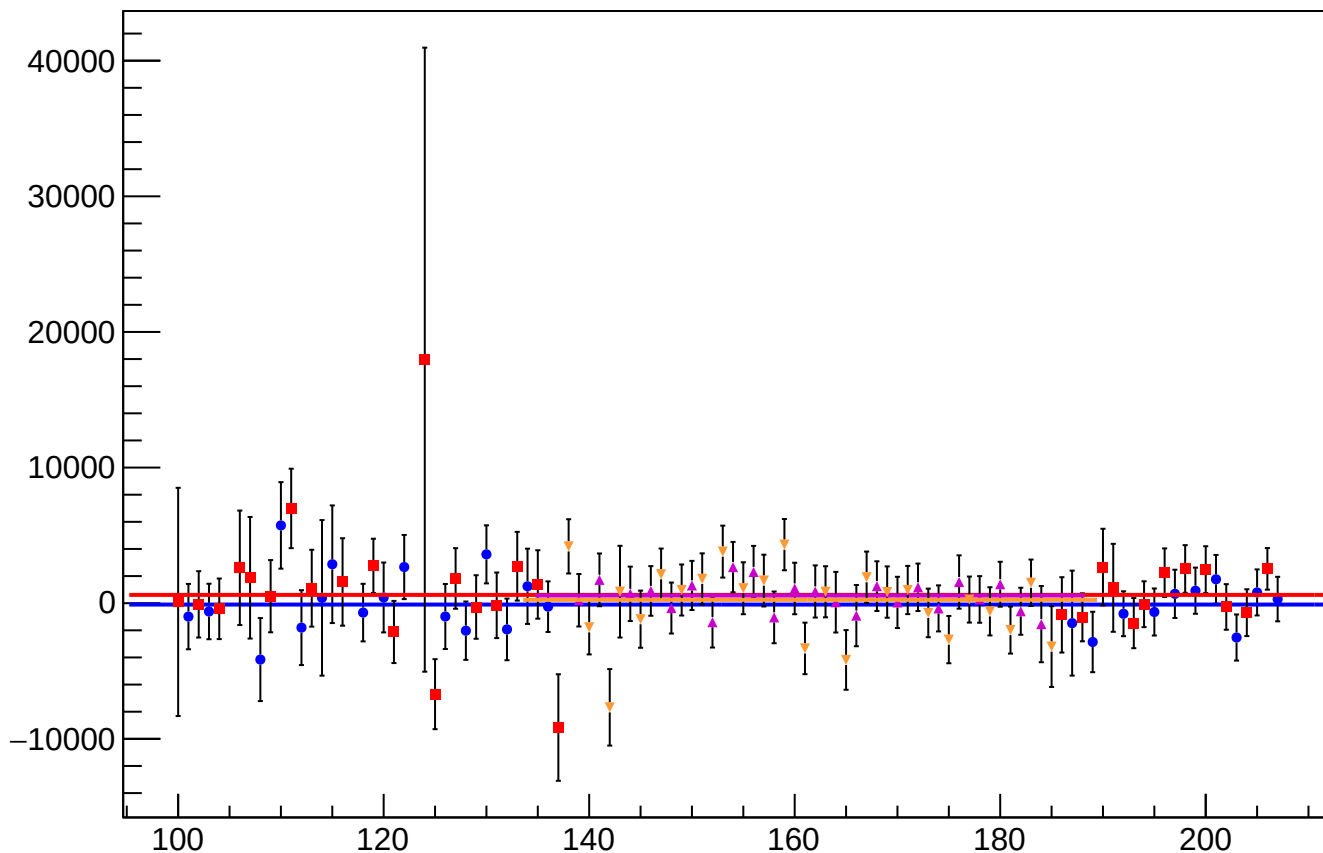
+ sign 1096.928+/-0.224  $\chi^2/\text{NDF}$ : 44009332.4/50

All: 977.294+/-0.153  $\chi^2/\text{NDF}$ : 95941600.3/10

- sign 872.766+/-0.209  $\chi^2/\text{NDF}$ : 51398081.9/53



# eigen\_cor\_asym\_atl\_dd\_mean vs Slug



Right In: -100.400+/-422.406  $\chi^2/\text{NDF}$ : 18.4/25

Left Out: 248.216+/-388.827  $\chi^2/\text{NDF}$ : 39.6/24

Right Out: 612.135+/-412.156  $\chi^2/\text{NDF}$ : 32.9/30

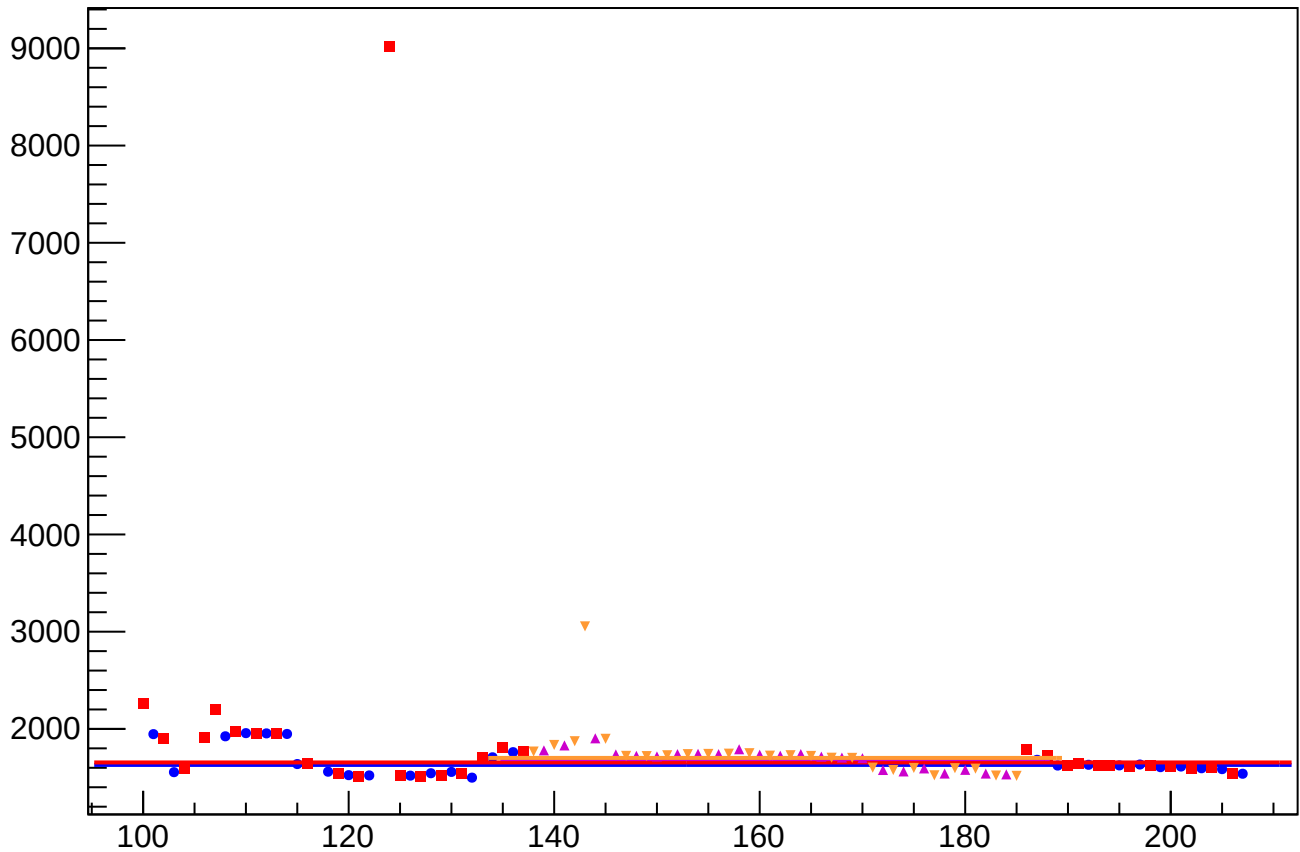
Left In: 559.960+/-395.112  $\chi^2/\text{NDF}$ : 7.5/22

+ sign 88.313+/-286.078  $\chi^2/\text{NDF}$ : 58.4/50

All: 337.374+/-201.984  $\chi^2/\text{NDF}$ : 100.3/104

- sign 584.946+/-285.221  $\chi^2/\text{NDF}$ : 40.4/53

# eigen\_cor\_asym\_atl\_dd\_rms vs Slug



Right In: 1629.678 $\pm$ 0.299  $\chi^2$ /NDF: 157073.9/25

Left Out: 1701.583 $\pm$ 0.275  $\chi^2$ /NDF: 452379.0/24

Right Out: 1655.075 $\pm$ 0.291  $\chi^2$ /NDF: 423740.9/30

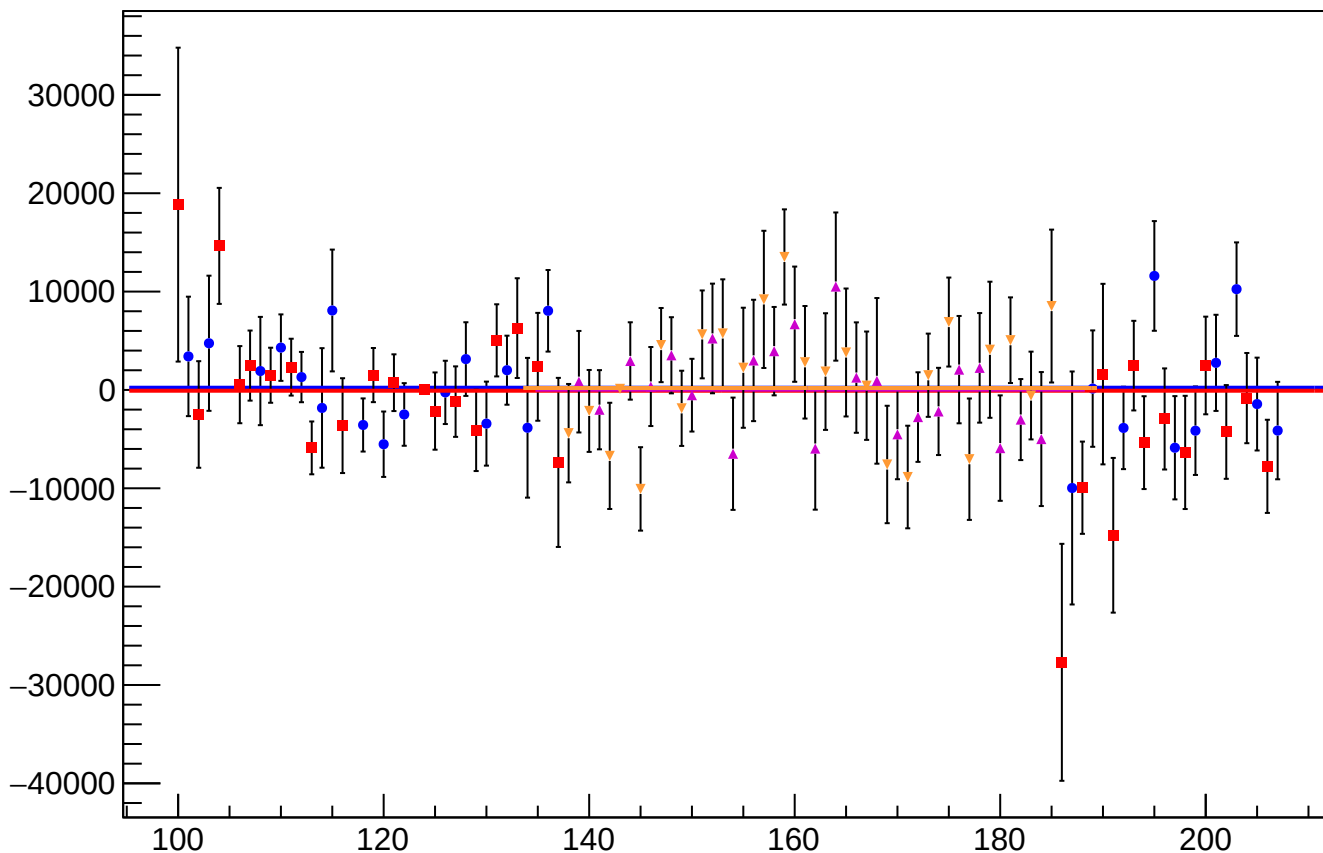
Left In: 1689.259 $\pm$ 0.279  $\chi^2$ /NDF: 122317.9/22

+ sign 1668.602 $\pm$ 0.202  $\chi^2$ /NDF: 640824.7/50

All: 1670.738 $\pm$ 0.143  $\chi^2$ /NDF: 1194288.0/10

- sign 1672.859 $\pm$ 0.202  $\chi^2$ /NDF: 553241.0/53

asym\_atl\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In: 225.257 $\pm$ 826.136  $\chi^2$ /NDF: 29.1/25

Left Out: 193.916 $\pm$ 343.107  $\chi^2$ /NDF:33.9/24

Right Out: -79.962 $\pm$ 309.373  $\chi^2$ /NDF: 40.9/30

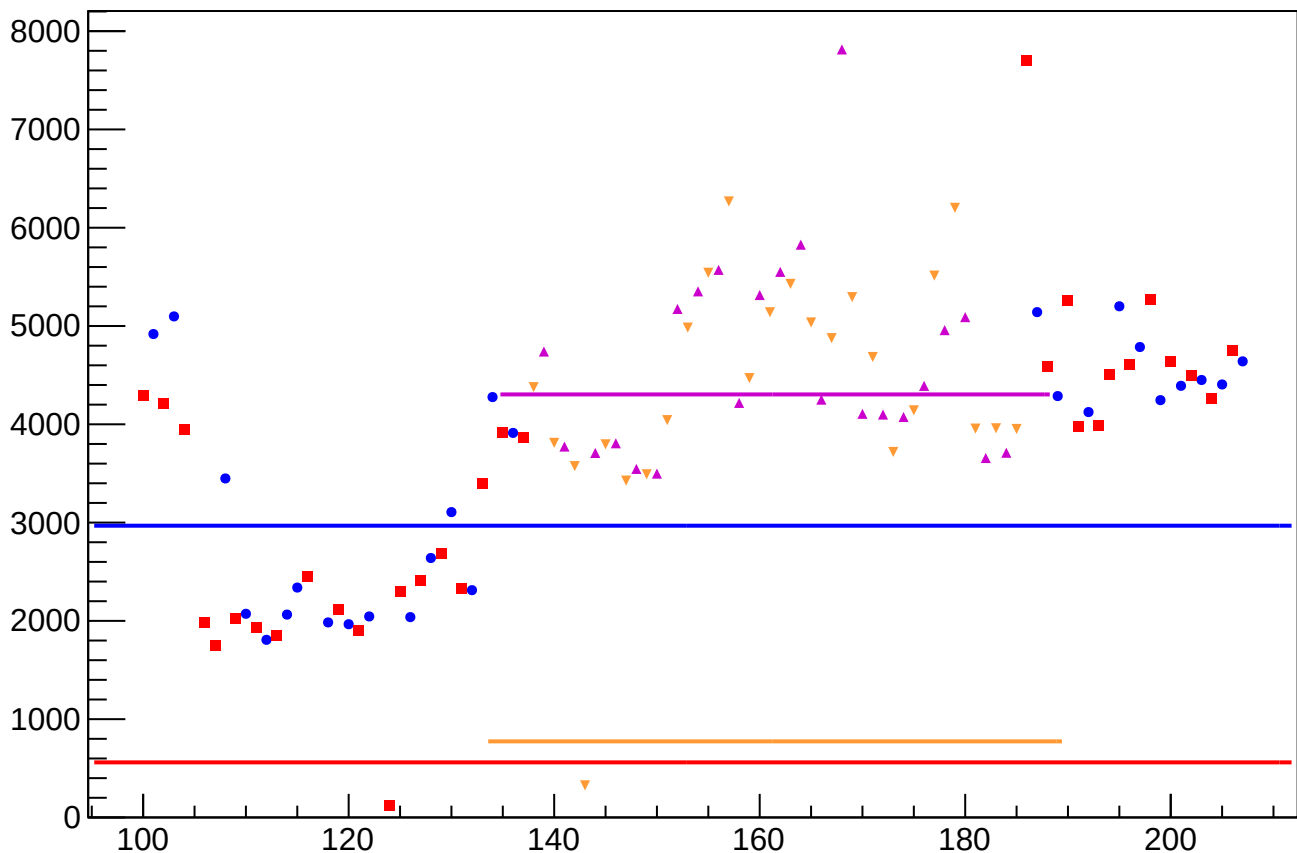
Left In: 28.766 $\pm$ 1025.480  $\chi^2$ /NDF:13.3/22

+ sign 198.526 $\pm$ 316.866  $\chi^2$ /NDF: 63.0/50

All: 54.740 $\pm$ 216.378  $\chi^2$ /NDF: 117.6/104

- sign -70.892 $\pm$ 296.188  $\chi^2$ /NDF: 54.2/53

# asym\_atl\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 2968.279+/-0.584  $\chi^2/\text{NDF}$ : 3890640.1/25

Left Out: 774.143+/-0.243  $\chi^2/\text{NDF}$ :28086455.1/24

Right Out: 560.474+/-0.219  $\chi^2/\text{NDF}$ : 25752415.6/30

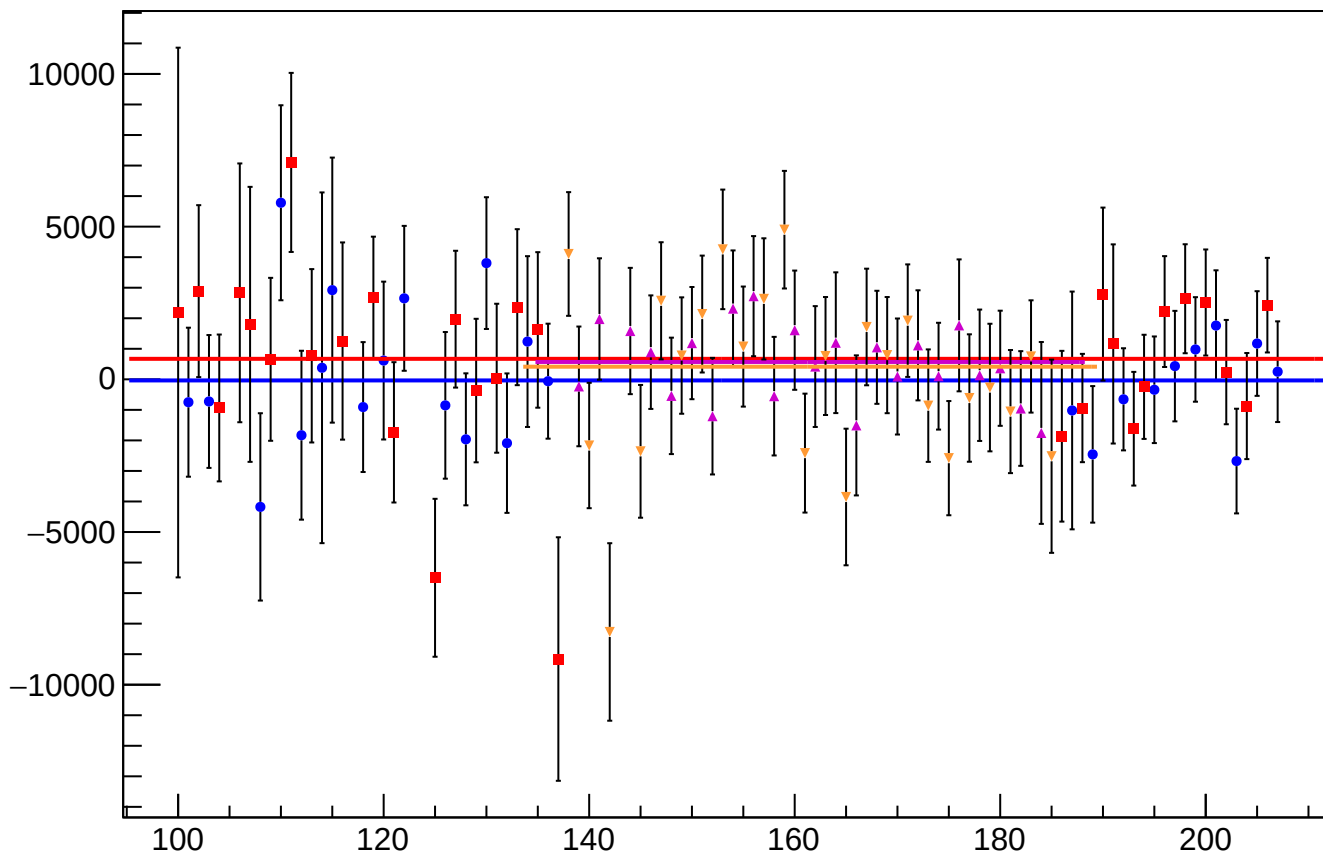
Left In: 4304.001+/-0.725  $\chi^2/\text{NDF}$ :1216572.3/22

+ sign 1096.928+/-0.224  $\chi^2/\text{NDF}$ : 44009332.4/50

All: 977.294+/-0.153  $\chi^2/\text{NDF}$ : 95941600.3/10

- sign 872.766+/-0.209  $\chi^2/\text{NDF}$ : 51398081.9/53

# dit\_asym\_atl\_dd\_mean vs Slug



Right In:  $-36.077 \pm 426.271$   $\chi^2/\text{NDF}$ : 18.5/25

Left Out:  $413.309 \pm 410.536$   $\chi^2/\text{NDF}$ : 40.0/23

Right Out:  $671.149 \pm 417.440$   $\chi^2/\text{NDF}$ : 32.5/29

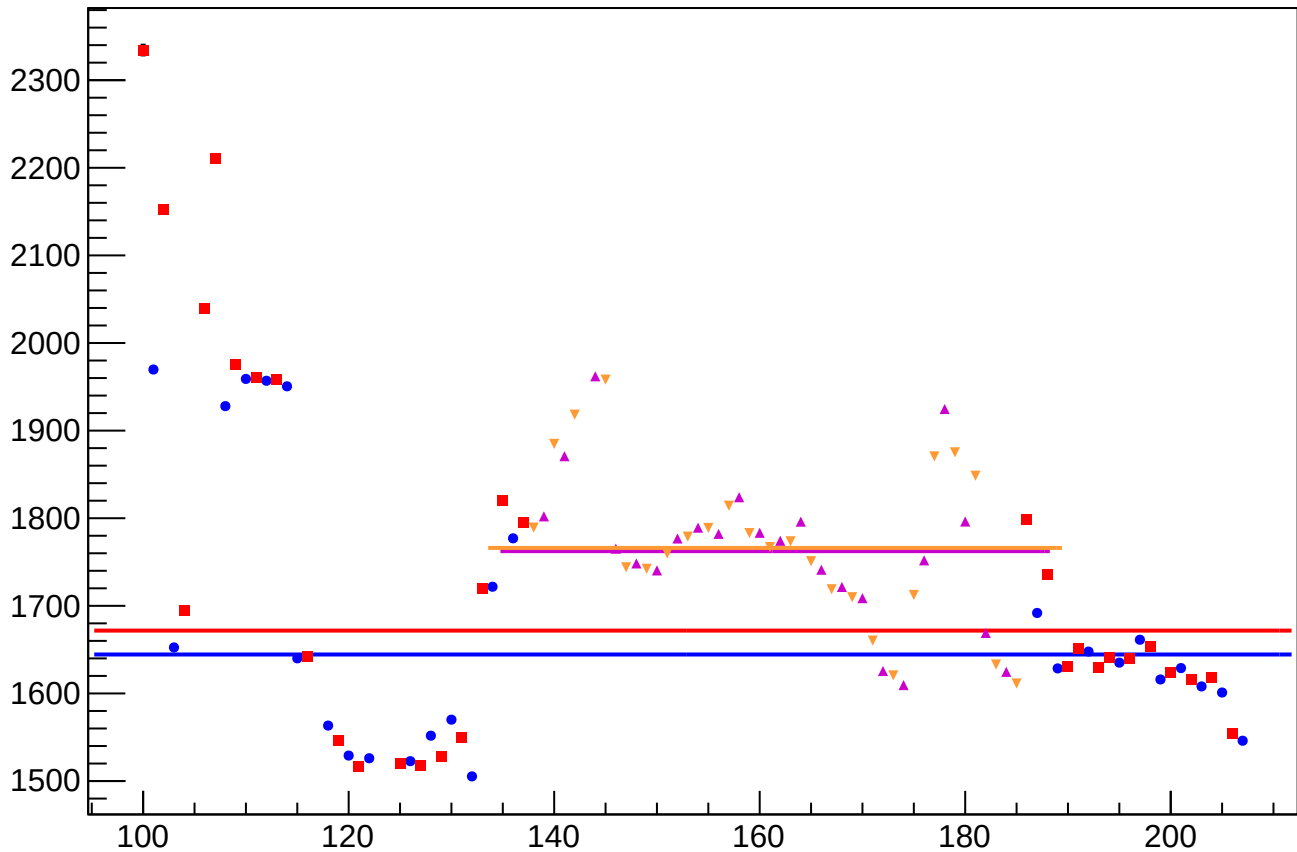
Left In:  $568.823 \pm 412.052$   $\chi^2/\text{NDF}$ : 7.7/22

+ sign  $197.063 \pm 295.699$   $\chi^2/\text{NDF}$ : 59.1/49

All:  $409.947 \pm 208.220$   $\chi^2/\text{NDF}$ : 100.5/102

- sign  $619.321 \pm 293.251$   $\chi^2/\text{NDF}$ : 40.3/52

# dit\_asym\_atl\_dd\_rms vs Slug



Right In: 1644.468+/-0.301  $\chi^2/\text{NDF}$ : 155891.8/25

Left Out: 1766.115+/-0.290  $\chi^2/\text{NDF}$ : 83252.4/23

Right Out: 1671.736+/-0.295  $\chi^2/\text{NDF}$ : 264663.3/29

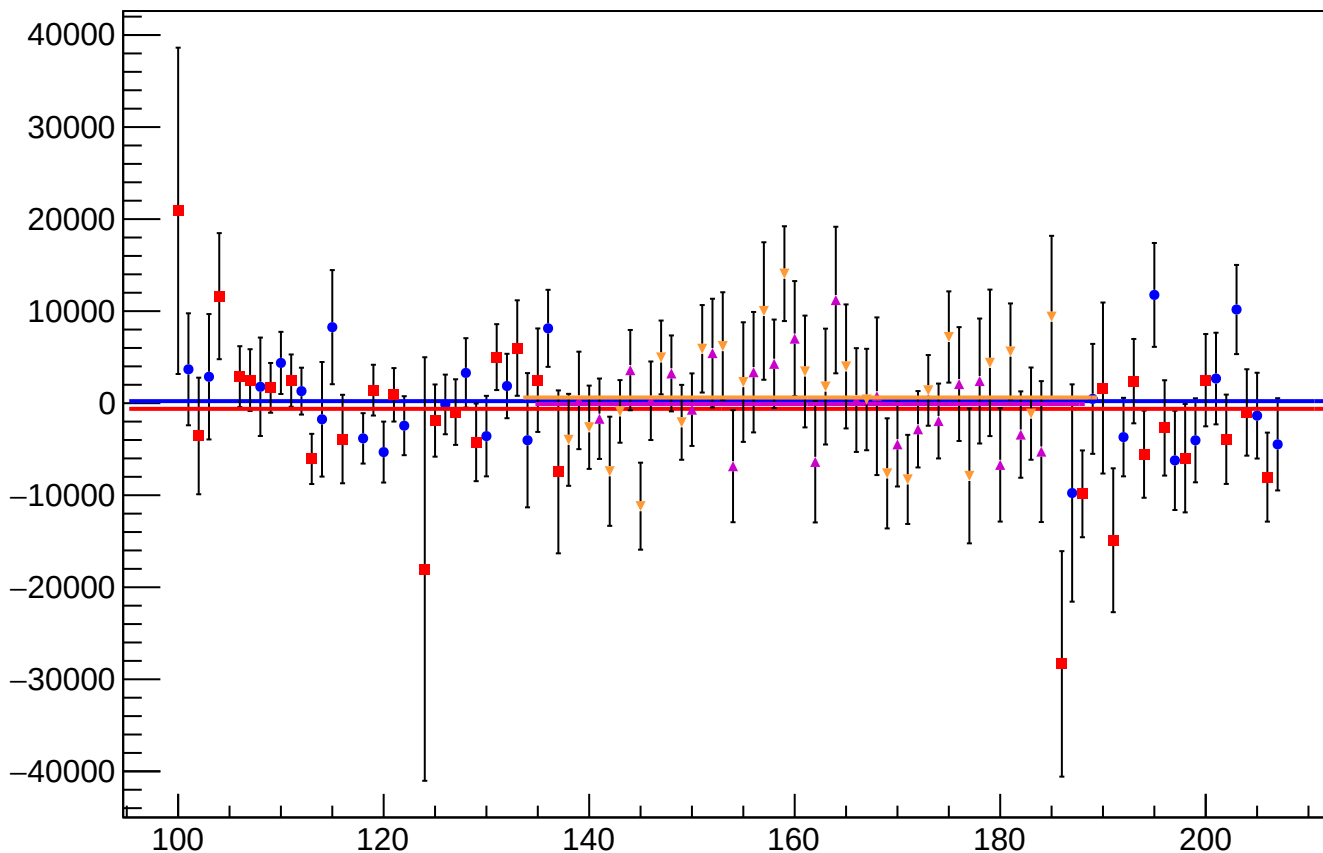
Left In: 1762.405+/-0.291  $\chi^2/\text{NDF}$ : 80090.6/22

+ sign 1707.578+/-0.209  $\chi^2/\text{NDF}$ : 323644.3/49

All: 1712.641+/-0.147  $\chi^2/\text{NDF}$ : 717397.3/102

- sign 1717.616+/-0.207  $\chi^2/\text{NDF}$ : 392590.6/52

# asym\_atl\_dd\_dit\_correction\_mean vs Slug



Right In:  $222.659 \pm 831.212$   $\chi^2/\text{NDF}$ : 28.8/25

Left Out:  $619.658 \pm 1034.658$   $\chi^2/\text{NDF}$ : 33.1/24

Right Out:  $-615.261 \pm 769.684$   $\chi^2/\text{NDF}$ : 38.5/30

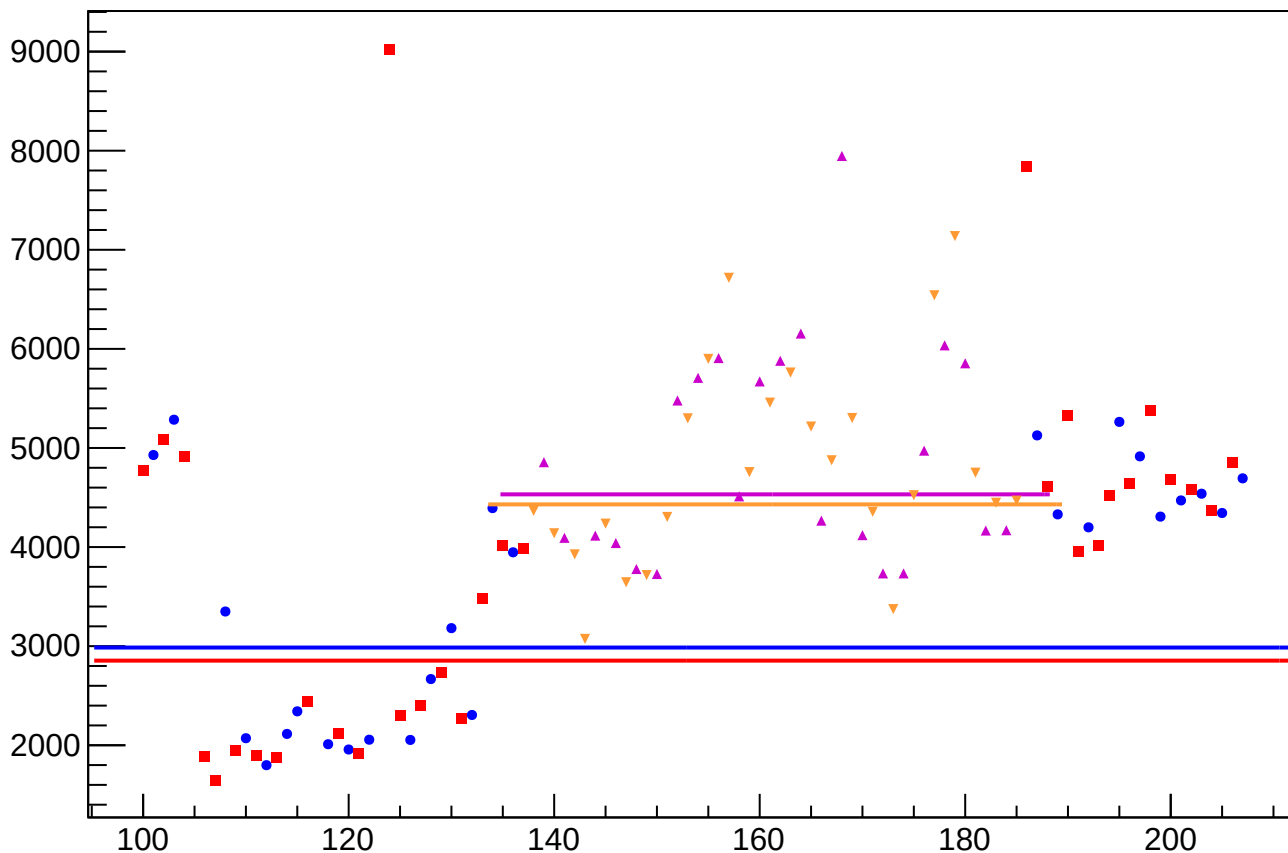
Left In:  $-85.511 \pm 1082.508$   $\chi^2/\text{NDF}$ : 12.9/22

+ sign  $378.380 \pm 648.001$   $\chi^2/\text{NDF}$ : 61.9/50

All:  $-42.746 \pm 450.703$   $\chi^2/\text{NDF}$ : 114.3/104

- sign  $-437.376 \pm 627.285$   $\chi^2/\text{NDF}$ : 51.6/53

# asym\_atl\_dd\_dit\_correction\_rms vs Slug



Right In: 2986.048 $\pm$ 0.588  $\chi^2$ /NDF: 4001525.6/25

Left Out: 4430.796 $\pm$ 0.732  $\chi^2$ /NDF:1613272.4/24

Right Out: 2853.912 $\pm$ 0.544  $\chi^2$ /NDF: 5216667.5/30

Left In: 4531.944 $\pm$ 0.765  $\chi^2$ /NDF:1376472.2/22

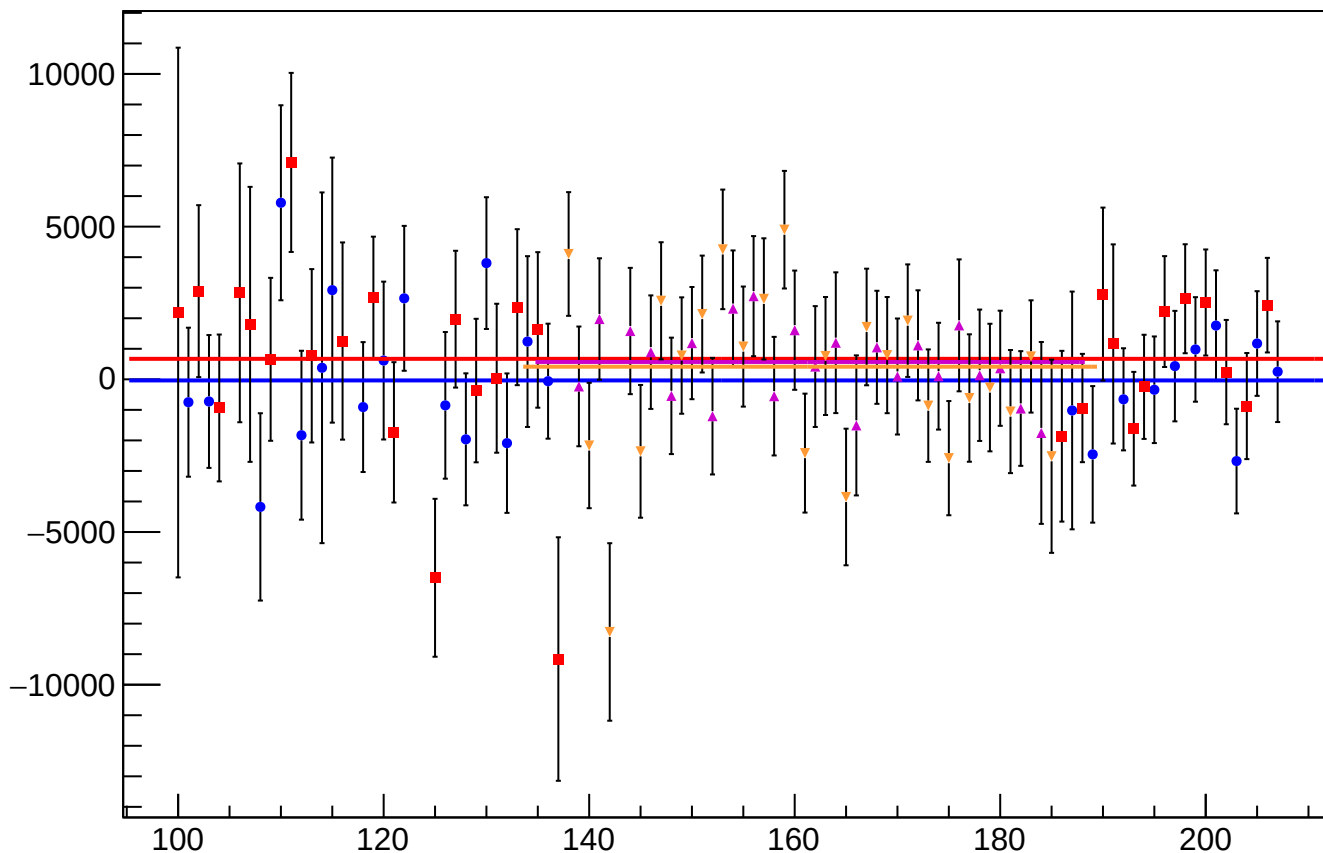
+ sign 3552.744 $\pm$ 0.458  $\chi^2$ /NDF: 7984801.2/50

All: 3482.863 $\pm$ 0.319  $\chi^2$ /NDF: 17815074.2/100

- sign 3417.379 $\pm$ 0.444  $\chi^2$ /NDF: 9785217.5/53



# eigen\_dit\_asym\_atl\_dd\_mean vs Slug



Right In:  $-36.078 \pm 426.271$   $\chi^2/\text{NDF}$ : 18.5/25

Left Out:  $413.311 \pm 410.536$   $\chi^2/\text{NDF}$ : 40.0/23

Right Out:  $671.147 \pm 417.440$   $\chi^2/\text{NDF}$ : 32.5/29

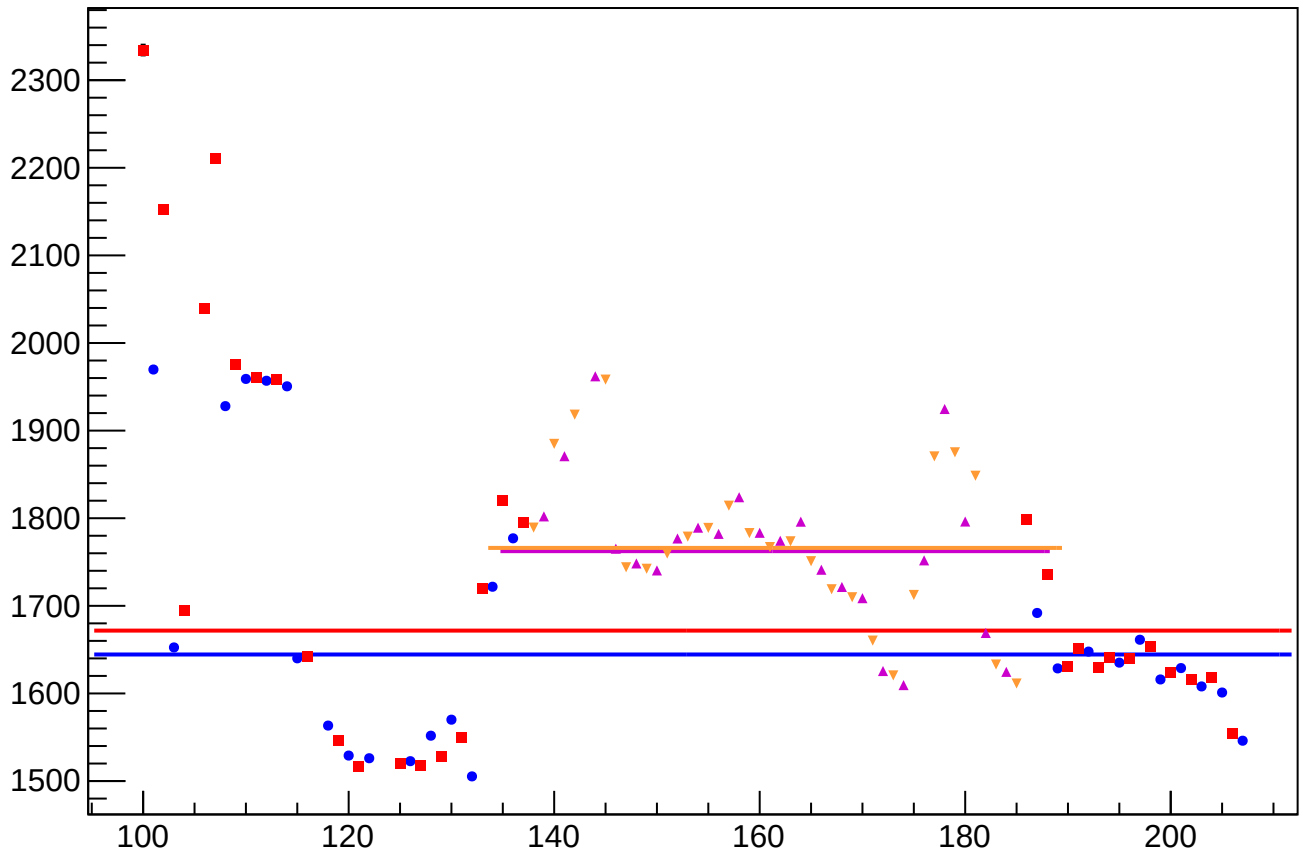
Left In:  $568.821 \pm 412.052$   $\chi^2/\text{NDF}$ : 7.7/22

+ sign  $197.064 \pm 295.699$   $\chi^2/\text{NDF}$ : 59.1/49

All:  $409.947 \pm 208.220$   $\chi^2/\text{NDF}$ : 100.5/102

- sign  $619.320 \pm 293.251$   $\chi^2/\text{NDF}$ : 40.3/52

# eigen\_dit\_asym\_atl\_dd\_rms vs Slug



Right In: 1644.468+/-0.301  $\chi^2/\text{NDF}$ : 155891.8/25

Left Out: 1766.116+/-0.290  $\chi^2/\text{NDF}$ : 83255.3/23

Right Out: 1671.737+/-0.295  $\chi^2/\text{NDF}$ : 264662.0/29

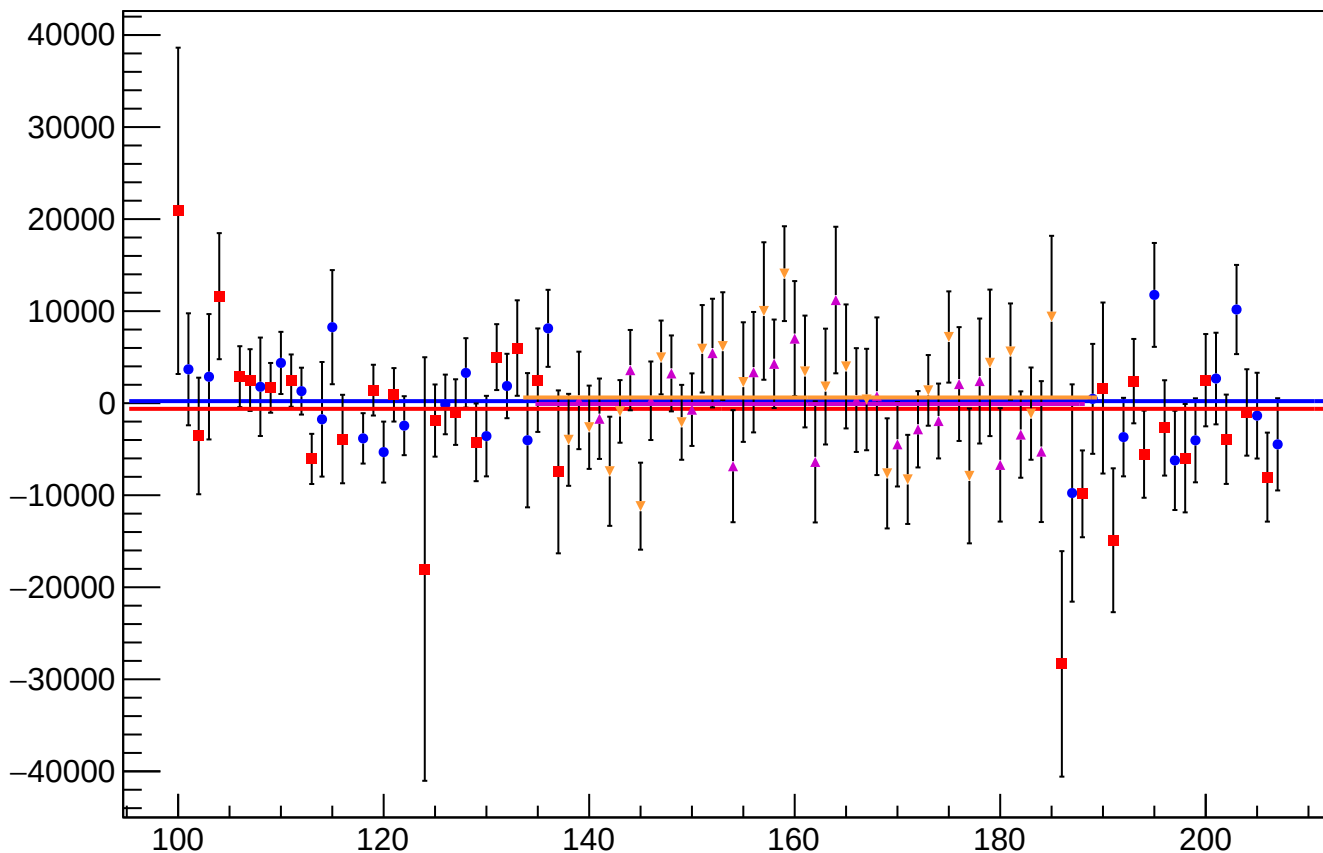
Left In: 1762.406+/-0.291  $\chi^2/\text{NDF}$ : 80093.2/22

+ sign 1707.579+/-0.209  $\chi^2/\text{NDF}$ : 323648.5/49

All: 1712.642+/-0.147  $\chi^2/\text{NDF}$ : 717403.7/102

- sign 1717.616+/-0.207  $\chi^2/\text{NDF}$ : 392592.8/52

# asym\_atl\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In: 222.654 $\pm$ 831.210  $\chi^2$ /NDF: 28.8/25

Left Out: 619.663 $\pm$ 1034.659  $\chi^2$ /NDF:33.1/24

Right Out: -615.253 $\pm$ 769.682  $\chi^2$ /NDF: 38.5/30

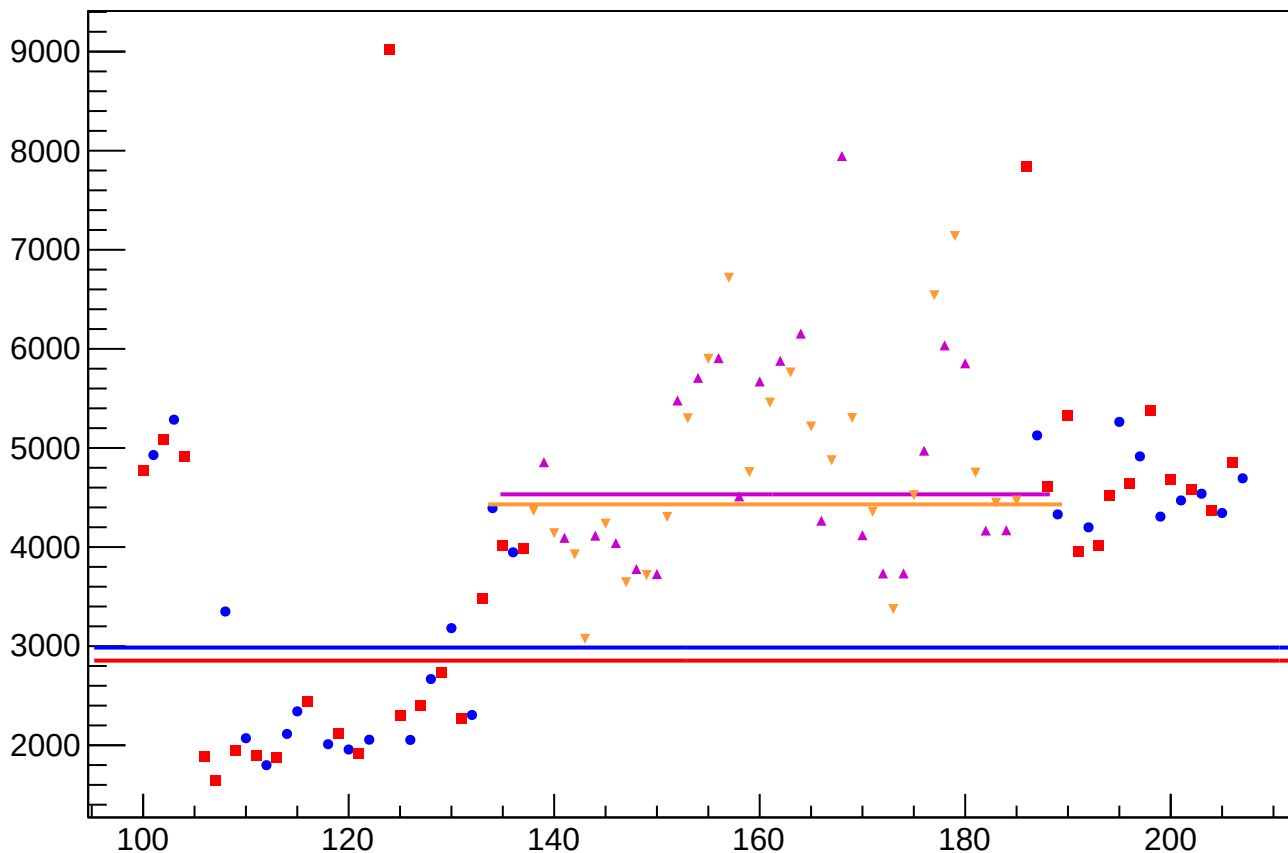
Left In: -85.511 $\pm$ 1082.509  $\chi^2$ /NDF:12.9/22

+ sign 378.378 $\pm$ 648.001  $\chi^2$ /NDF: 61.9/50

All: -42.745 $\pm$ 450.703  $\chi^2$ /NDF: 114.3/104

- sign -437.372 $\pm$ 627.284  $\chi^2$ /NDF: 51.6/53

# asym\_atl\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 2986.038 $\pm$ 0.588  $\chi^2$ /NDF: 4001584.4/25

Left Out: 4430.803 $\pm$ 0.732  $\chi^2$ /NDF:1613274.9/24

Right Out: 2853.903 $\pm$ 0.544  $\chi^2$ /NDF: 5216720.2/30

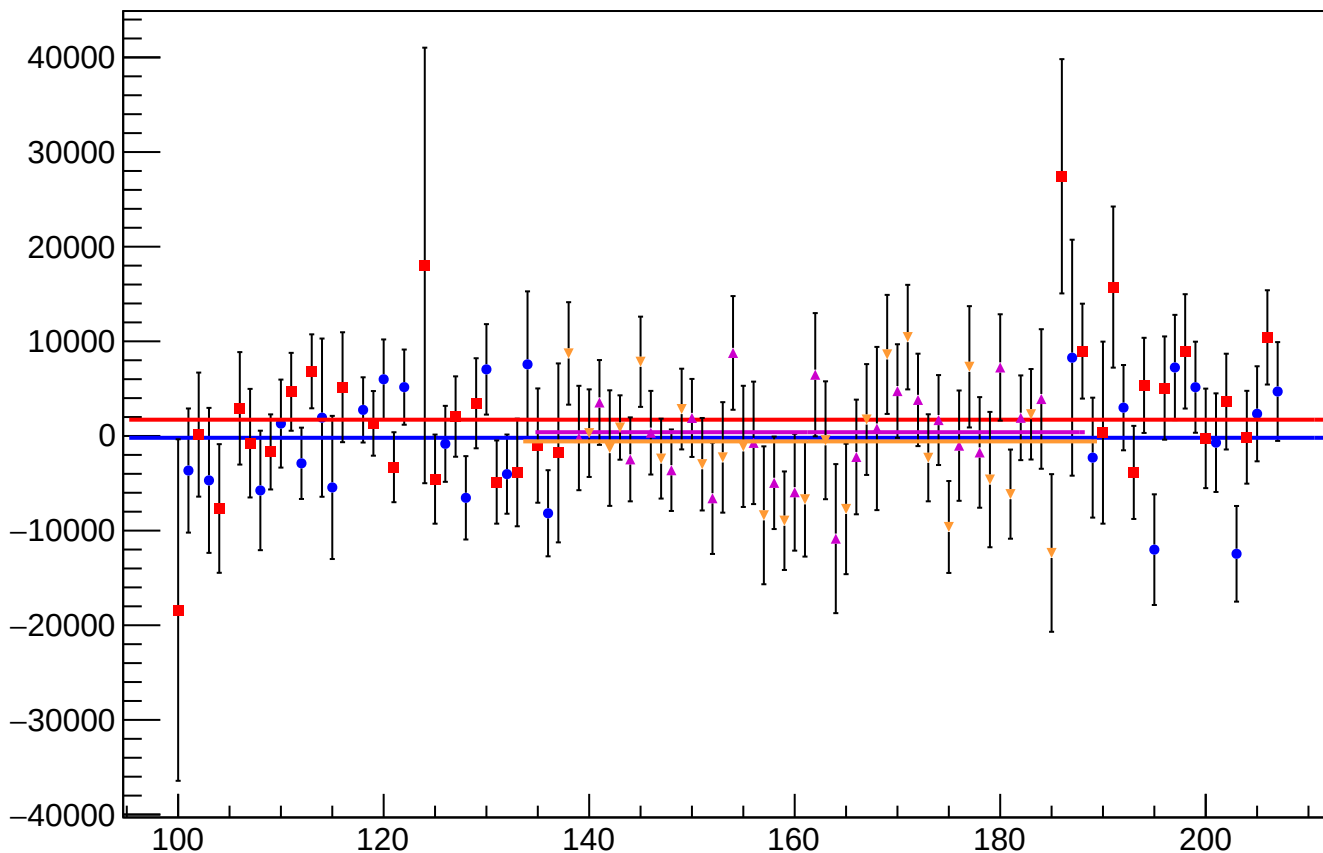
Left In: 4531.951 $\pm$ 0.765  $\chi^2$ /NDF:1376473.4/22

+ sign 3552.738 $\pm$ 0.458  $\chi^2$ /NDF: 7984918.6/50

All: 3482.857 $\pm$ 0.319  $\chi^2$ /NDF: 17815305.0/100

- sign 3417.372 $\pm$ 0.444  $\chi^2$ /NDF: 9785330.6/53

# asym\_atl\_dd\_mean vs Slug



Right In:  $-192.873 \pm 982.811$   $\chi^2/\text{NDF}$ : 31.8/25

Left Out:  $-573.122 \pm 1054.836$   $\chi^2/\text{NDF}$ : 28.8/24

Right Out:  $1719.642 \pm 944.411$   $\chi^2/\text{NDF}$ : 30.8/30

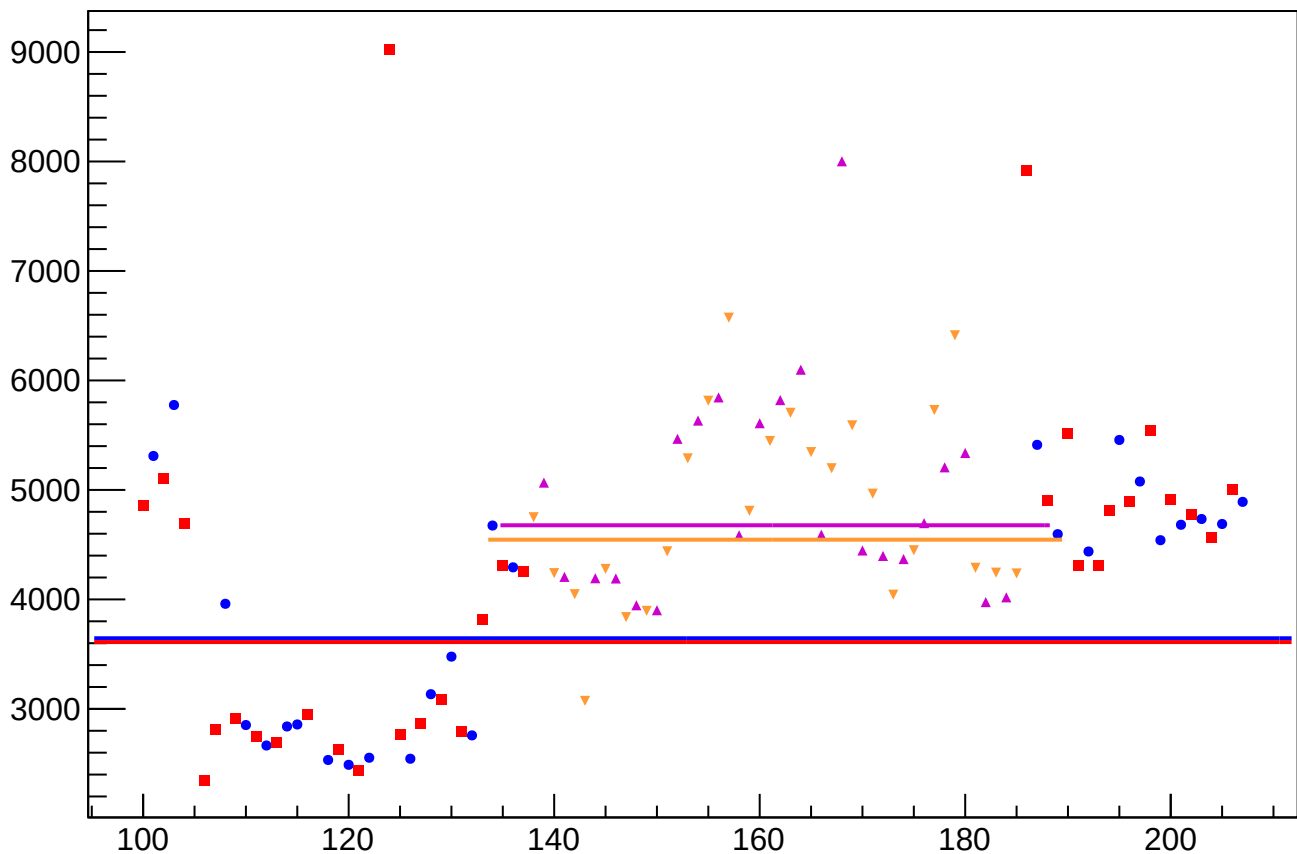
Left In:  $398.404 \pm 1109.490$   $\chi^2/\text{NDF}$ : 14.0/22

+ sign  $-369.574 \pm 719.068$   $\chi^2/\text{NDF}$ : 60.6/50

All:  $397.389 \pm 508.488$   $\chi^2/\text{NDF}$ : 108.5/104

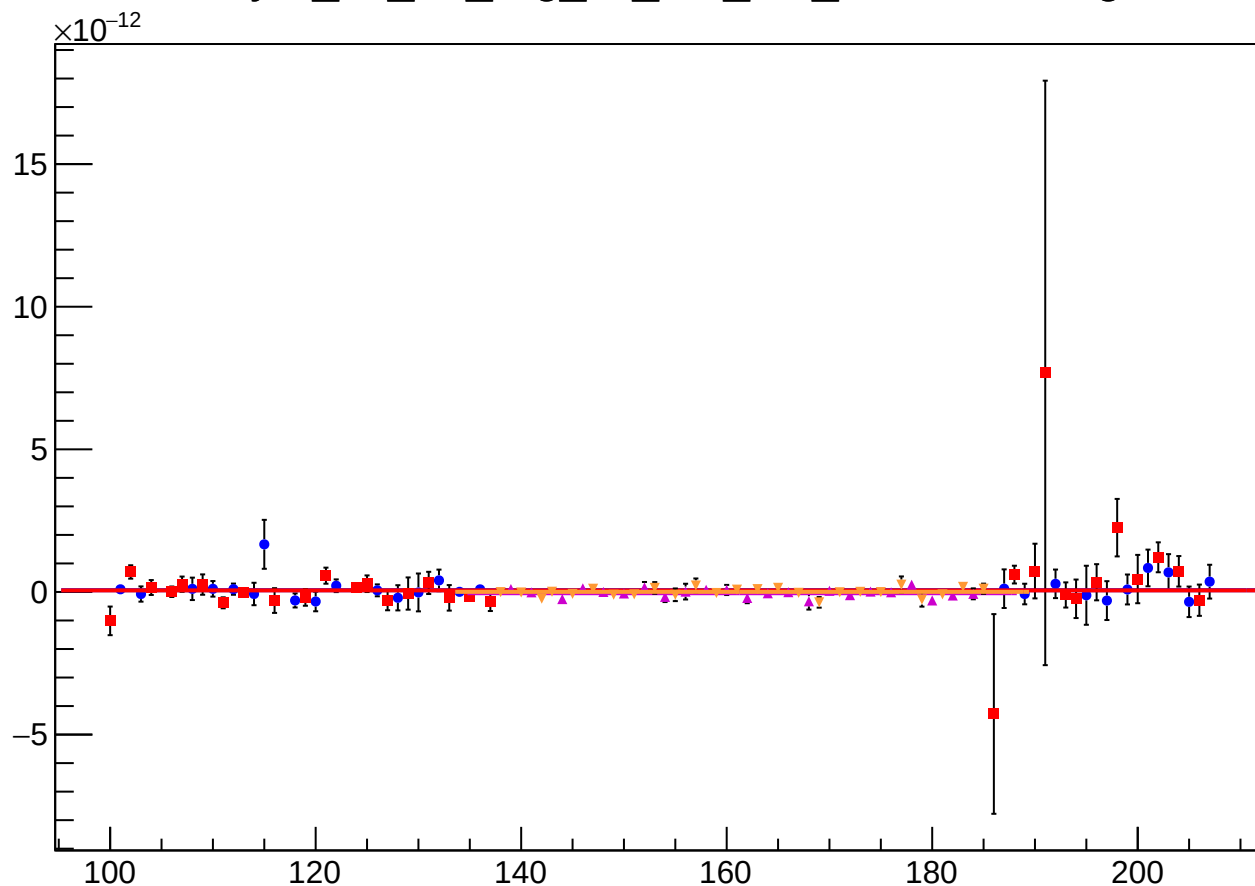
- sign  $1164.534 \pm 719.154$   $\chi^2/\text{NDF}$ : 45.6/53

# asym\_atl\_dd\_rms vs Slug



|                             |                                    |                         |                                    |
|-----------------------------|------------------------------------|-------------------------|------------------------------------|
| Right In: 3645.021+/-0.695  | $\chi^2/\text{NDF}$ : 2291447.9/25 | + sign 4063.467+/-0.508 | $\chi^2/\text{NDF}$ : 4330166.3/50 |
| Left Out: 4545.493+/-0.746  | $\chi^2/\text{NDF}$ : 1258528.5/24 | All: 4058.614+/-0.359   | $\chi^2/\text{NDF}$ : 9149008.0/10 |
| Right Out: 3610.424+/-0.662 | $\chi^2/\text{NDF}$ : 2778712.7/30 | - sign 4053.812+/-0.506 | $\chi^2/\text{NDF}$ : 4818660.4/53 |
| Left In: 4677.049+/-0.785   | $\chi^2/\text{NDF}$ : 959885.7/22  |                         |                                    |

# asym\_atl\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 13.3/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 18.2/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 48.7/30

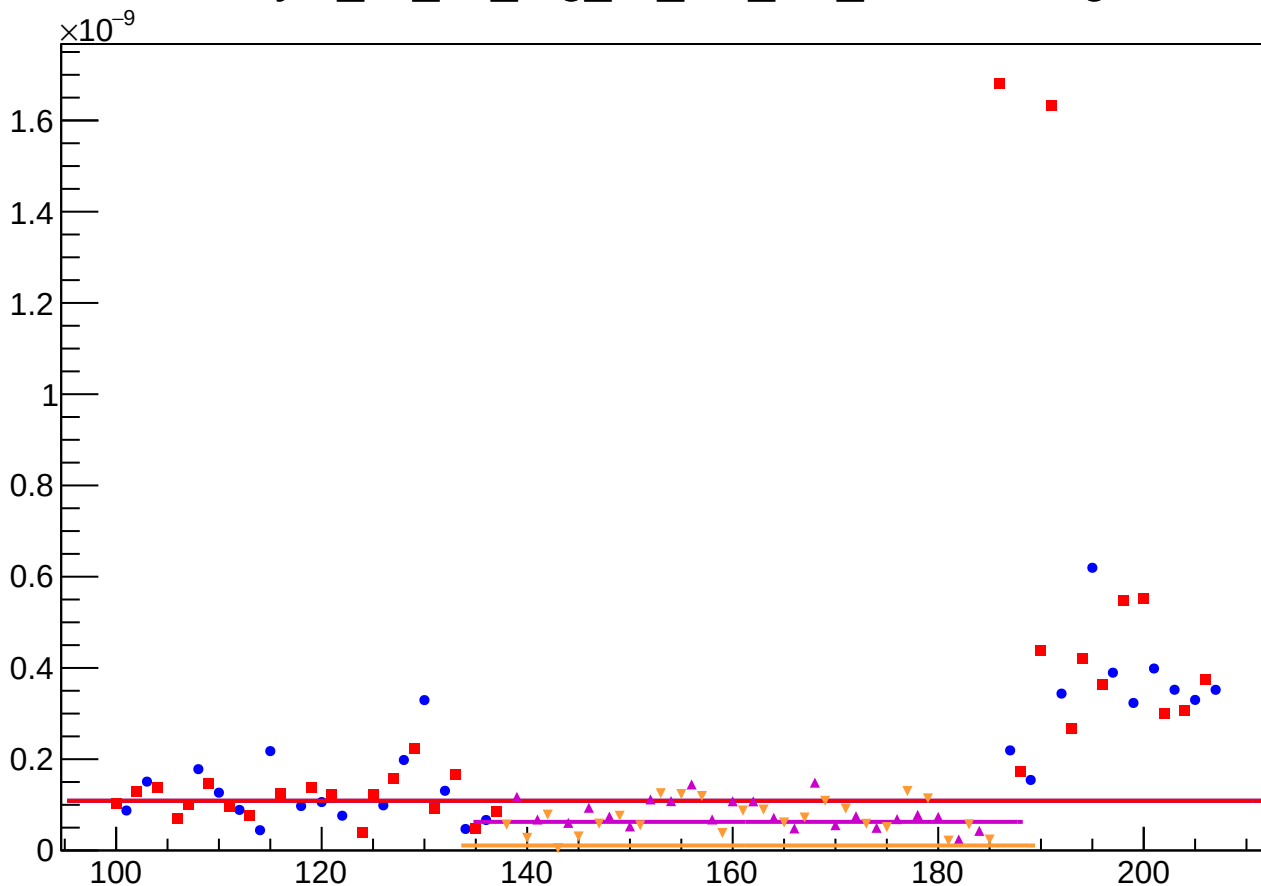
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 20.6/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 32.6/50

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 106.2/104

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 72.2/53

# asym\_atl\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 4251242.4/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 9705530.0/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 5001566.7/30

Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2092071.7/22

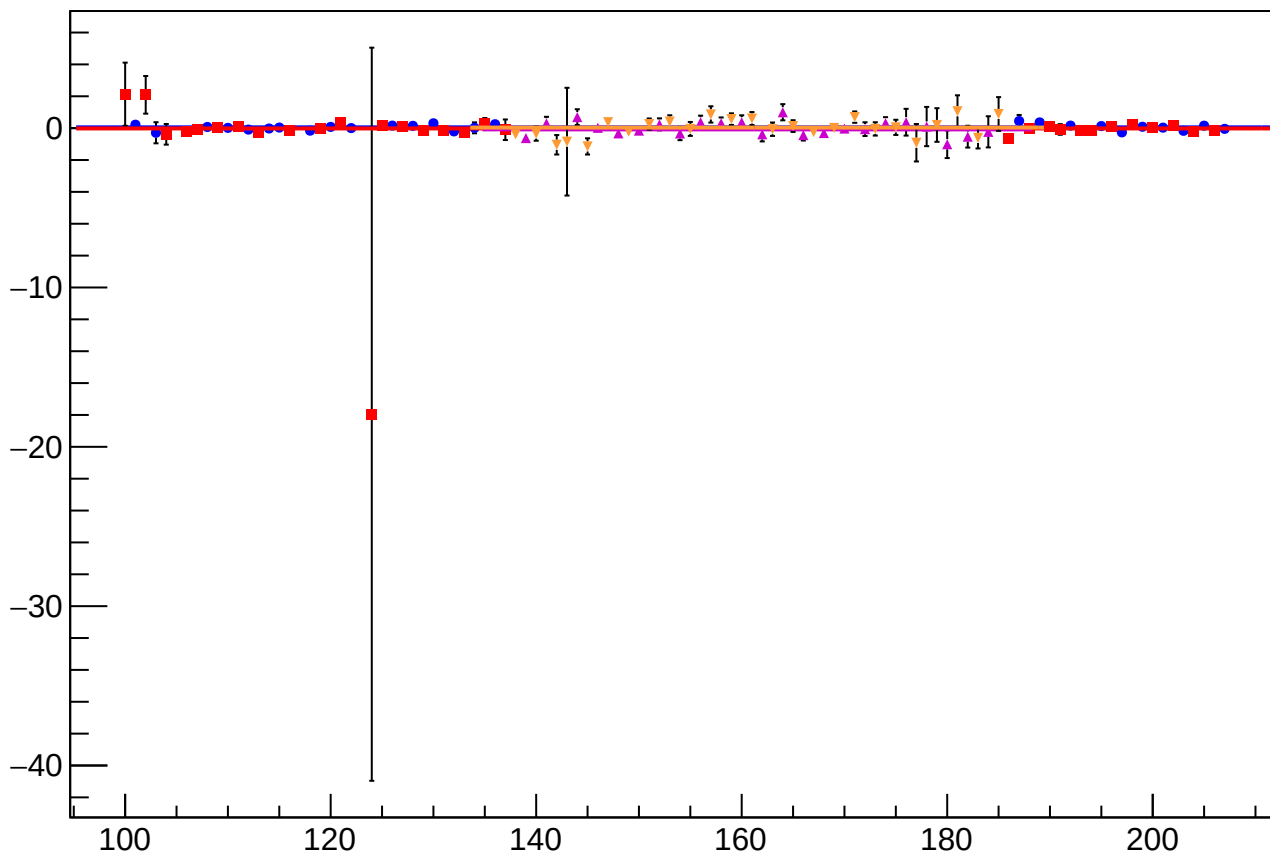
+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 20432066.9/50

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 39884314.4/104

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 8321509.8/53



# asym\_atl\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.050 \pm 0.036$   $\chi^2/\text{NDF}: 17.6/25$

Left Out:  $0.036 \pm 0.077$   $\chi^2/\text{NDF}: 29.7/24$

Right Out:  $-0.019 \pm 0.033$   $\chi^2/\text{NDF}: 32.8/30$

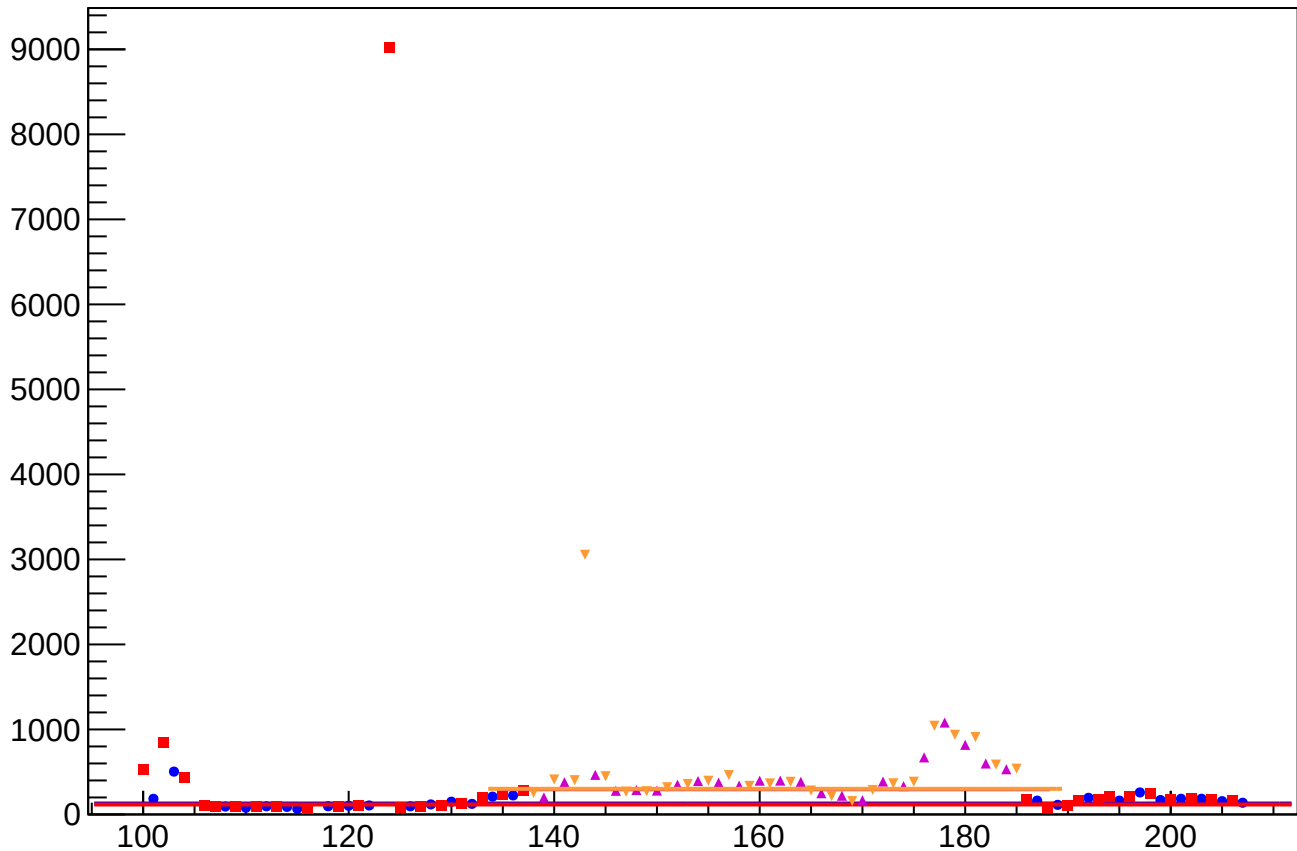
Left In:  $-0.078 \pm 0.076$   $\chi^2/\text{NDF}: 24.1/22$

+ sign  $0.047 \pm 0.033$   $\chi^2/\text{NDF}: 47.3/50$

All:  $0.006 \pm 0.022$   $\chi^2/\text{NDF}: 107.5/104$

- sign  $-0.028 \pm 0.030$   $\chi^2/\text{NDF}: 57.4/53$

# asym\_atl\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 128.577 $\pm$ 0.026  $\chi^2$ /NDF: 3446508.0/25

Left Out: 301.735 $\pm$ 0.054  $\chi^2$ /NDF: 6693517.2/24

Right Out: 117.104 $\pm$ 0.023  $\chi^2$ /NDF: 5408144.3/30

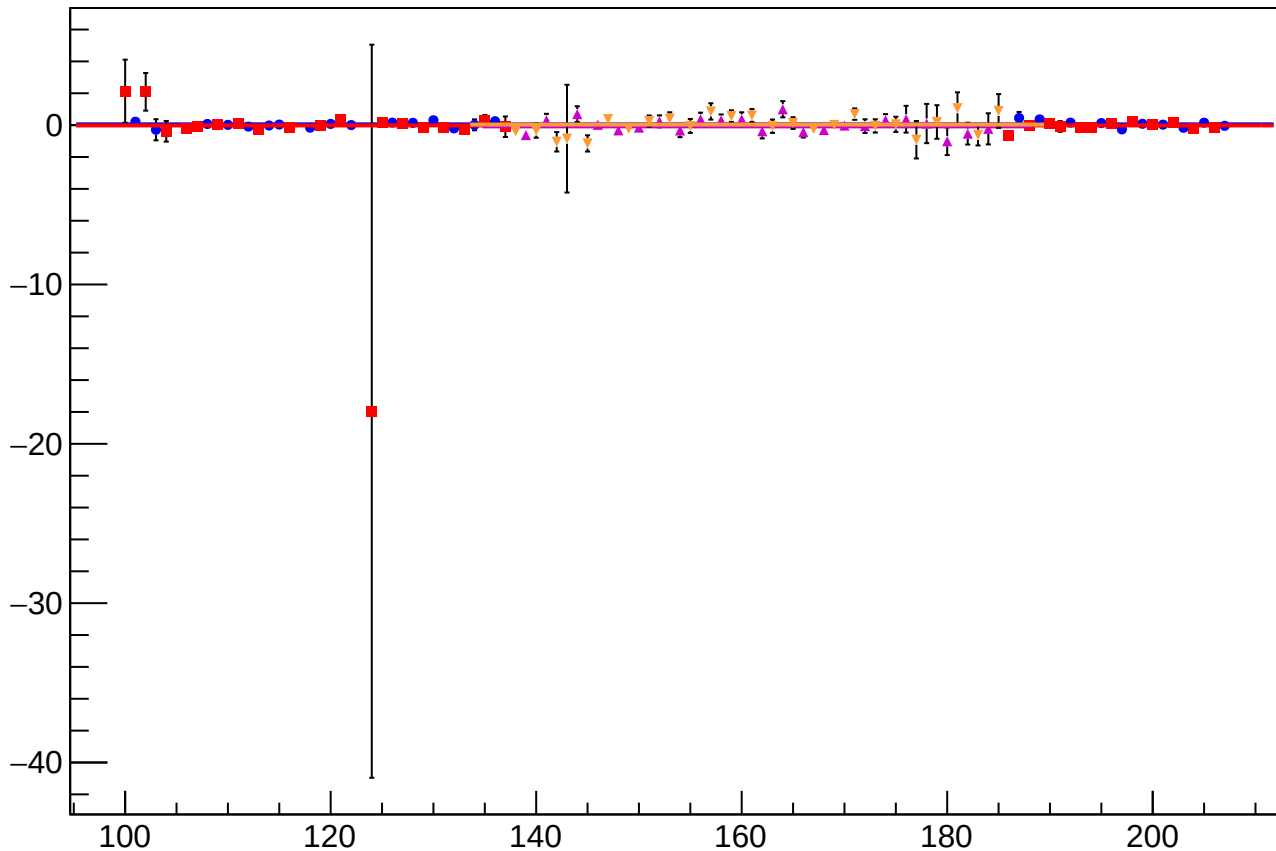
Left In: 296.875 $\pm$ 0.054  $\chi^2$ /NDF: 4917907.0/22

+ sign 160.212 $\pm$ 0.023  $\chi^2$ /NDF: 18420930.5/50

All: 152.379 $\pm$ 0.016  $\chi^2$ /NDF: 38428395.7/10

- sign 145.756 $\pm$ 0.021  $\chi^2$ /NDF: 19797999.2/53

asym\_atl\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.050 $\pm$ 0.036  $\chi^2$ /NDF: 17.6/25

Left Out: 0.036 $\pm$ 0.077  $\chi^2$ /NDF: 29.7/24

Right Out: -0.019 $\pm$ 0.033  $\chi^2$ /NDF: 32.8/30

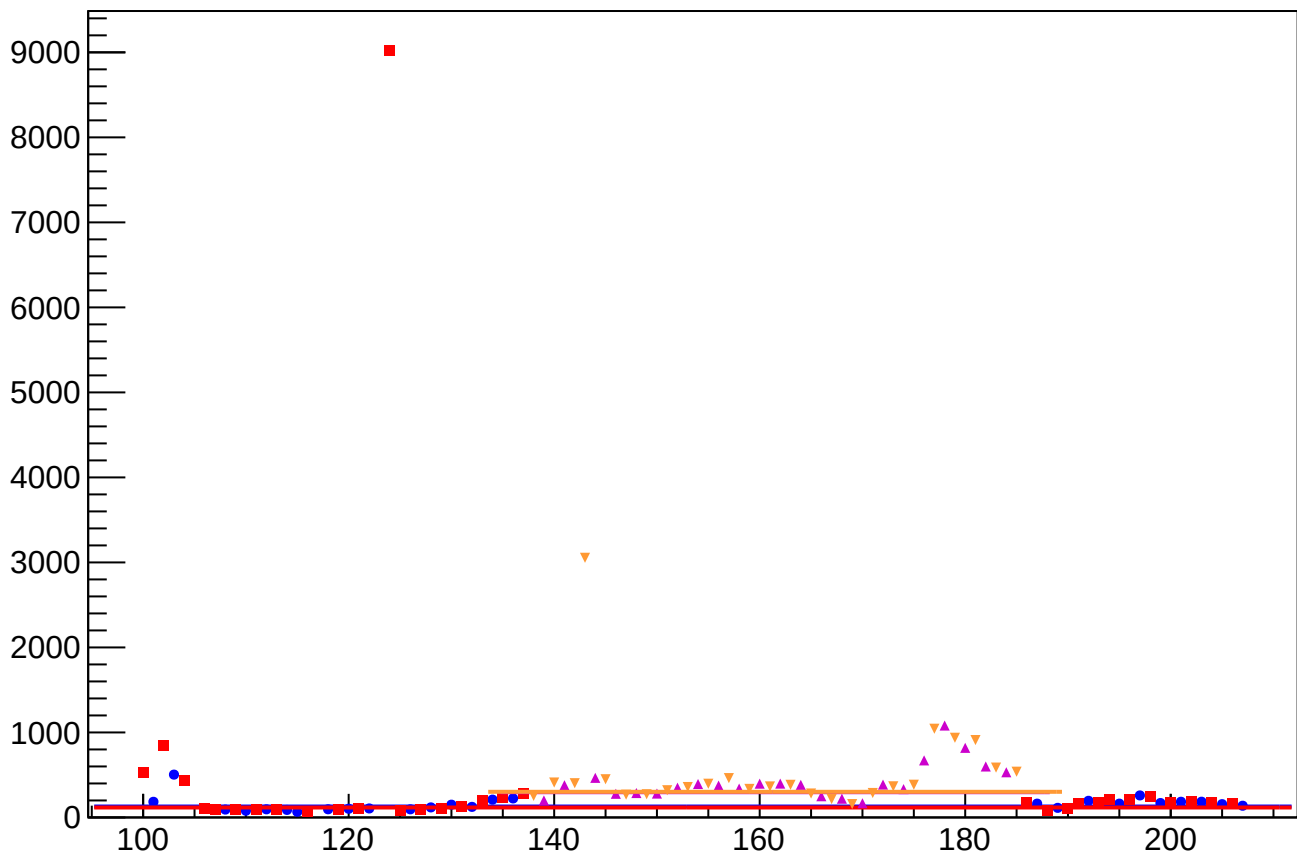
Left In: -0.078 $\pm$ 0.076  $\chi^2$ /NDF: 24.1/22

+ sign 0.047 $\pm$ 0.033  $\chi^2$ /NDF: 47.3/50

All: 0.006 $\pm$ 0.022  $\chi^2$ /NDF: 107.5/104

- sign -0.028 $\pm$ 0.030  $\chi^2$ /NDF: 57.4/53

# asym\_atl\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 128.577 $\pm$ 0.026  $\chi^2$ /NDF: 3446508.0/25

Left Out: 301.735 $\pm$ 0.054  $\chi^2$ /NDF:6693517.2/24

Right Out: 117.104 $\pm$ 0.023  $\chi^2$ /NDF: 5408144.3/30

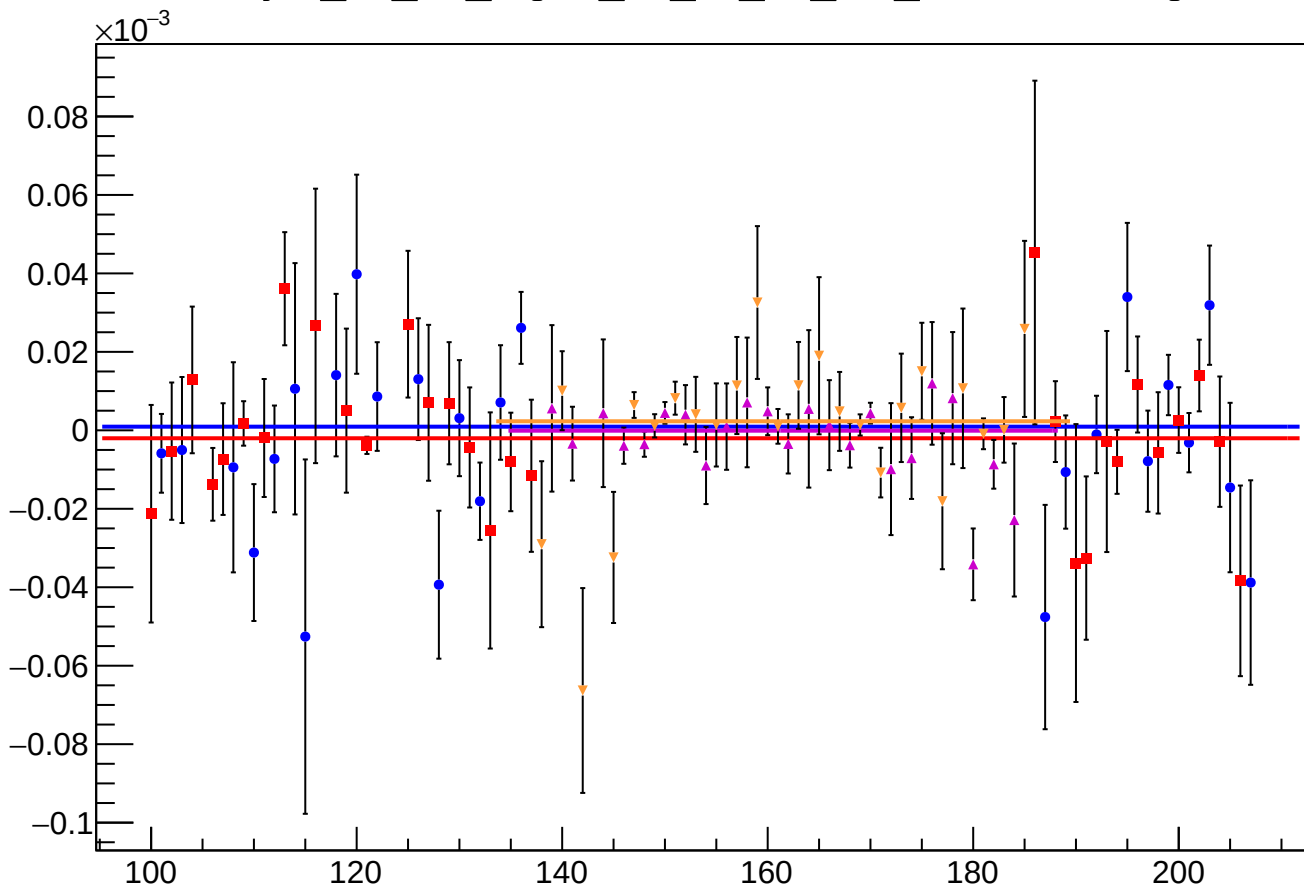
Left In: 296.875 $\pm$ 0.054  $\chi^2$ /NDF:4917907.0/22

+ sign 160.212 $\pm$ 0.023  $\chi^2$ /NDF: 18420930.5/50

All: 152.379 $\pm$ 0.016  $\chi^2$ /NDF: 38428395.7/10

- sign 145.756 $\pm$ 0.021  $\chi^2$ /NDF: 19797999.2/53

asym\_atl\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 41.9/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:31.2/23

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 27.6/29

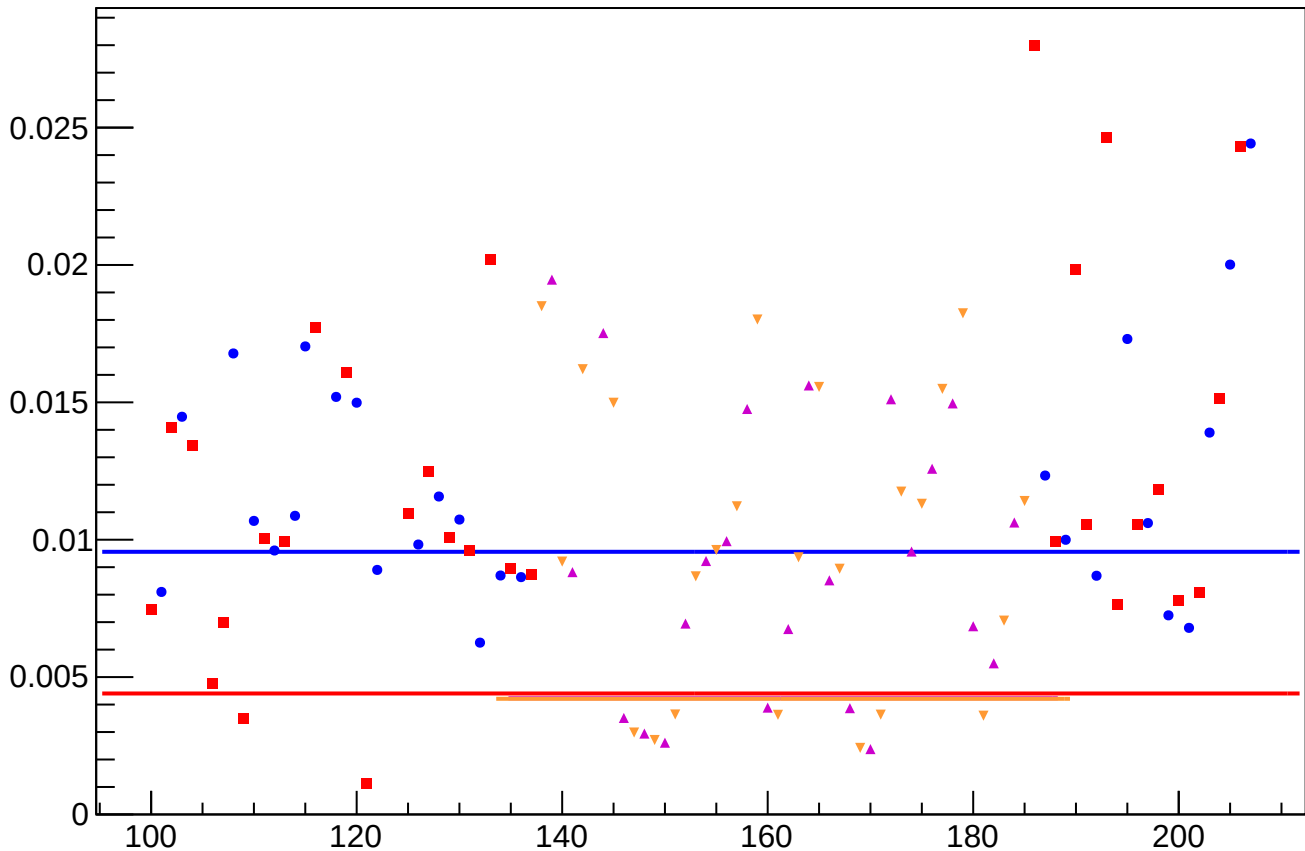
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:29.1/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 73.3/49

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 134.5/102

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 57.6/52

# asym\_atl\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.010 $\pm$ 0.000  $\chi^2$ /NDF: 3042545.3/25

Left Out: 0.004 $\pm$ 0.000  $\chi^2$ /NDF:12078055.5/23

Right Out: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 16055829.9/29

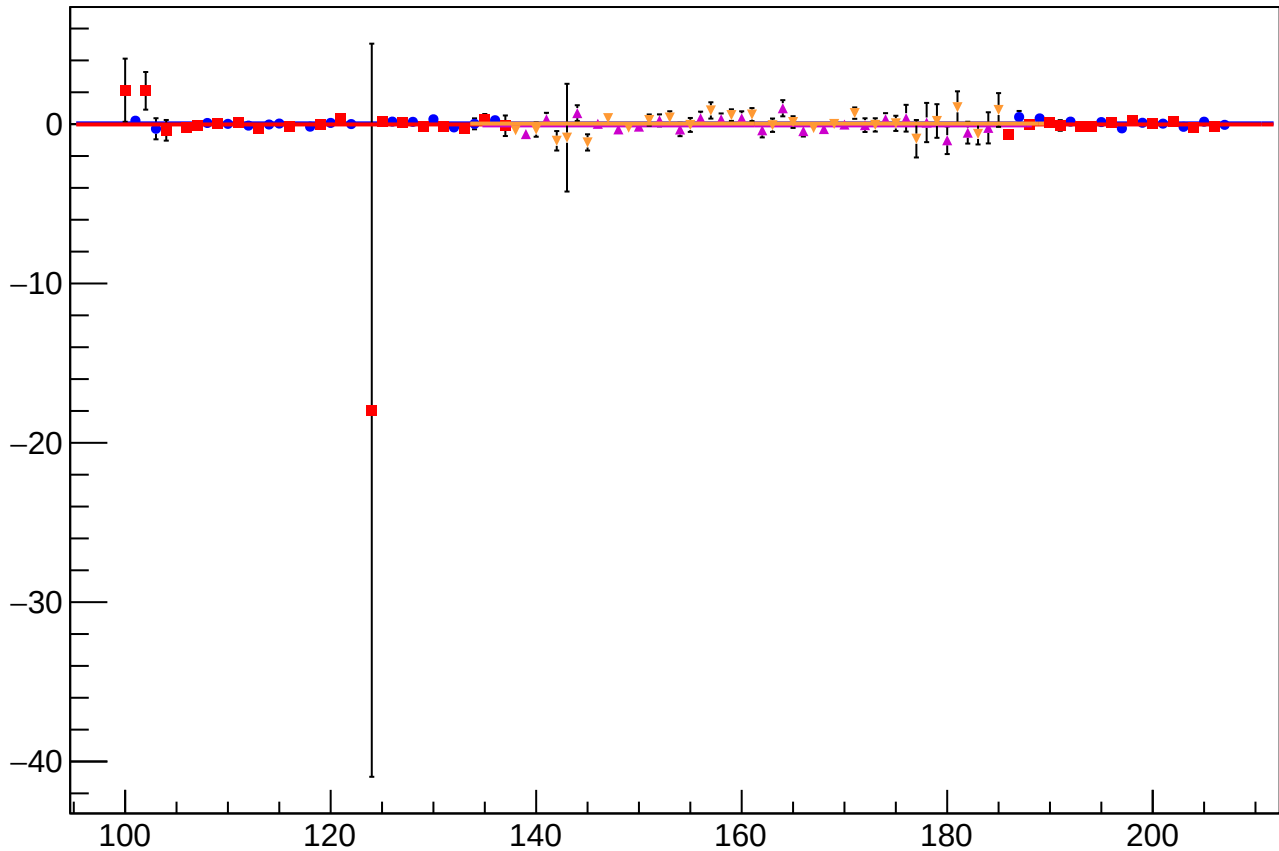
Left In: 0.004 $\pm$ 0.000  $\chi^2$ /NDF:11034220.9/22

+ sign 0.005 $\pm$ 0.000  $\chi^2$ /NDF: 21673613.1/49

All: 0.005 $\pm$ 0.000  $\chi^2$ /NDF: 49438743.4/102

- sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 27104093.3/52

# asym\_atl\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.050 \pm 0.036$   $\chi^2/\text{NDF}: 17.6/25$

Left Out:  $0.036 \pm 0.077$   $\chi^2/\text{NDF}: 29.7/24$

Right Out:  $-0.019 \pm 0.033$   $\chi^2/\text{NDF}: 32.8/30$

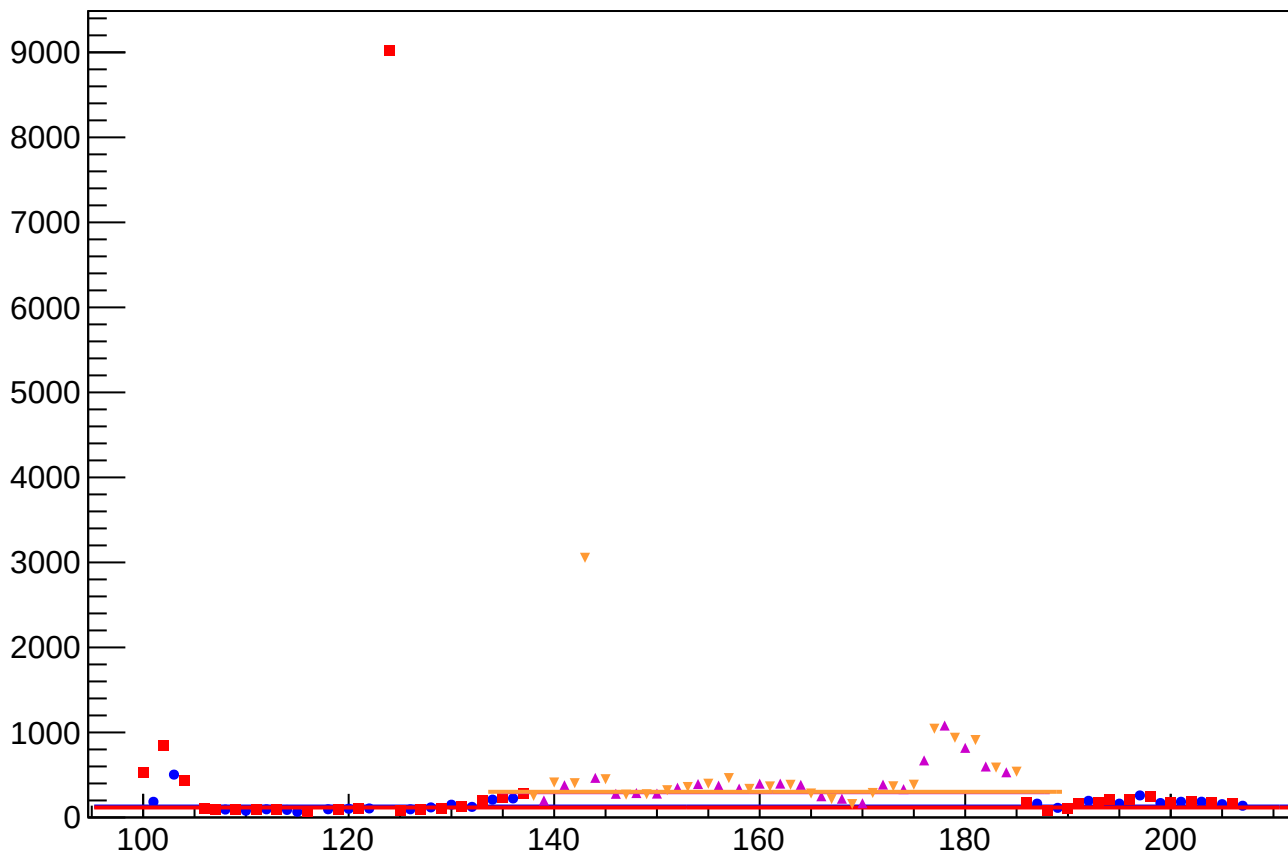
Left In:  $-0.078 \pm 0.076$   $\chi^2/\text{NDF}: 24.1/22$

+ sign  $0.047 \pm 0.033$   $\chi^2/\text{NDF}: 47.3/50$

All:  $0.006 \pm 0.022$   $\chi^2/\text{NDF}: 107.5/104$

- sign  $-0.028 \pm 0.030$   $\chi^2/\text{NDF}: 57.4/53$

# asym\_atl\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 128.578 $\pm$ 0.026  $\chi^2$ /NDF: 3446484.3/25

Left Out: 301.737 $\pm$ 0.054  $\chi^2$ /NDF: 6693577.7/24

Right Out: 117.105 $\pm$ 0.023  $\chi^2$ /NDF: 5408069.3/30

Left In: 296.878 $\pm$ 0.054  $\chi^2$ /NDF: 4917864.1/22

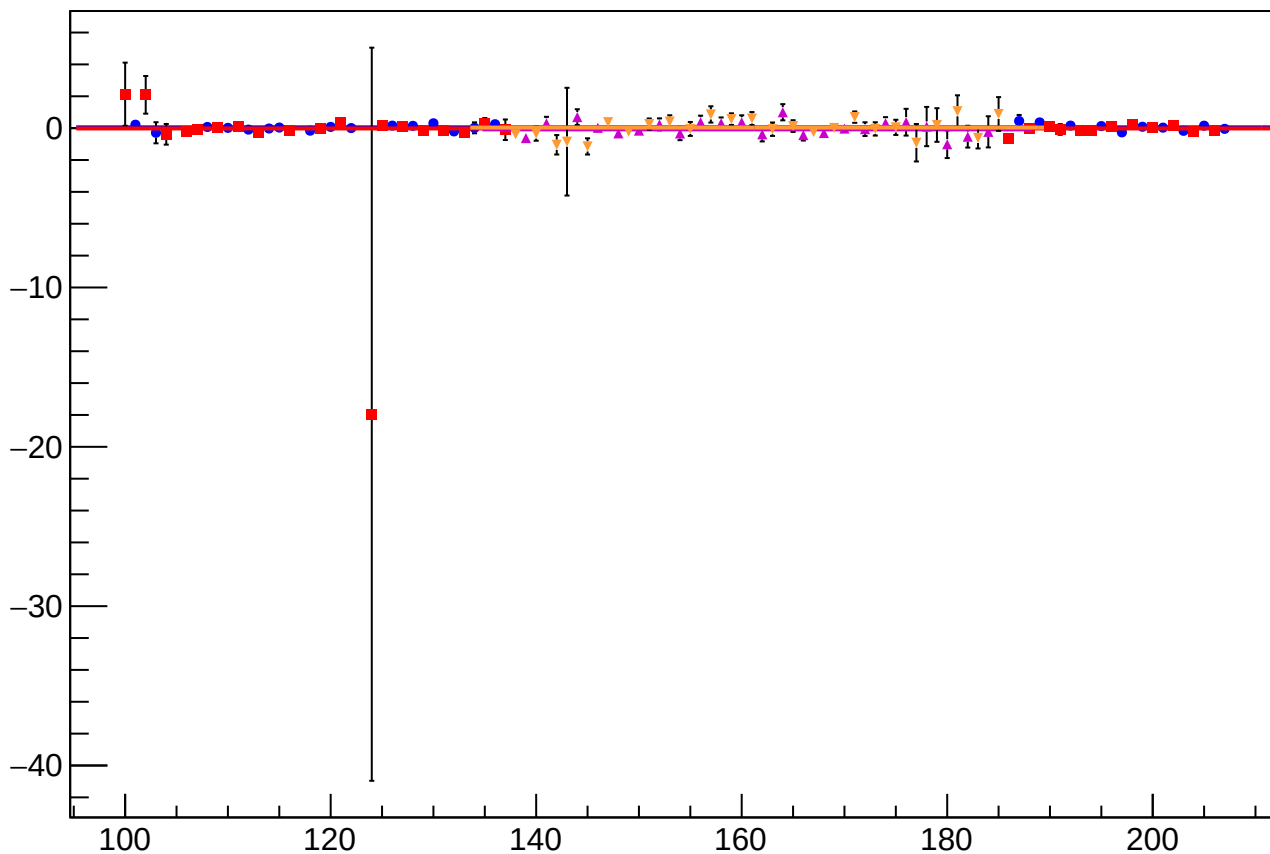
+ sign 160.213 $\pm$ 0.023  $\chi^2$ /NDF: 18420969.0/50

All: 152.380 $\pm$ 0.016  $\chi^2$ /NDF: 38428374.2/10

- sign 145.757 $\pm$ 0.021  $\chi^2$ /NDF: 19797950.5/53



asym\_atl\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.050 \pm 0.036$   $\chi^2/\text{NDF}: 17.6/25$

Left Out:  $0.036 \pm 0.077$   $\chi^2/\text{NDF}: 29.7/24$

Right Out:  $-0.019 \pm 0.033$   $\chi^2/\text{NDF}: 32.8/30$

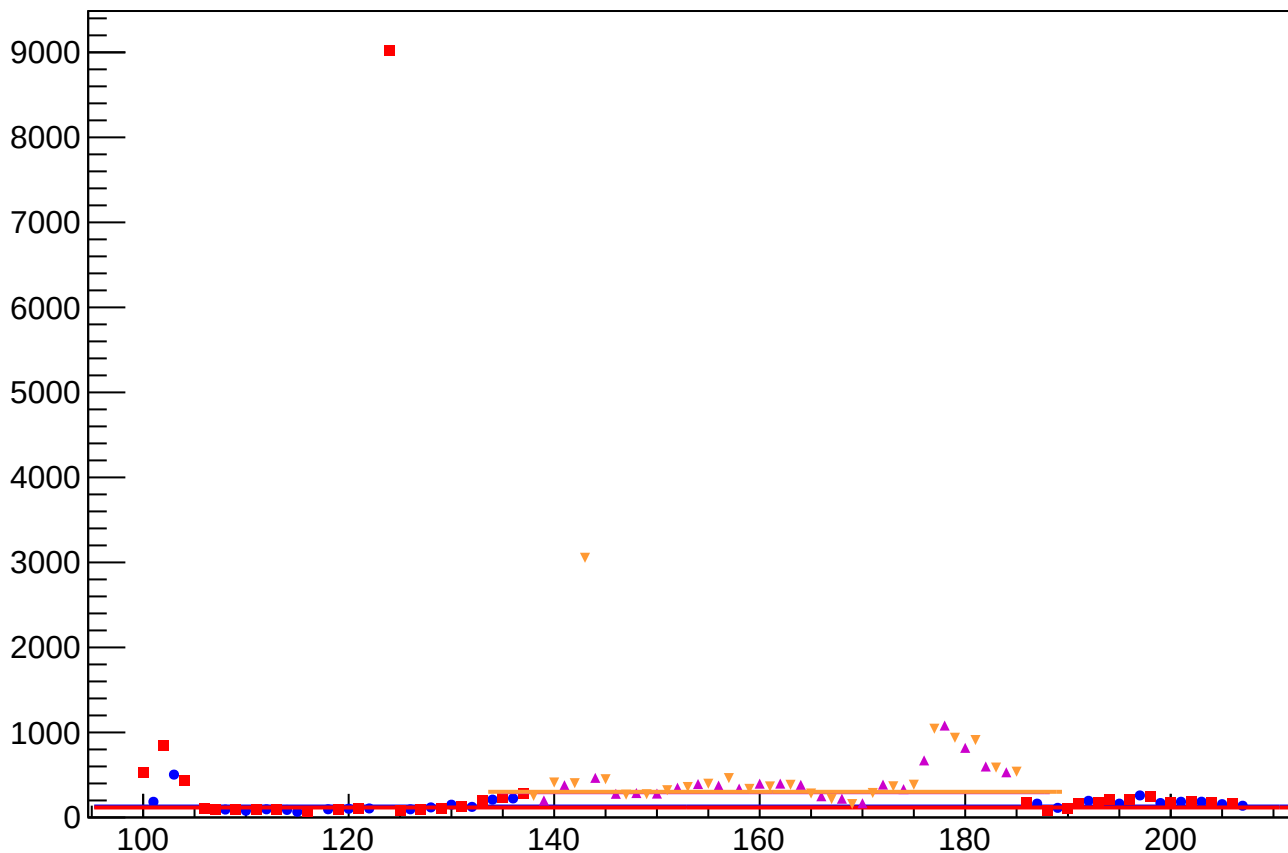
Left In:  $-0.078 \pm 0.076$   $\chi^2/\text{NDF}: 24.1/22$

+ sign  $0.047 \pm 0.033$   $\chi^2/\text{NDF}: 47.3/50$

All:  $0.006 \pm 0.022$   $\chi^2/\text{NDF}: 107.5/104$

- sign  $-0.028 \pm 0.030$   $\chi^2/\text{NDF}: 57.4/53$

asym\_atl\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 128.578+/-0.026  $\chi^2/\text{NDF}$ : 3446484.3/25

Left Out: 301.737+/-0.054  $\chi^2/\text{NDF}$ : 6693577.7/24

Right Out: 117.105+/-0.023  $\chi^2/\text{NDF}$ : 5408069.3/30

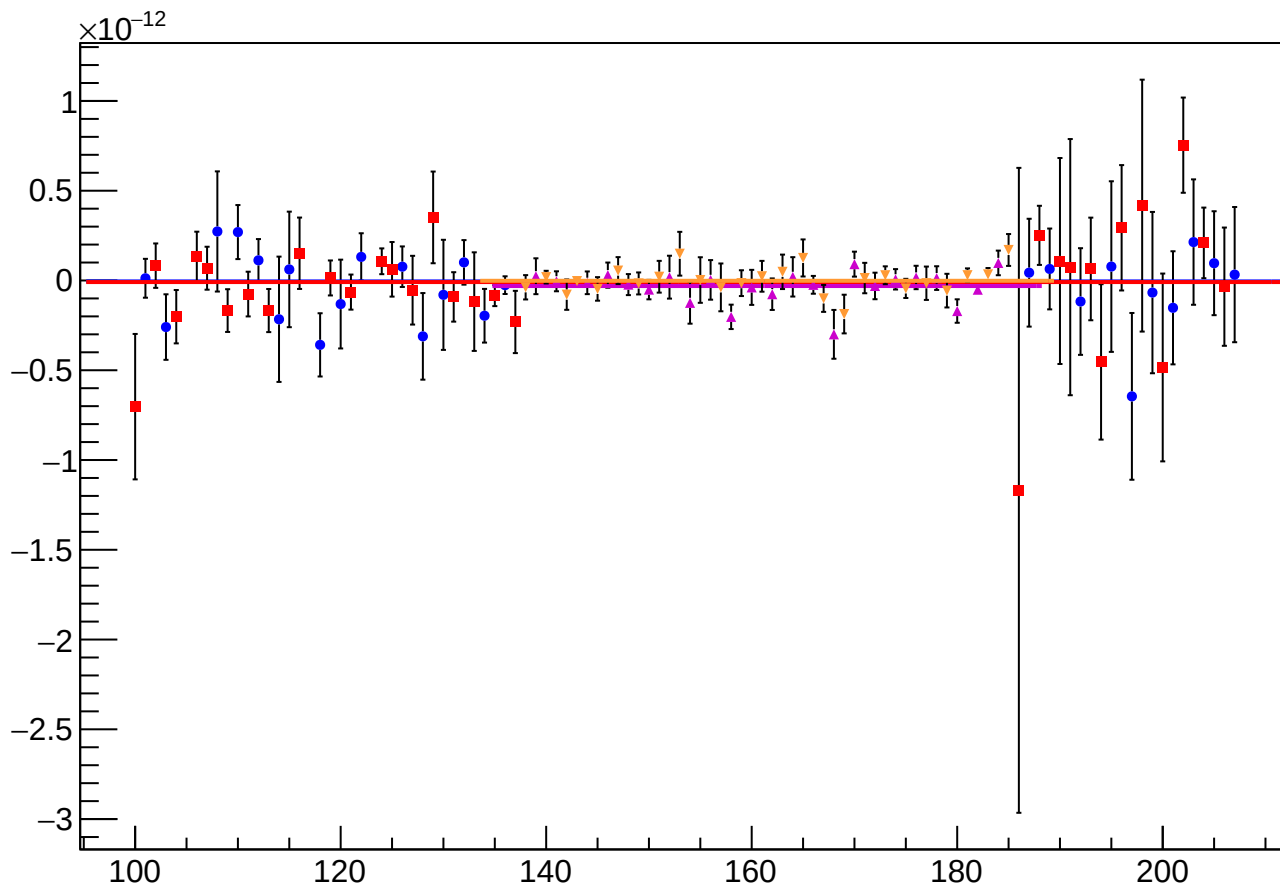
Left In: 296.878+/-0.054  $\chi^2/\text{NDF}$ : 4917864.1/22

+ sign 160.213+/-0.023  $\chi^2/\text{NDF}$ : 18420969.0/50

All: 152.380+/-0.016  $\chi^2/\text{NDF}$ : 38428374.2/10

- sign 145.757+/-0.021  $\chi^2/\text{NDF}$ : 19797950.5/53

asym\_atl\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2$ /NDF: 20.4/25

Left Out: -0.000+/-0.000  $\chi^2$ /NDF:17.7/24

Right Out: -0.000+/-0.000  $\chi^2$ /NDF: 35.7/30

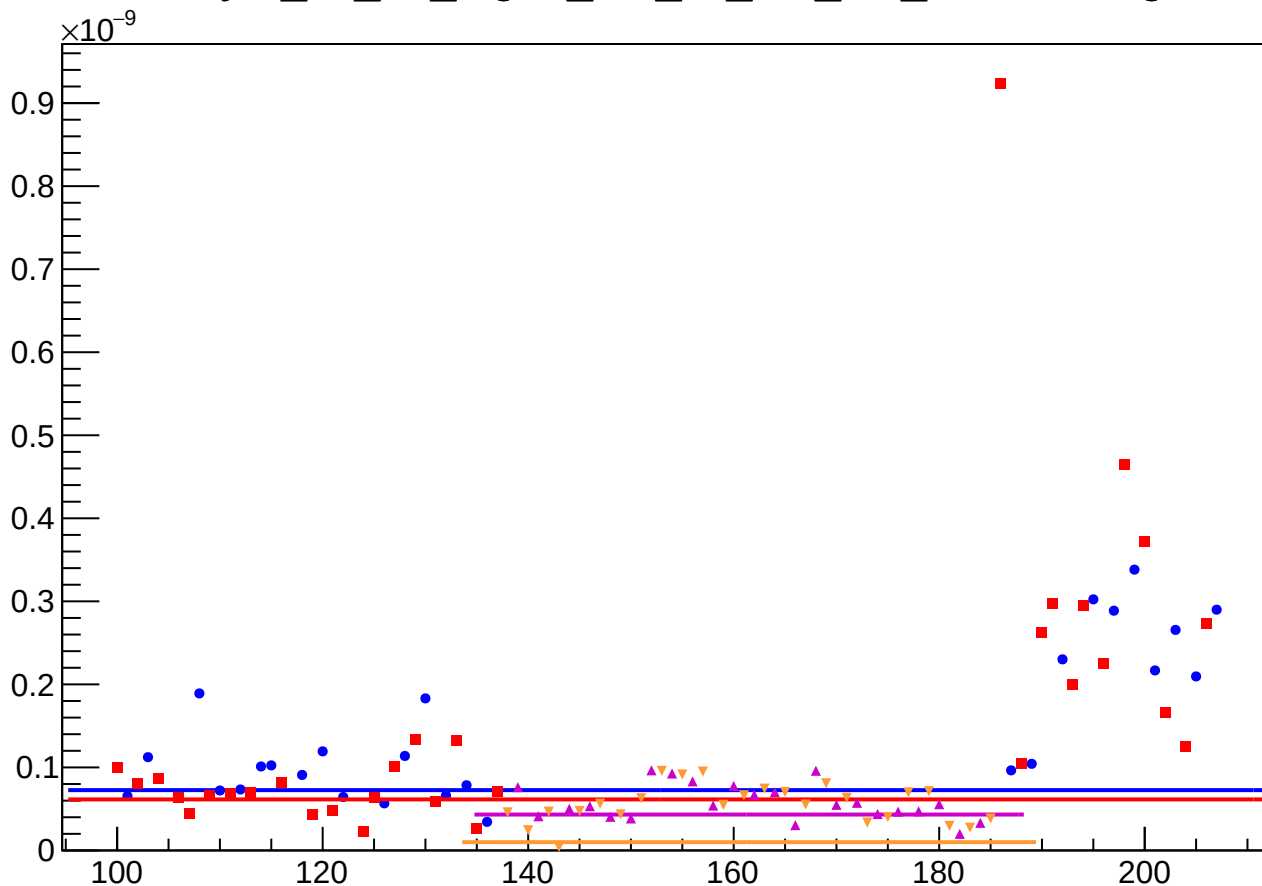
Left In: -0.000+/-0.000  $\chi^2$ /NDF:26.4/22

+ sign -0.000+/-0.000  $\chi^2$ /NDF: 38.2/50

All: -0.000+/-0.000  $\chi^2$ /NDF: 104.5/104

- sign -0.000+/-0.000  $\chi^2$ /NDF: 62.6/53

asym\_atl\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6403221.2/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :18523402.3/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7238383.6/30

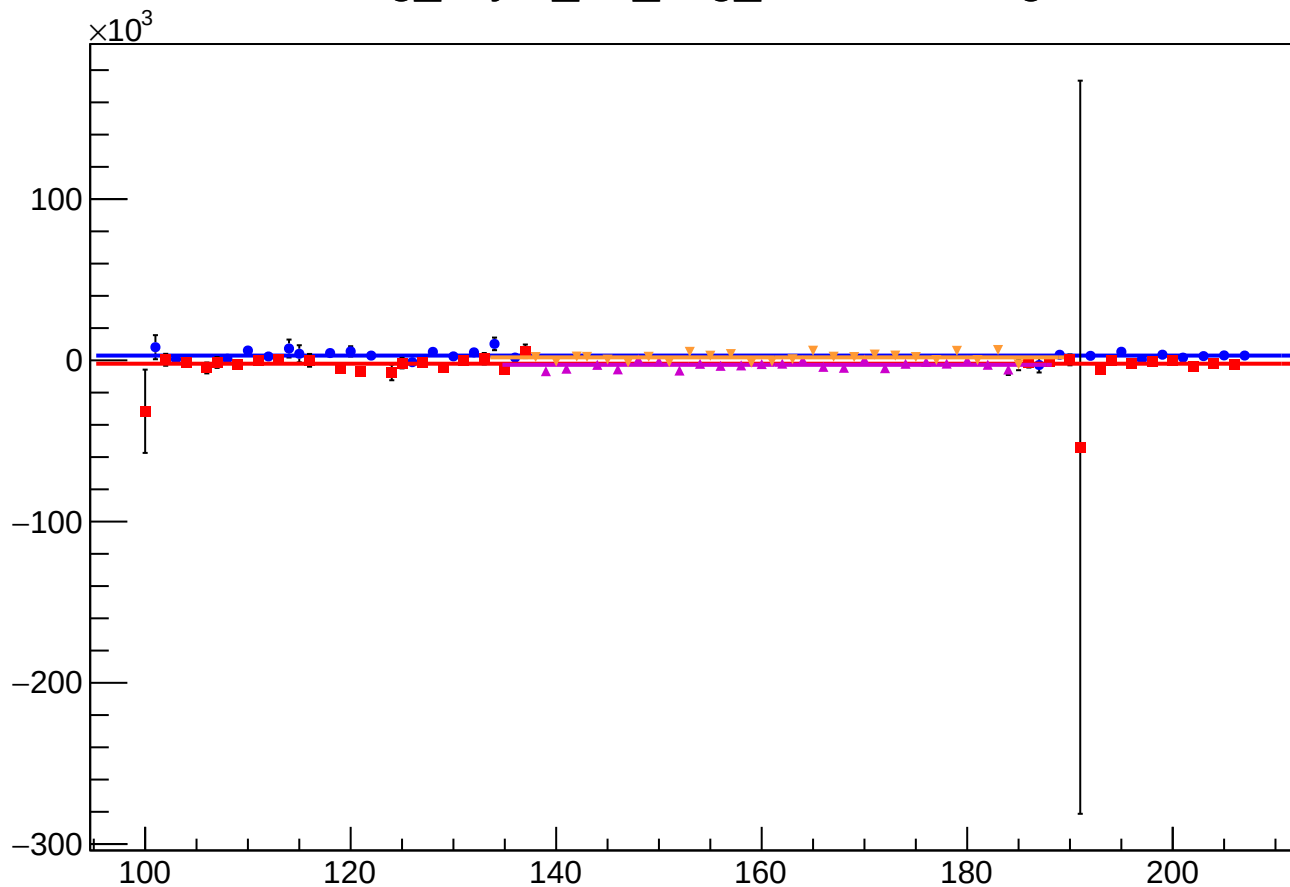
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :4049081.0/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 33206670.0/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 60286972.8/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12066486.5/53

# reg\_asym\_atr\_avg\_mean vs Slug



Right In: 2959.708 $\pm$ 506.634  $\chi^2$ /NDF: 16.3/25

Left Out: 1851.999 $\pm$ 420.006  $\chi^2$ /NDF: 31.5/24

Right Out: -2087.840 $\pm$ 487.090  $\chi^2$ /NDF: 22.6/30

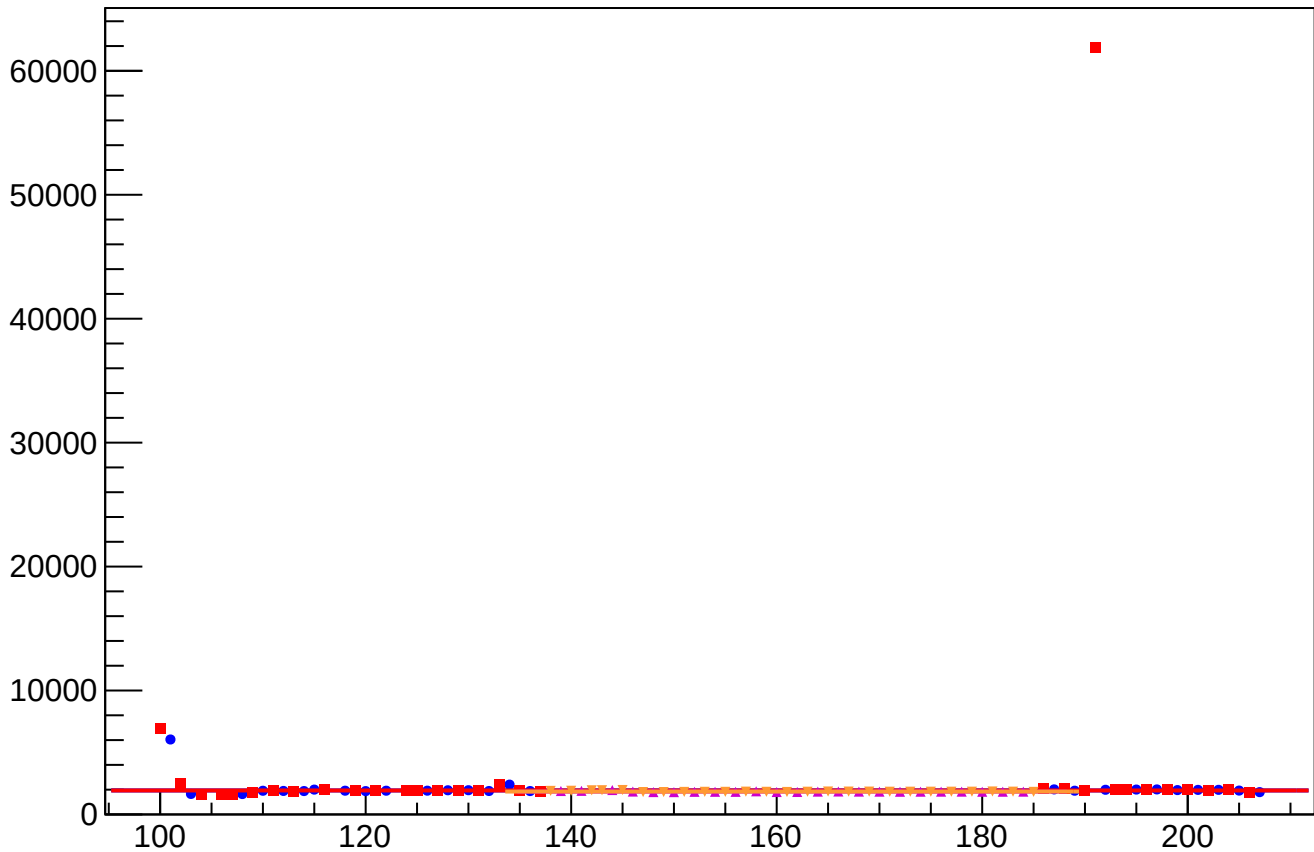
Left In: -2775.769 $\pm$ 430.870  $\chi^2$ /NDF: 25.4/22

+ sign 2303.196 $\pm$ 323.344  $\chi^2$ /NDF: 50.7/50

All: -89.860 $\pm$ 228.420  $\chi^2$ /NDF: 209.1/104

- sign -2473.779 $\pm$ 322.726  $\chi^2$ /NDF: 49.2/53

# reg\_asym\_atr\_avg\_rms vs Slug



Right In: 1937.594+/-0.358  $\chi^2/\text{NDF}$ : 718015.6/25

Left Out: 1848.522+/-0.297  $\chi^2/\text{NDF}$ : 20886.6/24

Right Out: 1936.537+/-0.344  $\chi^2/\text{NDF}$ : 415990.6/30

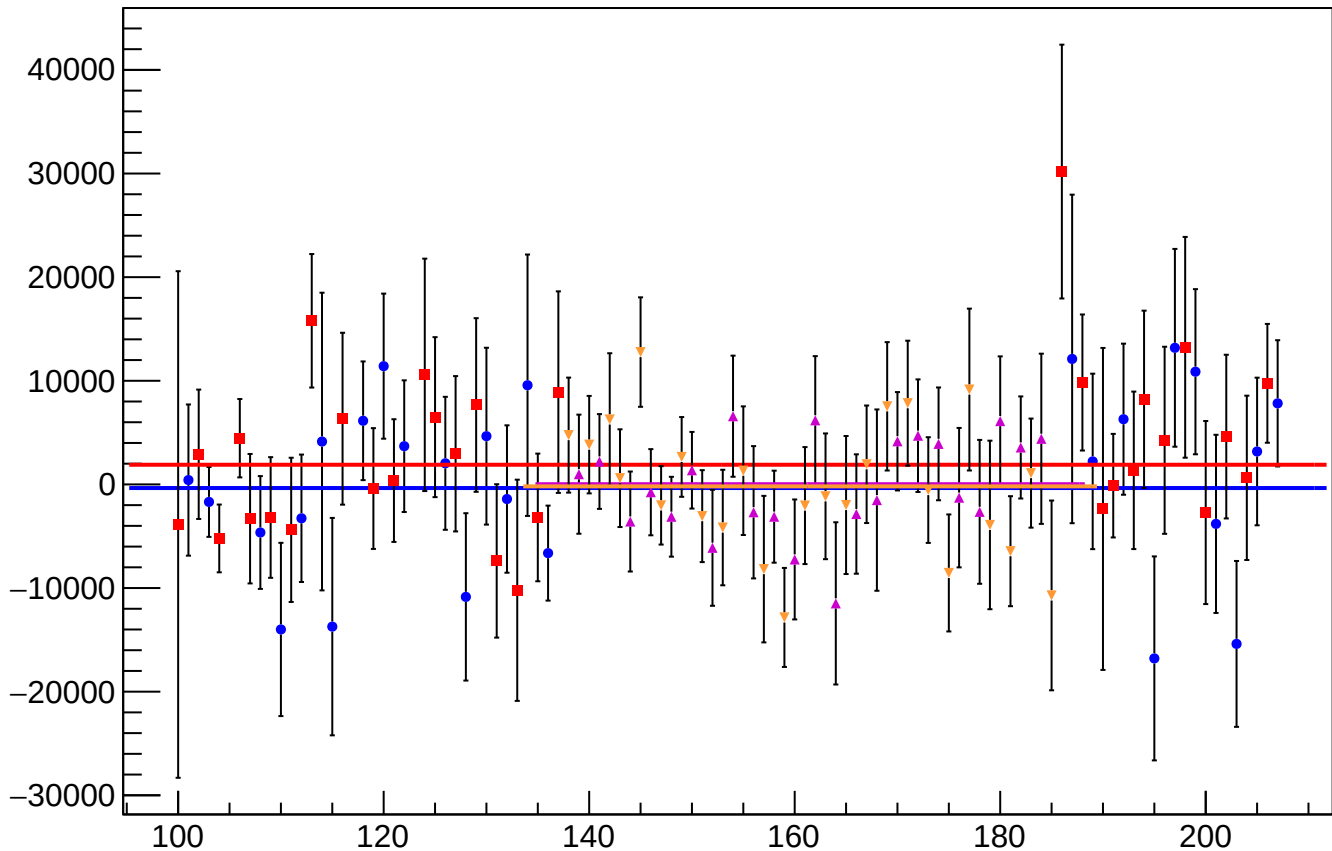
Left In: 1845.061+/-0.305  $\chi^2/\text{NDF}$ : 14026.0/22

+ sign 1884.803+/-0.229  $\chi^2/\text{NDF}$ : 775541.4/50

All: 1885.048+/-0.161  $\chi^2/\text{NDF}$ : 1245205.8/10

- sign 1885.291+/-0.228  $\chi^2/\text{NDF}$ : 469662.1/53

# asym\_atr\_avg\_reg\_correction\_mean vs Slug



Right In:  $-349.744 \pm 1351.545$   $\chi^2/\text{NDF}$ : 28.7/25

Left Out:  $-189.458 \pm 1088.618$   $\chi^2/\text{NDF}$ : 28.9/24

Right Out:  $1897.545 \pm 1208.008$   $\chi^2/\text{NDF}$ : 29.3/30

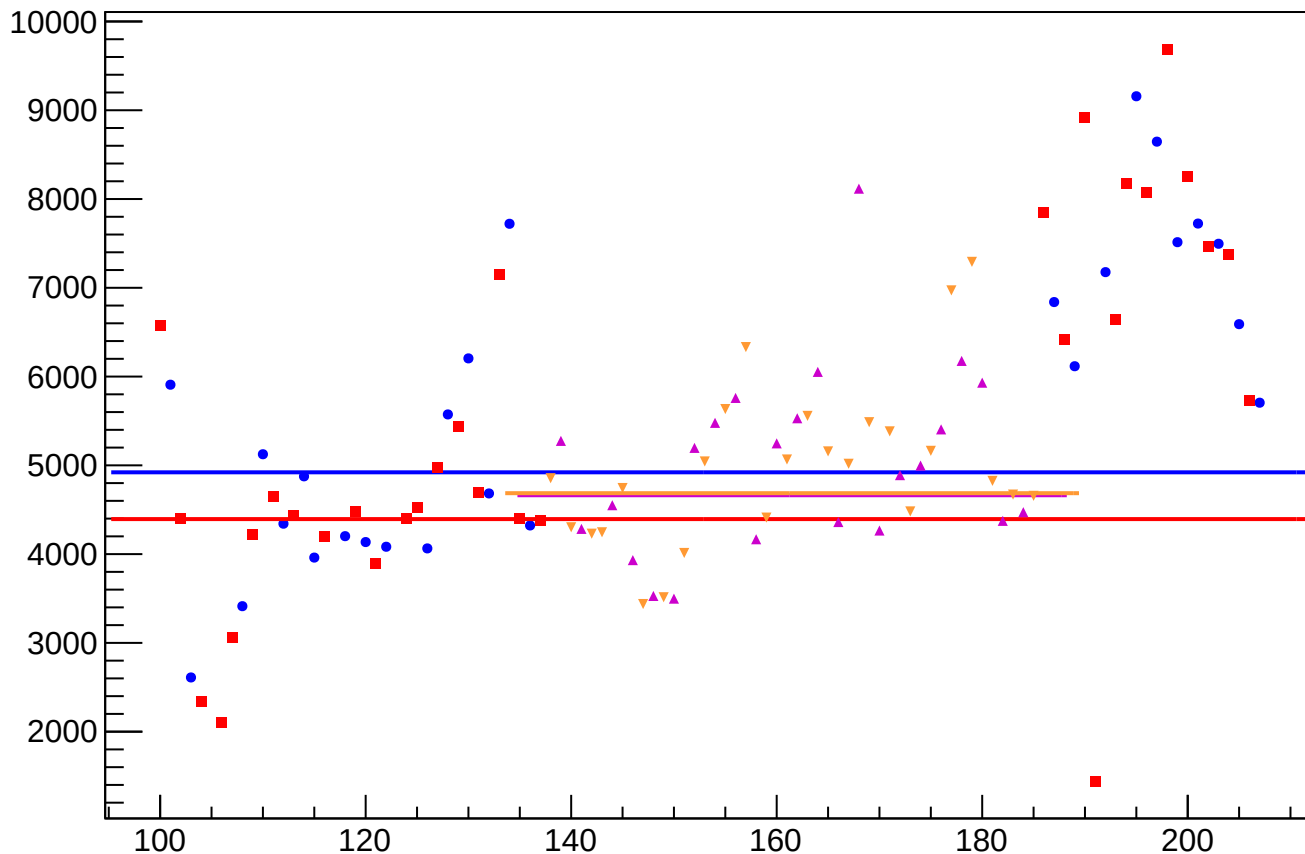
Left In:  $19.391 \pm 1112.574$   $\chi^2/\text{NDF}$ : 13.7/22

+ sign  $-252.528 \pm 847.804$   $\chi^2/\text{NDF}$ : 57.6/50

All:  $334.440 \pm 588.806$   $\chi^2/\text{NDF}$ : 102.9/104

- sign  $881.359 \pm 818.370$   $\chi^2/\text{NDF}$ : 44.3/53

# asym\_atr\_avg\_reg\_correction\_rms vs Slug



Right In: 4921.424+/-0.956  $\chi^2/\text{NDF}$ : 3194867.3/25

Left Out: 4686.353+/-0.770  $\chi^2/\text{NDF}$ : 1185063.7/24

Right Out: 4394.564+/-0.854  $\chi^2/\text{NDF}$ : 5517108.2/30

Left In: 4663.272+/-0.787  $\chi^2/\text{NDF}$ : 1286726.4/22

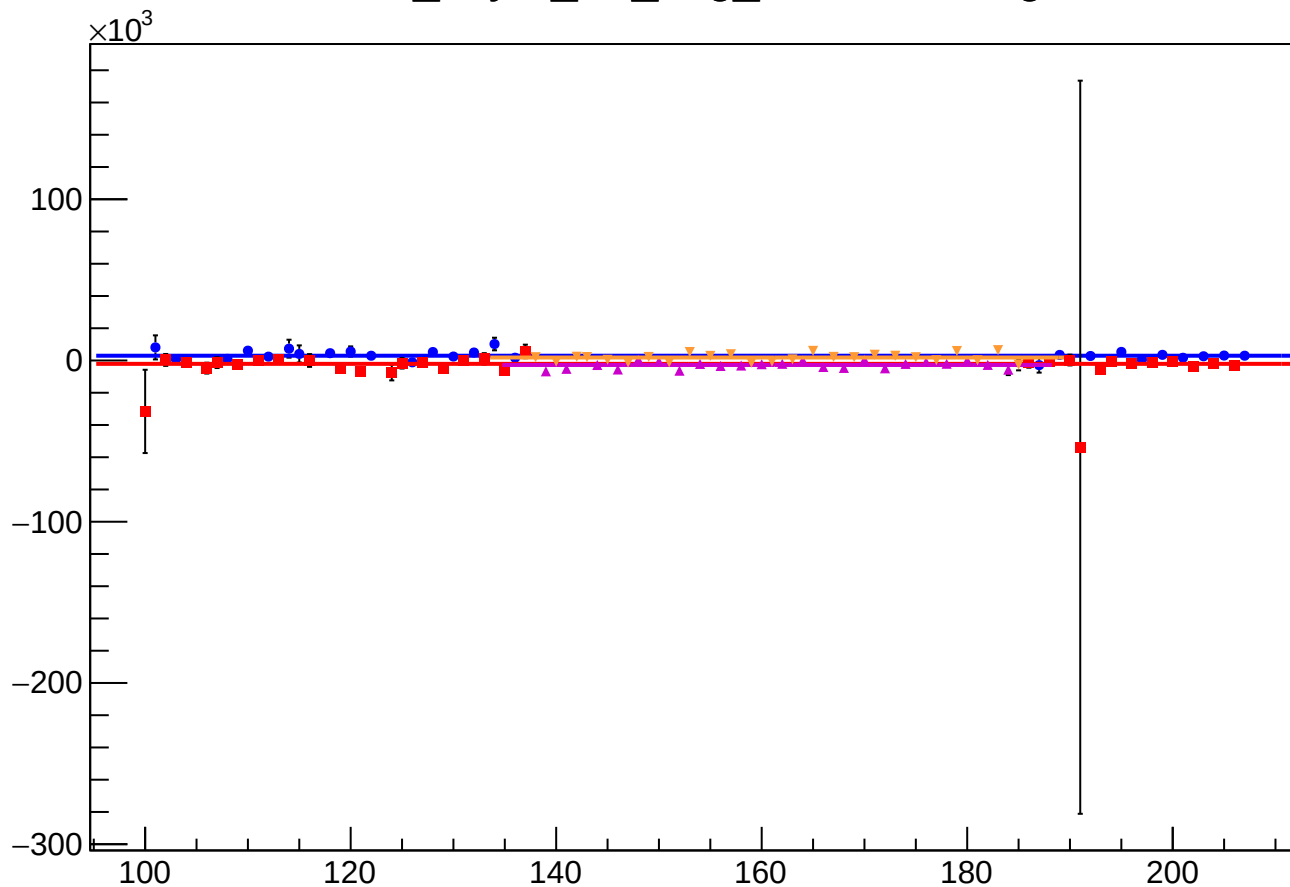
+ sign 4778.851+/-0.599  $\chi^2/\text{NDF}$ : 4416625.9/50

All: 4655.181+/-0.416  $\chi^2/\text{NDF}$ : 11356211.9/100

- sign 4539.949+/-0.579  $\chi^2/\text{NDF}$ : 6857376.7/53



# cor\_asym\_atr\_avg\_mean vs Slug



Right In:  $2959.432 \pm 506.634$   $\chi^2/\text{NDF}$ : 16.3/25

Left Out:  $1851.888 \pm 420.006$   $\chi^2/\text{NDF}$ : 31.5/24

Right Out:  $-2088.350 \pm 487.091$   $\chi^2/\text{NDF}$ : 22.6/30

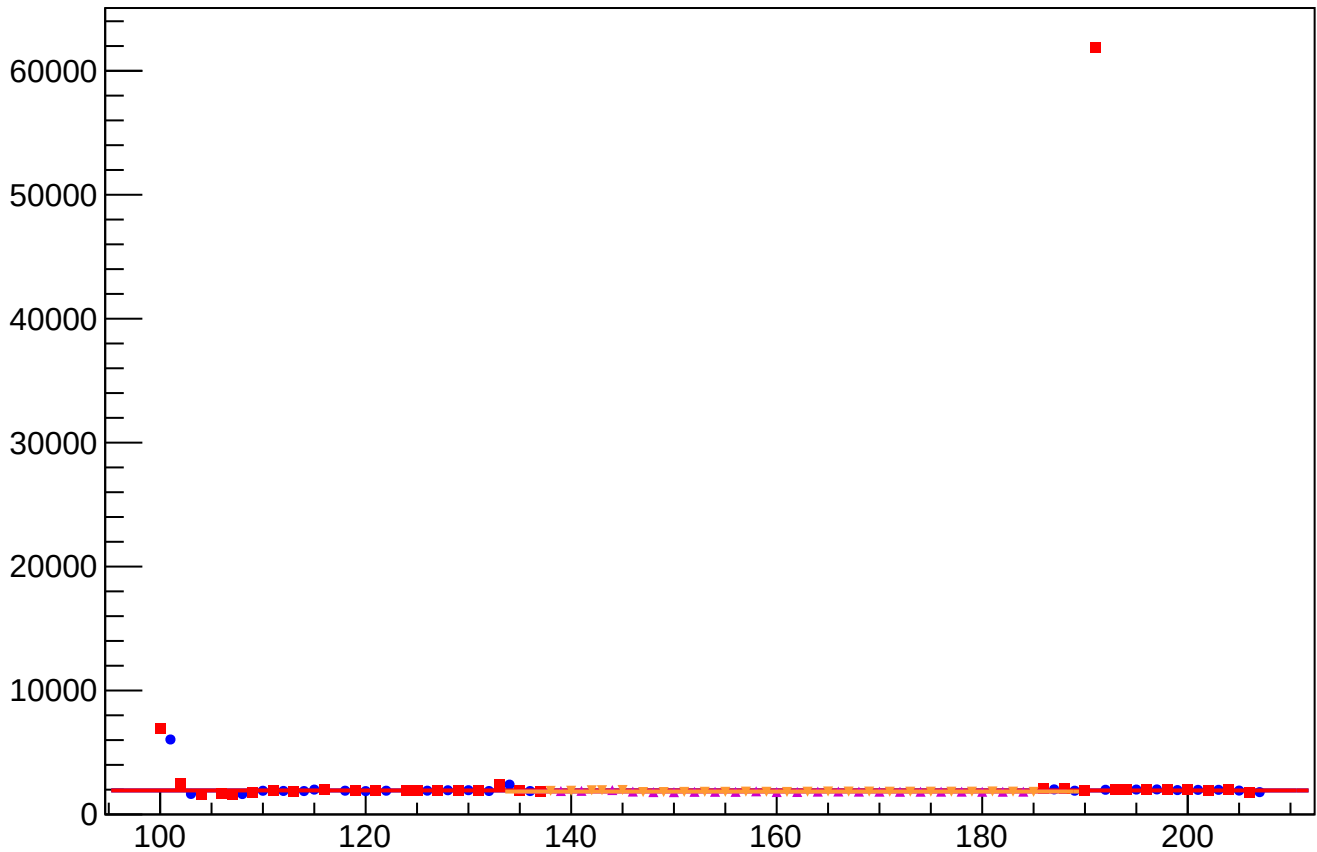
Left In:  $-2775.745 \pm 430.870$   $\chi^2/\text{NDF}$ : 25.4/22

+ sign  $2303.018 \pm 323.344$   $\chi^2/\text{NDF}$ : 50.6/50

All:  $-90.053 \pm 228.420$   $\chi^2/\text{NDF}$ : 209.2/104

- sign  $-2473.990 \pm 322.726$   $\chi^2/\text{NDF}$ : 49.2/53

# cor\_asym\_atr\_avg\_rms vs Slug



Right In: 1937.594+/-0.358  $\chi^2/\text{NDF}$ : 718014.7/25

Left Out: 1848.522+/-0.297  $\chi^2/\text{NDF}$ : 20886.6/24

Right Out: 1938.492+/-0.344  $\chi^2/\text{NDF}$ : 408068.1/30

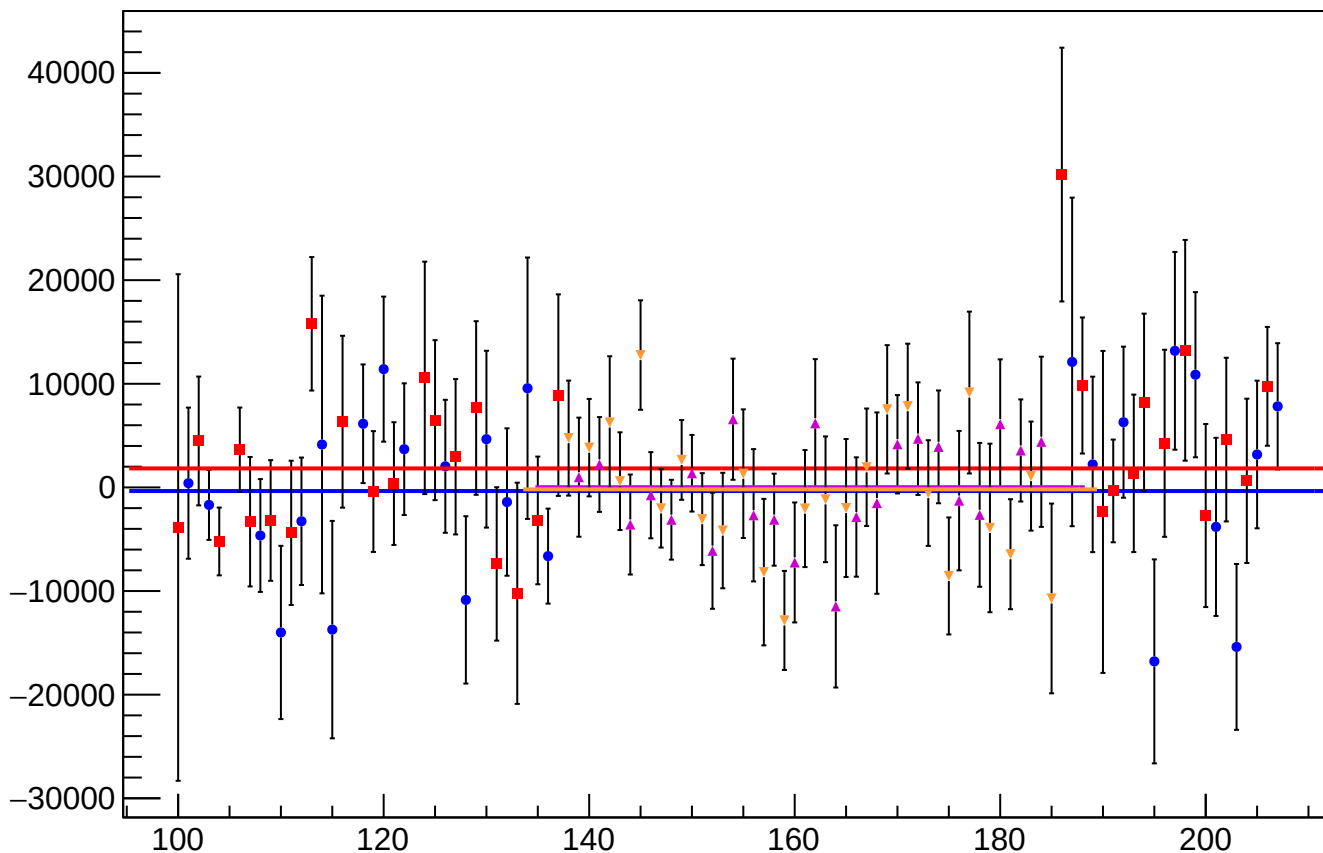
Left In: 1845.061+/-0.305  $\chi^2/\text{NDF}$ : 14026.0/22

+ sign 1884.803+/-0.229  $\chi^2/\text{NDF}$ : 775540.6/50

All: 1885.458+/-0.161  $\chi^2/\text{NDF}$ : 1238968.5/10

- sign 1886.110+/-0.228  $\chi^2/\text{NDF}$ : 463411.5/53

# asym\_atr\_avg\_cor\_correction\_mean vs Slug



Right In:  $-349.952 \pm 1351.547$   $\chi^2/\text{NDF}$ : 28.7/25

Left Out:  $-189.487 \pm 1088.617$   $\chi^2/\text{NDF}$ : 28.9/24

Right Out:  $1833.465 \pm 1215.721$   $\chi^2/\text{NDF}$ : 29.2/30

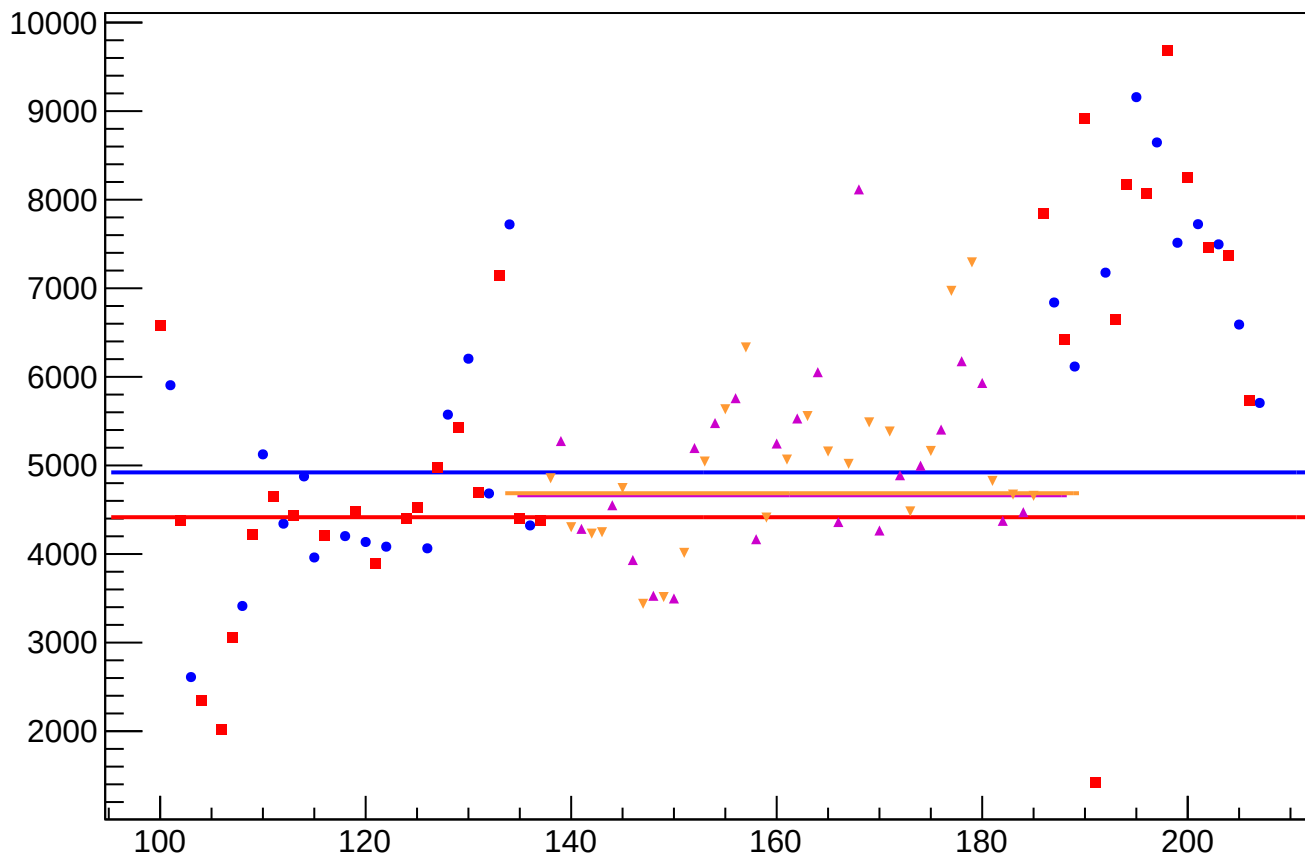
Left In:  $19.431 \pm 1112.574$   $\chi^2/\text{NDF}$ : 13.7/22

+ sign  $-252.628 \pm 847.804$   $\chi^2/\text{NDF}$ : 57.6/50

All:  $314.615 \pm 589.693$   $\chi^2/\text{NDF}$ : 102.6/104

- sign  $846.241 \pm 820.756$   $\chi^2/\text{NDF}$ : 44.2/53

# asym\_atr\_avg\_cor\_correction\_rms vs Slug



Right In:  $4921.493 \pm 0.956$   $\chi^2/\text{NDF}$ : 3194248.8/25

Left Out:  $4686.346 \pm 0.770$   $\chi^2/\text{NDF}$ : 1185089.0/24

Right Out:  $4415.638 \pm 0.860$   $\chi^2/\text{NDF}$ : 5477333.2/30

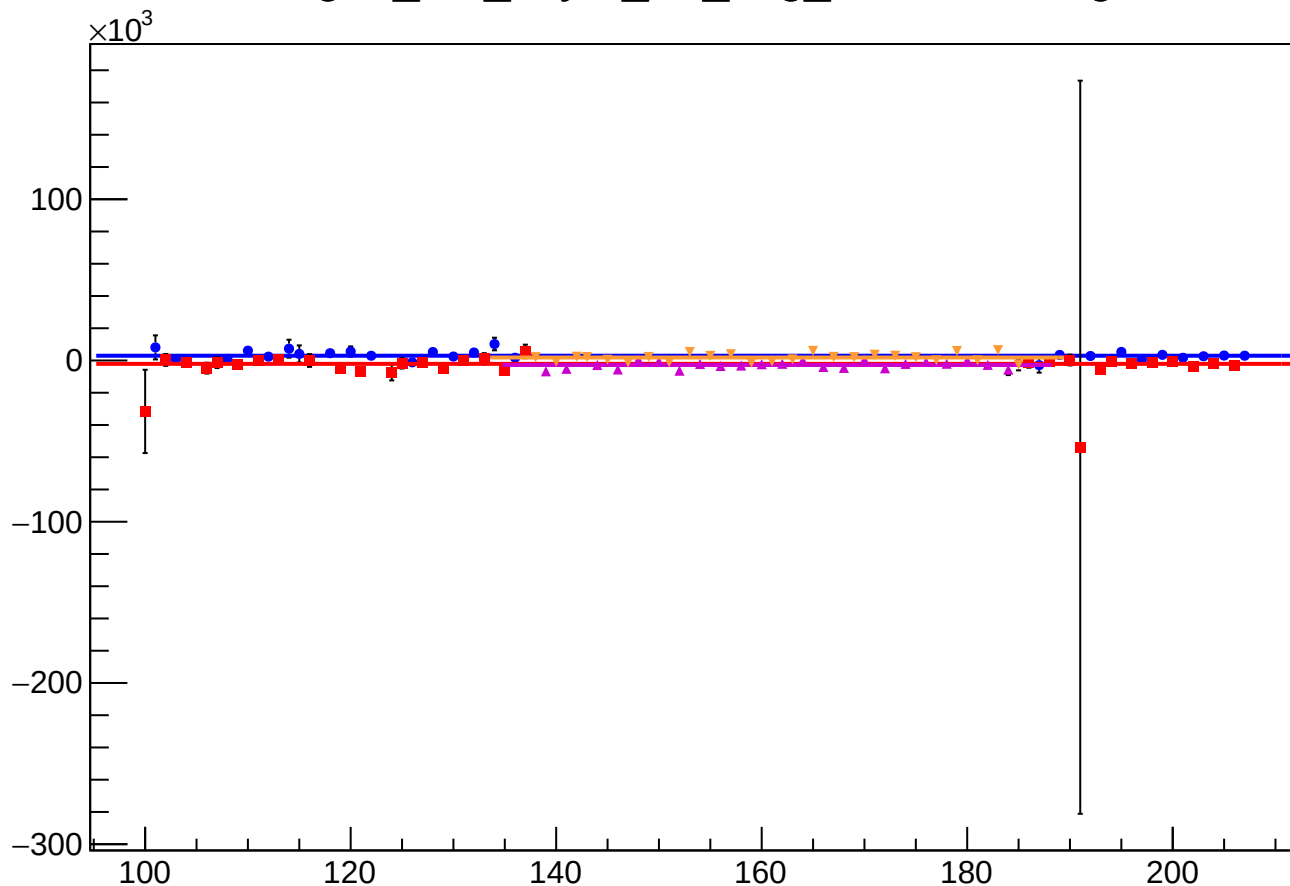
Left In:  $4663.273 \pm 0.787$   $\chi^2/\text{NDF}$ : 1286722.8/22

+ sign  $4778.873 \pm 0.599$   $\chi^2/\text{NDF}$ : 4416056.6/50

All:  $4660.936 \pm 0.417$   $\chi^2/\text{NDF}$ : 11300248.1/100

- sign  $4550.404 \pm 0.580$   $\chi^2/\text{NDF}$ : 6809216.6/53

# eigen\_cor\_asym\_atr\_avg\_mean vs Slug



Right In: 2959.432 $\pm$ 506.634  $\chi^2$ /NDF: 16.3/25

Left Out: 1851.888 $\pm$ 420.006  $\chi^2$ /NDF: 31.5/24

Right Out: -2088.350 $\pm$ 487.091  $\chi^2$ /NDF: 22.6/30

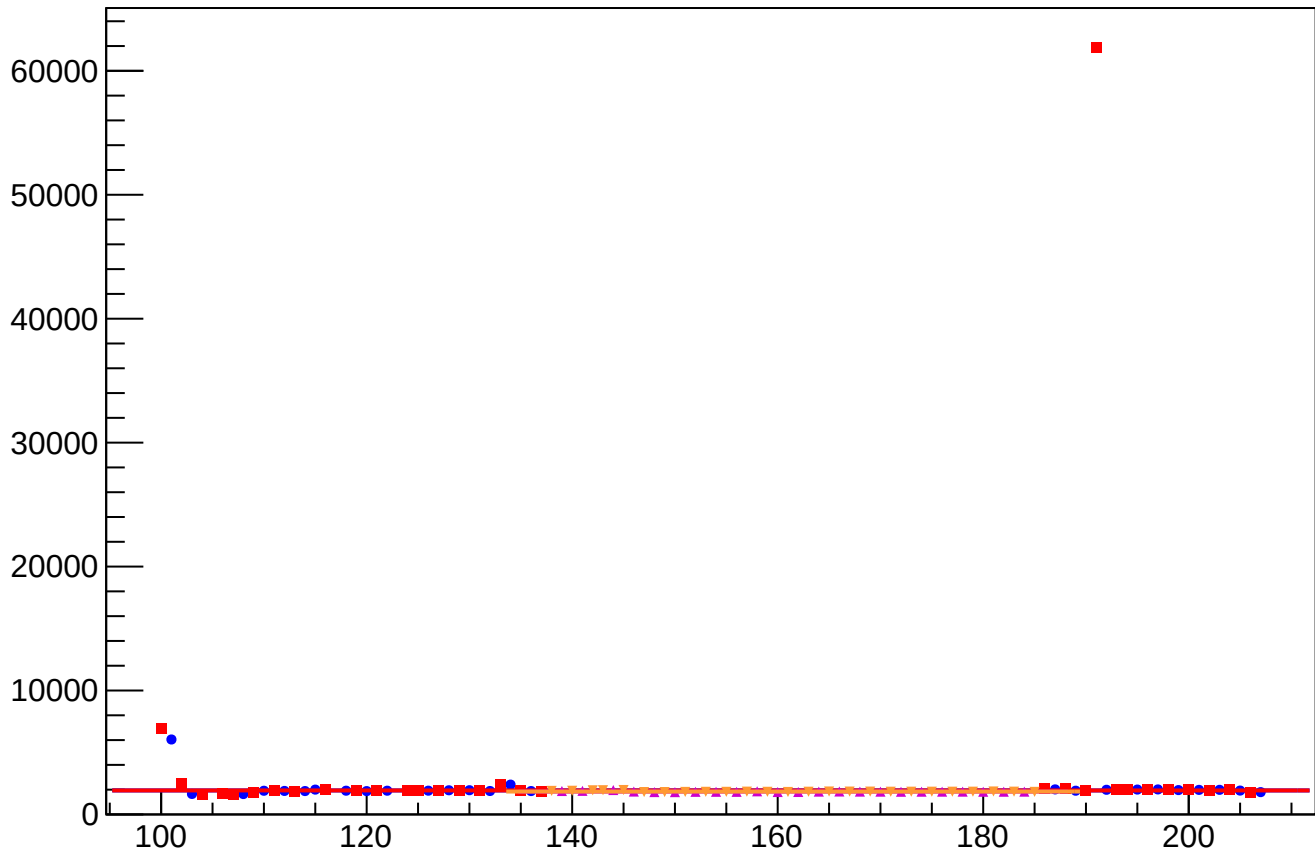
Left In: -2775.745 $\pm$ 430.870  $\chi^2$ /NDF: 25.4/22

+ sign 2303.018 $\pm$ 323.344  $\chi^2$ /NDF: 50.6/50

All: -90.053 $\pm$ 228.420  $\chi^2$ /NDF: 209.2/104

- sign -2473.990 $\pm$ 322.726  $\chi^2$ /NDF: 49.2/53

# eigen\_cor\_asym\_atr\_avg\_rms vs Slug



Right In: 1937.594+/-0.358  $\chi^2/\text{NDF}$ : 718014.7/25

Left Out: 1848.522+/-0.297  $\chi^2/\text{NDF}$ : 20886.6/24

Right Out: 1938.492+/-0.344  $\chi^2/\text{NDF}$ : 408068.1/30

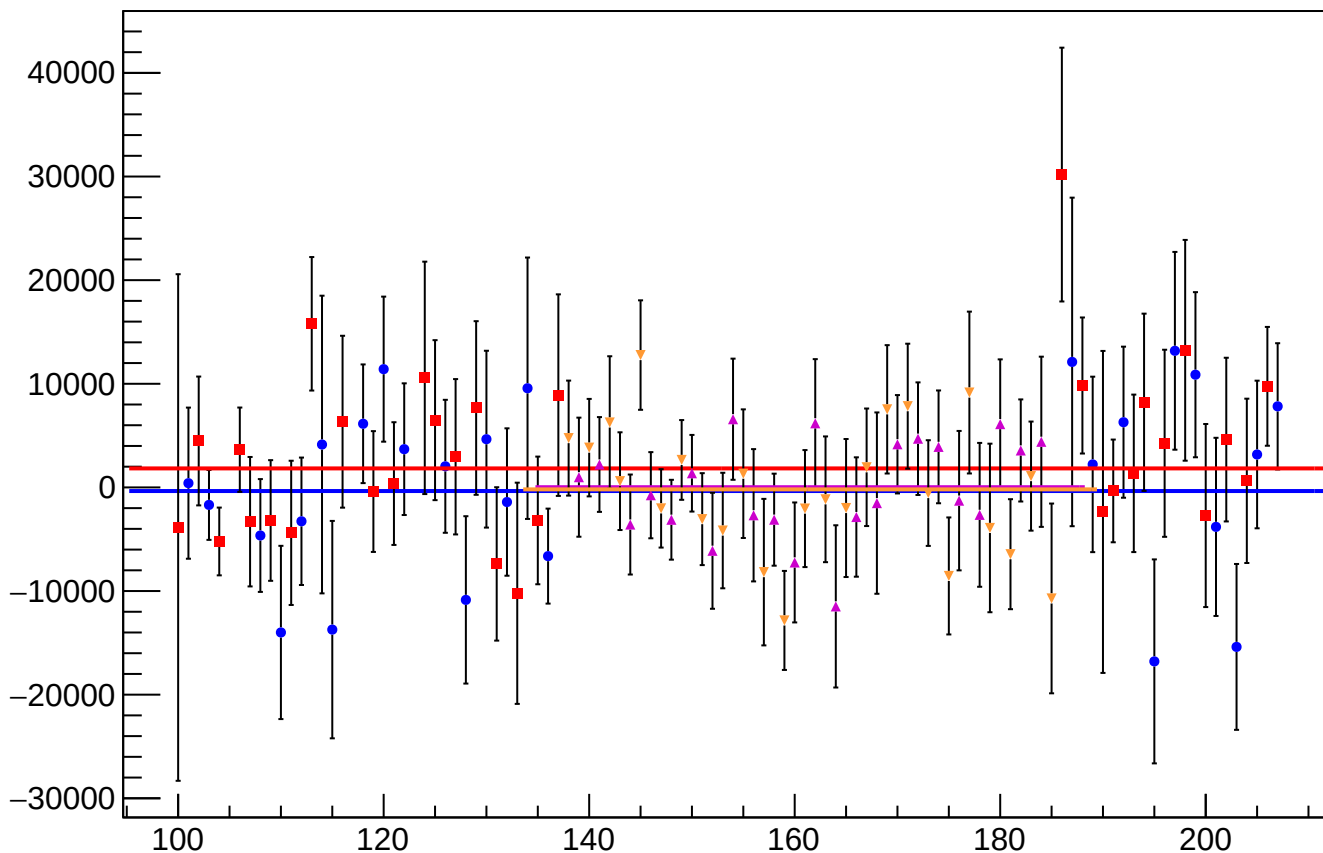
Left In: 1845.061+/-0.305  $\chi^2/\text{NDF}$ : 14026.0/22

+ sign 1884.803+/-0.229  $\chi^2/\text{NDF}$ : 775540.6/50

All: 1885.458+/-0.161  $\chi^2/\text{NDF}$ : 1238968.5/10

- sign 1886.110+/-0.228  $\chi^2/\text{NDF}$ : 463411.5/53

asym\_atr\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In: -349.952+/-1351.547  $\chi^2/\text{NDF}$ : 28.7/25

Left Out: -189.487+/-1088.617  $\chi^2/\text{NDF}$ : 28.9/24

Right Out: 1833.465+/-1215.721  $\chi^2/\text{NDF}$ : 29.2/30

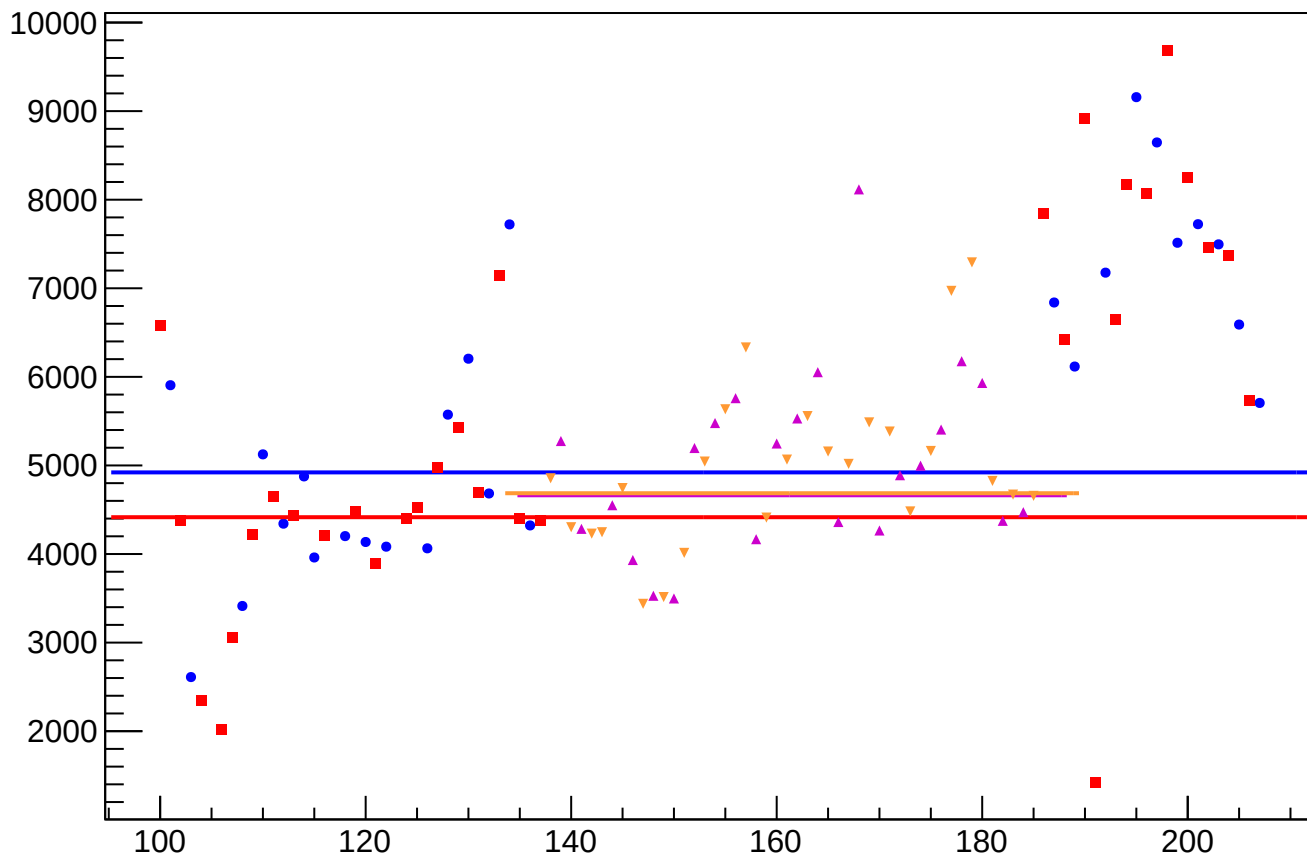
Left In: 19.431+/-1112.574  $\chi^2/\text{NDF}$ : 13.7/22

+ sign -252.628+/-847.804  $\chi^2/\text{NDF}$ : 57.6/50

All: 314.615+/-589.693  $\chi^2/\text{NDF}$ : 102.6/104

- sign 846.241+/-820.756  $\chi^2/\text{NDF}$ : 44.2/53

asym\_atr\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 4921.493+/-0.956  $\chi^2/\text{NDF}$ : 3194248.8/25

Left Out: 4686.346+/-0.770  $\chi^2/\text{NDF}$ : 1185089.0/24

Right Out: 4415.638+/-0.860  $\chi^2/\text{NDF}$ : 5477333.2/30

Left In: 4663.273+/-0.787  $\chi^2/\text{NDF}$ : 1286722.8/22

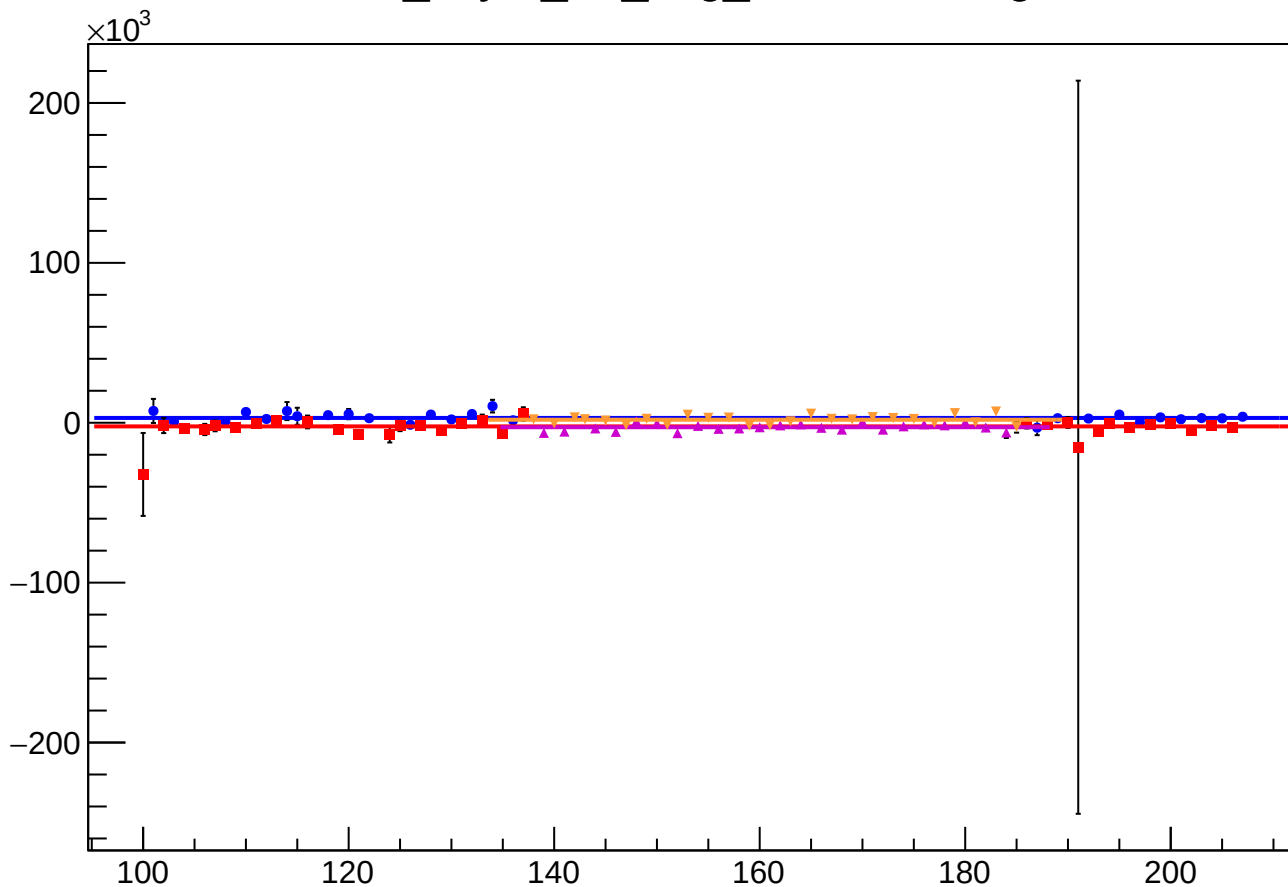
+ sign 4778.873+/-0.599  $\chi^2/\text{NDF}$ : 4416056.6/50

All: 4660.936+/-0.417  $\chi^2/\text{NDF}$ : 11300248.1/100

- sign 4550.404+/-0.580  $\chi^2/\text{NDF}$ : 6809216.6/53



# dit\_asym\_atr\_avg\_mean vs Slug



Right In: 3013.434+/-517.559  $\chi^2/\text{NDF}$ : 16.7/25

Left Out: 1880.927+/-428.980  $\chi^2/\text{NDF}$ : 32.9/24

Right Out: -2278.225+/-498.552  $\chi^2/\text{NDF}$ : 23.4/30

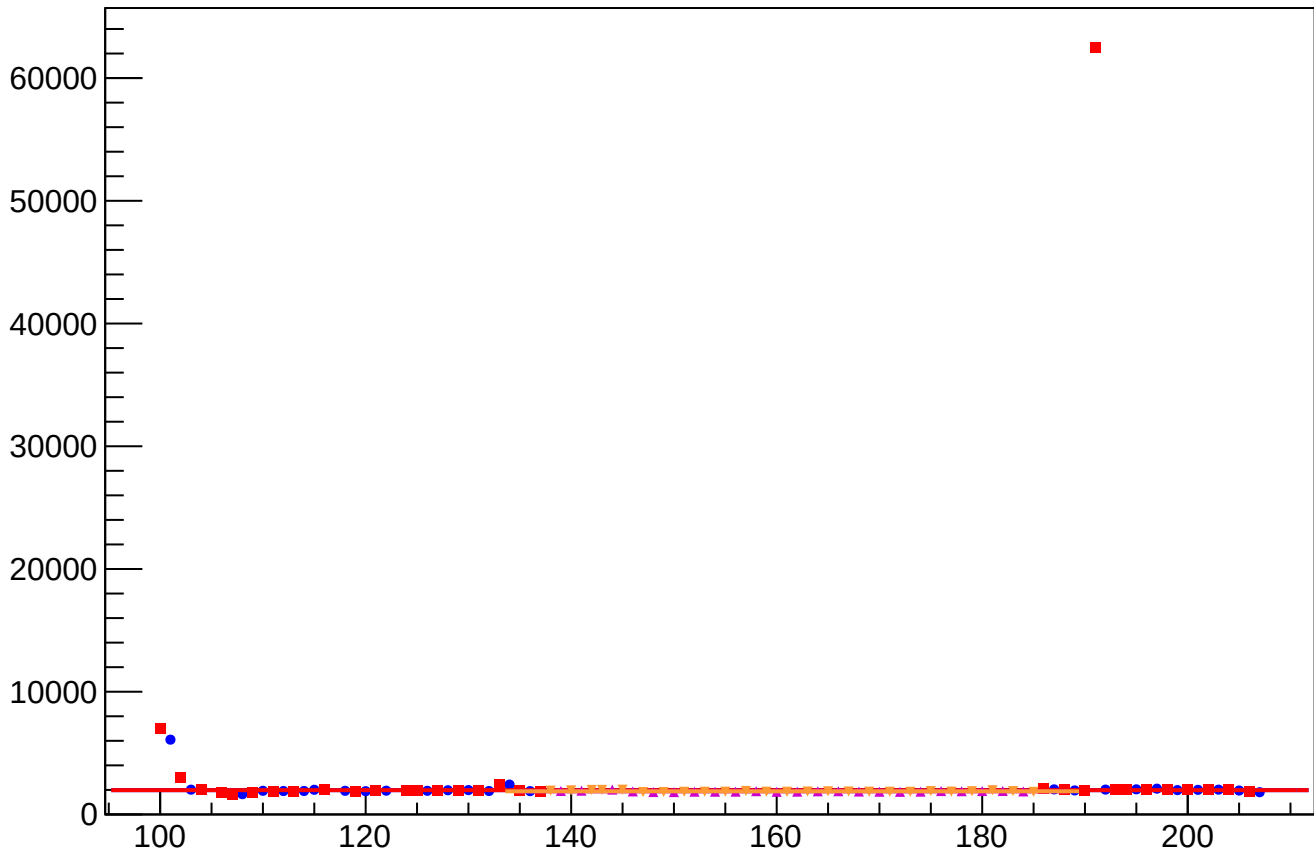
Left In: -2798.435+/-439.234  $\chi^2/\text{NDF}$ : 25.4/22

+ sign 2342.119+/-330.278  $\chi^2/\text{NDF}$ : 52.5/50

All: -119.750+/-233.292  $\chi^2/\text{NDF}$ : 212.8/104

- sign -2571.104+/-329.572  $\chi^2/\text{NDF}$ : 49.5/53

# dit\_asym\_atr\_avg\_rms vs Slug



Right In: 1980.019+/-0.366  $\chi^2/\text{NDF}$ : 690310.2/25

Left Out: 1887.545+/-0.303  $\chi^2/\text{NDF}$ : 31955.7/24

Right Out: 1979.824+/-0.352  $\chi^2/\text{NDF}$ : 431860.9/30

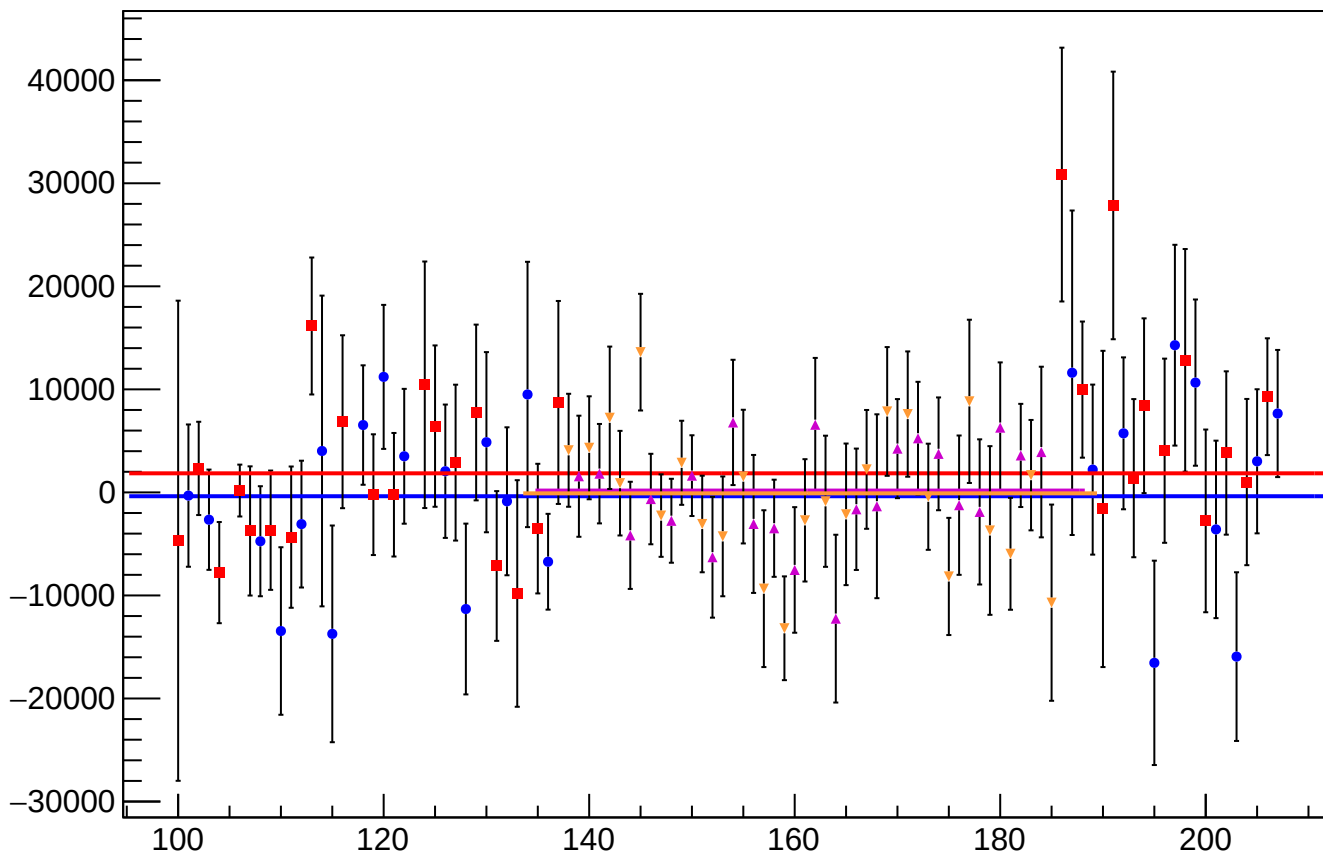
Left In: 1880.575+/-0.311  $\chi^2/\text{NDF}$ : 19037.6/22

+ sign 1925.203+/-0.234  $\chi^2/\text{NDF}$ : 760113.2/50

All: 1924.583+/-0.165  $\chi^2/\text{NDF}$ : 1255670.2/100

- sign 1923.966+/-0.233  $\chi^2/\text{NDF}$ : 495543.0/53

# asym\_atr\_avg\_dit\_correction\_mean vs Slug



Right In:  $-371.898 \pm 1416.385$   $\chi^2/\text{NDF}: 28.4/25$

Left Out:  $-91.889 \pm 1133.233$   $\chi^2/\text{NDF}: 28.1/24$

Right Out:  $1852.152 \pm 1191.344$   $\chi^2/\text{NDF}: 32.2/30$

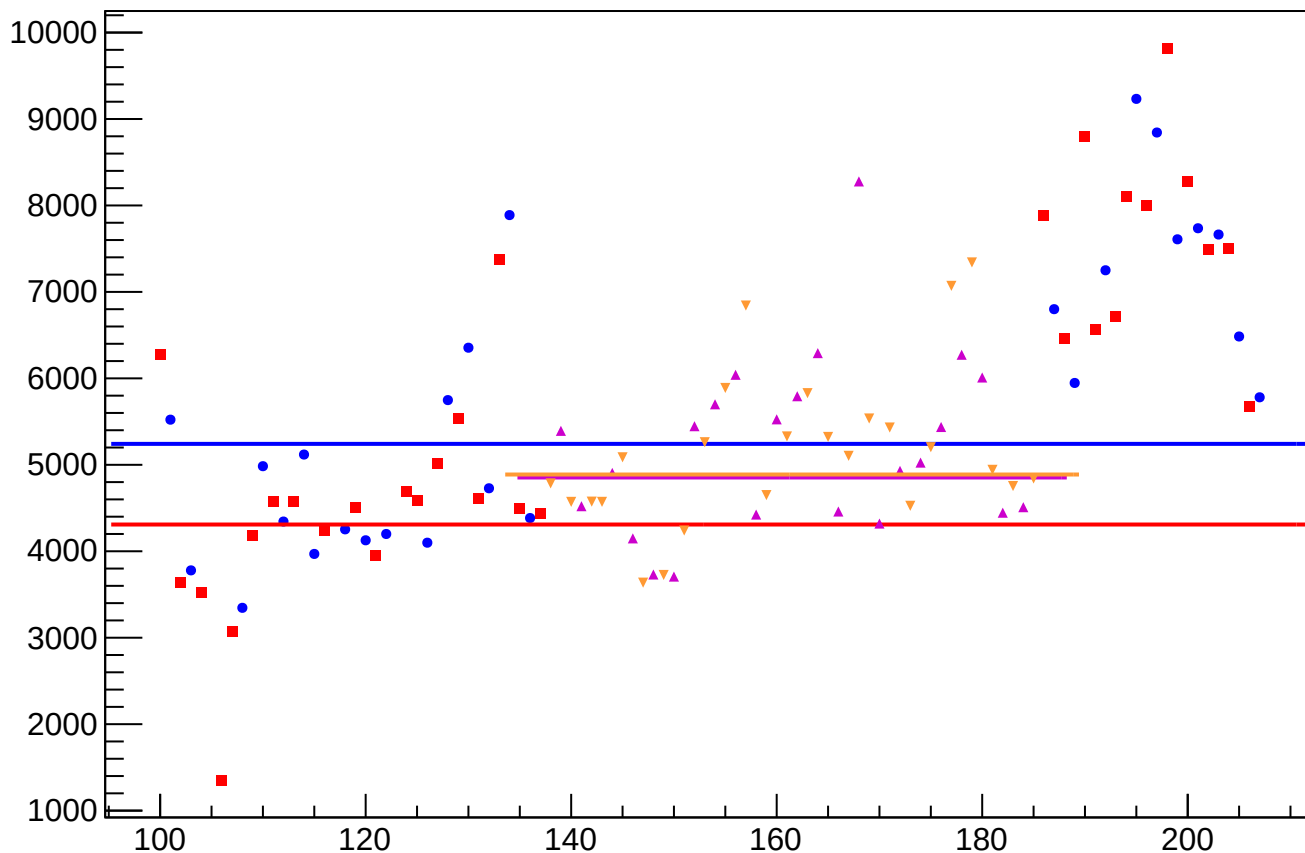
Left In:  $177.137 \pm 1156.061$   $\chi^2/\text{NDF}: 13.5/22$

+ sign  $-201.176 \pm 884.868$   $\chi^2/\text{NDF}: 56.6/50$

All:  $432.455 \pm 605.232$   $\chi^2/\text{NDF}: 104.3/104$

- sign  $989.474 \pm 829.651$   $\chi^2/\text{NDF}: 46.8/53$

# asym\_atr\_avg\_dit\_correction\_rms vs Slug



Right In: 5242.215+/-1.002  $\chi^2/\text{NDF}$ : 2308685.2/25

Left Out: 4887.823+/-0.801  $\chi^2/\text{NDF}$ : 1063298.6/24

Right Out: 4309.400+/-0.842  $\chi^2/\text{NDF}$ : 6425774.1/30

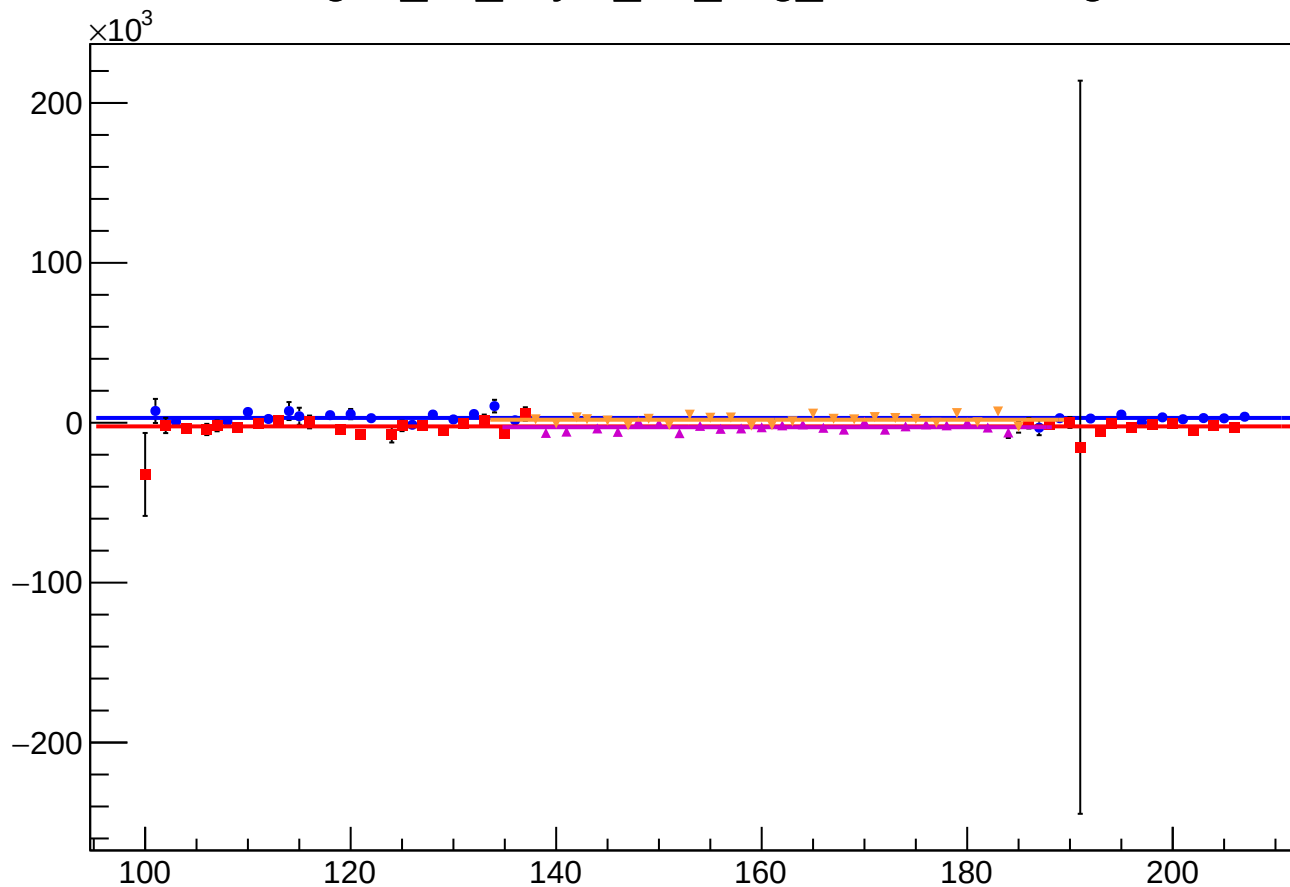
Left In: 4853.363+/-0.817  $\chi^2/\text{NDF}$ : 1178636.9/22

+ sign 5026.141+/-0.626  $\chi^2/\text{NDF}$ : 3448323.9/50

All: 4793.802+/-0.428  $\chi^2/\text{NDF}$ : 11526577.9/100

- sign 4589.556+/-0.587  $\chi^2/\text{NDF}$ : 7819157.1/53

# eigen\_dit\_asym\_atr\_avg\_mean vs Slug



Right In: 3013.434+/-517.559  $\chi^2/\text{NDF}$ : 16.7/25

Left Out: 1880.922+/-428.981  $\chi^2/\text{NDF}$ : 32.9/24

Right Out: -2278.224+/-498.552  $\chi^2/\text{NDF}$ : 23.4/30

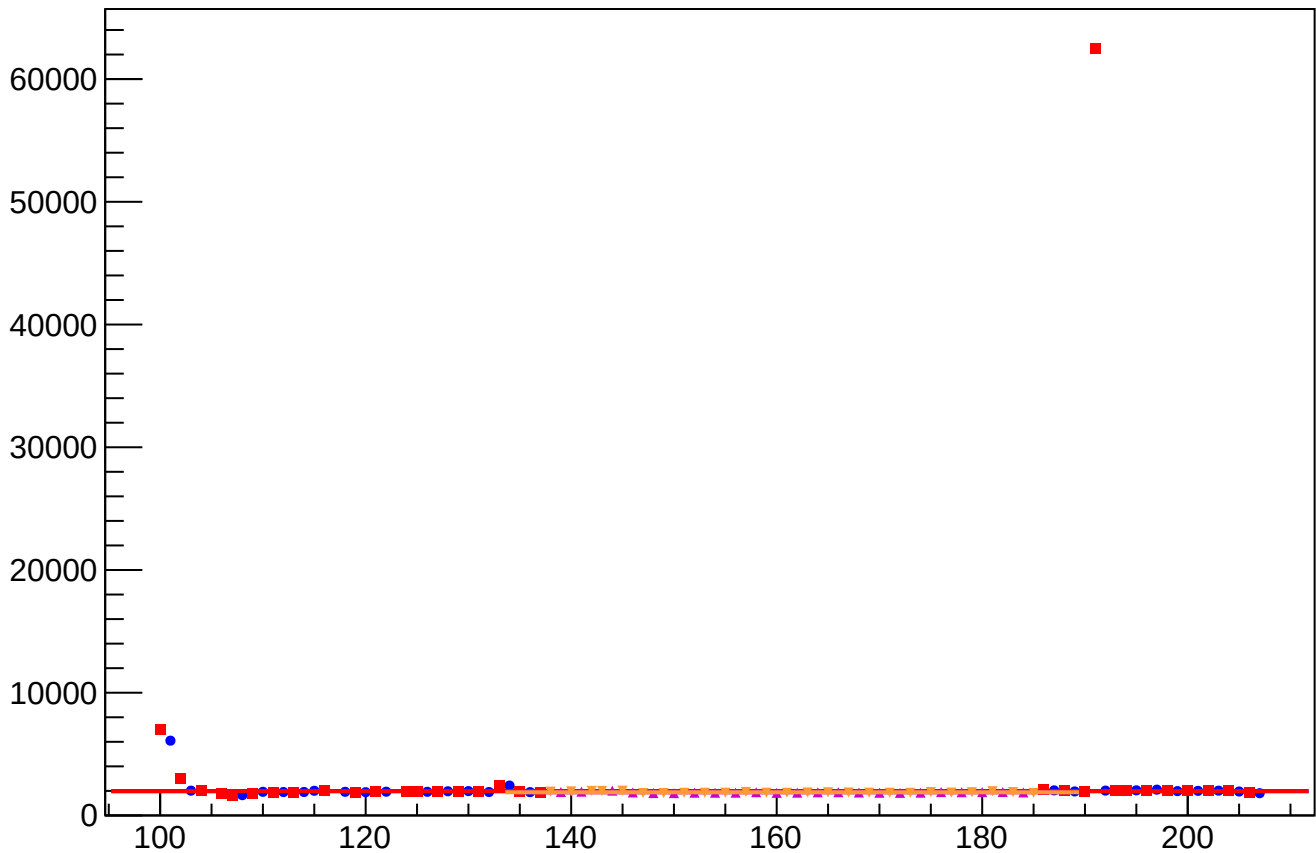
Left In: -2798.435+/-439.234  $\chi^2/\text{NDF}$ : 25.4/22

+ sign 2342.116+/-330.279  $\chi^2/\text{NDF}$ : 52.5/50

All: -119.751+/-233.292  $\chi^2/\text{NDF}$ : 212.8/104

- sign -2571.103+/-329.573  $\chi^2/\text{NDF}$ : 49.5/53

eigen\_dit\_asym\_atr\_avg\_rms vs Slug



Right In: 1980.019+/-0.366     $\chi^2/\text{NDF}$ : 690310.2/25

Left Out: 1887.546+/-0.303     $\chi^2/\text{NDF}$ :31955.8/24

+ sign 1925.204+/-0.234     $\chi^2/\text{NDF}$ : 760112.5/50

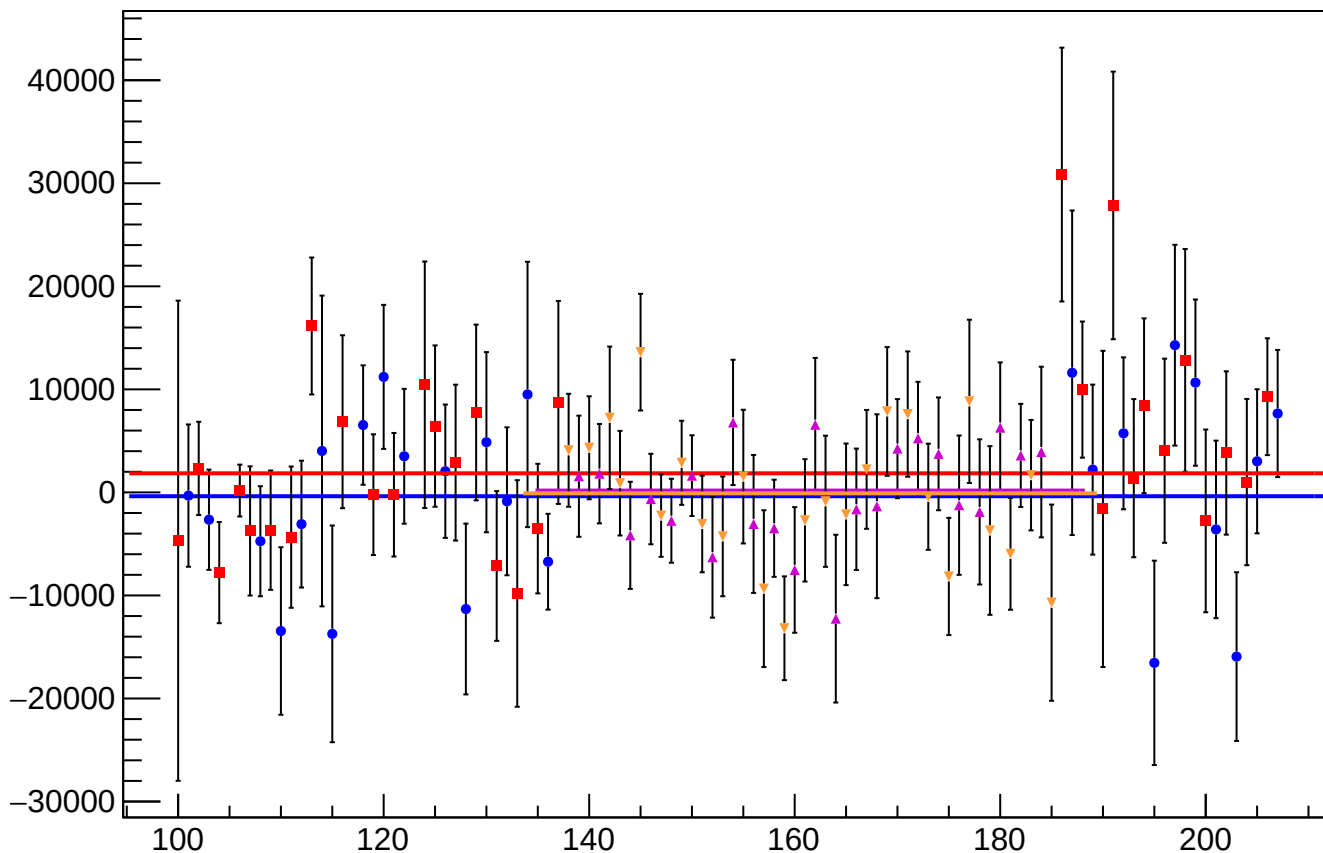
Right Out:  $1979.824 \pm 0.352$   $\chi^2/\text{NDF}$ : 431860.5/30

All: 1924.584+/-0.165     $\chi^2/\text{NDF}$ : 1255668.5/10

- sign 1923.967+/-0.233     $\chi^2/\text{NDF}$ : 495541.9/53

Left In: 1880.576+/-0.311     $\chi^2/\text{NDF}$ :19037.6/22

asym\_atr\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In: -371.889 $\pm$ 1416.384  $\chi^2/\text{NDF}$ : 28.4/25

Left Out: -91.892 $\pm$ 1133.235  $\chi^2/\text{NDF}$ : 28.1/24

Right Out: 1852.147 $\pm$ 1191.342  $\chi^2/\text{NDF}$ : 32.2/30

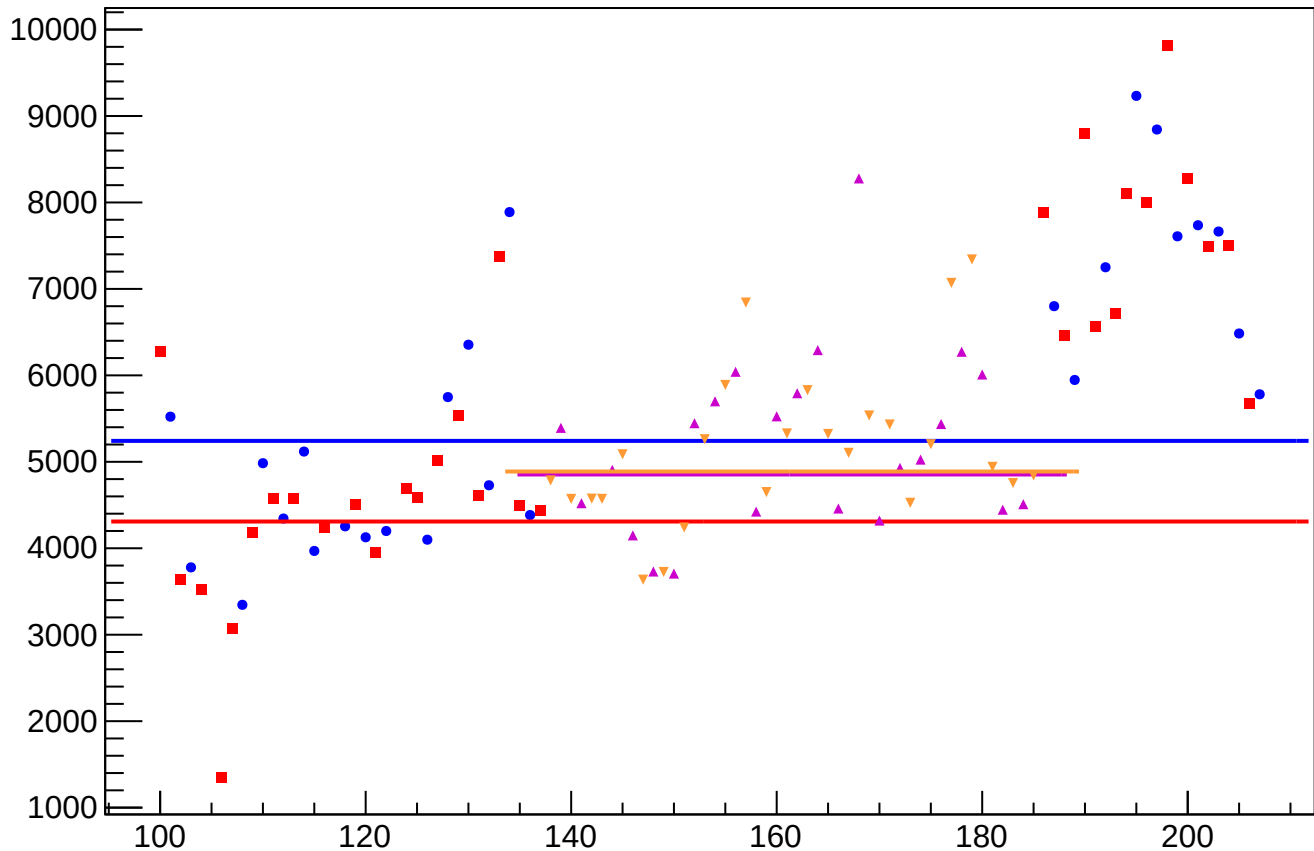
Left In: 177.140 $\pm$ 1156.062  $\chi^2/\text{NDF}$ : 13.5/22

+ sign -201.174 $\pm$ 884.869  $\chi^2/\text{NDF}$ : 56.6/50

All: 432.456 $\pm$ 605.232  $\chi^2/\text{NDF}$ : 104.3/104

- sign 989.475 $\pm$ 829.652  $\chi^2/\text{NDF}$ : 46.8/53

asym\_atr\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 5242.209+/-1.002  $\chi^2/\text{NDF}$ : 2308701.7/25

Left Out: 4887.830+/-0.801  $\chi^2/\text{NDF}$ : 1063300.0/24

Right Out: 4309.391+/-0.842  $\chi^2/\text{NDF}$ : 6425807.3/30

Left In: 4853.371+/-0.817  $\chi^2/\text{NDF}$ : 1178639.4/22

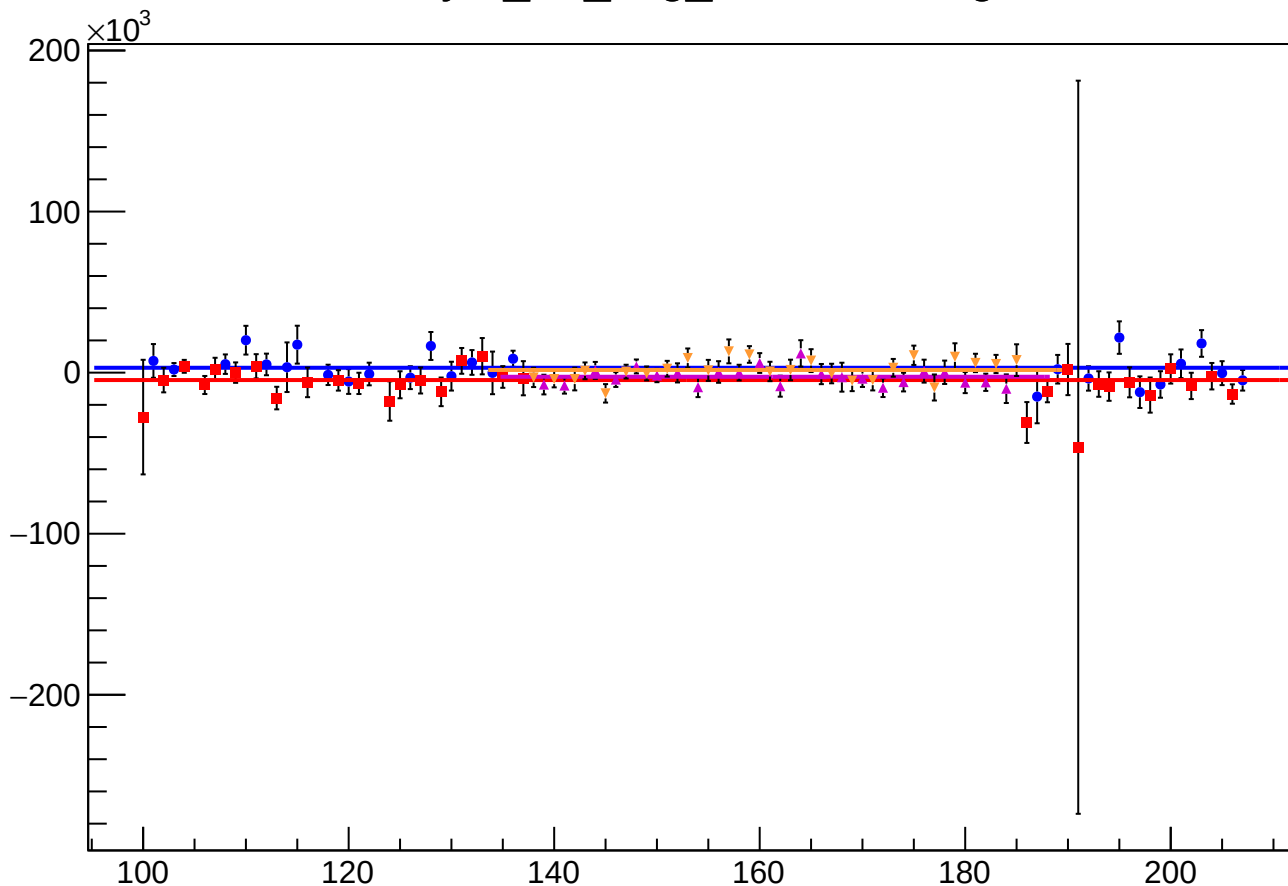
+ sign 5026.144+/-0.626  $\chi^2/\text{NDF}$ : 3448336.2/50

All: 4793.803+/-0.428  $\chi^2/\text{NDF}$ : 11526643.6/100

- sign 4589.554+/-0.587  $\chi^2/\text{NDF}$ : 7819205.7/53



# asym\_atr\_avg\_mean vs Slug



Right In: 3024.599 $\pm$ 1484.888  $\chi^2$ /NDF: 27.1/25

Left Out: 1654.615 $\pm$ 1178.652  $\chi^2$ /NDF: 26.0/24

Right Out: -4603.560 $\pm$ 1404.137  $\chi^2$ /NDF: 26.1/30

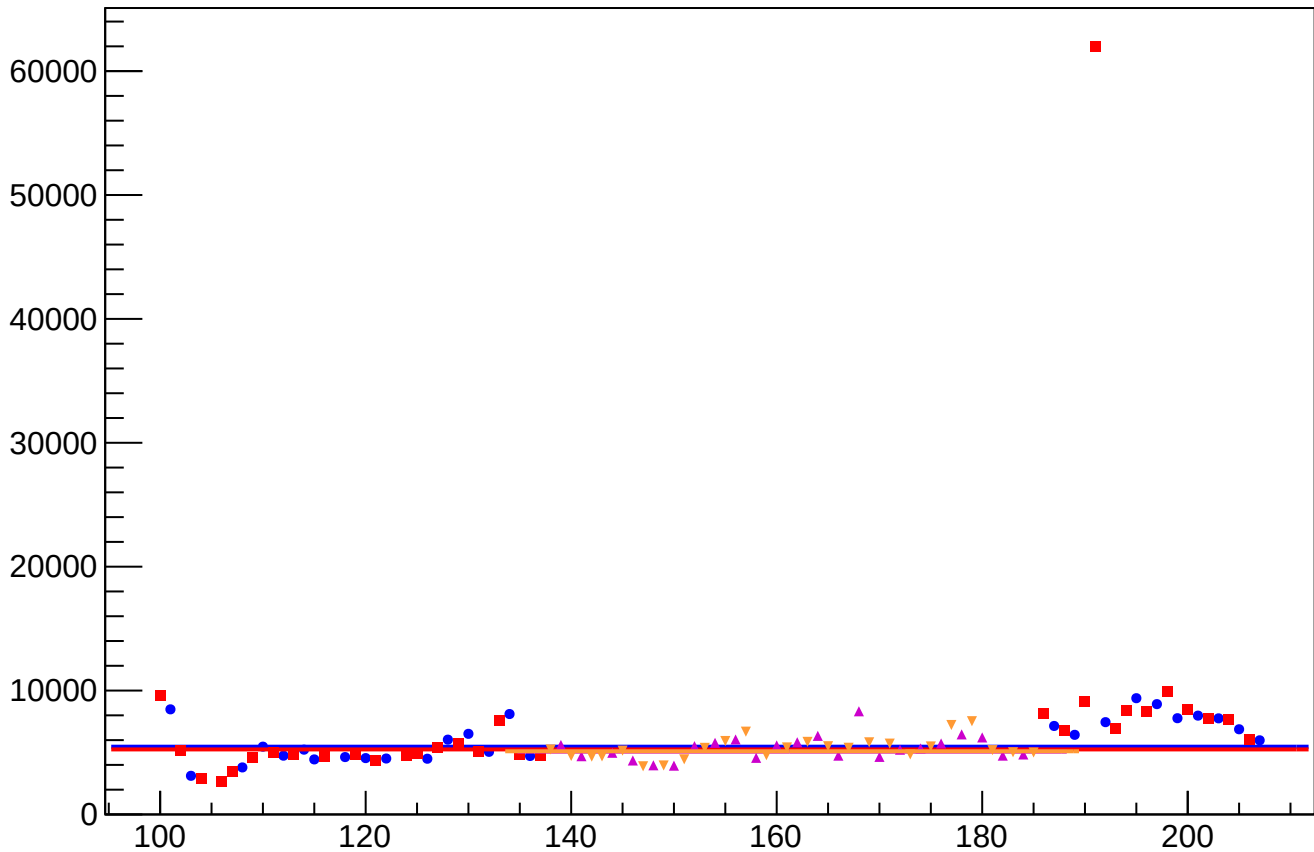
Left In: -2563.603 $\pm$ 1204.450  $\chi^2$ /NDF: 16.0/22

+ sign 2184.151 $\pm$ 923.174  $\chi^2$ /NDF: 53.6/50

All: -649.515 $\pm$ 649.585  $\chi^2$ /NDF: 115.6/104

- sign -3428.333 $\pm$ 914.196  $\chi^2$ /NDF: 43.3/53

# asym\_atr\_avg\_rms vs Slug



Right In: 5469.234+/-1.050  $\chi^2/\text{NDF}$ : 2624507.8/25

Left Out: 5100.641+/-0.833  $\chi^2/\text{NDF}$ : 909330.5/24

Right Out: 5249.680+/-0.987  $\chi^2/\text{NDF}$ : 3579976.7/30

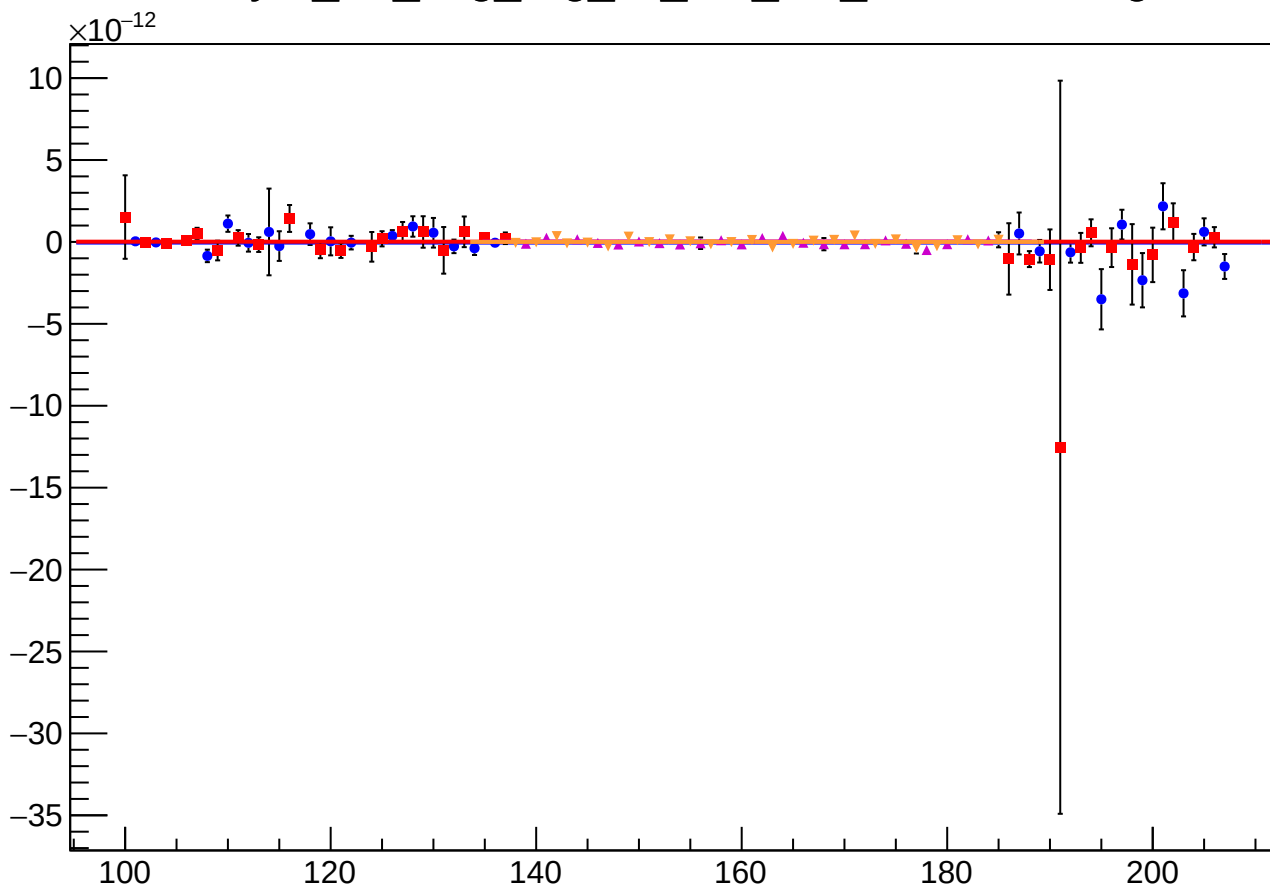
Left In: 5073.543+/-0.852  $\chi^2/\text{NDF}$ : 991915.5/22

+ sign 5243.112+/-0.653  $\chi^2/\text{NDF}$ : 3609440.3/50

All: 5195.340+/-0.459  $\chi^2/\text{NDF}$ : 8210172.2/10

- sign 5148.736+/-0.645  $\chi^2/\text{NDF}$ : 4590151.4/53

asym\_atr\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 36.2/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 33.3/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 23.4/30

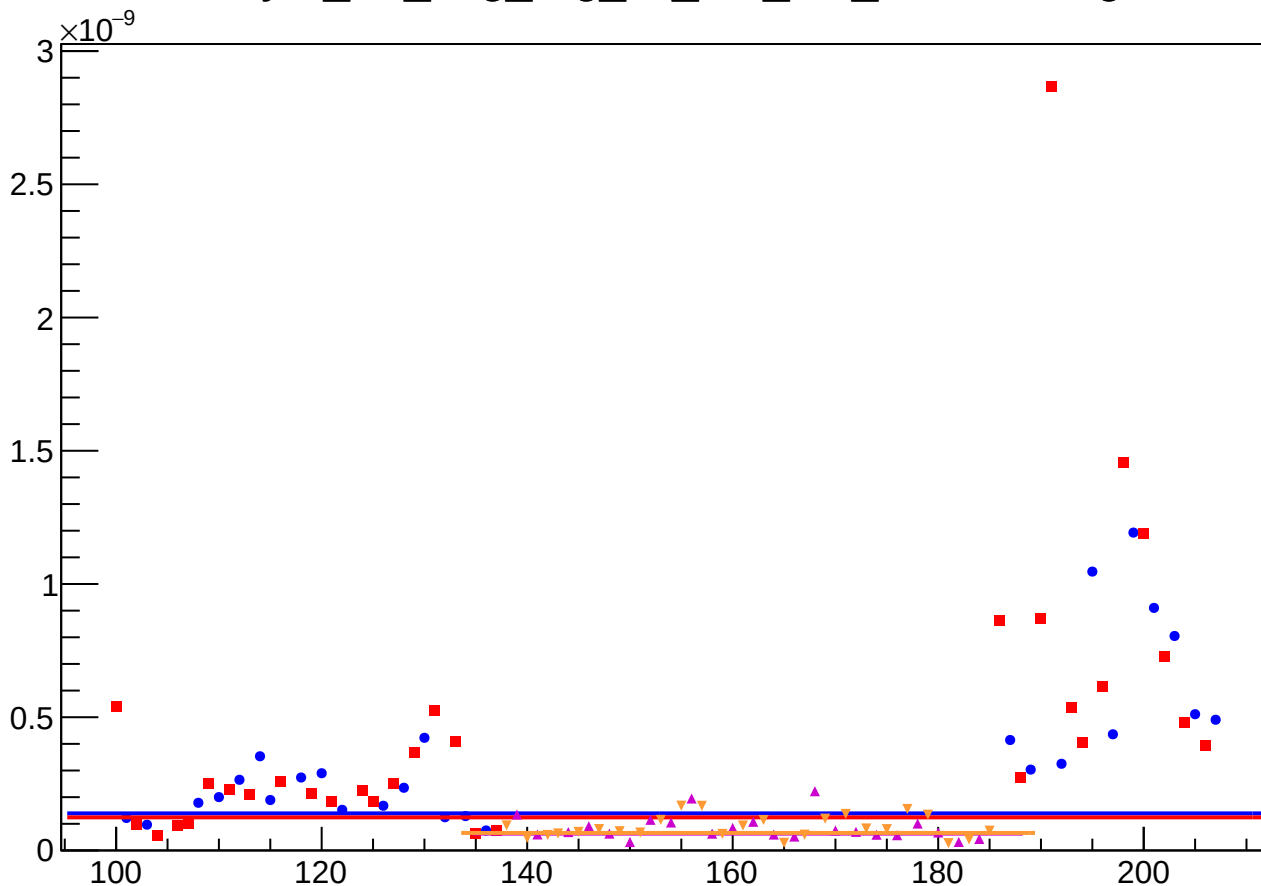
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 32.4/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 69.8/50

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 126.0/104

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 55.9/53

asym\_atr\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5041741.3/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2472657.6/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6546628.8/30

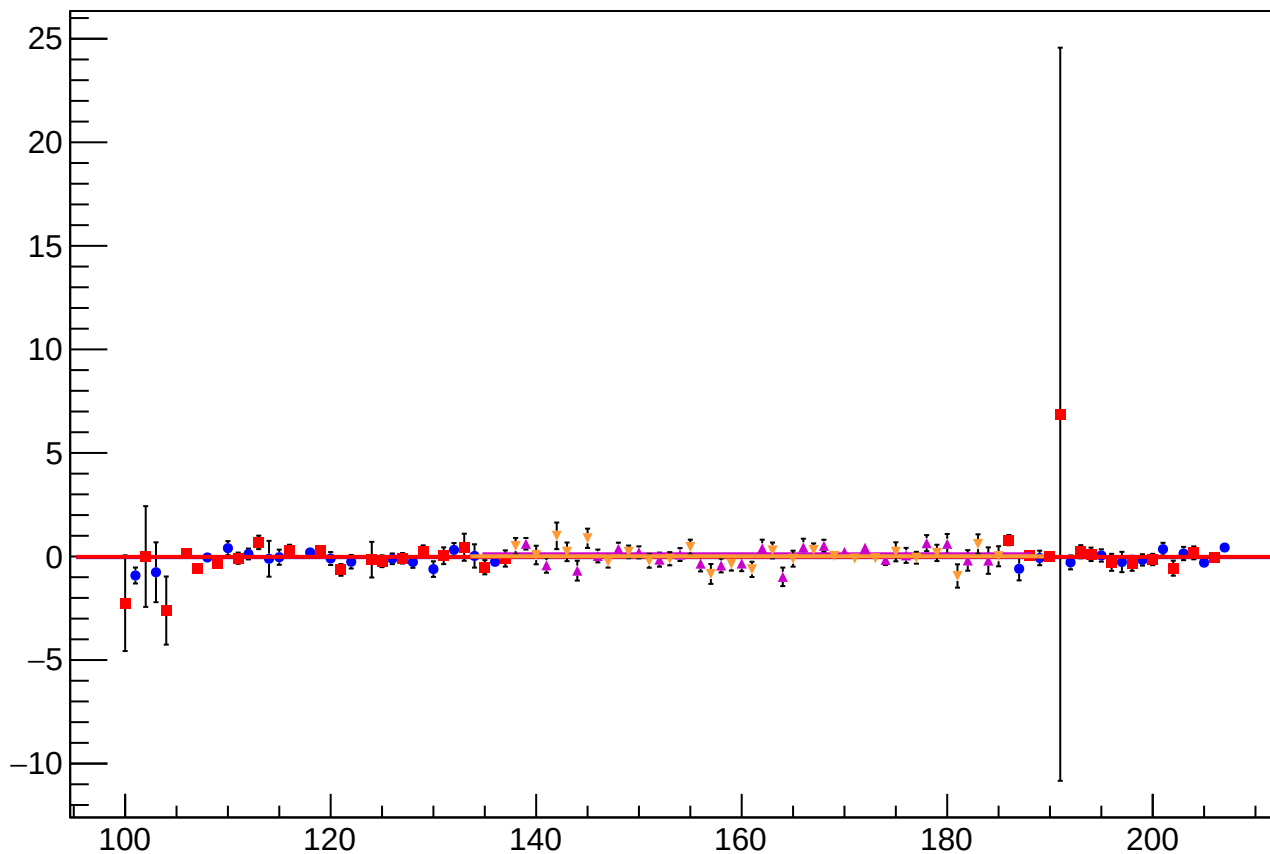
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2196878.1/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9277854.5/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 19346801.8/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10049829.0/53

# asym\_atr\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.032 \pm 0.059$   $\chi^2/\text{NDF}$ : 26.9/25

Left Out:  $0.012 \pm 0.068$   $\chi^2/\text{NDF}$ : 25.2/24

Right Out:  $-0.018 \pm 0.050$   $\chi^2/\text{NDF}$ : 45.0/30

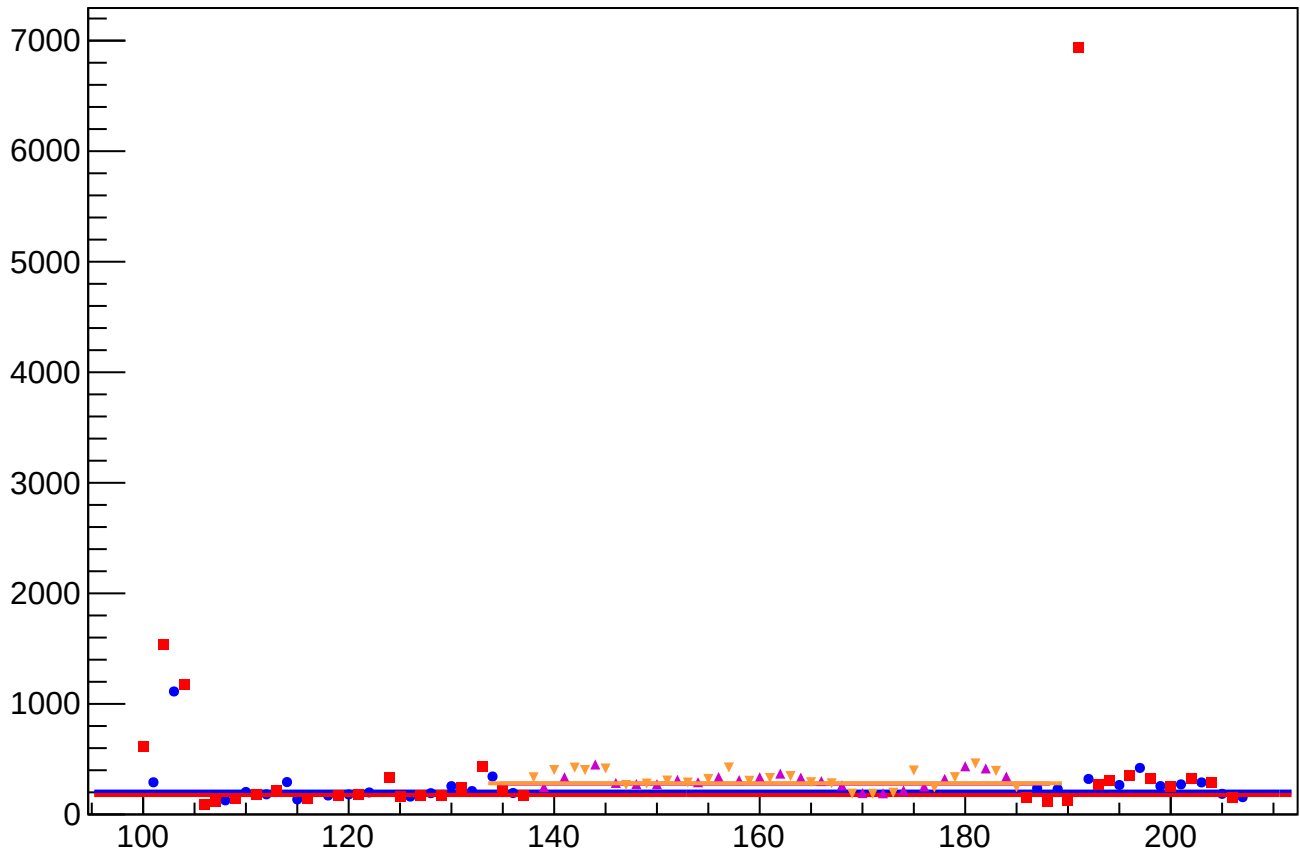
Left In:  $0.105 \pm 0.069$   $\chi^2/\text{NDF}$ : 31.4/22

+ sign  $-0.014 \pm 0.044$   $\chi^2/\text{NDF}$ : 52.3/50

All:  $0.007 \pm 0.030$   $\chi^2/\text{NDF}$ : 131.3/104

- sign  $0.025 \pm 0.041$   $\chi^2/\text{NDF}$ : 78.6/53

# asym\_atr\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 206.973+/-0.041  $\chi^2/\text{NDF}$ : 2747523.6/25

Left Out: 281.818+/-0.048  $\chi^2/\text{NDF}$ : 2520824.2/24

Right Out: 175.856+/-0.036  $\chi^2/\text{NDF}$ : 5470688.8/30

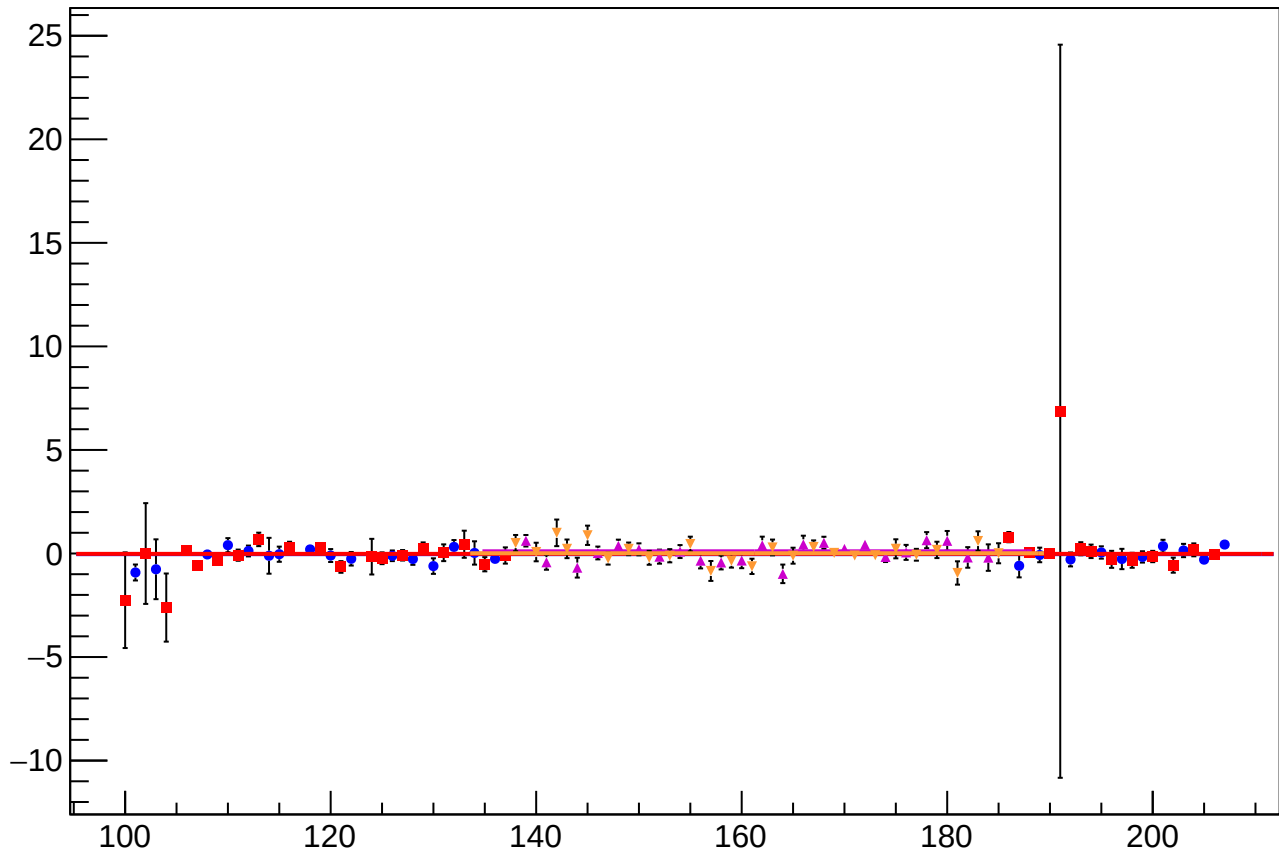
Left In: 278.409+/-0.049  $\chi^2/\text{NDF}$ : 1799690.4/22

+ sign 238.818+/-0.031  $\chi^2/\text{NDF}$ : 6658443.0/50

All: 223.986+/-0.021  $\chi^2/\text{NDF}$ : 17249057.7/10

- sign 211.629+/-0.029  $\chi^2/\text{NDF}$ : 10181218.8/53

asym\_atr\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.032 \pm 0.059$   $\chi^2/\text{NDF}$ : 26.9/25

Left Out:  $0.012 \pm 0.068$   $\chi^2/\text{NDF}$ : 25.2/24

Right Out:  $-0.018 \pm 0.050$   $\chi^2/\text{NDF}$ : 45.0/30

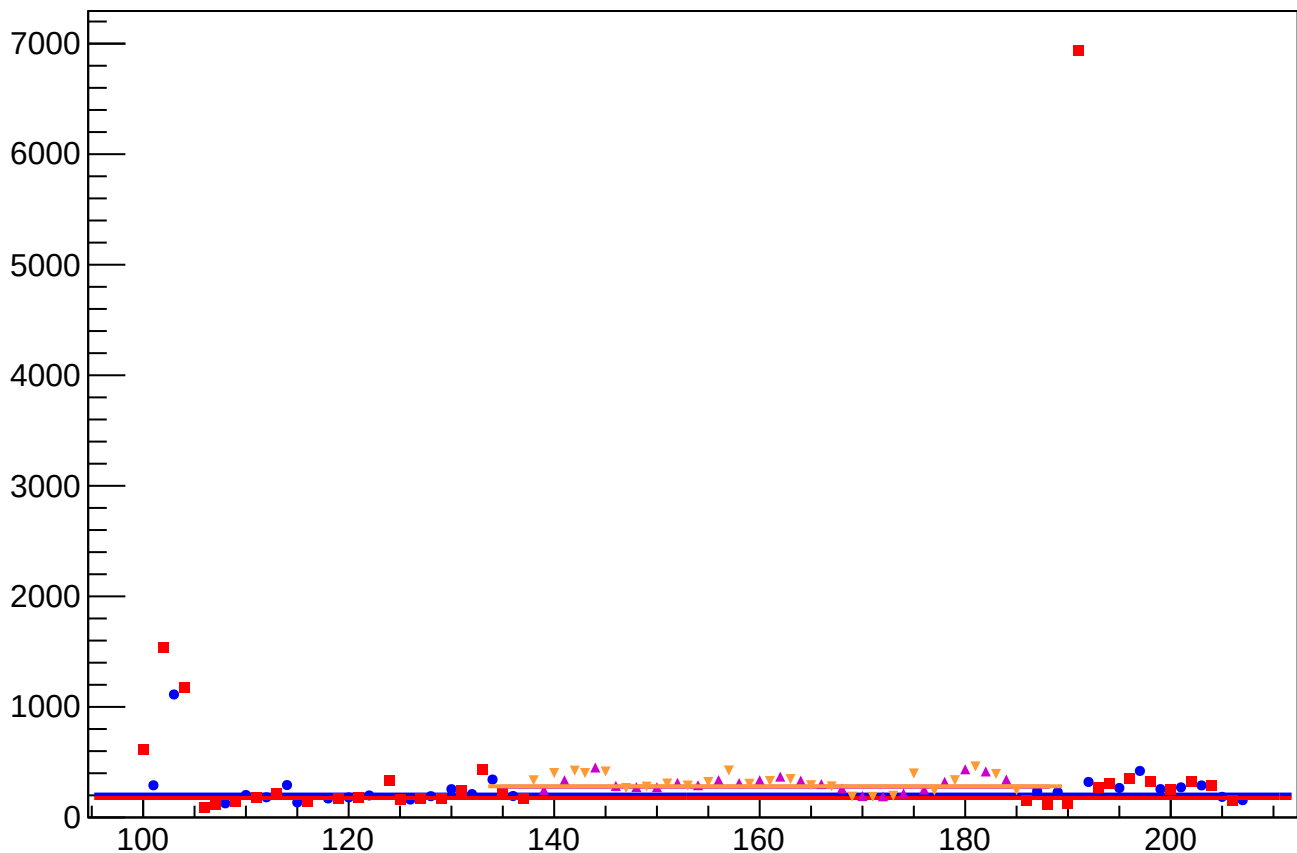
Left In:  $0.105 \pm 0.069$   $\chi^2/\text{NDF}$ : 31.4/22

+ sign  $-0.014 \pm 0.044$   $\chi^2/\text{NDF}$ : 52.3/50

All:  $0.007 \pm 0.030$   $\chi^2/\text{NDF}$ : 131.3/104

- sign  $0.025 \pm 0.041$   $\chi^2/\text{NDF}$ : 78.6/53

asym\_atr\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 206.973 $\pm$ 0.041  $\chi^2$ /NDF: 2747523.6/25

Left Out: 281.818 $\pm$ 0.048  $\chi^2$ /NDF: 2520824.2/24

Right Out: 175.856 $\pm$ 0.036  $\chi^2$ /NDF: 5470688.8/30

Left In: 278.409 $\pm$ 0.049  $\chi^2$ /NDF: 1799690.4/22

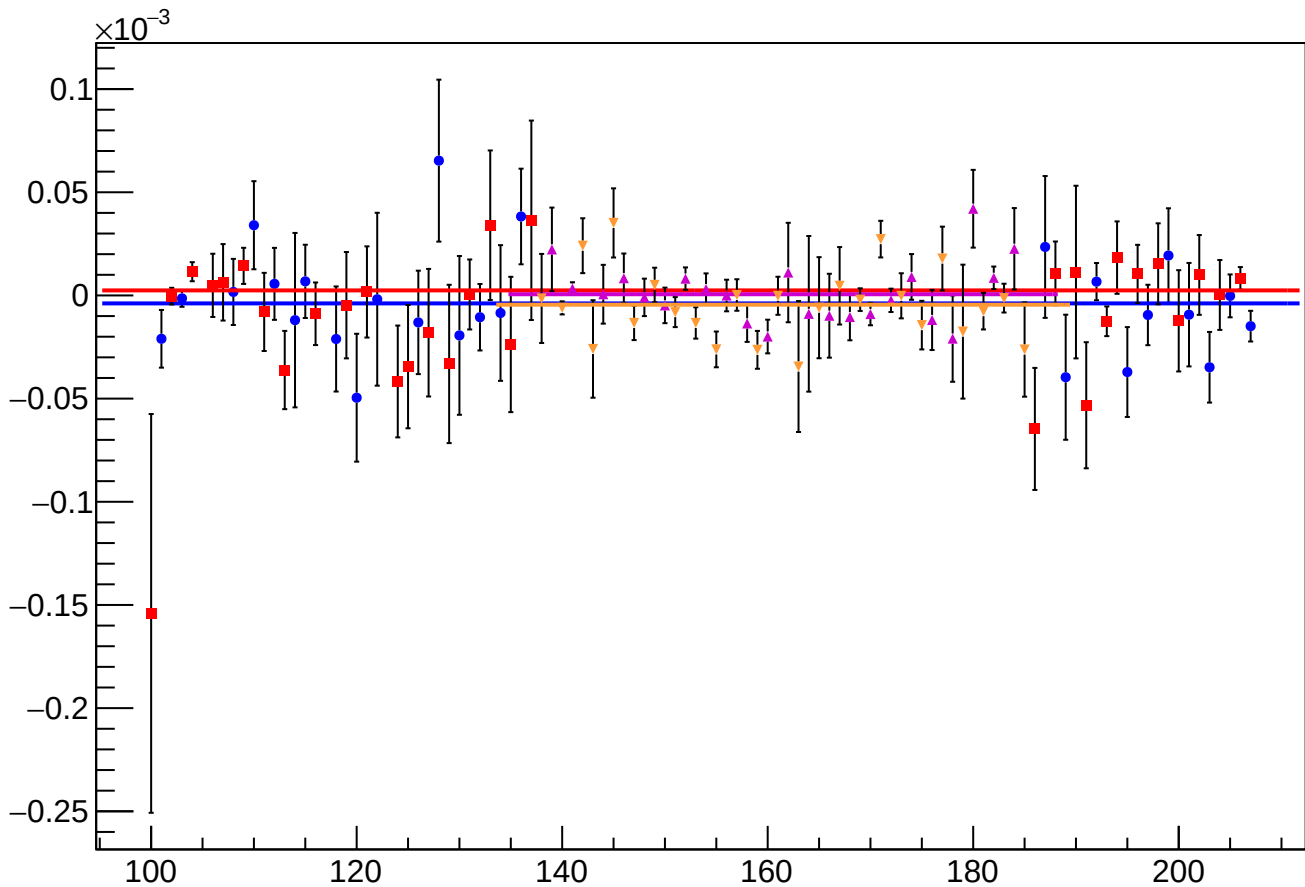
+ sign 238.818 $\pm$ 0.031  $\chi^2$ /NDF: 6658443.0/50

All: 223.986 $\pm$ 0.021  $\chi^2$ /NDF: 17249057.7/10

- sign 211.629 $\pm$ 0.029  $\chi^2$ /NDF: 10181218.8/53



asym\_atr\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2$ /NDF: 27.9/25

Left Out: -0.000+/-0.000  $\chi^2$ /NDF: 46.4/24

Right Out: 0.000+/-0.000  $\chi^2$ /NDF: 37.7/30

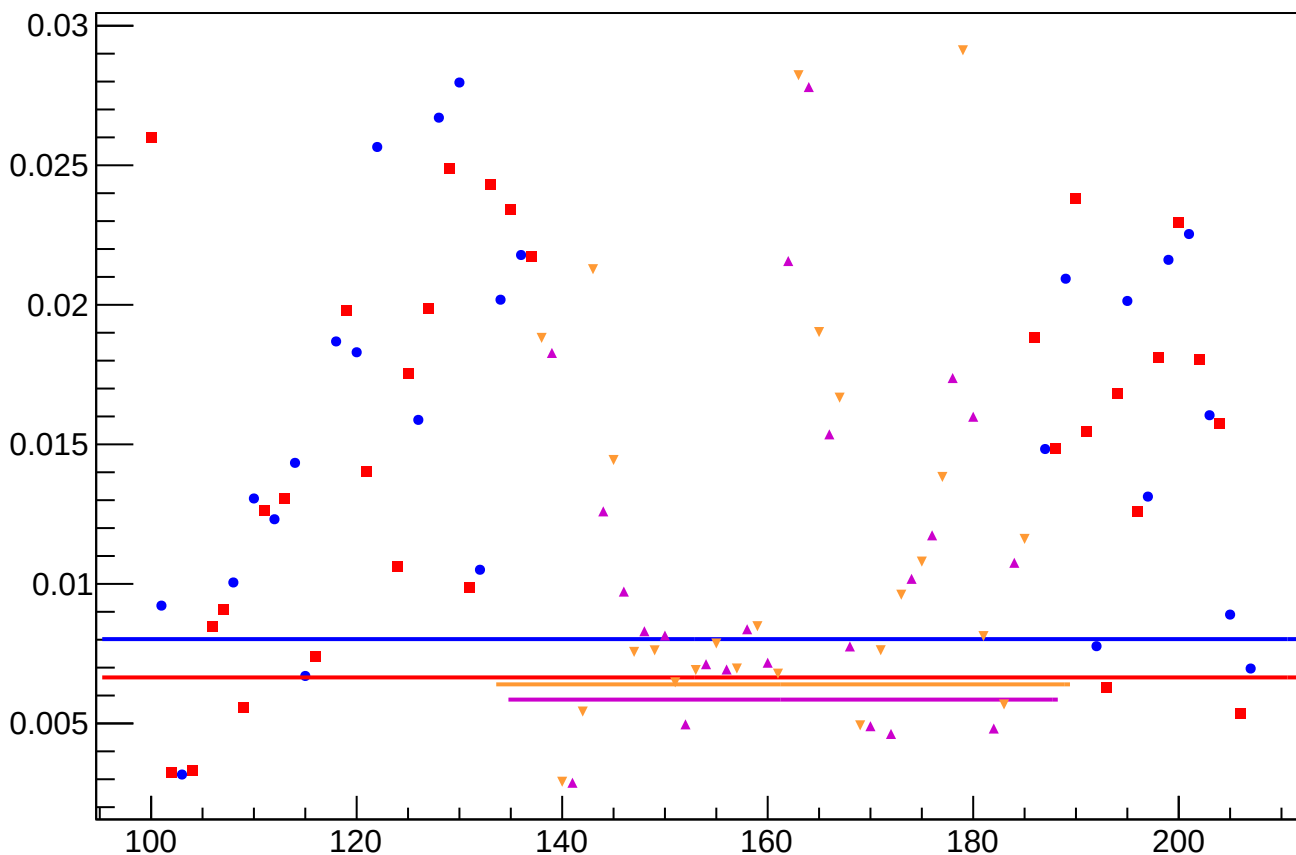
Left In: 0.000+/-0.000  $\chi^2$ /NDF: 29.1/22

+ sign -0.000+/-0.000  $\chi^2$ /NDF: 74.3/50

All: -0.000+/-0.000  $\chi^2$ /NDF: 150.0/104

- sign 0.000+/-0.000  $\chi^2$ /NDF: 67.3/53

asym\_atr\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 9482736.2/25

Left Out: 0.006 $\pm$ 0.000  $\chi^2$ /NDF:8964265.3/24

Right Out: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 11600229.3/30

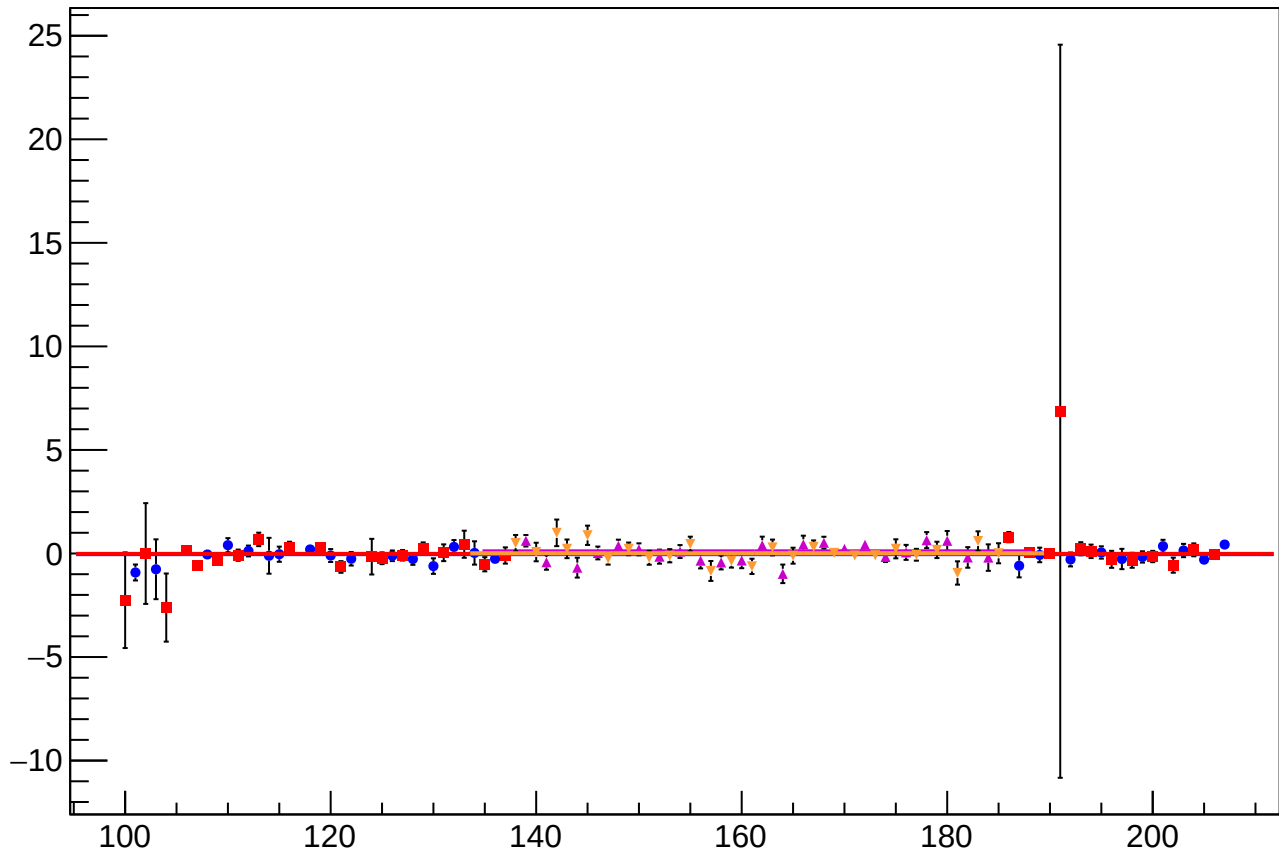
Left In: 0.006 $\pm$ 0.000  $\chi^2$ /NDF:8144305.6/22

+ sign 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 18984491.6/50

All: 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 39197777.3/104

- sign 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 19924823.6/53

asym\_atr\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.032 \pm 0.059$   $\chi^2/\text{NDF}: 26.9/25$

Left Out:  $0.012 \pm 0.068$   $\chi^2/\text{NDF}: 25.2/24$

Right Out:  $-0.018 \pm 0.050$   $\chi^2/\text{NDF}: 45.0/30$

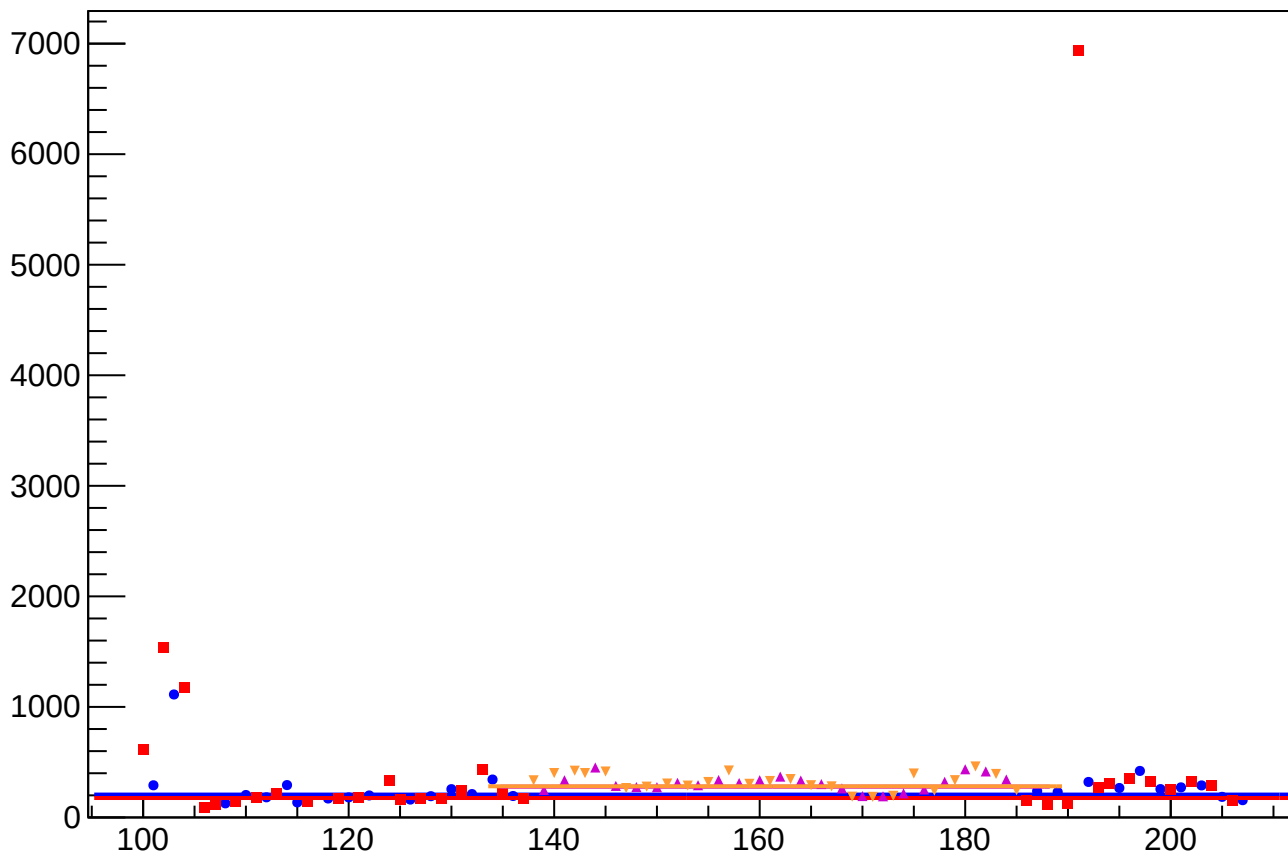
Left In:  $0.105 \pm 0.069$   $\chi^2/\text{NDF}: 31.4/22$

+ sign  $-0.014 \pm 0.044$   $\chi^2/\text{NDF}: 52.3/50$

All:  $0.007 \pm 0.030$   $\chi^2/\text{NDF}: 131.3/104$

- sign  $0.025 \pm 0.041$   $\chi^2/\text{NDF}: 78.6/53$

asym\_atr\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 206.972 $\pm$ 0.041  $\chi^2$ /NDF: 2747537.1/25

Left Out: 281.820 $\pm$ 0.048  $\chi^2$ /NDF: 2520889.0/24

Right Out: 175.853 $\pm$ 0.036  $\chi^2$ /NDF: 5470844.2/30

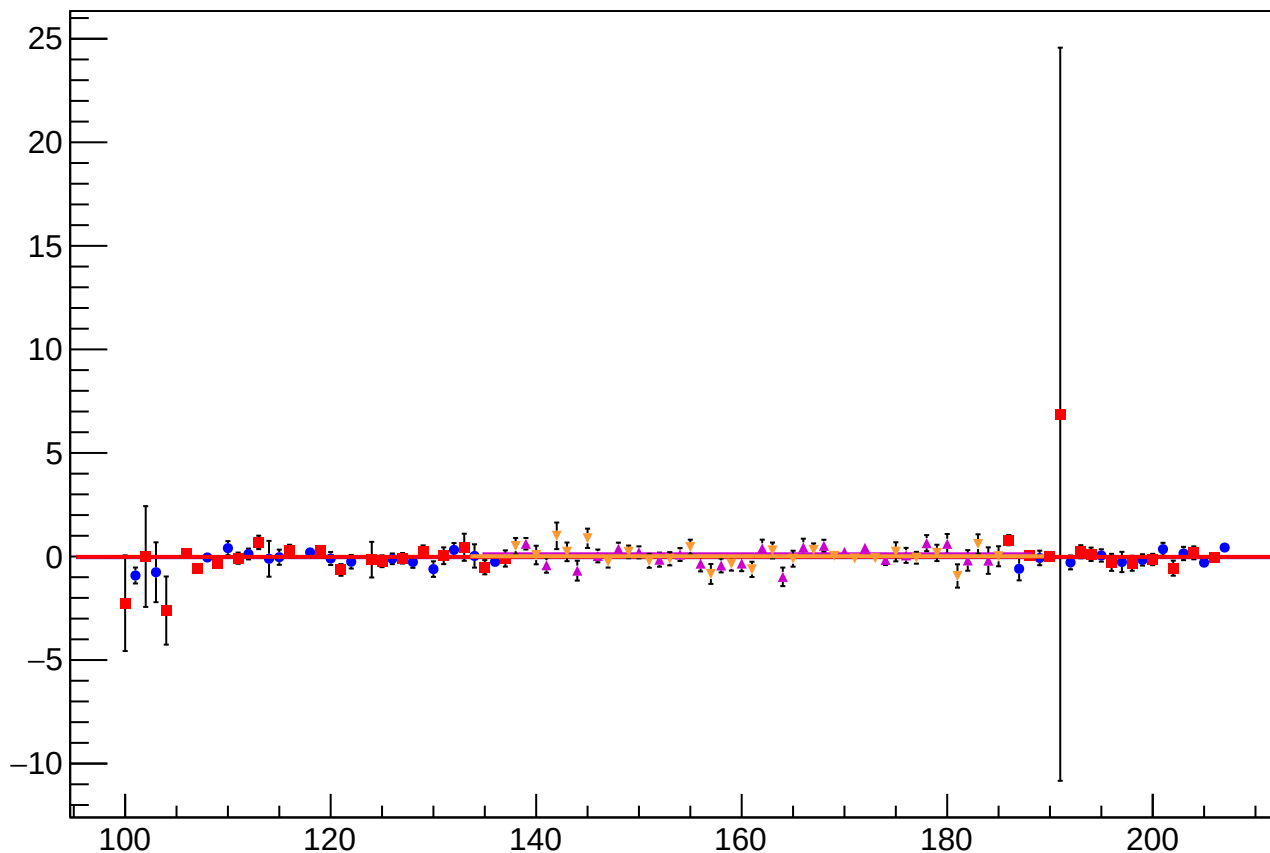
Left In: 278.412 $\pm$ 0.049  $\chi^2$ /NDF: 1799730.1/22

+ sign 238.819 $\pm$ 0.031  $\chi^2$ /NDF: 6658616.9/50

All: 223.985 $\pm$ 0.021  $\chi^2$ /NDF: 17249798.7/10

- sign 211.627 $\pm$ 0.029  $\chi^2$ /NDF: 10181710.1/53

asym\_atr\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.032 \pm 0.059$   $\chi^2/\text{NDF}$ : 26.9/25

Left Out:  $0.012 \pm 0.068$   $\chi^2/\text{NDF}$ : 25.2/24

Right Out:  $-0.018 \pm 0.050$   $\chi^2/\text{NDF}$ : 45.0/30

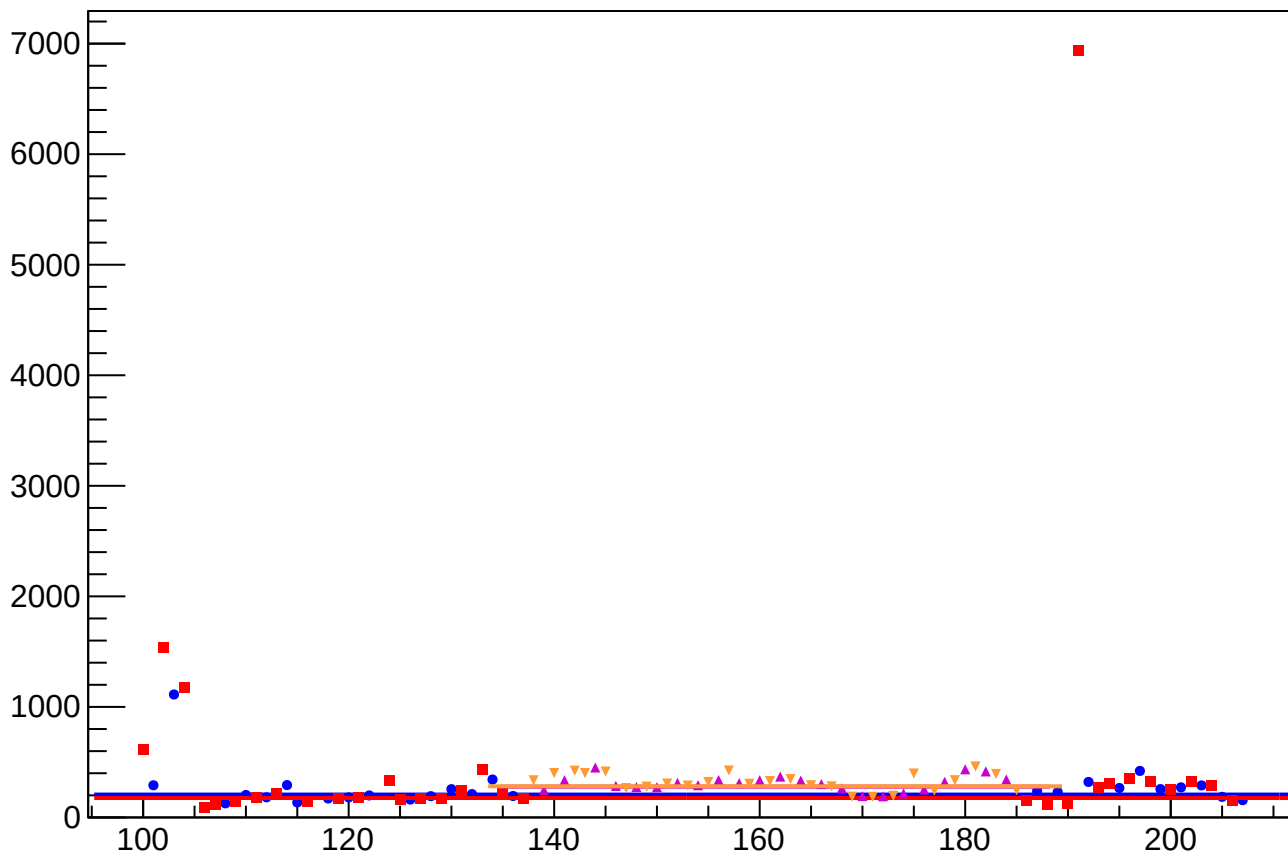
Left In:  $0.105 \pm 0.069$   $\chi^2/\text{NDF}$ : 31.4/22

+ sign  $-0.014 \pm 0.044$   $\chi^2/\text{NDF}$ : 52.3/50

All:  $0.007 \pm 0.030$   $\chi^2/\text{NDF}$ : 131.3/104

- sign  $0.025 \pm 0.041$   $\chi^2/\text{NDF}$ : 78.6/53

asym\_atr\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 206.972 $\pm$ 0.041  $\chi^2$ /NDF: 2747537.1/25

Left Out: 281.820 $\pm$ 0.048  $\chi^2$ /NDF: 2520889.0/24

Right Out: 175.853 $\pm$ 0.036  $\chi^2$ /NDF: 5470844.2/30

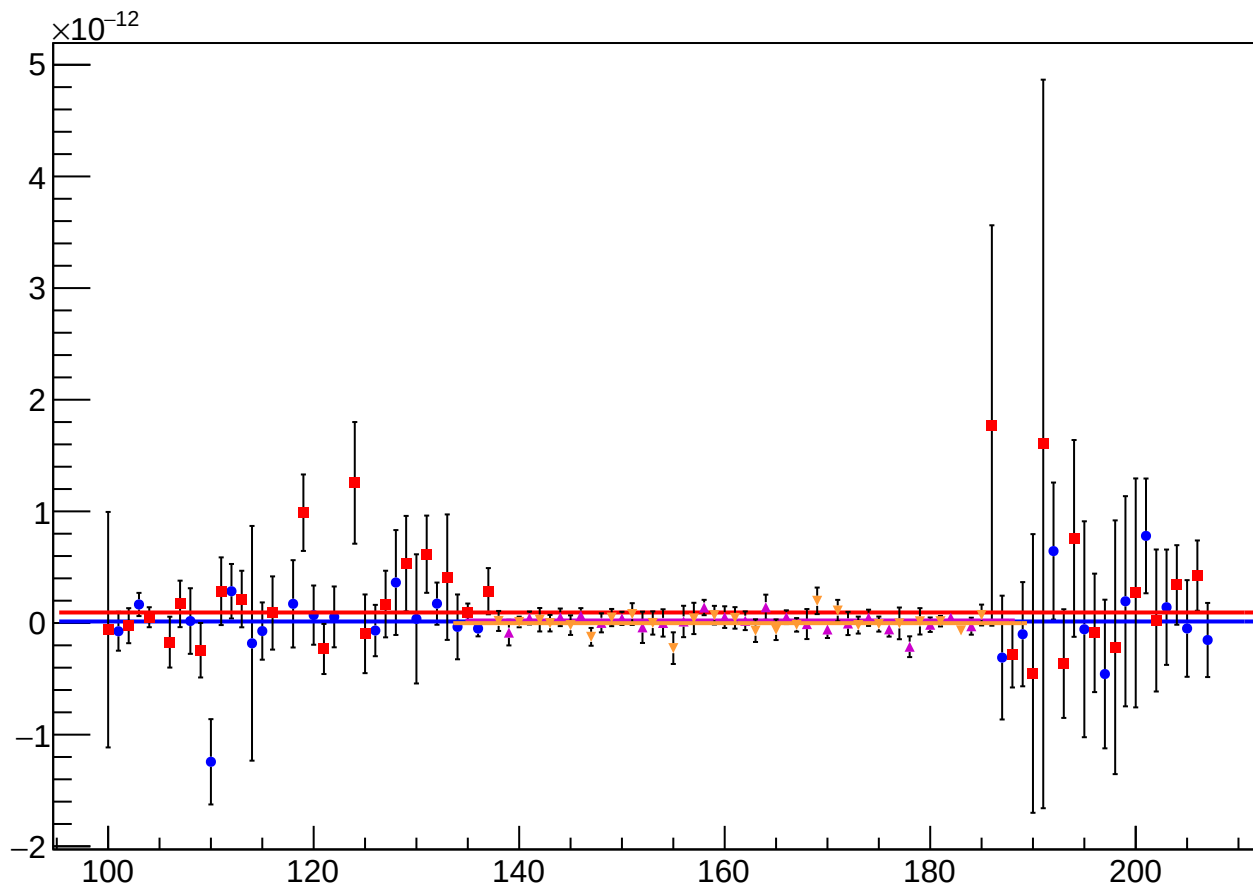
Left In: 278.412 $\pm$ 0.049  $\chi^2$ /NDF: 1799730.1/22

+ sign 238.819 $\pm$ 0.031  $\chi^2$ /NDF: 6658616.9/50

All: 223.985 $\pm$ 0.021  $\chi^2$ /NDF: 17249798.7/10

- sign 211.627 $\pm$ 0.029  $\chi^2$ /NDF: 10181710.1/53

asym\_atr\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 21.6/25

Left Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 15.4/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 29.4/30

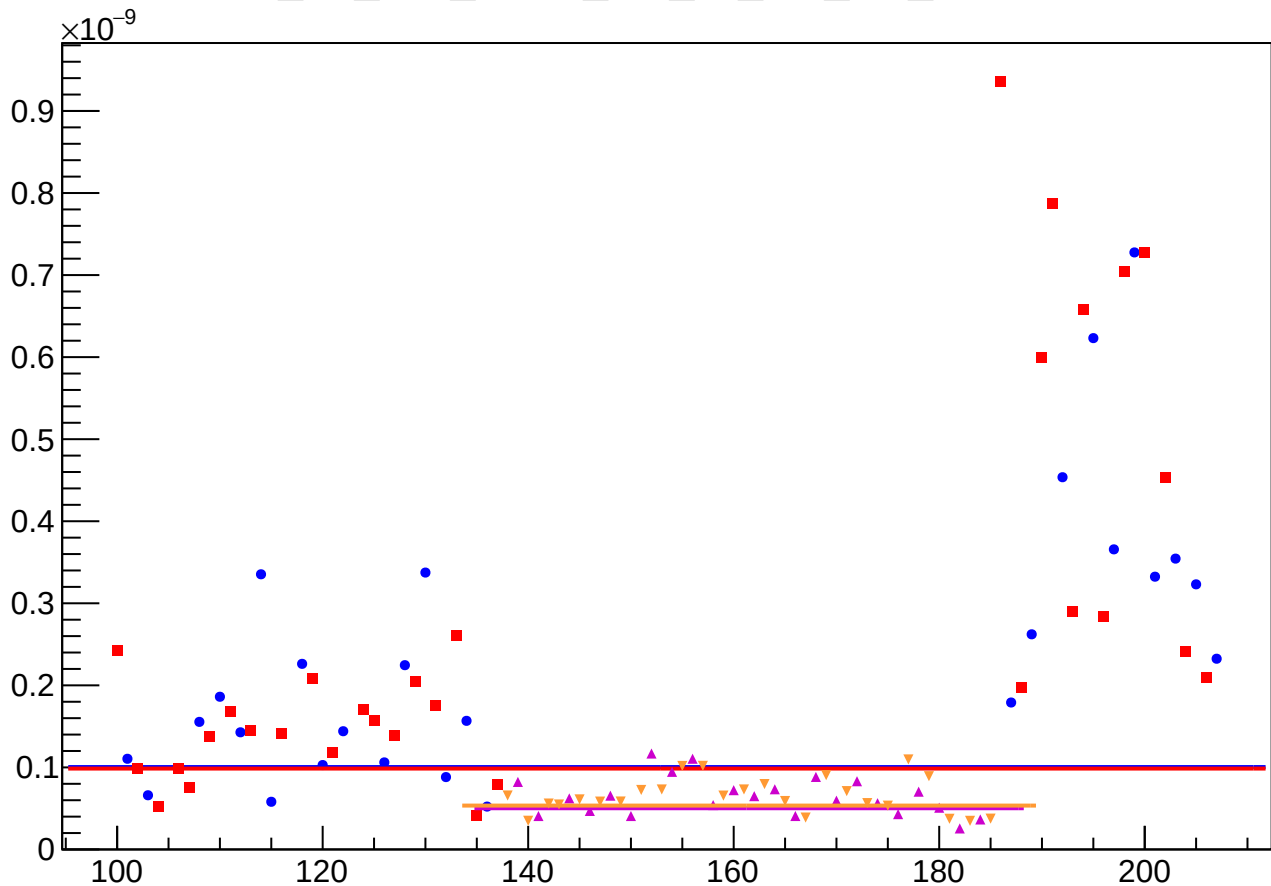
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 16.8/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 37.1/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 87.9/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 48.7/53

asym\_atr\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6846075.9/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2781376.7/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7491343.3/30

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3367886.1/22

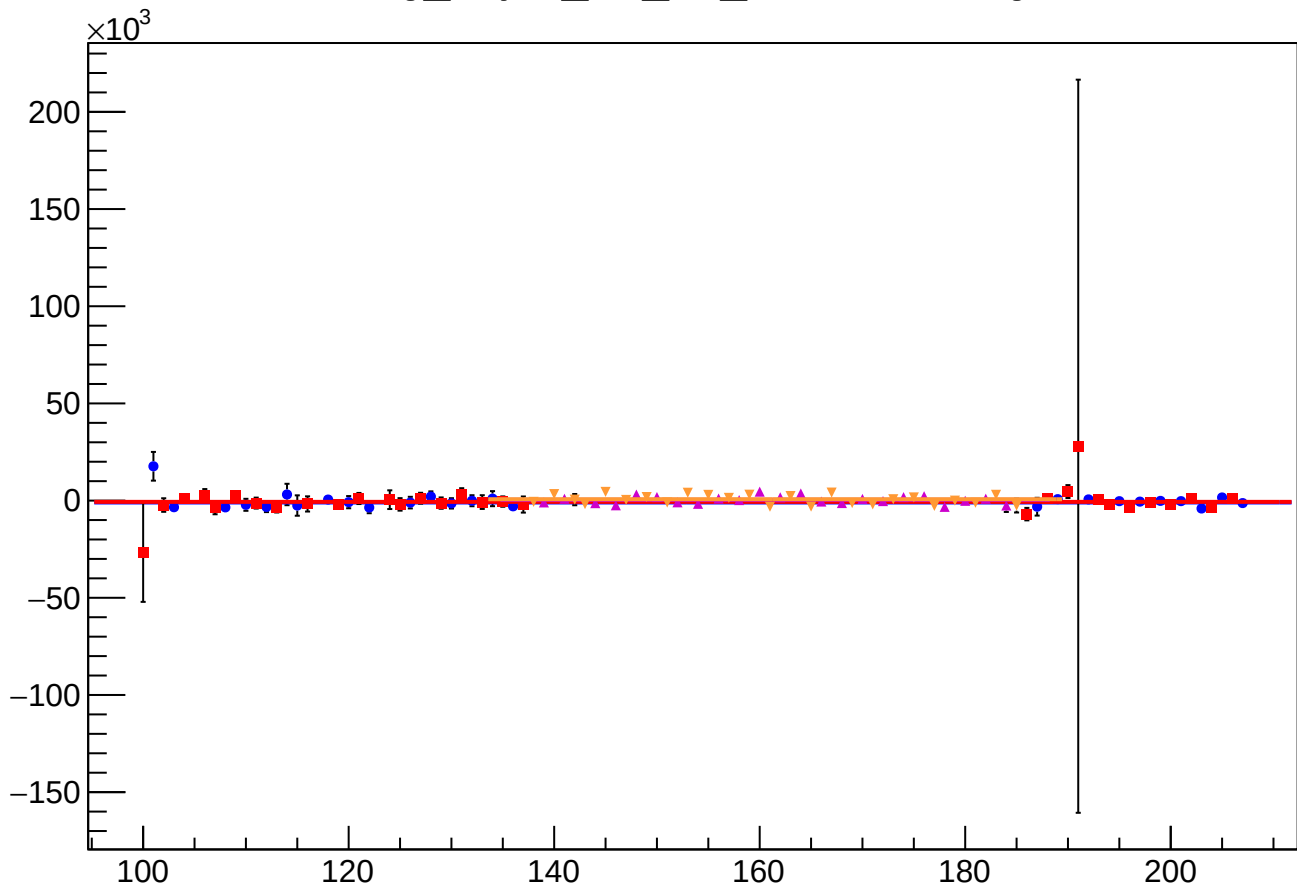
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11656319.1/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 24812897.7/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13113474.6/53



# reg\_asym\_atr\_dd\_mean vs Slug



Right In:  $-958.172 \pm 500.669$   $\chi^2/\text{NDF}$ : 19.5/25

Left Out:  $705.742 \pm 415.383$   $\chi^2/\text{NDF}$ : 31.9/24

Right Out:  $-648.361 \pm 481.363$   $\chi^2/\text{NDF}$ : 23.3/30

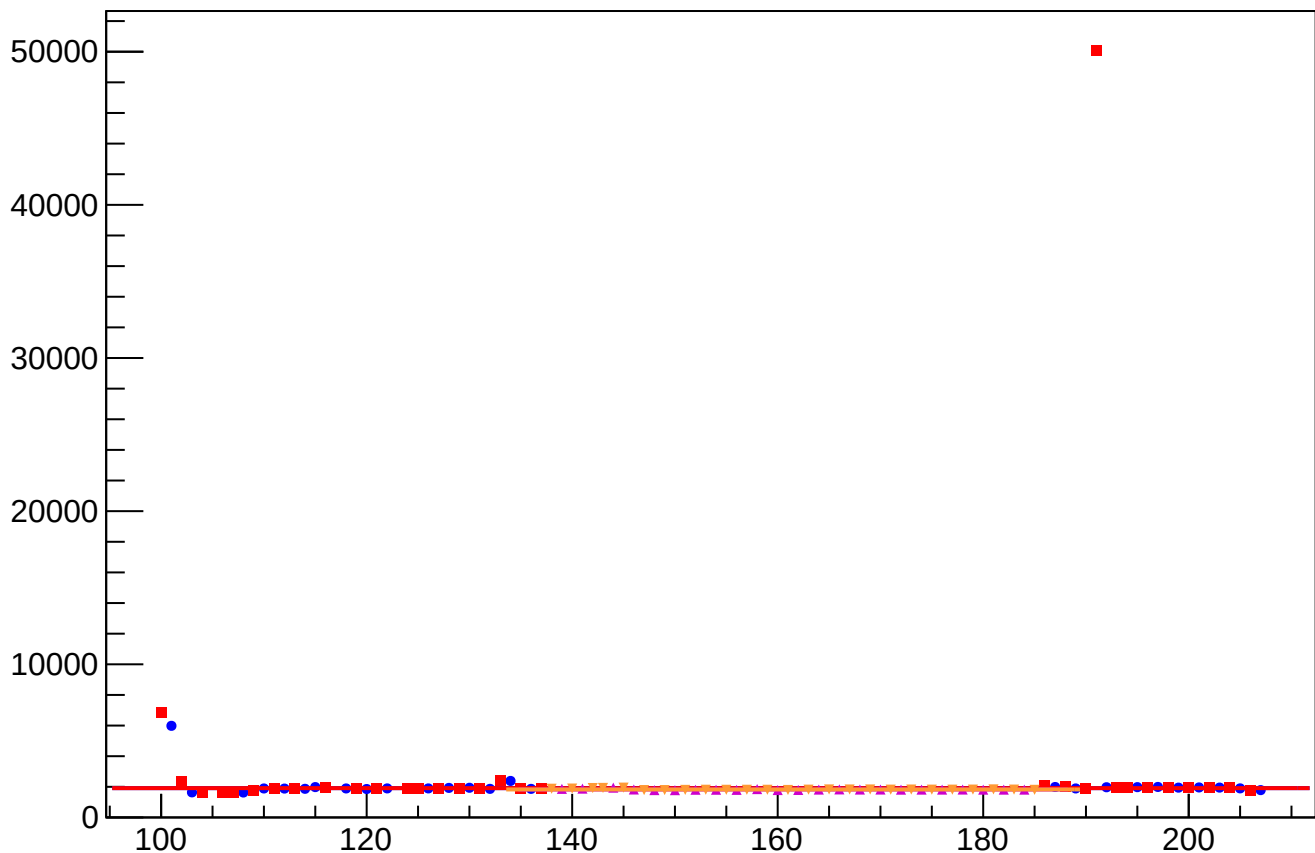
Left In:  $403.144 \pm 426.215$   $\chi^2/\text{NDF}$ : 20.7/22

+ sign  $27.366 \pm 319.684$   $\chi^2/\text{NDF}$ : 58.0/50

All:  $-15.870 \pm 225.845$   $\chi^2/\text{NDF}$ : 104.7/104

- sign  $-58.950 \pm 319.104$   $\chi^2/\text{NDF}$ : 46.7/53

# reg\_asym\_atr\_dd\_rms vs Slug



Right In: 1914.915+/-0.354  $\chi^2/\text{NDF}$ : 716435.7/25

Left Out: 1828.243+/-0.294  $\chi^2/\text{NDF}$ : 19329.0/24

Right Out: 1914.345+/-0.340  $\chi^2/\text{NDF}$ : 385868.5/30

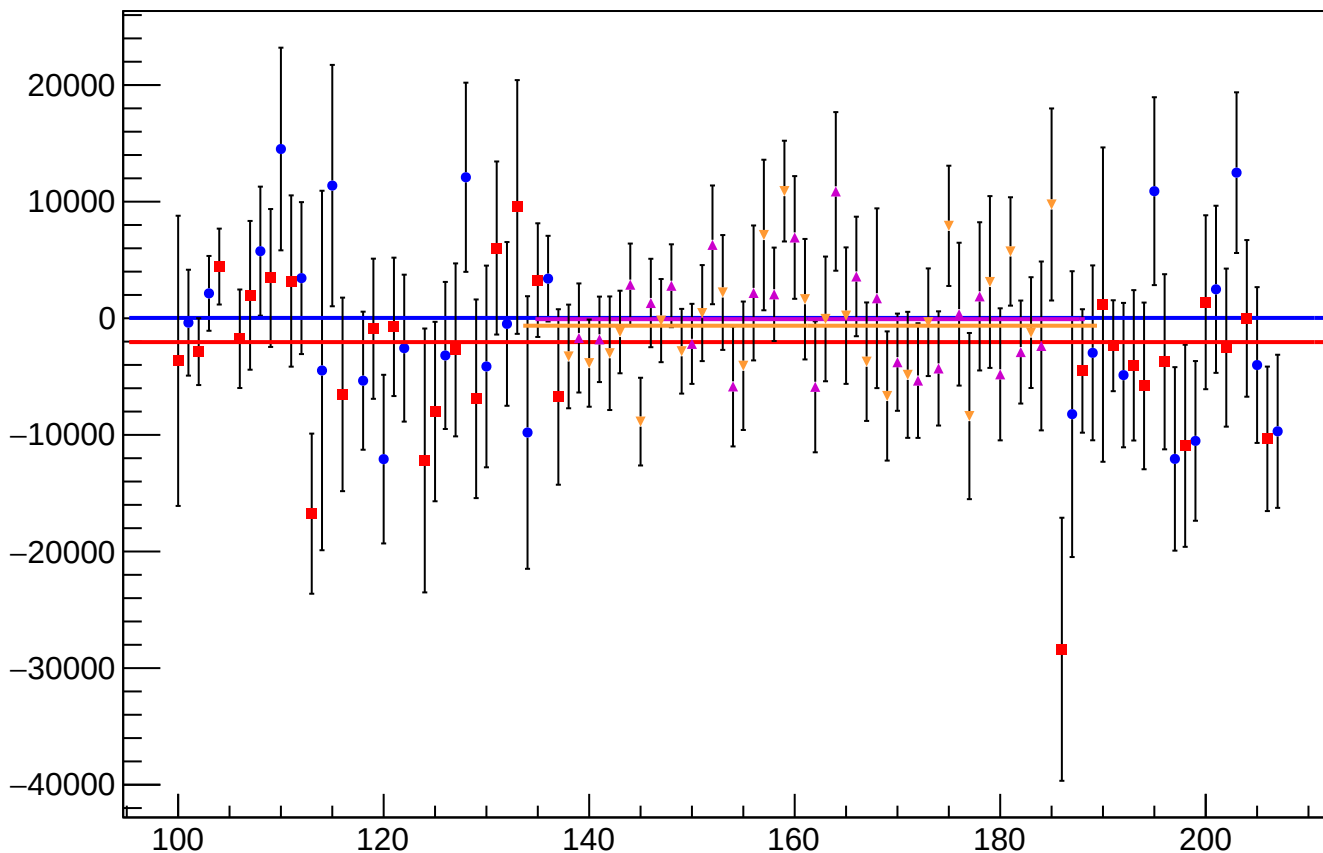
Left In: 1825.165+/-0.301  $\chi^2/\text{NDF}$ : 13360.2/22

+ sign 1863.579+/-0.226  $\chi^2/\text{NDF}$ : 771265.1/50

All: 1864.003+/-0.160  $\chi^2/\text{NDF}$ : 1209049.3/100

- sign 1864.426+/-0.225  $\chi^2/\text{NDF}$ : 437777.2/53

# asym\_atr\_dd\_reg\_correction\_mean vs Slug



Right In:  $30.297 \pm 1243.634$   $\chi^2/\text{NDF}: 27.6/25$

Left Out:  $-637.703 \pm 946.866$   $\chi^2/\text{NDF}: 26.0/24$

Right Out:  $-2042.548 \pm 1076.646$   $\chi^2/\text{NDF}: 25.7/30$

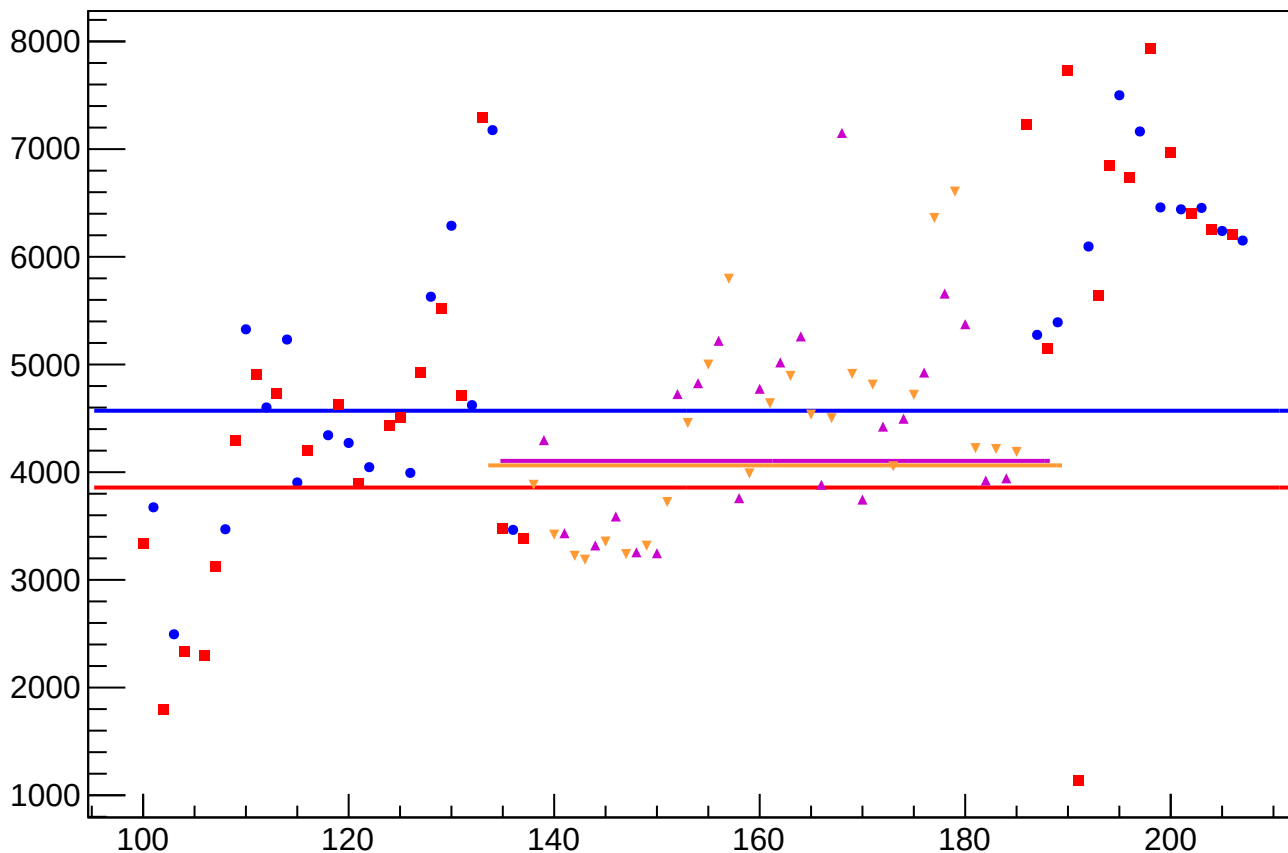
Left In:  $-75.764 \pm 980.243$   $\chi^2/\text{NDF}: 15.4/22$

+ sign  $-392.572 \pm 753.361$   $\chi^2/\text{NDF}: 53.8/50$

All:  $-690.963 \pm 522.326$   $\chi^2/\text{NDF}: 97.1/104$

- sign  $-967.178 \pm 724.827$   $\chi^2/\text{NDF}: 43.0/53$

# asym\_atr\_dd\_reg\_correction\_rms vs Slug



Right In: 4570.651 $\pm$ 0.879  $\chi^2$ /NDF: 2764825.7/25

Left Out: 4063.108 $\pm$ 0.670  $\chi^2$ /NDF: 1405036.2/24

Right Out: 3857.499 $\pm$ 0.761  $\chi^2$ /NDF: 6123712.3/30

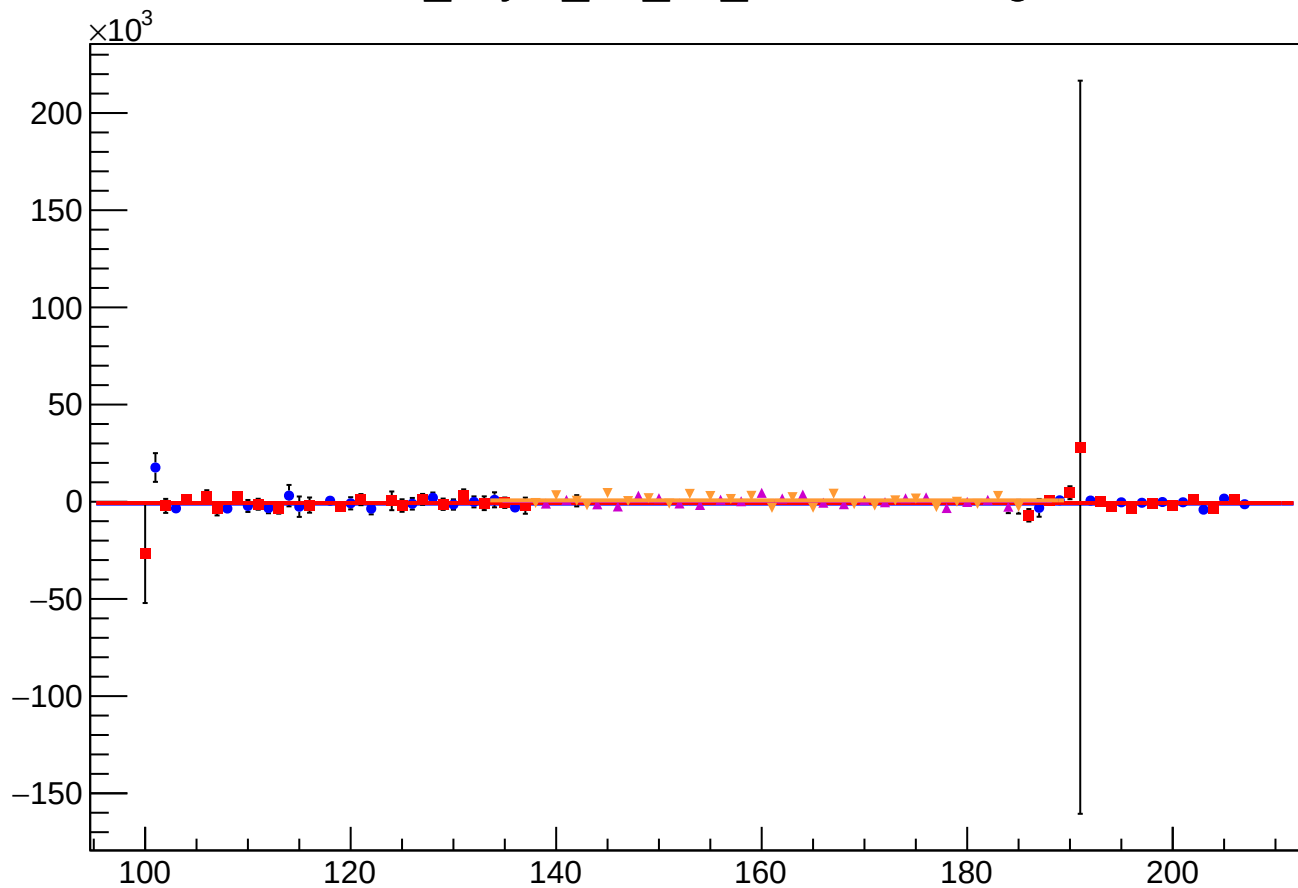
Left In: 4105.057 $\pm$ 0.693  $\chi^2$ /NDF: 1359493.1/22

+ sign 4249.357 $\pm$ 0.533  $\chi^2$ /NDF: 4380734.4/50

All: 4116.157 $\pm$ 0.369  $\chi^2$ /NDF: 12042153.5/100

- sign 3992.855 $\pm$ 0.513  $\chi^2$ /NDF: 7541020.6/53

# cor\_asym\_atr\_dd\_mean vs Slug



Right In:  $-958.376 \pm 500.669$   $\chi^2/\text{NDF}$ : 19.5/25

Left Out:  $705.801 \pm 415.383$   $\chi^2/\text{NDF}$ : 31.9/24

Right Out:  $-643.821 \pm 481.667$   $\chi^2/\text{NDF}$ : 23.3/30

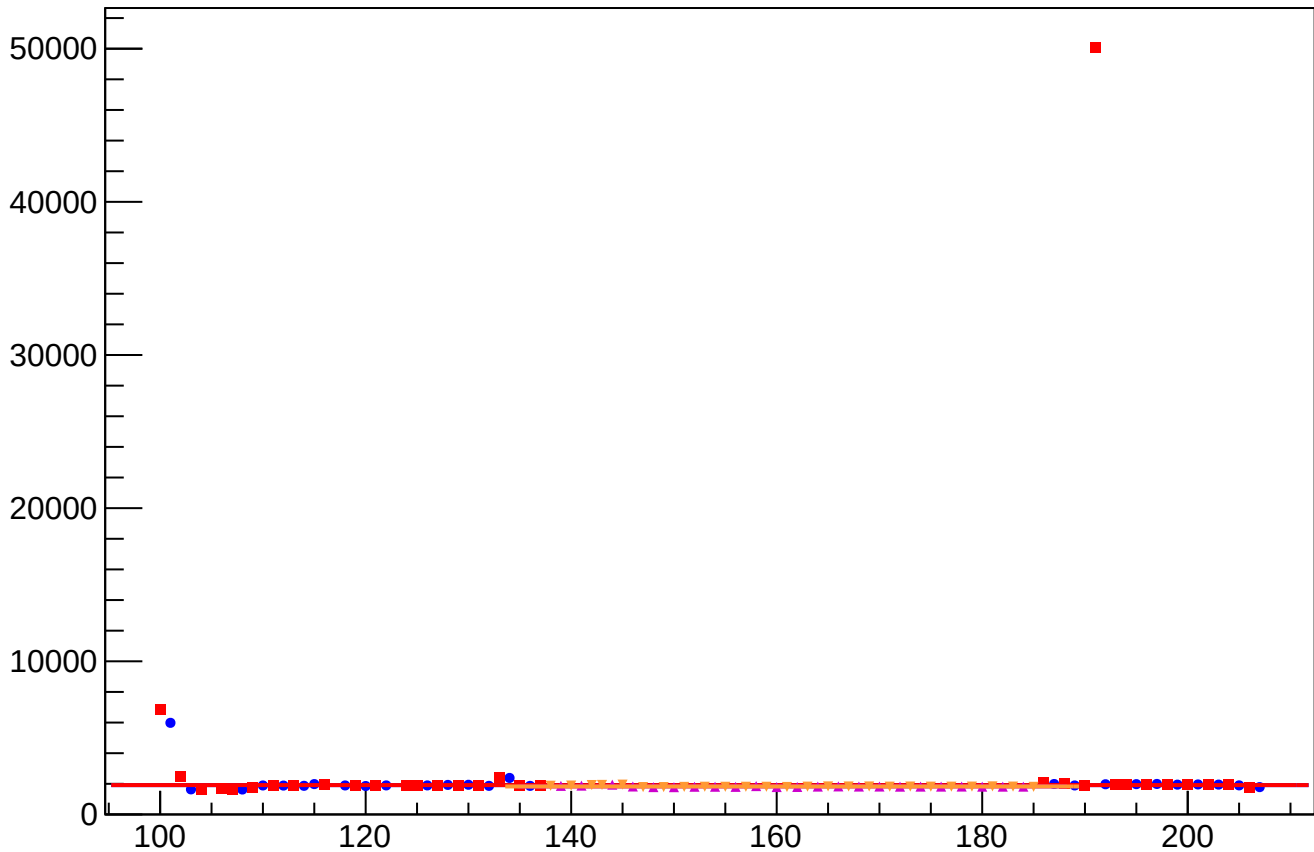
Left In:  $402.981 \pm 426.215$   $\chi^2/\text{NDF}$ : 20.8/22

+ sign  $27.317 \pm 319.684$   $\chi^2/\text{NDF}$ : 57.9/50

All:  $-14.766 \pm 225.877$   $\chi^2/\text{NDF}$ : 104.6/104

- sign  $-56.721 \pm 319.192$   $\chi^2/\text{NDF}$ : 46.7/53

# cor\_asym\_atr\_dd\_rms vs Slug



Right In: 1914.915 $\pm$ 0.354  $\chi^2$ /NDF: 716435.9/25

Left Out: 1828.243 $\pm$ 0.294  $\chi^2$ /NDF: 19329.0/24

Right Out: 1917.637 $\pm$ 0.340  $\chi^2$ /NDF: 392629.5/30

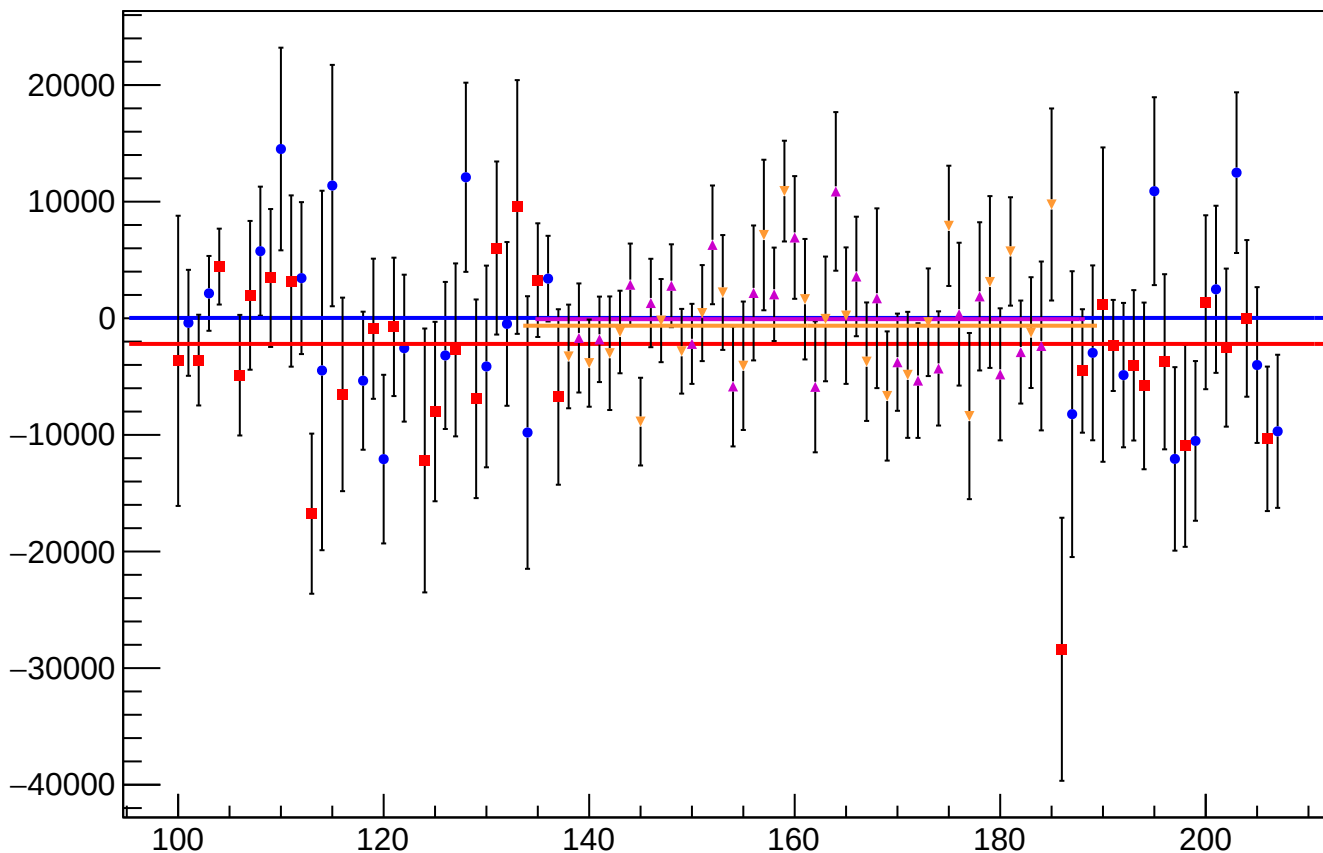
Left In: 1825.165 $\pm$ 0.301  $\chi^2$ /NDF: 13360.2/22

+ sign 1863.579 $\pm$ 0.226  $\chi^2$ /NDF: 771265.2/50

All: 1864.695 $\pm$ 0.160  $\chi^2$ /NDF: 1218680.6/100

- sign 1865.807 $\pm$ 0.226  $\chi^2$ /NDF: 447366.8/53

# asym\_atr\_dd\_cor\_correction\_mean vs Slug



Right In:  $29.246 \pm 1243.737$   $\chi^2/\text{NDF}$ : 27.6/25

Left Out:  $-637.720 \pm 946.866$   $\chi^2/\text{NDF}$ : 26.0/24

Right Out:  $-2198.983 \pm 1126.355$   $\chi^2/\text{NDF}$ : 26.1/30

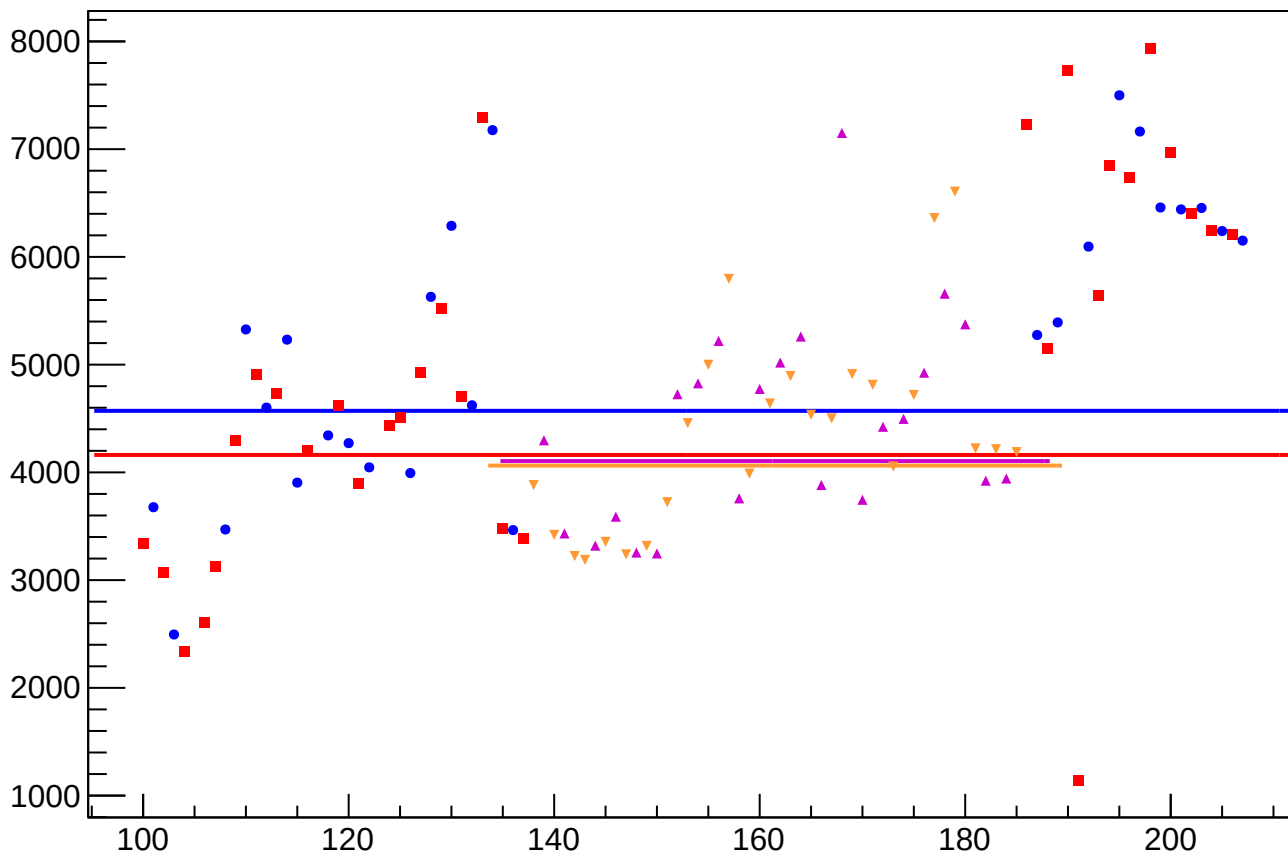
Left In:  $-75.789 \pm 980.241$   $\chi^2/\text{NDF}$ : 15.4/22

+ sign  $-392.994 \pm 753.384$   $\chi^2/\text{NDF}$ : 53.8/50

All:  $-697.496 \pm 527.722$   $\chi^2/\text{NDF}$ : 97.7/104

- sign  $-990.826 \pm 739.435$   $\chi^2/\text{NDF}$ : 43.6/53

# asym\_atr\_dd\_cor\_correction\_rms vs Slug



Right In: 4571.145+/-0.879  $\chi^2/\text{NDF}$ : 2763537.1/25

Left Out: 4063.106+/-0.670  $\chi^2/\text{NDF}$ : 1405030.5/24

Right Out: 4161.727+/-0.796  $\chi^2/\text{NDF}$ : 4866972.3/30

Left In: 4105.050+/-0.693  $\chi^2/\text{NDF}$ : 1359501.9/22

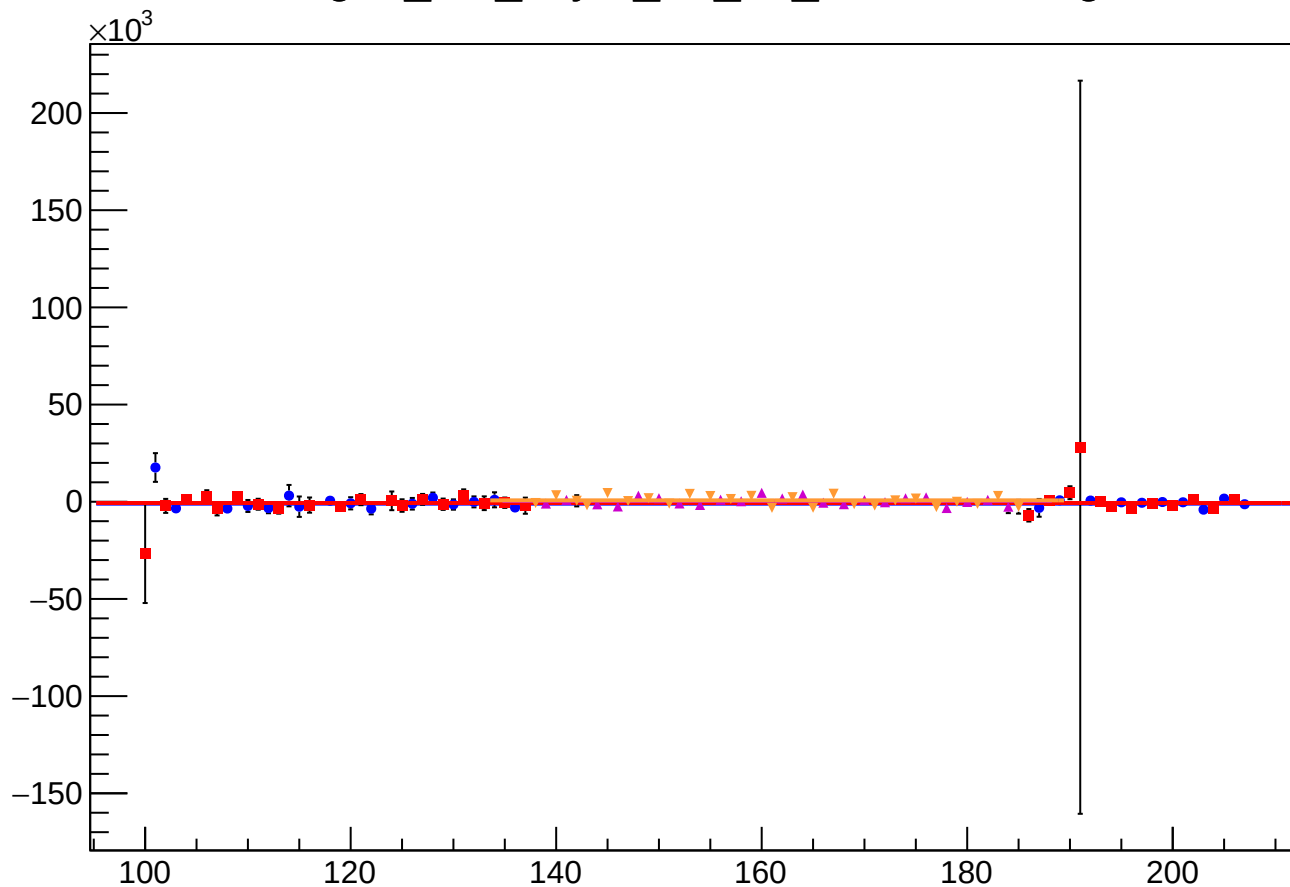
+ sign 4249.517+/-0.533  $\chi^2/\text{NDF}$ : 4379830.7/50

All: 4188.375+/-0.373  $\chi^2/\text{NDF}$ : 10635049.0/100

- sign 4129.476+/-0.523  $\chi^2/\text{NDF}$ : 6229355.7/53



# eigen\_cor\_asym\_atr\_dd\_mean vs Slug



Right In:  $-958.376 \pm 500.669$   $\chi^2/\text{NDF}$ : 19.5/25

Left Out:  $705.801 \pm 415.383$   $\chi^2/\text{NDF}$ : 31.9/24

Right Out:  $-643.821 \pm 481.667$   $\chi^2/\text{NDF}$ : 23.3/30

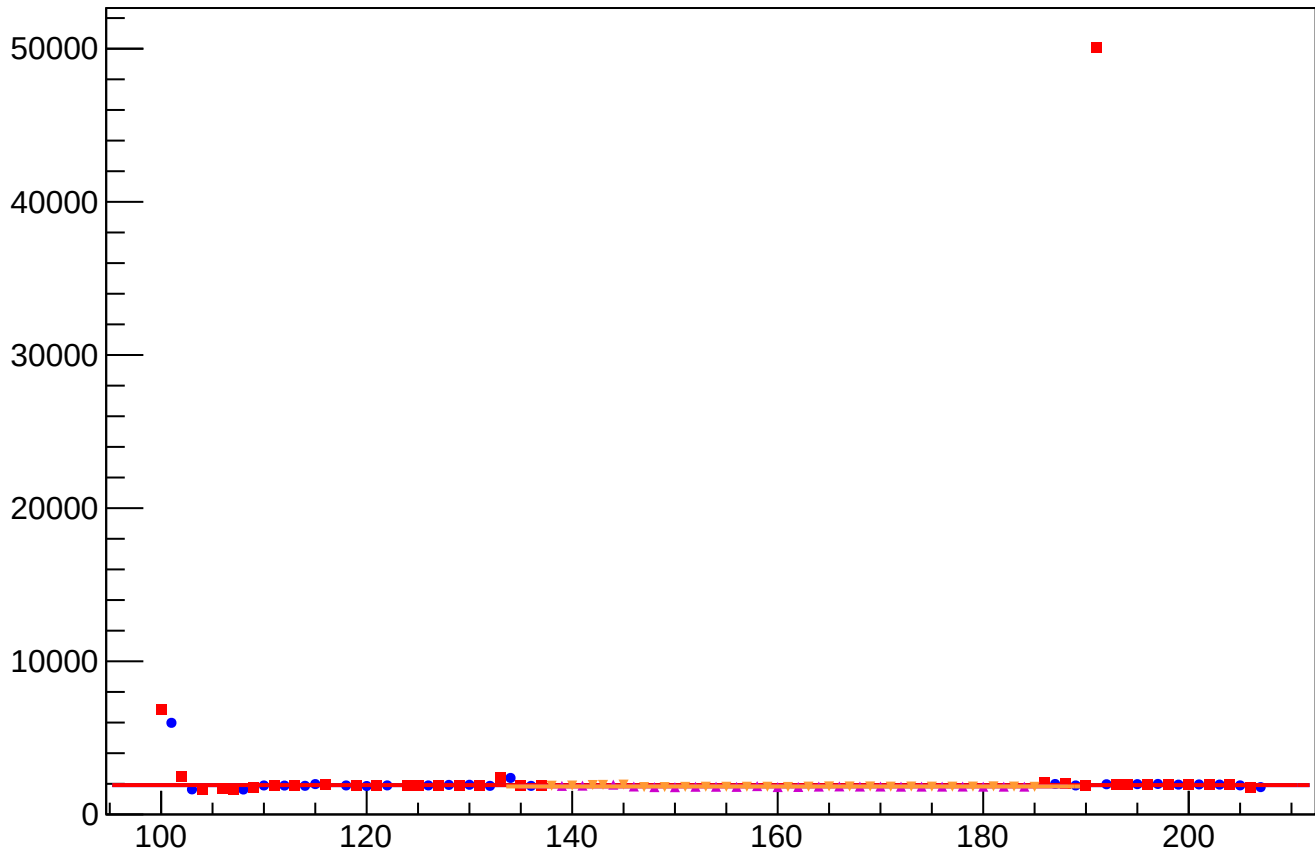
Left In:  $402.981 \pm 426.215$   $\chi^2/\text{NDF}$ : 20.8/22

+ sign  $27.317 \pm 319.684$   $\chi^2/\text{NDF}$ : 57.9/50

All:  $-14.766 \pm 225.877$   $\chi^2/\text{NDF}$ : 104.6/104

- sign  $-56.721 \pm 319.192$   $\chi^2/\text{NDF}$ : 46.7/53

# eigen\_cor\_asym\_atr\_dd\_rms vs Slug



Right In: 1914.915 $\pm$ 0.354  $\chi^2$ /NDF: 716435.9/25

Left Out: 1828.243 $\pm$ 0.294  $\chi^2$ /NDF: 19329.0/24

Right Out: 1917.637 $\pm$ 0.340  $\chi^2$ /NDF: 392629.5/30

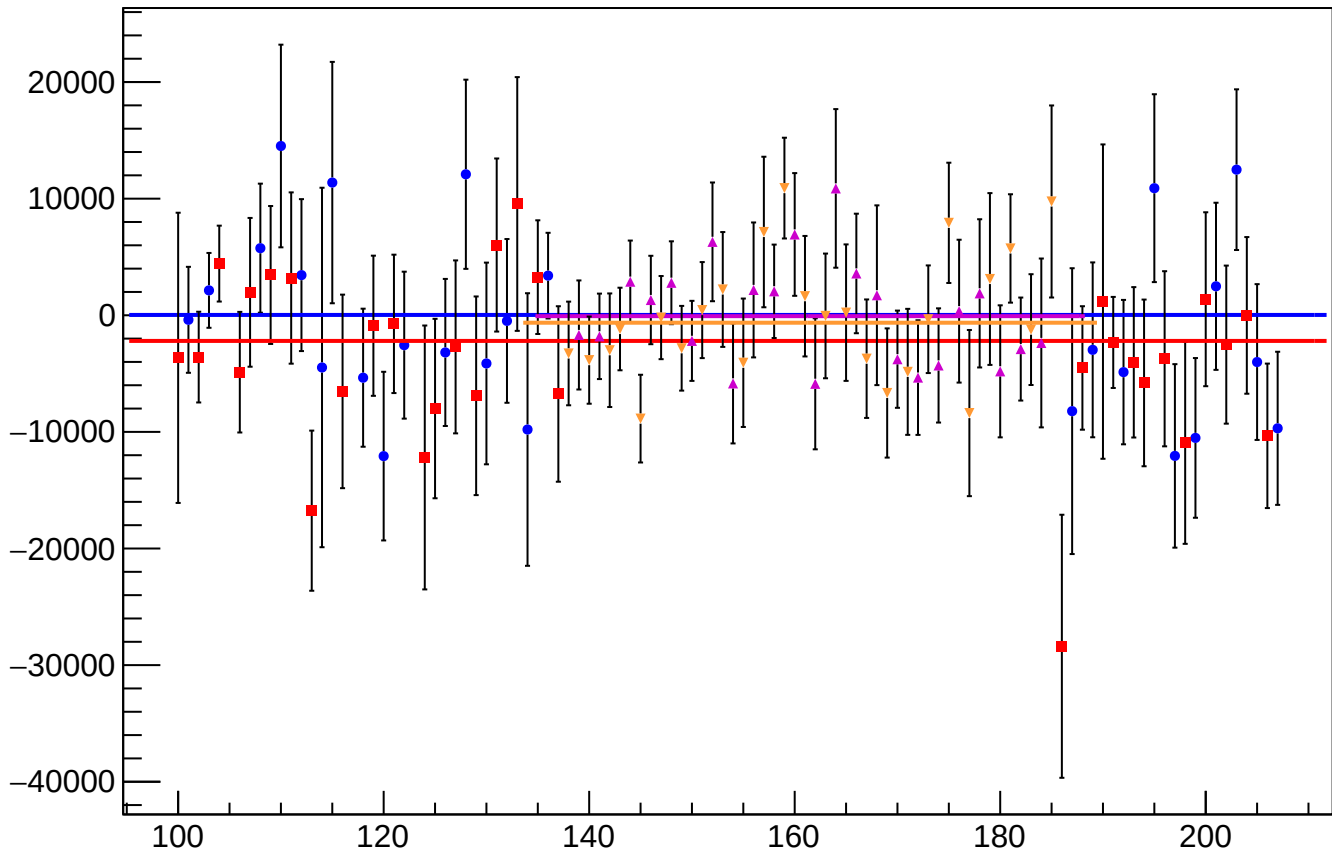
Left In: 1825.165 $\pm$ 0.301  $\chi^2$ /NDF: 13360.2/22

+ sign 1863.579 $\pm$ 0.226  $\chi^2$ /NDF: 771265.2/50

All: 1864.695 $\pm$ 0.160  $\chi^2$ /NDF: 1218680.6/10

- sign 1865.807 $\pm$ 0.226  $\chi^2$ /NDF: 447366.8/53

asym\_atr\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In:  $29.246 \pm 1243.737$   $\chi^2/\text{NDF}: 27.6/25$

Left Out:  $-637.720 \pm 946.866$   $\chi^2/\text{NDF}: 26.0/24$

Right Out:  $-2198.983 \pm 1126.355$   $\chi^2/\text{NDF}: 26.1/30$

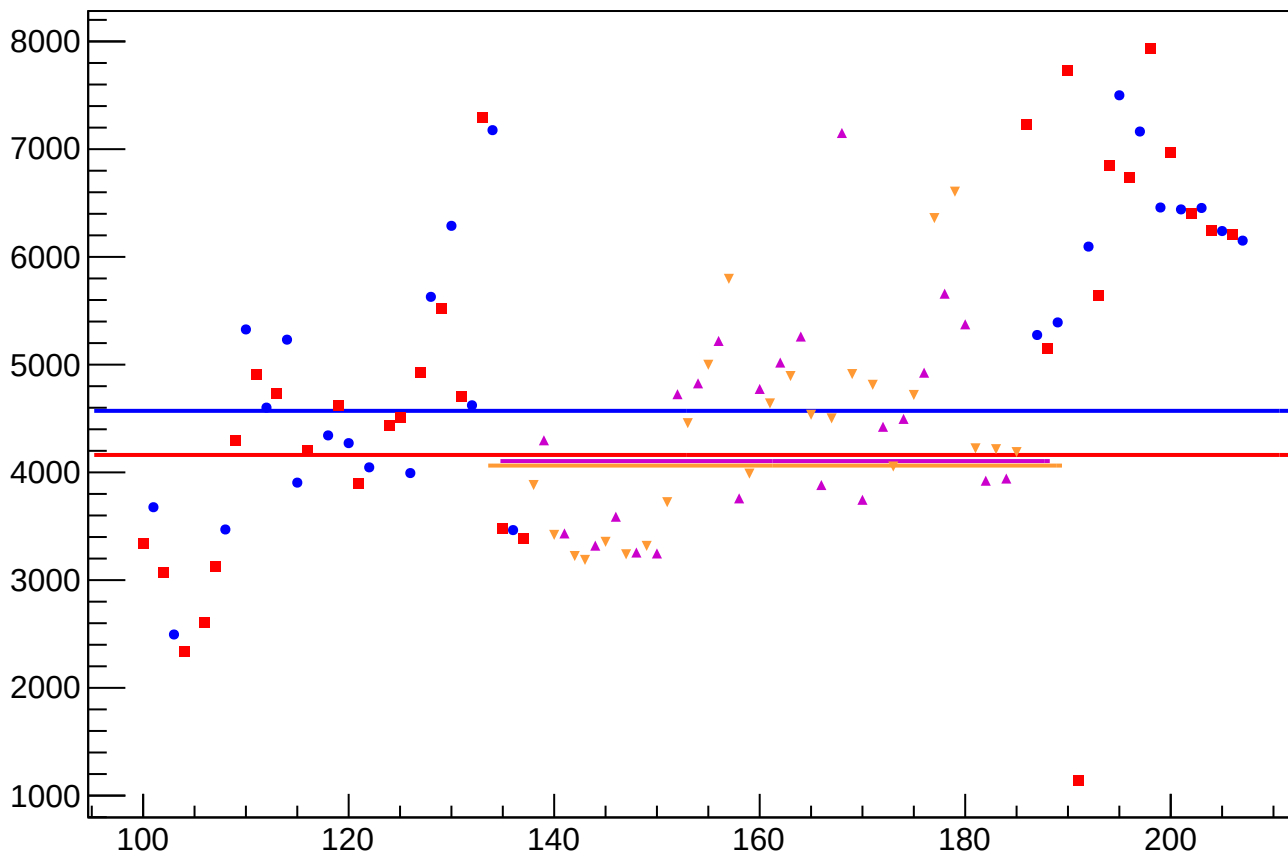
Left In:  $-75.789 \pm 980.241$   $\chi^2/\text{NDF}: 15.4/22$

+ sign  $-392.994 \pm 753.384$   $\chi^2/\text{NDF}: 53.8/50$

All:  $-697.496 \pm 527.722$   $\chi^2/\text{NDF}: 97.7/104$

- sign  $-990.826 \pm 739.435$   $\chi^2/\text{NDF}: 43.6/53$

asym\_atr\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 4571.145 $\pm$ 0.879  $\chi^2$ /NDF: 2763537.1/25

Left Out: 4063.106 $\pm$ 0.670  $\chi^2$ /NDF:1405030.5/24

Right Out: 4161.727 $\pm$ 0.796  $\chi^2$ /NDF: 4866972.3/30

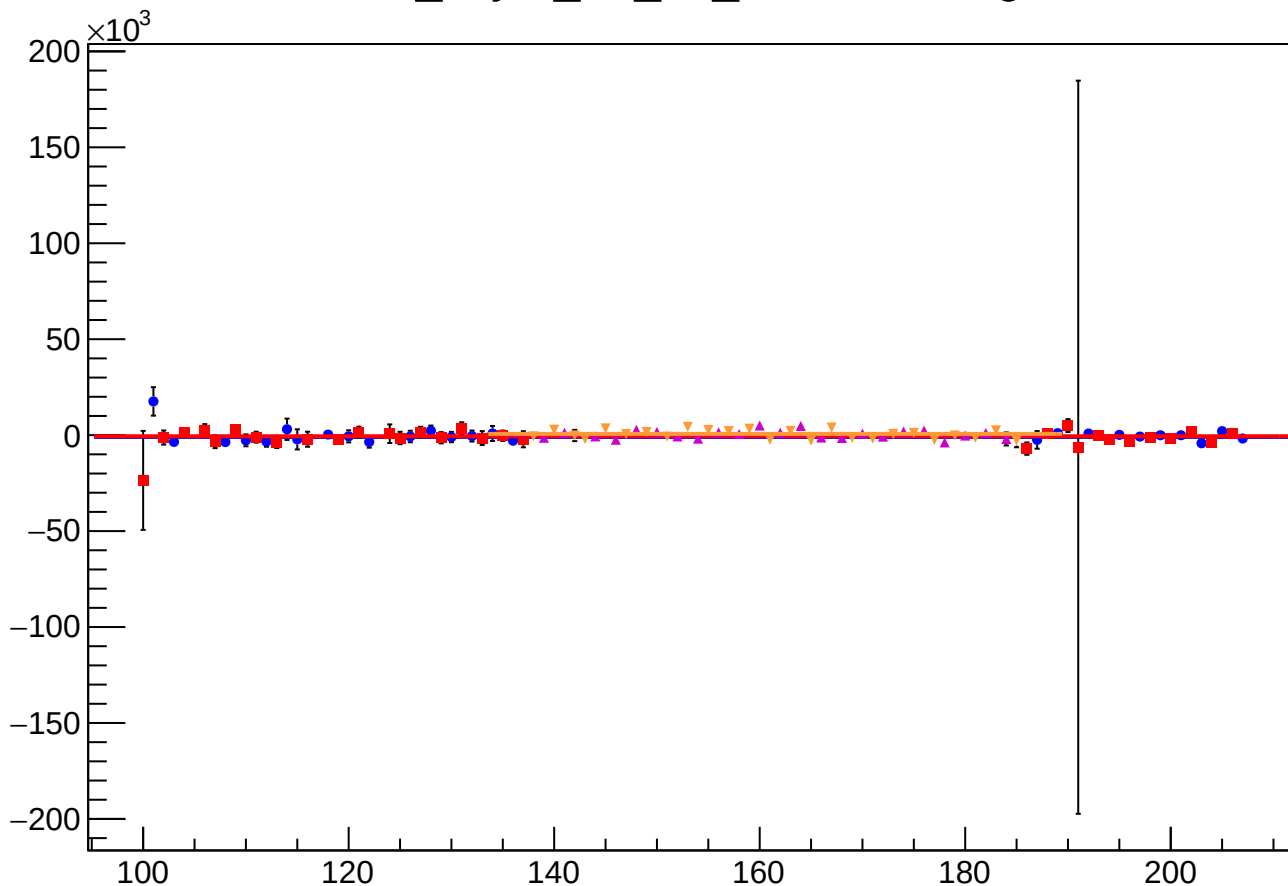
Left In: 4105.050 $\pm$ 0.693  $\chi^2$ /NDF:1359501.9/22

+ sign 4249.517 $\pm$ 0.533  $\chi^2$ /NDF: 4379830.7/50

All: 4188.375 $\pm$ 0.373  $\chi^2$ /NDF: 10635049.0/100

- sign 4129.476 $\pm$ 0.523  $\chi^2$ /NDF: 6229355.7/53

dit\_asym\_atr\_dd\_mean vs Slug



Right In:  $-920.309 \pm 505.021$   $\chi^2/\text{NDF}$ : 21.0/25

Left Out:  $657.616 \pm 423.063$   $\chi^2/\text{NDF}$ : 27.0/24

Right Out:  $-594.058 \pm 486.348$   $\chi^2/\text{NDF}$ : 25.0/30

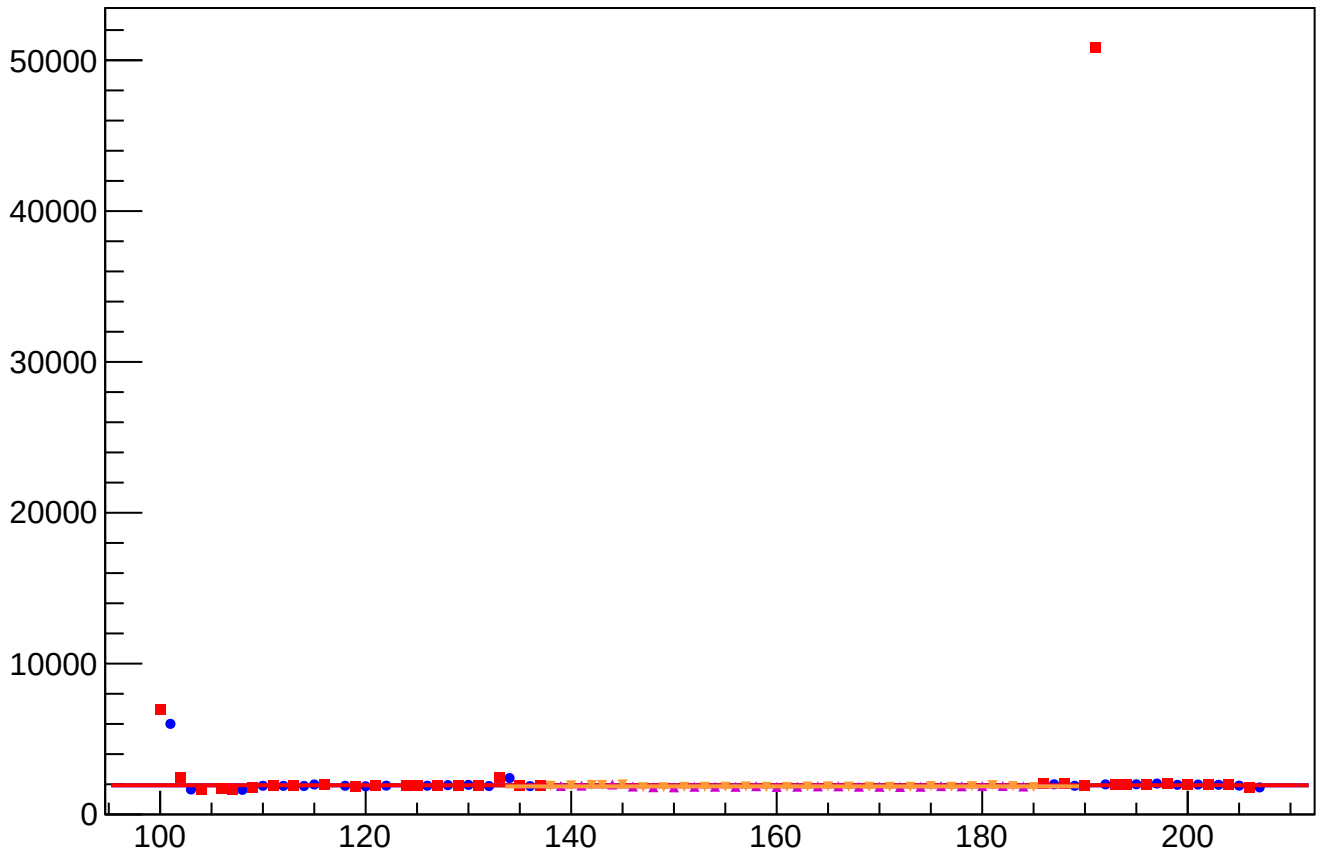
Left In:  $410.869 \pm 433.856$   $\chi^2/\text{NDF}$ : 23.6/22

+ sign  $6.920 \pm 324.306$   $\chi^2/\text{NDF}$ : 53.7/50

All:  $-13.803 \pm 229.124$   $\chi^2/\text{NDF}$ : 104.8/104

- sign  $-34.455 \pm 323.756$   $\chi^2/\text{NDF}$ : 51.0/53

# dit\_asym\_atr\_dd\_rms vs Slug



Right In: 1931.351+/-0.357  $\chi^2/\text{NDF}$ : 720442.0/25

Left Out: 1861.731+/-0.299  $\chi^2/\text{NDF}$ : 26014.9/24

Right Out: 1935.632+/-0.344  $\chi^2/\text{NDF}$ : 402730.9/30

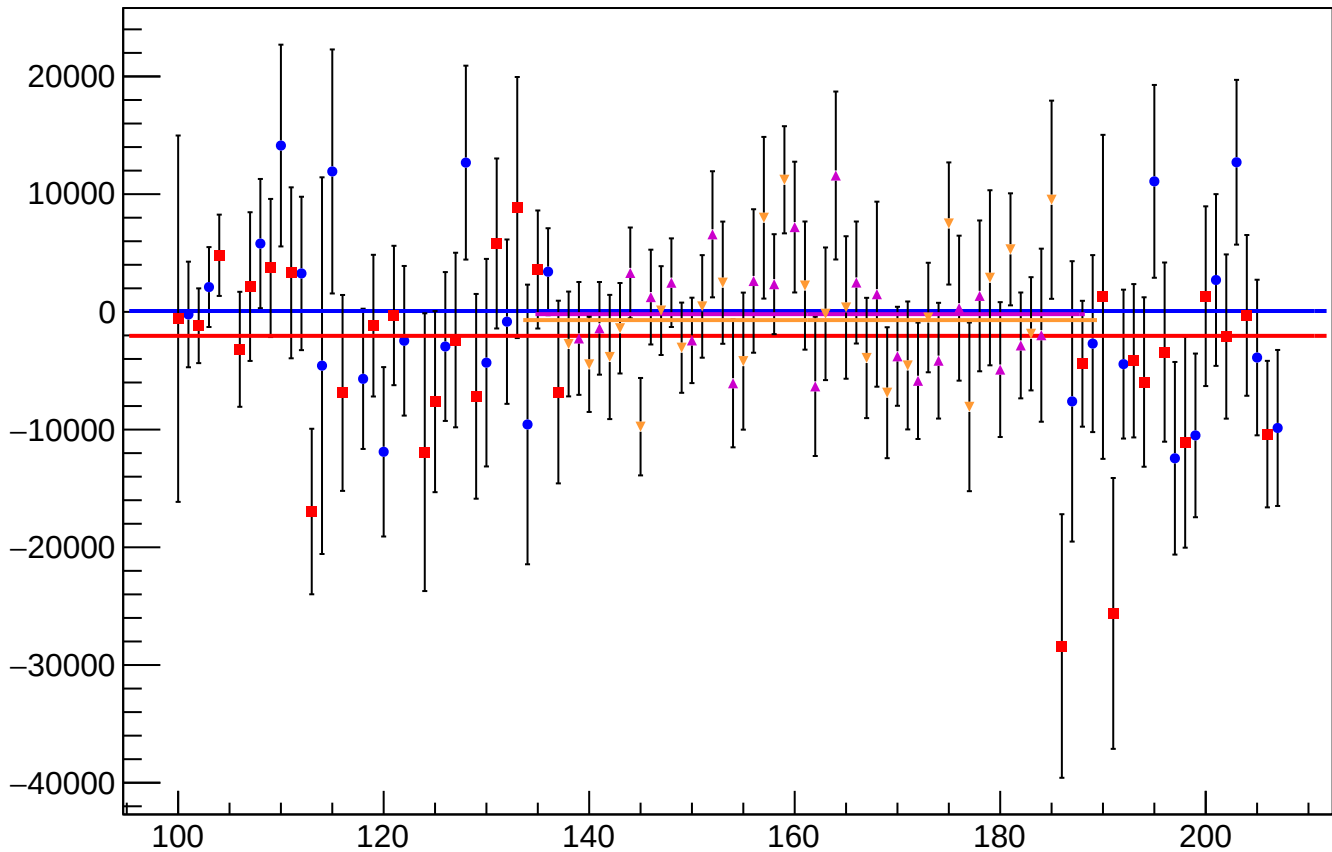
Left In: 1857.661+/-0.307  $\chi^2/\text{NDF}$ : 16381.0/22

+ sign 1890.440+/-0.229  $\chi^2/\text{NDF}$ : 768791.7/50

All: 1891.338+/-0.162  $\chi^2/\text{NDF}$ : 1216575.2/100

- sign 1892.232+/-0.229  $\chi^2/\text{NDF}$ : 447752.9/53

# asym\_atr\_dd\_dit\_correction\_mean vs Slug



Right In:  $73.863 \pm 1258.903$   $\chi^2/\text{NDF}$ : 27.5/25

Left Out:  $-698.287 \pm 990.035$   $\chi^2/\text{NDF}$ : 25.3/24

Right Out:  $-2036.970 \pm 1158.190$   $\chi^2/\text{NDF}$ : 29.8/30

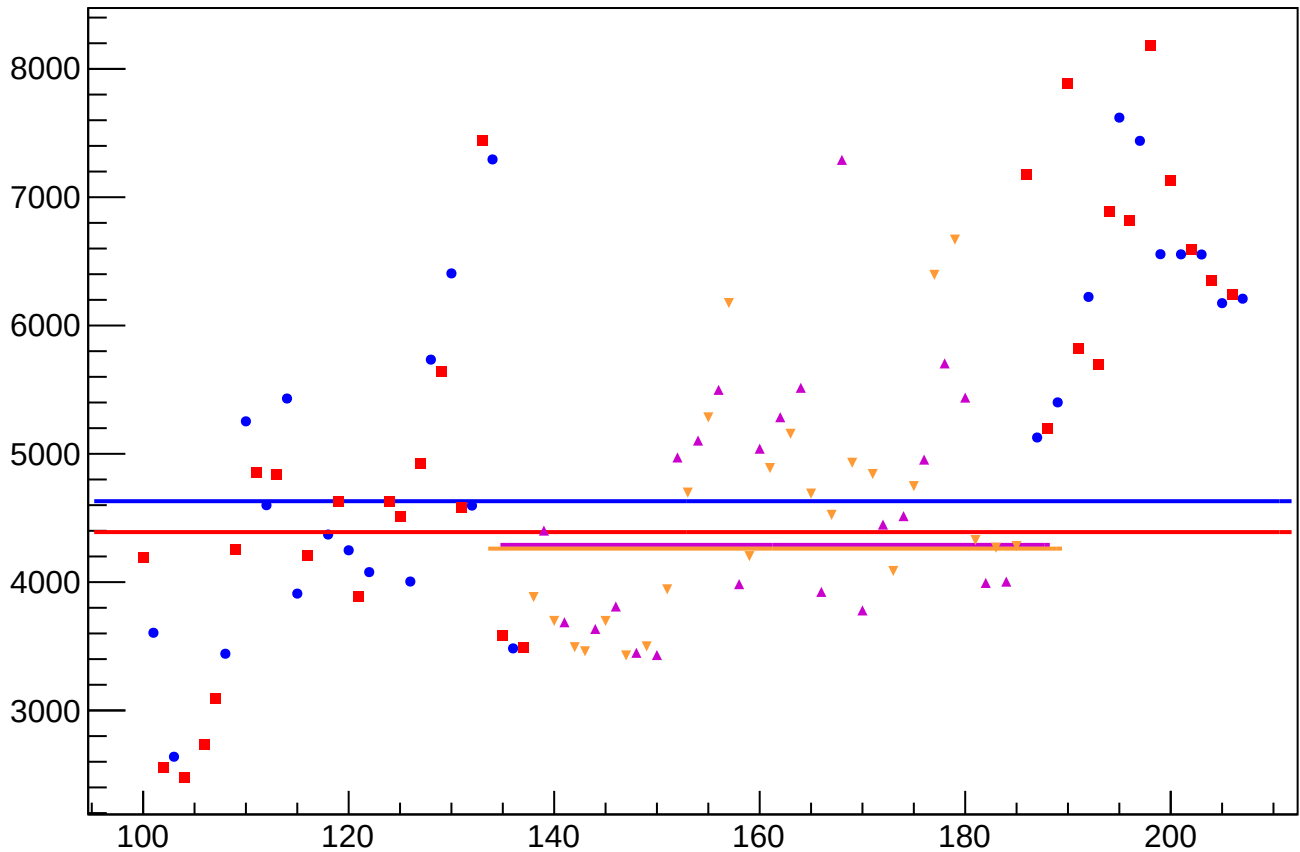
Left In:  $-192.486 \pm 1022.469$   $\chi^2/\text{NDF}$ : 15.2/22

+ sign  $-403.224 \pm 778.213$   $\chi^2/\text{NDF}$ : 53.0/50

All:  $-706.322 \pm 546.095$   $\chi^2/\text{NDF}$ : 99.7/104

- sign  $-1000.373 \pm 766.510$   $\chi^2/\text{NDF}$ : 46.4/53

# asym\_atr\_dd\_dit\_correction\_rms vs Slug



Right In: 4630.827 $\pm$ 0.890  $\chi^2$ /NDF: 2686125.7/25

Left Out: 4261.124 $\pm$ 0.700  $\chi^2$ /NDF:1190561.4/24

+ sign 4402.399 $\pm$ 0.550  $\chi^2$ /NDF: 3983260.4/50

Right Out: 4389.988 $\pm$ 0.819  $\chi^2$ /NDF: 3928900.7/30

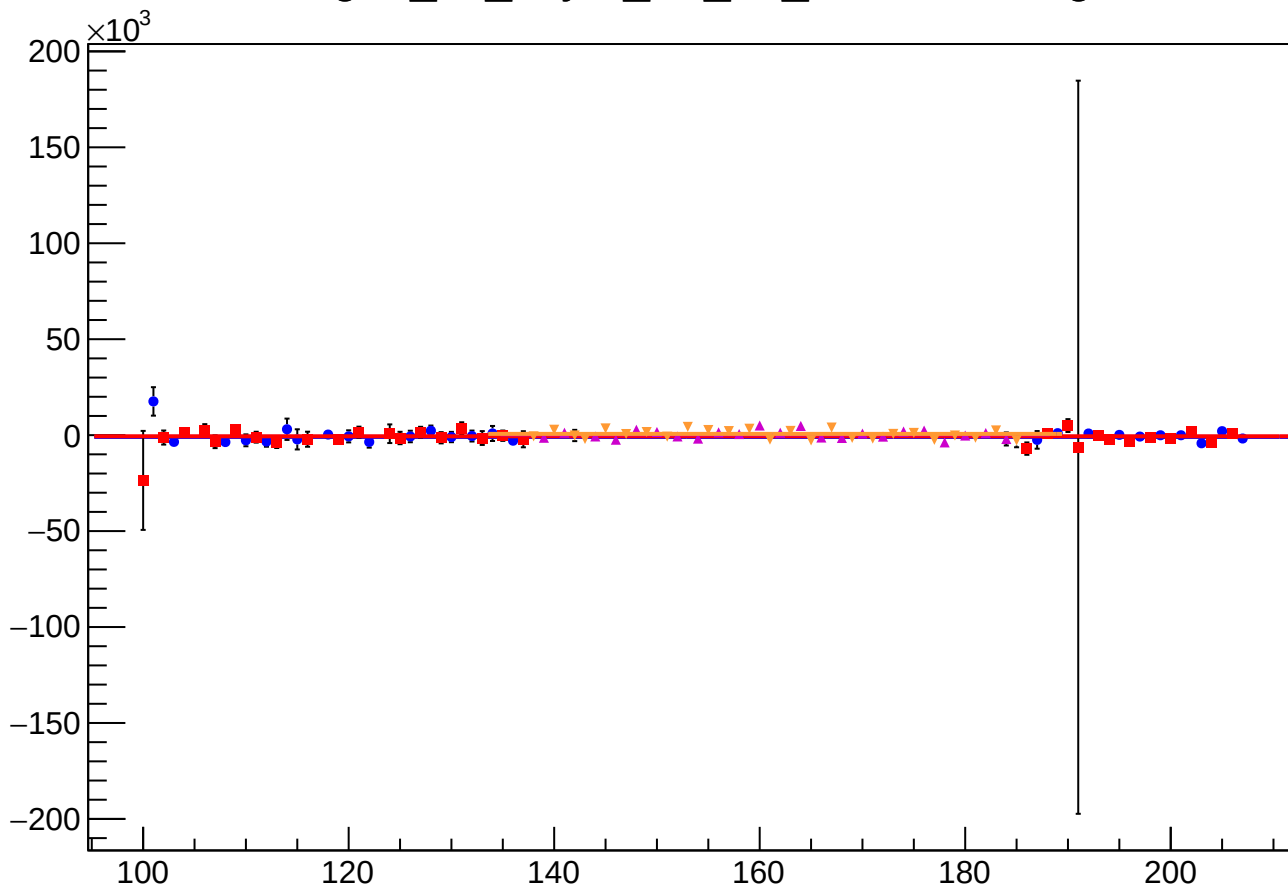
All: 4367.691 $\pm$ 0.386  $\chi^2$ /NDF: 9142274.4/10

Left In: 4290.398 $\pm$ 0.723  $\chi^2$ /NDF:1213964.7/22

- sign 4334.018 $\pm$ 0.542  $\chi^2$ /NDF: 5151176.0/53



eigen\_dit\_asym\_atr\_dd\_mean vs Slug



Right In:  $-920.309 \pm 505.021$   $\chi^2/\text{NDF}$ : 21.0/25

Left Out:  $657.622 \pm 423.063$   $\chi^2/\text{NDF}$ : 27.0/24

Right Out:  $-594.056 \pm 486.348$   $\chi^2/\text{NDF}$ : 25.0/30

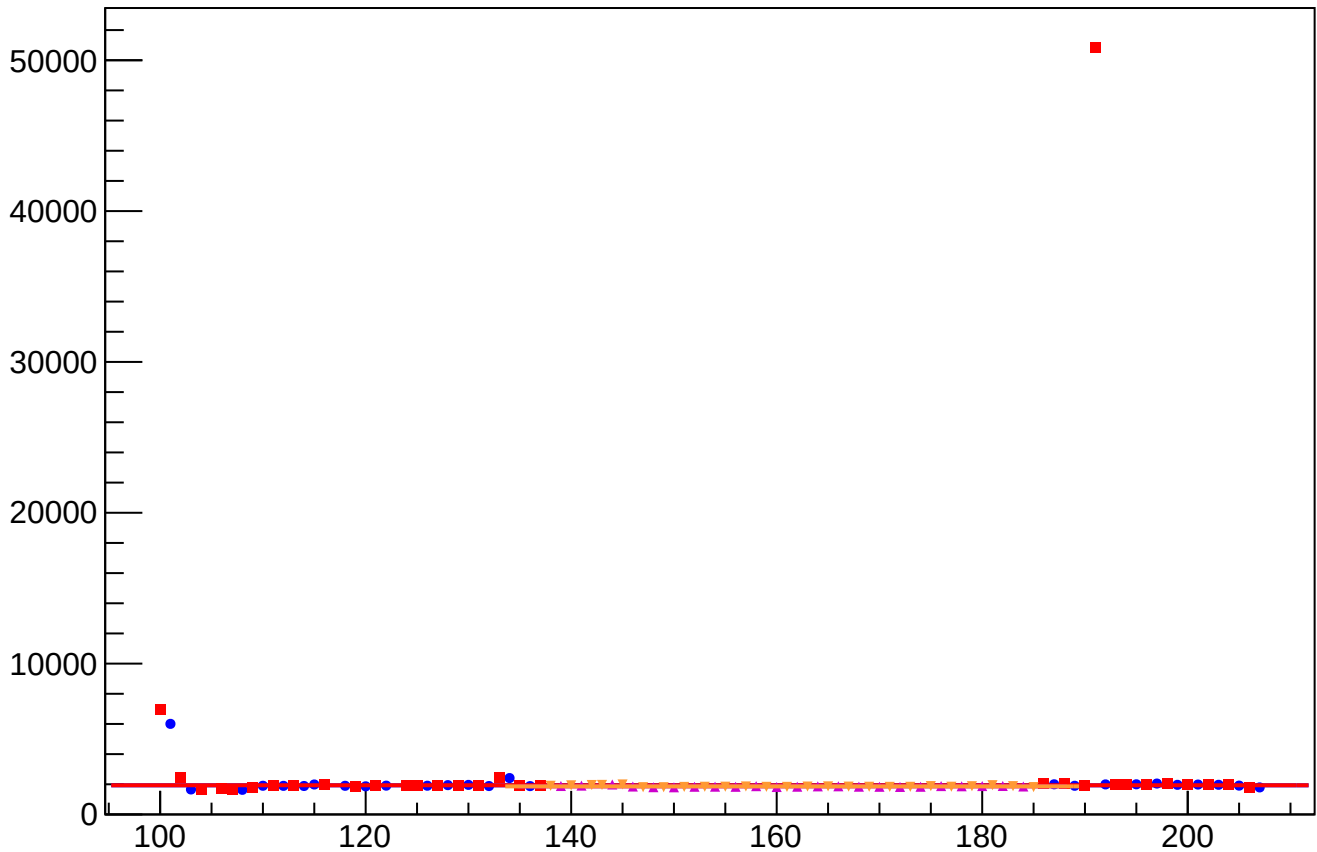
Left In:  $410.869 \pm 433.856$   $\chi^2/\text{NDF}$ : 23.6/22

+ sign  $6.923 \pm 324.306$   $\chi^2/\text{NDF}$ : 53.7/50

All:  $-13.801 \pm 229.124$   $\chi^2/\text{NDF}$ : 104.8/104

- sign  $-34.455 \pm 323.756$   $\chi^2/\text{NDF}$ : 51.0/53

# eigen\_dit\_asym\_atr\_dd\_rms vs Slug



Right In: 1931.351+/-0.357  $\chi^2/\text{NDF}$ : 720441.9/25

Left Out: 1861.731+/-0.299  $\chi^2/\text{NDF}$ : 26014.9/24

Right Out: 1935.632+/-0.344  $\chi^2/\text{NDF}$ : 402731.1/30

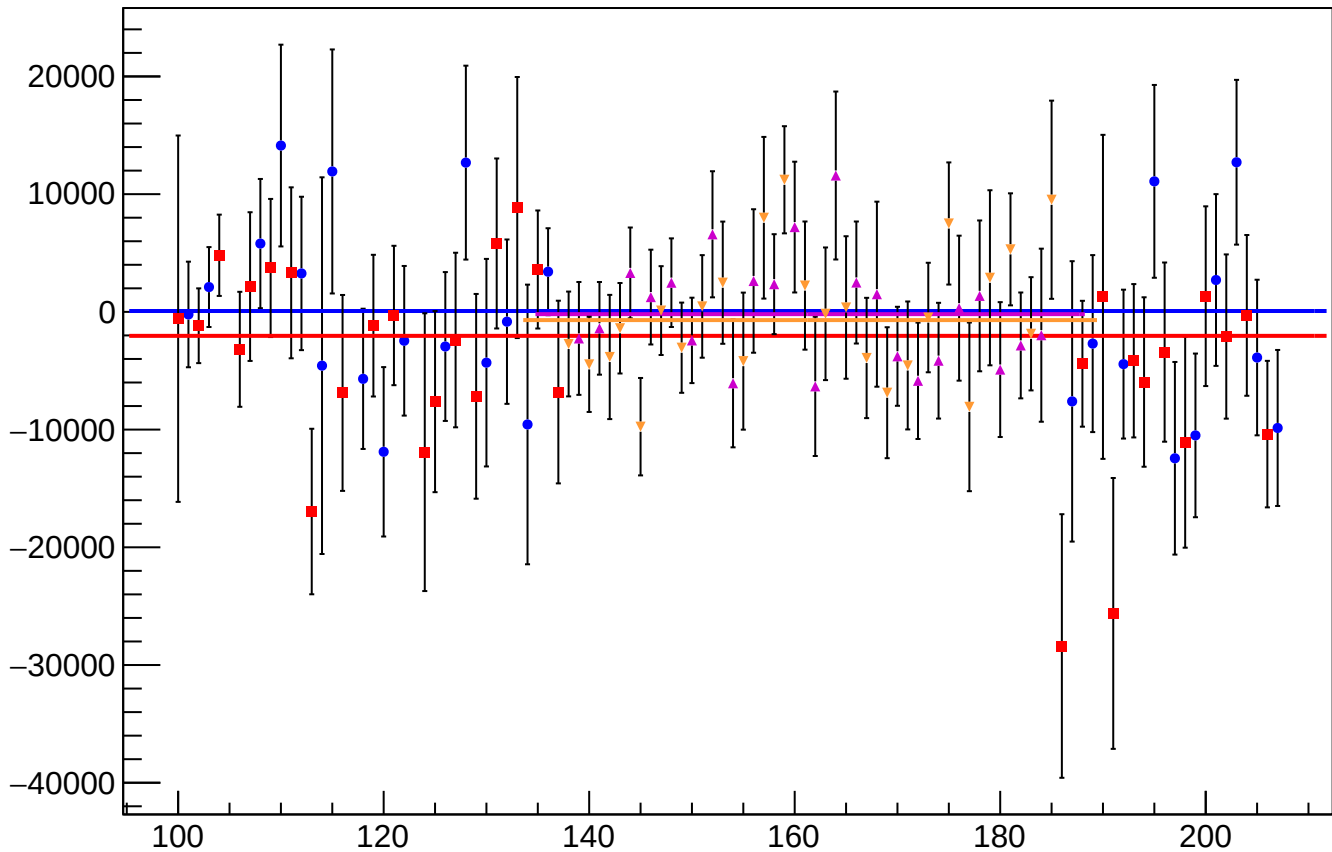
Left In: 1857.661+/-0.307  $\chi^2/\text{NDF}$ : 16380.9/22

+ sign 1890.441+/-0.229  $\chi^2/\text{NDF}$ : 768791.1/50

All: 1891.338+/-0.162  $\chi^2/\text{NDF}$ : 1216574.4/100

- sign 1892.233+/-0.229  $\chi^2/\text{NDF}$ : 447752.6/53

asym\_atr\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $73.855 \pm 1258.903$   $\chi^2/\text{NDF}: 27.5/25$

Left Out:  $-698.285 \pm 990.036$   $\chi^2/\text{NDF}: 25.3/24$

Right Out:  $-2036.968 \pm 1158.190$   $\chi^2/\text{NDF}: 29.8/30$

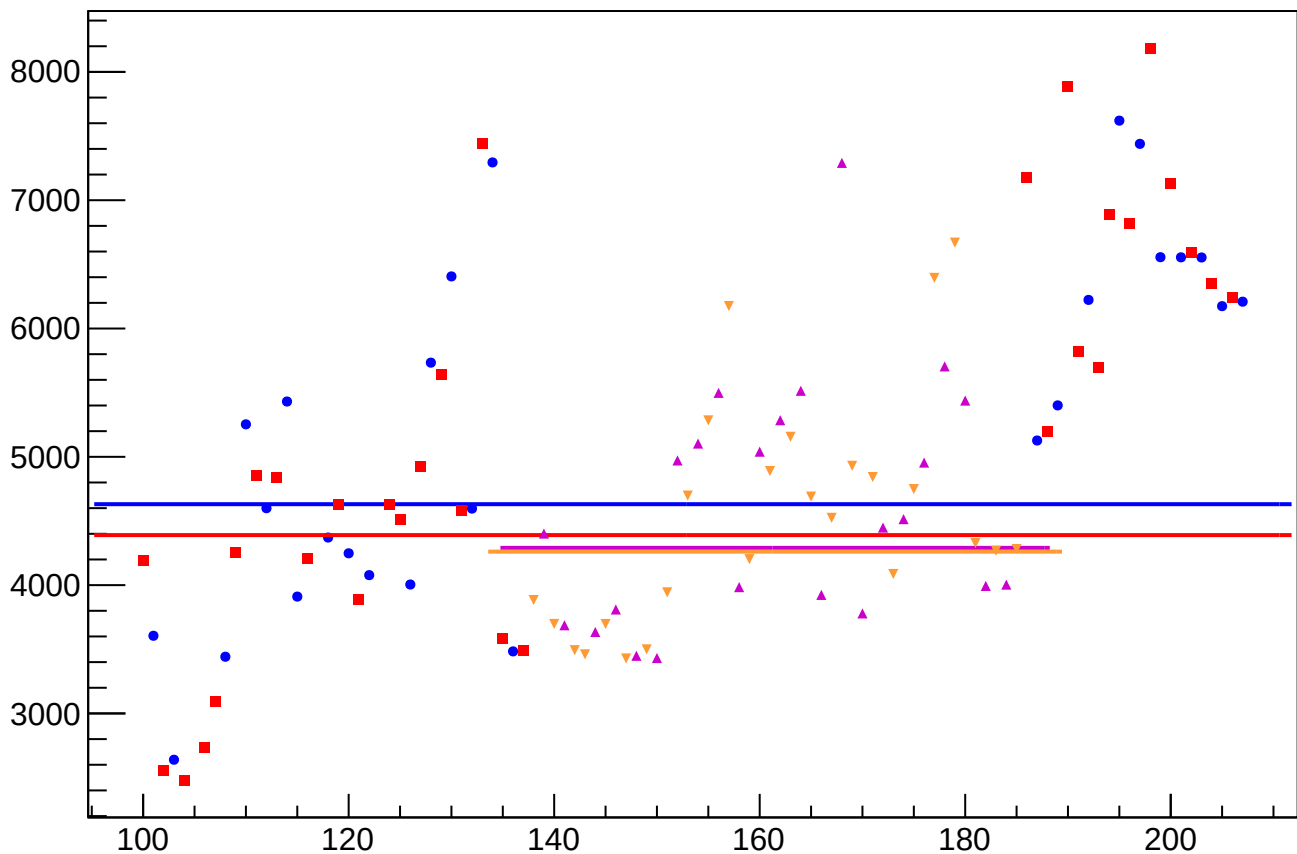
Left In:  $-192.488 \pm 1022.471$   $\chi^2/\text{NDF}: 15.2/22$

+ sign  $-403.226 \pm 778.214$   $\chi^2/\text{NDF}: 53.0/50$

All:  $-706.324 \pm 546.096$   $\chi^2/\text{NDF}: 99.7/104$

- sign  $-1000.375 \pm 766.511$   $\chi^2/\text{NDF}: 46.4/53$

# asym\_atr\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 4630.826 $\pm$ 0.890  $\chi^2/\text{NDF}$ : 2686130.0/25

Left Out: 4261.131 $\pm$ 0.700  $\chi^2/\text{NDF}$ : 1190564.2/24

Right Out: 4389.985 $\pm$ 0.819  $\chi^2/\text{NDF}$ : 3928904.9/30

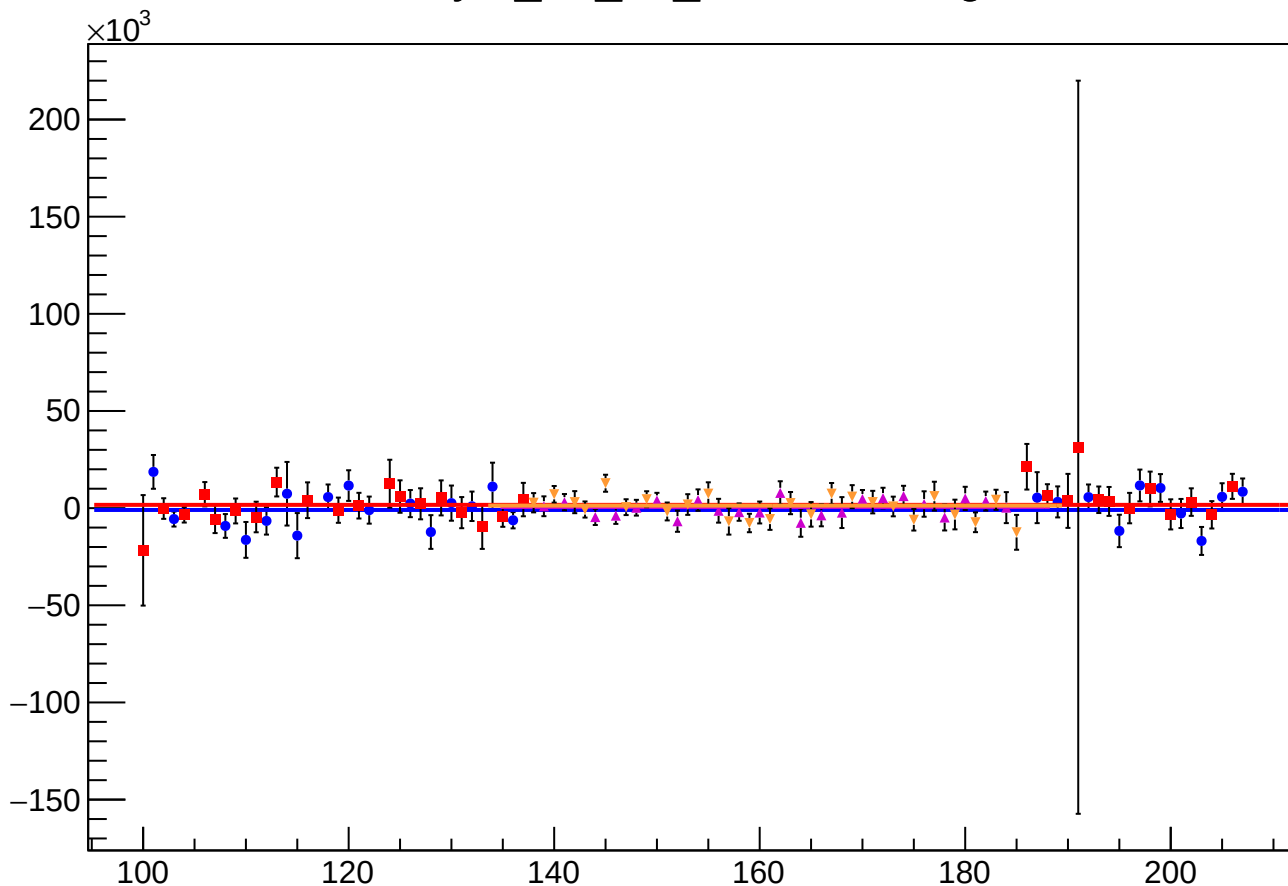
Left In: 4290.404 $\pm$ 0.723  $\chi^2/\text{NDF}$ : 1213970.5/22

+ sign 4402.403 $\pm$ 0.550  $\chi^2/\text{NDF}$ : 3983262.5/50

All: 4367.694 $\pm$ 0.386  $\chi^2/\text{NDF}$ : 9142285.2/10

- sign 4334.021 $\pm$ 0.542  $\chi^2/\text{NDF}$ : 5151184.6/53

# asym\_atr\_dd\_mean vs Slug



Right In: -937.524+/-1398.758  $\chi^2/\text{NDF}$ : 37.5/25

Left Out: 1298.373+/-1049.555  $\chi^2/\text{NDF}$ : 28.5/24

Right Out: 1685.997+/-1322.386  $\chi^2/\text{NDF}$ : 19.3/30

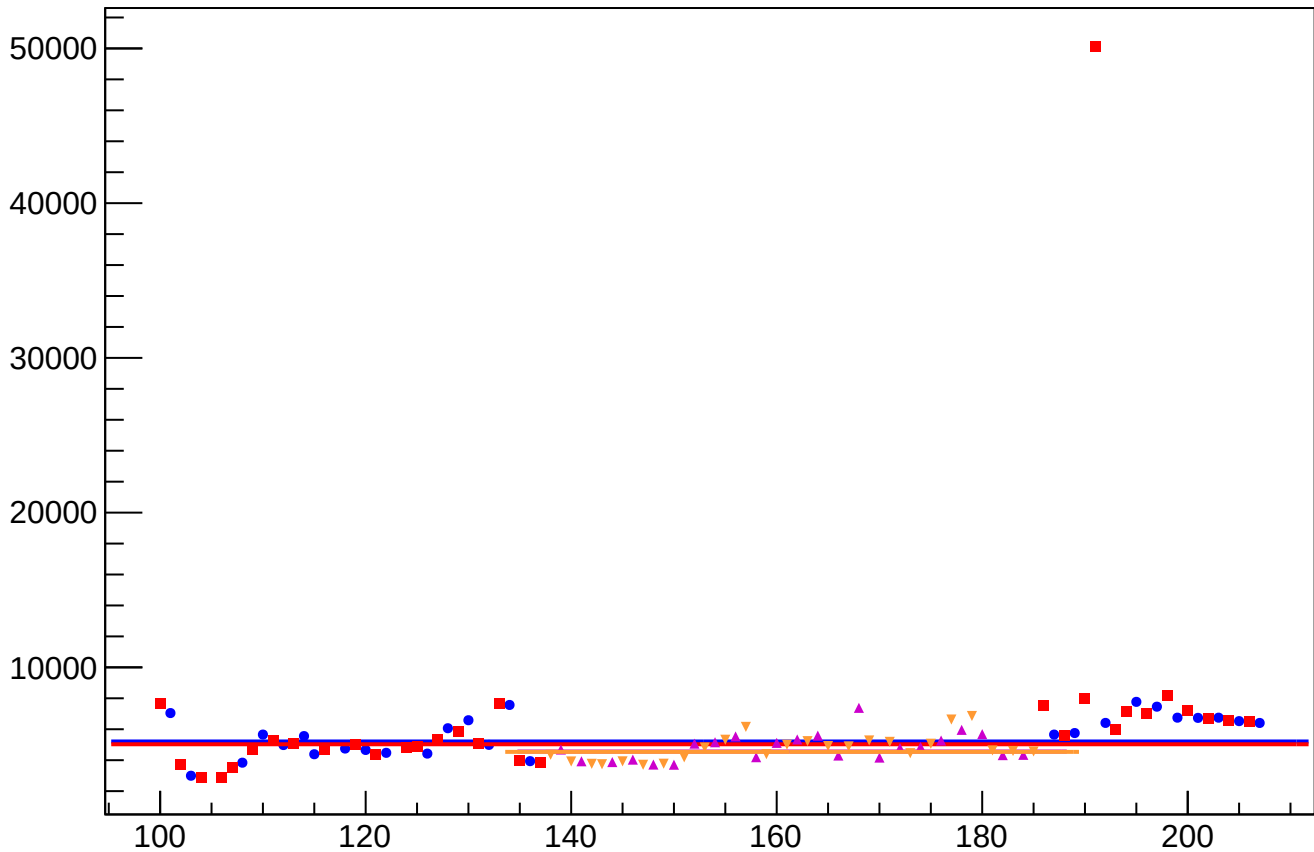
Left In: 576.442+/-1082.127  $\chi^2/\text{NDF}$ : 14.4/22

+ sign 492.972+/-839.504  $\chi^2/\text{NDF}$ : 67.6/50

All: 757.853+/-592.897  $\chi^2/\text{NDF}$ : 101.9/104

- sign 1021.449+/-837.466  $\chi^2/\text{NDF}$ : 34.1/53

# asym\_atr\_dd\_rms vs Slug



Right In: 5209.397 $\pm$ 0.989  $\chi^2$ /NDF: 2077753.4/25

Left Out: 4537.934 $\pm$ 0.742  $\chi^2$ /NDF:992905.4/24

Right Out: 5029.219 $\pm$ 0.930  $\chi^2$ /NDF: 2739015.8/30

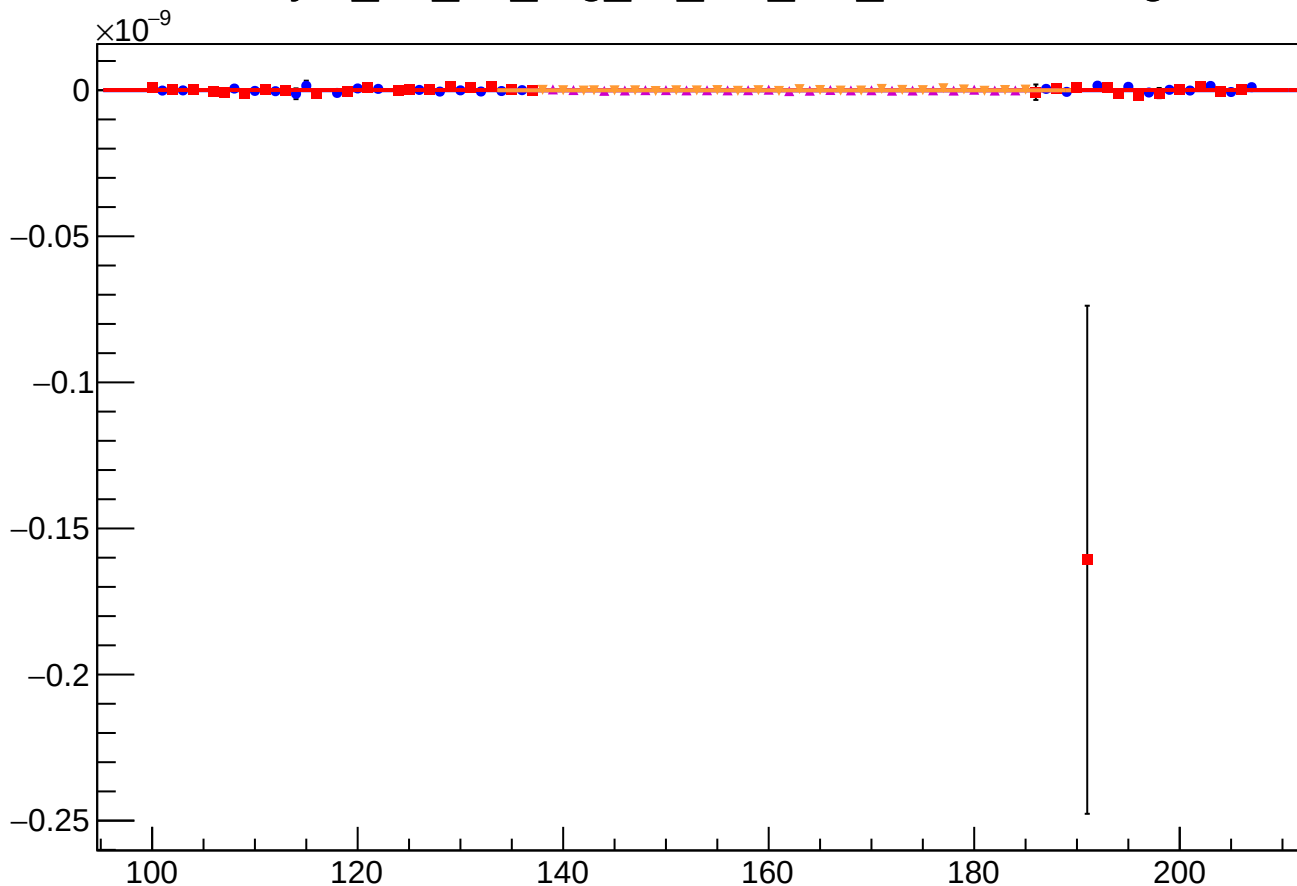
Left In: 4560.506 $\pm$ 0.765  $\chi^2$ /NDF:980201.3/22

+ sign 4779.804 $\pm$ 0.594  $\chi^2$ /NDF: 3365524.5/50

All: 4764.694 $\pm$ 0.419  $\chi^2$ /NDF: 7237505.4/100

- sign 4749.722 $\pm$ 0.591  $\chi^2$ /NDF: 3870690.9/53

# asym\_atr\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 24.0/25

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 37.9/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 36.2/30

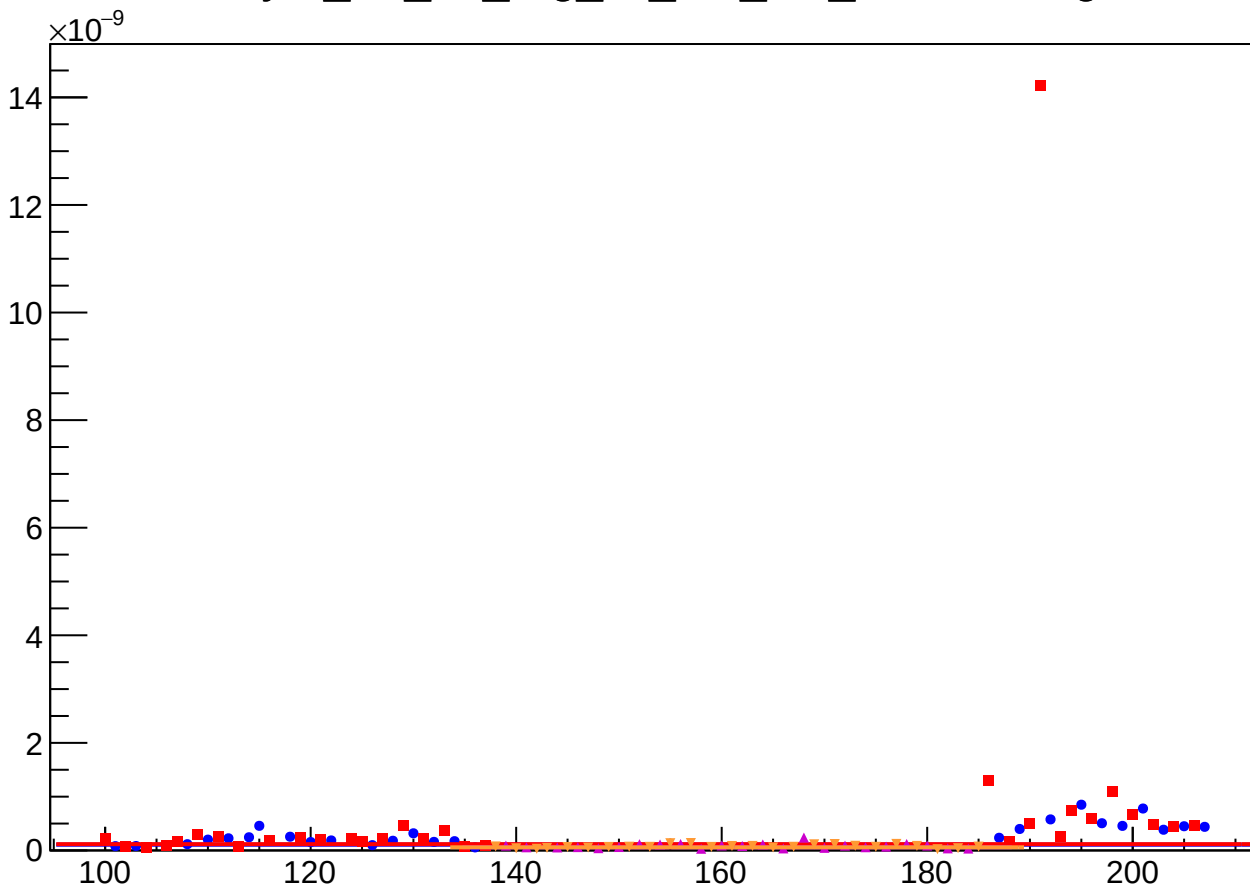
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 20.6/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 62.1/50

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 120.8/104

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 58.2/53

# asym\_atr\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 5246225.7/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:1934390.7/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 6112471.9/30

Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:2104577.2/22

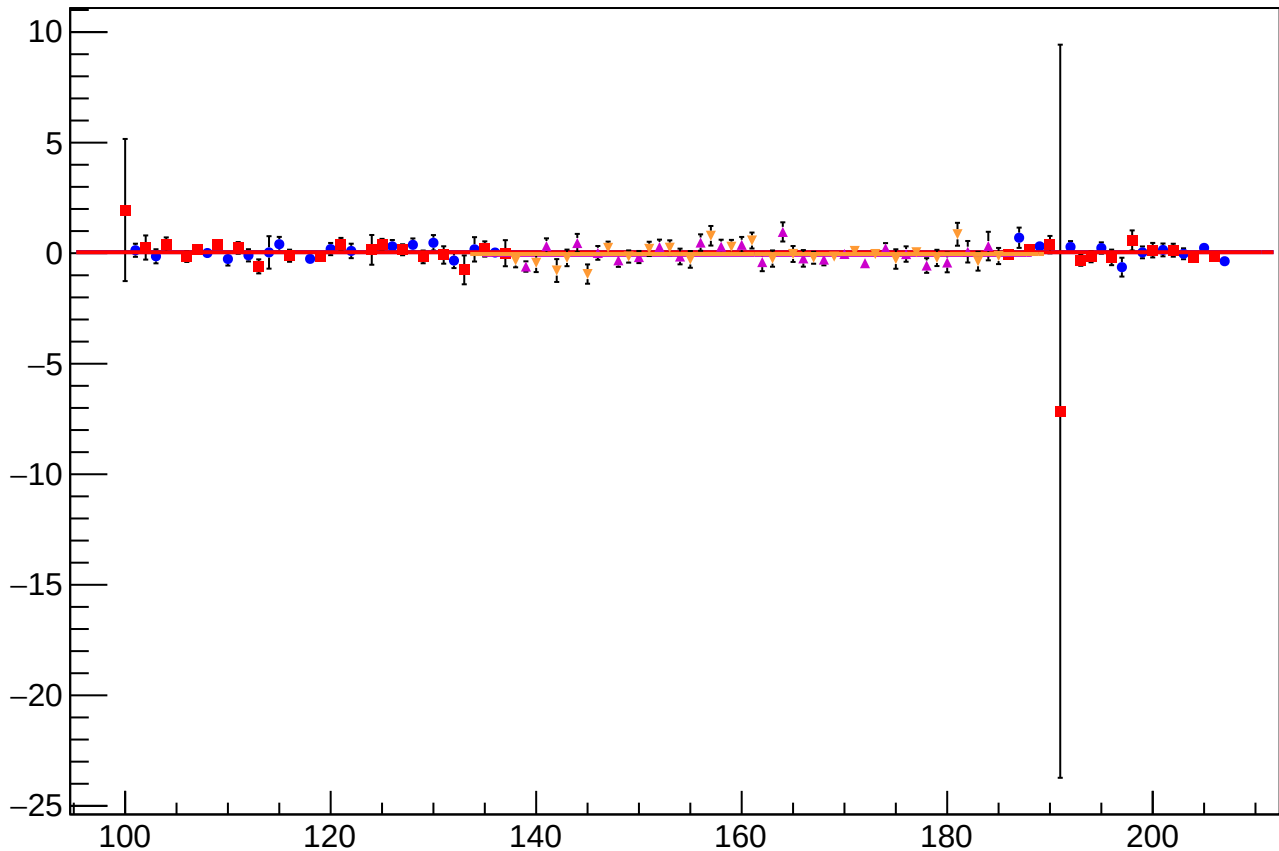
+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 8300870.0/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 17906593.4/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 9600563.4/53



# asym\_atr\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.048 $\pm$ 0.052  $\chi^2$ /NDF: 25.5/25

Left Out: -0.038 $\pm$ 0.062  $\chi^2$ /NDF: 24.4/24

Right Out: 0.043 $\pm$ 0.048  $\chi^2$ /NDF: 27.9/30

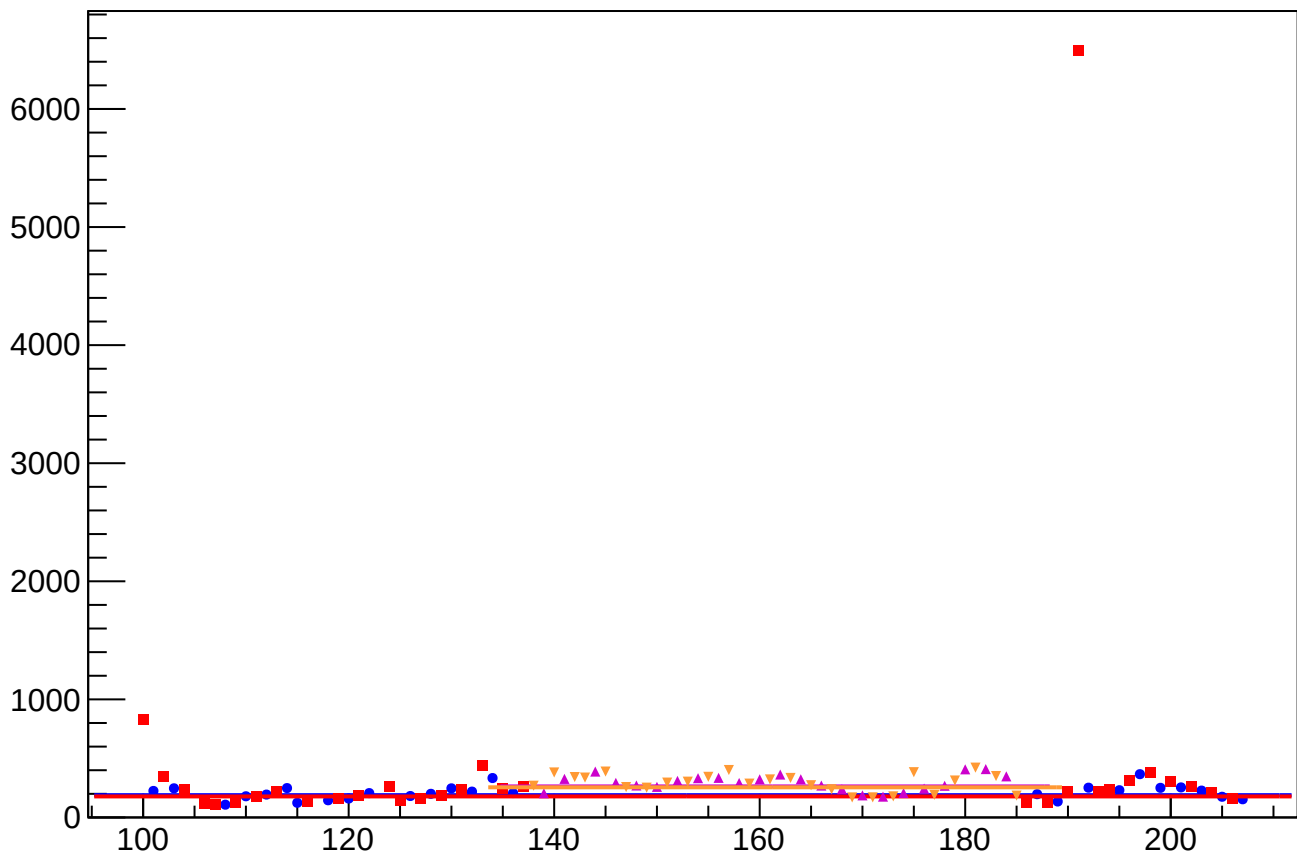
Left In: -0.078 $\pm$ 0.065  $\chi^2$ /NDF: 31.1/22

+ sign 0.013 $\pm$ 0.040  $\chi^2$ /NDF: 51.1/50

All: 0.006 $\pm$ 0.028  $\chi^2$ /NDF: 112.4/104

- sign -0.001 $\pm$ 0.039  $\chi^2$ /NDF: 61.2/53

# asym\_atr\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 188.877 $\pm$ 0.037  $\chi^2$ /NDF: 1976583.5/25

Left Out: 255.355 $\pm$ 0.044  $\chi^2$ /NDF: 2935324.6/24

Right Out: 178.059 $\pm$ 0.034  $\chi^2$ /NDF: 3552023.6/30

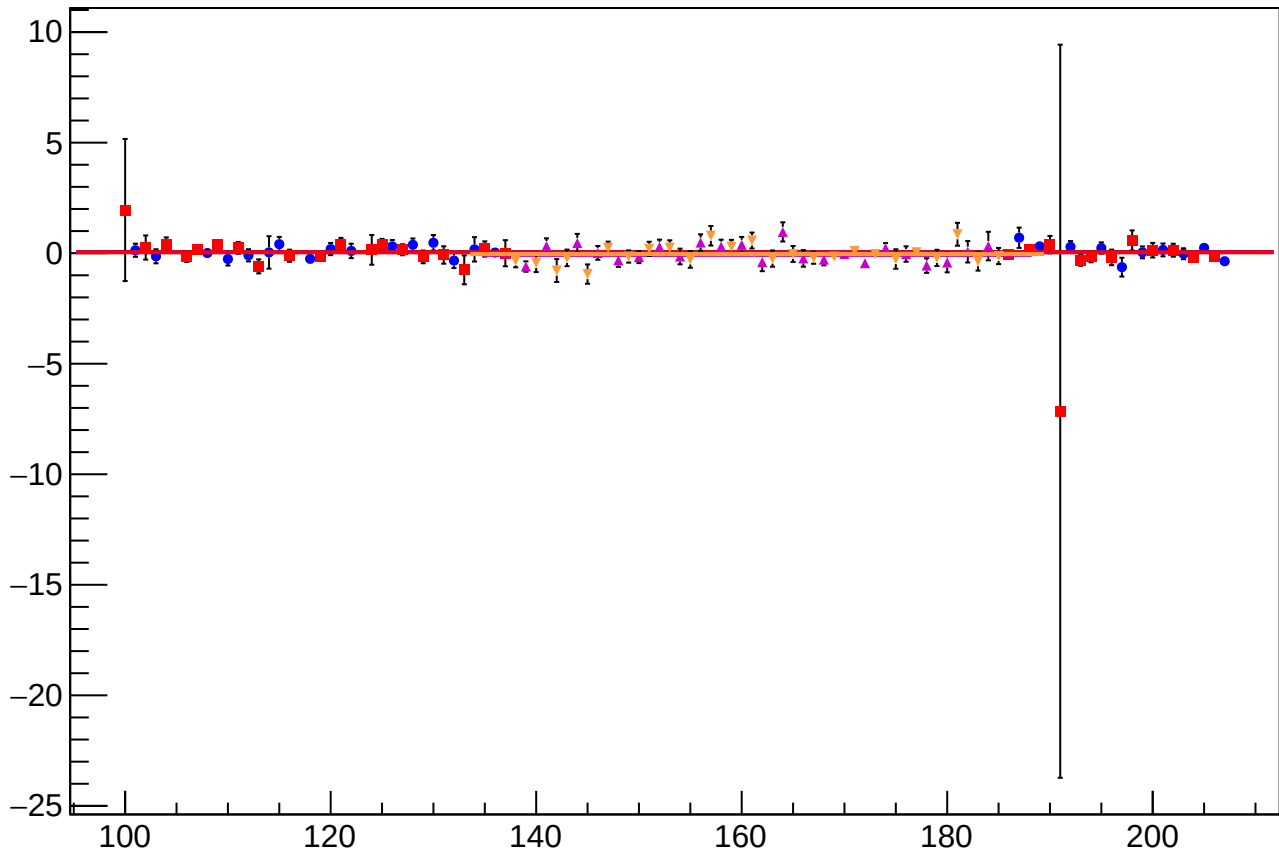
Left In: 262.788 $\pm$ 0.046  $\chi^2$ /NDF: 2025363.4/22

+ sign 216.291 $\pm$ 0.028  $\chi^2$ /NDF: 6266437.0/50

All: 212.268 $\pm$ 0.020  $\chi^2$ /NDF: 14071783.9/10

- sign 208.429 $\pm$ 0.027  $\chi^2$ /NDF: 7765340.4/53

asym\_atr\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.048 $\pm$ 0.052     $\chi^2$ /NDF: 25.5/25

Left Out: -0.038 $\pm$ 0.062     $\chi^2$ /NDF: 24.4/24

Right Out: 0.043 $\pm$ 0.048     $\chi^2$ /NDF: 27.9/30

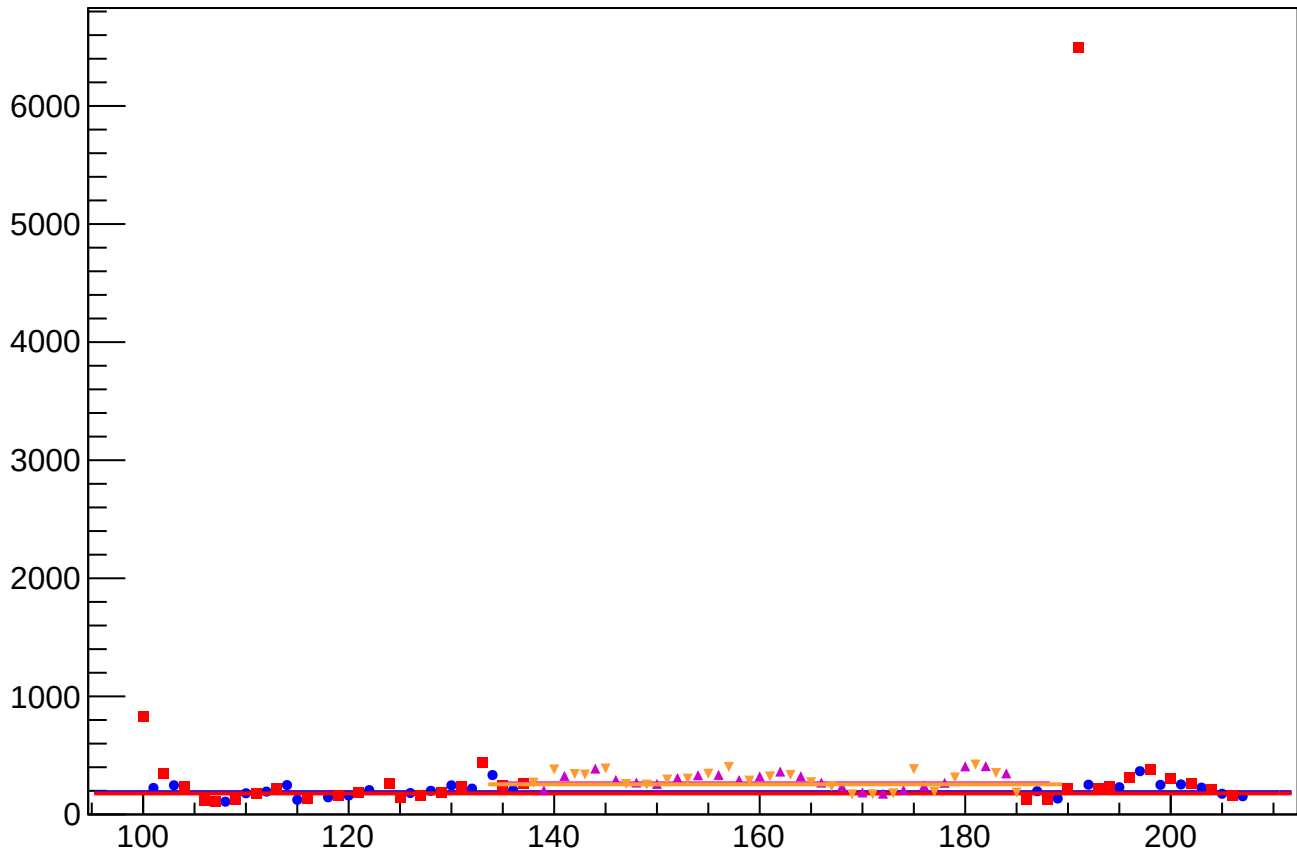
Left In: -0.078 $\pm$ 0.065     $\chi^2$ /NDF: 31.1/22

+ sign 0.013 $\pm$ 0.040     $\chi^2$ /NDF: 51.1/50

All: 0.006 $\pm$ 0.028     $\chi^2$ /NDF: 112.4/104

- sign -0.001 $\pm$ 0.039     $\chi^2$ /NDF: 61.2/53

# asym\_atr\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 188.877 $\pm$ 0.037  $\chi^2$ /NDF: 1976583.5/25

Left Out: 255.355 $\pm$ 0.044  $\chi^2$ /NDF: 2935324.6/24

Right Out: 178.059 $\pm$ 0.034  $\chi^2$ /NDF: 3552023.6/30

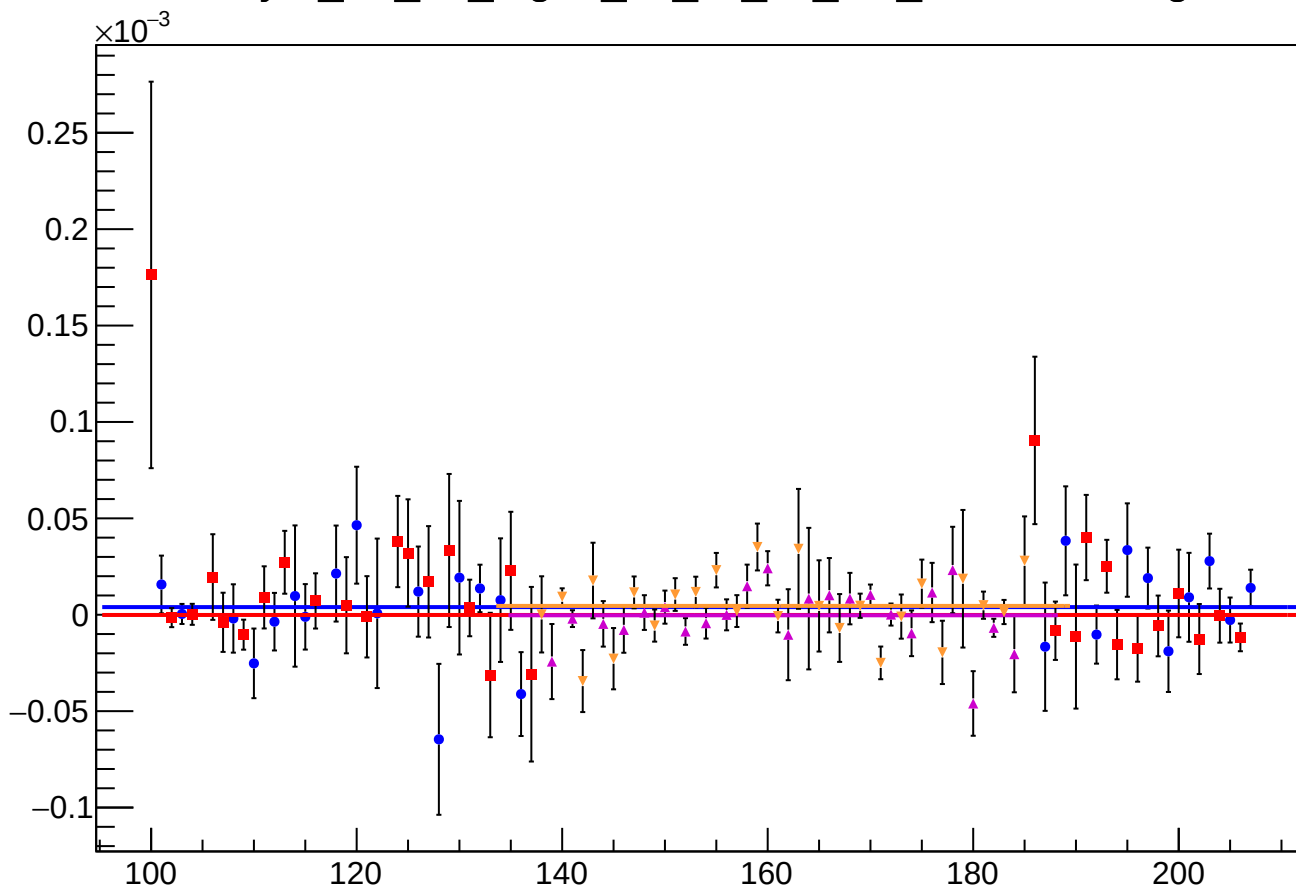
Left In: 262.788 $\pm$ 0.046  $\chi^2$ /NDF: 2025363.4/22

+ sign 216.291 $\pm$ 0.028  $\chi^2$ /NDF: 6266437.0/50

All: 212.268 $\pm$ 0.020  $\chi^2$ /NDF: 14071783.9/10

- sign 208.429 $\pm$ 0.027  $\chi^2$ /NDF: 7765340.4/53

asym\_atr\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 25.5/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 43.4/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 32.9/30

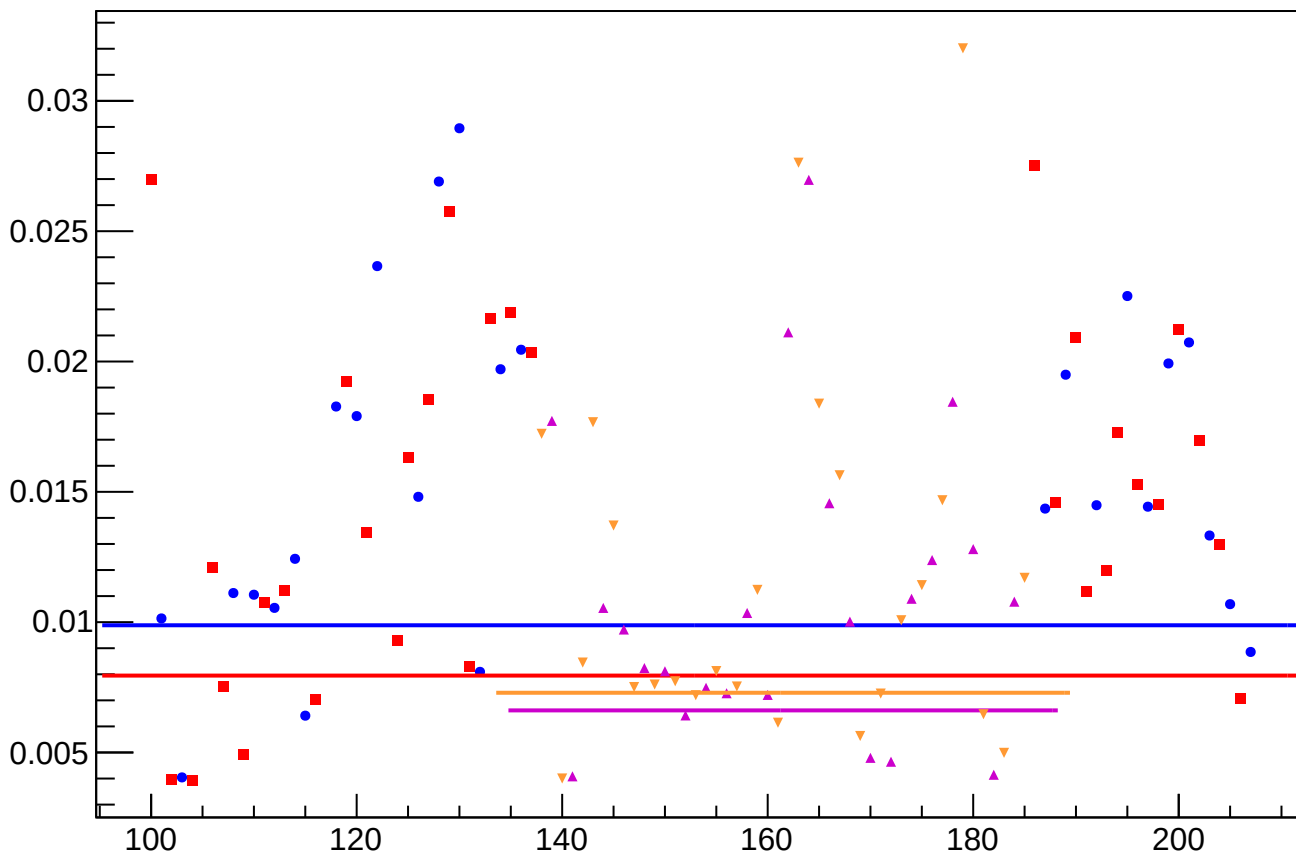
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 31.2/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 68.9/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 137.7/104

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 64.1/53

asym\_atr\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.010 $\pm$ 0.000  $\chi^2$ /NDF: 7093758.4/25

Left Out: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 6772003.6/24

Right Out: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 9291243.9/30

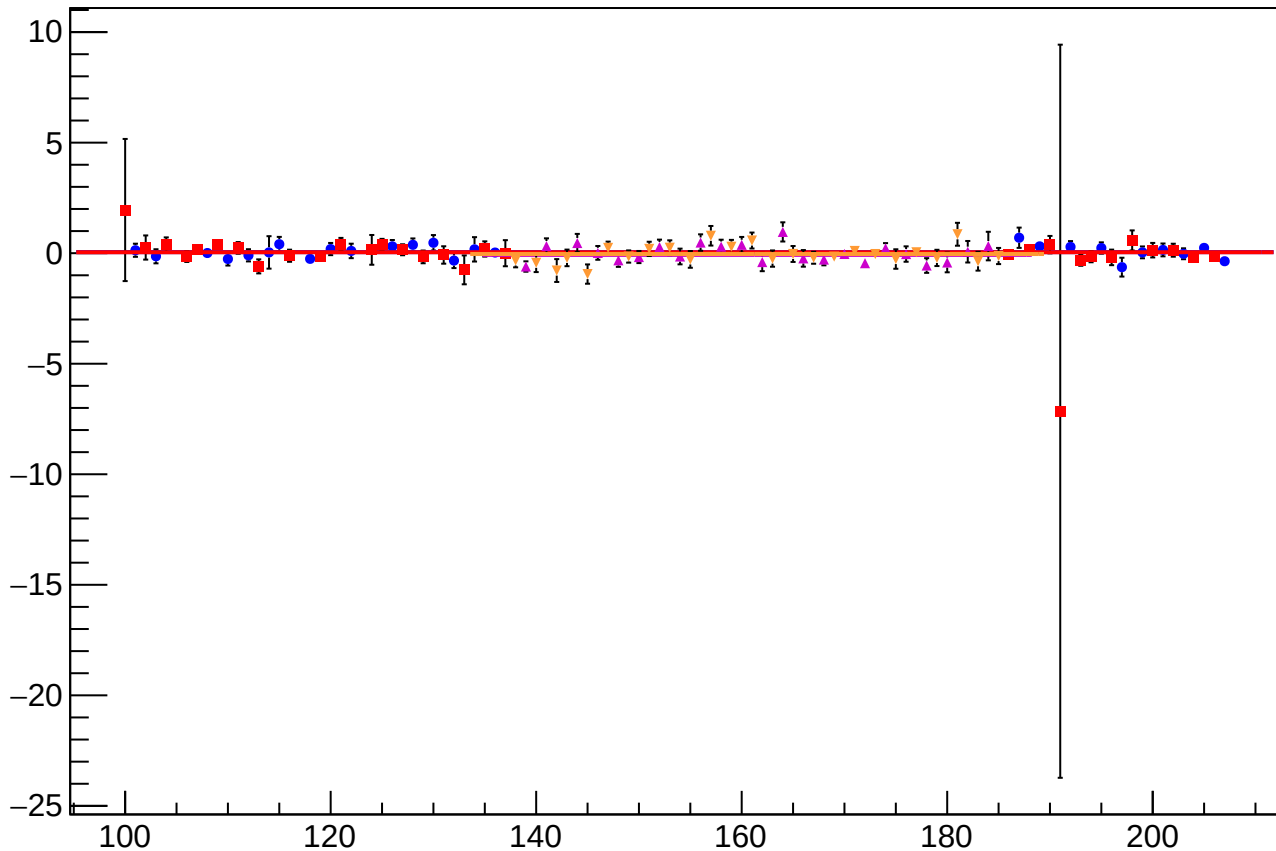
Left In: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 6410135.0/22

+ sign 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 14945249.7/50

All: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 31424207.0/104

- sign 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 16106310.1/53

asym\_atr\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.048 $\pm$ 0.052     $\chi^2$ /NDF: 25.5/25

Left Out: -0.038 $\pm$ 0.062     $\chi^2$ /NDF: 24.4/24

Right Out: 0.043 $\pm$ 0.048     $\chi^2$ /NDF: 27.9/30

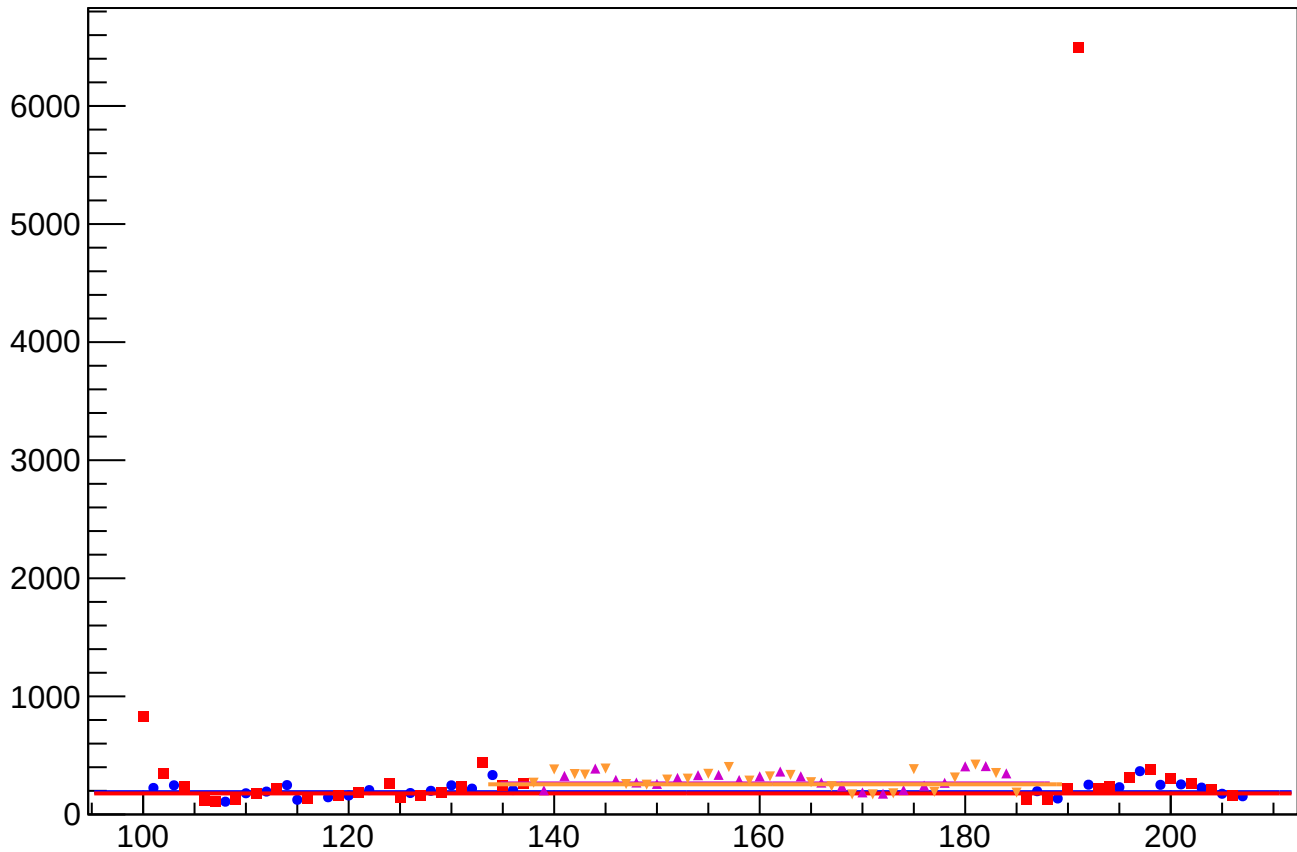
Left In: -0.078 $\pm$ 0.065     $\chi^2$ /NDF: 31.1/22

+ sign 0.013 $\pm$ 0.040     $\chi^2$ /NDF: 51.1/50

All: 0.006 $\pm$ 0.028     $\chi^2$ /NDF: 112.4/104

- sign -0.001 $\pm$ 0.039     $\chi^2$ /NDF: 61.2/53

# asym\_atr\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 188.877 $\pm$ 0.037  $\chi^2$ /NDF: 1976587.8/25

Left Out: 255.357 $\pm$ 0.044  $\chi^2$ /NDF: 2935428.4/24

Right Out: 178.060 $\pm$ 0.034  $\chi^2$ /NDF: 3551984.4/30

Left In: 262.790 $\pm$ 0.046  $\chi^2$ /NDF: 2025402.0/22

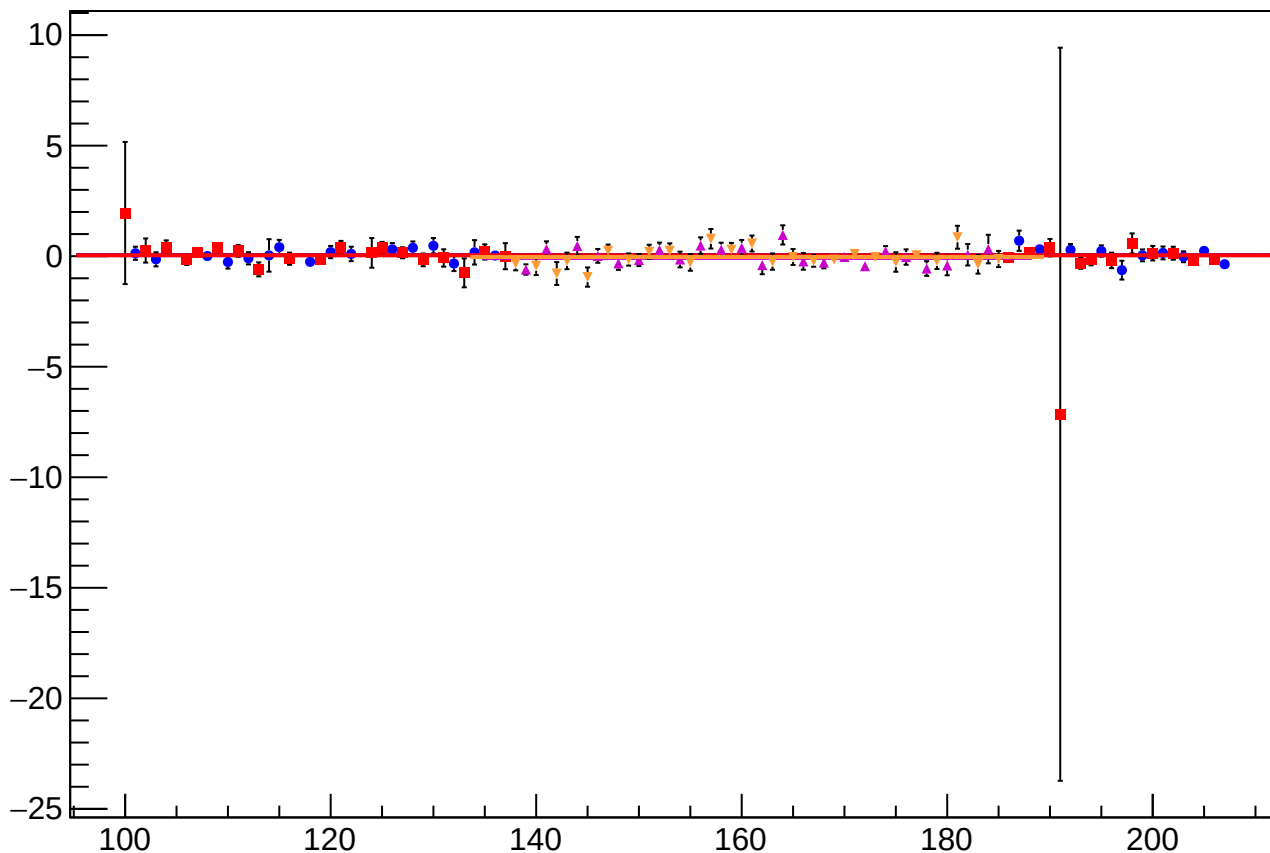
+ sign 216.292 $\pm$ 0.028  $\chi^2$ /NDF: 6266612.5/50

All: 212.269 $\pm$ 0.020  $\chi^2$ /NDF: 14071960.4/10

- sign 208.430 $\pm$ 0.027  $\chi^2$ /NDF: 7765354.7/53



asym\_atr\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.048 $\pm$ 0.052  $\chi^2$ /NDF: 25.5/25

Left Out: -0.038 $\pm$ 0.062  $\chi^2$ /NDF: 24.4/24

Right Out: 0.043 $\pm$ 0.048  $\chi^2$ /NDF: 27.9/30

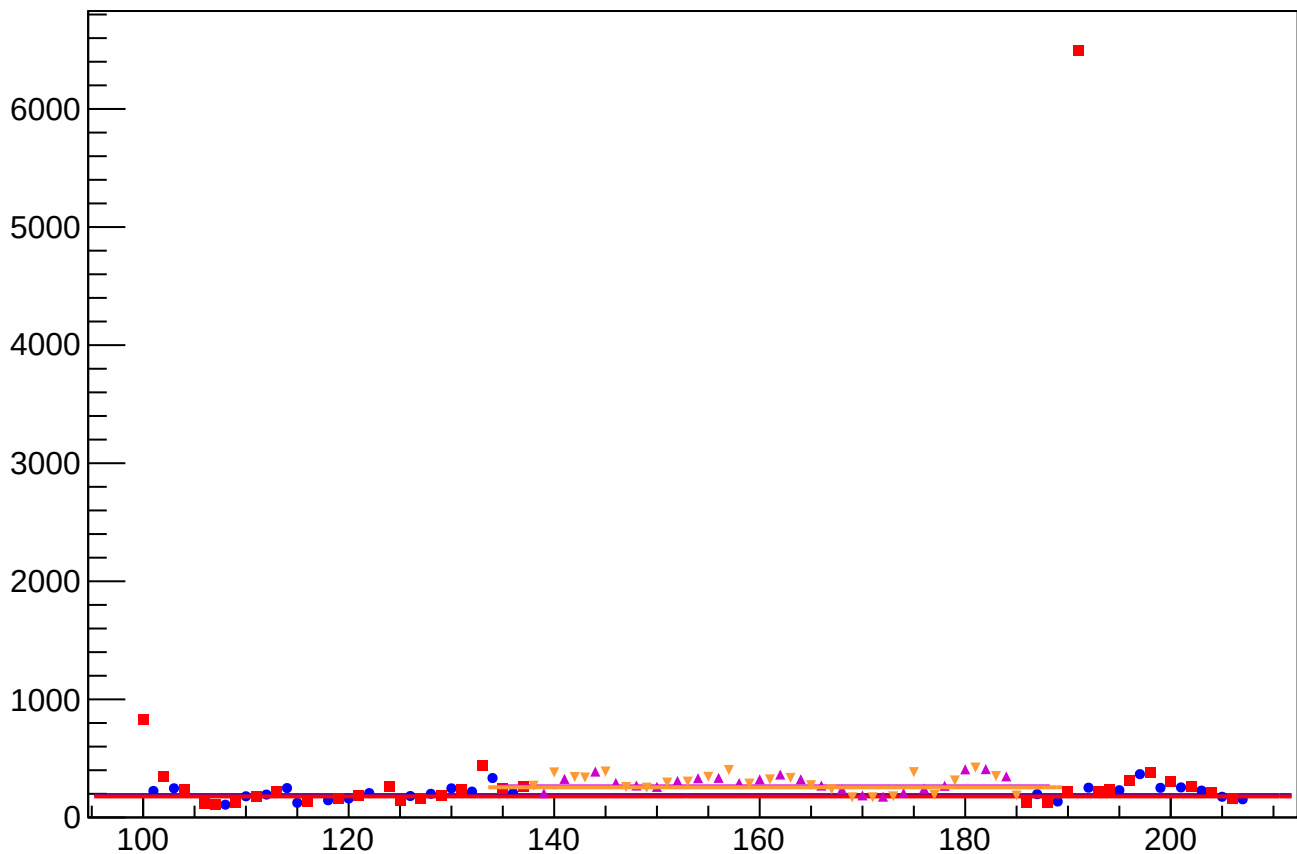
Left In: -0.078 $\pm$ 0.065  $\chi^2$ /NDF: 31.1/22

+ sign 0.013 $\pm$ 0.040  $\chi^2$ /NDF: 51.1/50

All: 0.006 $\pm$ 0.028  $\chi^2$ /NDF: 112.4/104

- sign -0.001 $\pm$ 0.039  $\chi^2$ /NDF: 61.2/53

asym\_atr\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 188.877 $\pm$ 0.037  $\chi^2$ /NDF: 1976587.8/25

Left Out: 255.357 $\pm$ 0.044  $\chi^2$ /NDF: 2935428.4/24

Right Out: 178.060 $\pm$ 0.034  $\chi^2$ /NDF: 3551984.4/30

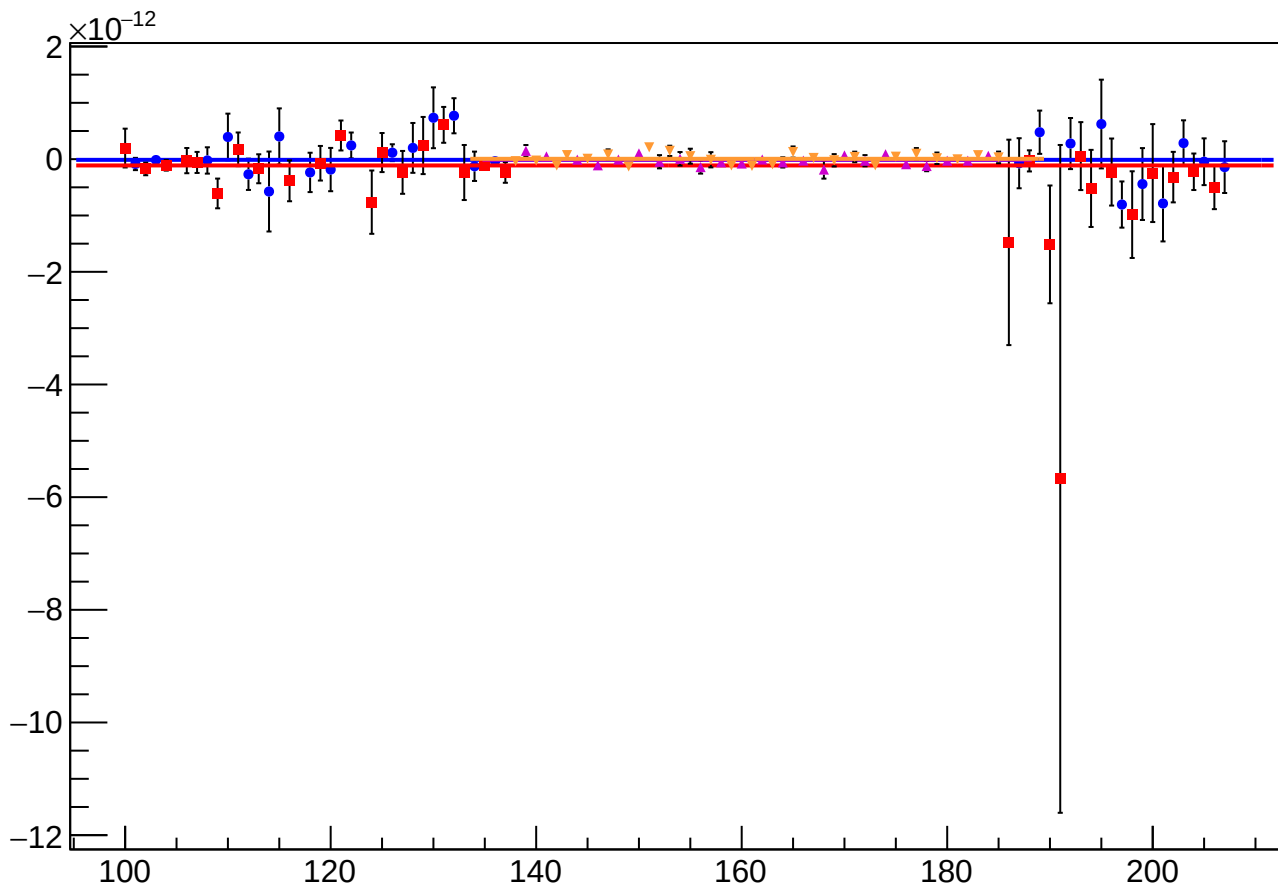
Left In: 262.790 $\pm$ 0.046  $\chi^2$ /NDF: 2025402.0/22

+ sign 216.292 $\pm$ 0.028  $\chi^2$ /NDF: 6266612.5/50

All: 212.269 $\pm$ 0.020  $\chi^2$ /NDF: 14071960.4/10

- sign 208.430 $\pm$ 0.027  $\chi^2$ /NDF: 7765354.7/53

asym\_atr\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 23.9/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 30.5/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 25.1/30

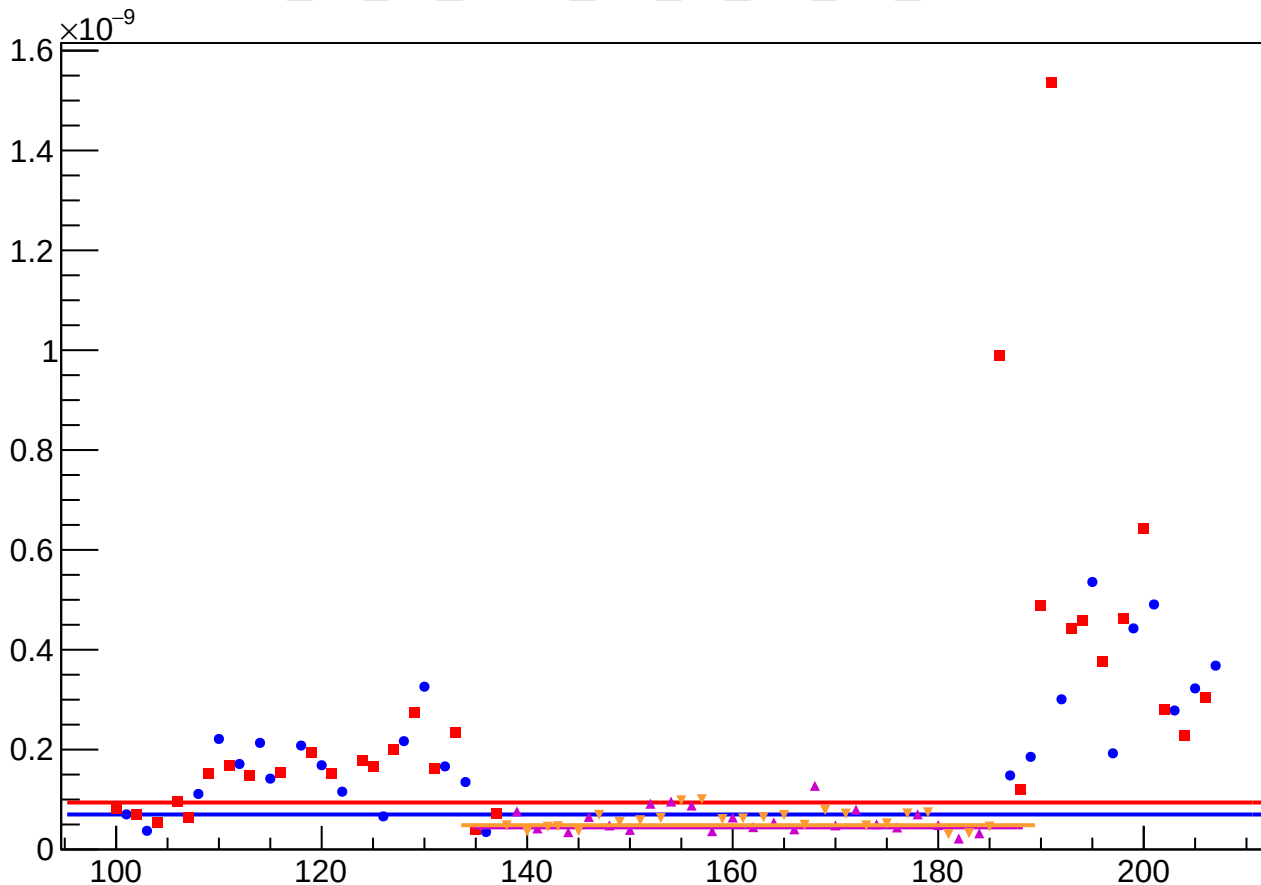
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 21.2/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 54.6/50

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 108.4/104

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 52.2/53

asym\_atr\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8772846.3/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2493290.7/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8167522.4/30

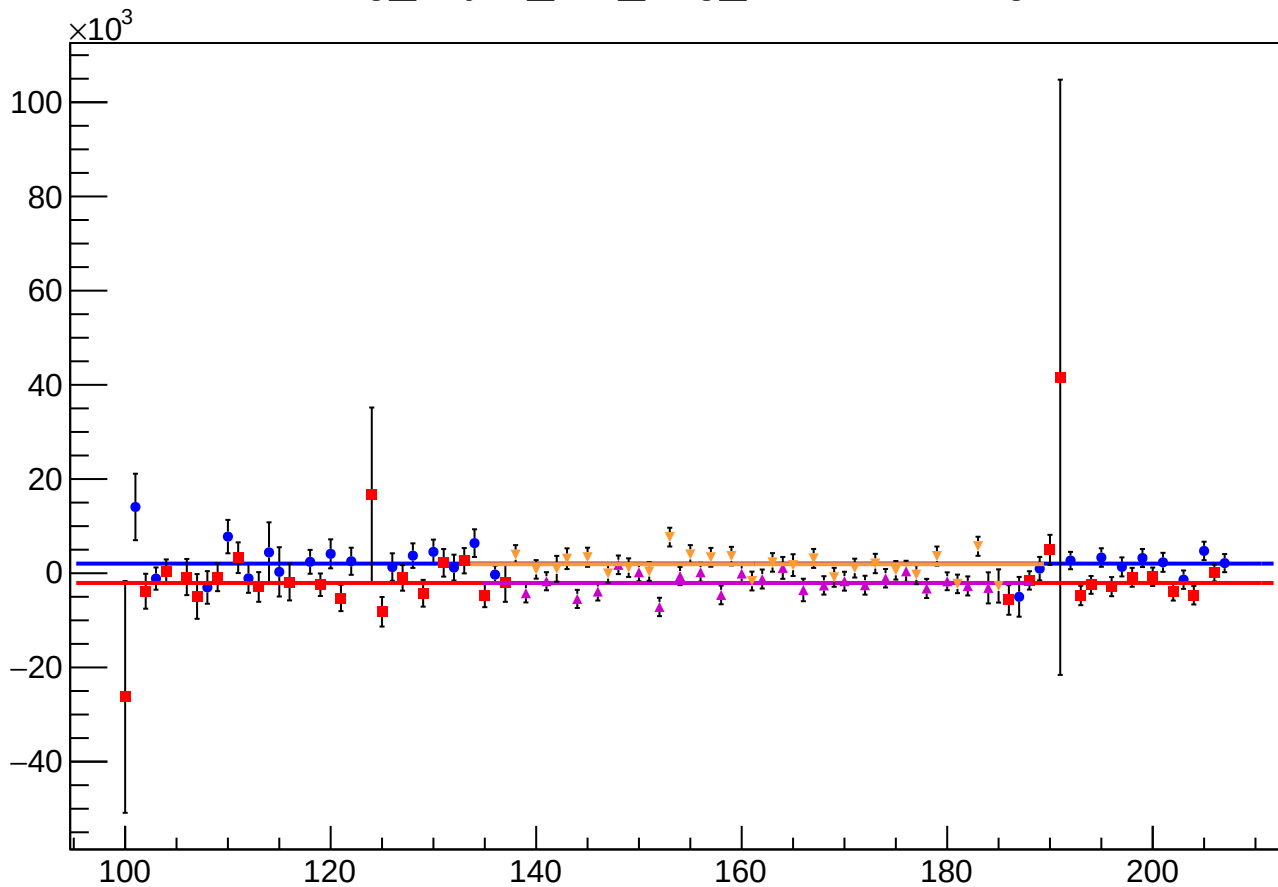
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3624474.0/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11936330.3/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 26531485.6/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14567119.0/53

# reg\_asym\_at1\_avg\_mean vs Slug



Right In: 2045.898 $\pm$ 489.645  $\chi^2$ /NDF: 25.4/25

Left Out: 1920.623 $\pm$ 412.915  $\chi^2$ /NDF:32.5/24

Right Out: -2064.035 $\pm$ 476.323  $\chi^2$ /NDF: 32.0/30

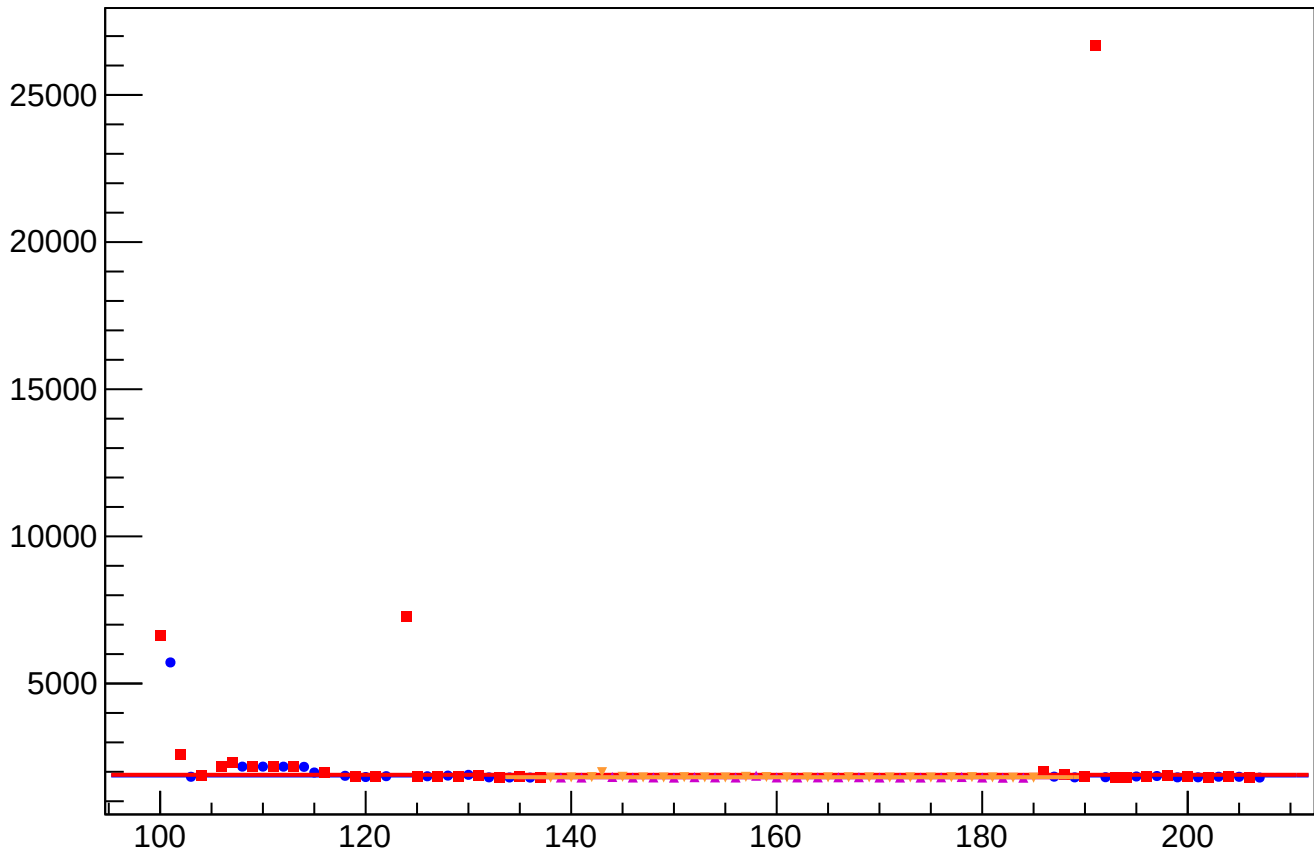
Left In: -2074.205 $\pm$ 423.203  $\chi^2$ /NDF:26.5/22

+ sign 1972.687 $\pm$ 315.658  $\chi^2$ /NDF: 58.0/50

All: -43.962 $\pm$ 223.455  $\chi^2$ /NDF: 198.3/104

- sign -2069.718 $\pm$ 316.370  $\chi^2$ /NDF: 58.5/53

# reg\_asym\_at1\_avg\_rms vs Slug



Right In: 1874.531+/-0.346  $\chi^2/\text{NDF}$ : 665293.8/25

Left Out: 1817.524+/-0.292  $\chi^2/\text{NDF}$ : 12955.2/24

Right Out: 1898.698+/-0.337  $\chi^2/\text{NDF}$ : 734405.9/30

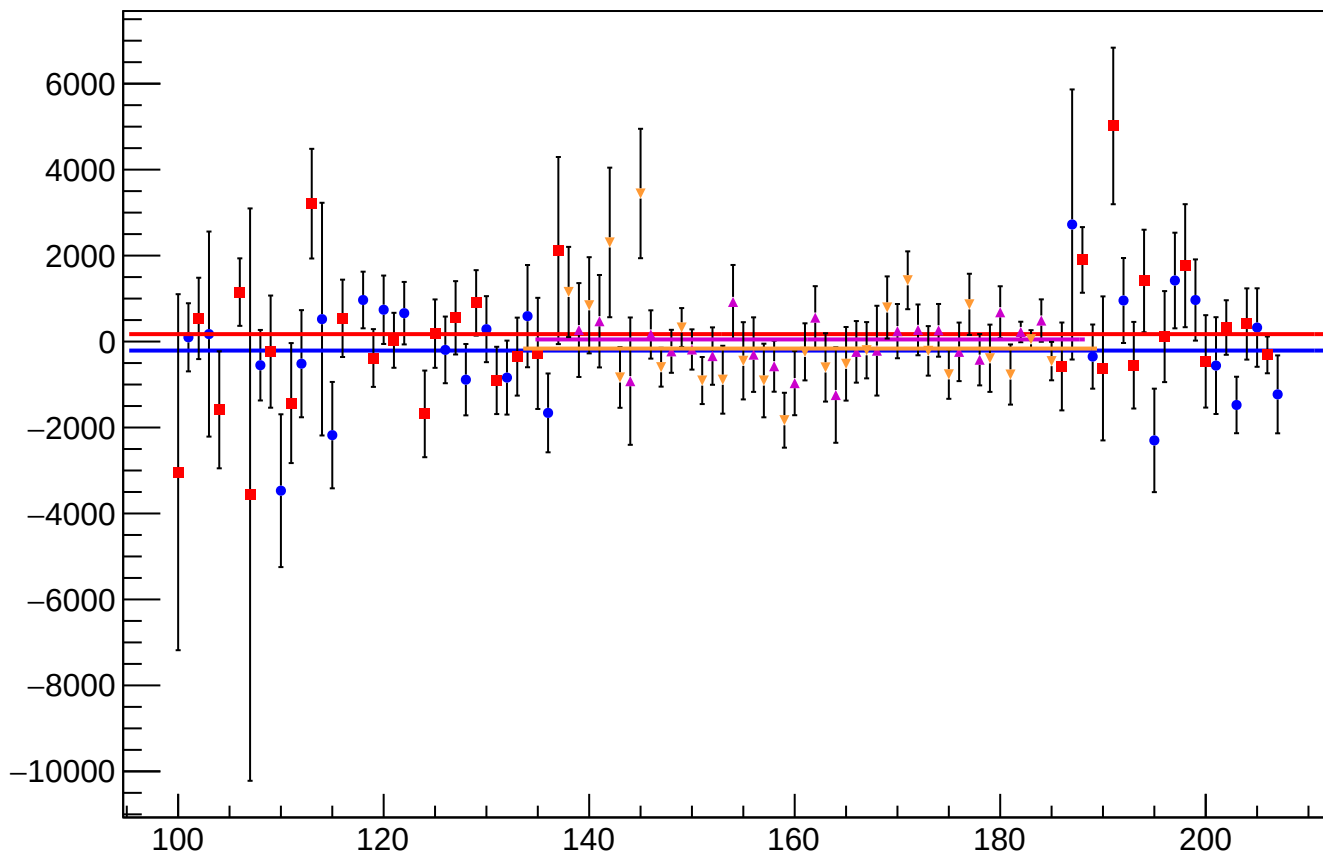
Left In: 1812.545+/-0.299  $\chi^2/\text{NDF}$ : 2013.0/22

+ sign 1841.216+/-0.223  $\chi^2/\text{NDF}$ : 694091.8/50

All: 1845.873+/-0.158  $\chi^2/\text{NDF}$ : 1467948.3/10

- sign 1850.552+/-0.224  $\chi^2/\text{NDF}$ : 772983.8/53

# asym\_at1\_avg\_reg\_correction\_mean vs Slug



Right In:  $-209.628 \pm 182.905$   $\chi^2/\text{NDF}$ : 31.4/25

Left Out:  $-162.996 \pm 115.295$   $\chi^2/\text{NDF}$ : 36.8/24

Right Out:  $172.884 \pm 164.514$   $\chi^2/\text{NDF}$ : 37.5/30

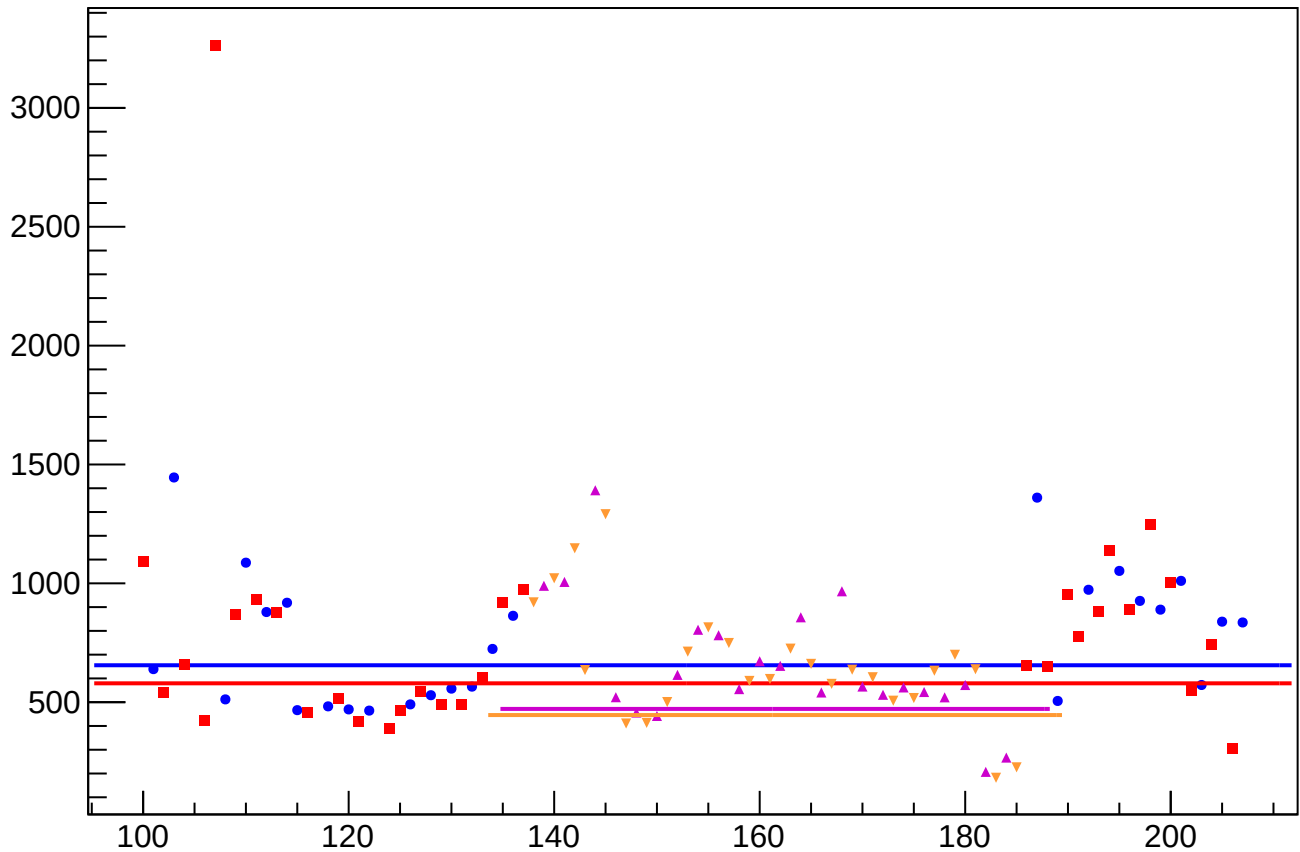
Left In:  $49.290 \pm 122.691$   $\chi^2/\text{NDF}$ : 11.3/22

+ sign  $-176.256 \pm 97.535$   $\chi^2/\text{NDF}$ : 68.3/50

All:  $-42.522 \pm 69.255$   $\chi^2/\text{NDF}$ : 121.2/104

- sign  $93.463 \pm 98.352$   $\chi^2/\text{NDF}$ : 49.2/53

# asym\_at1\_avg\_reg\_correction\_rms vs Slug



Right In:  $655.397 \pm 0.129$   $\chi^2/\text{NDF}$ : 2450926.3/25

Left Out:  $445.893 \pm 0.082$   $\chi^2/\text{NDF}$ : 7982455.6/24

Right Out:  $579.396 \pm 0.116$   $\chi^2/\text{NDF}$ : 3910394.3/30

Left In:  $471.746 \pm 0.087$   $\chi^2/\text{NDF}$ : 6413905.5/22

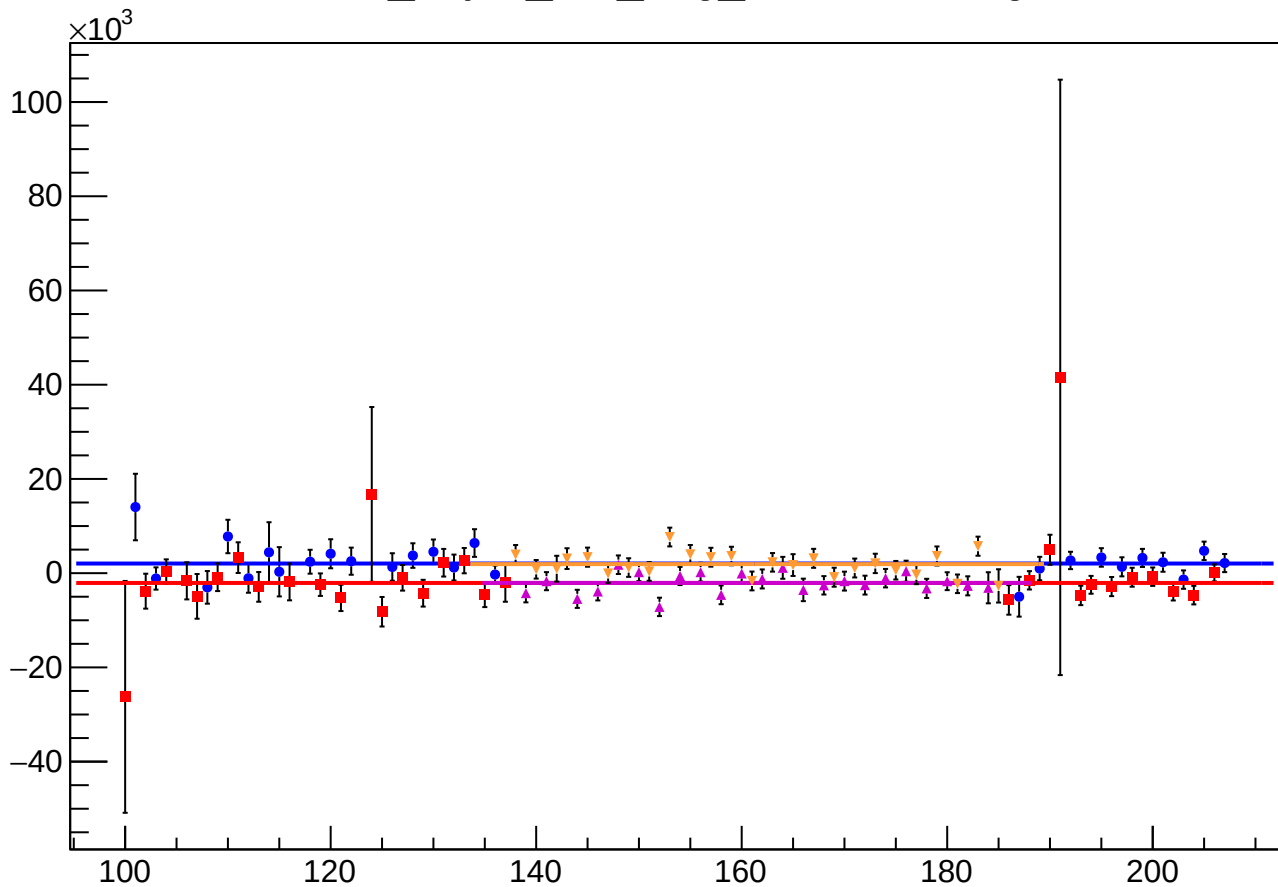
+ sign  $505.468 \pm 0.069$   $\chi^2/\text{NDF}$ : 12311234.4/50

All:  $507.824 \pm 0.049$   $\chi^2/\text{NDF}$ : 23188178.4/10

- sign  $510.220 \pm 0.070$   $\chi^2/\text{NDF}$ : 10874589.5/53



# cor\_asym\_at1\_avg\_mean vs Slug



Right In:  $2045.815 \pm 489.645$   $\chi^2/\text{NDF}$ : 25.4/25

Left Out:  $1920.588 \pm 412.915$   $\chi^2/\text{NDF}$ : 32.5/24

Right Out:  $-2077.097 \pm 476.498$   $\chi^2/\text{NDF}$ : 31.9/30

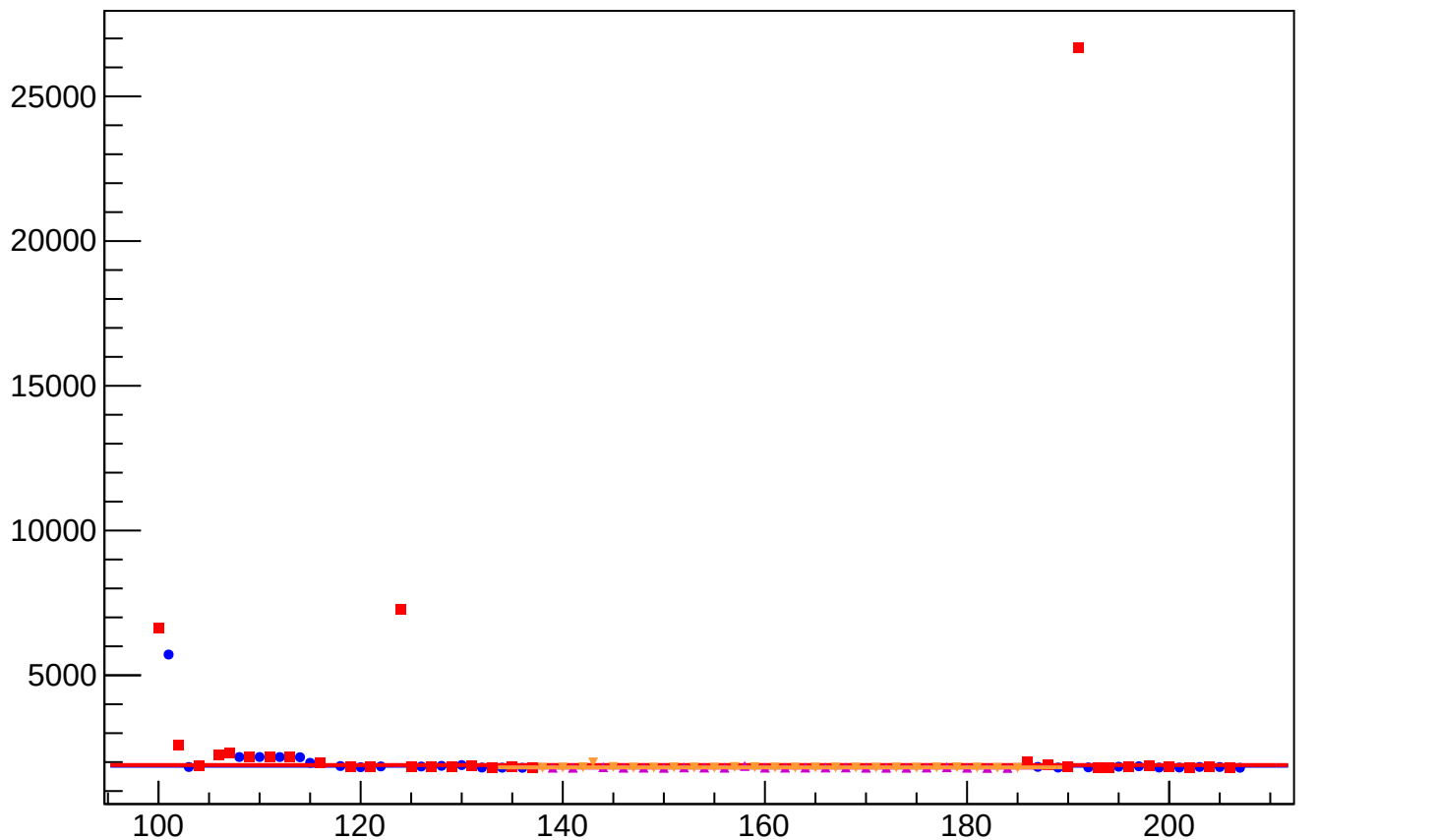
Left In:  $-2074.306 \pm 423.203$   $\chi^2/\text{NDF}$ : 26.5/22

+ sign  $1972.632 \pm 315.658$   $\chi^2/\text{NDF}$ : 58.0/50

All:  $-46.564 \pm 223.473$   $\chi^2/\text{NDF}$ : 198.5/104

- sign  $-2075.537 \pm 316.421$   $\chi^2/\text{NDF}$ : 58.4/53

# cor\_asym\_at1\_avg\_rms vs Slug



Right In: 1874.531 $\pm$ 0.346  $\chi^2$ /NDF: 665293.7/25

Left Out: 1817.524 $\pm$ 0.292  $\chi^2$ /NDF: 12955.2/24

Right Out: 1899.226 $\pm$ 0.337  $\chi^2$ /NDF: 738028.5/30

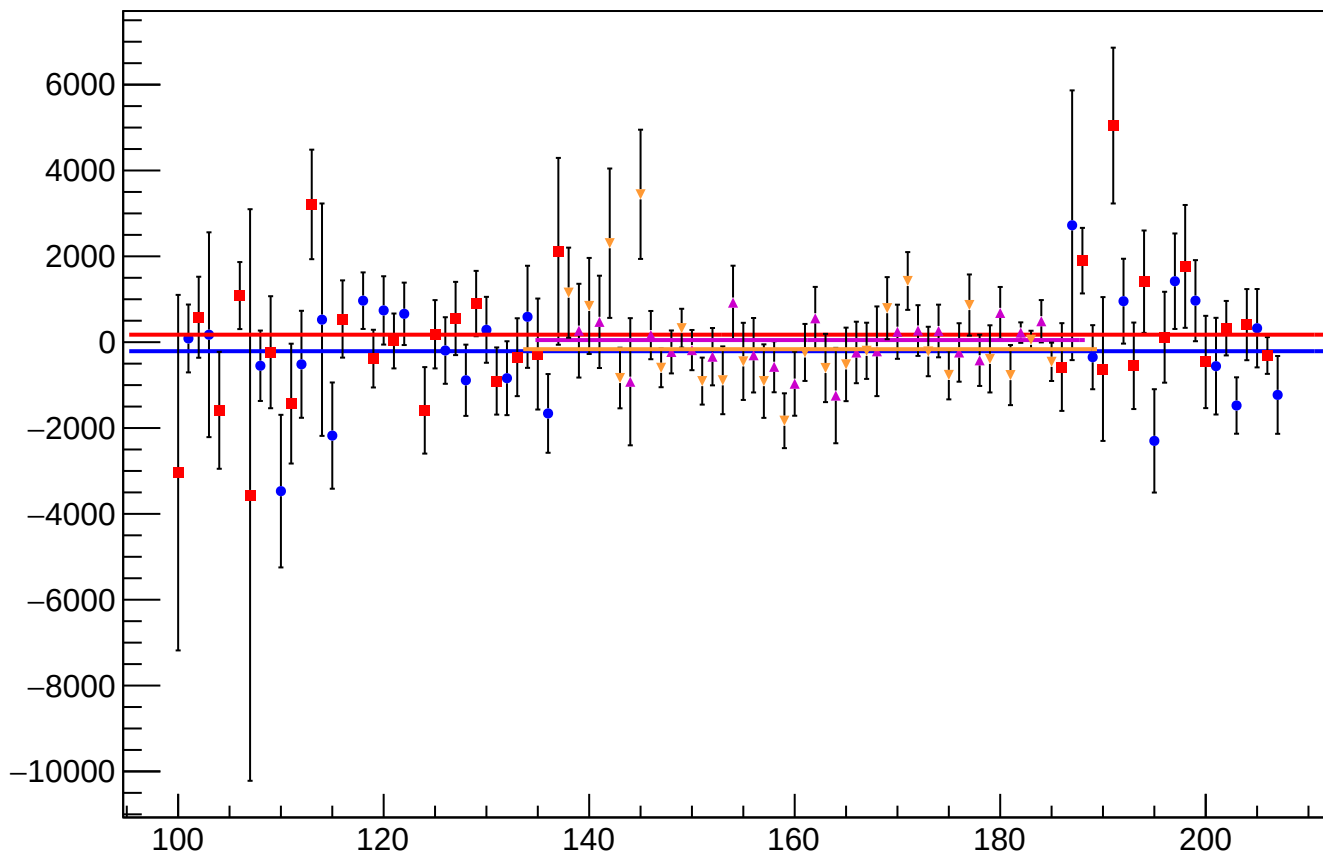
Left In: 1812.545 $\pm$ 0.299  $\chi^2$ /NDF: 2013.0/22

+ sign 1841.216 $\pm$ 0.223  $\chi^2$ /NDF: 694091.7/50

All: 1845.981 $\pm$ 0.158  $\chi^2$ /NDF: 1472045.9/10

- sign 1850.769 $\pm$ 0.224  $\chi^2$ /NDF: 777040.5/53

# asym\_at1\_avg\_cor\_correction\_mean vs Slug



Right In:  $-210.101 \pm 182.881$   $\chi^2/\text{NDF}$ : 31.4/25

Left Out:  $-162.911 \pm 115.291$   $\chi^2/\text{NDF}$ : 36.9/24

Right Out:  $174.717 \pm 164.451$   $\chi^2/\text{NDF}$ : 37.1/30

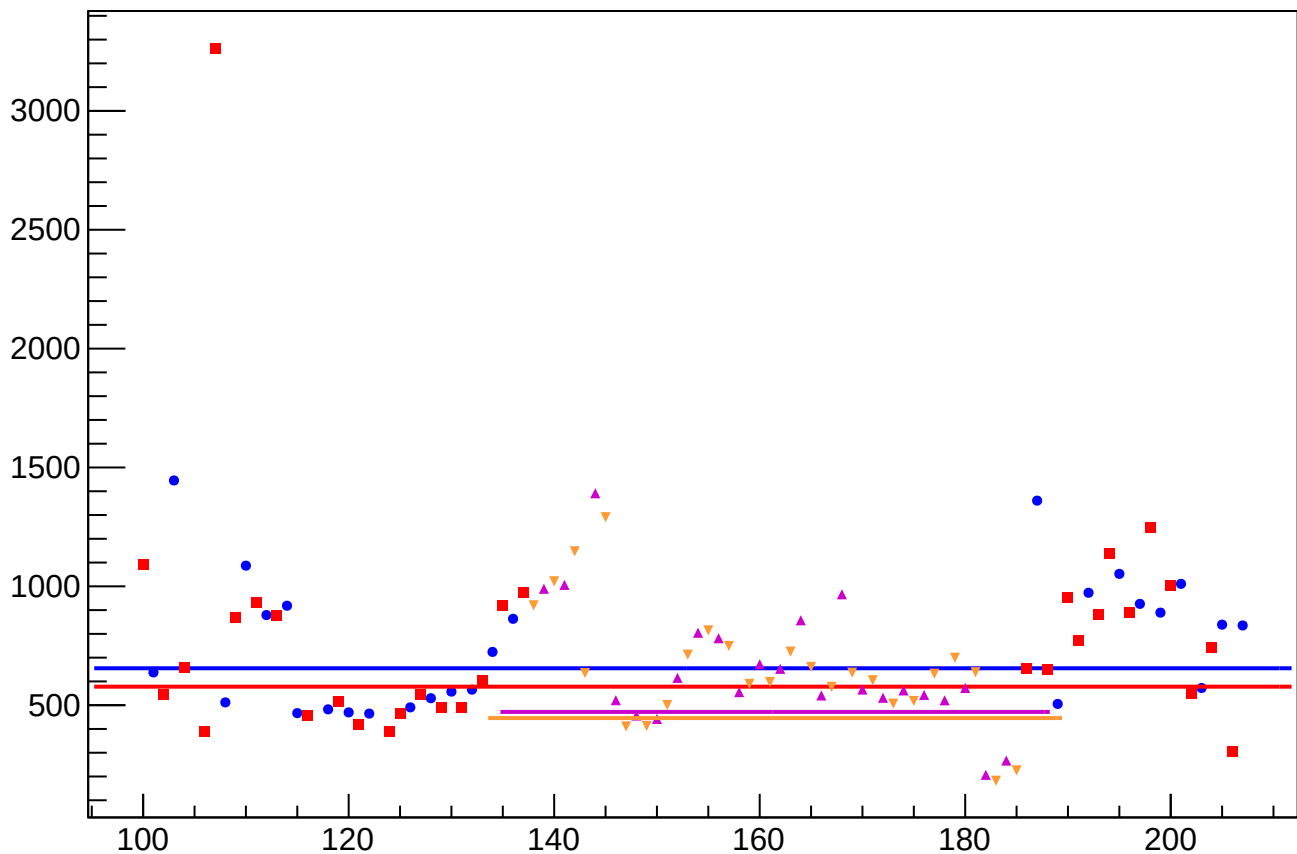
Left In:  $49.310 \pm 122.694$   $\chi^2/\text{NDF}$ : 11.3/22

+ sign  $-176.332 \pm 97.529$   $\chi^2/\text{NDF}$ : 68.3/50

All:  $-42.209 \pm 69.248$   $\chi^2/\text{NDF}$ : 120.9/104

- sign  $94.154 \pm 98.340$   $\chi^2/\text{NDF}$ : 48.8/53

# asym\_at1\_avg\_cor\_correction\_rms vs Slug



Right In:  $655.321 \pm 0.129$   $\chi^2/\text{NDF}$ : 2451127.8/25

Left Out:  $445.867 \pm 0.082$   $\chi^2/\text{NDF}$ : 7983869.6/24

Right Out:  $577.922 \pm 0.116$   $\chi^2/\text{NDF}$ : 3949059.4/30

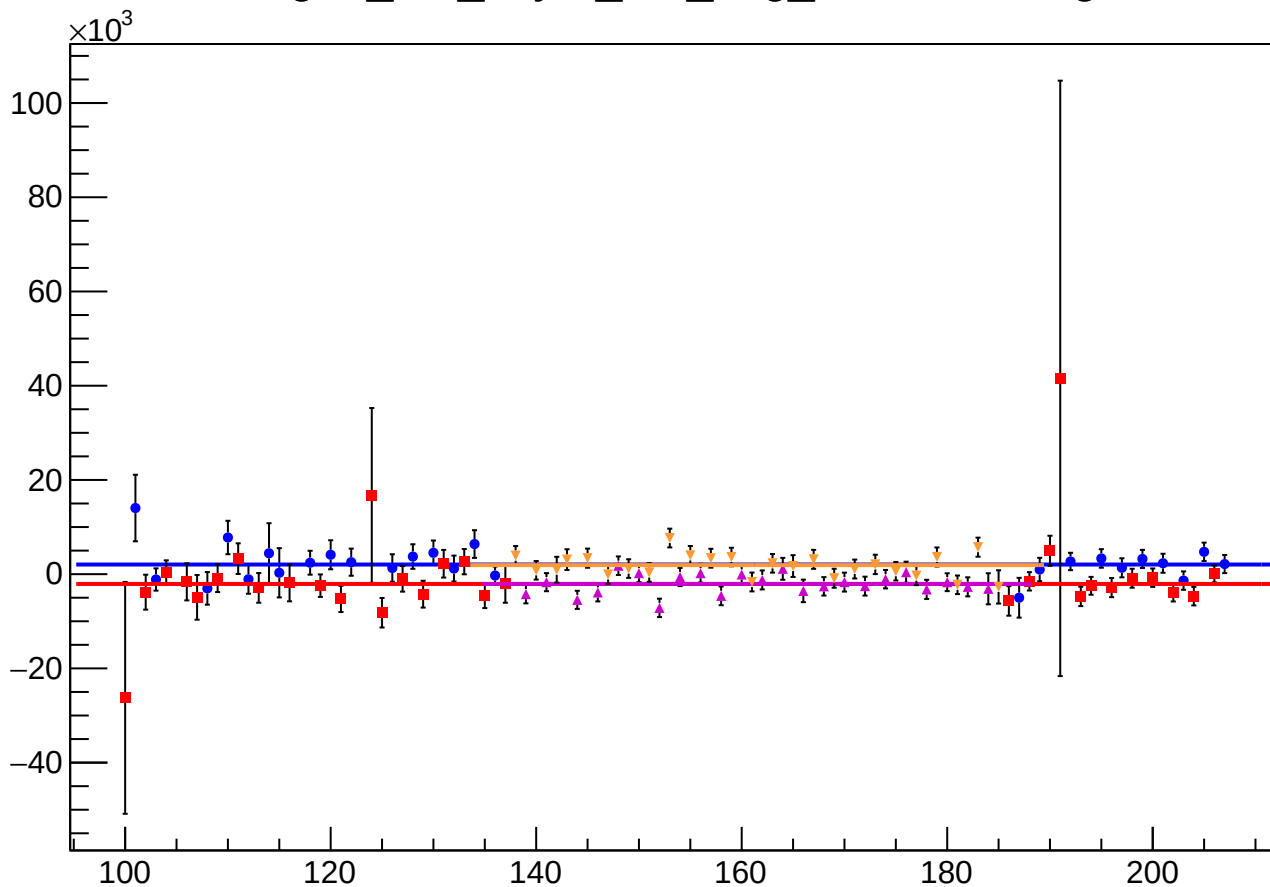
Left In:  $471.757 \pm 0.087$   $\chi^2/\text{NDF}$ : 6413685.0/22

+ sign  $505.436 \pm 0.069$   $\chi^2/\text{NDF}$ : 12312332.4/50

All:  $507.560 \pm 0.049$   $\chi^2/\text{NDF}$ : 23212459.1/10

- sign  $509.721 \pm 0.070$   $\chi^2/\text{NDF}$ : 10898212.3/53

# eigen\_cor\_asym\_at1\_avg\_mean vs Slug



Right In: 2045.815 $\pm$ 489.645  $\chi^2$ /NDF: 25.4/25

Left Out: 1920.588 $\pm$ 412.915  $\chi^2$ /NDF:32.5/24

Right Out: -2077.097 $\pm$ 476.498  $\chi^2$ /NDF: 31.9/30

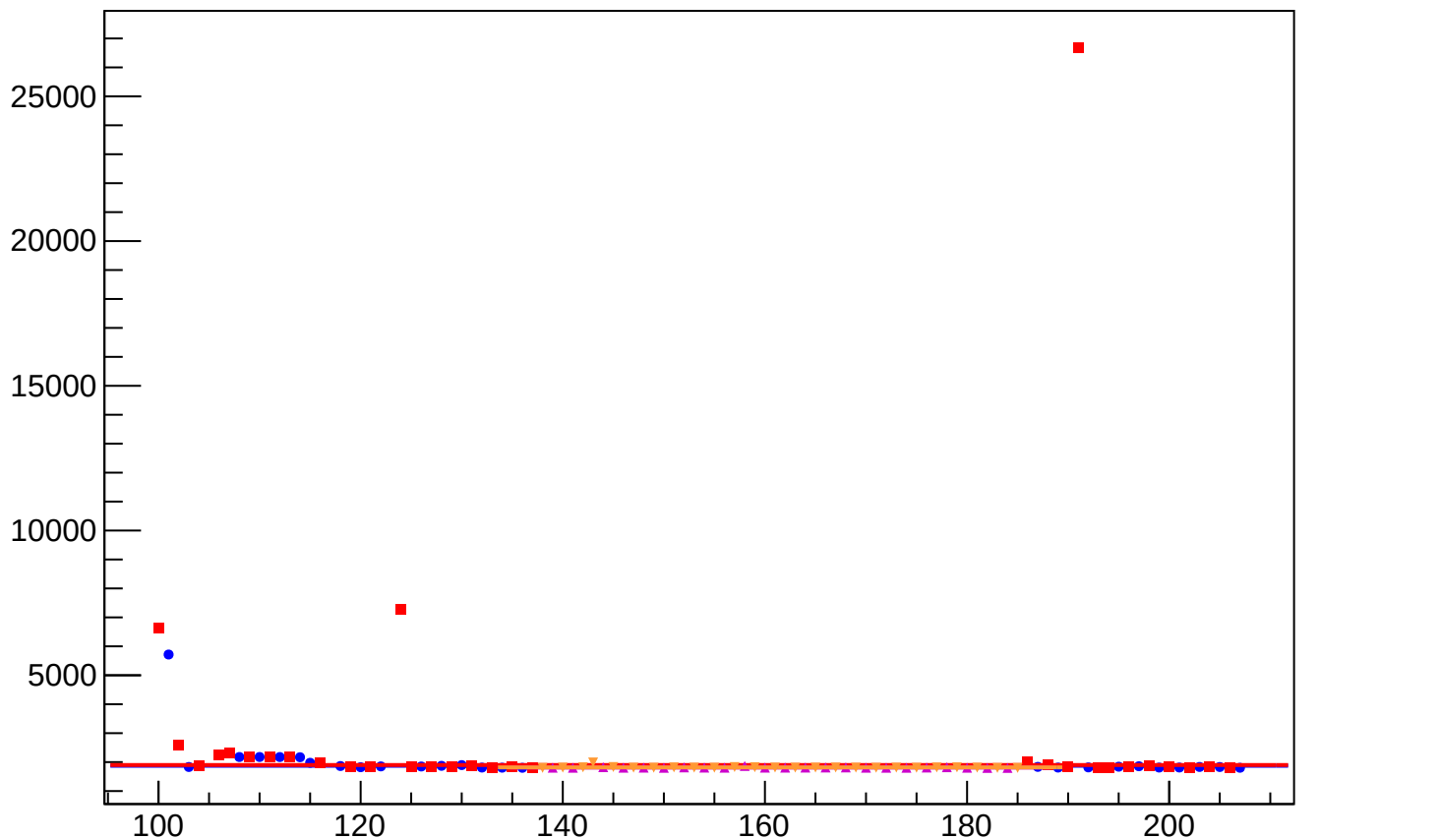
Left In: -2074.306 $\pm$ 423.203  $\chi^2$ /NDF:26.5/22

+ sign 1972.632 $\pm$ 315.658  $\chi^2$ /NDF: 58.0/50

All: -46.564 $\pm$ 223.473  $\chi^2$ /NDF: 198.5/104

- sign -2075.537 $\pm$ 316.421  $\chi^2$ /NDF: 58.4/53

# eigen\_cor\_asym\_at1\_avg\_rms vs Slug



Right In: 1874.531 $\pm$ 0.346  $\chi^2$ /NDF: 665293.7/25

Left Out: 1817.524 $\pm$ 0.292  $\chi^2$ /NDF:12955.2/24

Right Out: 1899.226 $\pm$ 0.337  $\chi^2$ /NDF: 738028.5/30

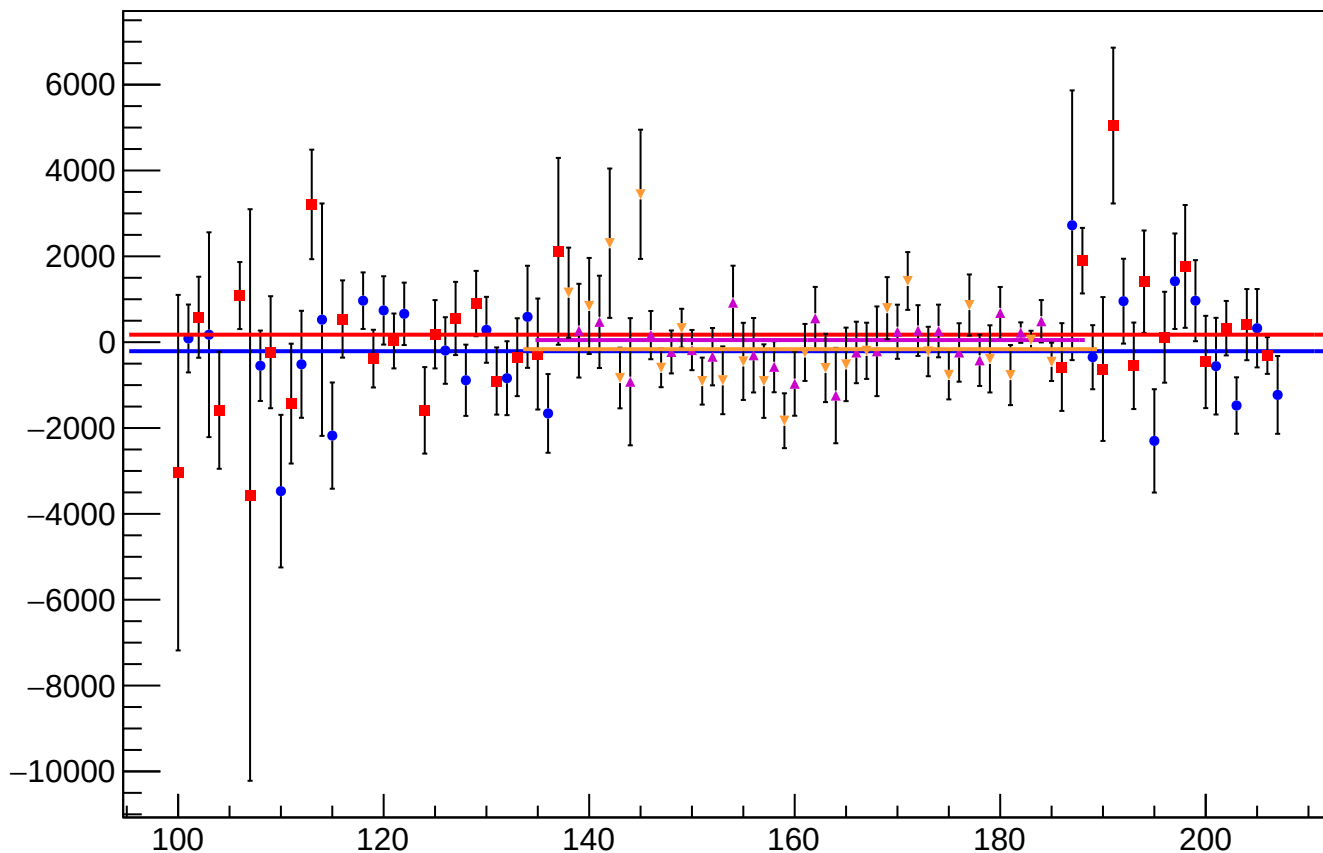
Left In: 1812.545 $\pm$ 0.299  $\chi^2$ /NDF:2013.0/22

+ sign 1841.216 $\pm$ 0.223  $\chi^2$ /NDF: 694091.7/50

All: 1845.981 $\pm$ 0.158  $\chi^2$ /NDF: 1472045.9/10

- sign 1850.769 $\pm$ 0.224  $\chi^2$ /NDF: 777040.5/53

asym\_at1\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In: -210.101 $\pm$ 182.881  $\chi^2$ /NDF: 31.4/25

Left Out: -162.911 $\pm$ 115.291  $\chi^2$ /NDF: 36.9/24

Right Out: 174.717 $\pm$ 164.451  $\chi^2$ /NDF: 37.1/30

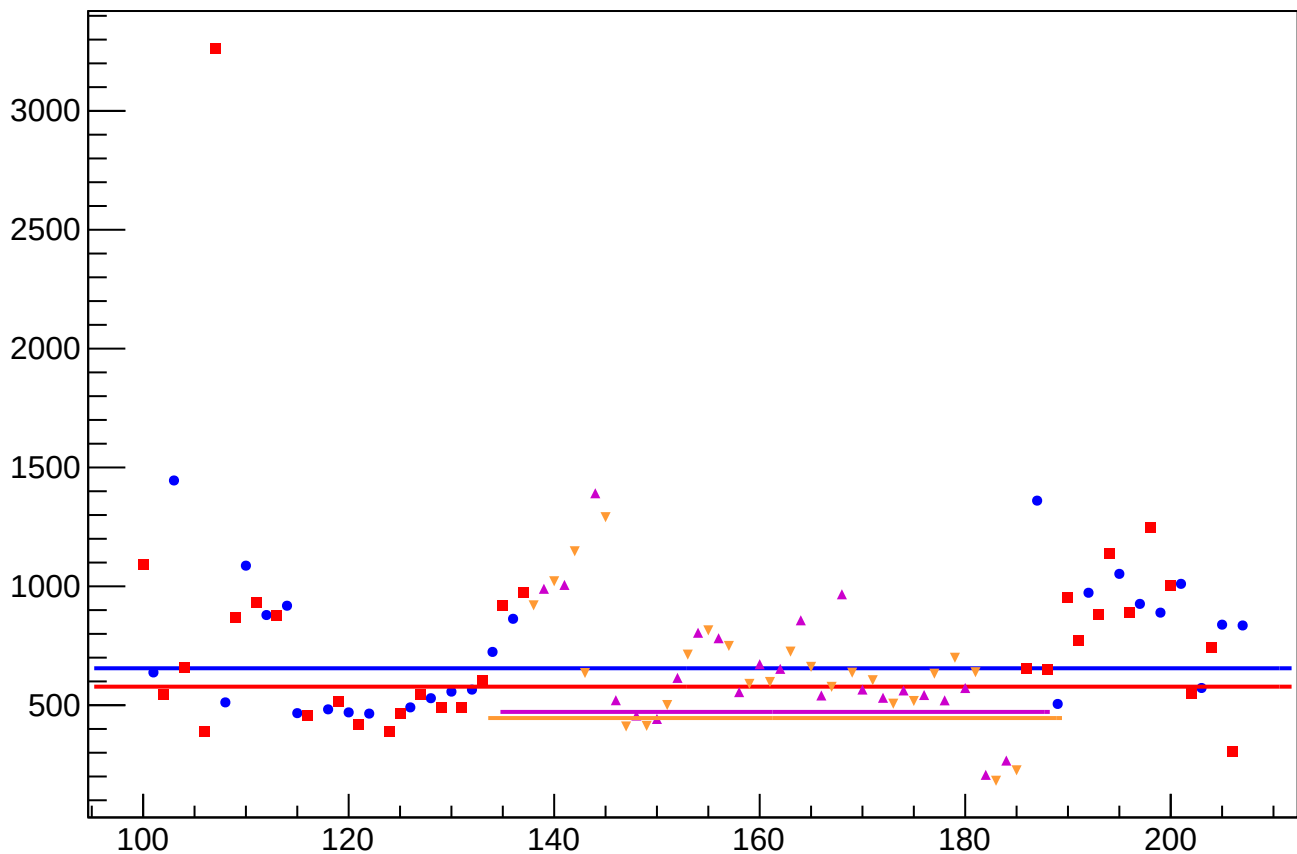
Left In: 49.310 $\pm$ 122.694  $\chi^2$ /NDF: 11.3/22

+ sign -176.332 $\pm$ 97.529  $\chi^2$ /NDF: 68.3/50

All: -42.209 $\pm$ 69.248  $\chi^2$ /NDF: 120.9/104

- sign 94.154 $\pm$ 98.340  $\chi^2$ /NDF: 48.8/53

asym\_at1\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 655.321+/-0.129  $\chi^2/\text{NDF}$ : 2451127.8/25

Left Out: 445.867+/-0.082  $\chi^2/\text{NDF}$ : 7983869.6/24

Right Out: 577.922+/-0.116  $\chi^2/\text{NDF}$ : 3949059.4/30

Left In: 471.757+/-0.087  $\chi^2/\text{NDF}$ : 6413685.0/22

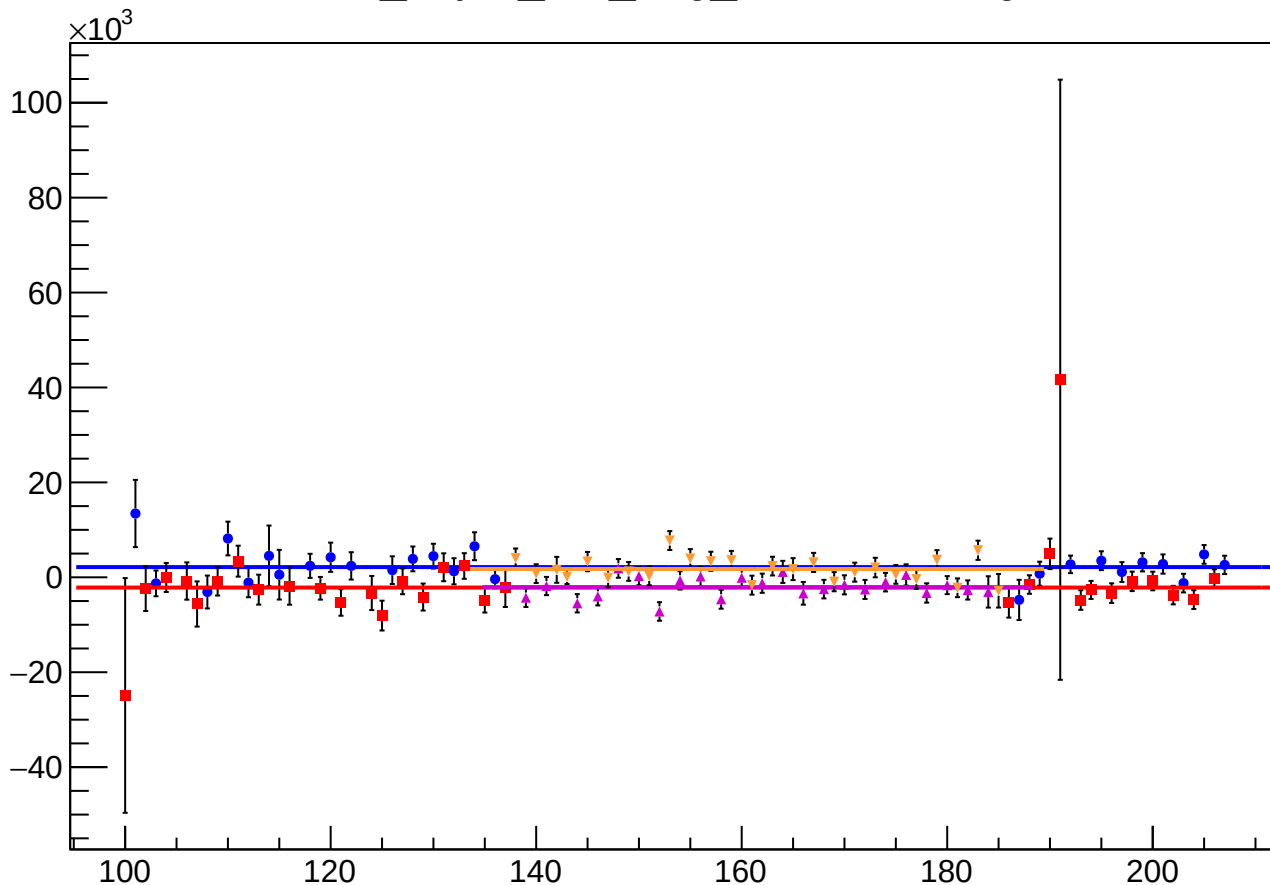
+ sign 505.436+/-0.069  $\chi^2/\text{NDF}$ : 12312332.4/50

All: 507.560+/-0.049  $\chi^2/\text{NDF}$ : 23212459.1/10

- sign 509.721+/-0.070  $\chi^2/\text{NDF}$ : 10898212.3/53



# dit\_asym\_at1\_avg\_mean vs Slug



Right In:  $2151.352 \pm 494.789$   $\chi^2/\text{NDF}$ : 25.5/25

Left Out:  $1755.493 \pm 405.401$   $\chi^2/\text{NDF}$ : 33.8/24

Right Out:  $-2160.635 \pm 479.052$   $\chi^2/\text{NDF}$ : 29.7/30

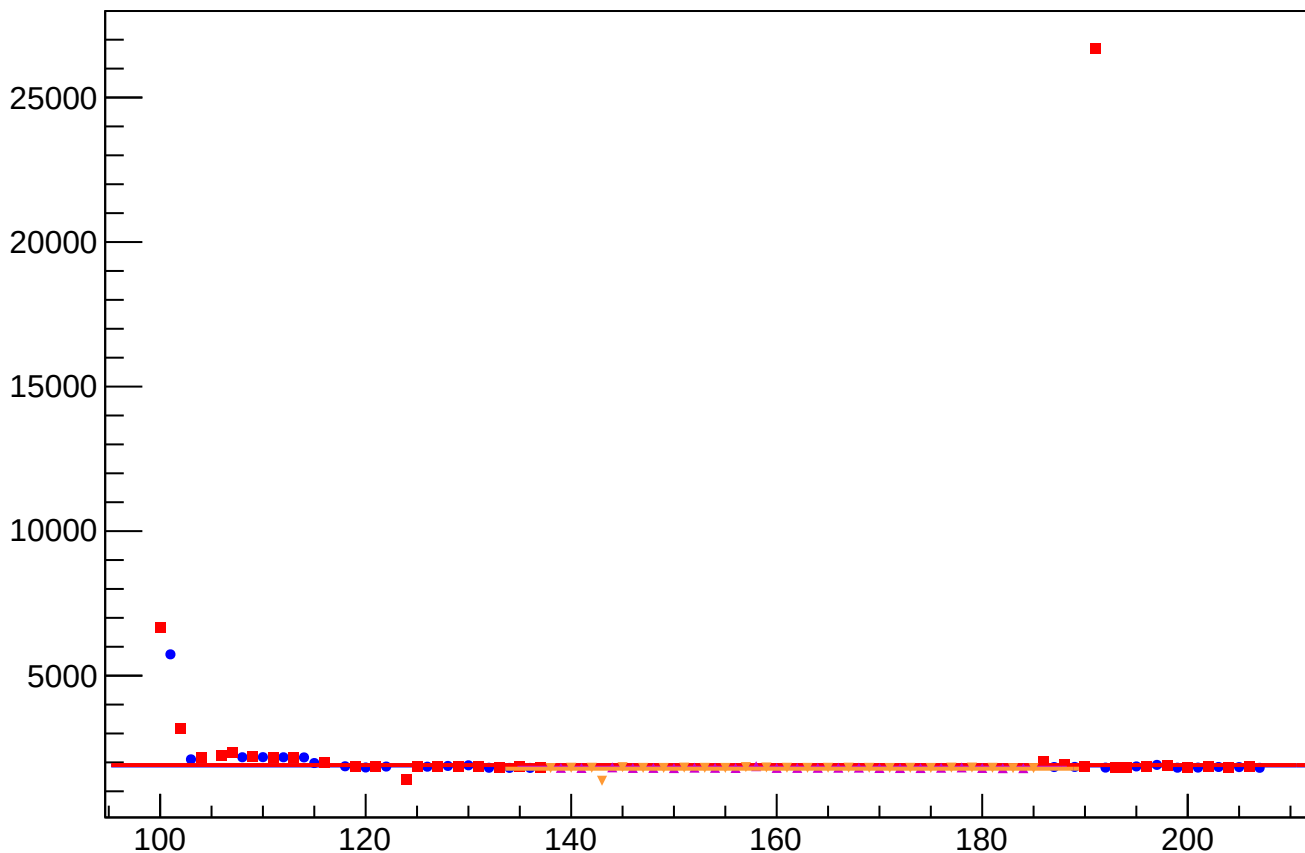
Left In:  $-2073.441 \pm 423.648$   $\chi^2/\text{NDF}$ : 27.0/22

+ sign  $1914.498 \pm 313.585$   $\chi^2/\text{NDF}$ : 59.7/50

All:  $-74.560 \pm 223.058$   $\chi^2/\text{NDF}$ : 197.8/104

- sign  $-2111.706 \pm 317.353$   $\chi^2/\text{NDF}$ : 56.7/53

# dit\_asym\_at1\_avg\_rms vs Slug



Right In: 1893.640 $\pm$ 0.350  $\chi^2$ /NDF: 675284.9/25

Left Out: 1780.913 $\pm$ 0.287  $\chi^2$ /NDF: 164936.9/24

Right Out: 1907.899 $\pm$ 0.339  $\chi^2$ /NDF: 691342.0/30

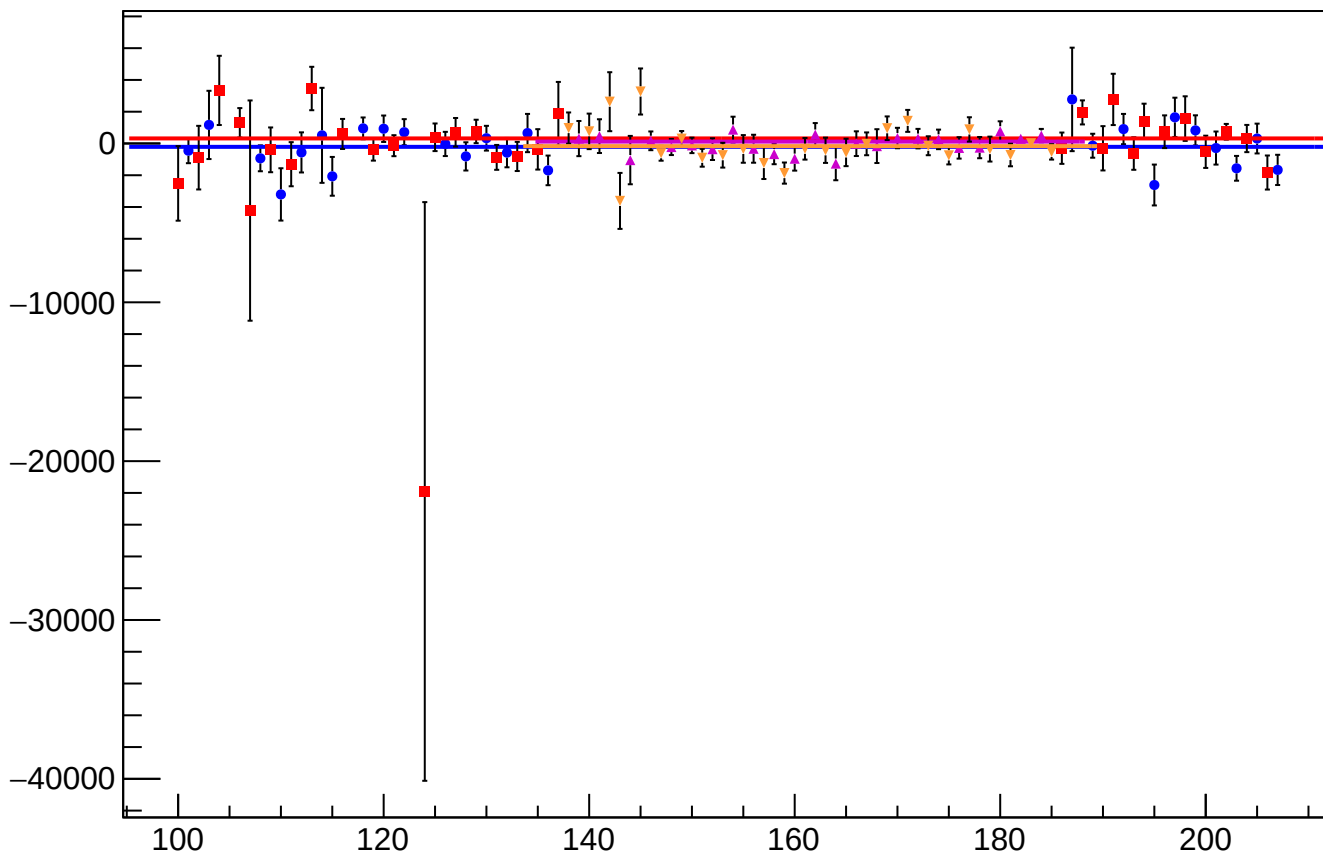
Left In: 1814.434 $\pm$ 0.300  $\chi^2$ /NDF: 2094.6/22

+ sign 1826.192 $\pm$ 0.222  $\chi^2$ /NDF: 902335.2/50

All: 1840.647 $\pm$ 0.158  $\chi^2$ /NDF: 1647094.1/10

- sign 1855.452 $\pm$ 0.224  $\chi^2$ /NDF: 736156.9/53

# asym\_at1\_avg\_dit\_correction\_mean vs Slug



Right In:  $-212.848 \pm 189.169$   $\chi^2/\text{NDF}$ : 32.1/25

Left Out:  $-167.909 \pm 121.628$   $\chi^2/\text{NDF}$ : 38.3/24

Right Out:  $317.446 \pm 179.178$   $\chi^2/\text{NDF}$ : 36.4/30

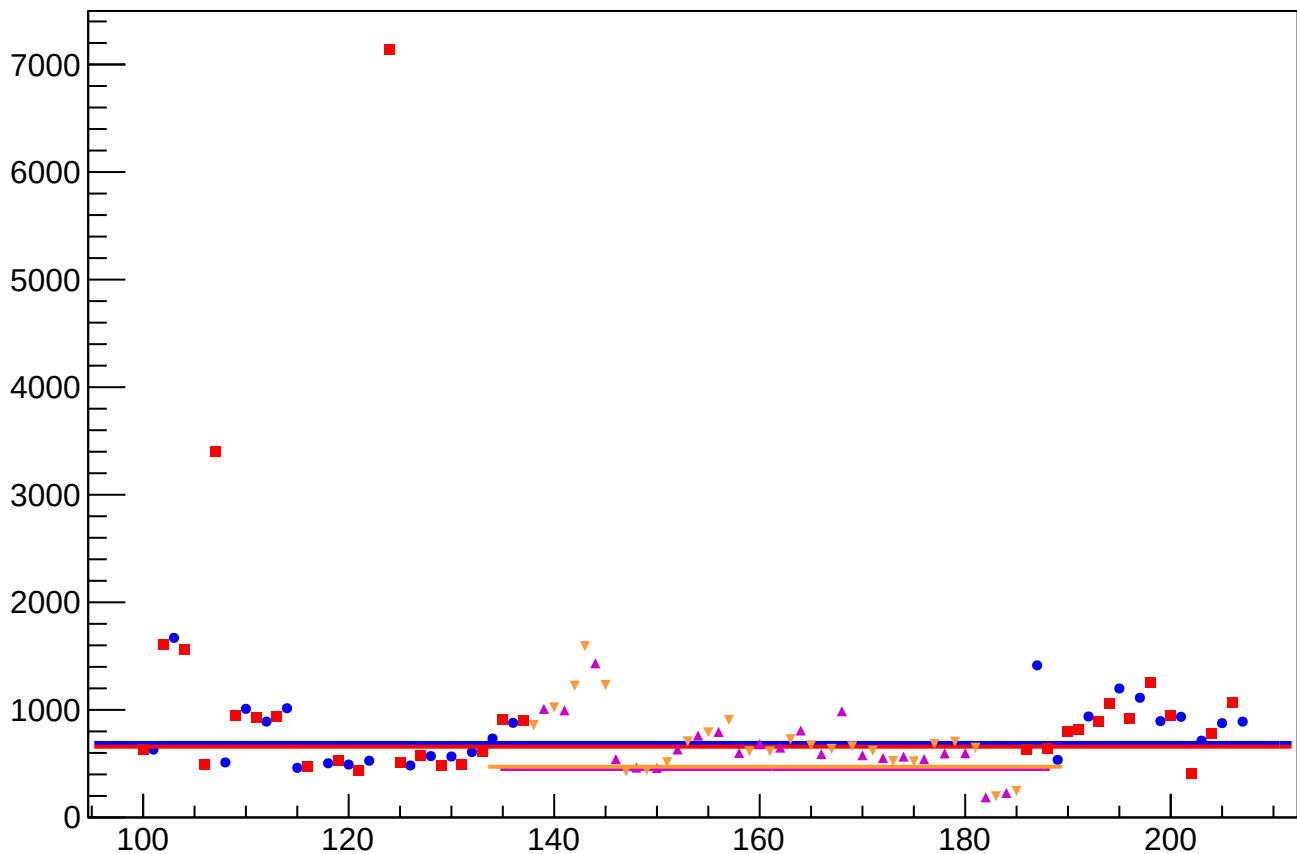
Left In:  $117.211 \pm 119.772$   $\chi^2/\text{NDF}$ : 12.3/22

+ sign  $-181.053 \pm 102.306$   $\chi^2/\text{NDF}$ : 70.4/50

All:  $3.872 \pm 71.356$   $\chi^2/\text{NDF}$ : 126.3/104

- sign  $179.050 \pm 99.574$   $\chi^2/\text{NDF}$ : 49.5/53

# asym\_at1\_avg\_dit\_correction\_rms vs Slug



Right In:  $692.653 \pm 0.134$   $\chi^2/\text{NDF}: 2657363.1/25$

Left Out:  $471.777 \pm 0.086$   $\chi^2/\text{NDF}: 8112666.9/24$

Right Out:  $657.899 \pm 0.127$   $\chi^2/\text{NDF}: 4347373.6/30$

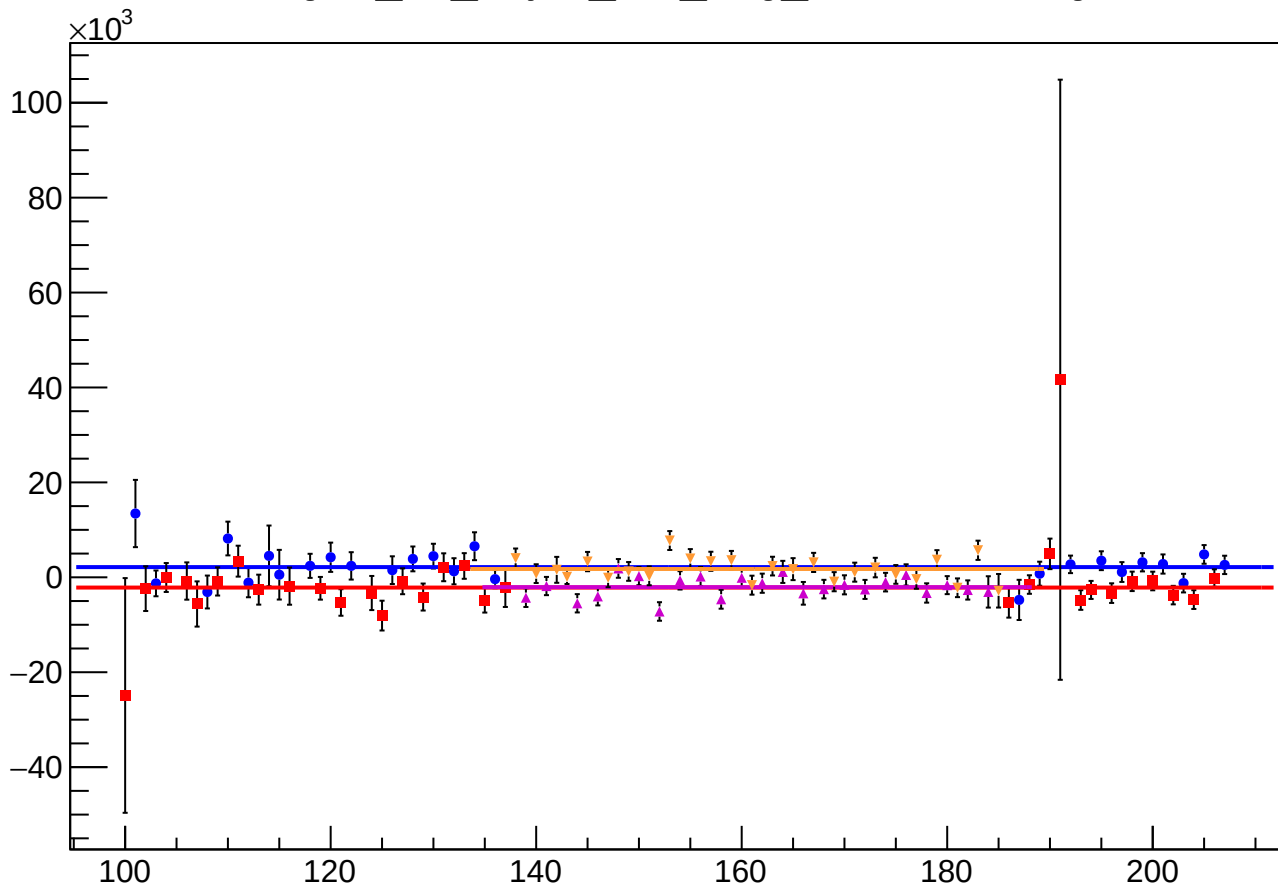
Left In:  $450.652 \pm 0.085$   $\chi^2/\text{NDF}: 7928332.5/22$

+ sign  $536.380 \pm 0.072$   $\chi^2/\text{NDF}: 12699159.7/50$

All:  $525.224 \pm 0.050$   $\chi^2/\text{NDF}: 26870533.4/10$

- sign  $514.657 \pm 0.070$   $\chi^2/\text{NDF}: 14125066.4/53$

# eigen\_dit\_asym\_at1\_avg\_mean vs Slug



Right In:  $2151.351 \pm 494.789$   $\chi^2/\text{NDF}$ : 25.5/25

Left Out:  $1755.493 \pm 405.401$   $\chi^2/\text{NDF}$ : 33.8/24

Right Out:  $-2160.634 \pm 479.051$   $\chi^2/\text{NDF}$ : 29.7/30

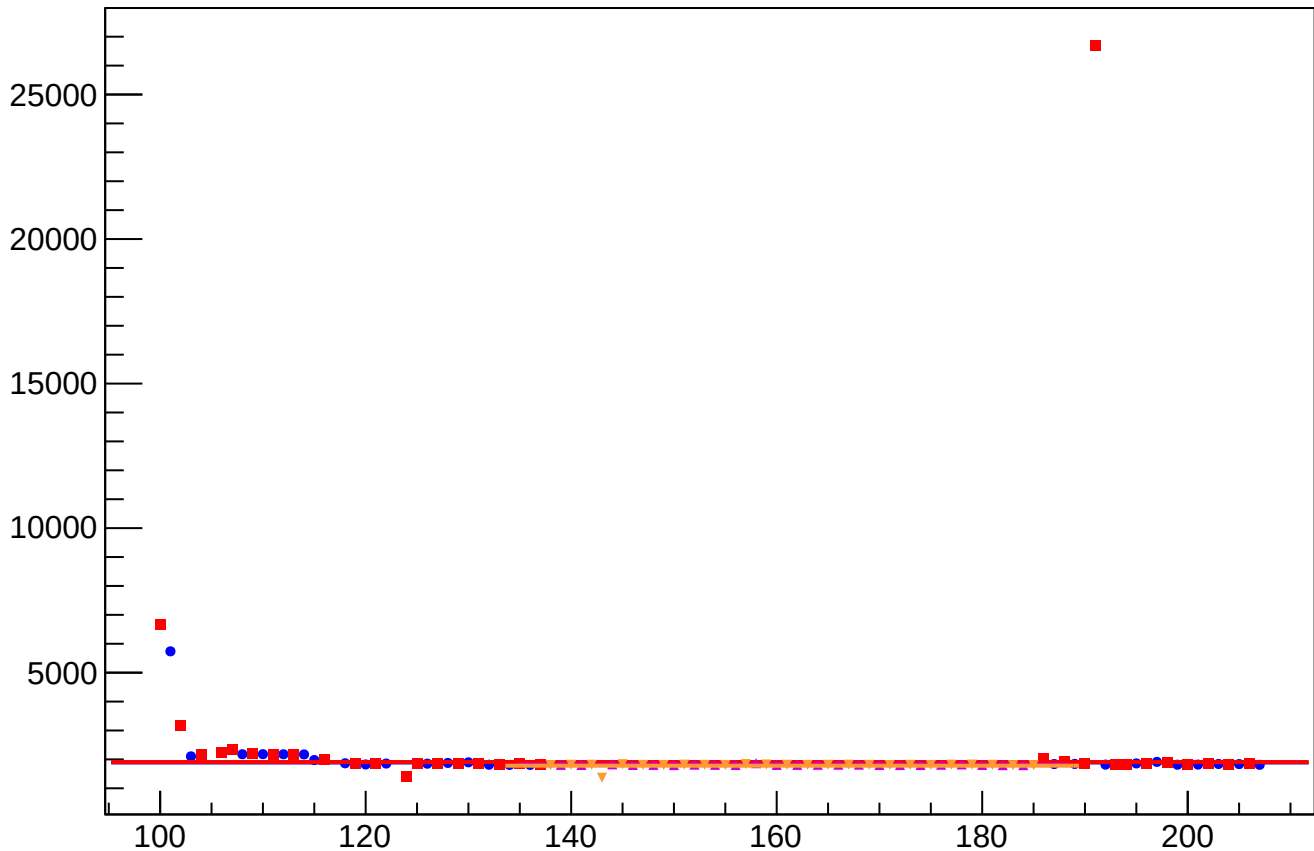
Left In:  $-2073.441 \pm 423.648$   $\chi^2/\text{NDF}$ : 27.0/22

+ sign  $1914.498 \pm 313.585$   $\chi^2/\text{NDF}$ : 59.7/50

All:  $-74.560 \pm 223.058$   $\chi^2/\text{NDF}$ : 197.8/104

- sign  $-2111.706 \pm 317.353$   $\chi^2/\text{NDF}$ : 56.7/53

# eigen\_dit\_asym\_at1\_avg\_rms vs Slug



Right In: 1893.640 $\pm$ 0.350  $\chi^2$ /NDF: 675284.5/25

Left Out: 1780.913 $\pm$ 0.287  $\chi^2$ /NDF:164936.9/24

Right Out: 1907.899 $\pm$ 0.339  $\chi^2$ /NDF: 691340.6/30

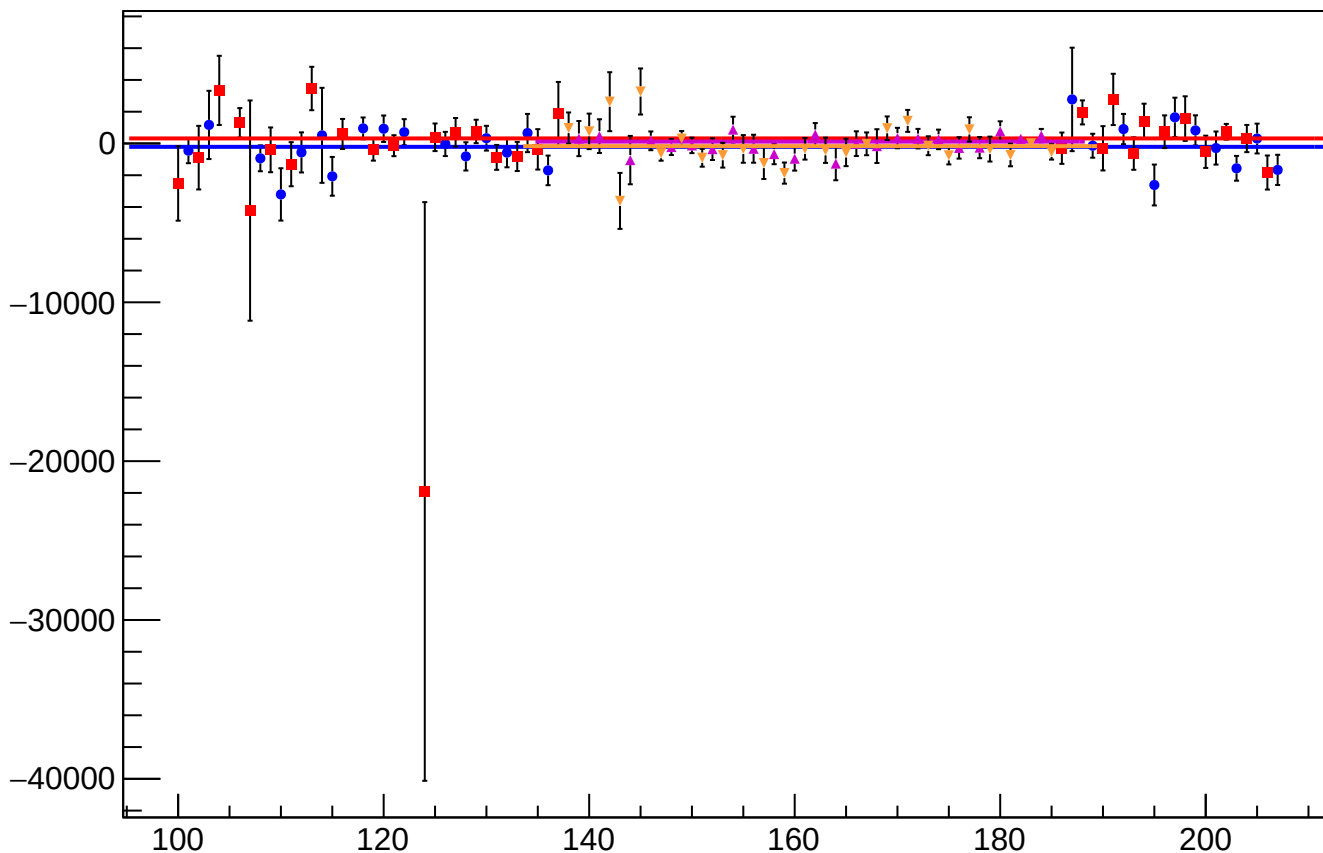
Left In: 1814.434 $\pm$ 0.300  $\chi^2$ /NDF:2094.6/22

+ sign 1826.192 $\pm$ 0.222  $\chi^2$ /NDF: 902334.7/50

All: 1840.647 $\pm$ 0.158  $\chi^2$ /NDF: 1647092.1/10

- sign 1855.452 $\pm$ 0.224  $\chi^2$ /NDF: 736155.4/53

asym\_at1\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In: -212.848 $\pm$ 189.169  $\chi^2$ /NDF: 32.1/25

Left Out: -167.909 $\pm$ 121.629  $\chi^2$ /NDF:38.3/24

Right Out: 317.446 $\pm$ 179.178  $\chi^2$ /NDF: 36.4/30

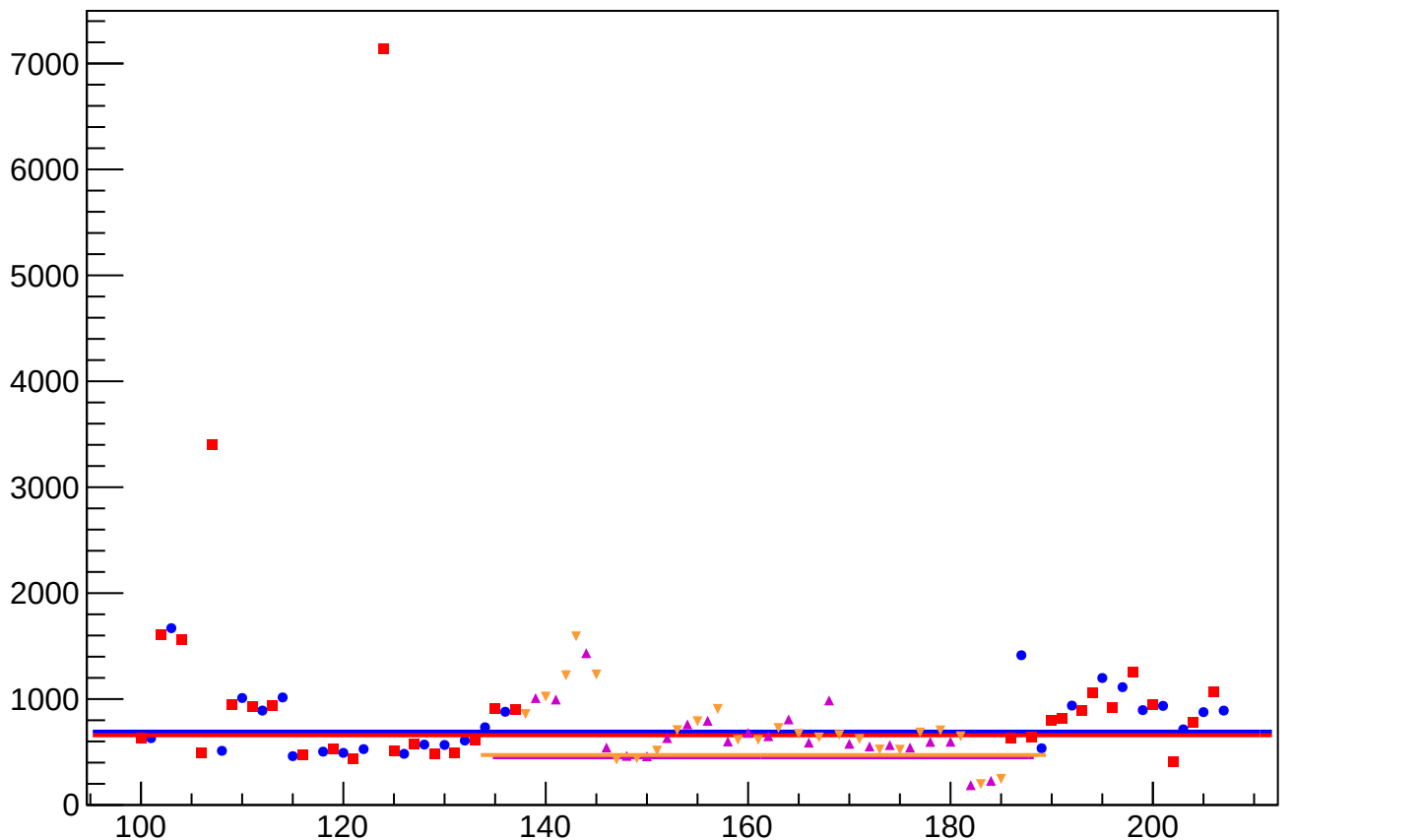
Left In: 117.211 $\pm$ 119.772  $\chi^2$ /NDF:12.3/22

+ sign -181.053 $\pm$ 102.306  $\chi^2$ /NDF: 70.4/50

All: 3.872 $\pm$ 71.356  $\chi^2$ /NDF: 126.3/104

- sign 179.051 $\pm$ 99.574  $\chi^2$ /NDF: 49.5/53

# asym\_at1\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In:  $692.652 \pm 0.134$   $\chi^2/\text{NDF}$ : 2657385.1/25

Left Out:  $471.778 \pm 0.086$   $\chi^2/\text{NDF}$ : 8112665.9/24

Right Out:  $657.899 \pm 0.127$   $\chi^2/\text{NDF}$ : 4347384.6/30

Left In:  $450.653 \pm 0.085$   $\chi^2/\text{NDF}$ : 7928317.5/22

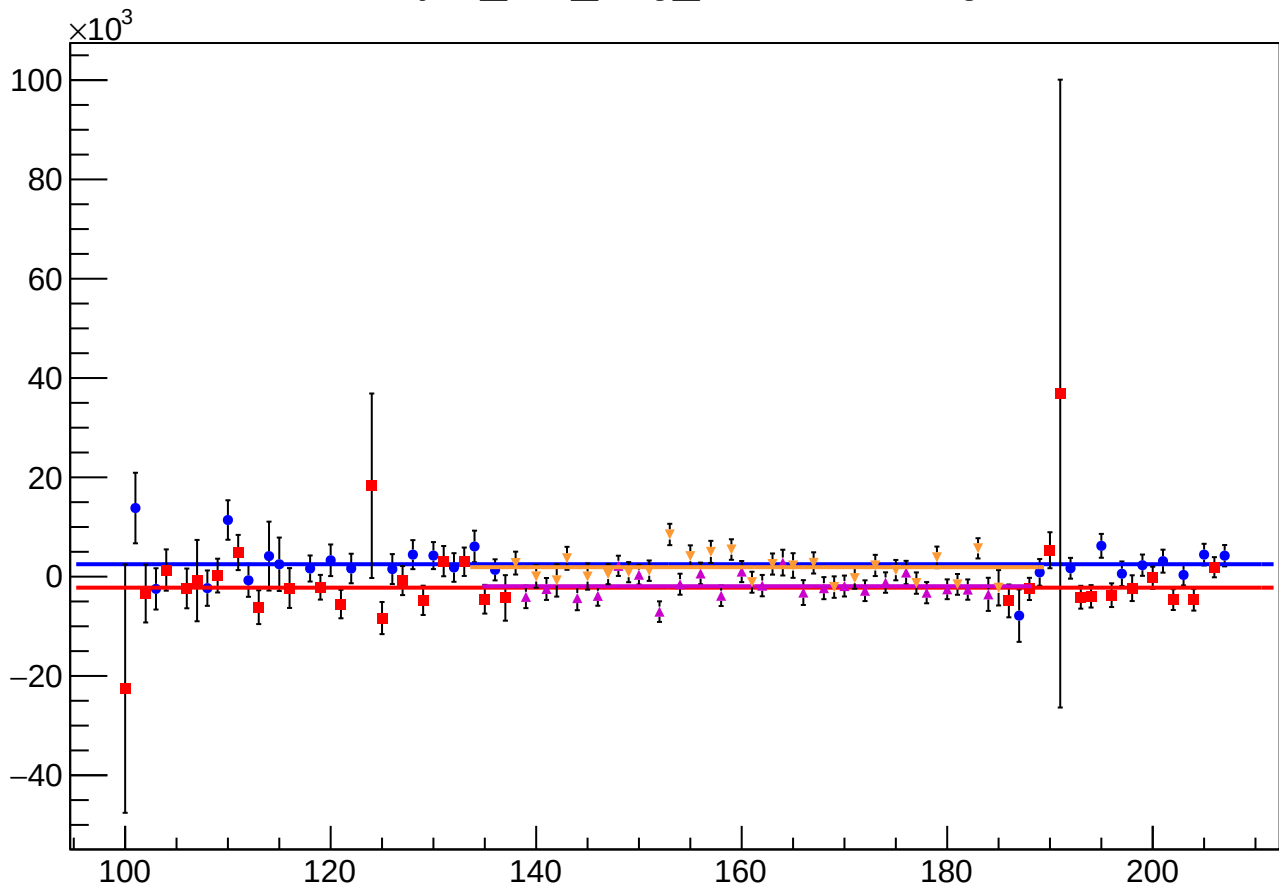
+ sign  $536.381 \pm 0.072$   $\chi^2/\text{NDF}$ : 12699160.1/50

All:  $525.225 \pm 0.050$   $\chi^2/\text{NDF}$ : 26870511.1/10

- sign  $514.657 \pm 0.070$   $\chi^2/\text{NDF}$ : 14125045.1/53



# asym\_at1\_avg\_mean vs Slug



Right In: 2502.496 $\pm$ 548.813  $\chi^2$ /NDF: 24.5/25

Left Out: 1907.369 $\pm$ 443.523  $\chi^2$ /NDF: 36.3/24

Right Out: -2217.896 $\pm$ 538.111  $\chi^2$ /NDF: 36.3/30

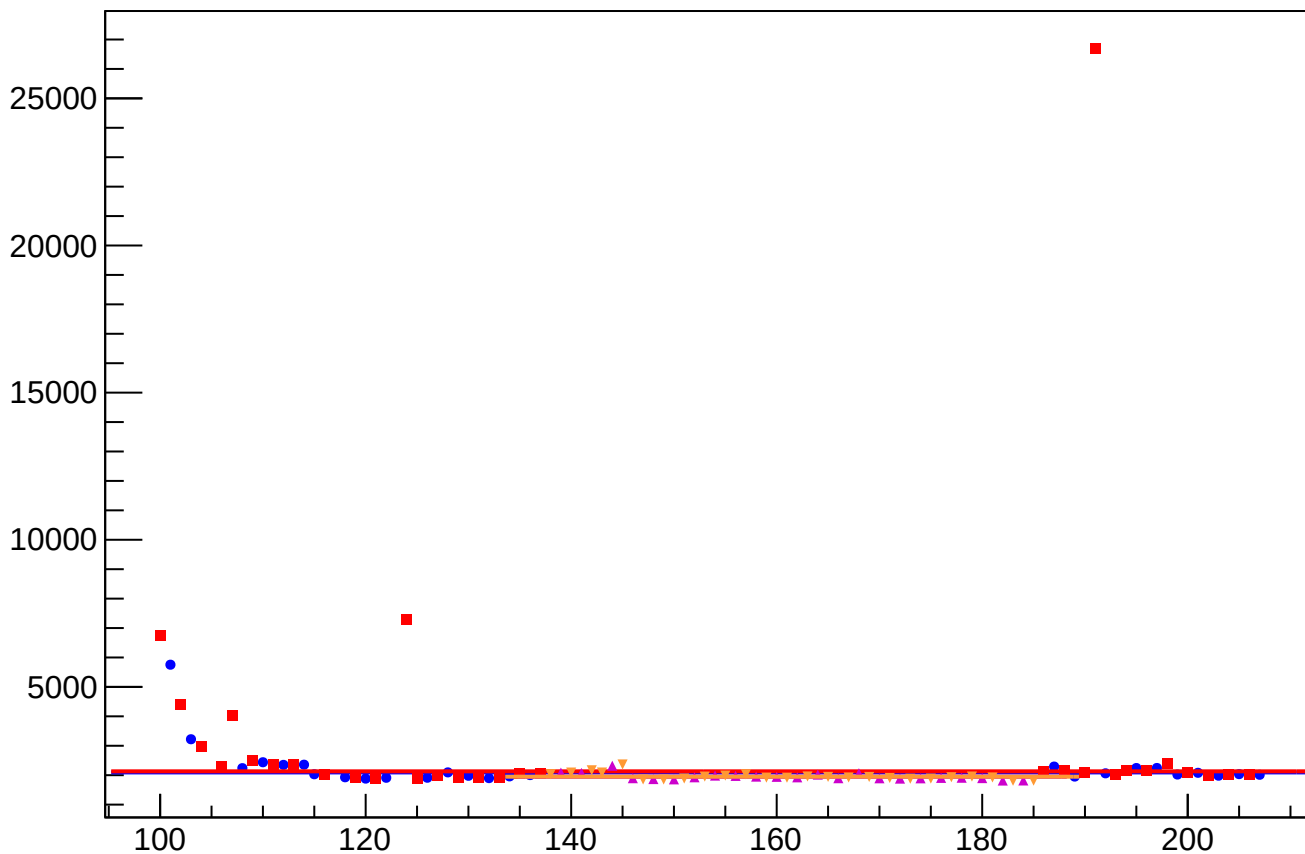
Left In: -1926.570 $\pm$ 454.880  $\chi^2$ /NDF: 24.8/22

+ sign 2142.490 $\pm$ 344.958  $\chi^2$ /NDF: 61.5/50

All: 61.977 $\pm$ 244.778  $\chi^2$ /NDF: 195.9/104

- sign -2047.985 $\pm$ 347.391  $\chi^2$ /NDF: 61.2/53

# asym\_at1\_avg\_rms vs Slug



Right In: 2093.986+/-0.388  $\chi^2/\text{NDF}$ : 797999.2/25

Left Out: 1949.001+/-0.314  $\chi^2/\text{NDF}$ :108523.9/24

Right Out: 2131.192+/-0.381  $\chi^2/\text{NDF}$ : 1178809.6/30

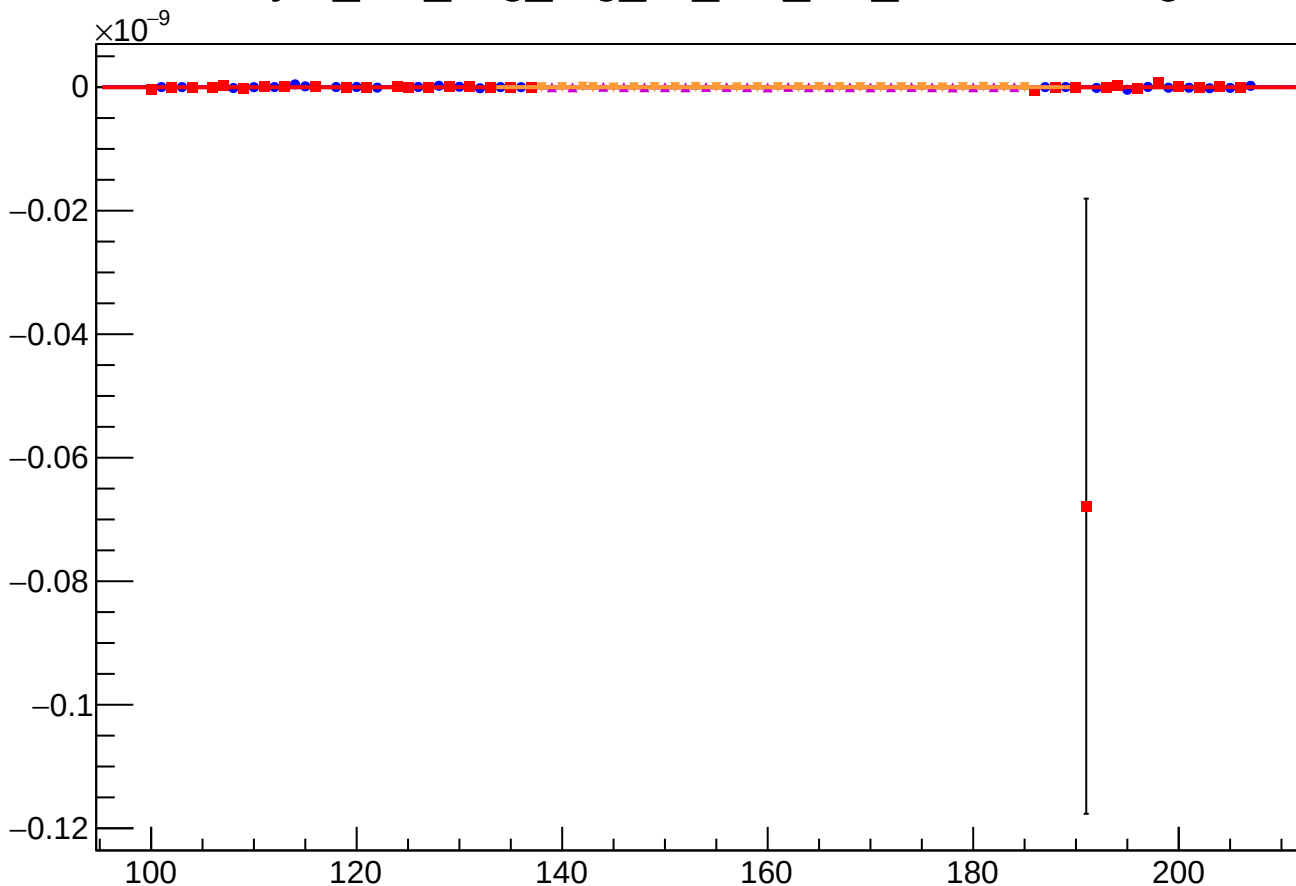
Left In: 1945.132+/-0.322  $\chi^2/\text{NDF}$ :95954.5/22

+ sign 2006.282+/-0.244  $\chi^2/\text{NDF}$ : 990958.8/50

All: 2014.421+/-0.173  $\chi^2/\text{NDF}$ : 2407421.6/10

- sign 2022.676+/-0.246  $\chi^2/\text{NDF}$ : 1414220.0/53

# asym\_at1\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 33.3/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:28.7/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 30.2/30

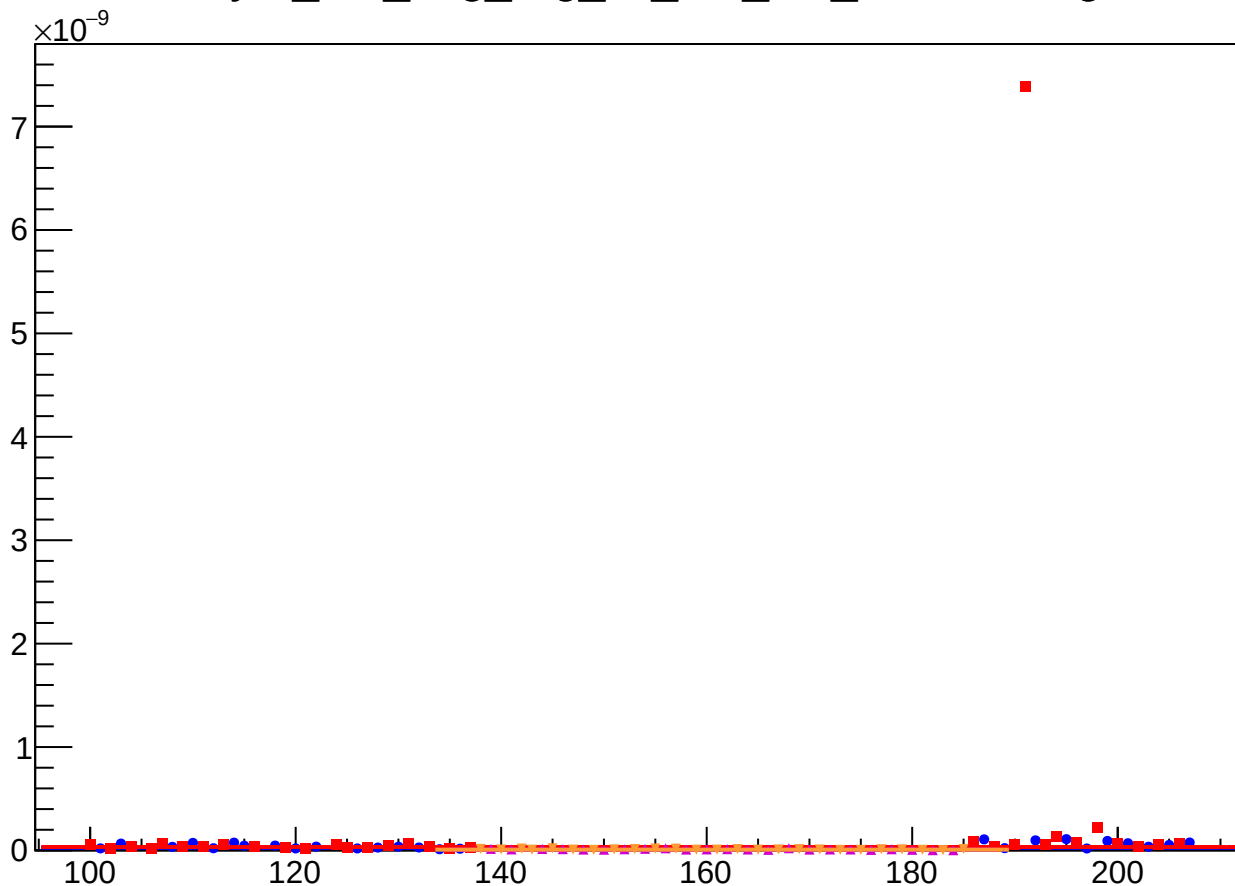
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:31.1/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 62.1/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 124.7/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 62.4/53

# asym\_at1\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2$ /NDF: 3355996.3/25

Left Out: 0.000+/-0.000  $\chi^2$ /NDF: 2160933.2/24

Right Out: 0.000+/-0.000  $\chi^2$ /NDF: 3033468.9/30

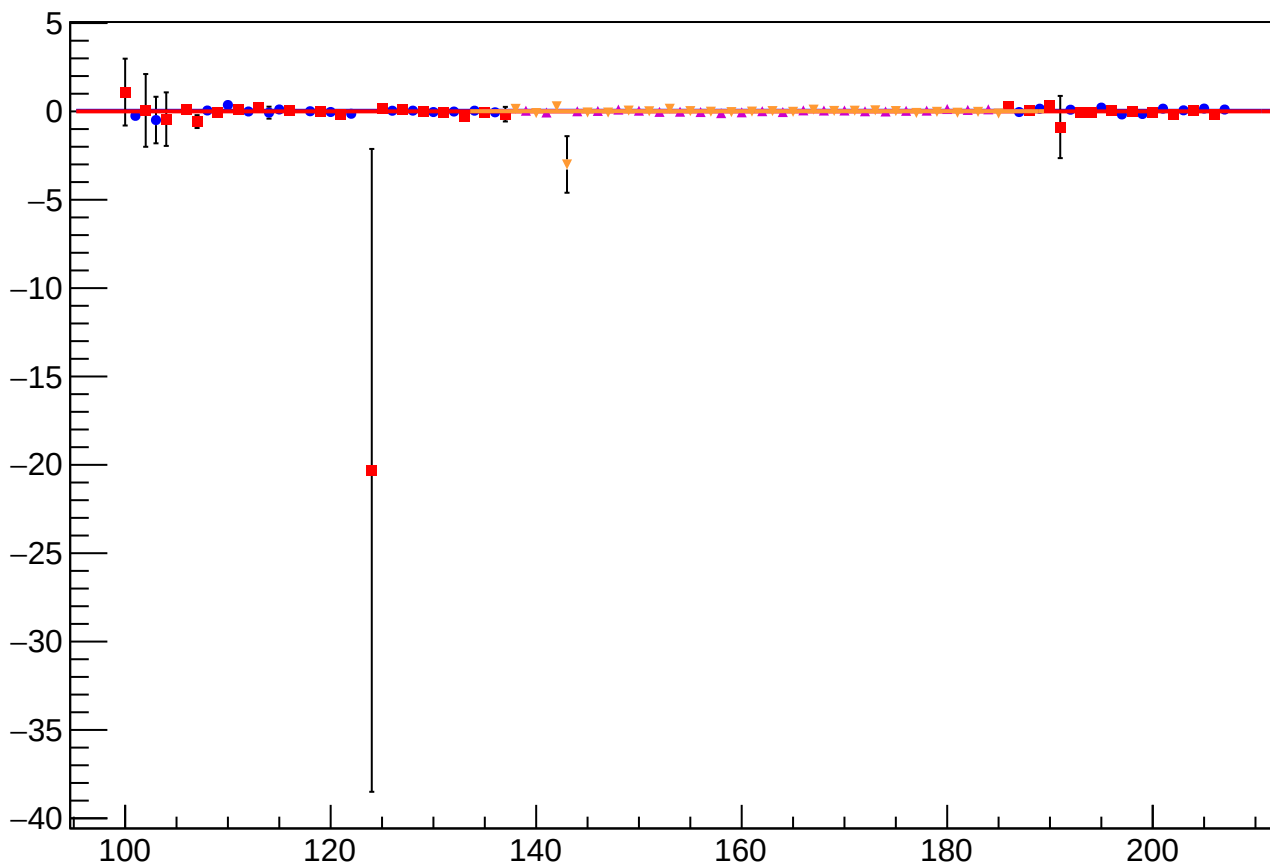
Left In: 0.000+/-0.000  $\chi^2$ /NDF: 2613869.2/22

+ sign 0.000+/-0.000  $\chi^2$ /NDF: 9039038.4/50

All: 0.000+/-0.000  $\chi^2$ /NDF: 19511999.0/104

- sign 0.000+/-0.000  $\chi^2$ /NDF: 10470898.4/53

asym\_at1\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.034 $\pm$ 0.021  $\chi^2$ /NDF: 22.1/25

Left Out: 0.011 $\pm$ 0.012  $\chi^2$ /NDF:29.6/24

Right Out: 0.002 $\pm$ 0.020  $\chi^2$ /NDF: 29.9/30

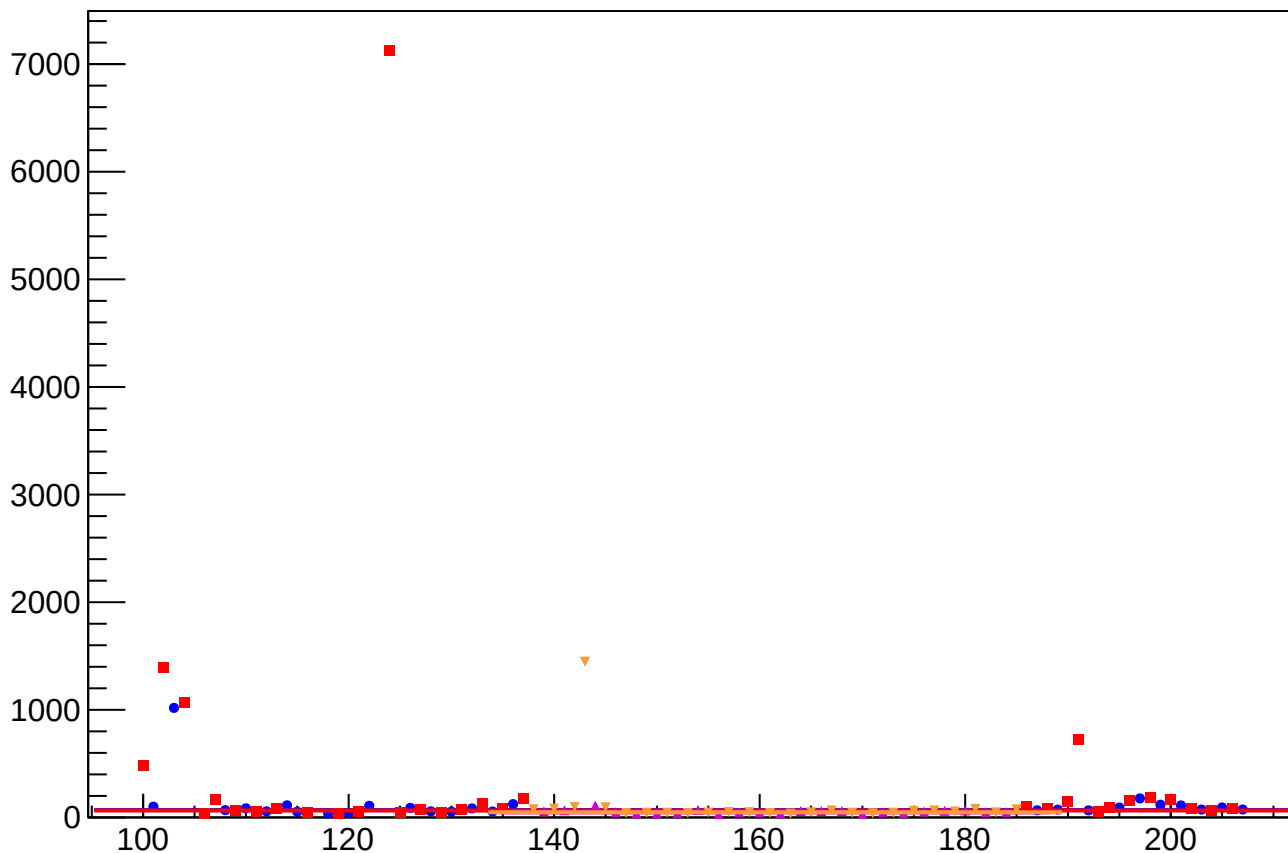
Left In: 0.018 $\pm$ 0.012  $\chi^2$ /NDF:20.3/22

+ sign 0.017 $\pm$ 0.011  $\chi^2$ /NDF: 52.6/50

All: 0.015 $\pm$ 0.008  $\chi^2$ /NDF: 103.3/104

- sign 0.014 $\pm$ 0.011  $\chi^2$ /NDF: 50.7/53

# asym\_at1\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In:  $68.385 \pm 0.015$   $\chi^2/\text{NDF}: 3883230.7/25$

Left Out:  $47.901 \pm 0.009$   $\chi^2/\text{NDF}: 3496596.6/24$

Right Out:  $64.794 \pm 0.014$   $\chi^2/\text{NDF}: 6223538.7/30$

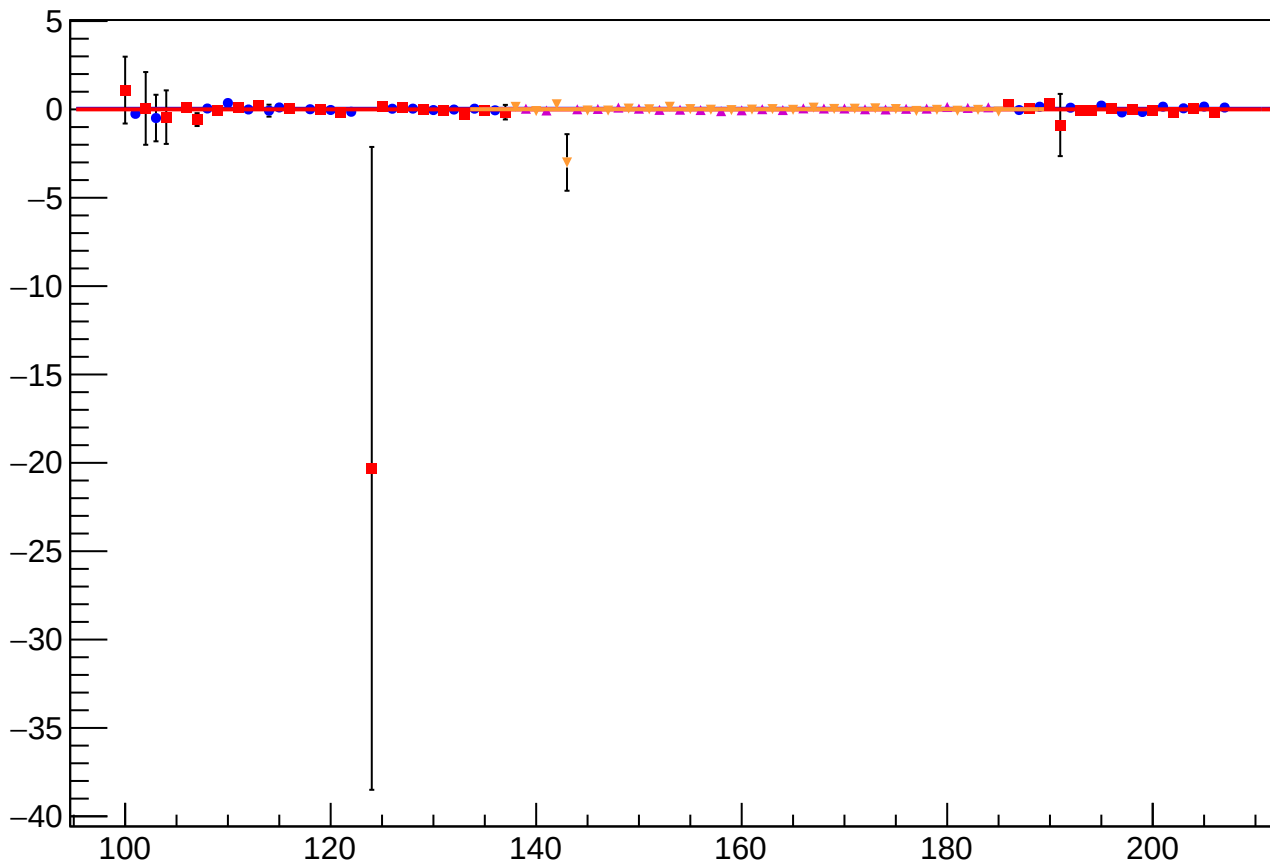
Left In:  $46.786 \pm 0.009$   $\chi^2/\text{NDF}: 1949486.1/22$

+ sign  $53.126 \pm 0.008$   $\chi^2/\text{NDF}: 8762501.3/50$

All:  $52.316 \pm 0.005$   $\chi^2/\text{NDF}: 18097973.8/104$

- sign  $51.540 \pm 0.007$   $\chi^2/\text{NDF}: 9313186.6/53$

asym\_at1\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.034 \pm 0.021$   $\chi^2/\text{NDF}$ : 22.1/25

Left Out:  $0.011 \pm 0.012$   $\chi^2/\text{NDF}$ : 29.6/24

Right Out:  $0.002 \pm 0.020$   $\chi^2/\text{NDF}$ : 29.9/30

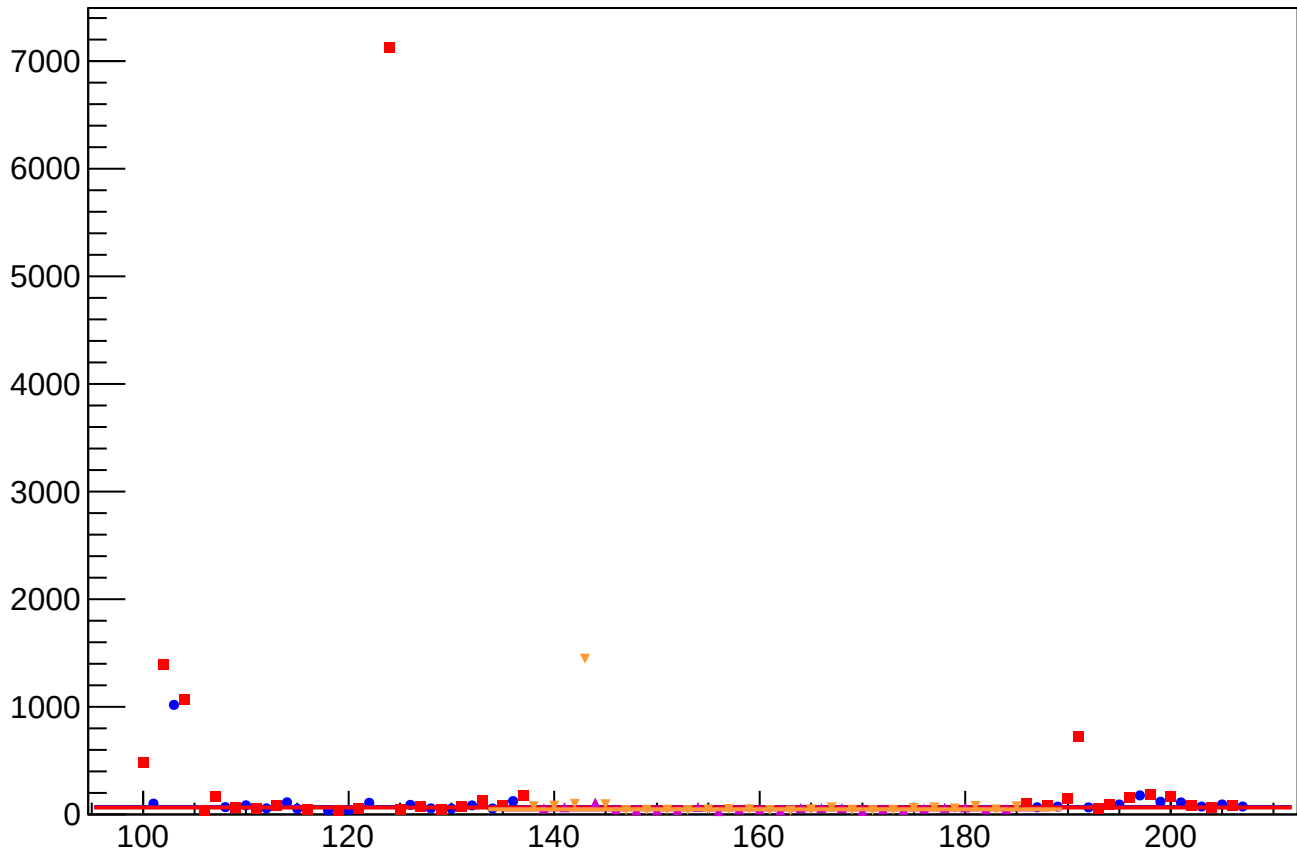
Left In:  $0.018 \pm 0.012$   $\chi^2/\text{NDF}$ : 20.3/22

+ sign  $0.017 \pm 0.011$   $\chi^2/\text{NDF}$ : 52.6/50

All:  $0.015 \pm 0.008$   $\chi^2/\text{NDF}$ : 103.3/104

- sign  $0.014 \pm 0.011$   $\chi^2/\text{NDF}$ : 50.7/53

# asym\_at1\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 68.385+/-0.015  $\chi^2/\text{NDF}$ : 3883230.7/25

Left Out: 47.901+/-0.009  $\chi^2/\text{NDF}$ : 3496596.6/24

Right Out: 64.794+/-0.014  $\chi^2/\text{NDF}$ : 6223538.7/30

Left In: 46.786+/-0.009  $\chi^2/\text{NDF}$ : 1949486.1/22

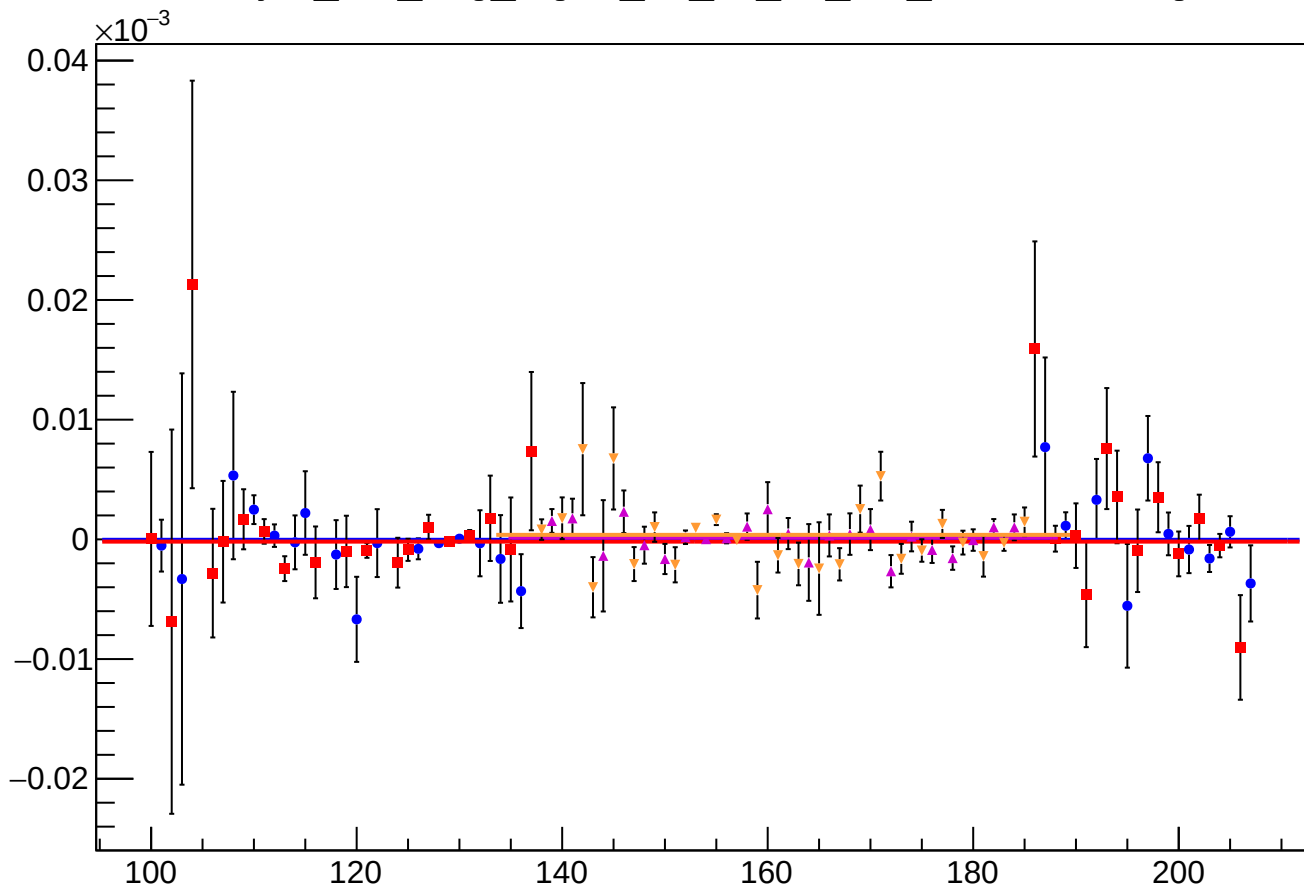
+ sign 53.126+/-0.008  $\chi^2/\text{NDF}$ : 8762501.3/50

All: 52.316+/-0.005  $\chi^2/\text{NDF}$ : 18097973.8/104

- sign 51.540+/-0.007  $\chi^2/\text{NDF}$ : 9313186.6/53



asym\_at1\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 24.5/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:51.7/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 30.4/30

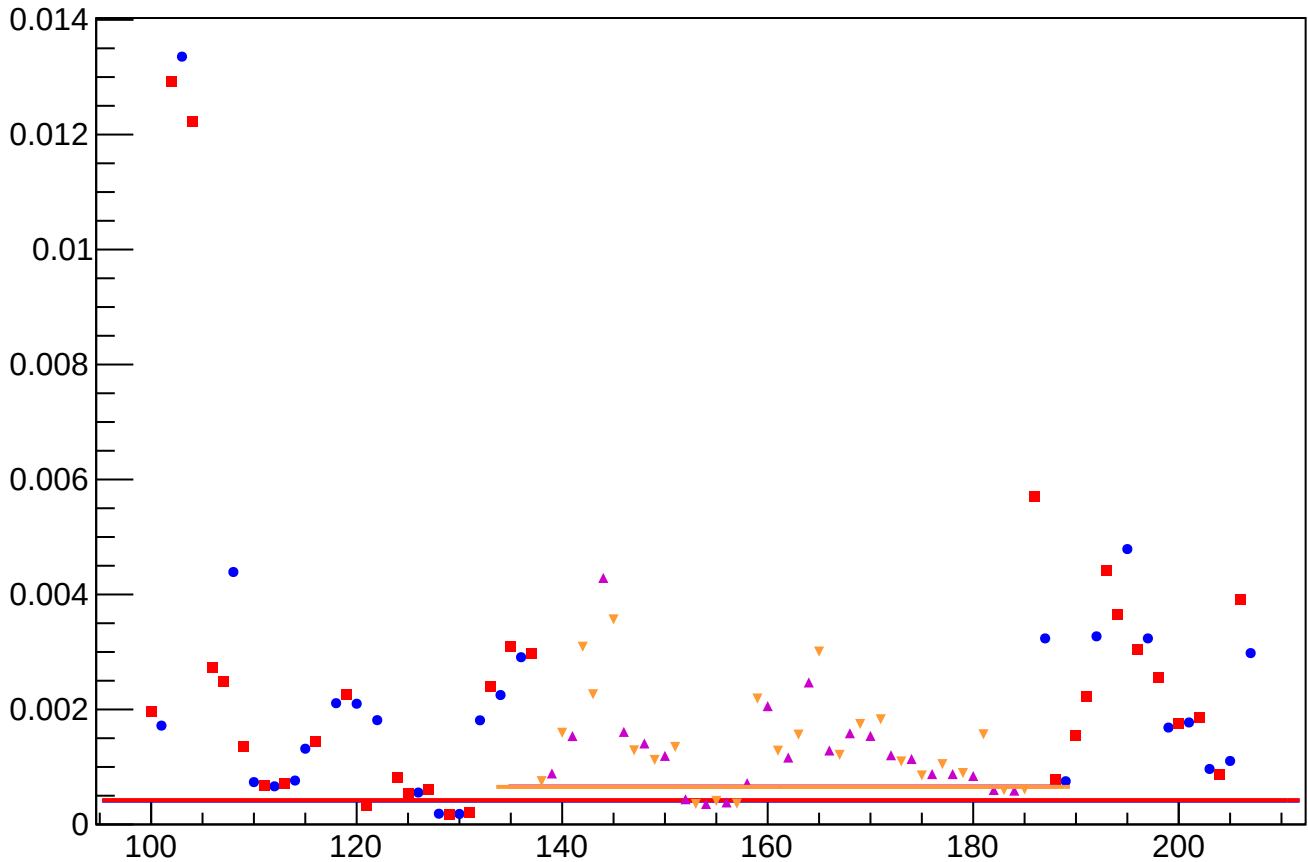
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:19.9/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 78.8/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 131.8/104

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 51.8/53

asym\_at1\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 18228878.7/25

Left Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ :12083891.4/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 18808502.3/30

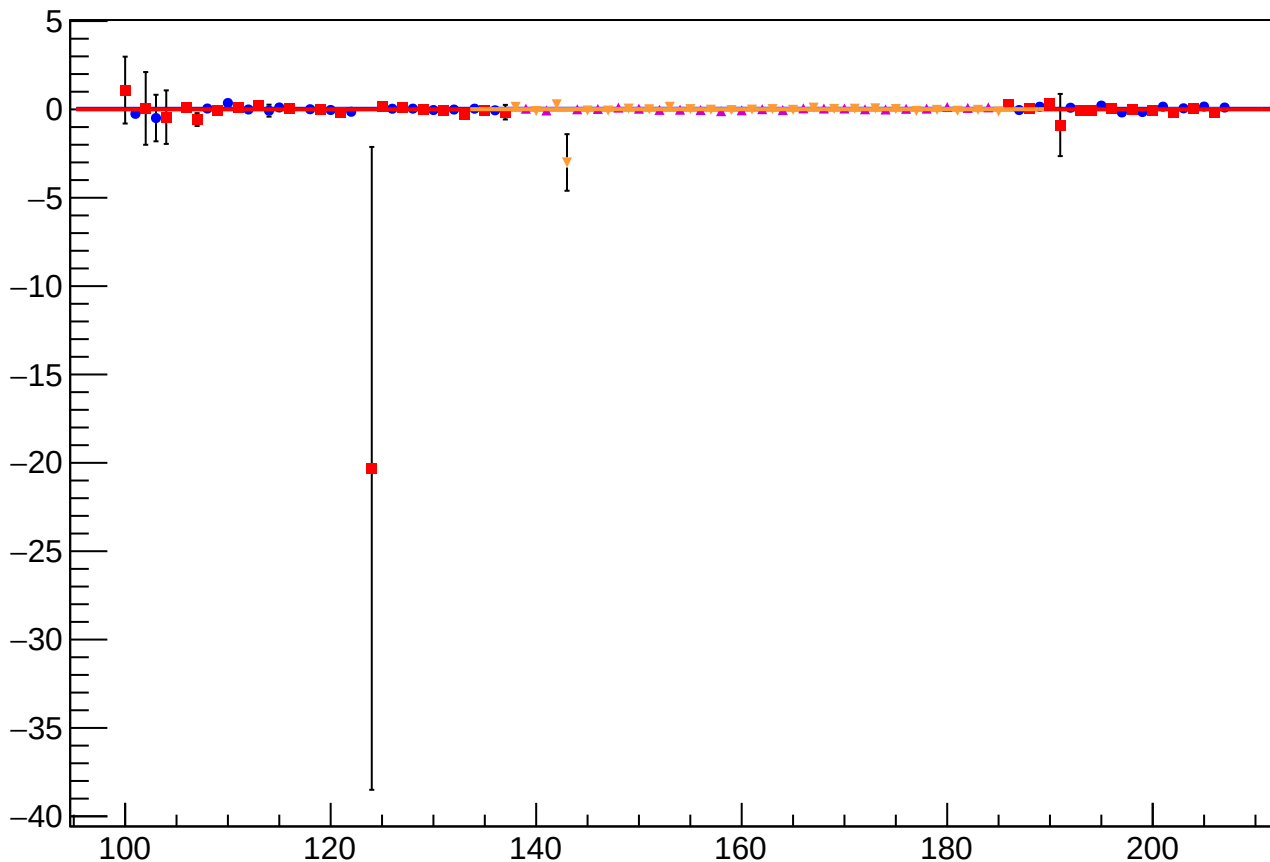
Left In: 0.001+/-0.000  $\chi^2/\text{NDF}$ :9695095.3/22

+ sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 32044707.9/50

All: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 62189823.6/104

- sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 30143694.9/53

asym\_at1\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.034 $\pm$ 0.021  $\chi^2$ /NDF: 22.1/25

Left Out: 0.011 $\pm$ 0.012  $\chi^2$ /NDF: 29.6/24

Right Out: 0.002 $\pm$ 0.020  $\chi^2$ /NDF: 29.9/30

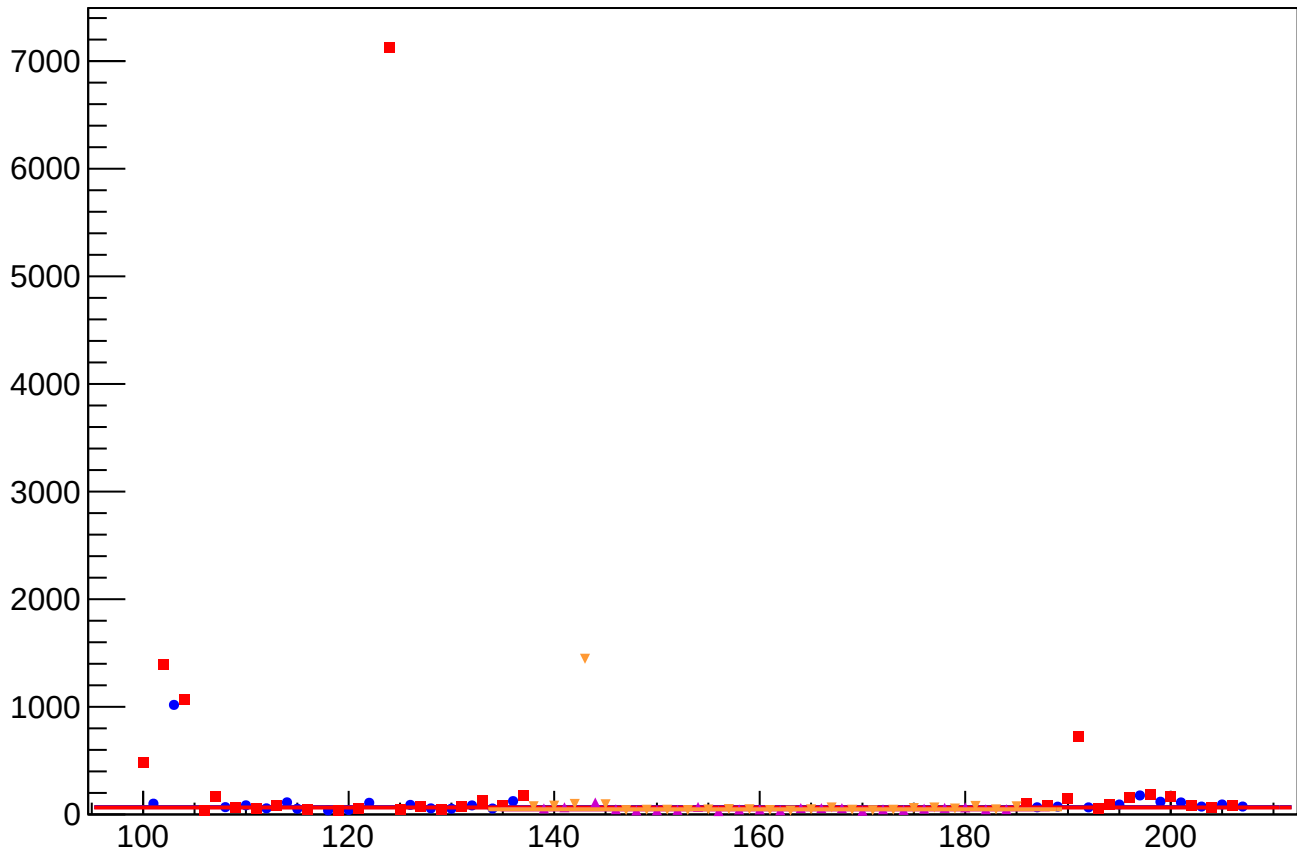
Left In: 0.018 $\pm$ 0.012  $\chi^2$ /NDF: 20.3/22

+ sign 0.017 $\pm$ 0.011  $\chi^2$ /NDF: 52.6/50

All: 0.015 $\pm$ 0.008  $\chi^2$ /NDF: 103.3/104

- sign 0.014 $\pm$ 0.011  $\chi^2$ /NDF: 50.7/53

# asym\_at1\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 68.385+/-0.015  $\chi^2/\text{NDF}$ : 3883286.5/25

Left Out: 47.902+/-0.009  $\chi^2/\text{NDF}$ : 3496571.8/24

Right Out: 64.794+/-0.014  $\chi^2/\text{NDF}$ : 6223733.5/30

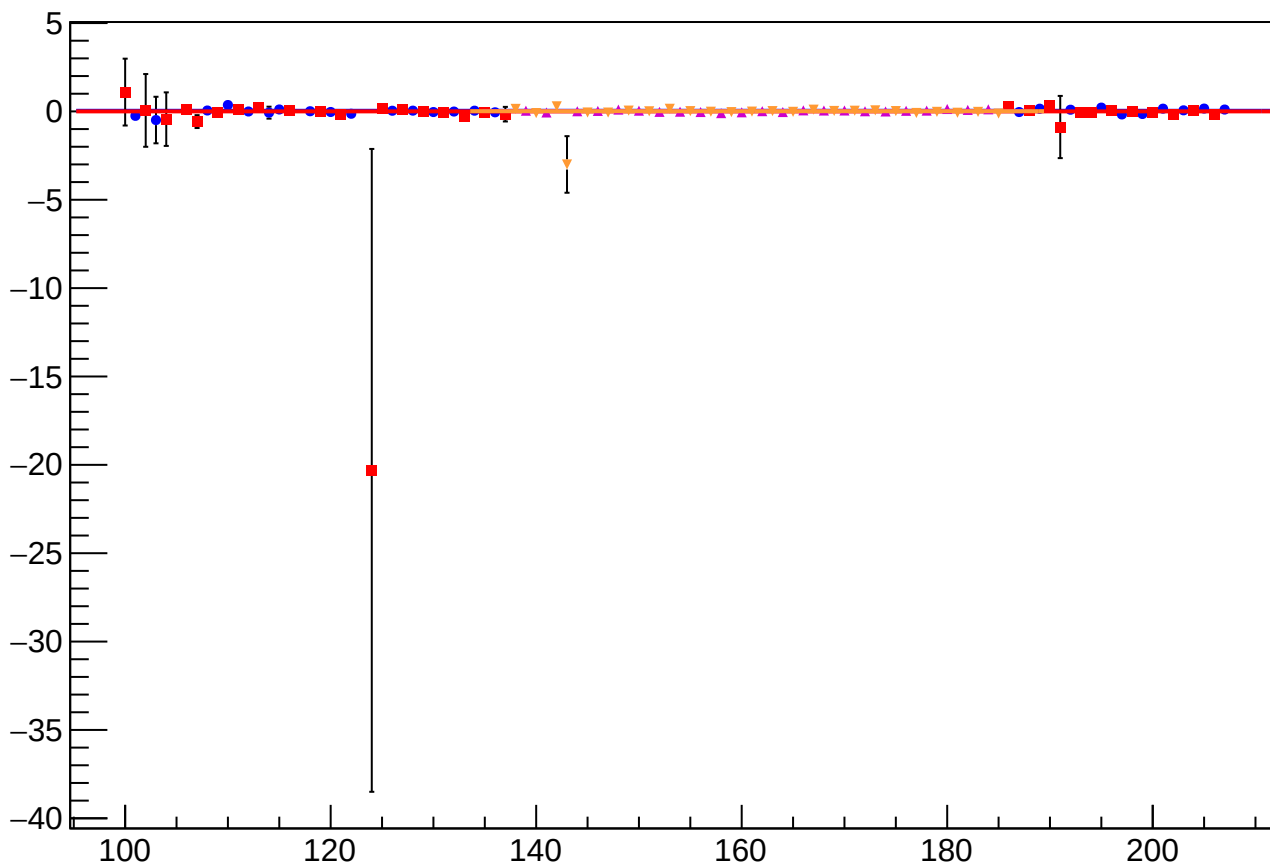
Left In: 46.786+/-0.009  $\chi^2/\text{NDF}$ : 1949480.3/22

+ sign 53.126+/-0.008  $\chi^2/\text{NDF}$ : 8762510.7/50

All: 52.316+/-0.005  $\chi^2/\text{NDF}$ : 18098096.0/104

- sign 51.539+/-0.007  $\chi^2/\text{NDF}$ : 9313288.9/53

asym\_at1\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.034 \pm 0.021$   $\chi^2/\text{NDF}$ : 22.1/25

Left Out:  $0.011 \pm 0.012$   $\chi^2/\text{NDF}$ : 29.6/24

Right Out:  $0.002 \pm 0.020$   $\chi^2/\text{NDF}$ : 29.9/30

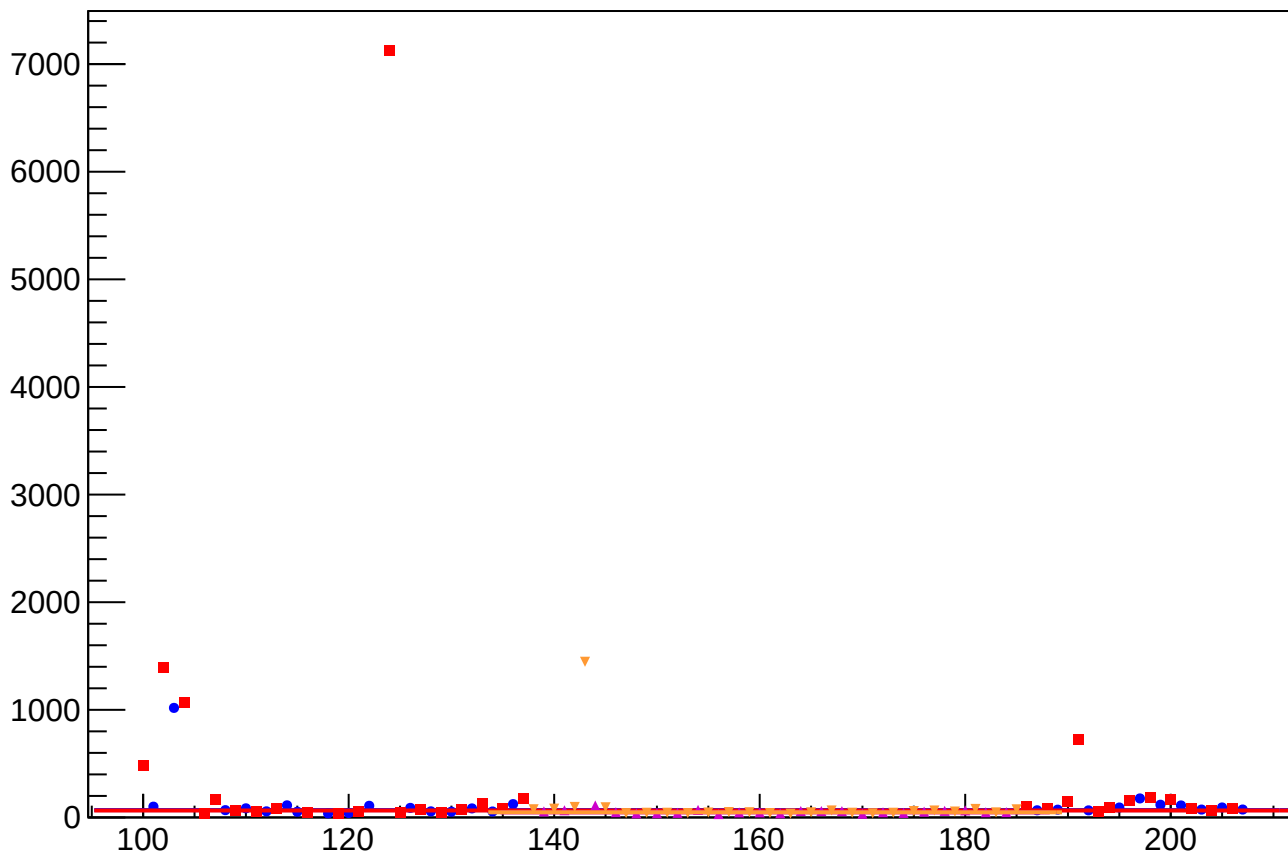
Left In:  $0.018 \pm 0.012$   $\chi^2/\text{NDF}$ : 20.3/22

+ sign  $0.017 \pm 0.011$   $\chi^2/\text{NDF}$ : 52.6/50

All:  $0.015 \pm 0.008$   $\chi^2/\text{NDF}$ : 103.3/104

- sign  $0.014 \pm 0.011$   $\chi^2/\text{NDF}$ : 50.7/53

asym\_at1\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In:  $68.385 \pm 0.015$   $\chi^2/\text{NDF}: 3883286.5/25$

Left Out:  $47.902 \pm 0.009$   $\chi^2/\text{NDF}: 3496571.8/24$

Right Out:  $64.794 \pm 0.014$   $\chi^2/\text{NDF}: 6223733.5/30$

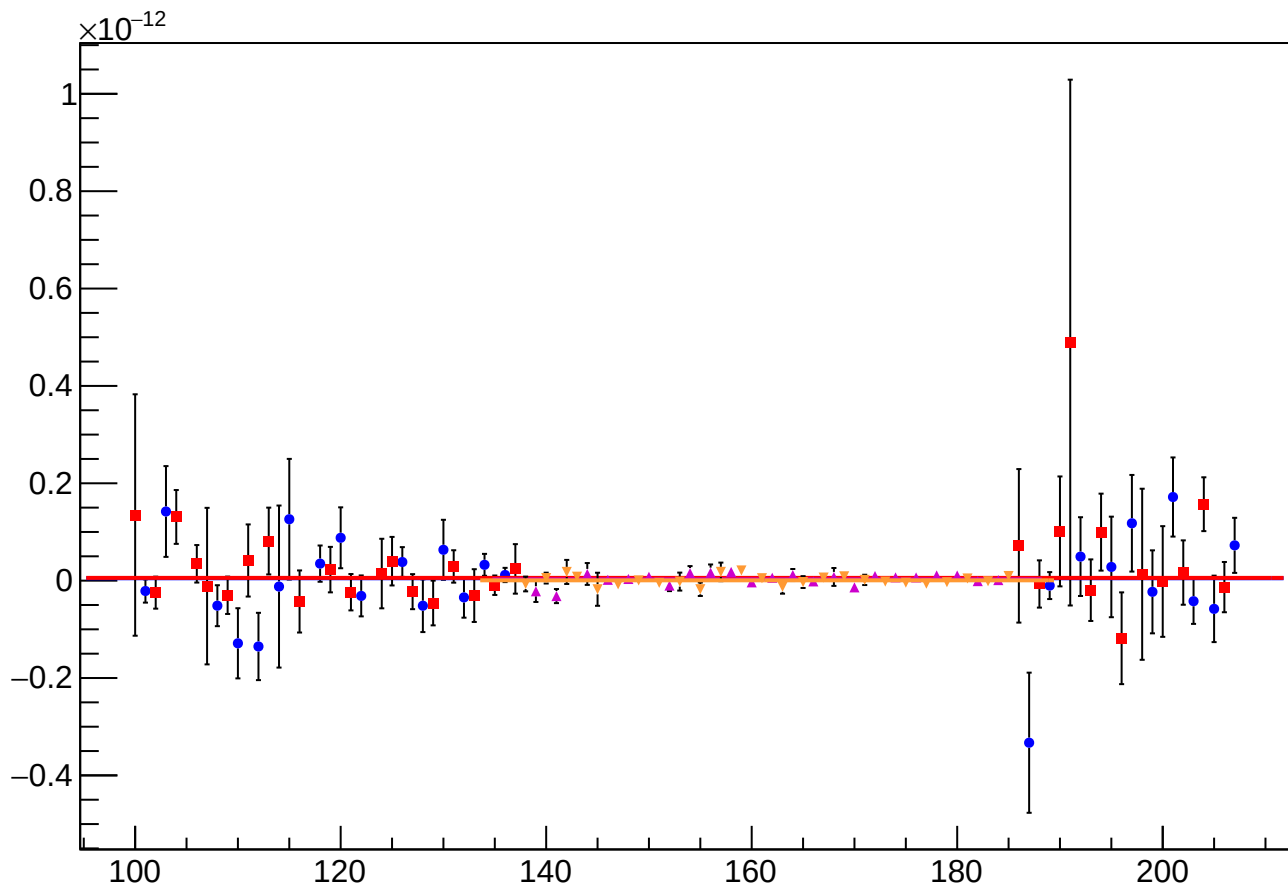
Left In:  $46.786 \pm 0.009$   $\chi^2/\text{NDF}: 1949480.3/22$

+ sign  $53.126 \pm 0.008$   $\chi^2/\text{NDF}: 8762510.7/50$

All:  $52.316 \pm 0.005$   $\chi^2/\text{NDF}: 18098096.0/104$

- sign  $51.539 \pm 0.007$   $\chi^2/\text{NDF}: 9313288.9/53$

asym\_at1\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 37.7/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:15.1/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 27.2/30

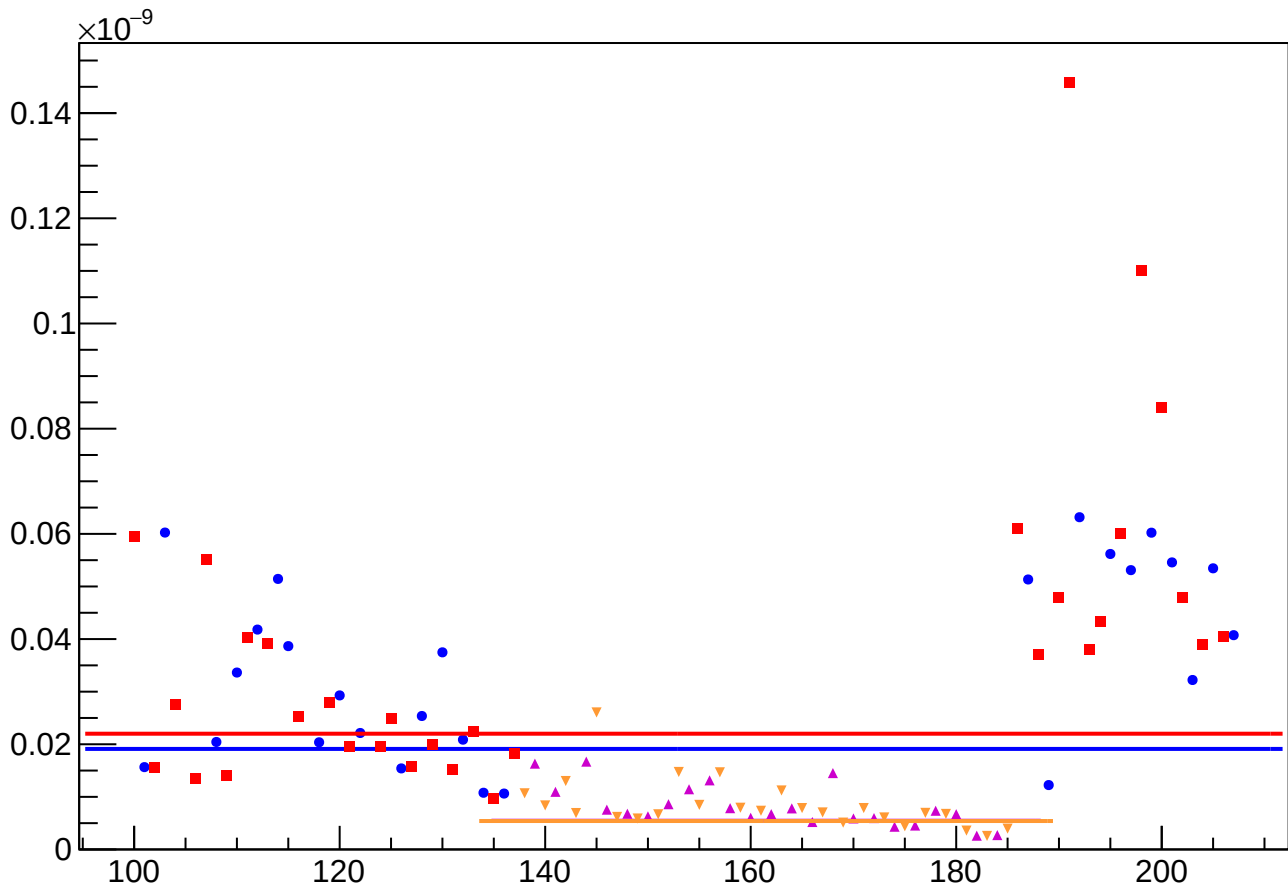
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:21.8/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 53.1/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 102.8/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 49.1/53

asym\_at1\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5216061.0/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5134602.9/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4610117.0/30

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4905821.2/22

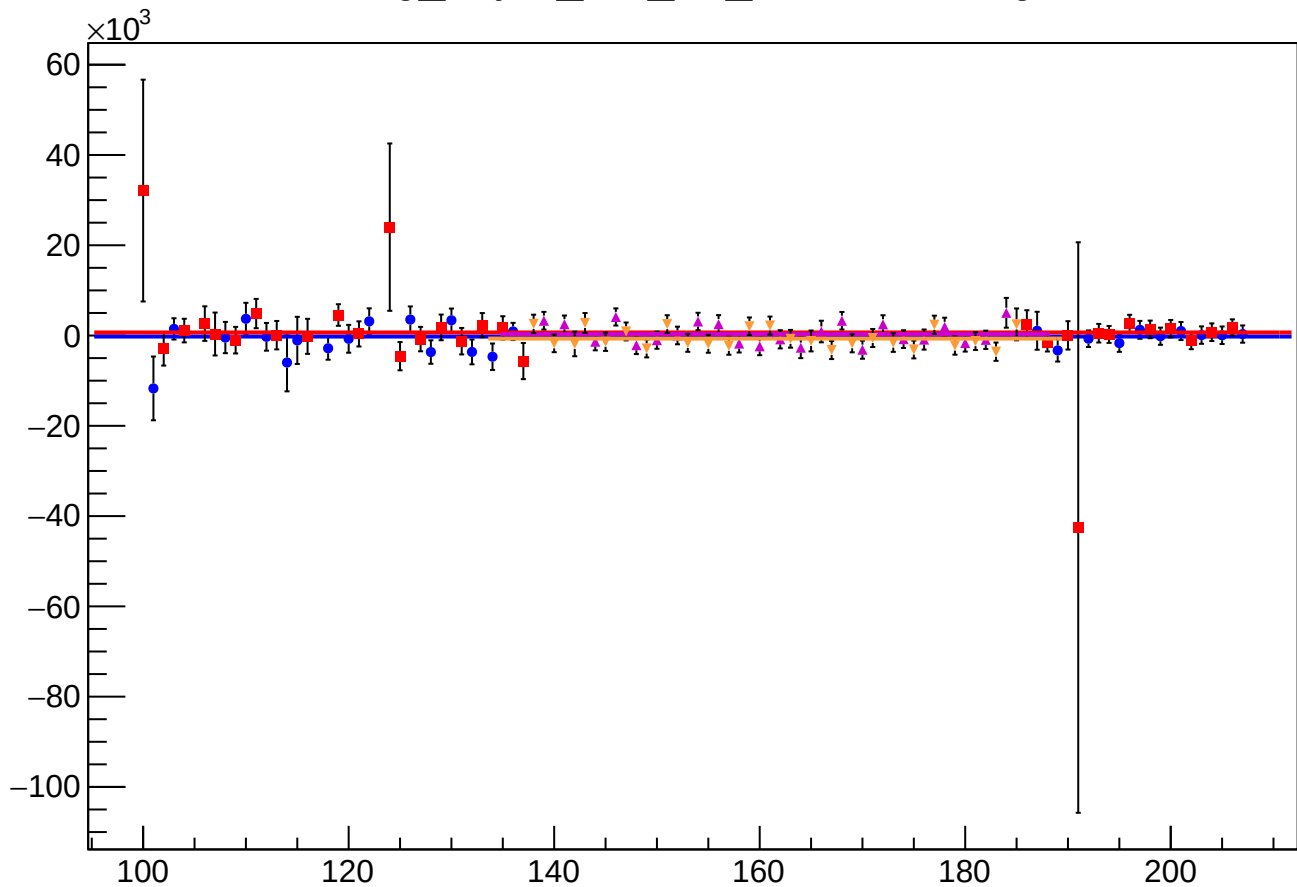
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 16218183.6/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 32358356.8/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 16138891.7/53



# reg\_asym\_at1\_dd\_mean vs Slug



Right In:  $-222.324 \pm 486.585$   $\chi^2/\text{NDF}$ : 20.6/25

Left Out:  $-670.041 \pm 412.206$   $\chi^2/\text{NDF}$ : 24.7/24

Right Out:  $684.748 \pm 472.967$   $\chi^2/\text{NDF}$ : 20.7/30

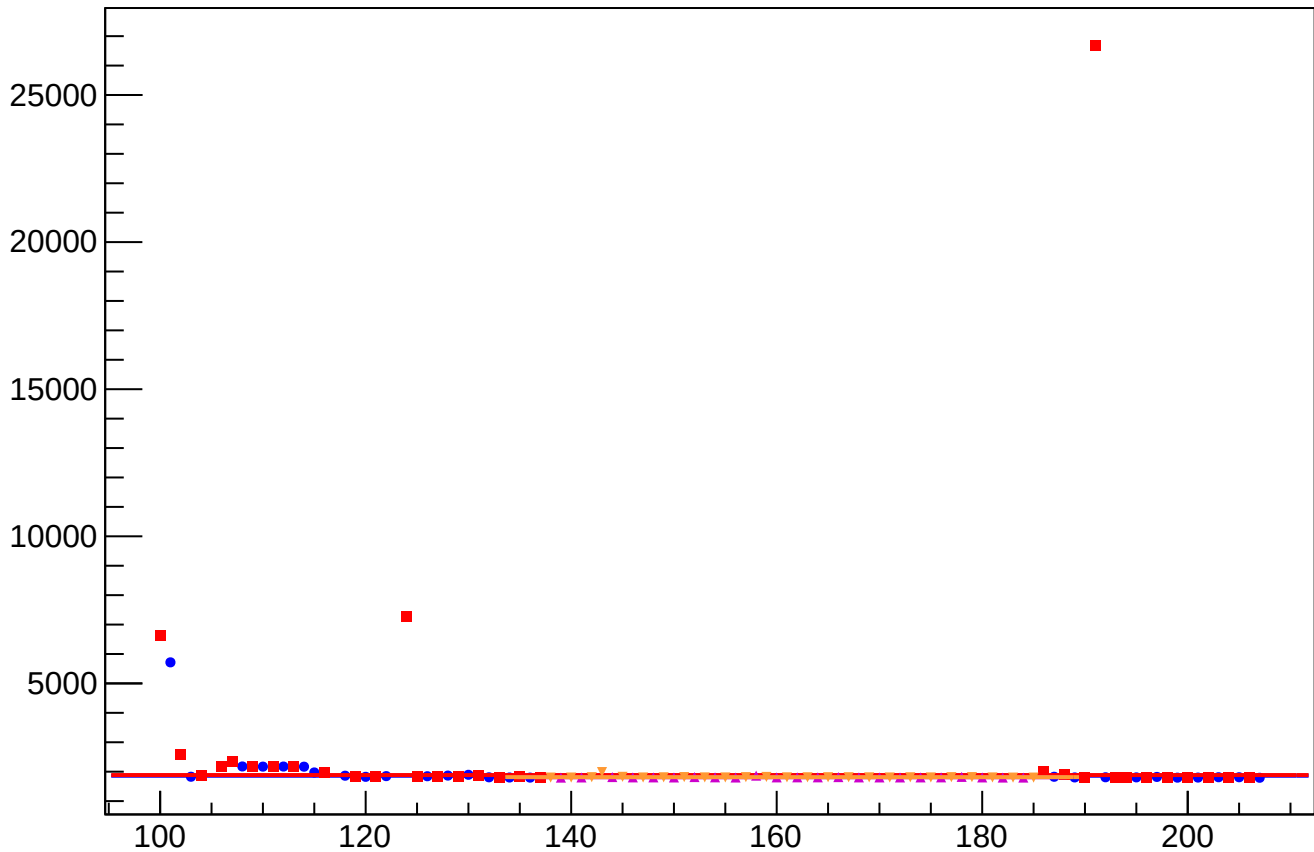
Left In:  $342.945 \pm 422.712$   $\chi^2/\text{NDF}$ : 30.1/22

+ sign  $-482.981 \pm 314.519$   $\chi^2/\text{NDF}$ : 45.8/50

All:  $4.851 \pm 222.631$   $\chi^2/\text{NDF}$ : 101.7/104

- sign  $494.729 \pm 315.178$   $\chi^2/\text{NDF}$ : 51.1/53

# reg\_asym\_at1\_dd\_rms vs Slug



Right In: 1862.576 $\pm$ 0.344  $\chi^2$ /NDF: 674087.3/25

Left Out: 1814.435 $\pm$ 0.291  $\chi^2$ /NDF:13102.1/24

Right Out: 1884.988 $\pm$ 0.334  $\chi^2$ /NDF: 746973.0/30

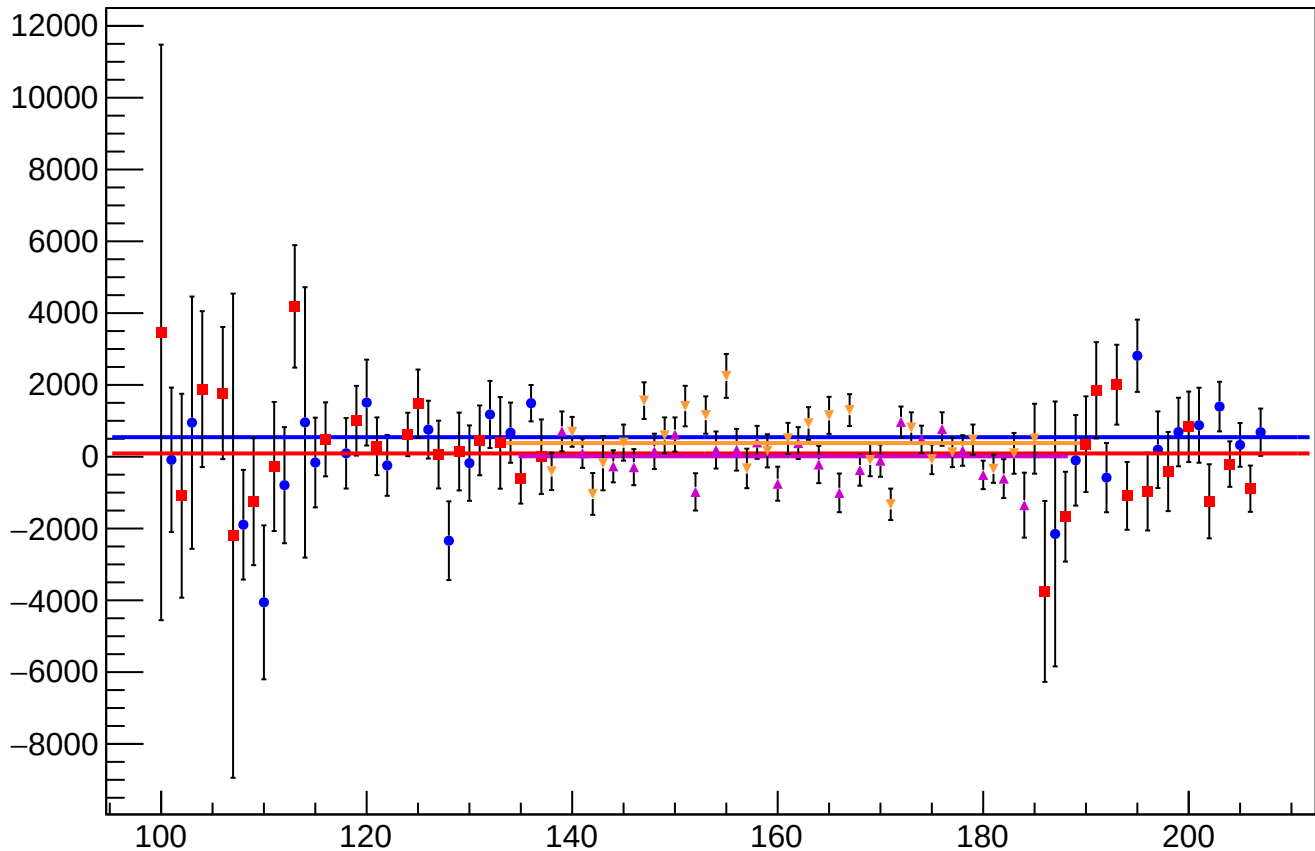
Left In: 1810.457 $\pm$ 0.299  $\chi^2$ /NDF:1967.2/22

+ sign 1834.549 $\pm$ 0.222  $\chi^2$ /NDF: 698587.2/50

All: 1839.042 $\pm$ 0.157  $\chi^2$ /NDF: 1475955.0/10

- sign 1843.554 $\pm$ 0.223  $\chi^2$ /NDF: 776549.7/53

# asym\_at1\_dd\_reg\_correction\_mean vs Slug



Right In:  $543.903 \pm 189.956$   $\chi^2/\text{NDF}$ : 30.6/25

Left Out:  $379.353 \pm 97.013$   $\chi^2/\text{NDF}$ : 62.3/24

Right Out:  $91.432 \pm 188.836$   $\chi^2/\text{NDF}$ : 30.1/30

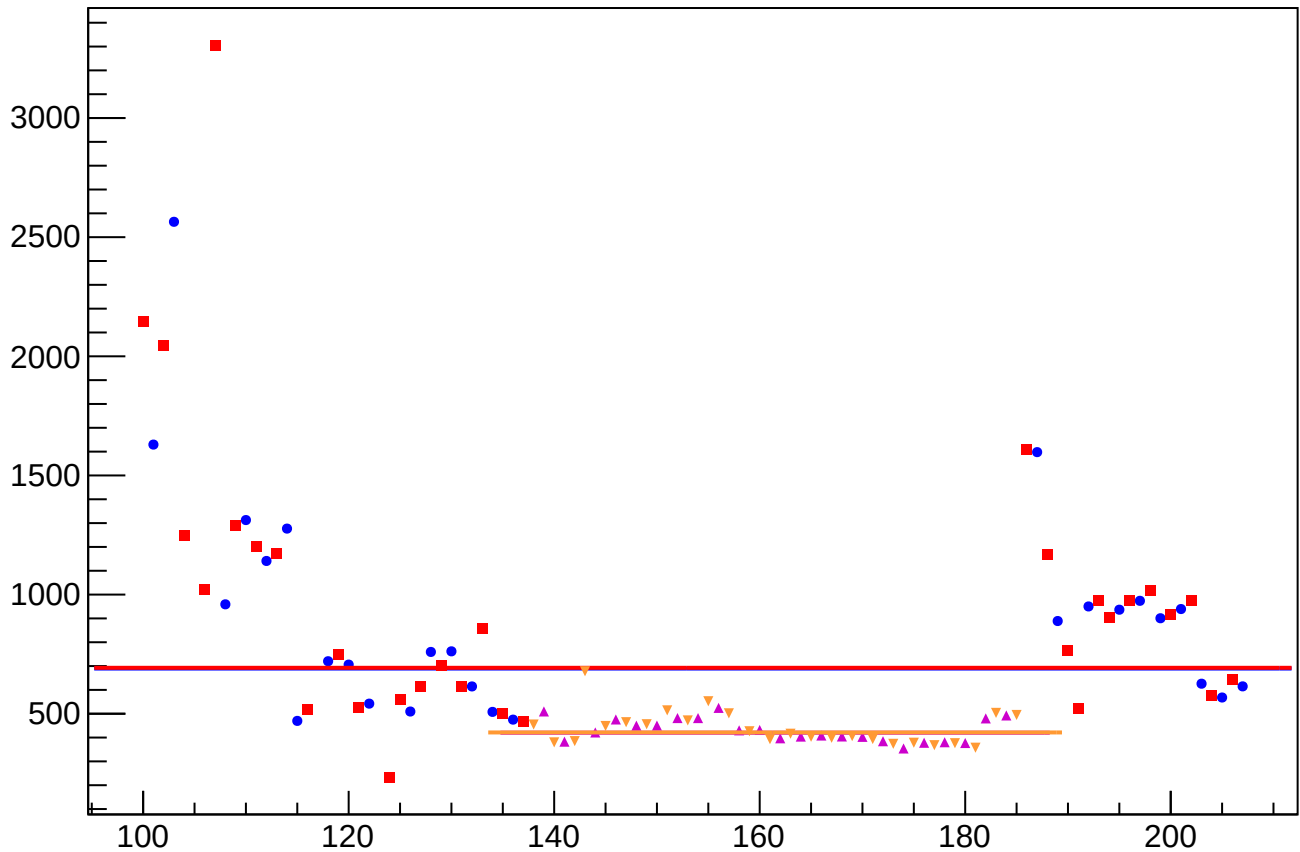
Left In:  $11.527 \pm 98.976$   $\chi^2/\text{NDF}$ : 31.1/22

+ sign  $413.393 \pm 86.398$   $\chi^2/\text{NDF}$ : 93.5/50

All:  $223.869 \pm 61.535$   $\chi^2/\text{NDF}$ : 164.6/104

- sign  $28.748 \pm 87.664$   $\chi^2/\text{NDF}$ : 61.3/53

# asym\_at1\_dd\_reg\_correction\_rms vs Slug



Right In: 689.659 $\pm$ 0.134  $\chi^2$ /NDF: 3064632.6/25

Left Out: 421.417 $\pm$ 0.069  $\chi^2$ /NDF: 743048.1/24

Right Out: 692.712 $\pm$ 0.134  $\chi^2$ /NDF: 4674859.5/30

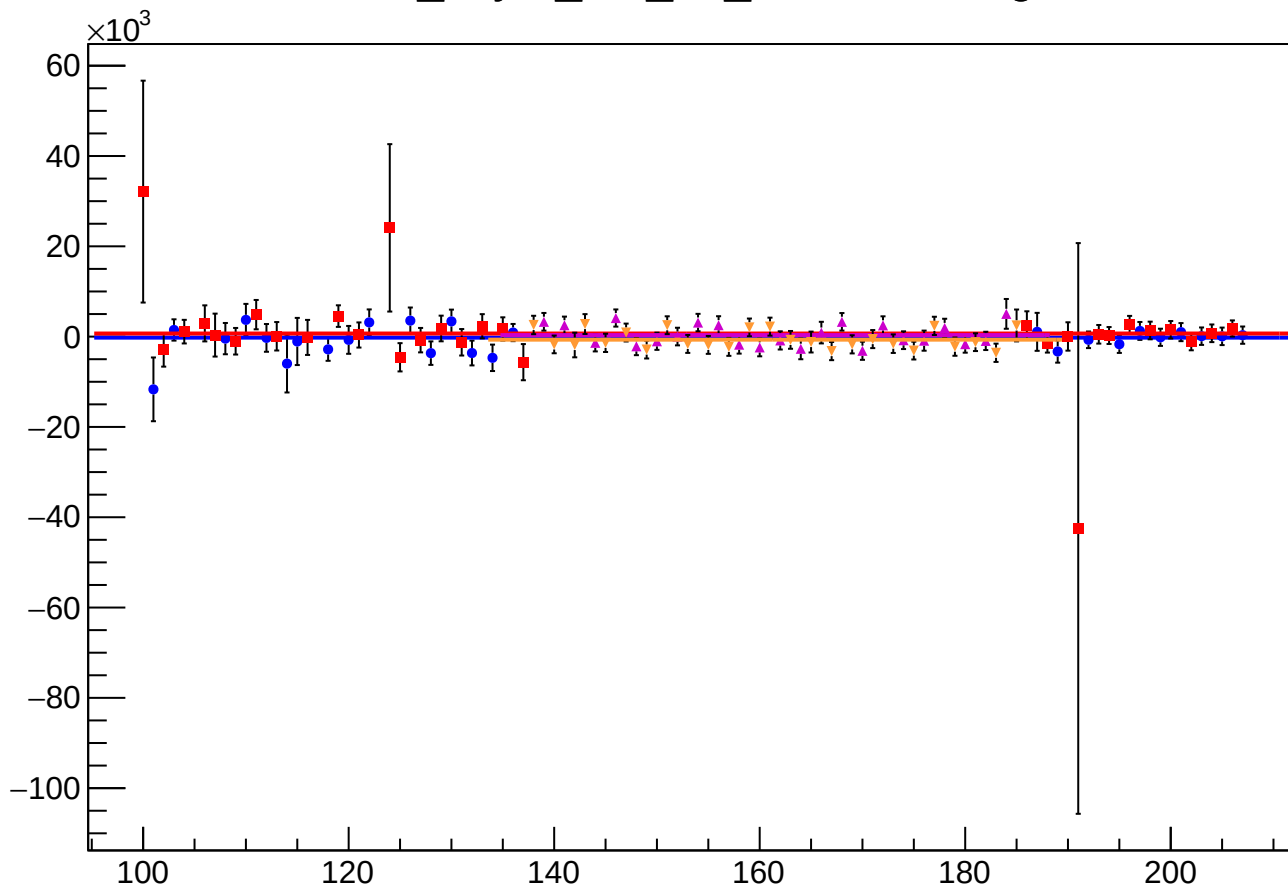
Left In: 420.222 $\pm$ 0.070  $\chi^2$ /NDF: 413129.7/22

+ sign 476.908 $\pm$ 0.061  $\chi^2$ /NDF: 6970857.6/50

All: 477.913 $\pm$ 0.044  $\chi^2$ /NDF: 15326393.8/10

- sign 478.948 $\pm$ 0.062  $\chi^2$ /NDF: 8354986.8/53

# cor\_asym\_at1\_dd\_mean vs Slug



Right In:  $-221.958 \pm 486.585$   $\chi^2/\text{NDF}$ : 20.6/25

Left Out:  $-670.031 \pm 412.206$   $\chi^2/\text{NDF}$ : 24.7/24

Right Out:  $686.715 \pm 473.252$   $\chi^2/\text{NDF}$ : 20.8/30

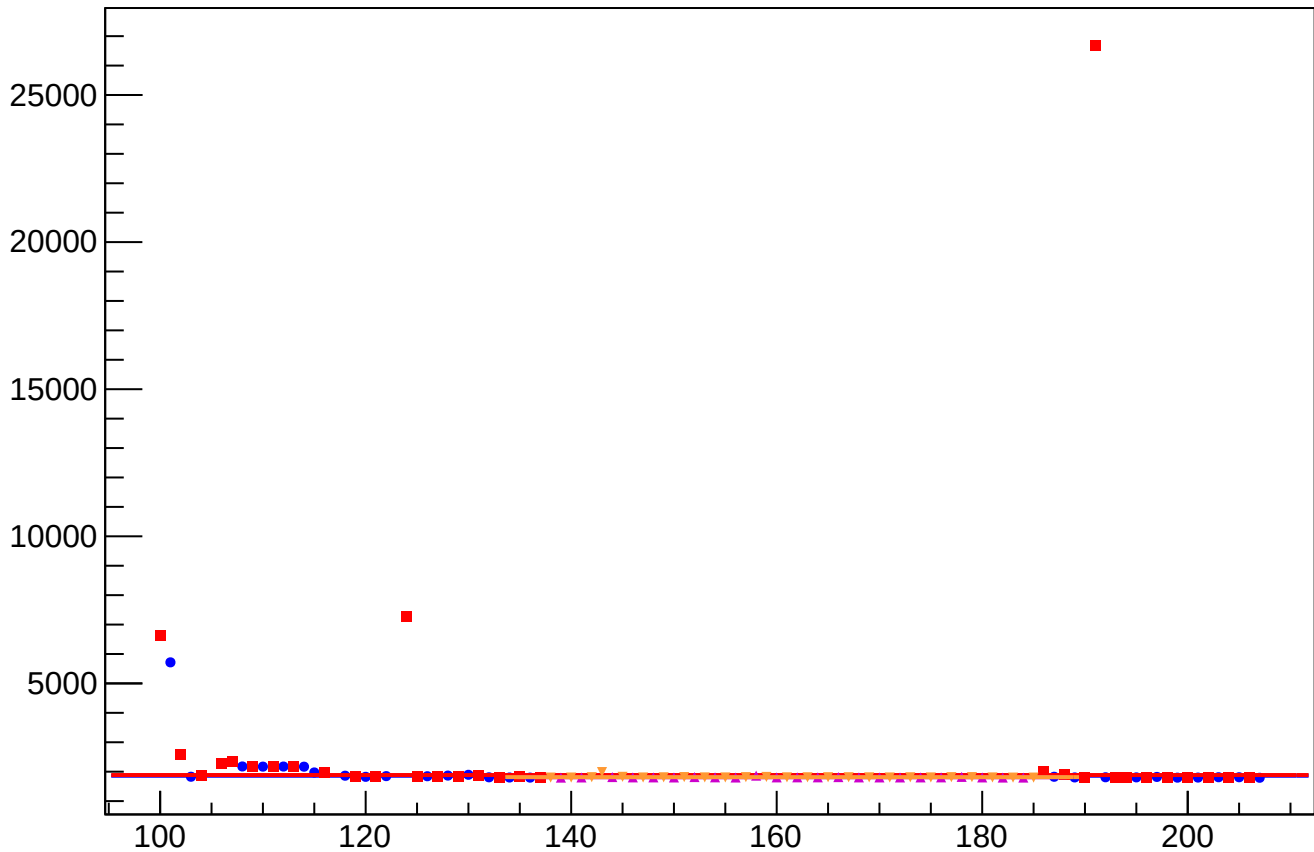
Left In:  $342.989 \pm 422.712$   $\chi^2/\text{NDF}$ : 30.1/22

+ sign  $-482.823 \pm 314.519$   $\chi^2/\text{NDF}$ : 45.8/50

All:  $5.197 \pm 222.661$   $\chi^2/\text{NDF}$ : 101.8/104

- sign  $495.525 \pm 315.262$   $\chi^2/\text{NDF}$ : 51.1/53

# cor\_asym\_at1\_dd\_rms vs Slug



Right In: 1862.576+/-0.344  $\chi^2/\text{NDF}$ : 674087.2/25

Left Out: 1814.435+/-0.291  $\chi^2/\text{NDF}$ : 13102.1/24

Right Out: 1885.775+/-0.335  $\chi^2/\text{NDF}$ : 753042.8/30

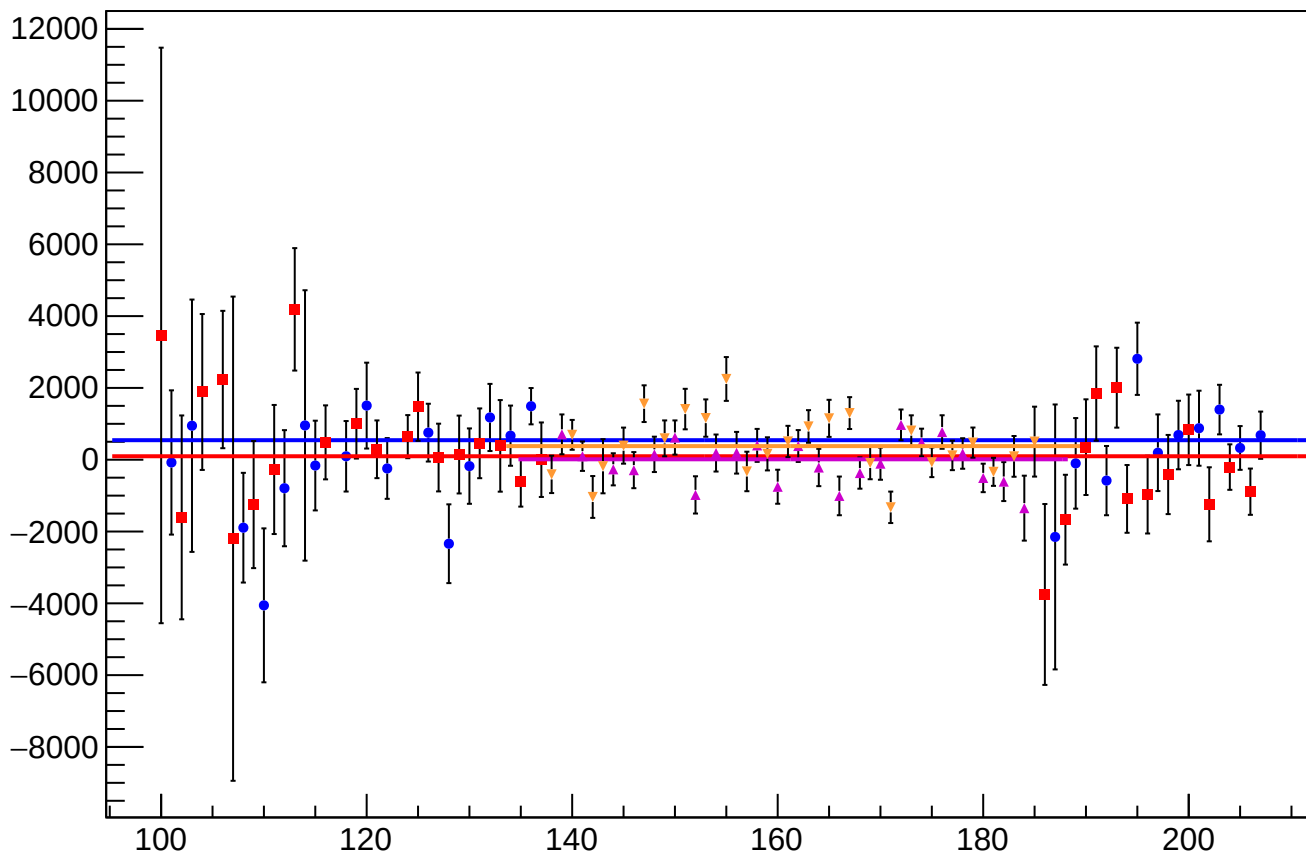
Left In: 1810.457+/-0.299  $\chi^2/\text{NDF}$ : 1967.2/22

+ sign 1834.549+/-0.222  $\chi^2/\text{NDF}$ : 698587.1/50

All: 1839.204+/-0.157  $\chi^2/\text{NDF}$ : 1482652.5/100

- sign 1843.881+/-0.223  $\chi^2/\text{NDF}$ : 783187.0/53

# asym\_at1\_dd\_cor\_correction\_mean vs Slug



Right In: 543.908 $\pm$ 189.953  $\chi^2/\text{NDF}$ : 30.6/25

Left Out: 379.343 $\pm$ 97.014  $\chi^2/\text{NDF}$ : 62.3/24

Right Out: 96.699 $\pm$ 188.693  $\chi^2/\text{NDF}$ : 30.8/30

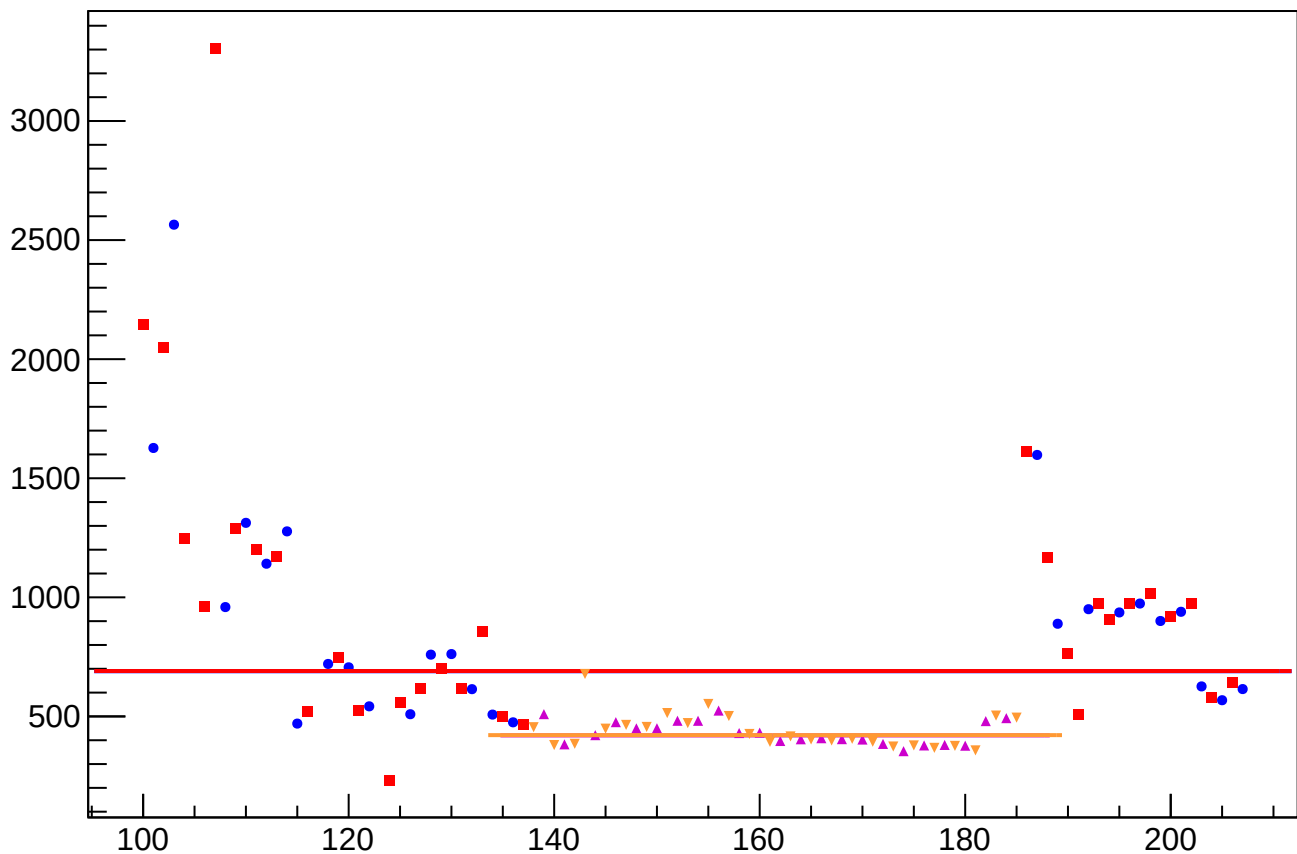
Left In: 11.539 $\pm$ 98.975  $\chi^2/\text{NDF}$ : 31.1/22

+ sign 413.388 $\pm$ 86.398  $\chi^2/\text{NDF}$ : 93.5/50

All: 224.408 $\pm$ 61.530  $\chi^2/\text{NDF}$ : 165.3/104

- sign 29.914 $\pm$ 87.649  $\chi^2/\text{NDF}$ : 62.1/53

# asym\_at1\_dd\_cor\_correction\_rms vs Slug



Right In: 689.658 $\pm$ 0.134  $\chi^2$ /NDF: 3063800.5/25

Left Out: 421.420 $\pm$ 0.069  $\chi^2$ /NDF: 742987.6/24

Right Out: 690.657 $\pm$ 0.133  $\chi^2$ /NDF: 4685218.0/30

Left In: 420.218 $\pm$ 0.070  $\chi^2$ /NDF: 413172.4/22

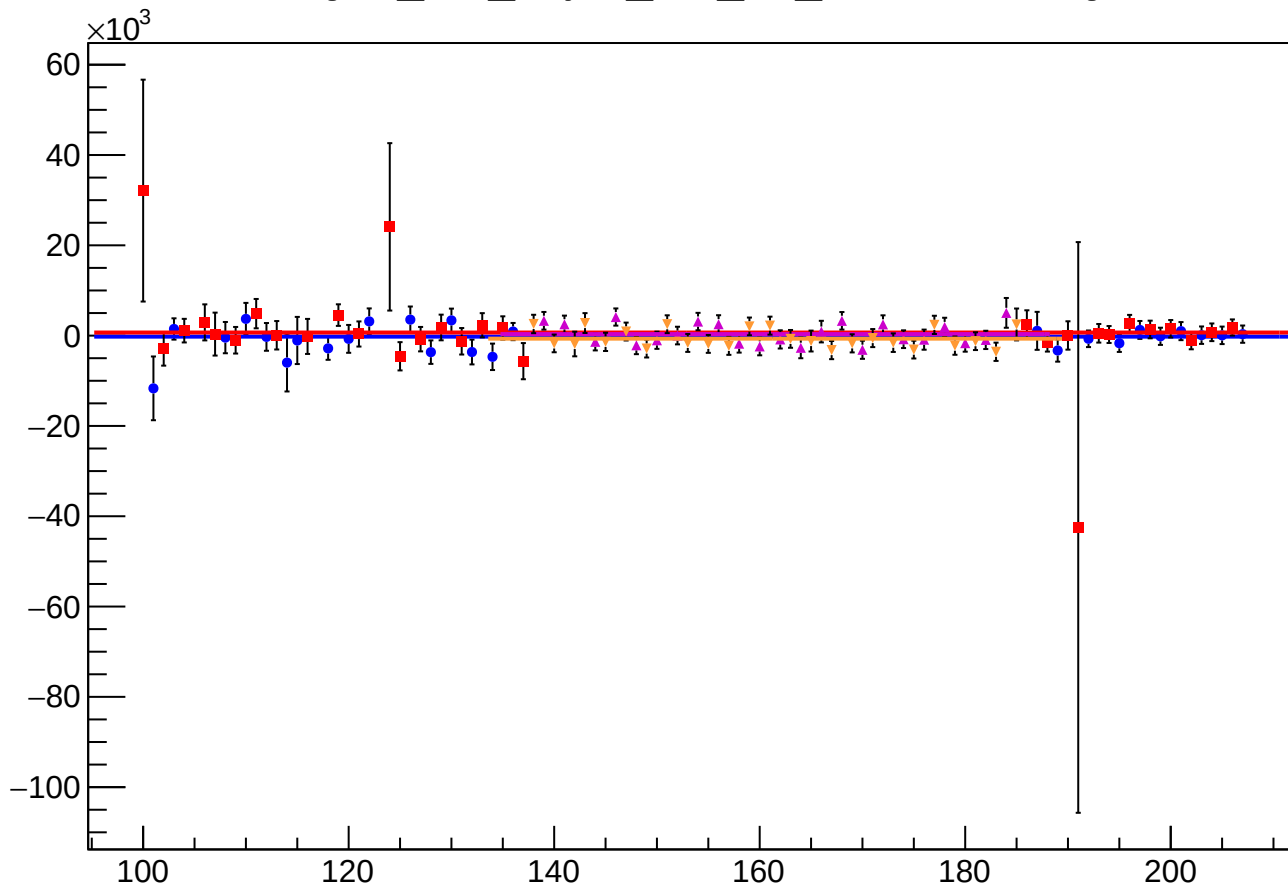
+ sign 476.913 $\pm$ 0.061  $\chi^2$ /NDF: 6969942.2/50

All: 477.729 $\pm$ 0.044  $\chi^2$ /NDF: 15290493.5/10

- sign 478.570 $\pm$ 0.062  $\chi^2$ /NDF: 8320188.6/53



# eigen\_cor\_asym\_at1\_dd\_mean vs Slug



Right In:  $-221.958 \pm 486.585$   $\chi^2/\text{NDF}$ : 20.6/25

Left Out:  $-670.031 \pm 412.206$   $\chi^2/\text{NDF}$ : 24.7/24

Right Out:  $686.715 \pm 473.252$   $\chi^2/\text{NDF}$ : 20.8/30

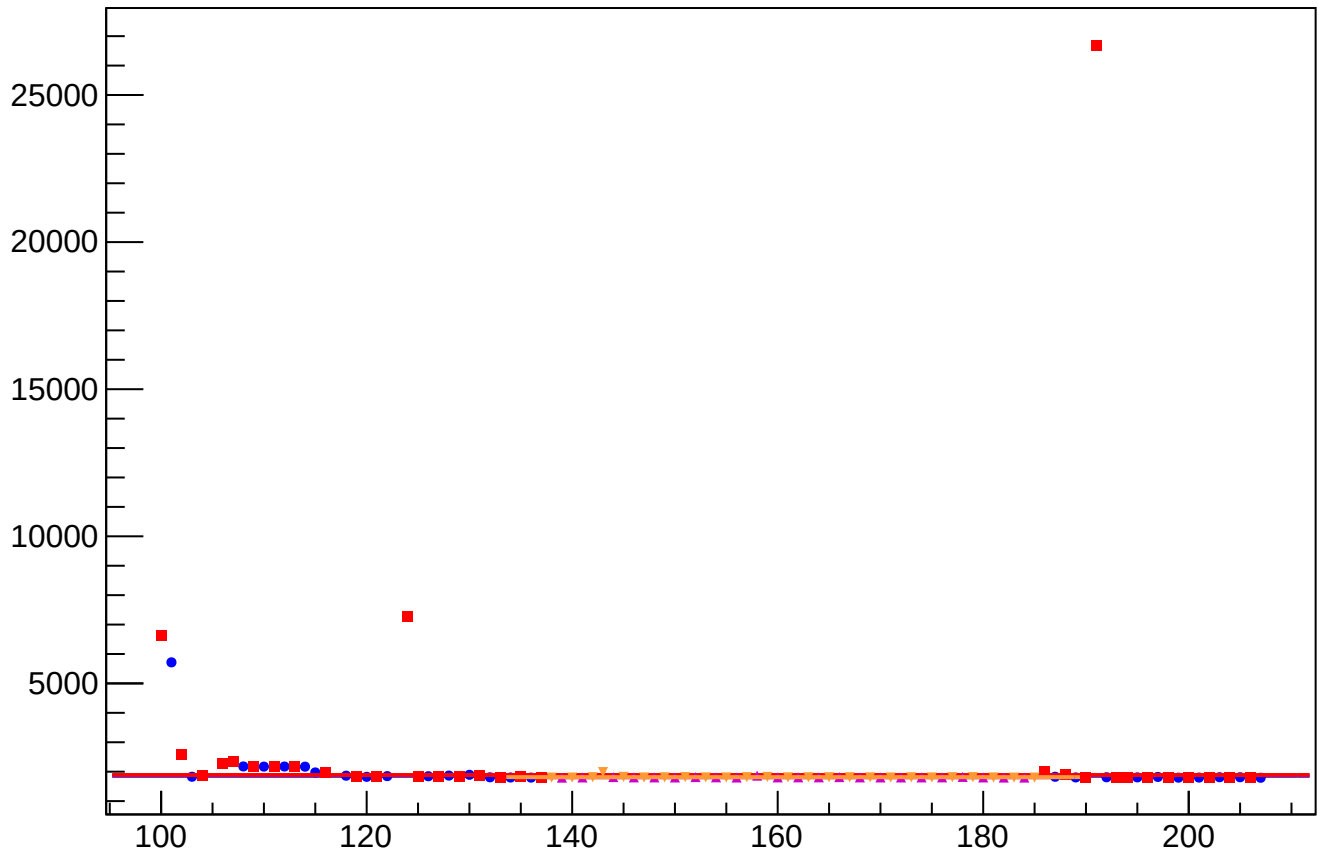
Left In:  $342.989 \pm 422.712$   $\chi^2/\text{NDF}$ : 30.1/22

+ sign  $-482.823 \pm 314.519$   $\chi^2/\text{NDF}$ : 45.8/50

All:  $5.197 \pm 222.661$   $\chi^2/\text{NDF}$ : 101.8/104

- sign  $495.525 \pm 315.262$   $\chi^2/\text{NDF}$ : 51.1/53

# eigen\_cor\_asym\_at1\_dd\_rms vs Slug



Right In:  $1862.576 \pm 0.344$   $\chi^2/\text{NDF}$ : 674087.2/25

Left Out:  $1814.435 \pm 0.291$   $\chi^2/\text{NDF}$ : 13102.1/24

Right Out:  $1885.775 \pm 0.335$   $\chi^2/\text{NDF}$ : 753042.8/30

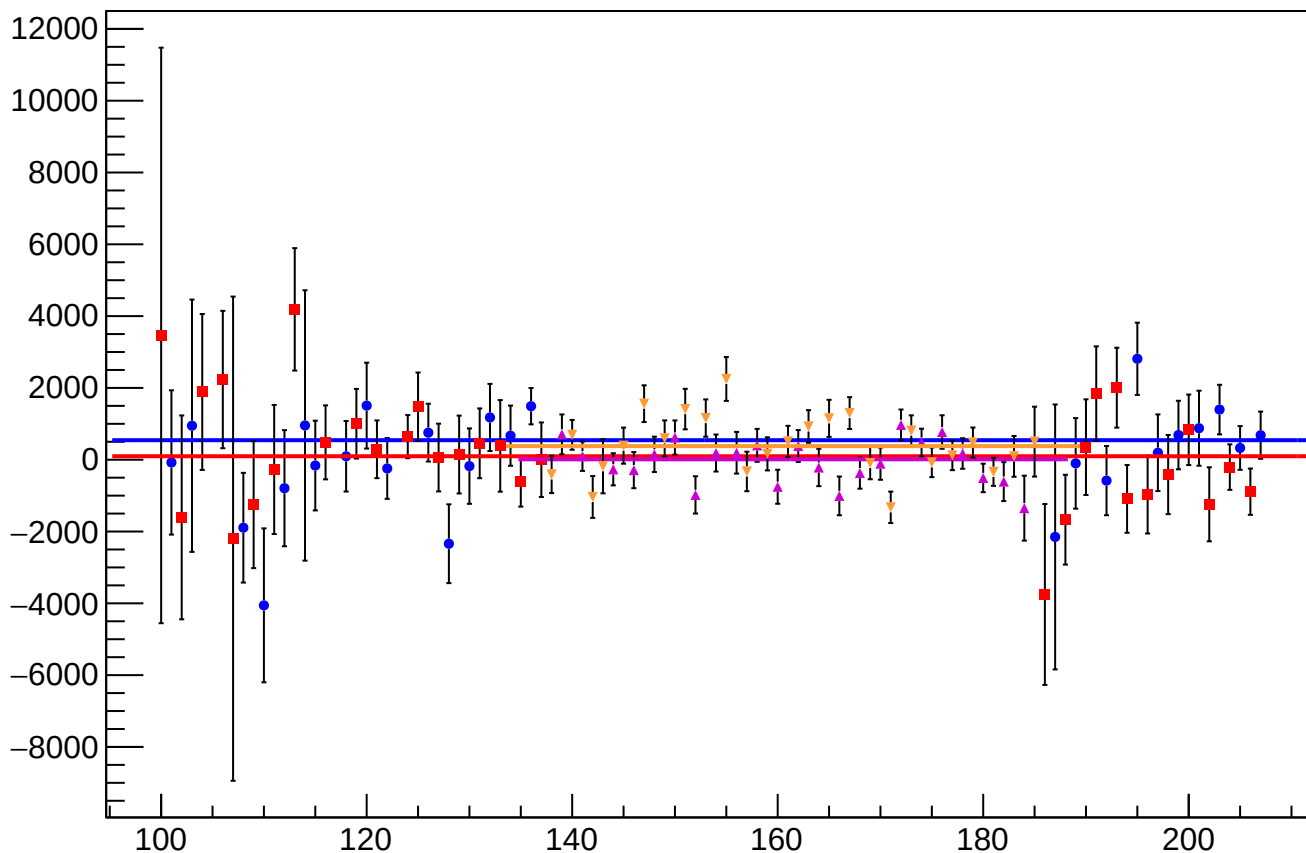
Left In:  $1810.457 \pm 0.299$   $\chi^2/\text{NDF}$ : 1967.2/22

+ sign  $1834.549 \pm 0.222$   $\chi^2/\text{NDF}$ : 698587.1/50

All:  $1839.204 \pm 0.157$   $\chi^2/\text{NDF}$ : 1482652.5/10

- sign  $1843.881 \pm 0.223$   $\chi^2/\text{NDF}$ : 783187.0/53

asym\_at1\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In: 543.908 $\pm$ 189.953  $\chi^2/\text{NDF}$ : 30.6/25

Left Out: 379.343 $\pm$ 97.014  $\chi^2/\text{NDF}$ :62.3/24

Right Out: 96.699 $\pm$ 188.693  $\chi^2/\text{NDF}$ : 30.8/30

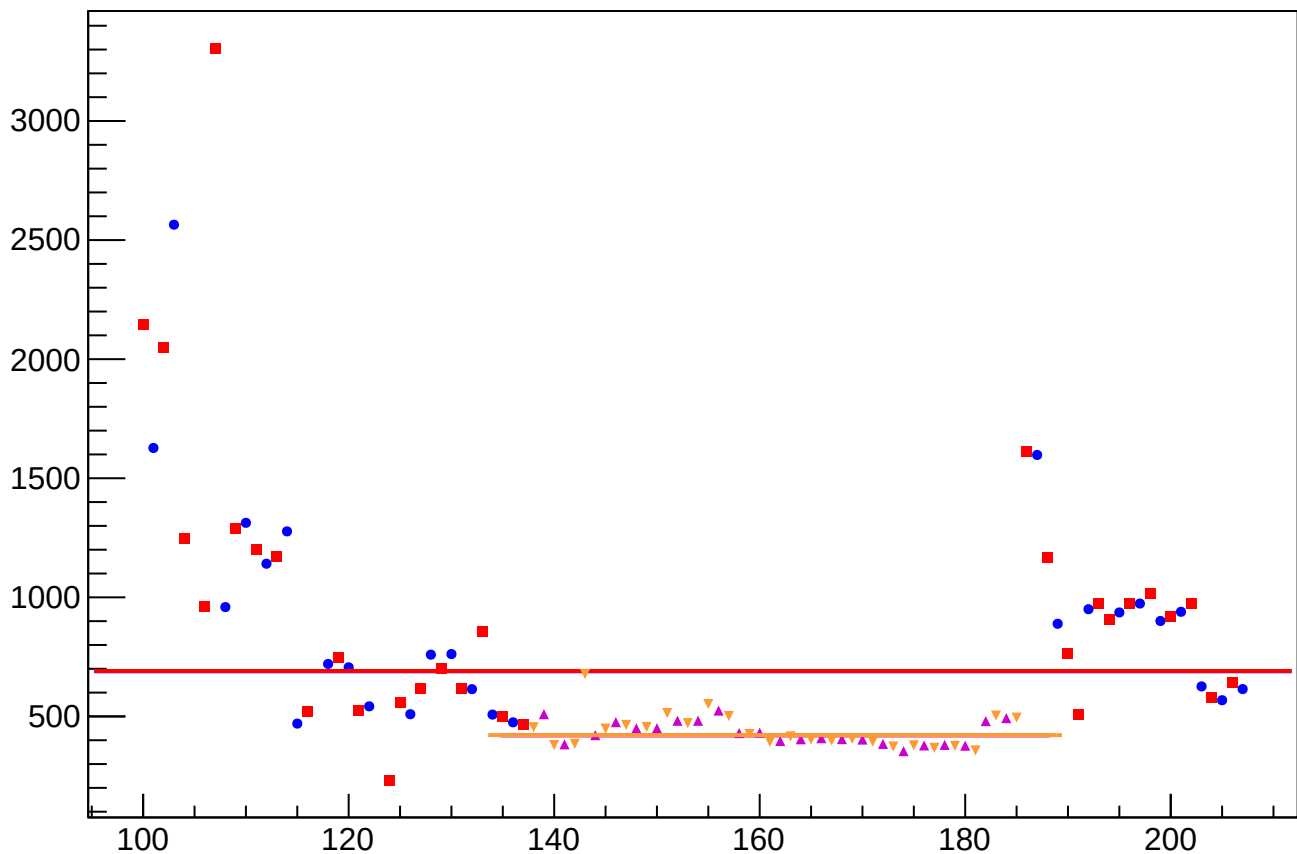
Left In: 11.539 $\pm$ 98.975  $\chi^2/\text{NDF}$ :31.1/22

+ sign 413.388 $\pm$ 86.398  $\chi^2/\text{NDF}$ : 93.5/50

All: 224.408 $\pm$ 61.530  $\chi^2/\text{NDF}$ : 165.3/104

- sign 29.914 $\pm$ 87.649  $\chi^2/\text{NDF}$ : 62.1/53

# asym\_at1\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 689.658 $\pm$ 0.134  $\chi^2$ /NDF: 3063800.5/25

Left Out: 421.420 $\pm$ 0.069  $\chi^2$ /NDF: 742987.6/24

Right Out: 690.657 $\pm$ 0.133  $\chi^2$ /NDF: 4685218.0/30

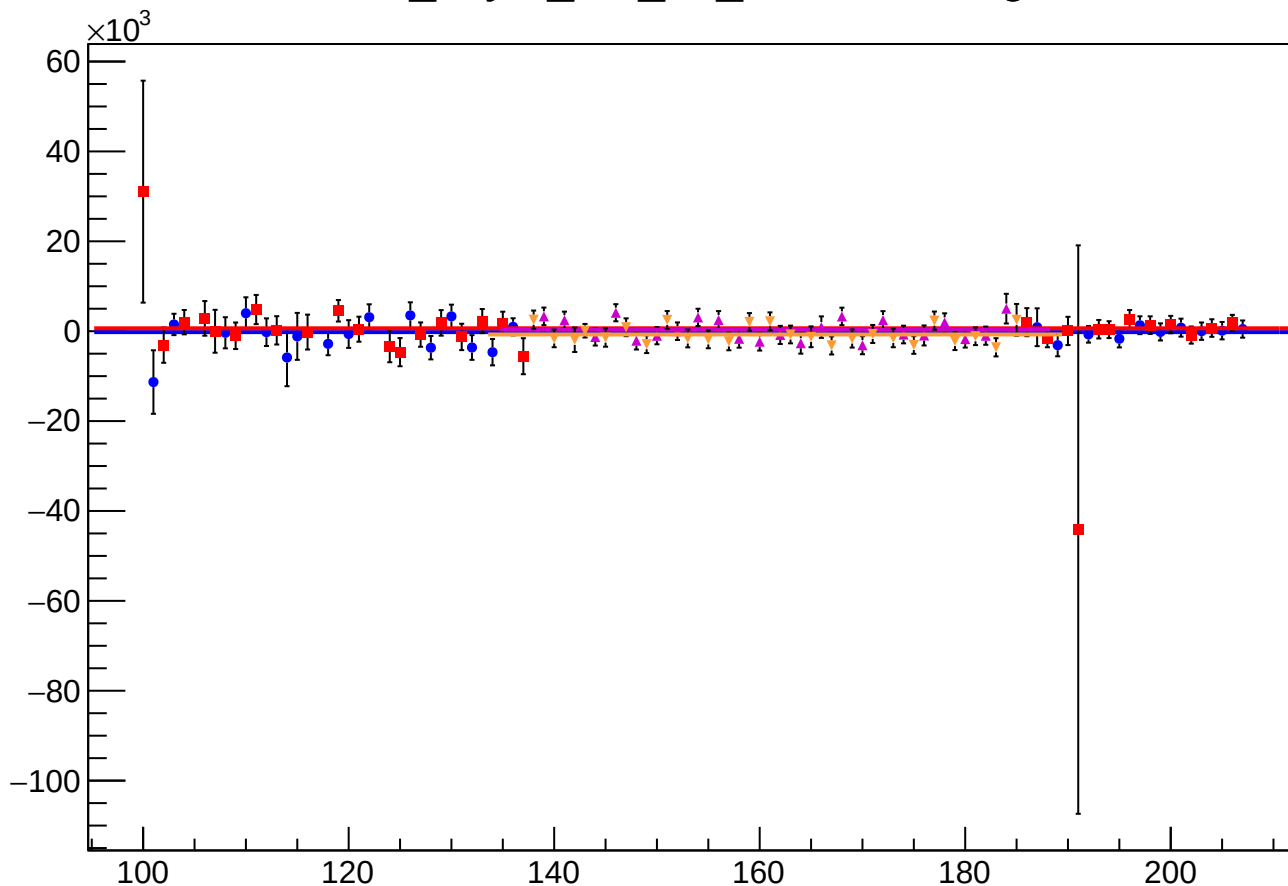
Left In: 420.218 $\pm$ 0.070  $\chi^2$ /NDF: 413172.4/22

+ sign 476.913 $\pm$ 0.061  $\chi^2$ /NDF: 6969942.2/50

All: 477.729 $\pm$ 0.044  $\chi^2$ /NDF: 15290493.5/10

- sign 478.570 $\pm$ 0.062  $\chi^2$ /NDF: 8320188.6/53

# dit\_asym\_at1\_dd\_mean vs Slug



Right In:  $-207.015 \pm 487.124$   $\chi^2/\text{NDF}$ : 20.2/25

Left Out:  $-724.527 \pm 404.417$   $\chi^2/\text{NDF}$ : 22.2/24

Right Out:  $642.976 \pm 470.567$   $\chi^2/\text{NDF}$ : 20.2/30

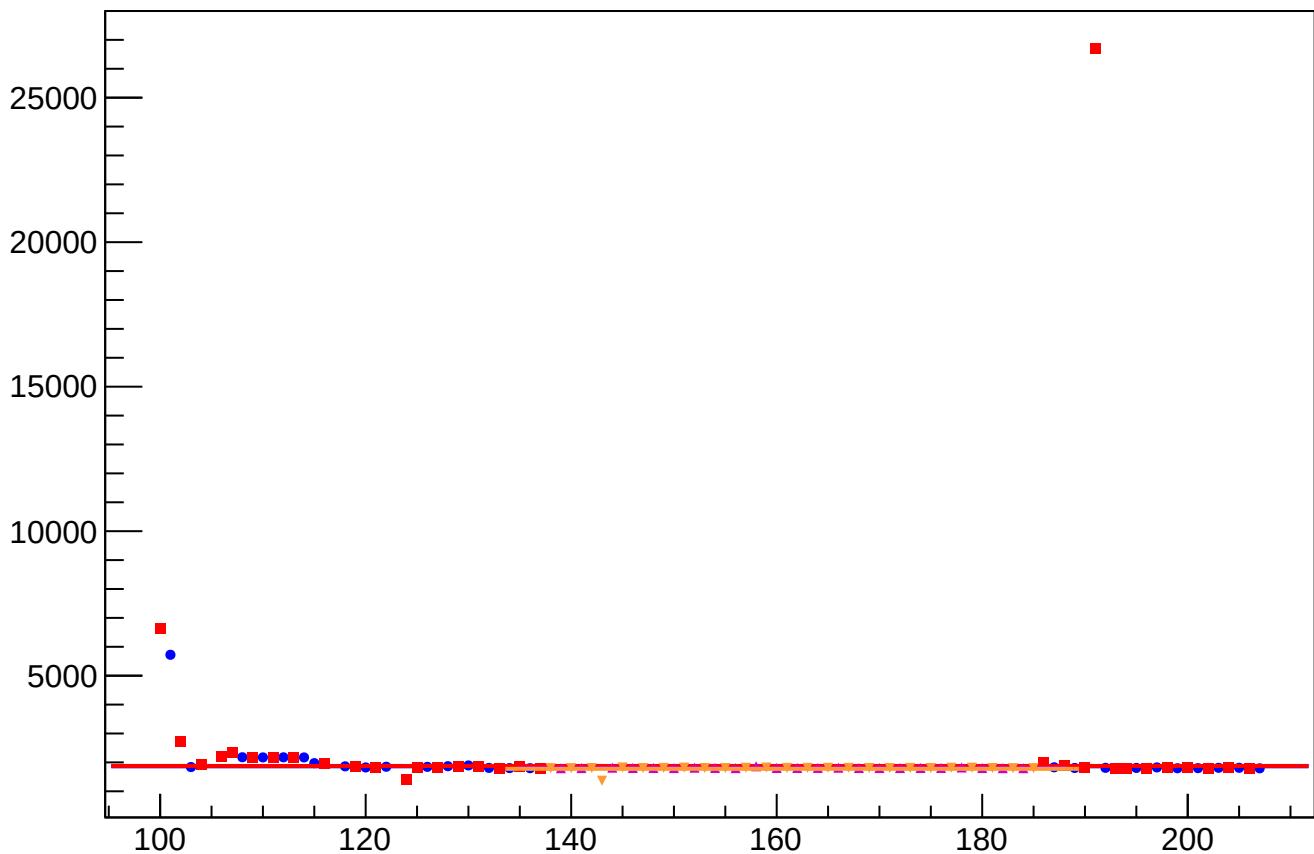
Left In:  $341.223 \pm 422.858$   $\chi^2/\text{NDF}$ : 29.6/22

+ sign  $-513.370 \pm 311.159$   $\chi^2/\text{NDF}$ : 43.1/50

All:  $-23.992 \pm 221.203$   $\chi^2/\text{NDF}$ : 98.1/104

- sign  $476.032 \pm 314.525$   $\chi^2/\text{NDF}$ : 50.0/53

dit\_asym\_at1\_dd\_rms vs Slug



Right In: 1864.514 $\pm$ 0.344  $\chi^2$ /NDF: 673790.1/25

Left Out: 1776.721 $\pm$ 0.286  $\chi^2$ /NDF: 161294.8/24

Right Out: 1877.082 $\pm$ 0.333  $\chi^2$ /NDF: 630047.0/30

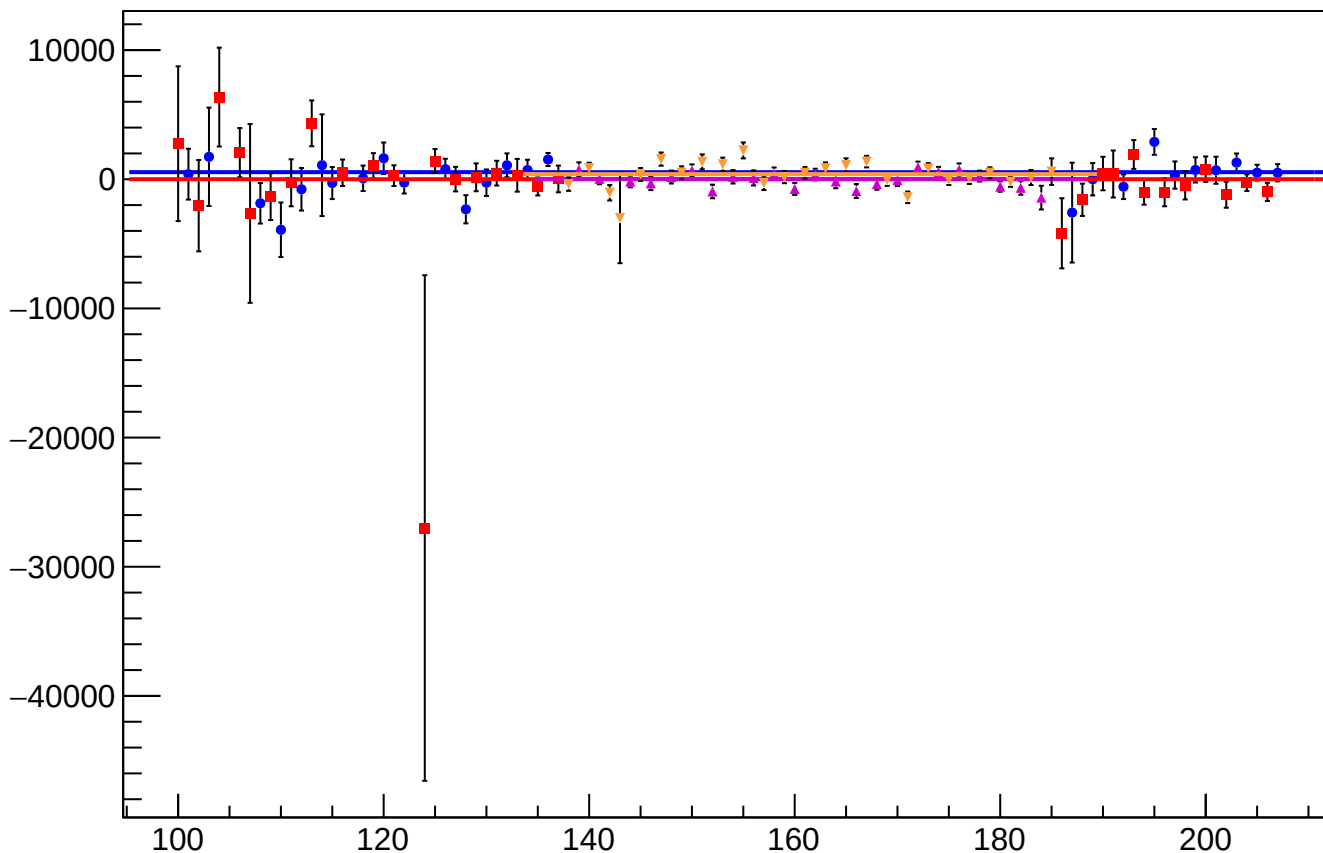
Left In: 1811.084 $\pm$ 0.299  $\chi^2$ /NDF: 1965.1/22

+ sign 1812.543 $\pm$ 0.220  $\chi^2$ /NDF: 873541.8/50

All: 1826.405 $\pm$ 0.156  $\chi^2$ /NDF: 1535345.1/10

- sign 1840.569 $\pm$ 0.222  $\chi^2$ /NDF: 653778.0/53

# asym\_at1\_dd\_dit\_correction\_mean vs Slug



Right In:  $549.932 \pm 189.881$   $\chi^2/\text{NDF}$ : 30.7/25

Left Out:  $398.269 \pm 99.165$   $\chi^2/\text{NDF}$ : 60.5/24

Right Out:  $4.421 \pm 202.258$   $\chi^2/\text{NDF}$ : 31.2/30

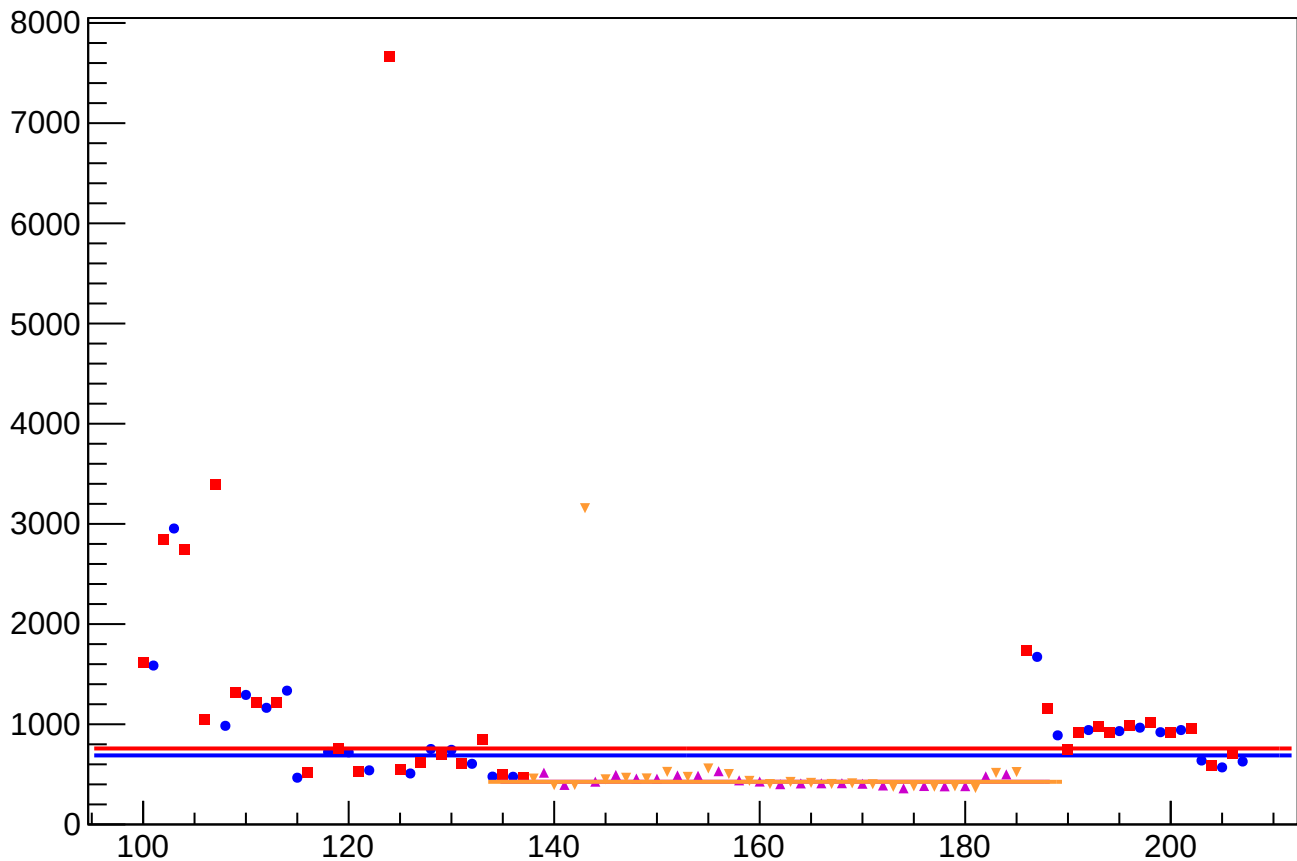
Left In:  $21.453 \pm 100.264$   $\chi^2/\text{NDF}$ : 30.8/22

+ sign  $430.769 \pm 87.900$   $\chi^2/\text{NDF}$ : 91.7/50

All:  $228.918 \pm 62.827$   $\chi^2/\text{NDF}$ : 164.5/104

- sign  $18.093 \pm 89.832$   $\chi^2/\text{NDF}$ : 62.1/53

# asym\_at1\_dd\_dit\_correction\_rms vs Slug



Right In: 689.045 $\pm$ 0.134     $\chi^2$ /NDF: 3245338.1/25

Left Out: 425.697 $\pm$ 0.070     $\chi^2$ /NDF:1718145.2/24

Right Out: 758.358 $\pm$ 0.143     $\chi^2$ /NDF: 4326552.7/30

Left In: 426.144 $\pm$ 0.071     $\chi^2$ /NDF:415411.7/22

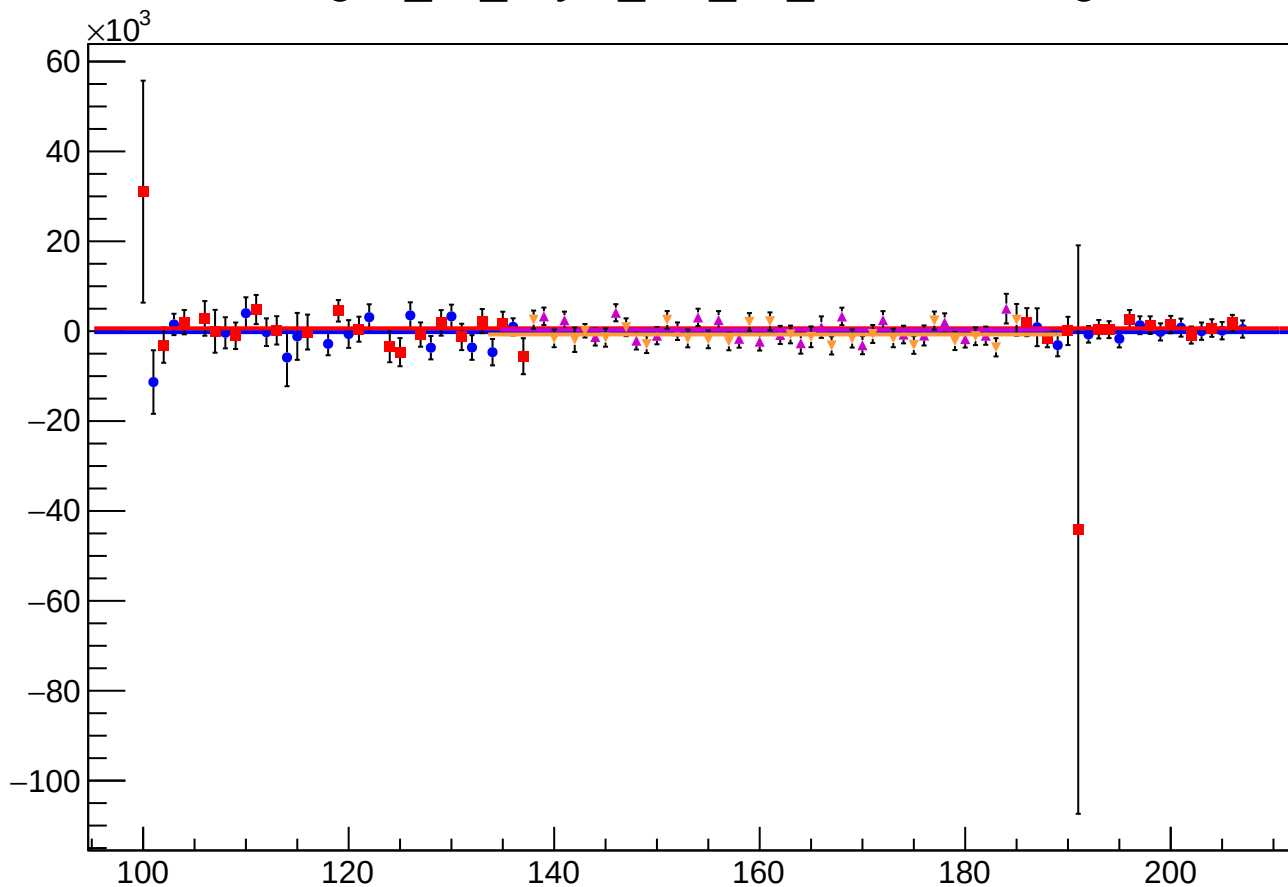
+ sign 482.131 $\pm$ 0.062     $\chi^2$ /NDF: 7986146.8/50

All: 486.801 $\pm$ 0.044     $\chi^2$ /NDF: 17071023.0/10

- sign 491.679 $\pm$ 0.064     $\chi^2$ /NDF: 9073334.6/53



# eigen\_dit\_asym\_at1\_dd\_mean vs Slug



Right In: -207.016 $\pm$ 487.124  $\chi^2$ /NDF: 20.2/25

Left Out: -724.528 $\pm$ 404.417  $\chi^2$ /NDF: 22.2/24

Right Out: 642.975 $\pm$ 470.567  $\chi^2$ /NDF: 20.2/30

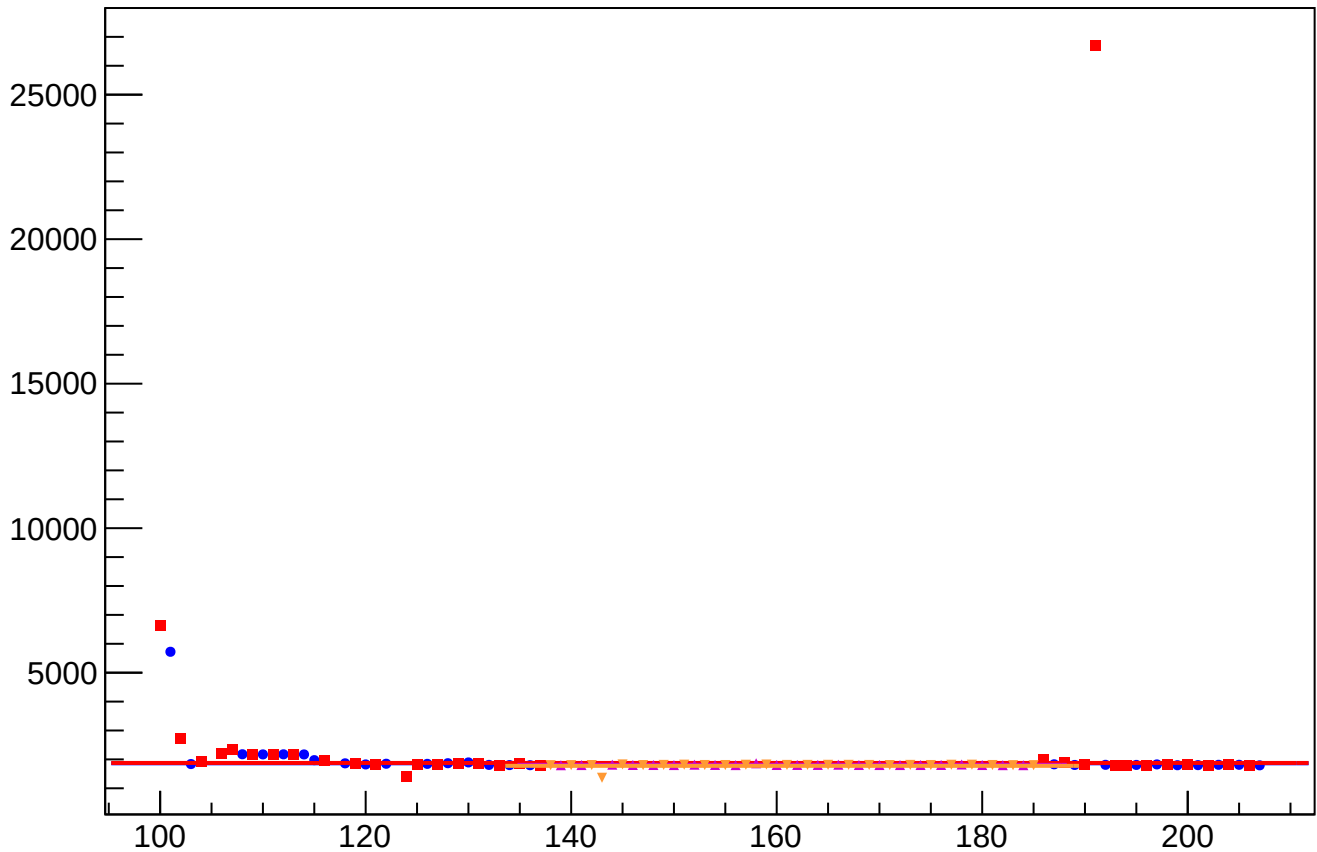
Left In: 341.223 $\pm$ 422.858  $\chi^2$ /NDF: 29.6/22

+ sign -513.371 $\pm$ 311.159  $\chi^2$ /NDF: 43.1/50

All: -23.992 $\pm$ 221.203  $\chi^2$ /NDF: 98.1/104

- sign 476.031 $\pm$ 314.525  $\chi^2$ /NDF: 50.0/53

# eigen\_dit\_asym\_at1\_dd\_rms vs Slug



Right In: 1864.514+/-0.344  $\chi^2/\text{NDF}$ : 673790.1/25

Left Out: 1776.721+/-0.286  $\chi^2/\text{NDF}$ : 161294.8/24

Right Out: 1877.082+/-0.333  $\chi^2/\text{NDF}$ : 630046.8/30

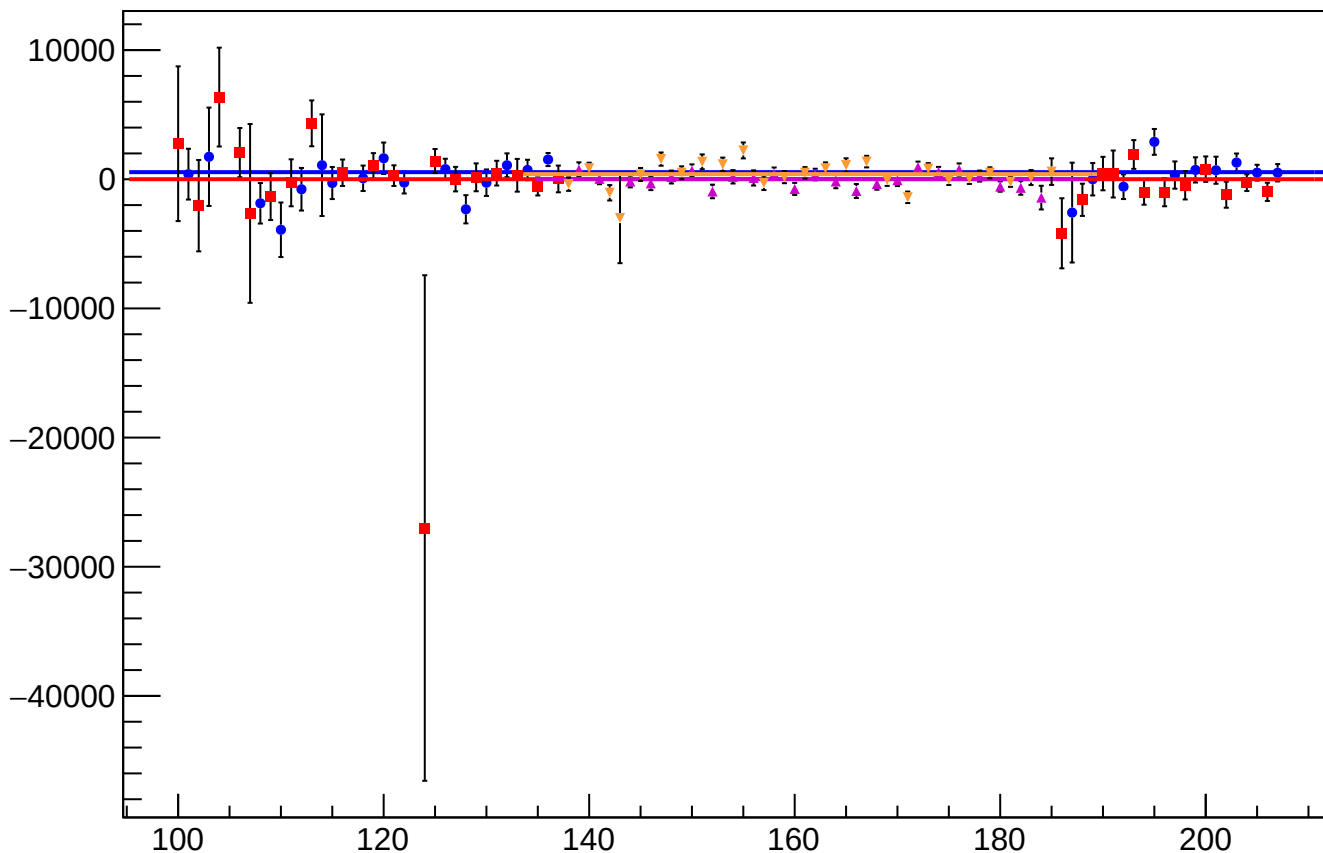
Left In: 1811.084+/-0.299  $\chi^2/\text{NDF}$ : 1965.1/22

+ sign 1812.543+/-0.220  $\chi^2/\text{NDF}$ : 873541.8/50

All: 1826.405+/-0.156  $\chi^2/\text{NDF}$ : 1535344.8/10

- sign 1840.569+/-0.222  $\chi^2/\text{NDF}$ : 653777.8/53

# asym\_at1\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In: 549.931 $\pm$ 189.881  $\chi^2$ /NDF: 30.7/25

Left Out: 398.268 $\pm$ 99.165  $\chi^2$ /NDF:60.5/24

Right Out: 4.421 $\pm$ 202.258  $\chi^2$ /NDF: 31.2/30

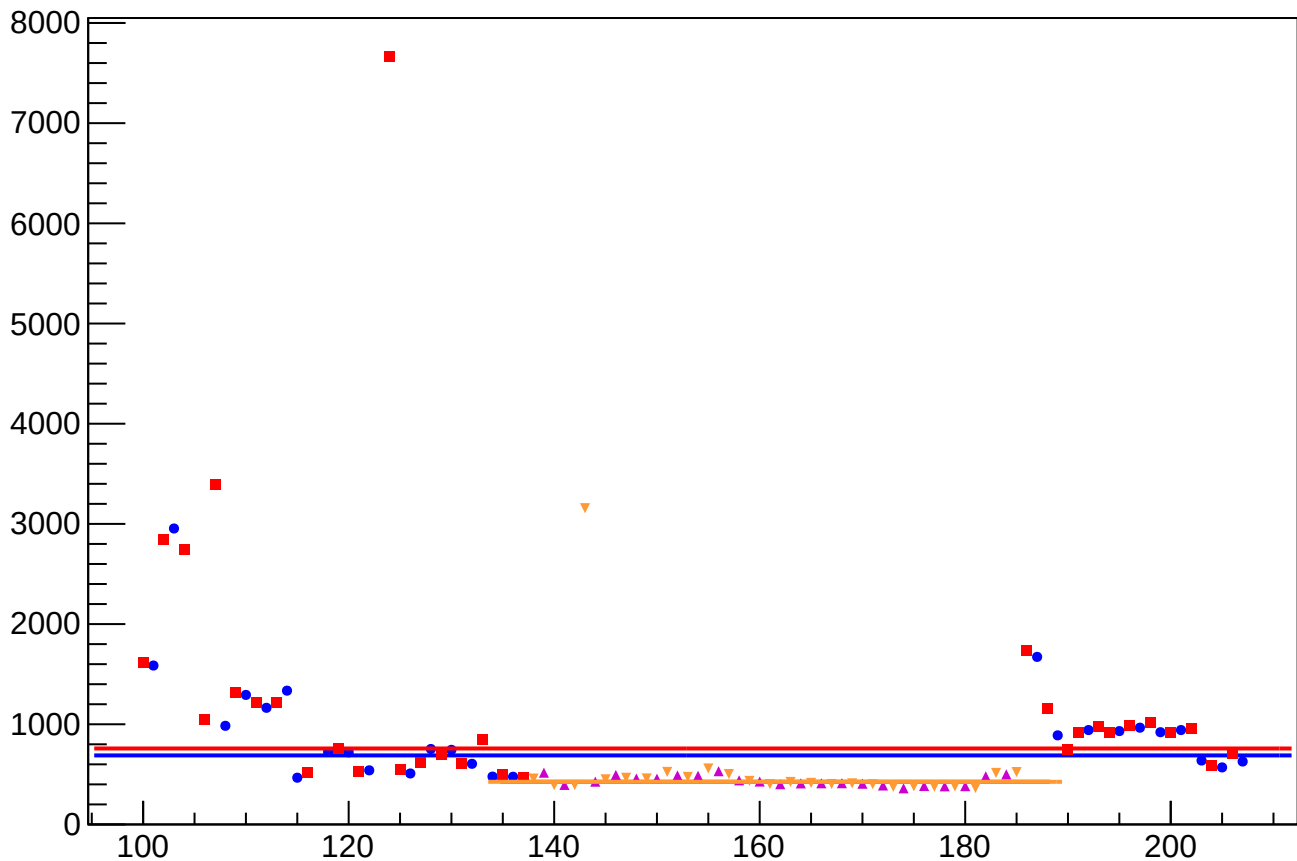
Left In: 21.452 $\pm$ 100.264  $\chi^2$ /NDF:30.8/22

+ sign 430.769 $\pm$ 87.900  $\chi^2$ /NDF: 91.7/50

All: 228.917 $\pm$ 62.826  $\chi^2$ /NDF: 164.5/104

- sign 18.093 $\pm$ 89.832  $\chi^2$ /NDF: 62.1/53

# asym\_at1\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 689.045 $\pm$ 0.134  $\chi^2$ /NDF: 3245338.0/25

Left Out: 425.696 $\pm$ 0.070  $\chi^2$ /NDF:1718147.9/24

Right Out: 758.358 $\pm$ 0.143  $\chi^2$ /NDF: 4326553.5/30

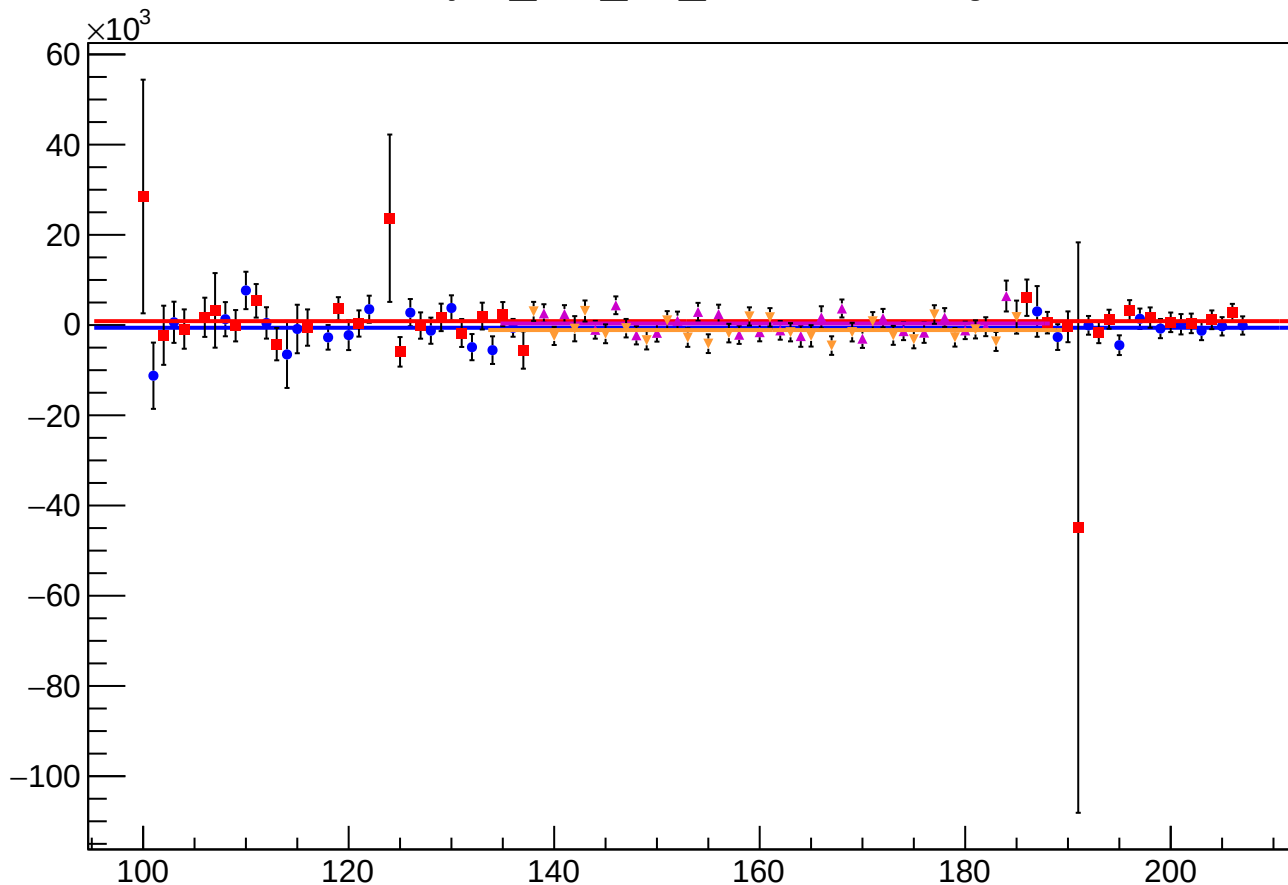
Left In: 426.144 $\pm$ 0.071  $\chi^2$ /NDF:415415.2/22

+ sign 482.131 $\pm$ 0.062  $\chi^2$ /NDF: 7986157.2/50

All: 486.801 $\pm$ 0.044  $\chi^2$ /NDF: 17071047.3/10

- sign 491.678 $\pm$ 0.064  $\chi^2$ /NDF: 9073348.2/53

# asym\_at1\_dd\_mean vs Slug



Right In: -597.074+/-540.176     $\chi^2/\text{NDF}$ : 23.6/25

Left Out: -1105.791+/-424.648     $\chi^2/\text{NDF}$ : 28.0/24

Right Out: 869.151+/-534.483     $\chi^2/\text{NDF}$ : 22.0/30

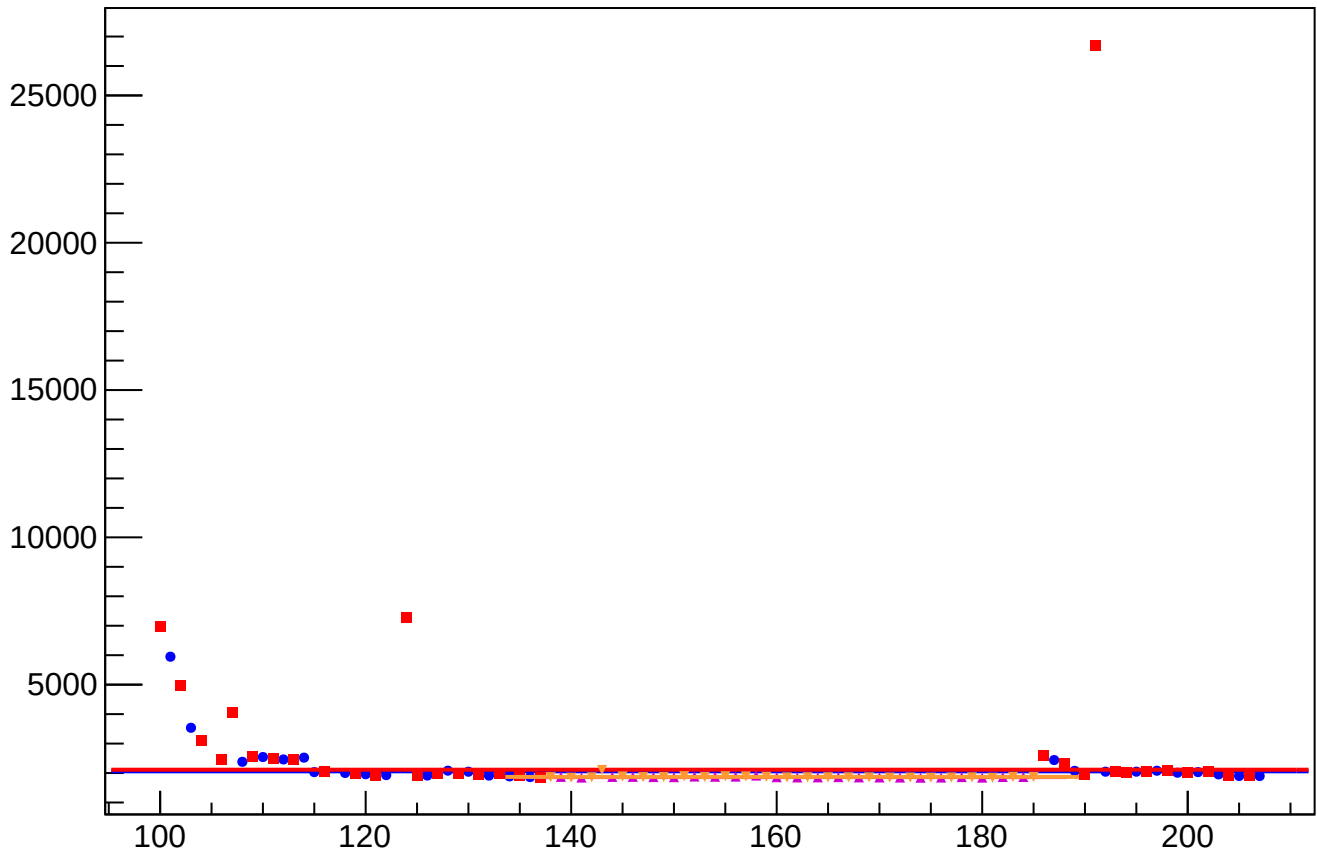
Left In: 346.936+/-434.947     $\chi^2/\text{NDF}$ : 28.8/22

+ sign -911.486+/-333.841     $\chi^2/\text{NDF}$ : 52.2/50

All: -185.934+/-237.295     $\chi^2/\text{NDF}$ : 113.0/104

- sign 554.985+/-337.358     $\chi^2/\text{NDF}$ : 51.3/53

# asym\_at1\_dd\_rms vs Slug



Right In: 2058.088+/-0.382  $\chi^2/\text{NDF}$ : 929659.2/25

Left Out: 1868.941+/-0.300  $\chi^2/\text{NDF}$ : 23314.7/24

Right Out: 2113.245+/-0.378  $\chi^2/\text{NDF}$ : 1362629.9/30

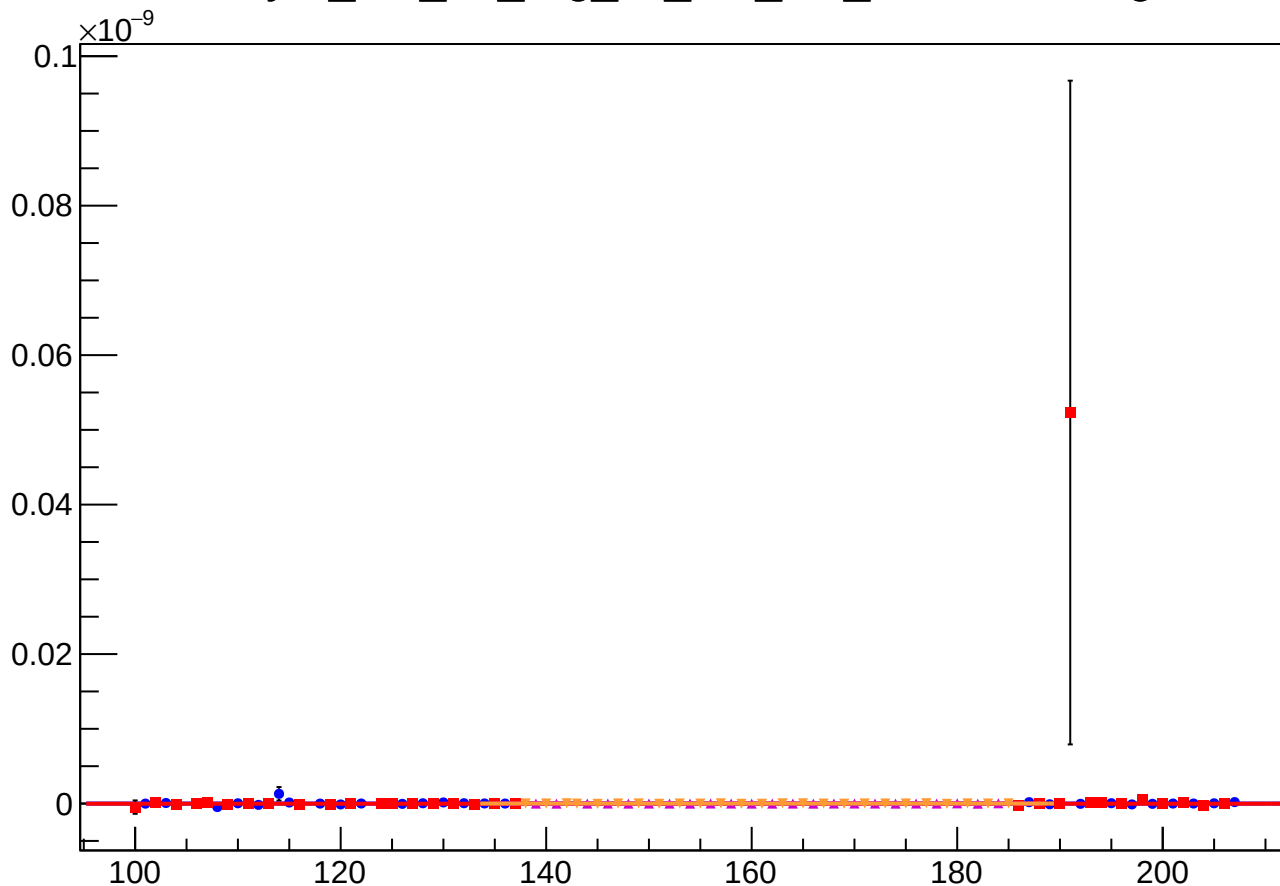
Left In: 1862.828+/-0.308  $\chi^2/\text{NDF}$ : 2714.5/22

+ sign 1941.186+/-0.236  $\chi^2/\text{NDF}$ : 1104531.7/50

All: 1951.778+/-0.168  $\chi^2/\text{NDF}$ : 2738065.1/10

- sign 1962.594+/-0.239  $\chi^2/\text{NDF}$ : 1629464.3/53

asym\_at1\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 26.1/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:42.1/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 32.0/30

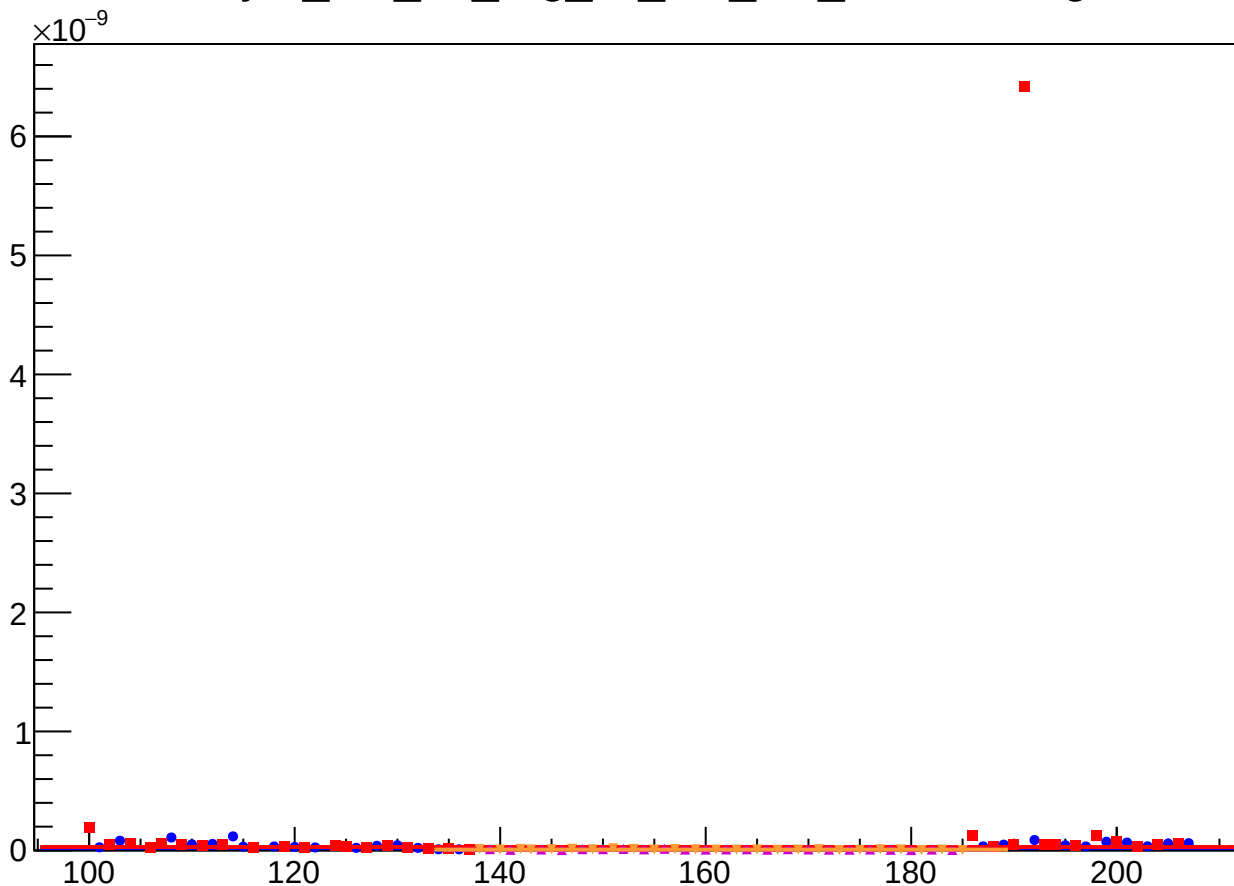
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:17.3/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 68.2/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 121.5/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 52.7/53

# asym\_at1\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4839235.5/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :1843010.5/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3312418.8/30

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :1477997.8/22

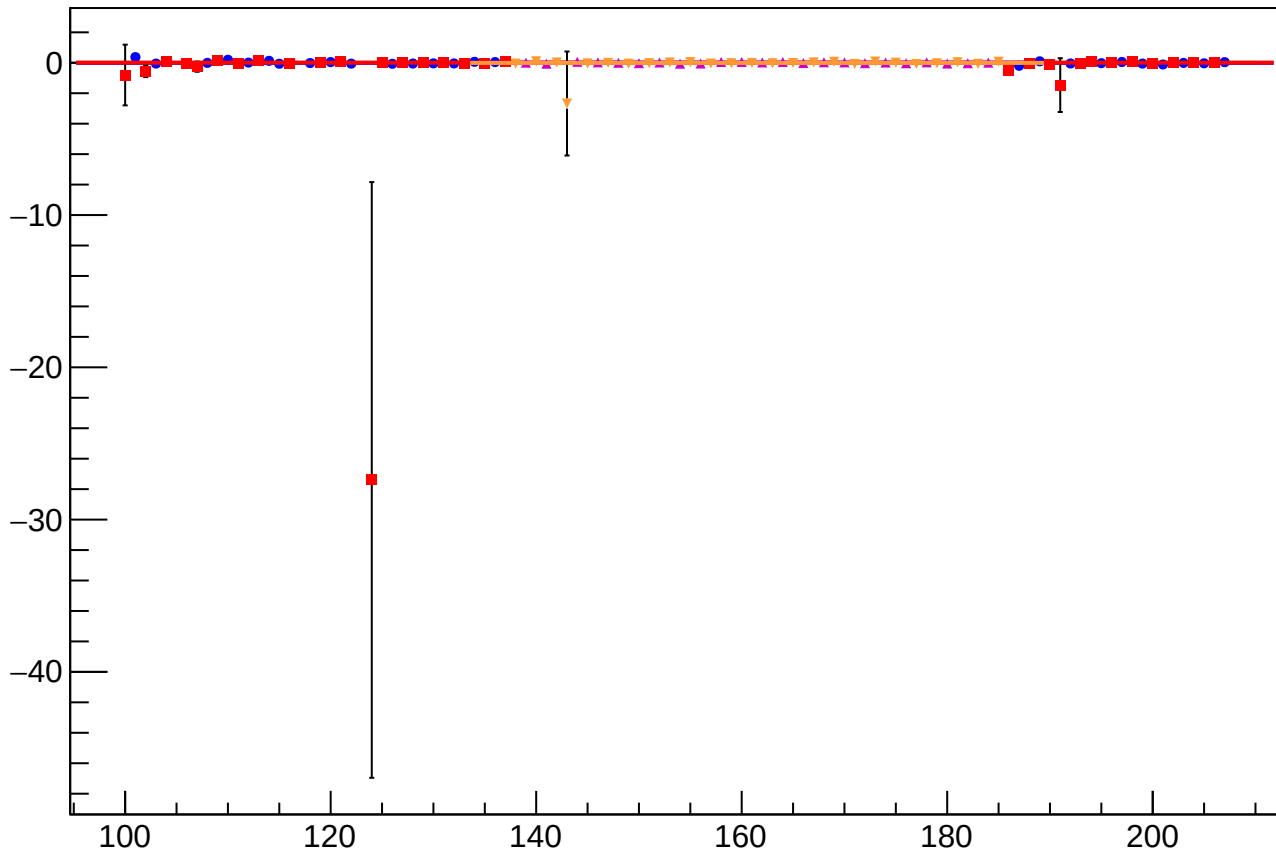
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9499956.5/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 19110532.1/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9607112.4/53



# asym\_at1\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.007 \pm 0.012$   $\chi^2/\text{NDF}$ : 28.4/25

Left Out:  $-0.010 \pm 0.008$   $\chi^2/\text{NDF}$ : 39.5/24

Right Out:  $0.007 \pm 0.012$   $\chi^2/\text{NDF}$ : 26.1/30

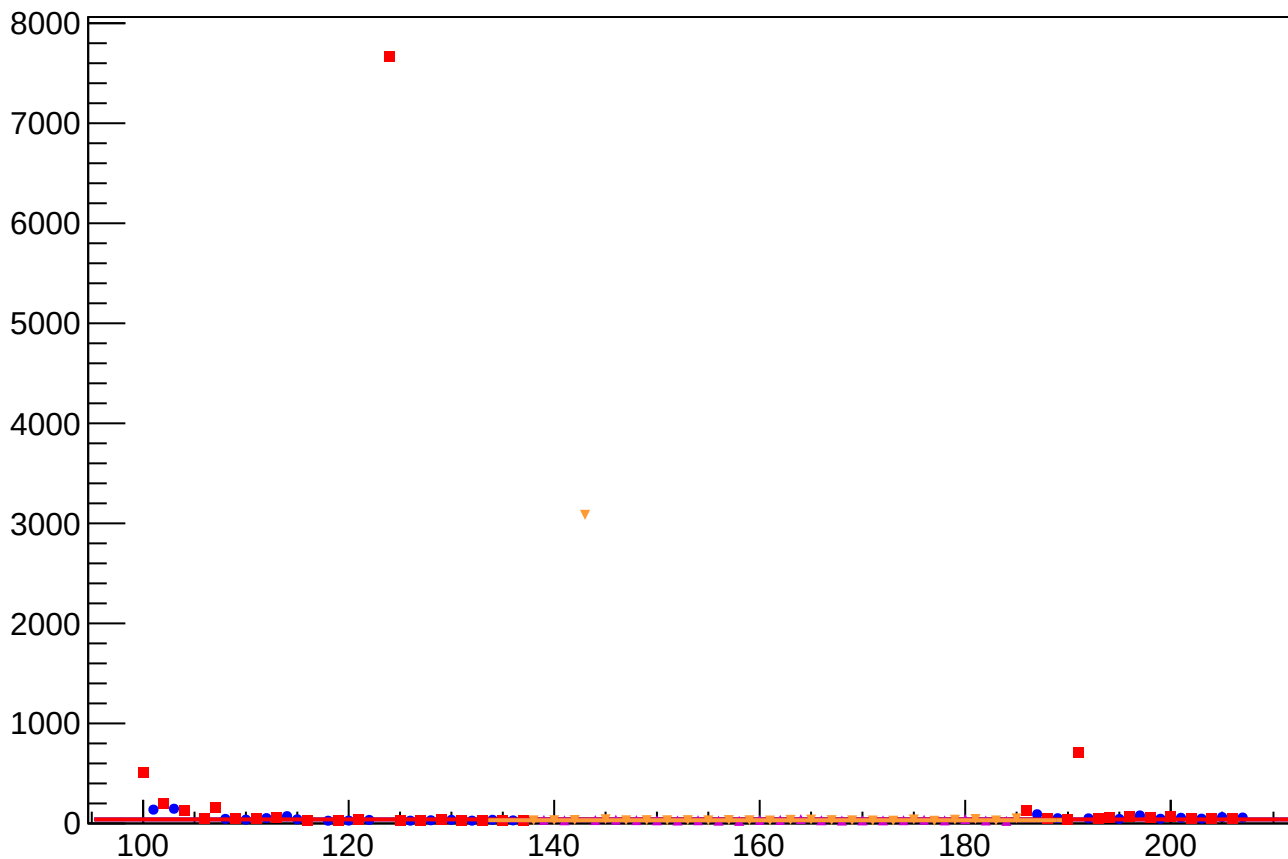
Left In:  $0.004 \pm 0.008$   $\chi^2/\text{NDF}$ : 20.8/22

+ sign  $-0.009 \pm 0.007$   $\chi^2/\text{NDF}$ : 68.0/50

All:  $-0.002 \pm 0.005$   $\chi^2/\text{NDF}$ : 116.9/104

- sign  $0.005 \pm 0.007$   $\chi^2/\text{NDF}$ : 47.0/53

# asym\_at1\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 40.423+/-0.009  $\chi^2/\text{NDF}$ : 3234681.7/25

Left Out: 32.277+/-0.006  $\chi^2/\text{NDF}$ : 2120929.6/24

Right Out: 40.237+/-0.008  $\chi^2/\text{NDF}$ : 4276161.5/30

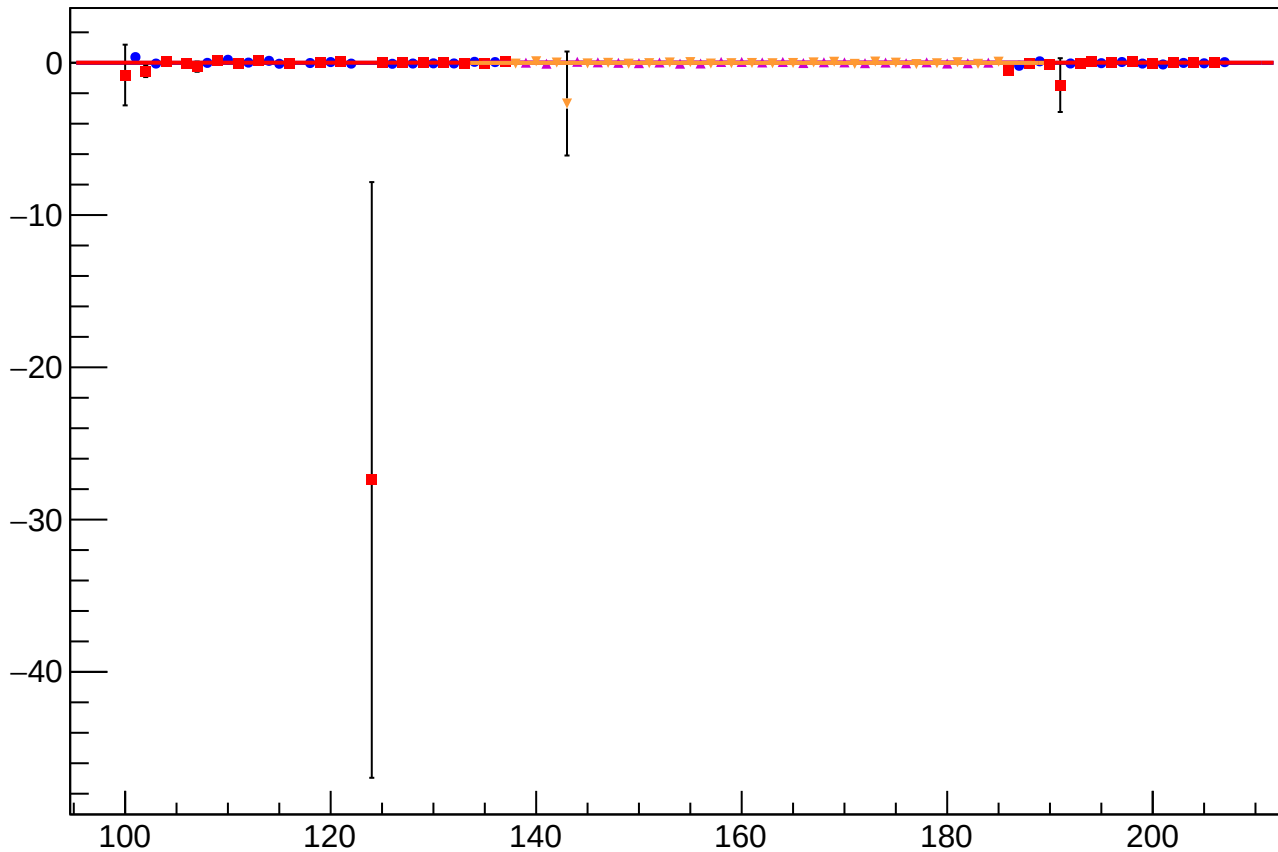
Left In: 32.421+/-0.006  $\chi^2/\text{NDF}$ : 426084.8/22

+ sign 34.857+/-0.005  $\chi^2/\text{NDF}$ : 5975954.9/50

All: 34.913+/-0.003  $\chi^2/\text{NDF}$ : 11258059.8/104

- sign 34.968+/-0.005  $\chi^2/\text{NDF}$ : 5281841.8/53

asym\_at1\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.007 \pm 0.012$   $\chi^2/\text{NDF}$ : 28.4/25

Left Out:  $-0.010 \pm 0.008$   $\chi^2/\text{NDF}$ : 39.5/24

Right Out:  $0.007 \pm 0.012$   $\chi^2/\text{NDF}$ : 26.1/30

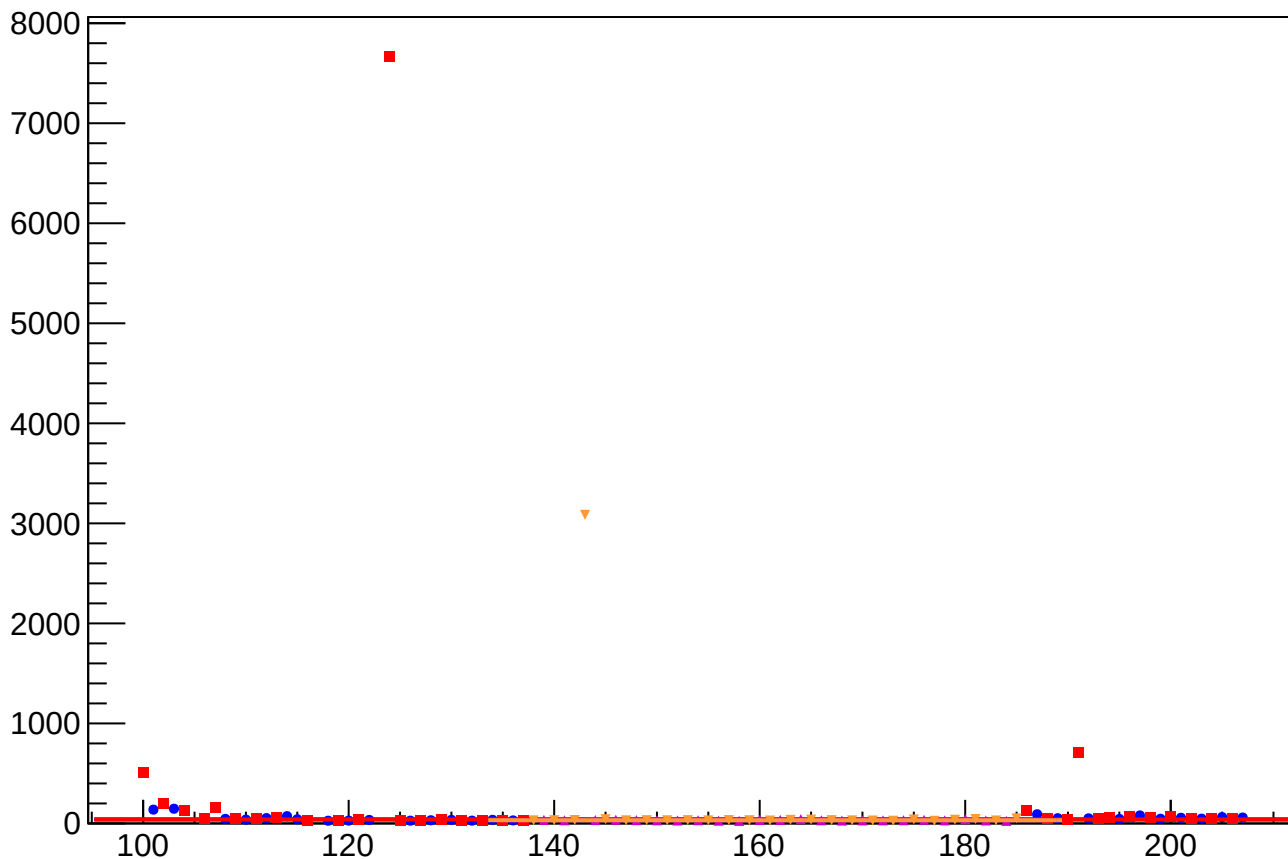
Left In:  $0.004 \pm 0.008$   $\chi^2/\text{NDF}$ : 20.8/22

+ sign  $-0.009 \pm 0.007$   $\chi^2/\text{NDF}$ : 68.0/50

All:  $-0.002 \pm 0.005$   $\chi^2/\text{NDF}$ : 116.9/104

- sign  $0.005 \pm 0.007$   $\chi^2/\text{NDF}$ : 47.0/53

# asym\_at1\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 40.423+/-0.009  $\chi^2/\text{NDF}$ : 3234681.7/25

Left Out: 32.277+/-0.006  $\chi^2/\text{NDF}$ : 2120929.6/24

Right Out: 40.237+/-0.008  $\chi^2/\text{NDF}$ : 4276161.5/30

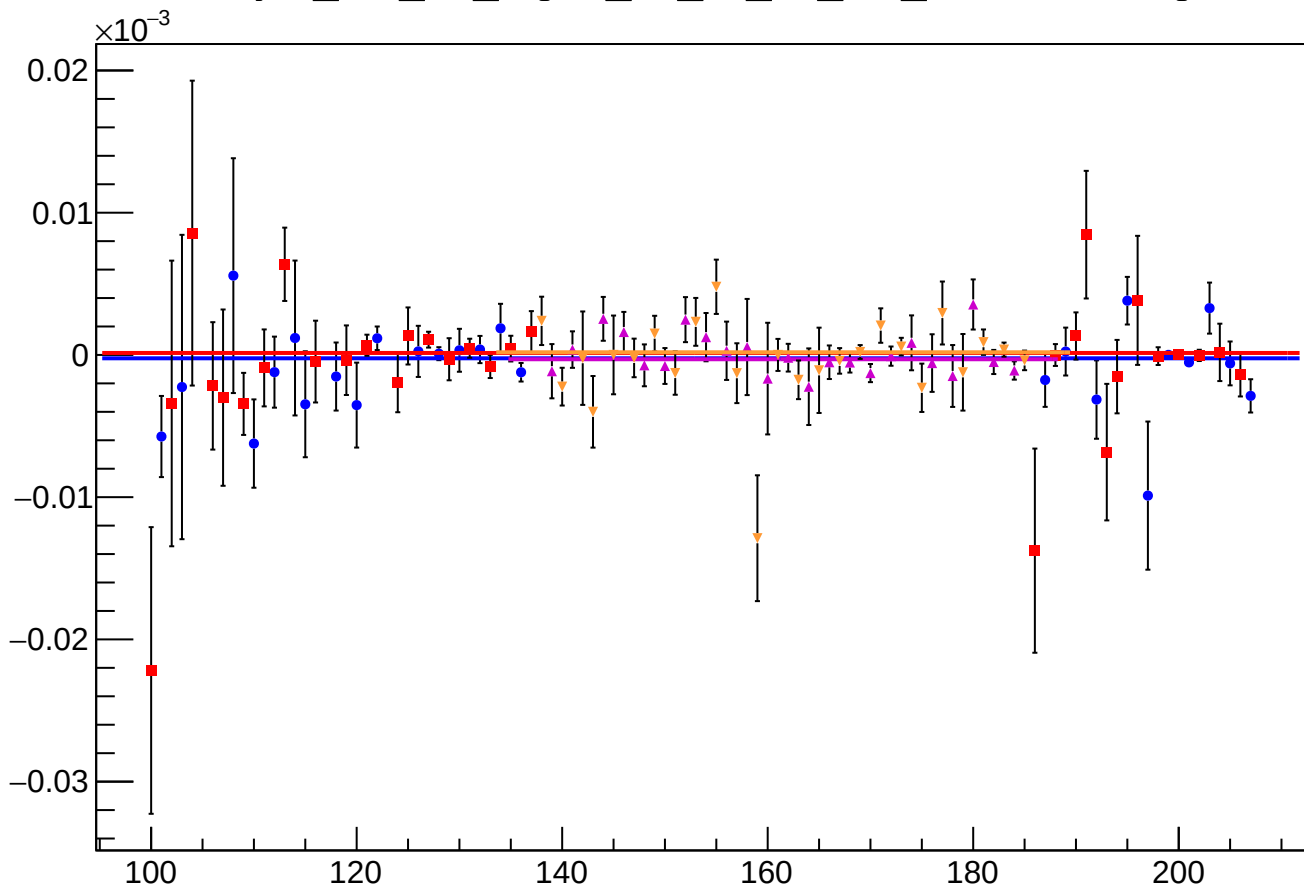
Left In: 32.421+/-0.006  $\chi^2/\text{NDF}$ : 426084.8/22

+ sign 34.857+/-0.005  $\chi^2/\text{NDF}$ : 5975954.9/50

All: 34.913+/-0.003  $\chi^2/\text{NDF}$ : 11258059.8/104

- sign 34.968+/-0.005  $\chi^2/\text{NDF}$ : 5281841.8/53

asym\_at1\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 40.1/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:37.5/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 34.9/30

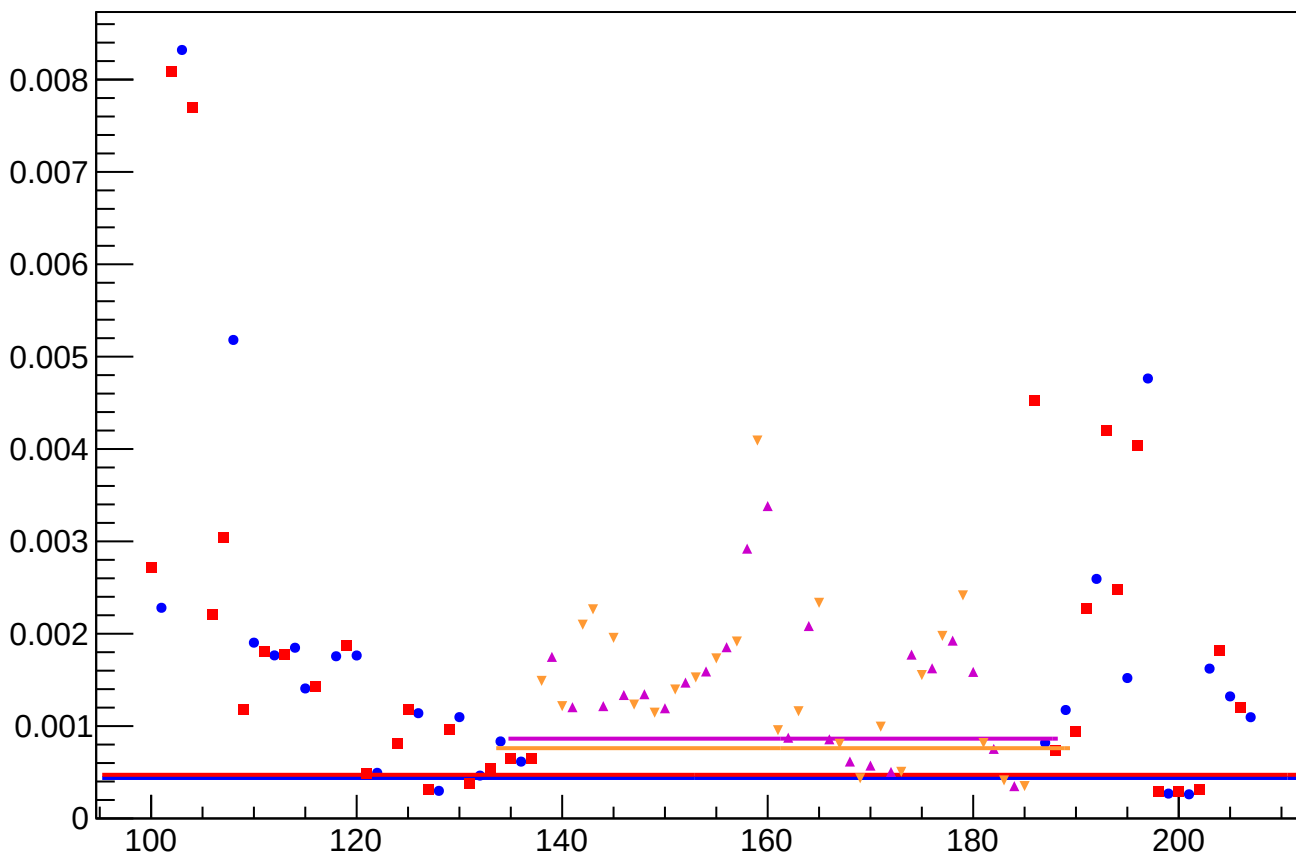
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:20.2/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 80.1/50

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 137.7/104

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 57.5/53

# asym\_at1\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 13491213.4/25

Left Out: 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ :11085699.1/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 13297521.7/30

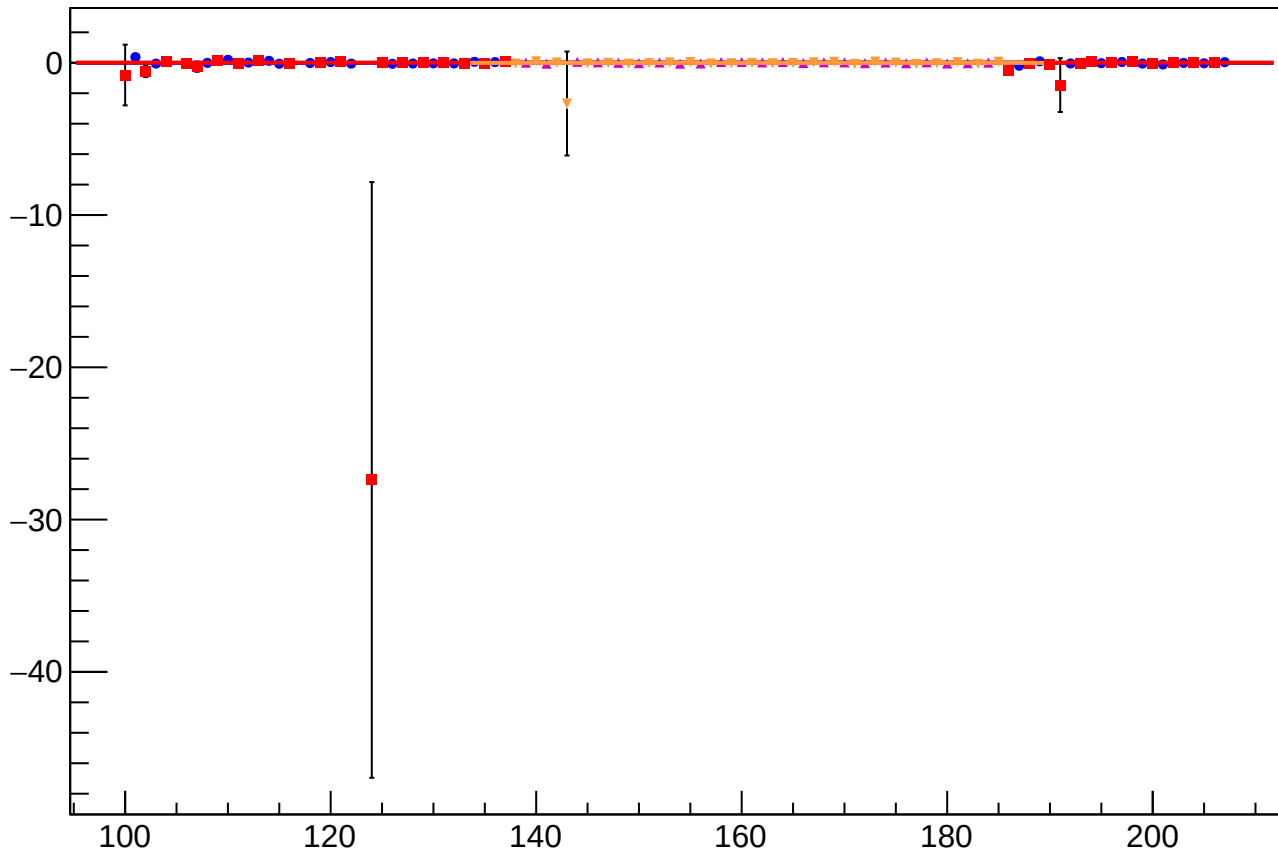
Left In: 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ :8440059.8/22

+ sign 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 27497181.9/50

All: 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 52912849.2/104

- sign 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 25294429.3/53

asym\_at1\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.007 \pm 0.012$   $\chi^2/\text{NDF}$ : 28.4/25

Left Out:  $-0.010 \pm 0.008$   $\chi^2/\text{NDF}$ : 39.5/24

Right Out:  $0.007 \pm 0.012$   $\chi^2/\text{NDF}$ : 26.1/30

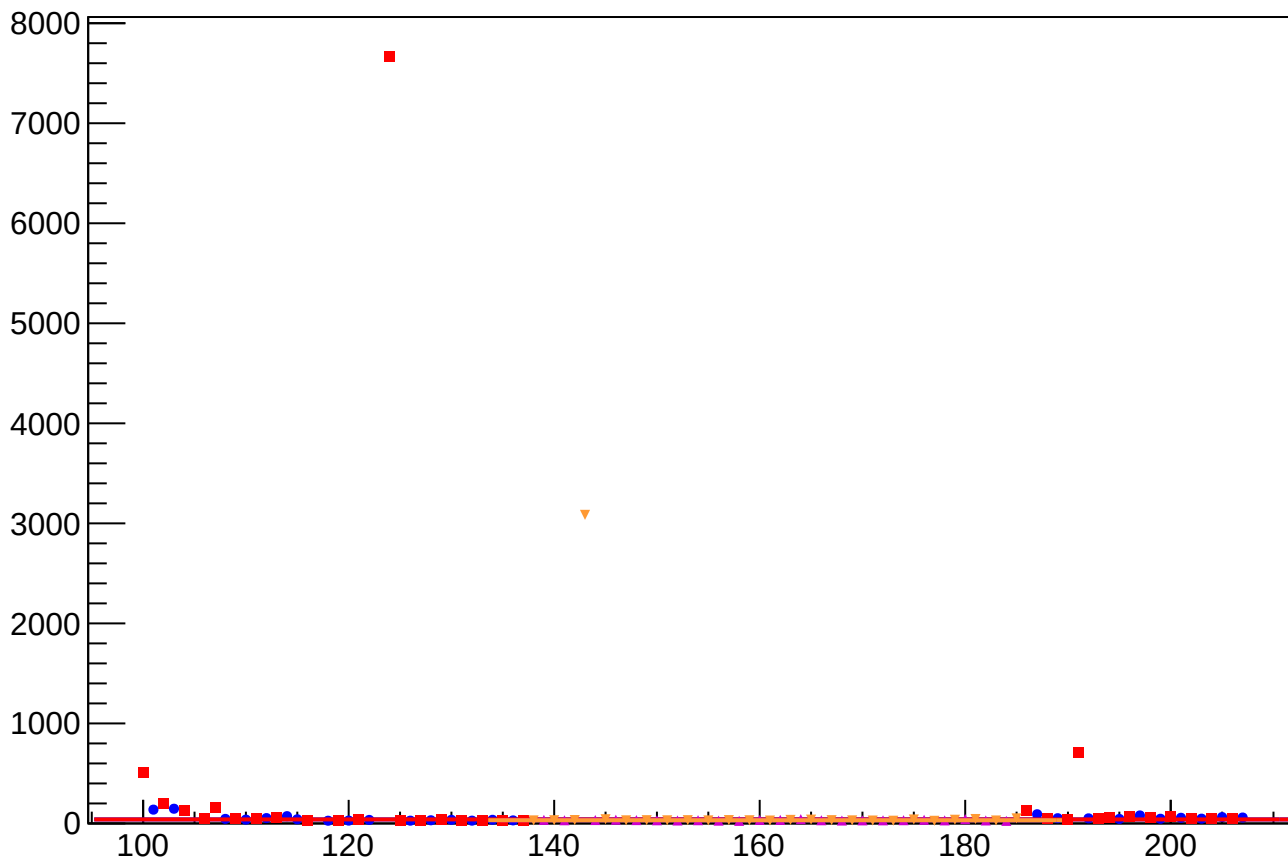
Left In:  $0.004 \pm 0.008$   $\chi^2/\text{NDF}$ : 20.8/22

+ sign  $-0.009 \pm 0.007$   $\chi^2/\text{NDF}$ : 68.0/50

All:  $-0.002 \pm 0.005$   $\chi^2/\text{NDF}$ : 116.9/104

- sign  $0.005 \pm 0.007$   $\chi^2/\text{NDF}$ : 47.0/53

# asym\_at1\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 40.423+/-0.009  $\chi^2/\text{NDF}$ : 3234663.1/25

Left Out: 32.277+/-0.006  $\chi^2/\text{NDF}$ : 2120971.9/24

Right Out: 40.237+/-0.008  $\chi^2/\text{NDF}$ : 4276179.4/30

Left In: 32.422+/-0.006  $\chi^2/\text{NDF}$ : 426001.5/22

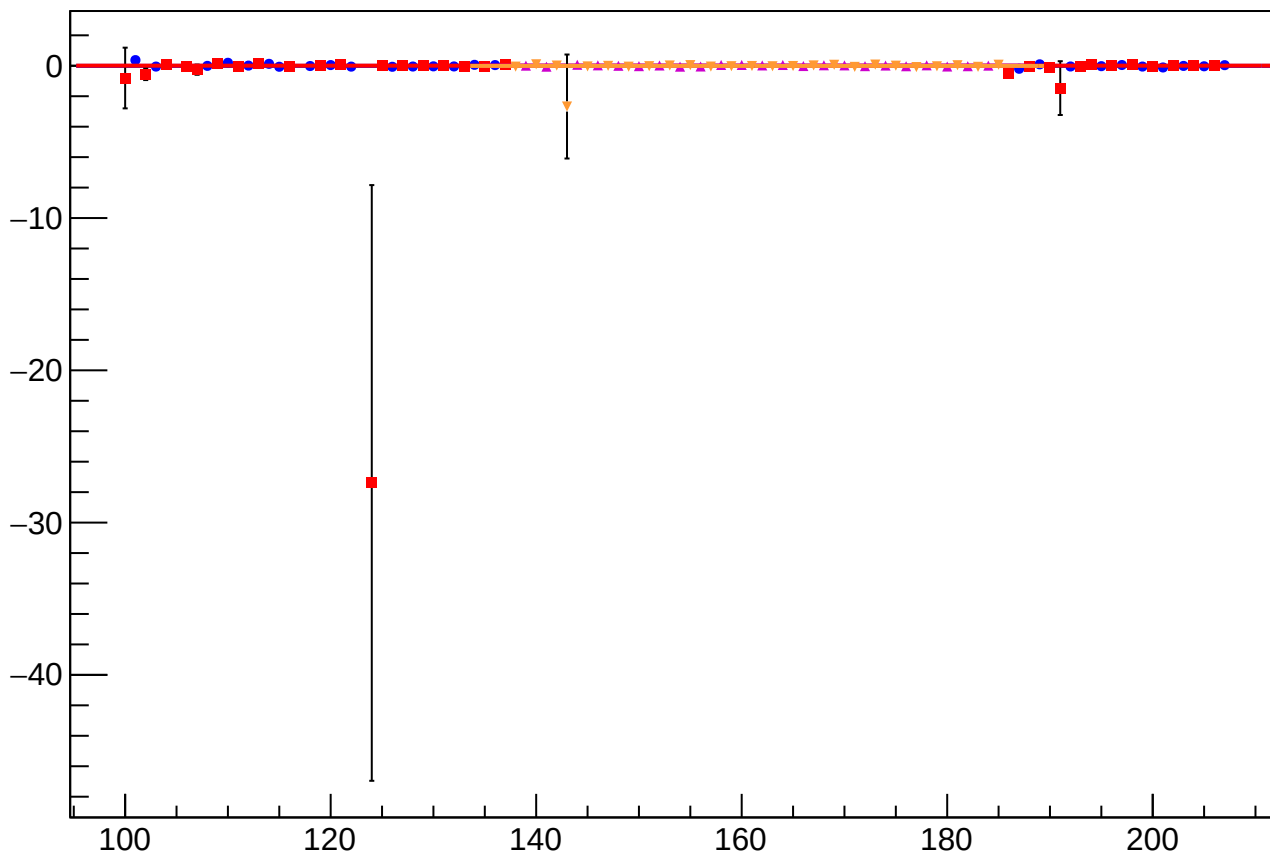
+ sign 34.857+/-0.005  $\chi^2/\text{NDF}$ : 5975985.8/50

All: 34.913+/-0.003  $\chi^2/\text{NDF}$ : 11257990.6/104

- sign 34.968+/-0.005  $\chi^2/\text{NDF}$ : 5281740.4/53



asym\_at1\_dd\_eigen\_dit vs eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.007 \pm 0.012$      $\chi^2/\text{NDF}$ : 28.4/25

Left Out:  $-0.010 \pm 0.008$      $\chi^2/\text{NDF}: 39.5/24$

Right Out:  $0.007 \pm 0.012$      $\chi^2/\text{NDF}$ : 26.1/30

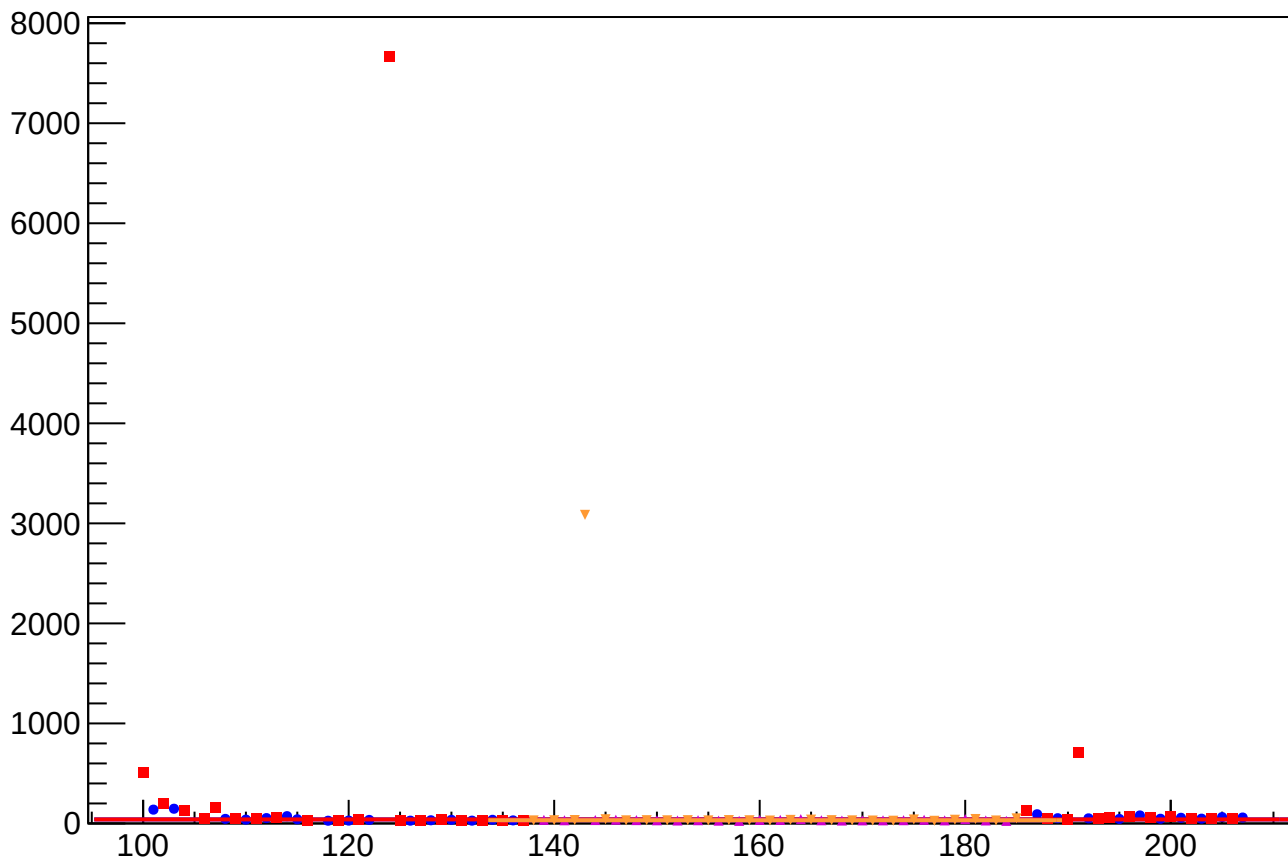
Left In: 0.004+/-0.008     $\chi^2/\text{NDF}$ :20.8/22

+ sign  $-0.009 \pm 0.007$   $\chi^2/\text{NDF}: 68.0/50$

All:  $-0.002 \pm 0.005$      $\chi^2/\text{NDF}: 116.9/104$

- sign 0.005+/-0.007     $\chi^2/\text{NDF}$ : 47.0/53

asym\_at1\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 40.423+/-0.009  $\chi^2/\text{NDF}$ : 3234663.1/25

Left Out: 32.277+/-0.006  $\chi^2/\text{NDF}$ : 2120971.9/24

Right Out: 40.237+/-0.008  $\chi^2/\text{NDF}$ : 4276179.4/30

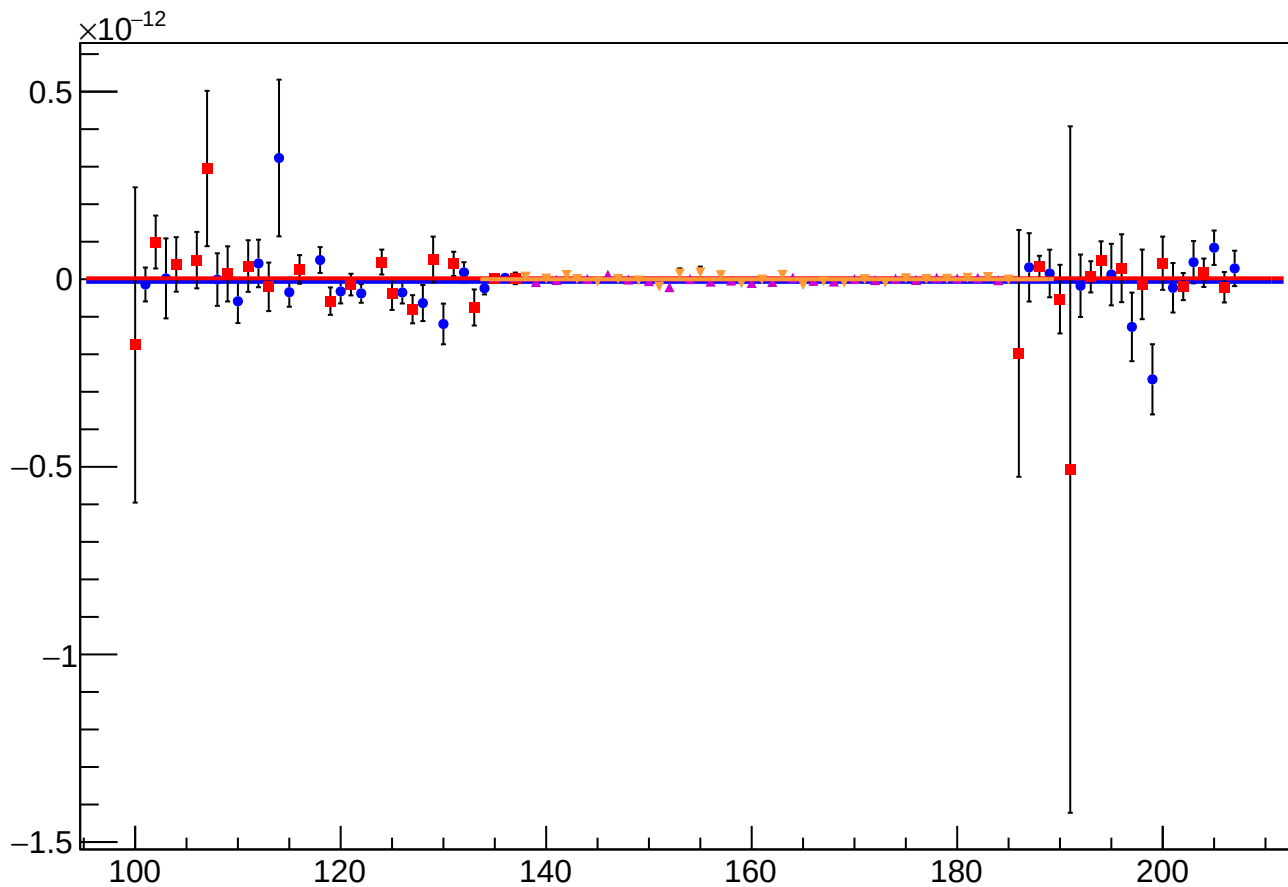
Left In: 32.422+/-0.006  $\chi^2/\text{NDF}$ : 426001.5/22

+ sign 34.857+/-0.005  $\chi^2/\text{NDF}$ : 5975985.8/50

All: 34.913+/-0.003  $\chi^2/\text{NDF}$ : 11257990.6/104

- sign 34.968+/-0.005  $\chi^2/\text{NDF}$ : 5281740.4/53

# asym\_at1\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug

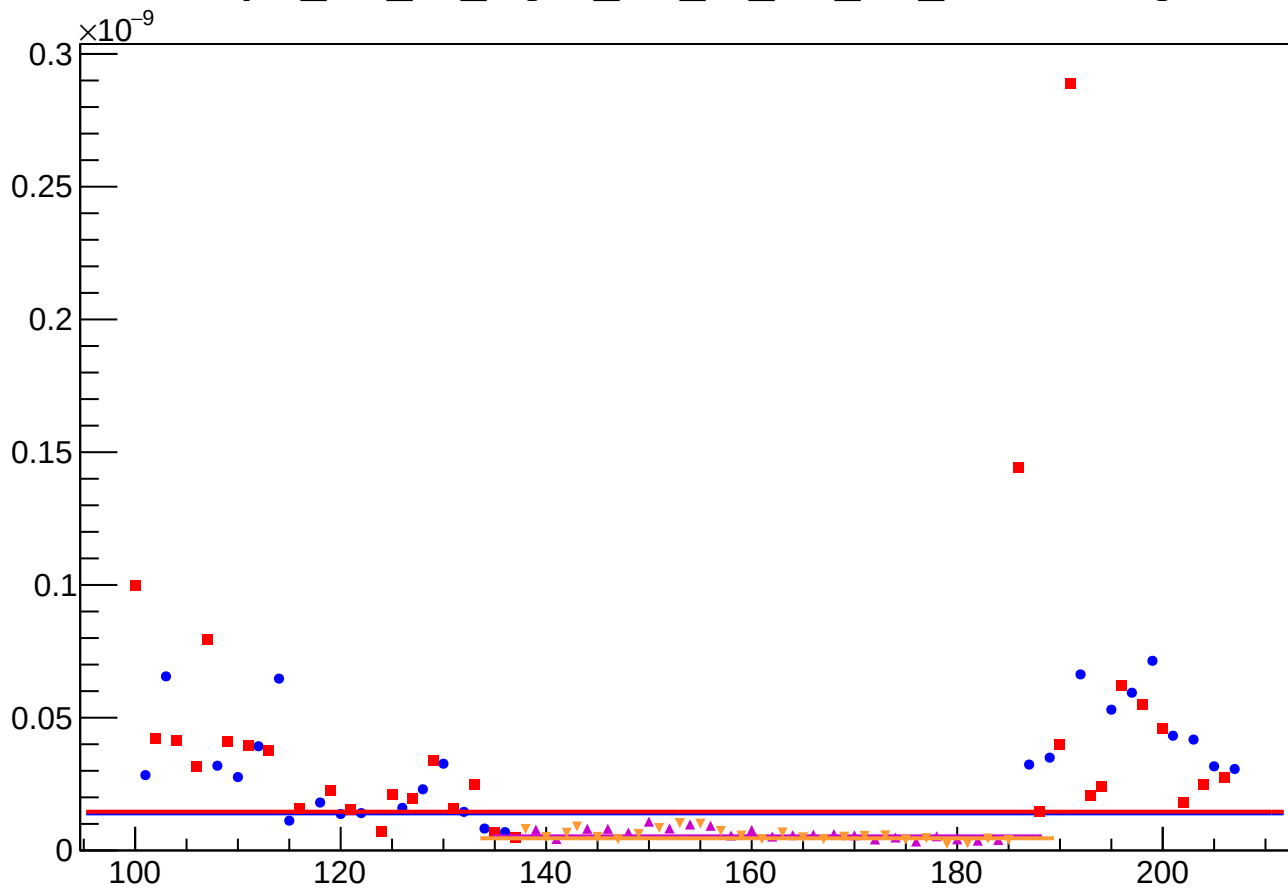


+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 56.9/50$

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 91.6/104$

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 34.6/53$

asym\_at1\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7373883.8/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2796753.7/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6426769.3/30

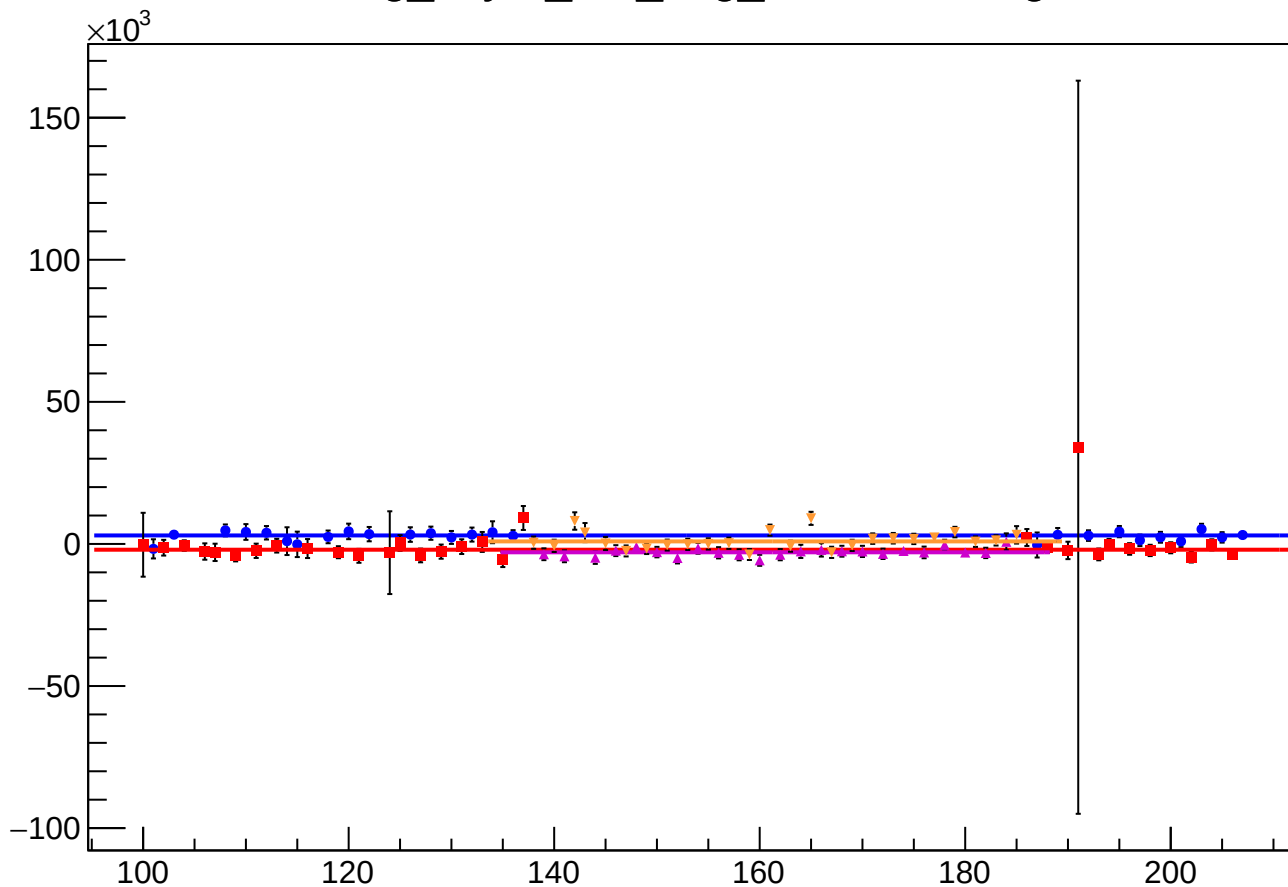
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2230717.6/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14640718.3/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 27426535.2/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12525998.0/53

# reg\_asym\_at2\_avg\_mean vs Slug



Right In: 2992.077 $\pm$ 447.573  $\chi^2$ /NDF: 8.8/25

Left Out: 898.921 $\pm$ 405.540  $\chi^2$ /NDF: 45.3/24

Right Out: -2030.756 $\pm$ 434.860  $\chi^2$ /NDF: 21.9/30

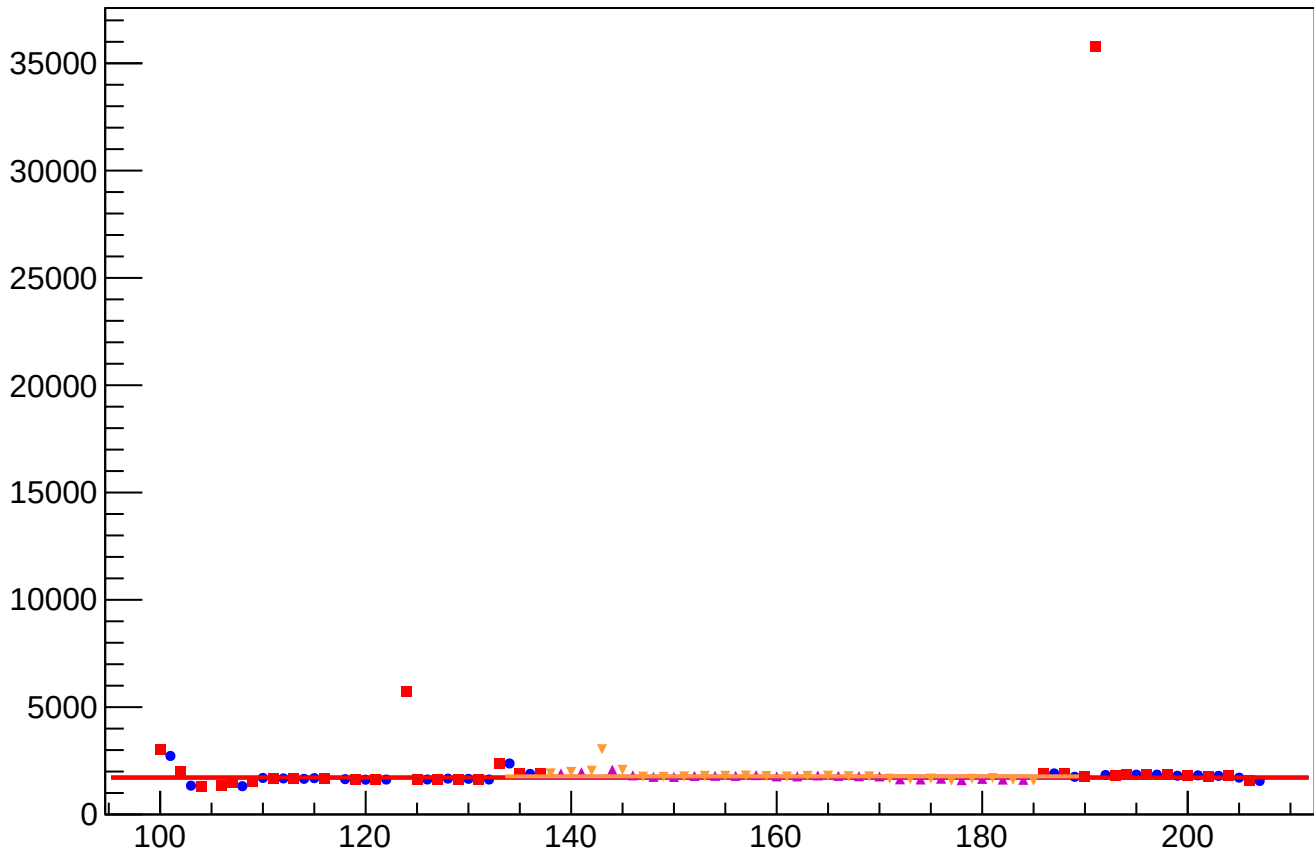
Left In: -2943.285 $\pm$ 412.069  $\chi^2$ /NDF: 10.6/22

+ sign 1842.619 $\pm$ 300.525  $\chi^2$ /NDF: 66.1/50

All: -344.744 $\pm$ 212.001  $\chi^2$ /NDF: 206.3/104

- sign -2511.560 $\pm$ 299.110  $\chi^2$ /NDF: 34.8/53

# reg\_asym\_at2\_avg\_rms vs Slug



Right In: 1716.582 $\pm$ 0.316  $\chi^2$ /NDF: 493200.0/25

Left Out: 1774.731 $\pm$ 0.287  $\chi^2$ /NDF: 446895.8/24

Right Out: 1724.138 $\pm$ 0.307  $\chi^2$ /NDF: 692577.8/30

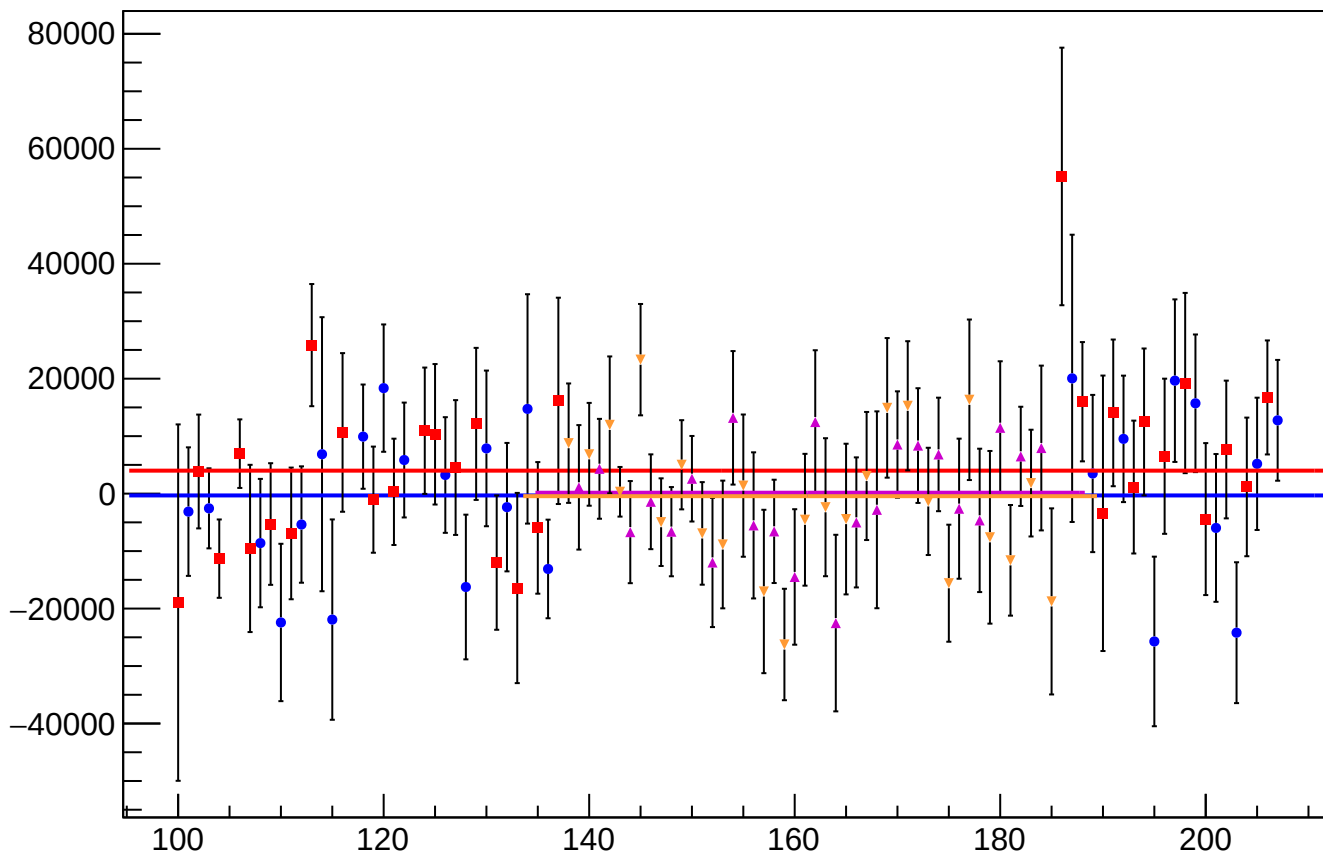
Left In: 1761.089 $\pm$ 0.291  $\chi^2$ /NDF: 146266.6/22

+ sign 1748.514 $\pm$ 0.213  $\chi^2$ /NDF: 958634.2/50

All: 1746.049 $\pm$ 0.150  $\chi^2$ /NDF: 1805355.0/10

- sign 1743.607 $\pm$ 0.212  $\chi^2$ /NDF: 846452.8/53

# asym\_at2\_avg\_reg\_correction\_mean vs Slug



Right In:  $-316.027 \pm 2270.745$   $\chi^2/\text{NDF}: 28.7/25$

Left Out:  $-443.346 \pm 1925.604$   $\chi^2/\text{NDF}: 29.5/24$

Right Out:  $3997.540 \pm 2035.358$   $\chi^2/\text{NDF}: 29.9/30$

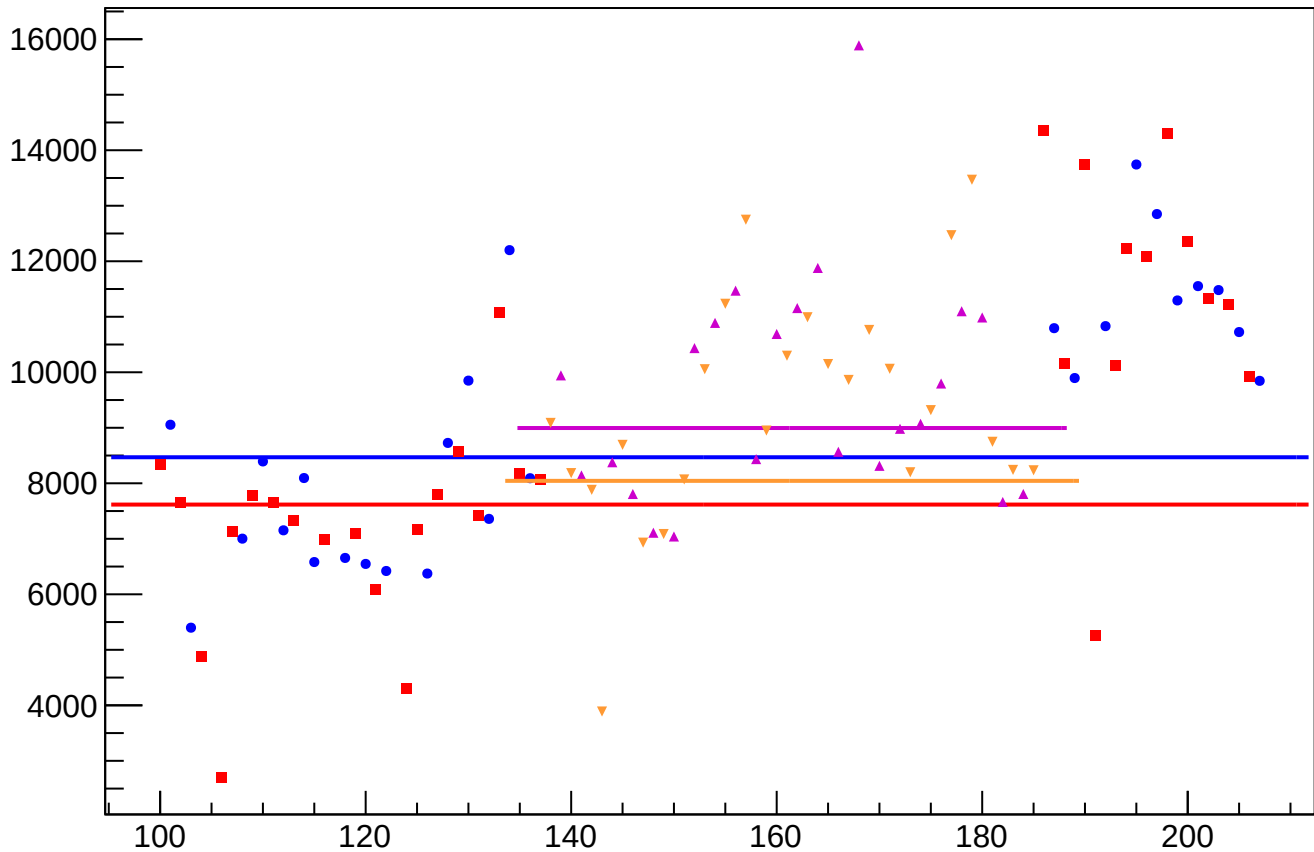
Left In:  $155.268 \pm 2143.489$   $\chi^2/\text{NDF}: 13.8/22$

+ sign  $-390.088 \pm 1468.638$   $\chi^2/\text{NDF}: 58.2/50$

All:  $886.454 \pm 1041.064$   $\chi^2/\text{NDF}: 105.1/104$

- sign  $2175.759 \pm 1475.962$   $\chi^2/\text{NDF}: 45.4/53$

# asym\_at2\_avg\_reg\_correction\_rms vs Slug



Right In: 8468.979+/-1.606  $\chi^2/\text{NDF}$ : 1949882.2/25

Left Out: 8043.834+/-1.362  $\chi^2/\text{NDF}$ : 3362838.6/24

Right Out: 7616.548+/-1.439  $\chi^2/\text{NDF}$ : 4210515.4/30

Left In: 8995.626+/-1.516  $\chi^2/\text{NDF}$ : 1207133.5/22

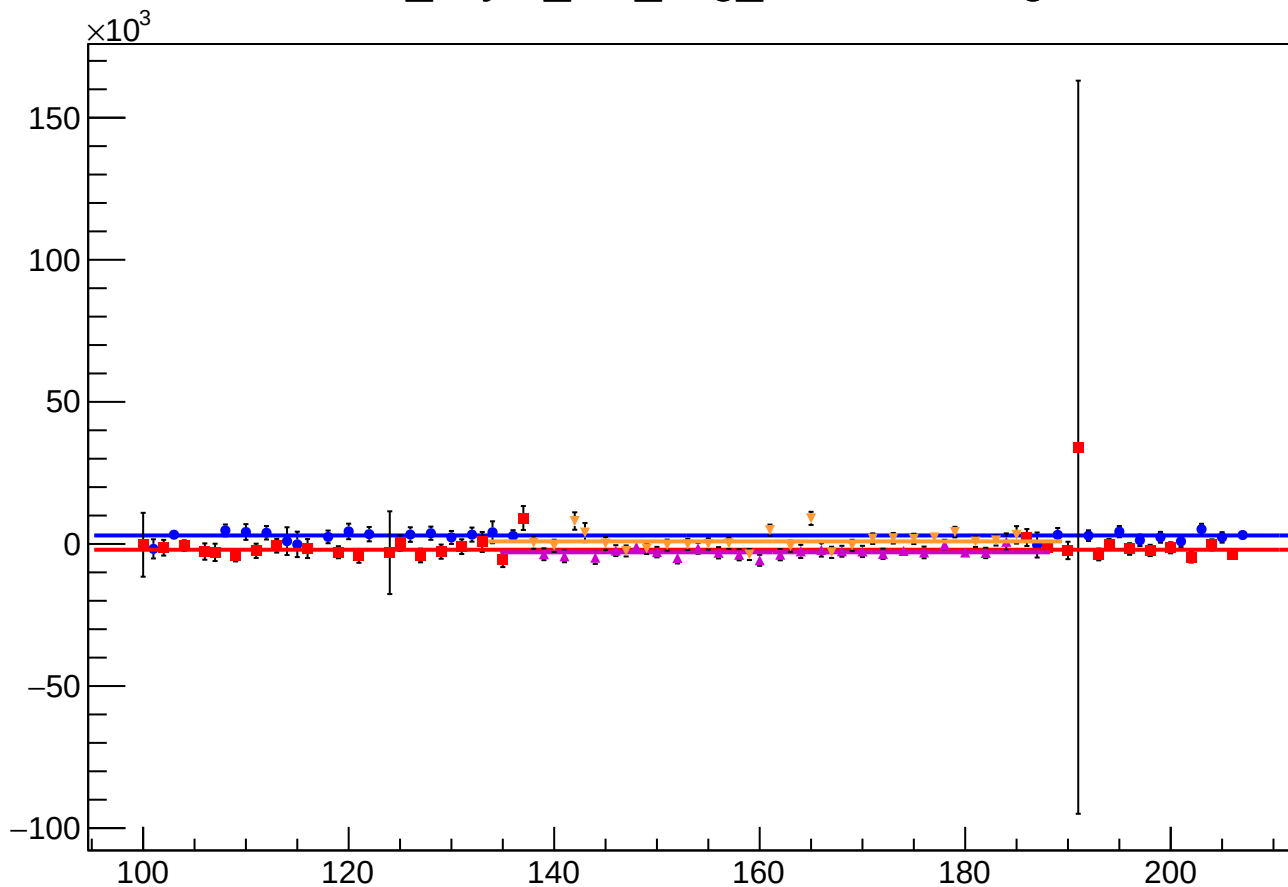
+ sign 8221.674+/-1.038  $\chi^2/\text{NDF}$ : 5353502.3/50

All: 8245.928+/-0.736  $\chi^2/\text{NDF}$ : 11207593.7/100

- sign 8270.425+/-1.044  $\chi^2/\text{NDF}$ : 5852995.0/53



# cor\_asym\_at2\_avg\_mean vs Slug



Right In: 2992.116 $\pm$ 447.573  $\chi^2$ /NDF: 8.8/25

Left Out: 898.842 $\pm$ 405.540  $\chi^2$ /NDF: 45.3/24

Right Out: -2030.674 $\pm$ 434.860  $\chi^2$ /NDF: 21.9/30

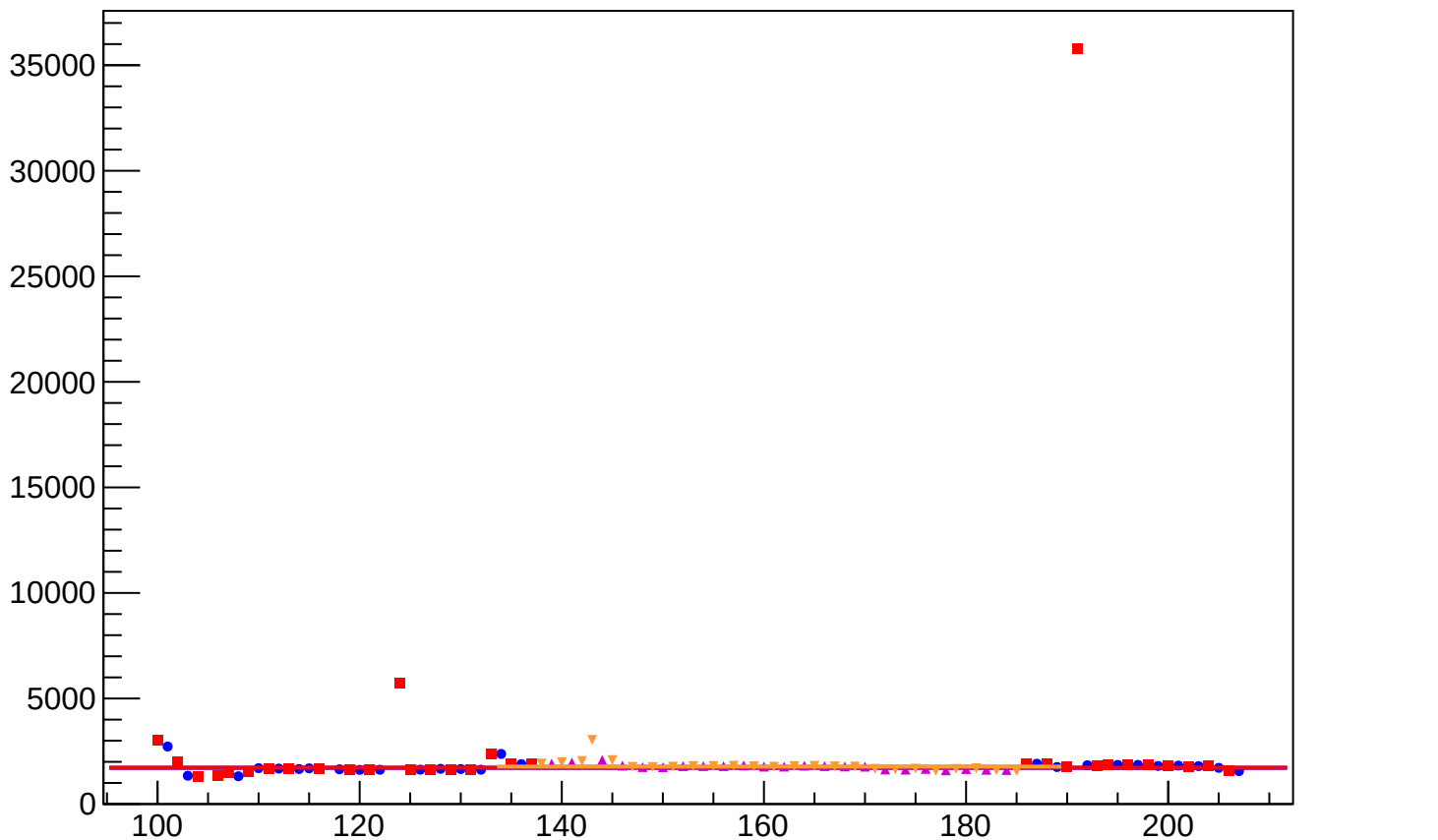
Left In: -2943.173 $\pm$ 412.069  $\chi^2$ /NDF: 10.6/22

+ sign 1842.593 $\pm$ 300.525  $\chi^2$ /NDF: 66.1/50

All: -344.708 $\pm$ 212.001  $\chi^2$ /NDF: 206.3/104

- sign -2511.461 $\pm$ 299.110  $\chi^2$ /NDF: 34.8/53

# cor\_asym\_at2\_avg\_rms vs Slug



Right In:  $1716.582 \pm 0.316$   $\chi^2/\text{NDF}$ : 493200.4/25

Left Out:  $1774.731 \pm 0.287$   $\chi^2/\text{NDF}$ : 446895.7/24

Right Out:  $1724.138 \pm 0.307$   $\chi^2/\text{NDF}$ : 692578.0/30

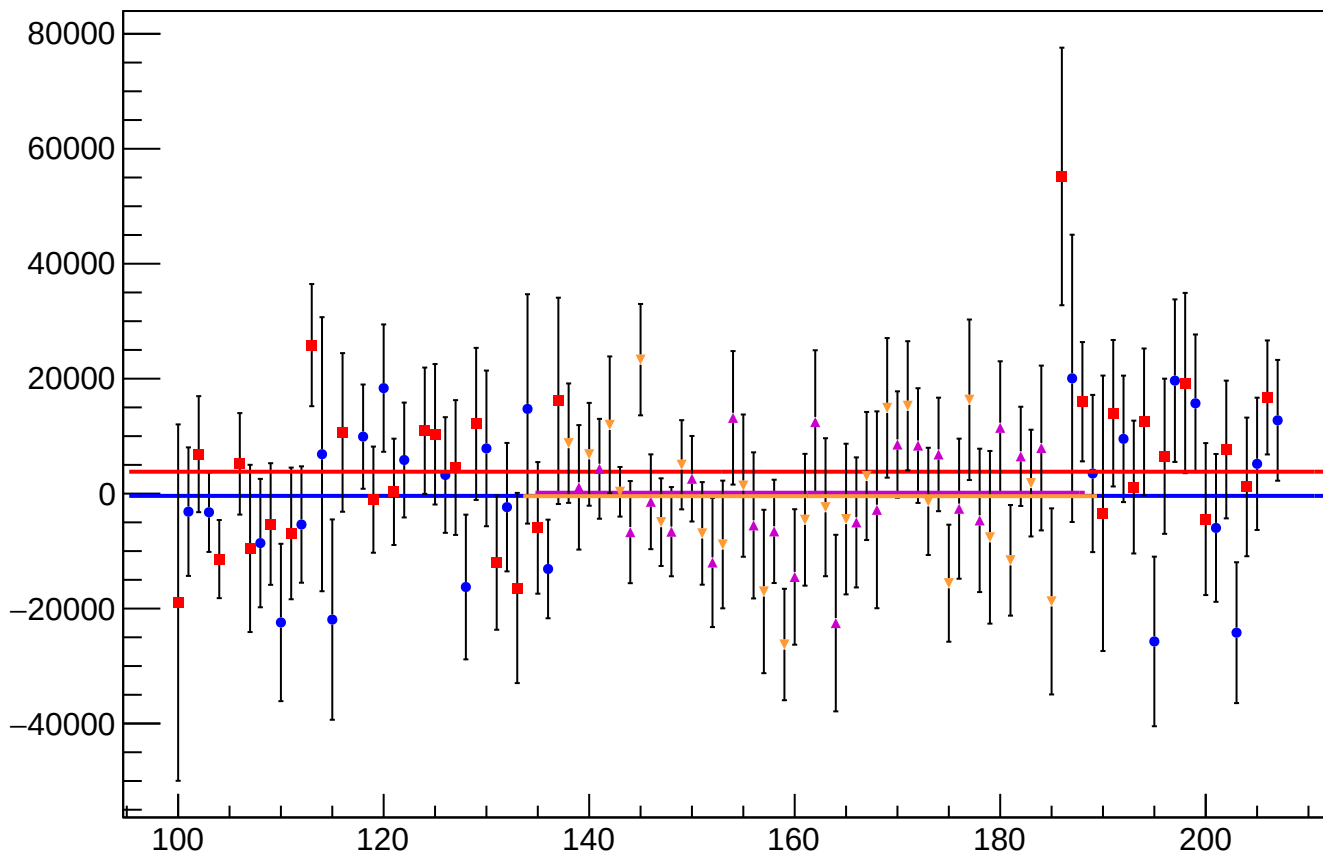
Left In:  $1761.089 \pm 0.291$   $\chi^2/\text{NDF}$ : 146266.6/22

+ sign  $1748.514 \pm 0.213$   $\chi^2/\text{NDF}$ : 958634.7/50

All:  $1746.049 \pm 0.150$   $\chi^2/\text{NDF}$ : 1805355.6/10

- sign  $1743.607 \pm 0.212$   $\chi^2/\text{NDF}$ : 846453.0/53

# asym\_at2\_avg\_cor\_correction\_mean vs Slug



Right In:  $-393.478 \pm 2268.667$   $\chi^2/\text{NDF}: 28.7/25$

Left Out:  $-443.387 \pm 1925.600$   $\chi^2/\text{NDF}: 29.5/24$

Right Out:  $3811.600 \pm 2104.180$   $\chi^2/\text{NDF}: 29.8/30$

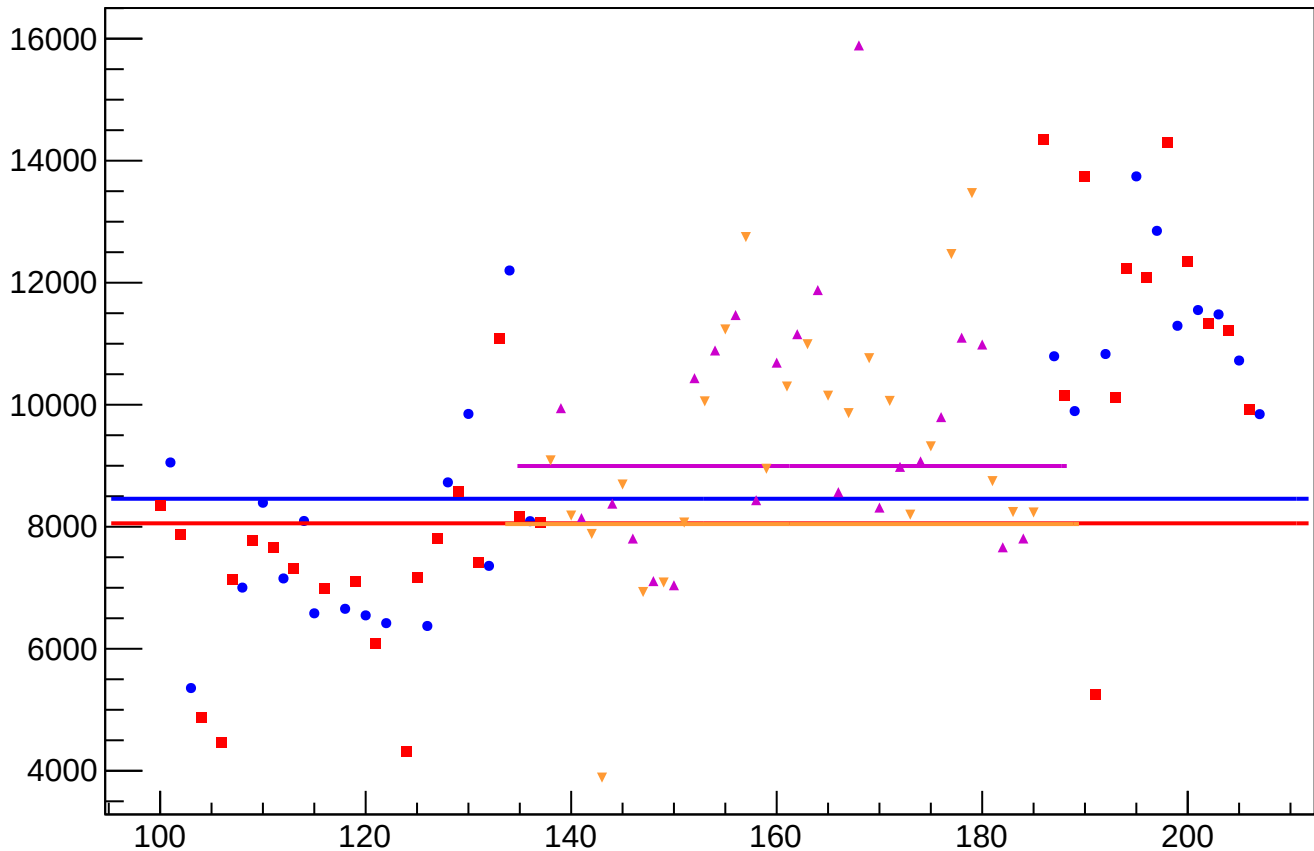
Left In:  $155.239 \pm 2143.487$   $\chi^2/\text{NDF}: 13.8/22$

+ sign  $-422.488 \pm 1468.074$   $\chi^2/\text{NDF}: 58.2/50$

All:  $769.854 \pm 1049.732$   $\chi^2/\text{NDF}: 104.7/104$

- sign  $2017.251 \pm 1501.584$   $\chi^2/\text{NDF}: 45.1/53$

# asym\_at2\_avg\_cor\_correction\_rms vs Slug



Right In: 8458.781+/-1.604  $\chi^2/\text{NDF}$ : 1967484.8/25

Left Out: 8043.808+/-1.362  $\chi^2/\text{NDF}$ : 3362915.7/24

Right Out: 8056.210+/-1.488  $\chi^2/\text{NDF}$ : 3024553.6/30

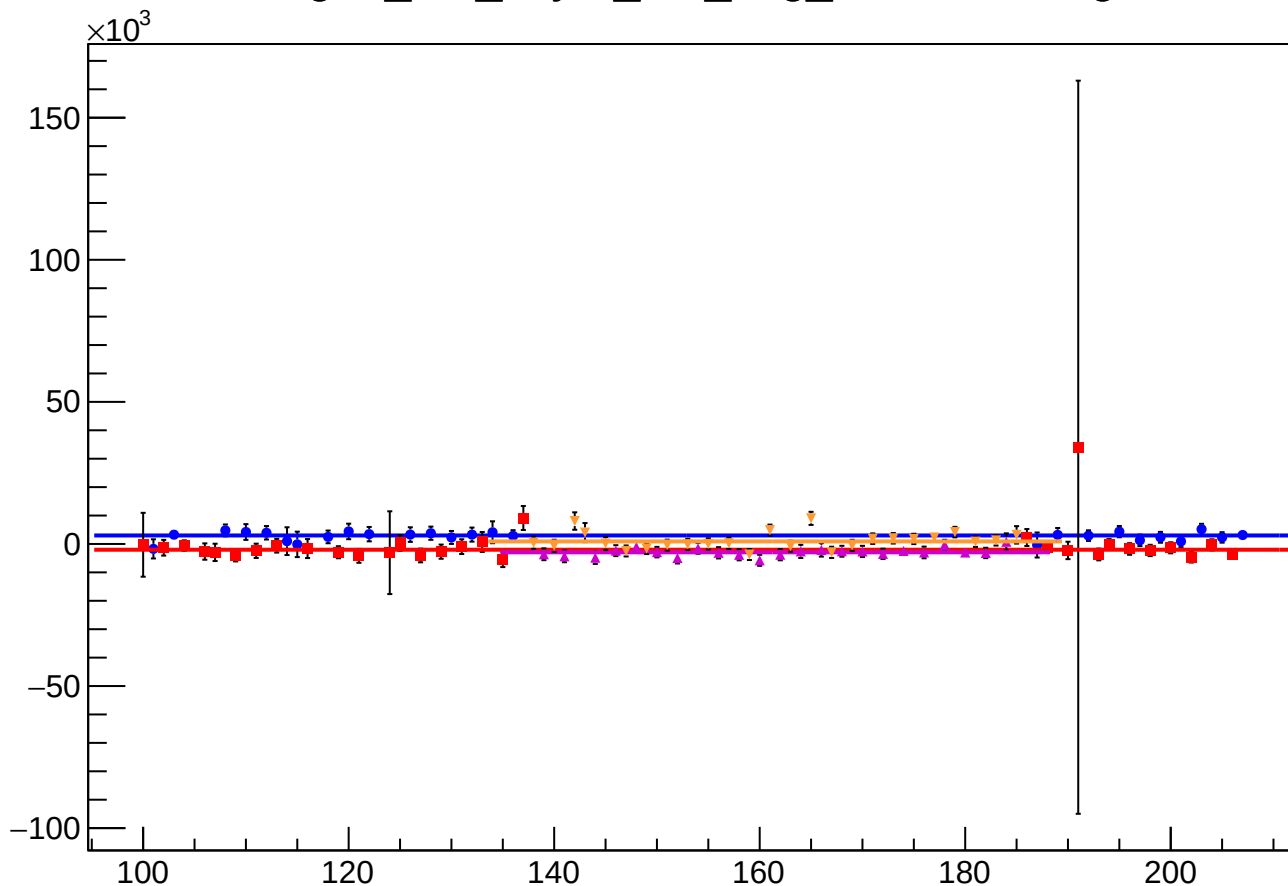
Left In: 8995.616+/-1.516  $\chi^2/\text{NDF}$ : 1207139.1/22

+ sign 8217.578+/-1.038  $\chi^2/\text{NDF}$ : 5369295.3/50

All: 8364.018+/-0.742  $\chi^2/\text{NDF}$ : 9837334.3/10

- sign 8517.220+/-1.062  $\chi^2/\text{NDF}$ : 4427319.9/53

# eigen\_cor\_asym\_at2\_avg\_mean vs Slug



Right In: 2992.116 $\pm$ 447.573  $\chi^2$ /NDF: 8.8/25

Left Out: 898.842 $\pm$ 405.540  $\chi^2$ /NDF:45.3/24

Right Out: -2030.674 $\pm$ 434.860  $\chi^2$ /NDF: 21.9/30

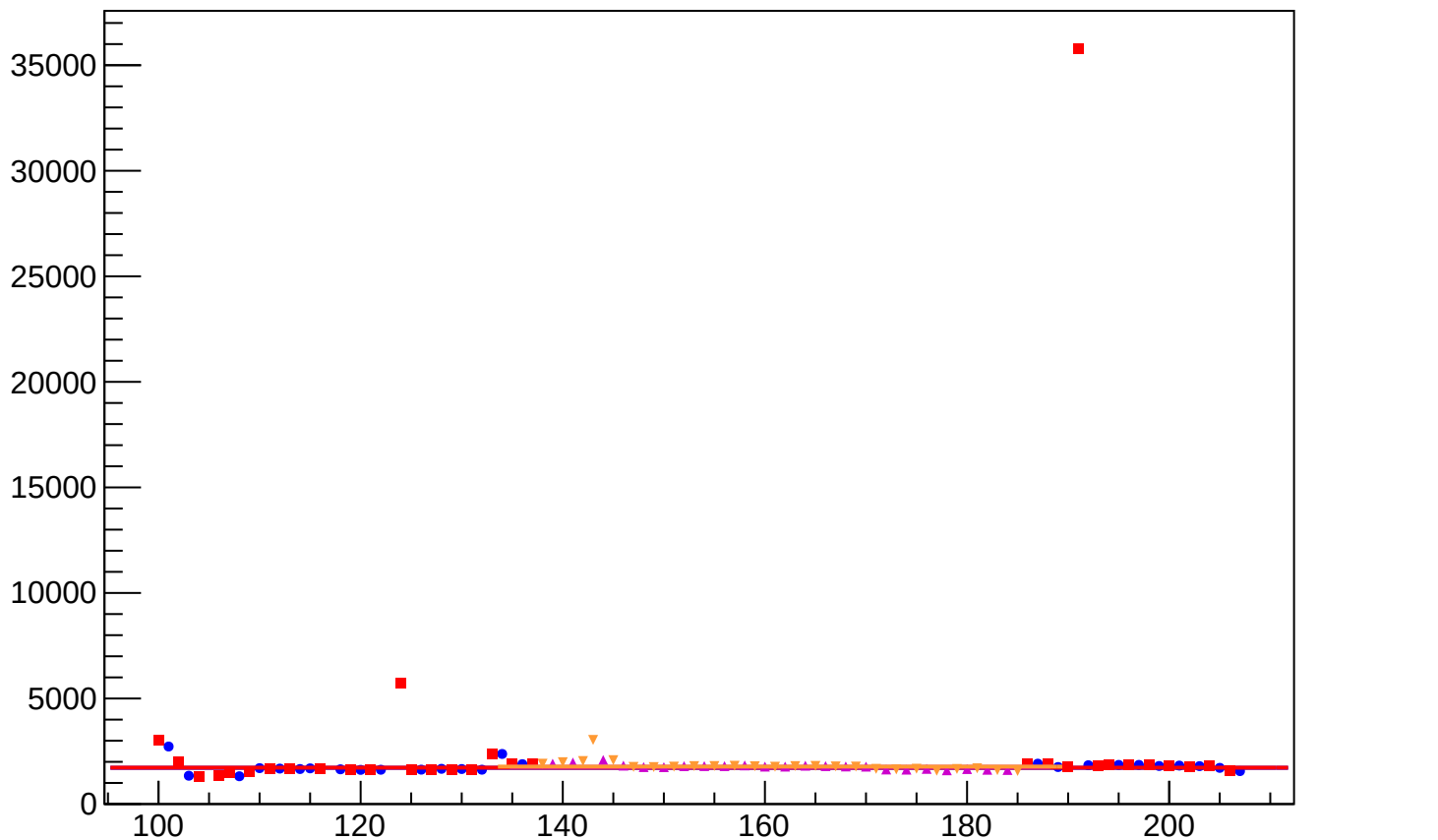
Left In: -2943.173 $\pm$ 412.069  $\chi^2$ /NDF:10.6/22

+ sign 1842.593 $\pm$ 300.525  $\chi^2$ /NDF: 66.1/50

All: -344.708 $\pm$ 212.001  $\chi^2$ /NDF: 206.3/104

- sign -2511.461 $\pm$ 299.110  $\chi^2$ /NDF: 34.8/53

# eigen\_cor\_asym\_at2\_avg\_rms vs Slug



Right In: 1716.582 $\pm$ 0.316  $\chi^2$ /NDF: 493200.4/25

Left Out: 1774.731 $\pm$ 0.287  $\chi^2$ /NDF: 446895.7/24

Right Out: 1724.138 $\pm$ 0.307  $\chi^2$ /NDF: 692578.0/30

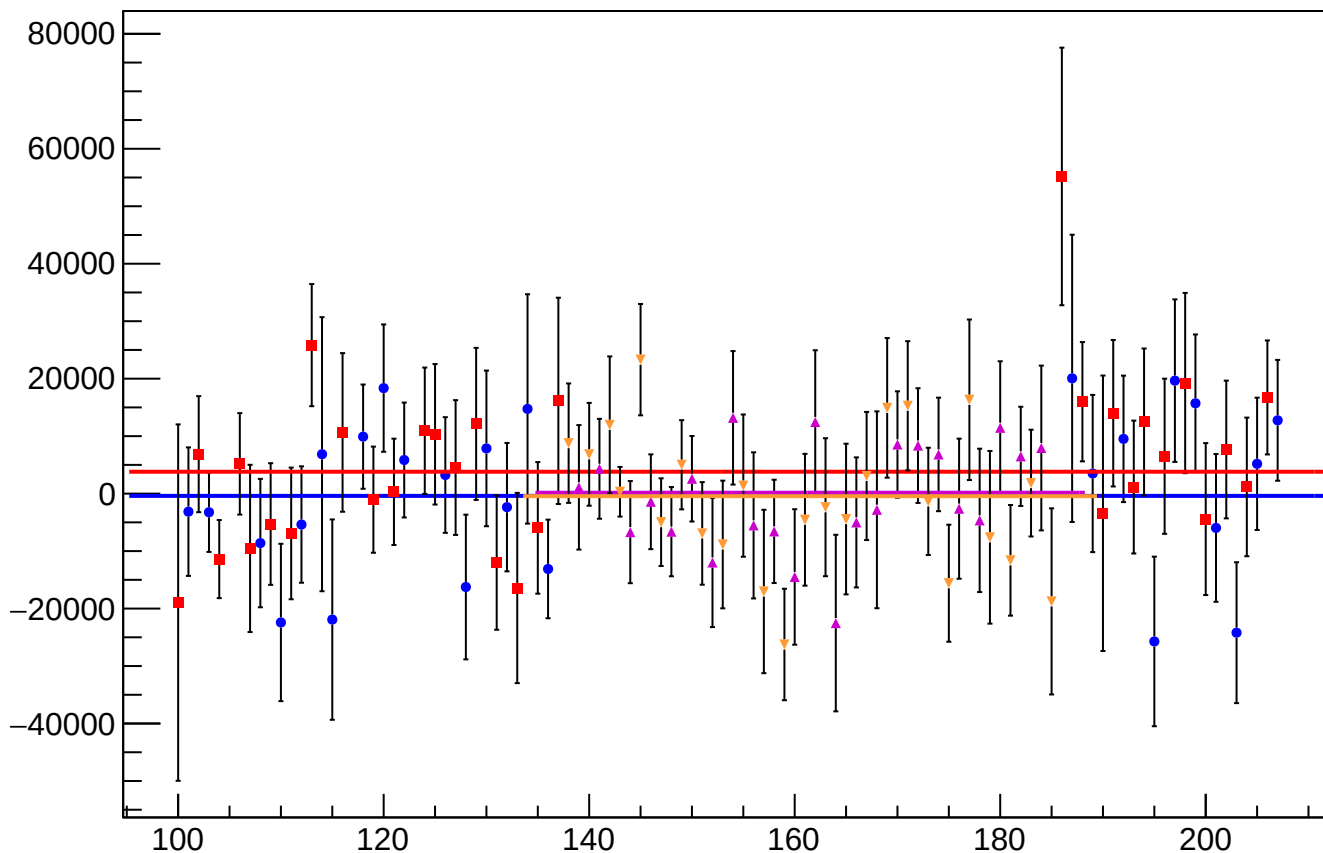
Left In: 1761.089 $\pm$ 0.291  $\chi^2$ /NDF: 146266.6/22

+ sign 1748.514 $\pm$ 0.213  $\chi^2$ /NDF: 958634.7/50

All: 1746.049 $\pm$ 0.150  $\chi^2$ /NDF: 1805355.6/10

- sign 1743.607 $\pm$ 0.212  $\chi^2$ /NDF: 846453.0/53

asym\_at2\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-393.478 \pm 2268.667$   $\chi^2/\text{NDF}: 28.7/25$

Left Out:  $-443.387 \pm 1925.600$   $\chi^2/\text{NDF}: 29.5/24$

Right Out:  $3811.600 \pm 2104.180$   $\chi^2/\text{NDF}: 29.8/30$

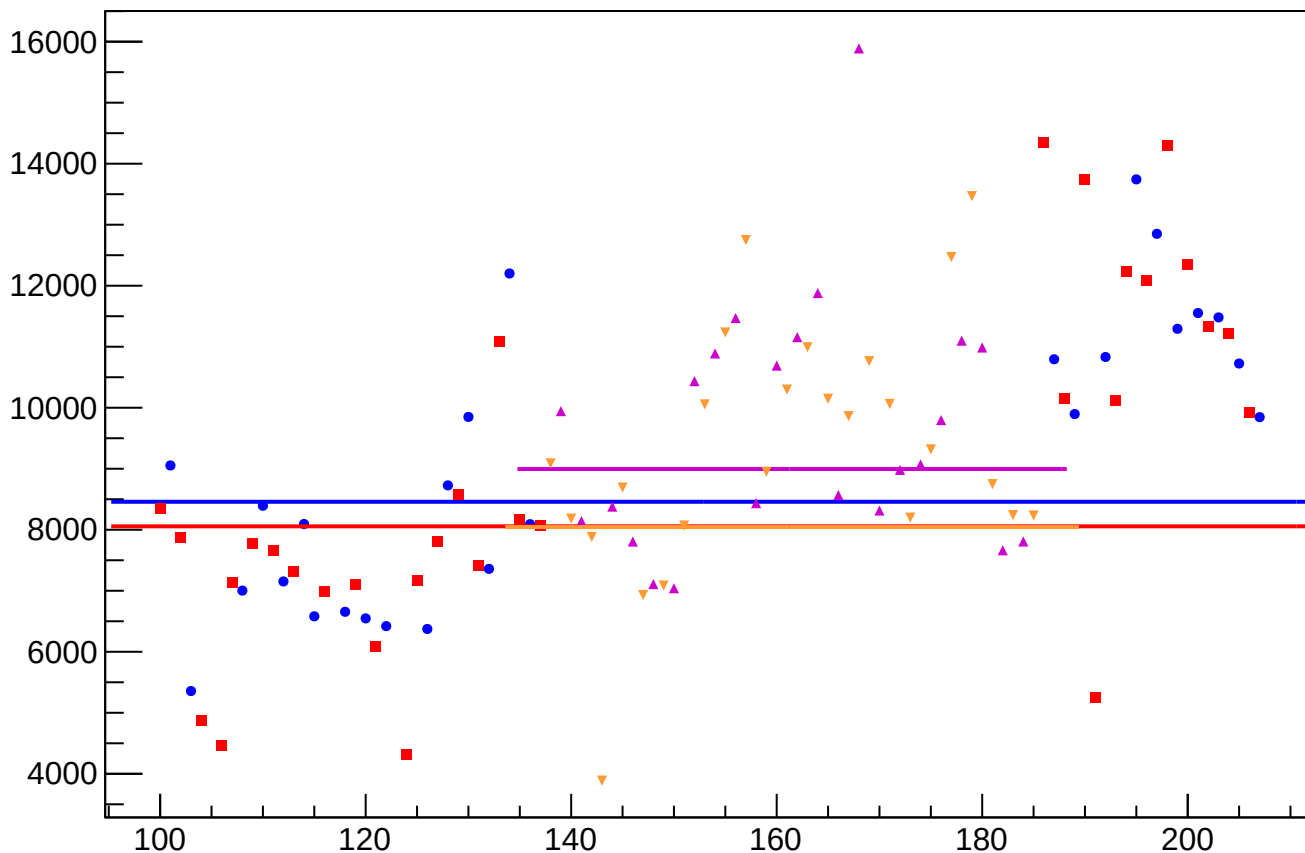
Left In:  $155.239 \pm 2143.487$   $\chi^2/\text{NDF}: 13.8/22$

+ sign  $-422.488 \pm 1468.074$   $\chi^2/\text{NDF}: 58.2/50$

All:  $769.854 \pm 1049.732$   $\chi^2/\text{NDF}: 104.7/104$

- sign  $2017.251 \pm 1501.584$   $\chi^2/\text{NDF}: 45.1/53$

asym\_at2\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 8458.781+/-1.604  $\chi^2/\text{NDF}$ : 1967484.8/25

Left Out: 8043.808+/-1.362  $\chi^2/\text{NDF}$ : 3362915.7/24

Right Out: 8056.210+/-1.488  $\chi^2/\text{NDF}$ : 3024553.6/30

Left In: 8995.616+/-1.516  $\chi^2/\text{NDF}$ : 1207139.1/22

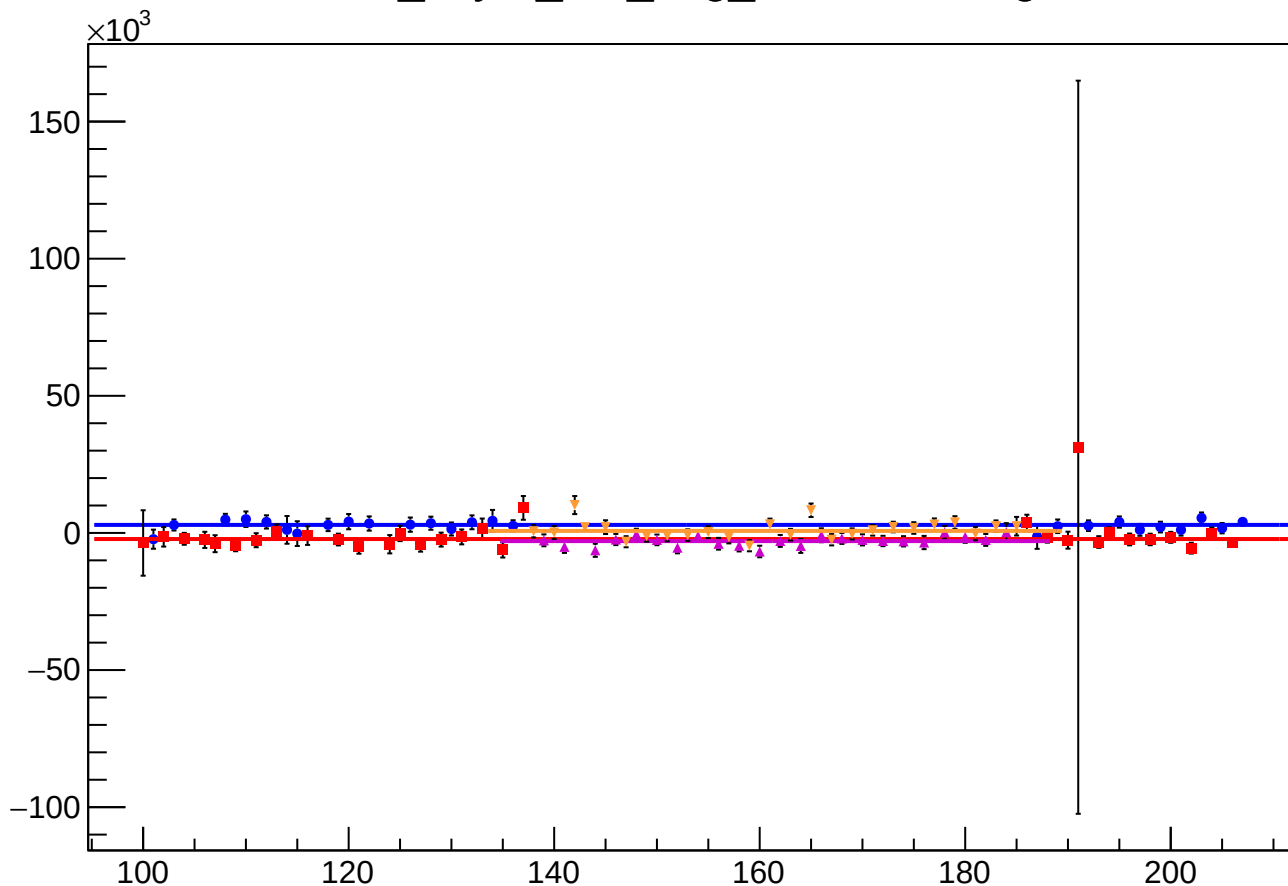
+ sign 8217.578+/-1.038  $\chi^2/\text{NDF}$ : 5369295.3/50

All: 8364.018+/-0.742  $\chi^2/\text{NDF}$ : 9837334.3/10

- sign 8517.220+/-1.062  $\chi^2/\text{NDF}$ : 4427319.9/53



# dit\_asym\_at2\_avg\_mean vs Slug



Right In: 2930.716 $\pm$ 463.523  $\chi^2$ /NDF: 10.7/25

Left Out: 739.029 $\pm$ 432.878  $\chi^2$ /NDF: 41.6/24

Right Out: -2224.222 $\pm$ 448.148  $\chi^2$ /NDF: 26.3/30

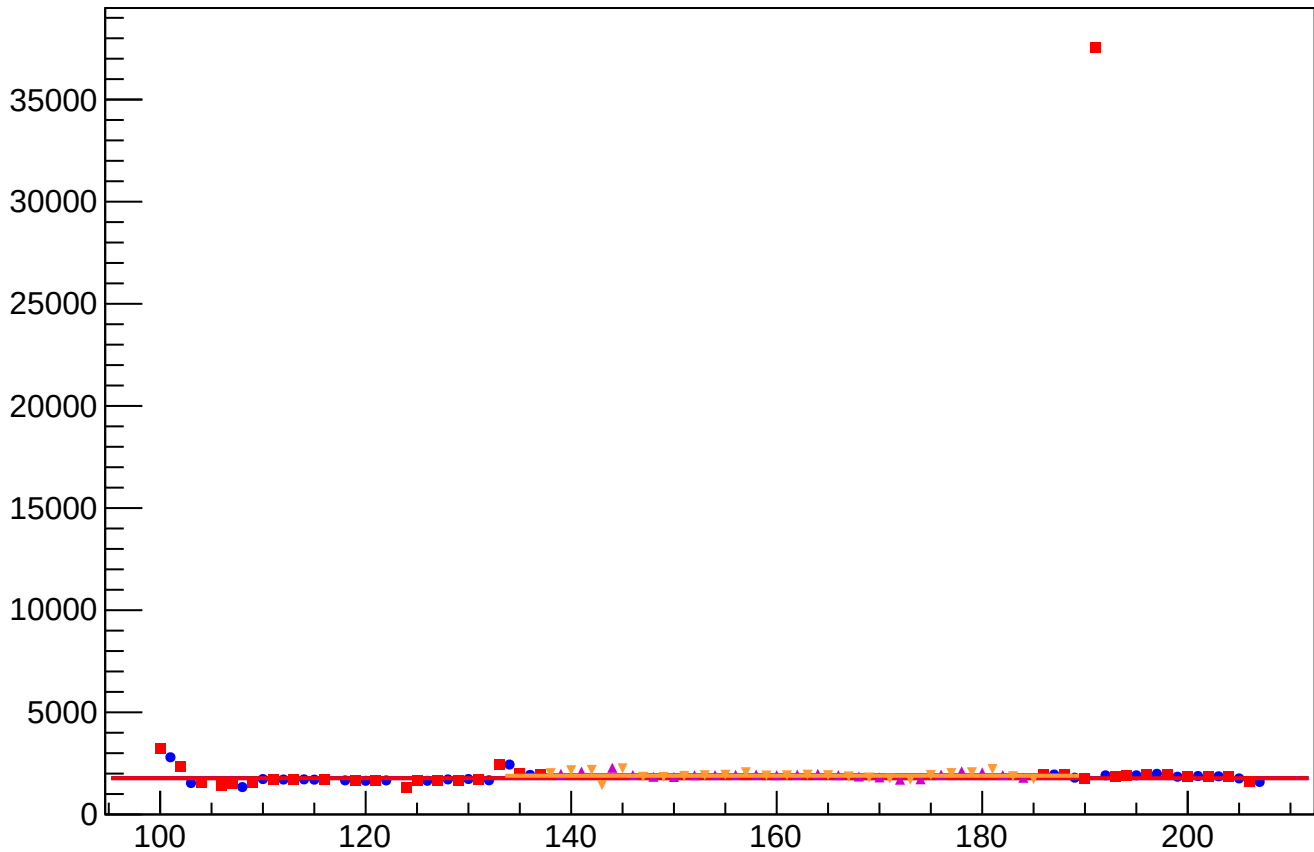
Left In: -2979.225 $\pm$ 450.334  $\chi^2$ /NDF: 15.6/22

+ sign 1760.033 $\pm$ 316.371  $\chi^2$ /NDF: 64.2/50

All: -411.068 $\pm$ 224.162  $\chi^2$ /NDF: 202.1/104

- sign -2599.886 $\pm$ 317.659  $\chi^2$ /NDF: 43.3/53

# dit\_asym\_at2\_avg\_rms vs Slug



Right In: 1777.992+/-0.328  $\chi^2/\text{NDF}$ : 455334.7/25

Left Out: 1894.684+/-0.306  $\chi^2/\text{NDF}$ : 368587.1/24

Right Out: 1774.795+/-0.317  $\chi^2/\text{NDF}$ : 562376.9/30

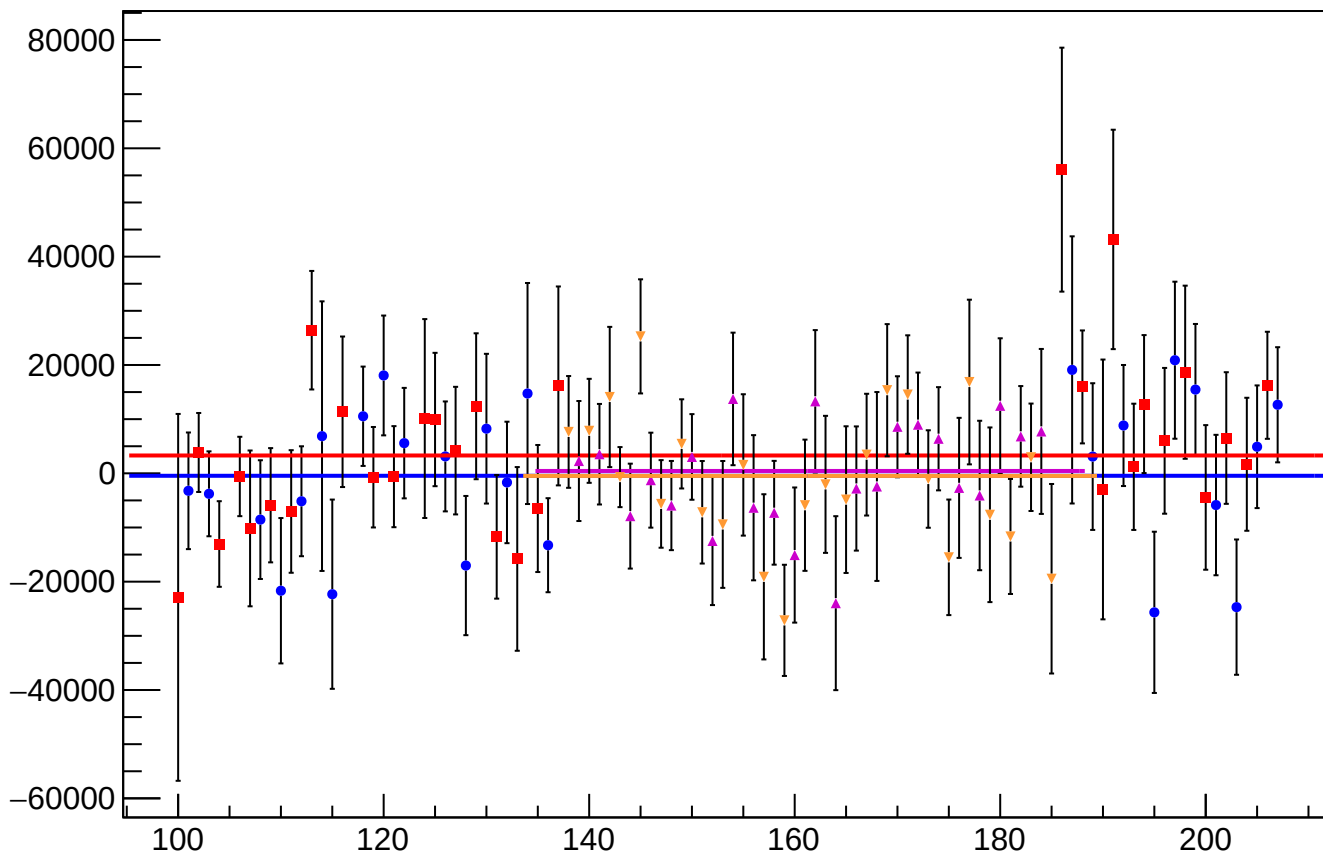
Left In: 1923.038+/-0.318  $\chi^2/\text{NDF}$ : 150977.3/22

+ sign 1840.323+/-0.224  $\chi^2/\text{NDF}$ : 891628.9/50

All: 1844.416+/-0.158  $\chi^2/\text{NDF}$ : 1714565.5/100

- sign 1848.542+/-0.225  $\chi^2/\text{NDF}$ : 822264.1/53

# asym\_at2\_avg\_dit\_correction\_mean vs Slug



Right In:  $-453.621 \pm 2306.862$   $\chi^2/\text{NDF}$ : 28.5/25

Left Out:  $-479.338 \pm 2089.235$   $\chi^2/\text{NDF}$ : 28.8/24

Right Out:  $3293.662 \pm 2113.514$   $\chi^2/\text{NDF}$ : 32.5/30

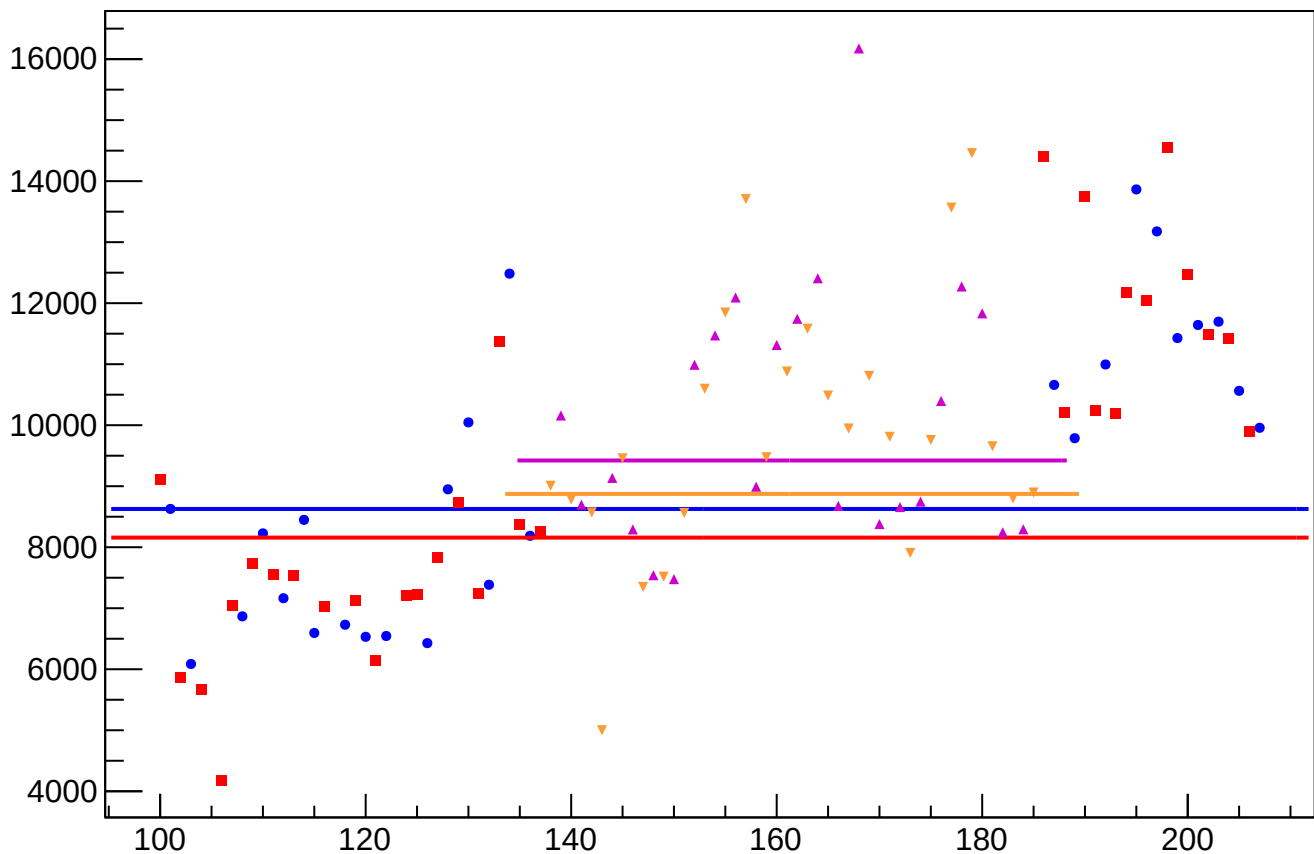
Left In:  $436.717 \pm 2245.180$   $\chi^2/\text{NDF}$ : 13.6/22

+ sign  $-467.749 \pm 1548.550$   $\chi^2/\text{NDF}$ : 57.3/50

All:  $749.374 \pm 1091.570$   $\chi^2/\text{NDF}$ : 105.5/104

- sign  $1951.412 \pm 1538.923$   $\chi^2/\text{NDF}$ : 46.9/53

# asym\_at2\_avg\_dit\_correction\_rms vs Slug



Right In: 8627.101+/-1.631  $\chi^2/\text{NDF}$ : 1779014.4/25

Left Out: 8873.592+/-1.477  $\chi^2/\text{NDF}$ : 2203249.6/24

Right Out: 8157.543+/-1.494  $\chi^2/\text{NDF}$ : 2925484.2/30

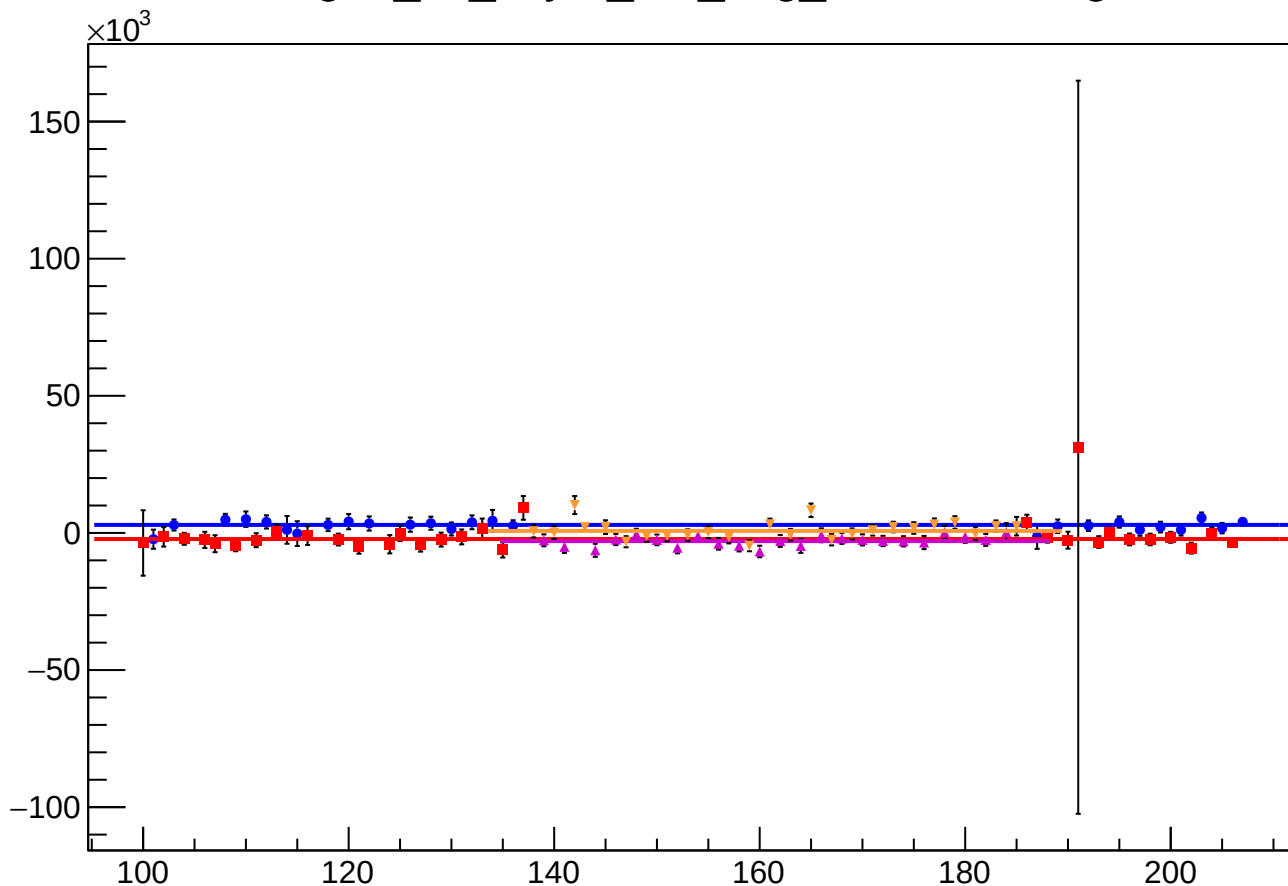
Left In: 9421.708+/-1.588  $\chi^2/\text{NDF}$ : 1204848.0/22

+ sign 8762.520+/-1.095  $\chi^2/\text{NDF}$ : 3994808.9/50

All: 8756.962+/-0.772  $\chi^2/\text{NDF}$ : 8461361.9/10

- sign 8751.473+/-1.088  $\chi^2/\text{NDF}$ : 4466501.8/53

# eigen\_dit\_asym\_at2\_avg\_mean vs Slug



Right In: 2930.712 $\pm$ 463.523  $\chi^2$ /NDF: 10.7/25

Left Out: 739.018 $\pm$ 432.879  $\chi^2$ /NDF:41.6/24

Right Out: -2224.220 $\pm$ 448.148  $\chi^2$ /NDF: 26.3/30

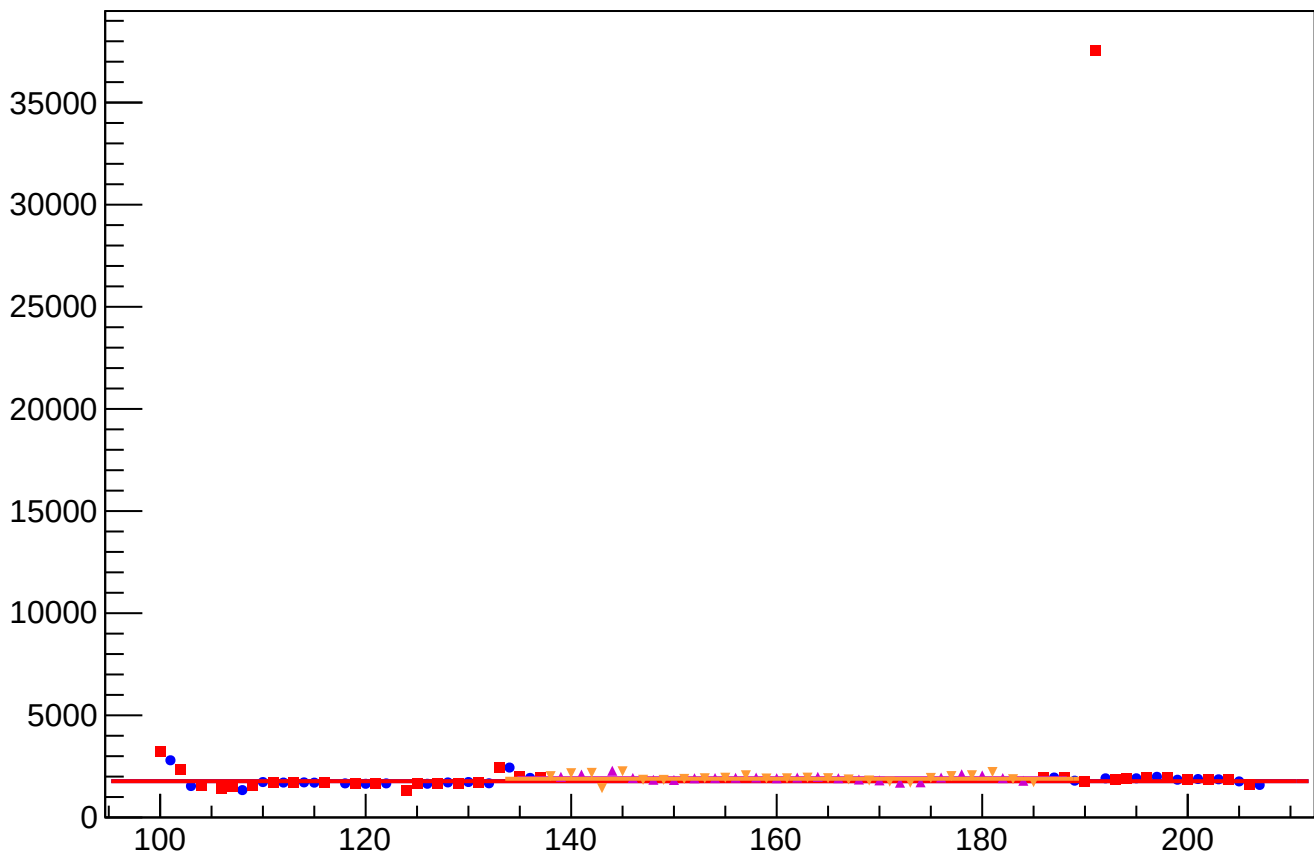
Left In: -2979.226 $\pm$ 450.335  $\chi^2$ /NDF:15.6/22

+ sign 1760.027 $\pm$ 316.371  $\chi^2$ /NDF: 64.2/50

All: -411.071 $\pm$ 224.162  $\chi^2$ /NDF: 202.1/104

- sign -2599.885 $\pm$ 317.659  $\chi^2$ /NDF: 43.3/53

# eigen\_dit\_asym\_at2\_avg\_rms vs Slug



Right In: 1777.991+/-0.328  $\chi^2/\text{NDF}$ : 455335.0/25

Left Out: 1894.687+/-0.306  $\chi^2/\text{NDF}$ : 368594.6/24

Right Out: 1774.795+/-0.317  $\chi^2/\text{NDF}$ : 562378.7/30

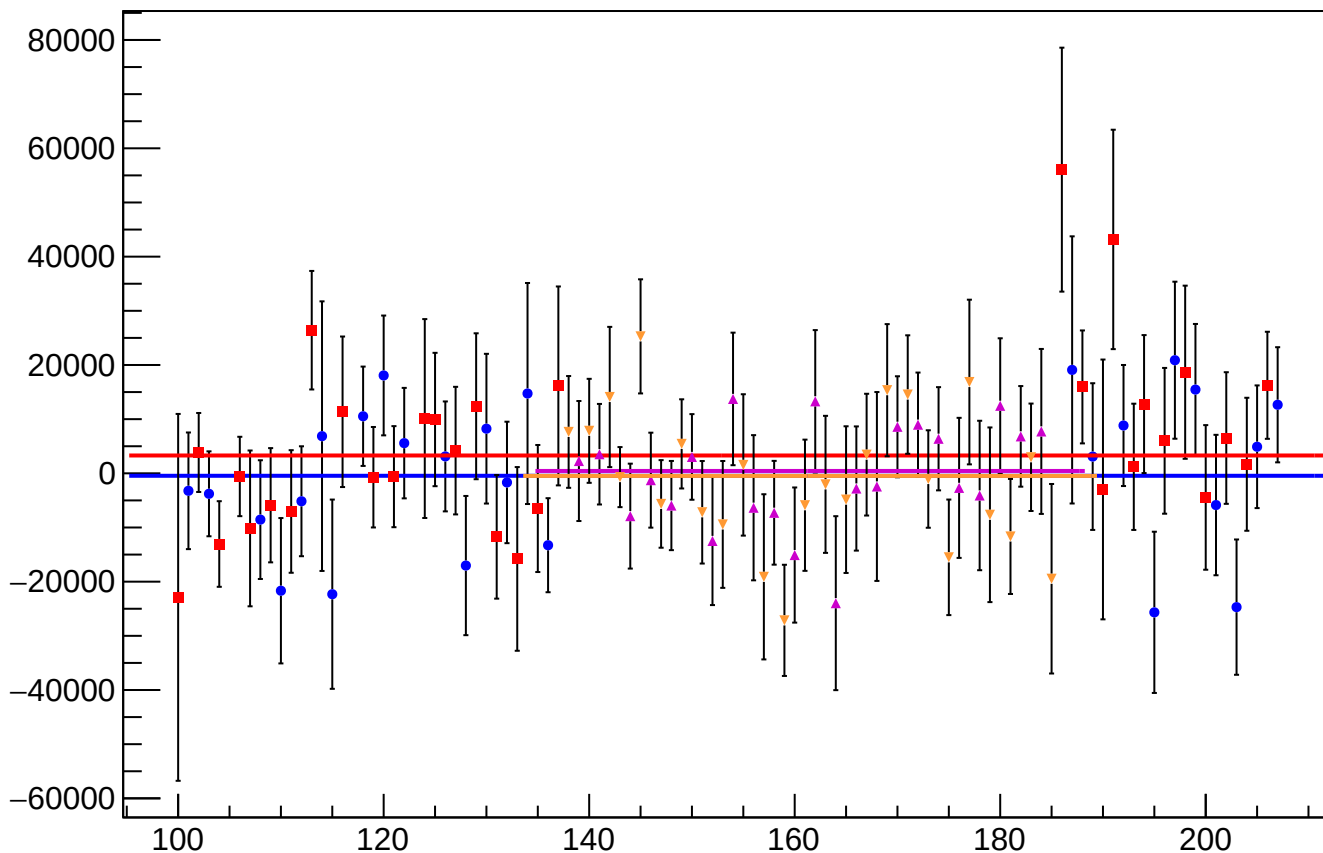
Left In: 1923.042+/-0.318  $\chi^2/\text{NDF}$ : 150984.8/22

+ sign 1840.324+/-0.224  $\chi^2/\text{NDF}$ : 891640.5/50

All: 1844.418+/-0.158  $\chi^2/\text{NDF}$ : 1714590.8/100

- sign 1848.544+/-0.225  $\chi^2/\text{NDF}$ : 822277.9/53

asym\_at2\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-453.612 \pm 2306.860$   $\chi^2/\text{NDF}$ : 28.5/25

Left Out:  $-479.345 \pm 2089.238$   $\chi^2/\text{NDF}$ : 28.8/24

Right Out:  $3293.647 \pm 2113.512$   $\chi^2/\text{NDF}$ : 32.5/30

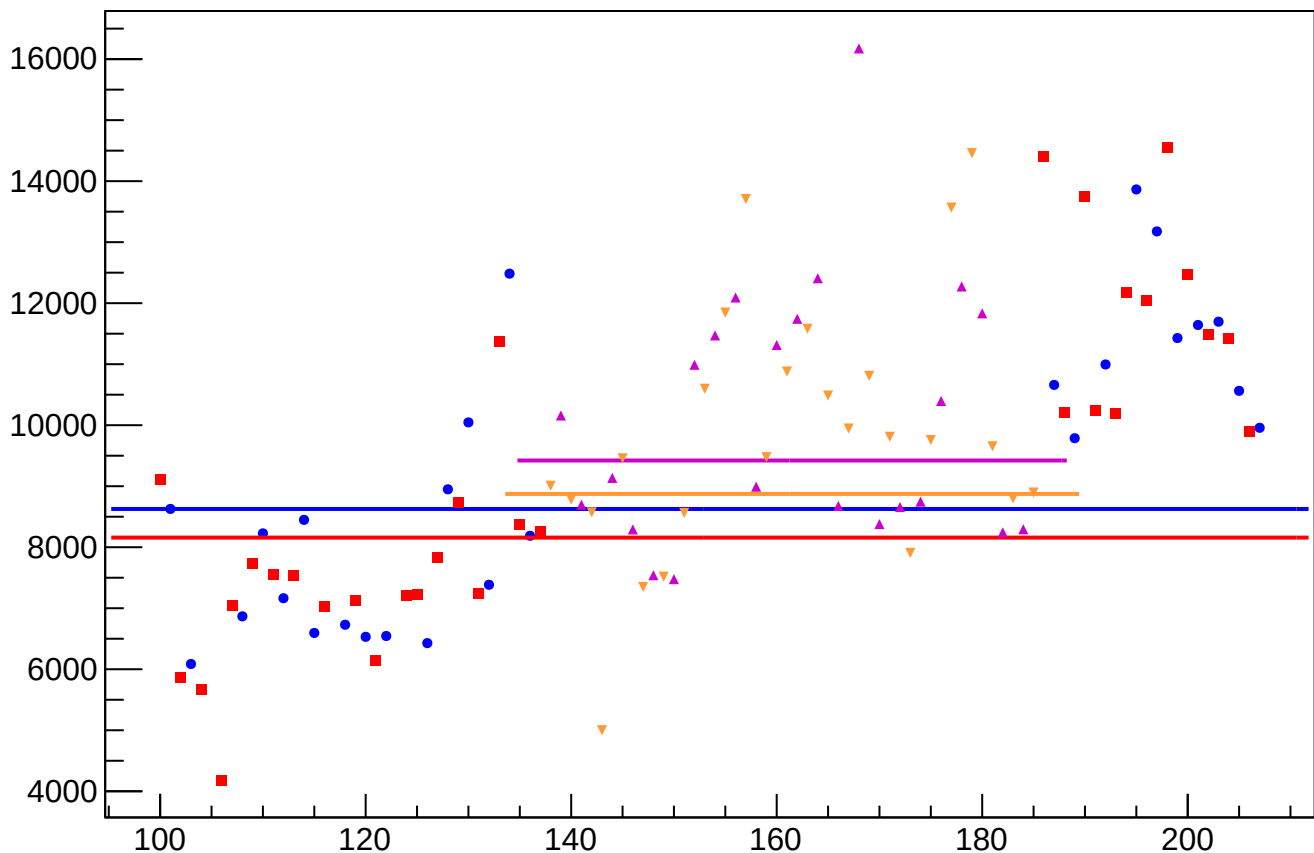
Left In:  $436.720 \pm 2245.183$   $\chi^2/\text{NDF}$ : 13.6/22

+ sign  $-467.749 \pm 1548.550$   $\chi^2/\text{NDF}$ : 57.3/50

All:  $749.373 \pm 1091.571$   $\chi^2/\text{NDF}$ : 105.5/104

- sign  $1951.409 \pm 1538.923$   $\chi^2/\text{NDF}$ : 46.9/53

# asym\_at2\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 8627.090+/-1.631  $\chi^2/\text{NDF}$ : 1779039.7/25

Left Out: 8873.607+/-1.477  $\chi^2/\text{NDF}$ : 2203251.2/24

Right Out: 8157.531+/-1.494  $\chi^2/\text{NDF}$ : 2925506.7/30

Left In: 9421.722+/-1.588  $\chi^2/\text{NDF}$ : 1204851.9/22

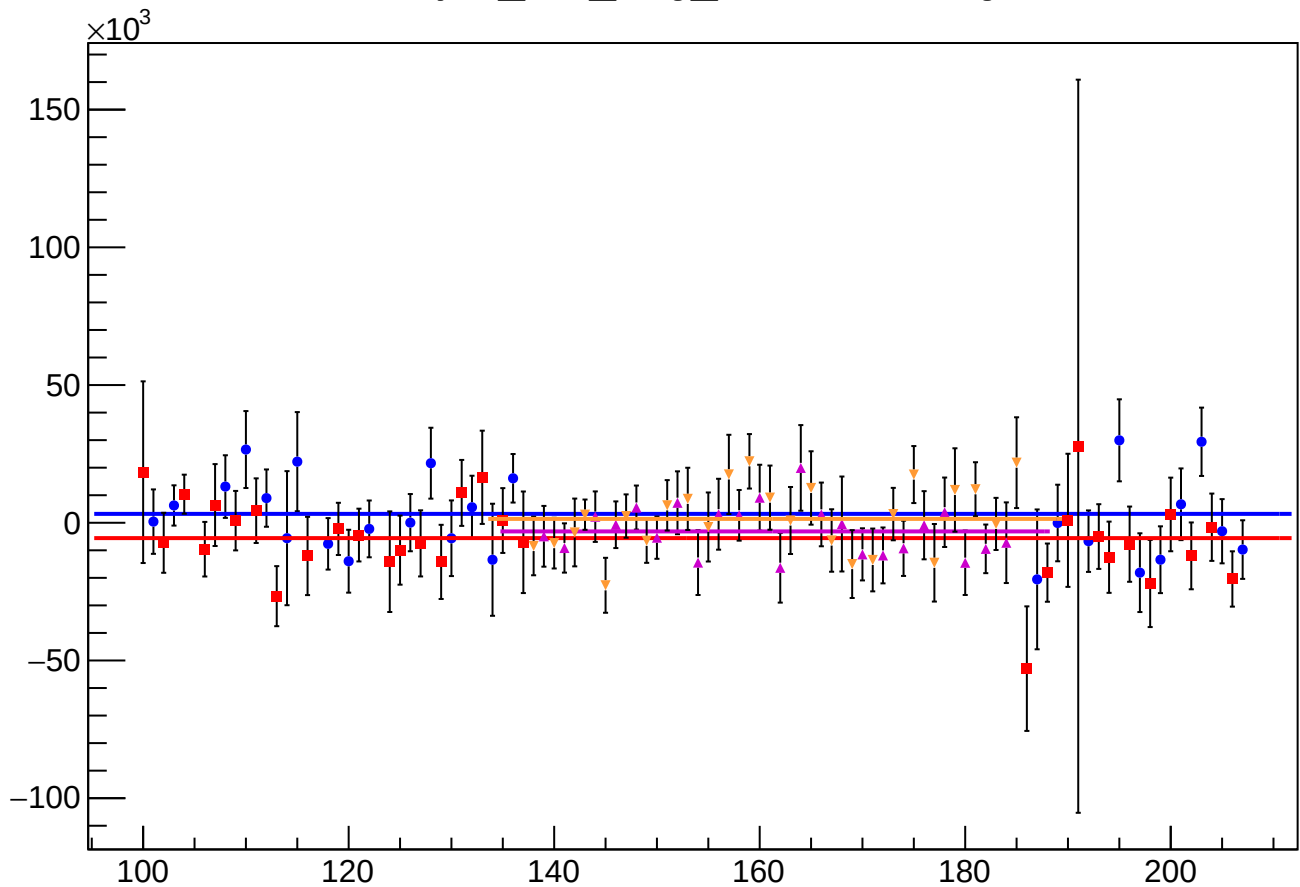
+ sign 8762.522+/-1.095  $\chi^2/\text{NDF}$ : 3994838.4/50

All: 8756.962+/-0.772  $\chi^2/\text{NDF}$ : 8461431.5/10

- sign 8751.471+/-1.088  $\chi^2/\text{NDF}$ : 4466541.9/53



# asym\_at2\_avg\_mean vs Slug



Right In: 3229.411 $\pm$ 2328.051  $\chi^2$ /NDF: 30.0/25

Left Out: 1408.316 $\pm$ 2039.907  $\chi^2$ /NDF: 27.4/24

Right Out: -5571.199 $\pm$ 2225.521  $\chi^2$ /NDF: 26.5/30

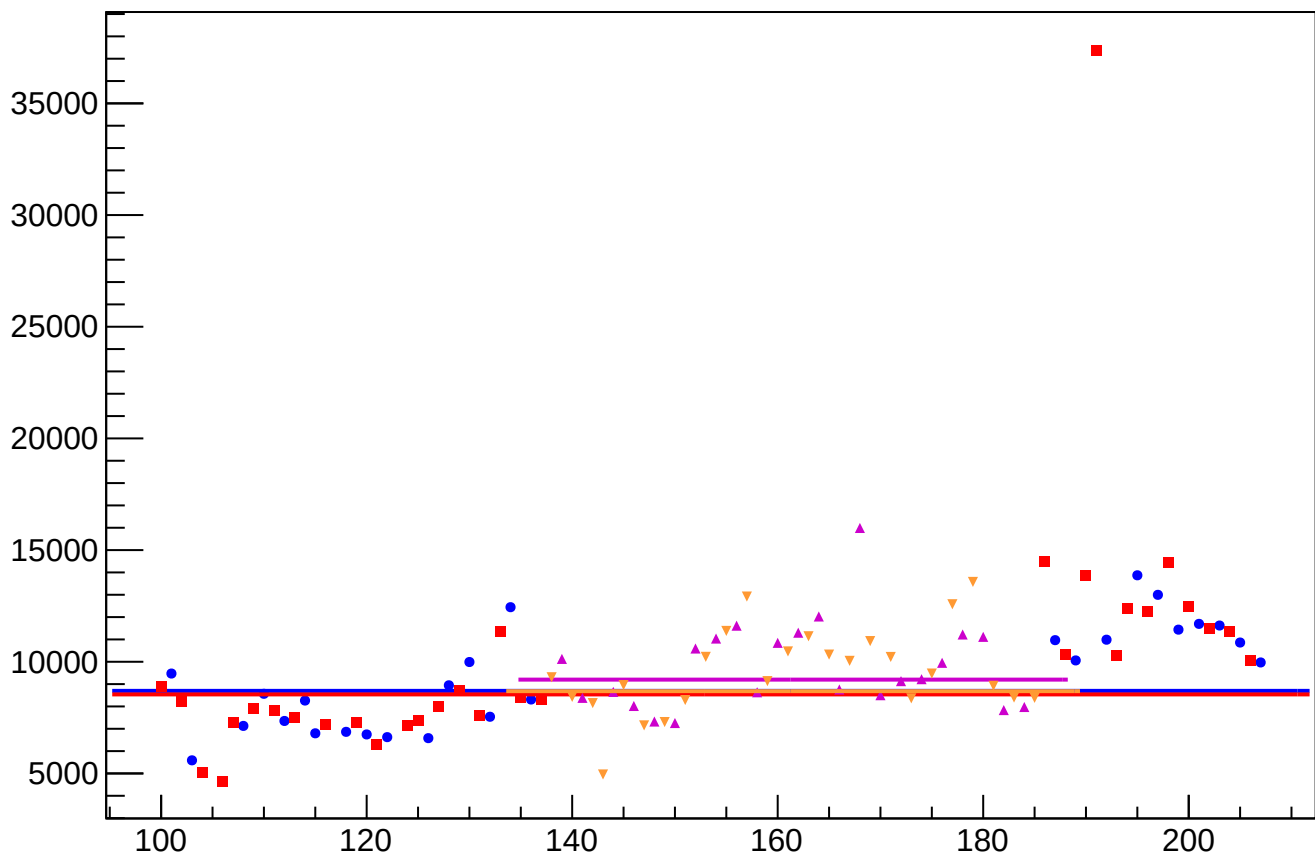
Left In: -3139.264 $\pm$ 2189.465  $\chi^2$ /NDF: 13.0/22

+ sign 2199.251 $\pm$ 1534.251  $\chi^2$ /NDF: 57.8/50

All: -1012.060 $\pm$ 1094.137  $\chi^2$ /NDF: 106.8/10

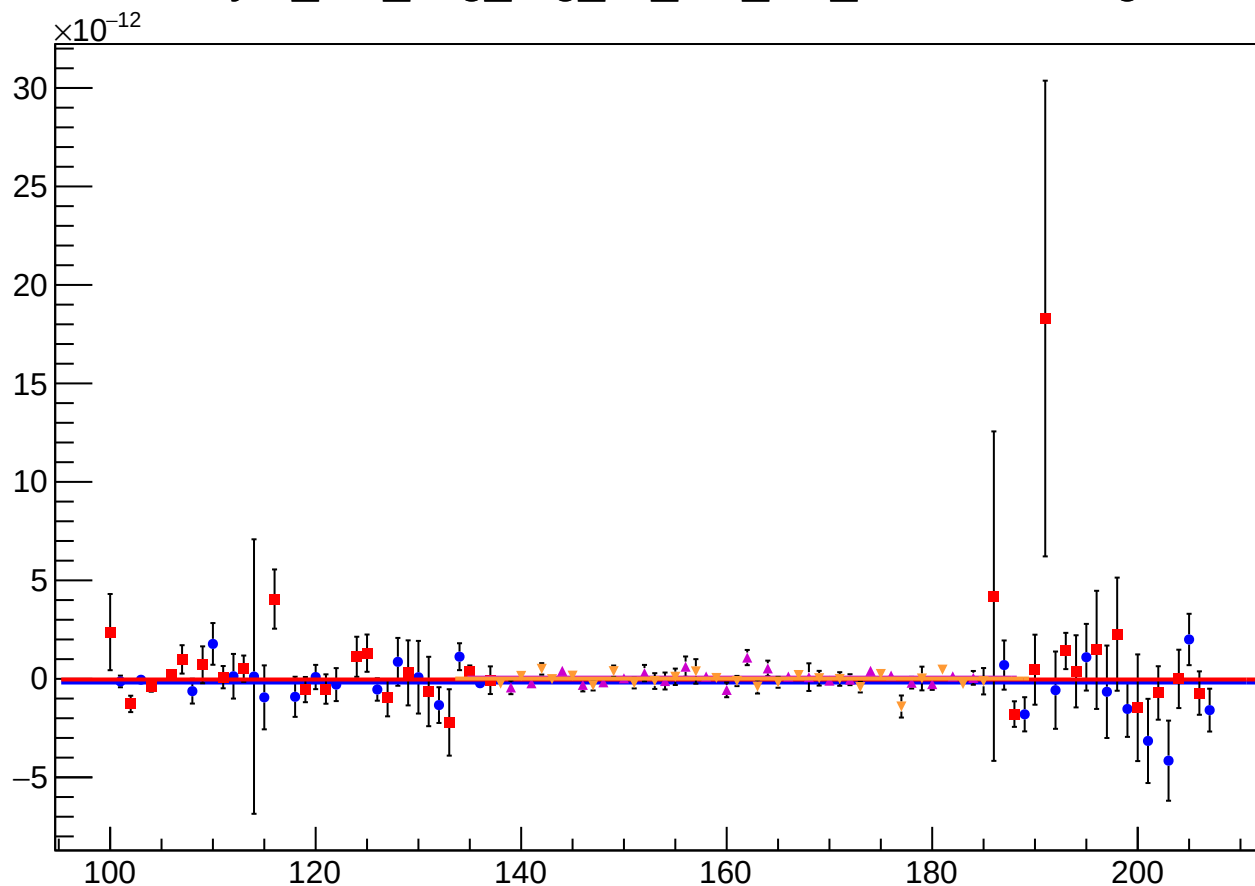
- sign -4335.372 $\pm$ 1560.777  $\chi^2$ /NDF: 40.1/53

# asym\_at2\_avg\_rms vs Slug



|                             |                                    |                         |                                    |
|-----------------------------|------------------------------------|-------------------------|------------------------------------|
| Right In: 8697.299+/-1.646  | $\chi^2/\text{NDF}$ : 1834319.4/25 | + sign 8690.087+/-1.085 | $\chi^2/\text{NDF}$ : 3885975.6/50 |
| Left Out: 8684.549+/-1.442  | $\chi^2/\text{NDF}$ : 2051622.3/24 | All: 8781.022+/-0.774   | $\chi^2/\text{NDF}$ : 7701398.2/10 |
| Right Out: 8538.675+/-1.574 | $\chi^2/\text{NDF}$ : 2581740.0/30 | - sign 8875.124+/-1.104 | $\chi^2/\text{NDF}$ : 3801126.1/53 |
| Left In: 9200.796+/-1.548   | $\chi^2/\text{NDF}$ : 1129421.3/22 |                         |                                    |

# asym\_at2\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 27.5/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 28.8/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 47.2/30

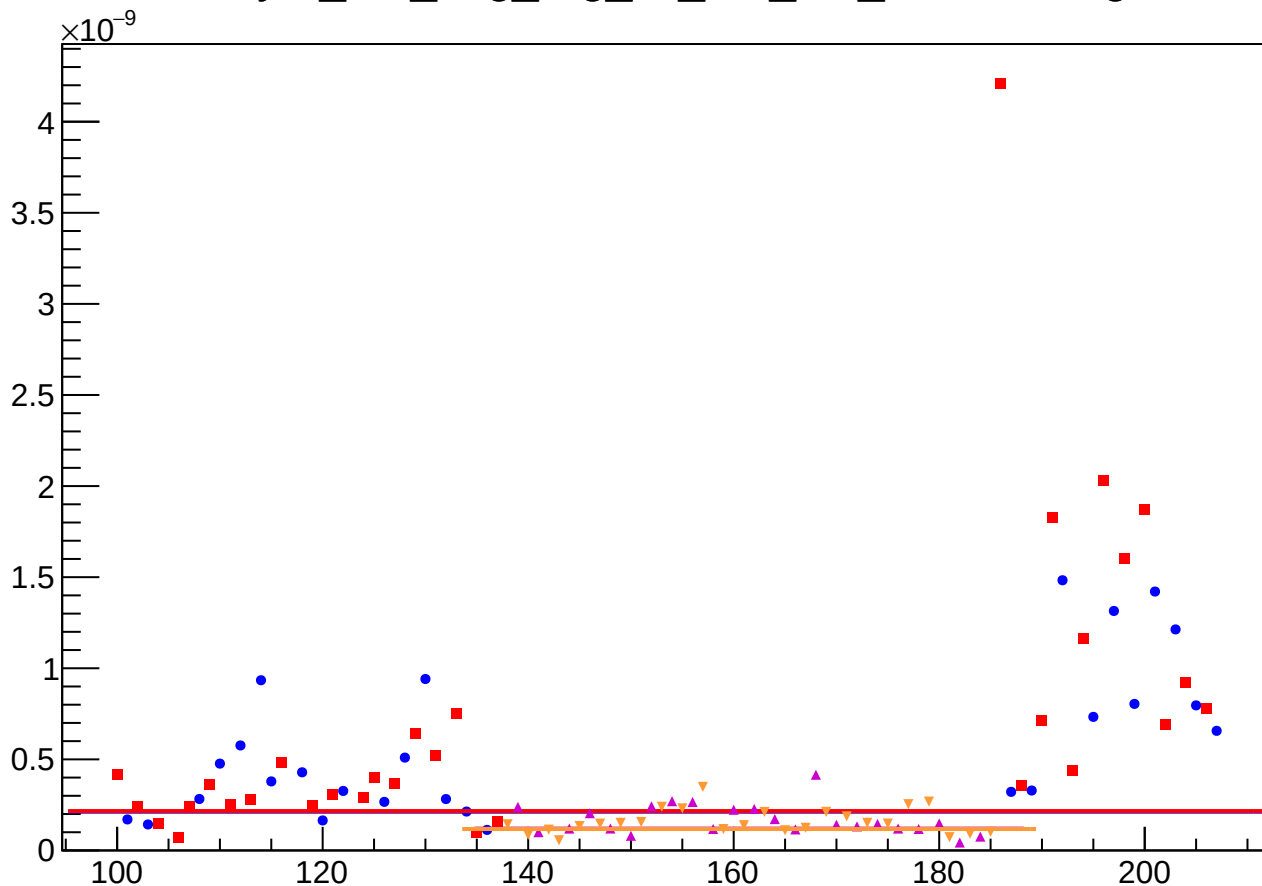
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 27.8/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 58.9/50

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 135.2/104

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 75.5/53

asym\_at2\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5426194.4/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2335885.1/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6436165.6/30

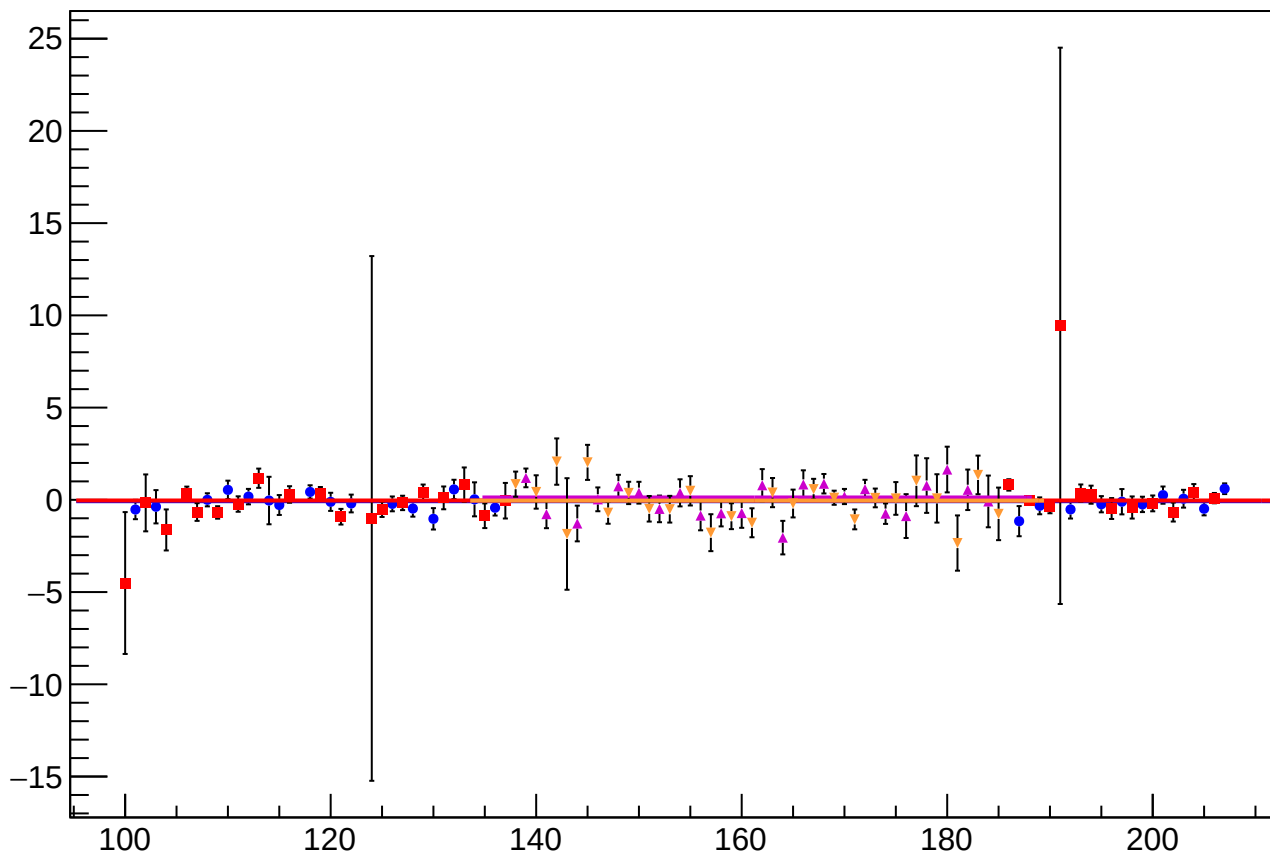
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2660632.2/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8910867.9/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 19134509.1/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10218055.7/53

# asym\_at2\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.074 \pm 0.092$   $\chi^2/\text{NDF}$ : 21.3/25

Left Out:  $-0.041 \pm 0.148$   $\chi^2/\text{NDF}$ : 30.1/24

Right Out:  $-0.035 \pm 0.078$   $\chi^2/\text{NDF}$ : 39.7/30

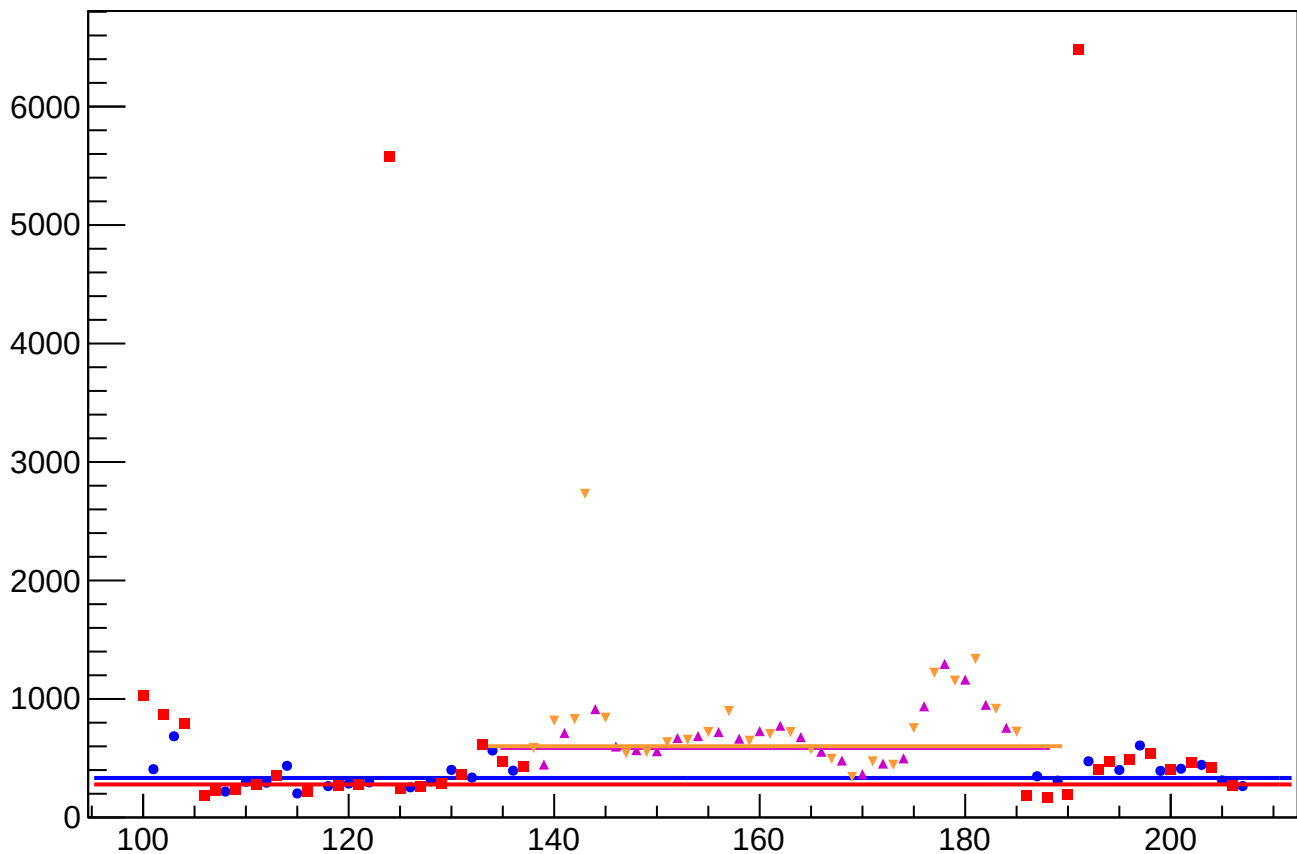
Left In:  $0.128 \pm 0.145$   $\chi^2/\text{NDF}$ : 29.0/22

+ sign  $-0.065 \pm 0.078$   $\chi^2/\text{NDF}$ : 51.4/50

All:  $-0.028 \pm 0.052$   $\chi^2/\text{NDF}$ : 121.5/104

- sign  $0.001 \pm 0.069$   $\chi^2/\text{NDF}$ : 69.7/53

# asym\_at2\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In:  $333.267 \pm 0.065$   $\chi^2/\text{NDF}$ : 1947620.8/25

Left Out:  $601.214 \pm 0.104$   $\chi^2/\text{NDF}$ : 4460456.7/24

Right Out:  $278.605 \pm 0.055$   $\chi^2/\text{NDF}$ : 4982287.6/30

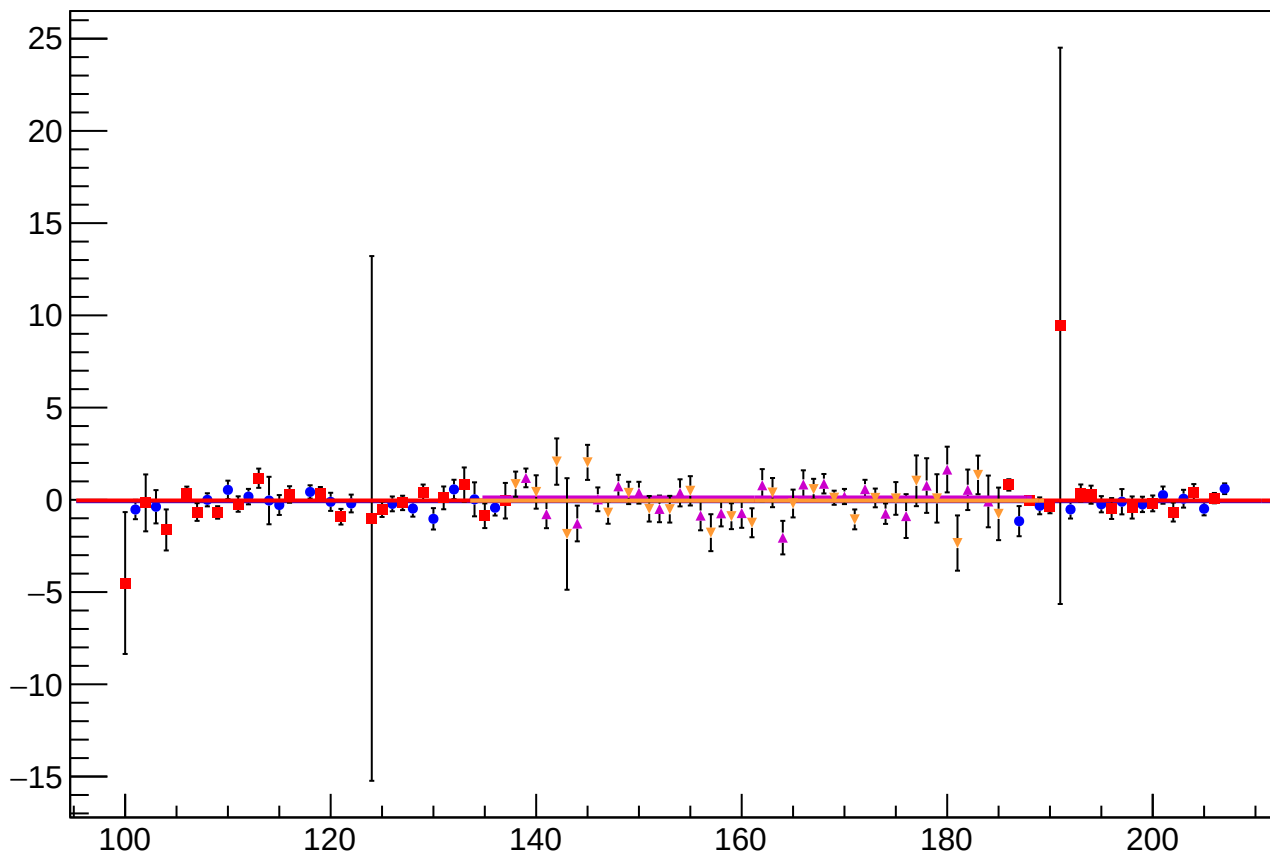
Left In:  $586.817 \pm 0.103$   $\chi^2/\text{NDF}$ : 2934488.2/22

+ sign  $407.759 \pm 0.055$   $\chi^2/\text{NDF}$ : 11172136.6/50

All:  $374.149 \pm 0.036$   $\chi^2/\text{NDF}$ : 26742013.4/10

- sign  $347.840 \pm 0.049$   $\chi^2/\text{NDF}$ : 14904110.8/53

asym\_at2\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.074 \pm 0.092$   $\chi^2/\text{NDF}$ : 21.3/25

Left Out:  $-0.041 \pm 0.148$   $\chi^2/\text{NDF}$ : 30.1/24

Right Out:  $-0.035 \pm 0.078$   $\chi^2/\text{NDF}$ : 39.7/30

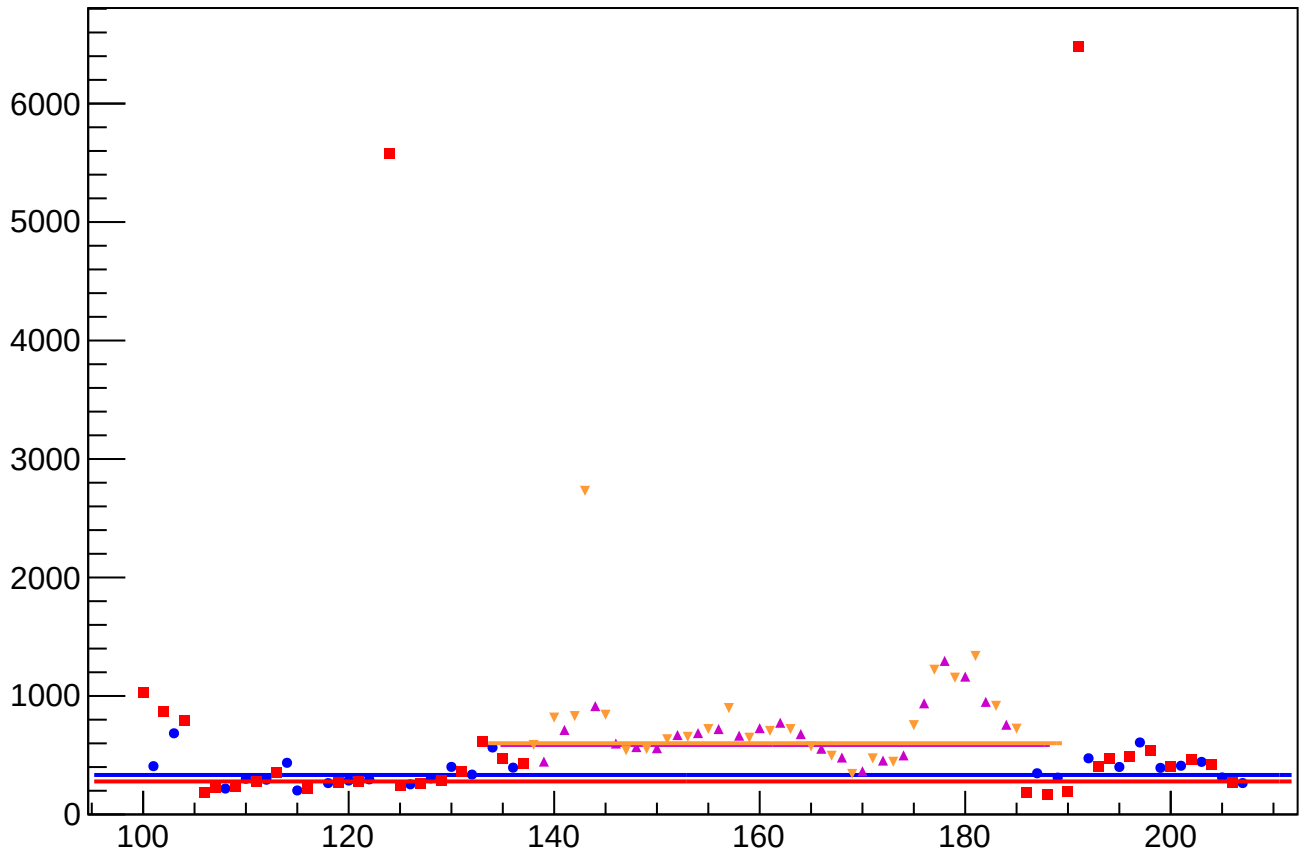
Left In:  $0.128 \pm 0.145$   $\chi^2/\text{NDF}$ : 29.0/22

+ sign  $-0.065 \pm 0.078$   $\chi^2/\text{NDF}$ : 51.4/50

All:  $-0.028 \pm 0.052$   $\chi^2/\text{NDF}$ : 121.5/104

- sign  $0.001 \pm 0.069$   $\chi^2/\text{NDF}$ : 69.7/53

asym\_at2\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 333.267 $\pm$ 0.065  $\chi^2$ /NDF: 1947620.8/25

Left Out: 601.214 $\pm$ 0.104  $\chi^2$ /NDF: 4460456.7/24

Right Out: 278.605 $\pm$ 0.055  $\chi^2$ /NDF: 4982287.6/30

Left In: 586.817 $\pm$ 0.103  $\chi^2$ /NDF: 2934488.2/22

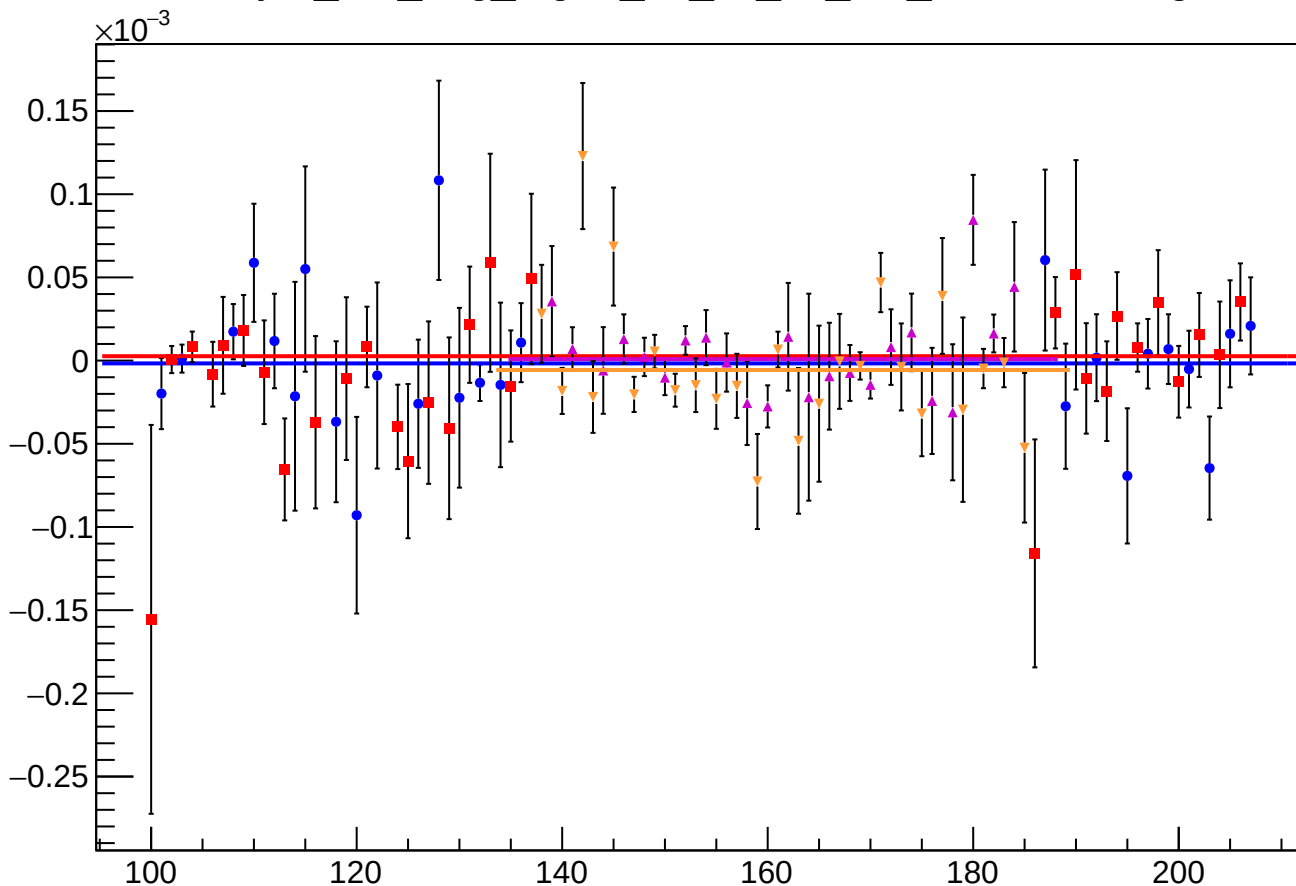
+ sign 407.759 $\pm$ 0.055  $\chi^2$ /NDF: 11172136.6/50

All: 374.149 $\pm$ 0.036  $\chi^2$ /NDF: 26742013.4/10

- sign 347.840 $\pm$ 0.049  $\chi^2$ /NDF: 14904110.8/53



asym\_at2\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2$ /NDF: 24.4/25

Left Out: -0.000+/-0.000  $\chi^2$ /NDF:42.6/24

Right Out: 0.000+/-0.000  $\chi^2$ /NDF: 27.0/30

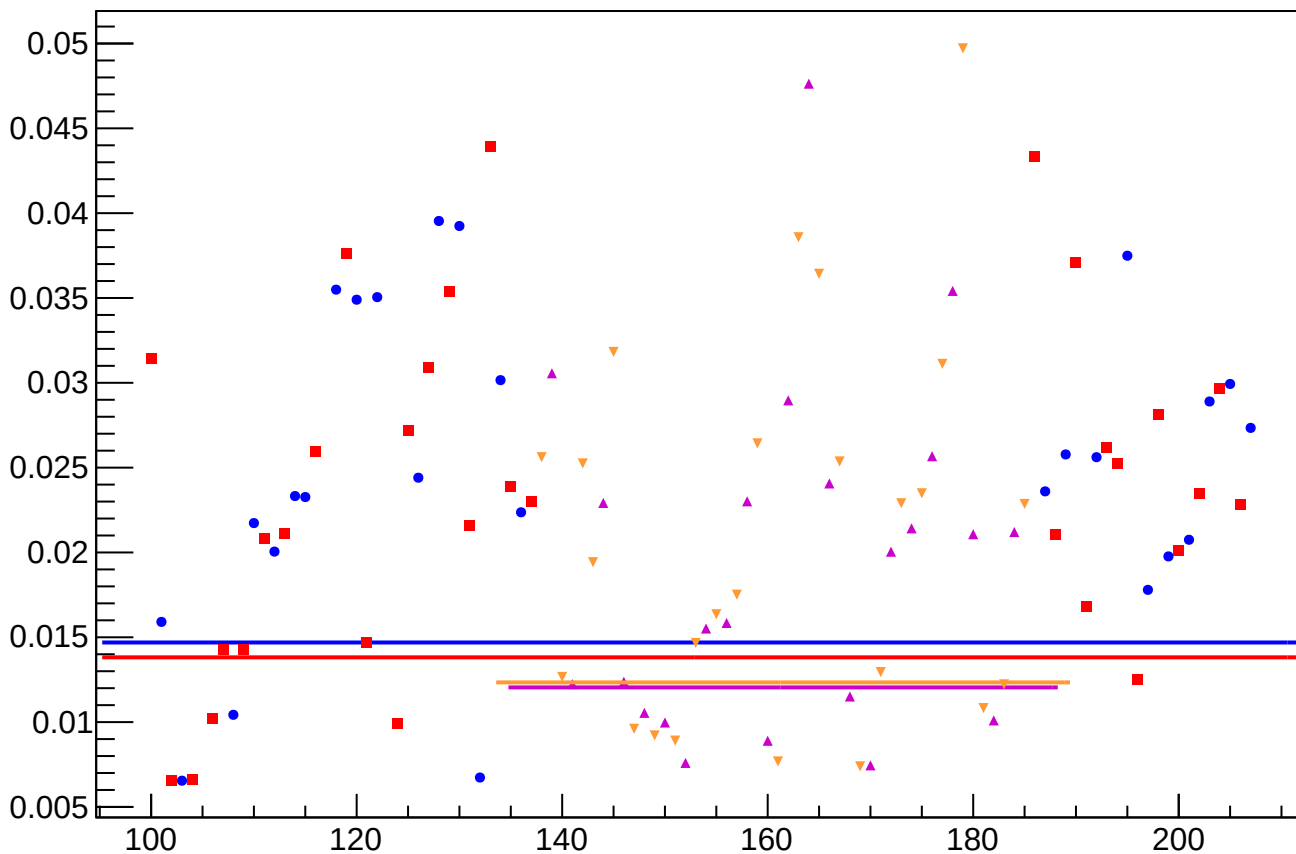
Left In: 0.000+/-0.000  $\chi^2$ /NDF:30.2/22

+ sign -0.000+/-0.000  $\chi^2$ /NDF: 67.5/50

All: -0.000+/-0.000  $\chi^2$ /NDF: 127.4/104

- sign 0.000+/-0.000  $\chi^2$ /NDF: 57.3/53

asym\_at2\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 8200886.6/25

Left Out: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 7839123.8/24

Right Out: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 8507051.0/30

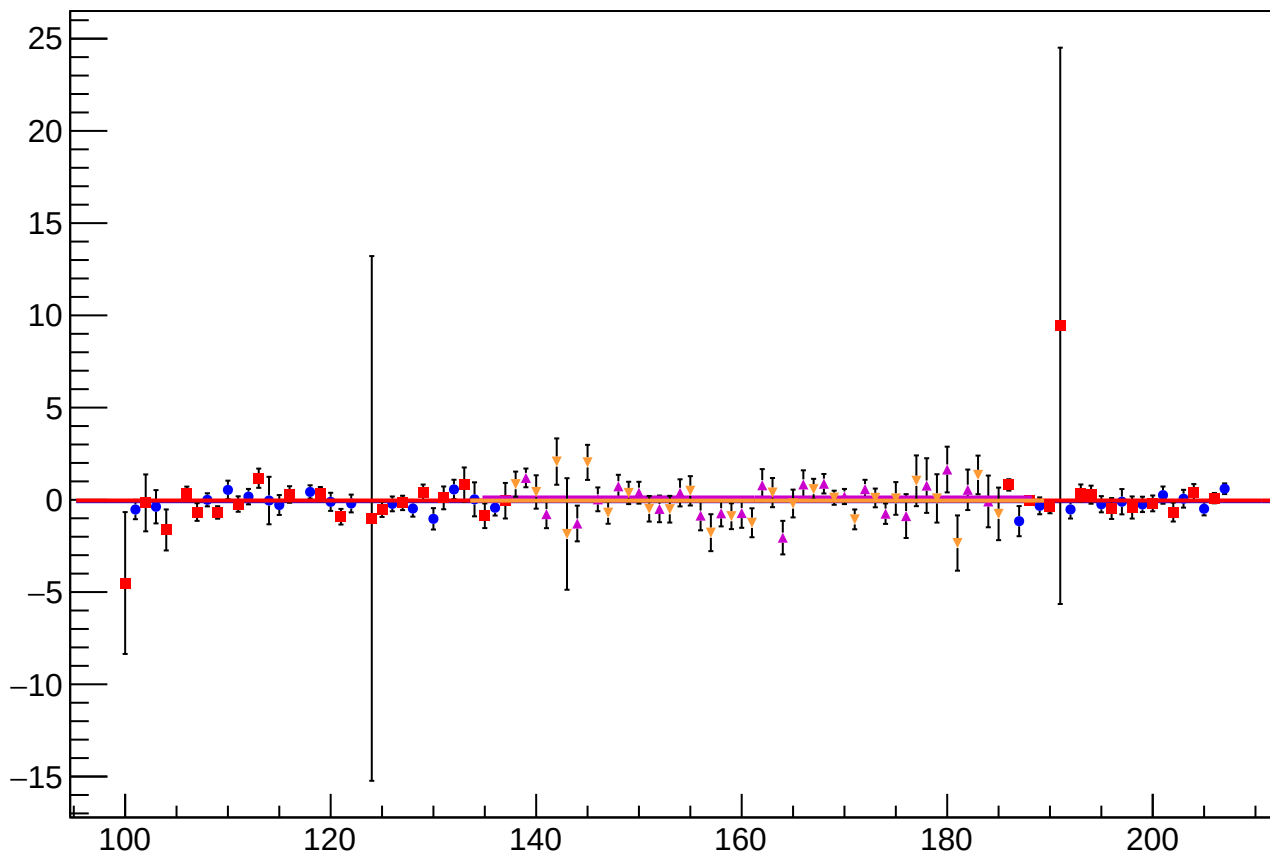
Left In: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 6379401.9/22

+ sign 0.013+/-0.000  $\chi^2/\text{NDF}$ : 16393249.8/50

All: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 31532979.9/104

- sign 0.013+/-0.000  $\chi^2/\text{NDF}$ : 15117884.4/53

asym\_at2\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.074 \pm 0.092$   $\chi^2/\text{NDF}$ : 21.3/25

Left Out:  $-0.041 \pm 0.148$   $\chi^2/\text{NDF}$ : 30.1/24

Right Out:  $-0.035 \pm 0.078$   $\chi^2/\text{NDF}$ : 39.7/30

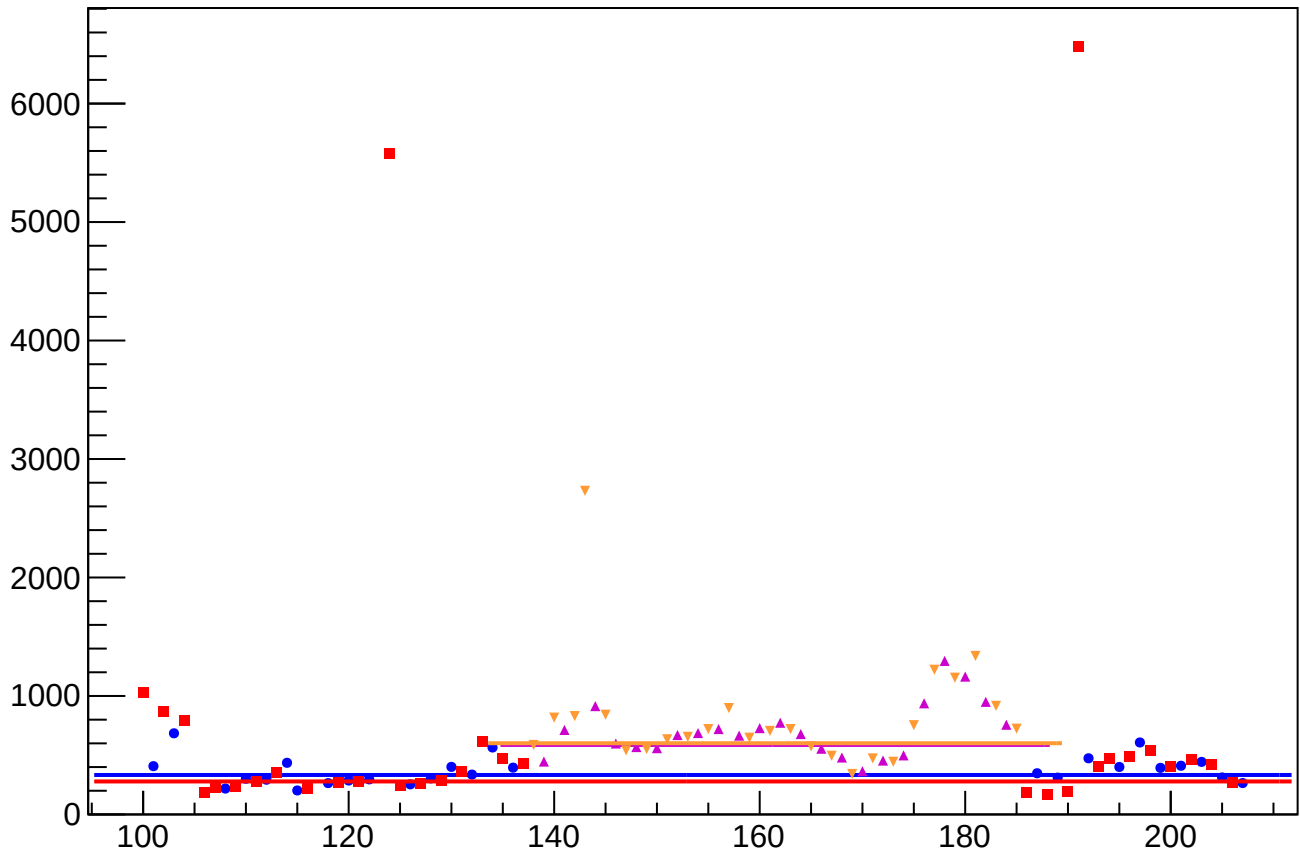
Left In:  $0.128 \pm 0.145$   $\chi^2/\text{NDF}$ : 29.0/22

+ sign  $-0.065 \pm 0.078$   $\chi^2/\text{NDF}$ : 51.4/50

All:  $-0.028 \pm 0.052$   $\chi^2/\text{NDF}$ : 121.5/104

- sign  $0.001 \pm 0.069$   $\chi^2/\text{NDF}$ : 69.7/53

# asym\_at2\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 333.266+/-0.065     $\chi^2/\text{NDF}$ : 1947605.9/25

Left Out: 601.214+/-0.104     $\chi^2/\text{NDF}$ : 4460662.1/24

Right Out: 278.599+/-0.055     $\chi^2/\text{NDF}$ : 4982614.0/30

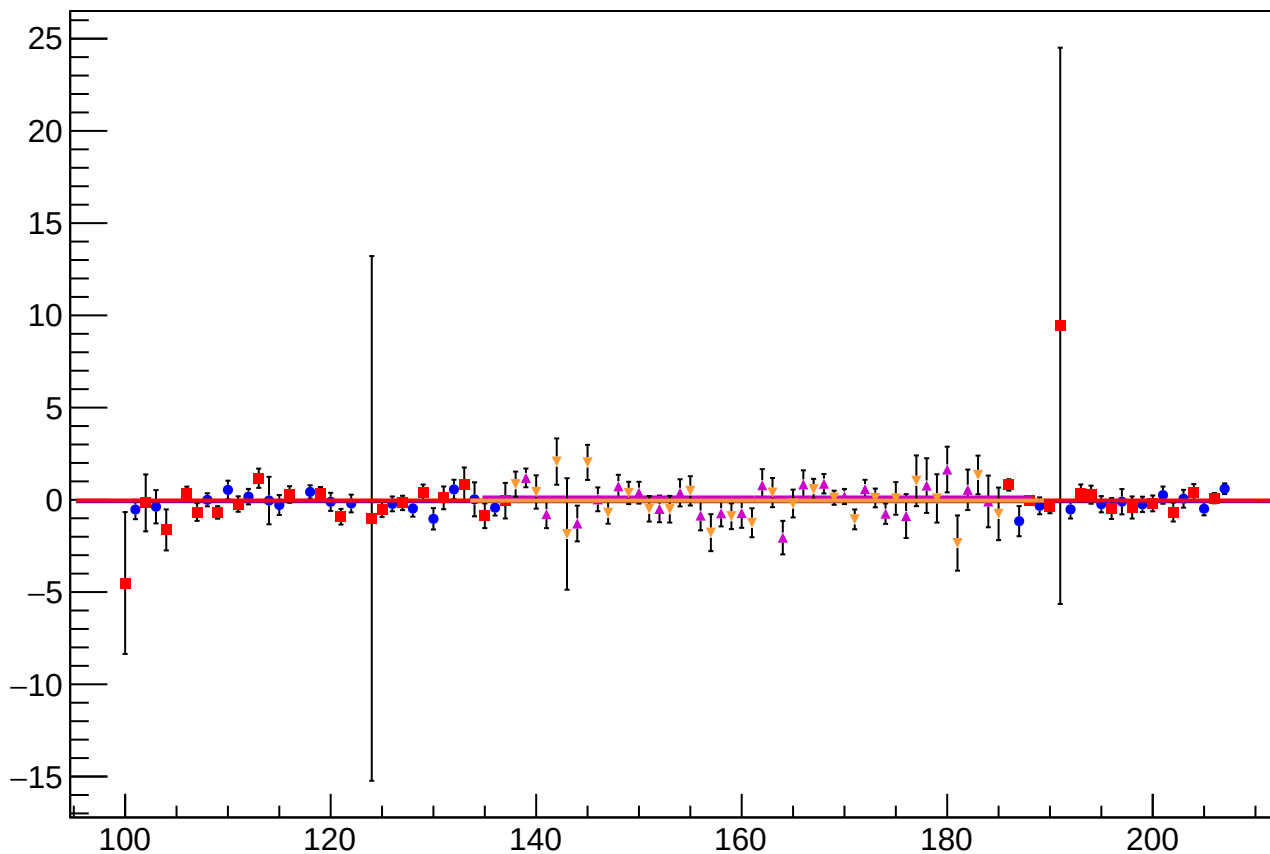
Left In: 586.820+/-0.103     $\chi^2/\text{NDF}$ : 2934613.3/22

+ sign 407.758+/-0.055     $\chi^2/\text{NDF}$ : 11172346.5/50

All: 374.145+/-0.036     $\chi^2/\text{NDF}$ : 26743175.3/10

- sign 347.833+/-0.049     $\chi^2/\text{NDF}$ : 14904938.9/53

asym\_at2\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.074 \pm 0.092$   $\chi^2/\text{NDF}$ : 21.3/25

Left Out:  $-0.041 \pm 0.148$   $\chi^2/\text{NDF}$ : 30.1/24

Right Out:  $-0.035 \pm 0.078$   $\chi^2/\text{NDF}$ : 39.7/30

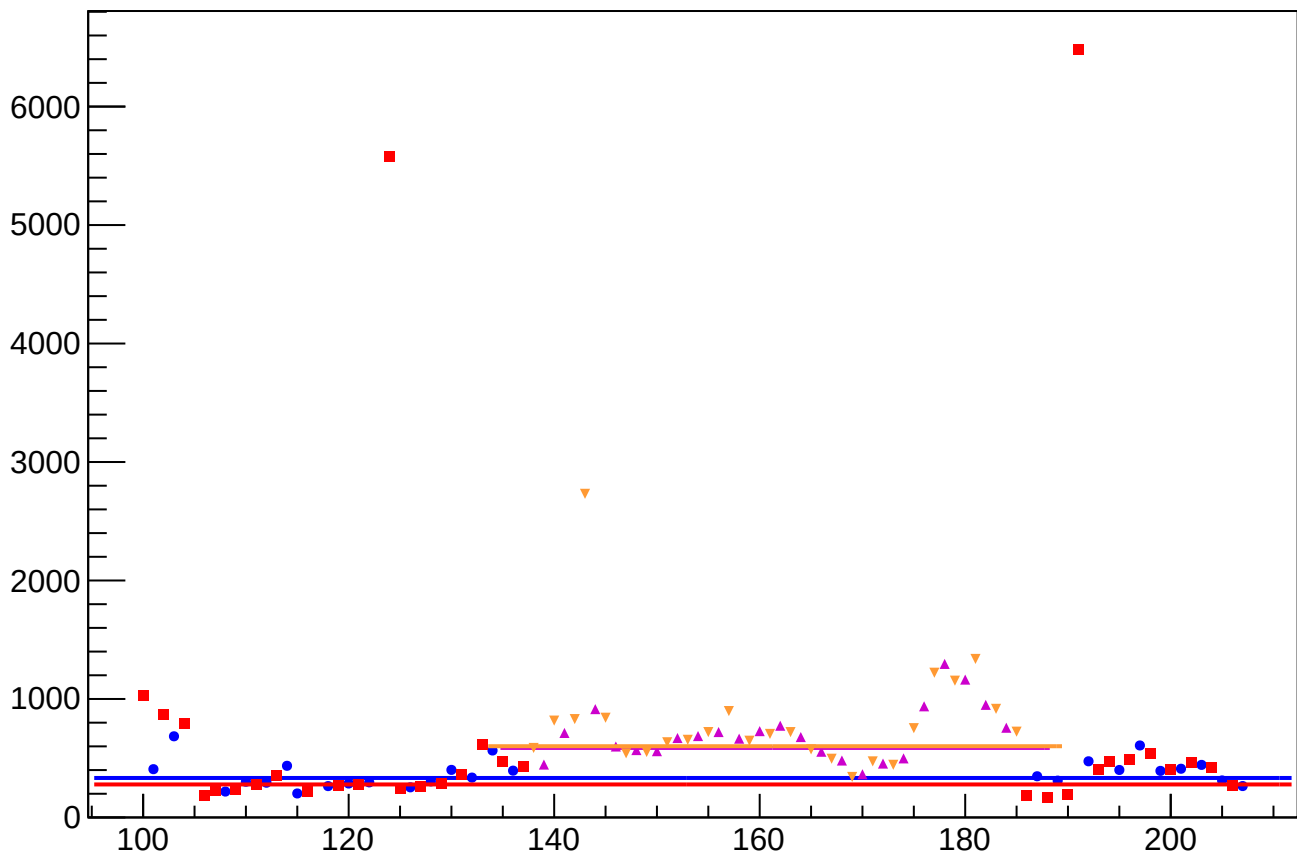
Left In:  $0.128 \pm 0.145$   $\chi^2/\text{NDF}$ : 29.0/22

+ sign  $-0.065 \pm 0.078$   $\chi^2/\text{NDF}$ : 51.4/50

All:  $-0.028 \pm 0.052$   $\chi^2/\text{NDF}$ : 121.5/104

- sign  $0.001 \pm 0.069$   $\chi^2/\text{NDF}$ : 69.7/53

asym\_at2\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In:  $333.266 \pm 0.065$   $\chi^2/\text{NDF}$ : 1947605.9/25

Left Out:  $601.214 \pm 0.104$   $\chi^2/\text{NDF}$ : 4460662.1/24

Right Out:  $278.599 \pm 0.055$   $\chi^2/\text{NDF}$ : 4982614.0/30

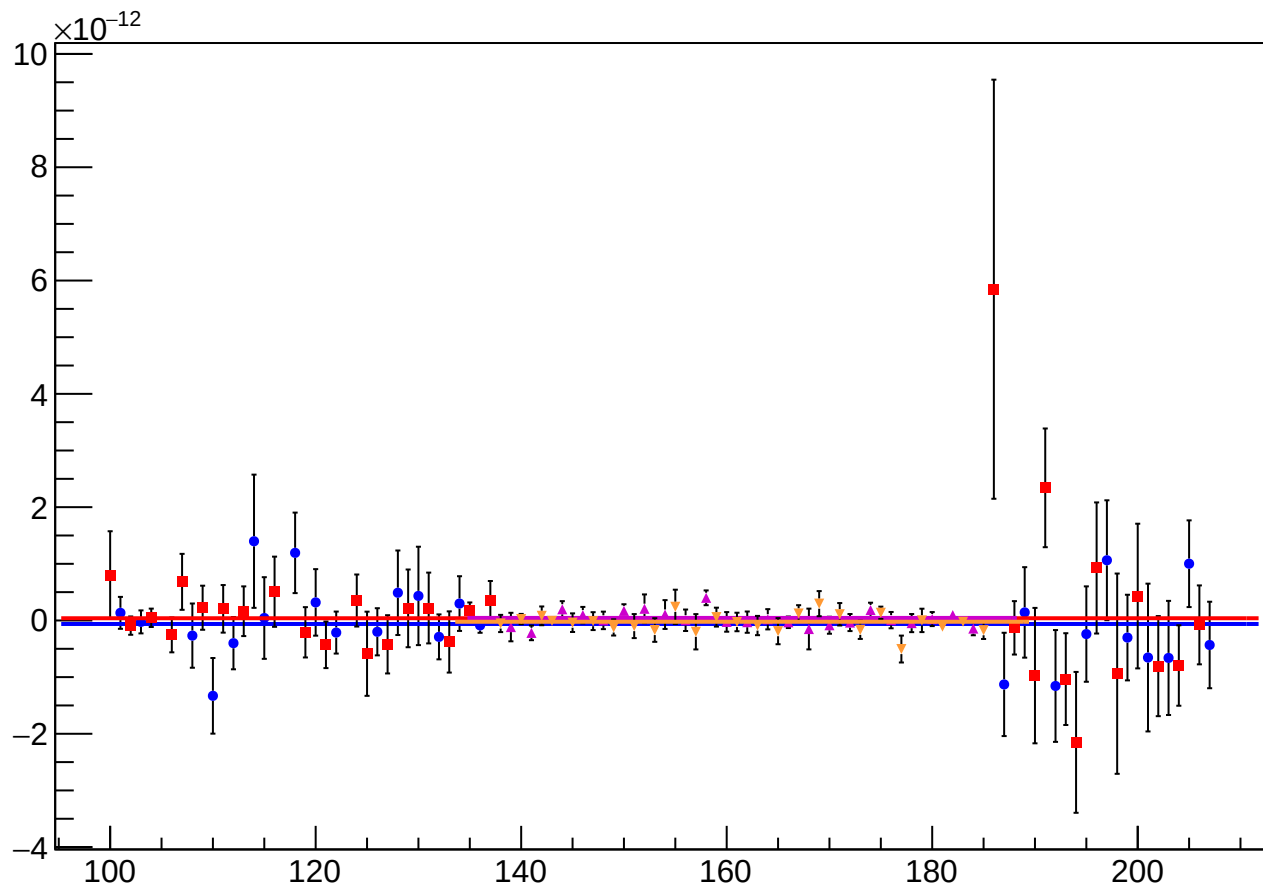
Left In:  $586.820 \pm 0.103$   $\chi^2/\text{NDF}$ : 2934613.3/22

+ sign  $407.758 \pm 0.055$   $\chi^2/\text{NDF}$ : 11172346.5/50

All:  $374.145 \pm 0.036$   $\chi^2/\text{NDF}$ : 26743175.3/10

- sign  $347.833 \pm 0.049$   $\chi^2/\text{NDF}$ : 14904938.9/53

asym\_at2\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 18.6/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 16.4/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 27.9/30

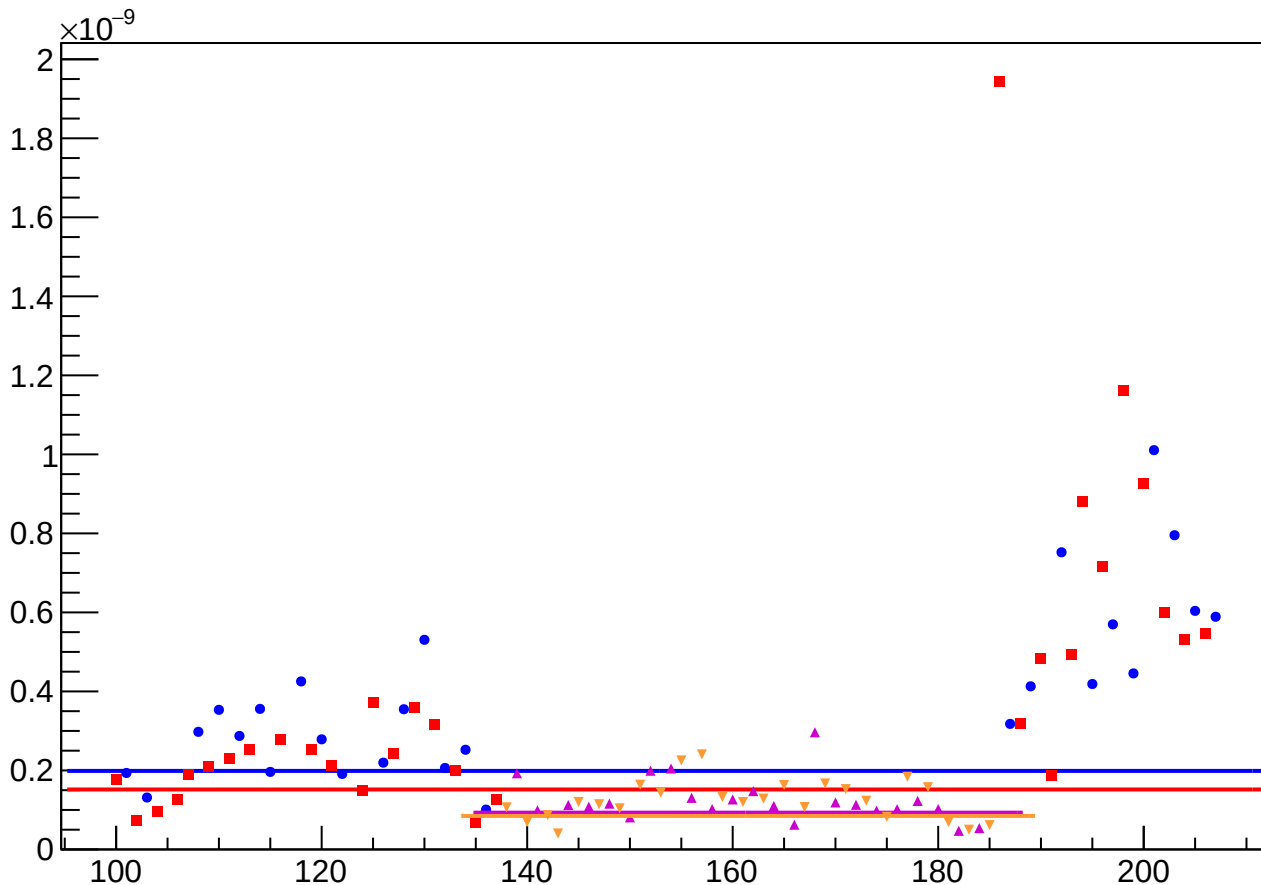
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 22.0/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 35.2/50

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 88.9/104

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 49.8/53

asym\_at2\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6240107.3/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5379905.7/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8019309.9/30

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3869234.9/22

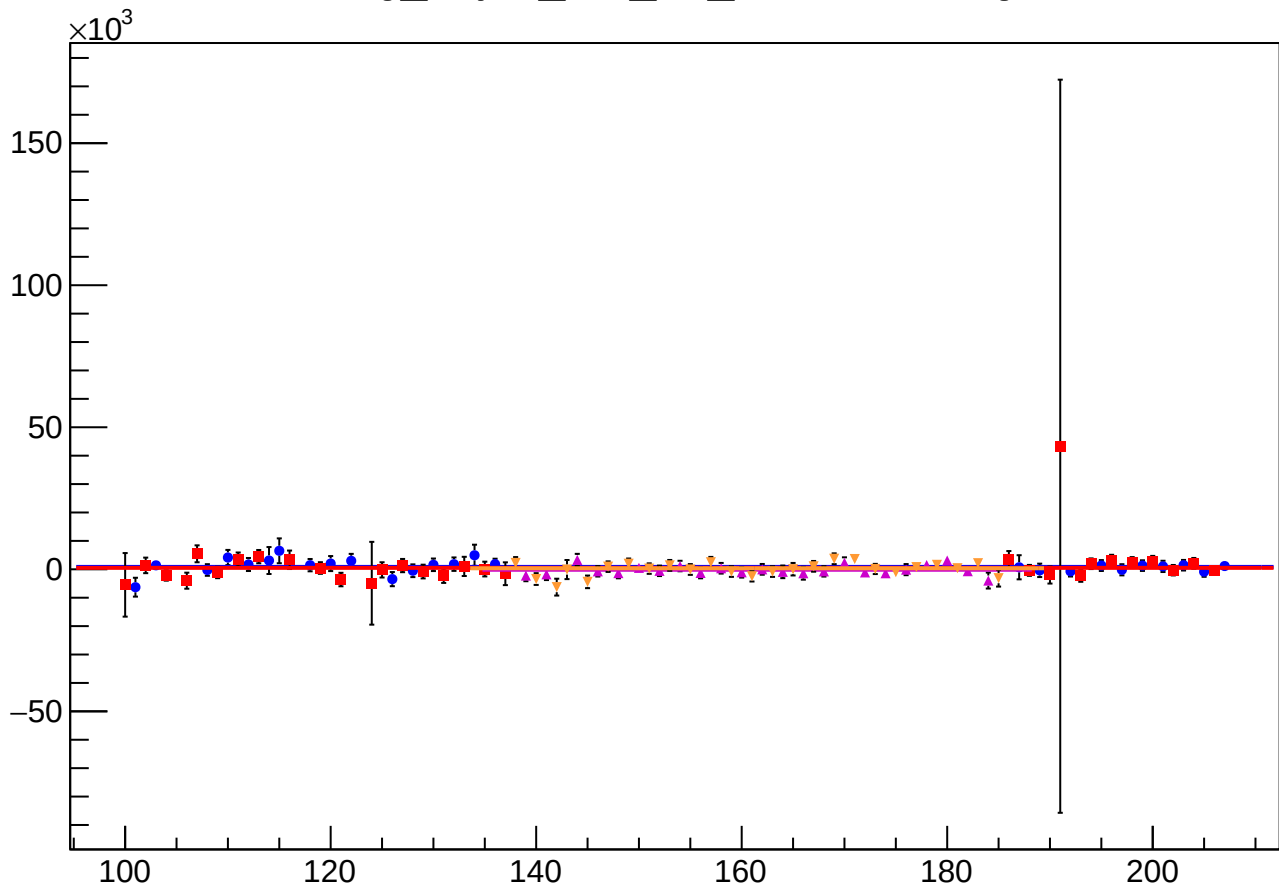
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 15217004.1/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 28448980.9/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13170351.3/53



# reg\_asym\_at2\_dd\_mean vs Slug



Right In: 841.357+/-435.243  $\chi^2/\text{NDF}$ : 17.1/25

Left Out: 361.645+/-388.131  $\chi^2/\text{NDF}$ : 29.6/24

Right Out: 511.673+/-423.157  $\chi^2/\text{NDF}$ : 28.9/30

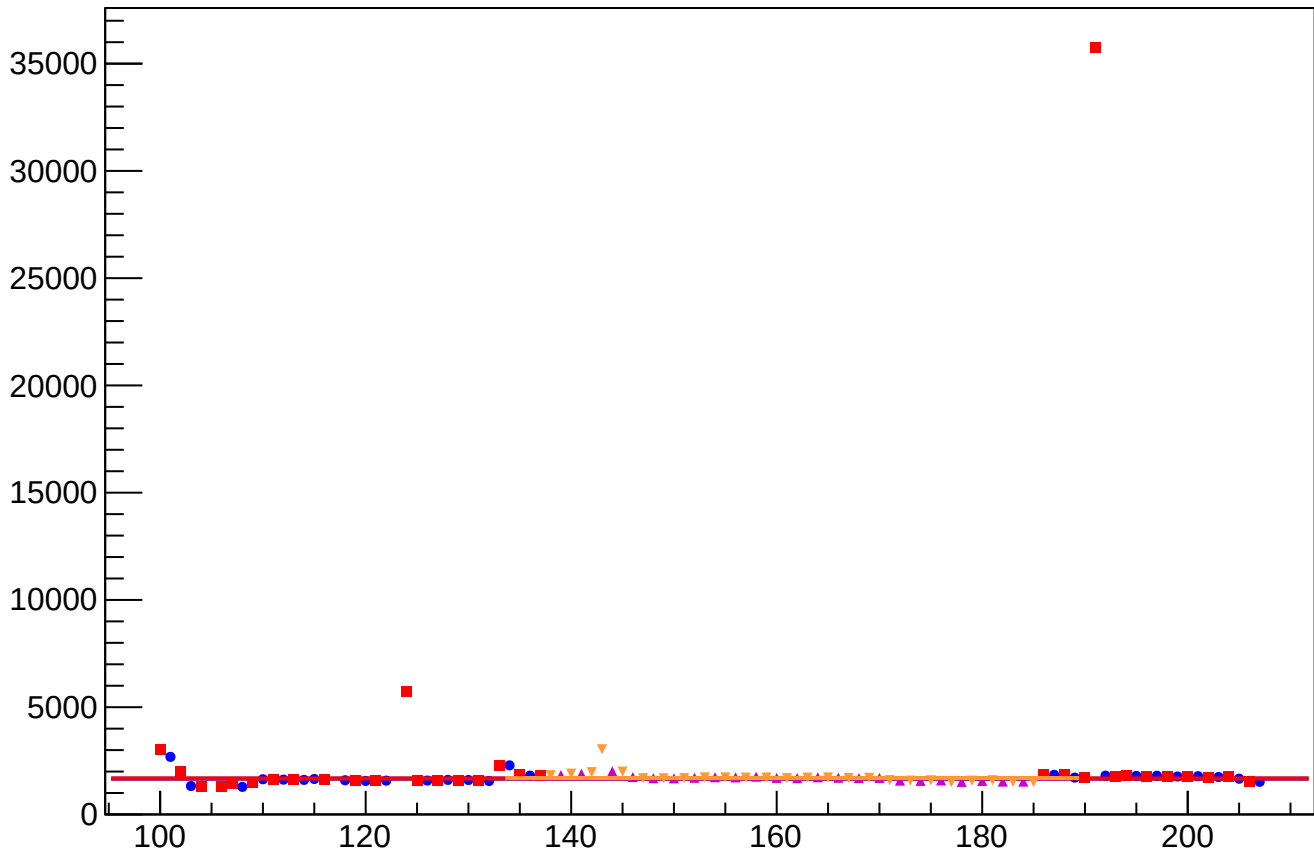
Left In: -157.028+/-394.257  $\chi^2/\text{NDF}$ : 16.0/22

+ sign 574.142+/-289.680  $\chi^2/\text{NDF}$ : 47.4/50

All: 363.038+/-204.401  $\chi^2/\text{NDF}$ : 94.7/104

- sign 153.711+/-288.458  $\chi^2/\text{NDF}$ : 46.3/53

# reg\_asym\_at2\_dd\_rms vs Slug



Right In: 1669.532 $\pm$ 0.308  $\chi^2$ /NDF: 488218.4/25

Left Out: 1697.496 $\pm$ 0.274  $\chi^2$ /NDF: 495397.9/24

Right Out: 1677.814 $\pm$ 0.299  $\chi^2$ /NDF: 694077.2/30

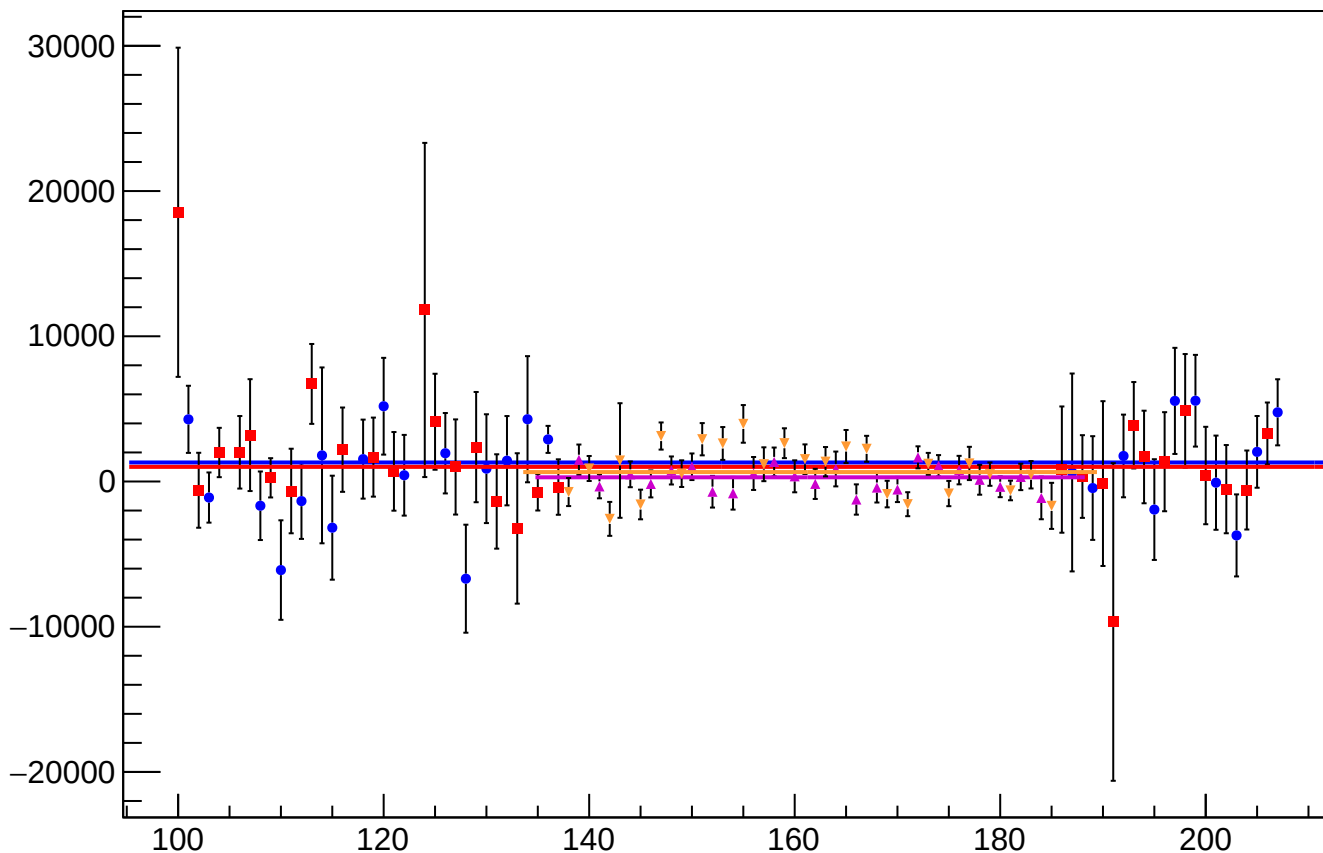
Left In: 1684.577 $\pm$ 0.279  $\chi^2$ /NDF: 165355.7/22

+ sign 1685.108 $\pm$ 0.205  $\chi^2$ /NDF: 988215.0/50

All: 1683.264 $\pm$ 0.145  $\chi^2$ /NDF: 1848083.0/10

- sign 1681.434 $\pm$ 0.204  $\chi^2$ /NDF: 859706.4/53

# asym\_at2\_dd\_reg\_correction\_mean vs Slug



Right In: 1310.173 $\pm$ 497.426  $\chi^2$ /NDF: 32.1/25

Left Out: 649.165 $\pm$ 195.671  $\chi^2$ /NDF: 65.5/24

Right Out: 1007.192 $\pm$ 479.557  $\chi^2$ /NDF: 19.1/30

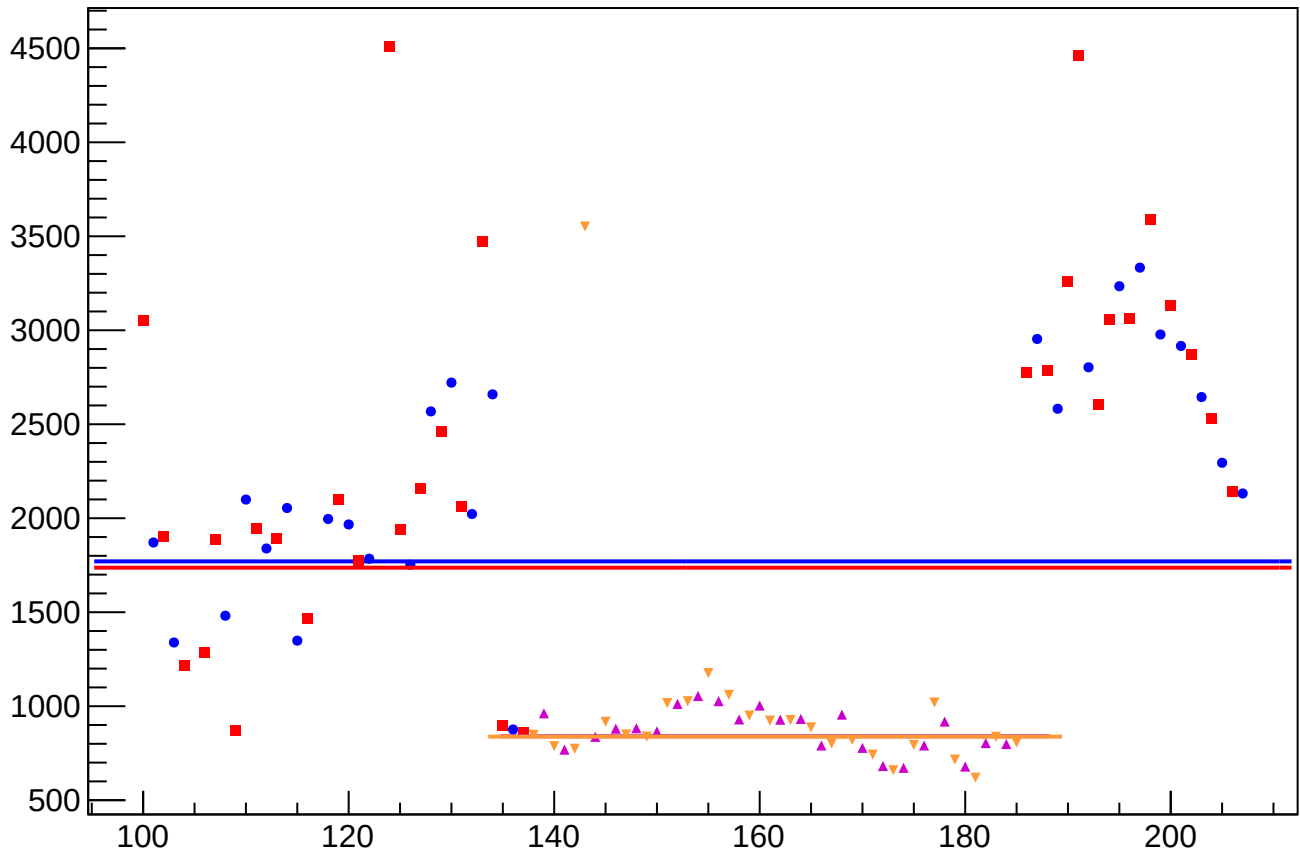
Left In: 288.616 $\pm$ 198.494  $\chi^2$ /NDF: 16.6/22

+ sign 737.741 $\pm$ 182.089  $\chi^2$ /NDF: 99.1/50

All: 566.967 $\pm$ 129.219  $\chi^2$ /NDF: 138.5/104

- sign 393.718 $\pm$ 183.404  $\chi^2$ /NDF: 37.6/53

# asym\_at2\_dd\_reg\_correction\_rms vs Slug



Right In: 1770.435+/-0.352  $\chi^2/\text{NDF}$ : 4420438.9/25

Left Out: 838.243+/-0.138  $\chi^2/\text{NDF}$ :1800245.5/24

+ sign 963.158+/-0.129  $\chi^2/\text{NDF}$ : 12303444.6/50

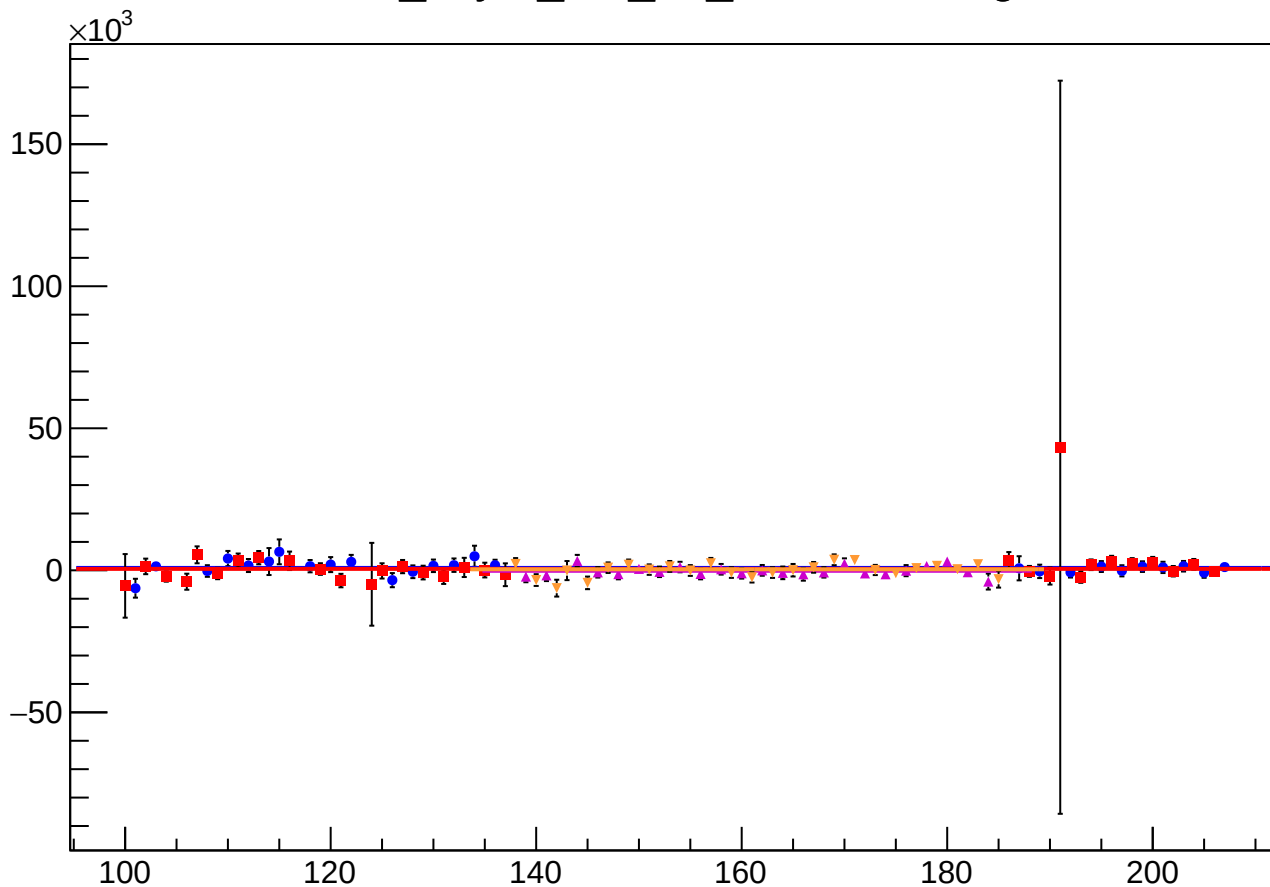
Right Out: 1737.085+/-0.339  $\chi^2/\text{NDF}$ : 5755206.8/30

All: 967.146+/-0.091  $\chi^2/\text{NDF}$ : 24705275.6/100

Left In: 839.976+/-0.140  $\chi^2/\text{NDF}$ :669341.7/22

- sign 971.191+/-0.130  $\chi^2/\text{NDF}$ : 12399898.9/53

# cor\_asym\_at2\_dd\_mean vs Slug



Right In: 841.401 $\pm$ 435.243  $\chi^2$ /NDF: 17.1/25

Left Out: 361.560 $\pm$ 388.131  $\chi^2$ /NDF:29.6/24

Right Out: 511.813 $\pm$ 423.157  $\chi^2$ /NDF: 28.9/30

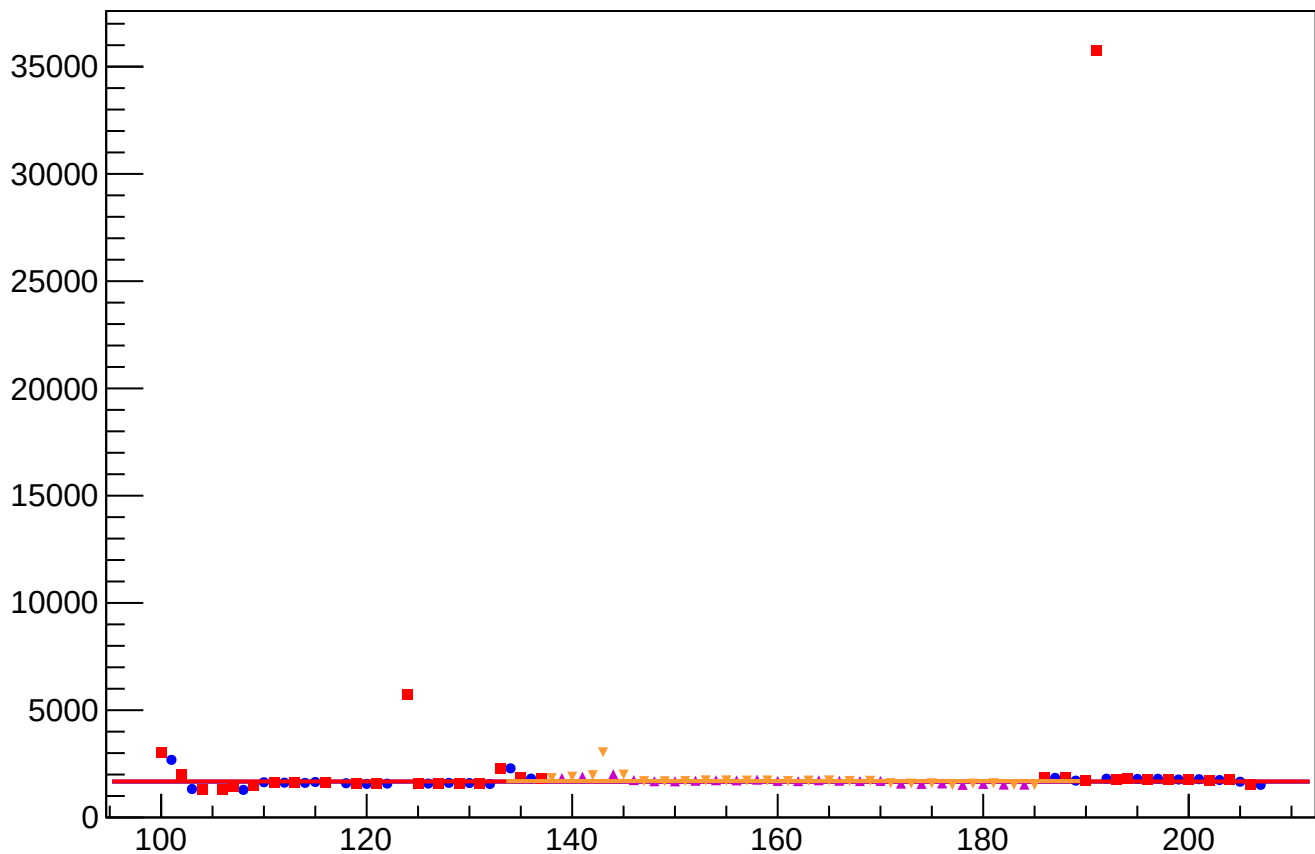
Left In: -156.934 $\pm$ 394.258  $\chi^2$ /NDF:16.0/22

+ sign 574.115 $\pm$ 289.680  $\chi^2$ /NDF: 47.4/50

All: 363.082 $\pm$ 204.401  $\chi^2$ /NDF: 94.7/104

- sign 153.826 $\pm$ 288.458  $\chi^2$ /NDF: 46.3/53

# cor\_asym\_at2\_dd\_rms vs Slug



Right In: 1669.532 $\pm$ 0.308  $\chi^2$ /NDF: 488218.7/25

Left Out: 1697.496 $\pm$ 0.274  $\chi^2$ /NDF: 495397.9/24

Right Out: 1677.814 $\pm$ 0.299  $\chi^2$ /NDF: 694077.4/30

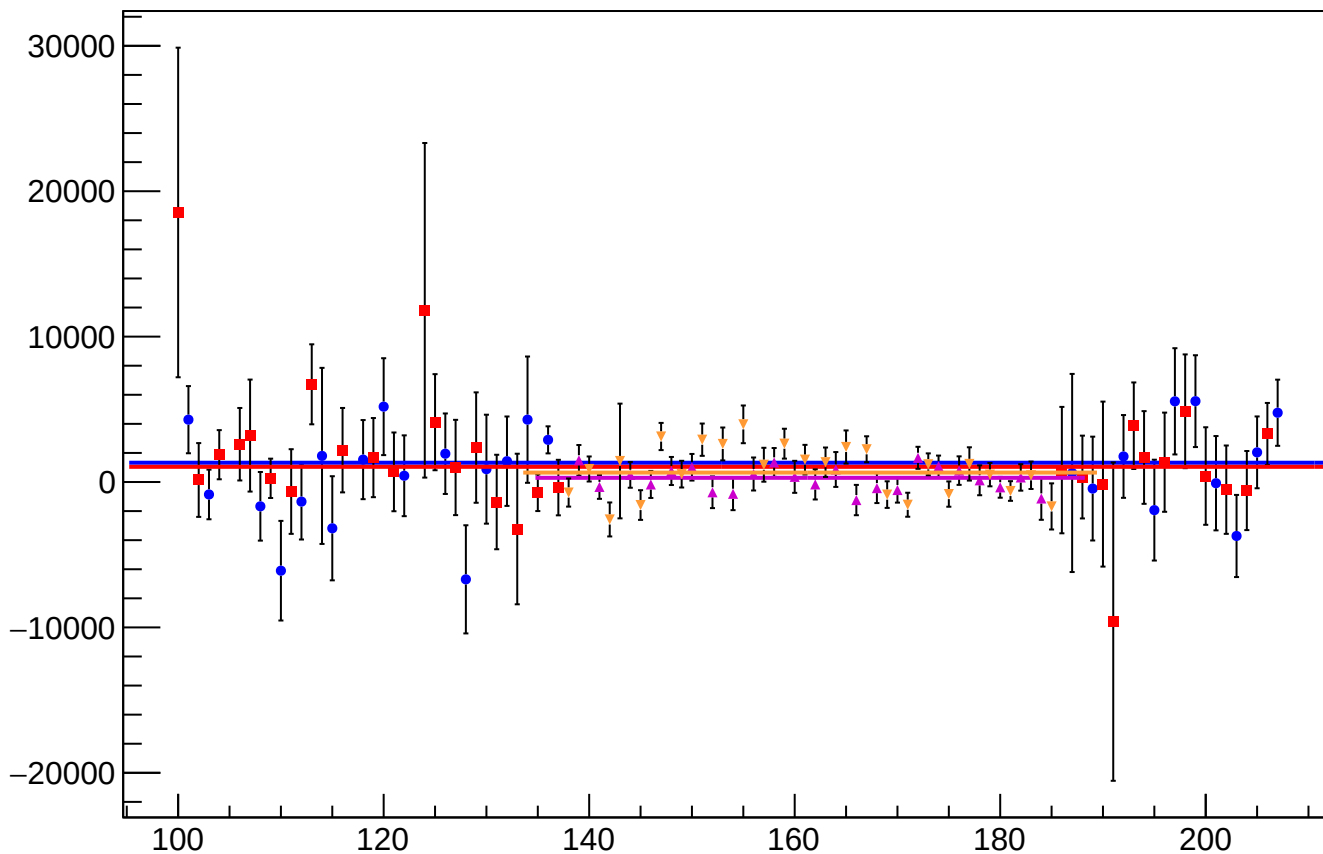
Left In: 1684.577 $\pm$ 0.279  $\chi^2$ /NDF: 165355.7/22

+ sign 1685.108 $\pm$ 0.205  $\chi^2$ /NDF: 988215.3/50

All: 1683.264 $\pm$ 0.145  $\chi^2$ /NDF: 1848083.4/10

- sign 1681.434 $\pm$ 0.204  $\chi^2$ /NDF: 859706.5/53

# asym\_at2\_dd\_cor\_correction\_mean vs Slug



Right In: 1326.822 $\pm$ 496.905  $\chi^2$ /NDF: 31.8/25

Left Out: 649.165 $\pm$ 195.673  $\chi^2$ /NDF: 65.5/24

Right Out: 1045.244 $\pm$ 479.066  $\chi^2$ /NDF: 19.0/30

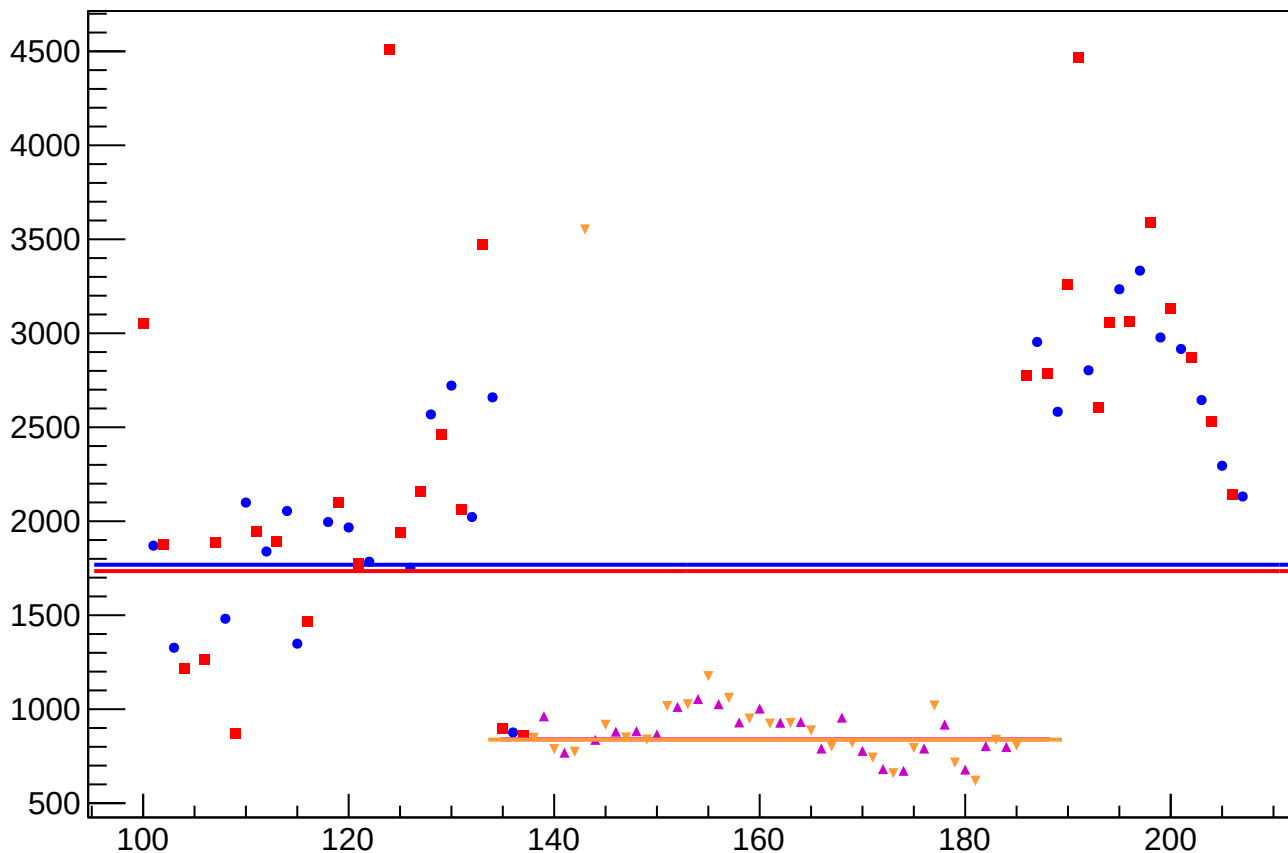
Left In: 288.602 $\pm$ 198.495  $\chi^2$ /NDF: 16.6/22

+ sign 740.139 $\pm$ 182.065  $\chi^2$ /NDF: 98.9/50

All: 571.025 $\pm$ 129.201  $\chi^2$ /NDF: 138.3/104

- sign 399.466 $\pm$ 183.377  $\chi^2$ /NDF: 37.7/53

# asym\_at2\_dd\_cor\_correction\_rms vs Slug



Right In: 1768.517 $\pm$ 0.351  $\chi^2$ /NDF: 4430437.0/25

Left Out: 838.254 $\pm$ 0.138  $\chi^2$ /NDF: 1800138.0/24

Right Out: 1734.839 $\pm$ 0.339  $\chi^2$ /NDF: 5762853.0/30

Left In: 839.978 $\pm$ 0.140  $\chi^2$ /NDF: 669338.3/22

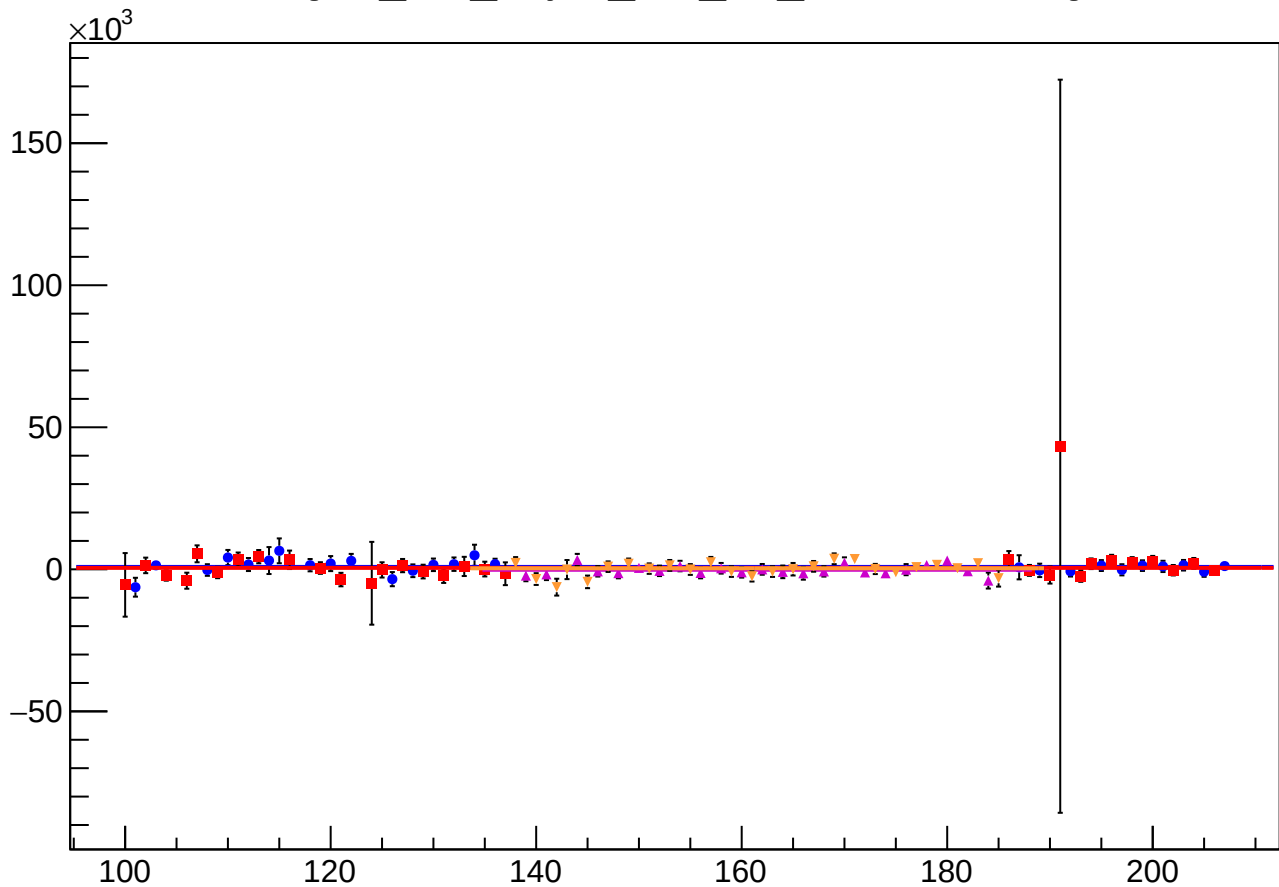
+ sign 963.140 $\pm$ 0.129  $\chi^2$ /NDF: 12299174.7/50

All: 967.089 $\pm$ 0.091  $\chi^2$ /NDF: 24689112.3/10

- sign 971.094 $\pm$ 0.130  $\chi^2$ /NDF: 12388042.7/53



# eigen\_cor\_asym\_at2\_dd\_mean vs Slug



Right In:  $841.401 \pm 435.243$   $\chi^2/\text{NDF}$ : 17.1/25

Left Out:  $361.560 \pm 388.131$   $\chi^2/\text{NDF}$ : 29.6/24

Right Out:  $511.813 \pm 423.157$   $\chi^2/\text{NDF}$ : 28.9/30

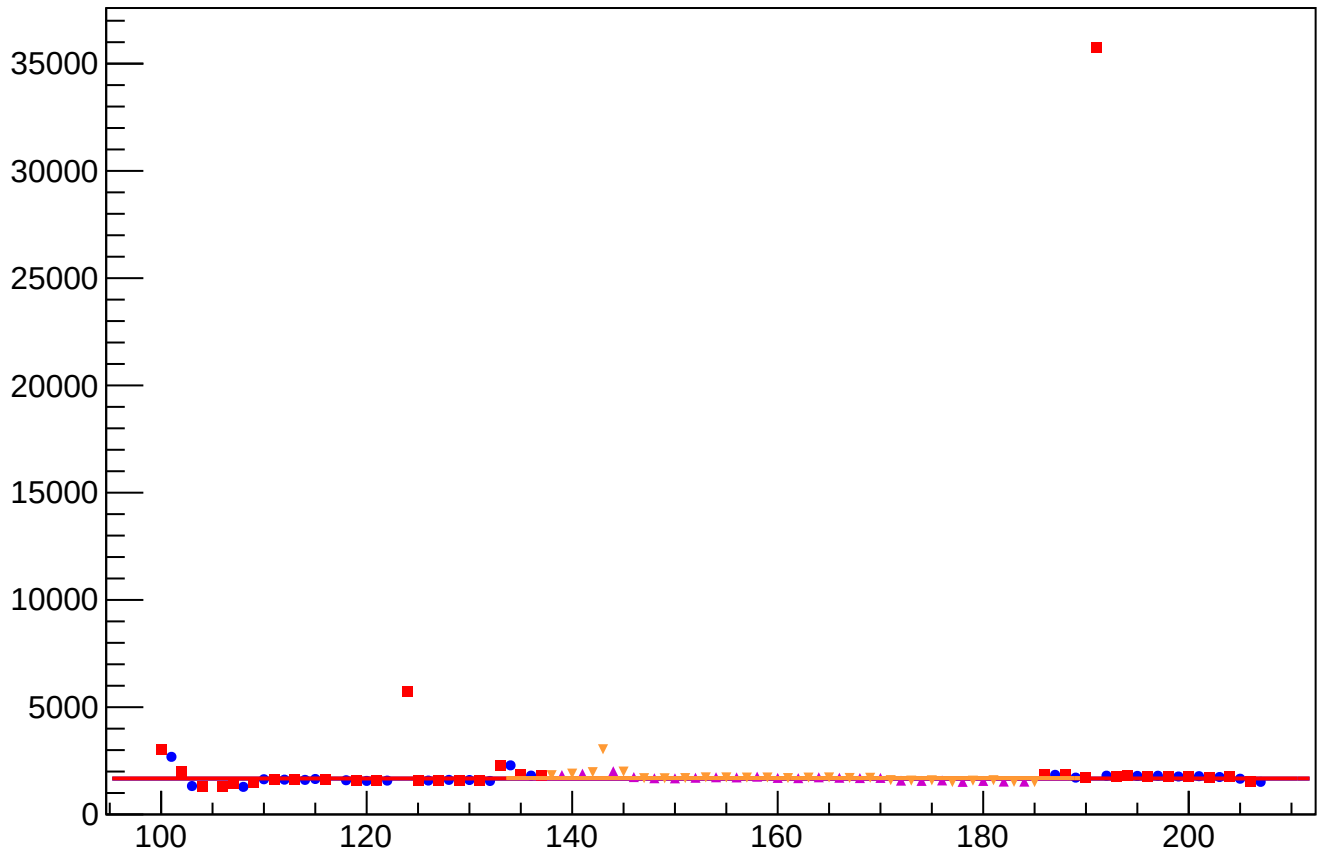
Left In:  $-156.934 \pm 394.258$   $\chi^2/\text{NDF}$ : 16.0/22

+ sign  $574.115 \pm 289.680$   $\chi^2/\text{NDF}$ : 47.4/50

All:  $363.082 \pm 204.401$   $\chi^2/\text{NDF}$ : 94.7/104

- sign  $153.826 \pm 288.458$   $\chi^2/\text{NDF}$ : 46.3/53

# eigen\_cor\_asym\_at2\_dd\_rms vs Slug



Right In: 1669.532 $\pm$ 0.308  $\chi^2$ /NDF: 488218.7/25

Left Out: 1697.496 $\pm$ 0.274  $\chi^2$ /NDF: 495397.9/24

Right Out: 1677.814 $\pm$ 0.299  $\chi^2$ /NDF: 694077.4/30

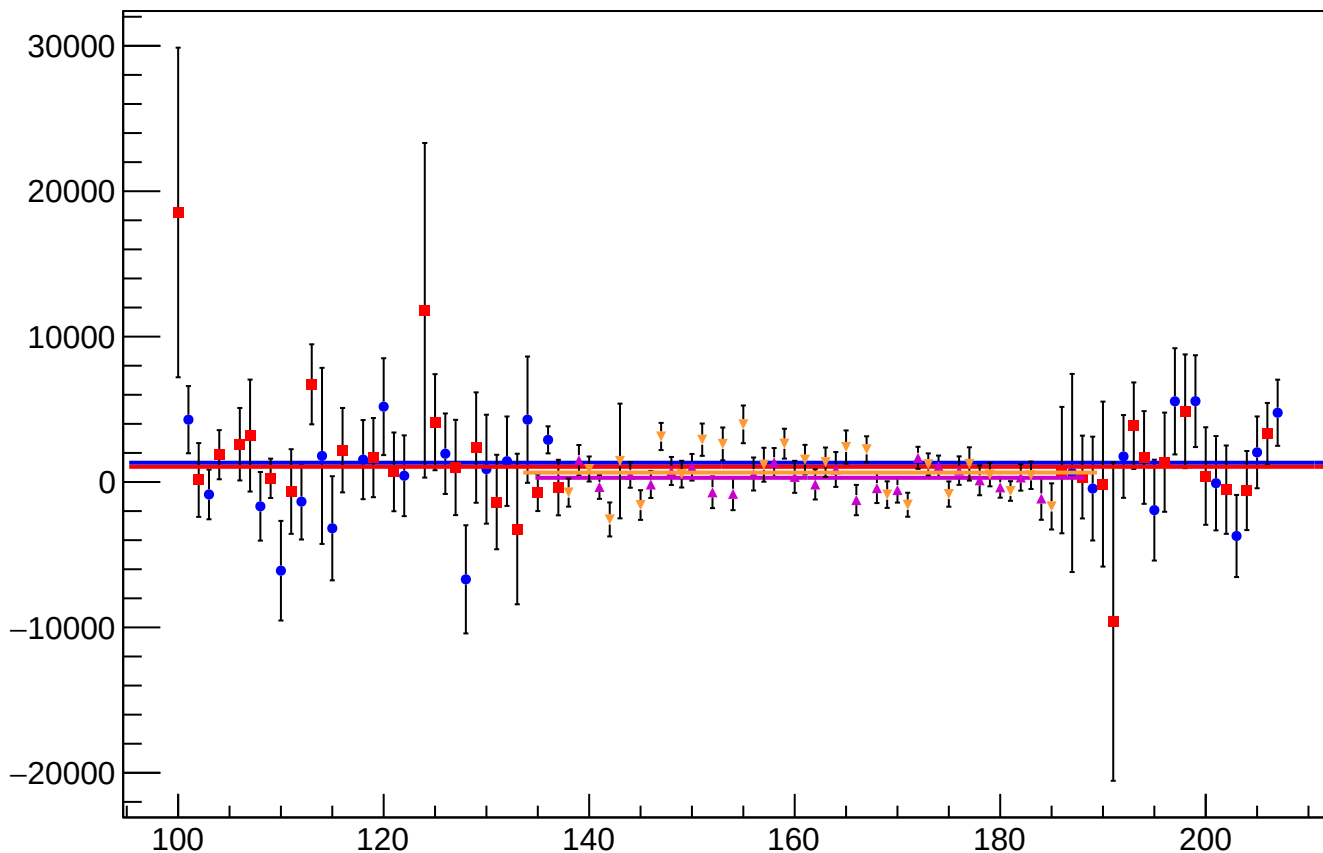
Left In: 1684.577 $\pm$ 0.279  $\chi^2$ /NDF: 165355.7/22

+ sign 1685.108 $\pm$ 0.205  $\chi^2$ /NDF: 988215.3/50

All: 1683.264 $\pm$ 0.145  $\chi^2$ /NDF: 1848083.4/10

- sign 1681.434 $\pm$ 0.204  $\chi^2$ /NDF: 859706.5/53

asym\_at2\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In: 1326.822 $\pm$ 496.905  $\chi^2$ /NDF: 31.8/25

Left Out: 649.165 $\pm$ 195.673  $\chi^2$ /NDF:65.5/24

Right Out: 1045.244 $\pm$ 479.066  $\chi^2$ /NDF: 19.0/30

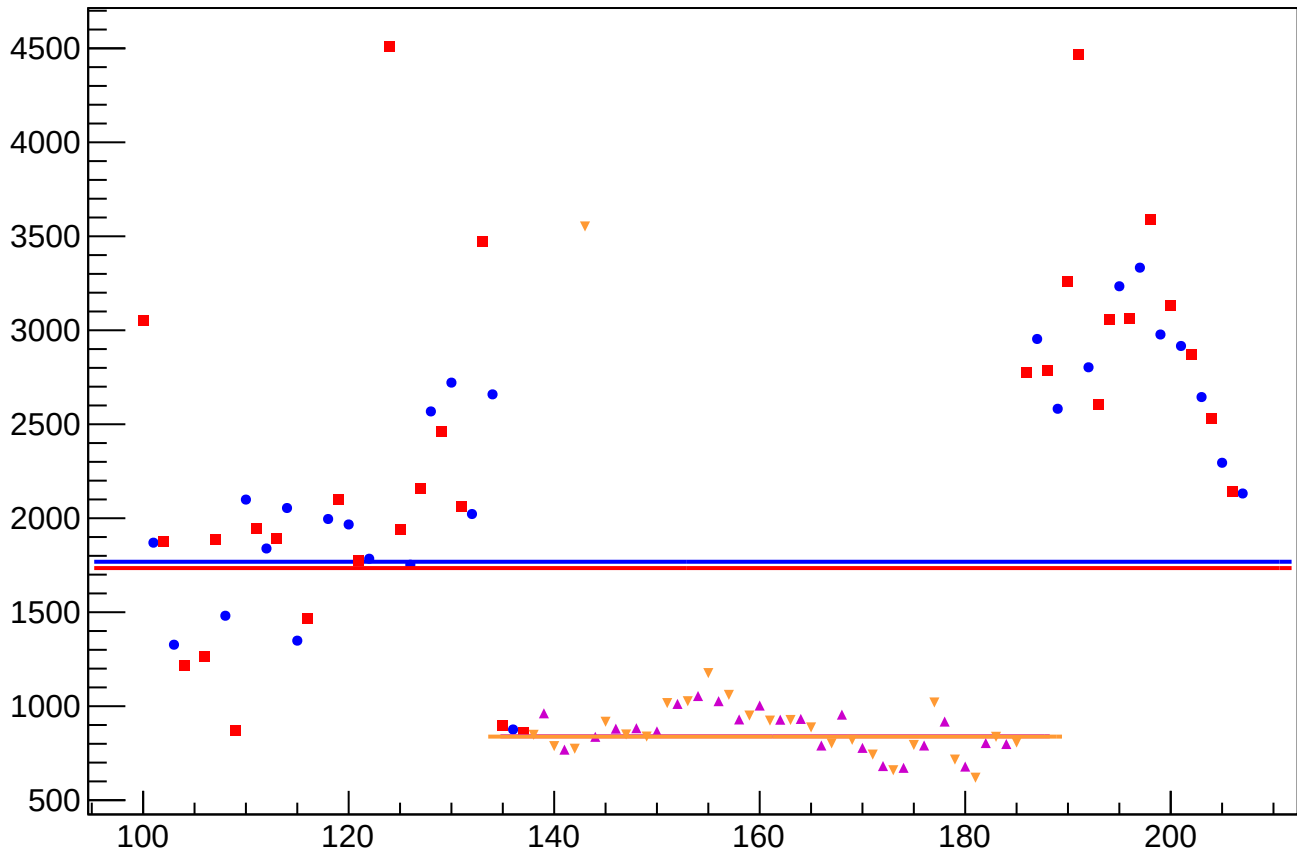
Left In: 288.602 $\pm$ 198.495  $\chi^2$ /NDF:16.6/22

+ sign 740.139 $\pm$ 182.065  $\chi^2$ /NDF: 98.9/50

All: 571.025 $\pm$ 129.201  $\chi^2$ /NDF: 138.3/104

- sign 399.466 $\pm$ 183.377  $\chi^2$ /NDF: 37.7/53

# asym\_at2\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 1768.517 $\pm$ 0.351  $\chi^2$ /NDF: 4430437.0/25

Left Out: 838.254 $\pm$ 0.138  $\chi^2$ /NDF:1800138.0/24

Right Out: 1734.839 $\pm$ 0.339  $\chi^2$ /NDF: 5762853.0/30

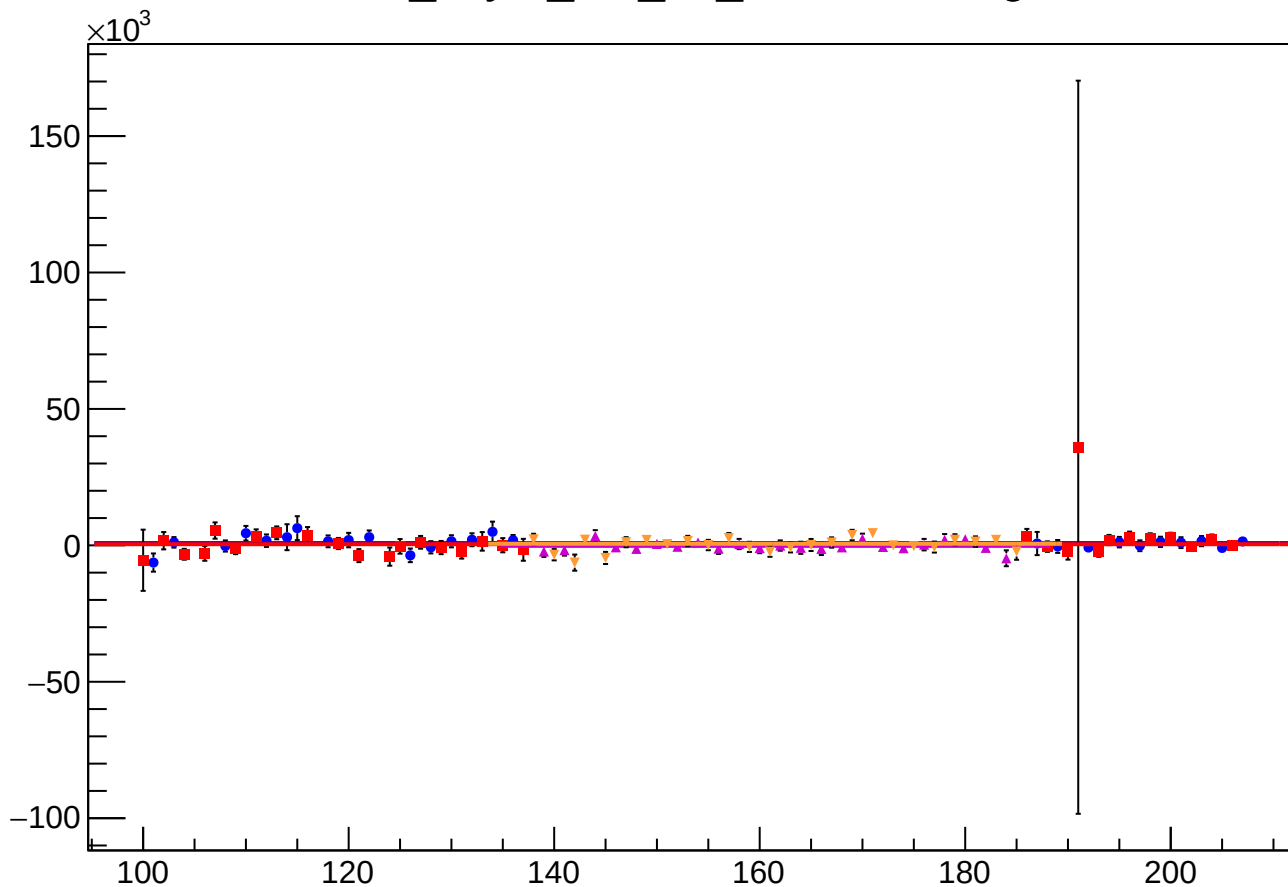
Left In: 839.978 $\pm$ 0.140  $\chi^2$ /NDF:669338.3/22

+ sign 963.140 $\pm$ 0.129  $\chi^2$ /NDF: 12299174.7/50

All: 967.089 $\pm$ 0.091  $\chi^2$ /NDF: 24689112.3/10

- sign 971.094 $\pm$ 0.130  $\chi^2$ /NDF: 12388042.7/53

# dit\_asym\_at2\_dd\_mean vs Slug



Right In: 825.174+/-438.668  $\chi^2/\text{NDF}$ : 17.9/25

Left Out: 580.299+/-389.769  $\chi^2/\text{NDF}$ : 31.9/24

Right Out: 420.727+/-423.713  $\chi^2/\text{NDF}$ : 31.1/30

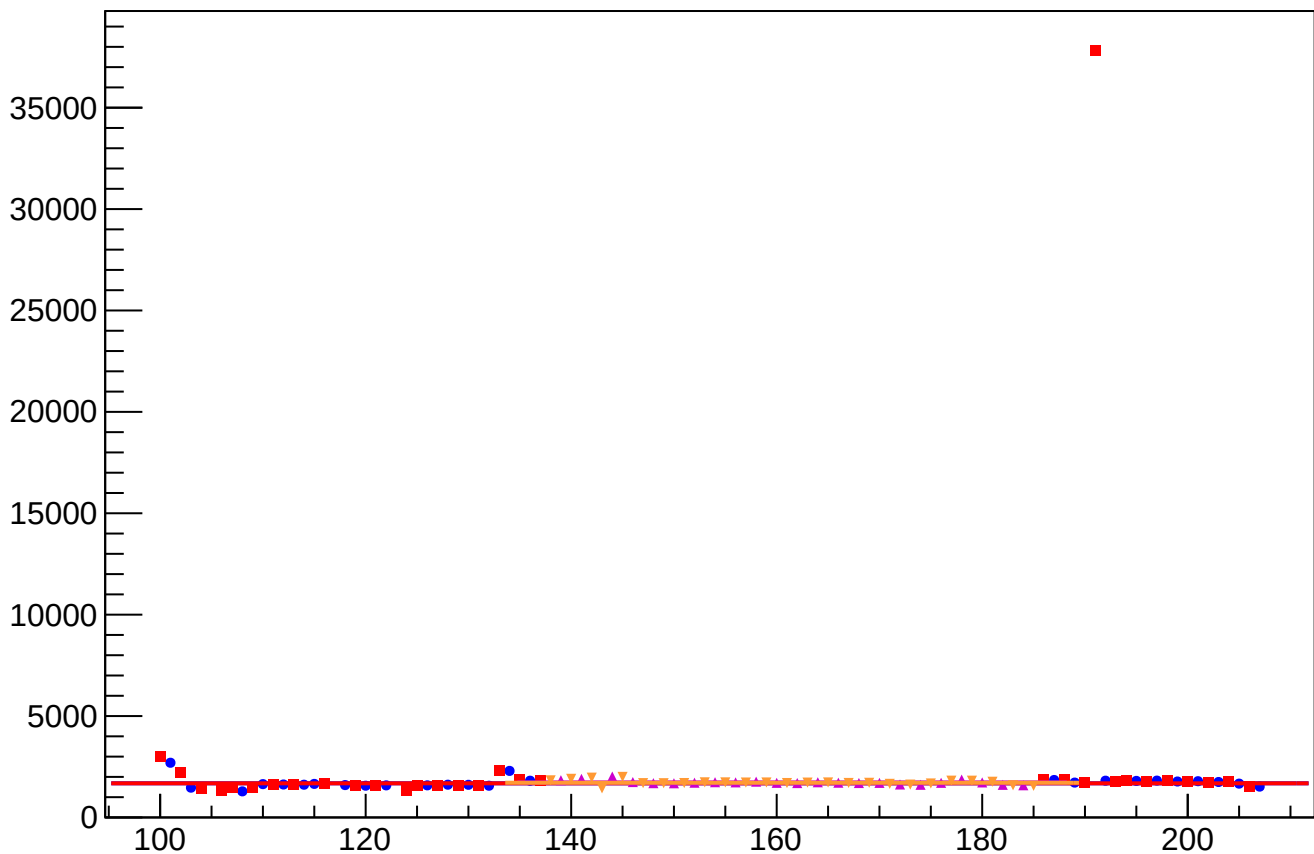
Left In: -185.836+/-404.094  $\chi^2/\text{NDF}$ : 14.4/22

+ sign 688.333+/-291.369  $\chi^2/\text{NDF}$ : 50.0/50

All: 396.767+/-206.402  $\chi^2/\text{NDF}$ : 98.6/104

- sign 103.078+/-292.428  $\chi^2/\text{NDF}$ : 46.6/53

dit\_asym\_at2\_dd\_rms vs Slug



Right In: 1684.195+/-0.310  $\chi^2/\text{NDF}$ : 435410.9/25

Left Out: 1711.712+/-0.276  $\chi^2/\text{NDF}$ : 168006.4/24

Right Out: 1683.254+/-0.300  $\chi^2/\text{NDF}$ : 555062.2/30

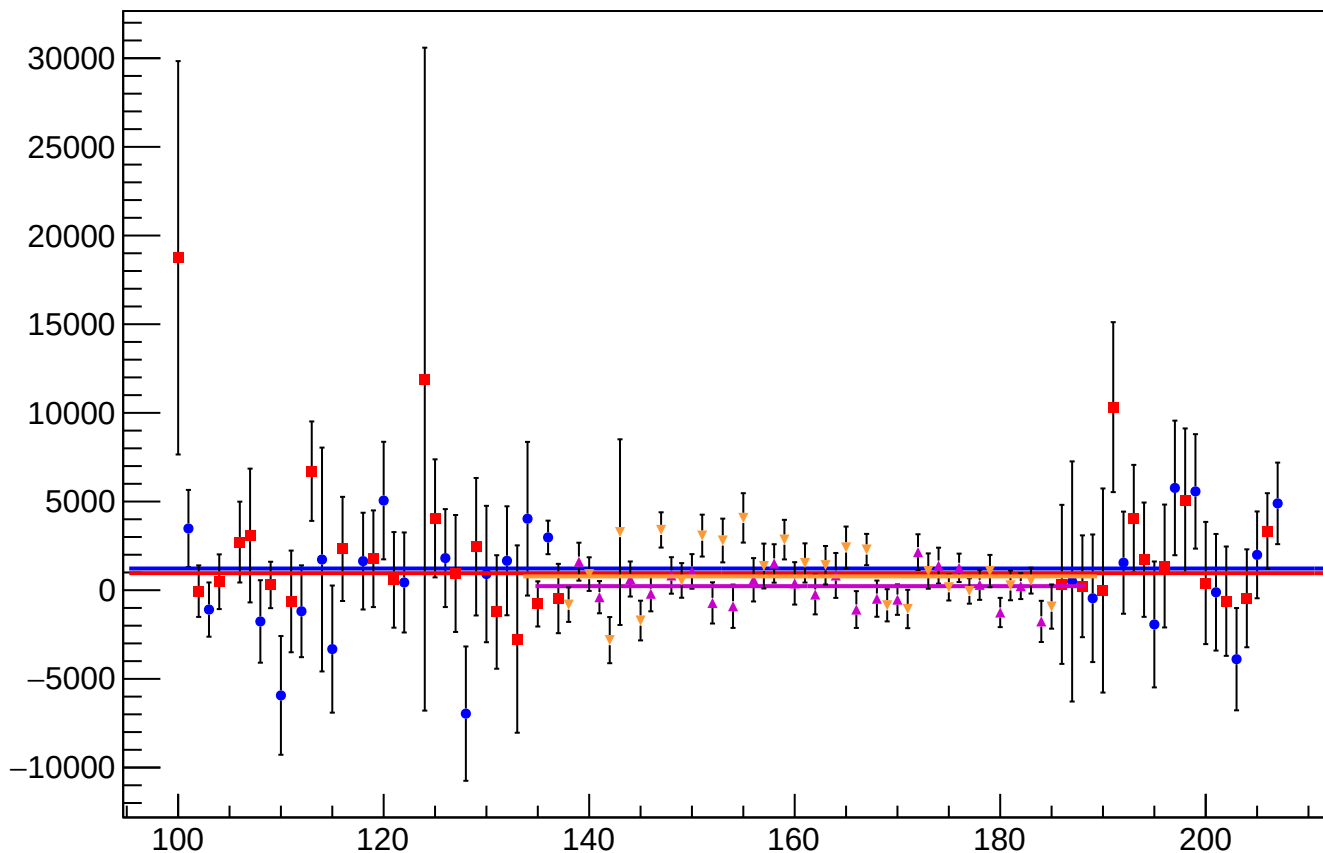
Left In: 1727.912+/-0.286  $\chi^2/\text{NDF}$ : 100226.8/22

+ sign 1699.572+/-0.206  $\chi^2/\text{NDF}$ : 607815.0/50

All: 1703.094+/-0.146  $\chi^2/\text{NDF}$ : 1275325.5/100

- sign 1706.641+/-0.207  $\chi^2/\text{NDF}$ : 666924.0/53

# asym\_at2\_dd\_dit\_correction\_mean vs Slug



Right In: 1223.987 $\pm$ 494.242  $\chi^2$ /NDF: 32.3/25

Left Out: 778.974 $\pm$ 201.641  $\chi^2$ /NDF:54.5/24

Right Out: 961.329 $\pm$ 457.210  $\chi^2$ /NDF: 21.7/30

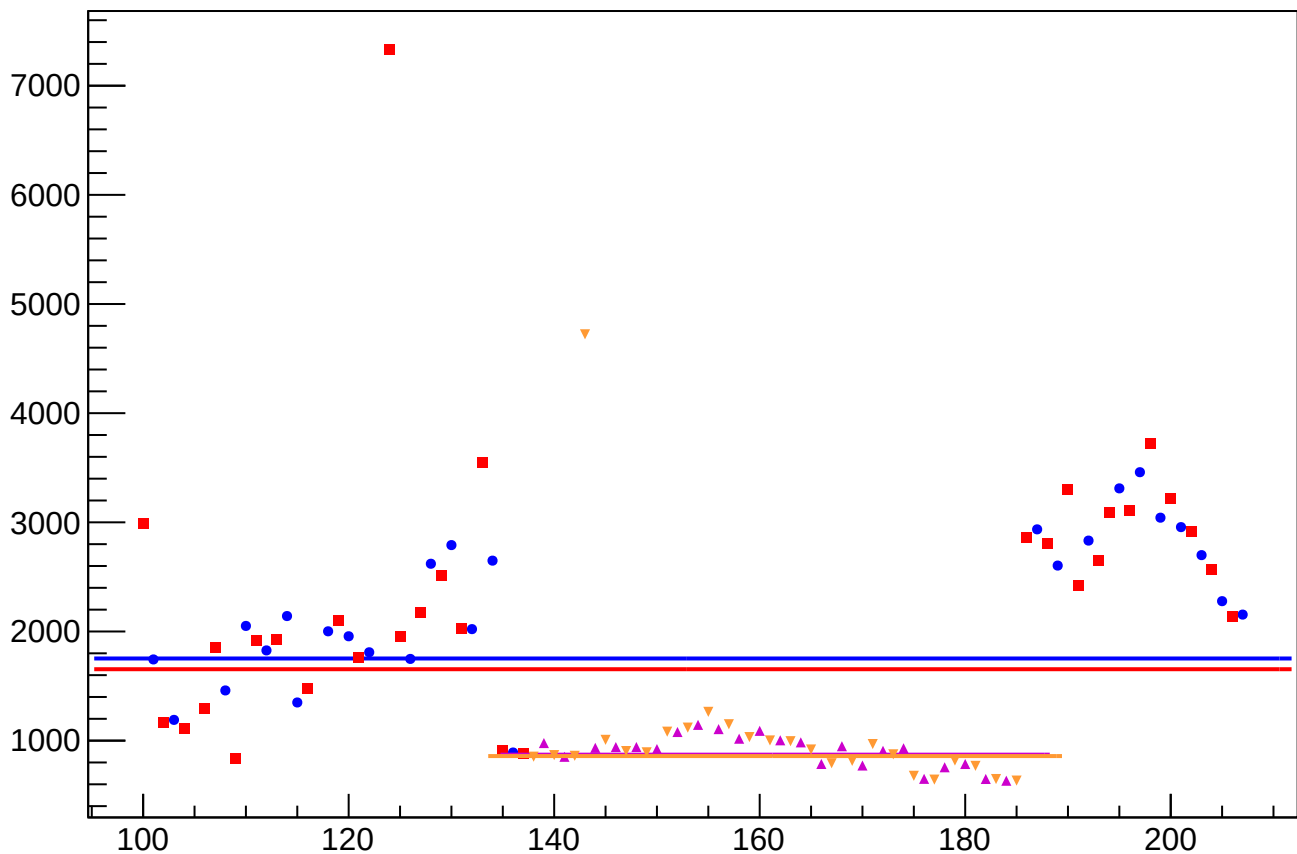
Left In: 228.879 $\pm$ 206.703  $\chi^2$ /NDF:22.6/22

+ sign 842.476 $\pm$ 186.701  $\chi^2$ /NDF: 87.6/50

All: 599.978 $\pm$ 132.596  $\chi^2$ /NDF: 137.4/104

- sign 353.179 $\pm$ 188.349  $\chi^2$ /NDF: 46.5/53

# asym\_at2\_dd\_dit\_correction\_rms vs Slug



Right In: 1752.616+/-0.349  $\chi^2/\text{NDF}$ : 4587712.4/25

Left Out: 858.593+/-0.143  $\chi^2/\text{NDF}$ : 2279775.0/24

+ sign 986.167+/-0.132  $\chi^2/\text{NDF}$ : 12477751.2/50

Right Out: 1654.345+/-0.323  $\chi^2/\text{NDF}$ : 6303531.2/30

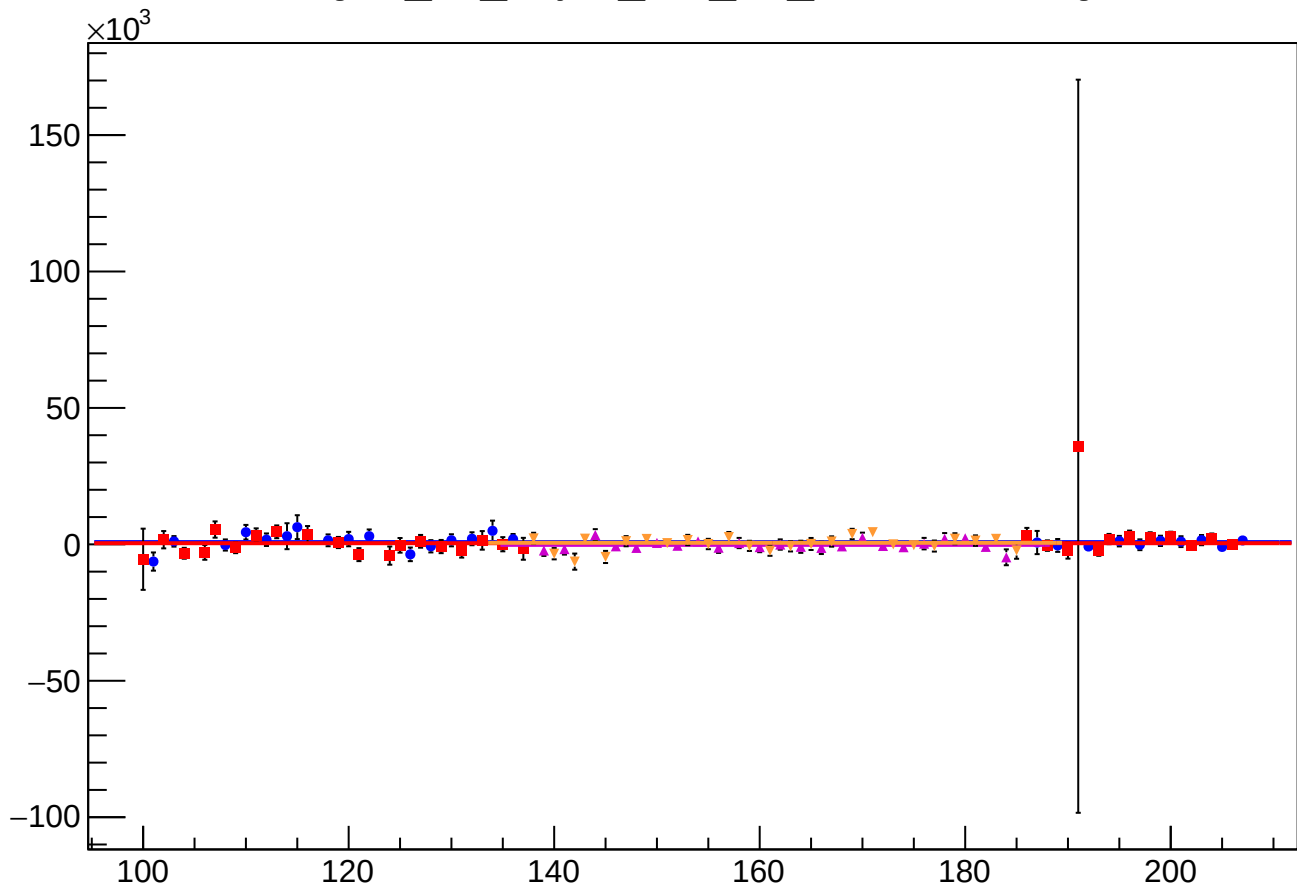
All: 995.191+/-0.094  $\chi^2/\text{NDF}$ : 24638090.6/10

Left In: 871.527+/-0.146  $\chi^2/\text{NDF}$ : 979356.2/22

- sign 1004.375+/-0.133  $\chi^2/\text{NDF}$ : 12150911.5/53



# eigen\_dit\_asym\_at2\_dd\_mean vs Slug



Right In: 825.171+/-438.668  $\chi^2/\text{NDF}$ : 17.9/25

Left Out: 580.295+/-389.769  $\chi^2/\text{NDF}$ : 31.9/24

Right Out: 420.725+/-423.713  $\chi^2/\text{NDF}$ : 31.1/30

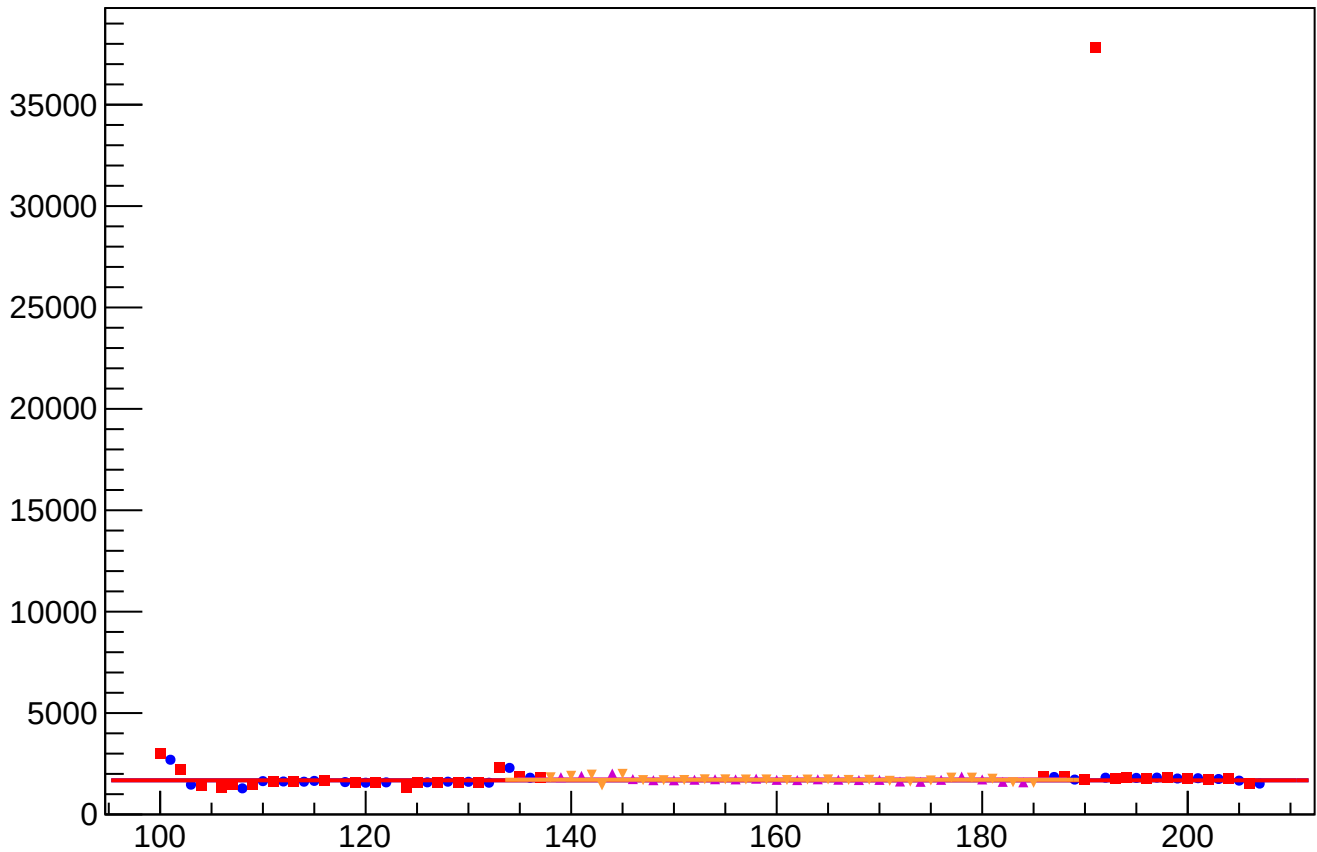
Left In: -185.837+/-404.094  $\chi^2/\text{NDF}$ : 14.4/22

+ sign 688.329+/-291.369  $\chi^2/\text{NDF}$ : 50.0/50

All: 396.764+/-206.402  $\chi^2/\text{NDF}$ : 98.6/104

- sign 103.077+/-292.427  $\chi^2/\text{NDF}$ : 46.6/53

# eigen\_dit\_asym\_at2\_dd\_rms vs Slug



Right In: 1684.195+/-0.310  $\chi^2/\text{NDF}$ : 435410.8/25

Left Out: 1711.711+/-0.276  $\chi^2/\text{NDF}$ : 168005.1/24

Right Out: 1683.254+/-0.300  $\chi^2/\text{NDF}$ : 555062.3/30

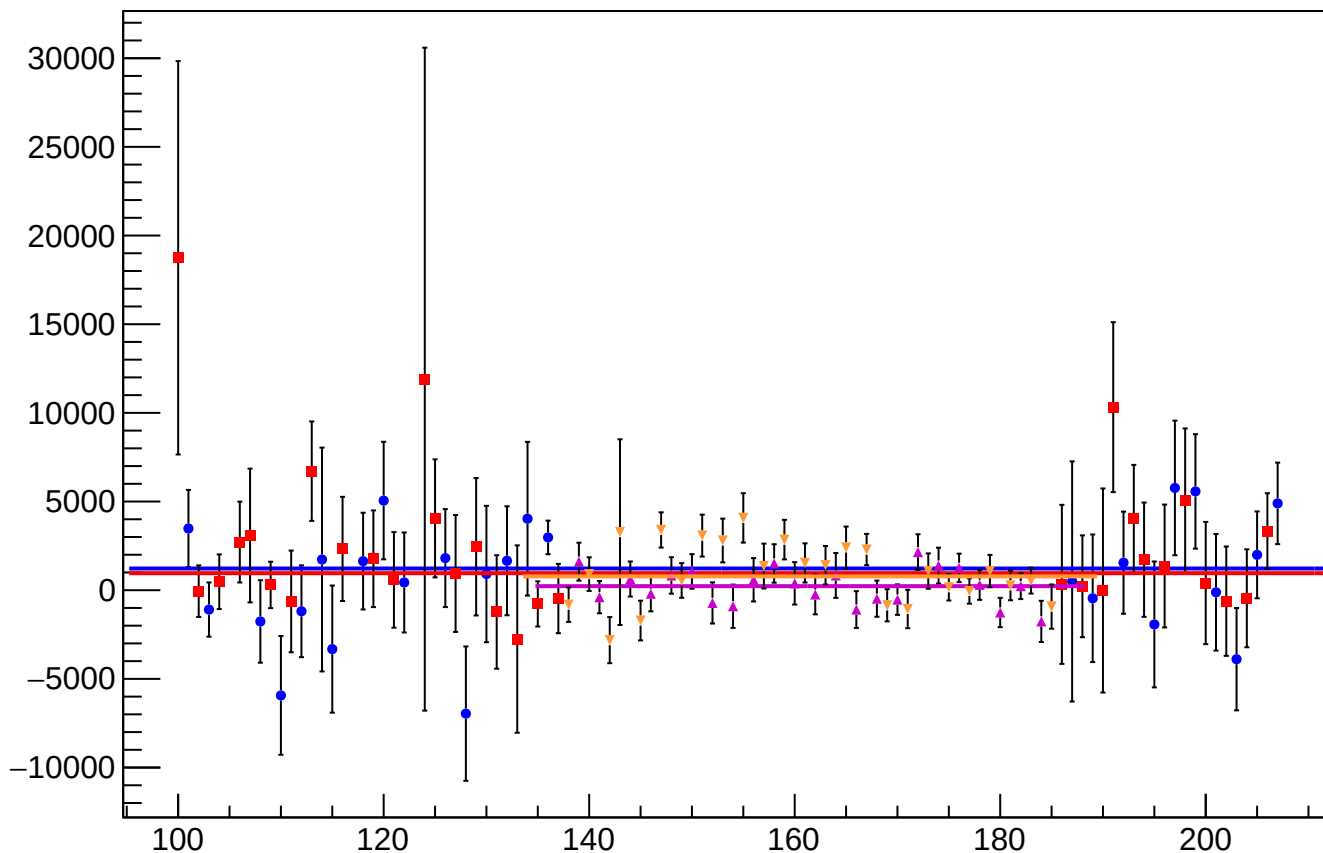
Left In: 1727.912+/-0.286  $\chi^2/\text{NDF}$ : 100226.8/22

+ sign 1699.572+/-0.206  $\chi^2/\text{NDF}$ : 607813.6/50

All: 1703.093+/-0.146  $\chi^2/\text{NDF}$ : 1275324.0/10

- sign 1706.641+/-0.207  $\chi^2/\text{NDF}$ : 666923.9/53

asym\_at2\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In: 1223.981 $\pm$ 494.244  $\chi^2$ /NDF: 32.3/25

Left Out: 778.977 $\pm$ 201.641  $\chi^2$ /NDF:54.5/24

Right Out: 961.344 $\pm$ 457.213  $\chi^2$ /NDF: 21.7/30

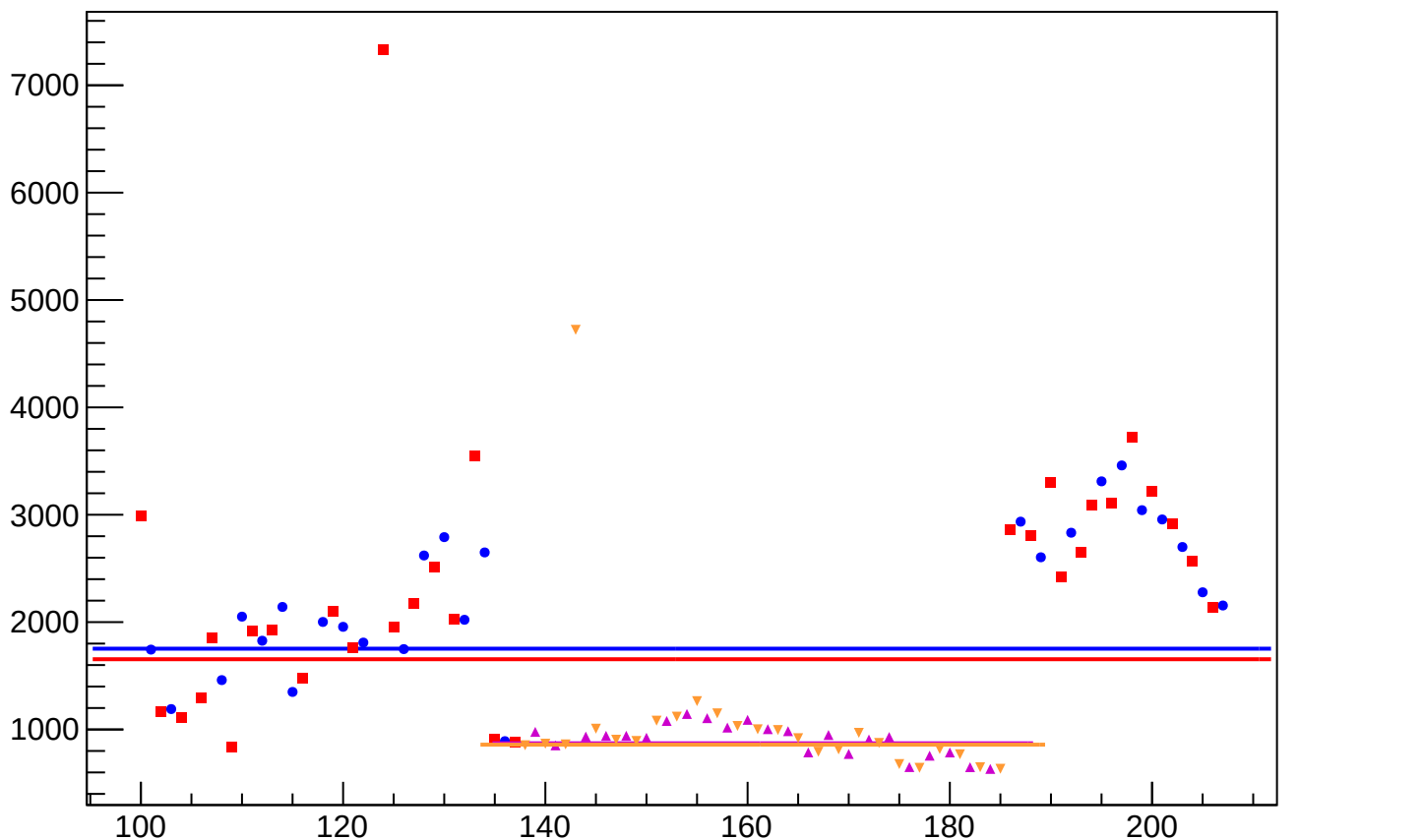
Left In: 228.876 $\pm$ 206.703  $\chi^2$ /NDF:22.6/22

+ sign 842.477 $\pm$ 186.701  $\chi^2$ /NDF: 87.6/50

All: 599.978 $\pm$ 132.596  $\chi^2$ /NDF: 137.4/104

- sign 353.179 $\pm$ 188.349  $\chi^2$ /NDF: 46.5/53

# asym\_at2\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 1752.630 $\pm$ 0.349  $\chi^2/\text{NDF}$ : 4587547.0/25

Left Out: 858.593 $\pm$ 0.143  $\chi^2/\text{NDF}$ : 2279765.6/24

Right Out: 1654.359 $\pm$ 0.323  $\chi^2/\text{NDF}$ : 6303382.2/30

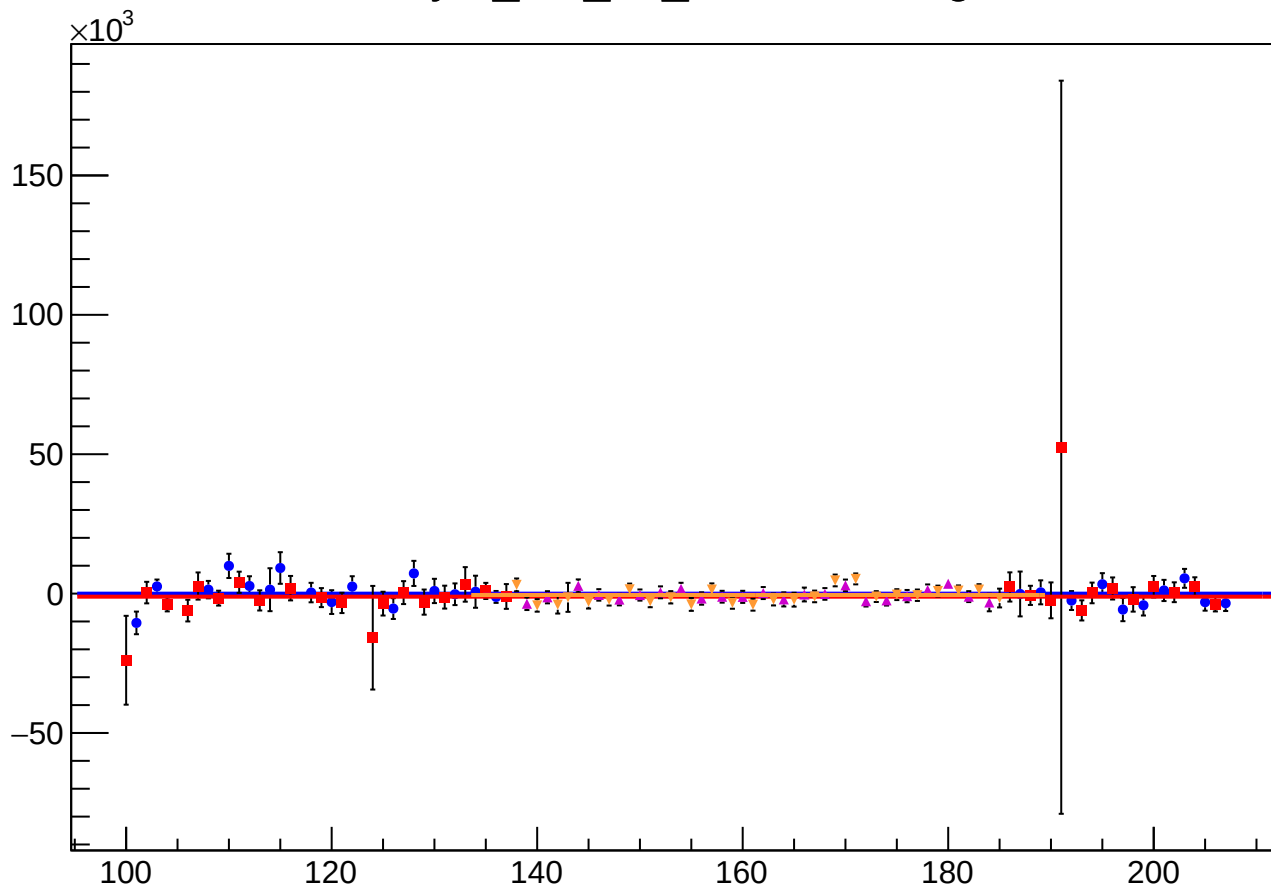
Left In: 871.525 $\pm$ 0.146  $\chi^2/\text{NDF}$ : 979360.3/22

+ sign 986.168 $\pm$ 0.132  $\chi^2/\text{NDF}$ : 12477705.4/50

All: 995.191 $\pm$ 0.094  $\chi^2/\text{NDF}$ : 24638039.1/100

- sign 1004.375 $\pm$ 0.133  $\chi^2/\text{NDF}$ : 12150907.0/53

# asym\_at2\_dd\_mean vs Slug



Right In:  $-21.953 \pm 715.821$   $\chi^2/\text{NDF}$ : 32.2/25

Left Out:  $-501.517 \pm 439.916$   $\chi^2/\text{NDF}$ : 35.9/24

Right Out:  $-1103.620 \pm 697.748$   $\chi^2/\text{NDF}$ : 17.5/30

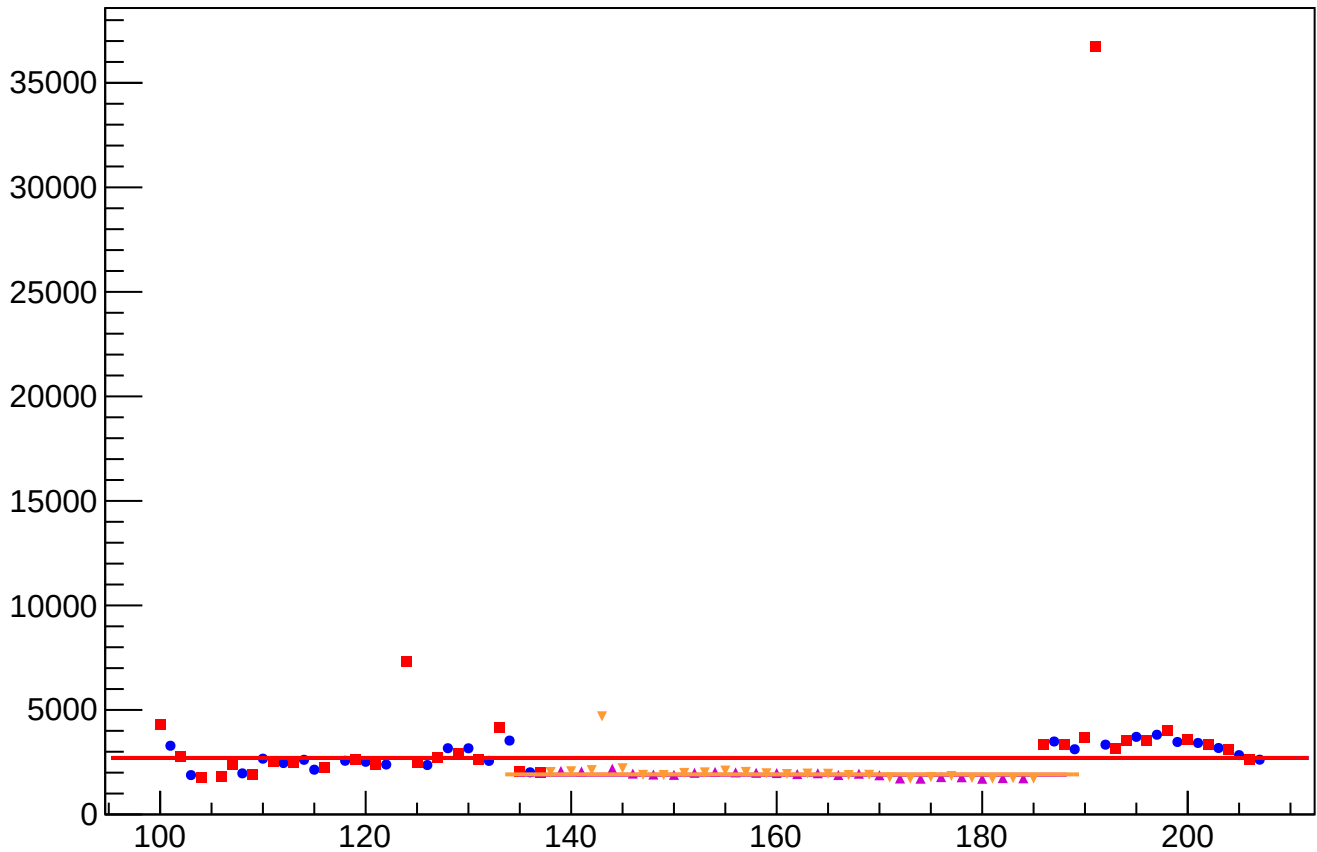
Left In:  $-411.323 \pm 444.573$   $\chi^2/\text{NDF}$ : 18.9/22

+ sign  $-370.047 \pm 374.796$   $\chi^2/\text{NDF}$ : 68.4/50

All:  $-490.589 \pm 265.070$   $\chi^2/\text{NDF}$ : 105.7/104

- sign  $-611.220 \pm 374.935$   $\chi^2/\text{NDF}$ : 37.0/53

# asym\_at2\_dd\_rms vs Slug



Right In: 2702.353 $\pm$ 0.506  $\chi^2$ /NDF: 1317442.5/25

Left Out: 1917.157 $\pm$ 0.311  $\chi^2$ /NDF: 756385.6/24

Right Out: 2703.276 $\pm$ 0.493  $\chi^2$ /NDF: 1945060.0/30

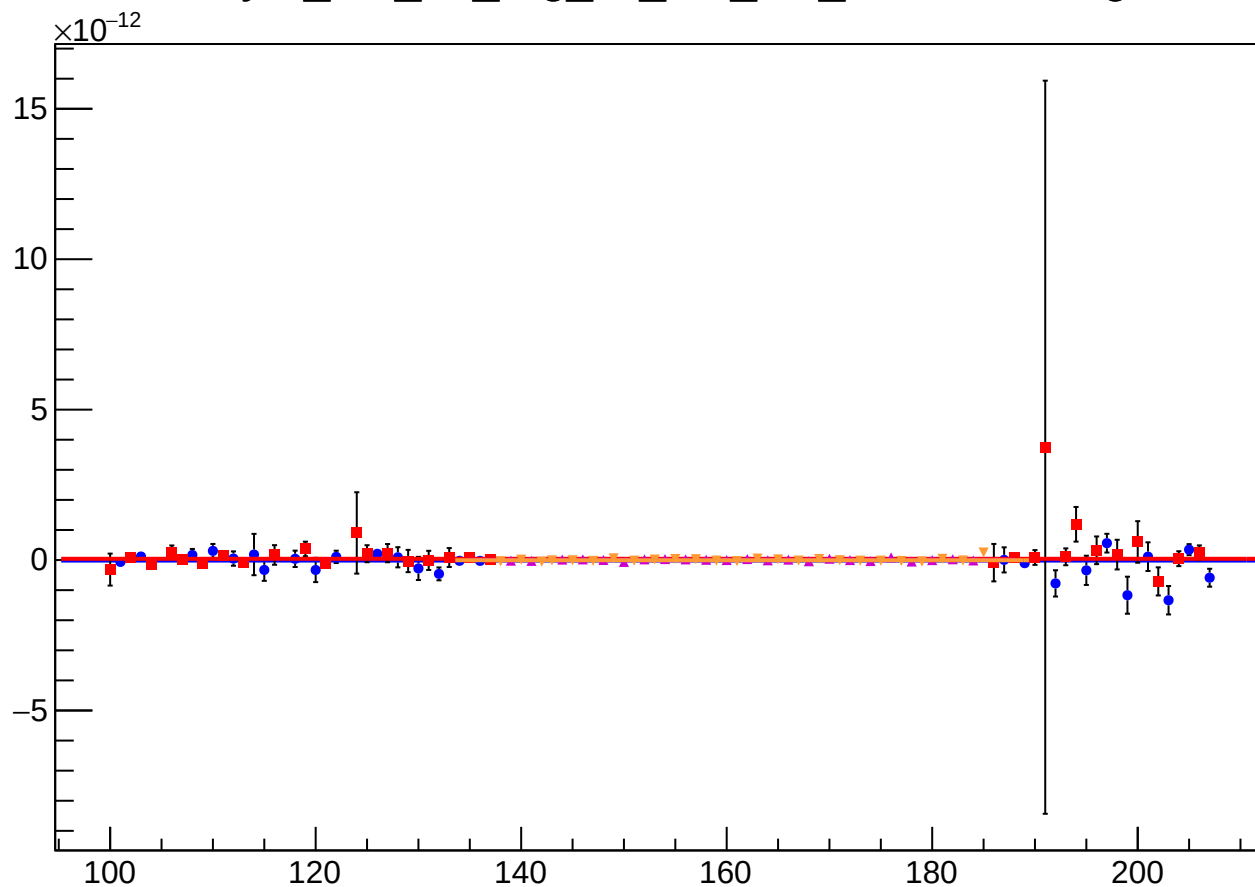
Left In: 1899.245 $\pm$ 0.314  $\chi^2$ /NDF: 173376.4/22

+ sign 2132.415 $\pm$ 0.265  $\chi^2$ /NDF: 3820561.7/50

All: 2131.911 $\pm$ 0.187  $\chi^2$ /NDF: 7827895.2/10

- sign 2131.407 $\pm$ 0.265  $\chi^2$ /NDF: 4007326.4/53

asym\_at2\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 41.1/25

Left Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 28.5/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 24.1/30

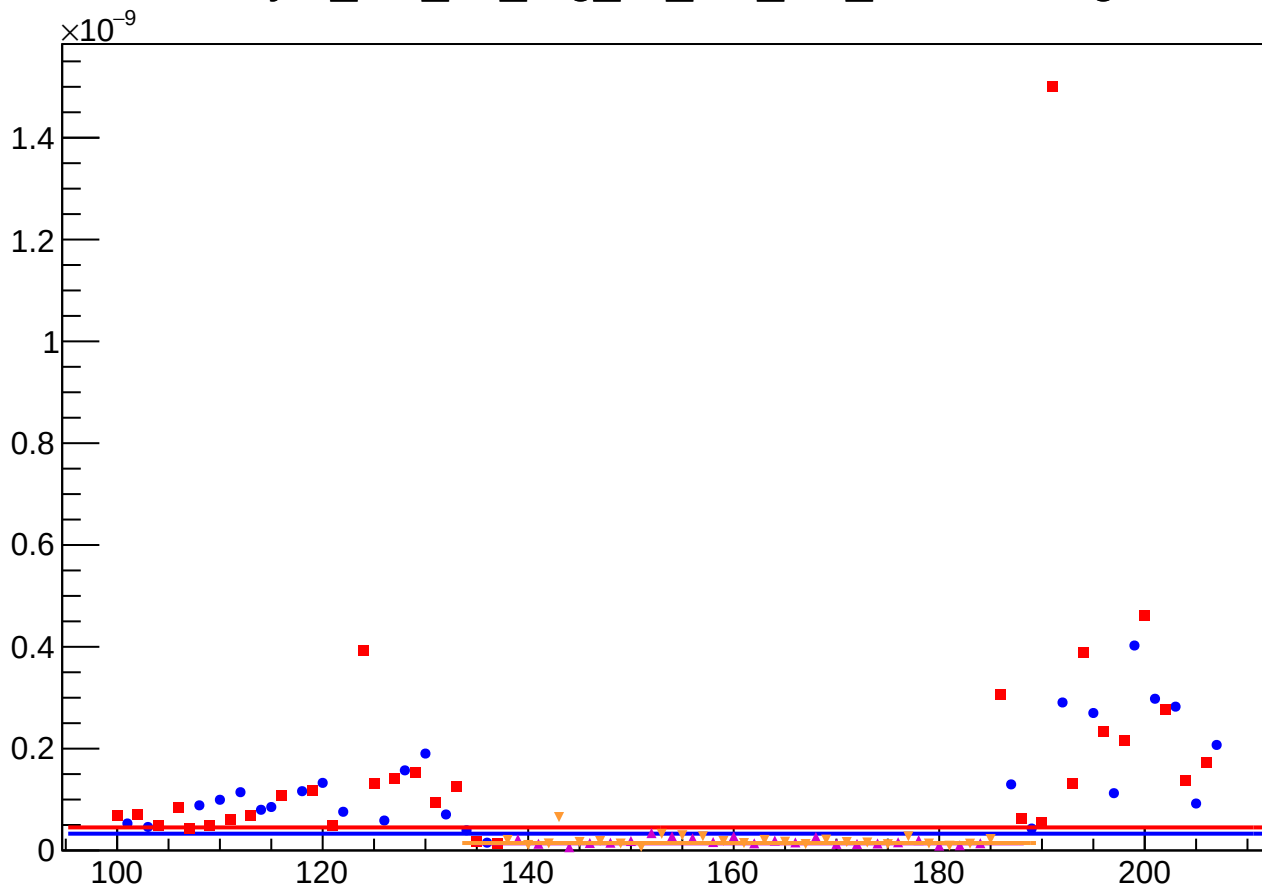
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 25.0/22

+ sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 69.8/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 124.3/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 50.8/53

# asym\_at2\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7066925.0/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1874636.4/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6569679.2/30

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1944578.7/22

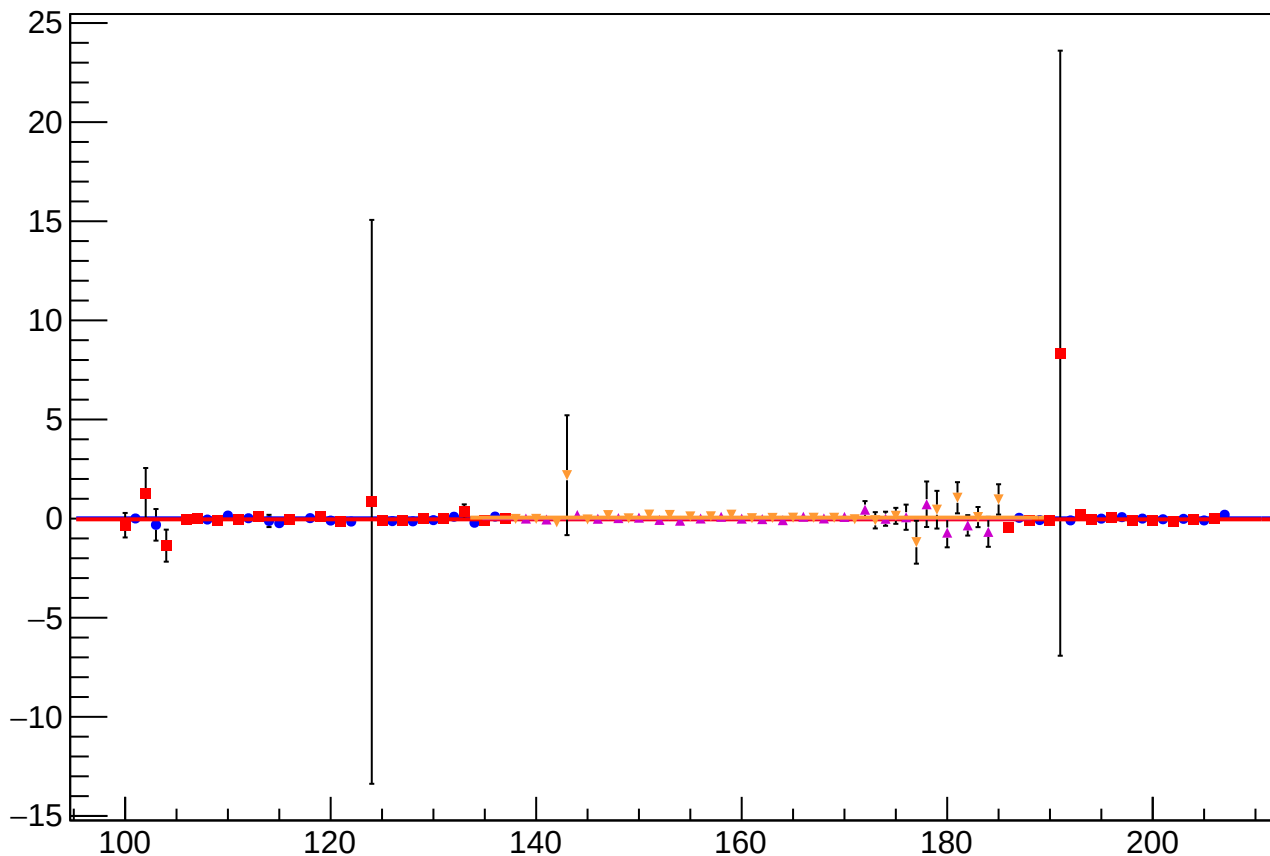
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10291169.1/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 21471019.1/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11173870.1/53



# asym\_at2\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.014 \pm 0.020$   $\chi^2/\text{NDF}$ : 28.9/25

Left Out:  $0.050 \pm 0.017$   $\chi^2/\text{NDF}$ : 24.5/24

Right Out:  $-0.037 \pm 0.019$   $\chi^2/\text{NDF}$ : 25.1/30

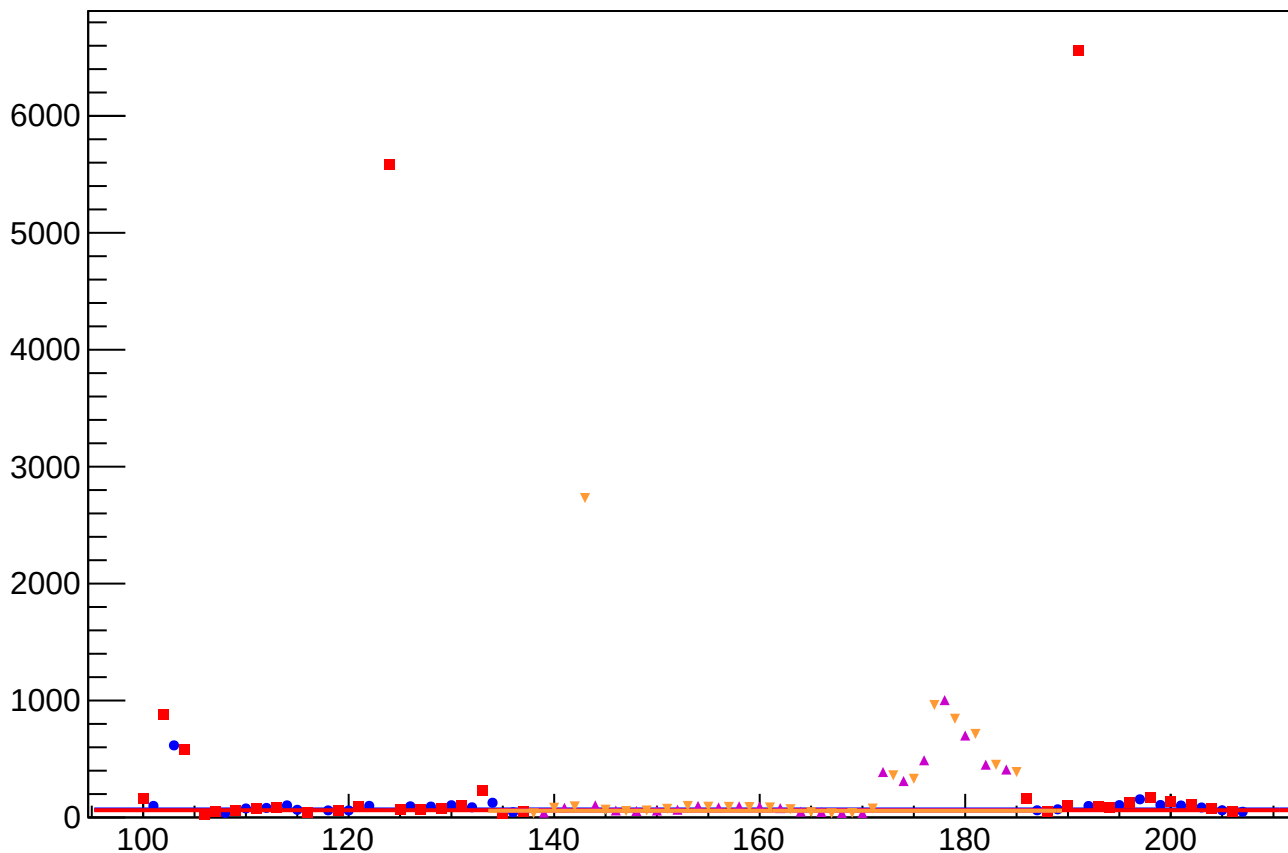
Left In:  $0.019 \pm 0.017$   $\chi^2/\text{NDF}$ : 15.4/22

+ sign  $0.035 \pm 0.013$   $\chi^2/\text{NDF}$ : 55.2/50

All:  $0.014 \pm 0.009$   $\chi^2/\text{NDF}$ : 105.9/104

- sign  $-0.007 \pm 0.013$   $\chi^2/\text{NDF}$ : 45.4/53

# asym\_at2\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In:  $68.440 \pm 0.014$   $\chi^2/\text{NDF}$ : 4072488.7/25

Left Out:  $57.259 \pm 0.012$   $\chi^2/\text{NDF}$ : 12322019.7/24

Right Out:  $61.915 \pm 0.013$   $\chi^2/\text{NDF}$ : 7271773.5/30

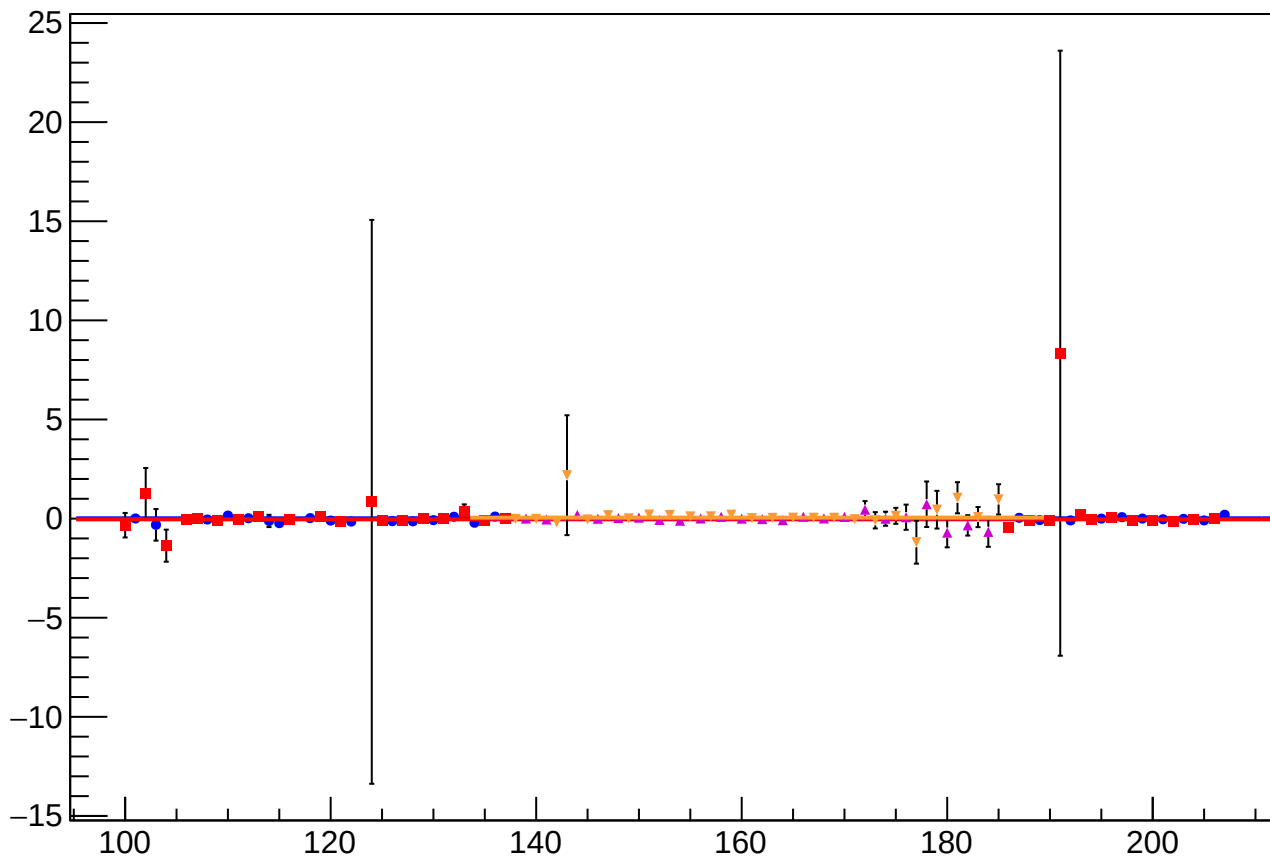
Left In:  $58.580 \pm 0.012$   $\chi^2/\text{NDF}$ : 10247660.0/22

+ sign  $61.950 \pm 0.009$   $\chi^2/\text{NDF}$ : 16756295.1/50

All:  $61.003 \pm 0.006$   $\chi^2/\text{NDF}$ : 34331200.9/104

- sign  $60.108 \pm 0.009$   $\chi^2/\text{NDF}$ : 17554161.2/53

asym\_at2\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.014 \pm 0.020$   $\chi^2/\text{NDF}$ : 28.9/25

Left Out:  $0.050 \pm 0.017$   $\chi^2/\text{NDF}$ : 24.5/24

Right Out:  $-0.037 \pm 0.019$   $\chi^2/\text{NDF}$ : 25.1/30

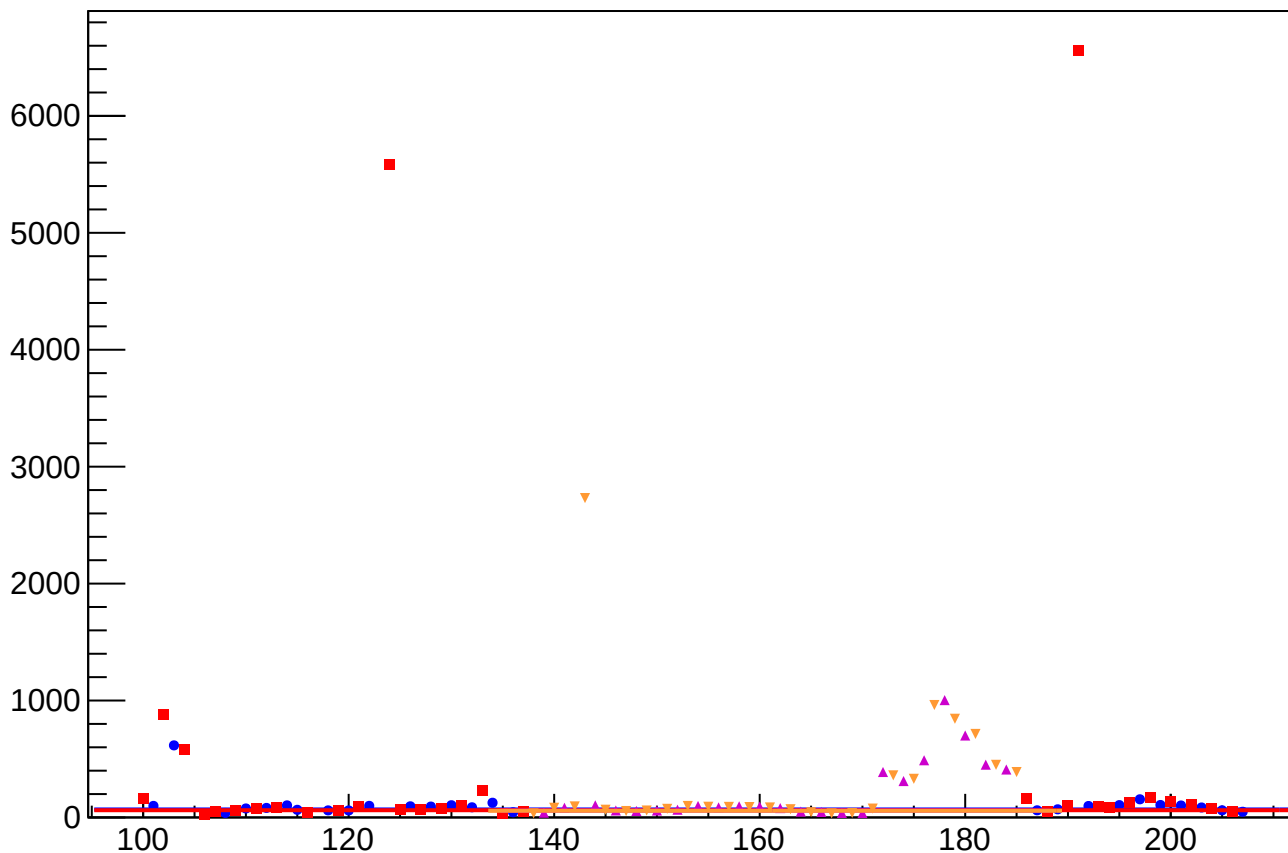
Left In:  $0.019 \pm 0.017$   $\chi^2/\text{NDF}$ : 15.4/22

+ sign  $0.035 \pm 0.013$   $\chi^2/\text{NDF}$ : 55.2/50

All:  $0.014 \pm 0.009$   $\chi^2/\text{NDF}$ : 105.9/104

- sign  $-0.007 \pm 0.013$   $\chi^2/\text{NDF}$ : 45.4/53

asym\_at2\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In:  $68.440 \pm 0.014$   $\chi^2/\text{NDF}$ : 4072488.7/25

Left Out:  $57.259 \pm 0.012$   $\chi^2/\text{NDF}$ : 12322019.7/24

Right Out:  $61.915 \pm 0.013$   $\chi^2/\text{NDF}$ : 7271773.5/30

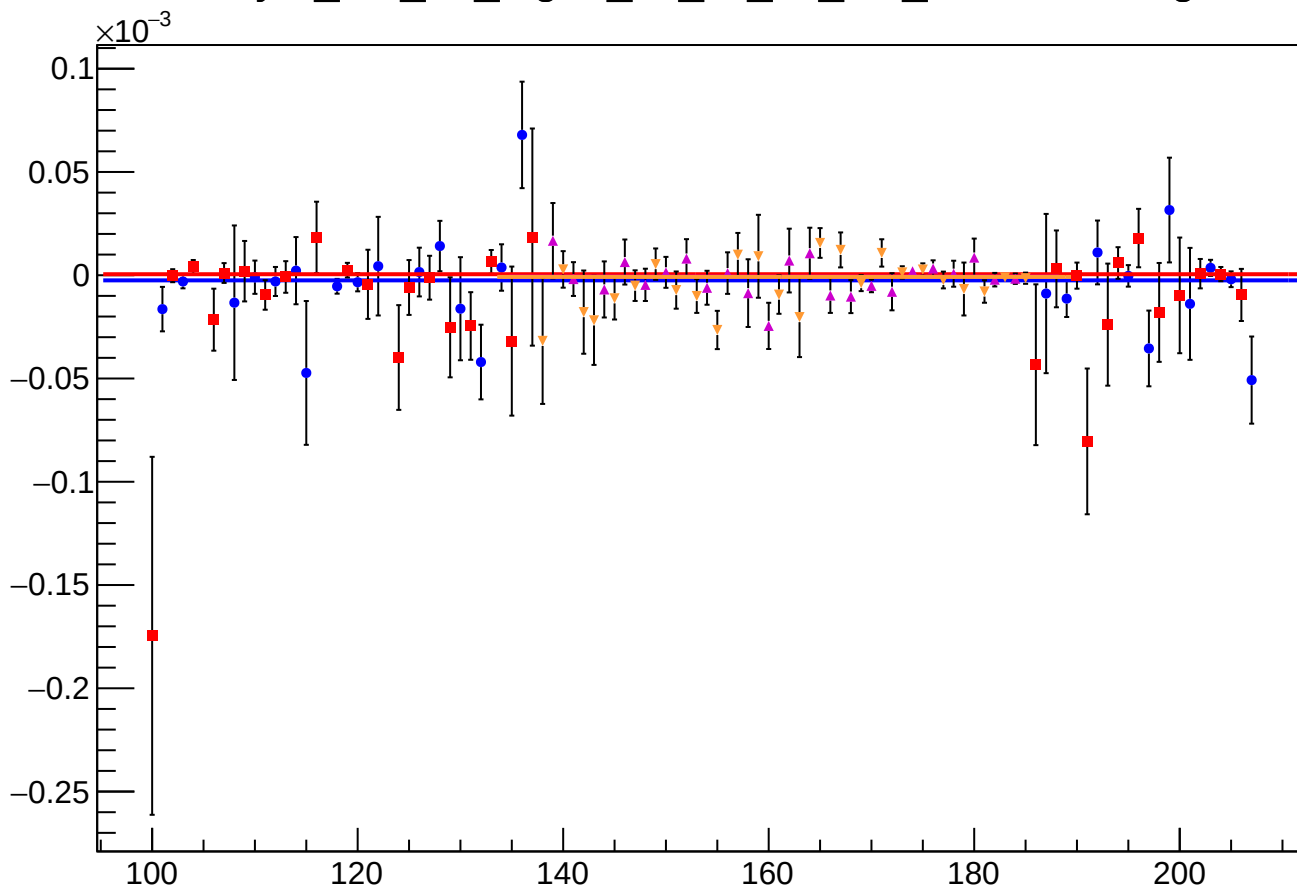
Left In:  $58.580 \pm 0.012$   $\chi^2/\text{NDF}$ : 10247660.0/22

+ sign  $61.950 \pm 0.009$   $\chi^2/\text{NDF}$ : 16756295.1/50

All:  $61.003 \pm 0.006$   $\chi^2/\text{NDF}$ : 34331200.9/104

- sign  $60.108 \pm 0.009$   $\chi^2/\text{NDF}$ : 17554161.2/53

asym\_at2\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 34.0/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 32.8/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 29.8/30

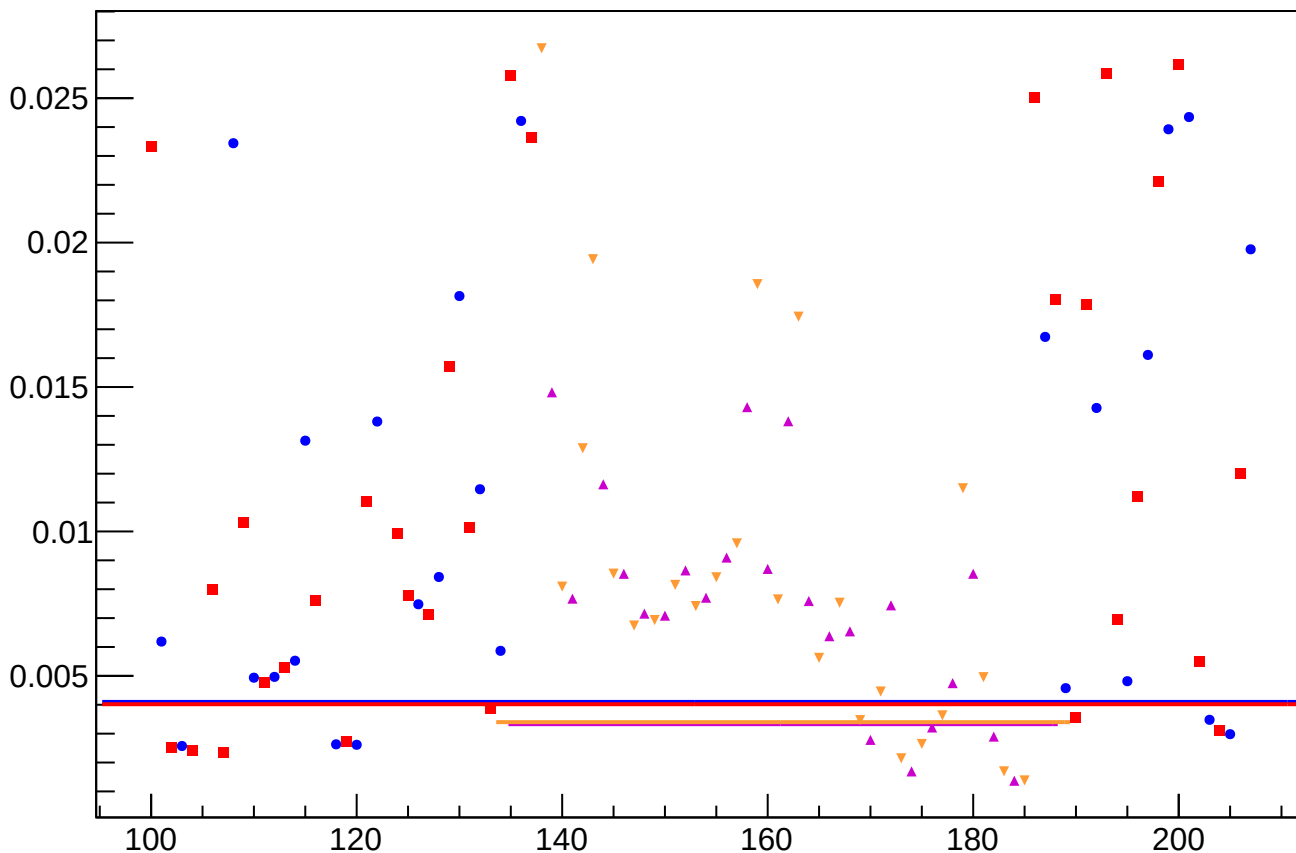
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 18.8/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 67.7/50

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 117.8/104

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 49.1/53

asym\_at2\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 10428669.7/25

Left Out: 0.003 $\pm$ 0.000  $\chi^2$ /NDF:14248948.0/24

Right Out: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 12103322.3/30

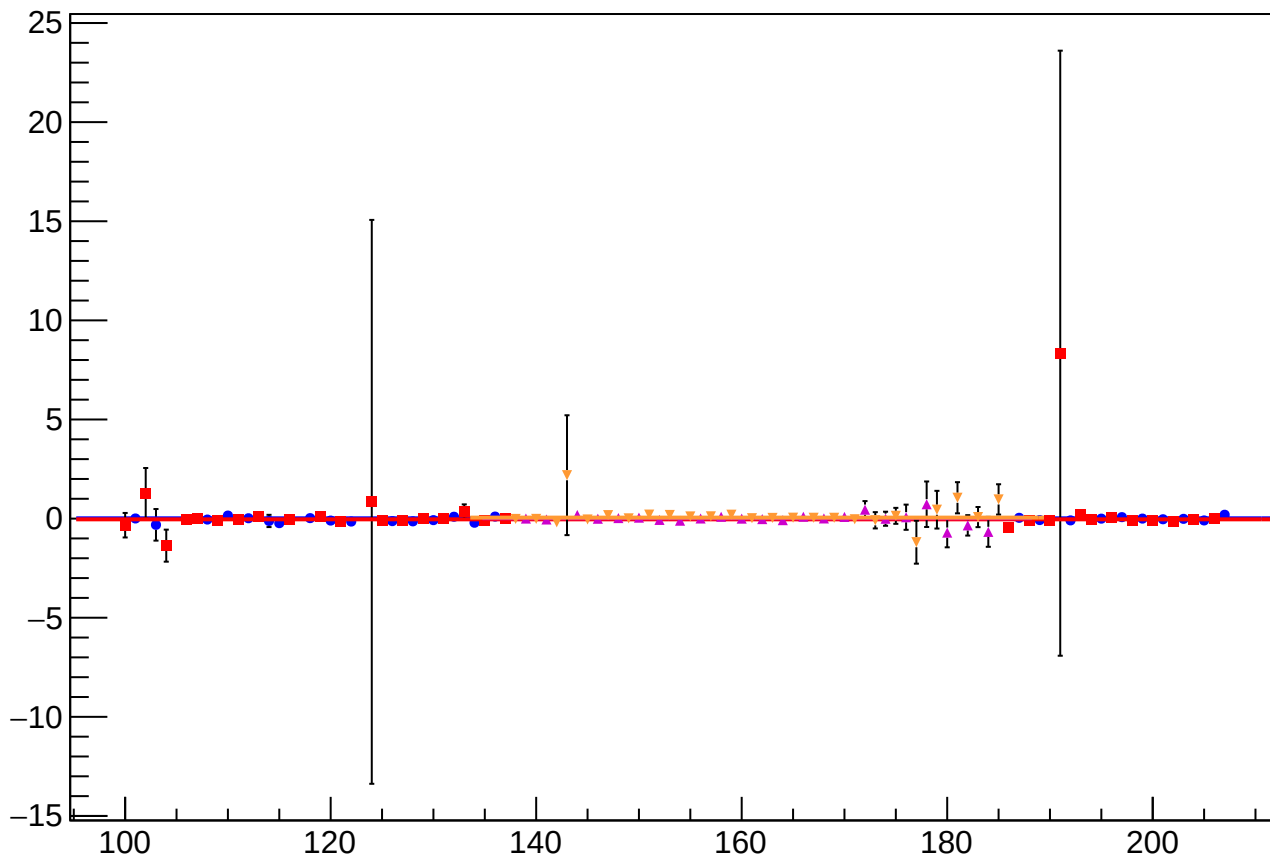
Left In: 0.003 $\pm$ 0.000  $\chi^2$ /NDF:12566501.1/22

+ sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 24998192.9/50

All: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 50010945.0/104

- sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 25010299.0/53

asym\_at2\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.014 \pm 0.020$   $\chi^2/\text{NDF}$ : 28.9/25

Left Out:  $0.050 \pm 0.017$   $\chi^2/\text{NDF}$ : 24.5/24

Right Out:  $-0.037 \pm 0.019$   $\chi^2/\text{NDF}$ : 25.1/30

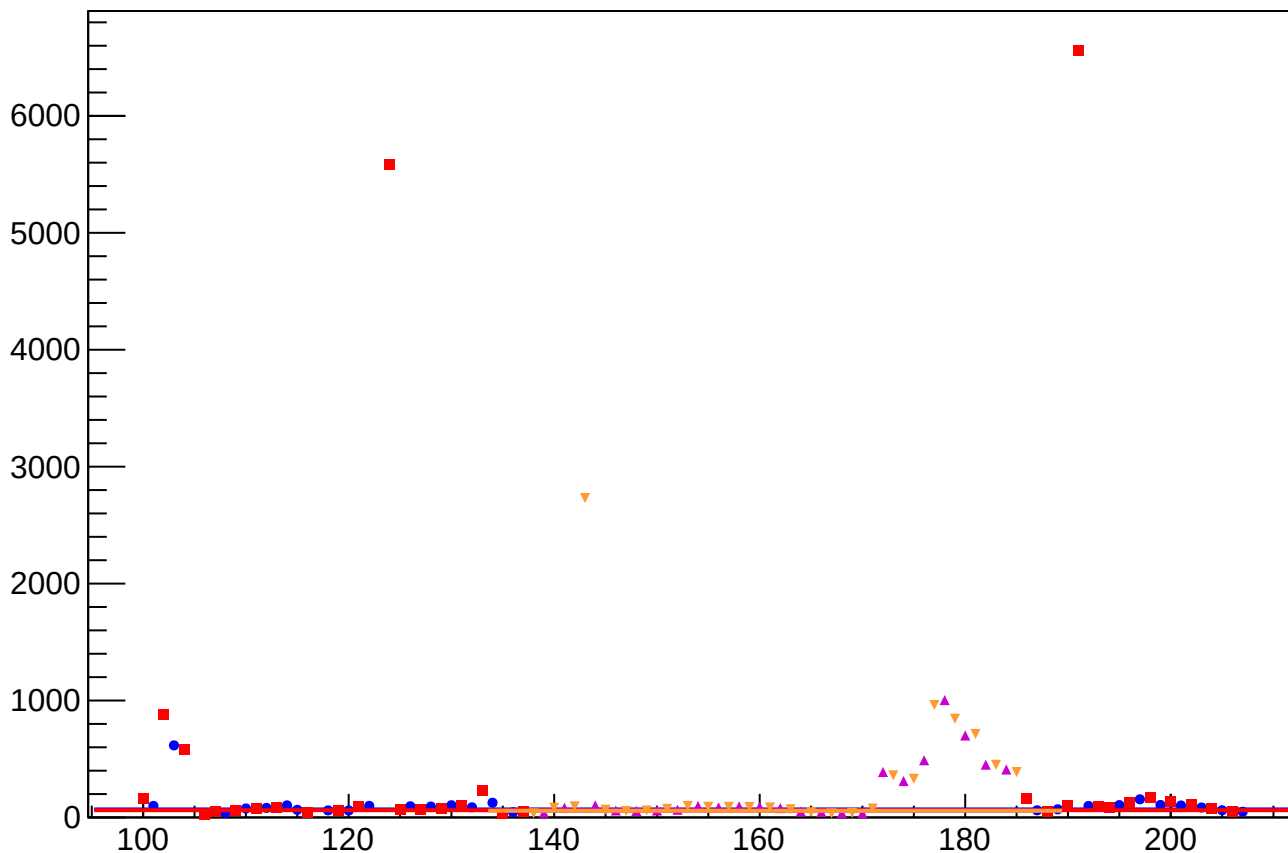
Left In:  $0.019 \pm 0.017$   $\chi^2/\text{NDF}$ : 15.4/22

+ sign  $0.035 \pm 0.013$   $\chi^2/\text{NDF}$ : 55.2/50

All:  $0.014 \pm 0.009$   $\chi^2/\text{NDF}$ : 105.9/104

- sign  $-0.007 \pm 0.013$   $\chi^2/\text{NDF}$ : 45.4/53

# asym\_at2\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 68.444+/-0.014  $\chi^2/\text{NDF}$ : 4071424.8/25

Left Out: 57.258+/-0.012  $\chi^2/\text{NDF}$ :12321763.3/24

Right Out: 61.911+/-0.013  $\chi^2/\text{NDF}$ : 7272718.8/30

Left In: 58.582+/-0.012  $\chi^2/\text{NDF}$ :10247153.8/22

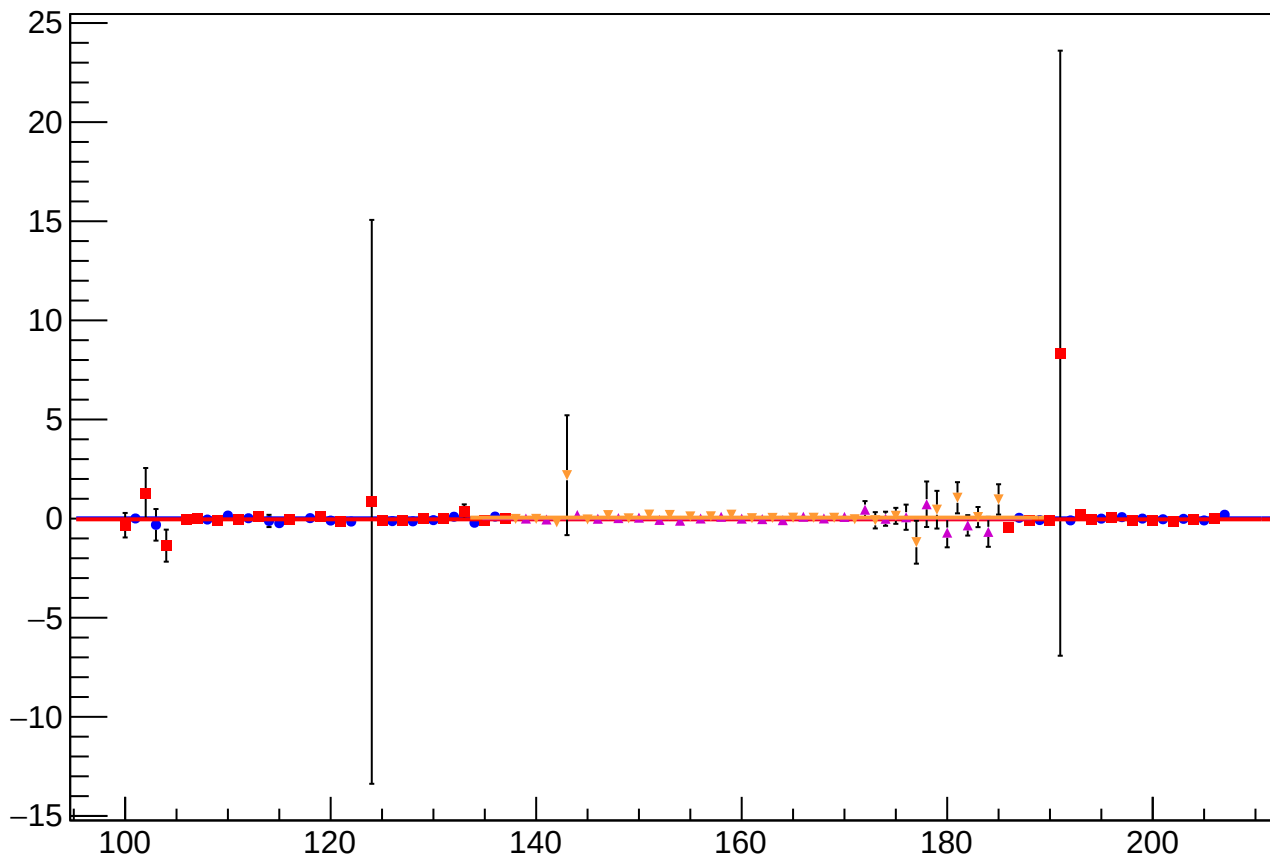
+ sign 61.951+/-0.009  $\chi^2/\text{NDF}$ : 16755315.8/50

All: 61.003+/-0.006  $\chi^2/\text{NDF}$ : 34330560.3/104

- sign 60.107+/-0.009  $\chi^2/\text{NDF}$ : 17554472.6/53



asym\_at2\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.014 \pm 0.020$   $\chi^2/\text{NDF}$ : 28.9/25

Left Out:  $0.050 \pm 0.017$   $\chi^2/\text{NDF}$ : 24.5/24

Right Out:  $-0.037 \pm 0.019$   $\chi^2/\text{NDF}$ : 25.1/30

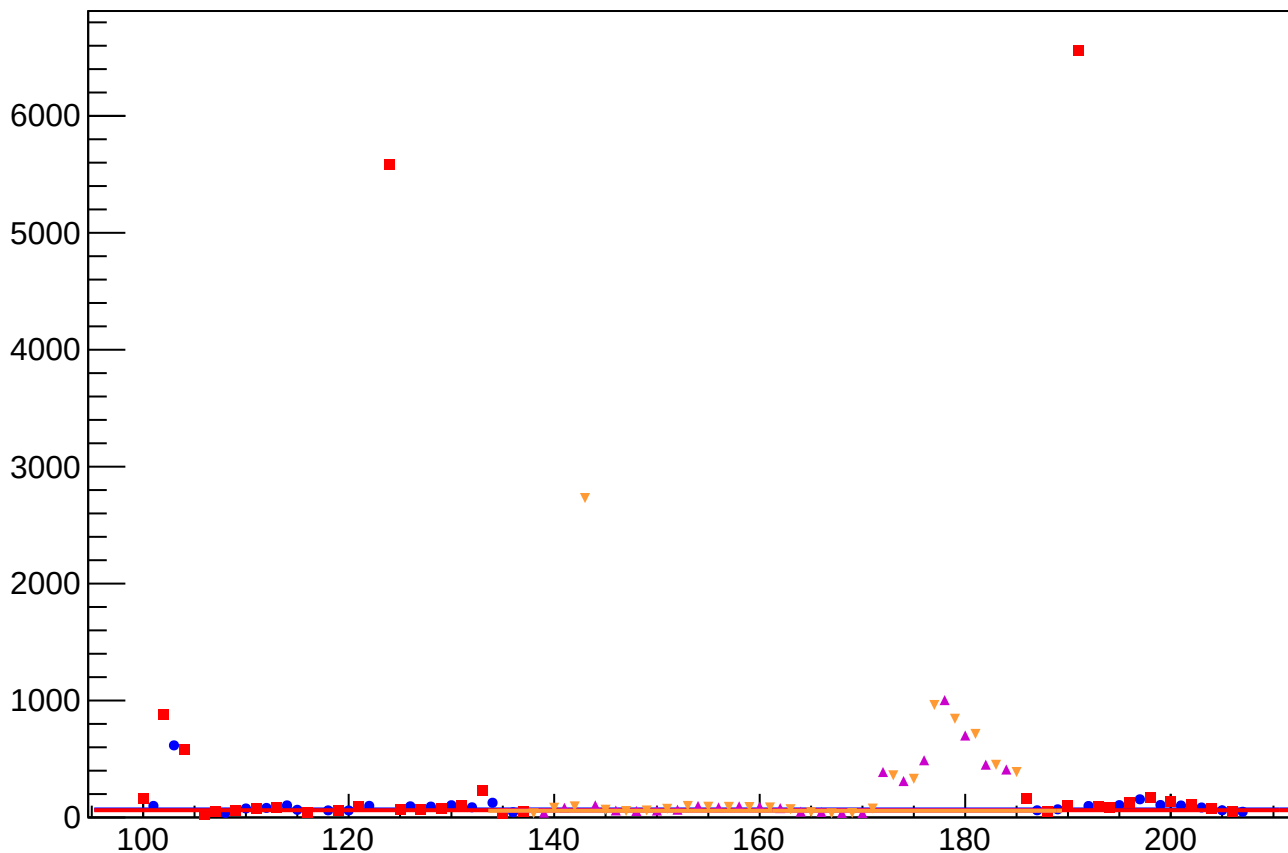
Left In:  $0.019 \pm 0.017$   $\chi^2/\text{NDF}$ : 15.4/22

+ sign  $0.035 \pm 0.013$   $\chi^2/\text{NDF}$ : 55.2/50

All:  $0.014 \pm 0.009$   $\chi^2/\text{NDF}$ : 105.9/104

- sign  $-0.007 \pm 0.013$   $\chi^2/\text{NDF}$ : 45.4/53

asym\_at2\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 68.444+/-0.014  $\chi^2$ /NDF: 4071424.8/25

Left Out: 57.258+/-0.012  $\chi^2$ /NDF:12321763.3/24

Right Out: 61.911+/-0.013  $\chi^2$ /NDF: 7272718.8/30

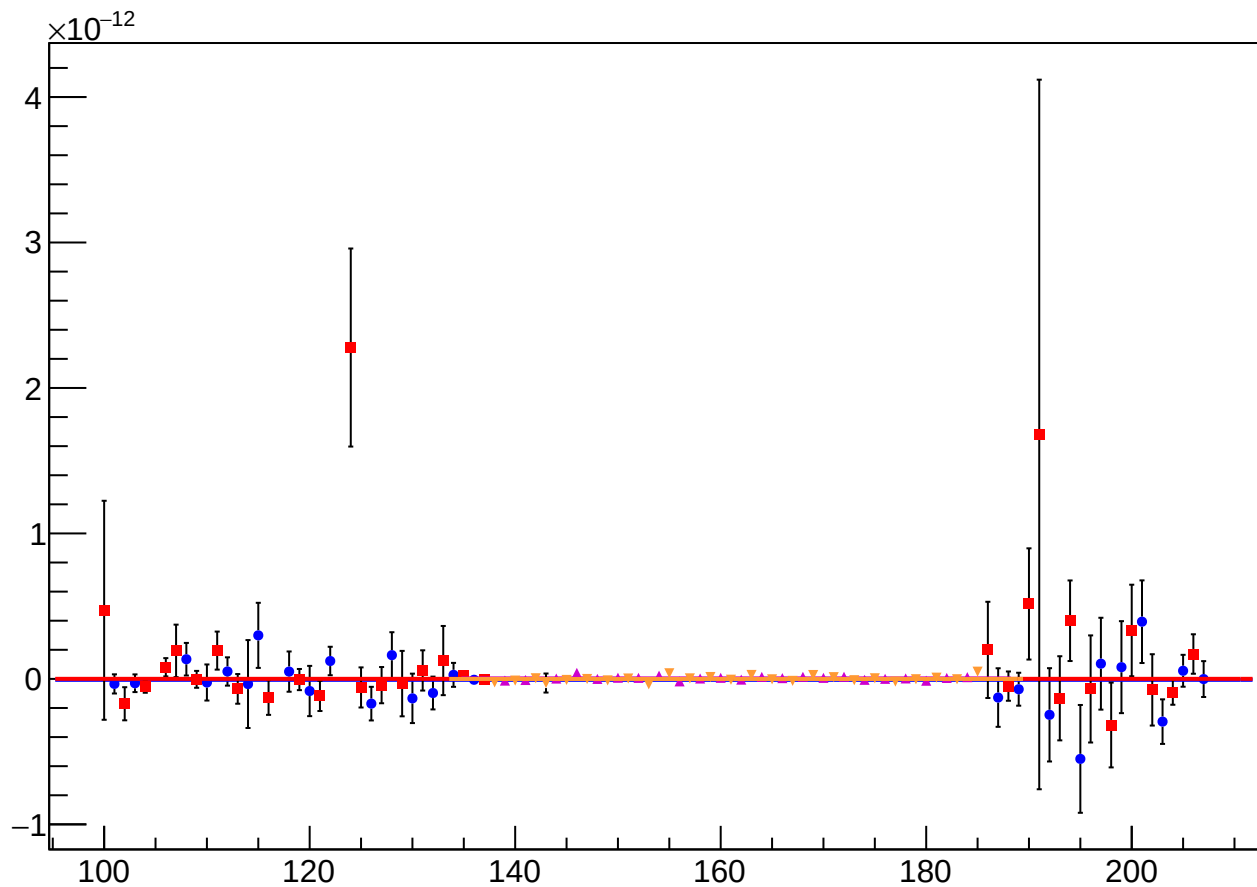
Left In: 58.582+/-0.012  $\chi^2$ /NDF:10247153.8/22

+ sign 61.951+/-0.009  $\chi^2$ /NDF: 16755315.8/50

All: 61.003+/-0.006  $\chi^2$ /NDF: 34330560.3/104

- sign 60.107+/-0.009  $\chi^2$ /NDF: 17554472.6/53

asym\_at2\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 20.3/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 18.8/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 35.4/30

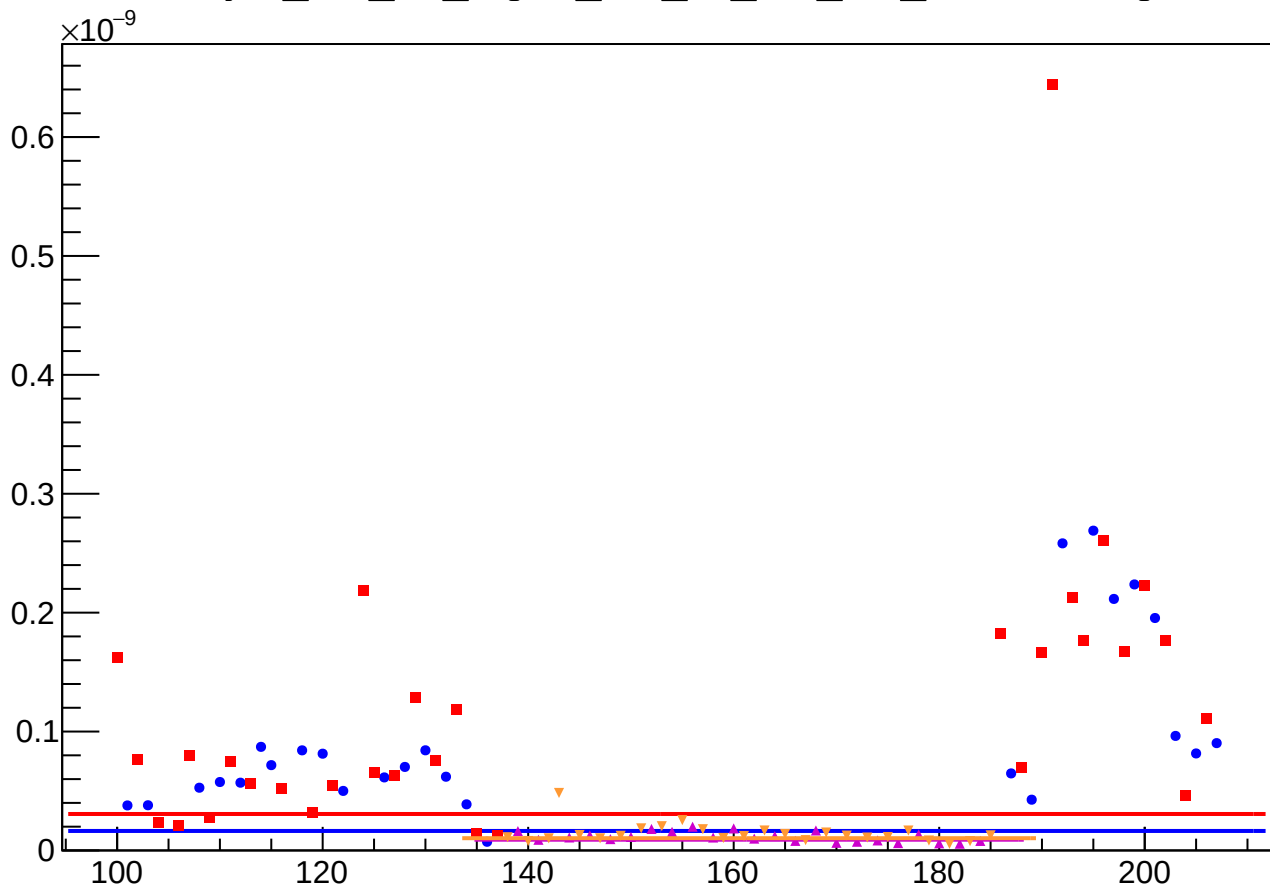
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 15.4/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 39.4/50

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 91.2/104

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 50.9/53

asym\_at2\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11830433.6/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3643428.5/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9748024.2/30

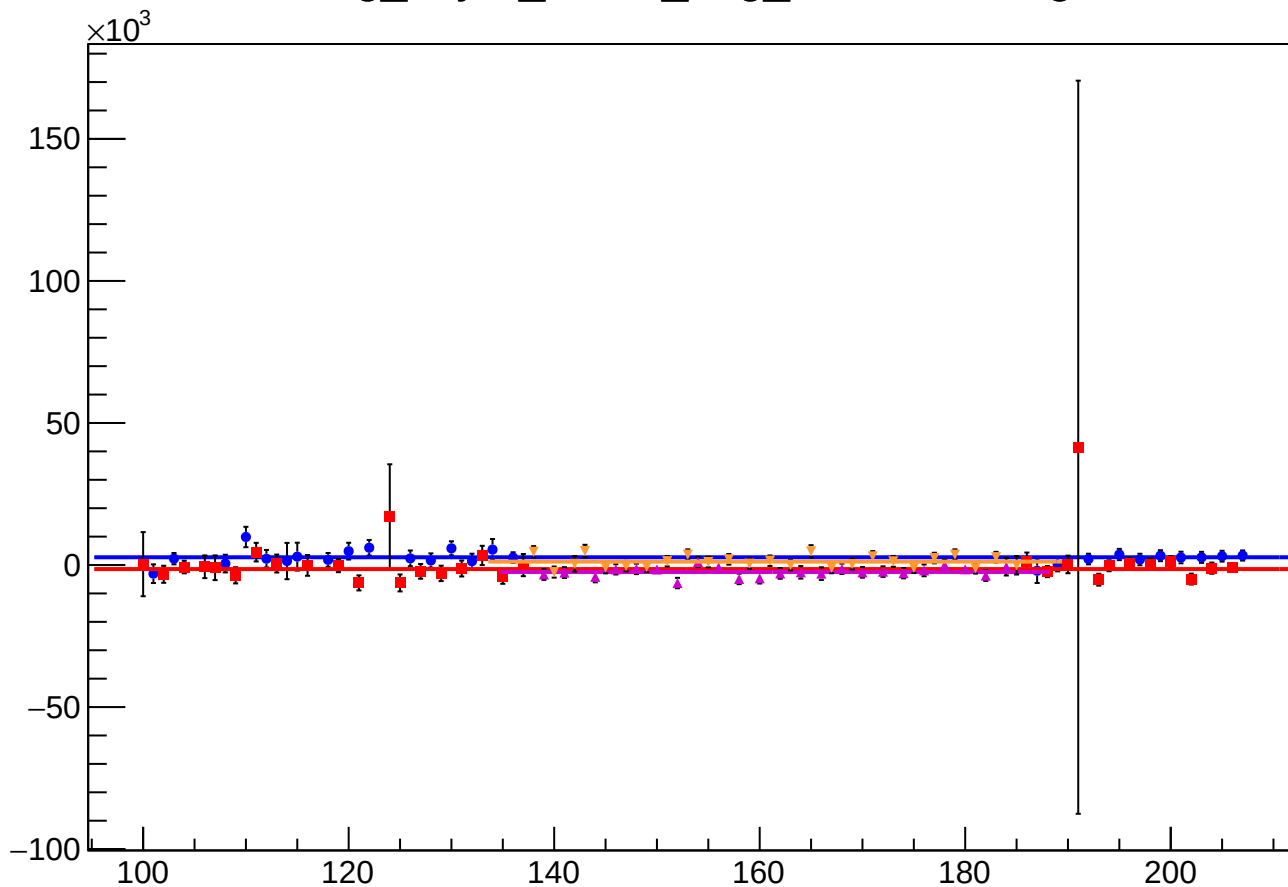
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3047861.1/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 16141566.9/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 33372131.1/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 17112581.5/53

# reg\_asym\_atl1r2\_avg\_mean vs Slug



Right In:  $2729.574 \pm 474.876$   $\chi^2/\text{NDF}$ : 15.6/25

Left Out:  $1202.401 \pm 389.137$   $\chi^2/\text{NDF}$ : 26.3/24

Right Out:  $-1423.780 \pm 465.741$   $\chi^2/\text{NDF}$ : 27.8/30

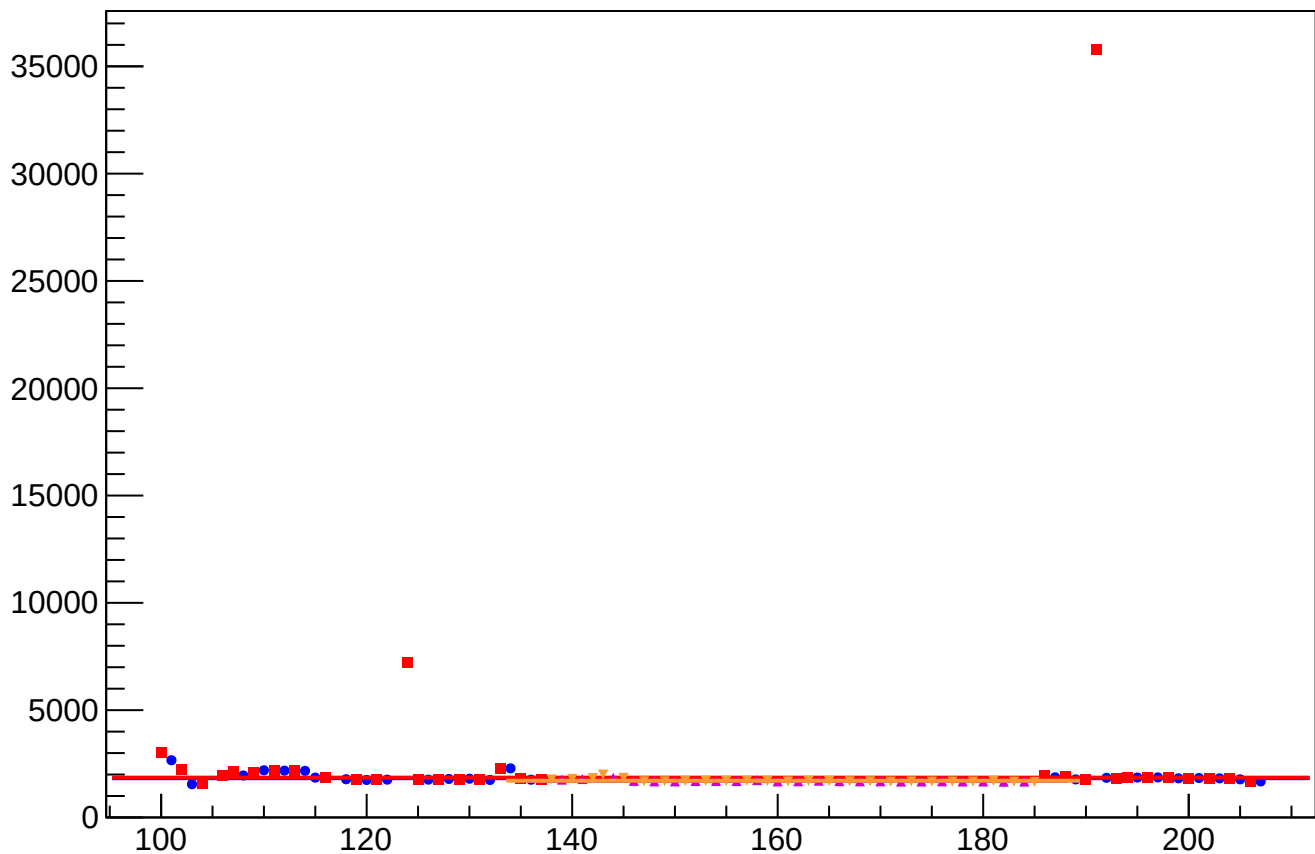
Left In:  $-2439.008 \pm 397.969$   $\chi^2/\text{NDF}$ : 17.5/22

+ sign  $1815.918 \pm 300.988$   $\chi^2/\text{NDF}$ : 48.0/50

All:  $-87.376 \pm 213.383$   $\chi^2/\text{NDF}$ : 176.4/104

- sign  $-2010.568 \pm 302.557$   $\chi^2/\text{NDF}$ : 48.0/53

# reg\_asym\_atl1r2\_avg\_rms vs Slug



Right In: 1829.934 $\pm$ 0.336  $\chi^2$ /NDF: 284304.4/25

Left Out: 1711.777 $\pm$ 0.275  $\chi^2$ /NDF: 60068.7/24

Right Out: 1855.293 $\pm$ 0.329  $\chi^2$ /NDF: 542736.0/30

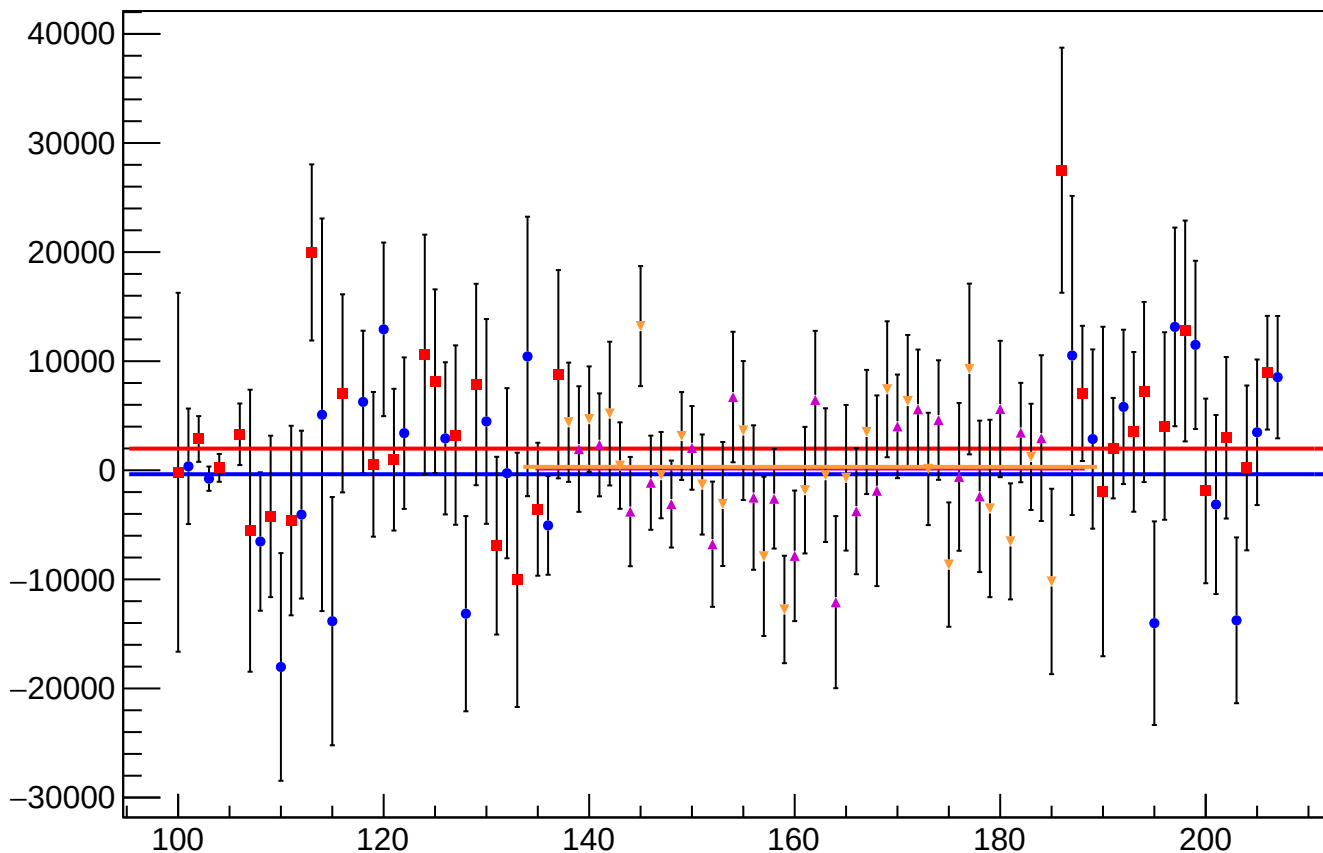
Left In: 1703.969 $\pm$ 0.281  $\chi^2$ /NDF: 22568.8/22

+ sign 1759.244 $\pm$ 0.213  $\chi^2$ /NDF: 418450.6/50

All: 1763.554 $\pm$ 0.151  $\chi^2$ /NDF: 1106754.6/10

- sign 1767.905 $\pm$ 0.214  $\chi^2$ /NDF: 687480.1/53

# asym\_atl1r2\_avg\_reg\_correction\_mean vs Slug



Right In:  $-362.221 \pm 896.313$   $\chi^2/\text{NDF}: 28.4/25$

Left Out:  $314.051 \pm 1091.976$   $\chi^2/\text{NDF}: 27.0/24$

Right Out:  $1986.902 \pm 838.969$   $\chi^2/\text{NDF}: 24.1/30$

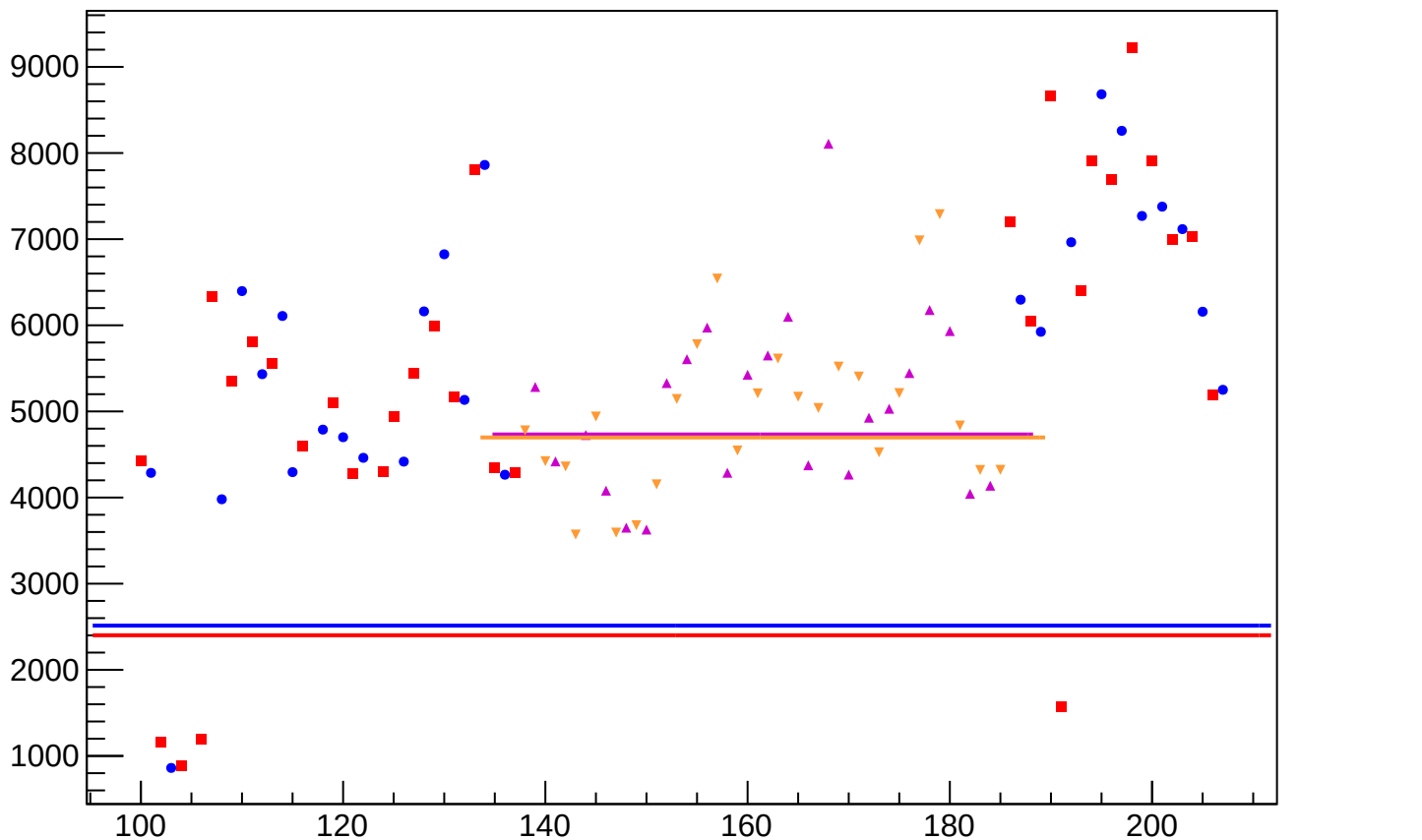
Left In:  $157.968 \pm 1128.443$   $\chi^2/\text{NDF}: 14.7/22$

+ sign  $-89.997 \pm 692.812$   $\chi^2/\text{NDF}: 55.6/50$

All:  $643.302 \pm 482.838$   $\chi^2/\text{NDF}: 98.3/104$

- sign  $1335.832 \pm 673.278$   $\chi^2/\text{NDF}: 40.5/53$

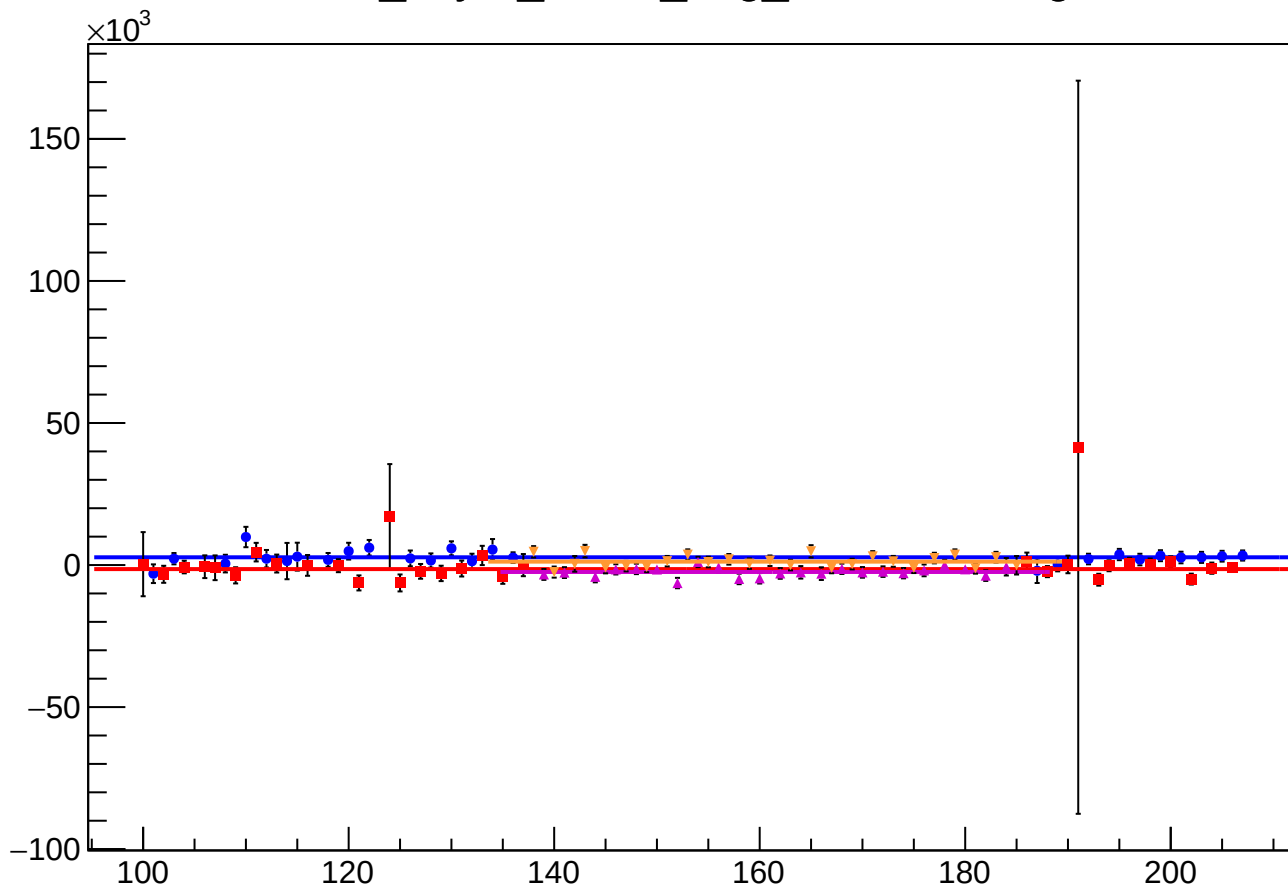
# asym\_atl1r2\_avg\_reg\_correction\_rms vs Slug



|                             |                                     |                         |                                     |
|-----------------------------|-------------------------------------|-------------------------|-------------------------------------|
| Right In: 2513.630+/-0.634  | $\chi^2/\text{NDF}$ : 13963110.7/25 | + sign 3392.766+/-0.490 | $\chi^2/\text{NDF}$ : 19982369.8/50 |
| Left Out: 4697.622+/-0.772  | $\chi^2/\text{NDF}$ : 1239373.0/24  | All: 3309.589+/-0.341   | $\chi^2/\text{NDF}$ : 41739417.6/1  |
| Right Out: 2401.136+/-0.593 | $\chi^2/\text{NDF}$ : 14960774.7/30 | - sign 3231.036+/-0.476 | $\chi^2/\text{NDF}$ : 21700995.3/53 |
| Left In: 4732.424+/-0.798   | $\chi^2/\text{NDF}$ : 1242793.9/22  |                         |                                     |



# cor\_asym\_atl1r2\_avg\_mean vs Slug



Right In: 2729.715 $\pm$ 474.876  $\chi^2/\text{NDF}$ : 15.6/25

Left Out: 1202.304 $\pm$ 389.137  $\chi^2/\text{NDF}$ : 26.3/24

Right Out: -1423.221 $\pm$ 465.741  $\chi^2/\text{NDF}$ : 27.8/30

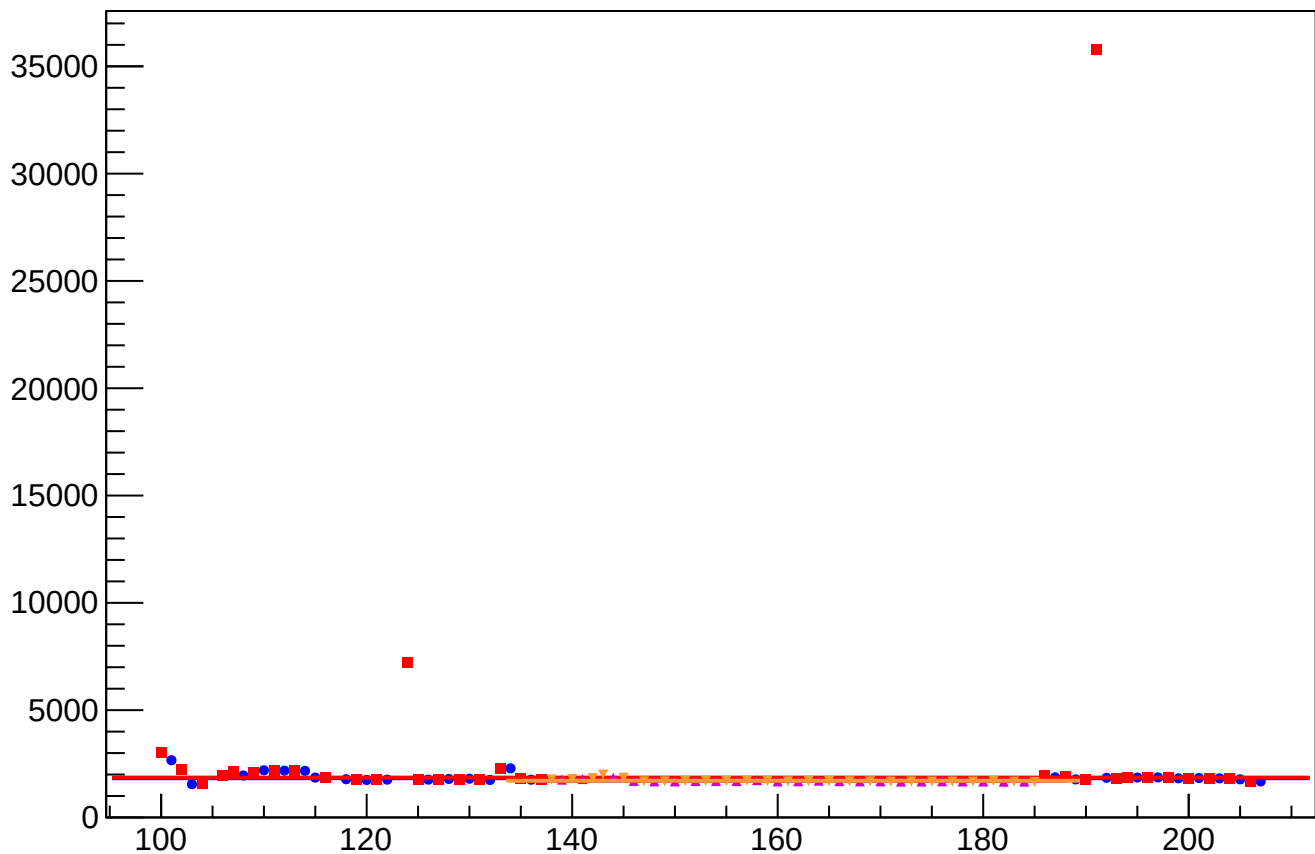
Left In: -2438.940 $\pm$ 397.969  $\chi^2/\text{NDF}$ : 17.5/22

+ sign 1815.916 $\pm$ 300.988  $\chi^2/\text{NDF}$ : 48.1/50

All: -87.239 $\pm$ 213.383  $\chi^2/\text{NDF}$ : 176.4/104

- sign -2010.292 $\pm$ 302.558  $\chi^2/\text{NDF}$ : 48.0/53

# cor\_asym\_atl1r2\_avg\_rms vs Slug



Right In: 1829.934+/-0.336  $\chi^2/\text{NDF}$ : 284304.3/25

Left Out: 1711.777+/-0.275  $\chi^2/\text{NDF}$ : 60068.7/24

Right Out: 1855.486+/-0.329  $\chi^2/\text{NDF}$ : 543109.0/30

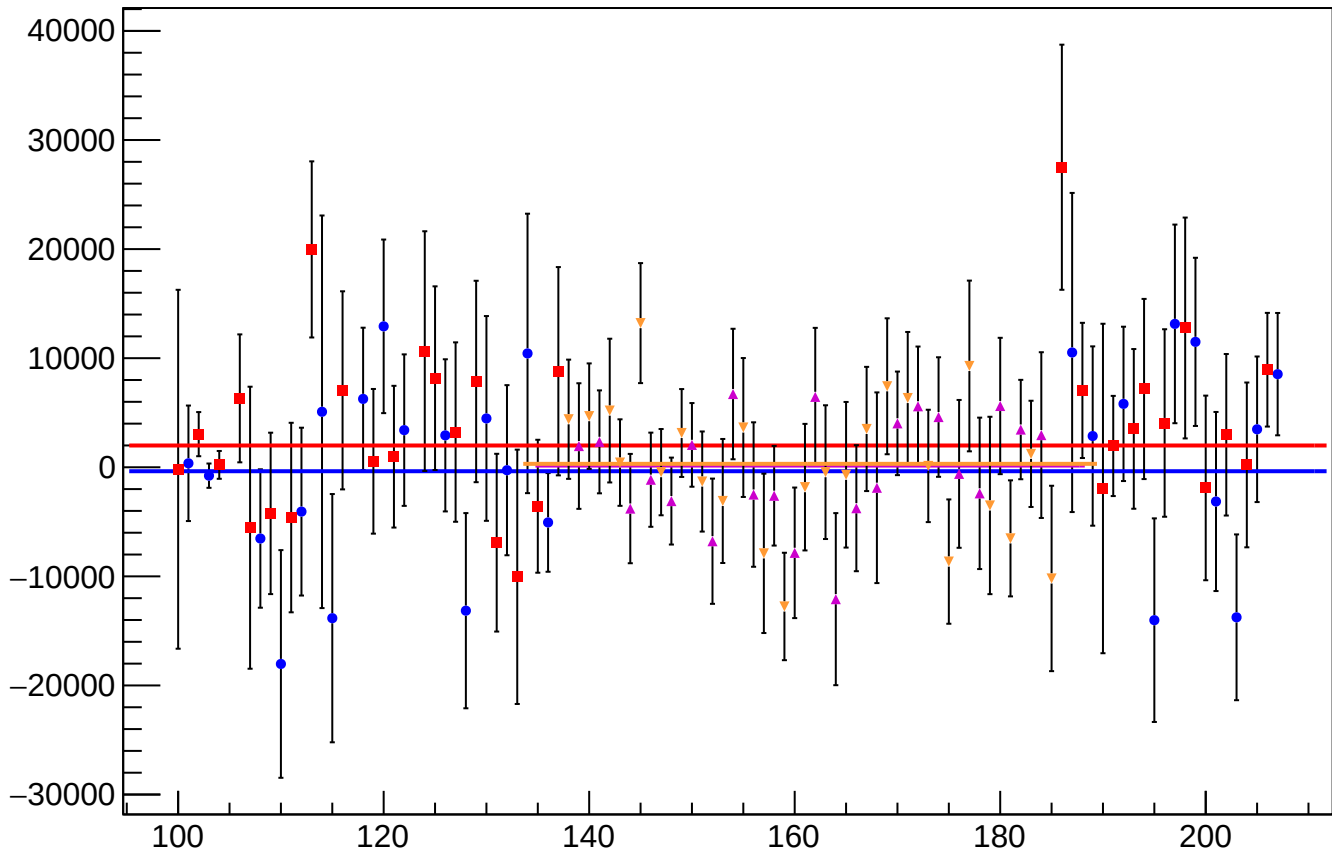
Left In: 1703.969+/-0.281  $\chi^2/\text{NDF}$ : 22568.8/22

+ sign 1759.245+/-0.213  $\chi^2/\text{NDF}$ : 418450.5/50

All: 1763.591+/-0.151  $\chi^2/\text{NDF}$ : 1107438.3/100

- sign 1767.979+/-0.214  $\chi^2/\text{NDF}$ : 688149.8/53

# asym\_atl1r2\_avg\_cor\_correction\_mean vs Slug



Right In:  $-361.828 \pm 896.270$   $\chi^2/\text{NDF}$ : 28.4/25

Left Out:  $314.084 \pm 1091.975$   $\chi^2/\text{NDF}$ : 27.0/24

Right Out:  $1996.393 \pm 863.455$   $\chi^2/\text{NDF}$ : 24.5/30

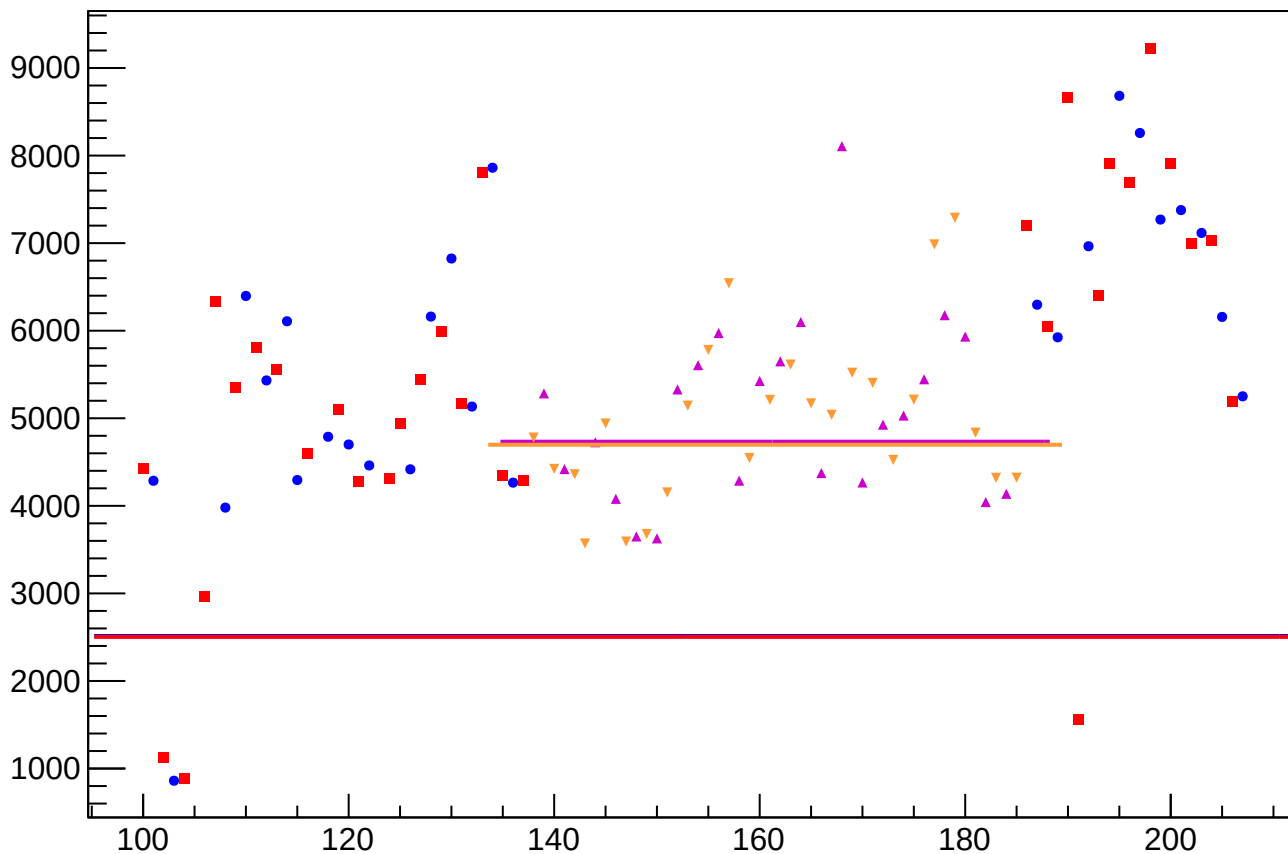
Left In:  $157.977 \pm 1128.443$   $\chi^2/\text{NDF}$ : 14.7/22

+ sign  $-89.765 \pm 692.792$   $\chi^2/\text{NDF}$ : 55.6/50

All:  $621.070 \pm 487.365$   $\chi^2/\text{NDF}$ : 98.6/104

- sign  $1317.501 \pm 685.738$   $\chi^2/\text{NDF}$ : 40.9/53

# asym\_atl1r2\_avg\_cor\_correction\_rms vs Slug



Right In: 2513.435 $\pm$ 0.634  $\chi^2$ /NDF: 13964061.9/25

Left Out: 4697.618 $\pm$ 0.772  $\chi^2$ /NDF:1239387.1/24

Right Out: 2503.814 $\pm$ 0.611  $\chi^2$ /NDF: 14683715.9/30

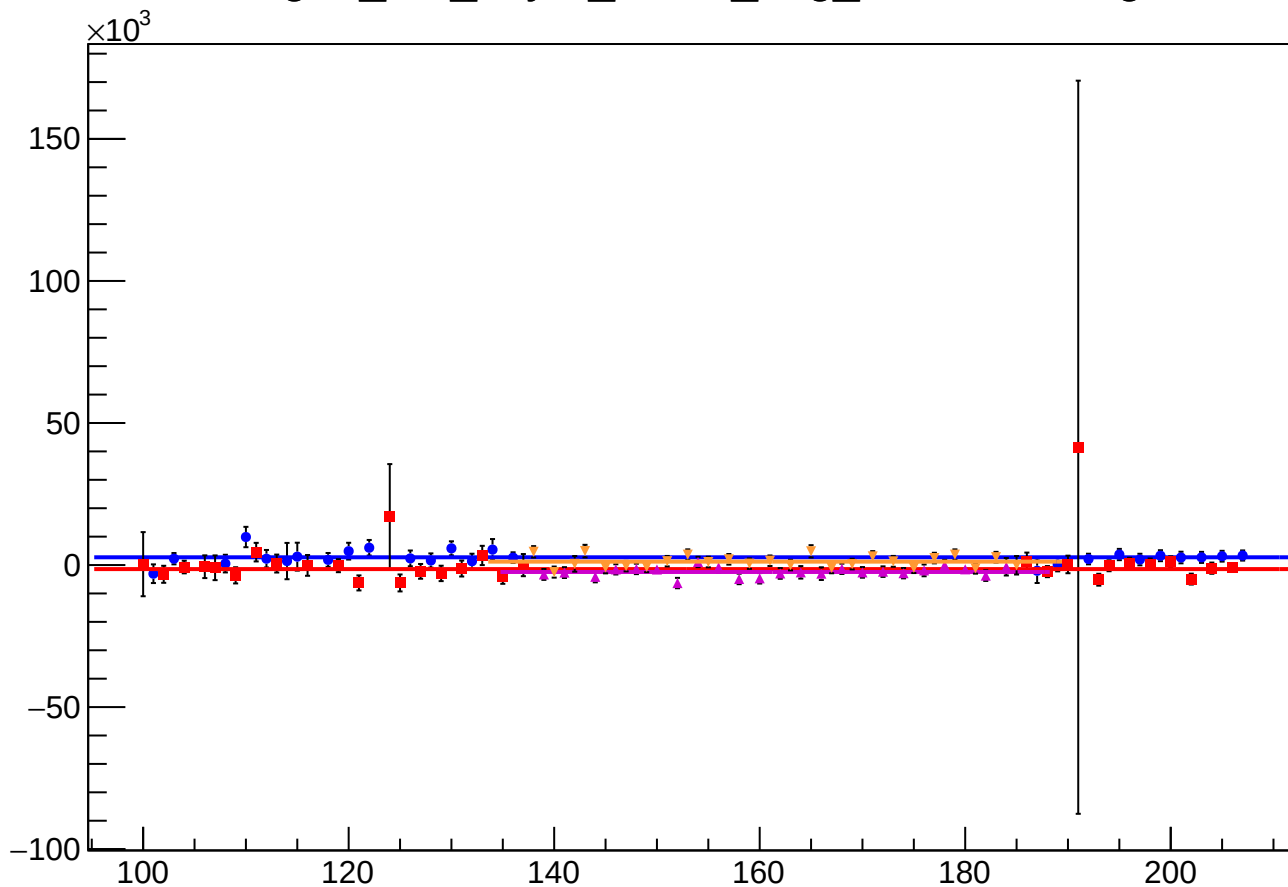
Left In: 4732.421 $\pm$ 0.798  $\chi^2$ /NDF:1242809.3/22

+ sign 3392.598 $\pm$ 0.490  $\chi^2$ /NDF: 19984360.0/50

All: 3359.360 $\pm$ 0.345  $\chi^2$ /NDF: 40840097.4/1

- sign 3326.796 $\pm$ 0.485  $\chi^2$ /NDF: 20846623.6/53

# eigen\_cor\_asym\_atl1r2\_avg\_mean vs Slug



Right In:  $2729.715 \pm 474.876$   $\chi^2/\text{NDF}$ : 15.6/25

Left Out:  $1202.304 \pm 389.137$   $\chi^2/\text{NDF}$ : 26.3/24

Right Out:  $-1423.221 \pm 465.741$   $\chi^2/\text{NDF}$ : 27.8/30

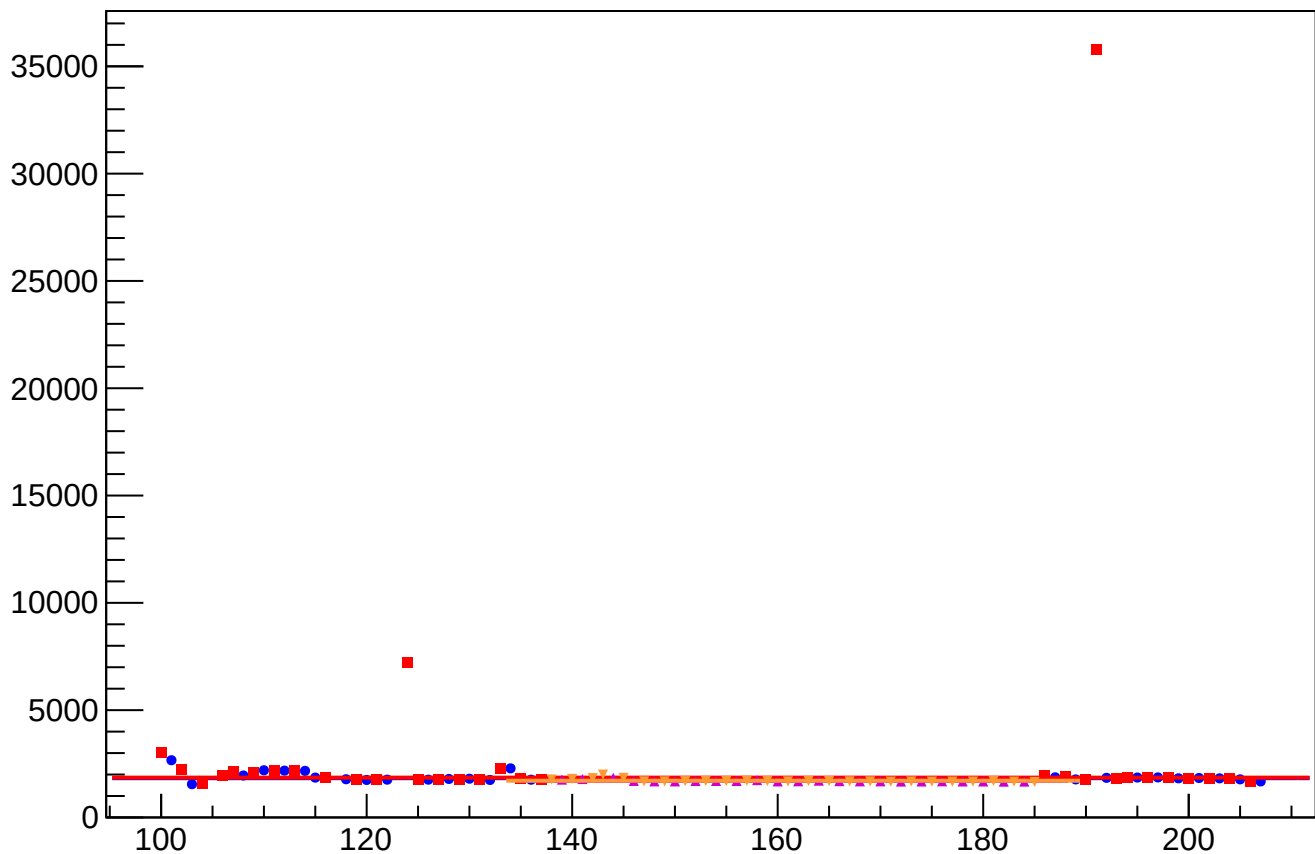
Left In:  $-2438.940 \pm 397.969$   $\chi^2/\text{NDF}$ : 17.5/22

+ sign  $1815.916 \pm 300.988$   $\chi^2/\text{NDF}$ : 48.1/50

All:  $-87.239 \pm 213.383$   $\chi^2/\text{NDF}$ : 176.4/104

- sign  $-2010.292 \pm 302.558$   $\chi^2/\text{NDF}$ : 48.0/53

# eigen\_cor\_asym\_atl1r2\_avg\_rms vs Slug



Right In: 1829.934 $\pm$ 0.336  $\chi^2$ /NDF: 284304.3/25

Left Out: 1711.777 $\pm$ 0.275  $\chi^2$ /NDF: 60068.7/24

Right Out: 1855.486 $\pm$ 0.329  $\chi^2$ /NDF: 543109.0/30

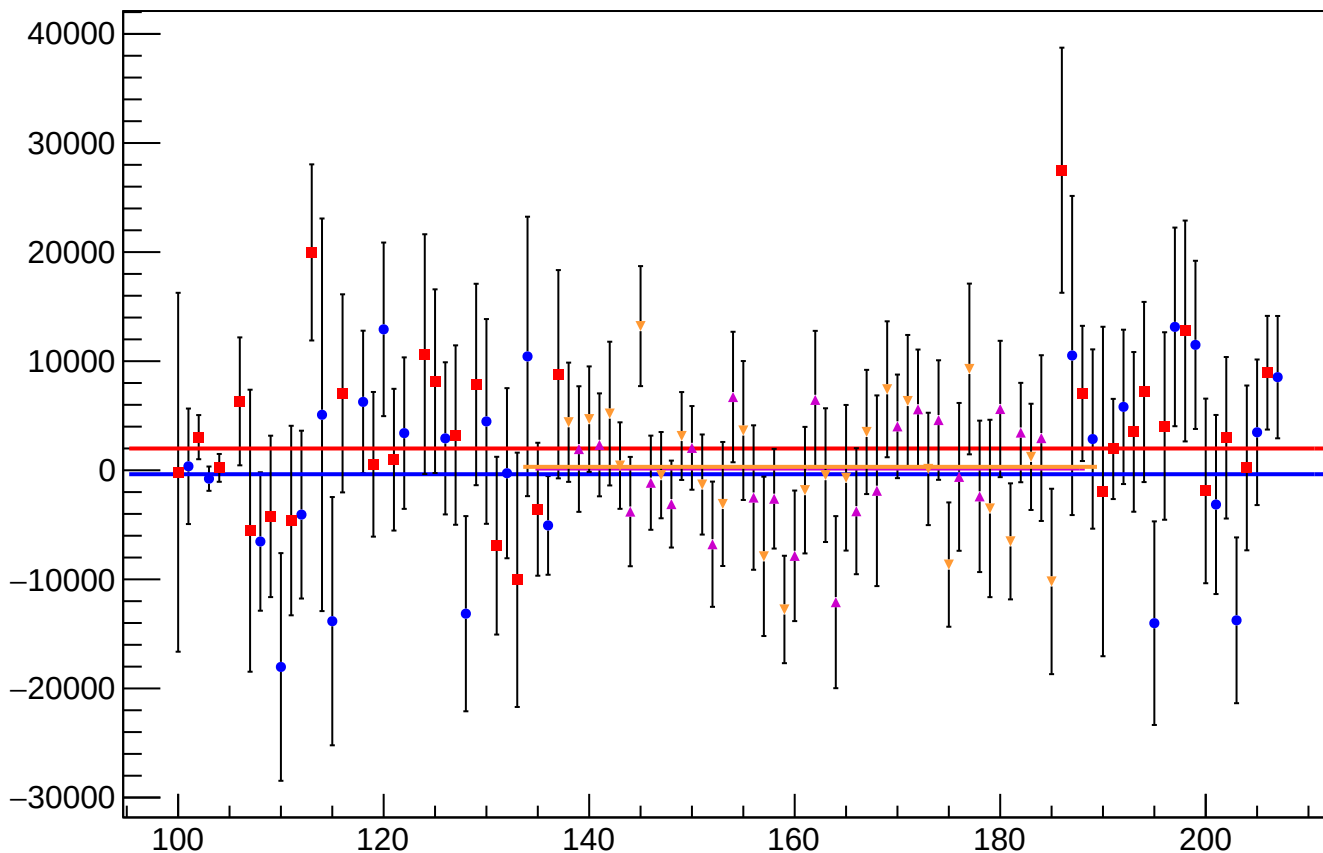
Left In: 1703.969 $\pm$ 0.281  $\chi^2$ /NDF: 22568.8/22

+ sign 1759.245 $\pm$ 0.213  $\chi^2$ /NDF: 418450.5/50

All: 1763.591 $\pm$ 0.151  $\chi^2$ /NDF: 1107438.3/10

- sign 1767.979 $\pm$ 0.214  $\chi^2$ /NDF: 688149.8/53

asym\_atl1r2\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-361.828 \pm 896.270$   $\chi^2/\text{NDF}$ : 28.4/25

Left Out:  $314.084 \pm 1091.975$   $\chi^2/\text{NDF}$ : 27.0/24

Right Out:  $1996.393 \pm 863.455$   $\chi^2/\text{NDF}$ : 24.5/30

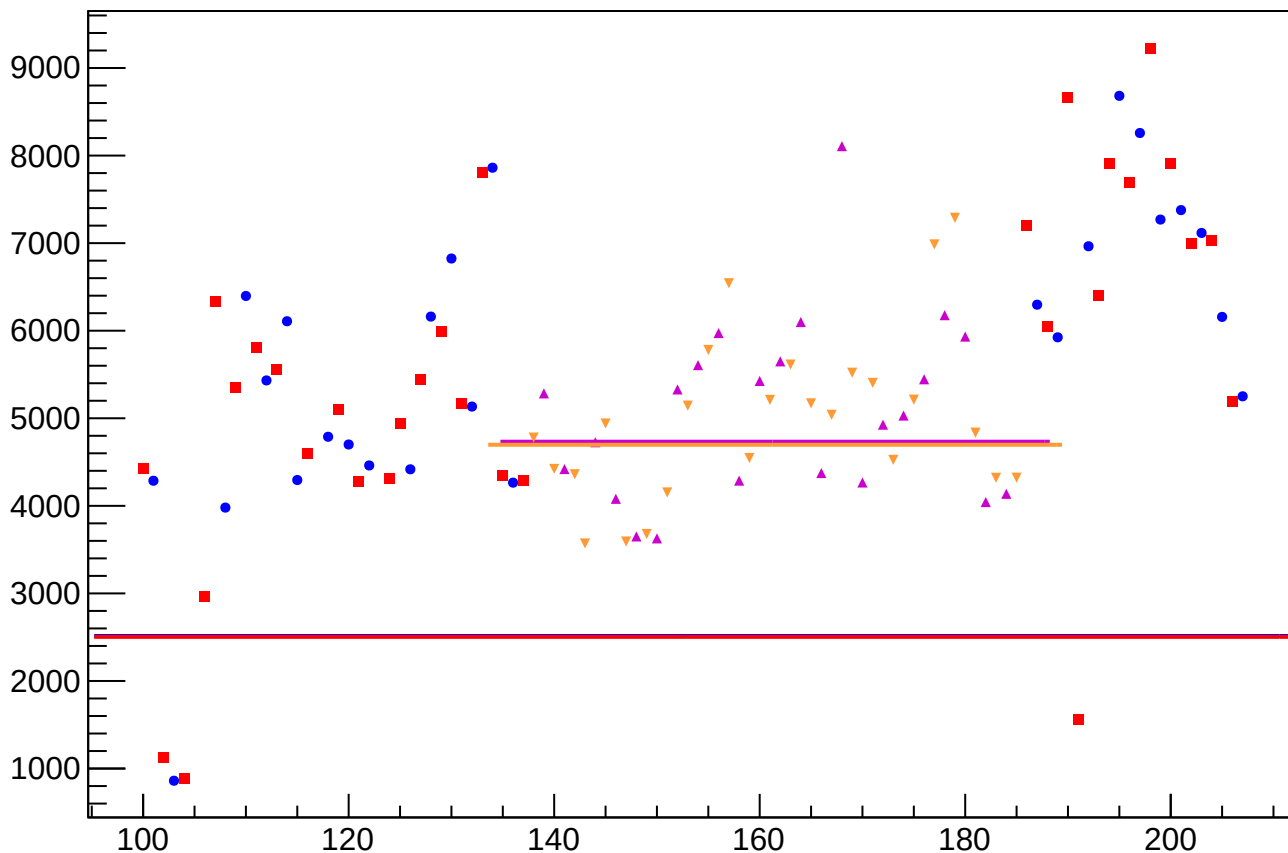
Left In:  $157.977 \pm 1128.443$   $\chi^2/\text{NDF}$ : 14.7/22

+ sign  $-89.765 \pm 692.792$   $\chi^2/\text{NDF}$ : 55.6/50

All:  $621.070 \pm 487.365$   $\chi^2/\text{NDF}$ : 98.6/104

- sign  $1317.501 \pm 685.738$   $\chi^2/\text{NDF}$ : 40.9/53

asym\_atl1r2\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 2513.435+/-0.634  $\chi^2/\text{NDF}$ : 13964061.9/25

Left Out: 4697.618+/-0.772  $\chi^2/\text{NDF}$ :1239387.1/24

Right Out: 2503.814+/-0.611  $\chi^2/\text{NDF}$ : 14683715.9/30

Left In: 4732.421+/-0.798  $\chi^2/\text{NDF}$ :1242809.3/22

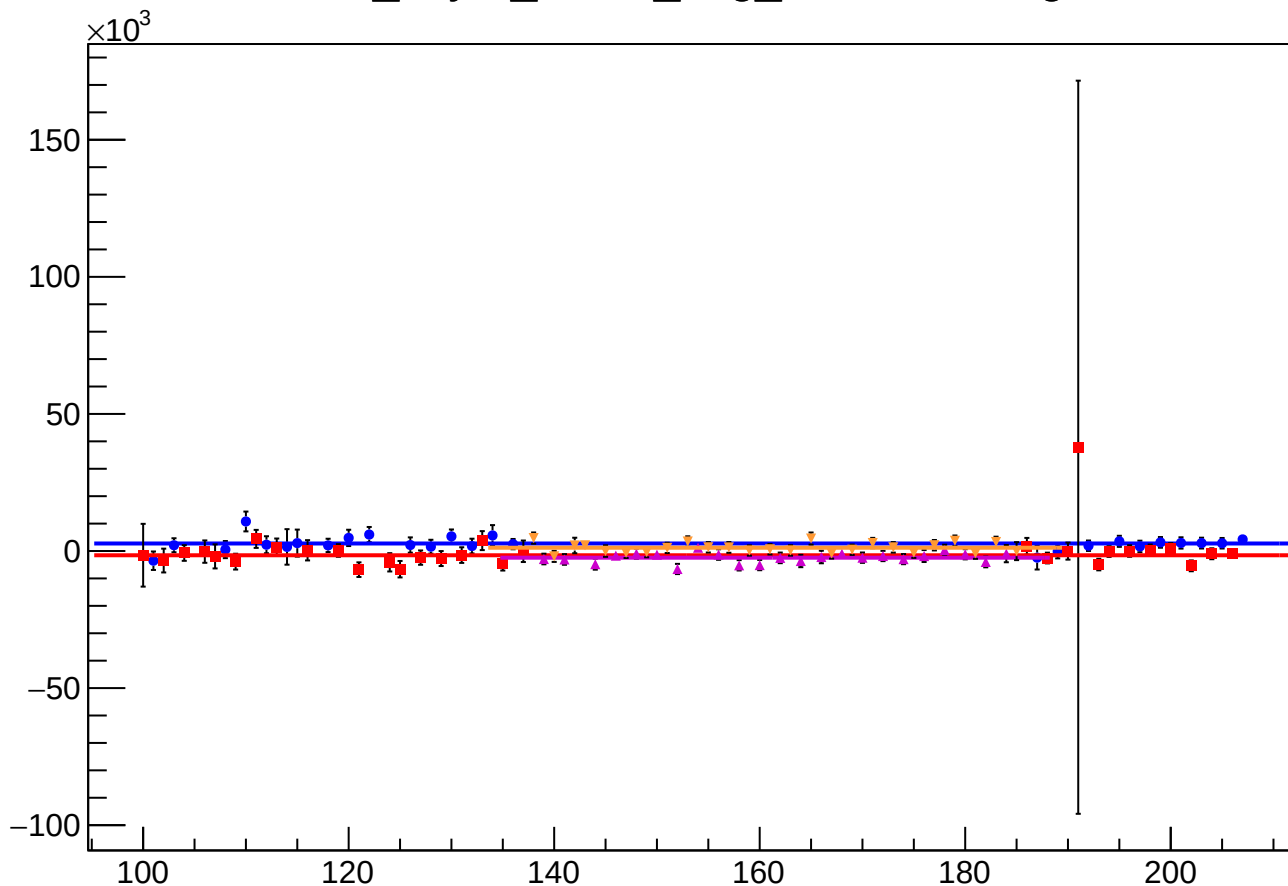
+ sign 3392.598+/-0.490  $\chi^2/\text{NDF}$ : 19984360.0/50

All: 3359.360+/-0.345  $\chi^2/\text{NDF}$ : 40840097.4/1

- sign 3326.796+/-0.485  $\chi^2/\text{NDF}$ : 20846623.6/53



# dit\_asym\_atl1r2\_avg\_mean vs Slug



Right In:  $2744.616 \pm 486.084$   $\chi^2/\text{NDF}$ : 17.2/25

Left Out:  $1197.362 \pm 392.981$   $\chi^2/\text{NDF}$ : 19.5/24

Right Out:  $-1551.605 \pm 474.145$   $\chi^2/\text{NDF}$ : 29.4/30

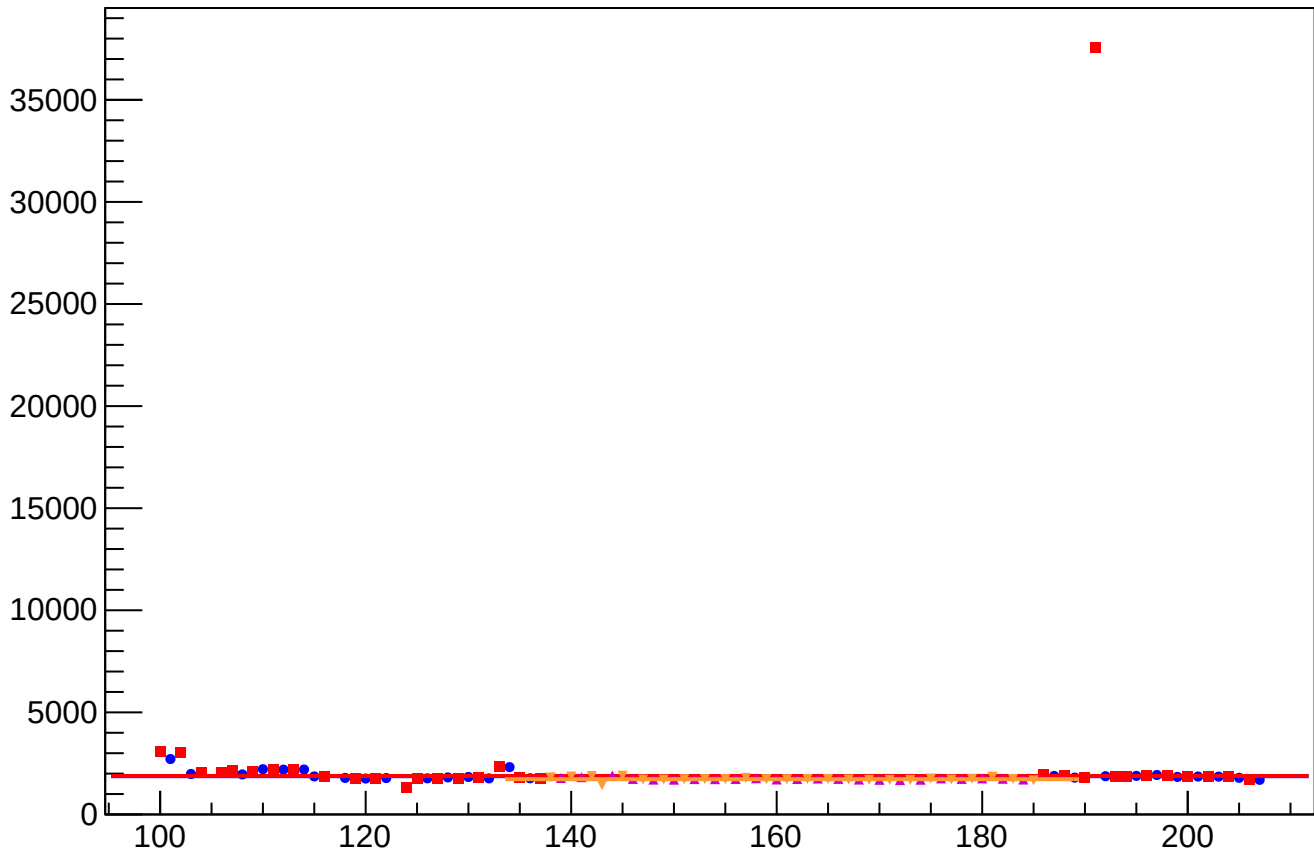
Left In:  $-2438.062 \pm 407.551$   $\chi^2/\text{NDF}$ : 20.6/22

+ sign  $1808.935 \pm 305.601$   $\chi^2/\text{NDF}$ : 42.9/50

All:  $-104.407 \pm 217.308$   $\chi^2/\text{NDF}$ : 174.2/104

- sign  $-2061.406 \pm 309.068$   $\chi^2/\text{NDF}$ : 52.0/53

# dit\_asym\_atl1r2\_avg\_rms vs Slug



Right In: 1873.515+/-0.344  $\chi^2/\text{NDF}$ : 250318.8/25

Left Out: 1727.235+/-0.278  $\chi^2/\text{NDF}$ : 110270.9/24

Right Out: 1885.339+/-0.335  $\chi^2/\text{NDF}$ : 520747.3/30

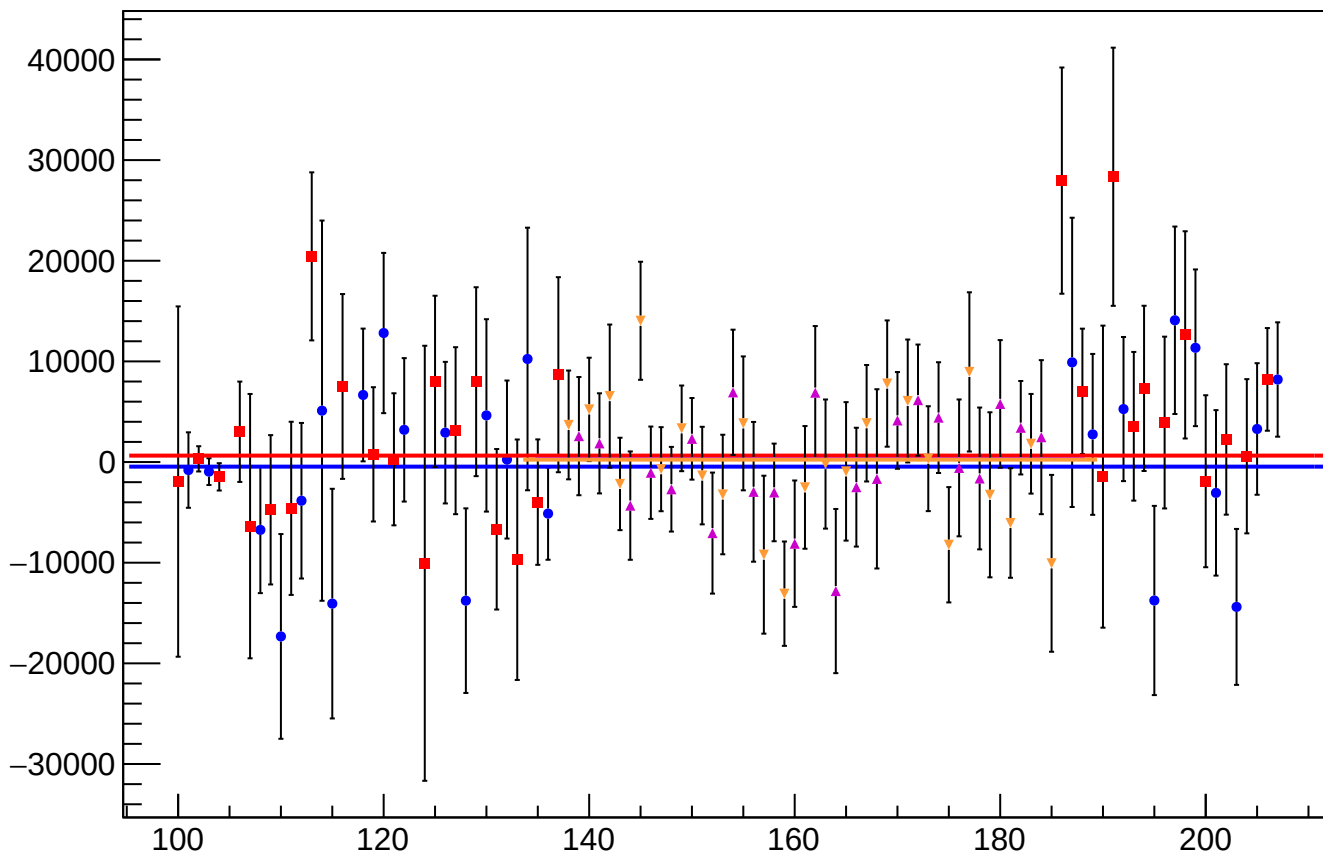
Left In: 1744.633+/-0.288  $\chi^2/\text{NDF}$ : 26798.0/22

+ sign 1785.054+/-0.216  $\chi^2/\text{NDF}$ : 470122.8/50

All: 1794.641+/-0.154  $\chi^2/\text{NDF}$ : 1122982.0/10

- sign 1804.443+/-0.219  $\chi^2/\text{NDF}$ : 648878.8/53

# asym\_atl1r2\_avg\_dit\_correction\_mean vs Slug



Right In: -456.495+/-983.079  $\chi^2/\text{NDF}$ : 28.2/25

Left Out: 241.131+/-1140.961  $\chi^2/\text{NDF}$ : 26.7/24

Right Out: 638.888+/-785.760  $\chi^2/\text{NDF}$ : 30.9/30

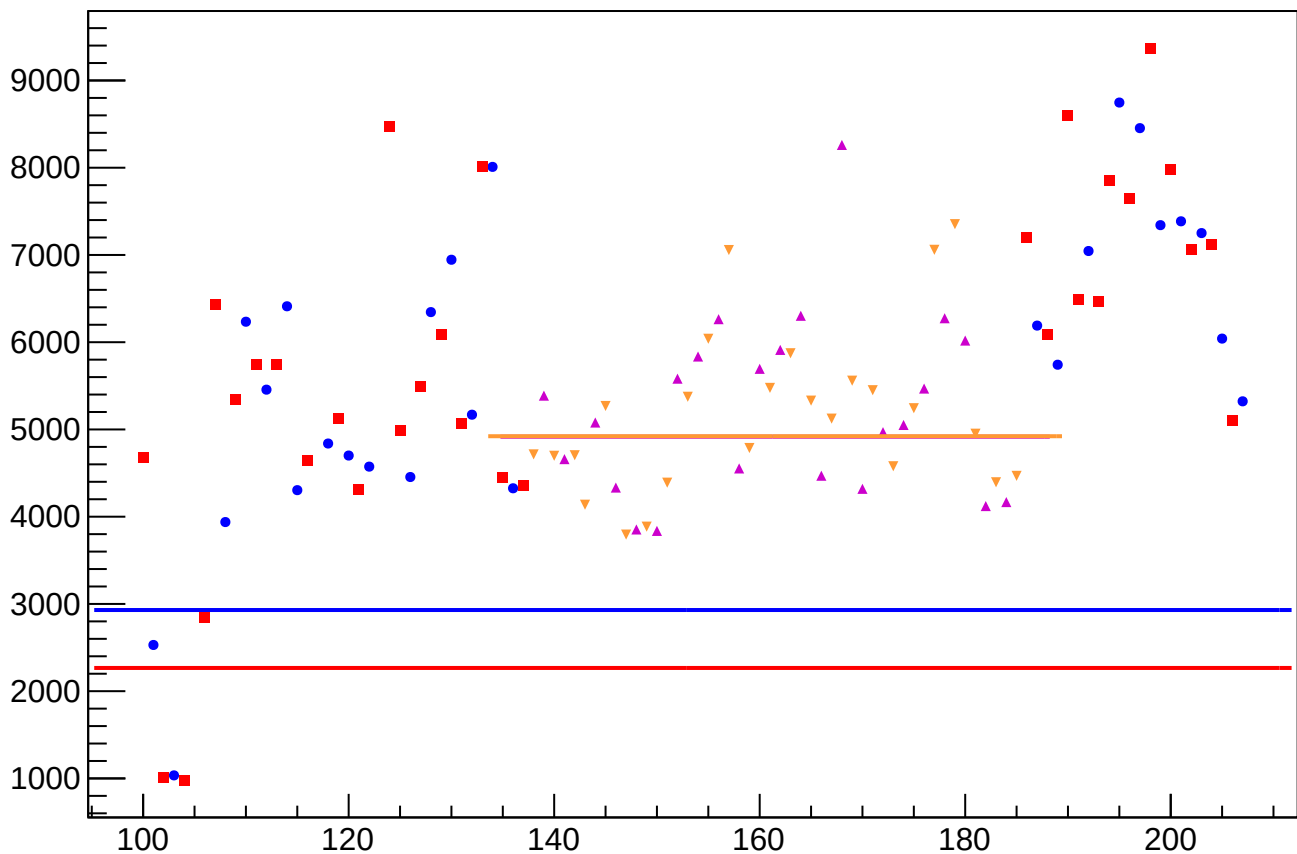
Left In: 306.106+/-1171.019  $\chi^2/\text{NDF}$ : 14.5/22

+ sign -159.252+/-744.758  $\chi^2/\text{NDF}$ : 55.1/50

All: 233.847+/-490.775  $\chi^2/\text{NDF}$ : 101.1/104

- sign 535.572+/-652.482  $\chi^2/\text{NDF}$ : 45.5/53

# asym\_atl1r2\_avg\_dit\_correction\_rms vs Slug



Right In: 2930.253+/-0.695  $\chi^2/\text{NDF}$ : 11543762.0/25

Left Out: 4922.380+/-0.807  $\chi^2/\text{NDF}$ :1050408.0/24

Right Out: 2266.232+/-0.556  $\chi^2/\text{NDF}$ : 16025181.6/30

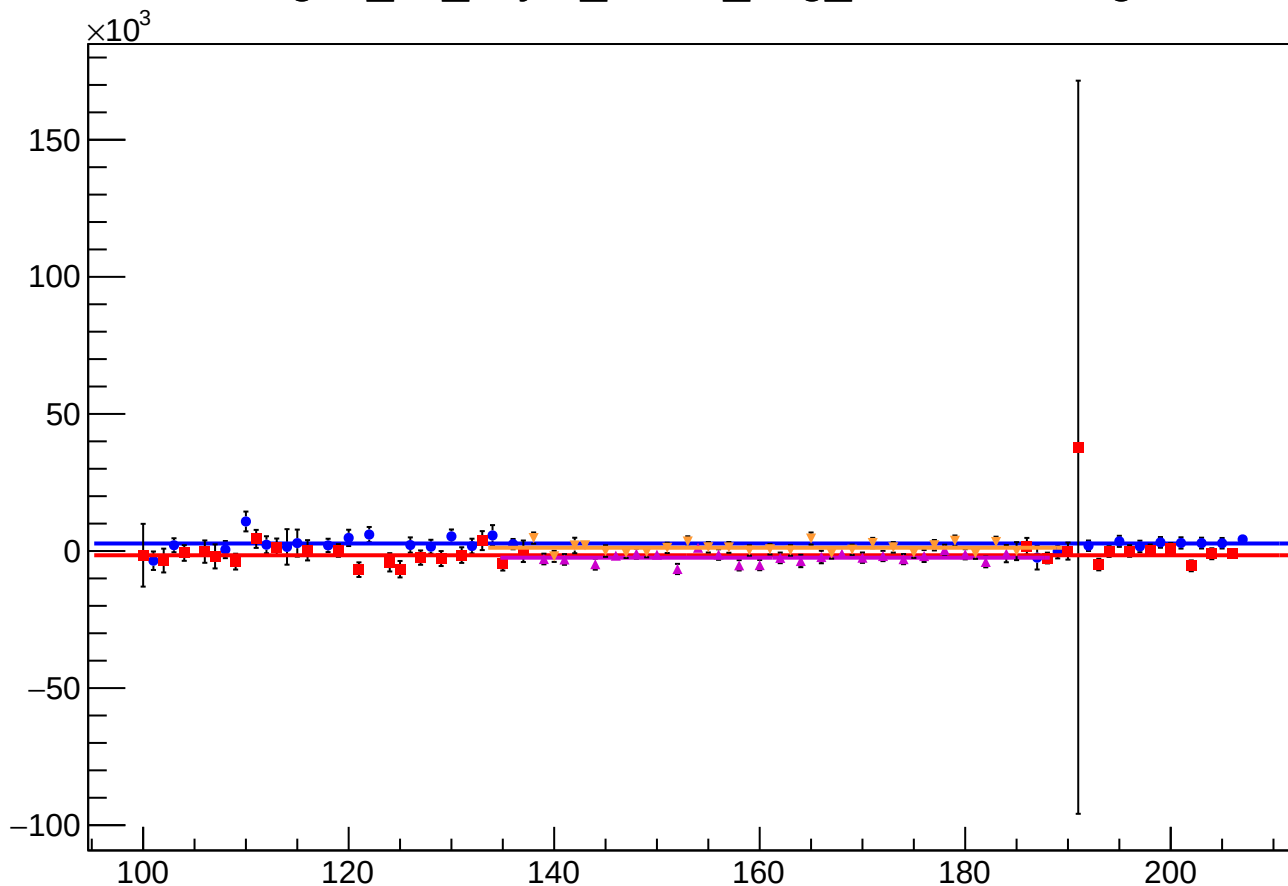
Left In: 4916.964+/-0.828  $\chi^2/\text{NDF}$ :1161642.5/22

+ sign 3779.054+/-0.527  $\chi^2/\text{NDF}$ : 16093426.0/50

All: 3388.758+/-0.347  $\chi^2/\text{NDF}$ : 41317414.3/1

- sign 3089.185+/-0.461  $\chi^2/\text{NDF}$ : 24253119.3/53

# eigen\_dit\_asym\_atl1r2\_avg\_mean vs Slug



Right In:  $2744.612 \pm 486.084$   $\chi^2/\text{NDF}$ : 17.2/25

Left Out:  $1197.356 \pm 392.981$   $\chi^2/\text{NDF}$ : 19.5/24

Right Out:  $-1551.605 \pm 474.145$   $\chi^2/\text{NDF}$ : 29.4/30

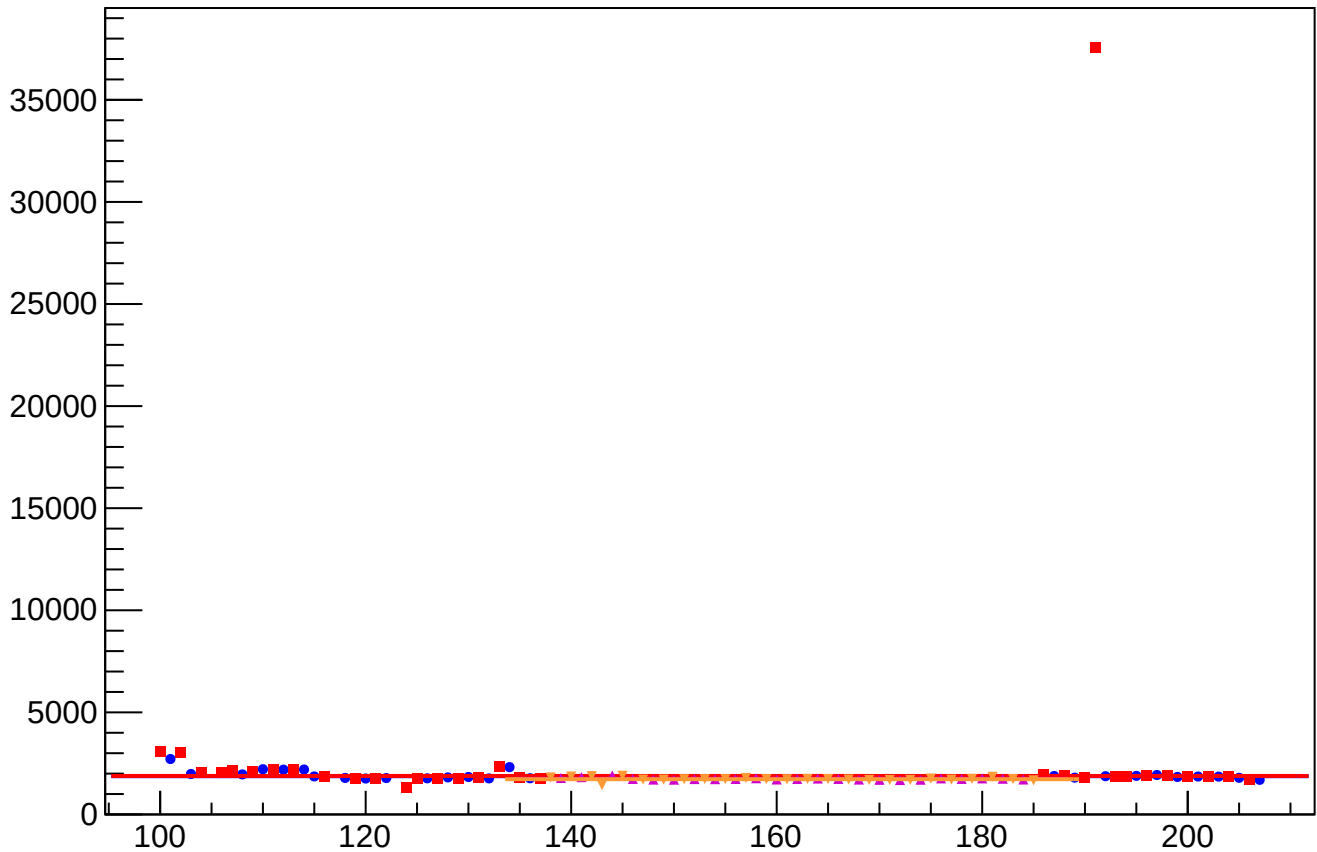
Left In:  $-2438.062 \pm 407.552$   $\chi^2/\text{NDF}$ : 20.6/22

+ sign  $1808.930 \pm 305.601$   $\chi^2/\text{NDF}$ : 42.9/50

All:  $-104.409 \pm 217.308$   $\chi^2/\text{NDF}$ : 174.2/104

- sign  $-2061.406 \pm 309.068$   $\chi^2/\text{NDF}$ : 52.0/53

# eigen\_dit\_asym\_atl1r2\_avg\_rms vs Slug



Right In: 1873.515+/-0.344  $\chi^2/\text{NDF}$ : 250318.8/25

Left Out: 1727.236+/-0.278  $\chi^2/\text{NDF}$ : 110269.9/24

Right Out: 1885.338+/-0.335  $\chi^2/\text{NDF}$ : 520746.1/30

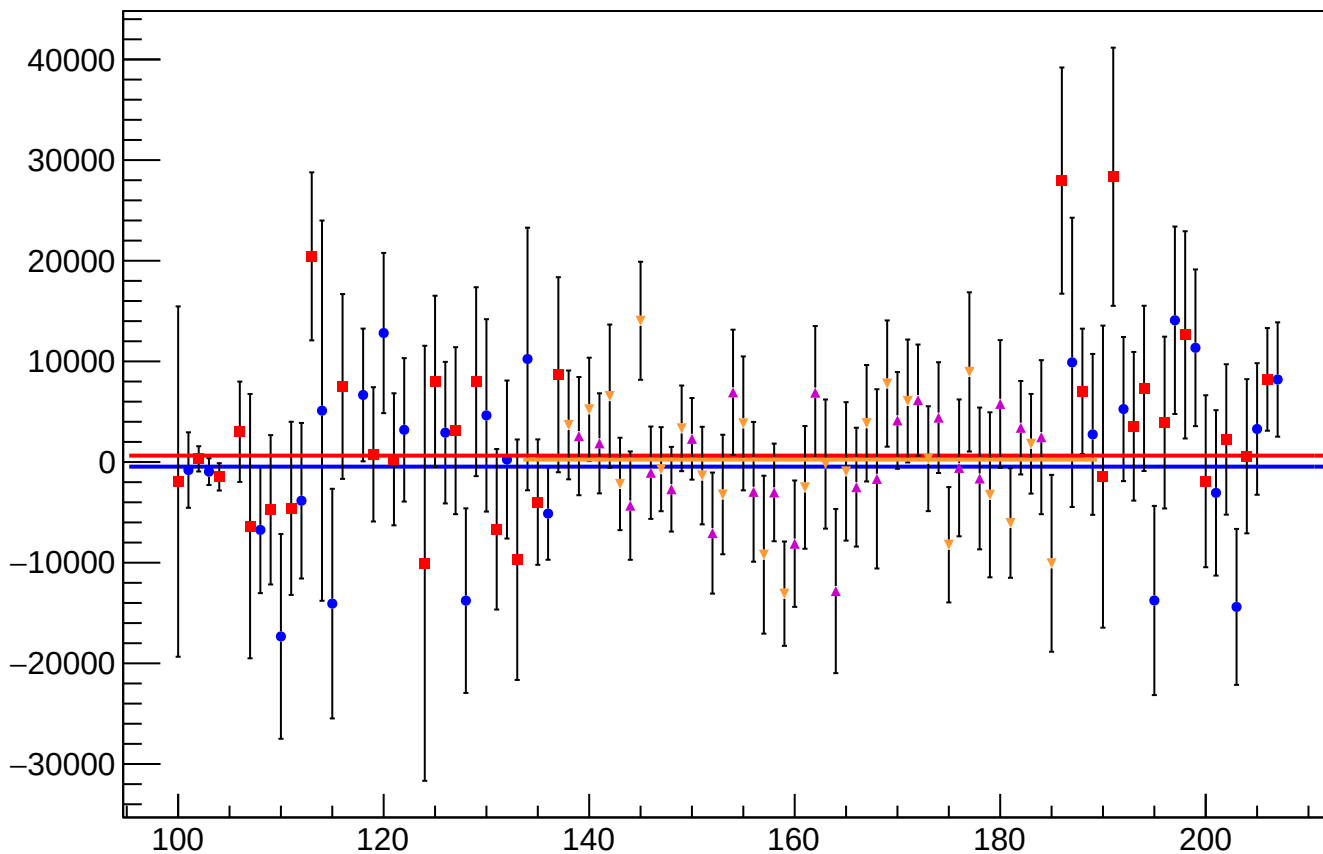
Left In: 1744.633+/-0.288  $\chi^2/\text{NDF}$ : 26798.0/22

+ sign 1785.055+/-0.216  $\chi^2/\text{NDF}$ : 470120.0/50

All: 1794.641+/-0.154  $\chi^2/\text{NDF}$ : 1122976.7/10

- sign 1804.443+/-0.219  $\chi^2/\text{NDF}$ : 648876.3/53

asym\_atl1r2\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In: -456.495+/-983.078  $\chi^2/\text{NDF}$ : 28.2/25

Left Out: 241.128+/-1140.962  $\chi^2/\text{NDF}$ : 26.7/24

Right Out: 638.892+/-785.759  $\chi^2/\text{NDF}$ : 30.9/30

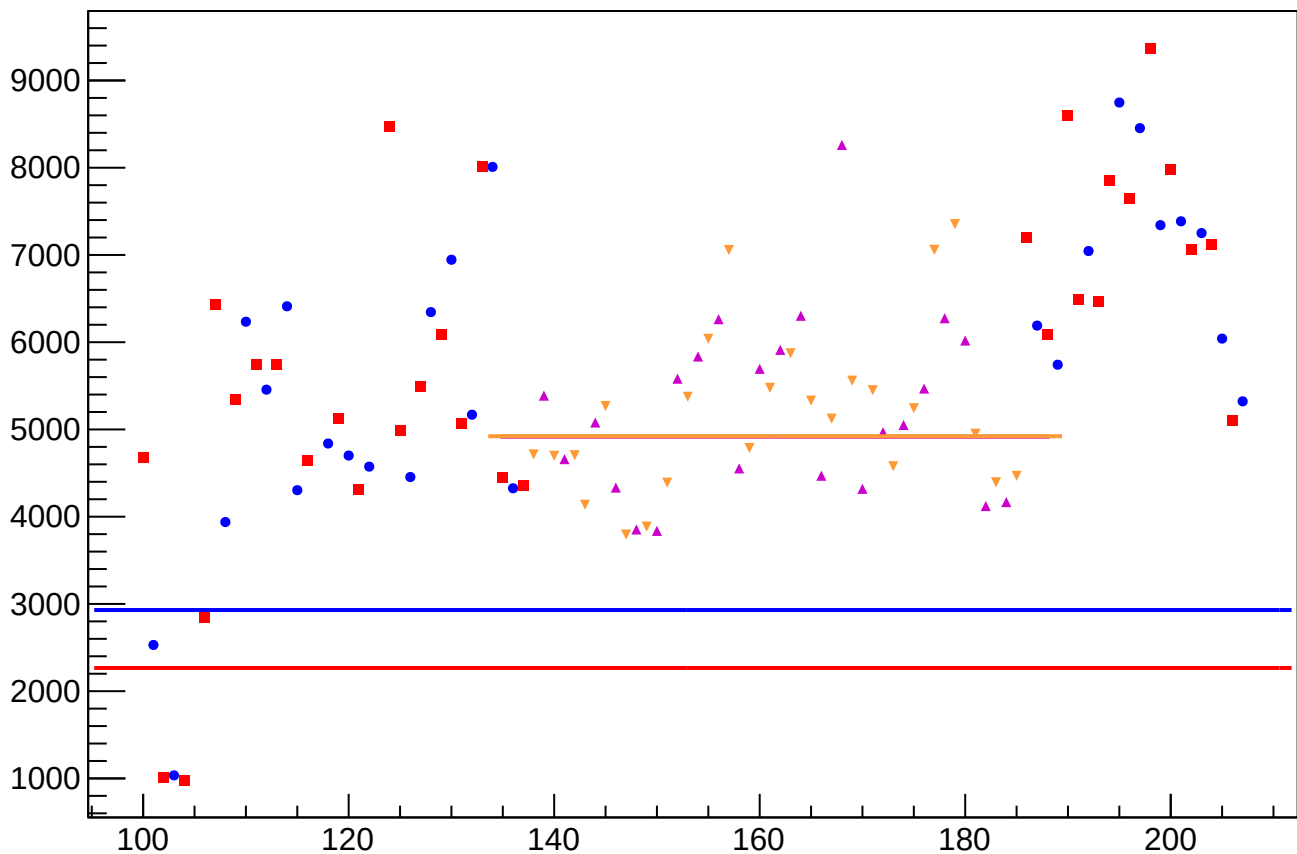
Left In: 306.109+/-1171.021  $\chi^2/\text{NDF}$ : 14.5/22

+ sign -159.254+/-744.758  $\chi^2/\text{NDF}$ : 55.1/50

All: 233.849+/-490.775  $\chi^2/\text{NDF}$ : 101.1/104

- sign 535.576+/-652.482  $\chi^2/\text{NDF}$ : 45.5/53

asym\_atl1r2\_avg\_eigen\_dit\_correction\_rms vs Slug

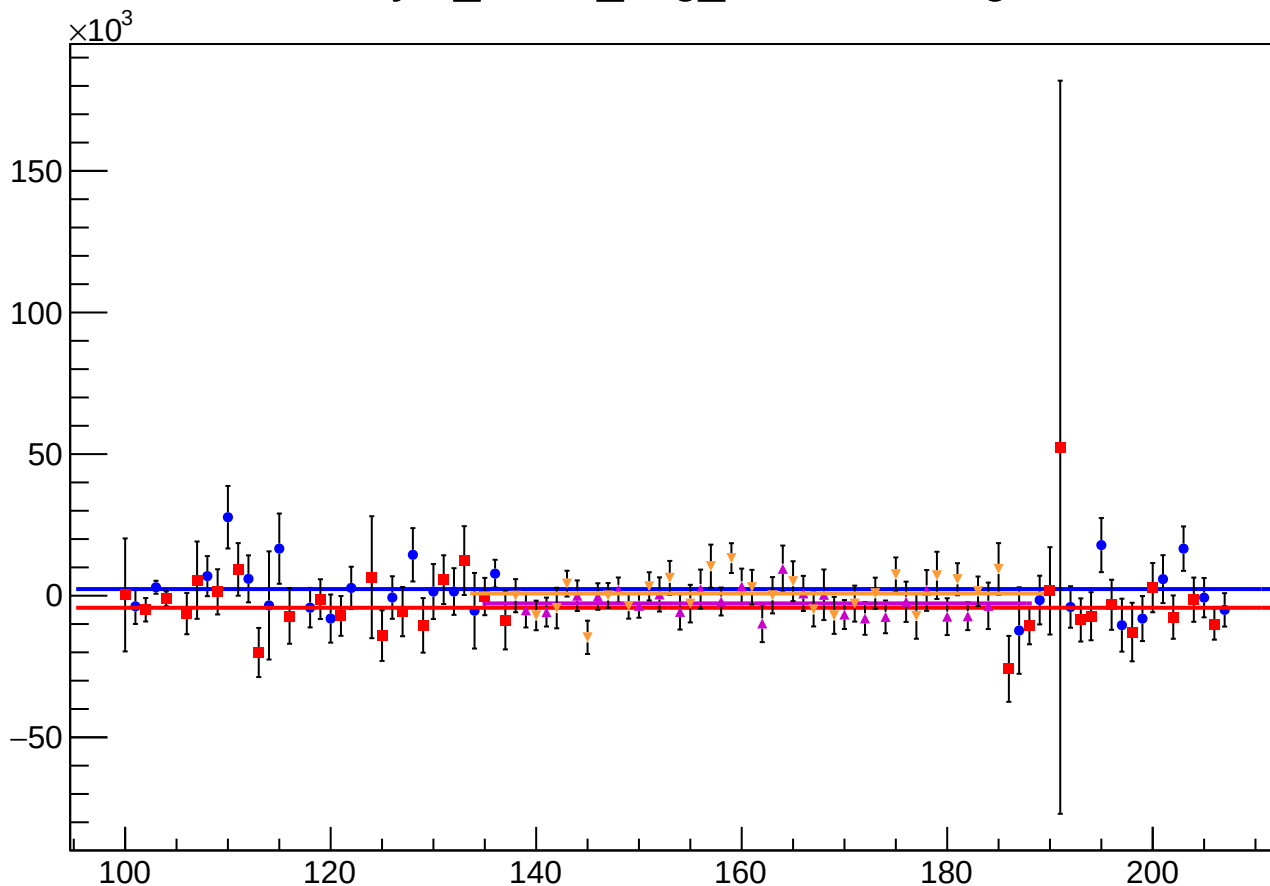


Right In: 2930.252 $\pm$ 0.695  $\chi^2$ /NDF: 11543768.1/25  
 Left Out: 4922.388 $\pm$ 0.807  $\chi^2$ /NDF:1050409.4/24  
 Right Out: 2266.231 $\pm$ 0.556  $\chi^2$ /NDF: 16025181.7/30  
 Left In: 4916.972 $\pm$ 0.828  $\chi^2$ /NDF:1161645.9/22

+ sign 3779.054 $\pm$ 0.527  $\chi^2$ /NDF: 16093463.0/50  
 All: 3388.757 $\pm$ 0.347  $\chi^2$ /NDF: 41317490.5/1  
 - sign 3089.185 $\pm$ 0.461  $\chi^2$ /NDF: 24253155.9/53



# asym\_atl1r2\_avg\_mean vs Slug



Right In: 2345.052 $\pm$ 1317.037  $\chi^2$ /NDF: 27.4/25

Left Out: 787.965 $\pm$ 1171.964  $\chi^2$ /NDF: 27.6/24

Right Out: -4257.631 $\pm$ 1309.123  $\chi^2$ /NDF: 22.1/30

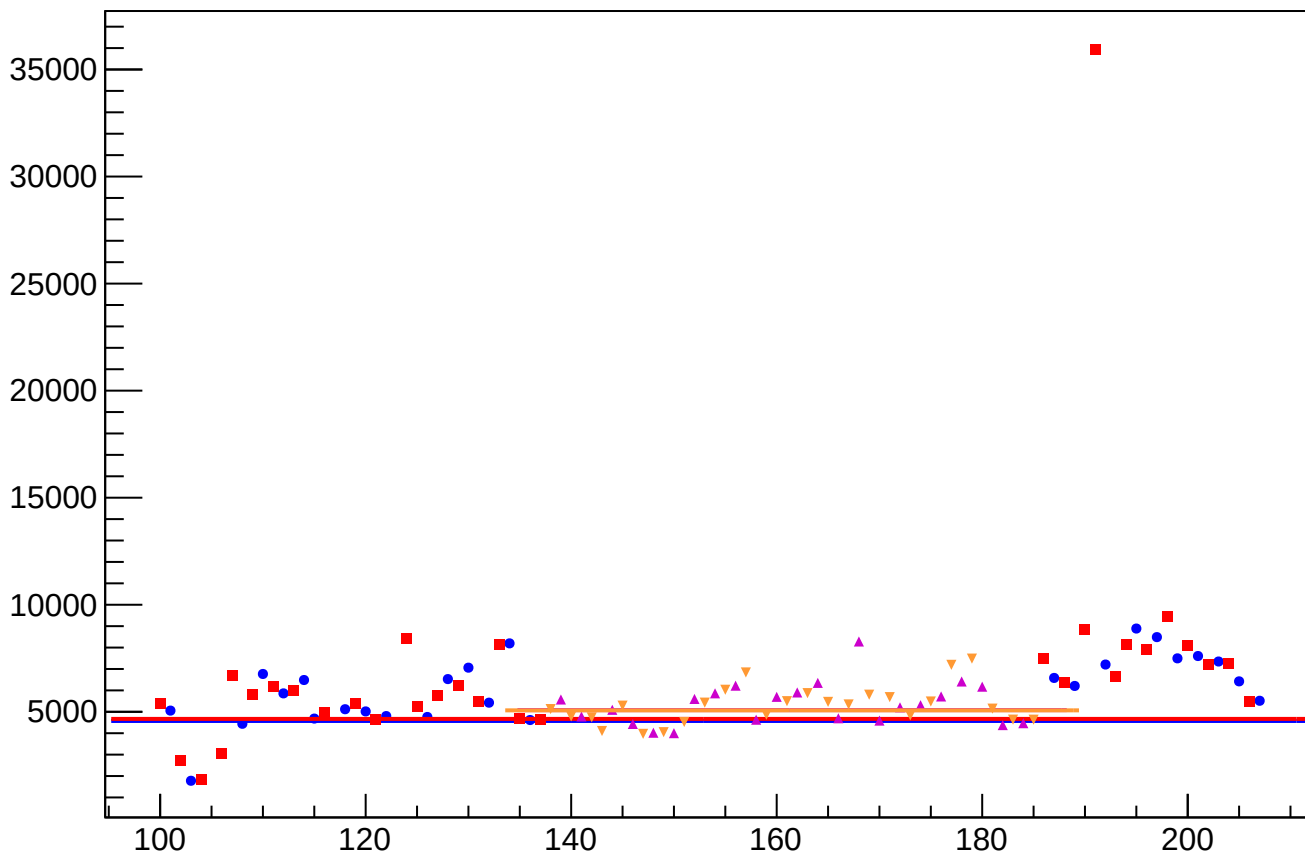
Left In: -2705.532 $\pm$ 1206.281  $\chi^2$ /NDF: 11.9/22

+ sign 1476.060 $\pm$ 875.519  $\chi^2$ /NDF: 55.8/50

All: -938.925 $\pm$ 623.140  $\chi^2$ /NDF: 106.0/104

- sign -3418.230 $\pm$ 887.102  $\chi^2$ /NDF: 34.8/53

# asym\_atl1r2\_avg\_rms vs Slug



Right In: 4572.474+/-0.931  $\chi^2$ /NDF: 5635521.6/25

Left Out: 5067.898+/-0.829  $\chi^2$ /NDF:954253.8/24

Right Out: 4668.277+/-0.919  $\chi^2$ /NDF: 5959287.4/30

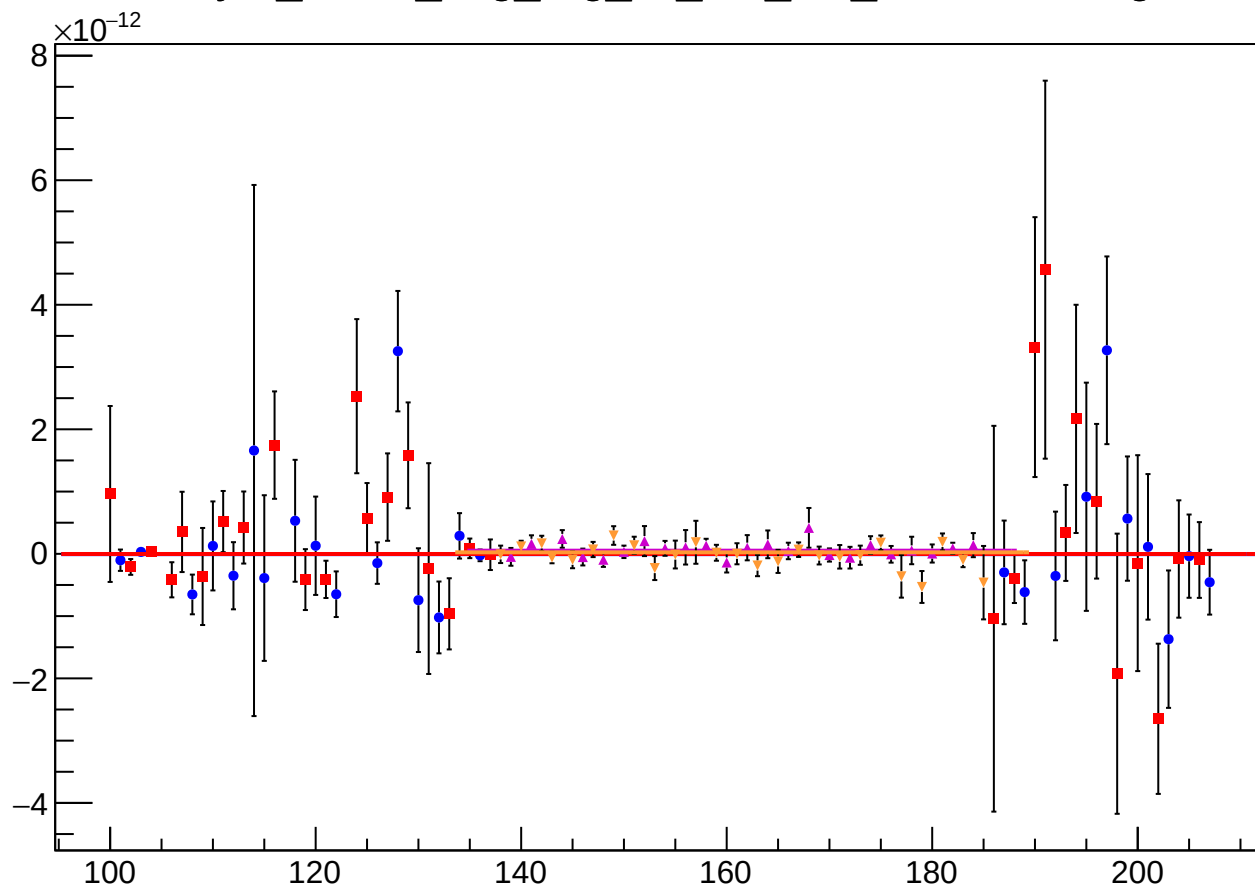
Left In: 5079.715+/-0.853  $\chi^2$ /NDF:1001241.5/22

+ sign 4848.964+/-0.619  $\chi^2$ /NDF: 6747715.0/50

All: 4868.946+/-0.440  $\chi^2$ /NDF: 13818014.2/100

- sign 4889.326+/-0.625  $\chi^2$ /NDF: 7068194.9/53

# asym\_atl1r2\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 34.7/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 23.6/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 41.8/30

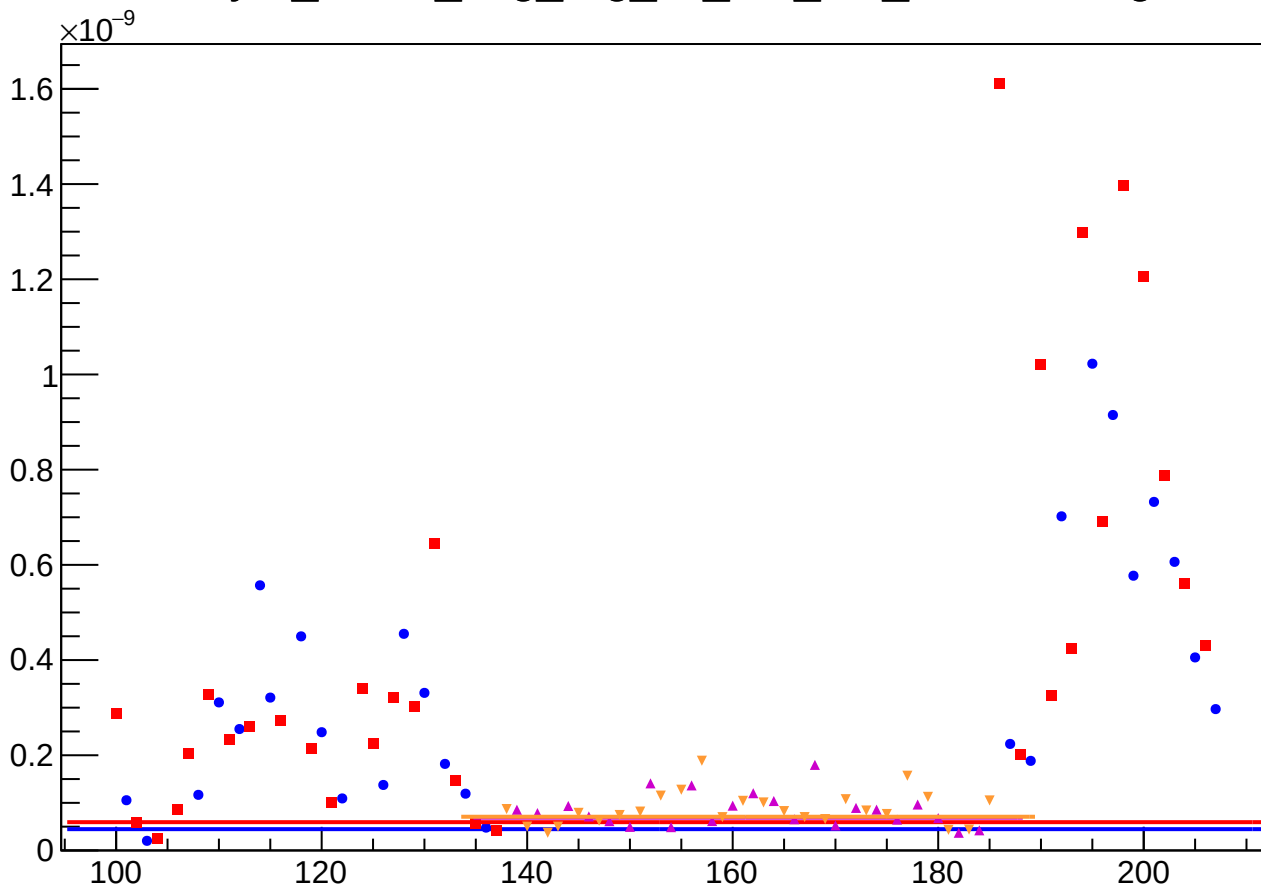
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 11.0/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 58.7/50

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 112.9/104

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 53.8/53

asym\_atl1r2\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 8343990.9/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1489228.5/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 9716193.7/30

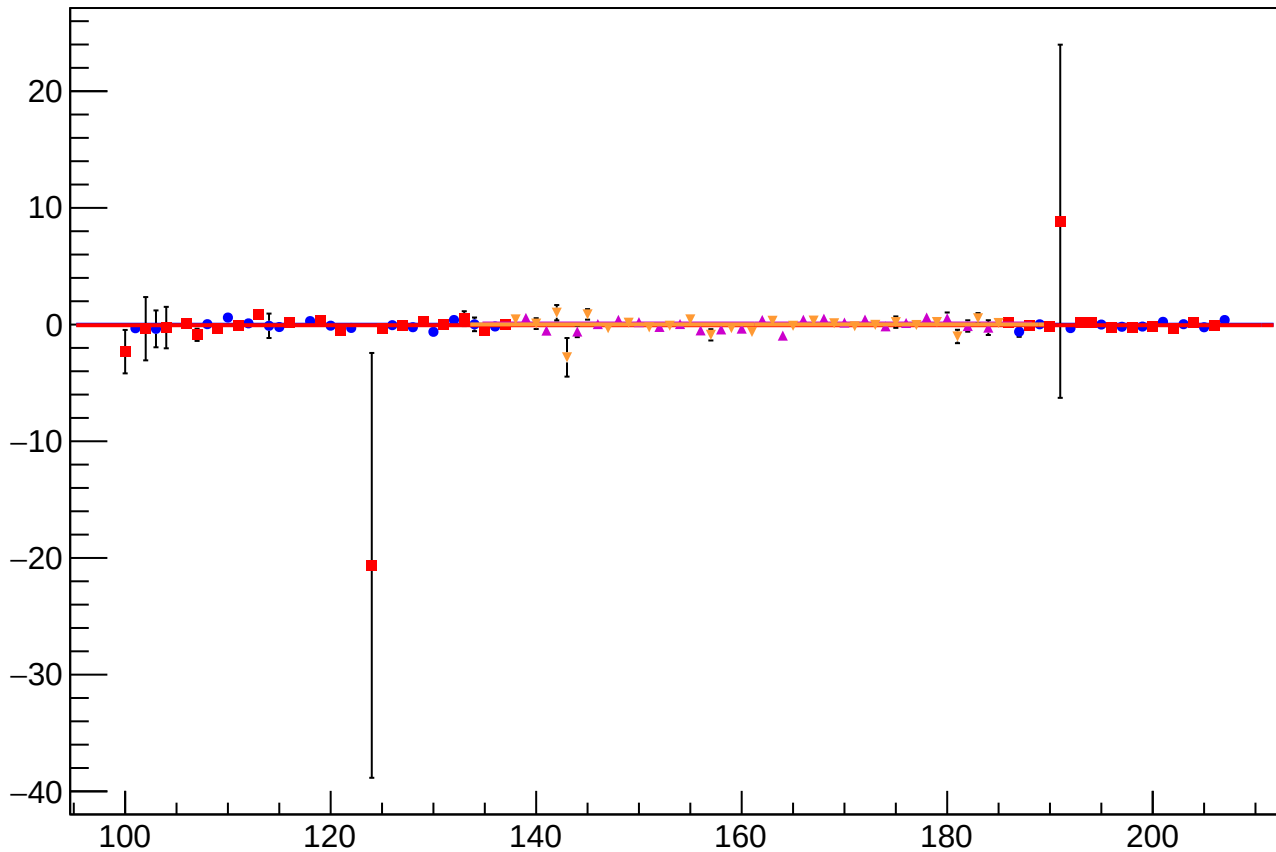
Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1432116.0/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 10472996.2/50

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 21736637.2/104

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 11211472.8/53

# asym\_atl1r2\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: -0.013 $\pm$ 0.056  $\chi^2/\text{NDF}$ : 23.4/25

Left Out: 0.014 $\pm$ 0.070  $\chi^2/\text{NDF}$ : 28.3/24

Right Out: -0.055 $\pm$ 0.050  $\chi^2/\text{NDF}$ : 29.7/30

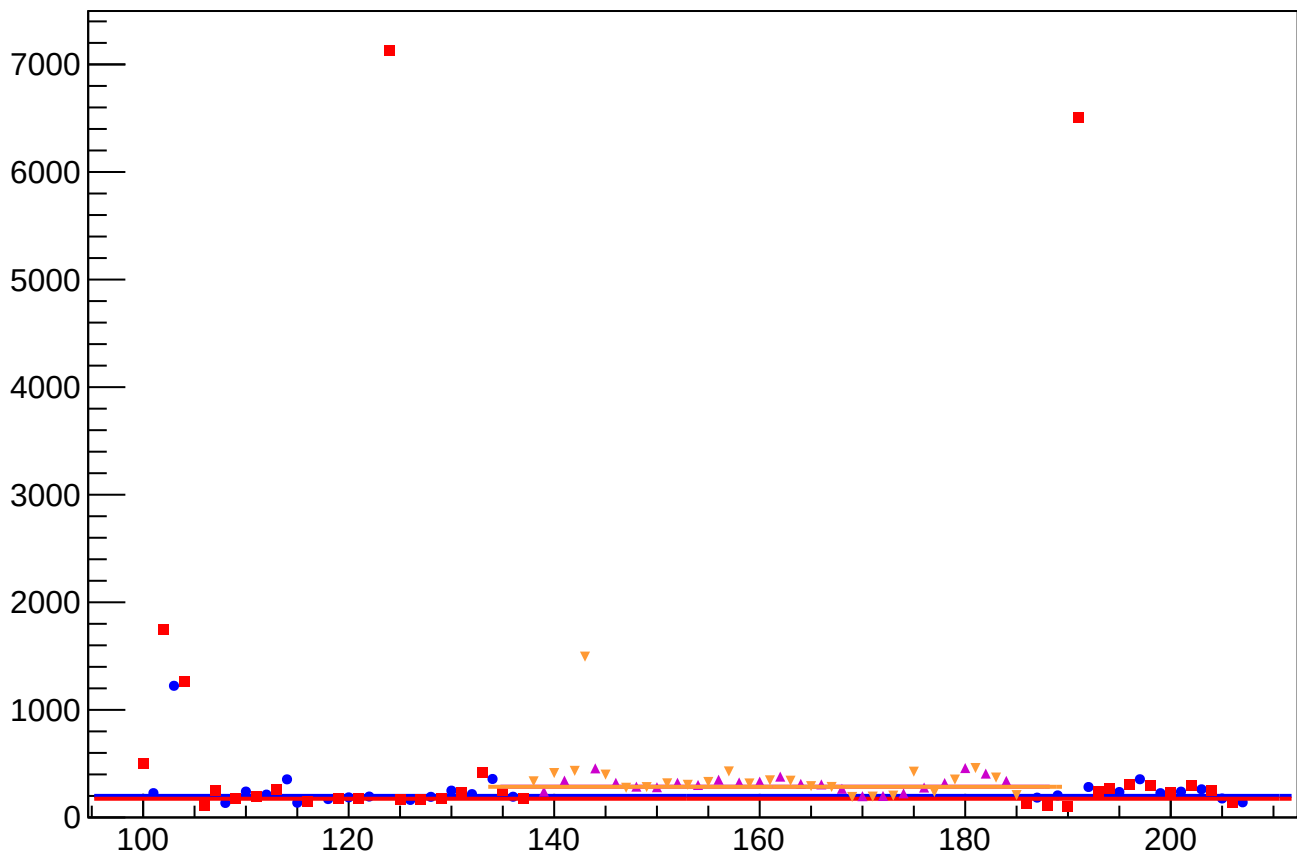
Left In: 0.091 $\pm$ 0.070  $\chi^2/\text{NDF}$ : 30.9/22

+ sign -0.002 $\pm$ 0.044  $\chi^2/\text{NDF}$ : 51.8/50

All: -0.005 $\pm$ 0.030  $\chi^2/\text{NDF}$ : 115.2/104

- sign -0.007 $\pm$ 0.041  $\chi^2/\text{NDF}$ : 63.5/53

# asym\_atl1r2\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 200.544 $\pm$ 0.040  $\chi^2$ /NDF: 2349710.7/25

Left Out: 285.036 $\pm$ 0.049  $\chi^2$ /NDF: 3407001.6/24

Right Out: 173.924 $\pm$ 0.035  $\chi^2$ /NDF: 5365480.2/30

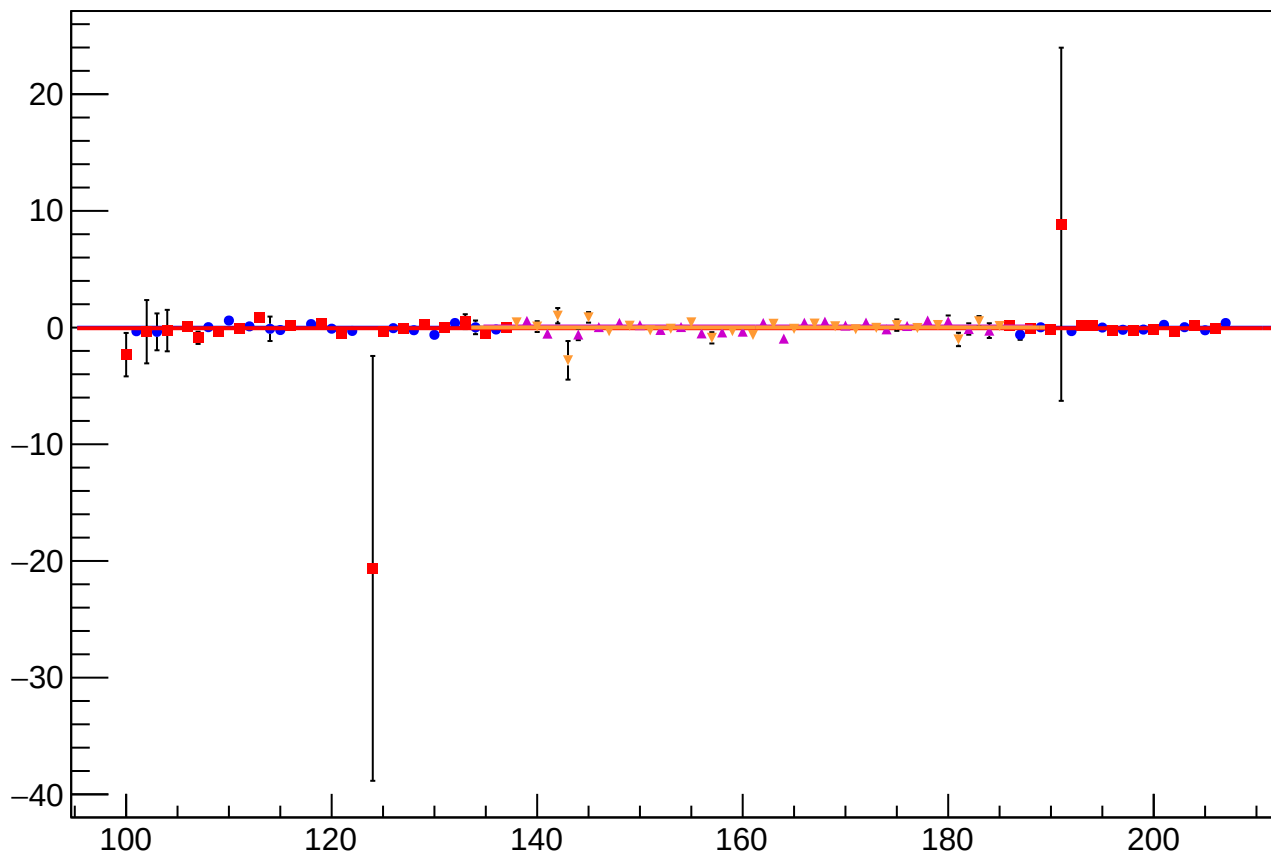
Left In: 285.869 $\pm$ 0.050  $\chi^2$ /NDF: 1744706.1/22

+ sign 233.758 $\pm$ 0.031  $\chi^2$ /NDF: 7534250.7/50

All: 221.512 $\pm$ 0.021  $\chi^2$ /NDF: 18314931.6/10

- sign 211.014 $\pm$ 0.029  $\chi^2$ /NDF: 10490012.3/53

asym\_atl1r2\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.013 \pm 0.056$   $\chi^2/\text{NDF}$ : 23.4/25

Left Out:  $0.014 \pm 0.070$   $\chi^2/\text{NDF}$ : 28.3/24

Right Out:  $-0.055 \pm 0.050$   $\chi^2/\text{NDF}$ : 29.7/30

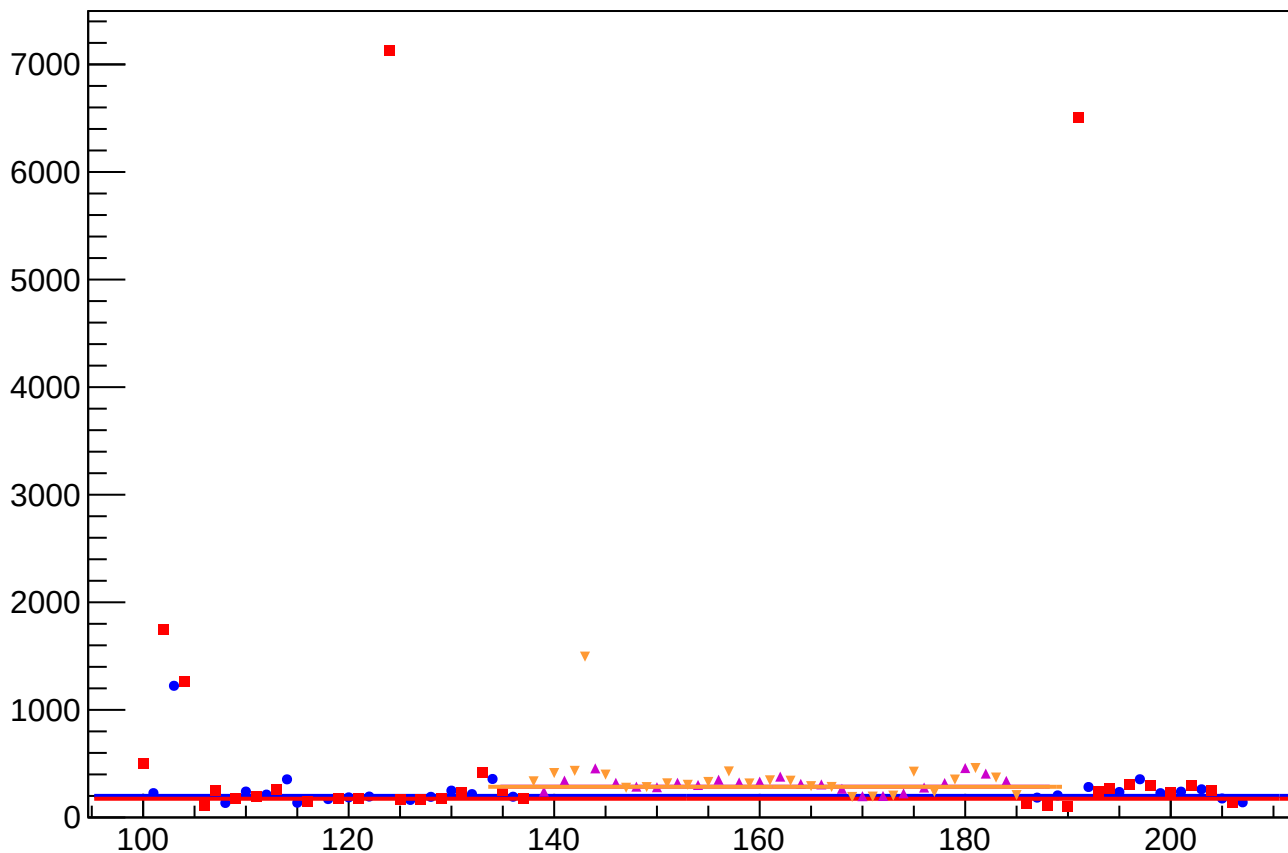
Left In:  $0.091 \pm 0.070$   $\chi^2/\text{NDF}$ : 30.9/22

+ sign  $-0.002 \pm 0.044$   $\chi^2/\text{NDF}$ : 51.8/50

All:  $-0.005 \pm 0.030$   $\chi^2/\text{NDF}$ : 115.2/104

- sign  $-0.007 \pm 0.041$   $\chi^2/\text{NDF}$ : 63.5/53

asym\_atl1r2\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 200.544 $\pm$ 0.040  $\chi^2$ /NDF: 2349710.7/25

Left Out: 285.036 $\pm$ 0.049  $\chi^2$ /NDF: 3407001.6/24

Right Out: 173.924 $\pm$ 0.035  $\chi^2$ /NDF: 5365480.2/30

Left In: 285.869 $\pm$ 0.050  $\chi^2$ /NDF: 1744706.1/22

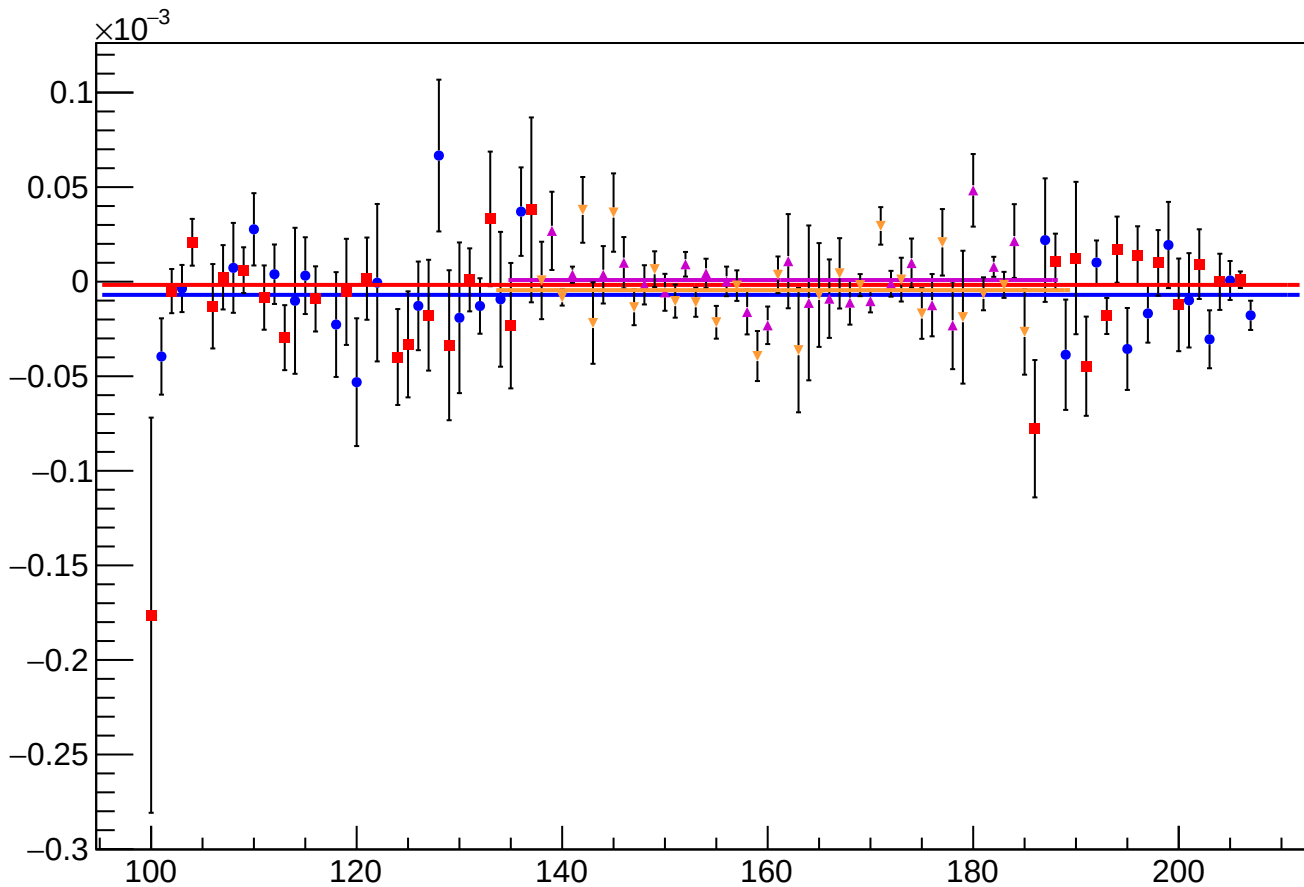
+ sign 233.758 $\pm$ 0.031  $\chi^2$ /NDF: 7534250.7/50

All: 221.512 $\pm$ 0.021  $\chi^2$ /NDF: 18314931.6/10

- sign 211.014 $\pm$ 0.029  $\chi^2$ /NDF: 10490012.3/53



asym\_atl1r2\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 29.0/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 43.9/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 30.9/30

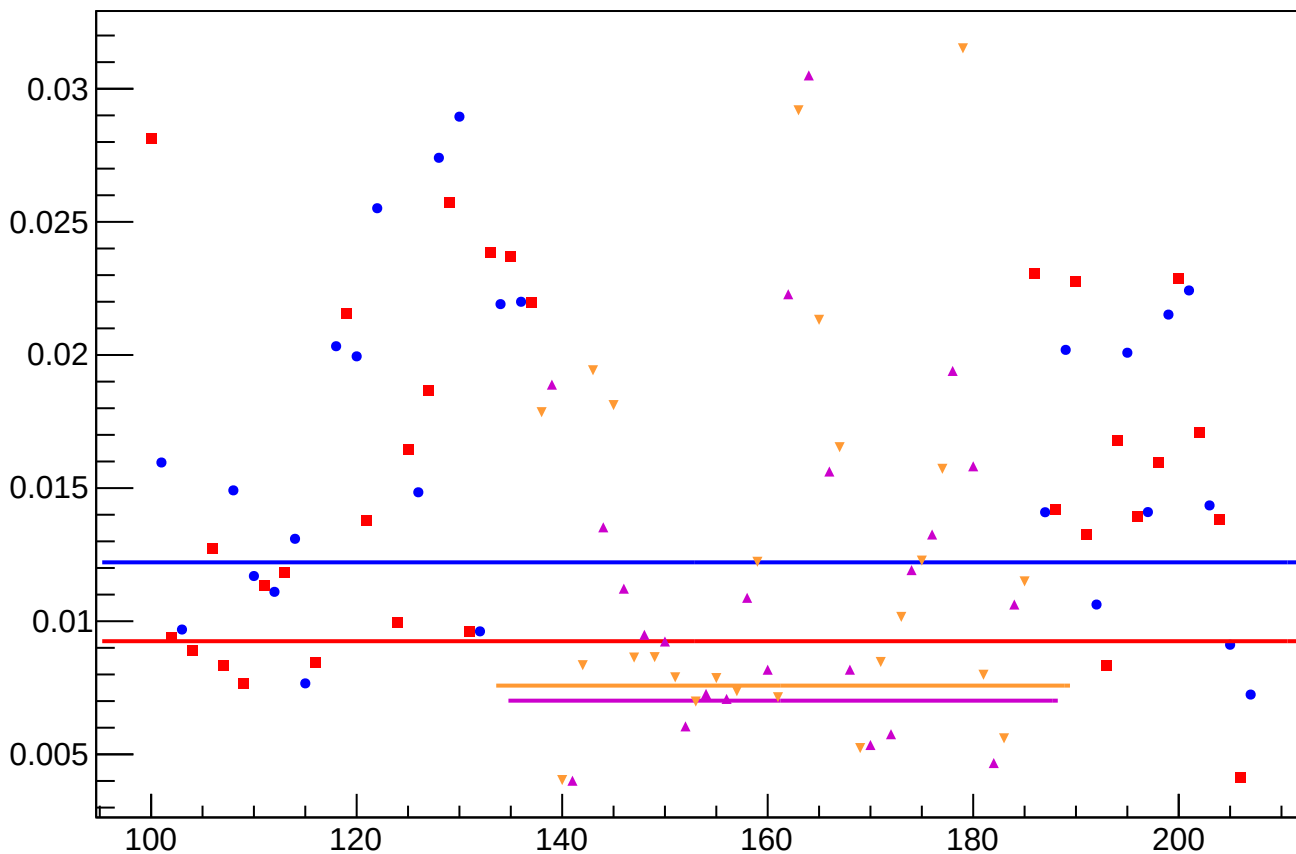
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 29.0/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 73.3/50

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 138.5/104

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 60.5/53

asym\_atl1r2\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 4197719.6/25

Left Out: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 7351454.7/24

Right Out: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 7780844.0/30

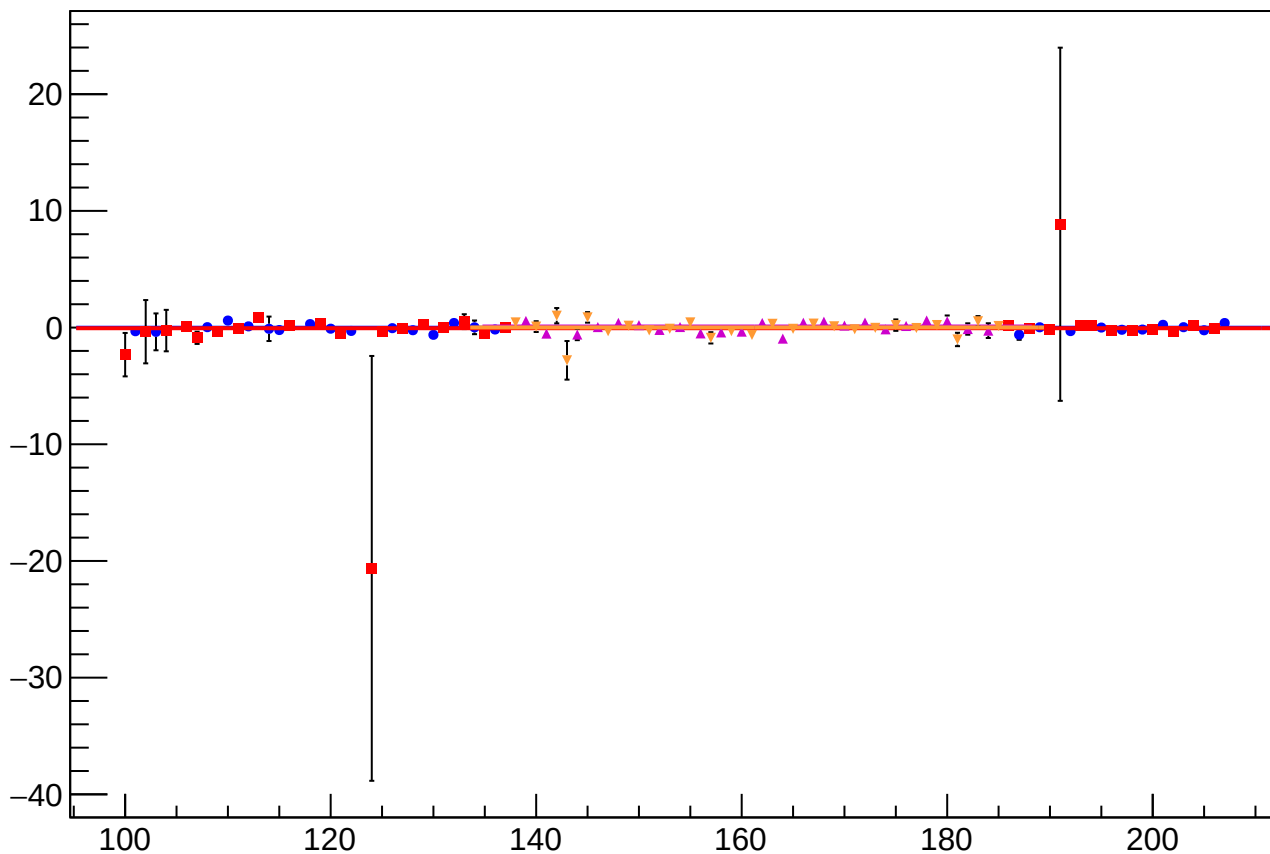
Left In: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 6740679.5/22

+ sign 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 14248765.5/50

All: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 30030461.9/104

- sign 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 15448695.5/53

asym\_atl1r2\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.013 \pm 0.056$   $\chi^2/\text{NDF}$ : 23.4/25

Left Out:  $0.014 \pm 0.070$   $\chi^2/\text{NDF}$ : 28.3/24

Right Out:  $-0.055 \pm 0.050$   $\chi^2/\text{NDF}$ : 29.7/30

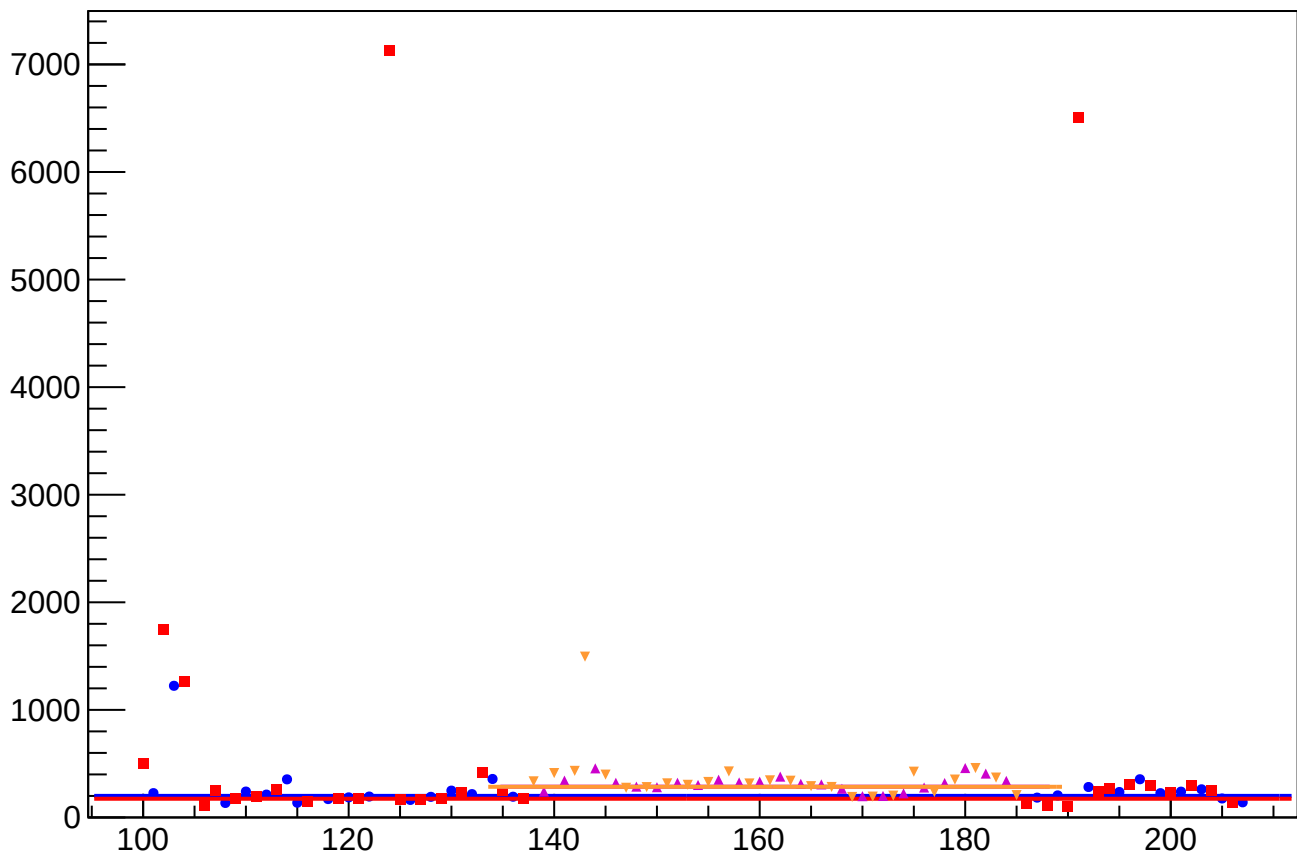
Left In:  $0.091 \pm 0.070$   $\chi^2/\text{NDF}$ : 30.9/22

+ sign  $-0.002 \pm 0.044$   $\chi^2/\text{NDF}$ : 51.8/50

All:  $-0.005 \pm 0.030$   $\chi^2/\text{NDF}$ : 115.2/104

- sign  $-0.007 \pm 0.041$   $\chi^2/\text{NDF}$ : 63.5/53

asym\_atl1r2\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 200.542 $\pm$ 0.040  $\chi^2$ /NDF: 2349729.7/25

Left Out: 285.039 $\pm$ 0.049  $\chi^2$ /NDF: 3407037.3/24

Right Out: 173.922 $\pm$ 0.035  $\chi^2$ /NDF: 5365638.7/30

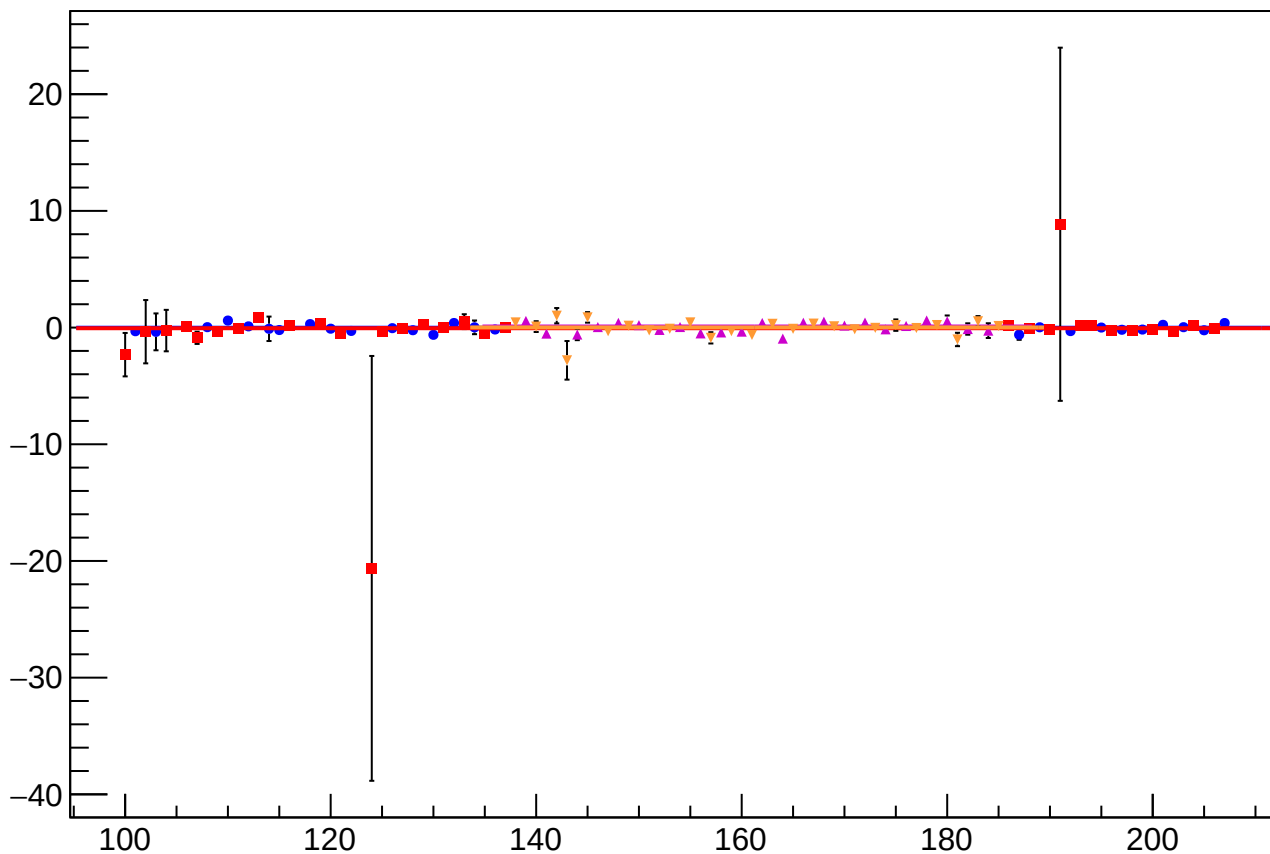
Left In: 285.871 $\pm$ 0.050  $\chi^2$ /NDF: 1744743.9/22

+ sign 233.757 $\pm$ 0.031  $\chi^2$ /NDF: 7534458.3/50

All: 221.511 $\pm$ 0.021  $\chi^2$ /NDF: 18315641.6/10

- sign 211.012 $\pm$ 0.029  $\chi^2$ /NDF: 10490480.0/53

asym\_atl1r2\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.013 \pm 0.056$   $\chi^2/\text{NDF}$ : 23.4/25

Left Out:  $0.014 \pm 0.070$   $\chi^2/\text{NDF}$ : 28.3/24

Right Out:  $-0.055 \pm 0.050$   $\chi^2/\text{NDF}$ : 29.7/30

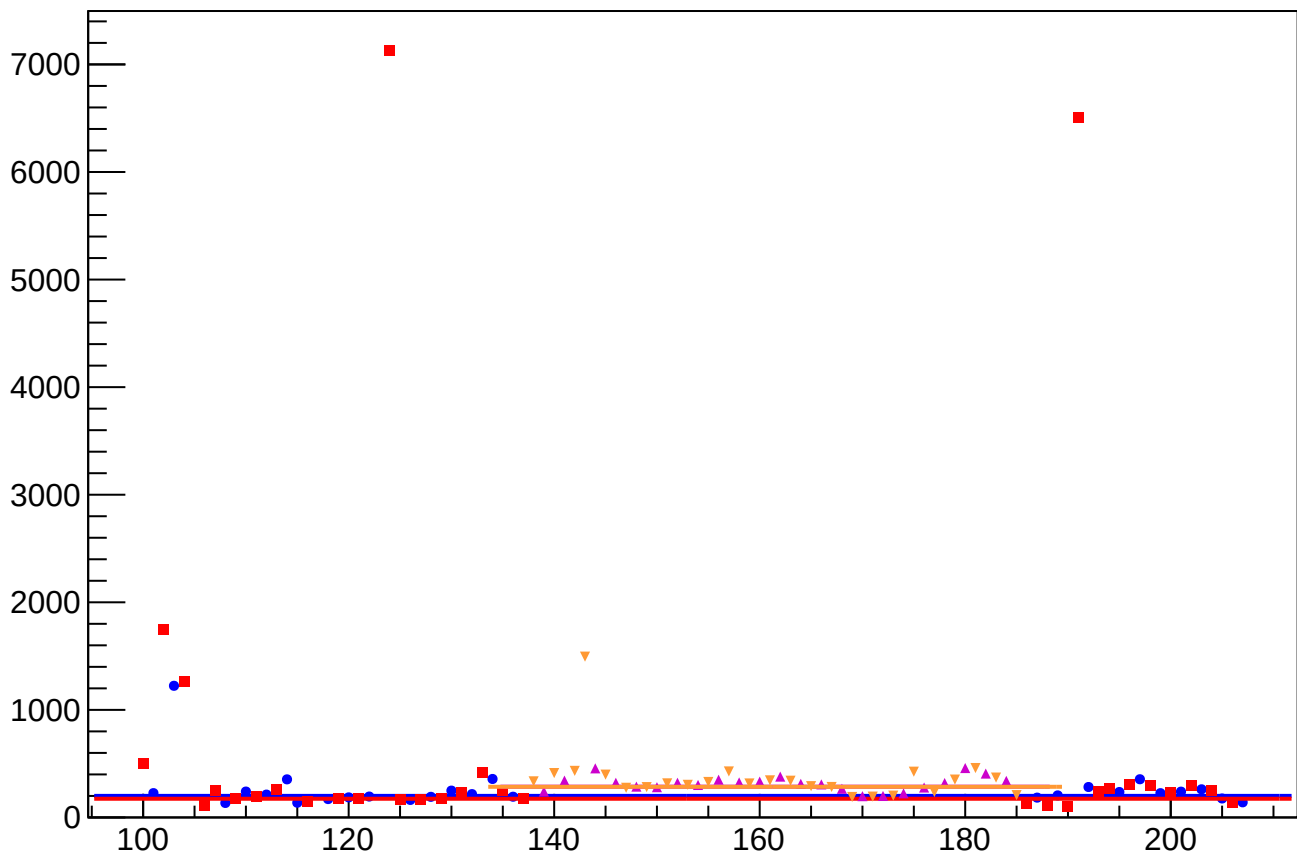
Left In:  $0.091 \pm 0.070$   $\chi^2/\text{NDF}$ : 30.9/22

+ sign  $-0.002 \pm 0.044$   $\chi^2/\text{NDF}$ : 51.8/50

All:  $-0.005 \pm 0.030$   $\chi^2/\text{NDF}$ : 115.2/104

- sign  $-0.007 \pm 0.041$   $\chi^2/\text{NDF}$ : 63.5/53

asym\_atl1r2\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 200.542 $\pm$ 0.040  $\chi^2$ /NDF: 2349729.7/25

Left Out: 285.039 $\pm$ 0.049  $\chi^2$ /NDF: 3407037.3/24

Right Out: 173.922 $\pm$ 0.035  $\chi^2$ /NDF: 5365638.7/30

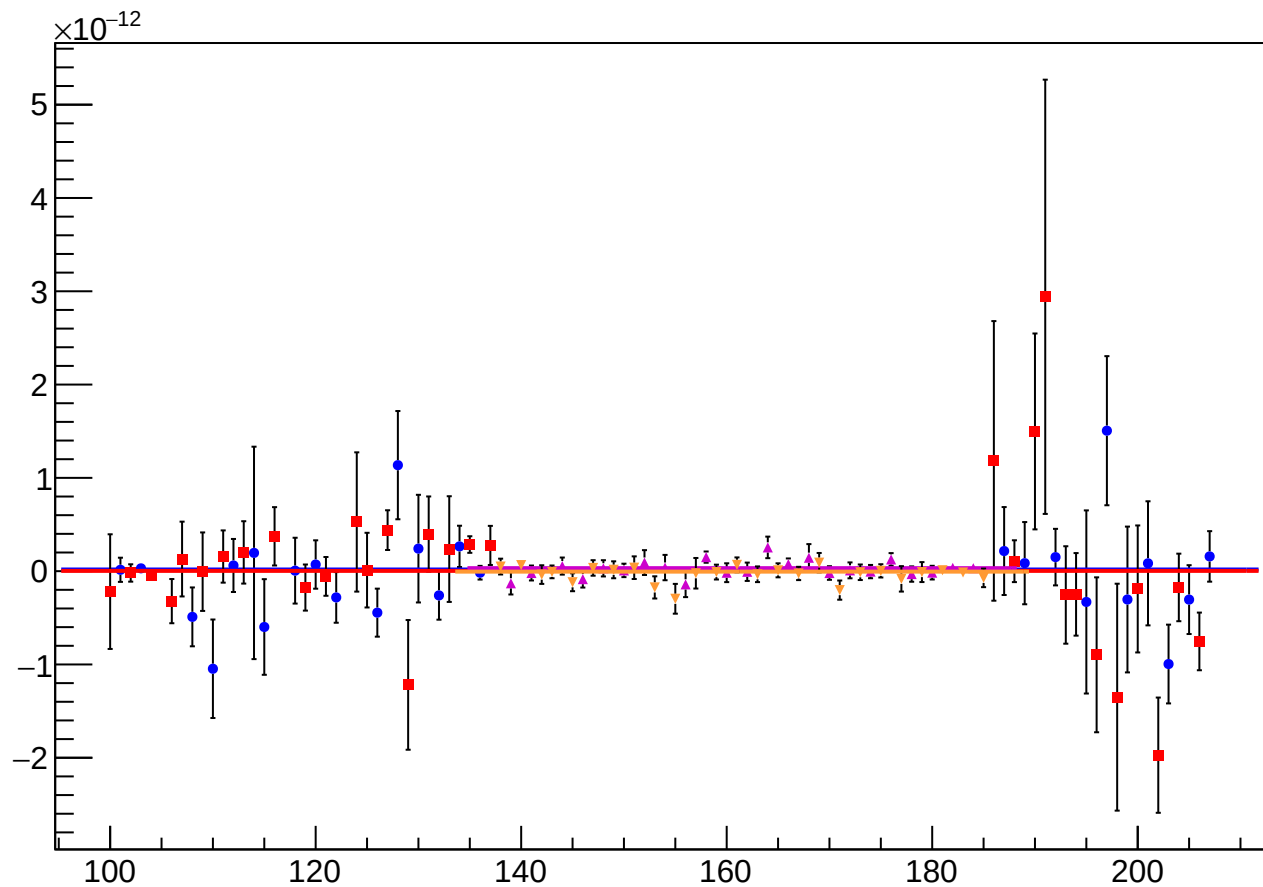
Left In: 285.871 $\pm$ 0.050  $\chi^2$ /NDF: 1744743.9/22

+ sign 233.757 $\pm$ 0.031  $\chi^2$ /NDF: 7534458.3/50

All: 221.511 $\pm$ 0.021  $\chi^2$ /NDF: 18315641.6/10

- sign 211.012 $\pm$ 0.029  $\chi^2$ /NDF: 10490480.0/53

asym\_atl1r2\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 30.4/25

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:16.6/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 51.3/30

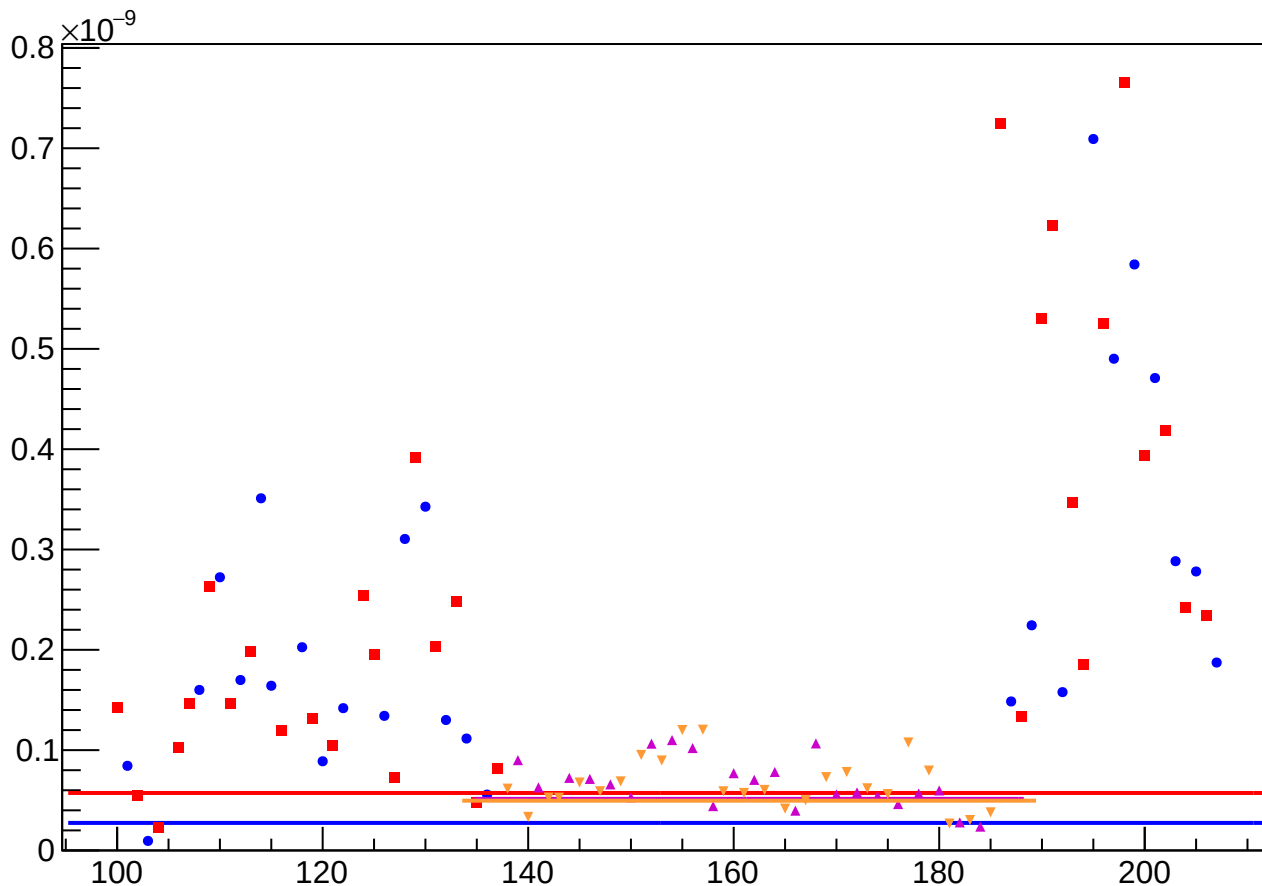
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:18.7/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 47.7/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 120.1/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 70.8/53

asym\_atl1r2\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 13355078.7/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:3882649.0/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 10037901.8/30

Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:3659712.8/22

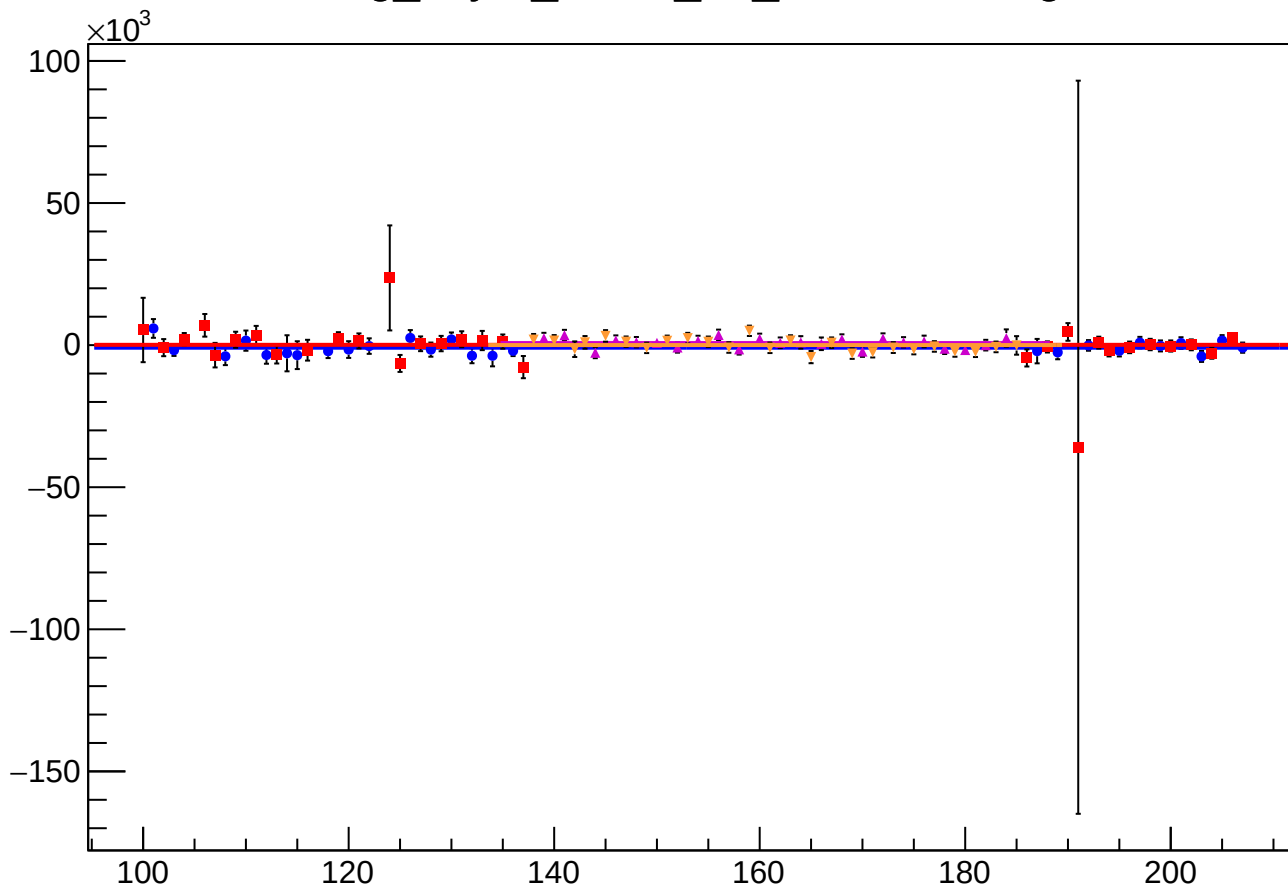
+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 18768582.5/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 33215210.0/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 13756676.6/53



## reg\_asym\_atl1r2\_dd\_mean vs Slug



Right In: -906.209+/-474.682     $\chi^2/\text{NDF}$ : 19.1/25

Left Out: 23.114+/-387.732     $\chi^2/\text{NDF}$ :29.5/24

Right Out:  $103.605 \pm 465.643$      $\chi^2/\text{NDF}$ : 31.5/30

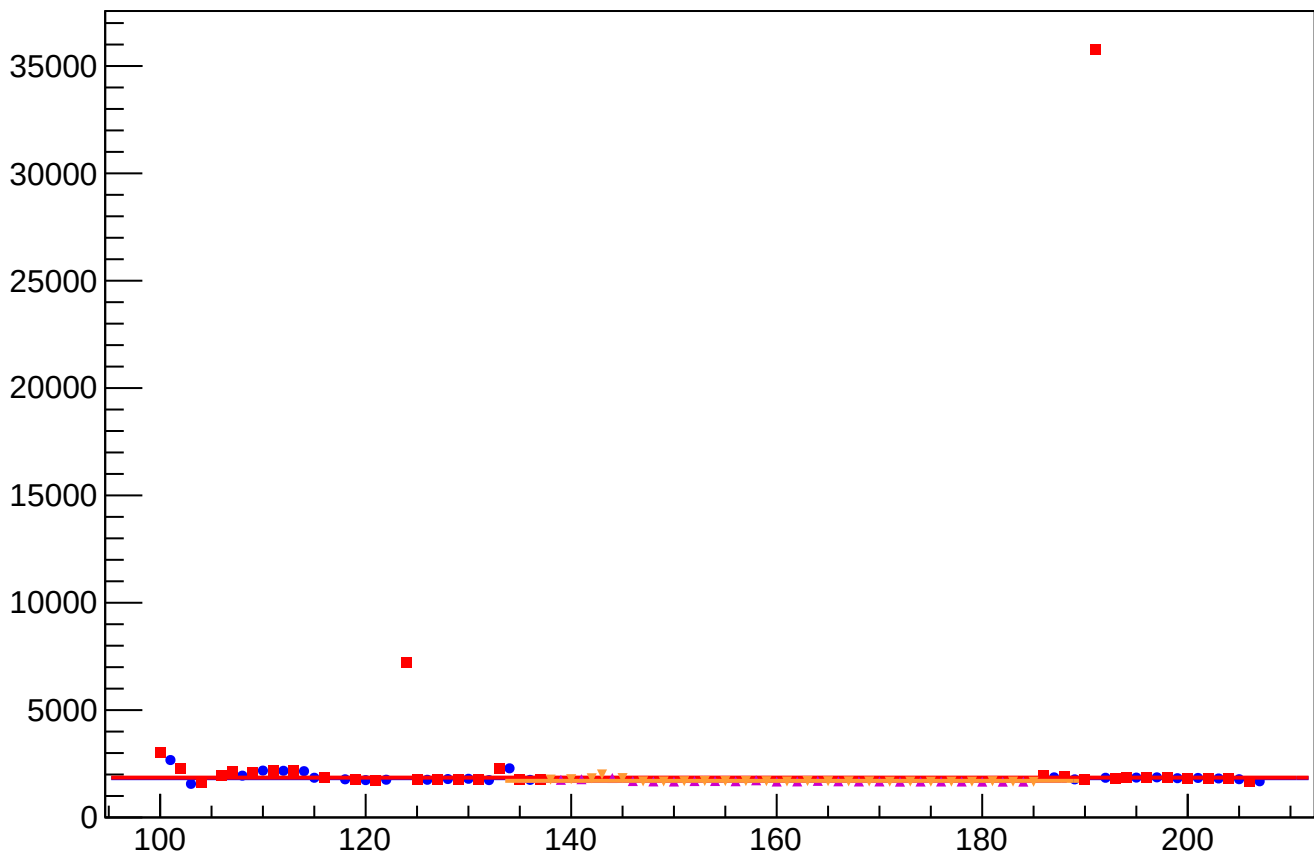
Left In: 719.504+/-396.449     $\chi^2/\text{NDF}: 19.1/22$

+ sign -348.795+/-300.288     $\chi^2/\text{NDF}$ : 50.9/50

All:  $53.823 \pm 212.890$      $\chi^2/\text{NDF}$ : 106.1/104

- sign 460.672+/-301.861     $\chi^2/\text{NDF}$ : 51.6/53

# reg\_asym\_atl1r2\_dd\_rms vs Slug



Right In: 1829.434 $\pm$ 0.336  $\chi^2$ /NDF: 278888.2/25

Left Out: 1705.634 $\pm$ 0.274  $\chi^2$ /NDF: 59928.6/24

Right Out: 1855.277 $\pm$ 0.329  $\chi^2$ /NDF: 535452.2/30

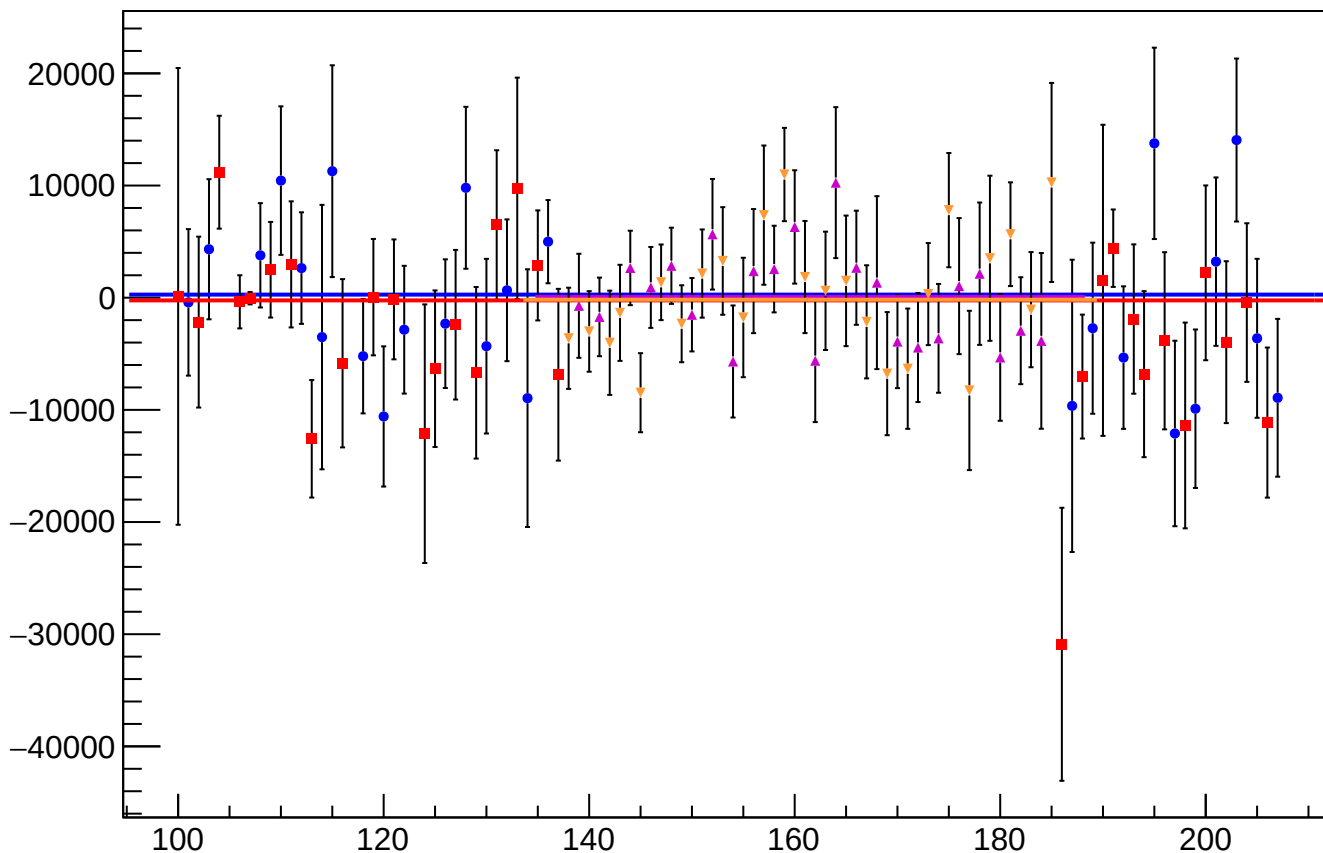
Left In: 1697.514 $\pm$ 0.280  $\chi^2$ /NDF: 21146.9/22

+ sign 1755.178 $\pm$ 0.212  $\chi^2$ /NDF: 420413.4/50

All: 1759.514 $\pm$ 0.151  $\chi^2$ /NDF: 1111104.2/10

- sign 1763.892 $\pm$ 0.213  $\chi^2$ /NDF: 689852.8/53

# asym\_atl1r2\_dd\_reg\_correction\_mean vs Slug



Right In: 275.644 $\pm$ 1273.858  $\chi^2$ /NDF: 28.2/25

Left Out: -175.777 $\pm$ 935.141  $\chi^2$ /NDF: 27.9/24

Right Out: -240.286 $\pm$ 488.773  $\chi^2$ /NDF: 33.3/30

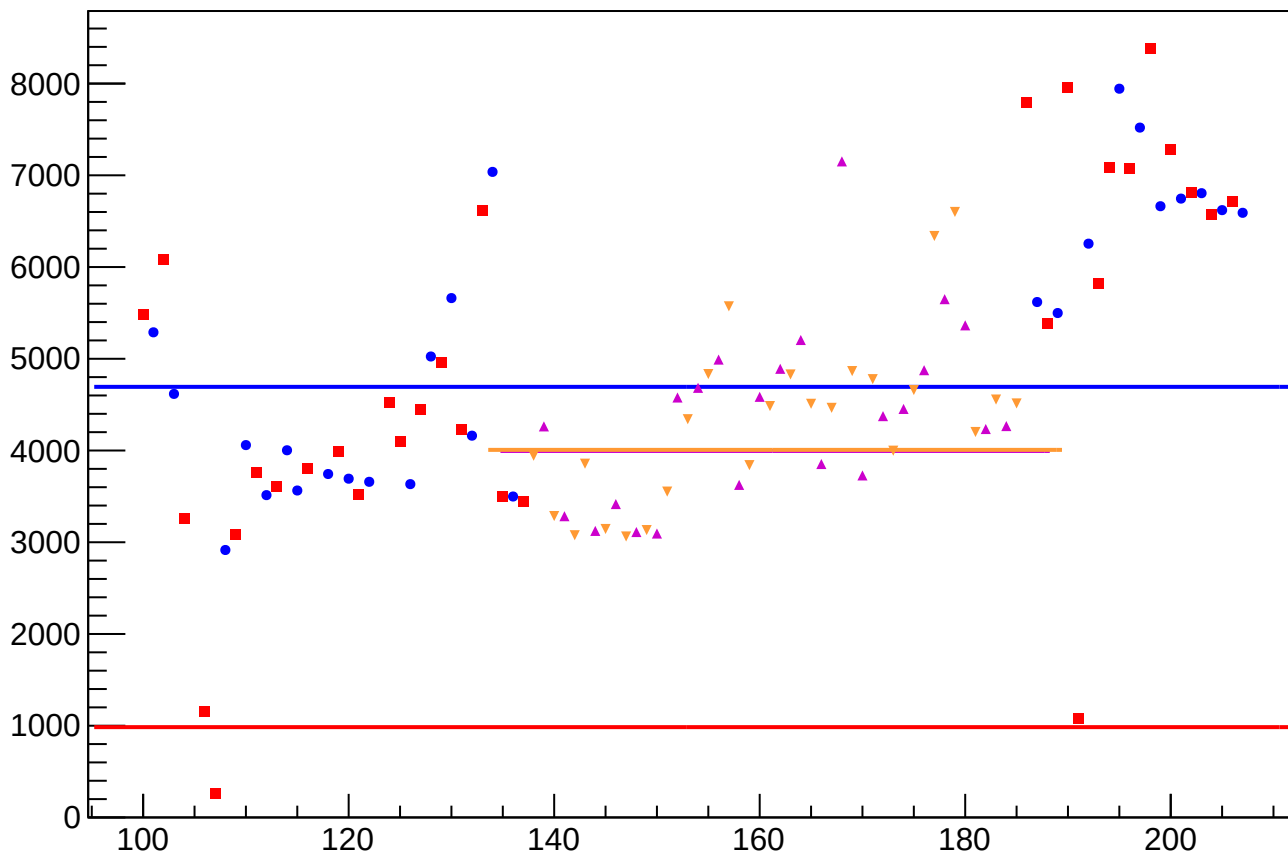
Left In: 56.448 $\pm$ 956.389  $\chi^2$ /NDF: 14.3/22

+ sign -17.695 $\pm$ 753.826  $\chi^2$ /NDF: 56.2/50

All: -138.549 $\pm$ 376.918  $\chi^2$ /NDF: 103.9/104

- sign -178.834 $\pm$ 435.229  $\chi^2$ /NDF: 47.7/53

# asym\_atl1r2\_dd\_reg\_correction\_rms vs Slug



Right In: 4693.994+/-0.901  $\chi^2$ /NDF: 2515034.1/25

Left Out: 4006.998+/-0.661  $\chi^2$ /NDF:1503677.6/24

Right Out: 984.555+/-0.346  $\chi^2$ /NDF: 23867516.9/30

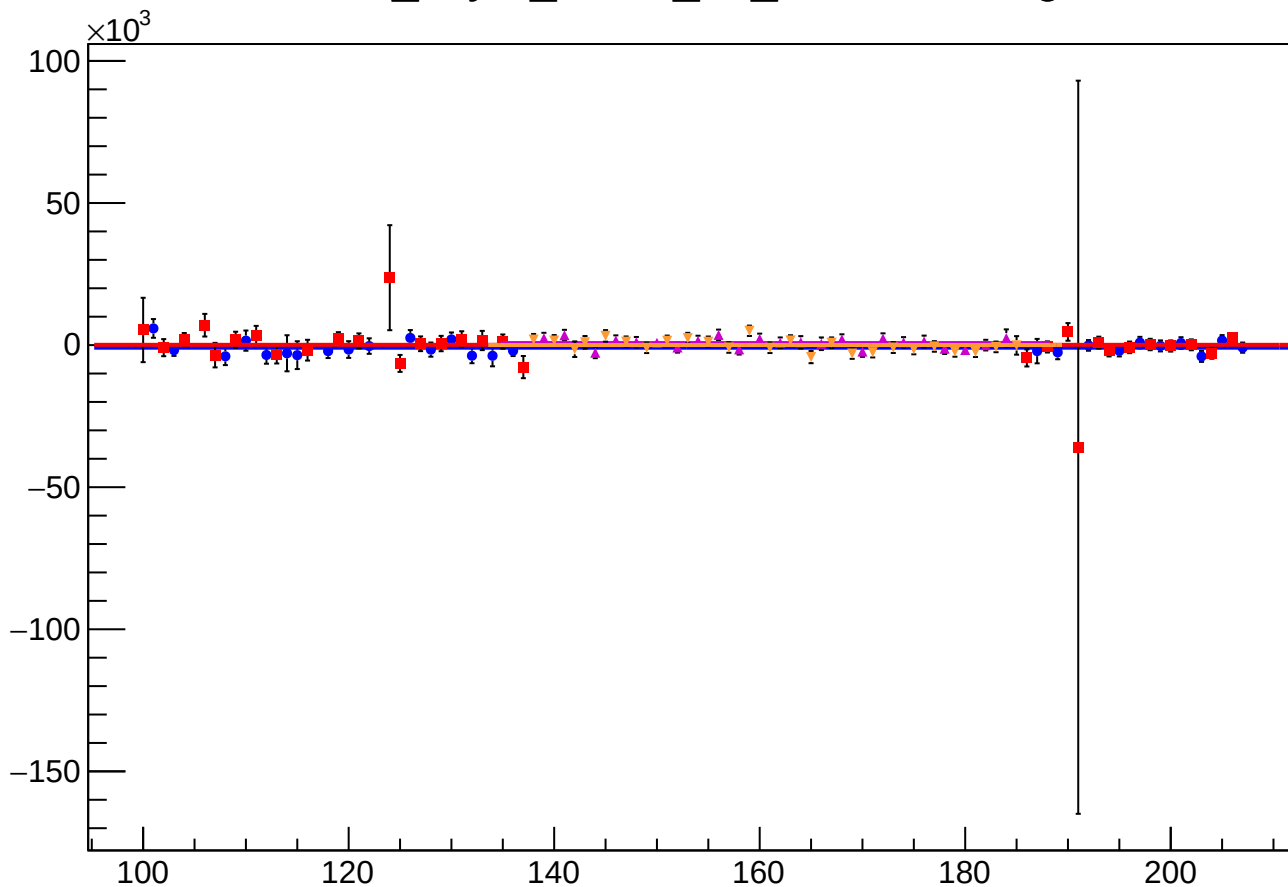
Left In: 3994.974+/-0.676  $\chi^2$ /NDF:1538115.4/22

+ sign 4247.575+/-0.533  $\chi^2$ /NDF: 4396705.0/50

All: 2267.906+/-0.267  $\chi^2$ /NDF: 63905956.6/1

- sign 1607.994+/-0.308  $\chi^2$ /NDF: 41117829.7/53

# cor\_asym\_atl1r2\_dd\_mean vs Slug



Right In:  $-906.012 \pm 474.682$   $\chi^2/\text{NDF}$ : 19.1/25

Left Out:  $23.186 \pm 387.732$   $\chi^2/\text{NDF}$ : 29.5/24

Right Out:  $103.760 \pm 465.644$   $\chi^2/\text{NDF}$ : 31.5/30

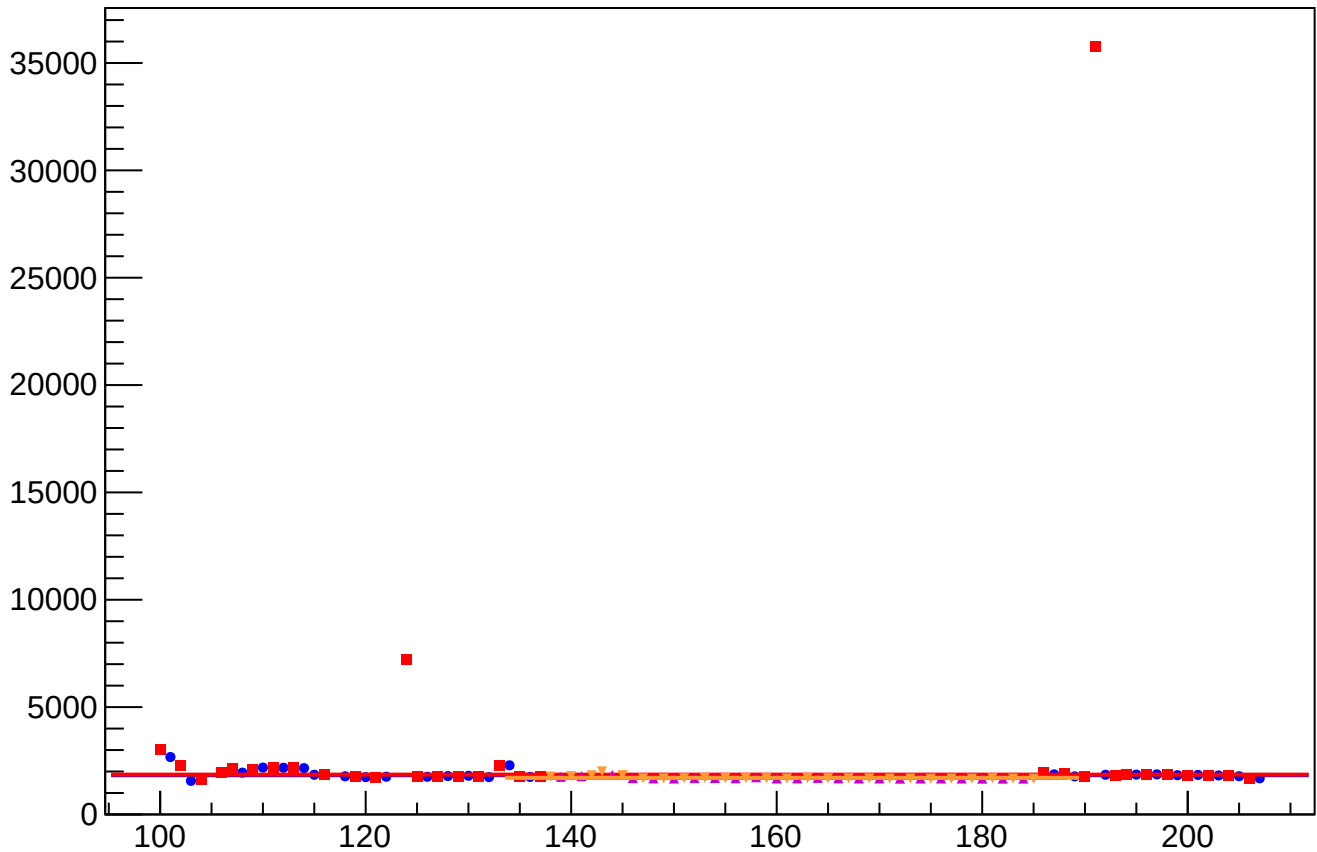
Left In:  $719.380 \pm 396.449$   $\chi^2/\text{NDF}$ : 19.1/22

+ sign  $-348.673 \pm 300.288$   $\chi^2/\text{NDF}$ : 50.9/50

All:  $53.881 \pm 212.890$   $\chi^2/\text{NDF}$ : 106.1/104

- sign  $460.666 \pm 301.862$   $\chi^2/\text{NDF}$ : 51.6/53

# cor\_asym\_atl1r2\_dd\_rms vs Slug



Right In: 1829.434+/-0.336  $\chi^2/\text{NDF}$ : 278887.4/25

Left Out: 1705.635+/-0.274  $\chi^2/\text{NDF}$ : 59928.6/24

Right Out: 1855.470+/-0.329  $\chi^2/\text{NDF}$ : 535796.7/30

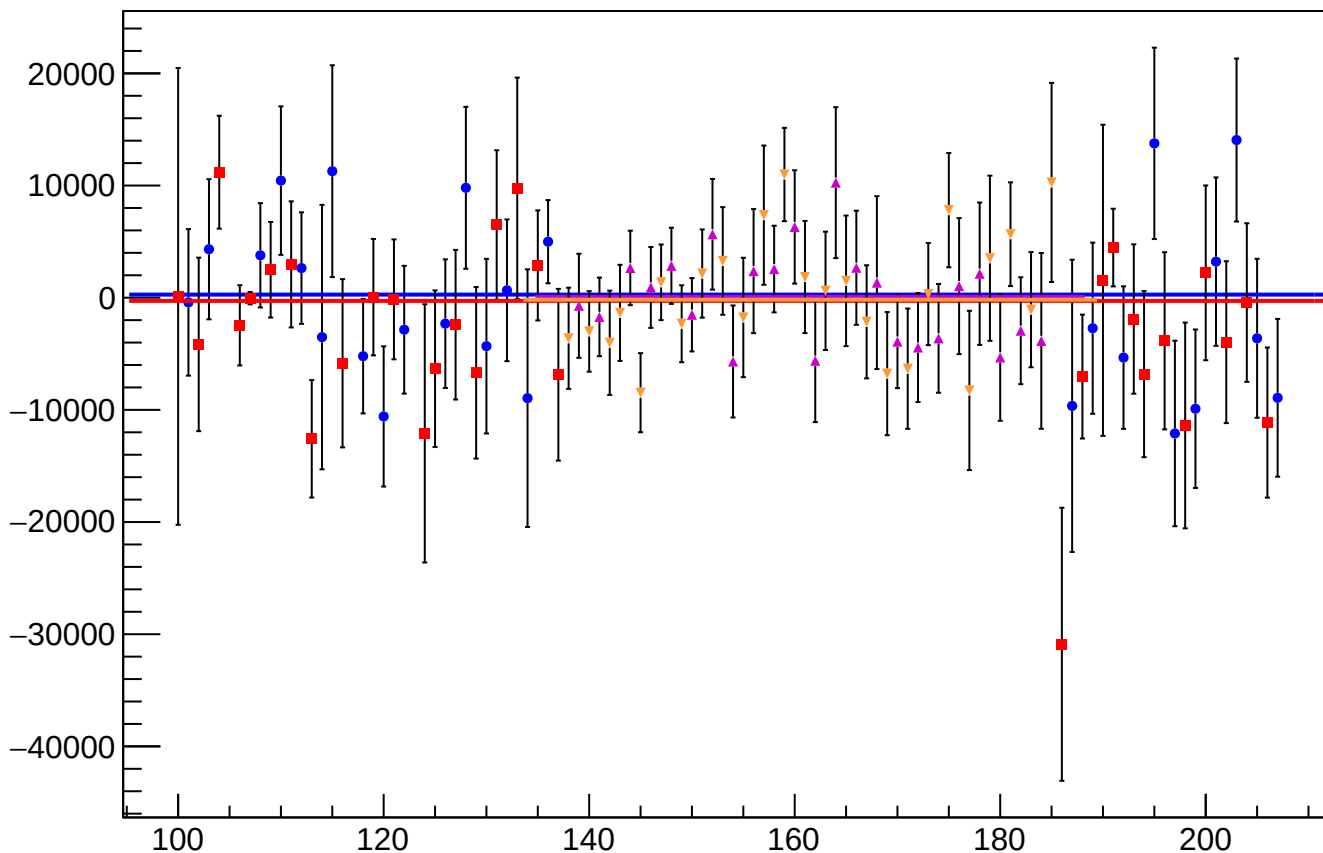
Left In: 1697.514+/-0.280  $\chi^2/\text{NDF}$ : 21146.9/22

+ sign 1755.178+/-0.212  $\chi^2/\text{NDF}$ : 420412.9/50

All: 1759.551+/-0.151  $\chi^2/\text{NDF}$ : 1111773.4/10

- sign 1763.965+/-0.213  $\chi^2/\text{NDF}$ : 690508.5/53

# asym\_atl1r2\_dd\_cor\_correction\_mean vs Slug



Right In:  $275.587 \pm 1273.861$   $\chi^2/\text{NDF}$ : 28.2/25

Left Out:  $-175.755 \pm 935.140$   $\chi^2/\text{NDF}$ : 27.9/24

Right Out:  $-284.148 \pm 494.751$   $\chi^2/\text{NDF}$ : 33.9/30

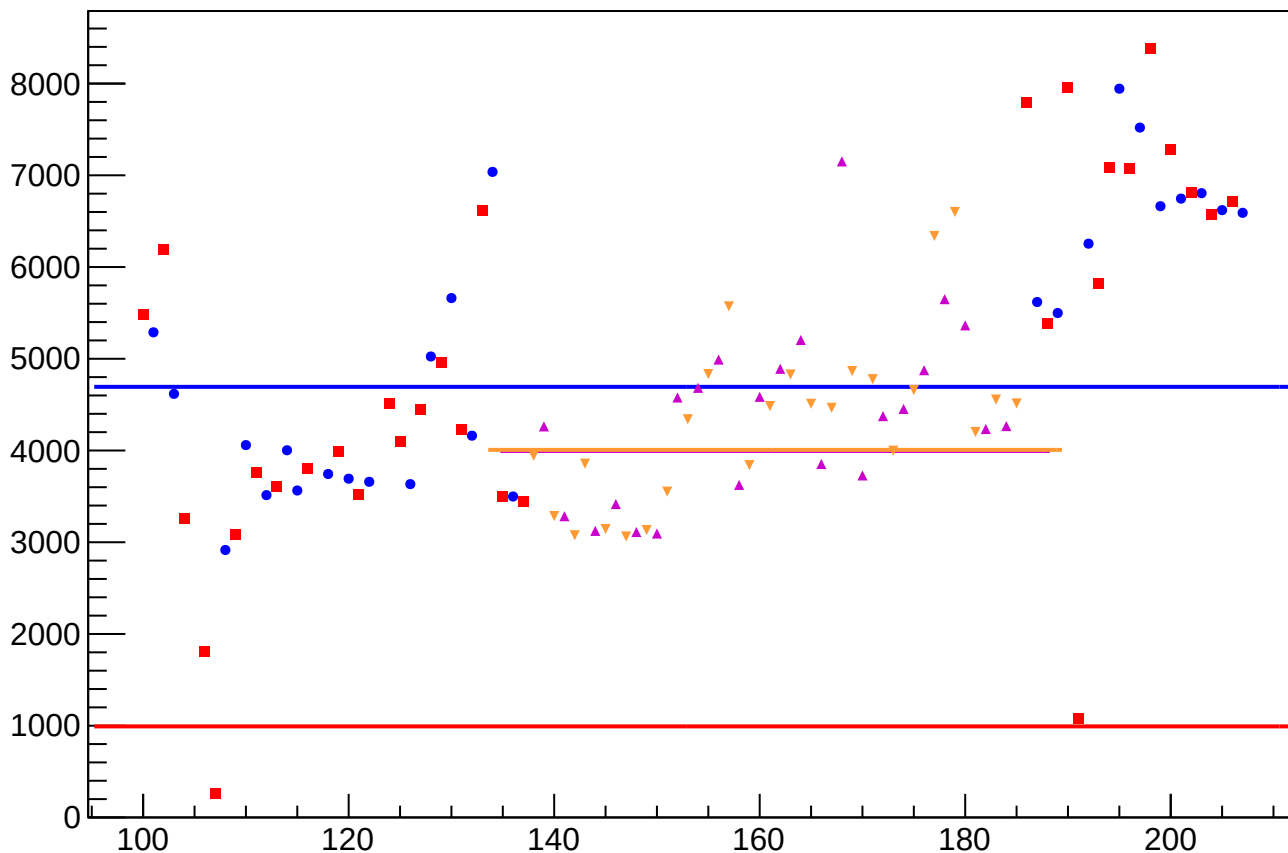
Left In:  $56.377 \pm 956.388$   $\chi^2/\text{NDF}$ : 14.3/22

+ sign  $-17.702 \pm 753.826$   $\chi^2/\text{NDF}$ : 56.2/50

All:  $-162.912 \pm 379.639$   $\chi^2/\text{NDF}$ : 104.5/104

- sign  $-212.258 \pm 439.434$   $\chi^2/\text{NDF}$ : 48.3/53

# asym\_atl1r2\_dd\_cor\_correction\_rms vs Slug



Right In: 4694.005 $\pm$ 0.901  $\chi^2$ /NDF: 2515044.1/25

Left Out: 4006.990 $\pm$ 0.661  $\chi^2$ /NDF:1503698.2/24

Right Out: 992.646 $\pm$ 0.350  $\chi^2$ /NDF: 23974700.7/30

Left In: 3994.972 $\pm$ 0.676  $\chi^2$ /NDF:1538098.4/22

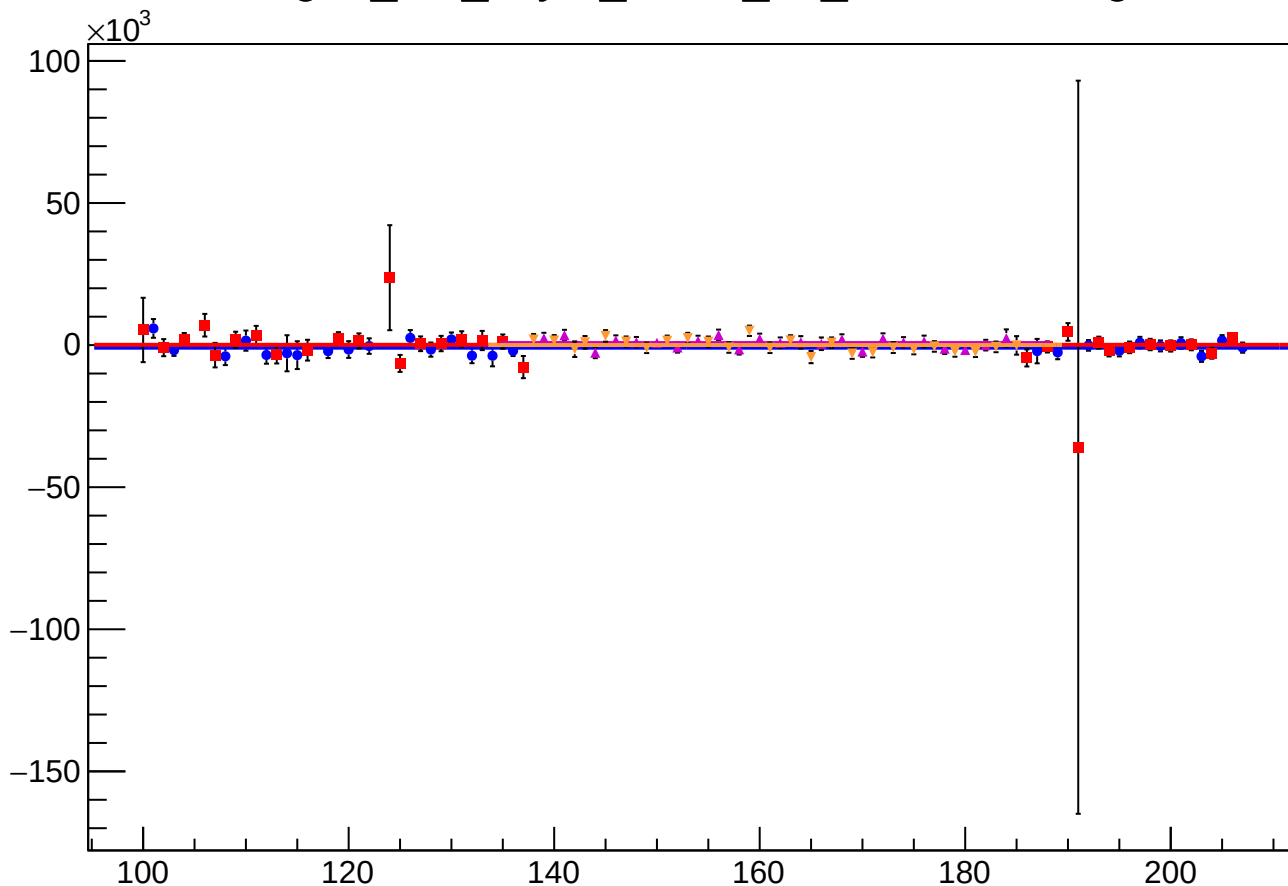
+ sign 4247.573 $\pm$ 0.533  $\chi^2$ /NDF: 4396755.3/50

All: 2291.268 $\pm$ 0.268  $\chi^2$ /NDF: 63505198.7/1

- sign 1626.482 $\pm$ 0.311  $\chi^2$ /NDF: 41061400.5/53



# eigen\_cor\_asym\_atl1r2\_dd\_mean vs Slug



Right In:  $-906.012 \pm 474.682$   $\chi^2/\text{NDF}$ : 19.1/25

Left Out:  $23.186 \pm 387.732$   $\chi^2/\text{NDF}$ : 29.5/24

Right Out:  $103.760 \pm 465.644$   $\chi^2/\text{NDF}$ : 31.5/30

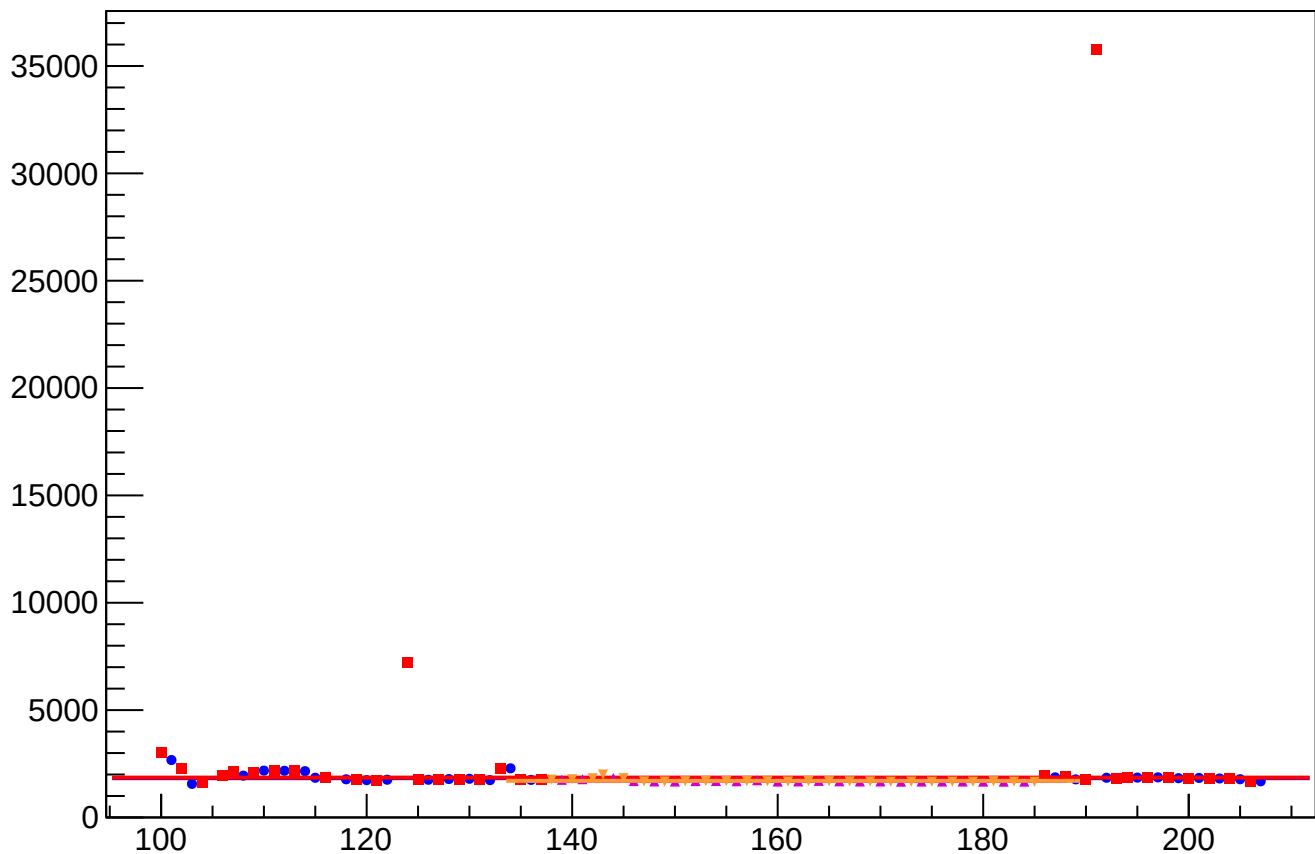
Left In:  $719.380 \pm 396.449$   $\chi^2/\text{NDF}$ : 19.1/22

+ sign  $-348.673 \pm 300.288$   $\chi^2/\text{NDF}$ : 50.9/50

All:  $53.881 \pm 212.890$   $\chi^2/\text{NDF}$ : 106.1/104

- sign  $460.666 \pm 301.862$   $\chi^2/\text{NDF}$ : 51.6/53

# eigen\_cor\_asym\_atl1r2\_dd\_rms vs Slug



Right In: 1829.434+/-0.336  $\chi^2/\text{NDF}$ : 278887.4/25

Left Out: 1705.635+/-0.274  $\chi^2/\text{NDF}$ : 59928.6/24

Right Out: 1855.470+/-0.329  $\chi^2/\text{NDF}$ : 535796.7/30

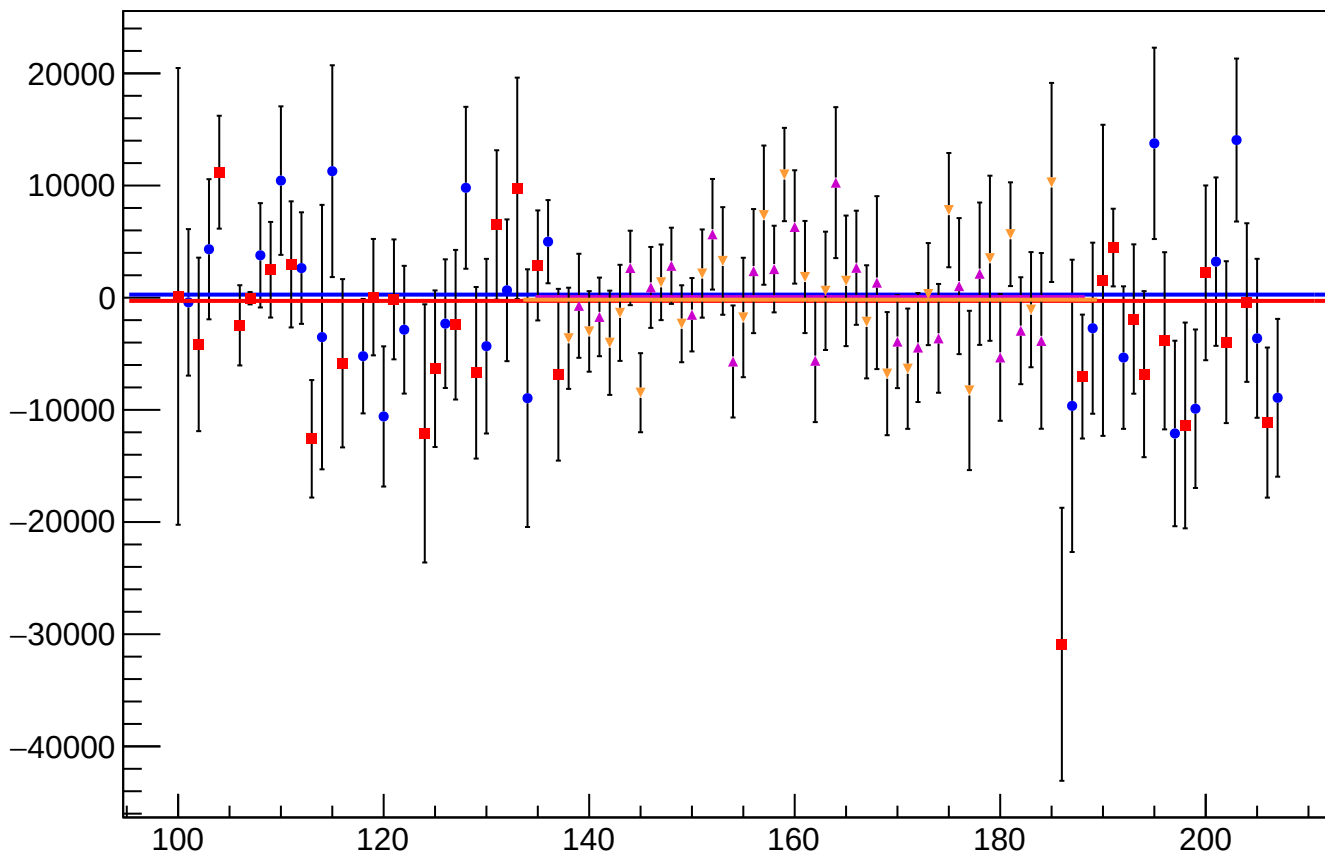
Left In: 1697.514+/-0.280  $\chi^2/\text{NDF}$ : 21146.9/22

+ sign 1755.178+/-0.212  $\chi^2/\text{NDF}$ : 420412.9/50

All: 1759.551+/-0.151  $\chi^2/\text{NDF}$ : 1111773.4/10

- sign 1763.965+/-0.213  $\chi^2/\text{NDF}$ : 690508.5/53

asym\_atl1r2\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In:  $275.587 \pm 1273.861$   $\chi^2/\text{NDF}$ : 28.2/25

Left Out:  $-175.755 \pm 935.140$   $\chi^2/\text{NDF}$ : 27.9/24

Right Out:  $-284.148 \pm 494.751$   $\chi^2/\text{NDF}$ : 33.9/30

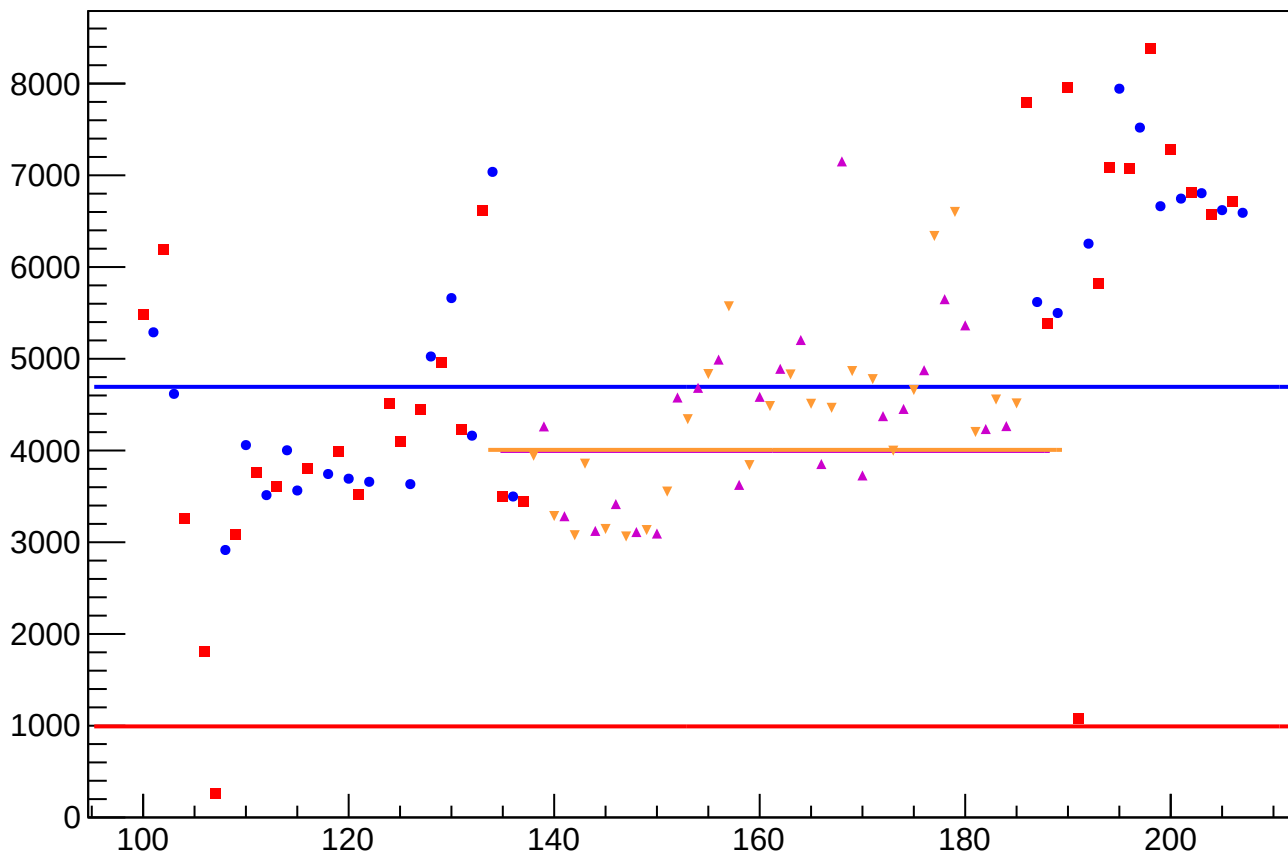
Left In:  $56.377 \pm 956.388$   $\chi^2/\text{NDF}$ : 14.3/22

+ sign  $-17.702 \pm 753.826$   $\chi^2/\text{NDF}$ : 56.2/50

All:  $-162.912 \pm 379.639$   $\chi^2/\text{NDF}$ : 104.5/104

- sign  $-212.258 \pm 439.434$   $\chi^2/\text{NDF}$ : 48.3/53

asym\_atl1r2\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 4694.005 $\pm$ 0.901  $\chi^2$ /NDF: 2515044.1/25

Left Out: 4006.990 $\pm$ 0.661  $\chi^2$ /NDF:1503698.2/24

Right Out: 992.646 $\pm$ 0.350  $\chi^2$ /NDF: 23974700.7/30

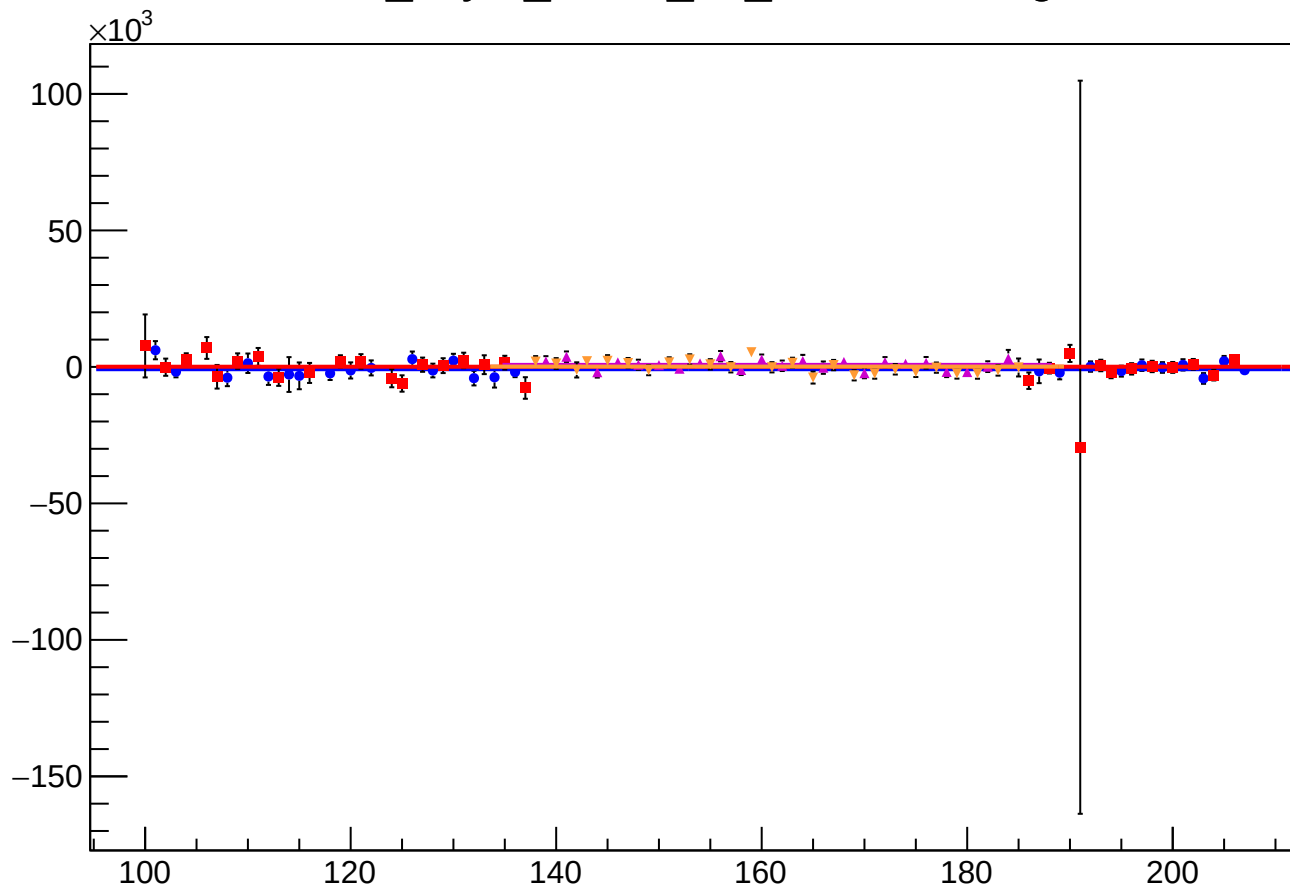
Left In: 3994.972 $\pm$ 0.676  $\chi^2$ /NDF:1538098.4/22

+ sign 4247.573 $\pm$ 0.533  $\chi^2$ /NDF: 4396755.3/50

All: 2291.268 $\pm$ 0.268  $\chi^2$ /NDF: 63505198.7/1

- sign 1626.482 $\pm$ 0.311  $\chi^2$ /NDF: 41061400.5/53

# dit\_asym\_atl1r2\_dd\_mean vs Slug



Right In:  $-844.576 \pm 479.915$   $\chi^2/\text{NDF}$ : 20.5/25

Left Out:  $119.959 \pm 389.458$   $\chi^2/\text{NDF}$ : 29.7/24

Right Out:  $65.673 \pm 467.431$   $\chi^2/\text{NDF}$ : 32.7/30

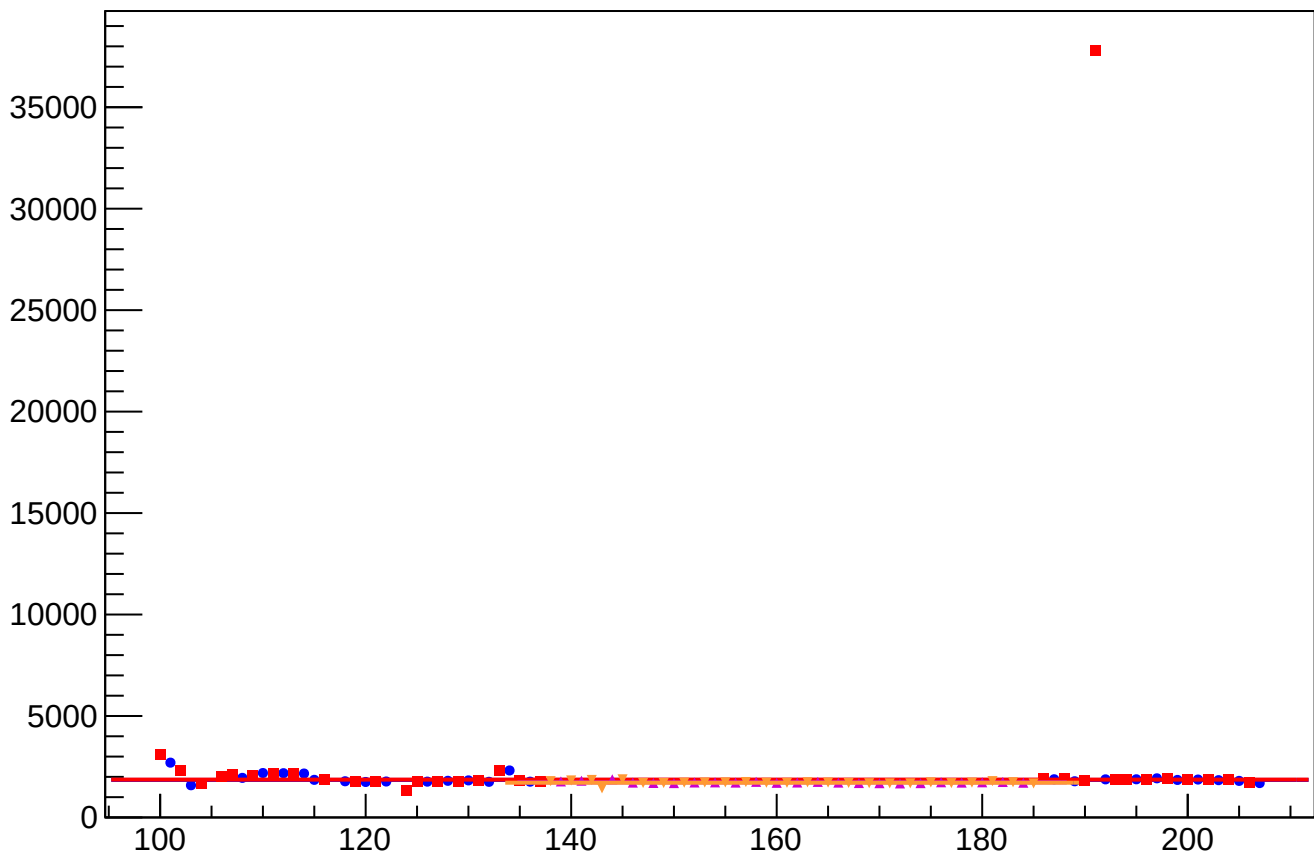
Left In:  $741.191 \pm 404.161$   $\chi^2/\text{NDF}$ : 19.0/22

+ sign  $-263.025 \pm 302.410$   $\chi^2/\text{NDF}$ : 52.6/50

All:  $90.693 \pm 214.999$   $\chi^2/\text{NDF}$ : 108.3/104

- sign  $452.211 \pm 305.726$   $\chi^2/\text{NDF}$ : 52.9/53

# dit\_asym\_atl1r2\_dd\_rms vs Slug



Right In: 1849.363+/-0.339  $\chi^2/\text{NDF}$ : 278896.2/25

Left Out: 1712.310+/-0.275  $\chi^2/\text{NDF}$ : 94399.0/24

Right Out: 1864.353+/-0.330  $\chi^2/\text{NDF}$ : 430128.9/30

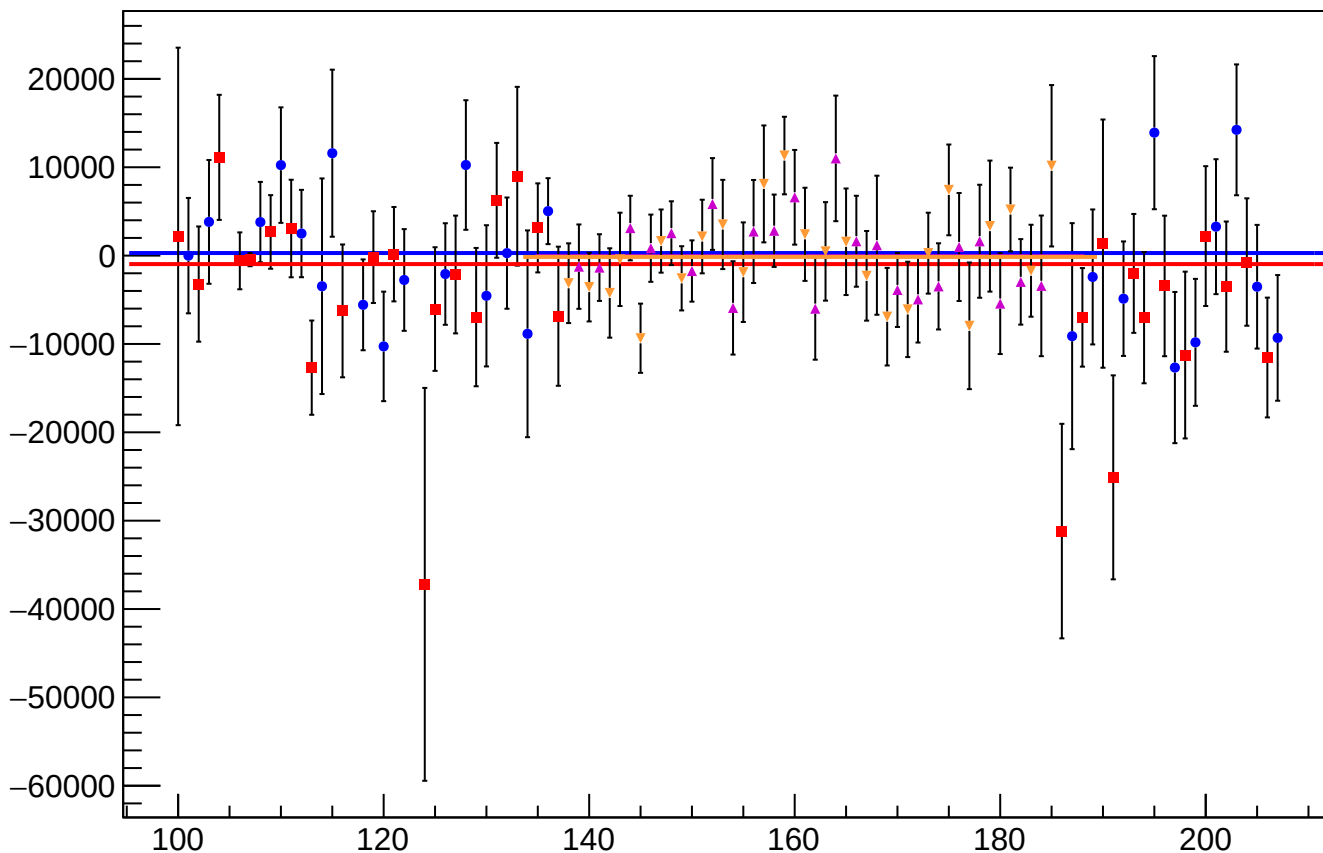
Left In: 1730.342+/-0.286  $\chi^2/\text{NDF}$ : 23075.7/22

+ sign 1766.729+/-0.214  $\chi^2/\text{NDF}$ : 471640.4/50

All: 1777.099+/-0.152  $\chi^2/\text{NDF}$ : 1023705.6/100

- sign 1787.695+/-0.216  $\chi^2/\text{NDF}$ : 547310.4/53

# asym\_atl1r2\_dd\_dit\_correction\_mean vs Slug



Right In:  $290.763 \pm 1284.281$   $\chi^2/\text{NDF}: 27.9/25$

Left Out:  $-150.169 \pm 984.984$   $\chi^2/\text{NDF}: 26.9/24$

Right Out:  $-960.380 \pm 632.429$   $\chi^2/\text{NDF}: 33.9/30$

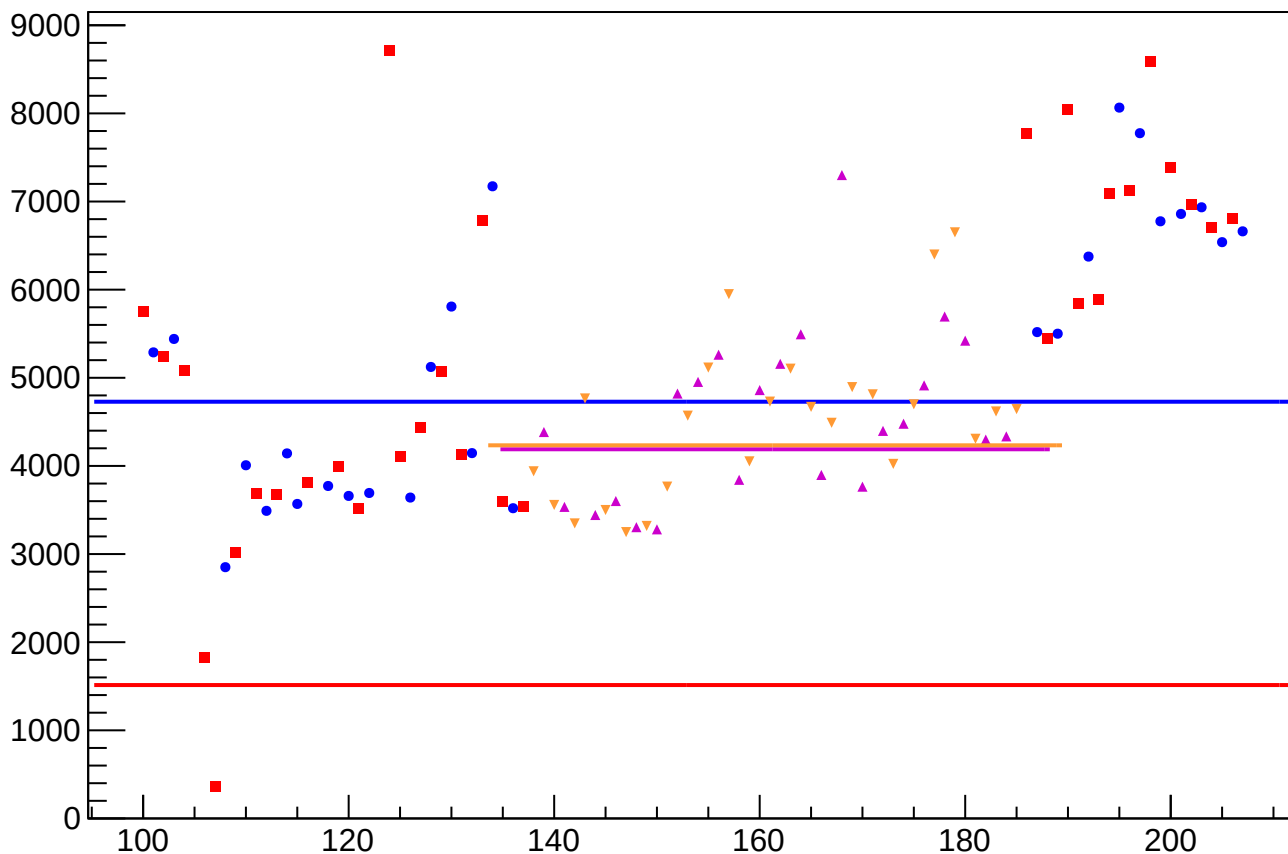
Left In:  $-65.169 \pm 1000.106$   $\chi^2/\text{NDF}: 14.0/22$

+ sign  $13.137 \pm 781.581$   $\chi^2/\text{NDF}: 54.8/50$

All:  $-475.920 \pm 441.210$   $\chi^2/\text{NDF}: 103.8/104$

- sign  $-704.660 \pm 534.523$   $\chi^2/\text{NDF}: 48.5/53$

# asym\_atl1r2\_dd\_dit\_correction\_rms vs Slug



Right In: 4728.428 $\pm$ 0.908  $\chi^2/\text{NDF}$ : 2666436.4/25

Left Out: 4233.905 $\pm$ 0.696  $\chi^2/\text{NDF}$ : 1284783.2/24

Right Out: 1513.665 $\pm$ 0.447  $\chi^2/\text{NDF}$ : 21224213.4/30

Left In: 4188.874 $\pm$ 0.707  $\chi^2/\text{NDF}$ : 1344602.0/22

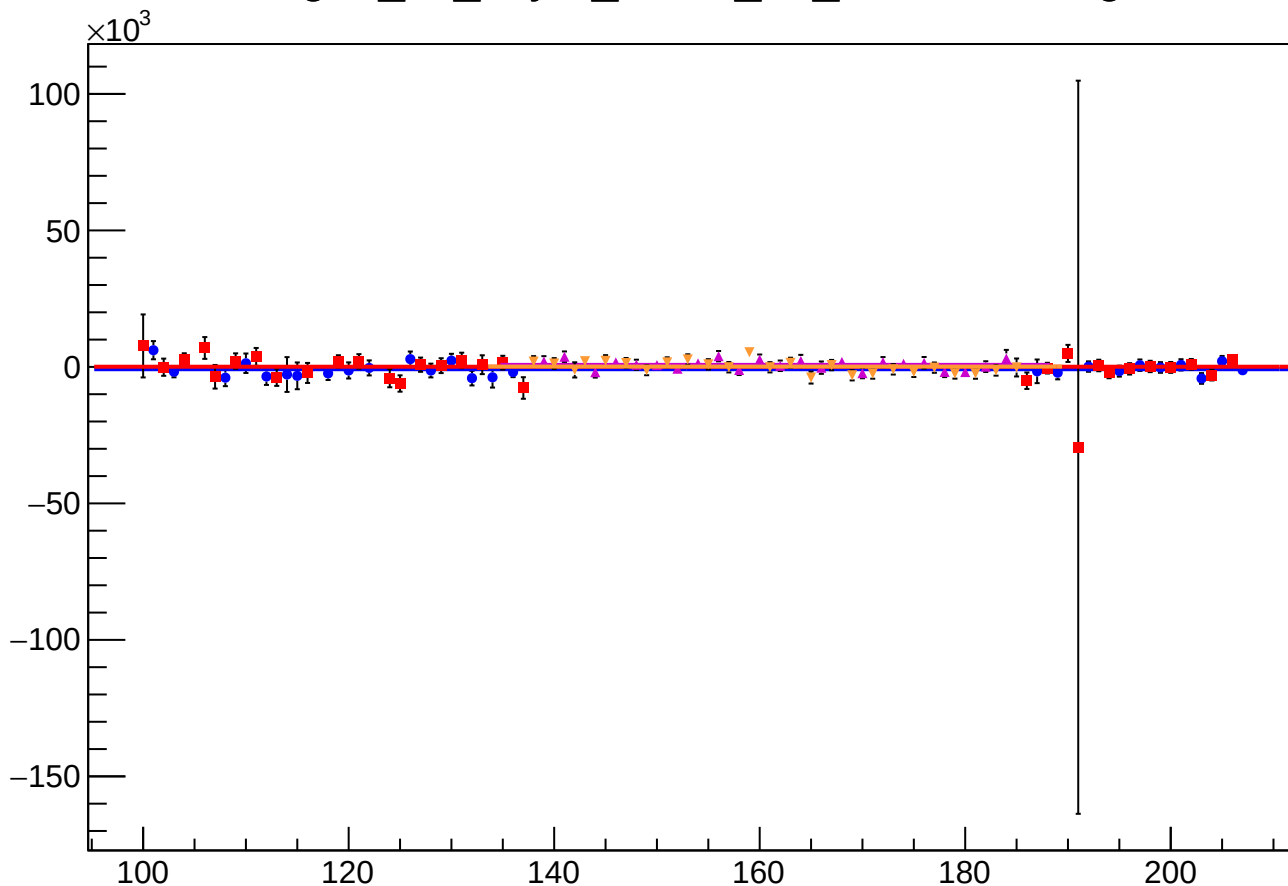
+ sign 4417.058 $\pm$ 0.553  $\chi^2/\text{NDF}$ : 4137931.5/50

All: 2959.551 $\pm$ 0.312  $\chi^2/\text{NDF}$ : 47137470.0/100

- sign 2277.849 $\pm$ 0.378  $\chi^2/\text{NDF}$ : 32791421.2/53



# eigen\_dit\_asym\_atl1r2\_dd\_mean vs Slug



Right In:  $-844.576 \pm 479.915$   $\chi^2/\text{NDF}$ : 20.5/25

Left Out:  $119.962 \pm 389.458$   $\chi^2/\text{NDF}$ : 29.7/24

Right Out:  $65.673 \pm 467.431$   $\chi^2/\text{NDF}$ : 32.7/30

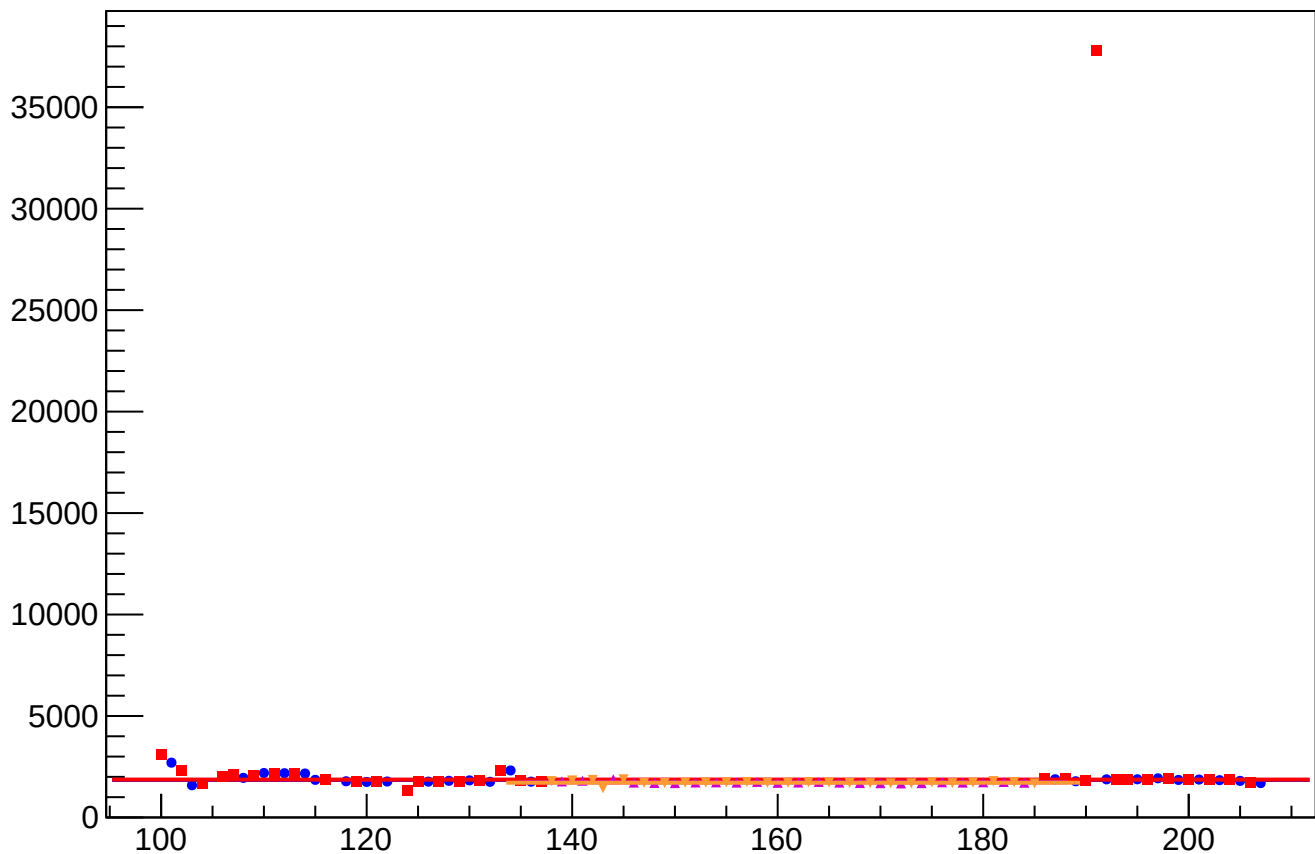
Left In:  $741.189 \pm 404.161$   $\chi^2/\text{NDF}$ : 19.0/22

+ sign  $-263.023 \pm 302.410$   $\chi^2/\text{NDF}$ : 52.6/50

All:  $90.694 \pm 214.999$   $\chi^2/\text{NDF}$ : 108.3/104

- sign  $452.211 \pm 305.726$   $\chi^2/\text{NDF}$ : 52.9/53

# eigen\_dit\_asym\_atl1r2\_dd\_rms vs Slug



Right In: 1849.363+/-0.339  $\chi^2/\text{NDF}$ : 278896.1/25

Left Out: 1712.310+/-0.275  $\chi^2/\text{NDF}$ : 94398.1/24

Right Out: 1864.353+/-0.330  $\chi^2/\text{NDF}$ : 430129.2/30

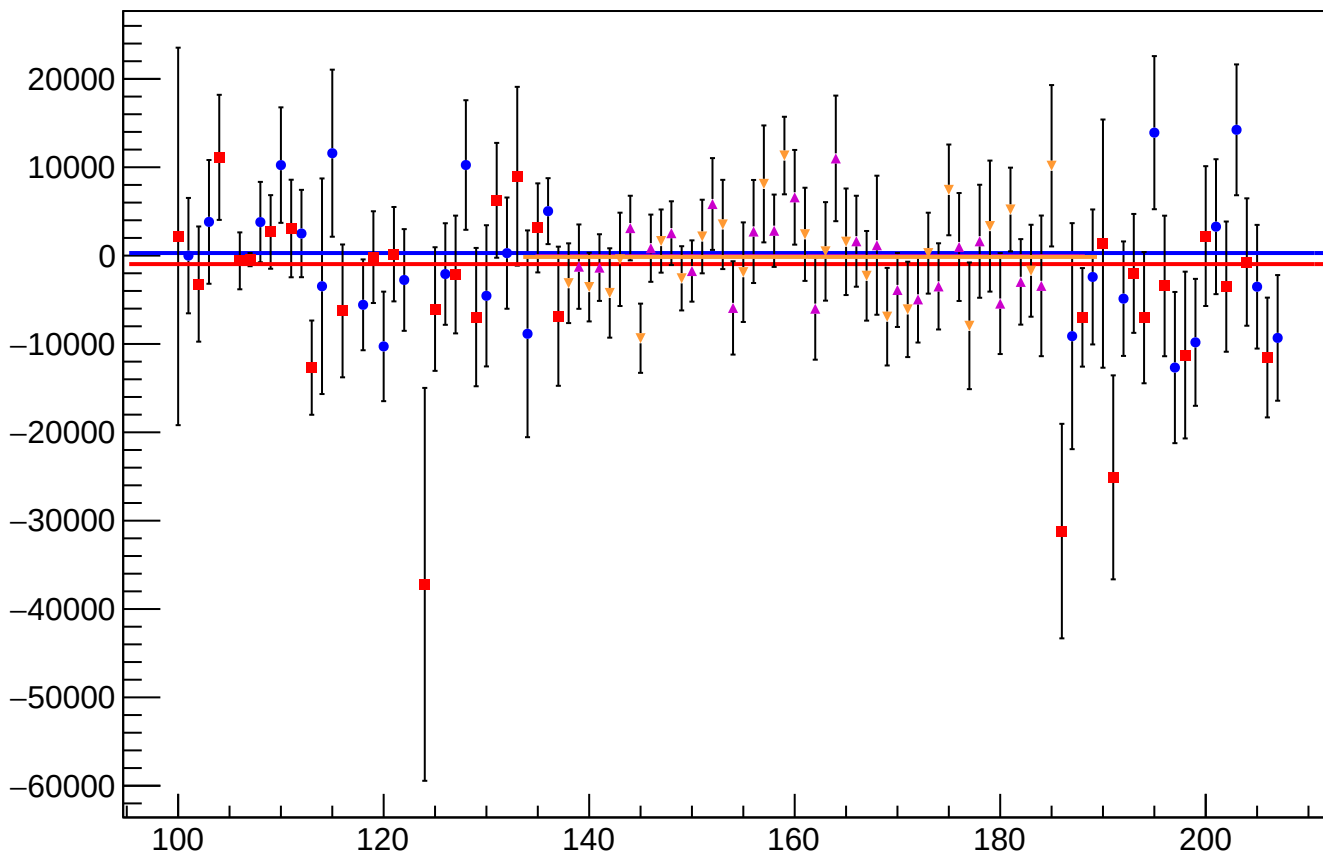
Left In: 1730.342+/-0.286  $\chi^2/\text{NDF}$ : 23075.7/22

+ sign 1766.729+/-0.214  $\chi^2/\text{NDF}$ : 471638.5/50

All: 1777.100+/-0.152  $\chi^2/\text{NDF}$ : 1023703.3/10

- sign 1787.695+/-0.216  $\chi^2/\text{NDF}$ : 547310.1/53

asym\_atl1r2\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $290.752 \pm 1284.280$   $\chi^2/\text{NDF}$ : 27.9/25

Left Out:  $-150.169 \pm 984.986$   $\chi^2/\text{NDF}$ : 26.9/24

Right Out:  $-960.401 \pm 632.439$   $\chi^2/\text{NDF}$ : 33.9/30

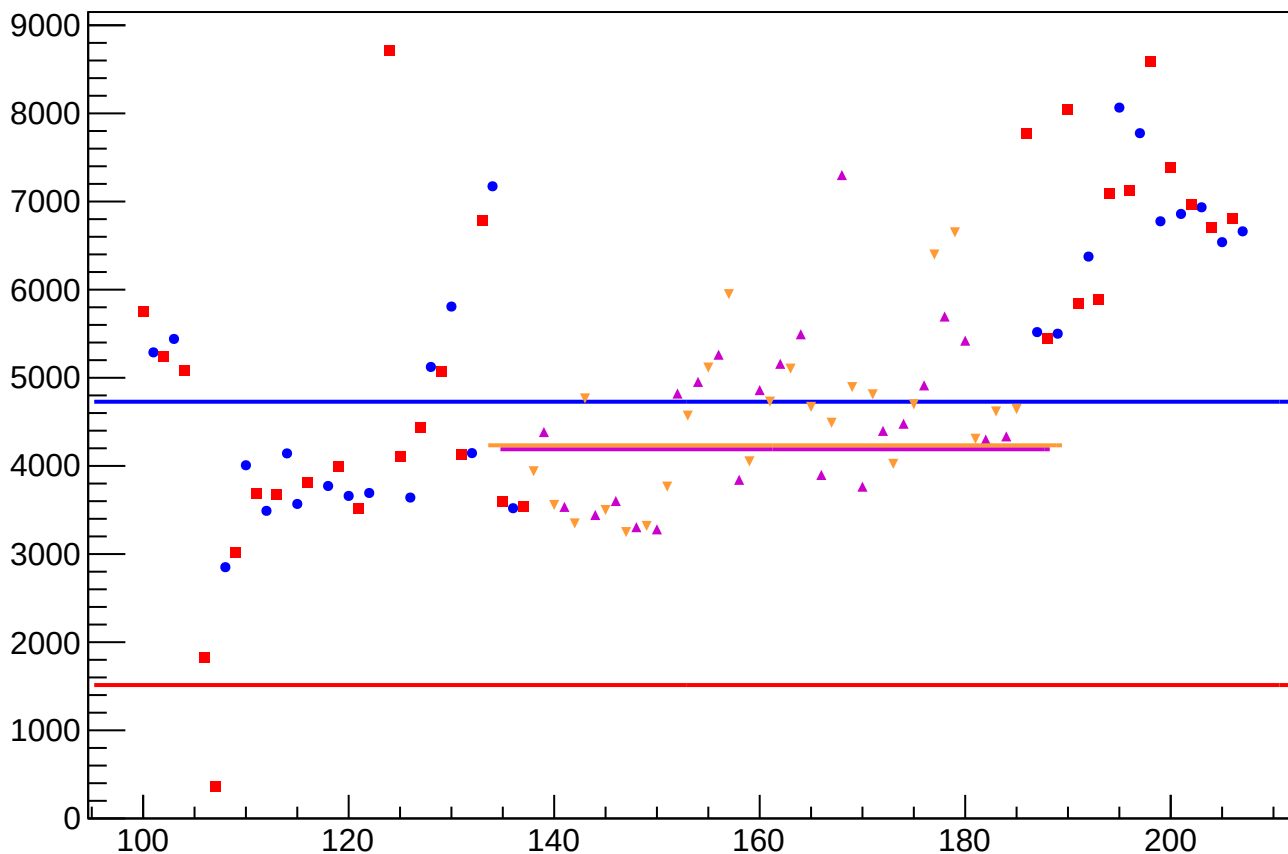
Left In:  $-65.171 \pm 1000.108$   $\chi^2/\text{NDF}$ : 14.0/22

+ sign  $13.133 \pm 781.582$   $\chi^2/\text{NDF}$ : 54.8/50

All:  $-475.924 \pm 441.213$   $\chi^2/\text{NDF}$ : 103.8/104

- sign  $-704.670 \pm 534.529$   $\chi^2/\text{NDF}$ : 48.5/53

asym\_atl1r2\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 4728.423 $\pm$ 0.908  $\chi^2/\text{NDF}$ : 2666454.0/25

Left Out: 4233.911 $\pm$ 0.696  $\chi^2/\text{NDF}$ : 1284785.6/24

Right Out: 1513.707 $\pm$ 0.447  $\chi^2/\text{NDF}$ : 21223938.0/30

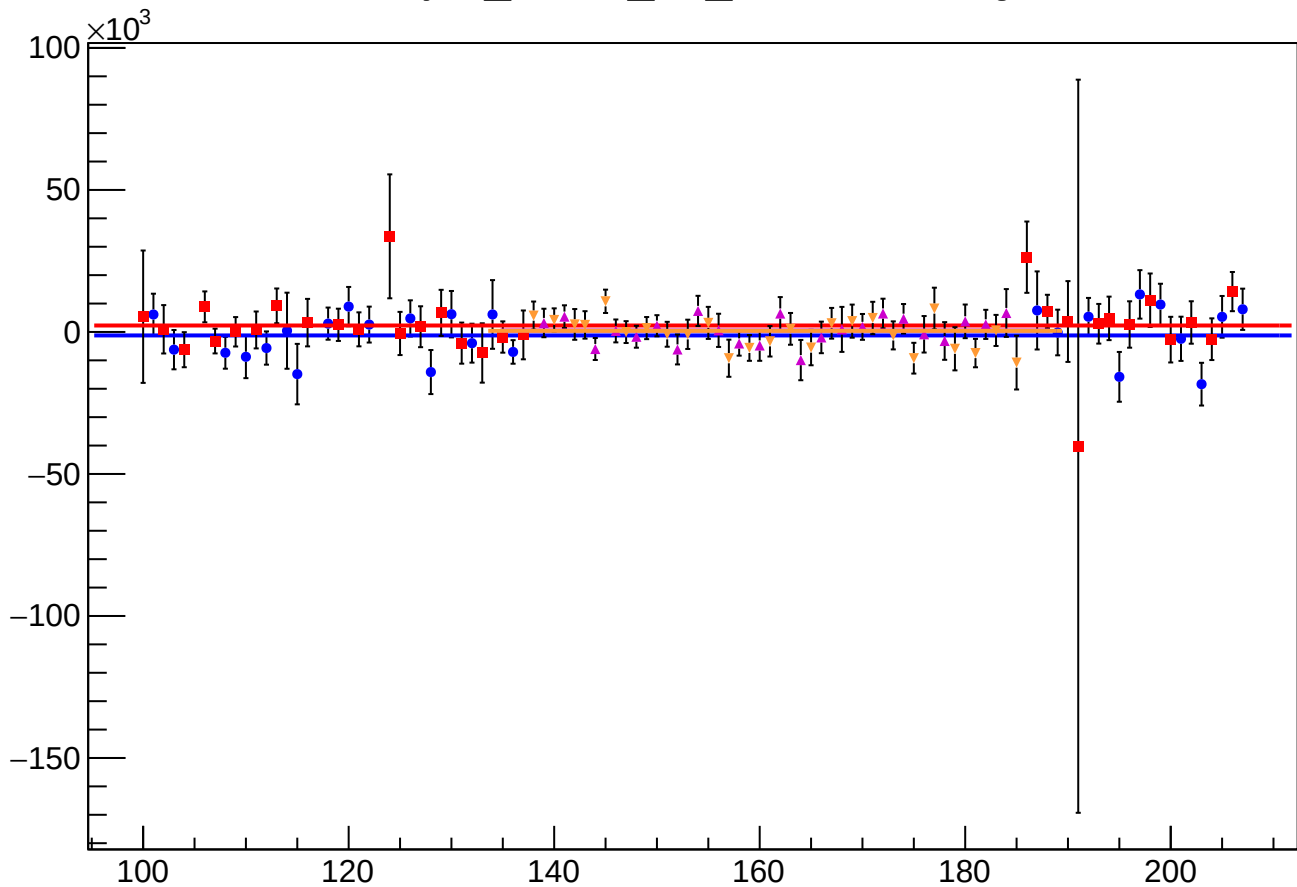
Left In: 4188.880 $\pm$ 0.707  $\chi^2/\text{NDF}$ : 1344607.0/22

+ sign 4417.060 $\pm$ 0.553  $\chi^2/\text{NDF}$ : 4137943.2/50

All: 2959.593 $\pm$ 0.312  $\chi^2/\text{NDF}$ : 47136329.5/100

- sign 2277.895 $\pm$ 0.378  $\chi^2/\text{NDF}$ : 32790770.2/53

# asym\_atl1r2\_dd\_mean vs Slug



Right In:  $-1227.389 \pm 1396.295$   $\chi^2/\text{NDF}$ : 32.9/25

Left Out:  $398.336 \pm 1028.431$   $\chi^2/\text{NDF}$ : 24.7/24

Right Out:  $2273.181 \pm 1296.461$   $\chi^2/\text{NDF}$ : 20.7/30

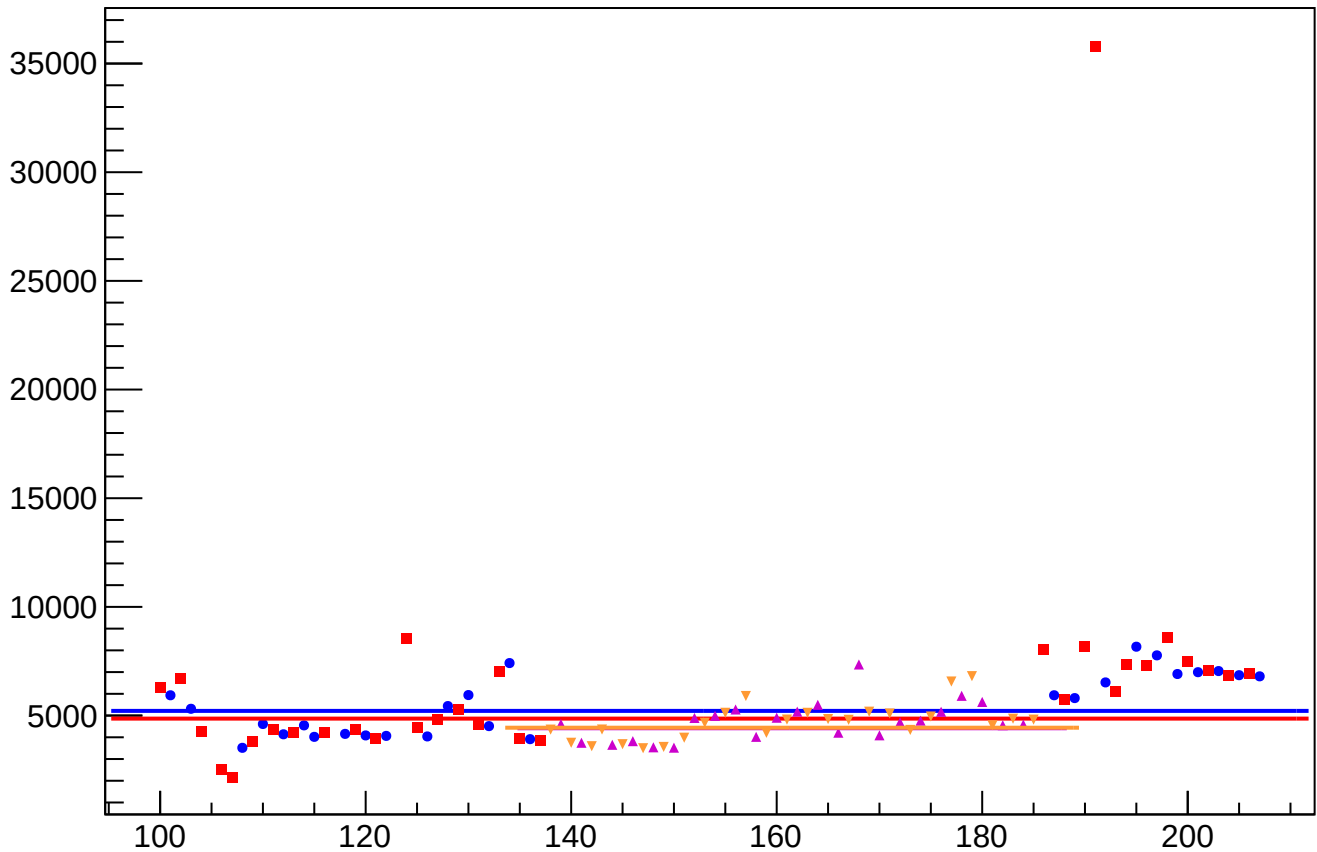
Left In:  $502.999 \pm 1049.682$   $\chi^2/\text{NDF}$ : 17.3/22

+ sign  $-173.431 \pm 828.063$   $\chi^2/\text{NDF}$ : 58.5/50

All:  $525.516 \pm 581.148$   $\chi^2/\text{NDF}$ : 99.0/104

- sign  $1203.931 \pm 815.809$   $\chi^2/\text{NDF}$ : 39.2/53

# asym\_atl1r2\_dd\_rms vs Slug



Right In: 5214.691+/-0.987  $\chi^2/\text{NDF}$ : 1900460.4/25

Left Out: 4440.810+/-0.727  $\chi^2/\text{NDF}$ : 1073119.1/24

Right Out: 4859.581+/-0.910  $\chi^2/\text{NDF}$ : 3680248.6/30

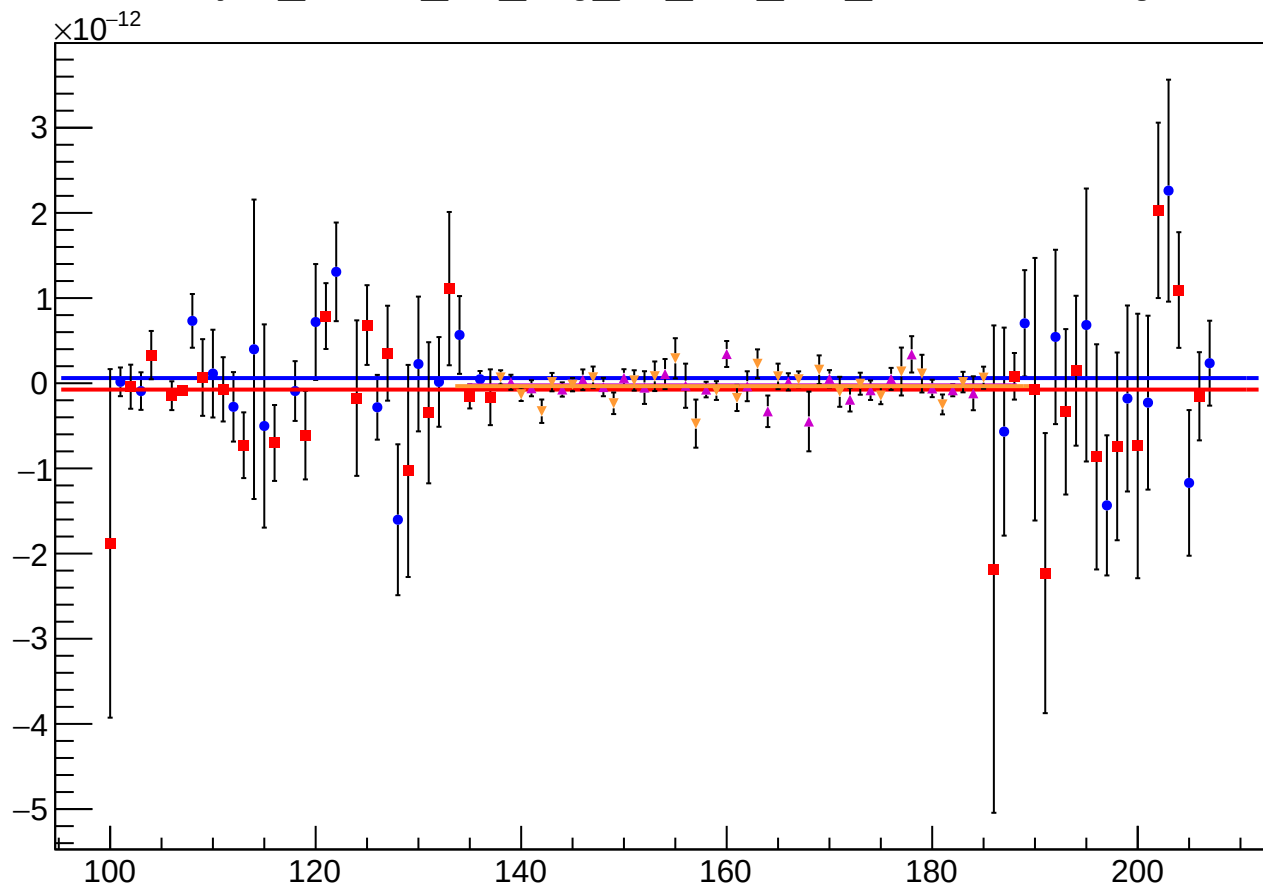
Left In: 4415.366+/-0.742  $\chi^2/\text{NDF}$ : 1111411.1/22

+ sign 4712.984+/-0.586  $\chi^2/\text{NDF}$ : 3371870.3/50

All: 4651.805+/-0.410  $\chi^2/\text{NDF}$ : 8328016.0/10

- sign 4592.755+/-0.575  $\chi^2/\text{NDF}$ : 4934691.5/53

# asym\_atl1r2\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 27.6/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 28.5/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 30.9/30

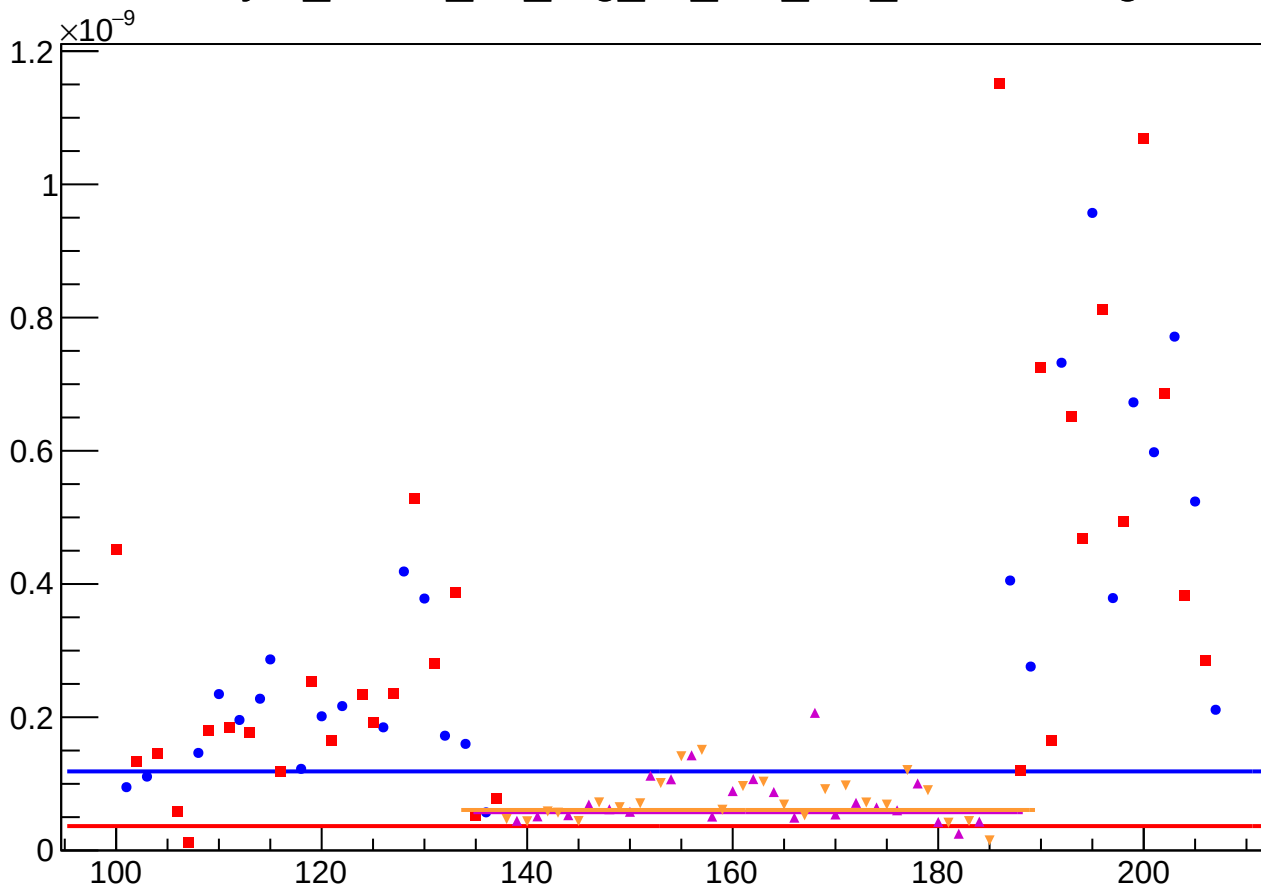
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 19.3/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 57.9/50

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 109.9/104

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 51.6/53

asym\_atl1r2\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5399022.9/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1723737.8/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10328673.7/30

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1878360.3/22

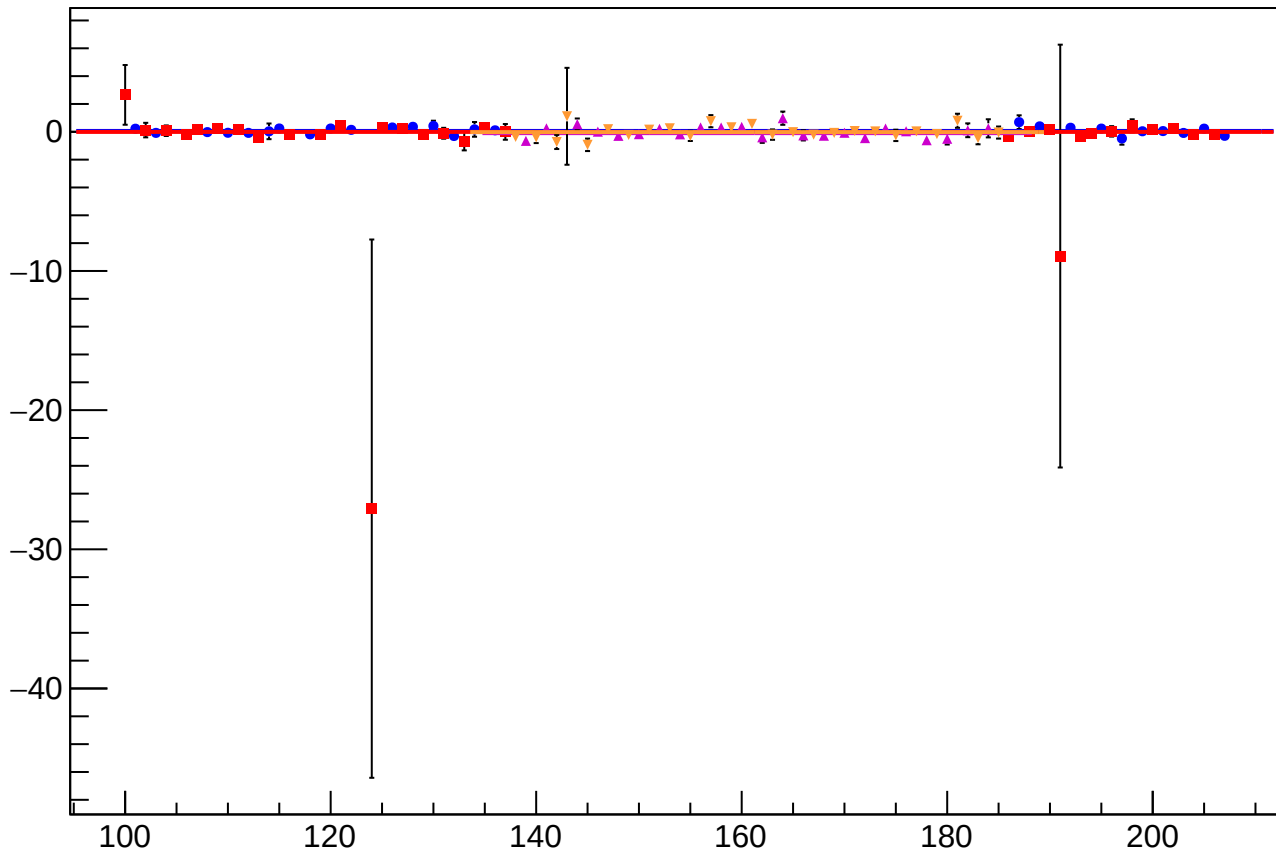
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8473002.9/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 21895918.8/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12726171.5/53



# asym\_atl1r2\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.061 \pm 0.053$   $\chi^2/\text{NDF}$ : 18.2/25

Left Out:  $-0.024 \pm 0.062$   $\chi^2/\text{NDF}$ : 23.5/24

Right Out:  $-0.008 \pm 0.047$   $\chi^2/\text{NDF}$ : 29.5/30

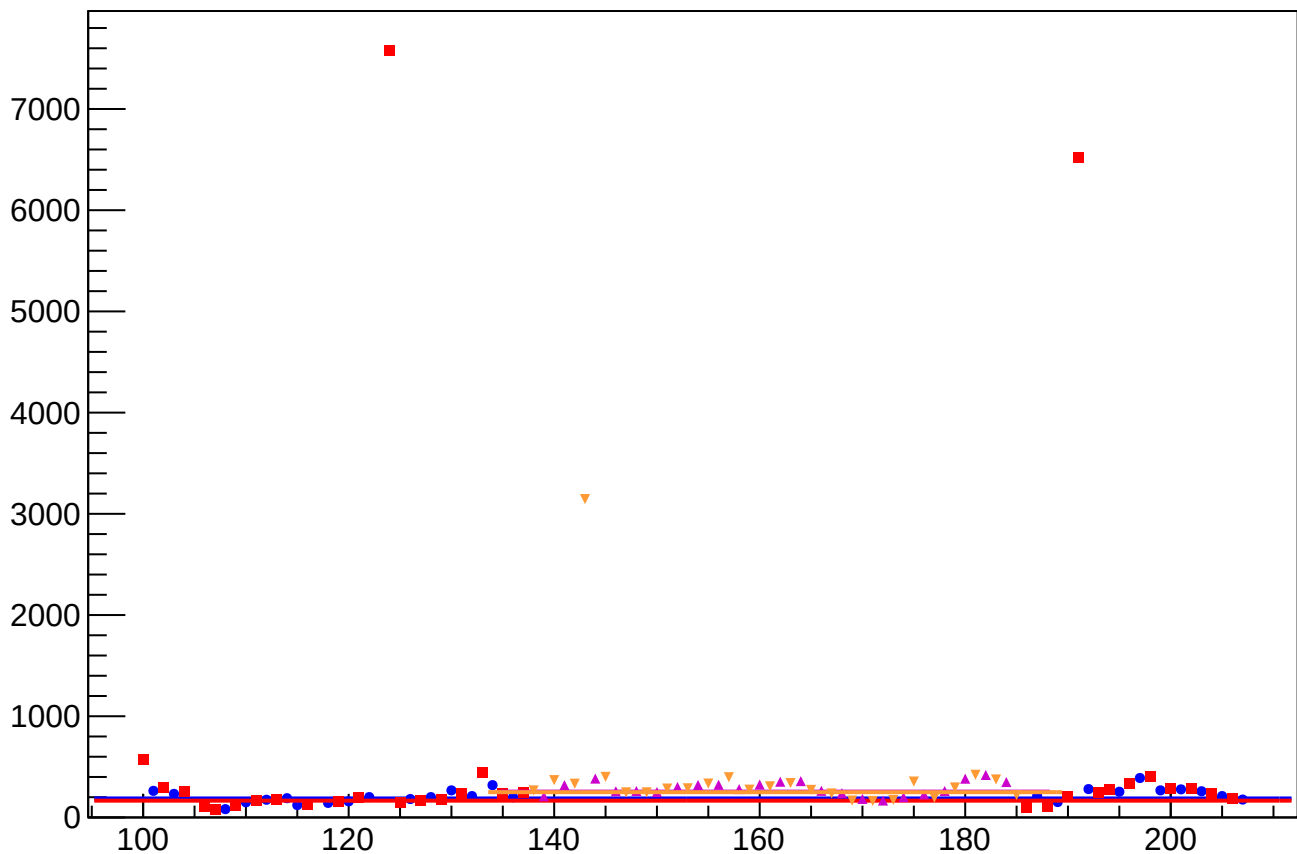
Left In:  $-0.095 \pm 0.063$   $\chi^2/\text{NDF}$ : 31.5/22

+ sign  $0.025 \pm 0.040$   $\chi^2/\text{NDF}$ : 42.9/50

All:  $-0.009 \pm 0.027$   $\chi^2/\text{NDF}$ : 106.5/104

- sign  $-0.039 \pm 0.038$   $\chi^2/\text{NDF}$ : 62.2/53

# asym\_atl1r2\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 187.720 $\pm$ 0.037  $\chi^2$ /NDF: 2962904.6/25

Left Out: 249.848 $\pm$ 0.044  $\chi^2$ /NDF: 4234507.4/24

Right Out: 166.084 $\pm$ 0.033  $\chi^2$ /NDF: 5300289.1/30

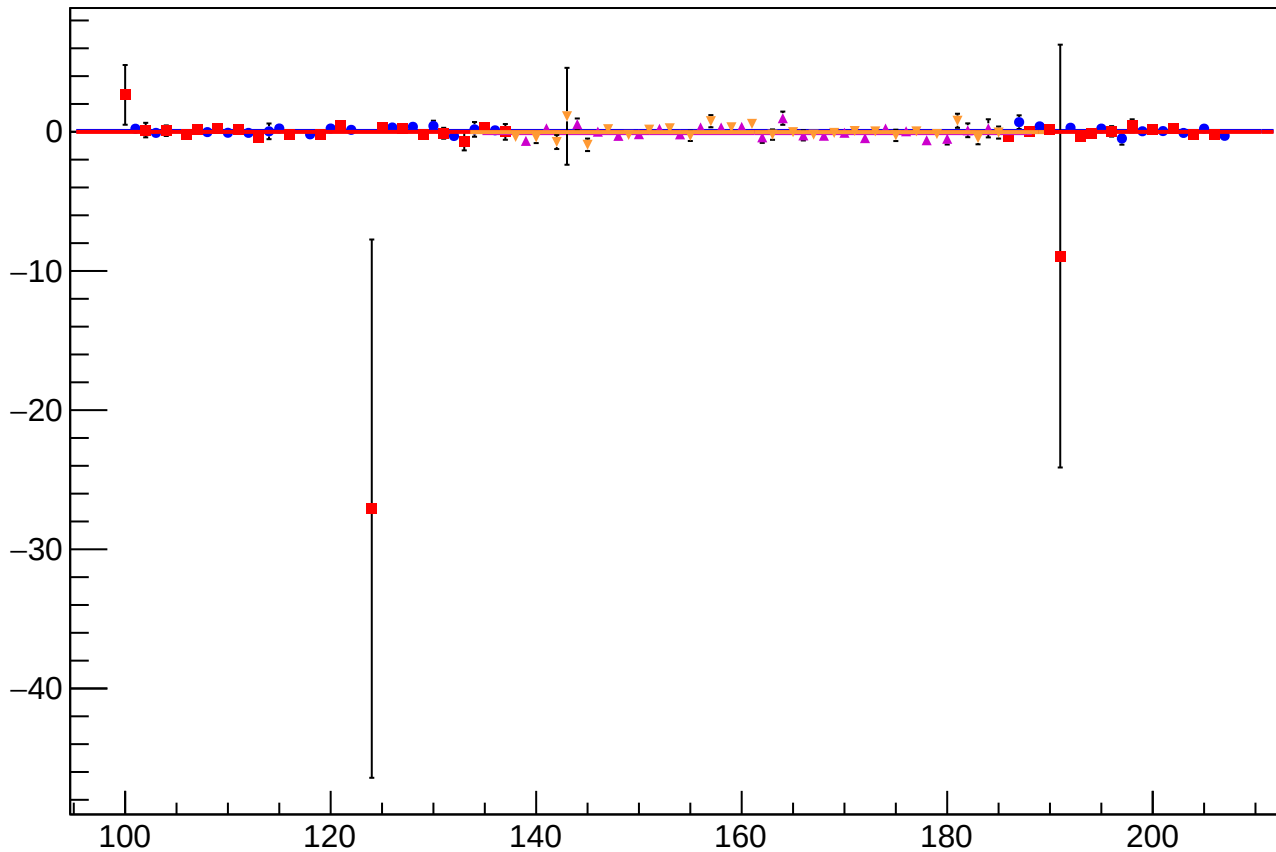
Left In: 255.299 $\pm$ 0.045  $\chi^2$ /NDF: 2111552.0/22

+ sign 213.873 $\pm$ 0.028  $\chi^2$ /NDF: 8374736.8/50

All: 205.436 $\pm$ 0.019  $\chi^2$ /NDF: 18532629.6/10

- sign 197.953 $\pm$ 0.027  $\chi^2$ /NDF: 9989825.1/53

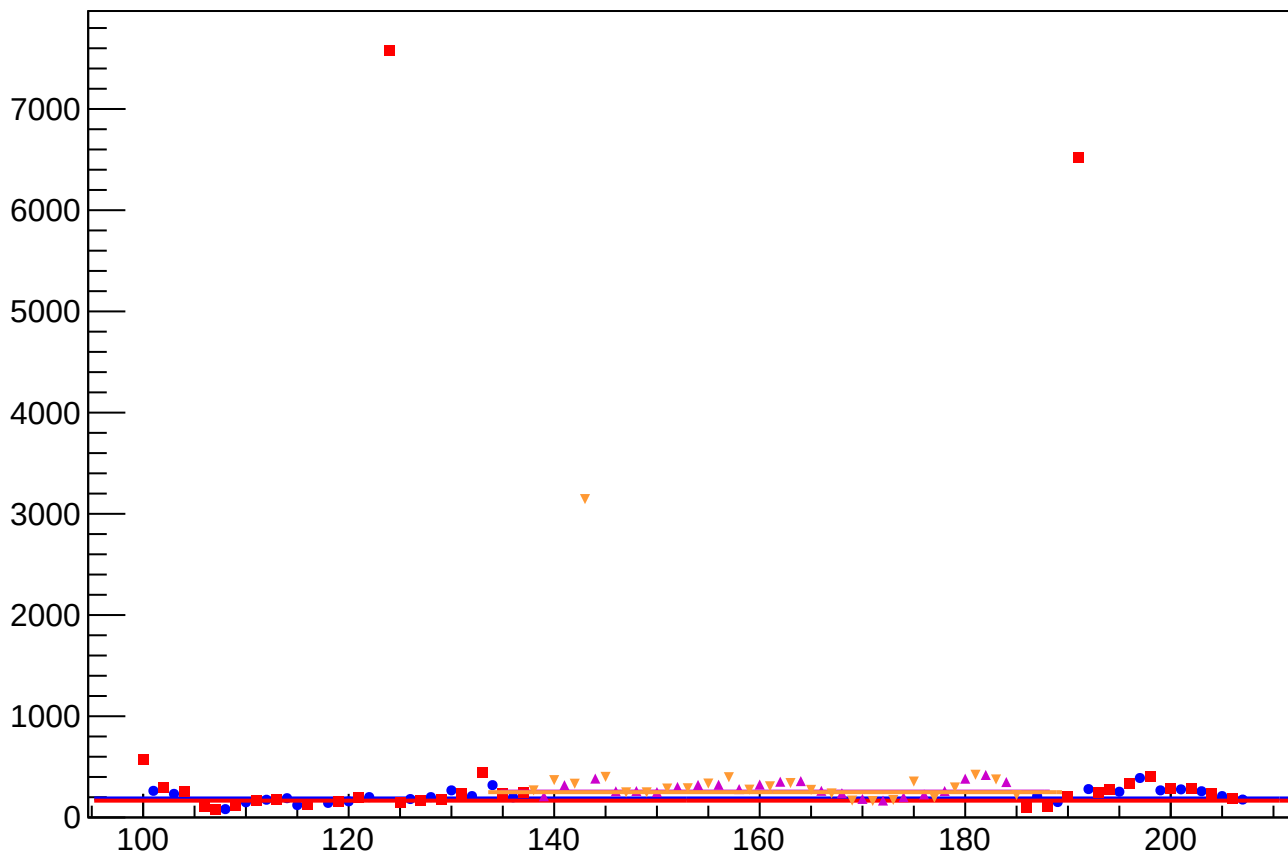
asym\_atl1r2\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.061 \pm 0.053$   $\chi^2/\text{NDF}: 18.2/25$   
 Left Out:  $-0.024 \pm 0.062$   $\chi^2/\text{NDF}: 23.5/24$   
 Right Out:  $-0.008 \pm 0.047$   $\chi^2/\text{NDF}: 29.5/30$   
 Left In:  $-0.095 \pm 0.063$   $\chi^2/\text{NDF}: 31.5/22$

+ sign  $0.025 \pm 0.040$   $\chi^2/\text{NDF}: 42.9/50$   
 All:  $-0.009 \pm 0.027$   $\chi^2/\text{NDF}: 106.5/104$   
 - sign  $-0.039 \pm 0.038$   $\chi^2/\text{NDF}: 62.2/53$

asym\_atl1r2\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 187.720 $\pm$ 0.037  $\chi^2$ /NDF: 2962904.6/25

Left Out: 249.848 $\pm$ 0.044  $\chi^2$ /NDF: 4234507.4/24

Right Out: 166.084 $\pm$ 0.033  $\chi^2$ /NDF: 5300289.1/30

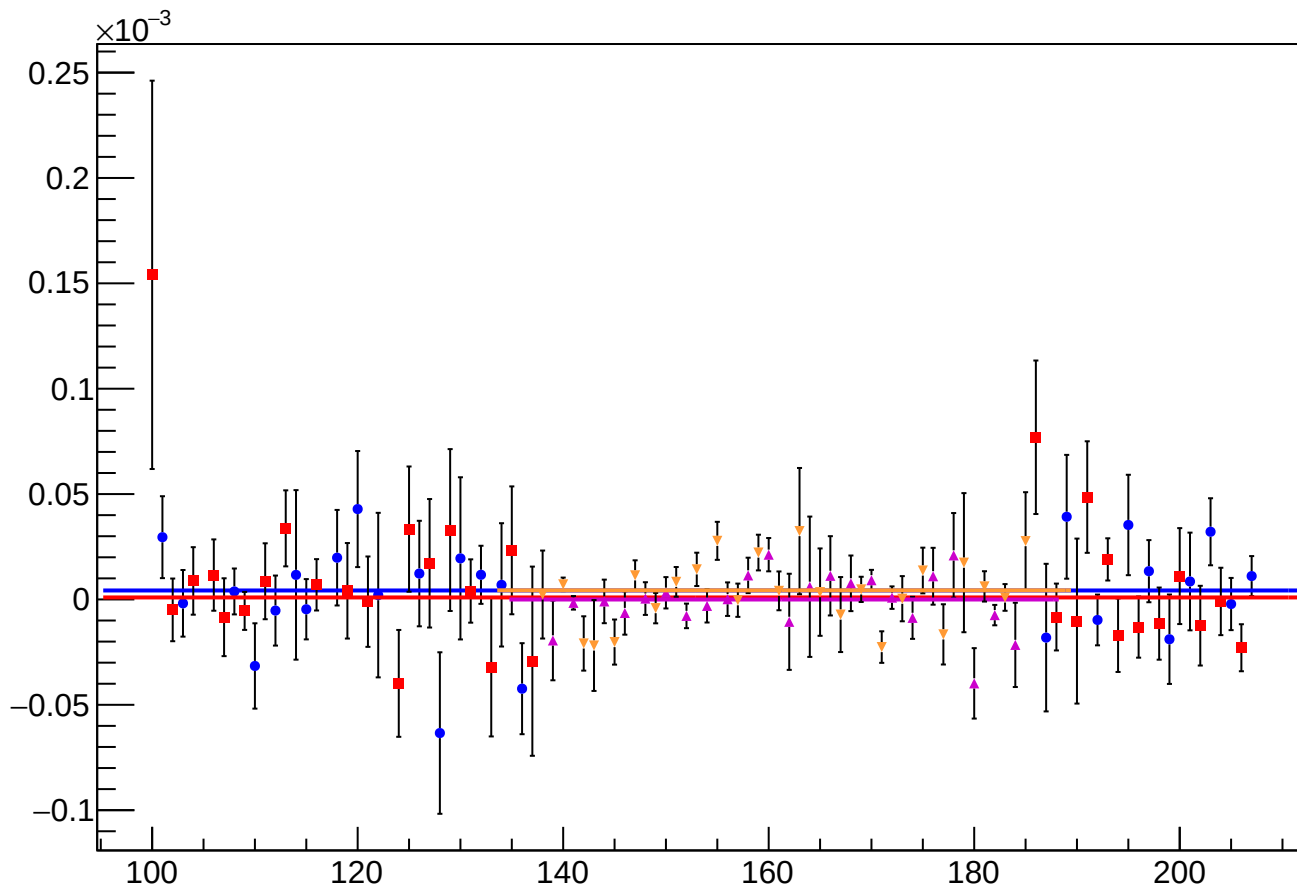
Left In: 255.299 $\pm$ 0.045  $\chi^2$ /NDF: 2111552.0/22

+ sign 213.873 $\pm$ 0.028  $\chi^2$ /NDF: 8374736.8/50

All: 205.436 $\pm$ 0.019  $\chi^2$ /NDF: 18532629.6/10

- sign 197.953 $\pm$ 0.027  $\chi^2$ /NDF: 9989825.1/53

asym\_atl1r2\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 26.8/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 46.0/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 34.0/30

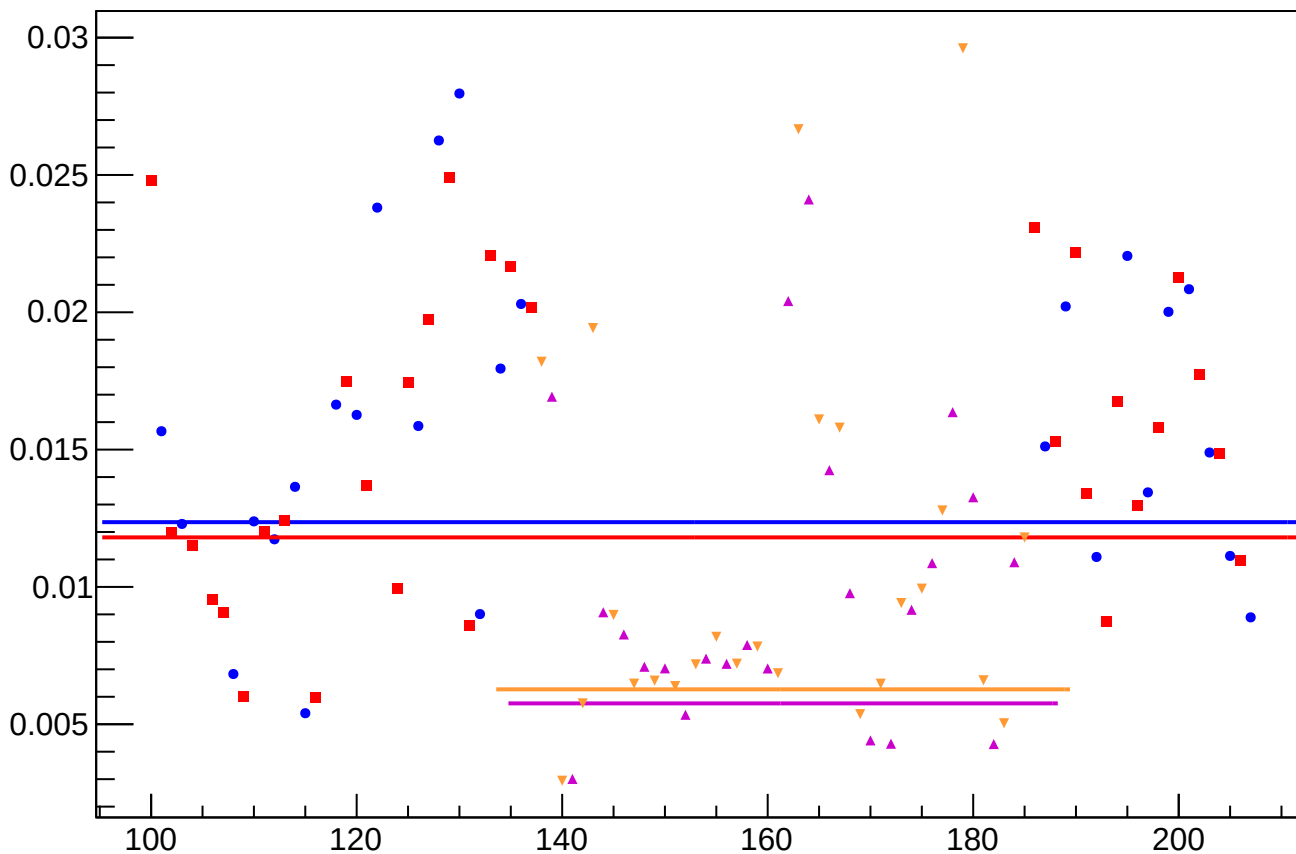
Left In: -0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 29.0/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 72.9/50

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 140.0/104

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 63.1/53

asym\_atl1r2\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.012 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 3813752.9/25

Left Out: 0.006 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7909965.6/24

Right Out: 0.012 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 4097935.9/30

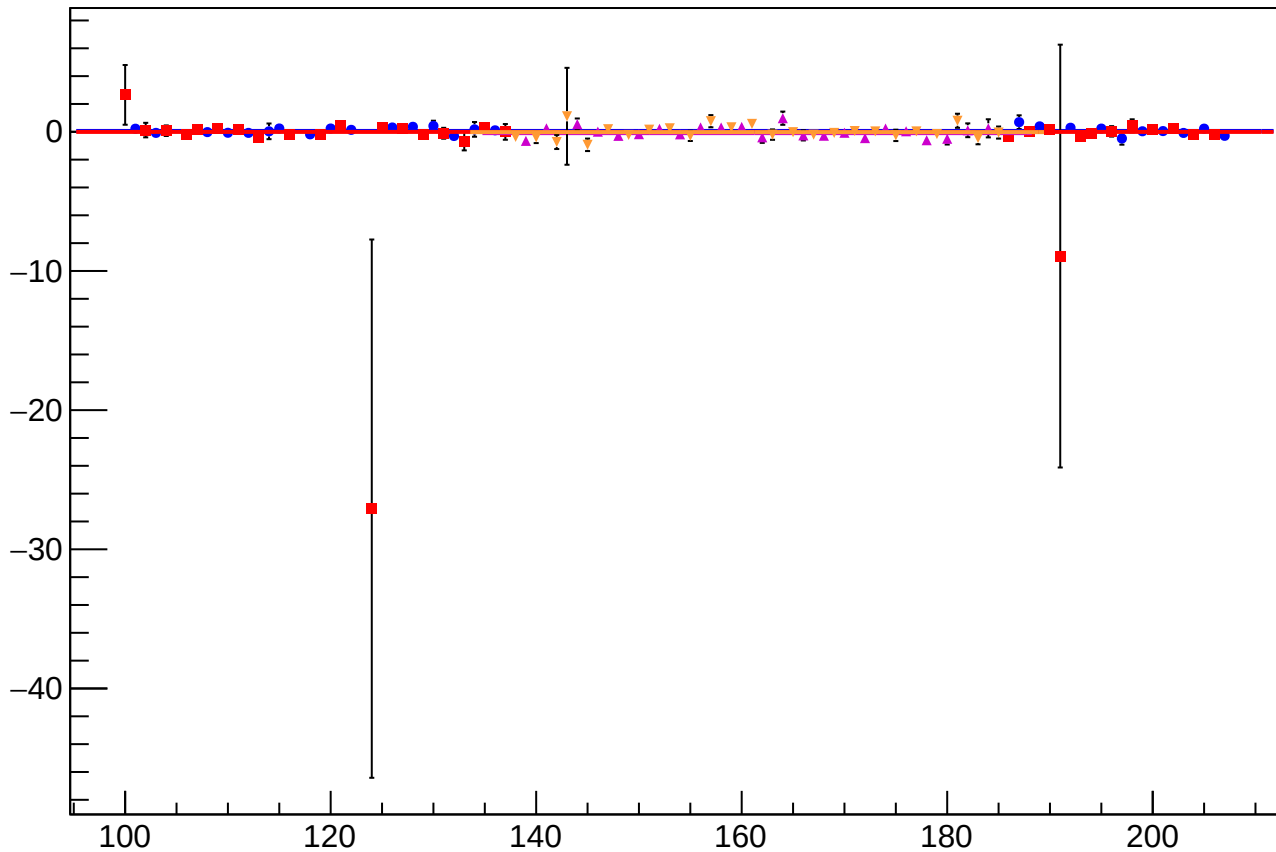
Left In: 0.006 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7081814.9/22

+ sign 0.007 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 16740736.5/50

All: 0.007 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 33877016.5/104

- sign 0.007 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 17052722.9/53

asym\_atl1r2\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.061 \pm 0.053$   $\chi^2/\text{NDF}$ : 18.2/25

Left Out:  $-0.024 \pm 0.062$   $\chi^2/\text{NDF}$ : 23.5/24

Right Out:  $-0.008 \pm 0.047$   $\chi^2/\text{NDF}$ : 29.5/30

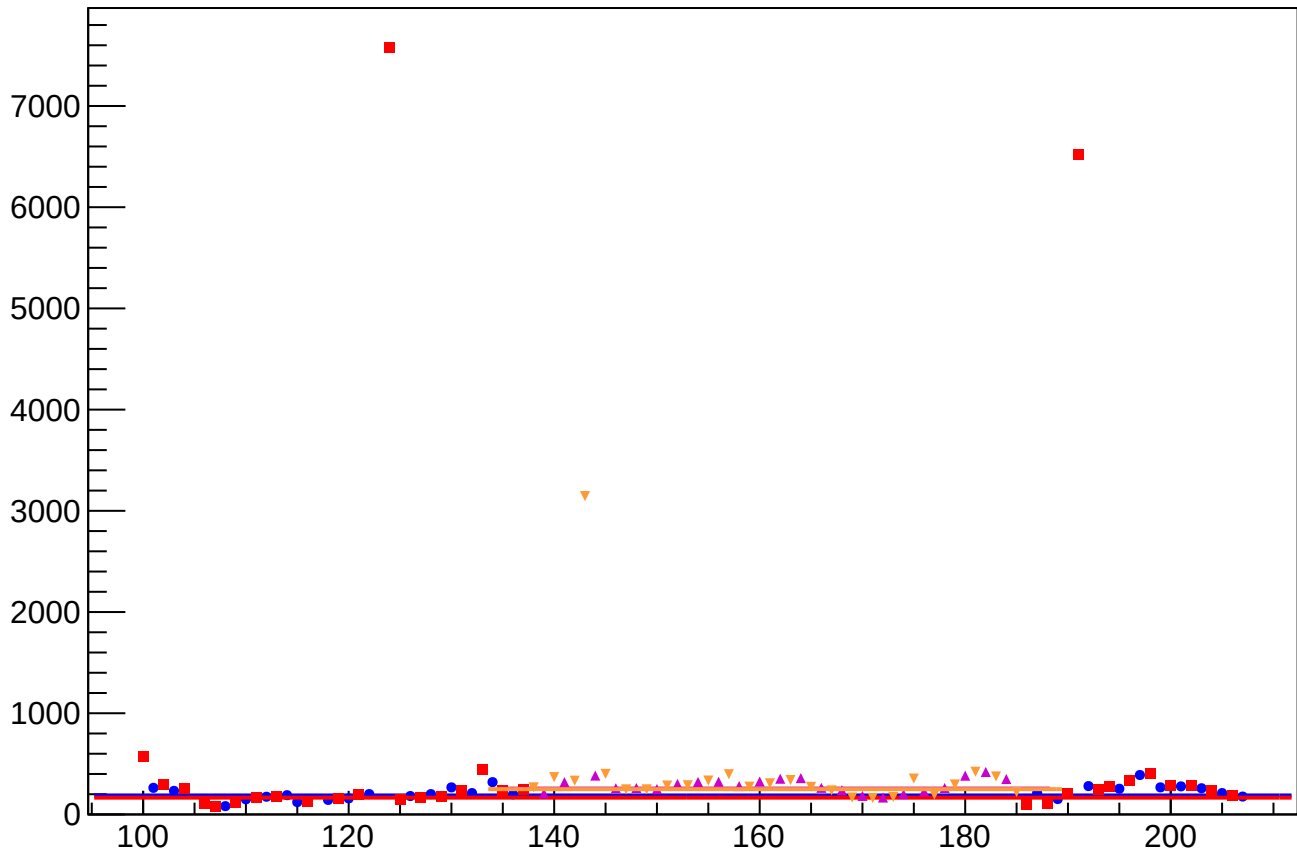
Left In:  $-0.095 \pm 0.063$   $\chi^2/\text{NDF}$ : 31.5/22

+ sign  $0.025 \pm 0.040$   $\chi^2/\text{NDF}$ : 42.9/50

All:  $-0.009 \pm 0.027$   $\chi^2/\text{NDF}$ : 106.5/104

- sign  $-0.039 \pm 0.038$   $\chi^2/\text{NDF}$ : 62.2/53

asym\_atl1r2\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 187.719 $\pm$ 0.037  $\chi^2$ /NDF: 2962978.1/25

Left Out: 249.850 $\pm$ 0.044  $\chi^2$ /NDF: 4234600.7/24

Right Out: 166.087 $\pm$ 0.033  $\chi^2$ /NDF: 5300170.7/30

Left In: 255.302 $\pm$ 0.045  $\chi^2$ /NDF: 2111585.0/22

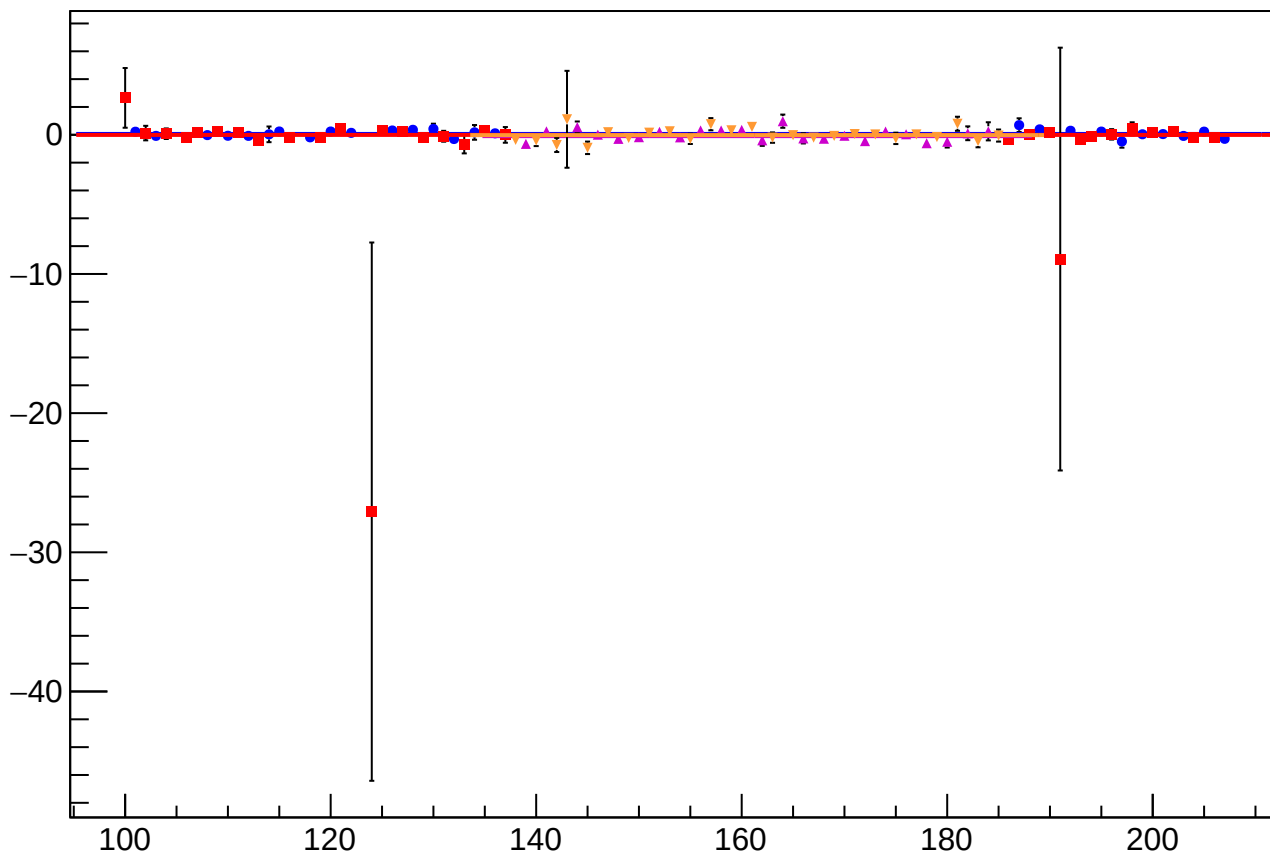
+ sign 213.872 $\pm$ 0.028  $\chi^2$ /NDF: 8375020.2/50

All: 205.437 $\pm$ 0.019  $\chi^2$ /NDF: 18532705.3/10

- sign 197.955 $\pm$ 0.027  $\chi^2$ /NDF: 9989684.4/53



asym\_atl1r2\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.061 \pm 0.053$   $\chi^2/\text{NDF}: 18.2/25$

Left Out:  $-0.024 \pm 0.062$   $\chi^2/\text{NDF}: 23.5/24$

Right Out:  $-0.008 \pm 0.047$   $\chi^2/\text{NDF}: 29.5/30$

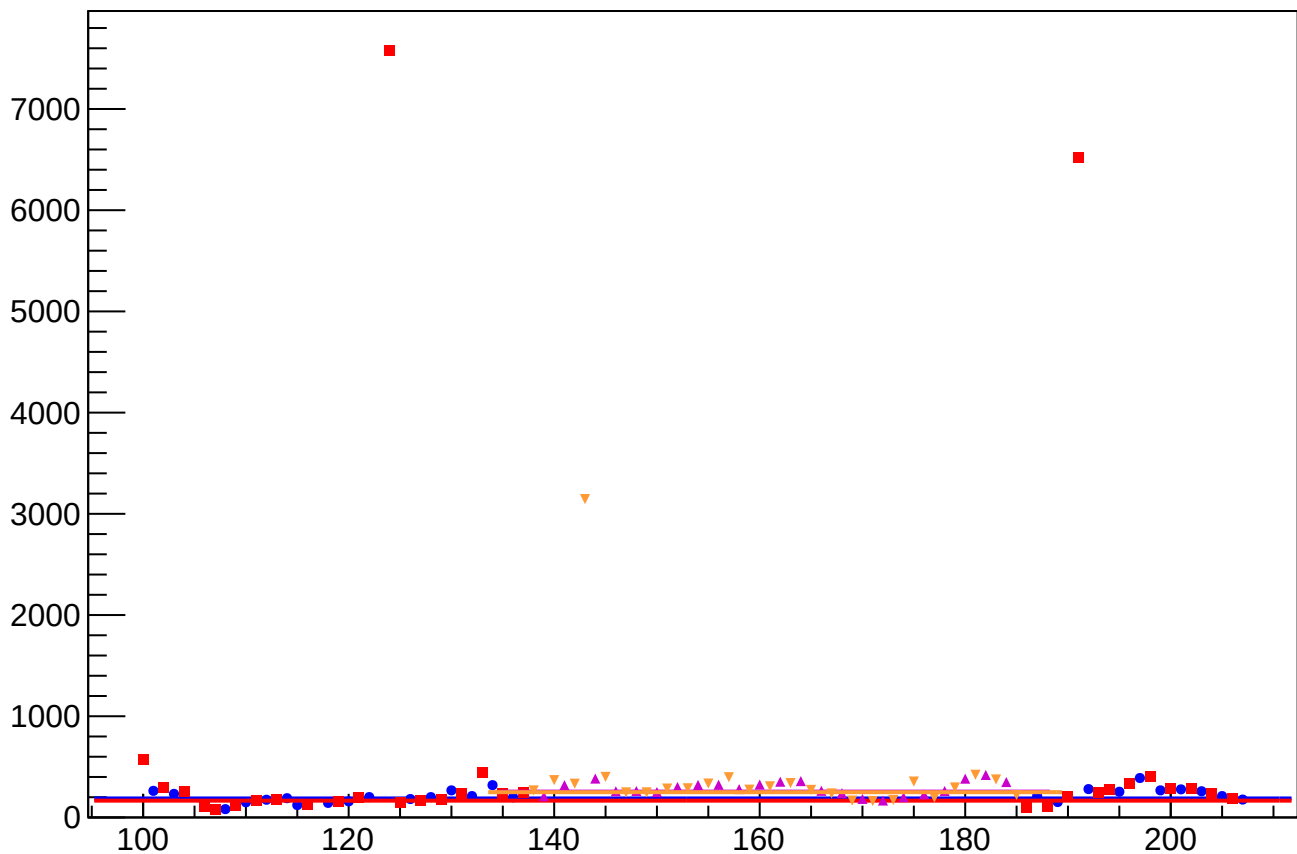
Left In:  $-0.095 \pm 0.063$   $\chi^2/\text{NDF}: 31.5/22$

+ sign  $0.025 \pm 0.040$   $\chi^2/\text{NDF}: 42.9/50$

All:  $-0.009 \pm 0.027$   $\chi^2/\text{NDF}: 106.5/104$

- sign  $-0.039 \pm 0.038$   $\chi^2/\text{NDF}: 62.2/53$

asym\_atl1r2\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 187.719 $\pm$ 0.037  $\chi^2$ /NDF: 2962978.1/25

Left Out: 249.850 $\pm$ 0.044  $\chi^2$ /NDF: 4234600.7/24

Right Out: 166.087 $\pm$ 0.033  $\chi^2$ /NDF: 5300170.7/30

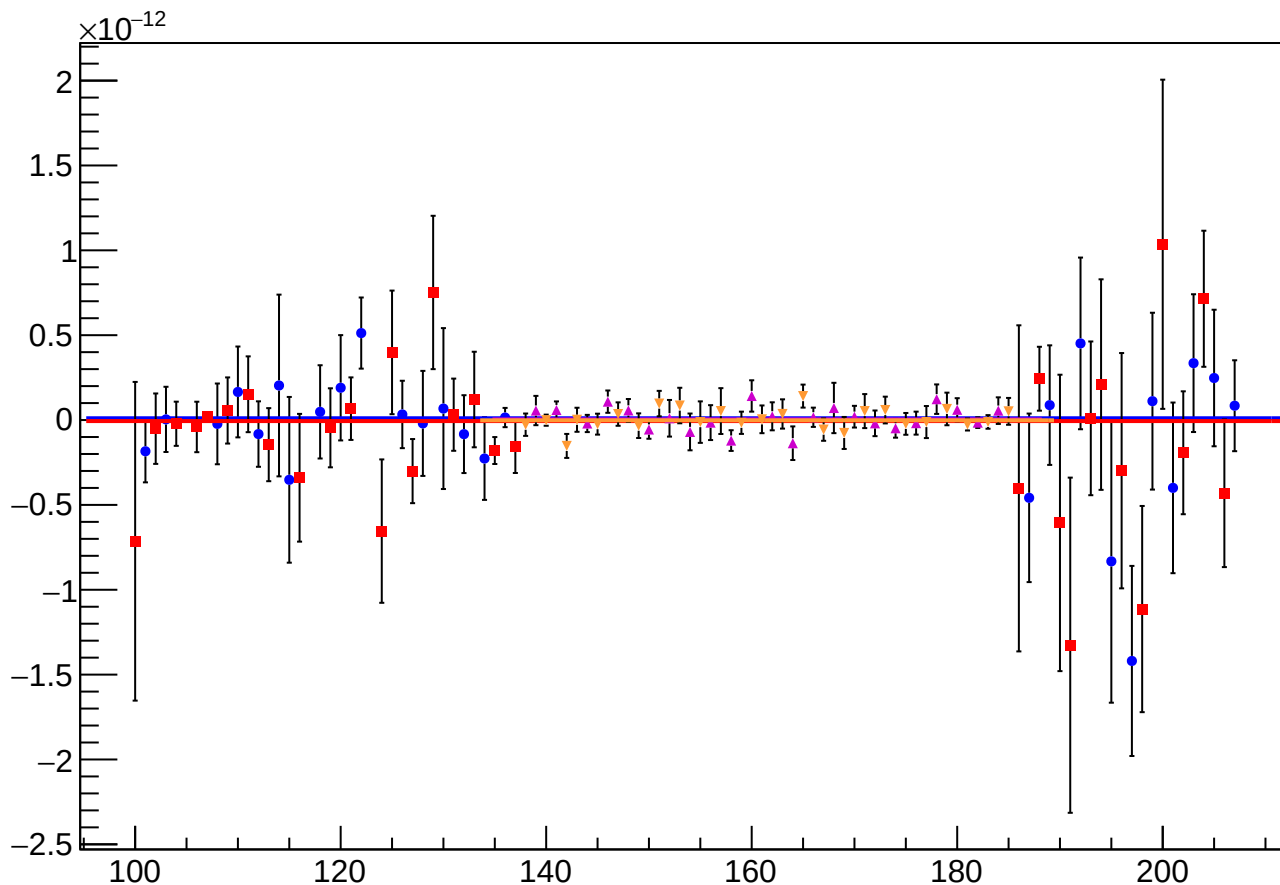
Left In: 255.302 $\pm$ 0.045  $\chi^2$ /NDF: 2111585.0/22

+ sign 213.872 $\pm$ 0.028  $\chi^2$ /NDF: 8375020.2/50

All: 205.437 $\pm$ 0.019  $\chi^2$ /NDF: 18532705.3/10

- sign 197.955 $\pm$ 0.027  $\chi^2$ /NDF: 9989684.4/53

asym\_atl1r2\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 20.7/25$

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 16.4/24$

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 31.8/30$

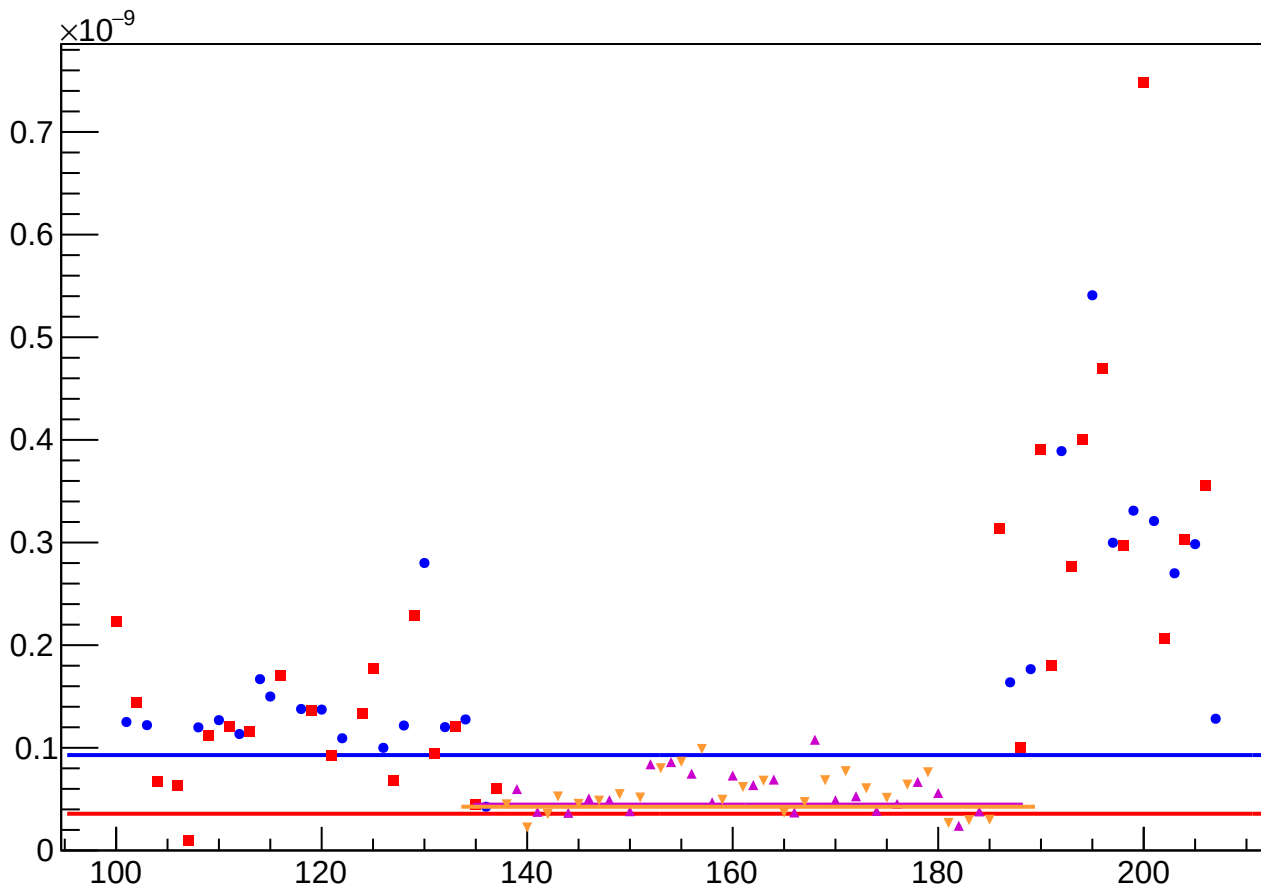
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 19.9/22$

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 37.1/50$

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 88.9/104$

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 51.8/53$

asym\_atl1r2\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5793326.1/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3648691.3/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12316985.3/30

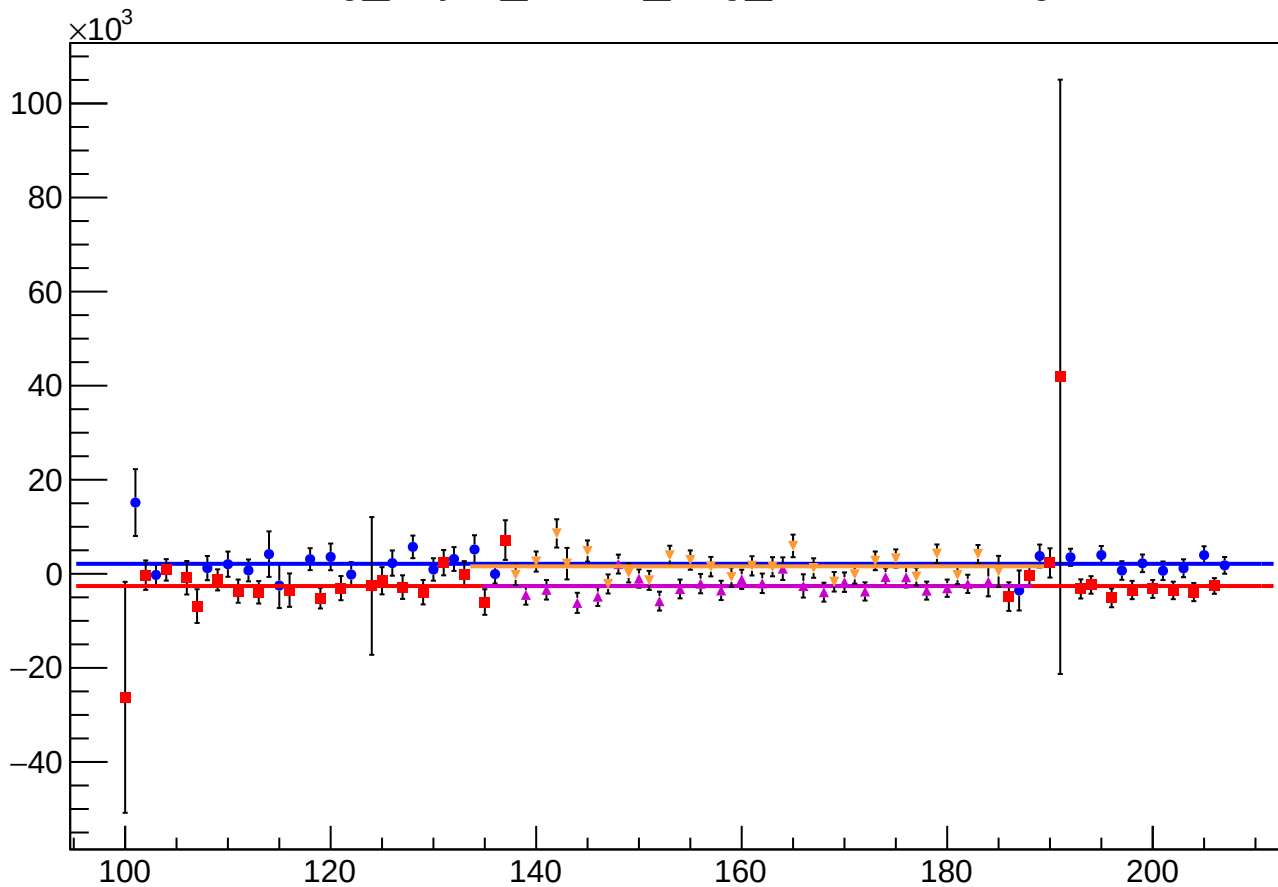
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2871089.5/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12249527.1/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 27836211.5/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 15415151.2/53

# reg\_asym\_atr1l2\_avg\_mean vs Slug



Right In:  $2126.814 \pm 460.614$   $\chi^2/\text{NDF}$ : 18.3/25

Left Out:  $1592.464 \pm 423.298$   $\chi^2/\text{NDF}$ : 31.3/24

Right Out:  $-2596.825 \pm 445.460$   $\chi^2/\text{NDF}$ : 26.8/30

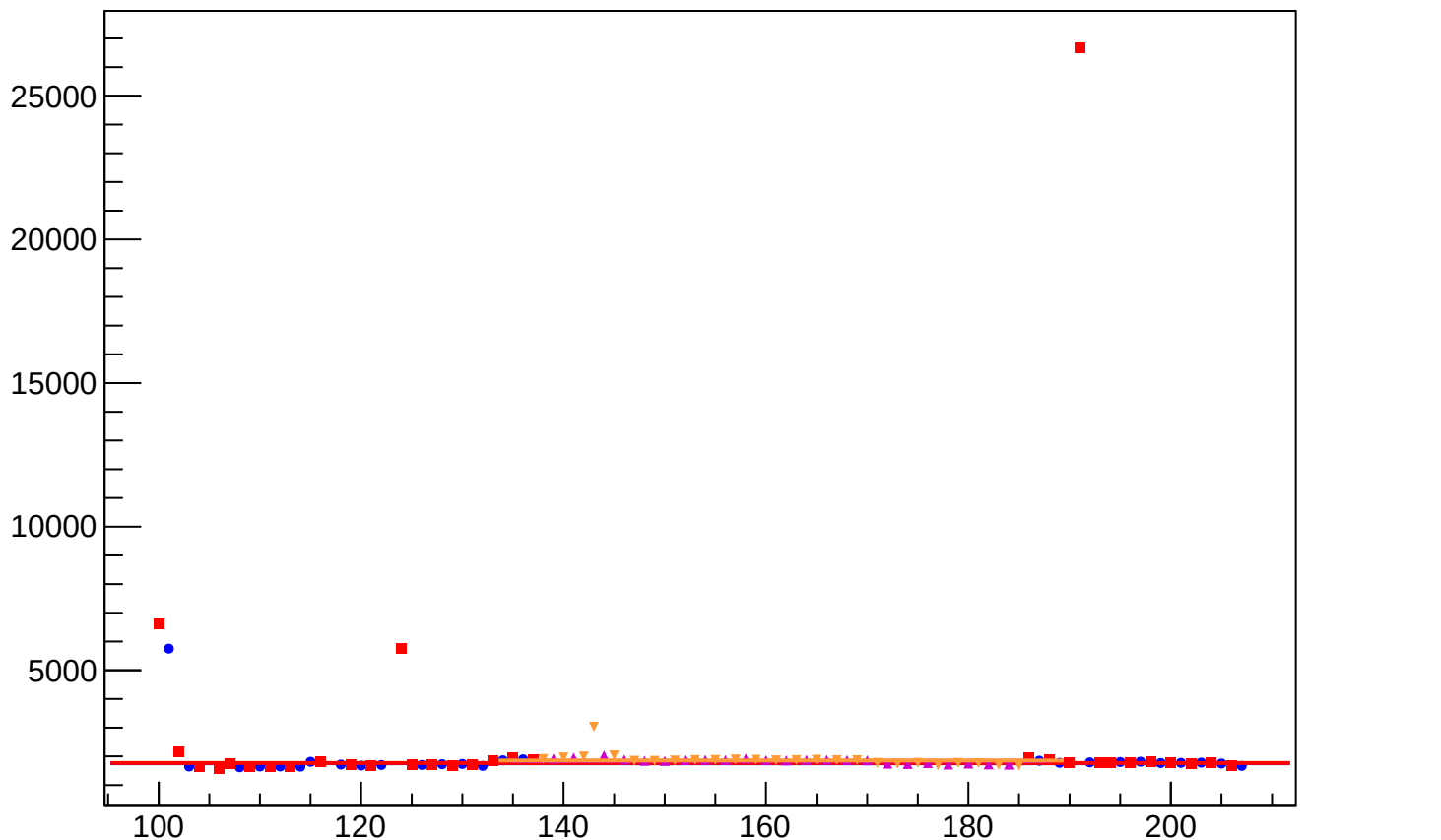
Left In:  $-2597.740 \pm 430.293$   $\chi^2/\text{NDF}$ : 20.1/22

+ sign  $1837.121 \pm 311.676$   $\chi^2/\text{NDF}$ : 50.3/50

All:  $-395.718 \pm 219.610$   $\chi^2/\text{NDF}$ : 199.1/104

- sign  $-2597.299 \pm 309.486$   $\chi^2/\text{NDF}$ : 46.9/53

# reg\_asym\_atr1l2\_avg\_rms vs Slug



Right In: 1761.241+/-0.326  $\chi^2/\text{NDF}$ : 680718.2/25

Left Out: 1855.560+/-0.299  $\chi^2/\text{NDF}$ : 324267.7/24

Right Out: 1768.411+/-0.314  $\chi^2/\text{NDF}$ : 646084.6/30

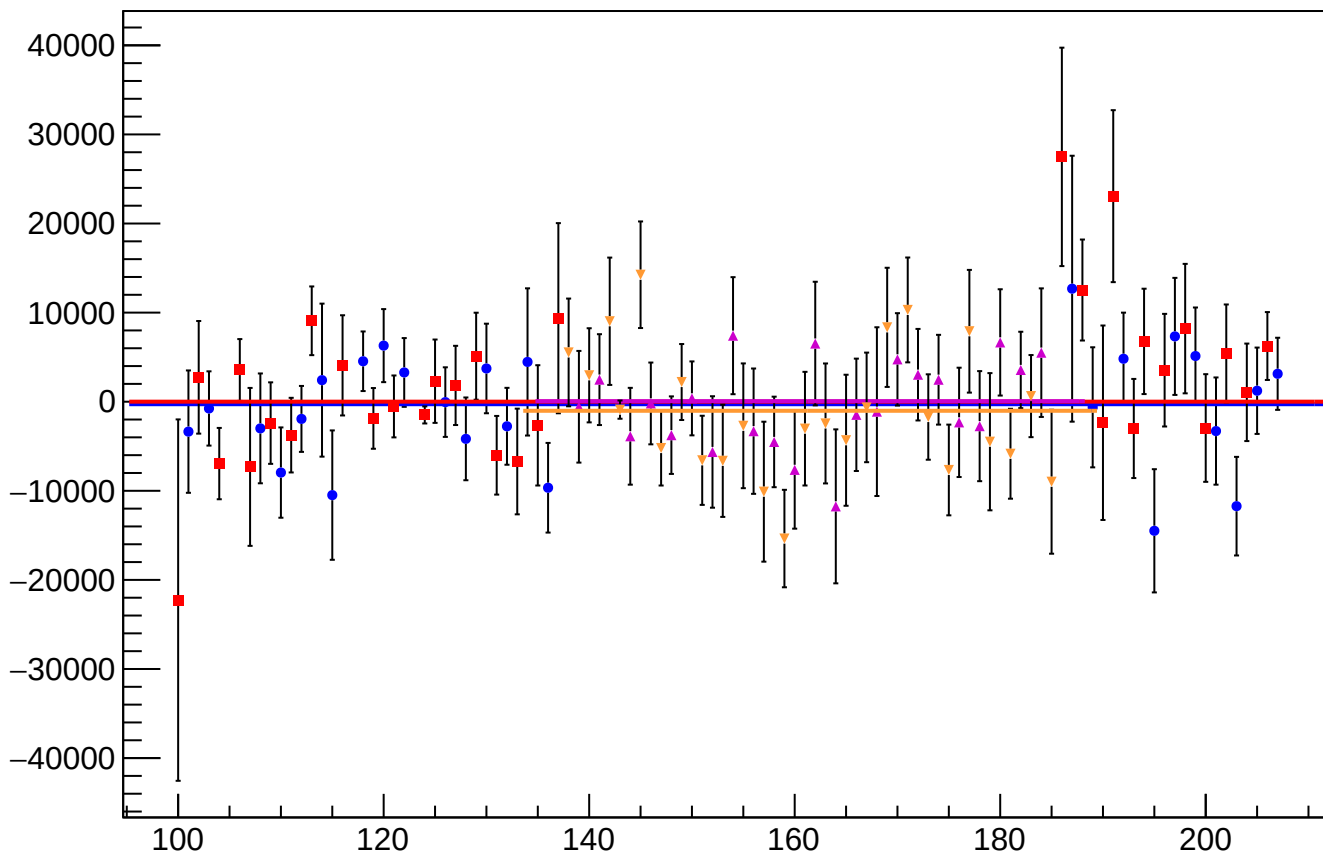
Left In: 1840.981+/-0.304  $\chi^2/\text{NDF}$ : 70985.8/22

+ sign 1812.375+/-0.220  $\chi^2/\text{NDF}$ : 1050449.7/50

All: 1809.073+/-0.155  $\chi^2/\text{NDF}$ : 1795520.9/10

- sign 1805.829+/-0.218  $\chi^2/\text{NDF}$ : 744626.2/53

# asym\_atr1l2\_avg\_reg\_correction\_mean vs Slug



Right In:  $-280.999 \pm 985.063$   $\chi^2/\text{NDF}$ : 29.6/25

Left Out:  $-1018.861 \pm 771.816$   $\chi^2/\text{NDF}$ : 33.7/24

Right Out:  $5.186 \pm 670.670$   $\chi^2/\text{NDF}$ : 44.4/30

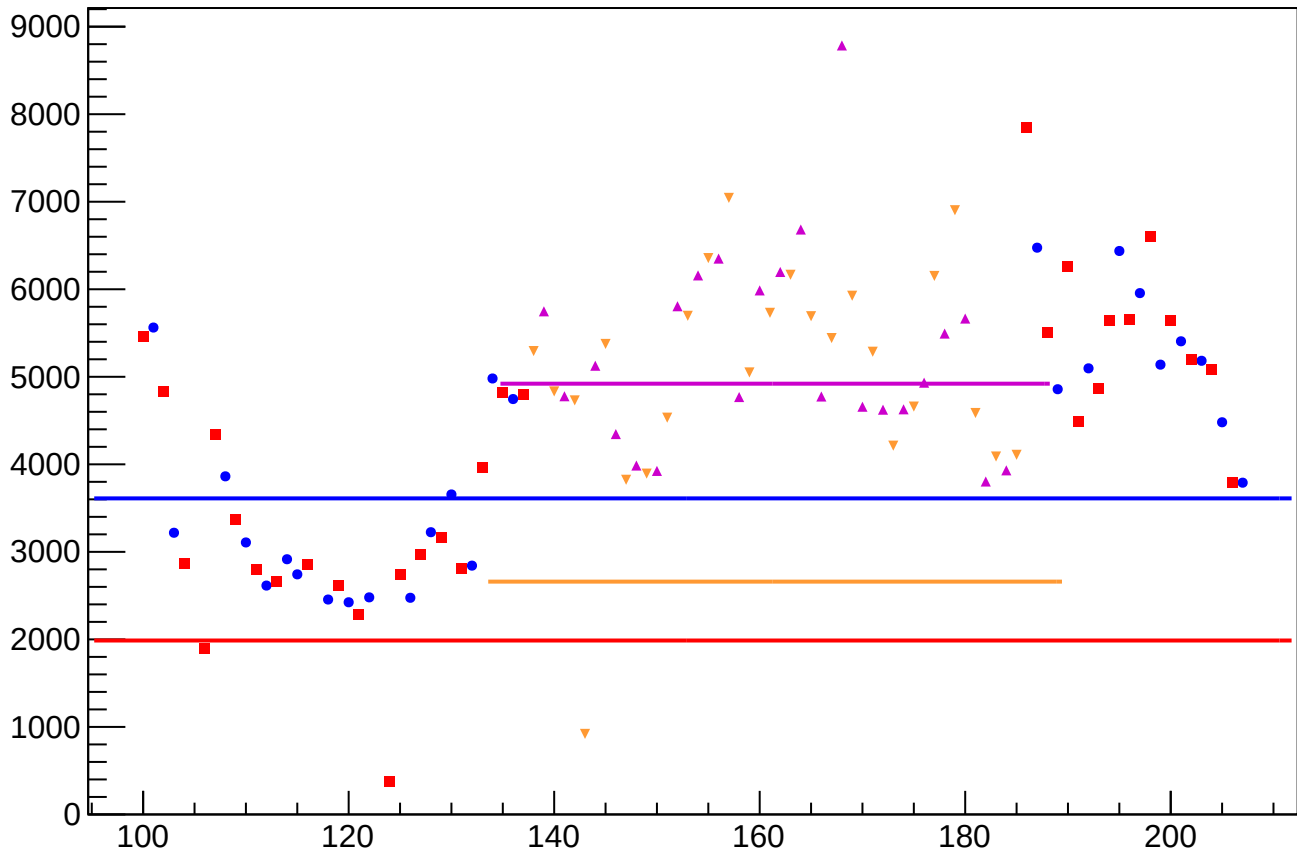
Left In:  $62.369 \pm 1173.429$   $\chi^2/\text{NDF}$ : 13.0/22

+ sign  $-738.190 \pm 607.540$   $\chi^2/\text{NDF}$ : 63.7/50

All:  $-343.385 \pm 420.379$   $\chi^2/\text{NDF}$ : 121.9/104

- sign  $19.266 \pm 582.275$   $\chi^2/\text{NDF}$ : 57.4/53

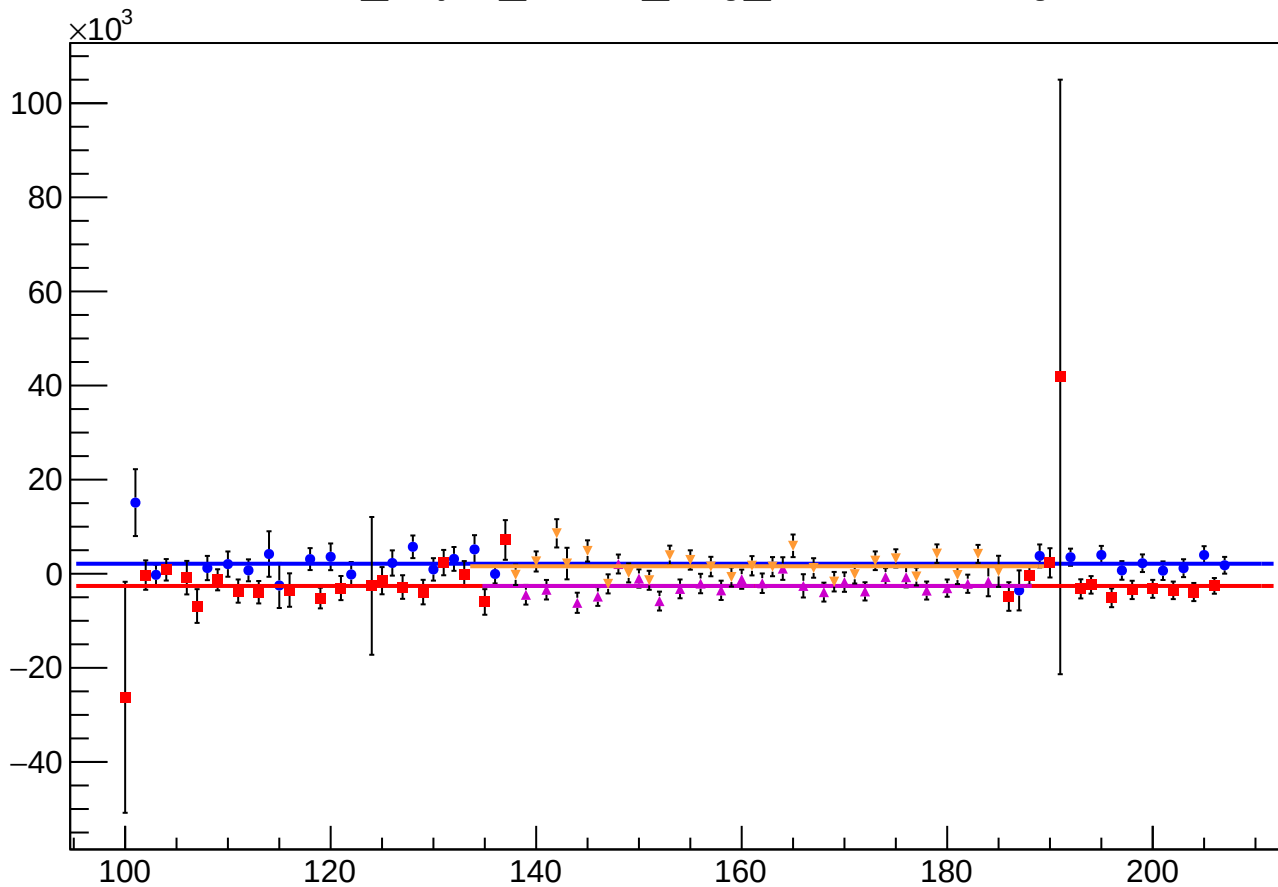
# asym\_atr1l2\_avg\_reg\_correction\_rms vs Slug



|                             |                                     |                         |                                     |
|-----------------------------|-------------------------------------|-------------------------|-------------------------------------|
| Right In: 3610.937+/-0.697  | $\chi^2/\text{NDF}$ : 2831341.3/25  | + sign 3021.727+/-0.430 | $\chi^2/\text{NDF}$ : 18522249.1/50 |
| Left Out: 2660.009+/-0.546  | $\chi^2/\text{NDF}$ : 14536074.6/24 | All: 2859.097+/-0.297   | $\chi^2/\text{NDF}$ : 44322370.2/1  |
| Right Out: 1987.256+/-0.474 | $\chi^2/\text{NDF}$ : 14848791.0/30 | - sign 2709.713+/-0.412 | $\chi^2/\text{NDF}$ : 25525171.3/53 |
| Left In: 4921.319+/-0.830   | $\chi^2/\text{NDF}$ : 1251123.1/22  |                         |                                     |



# cor\_asym\_atr1l2\_avg\_mean vs Slug



Right In: 2126.624+/-460.614  $\chi^2/\text{NDF}$ : 18.3/25

Left Out: 1592.431+/-423.298  $\chi^2/\text{NDF}$ : 31.3/24

Right Out: -2596.833+/-445.460  $\chi^2/\text{NDF}$ : 26.8/30

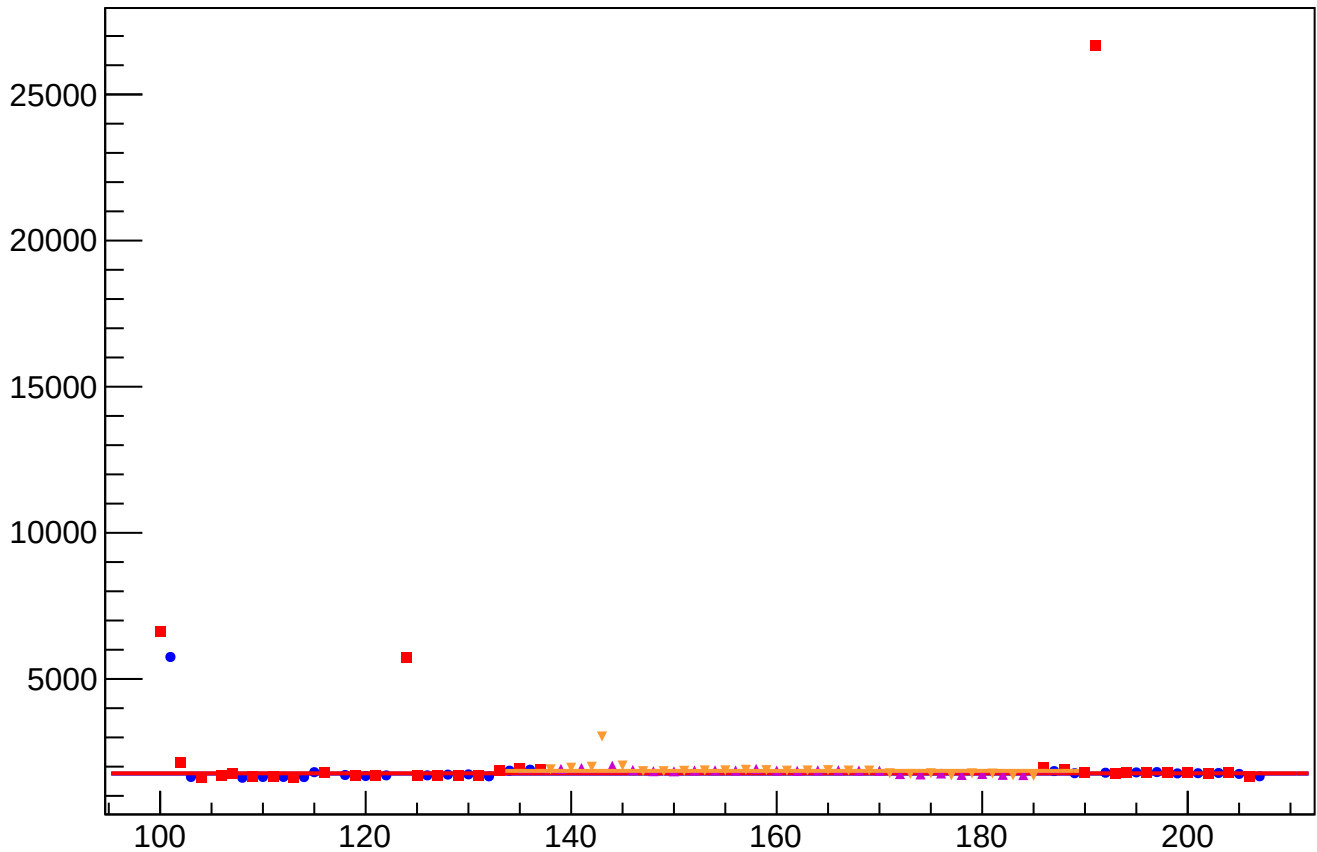
Left In: -2597.812+/-430.293  $\chi^2/\text{NDF}$ : 20.1/22

+ sign 1837.016+/-311.676  $\chi^2/\text{NDF}$ : 50.3/50

All: -395.791+/-219.610  $\chi^2/\text{NDF}$ : 199.1/104

- sign -2597.339+/-309.486  $\chi^2/\text{NDF}$ : 46.9/53

# cor\_asym\_atr1l2\_avg\_rms vs Slug



Right In: 1761.241 $\pm$ 0.326  $\chi^2$ /NDF: 680718.4/25

Left Out: 1855.560 $\pm$ 0.299  $\chi^2$ /NDF: 324267.7/24

Right Out: 1771.618 $\pm$ 0.314  $\chi^2$ /NDF: 637705.8/30

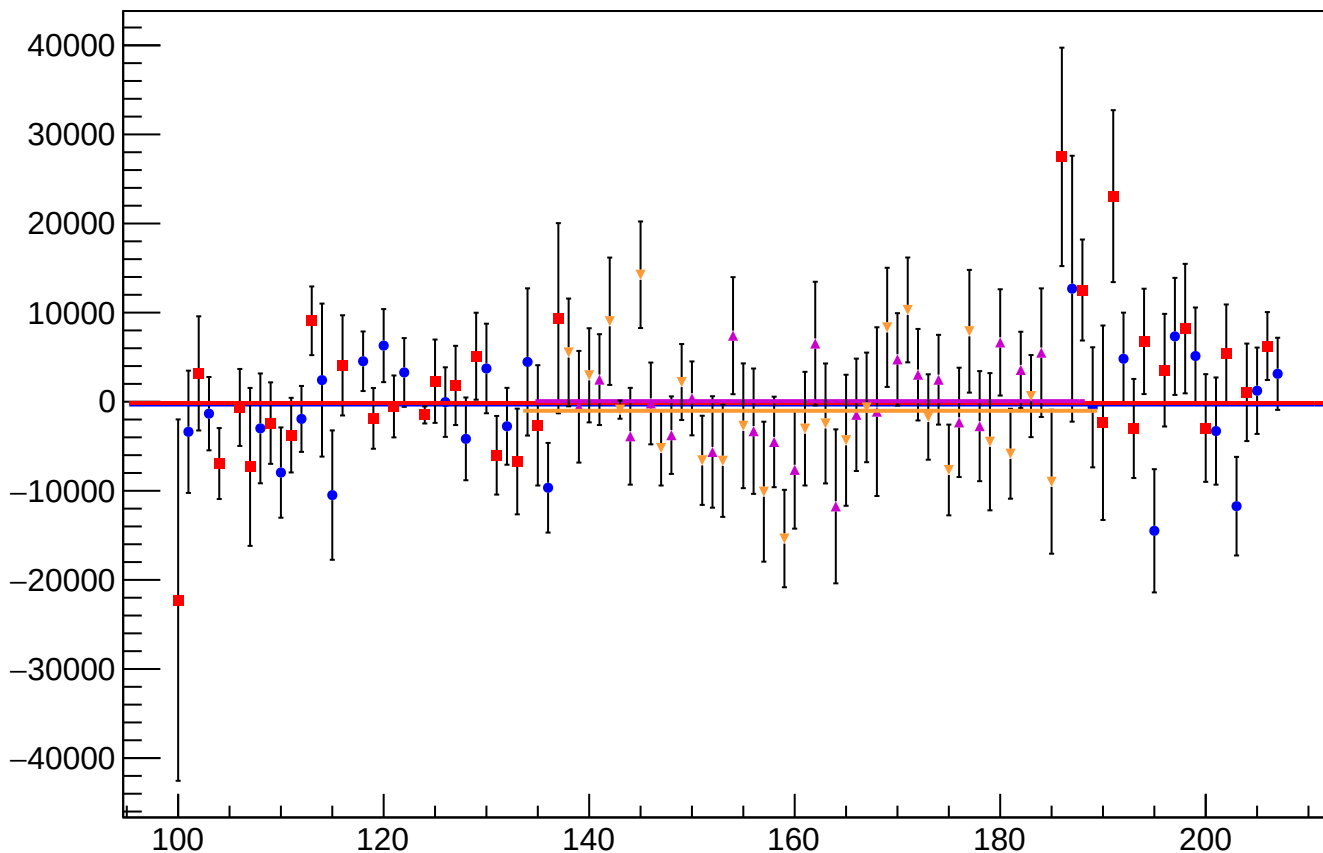
Left In: 1840.981 $\pm$ 0.304  $\chi^2$ /NDF: 70985.8/22

+ sign 1812.375 $\pm$ 0.220  $\chi^2$ /NDF: 1050450.1/50

All: 1809.888 $\pm$ 0.155  $\chi^2$ /NDF: 1784524.7/10

- sign 1807.441 $\pm$ 0.219  $\chi^2$ /NDF: 733821.9/53

# asym\_atr1l2\_avg\_cor\_correction\_mean vs Slug



Right In:  $-315.480 \pm 984.349$   $\chi^2/\text{NDF}$ : 29.6/25

Left Out:  $-1018.712 \pm 771.798$   $\chi^2/\text{NDF}$ : 33.7/24

Right Out:  $-143.452 \pm 675.177$   $\chi^2/\text{NDF}$ : 43.4/30

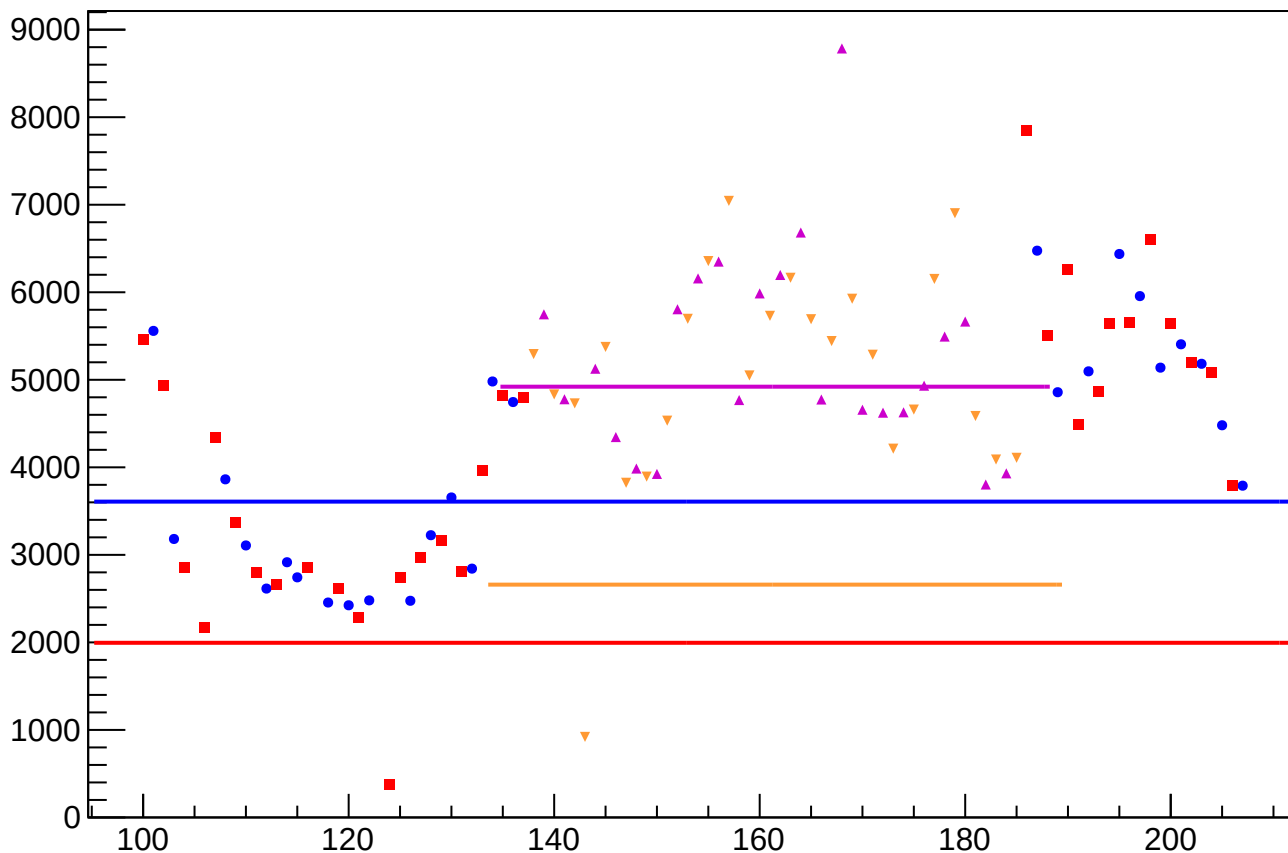
Left In:  $62.286 \pm 1173.429$   $\chi^2/\text{NDF}$ : 13.0/22

+ sign  $-750.981 \pm 607.364$   $\chi^2/\text{NDF}$ : 63.7/50

All:  $-409.402 \pm 421.423$   $\chi^2/\text{NDF}$ : 120.8/104

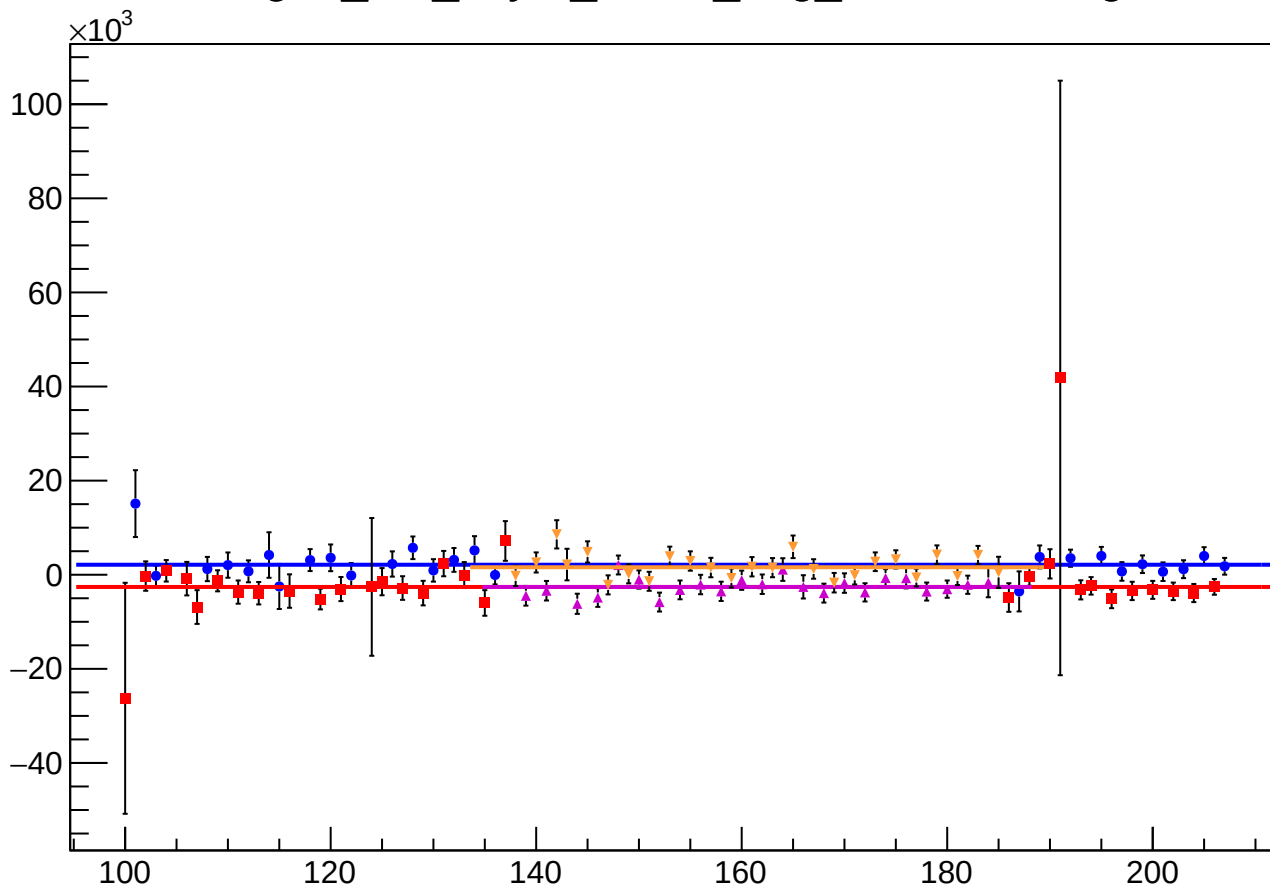
- sign  $-92.280 \pm 585.217$   $\chi^2/\text{NDF}$ : 56.5/53

# asym\_atr1l2\_avg\_cor\_correction\_rms vs Slug



|                             |                                     |                         |                                      |
|-----------------------------|-------------------------------------|-------------------------|--------------------------------------|
| Right In: 3608.254+/-0.696  | $\chi^2/\text{NDF}$ : 2834915.6/25  | + sign 3020.957+/-0.429 | $\chi^2/\text{NDF}$ : 18521356.0/50  |
| Left Out: 2659.907+/-0.546  | $\chi^2/\text{NDF}$ : 14536813.3/24 | All: 2866.515+/-0.298   | $\chi^2/\text{NDF}$ : 44230160.1/100 |
| Right Out: 1995.373+/-0.477 | $\chi^2/\text{NDF}$ : 14866148.6/30 | - sign 2723.130+/-0.414 | $\chi^2/\text{NDF}$ : 25459424.7/53  |
| Left In: 4921.316+/-0.830   | $\chi^2/\text{NDF}$ : 1251131.6/22  |                         |                                      |

# eigen\_cor\_asym\_atr1l2\_avg\_mean vs Slug



Right In: 2126.624 $\pm$ 460.614  $\chi^2$ /NDF: 18.3/25

Left Out: 1592.431 $\pm$ 423.298  $\chi^2$ /NDF:31.3/24

Right Out: -2596.833 $\pm$ 445.460  $\chi^2$ /NDF: 26.8/30

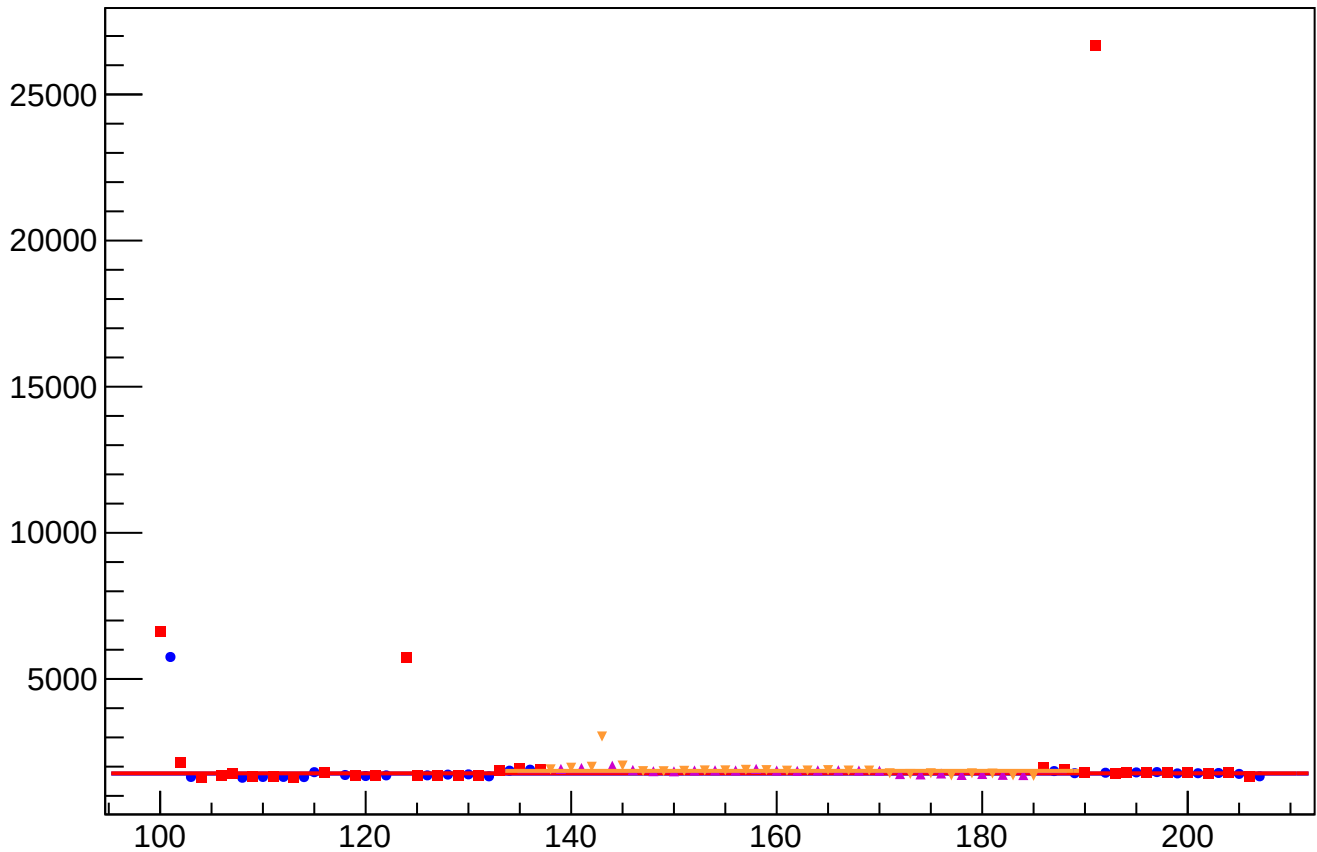
Left In: -2597.812 $\pm$ 430.293  $\chi^2$ /NDF:20.1/22

+ sign 1837.016 $\pm$ 311.676  $\chi^2$ /NDF: 50.3/50

All: -395.791 $\pm$ 219.610  $\chi^2$ /NDF: 199.1/104

- sign -2597.339 $\pm$ 309.486  $\chi^2$ /NDF: 46.9/53

# eigen\_cor\_asym\_atr1l2\_avg\_rms vs Slug



Right In: 1761.241+/-0.326  $\chi^2/\text{NDF}$ : 680718.4/25

Left Out: 1855.560+/-0.299  $\chi^2/\text{NDF}$ : 324267.7/24

Right Out: 1771.618+/-0.314  $\chi^2/\text{NDF}$ : 637705.8/30

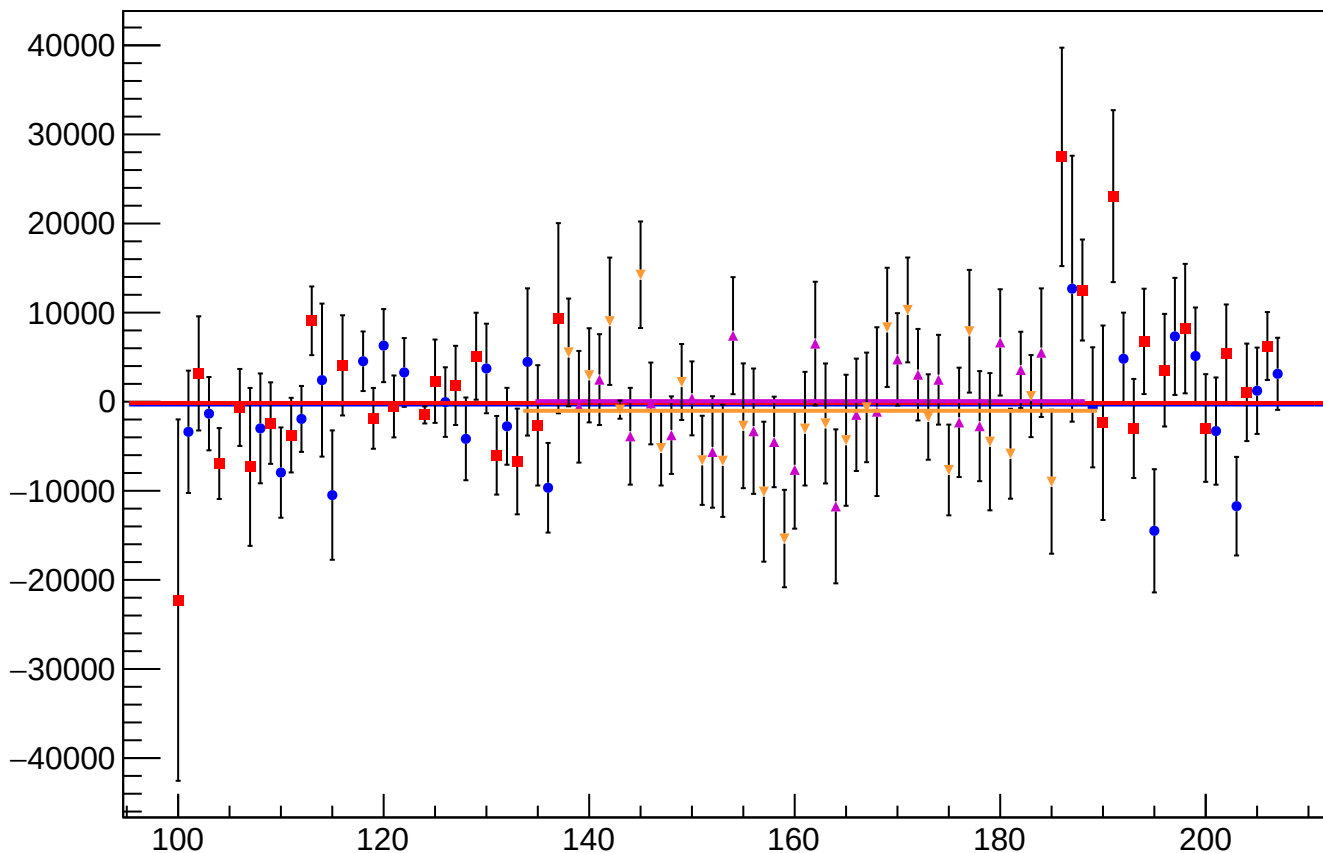
Left In: 1840.981+/-0.304  $\chi^2/\text{NDF}$ : 70985.8/22

+ sign 1812.375+/-0.220  $\chi^2/\text{NDF}$ : 1050450.1/50

All: 1809.888+/-0.155  $\chi^2/\text{NDF}$ : 1784524.7/10

- sign 1807.441+/-0.219  $\chi^2/\text{NDF}$ : 733821.9/53

asym\_atr1l2\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-315.480 \pm 984.349$   $\chi^2/\text{NDF}$ : 29.6/25

Left Out:  $-1018.712 \pm 771.798$   $\chi^2/\text{NDF}$ : 33.7/24

Right Out:  $-143.452 \pm 675.177$   $\chi^2/\text{NDF}$ : 43.4/30

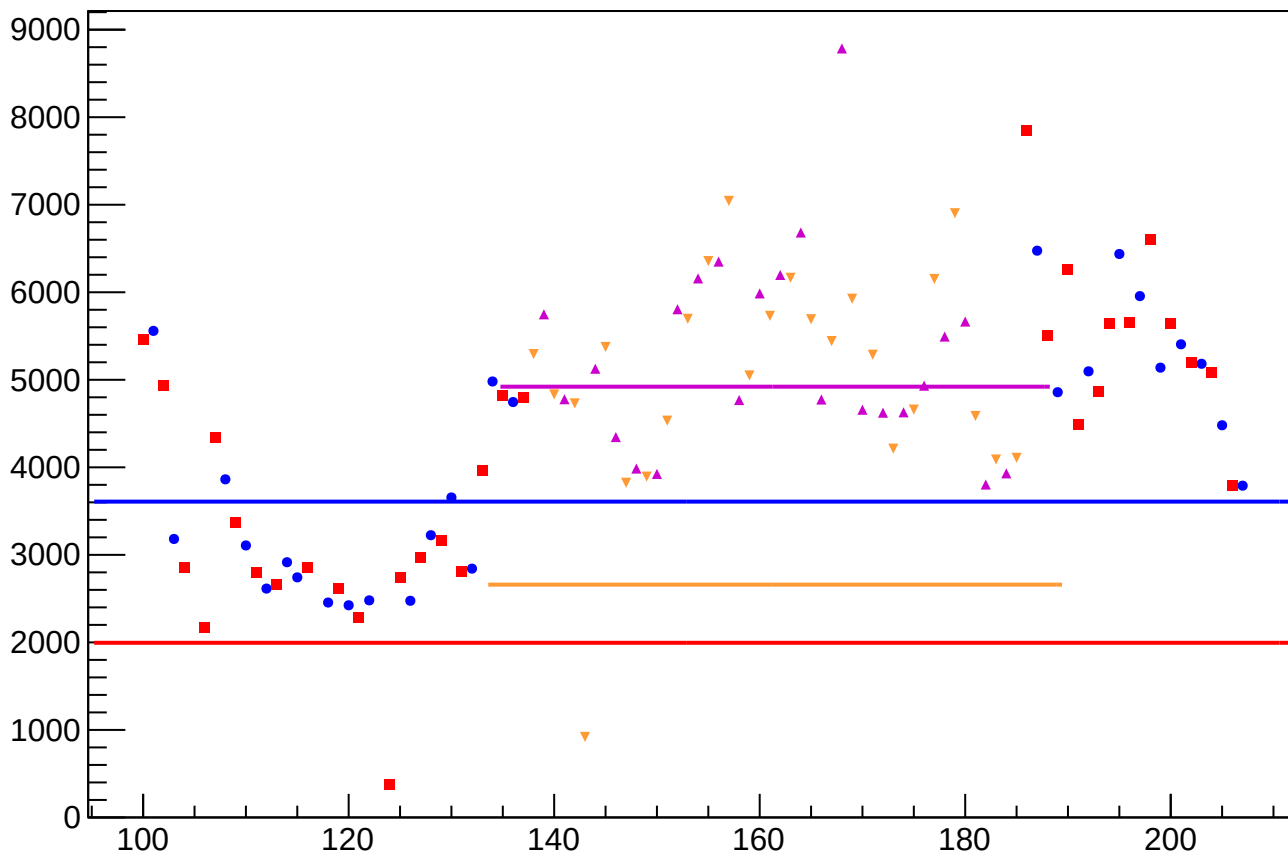
Left In:  $62.286 \pm 1173.429$   $\chi^2/\text{NDF}$ : 13.0/22

+ sign  $-750.981 \pm 607.364$   $\chi^2/\text{NDF}$ : 63.7/50

All:  $-409.402 \pm 421.423$   $\chi^2/\text{NDF}$ : 120.8/104

- sign  $-92.280 \pm 585.217$   $\chi^2/\text{NDF}$ : 56.5/53

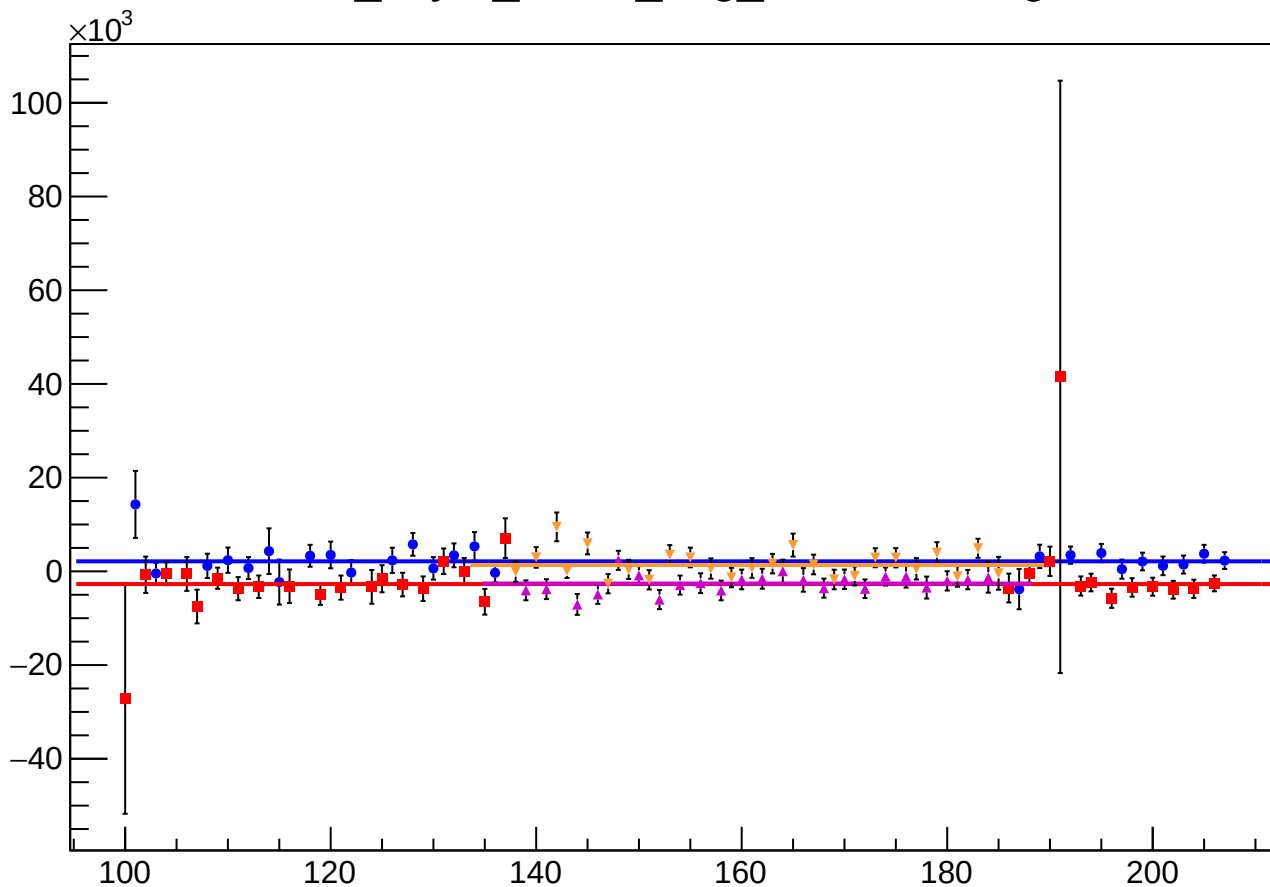
asym\_atr1l2\_avg\_eigen\_cor\_correction\_rms vs Slug



|                             |                                     |                         |                                     |
|-----------------------------|-------------------------------------|-------------------------|-------------------------------------|
| Right In: 3608.254+/-0.696  | $\chi^2/\text{NDF}$ : 2834915.6/25  | + sign 3020.957+/-0.429 | $\chi^2/\text{NDF}$ : 18521356.0/50 |
| Left Out: 2659.907+/-0.546  | $\chi^2/\text{NDF}$ : 14536813.3/24 | All: 2866.515+/-0.298   | $\chi^2/\text{NDF}$ : 44230160.1/1  |
| Right Out: 1995.373+/-0.477 | $\chi^2/\text{NDF}$ : 14866148.6/30 | - sign 2723.130+/-0.414 | $\chi^2/\text{NDF}$ : 25459424.7/53 |
| Left In: 4921.316+/-0.830   | $\chi^2/\text{NDF}$ : 1251131.6/22  |                         |                                     |



# dit\_asym\_atr1l2\_avg\_mean vs Slug



Right In: 2139.785 $\pm$ 465.819  $\chi^2$ /NDF: 17.7/25

Left Out: 1363.887 $\pm$ 427.332  $\chi^2$ /NDF: 36.1/24

Right Out: -2713.395 $\pm$ 448.808  $\chi^2$ /NDF: 25.1/30

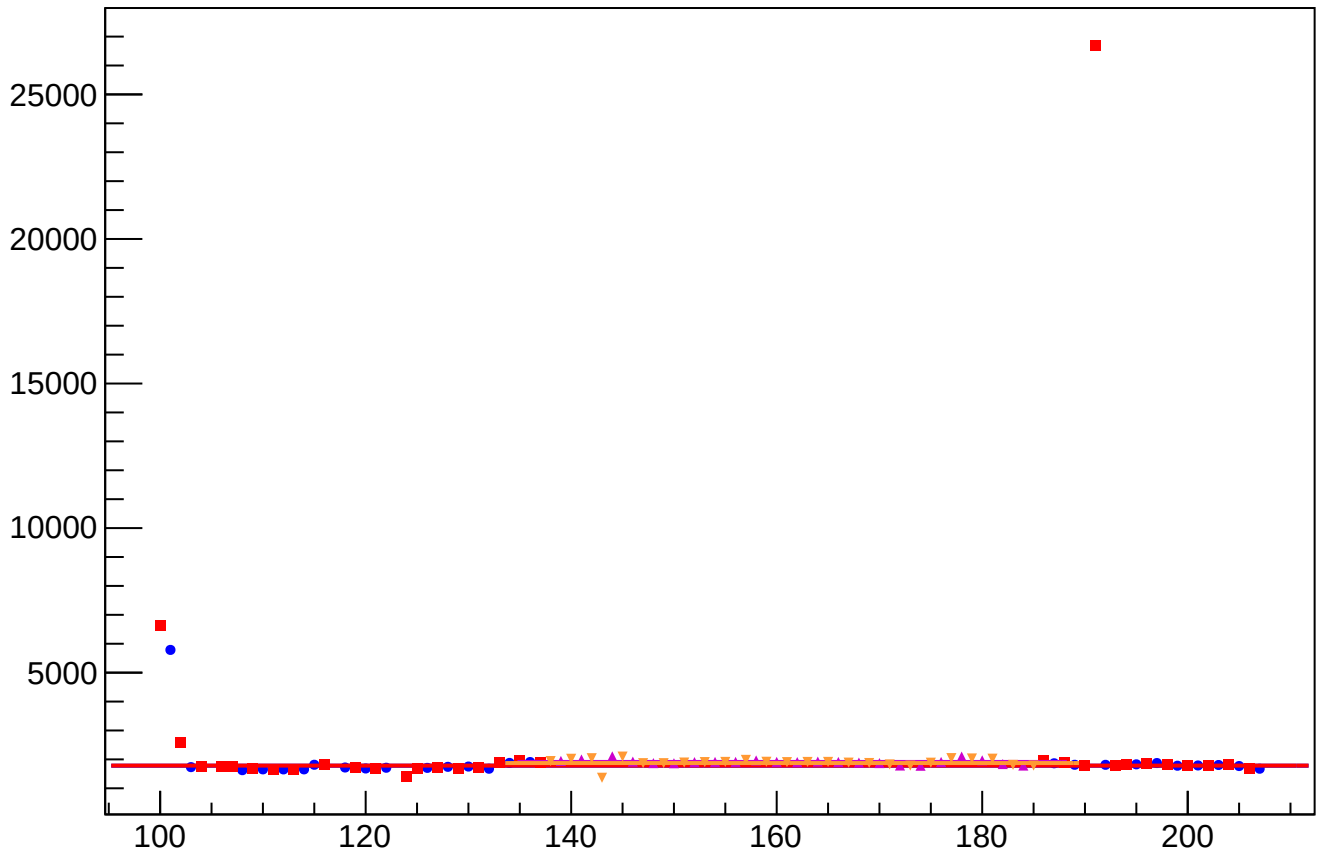
Left In: -2602.835 $\pm$ 446.741  $\chi^2$ /NDF: 20.0/22

+ sign 1718.464 $\pm$ 314.898  $\chi^2$ /NDF: 55.3/50

All: -457.751 $\pm$ 223.274  $\chi^2$ /NDF: 196.5/104

- sign -2657.860 $\pm$ 316.622  $\chi^2$ /NDF: 45.2/53

dit\_asym\_atr1l2\_avg\_rms vs Slug



Right In: 1780.881+/-0.329  $\chi^2/\text{NDF}$ : 682190.2/25

Left Out: 1873.177+/-0.302  $\chi^2/\text{NDF}$ : 309733.7/24

Right Out: 1785.362+/-0.317  $\chi^2/\text{NDF}$ : 561156.8/30

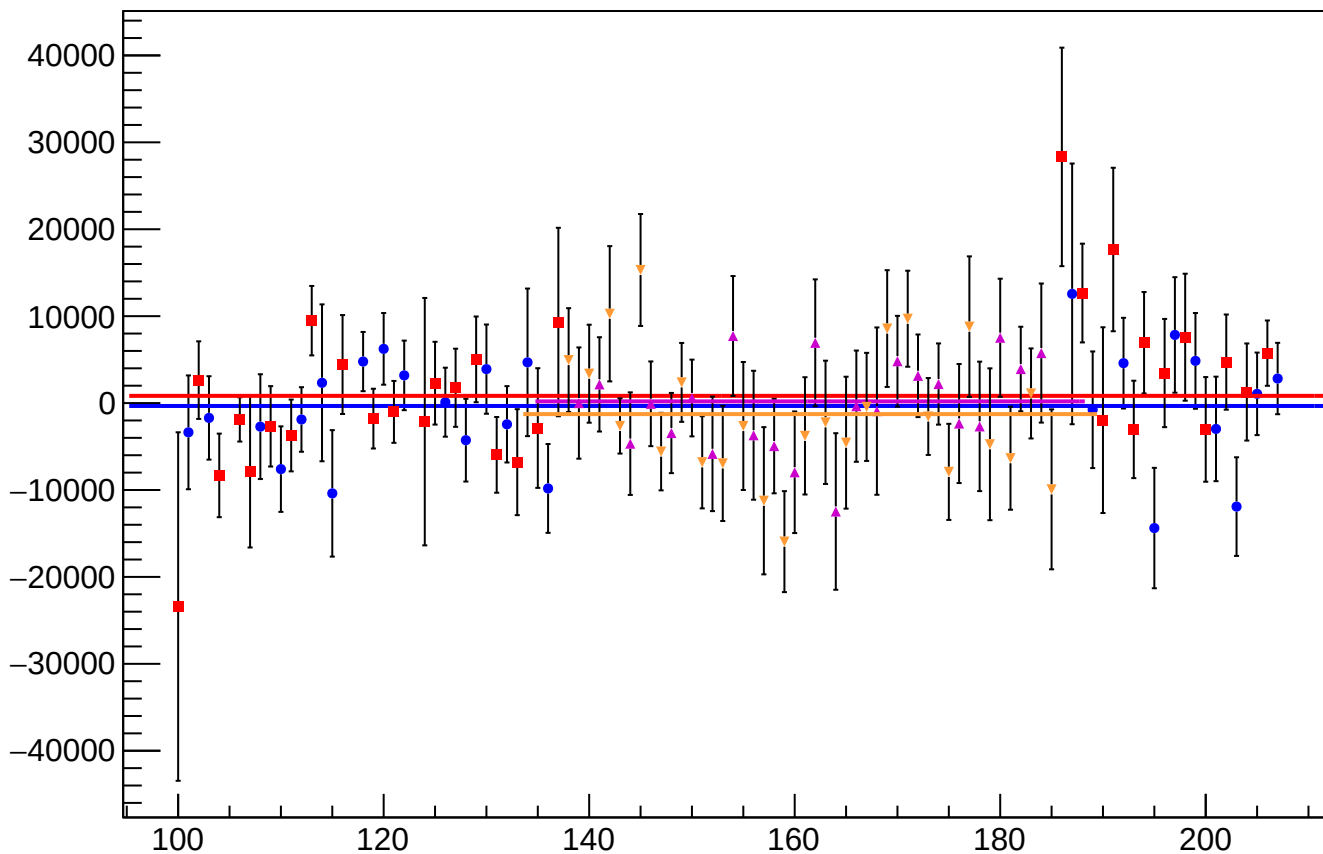
Left In: 1911.423+/-0.316  $\chi^2/\text{NDF}$ : 59139.8/22

+ sign 1830.999+/-0.223  $\chi^2/\text{NDF}$ : 1034559.6/50

All: 1839.760+/-0.158  $\chi^2/\text{NDF}$ : 1737323.9/10

- sign 1848.605+/-0.224  $\chi^2/\text{NDF}$ : 699653.4/53

# asym\_atr1l2\_avg\_dit\_correction\_mean vs Slug



Right In:  $-331.992 \pm 1000.759$   $\chi^2/\text{NDF}$ : 28.9/25

Left Out:  $-1269.760 \pm 1156.132$   $\chi^2/\text{NDF}$ : 33.4/24

Right Out:  $832.108 \pm 912.378$   $\chi^2/\text{NDF}$ : 38.5/30

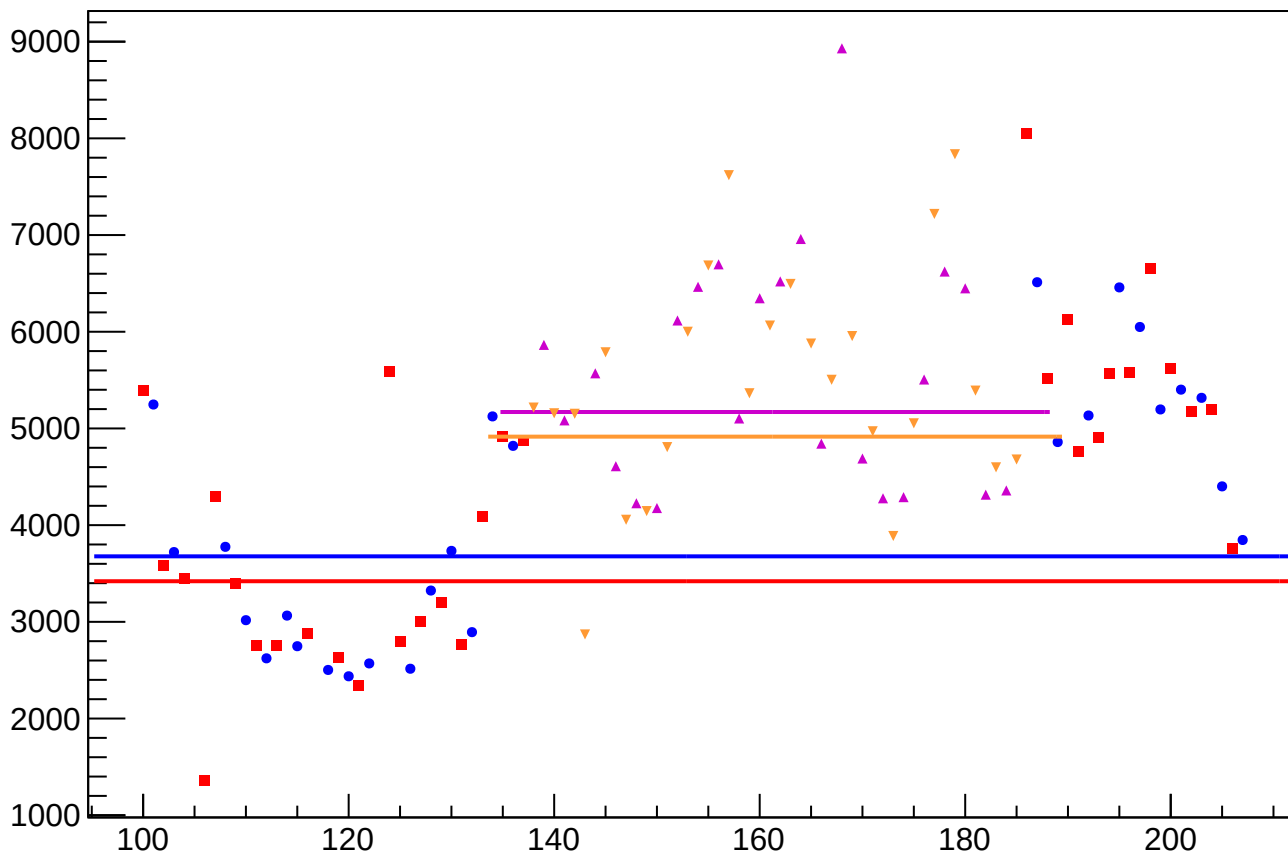
Left In:  $196.917 \pm 1234.538$   $\chi^2/\text{NDF}$ : 12.7/22

+ sign  $-733.672 \pm 756.658$   $\chi^2/\text{NDF}$ : 62.7/50

All:  $-42.352 \pm 526.750$   $\chi^2/\text{NDF}$ : 115.8/104

- sign  $607.728 \pm 733.743$   $\chi^2/\text{NDF}$ : 51.4/53

# asym\_atr1l2\_avg\_dit\_correction\_rms vs Slug



Right In: 3677.359+/-0.708  $\chi^2/\text{NDF}$ : 2731255.6/25

Left Out: 4915.244+/-0.818  $\chi^2/\text{NDF}$ : 2166229.1/24

Right Out: 3419.985+/-0.645  $\chi^2/\text{NDF}$ : 4512970.6/30

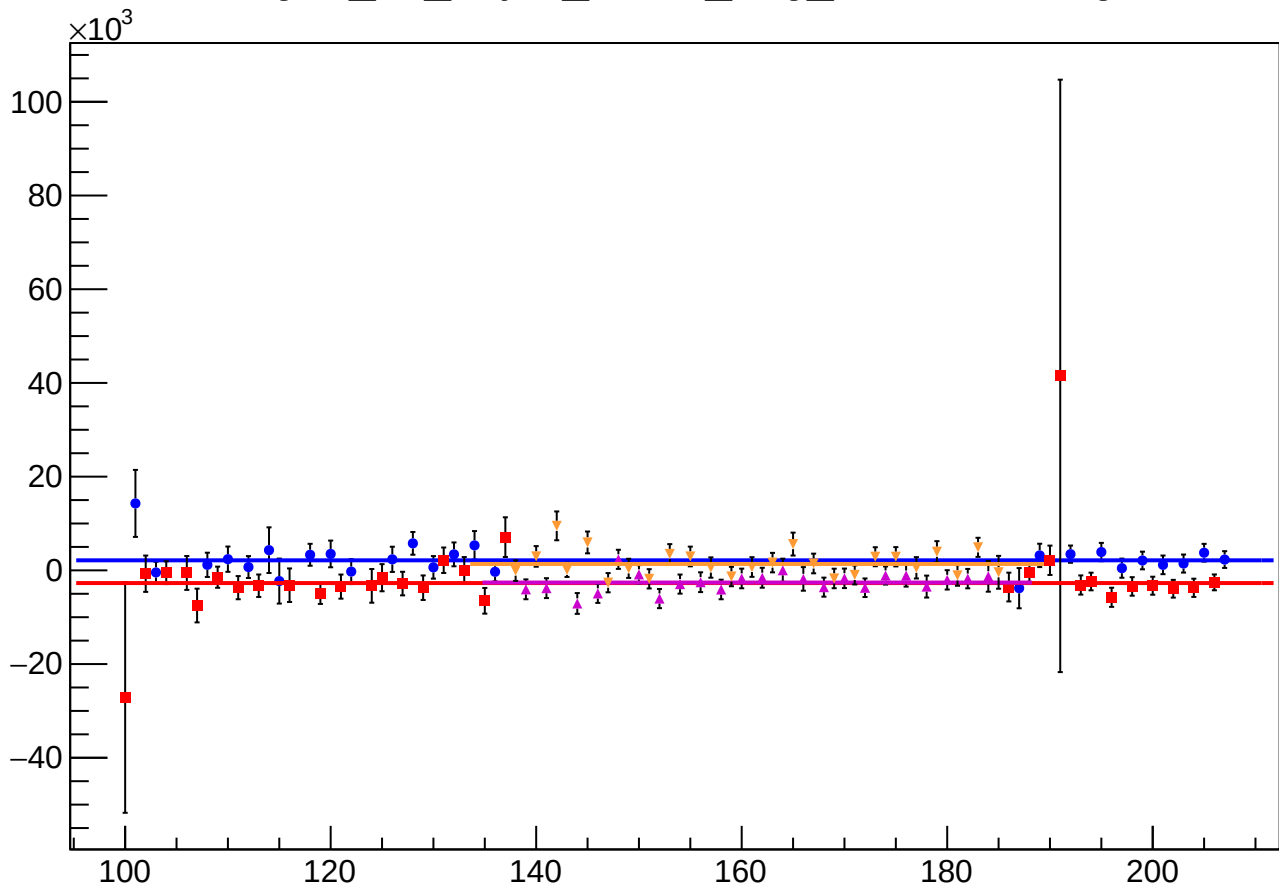
Left In: 5170.028+/-0.873  $\chi^2/\text{NDF}$ : 1348711.3/22

+ sign 4207.590+/-0.535  $\chi^2/\text{NDF}$ : 6208225.5/50

All: 4120.282+/-0.372  $\chi^2/\text{NDF}$ : 14720875.4/1

- sign 4038.183+/-0.519  $\chi^2/\text{NDF}$ : 8460982.7/53

# eigen\_dit\_asym\_atr1l2\_avg\_mean vs Slug



Right In: 2139.786 $\pm$ 465.819  $\chi^2$ /NDF: 17.7/25

Left Out: 1363.884 $\pm$ 427.333  $\chi^2$ /NDF: 36.1/24

Right Out: -2713.392 $\pm$ 448.808  $\chi^2$ /NDF: 25.1/30

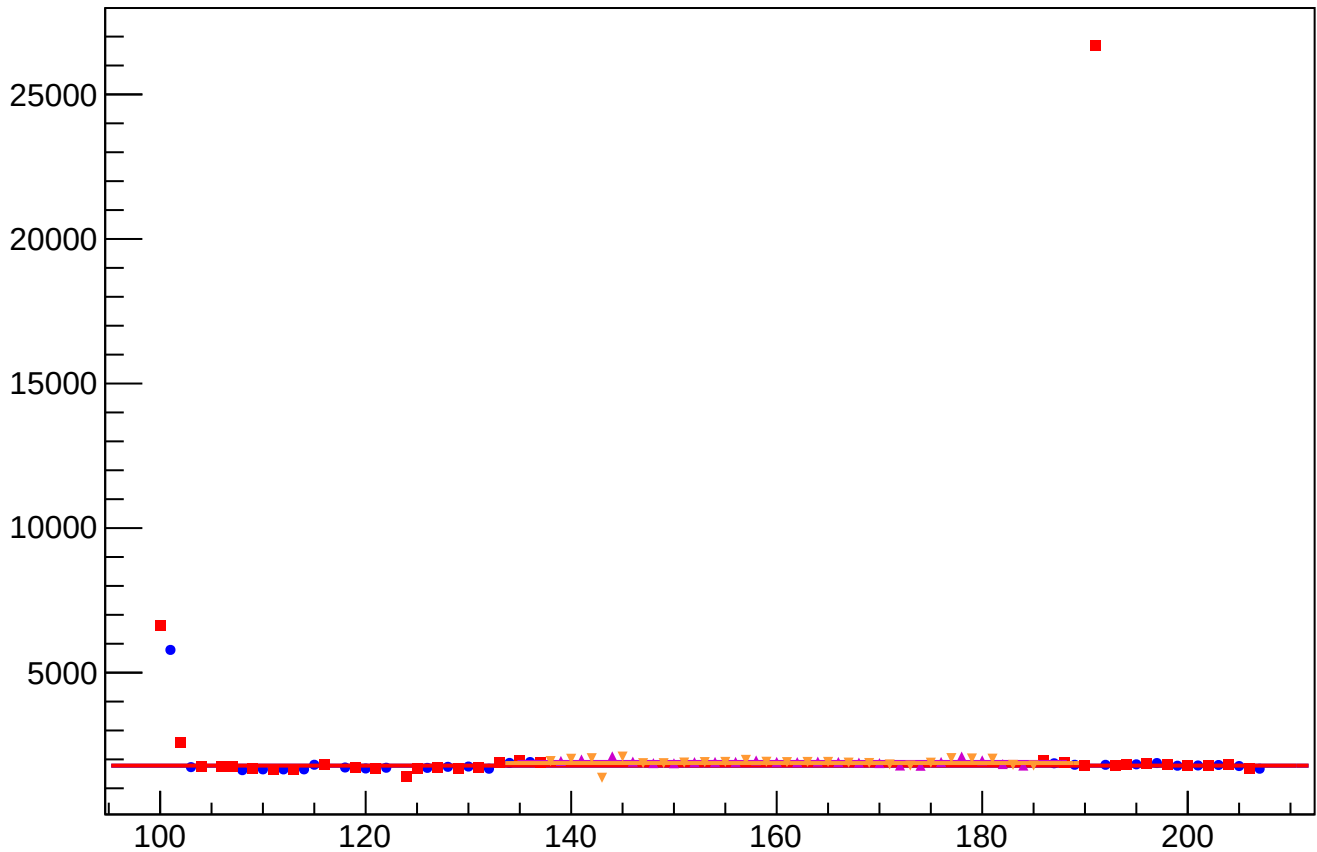
Left In: -2602.834 $\pm$ 446.742  $\chi^2$ /NDF: 20.0/22

+ sign 1718.463 $\pm$ 314.898  $\chi^2$ /NDF: 55.3/50

All: -457.751 $\pm$ 223.274  $\chi^2$ /NDF: 196.5/104

- sign -2657.858 $\pm$ 316.622  $\chi^2$ /NDF: 45.2/53

# eigen\_dit\_asym\_atr1l2\_avg\_rms vs Slug



Right In: 1780.881+/-0.329  $\chi^2/\text{NDF}$ : 682190.2/25

Left Out: 1873.178+/-0.302  $\chi^2/\text{NDF}$ : 309737.2/24

Right Out: 1785.362+/-0.317  $\chi^2/\text{NDF}$ : 561157.0/30

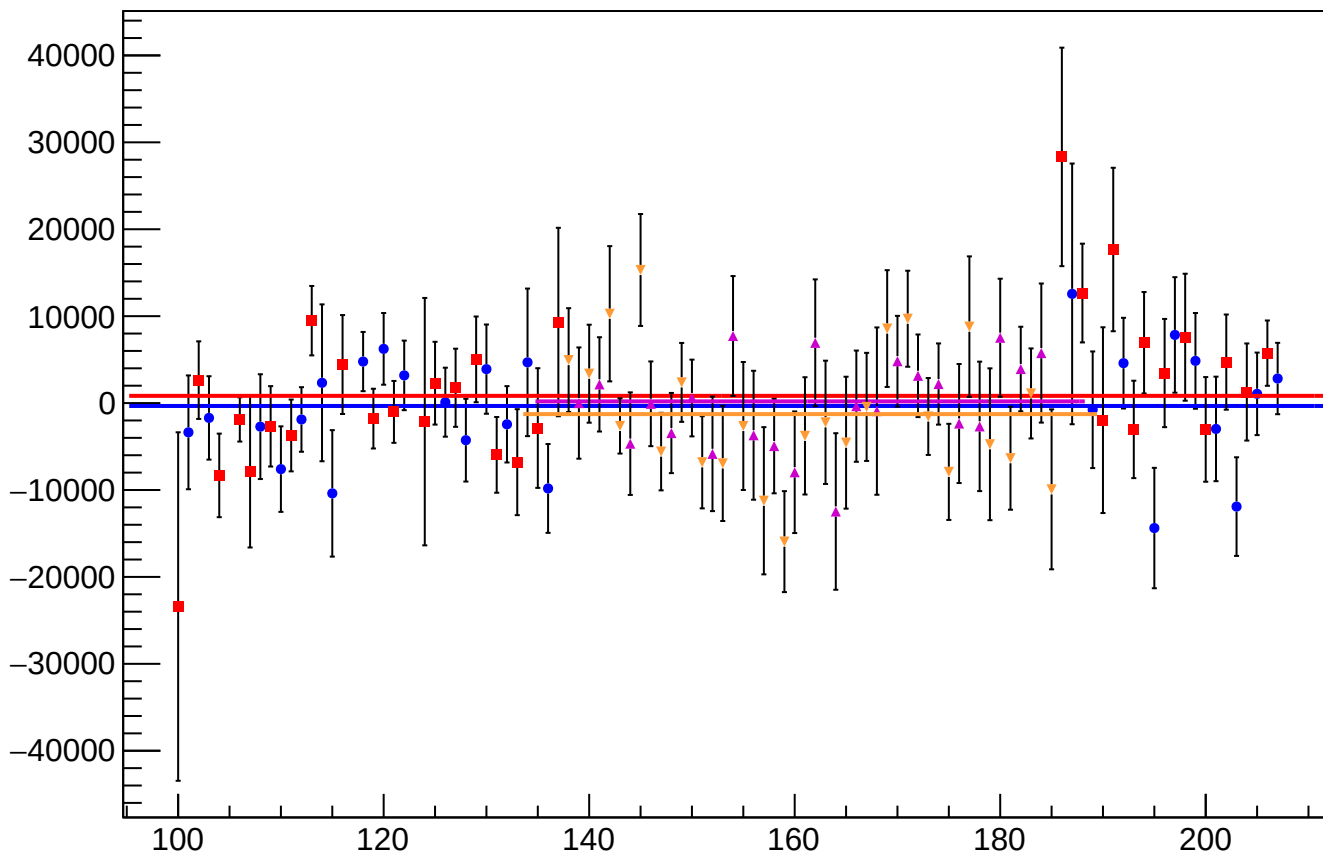
Left In: 1911.425+/-0.316  $\chi^2/\text{NDF}$ : 59142.0/22

+ sign 1831.000+/-0.223  $\chi^2/\text{NDF}$ : 1034563.9/50

All: 1839.760+/-0.158  $\chi^2/\text{NDF}$ : 1737332.0/10

- sign 1848.606+/-0.224  $\chi^2/\text{NDF}$ : 699657.1/53

asym\_atr1l2\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-331.987 \pm 1000.757$   $\chi^2/\text{NDF}$ : 28.9/25

Left Out:  $-1269.765 \pm 1156.133$   $\chi^2/\text{NDF}$ : 33.4/24

Right Out:  $832.097 \pm 912.376$   $\chi^2/\text{NDF}$ : 38.5/30

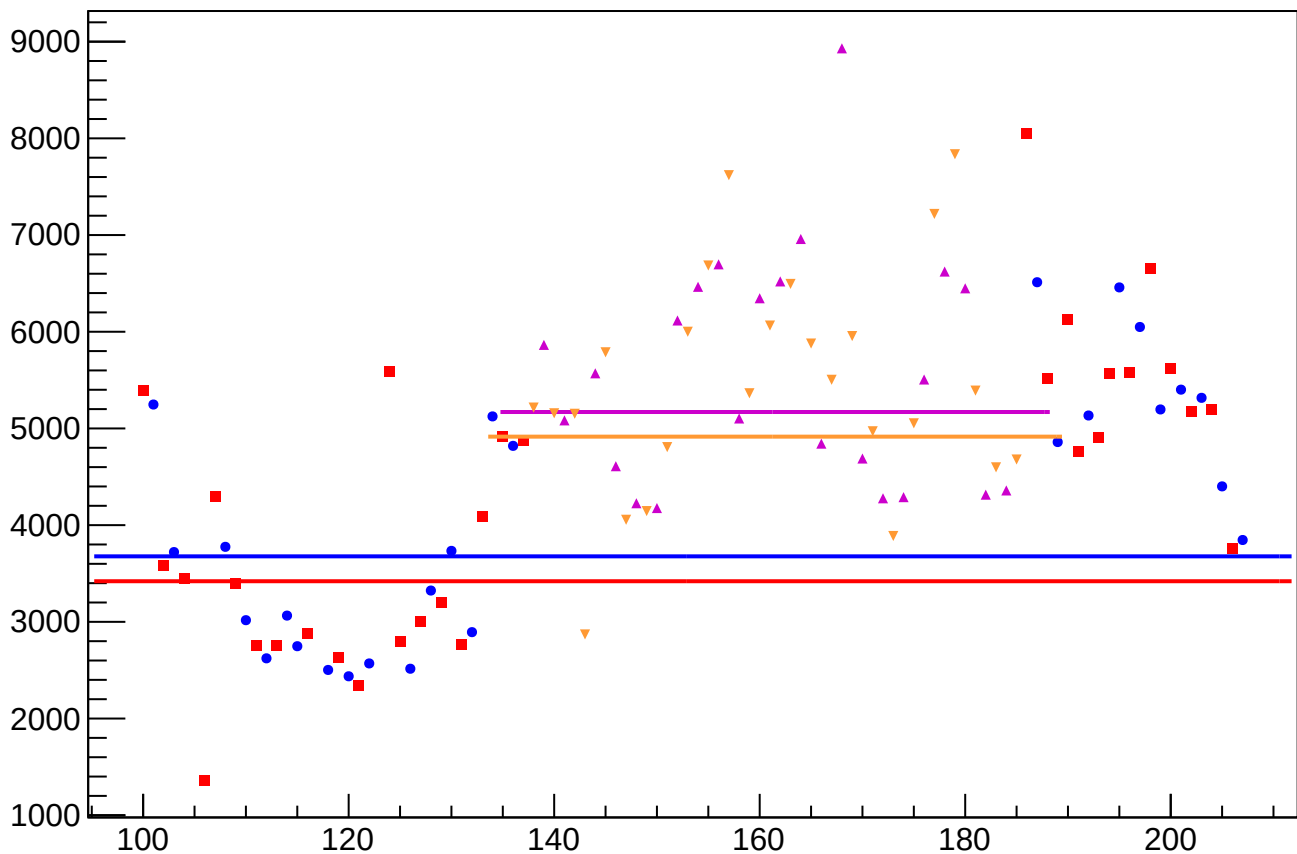
Left In:  $196.918 \pm 1234.540$   $\chi^2/\text{NDF}$ : 12.7/22

+ sign  $-733.670 \pm 756.658$   $\chi^2/\text{NDF}$ : 62.7/50

All:  $-42.354 \pm 526.749$   $\chi^2/\text{NDF}$ : 115.8/104

- sign  $607.723 \pm 733.742$   $\chi^2/\text{NDF}$ : 51.4/53

asym\_atr1l2\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 3677.351 $\pm$ 0.708  $\chi^2/\text{NDF}$ : 2731297.2/25

Left Out: 4915.251 $\pm$ 0.818  $\chi^2/\text{NDF}$ : 2166236.2/24

Right Out: 3419.973 $\pm$ 0.645  $\chi^2/\text{NDF}$ : 4513034.6/30

Left In: 5170.035 $\pm$ 0.873  $\chi^2/\text{NDF}$ : 1348713.2/22

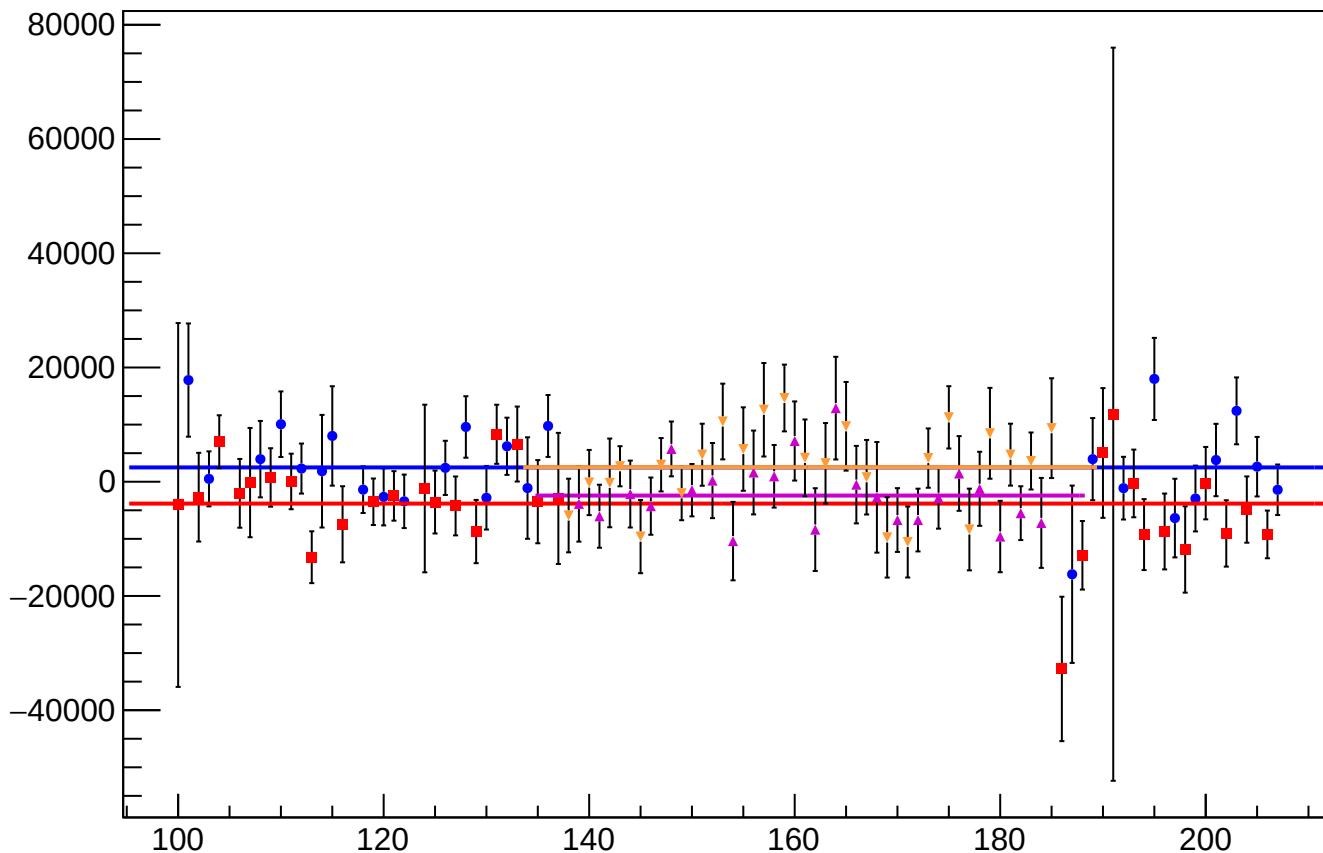
+ sign 4207.586 $\pm$ 0.535  $\chi^2/\text{NDF}$ : 6208304.6/50

All: 4120.276 $\pm$ 0.372  $\chi^2/\text{NDF}$ : 14721079.7/1

- sign 4038.175 $\pm$ 0.519  $\chi^2/\text{NDF}$ : 8461105.2/53



# asym\_atr1l2\_avg\_mean vs Slug



Right In: 2504.297+/-1121.906  $\chi^2/\text{NDF}$ : 26.3/25

Left Out: 2547.072+/-1187.668  $\chi^2/\text{NDF}$ : 29.1/24

Right Out: -3826.723+/-1090.419  $\chi^2/\text{NDF}$ : 34.5/30

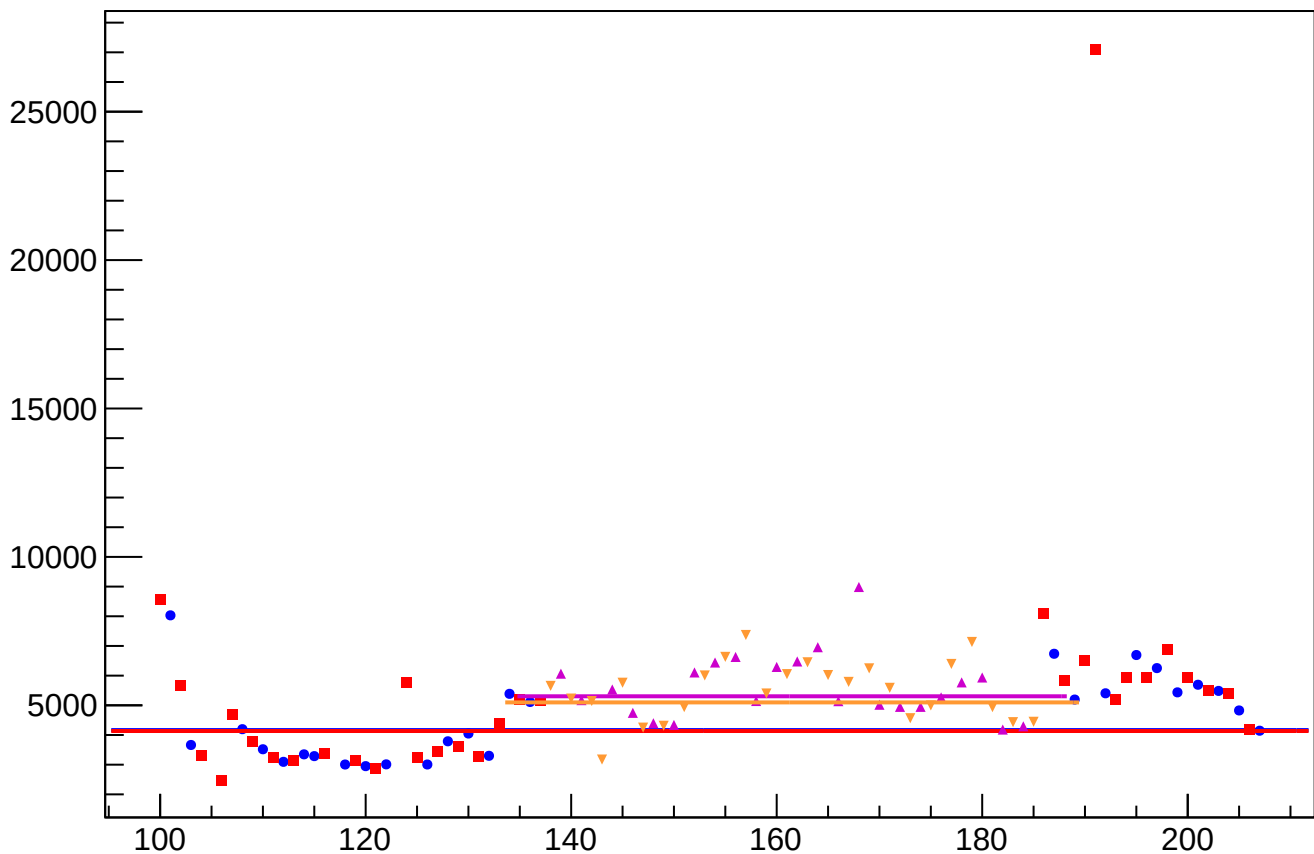
Left In: -2423.016+/-1259.653  $\chi^2/\text{NDF}$ : 15.0/22

+ sign 2524.467+/-815.565  $\chi^2/\text{NDF}$ : 55.4/50

All: -319.395+/-579.801  $\chi^2/\text{NDF}$ : 130.2/104

- sign -3225.433+/-824.432  $\chi^2/\text{NDF}$ : 50.2/53

# asym\_atr1l2\_avg\_rms vs Slug



Right In: 4165.276+/-0.793  $\chi^2/\text{NDF}$ : 2172000.4/25

Left Out: 5097.995+/-0.840  $\chi^2/\text{NDF}$ :1544385.5/24

Right Out: 4134.482+/-0.763  $\chi^2/\text{NDF}$ : 2894589.9/30

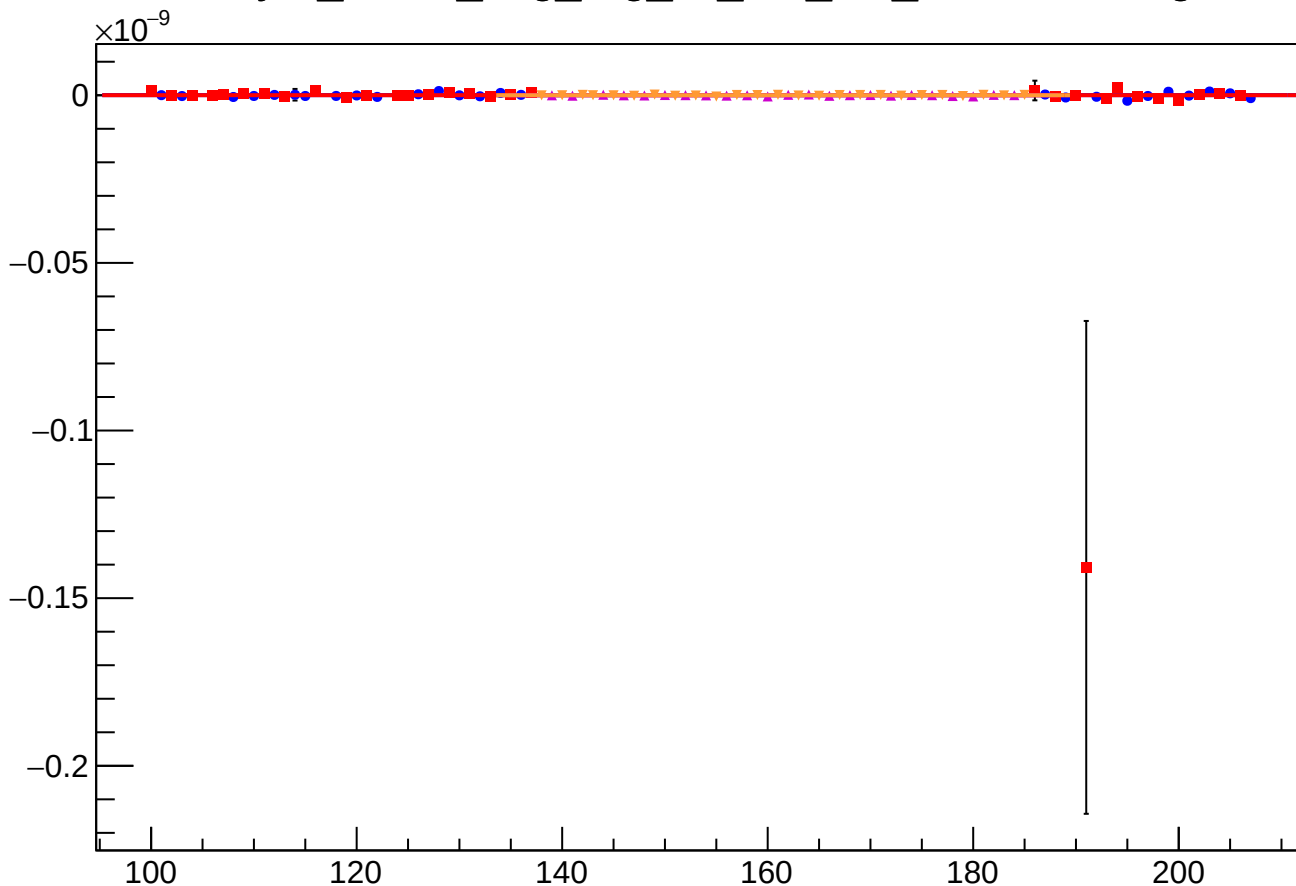
Left In: 5304.171+/-0.891  $\chi^2/\text{NDF}$ :1017974.6/22

+ sign 4605.099+/-0.577  $\chi^2/\text{NDF}$ : 4368234.2/50

All: 4617.310+/-0.409  $\chi^2/\text{NDF}$ : 9276186.8/10

- sign 4629.642+/-0.580  $\chi^2/\text{NDF}$ : 4907051.4/53

# asym\_atr1l2\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 34.0/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:15.2/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 39.4/30

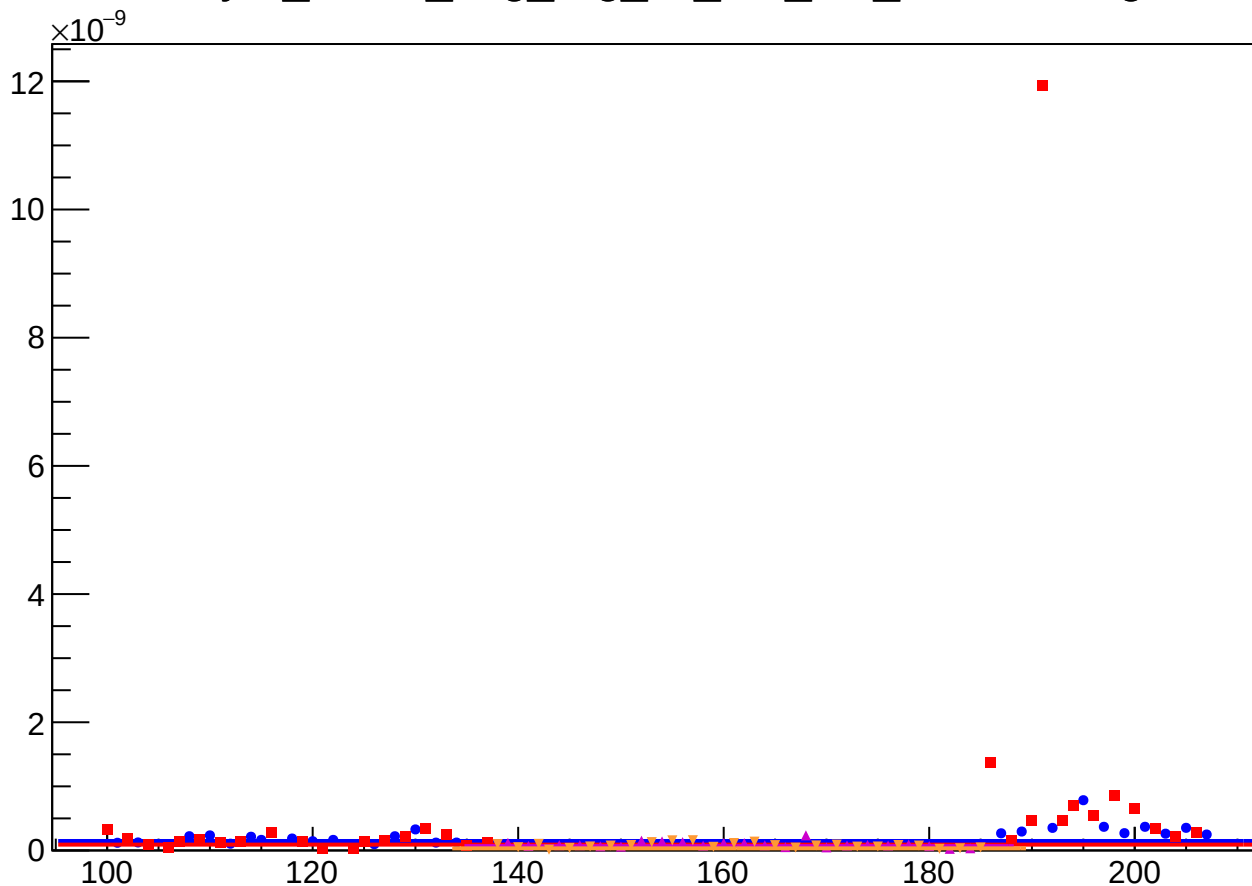
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:22.9/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 49.5/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 111.9/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 62.4/53

# asym\_atr1l2\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2745844.6/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6126369.9/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7014949.5/30

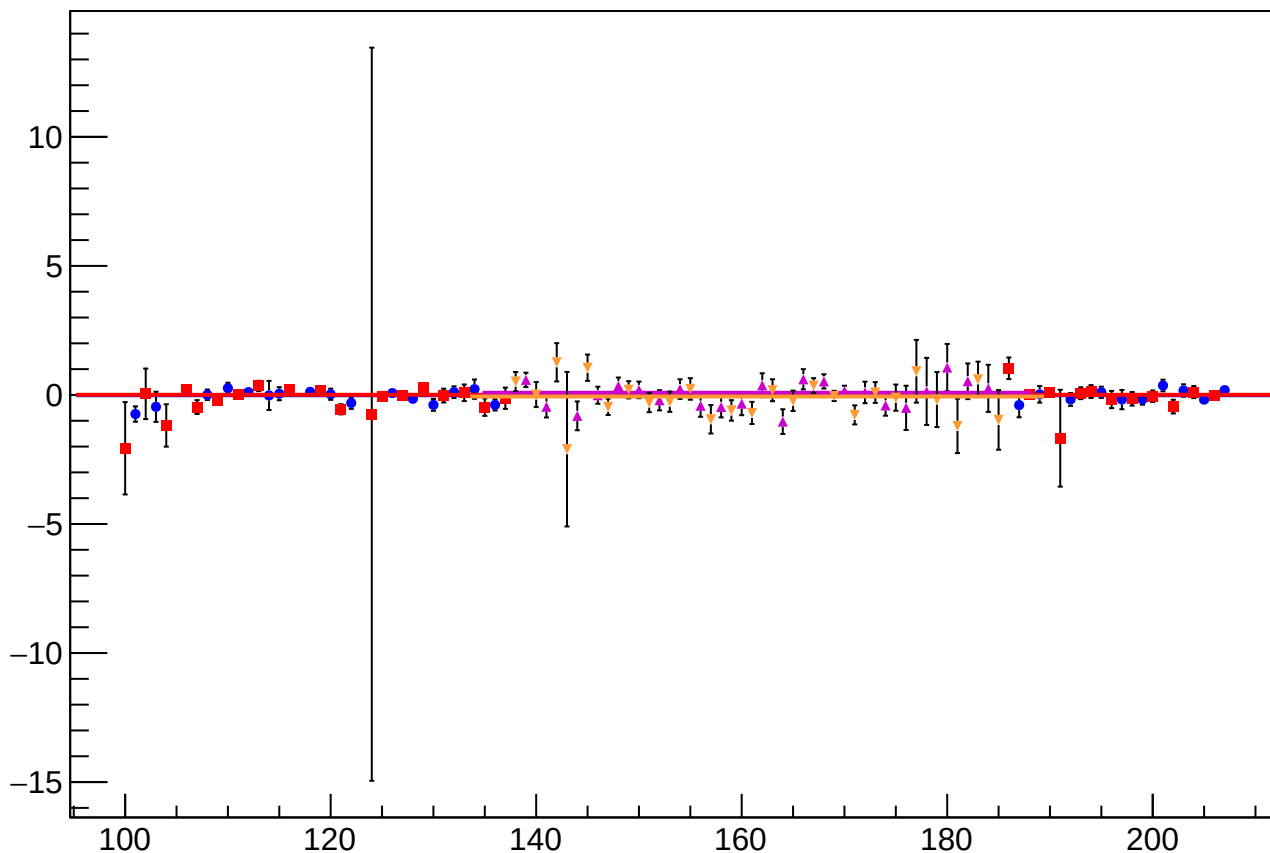
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2448729.8/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14190487.0/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 26501474.8/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9788622.9/53

# asym\_atr1l2\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.011 \pm 0.043$   $\chi^2/\text{NDF}$ : 27.2/25

Left Out:  $-0.061 \pm 0.084$   $\chi^2/\text{NDF}$ : 30.8/24

Right Out:  $0.006 \pm 0.039$   $\chi^2/\text{NDF}$ : 40.1/30

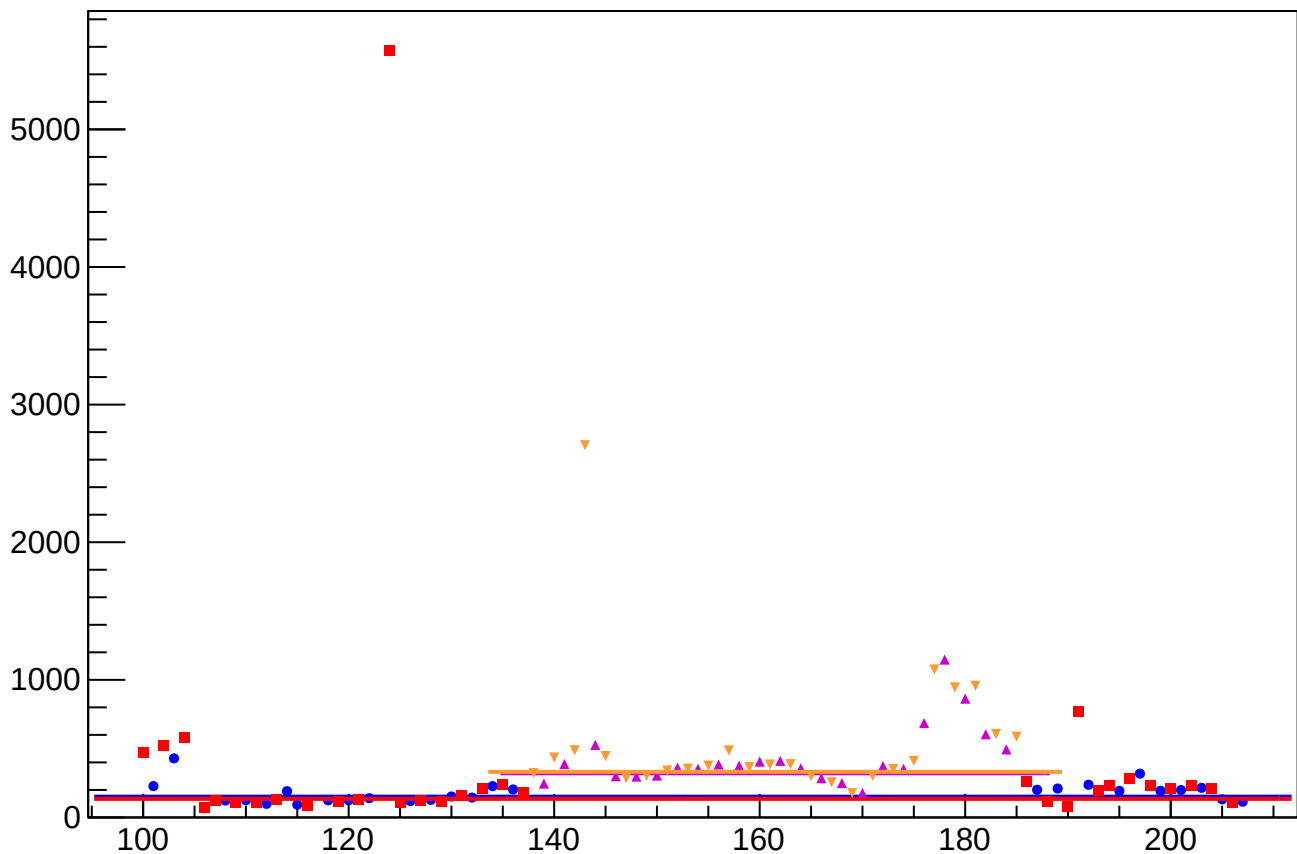
Left In:  $0.084 \pm 0.081$   $\chi^2/\text{NDF}$ : 27.0/22

+ sign  $-0.021 \pm 0.038$   $\chi^2/\text{NDF}$ : 58.3/50

All:  $0.001 \pm 0.026$   $\chi^2/\text{NDF}$ : 126.7/104

- sign  $0.020 \pm 0.035$   $\chi^2/\text{NDF}$ : 67.8/53

asym\_atr1l2\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 151.122 $\pm$ 0.030  $\chi^2$ /NDF: 2705407.1/25

Left Out: 331.651 $\pm$ 0.059  $\chi^2$ /NDF: 5838206.4/24

Right Out: 135.158 $\pm$ 0.027  $\chi^2$ /NDF: 4909545.6/30

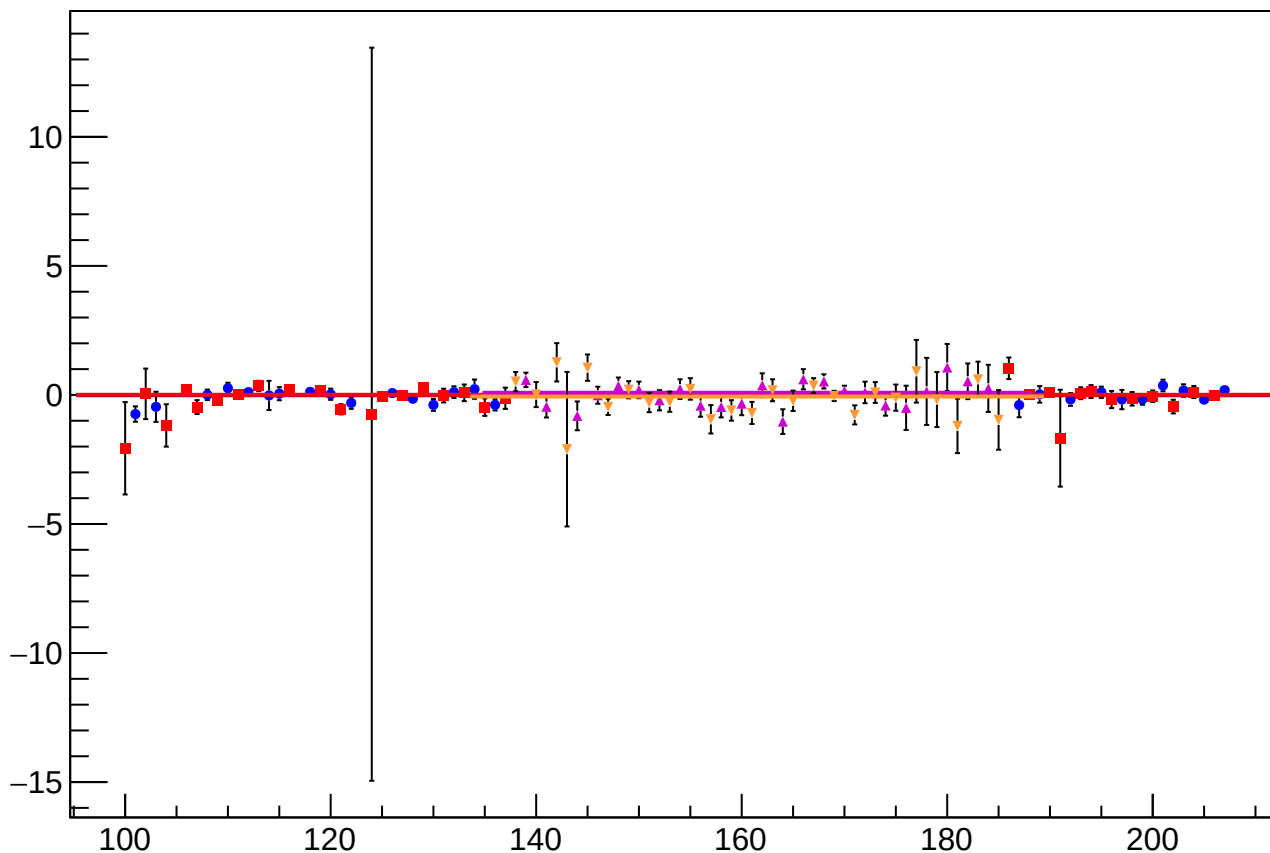
Left In: 320.746 $\pm$ 0.057  $\chi^2$ /NDF: 4248172.2/22

+ sign 188.975 $\pm$ 0.027  $\chi^2$ /NDF: 15898074.4/50

All: 178.314 $\pm$ 0.018  $\chi^2$ /NDF: 33865870.3/10

- sign 169.476 $\pm$ 0.025  $\chi^2$ /NDF: 17684718.7/53

asym\_atr1l2\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.011 \pm 0.043$   $\chi^2/\text{NDF}$ : 27.2/25

Left Out:  $-0.061 \pm 0.084$   $\chi^2/\text{NDF}$ : 30.8/24

Right Out:  $0.006 \pm 0.039$   $\chi^2/\text{NDF}$ : 40.1/30

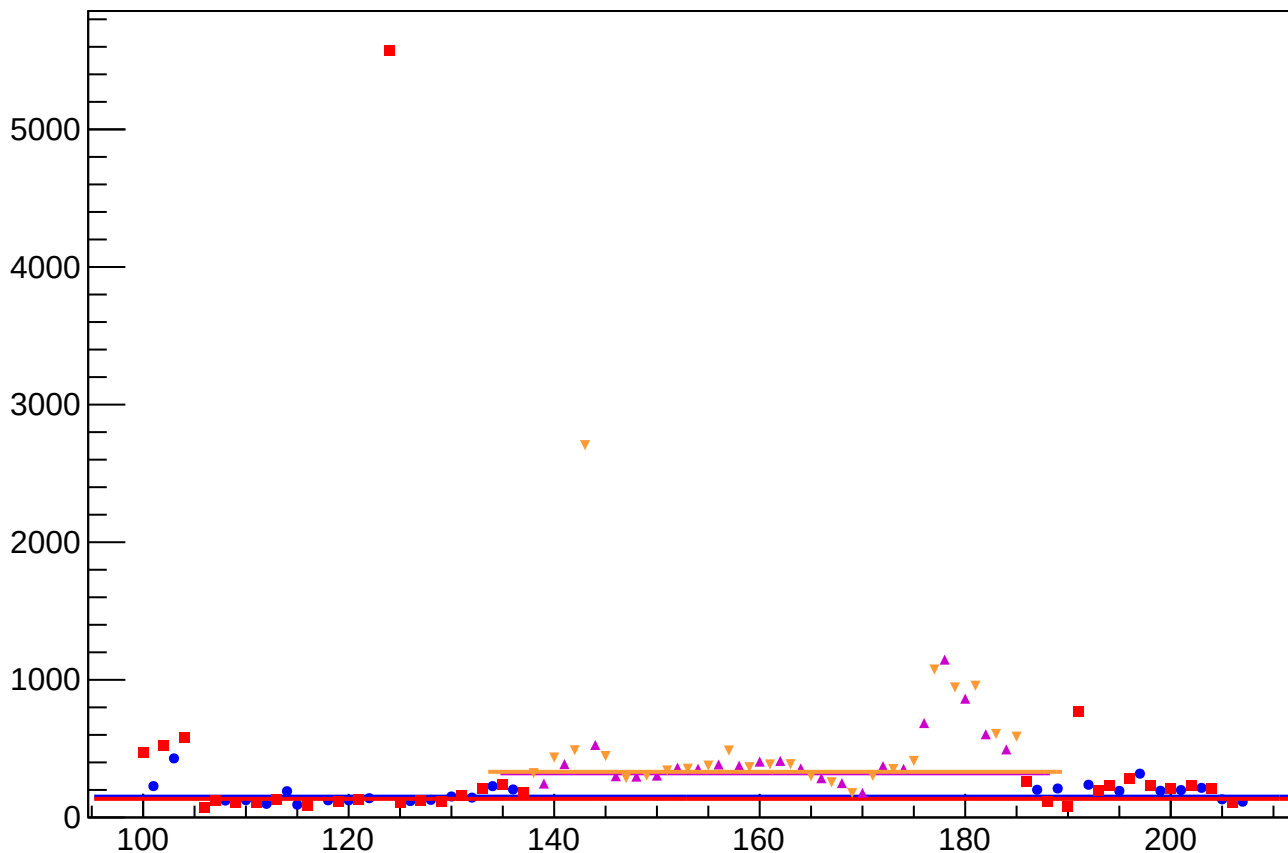
Left In:  $0.084 \pm 0.081$   $\chi^2/\text{NDF}$ : 27.0/22

+ sign  $-0.021 \pm 0.038$   $\chi^2/\text{NDF}$ : 58.3/50

All:  $0.001 \pm 0.026$   $\chi^2/\text{NDF}$ : 126.7/104

- sign  $0.020 \pm 0.035$   $\chi^2/\text{NDF}$ : 67.8/53

asym\_atr1l2\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 151.122+/-0.030  $\chi^2/\text{NDF}$ : 2705407.1/25

Left Out: 331.651+/-0.059  $\chi^2/\text{NDF}$ : 5838206.4/24

Right Out: 135.158+/-0.027  $\chi^2/\text{NDF}$ : 4909545.6/30

Left In: 320.746+/-0.057  $\chi^2/\text{NDF}$ : 4248172.2/22

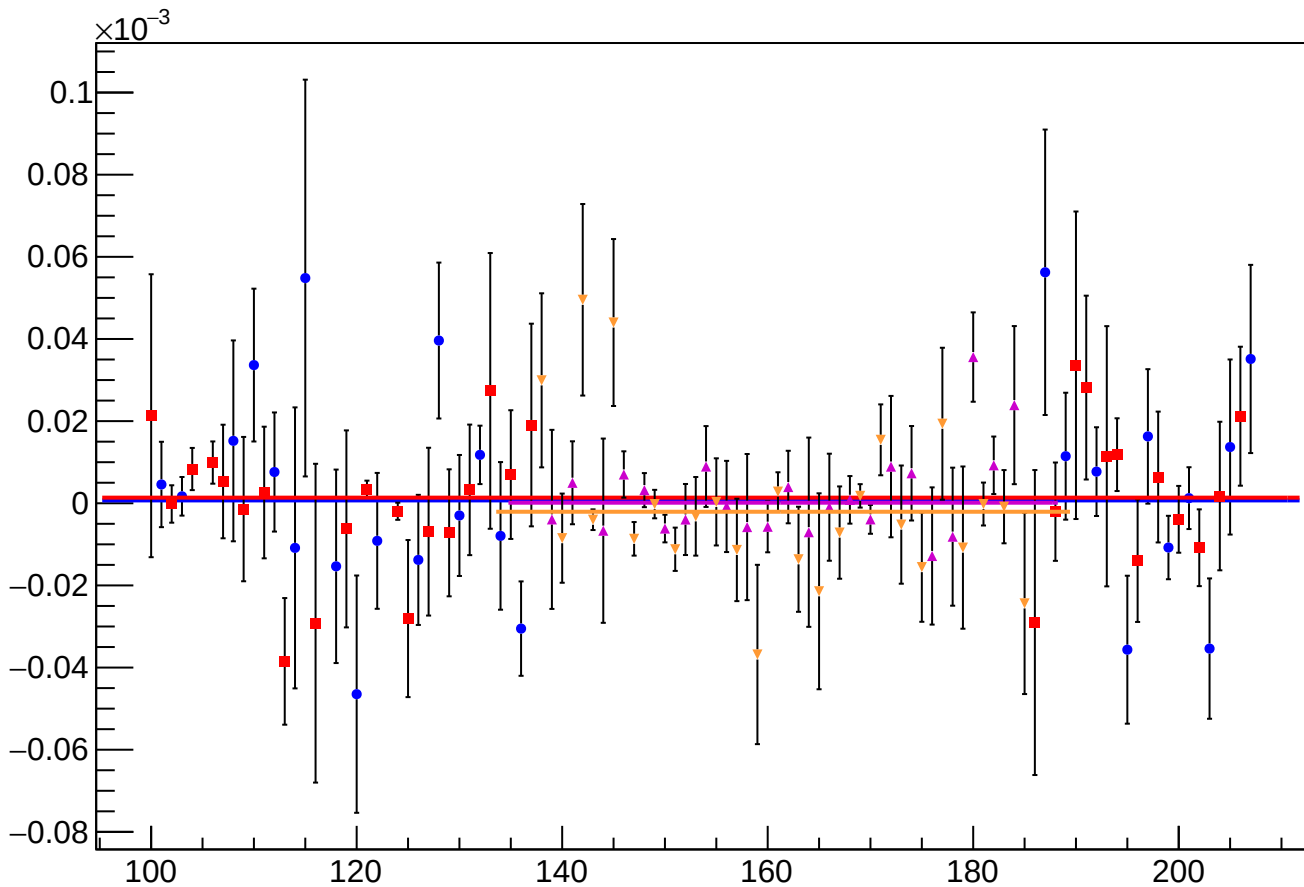
+ sign 188.975+/-0.027  $\chi^2/\text{NDF}$ : 15898074.4/50

All: 178.314+/-0.018  $\chi^2/\text{NDF}$ : 33865870.3/10

- sign 169.476+/-0.025  $\chi^2/\text{NDF}$ : 17684718.7/53



asym\_atr1l2\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 41.6/25

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 34.8/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 29.3/30

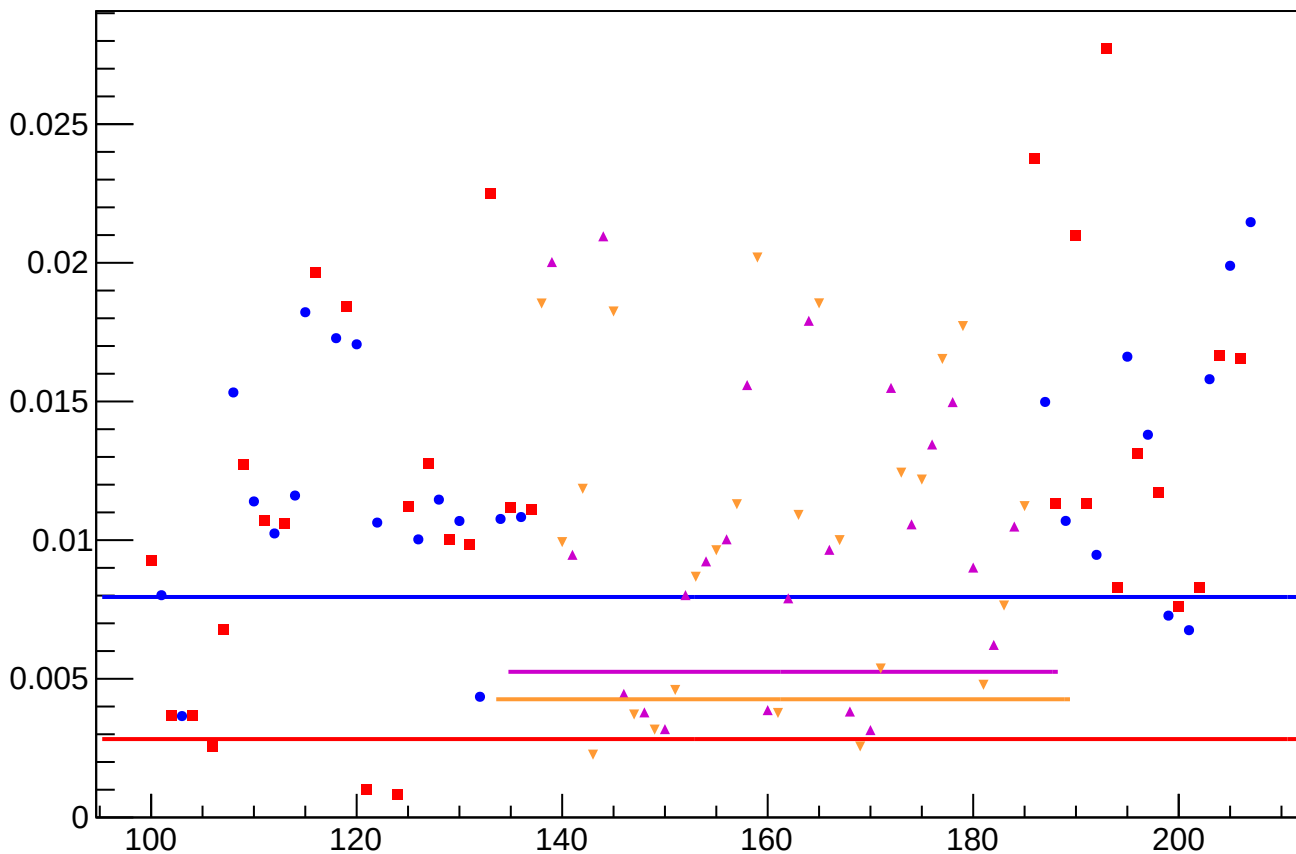
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 24.9/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 77.5/50

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 134.8/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 54.6/53

asym\_atr1l2\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 6222215.7/25

Left Out: 0.004 $\pm$ 0.000  $\chi^2$ /NDF:12968514.8/24

Right Out: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 19645072.4/30

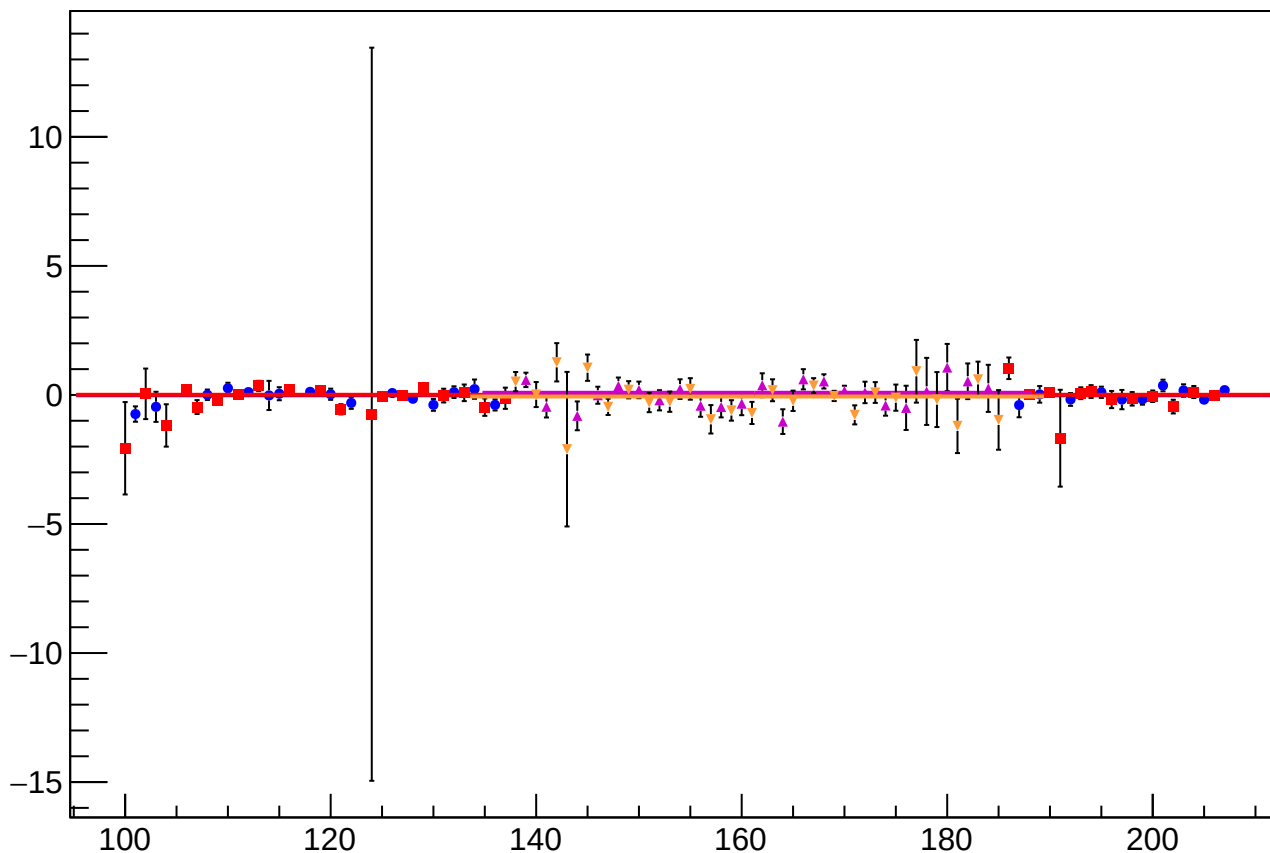
Left In: 0.005 $\pm$ 0.000  $\chi^2$ /NDF:9531217.7/22

+ sign 0.005 $\pm$ 0.000  $\chi^2$ /NDF: 22951046.3/50

All: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 56879709.9/104

- sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 32325690.1/53

asym\_atr1l2\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.011 \pm 0.043$   $\chi^2/\text{NDF}$ : 27.2/25

Left Out:  $-0.061 \pm 0.084$   $\chi^2/\text{NDF}$ : 30.8/24

Right Out:  $0.006 \pm 0.039$   $\chi^2/\text{NDF}$ : 40.1/30

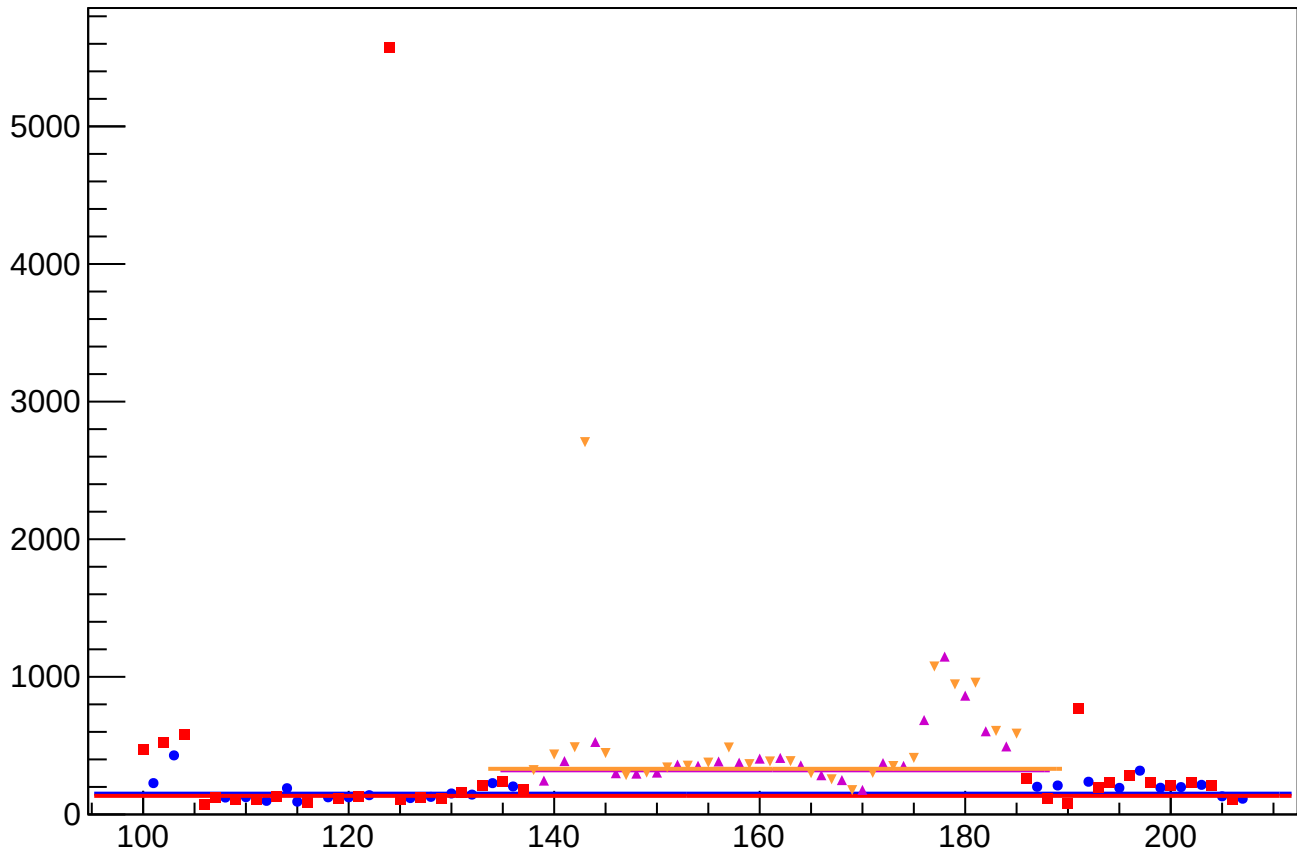
Left In:  $0.084 \pm 0.081$   $\chi^2/\text{NDF}$ : 27.0/22

+ sign  $-0.021 \pm 0.038$   $\chi^2/\text{NDF}$ : 58.3/50

All:  $0.001 \pm 0.026$   $\chi^2/\text{NDF}$ : 126.7/104

- sign  $0.020 \pm 0.035$   $\chi^2/\text{NDF}$ : 67.8/53

asym\_atr1l2\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 151.122 $\pm$ 0.030  $\chi^2$ /NDF: 2705386.0/25

Left Out: 331.653 $\pm$ 0.059  $\chi^2$ /NDF: 5838264.0/24

Right Out: 135.157 $\pm$ 0.027  $\chi^2$ /NDF: 4909590.2/30

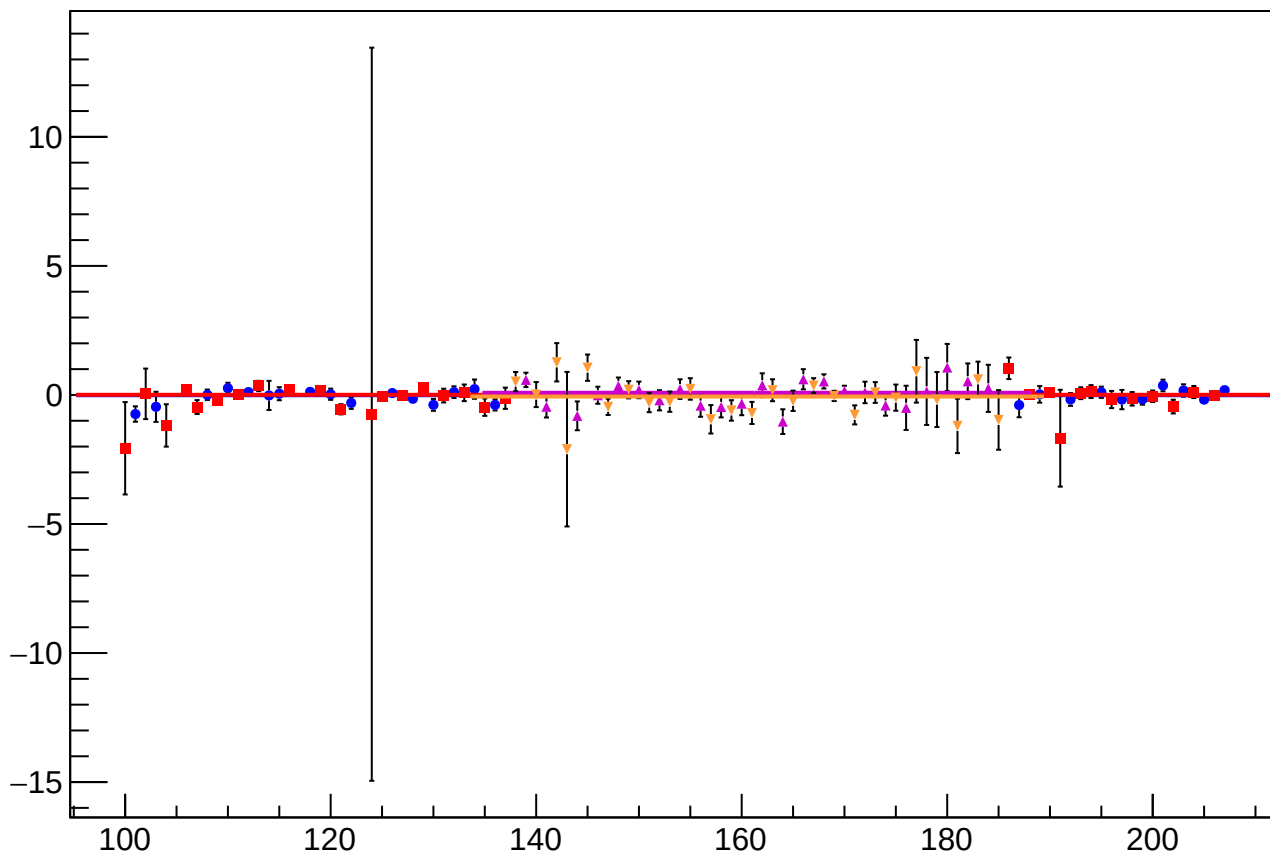
Left In: 320.749 $\pm$ 0.057  $\chi^2$ /NDF: 4248171.3/22

+ sign 188.975 $\pm$ 0.027  $\chi^2$ /NDF: 15898183.6/50

All: 178.314 $\pm$ 0.018  $\chi^2$ /NDF: 33866262.6/10

- sign 169.475 $\pm$ 0.025  $\chi^2$ /NDF: 17684977.1/53

asym\_atr1l2\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.011 \pm 0.043$   $\chi^2/\text{NDF}$ : 27.2/25

Left Out:  $-0.061 \pm 0.084$   $\chi^2/\text{NDF}$ : 30.8/24

Right Out:  $0.006 \pm 0.039$   $\chi^2/\text{NDF}$ : 40.1/30

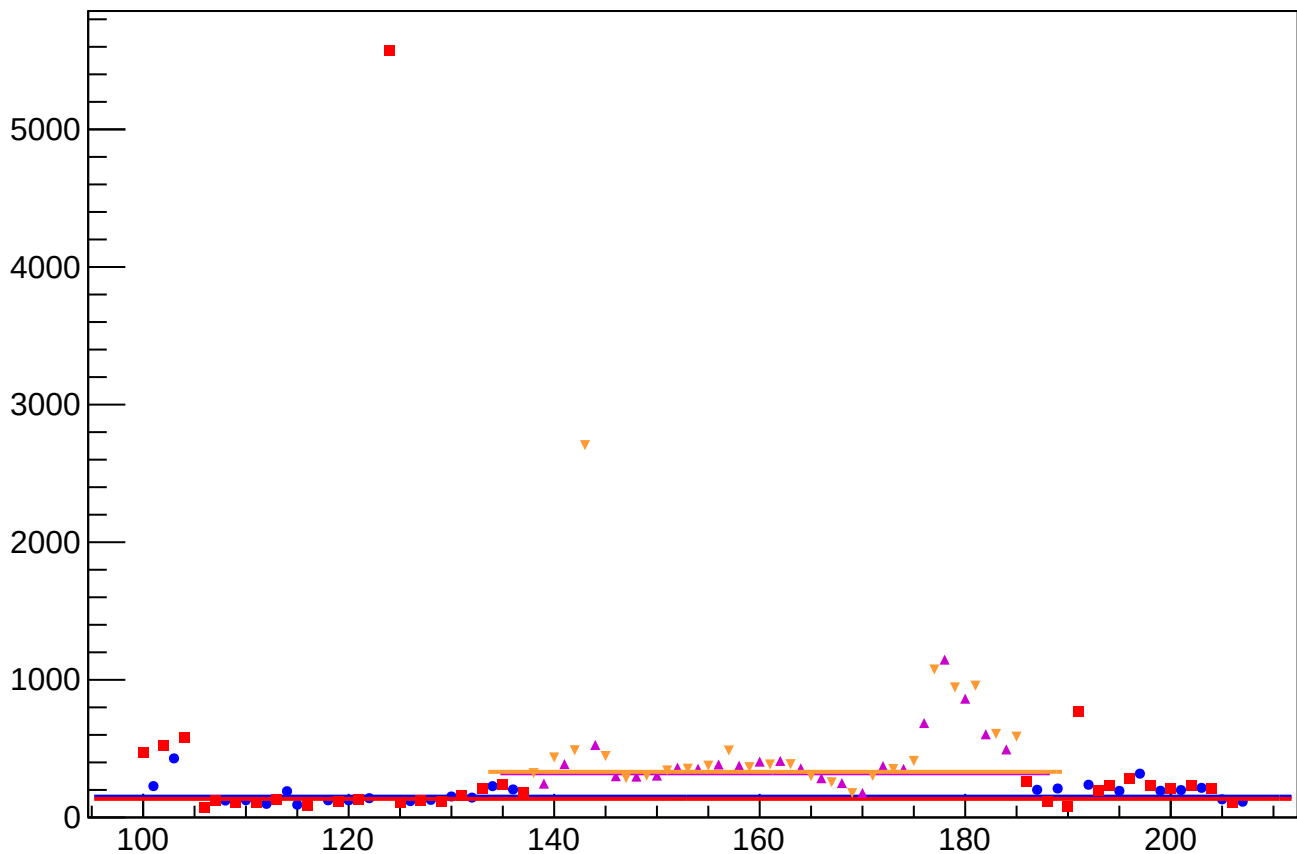
Left In:  $0.084 \pm 0.081$   $\chi^2/\text{NDF}$ : 27.0/22

+ sign  $-0.021 \pm 0.038$   $\chi^2/\text{NDF}$ : 58.3/50

All:  $0.001 \pm 0.026$   $\chi^2/\text{NDF}$ : 126.7/104

- sign  $0.020 \pm 0.035$   $\chi^2/\text{NDF}$ : 67.8/53

asym\_atr1l2\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 151.122 $\pm$ 0.030  $\chi^2$ /NDF: 2705386.0/25

Left Out: 331.653 $\pm$ 0.059  $\chi^2$ /NDF: 5838264.0/24

Right Out: 135.157 $\pm$ 0.027  $\chi^2$ /NDF: 4909590.2/30

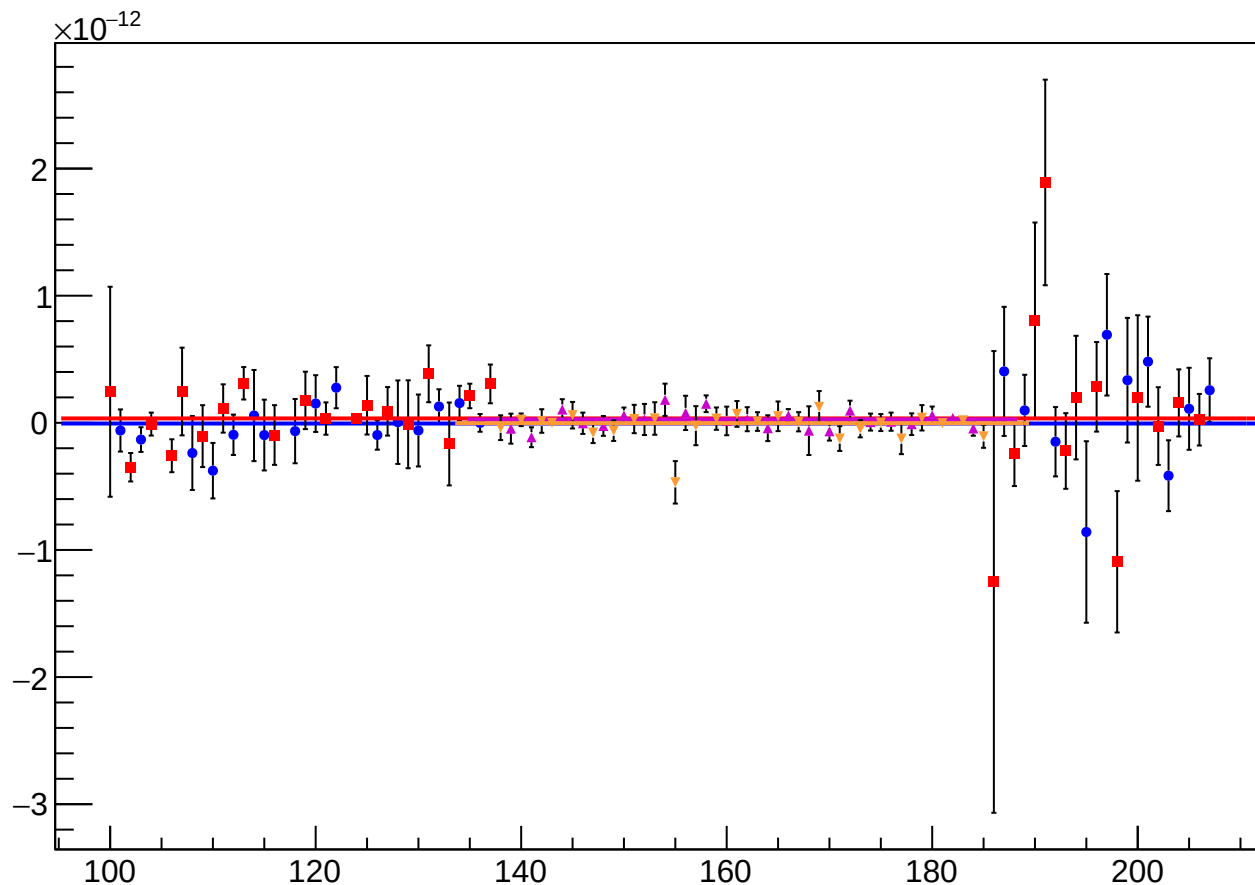
Left In: 320.749 $\pm$ 0.057  $\chi^2$ /NDF: 4248171.3/22

+ sign 188.975 $\pm$ 0.027  $\chi^2$ /NDF: 15898183.6/50

All: 178.314 $\pm$ 0.018  $\chi^2$ /NDF: 33866262.6/10

- sign 169.475 $\pm$ 0.025  $\chi^2$ /NDF: 17684977.1/53

asym\_atr1l2\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 22.8/25

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 17.0/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 46.8/30

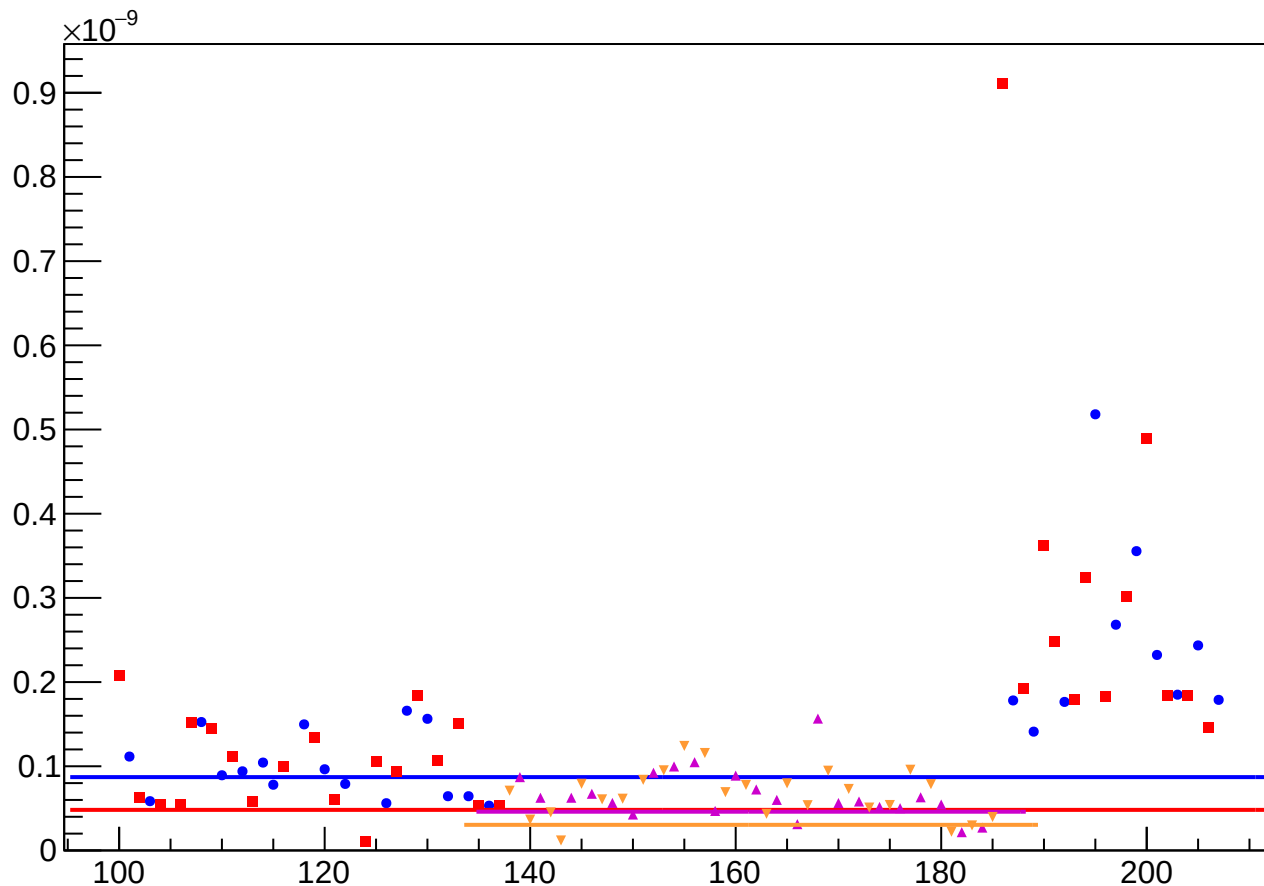
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 16.1/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 39.7/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 106.7/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 63.0/53

asym\_atr1l2\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4713372.3/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10517831.9/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10133807.3/30

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4899715.4/22

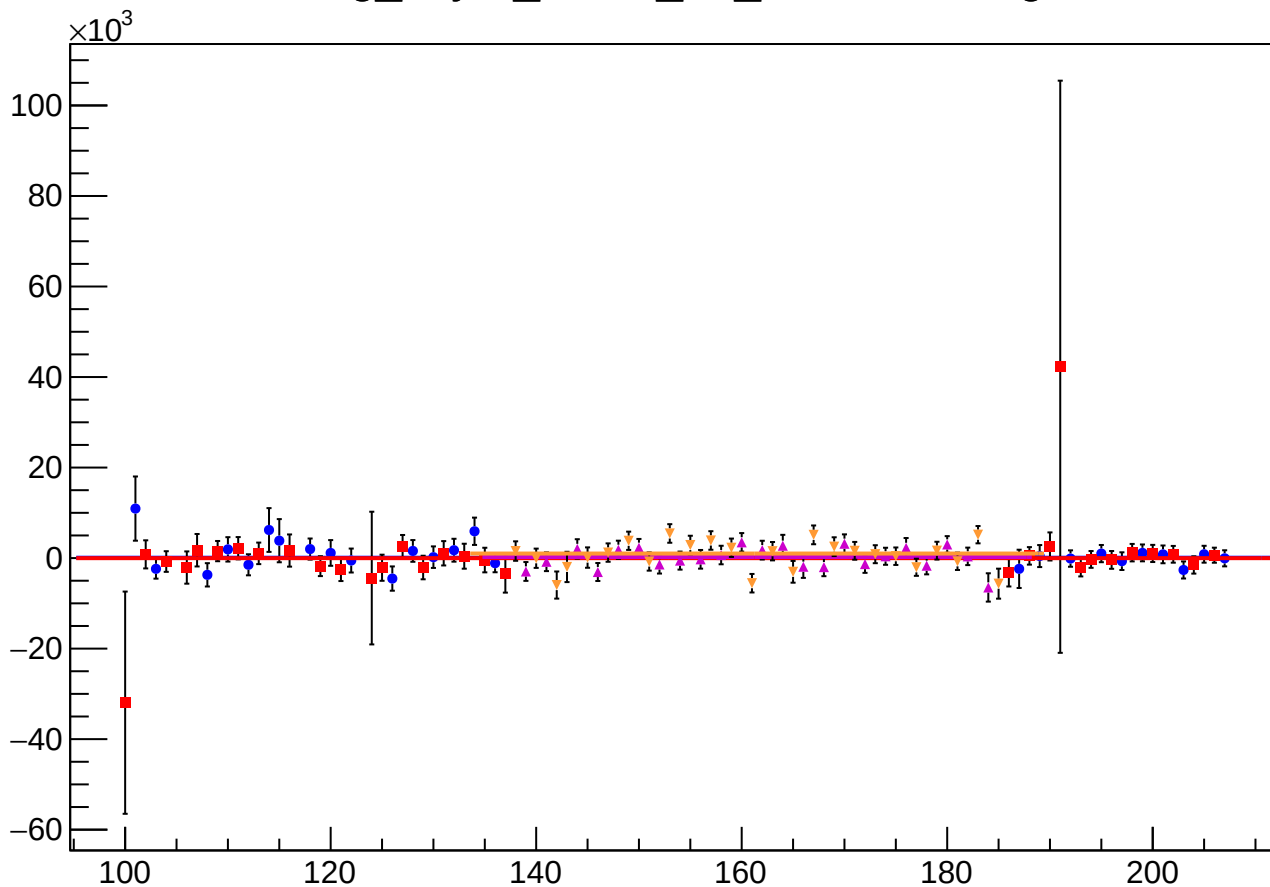
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 19979520.9/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 35998811.6/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 15045197.5/53



# reg\_asym\_atr1l2\_dd\_mean vs Slug



Right In:  $80.212 \pm 458.891$   $\chi^2/\text{NDF}$ : 21.1/25

Left Out:  $1004.165 \pm 422.582$   $\chi^2/\text{NDF}$ : 47.4/24

Right Out:  $-17.279 \pm 443.737$   $\chi^2/\text{NDF}$ : 14.0/30

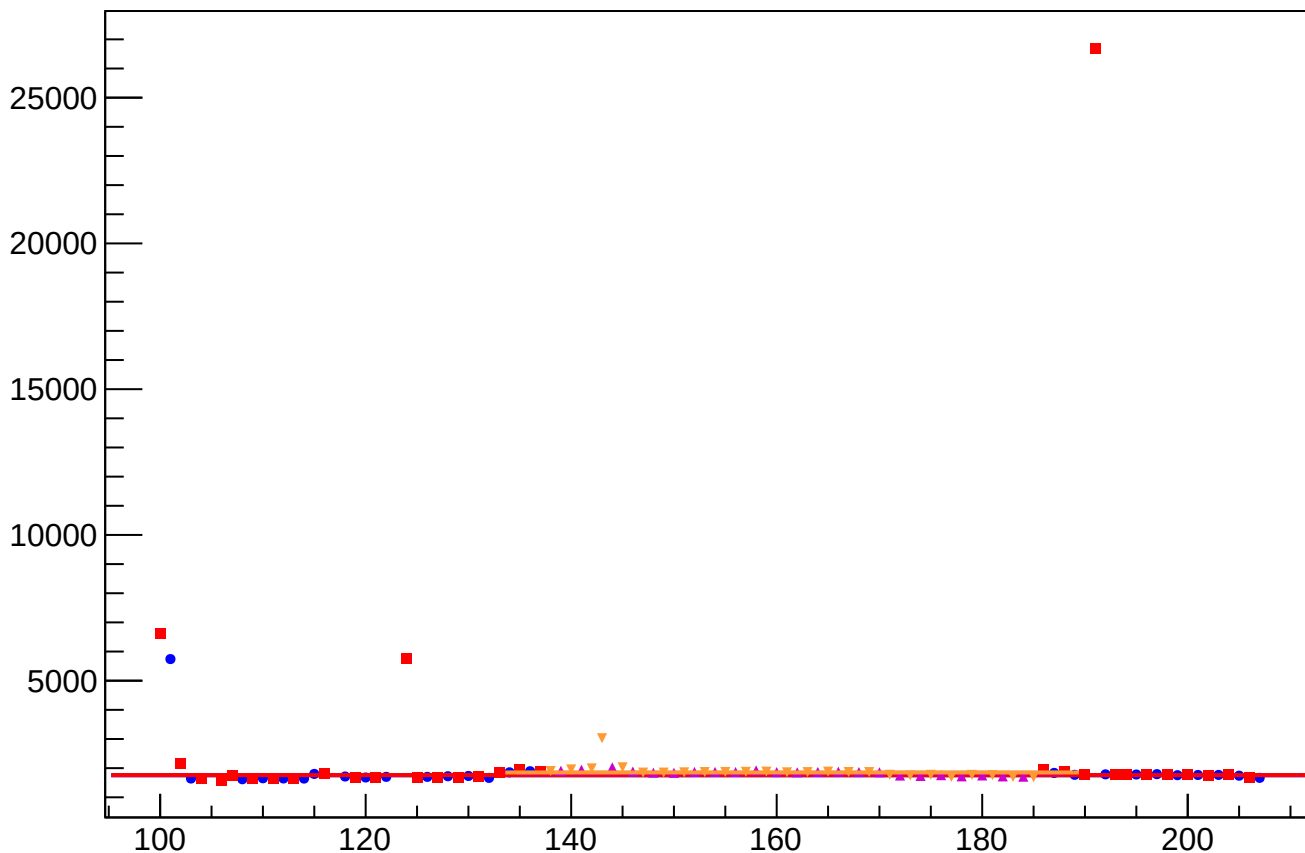
Left In:  $229.321 \pm 429.699$   $\chi^2/\text{NDF}$ : 26.4/22

+ sign  $580.183 \pm 310.856$   $\chi^2/\text{NDF}$ : 70.7/50

All:  $343.437 \pm 219.037$   $\chi^2/\text{NDF}$ : 112.4/104

- sign  $109.984 \pm 308.687$   $\chi^2/\text{NDF}$ : 40.6/53

# reg\_asym\_atr1l2\_dd\_rms vs Slug



Right In: 1754.793+/-0.324  $\chi^2/\text{NDF}$ : 677527.2/25

Left Out: 1852.534+/-0.299  $\chi^2/\text{NDF}$ : 321038.9/24

Right Out: 1761.751+/-0.313  $\chi^2/\text{NDF}$ : 644693.7/30

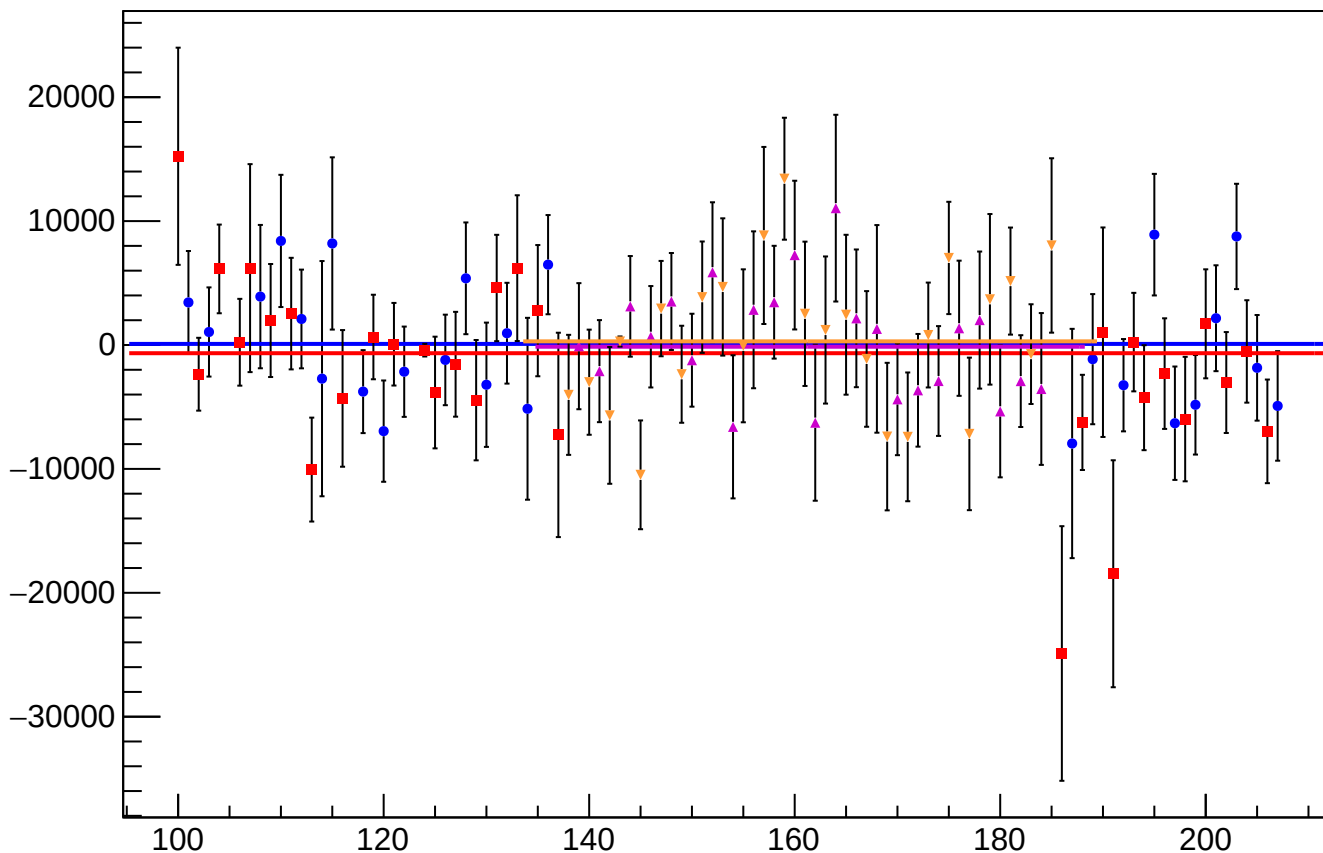
Left In: 1838.528+/-0.304  $\chi^2/\text{NDF}$ : 68478.0/22

+ sign 1807.682+/-0.220  $\chi^2/\text{NDF}$ : 1047663.9/50

All: 1804.435+/-0.155  $\chi^2/\text{NDF}$ : 1792276.1/10

- sign 1801.243+/-0.218  $\chi^2/\text{NDF}$ : 744179.4/53

# asym\_atr1l2\_dd\_reg\_correction\_mean vs Slug



Right In:  $88.025 \pm 872.927$   $\chi^2/\text{NDF}$ : 29.2/25

Left Out:  $294.407 \pm 379.922$   $\chi^2/\text{NDF}$ : 30.0/24

Right Out:  $-662.290 \pm 434.043$   $\chi^2/\text{NDF}$ : 36.2/30

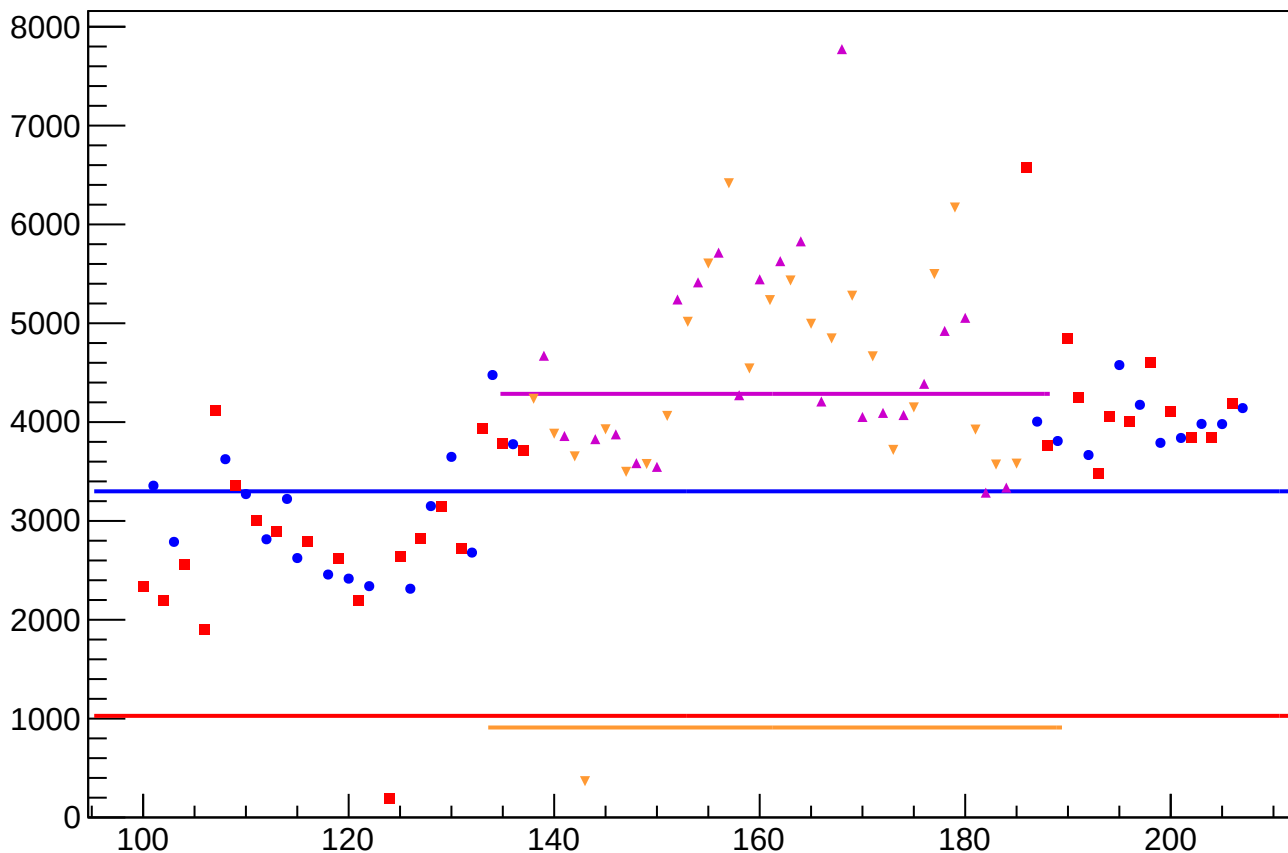
Left In:  $-138.350 \pm 1022.943$   $\chi^2/\text{NDF}$ : 13.9/22

+ sign  $261.539 \pm 348.358$   $\chi^2/\text{NDF}$ : 59.3/50

All:  $-102.901 \pm 262.576$   $\chi^2/\text{NDF}$ : 112.1/104

- sign  $-582.352 \pm 399.563$   $\chi^2/\text{NDF}$ : 50.3/53

# asym\_atr1l2\_dd\_reg\_correction\_rms vs Slug



Right In: 3299.690 $\pm$ 0.617  $\chi^2$ /NDF: 1233278.4/25

Left Out: 910.135 $\pm$ 0.269  $\chi^2$ /NDF:26774123.9/24

Right Out: 1027.941 $\pm$ 0.307  $\chi^2$ /NDF: 21196240.1/30

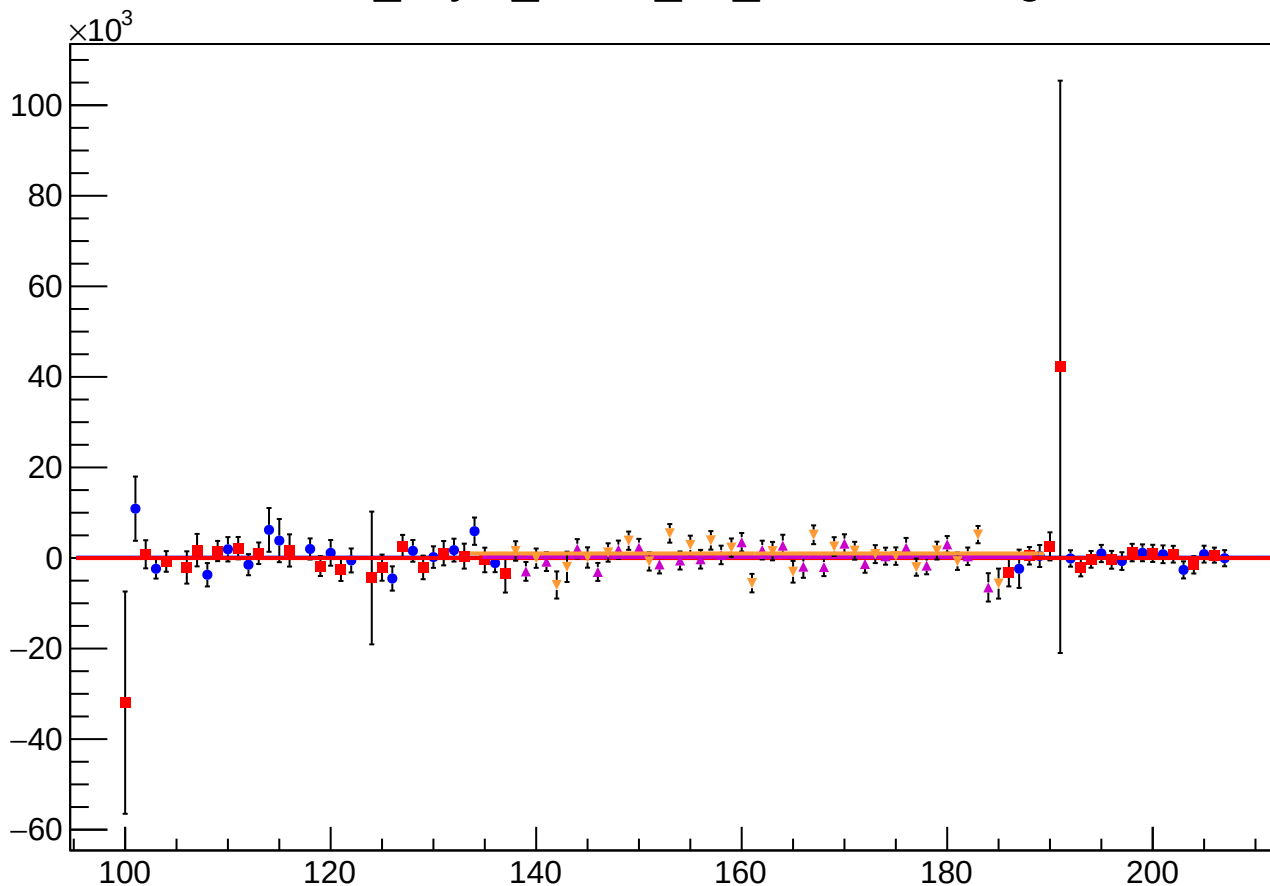
Left In: 4285.839 $\pm$ 0.723  $\chi^2$ /NDF:1327947.9/22

+ sign 1290.686 $\pm$ 0.246  $\chi^2$ /NDF: 40607434.9/50

All: 1391.875 $\pm$ 0.186  $\chi^2$ /NDF: 80713574.4/1

- sign 1524.997 $\pm$ 0.283  $\chi^2$ /NDF: 39715387.2/53

# cor\_asym\_atr1l2\_dd\_mean vs Slug



Right In: 80.074 $\pm$ 458.892  $\chi^2$ /NDF: 21.1/25

Left Out: 1004.123 $\pm$ 422.582  $\chi^2$ /NDF: 47.4/24

Right Out: -17.268 $\pm$ 443.737  $\chi^2$ /NDF: 14.0/30

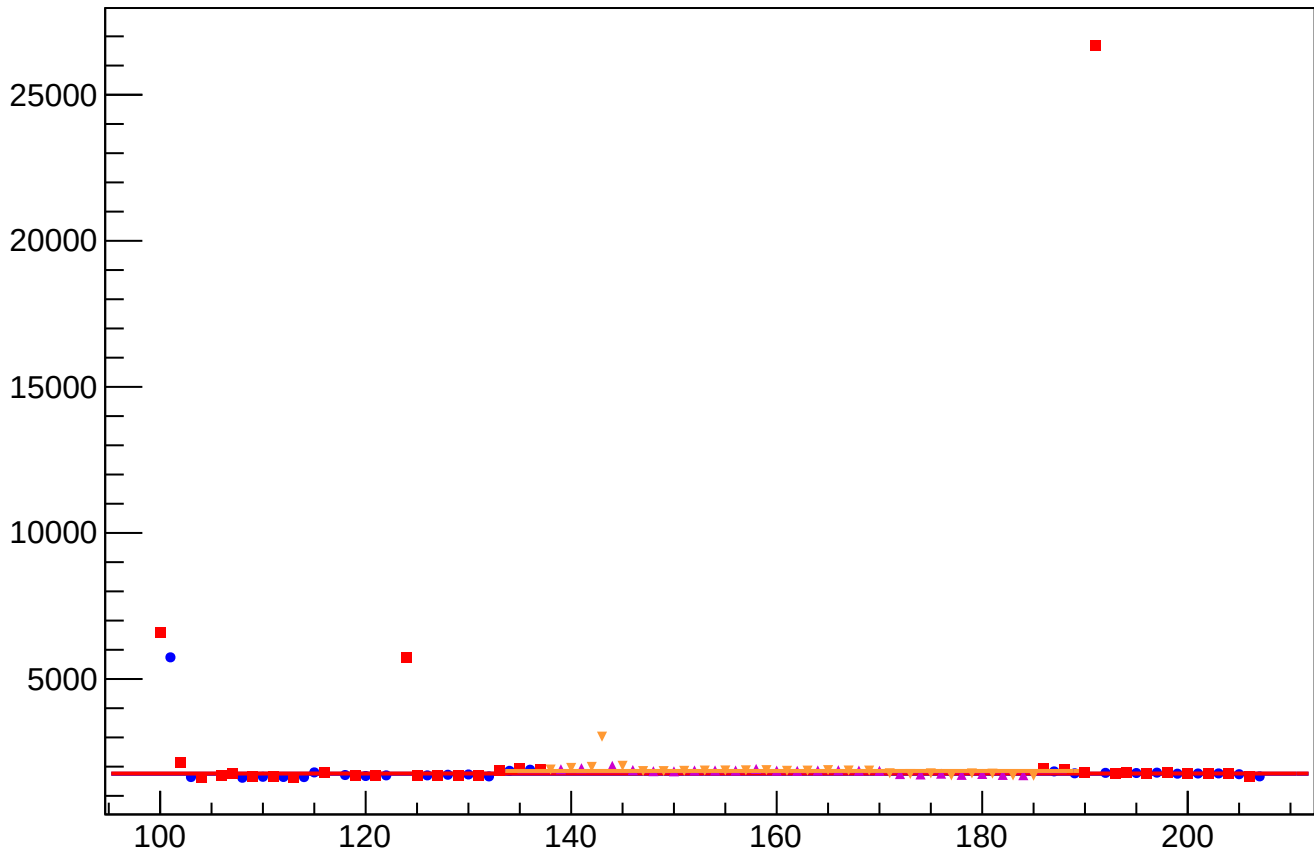
Left In: 229.236 $\pm$ 429.699  $\chi^2$ /NDF: 26.4/22

+ sign 580.097 $\pm$ 310.856  $\chi^2$ /NDF: 70.7/50

All: 343.375 $\pm$ 219.037  $\chi^2$ /NDF: 112.4/104

- sign 109.945 $\pm$ 308.687  $\chi^2$ /NDF: 40.6/53

# cor\_asym\_atr1l2\_dd\_rms vs Slug



Right In: 1754.792 $\pm$ 0.324  $\chi^2$ /NDF: 677527.4/25

Left Out: 1852.534 $\pm$ 0.299  $\chi^2$ /NDF: 321038.9/24

Right Out: 1764.911 $\pm$ 0.313  $\chi^2$ /NDF: 636808.0/30

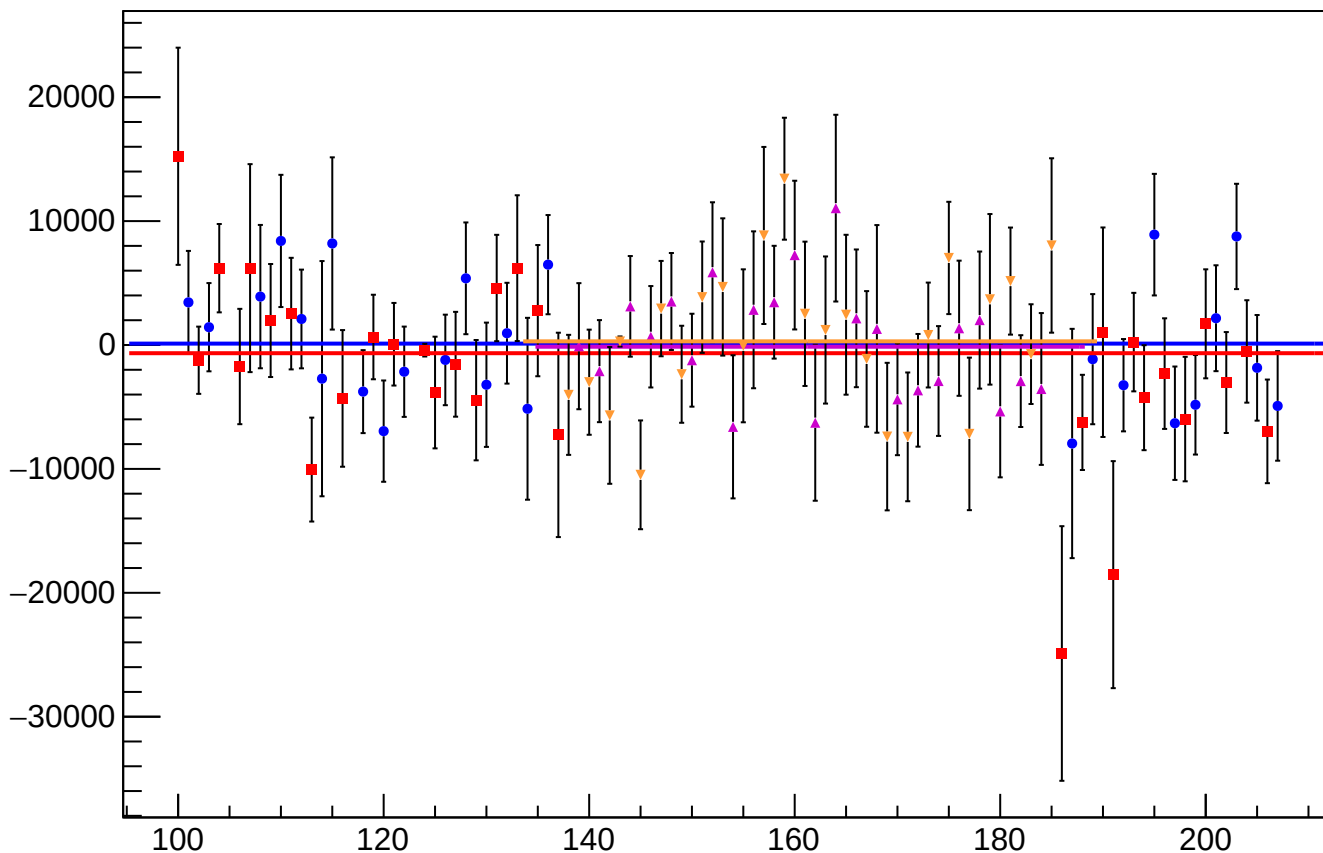
Left In: 1838.528 $\pm$ 0.304  $\chi^2$ /NDF: 68478.0/22

+ sign 1807.682 $\pm$ 0.220  $\chi^2$ /NDF: 1047664.2/50

All: 1805.242 $\pm$ 0.155  $\chi^2$ /NDF: 1781653.5/10

- sign 1802.839 $\pm$ 0.218  $\chi^2$ /NDF: 733744.6/53

# asym\_atr1l2\_dd\_cor\_correction\_mean vs Slug



Right In: 112.425+/-872.410  $\chi^2/\text{NDF}$ : 29.3/25

Left Out: 295.308+/-379.951  $\chi^2/\text{NDF}$ :30.0/24

Right Out: -661.480+/-434.822  $\chi^2/\text{NDF}$ : 36.0/30

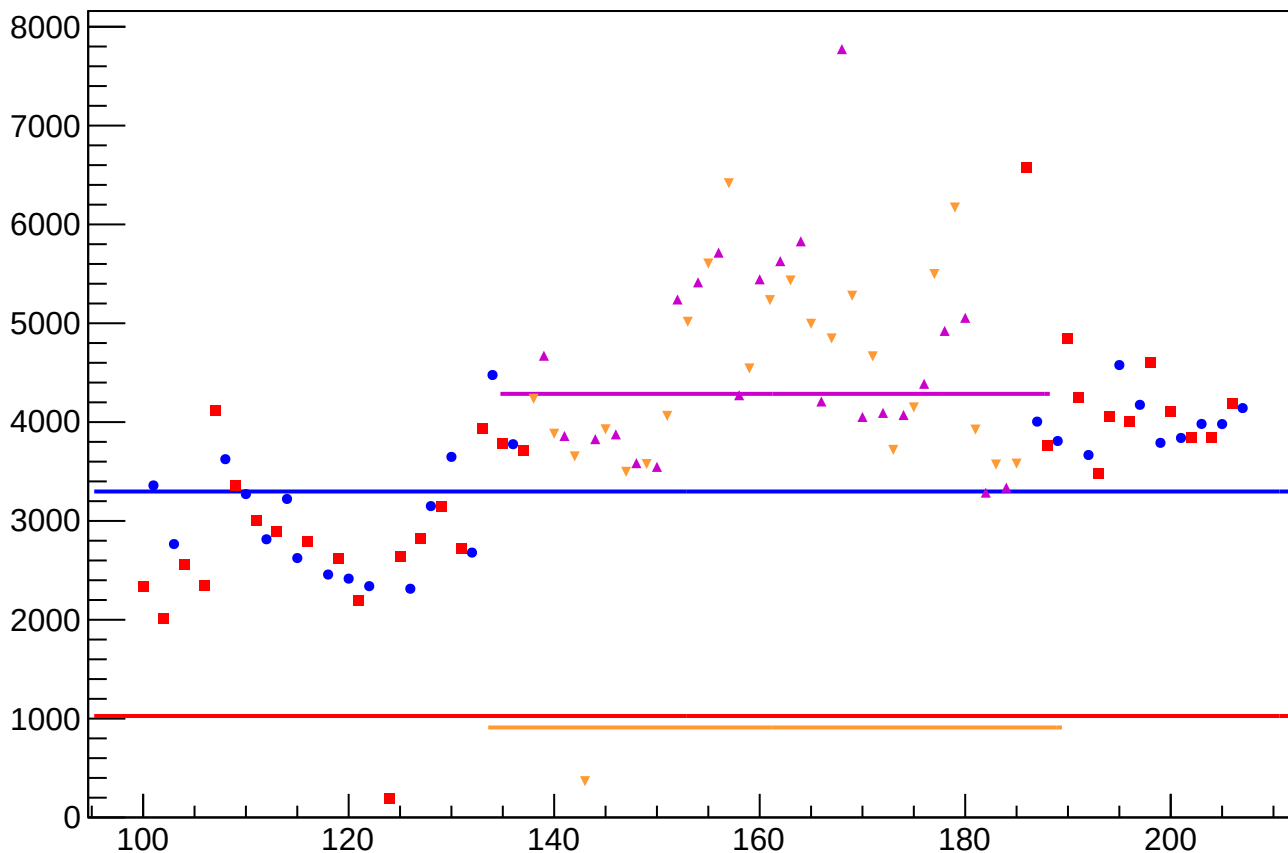
Left In: -138.272+/-1022.940  $\chi^2/\text{NDF}$ :13.9/22

+ sign 266.150+/-348.348  $\chi^2/\text{NDF}$ : 59.3/50

All: -99.232+/-262.744  $\chi^2/\text{NDF}$ : 112.0/104

- sign -581.412+/-400.170  $\chi^2/\text{NDF}$ : 50.1/53

# asym\_atr1l2\_dd\_cor\_correction\_rms vs Slug



Right In: 3297.838+/-0.617  $\chi^2/\text{NDF}$ : 1237796.0/25

Left Out: 910.253+/-0.269  $\chi^2/\text{NDF}$ : 26772969.1/24

Right Out: 1026.409+/-0.307  $\chi^2/\text{NDF}$ : 21168601.4/30

Left In: 4285.828+/-0.723  $\chi^2/\text{NDF}$ : 1327963.4/22

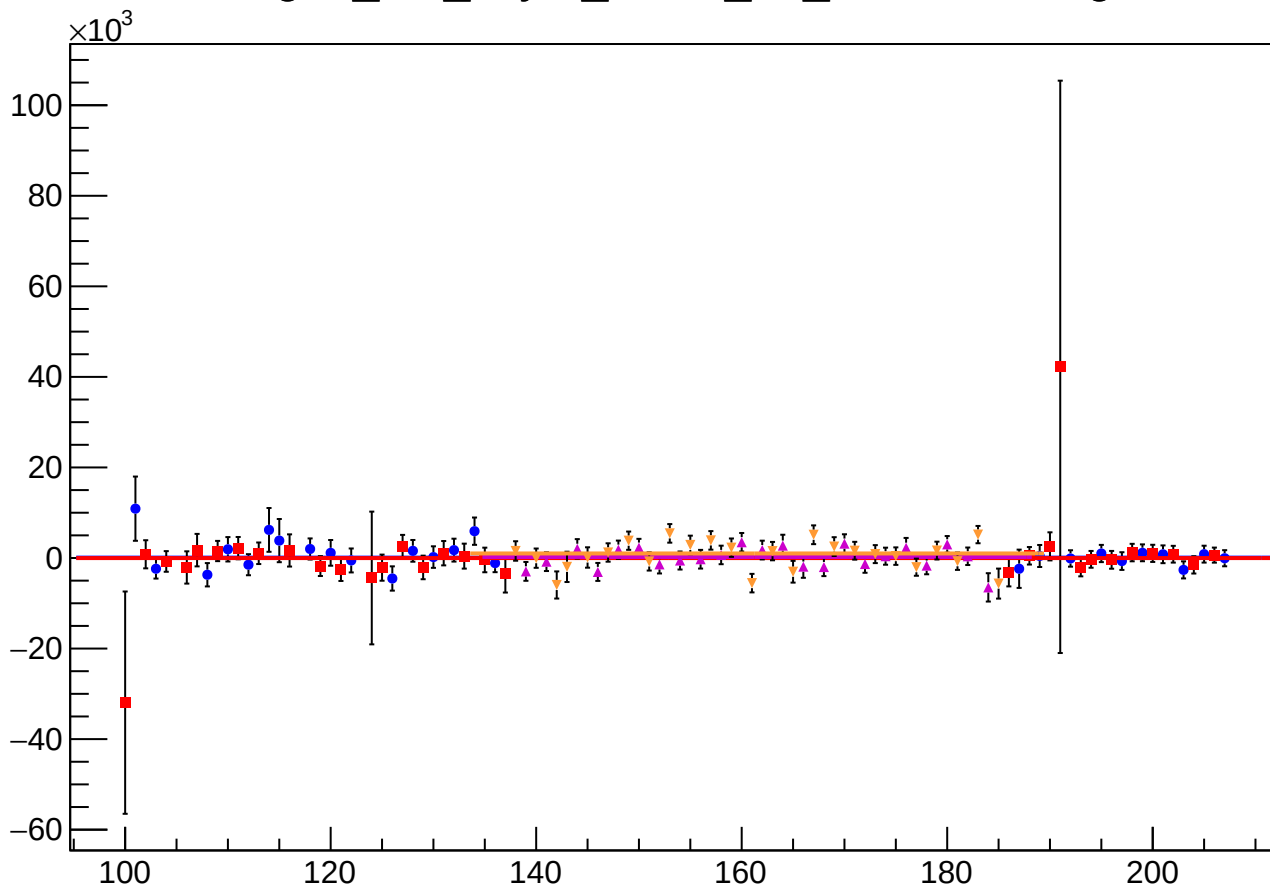
+ sign 1290.919+/-0.246  $\chi^2/\text{NDF}$ : 40602265.2/50

All: 1391.922+/-0.186  $\chi^2/\text{NDF}$ : 80686759.4/1

- sign 1525.211+/-0.283  $\chi^2/\text{NDF}$ : 39694468.2/53



# eigen\_cor\_asym\_atr1l2\_dd\_mean vs Slug



Right In: 80.074+/-458.892  $\chi^2/\text{NDF}$ : 21.1/25

Left Out: 1004.123+/-422.582  $\chi^2/\text{NDF}$ : 47.4/24

Right Out: -17.268+/-443.737  $\chi^2/\text{NDF}$ : 14.0/30

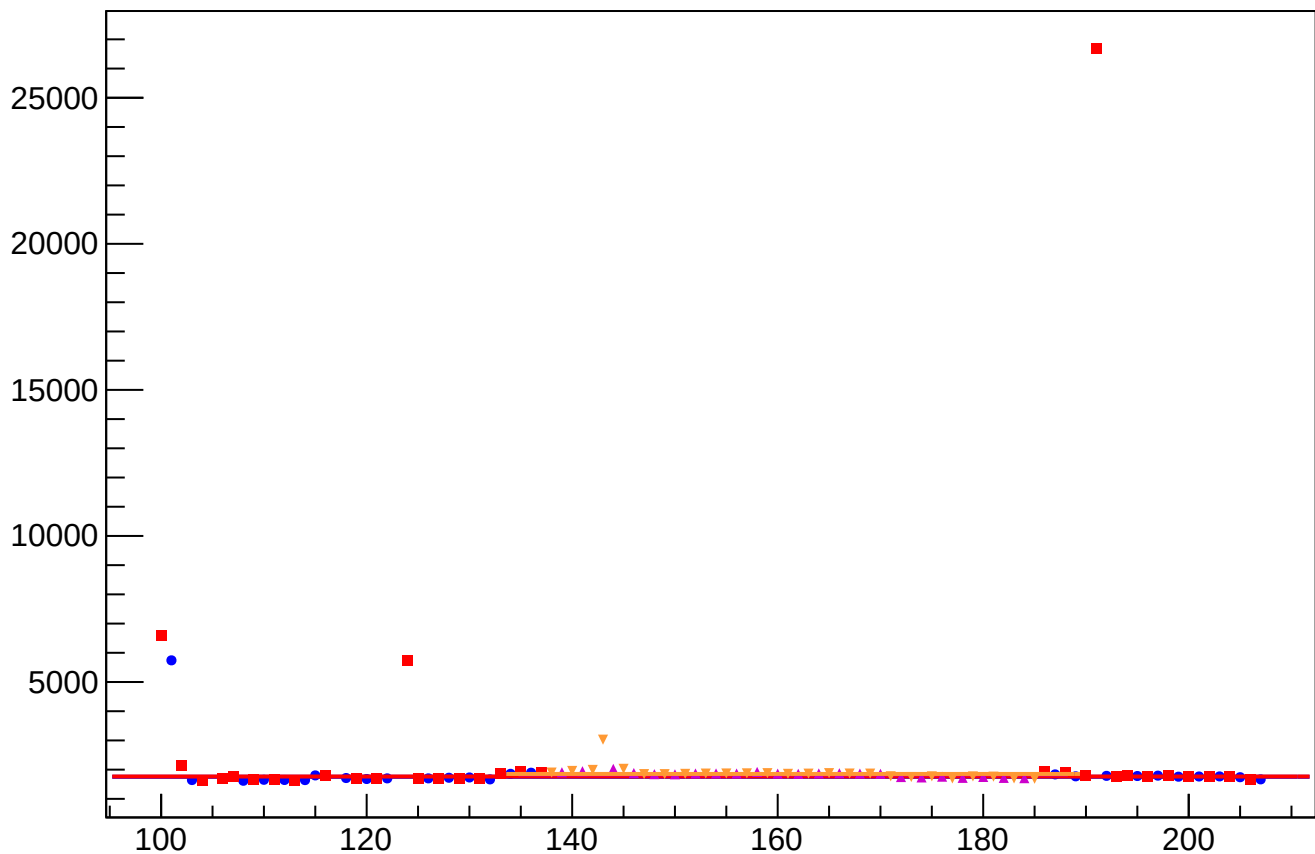
Left In: 229.236+/-429.699  $\chi^2/\text{NDF}$ : 26.4/22

+ sign 580.097+/-310.856  $\chi^2/\text{NDF}$ : 70.7/50

All: 343.375+/-219.037  $\chi^2/\text{NDF}$ : 112.4/104

- sign 109.945+/-308.687  $\chi^2/\text{NDF}$ : 40.6/53

# eigen\_cor\_asym\_atr1l2\_dd\_rms vs Slug



Right In: 1754.792+/-0.324  $\chi^2/\text{NDF}$ : 677527.4/25

Left Out: 1852.534+/-0.299  $\chi^2/\text{NDF}$ : 321038.9/24

Right Out: 1764.911+/-0.313  $\chi^2/\text{NDF}$ : 636808.0/30

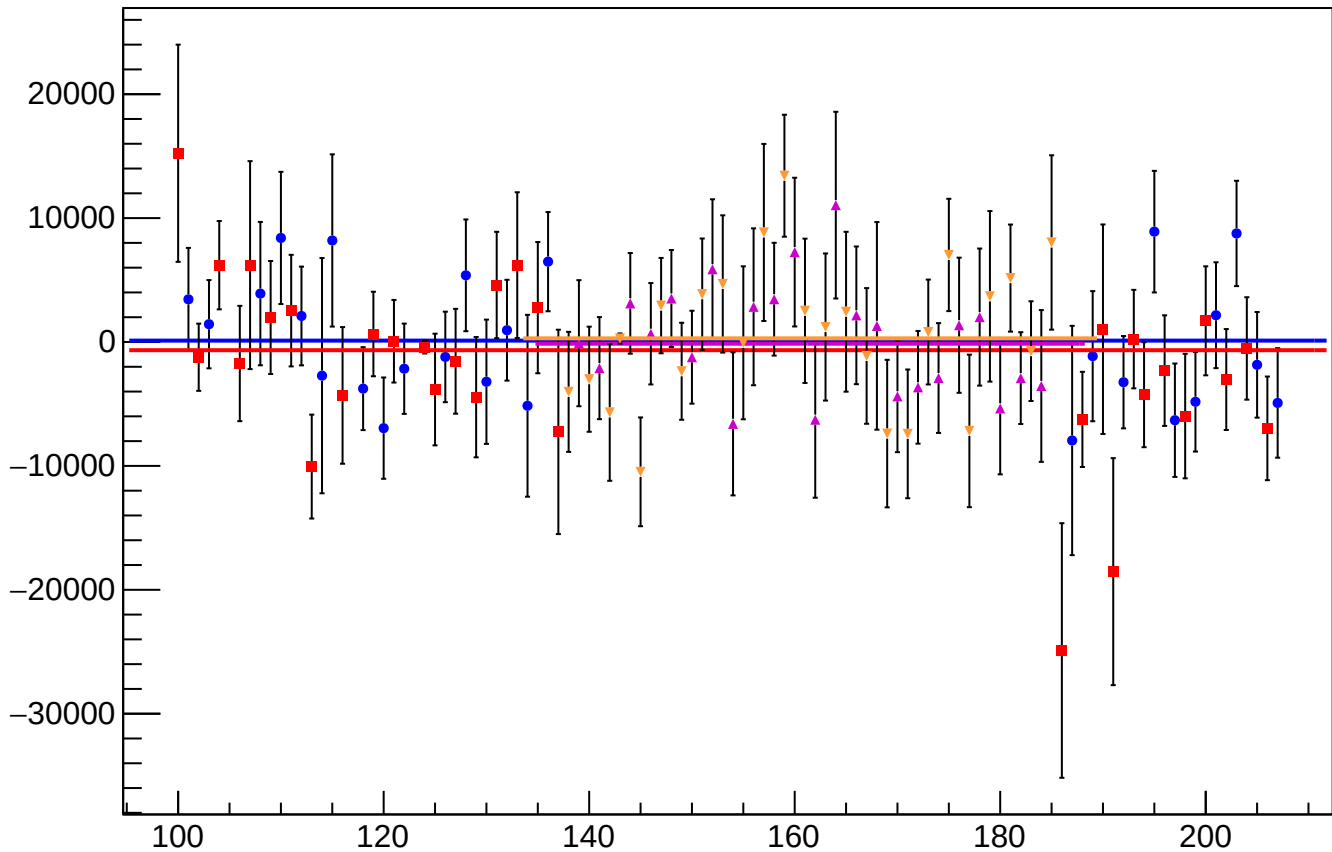
Left In: 1838.528+/-0.304  $\chi^2/\text{NDF}$ : 68478.0/22

+ sign 1807.682+/-0.220  $\chi^2/\text{NDF}$ : 1047664.2/50

All: 1805.242+/-0.155  $\chi^2/\text{NDF}$ : 1781653.5/10

- sign 1802.839+/-0.218  $\chi^2/\text{NDF}$ : 733744.6/53

asym\_atr1l2\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In: 112.425+/-872.410  $\chi^2/\text{NDF}$ : 29.3/25

Left Out: 295.308+/-379.951  $\chi^2/\text{NDF}$ :30.0/24

Right Out: -661.480+/-434.822  $\chi^2/\text{NDF}$ : 36.0/30

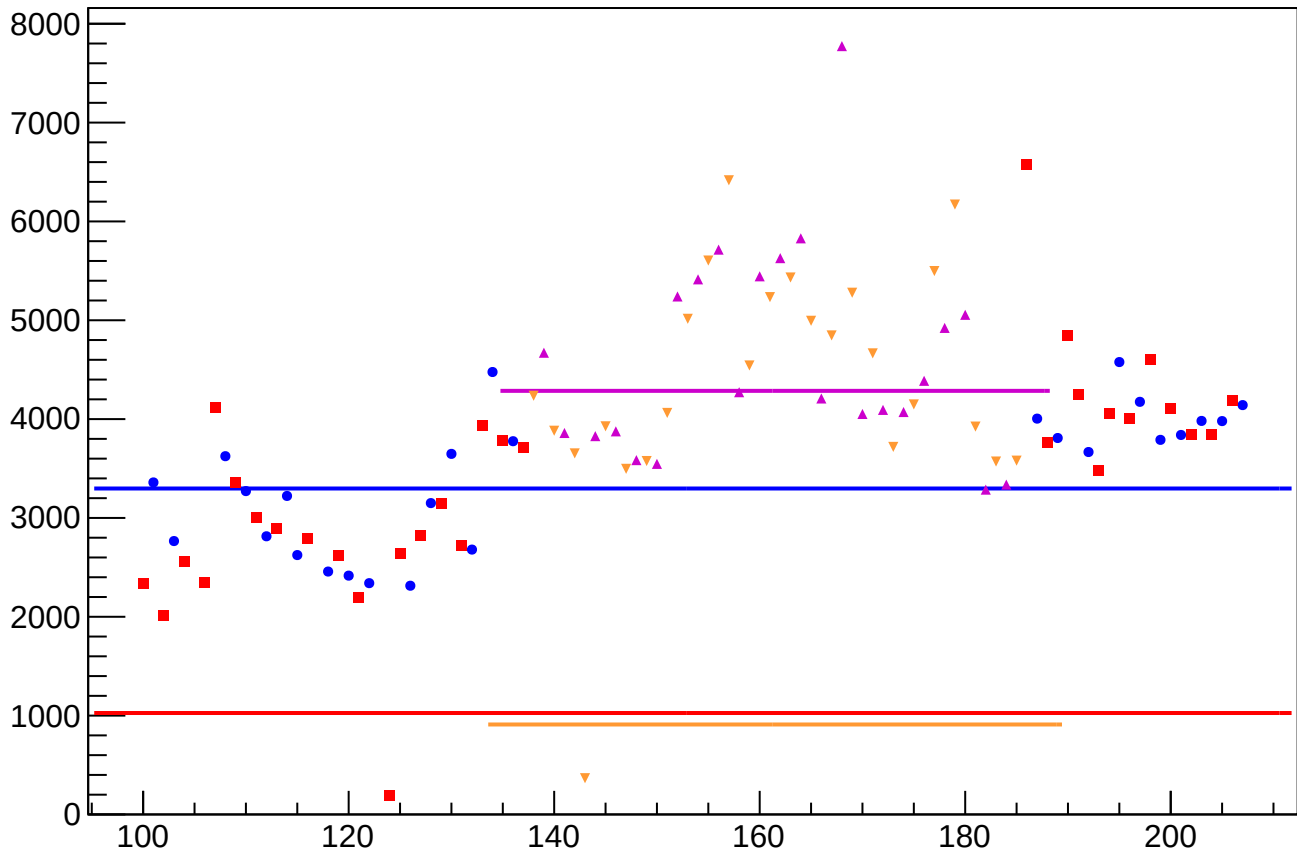
Left In: -138.272+/-1022.940  $\chi^2/\text{NDF}$ :13.9/22

+ sign 266.150+/-348.348  $\chi^2/\text{NDF}$ : 59.3/50

All: -99.232+/-262.744  $\chi^2/\text{NDF}$ : 112.0/104

- sign -581.412+/-400.170  $\chi^2/\text{NDF}$ : 50.1/53

asym\_atr1l2\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 3297.838 $\pm$ 0.617  $\chi^2$ /NDF: 1237796.0/25

Left Out: 910.253 $\pm$ 0.269  $\chi^2$ /NDF: 26772969.1/24

Right Out: 1026.409 $\pm$ 0.307  $\chi^2$ /NDF: 21168601.4/30

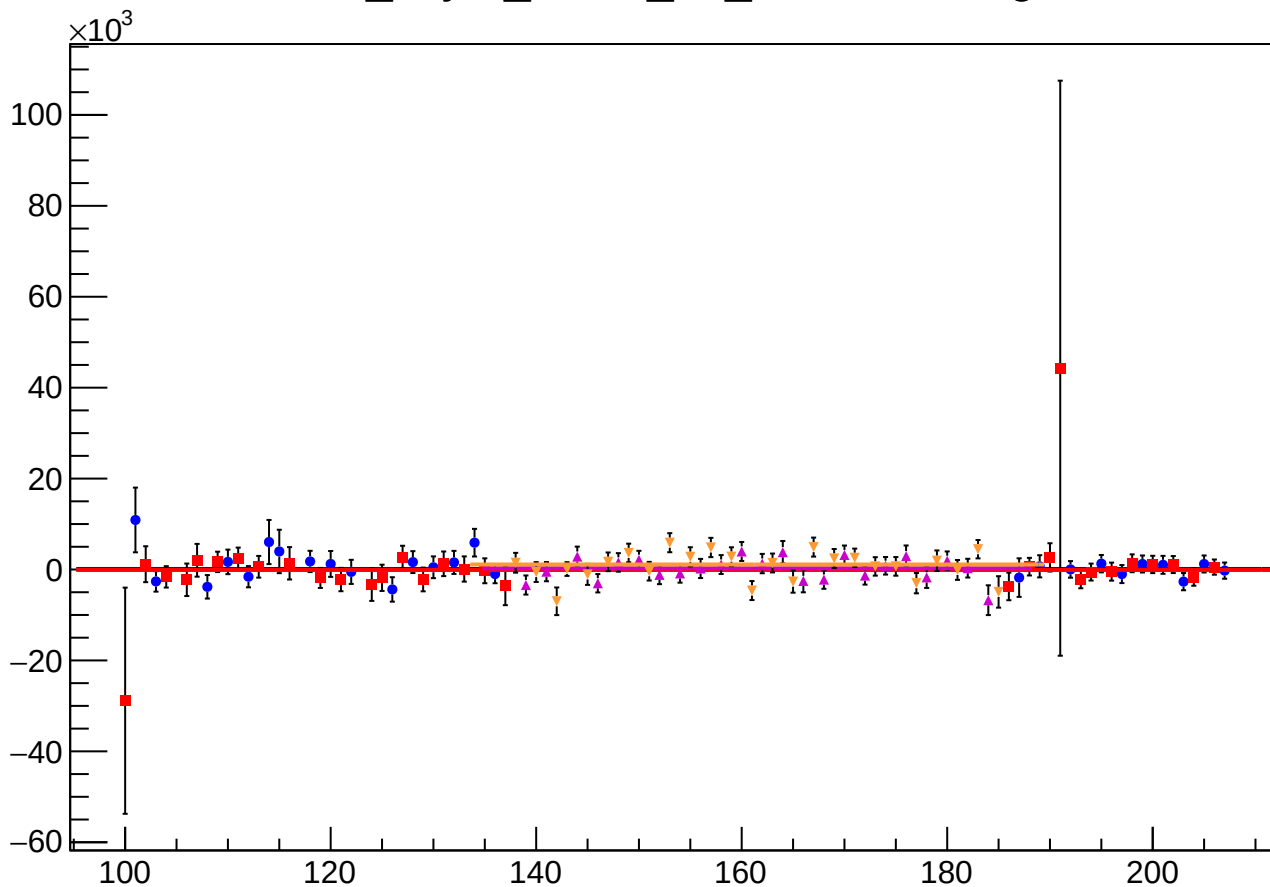
Left In: 4285.828 $\pm$ 0.723  $\chi^2$ /NDF: 1327963.4/22

+ sign 1290.919 $\pm$ 0.246  $\chi^2$ /NDF: 40602265.2/50

All: 1391.922 $\pm$ 0.186  $\chi^2$ /NDF: 80686759.4/1

- sign 1525.211 $\pm$ 0.283  $\chi^2$ /NDF: 39694468.2/53

# dit\_asym\_atr1l2\_dd\_mean vs Slug



Right In: 118.399 $\pm$ 461.774  $\chi^2$ /NDF: 21.3/25

Left Out: 1103.308 $\pm$ 425.320  $\chi^2$ /NDF: 44.8/24

Right Out: -99.798 $\pm$ 445.014  $\chi^2$ /NDF: 15.8/30

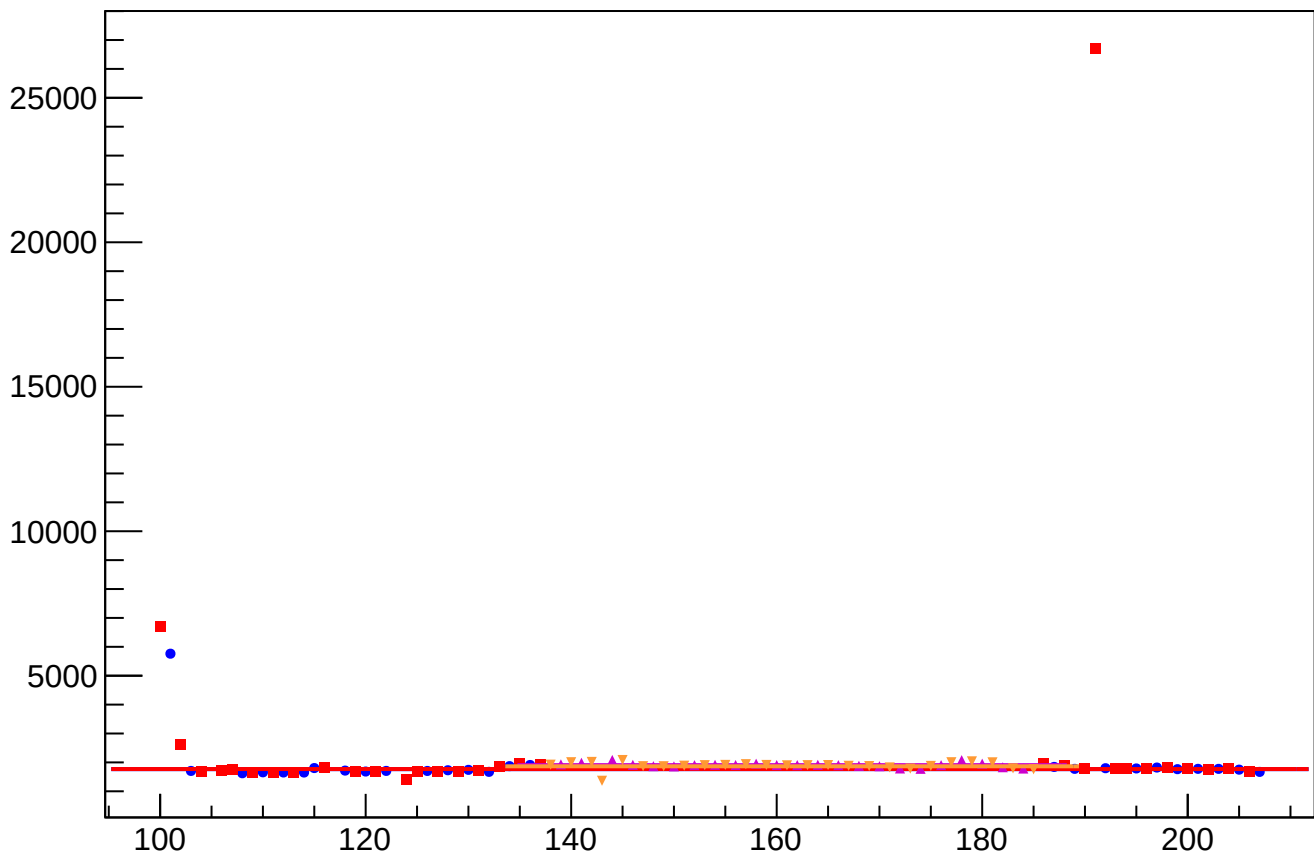
Left In: 264.609 $\pm$ 445.353  $\chi^2$ /NDF: 27.7/22

+ sign 651.259 $\pm$ 312.842  $\chi^2$ /NDF: 68.6/50

All: 368.531 $\pm$ 221.899  $\chi^2$ /NDF: 114.1/104

- sign 82.267 $\pm$ 314.792  $\chi^2$ /NDF: 43.8/53

# dit\_asym\_atr1l2\_dd\_rms vs Slug



Right In: 1765.802+/-0.327  $\chi^2/\text{NDF}$ : 676924.8/25

Left Out: 1864.841+/-0.301  $\chi^2/\text{NDF}$ : 294712.1/24

Right Out: 1769.988+/-0.314  $\chi^2/\text{NDF}$ : 568628.0/30

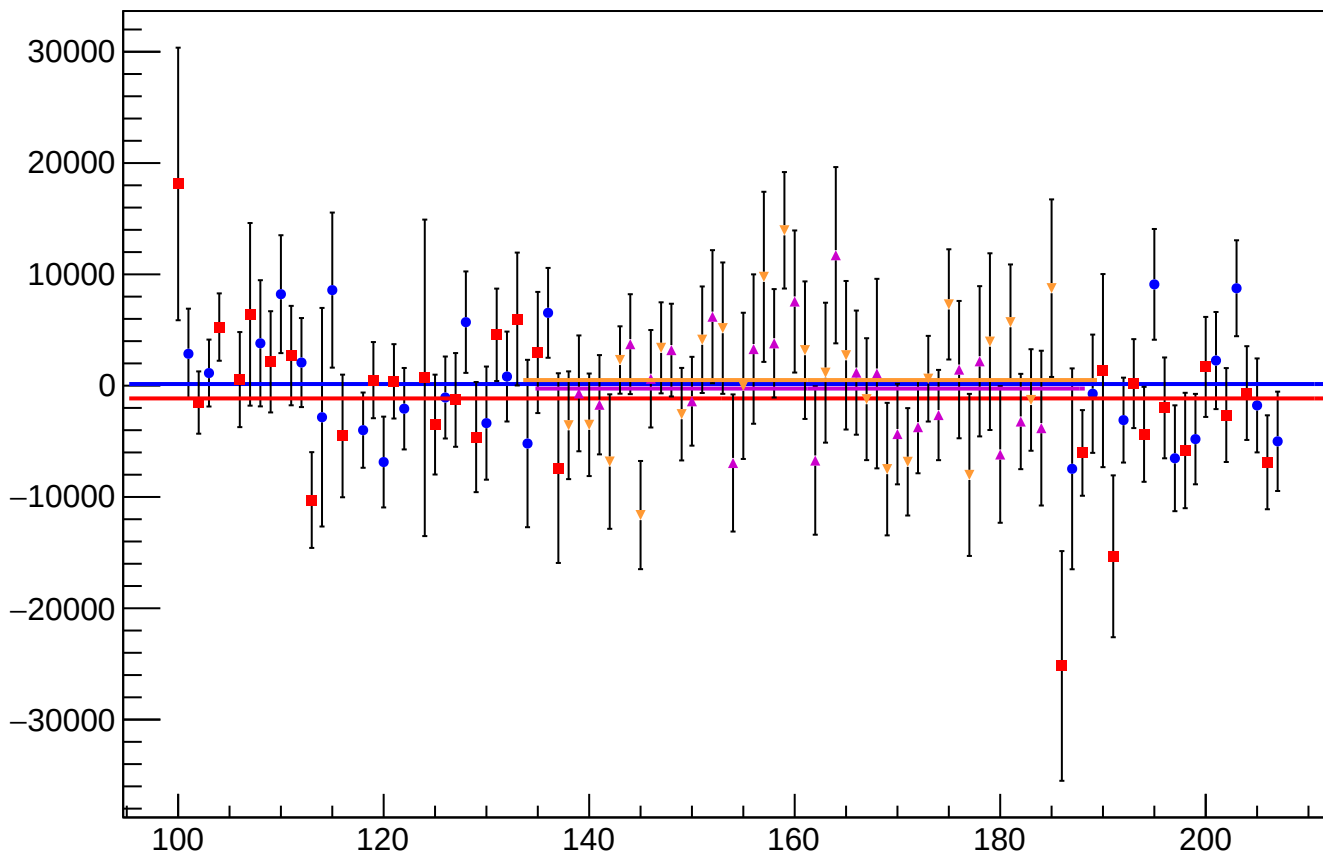
Left In: 1905.628+/-0.315  $\chi^2/\text{NDF}$ : 52781.7/22

+ sign 1819.384+/-0.221  $\chi^2/\text{NDF}$ : 1021410.1/50

All: 1828.474+/-0.157  $\chi^2/\text{NDF}$ : 1739170.5/100

- sign 1837.666+/-0.222  $\chi^2/\text{NDF}$ : 714364.6/53

# asym\_atr1l2\_dd\_dit\_correction\_mean vs Slug



Right In: 146.836 $\pm$ 867.299  $\chi^2/\text{NDF}$ : 28.9/25

Left Out: 504.261 $\pm$ 1021.684  $\chi^2/\text{NDF}$ :30.1/24

Right Out: -1146.343 $\pm$ 819.187  $\chi^2/\text{NDF}$ : 34.6/30

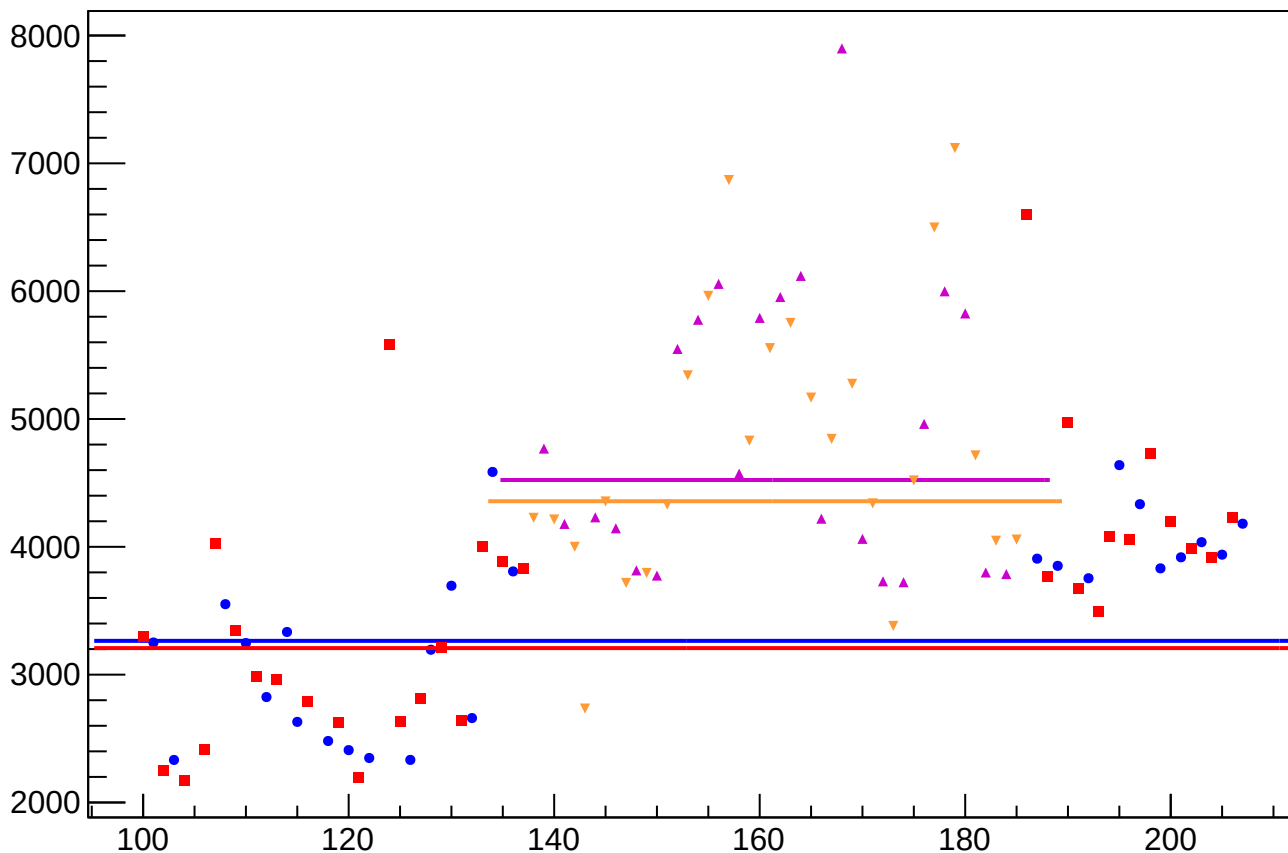
Left In: -261.050 $\pm$ 1081.402  $\chi^2/\text{NDF}$ :13.6/22

+ sign 296.530 $\pm$ 661.191  $\chi^2/\text{NDF}$ : 59.1/50

All: -270.507 $\pm$ 464.604  $\chi^2/\text{NDF}$ : 109.2/104

- sign -823.555 $\pm$ 652.984  $\chi^2/\text{NDF}$ : 48.7/53

asym\_atr1l2\_dd\_dit\_correction\_rms vs Slug



Right In: 3264.428+/-0.613  $\chi^2/\text{NDF}$ : 1448870.7/25

Left Out: 4356.643+/-0.722  $\chi^2/\text{NDF}$ : 1912322.9/24

Right Out: 3207.735+/-0.579  $\chi^2/\text{NDF}$ : 2071805.0/30

Left In: 4522.787+/-0.765  $\chi^2/\text{NDF}$ : 1434008.9/22

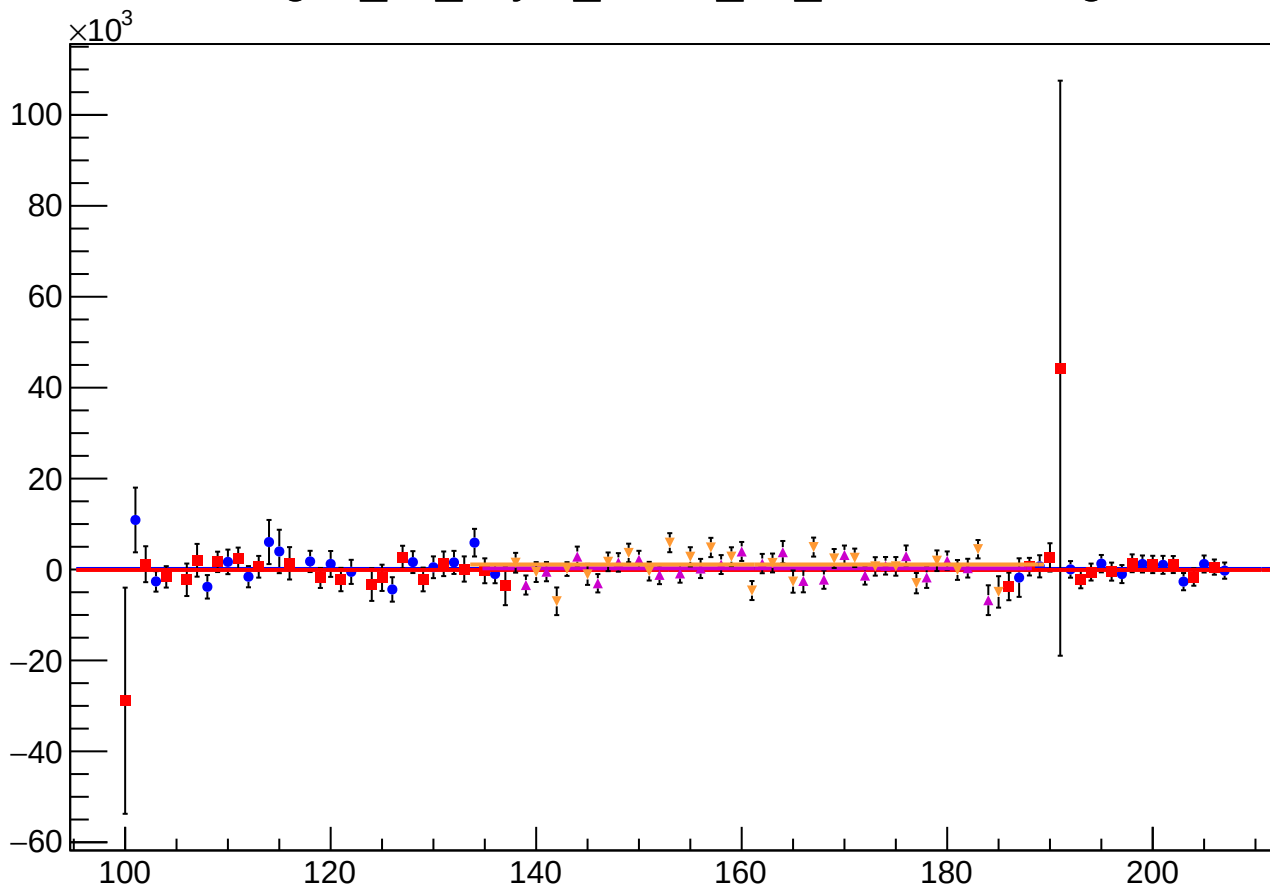
+ sign 3721.862+/-0.468  $\chi^2/\text{NDF}$ : 4689595.0/50

All: 3704.324+/-0.329  $\chi^2/\text{NDF}$ : 10077422.2/100

- sign 3687.218+/-0.462  $\chi^2/\text{NDF}$ : 5385047.6/53



# eigen\_dit\_asym\_atr1l2\_dd\_mean vs Slug



Right In:  $118.399 \pm 461.774$   $\chi^2/\text{NDF}$ : 21.3/25

Left Out:  $1103.310 \pm 425.321$   $\chi^2/\text{NDF}$ : 44.8/24

Right Out:  $-99.797 \pm 445.014$   $\chi^2/\text{NDF}$ : 15.8/30

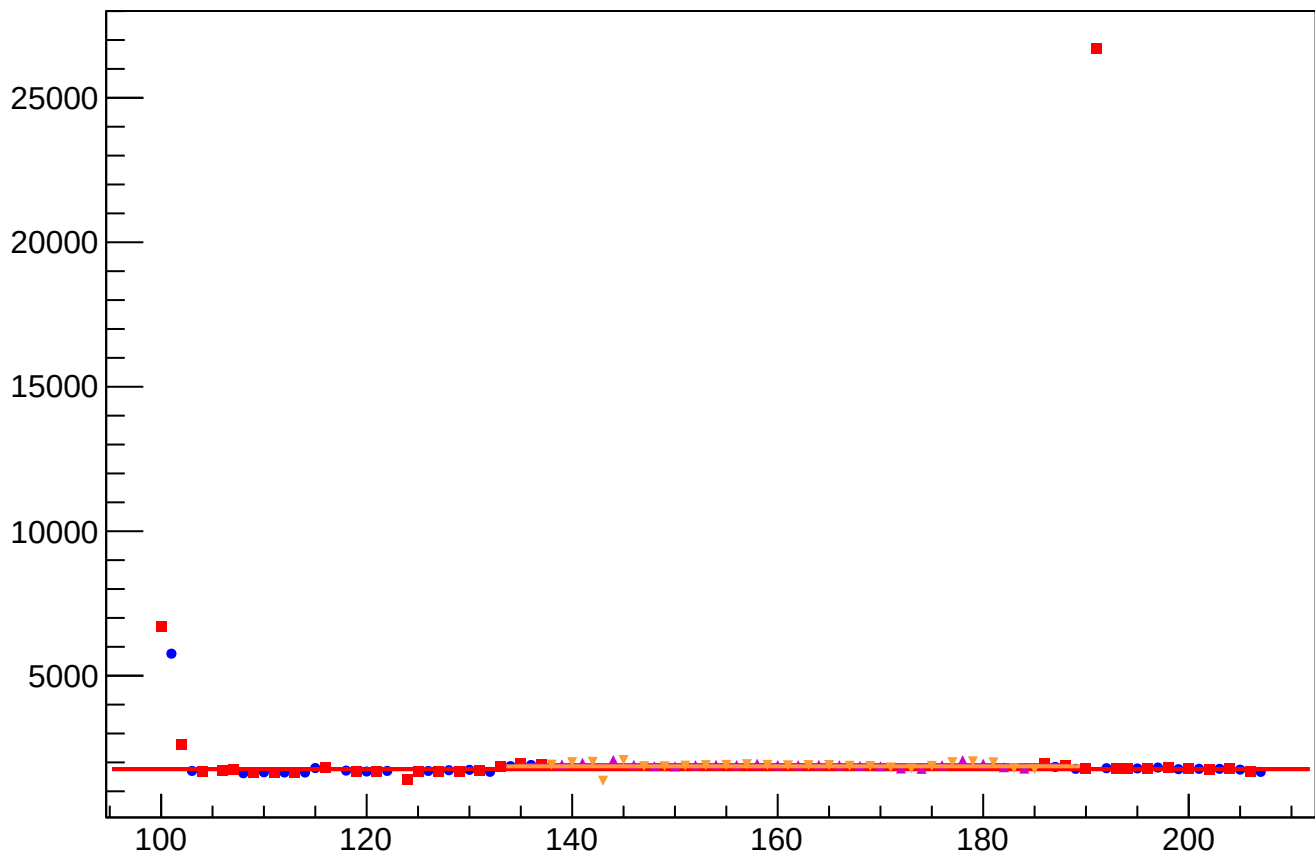
Left In:  $264.609 \pm 445.354$   $\chi^2/\text{NDF}$ : 27.7/22

+ sign  $651.259 \pm 312.842$   $\chi^2/\text{NDF}$ : 68.6/50

All:  $368.532 \pm 221.899$   $\chi^2/\text{NDF}$ : 114.1/104

- sign  $82.267 \pm 314.793$   $\chi^2/\text{NDF}$ : 43.8/53

# eigen\_dit\_asym\_atr1l2\_dd\_rms vs Slug



Right In: 1765.802+/-0.327  $\chi^2$ /NDF: 676924.8/25

Left Out: 1864.842+/-0.301  $\chi^2$ /NDF: 294715.4/24

Right Out: 1769.988+/-0.314  $\chi^2$ /NDF: 568628.0/30

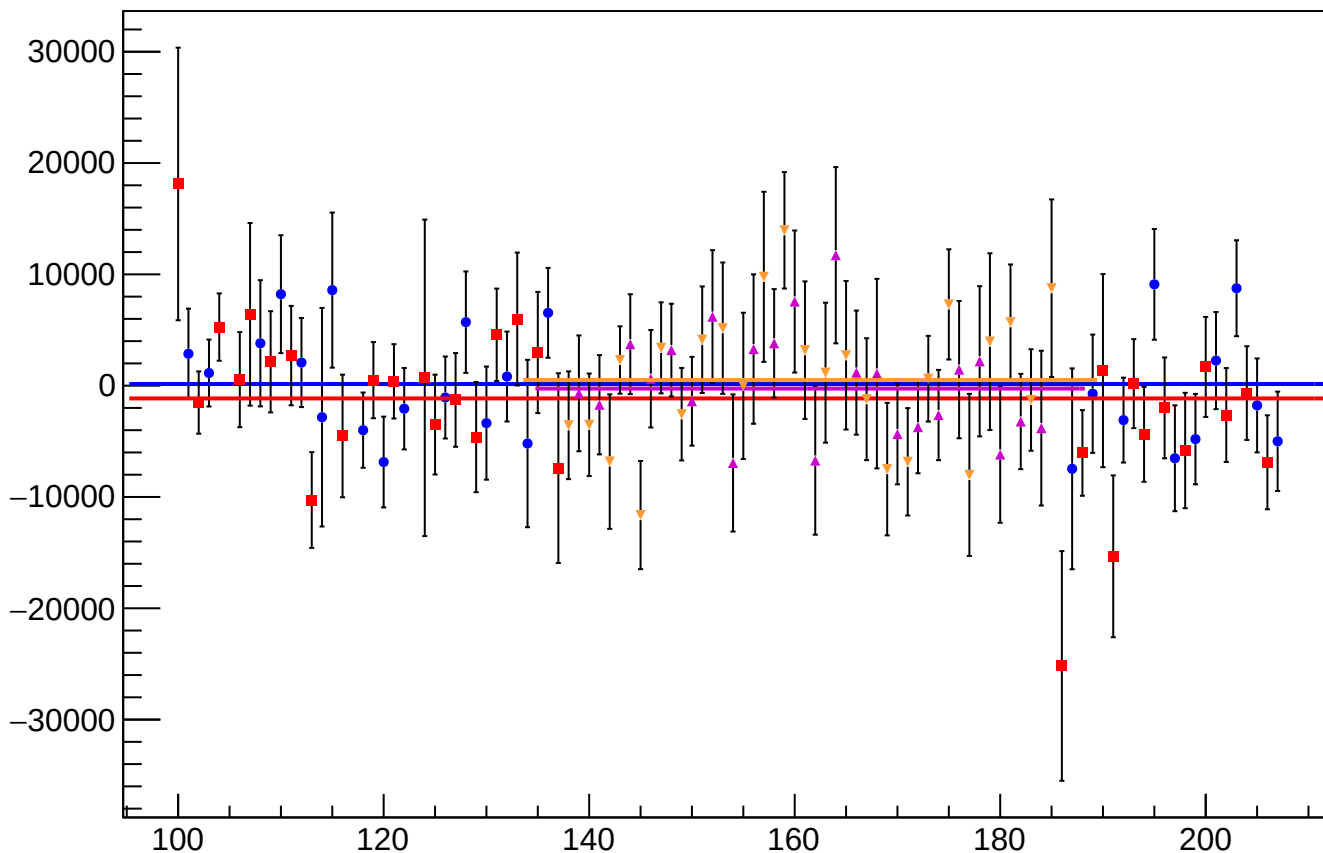
Left In: 1905.629+/-0.315  $\chi^2$ /NDF: 52783.9/22

+ sign 1819.385+/-0.221  $\chi^2$ /NDF: 1021414.4/50

All: 1828.475+/-0.157  $\chi^2$ /NDF: 1739178.3/100

- sign 1837.666+/-0.222  $\chi^2$ /NDF: 714368.2/53

asym\_atr1l2\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In: 146.833 $\pm$ 867.298  $\chi^2$ /NDF: 28.9/25

Left Out: 504.265 $\pm$ 1021.686  $\chi^2$ /NDF:30.1/24

Right Out: -1146.338 $\pm$ 819.186  $\chi^2$ /NDF: 34.6/30

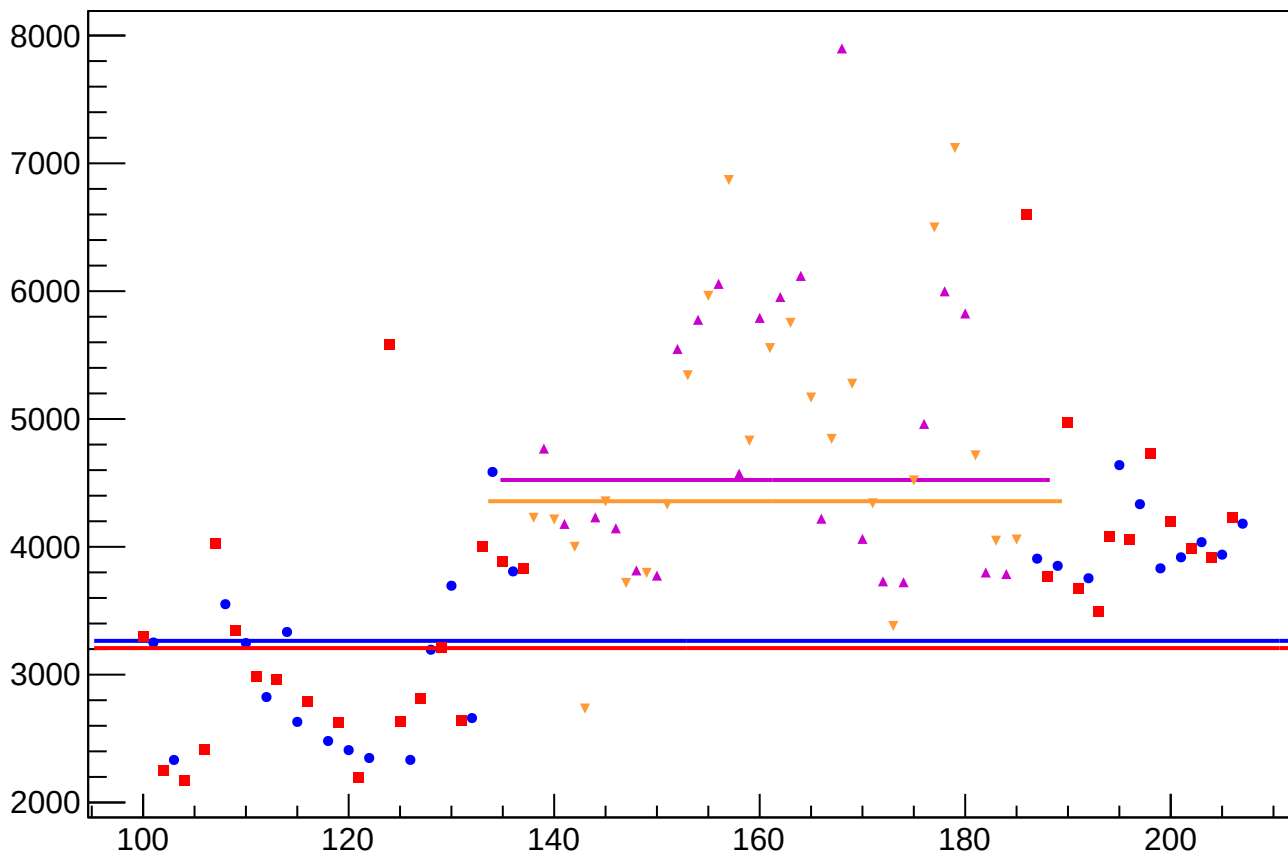
Left In: -261.051 $\pm$ 1081.404  $\chi^2$ /NDF:13.6/22

+ sign 296.530 $\pm$ 661.191  $\chi^2$ /NDF: 59.1/50

All: -270.506 $\pm$ 464.604  $\chi^2$ /NDF: 109.2/104

- sign -823.553 $\pm$ 652.984  $\chi^2$ /NDF: 48.7/53

asym\_atr1l2\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 3264.423+/-0.613  $\chi^2/\text{NDF}$ : 1448898.3/25

Left Out: 4356.650+/-0.722  $\chi^2/\text{NDF}$ : 1912327.4/24

Right Out: 3207.732+/-0.579  $\chi^2/\text{NDF}$ : 2071821.5/30

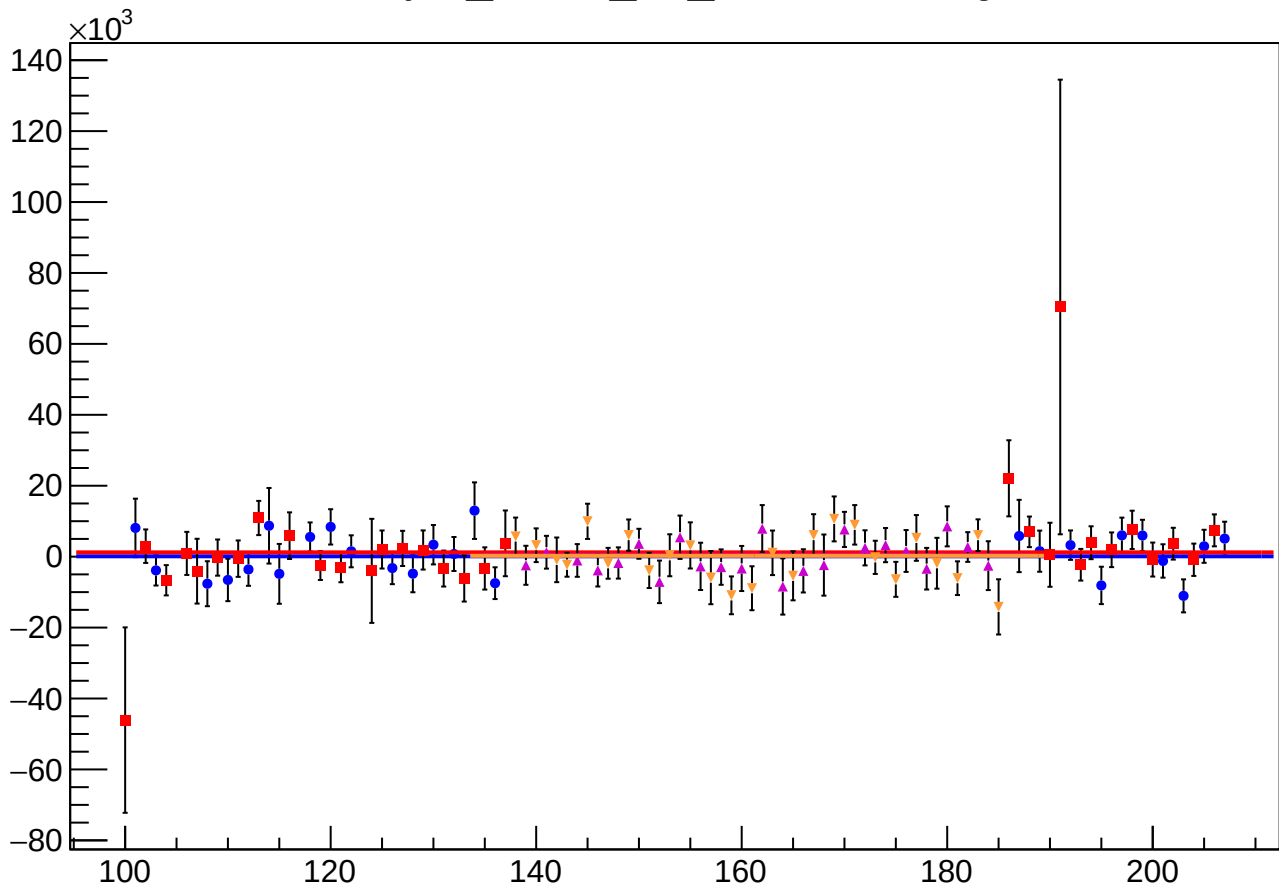
Left In: 4522.795+/-0.765  $\chi^2/\text{NDF}$ : 1434009.9/22

+ sign 3721.861+/-0.468  $\chi^2/\text{NDF}$ : 4689653.4/50

All: 3704.323+/-0.329  $\chi^2/\text{NDF}$ : 10077526.5/100

- sign 3687.218+/-0.462  $\chi^2/\text{NDF}$ : 5385093.5/53

# asym\_atr1l2\_dd\_mean vs Slug



Right In: 98.996 $\pm$ 1013.469  $\chi^2$ /NDF: 31.9/25

Left Out: 239.929 $\pm$ 1064.647  $\chi^2$ /NDF: 32.2/24

Right Out: 1215.486 $\pm$ 974.581  $\chi^2$ /NDF: 28.4/30

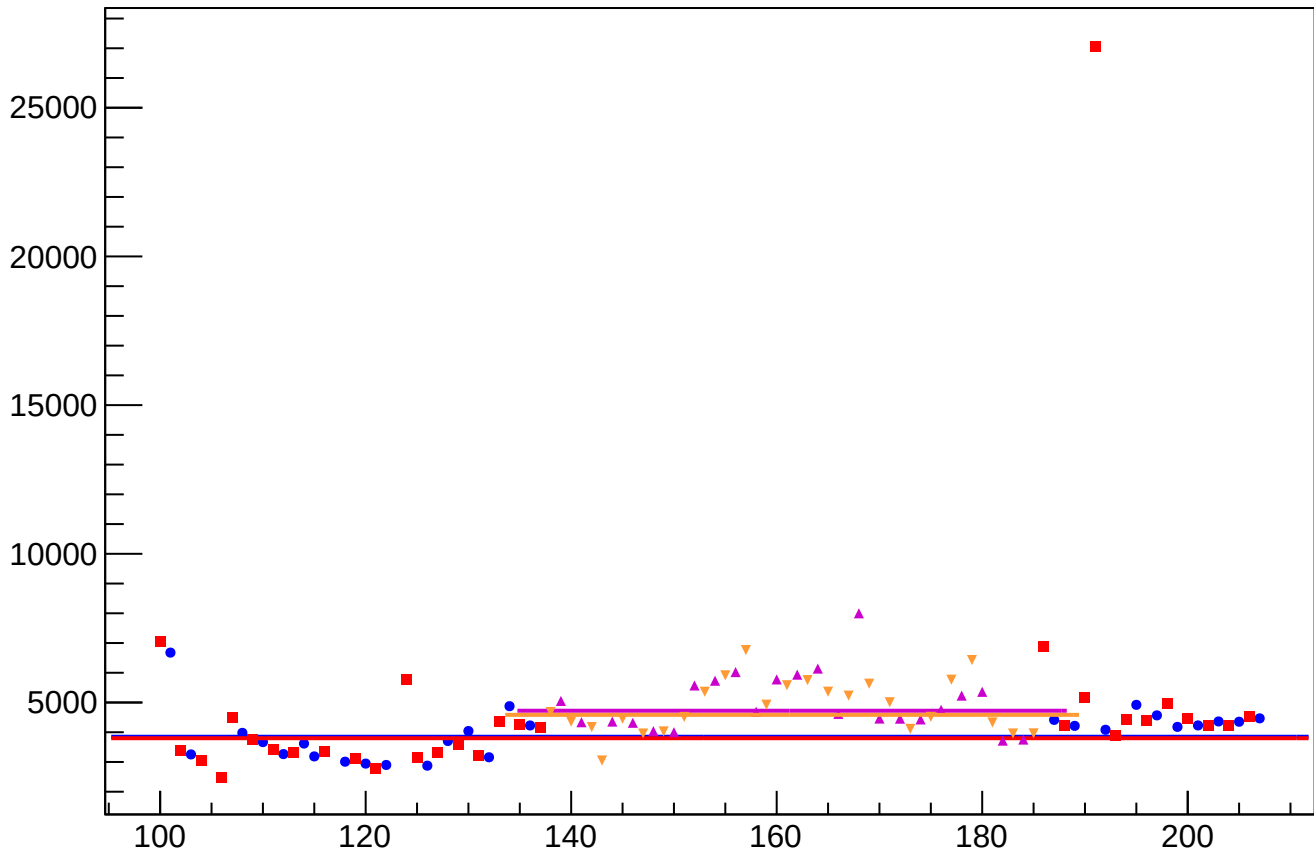
Left In: 397.881 $\pm$ 1121.323  $\chi^2$ /NDF: 14.2/22

+ sign 165.994 $\pm$ 734.057  $\chi^2$ /NDF: 64.1/50

All: 514.097 $\pm$ 519.595  $\chi^2$ /NDF: 107.4/104

- sign 863.648 $\pm$ 735.581  $\chi^2$ /NDF: 42.9/53

# asym\_atr1l2\_dd\_rms vs Slug



Right In: 3848.477 $\pm$ 0.717  $\chi^2$ /NDF: 995410.2/25

Left Out: 4584.664 $\pm$ 0.753  $\chi^2$ /NDF:1311720.7/24

Right Out: 3798.835 $\pm$ 0.683  $\chi^2$ /NDF: 1415241.8/30

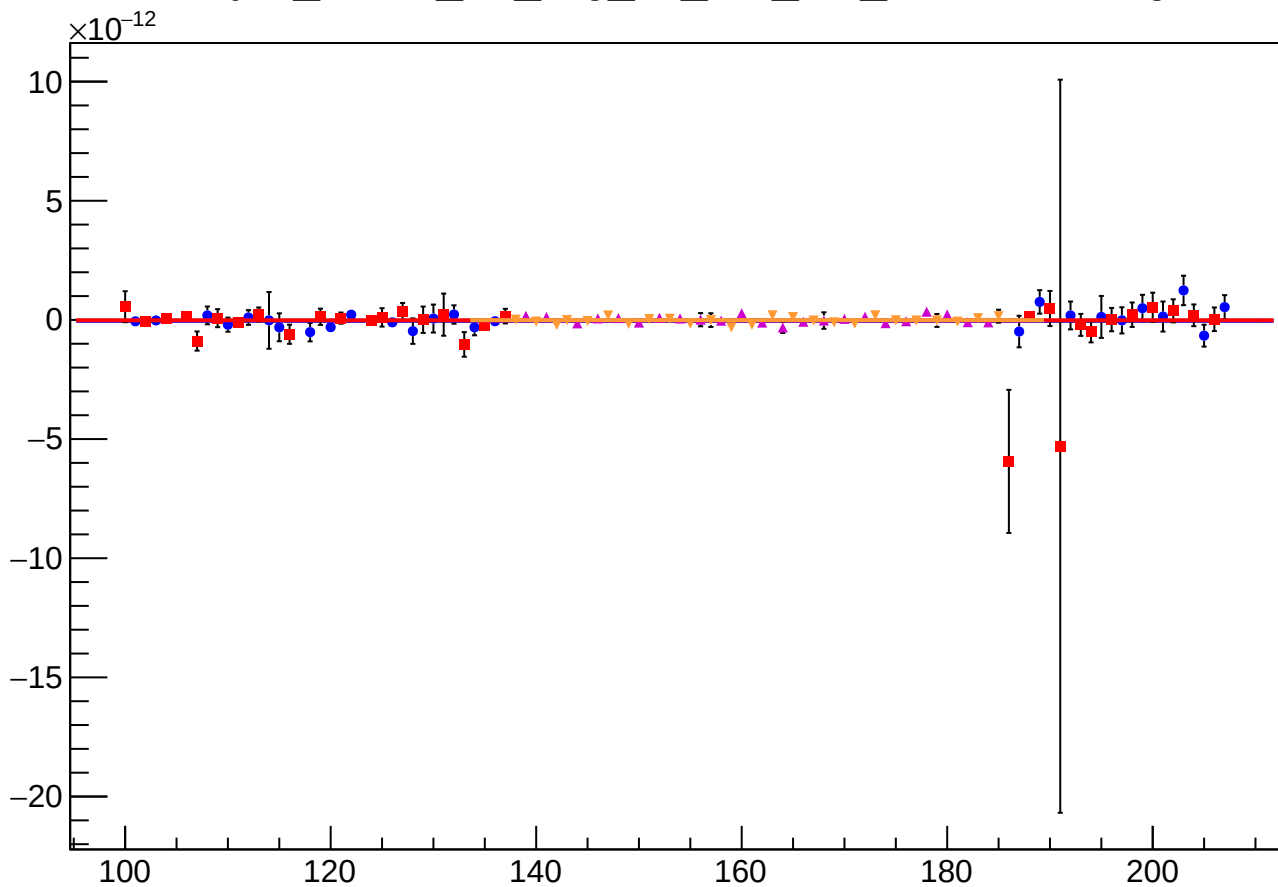
Left In: 4723.014 $\pm$ 0.793  $\chi^2$ /NDF:1016613.0/22

+ sign 4198.451 $\pm$ 0.519  $\chi^2$ /NDF: 2808819.3/50

All: 4195.620 $\pm$ 0.367  $\chi^2$ /NDF: 6020155.3/10

- sign 4192.805 $\pm$ 0.518  $\chi^2$ /NDF: 3211276.7/53

# asym\_atr1l2\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 20.3/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 22.8/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 26.7/30

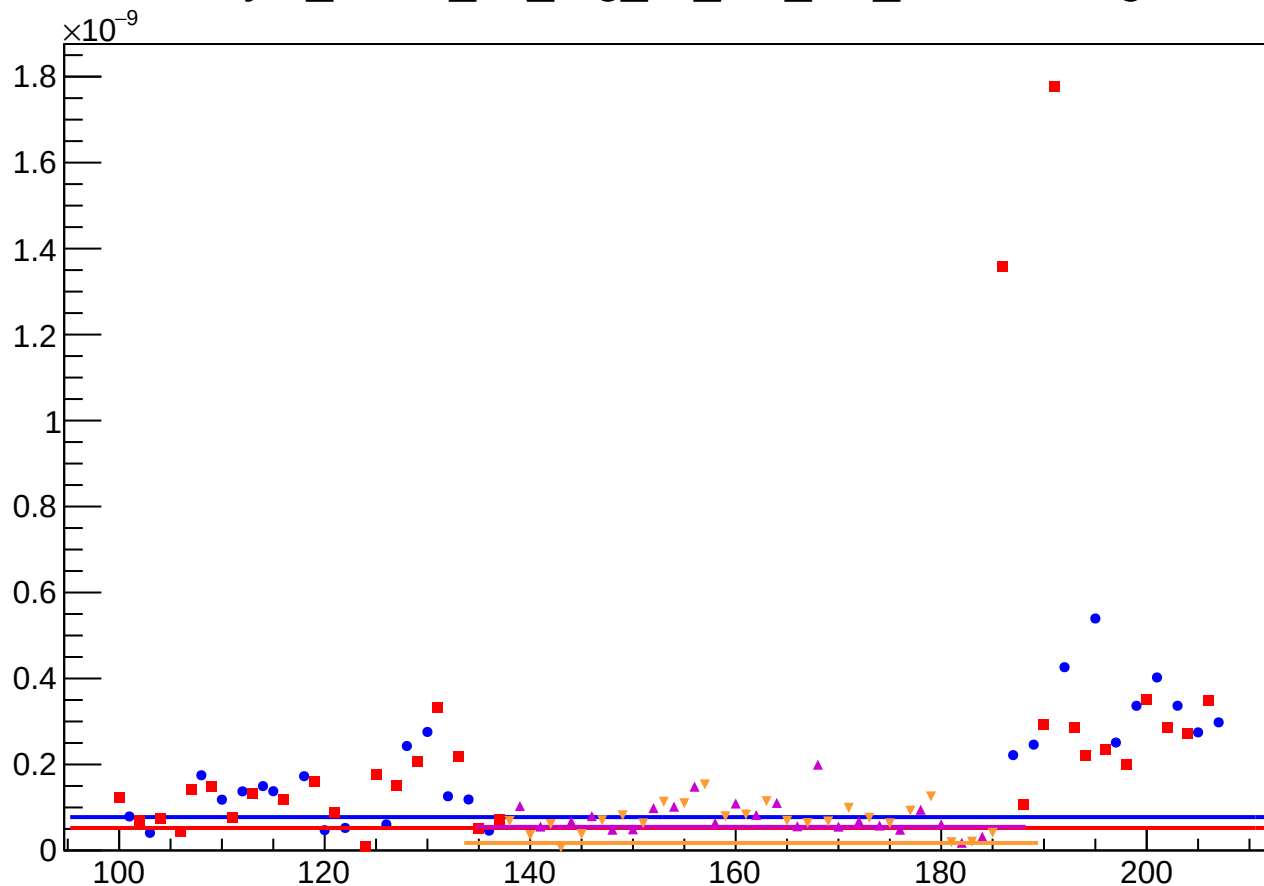
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 26.0/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 43.5/50

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 96.3/104

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 52.8/53

asym\_atr1l2\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 5490184.1/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 8870606.3/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7495093.8/30

Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2798764.9/22

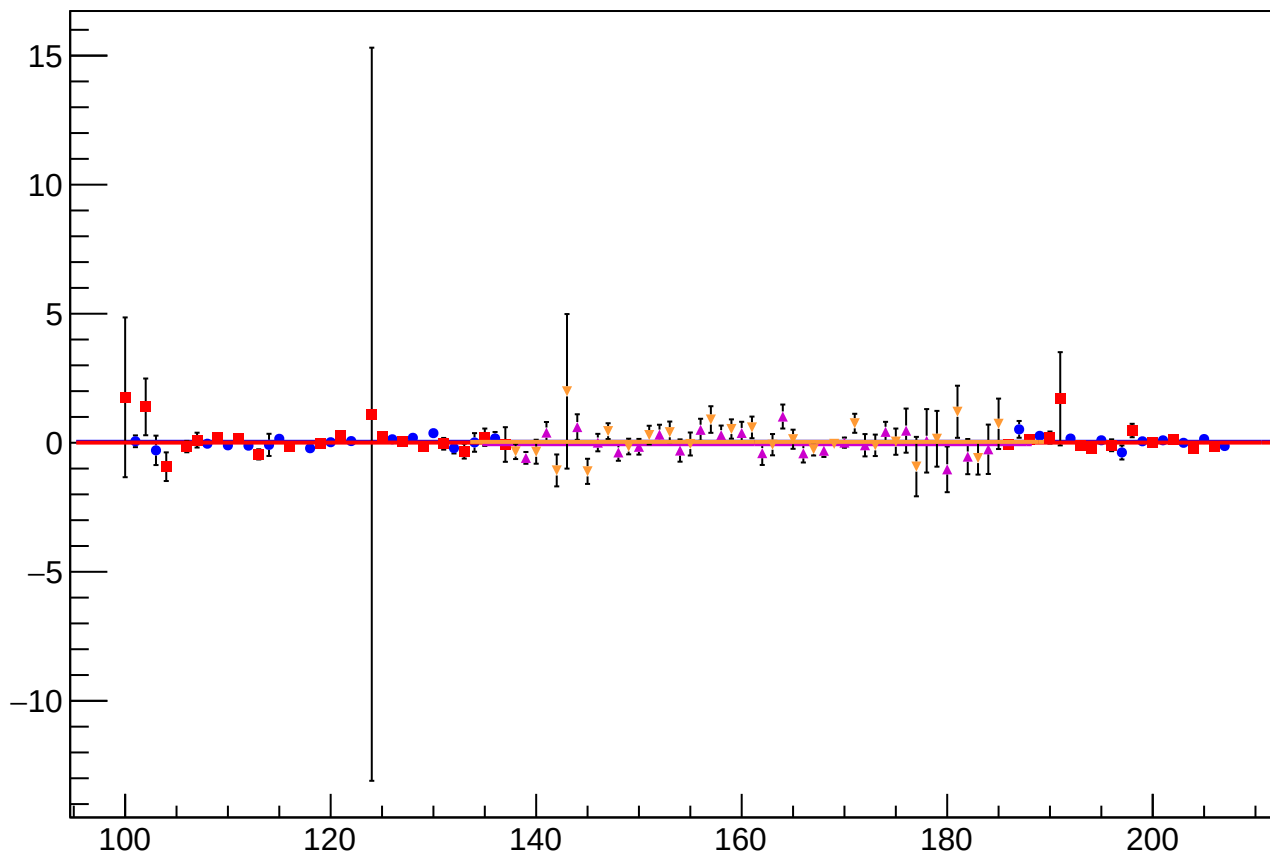
+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 17989450.0/50

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 32505829.5/104

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 10300908.3/53



# asym\_atr1l2\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.037 \pm 0.035$   $\chi^2/\text{NDF}$ : 21.8/25

Left Out:  $0.034 \pm 0.078$   $\chi^2/\text{NDF}$ : 30.5/24

Right Out:  $0.006 \pm 0.032$   $\chi^2/\text{NDF}$ : 35.7/30

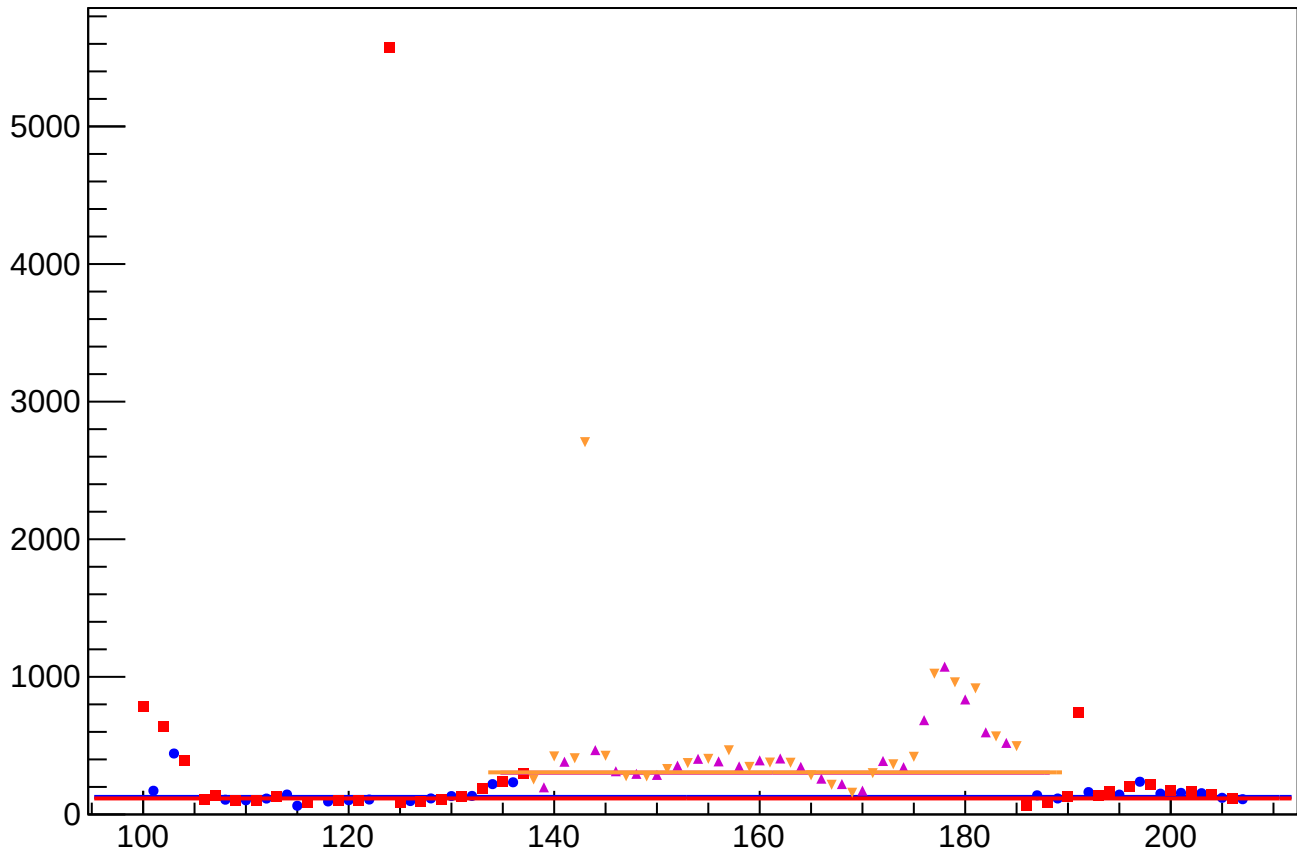
Left In:  $-0.056 \pm 0.077$   $\chi^2/\text{NDF}$ : 26.1/22

+ sign  $0.037 \pm 0.032$   $\chi^2/\text{NDF}$ : 52.3/50

All:  $0.015 \pm 0.022$   $\chi^2/\text{NDF}$ : 115.4/104

- sign  $-0.003 \pm 0.030$   $\chi^2/\text{NDF}$ : 62.3/53

# asym\_atr1l2\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 127.431+/-0.025  $\chi^2/\text{NDF}$ : 2440365.0/25

Left Out: 305.950+/-0.055  $\chi^2/\text{NDF}$ : 6634928.0/24

Right Out: 116.424+/-0.023  $\chi^2/\text{NDF}$ : 4364449.0/30

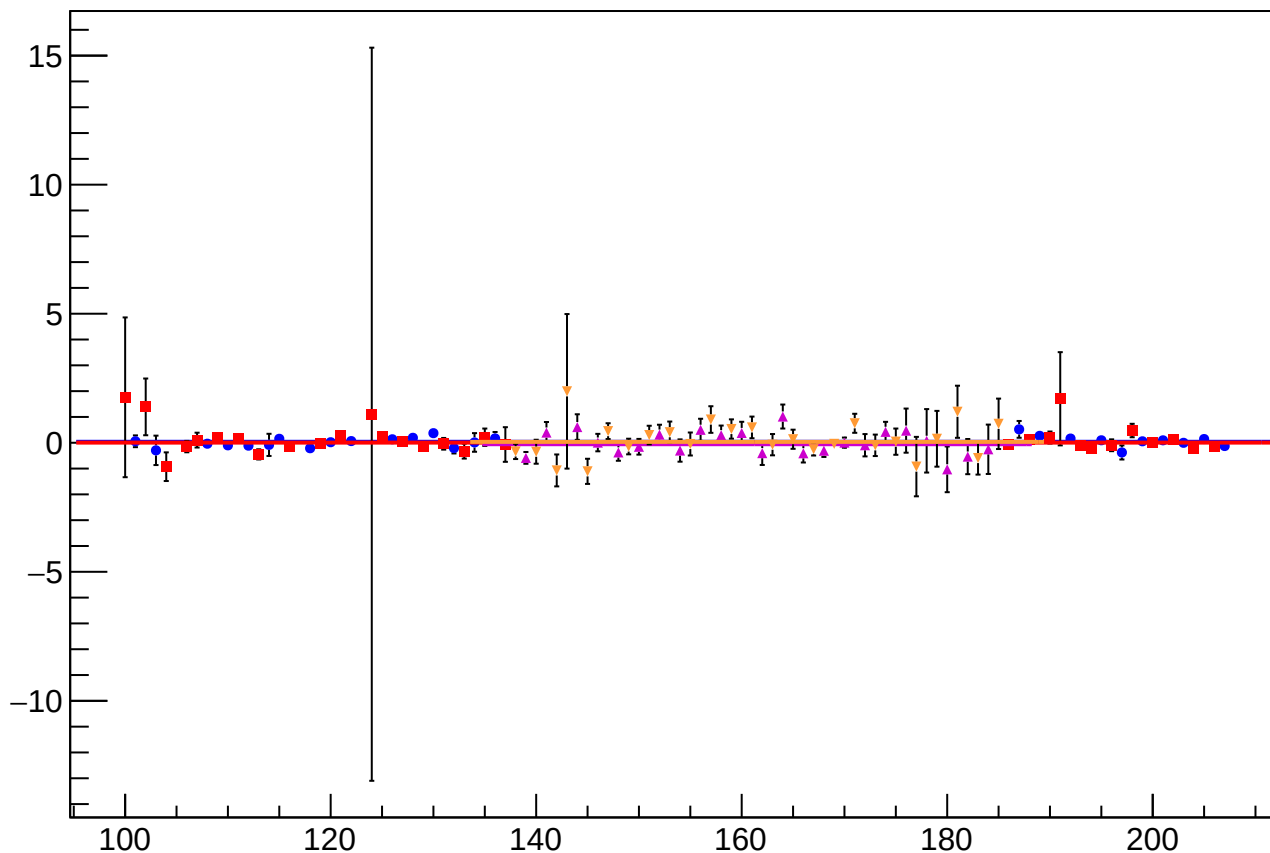
Left In: 303.278+/-0.055  $\chi^2/\text{NDF}$ : 4813442.3/22

+ sign 157.986+/-0.023  $\chi^2/\text{NDF}$ : 17772621.6/50

All: 150.721+/-0.016  $\chi^2/\text{NDF}$ : 37071201.3/10

- sign 144.456+/-0.021  $\chi^2/\text{NDF}$ : 19109490.7/53

asym\_atr1l2\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.037 \pm 0.035$   $\chi^2/\text{NDF}$ : 21.8/25

Left Out:  $0.034 \pm 0.078$   $\chi^2/\text{NDF}$ : 30.5/24

Right Out:  $0.006 \pm 0.032$   $\chi^2/\text{NDF}$ : 35.7/30

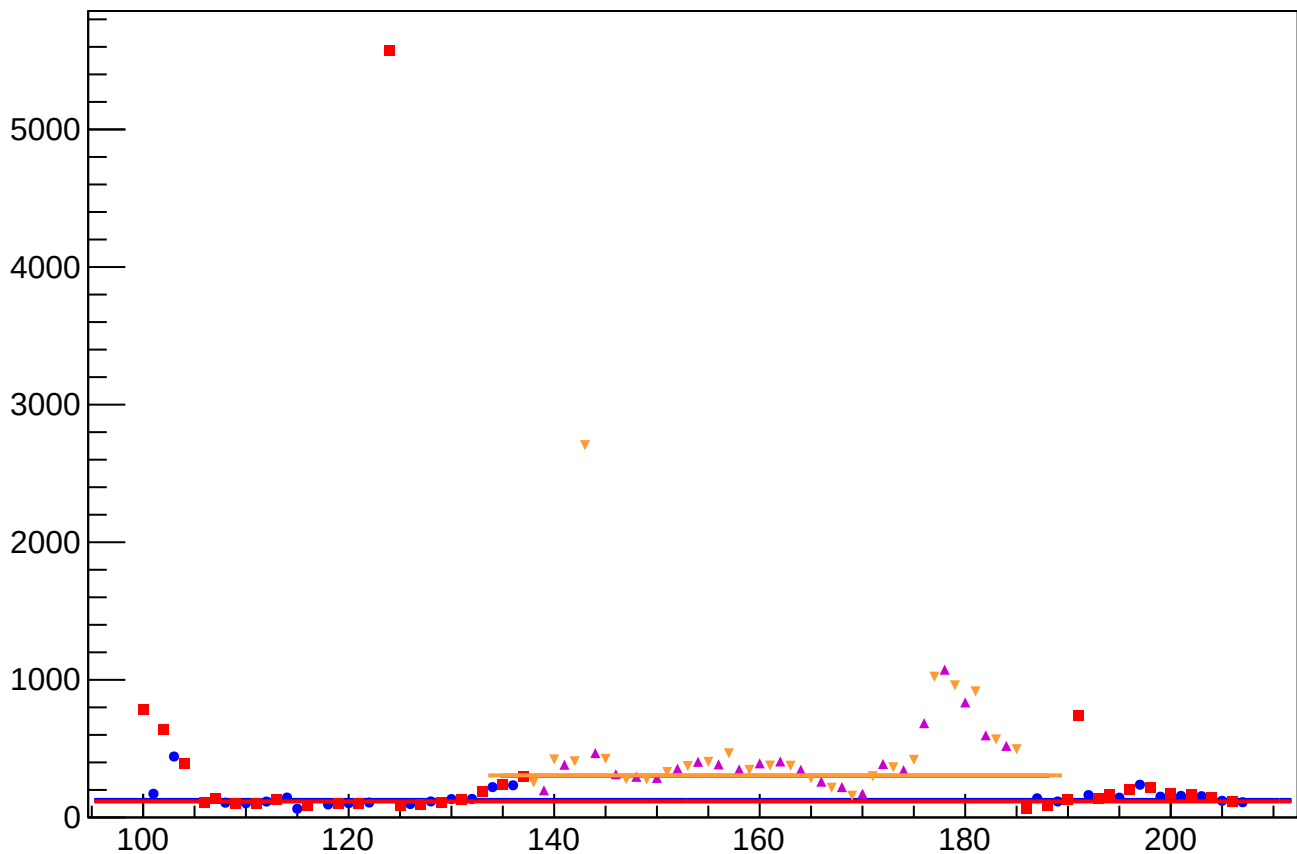
Left In:  $-0.056 \pm 0.077$   $\chi^2/\text{NDF}$ : 26.1/22

+ sign  $0.037 \pm 0.032$   $\chi^2/\text{NDF}$ : 52.3/50

All:  $0.015 \pm 0.022$   $\chi^2/\text{NDF}$ : 115.4/104

- sign  $-0.003 \pm 0.030$   $\chi^2/\text{NDF}$ : 62.3/53

asym\_atr1l2\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 127.431 $\pm$ 0.025  $\chi^2$ /NDF: 2440365.0/25

Left Out: 305.950 $\pm$ 0.055  $\chi^2$ /NDF:6634928.0/24

Right Out: 116.424 $\pm$ 0.023  $\chi^2$ /NDF: 4364449.0/30

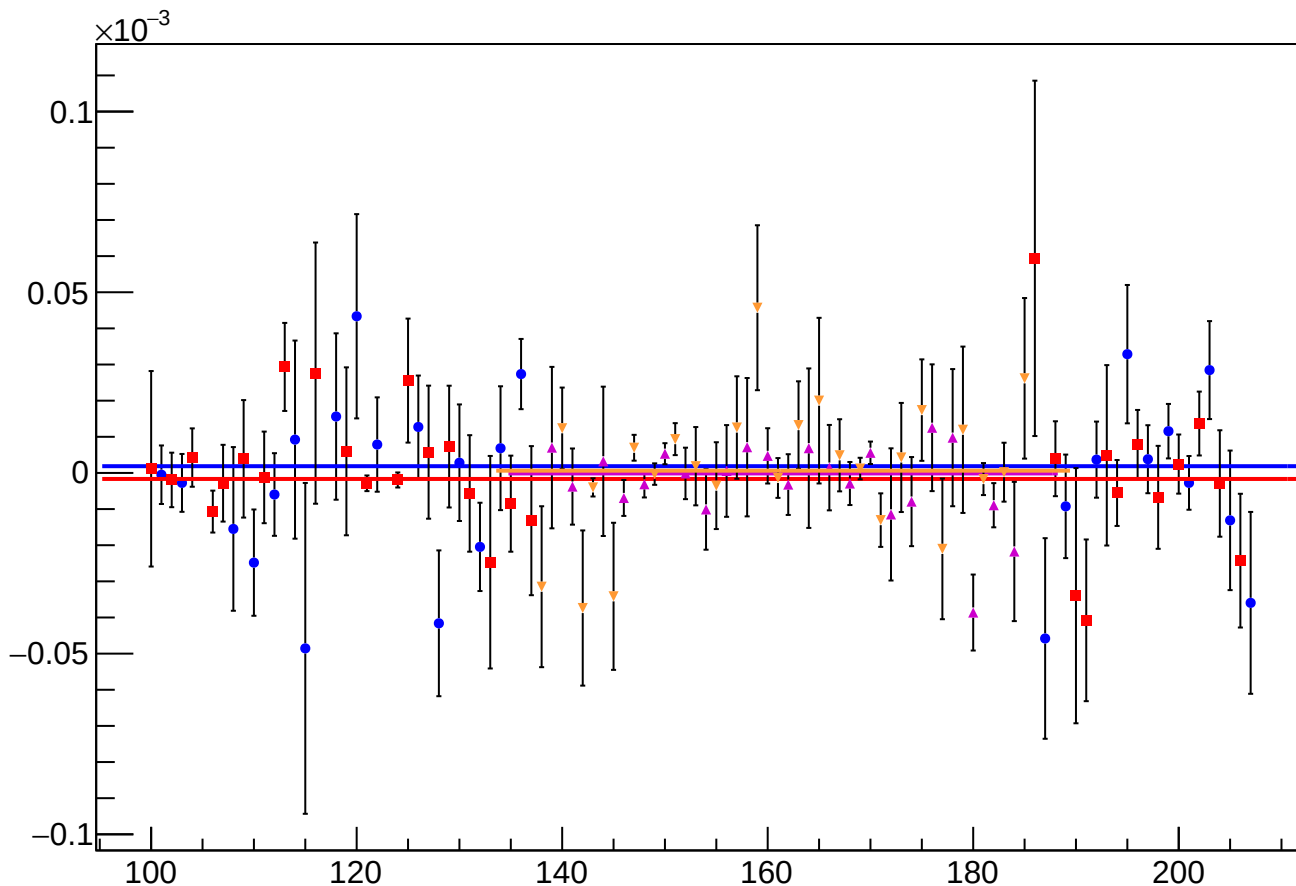
Left In: 303.278 $\pm$ 0.055  $\chi^2$ /NDF:4813442.3/22

+ sign 157.986 $\pm$ 0.023  $\chi^2$ /NDF: 17772621.6/50

All: 150.721 $\pm$ 0.016  $\chi^2$ /NDF: 37071201.3/10

- sign 144.456 $\pm$ 0.021  $\chi^2$ /NDF: 19109490.7/53

asym\_atr1l2\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 39.3/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 34.6/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 26.8/30

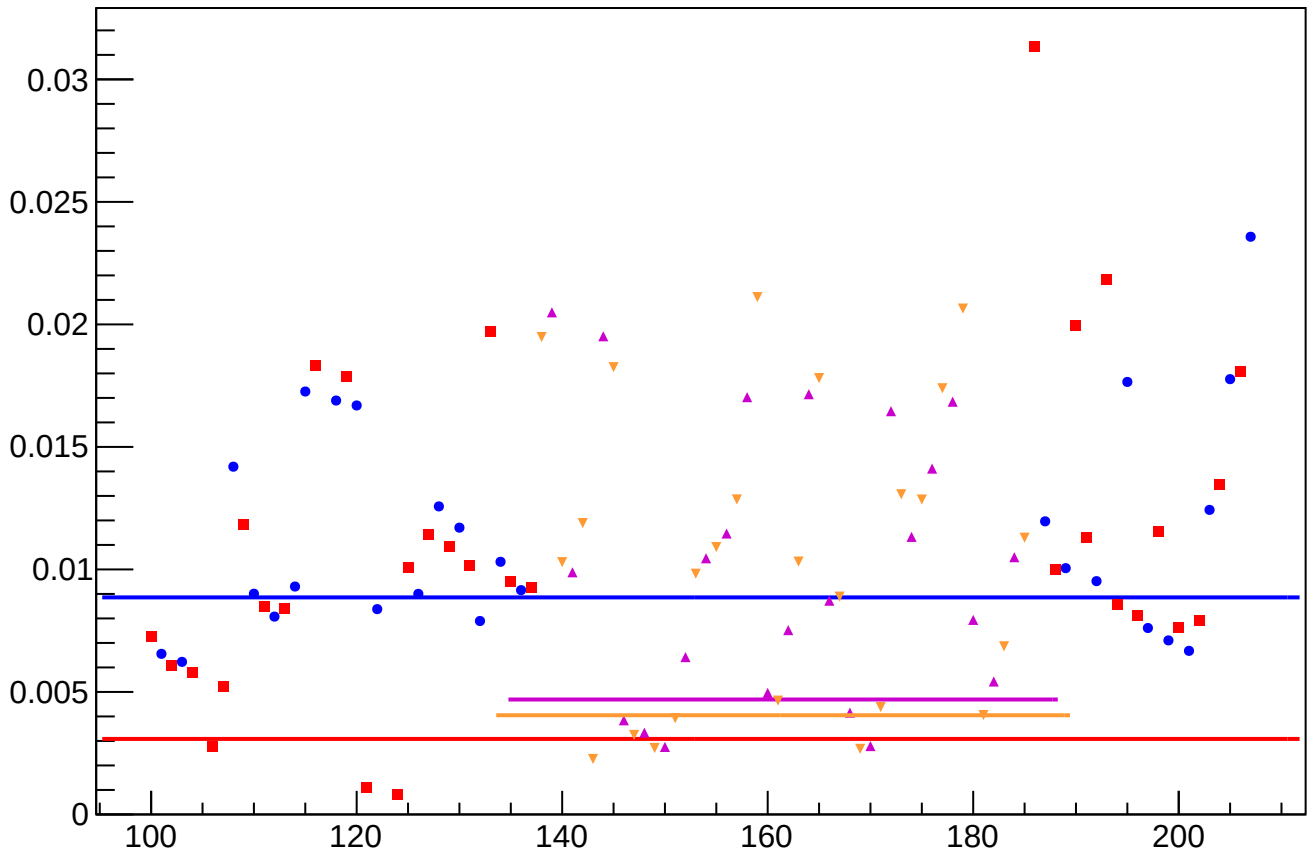
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 29.8/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 74.1/50

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 133.0/104

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 57.2/53

asym\_atr1l2\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 3158389.2/25

Left Out: 0.004+/-0.000  $\chi^2/\text{NDF}$ :13552895.5/24

Right Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 18978597.2/30

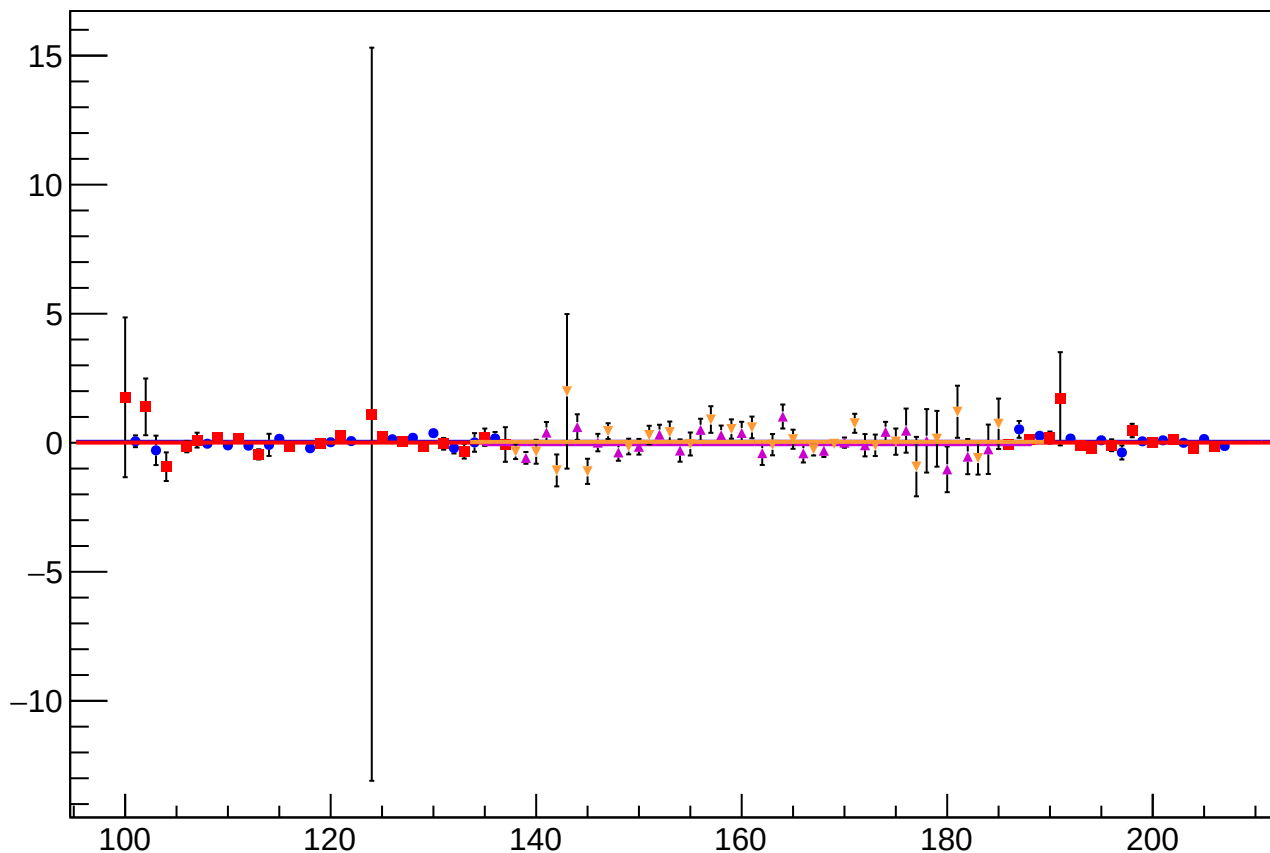
Left In: 0.005+/-0.000  $\chi^2/\text{NDF}$ :10859759.8/22

+ sign 0.005+/-0.000  $\chi^2/\text{NDF}$ : 22815265.7/50

All: 0.004+/-0.000  $\chi^2/\text{NDF}$ : 55433456.9/104

- sign 0.004+/-0.000  $\chi^2/\text{NDF}$ : 31304318.5/53

asym\_atr1l2\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.037 \pm 0.035$   $\chi^2/\text{NDF}$ : 21.8/25

Left Out:  $0.034 \pm 0.078$   $\chi^2/\text{NDF}$ : 30.5/24

Right Out:  $0.006 \pm 0.032$   $\chi^2/\text{NDF}$ : 35.7/30

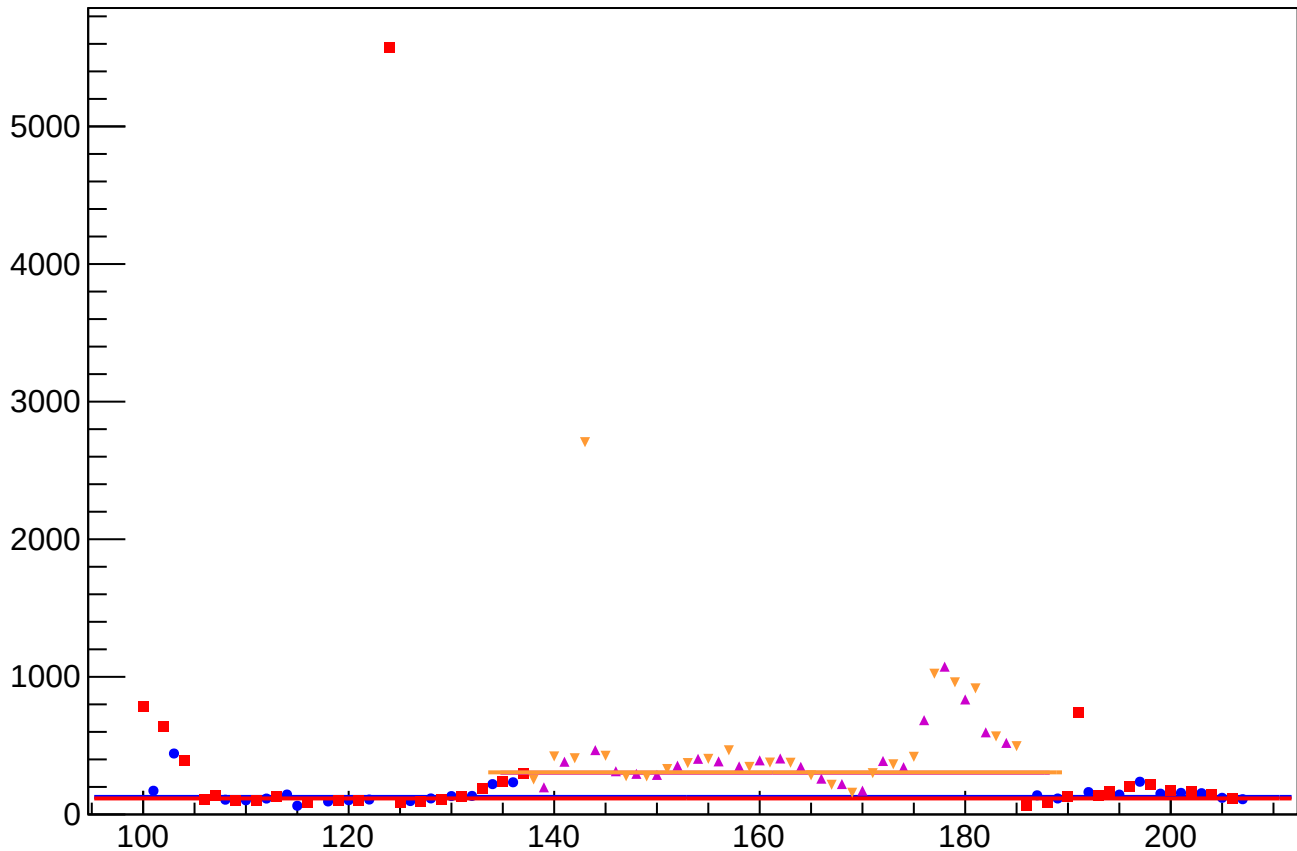
Left In:  $-0.056 \pm 0.077$   $\chi^2/\text{NDF}$ : 26.0/22

+ sign  $0.037 \pm 0.032$   $\chi^2/\text{NDF}$ : 52.3/50

All:  $0.015 \pm 0.022$   $\chi^2/\text{NDF}$ : 115.4/104

- sign  $-0.003 \pm 0.030$   $\chi^2/\text{NDF}$ : 62.3/53

asym\_atr1l2\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 127.432+/-0.025  $\chi^2/\text{NDF}$ : 2440321.8/25

Left Out: 305.951+/-0.055  $\chi^2/\text{NDF}$ : 6634999.6/24

Right Out: 116.425+/-0.023  $\chi^2/\text{NDF}$ : 4364264.6/30

Left In: 303.281+/-0.055  $\chi^2/\text{NDF}$ : 4813426.5/22

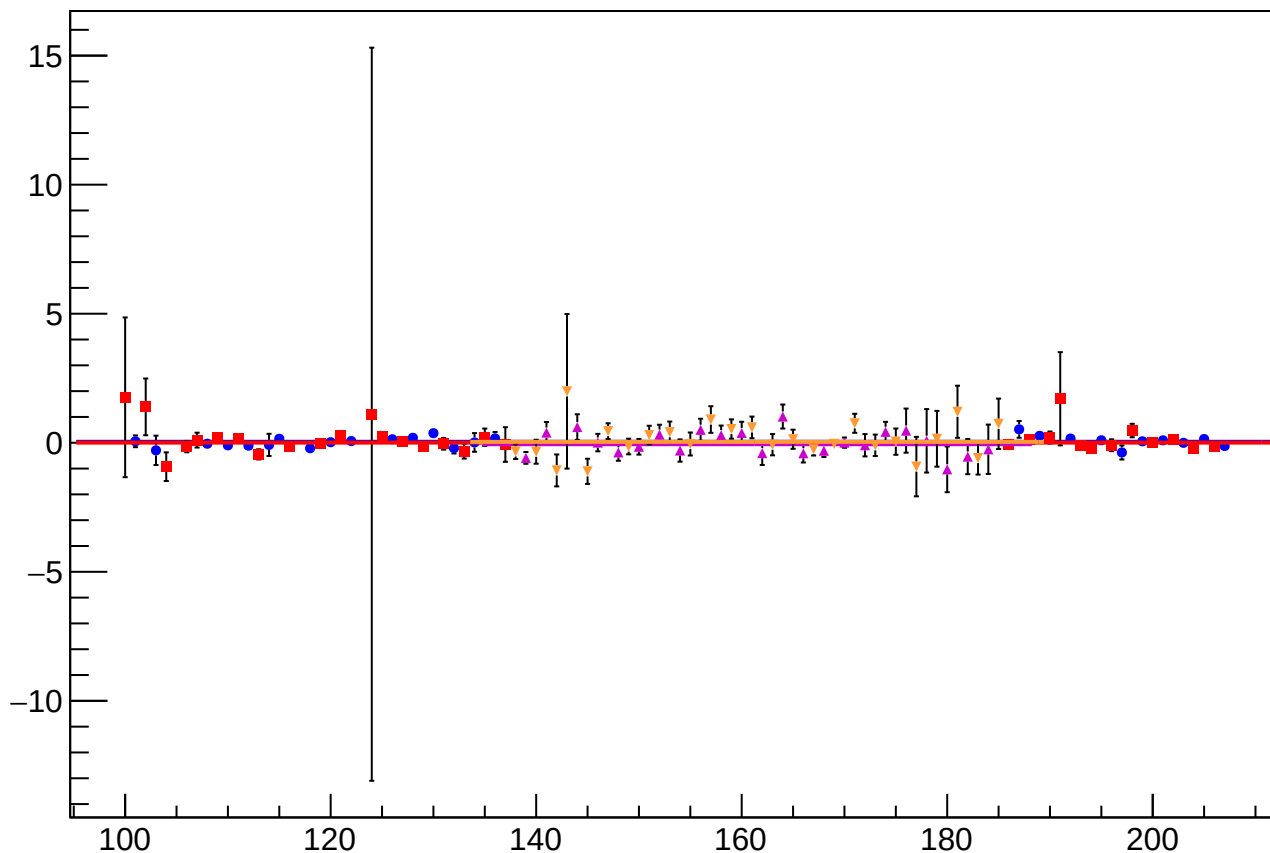
+ sign 157.987+/-0.023  $\chi^2/\text{NDF}$ : 17772596.9/50

All: 150.722+/-0.016  $\chi^2/\text{NDF}$ : 37070979.6/10

- sign 144.457+/-0.021  $\chi^2/\text{NDF}$ : 19109297.4/53



asym\_atr1l2\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.037 \pm 0.035$   $\chi^2/\text{NDF}$ : 21.8/25

Left Out:  $0.034 \pm 0.078$   $\chi^2/\text{NDF}$ : 30.5/24

Right Out:  $0.006 \pm 0.032$   $\chi^2/\text{NDF}$ : 35.7/30

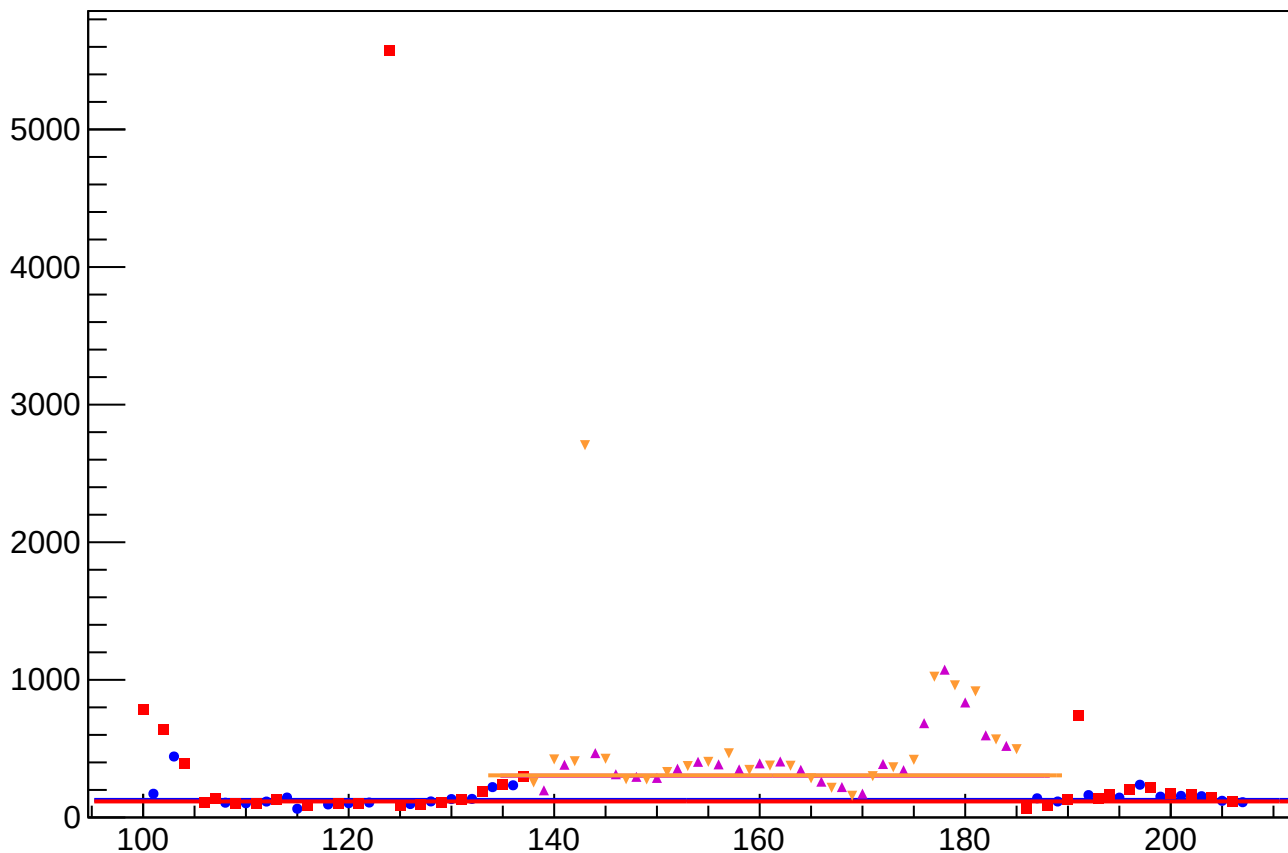
Left In:  $-0.056 \pm 0.077$   $\chi^2/\text{NDF}$ : 26.0/22

+ sign  $0.037 \pm 0.032$   $\chi^2/\text{NDF}$ : 52.3/50

All:  $0.015 \pm 0.022$   $\chi^2/\text{NDF}$ : 115.4/104

- sign  $-0.003 \pm 0.030$   $\chi^2/\text{NDF}$ : 62.3/53

asym\_atr1l2\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 127.432+/-0.025  $\chi^2/\text{NDF}$ : 2440321.8/25

Left Out: 305.951+/-0.055  $\chi^2/\text{NDF}$ : 6634999.6/24

Right Out: 116.425+/-0.023  $\chi^2/\text{NDF}$ : 4364264.6/30

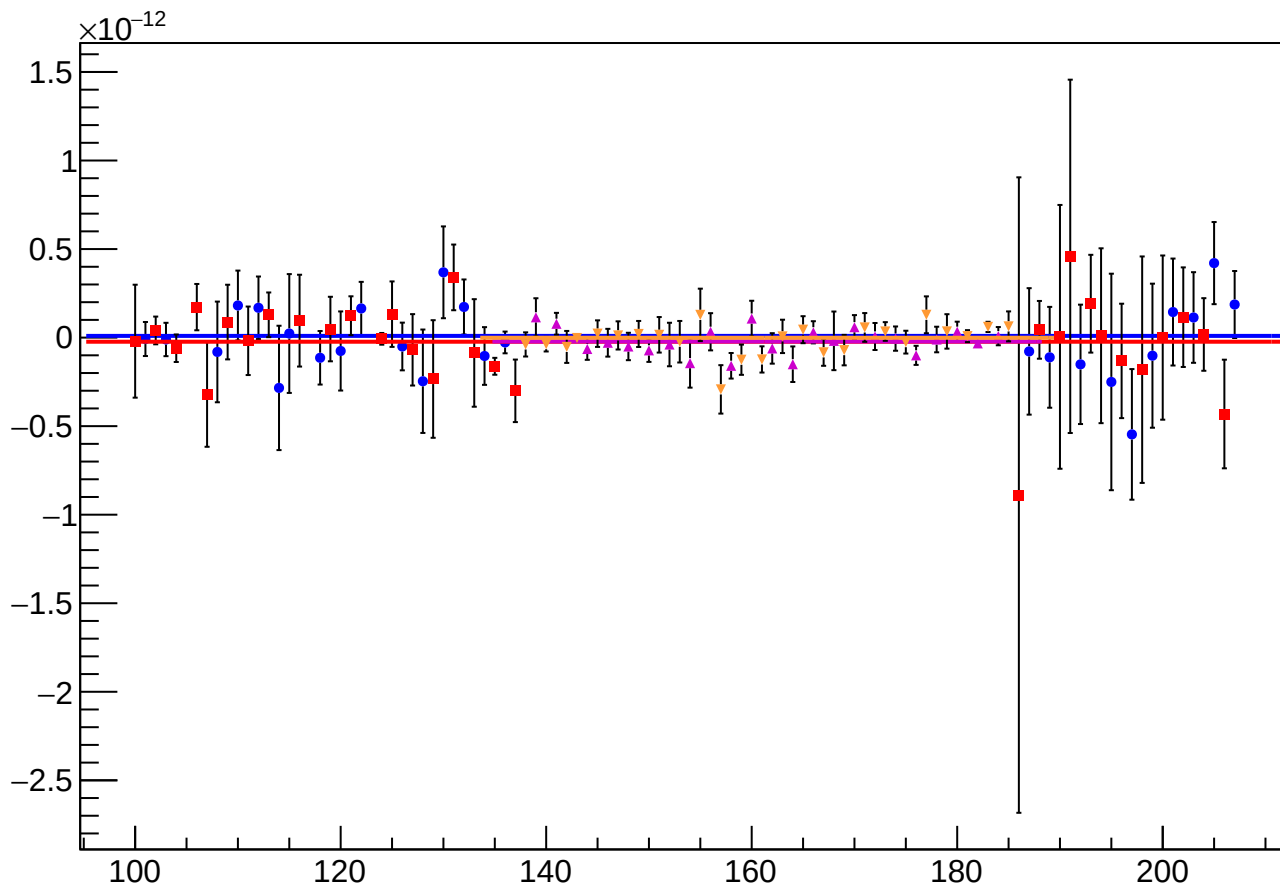
Left In: 303.281+/-0.055  $\chi^2/\text{NDF}$ : 4813426.5/22

+ sign 157.987+/-0.023  $\chi^2/\text{NDF}$ : 17772596.9/50

All: 150.722+/-0.016  $\chi^2/\text{NDF}$ : 37070979.6/10

- sign 144.457+/-0.021  $\chi^2/\text{NDF}$ : 19109297.4/53

asym\_atr1l2\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 16.6/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 22.0/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 27.7/30

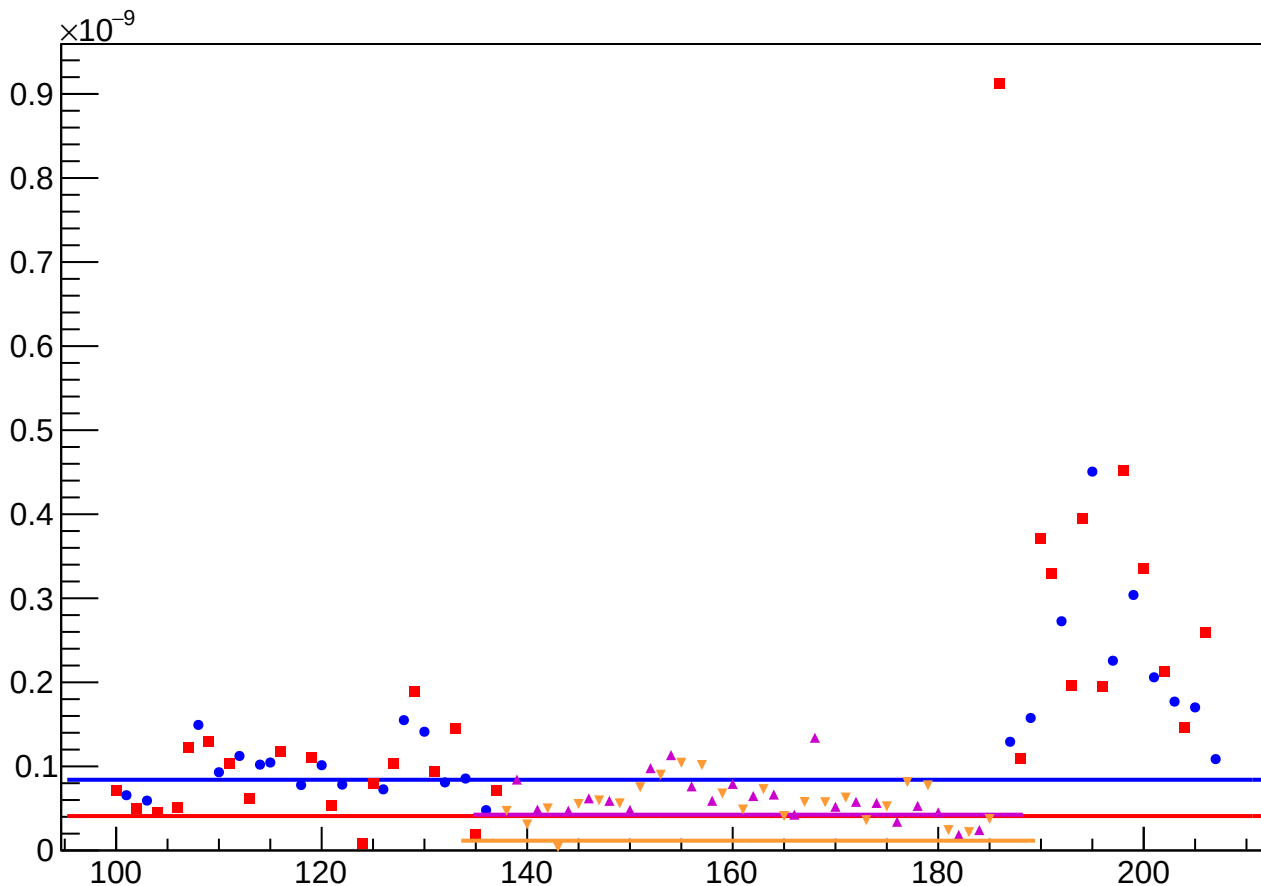
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 19.5/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 38.7/50

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 88.9/104

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 47.2/53

asym\_atr1l2\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4616166.7/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :17863822.5/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12190593.2/30

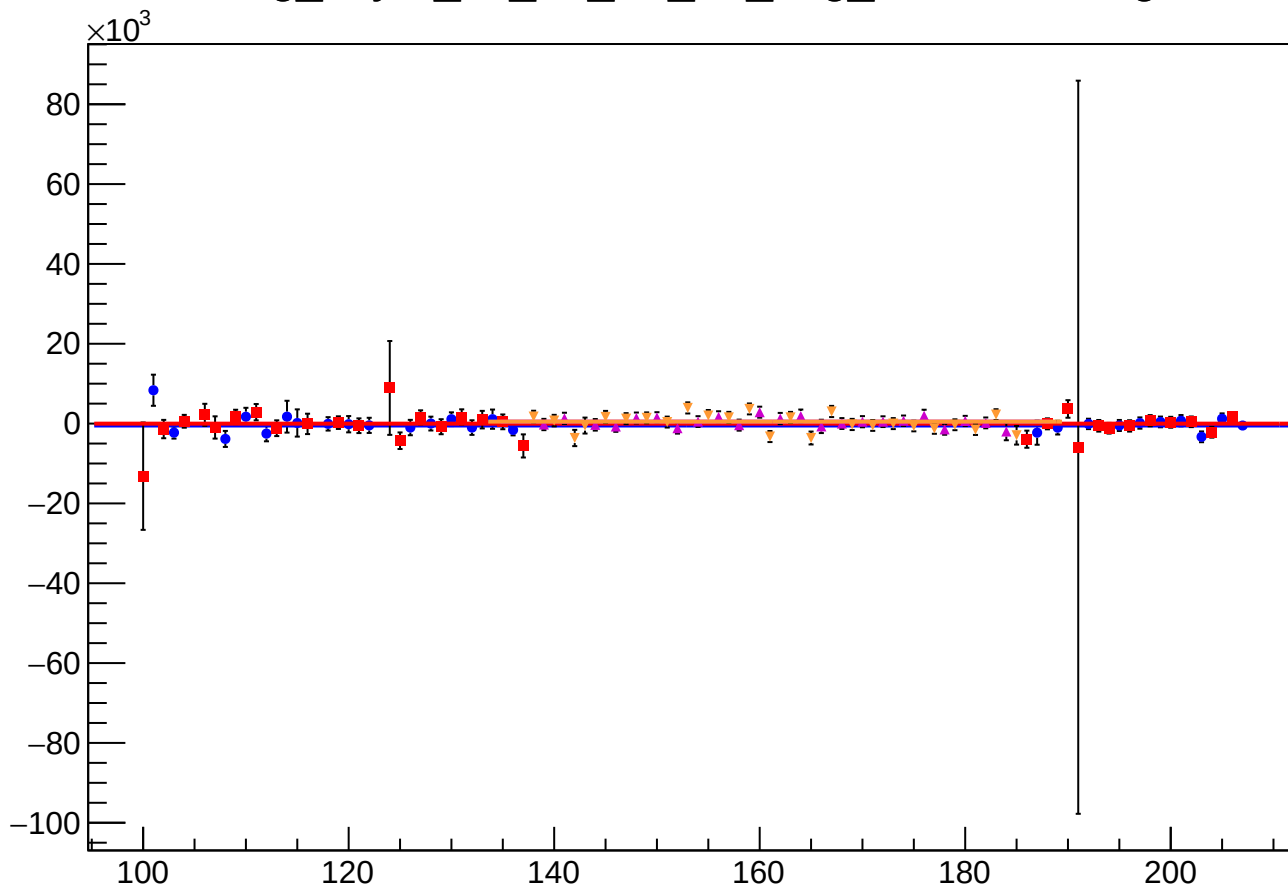
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :5419961.9/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 32249216.7/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 59806563.8/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 17619231.7/53

# reg\_asym\_atl\_dd\_atr\_dd\_avg\_mean vs Slug



Right In:  $-478.103 \pm 332.890$   $\chi^2/\text{NDF}$ : 21.9/25

Left Out:  $492.062 \pm 288.495$   $\chi^2/\text{NDF}$ : 46.9/24

Right Out:  $-18.212 \pm 323.963$   $\chi^2/\text{NDF}$ : 28.0/30

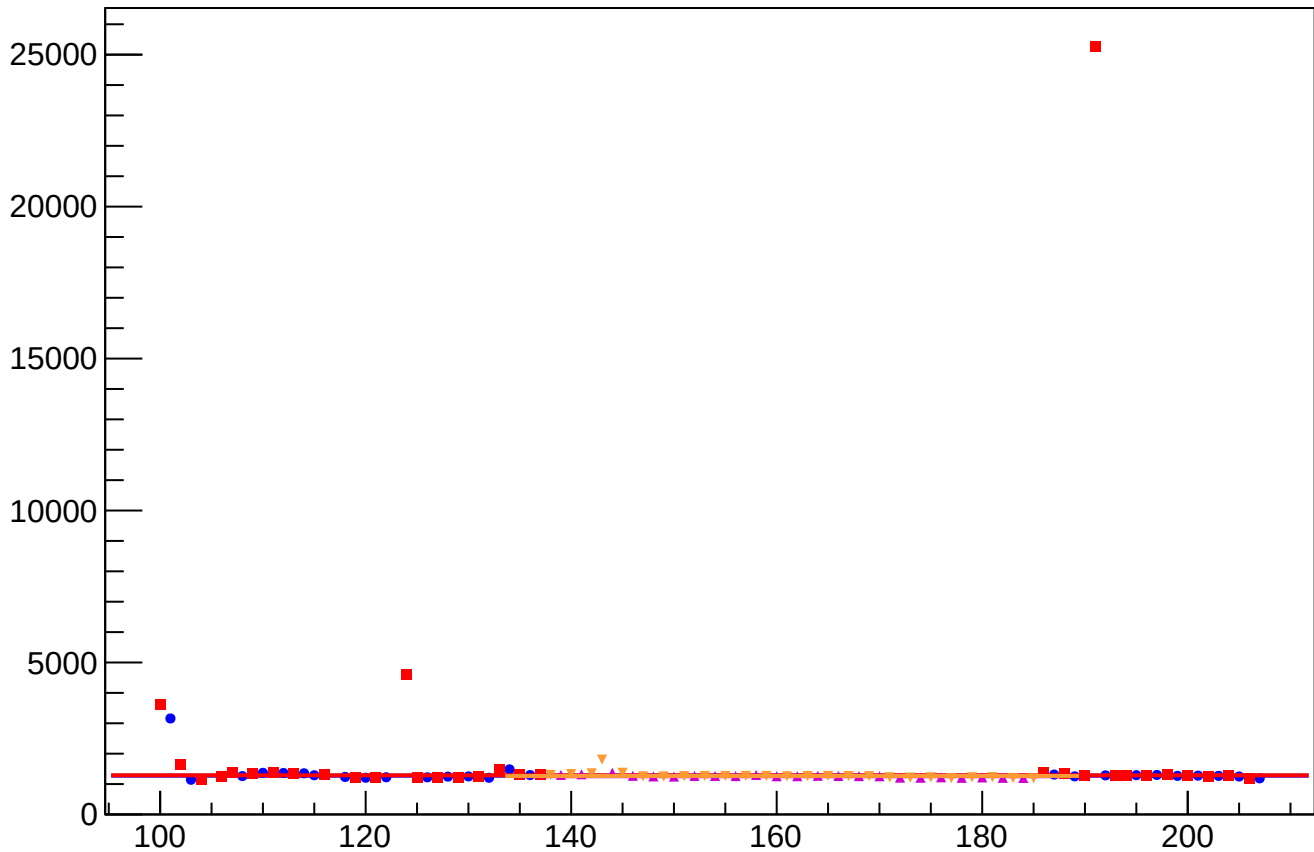
Left In:  $486.821 \pm 293.769$   $\chi^2/\text{NDF}$ : 14.4/22

+ sign  $75.941 \pm 218.016$   $\chi^2/\text{NDF}$ : 73.6/50

All:  $167.603 \pm 154.020$   $\chi^2/\text{NDF}$ : 117.8/104

- sign  $258.932 \pm 217.620$   $\chi^2/\text{NDF}$ : 43.8/53

# reg\_asym\_atl\_dd\_atr\_dd\_avg\_rms vs Slug



Right In: 1276.338 $\pm$ 0.235  $\chi^2$ /NDF: 528336.5/25

Left Out: 1266.967 $\pm$ 0.204  $\chi^2$ /NDF: 187545.6/24

Right Out: 1287.807 $\pm$ 0.229  $\chi^2$ /NDF: 482231.5/30

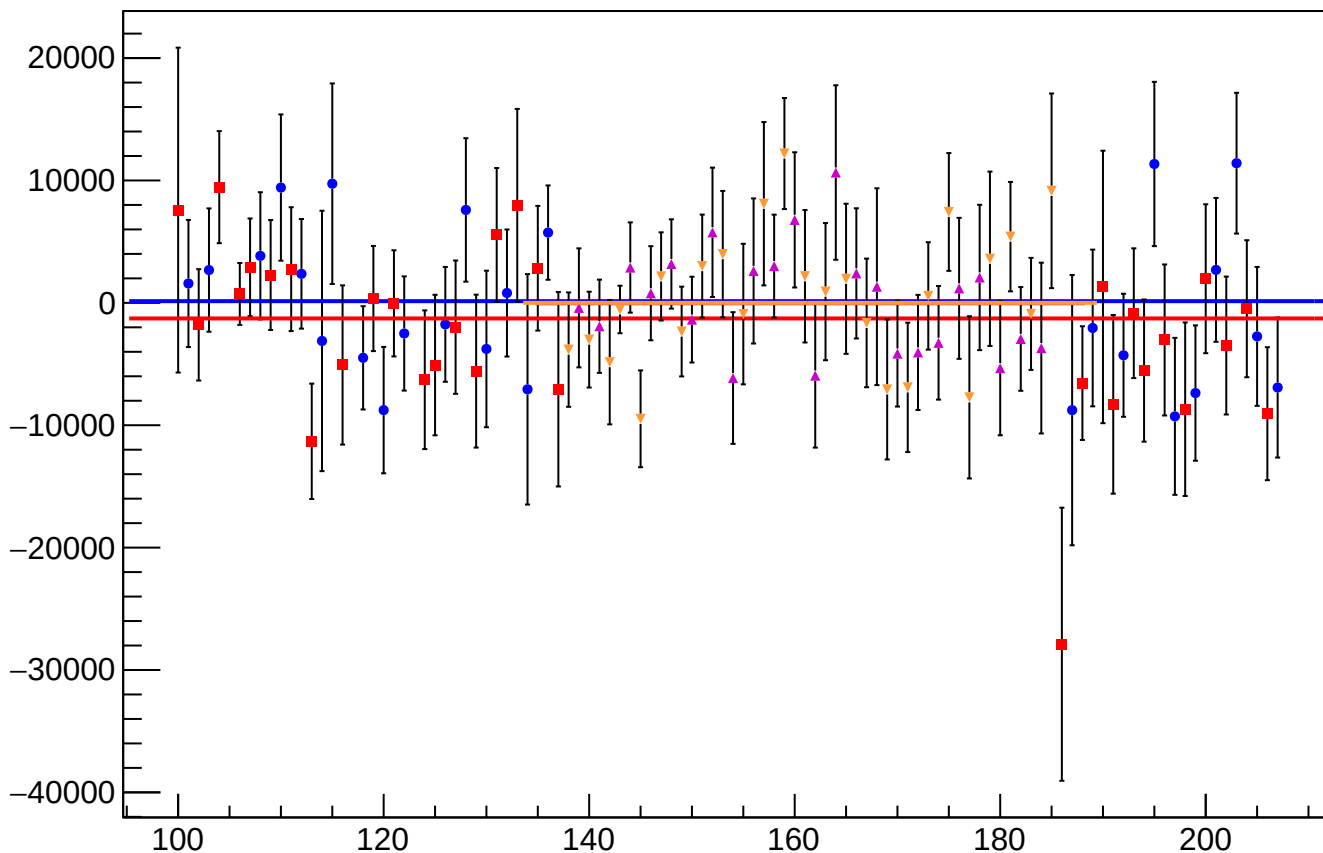
Left In: 1257.551 $\pm$ 0.208  $\chi^2$ /NDF: 36816.4/22

+ sign 1270.987 $\pm$ 0.154  $\chi^2$ /NDF: 716787.0/50

All: 1271.104 $\pm$ 0.109  $\chi^2$ /NDF: 1245420.9/100

- sign 1271.221 $\pm$ 0.154  $\chi^2$ /NDF: 528632.7/53

asym\_atl\_dd\_atr\_dd\_avg\_reg\_correction\_mean vs Slug



Right In:  $137.873 \pm 1090.143$   $\chi^2/\text{NDF}: 28.5/25$

Left Out:  $-0.604 \pm 886.488$   $\chi^2/\text{NDF}: 29.1/24$

Right Out:  $-1274.218 \pm 941.994$   $\chi^2/\text{NDF}: 32.1/30$

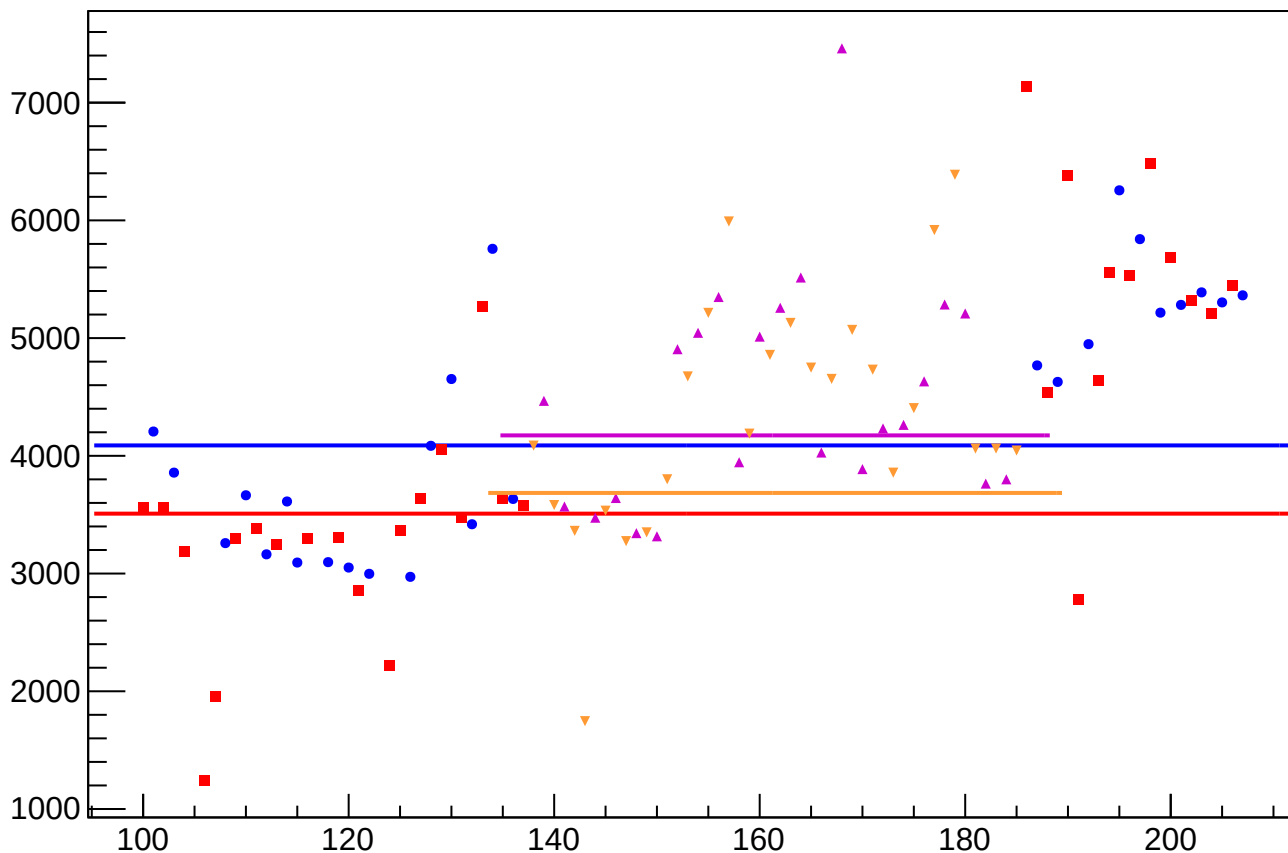
Left In:  $-31.593 \pm 995.348$   $\chi^2/\text{NDF}: 14.0/22$

+ sign  $54.517 \pm 687.785$   $\chi^2/\text{NDF}: 57.5/50$

All:  $-318.244 \pm 485.056$   $\chi^2/\text{NDF}: 105.0/104$

- sign  $-687.101 \pm 684.175$   $\chi^2/\text{NDF}: 46.9/53$

asym\_atl\_dd\_atr\_dd\_avg\_reg\_correction\_rms vs Slug



Right In: 4088.398 $\pm$ 0.771  $\chi^2$ /NDF: 1635045.1/25

Left Out: 3684.769 $\pm$ 0.627  $\chi^2$ /NDF: 3693646.6/24

Right Out: 3508.883 $\pm$ 0.666  $\chi^2$ /NDF: 4479226.0/30

Left In: 4173.556 $\pm$ 0.704  $\chi^2$ /NDF: 1274968.4/22

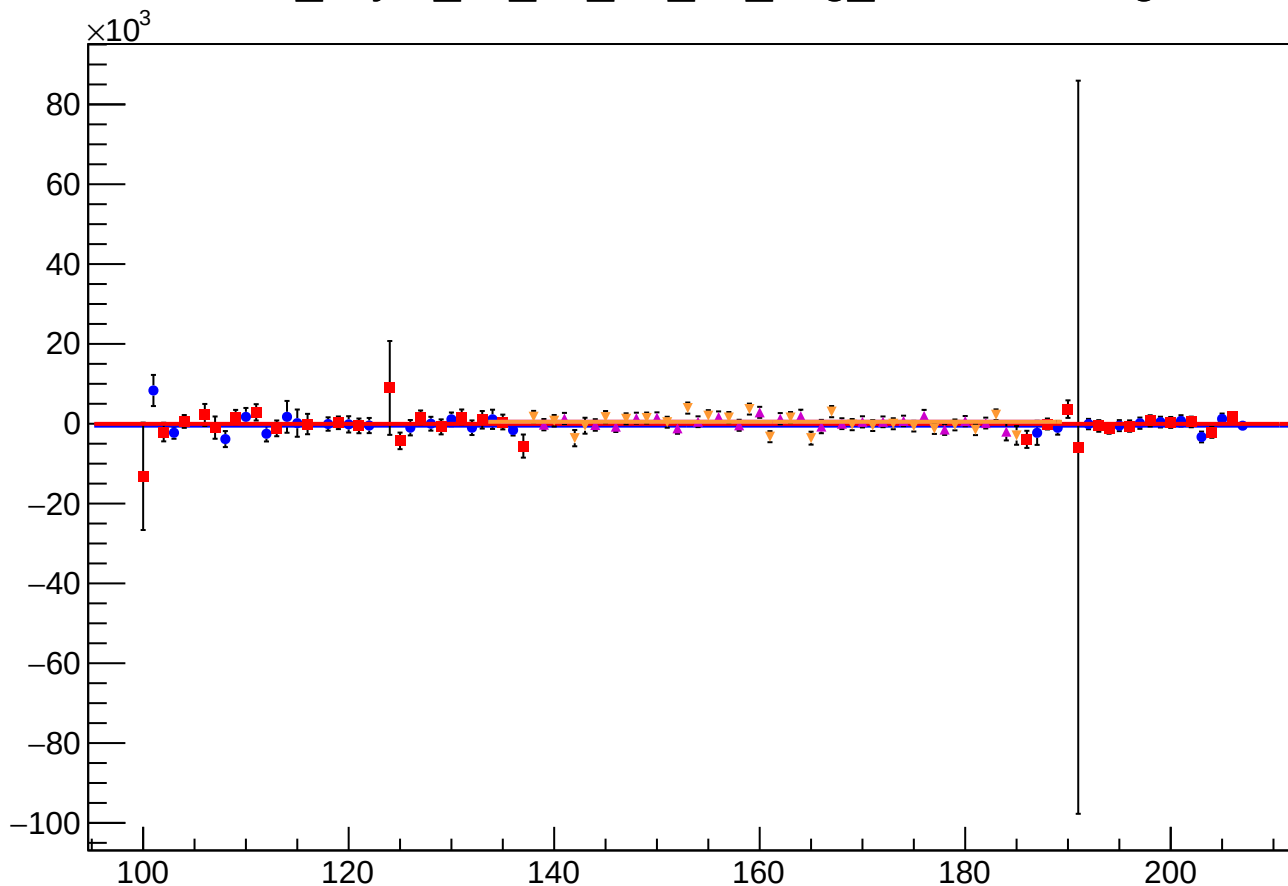
+ sign 3845.433 $\pm$ 0.486  $\chi^2$ /NDF: 5493731.0/50

All: 3834.122 $\pm$ 0.343  $\chi^2$ /NDF: 11719474.7/100

- sign 3822.928 $\pm$ 0.484  $\chi^2$ /NDF: 6224667.3/53



cor\_asym\_atl\_dd\_atr\_dd\_avg\_mean vs Slug



Right In:  $-478.242 \pm 332.890$   $\chi^2/\text{NDF}$ : 21.9/25

Left Out:  $492.079 \pm 288.495$   $\chi^2/\text{NDF}$ : 46.9/24

Right Out:  $-31.039 \pm 324.058$   $\chi^2/\text{NDF}$ : 28.5/30

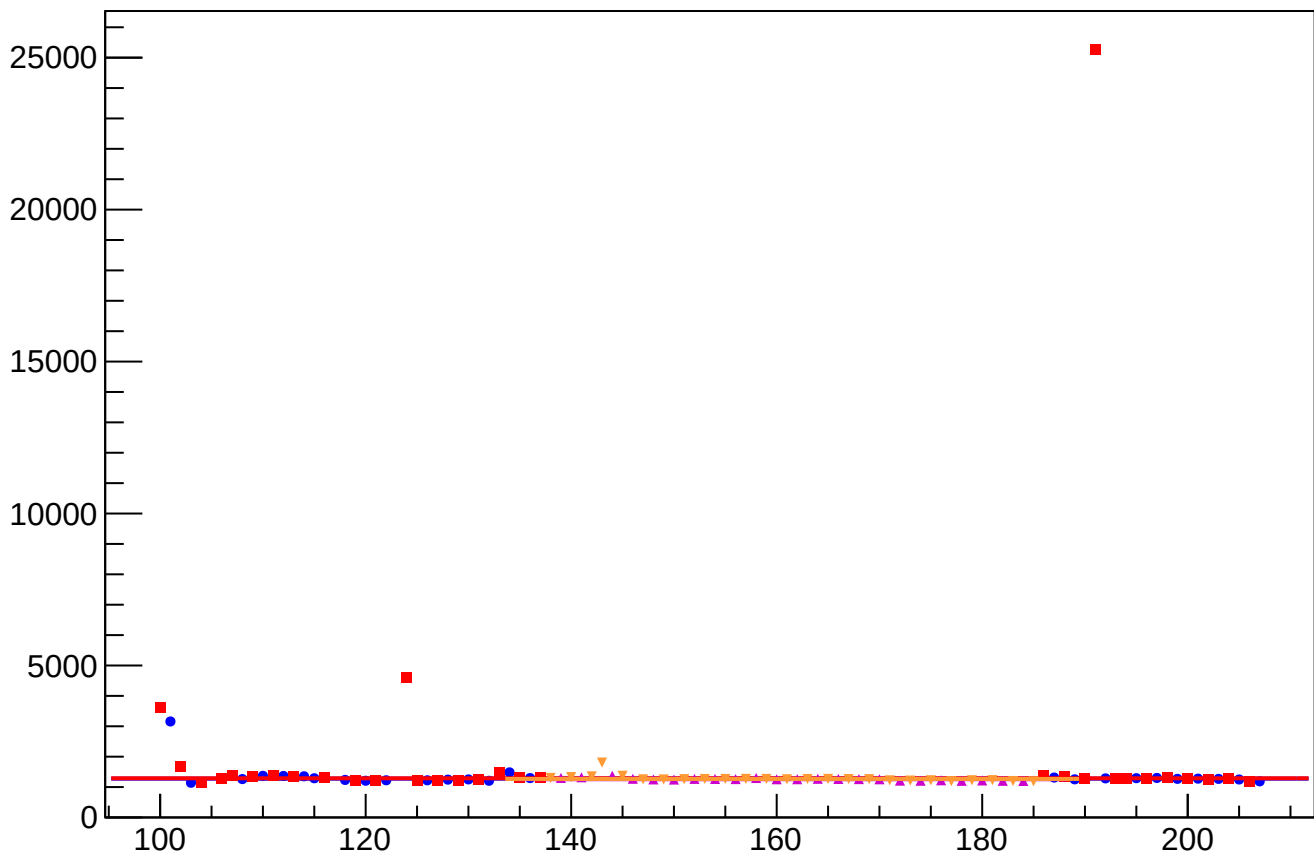
Left In:  $486.720 \pm 293.769$   $\chi^2/\text{NDF}$ : 14.4/22

+ sign  $75.891 \pm 218.016$   $\chi^2/\text{NDF}$ : 73.6/50

All:  $164.676 \pm 154.030$   $\chi^2/\text{NDF}$ : 118.3/104

- sign  $253.163 \pm 217.648$   $\chi^2/\text{NDF}$ : 44.3/53

# cor\_asym\_atl\_dd\_atr\_dd\_avg\_rms vs Slug



Right In: 1276.338 $\pm$ 0.235  $\chi^2$ /NDF: 528337.9/25

Left Out: 1266.968 $\pm$ 0.204  $\chi^2$ /NDF: 187545.6/24

Right Out: 1288.689 $\pm$ 0.229  $\chi^2$ /NDF: 489152.2/30

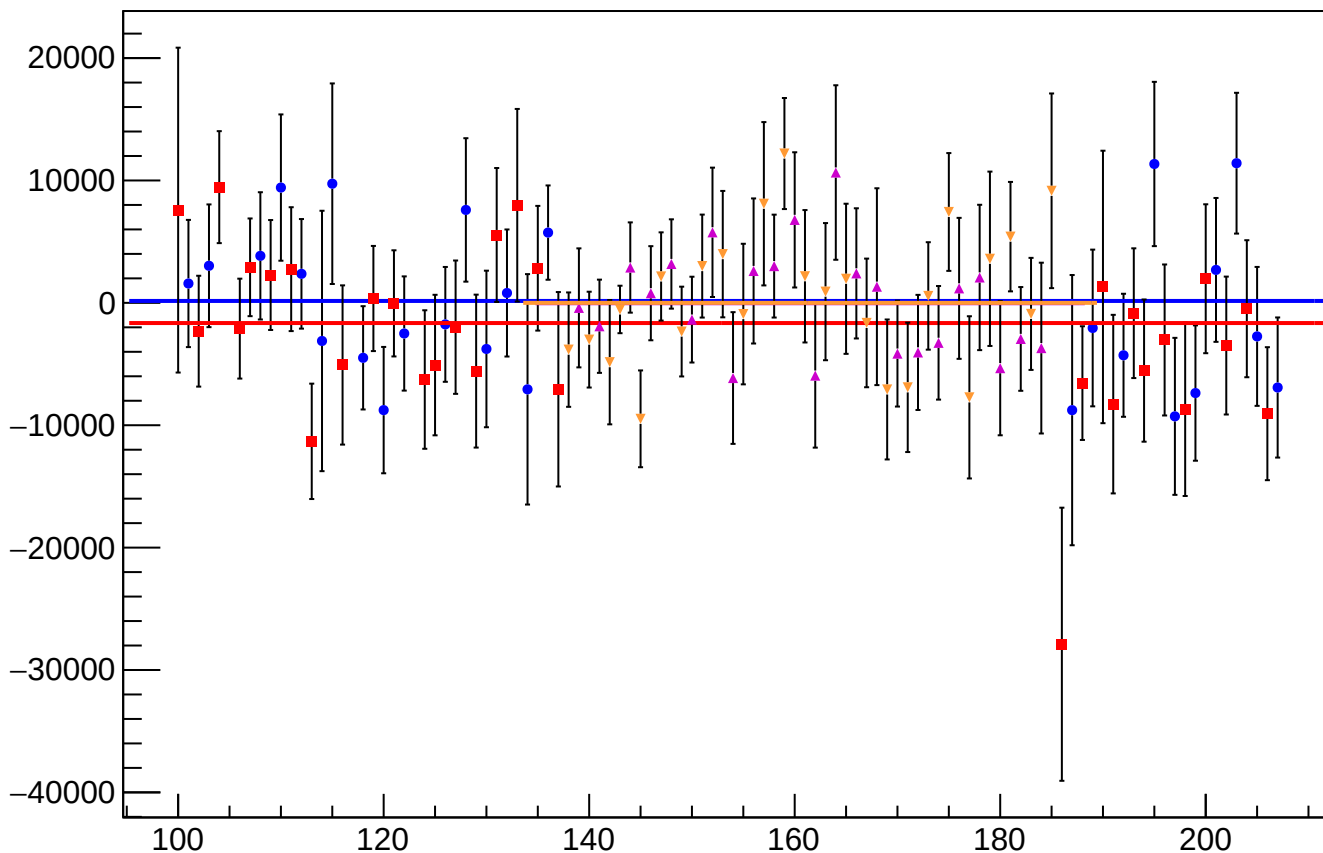
Left In: 1257.551 $\pm$ 0.208  $\chi^2$ /NDF: 36816.3/22

+ sign 1270.987 $\pm$ 0.154  $\chi^2$ /NDF: 716788.4/50

All: 1271.299 $\pm$ 0.109  $\chi^2$ /NDF: 1252910.0/10

- sign 1271.610 $\pm$ 0.154  $\chi^2$ /NDF: 536113.4/53

asym\_atl\_dd\_atr\_dd\_avg\_cor\_correction\_mean vs Slug



Right In: 155.615 $\pm$ 1089.890  $\chi^2$ /NDF: 28.5/25

Left Out: -0.541 $\pm$ 886.487  $\chi^2$ /NDF:29.1/24

Right Out: -1649.714 $\pm$ 984.732  $\chi^2$ /NDF: 31.4/30

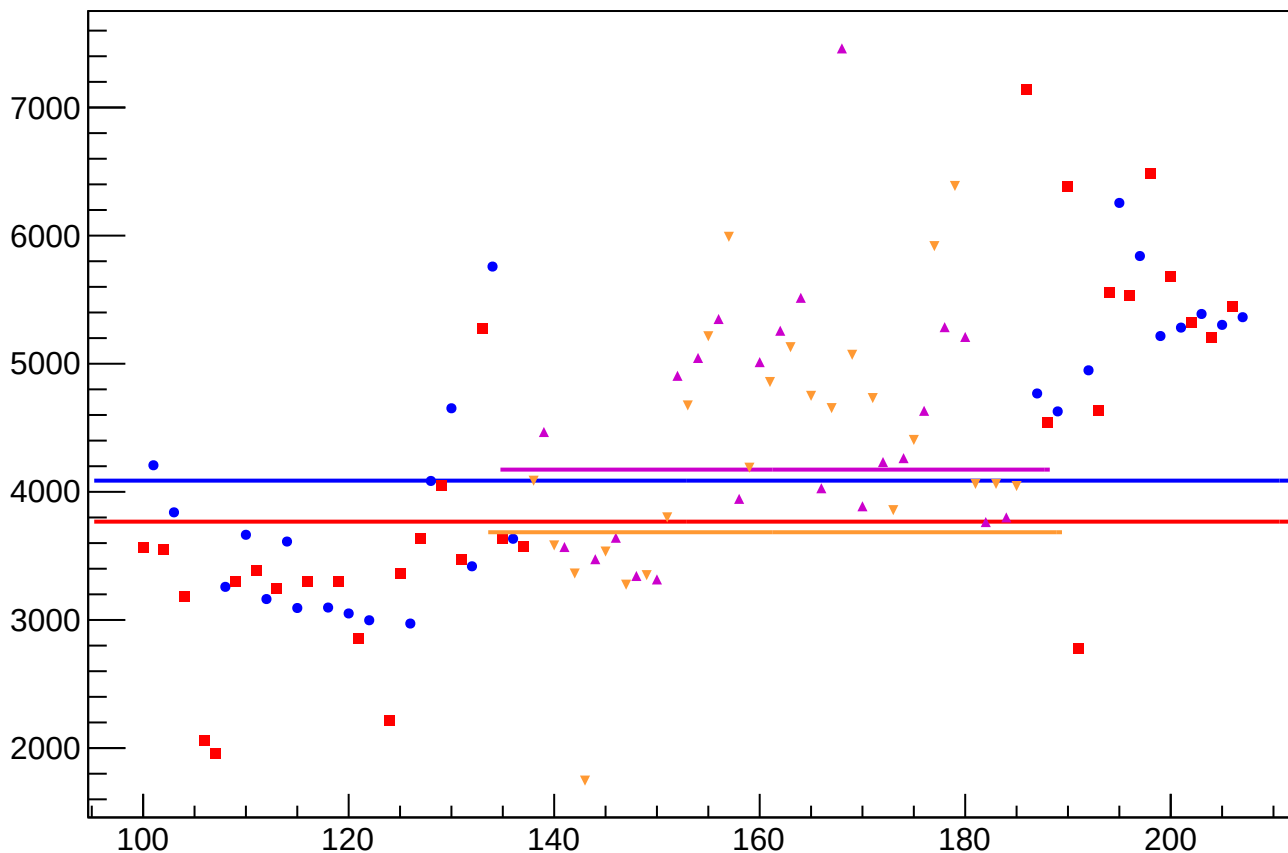
Left In: -31.597 $\pm$ 995.347  $\chi^2$ /NDF:14.0/22

+ sign 61.634 $\pm$ 687.721  $\chi^2$ /NDF: 57.6/50

All: -385.766 $\pm$ 490.587  $\chi^2$ /NDF: 105.2/104

- sign -849.330 $\pm$ 700.033  $\chi^2$ /NDF: 46.7/53

asym\_atl\_dd\_atr\_dd\_avg\_cor\_correction\_rms vs Slug



Right In: 4087.510+/-0.771  $\chi^2/\text{NDF}$ : 1635775.4/25

Left Out: 3684.762+/-0.627  $\chi^2/\text{NDF}$ : 3693687.2/24

Right Out: 3767.434+/-0.696  $\chi^2/\text{NDF}$ : 2986055.6/30

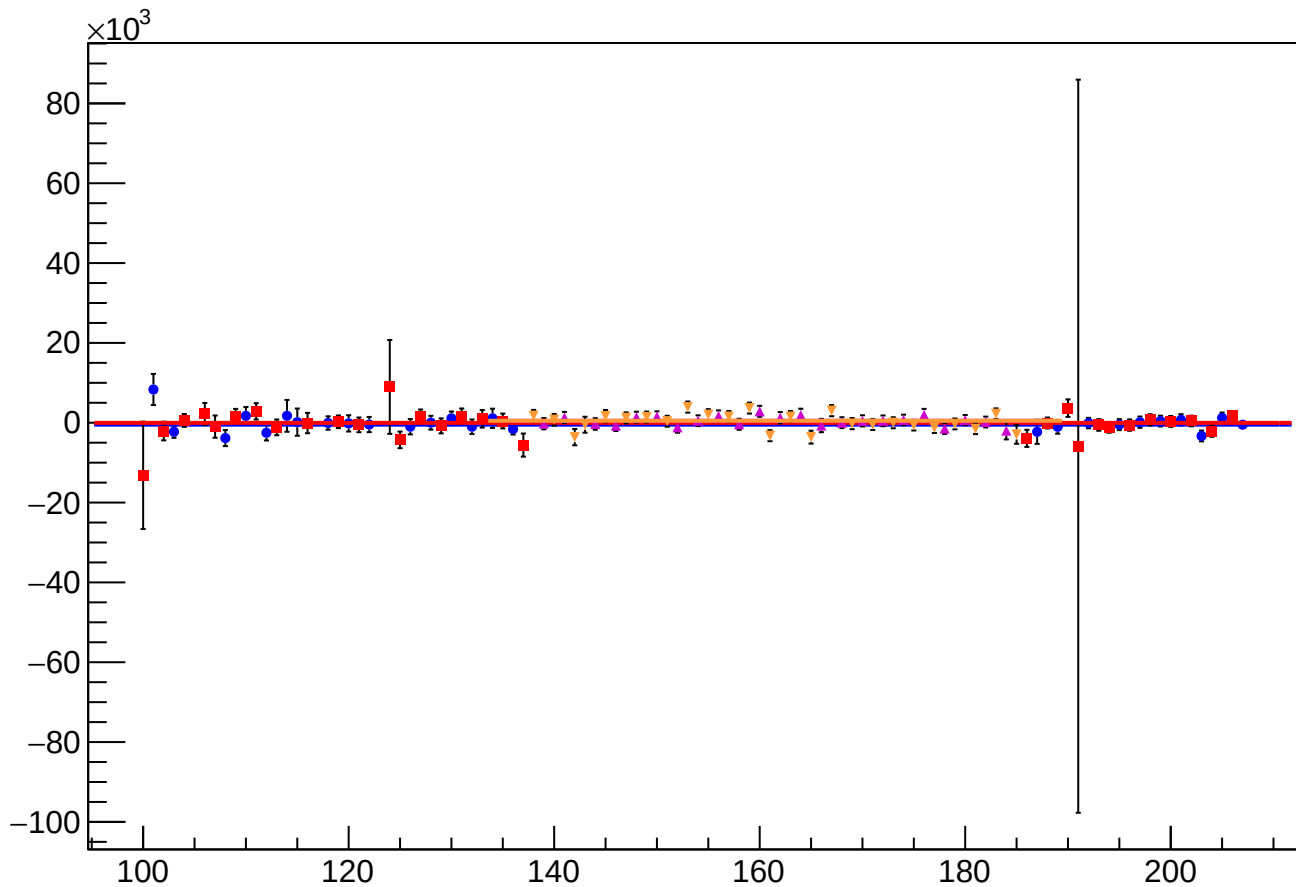
Left In: 4173.550+/-0.704  $\chi^2/\text{NDF}$ : 1274967.5/22

+ sign 3845.120+/-0.486  $\chi^2/\text{NDF}$ : 5493828.3/50

All: 3905.625+/-0.347  $\chi^2/\text{NDF}$ : 9954631.9/10

- sign 3968.315+/-0.495  $\chi^2/\text{NDF}$ : 4429284.0/53

eigen\_cor\_asym\_atl\_dd\_atr\_dd\_avg\_mean vs Slug



Right In:  $-478.242 \pm 332.890$   $\chi^2/\text{NDF}$ : 21.9/25

Left Out:  $492.079 \pm 288.495$   $\chi^2/\text{NDF}$ : 46.9/24

Right Out:  $-31.039 \pm 324.058$   $\chi^2/\text{NDF}$ : 28.5/30

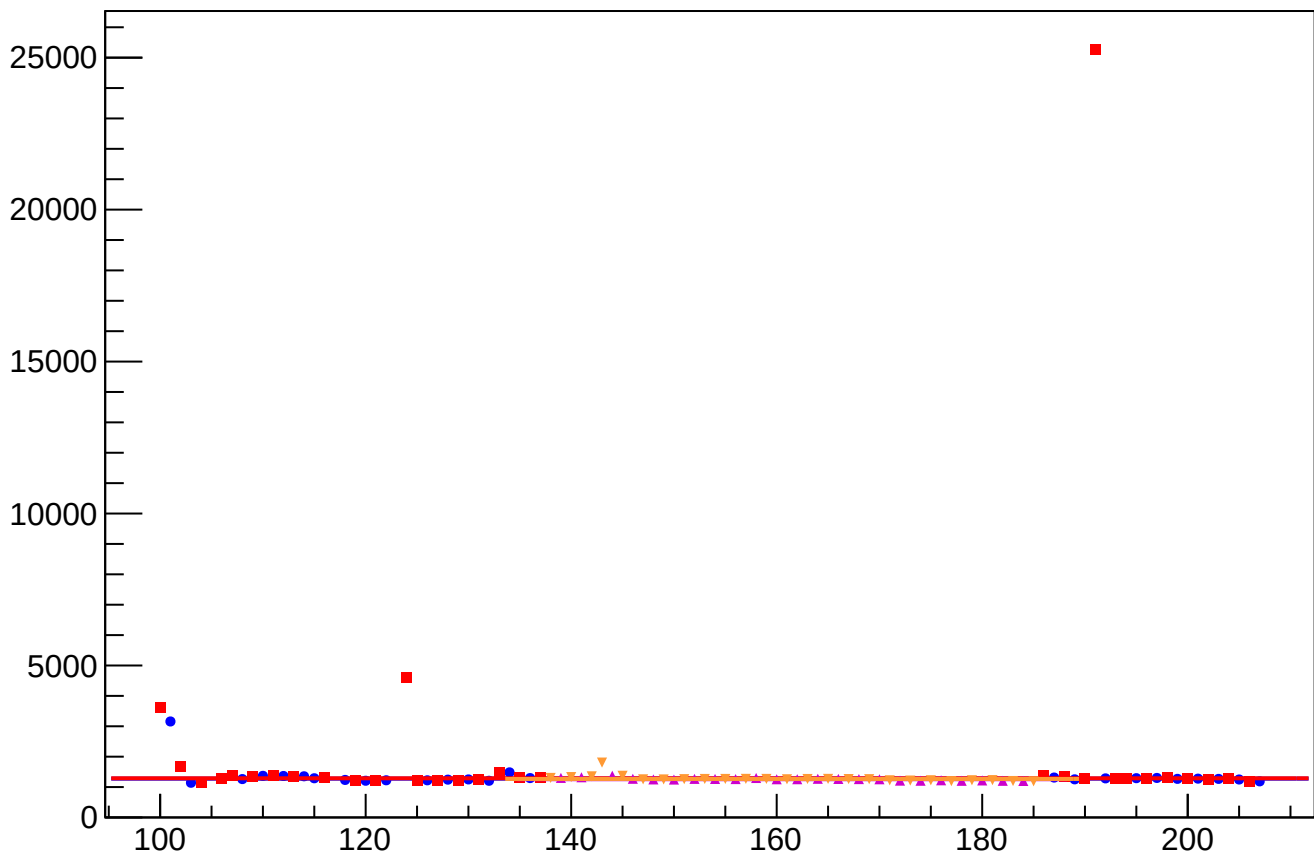
Left In:  $486.720 \pm 293.769$   $\chi^2/\text{NDF}$ : 14.4/22

+ sign  $75.891 \pm 218.016$   $\chi^2/\text{NDF}$ : 73.6/50

All:  $164.676 \pm 154.030$   $\chi^2/\text{NDF}$ : 118.3/104

- sign  $253.163 \pm 217.648$   $\chi^2/\text{NDF}$ : 44.3/53

eigen\_cor\_asym\_atl\_dd\_atr\_dd\_avg\_rms vs Slug



Right In: 1276.338 $\pm$ 0.235  $\chi^2$ /NDF: 528337.9/25

Left Out: 1266.968 $\pm$ 0.204  $\chi^2$ /NDF: 187545.6/24

Right Out: 1288.689 $\pm$ 0.229  $\chi^2$ /NDF: 489152.2/30

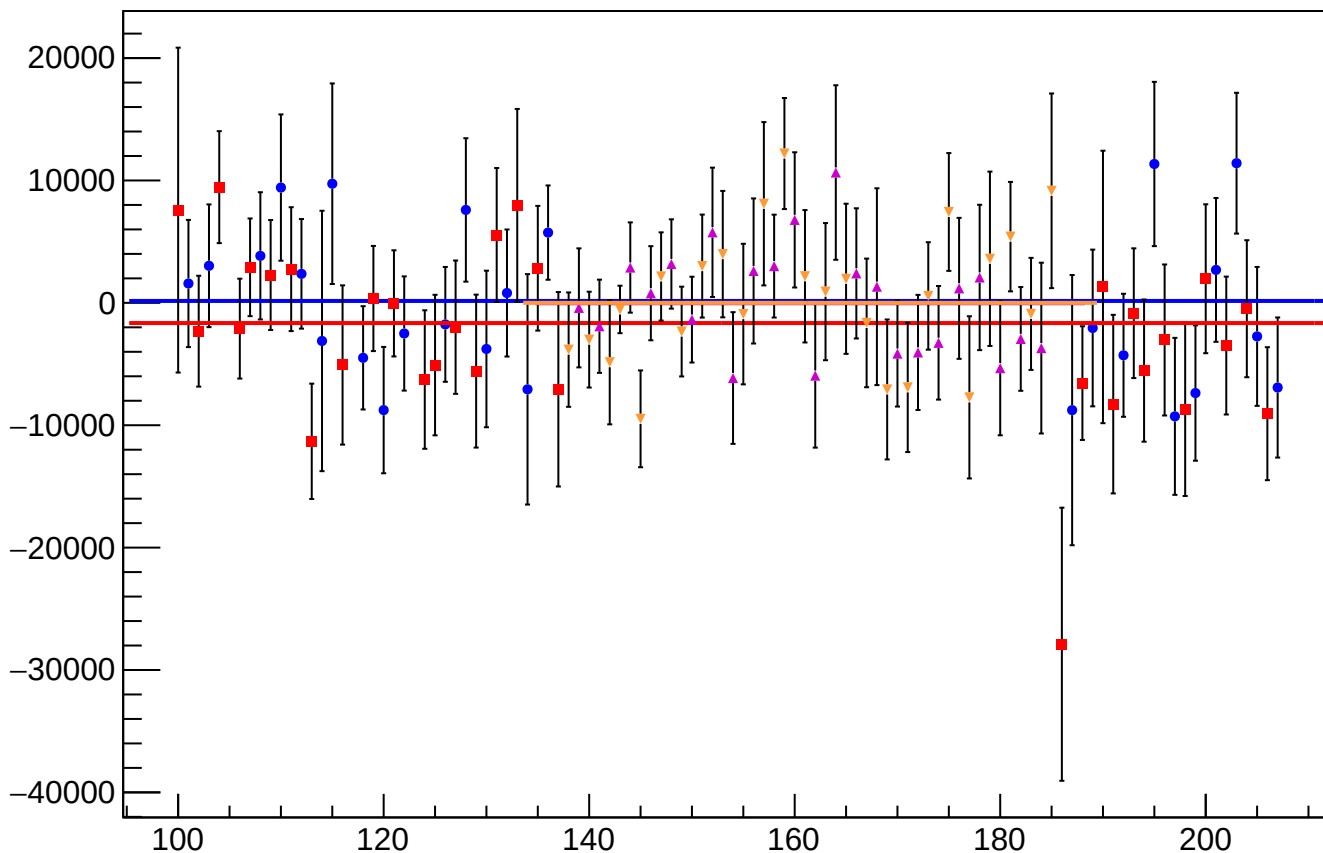
Left In: 1257.551 $\pm$ 0.208  $\chi^2$ /NDF: 36816.3/22

+ sign 1270.987 $\pm$ 0.154  $\chi^2$ /NDF: 716788.4/50

All: 1271.299 $\pm$ 0.109  $\chi^2$ /NDF: 1252910.0/10

- sign 1271.610 $\pm$ 0.154  $\chi^2$ /NDF: 536113.4/53

asym\_atl\_dd\_atr\_dd\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In: 155.615 $\pm$ 1089.890  $\chi^2$ /NDF: 28.5/25

Left Out: -0.541 $\pm$ 886.487  $\chi^2$ /NDF:29.1/24

Right Out: -1649.714 $\pm$ 984.732  $\chi^2$ /NDF: 31.4/30

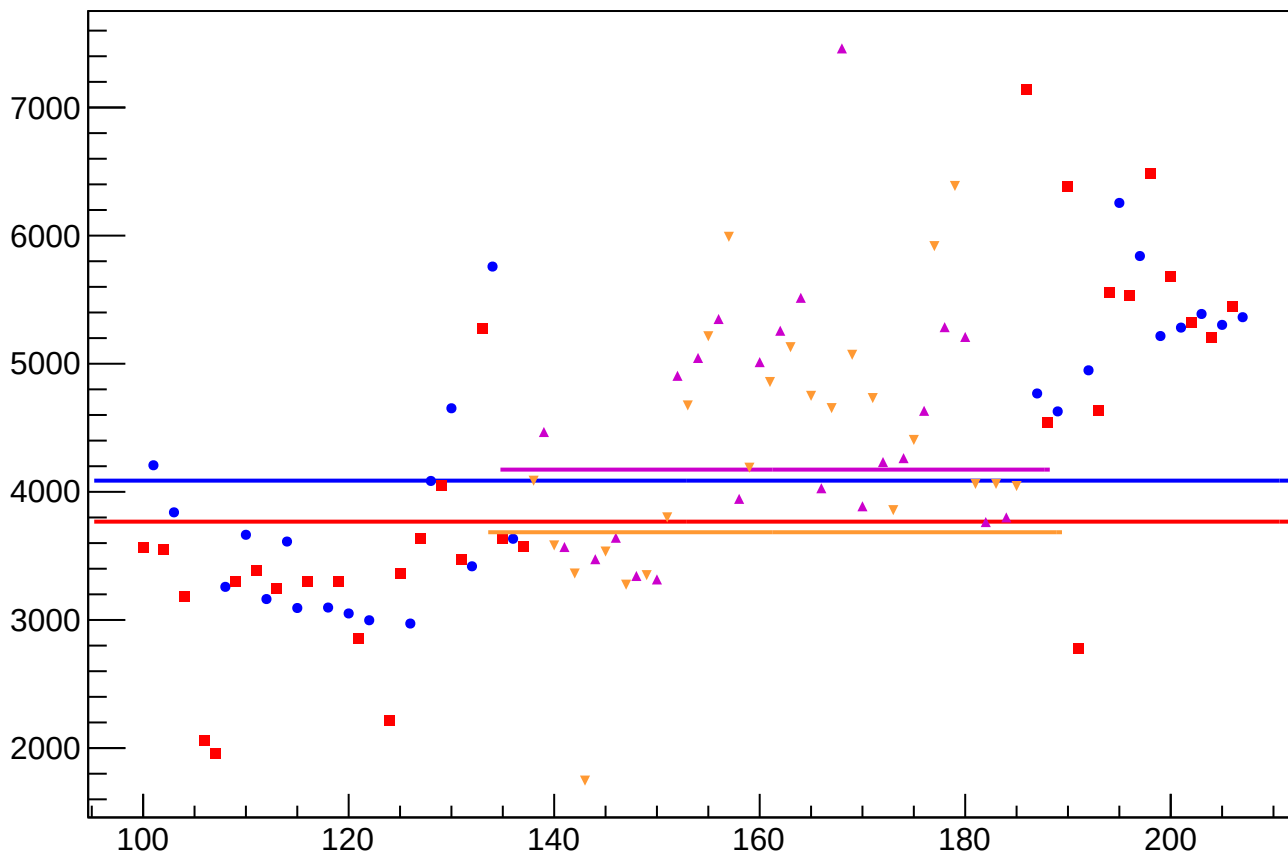
Left In: -31.597 $\pm$ 995.347  $\chi^2$ /NDF:14.0/22

+ sign 61.634 $\pm$ 687.721  $\chi^2$ /NDF: 57.6/50

All: -385.766 $\pm$ 490.587  $\chi^2$ /NDF: 105.2/104

- sign -849.330 $\pm$ 700.033  $\chi^2$ /NDF: 46.7/53

asym\_atl\_dd\_atr\_dd\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 4087.510+/-0.771  $\chi^2$ /NDF: 1635775.4/25

Left Out: 3684.762+/-0.627  $\chi^2$ /NDF: 3693687.2/24

Right Out: 3767.434+/-0.696  $\chi^2$ /NDF: 2986055.6/30

Left In: 4173.550+/-0.704  $\chi^2$ /NDF: 1274967.5/22

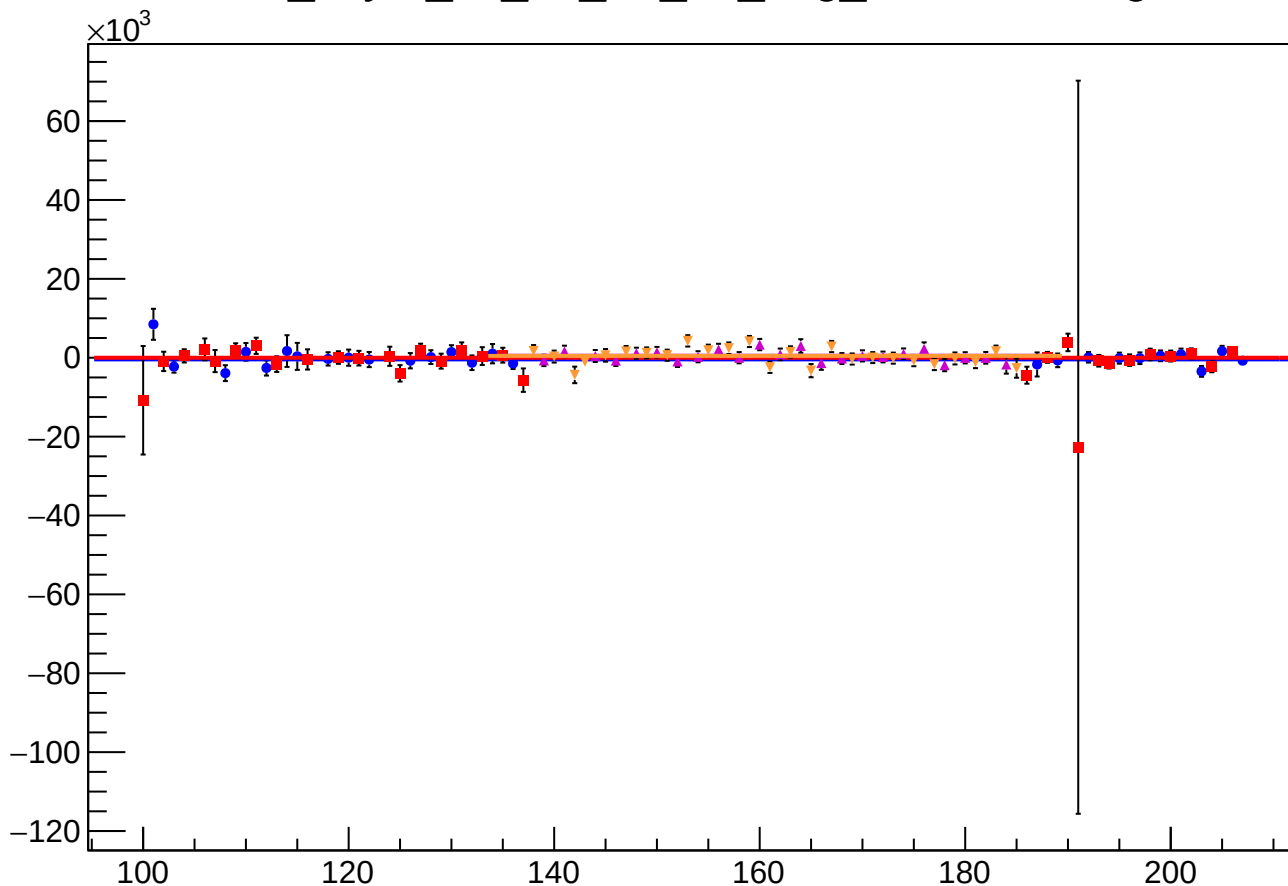
+ sign 3845.120+/-0.486  $\chi^2$ /NDF: 5493828.3/50

All: 3905.625+/-0.347  $\chi^2$ /NDF: 9954631.9/10

- sign 3968.315+/-0.495  $\chi^2$ /NDF: 4429284.0/53



dit\_asym\_atl\_dd\_atr\_dd\_avg\_mean vs Slug



Right In:  $-418.078 \pm 337.671$   $\chi^2/\text{NDF}$ : 23.2/25

Left Out:  $467.929 \pm 294.257$   $\chi^2/\text{NDF}$ : 44.1/24

Right Out:  $-5.003 \pm 326.544$   $\chi^2/\text{NDF}$ : 29.0/30

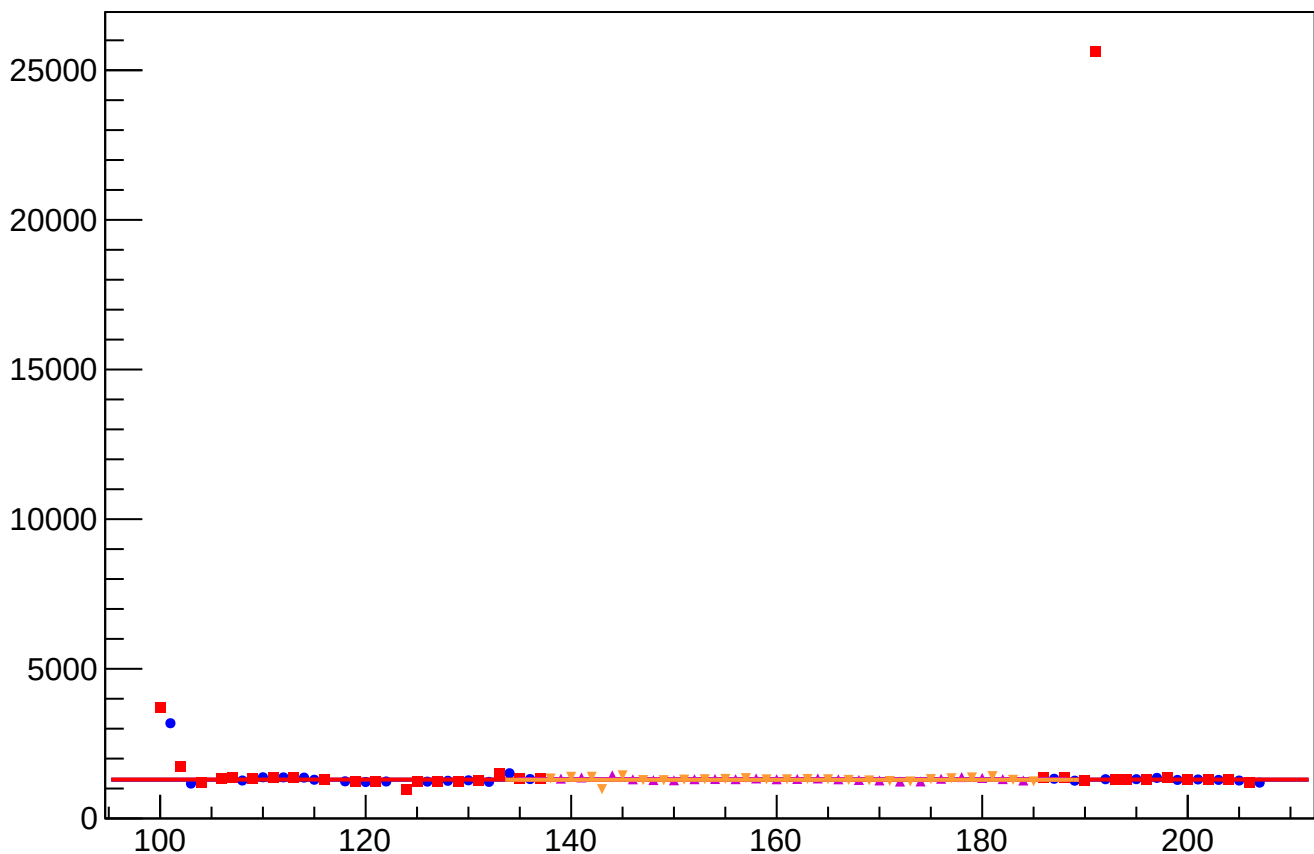
Left In:  $503.558 \pm 307.055$   $\chi^2/\text{NDF}$ : 17.4/22

+ sign  $85.508 \pm 221.843$   $\chi^2/\text{NDF}$ : 71.3/50

All:  $174.462 \pm 157.517$   $\chi^2/\text{NDF}$ : 119.3/104

- sign  $264.905 \pm 223.693$   $\chi^2/\text{NDF}$ : 47.7/53

dit\_asym\_atl\_dd\_atr\_dd\_avg\_rms vs Slug



Right In: 1294.519+/-0.239  $\chi^2/\text{NDF}$ : 528815.0/25

Left Out: 1291.211+/-0.208  $\chi^2/\text{NDF}$ : 230735.1/24

Right Out: 1300.024+/-0.231  $\chi^2/\text{NDF}$ : 377970.0/30

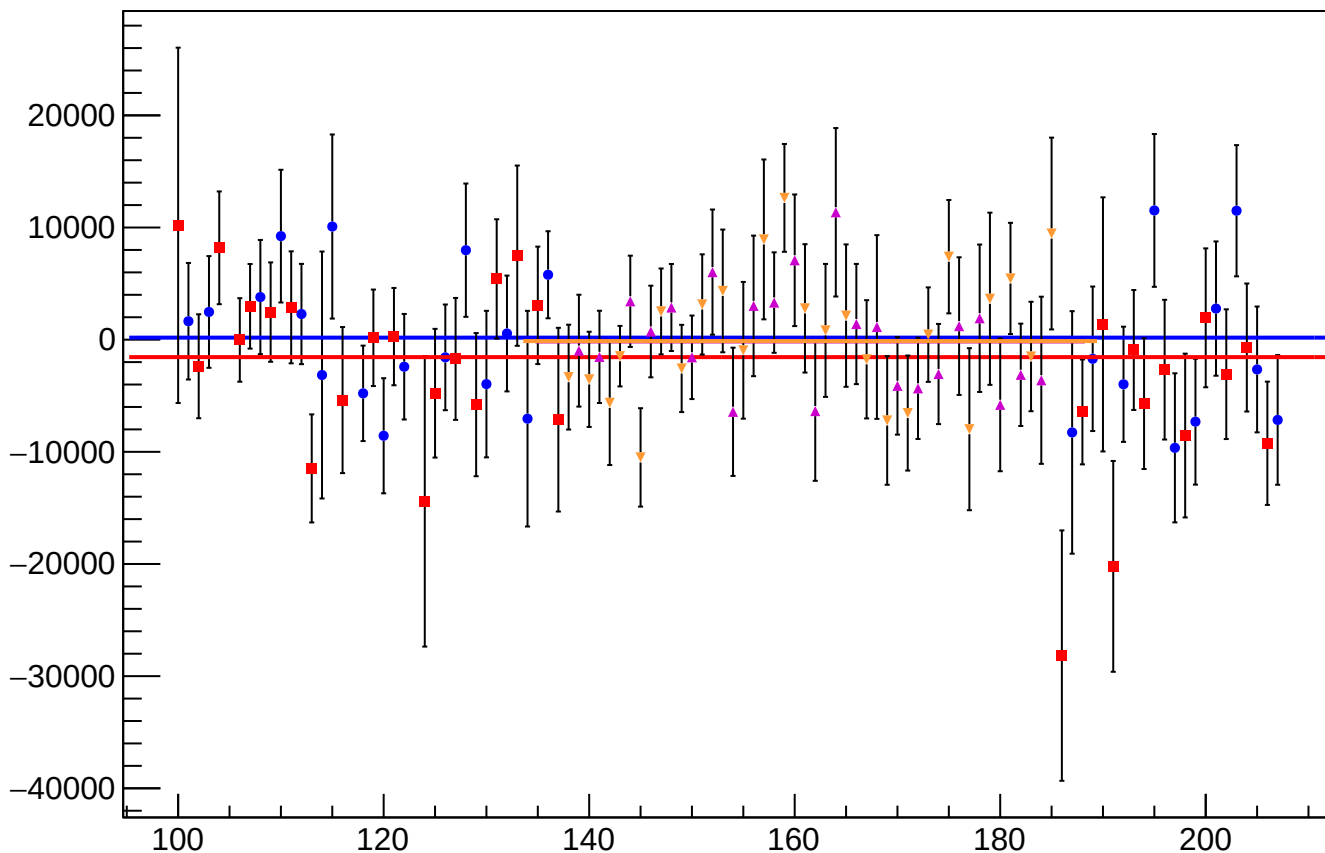
Left In: 1314.006+/-0.217  $\chi^2/\text{NDF}$ : 43044.7/22

+ sign 1292.639+/-0.157  $\chi^2/\text{NDF}$ : 759659.2/50

All: 1299.980+/-0.111  $\chi^2/\text{NDF}$ : 1187037.2/10

- sign 1307.442+/-0.158  $\chi^2/\text{NDF}$ : 422961.4/53

asym\_atl\_dd\_atr\_dd\_avg\_dit\_correction\_mean vs Slug



Right In:  $182.170 \pm 1095.752$   $\chi^2/\text{NDF}$ : 28.3/25

Left Out:  $-127.273 \pm 977.231$   $\chi^2/\text{NDF}$ : 28.6/24

Right Out:  $-1556.741 \pm 1002.016$   $\chi^2/\text{NDF}$ : 33.1/30

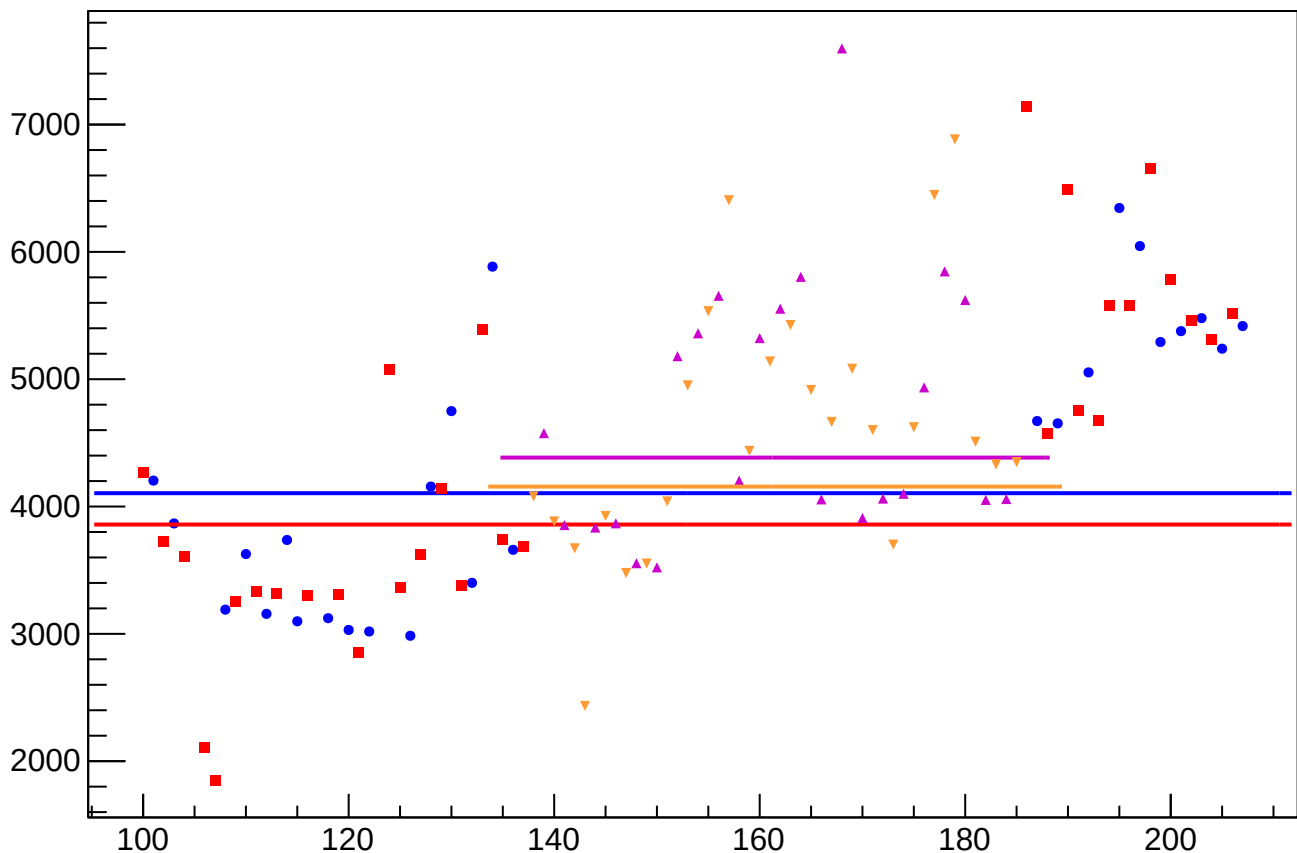
Left In:  $-159.452 \pm 1045.510$   $\chi^2/\text{NDF}$ : 13.8/22

+ sign  $9.814 \pm 729.323$   $\chi^2/\text{NDF}$ : 56.9/50

All:  $-442.623 \pm 513.609$   $\chi^2/\text{NDF}$ : 105.5/104

- sign  $-887.765 \pm 723.420$   $\chi^2/\text{NDF}$ : 47.8/53

asym\_atl\_dd\_atr\_dd\_avg\_dit\_correction\_rms vs Slug



Right In: 4104.906+/-0.775  $\chi^2/\text{NDF}$ : 1720690.2/25

Left Out: 4156.582+/-0.691  $\chi^2/\text{NDF}$ : 2080766.1/24

Right Out: 3858.672+/-0.709  $\chi^2/\text{NDF}$ : 3057818.8/30

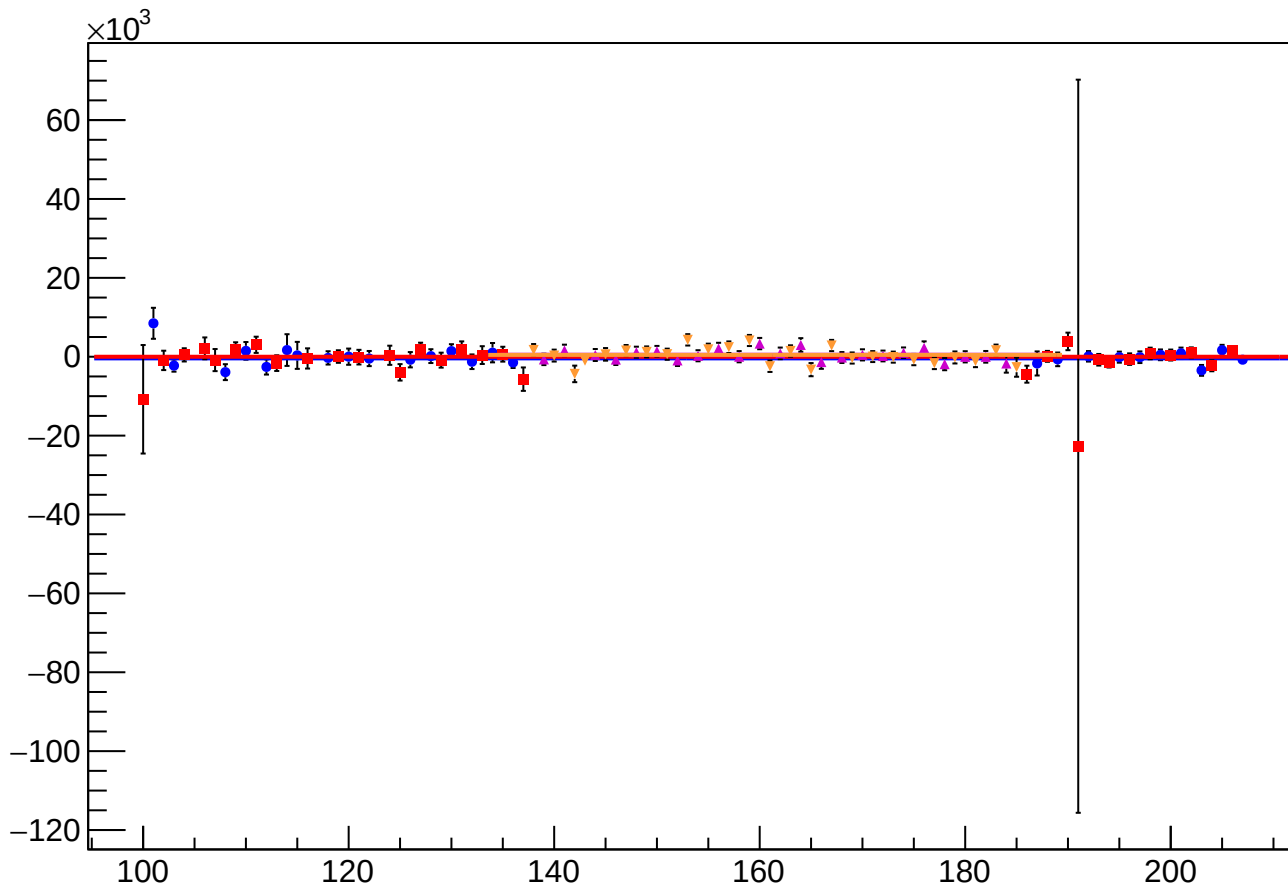
Left In: 4384.323+/-0.739  $\chi^2/\text{NDF}$ : 1255470.8/22

+ sign 4133.688+/-0.516  $\chi^2/\text{NDF}$ : 3803933.9/50

All: 4121.918+/-0.363  $\chi^2/\text{NDF}$ : 8381768.6/10

- sign 4110.336+/-0.512  $\chi^2/\text{NDF}$ : 4576801.2/53

eigen\_dit\_asym\_atl\_dd\_atr\_dd\_avg\_mean vs Slug



Right In: -418.078+/-337.671  $\chi^2$ /NDF: 23.2/25

Left Out: 467.933+/-294.257  $\chi^2$ /NDF:44.1/24

Right Out: -5.002+/-326.544  $\chi^2$ /NDF: 29.0/30

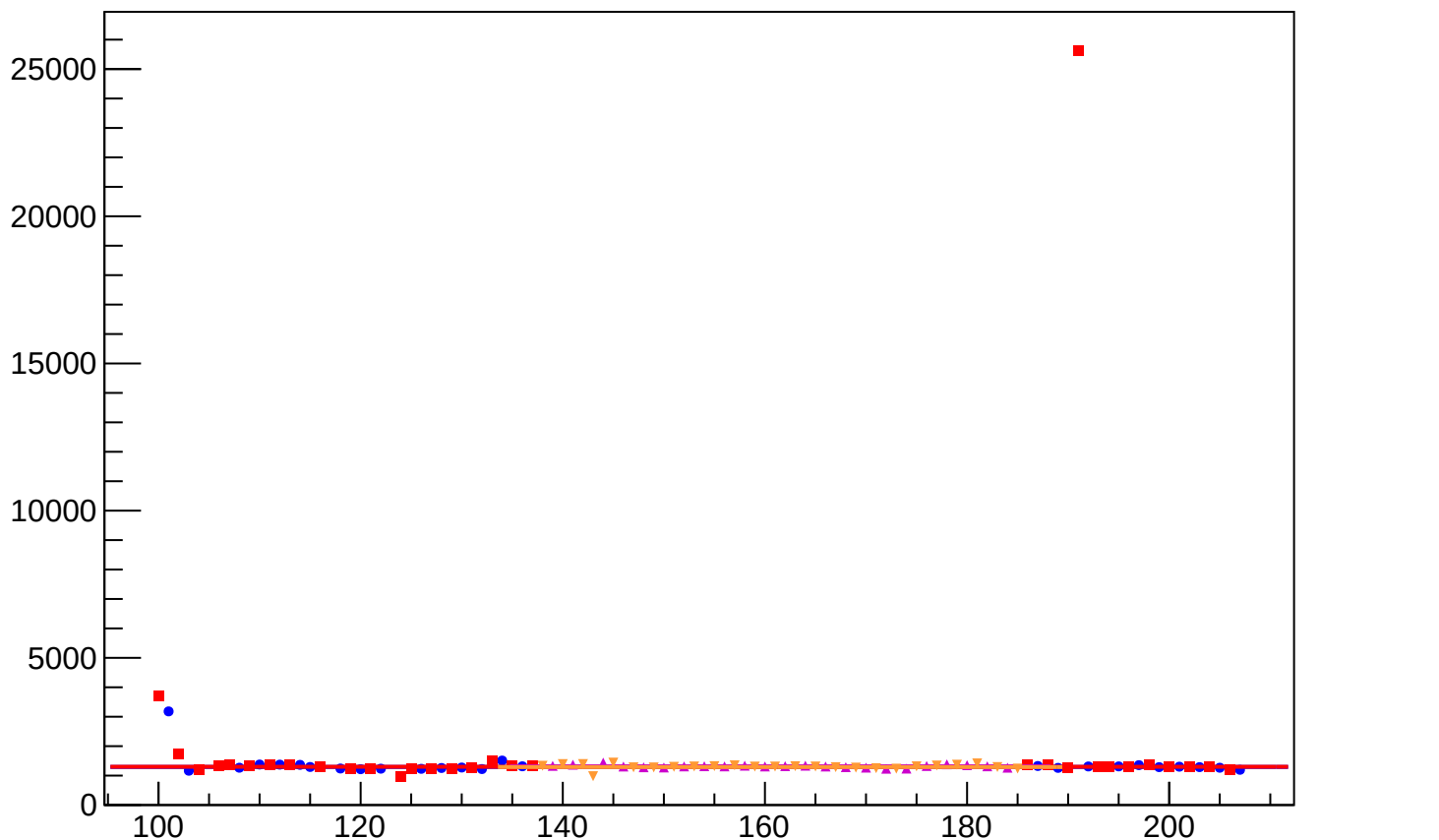
Left In: 503.558+/-307.056  $\chi^2$ /NDF:17.4/22

+ sign 85.510+/-221.843  $\chi^2$ /NDF: 71.3/50

All: 174.463+/-157.517  $\chi^2$ /NDF: 119.3/104

- sign 264.905+/-223.694  $\chi^2$ /NDF: 47.7/53

eigen\_dit\_asym\_atl\_dd\_atr\_dd\_avg\_rms vs Slug



Right In: 1294.519+/-0.239  $\chi^2/\text{NDF}$ : 528815.1/25

Left Out: 1291.212+/-0.208  $\chi^2/\text{NDF}$ : 230737.6/24

Right Out: 1300.024+/-0.231  $\chi^2/\text{NDF}$ : 377970.1/30

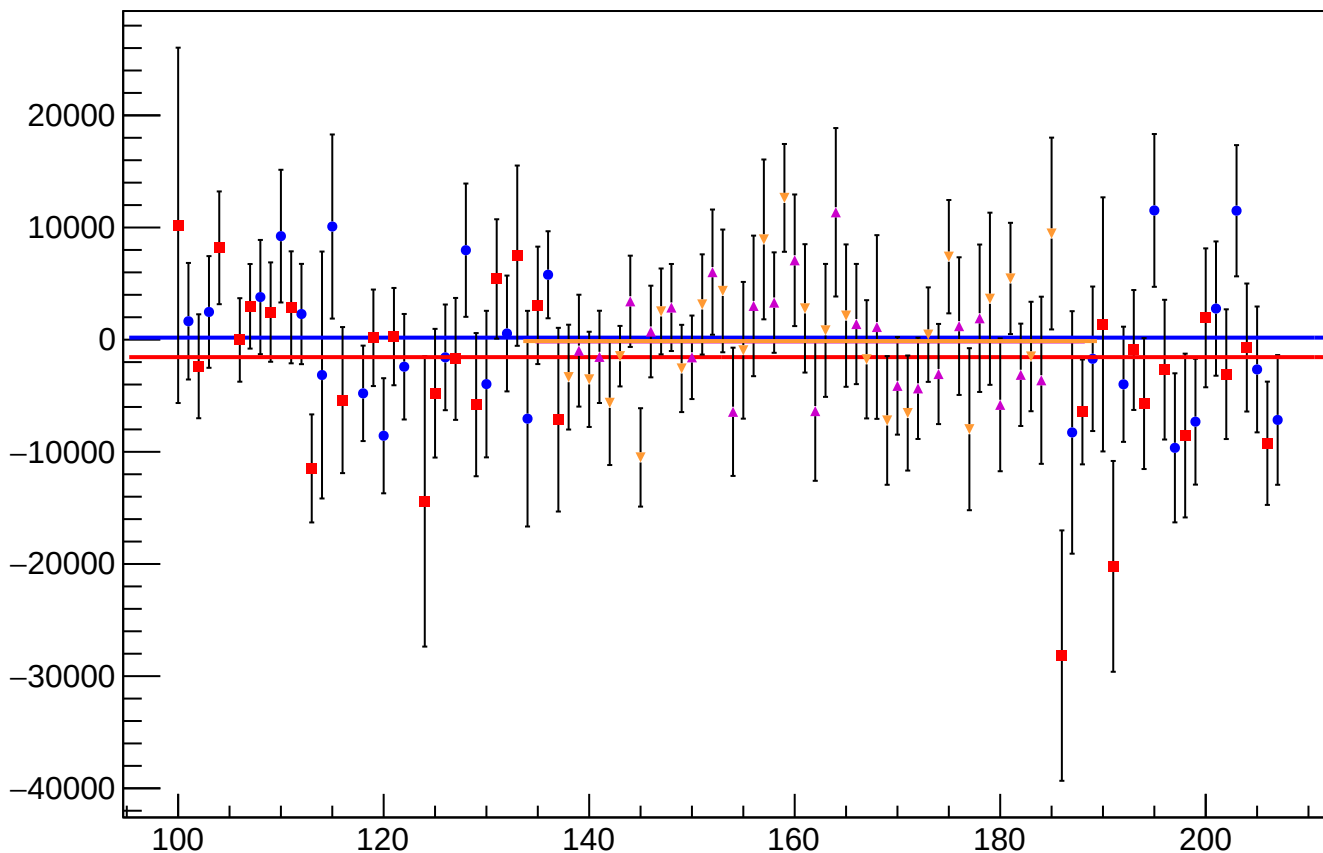
Left In: 1314.007+/-0.217  $\chi^2/\text{NDF}$ : 43046.8/22

+ sign 1292.639+/-0.157  $\chi^2/\text{NDF}$ : 759661.7/50

All: 1299.981+/-0.111  $\chi^2/\text{NDF}$ : 1187042.3/10

- sign 1307.443+/-0.158  $\chi^2/\text{NDF}$ : 422964.0/53

asym\_atl\_dd\_atr\_dd\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In:  $182.165 \pm 1095.751$   $\chi^2/\text{NDF}$ : 28.3/25

Left Out:  $-127.271 \pm 977.232$   $\chi^2/\text{NDF}$ : 28.6/24

Right Out:  $-1556.733 \pm 1002.014$   $\chi^2/\text{NDF}$ : 33.1/30

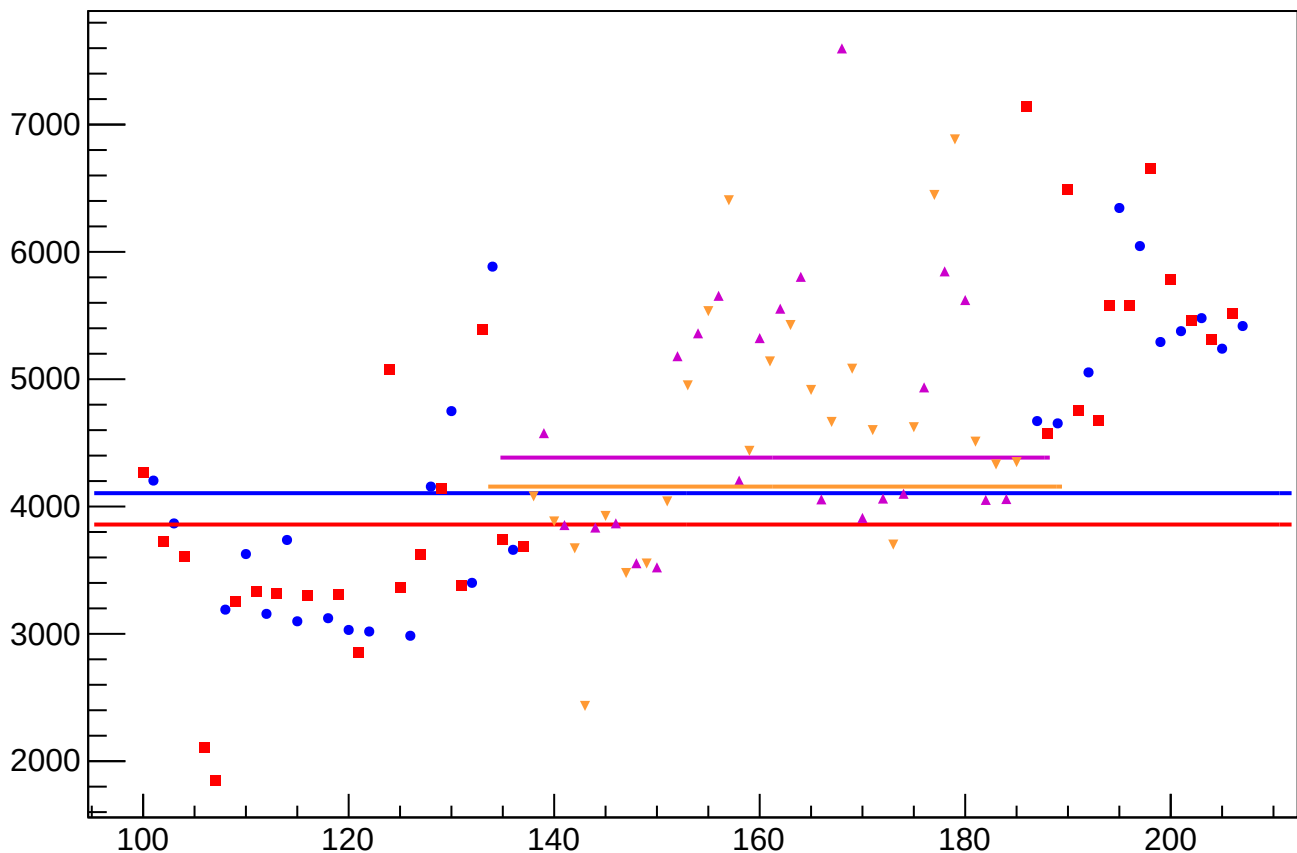
Left In:  $-159.454 \pm 1045.511$   $\chi^2/\text{NDF}$ : 13.8/22

+ sign  $9.814 \pm 729.324$   $\chi^2/\text{NDF}$ : 56.9/50

All:  $-442.622 \pm 513.610$   $\chi^2/\text{NDF}$ : 105.5/104

- sign  $-887.763 \pm 723.420$   $\chi^2/\text{NDF}$ : 47.8/53

asym\_atl\_dd\_atr\_dd\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 4104.899+/-0.775  $\chi^2/\text{NDF}$ : 1720719.4/25

Left Out: 4156.588+/-0.691  $\chi^2/\text{NDF}$ : 2080769.0/24

Right Out: 3858.666+/-0.709  $\chi^2/\text{NDF}$ : 3057847.1/30

Left In: 4384.329+/-0.739  $\chi^2/\text{NDF}$ : 1255475.0/22

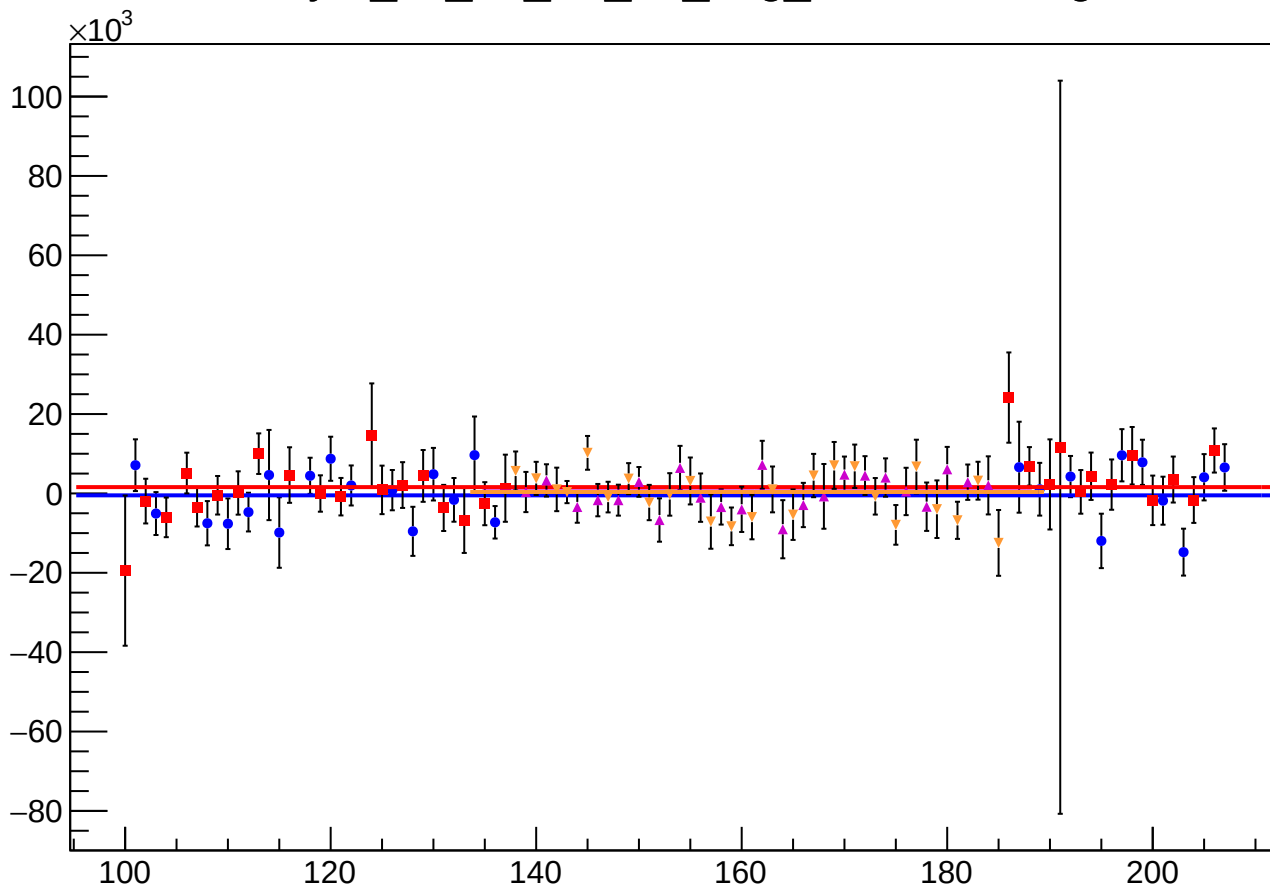
+ sign 4133.689+/-0.516  $\chi^2/\text{NDF}$ : 3803967.2/50

All: 4121.917+/-0.363  $\chi^2/\text{NDF}$ : 8381847.8/10

- sign 4110.336+/-0.512  $\chi^2/\text{NDF}$ : 4576846.9/53



# asym\_atl\_dd\_atr\_dd\_avg\_mean vs Slug



Right In:  $-484.908 \pm 1158.644$   $\chi^2/\text{NDF}$ : 34.4/25

Left Out:  $362.528 \pm 979.860$   $\chi^2/\text{NDF}$ : 27.7/24

Right Out:  $1590.008 \pm 1090.282$   $\chi^2/\text{NDF}$ : 22.8/30

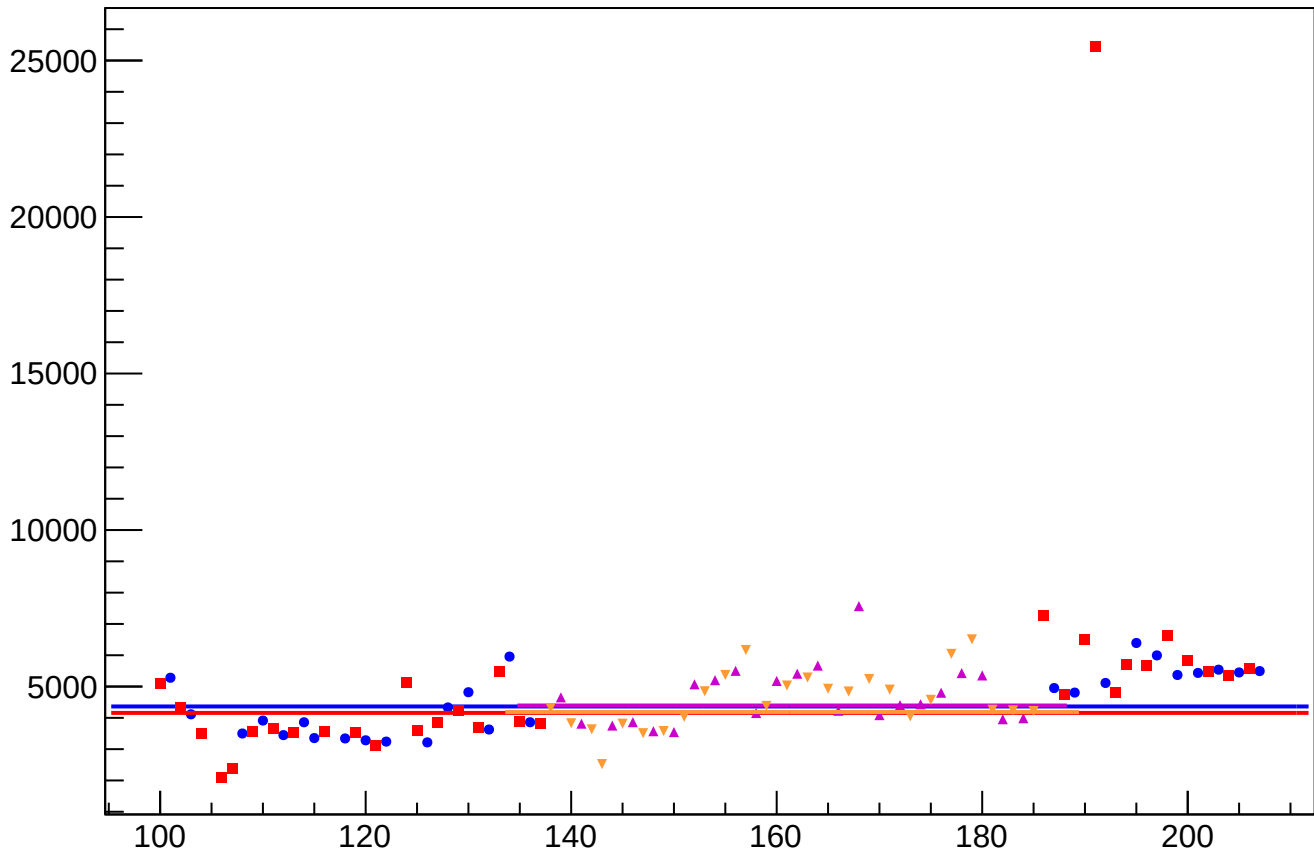
Left In:  $497.522 \pm 1044.707$   $\chi^2/\text{NDF}$ : 13.9/22

+ sign  $9.166 \pm 748.181$   $\chi^2/\text{NDF}$ : 62.4/50

All:  $510.681 \pm 531.200$   $\chi^2/\text{NDF}$ : 100.5/104

- sign  $1020.455 \pm 754.317$   $\chi^2/\text{NDF}$ : 37.2/53

# asym\_atl\_dd\_atr\_dd\_avg\_rms vs Slug



Right In: 4363.691+/-0.819  $\chi^2/\text{NDF}$ : 1410984.6/25

Left Out: 4187.848+/-0.693  $\chi^2/\text{NDF}$ : 1796345.9/24

Right Out: 4158.534+/-0.764  $\chi^2/\text{NDF}$ : 2452358.5/30

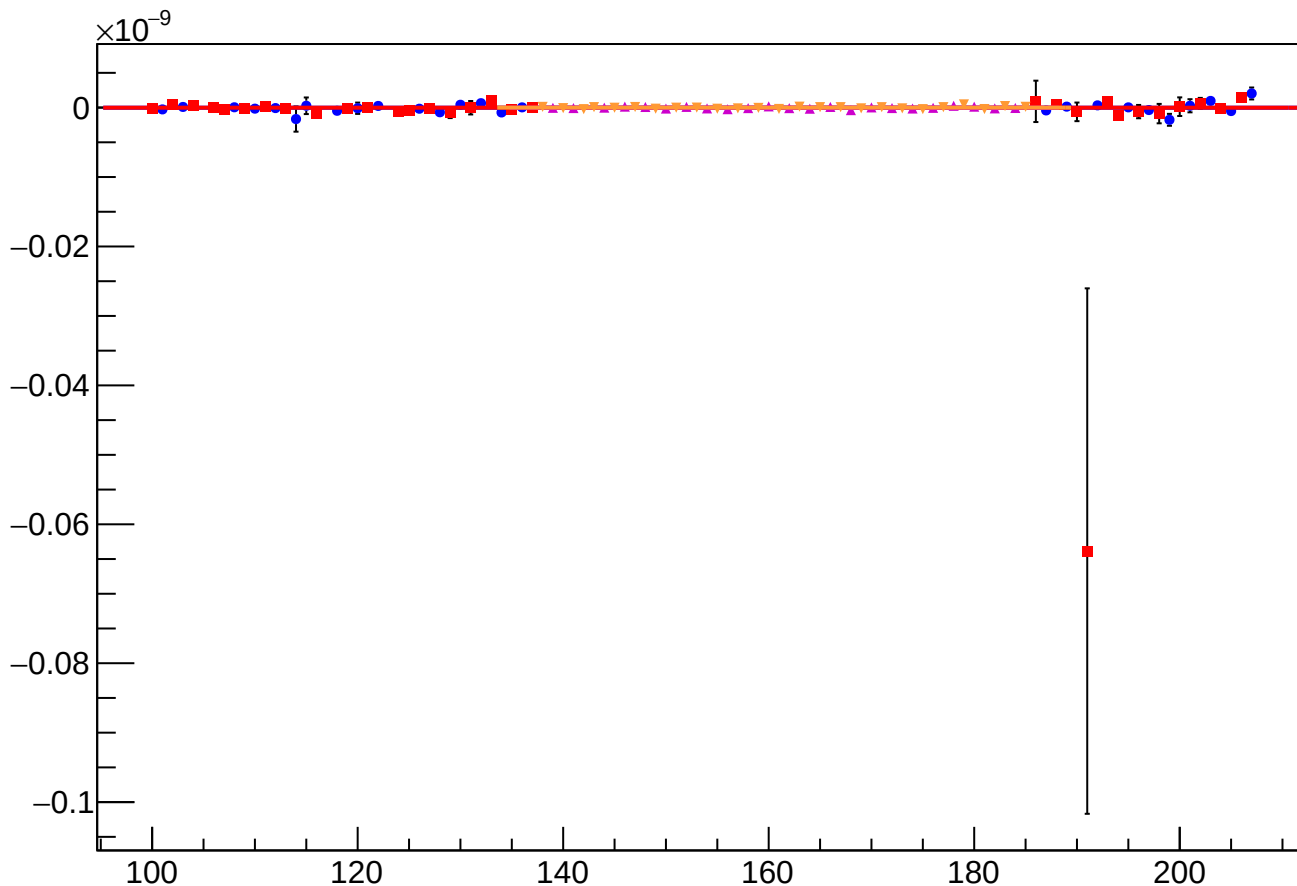
Left In: 4394.324+/-0.739  $\chi^2/\text{NDF}$ : 1088394.9/22

+ sign 4261.171+/-0.529  $\chi^2/\text{NDF}$ : 3234188.1/50

All: 4270.739+/-0.375  $\chi^2/\text{NDF}$ : 6824832.0/100

- sign 4280.379+/-0.531  $\chi^2/\text{NDF}$ : 3589987.3/53

asym\_atl\_dd\_atr\_dd\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2$ /NDF: 34.3/25

Left Out: -0.000+/-0.000  $\chi^2$ /NDF: 30.5/24

Right Out: -0.000+/-0.000  $\chi^2$ /NDF: 33.0/30

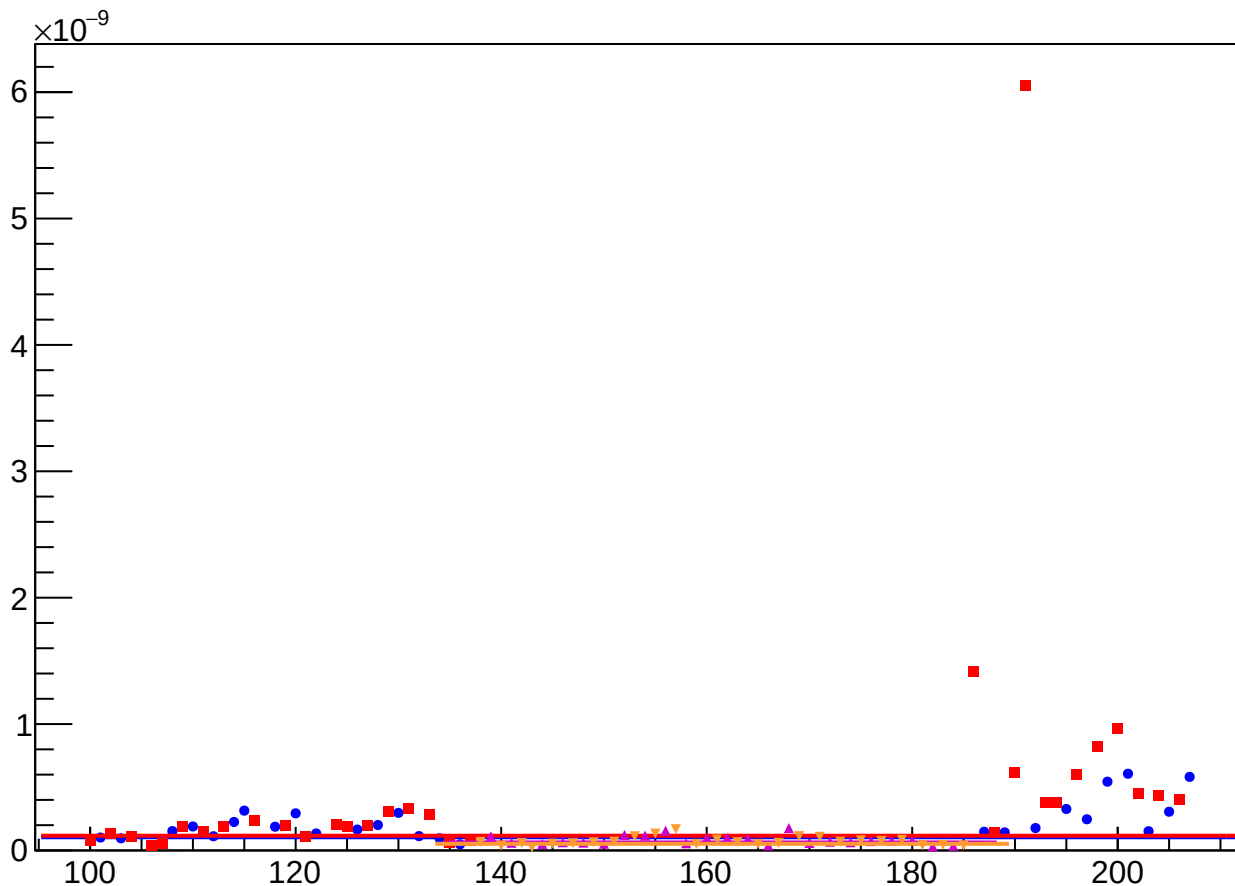
Left In: -0.000+/-0.000  $\chi^2$ /NDF: 17.0/22

+ sign -0.000+/-0.000  $\chi^2$ /NDF: 64.8/50

All: -0.000+/-0.000  $\chi^2$ /NDF: 115.1/104

- sign -0.000+/-0.000  $\chi^2$ /NDF: 50.0/53

asym\_atl\_dd\_atr\_dd\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2$ /NDF: 4027324.0/25

Left Out: 0.000+/-0.000  $\chi^2$ /NDF:2628519.8/24

Right Out: 0.000+/-0.000  $\chi^2$ /NDF: 6378887.3/30

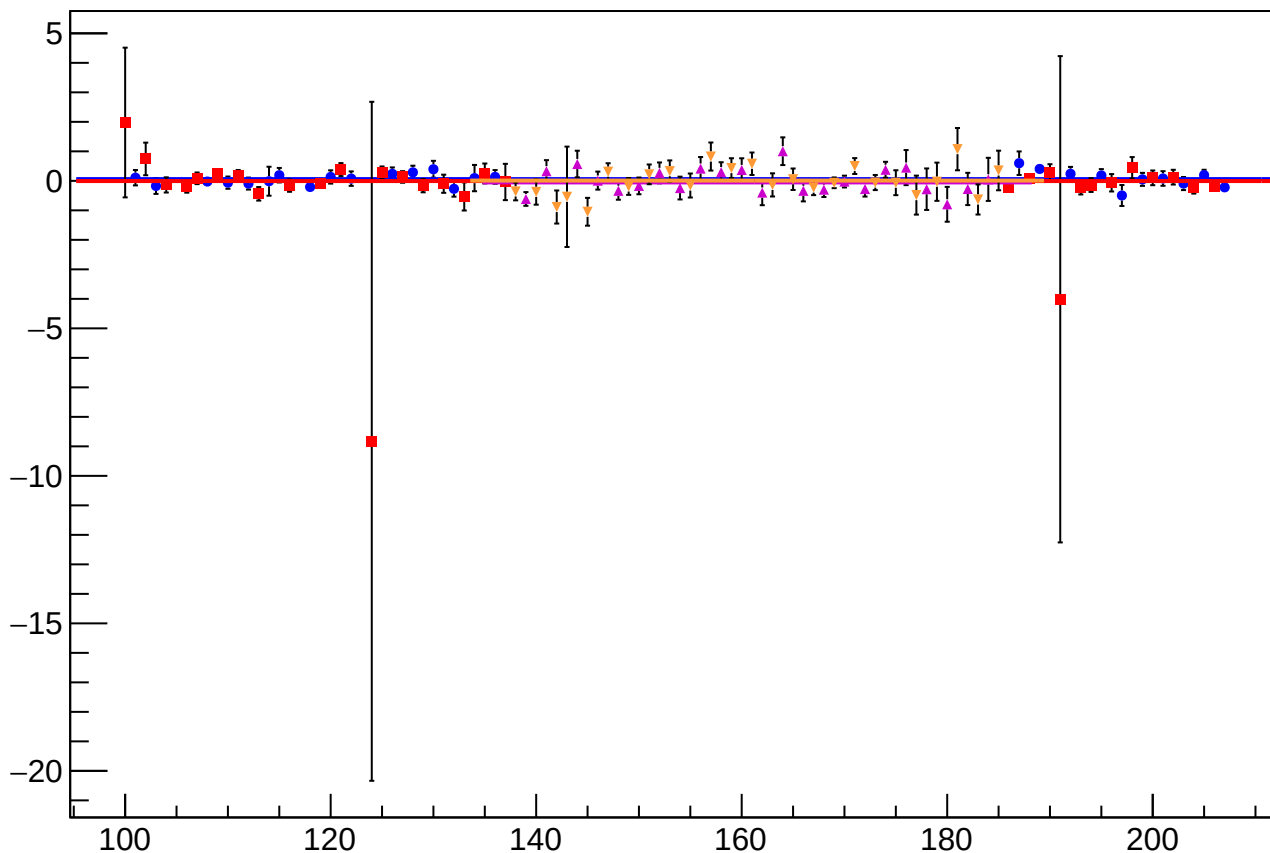
Left In: 0.000+/-0.000  $\chi^2$ /NDF:1788279.2/22

+ sign 0.000+/-0.000  $\chi^2$ /NDF: 8153490.6/50

All: 0.000+/-0.000  $\chi^2$ /NDF: 17902397.5/104

- sign 0.000+/-0.000  $\chi^2$ /NDF: 9458054.7/53

asym\_atl\_dd\_atr\_dd\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.059 \pm 0.044$   $\chi^2/\text{NDF}$ : 24.4/25

Left Out:  $0.009 \pm 0.071$   $\chi^2/\text{NDF}$ : 28.9/24

Right Out:  $-0.007 \pm 0.039$   $\chi^2/\text{NDF}$ : 31.9/30

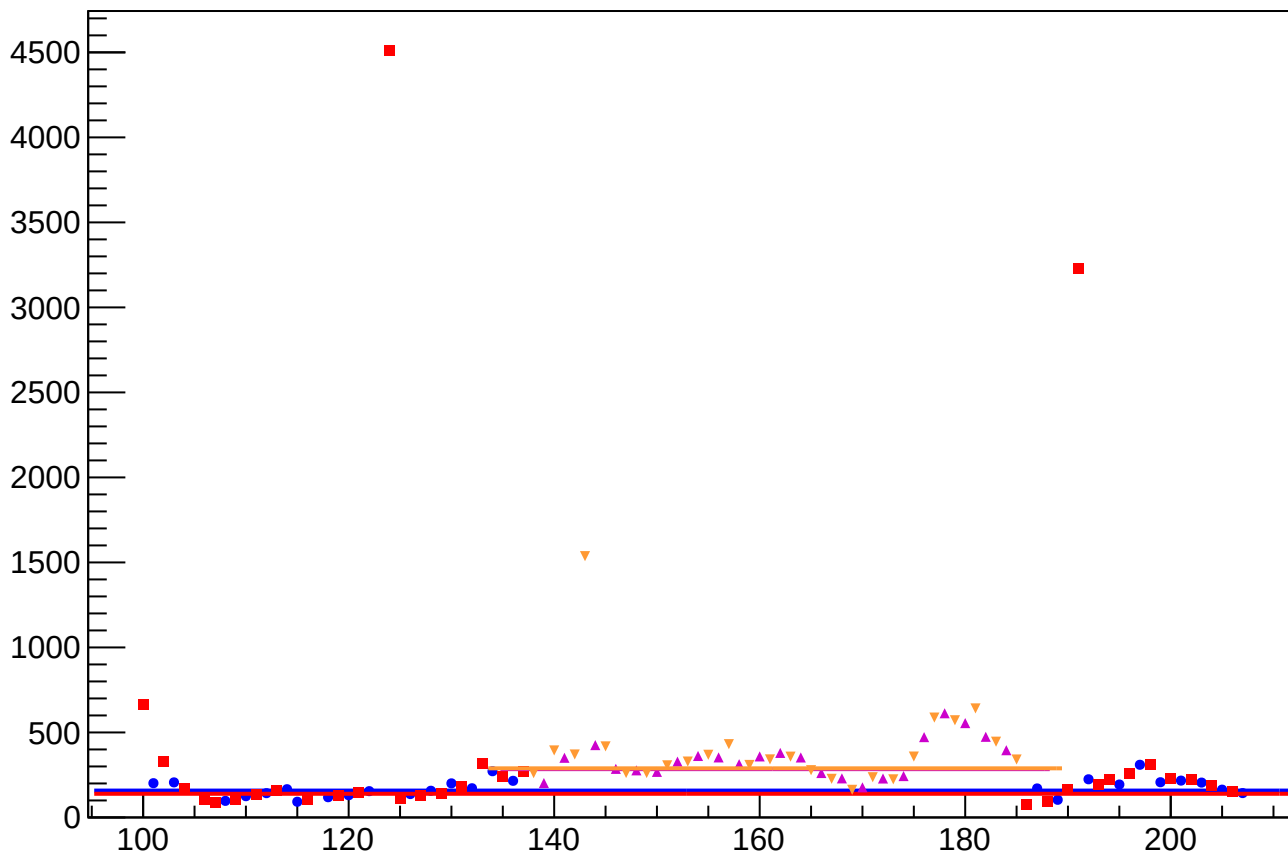
Left In:  $-0.053 \pm 0.070$   $\chi^2/\text{NDF}$ : 27.8/22

+ sign  $0.046 \pm 0.037$   $\chi^2/\text{NDF}$ : 53.7/50

All:  $0.011 \pm 0.025$   $\chi^2/\text{NDF}$ : 115.3/104

- sign  $-0.018 \pm 0.034$   $\chi^2/\text{NDF}$ : 60.0/53

asym\_atl\_dd\_atr\_dd\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 158.088+/-0.031  $\chi^2/\text{NDF}$ : 2235932.9/25

Left Out: 288.922+/-0.050  $\chi^2/\text{NDF}$ : 4648197.0/24

Right Out: 139.244+/-0.027  $\chi^2/\text{NDF}$ : 4674613.0/30

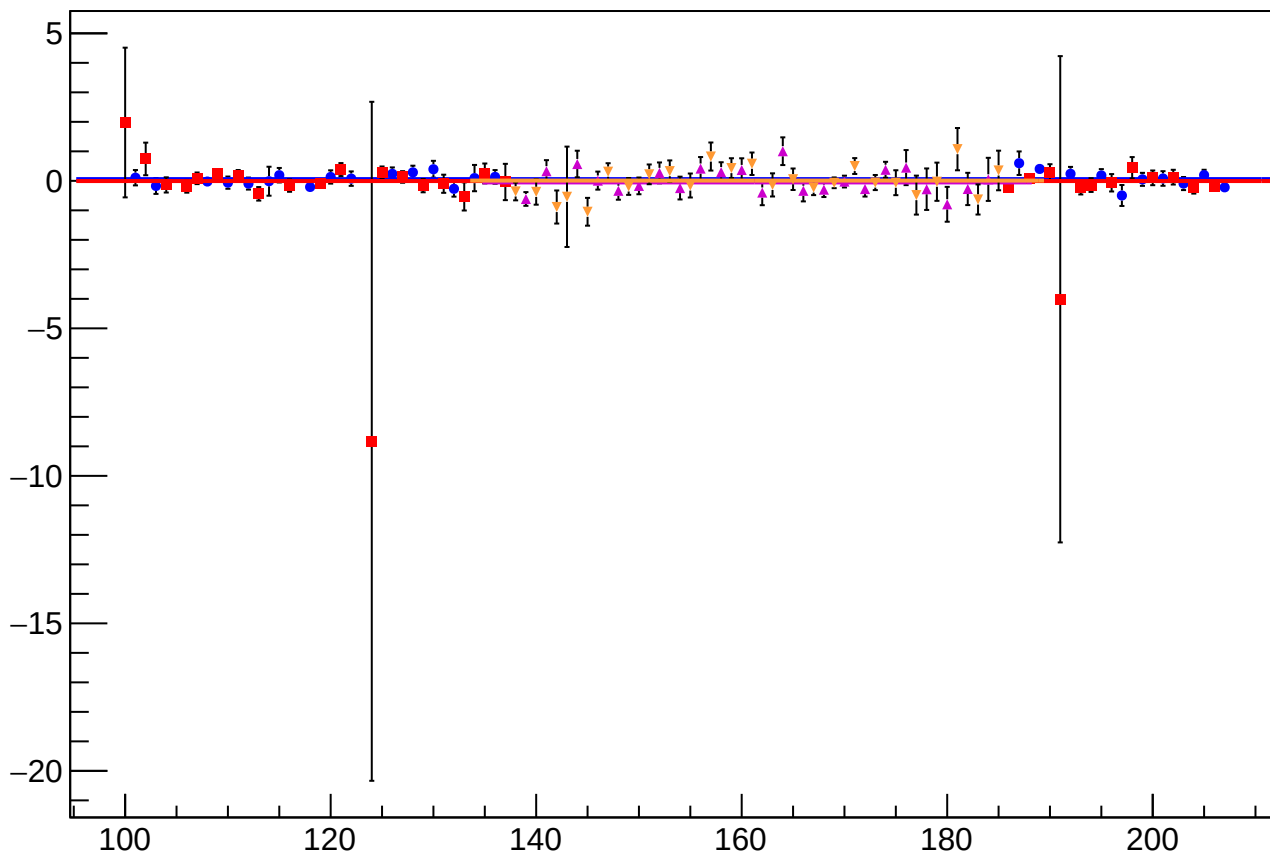
Left In: 284.168+/-0.050  $\chi^2/\text{NDF}$ : 3077521.1/22

+ sign 193.811+/-0.026  $\chi^2/\text{NDF}$ : 11818598.9/50

All: 182.453+/-0.018  $\chi^2/\text{NDF}$ : 26418523.1/10

- sign 172.947+/-0.024  $\chi^2/\text{NDF}$ : 14255780.1/53

asym\_atl\_dd\_atr\_dd\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.059 \pm 0.044$   $\chi^2/\text{NDF}$ : 24.4/25

Left Out:  $0.009 \pm 0.071$   $\chi^2/\text{NDF}$ : 28.9/24

Right Out:  $-0.007 \pm 0.039$   $\chi^2/\text{NDF}$ : 31.9/30

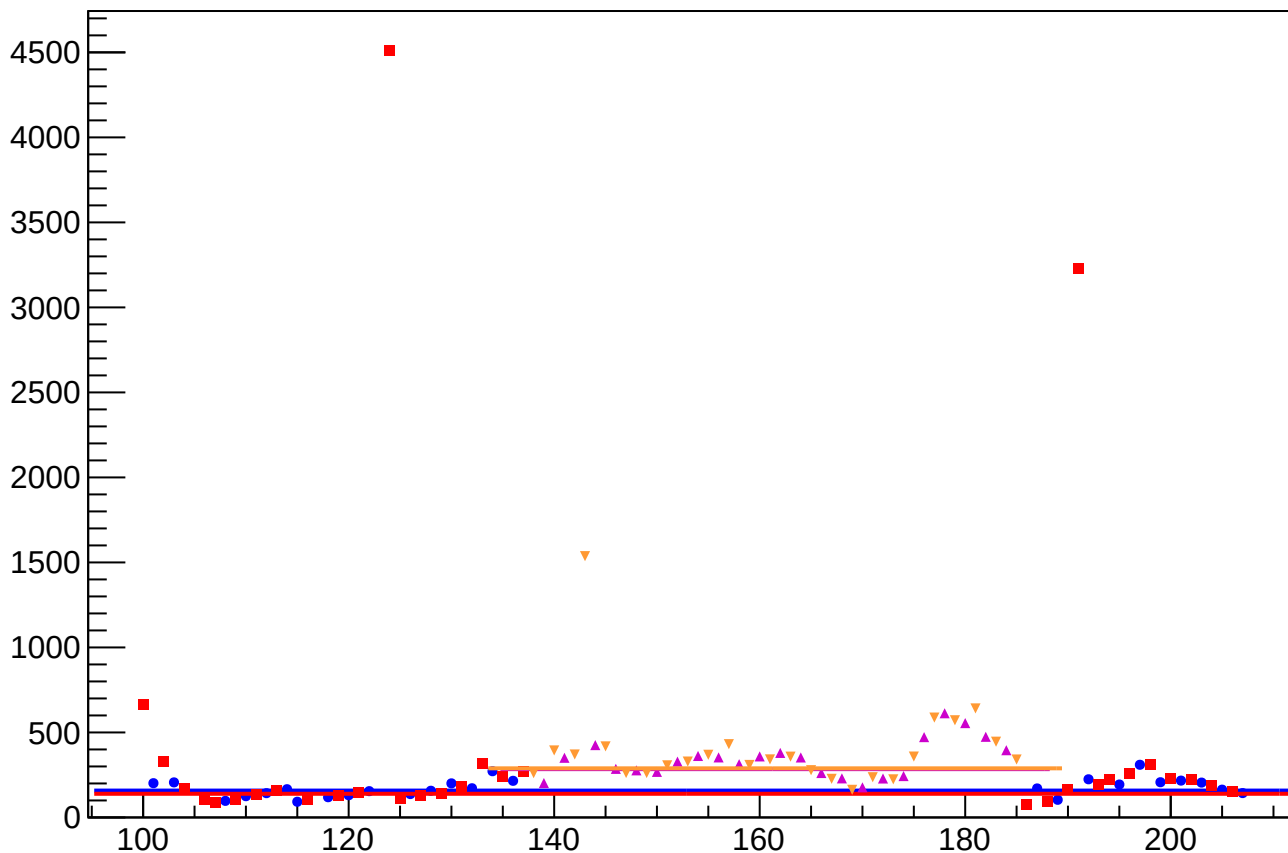
Left In:  $-0.053 \pm 0.070$   $\chi^2/\text{NDF}$ : 27.8/22

+ sign  $0.046 \pm 0.037$   $\chi^2/\text{NDF}$ : 53.7/50

All:  $0.011 \pm 0.025$   $\chi^2/\text{NDF}$ : 115.3/104

- sign  $-0.018 \pm 0.034$   $\chi^2/\text{NDF}$ : 60.0/53

asym\_atl\_dd\_atr\_dd\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 158.088+/-0.031  $\chi^2/\text{NDF}$ : 2235932.9/25

Left Out: 288.922+/-0.050  $\chi^2/\text{NDF}$ : 4648197.0/24

Right Out: 139.244+/-0.027  $\chi^2/\text{NDF}$ : 4674613.0/30

Left In: 284.168+/-0.050  $\chi^2/\text{NDF}$ : 3077521.1/22

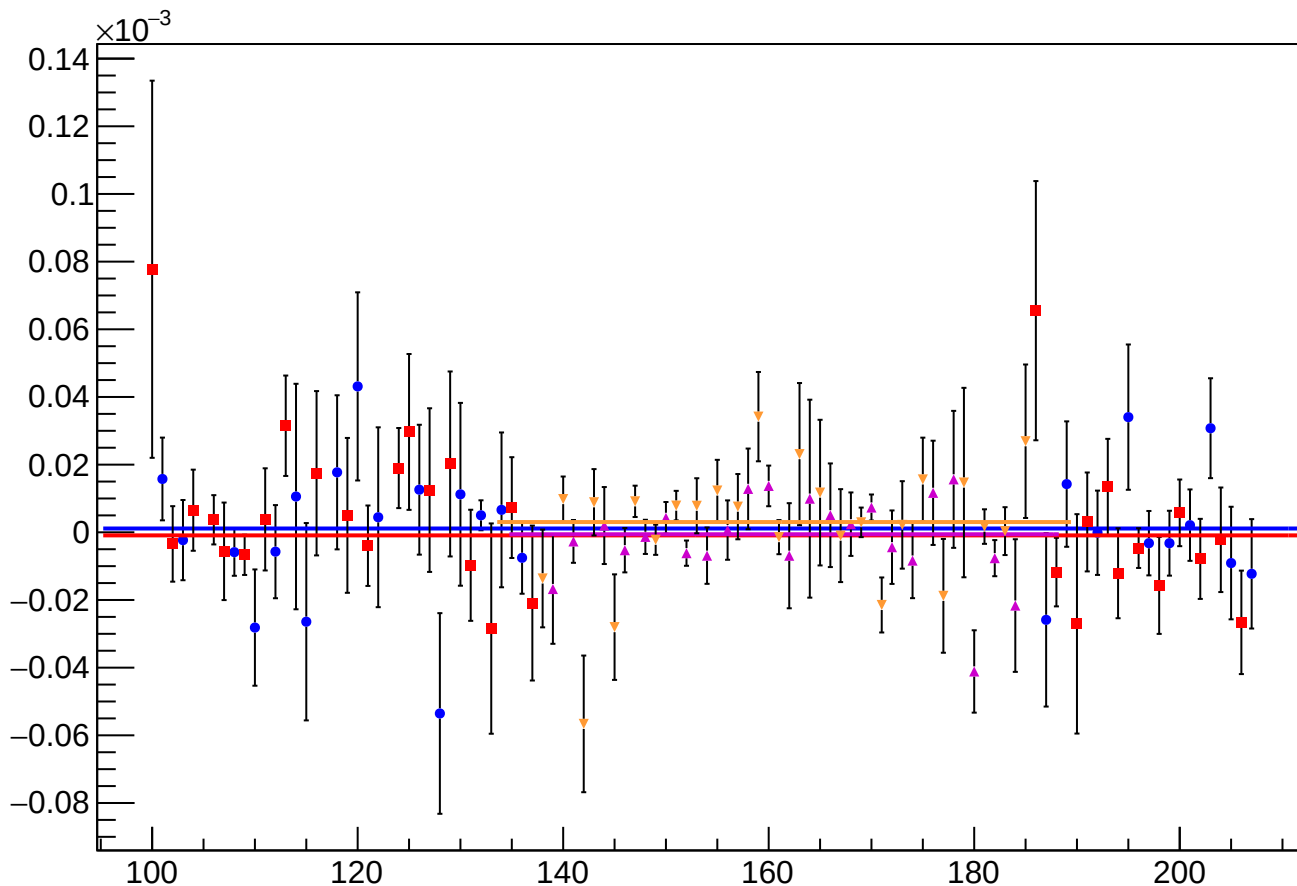
+ sign 193.811+/-0.026  $\chi^2/\text{NDF}$ : 11818598.9/50

All: 182.453+/-0.018  $\chi^2/\text{NDF}$ : 26418523.1/10

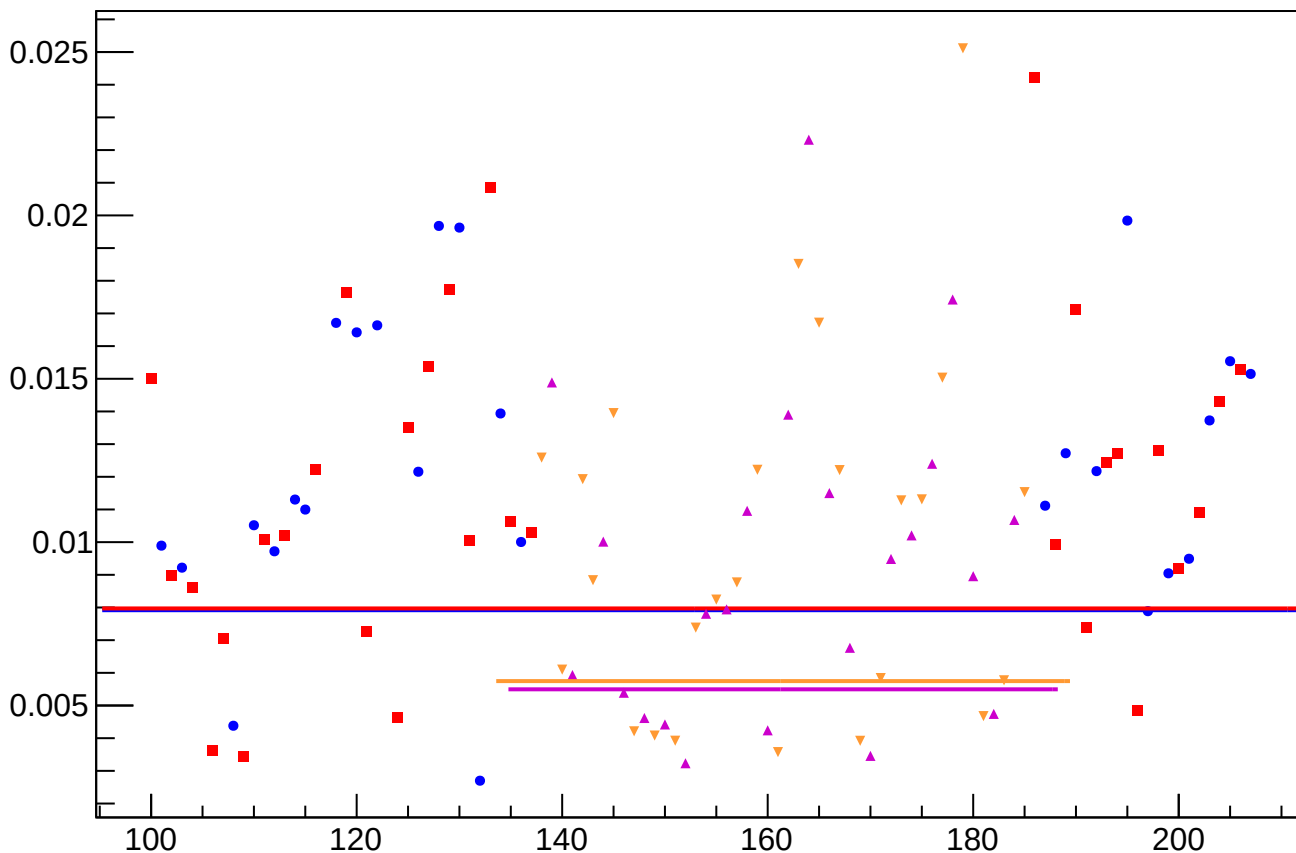
- sign 172.947+/-0.024  $\chi^2/\text{NDF}$ : 14255780.1/53



asym\_atl\_dd\_atr\_dd\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



asym\_atl\_dd\_atr\_dd\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 7412887.6/25

Left Out: 0.006 $\pm$ 0.000  $\chi^2$ /NDF:8128513.8/24

Right Out: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 6422510.5/30

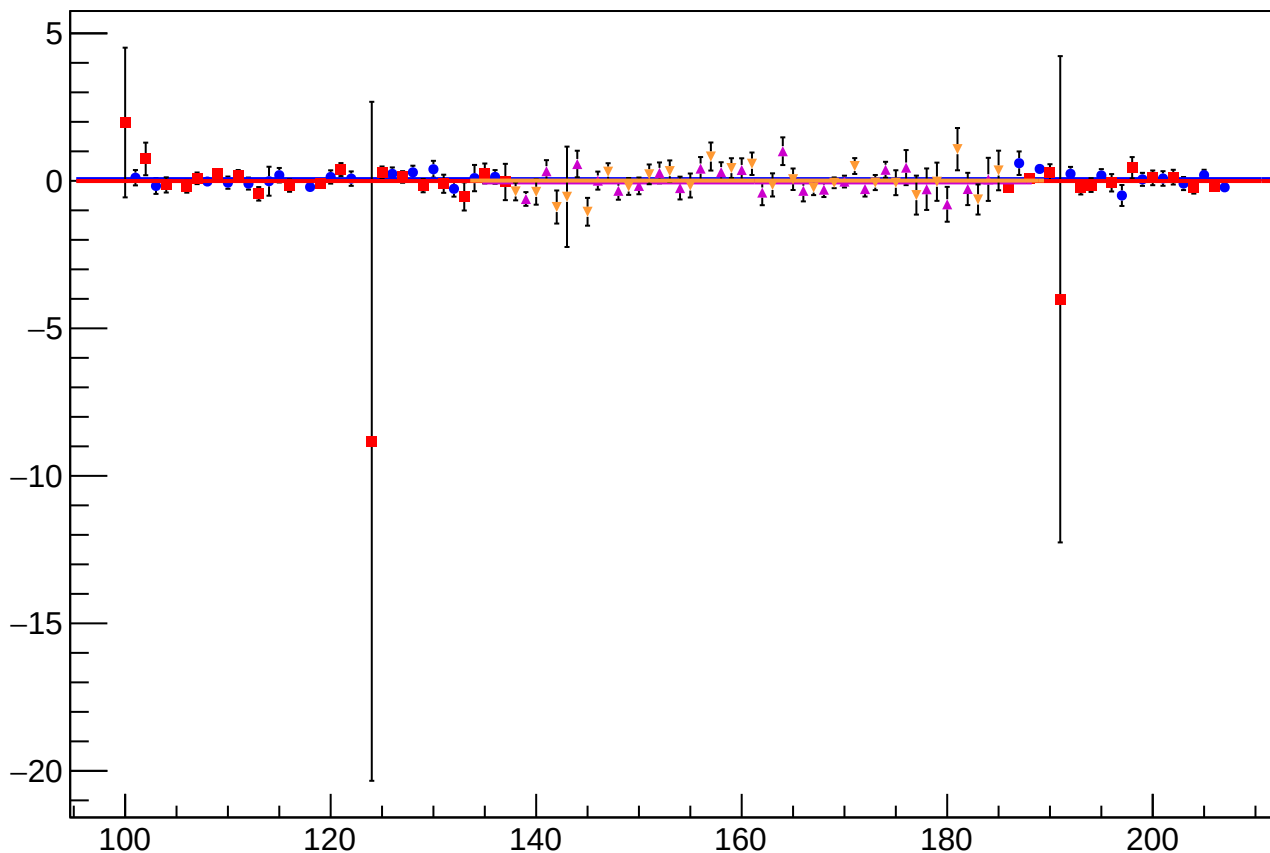
Left In: 0.005 $\pm$ 0.000  $\chi^2$ /NDF:6937299.0/22

+ sign 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 16702946.4/50

All: 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 31727909.0/104

- sign 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 15018604.9/53

asym\_atl\_dd\_atr\_dd\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.059 \pm 0.044$   $\chi^2/\text{NDF}$ : 24.4/25

Left Out:  $0.009 \pm 0.071$   $\chi^2/\text{NDF}$ : 28.9/24

Right Out:  $-0.007 \pm 0.039$   $\chi^2/\text{NDF}$ : 31.9/30

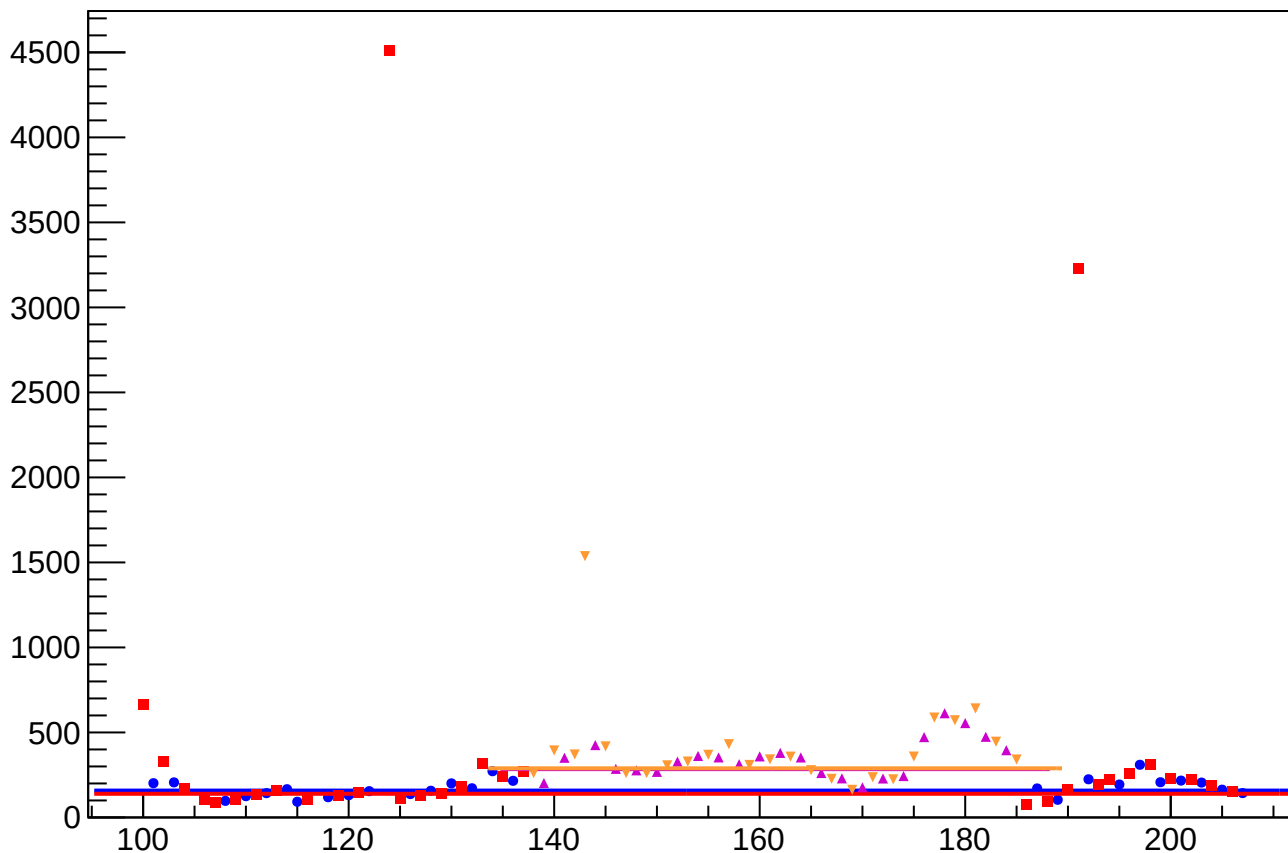
Left In:  $-0.053 \pm 0.070$   $\chi^2/\text{NDF}$ : 27.8/22

+ sign  $0.046 \pm 0.037$   $\chi^2/\text{NDF}$ : 53.7/50

All:  $0.011 \pm 0.025$   $\chi^2/\text{NDF}$ : 115.3/104

- sign  $-0.018 \pm 0.034$   $\chi^2/\text{NDF}$ : 60.0/53

asym\_atl\_dd\_atr\_dd\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 158.088+/-0.031  $\chi^2/\text{NDF}$ : 2235925.3/25

Left Out: 288.922+/-0.050  $\chi^2/\text{NDF}$ : 4648388.8/24

Right Out: 139.246+/-0.027  $\chi^2/\text{NDF}$ : 4674452.9/30

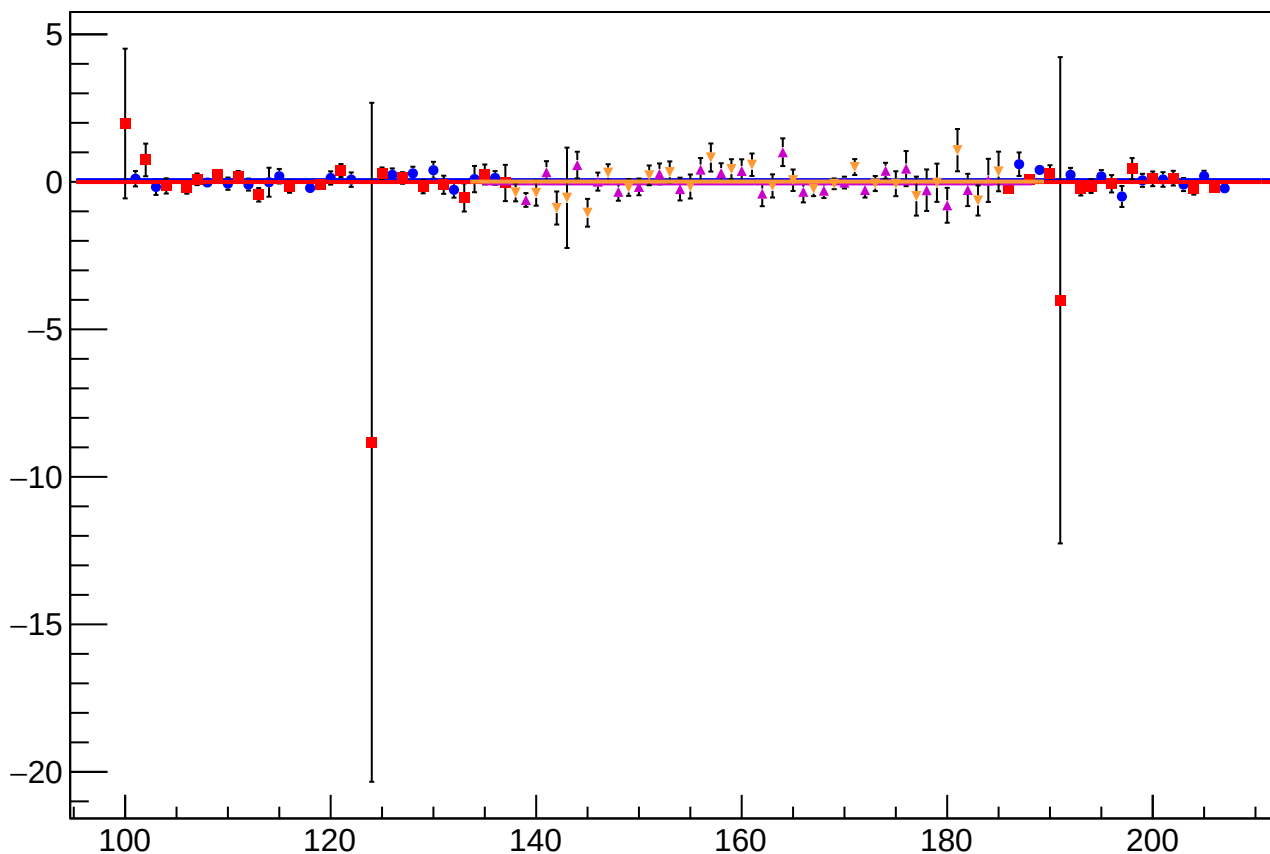
Left In: 284.170+/-0.050  $\chi^2/\text{NDF}$ : 3077626.7/22

+ sign 193.811+/-0.026  $\chi^2/\text{NDF}$ : 11818768.2/50

All: 182.455+/-0.018  $\chi^2/\text{NDF}$ : 26418417.8/10

- sign 172.949+/-0.024  $\chi^2/\text{NDF}$ : 14255580.6/53

asym\_atl\_dd\_atr\_dd\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.059 \pm 0.044$   $\chi^2/\text{NDF}$ : 24.4/25

Left Out:  $0.009 \pm 0.071$   $\chi^2/\text{NDF}$ : 28.9/24

Right Out:  $-0.007 \pm 0.039$   $\chi^2/\text{NDF}$ : 31.9/30

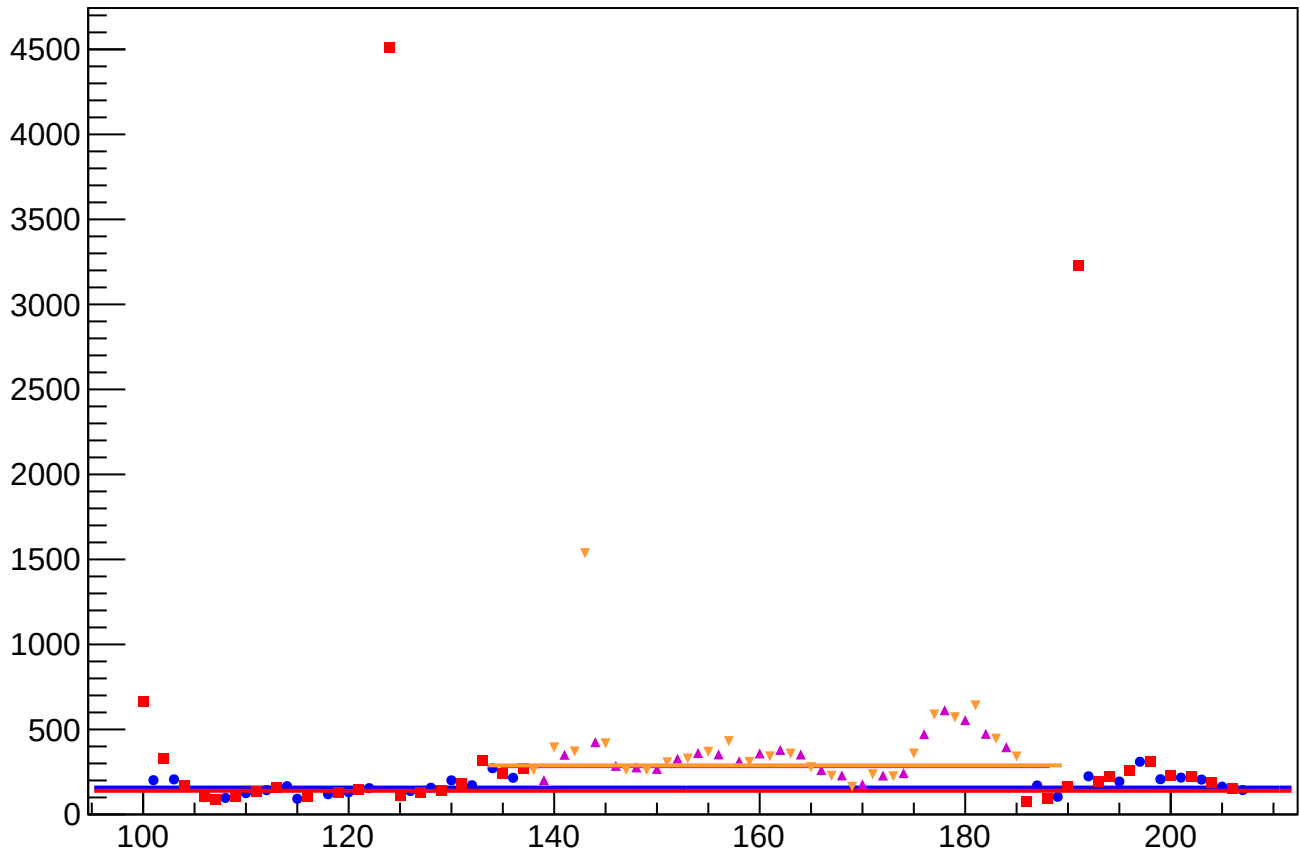
Left In:  $-0.053 \pm 0.070$   $\chi^2/\text{NDF}$ : 27.8/22

+ sign  $0.046 \pm 0.037$   $\chi^2/\text{NDF}$ : 53.7/50

All:  $0.011 \pm 0.025$   $\chi^2/\text{NDF}$ : 115.3/104

- sign  $-0.018 \pm 0.034$   $\chi^2/\text{NDF}$ : 60.0/53

asym\_atl\_dd\_atr\_dd\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 158.088+/-0.031  $\chi^2/\text{NDF}$ : 2235925.3/25

Left Out: 288.922+/-0.050  $\chi^2/\text{NDF}$ : 4648388.8/24

Right Out: 139.246+/-0.027  $\chi^2/\text{NDF}$ : 4674452.9/30

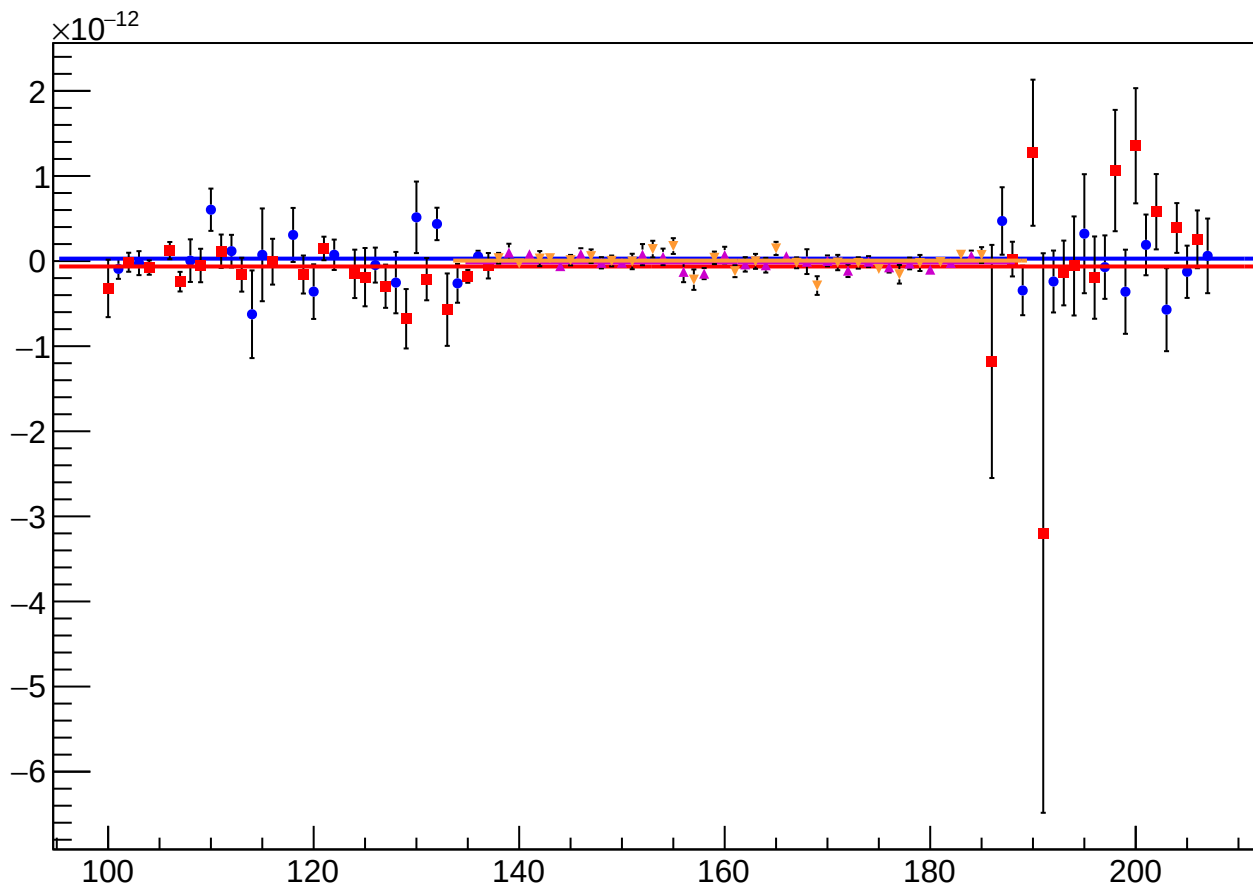
Left In: 284.170+/-0.050  $\chi^2/\text{NDF}$ : 3077626.7/22

+ sign 193.811+/-0.026  $\chi^2/\text{NDF}$ : 11818768.2/50

All: 182.455+/-0.018  $\chi^2/\text{NDF}$ : 26418417.8/10

- sign 172.949+/-0.024  $\chi^2/\text{NDF}$ : 14255580.6/53

asym\_atl\_dd\_atr\_dd\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 25.4/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:34.1/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 35.2/30

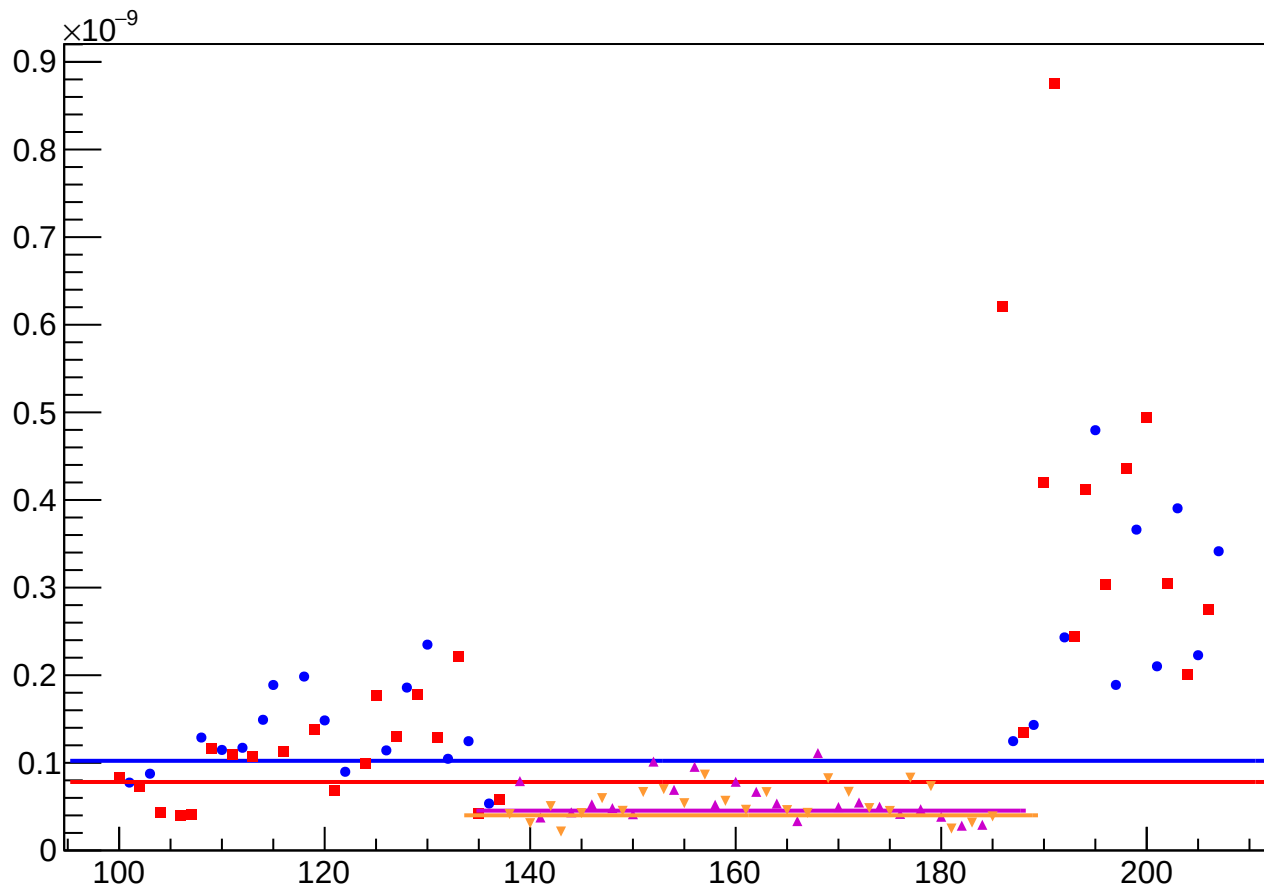
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:23.2/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 59.8/50

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 123.0/104

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 60.3/53

asym\_atl\_dd\_atr\_dd\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 5234990.1/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:3609934.1/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 7622623.9/30

Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:2780344.5/22

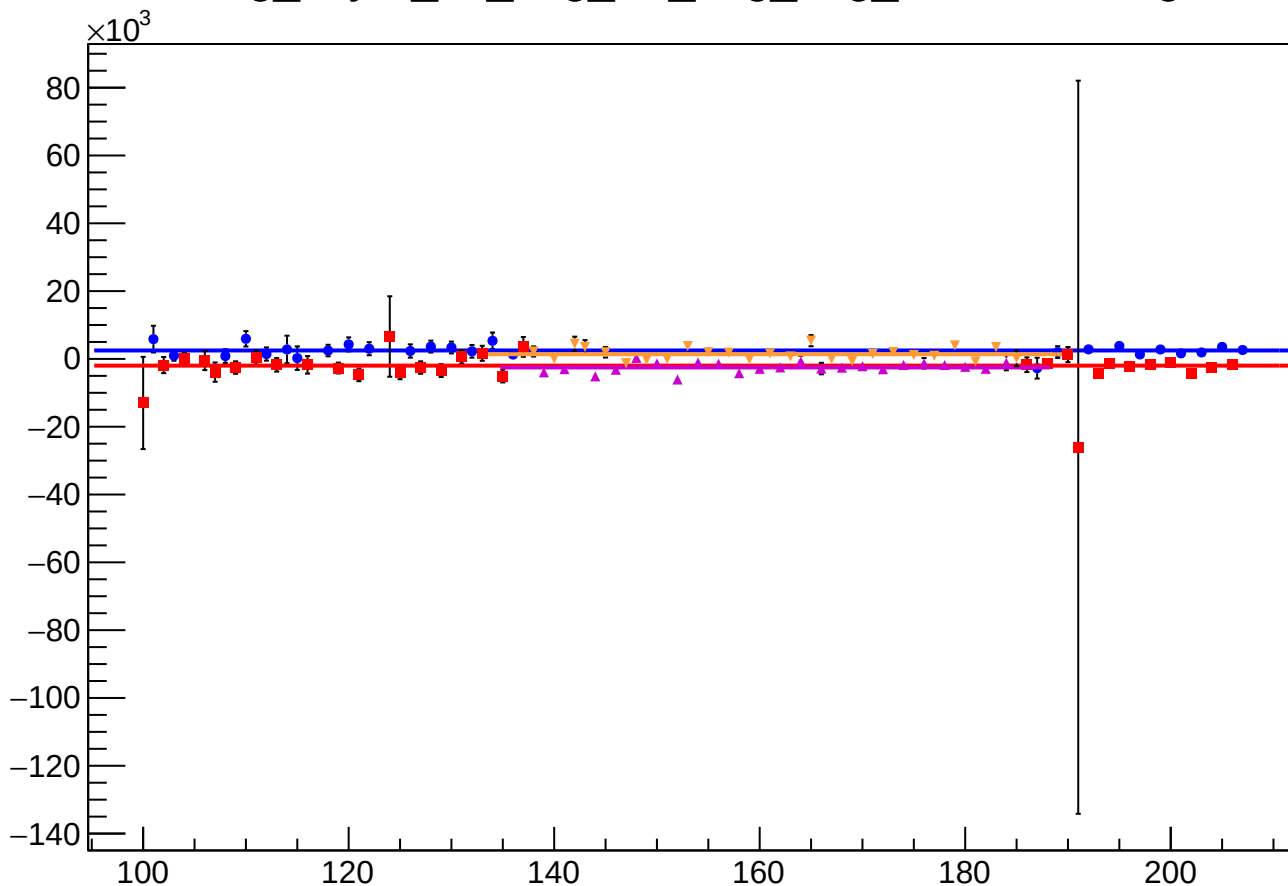
+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 13196374.3/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 25445033.4/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 12090467.6/53



reg\_asym\_atl\_avg\_atr\_avg\_avg\_mean vs Slug



Right In: 2491.321+/-337.744  $\chi^2/\text{NDF}$ : 14.8/25

Left Out: 1383.252+/-292.777  $\chi^2/\text{NDF}$ : 32.9/24

Right Out: -1979.540+/-328.736  $\chi^2/\text{NDF}$ : 28.1/30

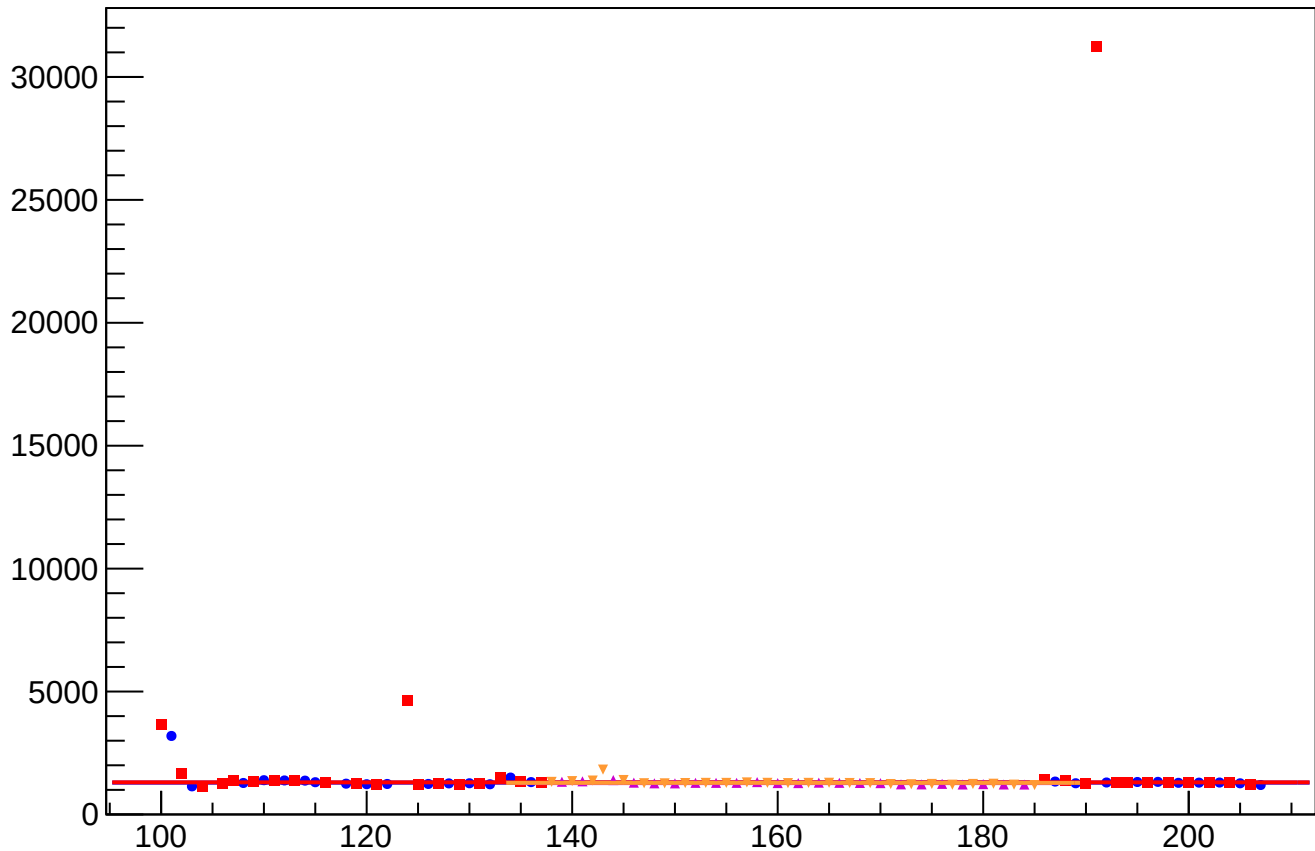
Left In: -2519.365+/-298.095  $\chi^2/\text{NDF}$ : 22.5/22

+ sign 1858.661+/-221.227  $\chi^2/\text{NDF}$ : 53.9/50

All: -212.316+/-156.289  $\chi^2/\text{NDF}$ : 280.9/104

- sign -2275.777+/-220.825  $\chi^2/\text{NDF}$ : 52.1/53

# reg\_asym\_atl\_avg\_atr\_avg\_avg\_rms vs Slug



Right In: 1294.748+/-0.239  $\chi^2/\text{NDF}$ : 532233.6/25

Left Out: 1285.649+/-0.207  $\chi^2/\text{NDF}$ : 191027.3/24

Right Out: 1306.088+/-0.232  $\chi^2/\text{NDF}$ : 505157.5/30

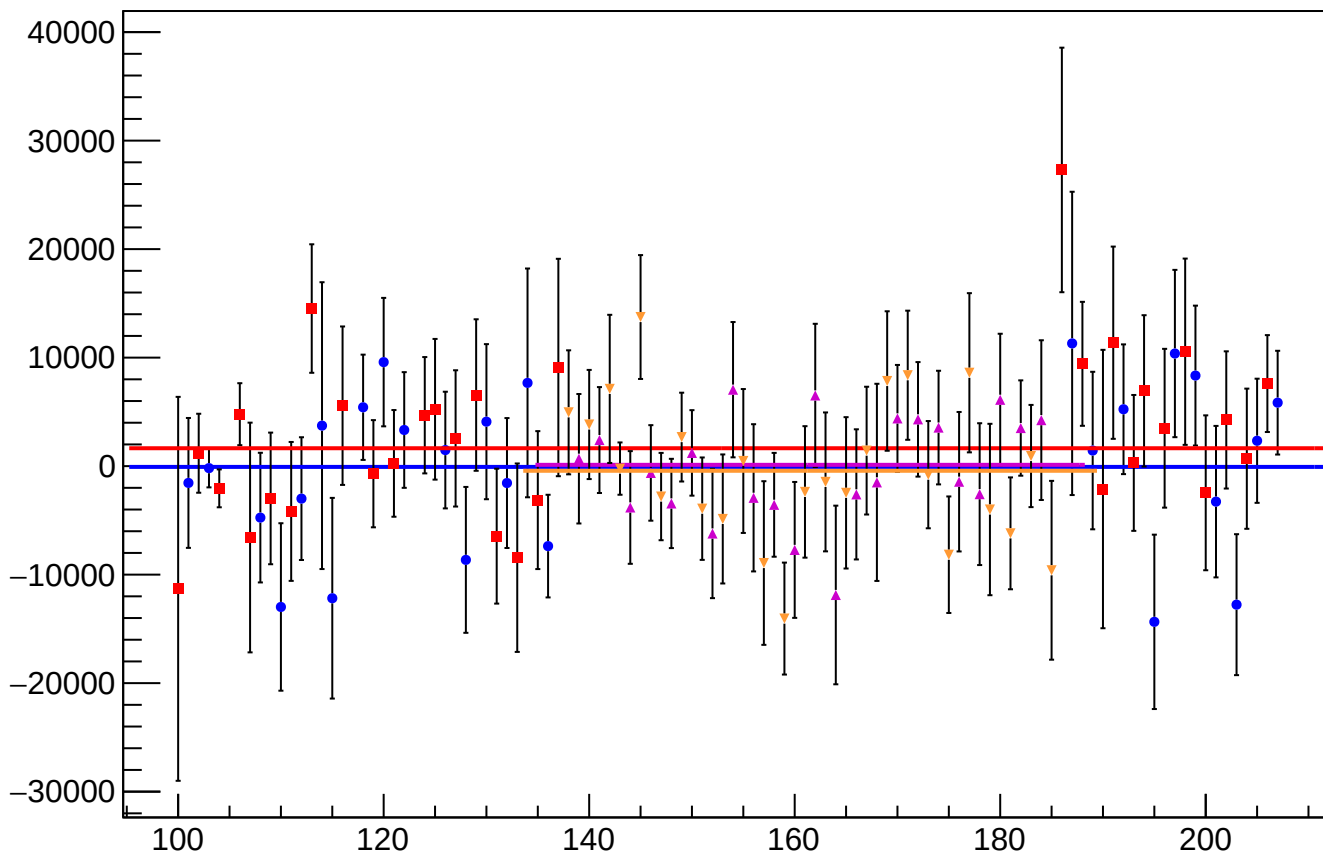
Left In: 1275.941+/-0.211  $\chi^2/\text{NDF}$ : 41399.0/22

+ sign 1289.553+/-0.156  $\chi^2/\text{NDF}$ : 724089.7/50

All: 1289.557+/-0.110  $\chi^2/\text{NDF}$ : 1279888.4/10

- sign 1289.562+/-0.156  $\chi^2/\text{NDF}$ : 555798.8/53

asym\_atl\_avg\_atr\_avg\_avg\_reg\_correction\_mean vs Slug



Right In: -71.479 $\pm$ 1037.086  $\chi^2$ /NDF: 28.9/25

Left Out: -428.530 $\pm$ 1038.038  $\chi^2$ /NDF:29.8/24

Right Out: 1648.800 $\pm$ 931.650  $\chi^2$ /NDF: 31.3/30

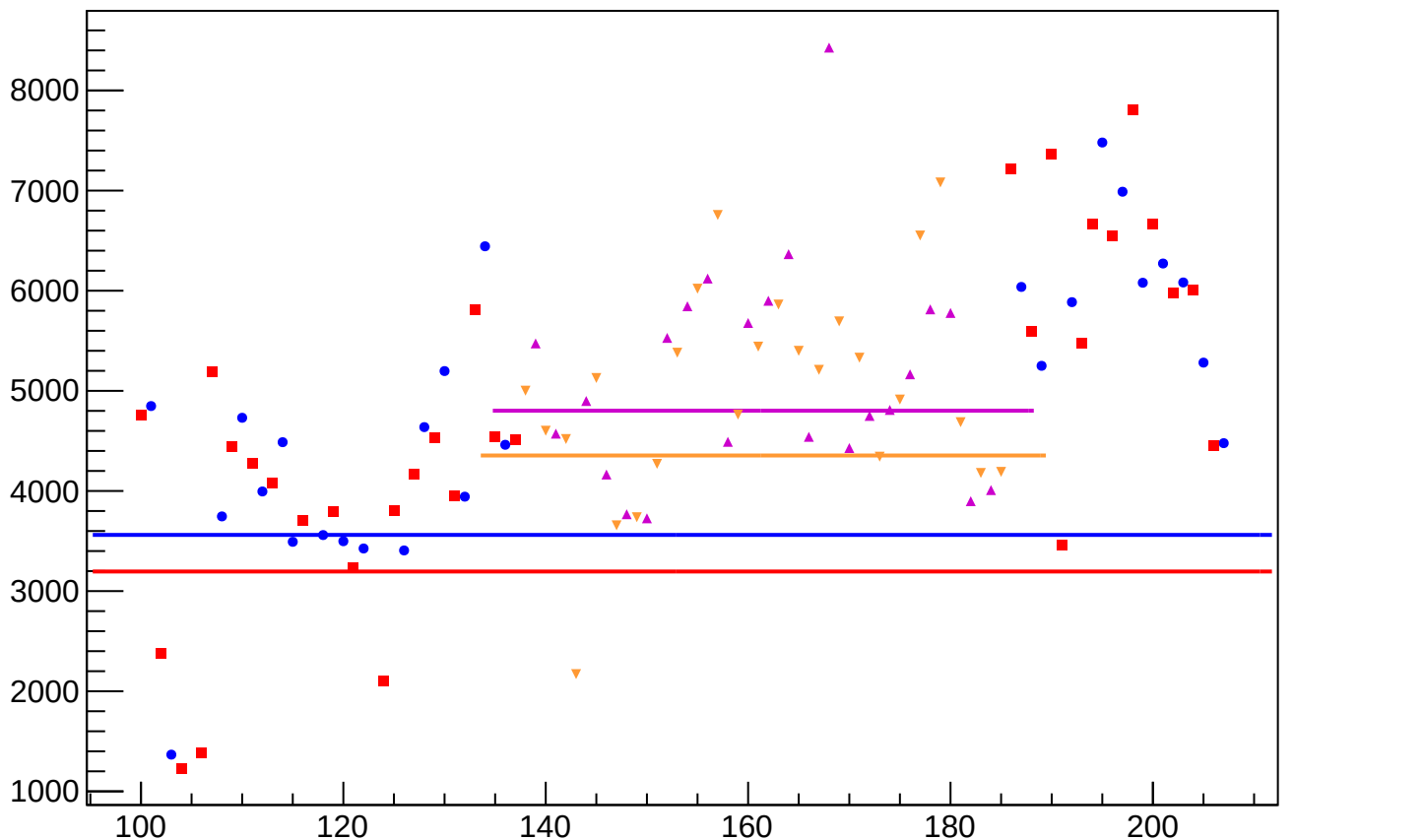
Left In: 119.335 $\pm$ 1144.695  $\chi^2$ /NDF:13.6/22

+ sign -249.841 $\pm$ 733.667  $\chi^2$ /NDF: 58.7/50

All: 404.580 $\pm$ 514.815  $\chi^2$ /NDF: 106.3/104

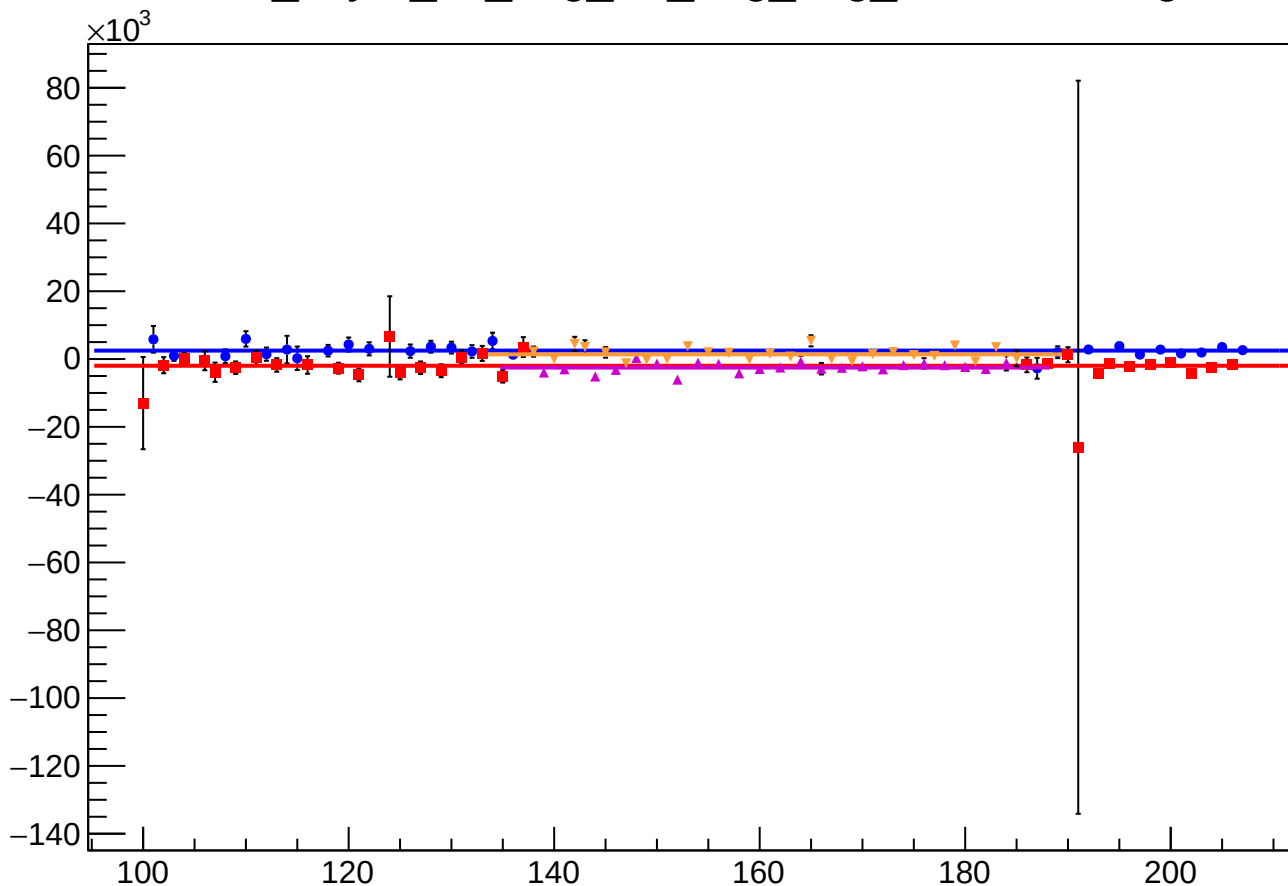
- sign 1039.365 $\pm$ 722.577  $\chi^2$ /NDF: 46.0/53

asym\_atl\_avg\_atr\_avg\_avg\_reg\_correction\_rms vs Slug



|                             |                                    |                         |                                     |
|-----------------------------|------------------------------------|-------------------------|-------------------------------------|
| Right In: 3561.200+/-0.733  | $\chi^2/\text{NDF}$ : 6114321.0/25 | + sign 3957.499+/-0.519 | $\chi^2/\text{NDF}$ : 9770380.3/50  |
| Left Out: 4354.526+/-0.734  | $\chi^2/\text{NDF}$ : 3071436.3/24 |                         |                                     |
| Right Out: 3195.705+/-0.659 | $\chi^2/\text{NDF}$ : 8288001.1/30 | All: 3895.613+/-0.364   | $\chi^2/\text{NDF}$ : 21686030.6/1  |
| Left In: 4801.573+/-0.809   | $\chi^2/\text{NDF}$ : 1231883.2/22 | - sign 3835.583+/-0.511 | $\chi^2/\text{NDF}$ : 11887616.2/53 |

cor\_asym\_atl\_avg\_atr\_avg\_avg\_mean vs Slug



Right In: 2491.227 $\pm$ 337.744  $\chi^2$ /NDF: 14.8/25

Left Out: 1383.188 $\pm$ 292.777  $\chi^2$ /NDF:32.9/24

Right Out: -1979.426 $\pm$ 328.736  $\chi^2$ /NDF: 28.1/30

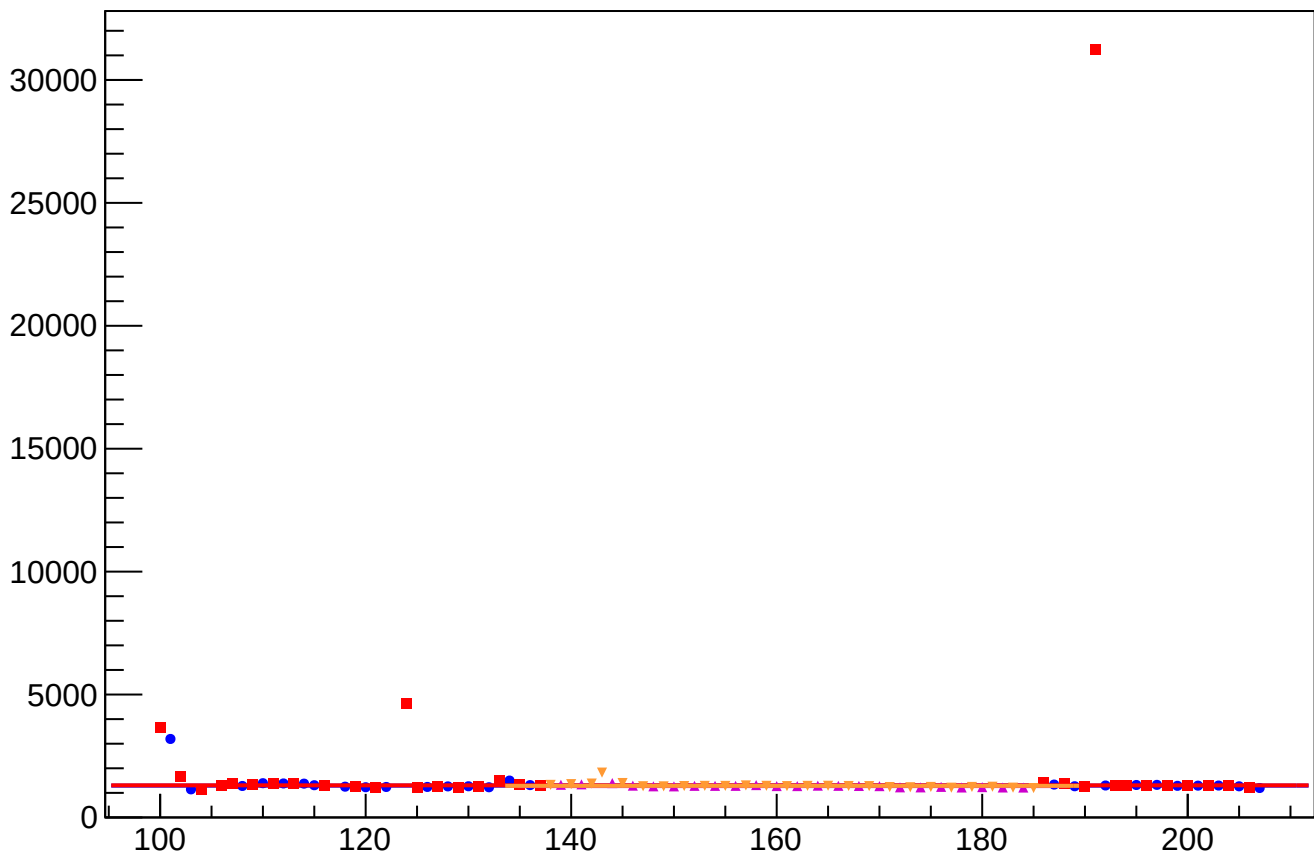
Left In: -2519.366 $\pm$ 298.095  $\chi^2$ /NDF:22.5/22

+ sign 1858.584 $\pm$ 221.227  $\chi^2$ /NDF: 53.9/50

All: -212.330 $\pm$ 156.289  $\chi^2$ /NDF: 280.9/104

- sign -2275.726 $\pm$ 220.825  $\chi^2$ /NDF: 52.1/53

cor\_asym\_atl\_avg\_atr\_avg\_avg\_rms vs Slug



Right In: 1294.748 $\pm$ 0.239  $\chi^2$ /NDF: 532235.1/25

Left Out: 1285.649 $\pm$ 0.207  $\chi^2$ /NDF: 191027.3/24

Right Out: 1306.580 $\pm$ 0.232  $\chi^2$ /NDF: 504852.5/30

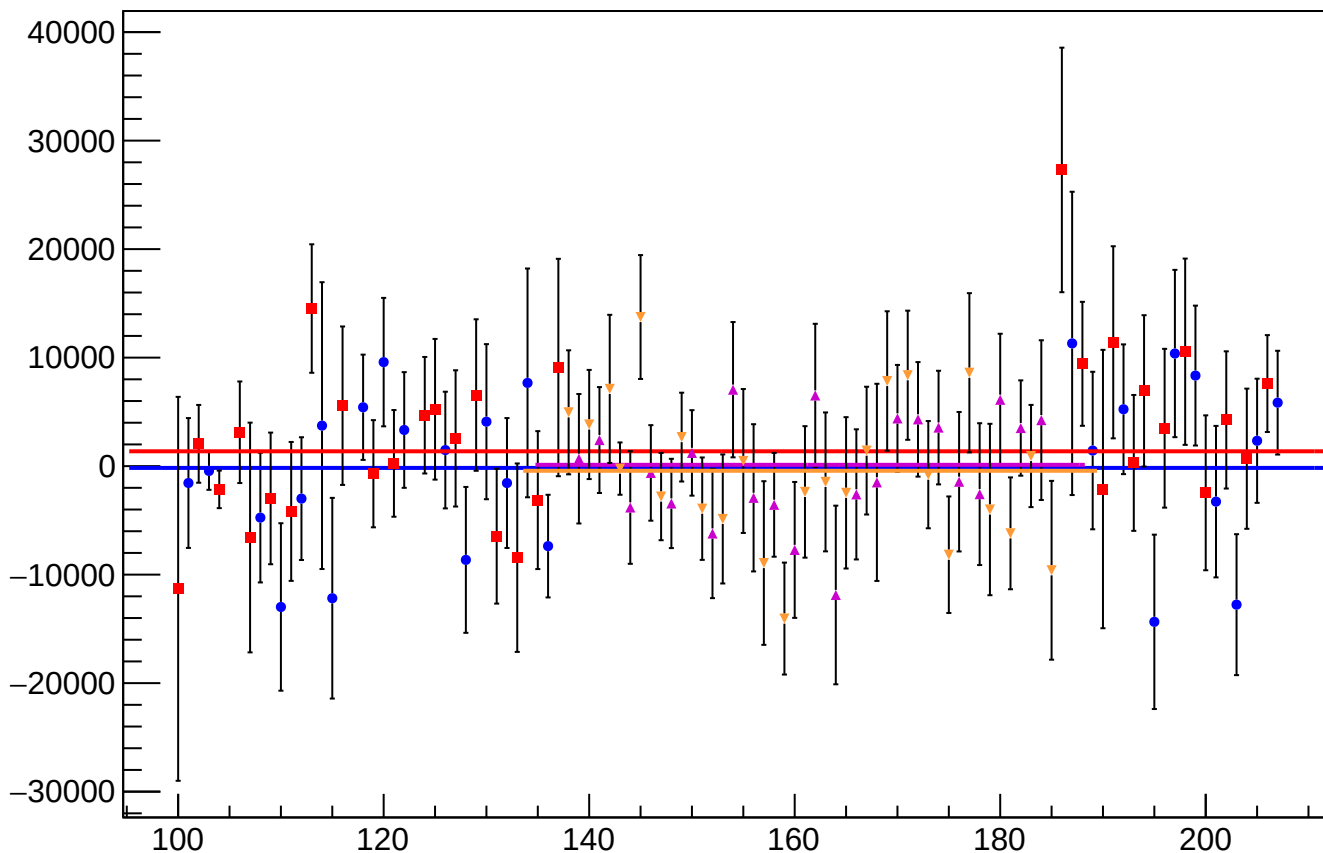
Left In: 1275.941 $\pm$ 0.211  $\chi^2$ /NDF: 41399.0/22

+ sign 1289.553 $\pm$ 0.156  $\chi^2$ /NDF: 724091.1/50

All: 1289.666 $\pm$ 0.110  $\chi^2$ /NDF: 1279886.9/100

- sign 1289.779 $\pm$ 0.156  $\chi^2$ /NDF: 555794.7/53

asym\_atl\_avg\_atr\_avg\_avg\_cor\_correction\_mean vs Slug



Right In: -164.321 $\pm$ 1030.211  $\chi^2$ /NDF: 28.9/25

Left Out: -428.525 $\pm$ 1038.036  $\chi^2$ /NDF: 29.8/24

Right Out: 1367.074 $\pm$ 960.666  $\chi^2$ /NDF: 30.4/30

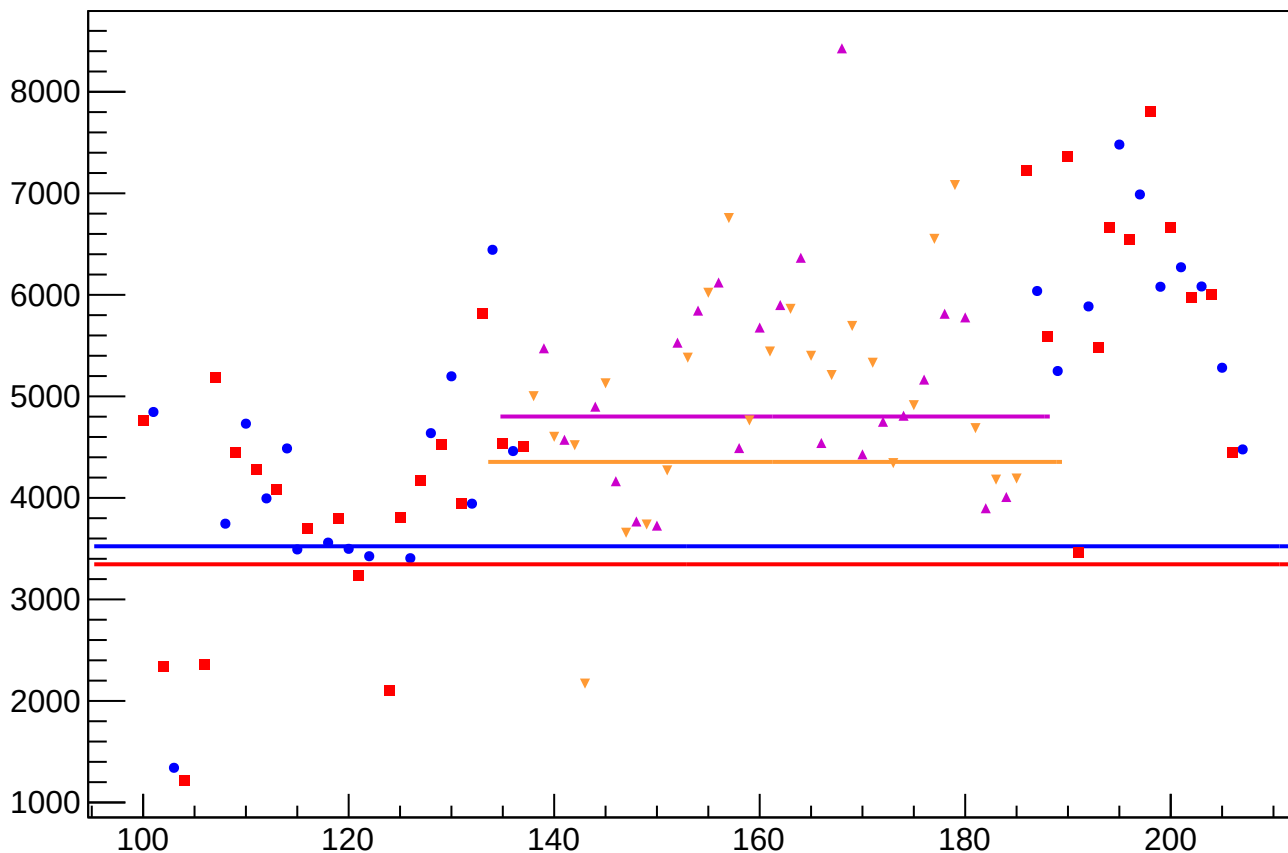
Left In: 119.307 $\pm$ 1144.695  $\chi^2$ /NDF: 13.6/22

+ sign -295.423 $\pm$ 731.220  $\chi^2$ /NDF: 58.7/50

All: 274.373 $\pm$ 518.685  $\chi^2$ /NDF: 104.7/104

- sign 851.430 $\pm$ 735.864  $\chi^2$ /NDF: 44.7/53

asym\_atl\_avg\_atr\_avg\_avg\_cor\_correction\_rms vs Slug

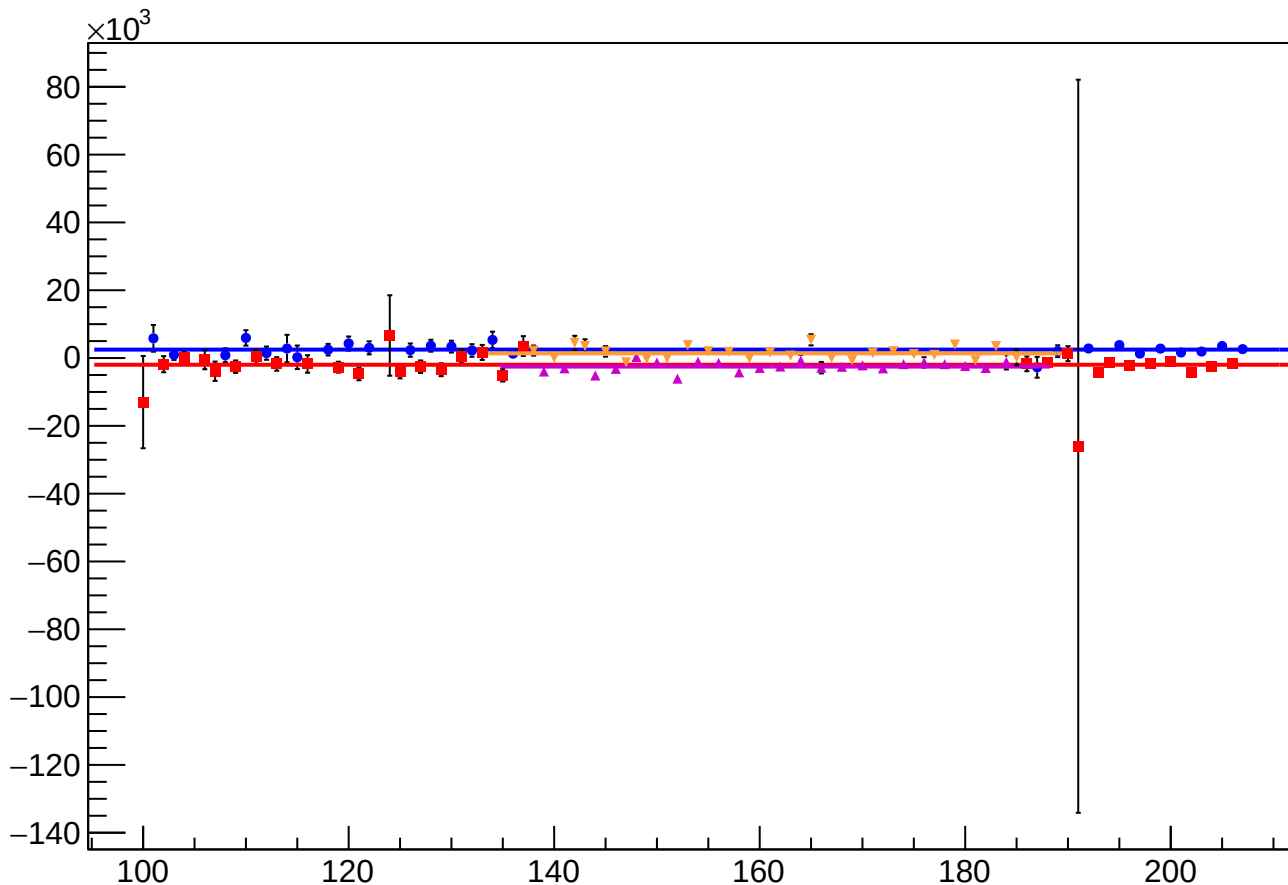


Right In: 3523.379 $\pm$ 0.728  $\chi^2/\text{NDF}$ : 6304704.0/25  
 Left Out: 4354.511 $\pm$ 0.734  $\chi^2/\text{NDF}$ : 3071528.5/24  
 Right Out: 3345.946 $\pm$ 0.679  $\chi^2/\text{NDF}$ : 7591603.4/30  
 Left In: 4801.570 $\pm$ 0.809  $\chi^2/\text{NDF}$ : 1231894.6/22

+ sign 3935.800 $\pm$ 0.517  $\chi^2/\text{NDF}$ : 10022168.1/50  
 All: 3941.607 $\pm$ 0.367  $\chi^2/\text{NDF}$ : 20743500.4/1  
 - sign 3947.487 $\pm$ 0.520  $\chi^2/\text{NDF}$ : 10721078.5/53



eigen\_cor\_asym\_atl\_avg\_atr\_avg\_avg\_mean vs Slug



Right In: 2491.227 $\pm$ 337.744  $\chi^2$ /NDF: 14.8/25

Left Out: 1383.188 $\pm$ 292.777  $\chi^2$ /NDF:32.9/24

Right Out: -1979.426 $\pm$ 328.736  $\chi^2$ /NDF: 28.1/30

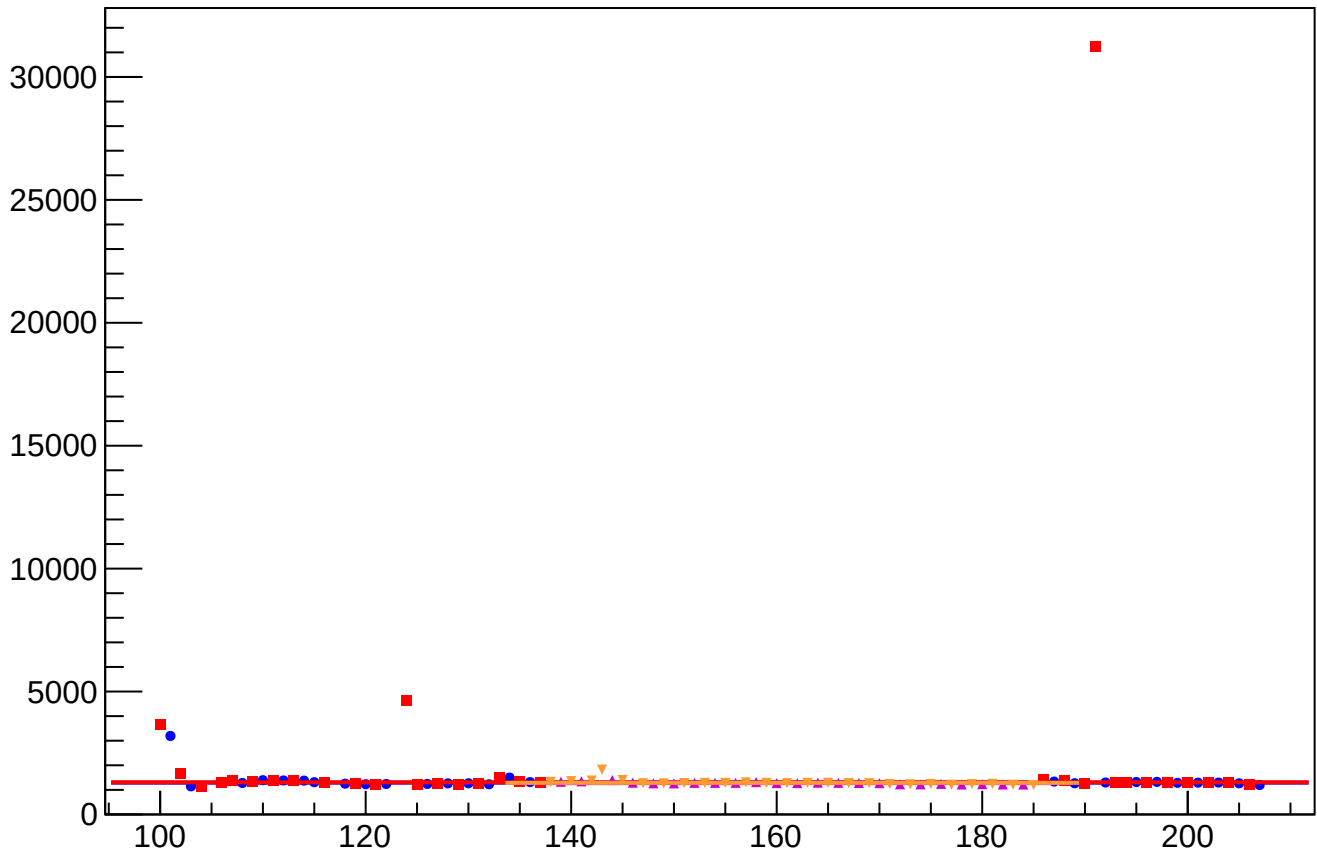
Left In: -2519.366 $\pm$ 298.095  $\chi^2$ /NDF:22.5/22

+ sign 1858.584 $\pm$ 221.227  $\chi^2$ /NDF: 53.9/50

All: -212.330 $\pm$ 156.289  $\chi^2$ /NDF: 280.9/104

- sign -2275.726 $\pm$ 220.825  $\chi^2$ /NDF: 52.1/53

eigen\_cor\_asym\_atl\_avg\_atr\_avg\_avg\_rms vs Slug



Right In: 1294.748+/-0.239  $\chi^2/\text{NDF}$ : 532235.1/25

Left Out: 1285.649+/-0.207  $\chi^2/\text{NDF}$ : 191027.3/24

Right Out: 1306.580+/-0.232  $\chi^2/\text{NDF}$ : 504852.5/30

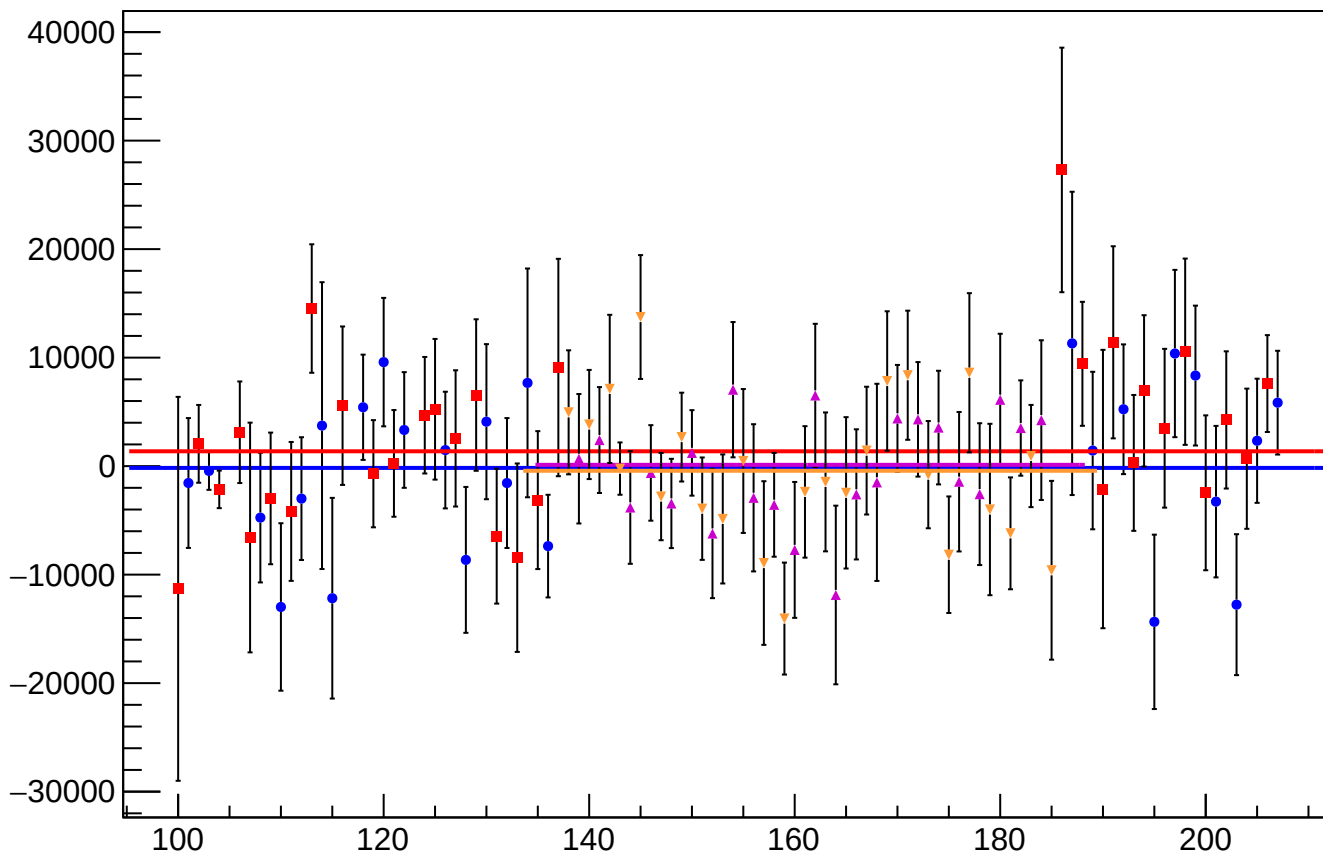
Left In: 1275.941+/-0.211  $\chi^2/\text{NDF}$ : 41399.0/22

+ sign 1289.553+/-0.156  $\chi^2/\text{NDF}$ : 724091.1/50

All: 1289.666+/-0.110  $\chi^2/\text{NDF}$ : 1279886.9/10

- sign 1289.779+/-0.156  $\chi^2/\text{NDF}$ : 555794.7/53

asym\_atl\_avg\_atr\_avg\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In: -164.321 $\pm$ 1030.211  $\chi^2$ /NDF: 28.9/25

Left Out: -428.525 $\pm$ 1038.036  $\chi^2$ /NDF: 29.8/24

Right Out: 1367.074 $\pm$ 960.666  $\chi^2$ /NDF: 30.4/30

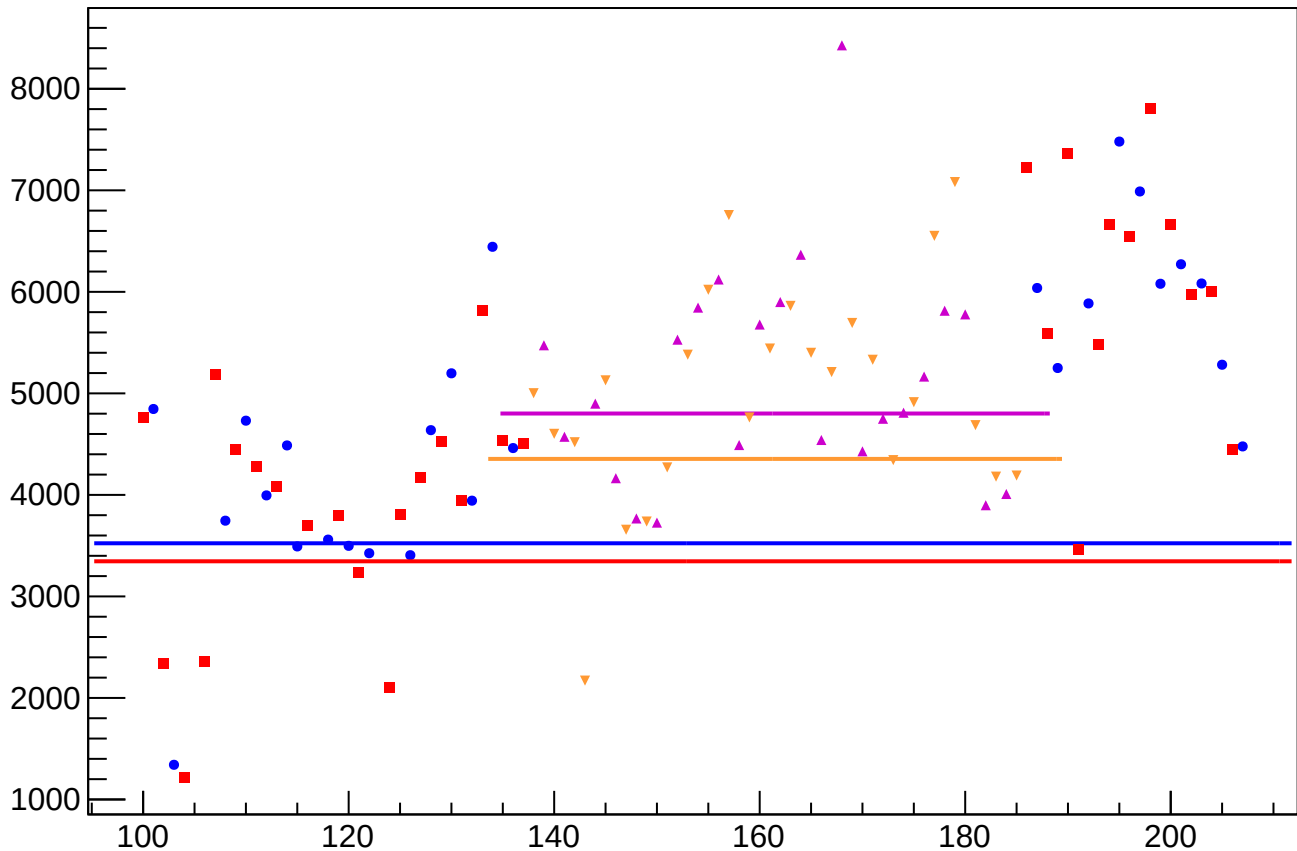
Left In: 119.307 $\pm$ 1144.695  $\chi^2$ /NDF: 13.6/22

+ sign -295.423 $\pm$ 731.220  $\chi^2$ /NDF: 58.7/50

All: 274.373 $\pm$ 518.685  $\chi^2$ /NDF: 104.7/104

- sign 851.430 $\pm$ 735.864  $\chi^2$ /NDF: 44.7/53

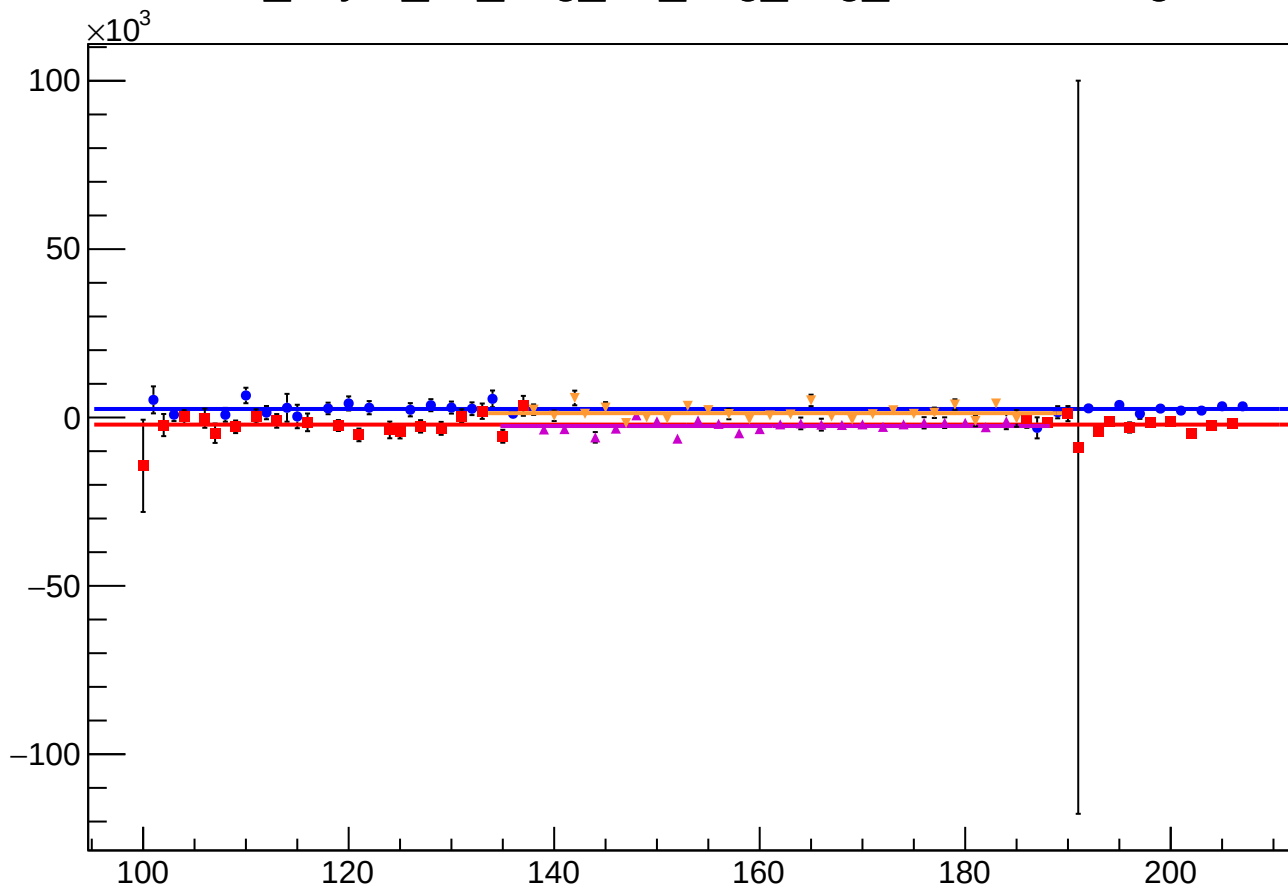
asym\_atl\_avg\_atr\_avg\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 3523.379 $\pm$ 0.728  $\chi^2/\text{NDF}$ : 6304704.0/25  
 Left Out: 4354.511 $\pm$ 0.734  $\chi^2/\text{NDF}$ : 3071528.5/24  
 Right Out: 3345.946 $\pm$ 0.679  $\chi^2/\text{NDF}$ : 7591603.4/30  
 Left In: 4801.570 $\pm$ 0.809  $\chi^2/\text{NDF}$ : 1231894.6/22

+ sign 3935.800 $\pm$ 0.517  $\chi^2/\text{NDF}$ : 10022168.1/50  
 All: 3941.607 $\pm$ 0.367  $\chi^2/\text{NDF}$ : 20743500.4/1  
 - sign 3947.487 $\pm$ 0.520  $\chi^2/\text{NDF}$ : 10721078.5/53

dit\_asym\_atl\_avg\_atr\_avg\_avg\_mean vs Slug



Right In: 2533.606 $\pm$ 347.389  $\chi^2$ /NDF: 15.3/25

Left Out: 1284.422 $\pm$ 300.530  $\chi^2$ /NDF:33.4/24

Right Out: -2109.419 $\pm$ 336.048  $\chi^2$ /NDF: 29.8/30

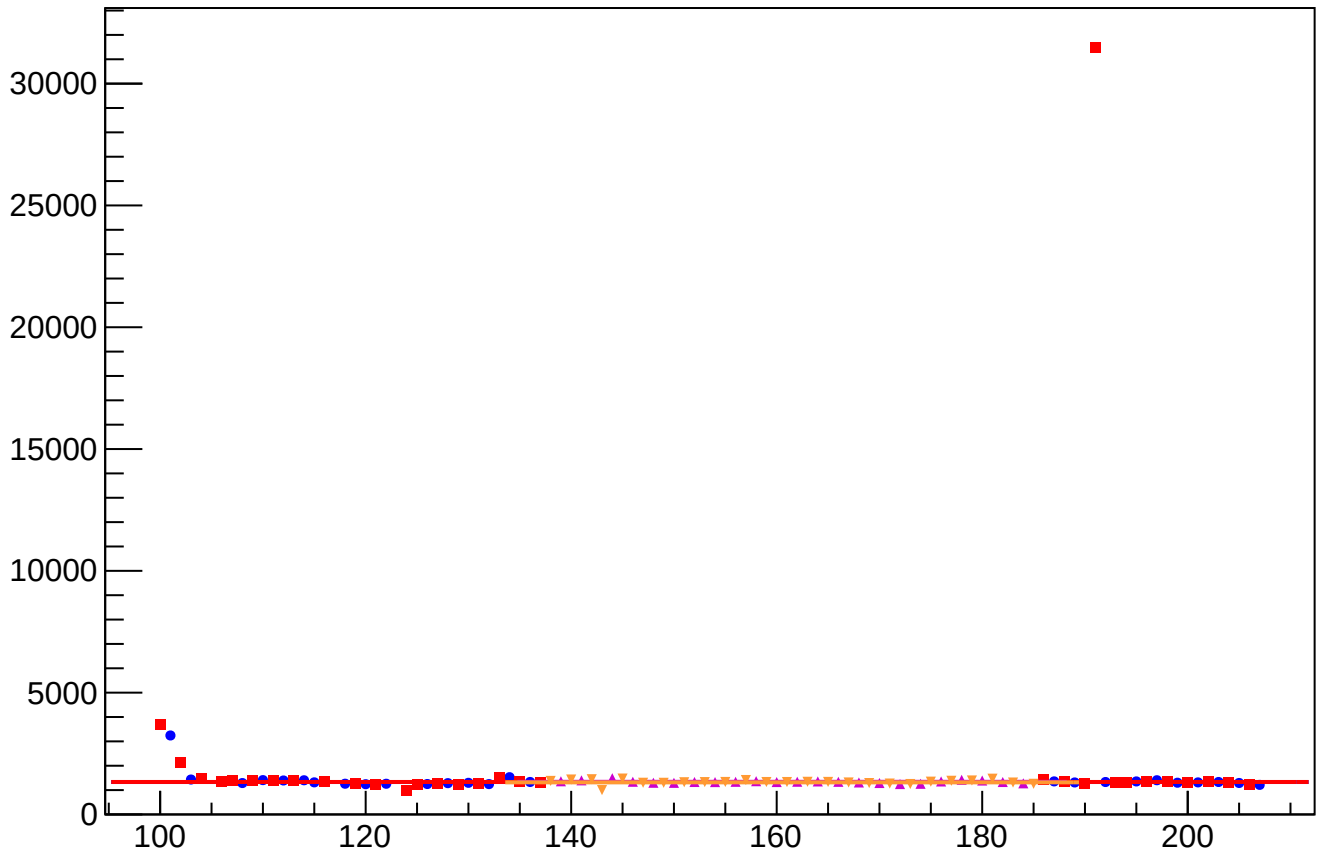
Left In: -2531.791 $\pm$ 312.886  $\chi^2$ /NDF:25.0/22

+ sign 1819.139 $\pm$ 227.282  $\chi^2$ /NDF: 56.1/50

All: -242.664 $\pm$ 161.315  $\chi^2$ /NDF: 277.5/104

- sign -2335.661 $\pm$ 228.995  $\chi^2$ /NDF: 55.6/53

dit\_asym\_atl\_avg\_atr\_avg\_avg\_rms vs Slug



Right In: 1331.503+/-0.246  $\chi^2/\text{NDF}$ : 521231.3/25

Left Out: 1318.174+/-0.213  $\chi^2/\text{NDF}$ : 248547.7/24

Right Out: 1333.528+/-0.238  $\chi^2/\text{NDF}$ : 447623.1/30

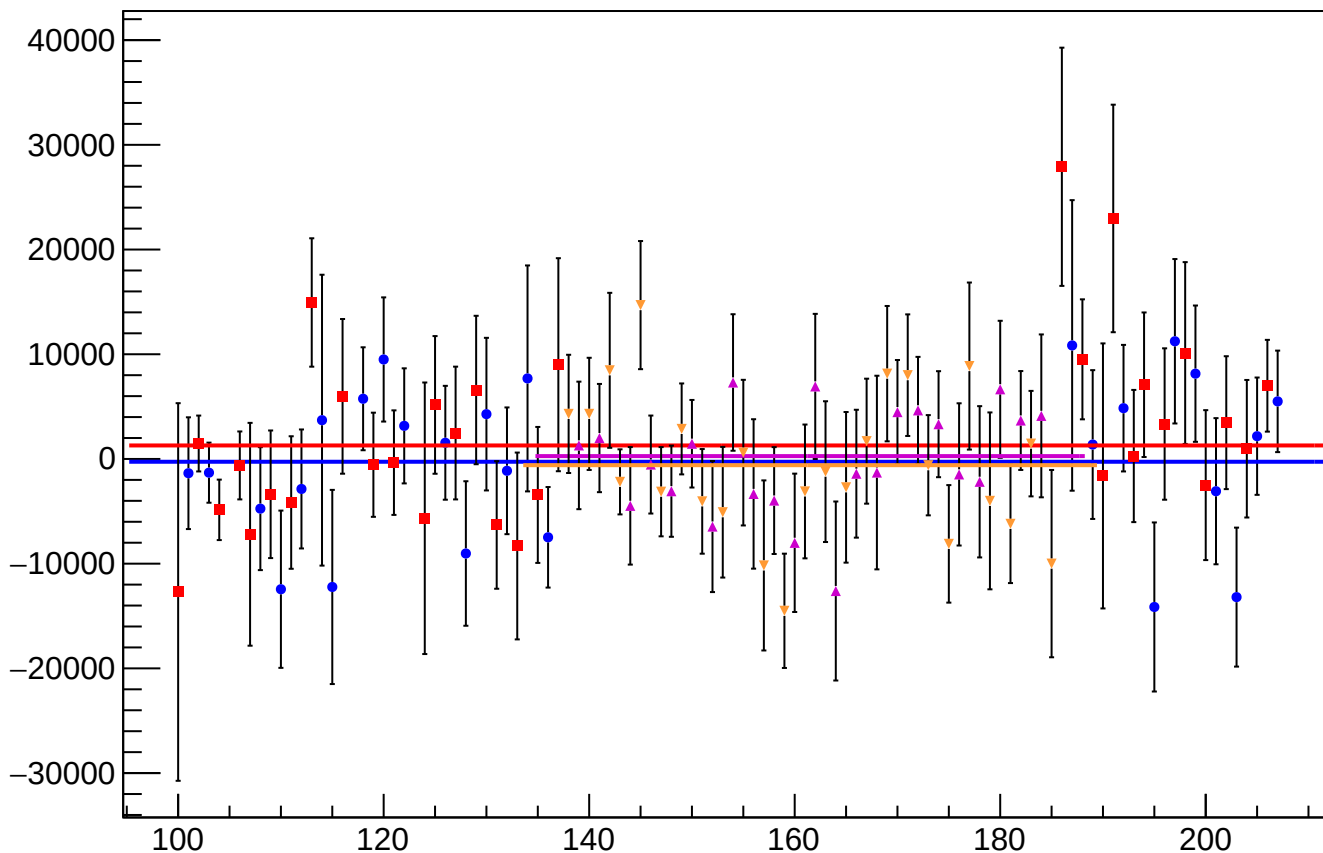
Left In: 1338.602+/-0.221  $\chi^2/\text{NDF}$ : 54248.5/22

+ sign 1323.880+/-0.161  $\chi^2/\text{NDF}$ : 771463.0/50

All: 1330.017+/-0.114  $\chi^2/\text{NDF}$ : 1276517.1/10

- sign 1336.246+/-0.162  $\chi^2/\text{NDF}$ : 502115.9/53

asym\_atl\_avg\_atr\_avg\_avg\_dit\_correction\_mean vs Slug



Right In:  $-267.187 \pm 1168.652$   $\chi^2/\text{NDF}: 28.6/25$

Left Out:  $-594.916 \pm 1122.287$   $\chi^2/\text{NDF}: 29.5/24$

Right Out:  $1289.807 \pm 1030.028$   $\chi^2/\text{NDF}: 33.6/30$

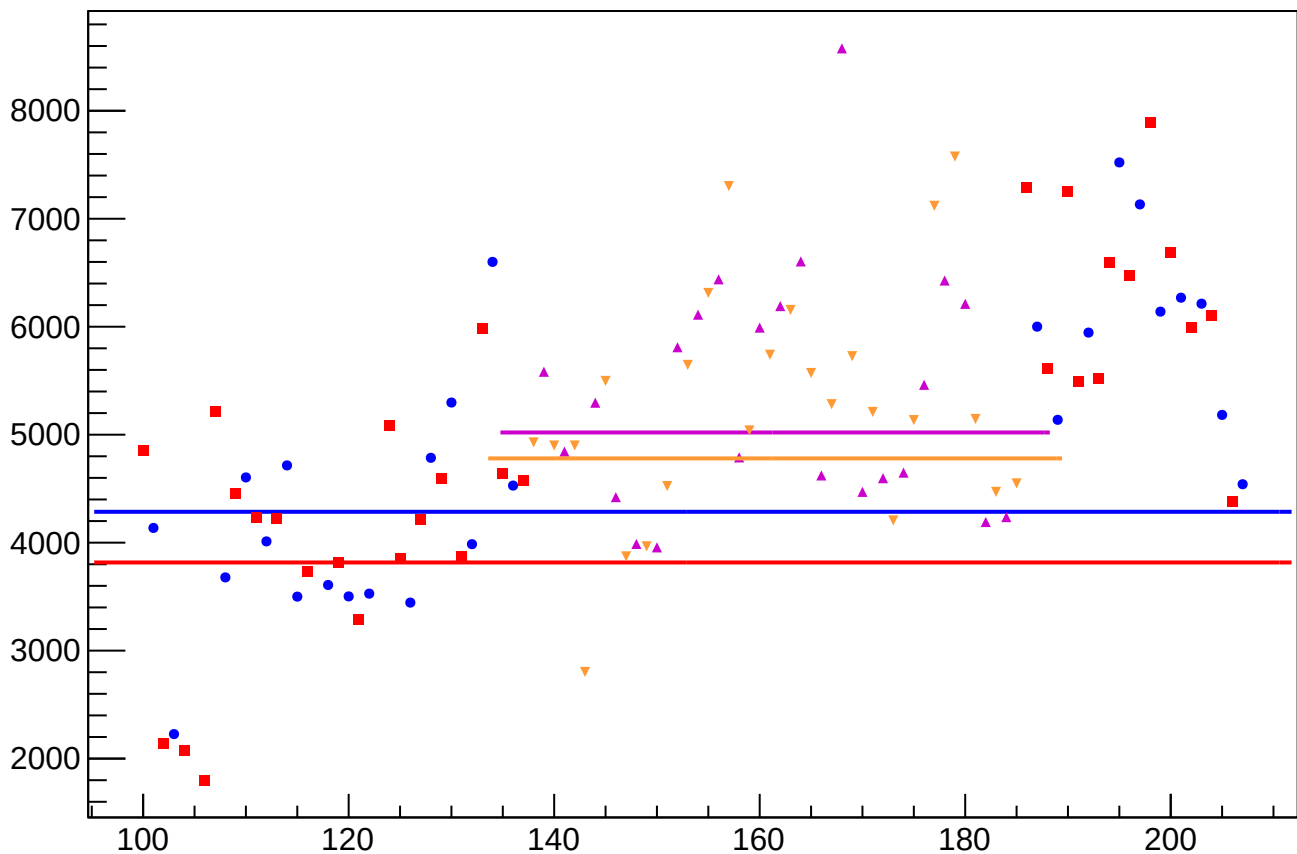
Left In:  $272.915 \pm 1196.804$   $\chi^2/\text{NDF}: 13.4/22$

+ sign  $-437.681 \pm 809.472$   $\chi^2/\text{NDF}: 58.2/50$

All:  $233.125 \pm 561.935$   $\chi^2/\text{NDF}: 106.9/104$

- sign  $857.095 \pm 780.702$   $\chi^2/\text{NDF}: 47.4/53$

asym\_atl\_avg\_atr\_avg\_avg\_dit\_correction\_rms vs Slug



Right In: 4285.849+/-0.826  $\chi^2/\text{NDF}$ : 2730825.7/25

Left Out: 4780.396+/-0.794  $\chi^2/\text{NDF}$ : 2006245.3/24

Right Out: 3816.517+/-0.728  $\chi^2/\text{NDF}$ : 5201996.6/30

Left In: 5020.560+/-0.846  $\chi^2/\text{NDF}$ : 1225091.9/22

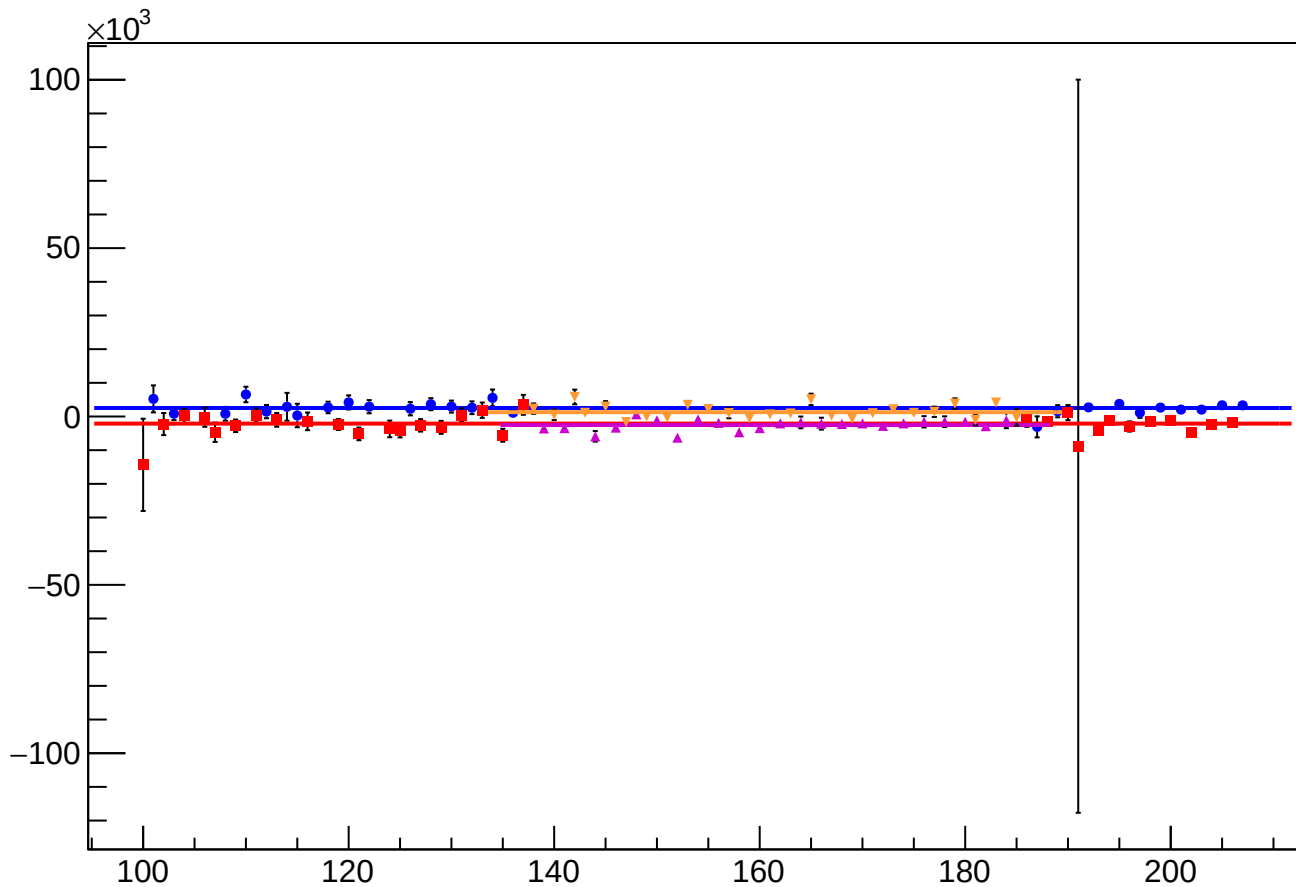
+ sign 4543.127+/-0.572  $\chi^2/\text{NDF}$ : 4923395.4/50

All: 4432.121+/-0.397  $\chi^2/\text{NDF}$ : 12585973.8/100

- sign 4328.866+/-0.552  $\chi^2/\text{NDF}$ : 7589981.6/53



eigen\_dit\_asym\_atl\_avg\_atr\_avg\_avg\_mean vs Slug



Right In: 2533.603 $\pm$ 347.389  $\chi^2/\text{NDF}$ : 15.3/25

Left Out: 1284.416 $\pm$ 300.530  $\chi^2/\text{NDF}$ : 33.4/24

Right Out: -2109.417 $\pm$ 336.047  $\chi^2/\text{NDF}$ : 29.8/30

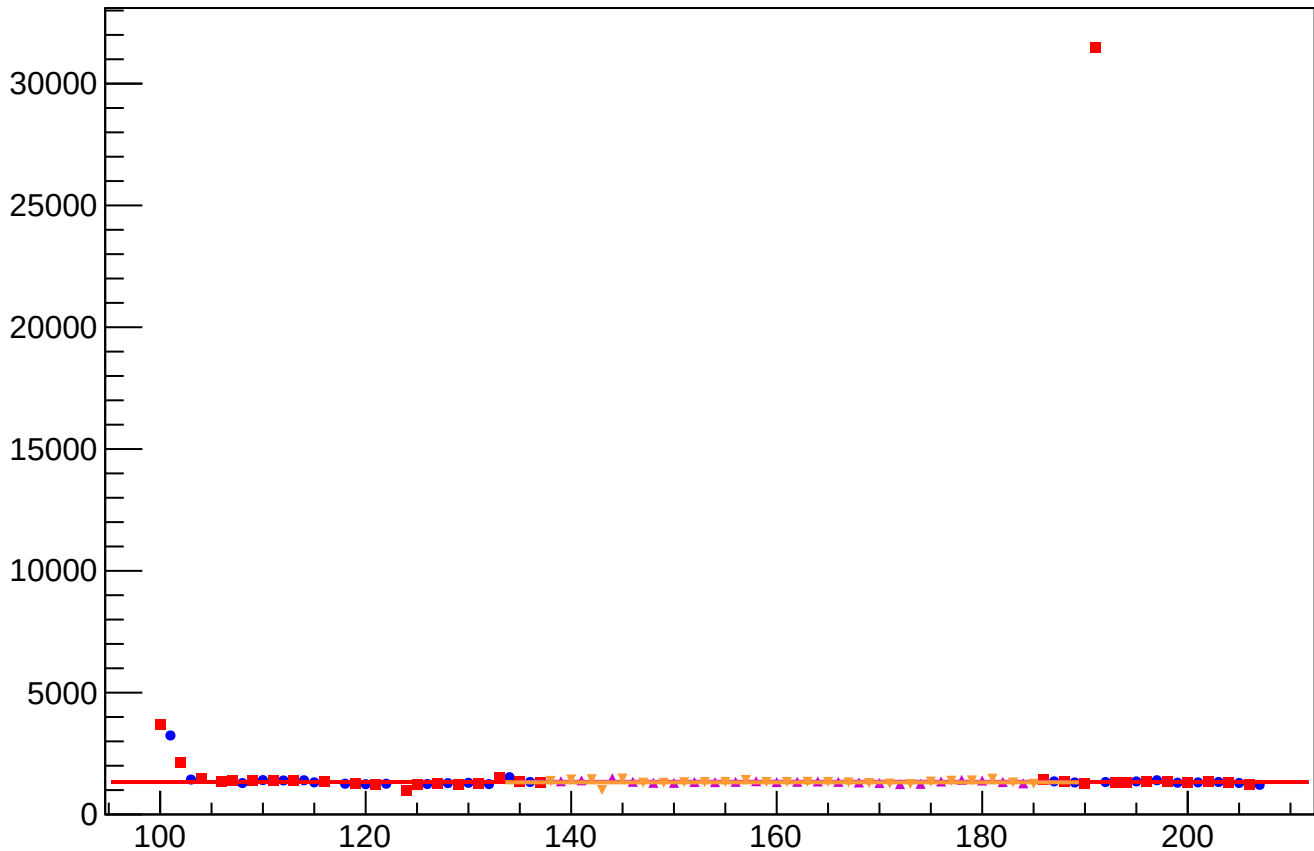
Left In: -2531.791 $\pm$ 312.887  $\chi^2/\text{NDF}$ : 25.0/22

+ sign 1819.136 $\pm$ 227.282  $\chi^2/\text{NDF}$ : 56.1/50

All: -242.665 $\pm$ 161.315  $\chi^2/\text{NDF}$ : 277.5/104

- sign -2335.660 $\pm$ 228.995  $\chi^2/\text{NDF}$ : 55.6/53

eigen\_dit\_asym\_atl\_avg\_atr\_avg\_avg\_rms vs Slug



Right In: 1331.503+/-0.246  $\chi^2/\text{NDF}$ : 521231.4/25

Left Out: 1318.176+/-0.213  $\chi^2/\text{NDF}$ : 248550.2/24

Right Out: 1333.528+/-0.238  $\chi^2/\text{NDF}$ : 447622.1/30

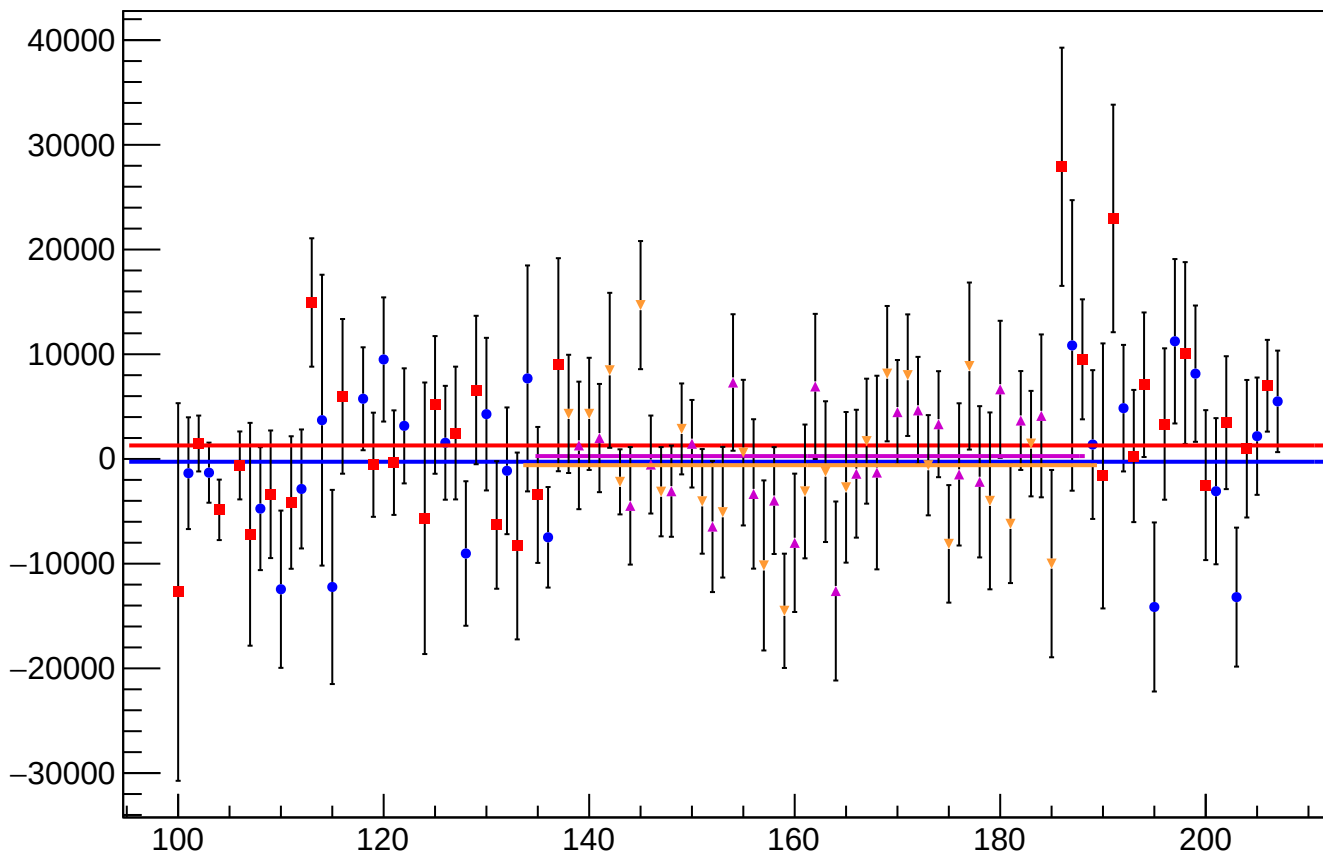
Left In: 1338.604+/-0.221  $\chi^2/\text{NDF}$ : 54251.0/22

+ sign 1323.880+/-0.161  $\chi^2/\text{NDF}$ : 771465.2/50

All: 1330.018+/-0.114  $\chi^2/\text{NDF}$ : 1276521.1/10

- sign 1336.246+/-0.162  $\chi^2/\text{NDF}$ : 502117.6/53

asym\_atl\_avg\_atr\_avg\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-267.184 \pm 1168.651$   $\chi^2/\text{NDF}$ : 28.6/25

Left Out:  $-594.920 \pm 1122.288$   $\chi^2/\text{NDF}$ : 29.5/24

Right Out:  $1289.799 \pm 1030.026$   $\chi^2/\text{NDF}$ : 33.6/30

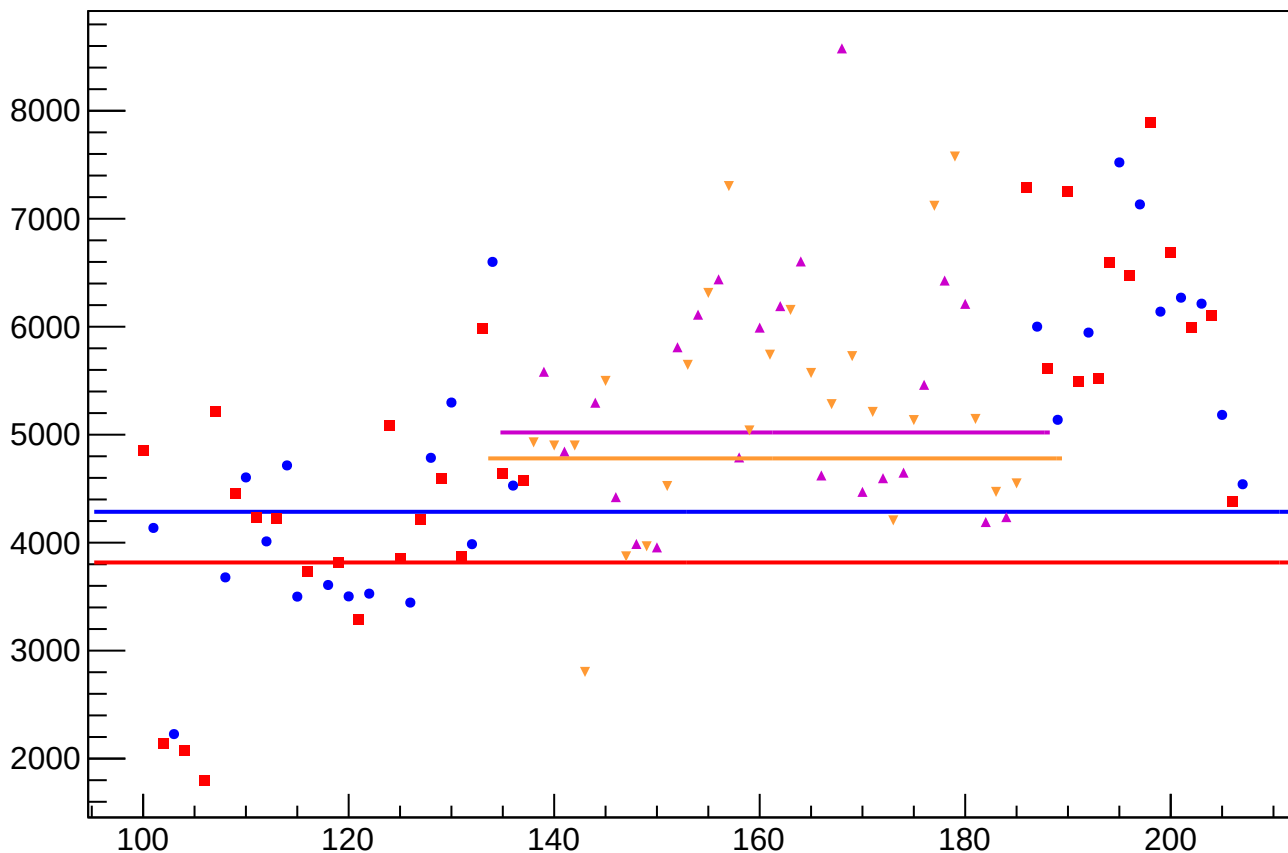
Left In:  $272.917 \pm 1196.806$   $\chi^2/\text{NDF}$ : 13.4/22

+ sign  $-437.682 \pm 809.472$   $\chi^2/\text{NDF}$ : 58.2/50

All:  $233.124 \pm 561.935$   $\chi^2/\text{NDF}$ : 106.9/104

- sign  $857.093 \pm 780.701$   $\chi^2/\text{NDF}$ : 47.4/53

asym\_atl\_avg\_atr\_avg\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 4285.842+/-0.826  $\chi^2/\text{NDF}$ : 2730852.3/25

Left Out: 4780.404+/-0.794  $\chi^2/\text{NDF}$ : 2006246.8/24

Right Out: 3816.508+/-0.728  $\chi^2/\text{NDF}$ : 5202030.9/30

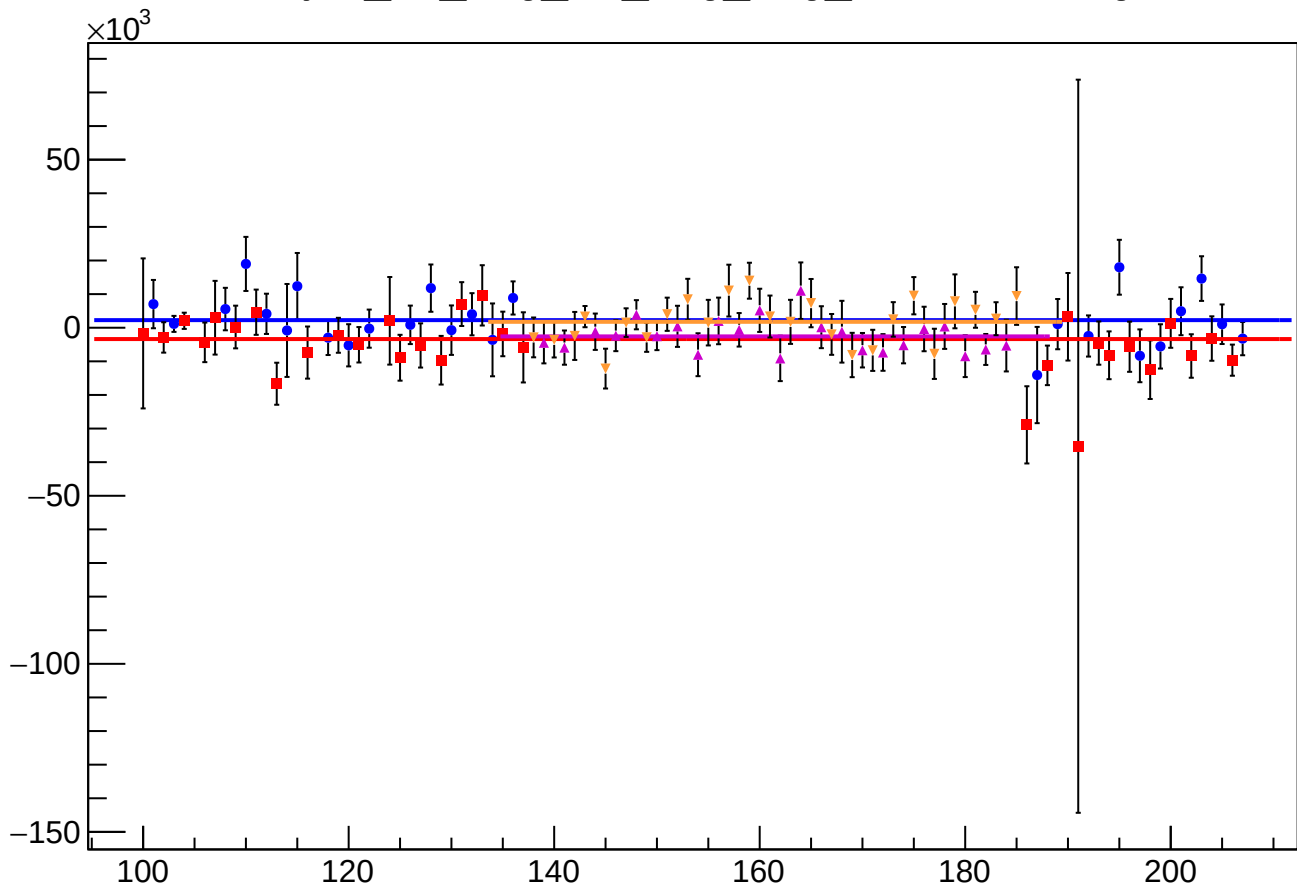
Left In: 5020.567+/-0.846  $\chi^2/\text{NDF}$ : 1225095.5/22

+ sign 4543.127+/-0.572  $\chi^2/\text{NDF}$ : 4923434.4/50

All: 4432.119+/-0.397  $\chi^2/\text{NDF}$ : 12586083.4/100

- sign 4328.862+/-0.552  $\chi^2/\text{NDF}$ : 7590049.7/53

# asym\_atl\_avg\_atr\_avg\_avg\_mean vs Slug



Right In:  $2259.875 \pm 1167.473$   $\chi^2/\text{NDF}: 27.1/25$

Left Out:  $1761.683 \pm 1116.232$   $\chi^2/\text{NDF}: 27.7/24$

Right Out:  $-3371.740 \pm 1125.658$   $\chi^2/\text{NDF}: 30.1/30$

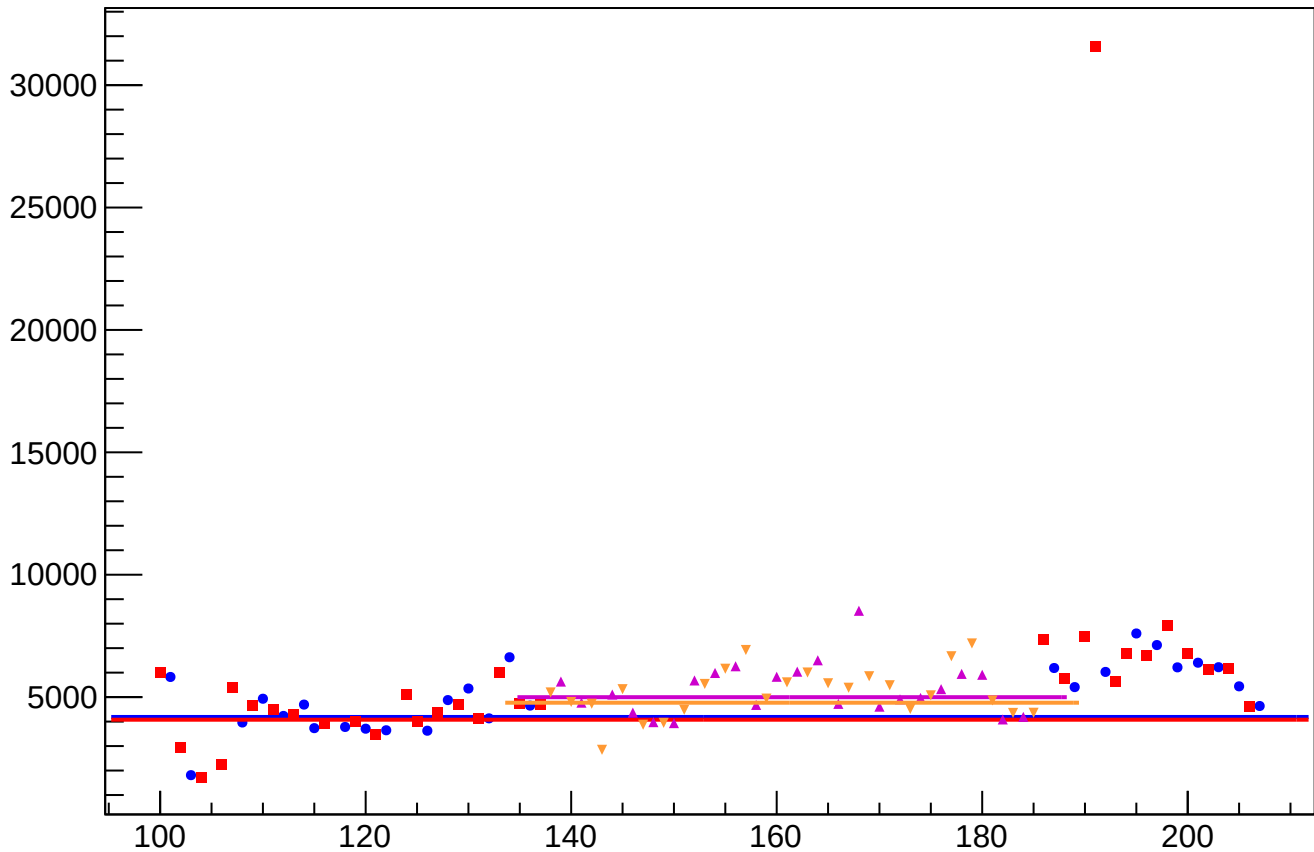
Left In:  $-2579.960 \pm 1188.448$   $\chi^2/\text{NDF}: 13.3/22$

+ sign  $1999.607 \pm 806.802$   $\chi^2/\text{NDF}: 54.8/50$

All:  $-466.689 \pm 574.156$   $\chi^2/\text{NDF}: 117.4/104$

- sign  $-2997.318 \pm 817.257$   $\chi^2/\text{NDF}: 43.6/53$

# asym\_atl\_avg\_atr\_avg\_avg\_rms vs Slug



Right In: 4188.684 $\pm$ 0.826  $\chi^2$ /NDF: 3952019.2/25

Left Out: 4771.181 $\pm$ 0.789  $\chi^2$ /NDF:1787082.6/24

Right Out: 4076.898 $\pm$ 0.788  $\chi^2$ /NDF: 4941226.0/30

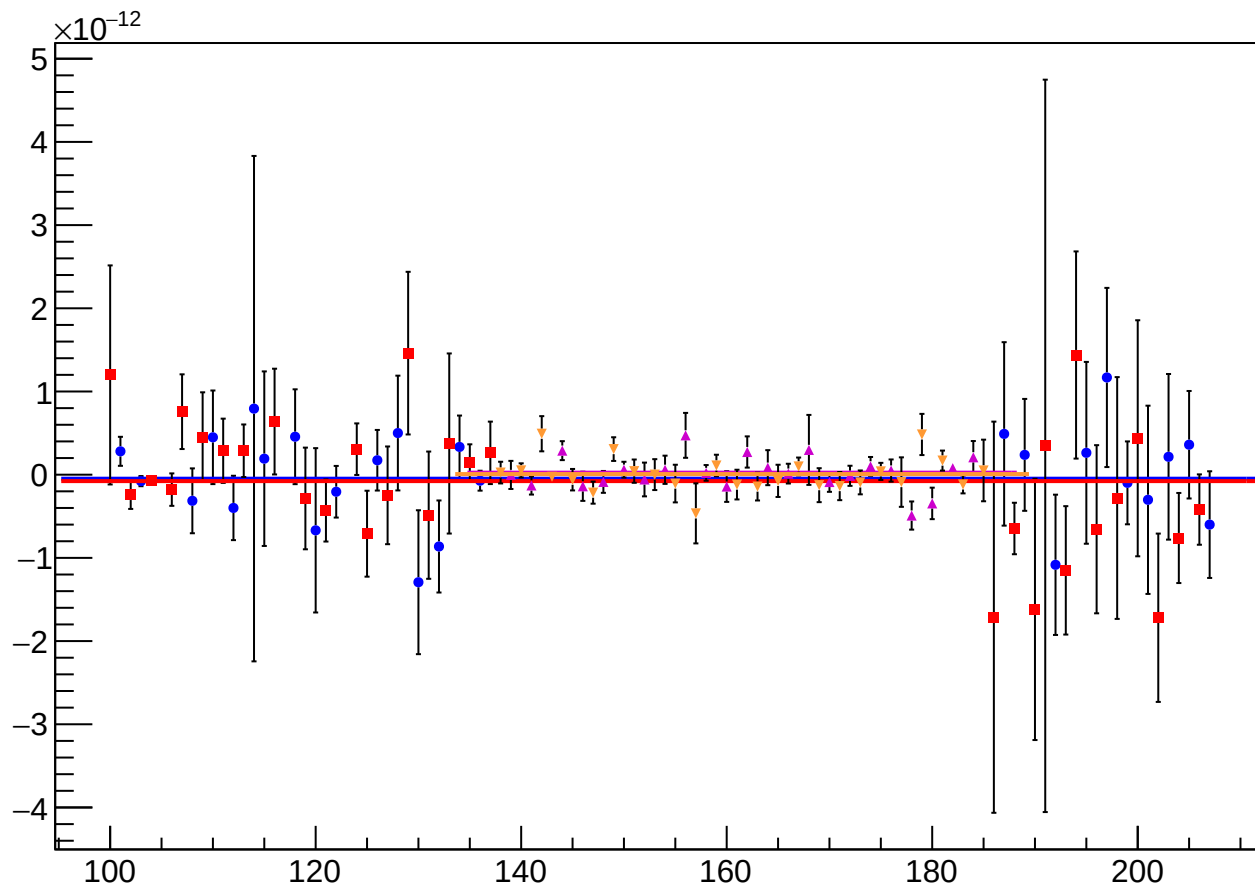
Left In: 4996.720 $\pm$ 0.840  $\chi^2$ /NDF:1095876.8/22

+ sign 4492.994 $\pm$ 0.570  $\chi^2$ /NDF: 5999207.9/50

All: 4500.132 $\pm$ 0.405  $\chi^2$ /NDF: 12673983.4/1

- sign 4507.381 $\pm$ 0.575  $\chi^2$ /NDF: 6674459.9/53

asym\_atl\_avg\_atr\_avg\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 18.3/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 27.1/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 32.6/30

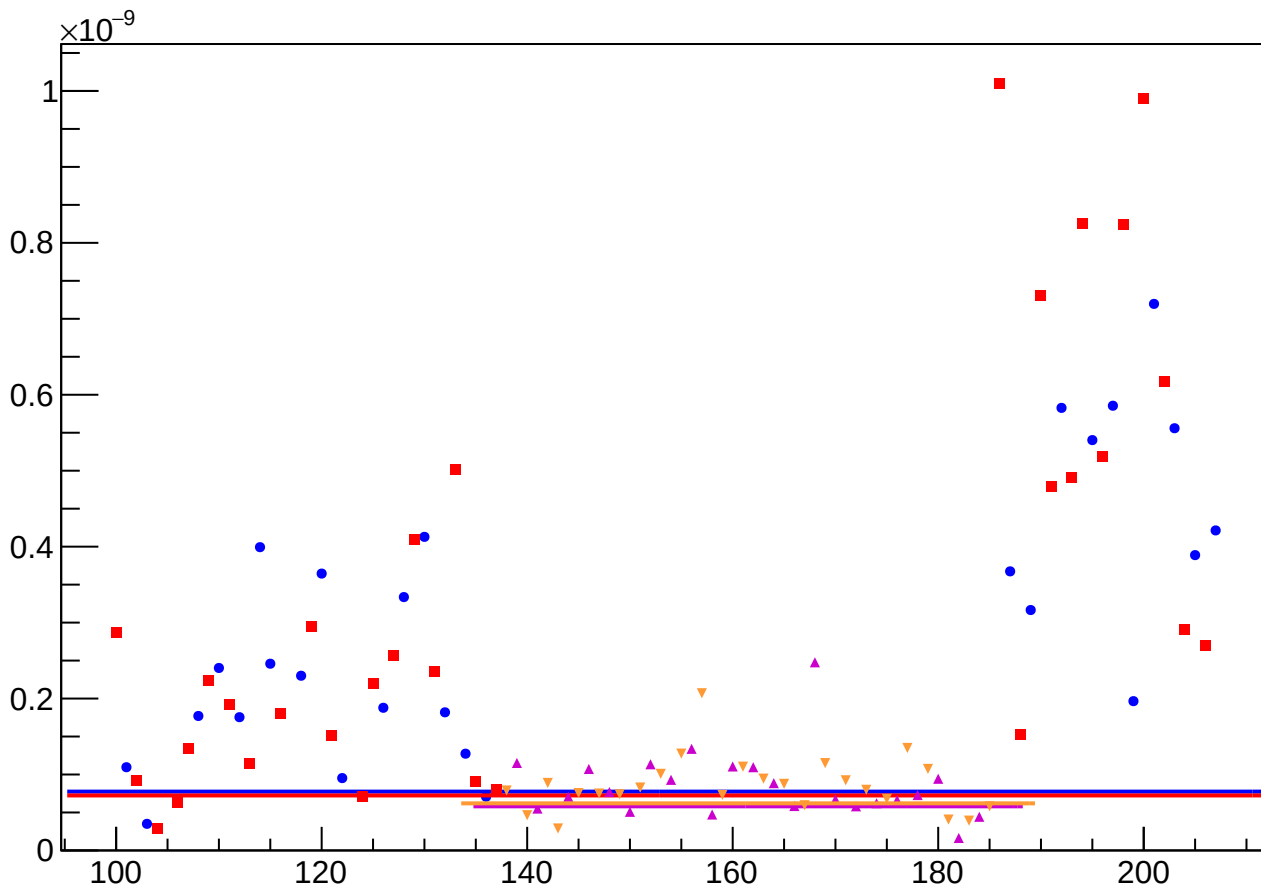
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 31.7/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 46.4/50

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 114.4/104

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 67.9/53

asym\_atl\_avg\_atr\_avg\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6901719.0/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2443383.4/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8275014.2/30

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2966562.8/22

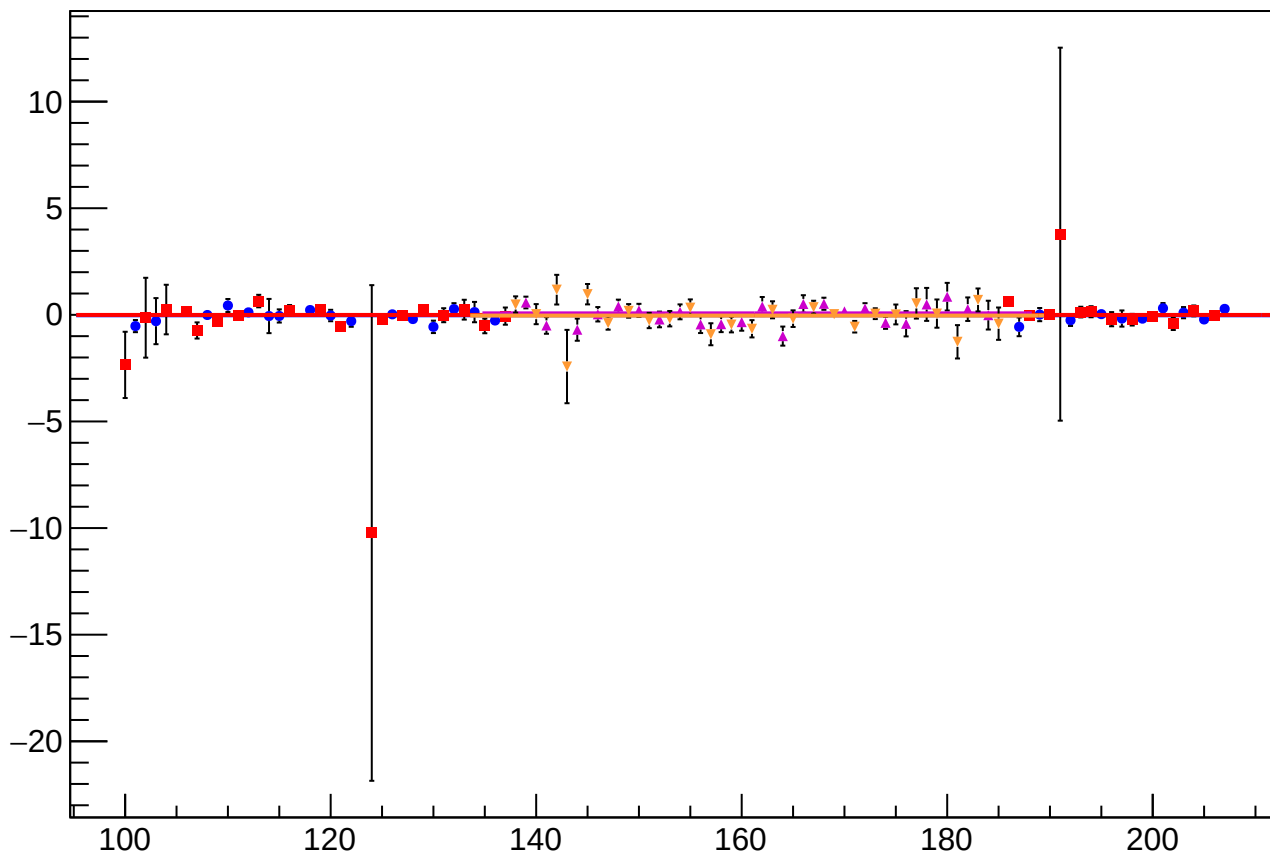
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9507751.1/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 20924652.7/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11386481.4/53



asym\_atl\_avg\_atr\_avg\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.021 \pm 0.049$   $\chi^2/\text{NDF}: 25.7/25$

Left Out:  $-0.035 \pm 0.077$   $\chi^2/\text{NDF}: 32.5/24$

Right Out:  $-0.005 \pm 0.043$   $\chi^2/\text{NDF}: 40.0/30$

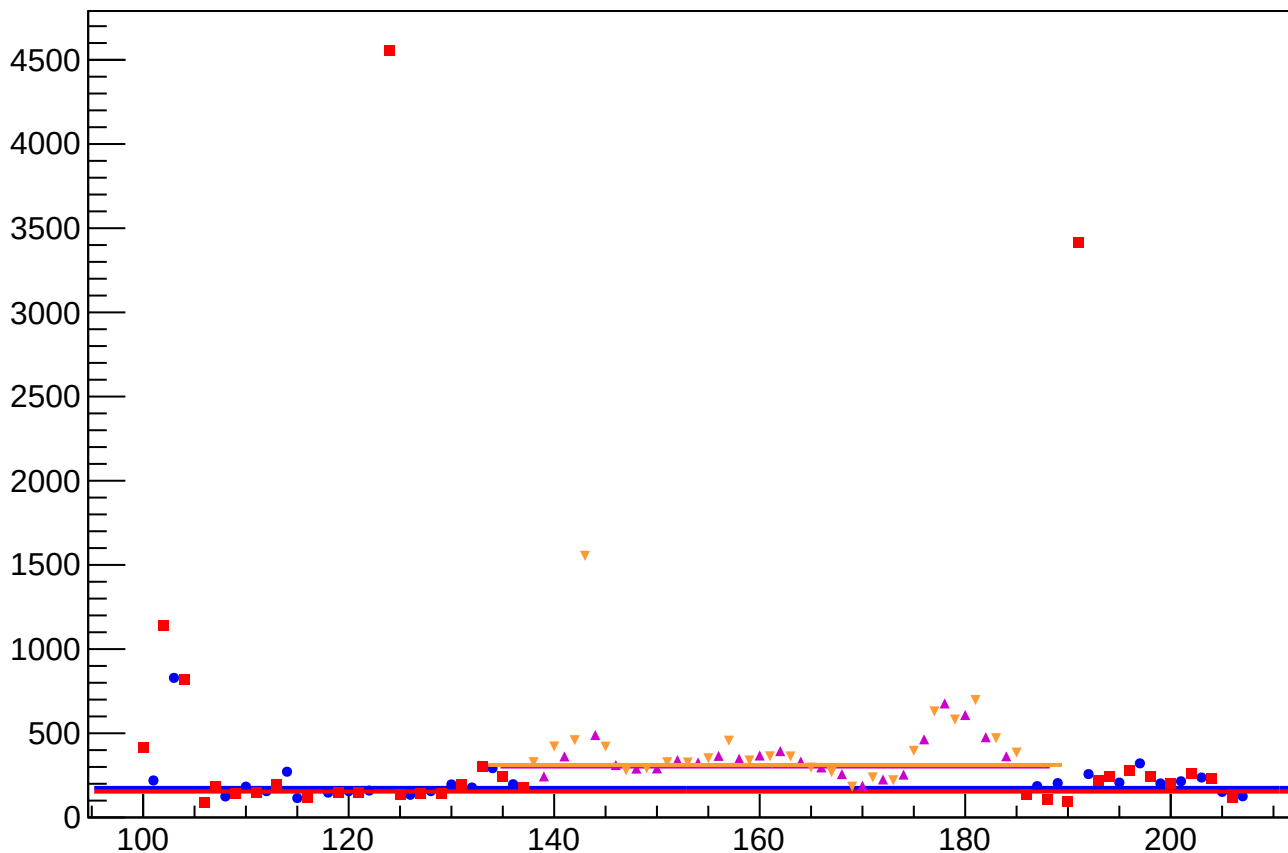
Left In:  $0.069 \pm 0.075$   $\chi^2/\text{NDF}: 29.9/22$

+ sign  $-0.025 \pm 0.041$   $\chi^2/\text{NDF}: 58.3/50$

All:  $-0.003 \pm 0.028$   $\chi^2/\text{NDF}: 129.4/104$

- sign  $0.014 \pm 0.038$   $\chi^2/\text{NDF}: 70.6/53$

asym\_atl\_avg\_atr\_avg\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 175.638 $\pm$ 0.035  $\chi^2$ /NDF: 2325740.3/25

Left Out: 311.961 $\pm$ 0.054  $\chi^2$ /NDF: 4350162.2/24

Right Out: 153.481 $\pm$ 0.031  $\chi^2$ /NDF: 4769527.3/30

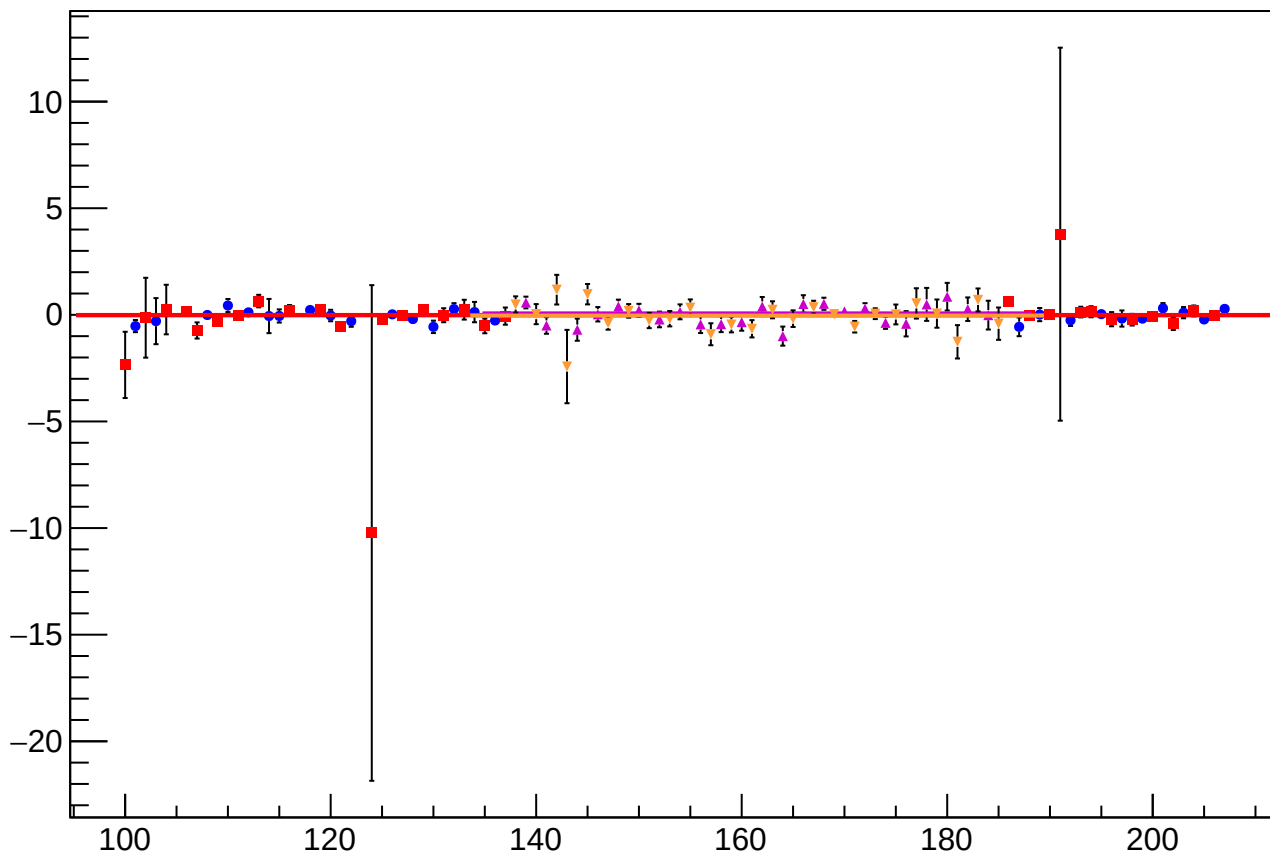
Left In: 302.375 $\pm$ 0.053  $\chi^2$ /NDF: 2808730.8/22

+ sign 215.511 $\pm$ 0.029  $\chi^2$ /NDF: 11148933.3/50

All: 202.006 $\pm$ 0.020  $\chi^2$ /NDF: 25029933.3/10

- sign 190.927 $\pm$ 0.027  $\chi^2$ /NDF: 13494829.3/53

asym\_atl\_avg\_atr\_avg\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.021 \pm 0.049$   $\chi^2/\text{NDF}$ : 25.7/25

Left Out:  $-0.035 \pm 0.077$   $\chi^2/\text{NDF}$ : 32.5/24

Right Out:  $-0.005 \pm 0.043$   $\chi^2/\text{NDF}$ : 40.0/30

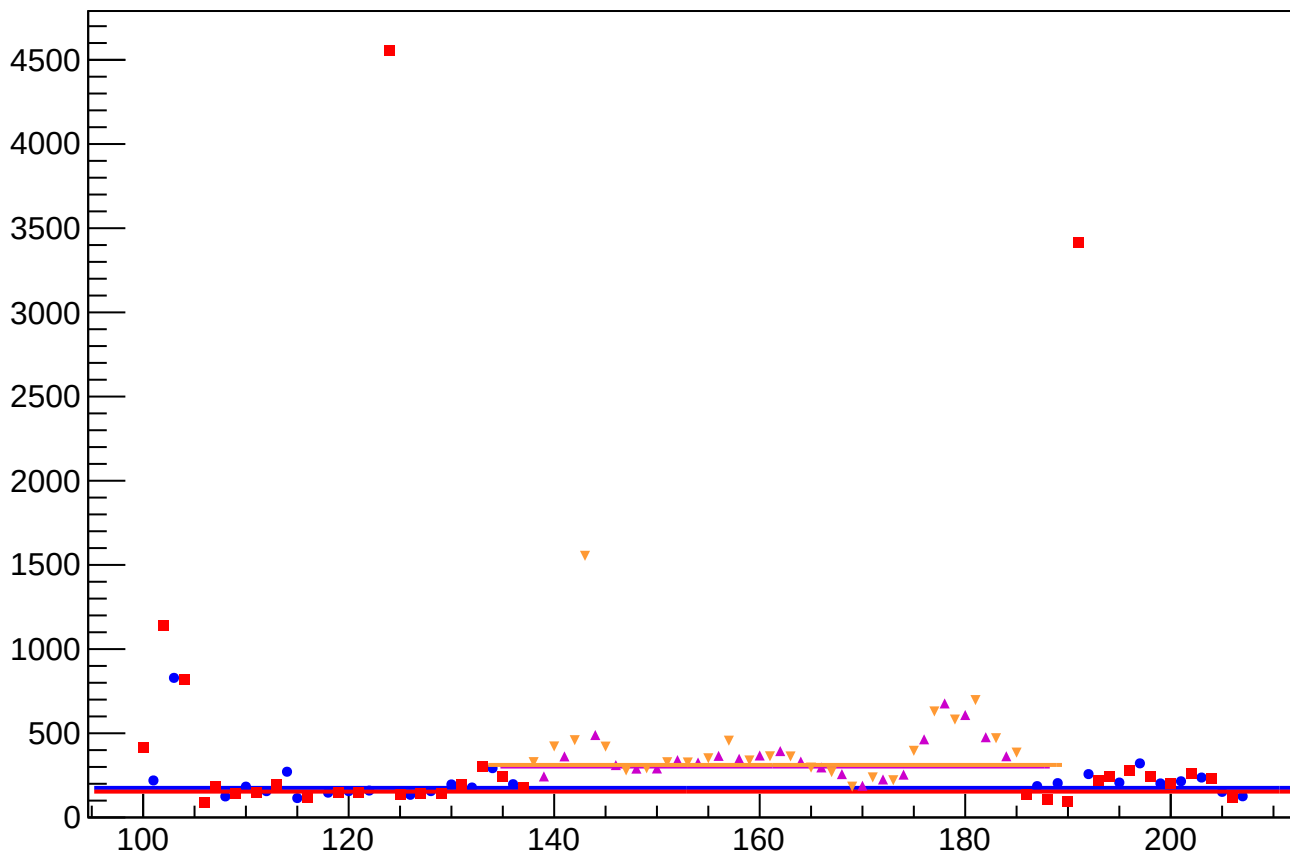
Left In:  $0.069 \pm 0.075$   $\chi^2/\text{NDF}$ : 29.9/22

+ sign  $-0.025 \pm 0.041$   $\chi^2/\text{NDF}$ : 58.3/50

All:  $-0.003 \pm 0.028$   $\chi^2/\text{NDF}$ : 129.4/104

- sign  $0.014 \pm 0.038$   $\chi^2/\text{NDF}$ : 70.6/53

asym\_atl\_avg\_atr\_avg\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 175.638 $\pm$ 0.035  $\chi^2$ /NDF: 2325740.3/25

Left Out: 311.961 $\pm$ 0.054  $\chi^2$ /NDF: 4350162.2/24

Right Out: 153.481 $\pm$ 0.031  $\chi^2$ /NDF: 4769527.3/30

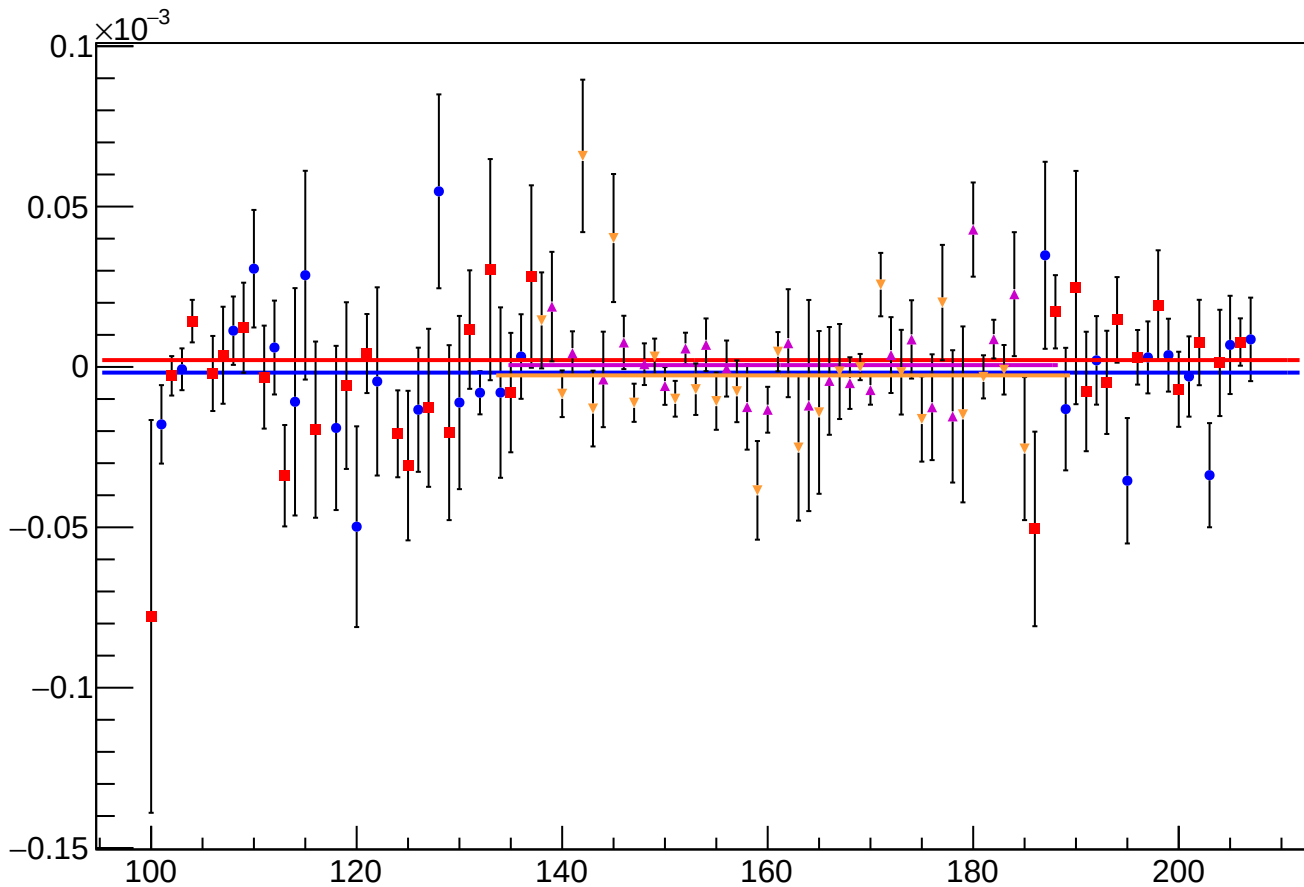
Left In: 302.375 $\pm$ 0.053  $\chi^2$ /NDF: 2808730.8/22

+ sign 215.511 $\pm$ 0.029  $\chi^2$ /NDF: 11148933.3/50

All: 202.006 $\pm$ 0.020  $\chi^2$ /NDF: 25029933.3/10

- sign 190.927 $\pm$ 0.027  $\chi^2$ /NDF: 13494829.3/53

asym\_atl\_avg\_atr\_avg\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2$ /NDF: 25.7/25

Left Out: -0.000+/-0.000  $\chi^2$ /NDF:42.4/24

Right Out: 0.000+/-0.000  $\chi^2$ /NDF: 29.2/30

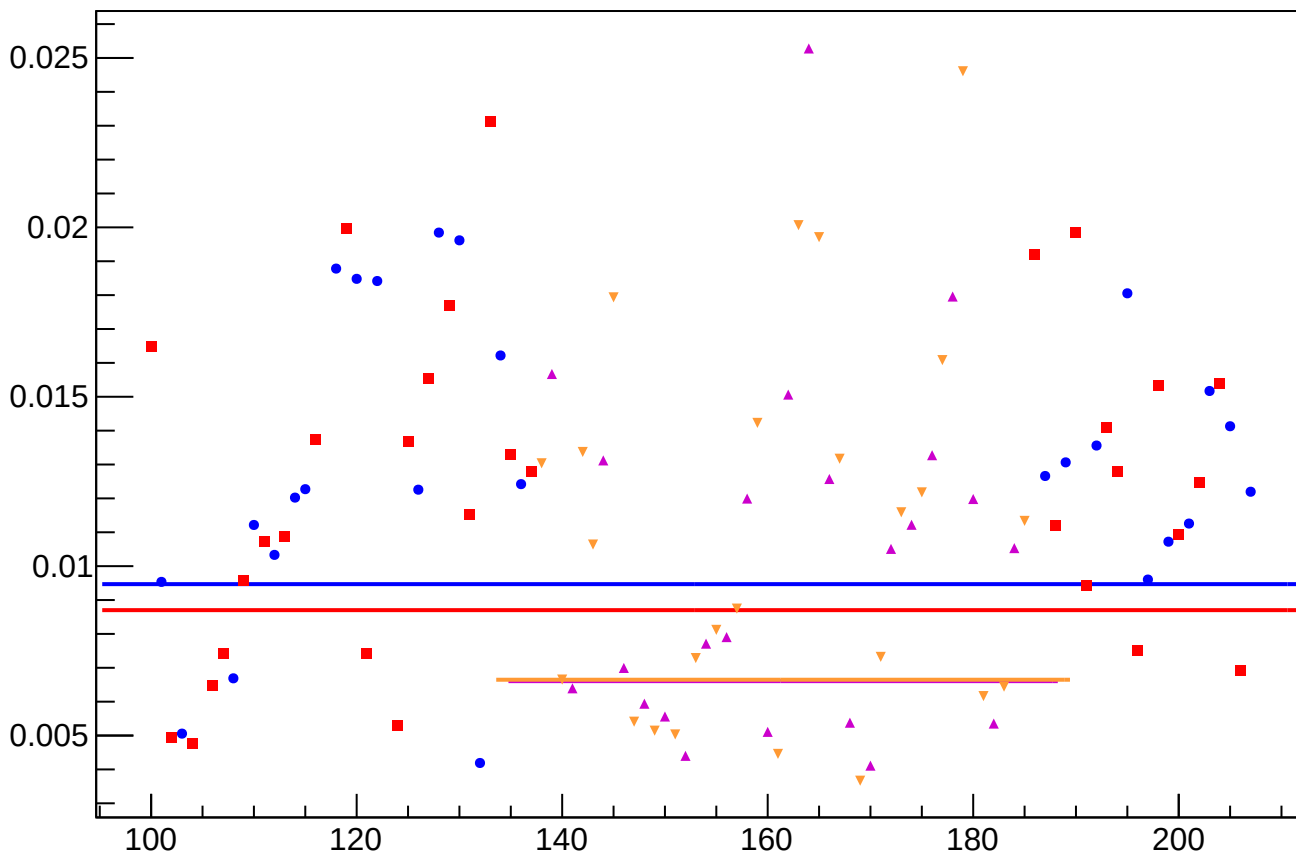
Left In: 0.000+/-0.000  $\chi^2$ /NDF:26.9/22

+ sign -0.000+/-0.000  $\chi^2$ /NDF: 68.2/50

All: -0.000+/-0.000  $\chi^2$ /NDF: 127.5/104

- sign 0.000+/-0.000  $\chi^2$ /NDF: 56.4/53

asym\_atl\_avg\_atr\_avg\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 4978908.0/25

Left Out: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 7513935.6/24

Right Out: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 5209744.5/30

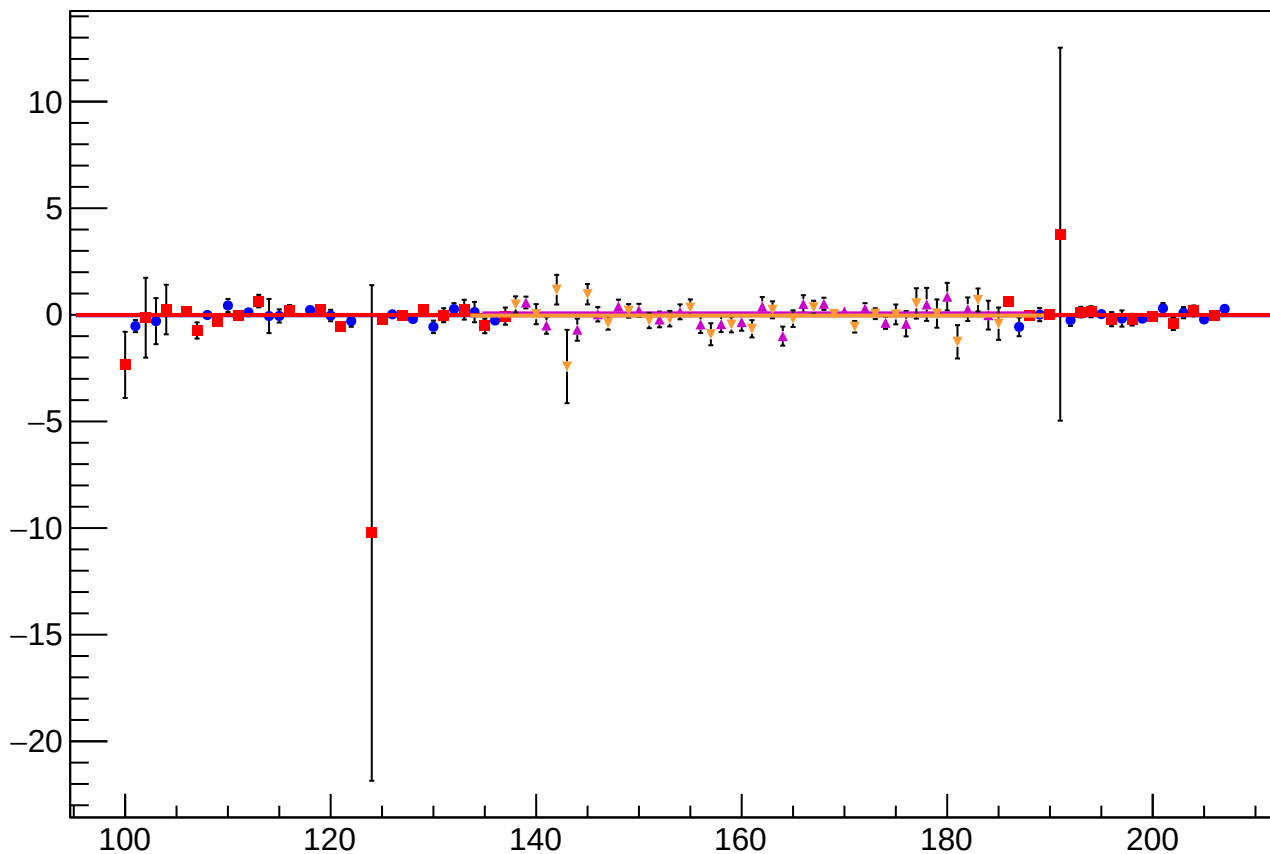
Left In: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 5855747.2/22

+ sign 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 14014670.2/50

All: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 26078675.2/104

- sign 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 12058381.8/53

asym\_atl\_avg\_atr\_avg\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.021 \pm 0.049$   $\chi^2/\text{NDF}$ : 25.7/25

Left Out:  $-0.035 \pm 0.077$   $\chi^2/\text{NDF}$ : 32.5/24

Right Out:  $-0.005 \pm 0.043$   $\chi^2/\text{NDF}$ : 40.0/30

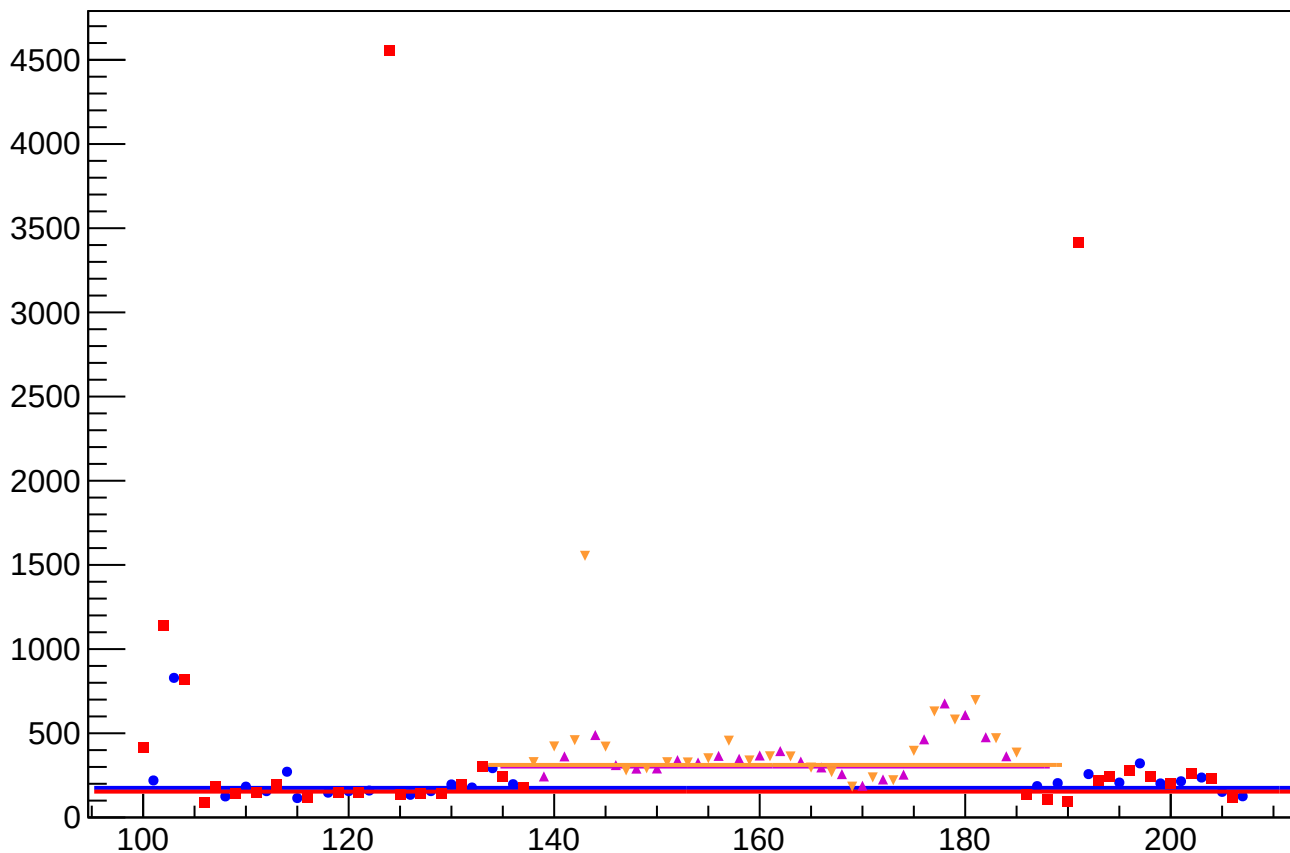
Left In:  $0.069 \pm 0.075$   $\chi^2/\text{NDF}$ : 29.9/22

+ sign  $-0.025 \pm 0.041$   $\chi^2/\text{NDF}$ : 58.3/50

All:  $-0.003 \pm 0.028$   $\chi^2/\text{NDF}$ : 129.4/104

- sign  $0.014 \pm 0.038$   $\chi^2/\text{NDF}$ : 70.6/53

asym\_atl\_avg\_atr\_avg\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 175.637 $\pm$ 0.035  $\chi^2$ /NDF: 2325804.1/25

Left Out: 311.961 $\pm$ 0.054  $\chi^2$ /NDF: 4350376.6/24

Right Out: 153.478 $\pm$ 0.031  $\chi^2$ /NDF: 4769753.7/30

Left In: 302.377 $\pm$ 0.053  $\chi^2$ /NDF: 2808874.8/22

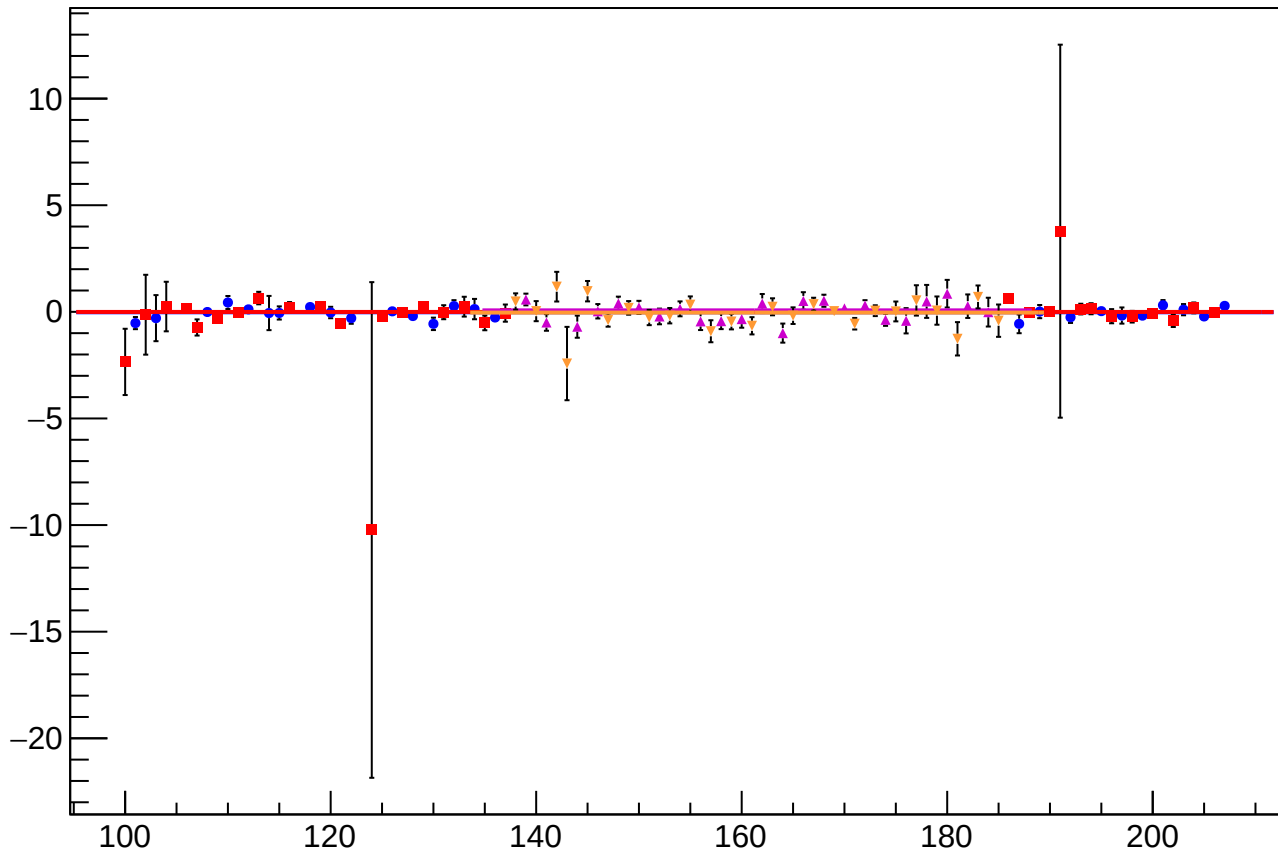
+ sign 215.510 $\pm$ 0.029  $\chi^2$ /NDF: 11149290.7/50

All: 202.004 $\pm$ 0.020  $\chi^2$ /NDF: 25031063.0/10

- sign 190.924 $\pm$ 0.027  $\chi^2$ /NDF: 13495537.8/53



asym\_atl\_avg\_atr\_avg\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.021 \pm 0.049$   $\chi^2/\text{NDF}$ : 25.7/25

Left Out:  $-0.035 \pm 0.077$   $\chi^2/\text{NDF}$ : 32.5/24

Right Out:  $-0.005 \pm 0.043$   $\chi^2/\text{NDF}$ : 40.0/30

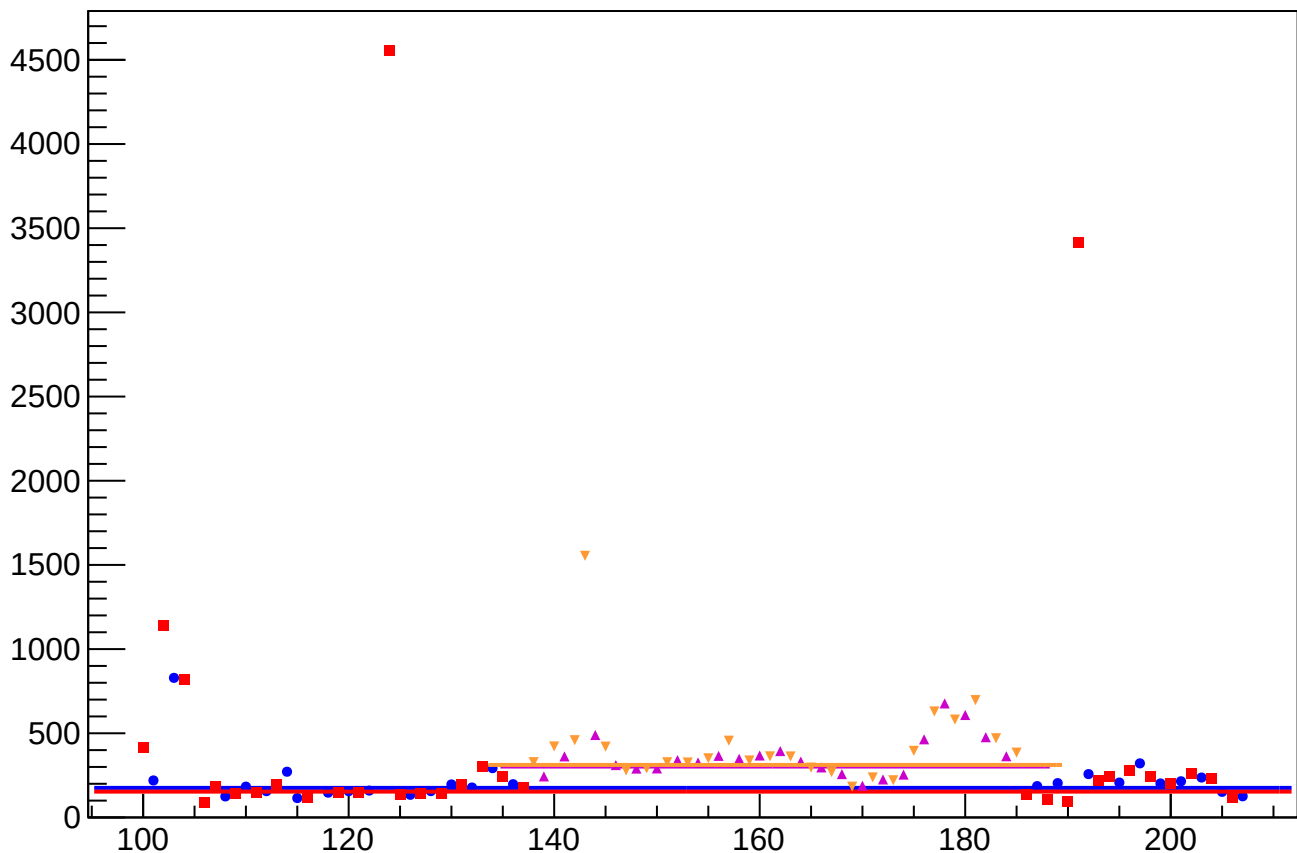
Left In:  $0.069 \pm 0.075$   $\chi^2/\text{NDF}$ : 29.9/22

+ sign  $-0.025 \pm 0.041$   $\chi^2/\text{NDF}$ : 58.3/50

All:  $-0.003 \pm 0.028$   $\chi^2/\text{NDF}$ : 129.4/104

- sign  $0.014 \pm 0.038$   $\chi^2/\text{NDF}$ : 70.6/53

asym\_atl\_avg\_atr\_avg\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 175.637 $\pm$ 0.035  $\chi^2$ /NDF: 2325804.1/25

Left Out: 311.961 $\pm$ 0.054  $\chi^2$ /NDF: 4350376.6/24

Right Out: 153.478 $\pm$ 0.031  $\chi^2$ /NDF: 4769753.7/30

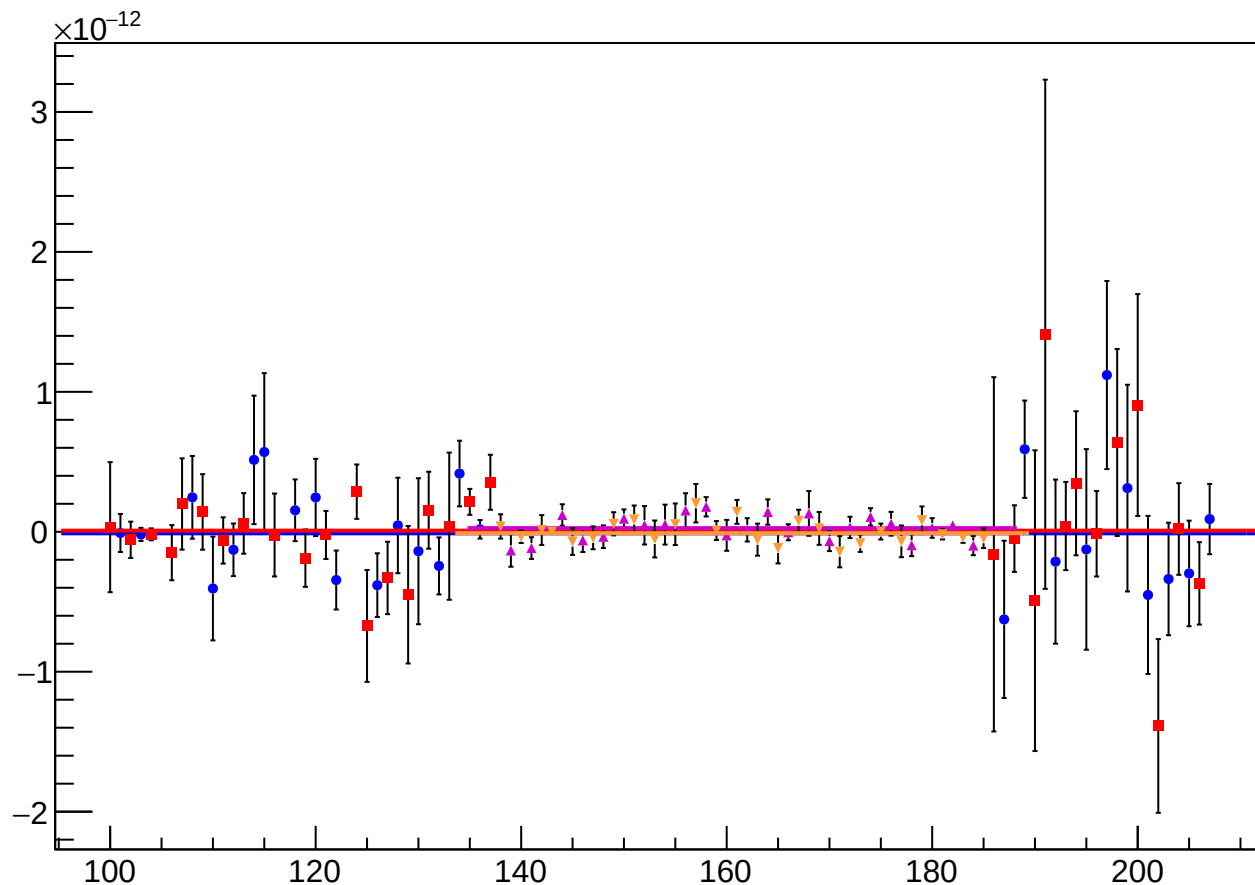
Left In: 302.377 $\pm$ 0.053  $\chi^2$ /NDF: 2808874.8/22

+ sign 215.510 $\pm$ 0.029  $\chi^2$ /NDF: 11149290.7/50

All: 202.004 $\pm$ 0.020  $\chi^2$ /NDF: 25031063.0/100

- sign 190.924 $\pm$ 0.027  $\chi^2$ /NDF: 13495537.8/53

asym\_atl\_avg\_atr\_avg\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2$ /NDF: 25.5/25

Left Out: -0.000+/-0.000  $\chi^2$ /NDF:16.2/24

Right Out: 0.000+/-0.000  $\chi^2$ /NDF: 29.1/30

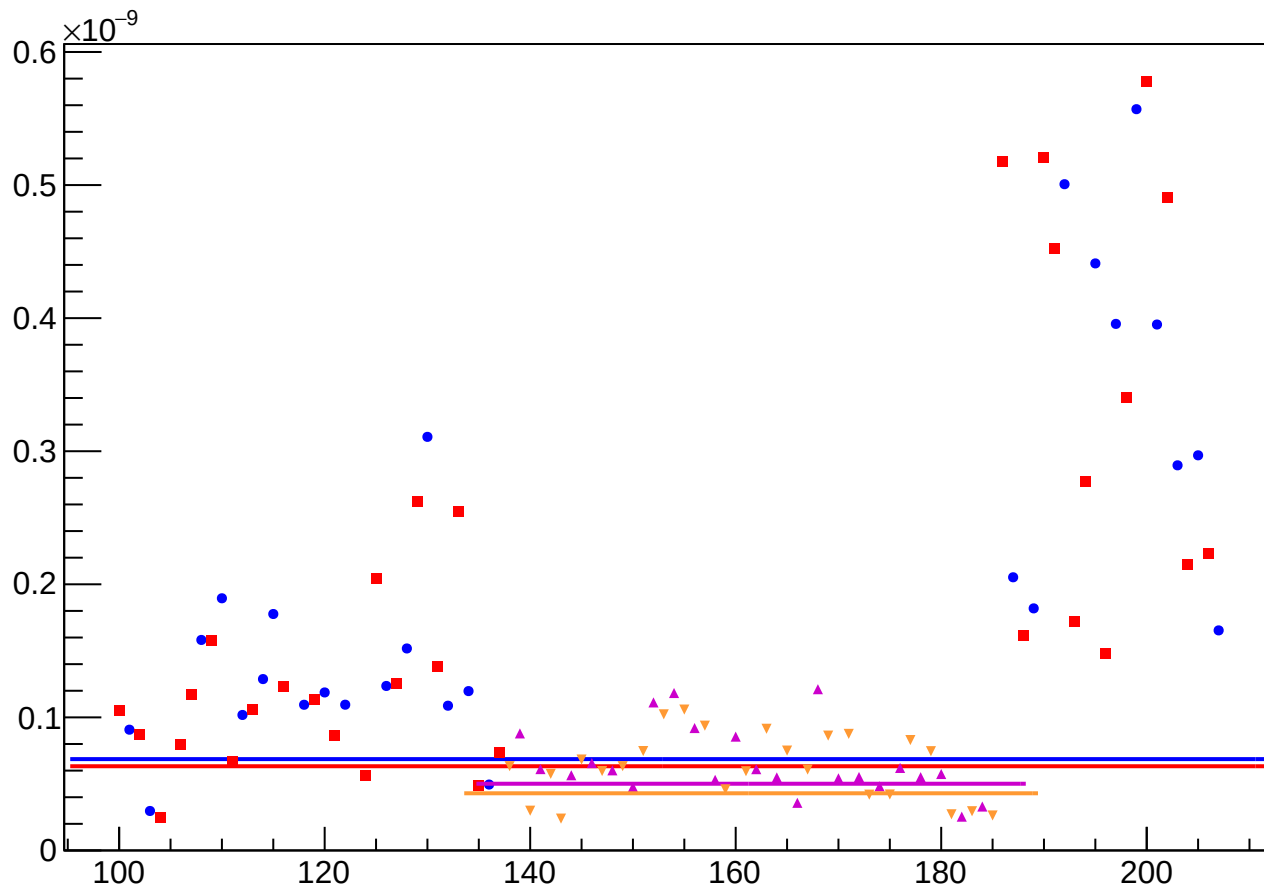
Left In: 0.000+/-0.000  $\chi^2$ /NDF:27.6/22

+ sign -0.000+/-0.000  $\chi^2$ /NDF: 41.7/50

All: 0.000+/-0.000  $\chi^2$ /NDF: 101.8/104

- sign 0.000+/-0.000  $\chi^2$ /NDF: 57.0/53

asym\_atl\_avg\_atr\_avg\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8827123.9/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5074676.1/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8480241.6/30

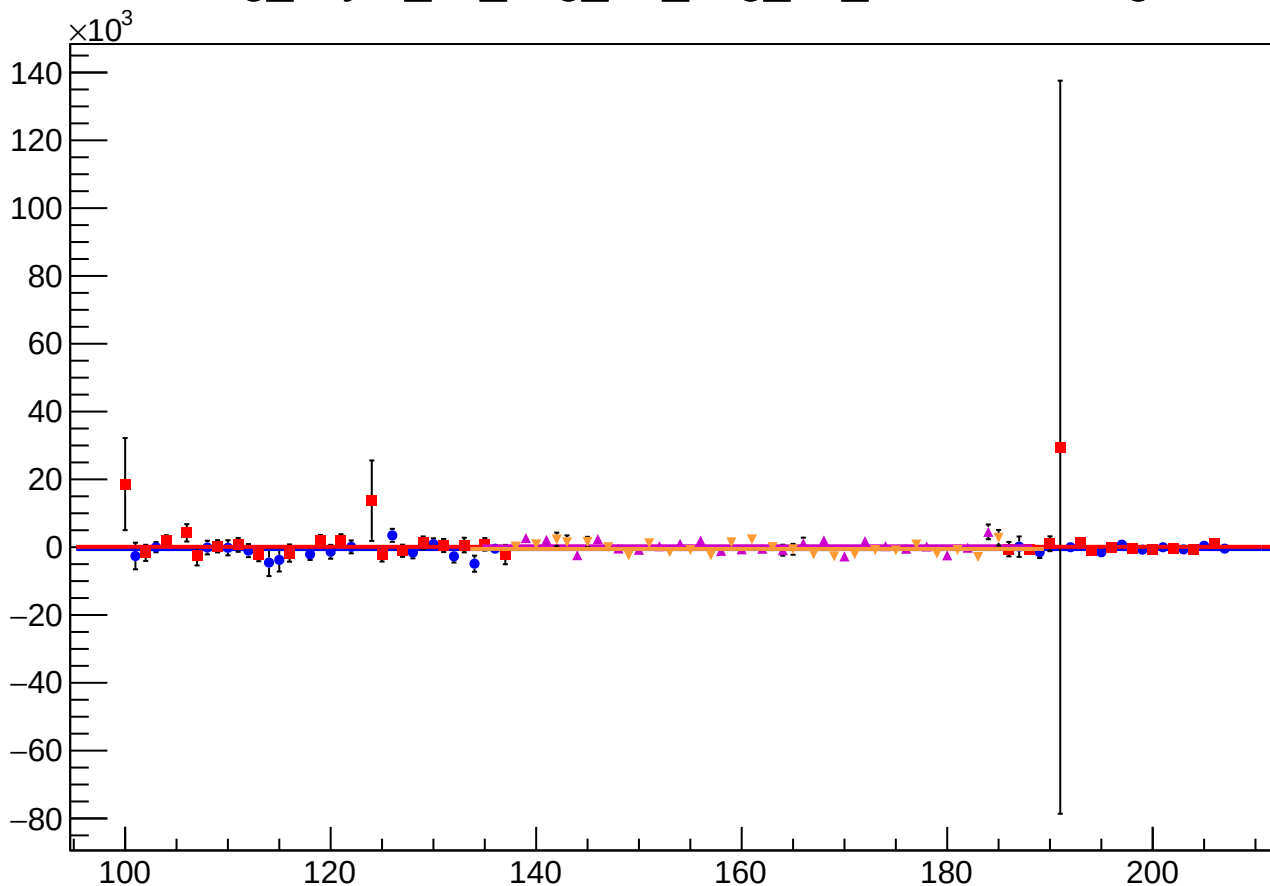
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3611362.7/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14995454.6/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 27595039.4/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12390153.0/53

reg\_asym\_atl\_avg\_atr\_avg\_dd\_mean vs Slug



Right In: -557.922+/-331.748  $\chi^2/\text{NDF}$ : 16.2/25

Left Out: -514.484+/-285.945  $\chi^2/\text{NDF}$ : 30.9/24

Right Out: 106.976+/-322.543  $\chi^2/\text{NDF}$ : 19.6/30

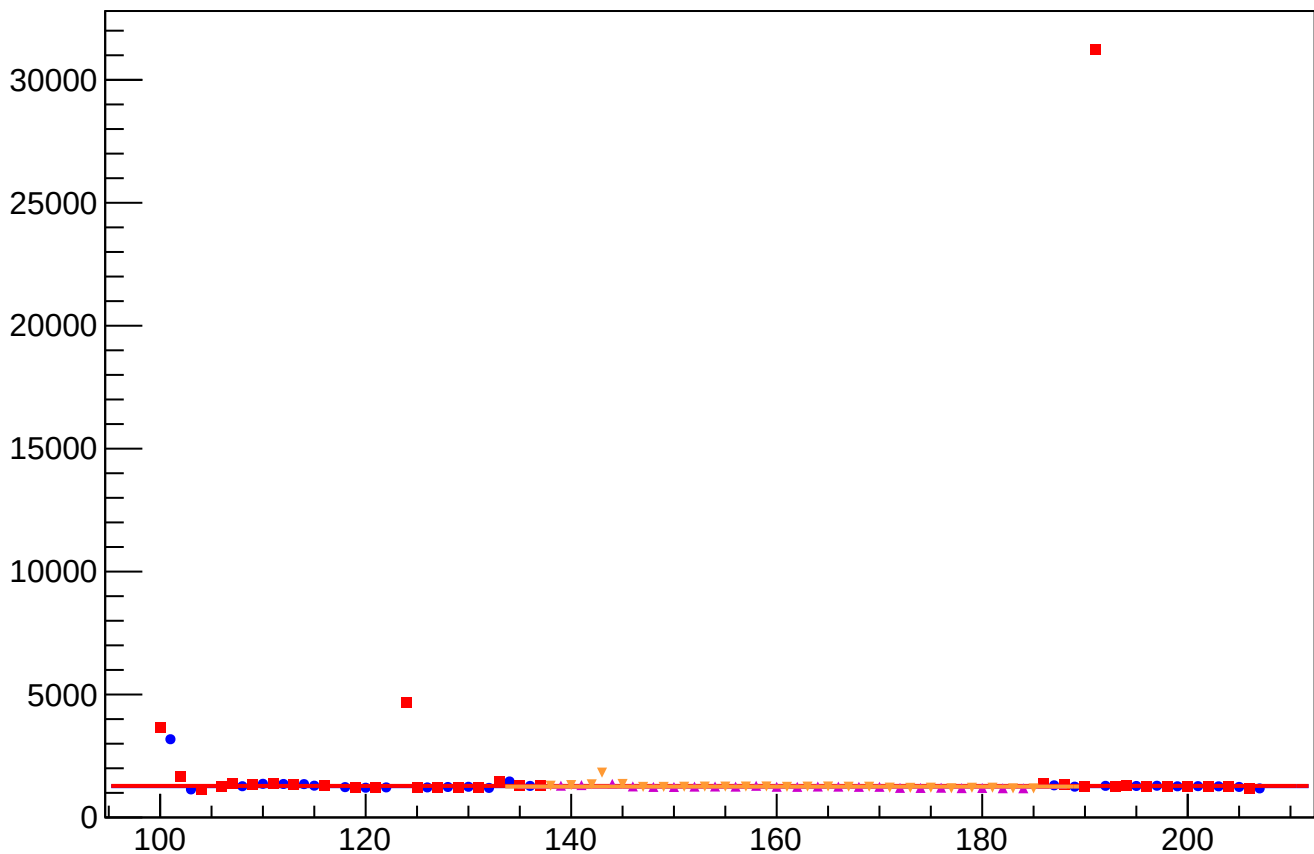
Left In: 242.686+/-291.166  $\chi^2/\text{NDF}$ : 32.0/22

+ sign -533.000+/-216.592  $\chi^2/\text{NDF}$ : 47.2/50

All: -174.861+/-152.990  $\chi^2/\text{NDF}$ : 104.4/104

- sign 181.751+/-216.130  $\chi^2/\text{NDF}$ : 51.8/53

reg\_asym\_atl\_avg\_atr\_avg\_dd\_rms vs Slug



Right In: 1271.870 $\pm$ 0.235  $\chi^2$ /NDF: 532252.5/25

Left Out: 1255.514 $\pm$ 0.202  $\chi^2$ /NDF: 203124.1/24

Right Out: 1283.190 $\pm$ 0.228  $\chi^2$ /NDF: 507237.7/30

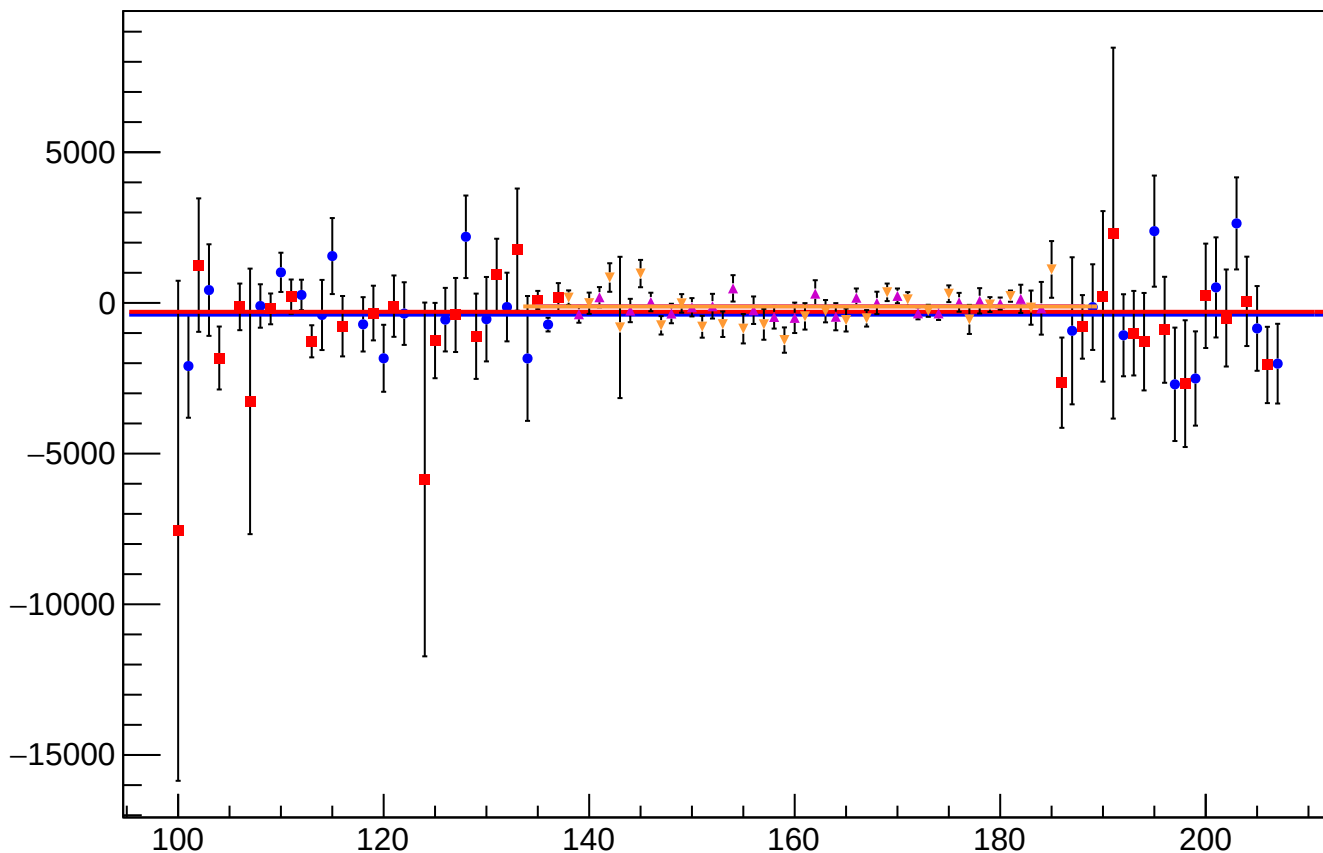
Left In: 1246.355 $\pm$ 0.206  $\chi^2$ /NDF: 39857.0/22

+ sign 1262.486 $\pm$ 0.153  $\chi^2$ /NDF: 738165.9/50

All: 1262.690 $\pm$ 0.108  $\chi^2$ /NDF: 1299636.7/10

- sign 1262.894 $\pm$ 0.153  $\chi^2$ /NDF: 561467.2/53

asym\_atl\_avg\_atr\_avg\_dd\_reg\_correction\_mean vs Slug



Right In:  $-388.665 \pm 159.310$   $\chi^2/\text{NDF}$ : 29.9/25

Left Out:  $-117.028 \pm 65.059$   $\chi^2/\text{NDF}$ : 48.4/24

Right Out:  $-294.835 \pm 159.092$   $\chi^2/\text{NDF}$ : 22.1/30

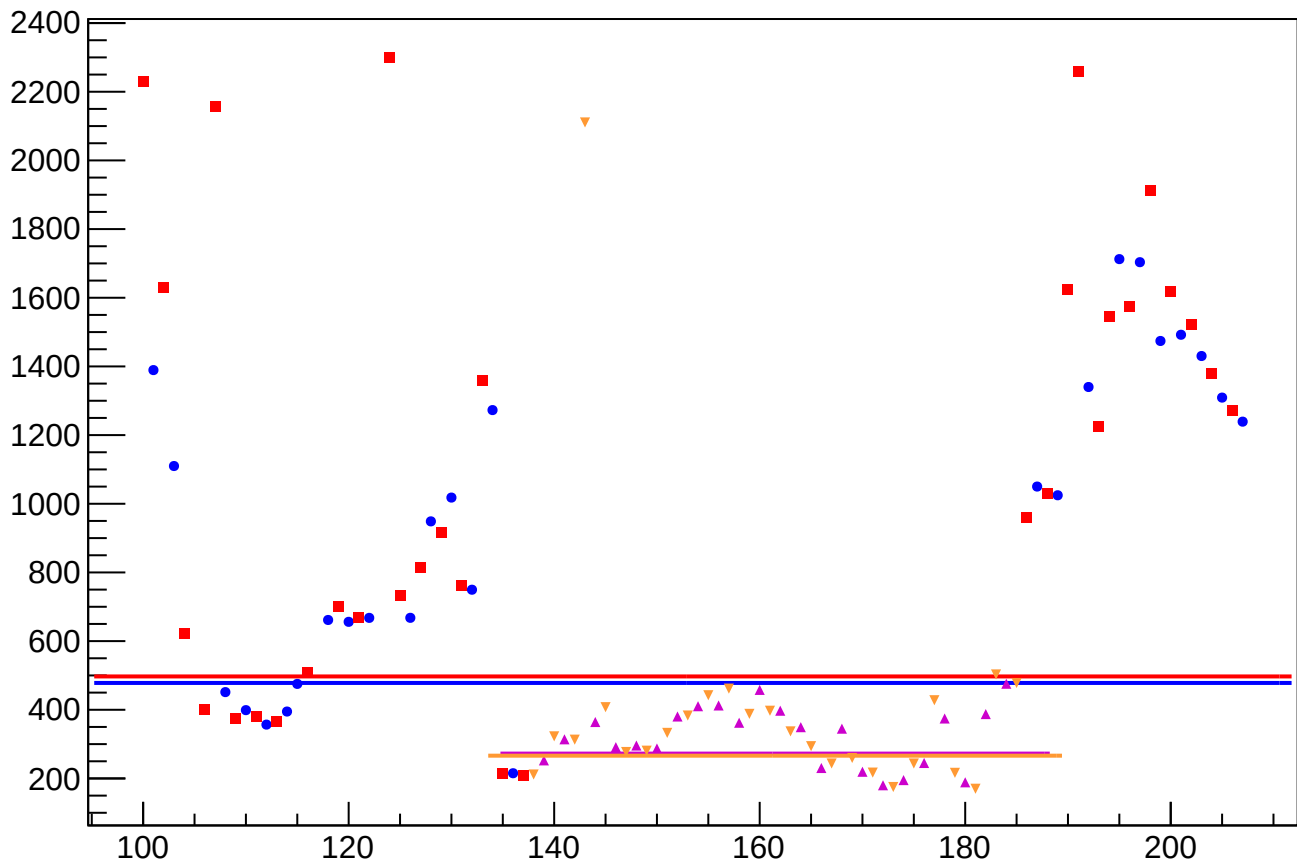
Left In:  $-107.341 \pm 67.001$   $\chi^2/\text{NDF}$ : 13.7/22

+ sign  $-155.855 \pm 60.230$   $\chi^2/\text{NDF}$ : 80.9/50

All:  $-145.973 \pm 43.116$   $\chi^2/\text{NDF}$ : 117.9/104

- sign  $-135.586 \pm 61.748$   $\chi^2/\text{NDF}$ : 37.0/53

asym\_atl\_avg\_atr\_avg\_dd\_reg\_correction\_rms vs Slug



Right In: 478.157+/-0.113  $\chi^2/\text{NDF}$ : 11561746.6/25

Left Out: 266.321+/-0.046  $\chi^2/\text{NDF}$ : 4630130.4/24

Right Out: 497.098+/-0.112  $\chi^2/\text{NDF}$ : 12280216.6/30

Left In: 272.368+/-0.047  $\chi^2/\text{NDF}$ : 2887823.5/22

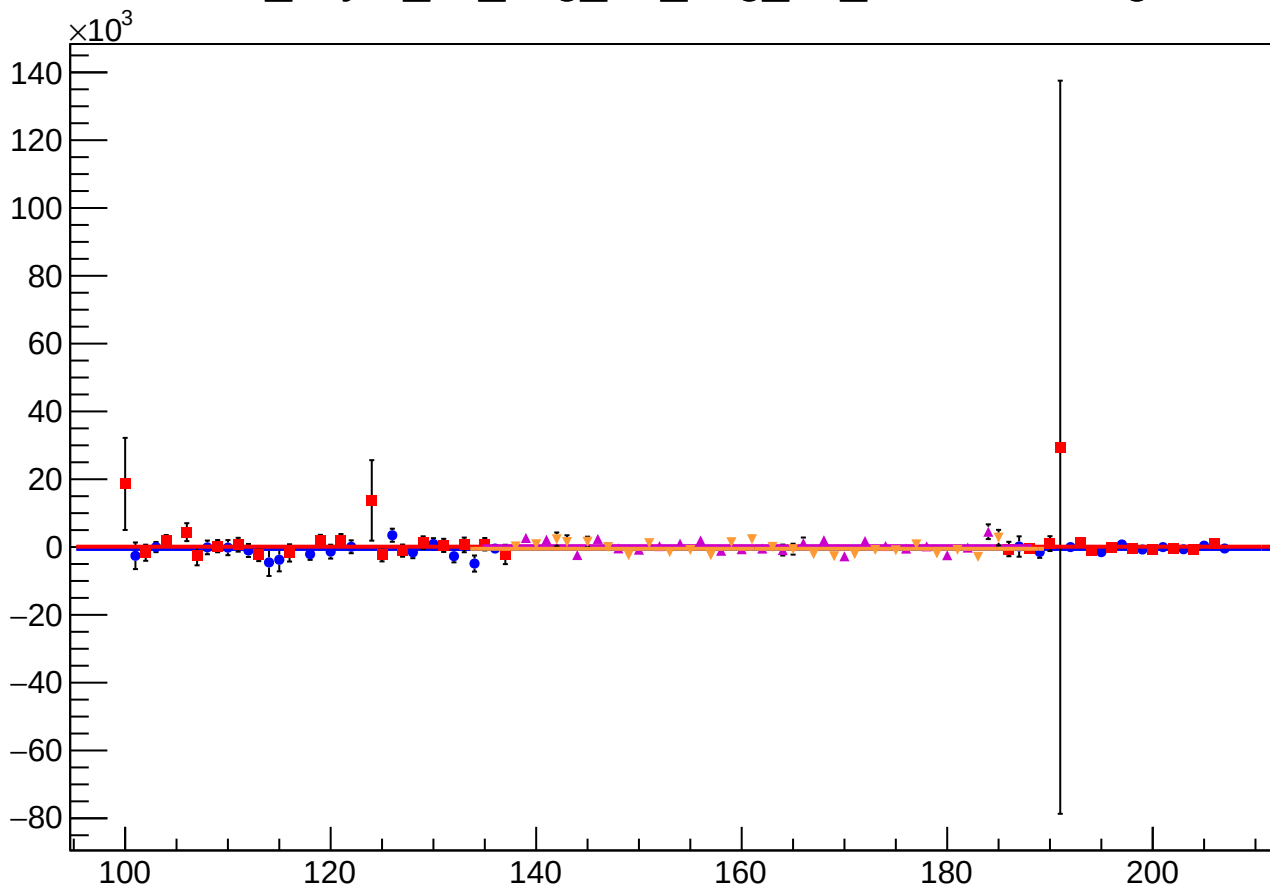
+ sign 296.600+/-0.043  $\chi^2/\text{NDF}$ : 19222676.6/50

All: 301.291+/-0.030  $\chi^2/\text{NDF}$ : 37805187.2/10

- sign 306.222+/-0.044  $\chi^2/\text{NDF}$ : 18557621.8/53



cor\_asym\_atl\_avg\_atr\_avg\_dd\_mean vs Slug



Right In: -557.779+/-331.748  $\chi^2/\text{NDF}$ : 16.2/25

Left Out: -514.430+/-285.945  $\chi^2/\text{NDF}$ : 30.9/24

Right Out: 105.587+/-322.696  $\chi^2/\text{NDF}$ : 19.7/30

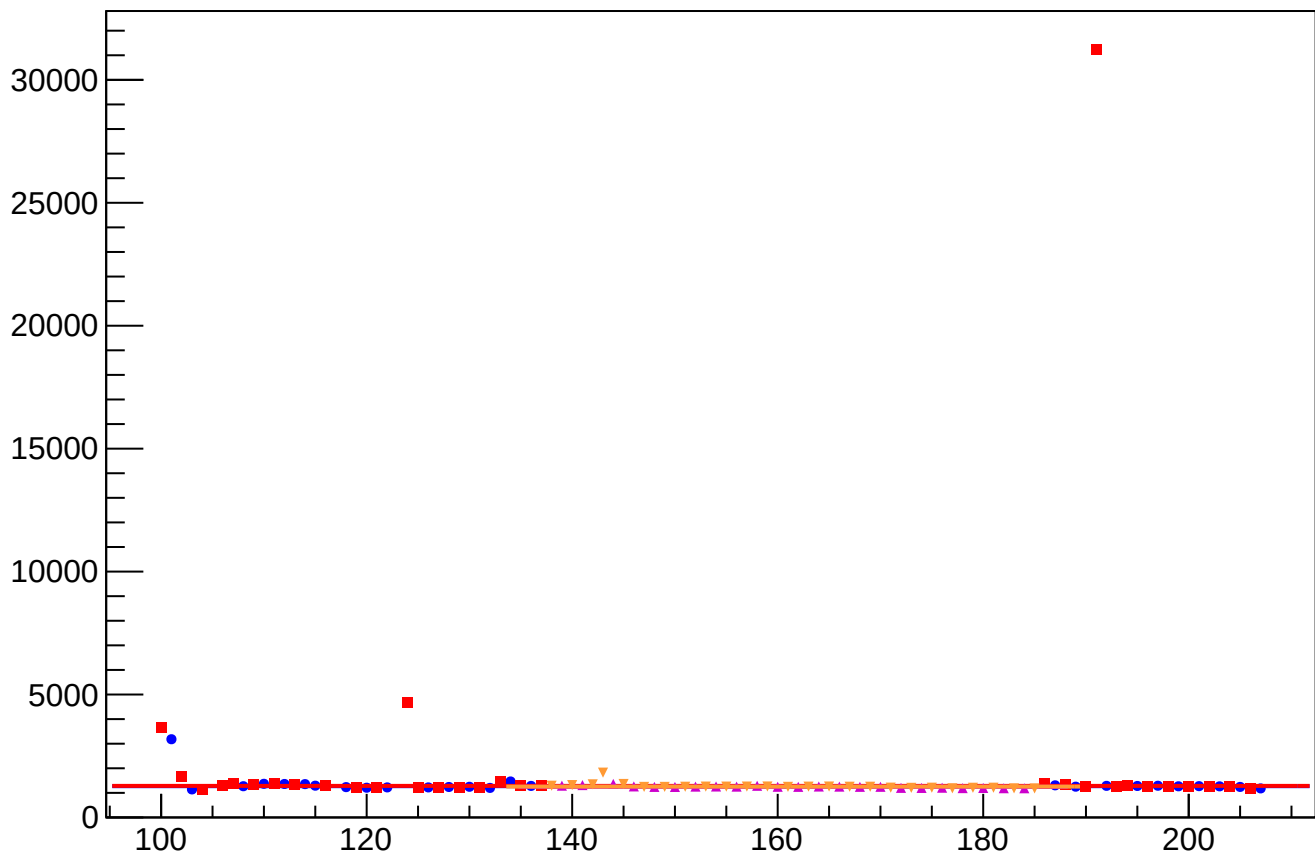
Left In: 242.663+/-291.166  $\chi^2/\text{NDF}$ : 32.0/22

+ sign -532.908+/-216.592  $\chi^2/\text{NDF}$ : 47.1/50

All: -175.194+/-153.006  $\chi^2/\text{NDF}$ : 104.4/104

- sign 181.147+/-216.176  $\chi^2/\text{NDF}$ : 51.8/53

cor\_asym\_atl\_avg\_atr\_avg\_dd\_rms vs Slug



Right In: 1271.870 $\pm$ 0.235  $\chi^2$ /NDF: 532253.9/25

Left Out: 1255.514 $\pm$ 0.202  $\chi^2$ /NDF: 203124.0/24

Right Out: 1283.817 $\pm$ 0.228  $\chi^2$ /NDF: 507229.7/30

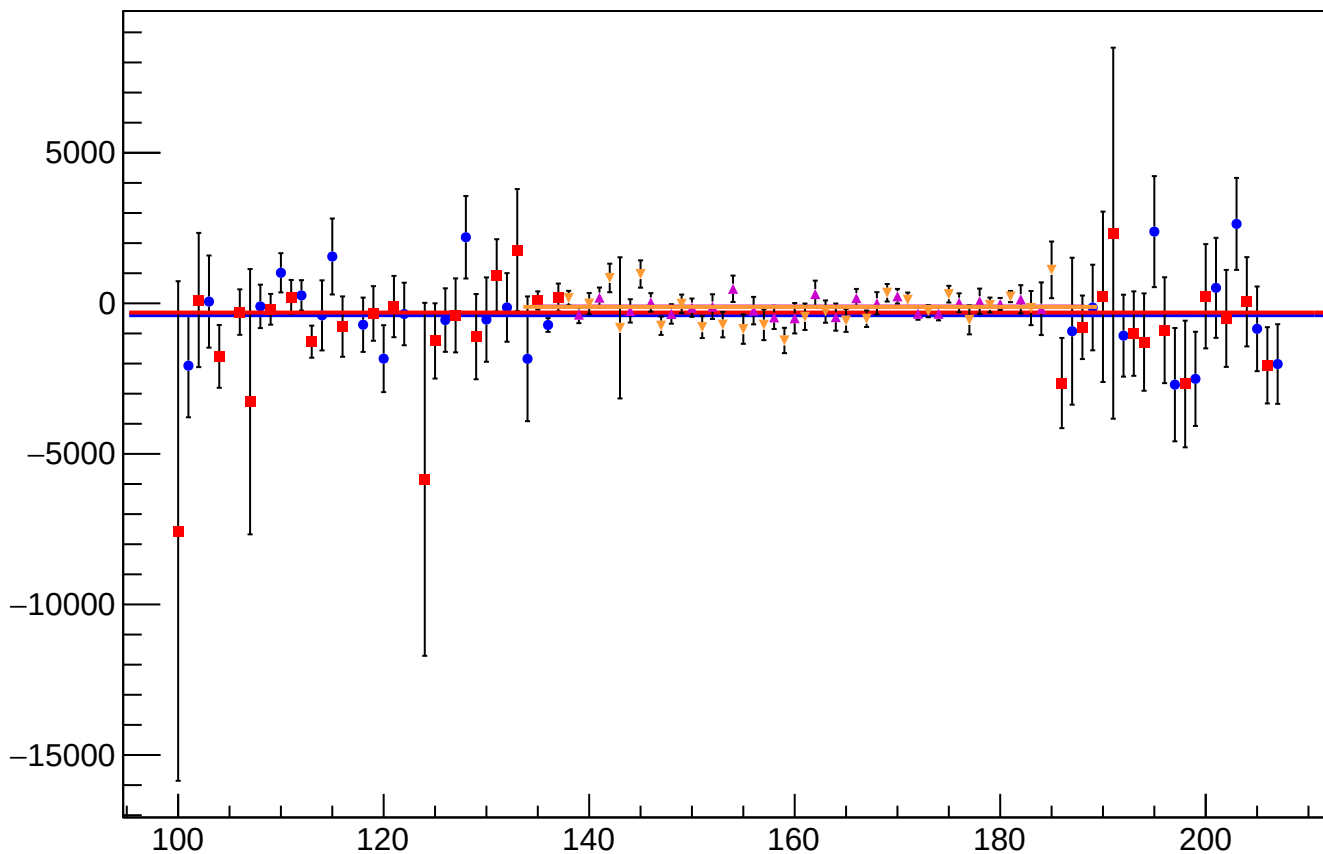
Left In: 1246.355 $\pm$ 0.206  $\chi^2$ /NDF: 39857.0/22

+ sign 1262.486 $\pm$ 0.153  $\chi^2$ /NDF: 738167.3/50

All: 1262.827 $\pm$ 0.108  $\chi^2$ /NDF: 1300121.9/100

- sign 1263.166 $\pm$ 0.153  $\chi^2$ /NDF: 561944.7/53

asym\_atl\_avg\_atr\_avg\_dd\_cor\_correction\_mean vs Slug



Right In:  $-392.667 \pm 159.327$   $\chi^2/\text{NDF}$ : 29.7/25

Left Out:  $-117.002 \pm 65.060$   $\chi^2/\text{NDF}$ : 48.4/24

Right Out:  $-306.237 \pm 158.929$   $\chi^2/\text{NDF}$ : 21.4/30

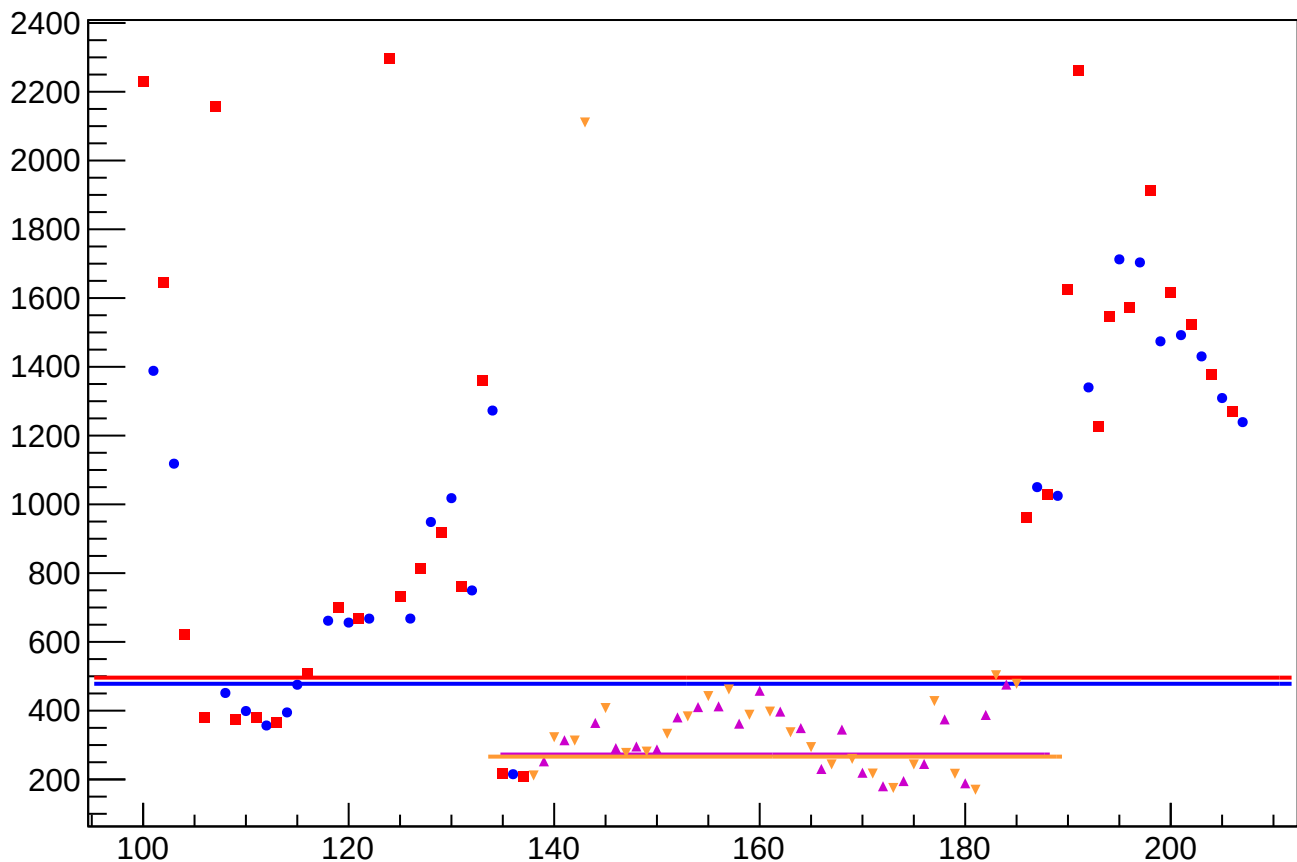
Left In:  $-107.459 \pm 67.003$   $\chi^2/\text{NDF}$ : 13.7/22

+ sign  $-156.399 \pm 60.232$   $\chi^2/\text{NDF}$ : 80.7/50

All:  $-147.162 \pm 43.114$   $\chi^2/\text{NDF}$ : 117.2/104

- sign  $-137.458 \pm 61.740$   $\chi^2/\text{NDF}$ : 36.4/53

asym\_atl\_avg\_atr\_avg\_dd\_cor\_correction\_rms vs Slug



Right In: 478.170 $\pm$ 0.113  $\chi^2$ /NDF: 11564848.5/25

Left Out: 266.326 $\pm$ 0.046  $\chi^2$ /NDF: 4630167.4/24

Right Out: 496.037 $\pm$ 0.112  $\chi^2$ /NDF: 12302824.5/30

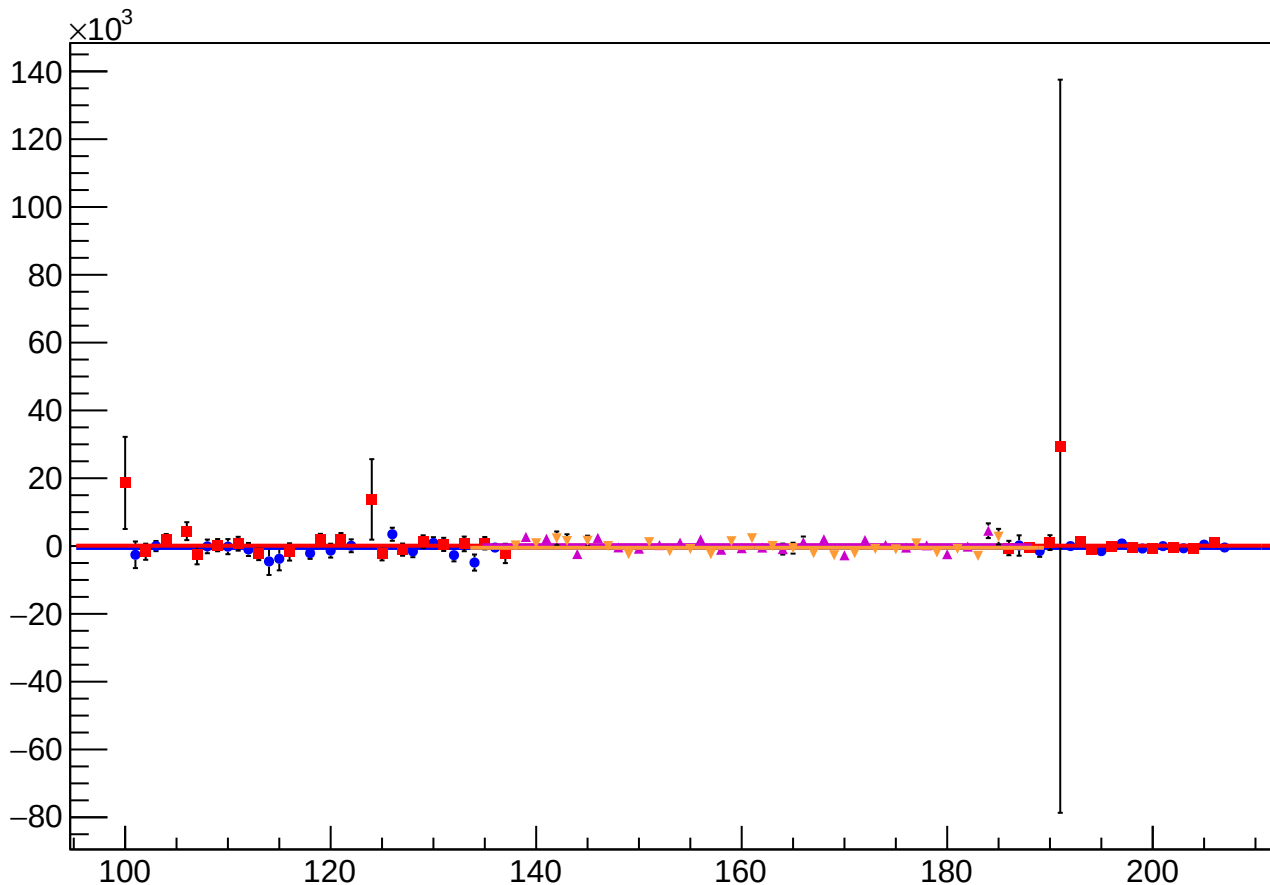
Left In: 272.378 $\pm$ 0.047  $\chi^2$ /NDF: 2887597.1/22

+ sign 296.602 $\pm$ 0.043  $\chi^2$ /NDF: 19225475.5/50

All: 301.249 $\pm$ 0.030  $\chi^2$ /NDF: 37803508.1/10

- sign 306.131 $\pm$ 0.044  $\chi^2$ /NDF: 18553622.3/53

eigen\_cor\_asym\_atl\_avg\_atr\_avg\_dd\_mean vs Slug



Right In:  $-557.779 \pm 331.748$   $\chi^2/\text{NDF}$ : 16.2/25

Left Out:  $-514.430 \pm 285.945$   $\chi^2/\text{NDF}$ : 30.9/24

Right Out:  $105.587 \pm 322.696$   $\chi^2/\text{NDF}$ : 19.7/30

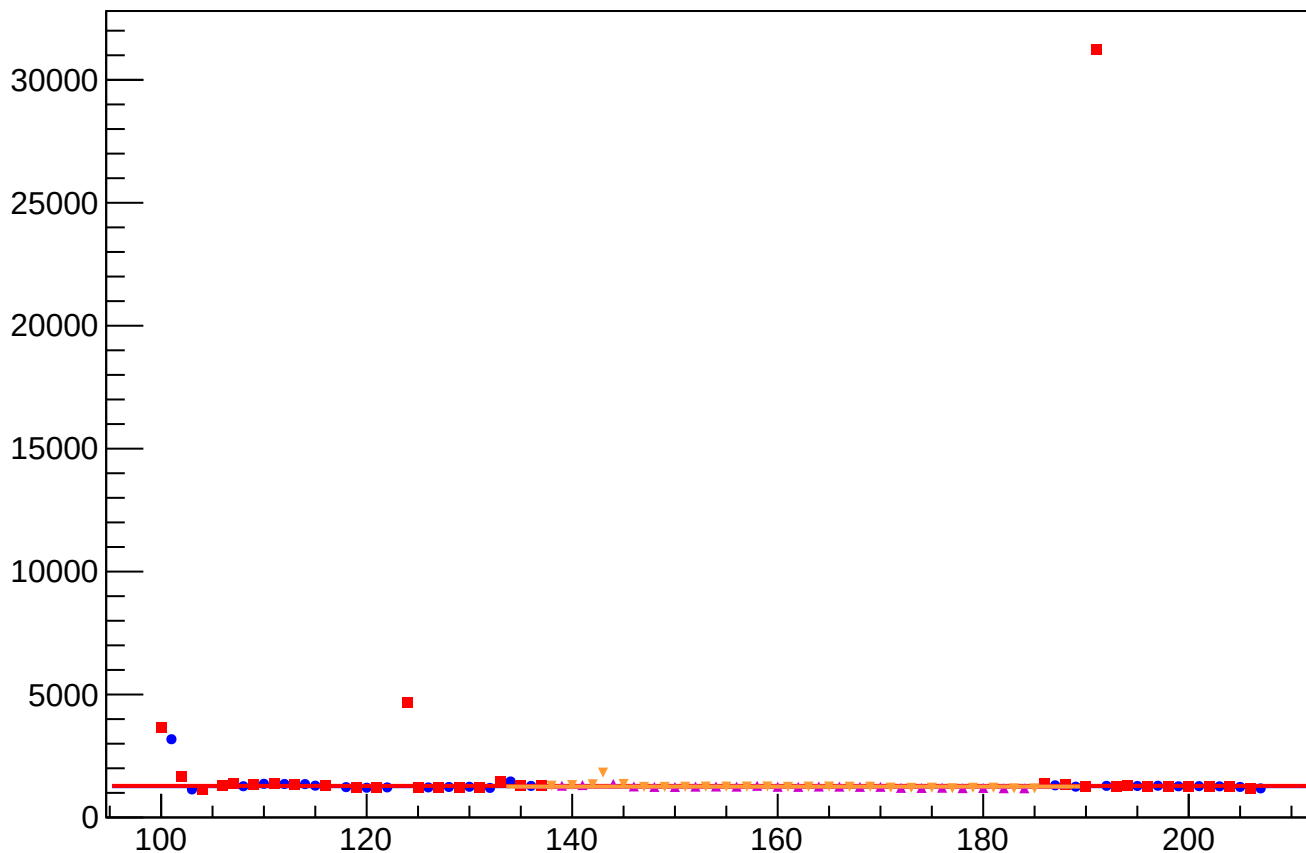
Left In:  $242.663 \pm 291.166$   $\chi^2/\text{NDF}$ : 32.0/22

+ sign  $-532.908 \pm 216.592$   $\chi^2/\text{NDF}$ : 47.1/50

All:  $-175.194 \pm 153.006$   $\chi^2/\text{NDF}$ : 104.4/104

- sign  $181.147 \pm 216.176$   $\chi^2/\text{NDF}$ : 51.8/53

eigen\_cor\_asym\_atl\_avg\_atr\_avg\_dd\_rms vs Slug



Right In: 1271.870 $\pm$ 0.235  $\chi^2$ /NDF: 532253.9/25

Left Out: 1255.514 $\pm$ 0.202  $\chi^2$ /NDF: 203124.0/24

Right Out: 1283.817 $\pm$ 0.228  $\chi^2$ /NDF: 507229.7/30

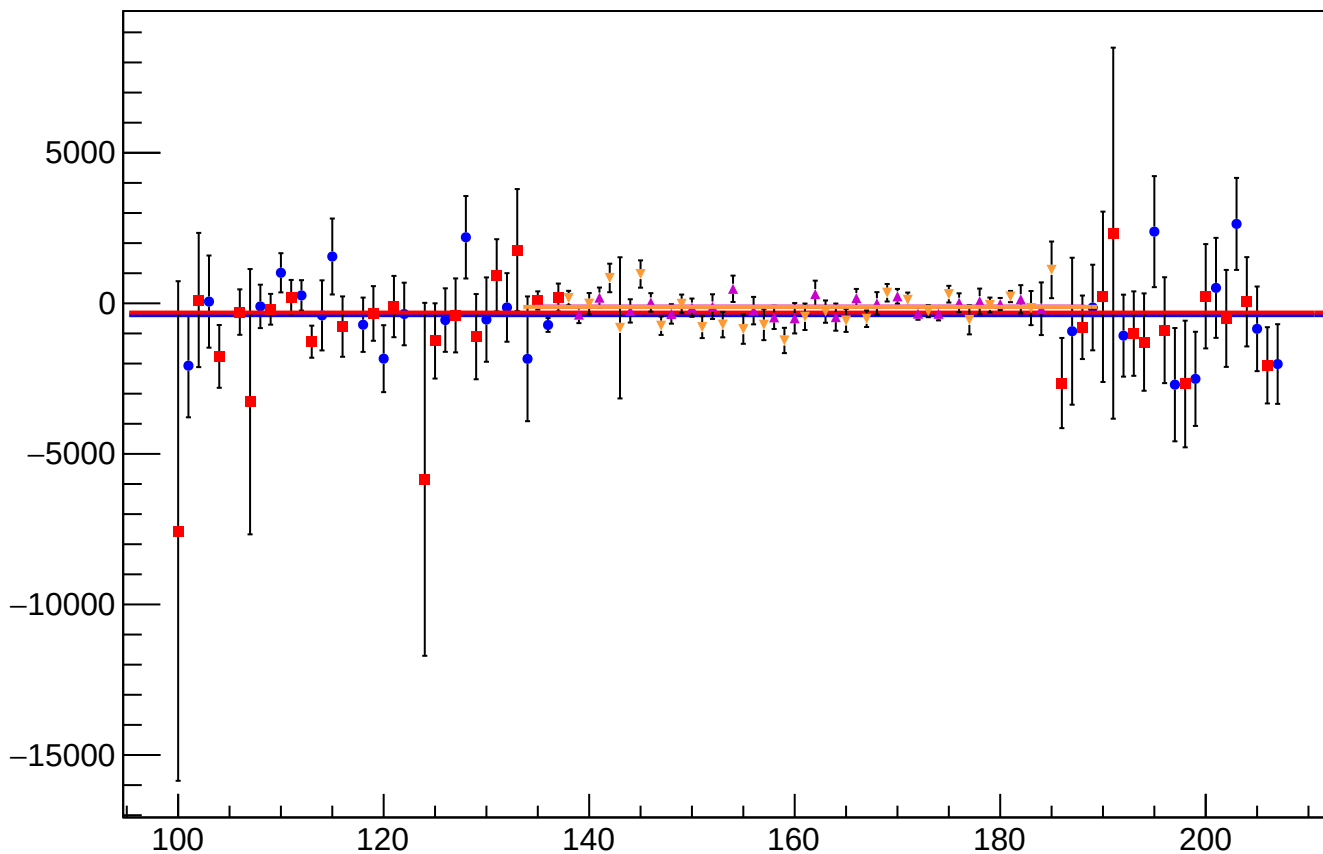
Left In: 1246.355 $\pm$ 0.206  $\chi^2$ /NDF: 39857.0/22

+ sign 1262.486 $\pm$ 0.153  $\chi^2$ /NDF: 738167.3/50

All: 1262.827 $\pm$ 0.108  $\chi^2$ /NDF: 1300121.9/100

- sign 1263.166 $\pm$ 0.153  $\chi^2$ /NDF: 561944.7/53

asym\_atl\_avg\_atr\_avg\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-392.667 \pm 159.327$   $\chi^2/\text{NDF}$ : 29.7/25

Left Out:  $-117.002 \pm 65.060$   $\chi^2/\text{NDF}$ : 48.4/24

Right Out:  $-306.237 \pm 158.929$   $\chi^2/\text{NDF}$ : 21.4/30

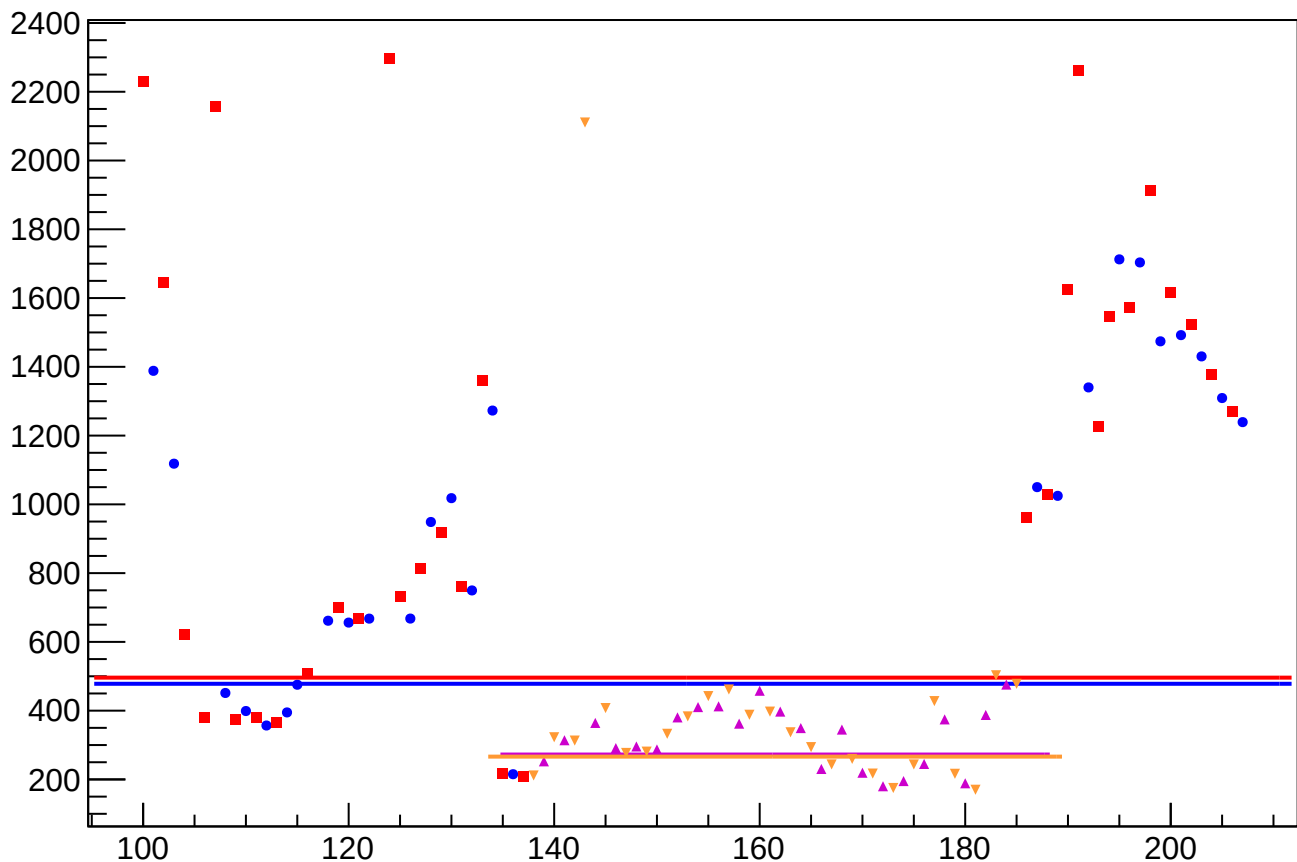
Left In:  $-107.459 \pm 67.003$   $\chi^2/\text{NDF}$ : 13.7/22

+ sign  $-156.399 \pm 60.232$   $\chi^2/\text{NDF}$ : 80.7/50

All:  $-147.162 \pm 43.114$   $\chi^2/\text{NDF}$ : 117.2/104

- sign  $-137.458 \pm 61.740$   $\chi^2/\text{NDF}$ : 36.4/53

asym\_atl\_avg\_atr\_avg\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 478.170 $\pm$ 0.113  $\chi^2$ /NDF: 11564848.5/25

Left Out: 266.326 $\pm$ 0.046  $\chi^2$ /NDF: 4630167.4/24

Right Out: 496.037 $\pm$ 0.112  $\chi^2$ /NDF: 12302824.5/30

Left In: 272.378 $\pm$ 0.047  $\chi^2$ /NDF: 2887597.1/22

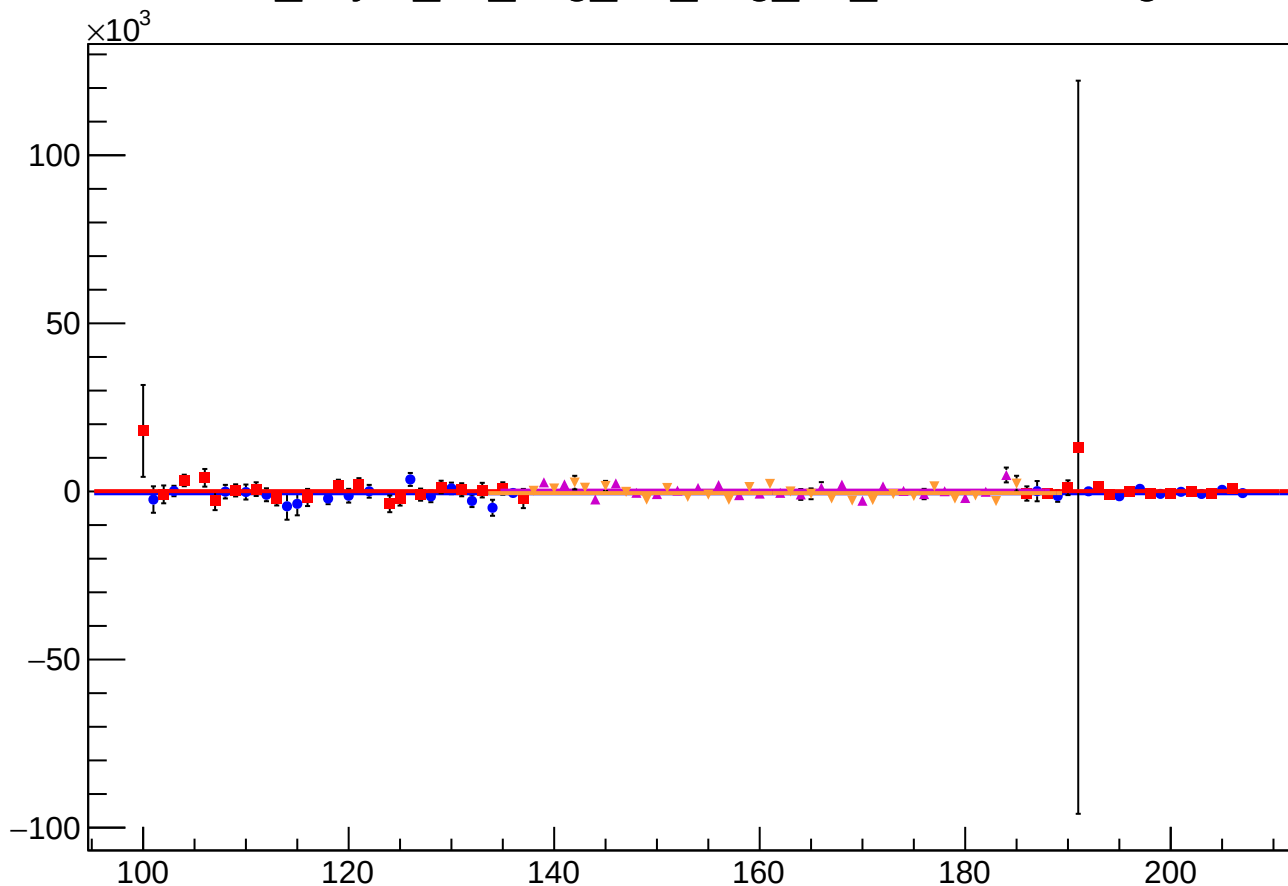
+ sign 296.602 $\pm$ 0.043  $\chi^2$ /NDF: 19225475.5/50

All: 301.249 $\pm$ 0.030  $\chi^2$ /NDF: 37803508.1/10

- sign 306.131 $\pm$ 0.044  $\chi^2$ /NDF: 18553622.3/53



dit\_asym\_atl\_avg\_atr\_avg\_dd\_mean vs Slug



Right In: -545.336+/-332.798  $\chi^2/\text{NDF}$ : 16.3/25

Left Out: -493.436+/-282.734  $\chi^2/\text{NDF}$ : 34.2/24

Right Out: 91.096+/-321.978  $\chi^2/\text{NDF}$ : 21.3/30

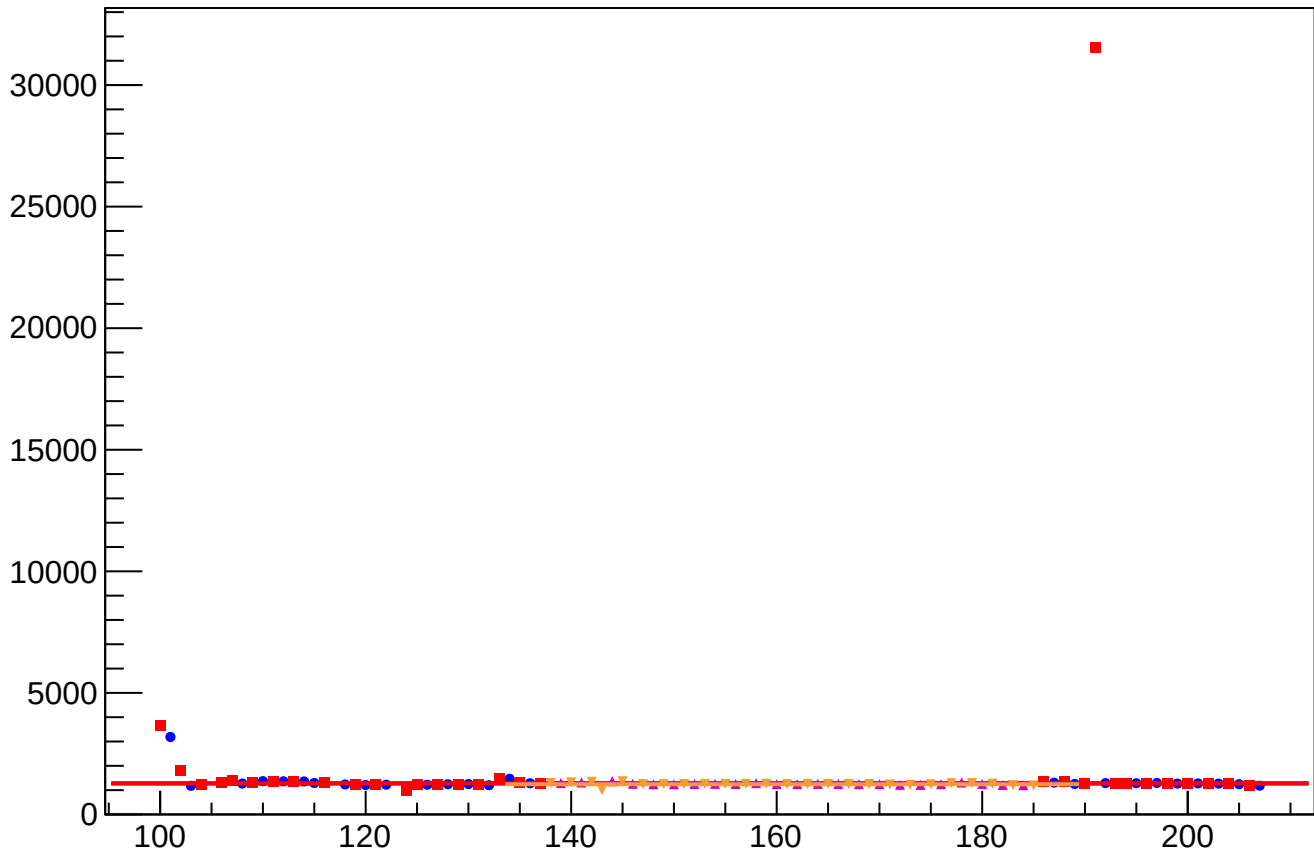
Left In: 242.004+/-294.339  $\chi^2/\text{NDF}$ : 30.7/22

+ sign -515.193+/-215.472  $\chi^2/\text{NDF}$ : 50.5/50

All: -173.764+/-152.985  $\chi^2/\text{NDF}$ : 107.7/104

- sign 173.304+/-217.244  $\chi^2/\text{NDF}$ : 52.1/53

dit\_asym\_atl\_avg\_atr\_avg\_dd\_rms vs Slug



Right In: 1275.993+/-0.235  $\chi^2/\text{NDF}$ : 524957.3/25

Left Out: 1242.539+/-0.200  $\chi^2/\text{NDF}$ : 130023.1/24

Right Out: 1281.036+/-0.228  $\chi^2/\text{NDF}$ : 387538.7/30

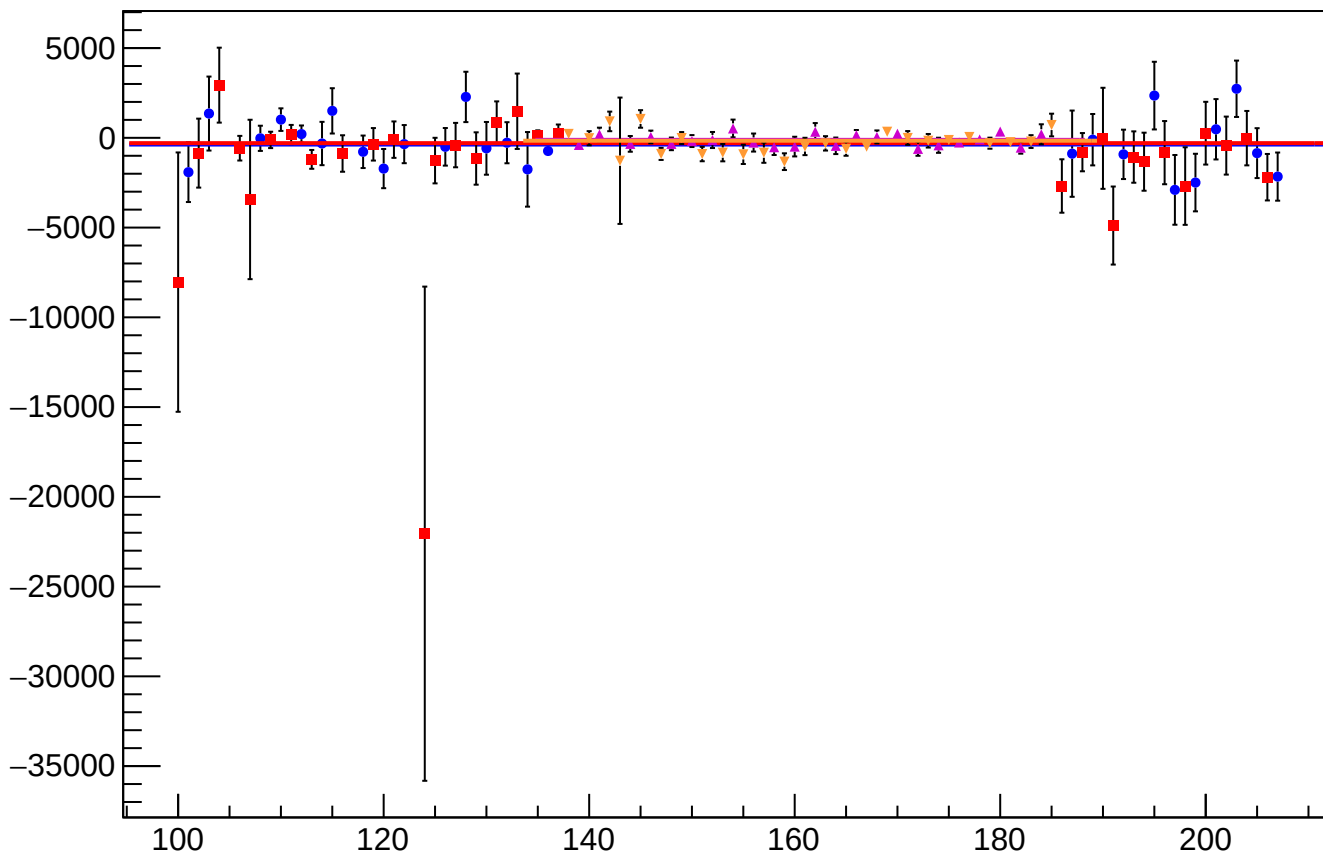
Left In: 1260.094+/-0.208  $\chi^2/\text{NDF}$ : 27932.1/22

+ sign 1256.563+/-0.152  $\chi^2/\text{NDF}$ : 666718.1/50

All: 1263.042+/-0.108  $\chi^2/\text{NDF}$ : 1090444.0/10

- sign 1269.627+/-0.154  $\chi^2/\text{NDF}$ : 420079.8/53

asym\_atl\_avg\_atr\_avg\_dd\_dit\_correction\_mean vs Slug



Right In:  $-374.043 \pm 161.013$   $\chi^2/\text{NDF}$ : 30.3/25

Left Out:  $-160.930 \pm 64.133$   $\chi^2/\text{NDF}$ : 43.8/24

Right Out:  $-296.054 \pm 158.992$   $\chi^2/\text{NDF}$ : 28.1/30

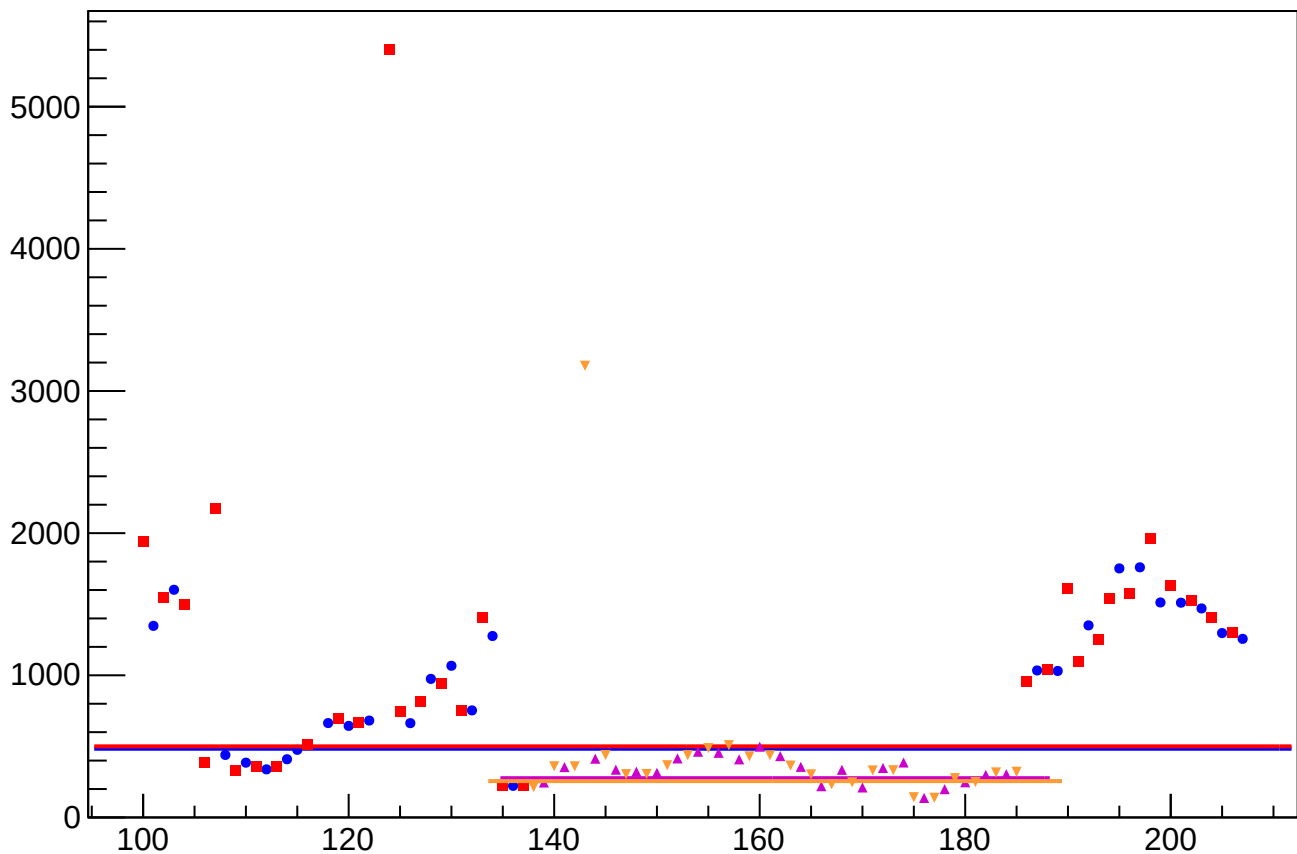
Left In:  $-113.722 \pm 68.841$   $\chi^2/\text{NDF}$ : 18.2/22

+ sign  $-190.110 \pm 59.580$   $\chi^2/\text{NDF}$ : 75.5/50

All:  $-167.701 \pm 43.344$   $\chi^2/\text{NDF}$ : 123.2/104

- sign  $-142.507 \pm 63.173$   $\chi^2/\text{NDF}$ : 47.4/53

asym\_atl\_avg\_atr\_avg\_dd\_dit\_correction\_rms vs Slug



Right In: 483.376+/-0.114  $\chi^2/\text{NDF}$ : 11712250.4/25

Left Out: 255.768+/-0.045  $\chi^2/\text{NDF}$ : 6373929.4/24

Right Out: 500.158+/-0.112  $\chi^2/\text{NDF}$ : 12831318.7/30

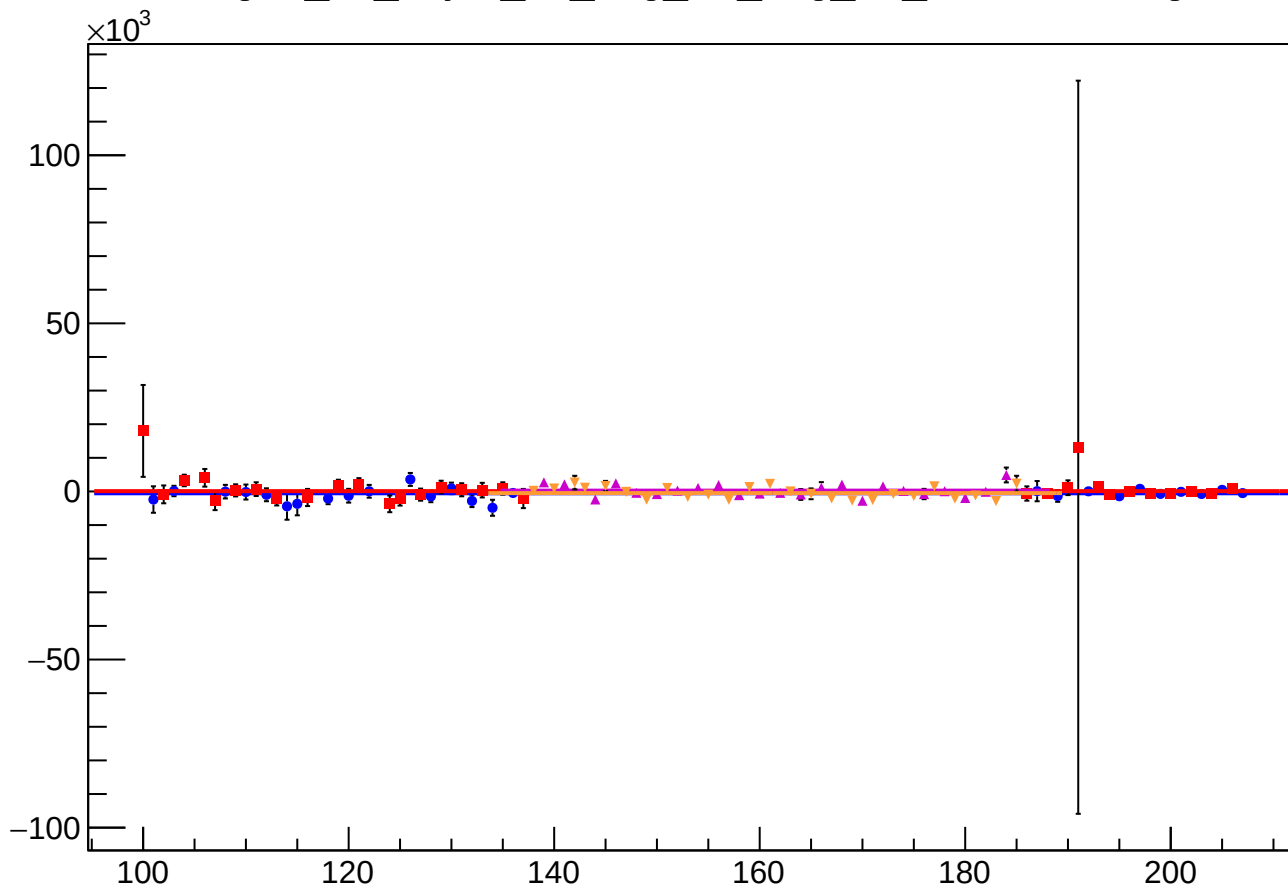
Left In: 276.298+/-0.049  $\chi^2/\text{NDF}$ : 4027410.5/22

+ sign 286.934+/-0.042  $\chi^2/\text{NDF}$ : 21535471.8/50

All: 298.564+/-0.031  $\chi^2/\text{NDF}$ : 41895043.6/10

- sign 311.640+/-0.045  $\chi^2/\text{NDF}$ : 20197667.3/53

eigen\_dit\_asym\_atl\_avg\_atr\_avg\_dd\_mean vs Slug



Right In:  $-545.336 \pm 332.798$   $\chi^2/\text{NDF}$ : 16.3/25

Left Out:  $-493.435 \pm 282.734$   $\chi^2/\text{NDF}$ : 34.2/24

Right Out:  $91.096 \pm 321.977$   $\chi^2/\text{NDF}$ : 21.3/30

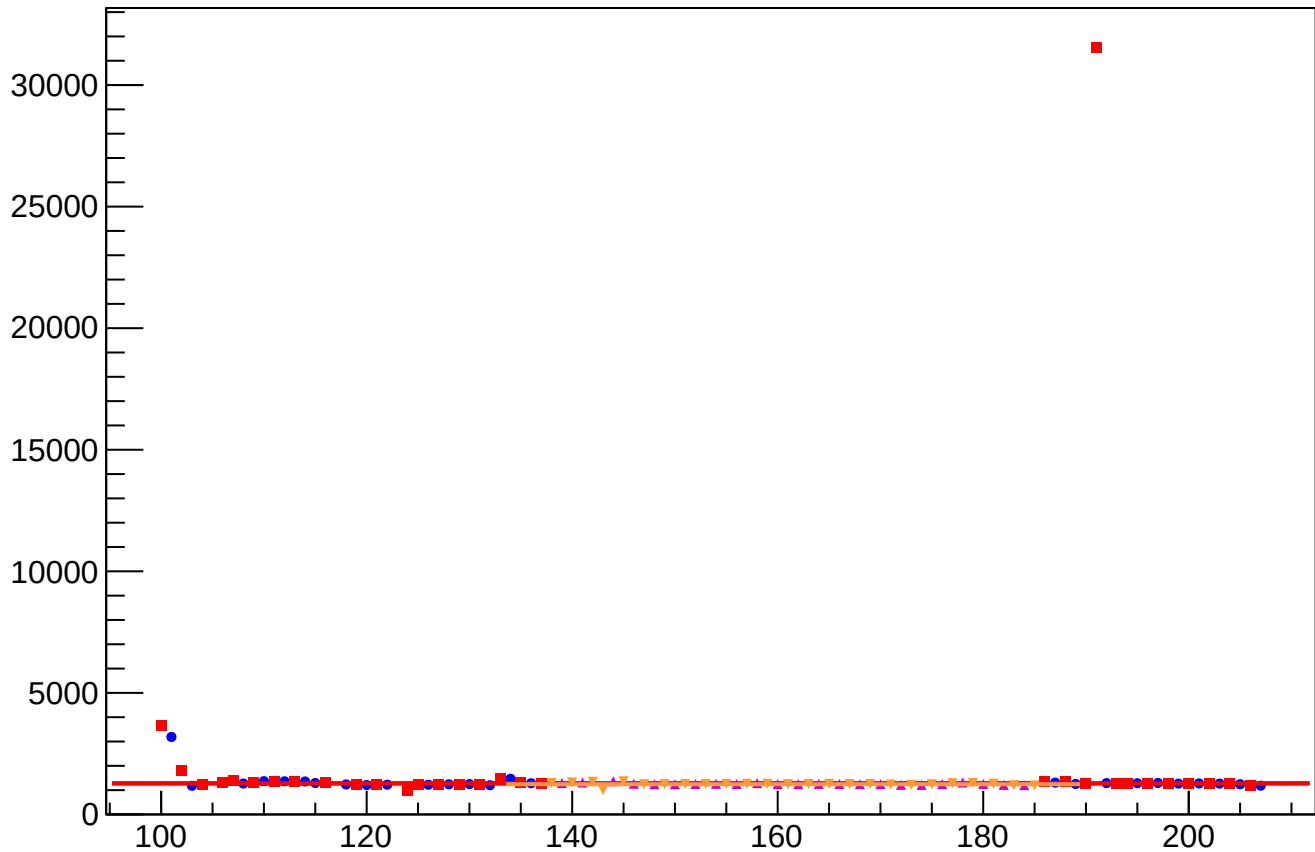
Left In:  $242.004 \pm 294.339$   $\chi^2/\text{NDF}$ : 30.7/22

+ sign  $-515.192 \pm 215.472$   $\chi^2/\text{NDF}$ : 50.5/50

All:  $-173.764 \pm 152.985$   $\chi^2/\text{NDF}$ : 107.7/104

- sign  $173.303 \pm 217.244$   $\chi^2/\text{NDF}$ : 52.1/53

eigen\_dit\_asym\_atl\_avg\_atr\_avg\_dd\_rms vs Slug



Right In: 1275.993+/-0.235  $\chi^2/\text{NDF}$ : 524957.3/25

Left Out: 1242.539+/-0.200  $\chi^2/\text{NDF}$ : 130022.2/24

Right Out: 1281.036+/-0.228  $\chi^2/\text{NDF}$ : 387539.0/30

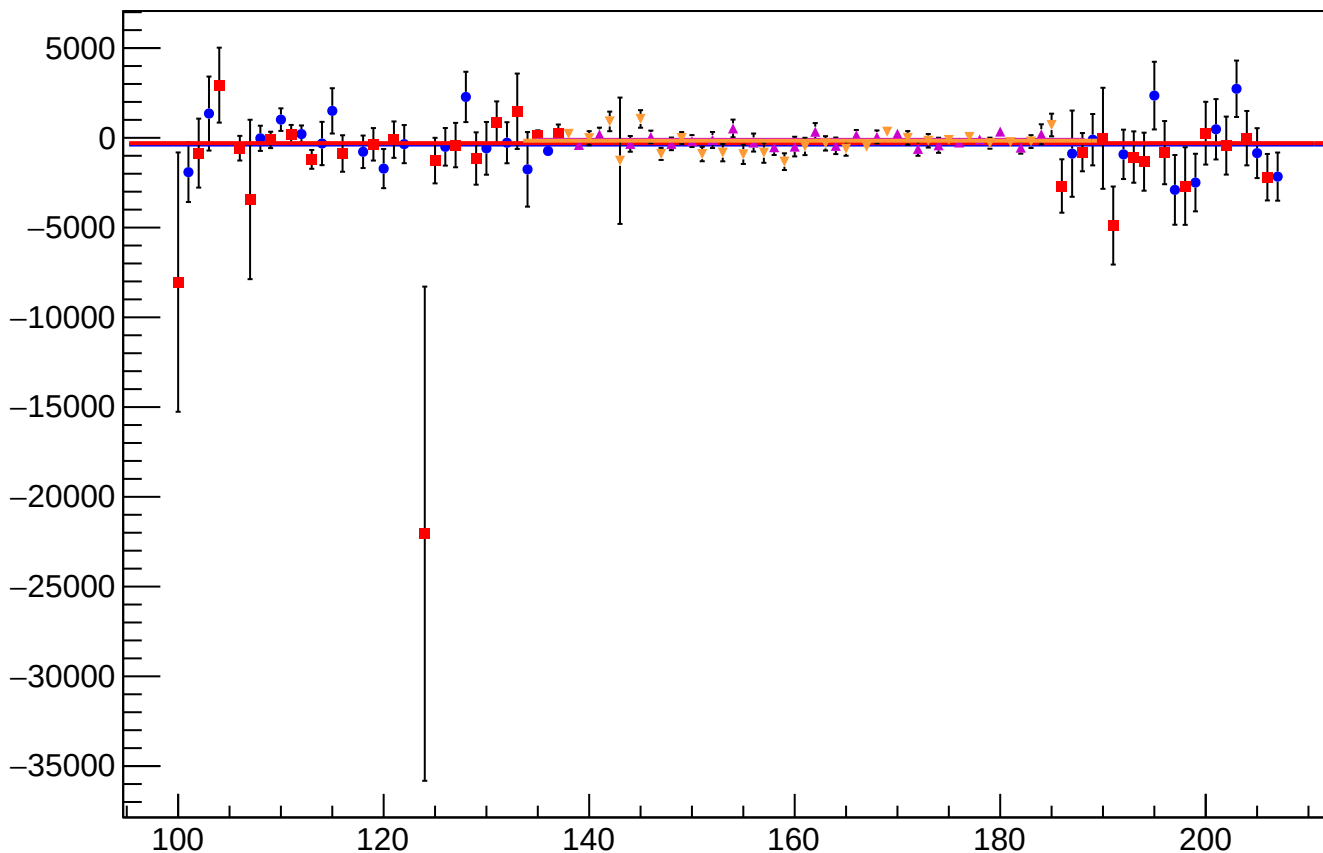
Left In: 1260.094+/-0.208  $\chi^2/\text{NDF}$ : 27932.2/22

+ sign 1256.563+/-0.152  $\chi^2/\text{NDF}$ : 666717.2/50

All: 1263.042+/-0.108  $\chi^2/\text{NDF}$ : 1090443.4/100

- sign 1269.627+/-0.154  $\chi^2/\text{NDF}$ : 420080.2/53

asym\_atl\_avg\_atr\_avg\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-374.044 \pm 161.016$   $\chi^2/\text{NDF}$ : 30.3/25

Left Out:  $-160.933 \pm 64.133$   $\chi^2/\text{NDF}$ : 43.8/24

Right Out:  $-296.062 \pm 158.993$   $\chi^2/\text{NDF}$ : 28.1/30

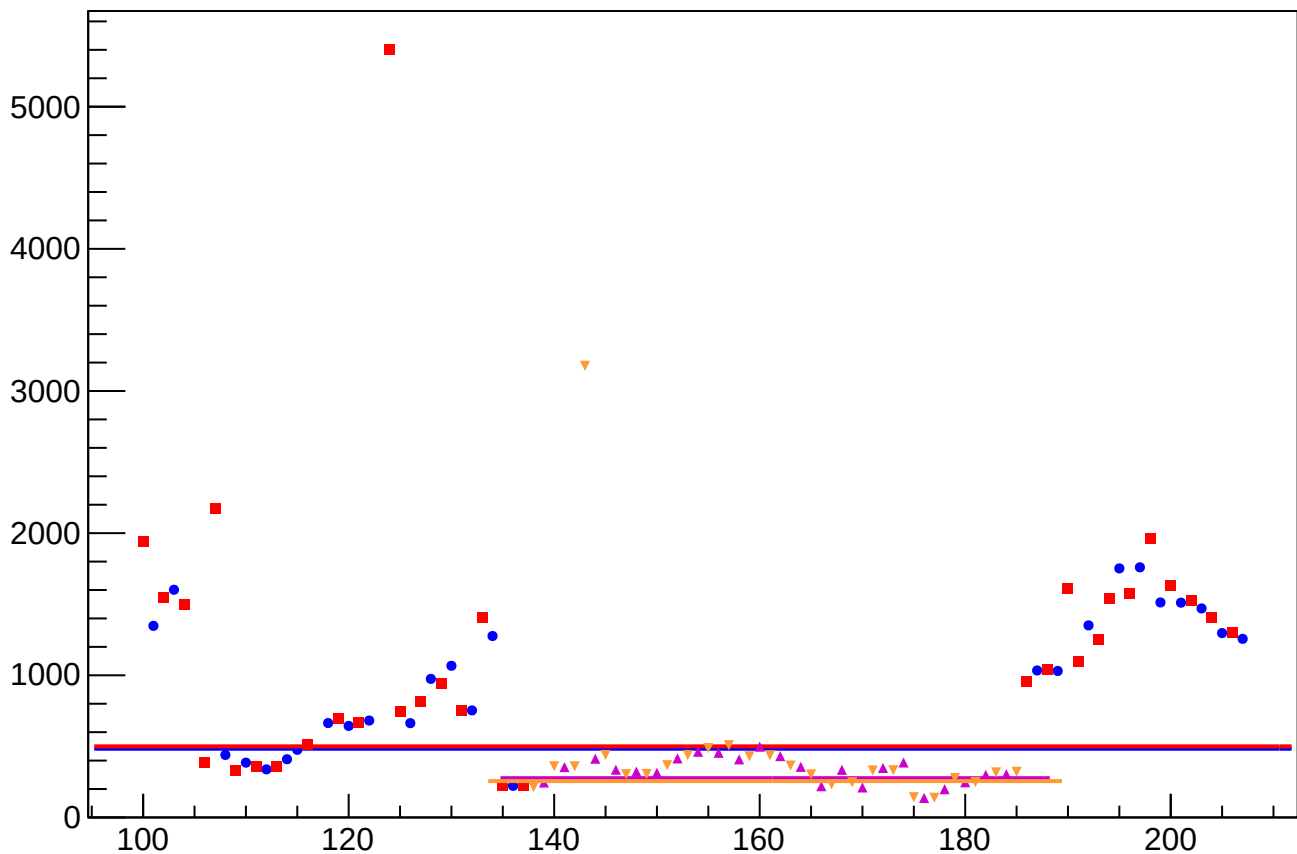
Left In:  $-113.720 \pm 68.841$   $\chi^2/\text{NDF}$ : 18.2/22

+ sign  $-190.113 \pm 59.581$   $\chi^2/\text{NDF}$ : 75.5/50

All:  $-167.702 \pm 43.344$   $\chi^2/\text{NDF}$ : 123.2/104

- sign  $-142.507 \pm 63.173$   $\chi^2/\text{NDF}$ : 47.4/53

asym\_atl\_avg\_atr\_avg\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 483.388+/-0.114  $\chi^2/\text{NDF}$ : 11711900.0/25

Left Out: 255.770+/-0.045  $\chi^2/\text{NDF}$ : 6373829.7/24

Right Out: 500.167+/-0.112  $\chi^2/\text{NDF}$ : 12831032.7/30

Left In: 276.299+/-0.049  $\chi^2/\text{NDF}$ : 4027371.0/22

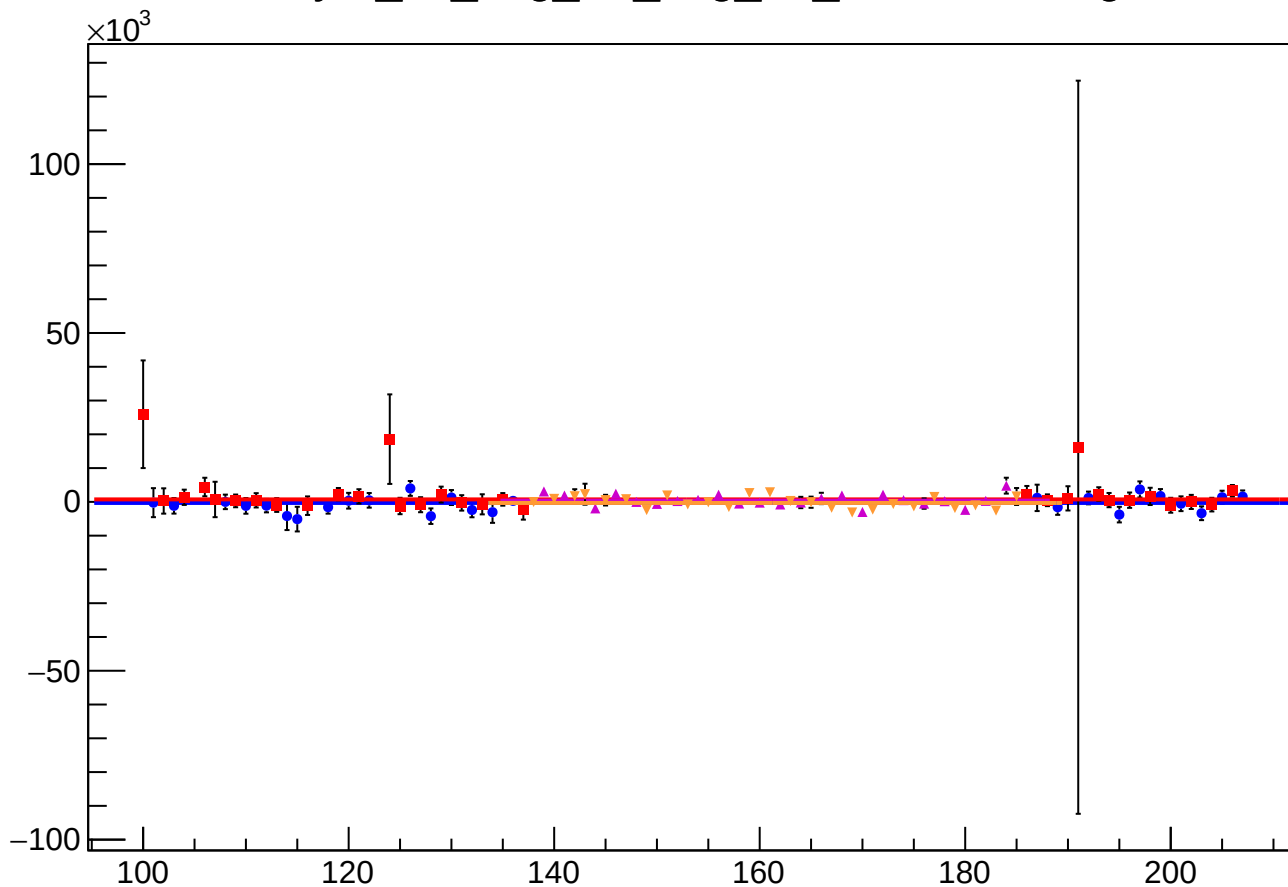
+ sign 286.936+/-0.042  $\chi^2/\text{NDF}$ : 21535255.5/50

All: 298.566+/-0.031  $\chi^2/\text{NDF}$ : 41894694.0/100

- sign 311.642+/-0.045  $\chi^2/\text{NDF}$ : 20197546.6/53



asym\_atl\_avg\_atr\_avg\_dd\_mean vs Slug



Right In:  $-314.086 \pm 434.574$   $\chi^2/\text{NDF}$ : 24.0/25

Left Out:  $-319.744 \pm 298.271$   $\chi^2/\text{NDF}$ : 31.6/24

Right Out:  $731.385 \pm 426.611$   $\chi^2/\text{NDF}$ : 15.9/30

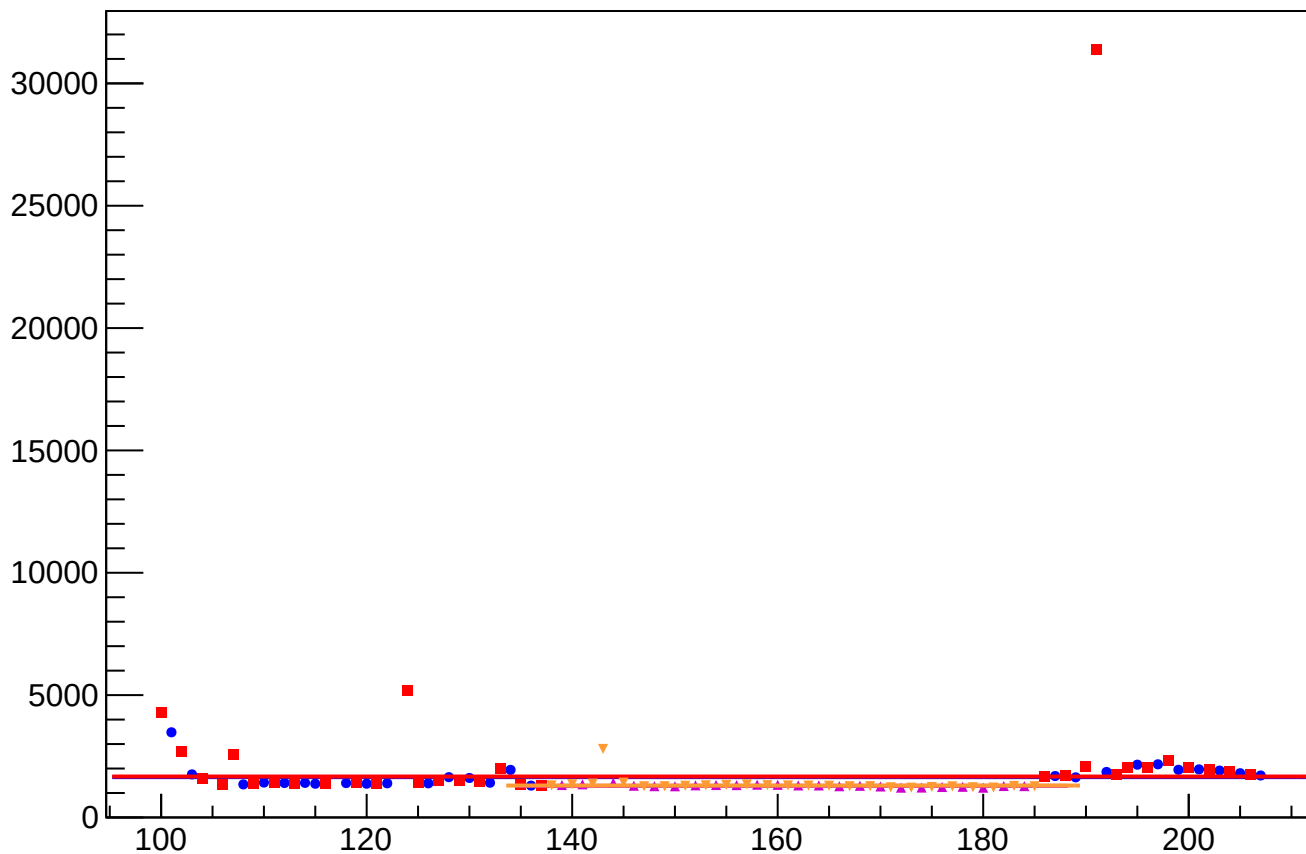
Left In:  $356.387 \pm 301.902$   $\chi^2/\text{NDF}$ : 29.7/22

+ sign  $-317.932 \pm 245.919$   $\chi^2/\text{NDF}$ : 55.5/50

All:  $80.955 \pm 174.074$   $\chi^2/\text{NDF}$ : 106.9/104

- sign  $481.520 \pm 246.436$   $\chi^2/\text{NDF}$ : 46.1/53

## asym\_atl\_avg\_atr\_avg\_dd\_rms vs Slug



Right In: 1648.193+/-0.307     $\chi^2/\text{NDF}$ : 1104688.5/25

Left Out: 1304.156+/-0.211     $\chi^2/\text{NDF}$ :519609.1/24

Right Out: 1672.588+/-0.302     $\chi^2/\text{NDF}$ : 1374227.9/30

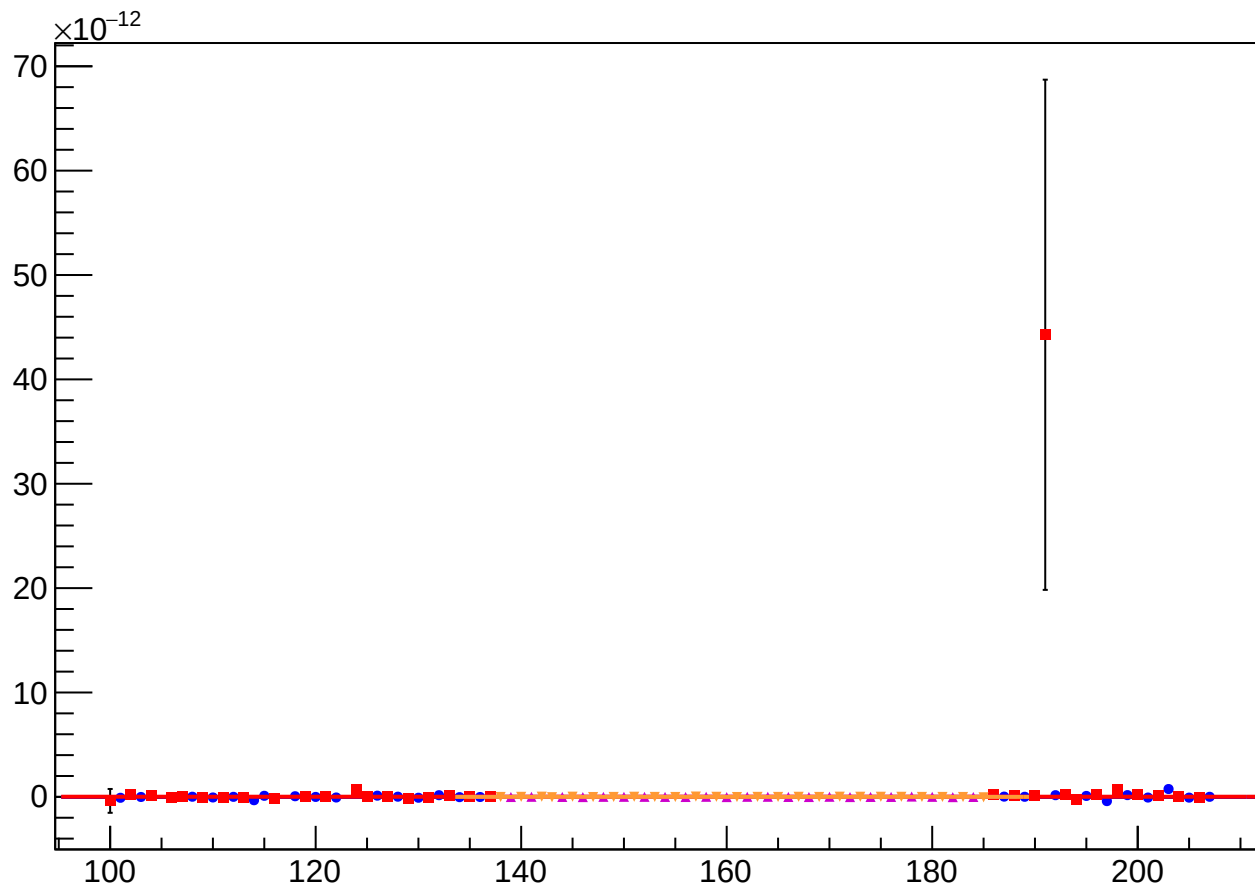
Left In: 1292.123+/-0.213     $\chi^2/\text{NDF}$ :48343.1/22

+ sign 1414.326+/-0.174     $\chi^2/\text{NDF}$ : 2476372.2/50

All:  $1416.699 \pm 0.123$      $\chi^2/\text{NDF}: 4959234.0/10$

- sign 1419.081+/-0.174     $\chi^2/\text{NDF}$ : 2482488.7/53

asym\_atl\_avg\_atr\_avg\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2$ /NDF: 28.3/25

Left Out: 0.000+/-0.000  $\chi^2$ /NDF:24.3/24

Right Out: 0.000+/-0.000  $\chi^2$ /NDF: 37.2/30

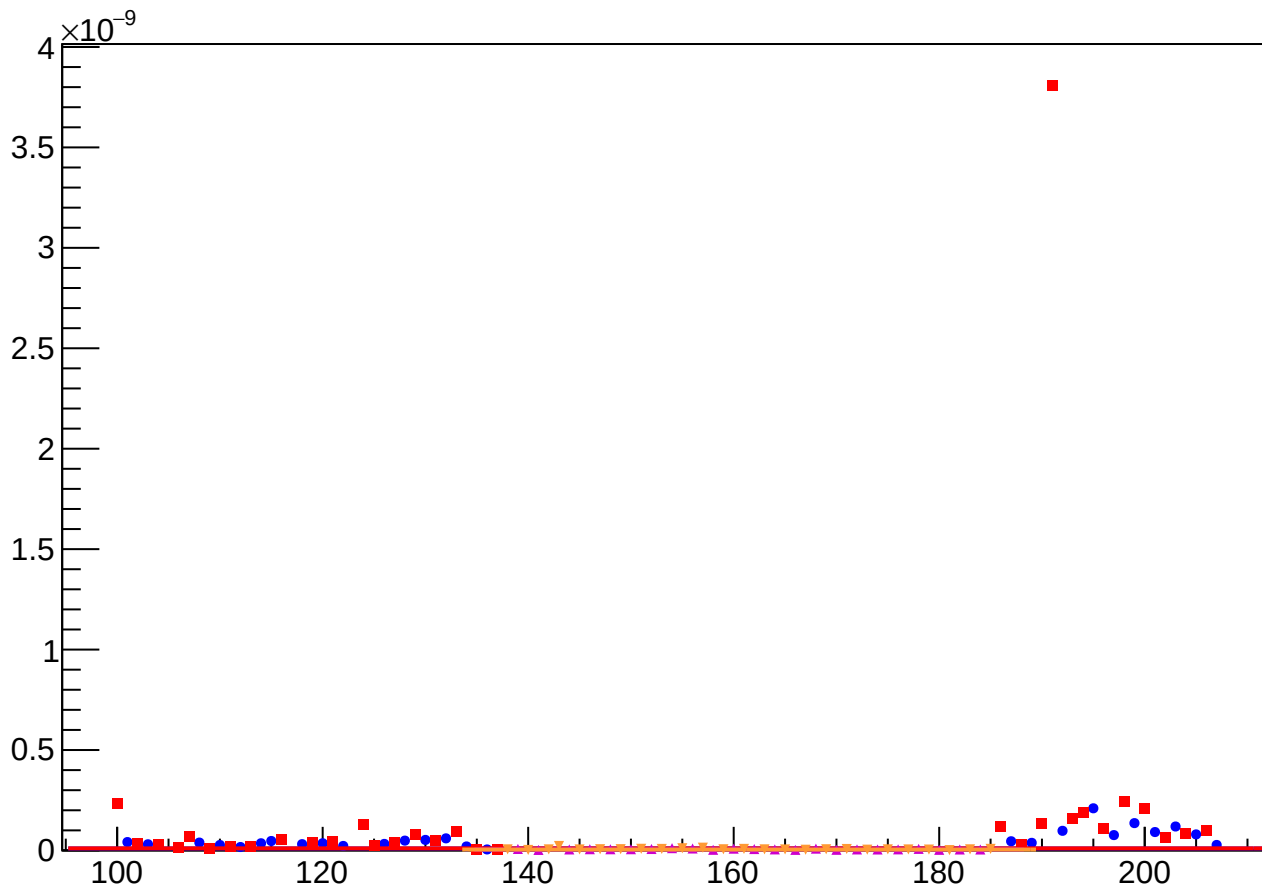
Left In: 0.000+/-0.000  $\chi^2$ /NDF:29.6/22

+ sign -0.000+/-0.000  $\chi^2$ /NDF: 55.2/50

All: 0.000+/-0.000  $\chi^2$ /NDF: 124.6/104

- sign 0.000+/-0.000  $\chi^2$ /NDF: 69.0/53

asym\_atl\_avg\_atr\_avg\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6829435.1/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2715297.7/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9284599.3/30

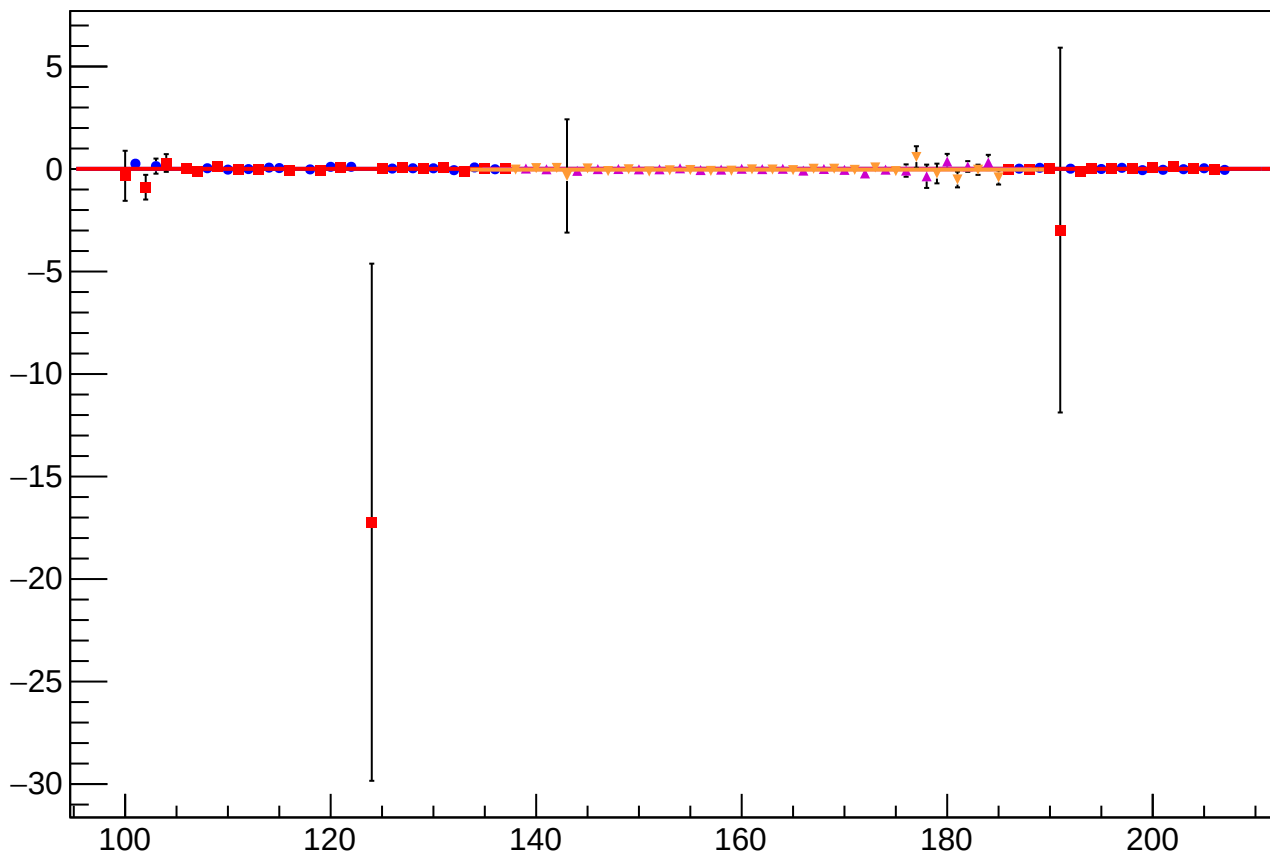
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1884808.0/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10485954.8/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 22613319.4/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12102161.2/53

asym\_atl\_avg\_atr\_avg\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.008 \pm 0.012$   $\chi^2/\text{NDF}$ : 15.7/25

Left Out:  $-0.028 \pm 0.010$   $\chi^2/\text{NDF}$ : 28.1/24

Right Out:  $0.009 \pm 0.012$   $\chi^2/\text{NDF}$ : 22.6/30

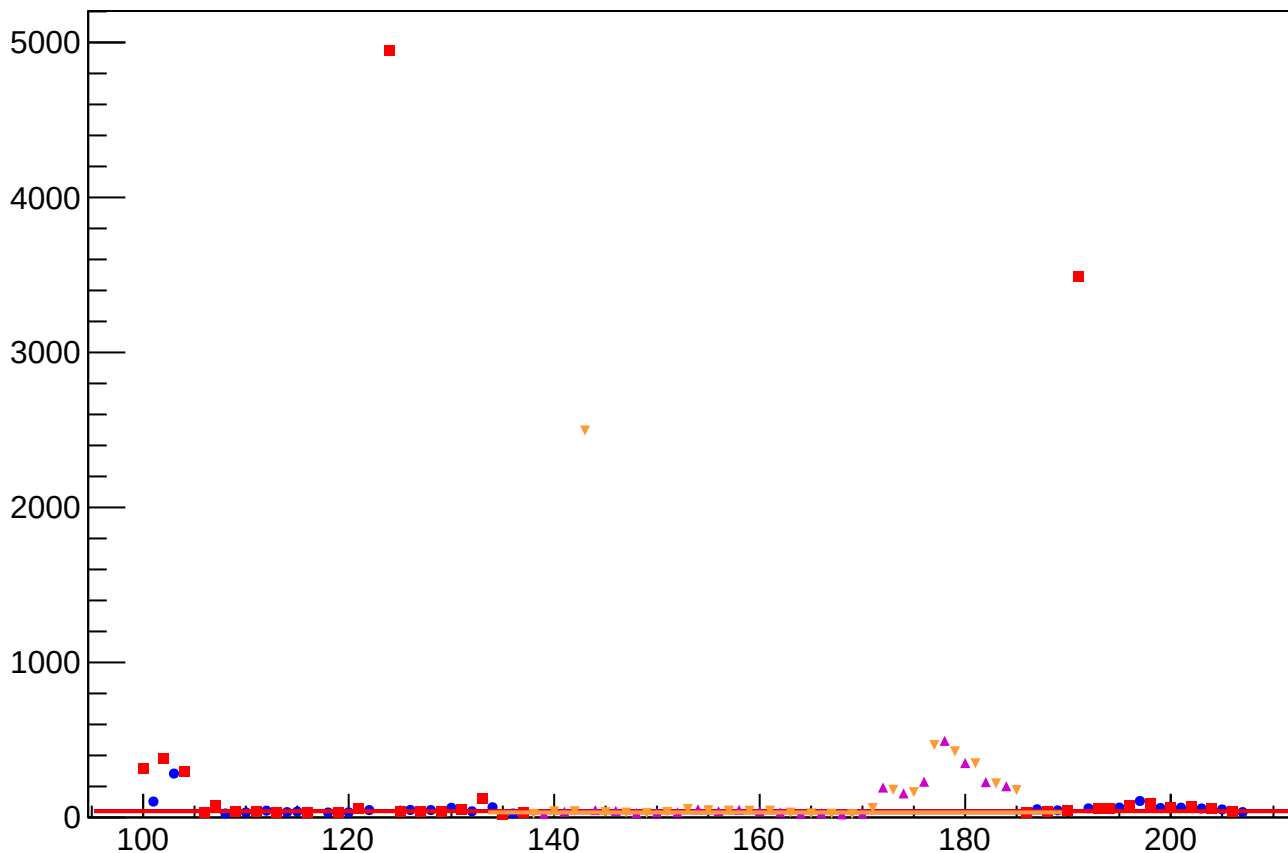
Left In:  $-0.011 \pm 0.009$   $\chi^2/\text{NDF}$ : 13.2/22

+ sign  $-0.015 \pm 0.008$   $\chi^2/\text{NDF}$ : 49.1/50

All:  $-0.009 \pm 0.005$   $\chi^2/\text{NDF}$ : 87.8/104

- sign  $-0.003 \pm 0.007$   $\chi^2/\text{NDF}$ : 37.5/53

asym\_atl\_avg\_atr\_avg\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 41.642 $\pm$ 0.009  $\chi^2$ /NDF: 4071459.2/25

Left Out: 32.551 $\pm$ 0.007  $\chi^2$ /NDF: 10871758.1/24

Right Out: 40.367 $\pm$ 0.008  $\chi^2$ /NDF: 5416368.0/30

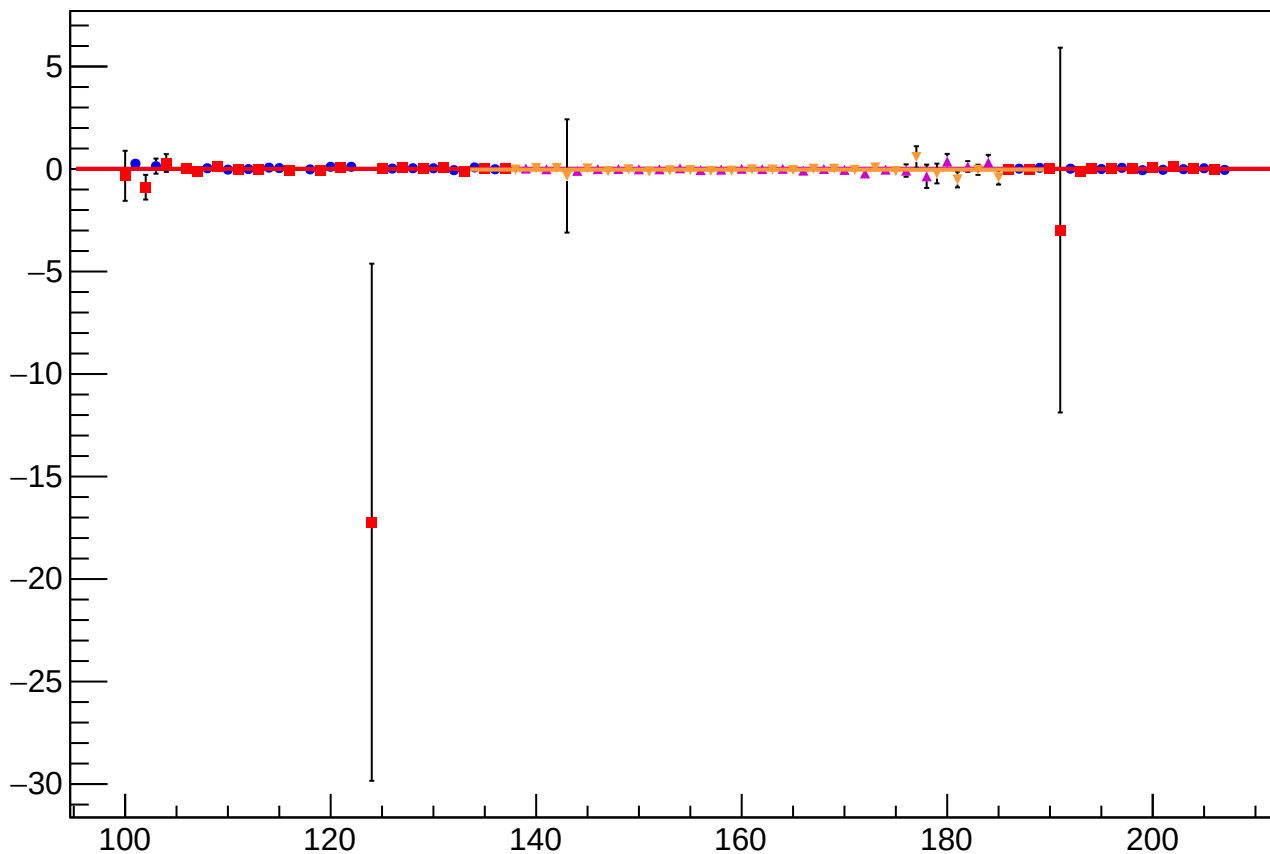
Left In: 32.738 $\pm$ 0.007  $\chi^2$ /NDF: 8963240.8/22

+ sign 35.926 $\pm$ 0.005  $\chi^2$ /NDF: 15620855.0/50

All: 35.830 $\pm$ 0.004  $\chi^2$ /NDF: 30508267.5/104

- sign 35.738 $\pm$ 0.005  $\chi^2$ /NDF: 14886780.8/53

asym\_atl\_avg\_atr\_avg\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.008 \pm 0.012$   $\chi^2/\text{NDF}$ : 15.7/25

Left Out:  $-0.028 \pm 0.010$   $\chi^2/\text{NDF}$ : 28.1/24

Right Out:  $0.009 \pm 0.012$   $\chi^2/\text{NDF}$ : 22.6/30

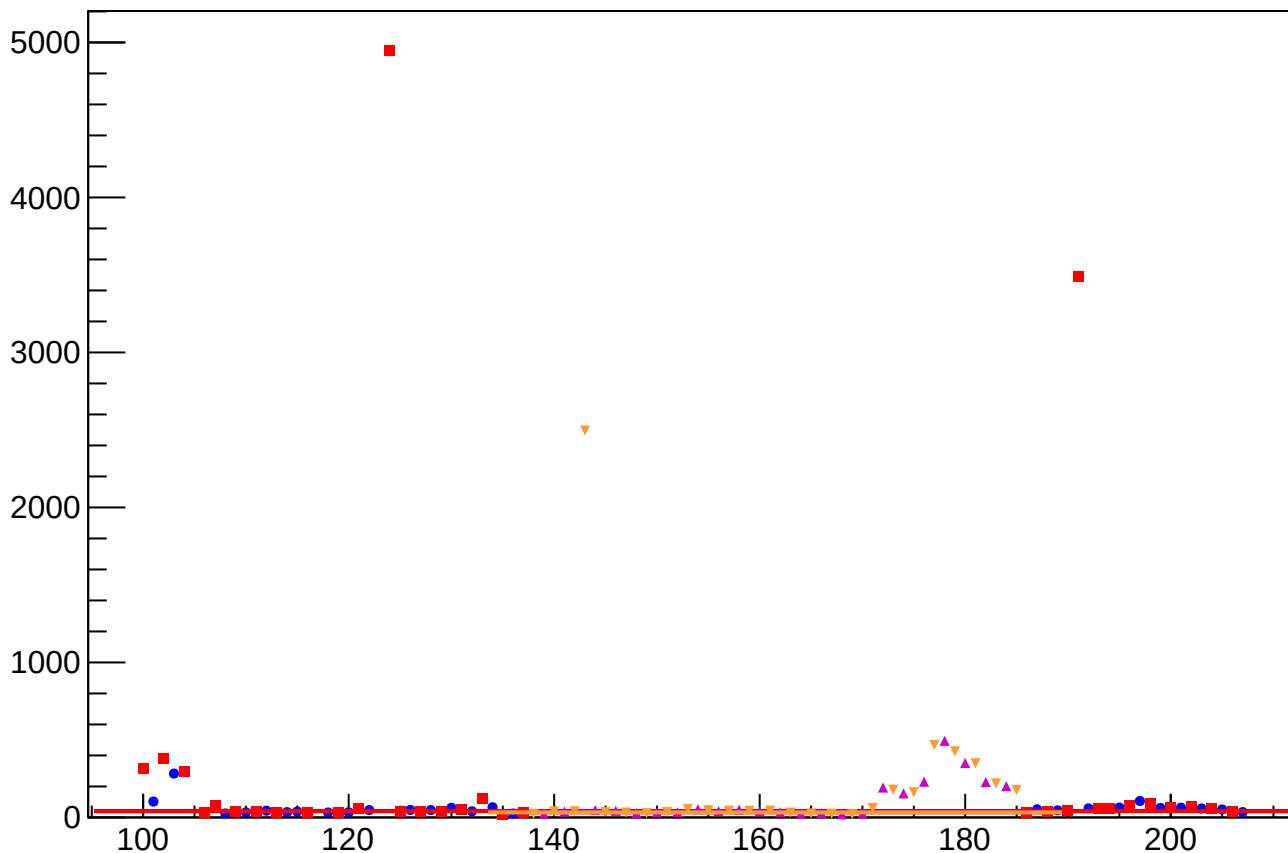
Left In:  $-0.011 \pm 0.009$   $\chi^2/\text{NDF}$ : 13.2/22

+ sign  $-0.015 \pm 0.008$   $\chi^2/\text{NDF}$ : 49.1/50

All:  $-0.009 \pm 0.005$   $\chi^2/\text{NDF}$ : 87.8/104

- sign  $-0.003 \pm 0.007$   $\chi^2/\text{NDF}$ : 37.5/53

asym\_atl\_avg\_atr\_avg\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 41.642+/-0.009  $\chi^2/\text{NDF}$ : 4071459.2/25

Left Out: 32.551+/-0.007  $\chi^2/\text{NDF}$ : 10871758.1/24

Right Out: 40.367+/-0.008  $\chi^2/\text{NDF}$ : 5416368.0/30

Left In: 32.738+/-0.007  $\chi^2/\text{NDF}$ : 8963240.8/22

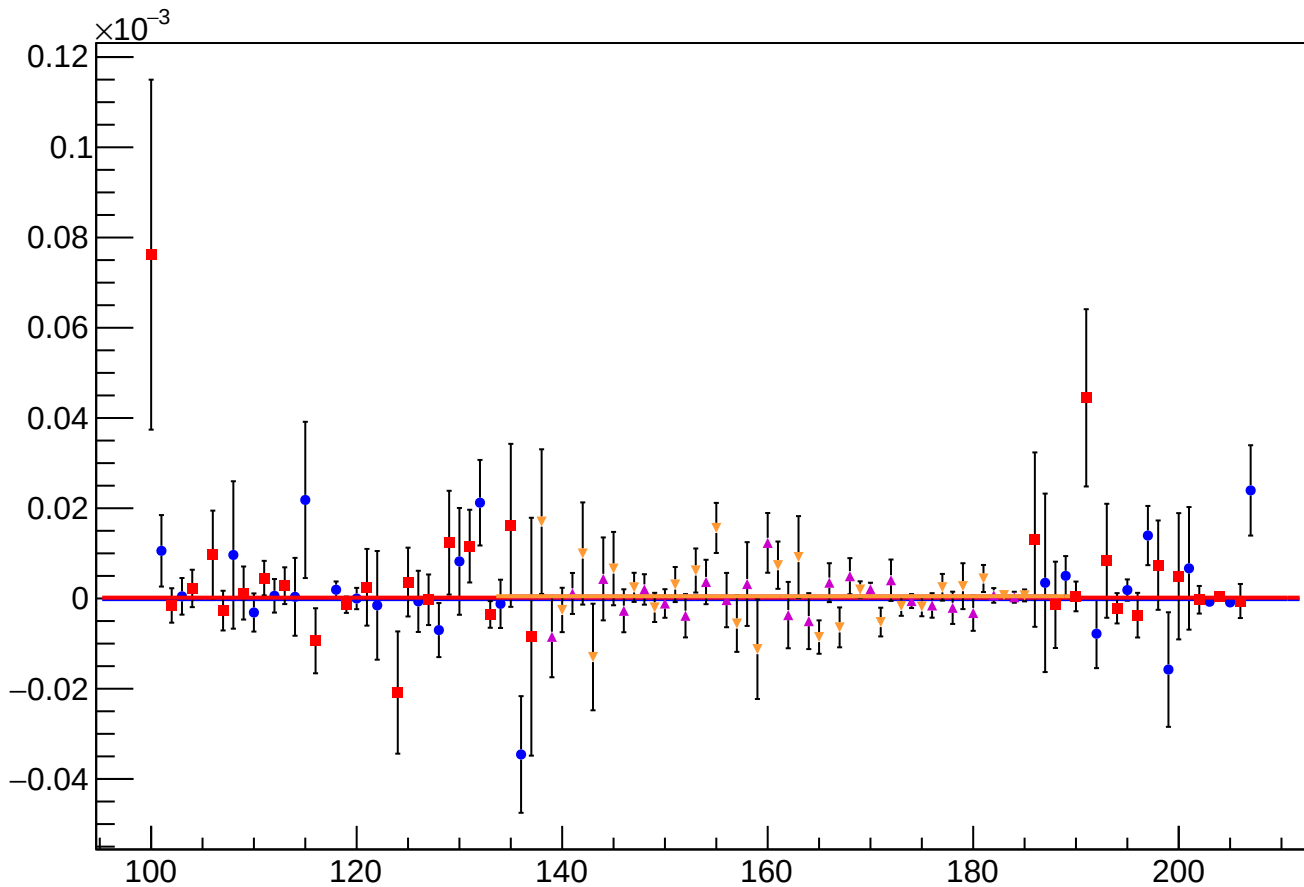
+ sign 35.926+/-0.005  $\chi^2/\text{NDF}$ : 15620855.0/50

All: 35.830+/-0.004  $\chi^2/\text{NDF}$ : 30508267.5/104

- sign 35.738+/-0.005  $\chi^2/\text{NDF}$ : 14886780.8/53



asym\_atl\_avg\_atr\_avg\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 36.1/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 35.7/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 26.1/30

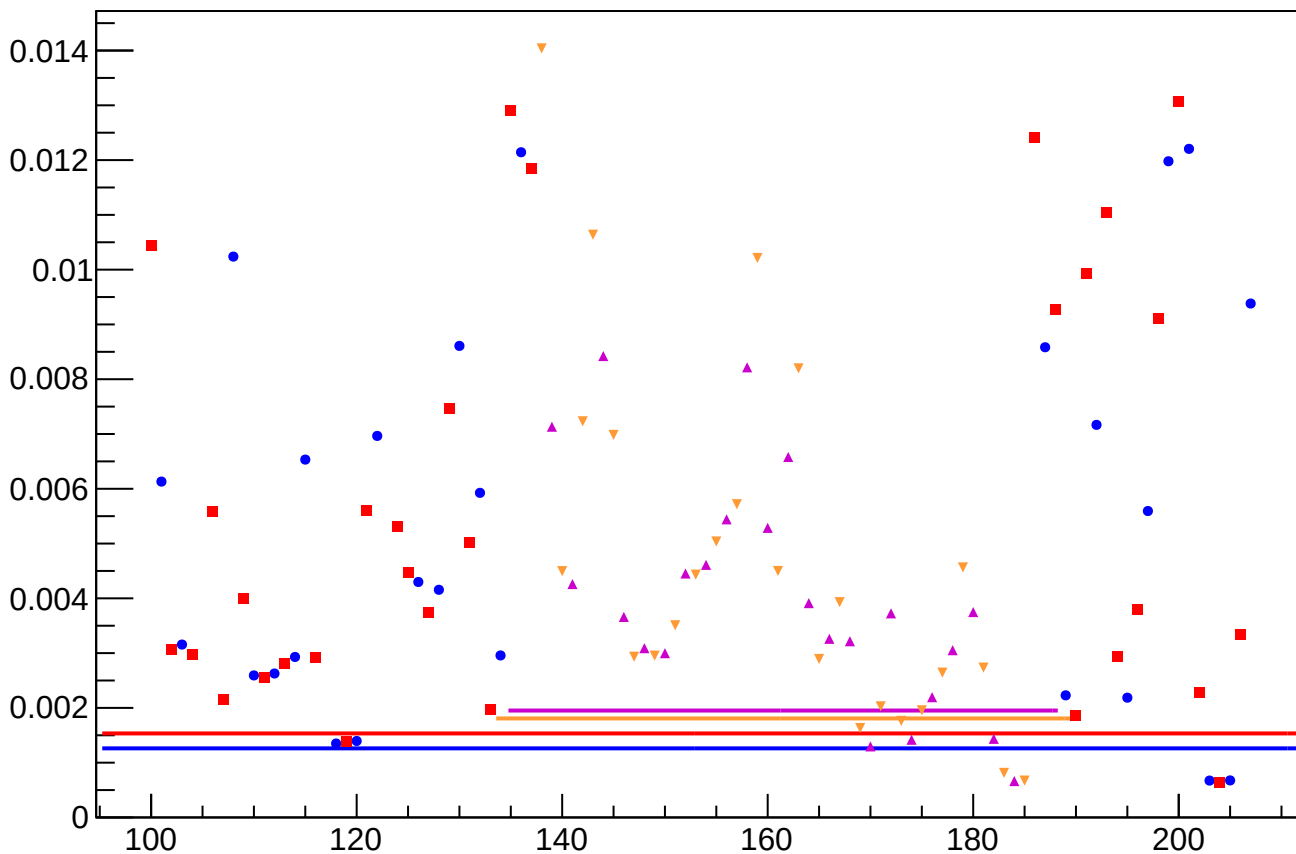
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 13.7/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 72.6/50

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 112.6/104

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 39.9/53

asym\_atl\_avg\_atr\_avg\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 15330246.8/25

Left Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ :14941257.4/24

Right Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 15411552.5/30

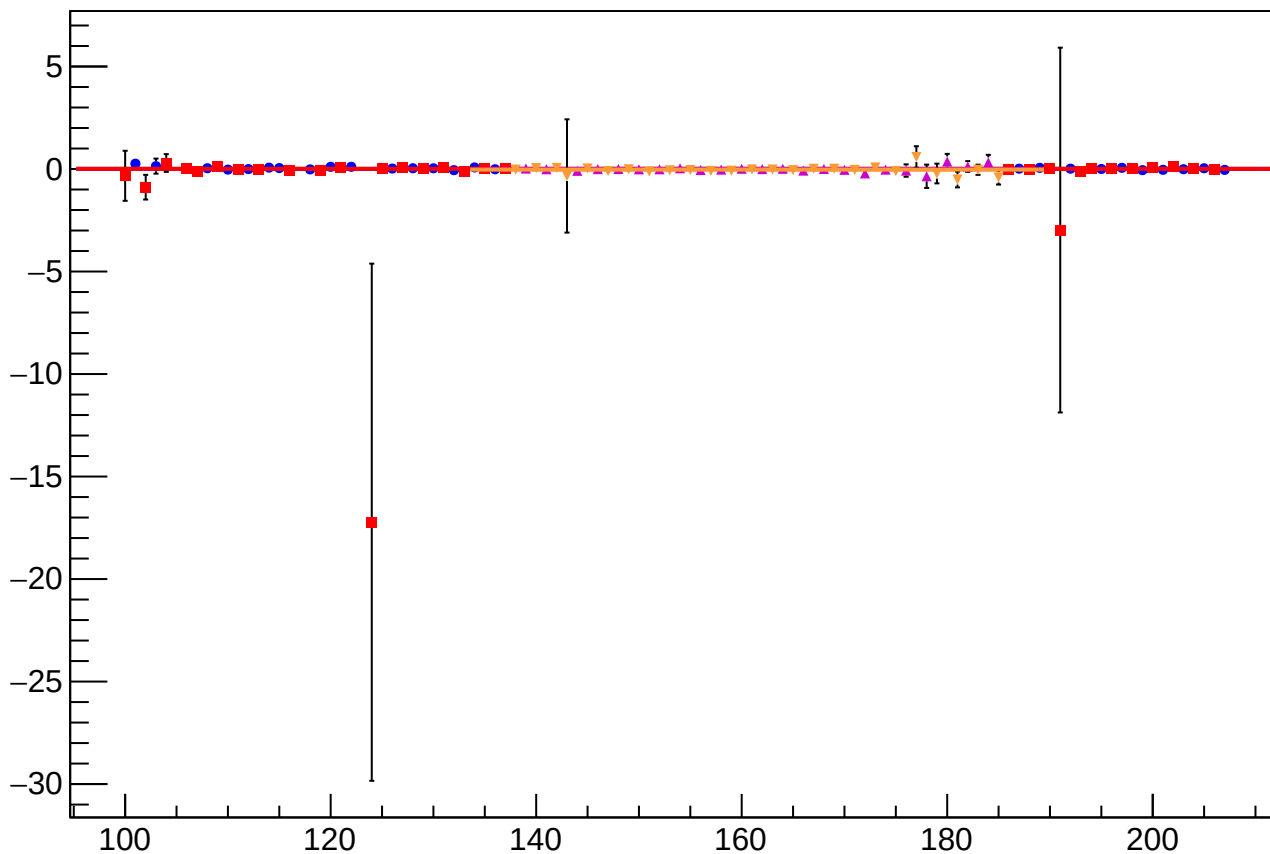
Left In: 0.002+/-0.000  $\chi^2/\text{NDF}$ :11478607.0/22

+ sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 31326915.9/50

All: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 59045619.7/104

- sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 27417185.8/53

asym\_atl\_avg\_atr\_avg\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.008 $\pm$ 0.012  $\chi^2$ /NDF: 15.7/25

Left Out: -0.028 $\pm$ 0.010  $\chi^2$ /NDF: 28.1/24

Right Out: 0.009 $\pm$ 0.012  $\chi^2$ /NDF: 22.6/30

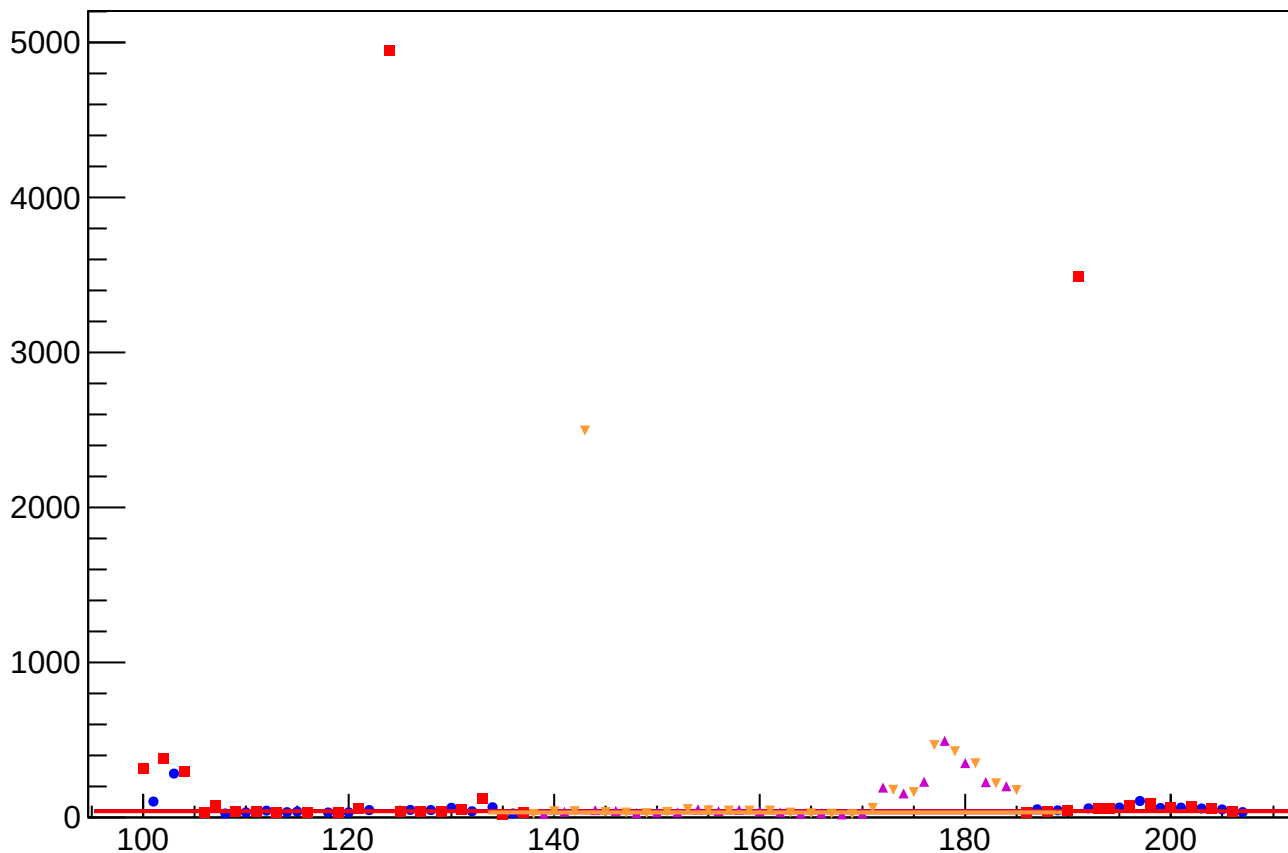
Left In: -0.011 $\pm$ 0.009  $\chi^2$ /NDF: 13.2/22

+ sign -0.015 $\pm$ 0.008  $\chi^2$ /NDF: 49.1/50

All: -0.009 $\pm$ 0.005  $\chi^2$ /NDF: 87.8/104

- sign -0.003 $\pm$ 0.007  $\chi^2$ /NDF: 37.5/53

asym\_atl\_avg\_atr\_avg\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 41.643+/-0.009     $\chi^2/\text{NDF}$ : 4071035.7/25

Left Out:  $32.551 \pm 0.007$      $\chi^2/\text{NDF}: 10872015.8/24$

Right Out: 40.367+/-0.008     $\chi^2/\text{NDF}$ : 5416163.6/30

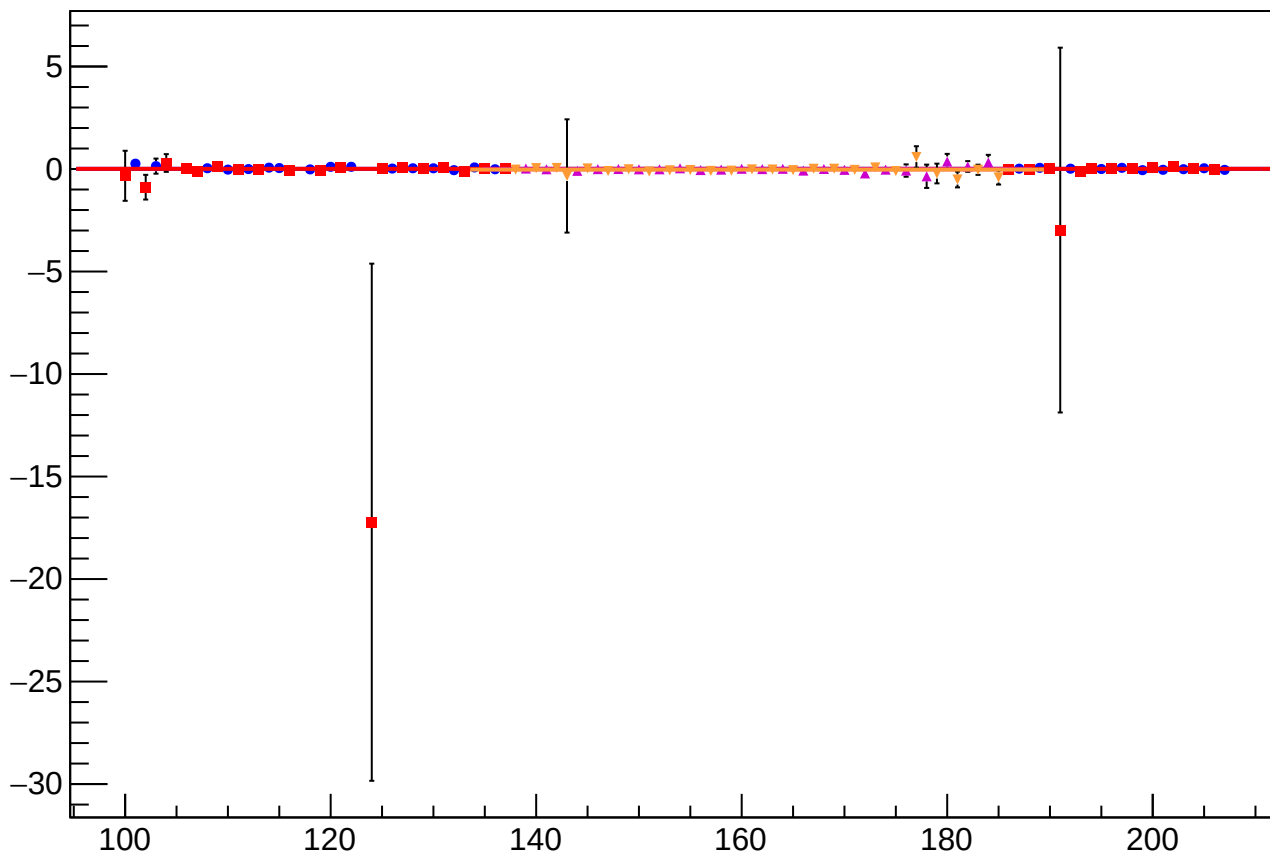
Left In: 32.737+/-0.007     $\chi^2/\text{NDF}$ :8963873.9/22

+ sign 35.926+/-0.005     $\chi^2/\text{NDF}$ : 15620790.6/50

All:  $35.830 \pm 0.004$      $\chi^2/\text{NDF}$ : 30508827.5/104

- sign 35.737+/-0.005     $\chi^2/\text{NDF}$ : 14887399.3/53

asym\_atl\_avg\_atr\_avg\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.008 $\pm$ 0.012  $\chi^2$ /NDF: 15.7/25

Left Out: -0.028 $\pm$ 0.010  $\chi^2$ /NDF: 28.1/24

Right Out: 0.009 $\pm$ 0.012  $\chi^2$ /NDF: 22.6/30

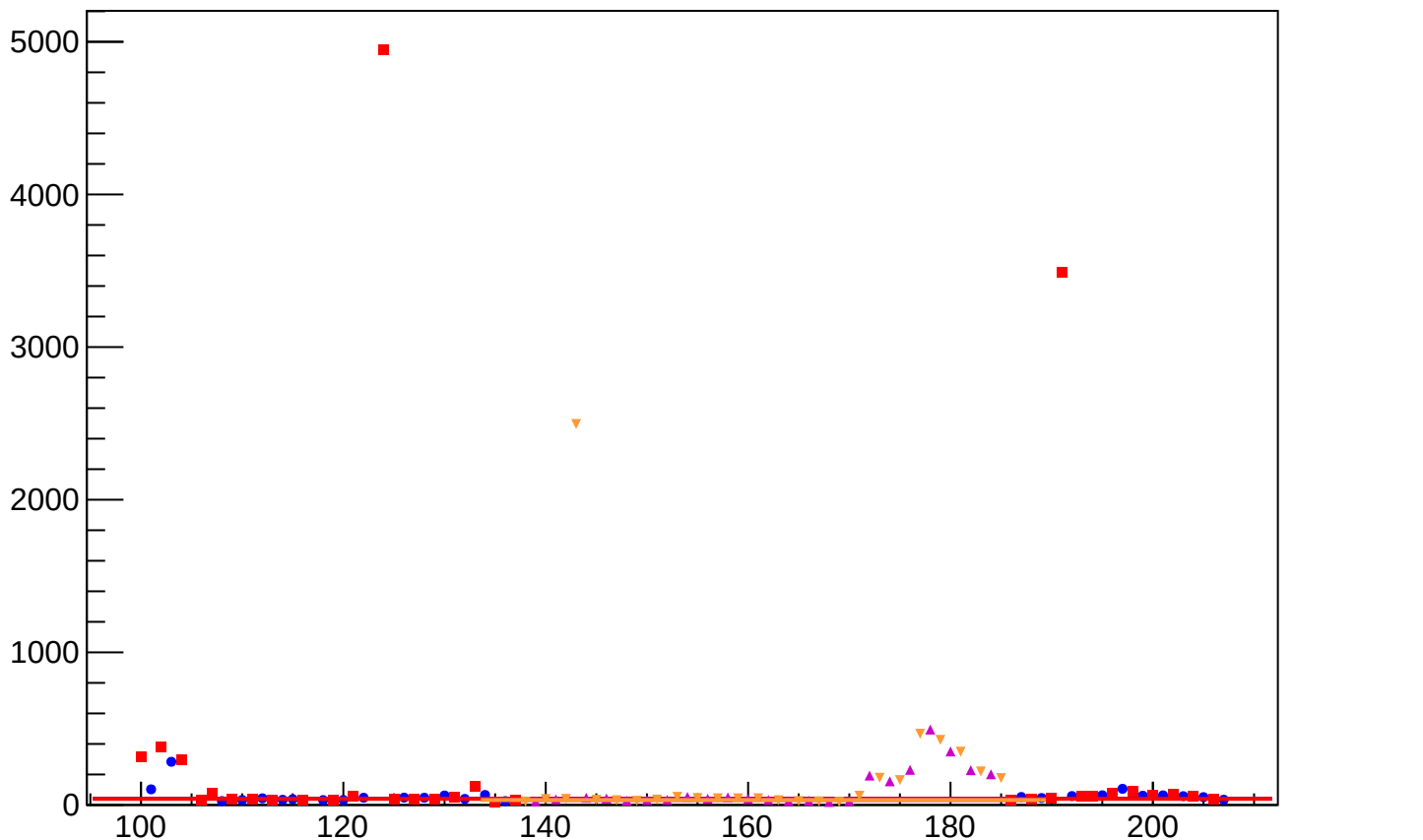
Left In: -0.011 $\pm$ 0.009  $\chi^2$ /NDF: 13.2/22

+ sign -0.015 $\pm$ 0.008  $\chi^2$ /NDF: 49.1/50

All: -0.009 $\pm$ 0.005  $\chi^2$ /NDF: 87.8/104

- sign -0.003 $\pm$ 0.007  $\chi^2$ /NDF: 37.5/53

asym\_atl\_avg\_atr\_avg\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 41.643+/-0.009  $\chi^2/\text{NDF}$ : 4071035.7/25

Left Out: 32.551+/-0.007  $\chi^2/\text{NDF}$ :10872015.8/24

Right Out: 40.367+/-0.008  $\chi^2/\text{NDF}$ : 5416163.6/30

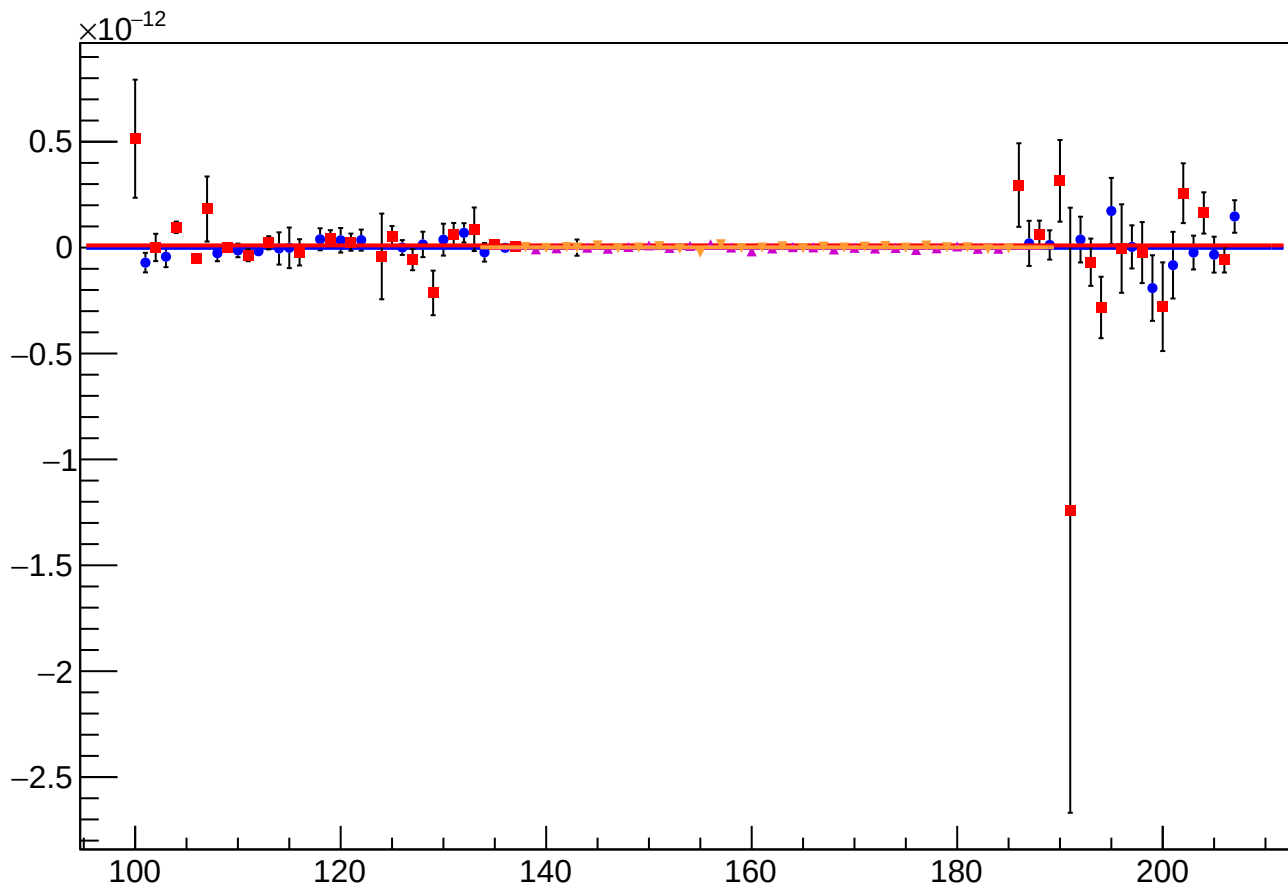
Left In: 32.737+/-0.007  $\chi^2/\text{NDF}$ :8963873.9/22

+ sign 35.926+/-0.005  $\chi^2/\text{NDF}$ : 15620790.6/50

All: 35.830+/-0.004  $\chi^2/\text{NDF}$ : 30508827.5/104

- sign 35.737+/-0.005  $\chi^2/\text{NDF}$ : 14887399.3/53

asym\_atl\_avg\_atr\_avg\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 15.8/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 18.1/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 59.2/30

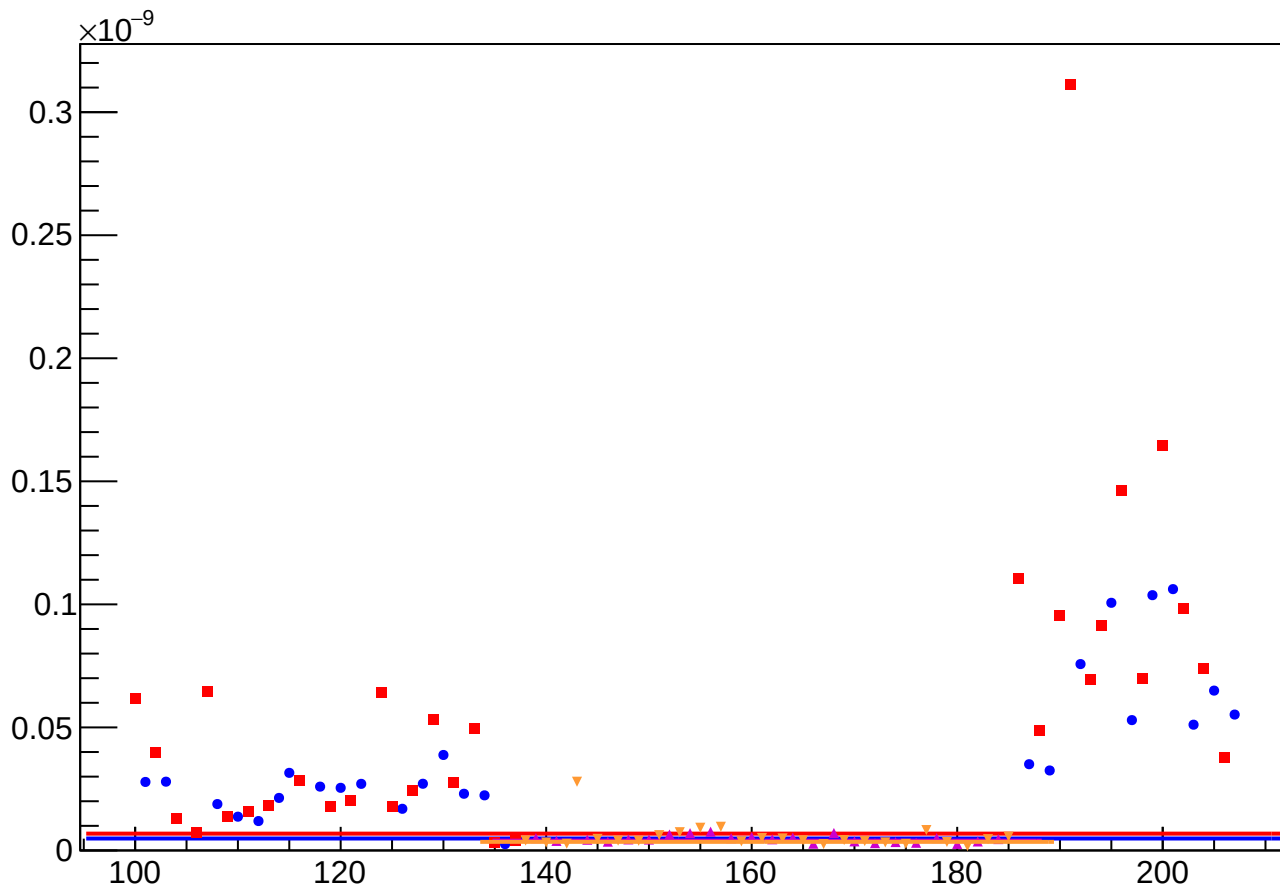
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 28.7/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 34.4/50

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 130.8/104

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 95.3/53

asym\_atl\_avg\_atr\_avg\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 11876779.1/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:4688121.0/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 12896666.9/30

Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:2073078.0/22

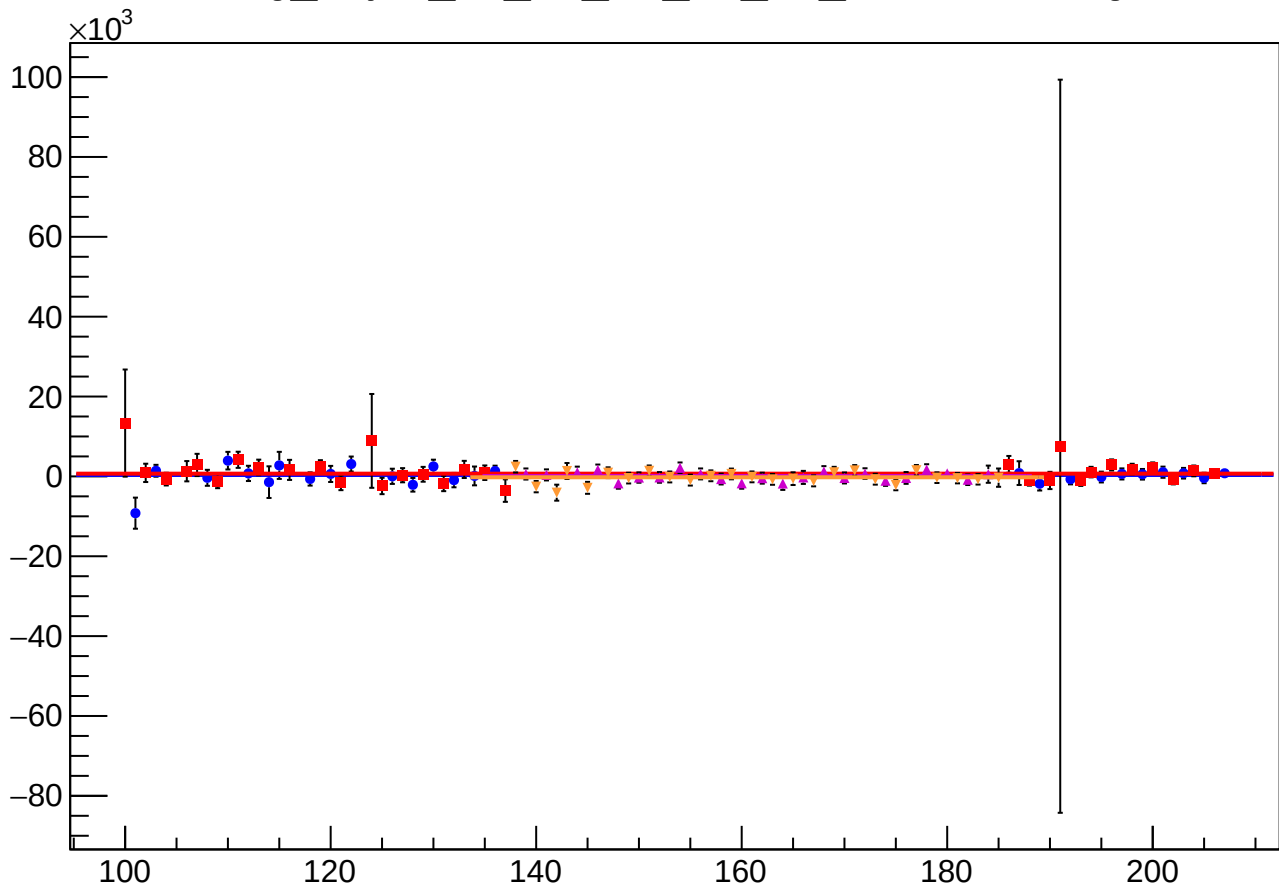
+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 16855520.0/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 32995049.3/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 15855975.0/53



reg\_asym\_atl\_dd\_atr\_dd\_dd\_mean vs Slug



Right In: 359.873 $\pm$ 328.263  $\chi^2$ /NDF: 20.7/25

Left Out: -220.721 $\pm$ 283.055  $\chi^2$ /NDF:23.9/24

Right Out: 681.848 $\pm$ 319.078  $\chi^2$ /NDF: 27.3/30

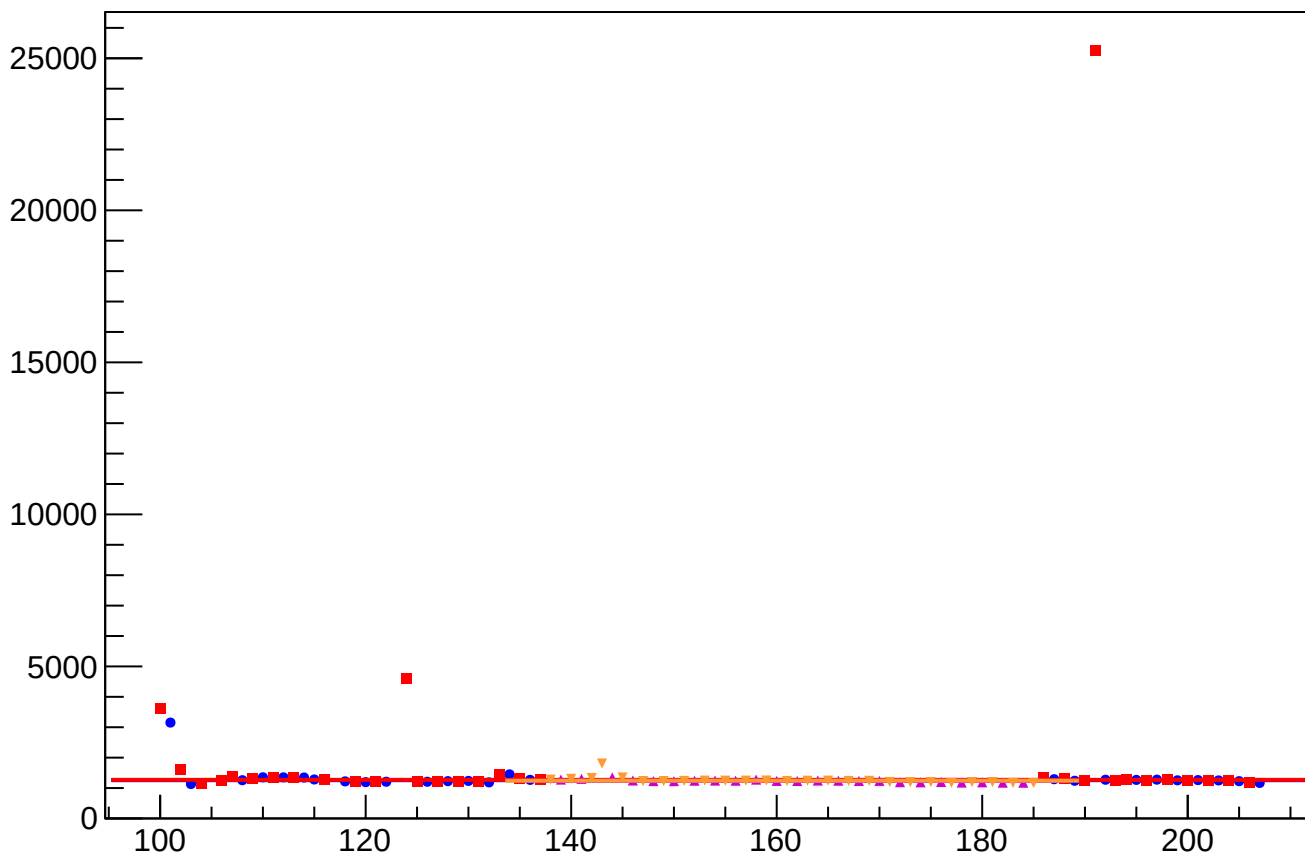
Left In: 92.402 $\pm$ 288.217  $\chi^2$ /NDF:14.7/22

+ sign 26.873 $\pm$ 214.366  $\chi^2$ /NDF: 46.4/50

All: 192.435 $\pm$ 151.408  $\chi^2$ /NDF: 91.5/104

- sign 357.248 $\pm$ 213.881  $\chi^2$ /NDF: 43.9/53

reg\_asym\_atl\_dd\_atr\_dd\_dd\_rms vs Slug



Right In: 1258.479+/-0.232  $\chi^2/\text{NDF}$ : 533843.3/25

Left Out: 1242.825+/-0.200  $\chi^2/\text{NDF}$ : 203299.1/24

Right Out: 1269.681+/-0.226  $\chi^2/\text{NDF}$ : 486242.8/30

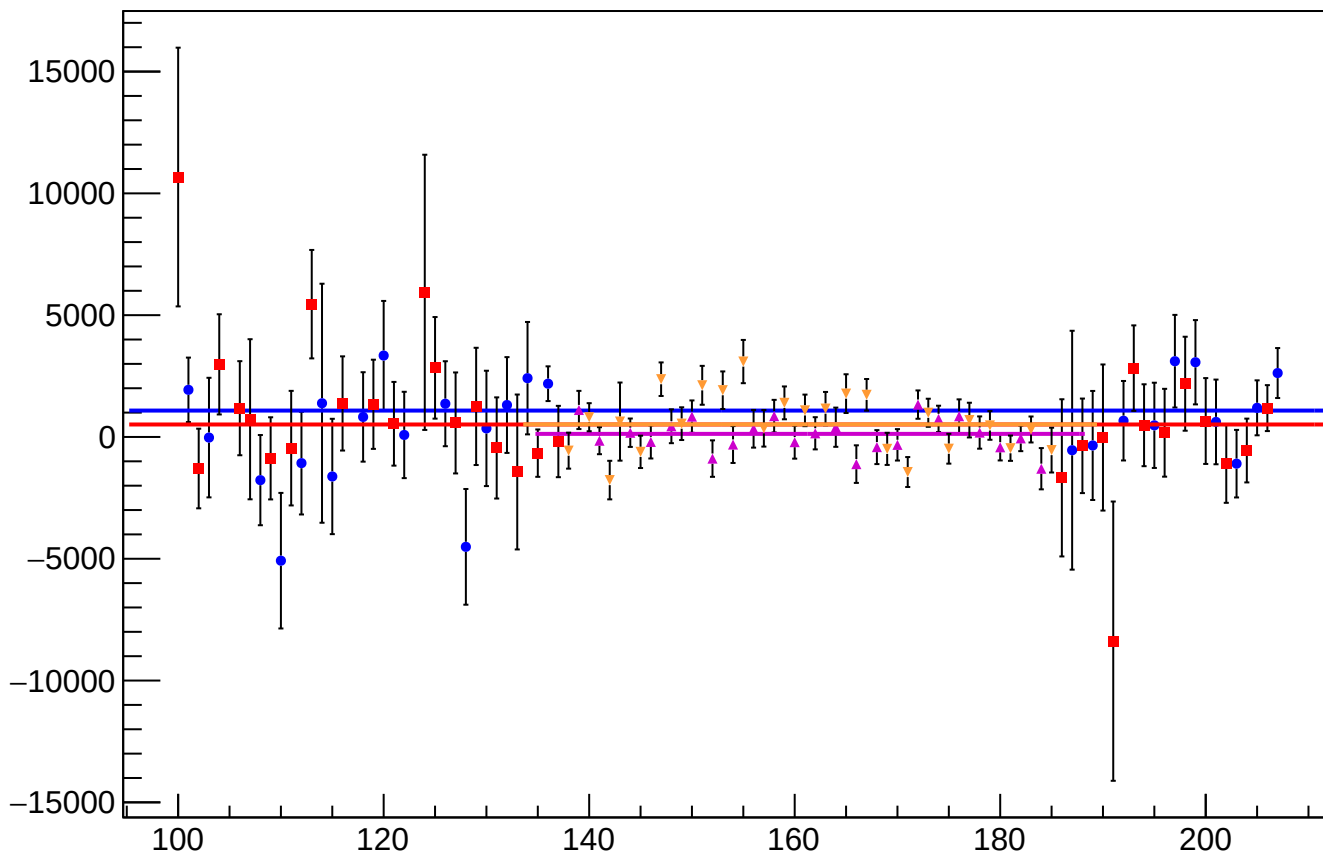
Left In: 1233.752+/-0.204  $\chi^2/\text{NDF}$ : 39281.8/22

+ sign 1249.500+/-0.152  $\chi^2/\text{NDF}$ : 739751.0/50

All: 1249.698+/-0.107  $\chi^2/\text{NDF}$ : 1279243.5/100

- sign 1249.896+/-0.151  $\chi^2/\text{NDF}$ : 539489.0/53

asym\_atl\_dd\_atr\_dd\_dd\_reg\_correction\_mean vs Slug



Right In: 1083.297 $\pm$ 321.817  $\chi^2$ /NDF: 28.0/25

Left Out: 516.792 $\pm$ 135.746  $\chi^2$ /NDF: 67.0/24

Right Out: 512.242 $\pm$ 327.067  $\chi^2$ /NDF: 25.0/30

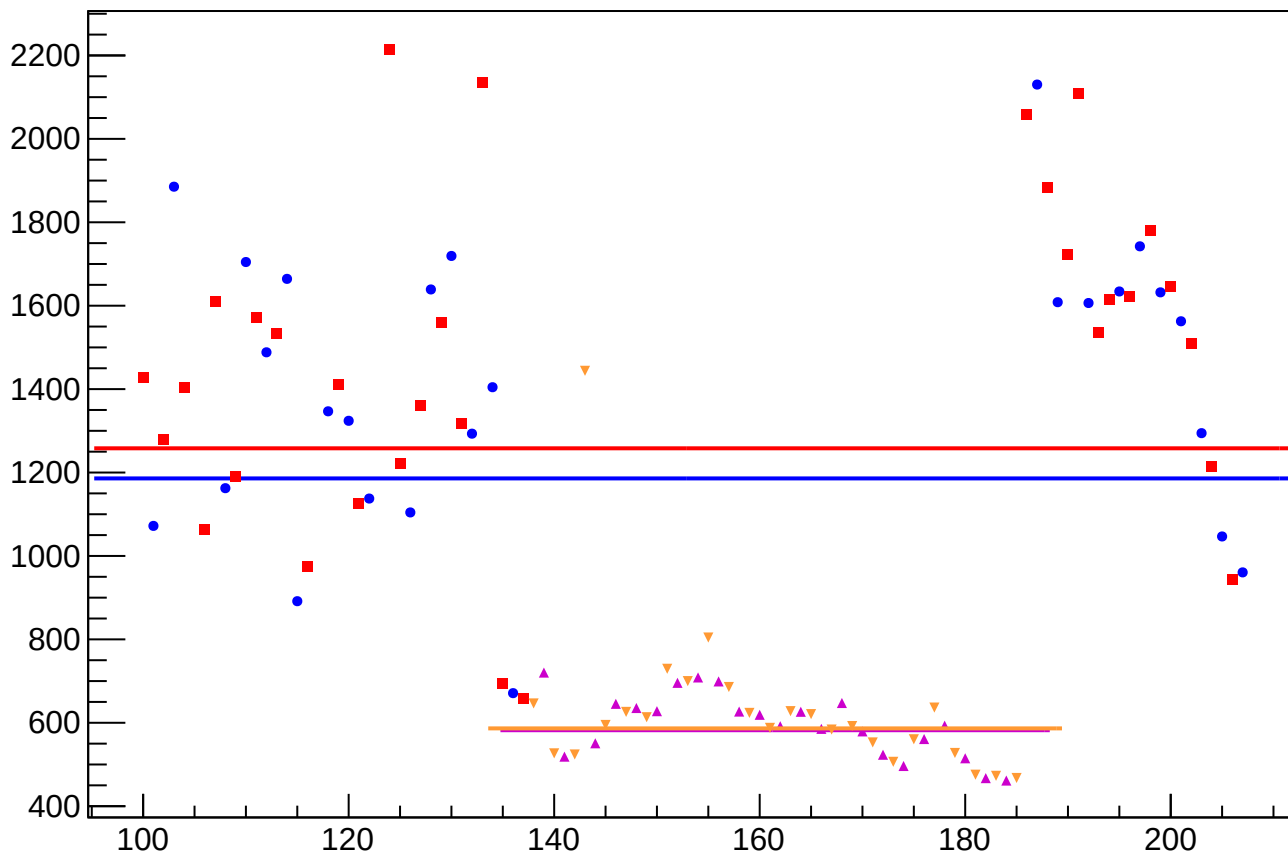
Left In: 126.569 $\pm$ 137.266  $\chi^2$ /NDF: 21.6/22

+ sign 602.362 $\pm$ 125.074  $\chi^2$ /NDF: 97.6/50

All: 395.831 $\pm$ 88.965  $\chi^2$ /NDF: 150.9/104

- sign 184.328 $\pm$ 126.571  $\chi^2$ /NDF: 47.7/53

asym\_atl\_dd\_atr\_dd\_dd\_reg\_correction\_rms vs Slug



Right In: 1185.886 $\pm$ 0.228  $\chi^2$ /NDF: 2555007.3/25

Left Out: 586.557 $\pm$ 0.096  $\chi^2$ /NDF:1202915.7/24

Right Out: 1258.079 $\pm$ 0.231  $\chi^2$ /NDF: 2611021.4/30

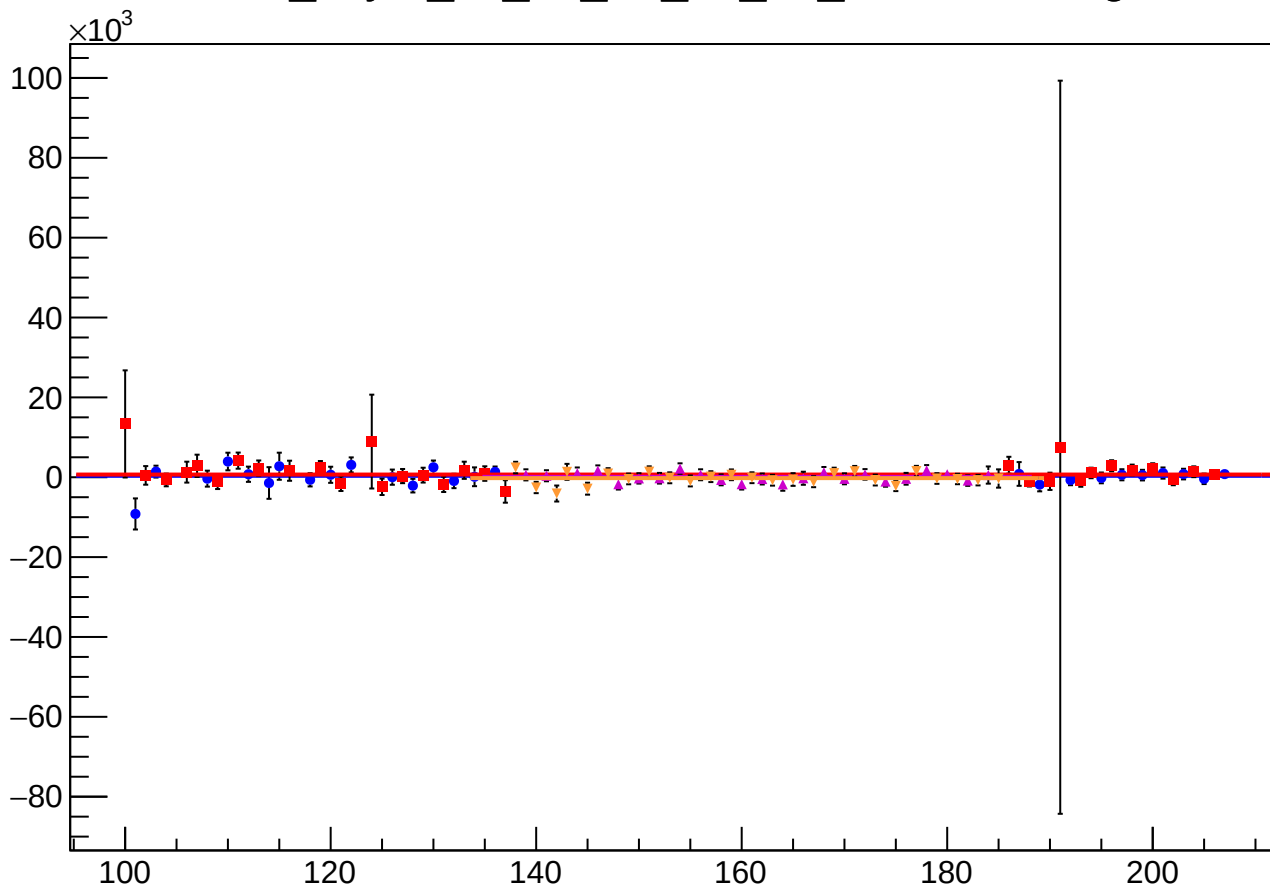
Left In: 582.190 $\pm$ 0.097  $\chi^2$ /NDF:559261.3/22

+ sign 677.085 $\pm$ 0.088  $\chi^2$ /NDF: 9646684.1/50

All: 680.211 $\pm$ 0.063  $\chi^2$ /NDF: 20081364.2/10

- sign 683.411 $\pm$ 0.089  $\chi^2$ /NDF: 10432152.4/53

cor\_asym\_atl\_dd\_atr\_dd\_dd\_mean vs Slug



Right In: 360.079 $\pm$ 328.263  $\chi^2$ /NDF: 20.6/25

Left Out: -220.755 $\pm$ 283.055  $\chi^2$ /NDF:23.9/24

Right Out: 673.061 $\pm$ 319.317  $\chi^2$ /NDF: 27.3/30

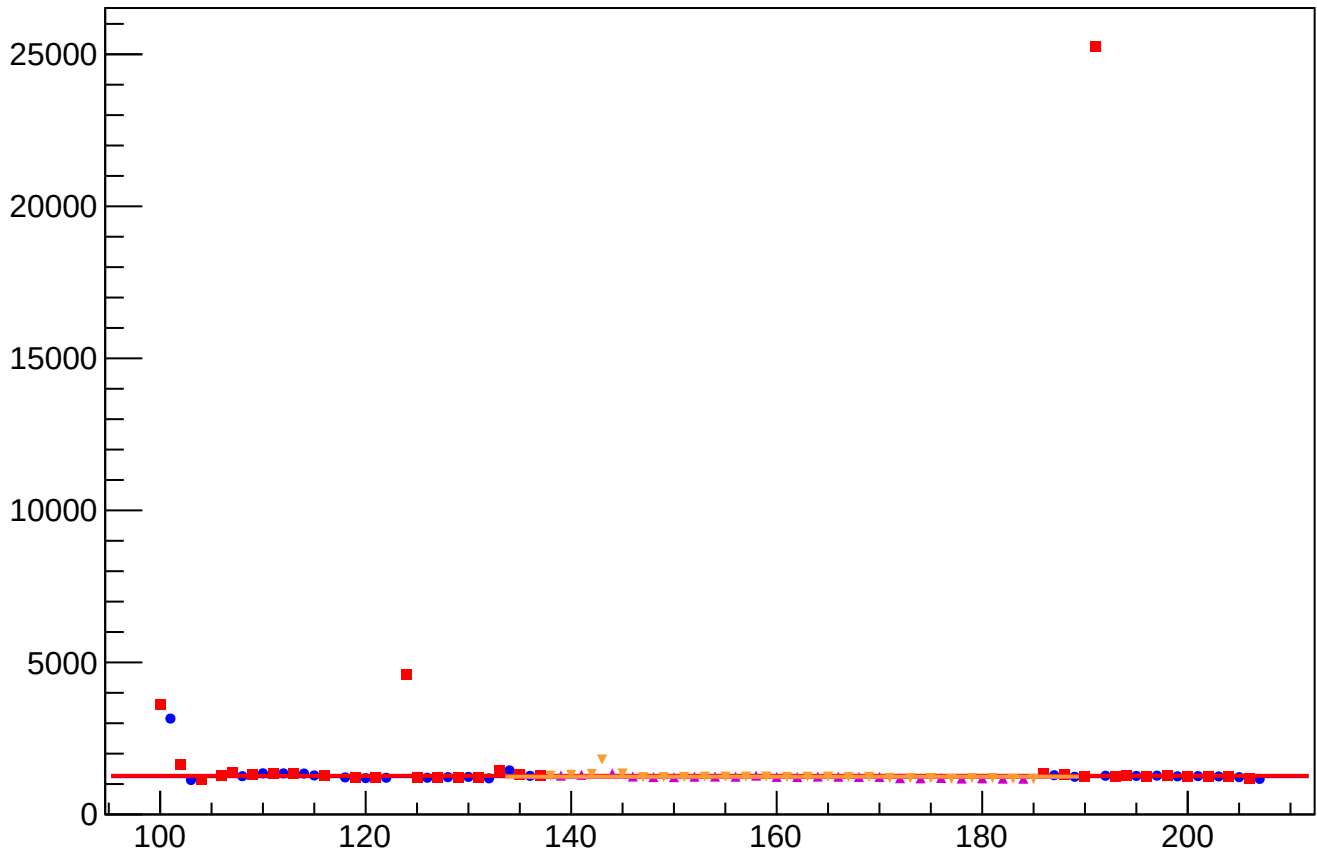
Left In: 92.472 $\pm$ 288.217  $\chi^2$ /NDF:14.7/22

+ sign 26.941 $\pm$ 214.366  $\chi^2$ /NDF: 46.3/50

All: 190.347 $\pm$ 151.433  $\chi^2$ /NDF: 91.4/104

- sign 353.123 $\pm$ 213.953  $\chi^2$ /NDF: 43.8/53

# cor\_asym\_atl\_dd\_atr\_dd\_dd\_rms vs Slug



Right In: 1258.479+/-0.232  $\chi^2/\text{NDF}$ : 533844.7/25

Left Out: 1242.825+/-0.200  $\chi^2/\text{NDF}$ : 203299.1/24

Right Out: 1270.669+/-0.226  $\chi^2/\text{NDF}$ : 493421.8/30

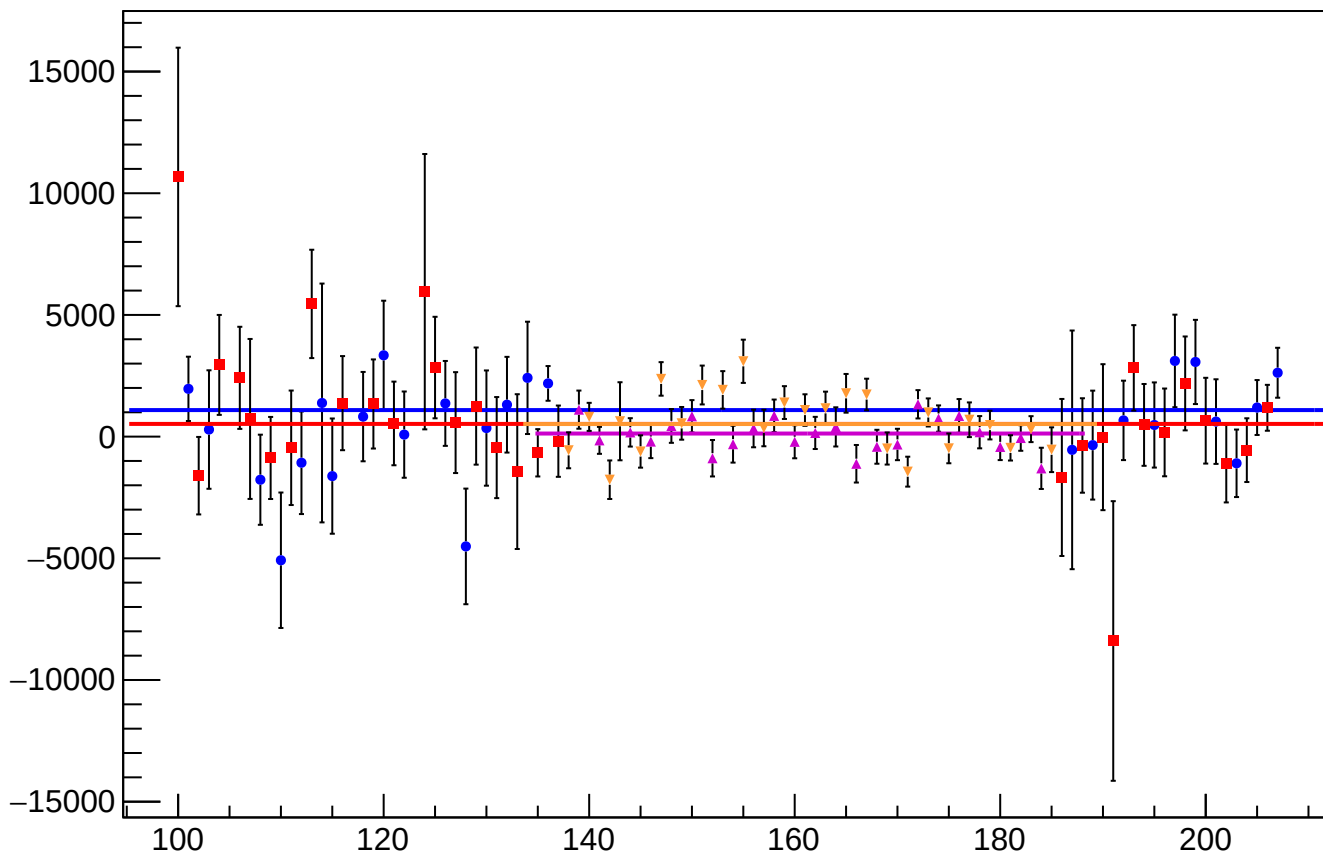
Left In: 1233.752+/-0.204  $\chi^2/\text{NDF}$ : 39281.7/22

+ sign 1249.500+/-0.152  $\chi^2/\text{NDF}$ : 739752.4/50

All: 1249.914+/-0.107  $\chi^2/\text{NDF}$ : 1287202.1/100

- sign 1250.326+/-0.151  $\chi^2/\text{NDF}$ : 547434.9/53

asym\_atl\_dd\_atr\_dd\_dd\_cor\_correction\_mean vs Slug



Right In: 1090.332 $\pm$ 321.741  $\chi^2$ /NDF: 27.9/25

Left Out: 516.811 $\pm$ 135.747  $\chi^2$ /NDF: 67.0/24

Right Out: 521.783 $\pm$ 327.419  $\chi^2$ /NDF: 26.2/30

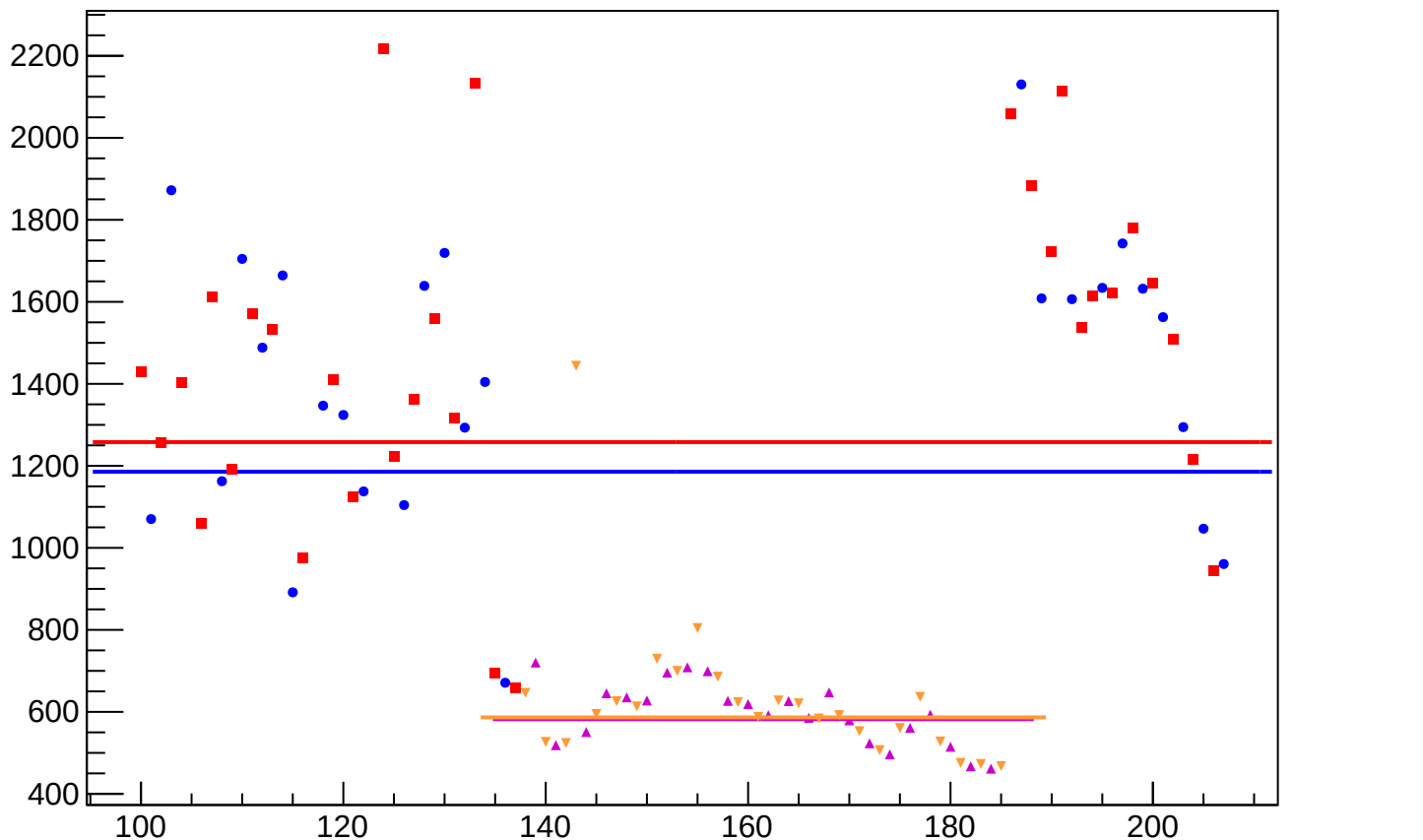
Left In: 126.549 $\pm$ 137.266  $\chi^2$ /NDF: 21.6/22

+ sign 603.477 $\pm$ 125.071  $\chi^2$ /NDF: 97.6/50

All: 397.078 $\pm$ 88.971  $\chi^2$ /NDF: 152.2/104

- sign 185.631 $\pm$ 126.591  $\chi^2$ /NDF: 49.0/53

asym\_atl\_dd\_atr\_dd\_dd\_cor\_correction\_rms vs Slug



Right In: 1185.728 $\pm$ 0.228  $\chi^2$ /NDF: 2552042.5/25

Left Out: 586.562 $\pm$ 0.096  $\chi^2$ /NDF:1202822.0/24

Right Out: 1257.943 $\pm$ 0.232  $\chi^2$ /NDF: 2608519.4/30

Left In: 582.189 $\pm$ 0.097  $\chi^2$ /NDF:559258.0/22

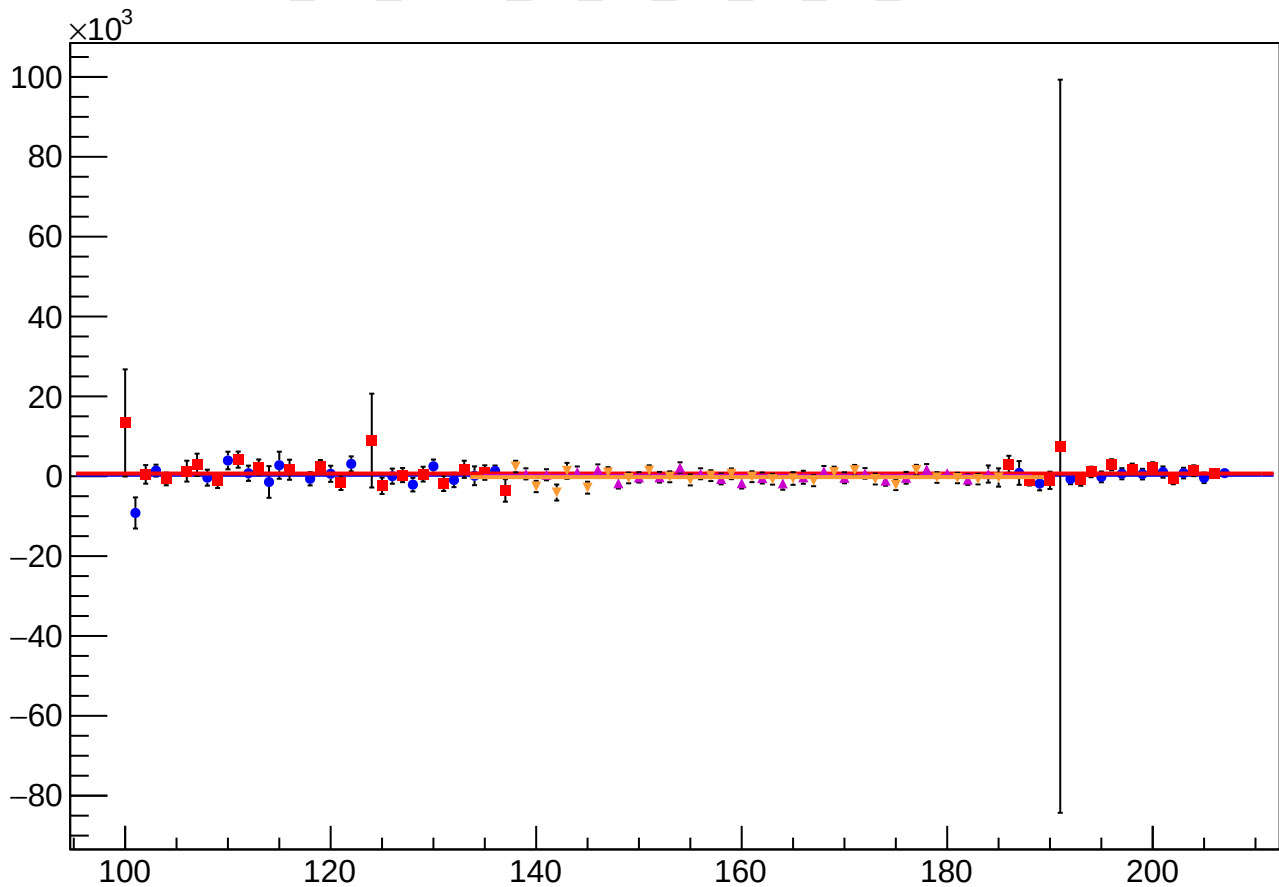
+ sign 677.103 $\pm$ 0.088  $\chi^2$ /NDF: 9642788.1/50

All: 680.117 $\pm$ 0.063  $\chi^2$ /NDF: 20058657.7/10

- sign 683.204 $\pm$ 0.090  $\chi^2$ /NDF: 10413518.6/53



eigen\_cor\_asym\_atl\_dd\_atr\_dd\_dd\_mean vs Slug



Right In:  $360.079 \pm 328.263$   $\chi^2/\text{NDF}$ : 20.6/25

Left Out:  $-220.755 \pm 283.055$   $\chi^2/\text{NDF}$ : 23.9/24

Right Out:  $673.061 \pm 319.317$   $\chi^2/\text{NDF}$ : 27.3/30

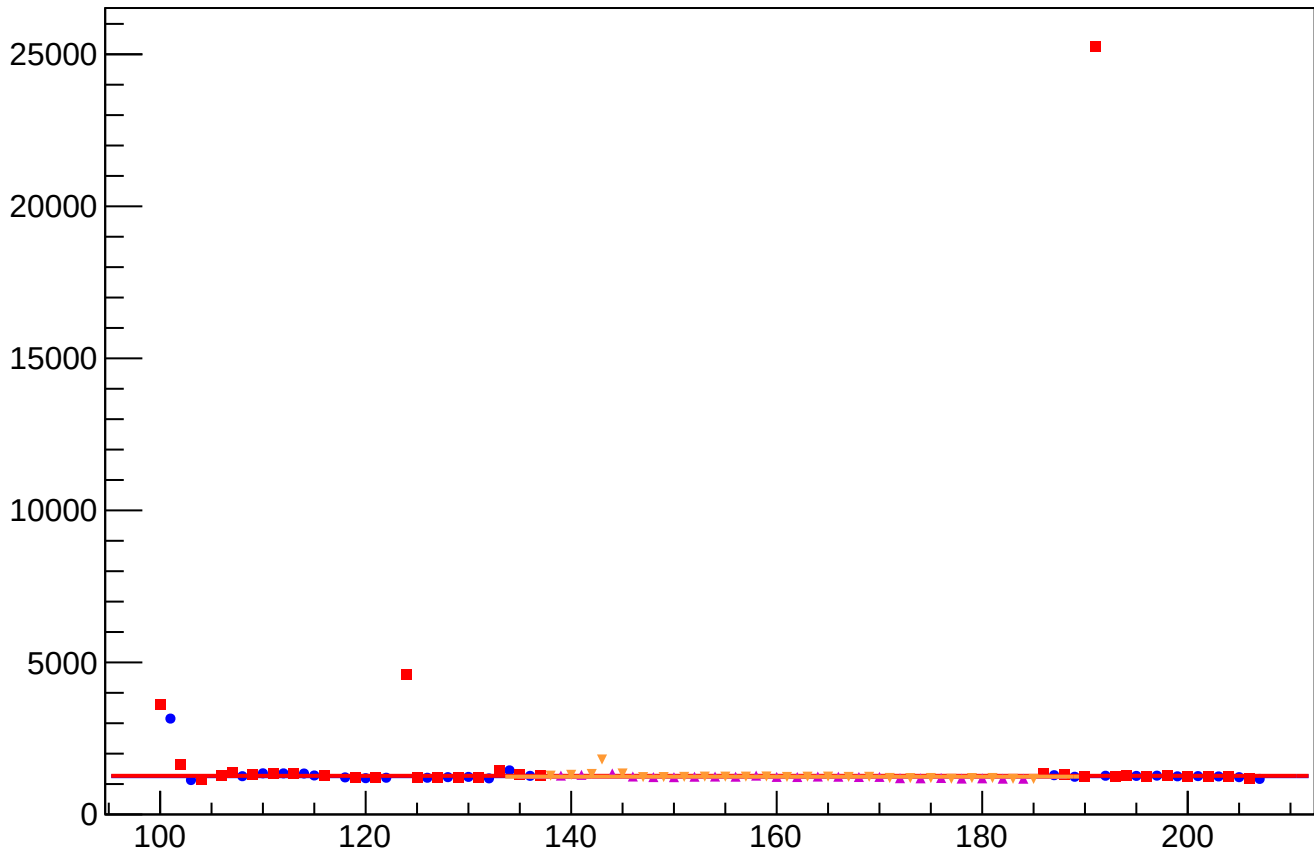
Left In:  $92.472 \pm 288.217$   $\chi^2/\text{NDF}$ : 14.7/22

+ sign  $26.941 \pm 214.366$   $\chi^2/\text{NDF}$ : 46.3/50

All:  $190.347 \pm 151.433$   $\chi^2/\text{NDF}$ : 91.4/104

- sign  $353.123 \pm 213.953$   $\chi^2/\text{NDF}$ : 43.8/53

eigen\_cor\_asym\_atl\_dd\_atr\_dd\_dd\_rms vs Slug



Right In: 1258.479+/-0.232  $\chi^2/\text{NDF}$ : 533844.7/25

Left Out: 1242.825+/-0.200  $\chi^2/\text{NDF}$ : 203299.1/24

Right Out: 1270.669+/-0.226  $\chi^2/\text{NDF}$ : 493421.8/30

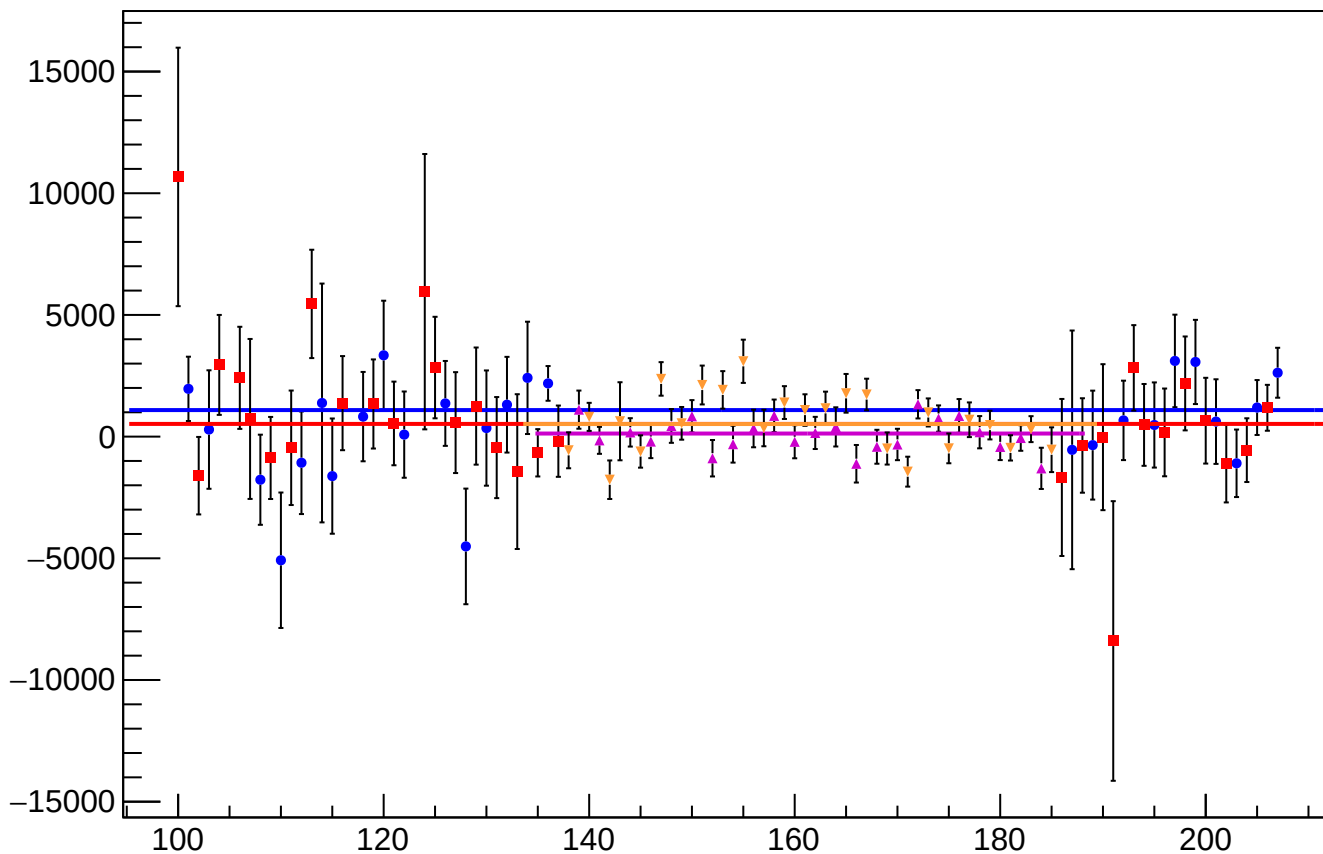
Left In: 1233.752+/-0.204  $\chi^2/\text{NDF}$ : 39281.7/22

+ sign 1249.500+/-0.152  $\chi^2/\text{NDF}$ : 739752.4/50

All: 1249.914+/-0.107  $\chi^2/\text{NDF}$ : 1287202.1/100

- sign 1250.326+/-0.151  $\chi^2/\text{NDF}$ : 547434.9/53

asym\_atl\_dd\_atr\_dd\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In: 1090.332 $\pm$ 321.741  $\chi^2$ /NDF: 27.9/25

Left Out: 516.811 $\pm$ 135.747  $\chi^2$ /NDF: 67.0/24

Right Out: 521.783 $\pm$ 327.419  $\chi^2$ /NDF: 26.2/30

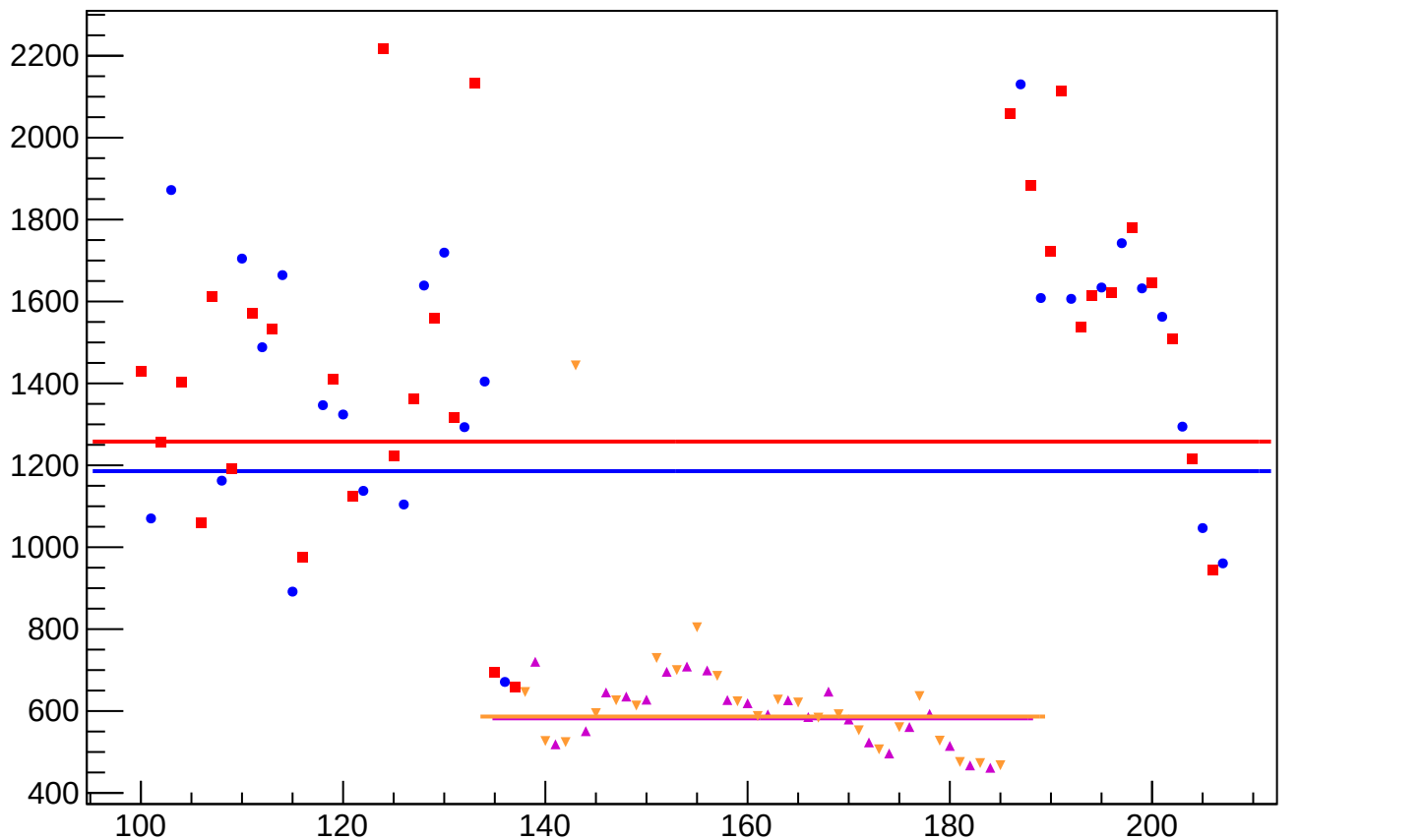
Left In: 126.549 $\pm$ 137.266  $\chi^2$ /NDF: 21.6/22

+ sign 603.477 $\pm$ 125.071  $\chi^2$ /NDF: 97.6/50

All: 397.078 $\pm$ 88.971  $\chi^2$ /NDF: 152.2/104

- sign 185.631 $\pm$ 126.591  $\chi^2$ /NDF: 49.0/53

asym\_atl\_dd\_atr\_dd\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 1185.728 $\pm$ 0.228  $\chi^2/\text{NDF}$ : 2552042.5/25

Left Out: 586.562 $\pm$ 0.096  $\chi^2/\text{NDF}$ :1202822.0/24

Right Out: 1257.943 $\pm$ 0.232  $\chi^2/\text{NDF}$ : 2608519.4/30

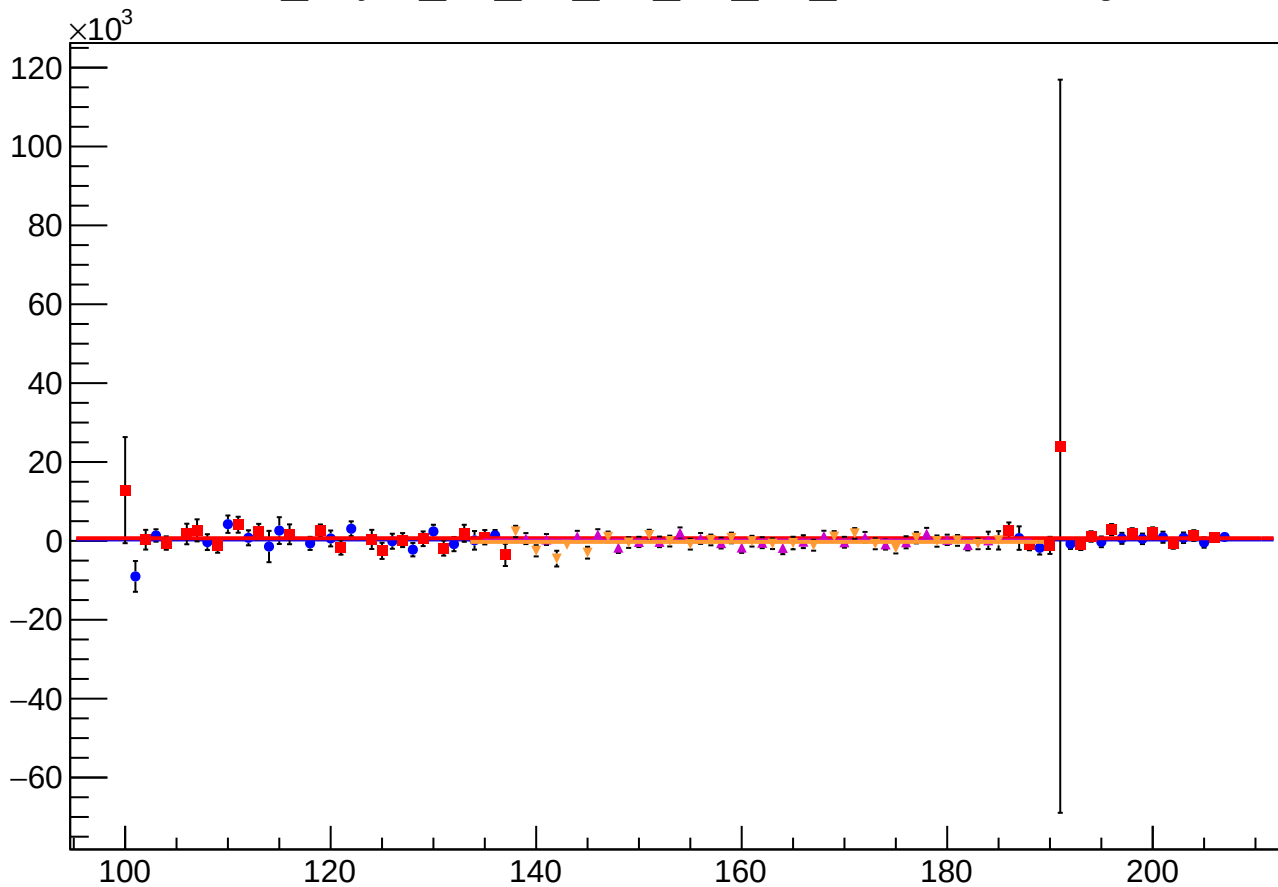
Left In: 582.189 $\pm$ 0.097  $\chi^2/\text{NDF}$ :559258.0/22

+ sign 677.103 $\pm$ 0.088  $\chi^2/\text{NDF}$ : 9642788.1/50

All: 680.117 $\pm$ 0.063  $\chi^2/\text{NDF}$ : 20058657.7/10

- sign 683.204 $\pm$ 0.090  $\chi^2/\text{NDF}$ : 10413518.6/53

dit\_asym\_atl\_dd\_atr\_dd\_dd\_mean vs Slug



Right In:  $362.916 \pm 329.469$   $\chi^2/\text{NDF}$ : 20.8/25

Left Out:  $-250.849 \pm 279.923$   $\chi^2/\text{NDF}$ : 24.0/24

Right Out:  $672.726 \pm 318.435$   $\chi^2/\text{NDF}$ : 26.8/30

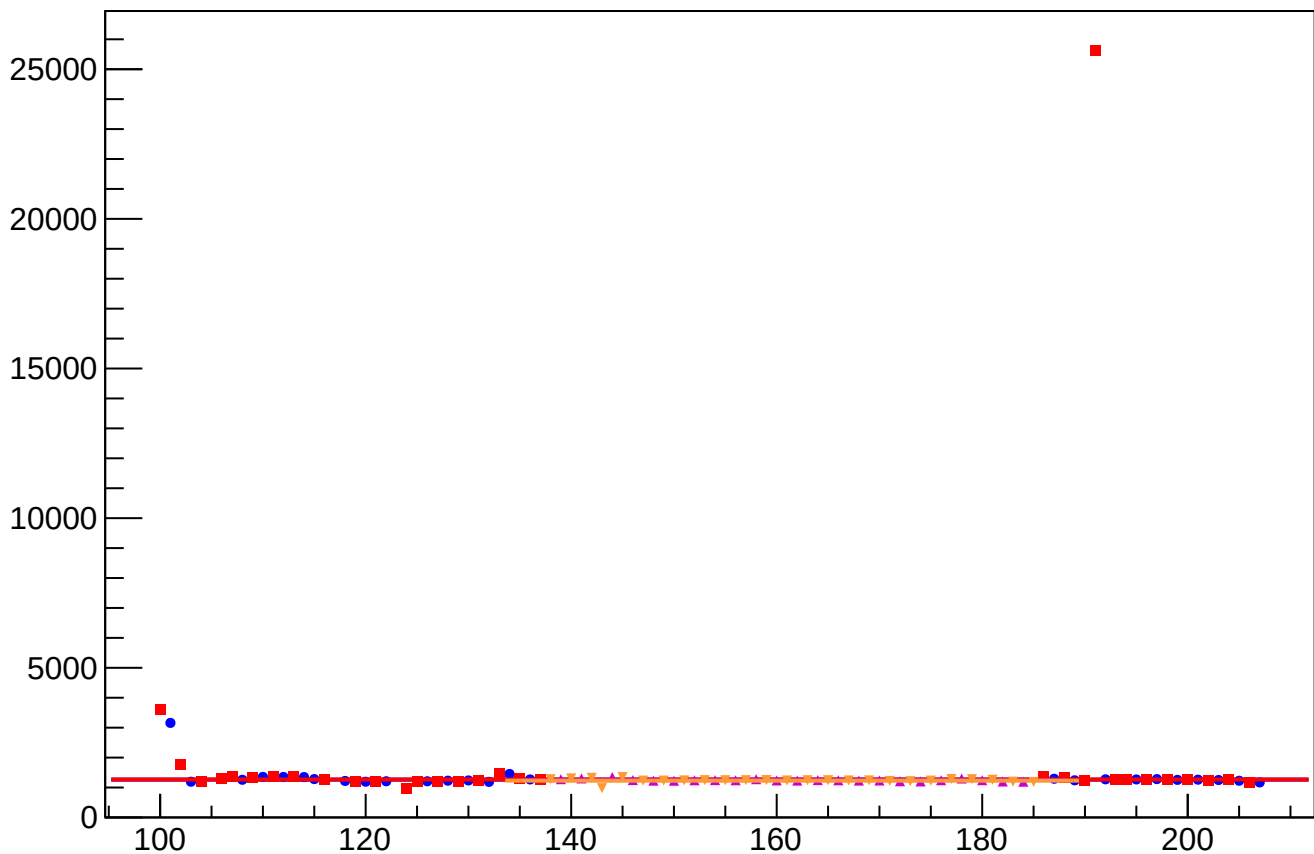
Left In:  $74.881 \pm 291.458$   $\chi^2/\text{NDF}$ : 14.0/22

+ sign  $6.460 \pm 213.324$   $\chi^2/\text{NDF}$ : 46.8/50

All:  $175.604 \pm 151.431$   $\chi^2/\text{NDF}$ : 90.8/104

- sign  $347.411 \pm 214.998$   $\chi^2/\text{NDF}$ : 42.8/53

dit\_asym\_atl\_dd\_atr\_dd\_dd\_rms vs Slug



Right In: 1263.295+/-0.233  $\chi^2/\text{NDF}$ : 523813.5/25

Left Out: 1229.986+/-0.198  $\chi^2/\text{NDF}$ : 141607.5/24

Right Out: 1268.948+/-0.225  $\chi^2/\text{NDF}$ : 384624.8/30

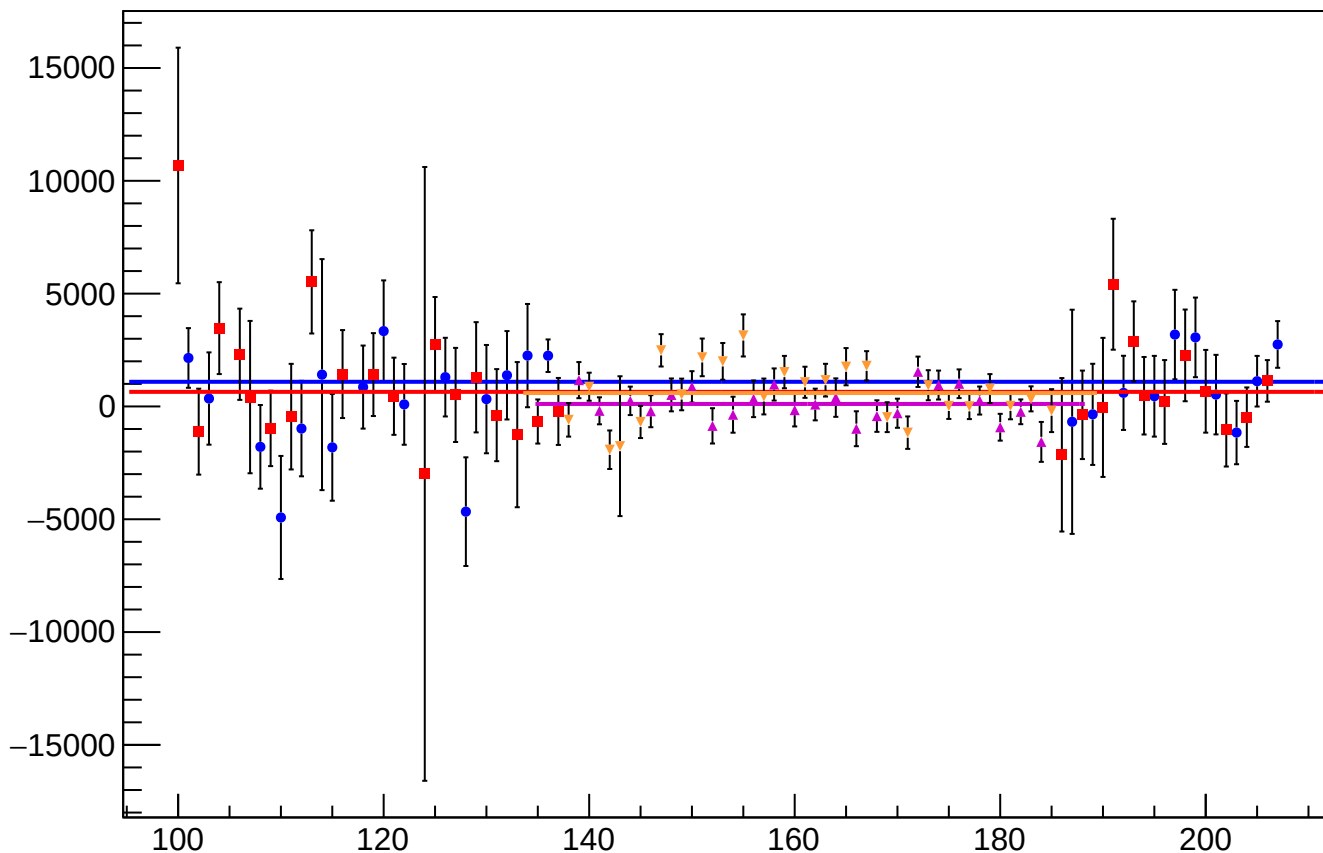
Left In: 1247.785+/-0.206  $\chi^2/\text{NDF}$ : 27340.8/22

+ sign 1243.950+/-0.151  $\chi^2/\text{NDF}$ : 677293.2/50

All: 1250.639+/-0.107  $\chi^2/\text{NDF}$ : 1098028.4/100

- sign 1257.432+/-0.152  $\chi^2/\text{NDF}$ : 416772.2/53

asym\_atl\_dd\_atr\_dd\_dd\_dit\_correction\_mean vs Slug



Right In: 1092.536 $\pm$ 322.990  $\chi^2$ /NDF: 28.9/25

Left Out: 595.000 $\pm$ 142.130  $\chi^2$ /NDF: 57.3/24

Right Out: 646.367 $\pm$ 330.082  $\chi^2$ /NDF: 25.2/30

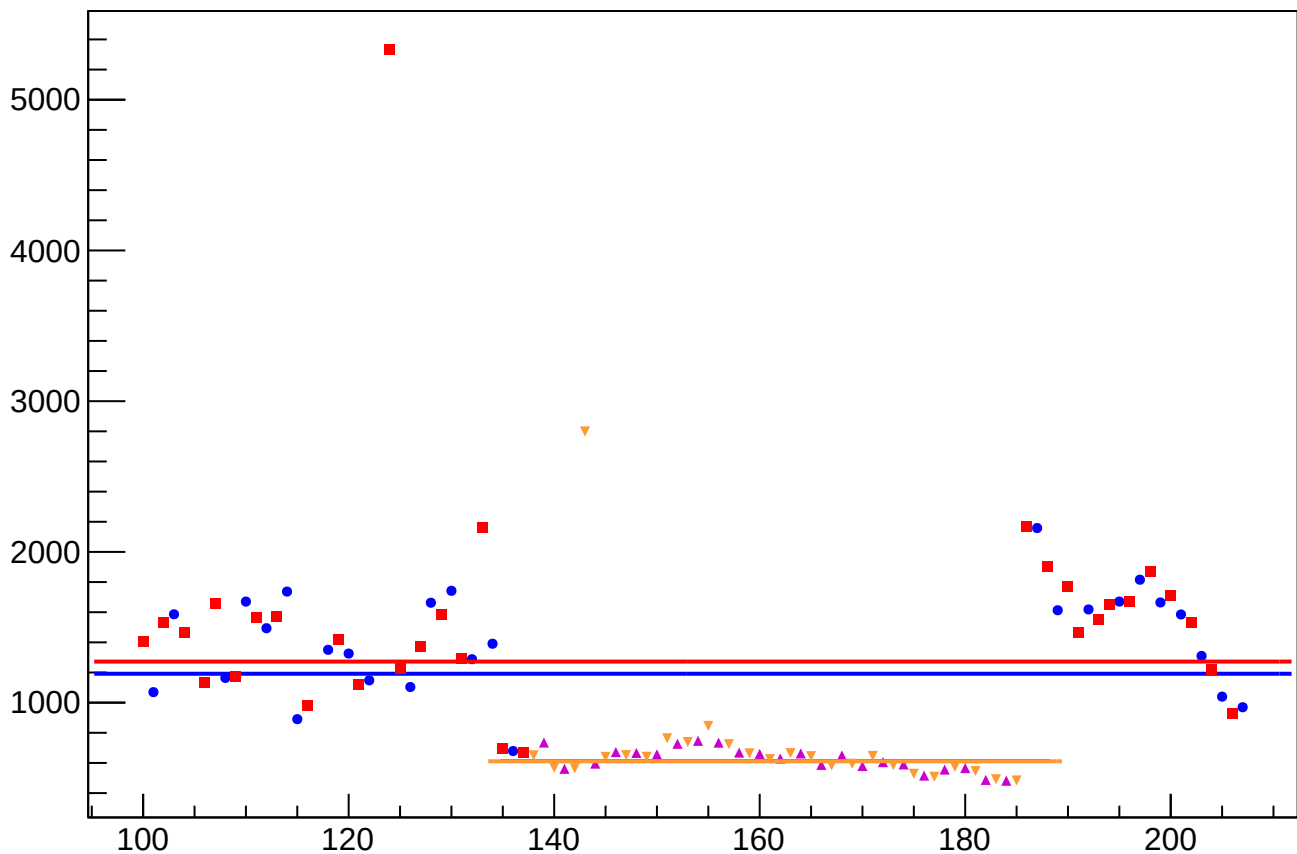
Left In: 110.252 $\pm$ 144.232  $\chi^2$ /NDF: 25.7/22

+ sign 675.714 $\pm$ 130.092  $\chi^2$ /NDF: 88.2/50

All: 439.750 $\pm$ 92.713  $\chi^2$ /NDF: 148.0/104

- sign 196.203 $\pm$ 132.166  $\chi^2$ /NDF: 53.1/53

asym\_atl\_dd\_atr\_dd\_dd\_dit\_correction\_rms vs Slug



Right In: 1191.699 $\pm$ 0.228  $\chi^2$ /NDF: 2498397.2/25

Left Out: 611.087 $\pm$ 0.101  $\chi^2$ /NDF:1619322.3/24

Right Out: 1272.435 $\pm$ 0.233  $\chi^2$ /NDF: 2900084.3/30

Left In: 612.399 $\pm$ 0.102  $\chi^2$ /NDF:508595.4/22

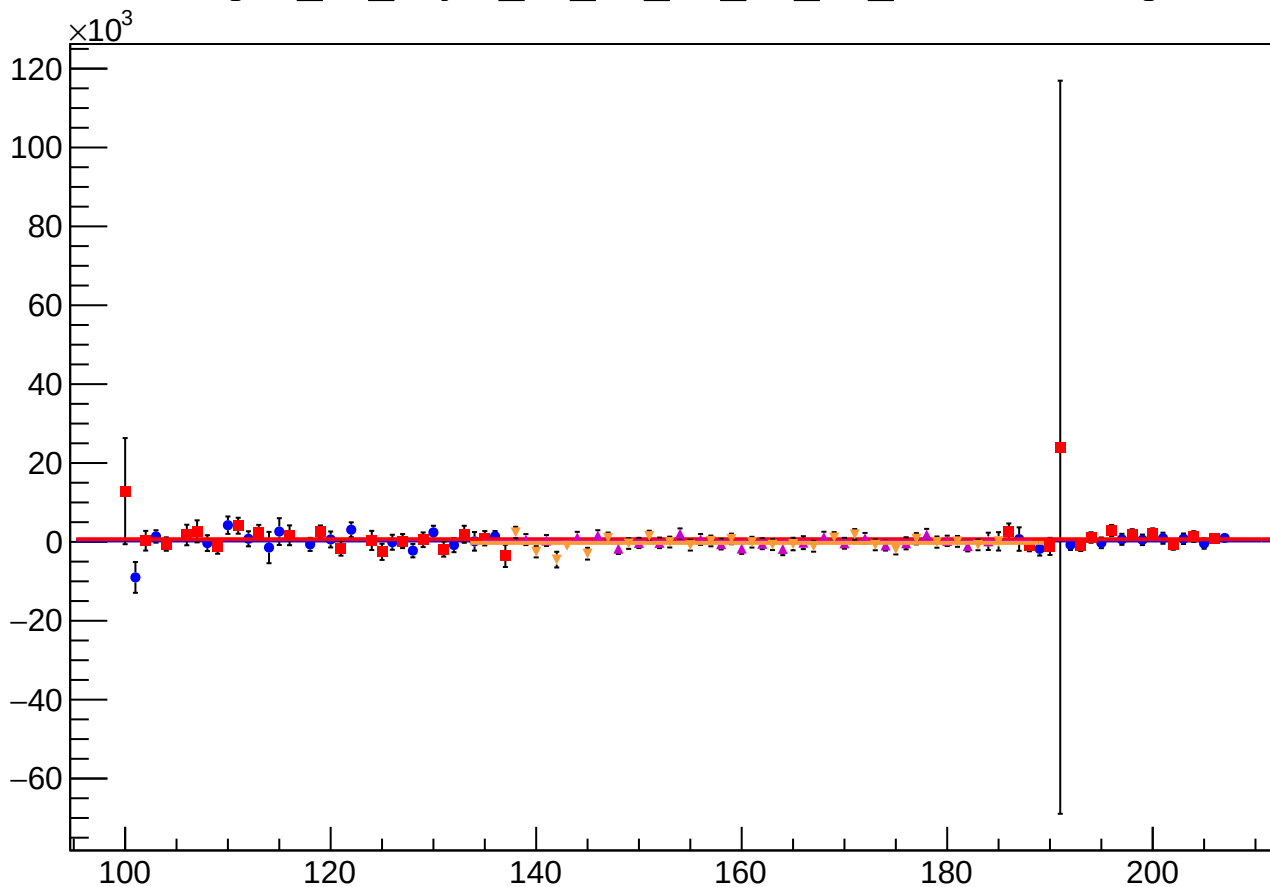
+ sign 705.277 $\pm$ 0.092  $\chi^2$ /NDF: 9532126.1/50

All: 711.645 $\pm$ 0.066  $\chi^2$ /NDF: 19665353.2/10

- sign 718.217 $\pm$ 0.093  $\chi^2$ /NDF: 10123490.1/53



eigen\_dit\_asym\_atl\_dd\_atr\_dd\_dd\_mean vs Slug



Right In:  $362.916 \pm 329.469$   $\chi^2/\text{NDF}$ : 20.8/25

Left Out:  $-250.851 \pm 279.923$   $\chi^2/\text{NDF}$ : 24.0/24

Right Out:  $672.725 \pm 318.435$   $\chi^2/\text{NDF}$ : 26.8/30

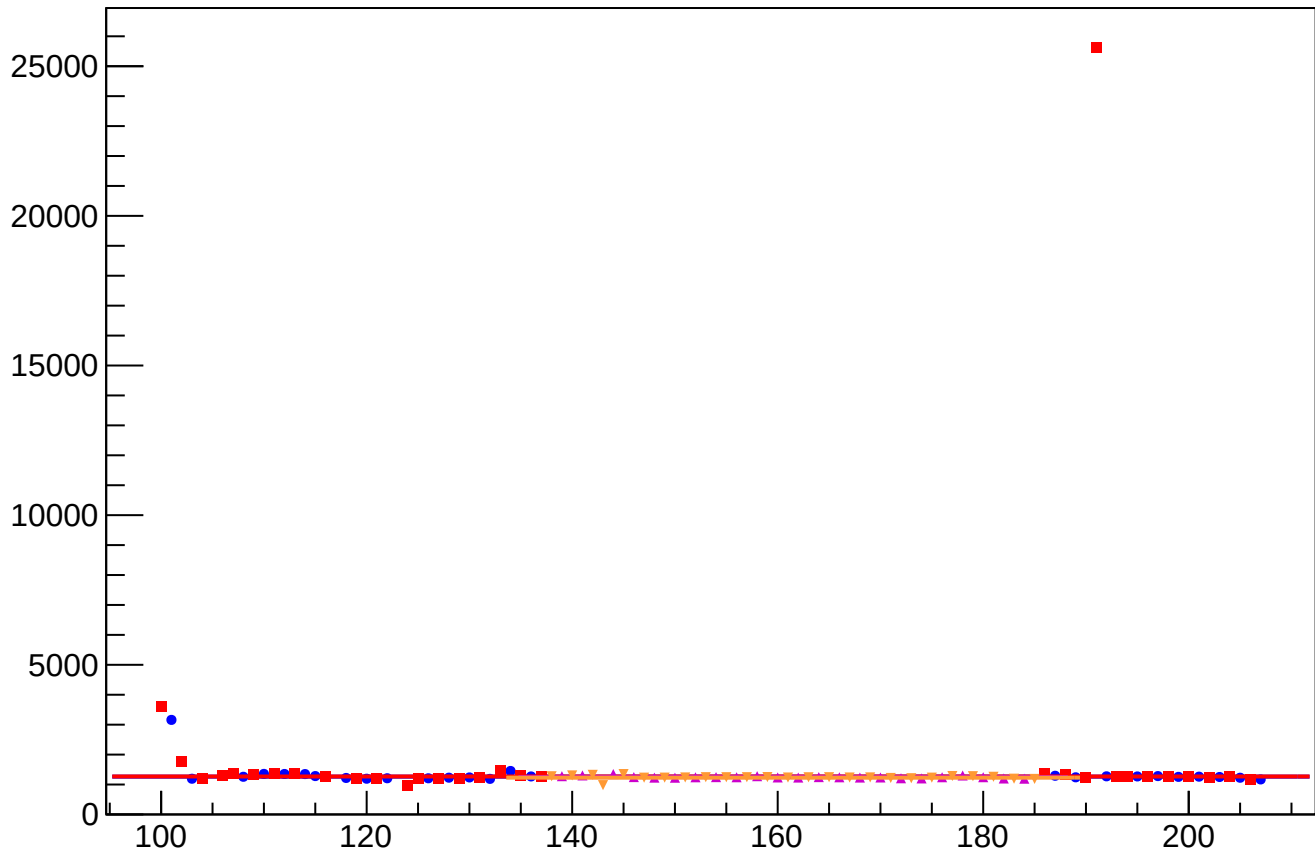
Left In:  $74.881 \pm 291.458$   $\chi^2/\text{NDF}$ : 14.0/22

+ sign  $6.458 \pm 213.324$   $\chi^2/\text{NDF}$ : 46.8/50

All:  $175.603 \pm 151.431$   $\chi^2/\text{NDF}$ : 90.8/104

- sign  $347.411 \pm 214.998$   $\chi^2/\text{NDF}$ : 42.8/53

eigen\_dit\_asym\_atl\_dd\_atr\_dd\_dd\_rms vs Slug



Right In: 1263.295+/-0.233  $\chi^2/\text{NDF}$ : 523813.6/25

Left Out: 1229.986+/-0.198  $\chi^2/\text{NDF}$ : 141606.6/24

Right Out: 1268.948+/-0.225  $\chi^2/\text{NDF}$ : 384624.6/30

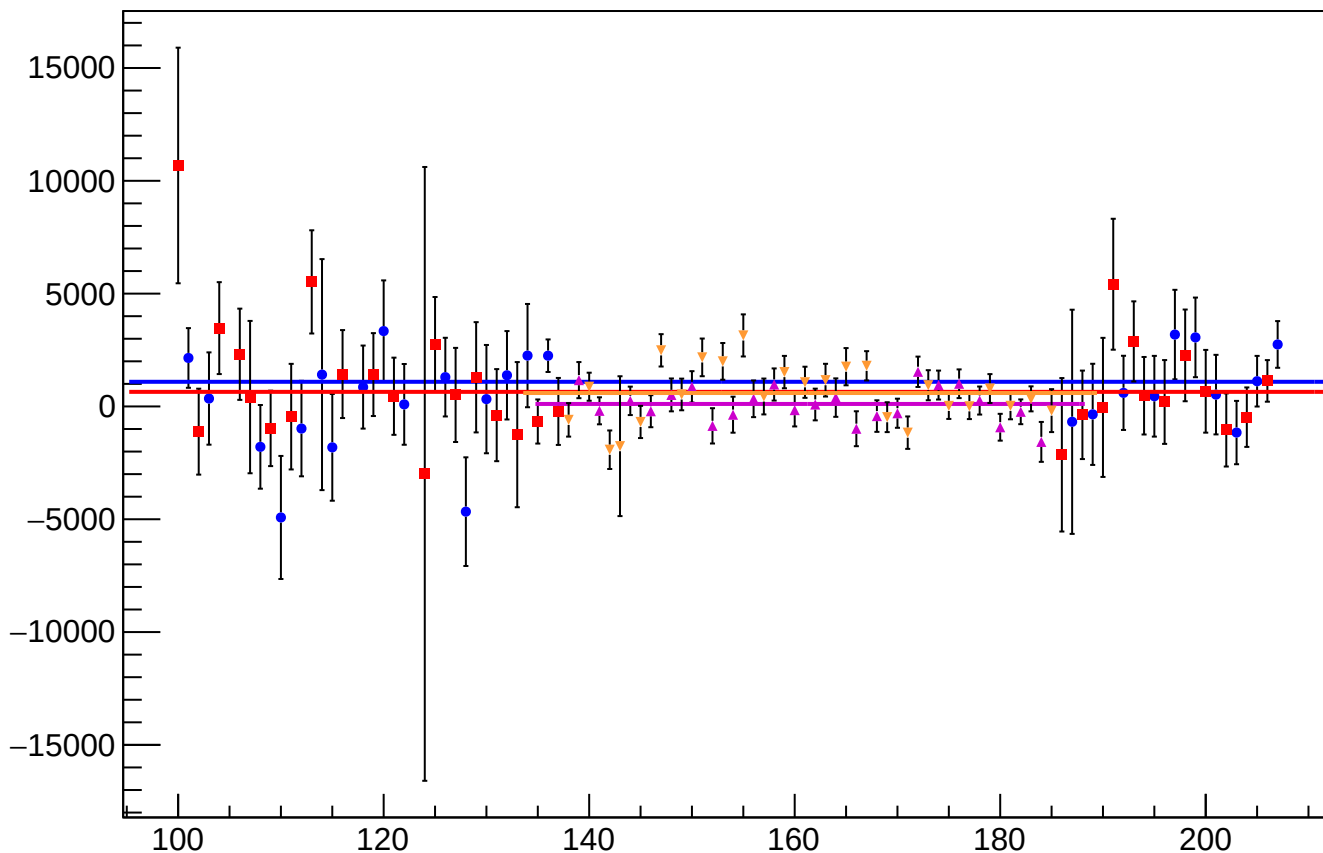
Left In: 1247.785+/-0.206  $\chi^2/\text{NDF}$ : 27340.7/22

+ sign 1243.950+/-0.151  $\chi^2/\text{NDF}$ : 677292.4/50

All: 1250.639+/-0.107  $\chi^2/\text{NDF}$ : 1098027.3/100

- sign 1257.432+/-0.152  $\chi^2/\text{NDF}$ : 416772.0/53

asym\_atl\_dd\_atr\_dd\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In: 1092.533 $\pm$ 322.990  $\chi^2$ /NDF: 28.9/25

Left Out: 595.000 $\pm$ 142.130  $\chi^2$ /NDF: 57.3/24

Right Out: 646.374 $\pm$ 330.083  $\chi^2$ /NDF: 25.2/30

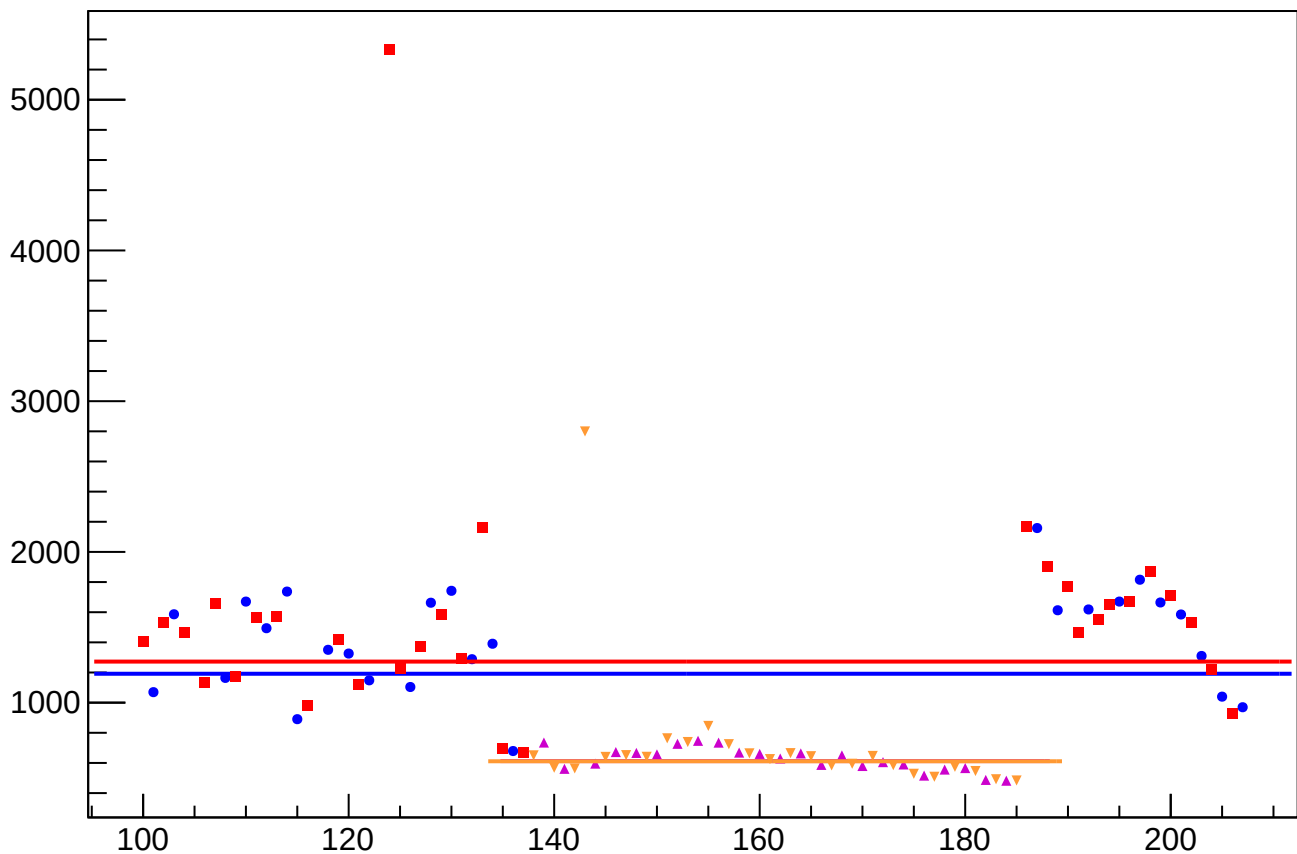
Left In: 110.251 $\pm$ 144.232  $\chi^2$ /NDF: 25.7/22

+ sign 675.713 $\pm$ 130.092  $\chi^2$ /NDF: 88.2/50

All: 439.749 $\pm$ 92.713  $\chi^2$ /NDF: 148.0/104

- sign 196.203 $\pm$ 132.166  $\chi^2$ /NDF: 53.1/53

asym\_atl\_dd\_atr\_dd\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 1191.701 $\pm$ 0.228  $\chi^2$ /NDF: 2498338.8/25

Left Out: 611.086 $\pm$ 0.101  $\chi^2$ /NDF: 1619319.5/24

Right Out: 1272.438 $\pm$ 0.233  $\chi^2$ /NDF: 2900033.6/30

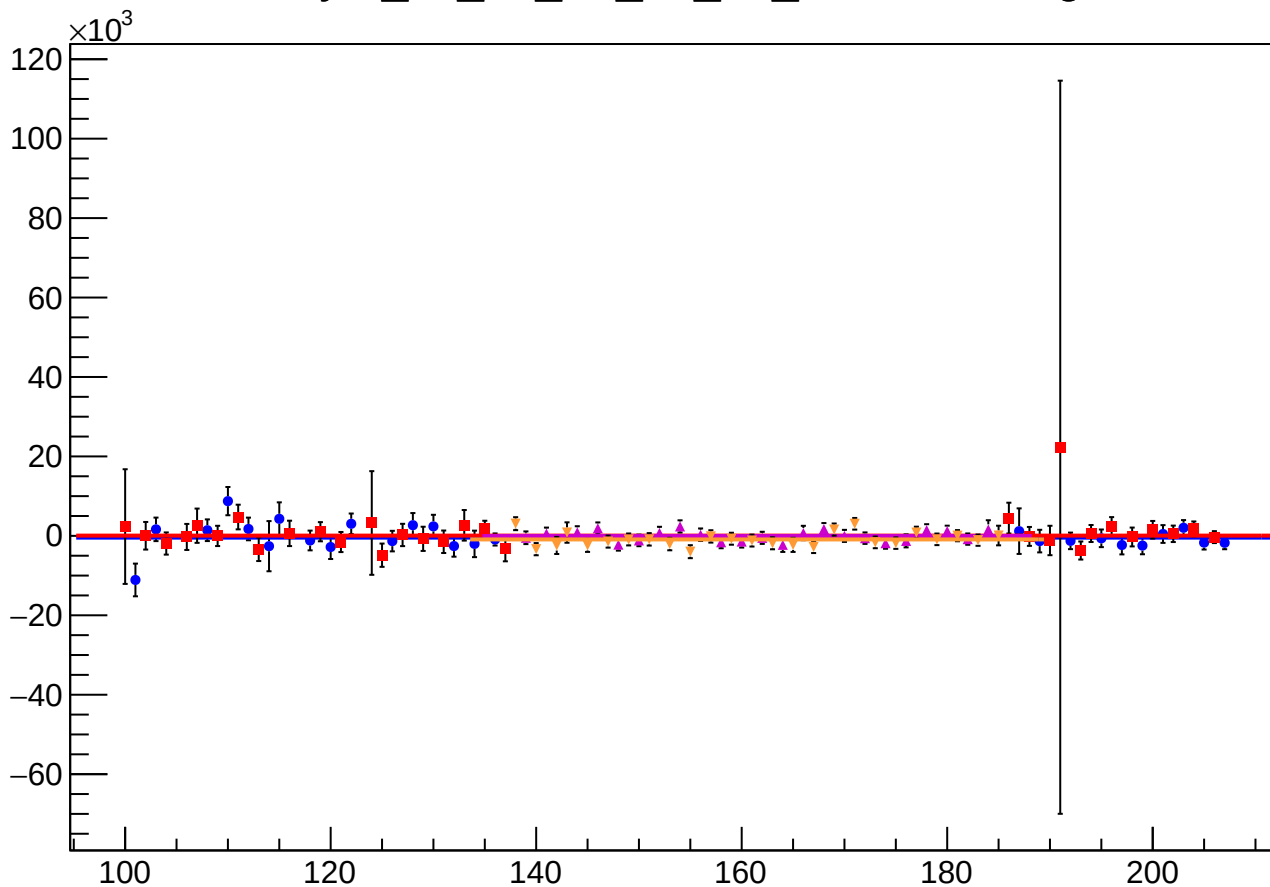
Left In: 612.398 $\pm$ 0.102  $\chi^2$ /NDF: 508597.7/22

+ sign 705.277 $\pm$ 0.092  $\chi^2$ /NDF: 9532100.3/50

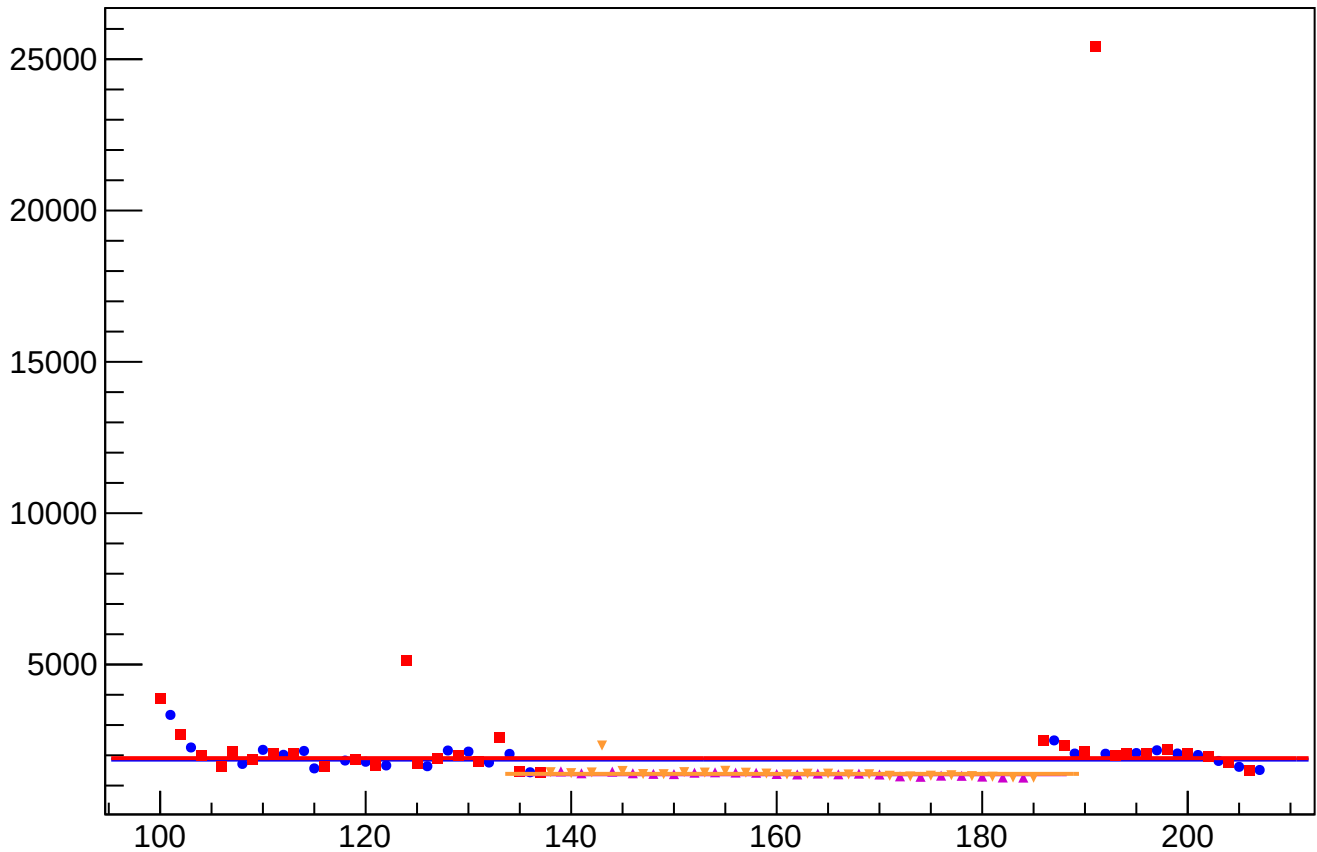
All: 711.645 $\pm$ 0.066  $\chi^2$ /NDF: 19665333.1/10

- sign 718.217 $\pm$ 0.093  $\chi^2$ /NDF: 10123496.4/53

# asym\_atl\_dd\_atr\_dd\_dd\_mean vs Slug



# asym\_atl\_dd\_atr\_dd\_dd\_rms vs Slug



Right In: 1858.113+/-0.345  $\chi^2/\text{NDF}$ : 818380.5/25

Left Out: 1386.845+/-0.224  $\chi^2/\text{NDF}$ : 339794.5/24

Right Out: 1905.838+/-0.341  $\chi^2/\text{NDF}$ : 991223.5/30

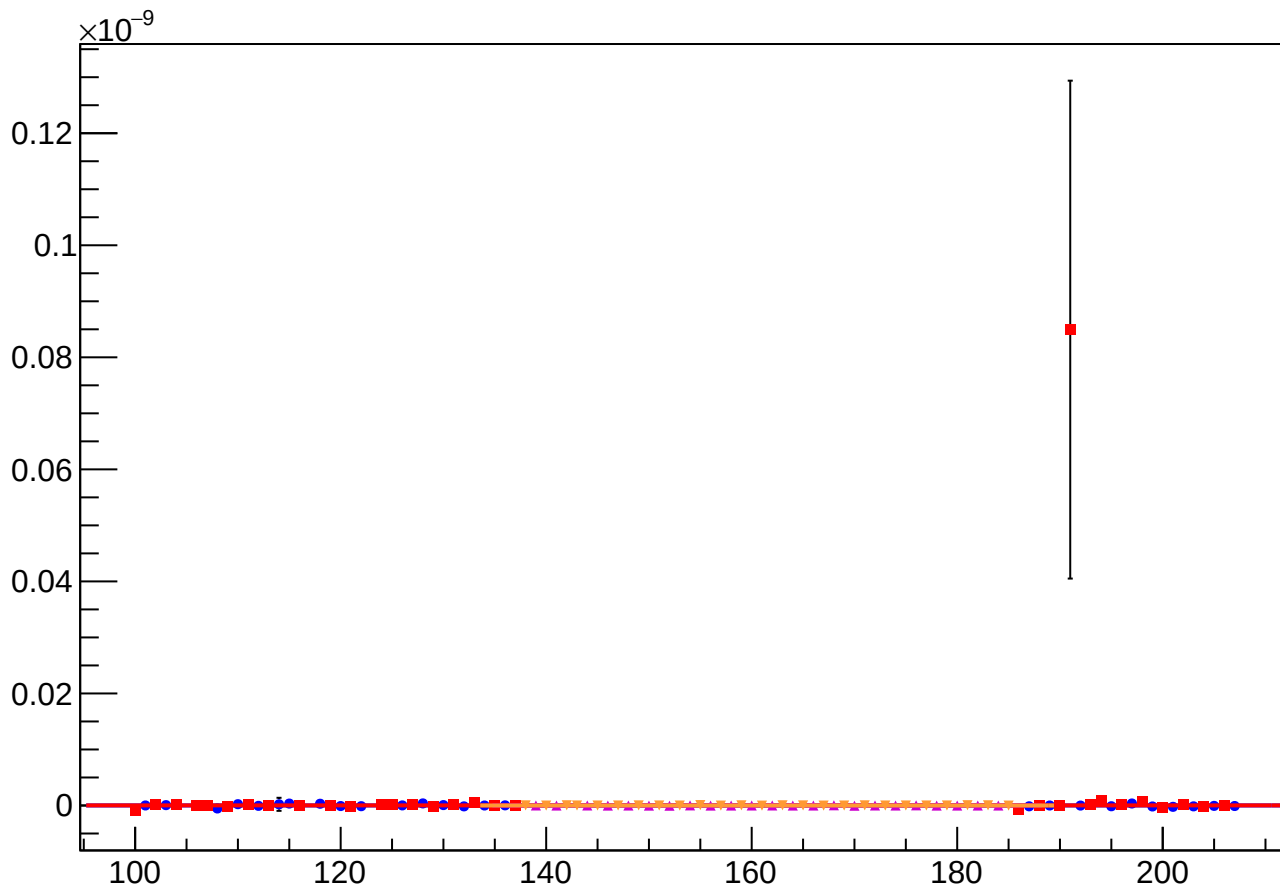
Left In: 1373.217+/-0.227  $\chi^2/\text{NDF}$ : 64467.6/22

+ sign 1526.490+/-0.188  $\chi^2/\text{NDF}$ : 2472541.0/50

All: 1531.525+/-0.133  $\chi^2/\text{NDF}$ : 5219765.5/100

- sign 1536.626+/-0.189  $\chi^2/\text{NDF}$ : 2745775.9/53

asym\_atl\_dd\_atr\_dd\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 22.9/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:24.8/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 46.1/30

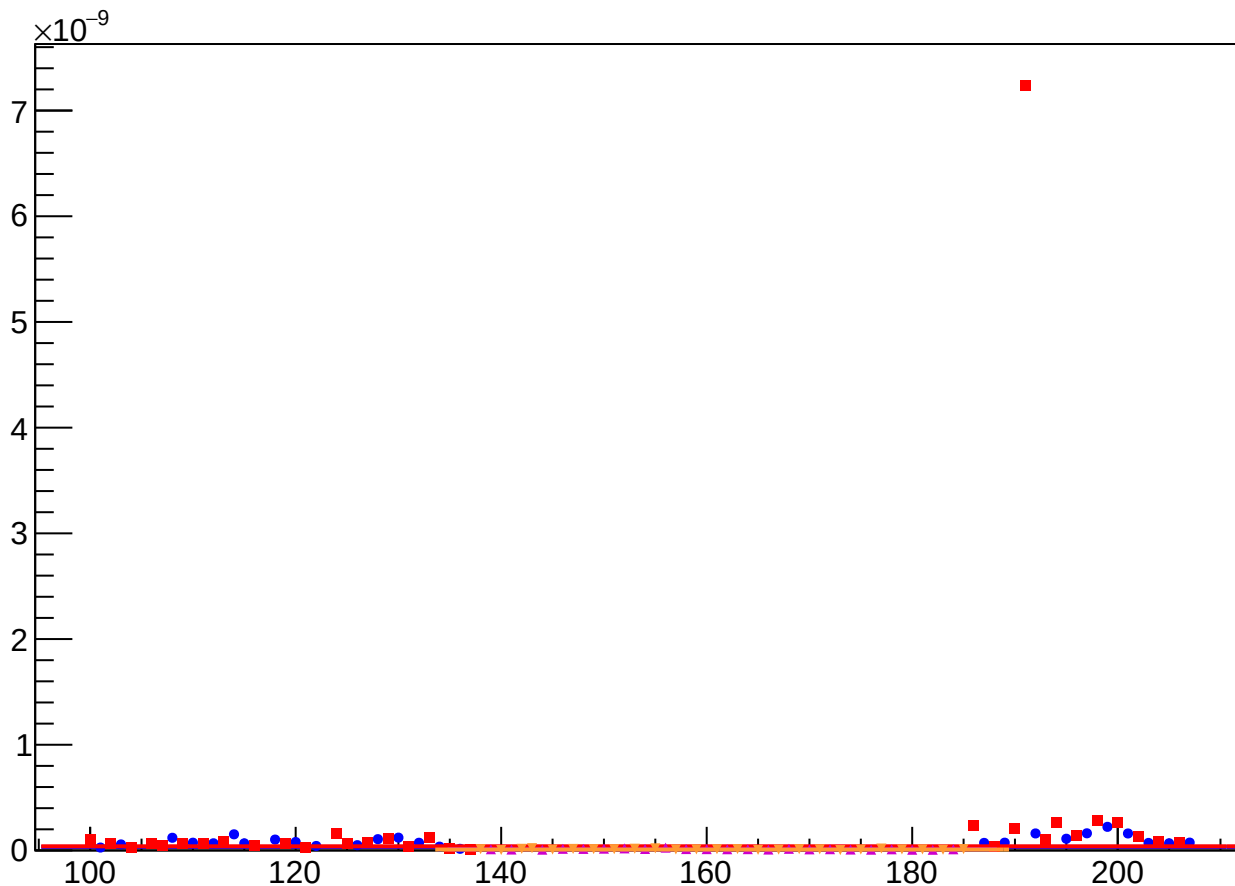
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:13.5/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 47.8/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 109.2/104

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 60.7/53

asym\_atl\_dd\_atr\_dd\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5862367.9/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2148494.6/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6427018.8/30

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1232395.4/22

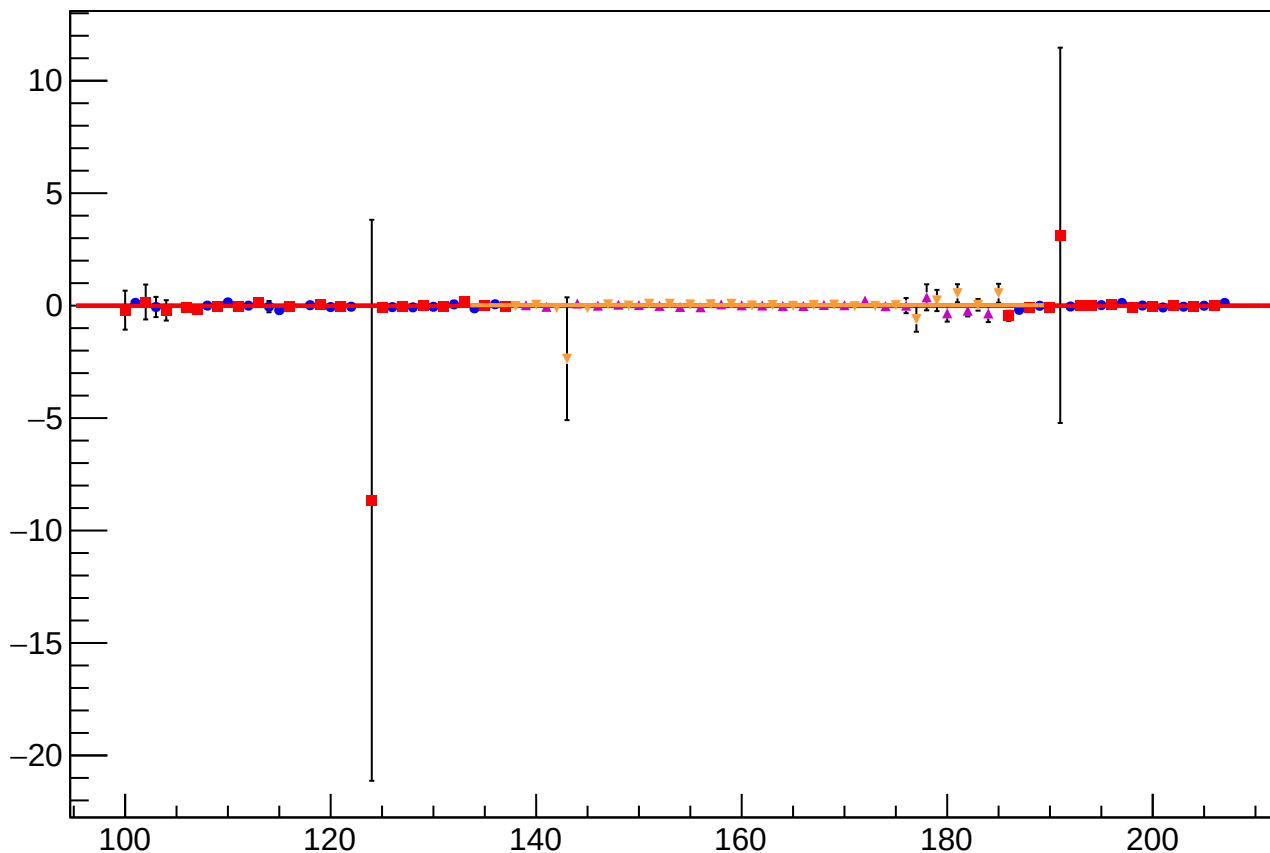
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11676076.8/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 23459830.5/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11504039.2/53



asym\_atl\_dd\_atr\_dd\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.009 \pm 0.011$   $\chi^2/\text{NDF}$ : 42.1/25

Left Out:  $0.023 \pm 0.010$   $\chi^2/\text{NDF}$ : 22.8/24

Right Out:  $-0.017 \pm 0.011$   $\chi^2/\text{NDF}$ : 22.5/30

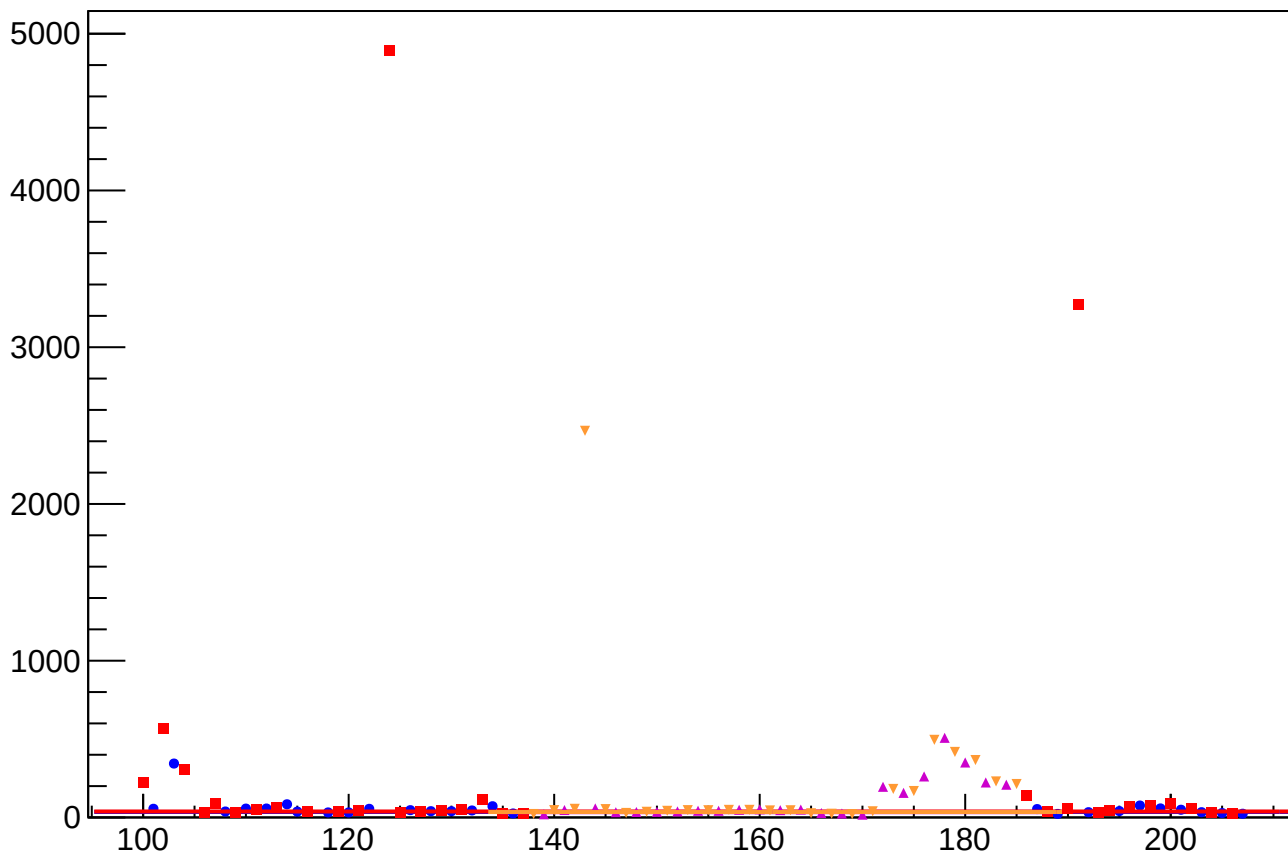
Left In:  $0.010 \pm 0.010$   $\chi^2/\text{NDF}$ : 14.8/22

+ sign  $0.016 \pm 0.007$   $\chi^2/\text{NDF}$ : 65.9/50

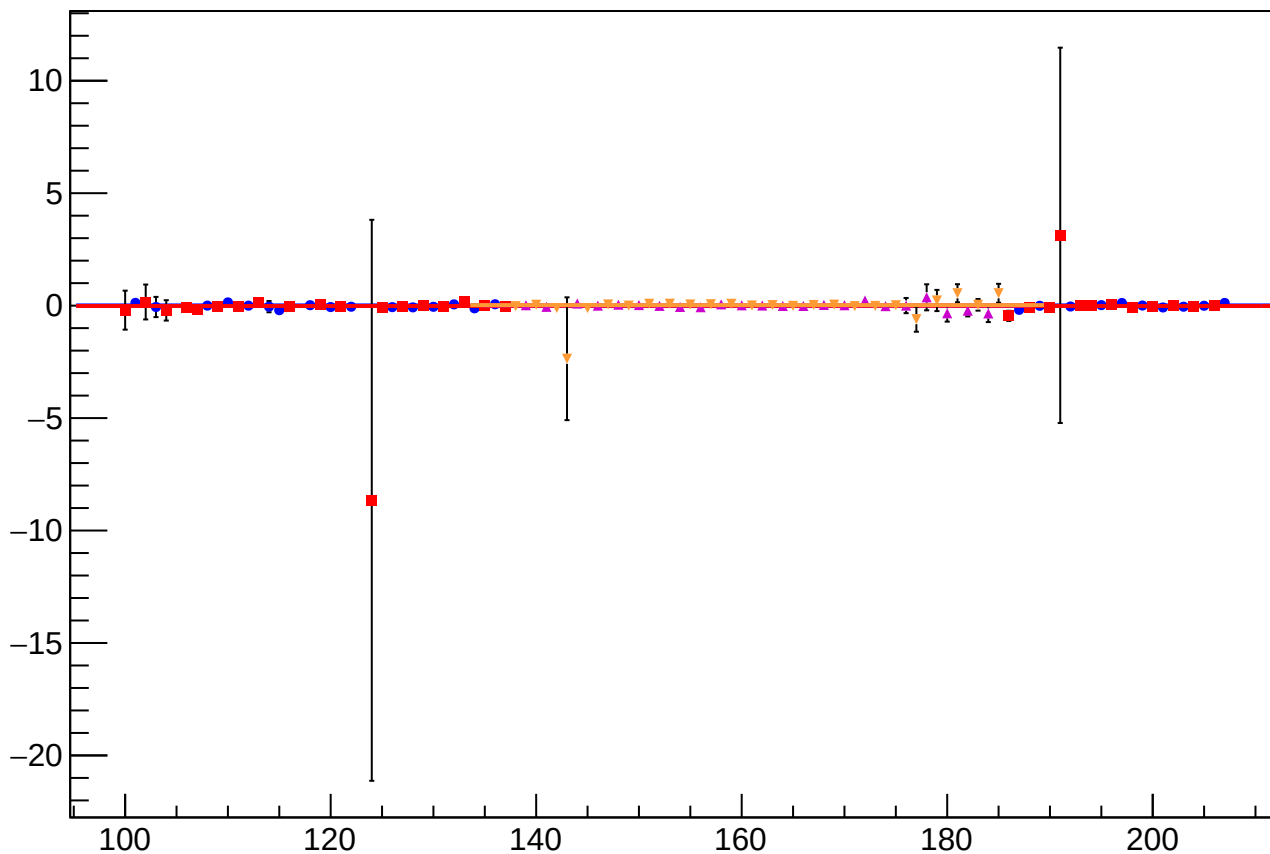
All:  $0.007 \pm 0.005$   $\chi^2/\text{NDF}$ : 109.4/104

- sign  $-0.002 \pm 0.007$   $\chi^2/\text{NDF}$ : 40.4/53

asym\_atl\_dd\_atr\_dd\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



asym\_atl\_dd\_atr\_dd\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.009 \pm 0.011$   $\chi^2/\text{NDF}$ : 42.1/25

Left Out:  $0.023 \pm 0.010$   $\chi^2/\text{NDF}$ : 22.8/24

Right Out:  $-0.017 \pm 0.011$   $\chi^2/\text{NDF}$ : 22.5/30

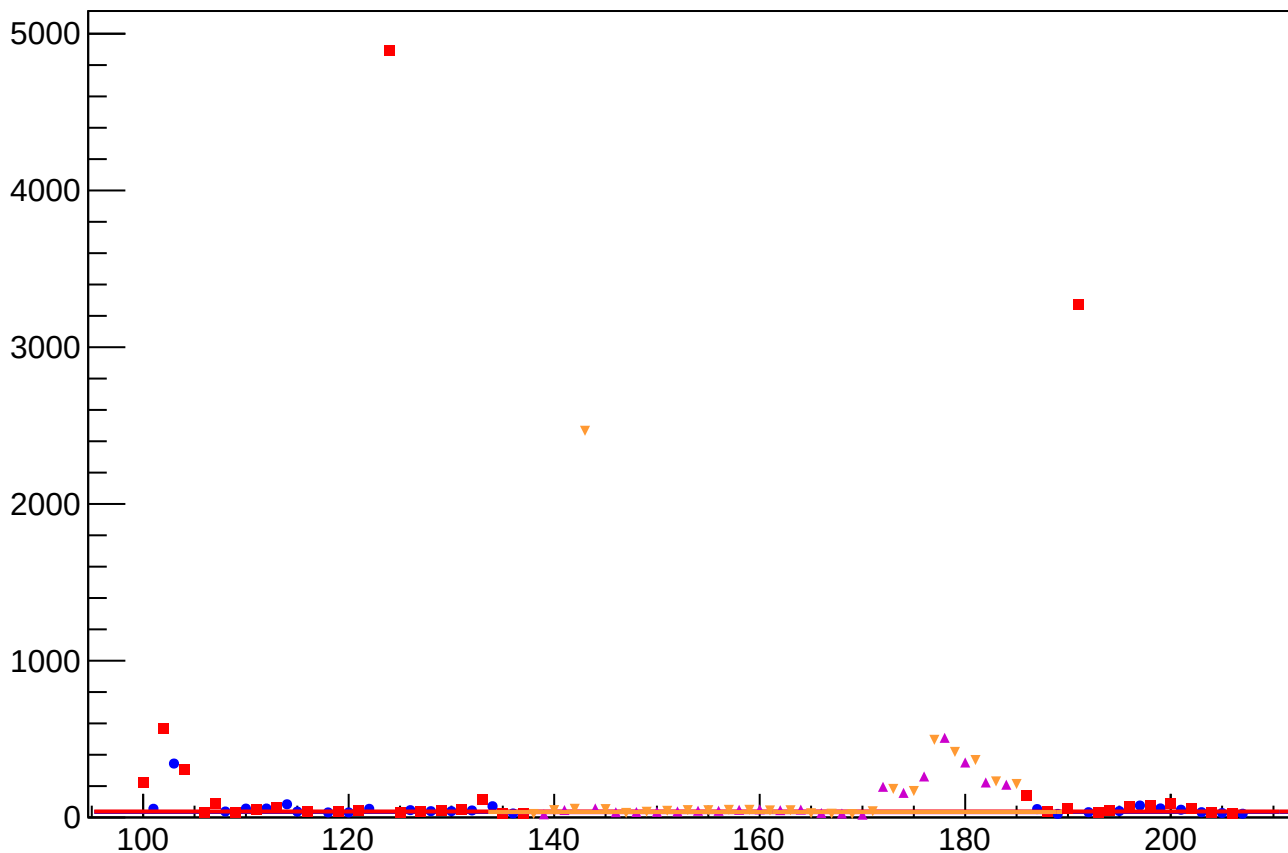
Left In:  $0.010 \pm 0.010$   $\chi^2/\text{NDF}$ : 14.8/22

+ sign  $0.016 \pm 0.007$   $\chi^2/\text{NDF}$ : 65.9/50

All:  $0.007 \pm 0.005$   $\chi^2/\text{NDF}$ : 109.4/104

- sign  $-0.002 \pm 0.007$   $\chi^2/\text{NDF}$ : 40.4/53

asym\_atl\_dd\_atr\_dd\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 35.048+/-0.007  $\chi^2/\text{NDF}$ : 3447880.8/25

Left Out: 34.624+/-0.007  $\chi^2/\text{NDF}$ : 11402451.4/24

Right Out: 38.062+/-0.008  $\chi^2/\text{NDF}$ : 5845374.8/30

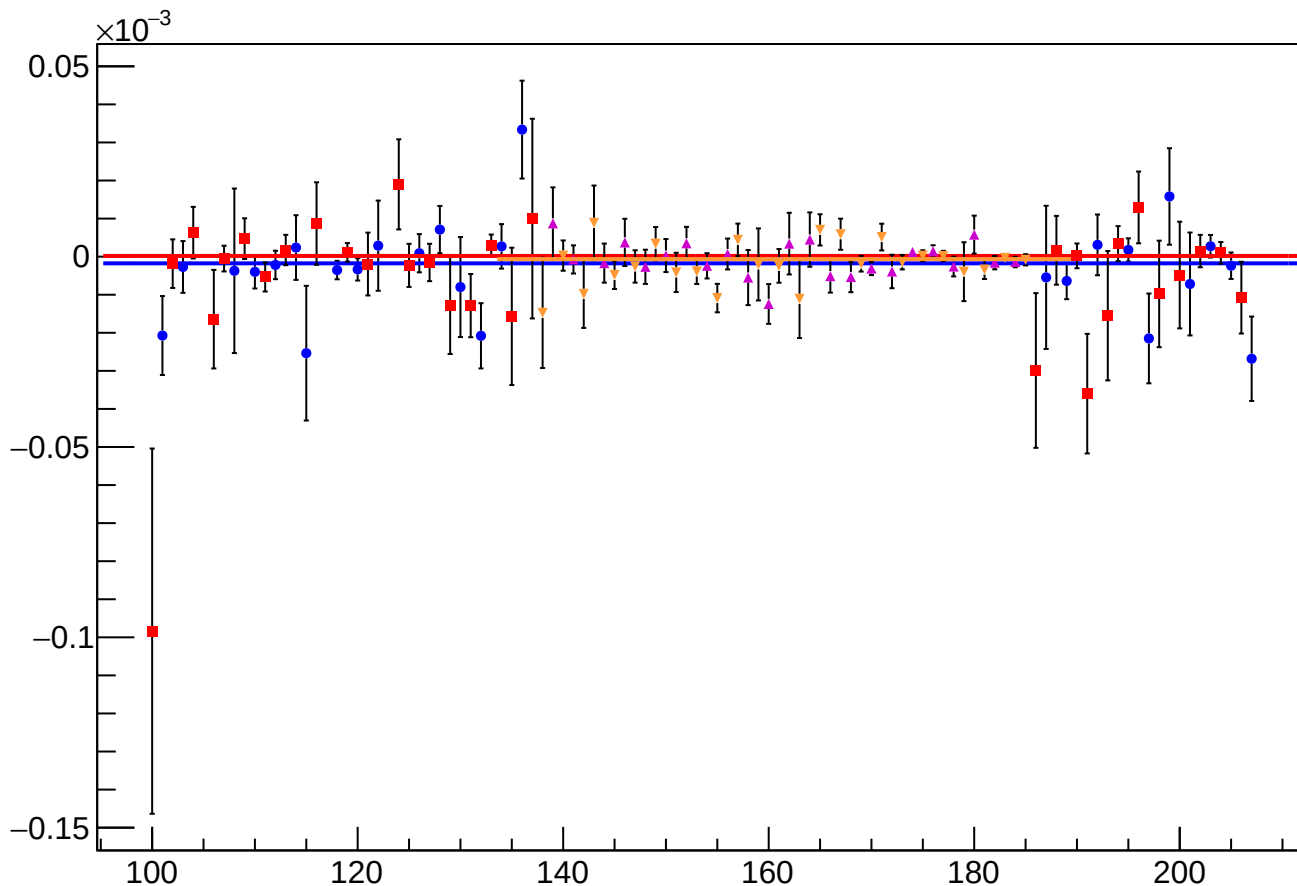
Left In: 33.592+/-0.007  $\chi^2/\text{NDF}$ : 10067466.4/22

+ sign 34.829+/-0.005  $\chi^2/\text{NDF}$ : 14852007.2/50

All: 35.175+/-0.004  $\chi^2/\text{NDF}$ : 30949581.6/104

- sign 35.534+/-0.005  $\chi^2/\text{NDF}$ : 16088509.5/53

asym\_atl\_dd\_atr\_dd\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 37.2/25

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 28.4/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 31.7/30

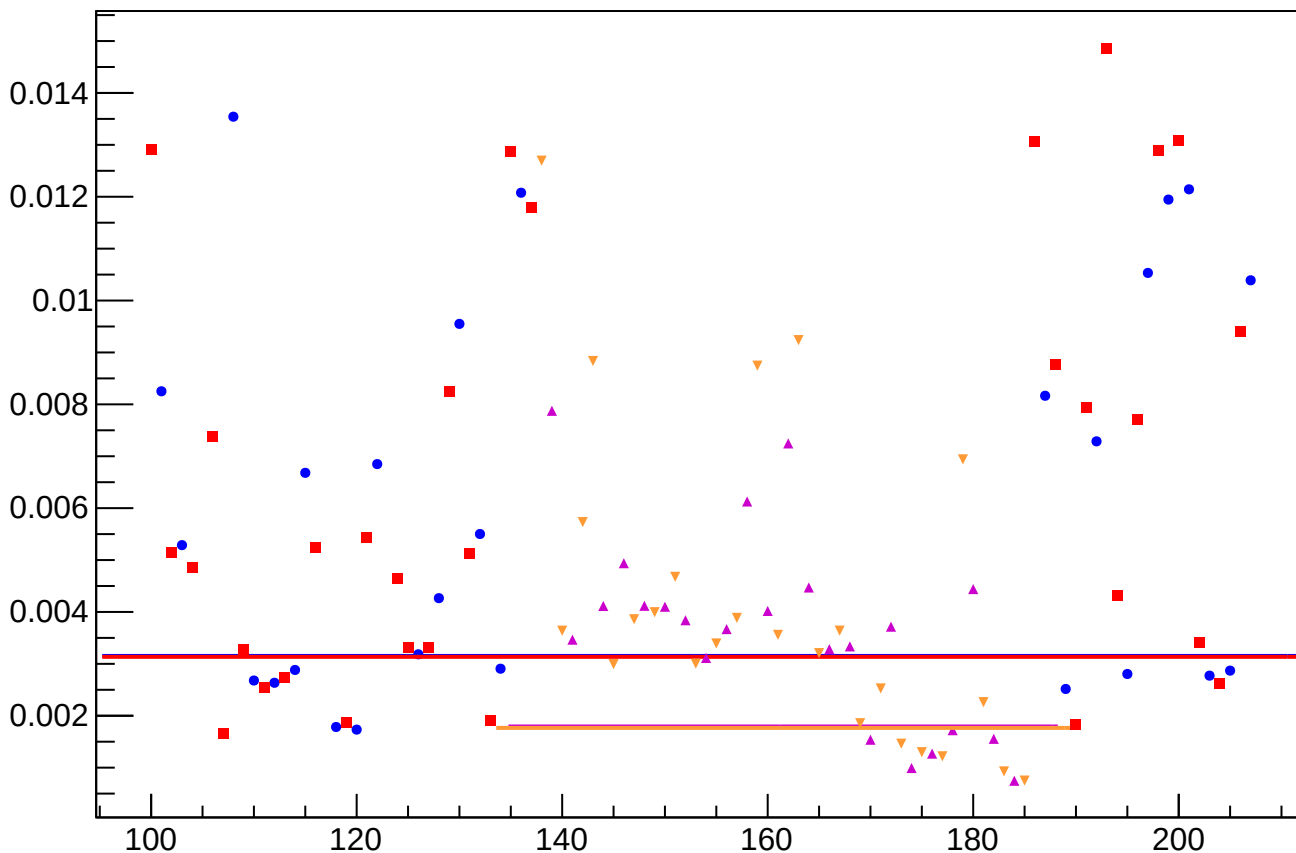
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 21.9/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 66.5/50

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 121.2/104

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 54.2/53

asym\_atl\_dd\_atr\_dd\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 8513702.9/25

Left Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF:12926339.2/24

Right Out: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 9758566.1/30

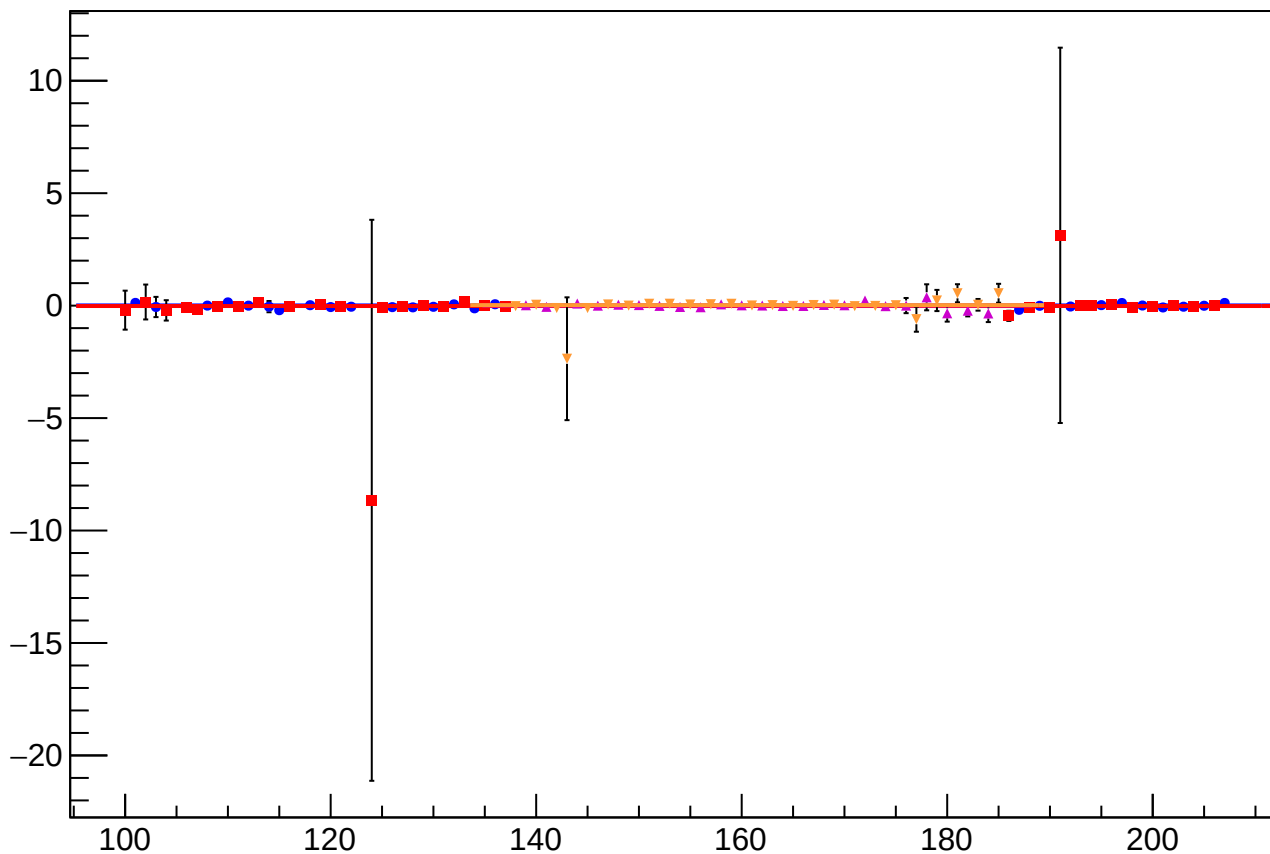
Left In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF:10766932.4/22

+ sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 24434931.0/50

All: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 47979098.1/104

- sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 23518585.6/53

asym\_atl\_dd\_atr\_dd\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.009 $\pm$ 0.011  $\chi^2$ /NDF: 42.1/25

Left Out: 0.023 $\pm$ 0.010  $\chi^2$ /NDF:22.8/24

Right Out: -0.017 $\pm$ 0.011  $\chi^2$ /NDF: 22.5/30

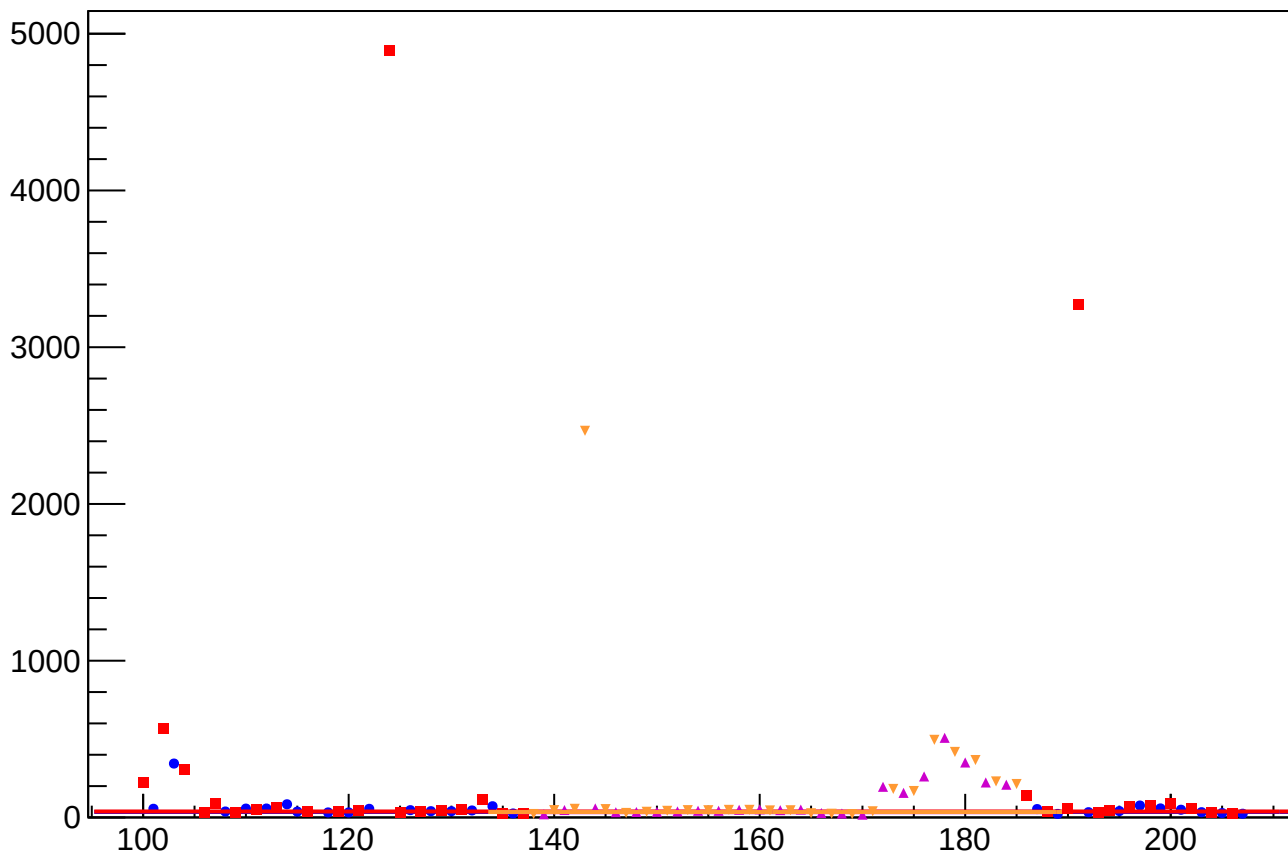
Left In: 0.010 $\pm$ 0.010  $\chi^2$ /NDF:14.8/22

+ sign 0.016 $\pm$ 0.007  $\chi^2$ /NDF: 65.9/50

All: 0.007 $\pm$ 0.005  $\chi^2$ /NDF: 109.4/104

- sign -0.002 $\pm$ 0.007  $\chi^2$ /NDF: 40.4/53

asym\_atl\_dd\_atr\_dd\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 35.052+/-0.007  $\chi^2/\text{NDF}$ : 3446499.3/25

Left Out: 34.623+/-0.007  $\chi^2/\text{NDF}$ : 11402566.2/24

Right Out: 38.063+/-0.008  $\chi^2/\text{NDF}$ : 5845045.3/30

Left In: 33.595+/-0.007  $\chi^2/\text{NDF}$ : 10066196.6/22

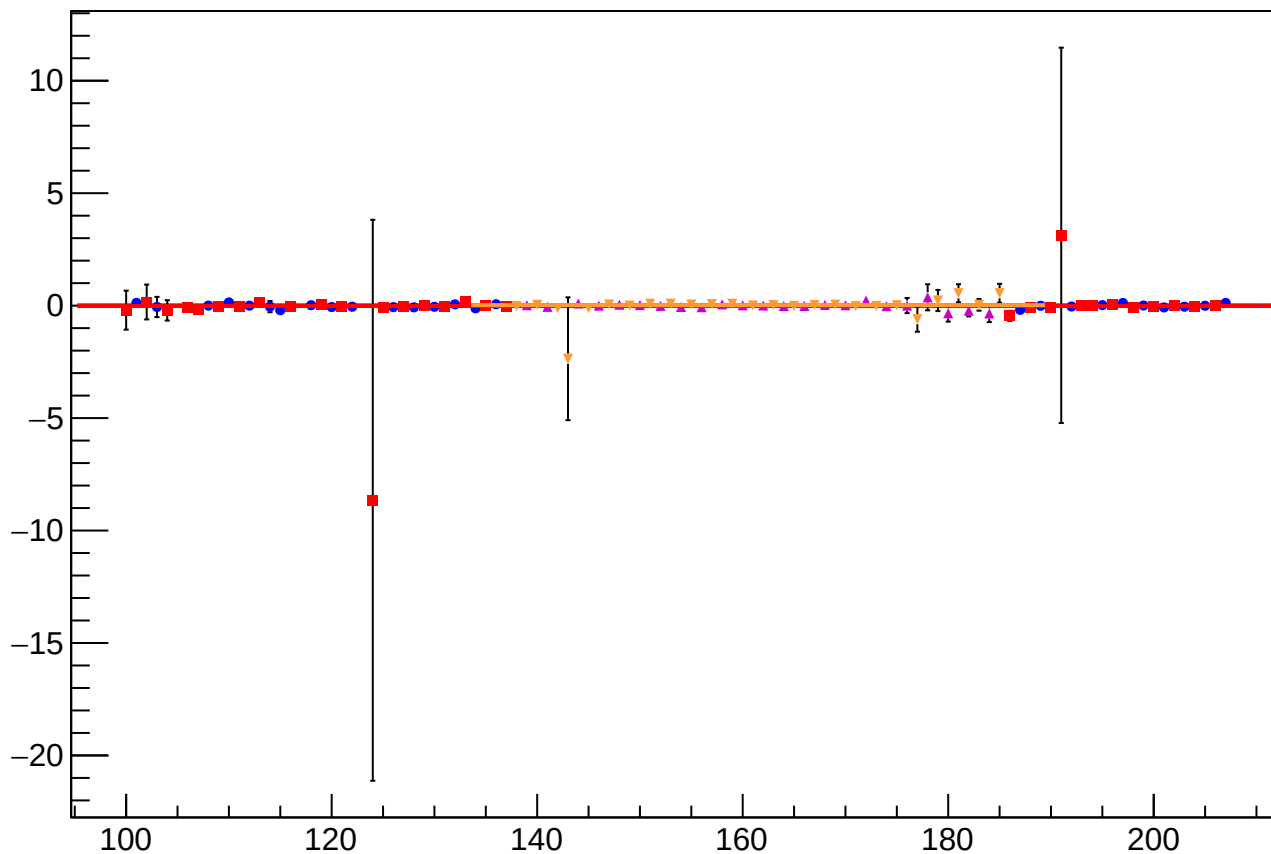
+ sign 34.830+/-0.005  $\chi^2/\text{NDF}$ : 14850774.9/50

All: 35.176+/-0.004  $\chi^2/\text{NDF}$ : 30946663.0/104

- sign 35.536+/-0.005  $\chi^2/\text{NDF}$ : 16086806.4/53



asym\_atl\_dd\_atr\_dd\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.009 \pm 0.011$   $\chi^2/\text{NDF}$ : 42.1/25

Left Out:  $0.023 \pm 0.010$   $\chi^2/\text{NDF}$ : 22.8/24

Right Out:  $-0.017 \pm 0.011$   $\chi^2/\text{NDF}$ : 22.5/30

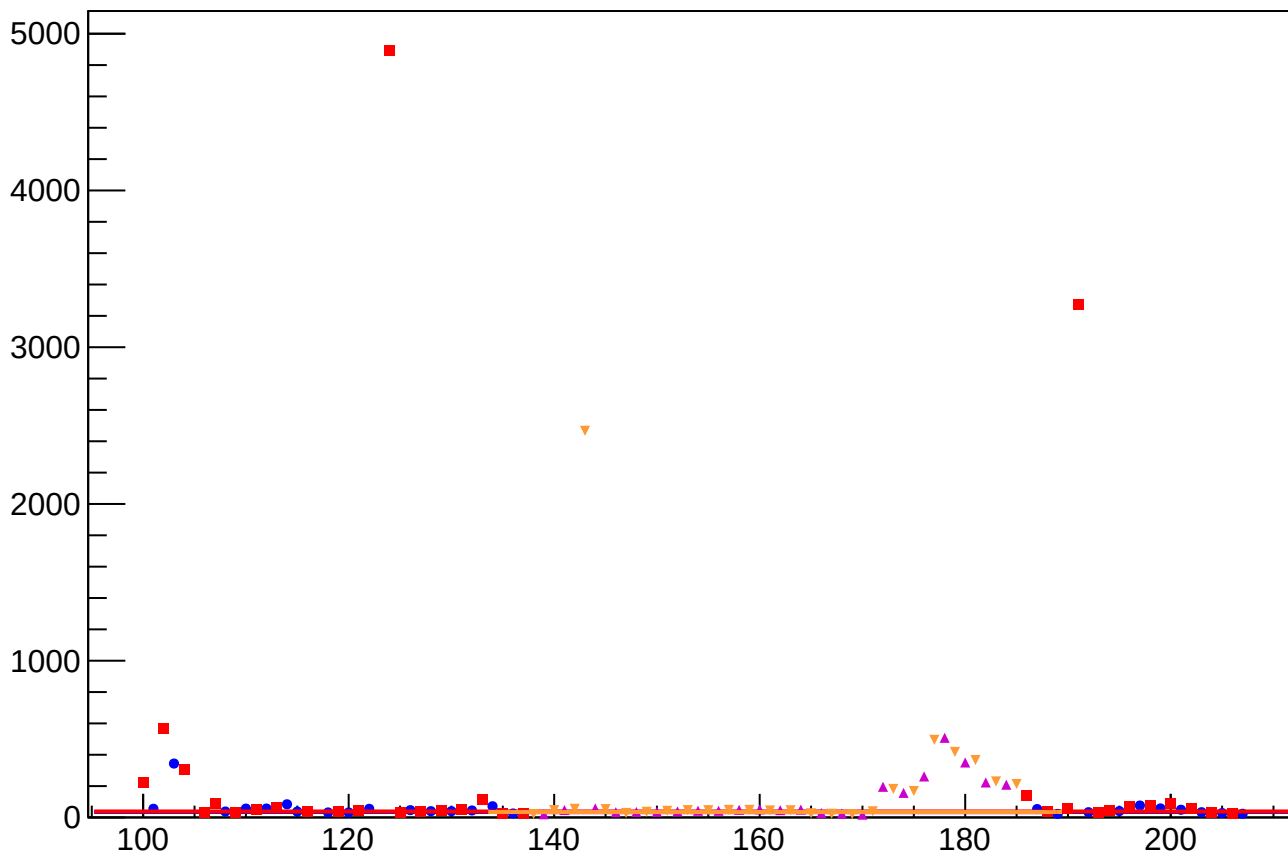
Left In:  $0.010 \pm 0.010$   $\chi^2/\text{NDF}$ : 14.8/22

+ sign  $0.016 \pm 0.007$   $\chi^2/\text{NDF}$ : 65.9/50

All:  $0.007 \pm 0.005$   $\chi^2/\text{NDF}$ : 109.4/104

- sign  $-0.002 \pm 0.007$   $\chi^2/\text{NDF}$ : 40.4/53

asym\_atl\_dd\_atr\_dd\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 35.052+/-0.007  $\chi^2/\text{NDF}$ : 3446499.3/25

Left Out: 34.623+/-0.007  $\chi^2/\text{NDF}$ : 11402566.2/24

Right Out: 38.063+/-0.008  $\chi^2/\text{NDF}$ : 5845045.3/30

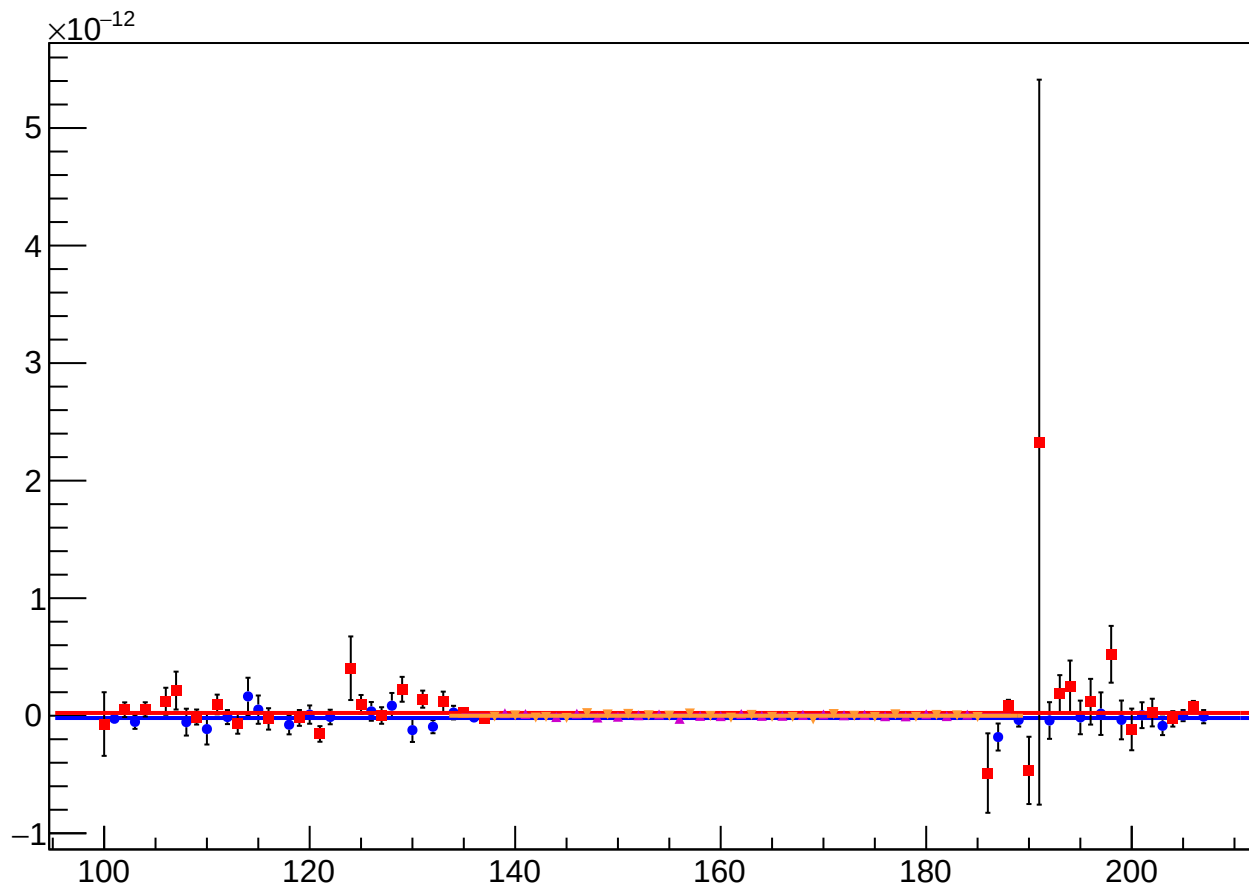
Left In: 33.595+/-0.007  $\chi^2/\text{NDF}$ : 10066196.6/22

+ sign 34.830+/-0.005  $\chi^2/\text{NDF}$ : 14850774.9/50

All: 35.176+/-0.004  $\chi^2/\text{NDF}$ : 30946663.0/104

- sign 35.536+/-0.005  $\chi^2/\text{NDF}$ : 16086806.4/53

asym\_atl\_dd\_atr\_dd\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 11.5/25

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 26.0/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 44.2/30

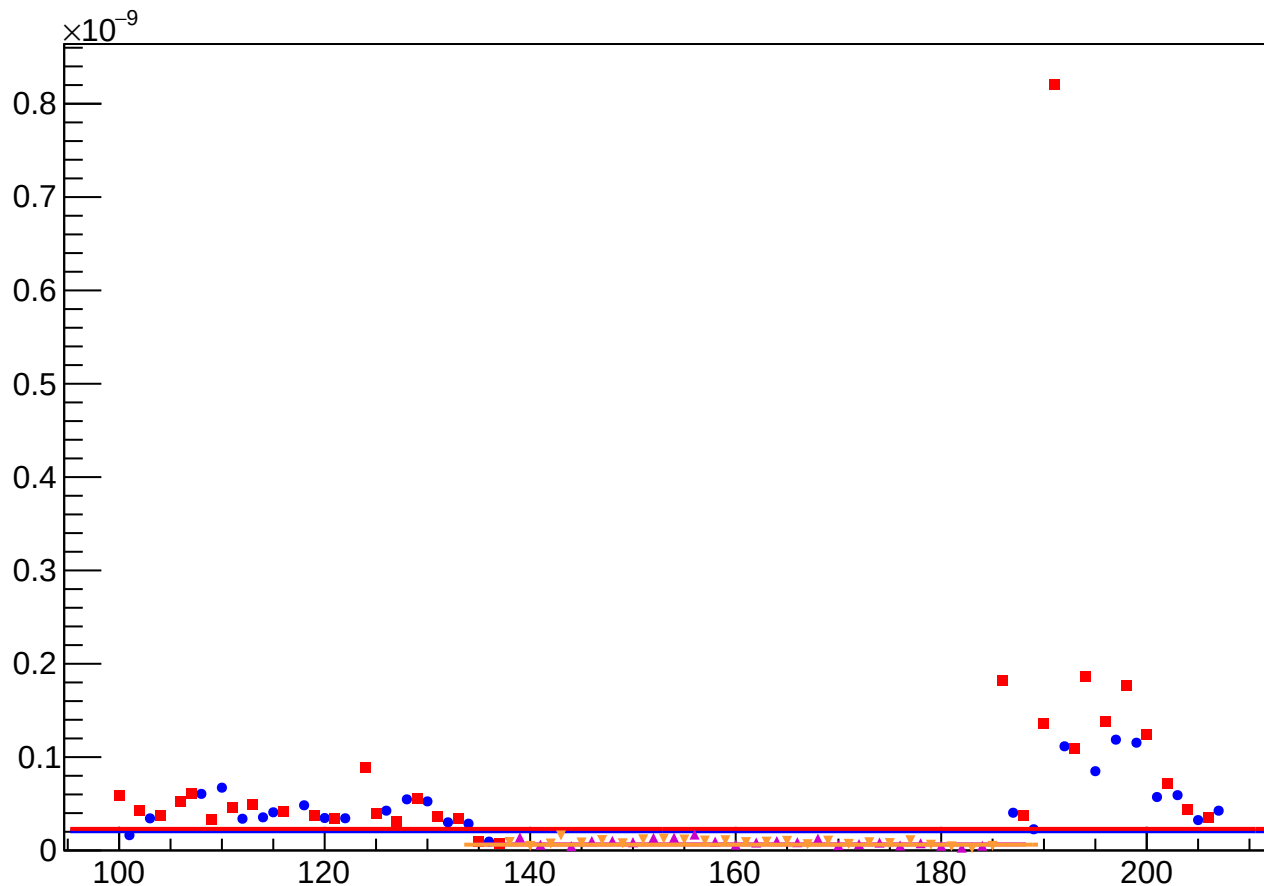
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 20.0/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 41.7/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 112.1/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 68.3/53

asym\_atl\_dd\_atr\_dd\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 7012248.6/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:5077918.2/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 9604991.0/30

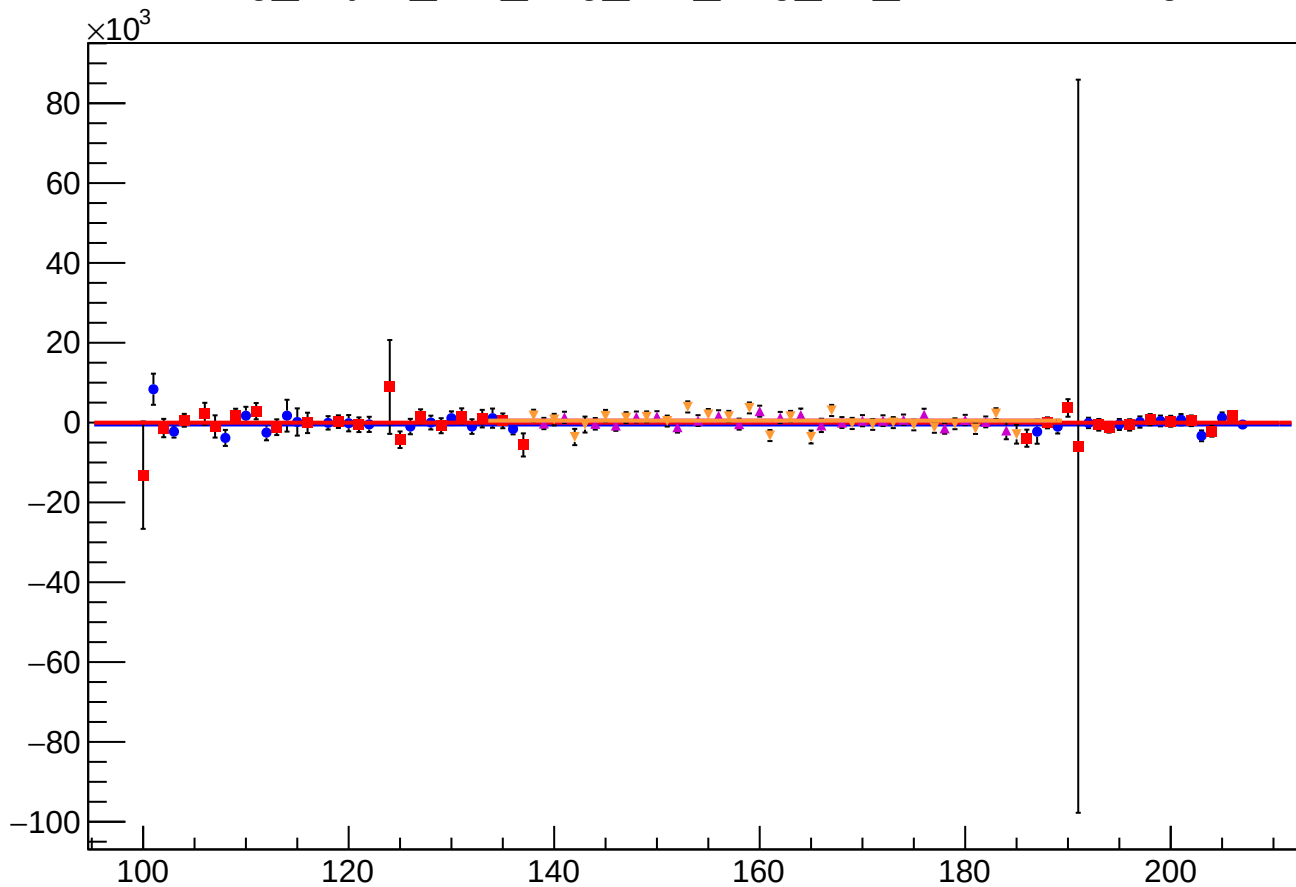
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:3998320.2/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 16728193.2/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 35403946.5/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 18651746.8/53

# reg\_asym\_at1\_avg\_at2\_avg\_dd\_mean vs Slug



Right In:  $-478.103 \pm 332.890$   $\chi^2/\text{NDF}$ : 21.9/25

Left Out:  $492.062 \pm 288.495$   $\chi^2/\text{NDF}$ : 46.9/24

Right Out:  $-18.212 \pm 323.963$   $\chi^2/\text{NDF}$ : 28.0/30

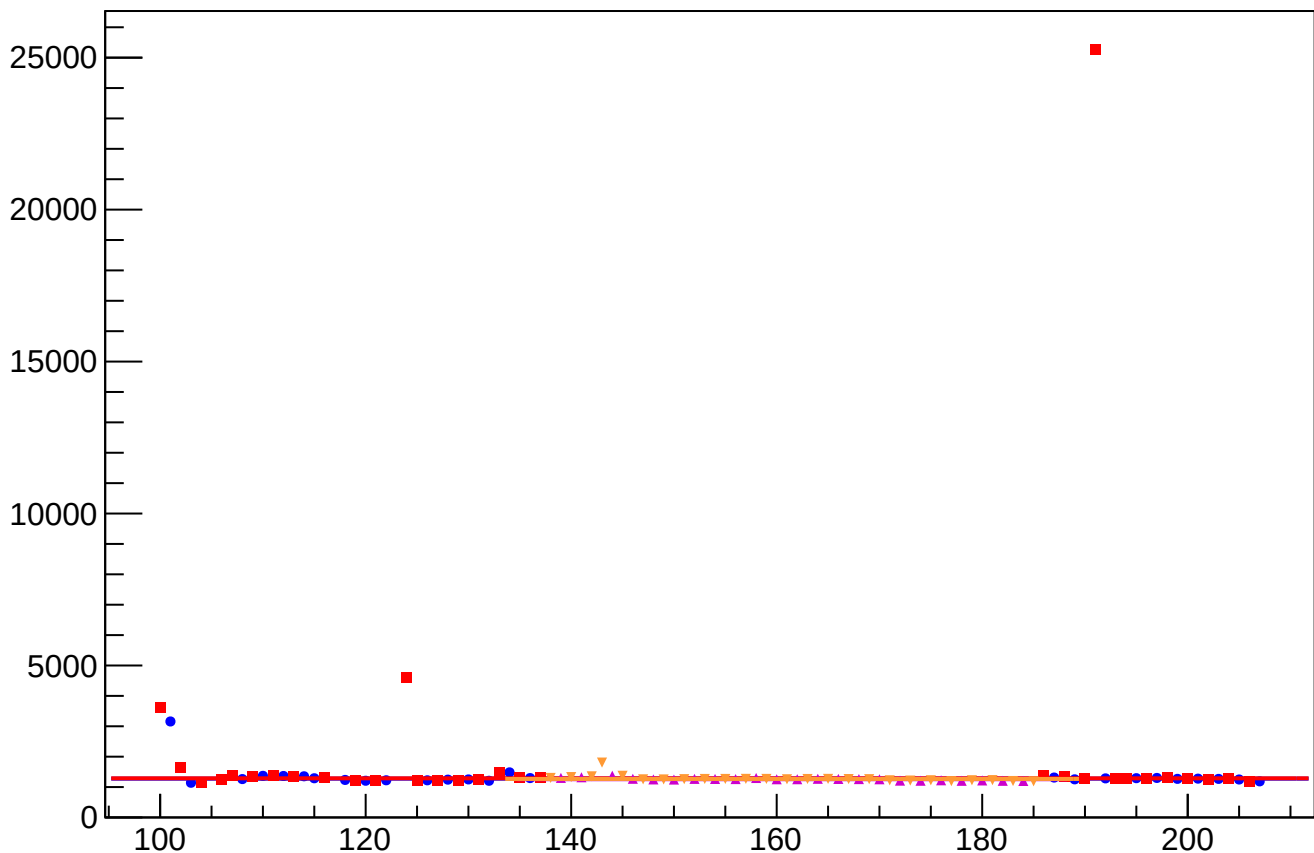
Left In:  $486.821 \pm 293.769$   $\chi^2/\text{NDF}$ : 14.4/22

+ sign  $75.941 \pm 218.016$   $\chi^2/\text{NDF}$ : 73.6/50

All:  $167.603 \pm 154.020$   $\chi^2/\text{NDF}$ : 117.8/104

- sign  $258.932 \pm 217.620$   $\chi^2/\text{NDF}$ : 43.8/53

reg\_asym\_at1\_avg\_at2\_avg\_dd\_rms vs Slug



Right In: 1276.338 $\pm$ 0.235  $\chi^2$ /NDF: 528336.5/25

Left Out: 1266.967 $\pm$ 0.204  $\chi^2$ /NDF: 187545.6/24

Right Out: 1287.807 $\pm$ 0.229  $\chi^2$ /NDF: 482231.5/30

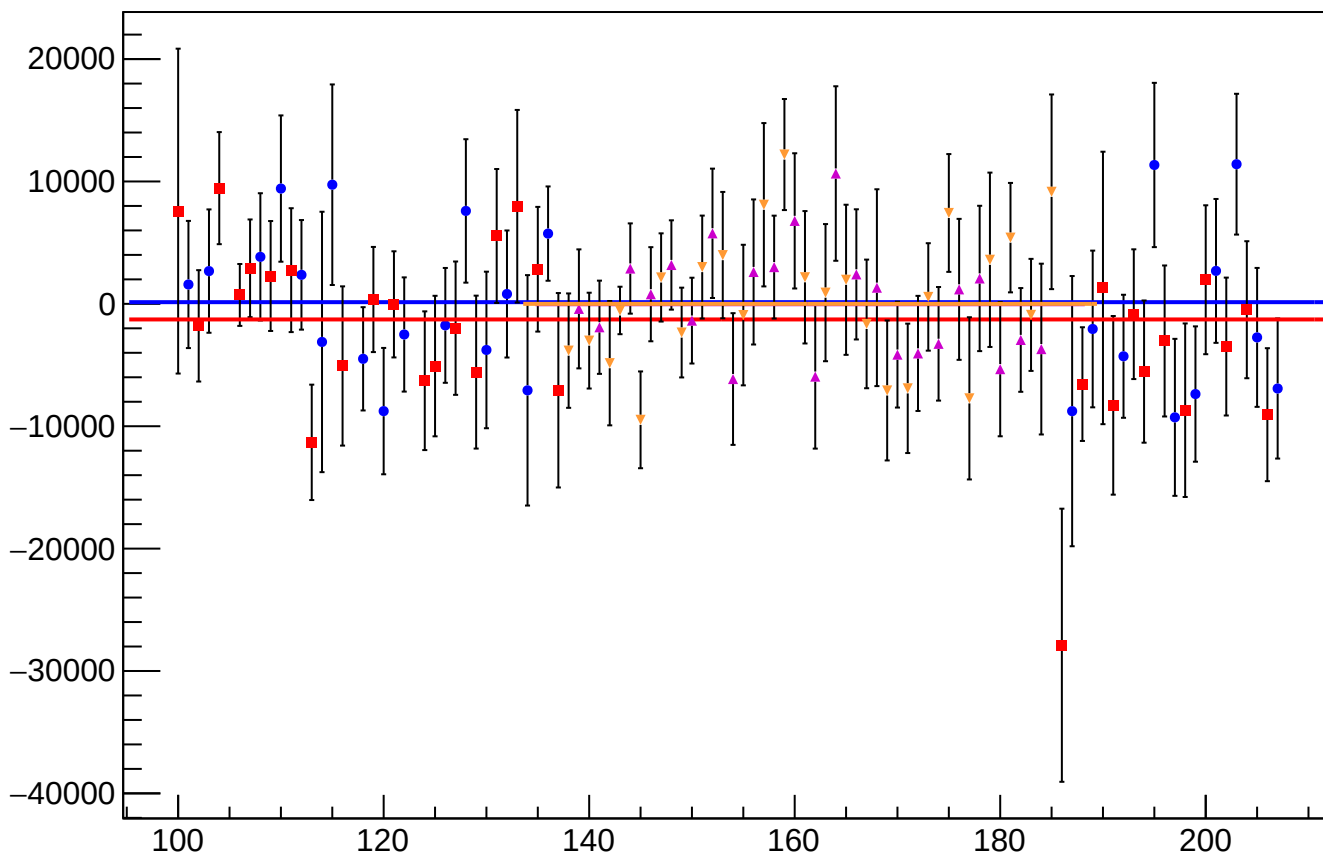
Left In: 1257.551 $\pm$ 0.208  $\chi^2$ /NDF: 36816.4/22

+ sign 1270.987 $\pm$ 0.154  $\chi^2$ /NDF: 716787.0/50

All: 1271.104 $\pm$ 0.109  $\chi^2$ /NDF: 1245420.9/100

- sign 1271.221 $\pm$ 0.154  $\chi^2$ /NDF: 528632.7/53

asym\_at1\_avg\_at2\_avg\_dd\_reg\_correction\_mean vs Slug



Right In: 137.873 $\pm$ 1090.143  $\chi^2$ /NDF: 28.5/25

Left Out: -0.604 $\pm$ 886.488  $\chi^2$ /NDF:29.1/24

Right Out: -1274.218 $\pm$ 941.994  $\chi^2$ /NDF: 32.1/30

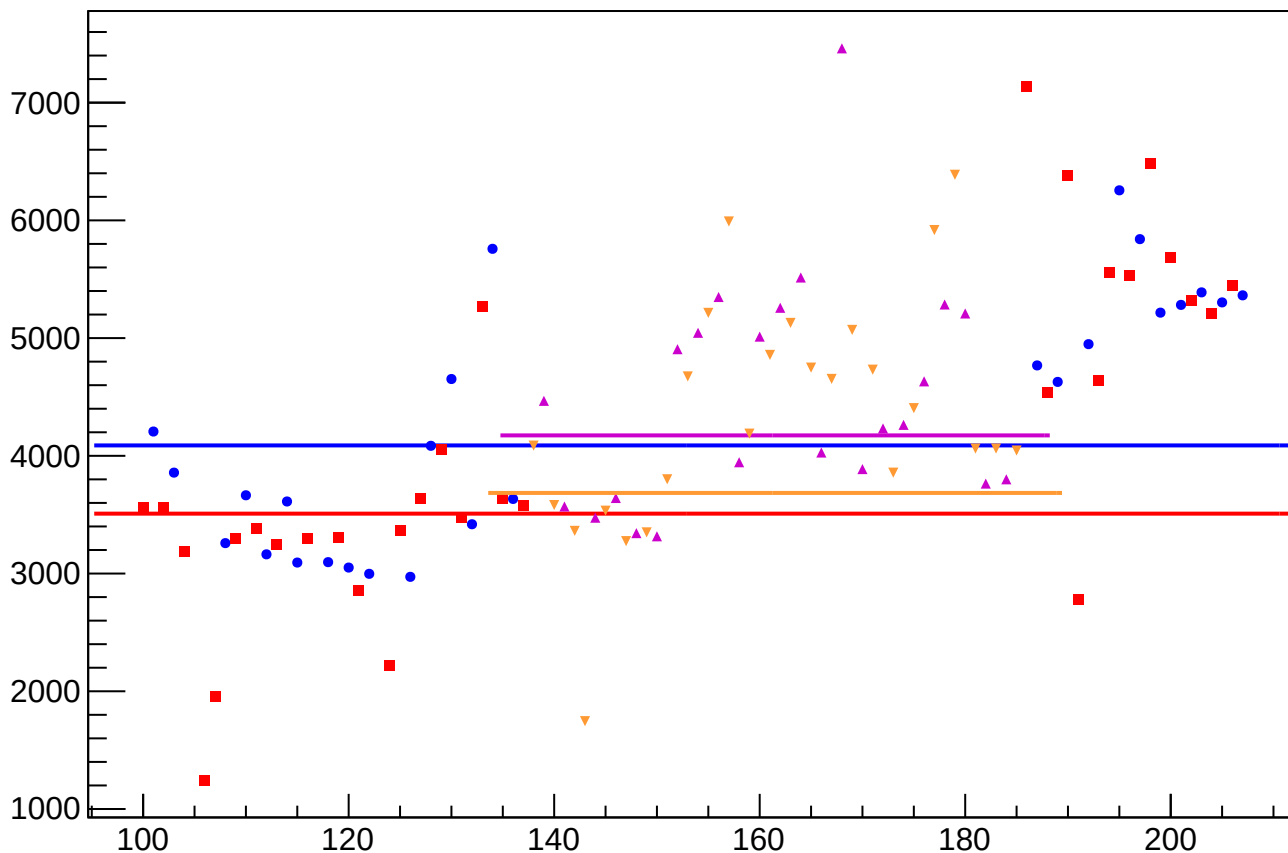
Left In: -31.593 $\pm$ 995.348  $\chi^2$ /NDF:14.0/22

+ sign 54.517 $\pm$ 687.785  $\chi^2$ /NDF: 57.5/50

All: -318.244 $\pm$ 485.056  $\chi^2$ /NDF: 105.0/104

- sign -687.101 $\pm$ 684.175  $\chi^2$ /NDF: 46.9/53

asym\_at1\_avg\_at2\_avg\_dd\_reg\_correction\_rms vs Slug



Right In: 4088.398+/-0.771  $\chi^2/\text{NDF}$ : 1635045.1/25

Left Out: 3684.769+/-0.627  $\chi^2/\text{NDF}$ : 3693646.6/24

Right Out: 3508.883+/-0.666  $\chi^2/\text{NDF}$ : 4479226.0/30

Left In: 4173.556+/-0.704  $\chi^2/\text{NDF}$ : 1274968.4/22

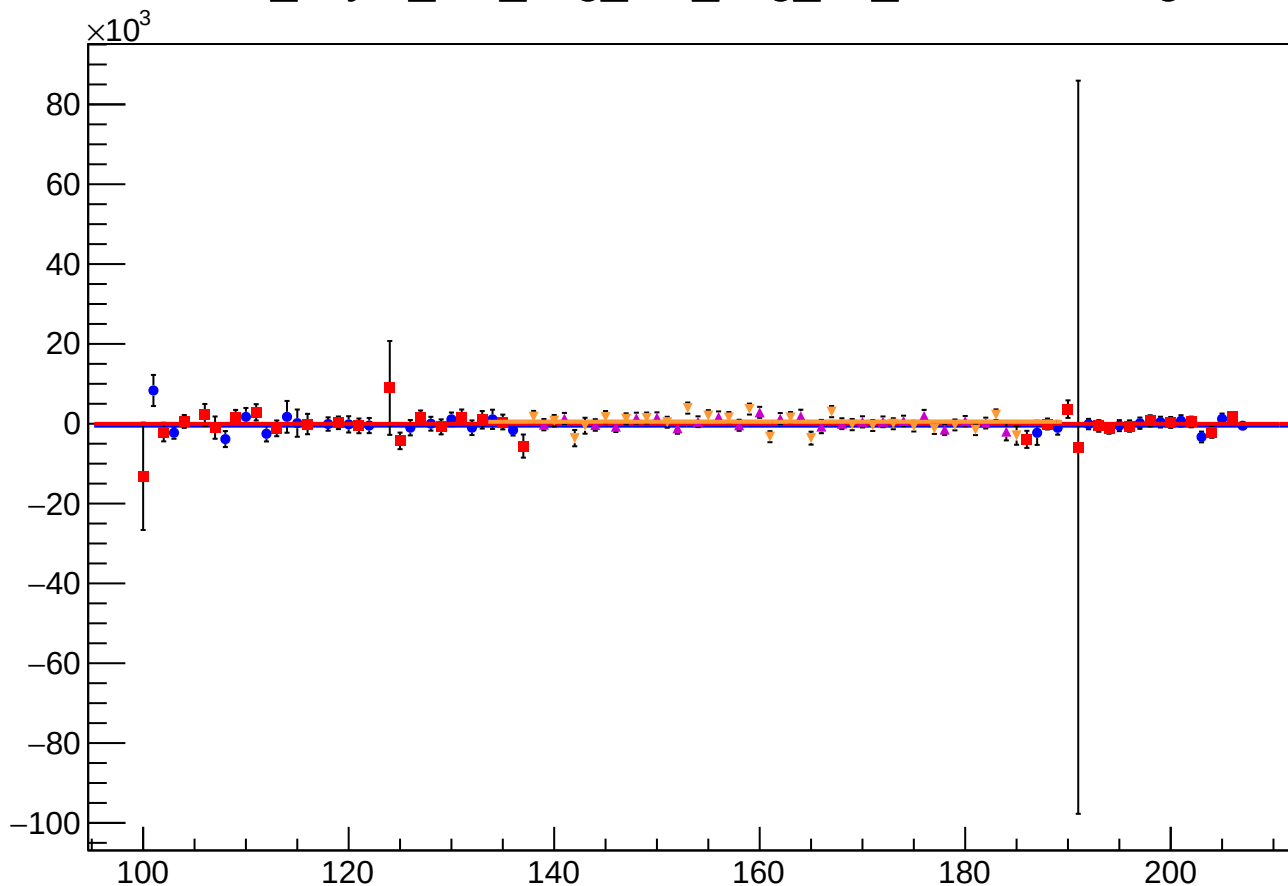
+ sign 3845.433+/-0.486  $\chi^2/\text{NDF}$ : 5493731.0/50

All: 3834.122+/-0.343  $\chi^2/\text{NDF}$ : 11719474.7/100

- sign 3822.928+/-0.484  $\chi^2/\text{NDF}$ : 6224667.3/53



# cor\_asym\_at1\_avg\_at2\_avg\_dd\_mean vs Slug



Right In:  $-478.242 \pm 332.890$   $\chi^2/\text{NDF}$ : 21.9/25

Left Out:  $492.079 \pm 288.495$   $\chi^2/\text{NDF}$ : 46.9/24

Right Out:  $-31.039 \pm 324.058$   $\chi^2/\text{NDF}$ : 28.5/30

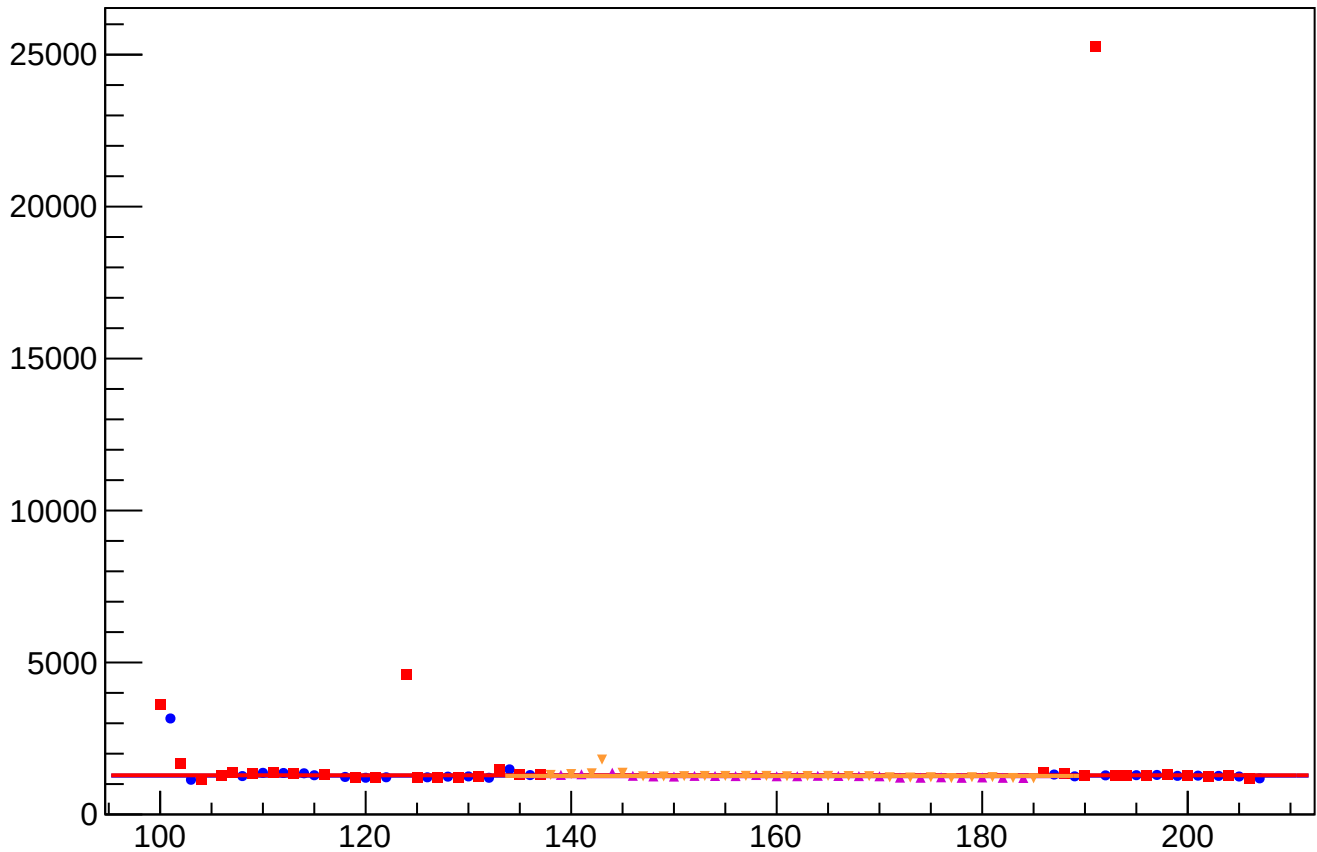
Left In:  $486.720 \pm 293.769$   $\chi^2/\text{NDF}$ : 14.4/22

+ sign  $75.891 \pm 218.016$   $\chi^2/\text{NDF}$ : 73.6/50

All:  $164.676 \pm 154.030$   $\chi^2/\text{NDF}$ : 118.3/104

- sign  $253.163 \pm 217.648$   $\chi^2/\text{NDF}$ : 44.3/53

# cor\_asym\_at1\_avg\_at2\_avg\_dd\_rms vs Slug



Right In: 1276.338 $\pm$ 0.235  $\chi^2$ /NDF: 528337.9/25

Left Out: 1266.968 $\pm$ 0.204  $\chi^2$ /NDF: 187545.6/24

Right Out: 1288.689 $\pm$ 0.229  $\chi^2$ /NDF: 489152.2/30

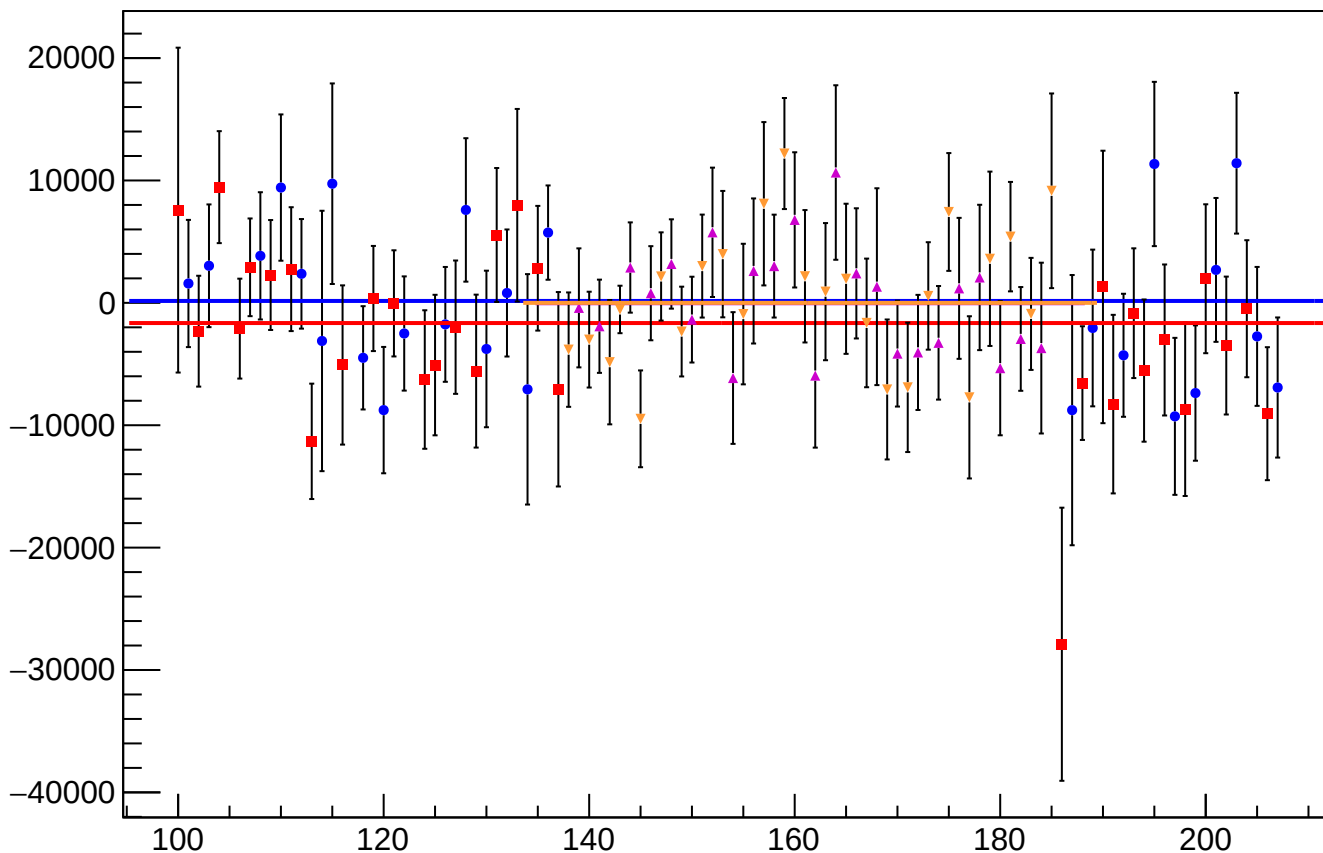
Left In: 1257.551 $\pm$ 0.208  $\chi^2$ /NDF: 36816.3/22

+ sign 1270.987 $\pm$ 0.154  $\chi^2$ /NDF: 716788.4/50

All: 1271.299 $\pm$ 0.109  $\chi^2$ /NDF: 1252910.0/100

- sign 1271.610 $\pm$ 0.154  $\chi^2$ /NDF: 536113.4/53

asym\_at1\_avg\_at2\_avg\_dd\_cor\_correction\_mean vs Slug



Right In: 155.615 $\pm$ 1089.890  $\chi^2$ /NDF: 28.5/25

Left Out: -0.541 $\pm$ 886.487  $\chi^2$ /NDF:29.1/24

Right Out: -1649.714 $\pm$ 984.732  $\chi^2$ /NDF: 31.4/30

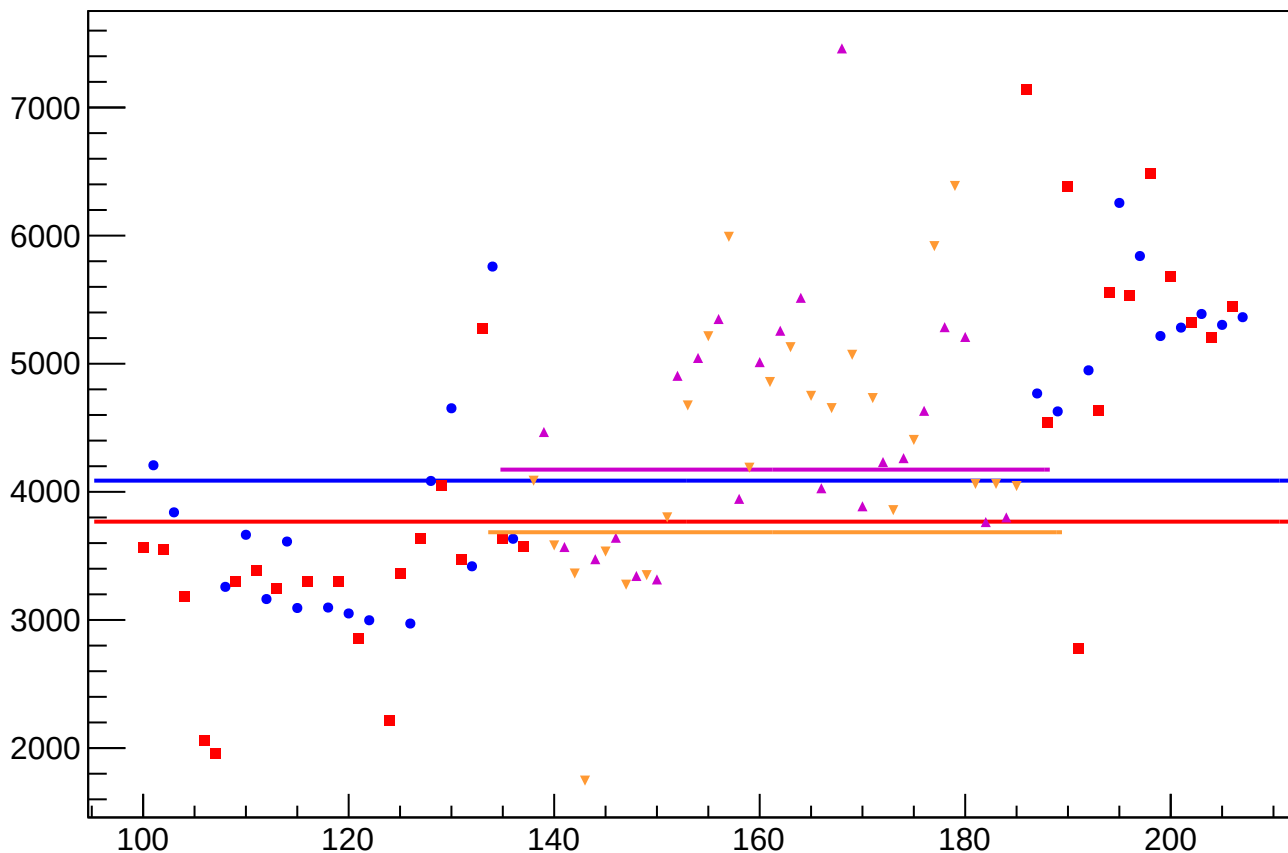
Left In: -31.597 $\pm$ 995.347  $\chi^2$ /NDF:14.0/22

+ sign 61.634 $\pm$ 687.721  $\chi^2$ /NDF: 57.6/50

All: -385.766 $\pm$ 490.587  $\chi^2$ /NDF: 105.2/104

- sign -849.330 $\pm$ 700.033  $\chi^2$ /NDF: 46.7/53

asym\_at1\_avg\_at2\_avg\_dd\_cor\_correction\_rms vs Slug



Right In: 4087.510+/-0.771  $\chi^2/\text{NDF}$ : 1635775.4/25

Left Out: 3684.762+/-0.627  $\chi^2/\text{NDF}$ : 3693687.2/24

Right Out: 3767.434+/-0.696  $\chi^2/\text{NDF}$ : 2986055.6/30

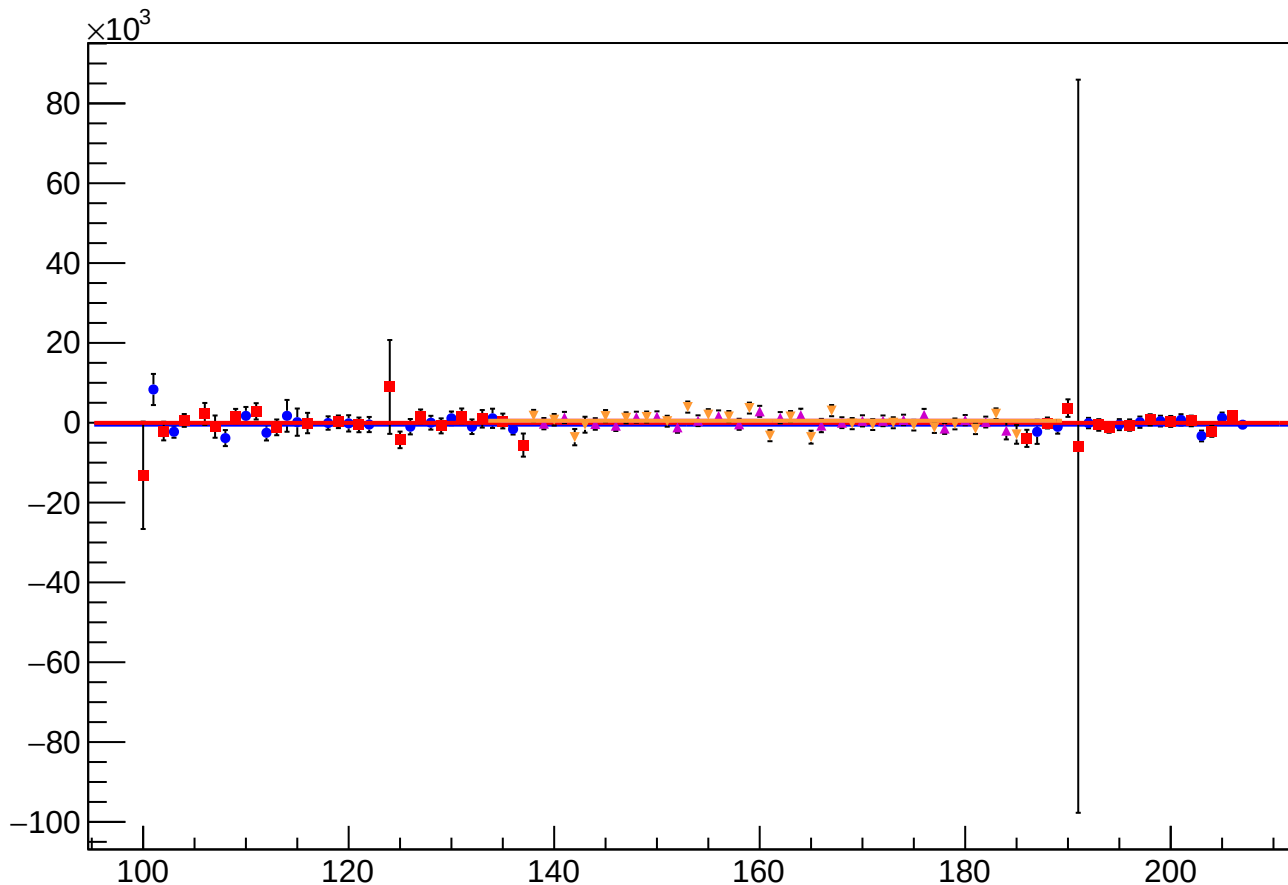
Left In: 4173.550+/-0.704  $\chi^2/\text{NDF}$ : 1274967.5/22

+ sign 3845.120+/-0.486  $\chi^2/\text{NDF}$ : 5493828.3/50

All: 3905.625+/-0.347  $\chi^2/\text{NDF}$ : 9954631.9/10

- sign 3968.315+/-0.495  $\chi^2/\text{NDF}$ : 4429284.0/53

eigen\_cor\_asym\_at1\_avg\_at2\_avg\_dd\_mean vs Slug



Right In: -478.242+/-332.890  $\chi^2/\text{NDF}$ : 21.9/25

Left Out: 492.079+/-288.495  $\chi^2/\text{NDF}$ : 46.9/24

Right Out: -31.039+/-324.058  $\chi^2/\text{NDF}$ : 28.5/30

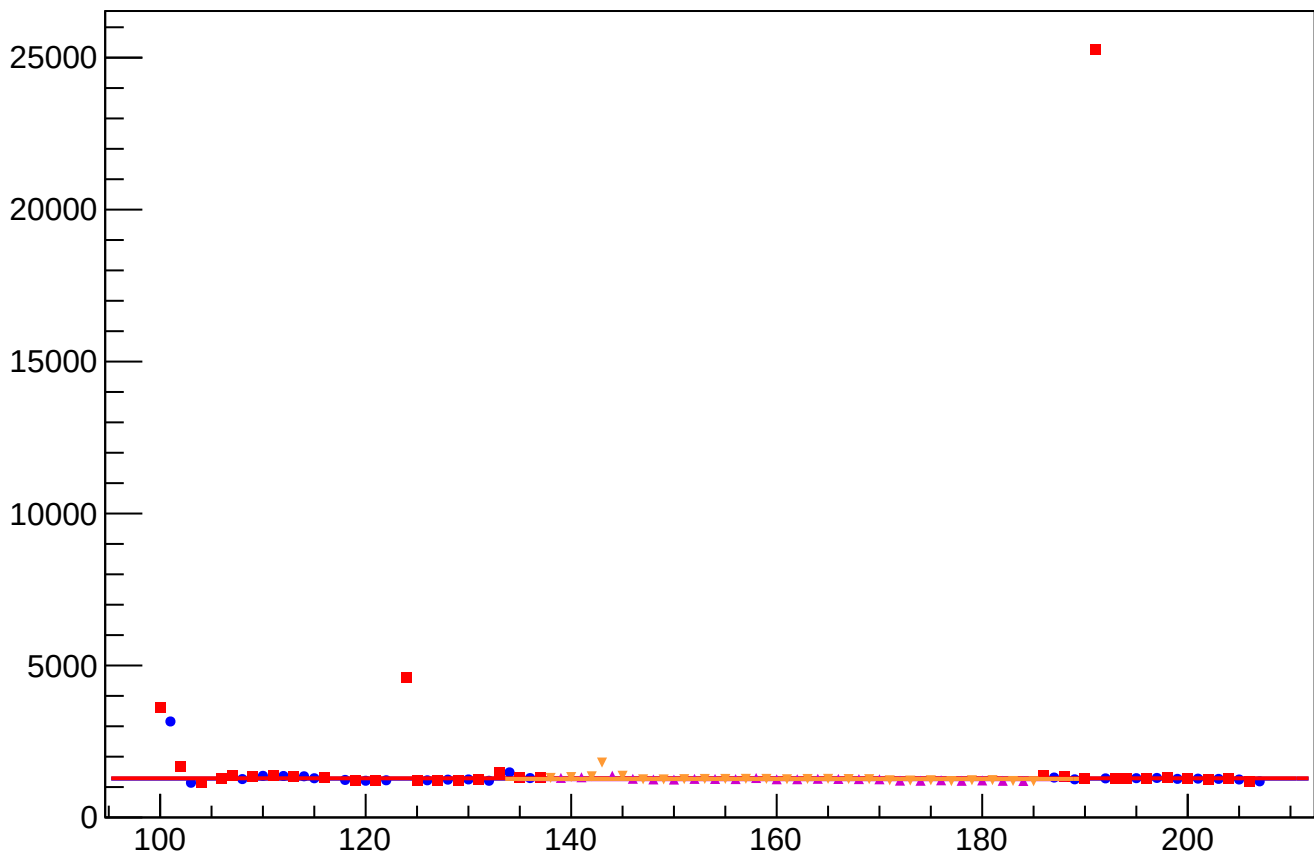
Left In: 486.720+/-293.769  $\chi^2/\text{NDF}$ : 14.4/22

+ sign 75.891+/-218.016  $\chi^2/\text{NDF}$ : 73.6/50

All: 164.676+/-154.030  $\chi^2/\text{NDF}$ : 118.3/104

- sign 253.163+/-217.648  $\chi^2/\text{NDF}$ : 44.3/53

eigen\_cor\_asym\_at1\_avg\_at2\_avg\_dd\_rms vs Slug



Right In: 1276.338 $\pm$ 0.235  $\chi^2$ /NDF: 528337.9/25

Left Out: 1266.968 $\pm$ 0.204  $\chi^2$ /NDF: 187545.6/24

Right Out: 1288.689 $\pm$ 0.229  $\chi^2$ /NDF: 489152.2/30

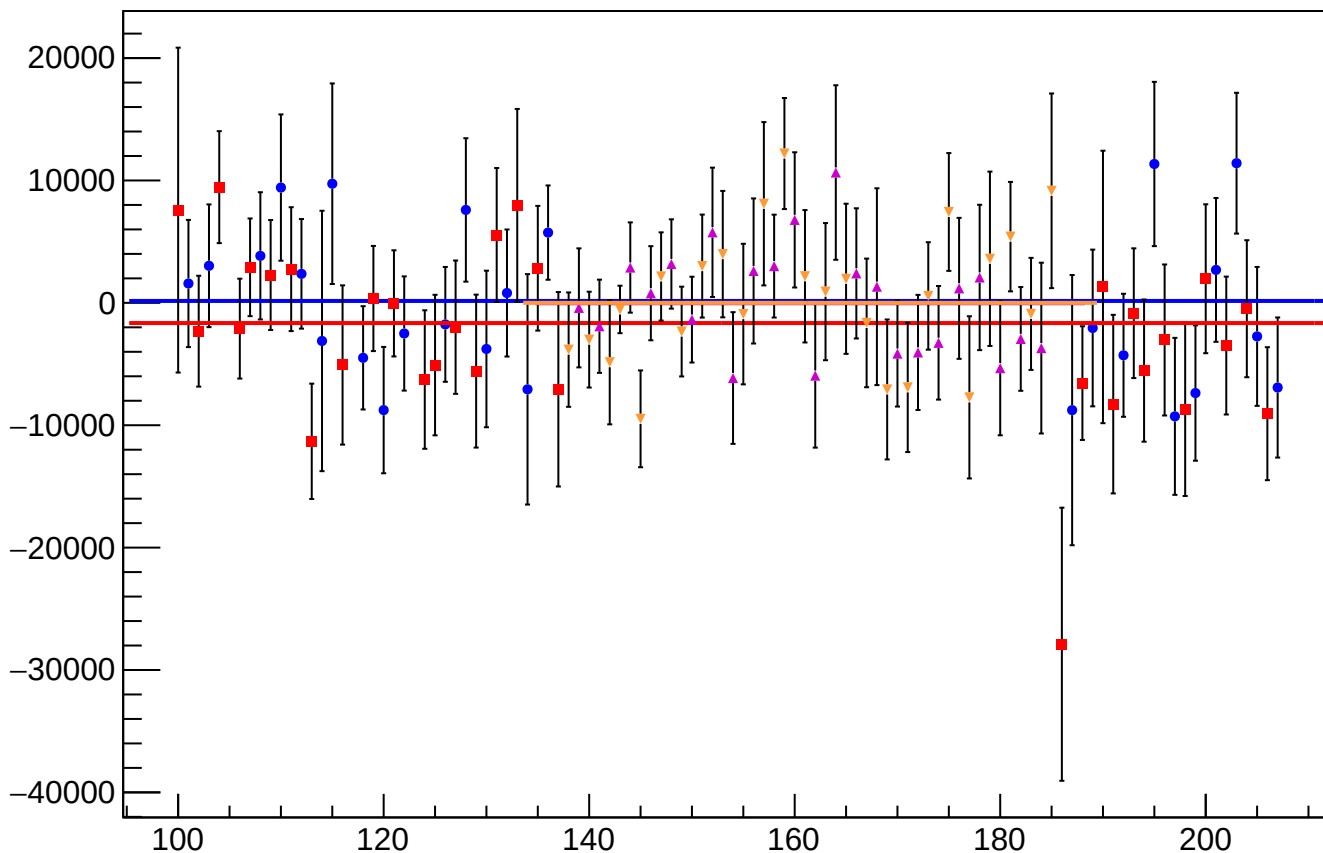
Left In: 1257.551 $\pm$ 0.208  $\chi^2$ /NDF: 36816.3/22

+ sign 1270.987 $\pm$ 0.154  $\chi^2$ /NDF: 716788.4/50

All: 1271.299 $\pm$ 0.109  $\chi^2$ /NDF: 1252910.0/10

- sign 1271.610 $\pm$ 0.154  $\chi^2$ /NDF: 536113.4/53

asym\_at1\_avg\_at2\_avg\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In: 155.615 $\pm$ 1089.890  $\chi^2$ /NDF: 28.5/25

Left Out: -0.541 $\pm$ 886.487  $\chi^2$ /NDF:29.1/24

Right Out: -1649.714 $\pm$ 984.732  $\chi^2$ /NDF: 31.4/30

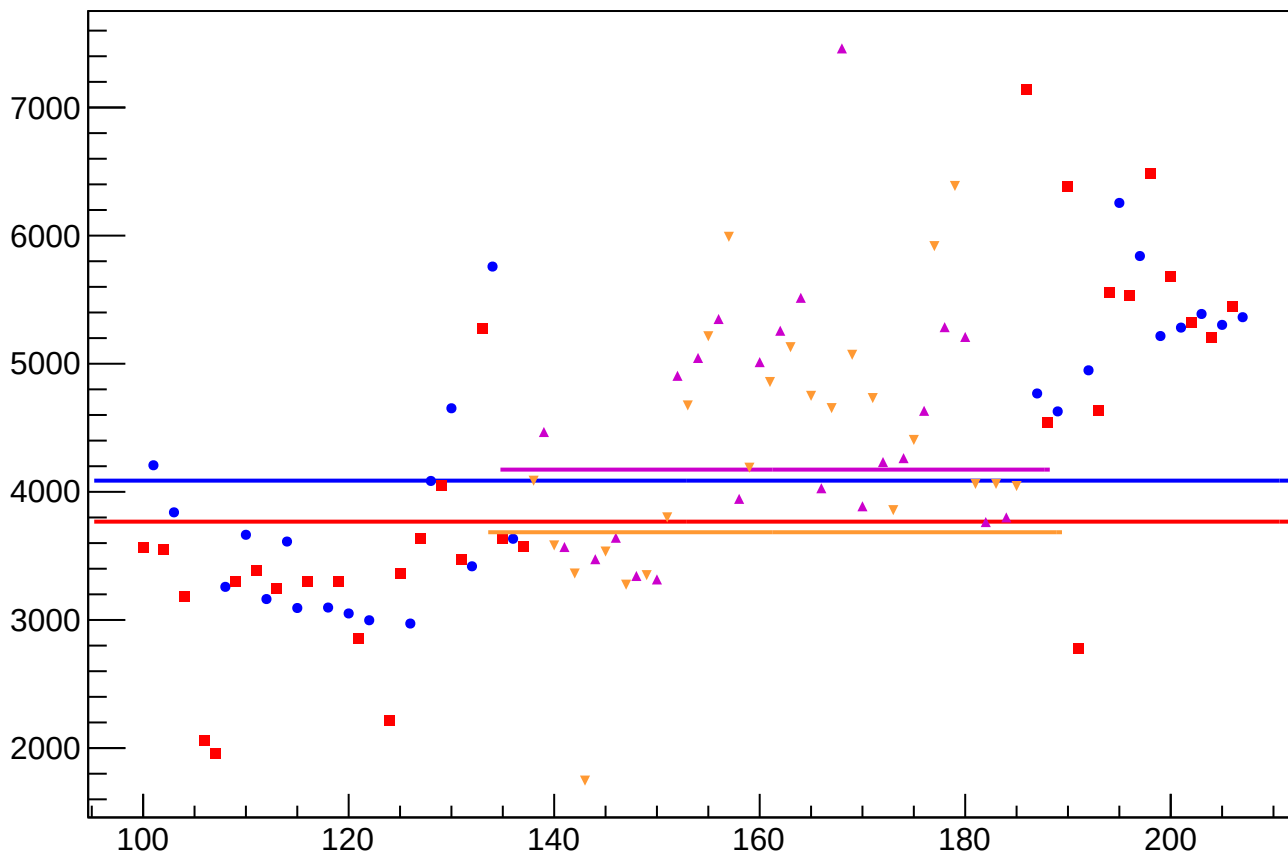
Left In: -31.597 $\pm$ 995.347  $\chi^2$ /NDF:14.0/22

+ sign 61.634 $\pm$ 687.721  $\chi^2$ /NDF: 57.6/50

All: -385.766 $\pm$ 490.587  $\chi^2$ /NDF: 105.2/104

- sign -849.330 $\pm$ 700.033  $\chi^2$ /NDF: 46.7/53

asym\_at1\_avg\_at2\_avg\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 4087.510+/-0.771  $\chi^2/\text{NDF}$ : 1635775.4/25

Left Out: 3684.762+/-0.627  $\chi^2/\text{NDF}$ : 3693687.2/24

Right Out: 3767.434+/-0.696  $\chi^2/\text{NDF}$ : 2986055.6/30

Left In: 4173.550+/-0.704  $\chi^2/\text{NDF}$ : 1274967.5/22

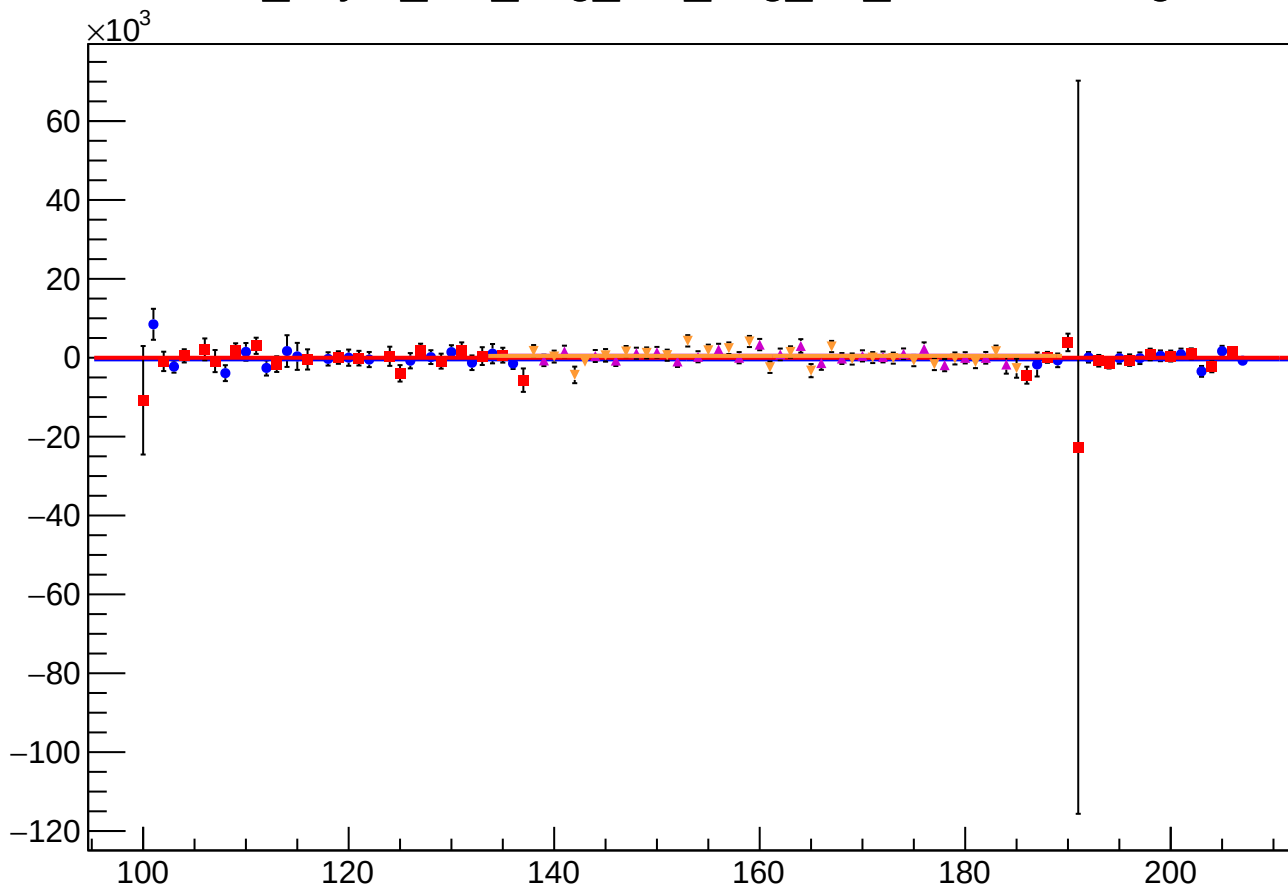
+ sign 3845.120+/-0.486  $\chi^2/\text{NDF}$ : 5493828.3/50

All: 3905.625+/-0.347  $\chi^2/\text{NDF}$ : 9954631.9/10

- sign 3968.315+/-0.495  $\chi^2/\text{NDF}$ : 4429284.0/53



dit\_asym\_at1\_avg\_at2\_avg\_dd\_mean vs Slug



Right In:  $-418.078 \pm 337.671$   $\chi^2/\text{NDF}$ : 23.2/25

Left Out:  $467.929 \pm 294.257$   $\chi^2/\text{NDF}$ : 44.1/24

Right Out:  $-5.003 \pm 326.544$   $\chi^2/\text{NDF}$ : 29.0/30

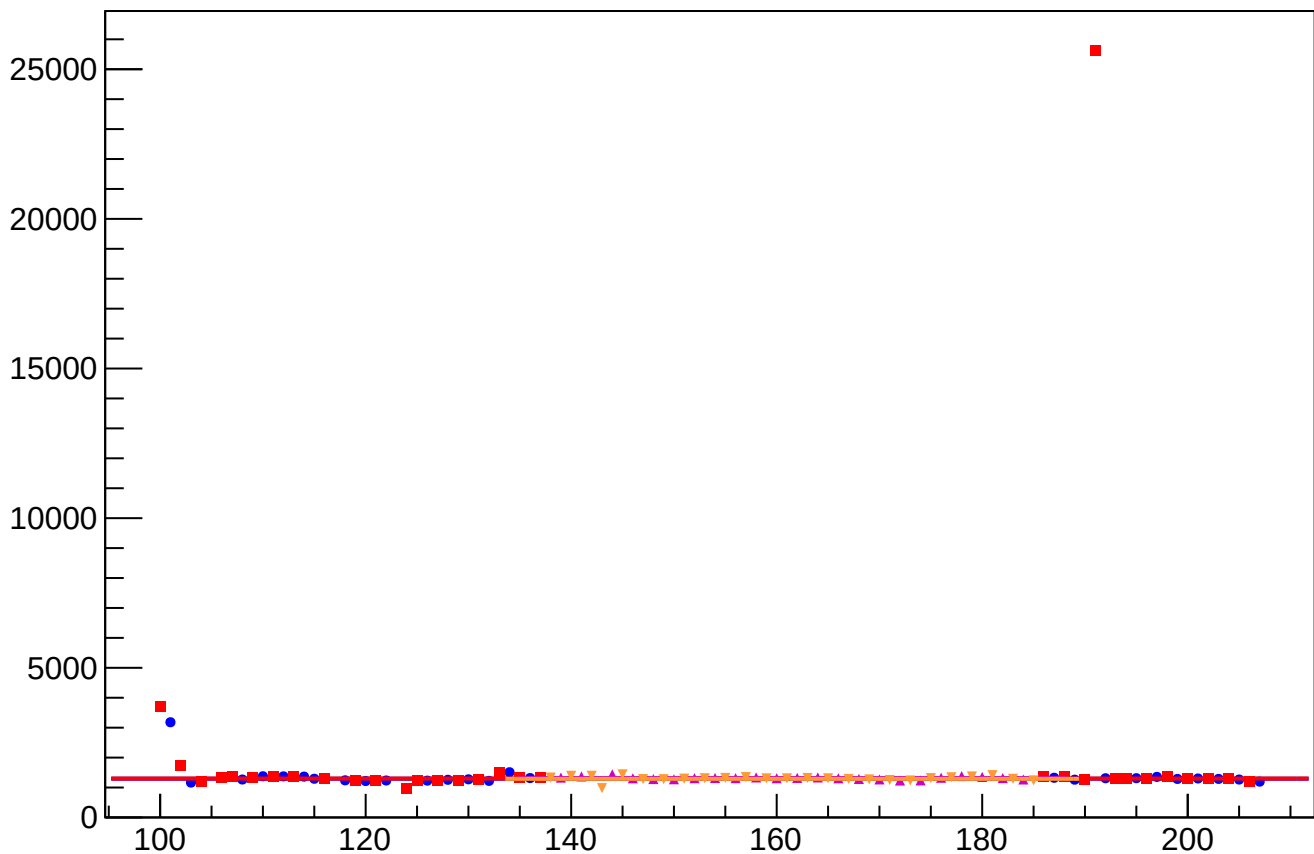
Left In:  $503.558 \pm 307.055$   $\chi^2/\text{NDF}$ : 17.4/22

+ sign  $85.508 \pm 221.843$   $\chi^2/\text{NDF}$ : 71.3/50

All:  $174.462 \pm 157.517$   $\chi^2/\text{NDF}$ : 119.3/104

- sign  $264.905 \pm 223.693$   $\chi^2/\text{NDF}$ : 47.7/53

dit\_asym\_at1\_avg\_at2\_avg\_dd\_rms vs Slug



Right In: 1294.519+/-0.239  $\chi^2/\text{NDF}$ : 528815.0/25

Left Out: 1291.211+/-0.208  $\chi^2/\text{NDF}$ : 230735.1/24

Right Out: 1300.024+/-0.231  $\chi^2/\text{NDF}$ : 377970.0/30

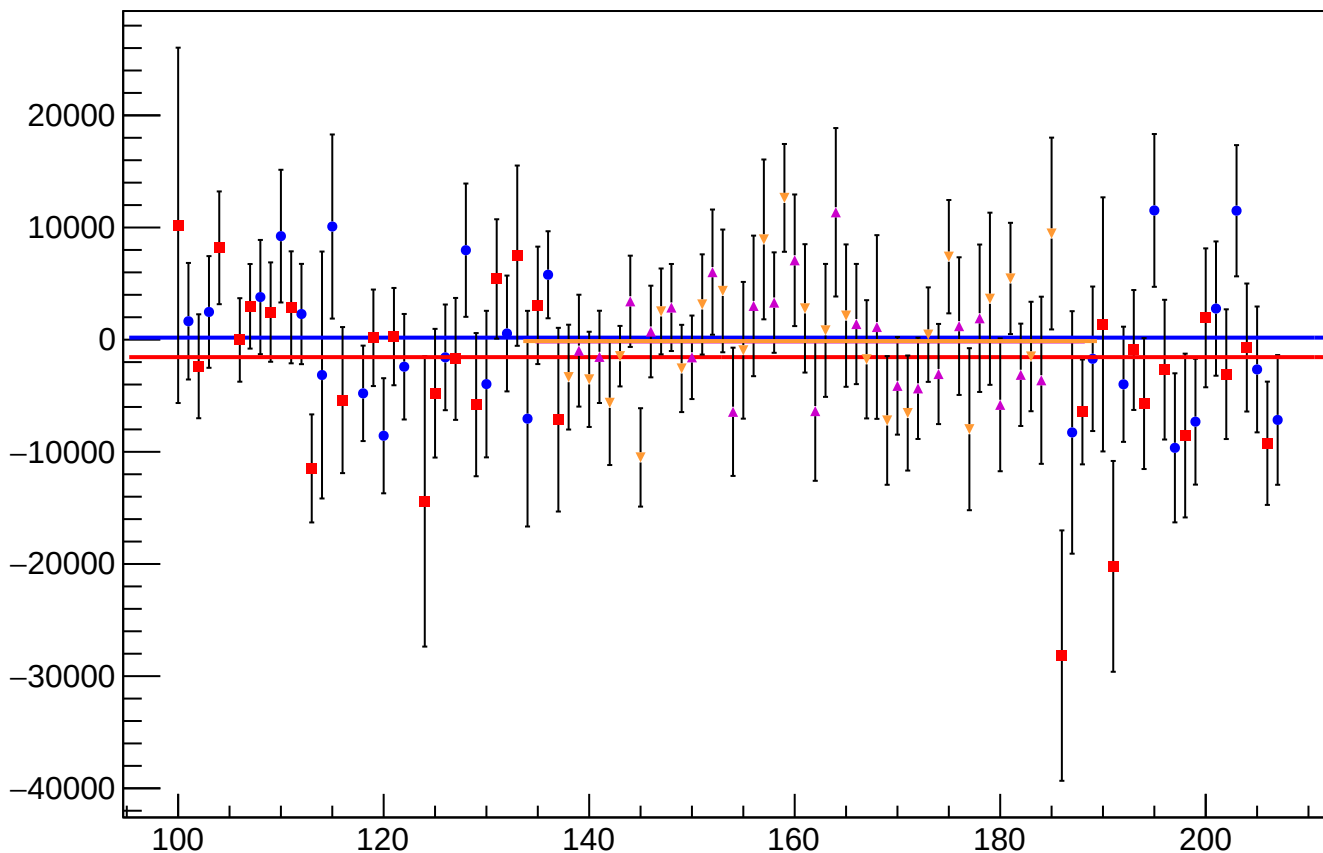
Left In: 1314.006+/-0.217  $\chi^2/\text{NDF}$ : 43044.7/22

+ sign 1292.639+/-0.157  $\chi^2/\text{NDF}$ : 759659.2/50

All: 1299.980+/-0.111  $\chi^2/\text{NDF}$ : 1187037.2/10

- sign 1307.442+/-0.158  $\chi^2/\text{NDF}$ : 422961.4/53

asym\_at1\_avg\_at2\_avg\_dd\_dit\_correction\_mean vs Slug



Right In:  $182.170 \pm 1095.752$   $\chi^2/\text{NDF}: 28.3/25$

Left Out:  $-127.273 \pm 977.231$   $\chi^2/\text{NDF}: 28.6/24$

Right Out:  $-1556.741 \pm 1002.016$   $\chi^2/\text{NDF}: 33.1/30$

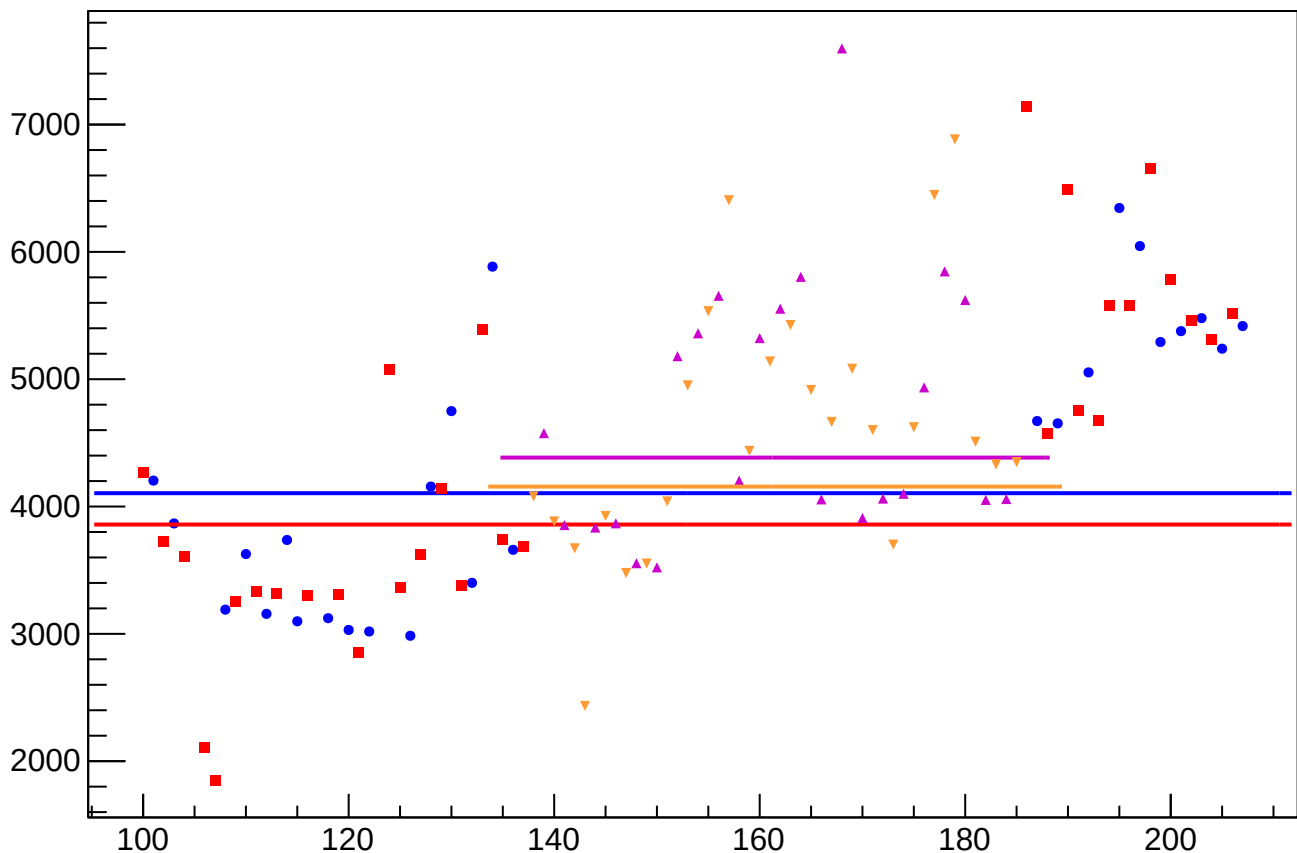
Left In:  $-159.452 \pm 1045.510$   $\chi^2/\text{NDF}: 13.8/22$

+ sign  $9.814 \pm 729.323$   $\chi^2/\text{NDF}: 56.9/50$

All:  $-442.623 \pm 513.609$   $\chi^2/\text{NDF}: 105.5/104$

- sign  $-887.765 \pm 723.420$   $\chi^2/\text{NDF}: 47.8/53$

asym\_at1\_avg\_at2\_avg\_dd\_dit\_correction\_rms vs Slug



Right In: 4104.906+/-0.775  $\chi^2/\text{NDF}$ : 1720690.2/25

Left Out: 4156.582+/-0.691  $\chi^2/\text{NDF}$ : 2080766.1/24

Right Out: 3858.672+/-0.709  $\chi^2/\text{NDF}$ : 3057818.8/30

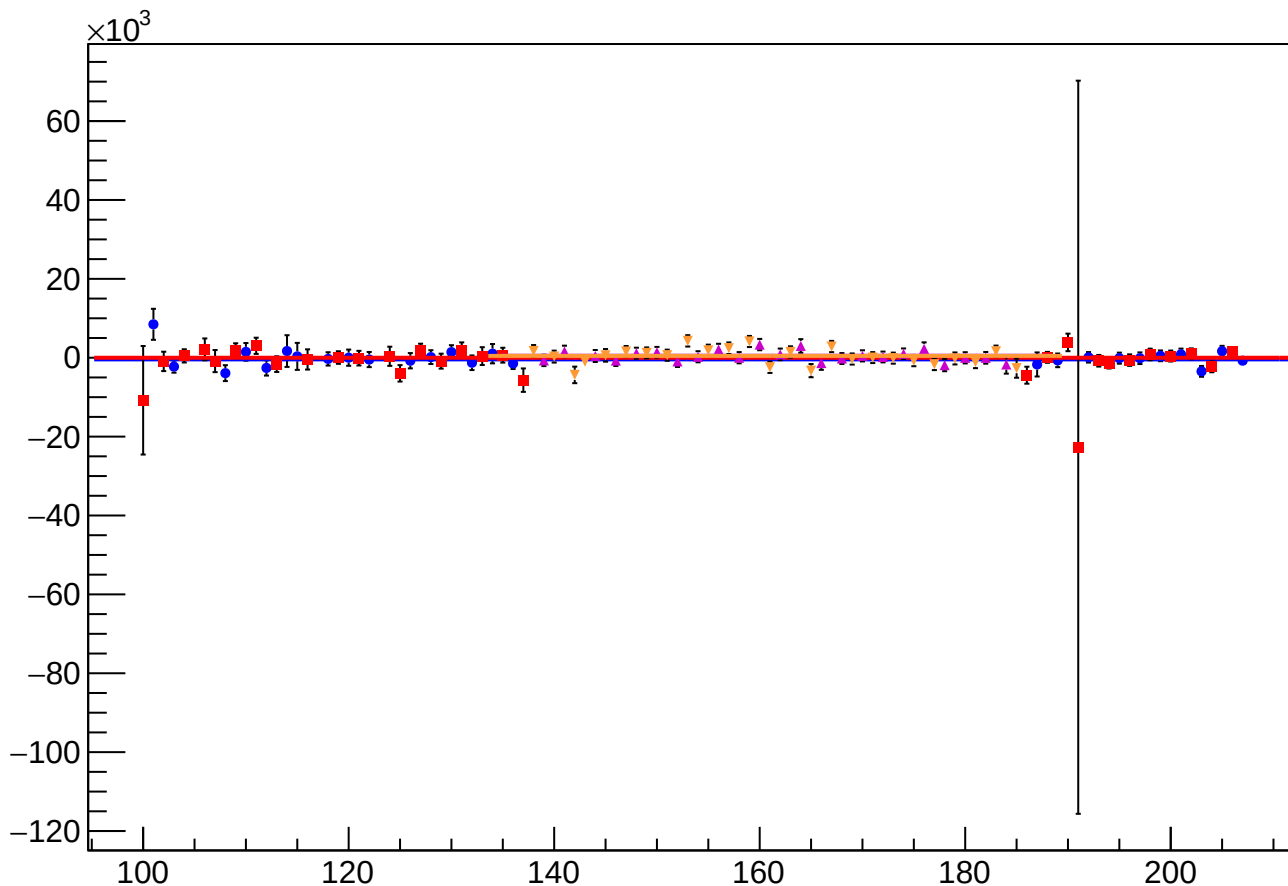
Left In: 4384.323+/-0.739  $\chi^2/\text{NDF}$ : 1255470.8/22

+ sign 4133.688+/-0.516  $\chi^2/\text{NDF}$ : 3803933.9/50

All: 4121.918+/-0.363  $\chi^2/\text{NDF}$ : 8381768.6/10

- sign 4110.336+/-0.512  $\chi^2/\text{NDF}$ : 4576801.2/53

eigen\_dit\_asym\_at1\_avg\_at2\_avg\_dd\_mean vs Slug



Right In:  $-418.078 \pm 337.671$   $\chi^2/\text{NDF}$ : 23.2/25

Left Out:  $467.933 \pm 294.257$   $\chi^2/\text{NDF}$ : 44.1/24

Right Out:  $-5.002 \pm 326.544$   $\chi^2/\text{NDF}$ : 29.0/30

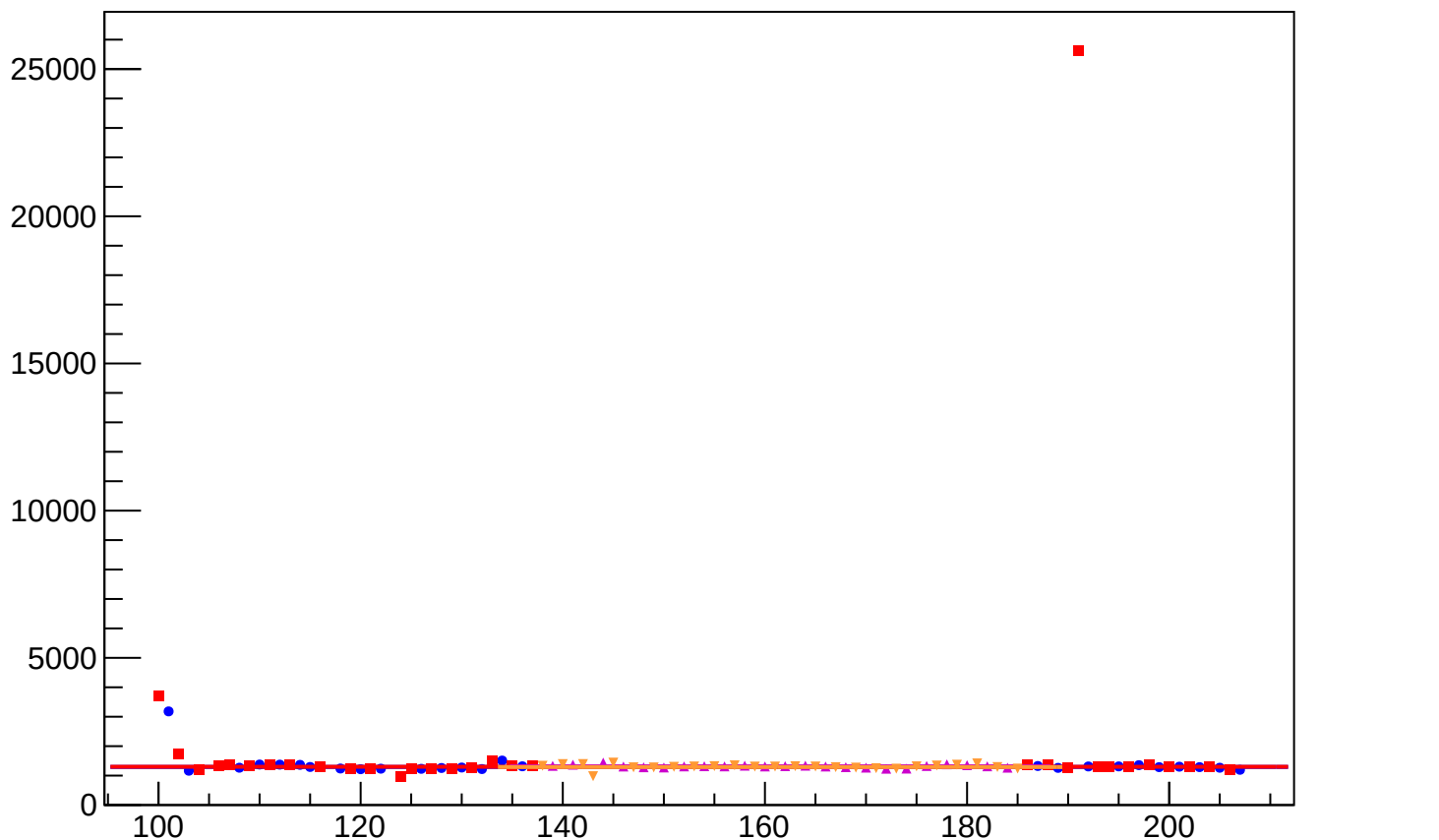
Left In:  $503.558 \pm 307.056$   $\chi^2/\text{NDF}$ : 17.4/22

+ sign  $85.510 \pm 221.843$   $\chi^2/\text{NDF}$ : 71.3/50

All:  $174.463 \pm 157.517$   $\chi^2/\text{NDF}$ : 119.3/104

- sign  $264.905 \pm 223.694$   $\chi^2/\text{NDF}$ : 47.7/53

eigen\_dit\_asym\_at1\_avg\_at2\_avg\_dd\_rms vs Slug



Right In: 1294.519+/-0.239  $\chi^2/\text{NDF}$ : 528815.1/25

Left Out: 1291.212+/-0.208  $\chi^2/\text{NDF}$ : 230737.6/24

Right Out: 1300.024+/-0.231  $\chi^2/\text{NDF}$ : 377970.1/30

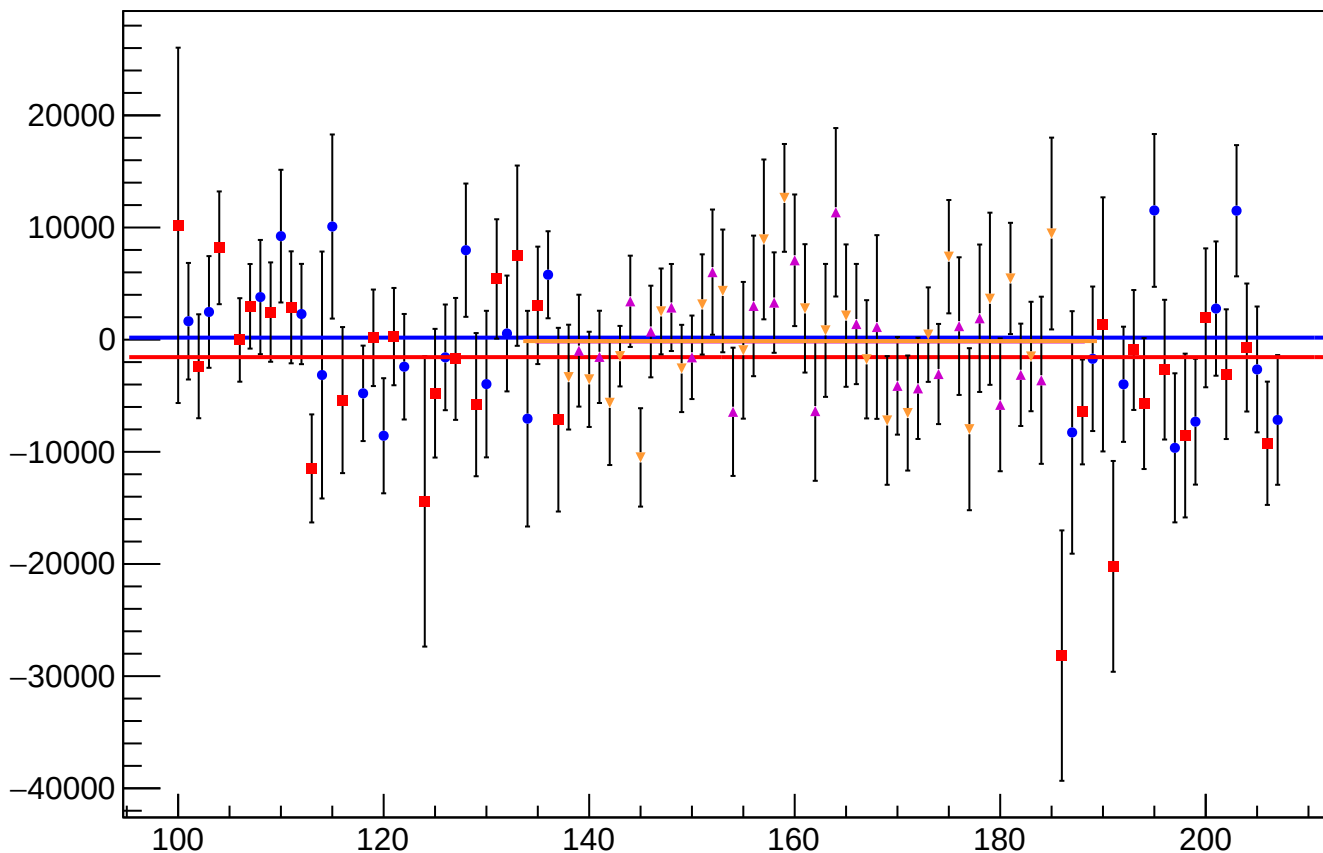
Left In: 1314.007+/-0.217  $\chi^2/\text{NDF}$ : 43046.8/22

+ sign 1292.639+/-0.157  $\chi^2/\text{NDF}$ : 759661.7/50

All: 1299.981+/-0.111  $\chi^2/\text{NDF}$ : 1187042.3/10

- sign 1307.443+/-0.158  $\chi^2/\text{NDF}$ : 422964.0/53

asym\_at1\_avg\_at2\_avg\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $182.165 \pm 1095.751$   $\chi^2/\text{NDF}$ : 28.3/25

Left Out:  $-127.271 \pm 977.232$   $\chi^2/\text{NDF}$ : 28.6/24

Right Out:  $-1556.733 \pm 1002.014$   $\chi^2/\text{NDF}$ : 33.1/30

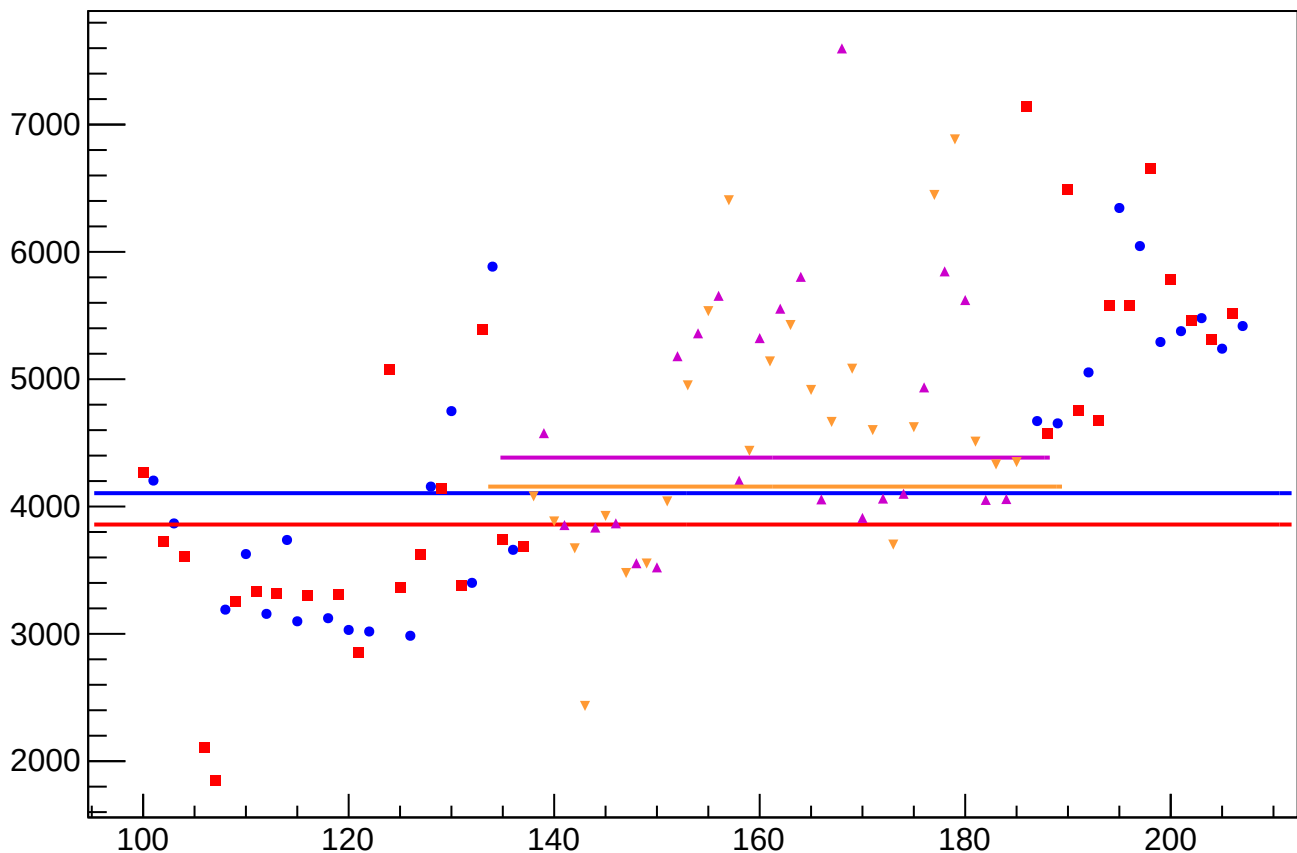
Left In:  $-159.454 \pm 1045.511$   $\chi^2/\text{NDF}$ : 13.8/22

+ sign  $9.814 \pm 729.324$   $\chi^2/\text{NDF}$ : 56.9/50

All:  $-442.622 \pm 513.610$   $\chi^2/\text{NDF}$ : 105.5/104

- sign  $-887.763 \pm 723.420$   $\chi^2/\text{NDF}$ : 47.8/53

asym\_at1\_avg\_at2\_avg\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 4104.899 $\pm$ 0.775  $\chi^2$ /NDF: 1720719.4/25

Left Out: 4156.588 $\pm$ 0.691  $\chi^2$ /NDF: 2080769.0/24

Right Out: 3858.666 $\pm$ 0.709  $\chi^2$ /NDF: 3057847.1/30

Left In: 4384.329 $\pm$ 0.739  $\chi^2$ /NDF: 1255475.0/22

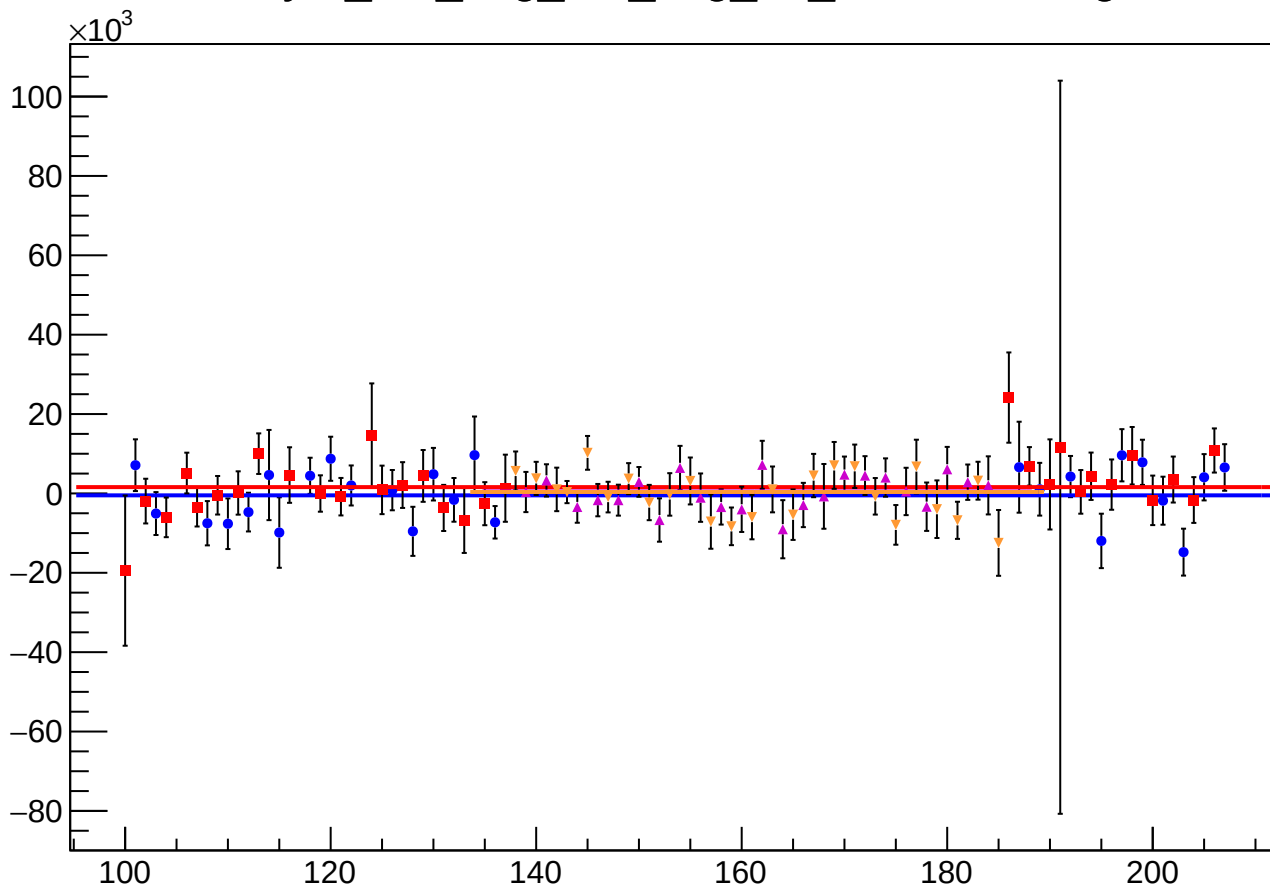
+ sign 4133.689 $\pm$ 0.516  $\chi^2$ /NDF: 3803967.2/50

All: 4121.917 $\pm$ 0.363  $\chi^2$ /NDF: 8381847.8/10

- sign 4110.336 $\pm$ 0.512  $\chi^2$ /NDF: 4576846.9/53



# asym\_at1\_avg\_at2\_avg\_dd\_mean vs Slug



Right In:  $-484.908 \pm 1158.644$   $\chi^2/\text{NDF}$ : 34.4/25

Left Out:  $362.528 \pm 979.860$   $\chi^2/\text{NDF}$ : 27.7/24

Right Out:  $1590.008 \pm 1090.282$   $\chi^2/\text{NDF}$ : 22.8/30

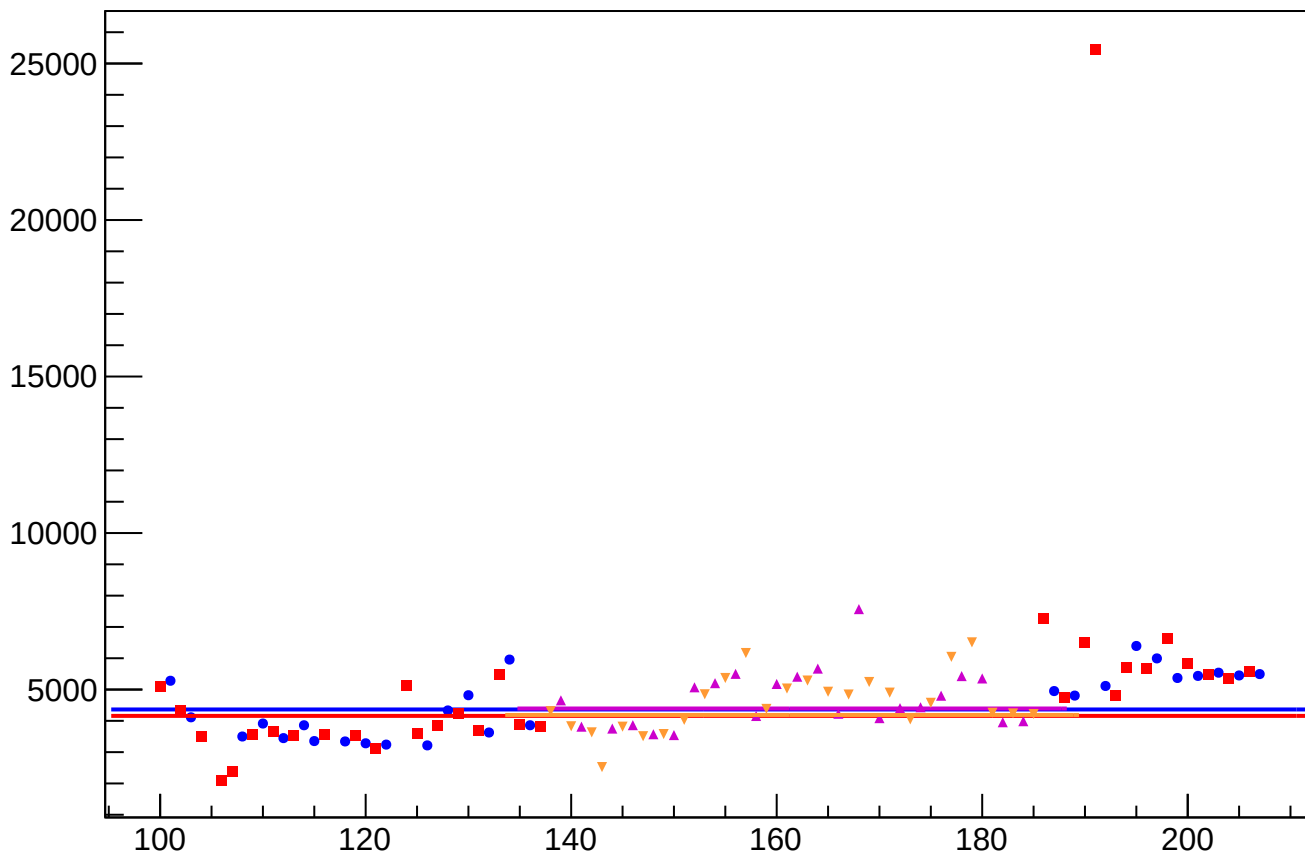
Left In:  $497.522 \pm 1044.707$   $\chi^2/\text{NDF}$ : 13.9/22

+ sign  $9.166 \pm 748.181$   $\chi^2/\text{NDF}$ : 62.4/50

All:  $510.681 \pm 531.200$   $\chi^2/\text{NDF}$ : 100.5/104

- sign  $1020.455 \pm 754.317$   $\chi^2/\text{NDF}$ : 37.2/53

# asym\_at1\_avg\_at2\_avg\_dd\_rms vs Slug



Right In: 4363.691+/-0.819     $\chi^2/\text{NDF}$ : 1410984.6/25

Left Out: 4187.848+/-0.693     $\chi^2/\text{NDF}$ :1796345.9/24

Right Out: 4158.534+/-0.764     $\chi^2/\text{NDF}$ : 2452358.5/30

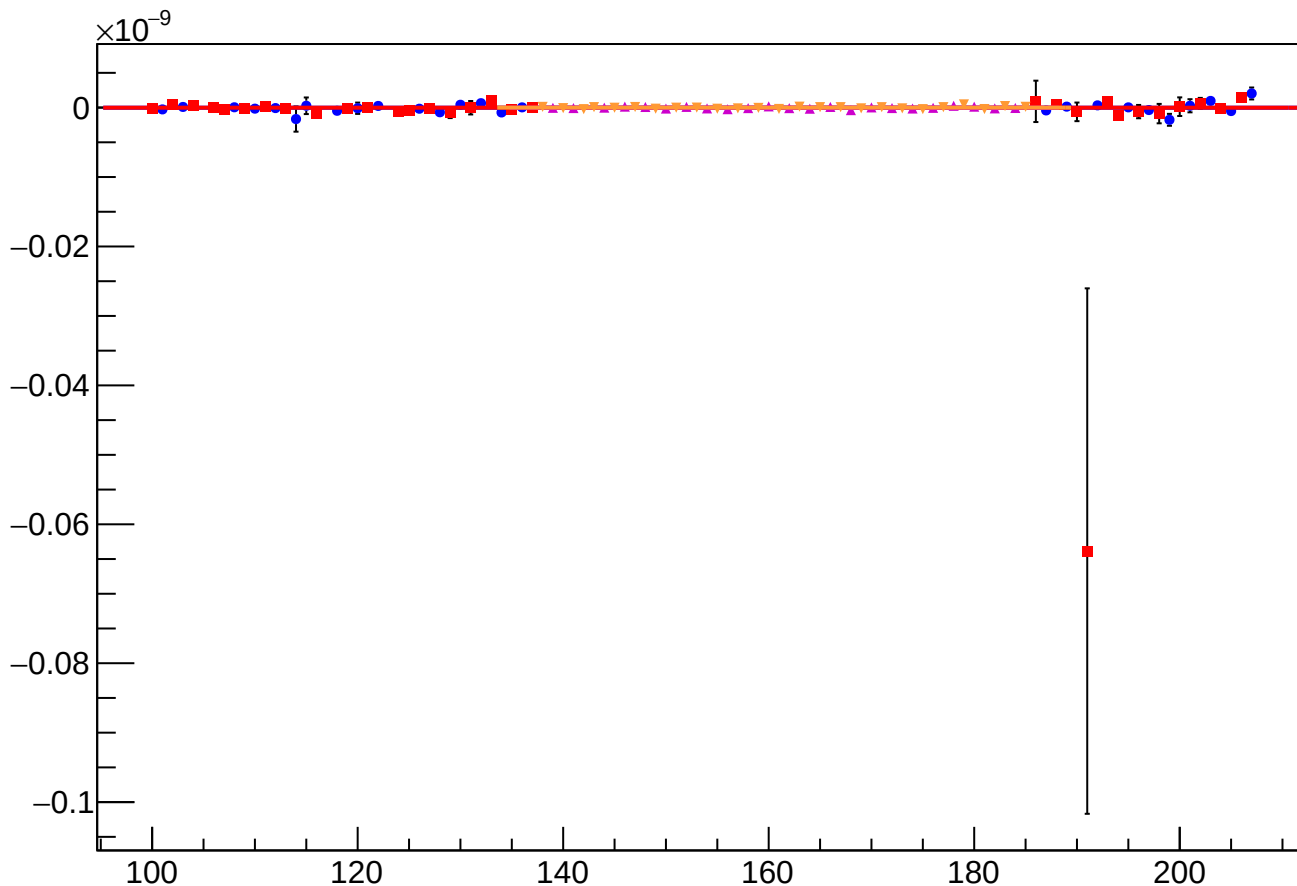
Left In: 4394.324+/-0.739     $\chi^2/\text{NDF}$ :1088394.9/22

+ sign 4261.171+/-0.529     $\chi^2/\text{NDF}$ : 3234188.1/50

All: 4270.739+/-0.375     $\chi^2/\text{NDF}$ : 6824832.0/10

- sign 4280.379+/-0.531     $\chi^2/\text{NDF}$ : 3589987.3/53

asym\_at1\_avg\_at2\_avg\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2$ /NDF: 34.3/25

Left Out: -0.000+/-0.000  $\chi^2$ /NDF: 30.5/24

Right Out: -0.000+/-0.000  $\chi^2$ /NDF: 33.0/30

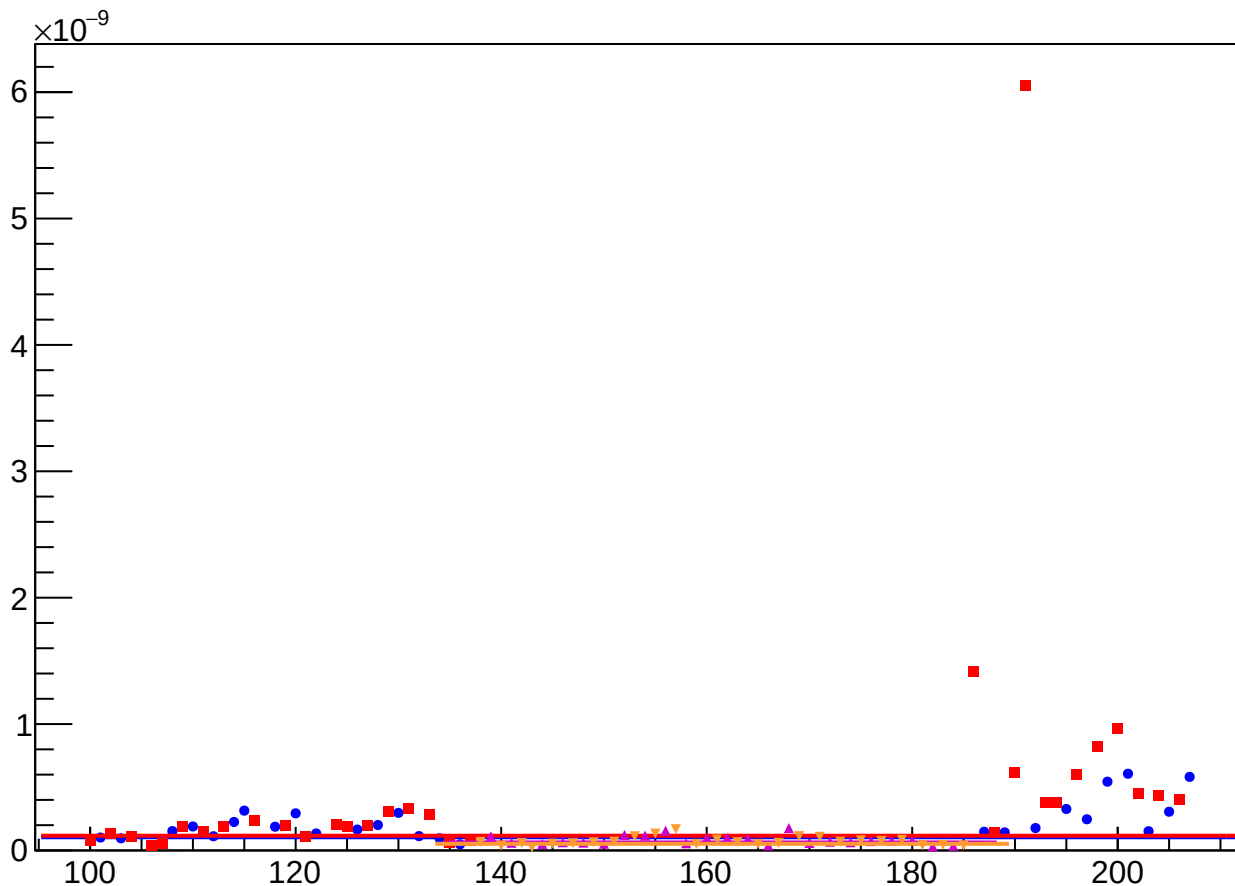
Left In: -0.000+/-0.000  $\chi^2$ /NDF: 17.0/22

+ sign -0.000+/-0.000  $\chi^2$ /NDF: 64.8/50

All: -0.000+/-0.000  $\chi^2$ /NDF: 115.1/104

- sign -0.000+/-0.000  $\chi^2$ /NDF: 50.0/53

asym\_at1\_avg\_at2\_avg\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4027324.0/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2628519.8/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6378887.3/30

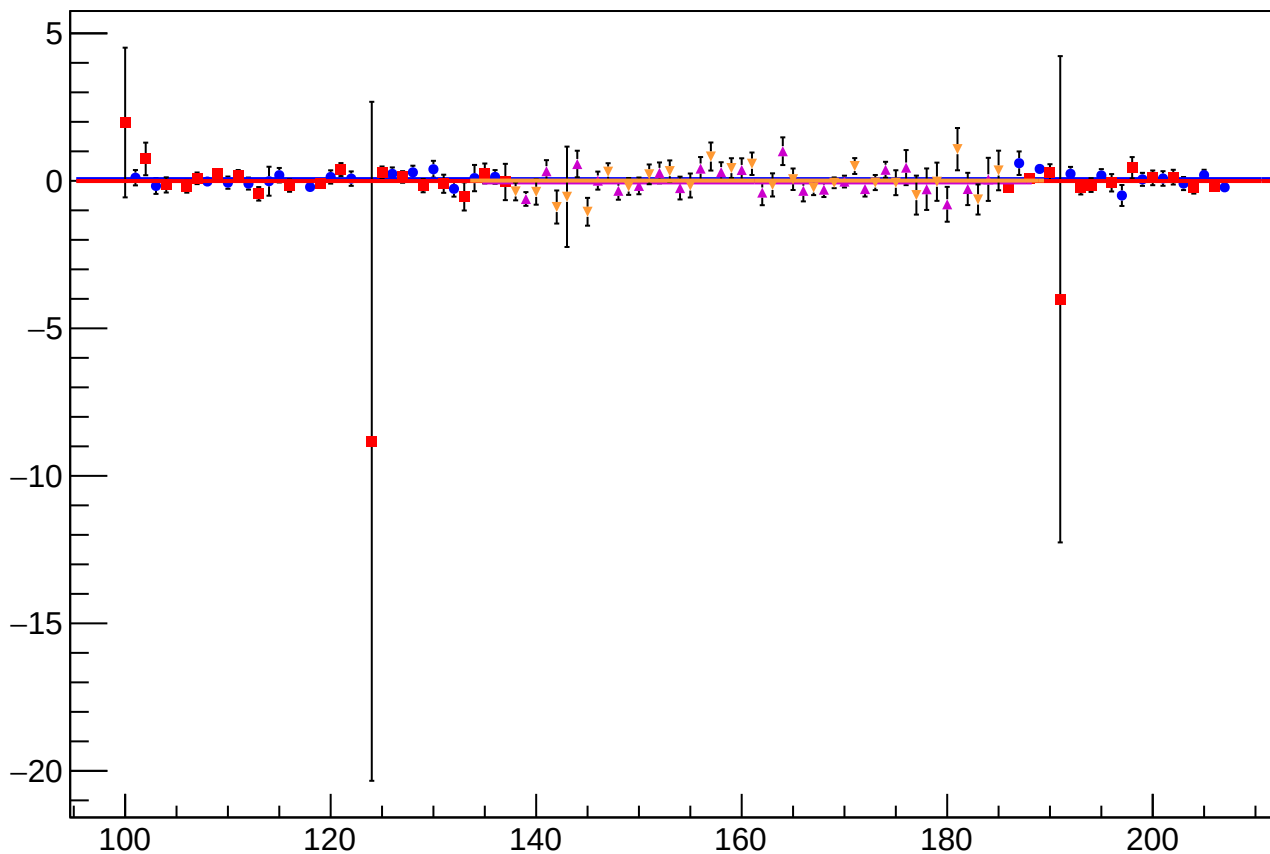
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1788279.2/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8153490.6/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 17902397.5/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9458054.7/53

asym\_at1\_avg\_at2\_avg\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.059 \pm 0.044$   $\chi^2/\text{NDF}$ : 24.4/25

Left Out:  $0.009 \pm 0.071$   $\chi^2/\text{NDF}$ : 28.9/24

Right Out:  $-0.007 \pm 0.039$   $\chi^2/\text{NDF}$ : 31.9/30

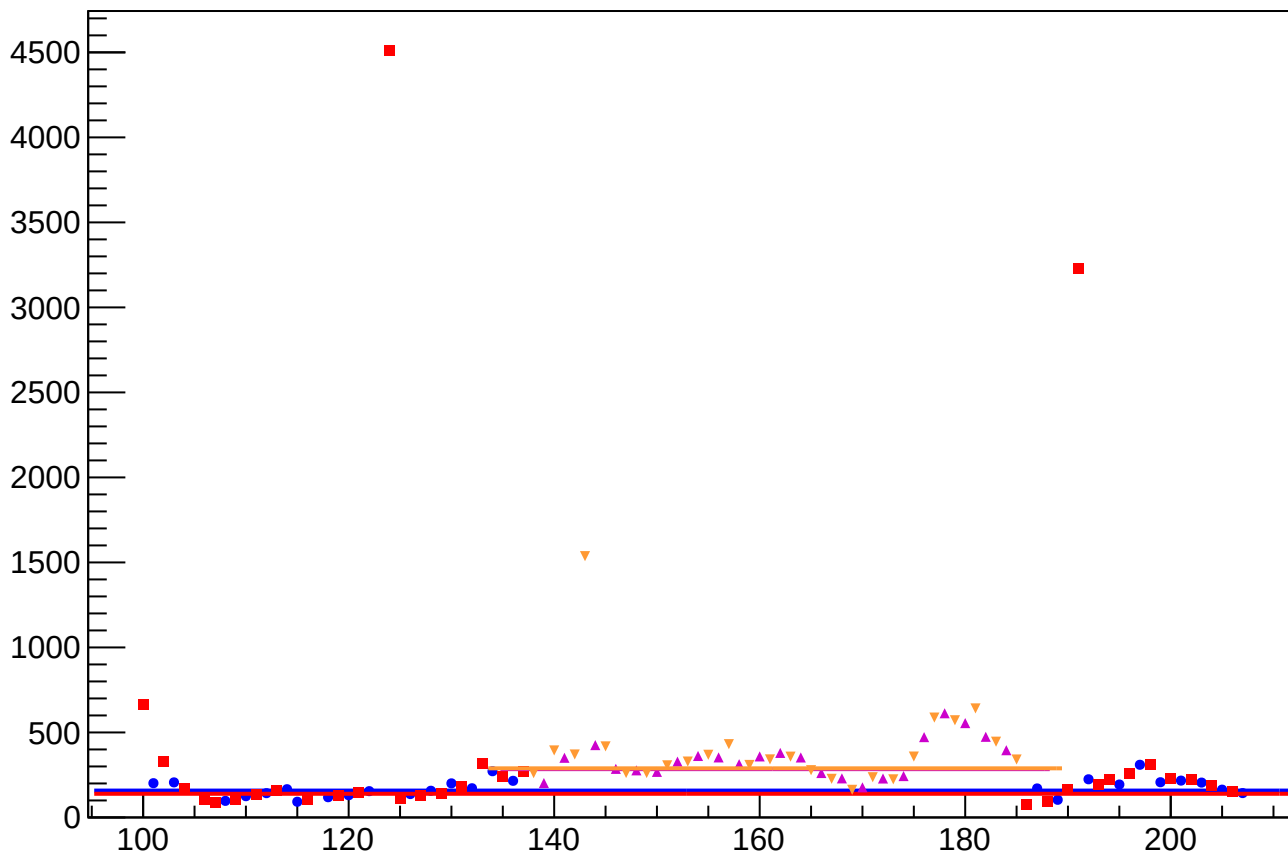
Left In:  $-0.053 \pm 0.070$   $\chi^2/\text{NDF}$ : 27.8/22

+ sign  $0.046 \pm 0.037$   $\chi^2/\text{NDF}$ : 53.7/50

All:  $0.011 \pm 0.025$   $\chi^2/\text{NDF}$ : 115.3/104

- sign  $-0.018 \pm 0.034$   $\chi^2/\text{NDF}$ : 60.0/53

asym\_at1\_avg\_at2\_avg\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 158.088+/-0.031  $\chi^2/\text{NDF}$ : 2235932.9/25

Left Out: 288.922+/-0.050  $\chi^2/\text{NDF}$ : 4648197.0/24

Right Out: 139.244+/-0.027  $\chi^2/\text{NDF}$ : 4674613.0/30

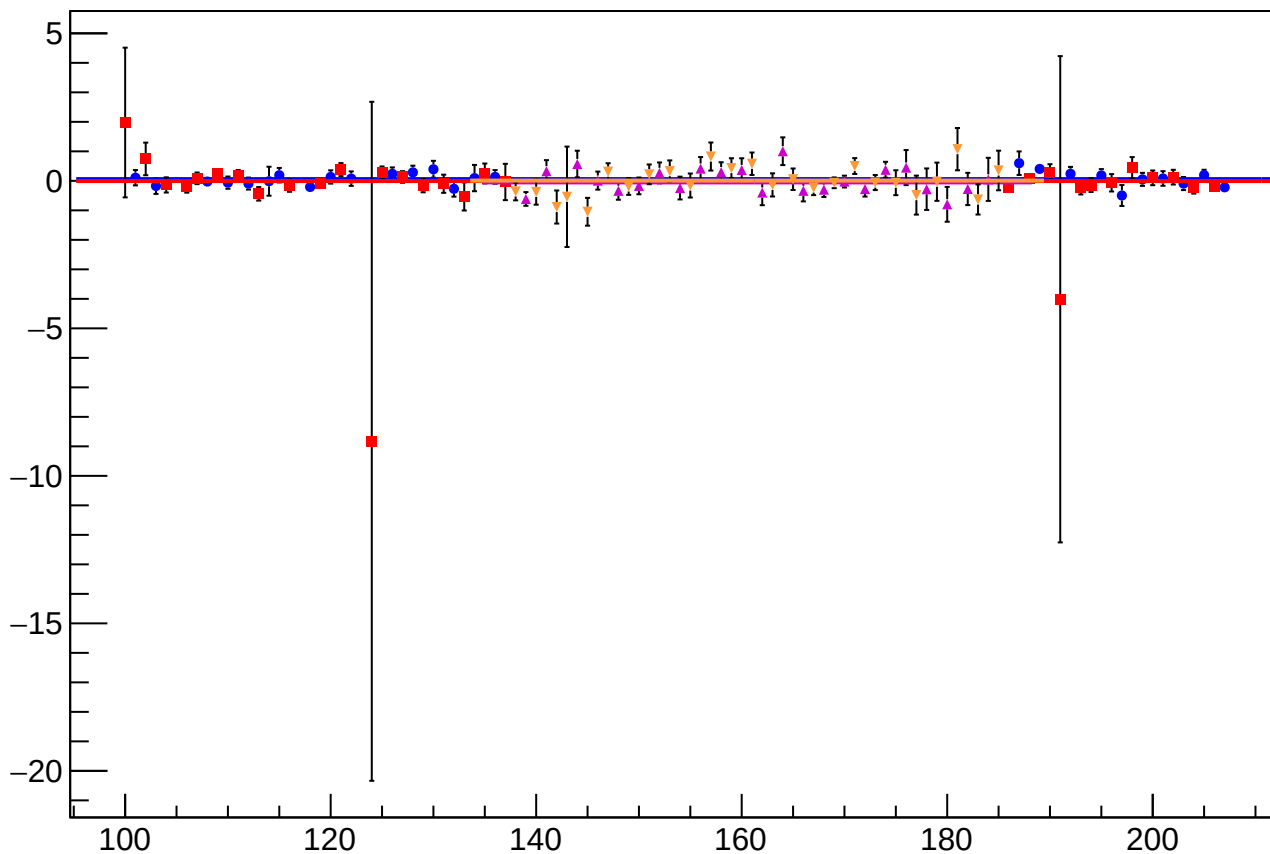
Left In: 284.168+/-0.050  $\chi^2/\text{NDF}$ : 3077521.1/22

+ sign 193.811+/-0.026  $\chi^2/\text{NDF}$ : 11818598.9/50

All: 182.453+/-0.018  $\chi^2/\text{NDF}$ : 26418523.1/10

- sign 172.947+/-0.024  $\chi^2/\text{NDF}$ : 14255780.1/53

asym\_at1\_avg\_at2\_avg\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.059 \pm 0.044$   $\chi^2/\text{NDF}$ : 24.4/25

Left Out:  $0.009 \pm 0.071$   $\chi^2/\text{NDF}$ : 28.9/24

Right Out:  $-0.007 \pm 0.039$   $\chi^2/\text{NDF}$ : 31.9/30

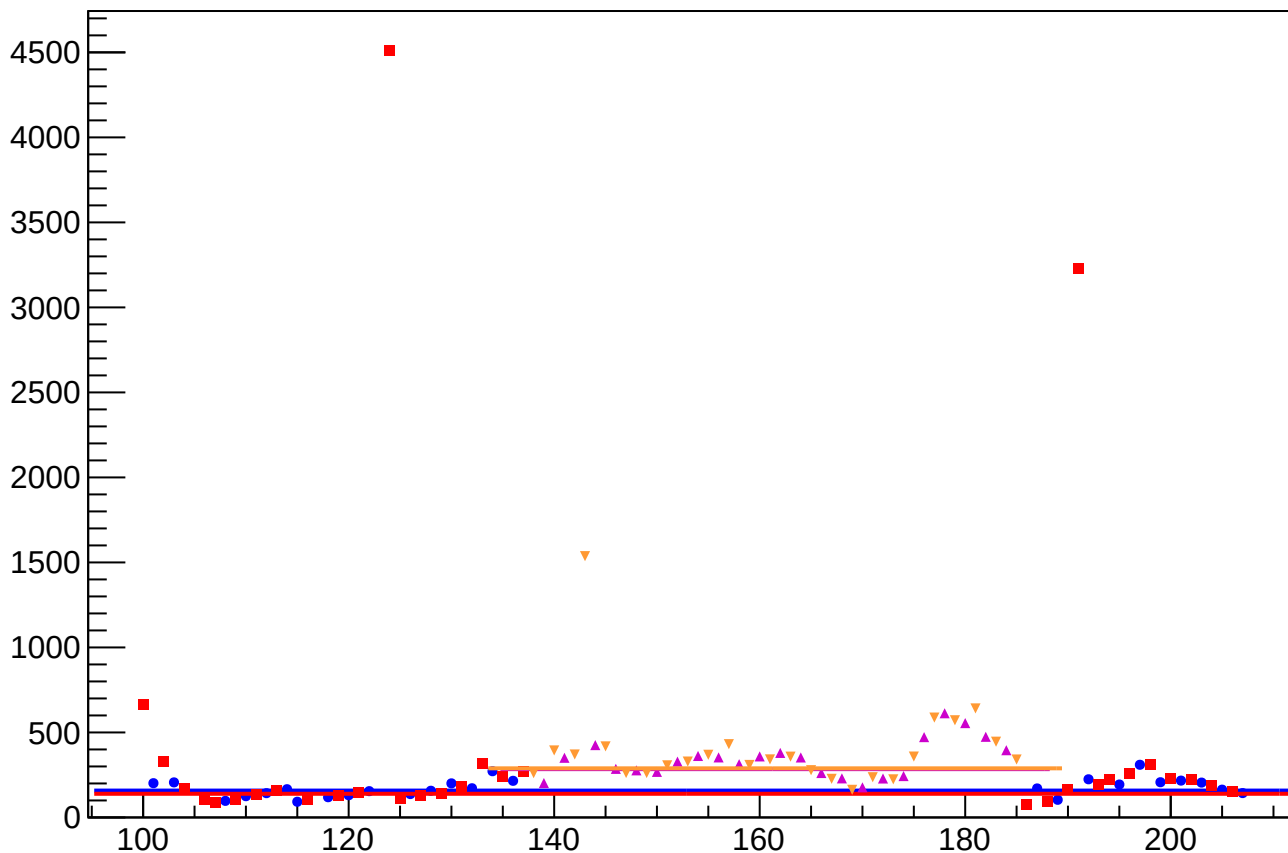
Left In:  $-0.053 \pm 0.070$   $\chi^2/\text{NDF}$ : 27.8/22

+ sign  $0.046 \pm 0.037$   $\chi^2/\text{NDF}$ : 53.7/50

All:  $0.011 \pm 0.025$   $\chi^2/\text{NDF}$ : 115.3/104

- sign  $-0.018 \pm 0.034$   $\chi^2/\text{NDF}$ : 60.0/53

asym\_at1\_avg\_at2\_avg\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 158.088+/-0.031  $\chi^2/\text{NDF}$ : 2235932.9/25

Left Out: 288.922+/-0.050  $\chi^2/\text{NDF}$ : 4648197.0/24

Right Out: 139.244+/-0.027  $\chi^2/\text{NDF}$ : 4674613.0/30

Left In: 284.168+/-0.050  $\chi^2/\text{NDF}$ : 3077521.1/22

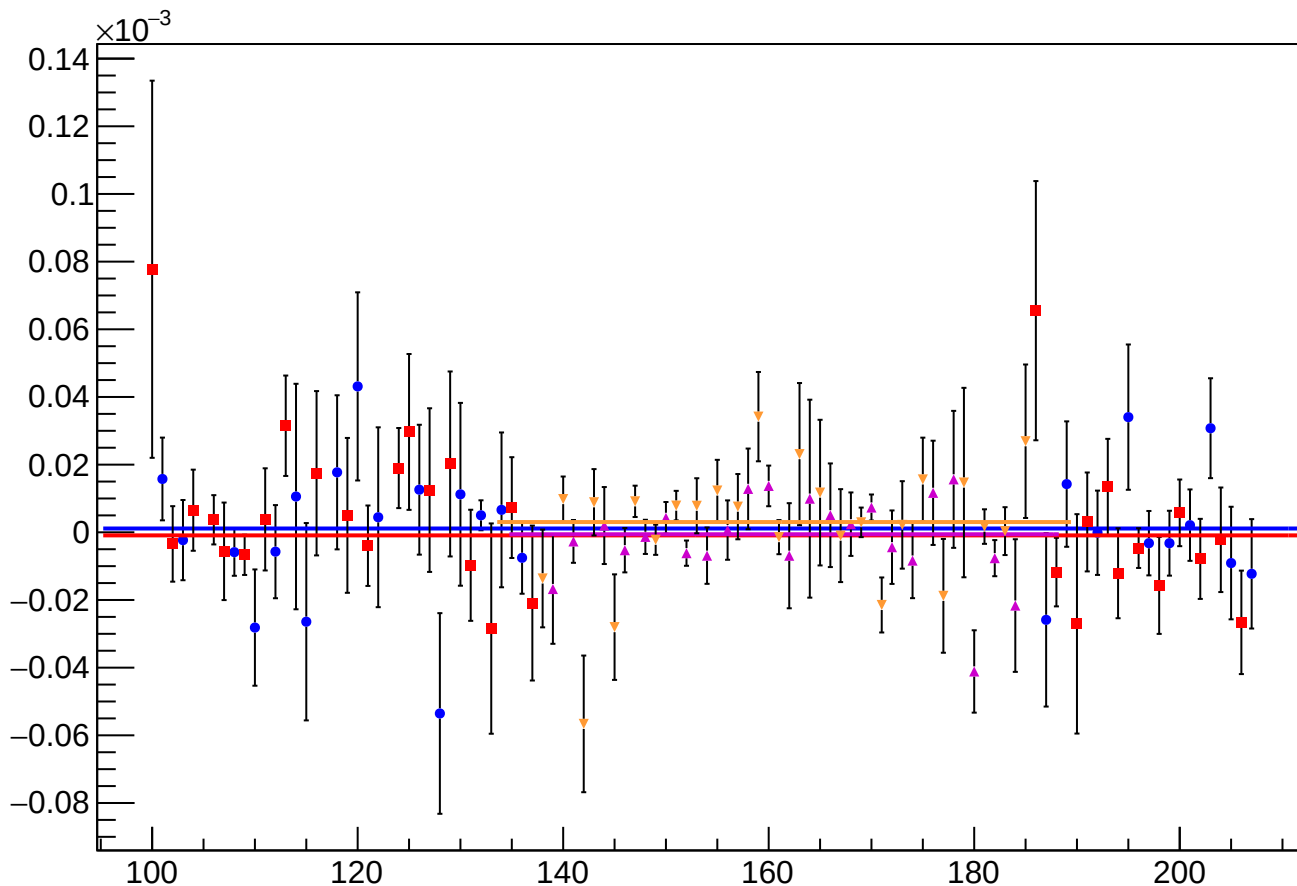
+ sign 193.811+/-0.026  $\chi^2/\text{NDF}$ : 11818598.9/50

All: 182.453+/-0.018  $\chi^2/\text{NDF}$ : 26418523.1/10

- sign 172.947+/-0.024  $\chi^2/\text{NDF}$ : 14255780.1/53



asym\_at1\_avg\_at2\_avg\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 24.4/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 42.2/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 28.8/30

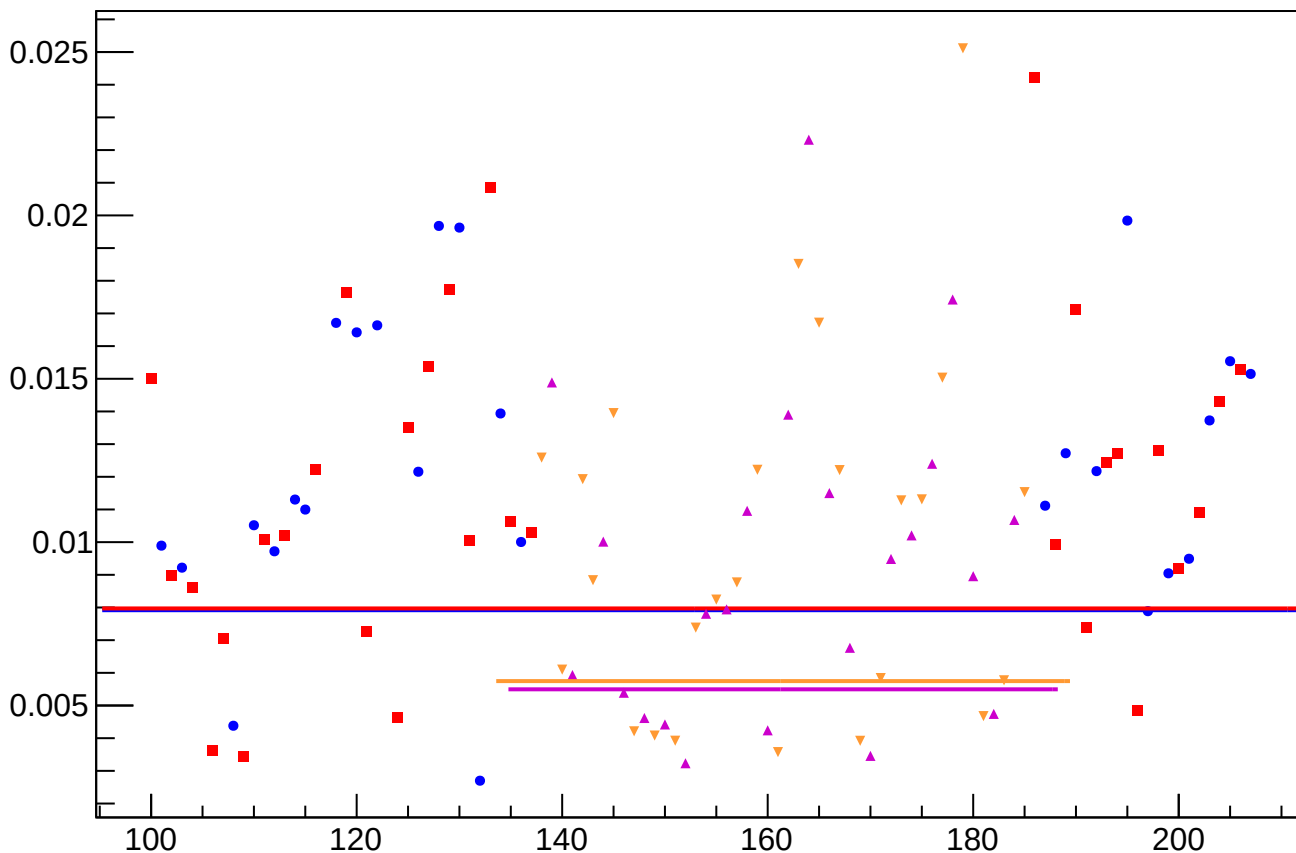
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 33.2/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 67.0/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 132.1/104

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 62.0/53

asym\_at1\_avg\_at2\_avg\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 7412887.6/25

Left Out: 0.006 $\pm$ 0.000  $\chi^2$ /NDF:8128513.8/24

Right Out: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 6422510.5/30

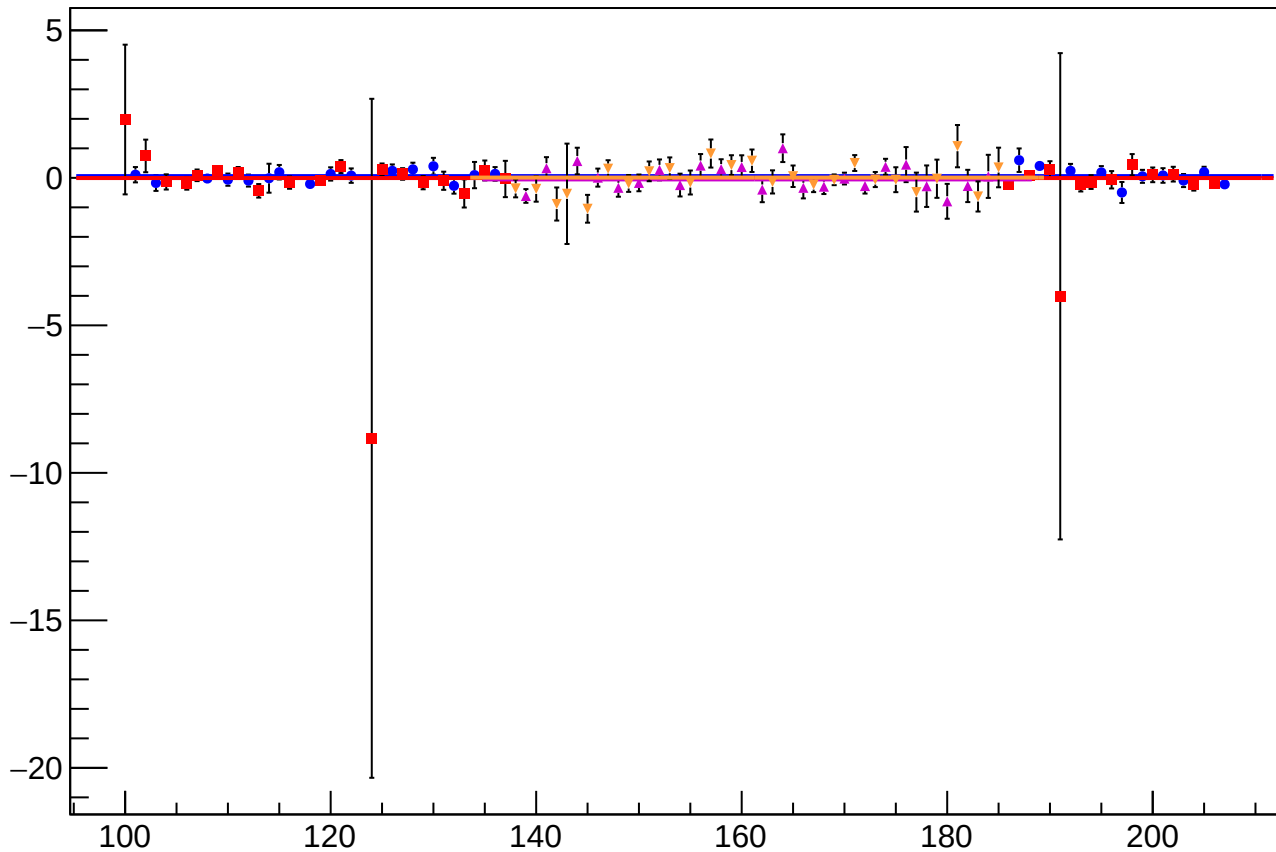
Left In: 0.005 $\pm$ 0.000  $\chi^2$ /NDF:6937299.0/22

+ sign 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 16702946.4/50

All: 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 31727909.0/104

- sign 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 15018604.9/53

asym\_at1\_avg\_at2\_avg\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.059 $\pm$ 0.044  $\chi^2$ /NDF: 24.4/25

Left Out: 0.009 $\pm$ 0.071  $\chi^2$ /NDF: 28.9/24

Right Out: -0.007 $\pm$ 0.039  $\chi^2$ /NDF: 31.9/30

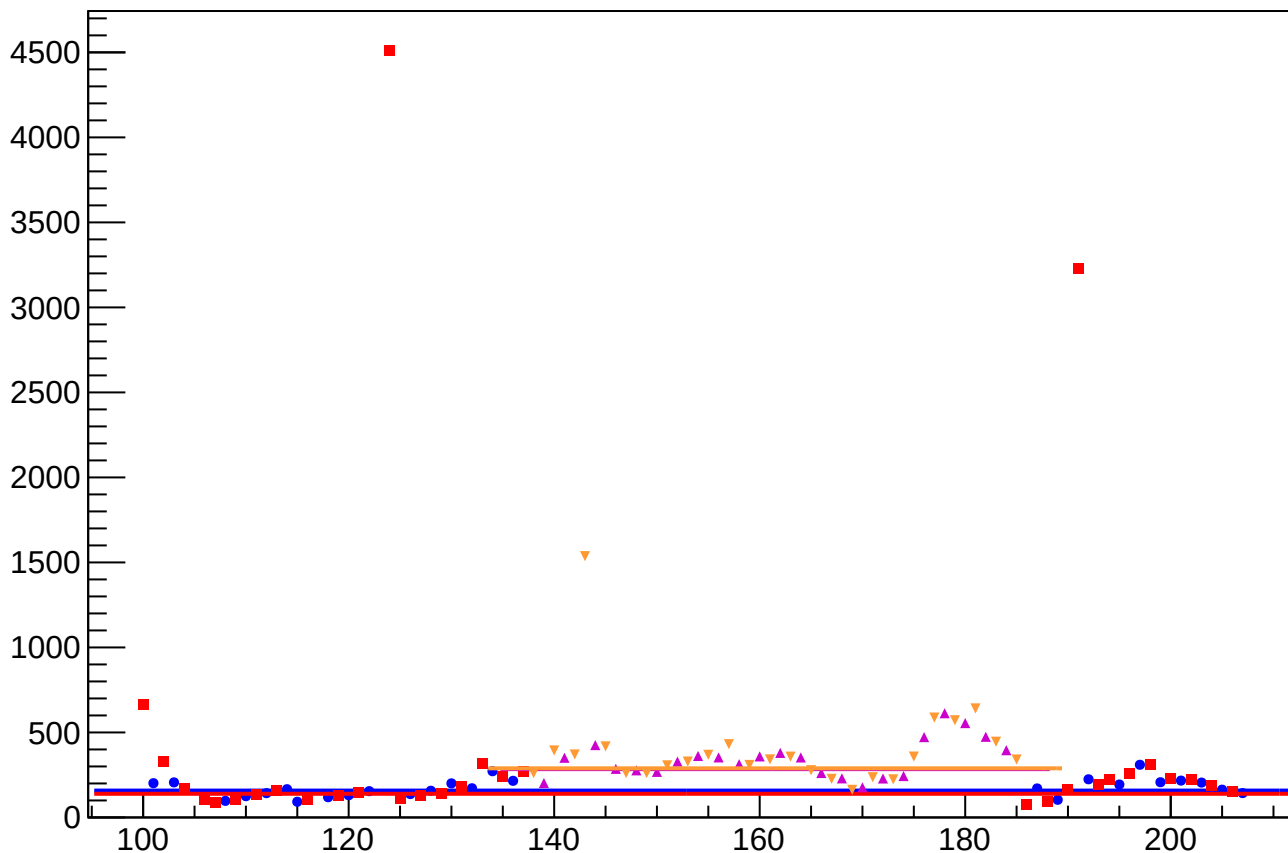
Left In: -0.053 $\pm$ 0.070  $\chi^2$ /NDF: 27.8/22

+ sign 0.046 $\pm$ 0.037  $\chi^2$ /NDF: 53.7/50

All: 0.011 $\pm$ 0.025  $\chi^2$ /NDF: 115.3/104

- sign -0.018 $\pm$ 0.034  $\chi^2$ /NDF: 60.0/53

asym\_at1\_avg\_at2\_avg\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 158.088+/-0.031  $\chi^2/\text{NDF}$ : 2235925.3/25

Left Out: 288.922+/-0.050  $\chi^2/\text{NDF}$ : 4648388.8/24

Right Out: 139.246+/-0.027  $\chi^2/\text{NDF}$ : 4674452.9/30

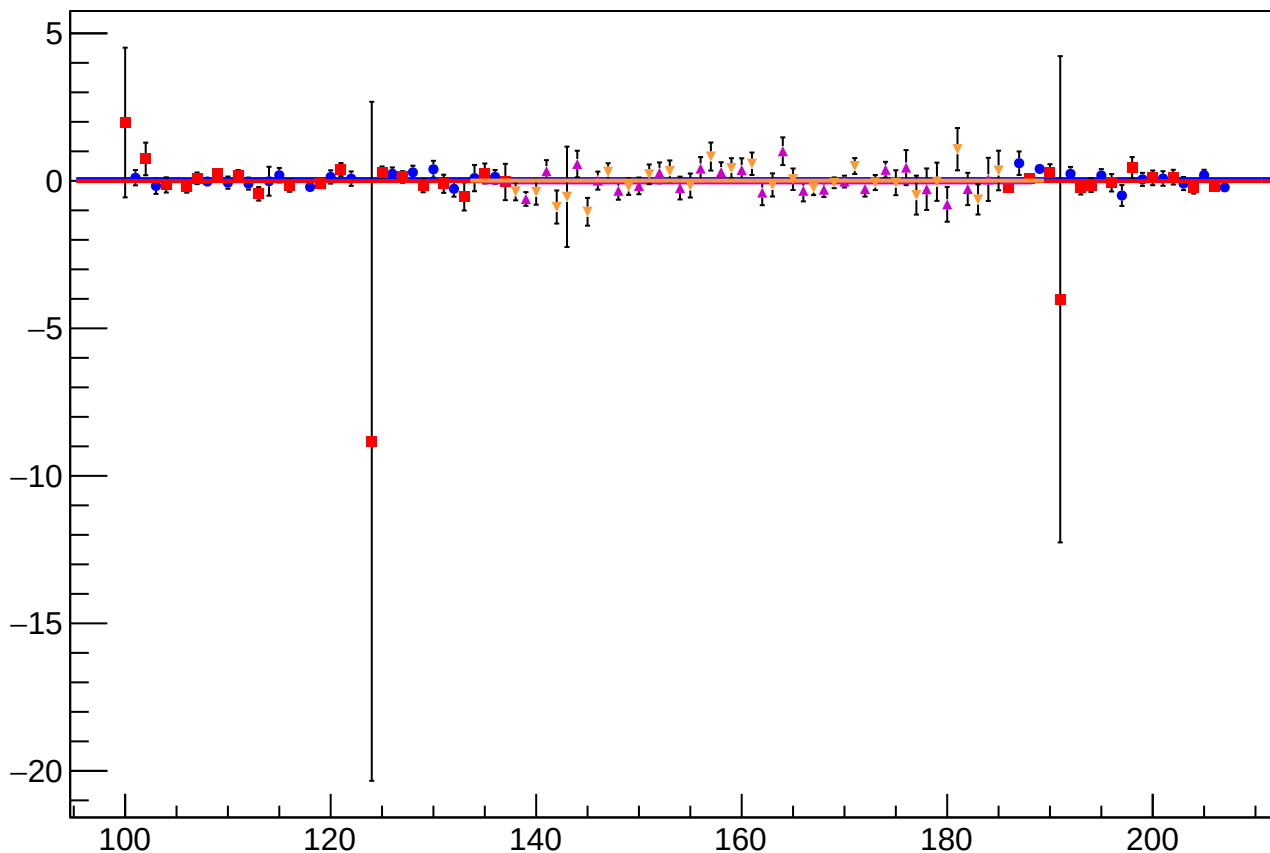
Left In: 284.170+/-0.050  $\chi^2/\text{NDF}$ : 3077626.7/22

+ sign 193.811+/-0.026  $\chi^2/\text{NDF}$ : 11818768.2/50

All: 182.455+/-0.018  $\chi^2/\text{NDF}$ : 26418417.8/10

- sign 172.949+/-0.024  $\chi^2/\text{NDF}$ : 14255580.6/53

asym\_at1\_avg\_at2\_avg\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.059 \pm 0.044$   $\chi^2/\text{NDF}$ : 24.4/25

Left Out:  $0.009 \pm 0.071$   $\chi^2/\text{NDF}$ : 28.9/24

Right Out:  $-0.007 \pm 0.039$   $\chi^2/\text{NDF}$ : 31.9/30

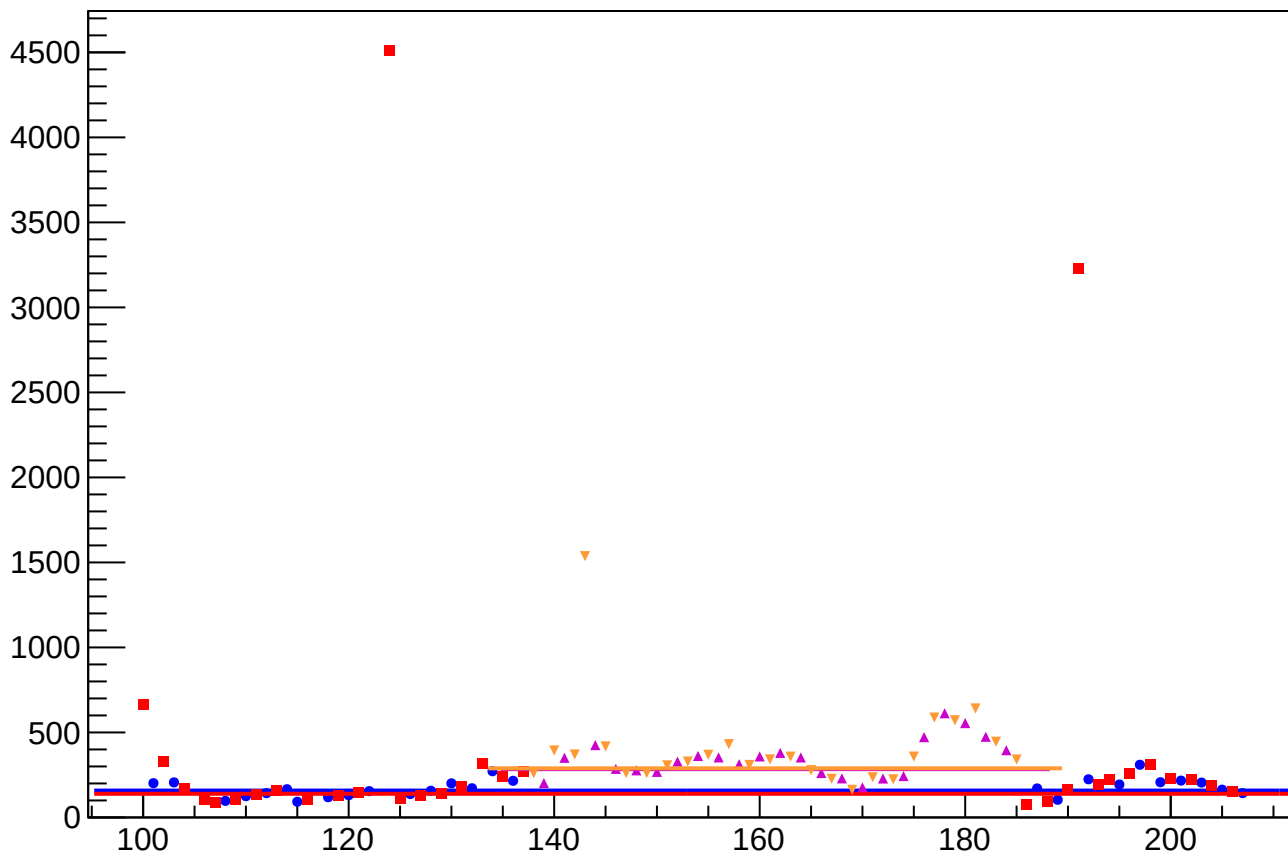
Left In:  $-0.053 \pm 0.070$   $\chi^2/\text{NDF}$ : 27.8/22

+ sign  $0.046 \pm 0.037$   $\chi^2/\text{NDF}$ : 53.7/50

All:  $0.011 \pm 0.025$   $\chi^2/\text{NDF}$ : 115.3/104

- sign  $-0.018 \pm 0.034$   $\chi^2/\text{NDF}$ : 60.0/53

asym\_at1\_avg\_at2\_avg\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 158.088+/-0.031  $\chi^2/\text{NDF}$ : 2235925.3/25

Left Out: 288.922+/-0.050  $\chi^2/\text{NDF}$ : 4648388.8/24

Right Out: 139.246+/-0.027  $\chi^2/\text{NDF}$ : 4674452.9/30

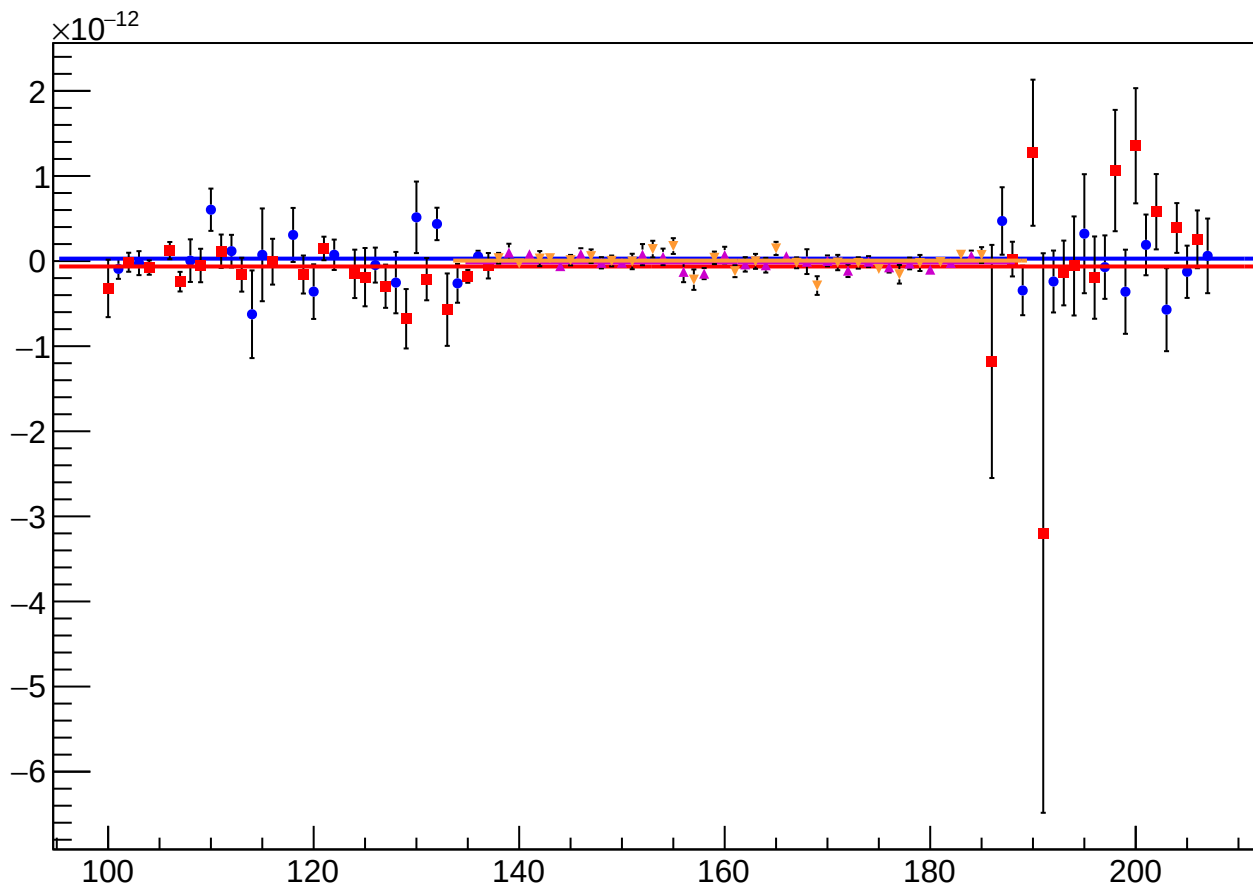
Left In: 284.170+/-0.050  $\chi^2/\text{NDF}$ : 3077626.7/22

+ sign 193.811+/-0.026  $\chi^2/\text{NDF}$ : 11818768.2/50

All: 182.455+/-0.018  $\chi^2/\text{NDF}$ : 26418417.8/10

- sign 172.949+/-0.024  $\chi^2/\text{NDF}$ : 14255580.6/53

asym\_at1\_avg\_at2\_avg\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 25.4/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:34.1/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 35.2/30

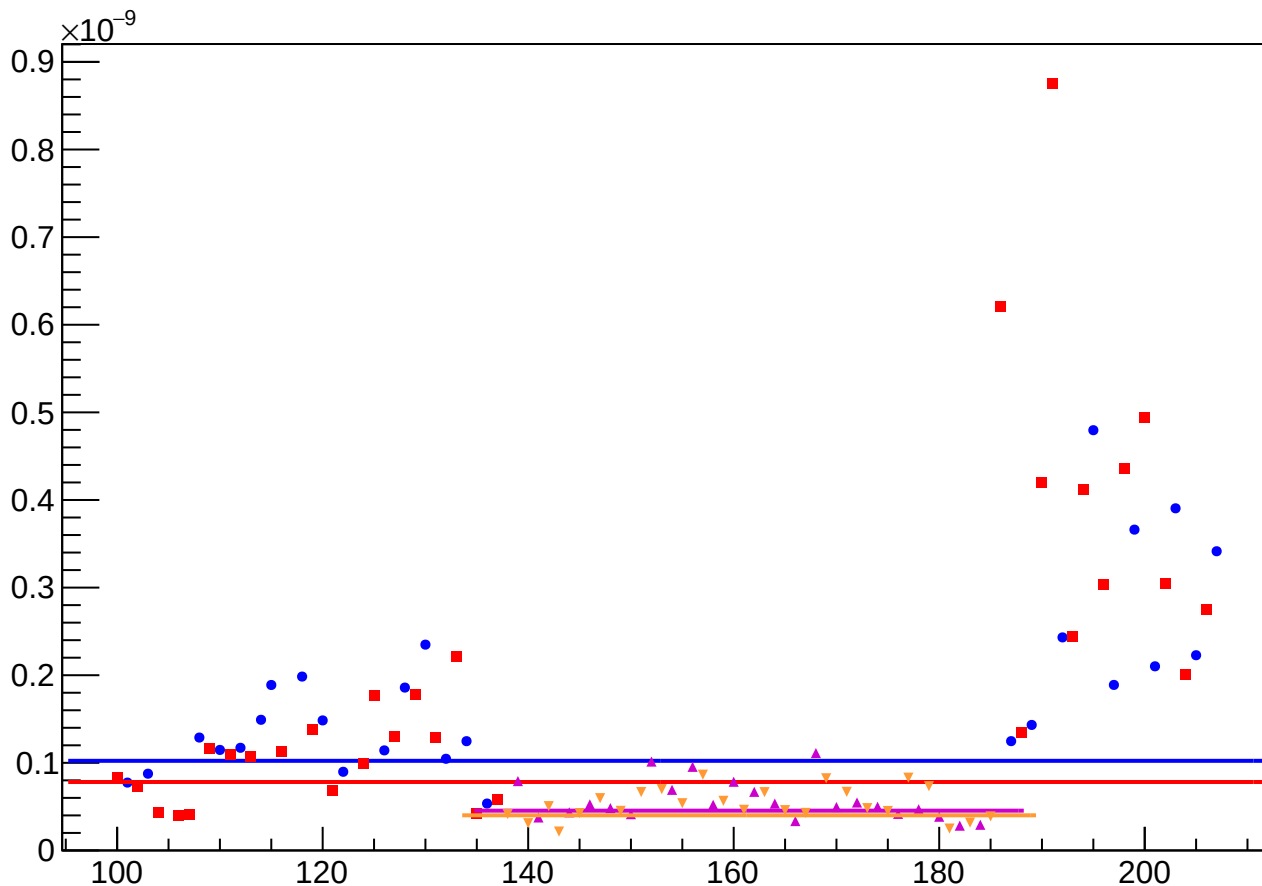
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:23.2/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 59.8/50

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 123.0/104

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 60.3/53

asym\_at1\_avg\_at2\_avg\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5234990.1/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3609934.1/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7622623.9/30

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2780344.5/22

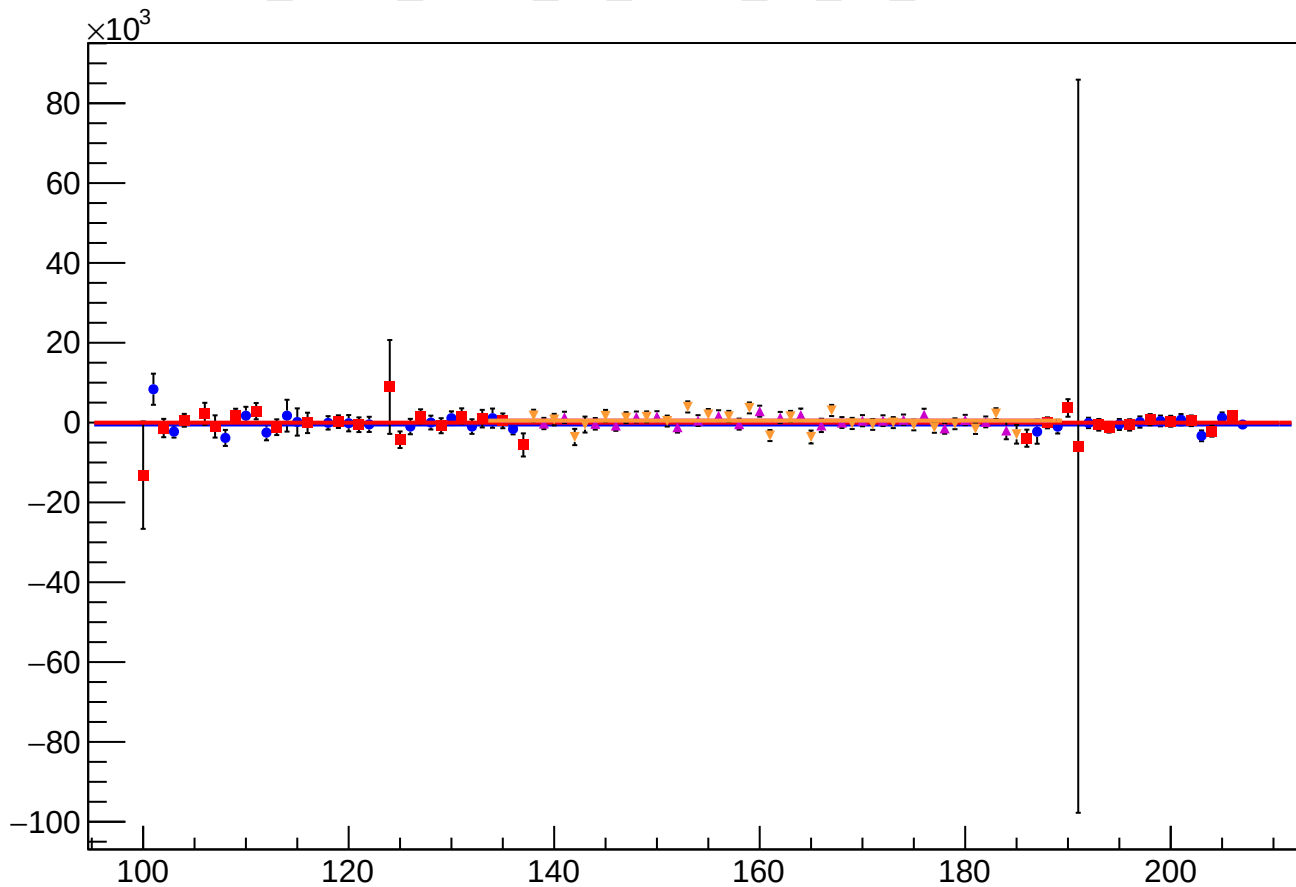
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13196374.3/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 25445033.4/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12090467.6/53



reg\_asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_mean vs Slug



Right In:  $-478.103 \pm 332.890$   $\chi^2/\text{NDF}$ : 21.9/25

Left Out:  $492.062 \pm 288.495$   $\chi^2/\text{NDF}$ : 46.9/24

Right Out:  $-18.212 \pm 323.963$   $\chi^2/\text{NDF}$ : 28.0/30

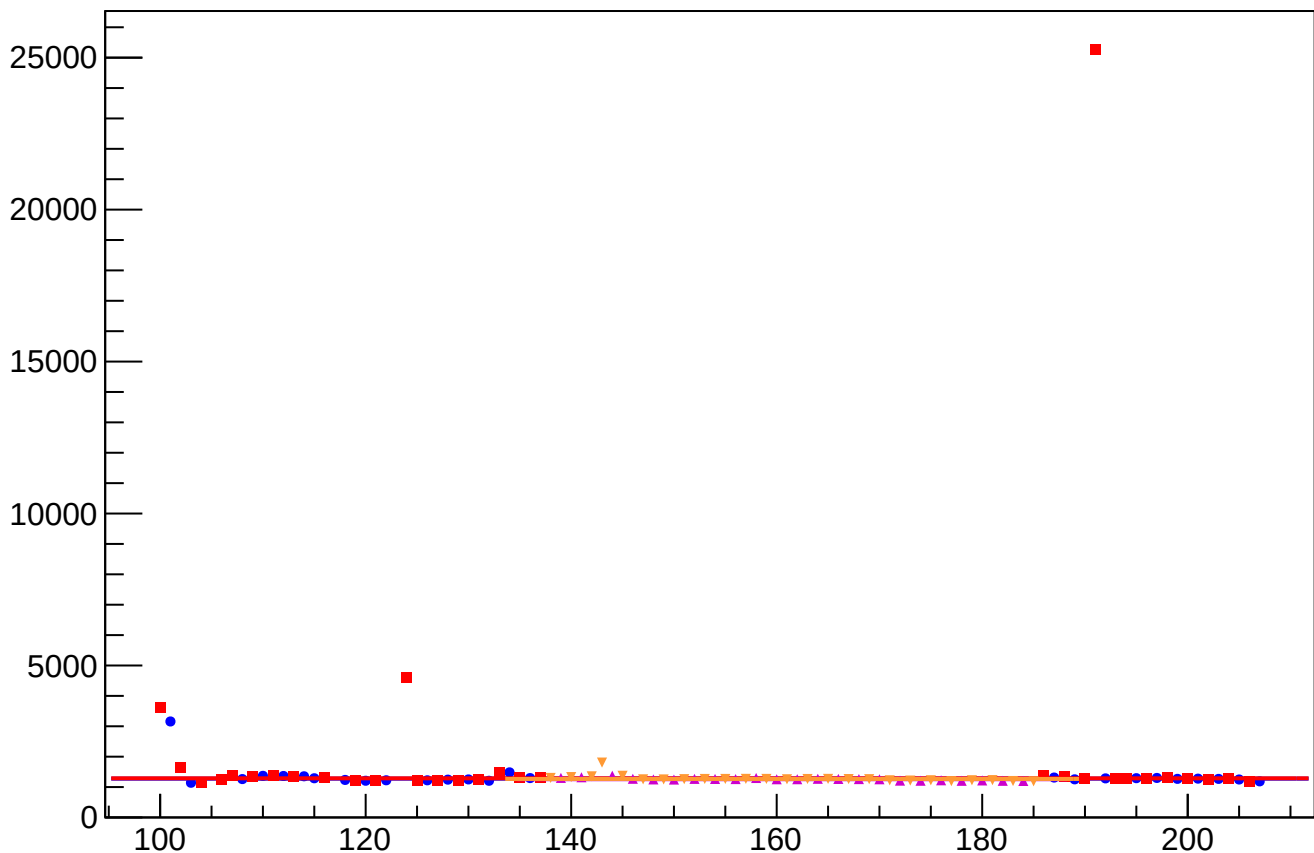
Left In:  $486.821 \pm 293.769$   $\chi^2/\text{NDF}$ : 14.4/22

+ sign  $75.941 \pm 218.016$   $\chi^2/\text{NDF}$ : 73.6/50

All:  $167.603 \pm 154.020$   $\chi^2/\text{NDF}$ : 117.8/104

- sign  $258.932 \pm 217.620$   $\chi^2/\text{NDF}$ : 43.8/53

# reg\_asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_rms vs Slug



Right In: 1276.338+/-0.235  $\chi^2/\text{NDF}$ : 528336.5/25

Left Out: 1266.967+/-0.204  $\chi^2/\text{NDF}$ : 187545.6/24

Right Out: 1287.807+/-0.229  $\chi^2/\text{NDF}$ : 482231.5/30

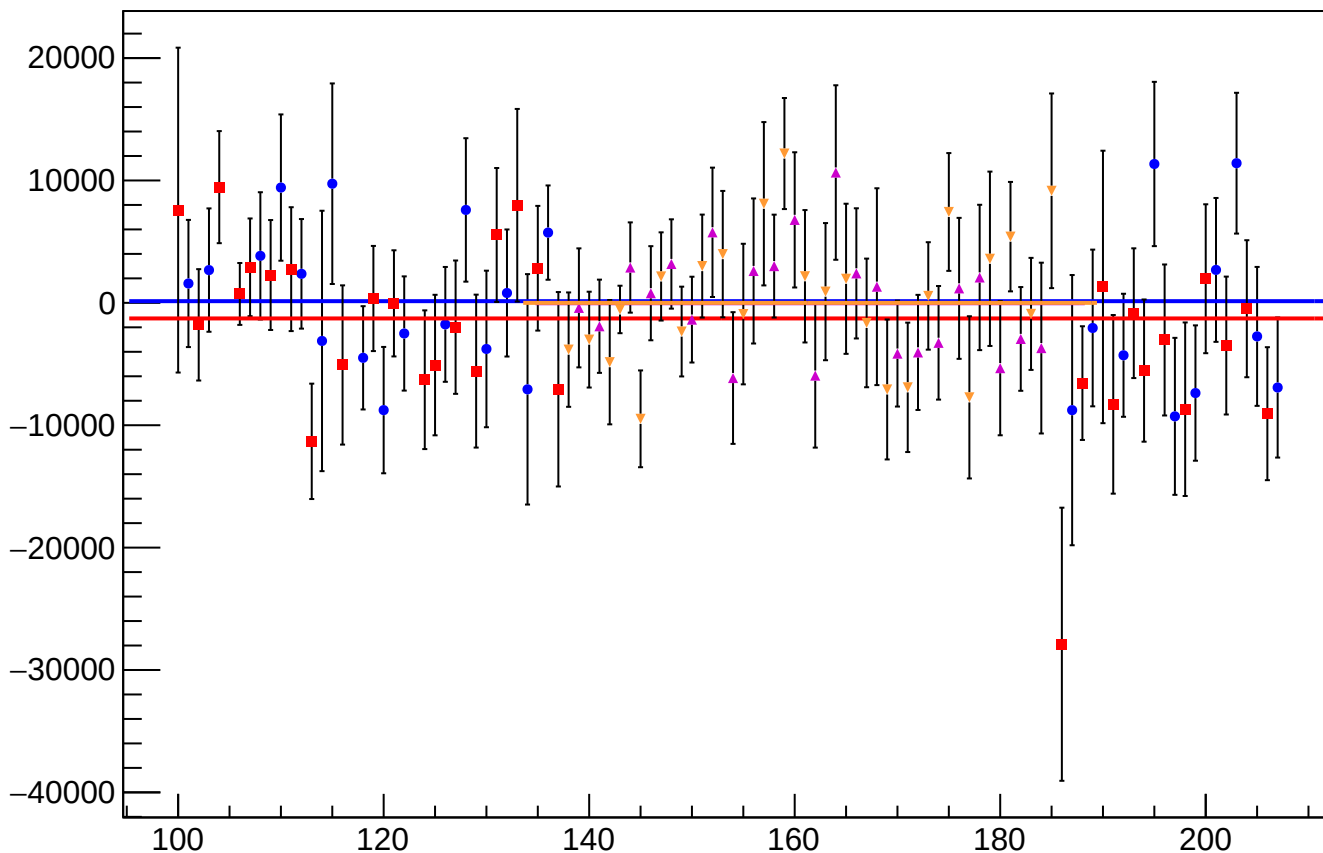
Left In: 1257.551+/-0.208  $\chi^2/\text{NDF}$ : 36816.4/22

+ sign 1270.987+/-0.154  $\chi^2/\text{NDF}$ : 716787.0/50

All: 1271.104+/-0.109  $\chi^2/\text{NDF}$ : 1245420.9/100

- sign 1271.221+/-0.154  $\chi^2/\text{NDF}$ : 528632.7/53

asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_reg\_correction\_mean vs Slug



Right In: 137.873 $\pm$ 1090.143  $\chi^2$ /NDF: 28.5/25

Left Out: -0.604 $\pm$ 886.488  $\chi^2$ /NDF:29.1/24

Right Out: -1274.218 $\pm$ 941.994  $\chi^2$ /NDF: 32.1/30

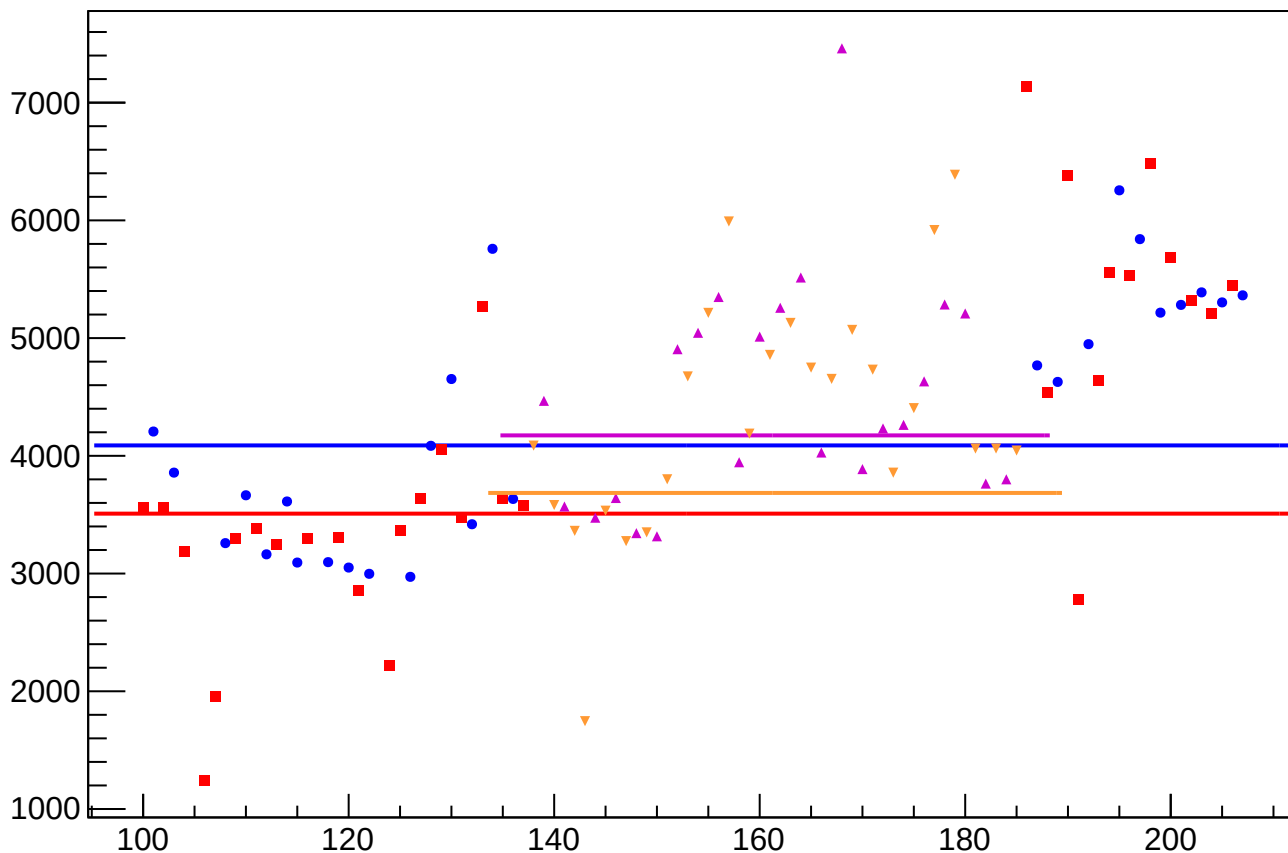
Left In: -31.593 $\pm$ 995.348  $\chi^2$ /NDF:14.0/22

+ sign 54.517 $\pm$ 687.785  $\chi^2$ /NDF: 57.5/50

All: -318.244 $\pm$ 485.056  $\chi^2$ /NDF: 105.0/104

- sign -687.101 $\pm$ 684.175  $\chi^2$ /NDF: 46.9/53

asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_reg\_correction\_rms vs Slug



Right In:  $4088.398 \pm 0.771$   $\chi^2/\text{NDF}: 1635045.1/25$

Left Out:  $3684.769 \pm 0.627$   $\chi^2/\text{NDF}: 3693646.6/24$

Right Out:  $3508.883 \pm 0.666$   $\chi^2/\text{NDF}: 4479226.0/30$

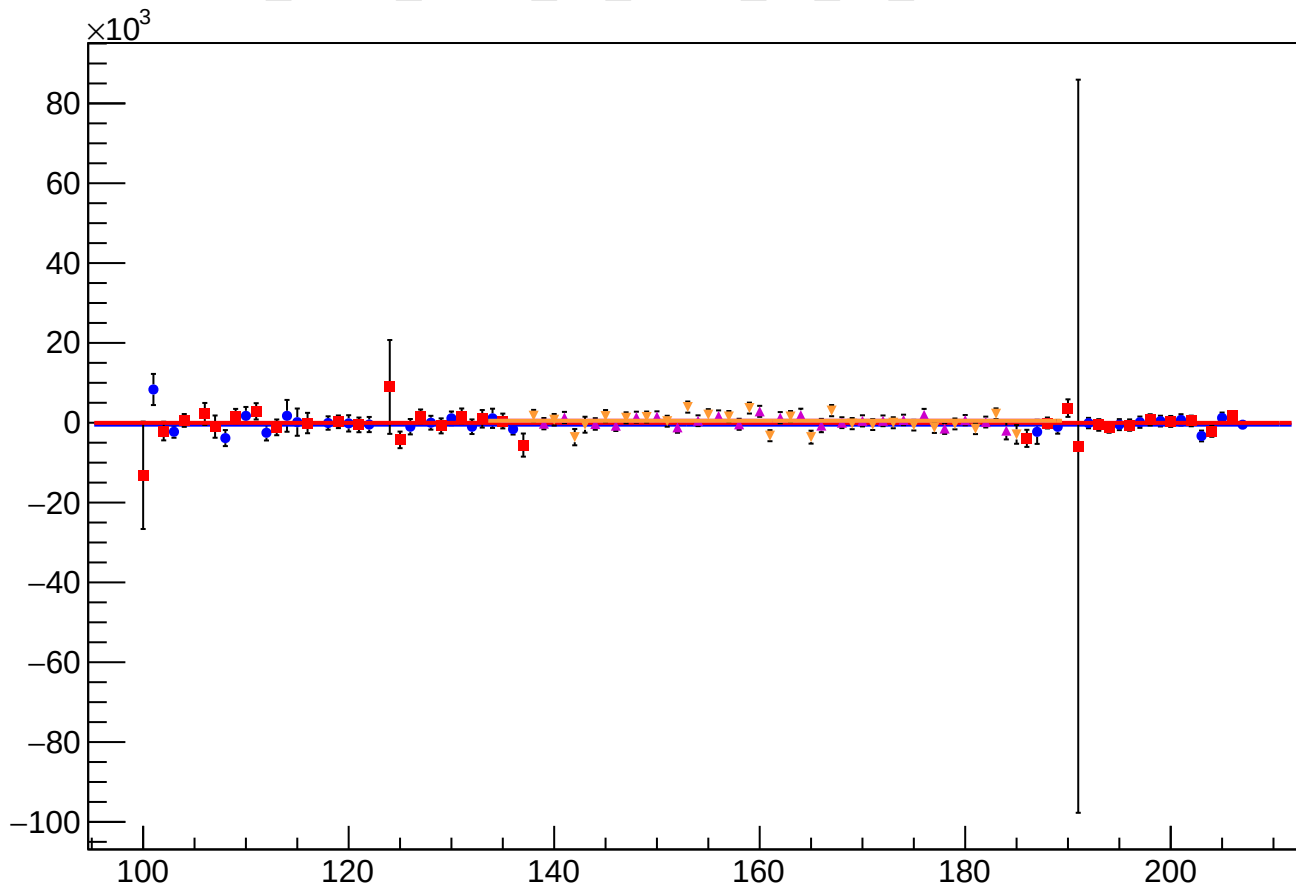
Left In:  $4173.556 \pm 0.704$   $\chi^2/\text{NDF}: 1274968.4/22$

+ sign  $3845.433 \pm 0.486$   $\chi^2/\text{NDF}: 5493731.0/50$

All:  $3834.122 \pm 0.343$   $\chi^2/\text{NDF}: 11719474.7/100$

- sign  $3822.928 \pm 0.484$   $\chi^2/\text{NDF}: 6224667.3/53$

cor\_asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_mean vs Slug



Right In:  $-478.242 \pm 332.890$   $\chi^2/\text{NDF}$ : 21.9/25

Left Out:  $492.079 \pm 288.495$   $\chi^2/\text{NDF}$ : 46.9/24

Right Out:  $-31.039 \pm 324.058$   $\chi^2/\text{NDF}$ : 28.5/30

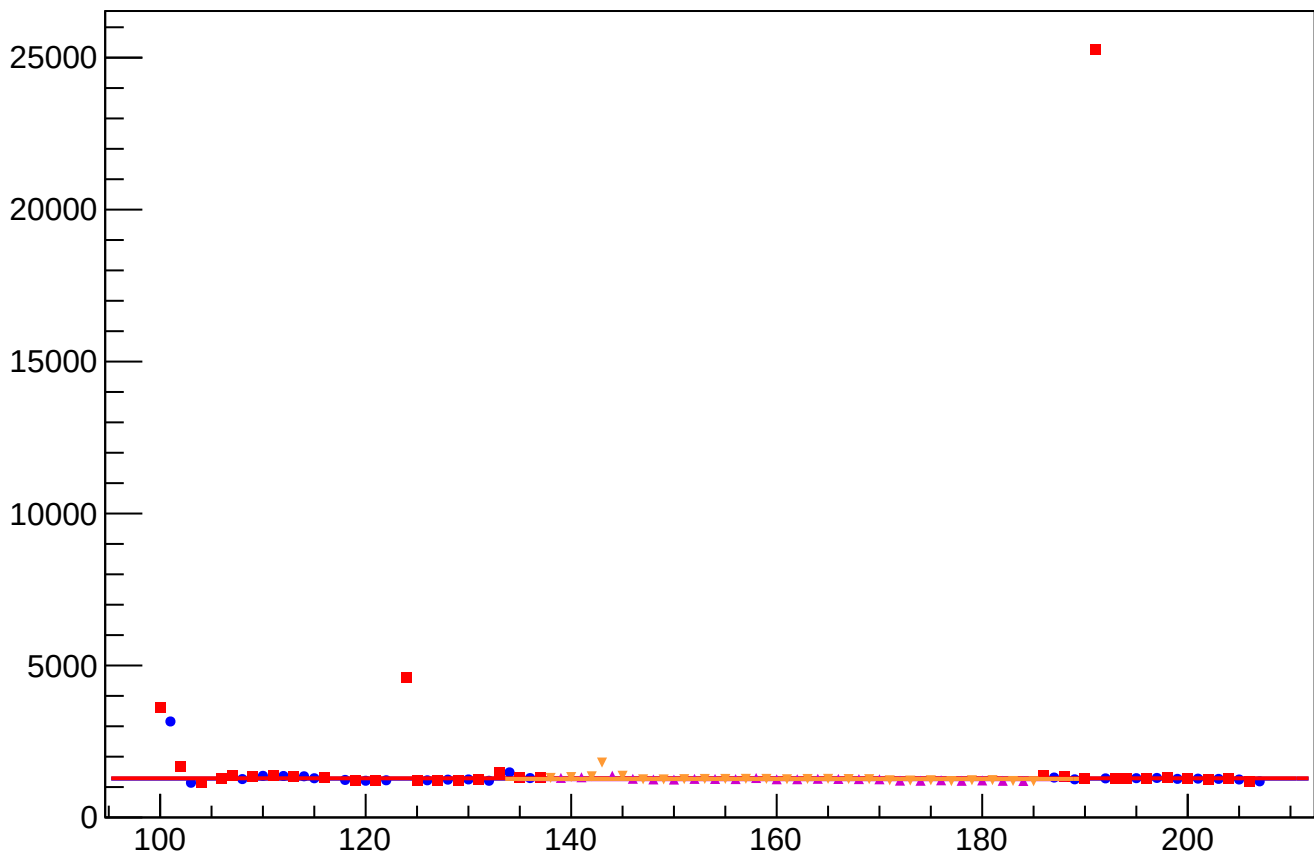
Left In:  $486.720 \pm 293.769$   $\chi^2/\text{NDF}$ : 14.4/22

+ sign  $75.891 \pm 218.016$   $\chi^2/\text{NDF}$ : 73.6/50

All:  $164.676 \pm 154.030$   $\chi^2/\text{NDF}$ : 118.3/104

- sign  $253.163 \pm 217.648$   $\chi^2/\text{NDF}$ : 44.3/53

cor\_asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_rms vs Slug



Right In: 1276.338+/-0.235  $\chi^2/\text{NDF}$ : 528337.9/25

Left Out: 1266.968+/-0.204  $\chi^2/\text{NDF}$ : 187545.6/24

Right Out: 1288.689+/-0.229  $\chi^2/\text{NDF}$ : 489152.2/30

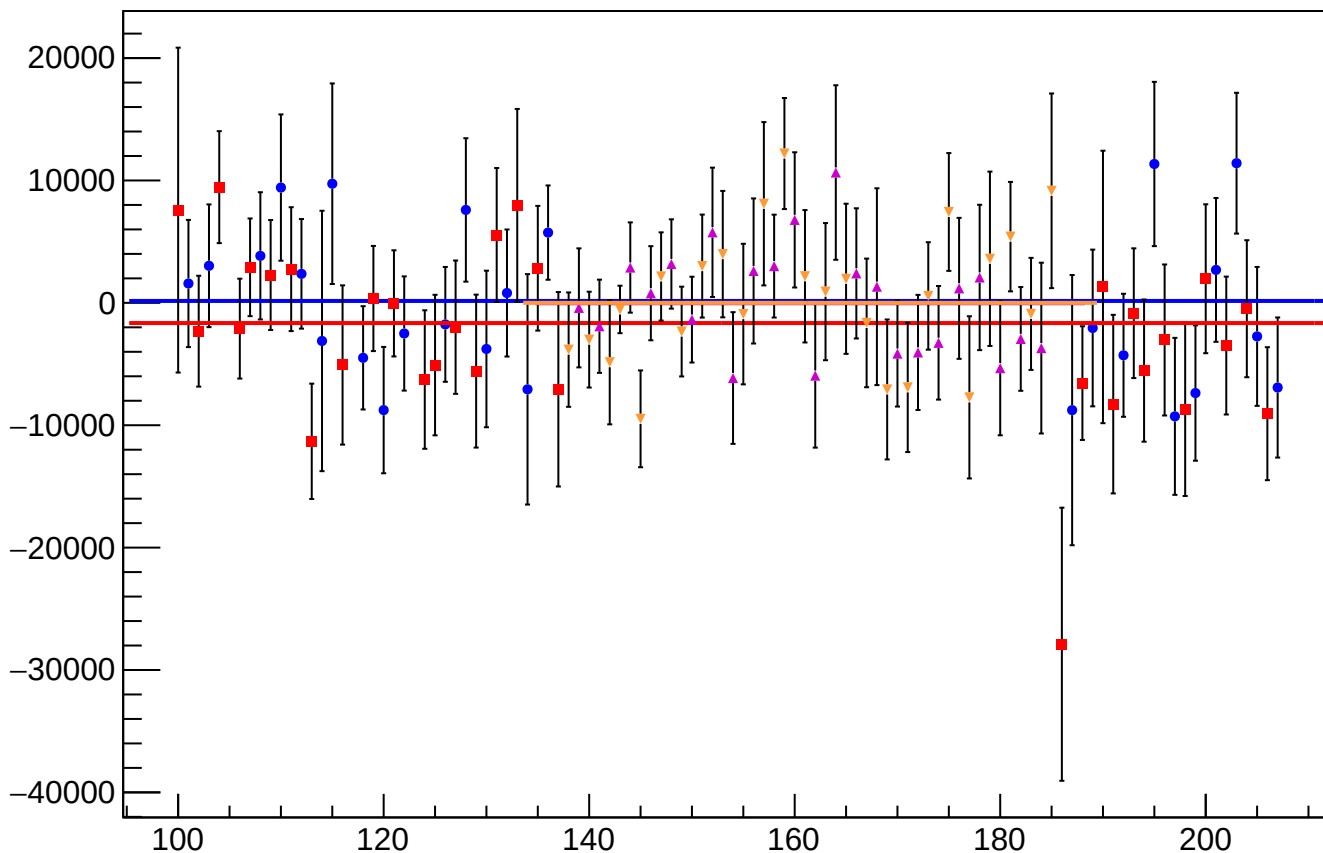
Left In: 1257.551+/-0.208  $\chi^2/\text{NDF}$ : 36816.3/22

+ sign 1270.987+/-0.154  $\chi^2/\text{NDF}$ : 716788.4/50

All: 1271.299+/-0.109  $\chi^2/\text{NDF}$ : 1252910.0/100

- sign 1271.610+/-0.154  $\chi^2/\text{NDF}$ : 536113.4/53

asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_cor\_correction\_mean vs Slug



Right In: 155.615 $\pm$ 1089.890  $\chi^2$ /NDF: 28.5/25

Left Out: -0.541 $\pm$ 886.487  $\chi^2$ /NDF:29.1/24

Right Out: -1649.714 $\pm$ 984.732  $\chi^2$ /NDF: 31.4/30

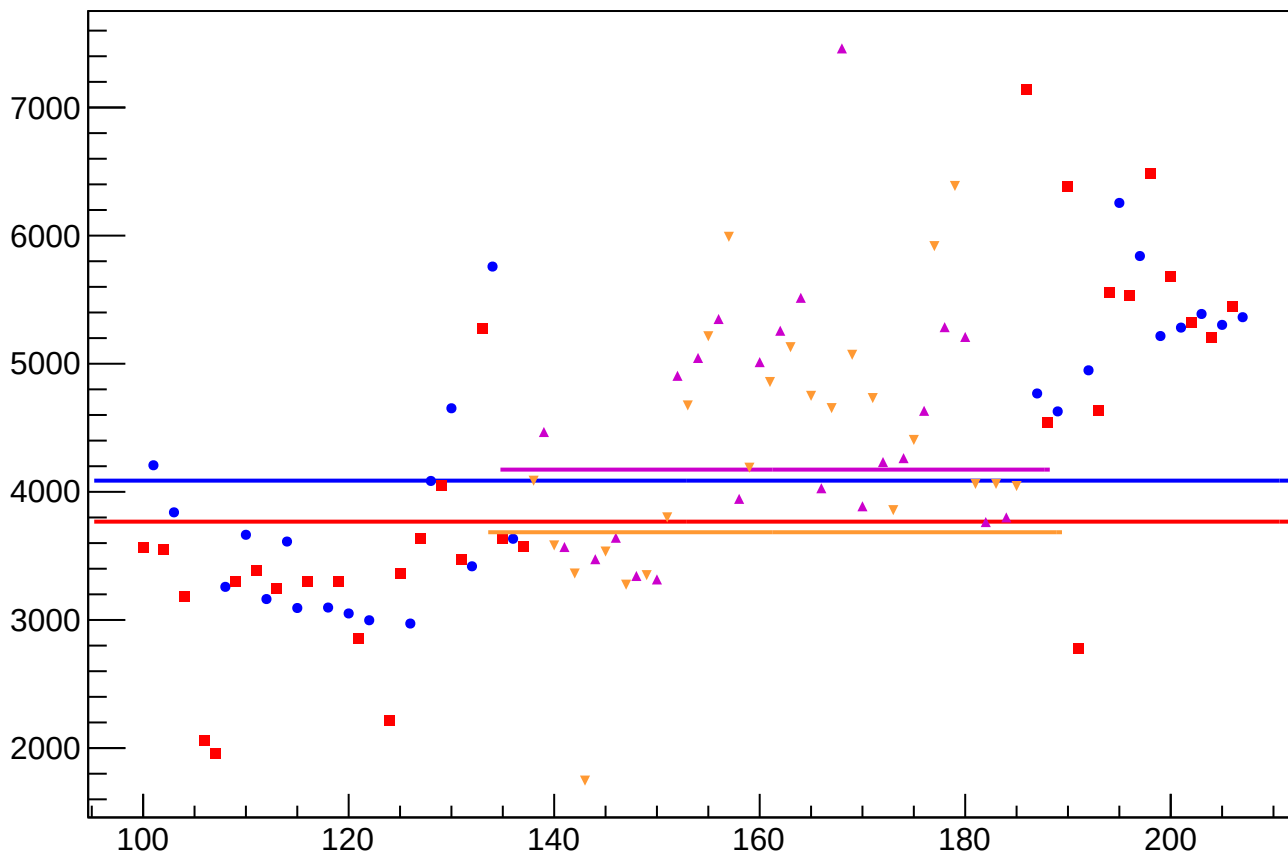
Left In: -31.597 $\pm$ 995.347  $\chi^2$ /NDF:14.0/22

+ sign 61.634 $\pm$ 687.721  $\chi^2$ /NDF: 57.6/50

All: -385.766 $\pm$ 490.587  $\chi^2$ /NDF: 105.2/104

- sign -849.330 $\pm$ 700.033  $\chi^2$ /NDF: 46.7/53

asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_cor\_correction\_rms vs Slug



Right In: 4087.510+/-0.771  $\chi^2/\text{NDF}$ : 1635775.4/25

Left Out: 3684.762+/-0.627  $\chi^2/\text{NDF}$ : 3693687.2/24

Right Out: 3767.434+/-0.696  $\chi^2/\text{NDF}$ : 2986055.6/30

Left In: 4173.550+/-0.704  $\chi^2/\text{NDF}$ : 1274967.5/22

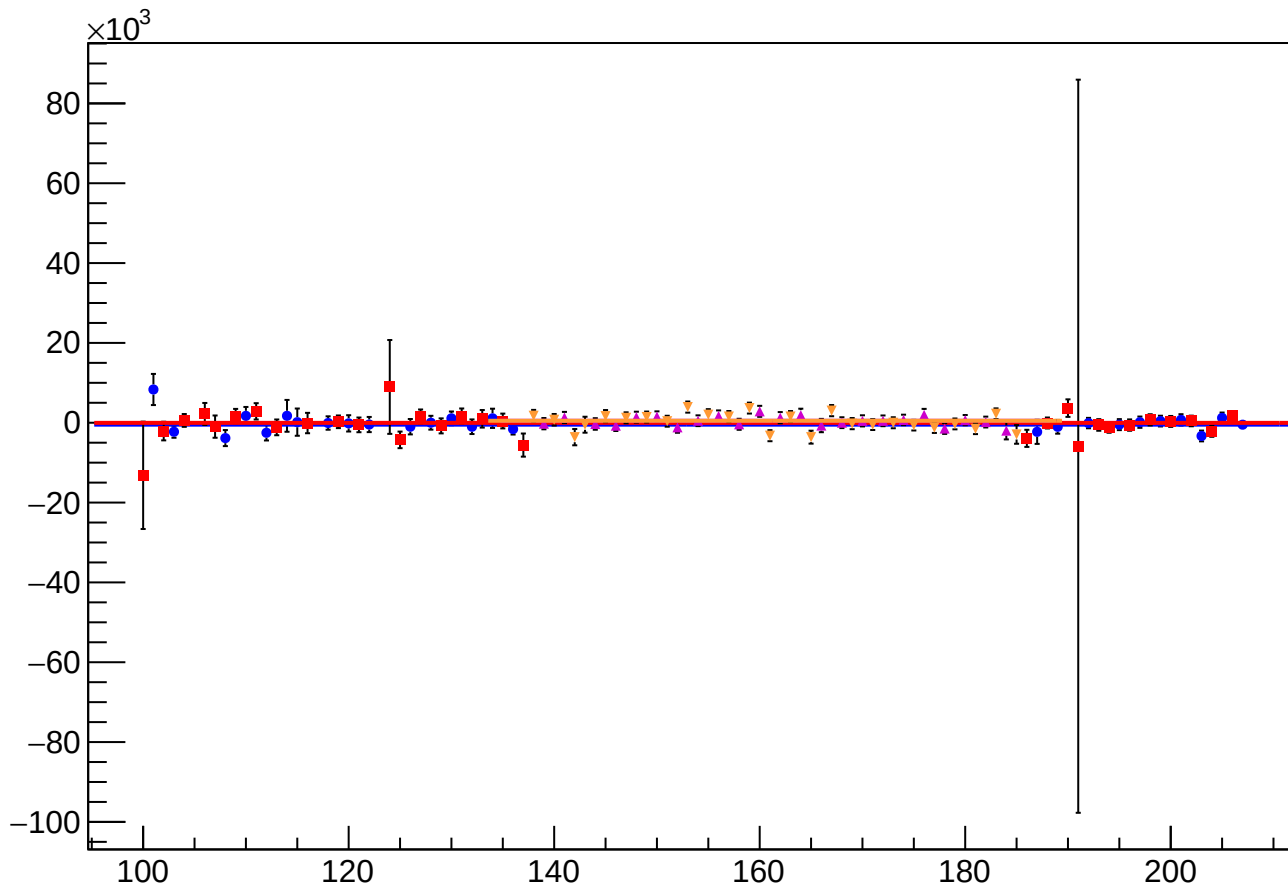
+ sign 3845.120+/-0.486  $\chi^2/\text{NDF}$ : 5493828.3/50

All: 3905.625+/-0.347  $\chi^2/\text{NDF}$ : 9954631.9/100

- sign 3968.315+/-0.495  $\chi^2/\text{NDF}$ : 4429284.0/53



eigen\_cor\_asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_mean vs Slug



Right In:  $-478.242 \pm 332.890$   $\chi^2/\text{NDF}$ : 21.9/25

Left Out:  $492.079 \pm 288.495$   $\chi^2/\text{NDF}$ : 46.9/24

Right Out:  $-31.039 \pm 324.058$   $\chi^2/\text{NDF}$ : 28.5/30

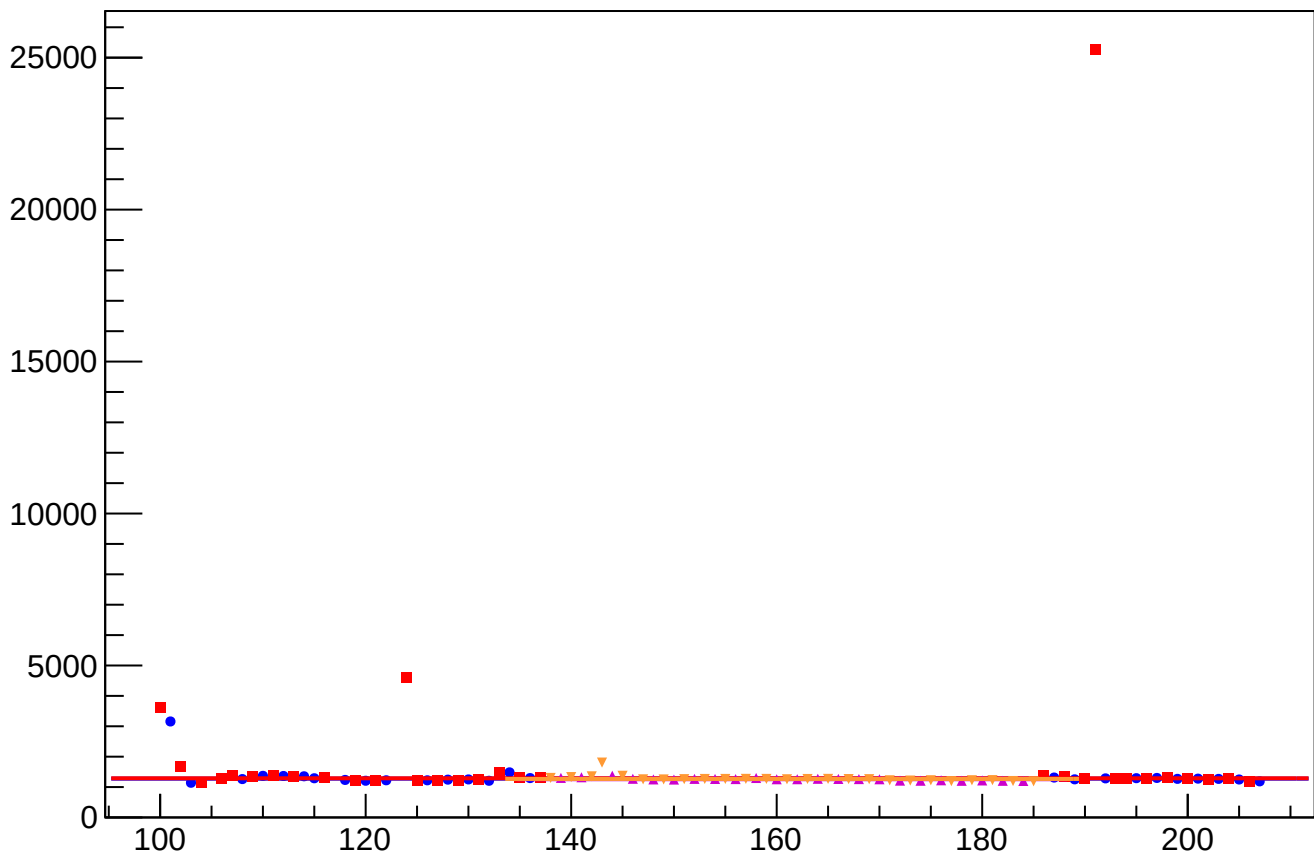
Left In:  $486.720 \pm 293.769$   $\chi^2/\text{NDF}$ : 14.4/22

+ sign  $75.891 \pm 218.016$   $\chi^2/\text{NDF}$ : 73.6/50

All:  $164.676 \pm 154.030$   $\chi^2/\text{NDF}$ : 118.3/104

- sign  $253.163 \pm 217.648$   $\chi^2/\text{NDF}$ : 44.3/53

eigen\_cor\_asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_rms vs Slug



Right In: 1276.338 $\pm$ 0.235  $\chi^2$ /NDF: 528337.9/25

Left Out: 1266.968 $\pm$ 0.204  $\chi^2$ /NDF: 187545.6/24

Right Out: 1288.689 $\pm$ 0.229  $\chi^2$ /NDF: 489152.2/30

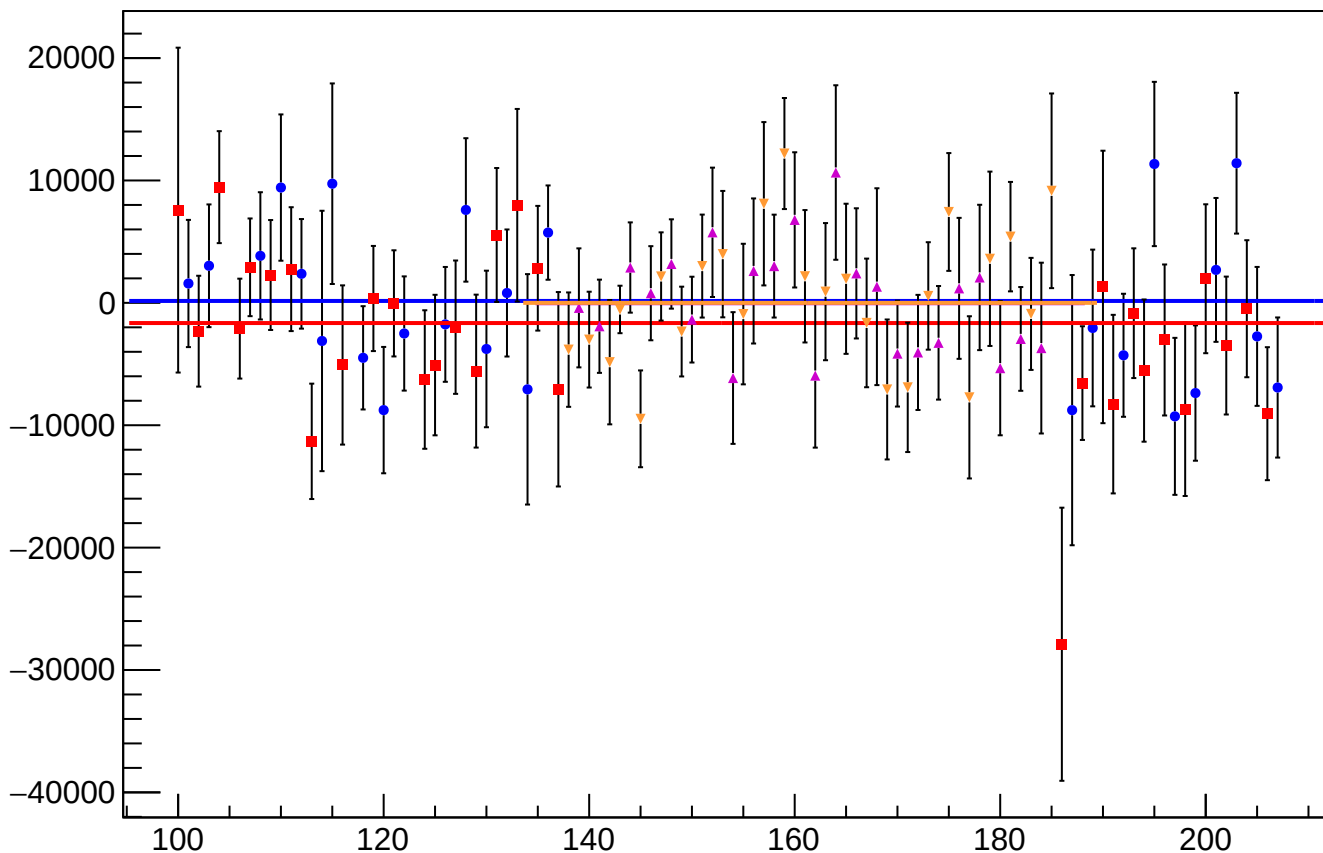
Left In: 1257.551 $\pm$ 0.208  $\chi^2$ /NDF: 36816.3/22

+ sign 1270.987 $\pm$ 0.154  $\chi^2$ /NDF: 716788.4/50

All: 1271.299 $\pm$ 0.109  $\chi^2$ /NDF: 1252910.0/10

- sign 1271.610 $\pm$ 0.154  $\chi^2$ /NDF: 536113.4/53

asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In: 155.615 $\pm$ 1089.890  $\chi^2$ /NDF: 28.5/25

Left Out: -0.541 $\pm$ 886.487  $\chi^2$ /NDF:29.1/24

Right Out: -1649.714 $\pm$ 984.732  $\chi^2$ /NDF: 31.4/30

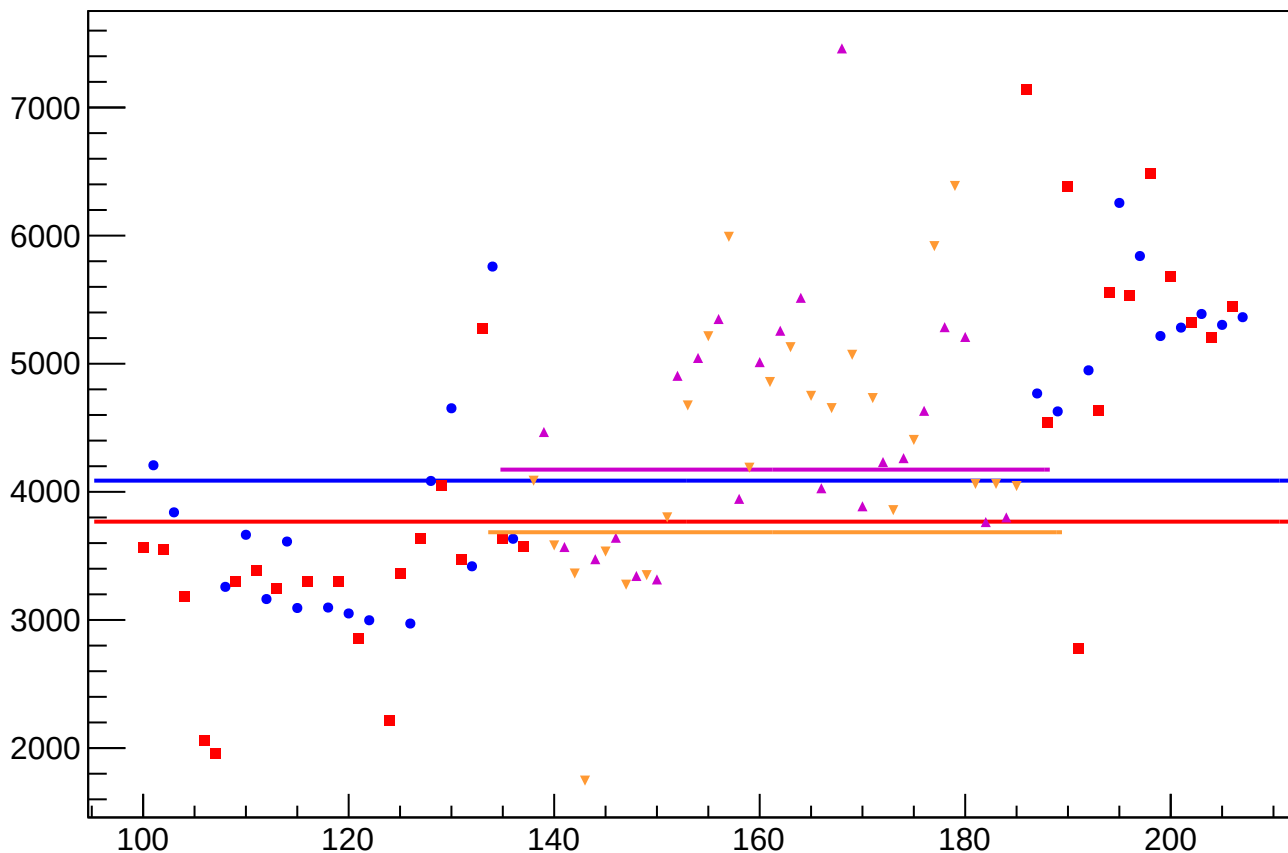
Left In: -31.597 $\pm$ 995.347  $\chi^2$ /NDF:14.0/22

+ sign 61.634 $\pm$ 687.721  $\chi^2$ /NDF: 57.6/50

All: -385.766 $\pm$ 490.587  $\chi^2$ /NDF: 105.2/104

- sign -849.330 $\pm$ 700.033  $\chi^2$ /NDF: 46.7/53

asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 4087.510+/-0.771  $\chi^2$ /NDF: 1635775.4/25

Left Out: 3684.762+/-0.627  $\chi^2$ /NDF: 3693687.2/24

Right Out: 3767.434+/-0.696  $\chi^2$ /NDF: 2986055.6/30

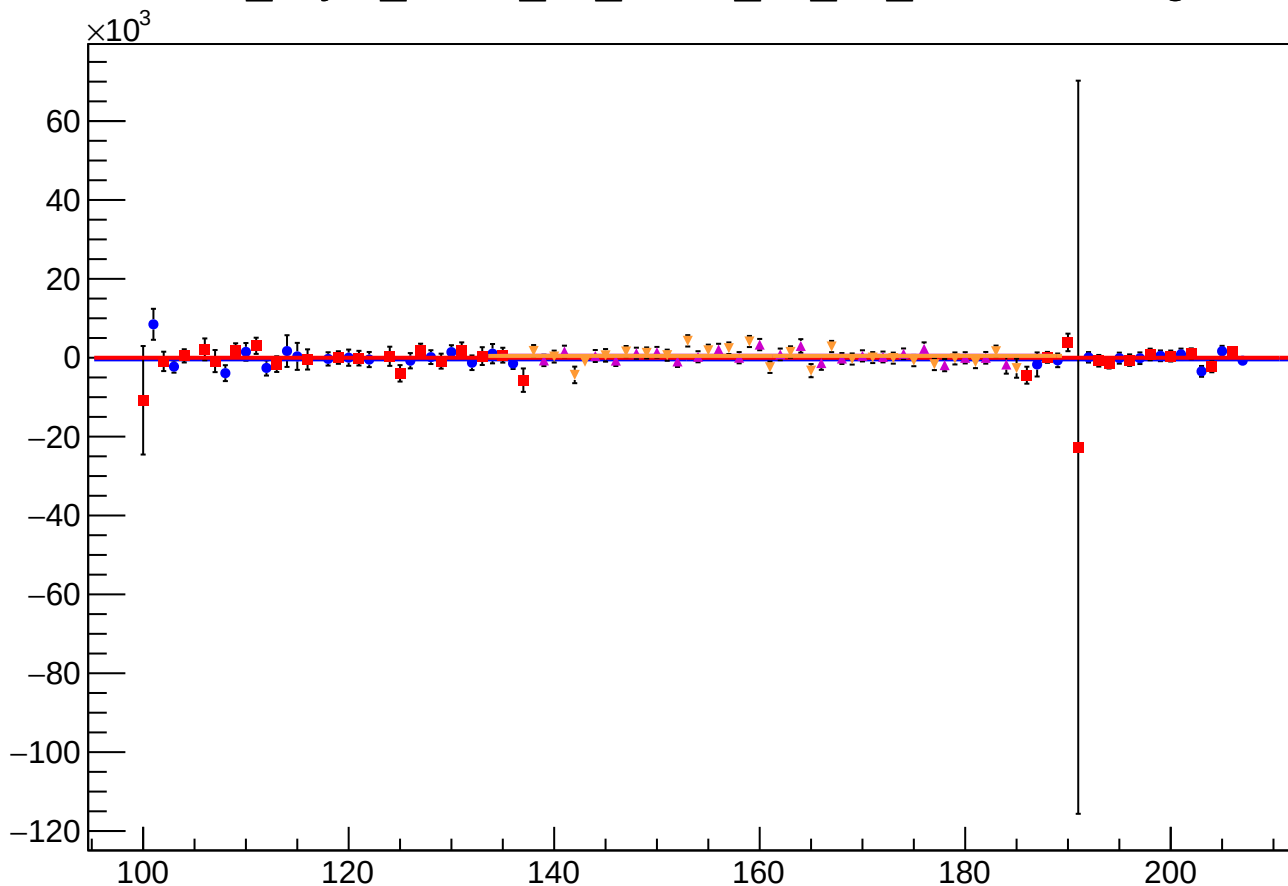
Left In: 4173.550+/-0.704  $\chi^2$ /NDF: 1274967.5/22

+ sign 3845.120+/-0.486  $\chi^2$ /NDF: 5493828.3/50

All: 3905.625+/-0.347  $\chi^2$ /NDF: 9954631.9/10

- sign 3968.315+/-0.495  $\chi^2$ /NDF: 4429284.0/53

dit\_asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_mean vs Slug



Right In:  $-418.078 \pm 337.671$   $\chi^2/\text{NDF}$ : 23.2/25

Left Out:  $467.929 \pm 294.257$   $\chi^2/\text{NDF}$ : 44.1/24

Right Out:  $-5.003 \pm 326.544$   $\chi^2/\text{NDF}$ : 29.0/30

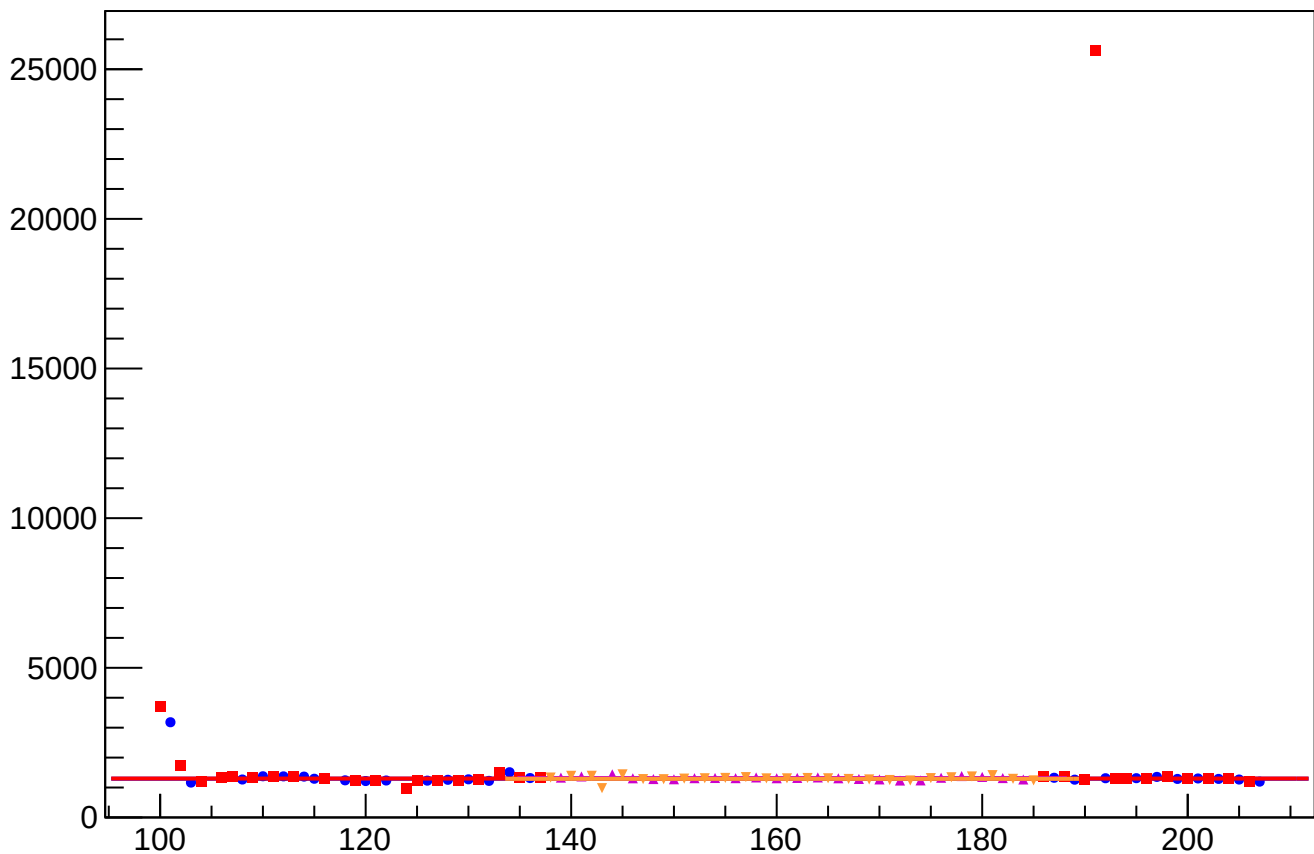
Left In:  $503.558 \pm 307.055$   $\chi^2/\text{NDF}$ : 17.4/22

+ sign  $85.508 \pm 221.843$   $\chi^2/\text{NDF}$ : 71.3/50

All:  $174.462 \pm 157.517$   $\chi^2/\text{NDF}$ : 119.3/104

- sign  $264.905 \pm 223.693$   $\chi^2/\text{NDF}$ : 47.7/53

dit\_asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_rms vs Slug



Right In: 1294.519+/-0.239  $\chi^2/\text{NDF}$ : 528815.0/25

Left Out: 1291.211+/-0.208  $\chi^2/\text{NDF}$ : 230735.1/24

Right Out: 1300.024+/-0.231  $\chi^2/\text{NDF}$ : 377970.0/30

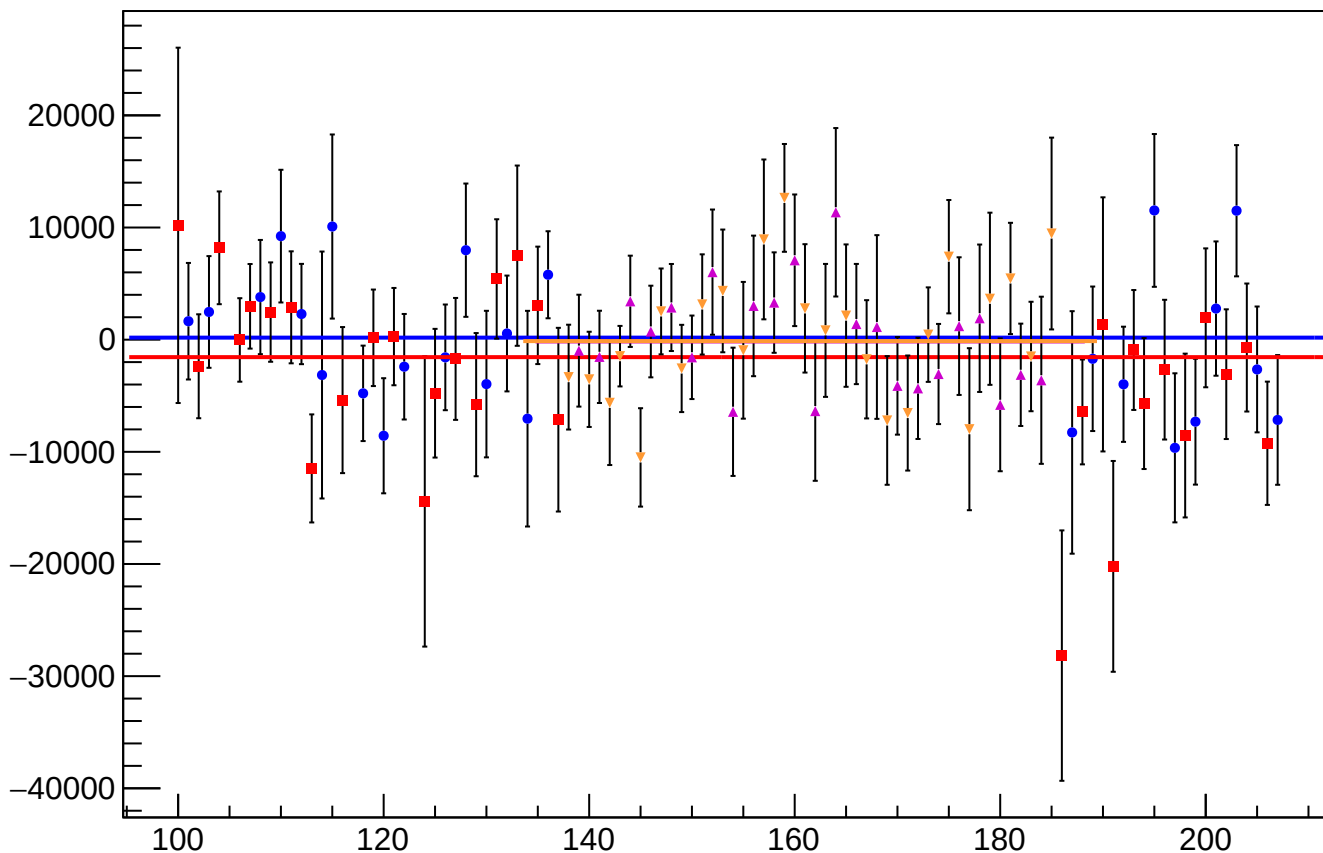
Left In: 1314.006+/-0.217  $\chi^2/\text{NDF}$ : 43044.7/22

+ sign 1292.639+/-0.157  $\chi^2/\text{NDF}$ : 759659.2/50

All: 1299.980+/-0.111  $\chi^2/\text{NDF}$ : 1187037.2/10

- sign 1307.442+/-0.158  $\chi^2/\text{NDF}$ : 422961.4/53

asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_dit\_correction\_mean vs Slug



Right In:  $182.170 \pm 1095.752$   $\chi^2/\text{NDF}: 28.3/25$

Left Out:  $-127.273 \pm 977.231$   $\chi^2/\text{NDF}: 28.6/24$

Right Out:  $-1556.741 \pm 1002.016$   $\chi^2/\text{NDF}: 33.1/30$

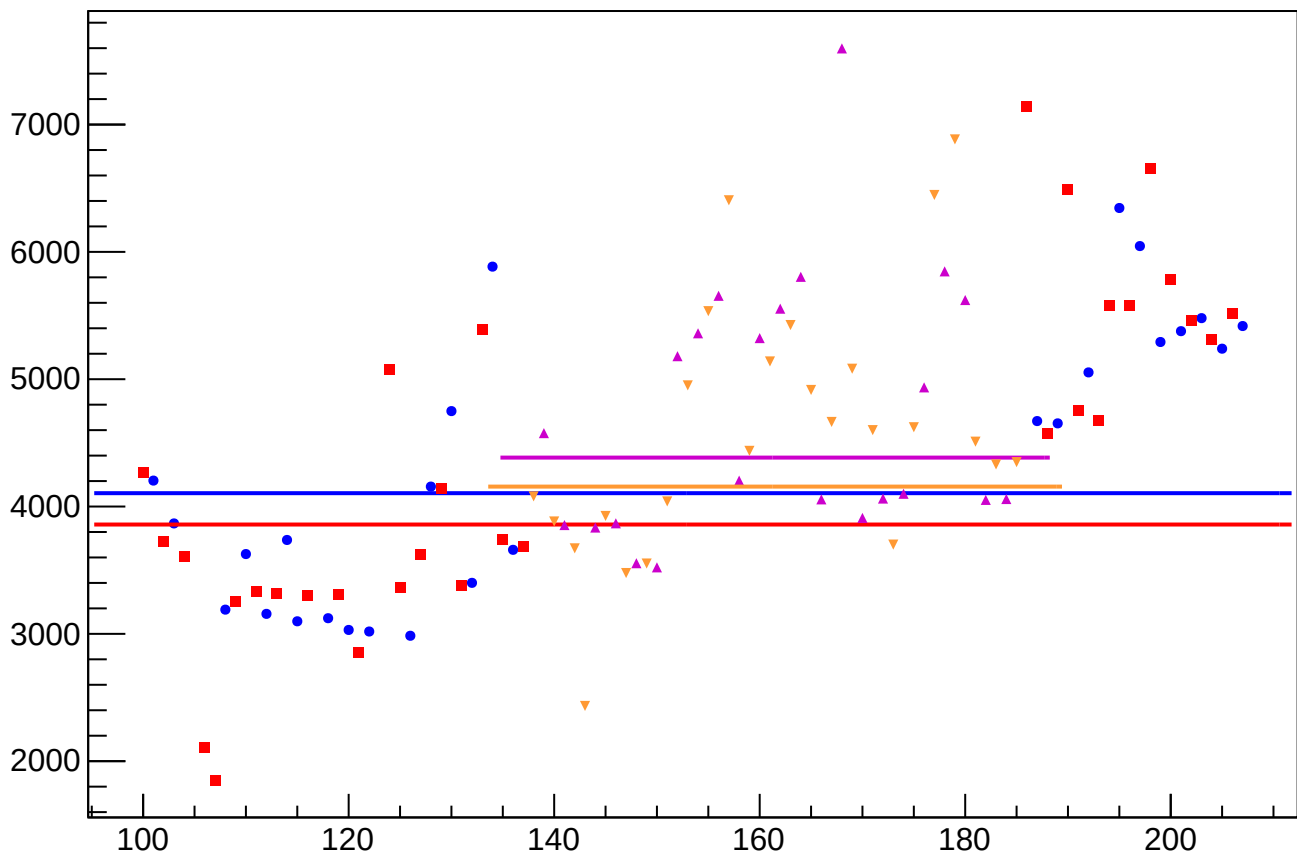
Left In:  $-159.452 \pm 1045.510$   $\chi^2/\text{NDF}: 13.8/22$

+ sign  $9.814 \pm 729.323$   $\chi^2/\text{NDF}: 56.9/50$

All:  $-442.623 \pm 513.609$   $\chi^2/\text{NDF}: 105.5/104$

- sign  $-887.765 \pm 723.420$   $\chi^2/\text{NDF}: 47.8/53$

asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_dit\_correction\_rms vs Slug



Right In: 4104.906 $\pm$ 0.775  $\chi^2$ /NDF: 1720690.2/25

Left Out: 4156.582 $\pm$ 0.691  $\chi^2$ /NDF: 2080766.1/24

Right Out: 3858.672 $\pm$ 0.709  $\chi^2$ /NDF: 3057818.8/30

Left In: 4384.323 $\pm$ 0.739  $\chi^2$ /NDF: 1255470.8/22

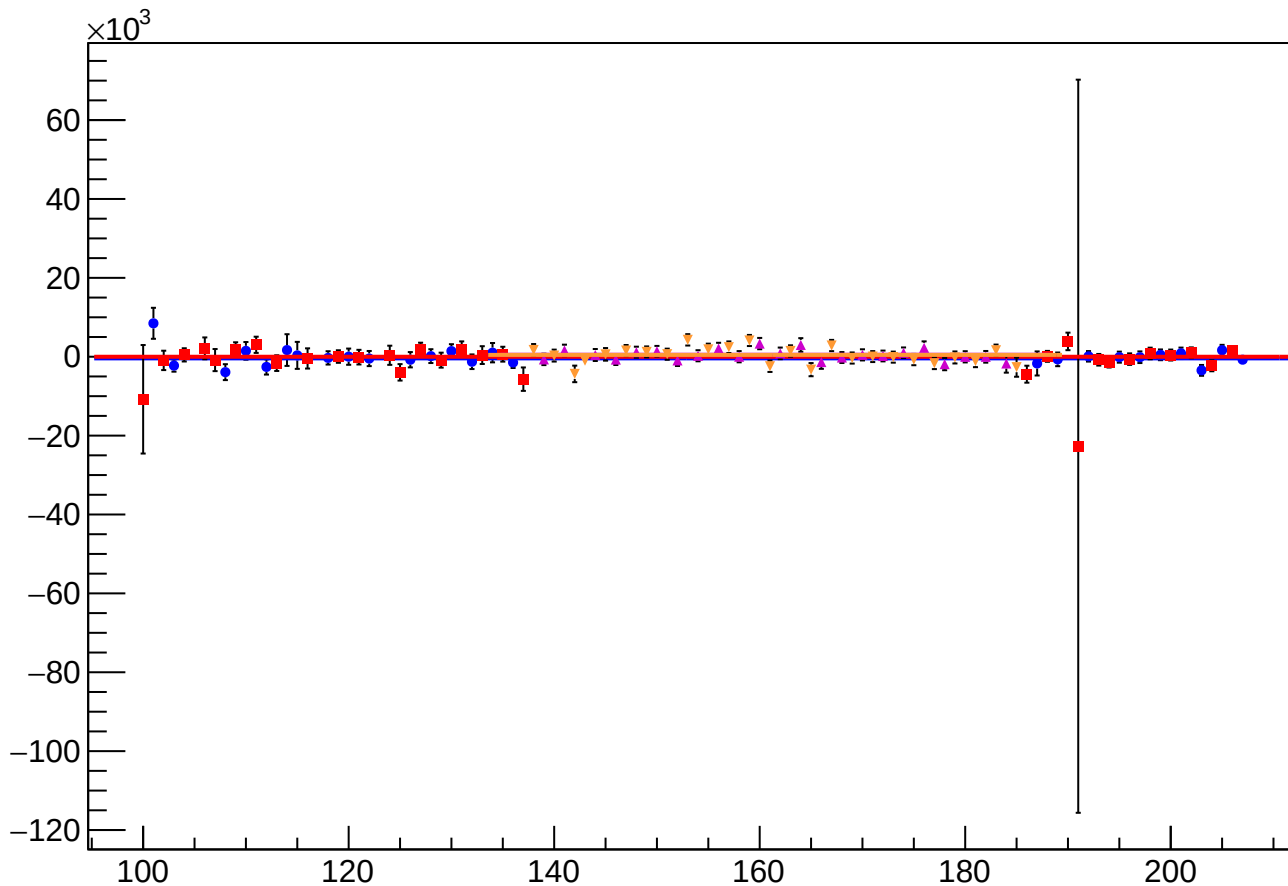
+ sign 4133.688 $\pm$ 0.516  $\chi^2$ /NDF: 3803933.9/50

All: 4121.918 $\pm$ 0.363  $\chi^2$ /NDF: 8381768.6/10

- sign 4110.336 $\pm$ 0.512  $\chi^2$ /NDF: 4576801.2/53



eigen\_dit\_asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_mean vs Slug



Right In:  $-418.078 \pm 337.671$   $\chi^2/\text{NDF}$ : 23.2/25

Left Out:  $467.933 \pm 294.257$   $\chi^2/\text{NDF}$ : 44.1/24

Right Out:  $-5.002 \pm 326.544$   $\chi^2/\text{NDF}$ : 29.0/30

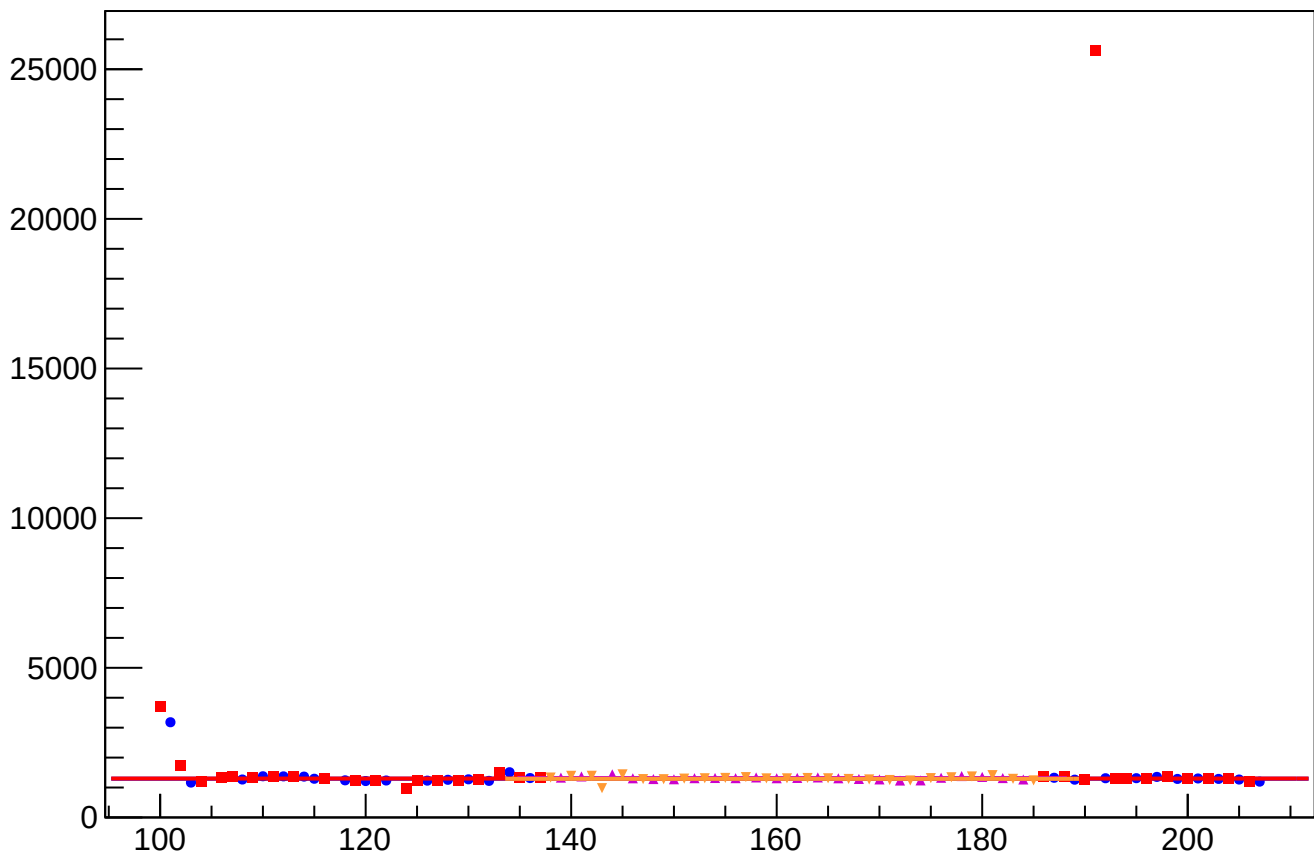
Left In:  $503.558 \pm 307.056$   $\chi^2/\text{NDF}$ : 17.4/22

+ sign  $85.510 \pm 221.843$   $\chi^2/\text{NDF}$ : 71.3/50

All:  $174.463 \pm 157.517$   $\chi^2/\text{NDF}$ : 119.3/104

- sign  $264.905 \pm 223.694$   $\chi^2/\text{NDF}$ : 47.7/53

eigen\_dit\_asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_rms vs Slug



Right In: 1294.519+/-0.239  $\chi^2/\text{NDF}$ : 528815.1/25

Left Out: 1291.212+/-0.208  $\chi^2/\text{NDF}$ : 230737.6/24

Right Out: 1300.024+/-0.231  $\chi^2/\text{NDF}$ : 377970.1/30

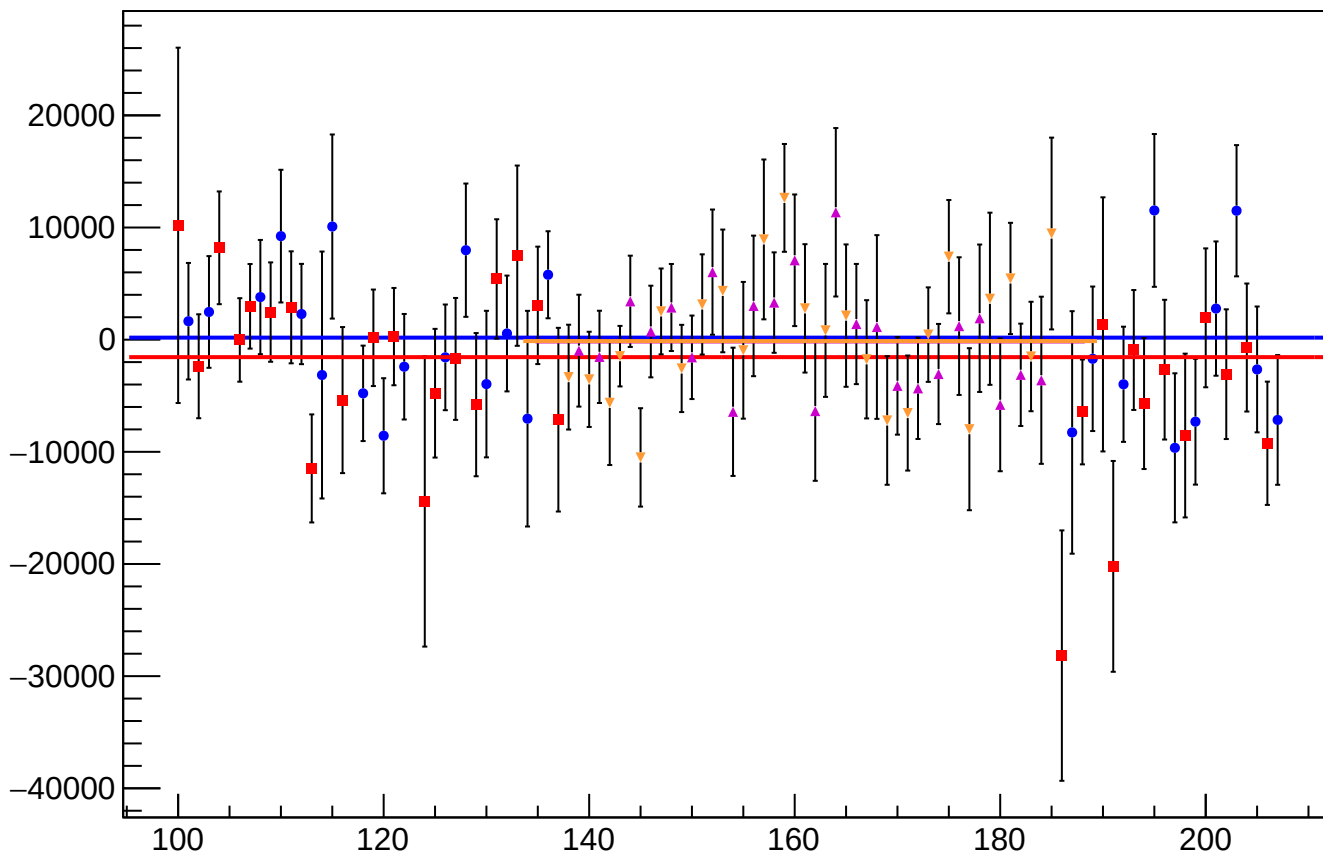
Left In: 1314.007+/-0.217  $\chi^2/\text{NDF}$ : 43046.8/22

+ sign 1292.639+/-0.157  $\chi^2/\text{NDF}$ : 759661.7/50

All: 1299.981+/-0.111  $\chi^2/\text{NDF}$ : 1187042.3/10

- sign 1307.443+/-0.158  $\chi^2/\text{NDF}$ : 422964.0/53

asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $182.165 \pm 1095.751$   $\chi^2/\text{NDF}$ : 28.3/25

Left Out:  $-127.271 \pm 977.232$   $\chi^2/\text{NDF}$ : 28.6/24

Right Out:  $-1556.733 \pm 1002.014$   $\chi^2/\text{NDF}$ : 33.1/30

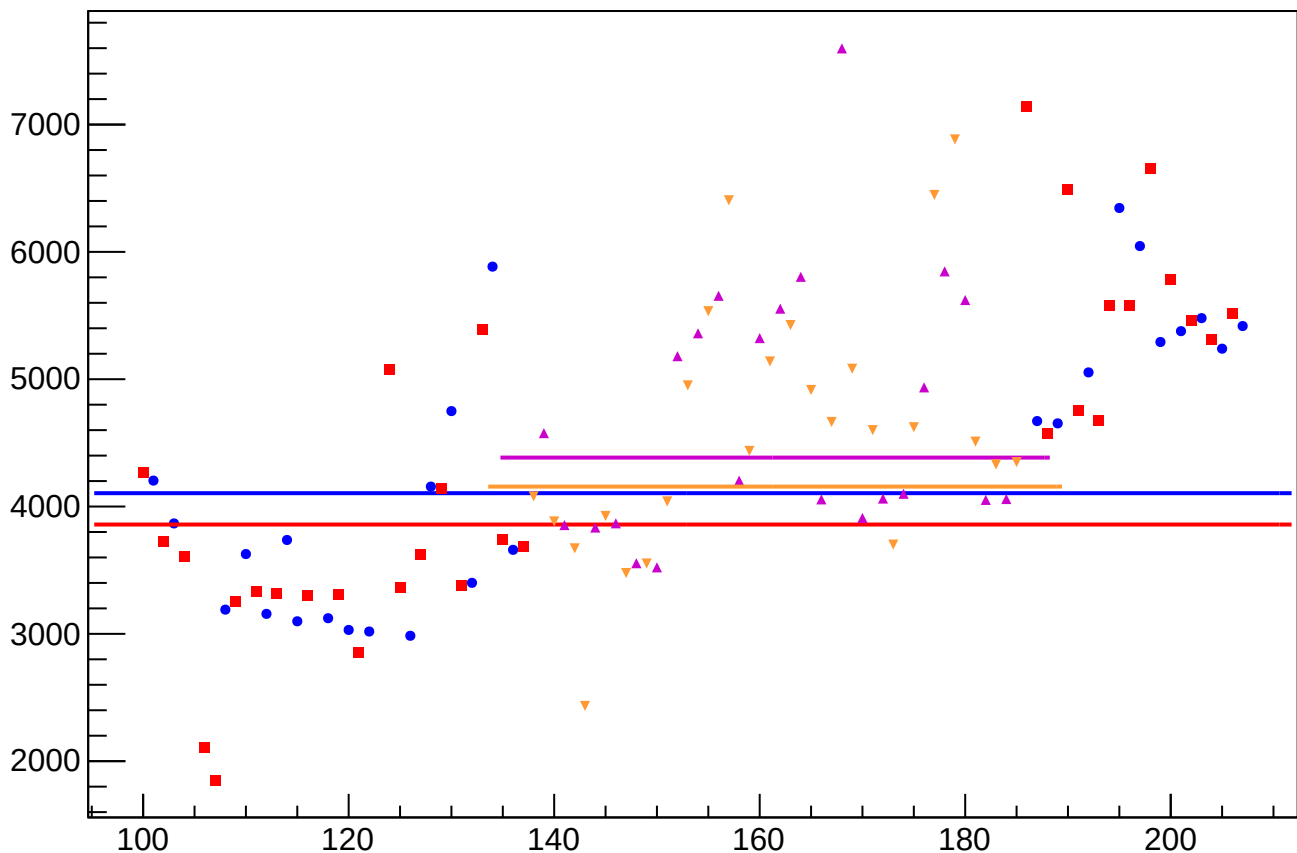
Left In:  $-159.454 \pm 1045.511$   $\chi^2/\text{NDF}$ : 13.8/22

+ sign  $9.814 \pm 729.324$   $\chi^2/\text{NDF}$ : 56.9/50

All:  $-442.622 \pm 513.610$   $\chi^2/\text{NDF}$ : 105.5/104

- sign  $-887.763 \pm 723.420$   $\chi^2/\text{NDF}$ : 47.8/53

asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 4104.899+/-0.775  $\chi^2/\text{NDF}$ : 1720719.4/25

Left Out: 4156.588+/-0.691  $\chi^2/\text{NDF}$ : 2080769.0/24

Right Out: 3858.666+/-0.709  $\chi^2/\text{NDF}$ : 3057847.1/30

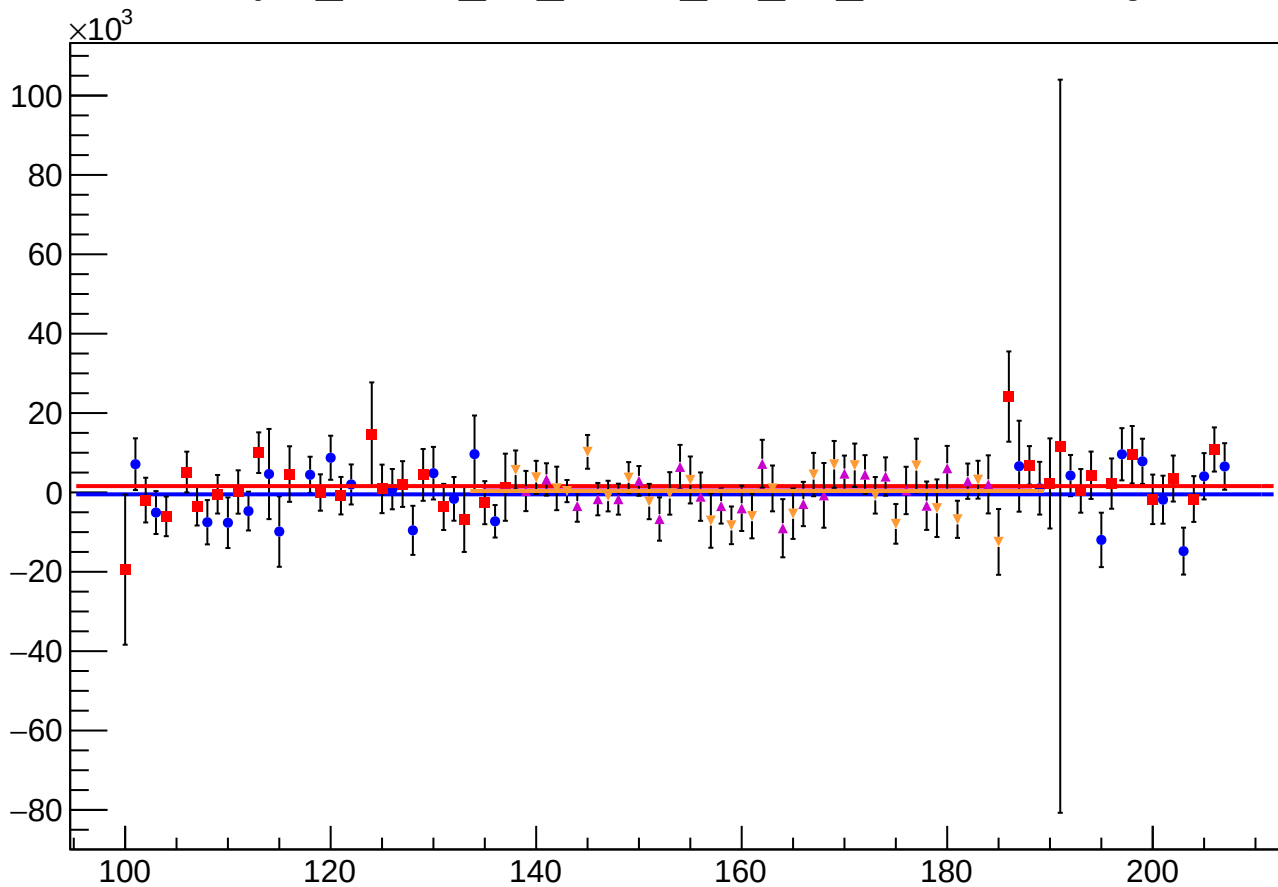
Left In: 4384.329+/-0.739  $\chi^2/\text{NDF}$ : 1255475.0/22

+ sign 4133.689+/-0.516  $\chi^2/\text{NDF}$ : 3803967.2/50

All: 4121.917+/-0.363  $\chi^2/\text{NDF}$ : 8381847.8/10

- sign 4110.336+/-0.512  $\chi^2/\text{NDF}$ : 4576846.9/53

# asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_mean vs Slug



Right In:  $-484.908 \pm 1158.644$   $\chi^2/\text{NDF}$ : 34.4/25

Left Out:  $362.528 \pm 979.860$   $\chi^2/\text{NDF}$ : 27.7/24

Right Out:  $1590.008 \pm 1090.282$   $\chi^2/\text{NDF}$ : 22.8/30

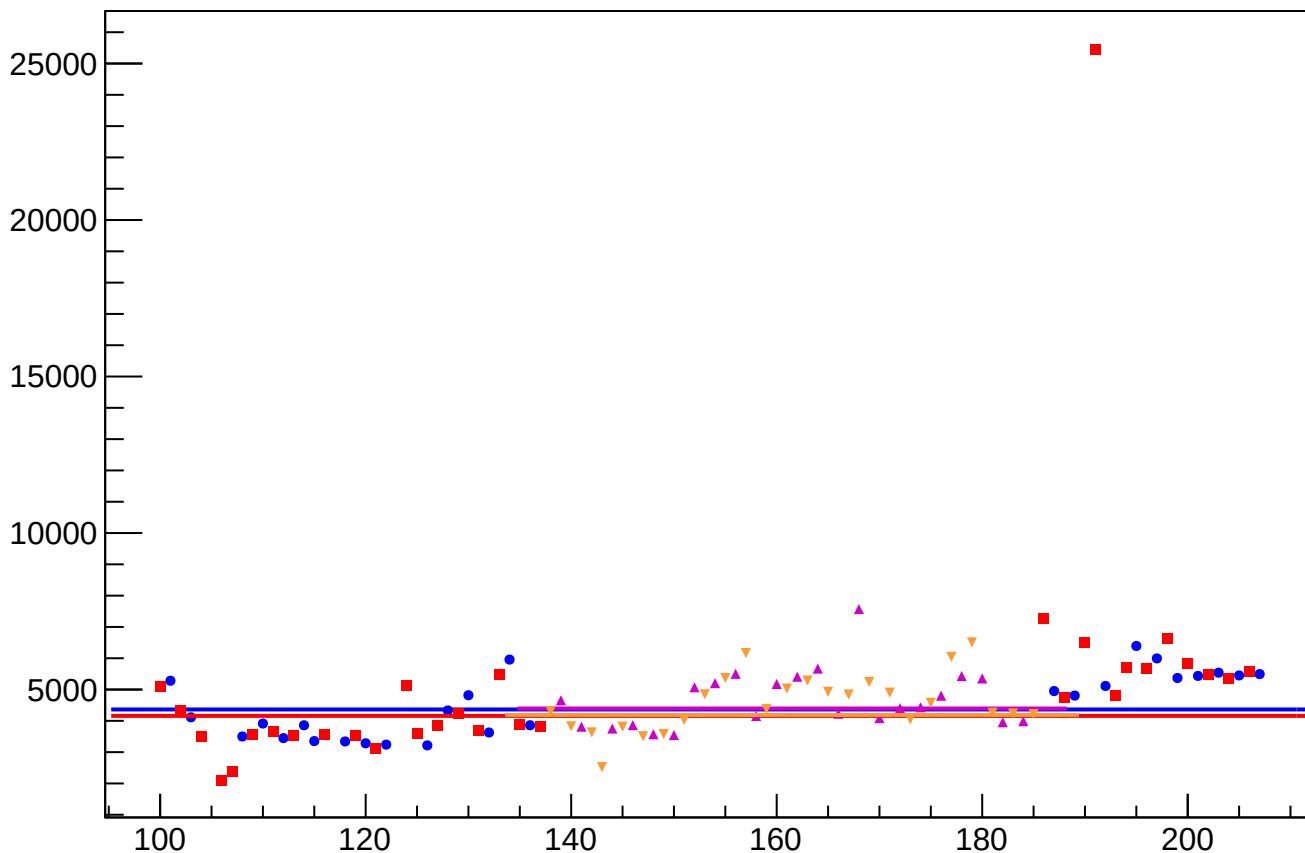
Left In:  $497.522 \pm 1044.707$   $\chi^2/\text{NDF}$ : 13.9/22

+ sign  $9.166 \pm 748.181$   $\chi^2/\text{NDF}$ : 62.4/50

All:  $510.681 \pm 531.200$   $\chi^2/\text{NDF}$ : 100.5/104

- sign  $1020.455 \pm 754.317$   $\chi^2/\text{NDF}$ : 37.2/53

# asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_rms vs Slug



Right In: 4363.691+/-0.819  $\chi^2/\text{NDF}$ : 1410984.6/25

Left Out: 4187.848+/-0.693  $\chi^2/\text{NDF}$ :1796345.9/24

Right Out: 4158.534+/-0.764  $\chi^2/\text{NDF}$ : 2452358.5/30

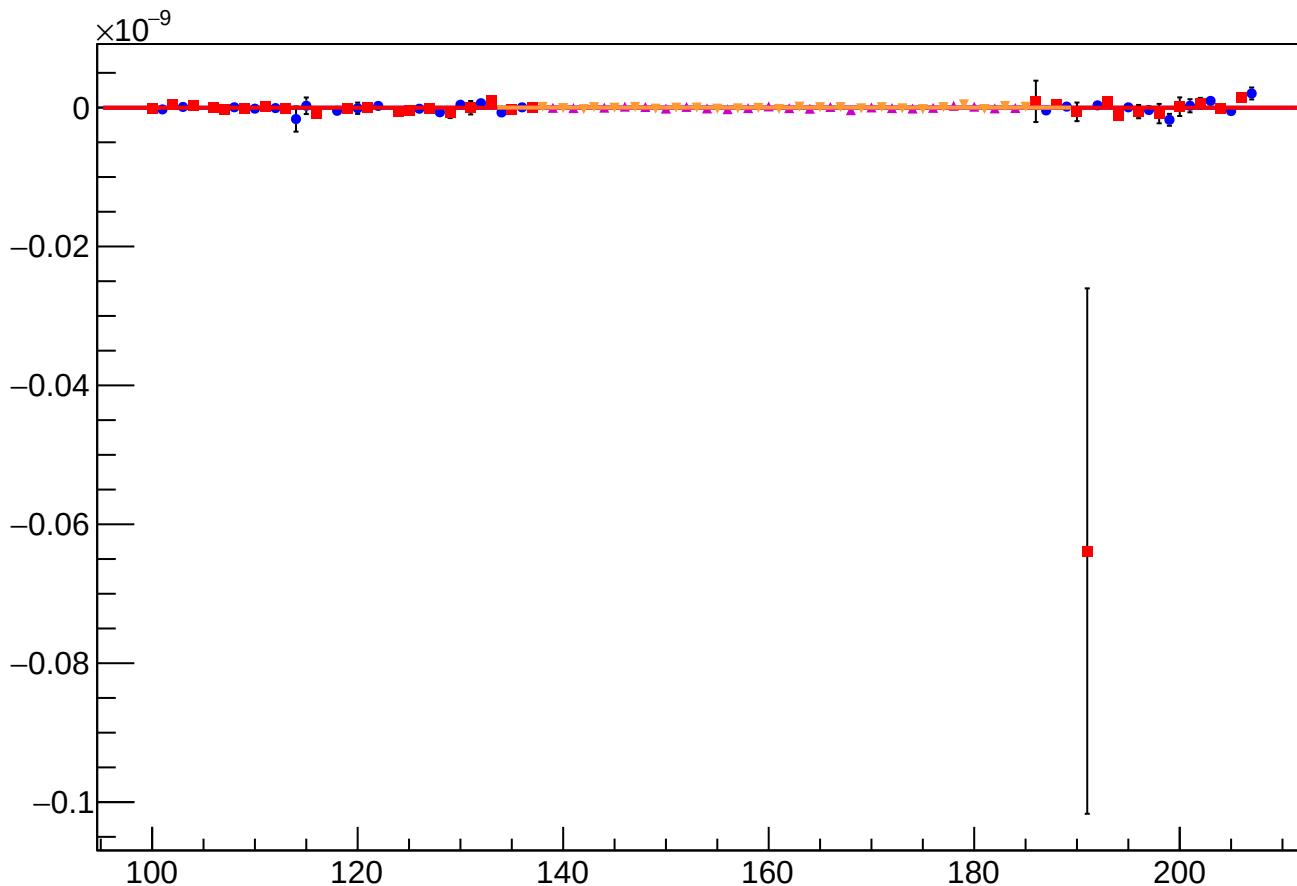
Left In: 4394.324+/-0.739  $\chi^2/\text{NDF}$ :1088394.9/22

+ sign 4261.171+/-0.529  $\chi^2/\text{NDF}$ : 3234188.1/50

All: 4270.739+/-0.375  $\chi^2/\text{NDF}$ : 6824832.0/100

- sign 4280.379+/-0.531  $\chi^2/\text{NDF}$ : 3589987.3/53

asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2$ /NDF: 34.3/25

Left Out: -0.000+/-0.000  $\chi^2$ /NDF:30.5/24

Right Out: -0.000+/-0.000  $\chi^2$ /NDF: 33.0/30

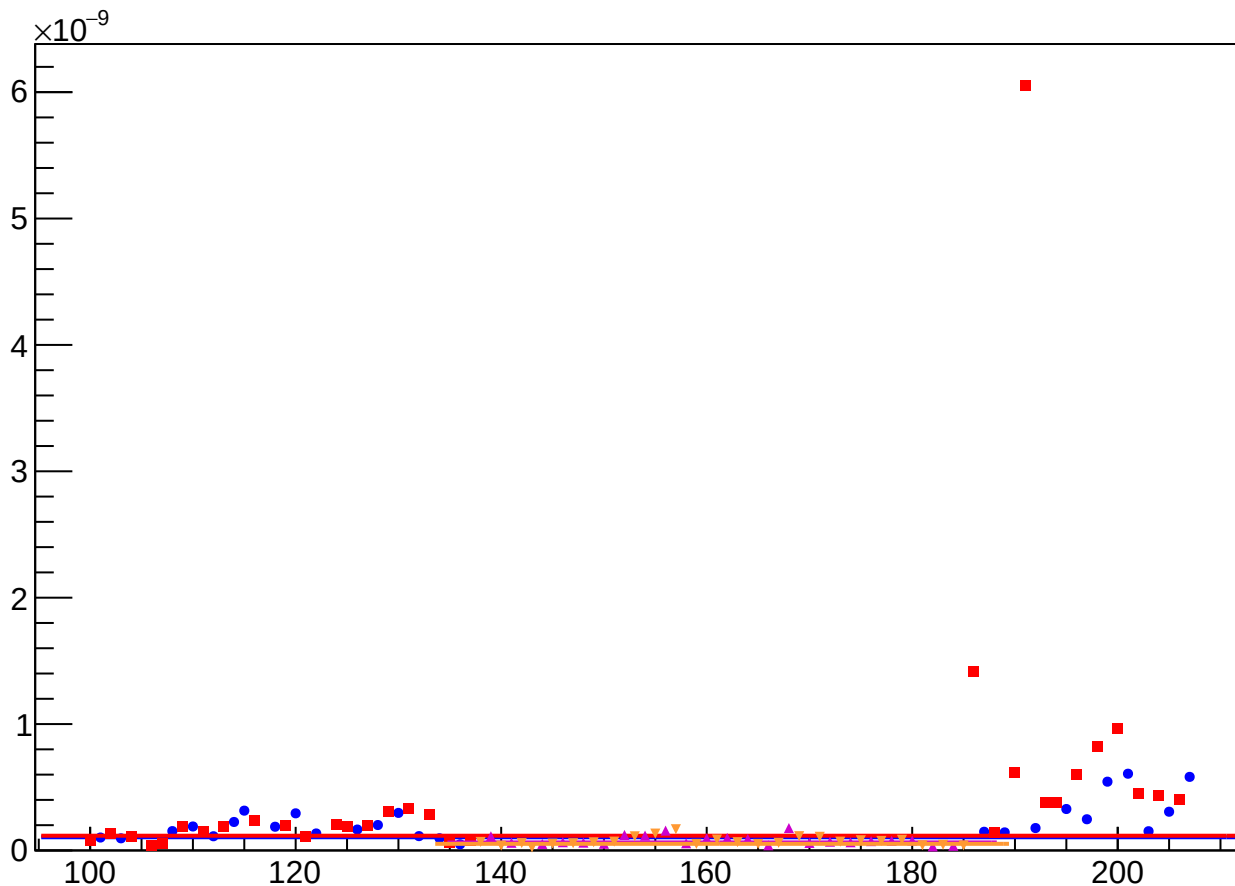
Left In: -0.000+/-0.000  $\chi^2$ /NDF:17.0/22

+ sign -0.000+/-0.000  $\chi^2$ /NDF: 64.8/50

All: -0.000+/-0.000  $\chi^2$ /NDF: 115.1/104

- sign -0.000+/-0.000  $\chi^2$ /NDF: 50.0/53

asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 4027324.0/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2628519.8/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 6378887.3/30

Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1788279.2/22

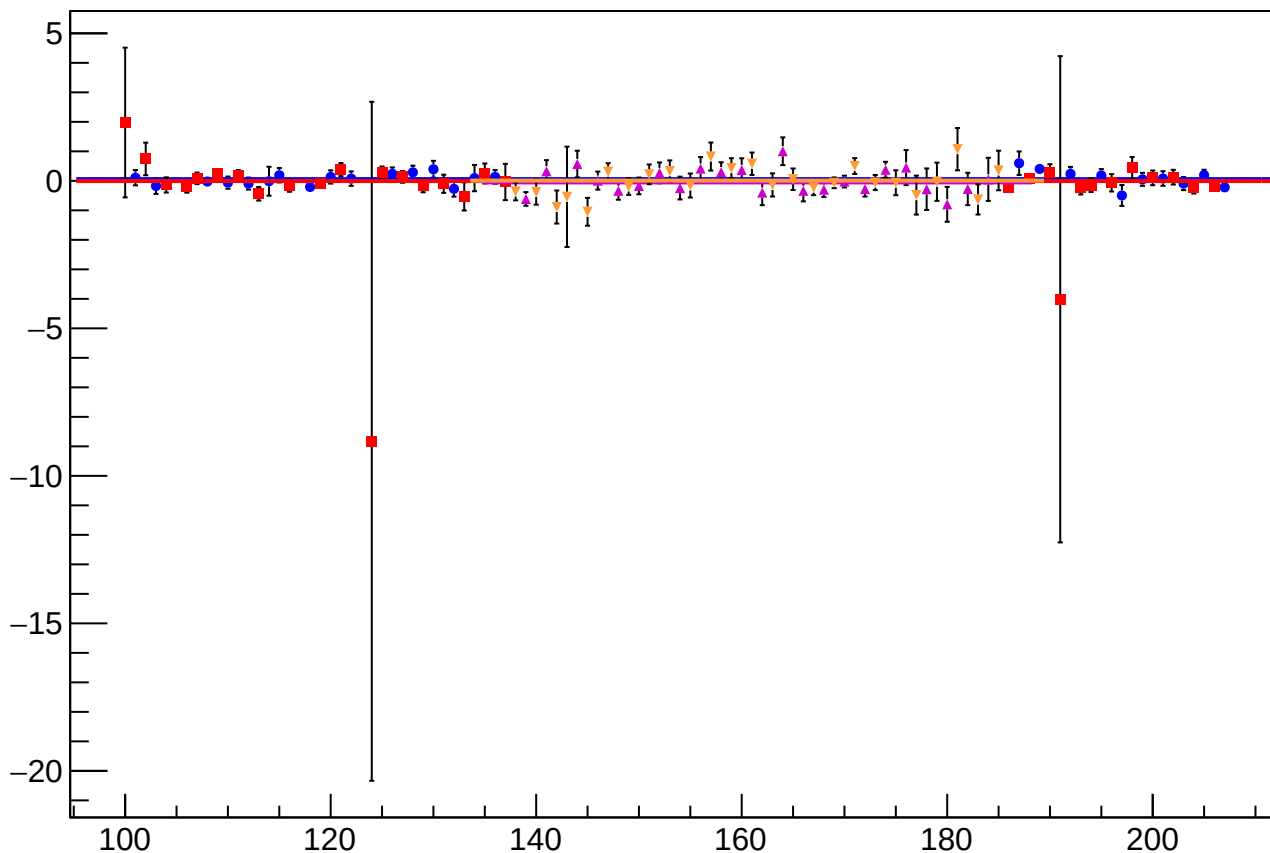
+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 8153490.6/50

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 17902397.5/104

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 9458054.7/53



asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.059 \pm 0.044$   $\chi^2/\text{NDF}$ : 24.4/25

Left Out:  $0.009 \pm 0.071$   $\chi^2/\text{NDF}$ : 28.9/24

Right Out:  $-0.007 \pm 0.039$   $\chi^2/\text{NDF}$ : 31.9/30

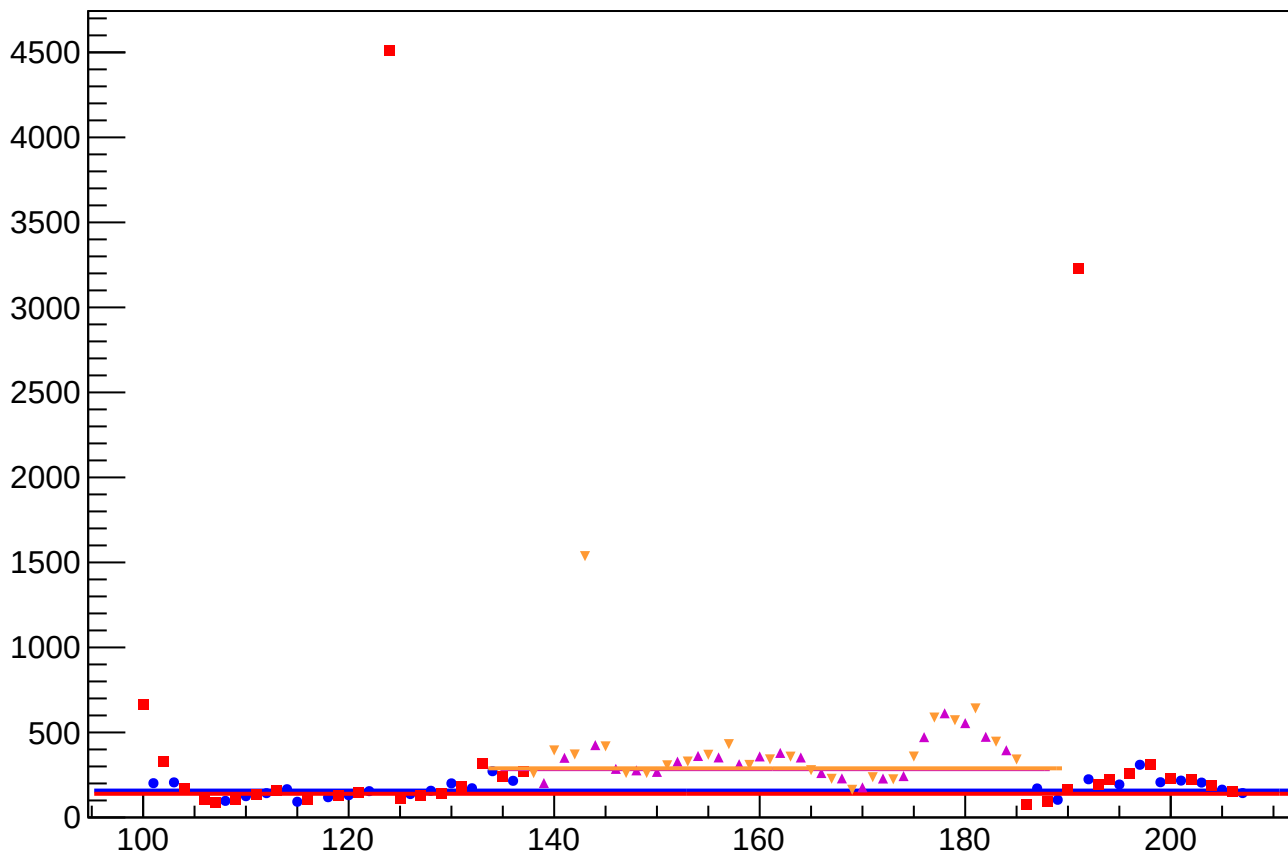
Left In:  $-0.053 \pm 0.070$   $\chi^2/\text{NDF}$ : 27.8/22

+ sign  $0.046 \pm 0.037$   $\chi^2/\text{NDF}$ : 53.7/50

All:  $0.011 \pm 0.025$   $\chi^2/\text{NDF}$ : 115.3/104

- sign  $-0.018 \pm 0.034$   $\chi^2/\text{NDF}$ : 60.0/53

asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 158.088+/-0.031  $\chi^2/\text{NDF}$ : 2235932.9/25

Left Out: 288.922+/-0.050  $\chi^2/\text{NDF}$ : 4648197.0/24

Right Out: 139.244+/-0.027  $\chi^2/\text{NDF}$ : 4674613.0/30

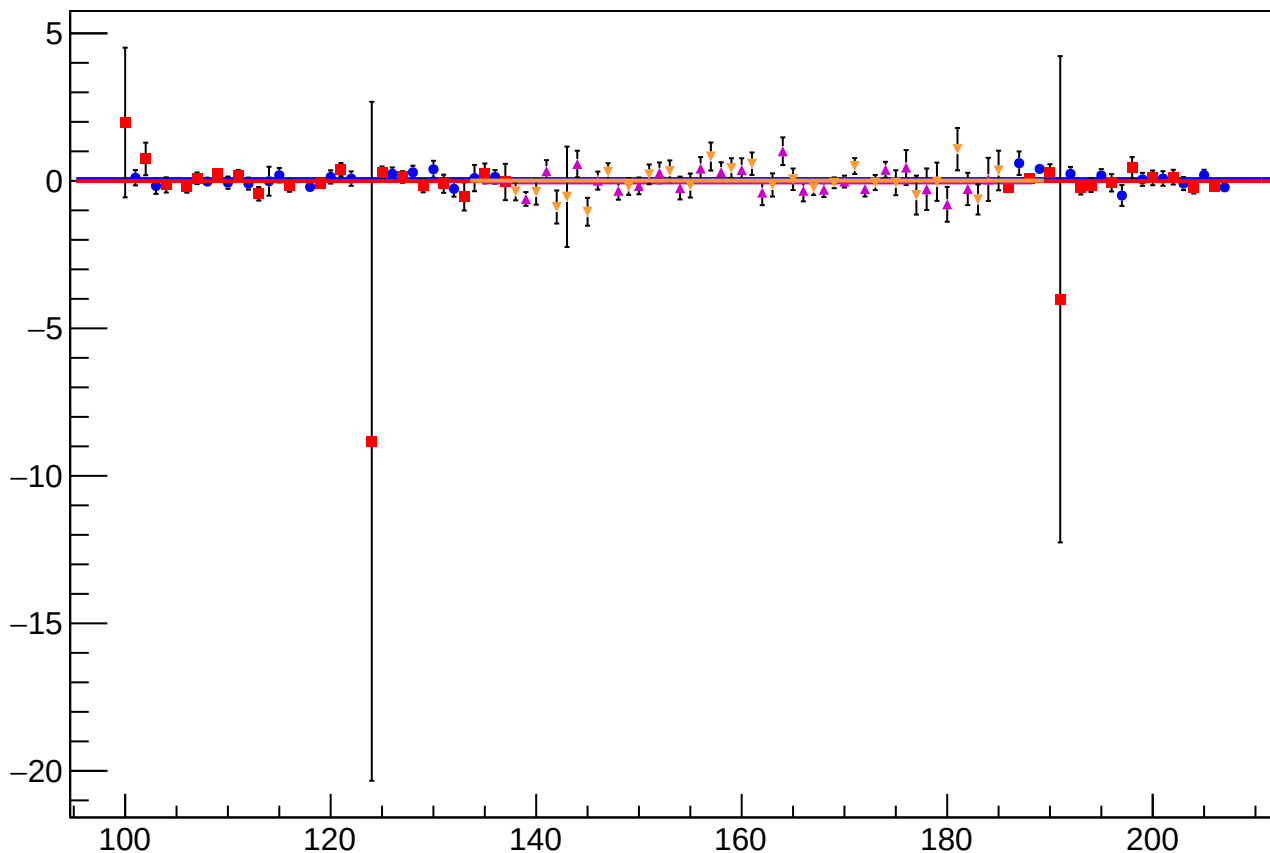
Left In: 284.168+/-0.050  $\chi^2/\text{NDF}$ : 3077521.1/22

+ sign 193.811+/-0.026  $\chi^2/\text{NDF}$ : 11818598.9/50

All: 182.453+/-0.018  $\chi^2/\text{NDF}$ : 26418523.1/10

- sign 172.947+/-0.024  $\chi^2/\text{NDF}$ : 14255780.1/53

asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.059 \pm 0.044$   $\chi^2/\text{NDF}$ : 24.4/25

Left Out:  $0.009 \pm 0.071$   $\chi^2/\text{NDF}$ : 28.9/24

Right Out:  $-0.007 \pm 0.039$   $\chi^2/\text{NDF}$ : 31.9/30

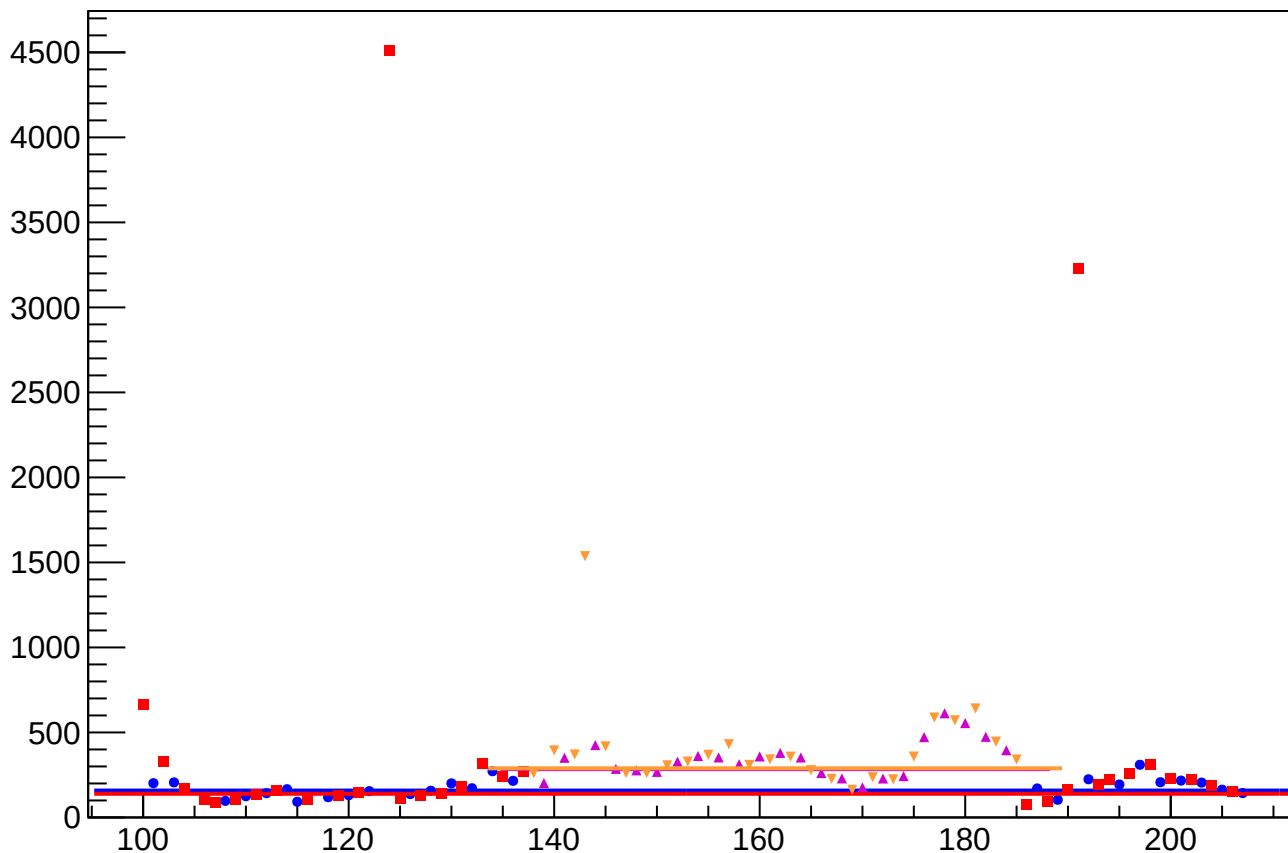
Left In:  $-0.053 \pm 0.070$   $\chi^2/\text{NDF}$ : 27.8/22

+ sign  $0.046 \pm 0.037$   $\chi^2/\text{NDF}$ : 53.7/50

All:  $0.011 \pm 0.025$   $\chi^2/\text{NDF}$ : 115.3/104

- sign  $-0.018 \pm 0.034$   $\chi^2/\text{NDF}$ : 60.0/53

asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 158.088+/-0.031  $\chi^2/\text{NDF}$ : 2235932.9/25

Left Out: 288.922+/-0.050  $\chi^2/\text{NDF}$ : 4648197.0/24

Right Out: 139.244+/-0.027  $\chi^2/\text{NDF}$ : 4674613.0/30

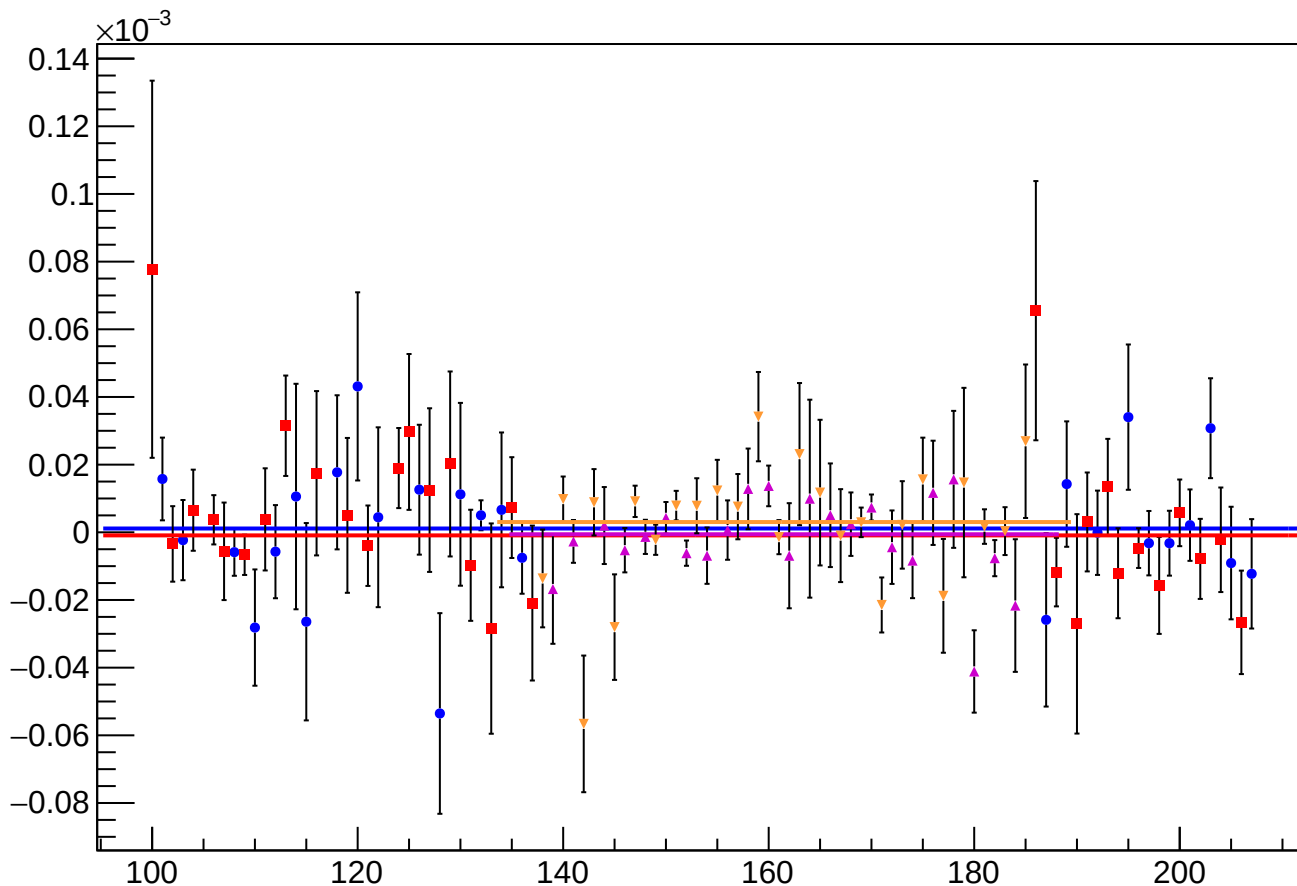
Left In: 284.168+/-0.050  $\chi^2/\text{NDF}$ : 3077521.1/22

+ sign 193.811+/-0.026  $\chi^2/\text{NDF}$ : 11818598.9/50

All: 182.453+/-0.018  $\chi^2/\text{NDF}$ : 26418523.1/10

- sign 172.947+/-0.024  $\chi^2/\text{NDF}$ : 14255780.1/53

asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 24.4/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 42.2/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 28.8/30

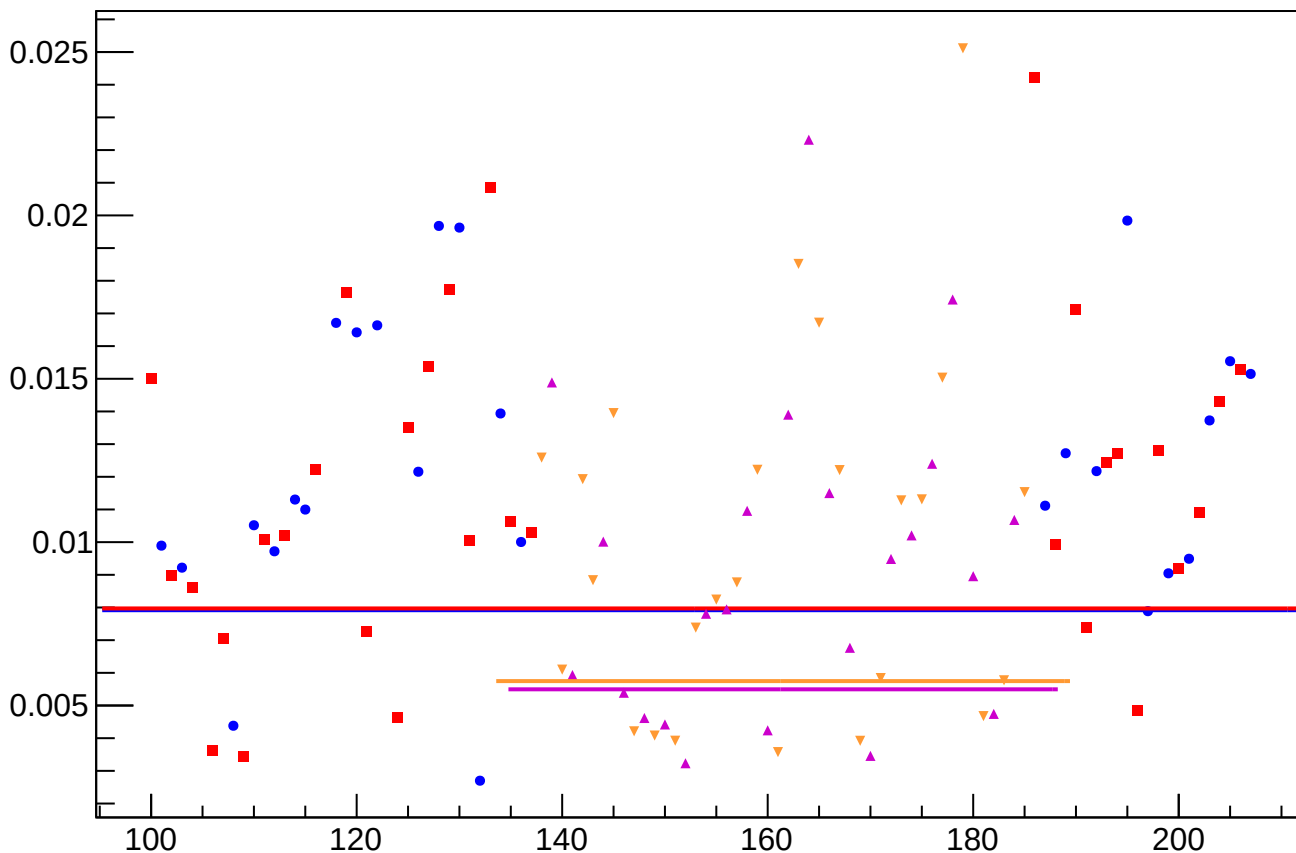
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 33.2/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 67.0/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 132.1/104

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 62.0/53

asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 7412887.6/25

Left Out: 0.006 $\pm$ 0.000  $\chi^2$ /NDF:8128513.8/24

Right Out: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 6422510.5/30

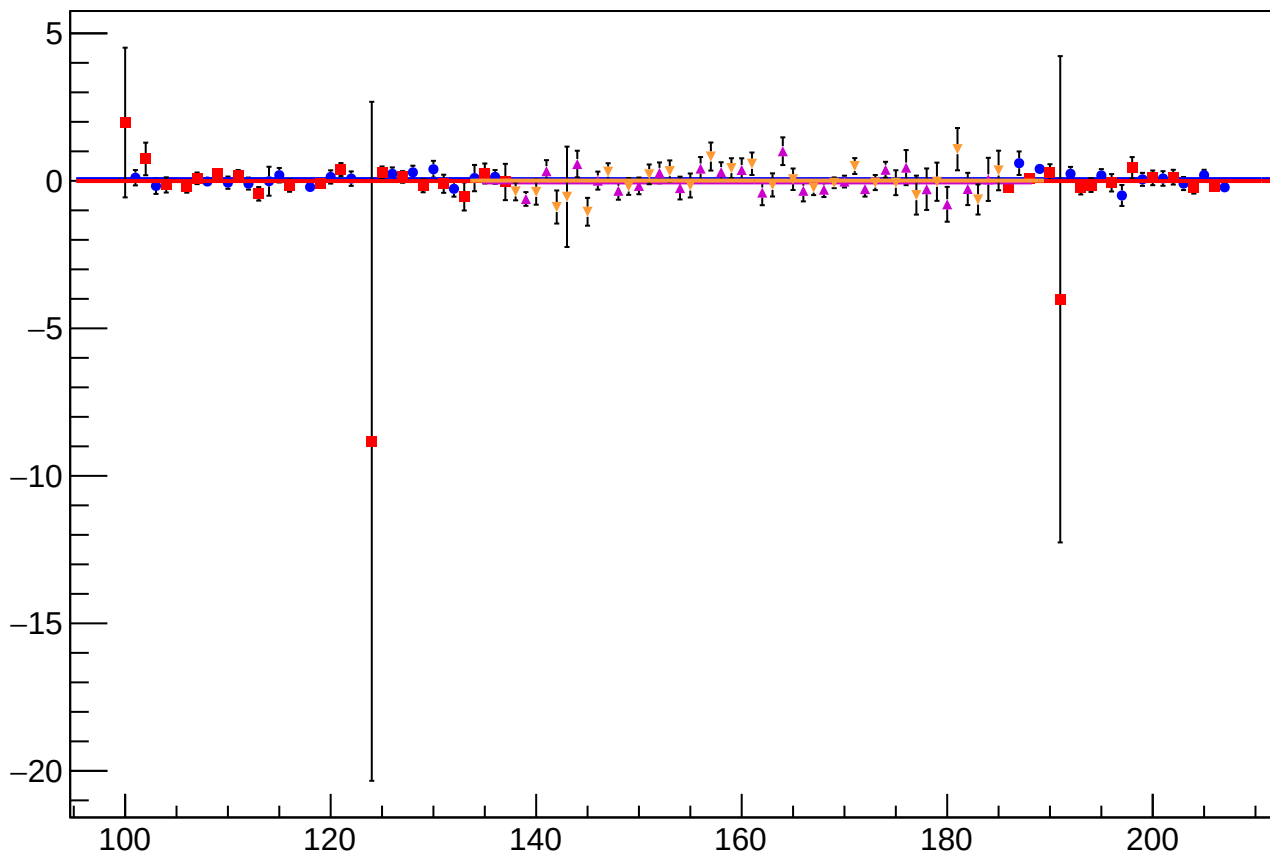
Left In: 0.005 $\pm$ 0.000  $\chi^2$ /NDF:6937299.0/22

+ sign 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 16702946.4/50

All: 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 31727909.0/104

- sign 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 15018604.9/53

asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.059 \pm 0.044$   $\chi^2/\text{NDF}$ : 24.4/25

Left Out:  $0.009 \pm 0.071$   $\chi^2/\text{NDF}$ : 28.9/24

Right Out:  $-0.007 \pm 0.039$   $\chi^2/\text{NDF}$ : 31.9/30

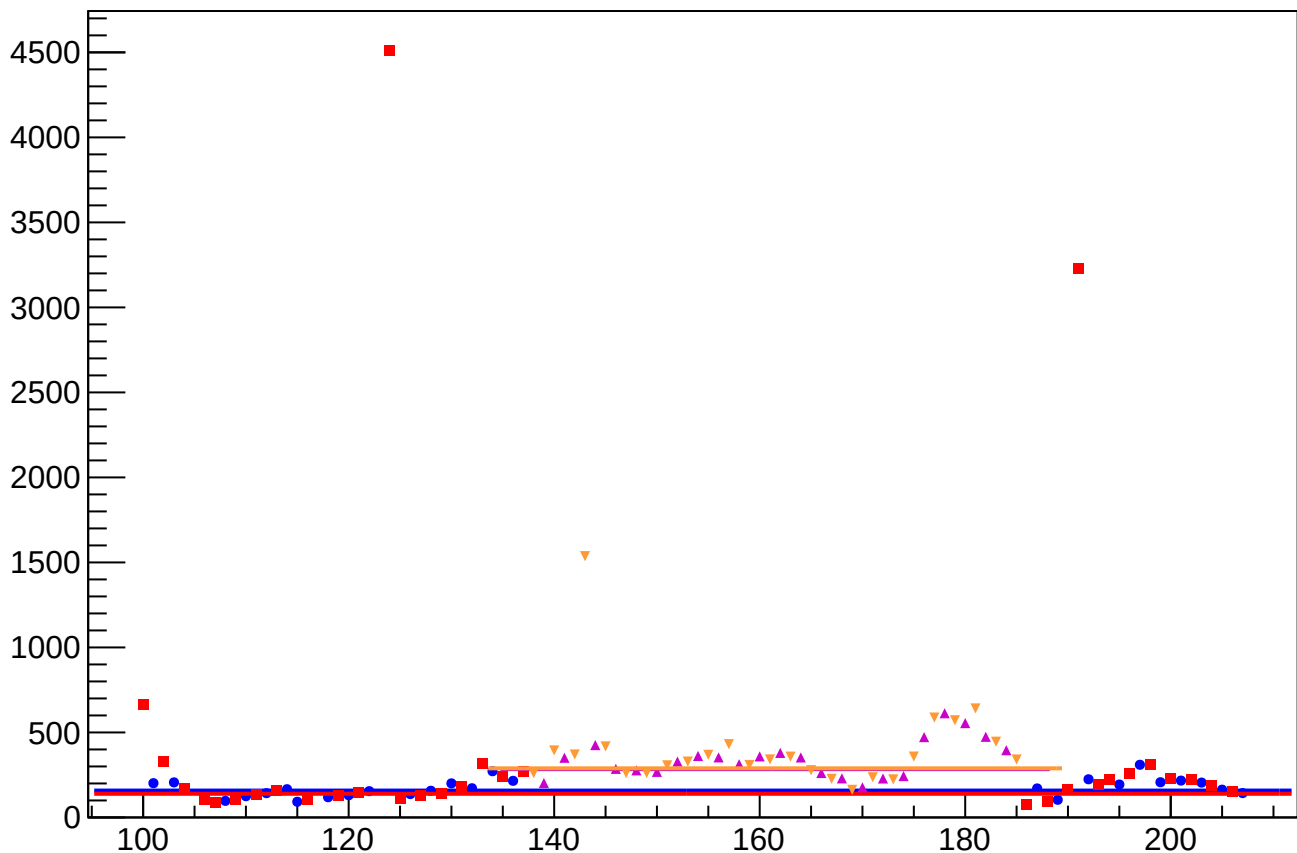
Left In:  $-0.053 \pm 0.070$   $\chi^2/\text{NDF}$ : 27.8/22

+ sign  $0.046 \pm 0.037$   $\chi^2/\text{NDF}$ : 53.7/50

All:  $0.011 \pm 0.025$   $\chi^2/\text{NDF}$ : 115.3/104

- sign  $-0.018 \pm 0.034$   $\chi^2/\text{NDF}$ : 60.0/53

asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 158.088+/-0.031  $\chi^2/\text{NDF}$ : 2235925.3/25

Left Out: 288.922+/-0.050  $\chi^2/\text{NDF}$ : 4648388.8/24

Right Out: 139.246+/-0.027  $\chi^2/\text{NDF}$ : 4674452.9/30

Left In: 284.170+/-0.050  $\chi^2/\text{NDF}$ : 3077626.7/22

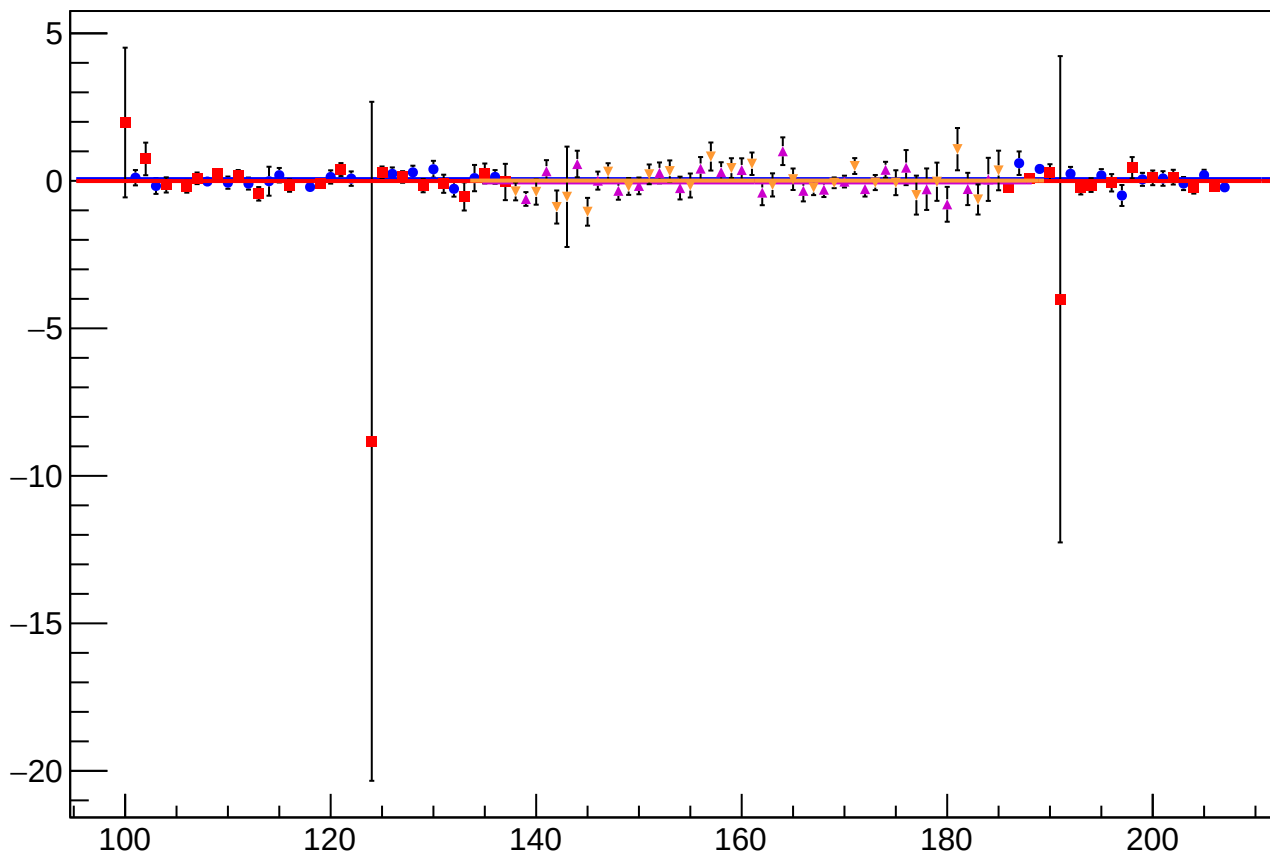
+ sign 193.811+/-0.026  $\chi^2/\text{NDF}$ : 11818768.2/50

All: 182.455+/-0.018  $\chi^2/\text{NDF}$ : 26418417.8/10

- sign 172.949+/-0.024  $\chi^2/\text{NDF}$ : 14255580.6/53



asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.059 \pm 0.044$   $\chi^2/\text{NDF}$ : 24.4/25

Left Out:  $0.009 \pm 0.071$   $\chi^2/\text{NDF}$ : 28.9/24

Right Out:  $-0.007 \pm 0.039$   $\chi^2/\text{NDF}$ : 31.9/30

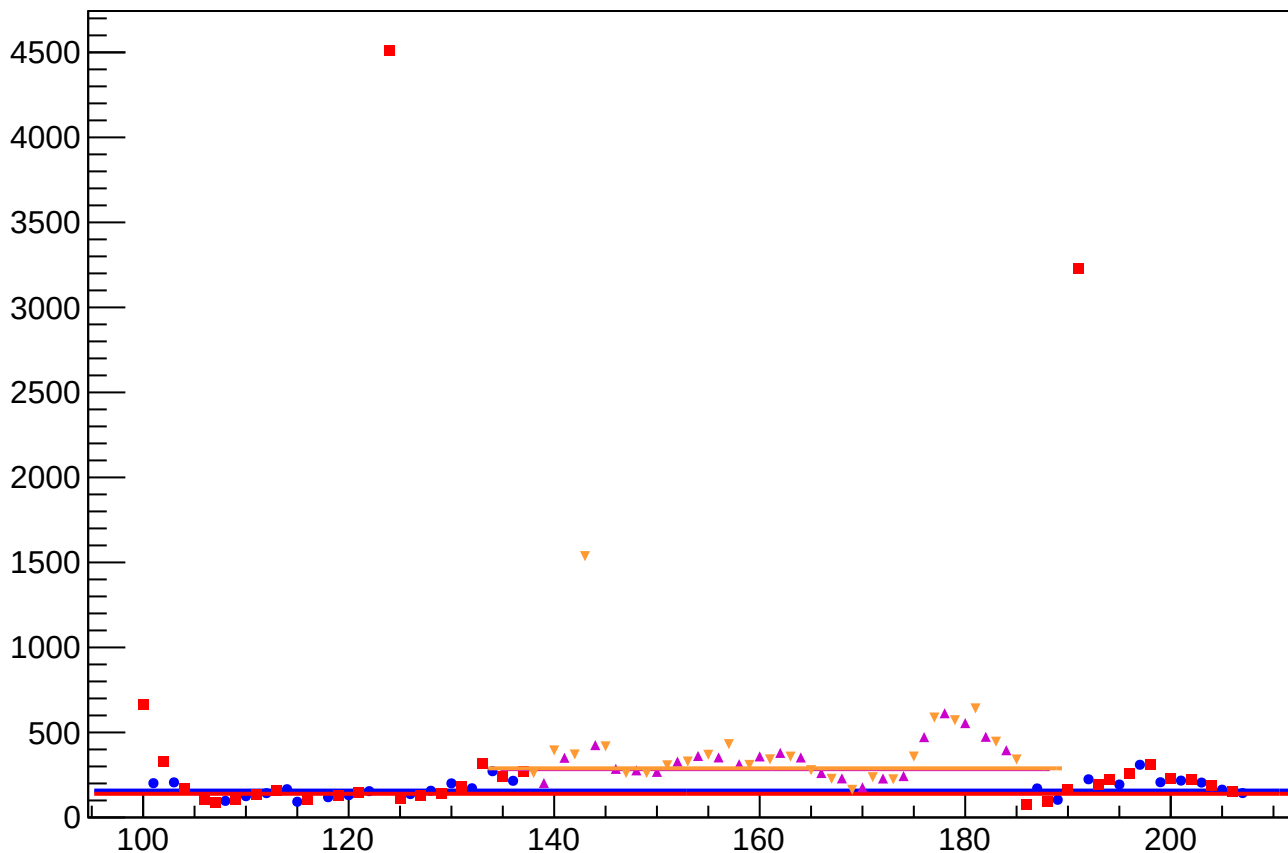
Left In:  $-0.053 \pm 0.070$   $\chi^2/\text{NDF}$ : 27.8/22

+ sign  $0.046 \pm 0.037$   $\chi^2/\text{NDF}$ : 53.7/50

All:  $0.011 \pm 0.025$   $\chi^2/\text{NDF}$ : 115.3/104

- sign  $-0.018 \pm 0.034$   $\chi^2/\text{NDF}$ : 60.0/53

asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 158.088+/-0.031  $\chi^2/\text{NDF}$ : 2235925.3/25

Left Out: 288.922+/-0.050  $\chi^2/\text{NDF}$ : 4648388.8/24

Right Out: 139.246+/-0.027  $\chi^2/\text{NDF}$ : 4674452.9/30

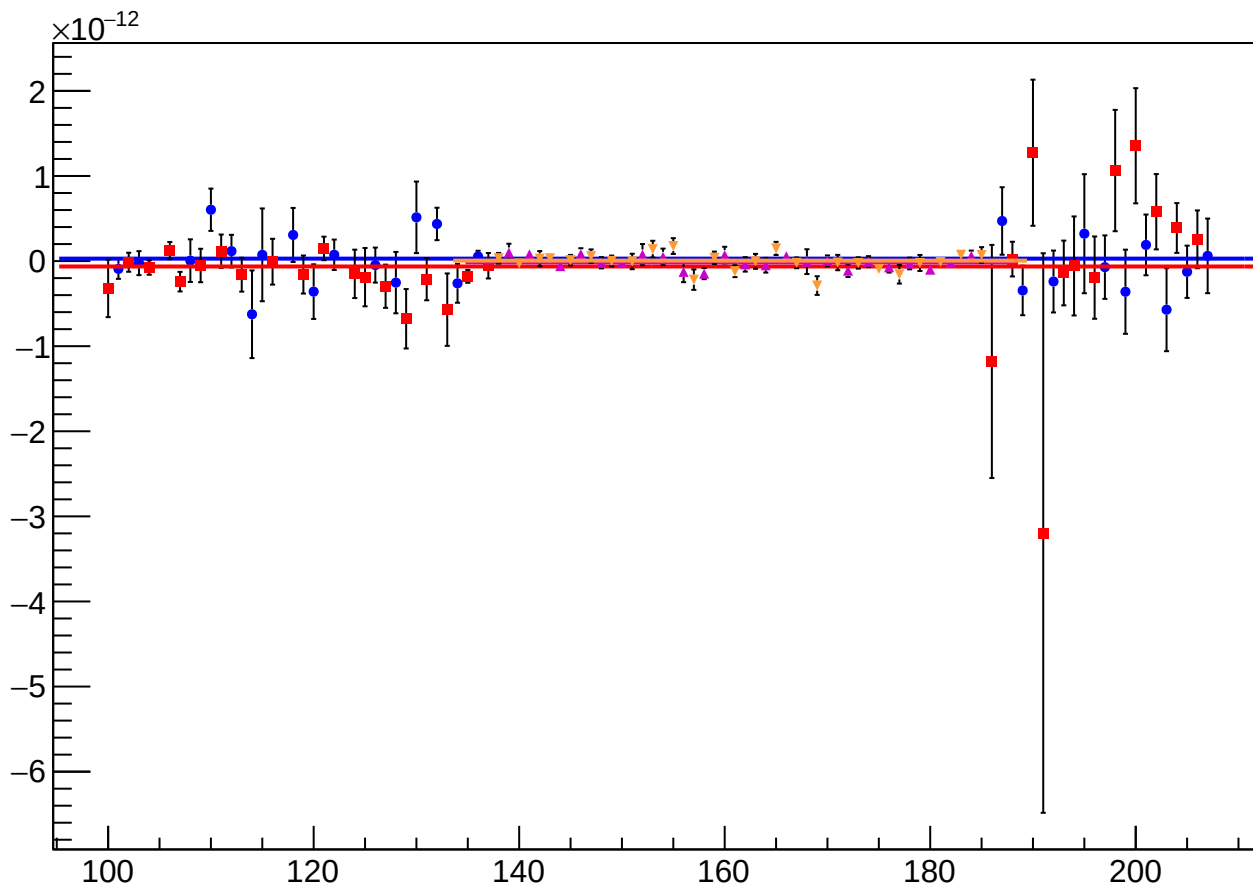
Left In: 284.170+/-0.050  $\chi^2/\text{NDF}$ : 3077626.7/22

+ sign 193.811+/-0.026  $\chi^2/\text{NDF}$ : 11818768.2/50

All: 182.455+/-0.018  $\chi^2/\text{NDF}$ : 26418417.8/10

- sign 172.949+/-0.024  $\chi^2/\text{NDF}$ : 14255580.6/53

asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 25.4/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 34.1/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 35.2/30

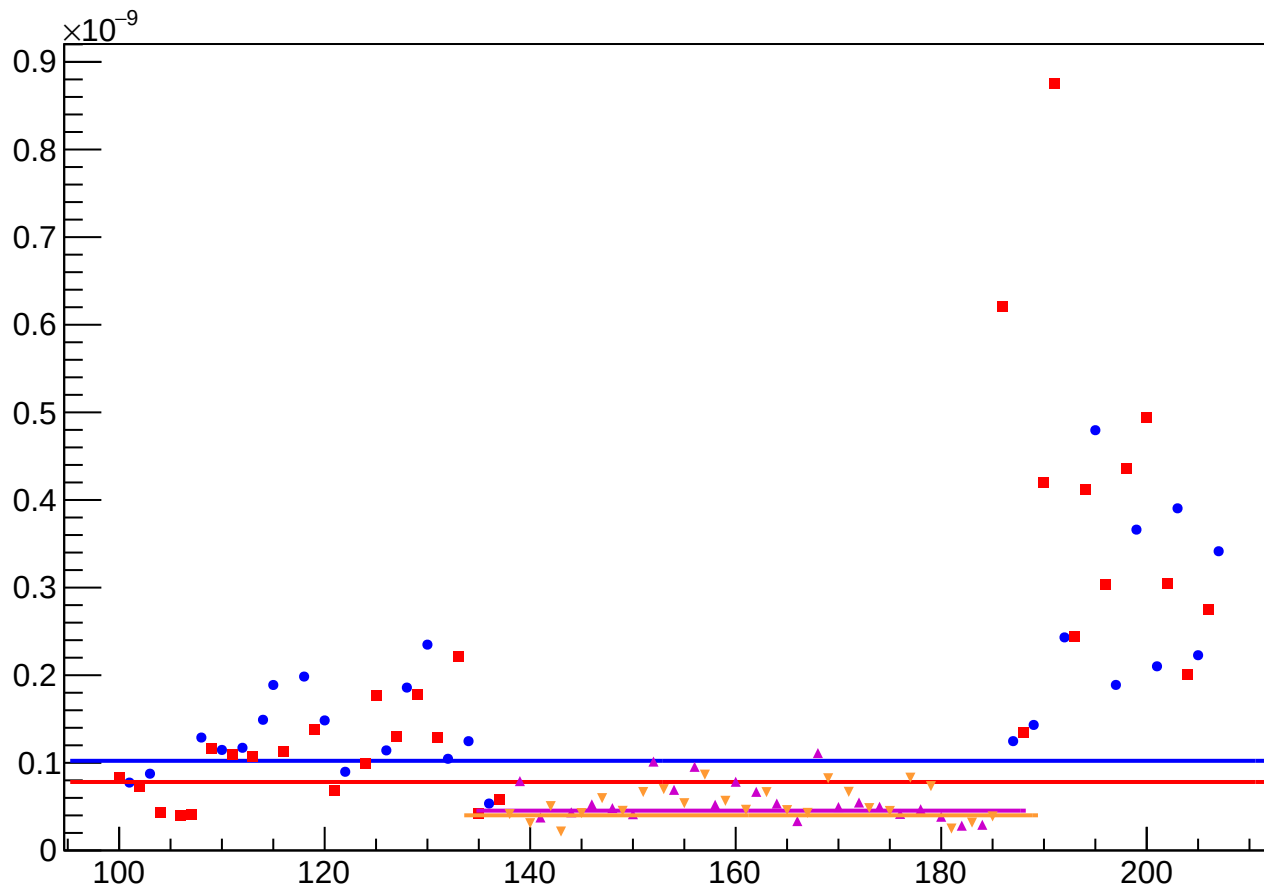
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 23.2/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 59.8/50

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 123.0/104

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 60.3/53

asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5234990.1/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3609934.1/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7622623.9/30

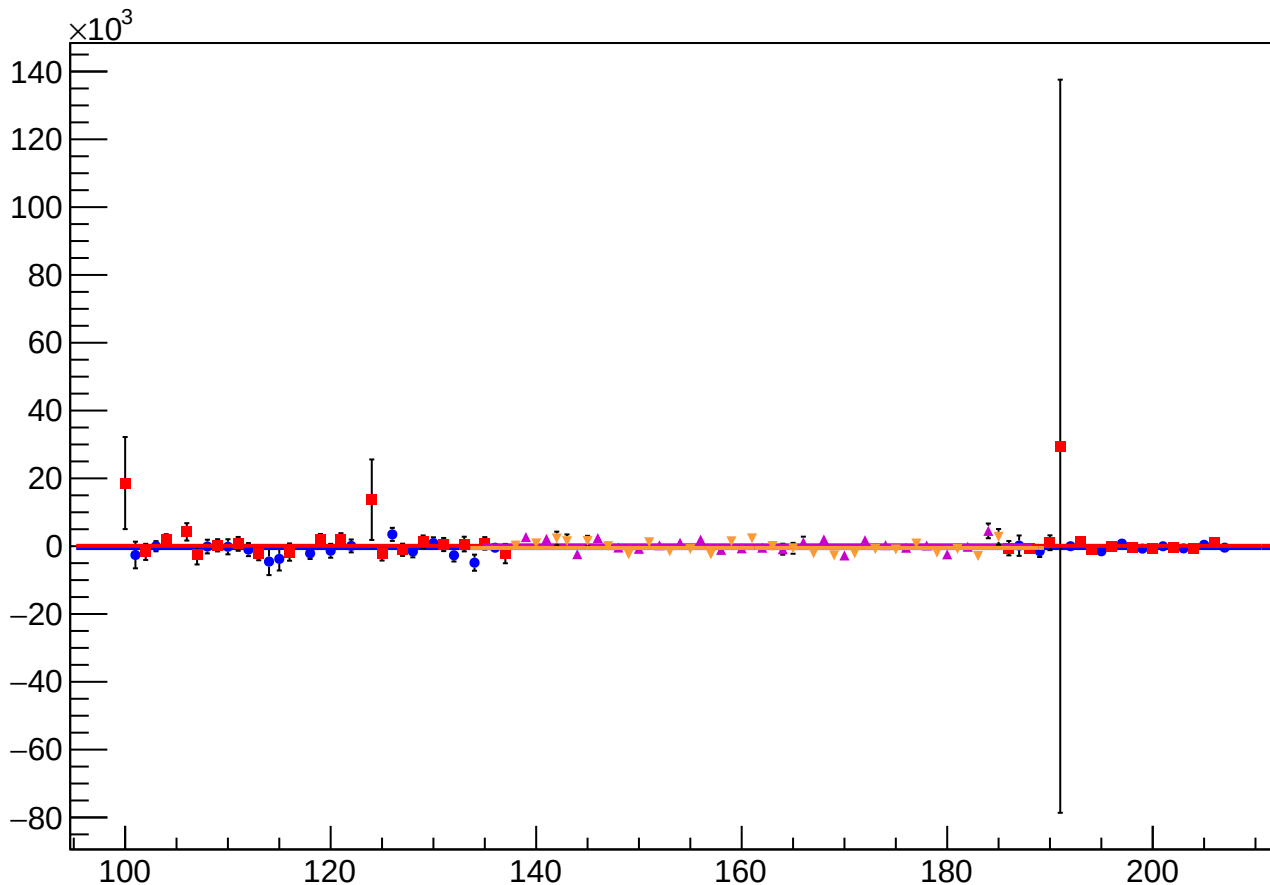
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2780344.5/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13196374.3/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 25445033.4/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12090467.6/53

reg\_asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_mean vs Slug



Right In: -557.922+/-331.748  $\chi^2/\text{NDF}$ : 16.2/25

Left Out: -514.484+/-285.945  $\chi^2/\text{NDF}$ : 30.9/24

Right Out: 106.976+/-322.543  $\chi^2/\text{NDF}$ : 19.6/30

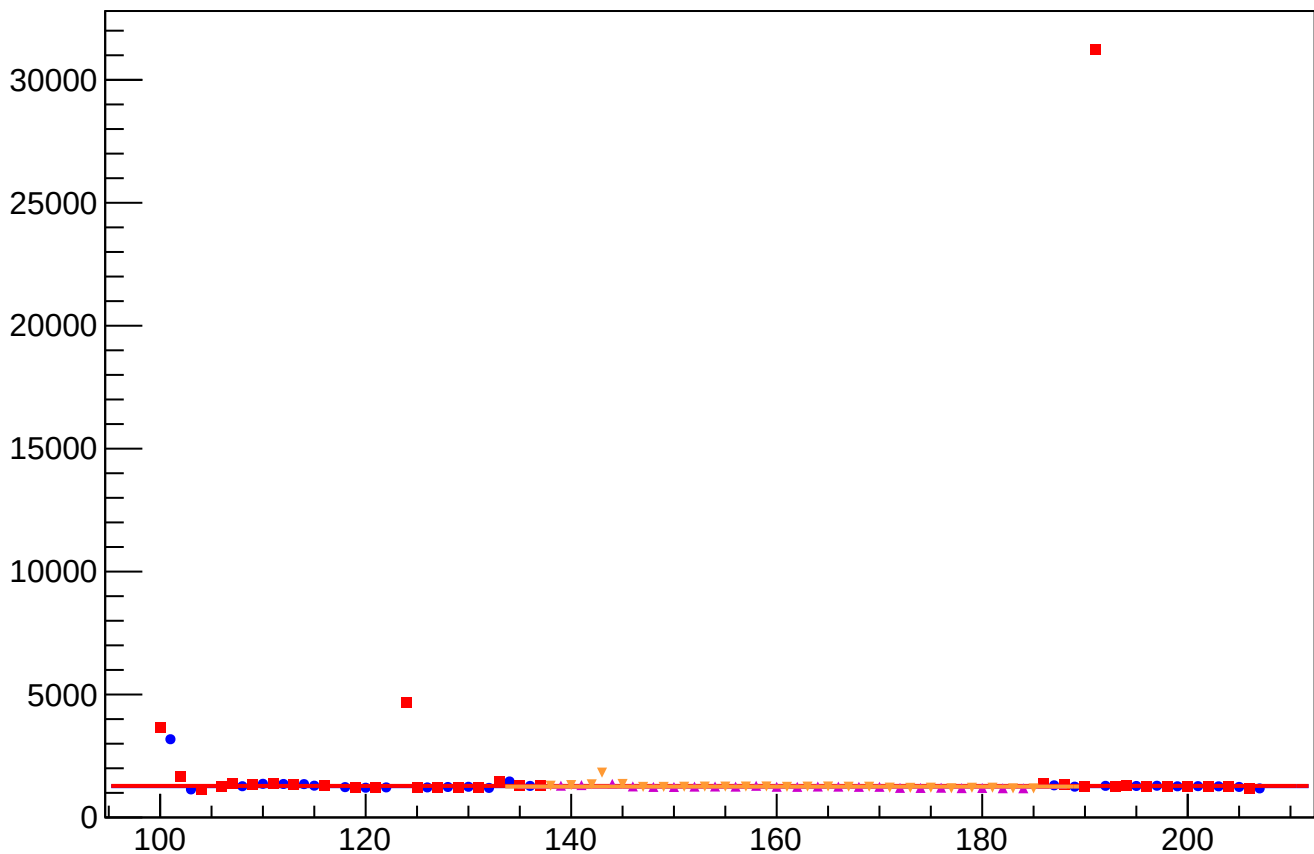
Left In: 242.686+/-291.166  $\chi^2/\text{NDF}$ : 32.0/22

+ sign -533.000+/-216.592  $\chi^2/\text{NDF}$ : 47.2/50

All: -174.861+/-152.990  $\chi^2/\text{NDF}$ : 104.4/104

- sign 181.751+/-216.130  $\chi^2/\text{NDF}$ : 51.8/53

reg\_asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_rms vs Slug



Right In: 1271.870+/-0.235  $\chi^2/\text{NDF}$ : 532252.5/25

Left Out: 1255.514+/-0.202  $\chi^2/\text{NDF}$ : 203124.1/24

Right Out: 1283.190+/-0.228  $\chi^2/\text{NDF}$ : 507237.7/30

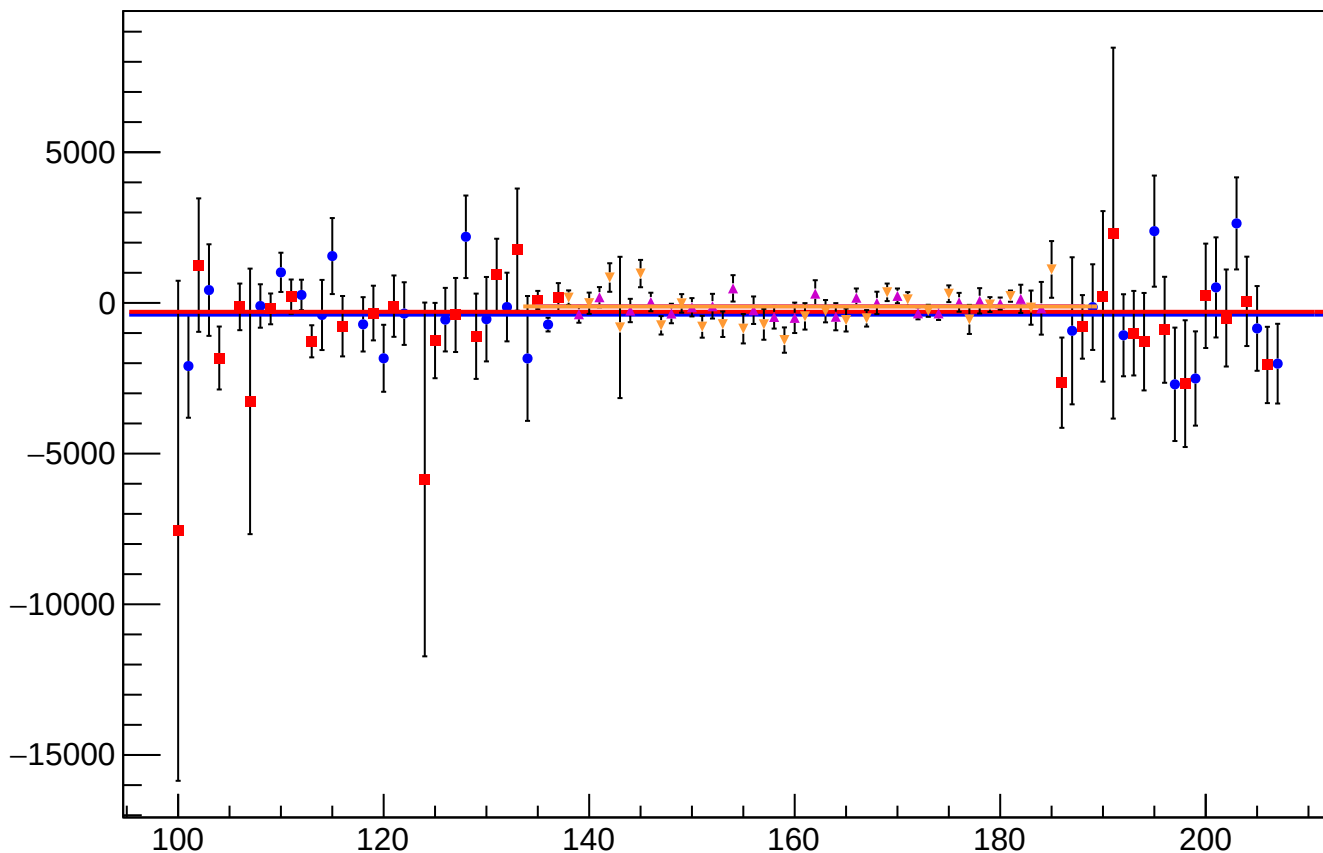
Left In: 1246.355+/-0.206  $\chi^2/\text{NDF}$ : 39857.0/22

+ sign 1262.486+/-0.153  $\chi^2/\text{NDF}$ : 738165.9/50

All: 1262.690+/-0.108  $\chi^2/\text{NDF}$ : 1299636.7/10

- sign 1262.894+/-0.153  $\chi^2/\text{NDF}$ : 561467.2/53

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_reg\_correction\_mean vs Slug



Right In:  $-388.665 \pm 159.310$   $\chi^2/\text{NDF}$ : 29.9/25

Left Out:  $-117.028 \pm 65.059$   $\chi^2/\text{NDF}$ : 48.4/24

Right Out:  $-294.835 \pm 159.092$   $\chi^2/\text{NDF}$ : 22.1/30

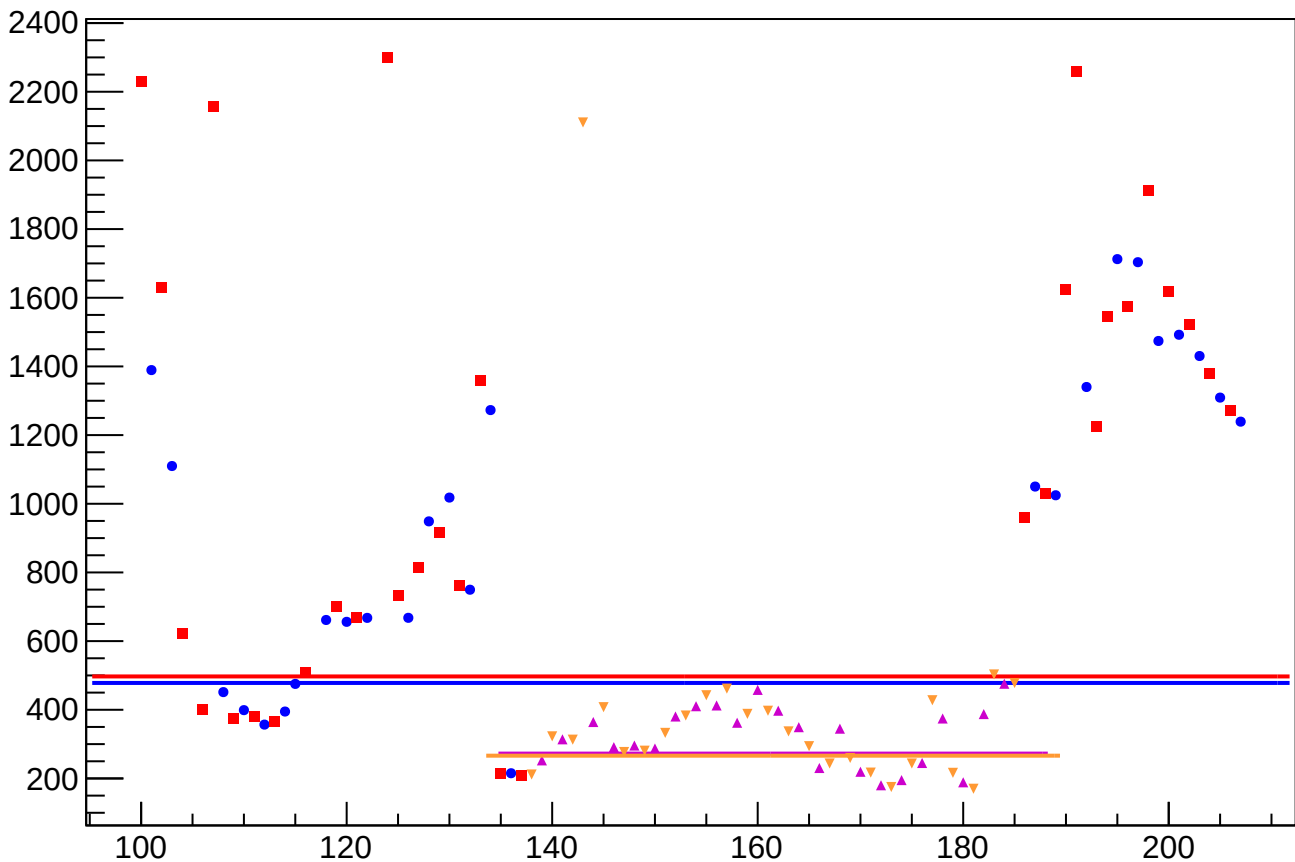
Left In:  $-107.341 \pm 67.001$   $\chi^2/\text{NDF}$ : 13.7/22

+ sign  $-155.855 \pm 60.230$   $\chi^2/\text{NDF}$ : 80.9/50

All:  $-145.973 \pm 43.116$   $\chi^2/\text{NDF}$ : 117.9/104

- sign  $-135.586 \pm 61.748$   $\chi^2/\text{NDF}$ : 37.0/53

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_reg\_correction\_rms vs Slug



Right In:  $478.157 \pm 0.113$   $\chi^2/\text{NDF}: 11561746.6/25$

Left Out:  $266.321 \pm 0.046$   $\chi^2/\text{NDF}: 4630130.4/24$

+ sign  $296.600 \pm 0.043$   $\chi^2/\text{NDF}: 19222676.6/50$

Right Out:  $497.098 \pm 0.112$   $\chi^2/\text{NDF}: 12280216.6/30$

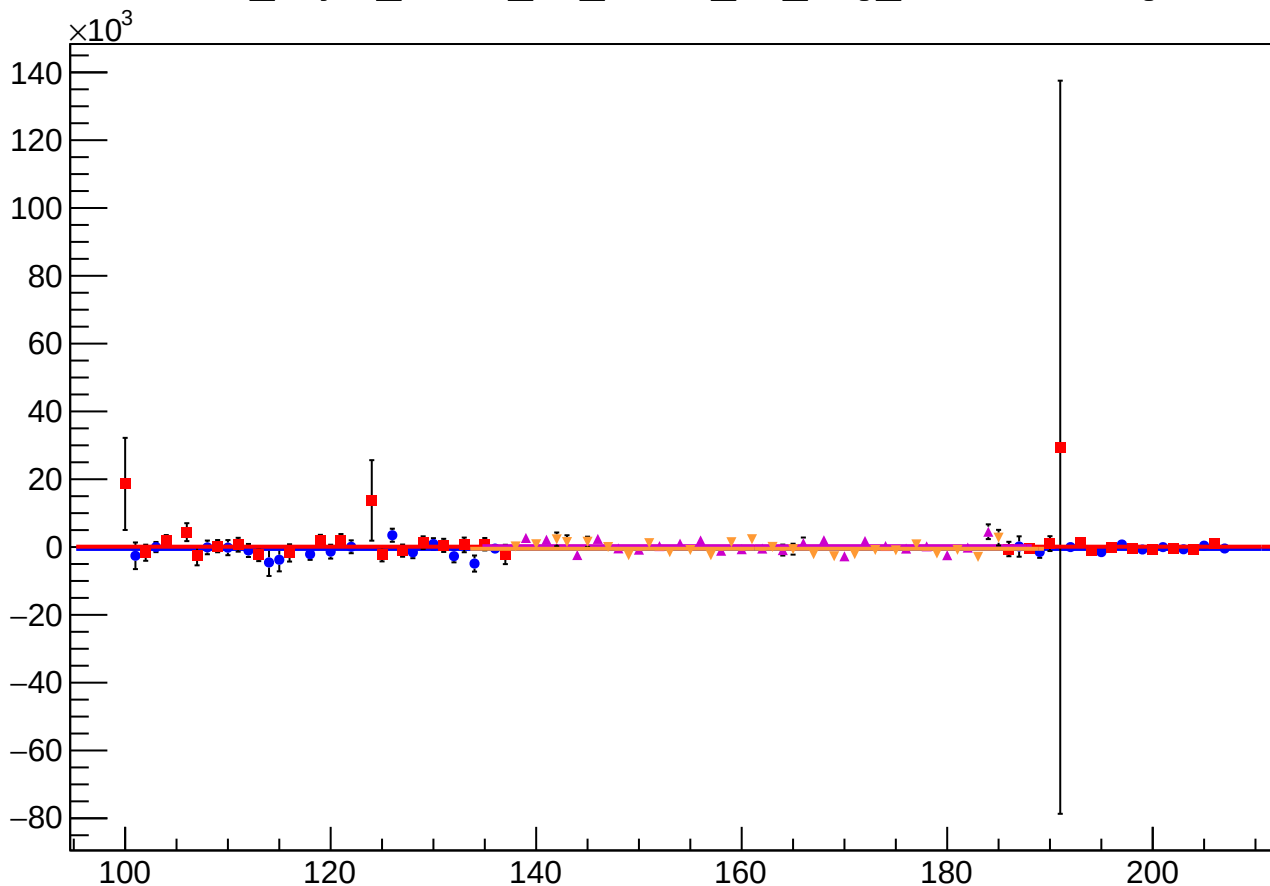
All:  $301.291 \pm 0.030$   $\chi^2/\text{NDF}: 37805187.2/10$

Left In:  $272.368 \pm 0.047$   $\chi^2/\text{NDF}: 2887823.5/22$

- sign  $306.222 \pm 0.044$   $\chi^2/\text{NDF}: 18557621.8/53$



cor\_asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_mean vs Slug



Right In: -557.779+/-331.748  $\chi^2/\text{NDF}$ : 16.2/25

Left Out: -514.430+/-285.945  $\chi^2/\text{NDF}$ : 30.9/24

Right Out: 105.587+/-322.696  $\chi^2/\text{NDF}$ : 19.7/30

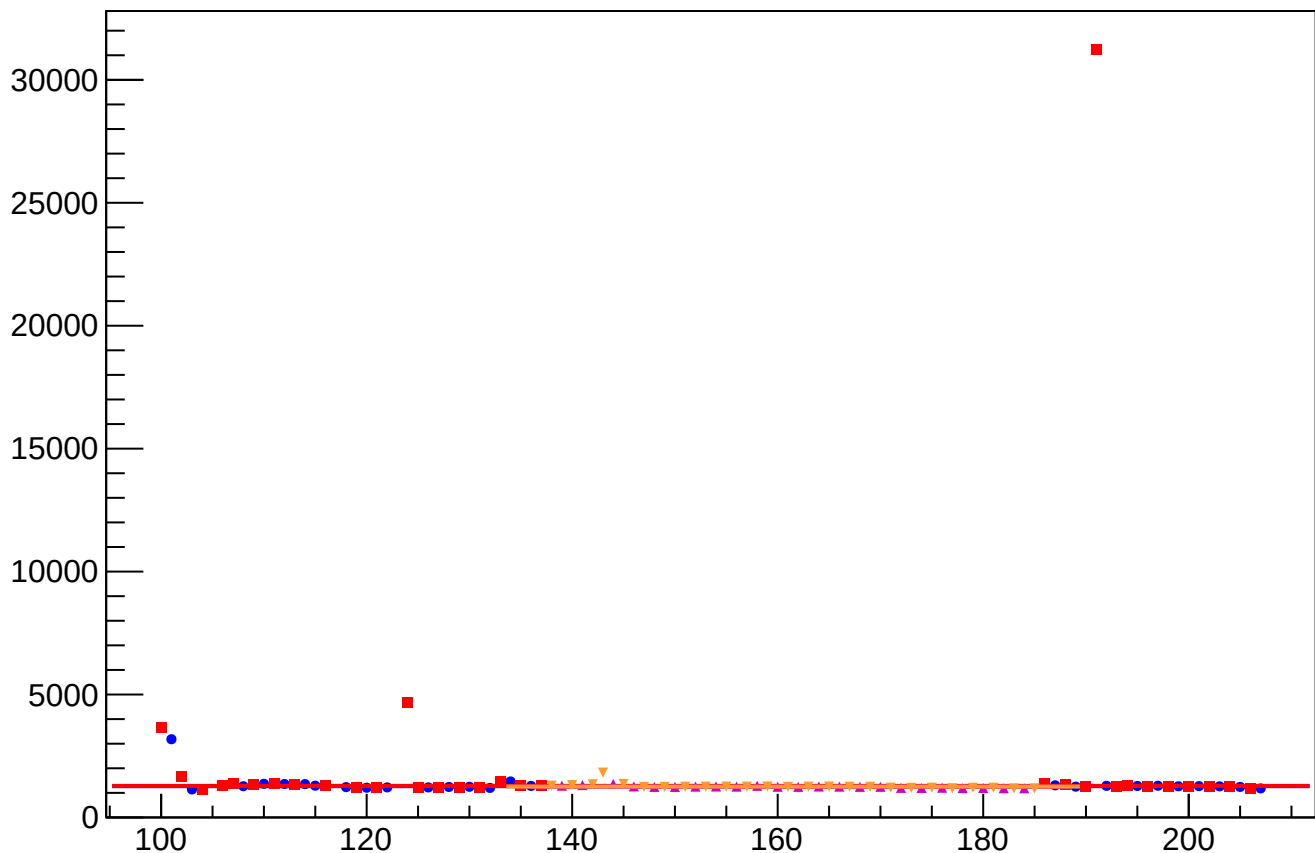
Left In: 242.663+/-291.166  $\chi^2/\text{NDF}$ : 32.0/22

+ sign -532.908+/-216.592  $\chi^2/\text{NDF}$ : 47.1/50

All: -175.194+/-153.006  $\chi^2/\text{NDF}$ : 104.4/104

- sign 181.147+/-216.176  $\chi^2/\text{NDF}$ : 51.8/53

cor\_asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_rms vs Slug



Right In: 1271.870 $\pm$ 0.235  $\chi^2$ /NDF: 532253.9/25

Left Out: 1255.514 $\pm$ 0.202  $\chi^2$ /NDF: 203124.0/24

Right Out: 1283.817 $\pm$ 0.228  $\chi^2$ /NDF: 507229.7/30

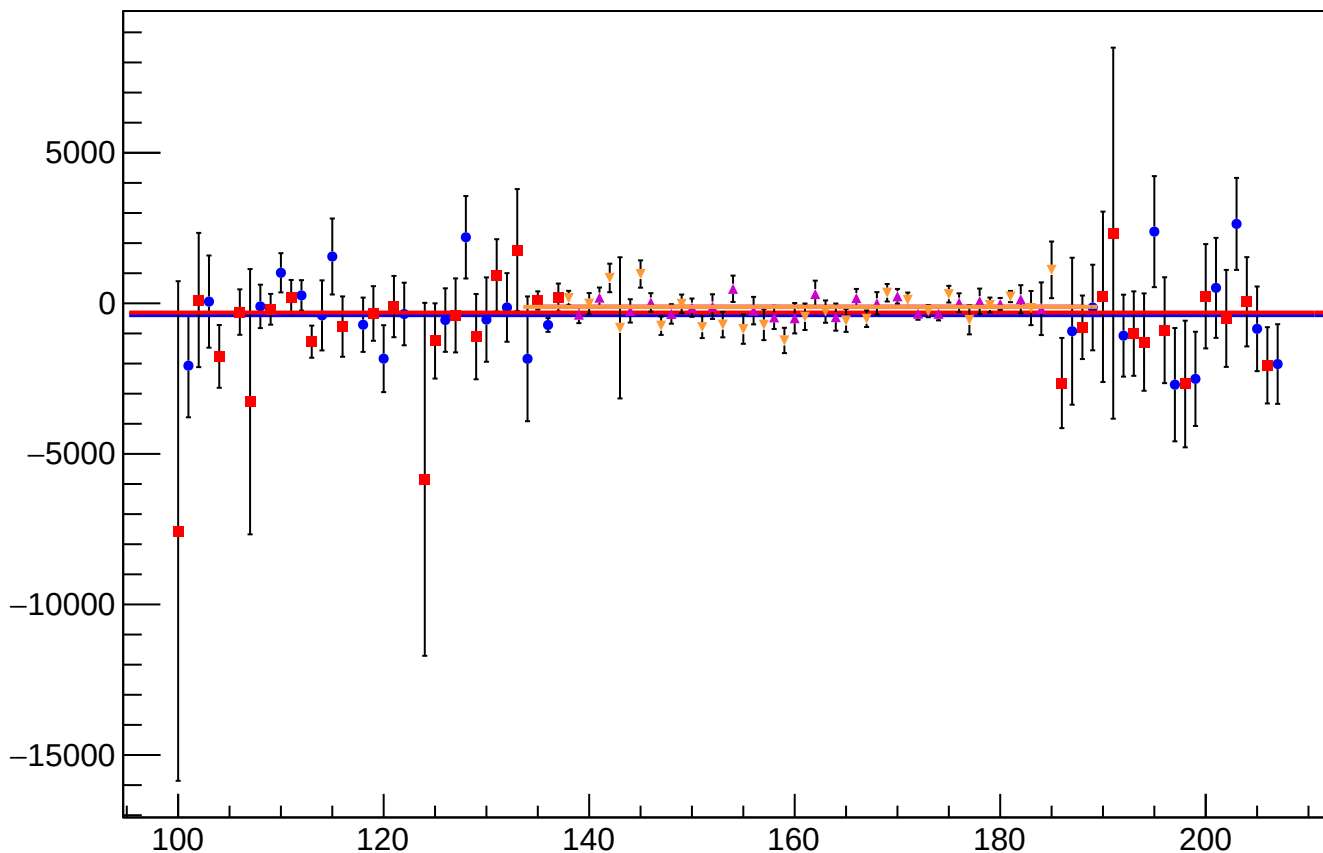
Left In: 1246.355 $\pm$ 0.206  $\chi^2$ /NDF: 39857.0/22

+ sign 1262.486 $\pm$ 0.153  $\chi^2$ /NDF: 738167.3/50

All: 1262.827 $\pm$ 0.108  $\chi^2$ /NDF: 1300121.9/100

- sign 1263.166 $\pm$ 0.153  $\chi^2$ /NDF: 561944.7/53

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_cor\_correction\_mean vs Slug



Right In:  $-392.667 \pm 159.327$   $\chi^2/\text{NDF}$ : 29.7/25

Left Out:  $-117.002 \pm 65.060$   $\chi^2/\text{NDF}$ : 48.4/24

Right Out:  $-306.237 \pm 158.929$   $\chi^2/\text{NDF}$ : 21.4/30

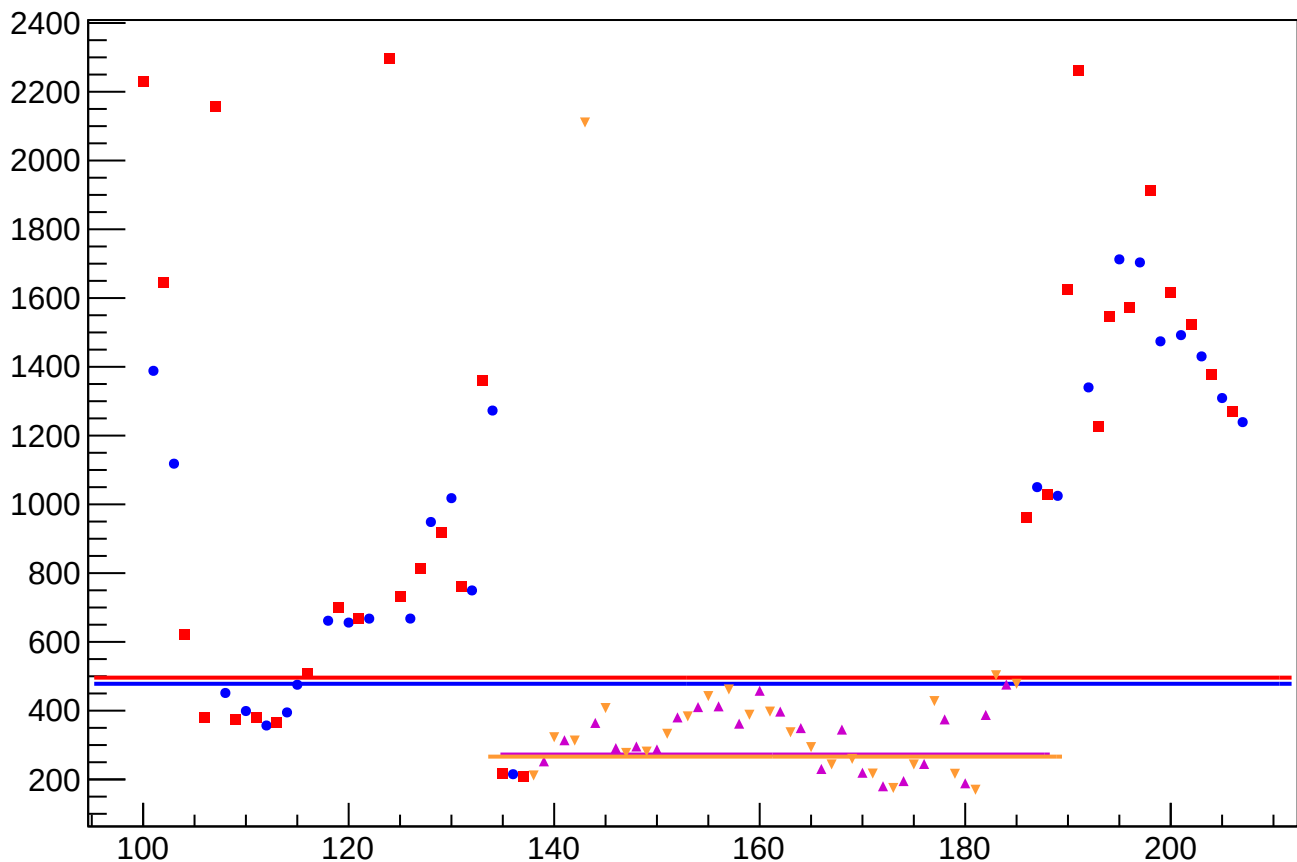
Left In:  $-107.459 \pm 67.003$   $\chi^2/\text{NDF}$ : 13.7/22

+ sign  $-156.399 \pm 60.232$   $\chi^2/\text{NDF}$ : 80.7/50

All:  $-147.162 \pm 43.114$   $\chi^2/\text{NDF}$ : 117.2/104

- sign  $-137.458 \pm 61.740$   $\chi^2/\text{NDF}$ : 36.4/53

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_cor\_correction\_rms vs Slug



Right In: 478.170+/-0.113  $\chi^2/\text{NDF}$ : 11564848.5/25

Left Out: 266.326+/-0.046  $\chi^2/\text{NDF}$ : 4630167.4/24

Right Out: 496.037+/-0.112  $\chi^2/\text{NDF}$ : 12302824.5/30

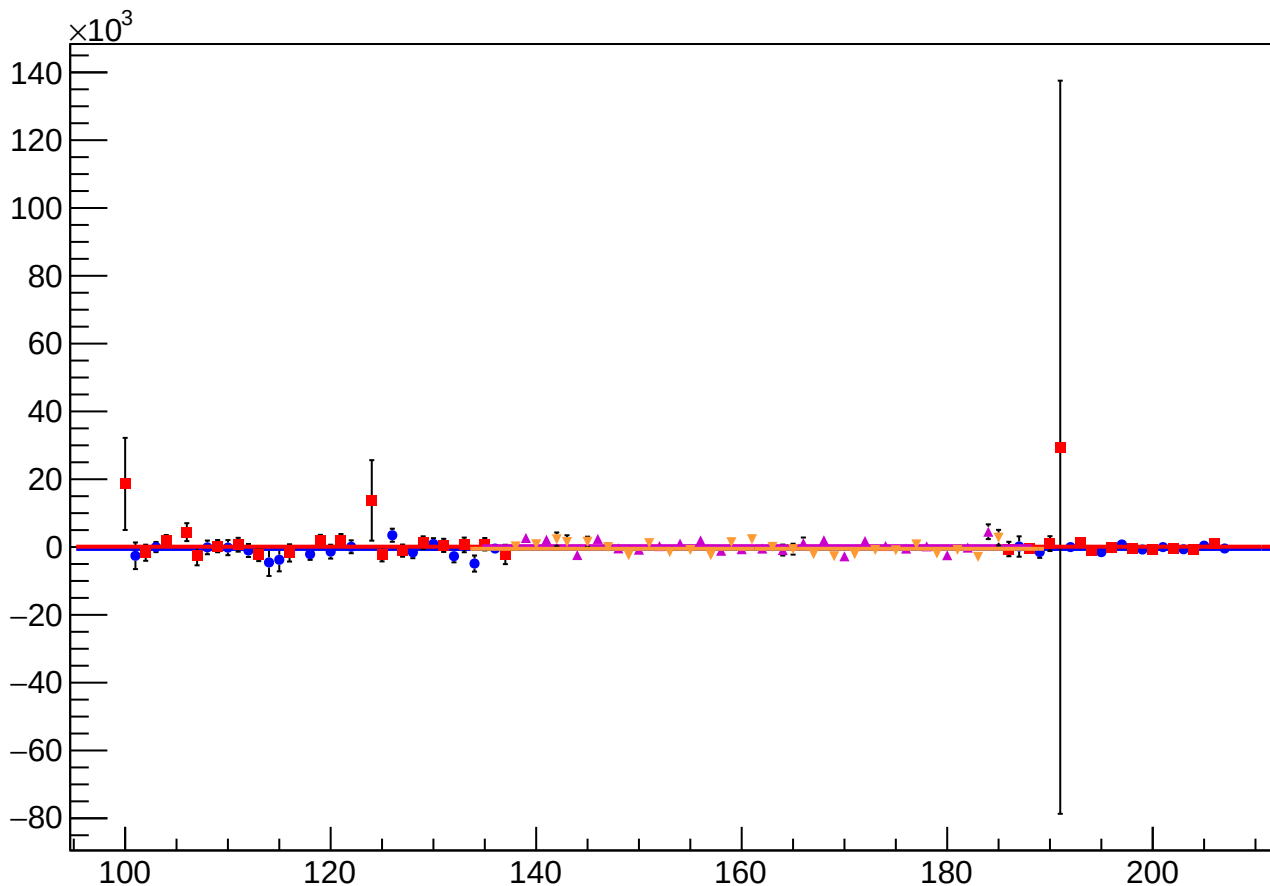
Left In: 272.378+/-0.047  $\chi^2/\text{NDF}$ : 2887597.1/22

+ sign 296.602+/-0.043  $\chi^2/\text{NDF}$ : 19225475.5/50

All: 301.249+/-0.030  $\chi^2/\text{NDF}$ : 37803508.1/10

- sign 306.131+/-0.044  $\chi^2/\text{NDF}$ : 18553622.3/53

eigen\_cor\_asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_mean vs Slug



Right In: -557.779+/-331.748  $\chi^2/\text{NDF}$ : 16.2/25

Left Out: -514.430+/-285.945  $\chi^2/\text{NDF}$ : 30.9/24

Right Out: 105.587+/-322.696  $\chi^2/\text{NDF}$ : 19.7/30

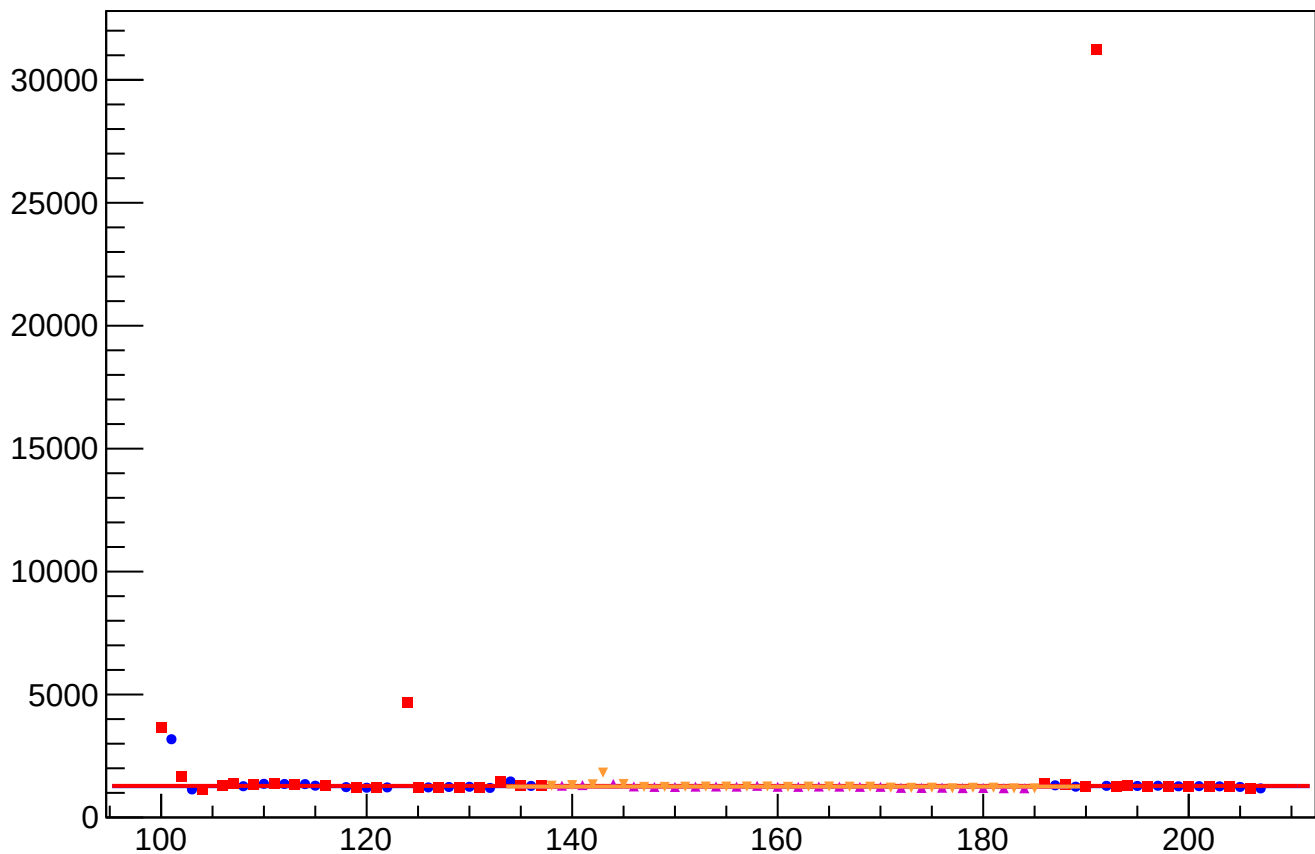
Left In: 242.663+/-291.166  $\chi^2/\text{NDF}$ : 32.0/22

+ sign -532.908+/-216.592  $\chi^2/\text{NDF}$ : 47.1/50

All: -175.194+/-153.006  $\chi^2/\text{NDF}$ : 104.4/104

- sign 181.147+/-216.176  $\chi^2/\text{NDF}$ : 51.8/53

eigen\_cor\_asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_rms vs Slug



Right In: 1271.870 $\pm$ 0.235  $\chi^2$ /NDF: 532253.9/25

Left Out: 1255.514 $\pm$ 0.202  $\chi^2$ /NDF: 203124.0/24

Right Out: 1283.817 $\pm$ 0.228  $\chi^2$ /NDF: 507229.7/30

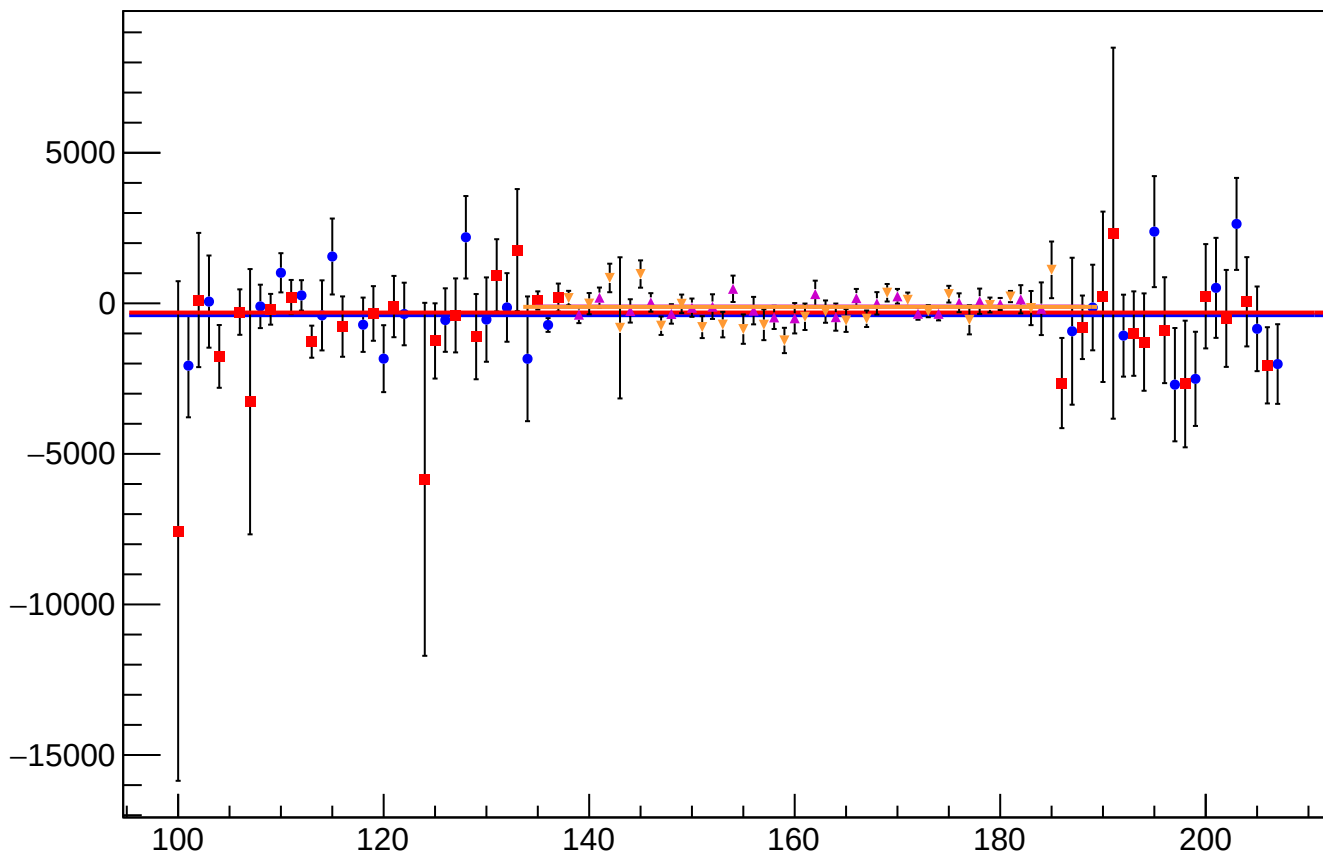
Left In: 1246.355 $\pm$ 0.206  $\chi^2$ /NDF: 39857.0/22

+ sign 1262.486 $\pm$ 0.153  $\chi^2$ /NDF: 738167.3/50

All: 1262.827 $\pm$ 0.108  $\chi^2$ /NDF: 1300121.9/100

- sign 1263.166 $\pm$ 0.153  $\chi^2$ /NDF: 561944.7/53

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-392.667 \pm 159.327$   $\chi^2/\text{NDF}$ : 29.7/25

Left Out:  $-117.002 \pm 65.060$   $\chi^2/\text{NDF}$ : 48.4/24

Right Out:  $-306.237 \pm 158.929$   $\chi^2/\text{NDF}$ : 21.4/30

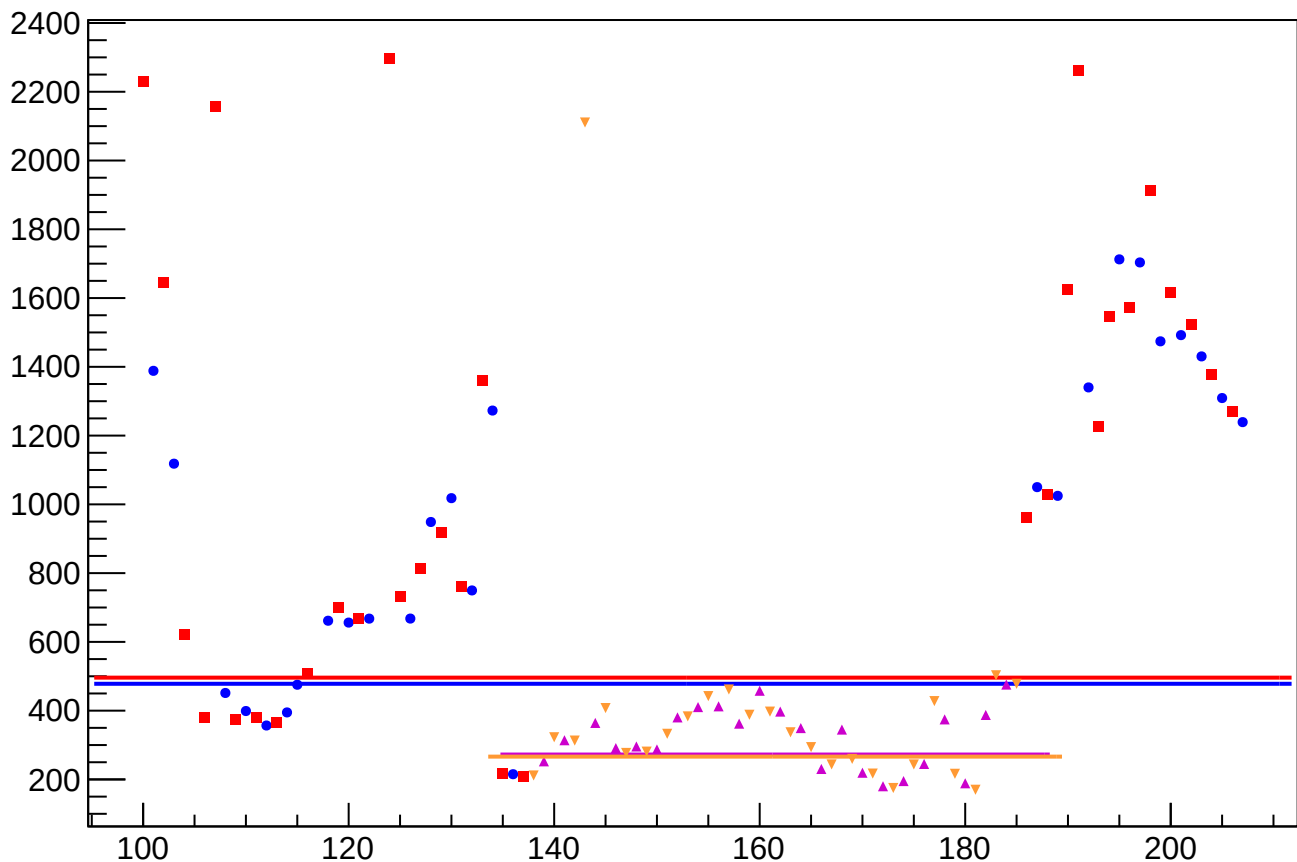
Left In:  $-107.459 \pm 67.003$   $\chi^2/\text{NDF}$ : 13.7/22

+ sign  $-156.399 \pm 60.232$   $\chi^2/\text{NDF}$ : 80.7/50

All:  $-147.162 \pm 43.114$   $\chi^2/\text{NDF}$ : 117.2/104

- sign  $-137.458 \pm 61.740$   $\chi^2/\text{NDF}$ : 36.4/53

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 478.170 $\pm$ 0.113  $\chi^2$ /NDF: 11564848.5/25

Left Out: 266.326 $\pm$ 0.046  $\chi^2$ /NDF: 4630167.4/24

Right Out: 496.037 $\pm$ 0.112  $\chi^2$ /NDF: 12302824.5/30

Left In: 272.378 $\pm$ 0.047  $\chi^2$ /NDF: 2887597.1/22

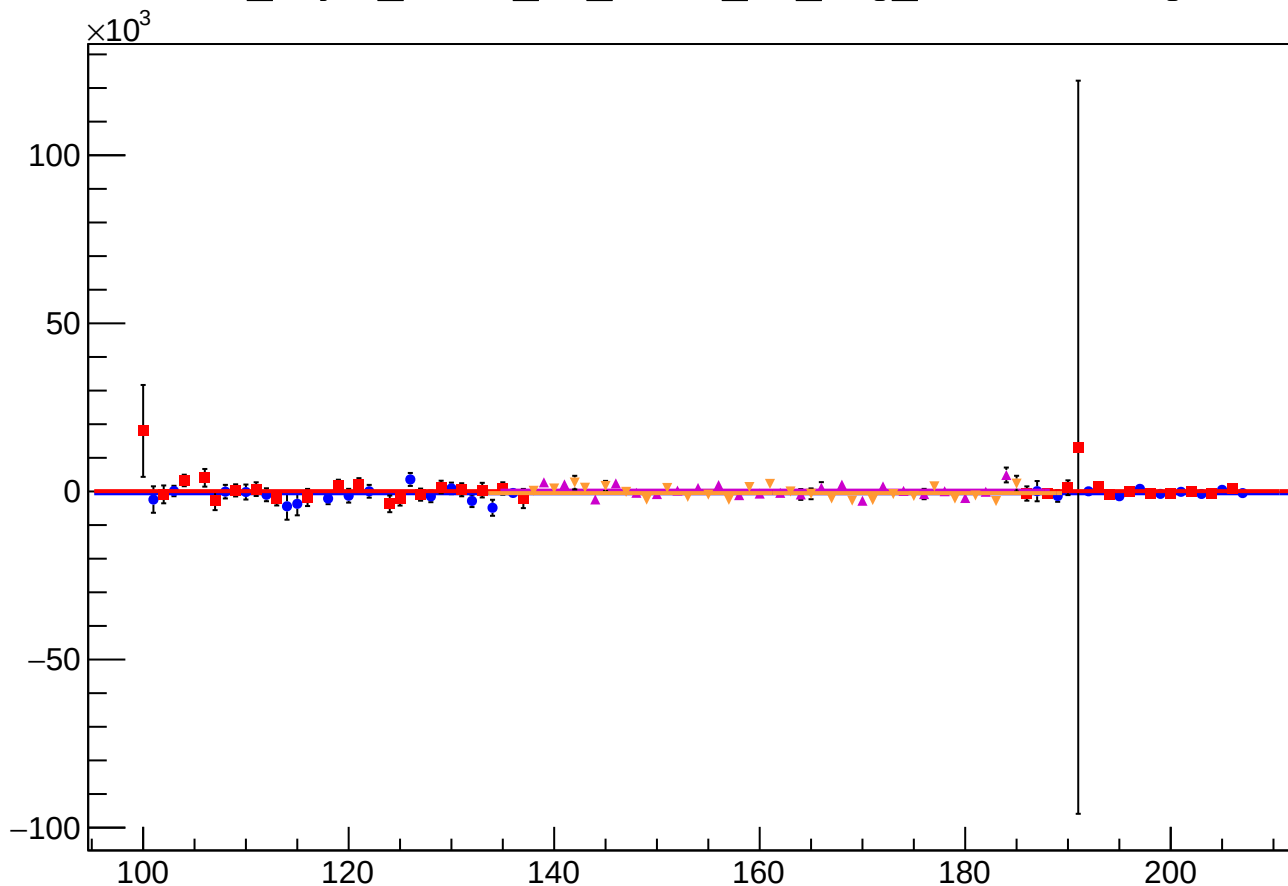
+ sign 296.602 $\pm$ 0.043  $\chi^2$ /NDF: 19225475.5/50

All: 301.249 $\pm$ 0.030  $\chi^2$ /NDF: 37803508.1/10

- sign 306.131 $\pm$ 0.044  $\chi^2$ /NDF: 18553622.3/53



dit\_asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_mean vs Slug



Right In: -545.336 $\pm$ 332.798  $\chi^2$ /NDF: 16.3/25

Left Out: -493.436 $\pm$ 282.734  $\chi^2$ /NDF:34.2/24

Right Out: 91.096 $\pm$ 321.978  $\chi^2$ /NDF: 21.3/30

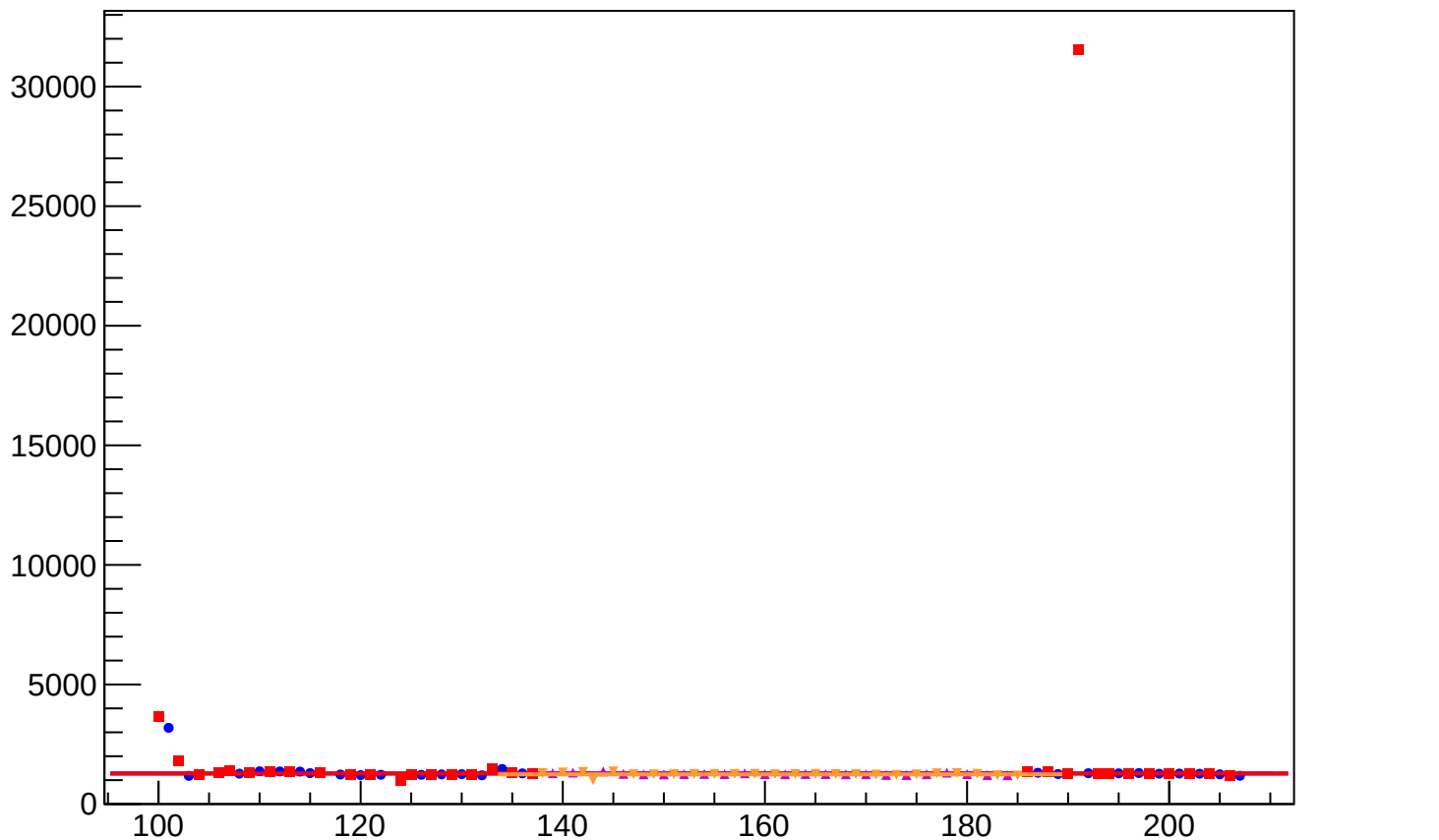
Left In: 242.004 $\pm$ 294.339  $\chi^2$ /NDF:30.7/22

+ sign -515.193 $\pm$ 215.472  $\chi^2$ /NDF: 50.5/50

All: -173.764 $\pm$ 152.985  $\chi^2$ /NDF: 107.7/104

- sign 173.304 $\pm$ 217.244  $\chi^2$ /NDF: 52.1/53

dit\_asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_rms vs Slug



Right In: 1275.993 $\pm$ 0.235  $\chi^2$ /NDF: 524957.3/25

Left Out: 1242.539 $\pm$ 0.200  $\chi^2$ /NDF: 130023.1/24

Right Out: 1281.036 $\pm$ 0.228  $\chi^2$ /NDF: 387538.7/30

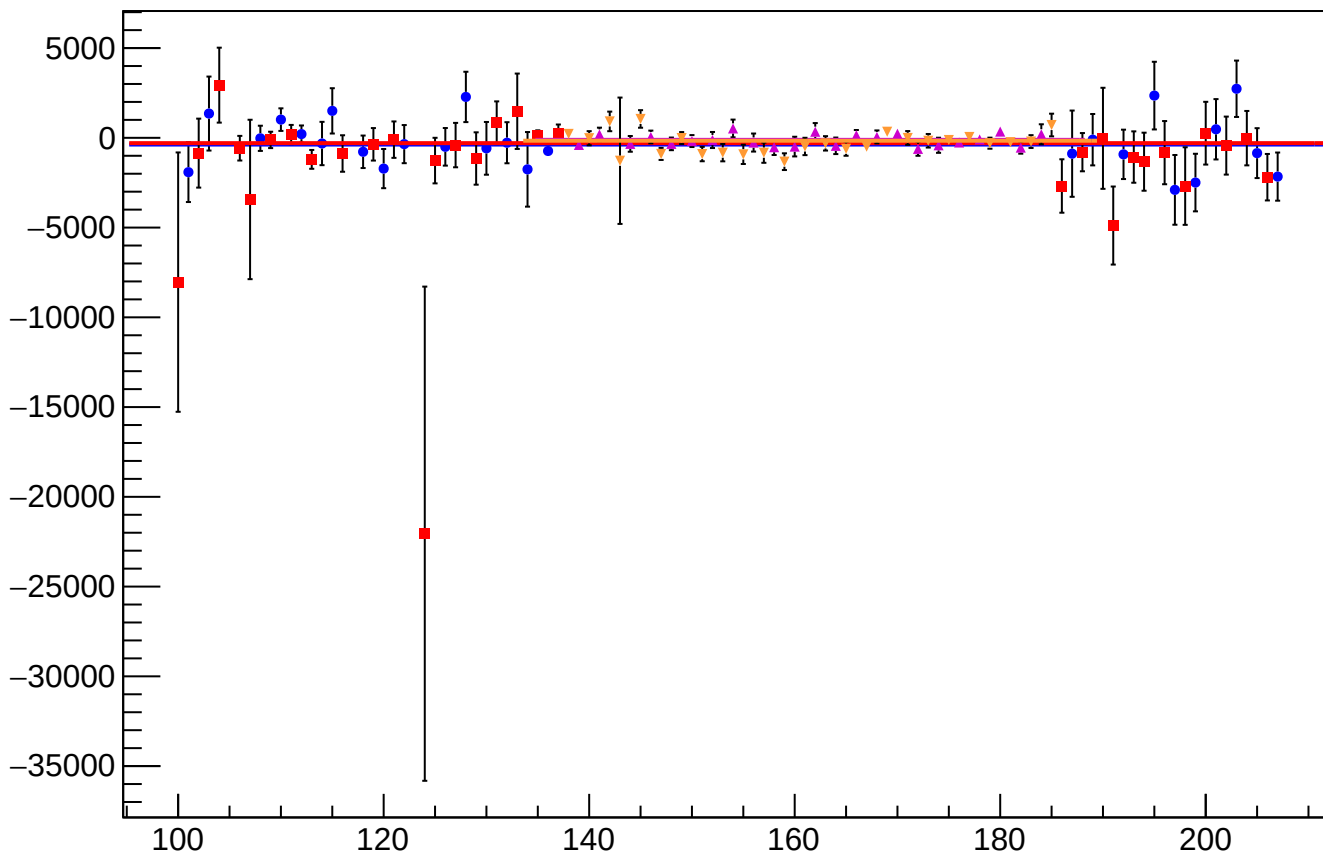
Left In: 1260.094 $\pm$ 0.208  $\chi^2$ /NDF: 27932.1/22

+ sign 1256.563 $\pm$ 0.152  $\chi^2$ /NDF: 666718.1/50

All: 1263.042 $\pm$ 0.108  $\chi^2$ /NDF: 1090444.0/10

- sign 1269.627 $\pm$ 0.154  $\chi^2$ /NDF: 420079.8/53

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_dit\_correction\_mean vs Slug



Right In:  $-374.043 \pm 161.013$   $\chi^2/\text{NDF}$ : 30.3/25

Left Out:  $-160.930 \pm 64.133$   $\chi^2/\text{NDF}$ : 43.8/24

Right Out:  $-296.054 \pm 158.992$   $\chi^2/\text{NDF}$ : 28.1/30

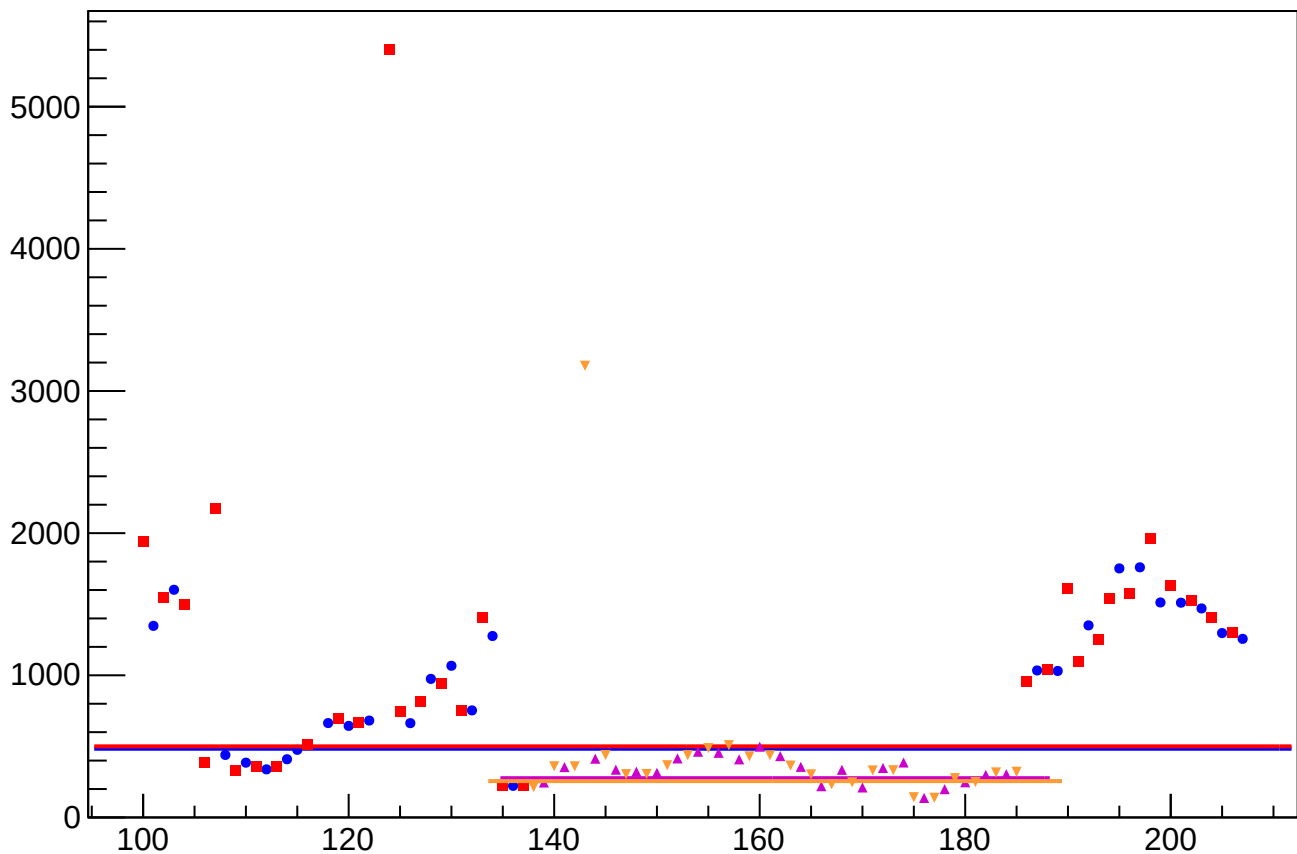
Left In:  $-113.722 \pm 68.841$   $\chi^2/\text{NDF}$ : 18.2/22

+ sign  $-190.110 \pm 59.580$   $\chi^2/\text{NDF}$ : 75.5/50

All:  $-167.701 \pm 43.344$   $\chi^2/\text{NDF}$ : 123.2/104

- sign  $-142.507 \pm 63.173$   $\chi^2/\text{NDF}$ : 47.4/53

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_dit\_correction\_rms vs Slug



Right In: 483.376+/-0.114  $\chi^2/\text{NDF}$ : 11712250.4/25

Left Out: 255.768+/-0.045  $\chi^2/\text{NDF}$ : 6373929.4/24

Right Out: 500.158+/-0.112  $\chi^2/\text{NDF}$ : 12831318.7/30

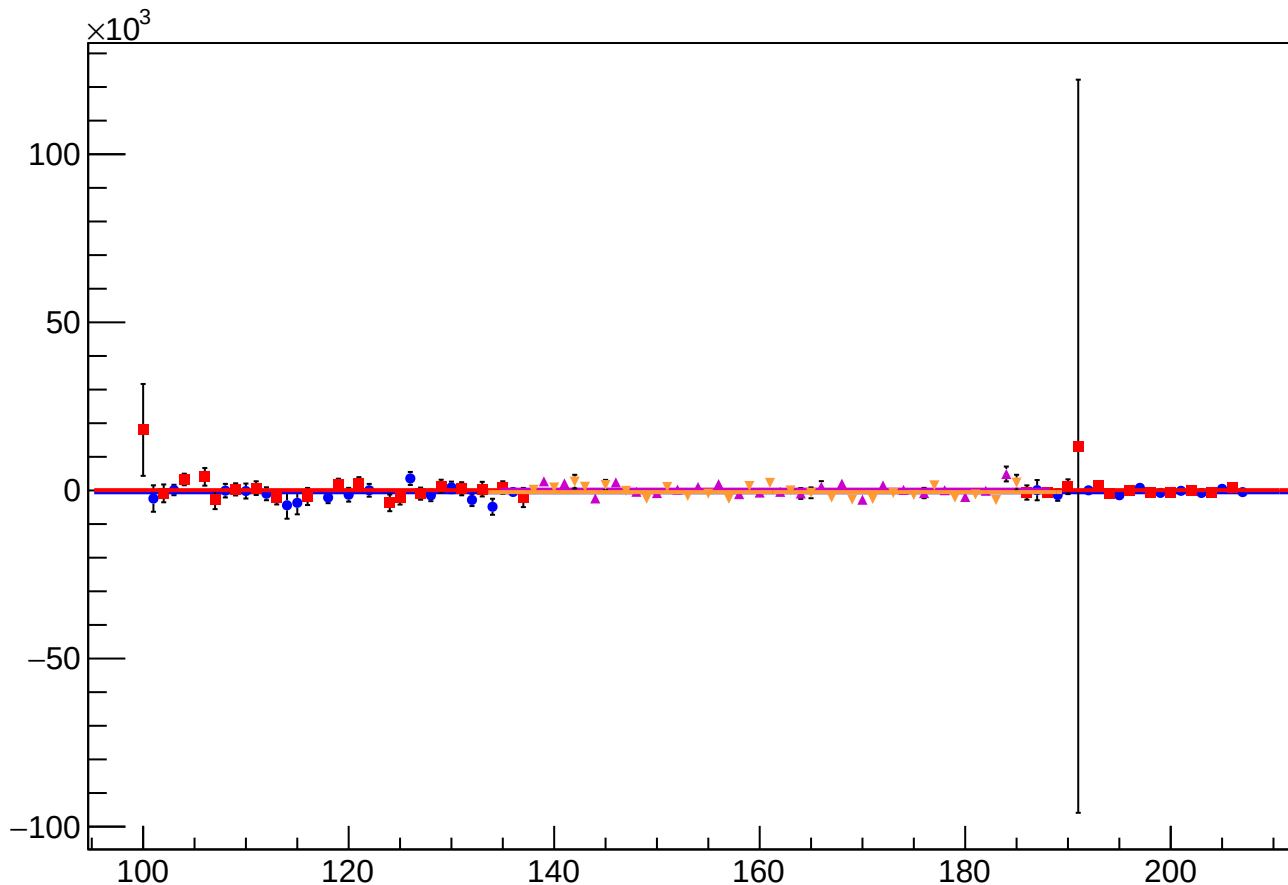
Left In: 276.298+/-0.049  $\chi^2/\text{NDF}$ : 4027410.5/22

+ sign 286.934+/-0.042  $\chi^2/\text{NDF}$ : 21535471.8/50

All: 298.564+/-0.031  $\chi^2/\text{NDF}$ : 41895043.6/10

- sign 311.640+/-0.045  $\chi^2/\text{NDF}$ : 20197667.3/53

eigen\_dit\_asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_mean vs Slug



Right In: -545.336+/-332.798  $\chi^2/\text{NDF}$ : 16.3/25

Left Out: -493.435+/-282.734  $\chi^2/\text{NDF}$ : 34.2/24

Right Out: 91.096+/-321.977  $\chi^2/\text{NDF}$ : 21.3/30

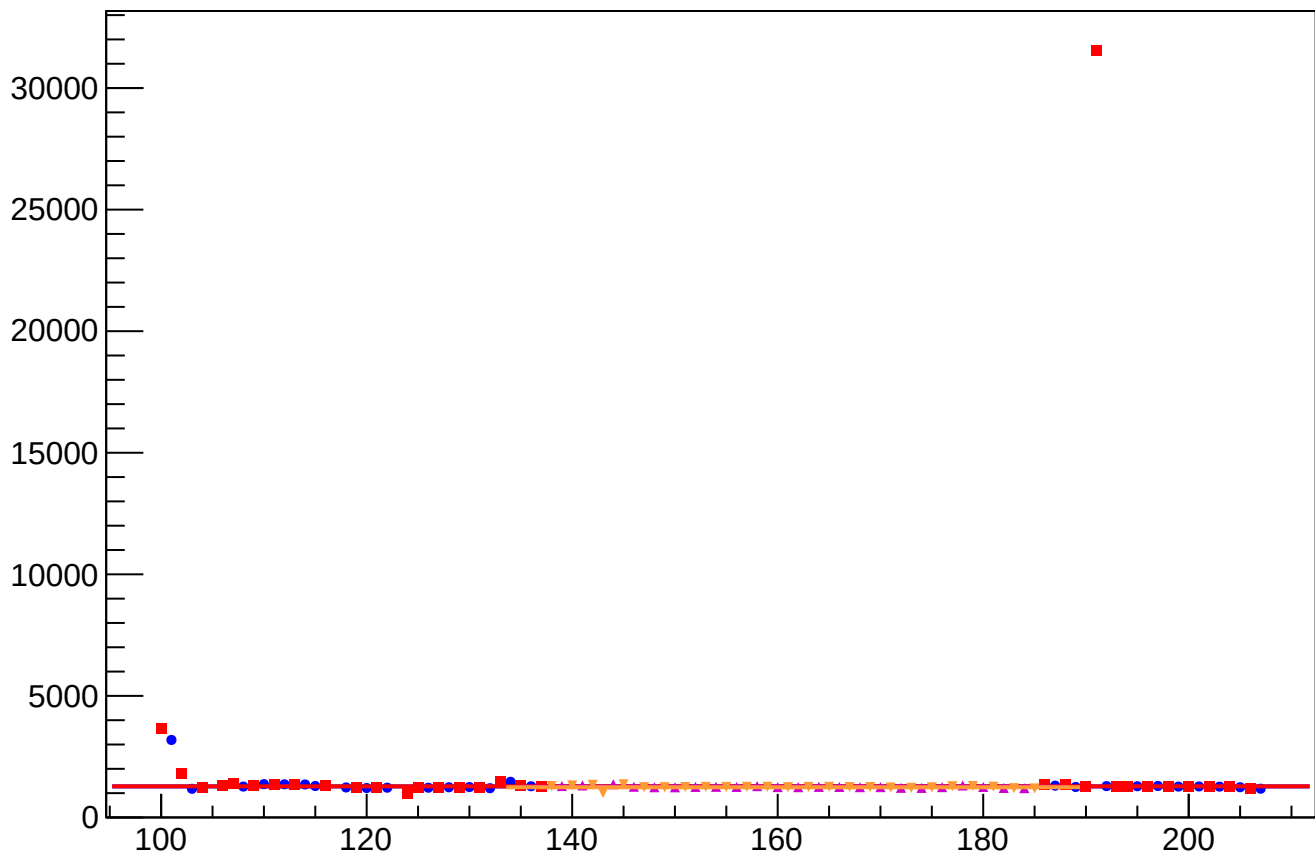
Left In: 242.004+/-294.339  $\chi^2/\text{NDF}$ : 30.7/22

+ sign -515.192+/-215.472  $\chi^2/\text{NDF}$ : 50.5/50

All: -173.764+/-152.985  $\chi^2/\text{NDF}$ : 107.7/104

- sign 173.303+/-217.244  $\chi^2/\text{NDF}$ : 52.1/53

eigen\_dit\_asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_rms vs Slug



Right In: 1275.993+/-0.235  $\chi^2/\text{NDF}$ : 524957.3/25

Left Out: 1242.539+/-0.200  $\chi^2/\text{NDF}$ : 130022.2/24

Right Out: 1281.036+/-0.228  $\chi^2/\text{NDF}$ : 387539.0/30

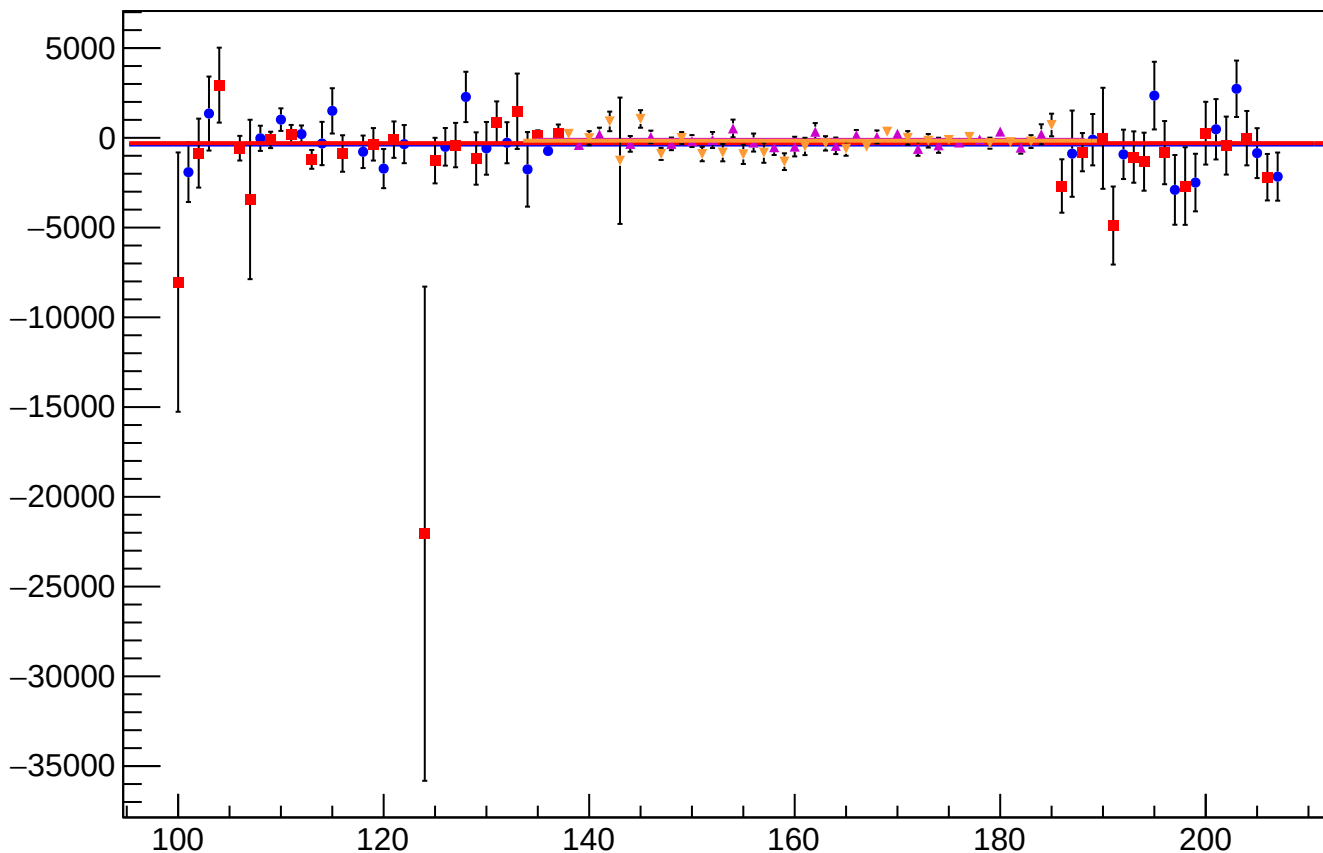
Left In: 1260.094+/-0.208  $\chi^2/\text{NDF}$ : 27932.2/22

+ sign 1256.563+/-0.152  $\chi^2/\text{NDF}$ : 666717.2/50

All: 1263.042+/-0.108  $\chi^2/\text{NDF}$ : 1090443.4/100

- sign 1269.627+/-0.154  $\chi^2/\text{NDF}$ : 420080.2/53

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-374.044 \pm 161.016$   $\chi^2/\text{NDF}$ : 30.3/25

Left Out:  $-160.933 \pm 64.133$   $\chi^2/\text{NDF}$ : 43.8/24

Right Out:  $-296.062 \pm 158.993$   $\chi^2/\text{NDF}$ : 28.1/30

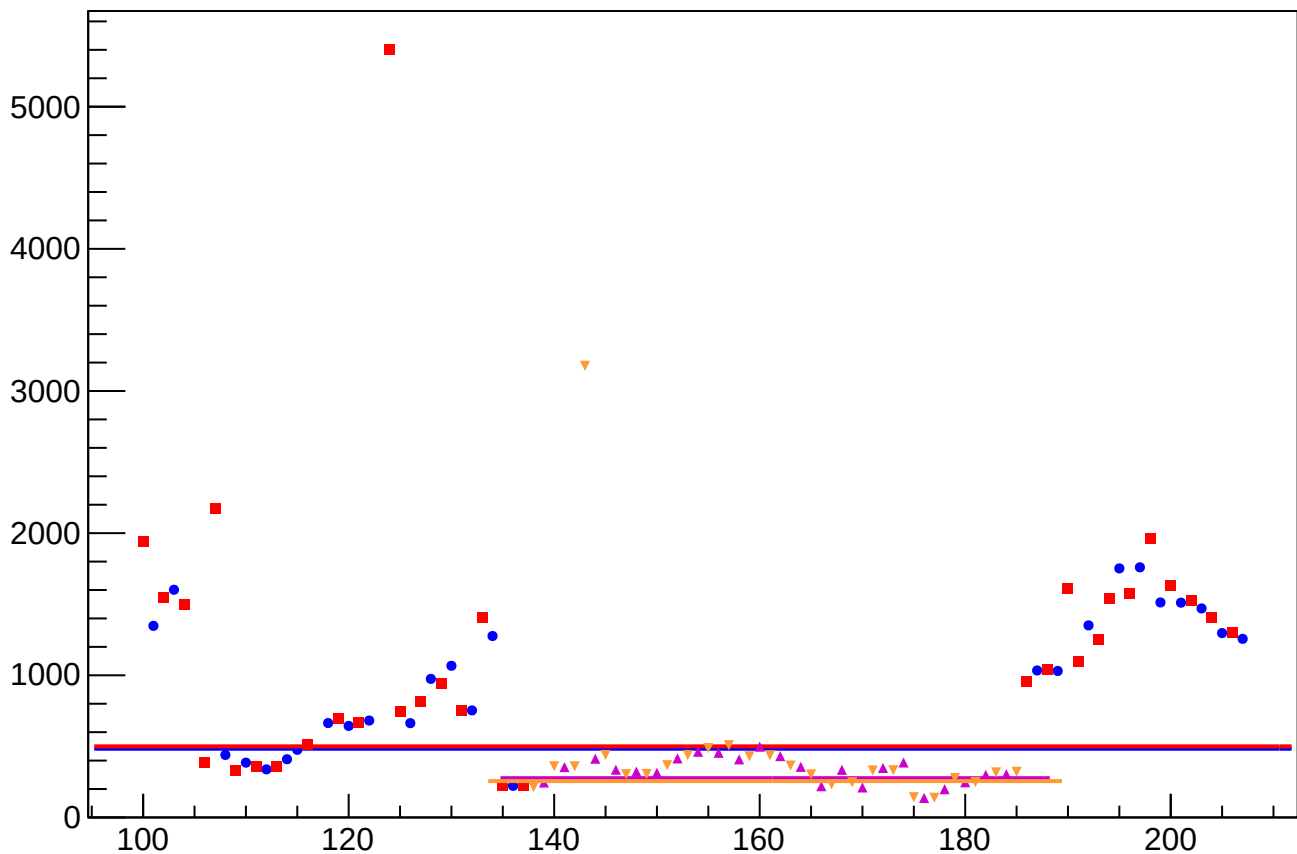
Left In:  $-113.720 \pm 68.841$   $\chi^2/\text{NDF}$ : 18.2/22

+ sign  $-190.113 \pm 59.581$   $\chi^2/\text{NDF}$ : 75.5/50

All:  $-167.702 \pm 43.344$   $\chi^2/\text{NDF}$ : 123.2/104

- sign  $-142.507 \pm 63.173$   $\chi^2/\text{NDF}$ : 47.4/53

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 483.388 $\pm$ 0.114  $\chi^2$ /NDF: 11711900.0/25

Left Out: 255.770 $\pm$ 0.045  $\chi^2$ /NDF: 6373829.7/24

Right Out: 500.167 $\pm$ 0.112  $\chi^2$ /NDF: 12831032.7/30

Left In: 276.299 $\pm$ 0.049  $\chi^2$ /NDF: 4027371.0/22

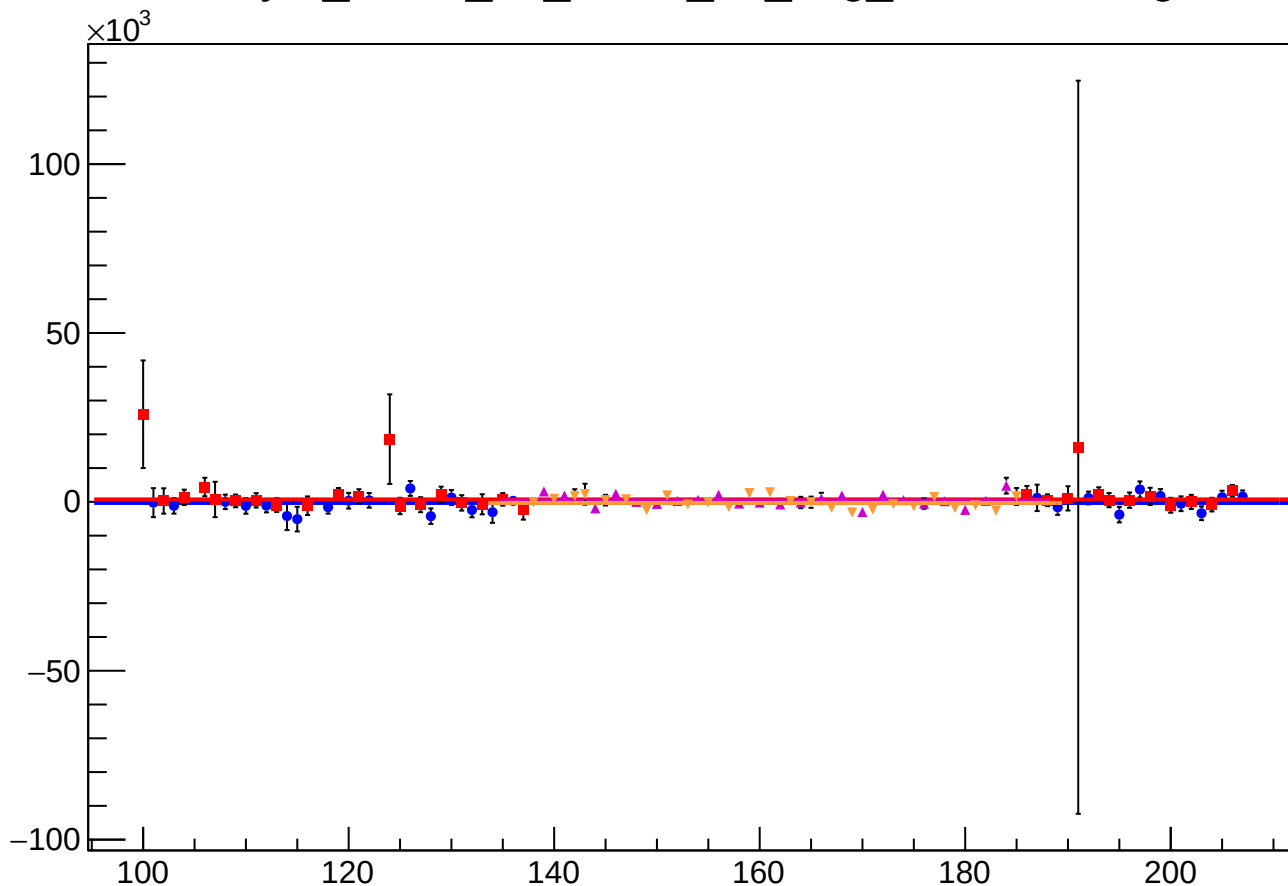
+ sign 286.936 $\pm$ 0.042  $\chi^2$ /NDF: 21535255.5/50

All: 298.566 $\pm$ 0.031  $\chi^2$ /NDF: 41894694.0/10

- sign 311.642 $\pm$ 0.045  $\chi^2$ /NDF: 20197546.6/53



asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_mean vs Slug



Right In:  $-314.086 \pm 434.574$   $\chi^2/\text{NDF}$ : 24.0/25

Left Out:  $-319.744 \pm 298.271$   $\chi^2/\text{NDF}$ : 31.6/24

Right Out:  $731.385 \pm 426.611$   $\chi^2/\text{NDF}$ : 15.9/30

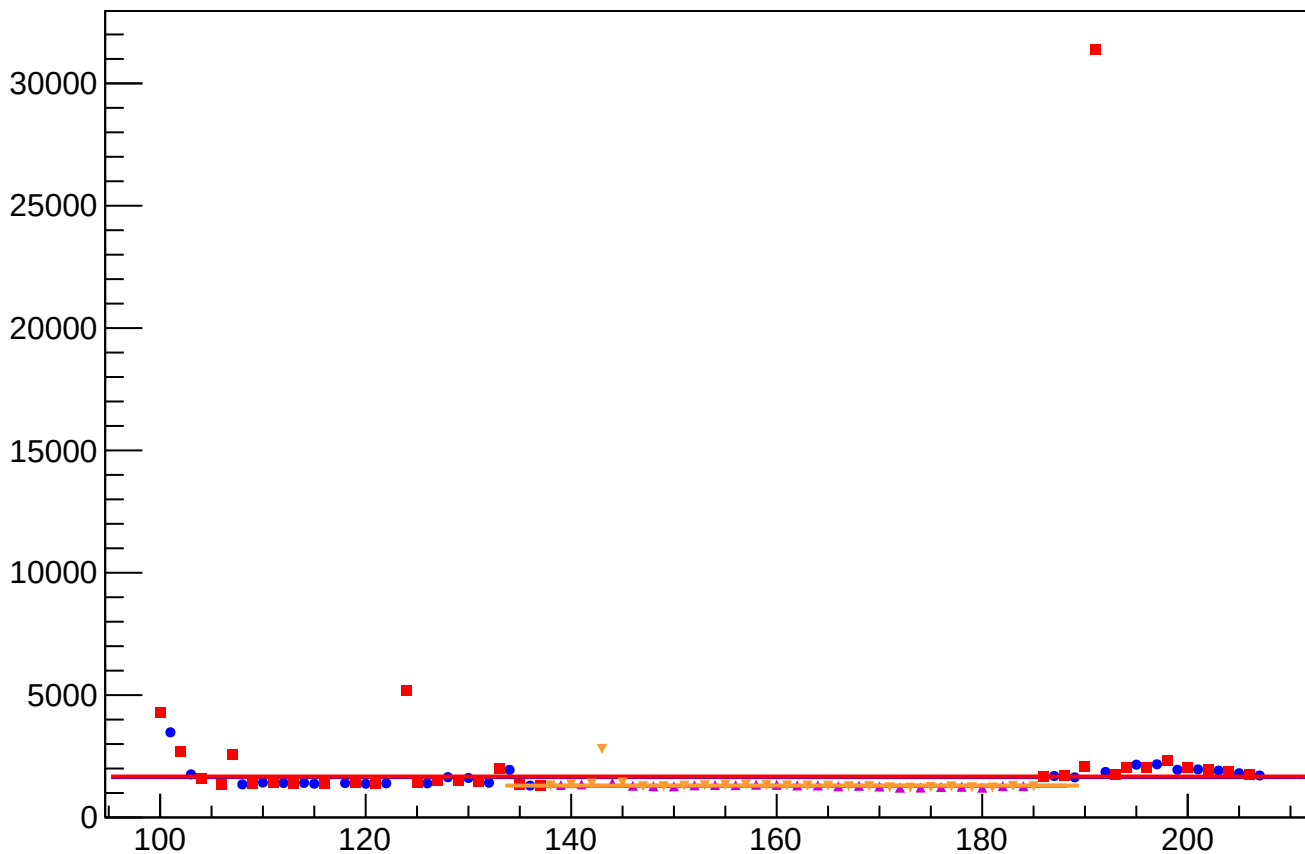
Left In:  $356.387 \pm 301.902$   $\chi^2/\text{NDF}$ : 29.7/22

+ sign  $-317.932 \pm 245.919$   $\chi^2/\text{NDF}$ : 55.5/50

All:  $80.955 \pm 174.074$   $\chi^2/\text{NDF}$ : 106.9/104

- sign  $481.520 \pm 246.436$   $\chi^2/\text{NDF}$ : 46.1/53

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_rms vs Slug



Right In: 1648.193+/-0.307  $\chi^2/\text{NDF}$ : 1104688.5/25

Left Out: 1304.156+/-0.211  $\chi^2/\text{NDF}$ : 519609.1/24

Right Out: 1672.588+/-0.302  $\chi^2/\text{NDF}$ : 1374227.9/30

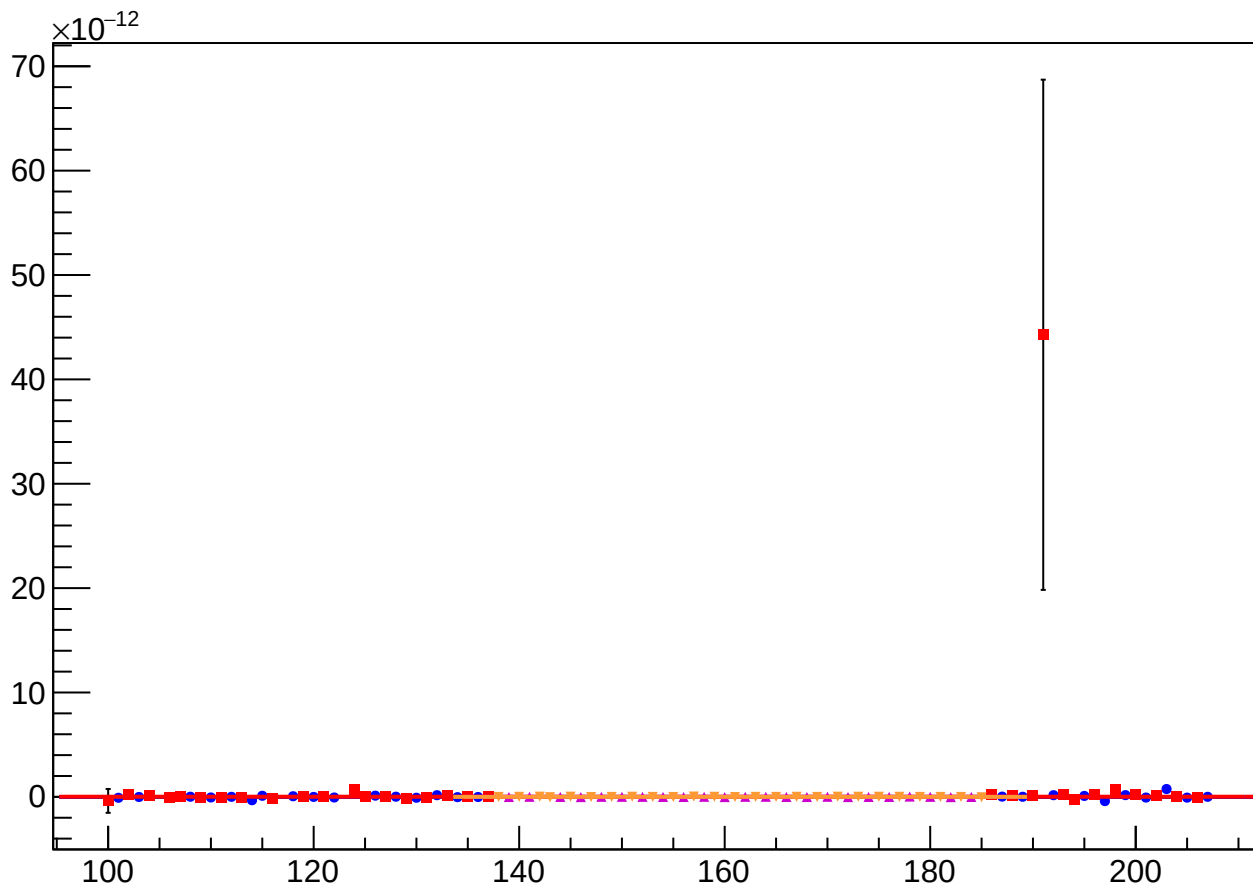
Left In: 1292.123+/-0.213  $\chi^2/\text{NDF}$ : 48343.1/22

+ sign 1414.326+/-0.174  $\chi^2/\text{NDF}$ : 2476372.2/50

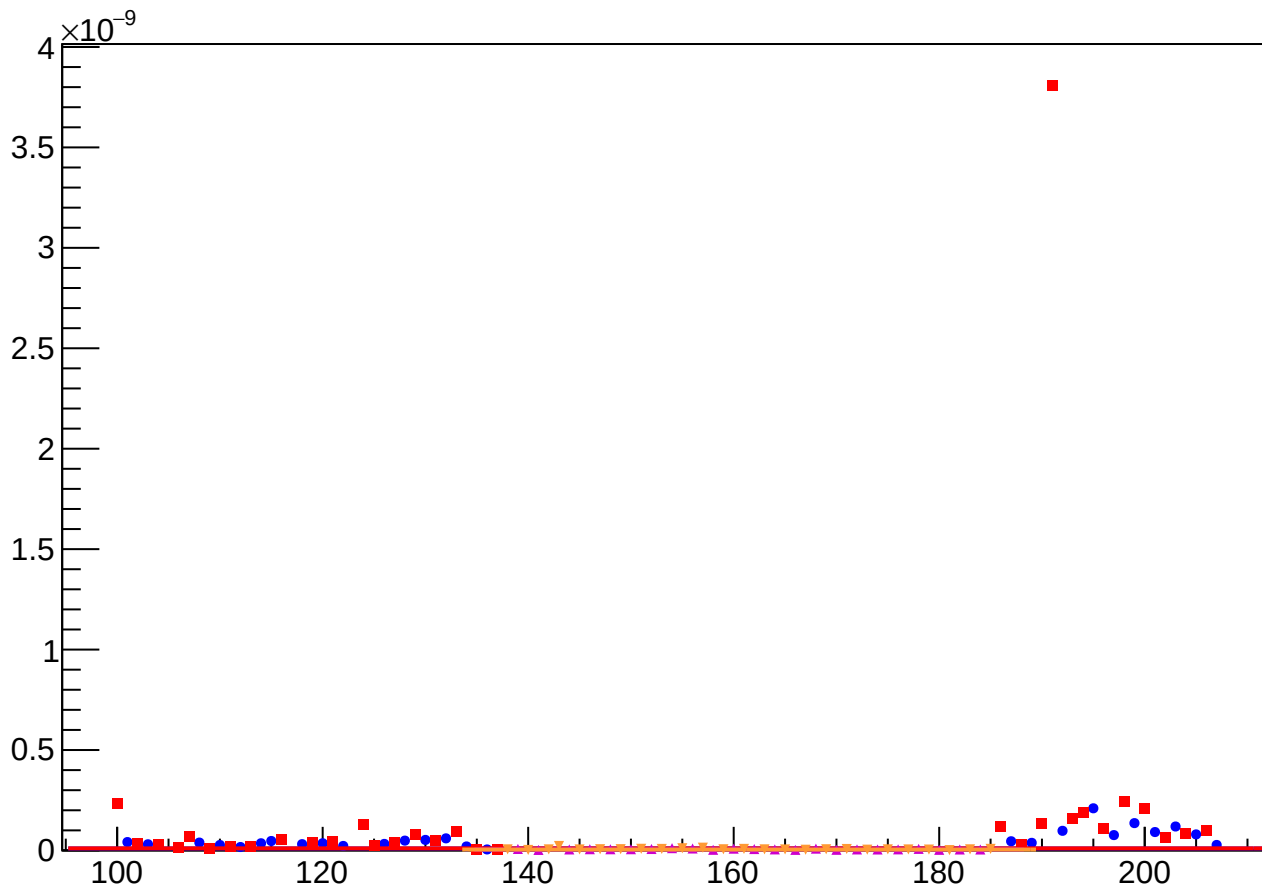
All: 1416.699+/-0.123  $\chi^2/\text{NDF}$ : 4959234.0/100

- sign 1419.081+/-0.174  $\chi^2/\text{NDF}$ : 2482488.7/53

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 6829435.1/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:2715297.7/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 9284599.3/30

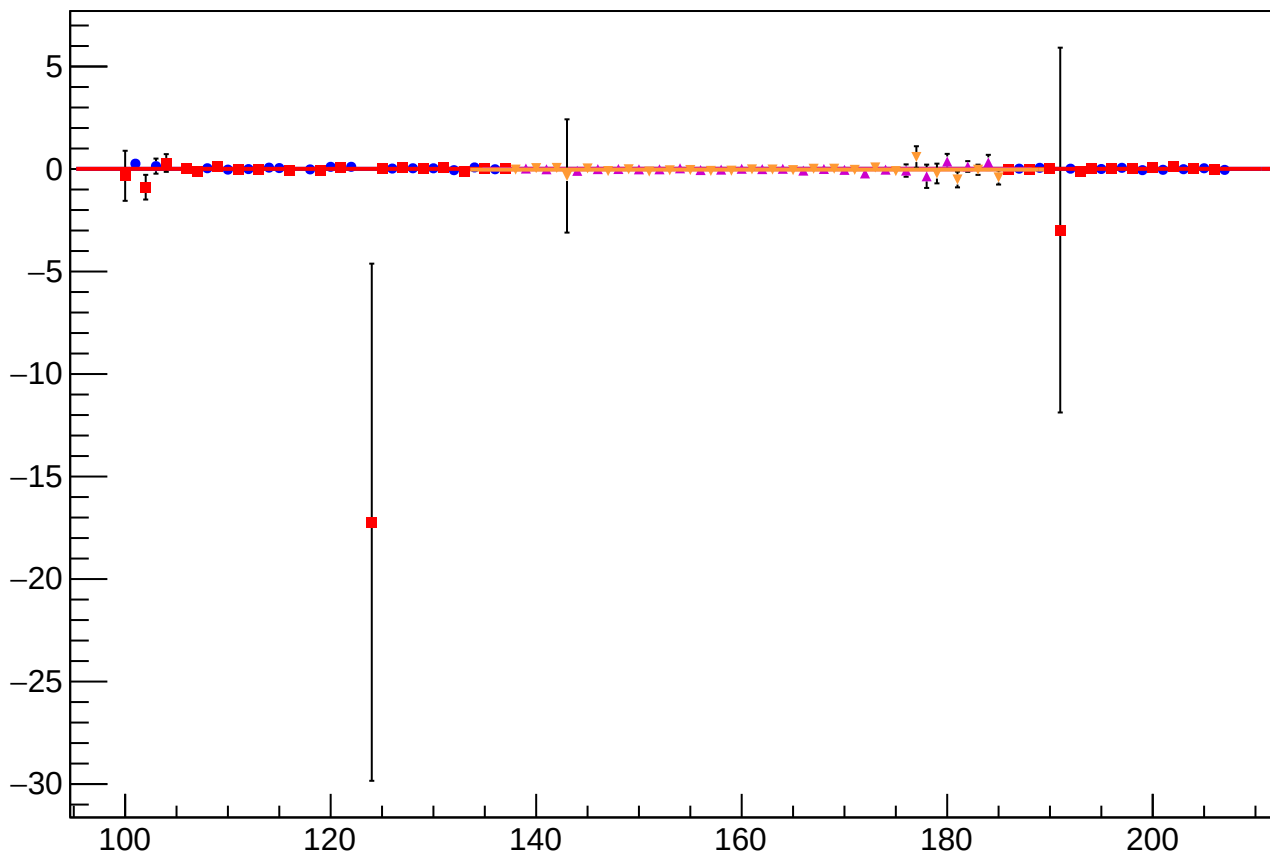
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:1884808.0/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 10485954.8/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 22613319.4/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 12102161.2/53

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.008 \pm 0.012$   $\chi^2/\text{NDF}$ : 15.7/25

Left Out:  $-0.028 \pm 0.010$   $\chi^2/\text{NDF}$ : 28.1/24

Right Out:  $0.009 \pm 0.012$   $\chi^2/\text{NDF}$ : 22.6/30

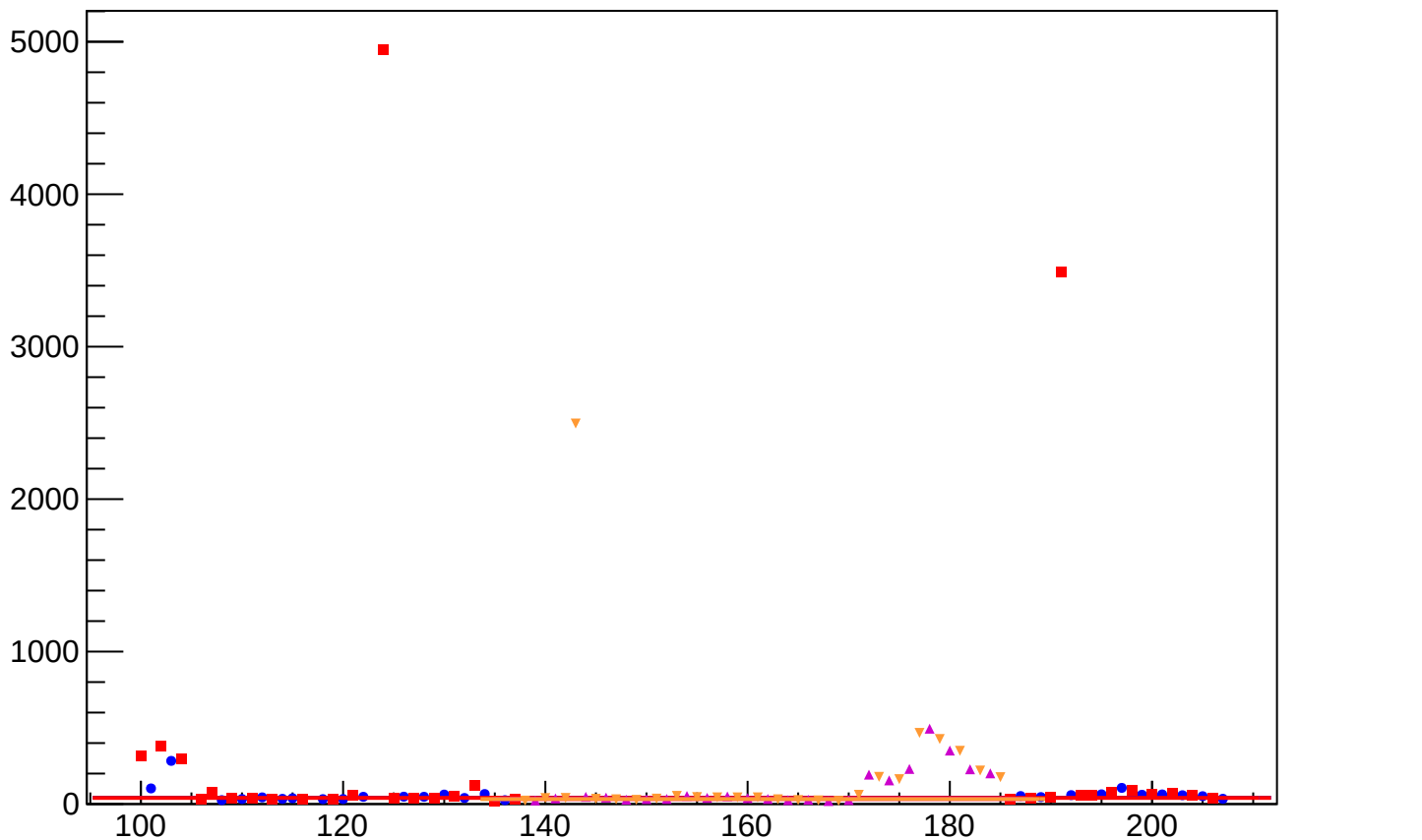
Left In:  $-0.011 \pm 0.009$   $\chi^2/\text{NDF}$ : 13.2/22

+ sign  $-0.015 \pm 0.008$   $\chi^2/\text{NDF}$ : 49.1/50

All:  $-0.009 \pm 0.005$   $\chi^2/\text{NDF}$ : 87.8/104

- sign  $-0.003 \pm 0.007$   $\chi^2/\text{NDF}$ : 37.5/53

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 41.642 $\pm$ 0.009  $\chi^2$ /NDF: 4071459.2/25

Left Out: 32.551 $\pm$ 0.007  $\chi^2$ /NDF: 10871758.1/24

Right Out: 40.367 $\pm$ 0.008  $\chi^2$ /NDF: 5416368.0/30

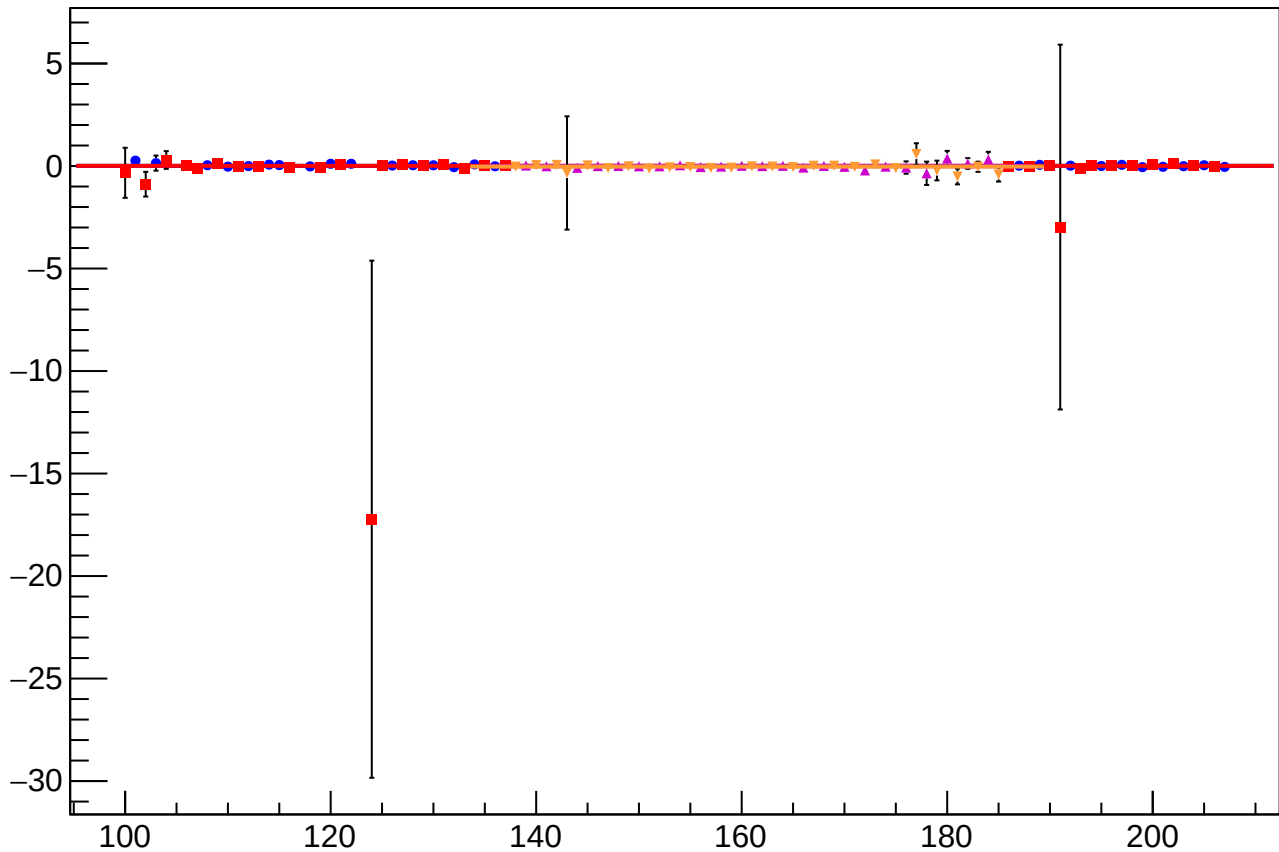
Left In: 32.738 $\pm$ 0.007  $\chi^2$ /NDF: 8963240.8/22

+ sign 35.926 $\pm$ 0.005  $\chi^2$ /NDF: 15620855.0/50

All: 35.830 $\pm$ 0.004  $\chi^2$ /NDF: 30508267.5/104

- sign 35.738 $\pm$ 0.005  $\chi^2$ /NDF: 14886780.8/53

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.008 $\pm$ 0.012  $\chi^2$ /NDF: 15.7/25

Left Out: -0.028 $\pm$ 0.010  $\chi^2$ /NDF: 28.1/24

Right Out: 0.009 $\pm$ 0.012  $\chi^2$ /NDF: 22.6/30

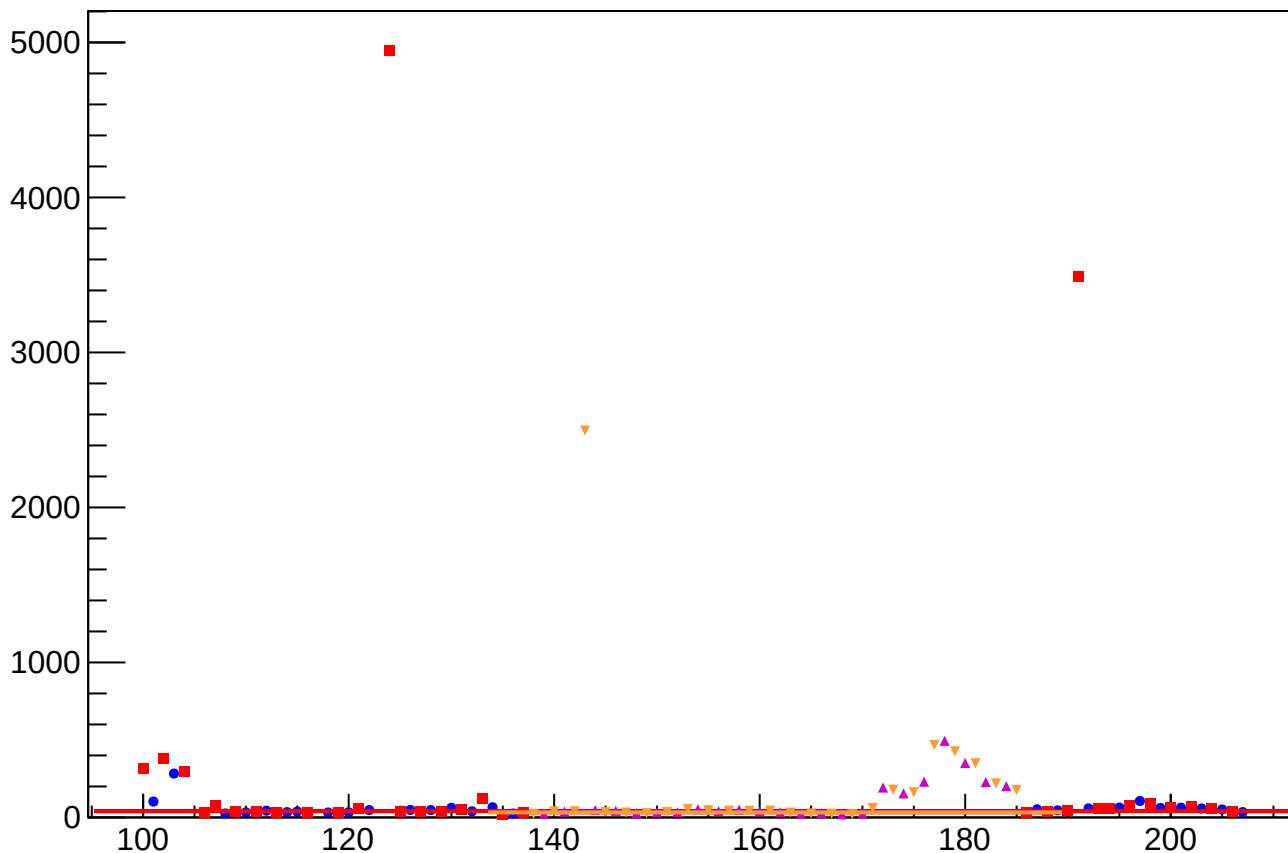
Left In: -0.011 $\pm$ 0.009  $\chi^2$ /NDF: 13.2/22

+ sign -0.015 $\pm$ 0.008  $\chi^2$ /NDF: 49.1/50

All: -0.009 $\pm$ 0.005  $\chi^2$ /NDF: 87.8/104

- sign -0.003 $\pm$ 0.007  $\chi^2$ /NDF: 37.5/53

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 41.642 $\pm$ 0.009  $\chi^2$ /NDF: 4071459.2/25

Left Out: 32.551 $\pm$ 0.007  $\chi^2$ /NDF: 10871758.1/24

Right Out: 40.367 $\pm$ 0.008  $\chi^2$ /NDF: 5416368.0/30

Left In: 32.738 $\pm$ 0.007  $\chi^2$ /NDF: 8963240.8/22

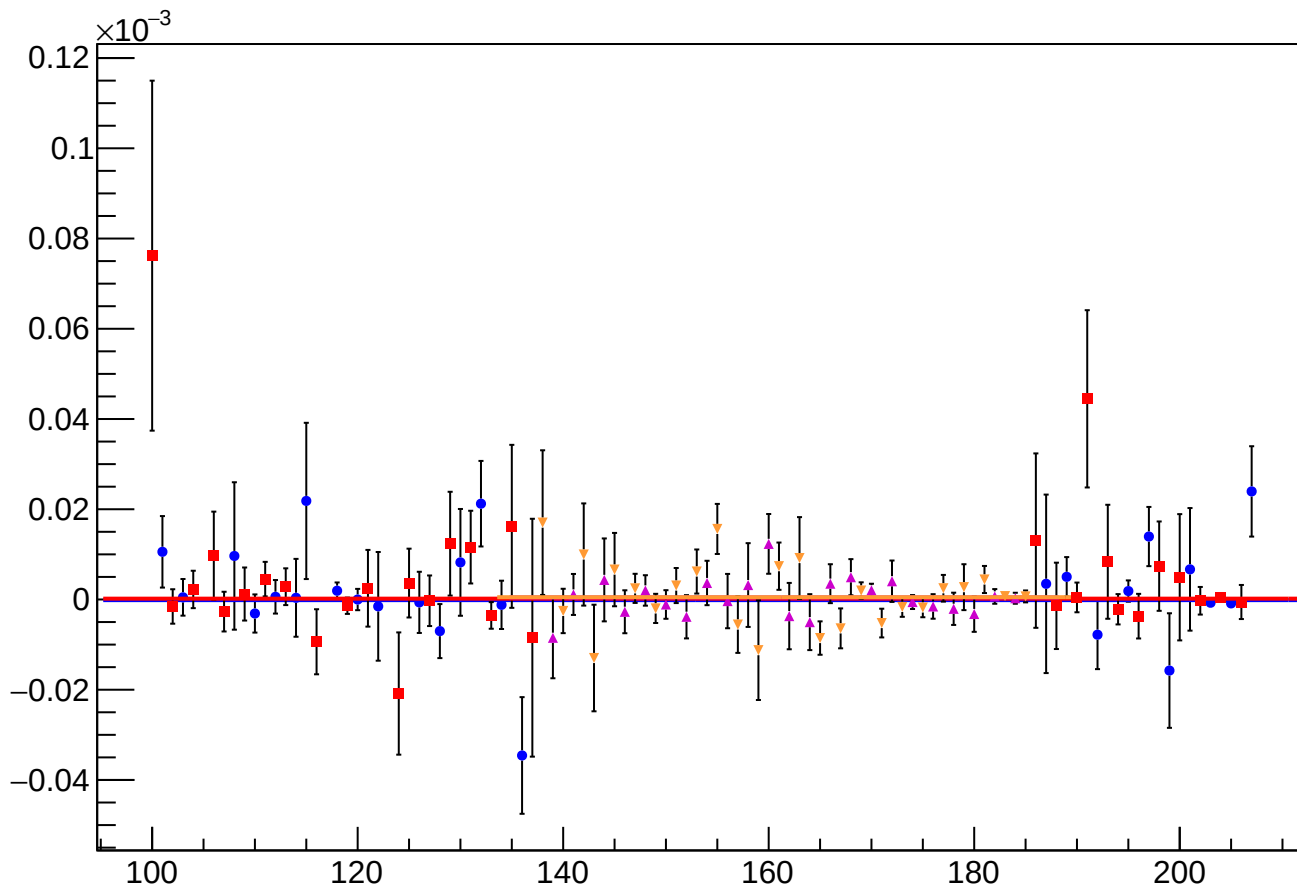
+ sign 35.926 $\pm$ 0.005  $\chi^2$ /NDF: 15620855.0/50

All: 35.830 $\pm$ 0.004  $\chi^2$ /NDF: 30508267.5/104

- sign 35.738 $\pm$ 0.005  $\chi^2$ /NDF: 14886780.8/53



asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 36.1/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:35.7/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 26.1/30

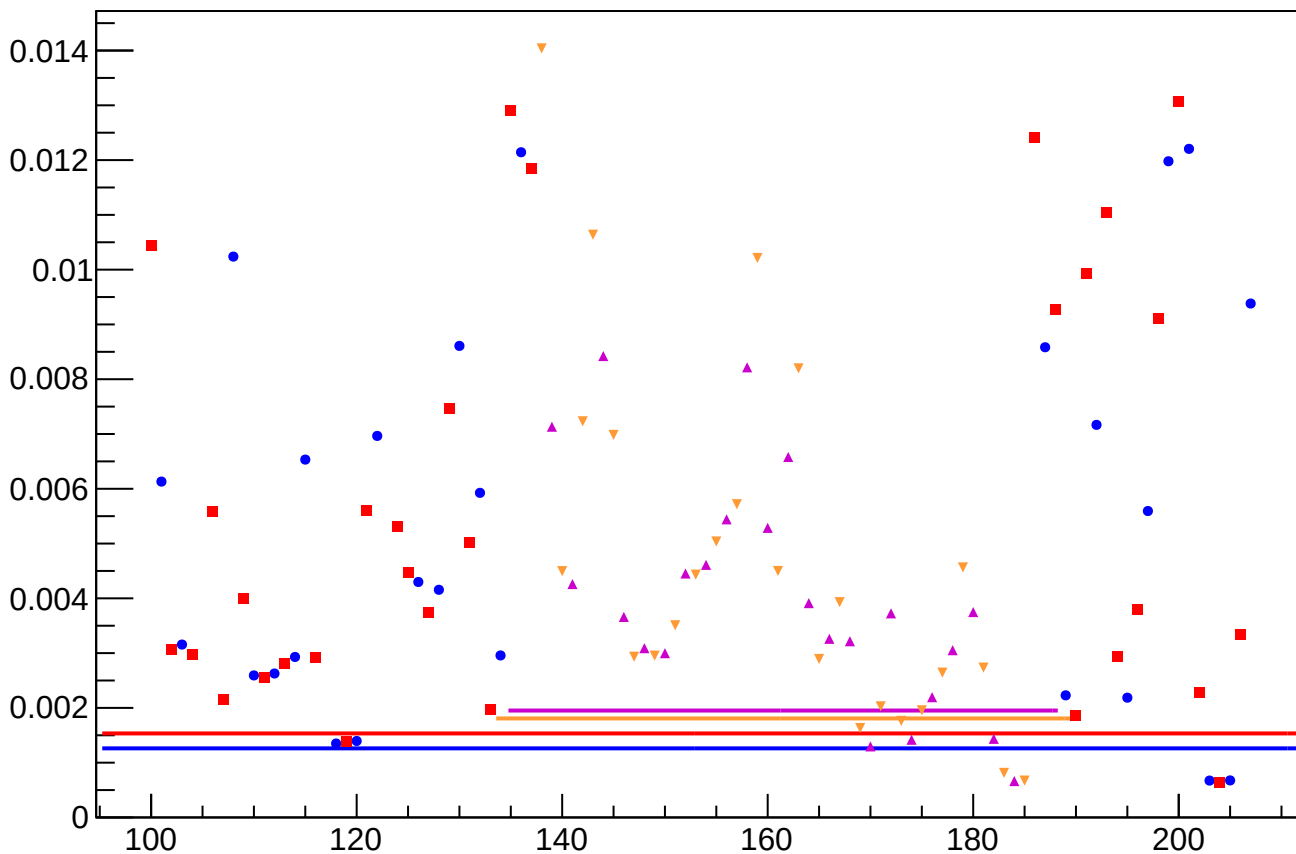
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:13.7/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 72.6/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 112.6/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 39.9/53

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 15330246.8/25

Left Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 14941257.4/24

Right Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 15411552.5/30

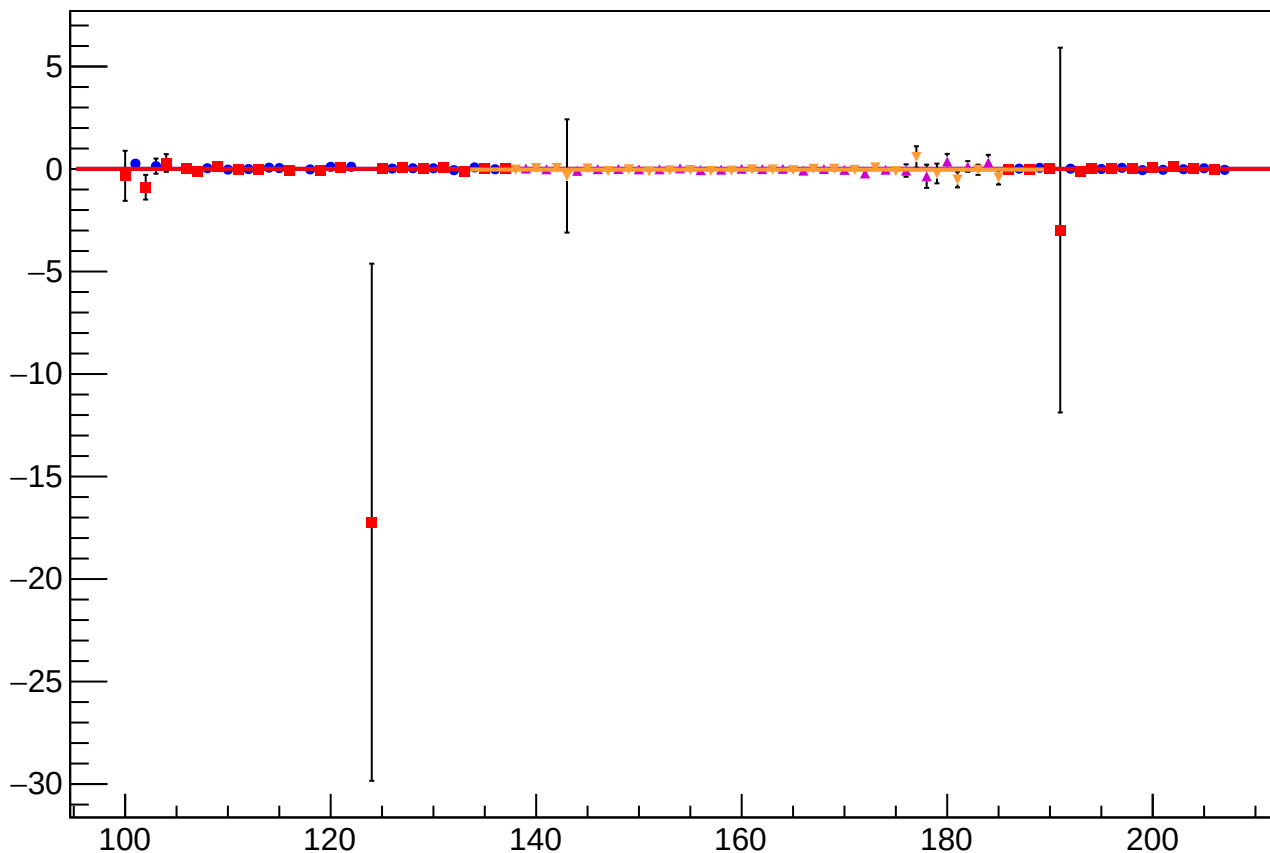
Left In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 11478607.0/22

+ sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 31326915.9/50

All: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 59045619.7/104

- sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 27417185.8/53

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.008 \pm 0.012$   $\chi^2/\text{NDF}$ : 15.7/25

Left Out:  $-0.028 \pm 0.010$   $\chi^2/\text{NDF}$ : 28.1/24

Right Out:  $0.009 \pm 0.012$   $\chi^2/\text{NDF}$ : 22.6/30

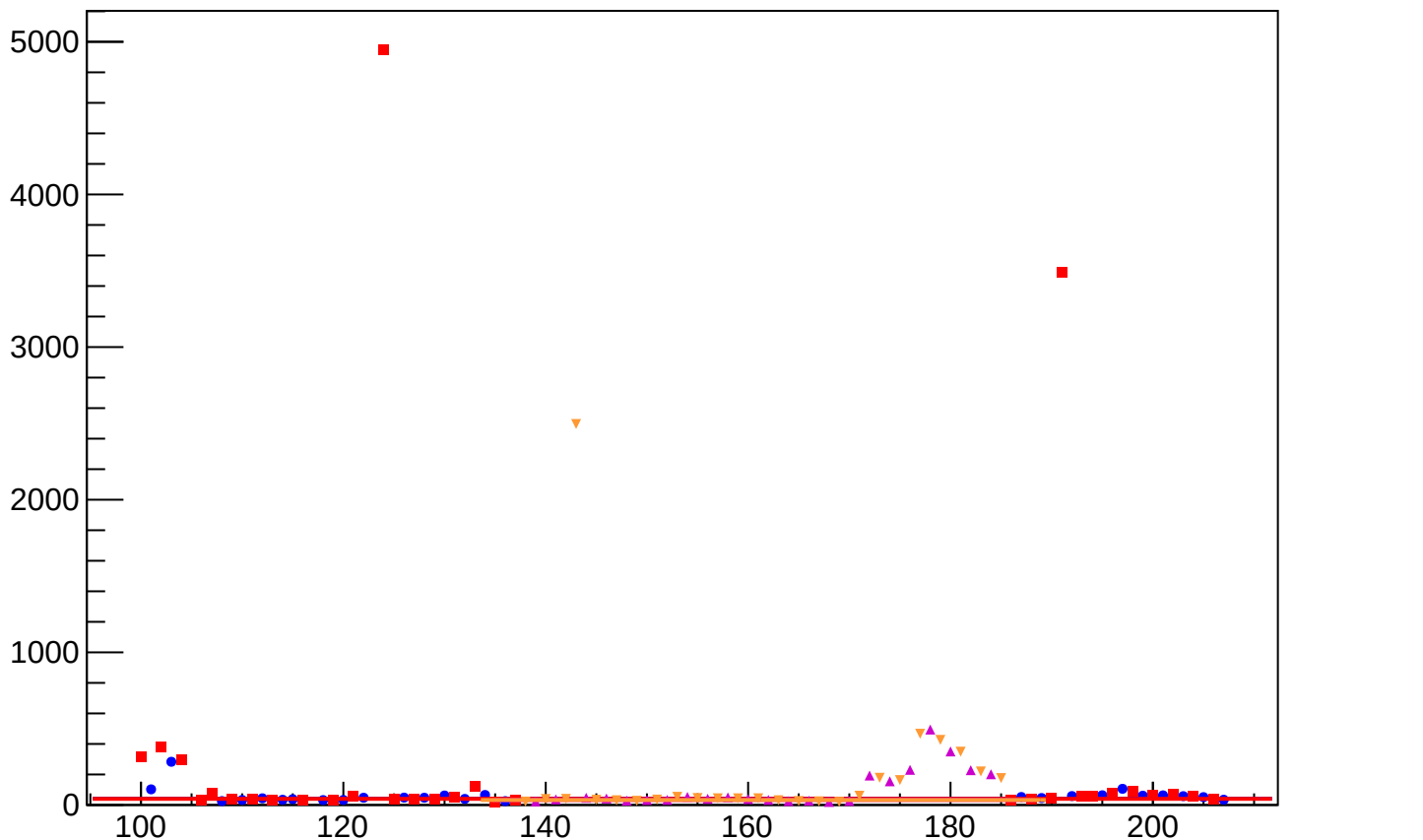
Left In:  $-0.011 \pm 0.009$   $\chi^2/\text{NDF}$ : 13.2/22

+ sign  $-0.015 \pm 0.008$   $\chi^2/\text{NDF}$ : 49.1/50

All:  $-0.009 \pm 0.005$   $\chi^2/\text{NDF}$ : 87.8/104

- sign  $-0.003 \pm 0.007$   $\chi^2/\text{NDF}$ : 37.5/53

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 41.643+/-0.009  $\chi^2/\text{NDF}$ : 4071035.7/25

Left Out: 32.551+/-0.007  $\chi^2/\text{NDF}$ :10872015.8/24

Right Out: 40.367+/-0.008  $\chi^2/\text{NDF}$ : 5416163.6/30

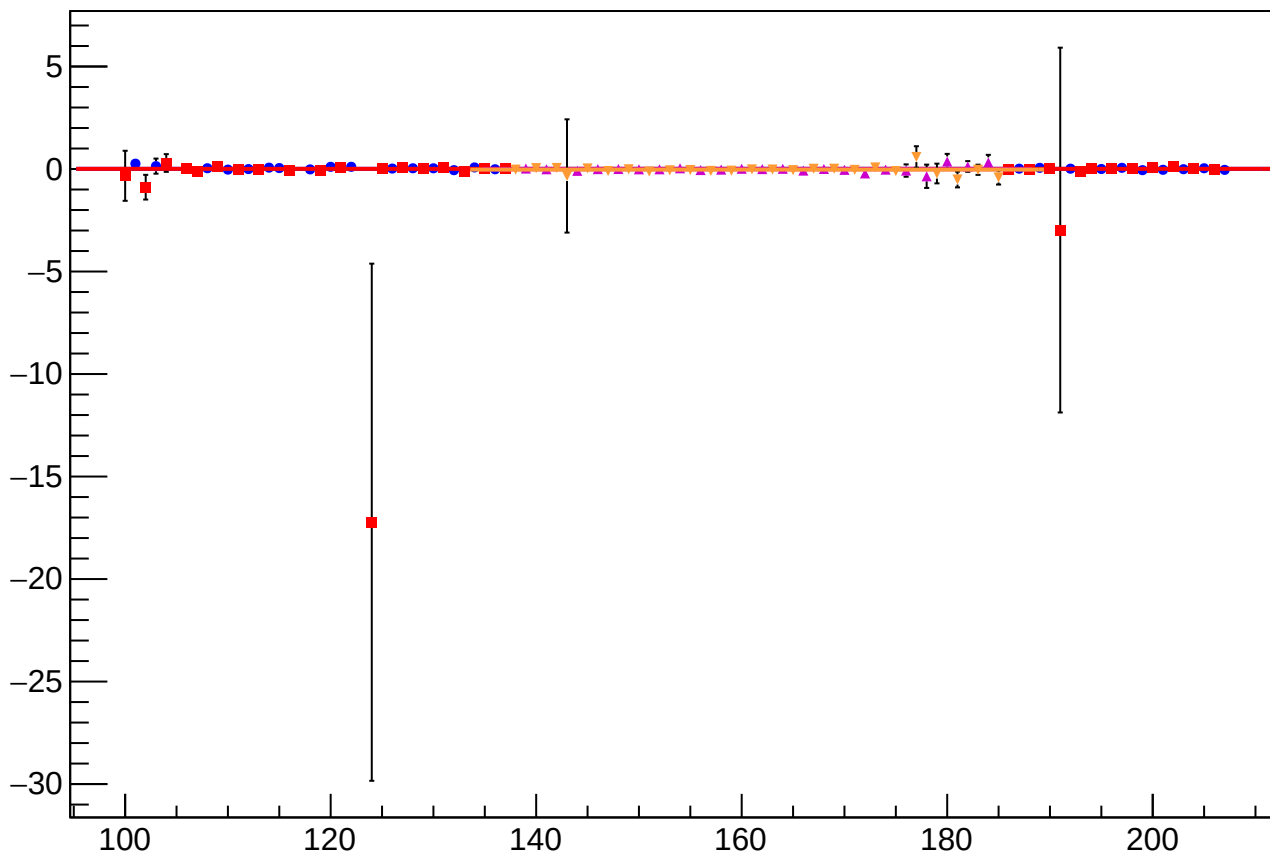
Left In: 32.737+/-0.007  $\chi^2/\text{NDF}$ :8963873.9/22

+ sign 35.926+/-0.005  $\chi^2/\text{NDF}$ : 15620790.6/50

All: 35.830+/-0.004  $\chi^2/\text{NDF}$ : 30508827.5/104

- sign 35.737+/-0.005  $\chi^2/\text{NDF}$ : 14887399.3/53

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.008 \pm 0.012$   $\chi^2/\text{NDF}$ : 15.7/25

Left Out:  $-0.028 \pm 0.010$   $\chi^2/\text{NDF}$ : 28.1/24

Right Out:  $0.009 \pm 0.012$   $\chi^2/\text{NDF}$ : 22.6/30

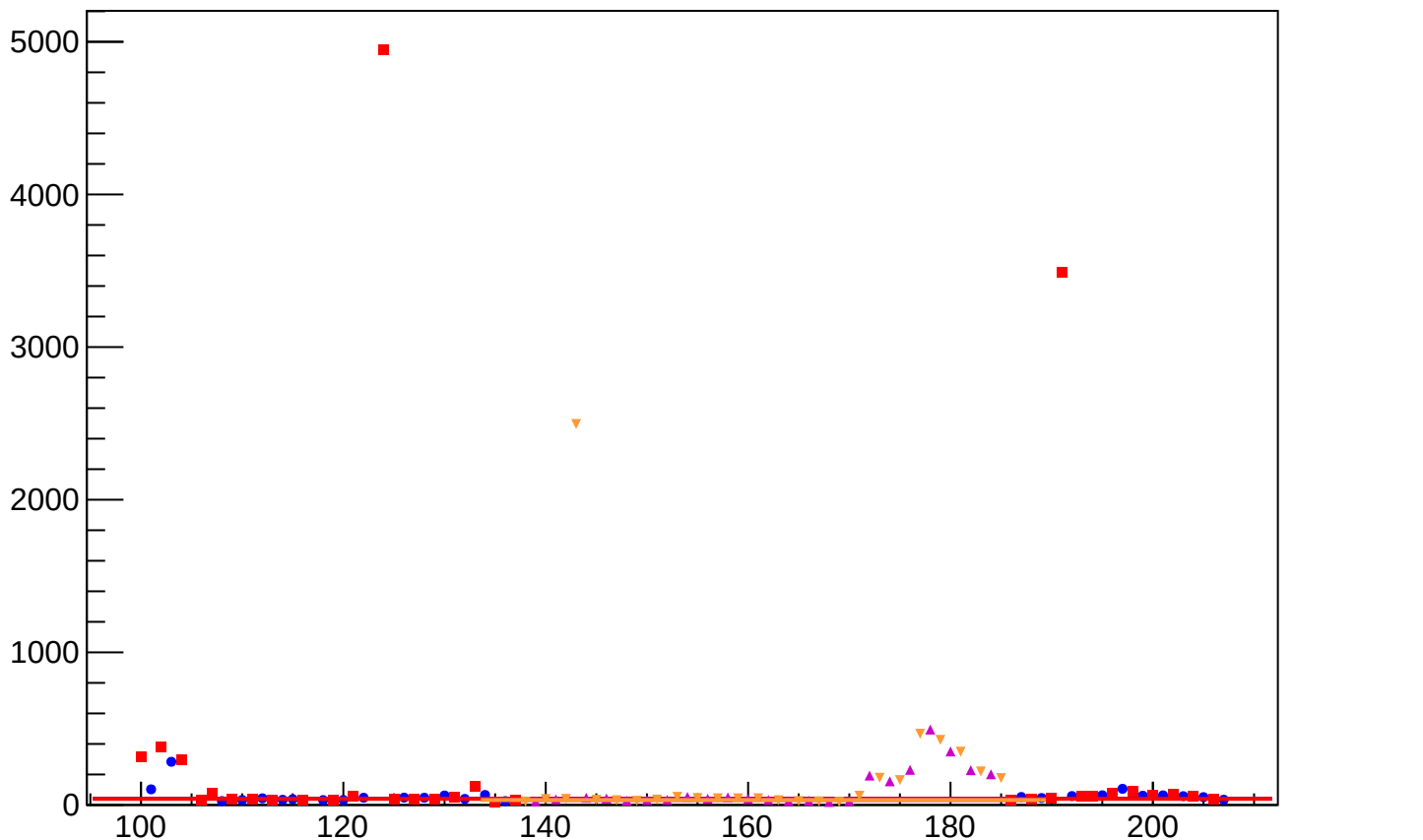
Left In:  $-0.011 \pm 0.009$   $\chi^2/\text{NDF}$ : 13.2/22

+ sign  $-0.015 \pm 0.008$   $\chi^2/\text{NDF}$ : 49.1/50

All:  $-0.009 \pm 0.005$   $\chi^2/\text{NDF}$ : 87.8/104

- sign  $-0.003 \pm 0.007$   $\chi^2/\text{NDF}$ : 37.5/53

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 41.643+/-0.009  $\chi^2$ /NDF: 4071035.7/25

Left Out: 32.551+/-0.007  $\chi^2$ /NDF:10872015.8/24

Right Out: 40.367+/-0.008  $\chi^2$ /NDF: 5416163.6/30

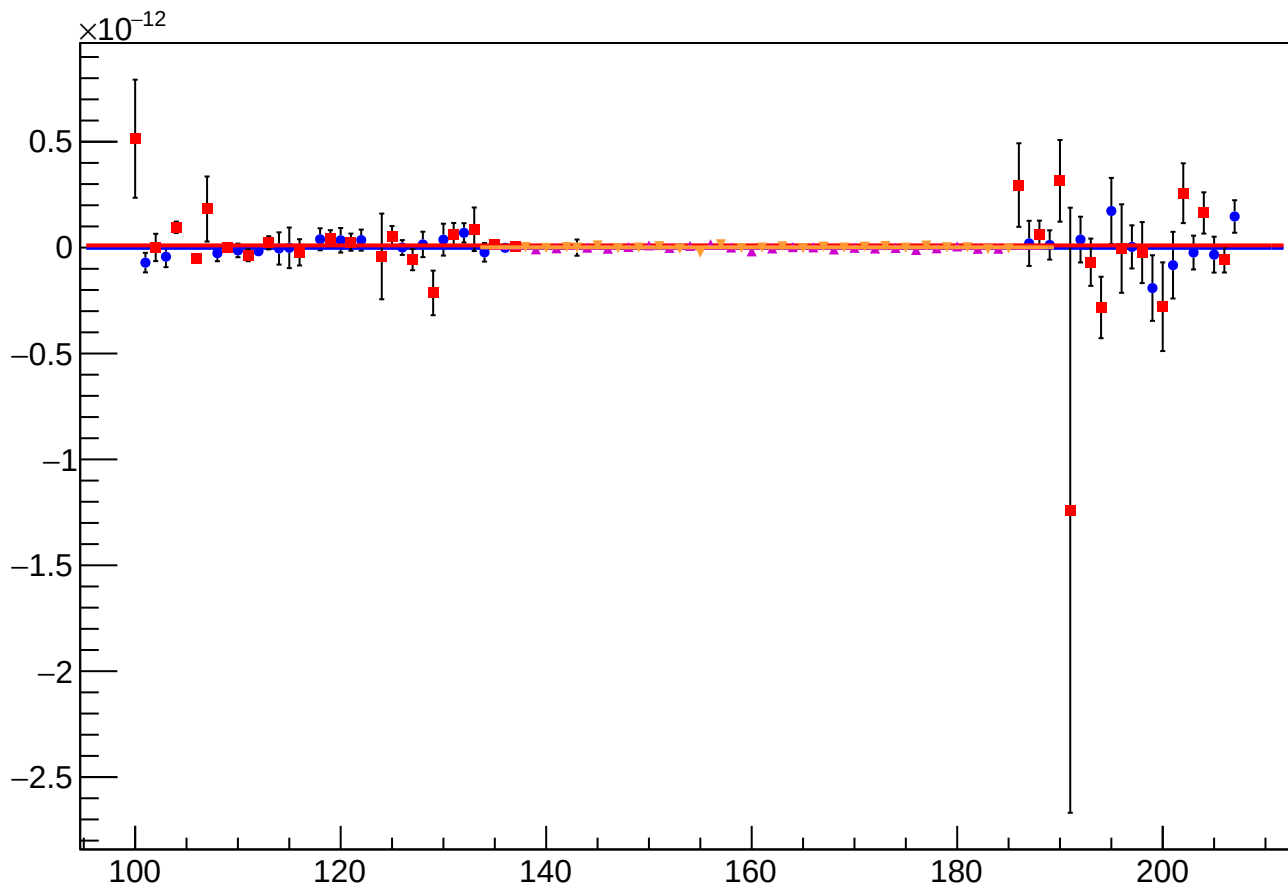
Left In: 32.737+/-0.007  $\chi^2$ /NDF:8963873.9/22

+ sign 35.926+/-0.005  $\chi^2$ /NDF: 15620790.6/50

All: 35.830+/-0.004  $\chi^2$ /NDF: 30508827.5/104

- sign 35.737+/-0.005  $\chi^2$ /NDF: 14887399.3/53

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 15.8/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:18.1/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 59.2/30

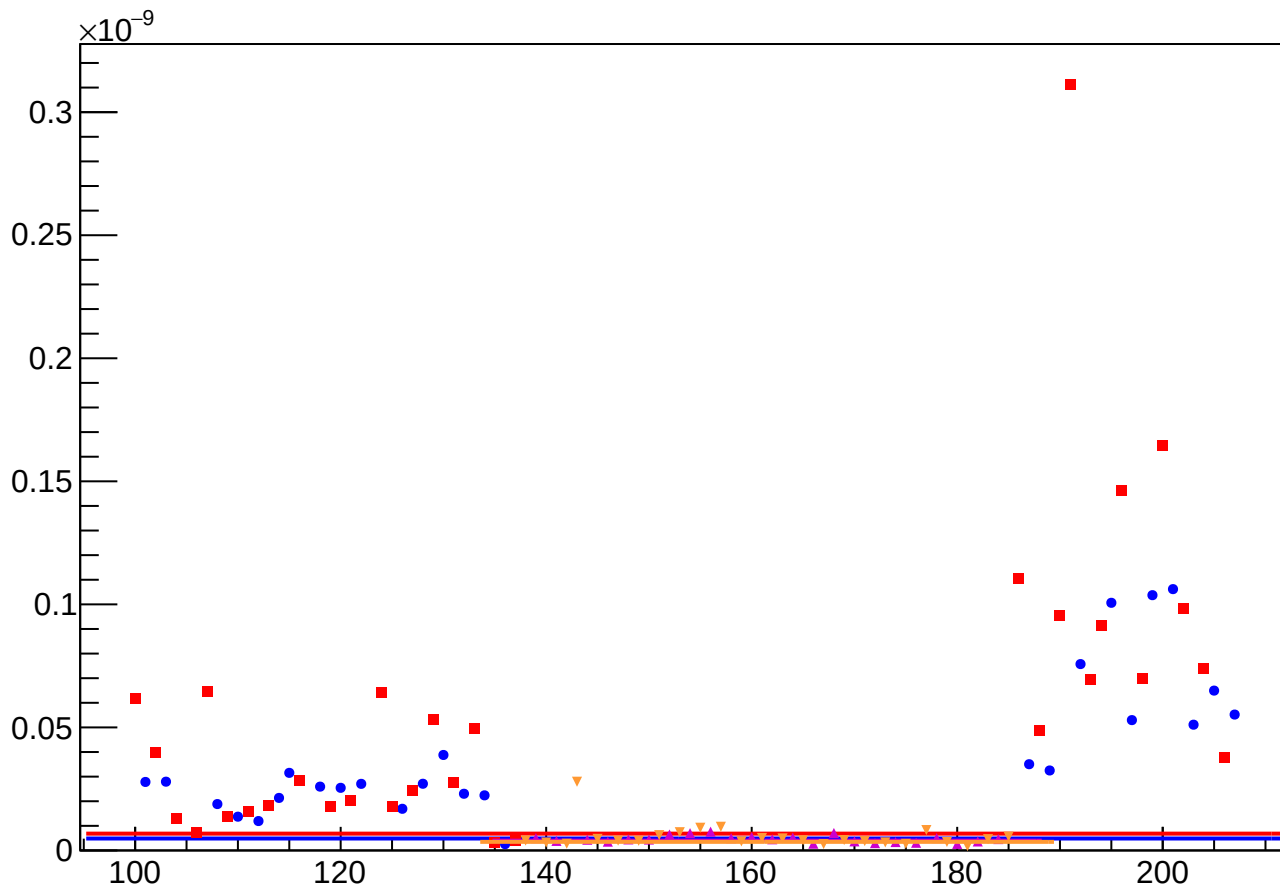
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:28.7/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 34.4/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 130.8/104

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 95.3/53

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11876779.1/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4688121.0/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12896666.9/30

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2073078.0/22

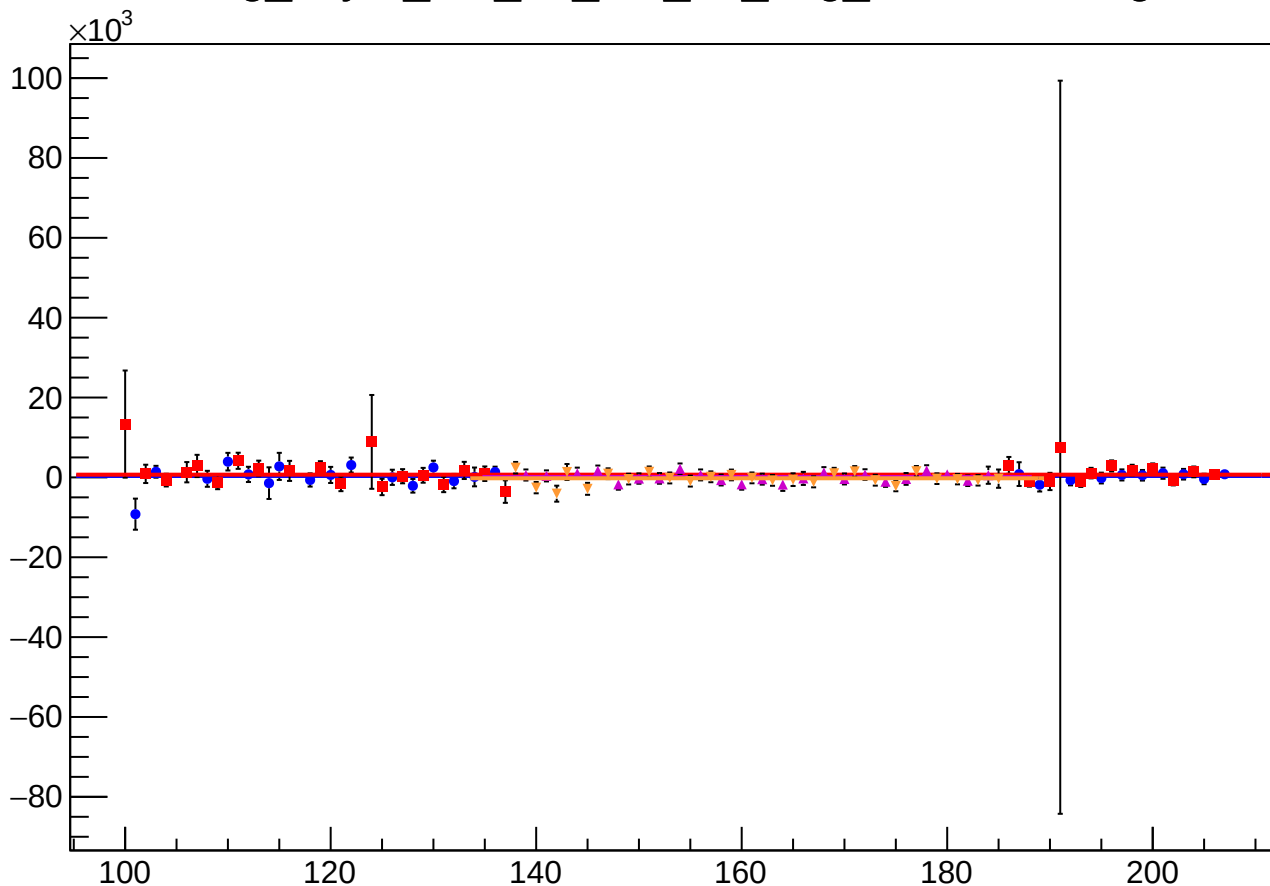
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 16855520.0/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 32995049.3/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 15855975.0/53



reg\_asym\_at1\_dd\_at2\_dd\_avg\_mean vs Slug



Right In:  $359.873 \pm 328.263$   $\chi^2/\text{NDF}$ : 20.7/25

Left Out:  $-220.721 \pm 283.055$   $\chi^2/\text{NDF}$ : 23.9/24

Right Out:  $681.848 \pm 319.078$   $\chi^2/\text{NDF}$ : 27.3/30

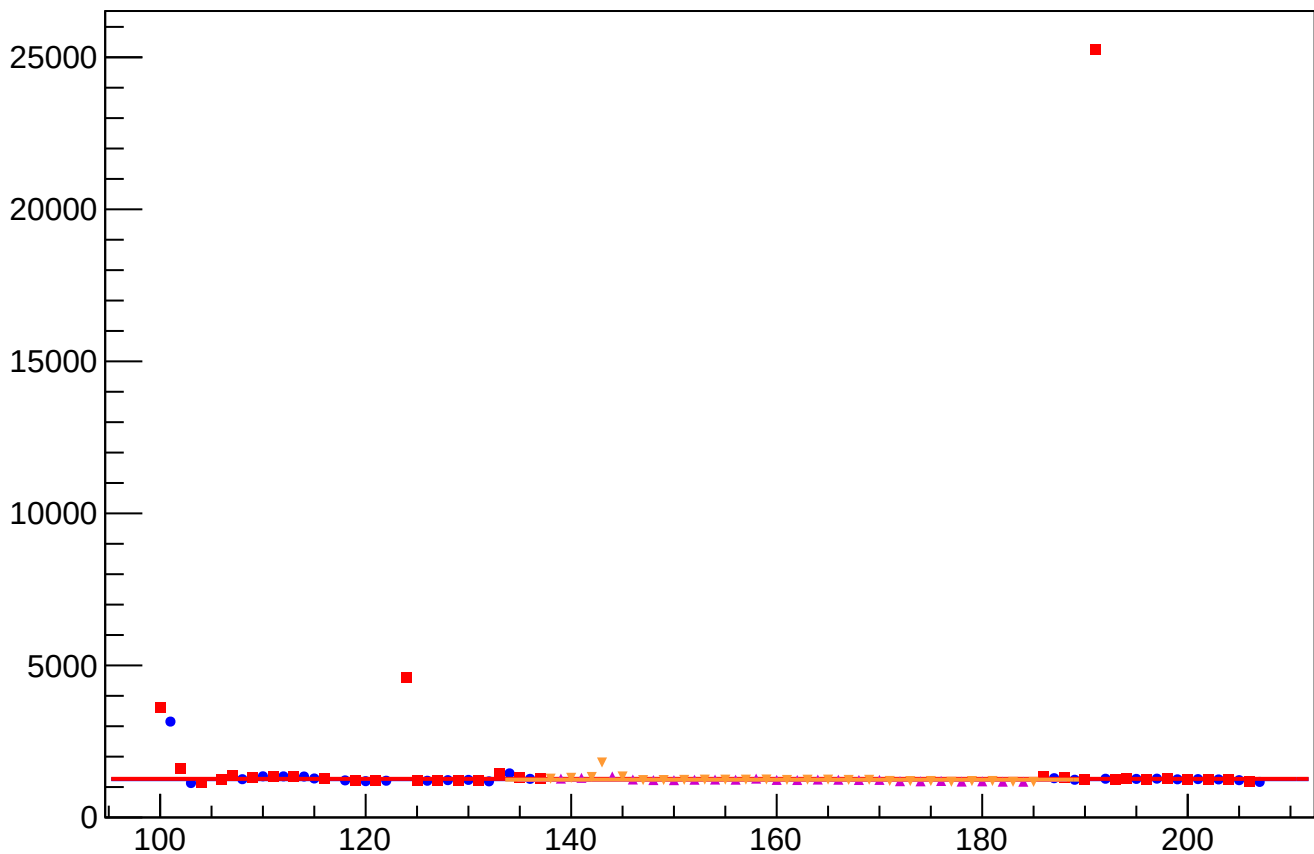
Left In:  $92.402 \pm 288.217$   $\chi^2/\text{NDF}$ : 14.7/22

+ sign  $26.873 \pm 214.366$   $\chi^2/\text{NDF}$ : 46.4/50

All:  $192.435 \pm 151.408$   $\chi^2/\text{NDF}$ : 91.5/104

- sign  $357.248 \pm 213.881$   $\chi^2/\text{NDF}$ : 43.9/53

reg\_asym\_at1\_dd\_at2\_dd\_avg\_rms vs Slug



Right In: 1258.479+/-0.232  $\chi^2/\text{NDF}$ : 533843.3/25

Left Out: 1242.825+/-0.200  $\chi^2/\text{NDF}$ : 203299.1/24

Right Out: 1269.681+/-0.226  $\chi^2/\text{NDF}$ : 486242.8/30

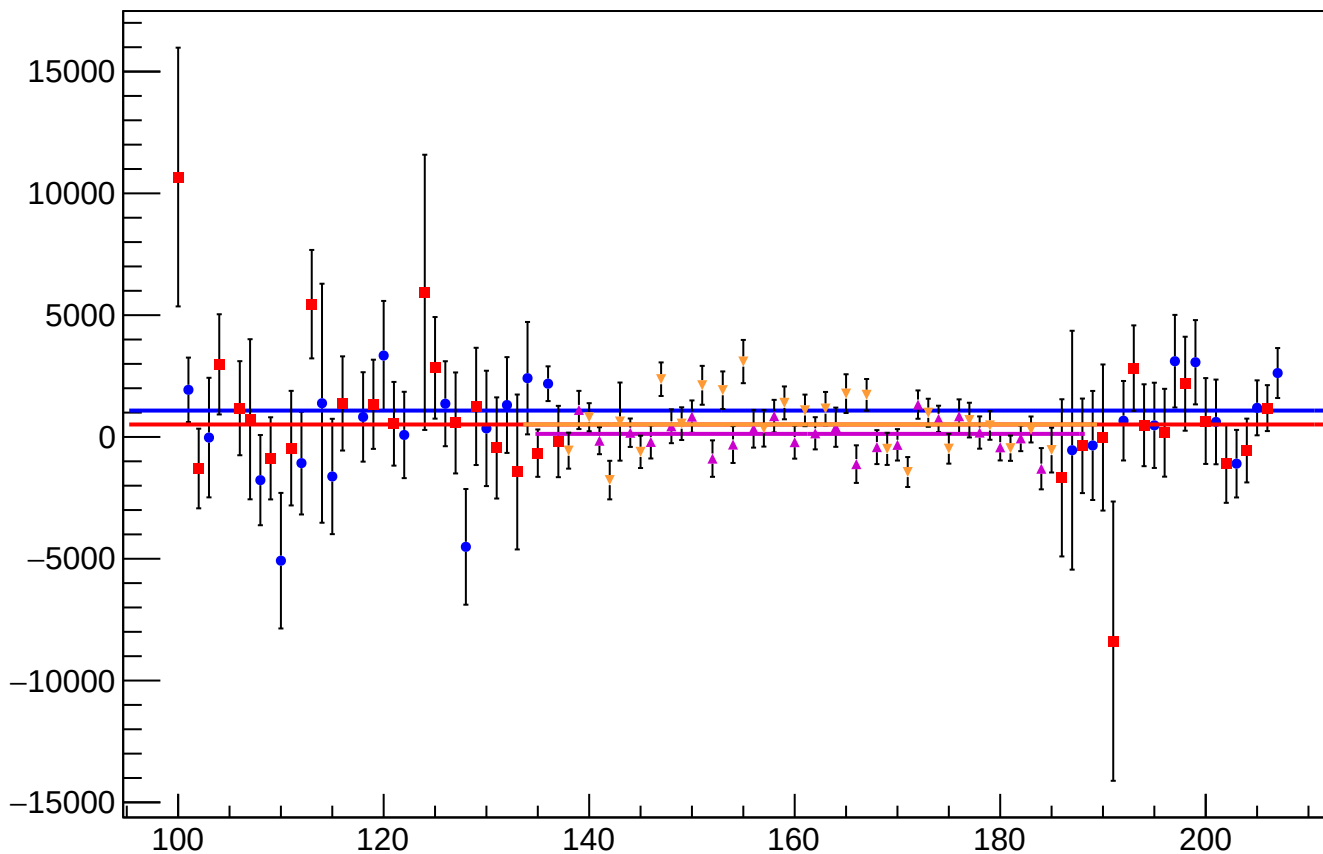
Left In: 1233.752+/-0.204  $\chi^2/\text{NDF}$ : 39281.8/22

+ sign 1249.500+/-0.152  $\chi^2/\text{NDF}$ : 739751.0/50

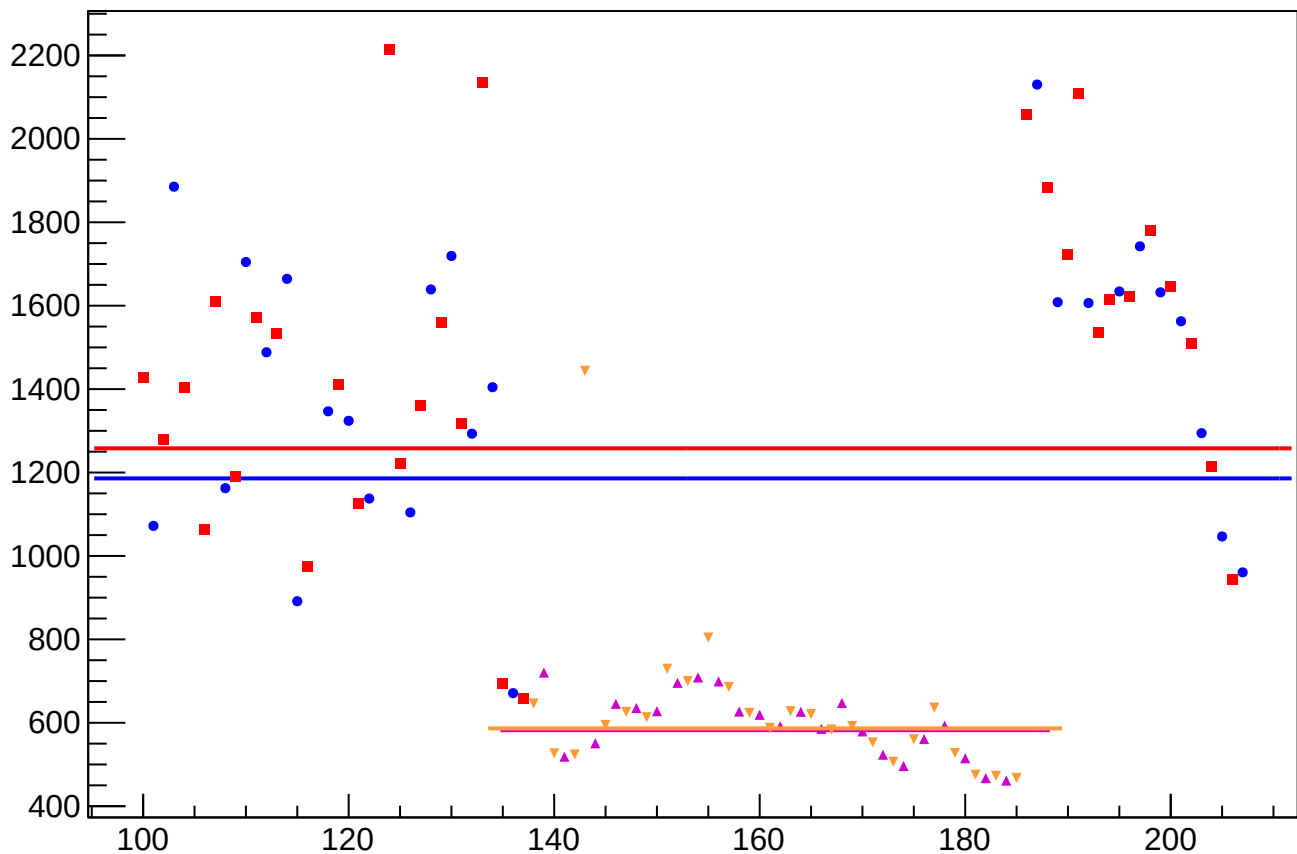
All: 1249.698+/-0.107  $\chi^2/\text{NDF}$ : 1279243.5/100

- sign 1249.896+/-0.151  $\chi^2/\text{NDF}$ : 539489.0/53

asym\_at1\_dd\_at2\_dd\_avg\_reg\_correction\_mean vs Slug



asym\_at1\_dd\_at2\_dd\_avg\_reg\_correction\_rms vs Slug



Right In: 1185.886 $\pm$ 0.228  $\chi^2$ /NDF: 2555007.3/25

Left Out: 586.557 $\pm$ 0.096  $\chi^2$ /NDF: 1202915.7/24

Right Out: 1258.079 $\pm$ 0.231  $\chi^2$ /NDF: 2611021.4/30

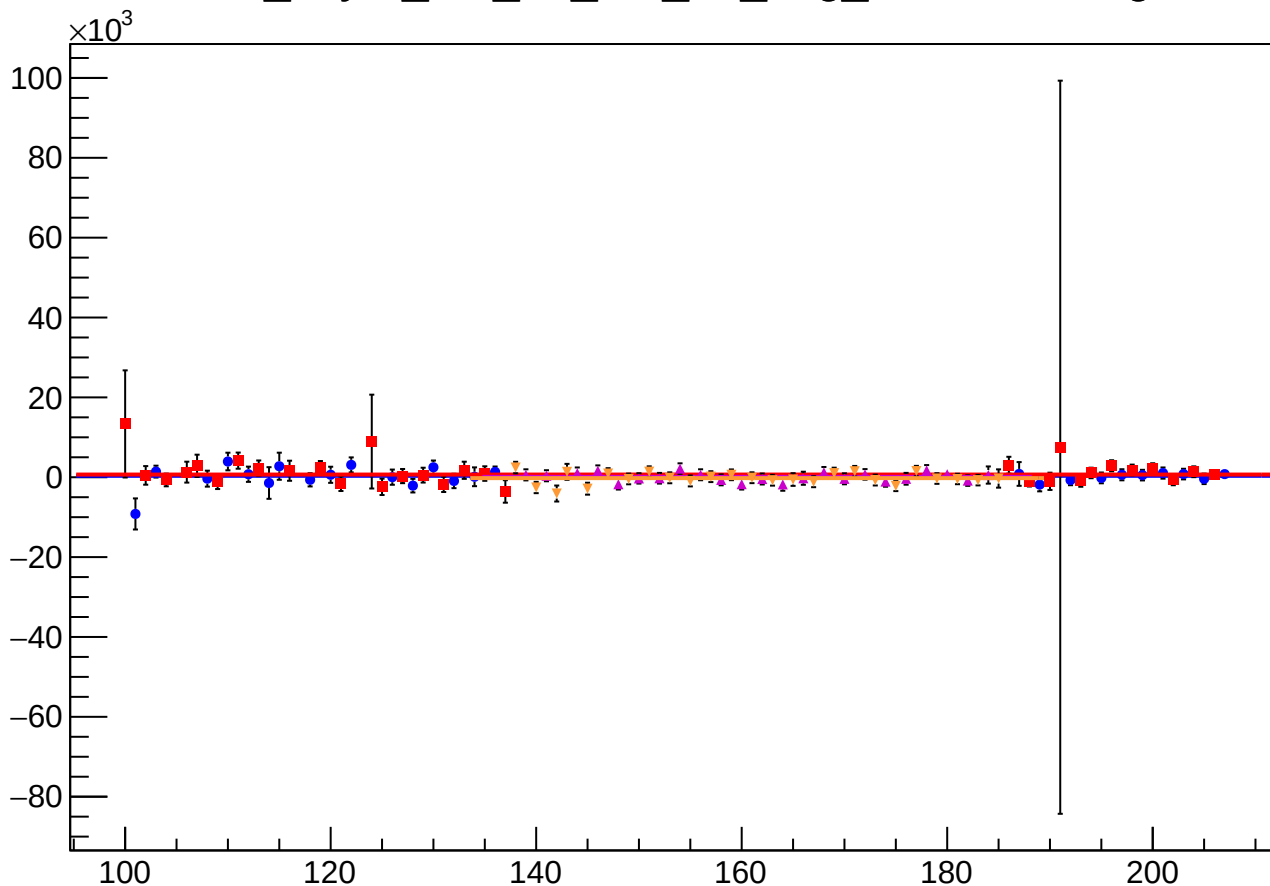
Left In: 582.190 $\pm$ 0.097  $\chi^2$ /NDF: 559261.3/22

+ sign 677.085 $\pm$ 0.088  $\chi^2$ /NDF: 9646684.1/50

All: 680.211 $\pm$ 0.063  $\chi^2$ /NDF: 20081364.2/10

- sign 683.411 $\pm$ 0.089  $\chi^2$ /NDF: 10432152.4/53

cor\_asym\_at1\_dd\_at2\_dd\_avg\_mean vs Slug



Right In:  $360.079 \pm 328.263$   $\chi^2/\text{NDF}$ : 20.6/25

Left Out:  $-220.755 \pm 283.055$   $\chi^2/\text{NDF}$ : 23.9/24

Right Out:  $673.061 \pm 319.317$   $\chi^2/\text{NDF}$ : 27.3/30

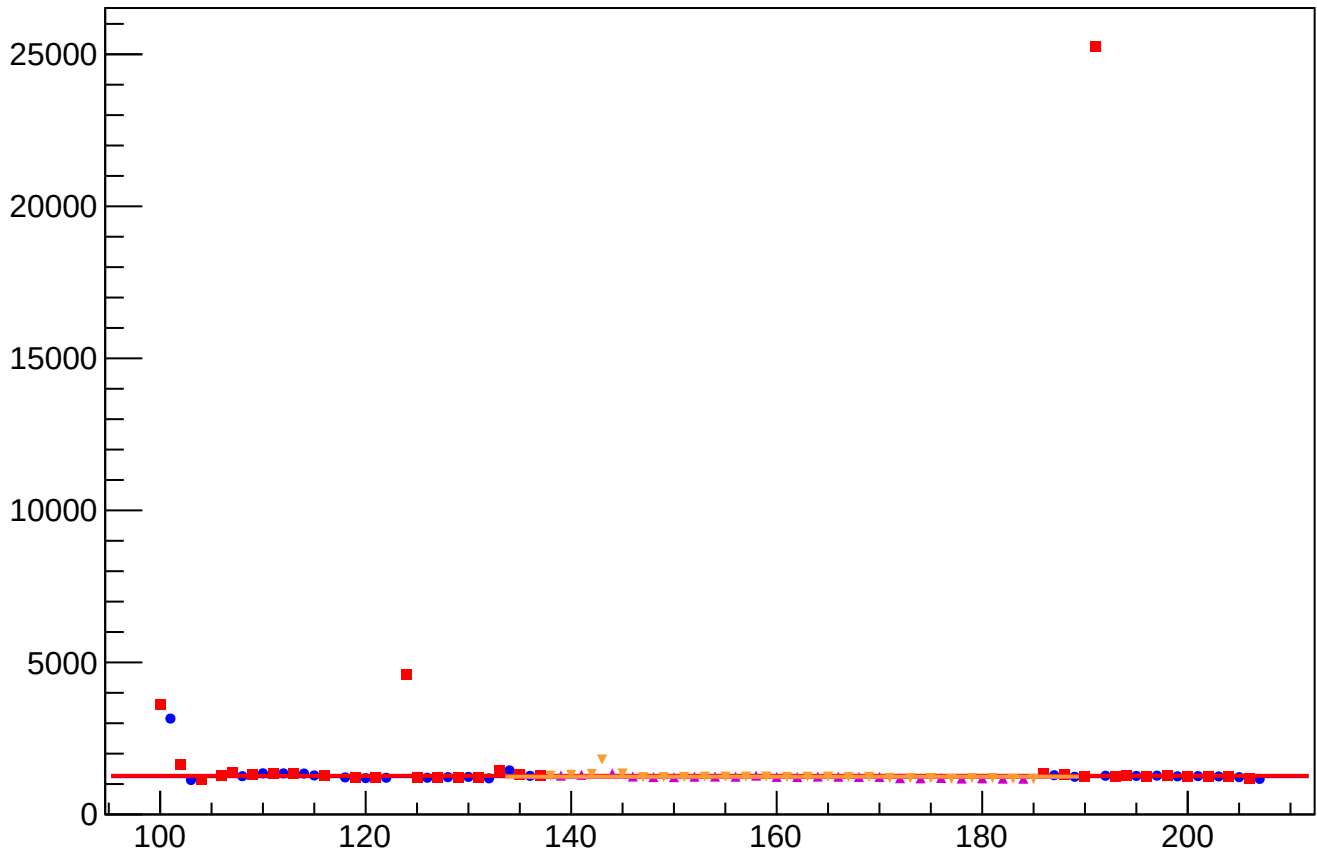
Left In:  $92.472 \pm 288.217$   $\chi^2/\text{NDF}$ : 14.7/22

+ sign  $26.941 \pm 214.366$   $\chi^2/\text{NDF}$ : 46.3/50

All:  $190.347 \pm 151.433$   $\chi^2/\text{NDF}$ : 91.4/104

- sign  $353.123 \pm 213.953$   $\chi^2/\text{NDF}$ : 43.8/53

cor\_asym\_at1\_dd\_at2\_dd\_avg\_rms vs Slug



Right In: 1258.479 $\pm$ 0.232  $\chi^2$ /NDF: 533844.7/25

Left Out: 1242.825 $\pm$ 0.200  $\chi^2$ /NDF: 203299.1/24

Right Out: 1270.669 $\pm$ 0.226  $\chi^2$ /NDF: 493421.8/30

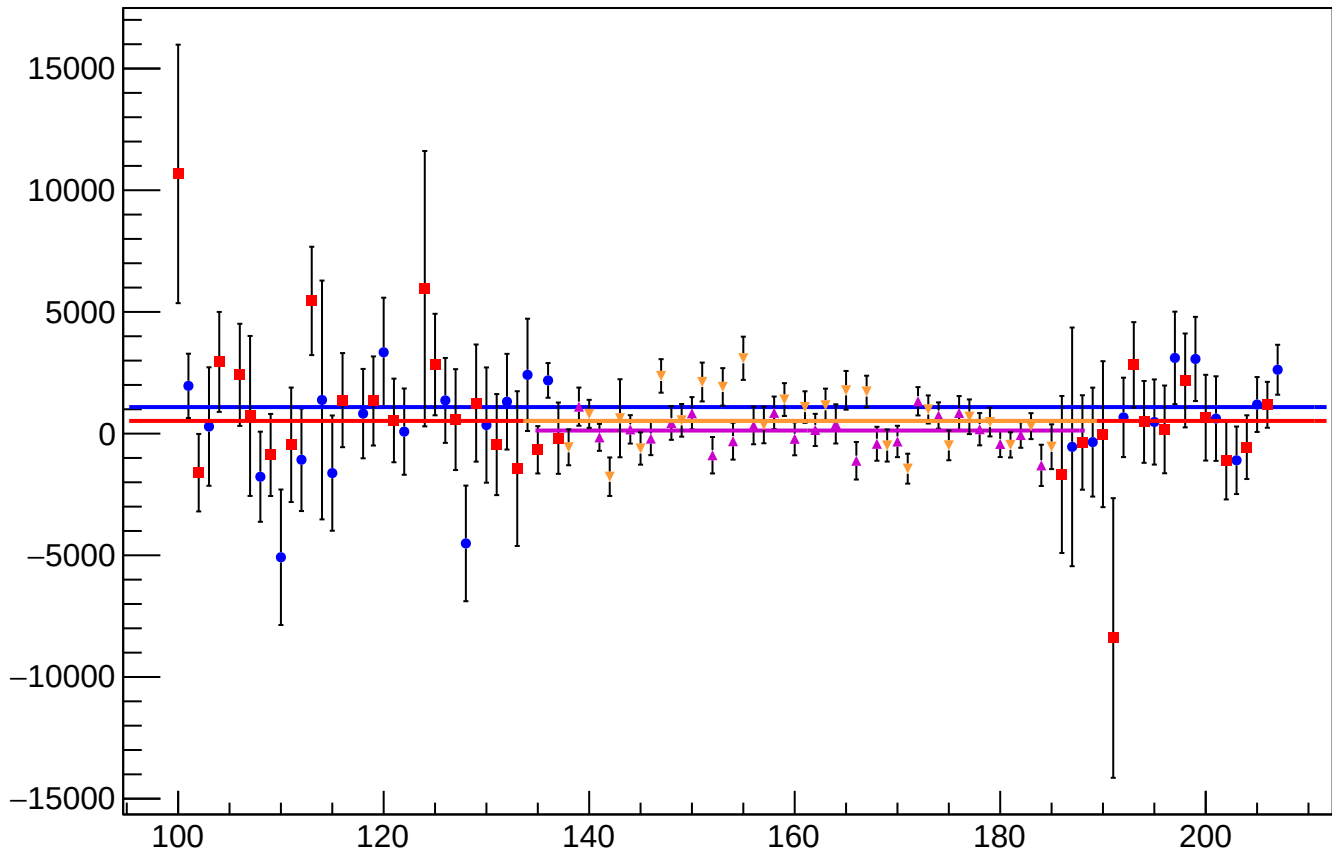
Left In: 1233.752 $\pm$ 0.204  $\chi^2$ /NDF: 39281.7/22

+ sign 1249.500 $\pm$ 0.152  $\chi^2$ /NDF: 739752.4/50

All: 1249.914 $\pm$ 0.107  $\chi^2$ /NDF: 1287202.1/100

- sign 1250.326 $\pm$ 0.151  $\chi^2$ /NDF: 547434.9/53

asym\_at1\_dd\_at2\_dd\_avg\_cor\_correction\_mean vs Slug



Right In: 1090.332 $\pm$ 321.741  $\chi^2$ /NDF: 27.9/25

Left Out: 516.811 $\pm$ 135.747  $\chi^2$ /NDF: 67.0/24

Right Out: 521.783 $\pm$ 327.419  $\chi^2$ /NDF: 26.2/30

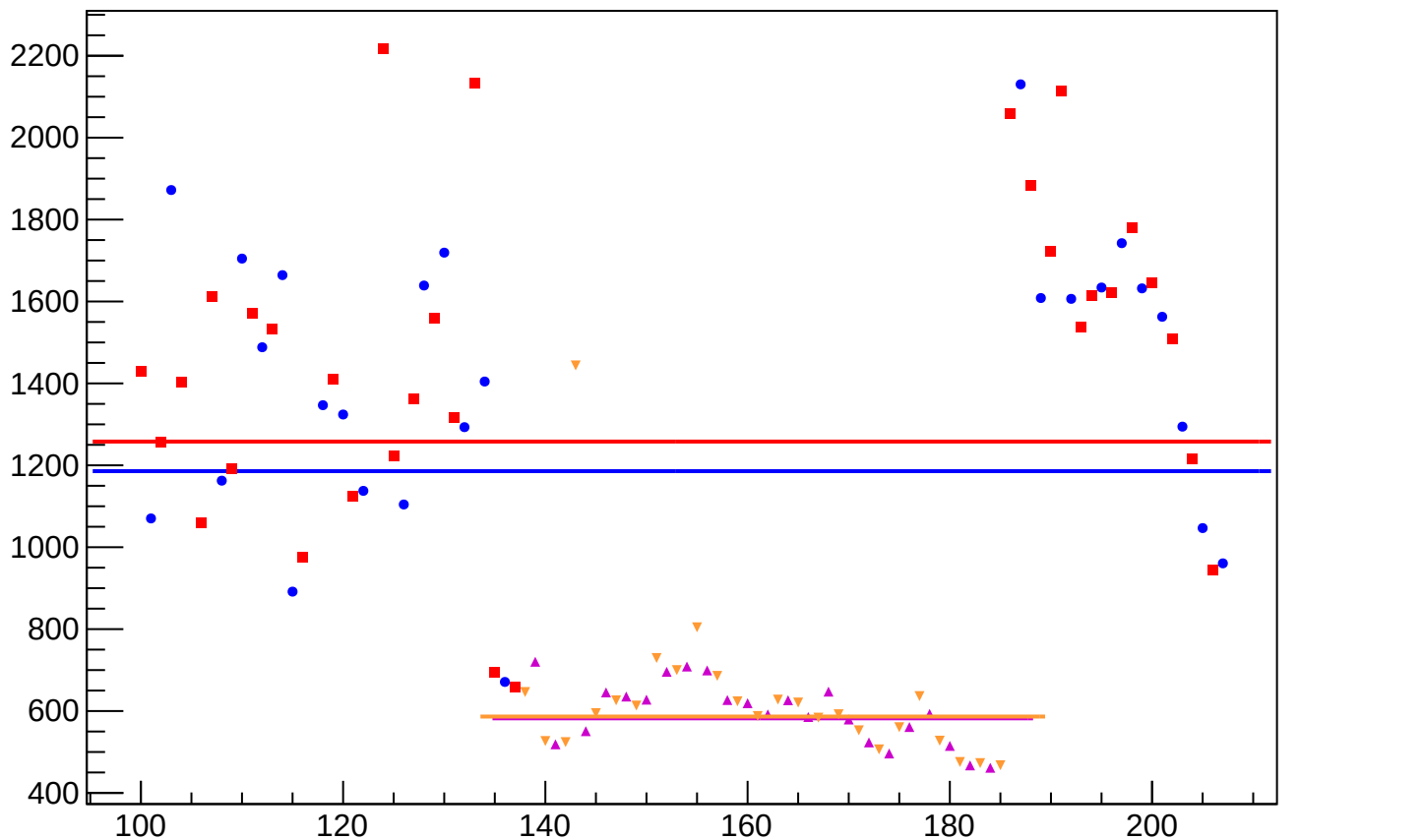
Left In: 126.549 $\pm$ 137.266  $\chi^2$ /NDF: 21.6/22

+ sign 603.477 $\pm$ 125.071  $\chi^2$ /NDF: 97.6/50

All: 397.078 $\pm$ 88.971  $\chi^2$ /NDF: 152.2/104

- sign 185.631 $\pm$ 126.591  $\chi^2$ /NDF: 49.0/53

asym\_at1\_dd\_at2\_dd\_avg\_cor\_correction\_rms vs Slug



Right In: 1185.728 $\pm$ 0.228  $\chi^2$ /NDF: 2552042.5/25

Left Out: 586.562 $\pm$ 0.096  $\chi^2$ /NDF:1202822.0/24

Right Out: 1257.943 $\pm$ 0.232  $\chi^2$ /NDF: 2608519.4/30

Left In: 582.189 $\pm$ 0.097  $\chi^2$ /NDF:559258.0/22

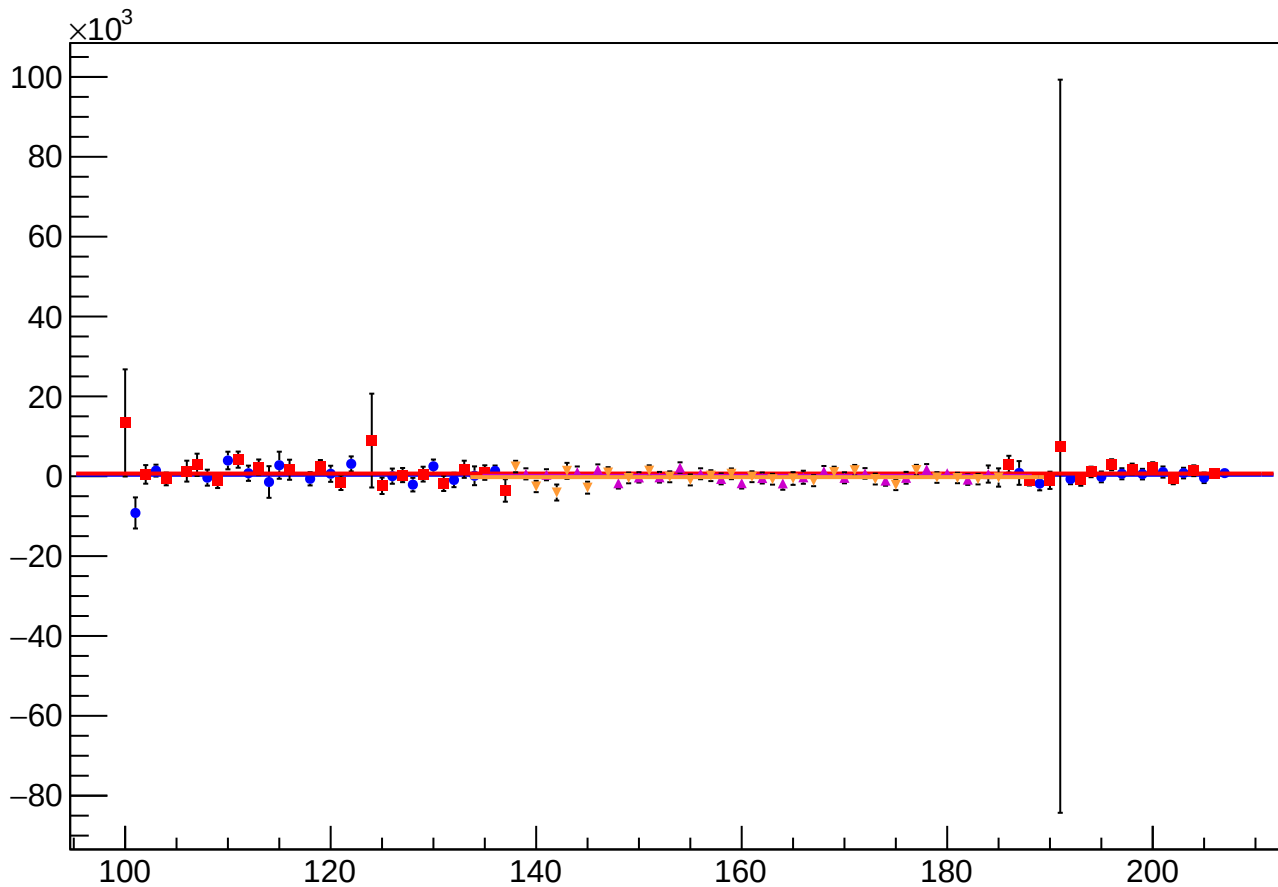
+ sign 677.103 $\pm$ 0.088  $\chi^2$ /NDF: 9642788.1/50

All: 680.117 $\pm$ 0.063  $\chi^2$ /NDF: 20058657.7/10

- sign 683.204 $\pm$ 0.090  $\chi^2$ /NDF: 10413518.6/53



eigen\_cor\_asym\_at1\_dd\_at2\_dd\_avg\_mean vs Slug



Right In:  $360.079 \pm 328.263$   $\chi^2/\text{NDF}$ : 20.6/25

Left Out:  $-220.755 \pm 283.055$   $\chi^2/\text{NDF}$ : 23.9/24

Right Out:  $673.061 \pm 319.317$   $\chi^2/\text{NDF}$ : 27.3/30

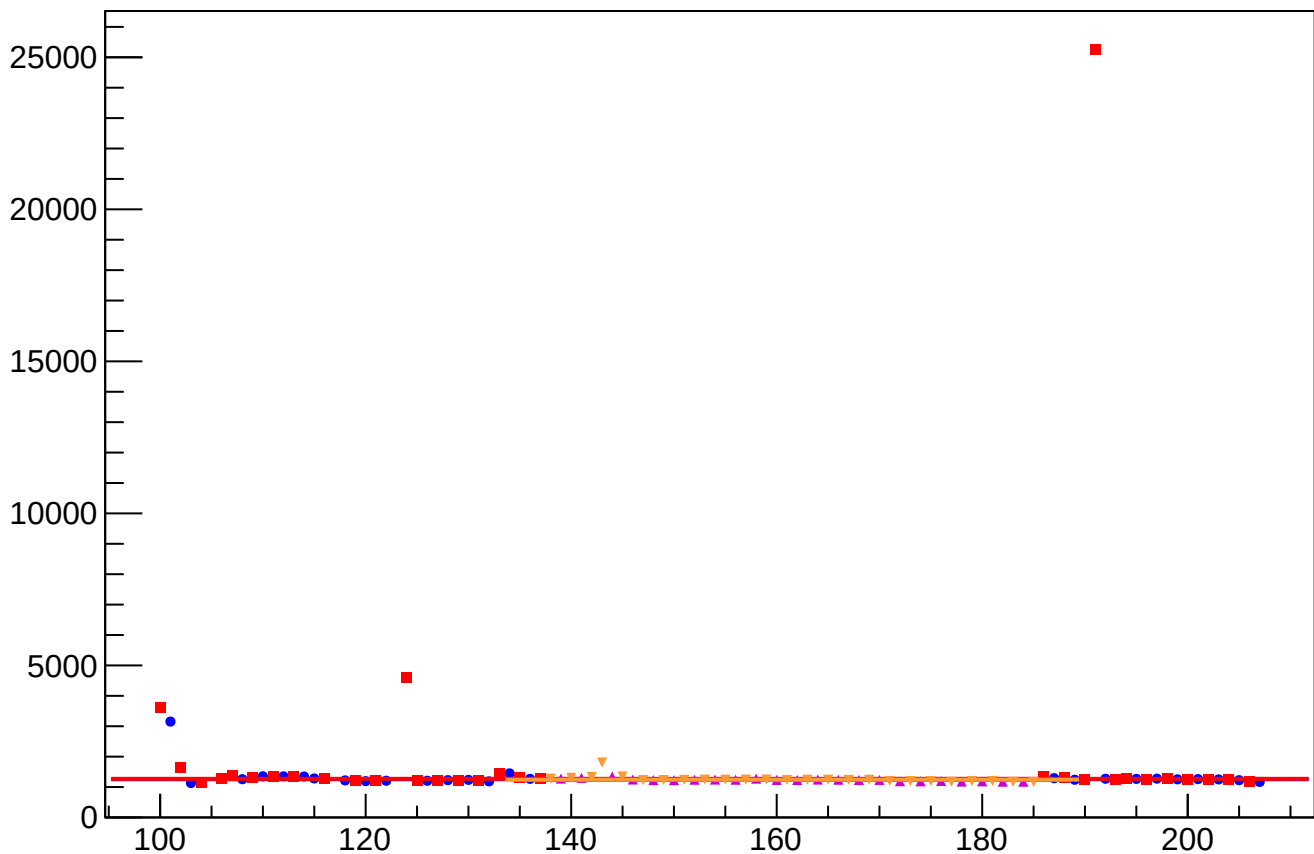
Left In:  $92.472 \pm 288.217$   $\chi^2/\text{NDF}$ : 14.7/22

+ sign  $26.941 \pm 214.366$   $\chi^2/\text{NDF}$ : 46.3/50

All:  $190.347 \pm 151.433$   $\chi^2/\text{NDF}$ : 91.4/104

- sign  $353.123 \pm 213.953$   $\chi^2/\text{NDF}$ : 43.8/53

eigen\_cor\_asym\_at1\_dd\_at2\_dd\_avg\_rms vs Slug



Right In: 1258.479+/-0.232  $\chi^2/\text{NDF}$ : 533844.7/25

Left Out: 1242.825+/-0.200  $\chi^2/\text{NDF}$ : 203299.1/24

Right Out: 1270.669+/-0.226  $\chi^2/\text{NDF}$ : 493421.8/30

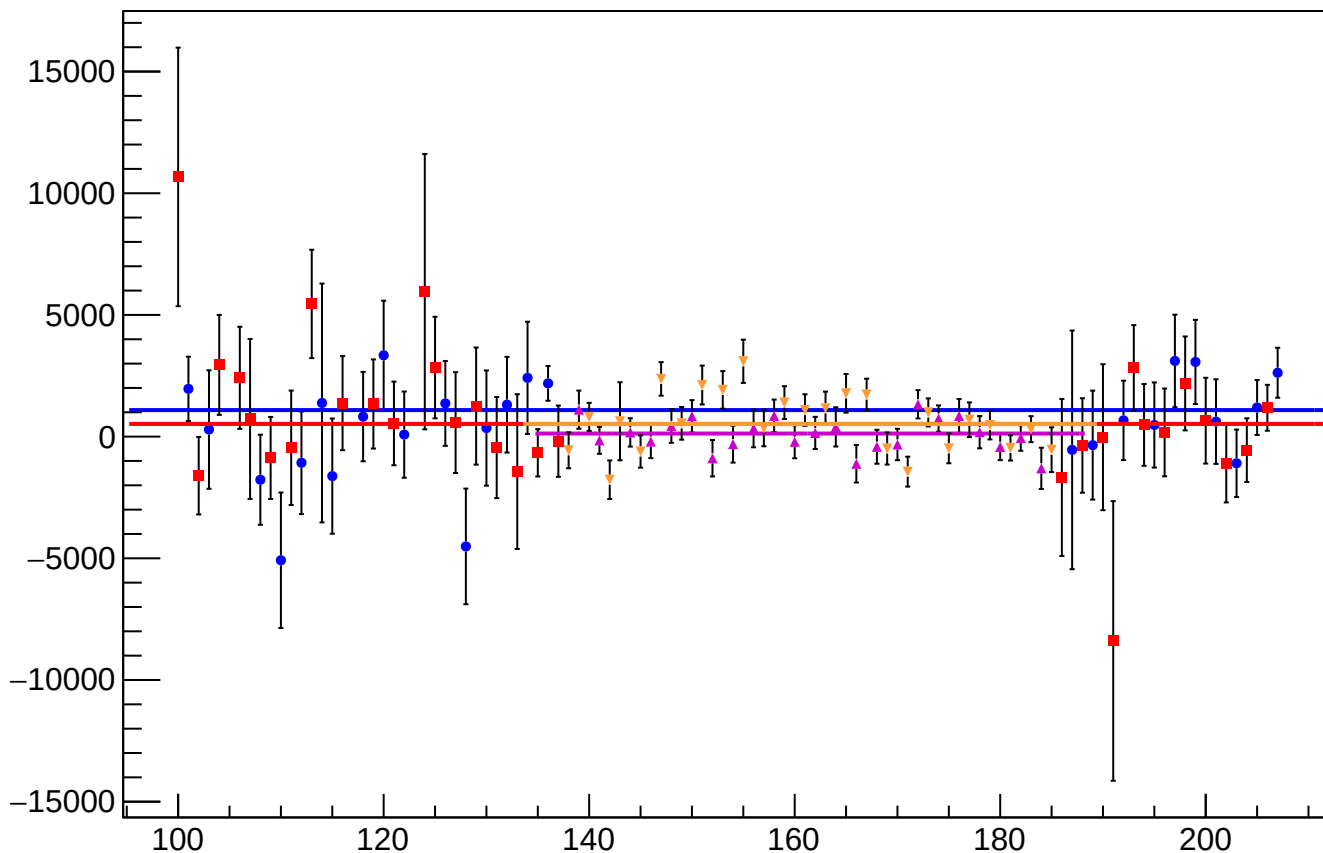
Left In: 1233.752+/-0.204  $\chi^2/\text{NDF}$ : 39281.7/22

+ sign 1249.500+/-0.152  $\chi^2/\text{NDF}$ : 739752.4/50

All: 1249.914+/-0.107  $\chi^2/\text{NDF}$ : 1287202.1/100

- sign 1250.326+/-0.151  $\chi^2/\text{NDF}$ : 547434.9/53

asym\_at1\_dd\_at2\_dd\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In: 1090.332 $\pm$ 321.741  $\chi^2$ /NDF: 27.9/25

Left Out: 516.811 $\pm$ 135.747  $\chi^2$ /NDF: 67.0/24

Right Out: 521.783 $\pm$ 327.419  $\chi^2$ /NDF: 26.2/30

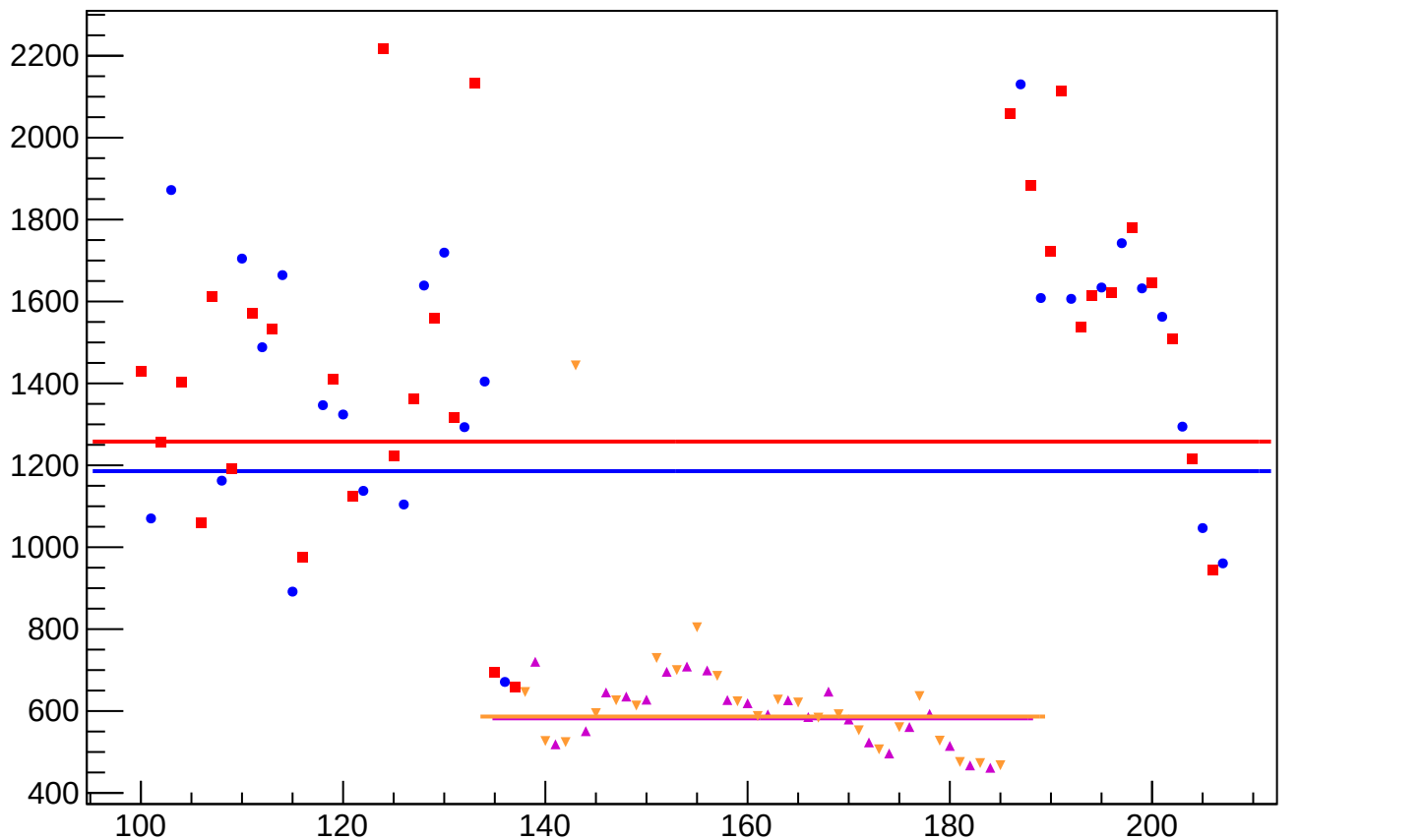
Left In: 126.549 $\pm$ 137.266  $\chi^2$ /NDF: 21.6/22

+ sign 603.477 $\pm$ 125.071  $\chi^2$ /NDF: 97.6/50

All: 397.078 $\pm$ 88.971  $\chi^2$ /NDF: 152.2/104

- sign 185.631 $\pm$ 126.591  $\chi^2$ /NDF: 49.0/53

asym\_at1\_dd\_at2\_dd\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In:  $1185.728 \pm 0.228$   $\chi^2/\text{NDF}$ : 2552042.5/25

Left Out:  $586.562 \pm 0.096$   $\chi^2/\text{NDF}$ : 1202822.0/24

Right Out:  $1257.943 \pm 0.232$   $\chi^2/\text{NDF}$ : 2608519.4/30

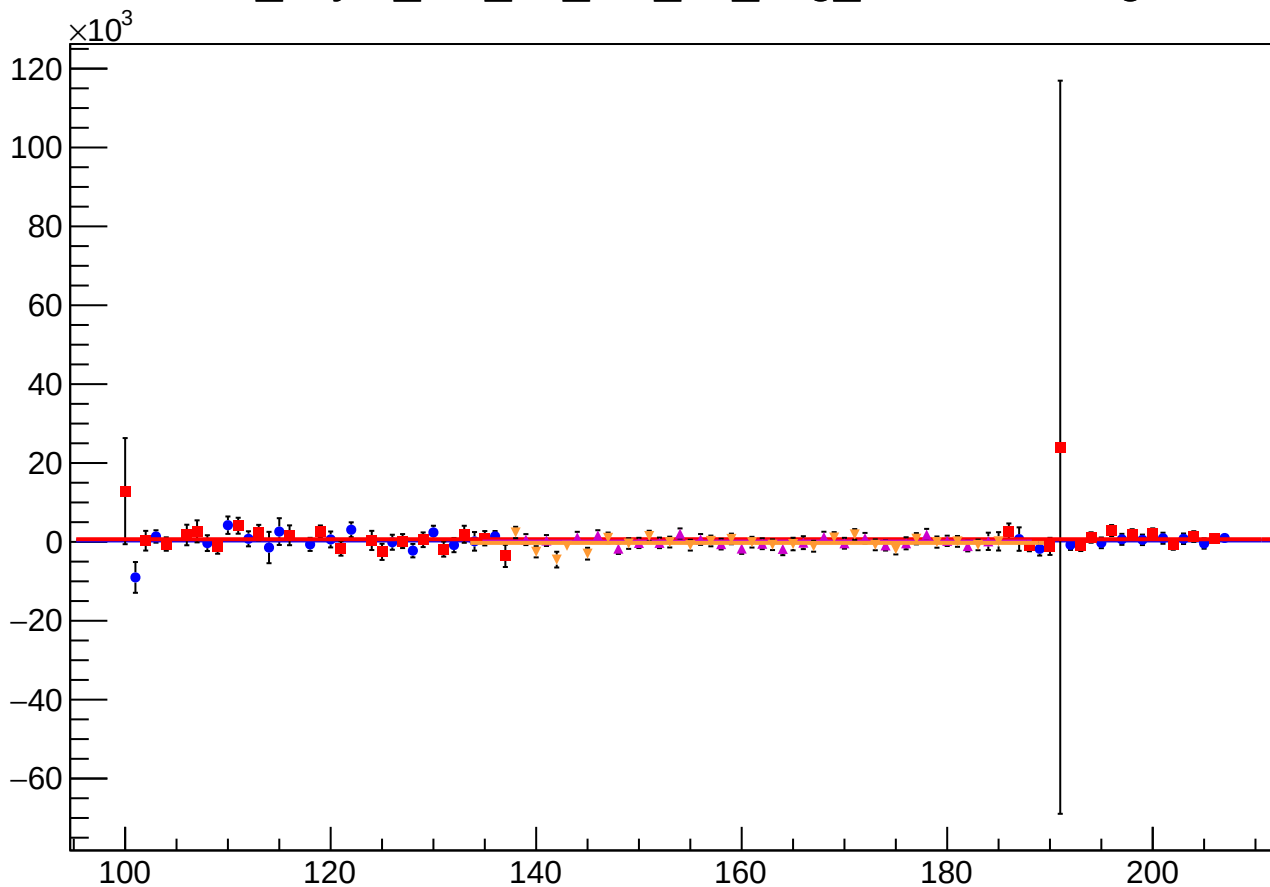
Left In:  $582.189 \pm 0.097$   $\chi^2/\text{NDF}$ : 559258.0/22

+ sign  $677.103 \pm 0.088$   $\chi^2/\text{NDF}$ : 9642788.1/50

All:  $680.117 \pm 0.063$   $\chi^2/\text{NDF}$ : 20058657.7/10

- sign  $683.204 \pm 0.090$   $\chi^2/\text{NDF}$ : 10413518.6/53

dit\_asym\_at1\_dd\_at2\_dd\_avg\_mean vs Slug



Right In:  $362.916 \pm 329.469$   $\chi^2/\text{NDF}$ : 20.8/25

Left Out:  $-250.849 \pm 279.923$   $\chi^2/\text{NDF}$ : 24.0/24

Right Out:  $672.726 \pm 318.435$   $\chi^2/\text{NDF}$ : 26.8/30

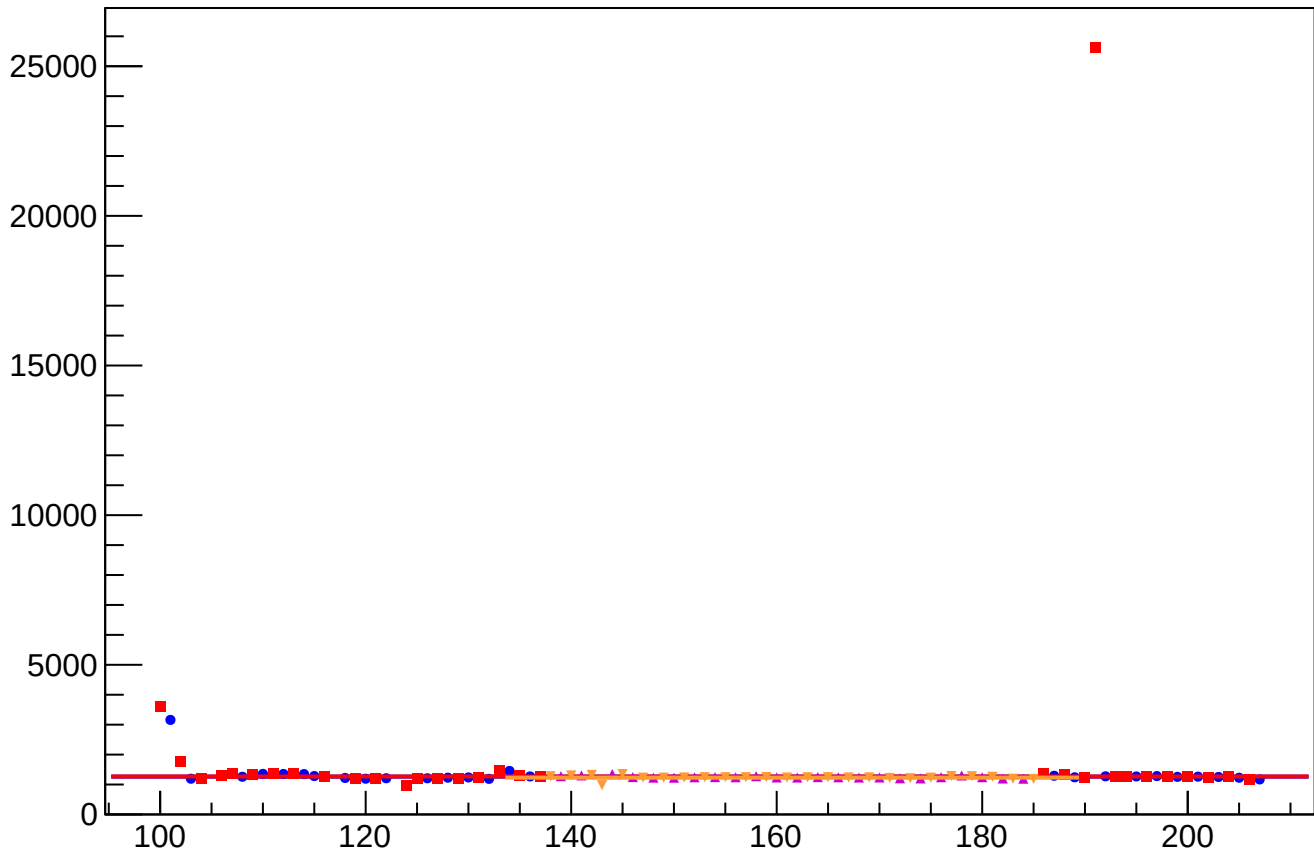
Left In:  $74.881 \pm 291.458$   $\chi^2/\text{NDF}$ : 14.0/22

+ sign  $6.460 \pm 213.324$   $\chi^2/\text{NDF}$ : 46.8/50

All:  $175.604 \pm 151.431$   $\chi^2/\text{NDF}$ : 90.8/104

- sign  $347.411 \pm 214.998$   $\chi^2/\text{NDF}$ : 42.8/53

dit asym at1 dd at2 dd avg rms vs Slug



Right In: 1263.295+/-0.233     $\chi^2/\text{NDF}$ : 523813.5/25

Left Out: 1229.986+/-0.198     $\chi^2/\text{NDF}$ :141607.5/24

Right Out: 1268.948+/-0.225     $\chi^2/\text{NDF}$ : 384624.8/30

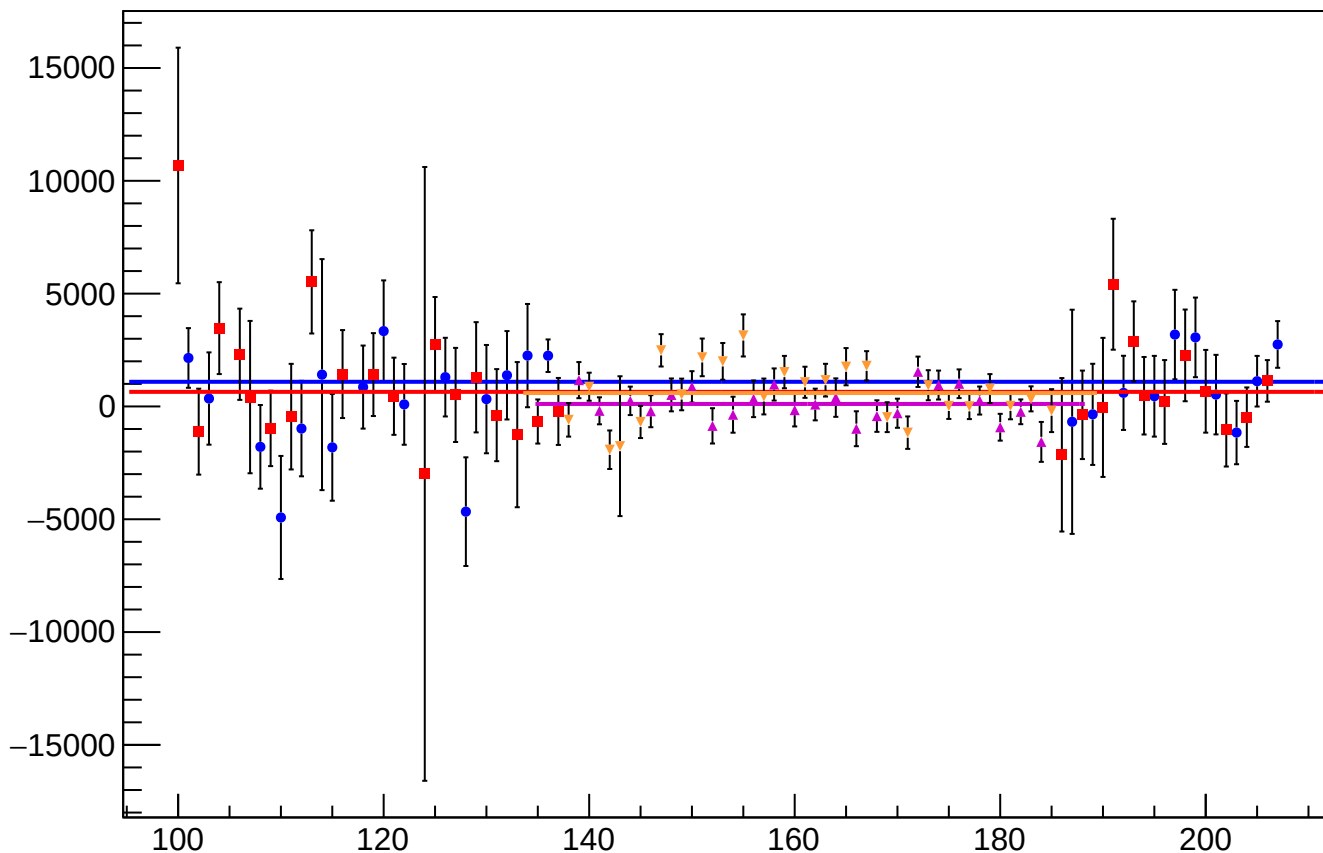
Left In: 1247.785+/-0.206     $\chi^2/\text{NDF}$ :27340.8/22

+ sign 1243.950+/-0.151  $\chi^2/\text{NDF}$ : 677293.2/50

All:  $1250.639 \pm 0.107$      $\chi^2/\text{NDF}: 1098028.4/10$

- sign 1257.432 $\pm$ 0.152     $\chi^2$ /NDF: 416772.2/53

asym\_at1\_dd\_at2\_dd\_avg\_dit\_correction\_mean vs Slug



Right In: 1092.536 $\pm$ 322.990  $\chi^2$ /NDF: 28.9/25

Left Out: 595.000 $\pm$ 142.130  $\chi^2$ /NDF: 57.3/24

Right Out: 646.367 $\pm$ 330.082  $\chi^2$ /NDF: 25.2/30

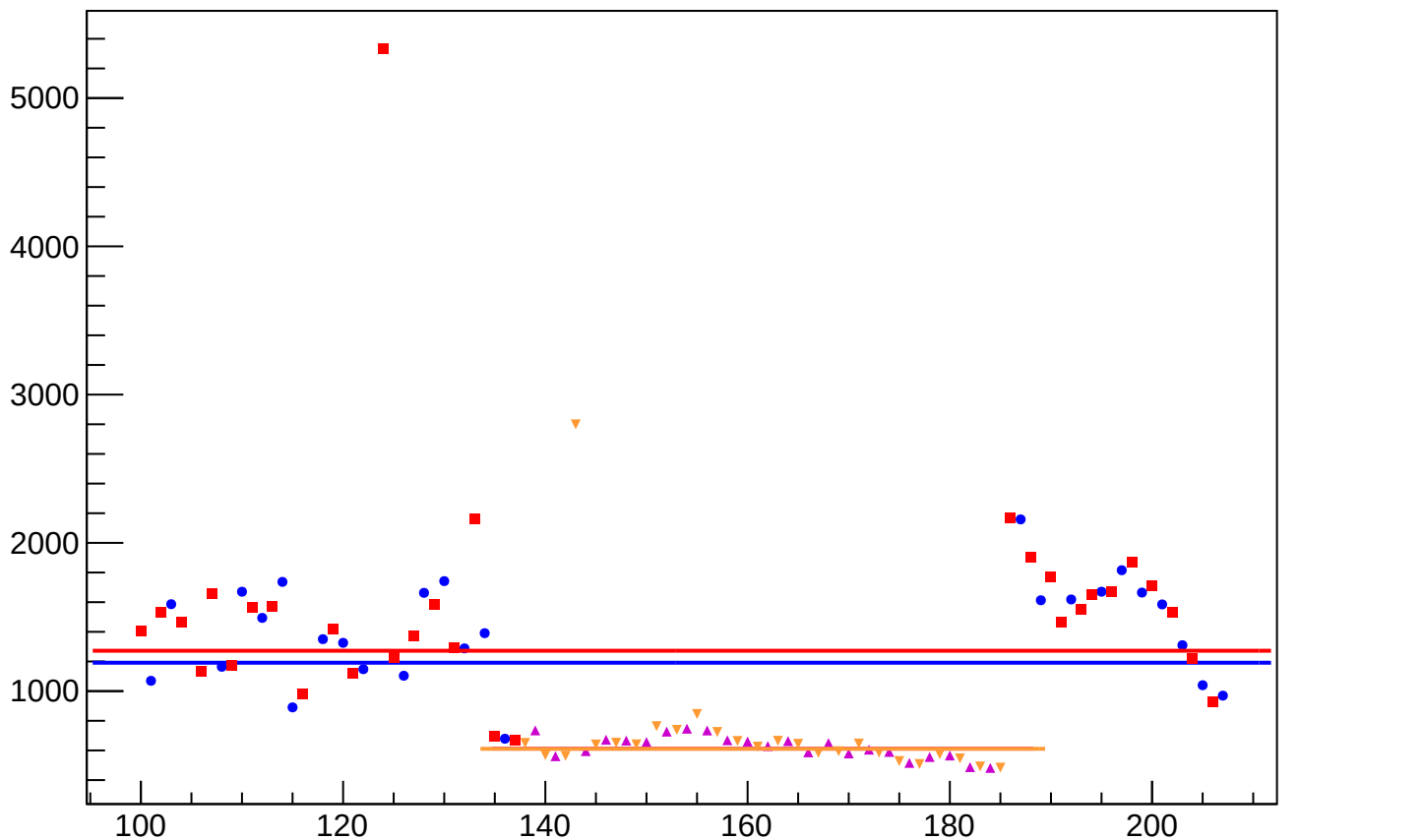
Left In: 110.252 $\pm$ 144.232  $\chi^2$ /NDF: 25.7/22

+ sign 675.714 $\pm$ 130.092  $\chi^2$ /NDF: 88.2/50

All: 439.750 $\pm$ 92.713  $\chi^2$ /NDF: 148.0/104

- sign 196.203 $\pm$ 132.166  $\chi^2$ /NDF: 53.1/53

asym\_at1\_dd\_at2\_dd\_avg\_dit\_correction\_rms vs Slug



Right In: 1191.699 $\pm$ 0.228  $\chi^2$ /NDF: 2498397.2/25

Left Out: 611.087 $\pm$ 0.101  $\chi^2$ /NDF: 1619322.3/24

Right Out: 1272.435 $\pm$ 0.233  $\chi^2$ /NDF: 2900084.3/30

Left In: 612.399 $\pm$ 0.102  $\chi^2$ /NDF: 508595.4/22

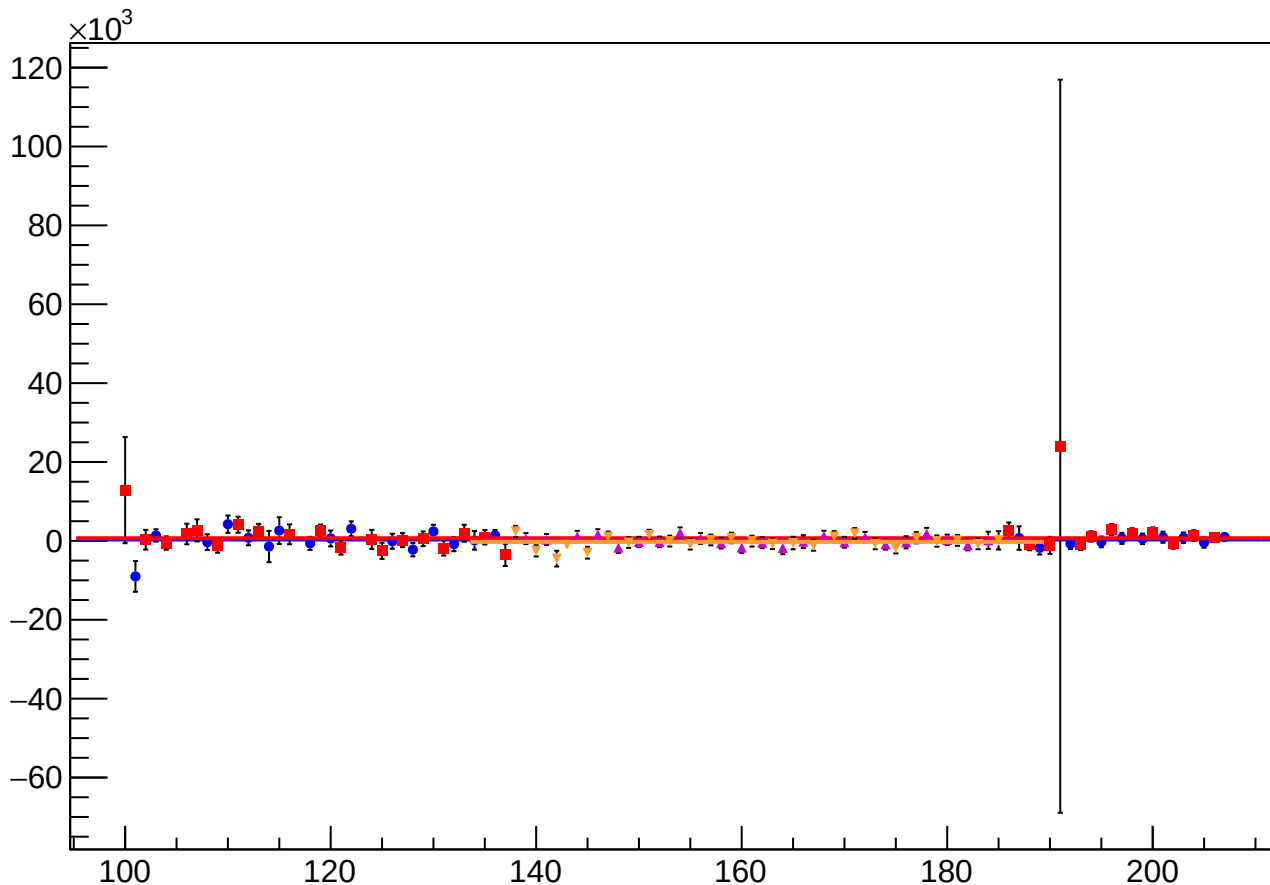
+ sign 705.277 $\pm$ 0.092  $\chi^2$ /NDF: 9532126.1/50

All: 711.645 $\pm$ 0.066  $\chi^2$ /NDF: 19665353.2/10

- sign 718.217 $\pm$ 0.093  $\chi^2$ /NDF: 10123490.1/53



eigen\_dit\_asym\_at1\_dd\_at2\_dd\_avg\_mean vs Slug



Right In:  $362.916 \pm 329.469$   $\chi^2/\text{NDF}$ : 20.8/25

Left Out:  $-250.851 \pm 279.923$   $\chi^2/\text{NDF}$ : 24.0/24

Right Out:  $672.725 \pm 318.435$   $\chi^2/\text{NDF}$ : 26.8/30

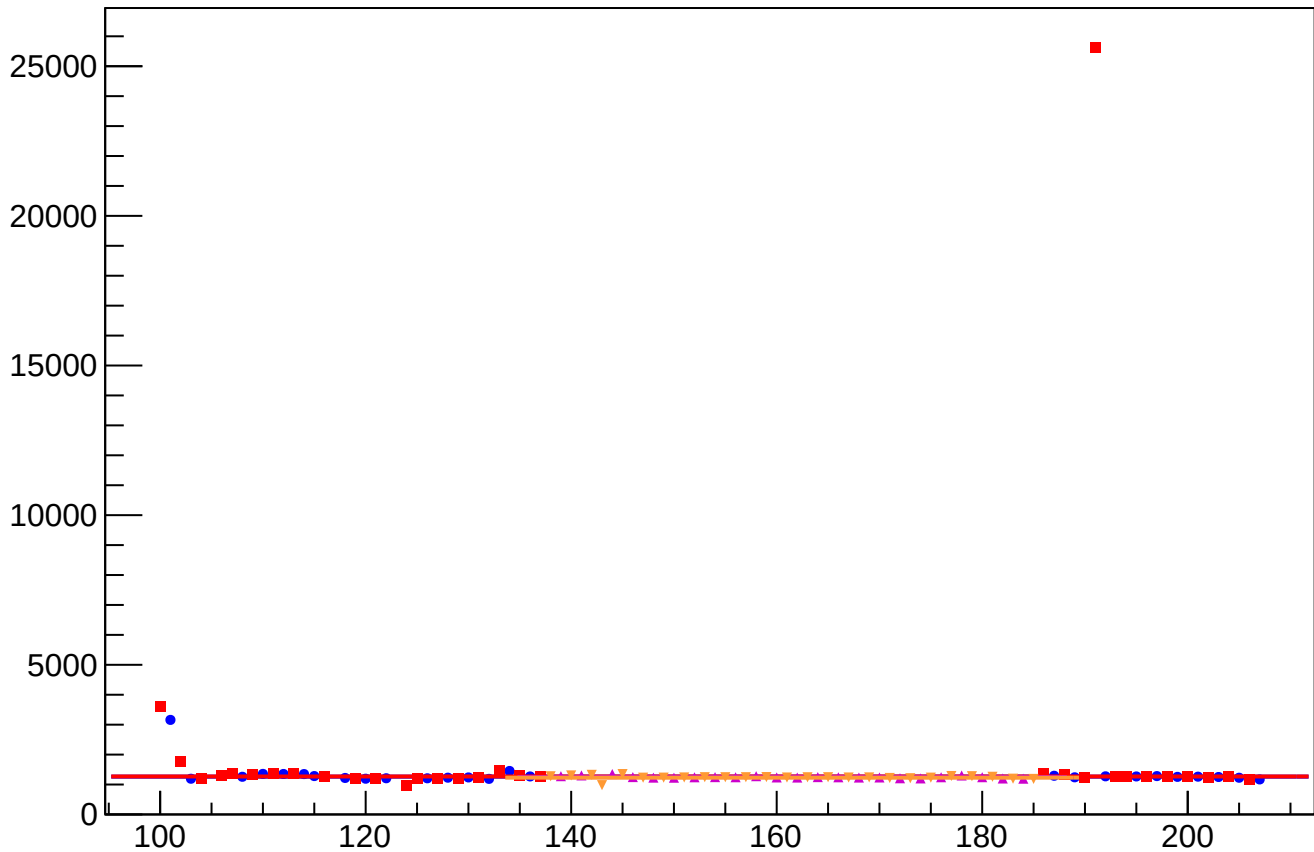
Left In:  $74.881 \pm 291.458$   $\chi^2/\text{NDF}$ : 14.0/22

+ sign  $6.458 \pm 213.324$   $\chi^2/\text{NDF}$ : 46.8/50

All:  $175.603 \pm 151.431$   $\chi^2/\text{NDF}$ : 90.8/104

- sign  $347.411 \pm 214.998$   $\chi^2/\text{NDF}$ : 42.8/53

eigen\_dit\_asym\_at1\_dd\_at2\_dd\_avg\_rms vs Slug



Right In: 1263.295+/-0.233  $\chi^2/\text{NDF}$ : 523813.6/25

Left Out: 1229.986+/-0.198  $\chi^2/\text{NDF}$ : 141606.6/24

Right Out: 1268.948+/-0.225  $\chi^2/\text{NDF}$ : 384624.6/30

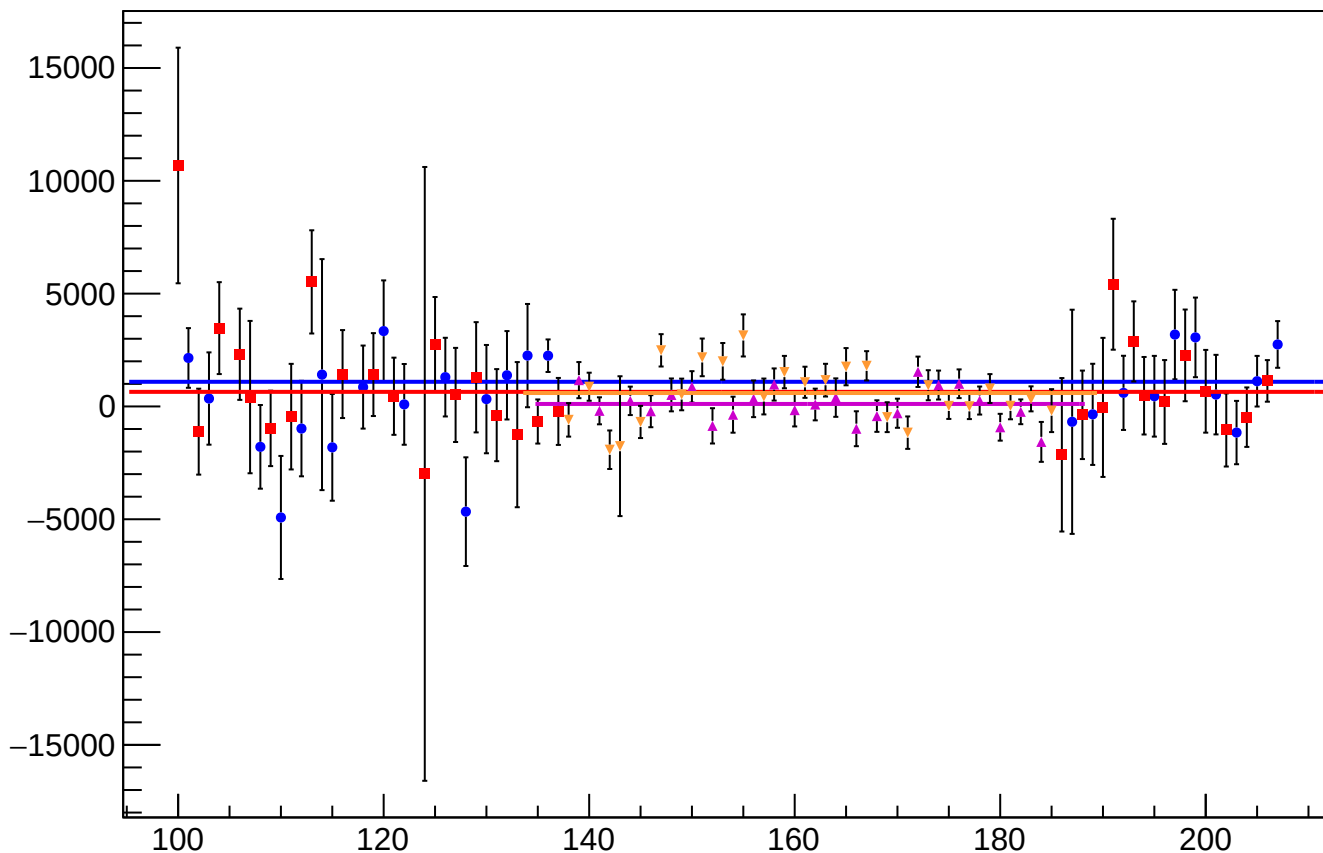
Left In: 1247.785+/-0.206  $\chi^2/\text{NDF}$ : 27340.7/22

+ sign 1243.950+/-0.151  $\chi^2/\text{NDF}$ : 677292.4/50

All: 1250.639+/-0.107  $\chi^2/\text{NDF}$ : 1098027.3/100

- sign 1257.432+/-0.152  $\chi^2/\text{NDF}$ : 416772.0/53

asym\_at1\_dd\_at2\_dd\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In: 1092.533 $\pm$ 322.990  $\chi^2$ /NDF: 28.9/25

Left Out: 595.000 $\pm$ 142.130  $\chi^2$ /NDF: 57.3/24

Right Out: 646.374 $\pm$ 330.083  $\chi^2$ /NDF: 25.2/30

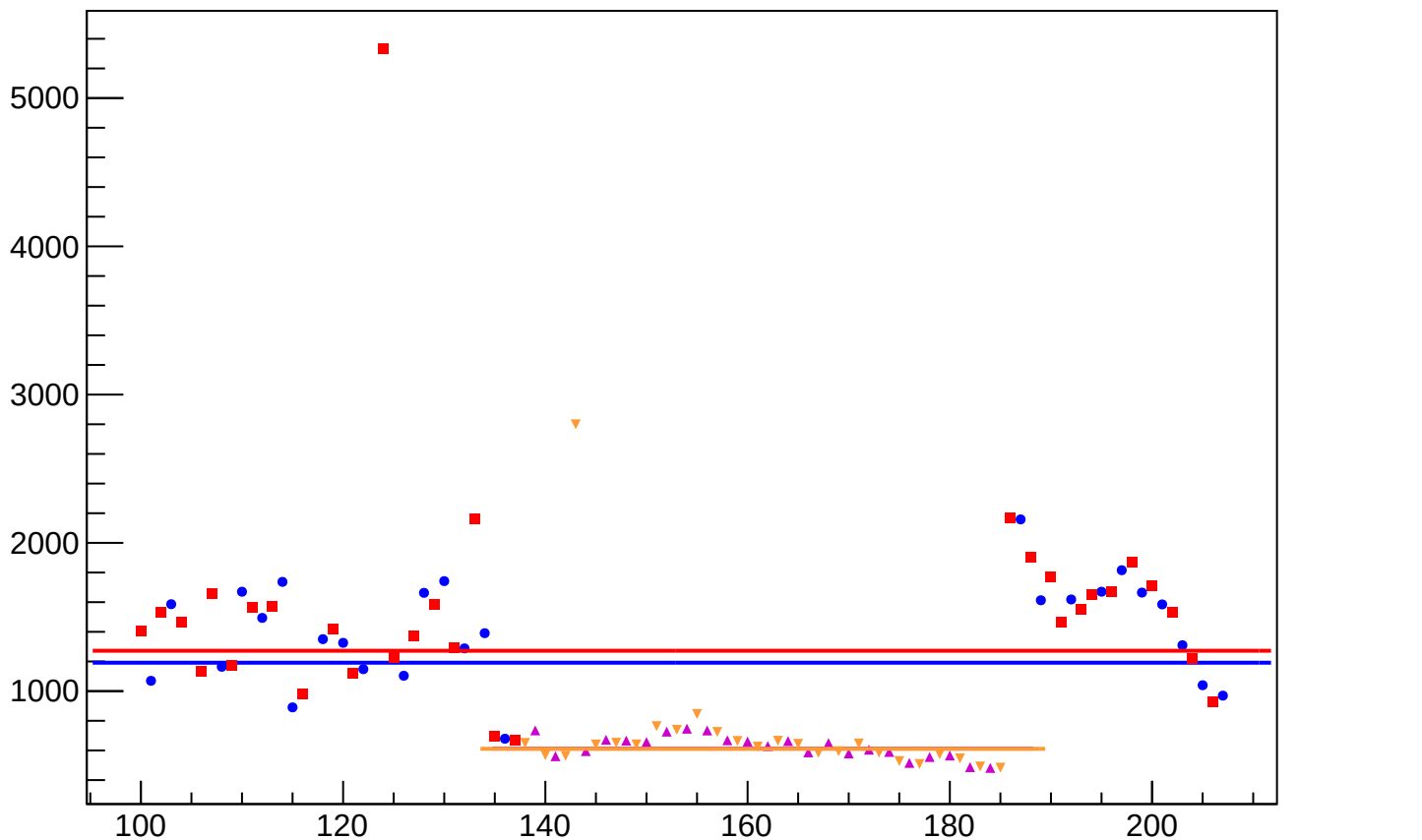
Left In: 110.251 $\pm$ 144.232  $\chi^2$ /NDF: 25.7/22

+ sign 675.713 $\pm$ 130.092  $\chi^2$ /NDF: 88.2/50

All: 439.749 $\pm$ 92.713  $\chi^2$ /NDF: 148.0/104

- sign 196.203 $\pm$ 132.166  $\chi^2$ /NDF: 53.1/53

asym\_at1\_dd\_at2\_dd\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 1191.701 $\pm$ 0.228  $\chi^2$ /NDF: 2498338.8/25

Left Out: 611.086 $\pm$ 0.101  $\chi^2$ /NDF:1619319.5/24

Right Out: 1272.438 $\pm$ 0.233  $\chi^2$ /NDF: 2900033.6/30

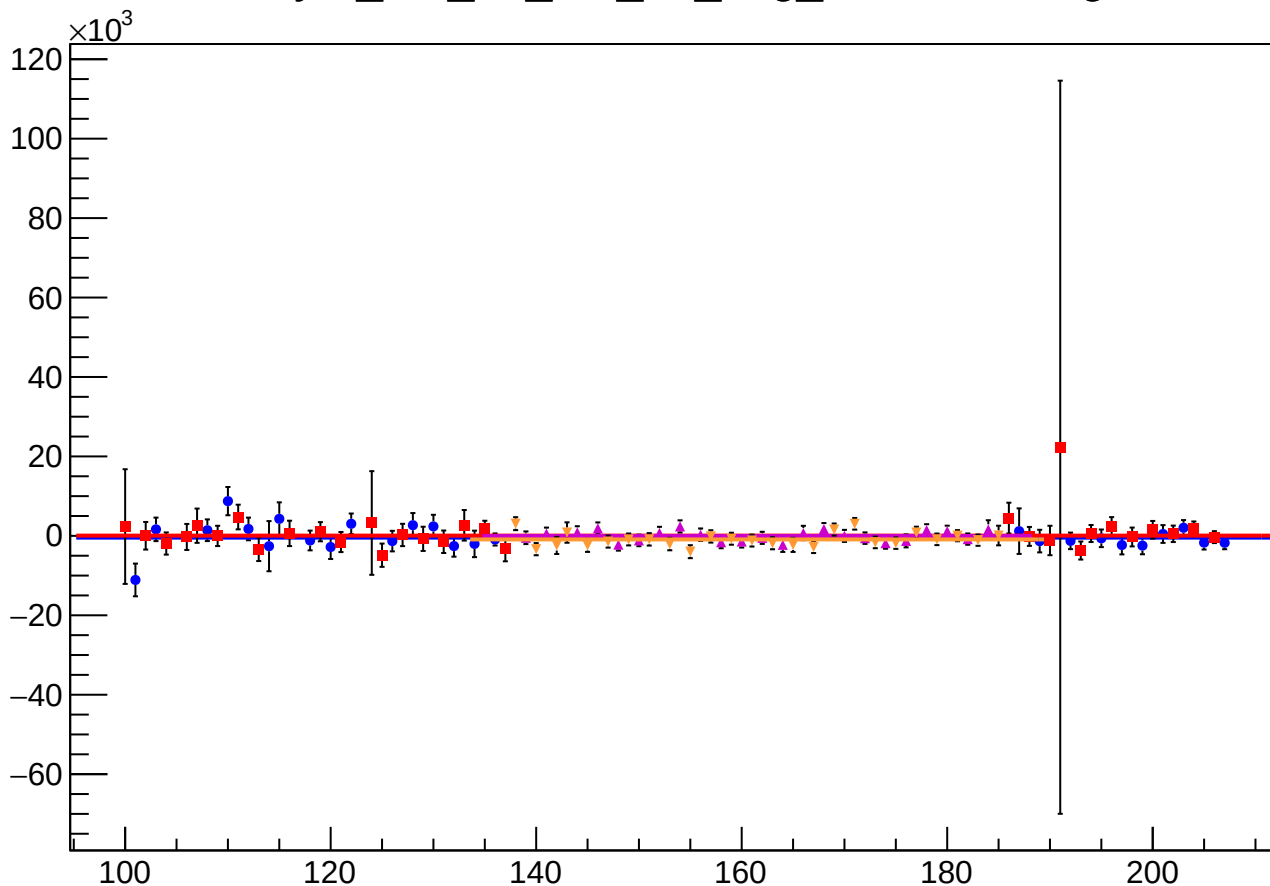
Left In: 612.398 $\pm$ 0.102  $\chi^2$ /NDF:508597.7/22

+ sign 705.277 $\pm$ 0.092  $\chi^2$ /NDF: 9532100.3/50

All: 711.645 $\pm$ 0.066  $\chi^2$ /NDF: 19665333.1/10

- sign 718.217 $\pm$ 0.093  $\chi^2$ /NDF: 10123496.4/53

asym\_at1\_dd\_at2\_dd\_avg\_mean vs Slug



Right In: -443.464 $\pm$ 487.657  $\chi^2$ /NDF: 26.7/25

Left Out: -899.894 $\pm$ 316.449  $\chi^2$ /NDF: 29.8/24

Right Out: 60.104 $\pm$ 482.403  $\chi^2$ /NDF: 17.2/30

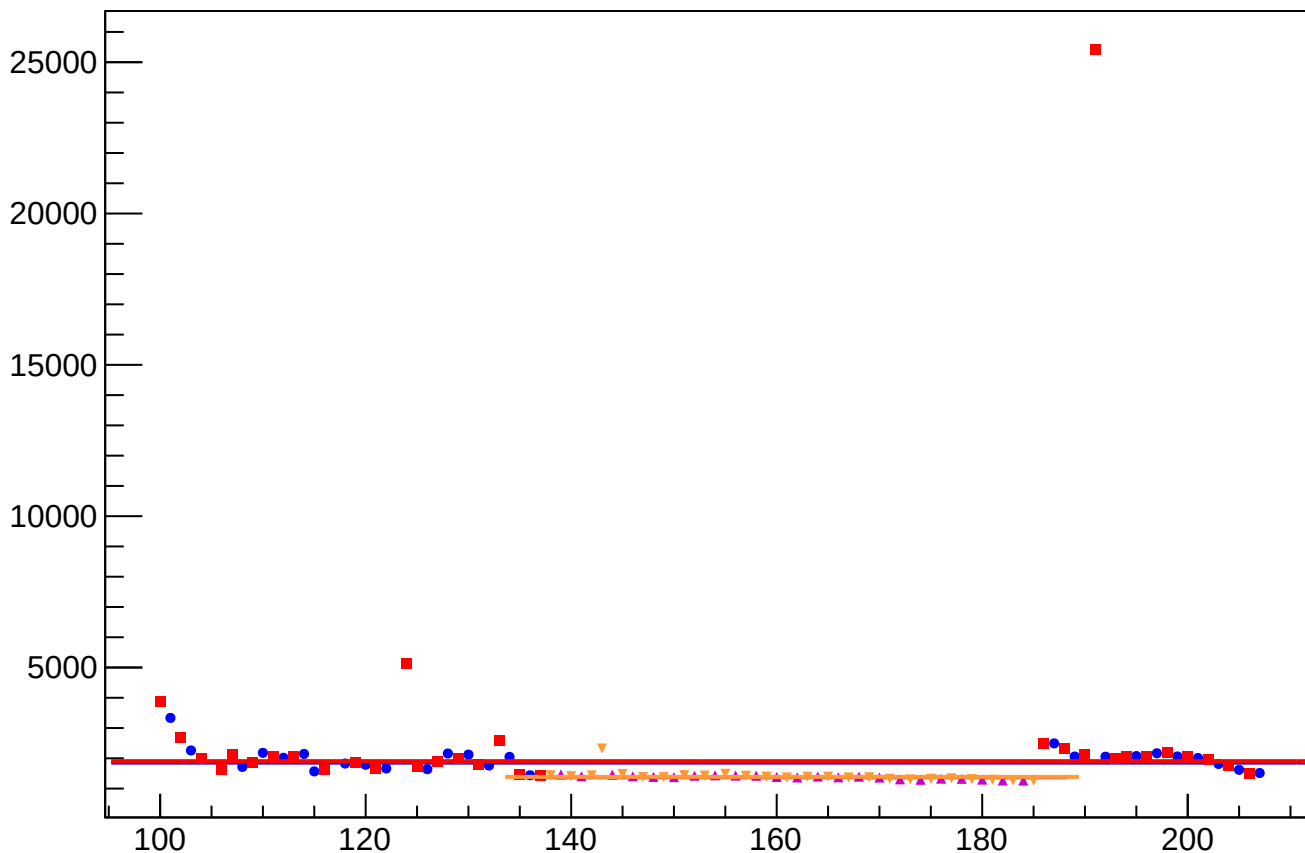
Left In: -48.178 $\pm$ 320.929  $\chi^2$ /NDF: 17.9/22

+ sign -764.647 $\pm$ 265.456  $\chi^2$ /NDF: 57.1/50

All: -392.258 $\pm$ 188.320  $\chi^2$ /NDF: 96.2/104

- sign -14.957 $\pm$ 267.201  $\chi^2$ /NDF: 35.1/53

# asym\_at1\_dd\_at2\_dd\_avg\_rms vs Slug



Right In: 1858.113+/-0.345     $\chi^2/\text{NDF}$ : 818380.5/25

Left Out: 1386.845+/-0.224     $\chi^2/\text{NDF}$ :339794.5/24

Right Out: 1905.838+/-0.341     $\chi^2/\text{NDF}$ : 991223.5/30

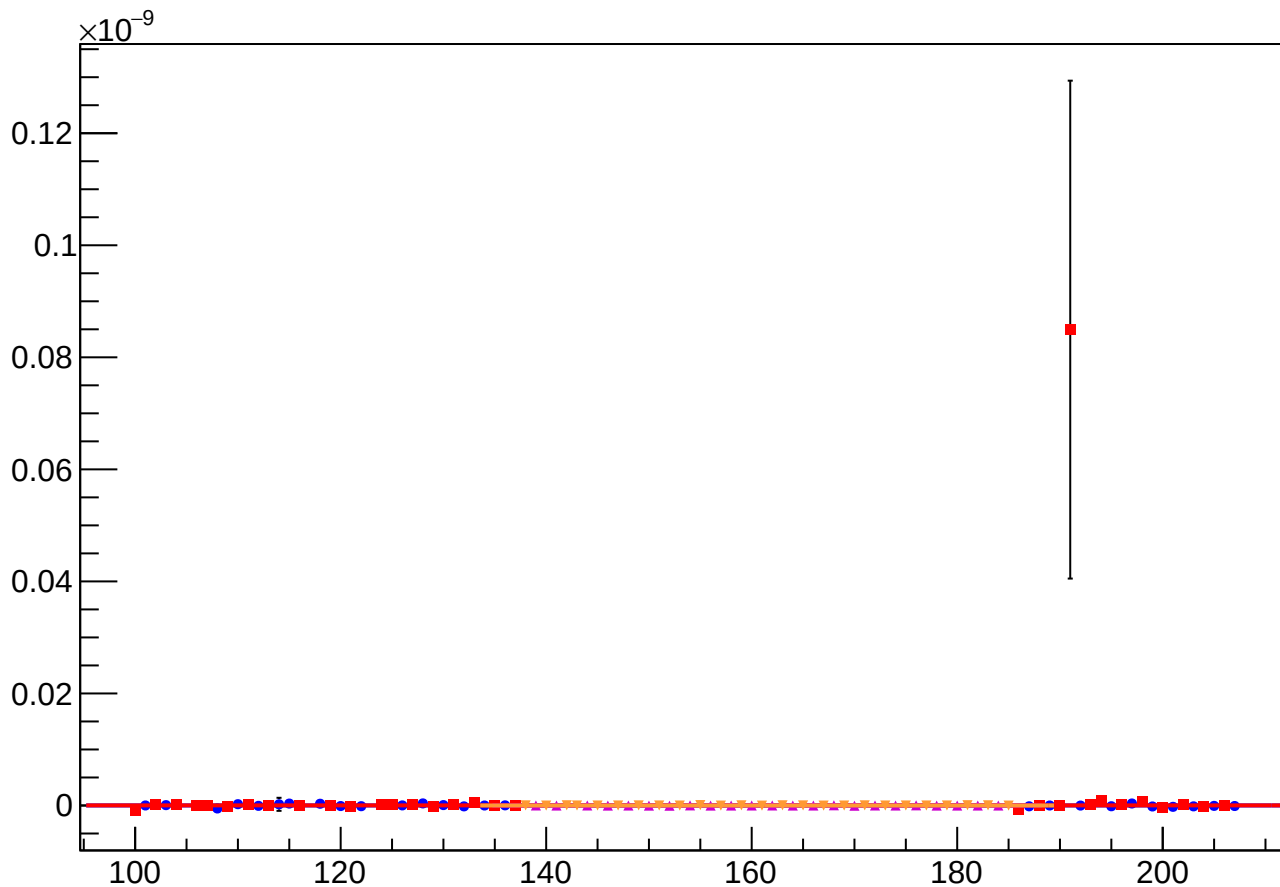
Left In: 1373.217+/-0.227     $\chi^2/\text{NDF}$ :64467.6/22

+ sign 1526.490+/-0.188     $\chi^2/\text{NDF}$ : 2472541.0/50

All: 1531.525+/-0.133     $\chi^2/\text{NDF}$ : 5219765.5/100

- sign 1536.626+/-0.189     $\chi^2/\text{NDF}$ : 2745775.9/53

asym\_at1\_dd\_at2\_dd\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 22.9/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 24.8/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 46.1/30

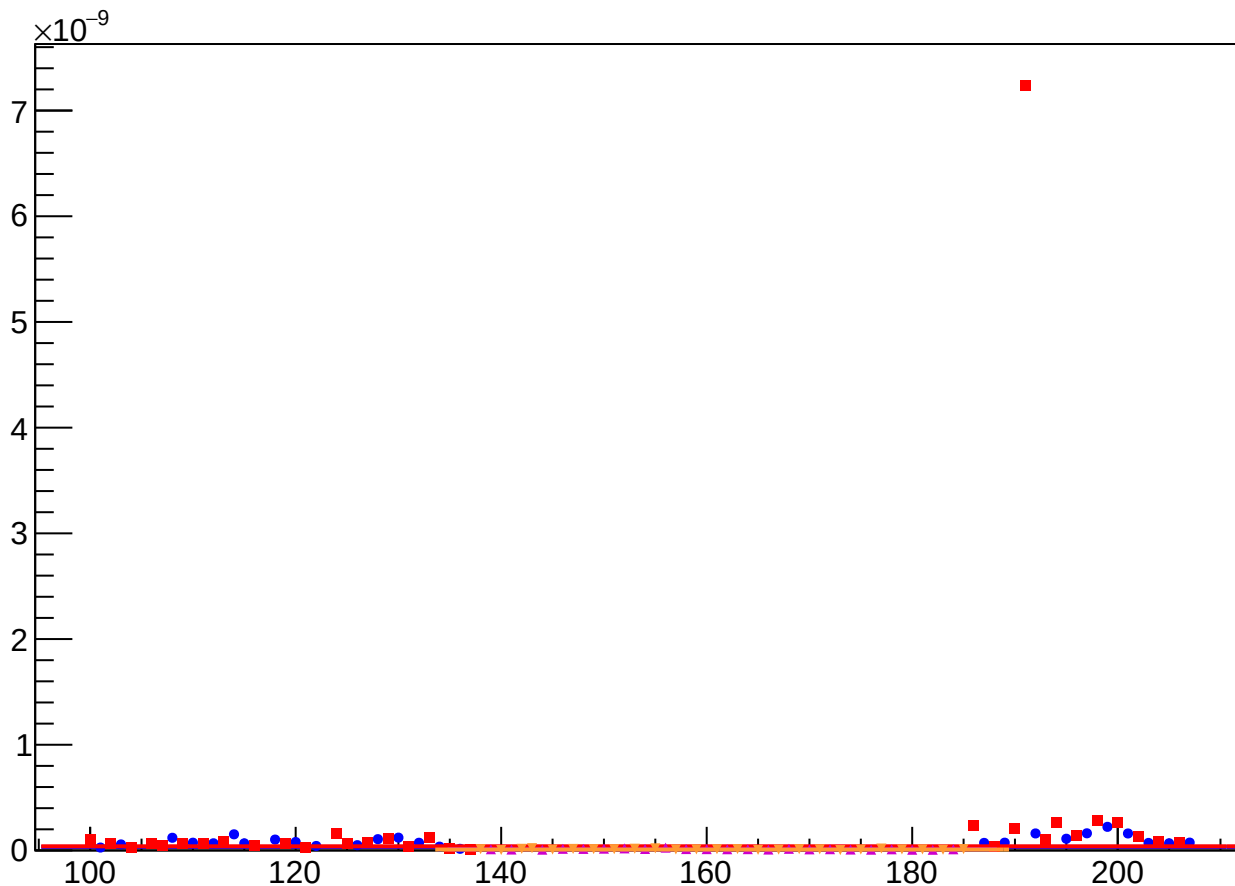
Left In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 13.5/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 47.8/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 109.2/104

- sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 60.7/53

asym\_at1\_dd\_at2\_dd\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5862367.9/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2148494.6/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6427018.8/30

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1232395.4/22

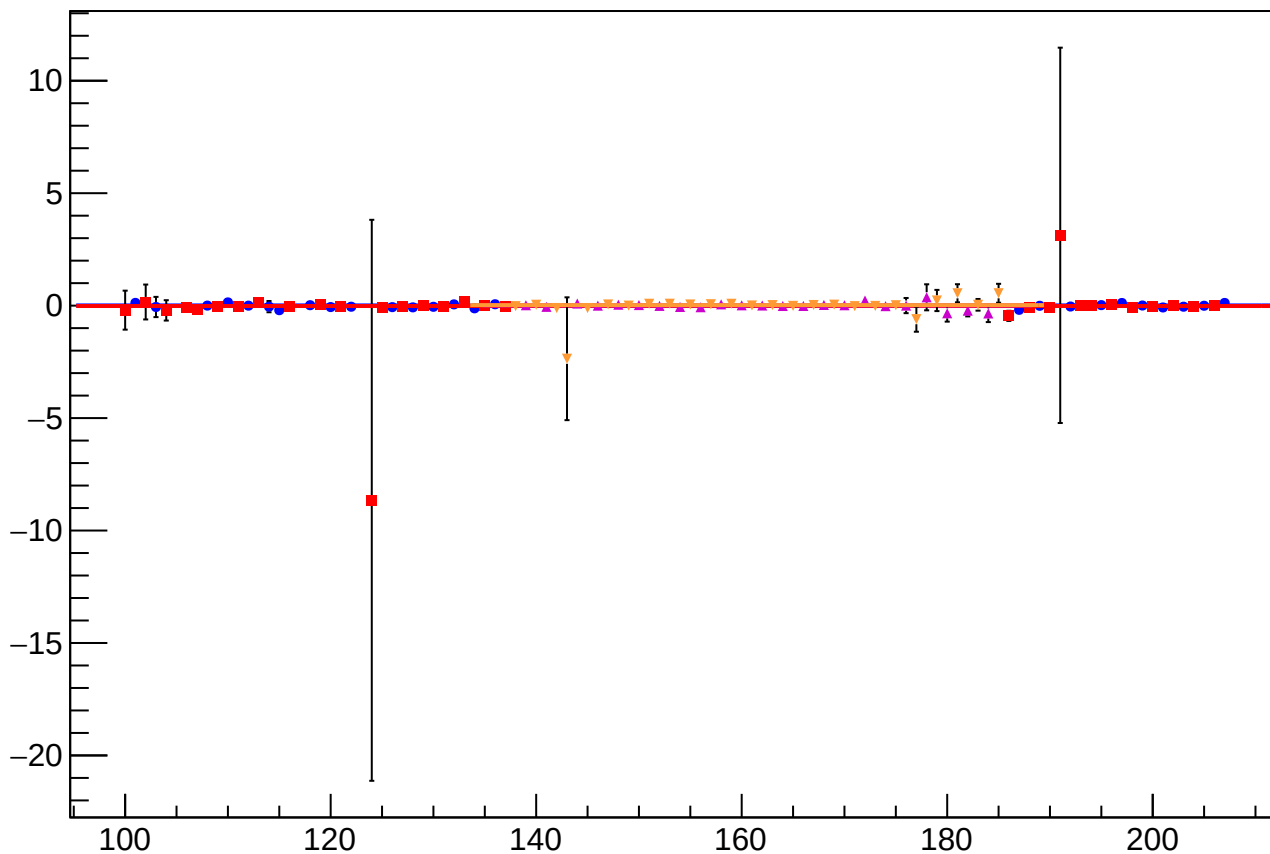
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11676076.8/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 23459830.5/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11504039.2/53



asym\_at1\_dd\_at2\_dd\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.009 \pm 0.011$   $\chi^2/\text{NDF}: 42.1/25$

Left Out:  $0.023 \pm 0.010$   $\chi^2/\text{NDF}: 22.8/24$

Right Out:  $-0.017 \pm 0.011$   $\chi^2/\text{NDF}: 22.5/30$

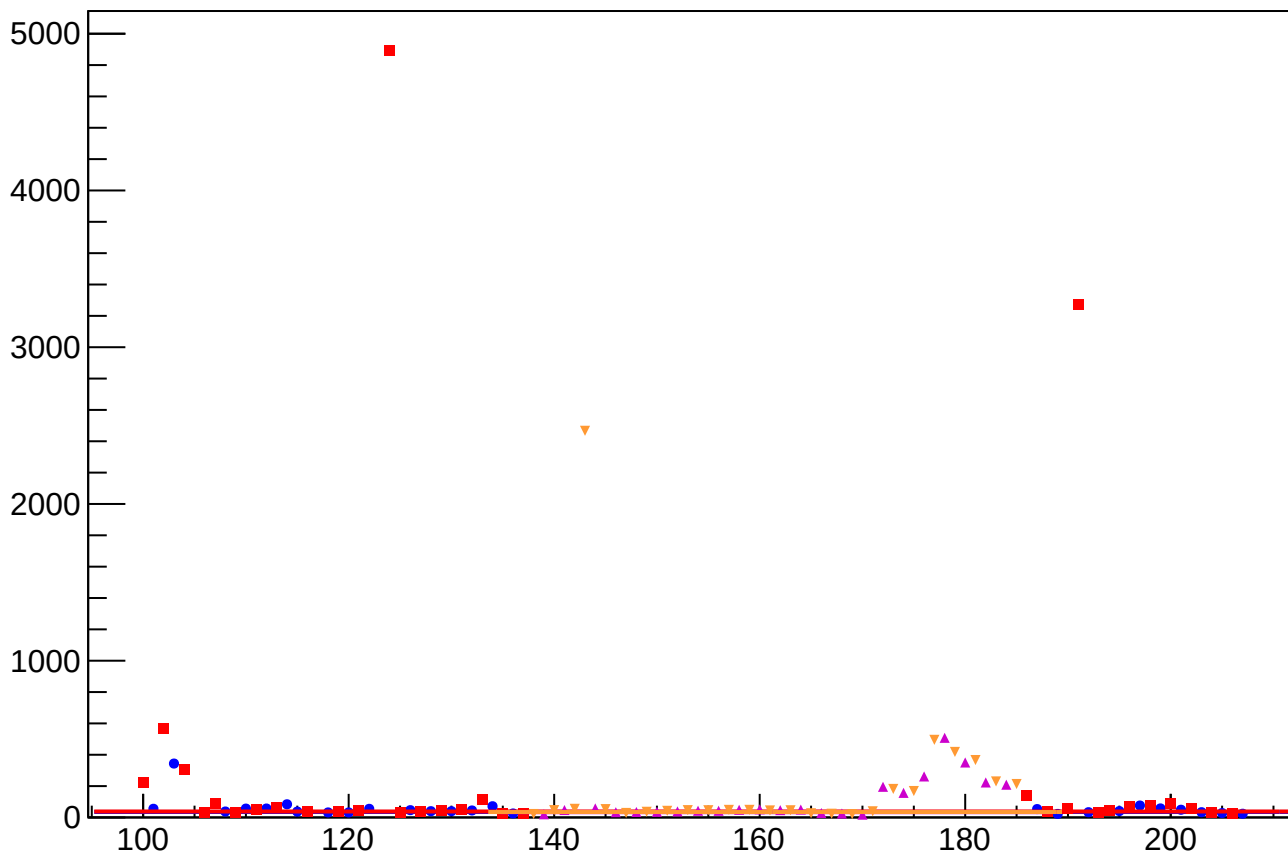
Left In:  $0.010 \pm 0.010$   $\chi^2/\text{NDF}: 14.8/22$

+ sign  $0.016 \pm 0.007$   $\chi^2/\text{NDF}: 65.9/50$

All:  $0.007 \pm 0.005$   $\chi^2/\text{NDF}: 109.4/104$

- sign  $-0.002 \pm 0.007$   $\chi^2/\text{NDF}: 40.4/53$

asym\_at1\_dd\_at2\_dd\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 35.048+/-0.007  $\chi^2/\text{NDF}$ : 3447880.8/25

Left Out: 34.624+/-0.007  $\chi^2/\text{NDF}$ : 11402451.4/24

Right Out: 38.062+/-0.008  $\chi^2/\text{NDF}$ : 5845374.8/30

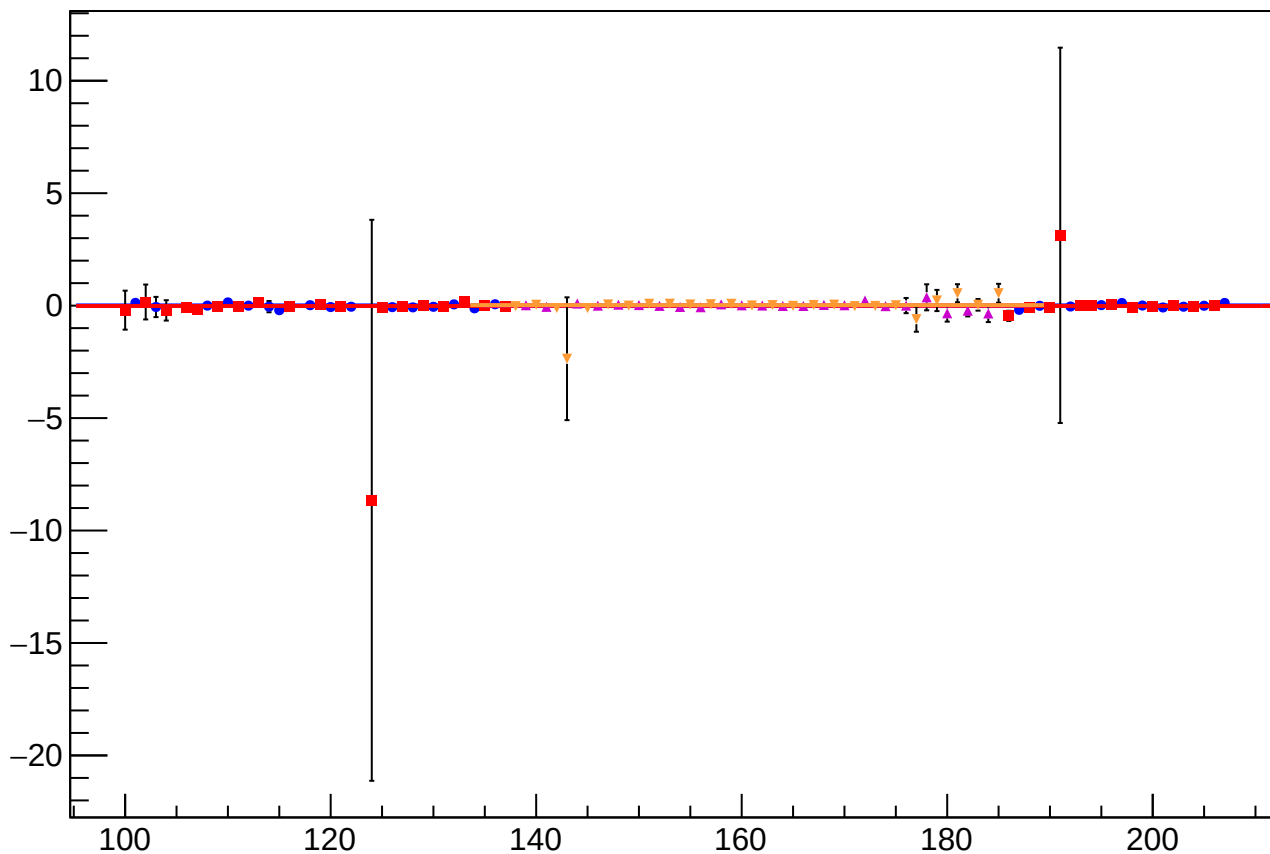
Left In: 33.592+/-0.007  $\chi^2/\text{NDF}$ : 10067466.4/22

+ sign 34.829+/-0.005  $\chi^2/\text{NDF}$ : 14852007.2/50

All: 35.175+/-0.004  $\chi^2/\text{NDF}$ : 30949581.6/104

- sign 35.534+/-0.005  $\chi^2/\text{NDF}$ : 16088509.5/53

asym\_at1\_dd\_at2\_dd\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.009 $\pm$ 0.011  $\chi^2$ /NDF: 42.1/25

Left Out: 0.023 $\pm$ 0.010  $\chi^2$ /NDF:22.8/24

Right Out: -0.017 $\pm$ 0.011  $\chi^2$ /NDF: 22.5/30

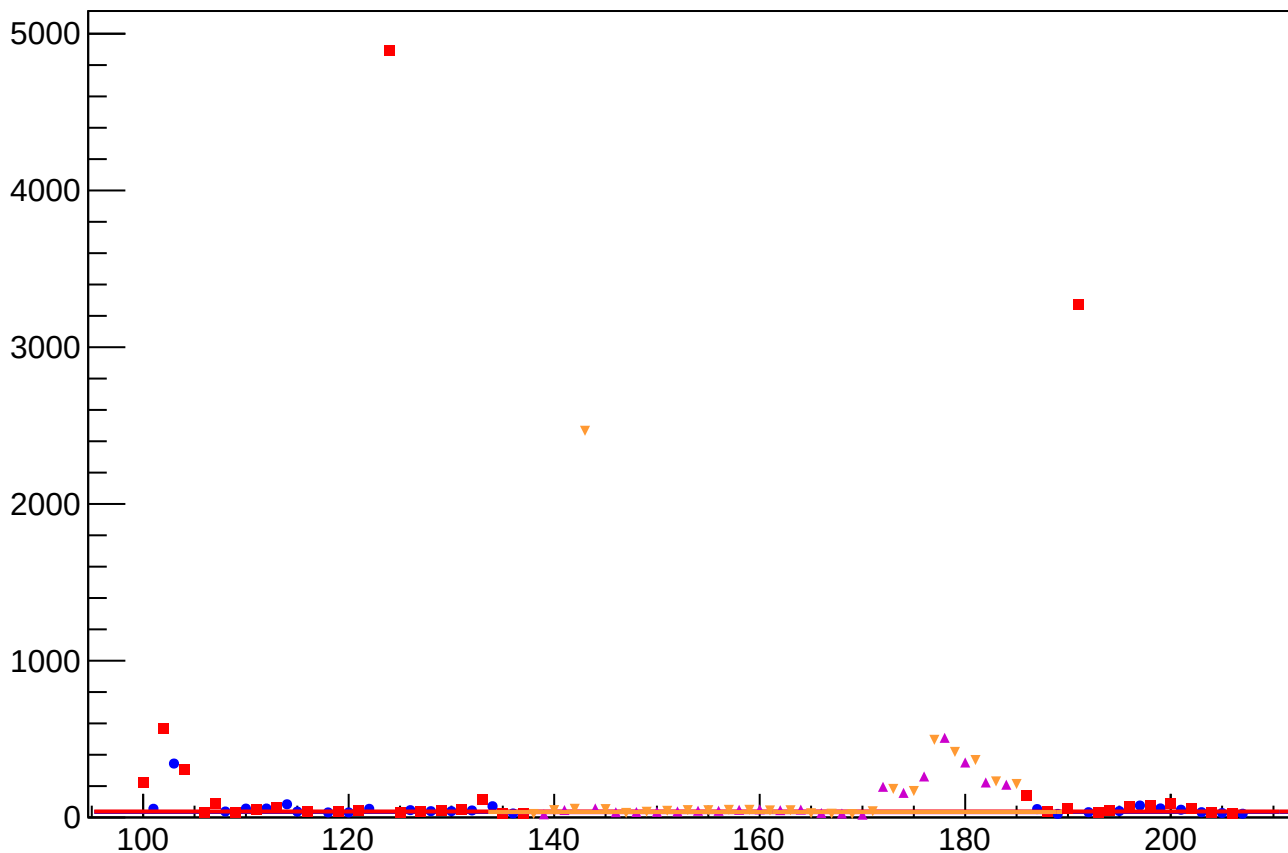
Left In: 0.010 $\pm$ 0.010  $\chi^2$ /NDF:14.8/22

+ sign 0.016 $\pm$ 0.007  $\chi^2$ /NDF: 65.9/50

All: 0.007 $\pm$ 0.005  $\chi^2$ /NDF: 109.4/104

- sign -0.002 $\pm$ 0.007  $\chi^2$ /NDF: 40.4/53

asym\_at1\_dd\_at2\_dd\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 35.048+/-0.007  $\chi^2/\text{NDF}$ : 3447880.8/25

Left Out: 34.624+/-0.007  $\chi^2/\text{NDF}$ : 11402451.4/24

Right Out: 38.062+/-0.008  $\chi^2/\text{NDF}$ : 5845374.8/30

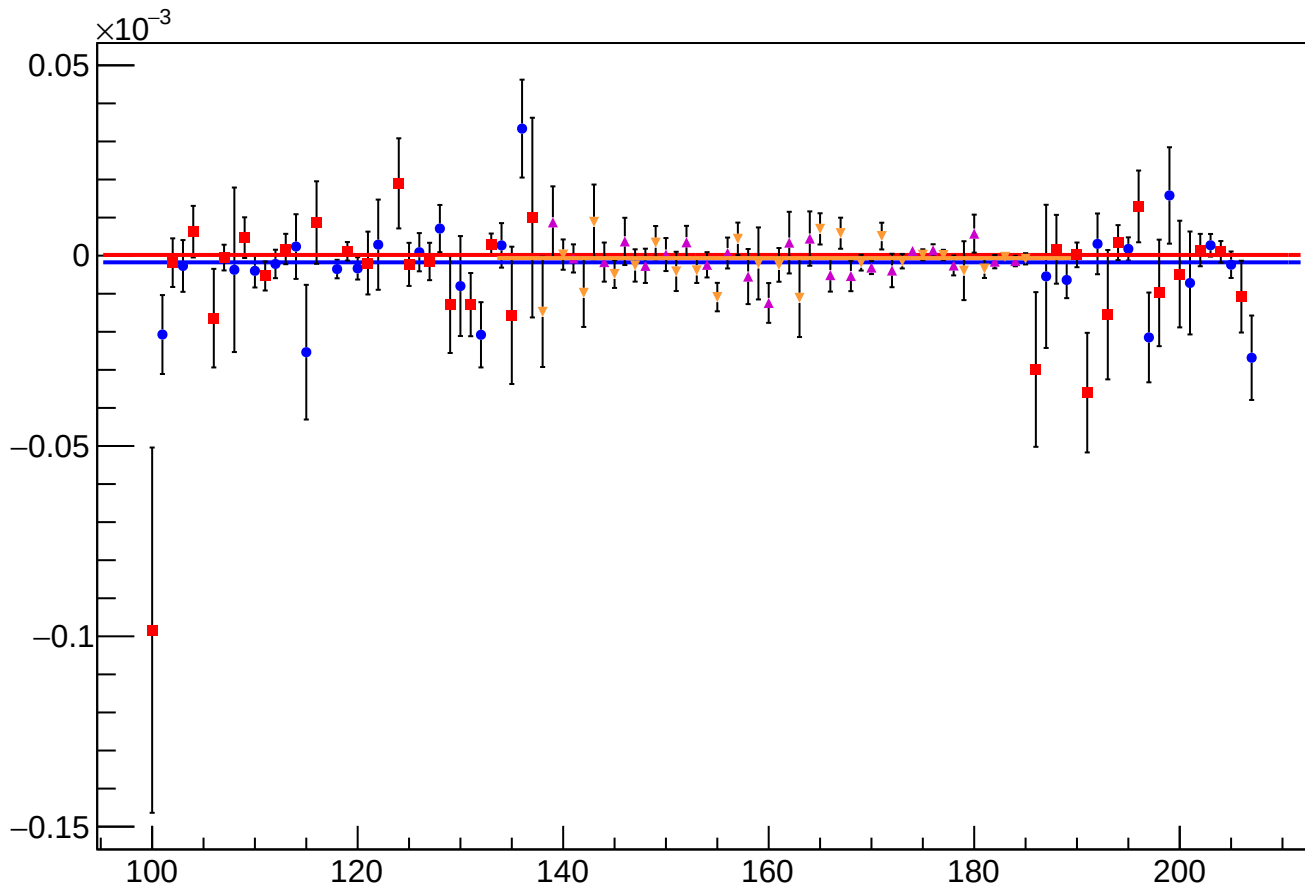
Left In: 33.592+/-0.007  $\chi^2/\text{NDF}$ : 10067466.4/22

+ sign 34.829+/-0.005  $\chi^2/\text{NDF}$ : 14852007.2/50

All: 35.175+/-0.004  $\chi^2/\text{NDF}$ : 30949581.6/104

- sign 35.534+/-0.005  $\chi^2/\text{NDF}$ : 16088509.5/53

asym\_at1\_dd\_at2\_dd\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 37.2/25

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 28.4/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 31.7/30

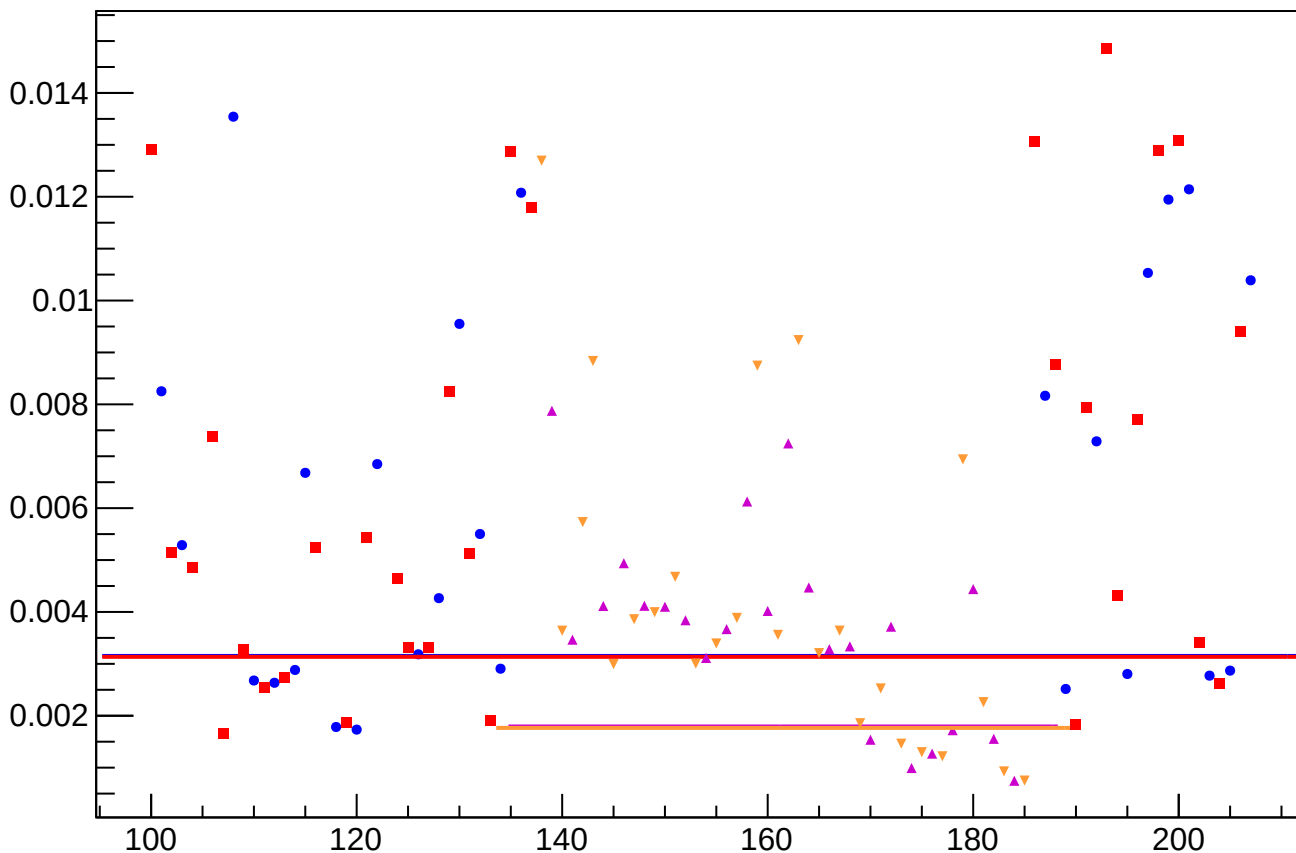
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 21.9/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 66.5/50

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 121.2/104

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 54.2/53

asym\_at1\_dd\_at2\_dd\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 8513702.9/25

Left Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF:12926339.2/24

Right Out: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 9758566.1/30

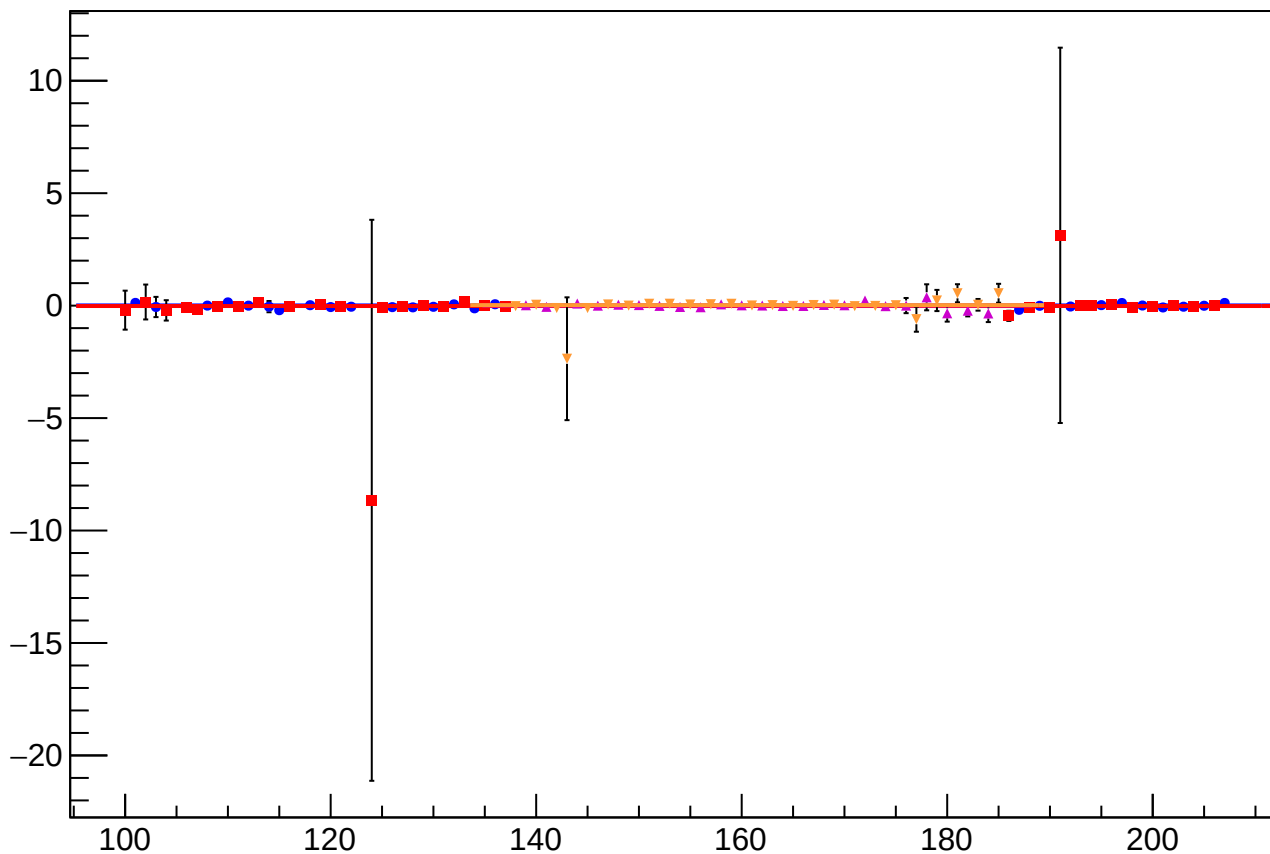
Left In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF:10766932.4/22

+ sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 24434931.0/50

All: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 47979098.1/104

- sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 23518585.6/53

asym\_at1\_dd\_at2\_dd\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.009 \pm 0.011$   $\chi^2/\text{NDF}$ : 42.1/25

Left Out:  $0.023 \pm 0.010$   $\chi^2/\text{NDF}$ : 22.8/24

Right Out:  $-0.017 \pm 0.011$   $\chi^2/\text{NDF}$ : 22.5/30

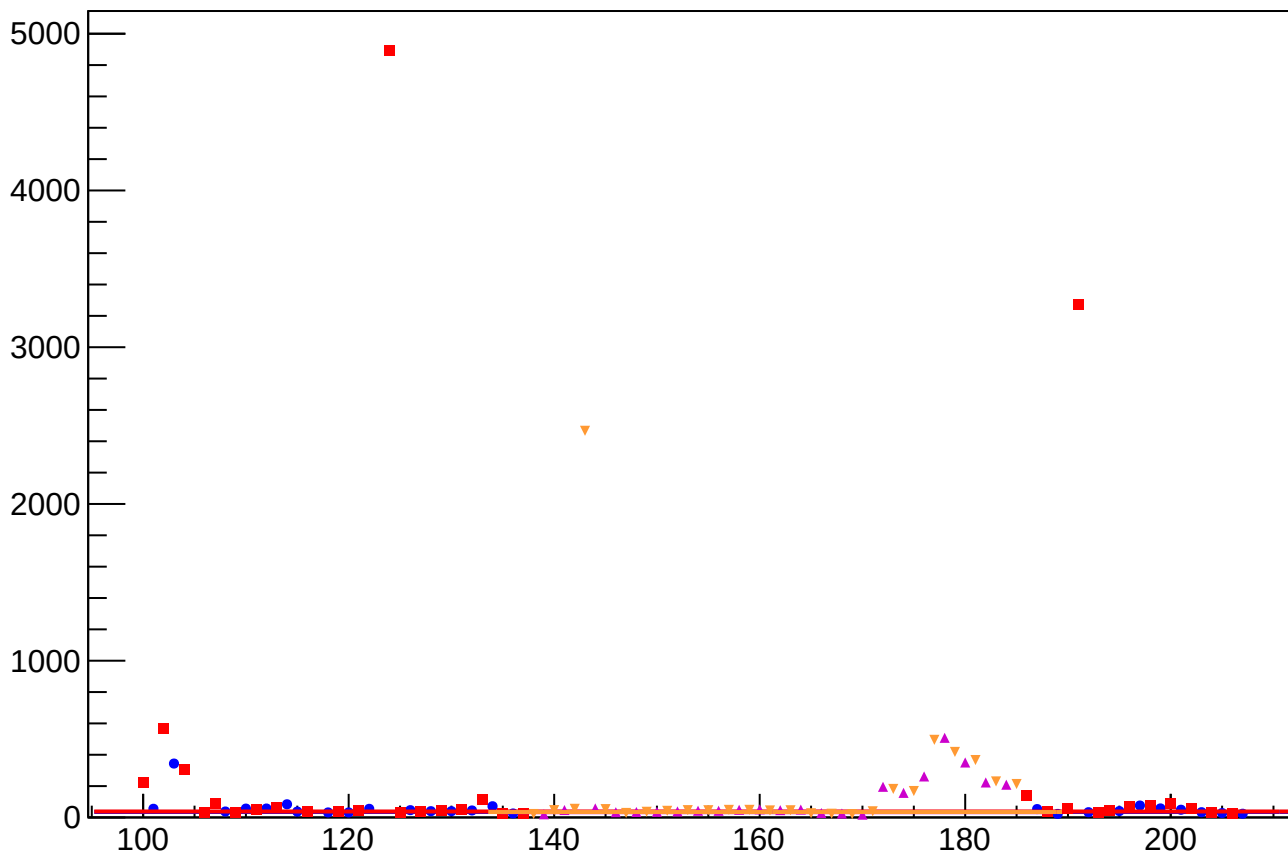
Left In:  $0.010 \pm 0.010$   $\chi^2/\text{NDF}$ : 14.8/22

+ sign  $0.016 \pm 0.007$   $\chi^2/\text{NDF}$ : 65.9/50

All:  $0.007 \pm 0.005$   $\chi^2/\text{NDF}$ : 109.4/104

- sign  $-0.002 \pm 0.007$   $\chi^2/\text{NDF}$ : 40.4/53

asym\_at1\_dd\_at2\_dd\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 35.052+/-0.007  $\chi^2/\text{NDF}$ : 3446499.3/25

Left Out: 34.623+/-0.007  $\chi^2/\text{NDF}$ : 11402566.2/24

Right Out: 38.063+/-0.008  $\chi^2/\text{NDF}$ : 5845045.3/30

Left In: 33.595+/-0.007  $\chi^2/\text{NDF}$ : 10066196.6/22

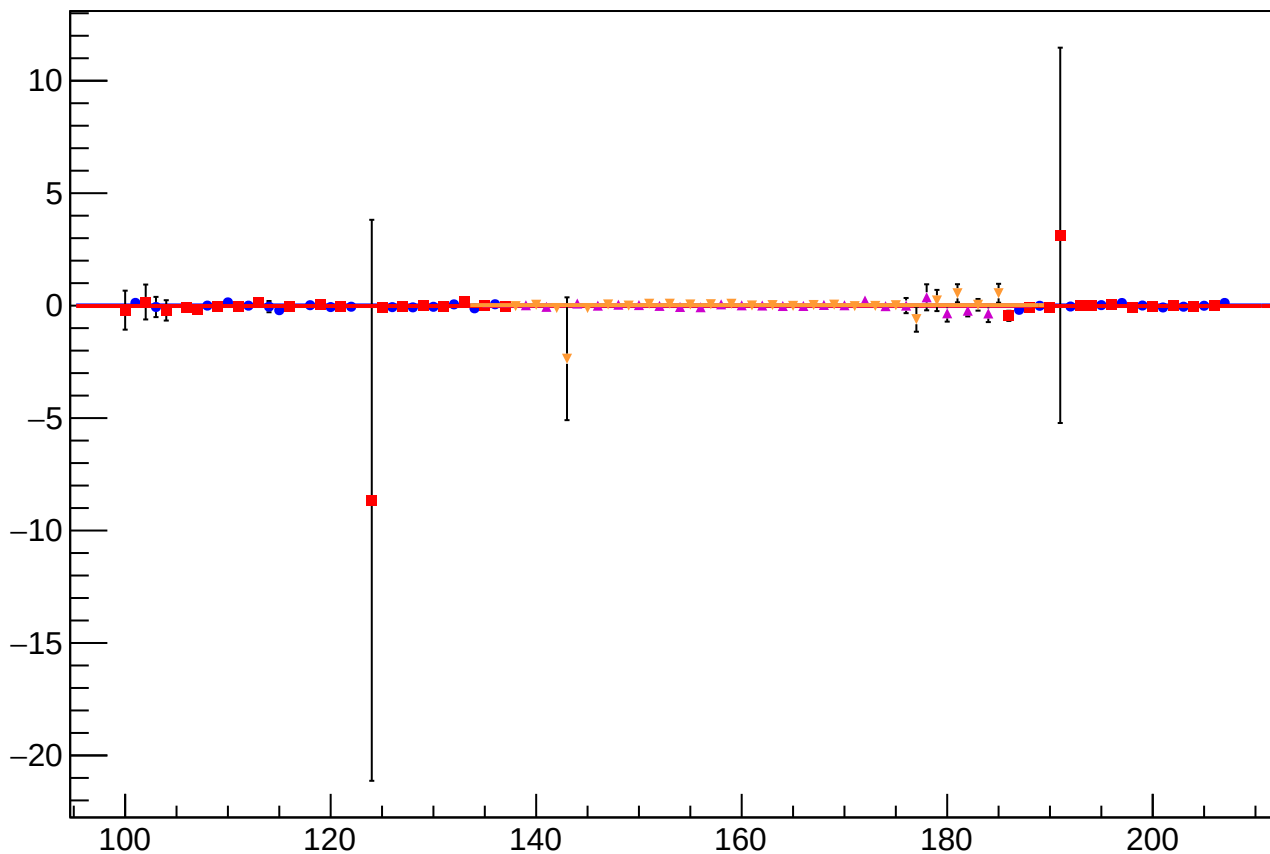
+ sign 34.830+/-0.005  $\chi^2/\text{NDF}$ : 14850774.9/50

All: 35.176+/-0.004  $\chi^2/\text{NDF}$ : 30946663.0/104

- sign 35.536+/-0.005  $\chi^2/\text{NDF}$ : 16086806.4/53



asym\_at1\_dd\_at2\_dd\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.009 \pm 0.011$   $\chi^2/\text{NDF}$ : 42.1/25

Left Out:  $0.023 \pm 0.010$   $\chi^2/\text{NDF}$ : 22.8/24

Right Out:  $-0.017 \pm 0.011$   $\chi^2/\text{NDF}$ : 22.5/30

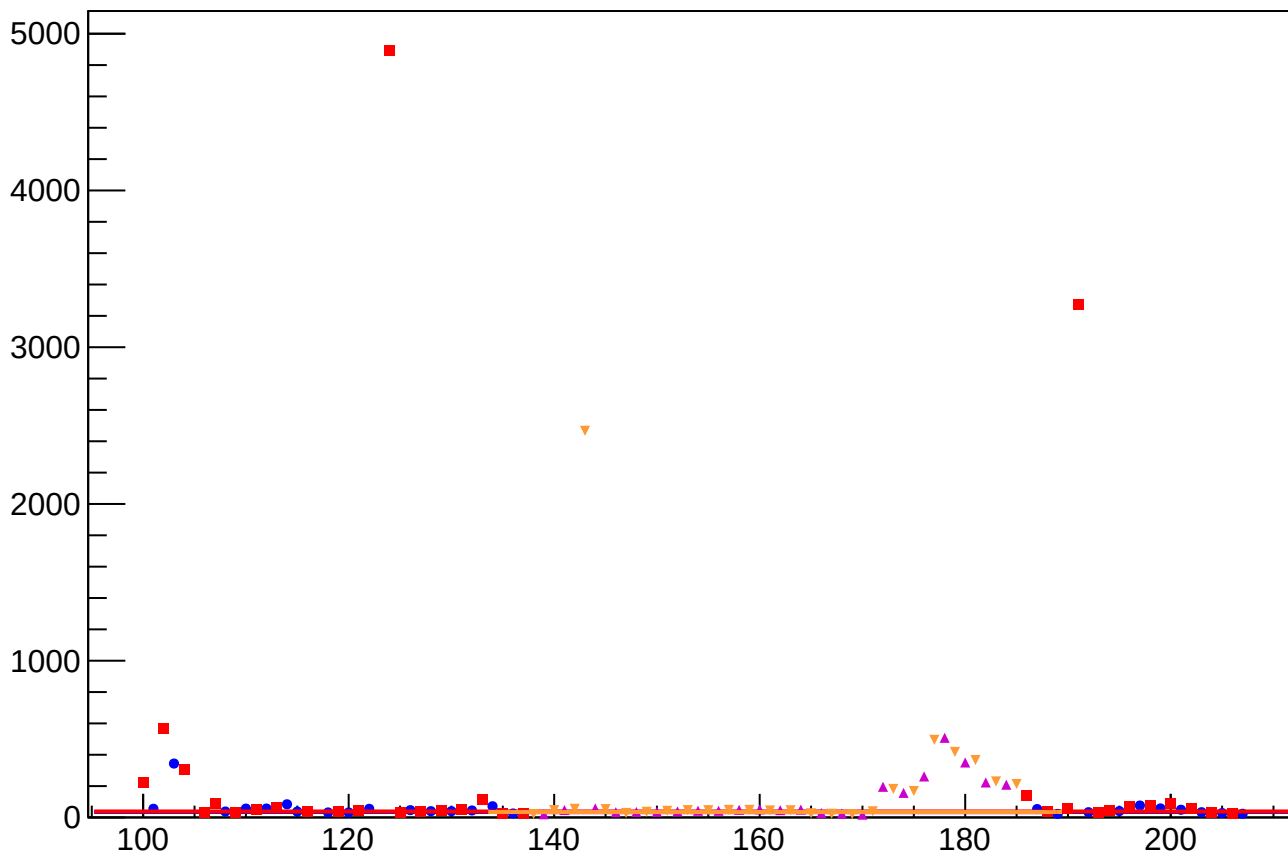
Left In:  $0.010 \pm 0.010$   $\chi^2/\text{NDF}$ : 14.8/22

+ sign  $0.016 \pm 0.007$   $\chi^2/\text{NDF}$ : 65.9/50

All:  $0.007 \pm 0.005$   $\chi^2/\text{NDF}$ : 109.4/104

- sign  $-0.002 \pm 0.007$   $\chi^2/\text{NDF}$ : 40.4/53

asym\_at1\_dd\_at2\_dd\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 35.052+/-0.007  $\chi^2/\text{NDF}$ : 3446499.3/25

Left Out: 34.623+/-0.007  $\chi^2/\text{NDF}$ : 11402566.2/24

Right Out: 38.063+/-0.008  $\chi^2/\text{NDF}$ : 5845045.3/30

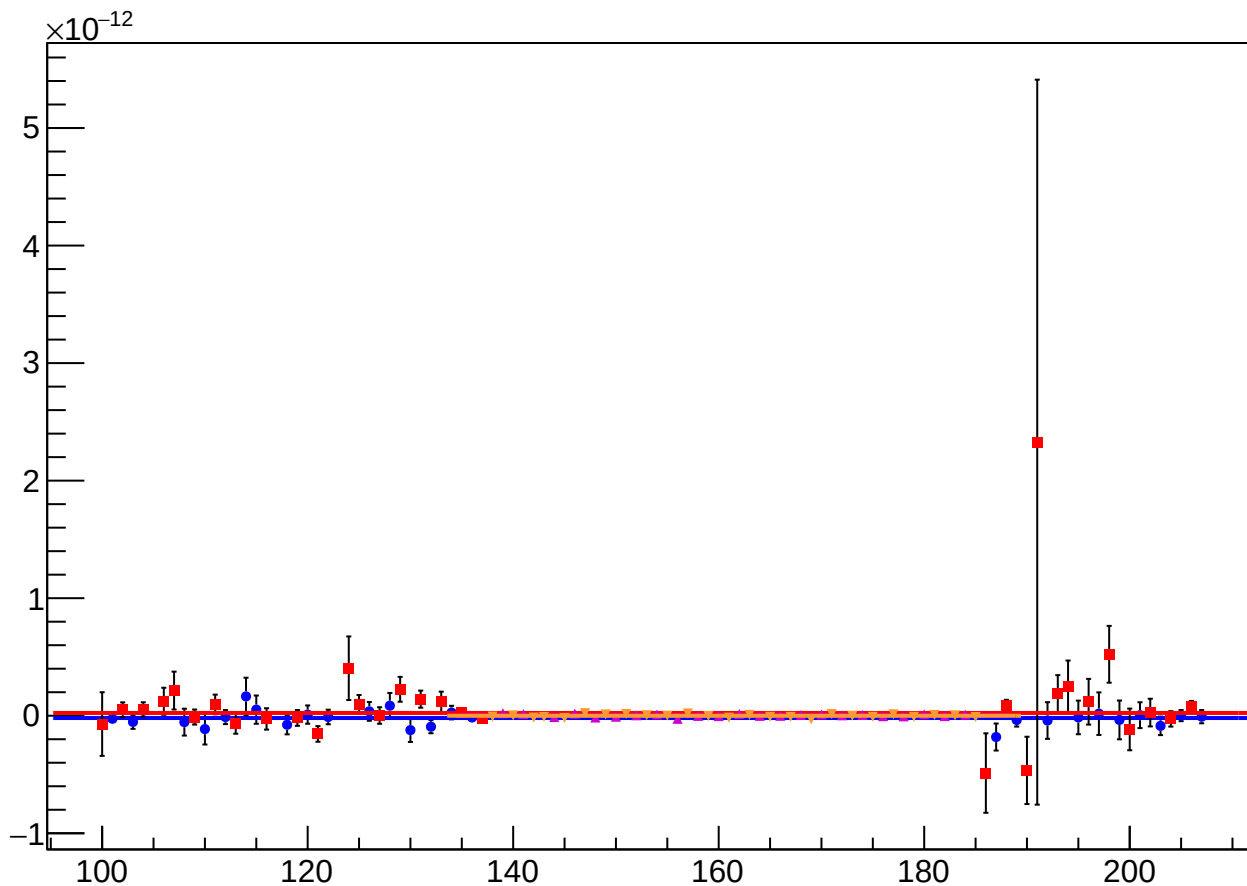
Left In: 33.595+/-0.007  $\chi^2/\text{NDF}$ : 10066196.6/22

+ sign 34.830+/-0.005  $\chi^2/\text{NDF}$ : 14850774.9/50

All: 35.176+/-0.004  $\chi^2/\text{NDF}$ : 30946663.0/104

- sign 35.536+/-0.005  $\chi^2/\text{NDF}$ : 16086806.4/53

asym\_at1\_dd\_at2\_dd\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2$ /NDF: 11.5/25

Left Out: -0.000+/-0.000  $\chi^2$ /NDF: 26.0/24

Right Out: 0.000+/-0.000  $\chi^2$ /NDF: 44.2/30

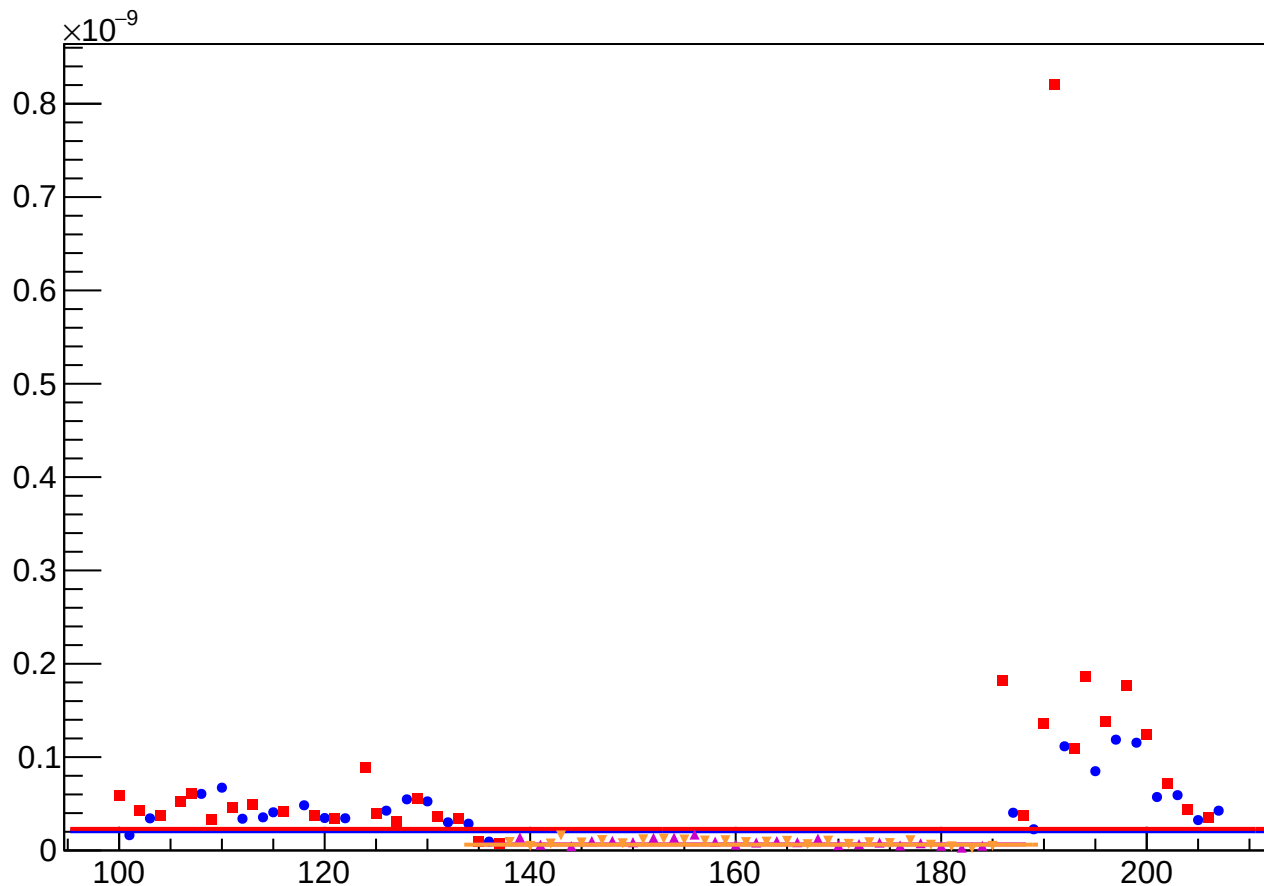
Left In: 0.000+/-0.000  $\chi^2$ /NDF: 20.0/22

+ sign -0.000+/-0.000  $\chi^2$ /NDF: 41.7/50

All: 0.000+/-0.000  $\chi^2$ /NDF: 112.1/104

- sign 0.000+/-0.000  $\chi^2$ /NDF: 68.3/53

asym\_at1\_dd\_at2\_dd\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 7012248.6/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:5077918.2/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 9604991.0/30

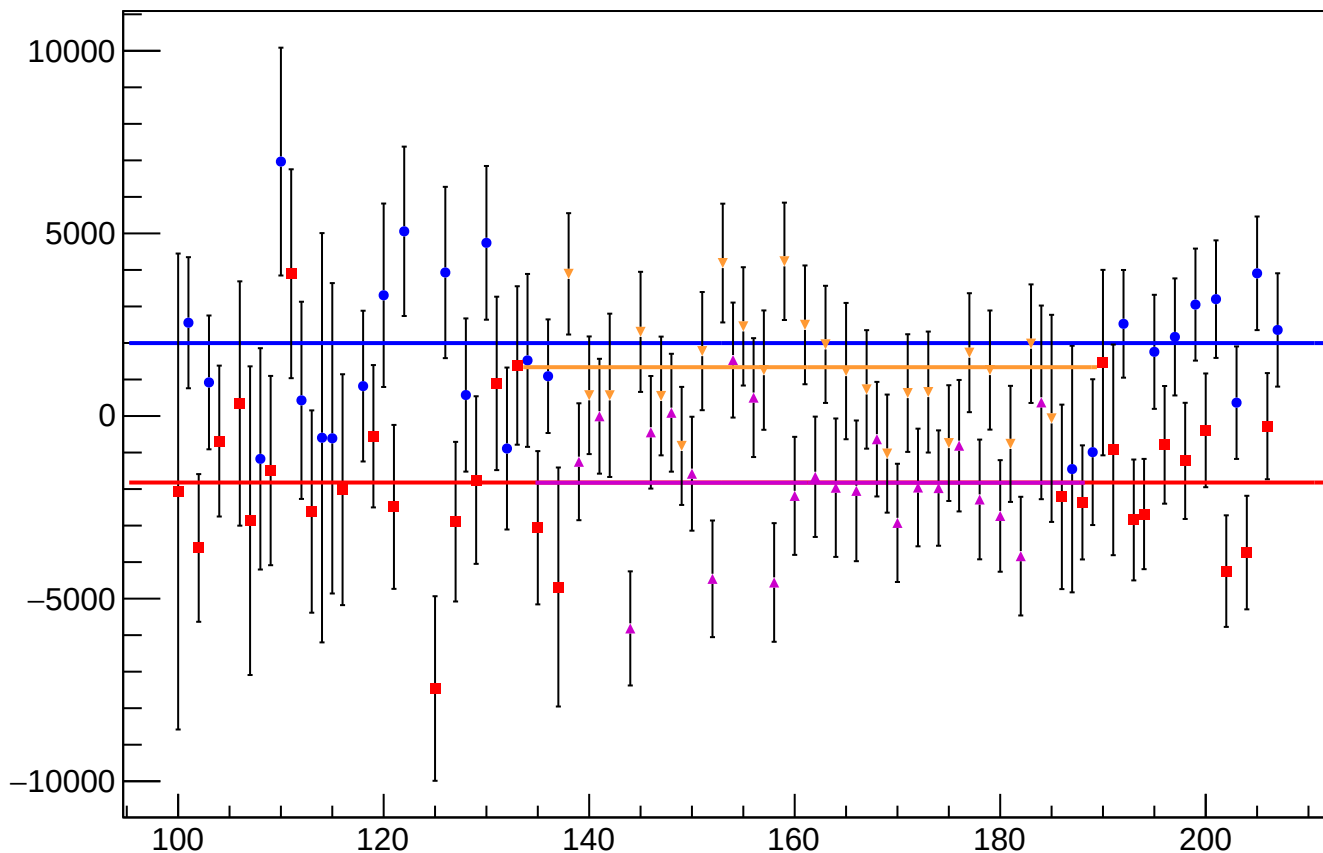
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:3998320.2/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 16728193.2/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 35403946.5/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 18651746.8/53

# reg\_asym\_usl\_atl1\_avg\_mean vs Slug



Right In:  $1997.010 \pm 385.956$   $\chi^2/\text{NDF}: 19.4/25$

Left Out:  $1337.008 \pm 341.012$   $\chi^2/\text{NDF}: 19.2/23$

Right Out:  $-1820.899 \pm 377.104$   $\chi^2/\text{NDF}: 25.2/29$

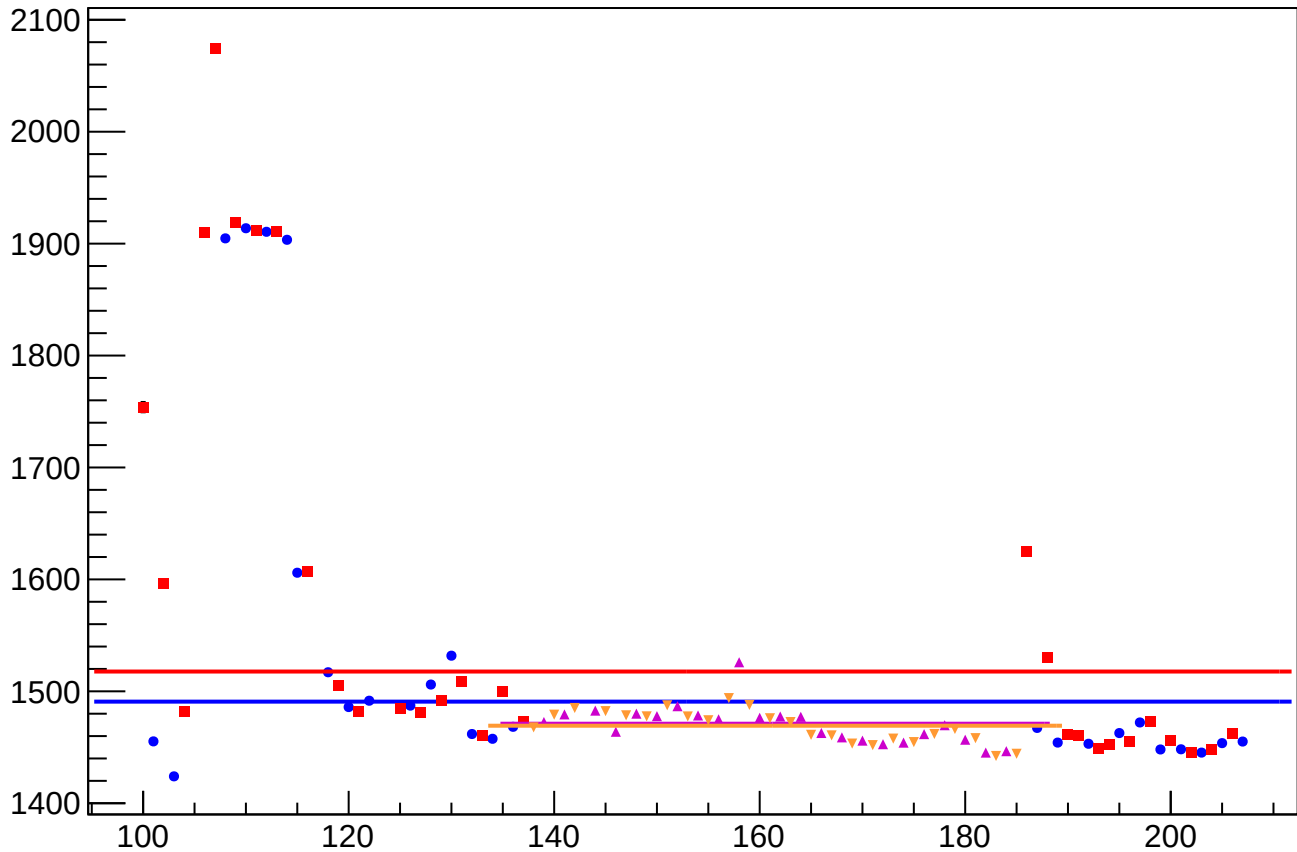
Left In:  $-1826.599 \pm 343.483$   $\chi^2/\text{NDF}: 26.5/22$

+ sign  $1626.361 \pm 255.552$   $\chi^2/\text{NDF}: 40.3/49$

All:  $-109.775 \pm 180.128$   $\chi^2/\text{NDF}: 183.6/102$

- sign  $-1824.014 \pm 253.935$   $\chi^2/\text{NDF}: 51.7/52$

# reg\_asym\_usl\_atl1\_avg\_rms vs Slug



Right In: 1490.786 $\pm$ 0.273  $\chi^2$ /NDF: 150440.7/25

Left Out: 1469.267 $\pm$ 0.241  $\chi^2$ /NDF:3155.3/23

Right Out: 1517.676 $\pm$ 0.267  $\chi^2$ /NDF: 231874.4/29

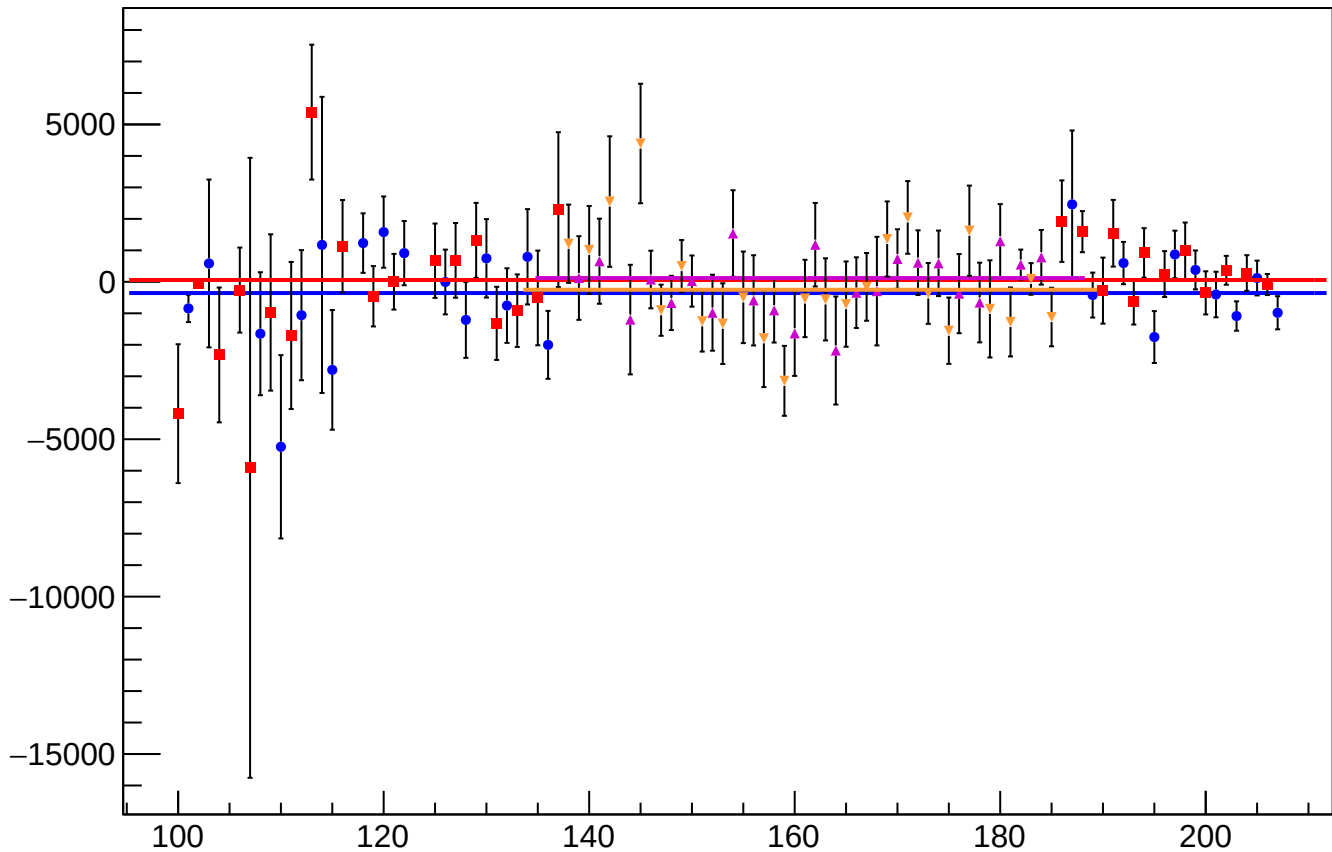
Left In: 1471.054 $\pm$ 0.243  $\chi^2$ /NDF:4642.4/22

+ sign 1478.701 $\pm$ 0.181  $\chi^2$ /NDF: 157087.6/49

All: 1485.490 $\pm$ 0.127  $\chi^2$ /NDF: 413118.0/102

- sign 1492.194 $\pm$ 0.180  $\chi^2$ /NDF: 253224.8/52

asym\_usl\_atl1\_avg\_reg\_correction\_mean vs Slug



Right In: -356.050 $\pm$ 164.233  $\chi^2$ /NDF: 33.2/25

Left Out: -251.610 $\pm$ 218.369  $\chi^2$ /NDF:32.7/23

Right Out: 58.555 $\pm$ 104.453  $\chi^2$ /NDF: 32.7/29

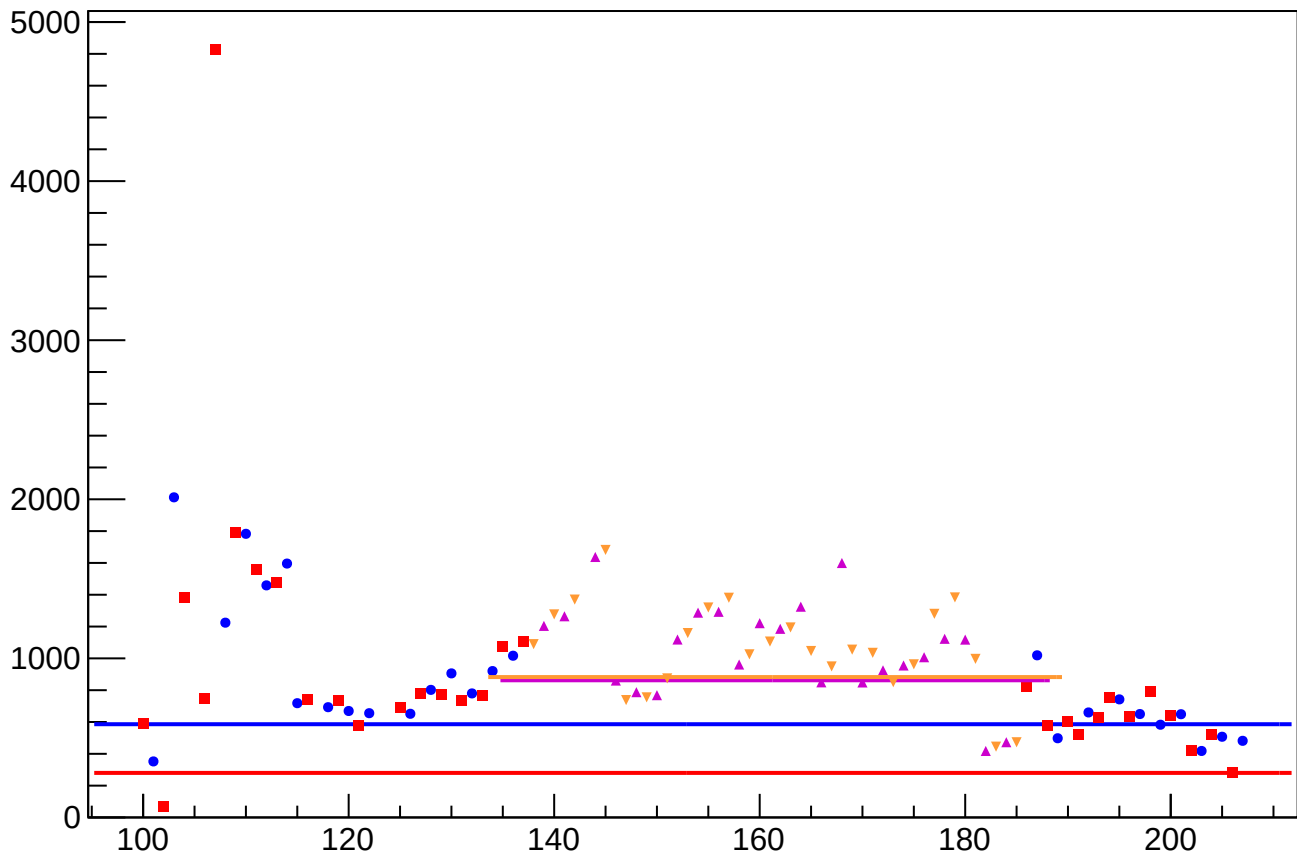
Left In: 119.802 $\pm$ 215.975  $\chi^2$ /NDF:12.8/22

+ sign -318.318 $\pm$ 131.255  $\chi^2$ /NDF: 66.0/49

All: -61.598 $\pm$ 76.441  $\chi^2$ /NDF: 117.4/102

- sign 70.165 $\pm$ 94.033  $\chi^2$ /NDF: 45.6/52

# asym\_usl\_atl1\_avg\_reg\_correction\_rms vs Slug



Right In: 586.120+/-0.116  $\chi^2/\text{NDF}$ : 3480568.2/25

Left Out: 882.430+/-0.154  $\chi^2/\text{NDF}$ : 3901279.8/23

Right Out: 280.048+/-0.074  $\chi^2/\text{NDF}$ : 15586444.9/29

Left In: 862.298+/-0.153  $\chi^2/\text{NDF}$ : 4369416.2/22

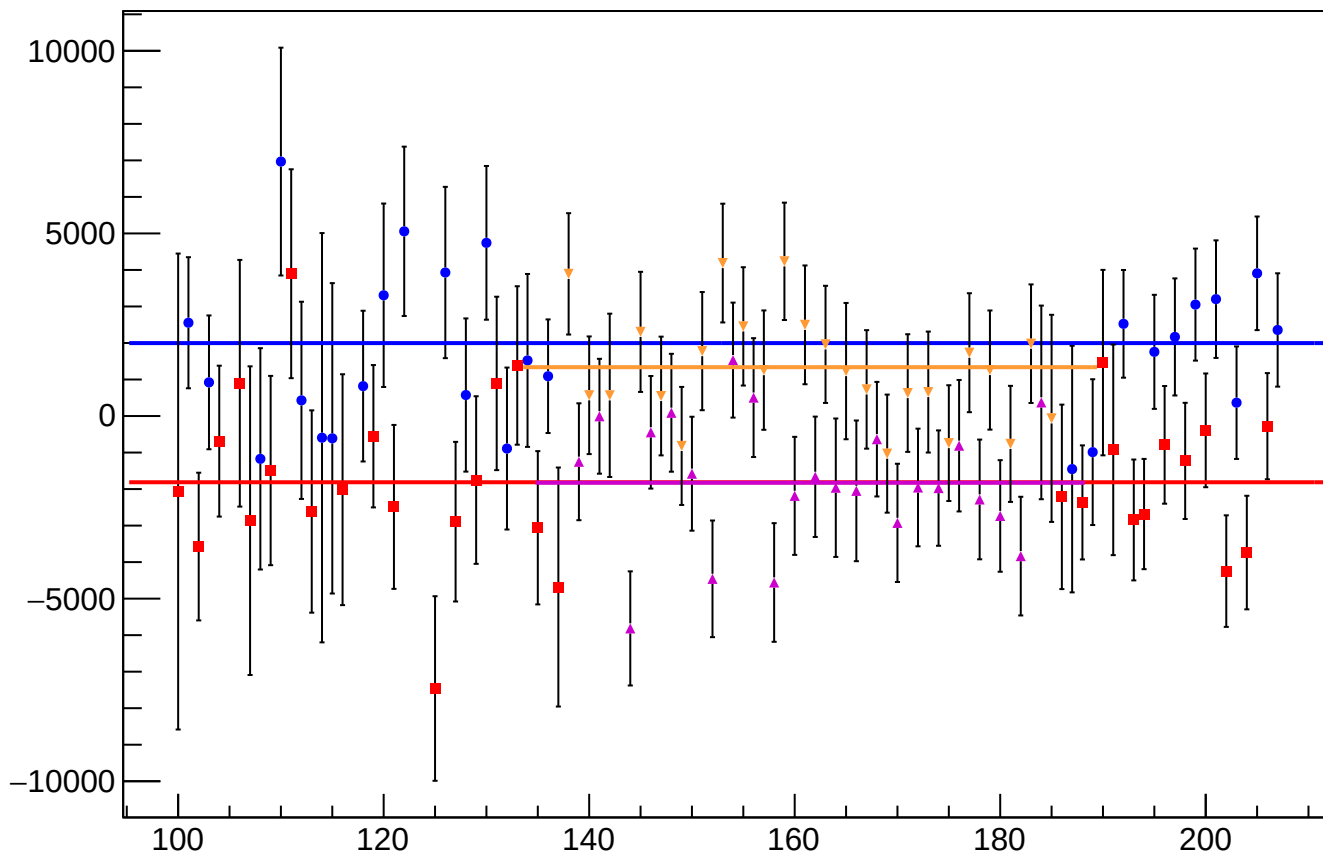
+ sign 693.171+/-0.093  $\chi^2/\text{NDF}$ : 9733910.4/49

All: 493.105+/-0.054  $\chi^2/\text{NDF}$ : 48501879.0/10

- sign 390.421+/-0.066  $\chi^2/\text{NDF}$ : 31736290.8/52



# cor\_asym\_usl\_atl1\_avg\_mean vs Slug



Right In: 1997.096 $\pm$ 385.956  $\chi^2$ /NDF: 19.4/25

Left Out: 1337.018 $\pm$ 341.012  $\chi^2$ /NDF:19.2/23

Right Out: -1813.168 $\pm$ 377.152  $\chi^2$ /NDF: 25.4/29

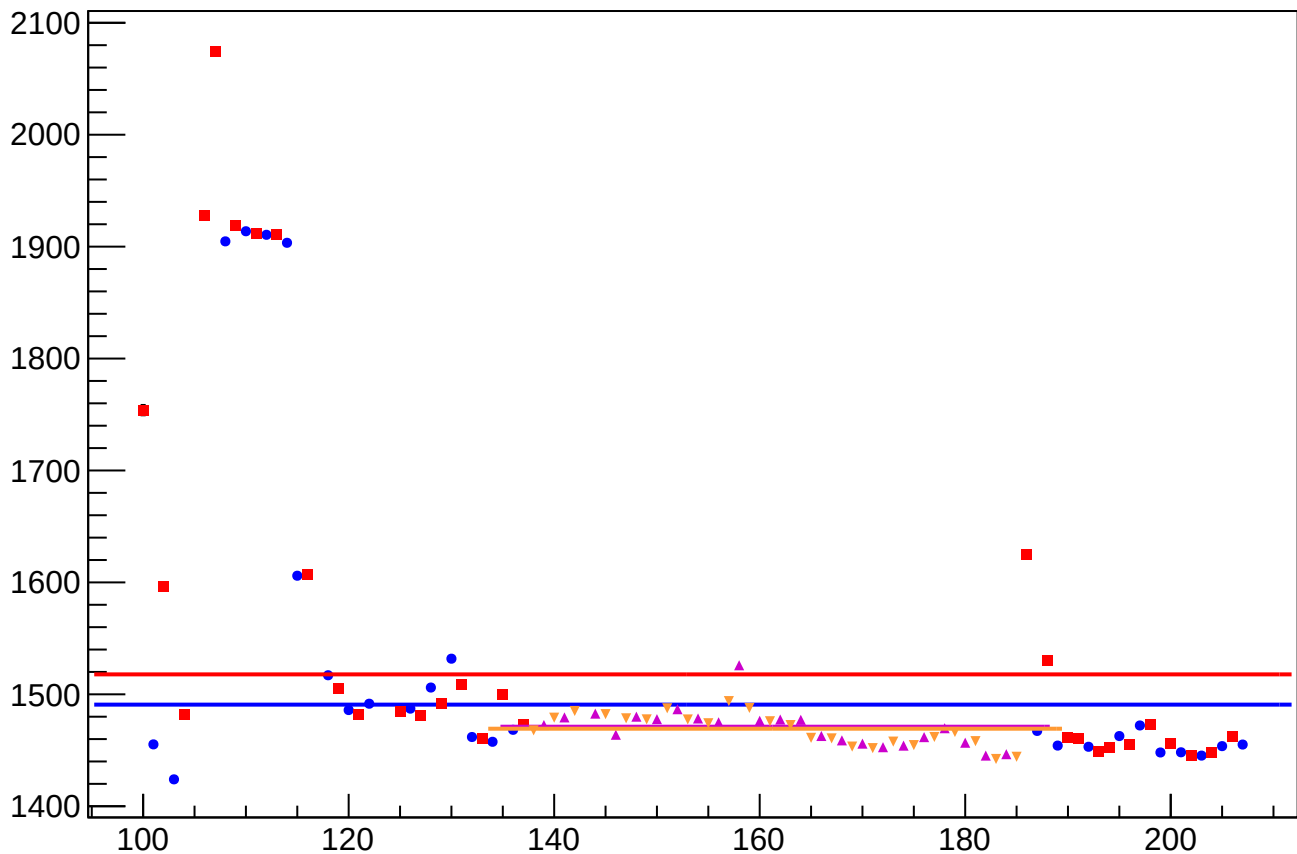
Left In: -1826.644 $\pm$ 343.483  $\chi^2$ /NDF:26.5/22

+ sign 1626.404 $\pm$ 255.552  $\chi^2$ /NDF: 40.3/49

All: -107.904 $\pm$ 180.133  $\chi^2$ /NDF: 183.6/102

- sign -1820.534 $\pm$ 253.950  $\chi^2$ /NDF: 51.9/52

# cor\_asym\_usl\_atl1\_avg\_rms vs Slug



Right In: 1490.786 $\pm$ 0.273  $\chi^2$ /NDF: 150440.7/25

Left Out: 1469.267 $\pm$ 0.241  $\chi^2$ /NDF:3155.3/23

Right Out: 1517.816 $\pm$ 0.267  $\chi^2$ /NDF: 233945.3/29

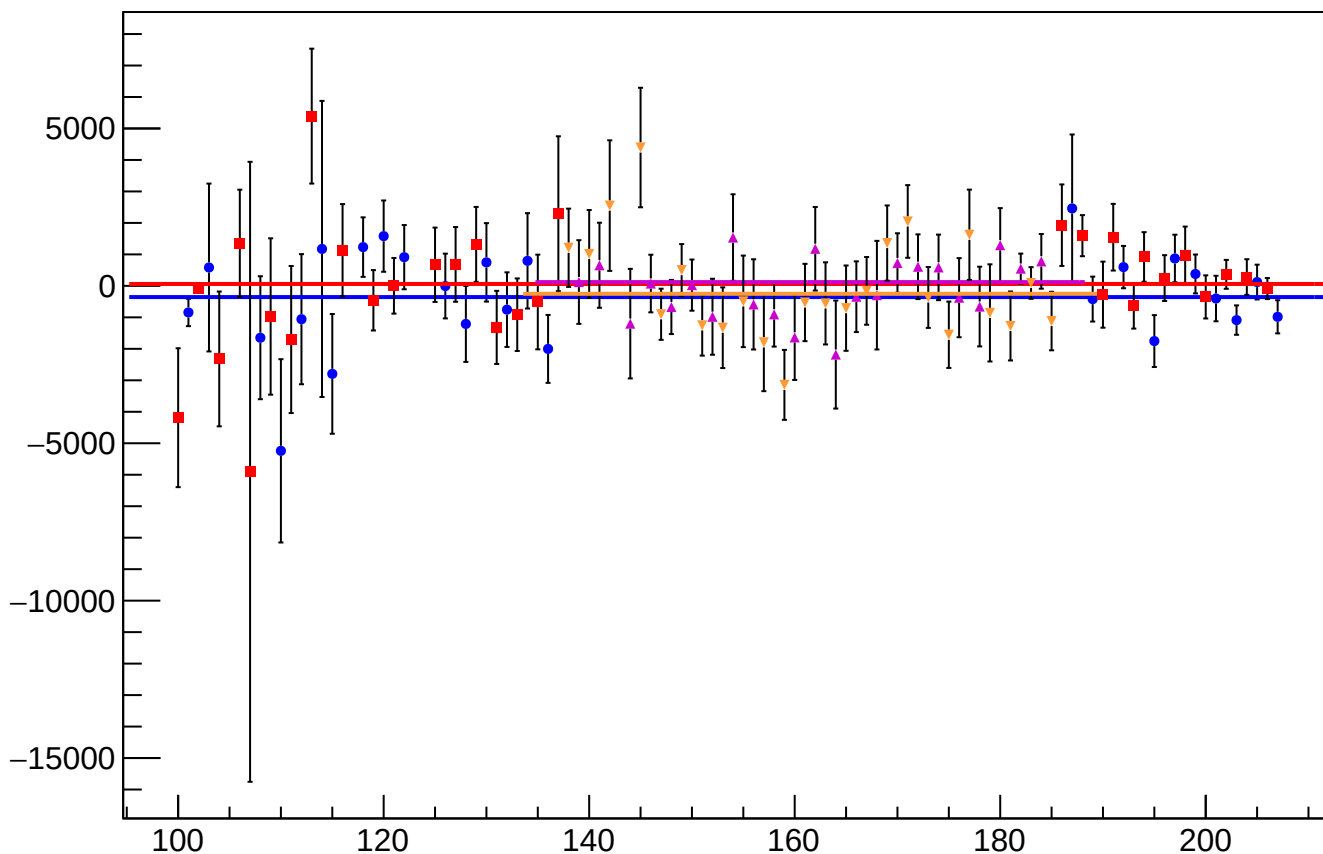
Left In: 1471.054 $\pm$ 0.243  $\chi^2$ /NDF:4642.4/22

+ sign 1478.701 $\pm$ 0.181  $\chi^2$ /NDF: 157087.5/49

All: 1485.521 $\pm$ 0.127  $\chi^2$ /NDF: 415312.1/102

- sign 1492.255 $\pm$ 0.180  $\chi^2$ /NDF: 255393.8/52

# asym\_usl\_atl1\_avg\_cor\_correction\_mean vs Slug



Right In:  $-355.988 \pm 164.231$   $\chi^2/\text{NDF}$ : 33.2/25

Left Out:  $-251.589 \pm 218.368$   $\chi^2/\text{NDF}$ : 32.7/23

Right Out:  $60.719 \pm 109.938$   $\chi^2/\text{NDF}$ : 33.5/29

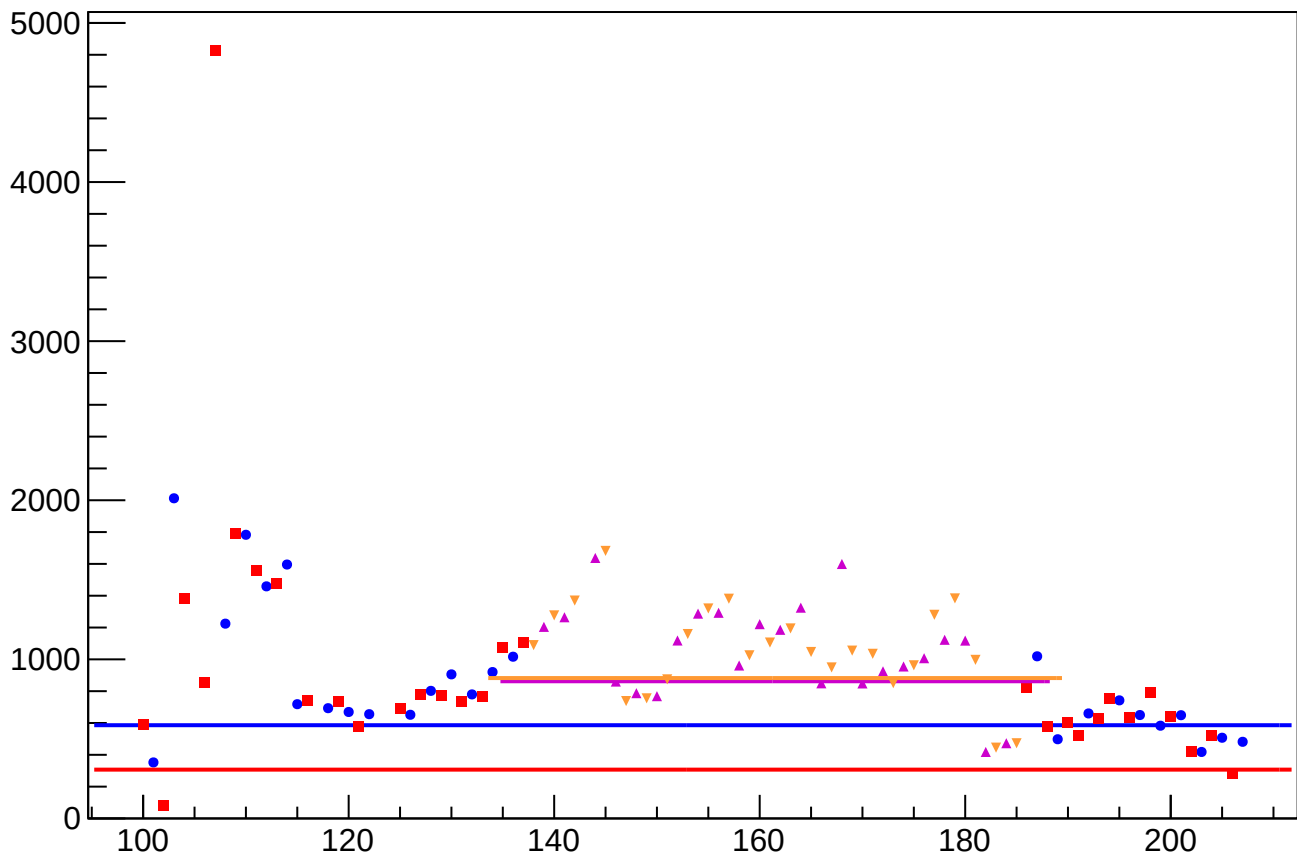
Left In:  $119.845 \pm 215.975$   $\chi^2/\text{NDF}$ : 12.8/22

+ sign  $-318.271 \pm 131.253$   $\chi^2/\text{NDF}$ : 66.0/49

All:  $-67.079 \pm 78.514$   $\chi^2/\text{NDF}$ : 118.2/102

- sign  $72.887 \pm 97.975$   $\chi^2/\text{NDF}$ : 46.4/52

# asym\_usl\_atl1\_avg\_cor\_correction\_rms vs Slug



Right In: 586.109+/-0.116  $\chi^2/\text{NDF}$ : 3480824.5/25

Left Out: 882.419+/-0.154  $\chi^2/\text{NDF}$ : 3901620.8/23

Right Out: 306.868+/-0.078  $\chi^2/\text{NDF}$ : 14317754.8/29

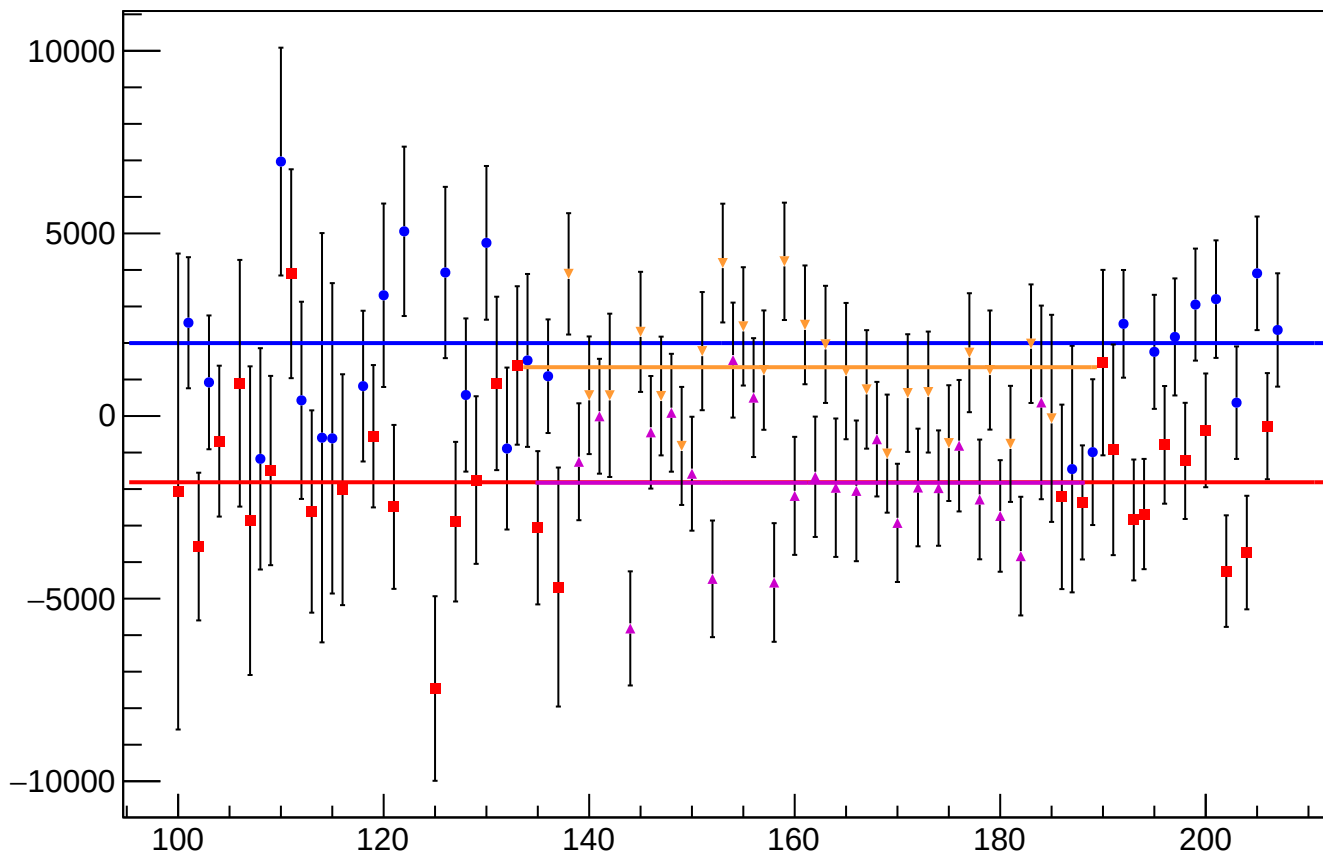
Left In: 862.300+/-0.153  $\chi^2/\text{NDF}$ : 4369426.7/22

+ sign 693.160+/-0.093  $\chi^2/\text{NDF}$ : 9734544.6/49

All: 518.495+/-0.056  $\chi^2/\text{NDF}$ : 44442557.1/10

- sign 421.170+/-0.069  $\chi^2/\text{NDF}$ : 29192716.6/52

# eigen\_cor\_asym\_usl\_atl1\_avg\_mean vs Slug



Right In: 1997.096 $\pm$ 385.956  $\chi^2$ /NDF: 19.4/25

Left Out: 1337.018 $\pm$ 341.012  $\chi^2$ /NDF:19.2/23

Right Out: -1813.168 $\pm$ 377.152  $\chi^2$ /NDF: 25.4/29

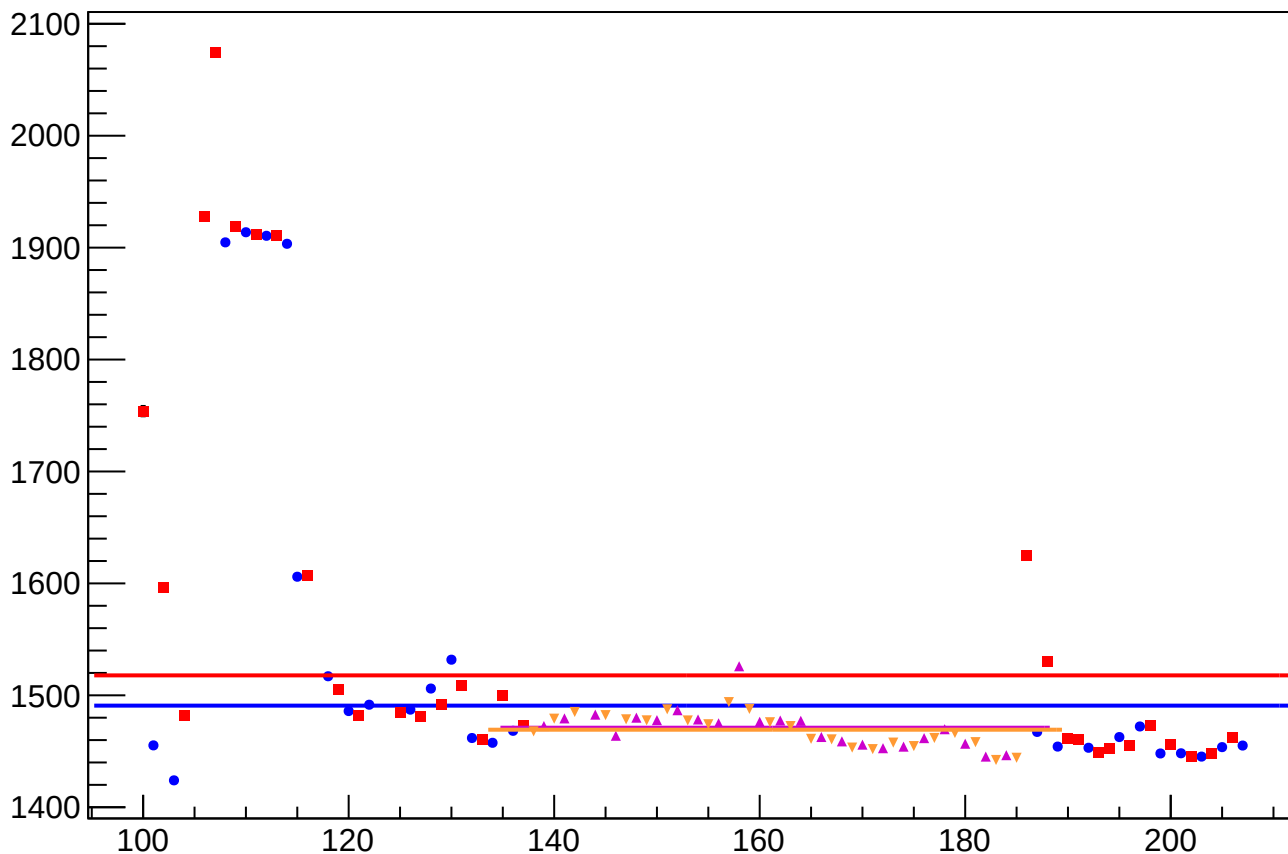
Left In: -1826.644 $\pm$ 343.483  $\chi^2$ /NDF:26.5/22

+ sign 1626.404 $\pm$ 255.552  $\chi^2$ /NDF: 40.3/49

All: -107.904 $\pm$ 180.133  $\chi^2$ /NDF: 183.6/102

- sign -1820.534 $\pm$ 253.950  $\chi^2$ /NDF: 51.9/52

# eigen\_cor\_asym\_usl\_atl1\_avg\_rms vs Slug



Right In: 1490.786 $\pm$ 0.273  $\chi^2$ /NDF: 150440.7/25

Left Out: 1469.267 $\pm$ 0.241  $\chi^2$ /NDF:3155.3/23

Right Out: 1517.816 $\pm$ 0.267  $\chi^2$ /NDF: 233945.3/29

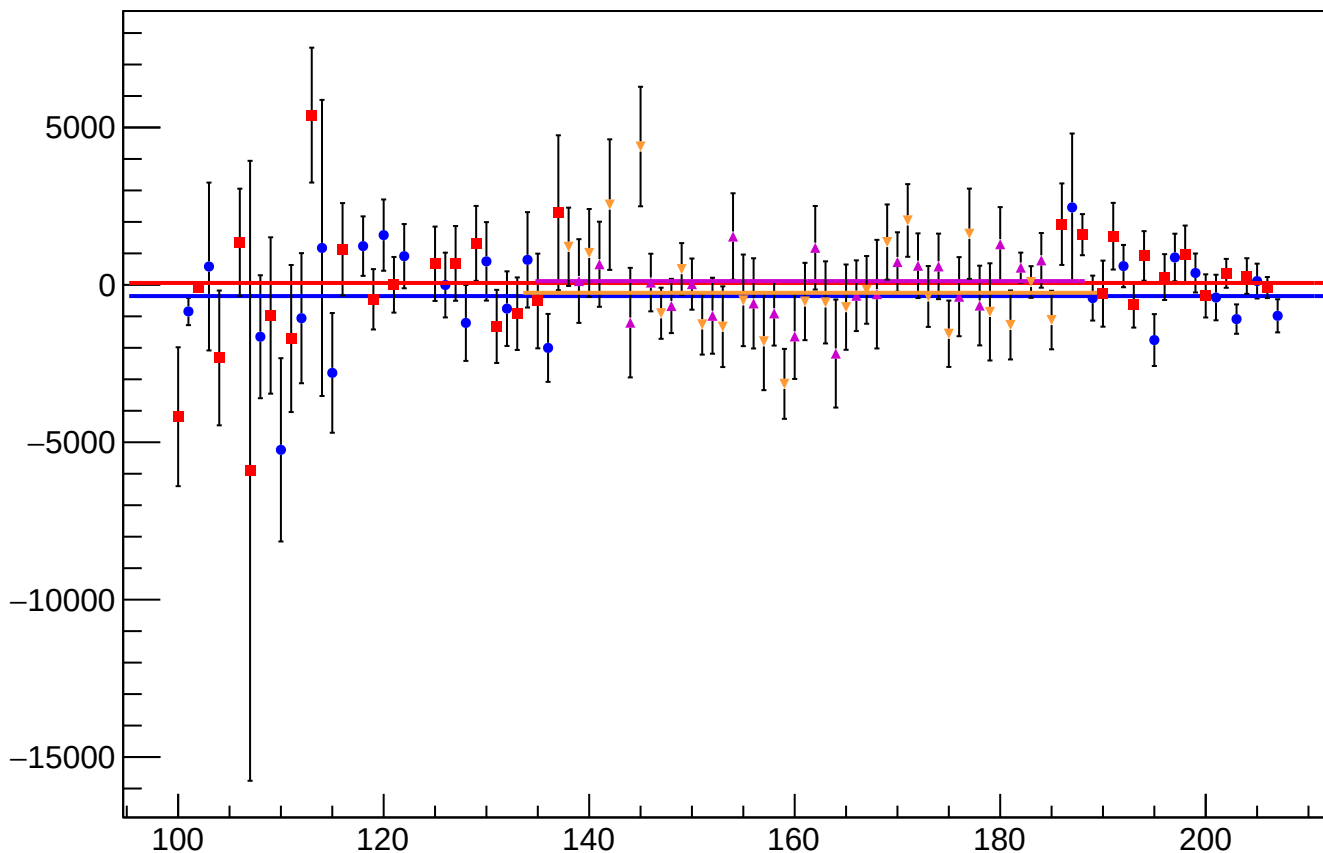
Left In: 1471.054 $\pm$ 0.243  $\chi^2$ /NDF:4642.4/22

+ sign 1478.701 $\pm$ 0.181  $\chi^2$ /NDF: 157087.5/49

All: 1485.521 $\pm$ 0.127  $\chi^2$ /NDF: 415312.1/102

- sign 1492.255 $\pm$ 0.180  $\chi^2$ /NDF: 255393.8/52

asym\_usl\_atl1\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In: -355.988 $\pm$ 164.231  $\chi^2$ /NDF: 33.2/25

Left Out: -251.589 $\pm$ 218.368  $\chi^2$ /NDF:32.7/23

Right Out: 60.719 $\pm$ 109.938  $\chi^2$ /NDF: 33.5/29

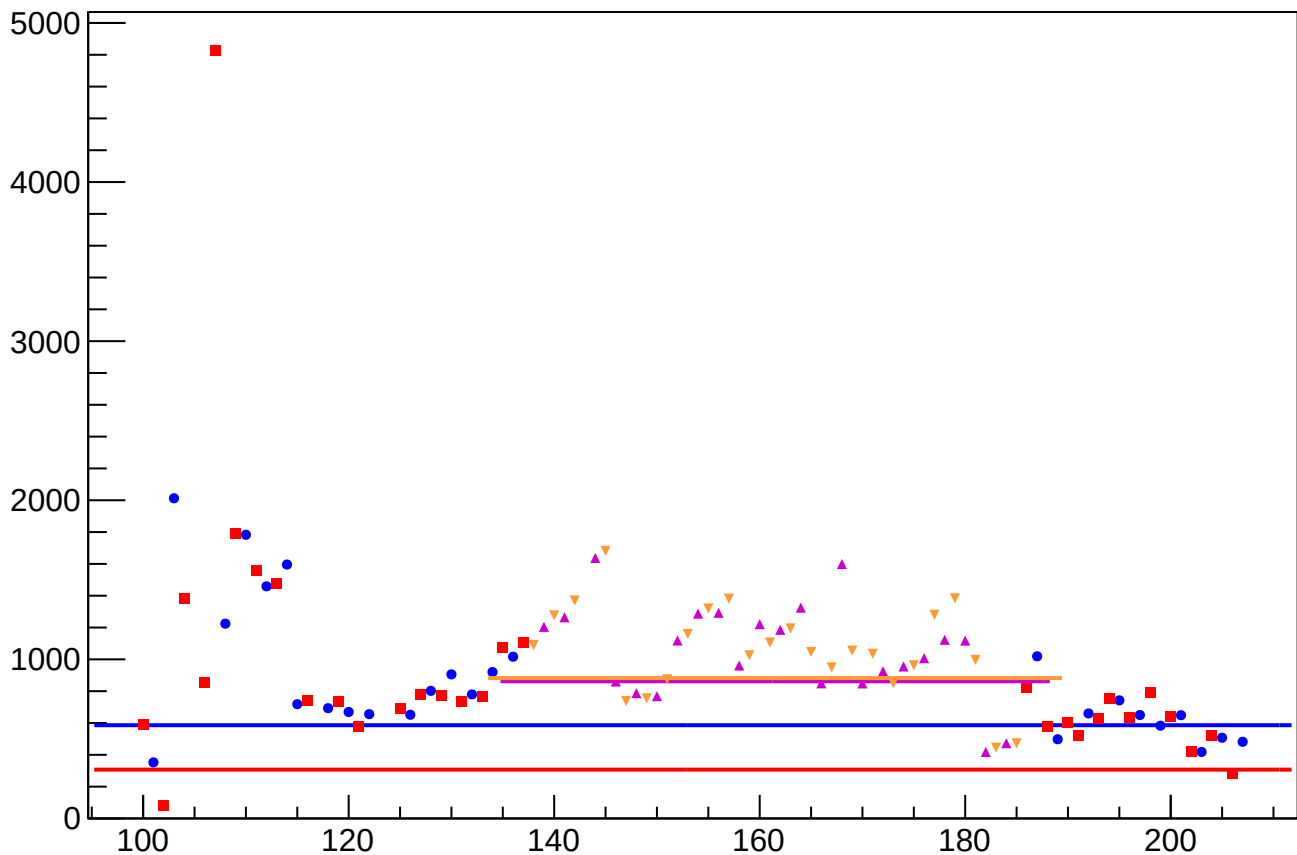
Left In: 119.845 $\pm$ 215.975  $\chi^2$ /NDF:12.8/22

+ sign -318.271 $\pm$ 131.253  $\chi^2$ /NDF: 66.0/49

All: -67.079 $\pm$ 78.514  $\chi^2$ /NDF: 118.2/102

- sign 72.887 $\pm$ 97.975  $\chi^2$ /NDF: 46.4/52

asym\_usl\_atl1\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 586.109+/-0.116  $\chi^2/\text{NDF}$ : 3480824.5/25

Left Out: 882.419+/-0.154  $\chi^2/\text{NDF}$ : 3901620.8/23

Right Out: 306.868+/-0.078  $\chi^2/\text{NDF}$ : 14317754.8/29

Left In: 862.300+/-0.153  $\chi^2/\text{NDF}$ : 4369426.7/22

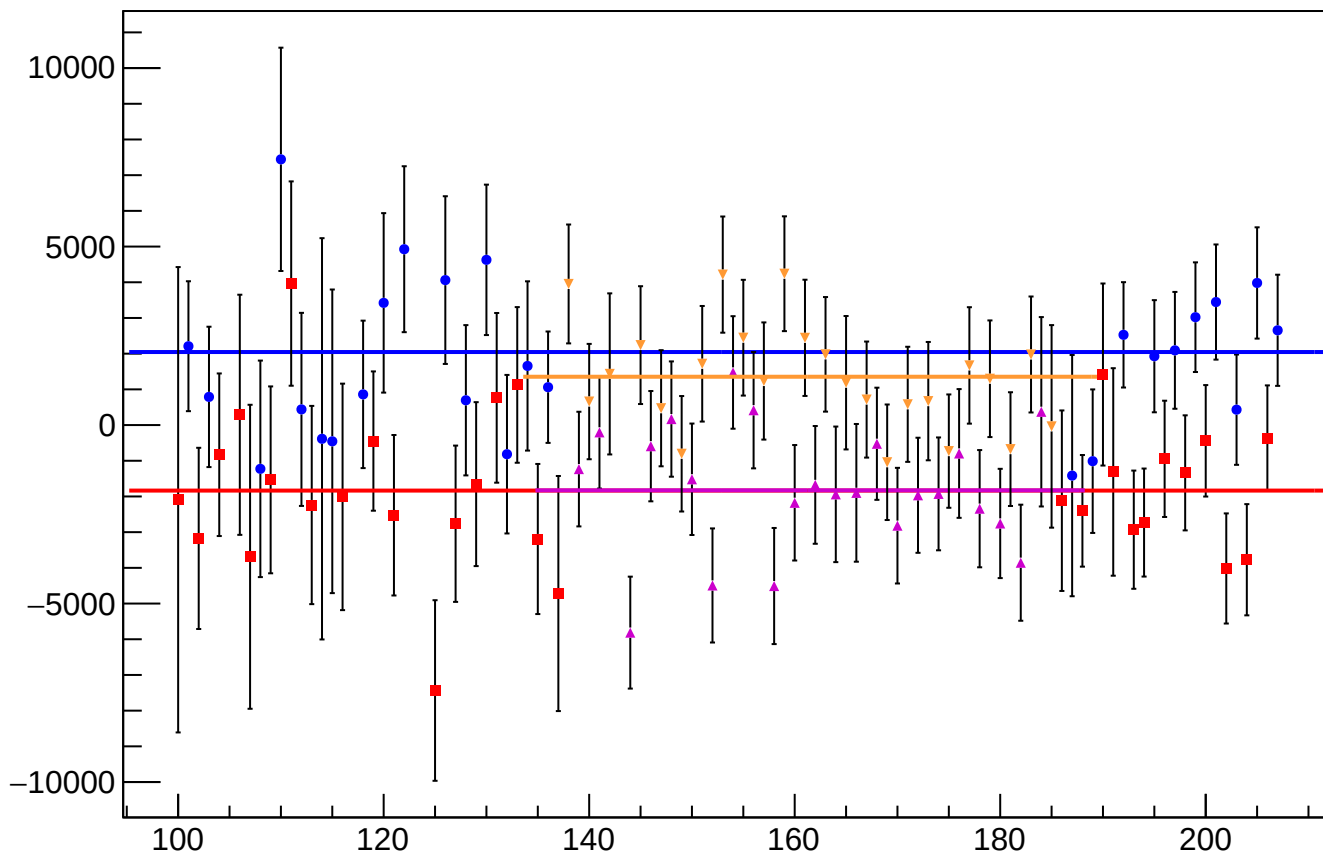
+ sign 693.160+/-0.093  $\chi^2/\text{NDF}$ : 9734544.6/49

All: 518.495+/-0.056  $\chi^2/\text{NDF}$ : 44442557.1/10

- sign 421.170+/-0.069  $\chi^2/\text{NDF}$ : 29192716.6/52



dit\_asym\_usl\_atl1\_avg\_mean vs Slug



Right In: 2045.894 $\pm$ 388.618  $\chi^2$ /NDF: 19.8/25

Left Out: 1353.686 $\pm$ 341.570  $\chi^2$ /NDF:18.9/23

Right Out: -1835.296 $\pm$ 382.471  $\chi^2$ /NDF: 23.4/29

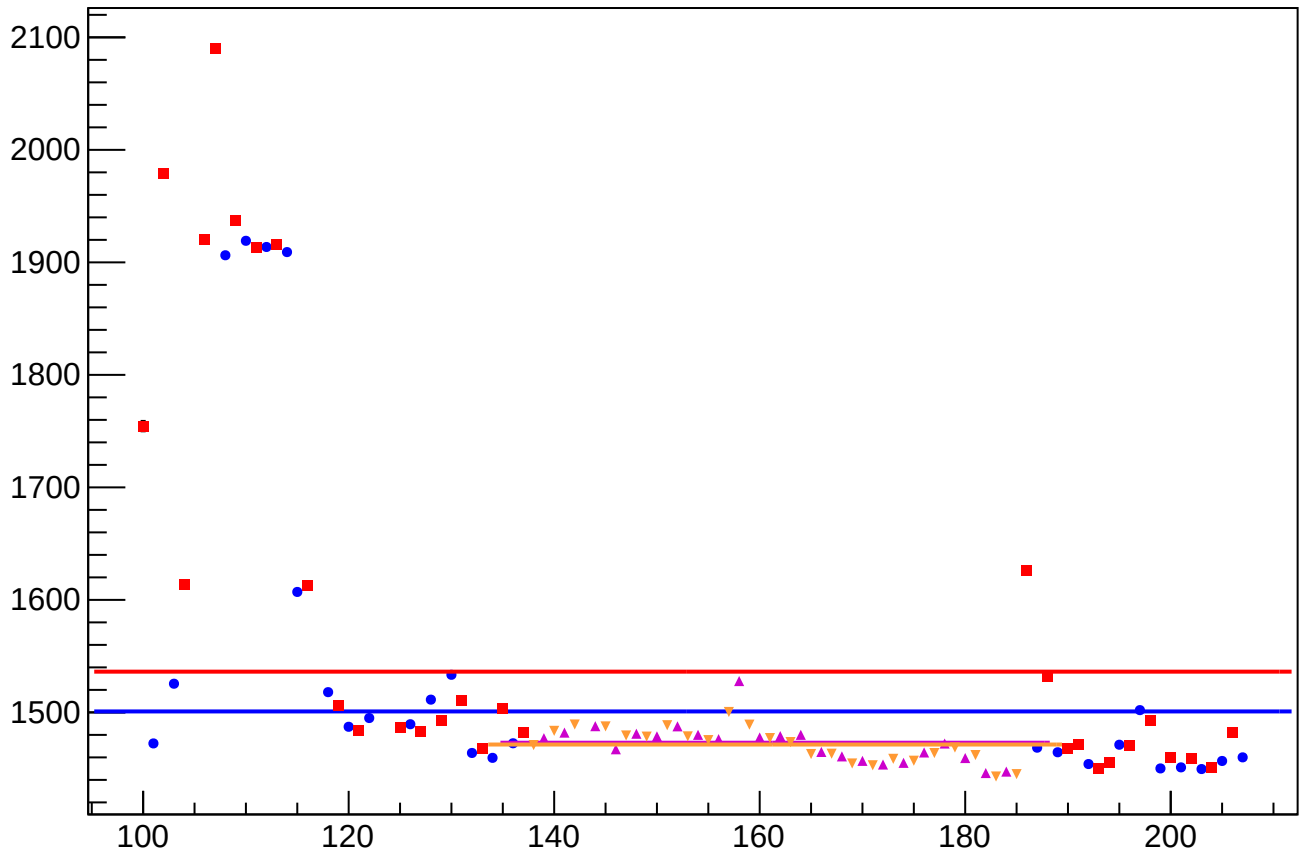
Left In: -1828.250 $\pm$ 343.952  $\chi^2$ /NDF:25.8/22

+ sign 1655.373 $\pm$ 256.557  $\chi^2$ /NDF: 40.5/49

All: -93.516 $\pm$ 181.126  $\chi^2$ /NDF: 182.4/102

- sign -1831.400 $\pm$ 255.748  $\chi^2$ /NDF: 49.3/52

dit\_asym\_usl\_atl1\_avg\_rms vs Slug



Right In:  $1500.851 \pm 0.275$   $\chi^2/\text{NDF}$ : 146125.6/25

Left Out:  $1471.437 \pm 0.242$   $\chi^2/\text{NDF}$ : 3436.8/23

Right Out:  $1536.208 \pm 0.270$   $\chi^2/\text{NDF}$ : 292382.9/29

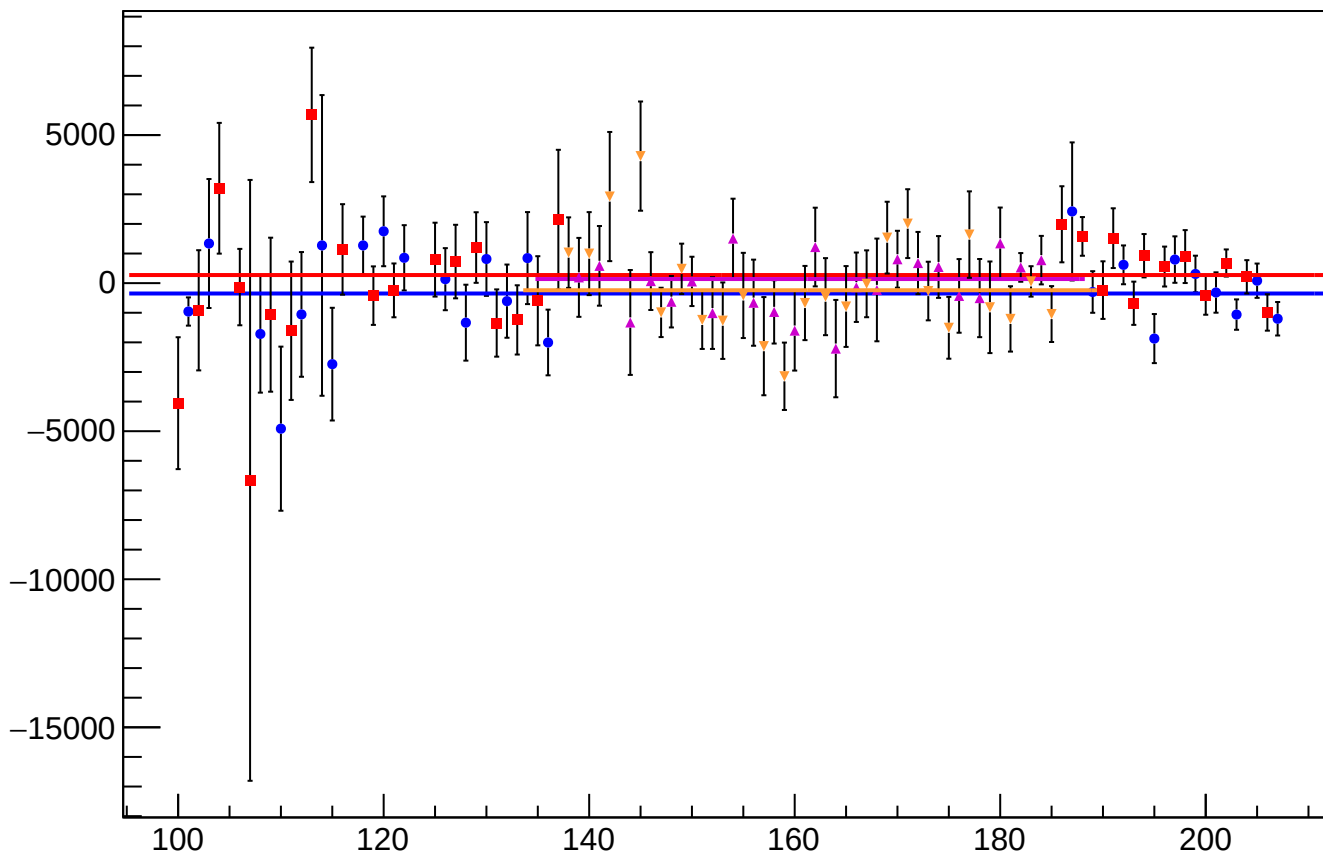
Left In:  $1473.049 \pm 0.243$   $\chi^2/\text{NDF}$ : 4751.3/22

+ sign  $1484.256 \pm 0.181$   $\chi^2/\text{NDF}$ : 156026.3/49

All:  $1492.799 \pm 0.128$   $\chi^2/\text{NDF}$ : 487735.2/102

- sign  $1501.289 \pm 0.181$   $\chi^2/\text{NDF}$ : 327287.6/52

# asym\_usl\_atl1\_avg\_dit\_correction\_mean vs Slug



Right In: -350.026+/-170.302  $\chi^2/\text{NDF}$ : 33.9/25

Left Out: -240.267+/-221.787  $\chi^2/\text{NDF}$ : 32.4/23

Right Out: 273.483+/-172.474  $\chi^2/\text{NDF}$ : 36.6/29

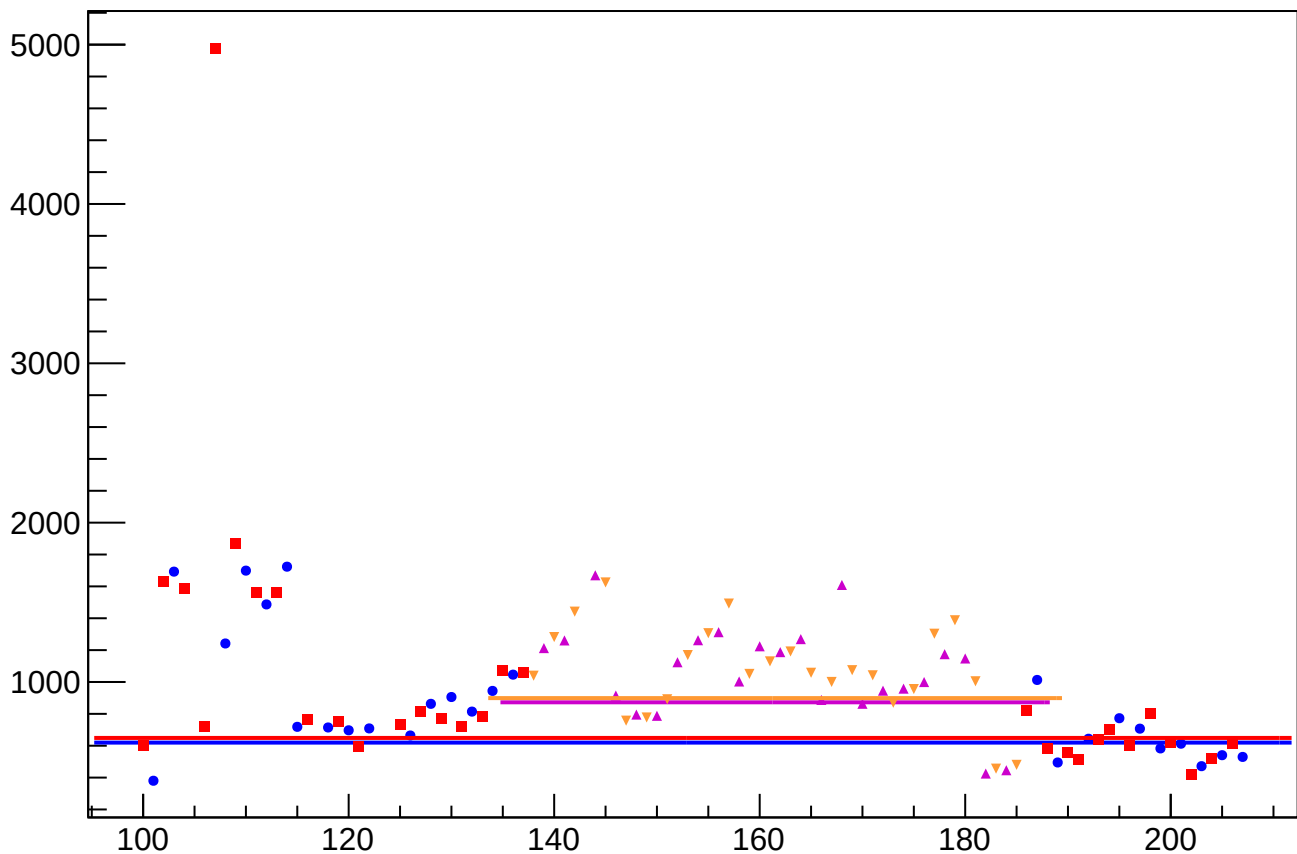
Left In: 138.421+/-218.478  $\chi^2/\text{NDF}$ : 13.0/22

+ sign -309.315+/-135.075  $\chi^2/\text{NDF}$ : 66.5/49

All: -44.432+/-95.618  $\chi^2/\text{NDF}$ : 124.0/102

- sign 221.628+/-135.375  $\chi^2/\text{NDF}$ : 49.8/52

# asym\_usl\_atl1\_avg\_dit\_correction\_rms vs Slug



Right In: 619.602 $\pm$ 0.120  $\chi^2$ /NDF: 3060534.0/25

Left Out: 898.849 $\pm$ 0.157  $\chi^2$ /NDF: 3791528.8/23

Right Out: 648.918 $\pm$ 0.122  $\chi^2$ /NDF: 3455028.8/29

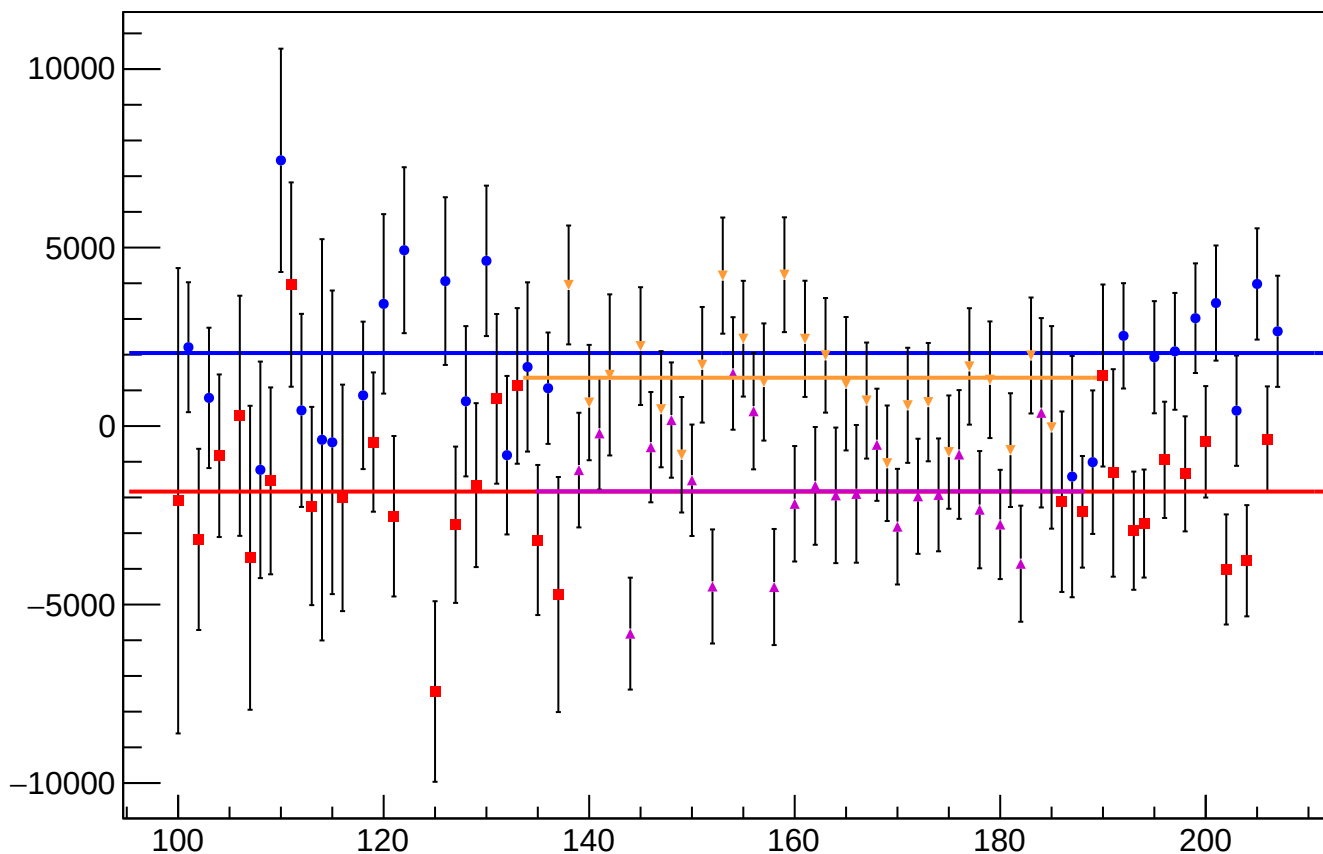
Left In: 872.472 $\pm$ 0.154  $\chi^2$ /NDF: 4435516.3/22

+ sign 723.179 $\pm$ 0.096  $\chi^2$ /NDF: 8846596.4/49

All: 728.951 $\pm$ 0.068  $\chi^2$ /NDF: 18034507.7/10

- sign 734.749 $\pm$ 0.096  $\chi^2$ /NDF: 9180591.1/52

eigen\_dit\_asym\_usl\_atl1\_avg\_mean vs Slug



Right In: 2045.892 $\pm$ 388.618  $\chi^2$ /NDF: 19.8/25

Left Out: 1353.684 $\pm$ 341.570  $\chi^2$ /NDF:18.9/23

Right Out: -1835.295 $\pm$ 382.471  $\chi^2$ /NDF: 23.4/29

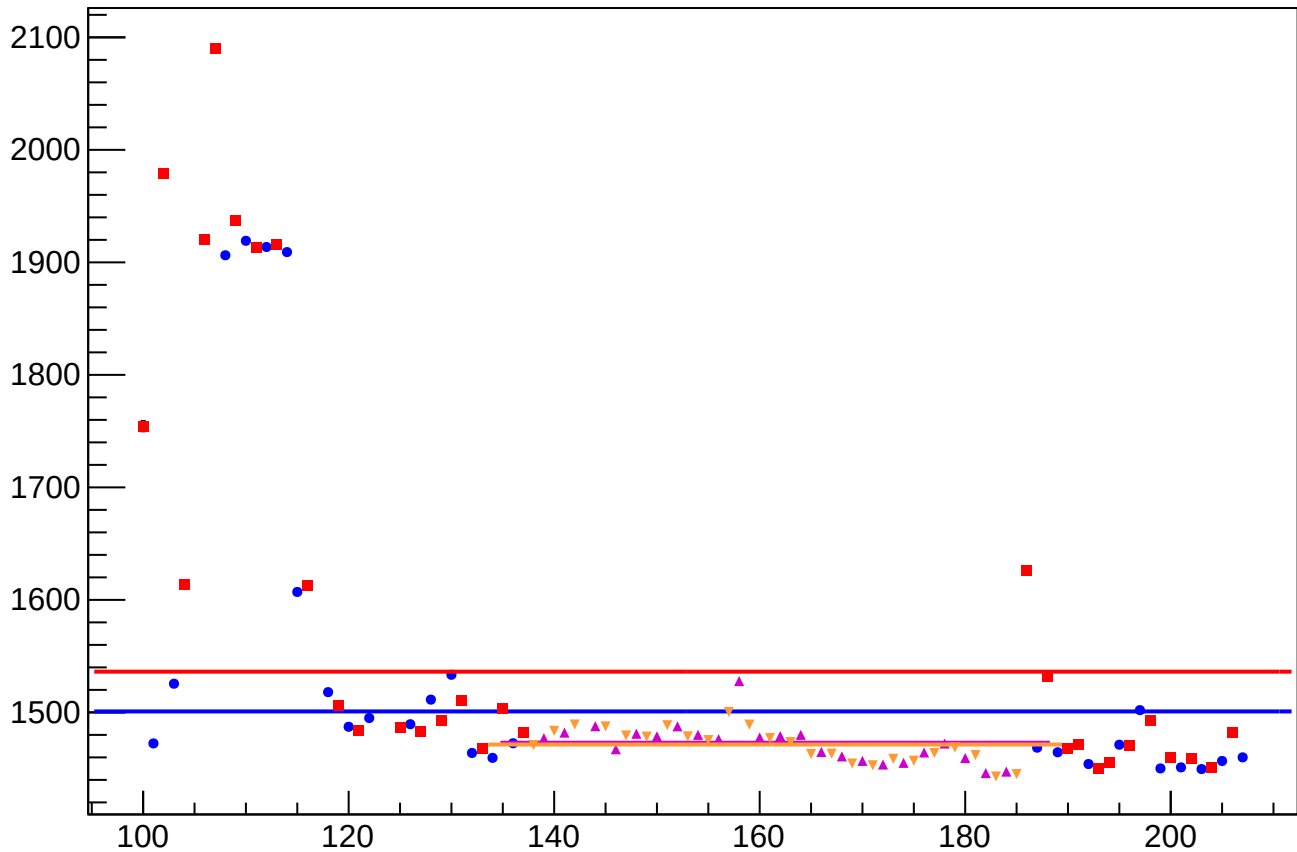
Left In: -1828.250 $\pm$ 343.952  $\chi^2$ /NDF:25.8/22

+ sign 1655.372 $\pm$ 256.557  $\chi^2$ /NDF: 40.5/49

All: -93.516 $\pm$ 181.126  $\chi^2$ /NDF: 182.4/102

- sign -1831.400 $\pm$ 255.748  $\chi^2$ /NDF: 49.3/52

# eigen\_dit\_asym\_usl\_atl1\_avg\_rms vs Slug



Right In: 1500.850+/-0.275  $\chi^2/\text{NDF}$ : 146125.5/25

Left Out: 1471.437+/-0.242  $\chi^2/\text{NDF}$ : 3436.8/23

Right Out: 1536.208+/-0.270  $\chi^2/\text{NDF}$ : 292382.4/29

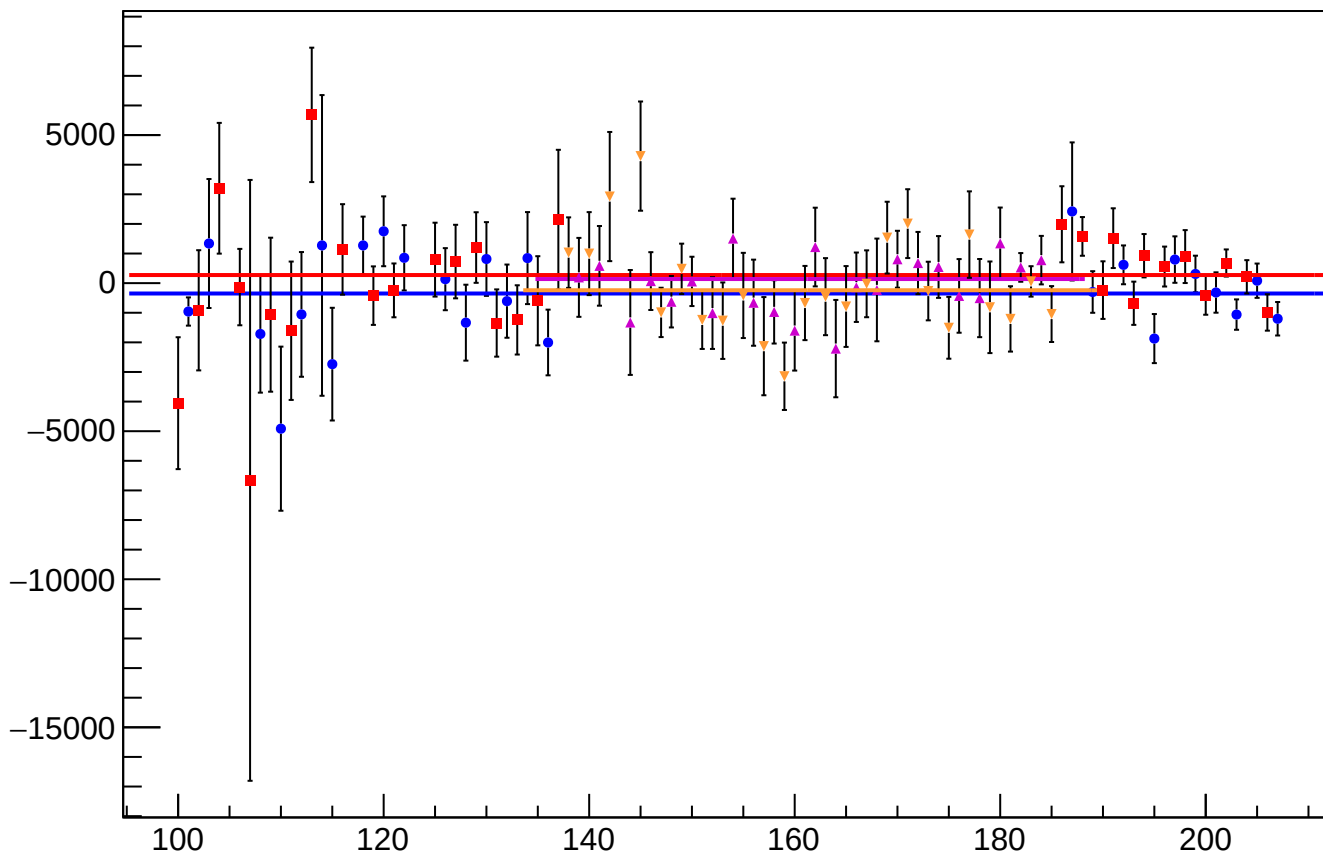
Left In: 1473.049+/-0.243  $\chi^2/\text{NDF}$ : 4751.3/22

+ sign 1484.256+/-0.181  $\chi^2/\text{NDF}$ : 156026.1/49

All: 1492.799+/-0.128  $\chi^2/\text{NDF}$ : 487734.5/102

- sign 1501.289+/-0.181  $\chi^2/\text{NDF}$ : 327287.0/52

asym\_usl\_atl1\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In: -350.026+/-170.302  $\chi^2/\text{NDF}$ : 33.9/25

Left Out: -240.269+/-221.788  $\chi^2/\text{NDF}$ : 32.4/23

Right Out: 273.483+/-172.474  $\chi^2/\text{NDF}$ : 36.6/29

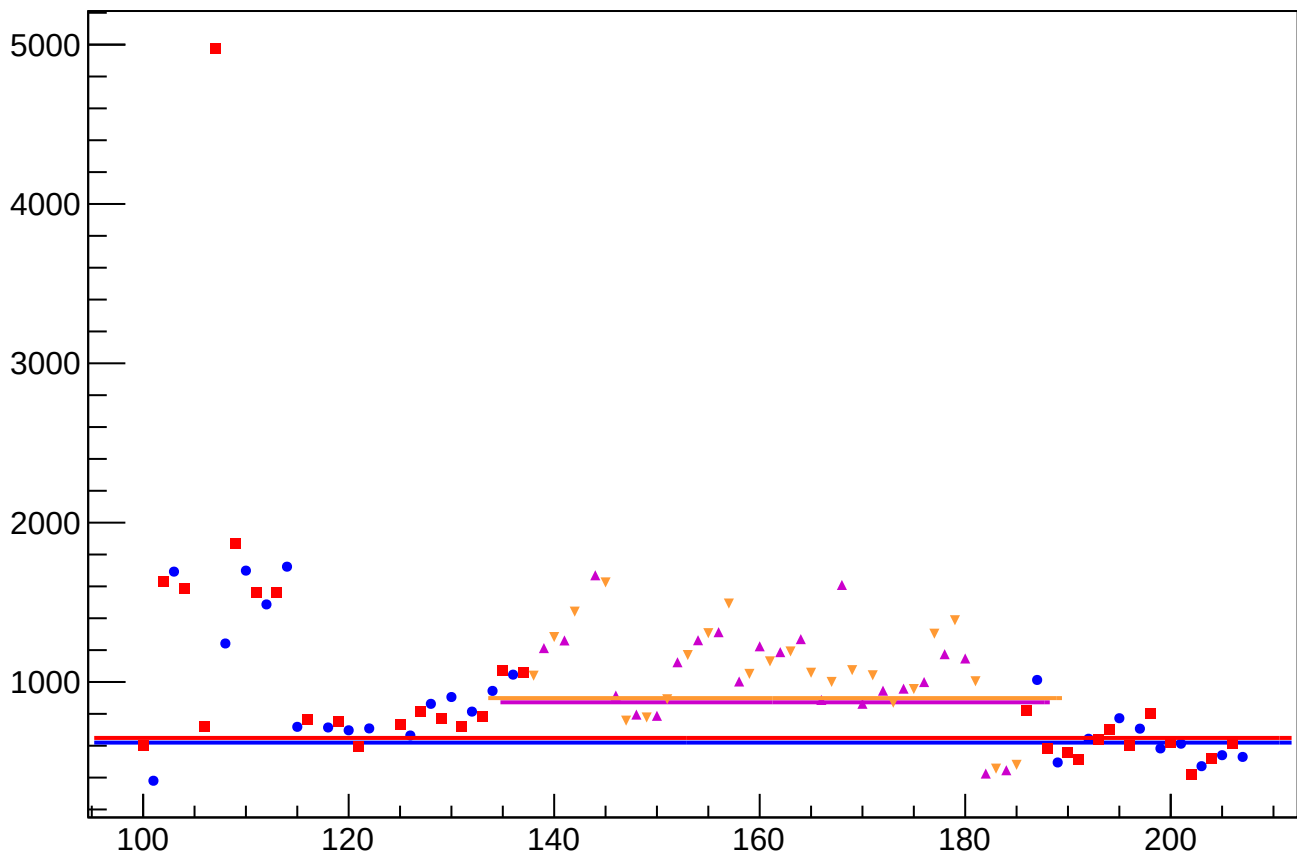
Left In: 138.421+/-218.478  $\chi^2/\text{NDF}$ : 13.0/22

+ sign -309.315+/-135.075  $\chi^2/\text{NDF}$ : 66.5/49

All: -44.432+/-95.618  $\chi^2/\text{NDF}$ : 124.0/102

- sign 221.628+/-135.375  $\chi^2/\text{NDF}$ : 49.8/52

asym\_usl\_atl1\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 619.602 $\pm$ 0.120  $\chi^2$ /NDF: 3060526.2/25

Left Out: 898.850 $\pm$ 0.157  $\chi^2$ /NDF: 3791537.4/23

Right Out: 648.919 $\pm$ 0.122  $\chi^2$ /NDF: 3455024.9/29

Left In: 872.473 $\pm$ 0.154  $\chi^2$ /NDF: 4435524.1/22

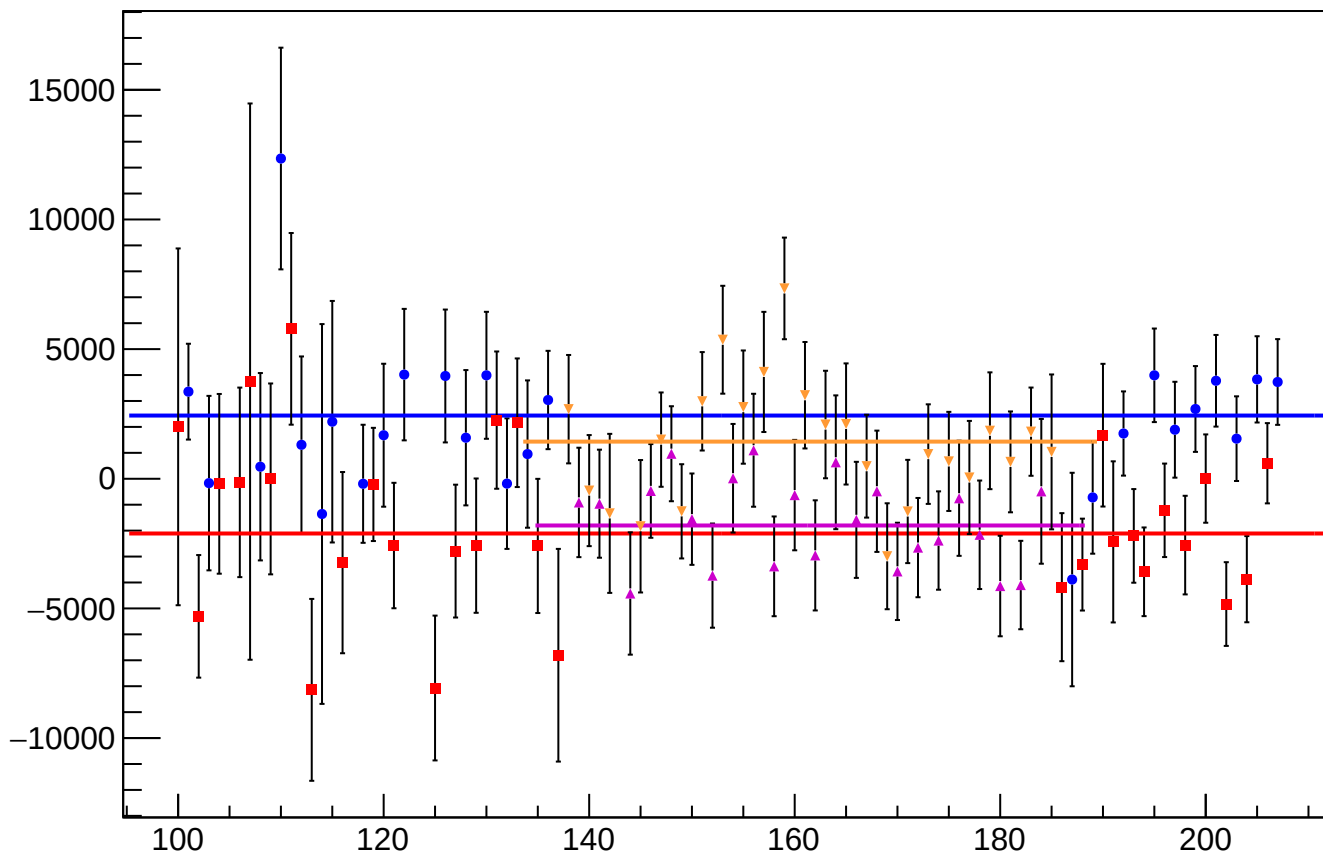
+ sign 723.179 $\pm$ 0.096  $\chi^2$ /NDF: 8846602.7/49

All: 728.951 $\pm$ 0.068  $\chi^2$ /NDF: 18034522.6/10

- sign 734.749 $\pm$ 0.096  $\chi^2$ /NDF: 9180599.5/52



# asym\_usl\_atl1\_avg\_mean vs Slug



Right In: 2438.139+/-438.205  $\chi^2/\text{NDF}$ : 18.7/25

Left Out: 1433.314+/-424.465  $\chi^2/\text{NDF}$ : 29.4/23

Right Out: -2110.447+/-429.550  $\chi^2/\text{NDF}$ : 36.0/29

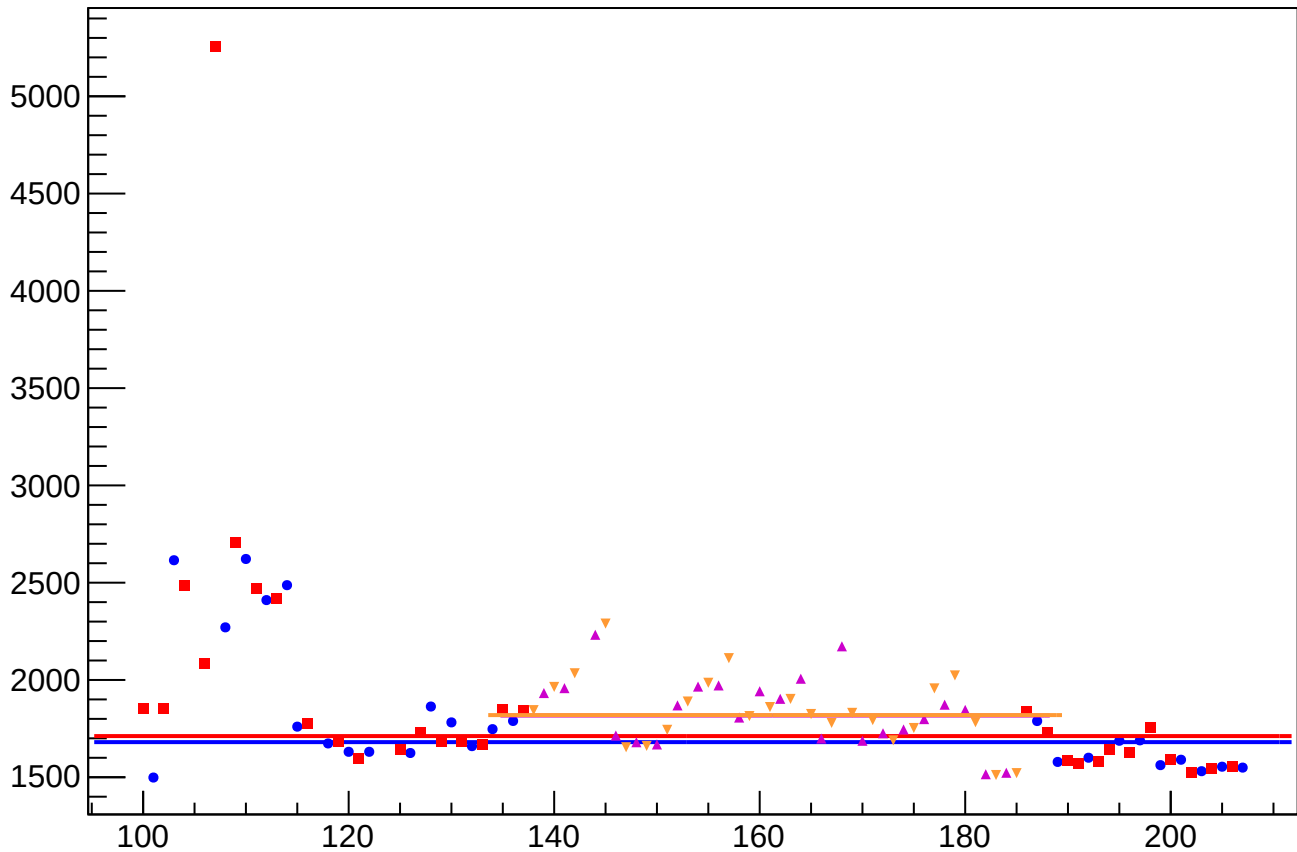
Left In: -1801.543+/-426.483  $\chi^2/\text{NDF}$ : 15.3/22

+ sign 1919.726+/-304.884  $\chi^2/\text{NDF}$ : 50.8/49

All: -31.844+/-214.790  $\chi^2/\text{NDF}$ : 183.8/102

- sign -1954.888+/-302.647  $\chi^2/\text{NDF}$ : 51.6/52

# asym\_usl\_atl1\_avg\_rms vs Slug



Right In: 1680.495+/-0.310  $\chi^2/\text{NDF}$ : 531289.6/25

Left Out: 1819.417+/-0.300  $\chi^2/\text{NDF}$ : 295015.0/23

Right Out: 1711.567+/-0.304  $\chi^2/\text{NDF}$ : 782758.6/29

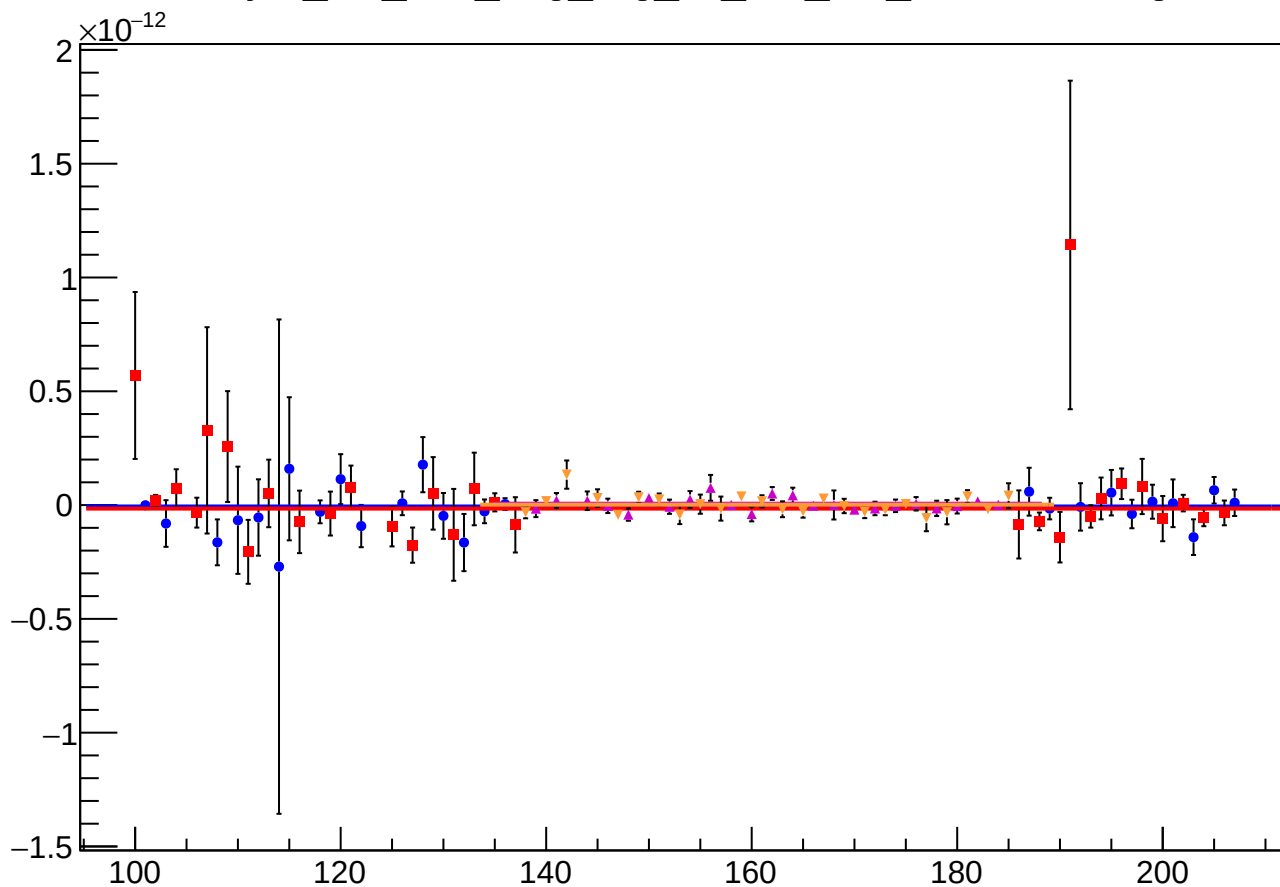
Left In: 1817.142+/-0.302  $\chi^2/\text{NDF}$ : 307103.2/22

+ sign 1752.169+/-0.216  $\chi^2/\text{NDF}$ : 930010.2/49

All: 1758.497+/-0.152  $\chi^2/\text{NDF}$ : 2082422.9/10

- sign 1764.733+/-0.214  $\chi^2/\text{NDF}$ : 1150702.0/52

asym\_usl\_atl1\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 16.0/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:29.3/23

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 29.5/29

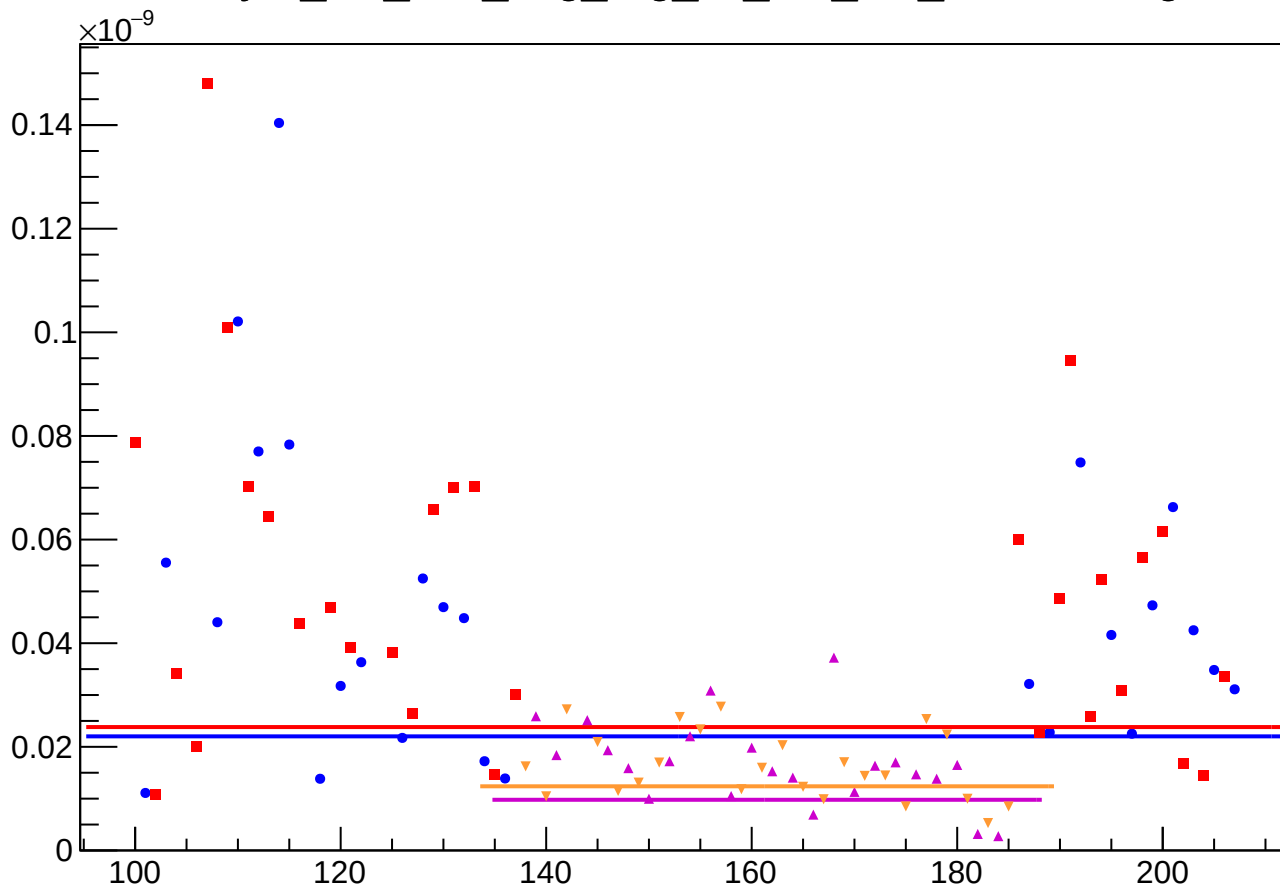
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:17.9/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 45.7/49

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 96.1/102

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 50.2/52

asym\_usl\_atl1\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 3562791.3/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1898110.3/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 3279109.1/29

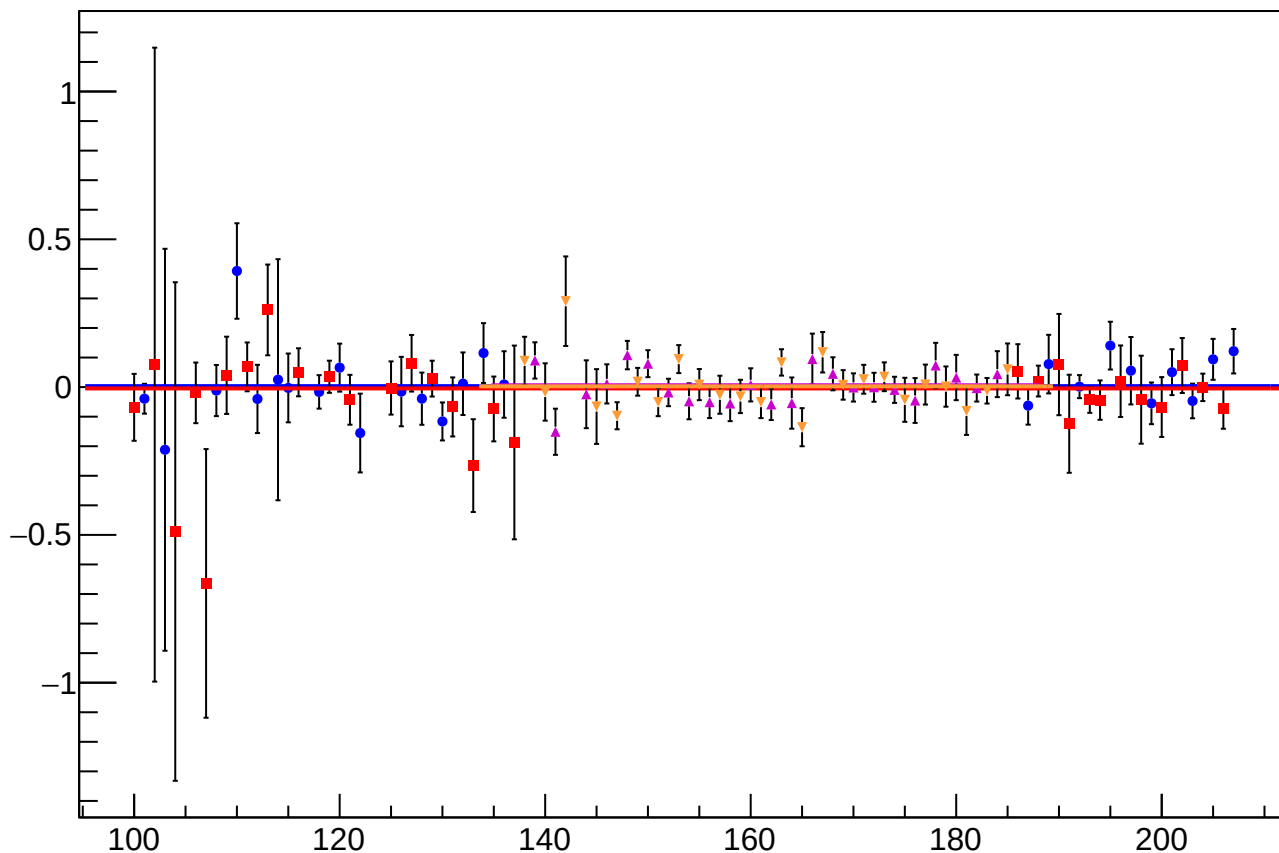
Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 4499862.2/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 6651502.3/49

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 17111279.7/102

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 10157868.6/52

asym\_usl\_atl1\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.003 \pm 0.015$   $\chi^2/\text{NDF}$ : 24.5/25

Left Out:  $0.003 \pm 0.012$   $\chi^2/\text{NDF}$ : 29.9/23

Right Out:  $-0.005 \pm 0.016$   $\chi^2/\text{NDF}$ : 17.5/29

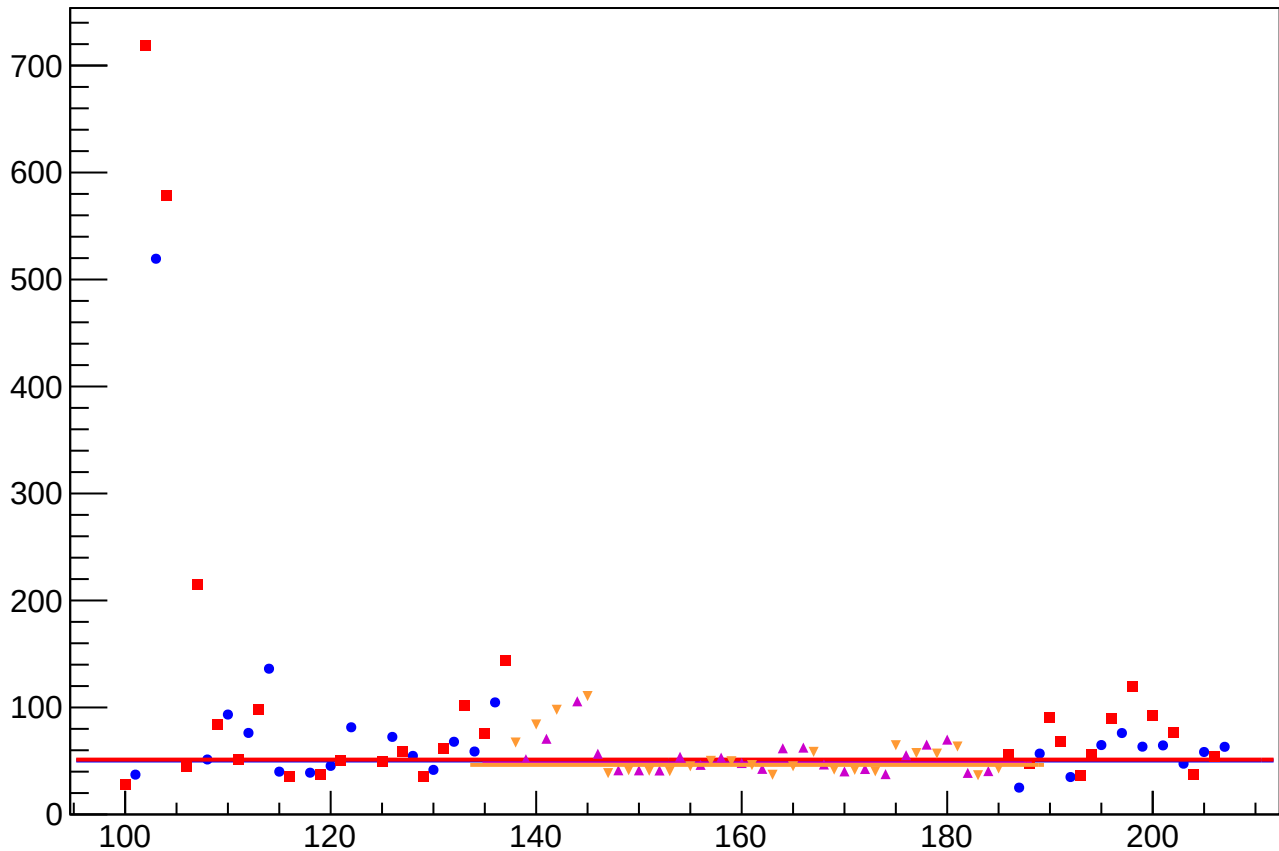
Left In:  $0.006 \pm 0.012$   $\chi^2/\text{NDF}$ : 21.6/22

+ sign  $0.003 \pm 0.009$   $\chi^2/\text{NDF}$ : 54.4/49

All:  $0.003 \pm 0.007$   $\chi^2/\text{NDF}$ : 93.9/102

- sign  $0.002 \pm 0.010$   $\chi^2/\text{NDF}$ : 39.4/52

asym\_usl\_atl1\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 50.425 $\pm$ 0.011  $\chi^2$ /NDF: 3300748.9/25

Left Out: 46.353 $\pm$ 0.008  $\chi^2$ /NDF:1967753.2/23

Right Out: 51.258 $\pm$ 0.011  $\chi^2$ /NDF: 4733371.7/29

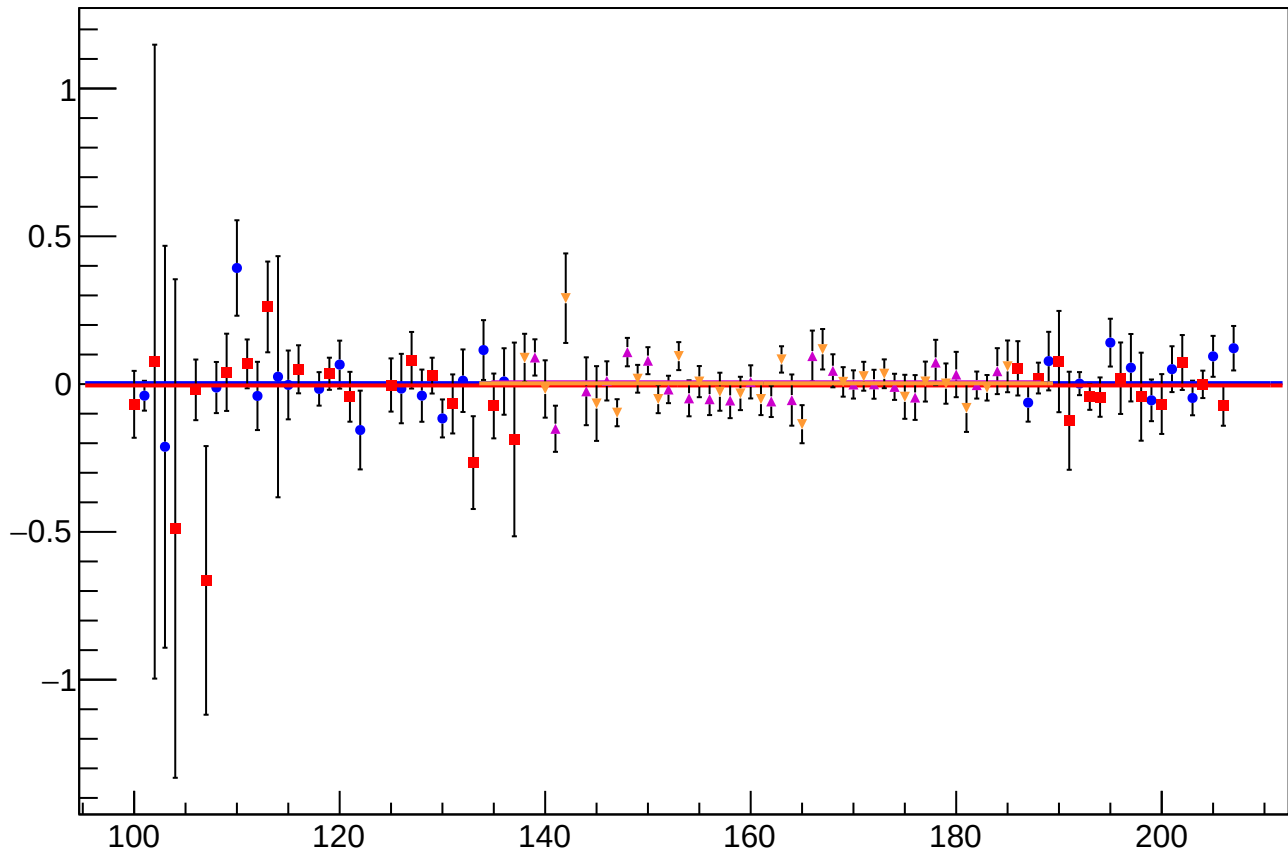
Left In: 47.575 $\pm$ 0.009  $\chi^2$ /NDF:1576196.2/22

+ sign 47.877 $\pm$ 0.007  $\chi^2$ /NDF: 5356164.5/49

All: 48.410 $\pm$ 0.005  $\chi^2$ /NDF: 11748282.0/102

- sign 48.963 $\pm$ 0.007  $\chi^2$ /NDF: 6379023.8/52

asym\_usl\_atl1\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.003 \pm 0.015$   $\chi^2/\text{NDF}$ : 24.5/25

Left Out:  $0.003 \pm 0.012$   $\chi^2/\text{NDF}$ : 29.9/23

Right Out:  $-0.005 \pm 0.016$   $\chi^2/\text{NDF}$ : 17.5/29

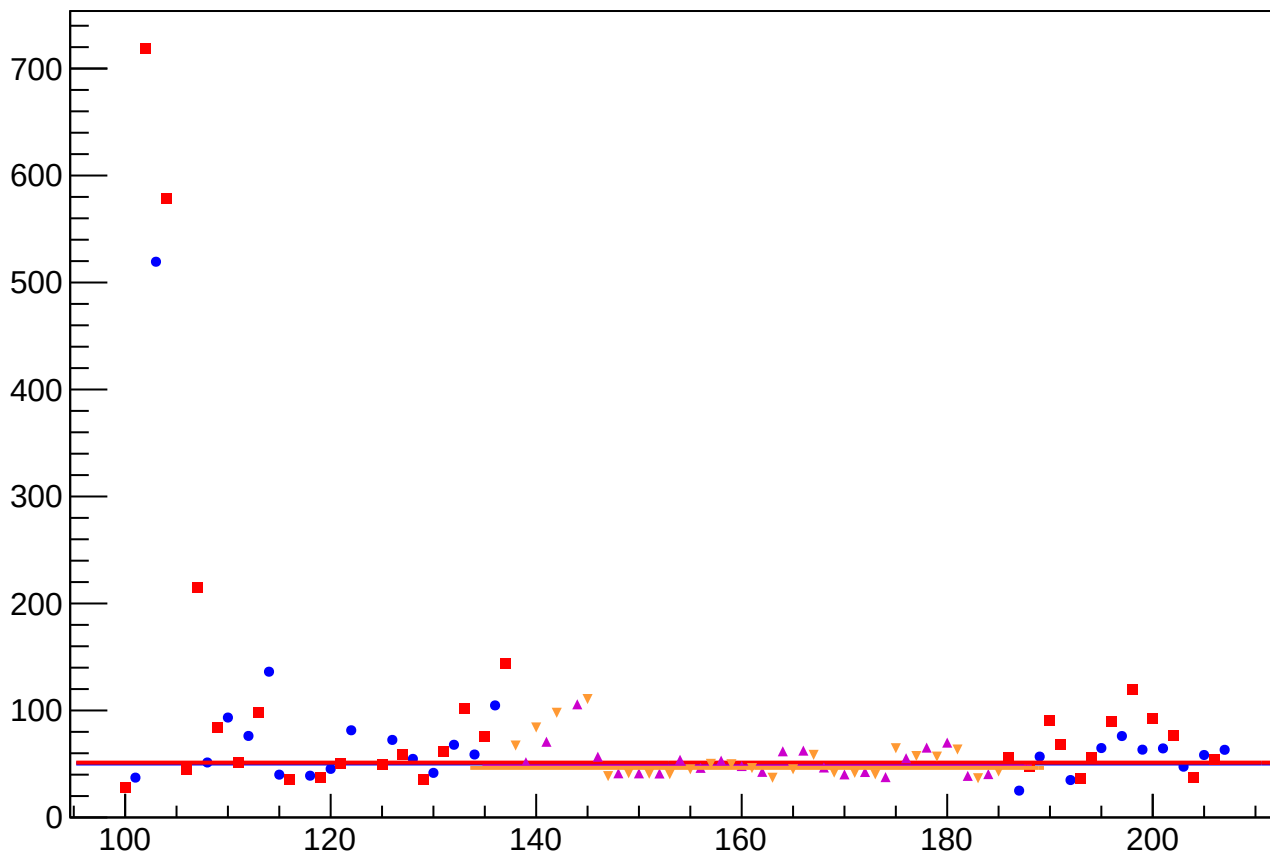
Left In:  $0.006 \pm 0.012$   $\chi^2/\text{NDF}$ : 21.6/22

+ sign  $0.003 \pm 0.009$   $\chi^2/\text{NDF}$ : 54.4/49

All:  $0.003 \pm 0.007$   $\chi^2/\text{NDF}$ : 93.9/102

- sign  $0.002 \pm 0.010$   $\chi^2/\text{NDF}$ : 39.4/52

asym\_usl\_atl1\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 50.425 $\pm$ 0.011  $\chi^2$ /NDF: 3300748.9/25

Left Out: 46.353 $\pm$ 0.008  $\chi^2$ /NDF:1967753.2/23

Right Out: 51.258 $\pm$ 0.011  $\chi^2$ /NDF: 4733371.7/29

Left In: 47.575 $\pm$ 0.009  $\chi^2$ /NDF:1576196.2/22

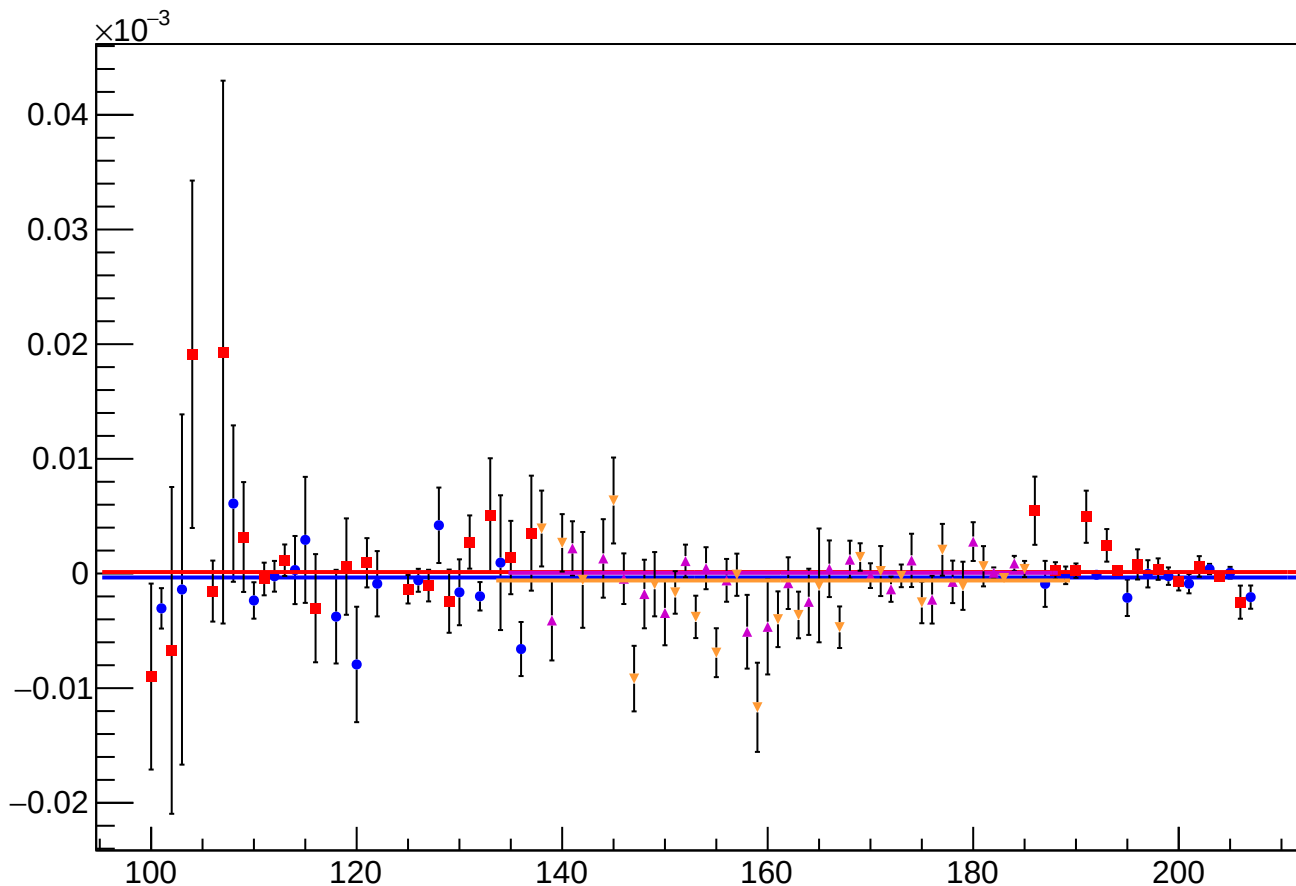
+ sign 47.877 $\pm$ 0.007  $\chi^2$ /NDF: 5356164.5/49

All: 48.410 $\pm$ 0.005  $\chi^2$ /NDF: 11748282.0/102

- sign 48.963 $\pm$ 0.007  $\chi^2$ /NDF: 6379023.8/52



asym\_usl\_atl1\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 27.5/25

Left Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 54.0/23

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 28.0/29

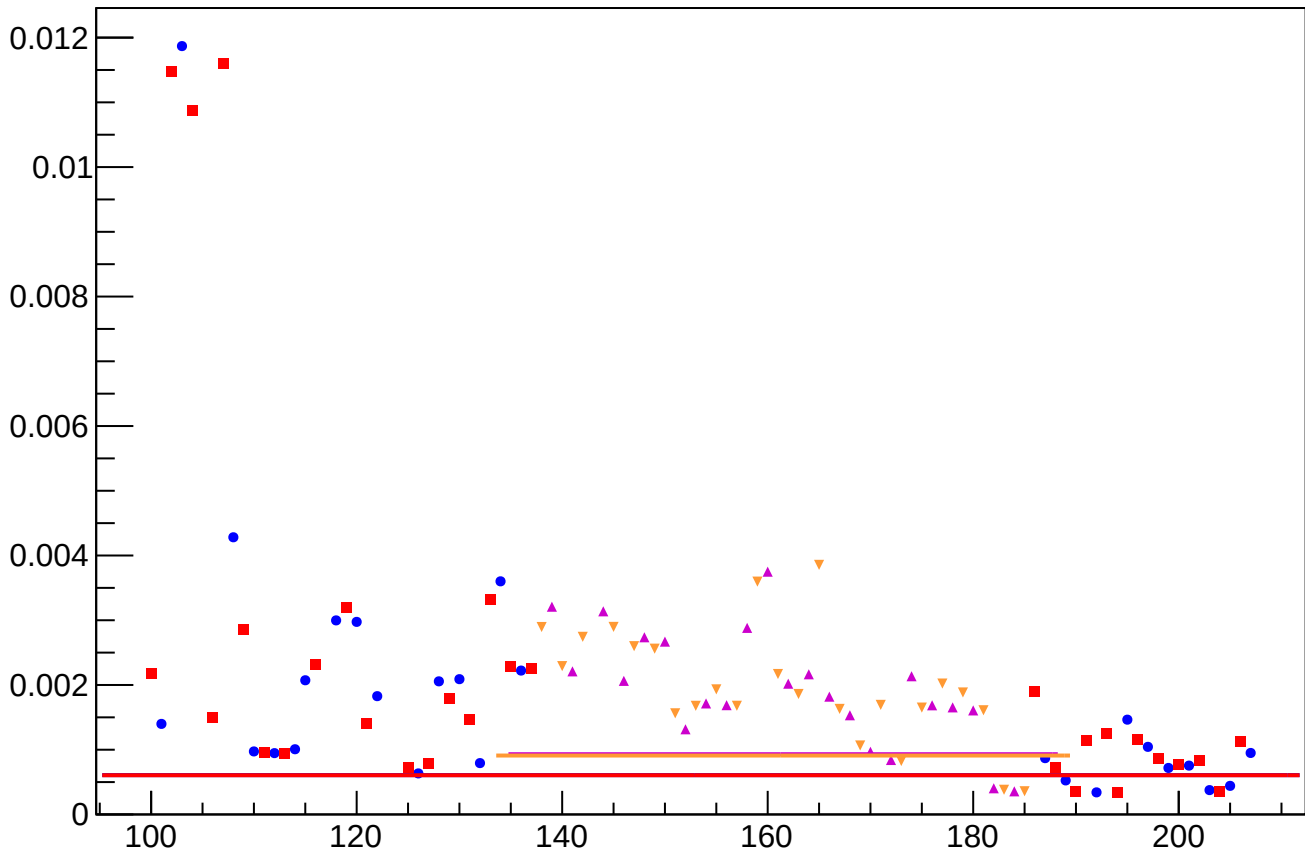
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 17.9/22

+ sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 82.1/49

All: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 133.7/102

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 45.9/52

asym\_usl\_atl1\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 9215085.1/25

Left Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 14137356.3/23

Right Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 10917287.8/29

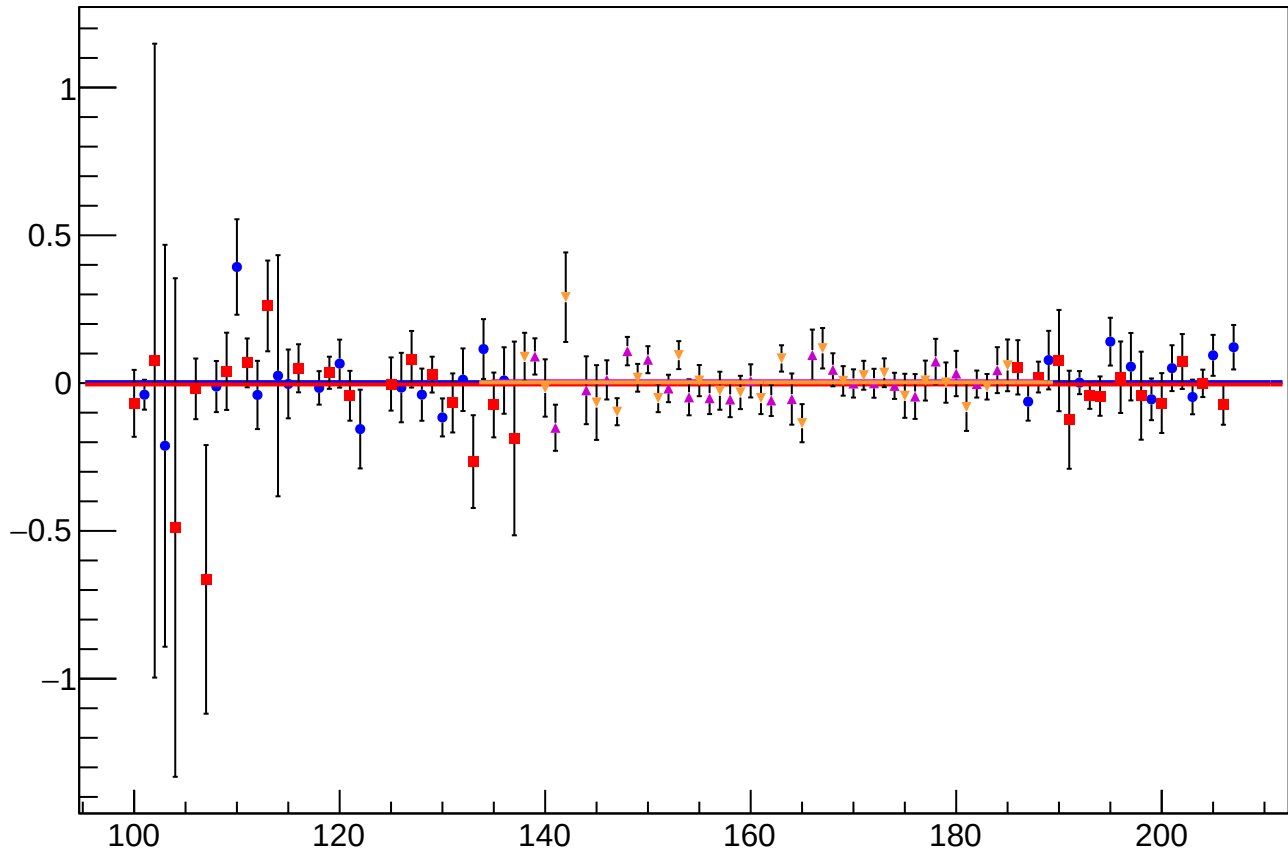
Left In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 13690985.6/22

+ sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 24924680.8/49

All: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 51332249.8/102

- sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 26407514.3/52

asym\_usl\_atl1\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.003 \pm 0.015$   $\chi^2/\text{NDF}$ : 24.5/25

Left Out:  $0.003 \pm 0.012$   $\chi^2/\text{NDF}$ : 29.9/23

Right Out:  $-0.005 \pm 0.016$   $\chi^2/\text{NDF}$ : 17.5/29

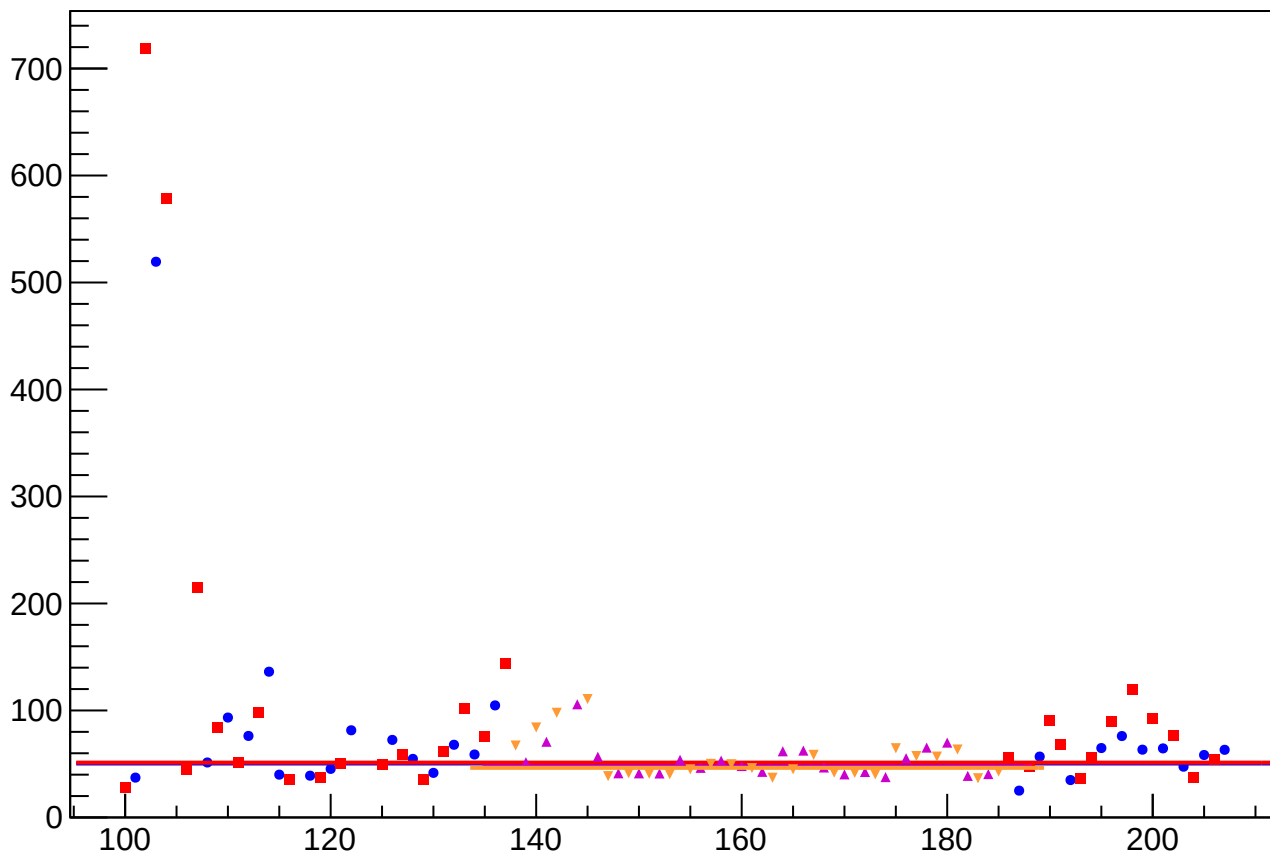
Left In:  $0.006 \pm 0.012$   $\chi^2/\text{NDF}$ : 21.6/22

+ sign  $0.003 \pm 0.009$   $\chi^2/\text{NDF}$ : 54.4/49

All:  $0.003 \pm 0.007$   $\chi^2/\text{NDF}$ : 93.9/102

- sign  $0.002 \pm 0.010$   $\chi^2/\text{NDF}$ : 39.4/52

asym\_usl\_atl1\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 50.424 $\pm$ 0.011  $\chi^2$ /NDF: 3300759.4/25

Left Out: 46.354 $\pm$ 0.008  $\chi^2$ /NDF:1967741.3/23

Right Out: 51.257 $\pm$ 0.011  $\chi^2$ /NDF: 4733374.3/29

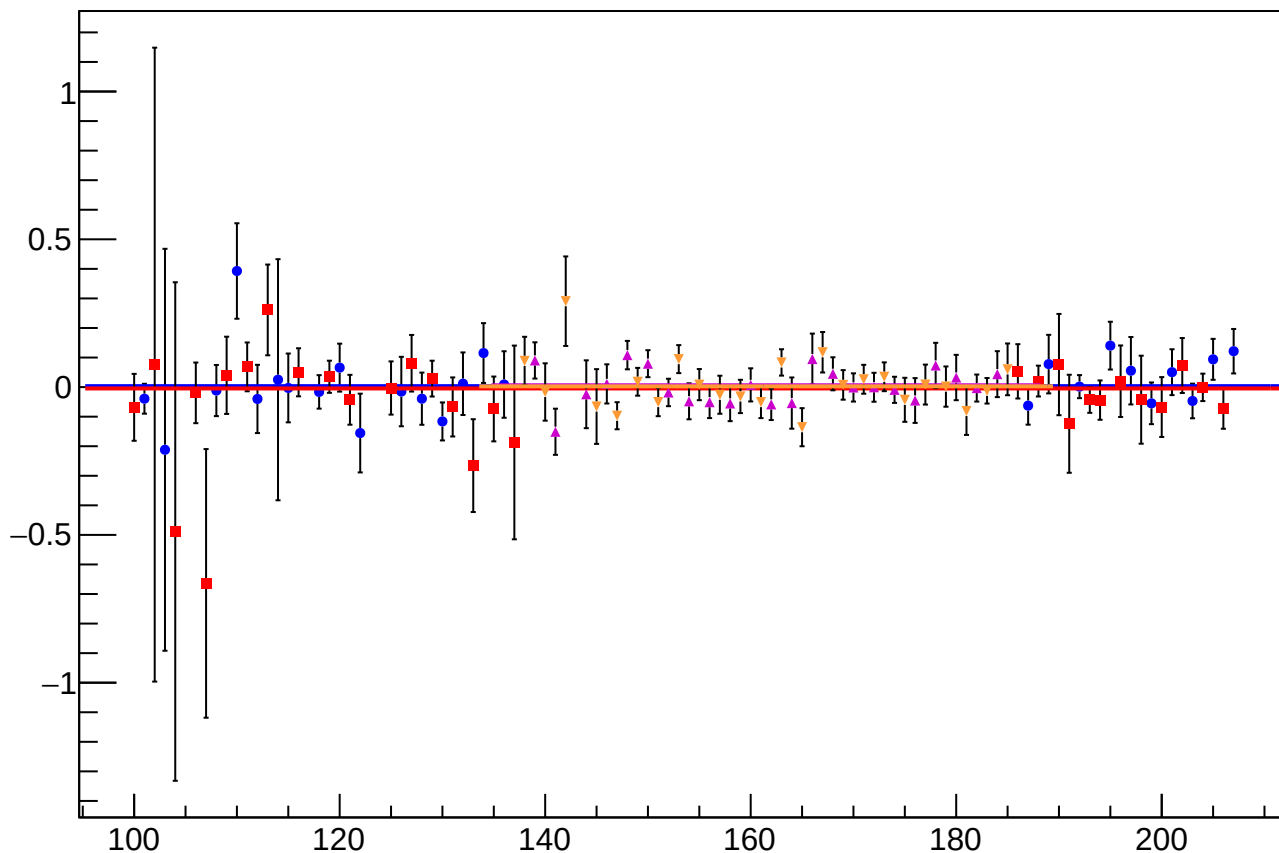
Left In: 47.575 $\pm$ 0.009  $\chi^2$ /NDF:1576204.5/22

+ sign 47.877 $\pm$ 0.007  $\chi^2$ /NDF: 5356154.5/49

All: 48.410 $\pm$ 0.005  $\chi^2$ /NDF: 11748267.6/102

- sign 48.963 $\pm$ 0.007  $\chi^2$ /NDF: 6379022.7/52

asym\_usl\_atl1\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.003 \pm 0.015$   $\chi^2/\text{NDF}: 24.5/25$

Left Out:  $0.003 \pm 0.012$   $\chi^2/\text{NDF}: 29.9/23$

Right Out:  $-0.005 \pm 0.016$   $\chi^2/\text{NDF}: 17.5/29$

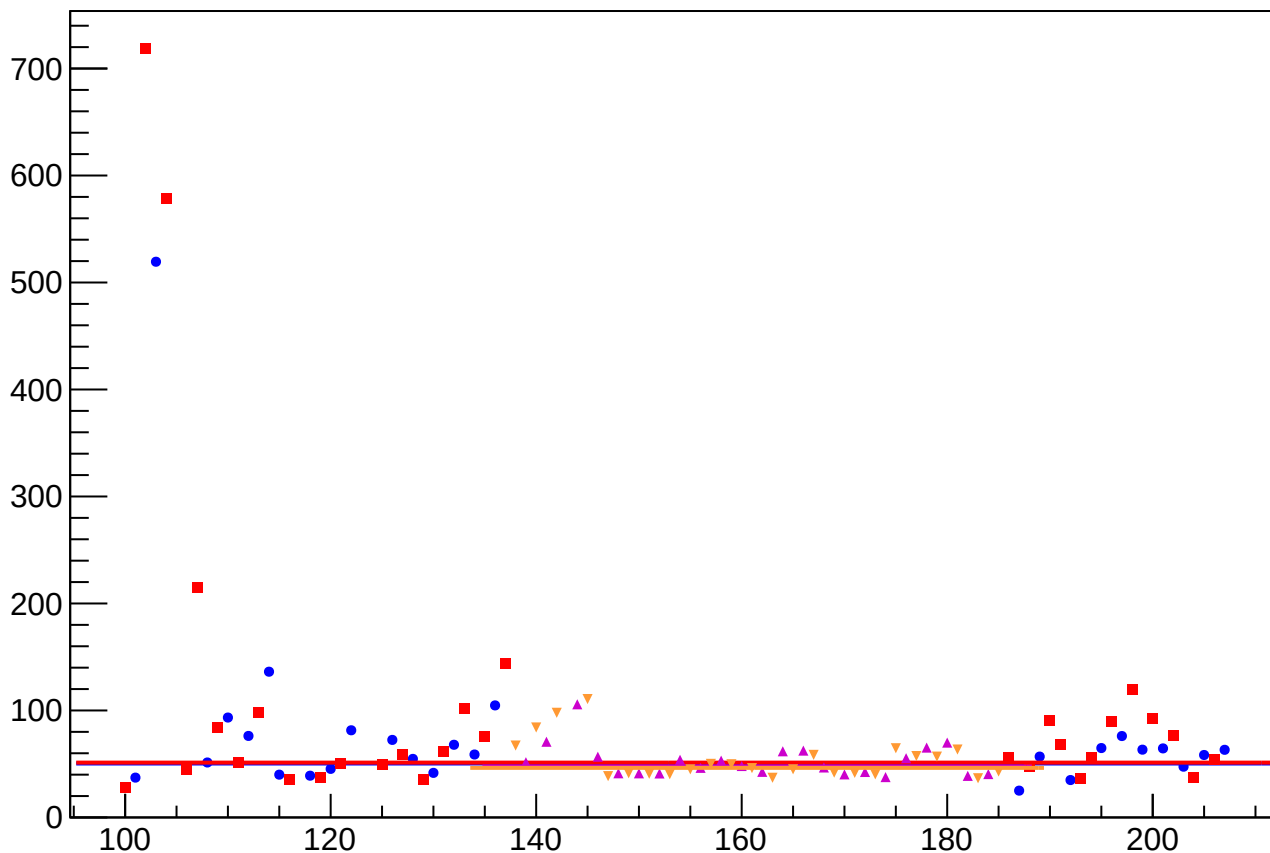
Left In:  $0.006 \pm 0.012$   $\chi^2/\text{NDF}: 21.6/22$

+ sign  $0.003 \pm 0.009$   $\chi^2/\text{NDF}: 54.4/49$

All:  $0.003 \pm 0.007$   $\chi^2/\text{NDF}: 93.9/102$

- sign  $0.002 \pm 0.010$   $\chi^2/\text{NDF}: 39.4/52$

asym\_usl\_atl1\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 50.424 $\pm$ 0.011  $\chi^2$ /NDF: 3300759.4/25

Left Out: 46.354 $\pm$ 0.008  $\chi^2$ /NDF: 1967741.3/23

Right Out: 51.257 $\pm$ 0.011  $\chi^2$ /NDF: 4733374.3/29

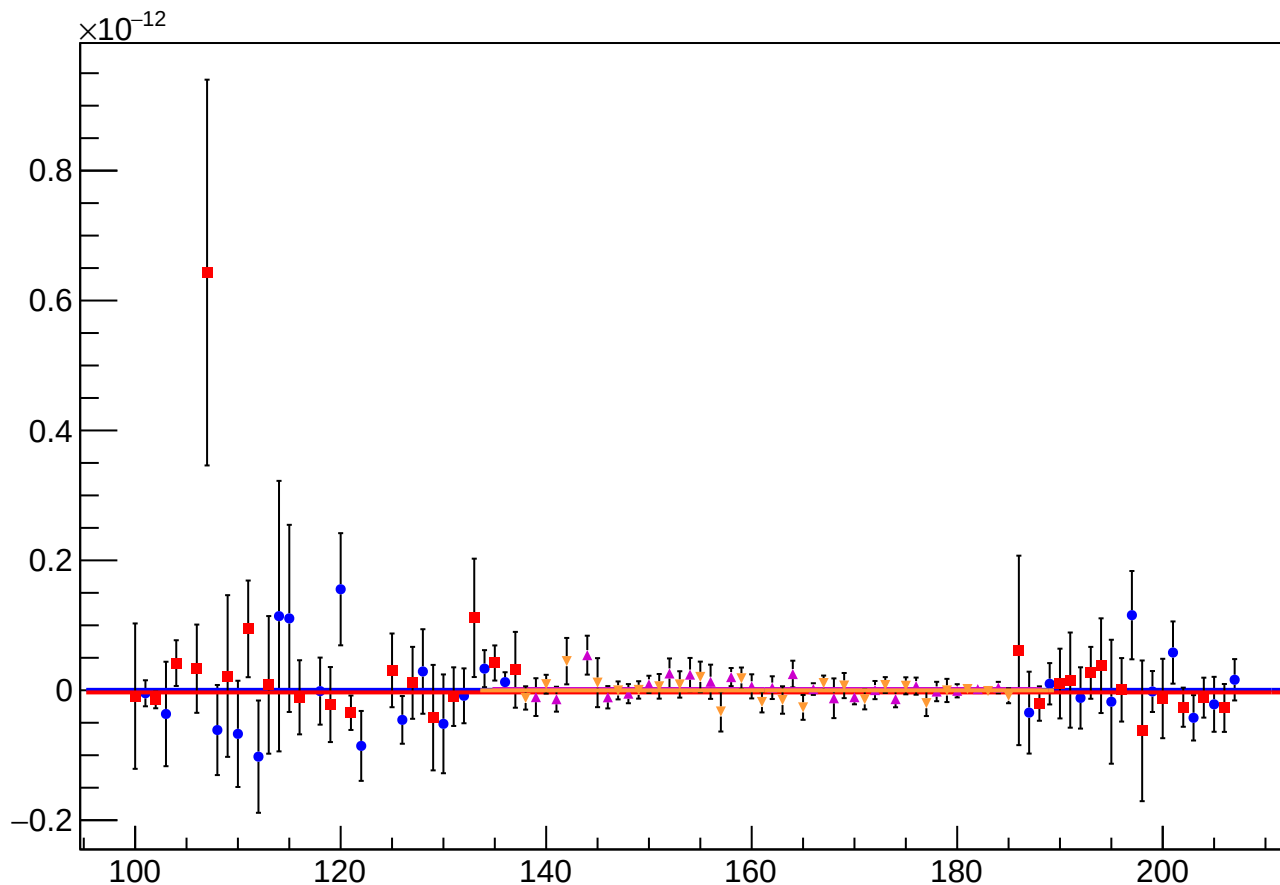
Left In: 47.575 $\pm$ 0.009  $\chi^2$ /NDF: 1576204.5/22

+ sign 47.877 $\pm$ 0.007  $\chi^2$ /NDF: 5356154.5/49

All: 48.410 $\pm$ 0.005  $\chi^2$ /NDF: 11748267.6/102

- sign 48.963 $\pm$ 0.007  $\chi^2$ /NDF: 6379022.7/52

asym\_usl\_atl1\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 20.9/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 13.9/23

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 19.2/29

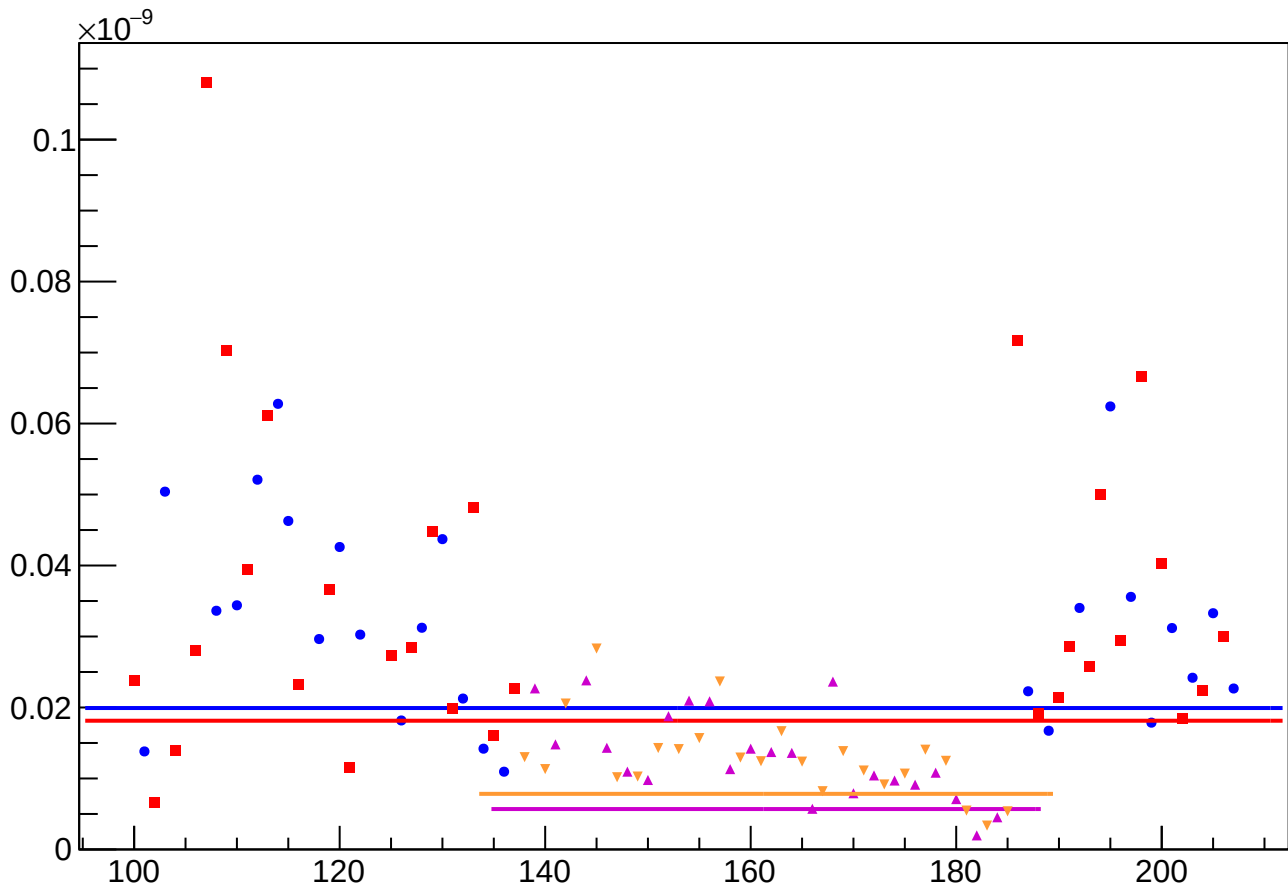
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 13.4/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 34.8/49

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 68.0/102

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 33.0/52

asym\_usl\_atl1\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 3433830.6/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:6422392.2/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 5392227.7/29

Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:11199324.6/22

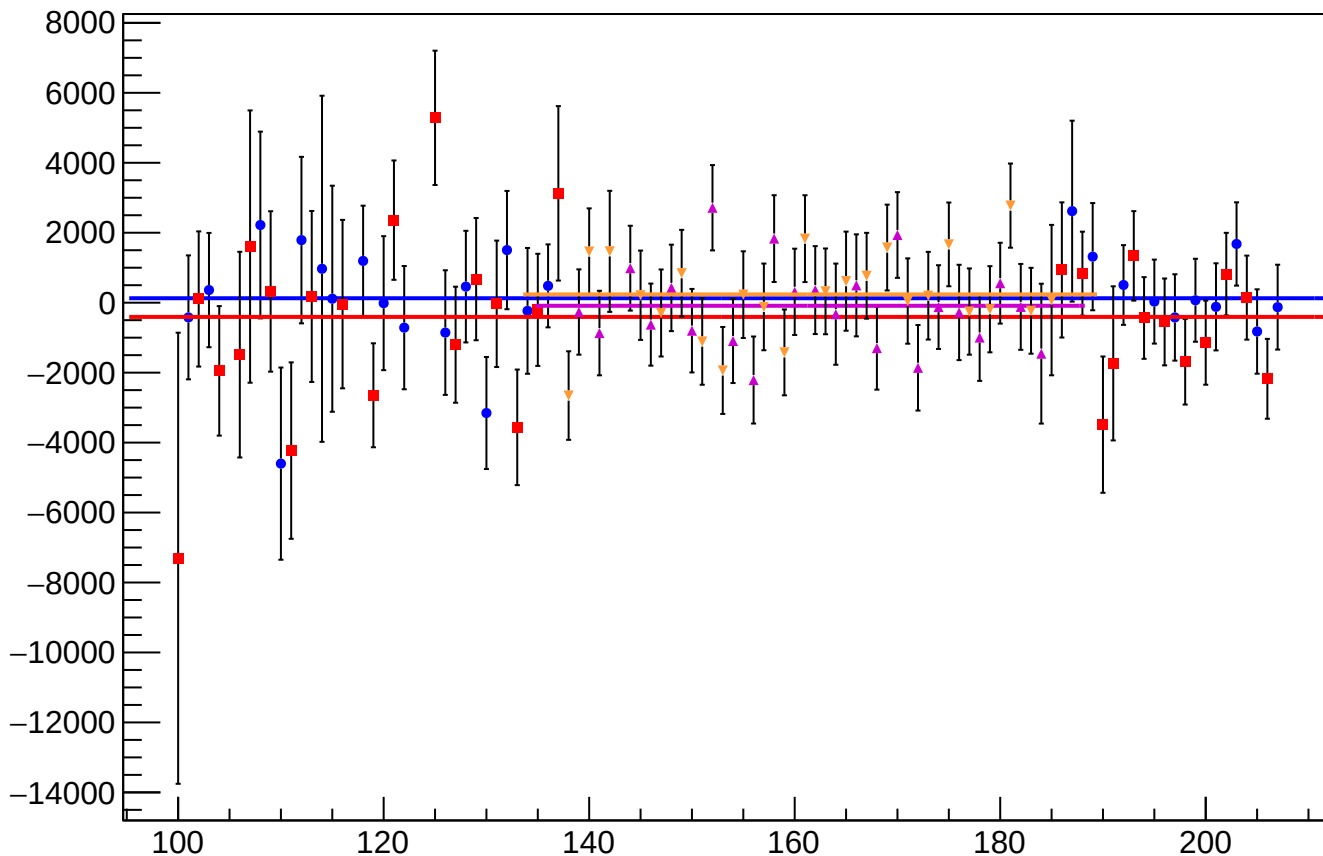
+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 14367085.3/49

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 37492879.1/102

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 22001274.0/52



# reg\_asym\_usl\_atl1\_dd\_mean vs Slug



Right In:  $127.316 \pm 303.384$   $\chi^2/\text{NDF}$ : 14.5/25

Left Out:  $236.601 \pm 259.669$   $\chi^2/\text{NDF}$ : 22.7/23

Right Out:  $-406.737 \pm 296.186$   $\chi^2/\text{NDF}$ : 36.3/29

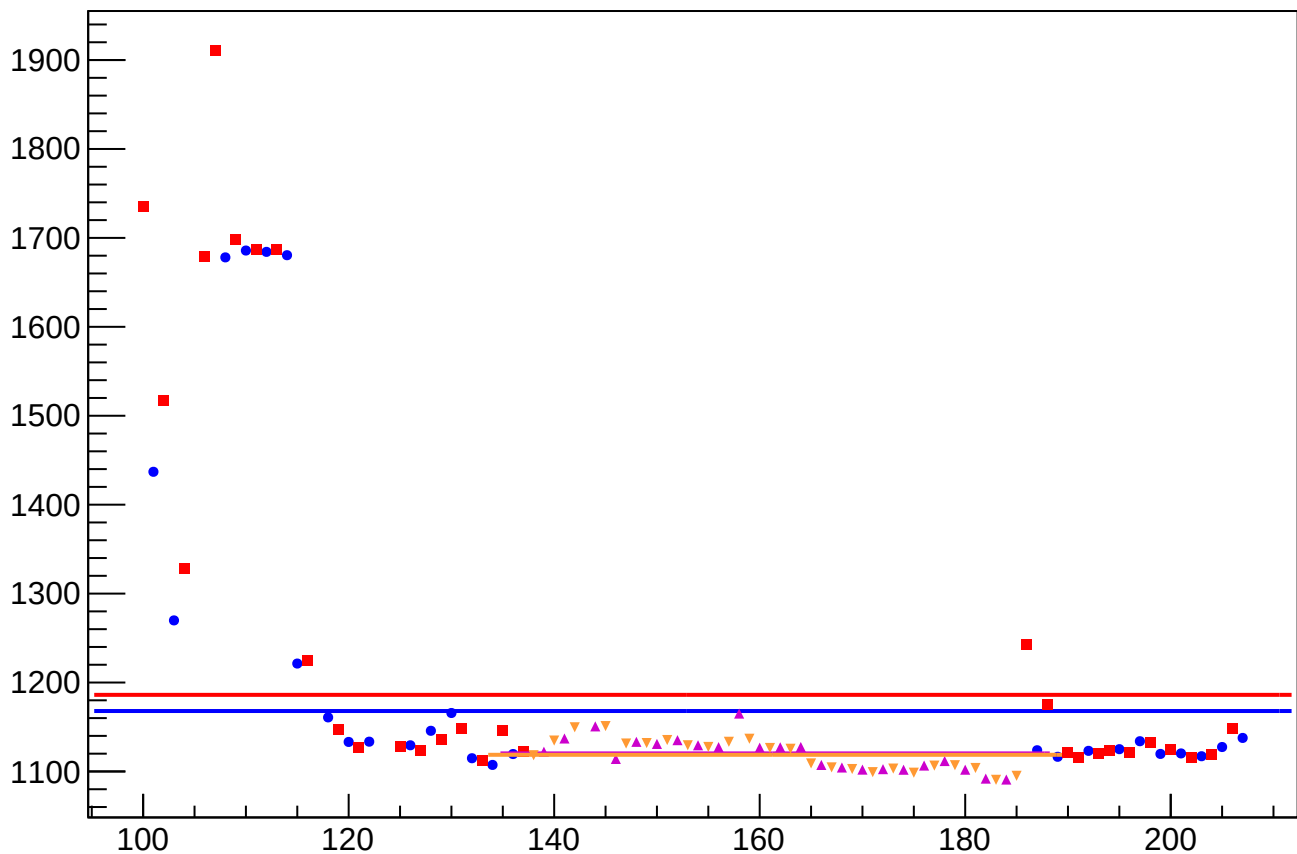
Left In:  $-88.380 \pm 261.602$   $\chi^2/\text{NDF}$ : 20.9/22

+ sign  $190.393 \pm 197.276$   $\chi^2/\text{NDF}$ : 37.3/49

All:  $-20.030 \pm 139.068$   $\chi^2/\text{NDF}$ : 97.3/102

- sign  $-227.896 \pm 196.073$   $\chi^2/\text{NDF}$ : 57.8/52

# reg\_asym\_usl\_atl1\_dd\_rms vs Slug



Right In: 1167.962 $\pm$ 0.215  $\chi^2$ /NDF: 347815.2/25

Left Out: 1118.733 $\pm$ 0.184  $\chi^2$ /NDF: 8205.0/23

Right Out: 1186.144 $\pm$ 0.209  $\chi^2$ /NDF: 537928.4/29

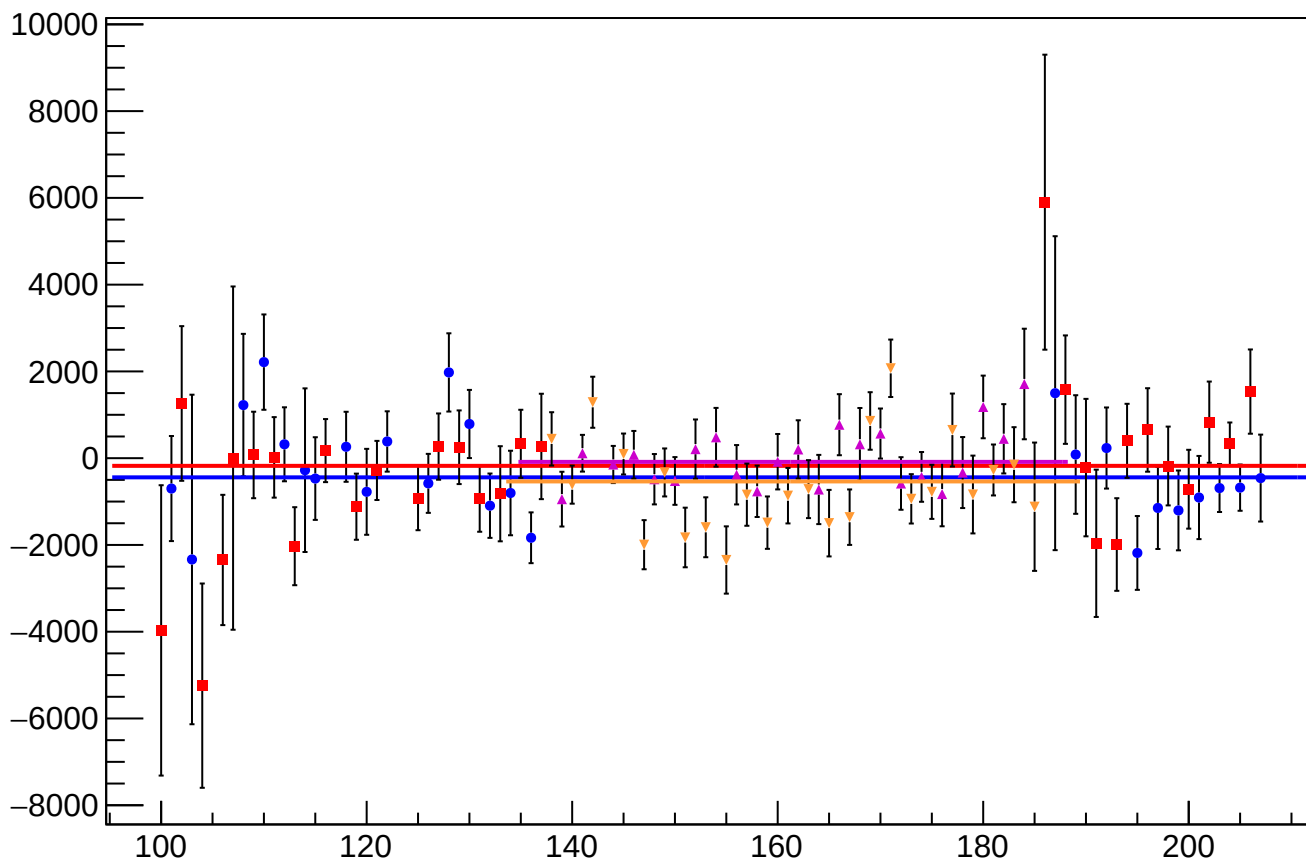
Left In: 1120.308 $\pm$ 0.185  $\chi^2$ /NDF: 9479.7/22

+ sign 1139.548 $\pm$ 0.139  $\chi^2$ /NDF: 386414.4/49

All: 1144.383 $\pm$ 0.098  $\chi^2$ /NDF: 991721.0/102

- sign 1149.160 $\pm$ 0.139  $\chi^2$ /NDF: 602918.4/52

# asym\_usl\_atl1\_dd\_reg\_correction\_mean vs Slug



Right In:  $-441.915 \pm 170.373$   $\chi^2/\text{NDF}$ : 33.5/25

Left Out:  $-535.899 \pm 130.646$   $\chi^2/\text{NDF}$ : 61.6/23

Right Out:  $-176.796 \pm 172.544$   $\chi^2/\text{NDF}$ : 34.3/29

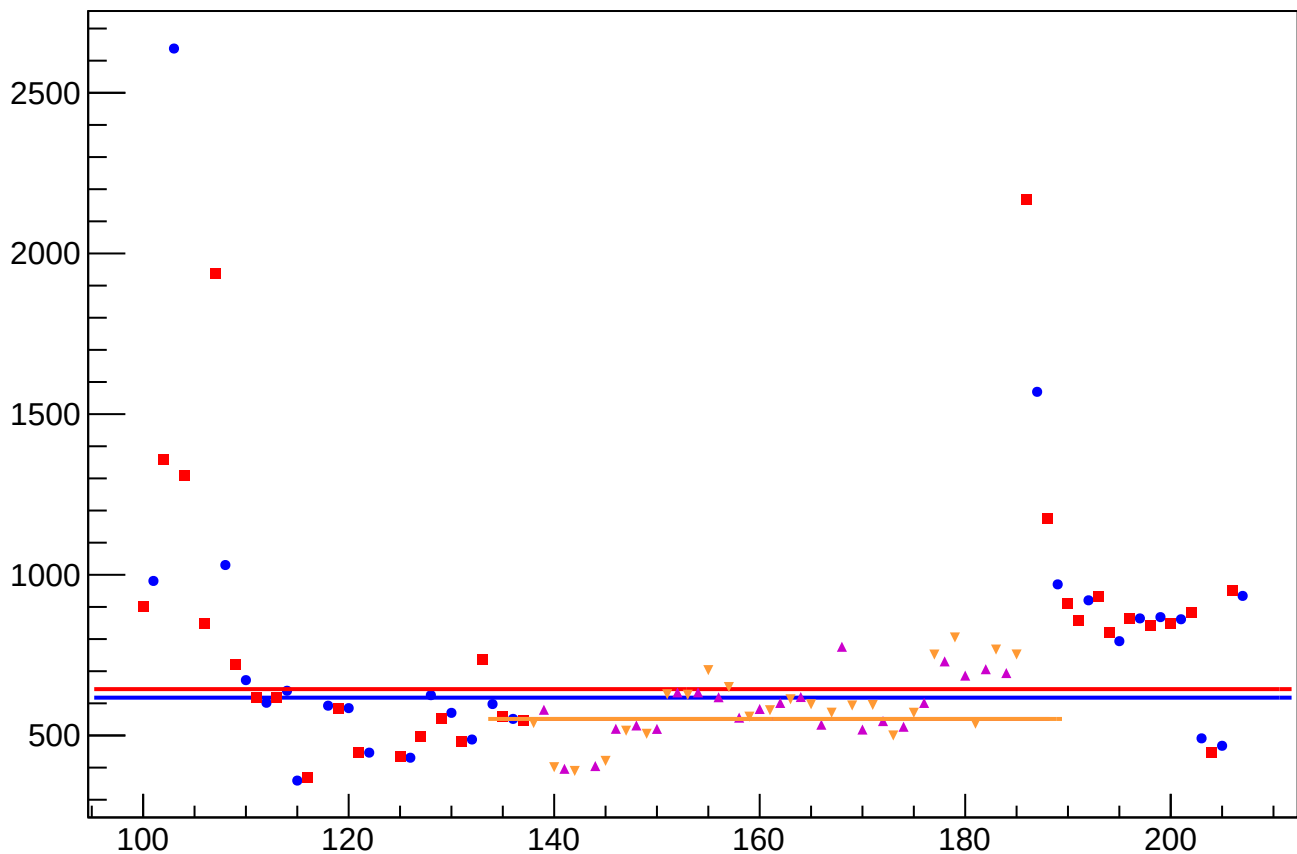
Left In:  $-85.254 \pm 130.966$   $\chi^2/\text{NDF}$ : 17.1/22

+ sign  $-501.098 \pm 103.674$   $\chi^2/\text{NDF}$ : 95.3/49

All:  $-311.093 \pm 73.535$   $\chi^2/\text{NDF}$ : 153.7/102

- sign  $-118.715 \pm 104.319$   $\chi^2/\text{NDF}$ : 51.6/52

# asym\_usl\_atl1\_dd\_reg\_correction\_rms vs Slug



Right In: 617.679+/-0.120  $\chi^2/\text{NDF}$ : 2839928.5/25

Left Out: 551.440+/-0.092  $\chi^2/\text{NDF}$ : 1226616.4/23

Right Out: 644.251+/-0.122  $\chi^2/\text{NDF}$ : 3661027.5/29

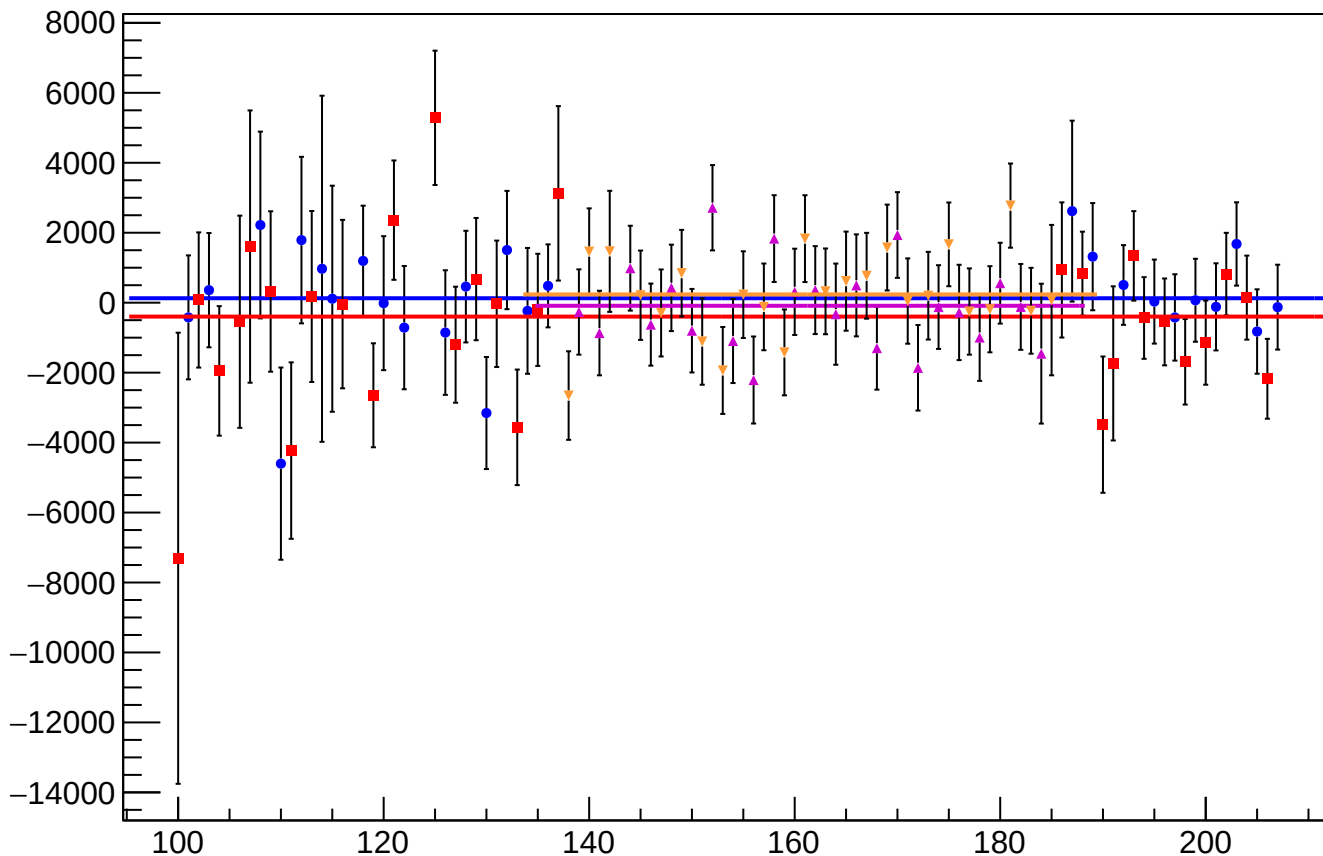
Left In: 551.336+/-0.093  $\chi^2/\text{NDF}$ : 1061764.2/22

+ sign 575.967+/-0.073  $\chi^2/\text{NDF}$ : 4256917.0/49

All: 580.604+/-0.052  $\chi^2/\text{NDF}$ : 9355730.7/102

- sign 585.300+/-0.074  $\chi^2/\text{NDF}$ : 5090761.1/52

# cor\_asym\_usl\_atl1\_dd\_mean vs Slug



Right In: 127.159 $\pm$ 303.384  $\chi^2$ /NDF: 14.5/25

Left Out: 236.642 $\pm$ 259.669  $\chi^2$ /NDF:22.7/23

Right Out: -397.802 $\pm$ 296.277  $\chi^2$ /NDF: 36.1/29

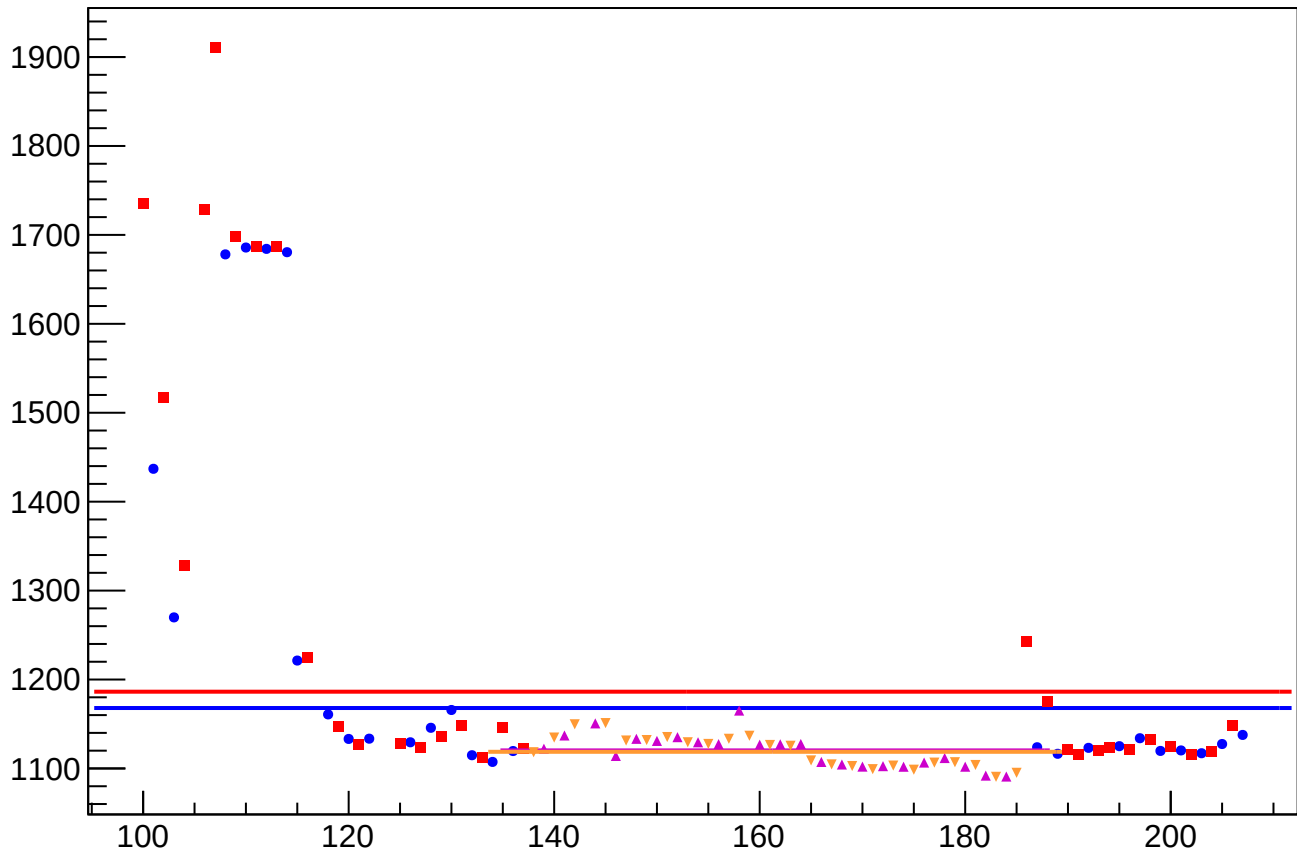
Left In: -88.370 $\pm$ 261.602  $\chi^2$ /NDF:20.9/22

+ sign 190.350 $\pm$ 197.276  $\chi^2$ /NDF: 37.3/49

All: -18.027 $\pm$ 139.077  $\chi^2$ /NDF: 97.1/102

- sign -223.927 $\pm$ 196.100  $\chi^2$ /NDF: 57.6/52

# cor\_asym\_usl\_atl1\_dd\_rms vs Slug



Right In: 1167.962 $\pm$ 0.215  $\chi^2$ /NDF: 347815.3/25

Left Out: 1118.733 $\pm$ 0.184  $\chi^2$ /NDF: 8205.0/23

Right Out: 1186.321 $\pm$ 0.209  $\chi^2$ /NDF: 545809.5/29

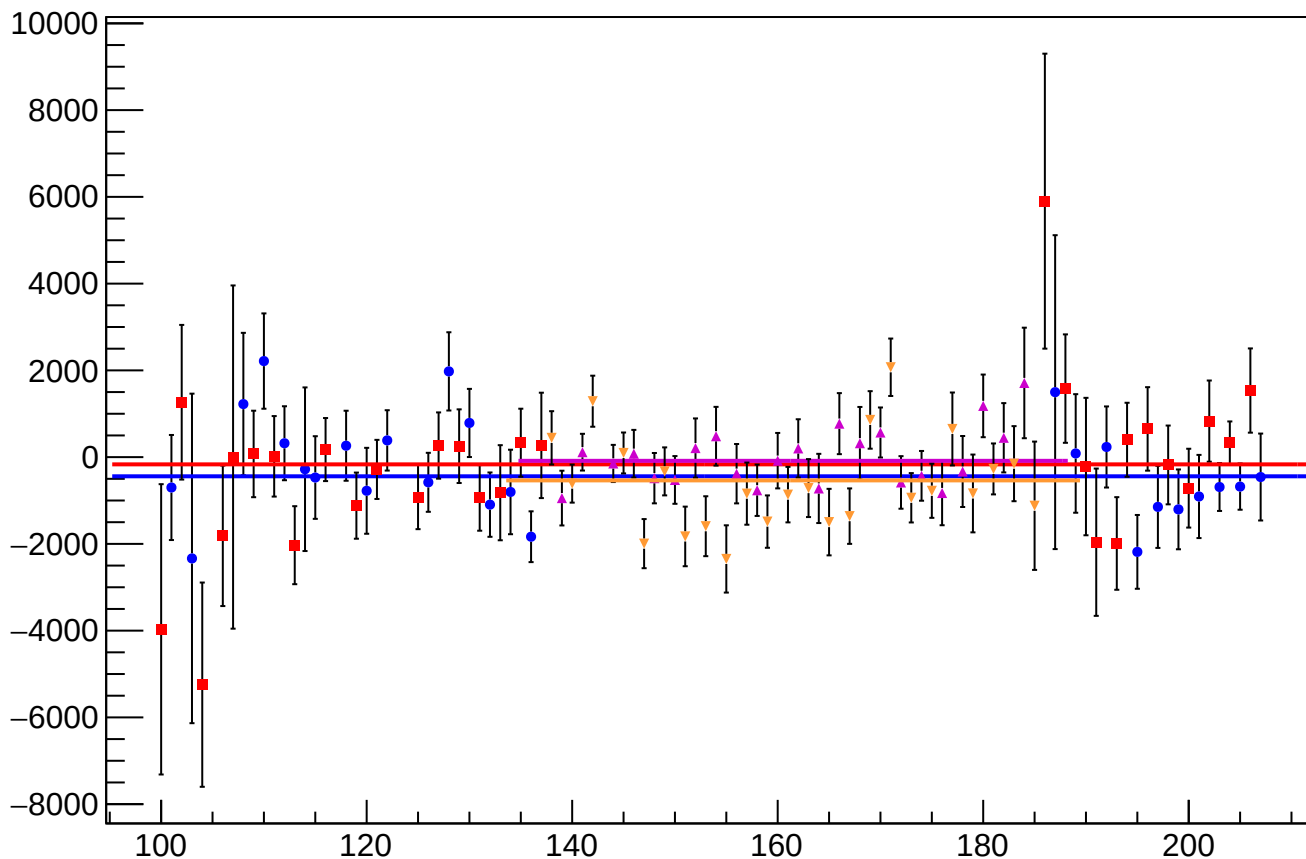
Left In: 1120.308 $\pm$ 0.185  $\chi^2$ /NDF: 9479.7/22

+ sign 1139.548 $\pm$ 0.139  $\chi^2$ /NDF: 386414.5/49

All: 1144.417 $\pm$ 0.098  $\chi^2$ /NDF: 999915.5/102

- sign 1149.227 $\pm$ 0.139  $\chi^2$ /NDF: 611079.4/52

# asym\_usl\_atl1\_dd\_cor\_correction\_mean vs Slug



Right In:  $-441.883 \pm 170.373$   $\chi^2/\text{NDF}$ : 33.6/25

Left Out:  $-535.930 \pm 130.646$   $\chi^2/\text{NDF}$ : 61.6/23

Right Out:  $-166.703 \pm 172.703$   $\chi^2/\text{NDF}$ : 33.3/29

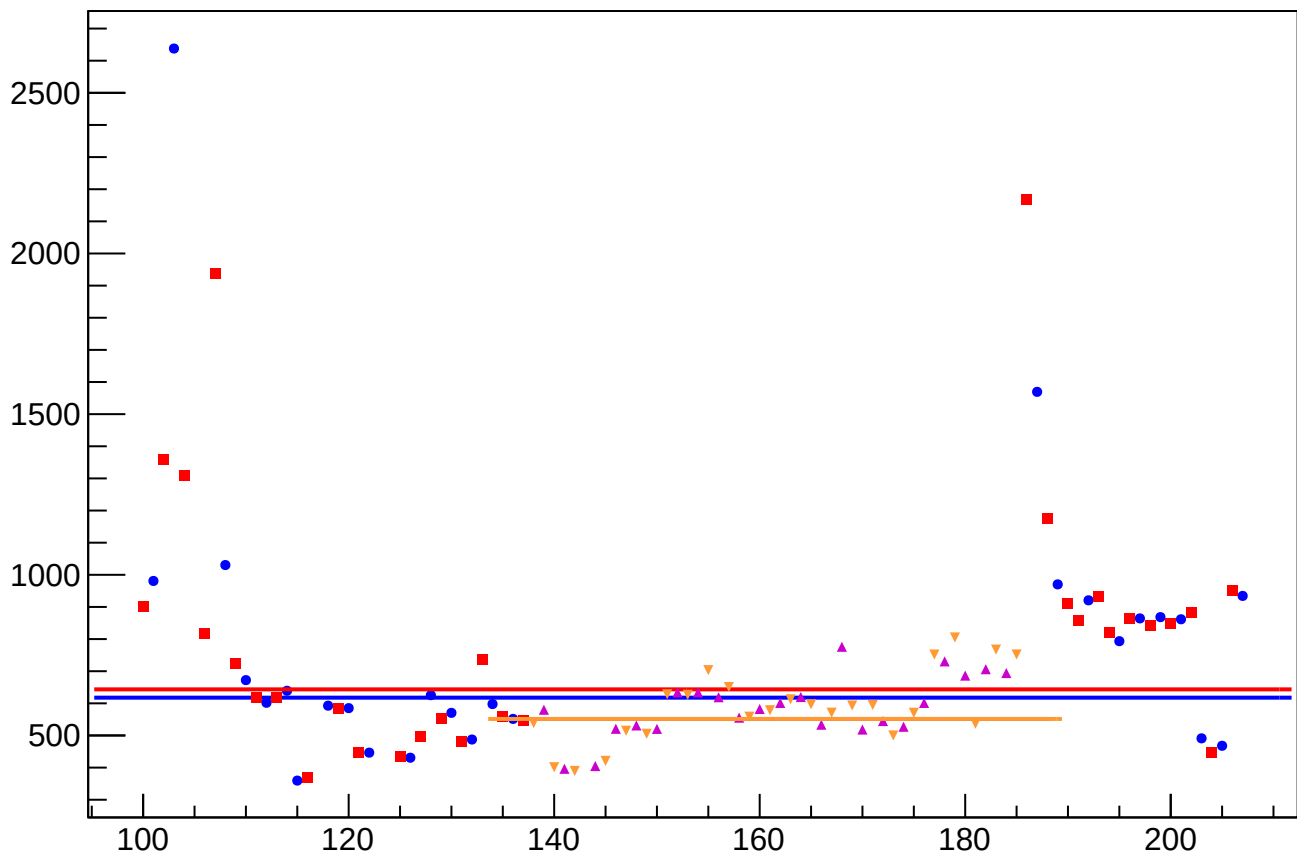
Left In:  $-85.243 \pm 130.966$   $\chi^2/\text{NDF}$ : 17.1/22

+ sign  $-501.105 \pm 103.674$   $\chi^2/\text{NDF}$ : 95.3/49

All:  $-309.307 \pm 73.548$   $\chi^2/\text{NDF}$ : 152.7/102

- sign  $-114.984 \pm 104.354$   $\chi^2/\text{NDF}$ : 50.6/52

# asym\_usl\_atl1\_dd\_cor\_correction\_rms vs Slug



Right In: 617.676 $\pm$ 0.120  $\chi^2/\text{NDF}$ : 2839922.3/25

Left Out: 551.439 $\pm$ 0.092  $\chi^2/\text{NDF}$ :1226632.2/23

Right Out: 643.515 $\pm$ 0.122  $\chi^2/\text{NDF}$ : 3647338.4/29

Left In: 551.335 $\pm$ 0.093  $\chi^2/\text{NDF}$ :1061731.9/22

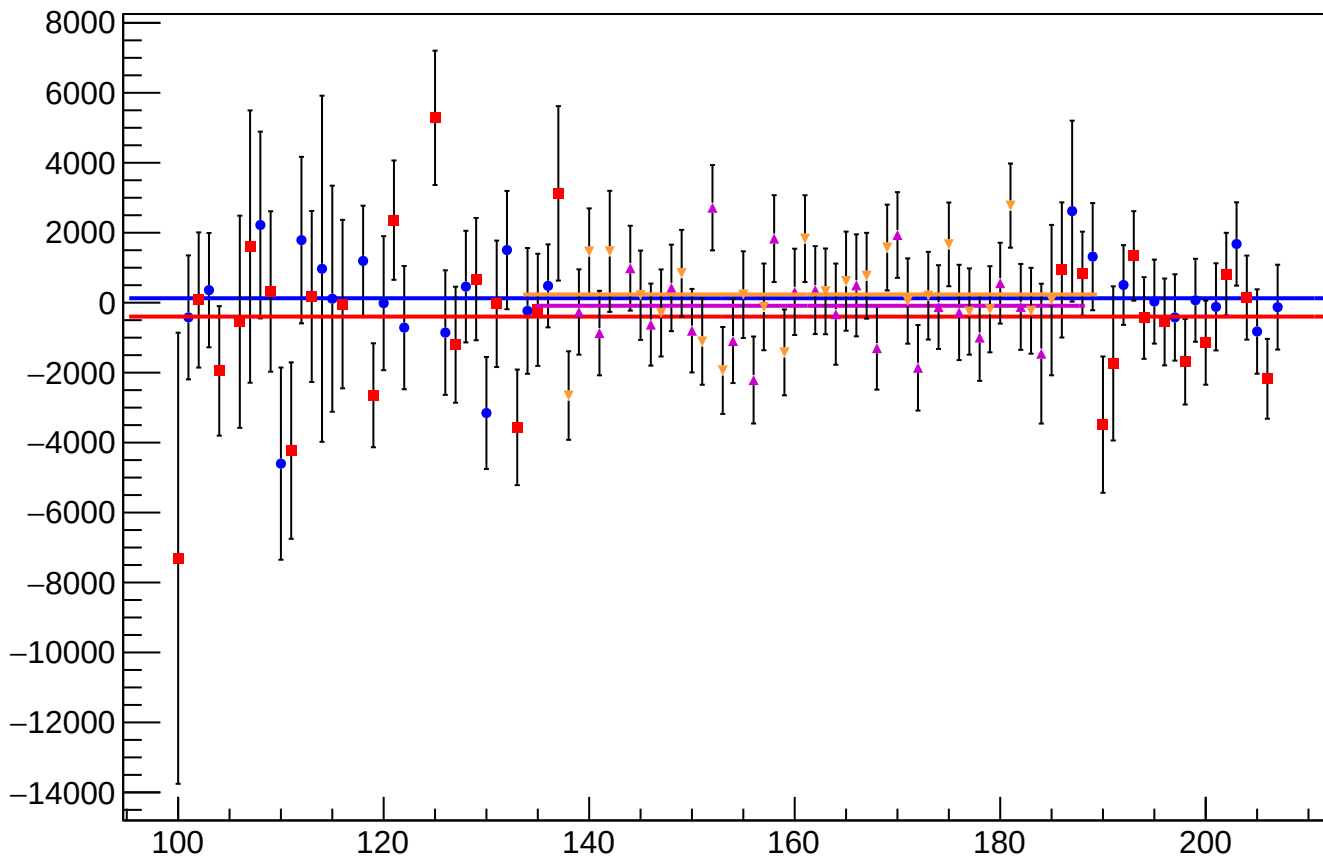
+ sign 575.966 $\pm$ 0.073  $\chi^2/\text{NDF}$ : 4256914.2/49

All: 580.449 $\pm$ 0.052  $\chi^2/\text{NDF}$ : 9335257.1/102

- sign 584.991 $\pm$ 0.074  $\chi^2/\text{NDF}$ : 5070815.0/52



# eigen\_cor\_asym\_usl\_atl1\_dd\_mean vs Slug



Right In:  $127.159 \pm 303.384$   $\chi^2/\text{NDF}$ : 14.5/25

Left Out:  $236.642 \pm 259.669$   $\chi^2/\text{NDF}$ : 22.7/23

Right Out:  $-397.802 \pm 296.277$   $\chi^2/\text{NDF}$ : 36.1/29

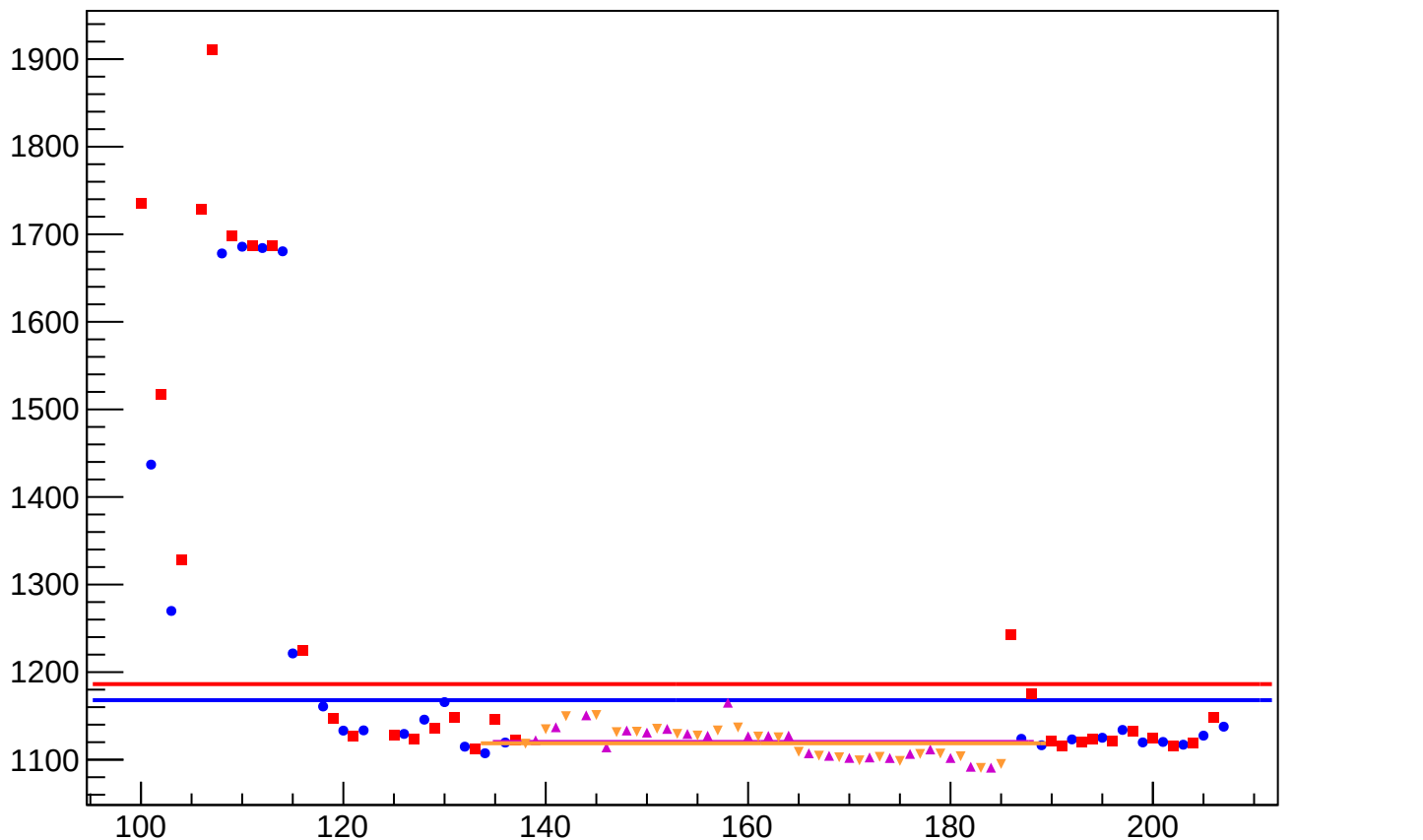
Left In:  $-88.370 \pm 261.602$   $\chi^2/\text{NDF}$ : 20.9/22

+ sign  $190.350 \pm 197.276$   $\chi^2/\text{NDF}$ : 37.3/49

All:  $-18.027 \pm 139.077$   $\chi^2/\text{NDF}$ : 97.1/102

- sign  $-223.927 \pm 196.100$   $\chi^2/\text{NDF}$ : 57.6/52

# eigen\_cor\_asym\_usl\_atl1\_dd\_rms vs Slug



Right In: 1167.962 $\pm$ 0.215  $\chi^2$ /NDF: 347815.3/25

Left Out: 1118.733 $\pm$ 0.184  $\chi^2$ /NDF: 8205.0/23

Right Out: 1186.321 $\pm$ 0.209  $\chi^2$ /NDF: 545809.5/29

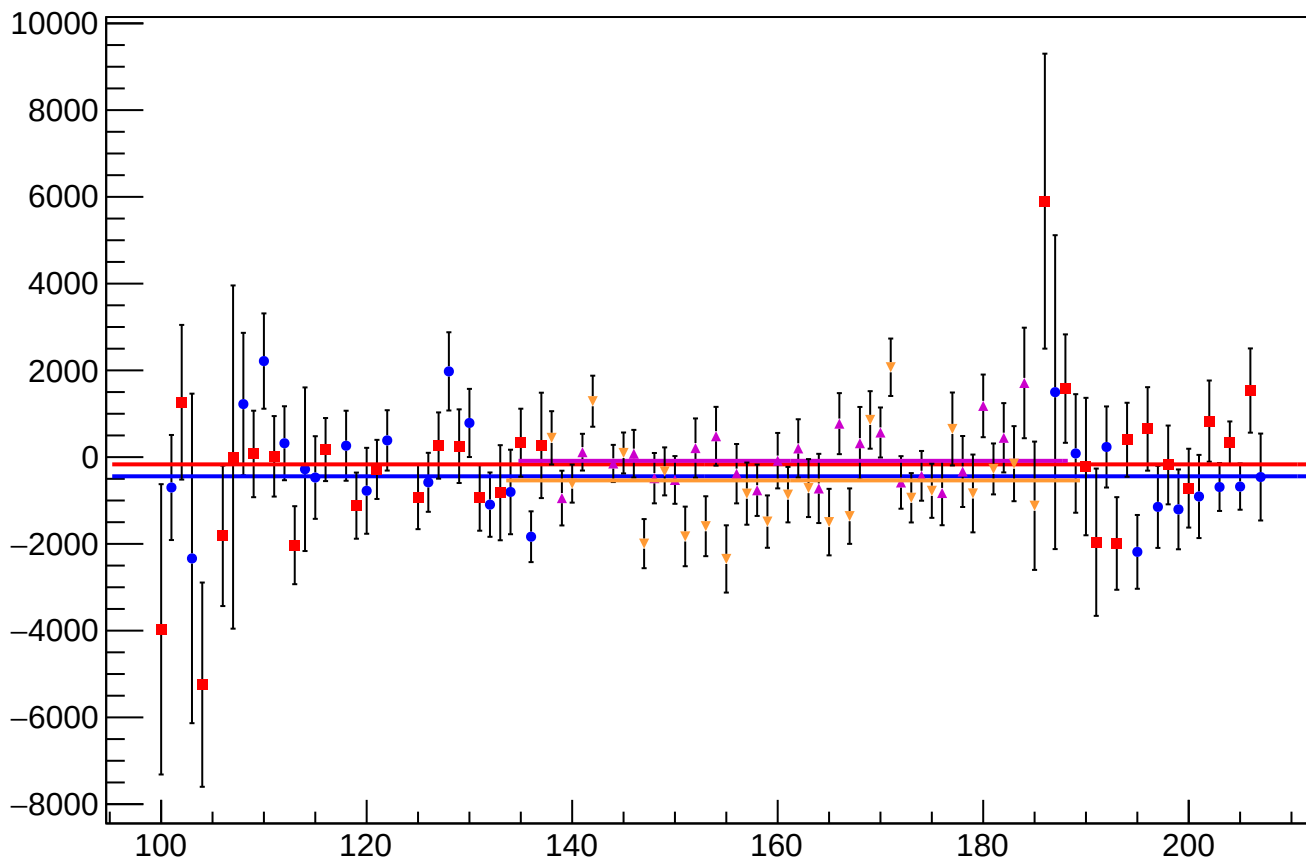
Left In: 1120.308 $\pm$ 0.185  $\chi^2$ /NDF: 9479.7/22

+ sign 1139.548 $\pm$ 0.139  $\chi^2$ /NDF: 386414.5/49

All: 1144.417 $\pm$ 0.098  $\chi^2$ /NDF: 999915.5/102

- sign 1149.227 $\pm$ 0.139  $\chi^2$ /NDF: 611079.4/52

asym\_usl\_atl1\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In: -441.883 $\pm$ 170.373  $\chi^2$ /NDF: 33.6/25

Left Out: -535.930 $\pm$ 130.646  $\chi^2$ /NDF:61.6/23

Right Out: -166.703 $\pm$ 172.703  $\chi^2$ /NDF: 33.3/29

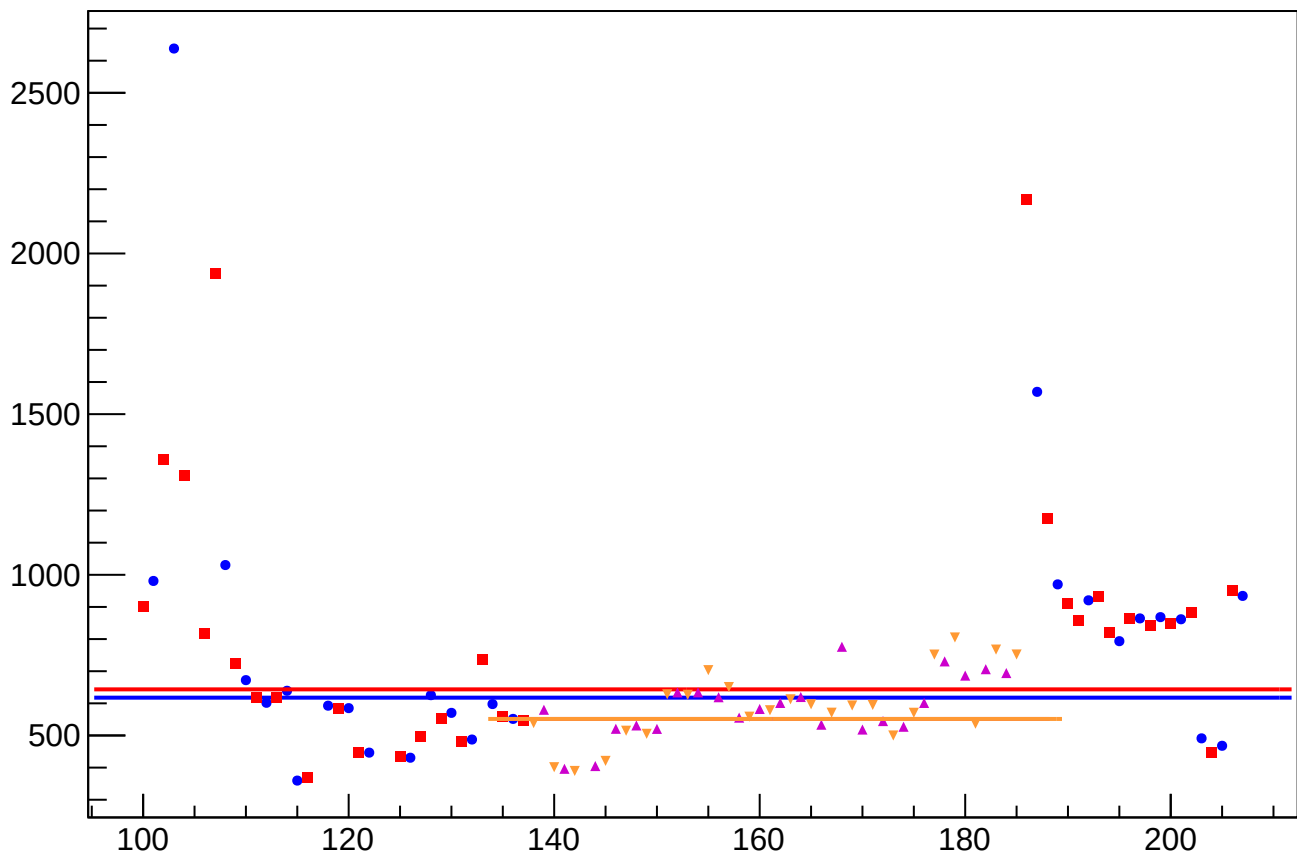
Left In: -85.243 $\pm$ 130.966  $\chi^2$ /NDF:17.1/22

+ sign -501.105 $\pm$ 103.674  $\chi^2$ /NDF: 95.3/49

All: -309.307 $\pm$ 73.548  $\chi^2$ /NDF: 152.7/102

- sign -114.984 $\pm$ 104.354  $\chi^2$ /NDF: 50.6/52

asym\_usl\_atl1\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 617.676 $\pm$ 0.120  $\chi^2/\text{NDF}$ : 2839922.3/25

Left Out: 551.439 $\pm$ 0.092  $\chi^2/\text{NDF}$ : 1226632.2/23

Right Out: 643.515 $\pm$ 0.122  $\chi^2/\text{NDF}$ : 3647338.4/29

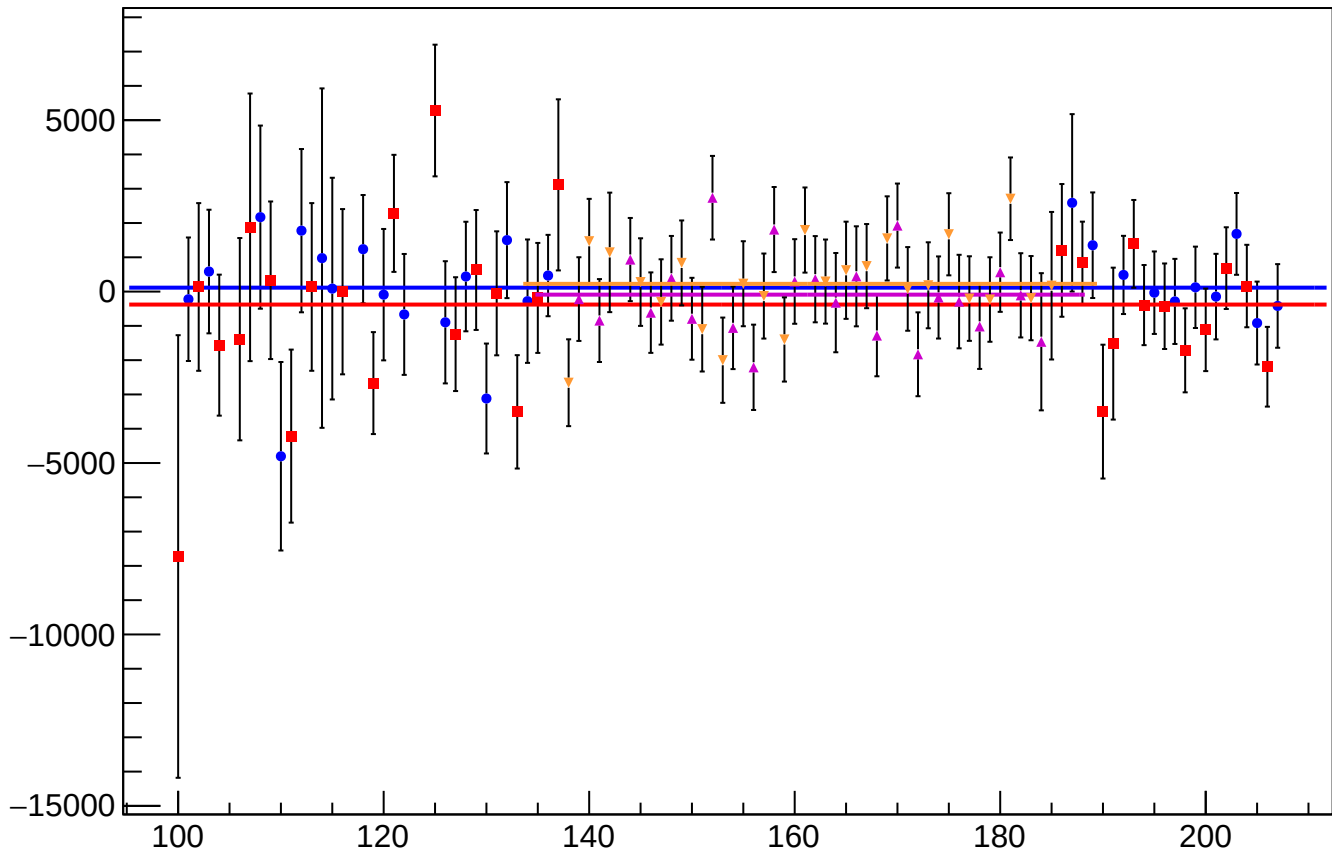
Left In: 551.335 $\pm$ 0.093  $\chi^2/\text{NDF}$ : 1061731.9/22

+ sign 575.966 $\pm$ 0.073  $\chi^2/\text{NDF}$ : 4256914.2/49

All: 580.449 $\pm$ 0.052  $\chi^2/\text{NDF}$ : 9335257.1/102

- sign 584.991 $\pm$ 0.074  $\chi^2/\text{NDF}$ : 5070815.0/52

dit\_asym\_usl\_atl1\_dd\_mean vs Slug



Right In: 114.838 $\pm$ 304.974  $\chi^2$ /NDF: 14.8/25

Left Out: 225.663 $\pm$ 259.829  $\chi^2$ /NDF:22.2/23

Right Out: -378.429 $\pm$ 299.124  $\chi^2$ /NDF: 35.7/29

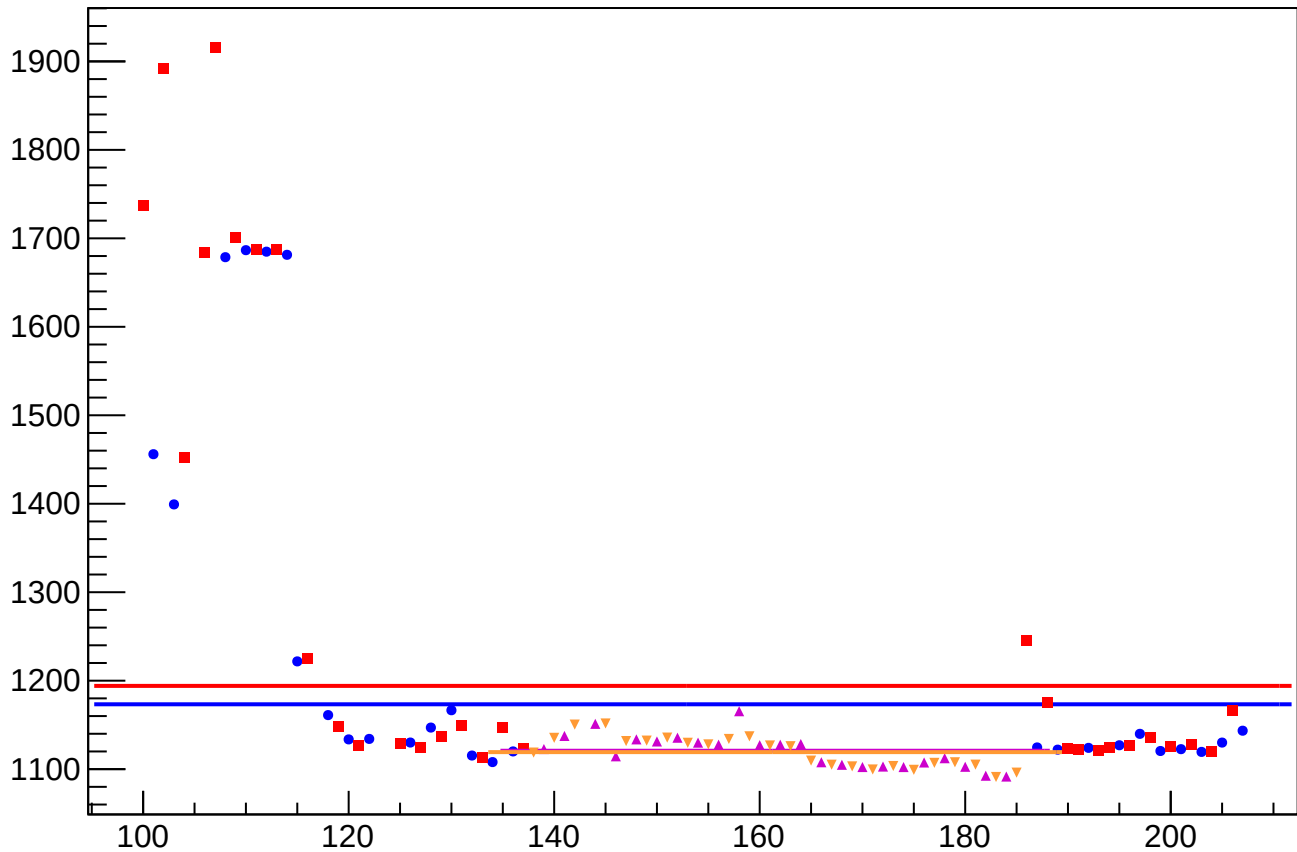
Left In: -89.078 $\pm$ 261.717  $\chi^2$ /NDF:20.6/22

+ sign 179.052 $\pm$ 197.781  $\chi^2$ /NDF: 37.1/49

All: -18.555 $\pm$ 139.564  $\chi^2$ /NDF: 95.9/102

- sign -214.540 $\pm$ 196.968  $\chi^2$ /NDF: 56.8/52

# dit\_asym\_usl\_atl1\_dd\_rms vs Slug



Right In: 1173.316 $\pm$ 0.216  $\chi^2$ /NDF: 374796.5/25

Left Out: 1119.258 $\pm$ 0.184  $\chi^2$ /NDF: 8143.3/23

Right Out: 1194.111 $\pm$ 0.212  $\chi^2$ /NDF: 662381.1/29

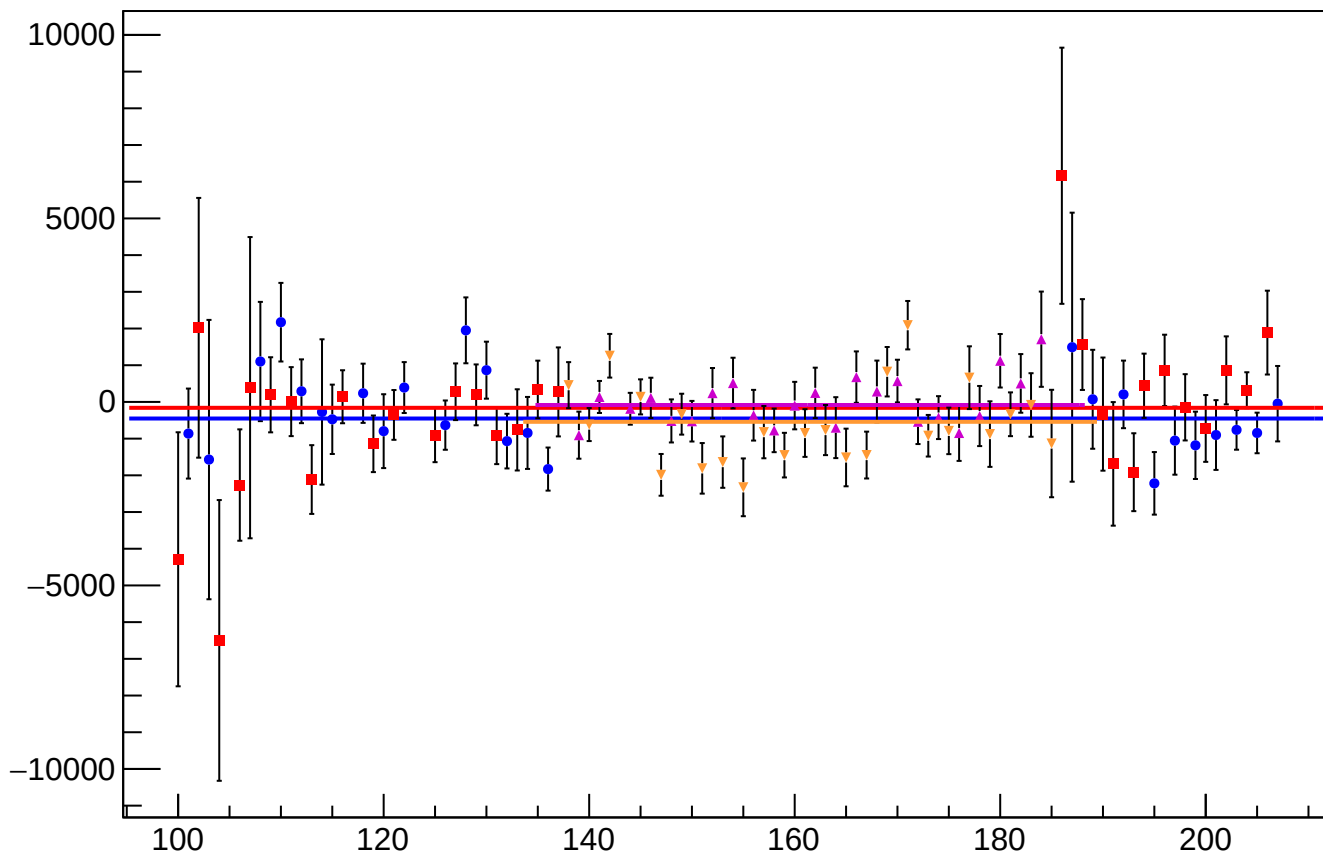
Left In: 1120.800 $\pm$ 0.185  $\chi^2$ /NDF: 9426.5/22

+ sign 1141.994 $\pm$ 0.140  $\chi^2$ /NDF: 419349.9/49

All: 1147.312 $\pm$ 0.099  $\chi^2$ /NDF: 1162082.7/10

- sign 1152.588 $\pm$ 0.139  $\chi^2$ /NDF: 739851.8/52

# asym\_usl\_atl1\_dd\_dit\_correction\_mean vs Slug



Right In: -452.083+/-170.421  $\chi^2/\text{NDF}$ : 34.2/25

Left Out: -541.592+/-132.012  $\chi^2/\text{NDF}$ : 60.9/23

Right Out: -160.571+/-174.698  $\chi^2/\text{NDF}$ : 32.3/29

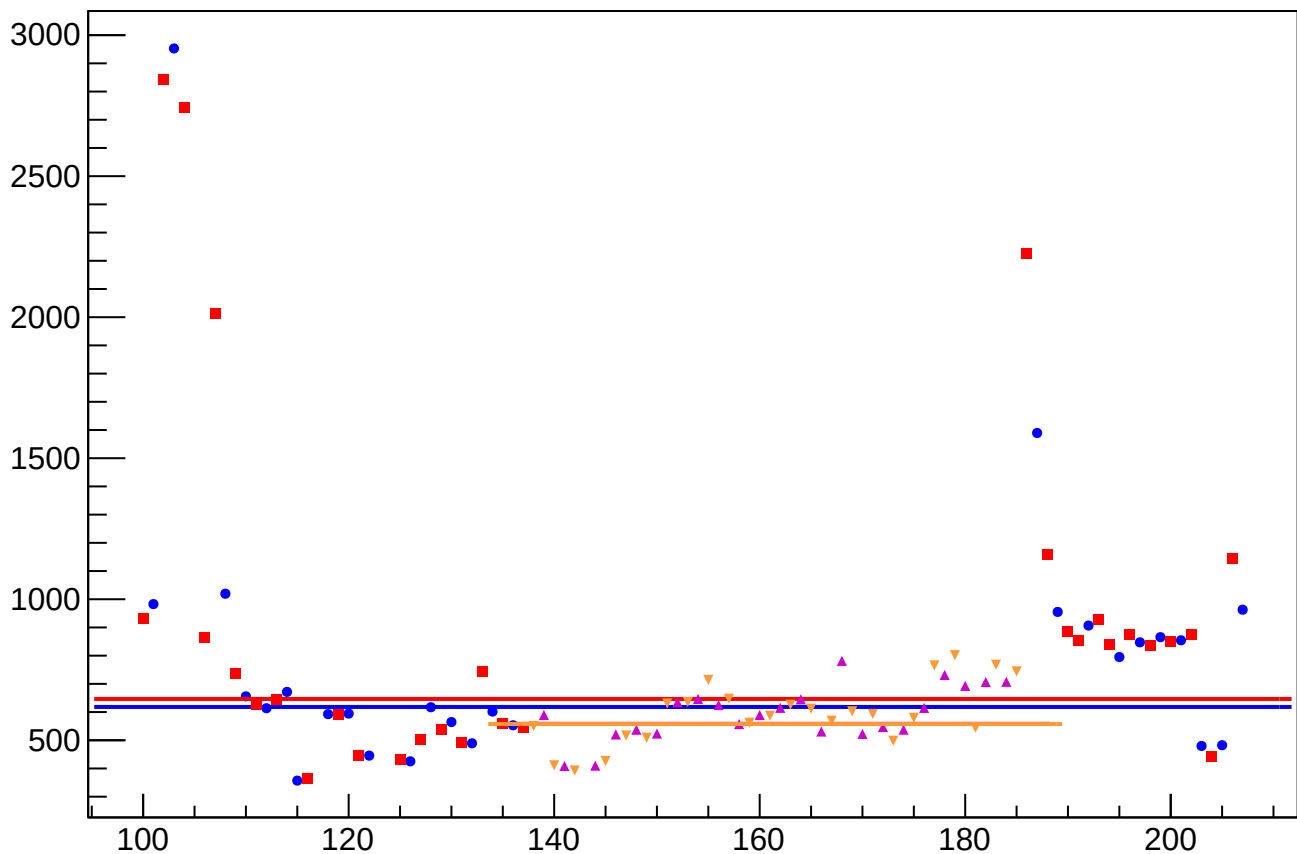
Left In: -84.122+/-132.548  $\chi^2/\text{NDF}$ : 16.4/22

+ sign -508.025+/-104.363  $\chi^2/\text{NDF}$ : 95.2/49

All: -312.361+/-74.227  $\chi^2/\text{NDF}$ : 151.1/102

- sign -112.052+/-105.595  $\chi^2/\text{NDF}$ : 48.8/52

asym\_usl\_atl1\_dd\_dit\_correction\_rms vs Slug



Right In:  $618.118 \pm 0.121$   $\chi^2/\text{NDF}: 3010736.7/25$

Left Out:  $557.592 \pm 0.093$   $\chi^2/\text{NDF}: 1193270.2/23$

Right Out:  $646.518 \pm 0.124$   $\chi^2/\text{NDF}: 4772338.5/29$

Left In:  $558.393 \pm 0.094$   $\chi^2/\text{NDF}: 1027814.4/22$

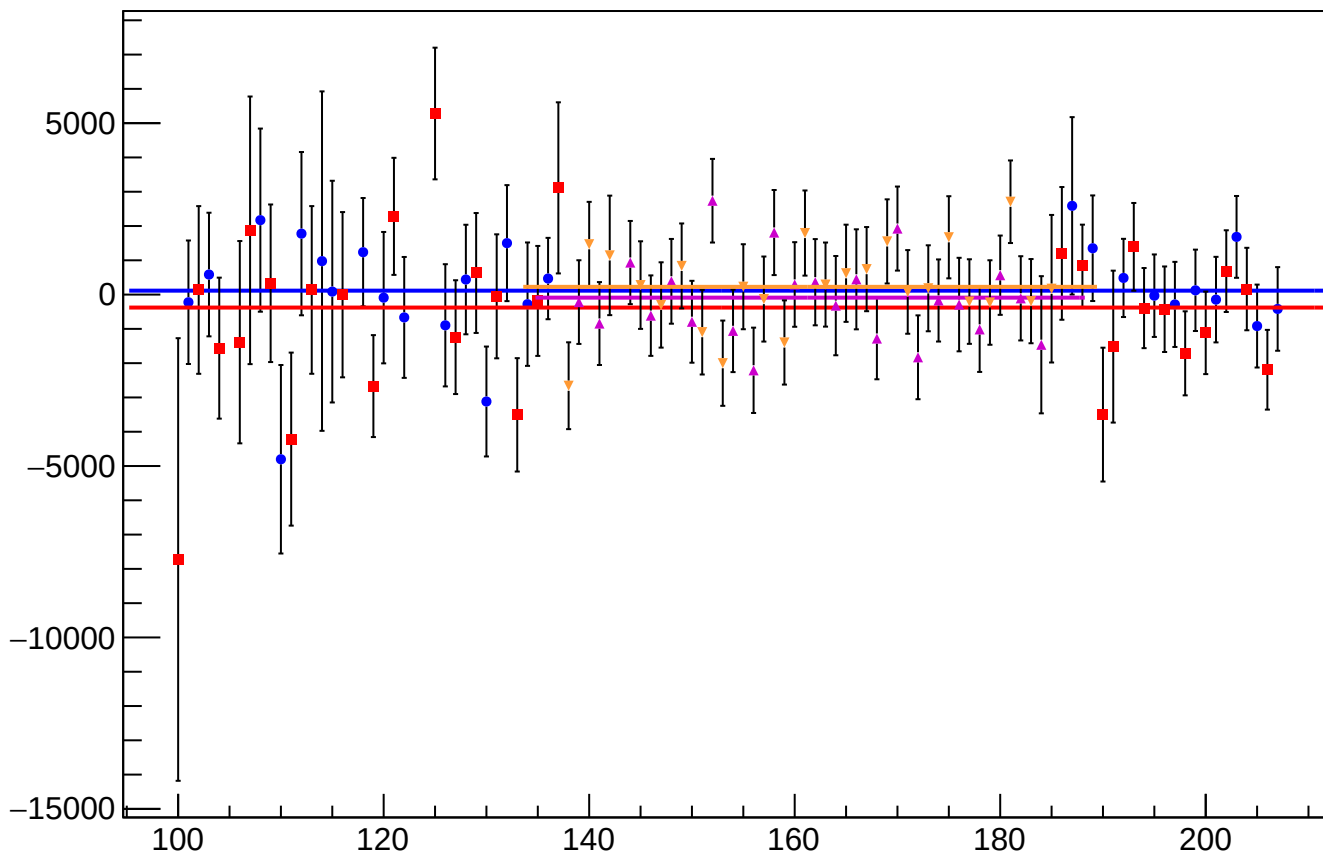
+ sign  $580.290 \pm 0.074$   $\chi^2/\text{NDF}: 4361672.8/49$

All:  $585.379 \pm 0.052$   $\chi^2/\text{NDF}: 10494435.1/10$

- sign  $590.589 \pm 0.075$   $\chi^2/\text{NDF}: 6123137.7/52$



# eigen\_dit\_asym\_usl\_atl1\_dd\_mean vs Slug



Right In:  $114.839 \pm 304.974$   $\chi^2/\text{NDF}$ : 14.8/25

Left Out:  $225.661 \pm 259.829$   $\chi^2/\text{NDF}$ : 22.2/23

Right Out:  $-378.428 \pm 299.124$   $\chi^2/\text{NDF}$ : 35.7/29

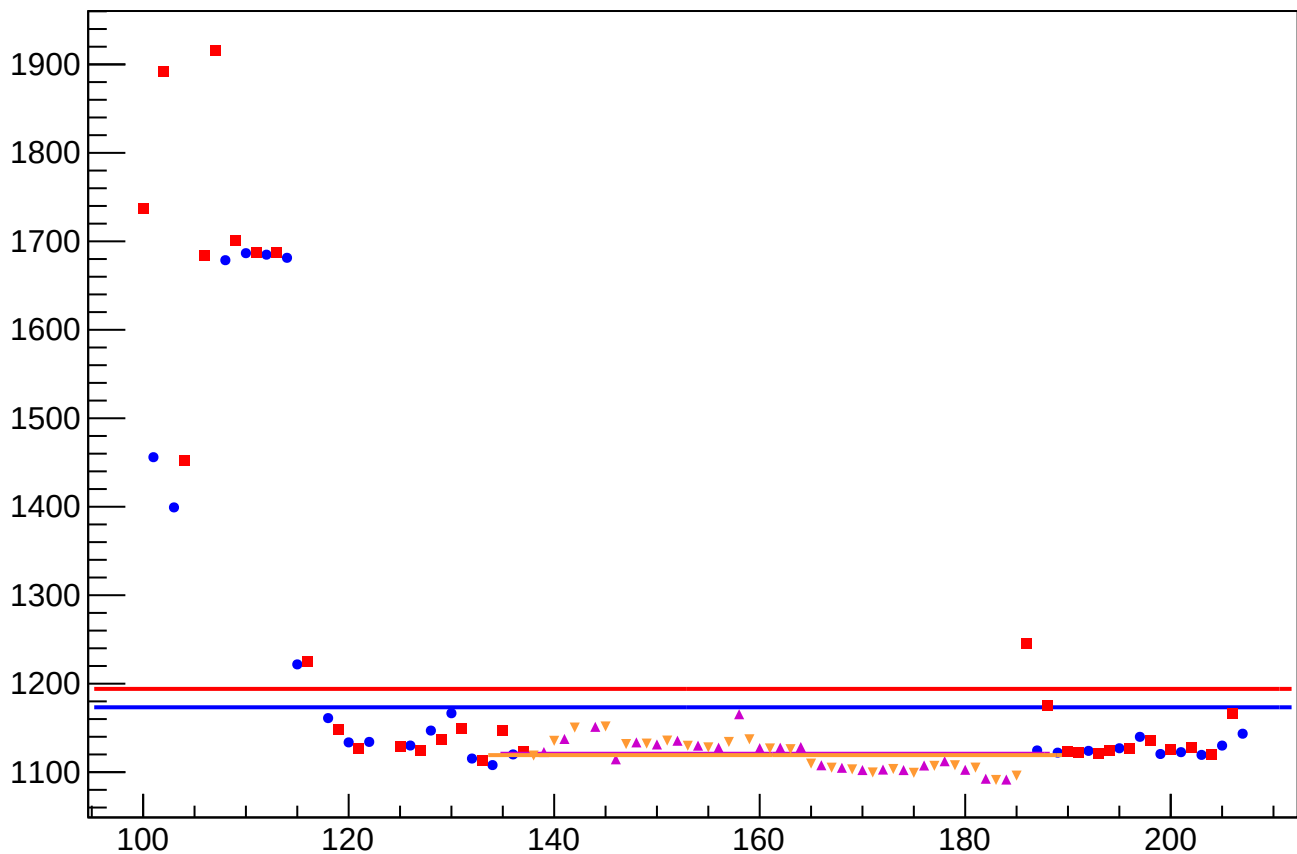
Left In:  $-89.079 \pm 261.717$   $\chi^2/\text{NDF}$ : 20.6/22

+ sign  $179.052 \pm 197.781$   $\chi^2/\text{NDF}$ : 37.1/49

All:  $-18.555 \pm 139.564$   $\chi^2/\text{NDF}$ : 95.9/102

- sign  $-214.540 \pm 196.968$   $\chi^2/\text{NDF}$ : 56.8/52

# eigen\_dit\_asym\_usl\_atl1\_dd\_rms vs Slug



Right In: 1173.316 $\pm$ 0.216  $\chi^2$ /NDF: 374796.0/25

Left Out: 1119.258 $\pm$ 0.184  $\chi^2$ /NDF: 8143.3/23

Right Out: 1194.111 $\pm$ 0.212  $\chi^2$ /NDF: 662380.4/29

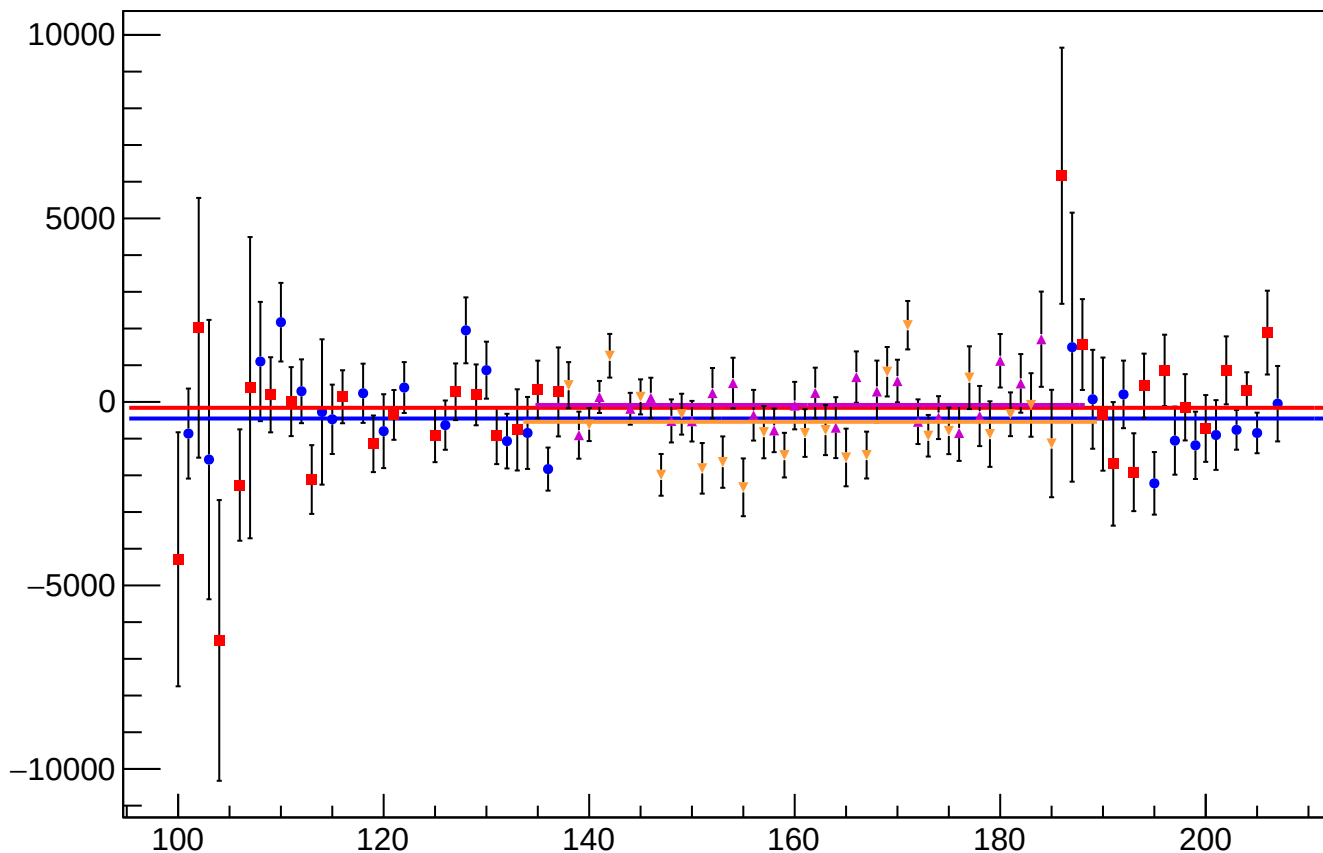
Left In: 1120.800 $\pm$ 0.185  $\chi^2$ /NDF: 9426.5/22

+ sign 1141.994 $\pm$ 0.140  $\chi^2$ /NDF: 419349.4/49

All: 1147.312 $\pm$ 0.099  $\chi^2$ /NDF: 1162081.5/10

- sign 1152.588 $\pm$ 0.139  $\chi^2$ /NDF: 739851.1/52

asym\_usl\_atl1\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-452.083 \pm 170.421$   $\chi^2/\text{NDF}$ : 34.2/25

Left Out:  $-541.591 \pm 132.012$   $\chi^2/\text{NDF}$ : 60.9/23

Right Out:  $-160.571 \pm 174.698$   $\chi^2/\text{NDF}$ : 32.3/29

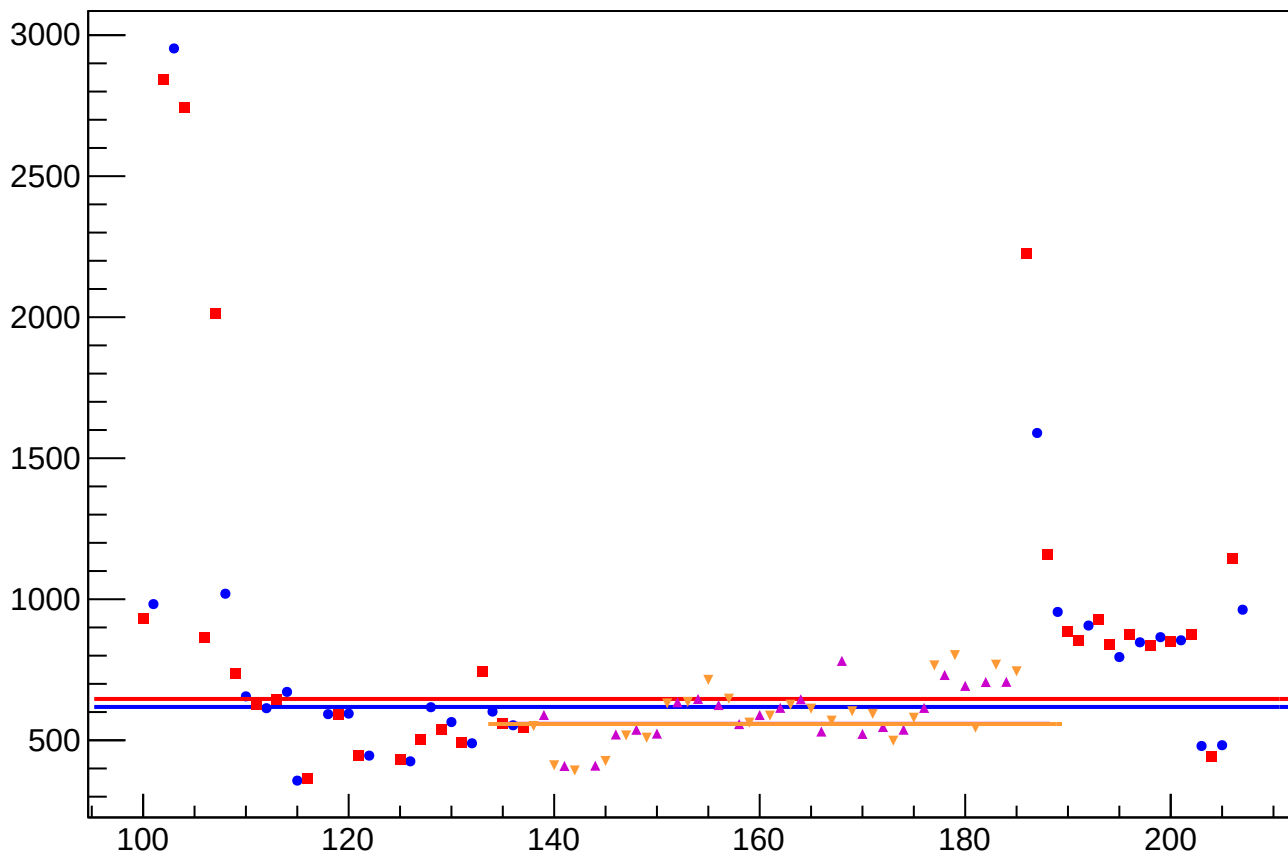
Left In:  $-84.122 \pm 132.548$   $\chi^2/\text{NDF}$ : 16.4/22

+ sign  $-508.024 \pm 104.363$   $\chi^2/\text{NDF}$ : 95.2/49

All:  $-312.361 \pm 74.227$   $\chi^2/\text{NDF}$ : 151.1/102

- sign  $-112.052 \pm 105.595$   $\chi^2/\text{NDF}$ : 48.8/52

asym\_usl\_atl1\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In:  $618.117 \pm 0.121$   $\chi^2/\text{NDF}: 3010736.9/25$

Left Out:  $557.591 \pm 0.093$   $\chi^2/\text{NDF}: 1193291.2/23$

Right Out:  $646.517 \pm 0.124$   $\chi^2/\text{NDF}: 4772344.5/29$

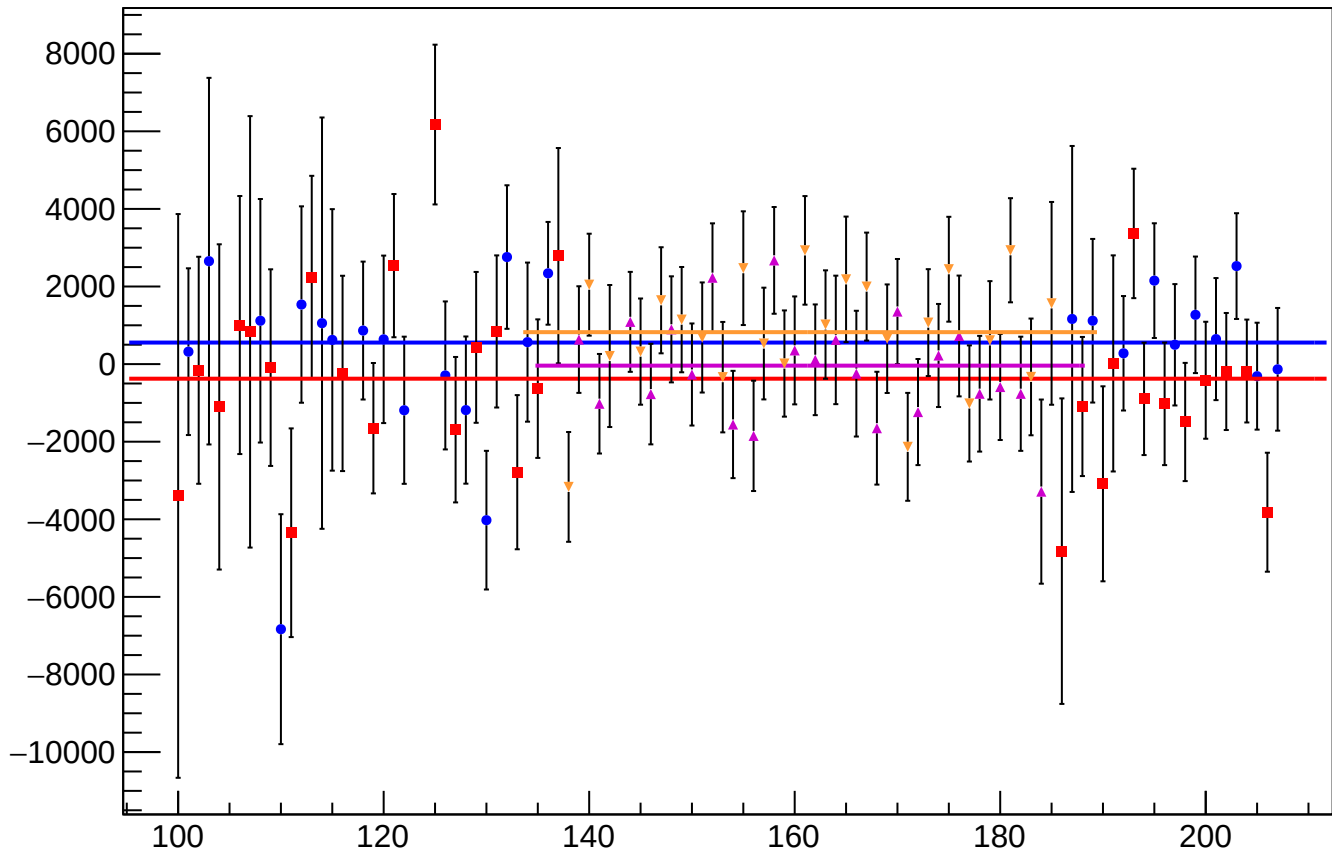
Left In:  $558.392 \pm 0.094$   $\chi^2/\text{NDF}: 1027828.9/22$

+ sign  $580.289 \pm 0.074$   $\chi^2/\text{NDF}: 4361696.2/49$

All:  $585.379 \pm 0.052$   $\chi^2/\text{NDF}: 10494482.0/100$

- sign  $590.589 \pm 0.075$   $\chi^2/\text{NDF}: 6123160.9/52$

# asym\_usl\_atl1\_dd\_mean vs Slug



Right In: 555.163 $\pm$ 366.486  $\chi^2$ /NDF: 22.5/25

Left Out: 823.319 $\pm$ 294.835  $\chi^2$ /NDF:26.2/23

Right Out: -376.144 $\pm$ 364.941  $\chi^2$ /NDF: 34.2/29

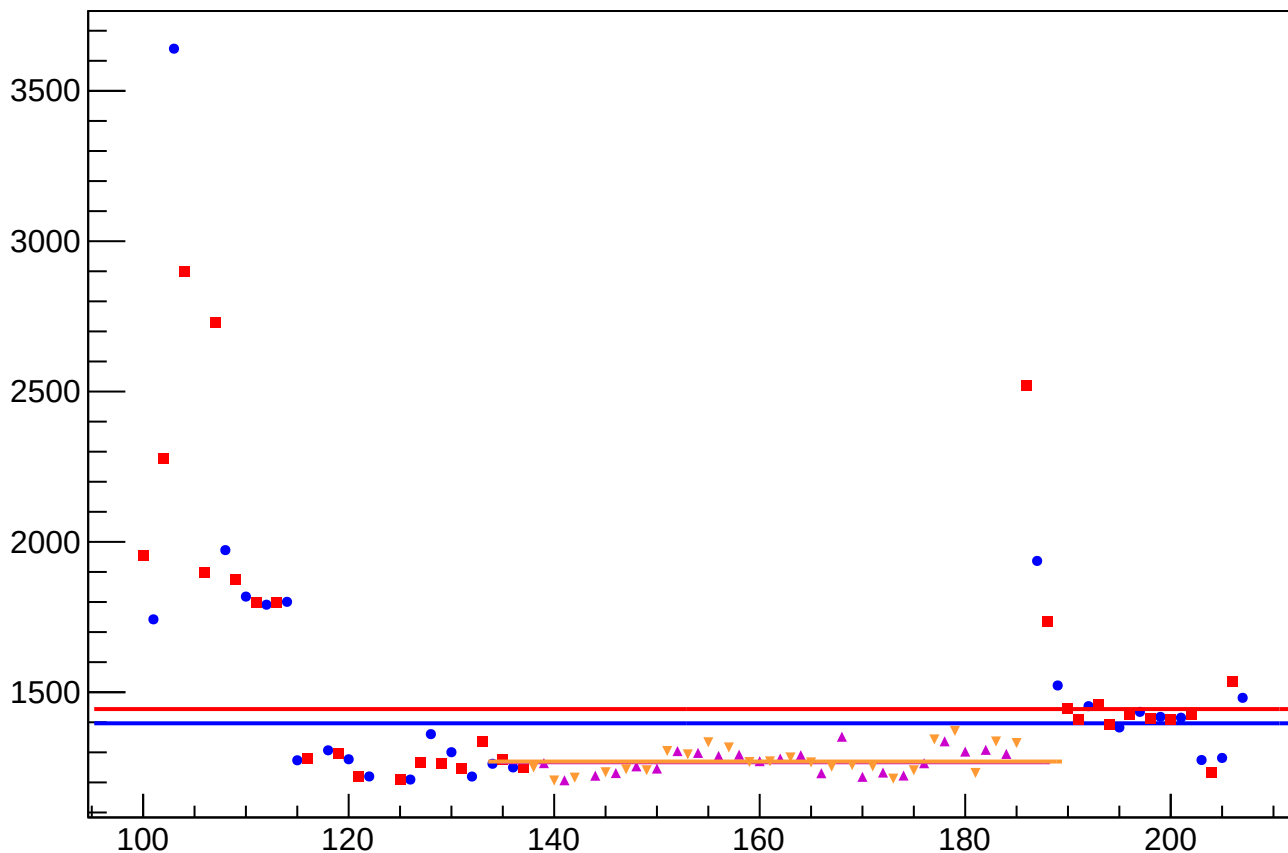
Left In: -39.696 $\pm$ 296.006  $\chi^2$ /NDF:17.9/22

+ sign 717.957 $\pm$ 229.723  $\chi^2$ /NDF: 49.0/49

All: 272.701 $\pm$ 162.498  $\chi^2$ /NDF: 109.2/102

- sign -173.207 $\pm$ 229.891  $\chi^2$ /NDF: 52.6/52

# asym\_usl\_atl1\_dd\_rms vs Slug



Right In: 1396.629+/-0.259  $\chi^2/\text{NDF}$ : 856645.0/25

Left Out: 1269.441+/-0.208  $\chi^2/\text{NDF}$ : 43040.3/23

Right Out: 1443.945+/-0.258  $\chi^2/\text{NDF}$ : 1121538.1/29

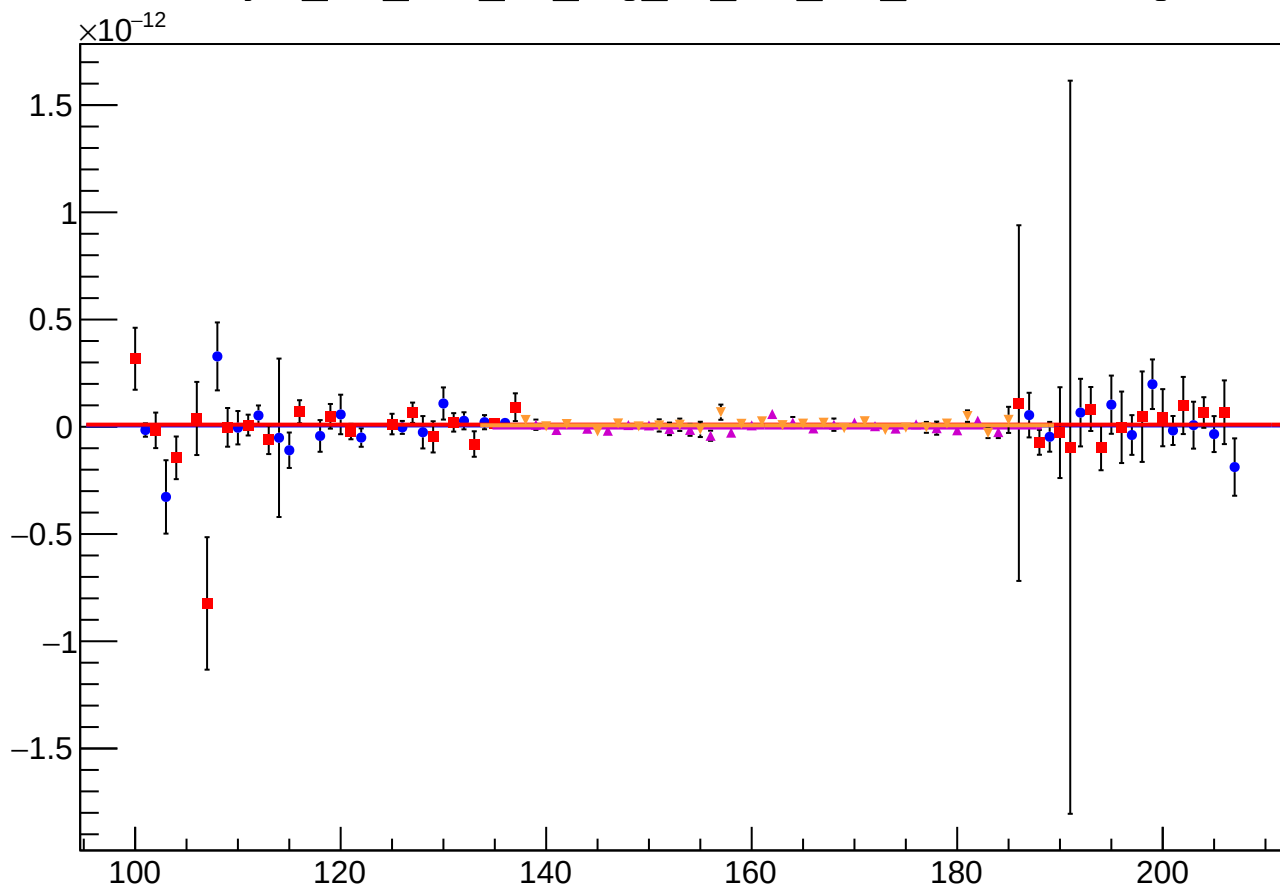
Left In: 1267.066+/-0.209  $\chi^2/\text{NDF}$ : 34547.0/22

+ sign 1319.414+/-0.162  $\chi^2/\text{NDF}$ : 1045924.4/49

All: 1328.329+/-0.115  $\chi^2/\text{NDF}$ : 2491423.7/10

- sign 1337.256+/-0.163  $\chi^2/\text{NDF}$ : 1439472.1/52

# asym\_usl\_atl1\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 23.8/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 19.8/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 28.9/29

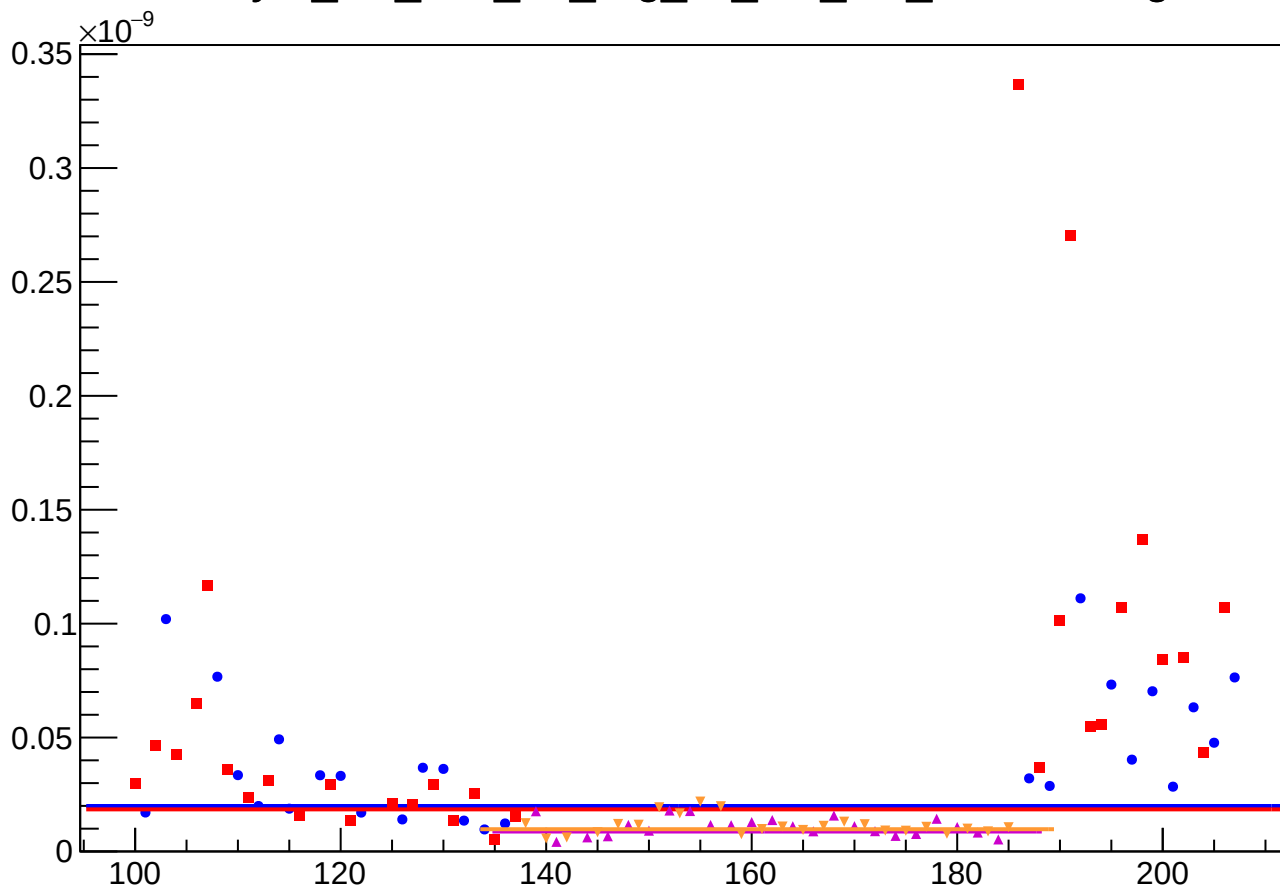
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 23.0/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 43.6/49

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 100.1/102

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 53.6/52

asym\_usl\_atl1\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4195482.4/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :1373738.7/23

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7040184.1/29

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :1928867.4/22

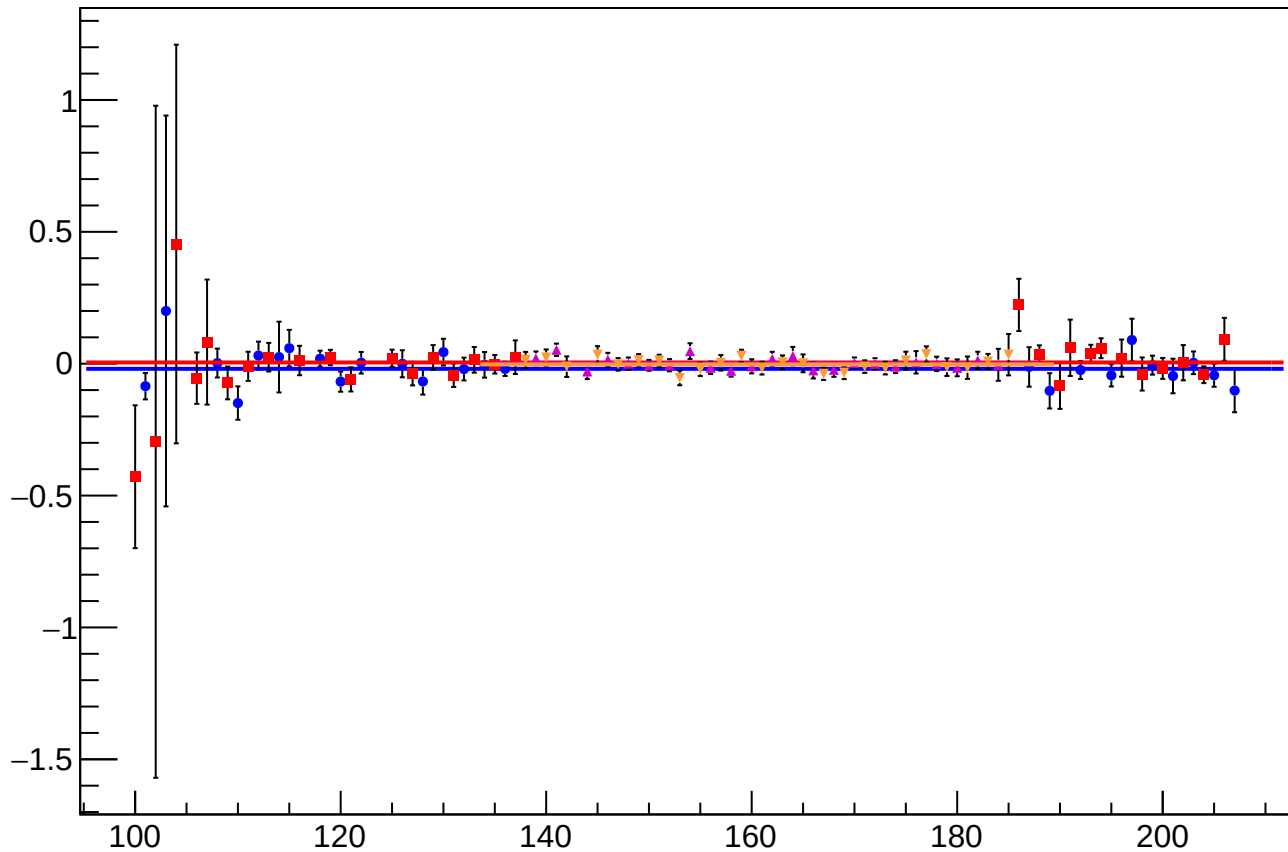
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7294622.3/49

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 18007174.3/102

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10603969.4/52



asym\_usl\_atl1\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.019 \pm 0.009$   $\chi^2/\text{NDF}$ : 20.4/25

Left Out:  $-0.003 \pm 0.006$   $\chi^2/\text{NDF}$ : 16.3/23

Right Out:  $0.005 \pm 0.009$   $\chi^2/\text{NDF}$ : 24.4/29

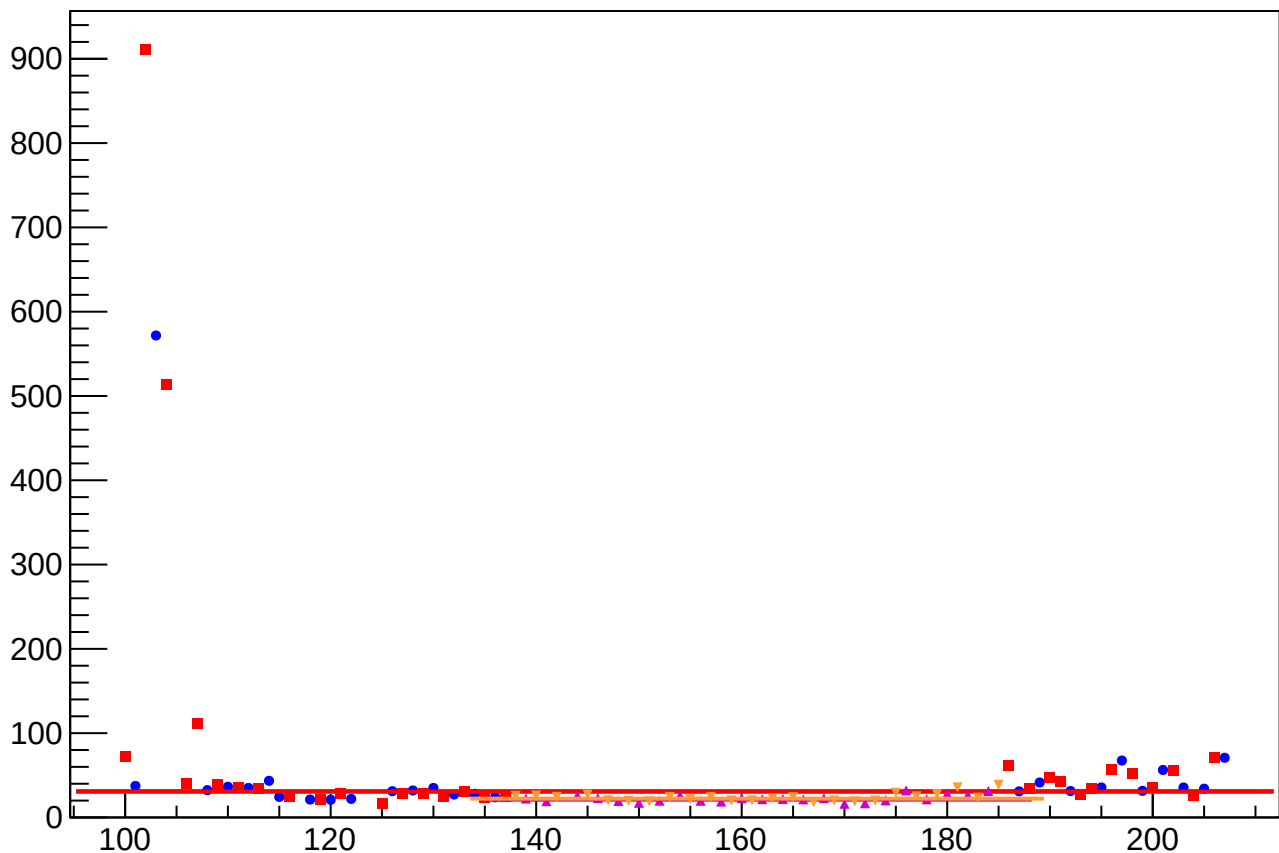
Left In:  $0.001 \pm 0.005$   $\chi^2/\text{NDF}$ : 14.9/22

+ sign  $-0.007 \pm 0.005$   $\chi^2/\text{NDF}$ : 39.1/49

All:  $-0.003 \pm 0.003$   $\chi^2/\text{NDF}$ : 80.4/102

- sign  $0.002 \pm 0.005$   $\chi^2/\text{NDF}$ : 39.4/52

# asym\_usl\_atl1\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 30.958+/-0.007  $\chi^2/\text{NDF}$ : 3056365.4/25

Left Out: 22.355+/-0.004  $\chi^2/\text{NDF}$ : 816073.4/23

Right Out: 30.681+/-0.006  $\chi^2/\text{NDF}$ : 4592488.5/29

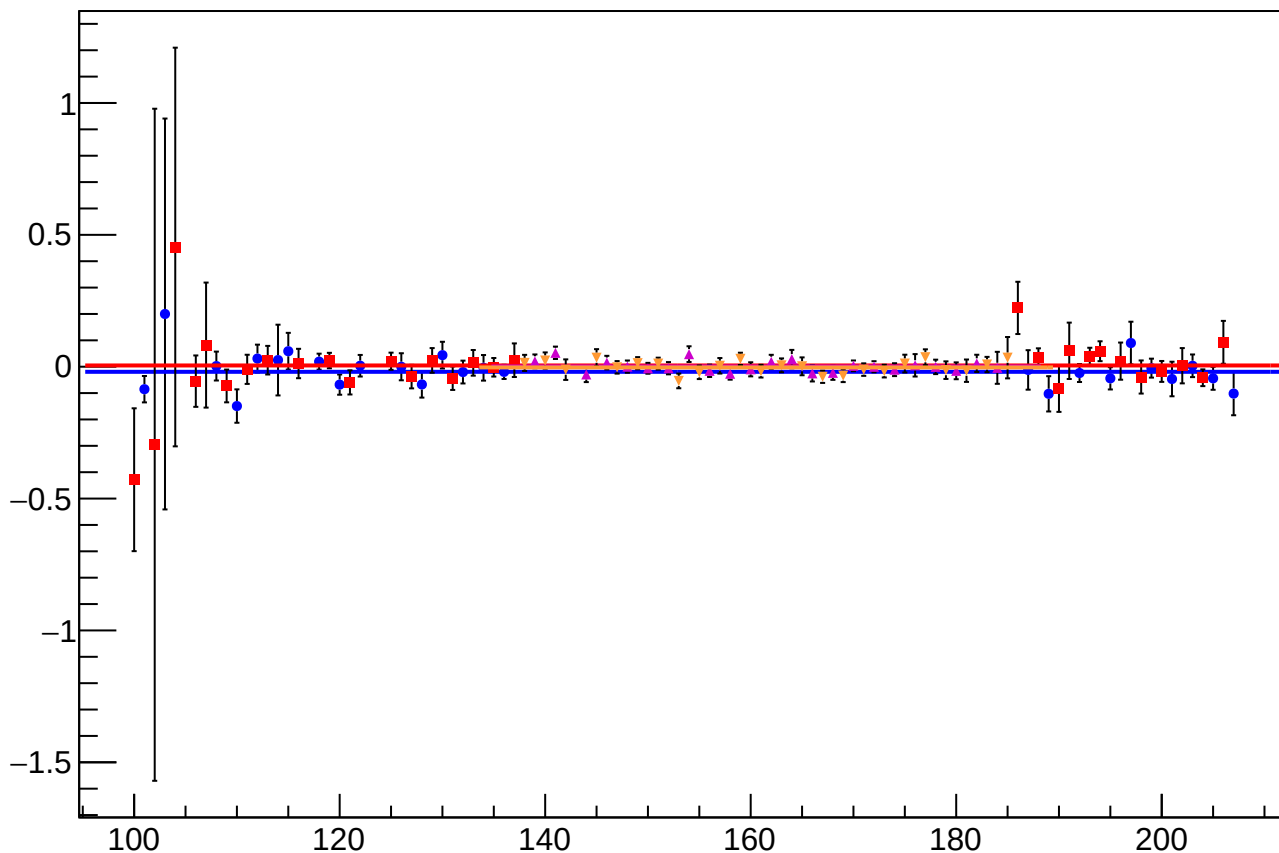
Left In: 21.099+/-0.004  $\chi^2/\text{NDF}$ : 819255.8/22

+ sign 24.713+/-0.003  $\chi^2/\text{NDF}$ : 5128027.1/49

All: 24.161+/-0.002  $\chi^2/\text{NDF}$ : 12222767.9/102

- sign 23.644+/-0.003  $\chi^2/\text{NDF}$ : 7044434.3/52

asym\_usl\_atl1\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.019 \pm 0.009$   $\chi^2/\text{NDF}$ : 20.4/25

Left Out:  $-0.003 \pm 0.006$   $\chi^2/\text{NDF}$ : 16.3/23

Right Out:  $0.005 \pm 0.009$   $\chi^2/\text{NDF}$ : 24.4/29

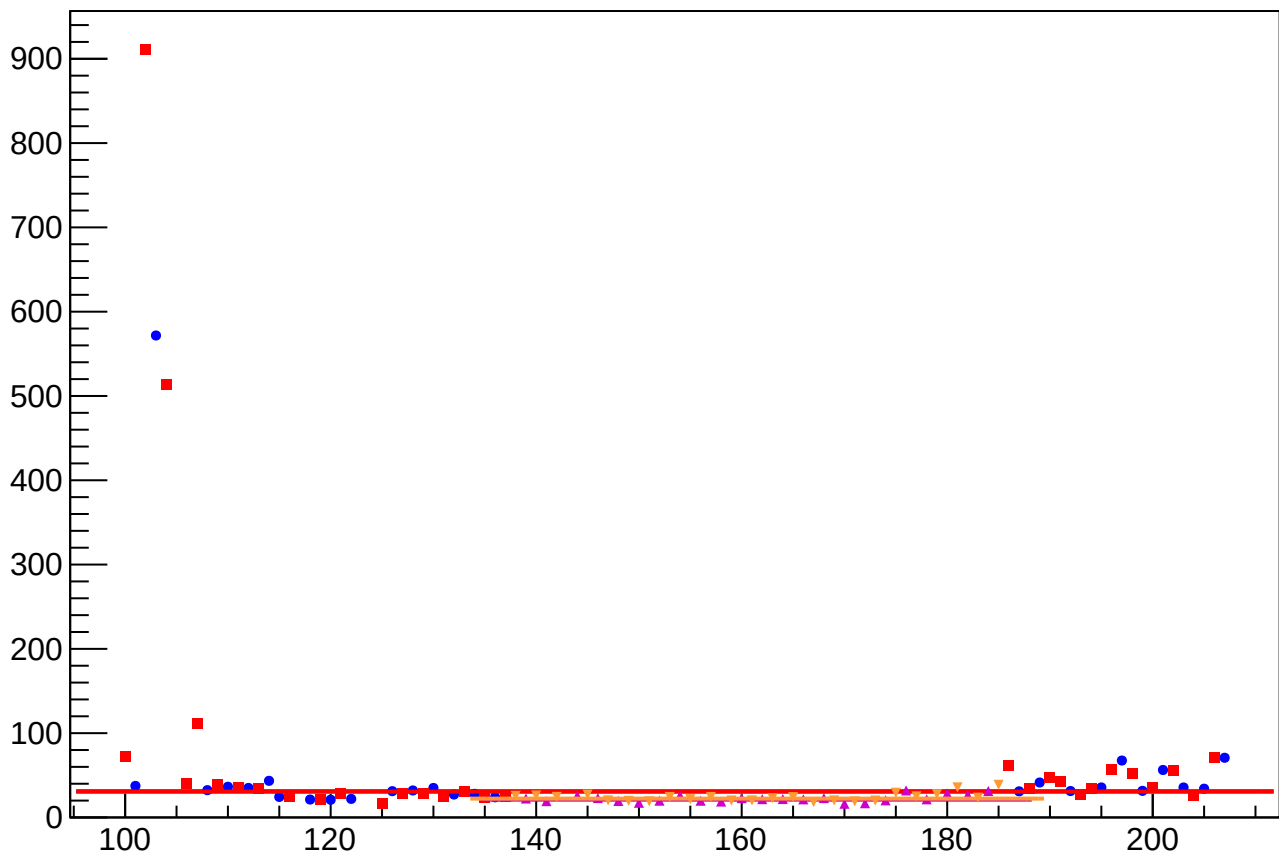
Left In:  $0.001 \pm 0.005$   $\chi^2/\text{NDF}$ : 14.9/22

+ sign  $-0.007 \pm 0.005$   $\chi^2/\text{NDF}$ : 39.1/49

All:  $-0.003 \pm 0.003$   $\chi^2/\text{NDF}$ : 80.4/102

- sign  $0.002 \pm 0.005$   $\chi^2/\text{NDF}$ : 39.4/52

asym\_usl\_atl1\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 30.958 $\pm$ 0.007  $\chi^2$ /NDF: 3056365.4/25

Left Out: 22.355 $\pm$ 0.004  $\chi^2$ /NDF: 816073.4/23

Right Out: 30.681 $\pm$ 0.006  $\chi^2$ /NDF: 4592488.5/29

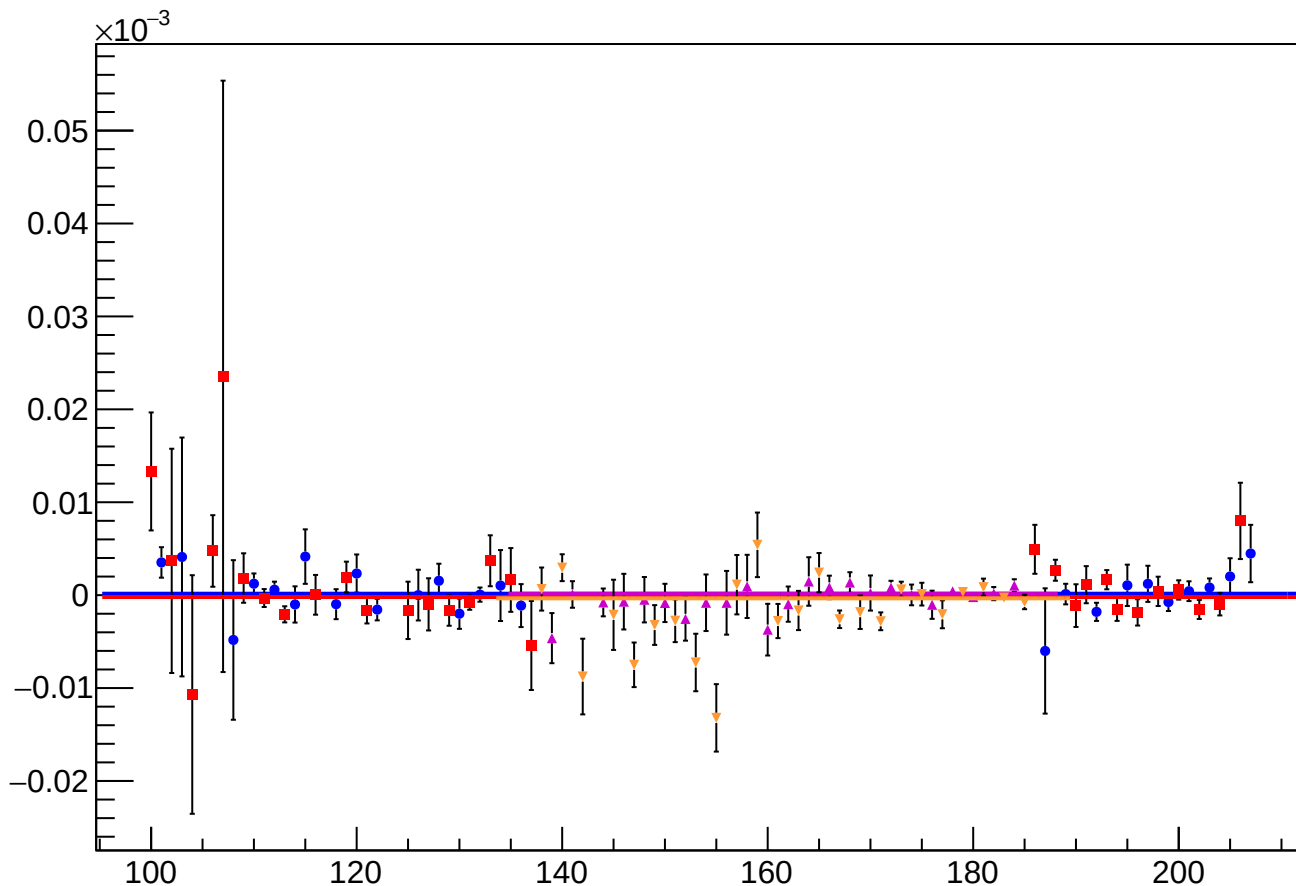
Left In: 21.099 $\pm$ 0.004  $\chi^2$ /NDF: 819255.8/22

+ sign 24.713 $\pm$ 0.003  $\chi^2$ /NDF: 5128027.1/49

All: 24.161 $\pm$ 0.002  $\chi^2$ /NDF: 12222767.9/102

- sign 23.644 $\pm$ 0.003  $\chi^2$ /NDF: 7044434.3/52

asym\_usl\_atl1\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 24.0/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 68.1/23

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 44.0/29

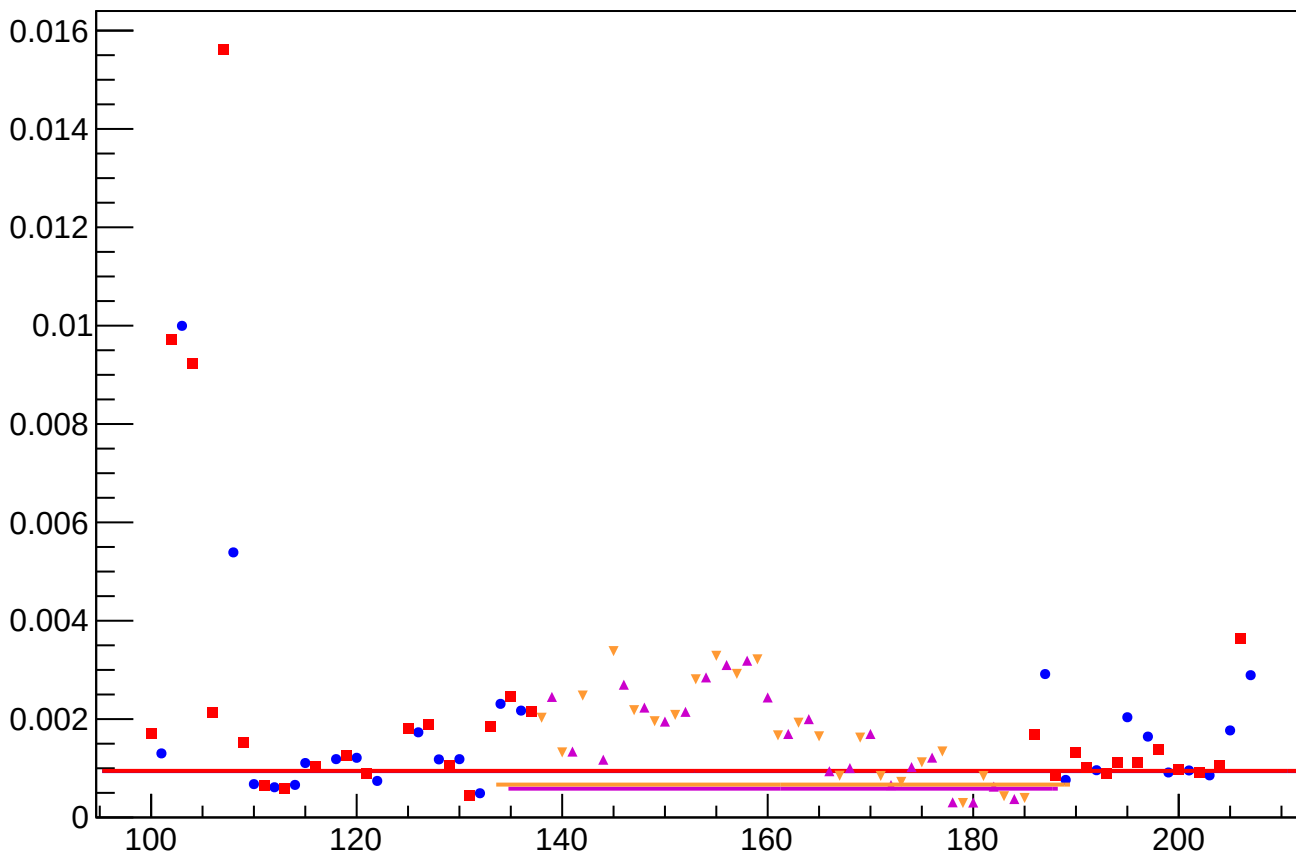
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 14.2/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 94.2/49

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 154.3/102

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 59.3/52

asym\_usl\_atl1\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 6115941.1/25

Left Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ :15375915.0/23

Right Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 6505801.9/29

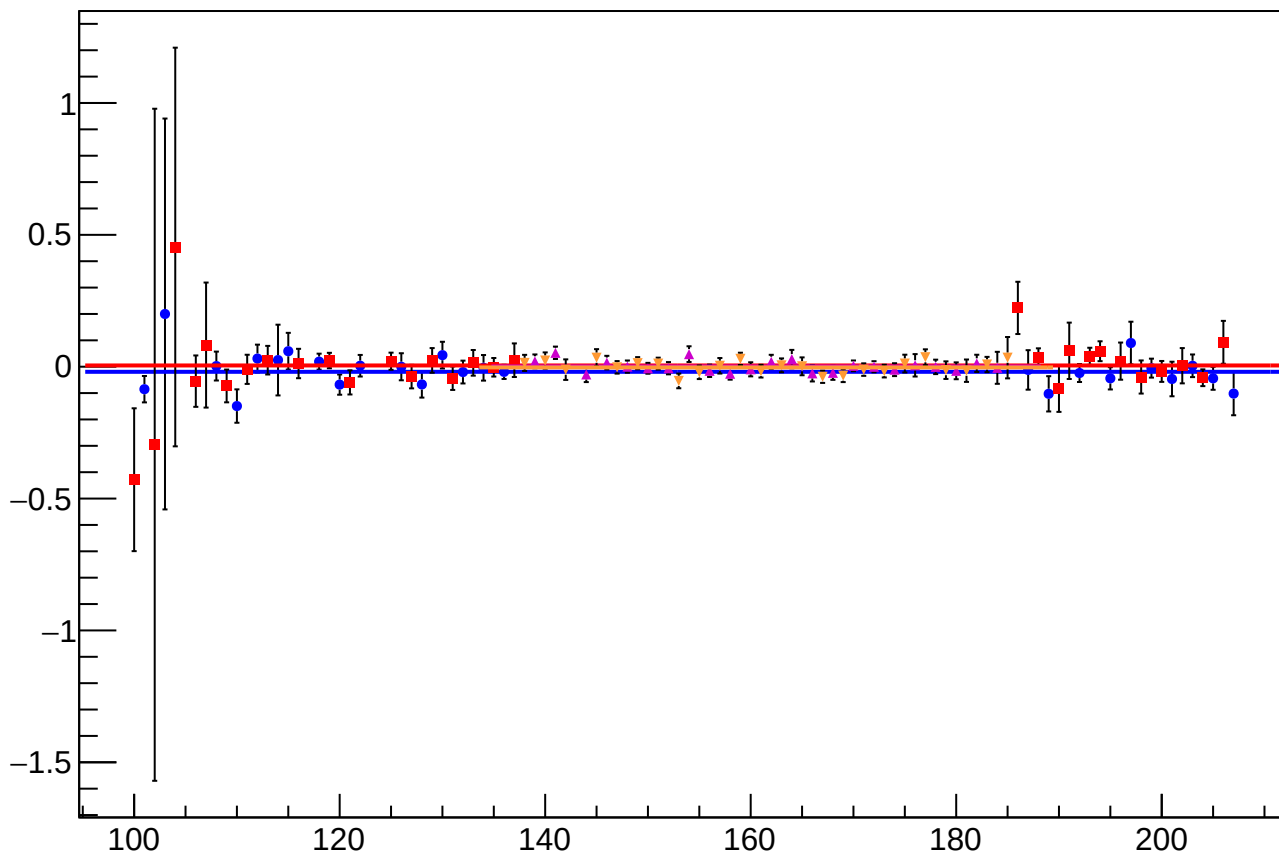
Left In: 0.001+/-0.000  $\chi^2/\text{NDF}$ :15658683.6/22

+ sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 22741992.8/49

All: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 47377380.2/102

- sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 24462664.2/52

asym\_usl\_atl1\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.019 \pm 0.009$   $\chi^2/\text{NDF}$ : 20.4/25

Left Out:  $-0.003 \pm 0.006$   $\chi^2/\text{NDF}$ : 16.3/23

Right Out:  $0.005 \pm 0.009$   $\chi^2/\text{NDF}$ : 24.4/29

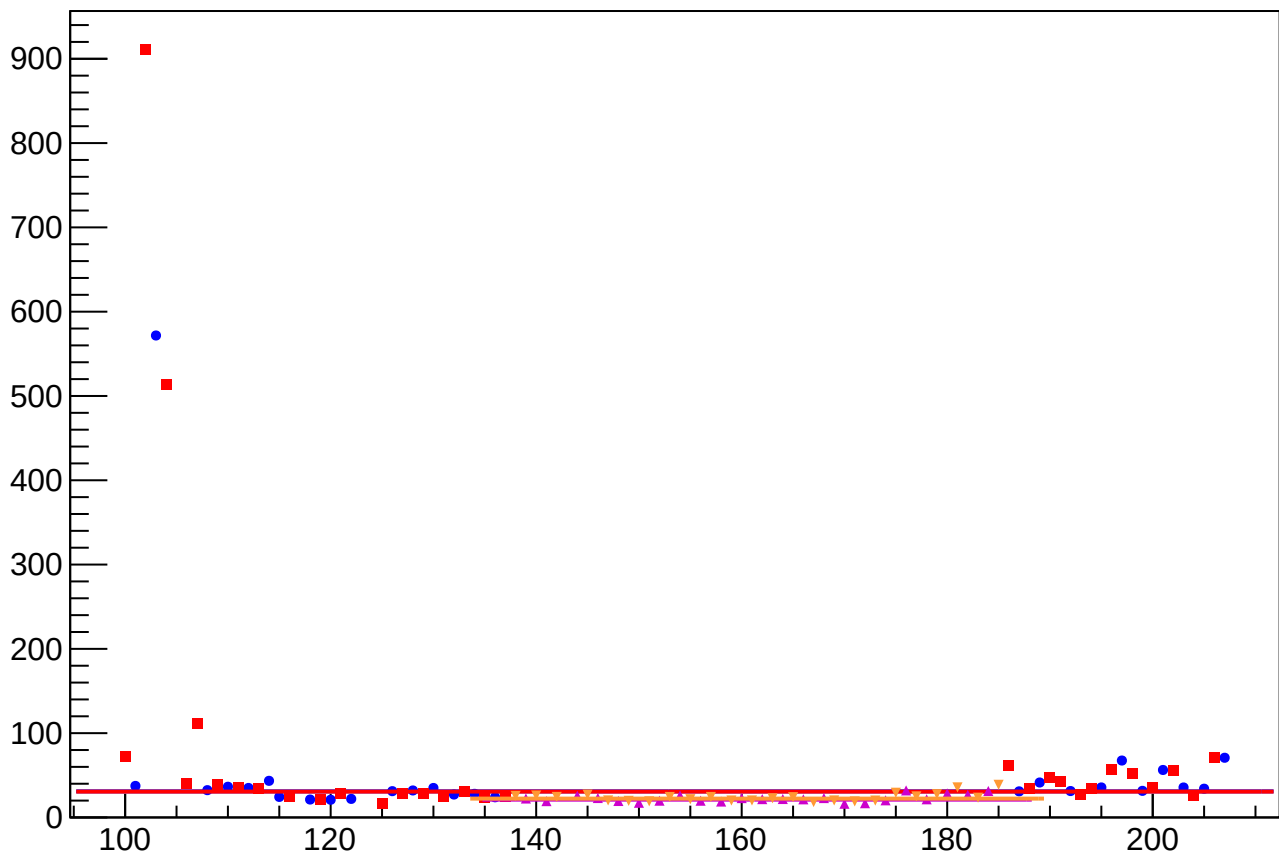
Left In:  $0.001 \pm 0.005$   $\chi^2/\text{NDF}$ : 14.9/22

+ sign  $-0.007 \pm 0.005$   $\chi^2/\text{NDF}$ : 39.1/49

All:  $-0.003 \pm 0.003$   $\chi^2/\text{NDF}$ : 80.4/102

- sign  $0.002 \pm 0.005$   $\chi^2/\text{NDF}$ : 39.4/52

asym\_usl\_atl1\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 30.958+/-0.007  $\chi^2/\text{NDF}$ : 3056412.0/25

Left Out: 22.355+/-0.004  $\chi^2/\text{NDF}$ : 816044.6/23

Right Out: 30.681+/-0.006  $\chi^2/\text{NDF}$ : 4592550.4/29

Left In: 21.099+/-0.004  $\chi^2/\text{NDF}$ : 819268.9/22

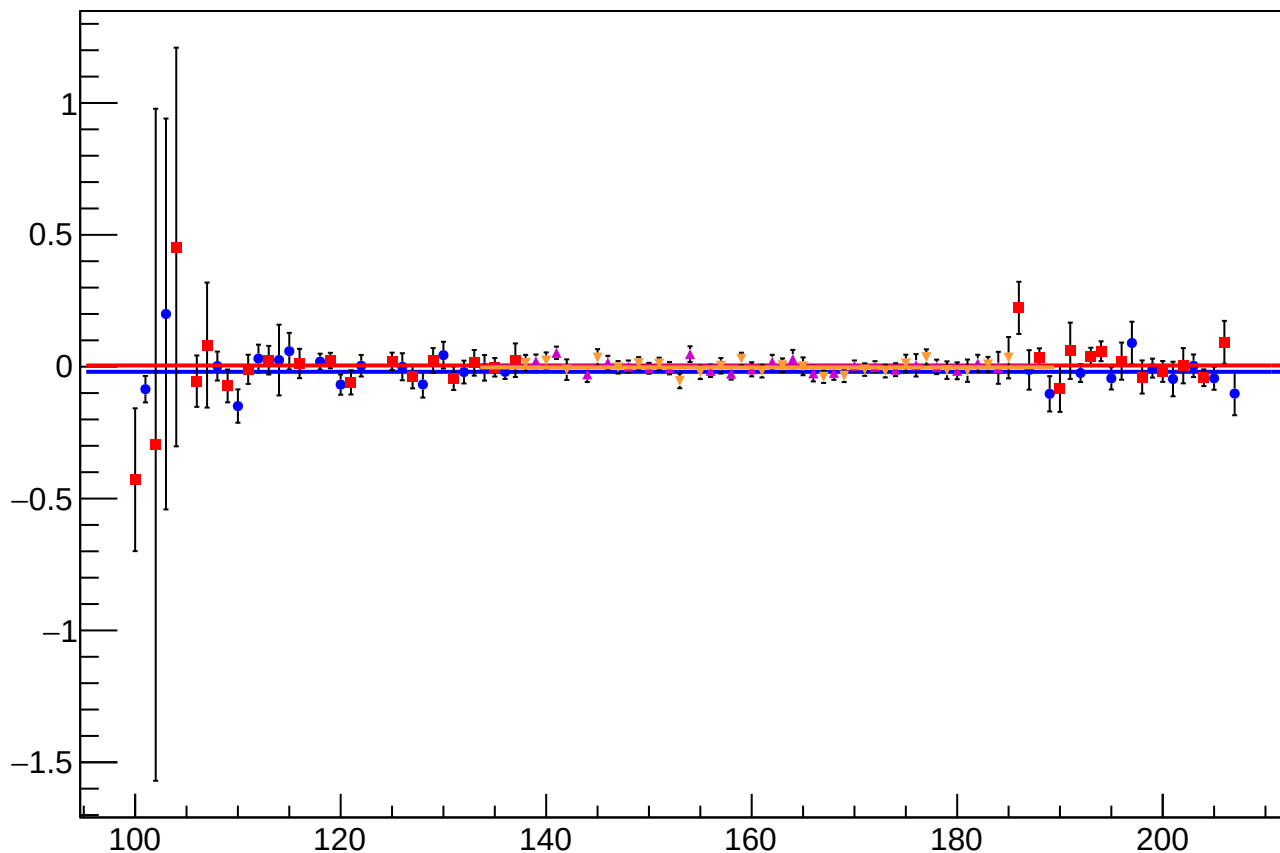
+ sign 24.713+/-0.003  $\chi^2/\text{NDF}$ : 5128062.4/49

All: 24.161+/-0.002  $\chi^2/\text{NDF}$ : 12222892.0/102

- sign 23.644+/-0.003  $\chi^2/\text{NDF}$ : 7044525.1/52



asym\_usl\_atl1\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.019 \pm 0.009$   $\chi^2/\text{NDF}$ : 20.4/25

Left Out:  $-0.003 \pm 0.006$   $\chi^2/\text{NDF}$ : 16.3/23

Right Out:  $0.005 \pm 0.009$   $\chi^2/\text{NDF}$ : 24.4/29

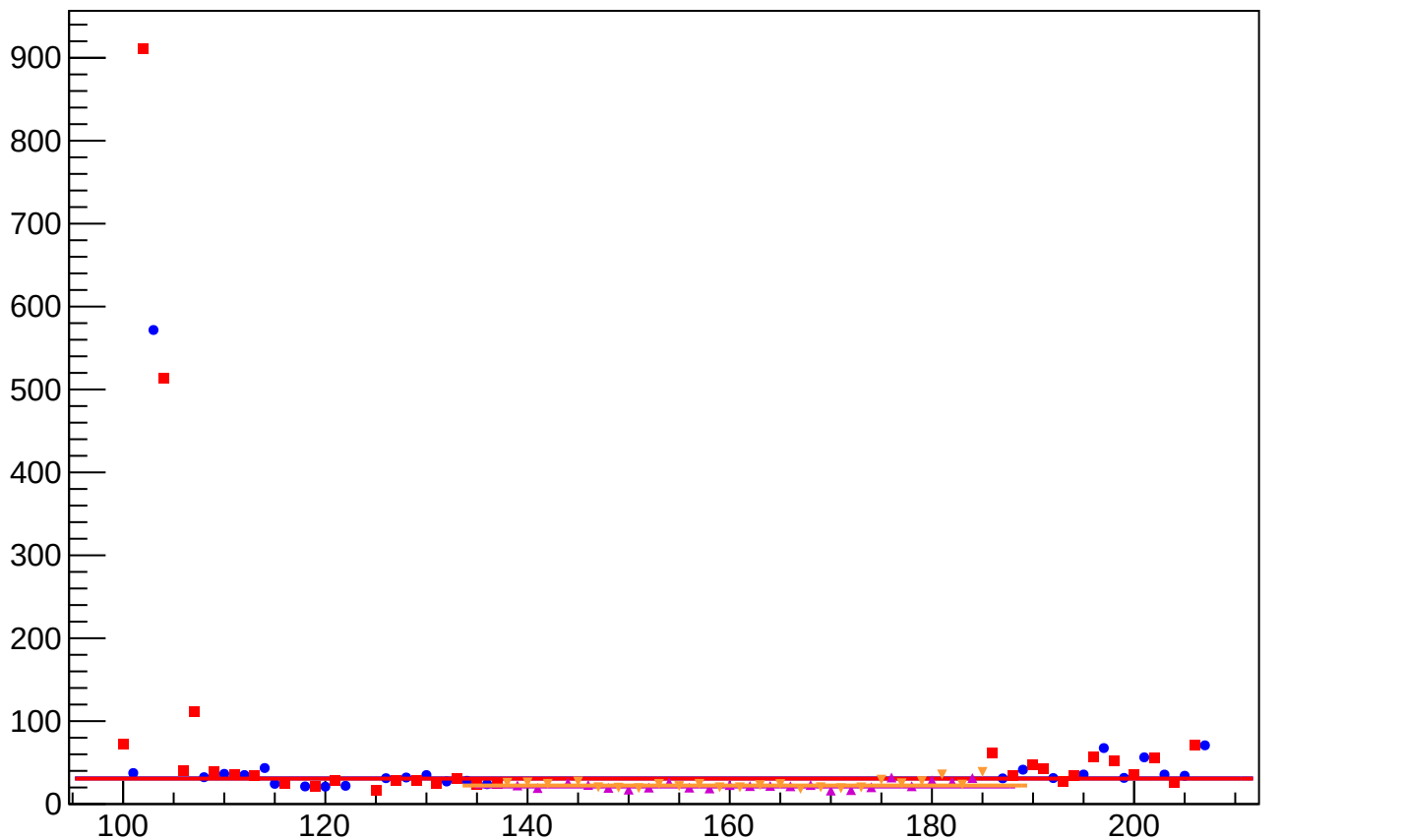
Left In:  $0.001 \pm 0.005$   $\chi^2/\text{NDF}$ : 14.9/22

+ sign  $-0.007 \pm 0.005$   $\chi^2/\text{NDF}$ : 39.1/49

All:  $-0.003 \pm 0.003$   $\chi^2/\text{NDF}$ : 80.4/102

- sign  $0.002 \pm 0.005$   $\chi^2/\text{NDF}$ : 39.4/52

asym\_usl\_atl1\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 30.958+/-0.007  $\chi^2/\text{NDF}$ : 3056412.0/25

Left Out: 22.355+/-0.004  $\chi^2/\text{NDF}$ : 816044.6/23

Right Out: 30.681+/-0.006  $\chi^2/\text{NDF}$ : 4592550.4/29

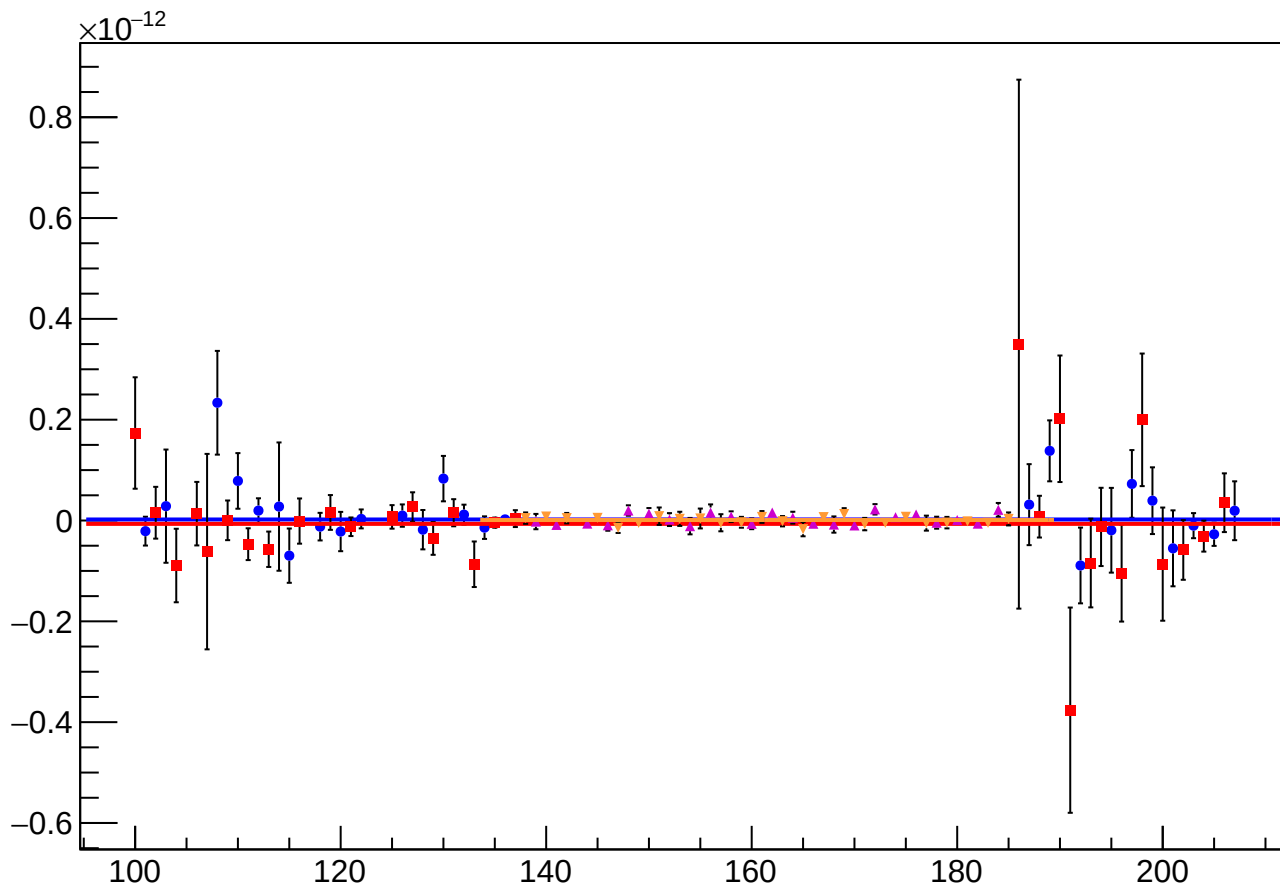
Left In: 21.099+/-0.004  $\chi^2/\text{NDF}$ : 819268.9/22

+ sign 24.713+/-0.003  $\chi^2/\text{NDF}$ : 5128062.4/49

All: 24.161+/-0.002  $\chi^2/\text{NDF}$ : 12222892.0/102

- sign 23.644+/-0.003  $\chi^2/\text{NDF}$ : 7044525.1/52

asym\_usl\_atl1\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 25.8/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:11.6/23

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 28.6/29

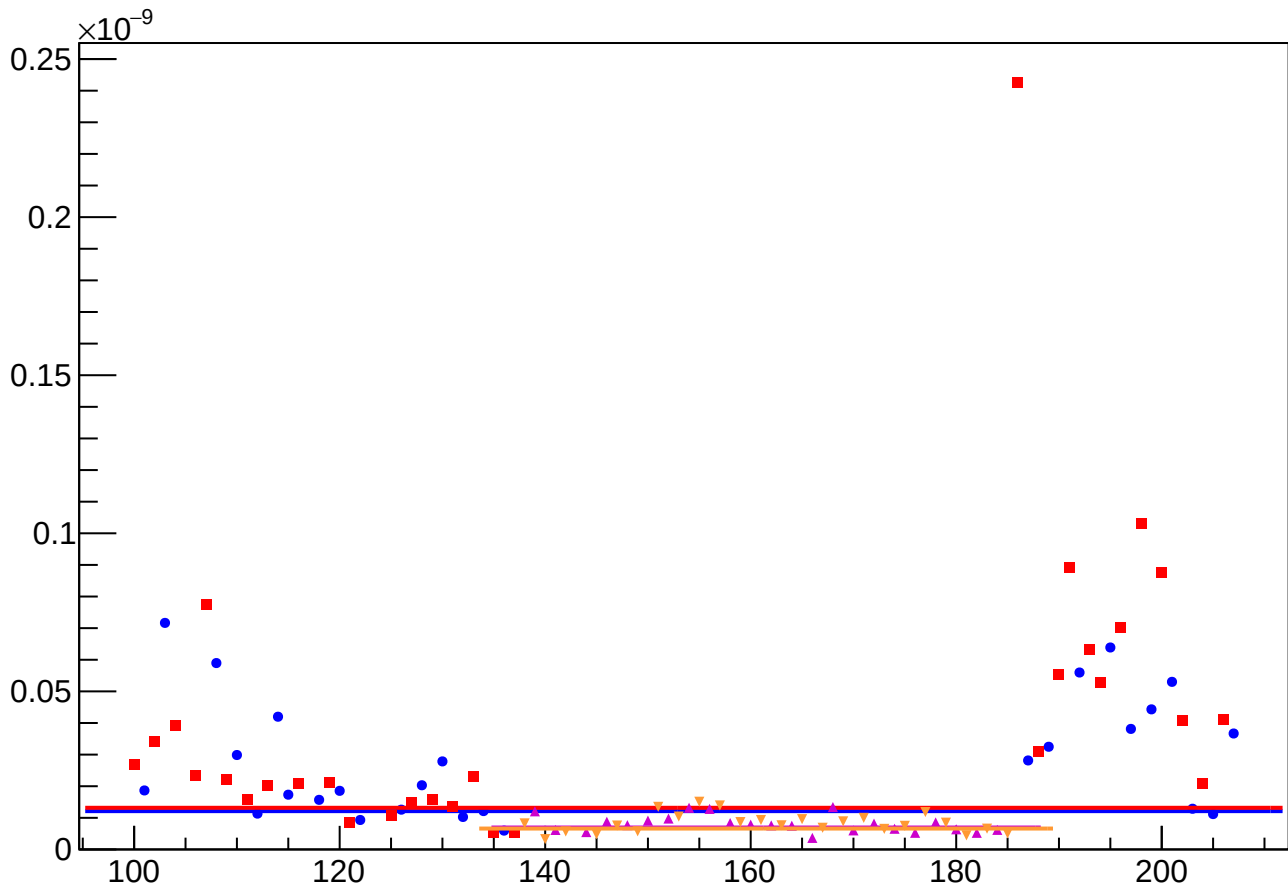
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:25.8/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 37.4/49

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 93.5/102

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 56.1/52

asym\_usl\_atl1\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 6428304.6/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 3457171.1/23

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 9101616.1/29

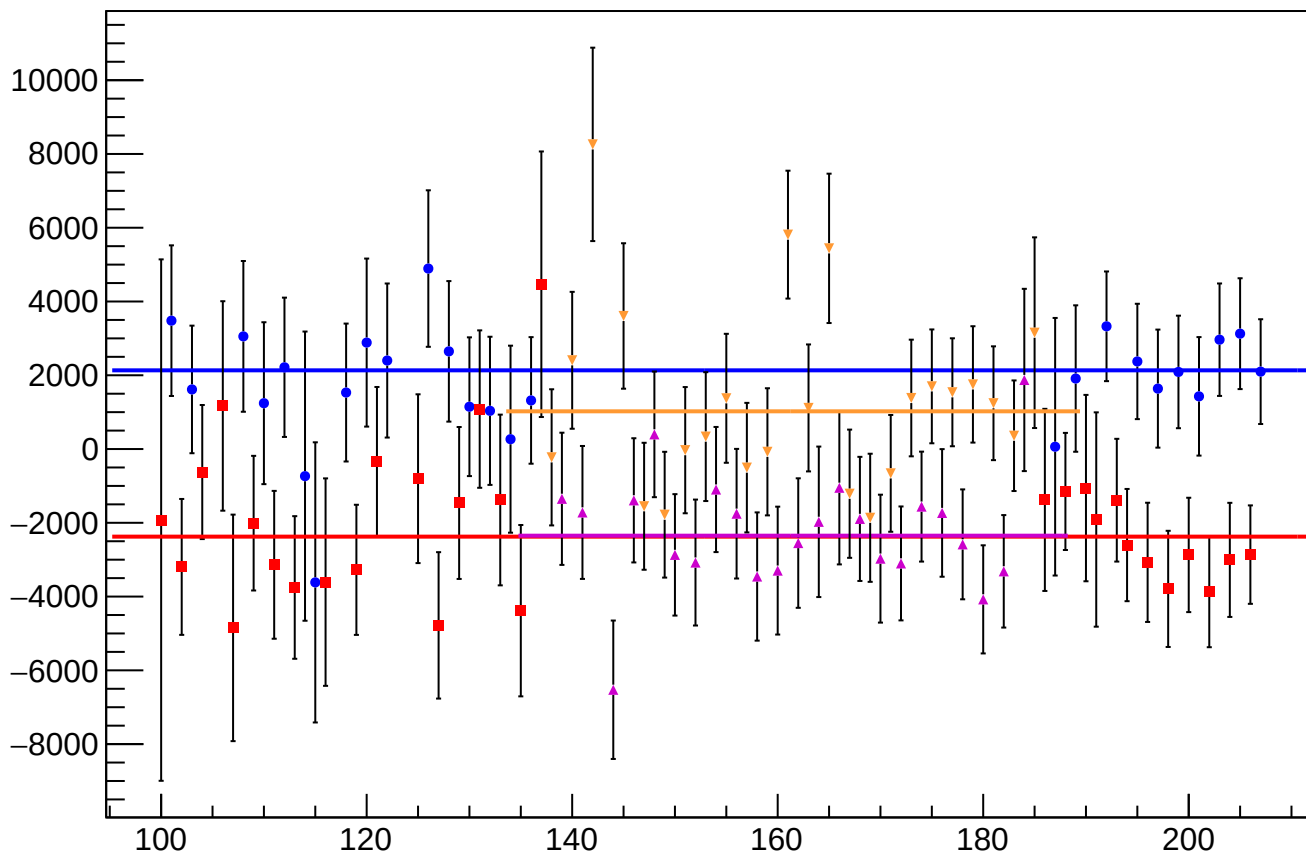
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 2315472.3/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 11773848.8/49

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 25292008.8/102

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 13485639.4/52

# reg\_asym\_usl\_atl2\_avg\_mean vs Slug



Right In: 2133.717 $\pm$ 366.590  $\chi^2$ /NDF: 9.1/25

Left Out: 1022.603 $\pm$ 353.459  $\chi^2$ /NDF:36.4/23

Right Out: -2375.005 $\pm$ 354.462  $\chi^2$ /NDF: 18.6/29

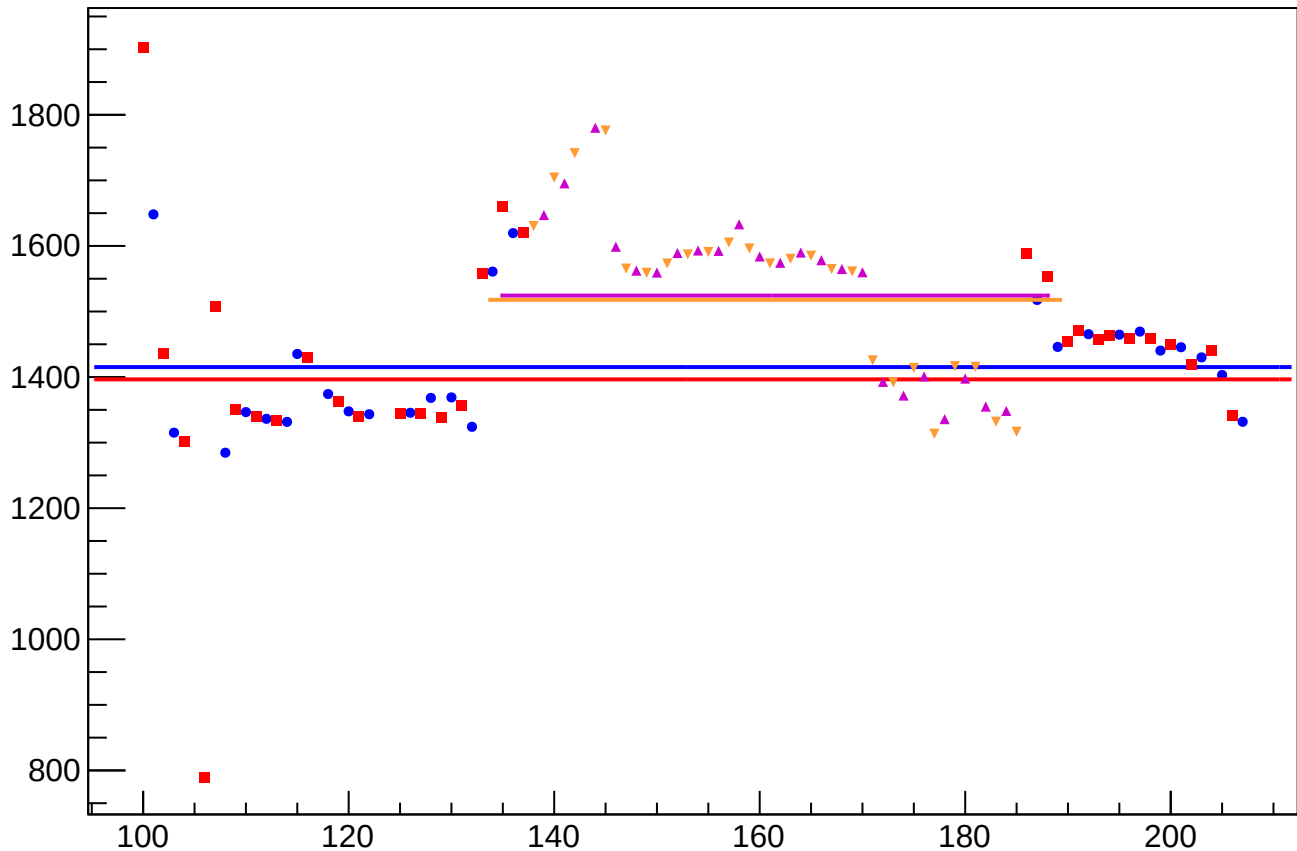
Left In: -2349.189 $\pm$ 357.068  $\chi^2$ /NDF:16.0/22

+ sign 1557.905 $\pm$ 254.449  $\chi^2$ /NDF: 50.3/49

All: -424.530 $\pm$ 178.892  $\chi^2$ /NDF: 204.9/102

- sign -2362.191 $\pm$ 251.559  $\chi^2$ /NDF: 34.6/52

# reg\_asym\_usl\_atl2\_avg\_rms vs Slug



Right In: 1415.209+/-0.259  $\chi^2/\text{NDF}$ : 113300.8/25

Left Out: 1517.815+/-0.250  $\chi^2/\text{NDF}$ : 233957.9/23

Right Out: 1396.488+/-0.247  $\chi^2/\text{NDF}$ : 399241.2/29

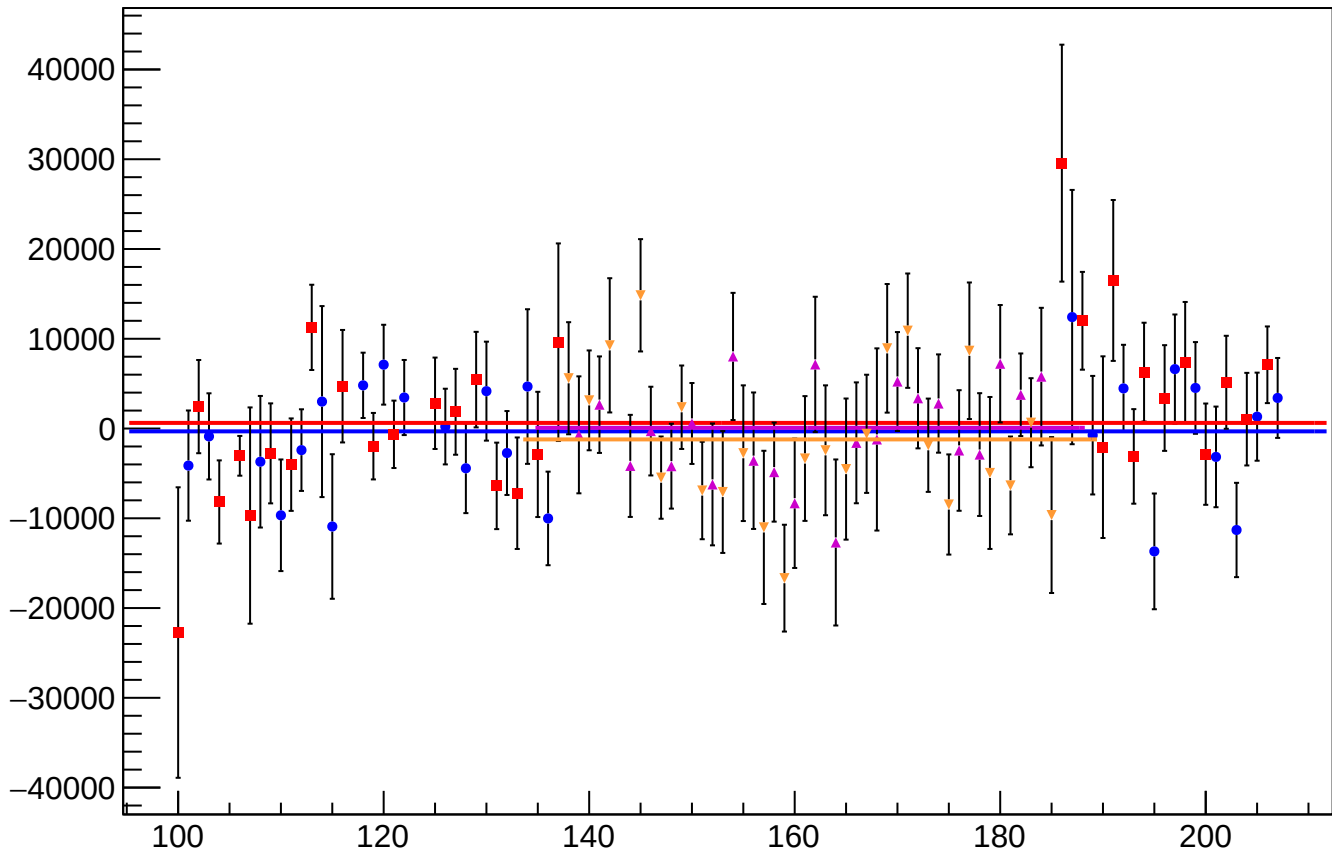
Left In: 1524.314+/-0.252  $\chi^2/\text{NDF}$ : 224321.2/22

+ sign 1468.383+/-0.180  $\chi^2/\text{NDF}$ : 428455.6/49

All: 1463.587+/-0.126  $\chi^2/\text{NDF}$ : 1184434.0/10

- sign 1458.971+/-0.177  $\chi^2/\text{NDF}$ : 754584.3/52

asym\_usl\_atl2\_avg\_reg\_correction\_mean vs Slug



Right In:  $-315.549 \pm 1045.311$   $\chi^2/\text{NDF}$ : 29.6/25

Left Out:  $-1211.893 \pm 1268.315$   $\chi^2/\text{NDF}$ : 33.2/23

Right Out:  $626.591 \pm 936.460$   $\chi^2/\text{NDF}$ : 40.9/29

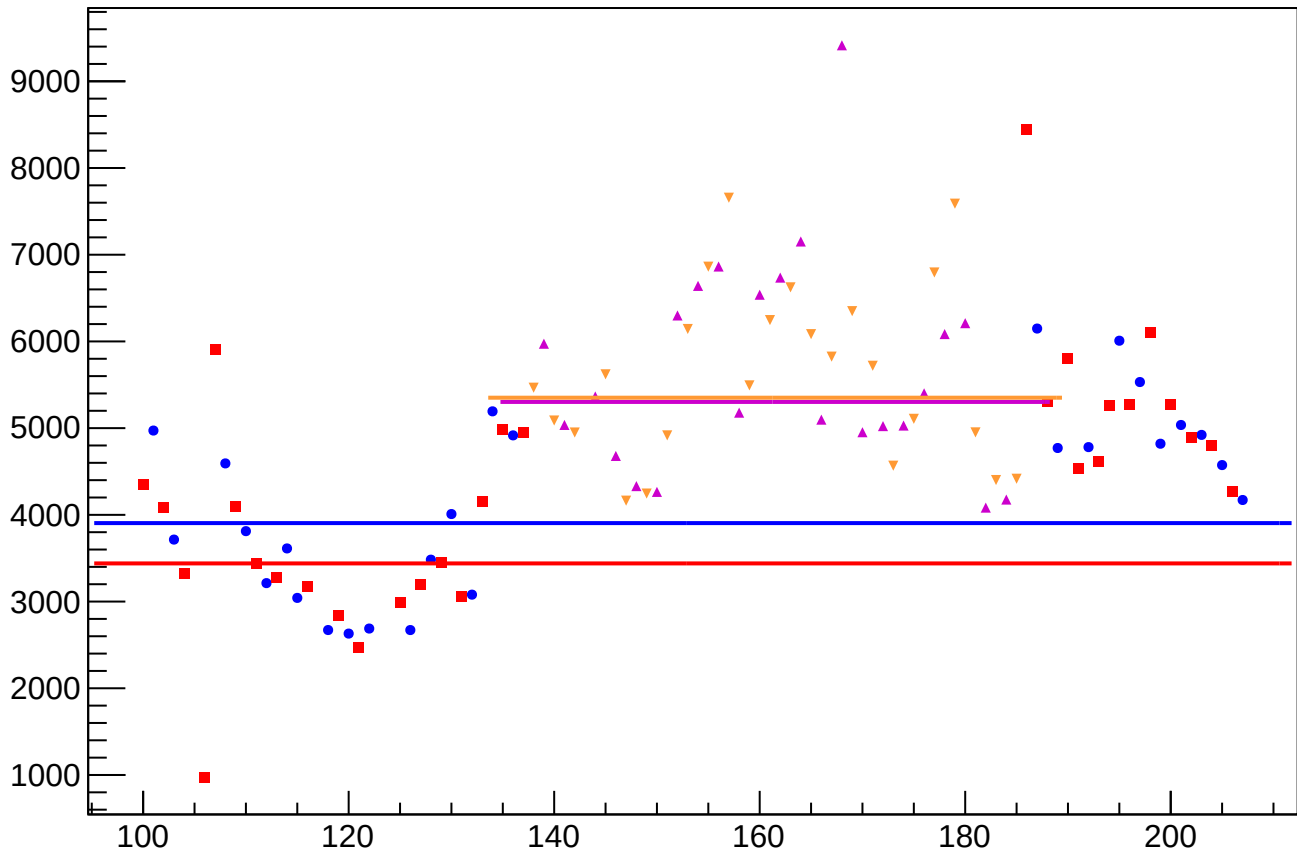
Left In:  $80.780 \pm 1264.327$   $\chi^2/\text{NDF}$ : 13.2/22

+ sign  $-678.120 \pm 806.652$   $\chi^2/\text{NDF}$ : 63.2/49

All:  $-83.906 \pm 550.255$   $\chi^2/\text{NDF}$ : 118.4/102

- sign  $433.233 \pm 752.522$   $\chi^2/\text{NDF}$ : 54.2/52

# asym\_usl\_atl2\_avg\_reg\_correction\_rms vs Slug



Right In: 3904.919+/-0.739  $\chi^2/\text{NDF}$ : 1854399.1/25

Left Out: 5351.126+/-0.897  $\chi^2/\text{NDF}$ : 1066045.6/23

Right Out: 3439.912+/-0.662  $\chi^2/\text{NDF}$ : 5100178.3/29

Left In: 5302.185+/-0.894  $\chi^2/\text{NDF}$ : 1256309.3/22

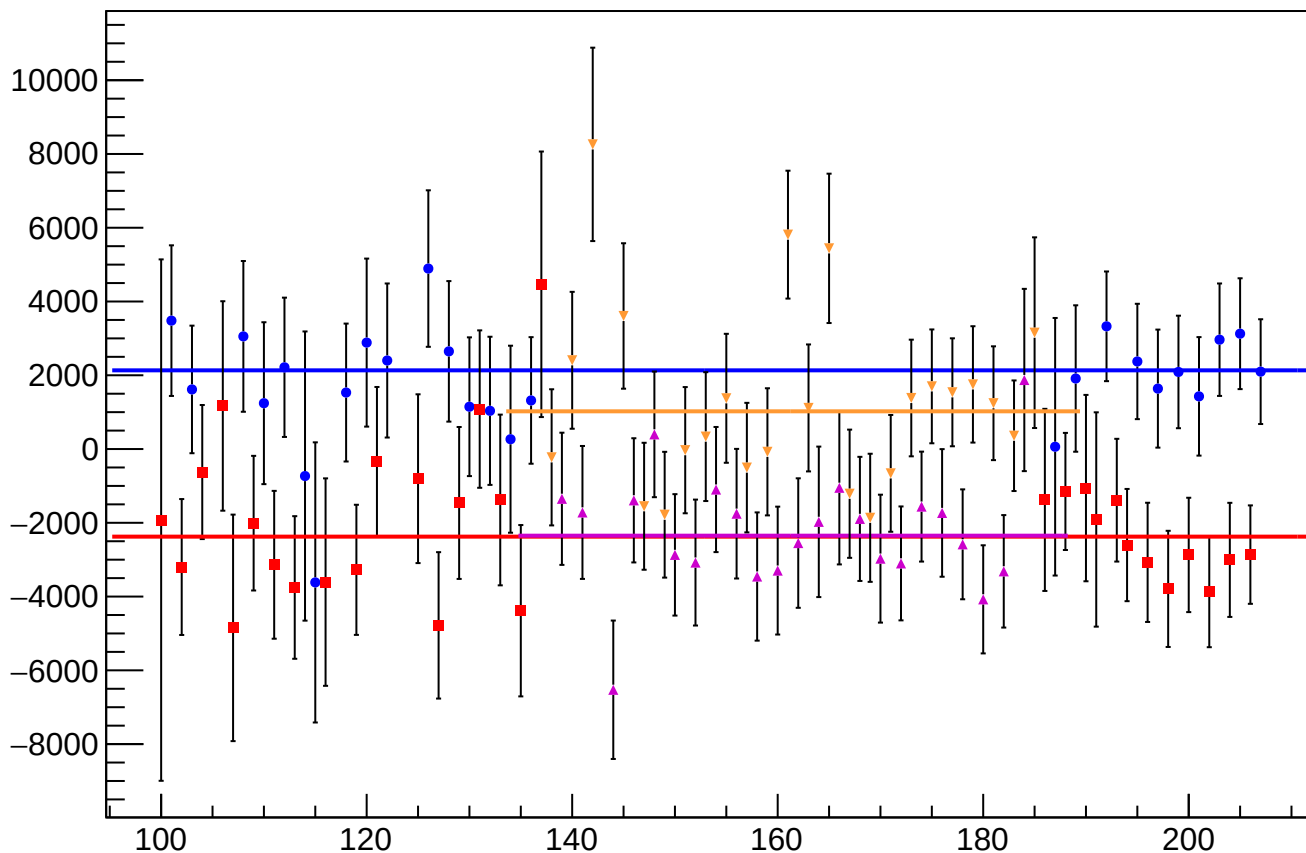
+ sign 4489.910+/-0.570  $\chi^2/\text{NDF}$ : 4468970.7/49

All: 4281.240+/-0.389  $\chi^2/\text{NDF}$ : 13877700.2/100

- sign 4099.637+/-0.532  $\chi^2/\text{NDF}$ : 9158415.8/52



# cor\_asym\_usl\_atl2\_avg\_mean vs Slug



Right In:  $2133.688 \pm 366.590$   $\chi^2/\text{NDF}: 9.1/25$

Left Out:  $1022.634 \pm 353.459$   $\chi^2/\text{NDF}: 36.4/23$

Right Out:  $-2375.077 \pm 354.463$   $\chi^2/\text{NDF}: 18.6/29$

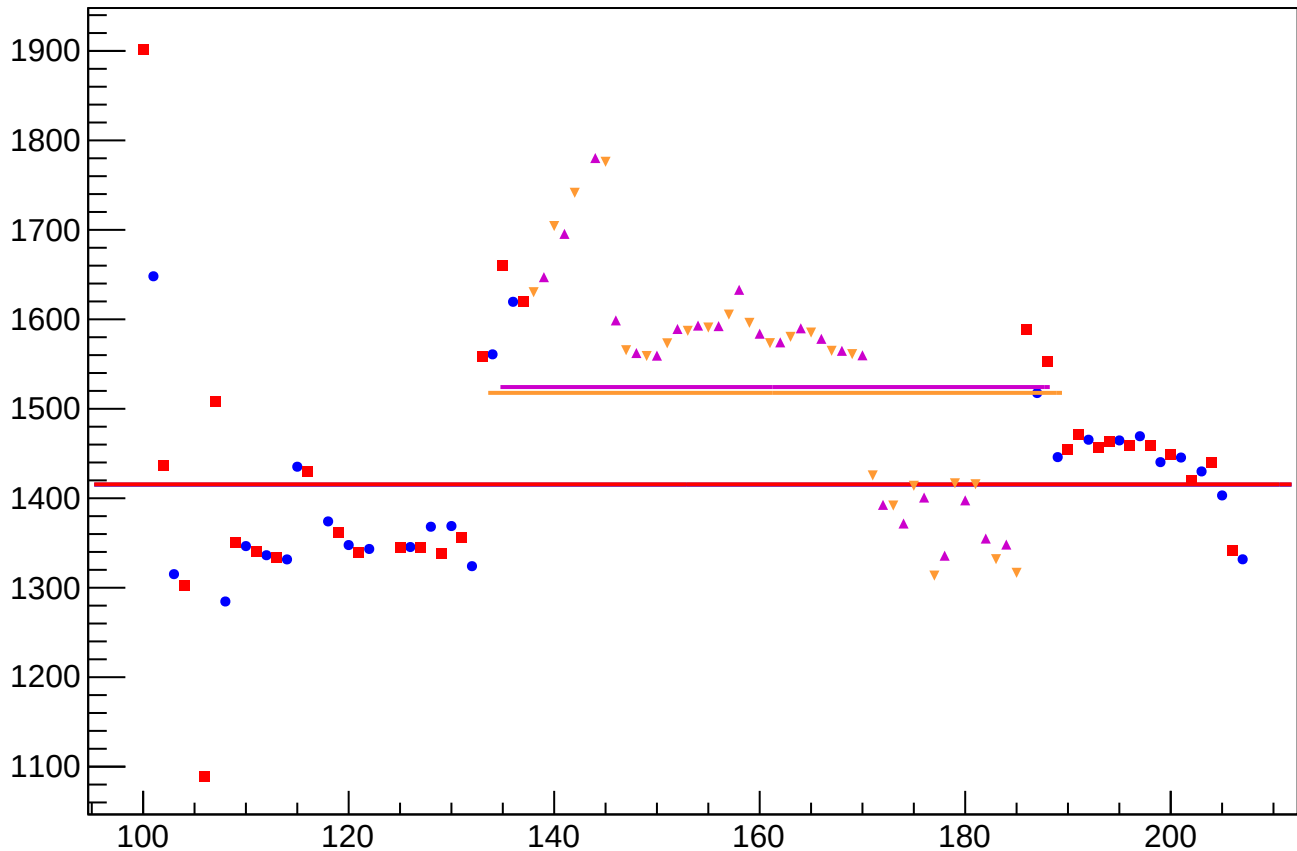
Left In:  $-2349.186 \pm 357.068$   $\chi^2/\text{NDF}: 16.0/22$

+ sign  $1557.906 \pm 254.449$   $\chi^2/\text{NDF}: 50.3/49$

All:  $-424.544 \pm 178.892$   $\chi^2/\text{NDF}: 204.9/102$

- sign  $-2362.226 \pm 251.559$   $\chi^2/\text{NDF}: 34.6/52$

# cor\_asym\_usl\_atl2\_avg\_rms vs Slug



Right In: 1415.209 $\pm$ 0.259  $\chi^2$ /NDF: 113300.8/25

Left Out: 1517.815 $\pm$ 0.250  $\chi^2$ /NDF: 233957.9/23

Right Out: 1415.560 $\pm$ 0.249  $\chi^2$ /NDF: 165662.2/29

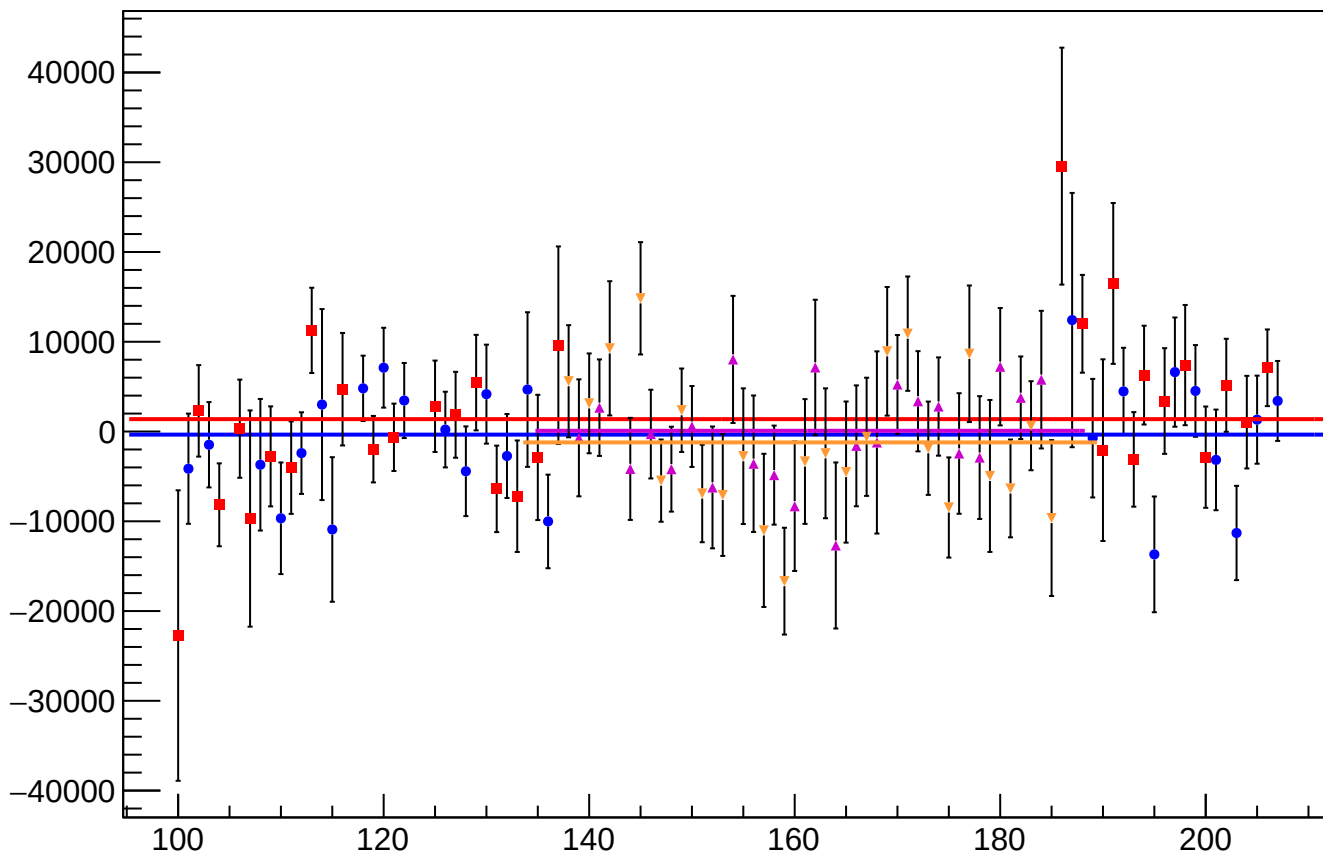
Left In: 1524.314 $\pm$ 0.252  $\chi^2$ /NDF: 224321.2/22

+ sign 1468.383 $\pm$ 0.180  $\chi^2$ /NDF: 428455.7/49

All: 1468.796 $\pm$ 0.126  $\chi^2$ /NDF: 912475.8/102

- sign 1469.198 $\pm$ 0.177  $\chi^2$ /NDF: 484009.7/52

asym\_usl\_atl2\_avg\_cor\_correction\_mean vs Slug



Right In:  $-345.249 \pm 1044.793$   $\chi^2/\text{NDF}$ : 29.7/25

Left Out:  $-1211.889 \pm 1268.316$   $\chi^2/\text{NDF}$ : 33.2/23

Right Out:  $1380.885 \pm 1014.550$   $\chi^2/\text{NDF}$ : 37.6/29

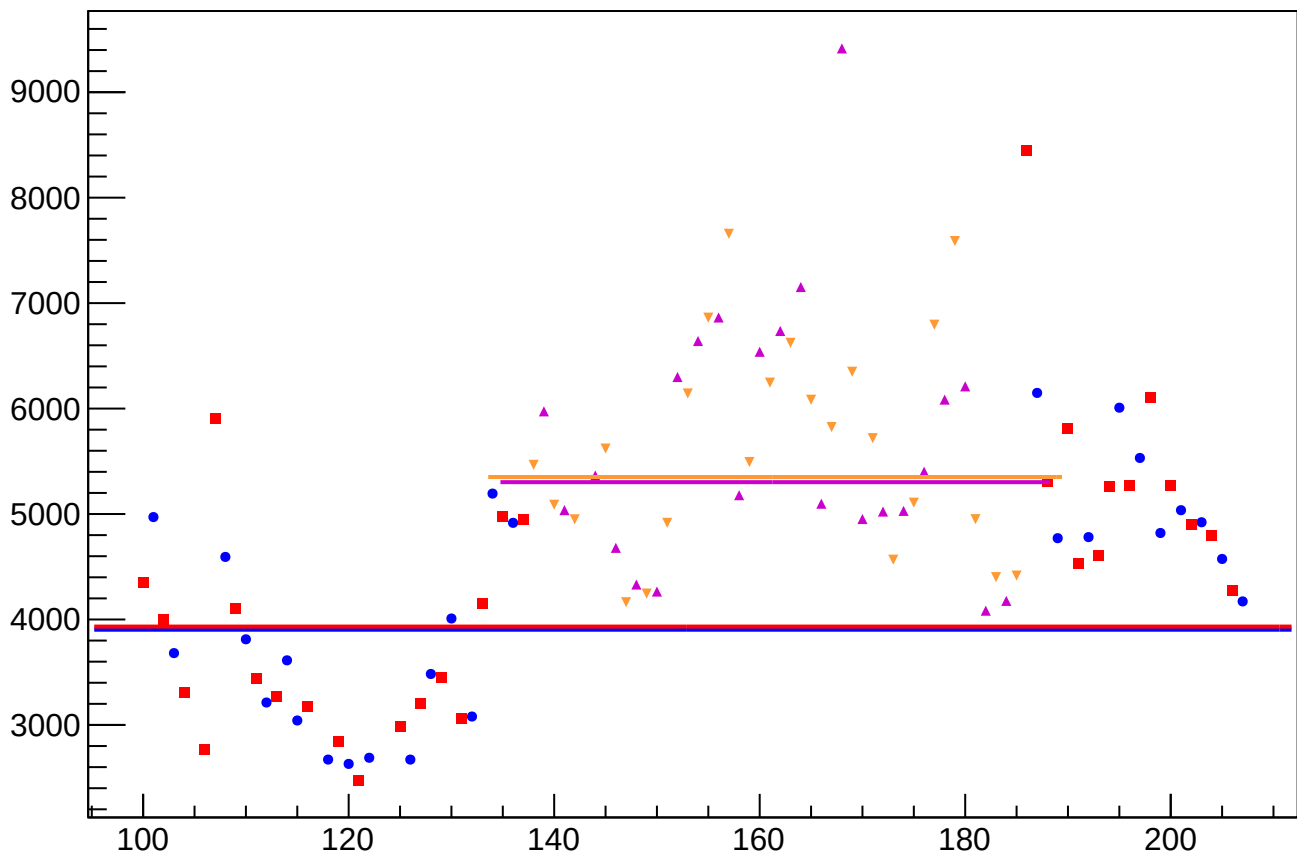
Left In:  $80.689 \pm 1264.325$   $\chi^2/\text{NDF}$ : 13.2/22

+ sign  $-695.598 \pm 806.415$   $\chi^2/\text{NDF}$ : 63.2/49

All:  $102.841 \pm 564.797$   $\chi^2/\text{NDF}$ : 116.5/102

- sign  $871.602 \pm 791.286$   $\chi^2/\text{NDF}$ : 51.4/52

# asym\_usl\_atl2\_avg\_cor\_correction\_rms vs Slug



Right In: 3903.093+/-0.739  $\chi^2/\text{NDF}$ : 1855594.5/25

Left Out: 5351.132+/-0.897  $\chi^2/\text{NDF}$ : 1066039.6/23

Right Out: 3932.772+/-0.717  $\chi^2/\text{NDF}$ : 2161579.6/29

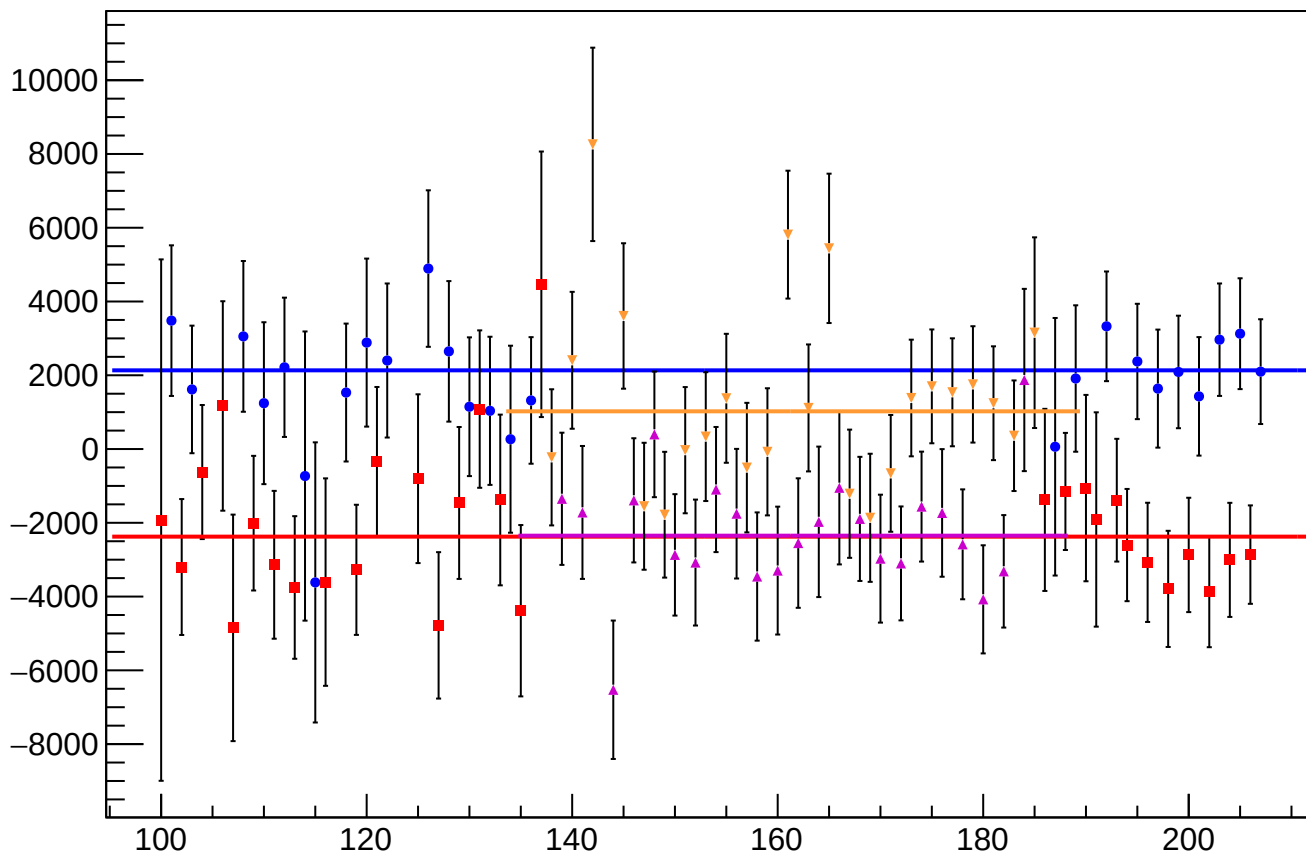
Left In: 5302.177+/-0.894  $\chi^2/\text{NDF}$ : 1256324.3/22

+ sign 4488.478+/-0.570  $\chi^2/\text{NDF}$ : 4474705.2/49

All: 4478.638+/-0.399  $\chi^2/\text{NDF}$ : 9320431.0/10

- sign 4469.163+/-0.560  $\chi^2/\text{NDF}$ : 4845141.2/52

# eigen\_cor\_asym\_usl\_atl2\_avg\_mean vs Slug



Right In: 2133.688 $\pm$ 366.590  $\chi^2$ /NDF: 9.1/25

Left Out: 1022.634 $\pm$ 353.459  $\chi^2$ /NDF:36.4/23

Right Out: -2375.077 $\pm$ 354.463  $\chi^2$ /NDF: 18.6/29

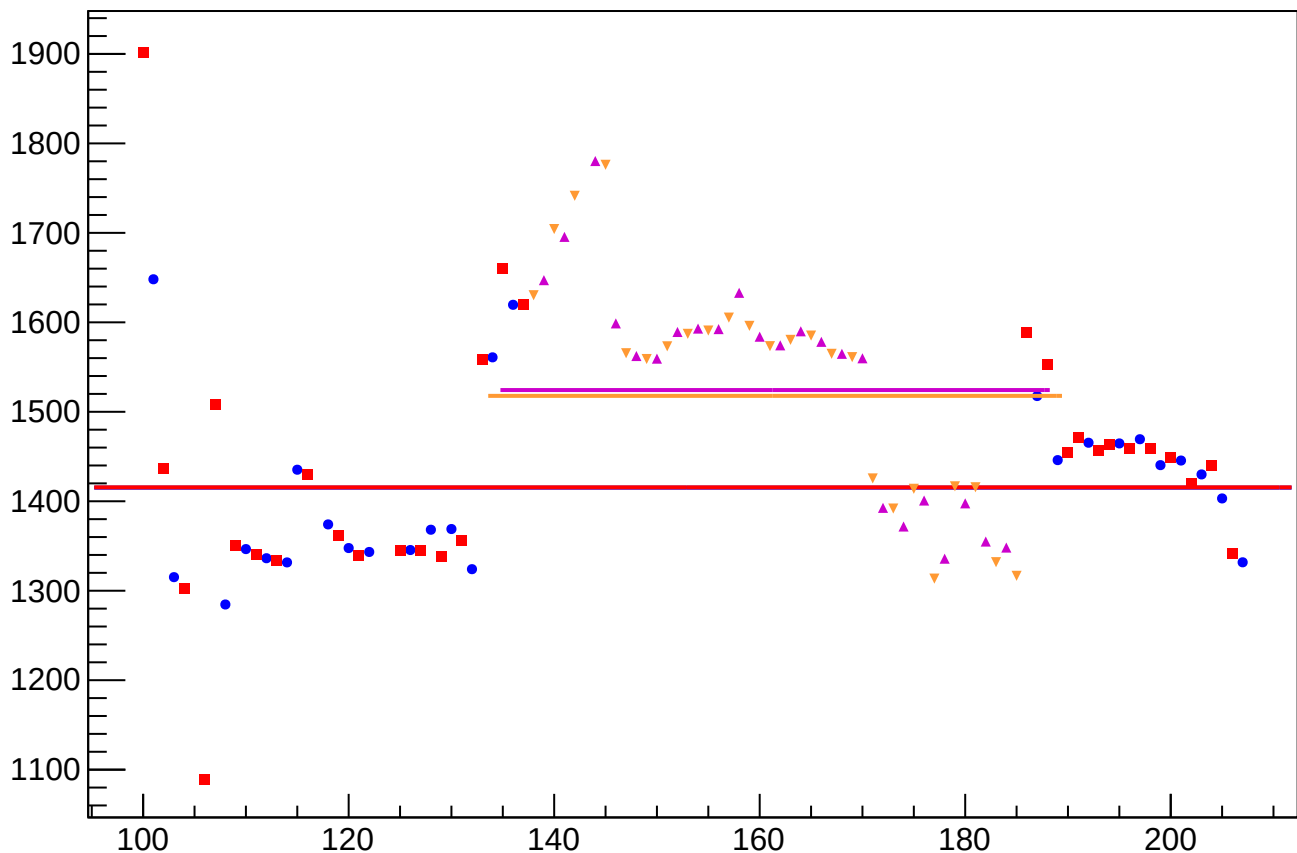
Left In: -2349.186 $\pm$ 357.068  $\chi^2$ /NDF:16.0/22

+ sign 1557.906 $\pm$ 254.449  $\chi^2$ /NDF: 50.3/49

All: -424.544 $\pm$ 178.892  $\chi^2$ /NDF: 204.9/102

- sign -2362.226 $\pm$ 251.559  $\chi^2$ /NDF: 34.6/52

# eigen\_cor\_asym\_usl\_atl2\_avg\_rms vs Slug



Right In: 1415.209+/-0.259  $\chi^2/\text{NDF}$ : 113300.8/25

Left Out: 1517.815+/-0.250  $\chi^2/\text{NDF}$ : 233957.9/23

Right Out: 1415.560+/-0.249  $\chi^2/\text{NDF}$ : 165662.2/29

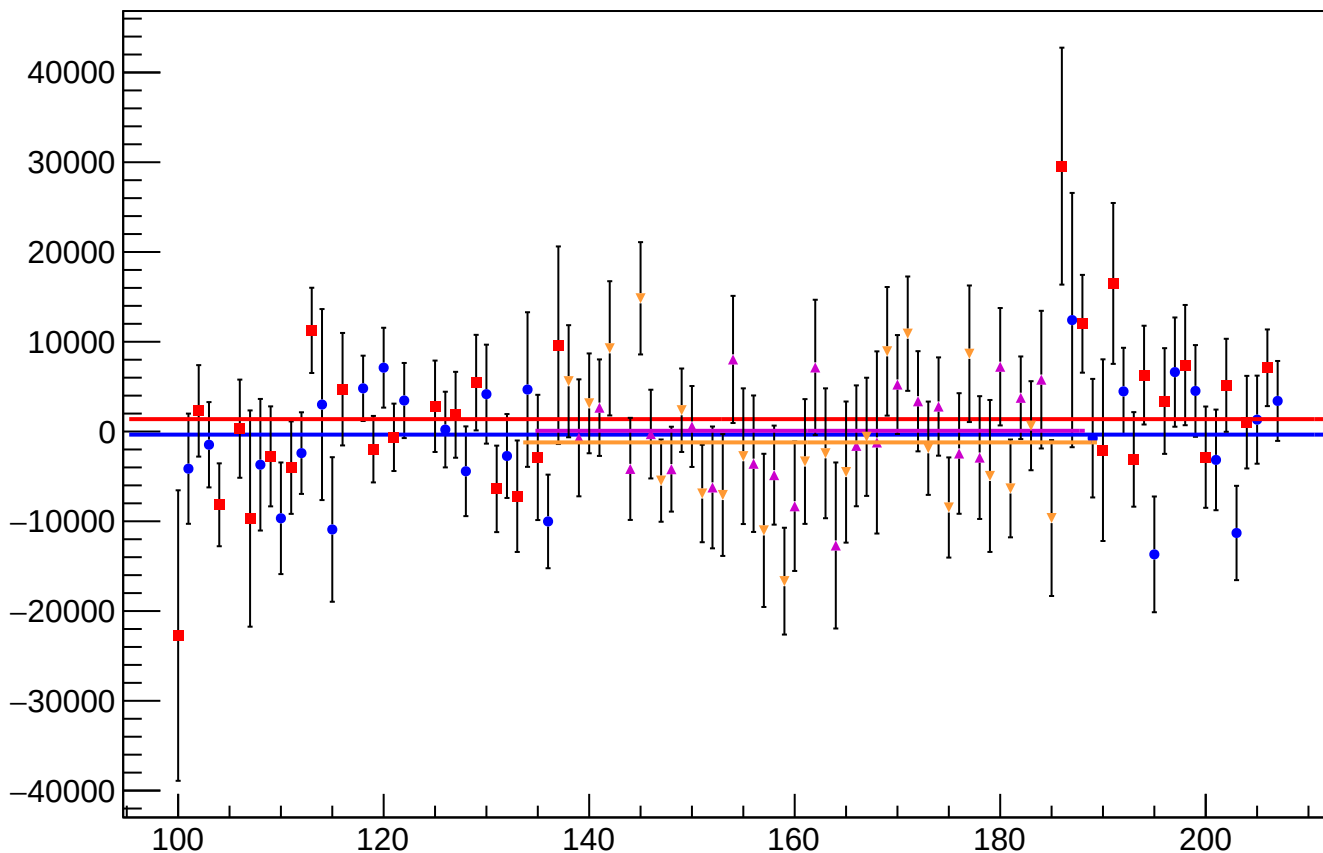
Left In: 1524.314+/-0.252  $\chi^2/\text{NDF}$ : 224321.2/22

+ sign 1468.383+/-0.180  $\chi^2/\text{NDF}$ : 428455.7/49

All: 1468.796+/-0.126  $\chi^2/\text{NDF}$ : 912475.8/102

- sign 1469.198+/-0.177  $\chi^2/\text{NDF}$ : 484009.7/52

asym\_usl\_atl2\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-345.249 \pm 1044.793$   $\chi^2/\text{NDF}: 29.7/25$

Left Out:  $-1211.889 \pm 1268.316$   $\chi^2/\text{NDF}: 33.2/23$

Right Out:  $1380.885 \pm 1014.550$   $\chi^2/\text{NDF}: 37.6/29$

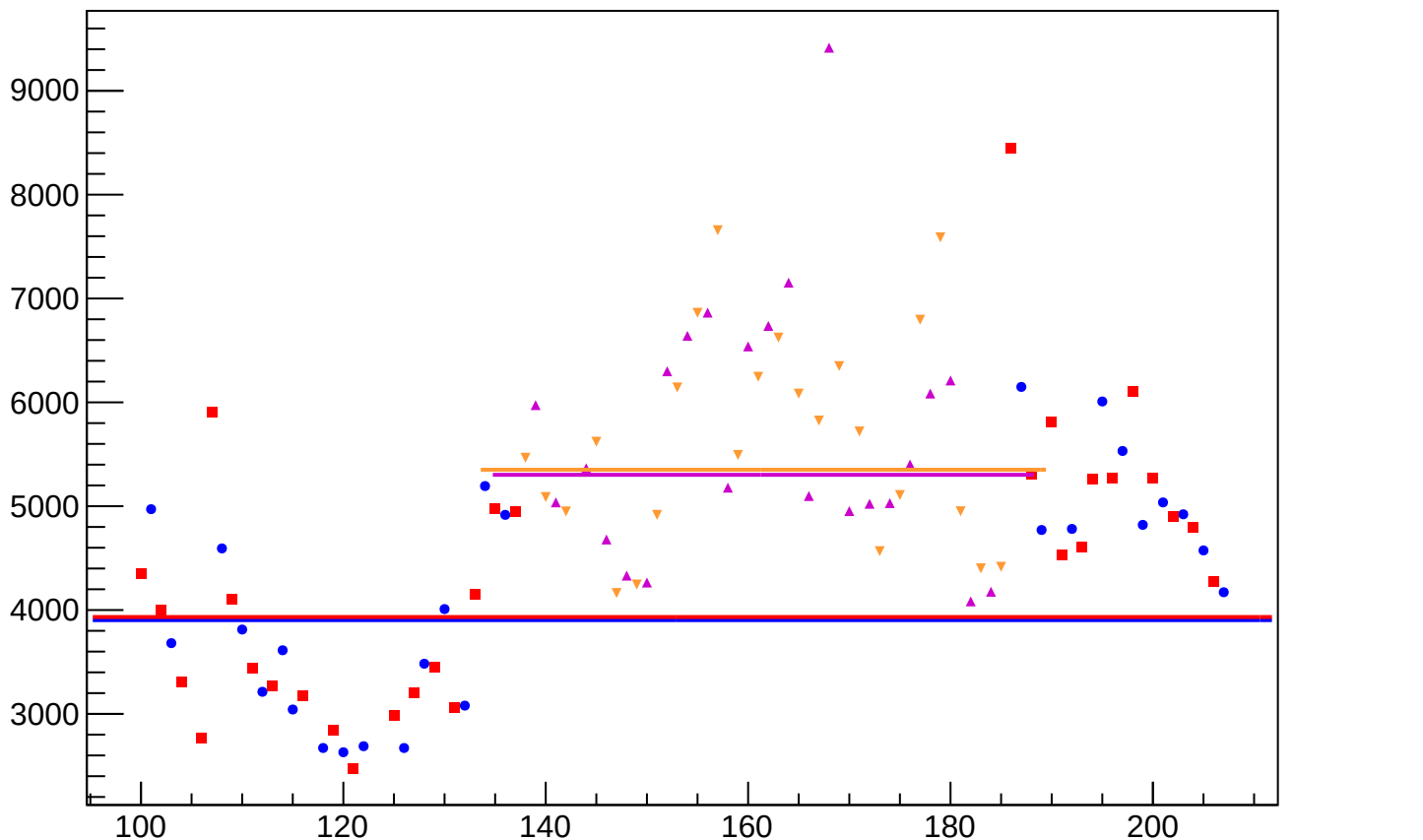
Left In:  $80.689 \pm 1264.325$   $\chi^2/\text{NDF}: 13.2/22$

+ sign  $-695.598 \pm 806.415$   $\chi^2/\text{NDF}: 63.2/49$

All:  $102.841 \pm 564.797$   $\chi^2/\text{NDF}: 116.5/102$

- sign  $871.602 \pm 791.286$   $\chi^2/\text{NDF}: 51.4/52$

asym\_usl\_atl2\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 3903.093+/-0.739  $\chi^2/\text{NDF}$ : 1855594.5/25

Left Out: 5351.132+/-0.897  $\chi^2/\text{NDF}$ : 1066039.6/23

Right Out: 3932.772+/-0.717  $\chi^2/\text{NDF}$ : 2161579.6/29

Left In: 5302.177+/-0.894  $\chi^2/\text{NDF}$ : 1256324.3/22

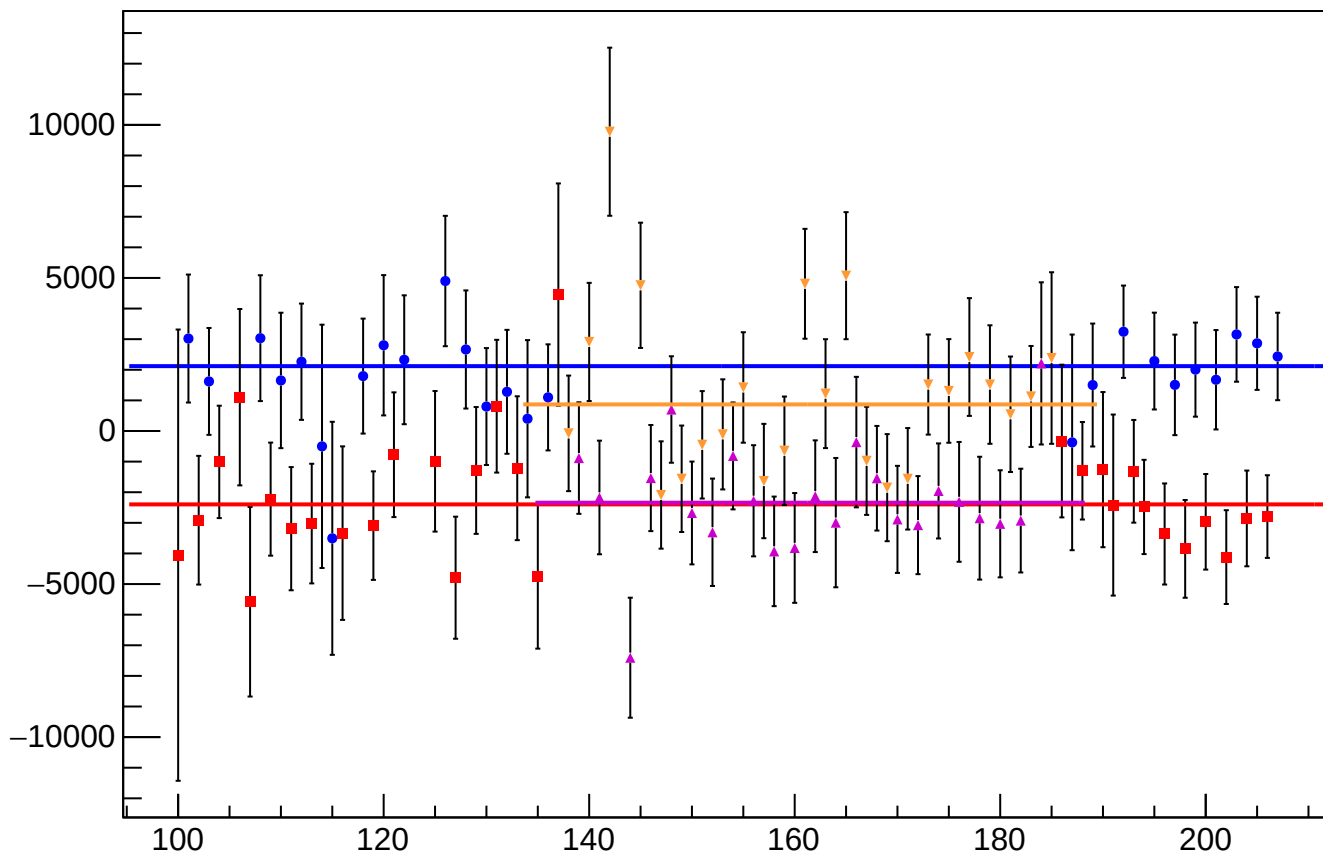
+ sign 4488.478+/-0.570  $\chi^2/\text{NDF}$ : 4474705.2/49

All: 4478.638+/-0.399  $\chi^2/\text{NDF}$ : 9320431.0/10

- sign 4469.163+/-0.560  $\chi^2/\text{NDF}$ : 4845141.2/52



# dit\_asym\_usl\_atl2\_avg\_mean vs Slug



Right In:  $2118.740 \pm 370.583$   $\chi^2/\text{NDF}$ : 8.6/25

Left Out:  $868.415 \pm 377.179$   $\chi^2/\text{NDF}$ : 39.7/23

Right Out:  $-2397.448 \pm 359.644$   $\chi^2/\text{NDF}$ : 18.0/29

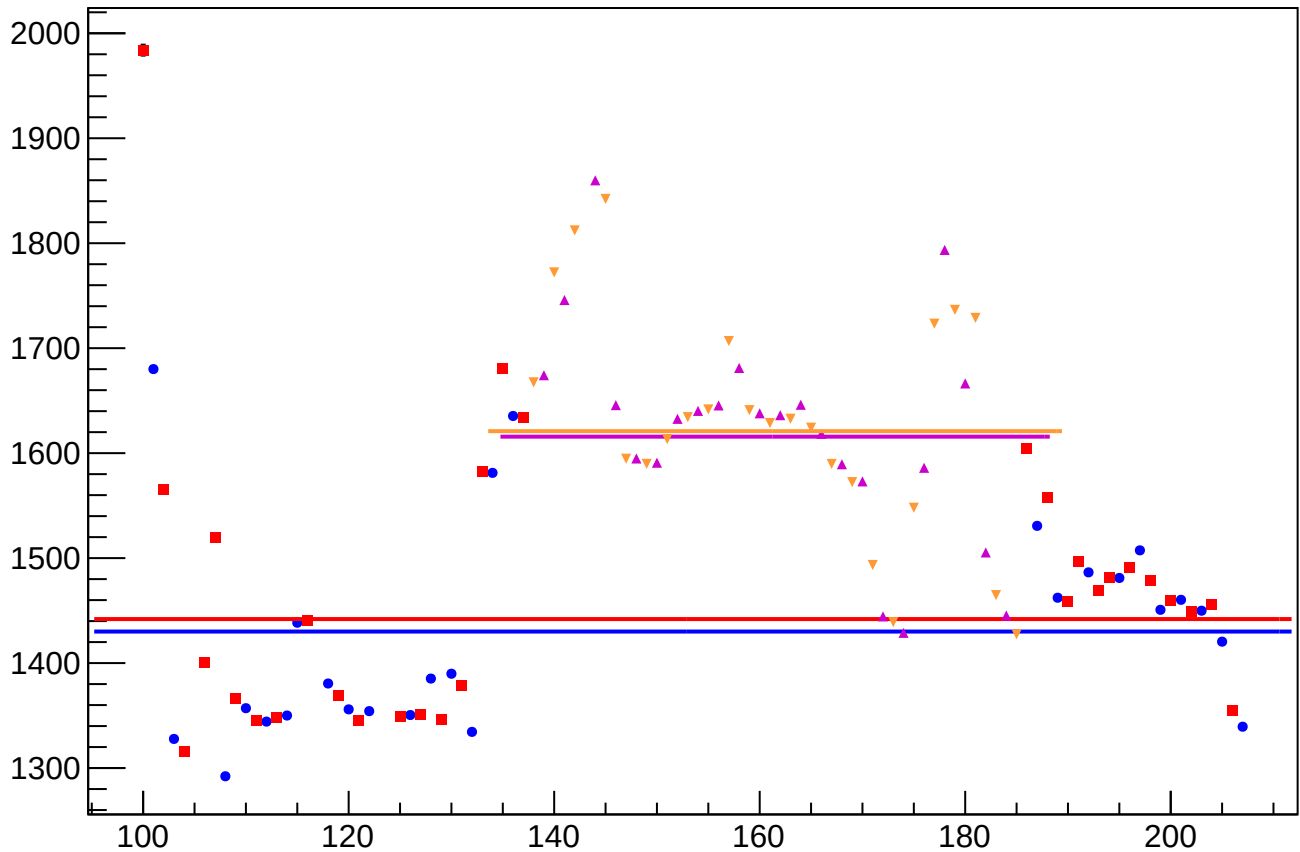
Left In:  $-2342.303 \pm 378.114$   $\chi^2/\text{NDF}$ : 18.0/22

+ sign  $1504.607 \pm 264.343$   $\chi^2/\text{NDF}$ : 53.9/49

All:  $-461.023 \pm 185.578$   $\chi^2/\text{NDF}$ : 199.0/102

- sign  $-2371.255 \pm 260.591$   $\chi^2/\text{NDF}$ : 36.1/52

# dit\_asym\_usl\_atl2\_avg\_rms vs Slug



Right In: 1430.041 $\pm$ 0.262  $\chi^2$ /NDF: 122865.0/25

Left Out: 1620.945 $\pm$ 0.267  $\chi^2$ /NDF: 141985.5/23

Right Out: 1441.942 $\pm$ 0.254  $\chi^2$ /NDF: 129448.4/29

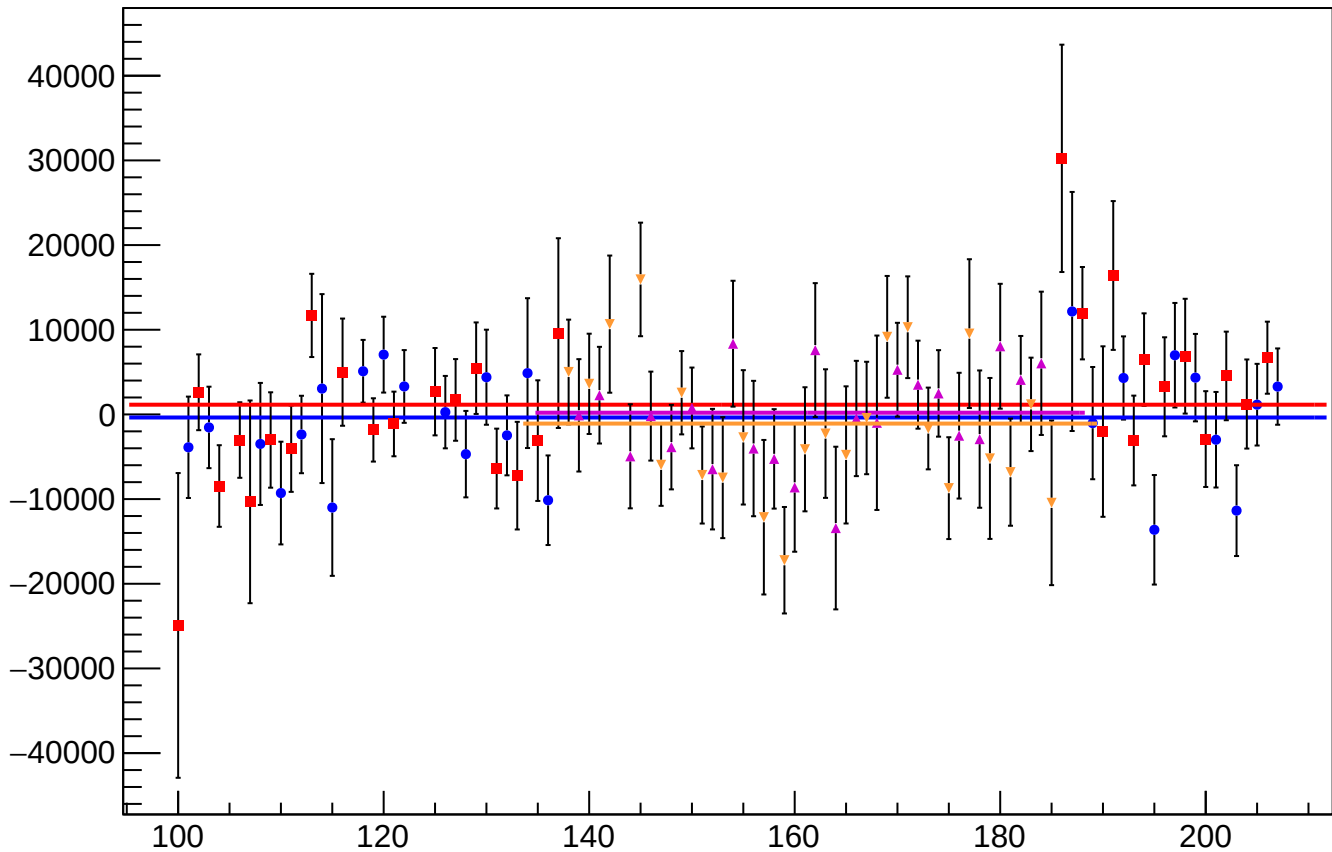
Left In: 1615.705 $\pm$ 0.267  $\chi^2$ /NDF: 137139.2/22

+ sign 1523.809 $\pm$ 0.187  $\chi^2$ /NDF: 525542.5/49

All: 1524.093 $\pm$ 0.131  $\chi^2$ /NDF: 1014150.6/10

- sign 1524.369 $\pm$ 0.184  $\chi^2$ /NDF: 488603.6/52

asym\_usl\_atl2\_avg\_dit\_correction\_mean vs Slug



Right In:  $-363.617 \pm 1054.587$   $\chi^2/\text{NDF}$ : 29.2/25

Left Out:  $-1082.232 \pm 1332.403$   $\chi^2/\text{NDF}$ : 32.9/23

Right Out:  $1147.575 \pm 1008.457$   $\chi^2/\text{NDF}$ : 38.3/29

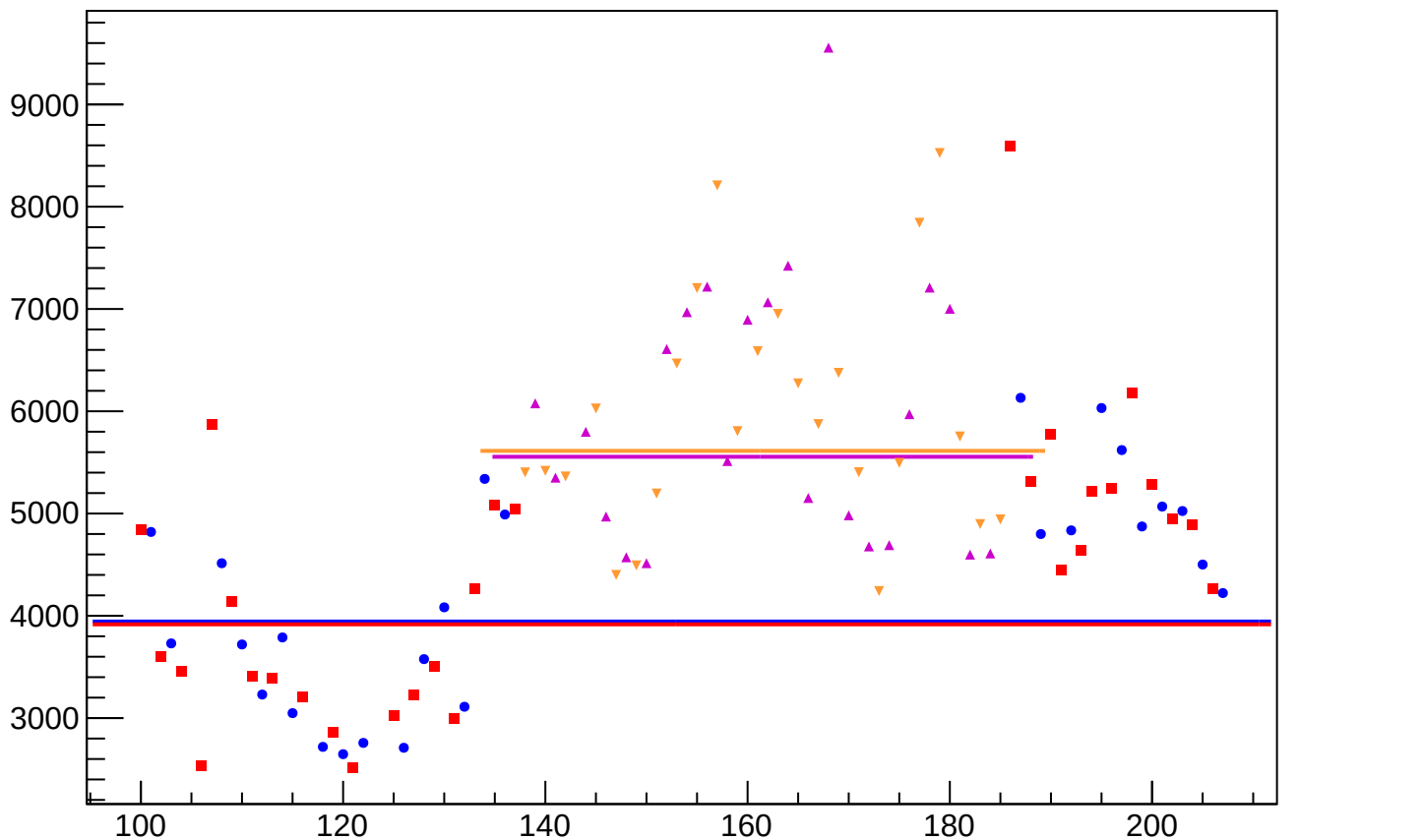
Left In:  $201.662 \pm 1326.173$   $\chi^2/\text{NDF}$ : 12.9/22

+ sign  $-640.404 \pm 826.915$   $\chi^2/\text{NDF}$ : 62.3/49

All:  $101.686 \pm 575.976$   $\chi^2/\text{NDF}$ : 115.4/102

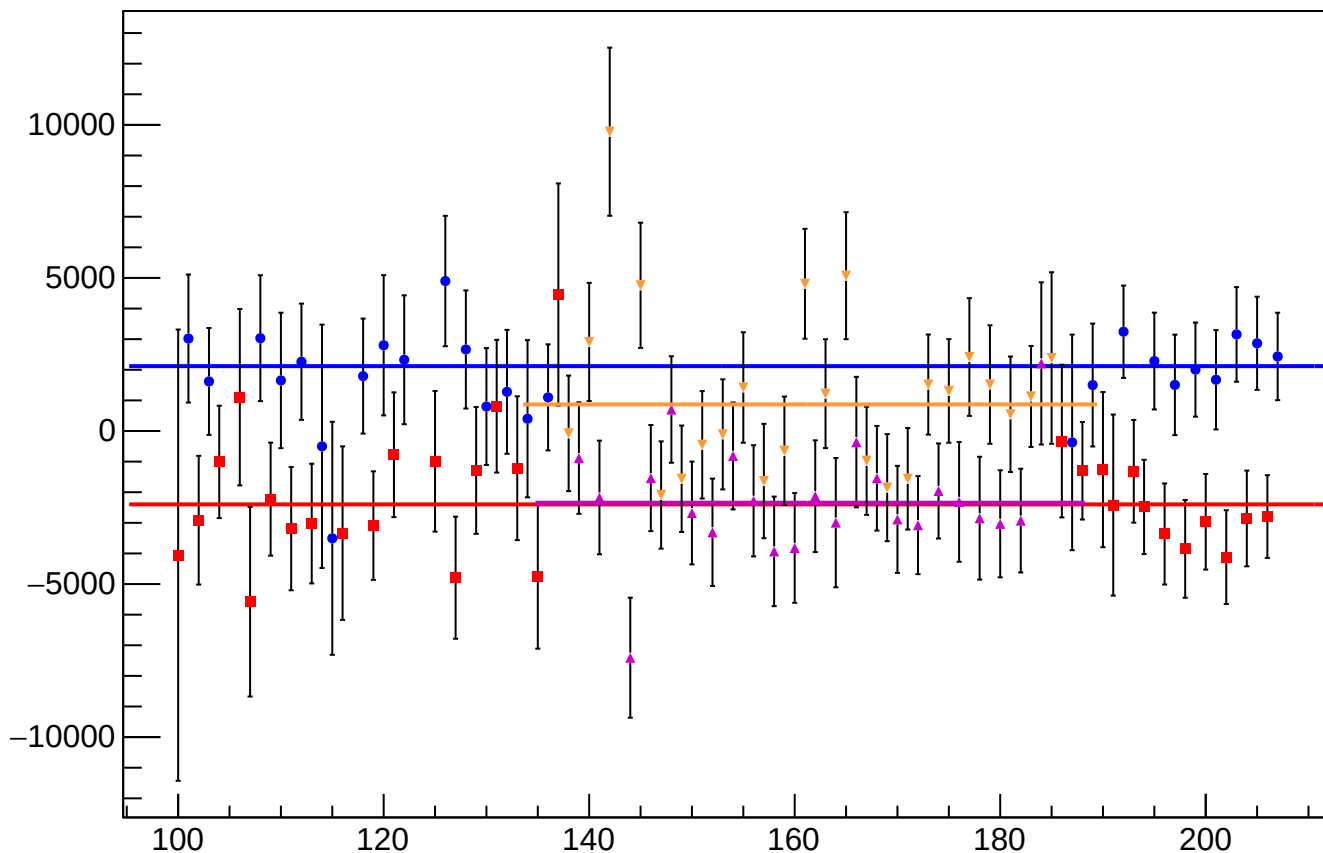
- sign  $801.005 \pm 802.731$   $\chi^2/\text{NDF}$ : 51.5/52

# asym\_usl\_atl2\_avg\_dit\_correction\_rms vs Slug



|                                 |                                   |                             |                                     |
|---------------------------------|-----------------------------------|-----------------------------|-------------------------------------|
| Right In: $3943.991 \pm 0.746$  | $\chi^2/\text{NDF}: 1806245.9/25$ | + sign $4586.736 \pm 0.585$ | $\chi^2/\text{NDF}: 4923187.9/49$   |
| Left Out: $5612.730 \pm 0.942$  | $\chi^2/\text{NDF}: 1188118.0/23$ |                             |                                     |
| Right Out: $3916.749 \pm 0.713$ | $\chi^2/\text{NDF}: 2247825.8/29$ | All: $4550.810 \pm 0.407$   | $\chi^2/\text{NDF}: 10444957.9/104$ |
| Left In: $5554.927 \pm 0.938$   | $\chi^2/\text{NDF}: 1332970.4/22$ | - sign $4516.955 \pm 0.568$ | $\chi^2/\text{NDF}: 5514437.6/52$   |

# eigen\_dit\_asym\_usl\_atl2\_avg\_mean vs Slug



Right In: 2118.740+/-370.583  $\chi^2/\text{NDF}$ : 8.6/25

Left Out: 868.410+/-377.180  $\chi^2/\text{NDF}$ : 39.7/23

Right Out: -2397.446+/-359.644  $\chi^2/\text{NDF}$ : 18.0/29

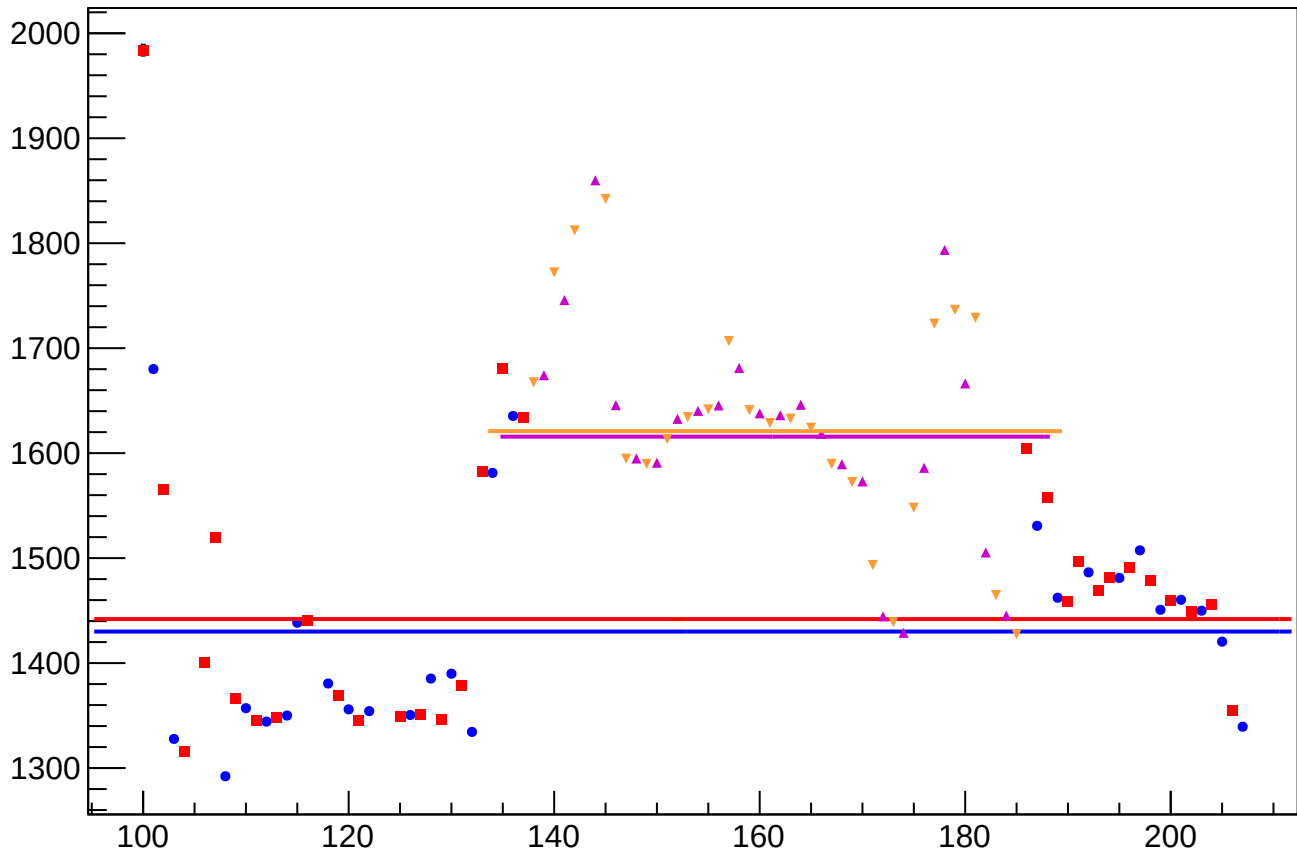
Left In: -2342.303+/-378.114  $\chi^2/\text{NDF}$ : 18.0/22

+ sign 1504.604+/-264.343  $\chi^2/\text{NDF}$ : 53.9/49

All: -461.024+/-185.578  $\chi^2/\text{NDF}$ : 199.0/102

- sign -2371.254+/-260.591  $\chi^2/\text{NDF}$ : 36.1/52

# eigen\_dit\_asym\_usl\_atl2\_avg\_rms vs Slug



Right In: 1430.041 $\pm$ 0.262  $\chi^2/\text{NDF}$ : 122864.9/25

Left Out: 1620.946 $\pm$ 0.267  $\chi^2/\text{NDF}$ : 141990.3/23

Right Out: 1441.942 $\pm$ 0.254  $\chi^2/\text{NDF}$ : 129448.7/29

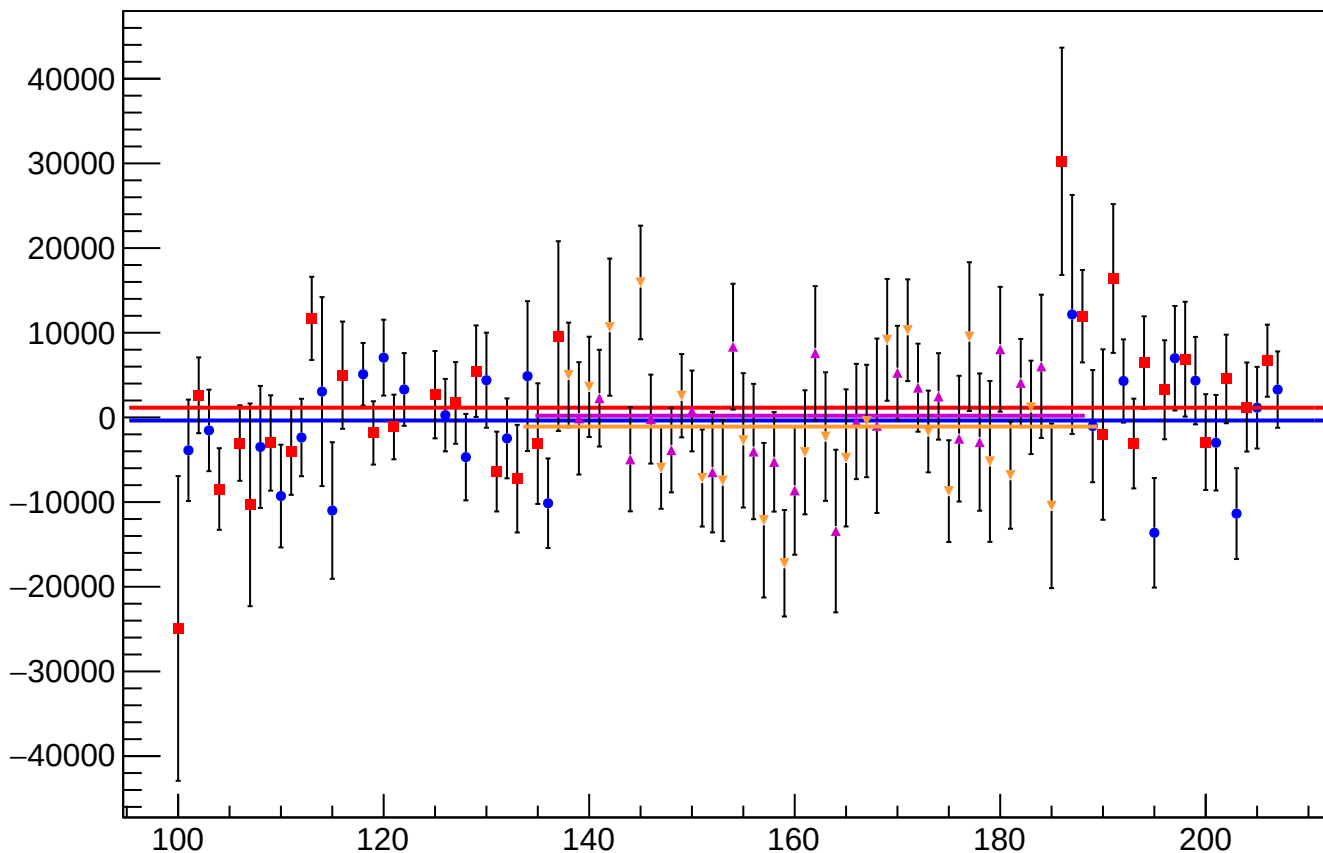
Left In: 1615.706 $\pm$ 0.267  $\chi^2/\text{NDF}$ : 137144.0/22

+ sign 1523.810 $\pm$ 0.187  $\chi^2/\text{NDF}$ : 525550.3/49

All: 1524.094 $\pm$ 0.131  $\chi^2/\text{NDF}$ : 1014166.5/10

- sign 1524.369 $\pm$ 0.184  $\chi^2/\text{NDF}$ : 488611.6/52

asym\_usl\_atl2\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In: -363.611 $\pm$ 1054.586  $\chi^2$ /NDF: 29.2/25

Left Out: -1082.239 $\pm$ 1332.405  $\chi^2$ /NDF: 32.9/23

Right Out: 1147.566 $\pm$ 1008.456  $\chi^2$ /NDF: 38.3/29

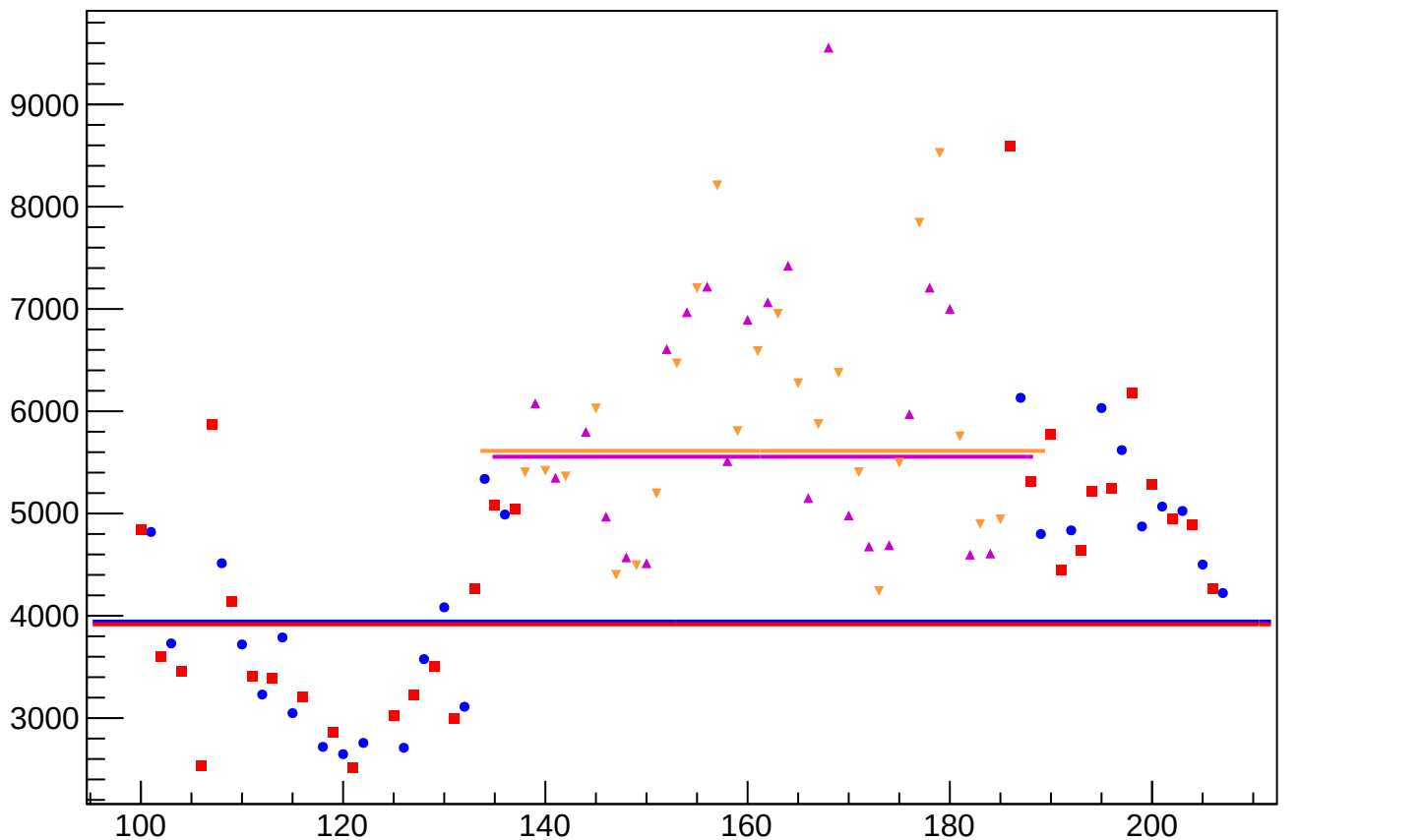
Left In: 201.663 $\pm$ 1326.175  $\chi^2$ /NDF: 12.9/22

+ sign -640.403 $\pm$ 826.914  $\chi^2$ /NDF: 62.3/49

All: 101.685 $\pm$ 575.976  $\chi^2$ /NDF: 115.4/102

- sign 801.001 $\pm$ 802.730  $\chi^2$ /NDF: 51.5/52

asym\_usl\_atl2\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 3943.984 $\pm$ 0.746  $\chi^2$ /NDF: 1806279.6/25

Left Out: 5612.739 $\pm$ 0.942  $\chi^2$ /NDF:1188118.8/23

Right Out: 3916.742 $\pm$ 0.713  $\chi^2$ /NDF: 2247855.1/29

Left In: 5554.935 $\pm$ 0.938  $\chi^2$ /NDF:1332972.0/22

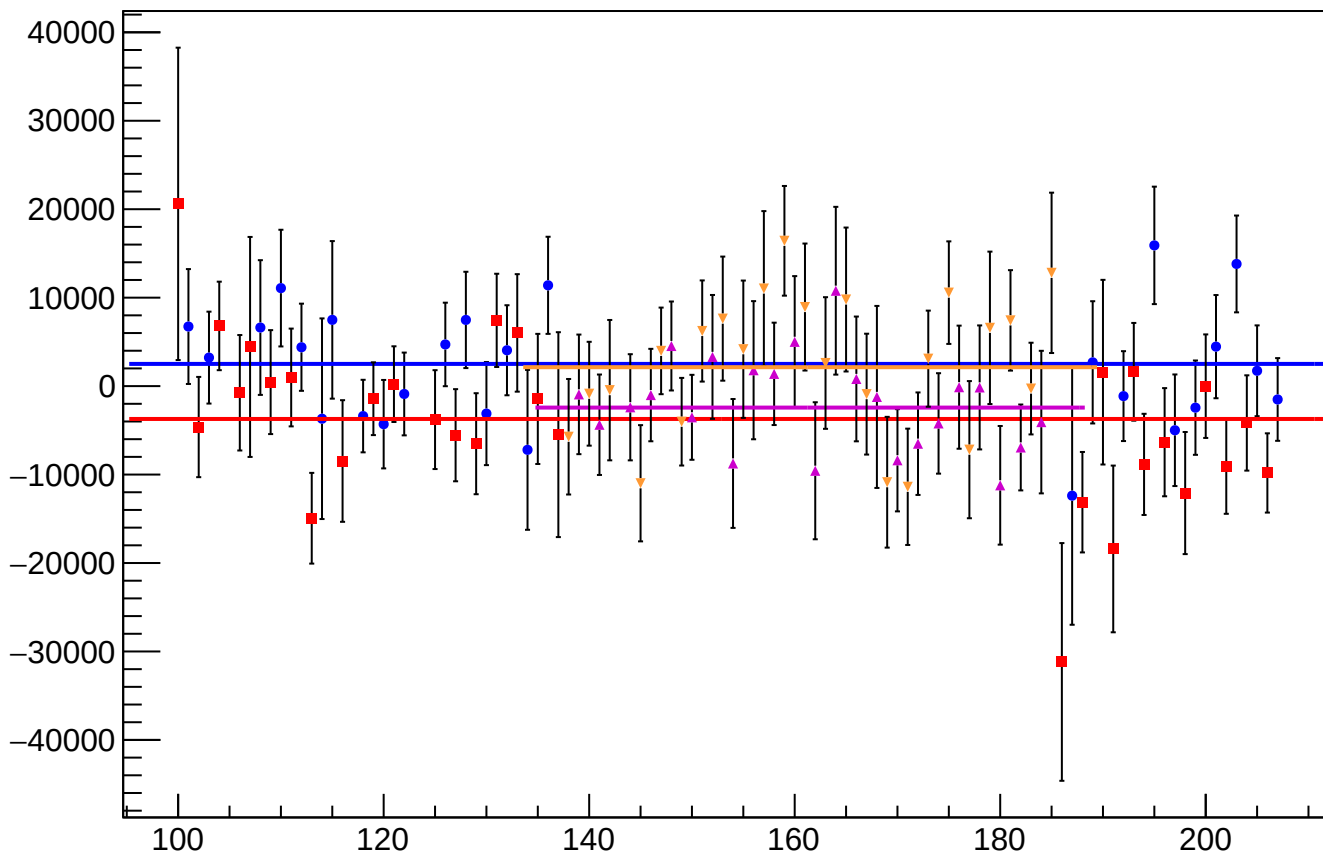
+ sign 4586.733 $\pm$ 0.585  $\chi^2$ /NDF: 4923256.3/49

All: 4550.807 $\pm$ 0.407  $\chi^2$ /NDF: 10445090.9/100

- sign 4516.951 $\pm$ 0.568  $\chi^2$ /NDF: 5514502.0/52



# asym\_usl\_atl2\_avg\_mean vs Slug



Right In: 2510.383+/-1122.492  $\chi^2/\text{NDF}$ : 26.5/25

Left Out: 2138.140+/-1324.387  $\chi^2/\text{NDF}$ :30.7/23

Right Out: -3713.979+/-1091.832  $\chi^2/\text{NDF}$ : 38.0/29

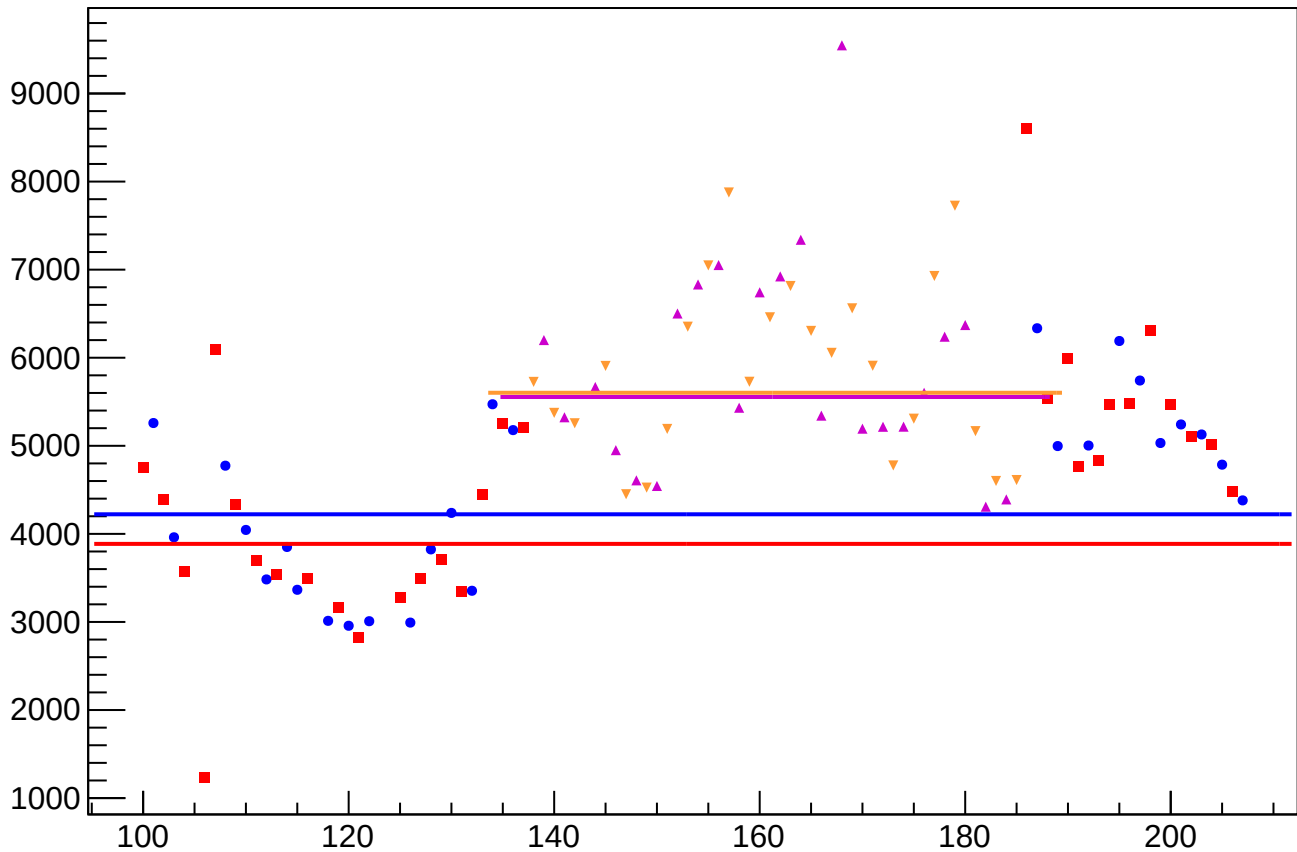
Left In: -2428.059+/-1321.080  $\chi^2/\text{NDF}$ :12.9/22

+ sign 2354.768+/-856.303  $\chi^2/\text{NDF}$ : 57.2/49

All: -466.686+/-600.233  $\chi^2/\text{NDF}$ : 130.0/102

- sign -3192.099+/-841.603  $\chi^2/\text{NDF}$ : 51.4/52

# asym\_usl\_atl2\_avg\_rms vs Slug



Right In: 4222.372+/-0.794  $\chi^2/\text{NDF}$ : 1468242.2/25

Left Out: 5602.266+/-0.936  $\chi^2/\text{NDF}$ : 940451.0/23

Right Out: 3886.375+/-0.730  $\chi^2/\text{NDF}$ : 3697951.2/29

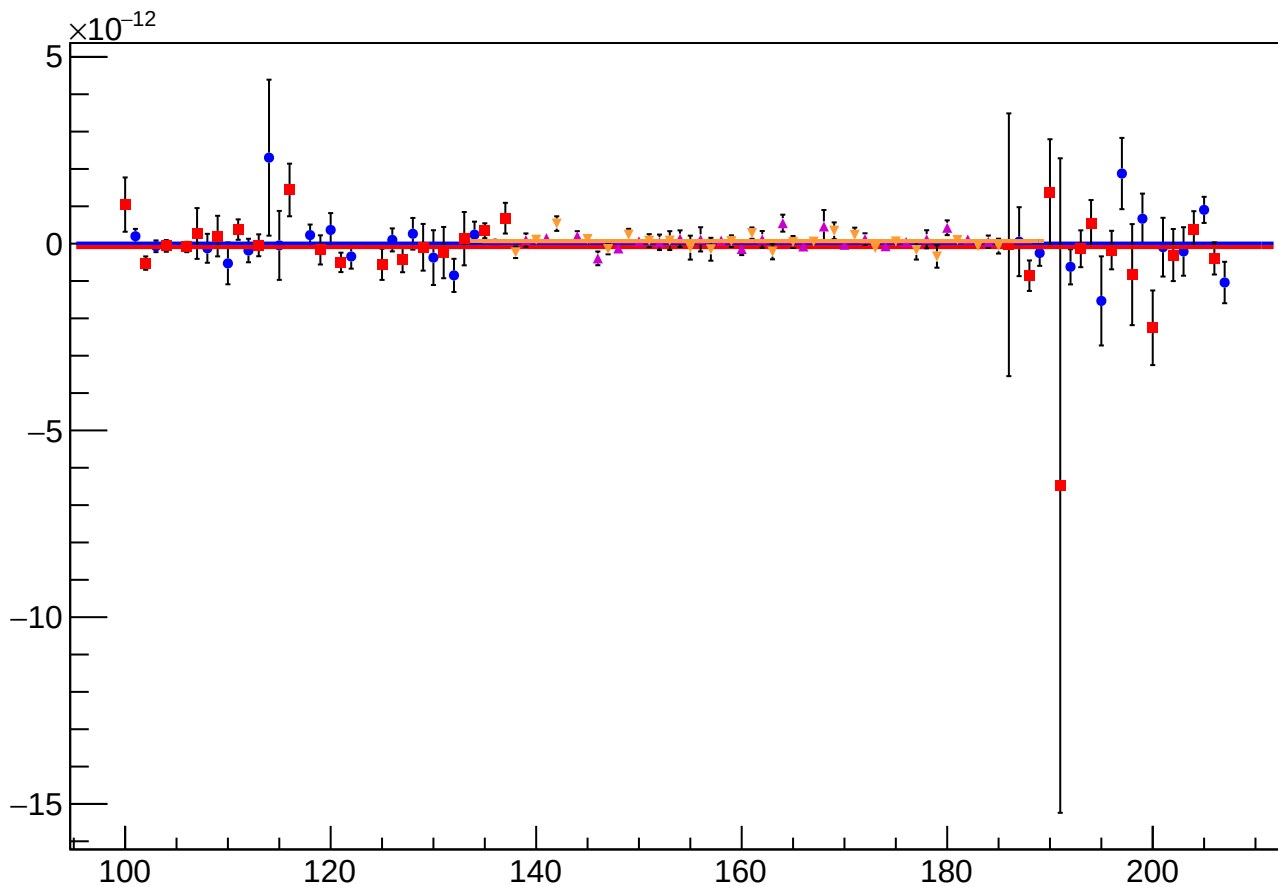
Left In: 5554.054+/-0.934  $\chi^2/\text{NDF}$ : 1112177.4/22

+ sign 4799.231+/-0.605  $\chi^2/\text{NDF}$ : 3672207.0/49

All: 4651.477+/-0.417  $\chi^2/\text{NDF}$ : 10575145.0/101

- sign 4518.232+/-0.575  $\chi^2/\text{NDF}$ : 6789692.8/52

asym\_usl\_atl2\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 30.2/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 28.3/23

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 42.2/29

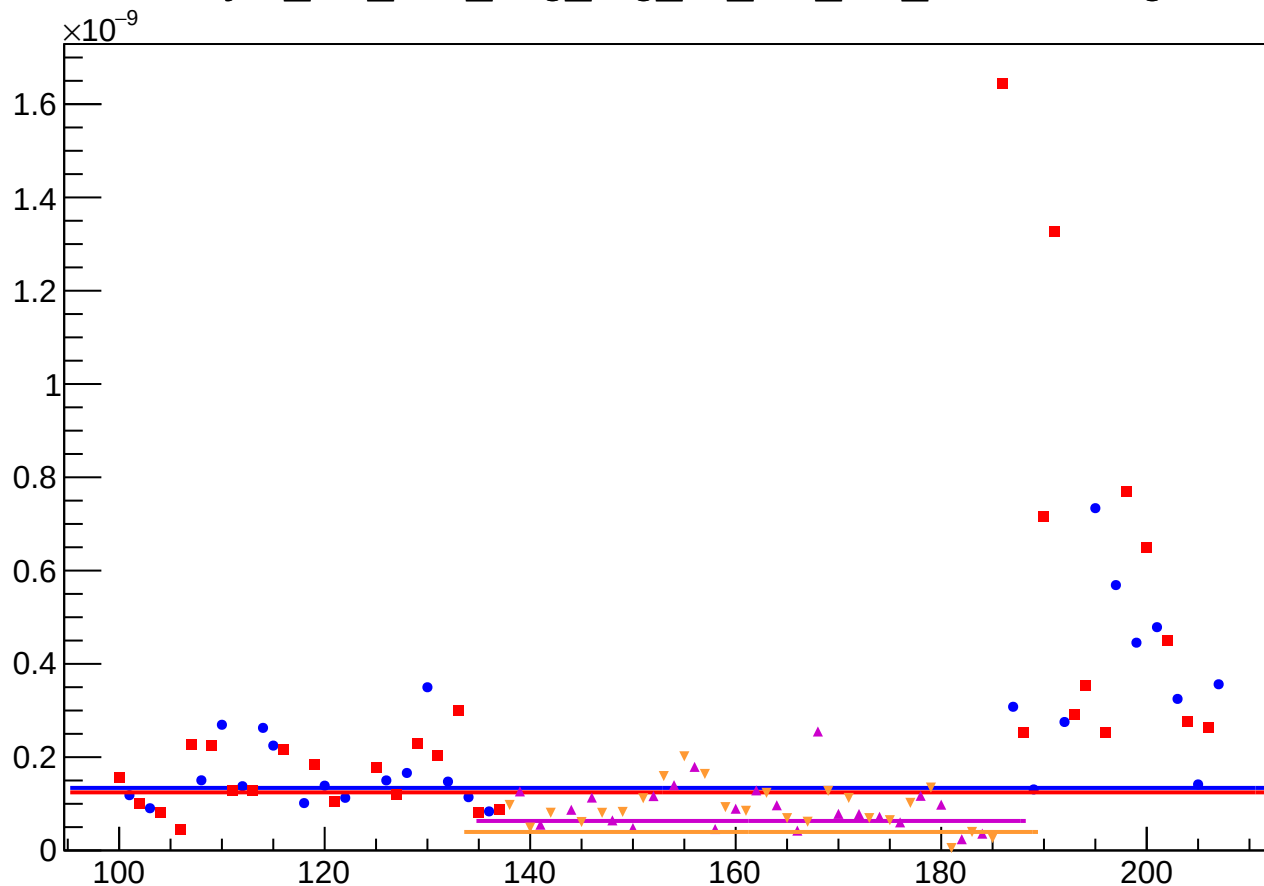
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 25.4/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 59.4/49

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 132.7/102

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 72.2/52

asym\_usl\_atl2\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 3309555.3/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 6954816.0/23

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 4809526.6/29

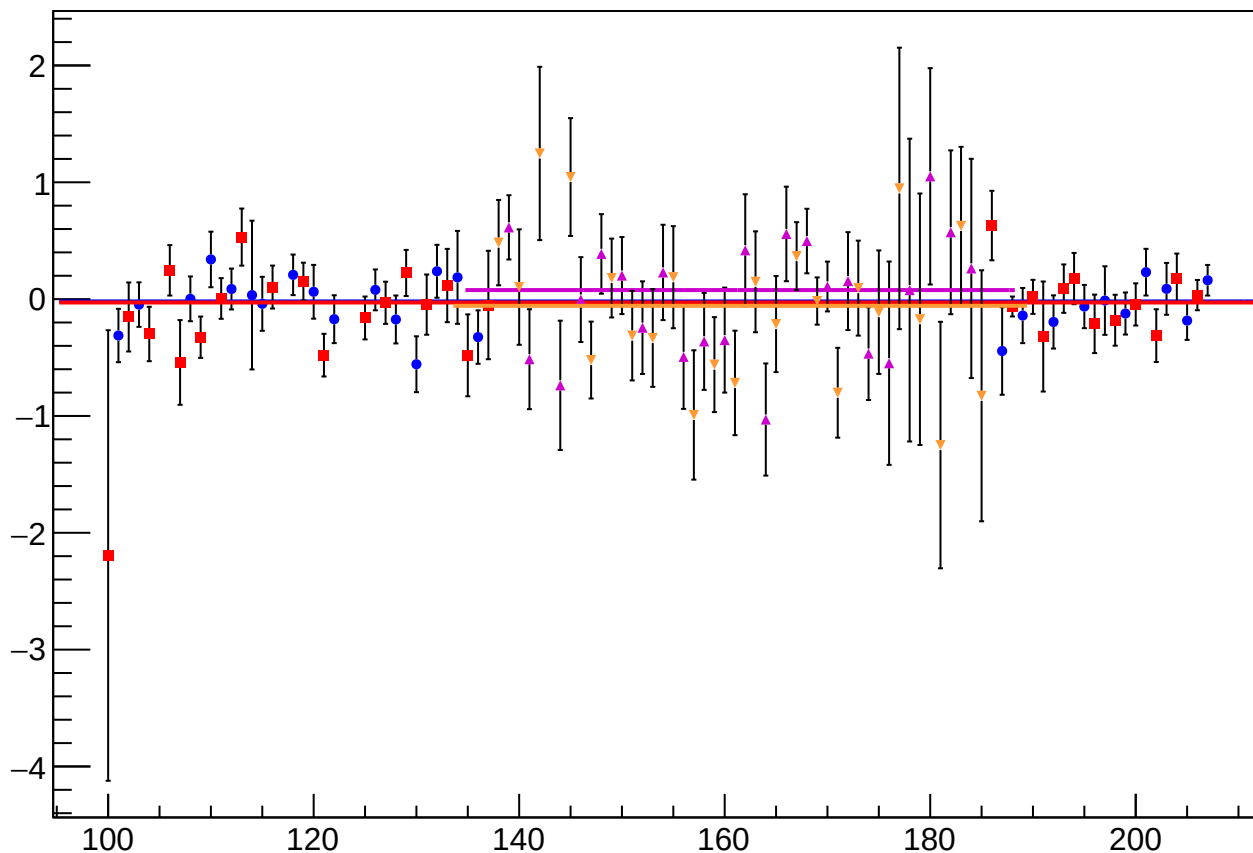
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 2922990.6/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 14030361.1/49

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 24484168.6/102

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 9364968.7/52

asym\_usl\_atl2\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.020 \pm 0.041$   $\chi^2/\text{NDF}$ : 23.3/25

Left Out:  $-0.057 \pm 0.085$   $\chi^2/\text{NDF}$ : 30.4/23

Right Out:  $-0.029 \pm 0.036$   $\chi^2/\text{NDF}$ : 37.0/29

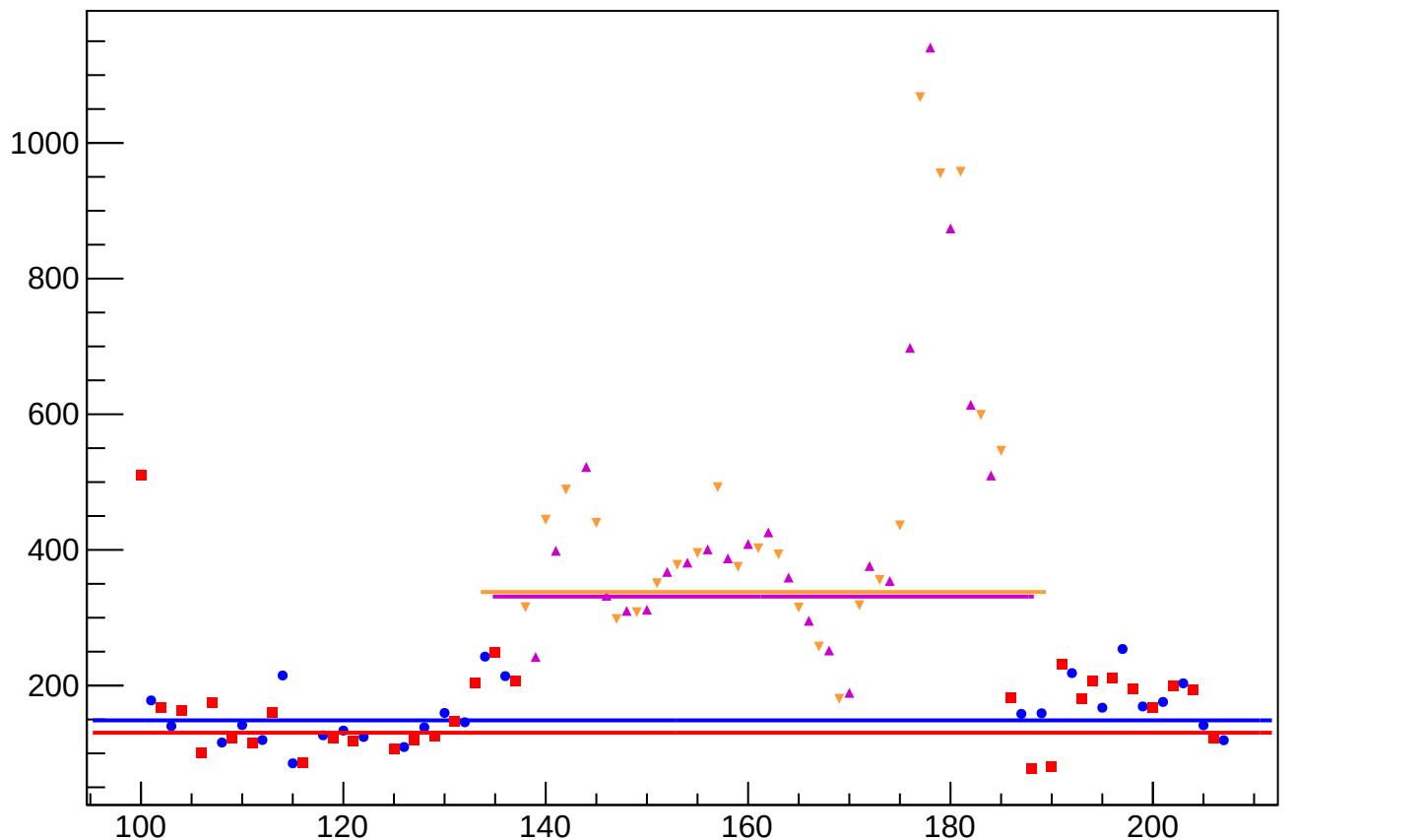
Left In:  $0.077 \pm 0.083$   $\chi^2/\text{NDF}$ : 27.0/22

+ sign  $-0.027 \pm 0.037$   $\chi^2/\text{NDF}$ : 53.8/49

All:  $-0.019 \pm 0.025$   $\chi^2/\text{NDF}$ : 119.3/102

- sign  $-0.012 \pm 0.033$   $\chi^2/\text{NDF}$ : 65.4/52

asym\_usl\_atl2\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 148.683+/-0.029  $\chi^2/\text{NDF}$ : 1536253.4/25

Left Out: 337.937+/-0.060  $\chi^2/\text{NDF}$ : 4517129.8/23

Right Out: 130.449+/-0.025  $\chi^2/\text{NDF}$ : 3206602.7/29

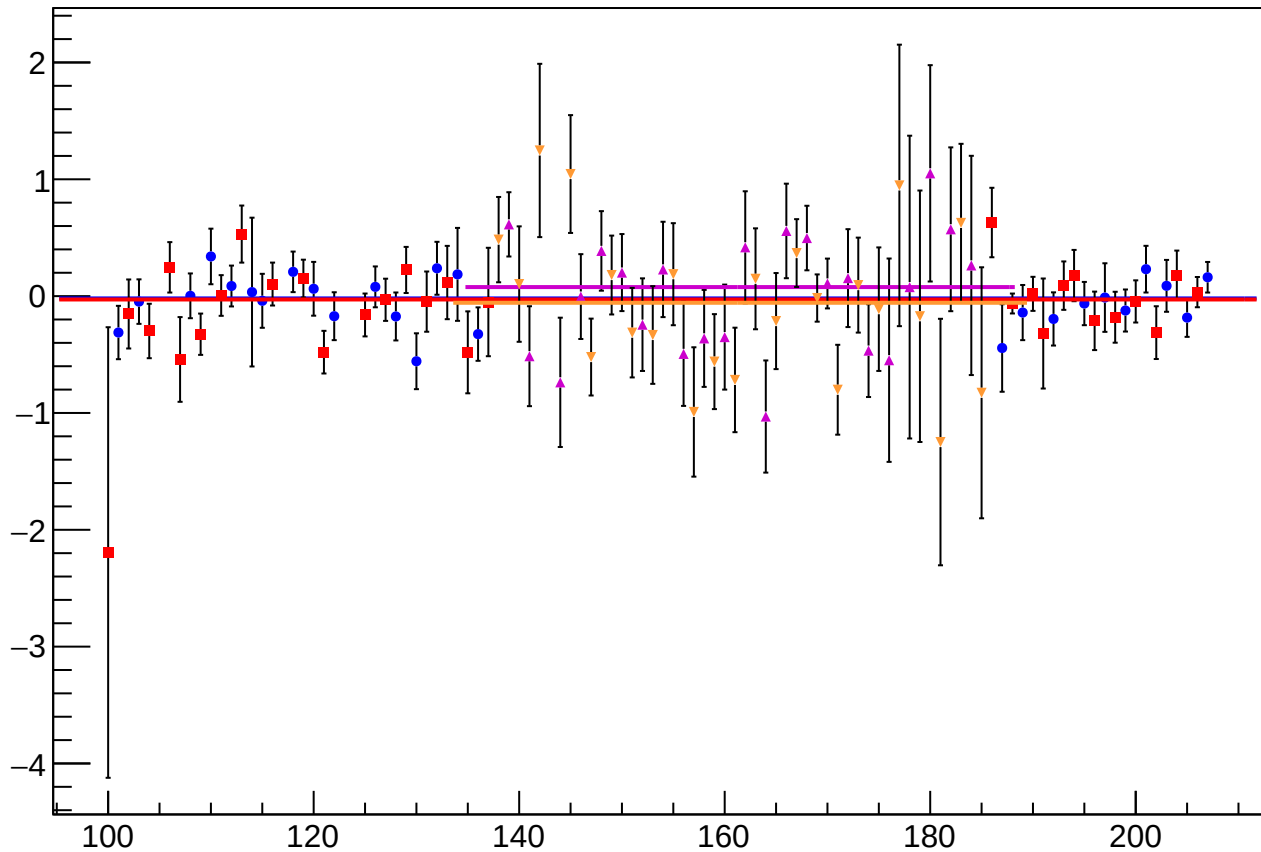
Left In: 331.158+/-0.059  $\chi^2/\text{NDF}$ : 4106959.8/22

+ sign 184.001+/-0.026  $\chi^2/\text{NDF}$ : 14031249.9/49

All: 171.635+/-0.017  $\chi^2/\text{NDF}$ : 31519868.5/10

- sign 161.781+/-0.023  $\chi^2/\text{NDF}$ : 17085398.1/52

asym\_usl\_atl2\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.020 \pm 0.041$   $\chi^2/\text{NDF}$ : 23.3/25

Left Out:  $-0.057 \pm 0.085$   $\chi^2/\text{NDF}$ : 30.4/23

Right Out:  $-0.029 \pm 0.036$   $\chi^2/\text{NDF}$ : 37.0/29

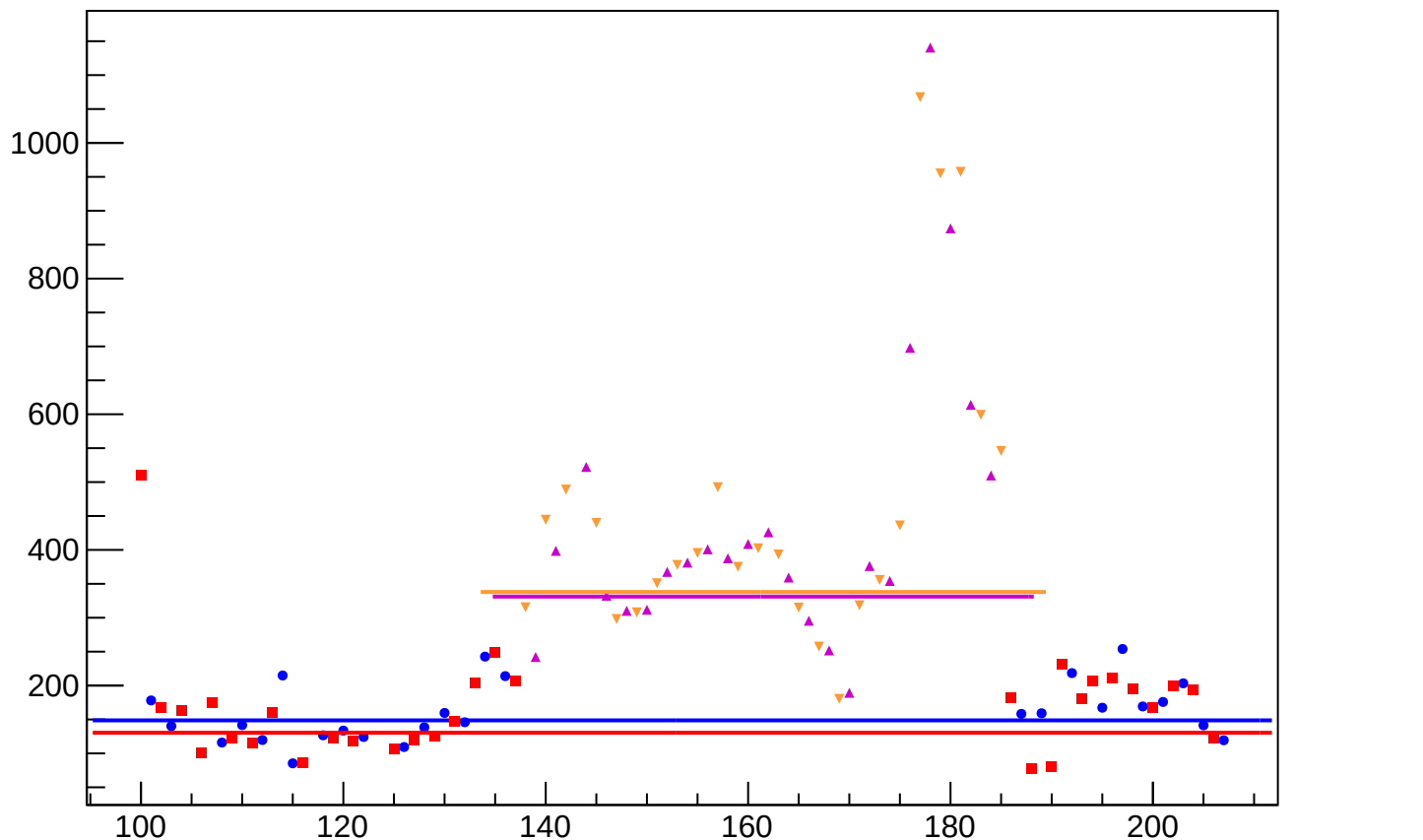
Left In:  $0.077 \pm 0.083$   $\chi^2/\text{NDF}$ : 27.0/22

+ sign  $-0.027 \pm 0.037$   $\chi^2/\text{NDF}$ : 53.8/49

All:  $-0.019 \pm 0.025$   $\chi^2/\text{NDF}$ : 119.3/102

- sign  $-0.012 \pm 0.033$   $\chi^2/\text{NDF}$ : 65.4/52

asym\_usl\_atl2\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 148.683+/-0.029  $\chi^2/\text{NDF}$ : 1536253.4/25

Left Out: 337.937+/-0.060  $\chi^2/\text{NDF}$ : 4517129.8/23

Right Out: 130.449+/-0.025  $\chi^2/\text{NDF}$ : 3206602.7/29

Left In: 331.158+/-0.059  $\chi^2/\text{NDF}$ : 4106959.8/22

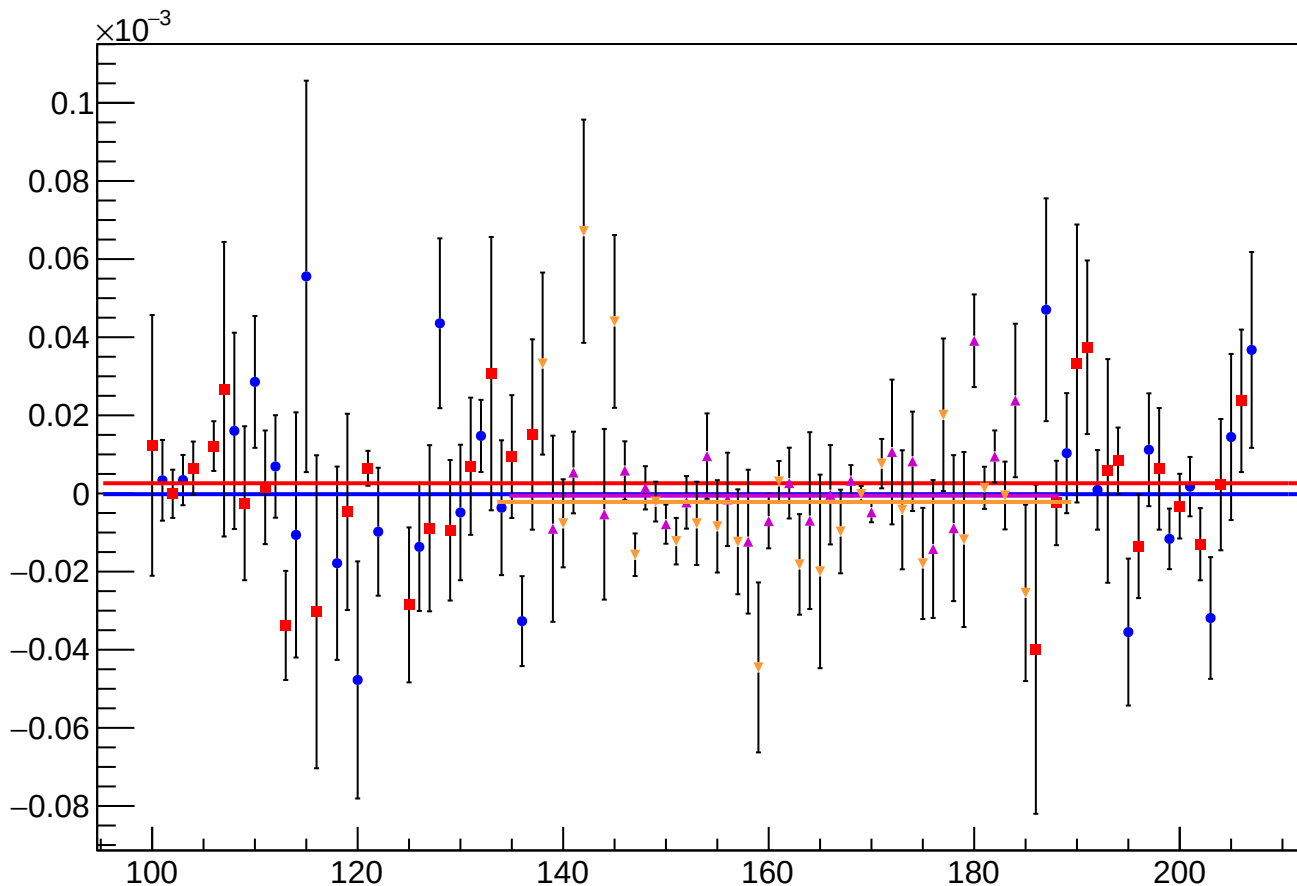
+ sign 184.001+/-0.026  $\chi^2/\text{NDF}$ : 14031249.9/49

All: 171.635+/-0.017  $\chi^2/\text{NDF}$ : 31519868.5/10

- sign 161.781+/-0.023  $\chi^2/\text{NDF}$ : 17085398.1/52



asym\_usl\_atl2\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 40.5/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 37.9/23

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 27.1/29

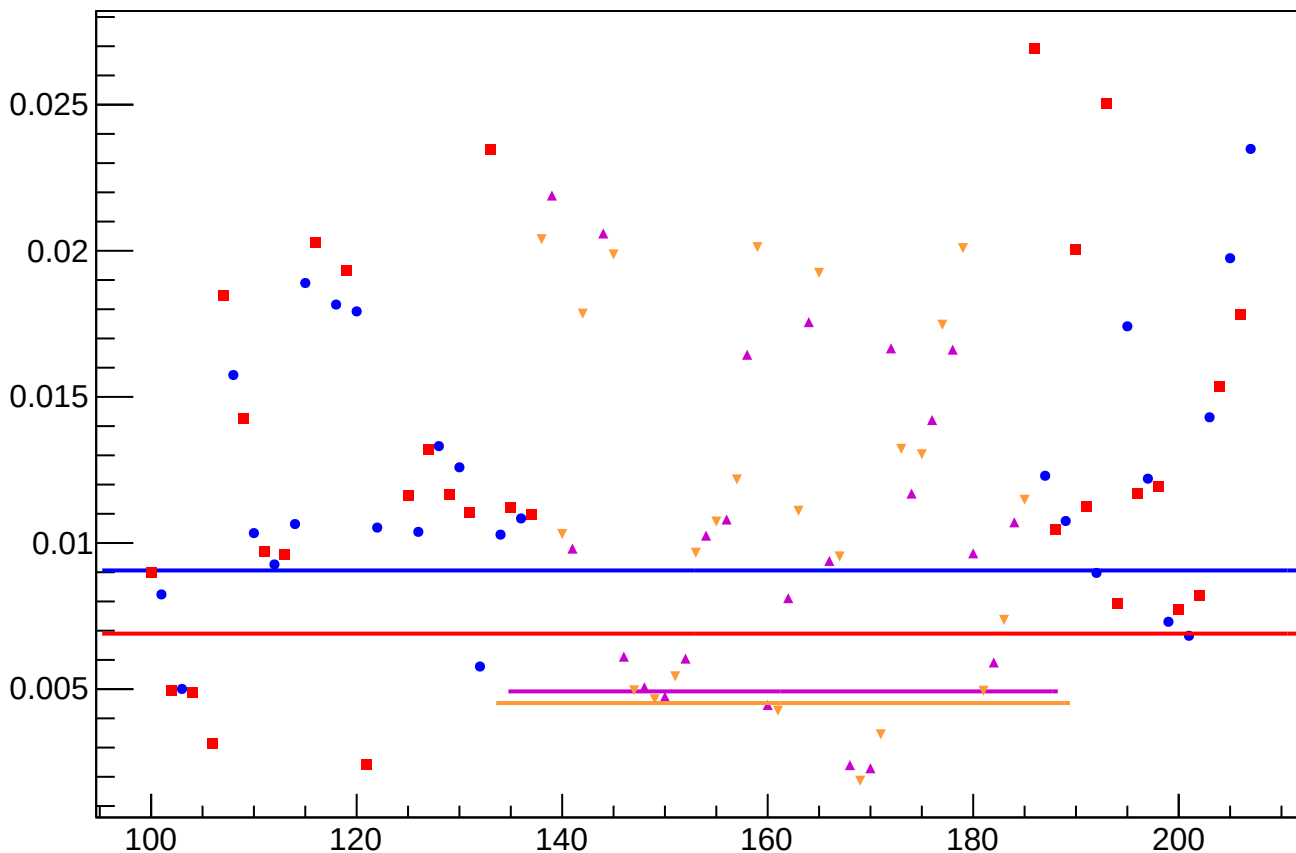
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 26.2/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 78.9/49

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 135.4/102

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 54.9/52

asym\_usl\_atl2\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 4192444.3/25

Left Out: 0.005 $\pm$ 0.000  $\chi^2$ /NDF:14239550.6/23

Right Out: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 9221115.9/29

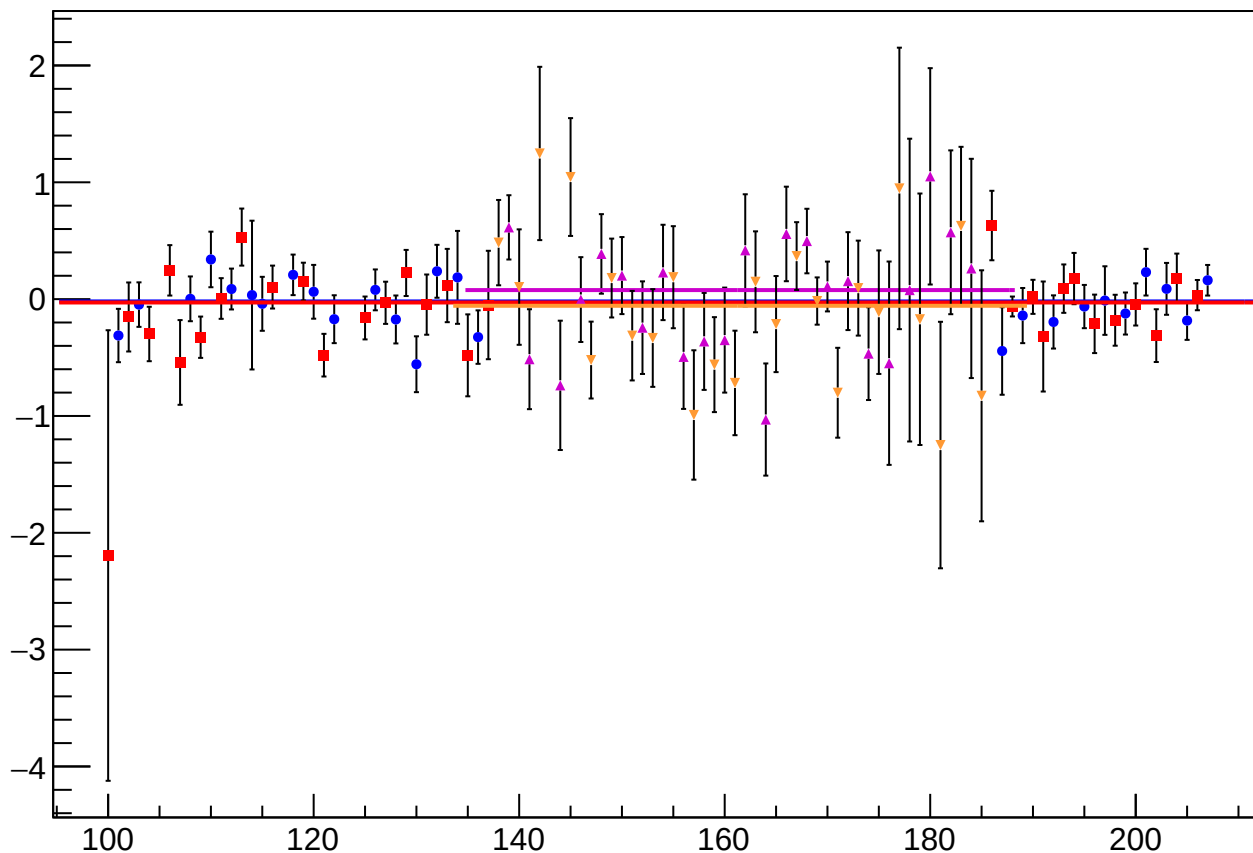
Left In: 0.005 $\pm$ 0.000  $\chi^2$ /NDF:11626984.8/22

+ sign 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 23172947.2/49

All: 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 45197963.3/102

- sign 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 22024106.5/52

asym\_usl\_atl2\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.020 \pm 0.041$   $\chi^2/\text{NDF}$ : 23.3/25

Left Out:  $-0.057 \pm 0.085$   $\chi^2/\text{NDF}$ : 30.4/23

Right Out:  $-0.029 \pm 0.036$   $\chi^2/\text{NDF}$ : 37.0/29

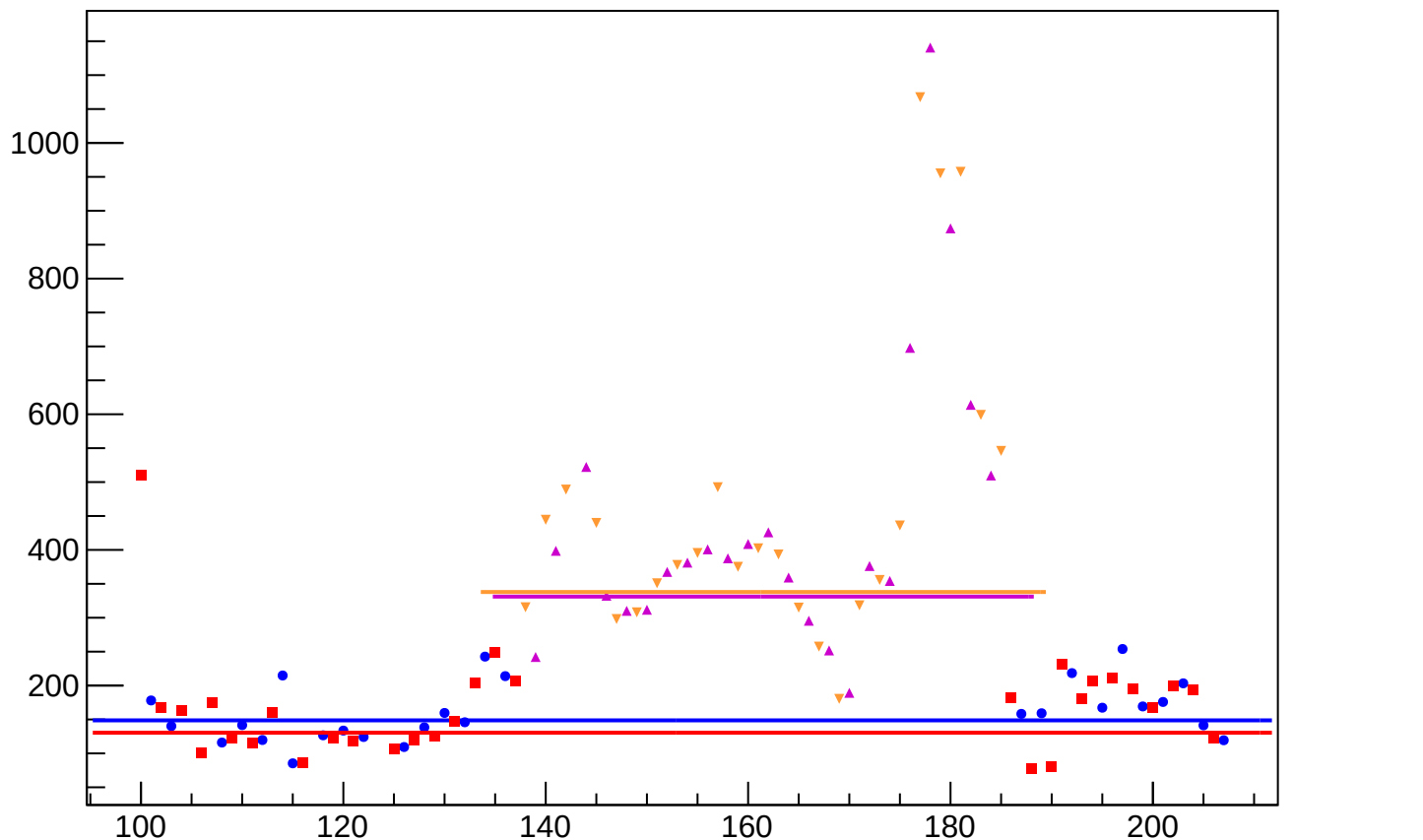
Left In:  $0.077 \pm 0.083$   $\chi^2/\text{NDF}$ : 27.0/22

+ sign  $-0.027 \pm 0.037$   $\chi^2/\text{NDF}$ : 53.8/49

All:  $-0.019 \pm 0.025$   $\chi^2/\text{NDF}$ : 119.3/102

- sign  $-0.012 \pm 0.033$   $\chi^2/\text{NDF}$ : 65.4/52

asym\_usl\_atl2\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 148.684+/-0.029  $\chi^2/\text{NDF}$ : 1536234.5/25

Left Out: 337.939+/-0.060  $\chi^2/\text{NDF}$ : 4517201.8/23

Right Out: 130.448+/-0.025  $\chi^2/\text{NDF}$ : 3206779.3/29

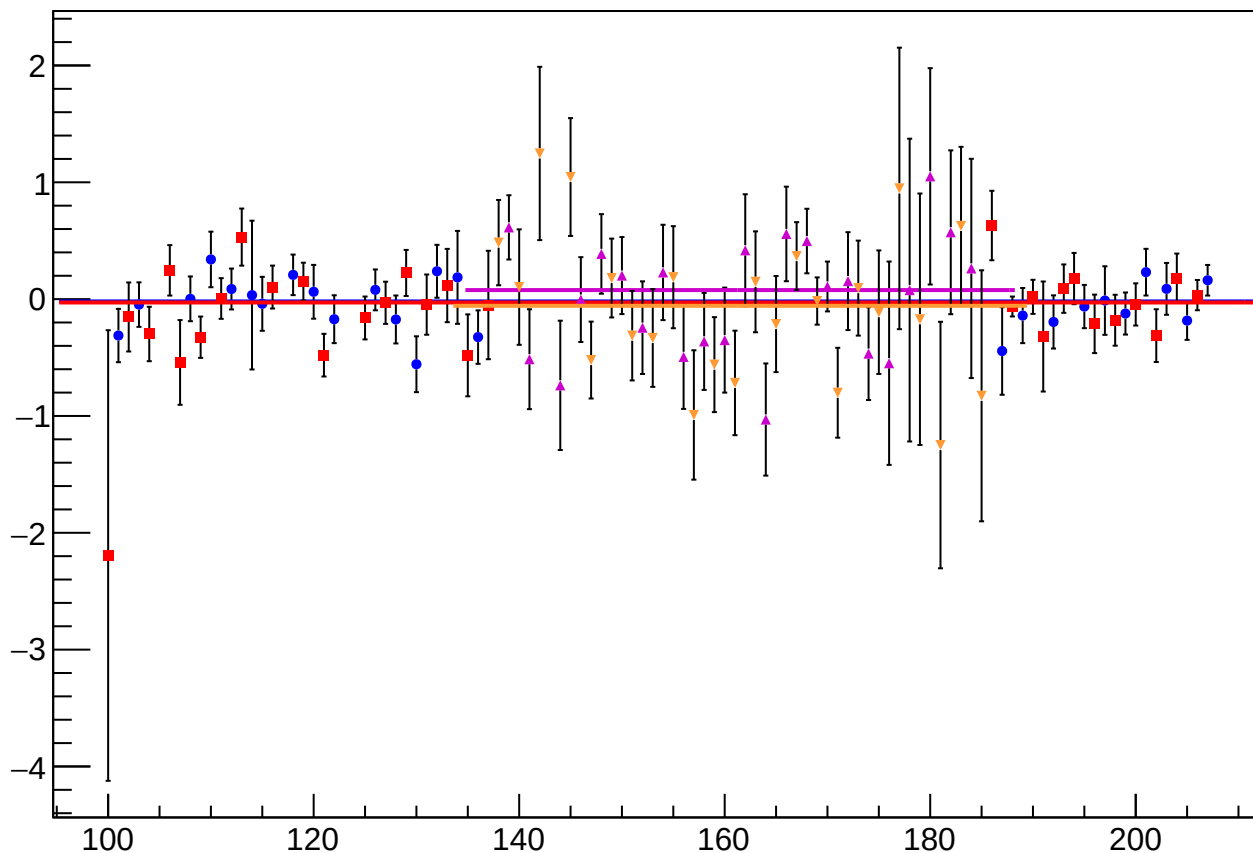
Left In: 331.161+/-0.059  $\chi^2/\text{NDF}$ : 4106963.1/22

+ sign 184.002+/-0.026  $\chi^2/\text{NDF}$ : 14031339.0/49

All: 171.635+/-0.017  $\chi^2/\text{NDF}$ : 31520480.0/10

- sign 161.779+/-0.023  $\chi^2/\text{NDF}$ : 17085854.2/52

asym\_usl\_atl2\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.020 \pm 0.041$   $\chi^2/\text{NDF}$ : 23.3/25

Left Out:  $-0.057 \pm 0.085$   $\chi^2/\text{NDF}$ : 30.4/23

Right Out:  $-0.029 \pm 0.036$   $\chi^2/\text{NDF}$ : 37.0/29

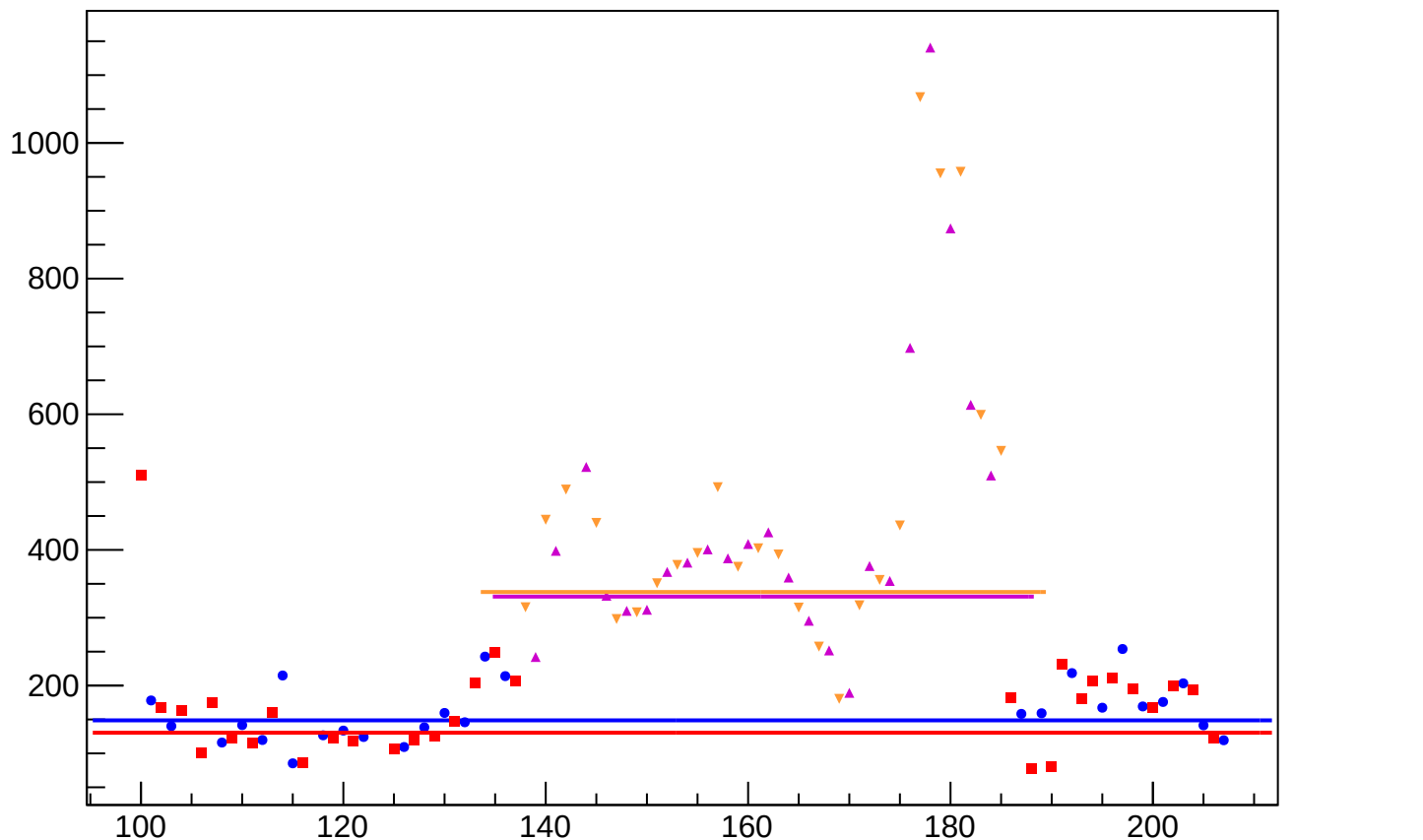
Left In:  $0.077 \pm 0.083$   $\chi^2/\text{NDF}$ : 27.0/22

+ sign  $-0.027 \pm 0.037$   $\chi^2/\text{NDF}$ : 53.8/49

All:  $-0.019 \pm 0.025$   $\chi^2/\text{NDF}$ : 119.3/102

- sign  $-0.012 \pm 0.033$   $\chi^2/\text{NDF}$ : 65.4/52

asym\_usl\_atl2\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 148.684 $\pm$ 0.029  $\chi^2$ /NDF: 1536234.5/25

Left Out: 337.939 $\pm$ 0.060  $\chi^2$ /NDF: 4517201.8/23

Right Out: 130.448 $\pm$ 0.025  $\chi^2$ /NDF: 3206779.3/29

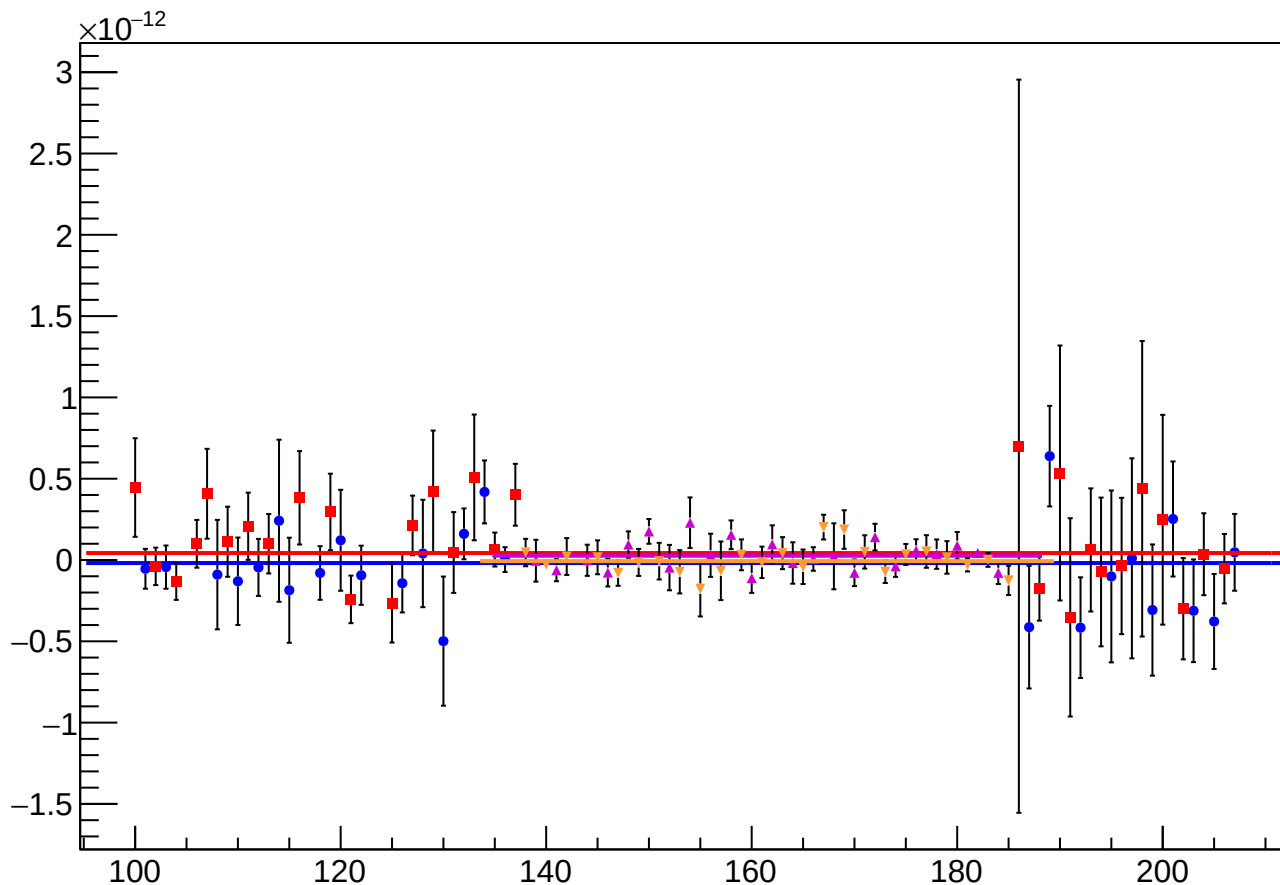
Left In: 331.161 $\pm$ 0.059  $\chi^2$ /NDF: 4106963.1/22

+ sign 184.002 $\pm$ 0.026  $\chi^2$ /NDF: 14031339.0/49

All: 171.635 $\pm$ 0.017  $\chi^2$ /NDF: 31520480.0/10

- sign 161.779 $\pm$ 0.023  $\chi^2$ /NDF: 17085854.2/52

asym\_usl\_atl2\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 20.7/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 18.1/23

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 26.3/29

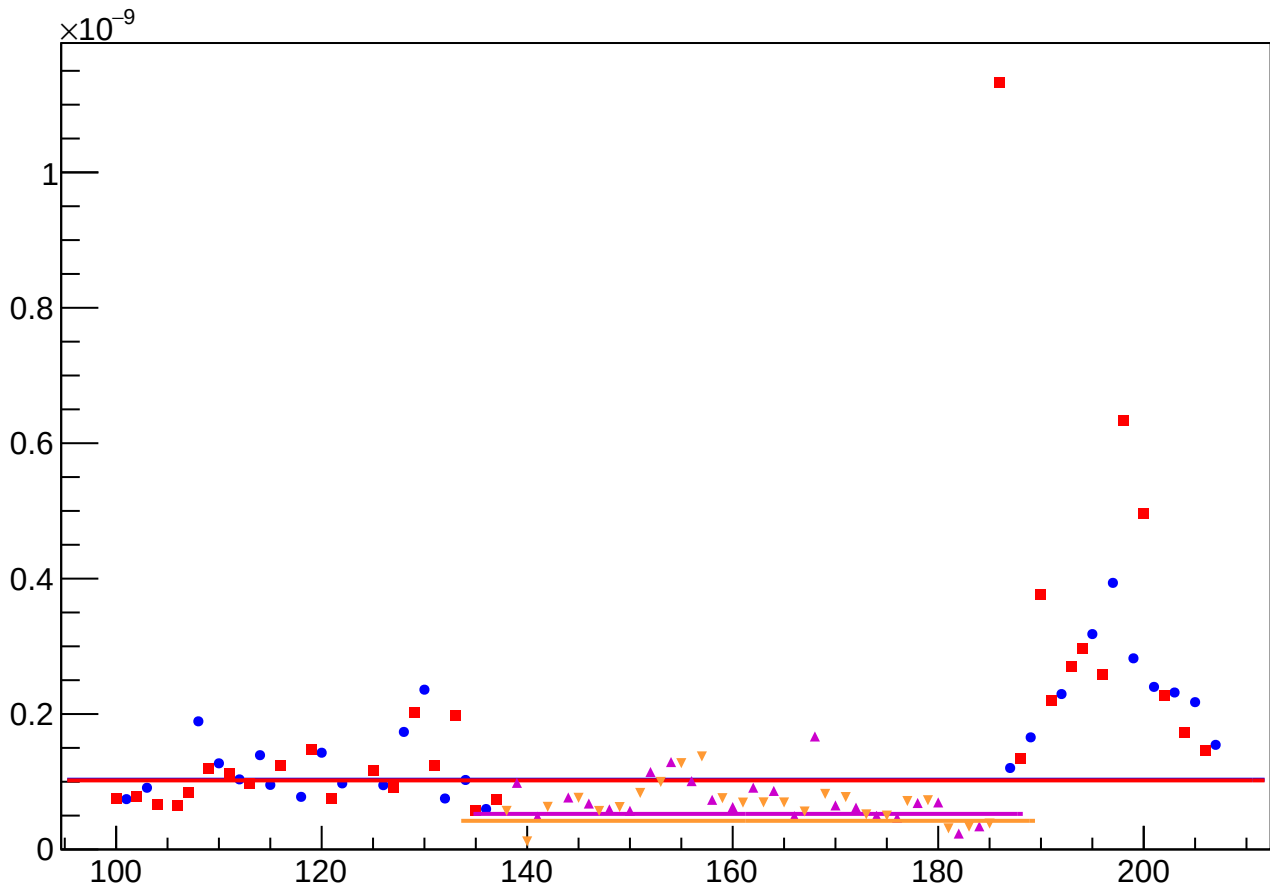
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 22.8/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 38.9/49

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 91.6/102

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 49.3/52

asym\_usl\_atl2\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4019627.6/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6680117.5/23

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5133090.7/29

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4897147.5/22

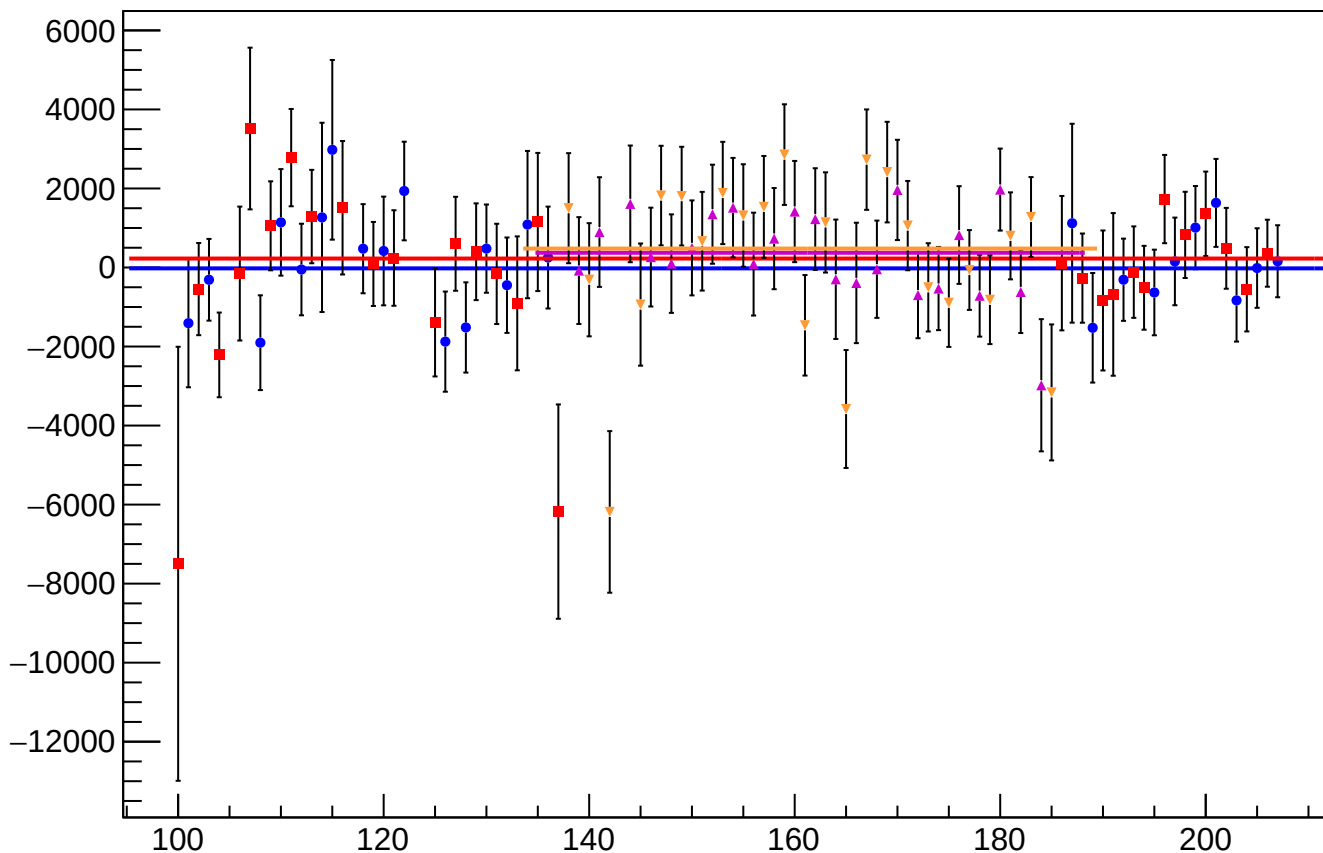
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14885353.2/49

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 28272447.6/102

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12836183.0/52



# reg\_asym\_usl\_atl2\_dd\_mean vs Slug



Right In:  $-22.171 \pm 239.155$   $\chi^2/\text{NDF}$ : 19.0/25

Left Out:  $479.555 \pm 256.330$   $\chi^2/\text{NDF}$ : 45.2/23

Right Out:  $226.652 \pm 231.139$   $\chi^2/\text{NDF}$ : 29.6/29

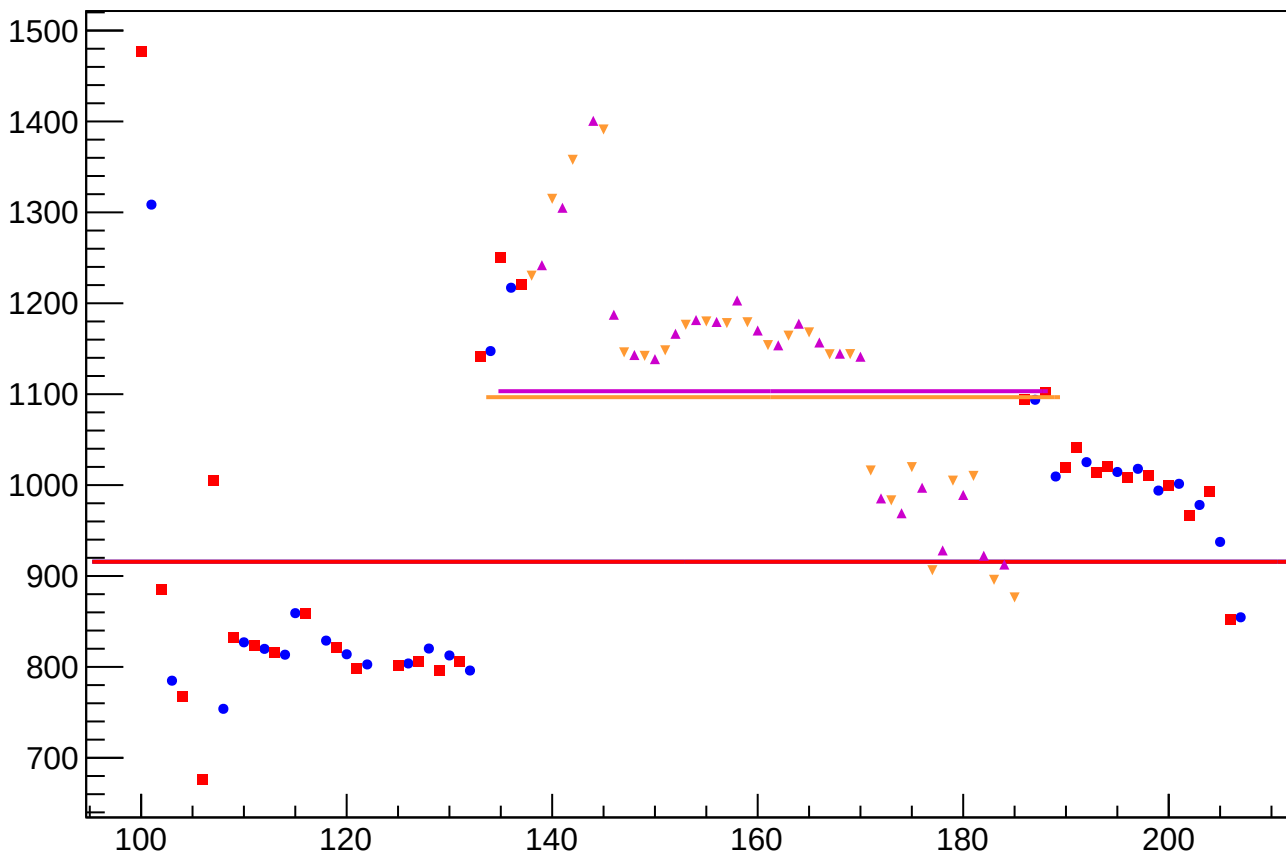
Left In:  $372.926 \pm 259.314$   $\chi^2/\text{NDF}$ : 16.0/22

+ sign  $211.322 \pm 174.865$   $\chi^2/\text{NDF}$ : 66.2/49

All:  $251.903 \pm 122.820$   $\chi^2/\text{NDF}$ : 112.1/102

- sign  $291.414 \pm 172.544$   $\chi^2/\text{NDF}$ : 45.8/52

# reg\_asym\_usl\_atl2\_dd\_rms vs Slug



Right In: 915.789 $\pm$ 0.169  $\chi^2$ /NDF: 573357.5/25

Left Out: 1096.711 $\pm$ 0.181  $\chi^2$ /NDF: 480498.6/23

Right Out: 915.654 $\pm$ 0.162  $\chi^2$ /NDF: 597819.9/29

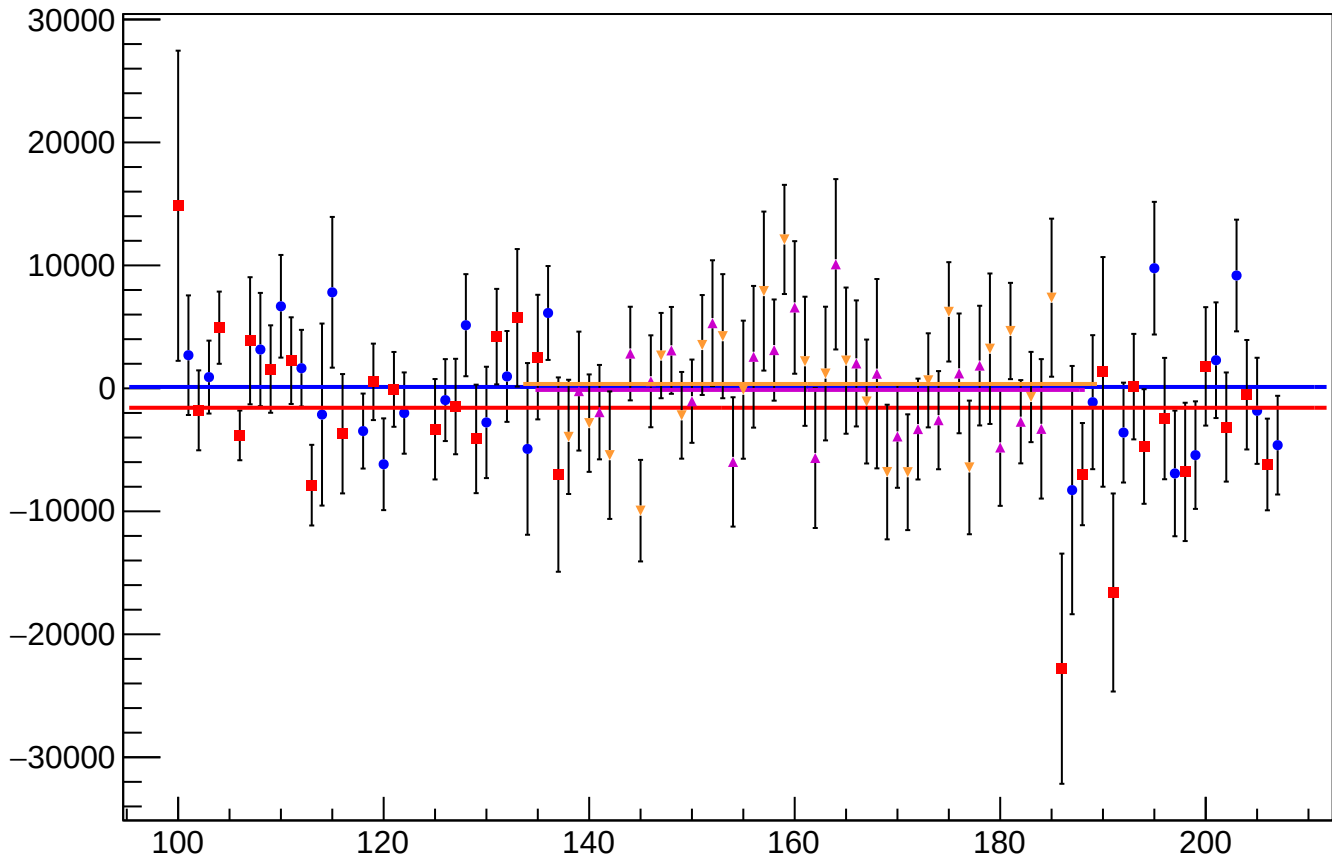
Left In: 1103.281 $\pm$ 0.183  $\chi^2$ /NDF: 447540.4/22

+ sign 999.987 $\pm$ 0.124  $\chi^2$ /NDF: 1586528.9/49

All: 999.041 $\pm$ 0.087  $\chi^2$ /NDF: 3218811.8/102

- sign 998.127 $\pm$ 0.122  $\chi^2$ /NDF: 1632167.9/52

asym\_usl\_atl2\_dd\_reg\_correction\_mean vs Slug



Right In: 114.172 $\pm$ 822.824  $\chi^2/\text{NDF}$ : 28.9/25

Left Out: 357.729 $\pm$ 934.220  $\chi^2/\text{NDF}$ : 30.3/23

Right Out: -1577.546 $\pm$ 740.804  $\chi^2/\text{NDF}$ : 35.2/29

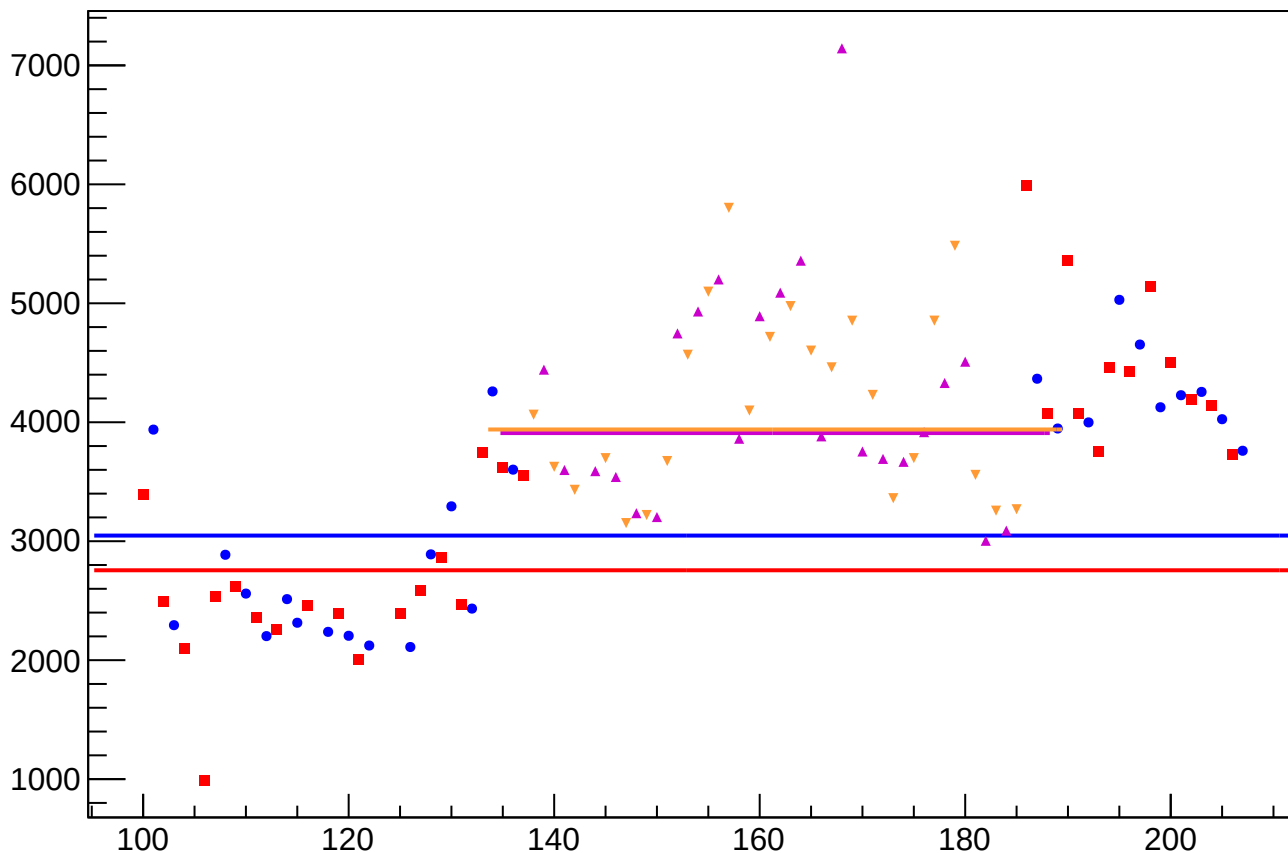
Left In: -126.696 $\pm$ 932.645  $\chi^2/\text{NDF}$ : 13.8/22

+ sign 220.571 $\pm$ 617.472  $\chi^2/\text{NDF}$ : 59.2/49

All: -436.441 $\pm$ 422.779  $\chi^2/\text{NDF}$ : 111.8/102

- sign -1016.287 $\pm$ 580.079  $\chi^2/\text{NDF}$ : 50.4/52

# asym\_usl\_atl2\_dd\_reg\_correction\_rms vs Slug



Right In: 3047.381 $\pm$ 0.582  $\chi^2/\text{NDF}$ : 2356301.8/25

Left Out: 3939.261 $\pm$ 0.661  $\chi^2/\text{NDF}$ : 1092666.9/23

Right Out: 2755.701 $\pm$ 0.524  $\chi^2/\text{NDF}$ : 4469058.7/29

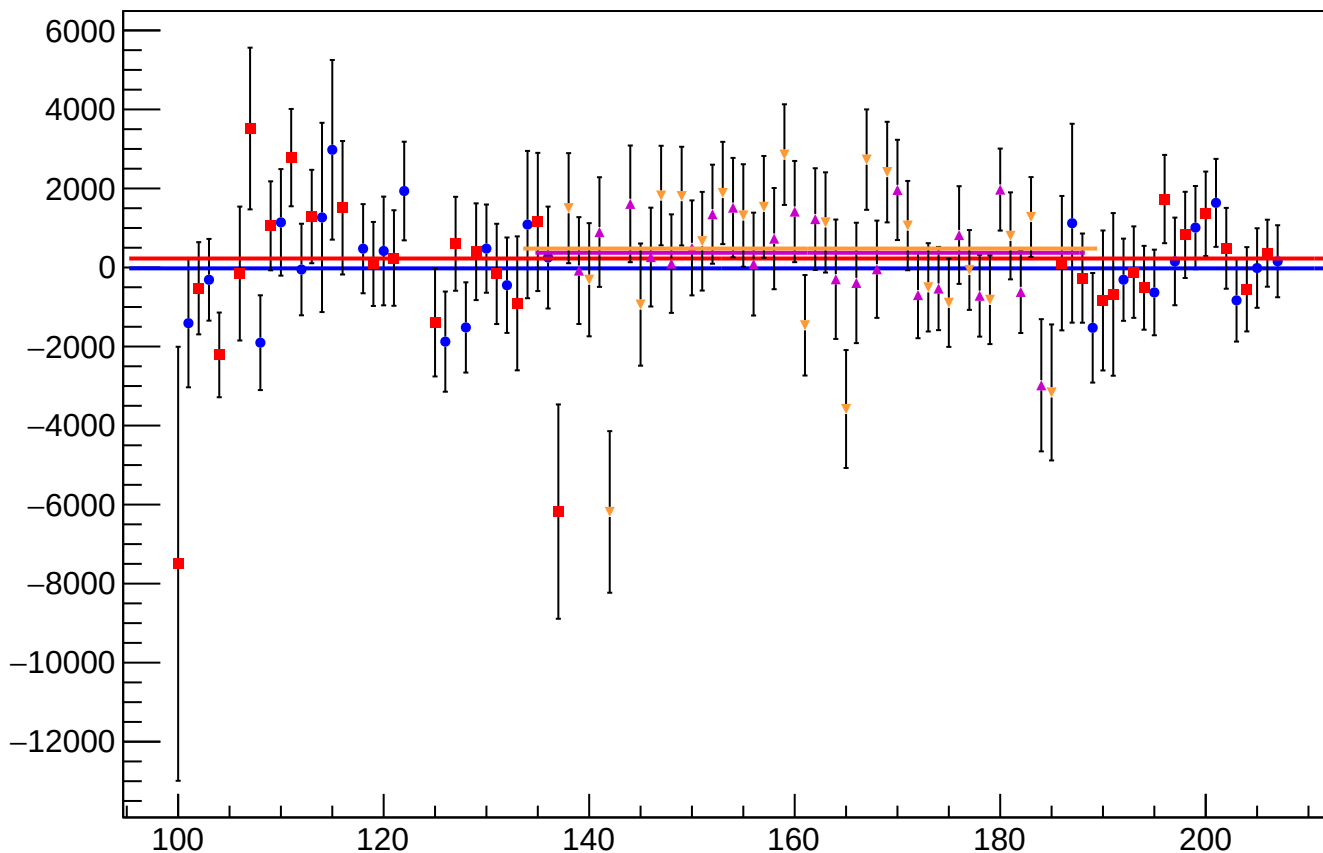
Left In: 3909.133 $\pm$ 0.659  $\chi^2/\text{NDF}$ : 1300774.2/22

+ sign 3437.002 $\pm$ 0.437  $\chi^2/\text{NDF}$ : 4475485.1/49

All: 3312.120 $\pm$ 0.299  $\chi^2/\text{NDF}$ : 12274963.1/100

- sign 3201.905 $\pm$ 0.410  $\chi^2/\text{NDF}$ : 7645469.6/52

# cor\_asym\_usl\_atl2\_dd\_mean vs Slug



Right In:  $-22.171 \pm 239.155$   $\chi^2/\text{NDF}$ : 19.0/25

Left Out:  $479.583 \pm 256.330$   $\chi^2/\text{NDF}$ : 45.2/23

Right Out:  $227.507 \pm 231.141$   $\chi^2/\text{NDF}$ : 29.6/29

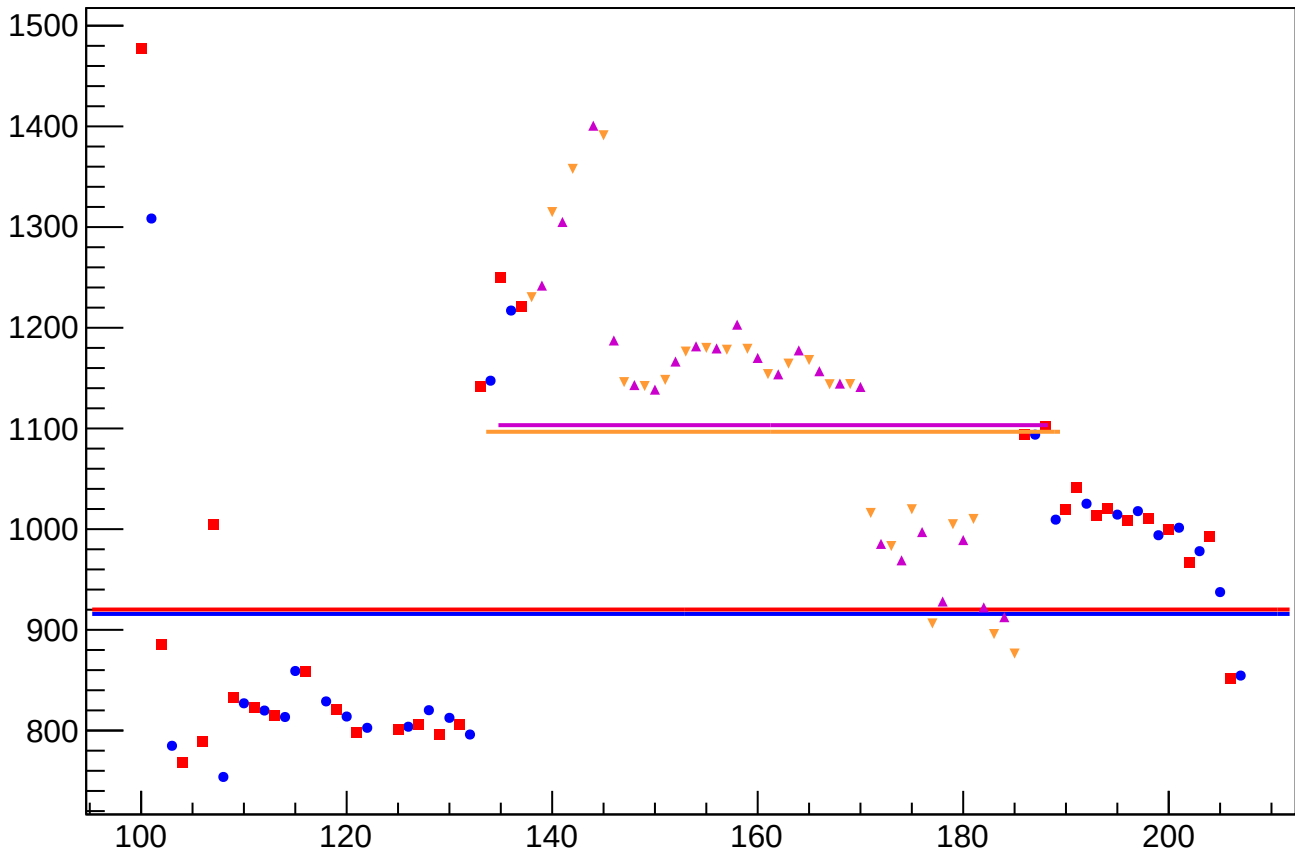
Left In:  $372.901 \pm 259.314$   $\chi^2/\text{NDF}$ : 16.0/22

+ sign  $211.335 \pm 174.865$   $\chi^2/\text{NDF}$ : 66.2/49

All:  $252.145 \pm 122.820$   $\chi^2/\text{NDF}$ : 112.1/102

- sign  $291.880 \pm 172.545$   $\chi^2/\text{NDF}$ : 45.8/52

# cor\_asym\_usl\_atl2\_dd\_rms vs Slug



Right In: 915.789 $\pm$ 0.169  $\chi^2$ /NDF: 573357.3/25

Left Out: 1096.711 $\pm$ 0.181  $\chi^2$ /NDF: 480498.6/23

Right Out: 920.184 $\pm$ 0.163  $\chi^2$ /NDF: 543302.5/29

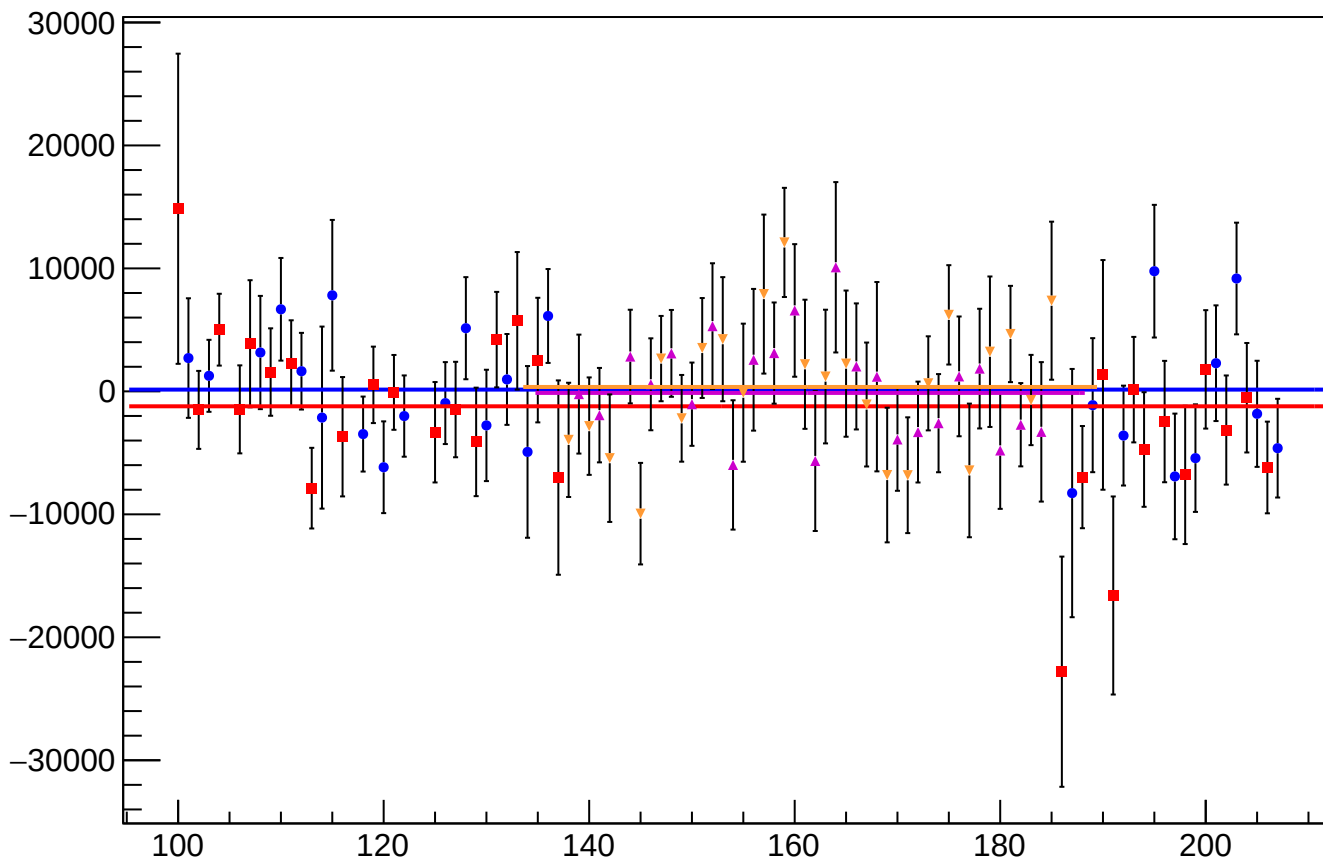
Left In: 1103.281 $\pm$ 0.183  $\chi^2$ /NDF: 447540.3/22

+ sign 999.987 $\pm$ 0.124  $\chi^2$ /NDF: 1586529.0/49

All: 1000.504 $\pm$ 0.087  $\chi^2$ /NDF: 3134363.9/10

- sign 1001.007 $\pm$ 0.122  $\chi^2$ /NDF: 1547800.3/52

# asym\_usl\_atl2\_dd\_cor\_correction\_mean vs Slug



Right In: 143.529 $\pm$ 821.978  $\chi^2$ /NDF: 29.0/25

Left Out: 357.728 $\pm$ 934.221  $\chi^2$ /NDF:30.3/23

Right Out: -1214.580 $\pm$ 775.762  $\chi^2$ /NDF: 33.9/29

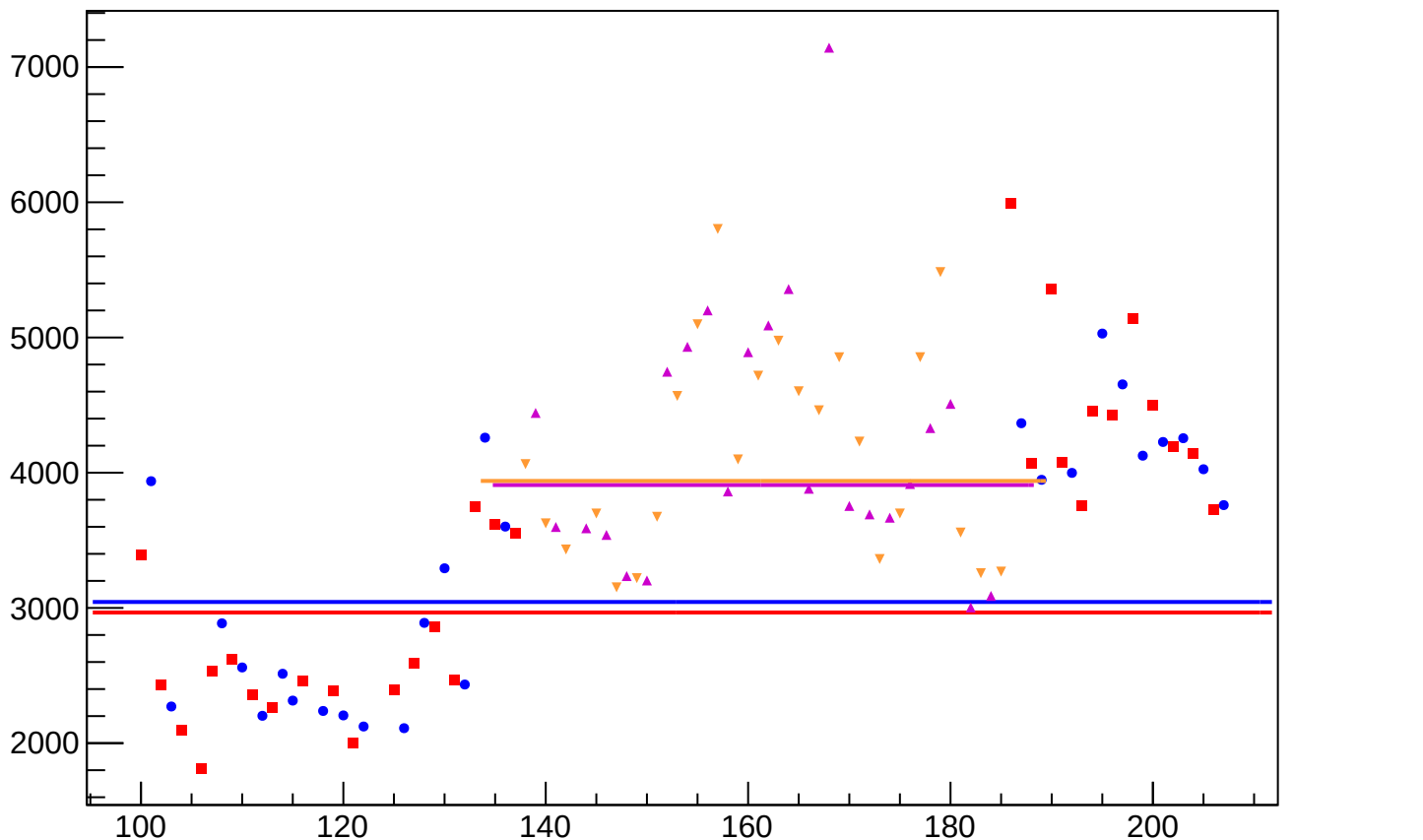
Left In: -126.635 $\pm$ 932.644  $\chi^2$ /NDF:13.8/22

+ sign 236.994 $\pm$ 617.115  $\chi^2$ /NDF: 59.3/49

All: -283.512 $\pm$ 428.859  $\chi^2$ /NDF: 109.1/102

- sign -769.678 $\pm$ 596.410  $\chi^2$ /NDF: 48.5/52

# asym\_usl\_atl2\_dd\_cor\_correction\_rms vs Slug



Right In: 3044.005 $\pm$ 0.581  $\chi^2$ /NDF: 2367837.4/25

Left Out: 3939.266 $\pm$ 0.661  $\chi^2$ /NDF:1092657.5/23

+ sign 3434.650 $\pm$ 0.436  $\chi^2$ /NDF: 4495735.2/49

Right Out: 2966.242 $\pm$ 0.549  $\chi^2$ /NDF: 2942165.2/29

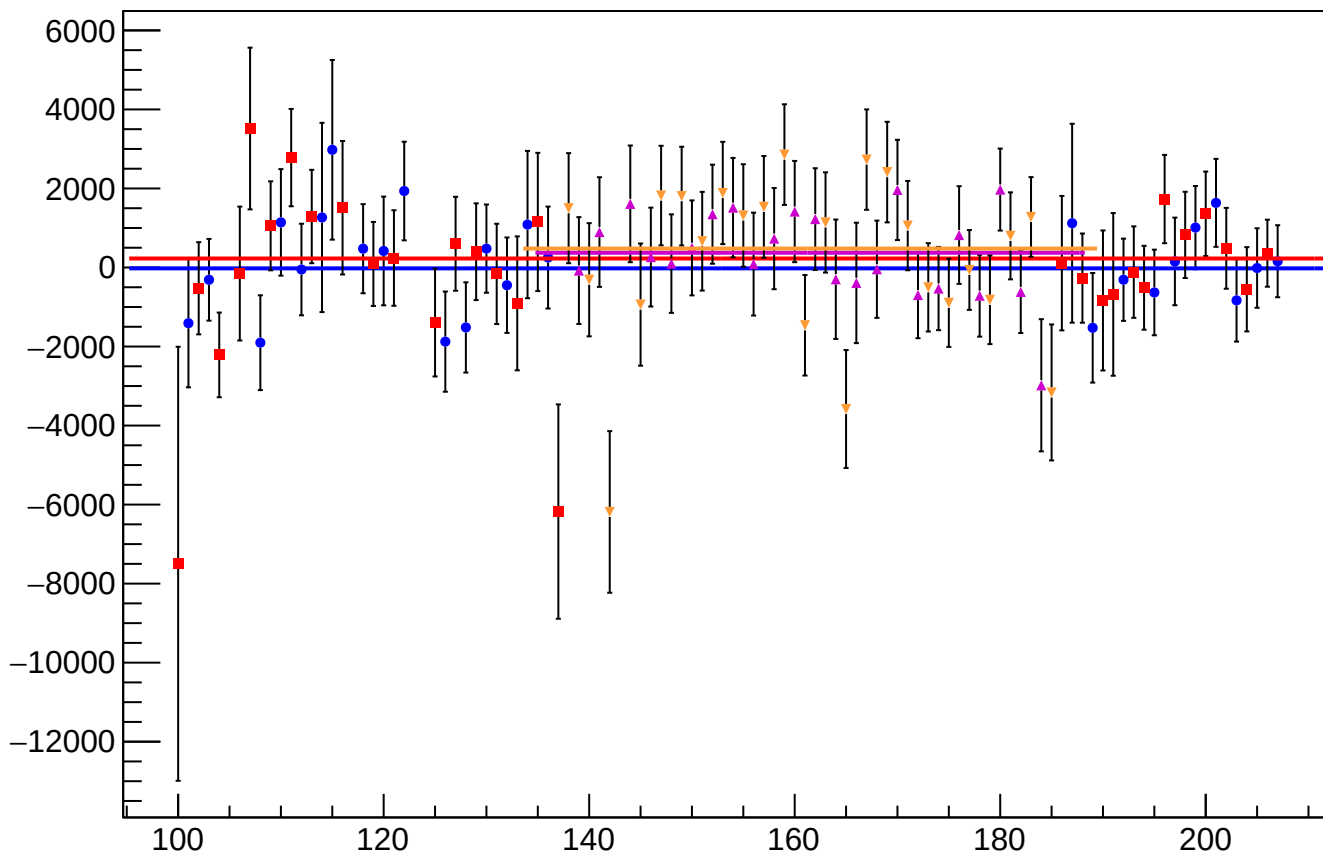
All: 3391.824 $\pm$ 0.303  $\chi^2$ /NDF: 9965539.5/10

Left In: 3909.128 $\pm$ 0.659  $\chi^2$ /NDF:1300782.7/22

- sign 3351.824 $\pm$ 0.422  $\chi^2$ /NDF: 5451176.3/52



# eigen\_cor\_asym\_usl\_atl2\_dd\_mean vs Slug



Right In:  $-22.171 \pm 239.155$   $\chi^2/\text{NDF}$ : 19.0/25

Left Out:  $479.583 \pm 256.330$   $\chi^2/\text{NDF}$ : 45.2/23

Right Out:  $227.507 \pm 231.141$   $\chi^2/\text{NDF}$ : 29.6/29

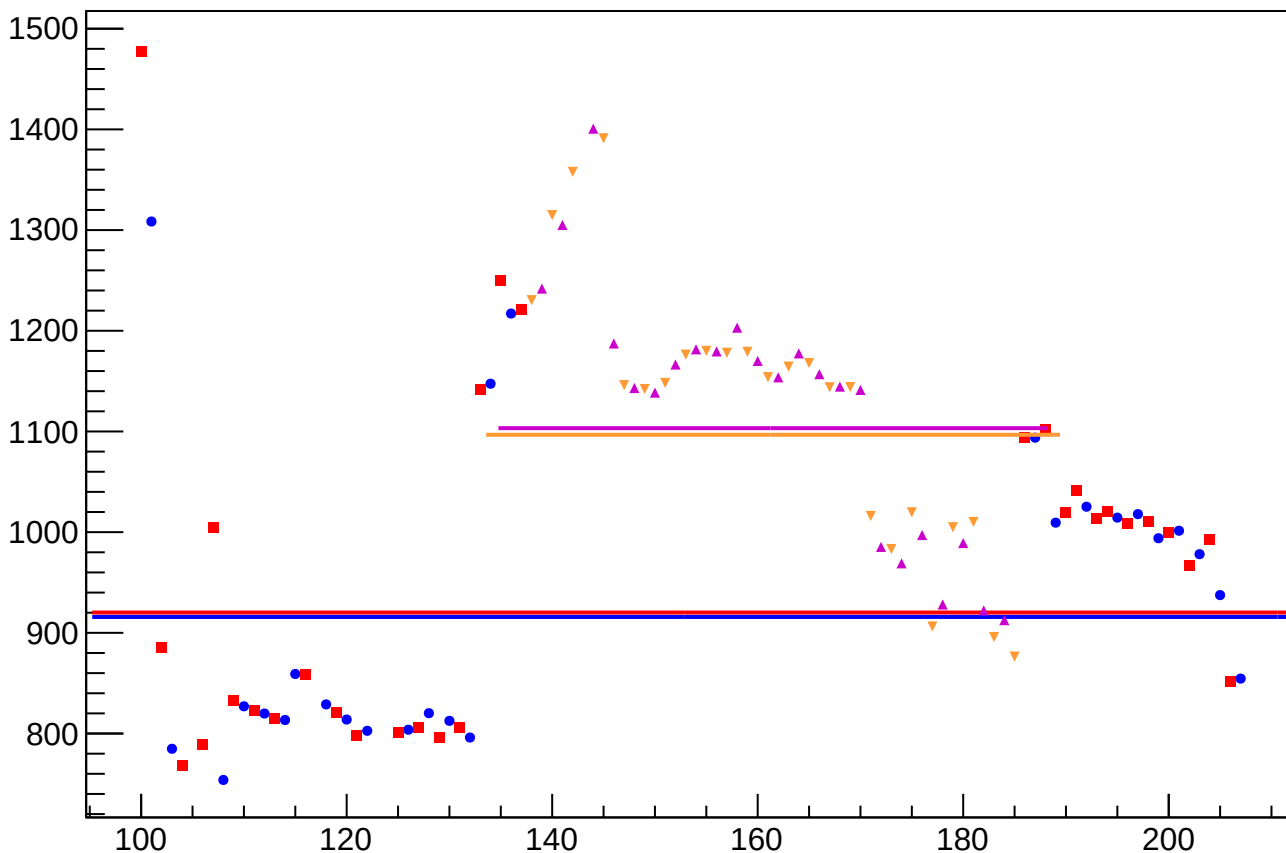
Left In:  $372.901 \pm 259.314$   $\chi^2/\text{NDF}$ : 16.0/22

+ sign  $211.335 \pm 174.865$   $\chi^2/\text{NDF}$ : 66.2/49

All:  $252.145 \pm 122.820$   $\chi^2/\text{NDF}$ : 112.1/102

- sign  $291.880 \pm 172.545$   $\chi^2/\text{NDF}$ : 45.8/52

# eigen\_cor\_asym\_usl\_atl2\_dd\_rms vs Slug



Right In: 915.789 $\pm$ 0.169  $\chi^2$ /NDF: 573357.3/25

Left Out: 1096.711 $\pm$ 0.181  $\chi^2$ /NDF: 480498.6/23

Right Out: 920.184 $\pm$ 0.163  $\chi^2$ /NDF: 543302.5/29

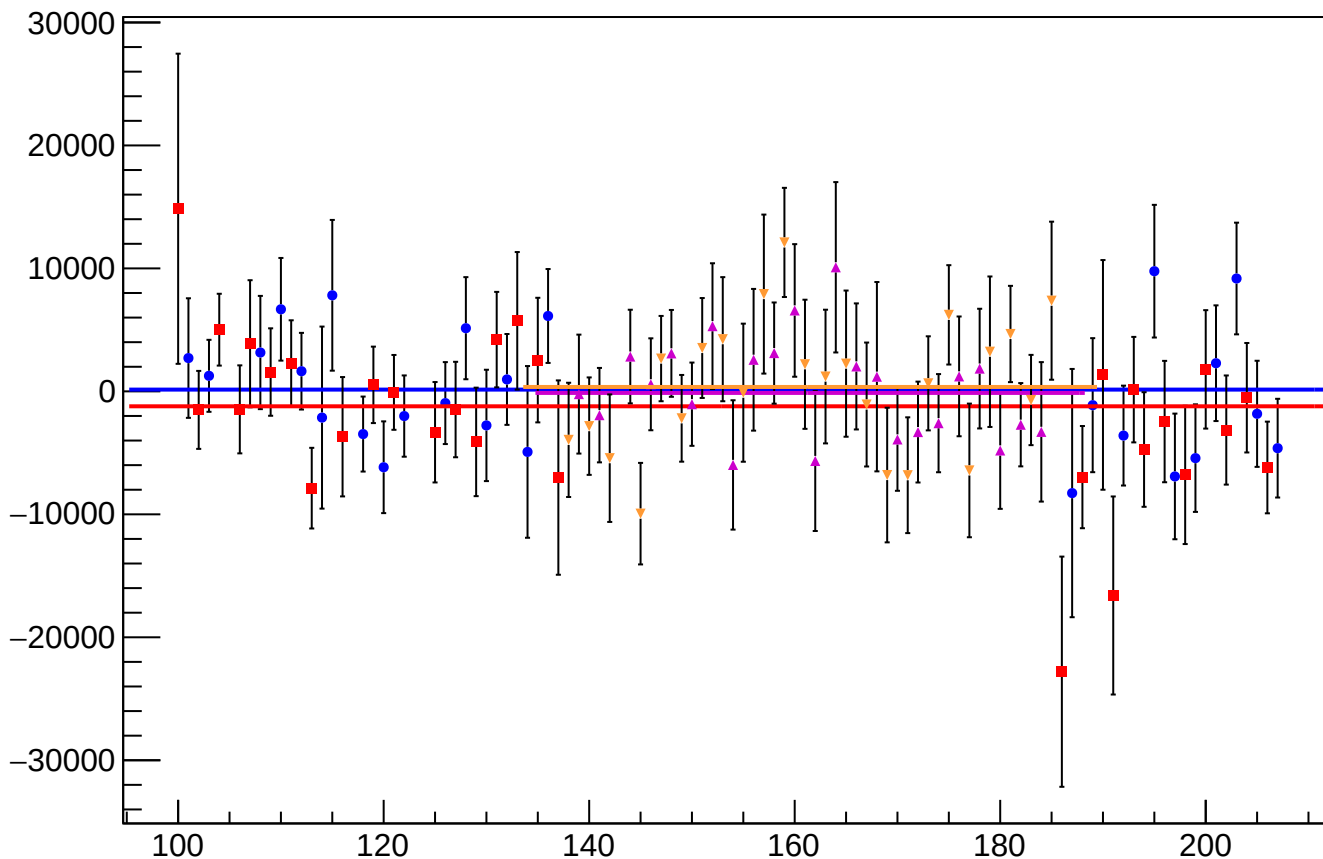
Left In: 1103.281 $\pm$ 0.183  $\chi^2$ /NDF: 447540.3/22

+ sign 999.987 $\pm$ 0.124  $\chi^2$ /NDF: 1586529.0/49

All: 1000.504 $\pm$ 0.087  $\chi^2$ /NDF: 3134363.9/10

- sign 1001.007 $\pm$ 0.122  $\chi^2$ /NDF: 1547800.3/52

asym\_usl\_atl2\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In: 143.529 $\pm$ 821.978  $\chi^2$ /NDF: 29.0/25

Left Out: 357.728 $\pm$ 934.221  $\chi^2$ /NDF:30.3/23

Right Out: -1214.580 $\pm$ 775.762  $\chi^2$ /NDF: 33.9/29

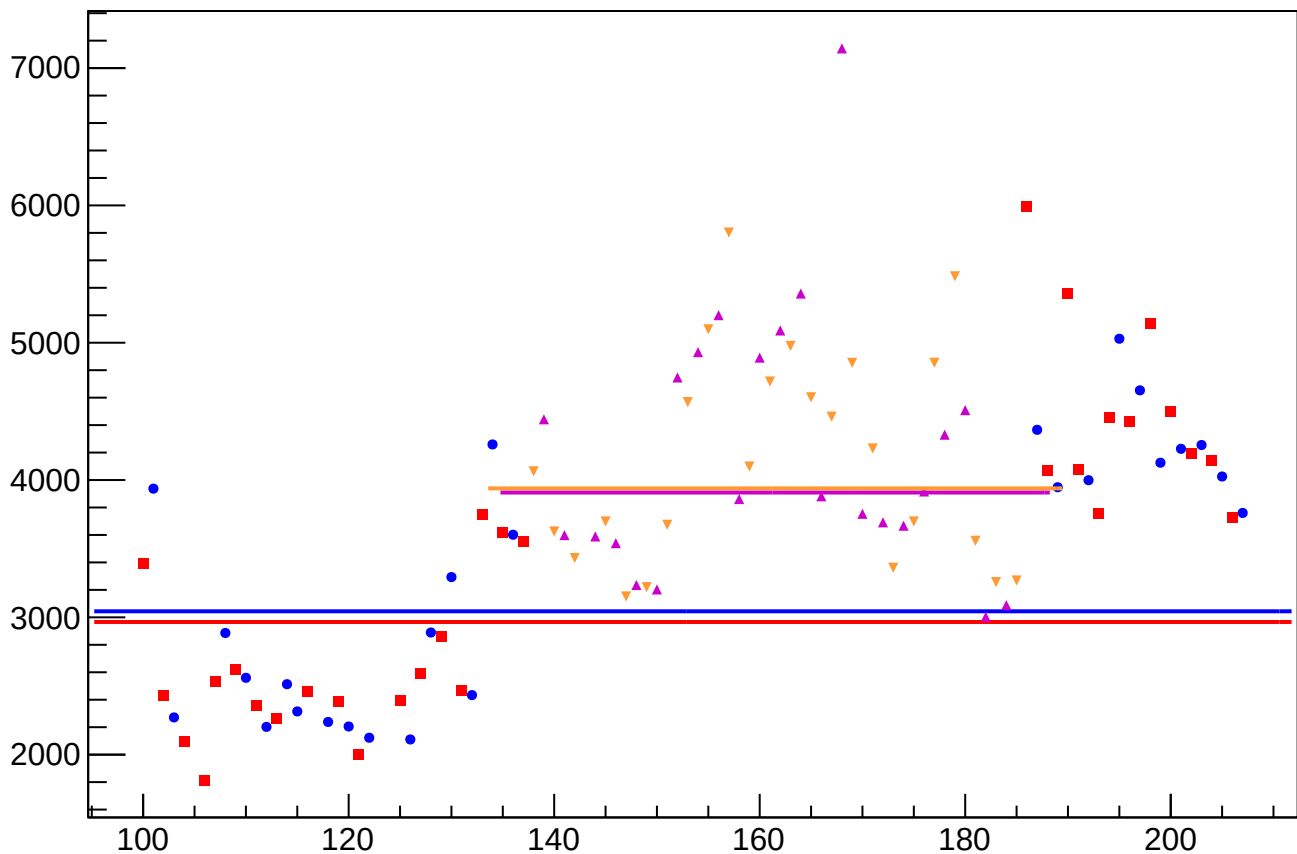
Left In: -126.635 $\pm$ 932.644  $\chi^2$ /NDF:13.8/22

+ sign 236.994 $\pm$ 617.115  $\chi^2$ /NDF: 59.3/49

All: -283.512 $\pm$ 428.859  $\chi^2$ /NDF: 109.1/102

- sign -769.678 $\pm$ 596.410  $\chi^2$ /NDF: 48.5/52

asym\_usl\_atl2\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 3044.005 $\pm$ 0.581  $\chi^2/\text{NDF}$ : 2367837.4/25

Left Out: 3939.266 $\pm$ 0.661  $\chi^2/\text{NDF}$ : 1092657.5/23

Right Out: 2966.242 $\pm$ 0.549  $\chi^2/\text{NDF}$ : 2942165.2/29

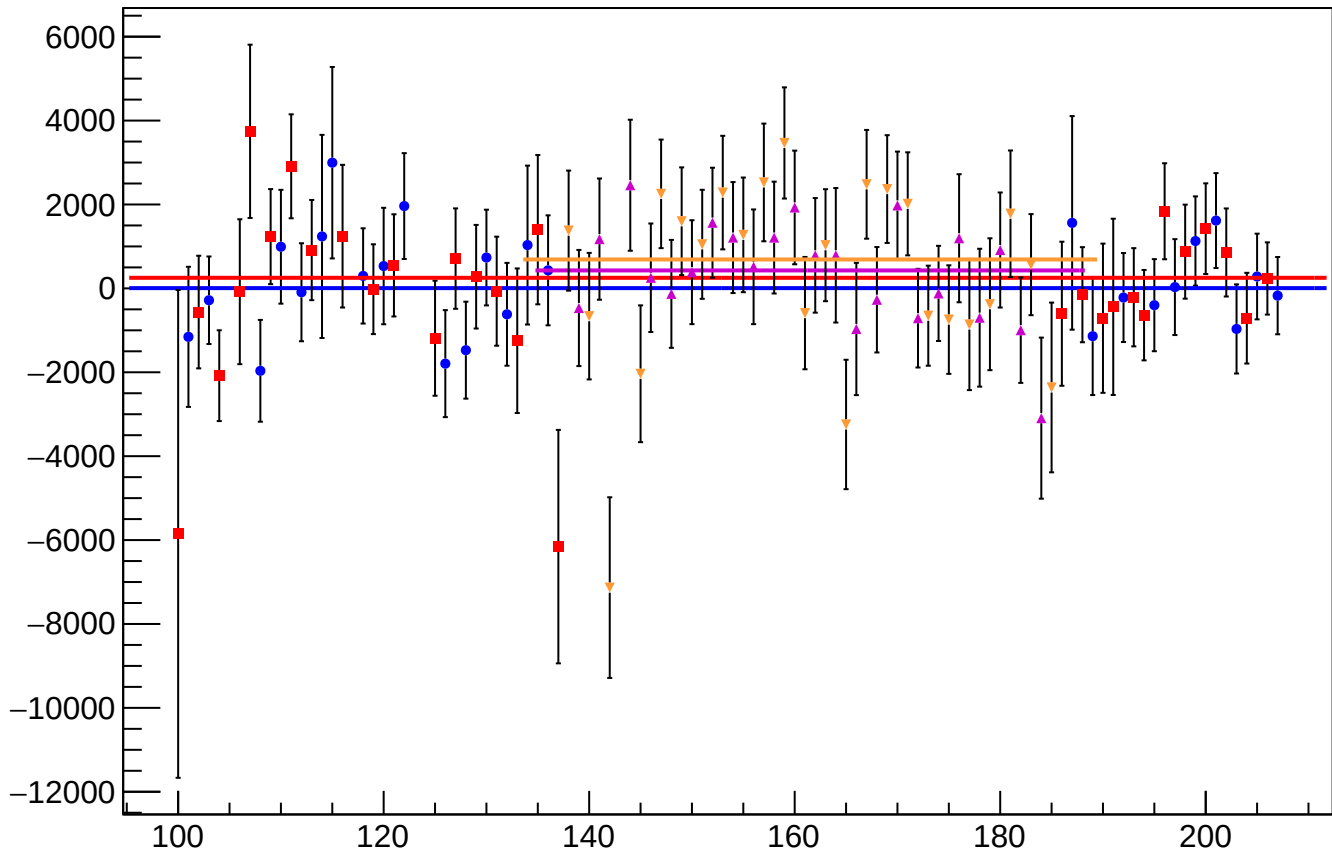
Left In: 3909.128 $\pm$ 0.659  $\chi^2/\text{NDF}$ : 1300782.7/22

+ sign 3434.650 $\pm$ 0.436  $\chi^2/\text{NDF}$ : 4495735.2/49

All: 3391.824 $\pm$ 0.303  $\chi^2/\text{NDF}$ : 9965539.5/10

- sign 3351.824 $\pm$ 0.422  $\chi^2/\text{NDF}$ : 5451176.3/52

# dit\_asym\_usl\_atl2\_dd\_mean vs Slug



Right In:  $6.053 \pm 242.441$   $\chi^2/\text{NDF}$ : 18.3/25

Left Out:  $689.087 \pm 284.388$   $\chi^2/\text{NDF}$ : 45.7/23

Right Out:  $252.006 \pm 235.242$   $\chi^2/\text{NDF}$ : 29.1/29

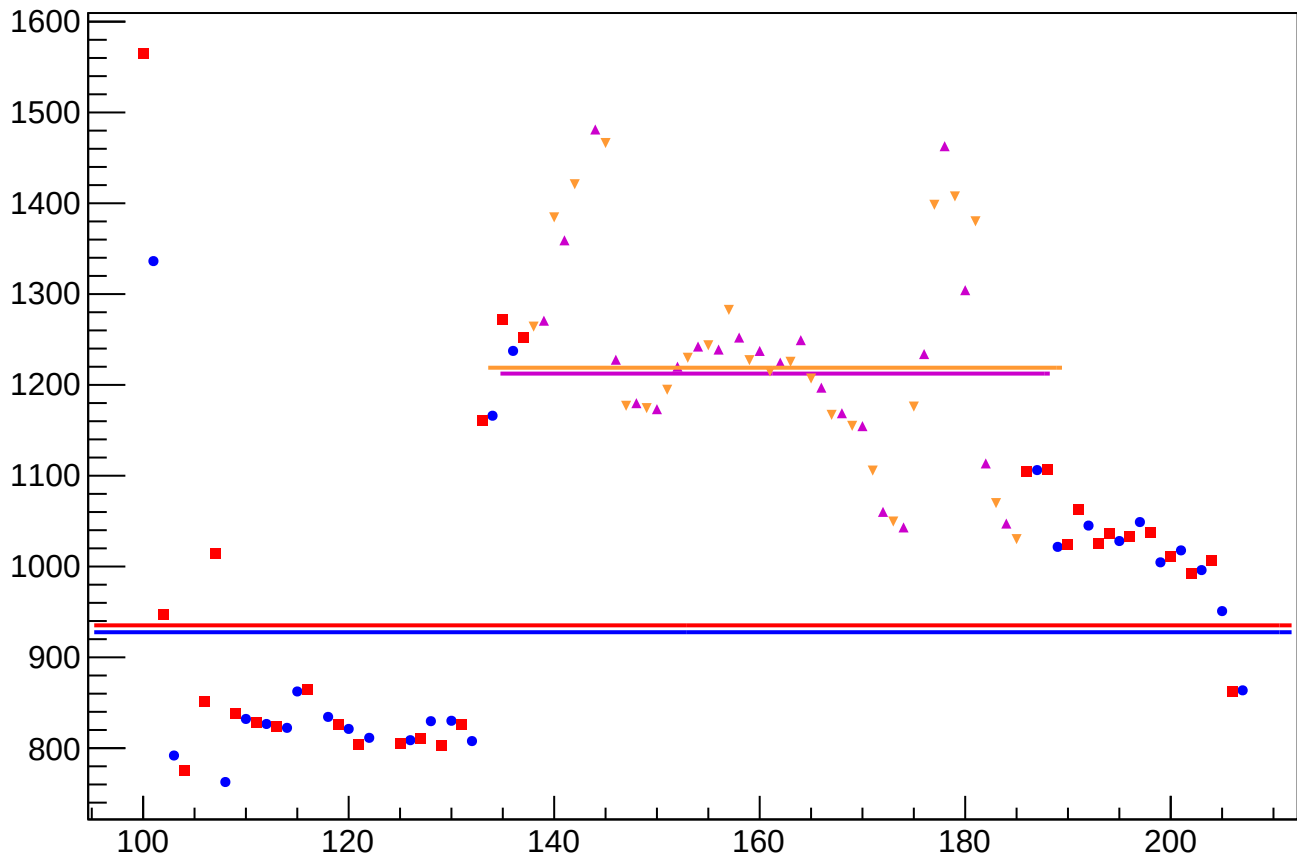
Left In:  $428.052 \pm 284.383$   $\chi^2/\text{NDF}$ : 14.6/22

+ sign  $293.529 \pm 184.498$   $\chi^2/\text{NDF}$ : 67.4/49

All:  $308.794 \pm 129.301$   $\chi^2/\text{NDF}$ : 111.3/102

- sign  $323.528 \pm 181.263$   $\chi^2/\text{NDF}$ : 43.9/52

# dit\_asym\_usl\_atl2\_dd\_rms vs Slug



Right In: 927.653 $\pm$ 0.171  $\chi^2$ /NDF: 596744.5/25

Left Out: 1218.928 $\pm$ 0.201  $\chi^2$ /NDF: 293874.9/23

Right Out: 935.223 $\pm$ 0.166  $\chi^2$ /NDF: 554723.3/29

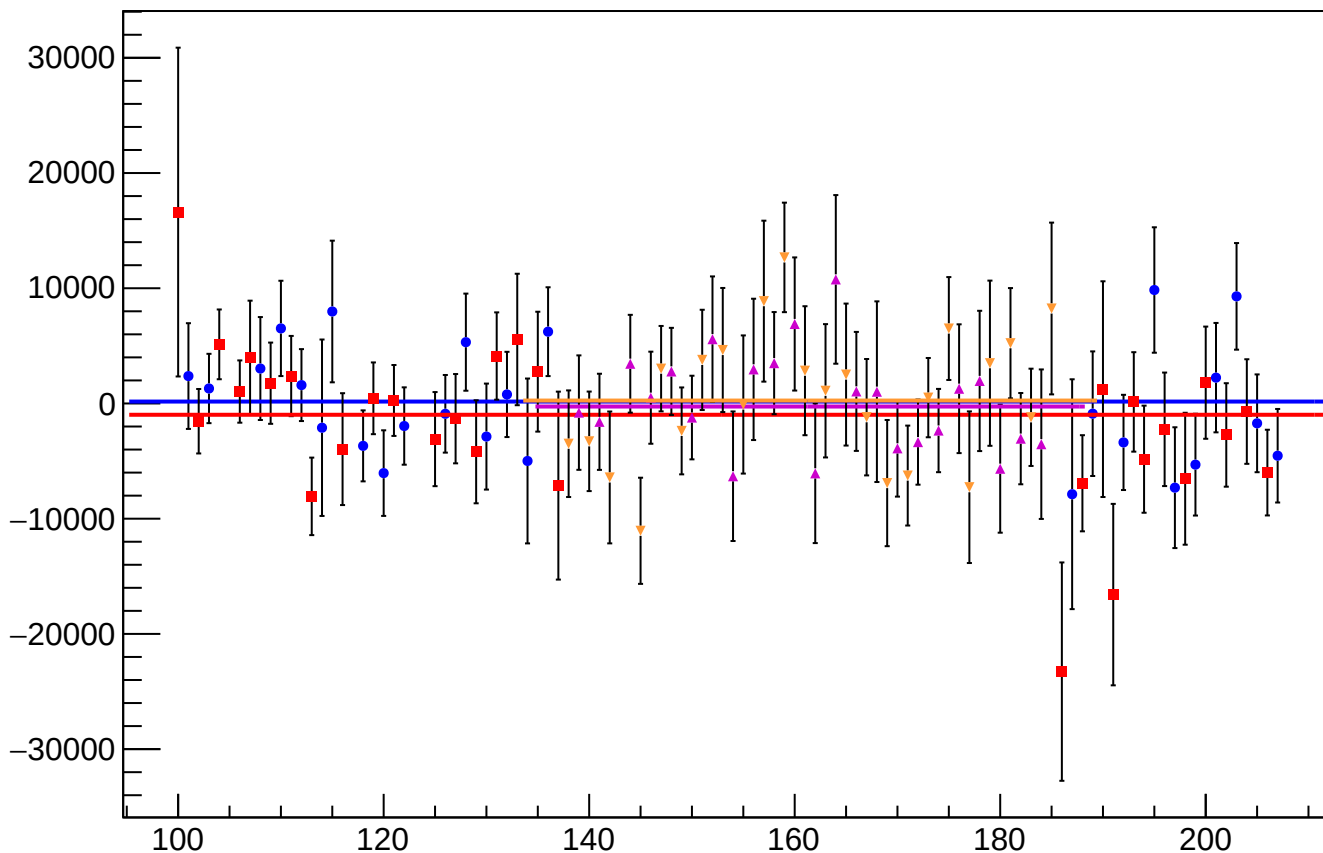
Left In: 1212.447 $\pm$ 0.201  $\chi^2$ /NDF: 260320.0/22

+ sign 1050.245 $\pm$ 0.130  $\chi^2$ /NDF: 2105631.0/49

All: 1048.992 $\pm$ 0.091  $\chi^2$ /NDF: 4049751.1/10

- sign 1047.783 $\pm$ 0.128  $\chi^2$ /NDF: 1943938.7/52

# asym\_usl\_atl2\_dd\_dit\_correction\_mean vs Slug



Right In: 165.954 $\pm$ 826.922  $\chi^2$ /NDF: 28.6/25

Left Out: 252.803 $\pm$ 995.149  $\chi^2$ /NDF: 29.7/23

Right Out: -980.937 $\pm$ 760.002  $\chi^2$ /NDF: 34.5/29

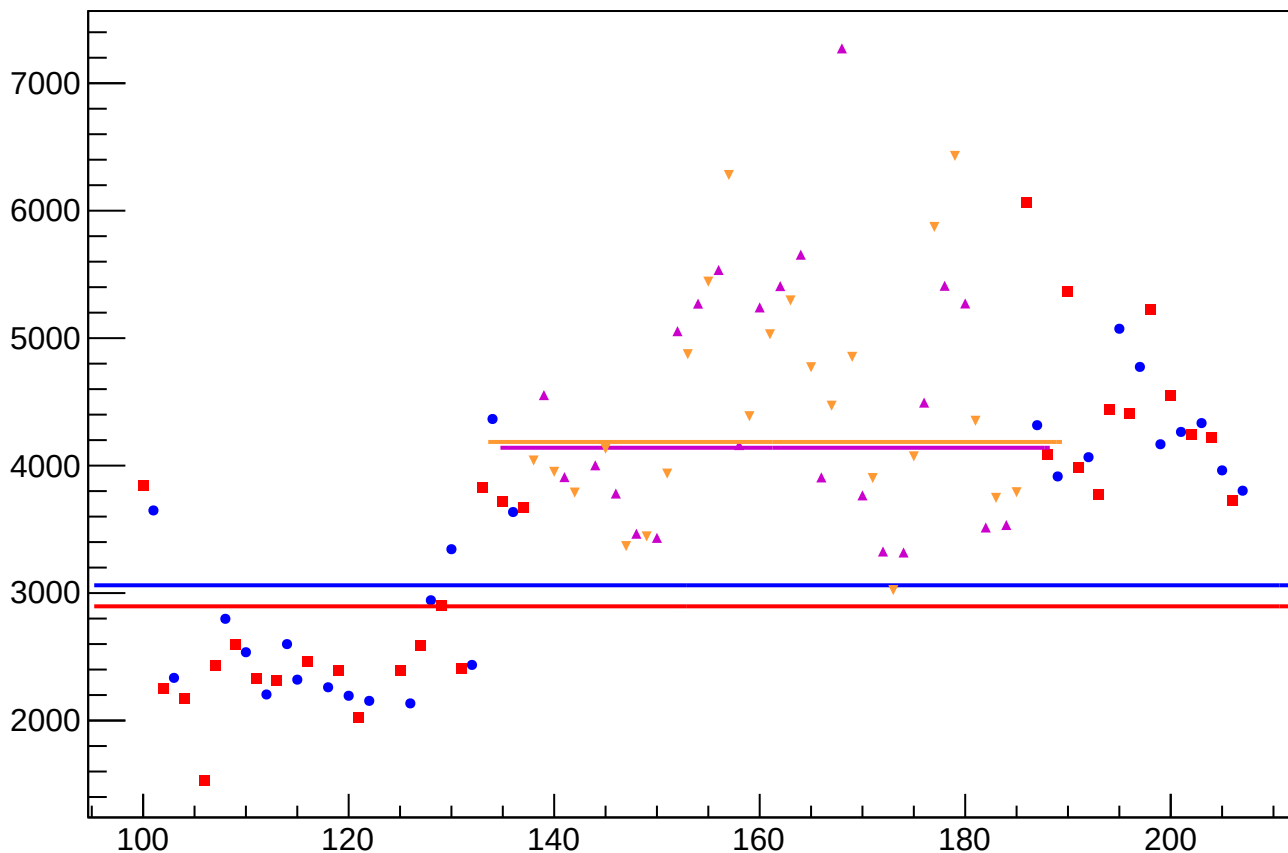
Left In: -266.235 $\pm$ 990.083  $\chi^2$ /NDF: 13.4/22

+ sign 201.427 $\pm$ 636.003  $\chi^2$ /NDF: 58.3/49

All: -281.781 $\pm$ 437.537  $\chi^2$ /NDF: 107.7/102

- sign -715.950 $\pm$ 602.866  $\chi^2$ /NDF: 48.3/52

# asym\_usl\_atl2\_dd\_dit\_correction\_rms vs Slug



Right In: 3061.099+/-0.585  $\chi^2/\text{NDF}$ : 2342932.2/25

Left Out: 4185.656+/-0.704  $\chi^2/\text{NDF}$ :1271248.5/23

Right Out: 2895.996+/-0.537  $\chi^2/\text{NDF}$ : 3381350.8/29

Left In: 4140.051+/-0.700  $\chi^2/\text{NDF}$ :1449924.0/22

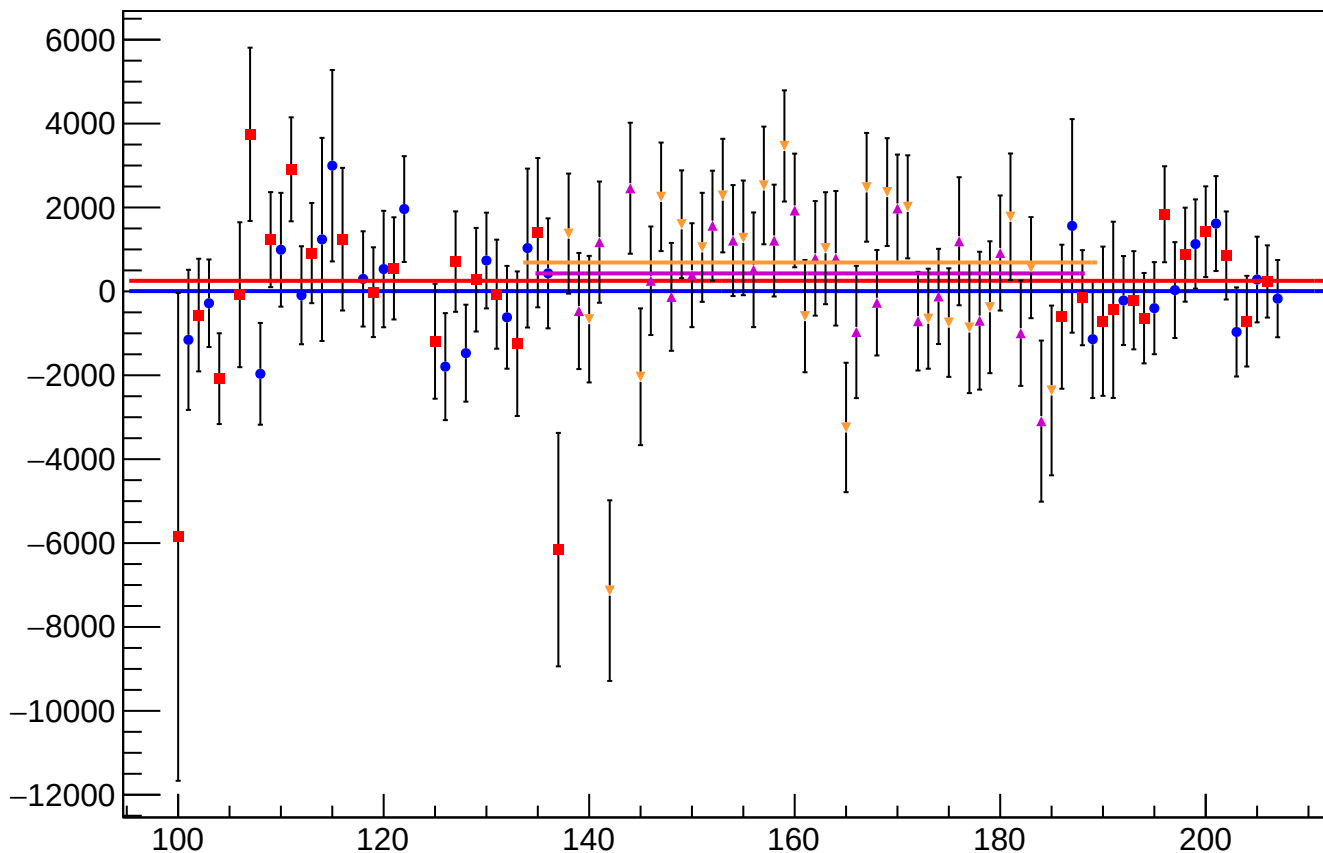
+ sign 3520.427+/-0.450  $\chi^2/\text{NDF}$ : 5124975.9/49

All: 3434.476+/-0.309  $\chi^2/\text{NDF}$ : 12012510.0/100

- sign 3357.249+/-0.426  $\chi^2/\text{NDF}$ : 6818187.4/52



# eigen\_dit\_asym\_usl\_atl2\_dd\_mean vs Slug



Right In:  $6.052 \pm 242.442$   $\chi^2/\text{NDF}$ : 18.3/25

Left Out:  $689.089 \pm 284.388$   $\chi^2/\text{NDF}$ : 45.7/23

Right Out:  $252.007 \pm 235.242$   $\chi^2/\text{NDF}$ : 29.1/29

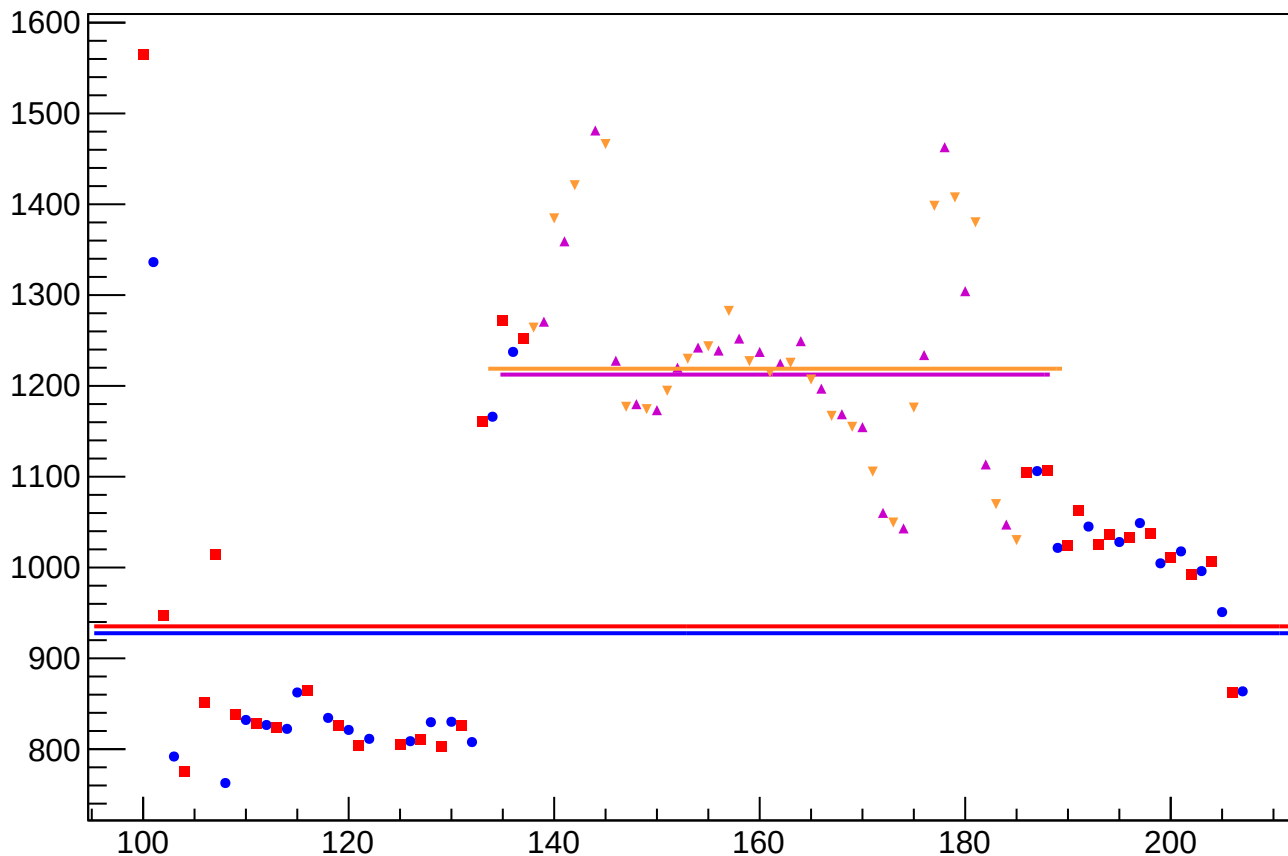
Left In:  $428.050 \pm 284.383$   $\chi^2/\text{NDF}$ : 14.6/22

+ sign  $293.529 \pm 184.498$   $\chi^2/\text{NDF}$ : 67.4/49

All:  $308.793 \pm 129.301$   $\chi^2/\text{NDF}$ : 111.3/102

- sign  $323.527 \pm 181.263$   $\chi^2/\text{NDF}$ : 43.9/52

# eigen\_dit\_asym\_usl\_atl2\_dd\_rms vs Slug



Right In: 927.654 $\pm$ 0.171  $\chi^2$ /NDF: 596744.3/25

Left Out: 1218.929 $\pm$ 0.201  $\chi^2$ /NDF: 293885.7/23

Right Out: 935.223 $\pm$ 0.166  $\chi^2$ /NDF: 554724.0/29

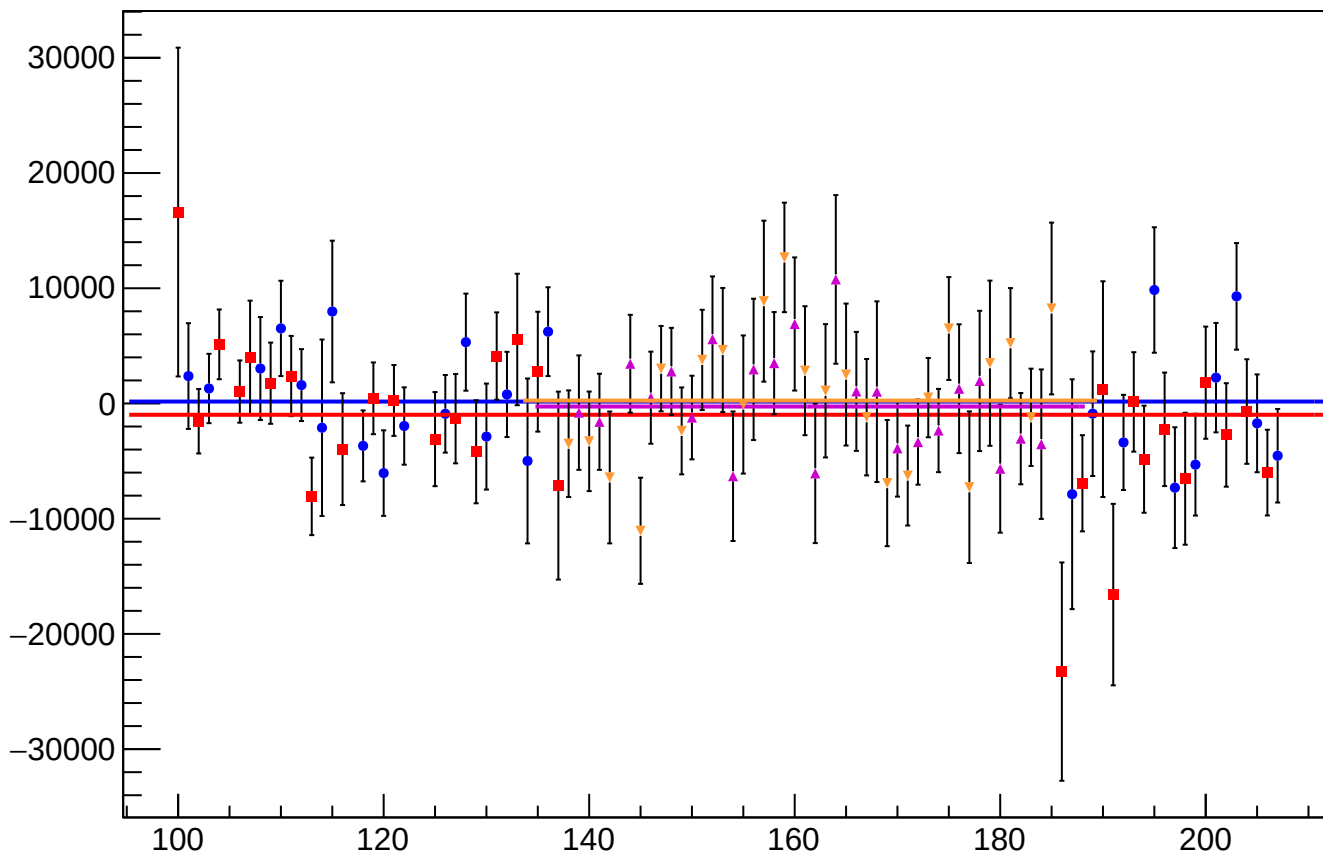
Left In: 1212.448 $\pm$ 0.201  $\chi^2$ /NDF: 260330.4/22

+ sign 1050.246 $\pm$ 0.130  $\chi^2$ /NDF: 2105647.8/49

All: 1048.992 $\pm$ 0.091  $\chi^2$ /NDF: 4049785.2/10

- sign 1047.783 $\pm$ 0.128  $\chi^2$ /NDF: 1943956.0/52

asym\_usl\_atl2\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $165.951 \pm 826.921$   $\chi^2/\text{NDF}$ : 28.6/25

Left Out:  $252.805 \pm 995.151$   $\chi^2/\text{NDF}$ : 29.7/23

Right Out:  $-980.931 \pm 760.001$   $\chi^2/\text{NDF}$ : 34.5/29

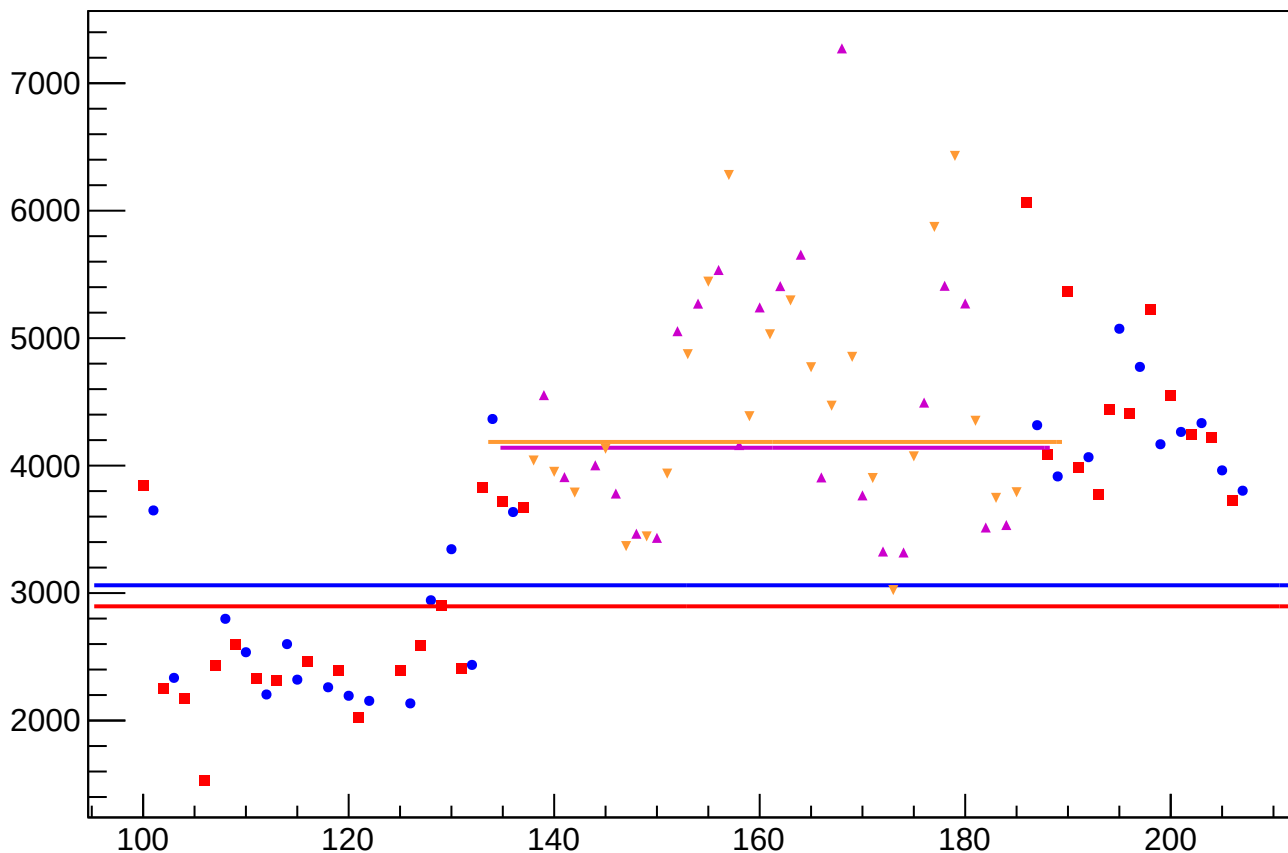
Left In:  $-266.236 \pm 990.085$   $\chi^2/\text{NDF}$ : 13.4/22

+ sign  $201.427 \pm 636.003$   $\chi^2/\text{NDF}$ : 58.3/49

All:  $-281.781 \pm 437.537$   $\chi^2/\text{NDF}$ : 107.7/102

- sign  $-715.948 \pm 602.866$   $\chi^2/\text{NDF}$ : 48.3/52

asym\_usl\_atl2\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 3061.092 $\pm$ 0.585  $\chi^2$ /NDF: 2342972.7/25

Left Out: 4185.664 $\pm$ 0.704  $\chi^2$ /NDF:1271247.4/23

Right Out: 2895.990 $\pm$ 0.537  $\chi^2$ /NDF: 3381387.8/29

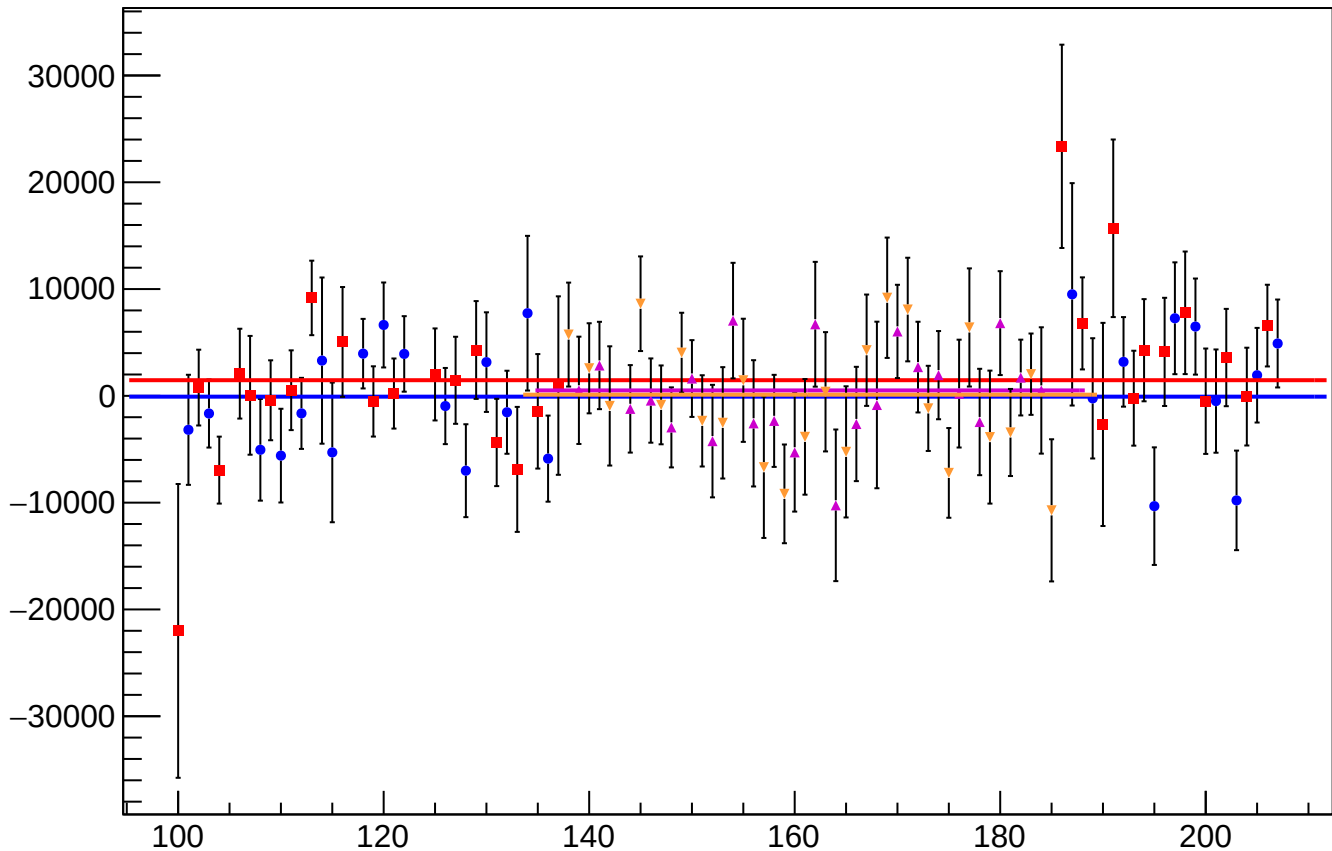
Left In: 4140.059 $\pm$ 0.700  $\chi^2$ /NDF:1449925.1/22

+ sign 3520.425 $\pm$ 0.450  $\chi^2$ /NDF: 5125053.0/49

All: 3434.474 $\pm$ 0.309  $\chi^2$ /NDF: 12012665.5/100

- sign 3357.246 $\pm$ 0.426  $\chi^2$ /NDF: 6818265.4/52

# asym\_usl\_atl2\_dd\_mean vs Slug



Right In:  $-75.131 \pm 864.117$   $\chi^2/\text{NDF}$ : 31.5/25

Left Out:  $108.966 \pm 975.598$   $\chi^2/\text{NDF}$ : 28.0/23

Right Out:  $1465.898 \pm 821.180$   $\chi^2/\text{NDF}$ : 35.4/29

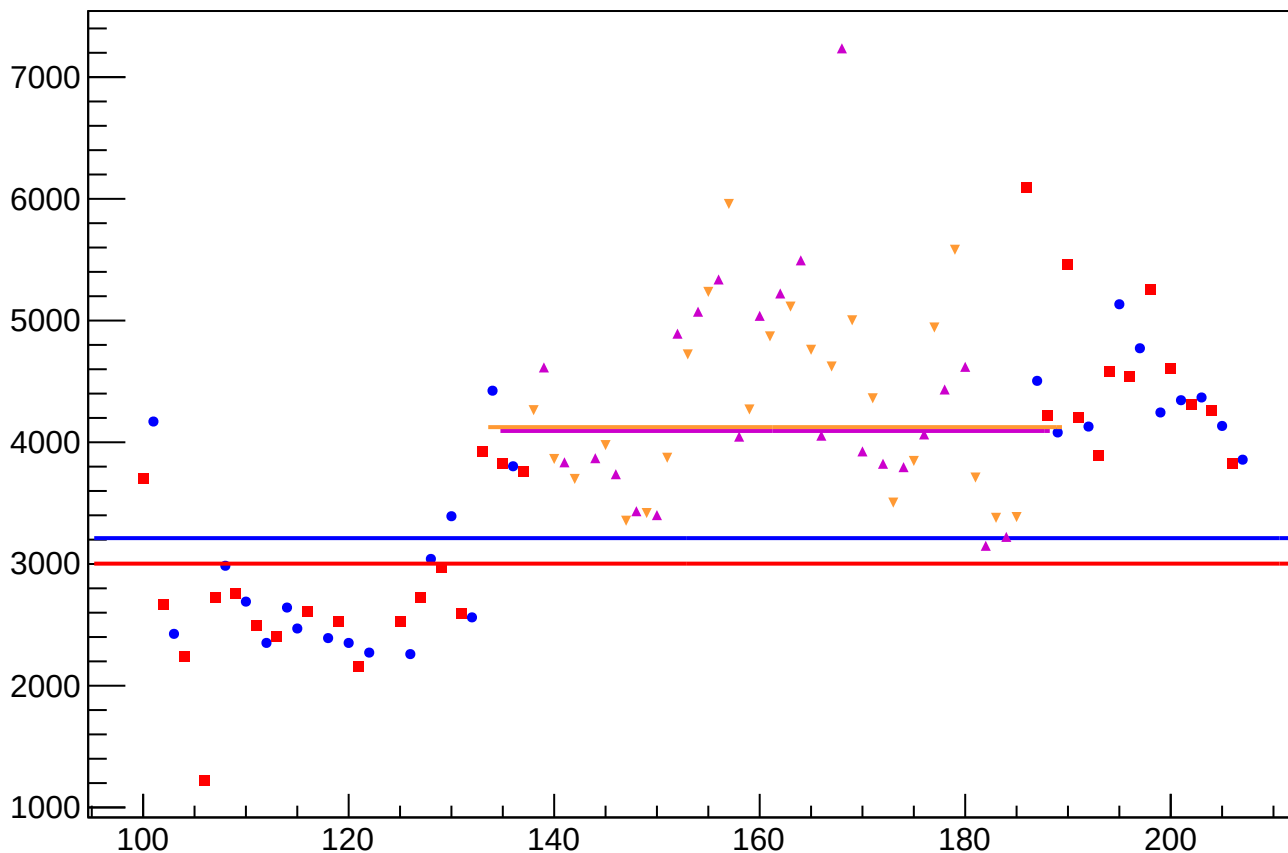
Left In:  $509.024 \pm 974.173$   $\chi^2/\text{NDF}$ : 13.5/22

+ sign  $5.803 \pm 646.863$   $\chi^2/\text{NDF}$ : 59.5/49

All:  $552.939 \pm 450.535$   $\chi^2/\text{NDF}$ : 110.4/102

- sign  $1068.414 \pm 627.868$   $\chi^2/\text{NDF}$ : 49.5/52

# asym\_usl\_atl2\_dd\_rms vs Slug



Right In: 3212.528+/-0.611  $\chi^2/\text{NDF}$ : 2128730.2/25

Left Out: 4124.485+/-0.690  $\chi^2/\text{NDF}$ : 969929.3/23

Right Out: 3002.945+/-0.562  $\chi^2/\text{NDF}$ : 3553772.8/29

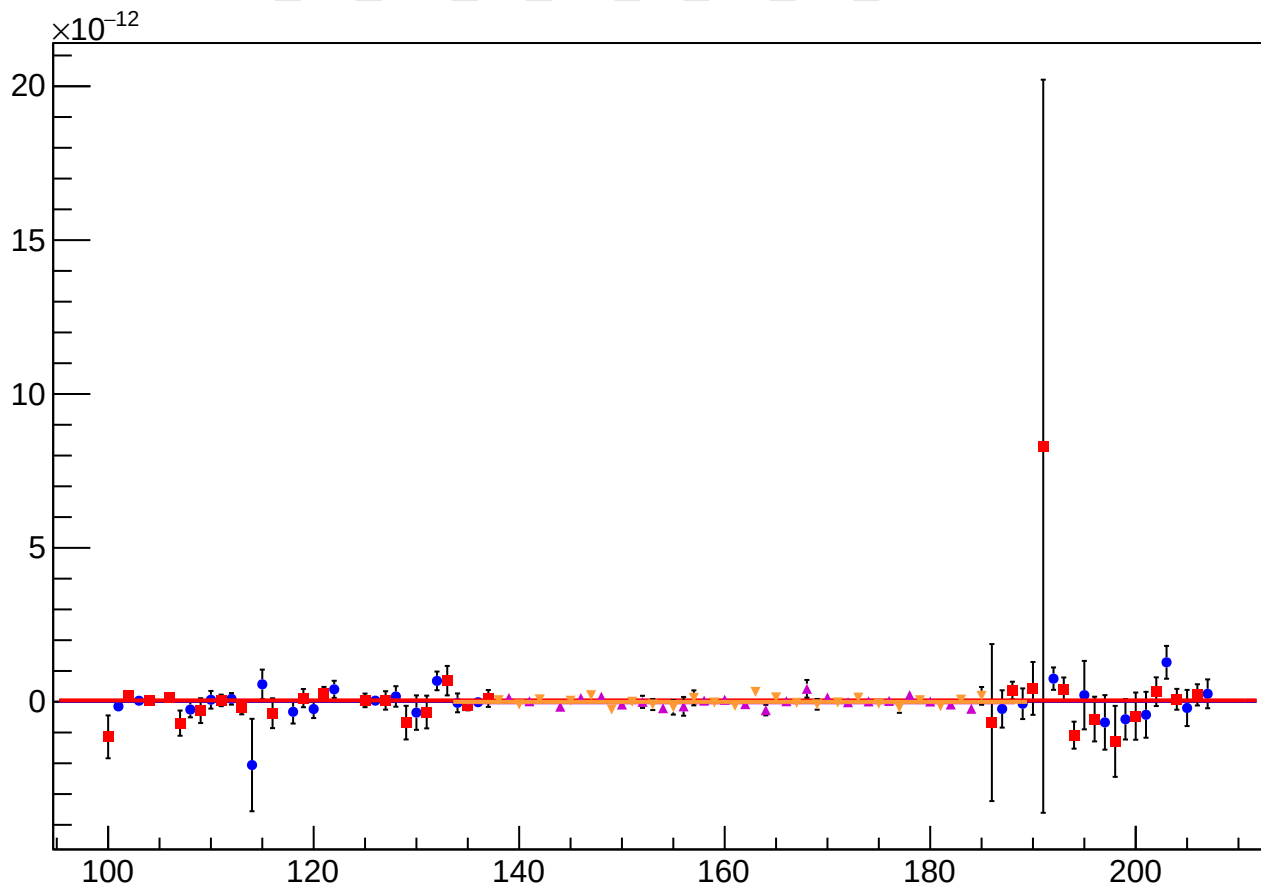
Left In: 4093.066+/-0.689  $\chi^2/\text{NDF}$ : 1162851.8/22

+ sign 3613.446+/-0.457  $\chi^2/\text{NDF}$ : 4077958.7/49

All: 3521.687+/-0.315  $\chi^2/\text{NDF}$ : 10375016.3/100

- sign 3438.531+/-0.435  $\chi^2/\text{NDF}$ : 6220342.0/52

asym\_usl\_atl2\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 27.4/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 24.2/23

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 29.7/29

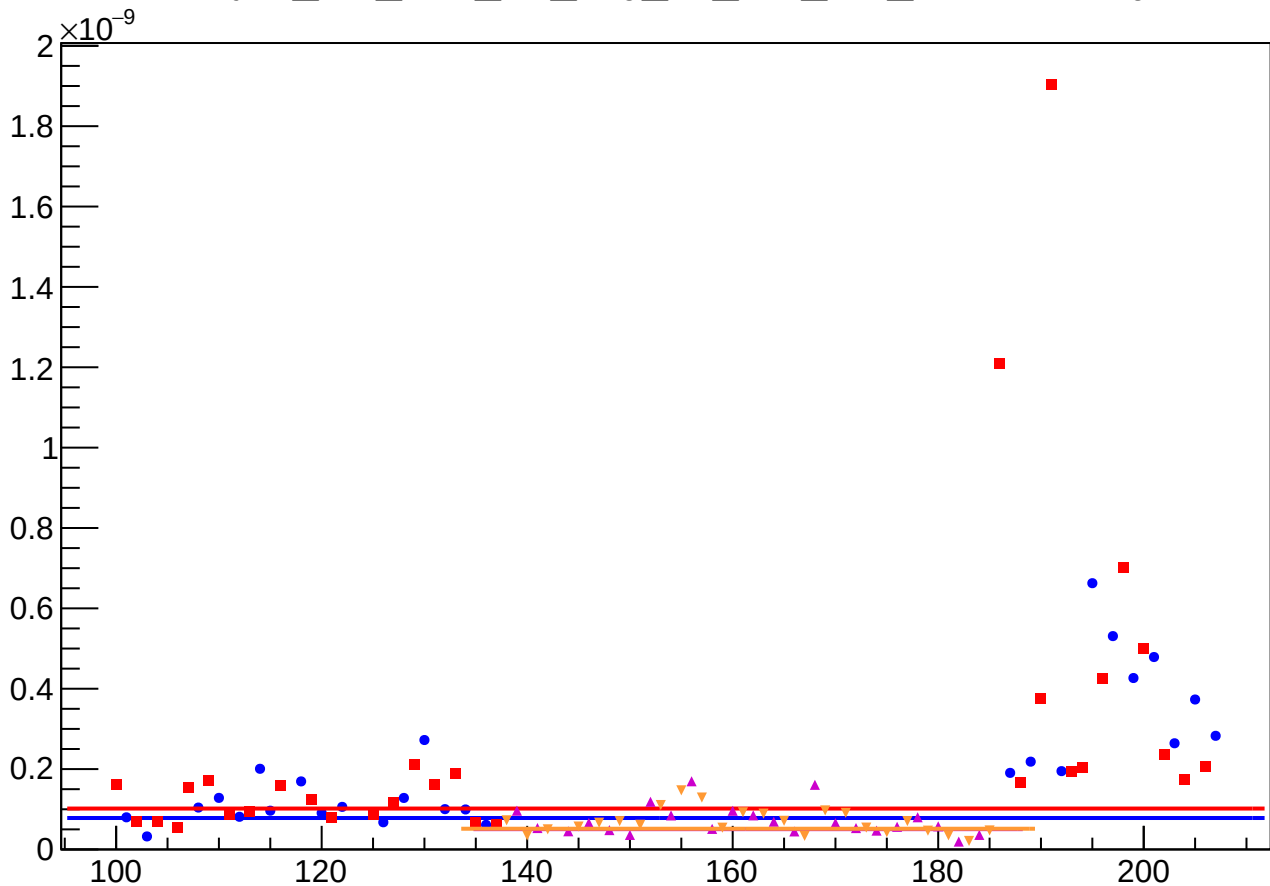
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 25.7/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 51.9/49

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 108.7/102

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 56.6/52

asym\_usl\_atl2\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 5174520.0/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2269565.3/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 3802073.0/29

Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2433650.3/22

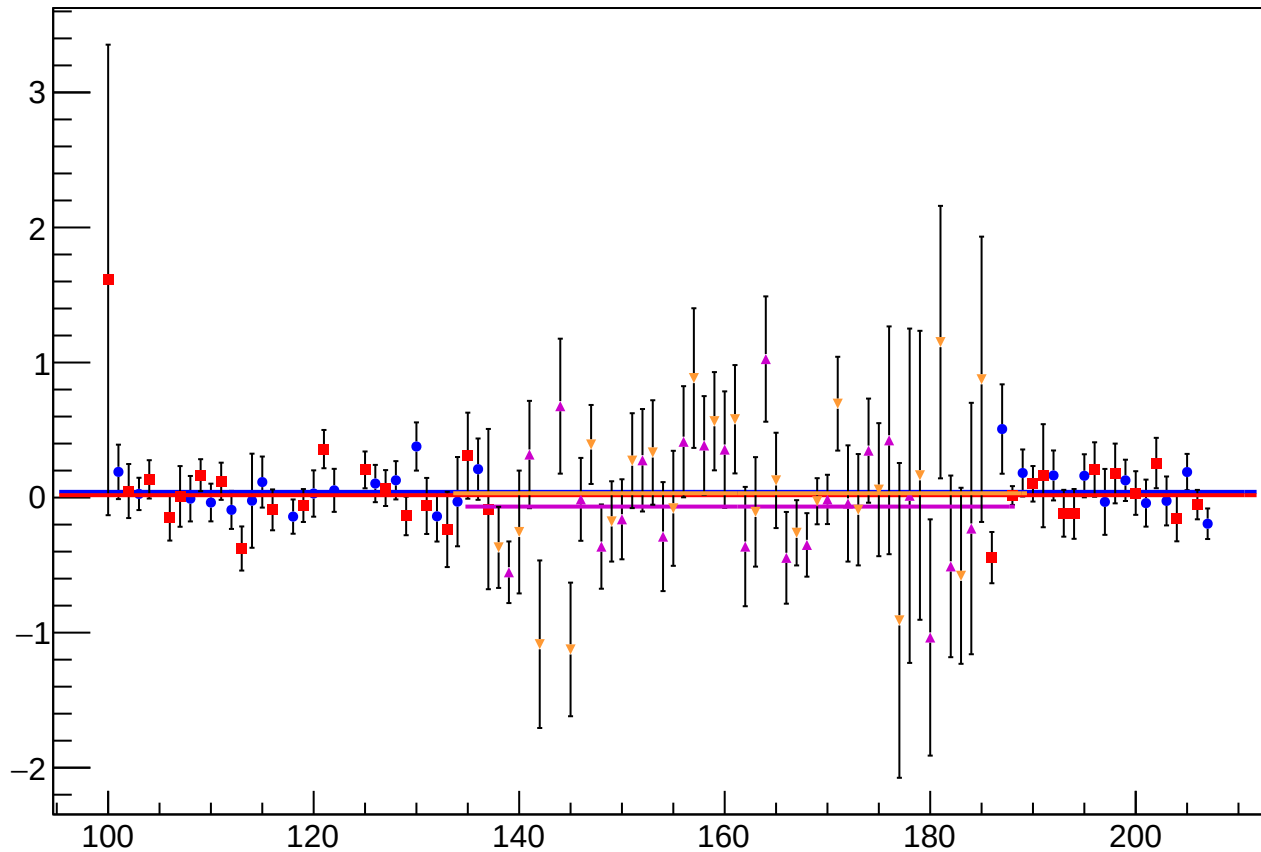
+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 8056332.4/49

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 16073310.4/102

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 8010175.9/52



# asym\_usl\_atl2\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.042 \pm 0.032$   $\chi^2/\text{NDF}$ : 19.7/25

Left Out:  $0.032 \pm 0.076$   $\chi^2/\text{NDF}$ : 29.7/23

Right Out:  $0.018 \pm 0.028$   $\chi^2/\text{NDF}$ : 34.4/29

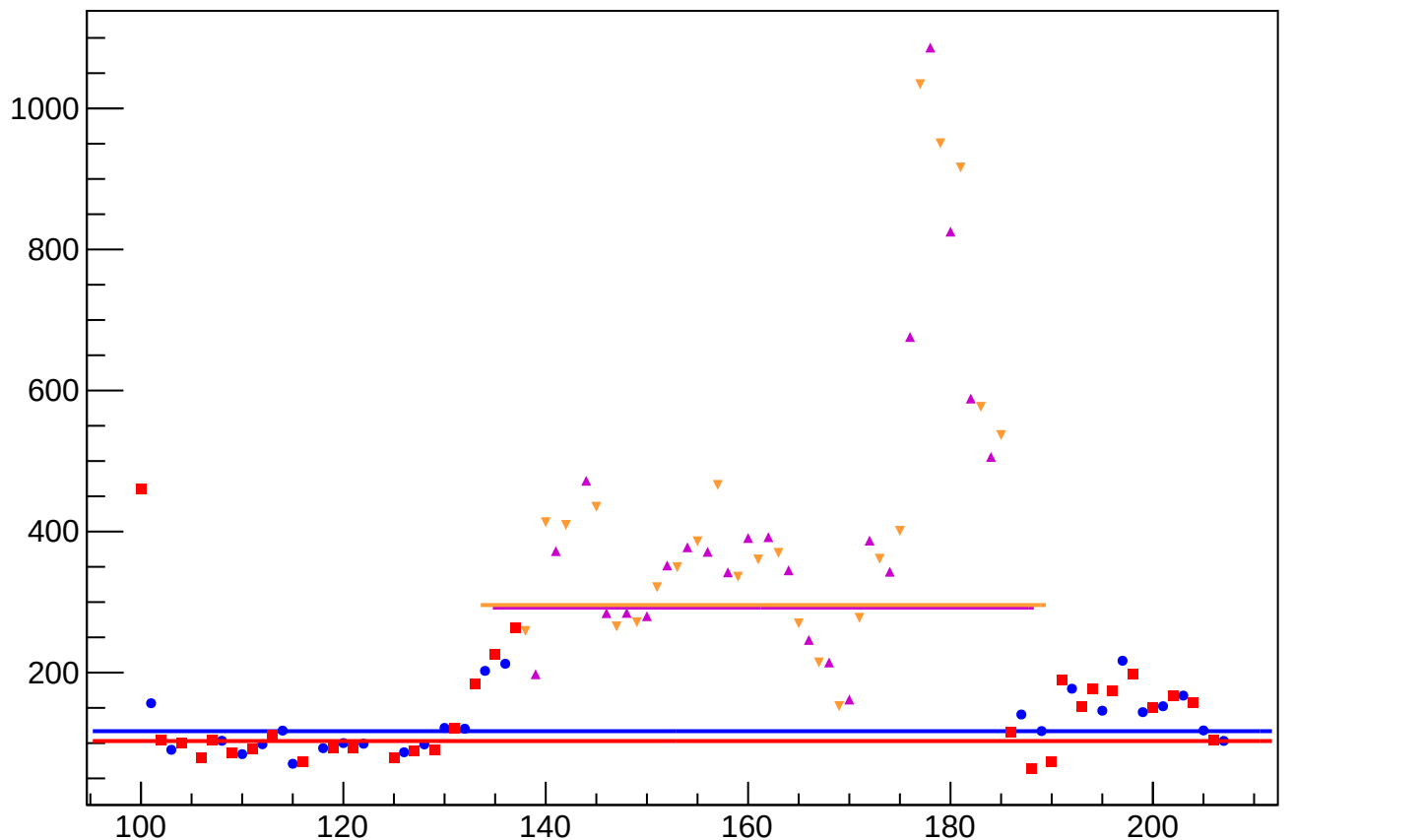
Left In:  $-0.067 \pm 0.075$   $\chi^2/\text{NDF}$ : 25.7/22

+ sign  $0.041 \pm 0.030$   $\chi^2/\text{NDF}$ : 49.4/49

All:  $0.022 \pm 0.020$   $\chi^2/\text{NDF}$ : 111.4/102

- sign  $0.007 \pm 0.026$   $\chi^2/\text{NDF}$ : 61.2/52

asym\_usl\_atl2\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 116.961+/-0.023  $\chi^2/\text{NDF}$ : 2139694.2/25

Left Out: 295.798+/-0.054  $\chi^2/\text{NDF}$ : 5501077.8/23

Right Out: 102.957+/-0.020  $\chi^2/\text{NDF}$ : 3570852.0/29

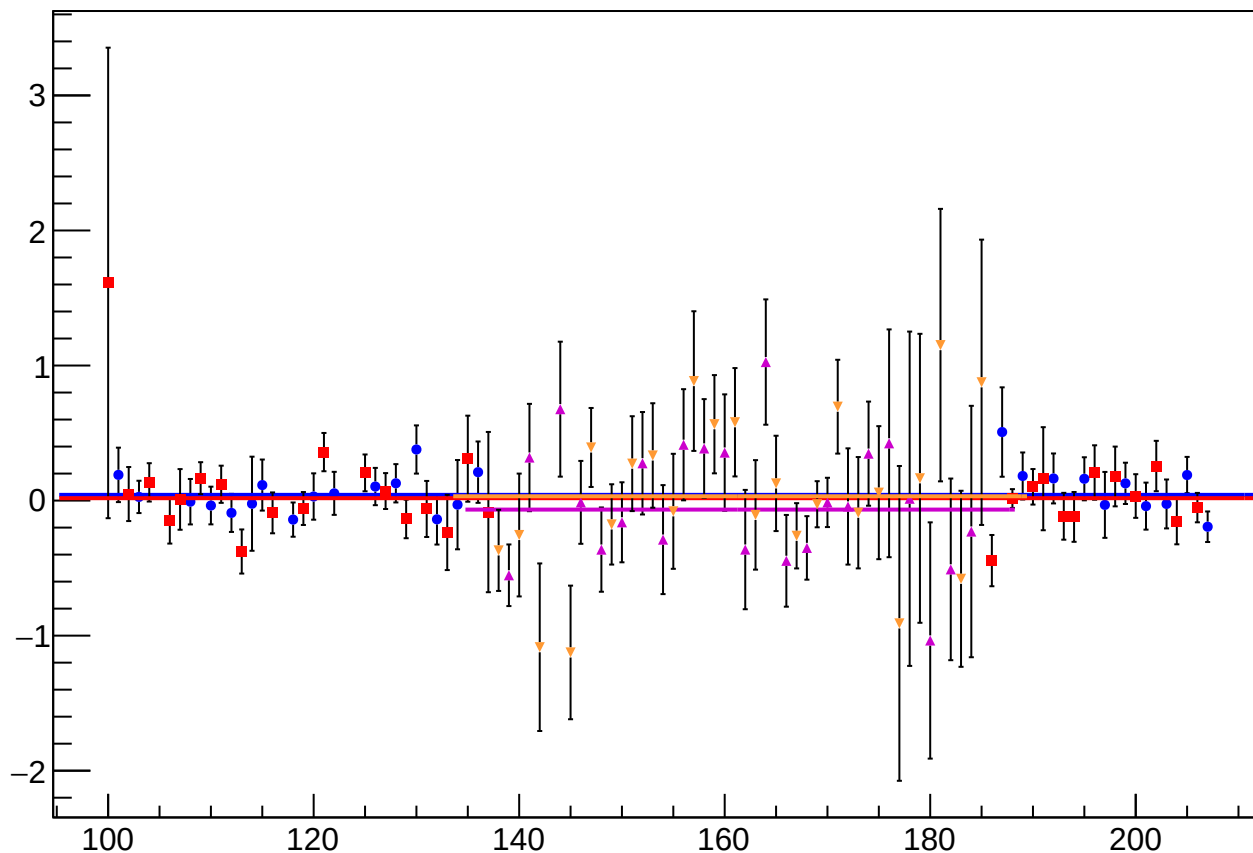
Left In: 292.100+/-0.053  $\chi^2/\text{NDF}$ : 5055737.7/22

+ sign 144.251+/-0.021  $\chi^2/\text{NDF}$ : 17023979.9/49

All: 134.405+/-0.014  $\chi^2/\text{NDF}$ : 37257616.5/10

- sign 126.607+/-0.019  $\chi^2/\text{NDF}$ : 19839501.1/52

asym\_usl\_atl2\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.042 \pm 0.032$   $\chi^2/\text{NDF}$ : 19.7/25

Left Out:  $0.032 \pm 0.076$   $\chi^2/\text{NDF}$ : 29.7/23

Right Out:  $0.018 \pm 0.028$   $\chi^2/\text{NDF}$ : 34.4/29

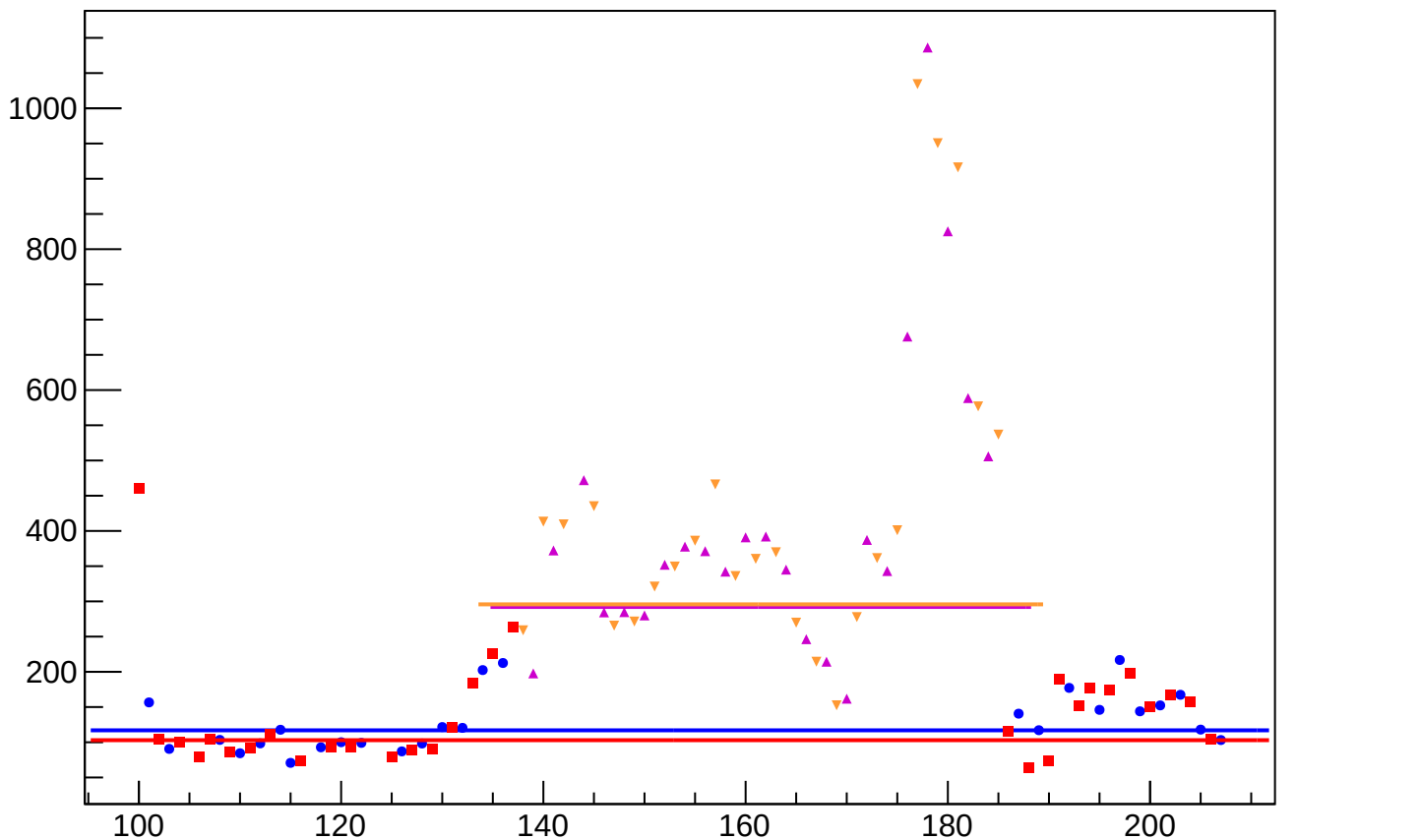
Left In:  $-0.067 \pm 0.075$   $\chi^2/\text{NDF}$ : 25.7/22

+ sign  $0.041 \pm 0.030$   $\chi^2/\text{NDF}$ : 49.4/49

All:  $0.022 \pm 0.020$   $\chi^2/\text{NDF}$ : 111.4/102

- sign  $0.007 \pm 0.026$   $\chi^2/\text{NDF}$ : 61.2/52

asym\_usl\_atl2\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 116.961 $\pm$ 0.023  $\chi^2$ /NDF: 2139694.2/25

Left Out: 295.798 $\pm$ 0.054  $\chi^2$ /NDF:5501077.8/23

Right Out: 102.957 $\pm$ 0.020  $\chi^2$ /NDF: 3570852.0/29

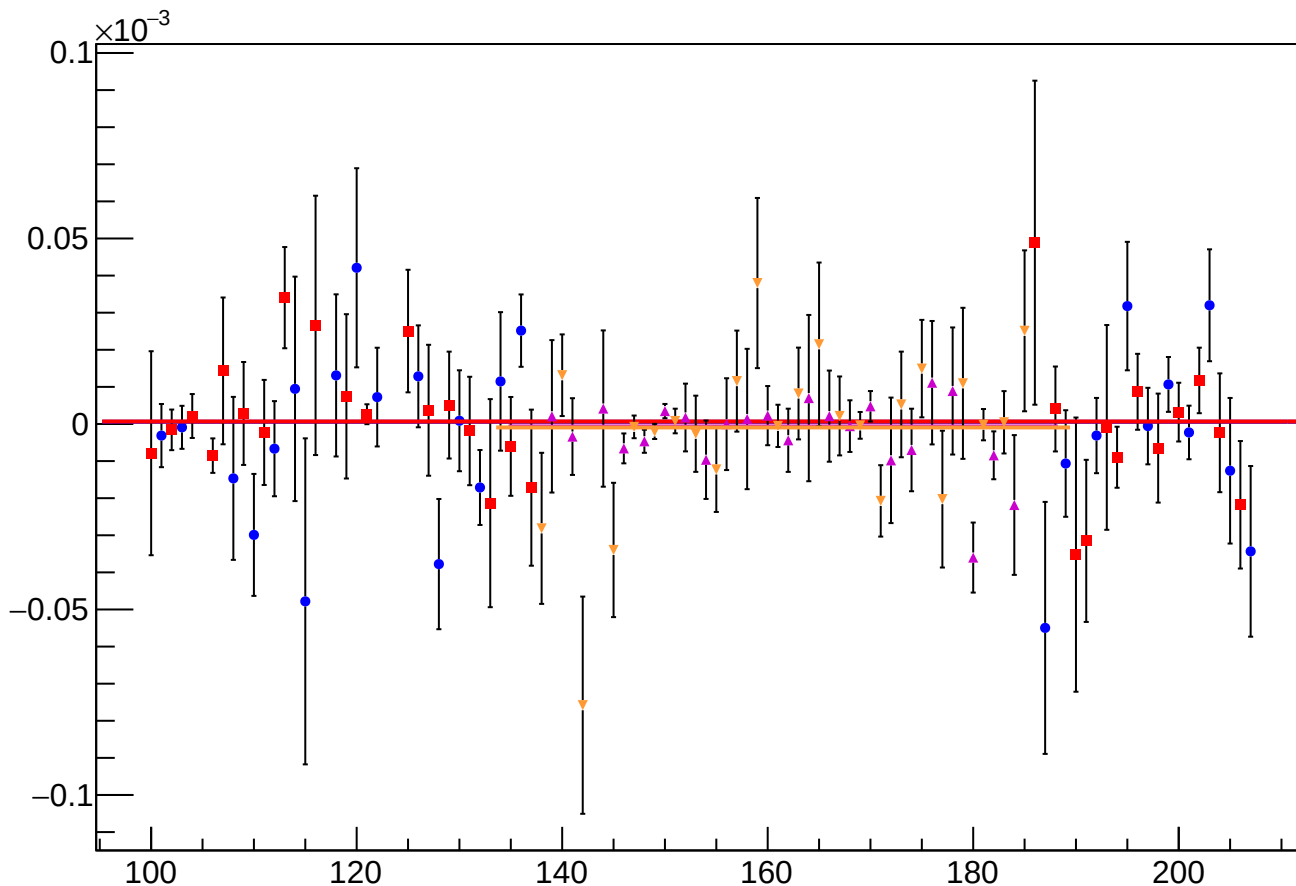
Left In: 292.100 $\pm$ 0.053  $\chi^2$ /NDF:5055737.7/22

+ sign 144.251 $\pm$ 0.021  $\chi^2$ /NDF: 17023979.9/49

All: 134.405 $\pm$ 0.014  $\chi^2$ /NDF: 37257616.5/10

- sign 126.607 $\pm$ 0.019  $\chi^2$ /NDF: 19839501.1/52

asym\_usl\_atl2\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 39.9/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 29.1/23

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 25.9/29

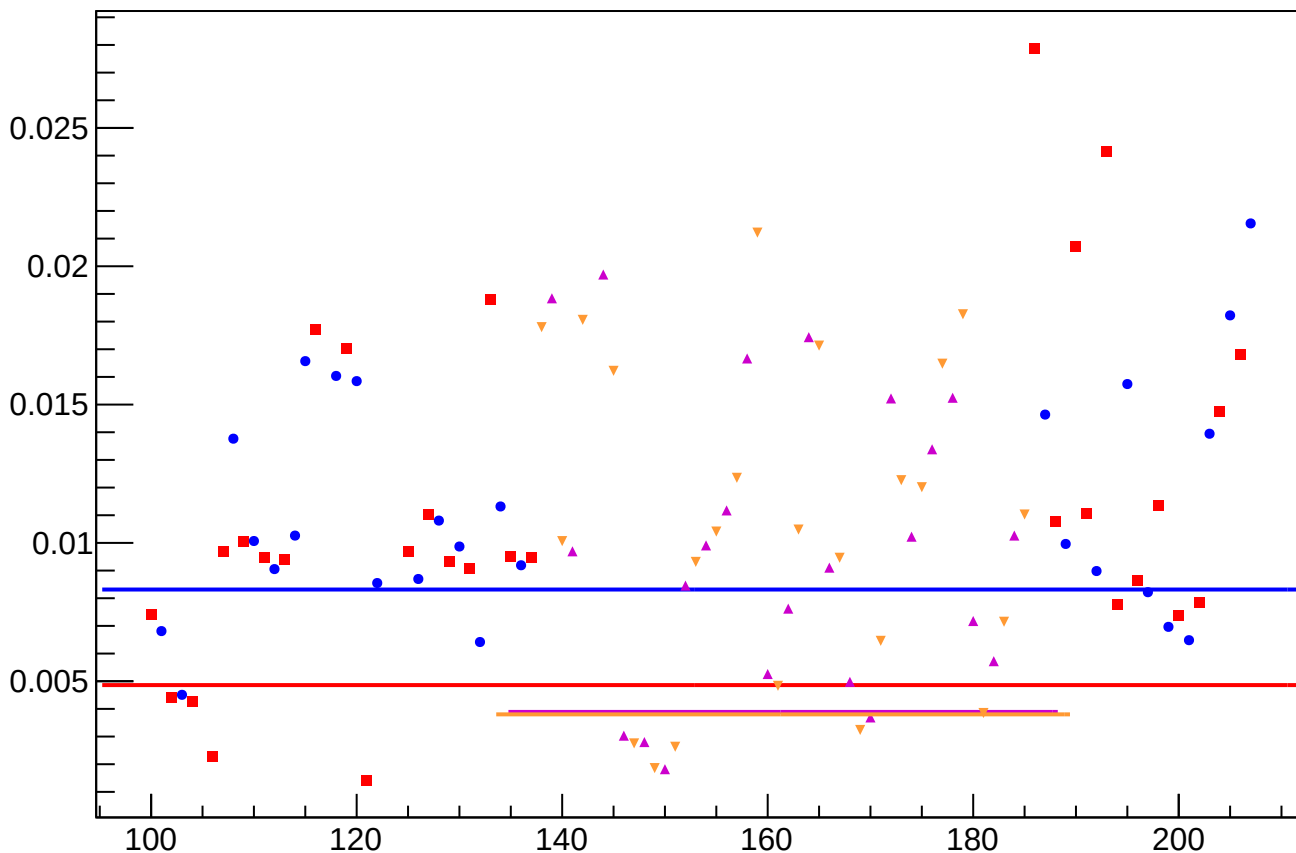
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 29.8/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 69.3/49

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 125.6/102

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 56.2/52

asym\_usl\_atl2\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 3889074.1/25

Left Out: 0.004 $\pm$ 0.000  $\chi^2$ /NDF:14624926.4/23

Right Out: 0.005 $\pm$ 0.000  $\chi^2$ /NDF: 12980200.6/29

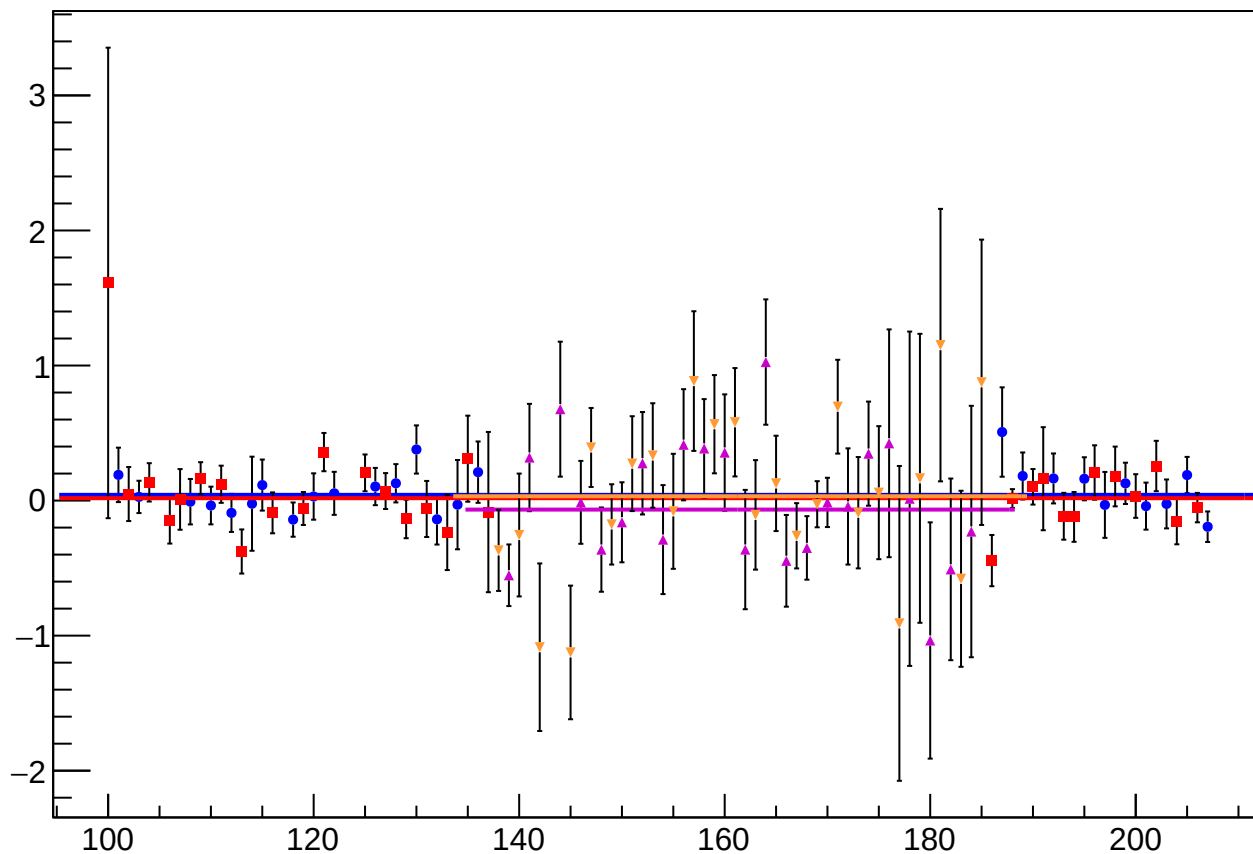
Left In: 0.004 $\pm$ 0.000  $\chi^2$ /NDF:13523554.3/22

+ sign 0.005 $\pm$ 0.000  $\chi^2$ /NDF: 24293757.0/49

All: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 51454566.5/102

- sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 26950203.4/52

asym\_usl\_atl2\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.042 \pm 0.032$   $\chi^2/\text{NDF}$ : 19.7/25

Left Out:  $0.032 \pm 0.076$   $\chi^2/\text{NDF}$ : 29.7/23

Right Out:  $0.018 \pm 0.028$   $\chi^2/\text{NDF}$ : 34.4/29

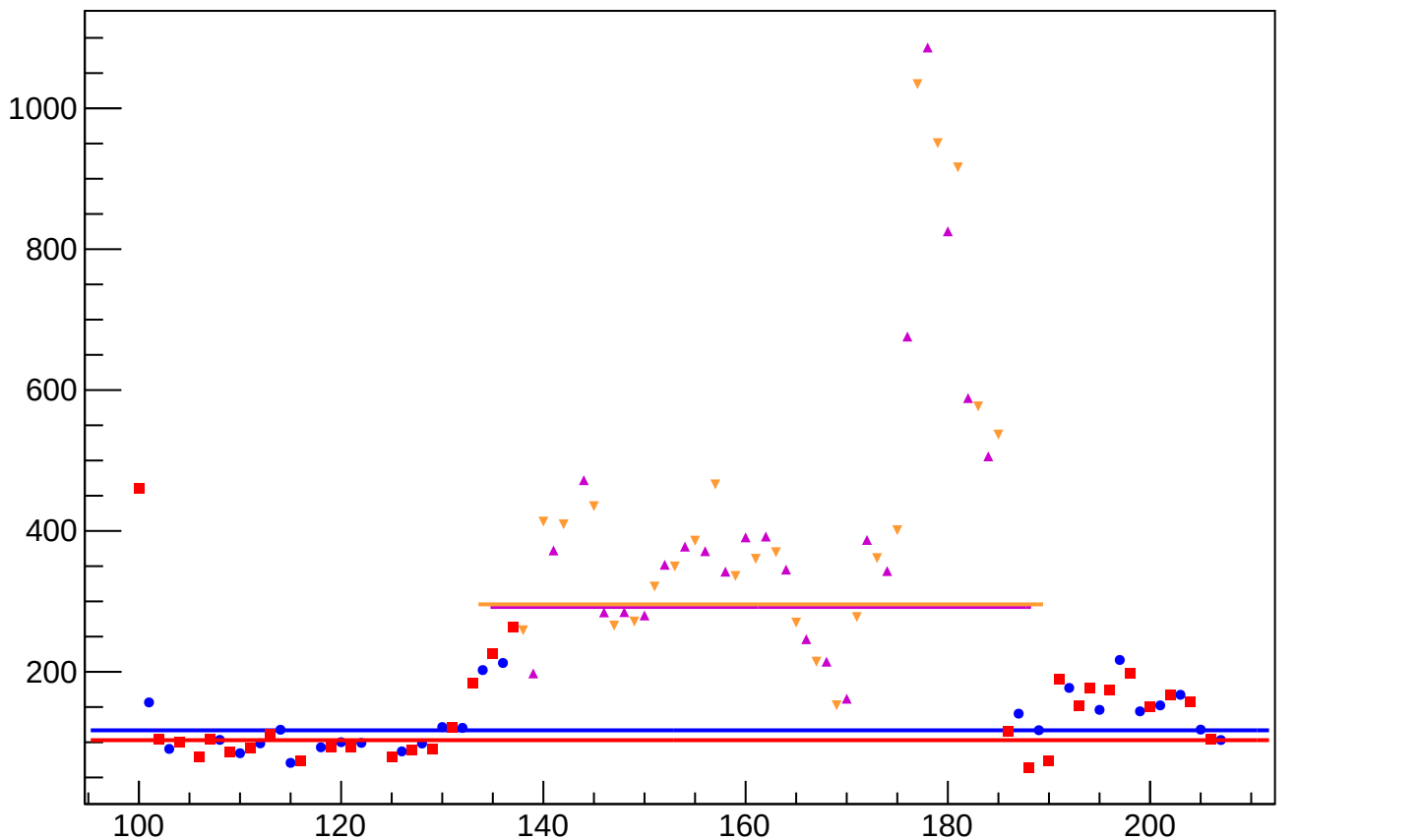
Left In:  $-0.067 \pm 0.075$   $\chi^2/\text{NDF}$ : 25.7/22

+ sign  $0.041 \pm 0.030$   $\chi^2/\text{NDF}$ : 49.4/49

All:  $0.022 \pm 0.020$   $\chi^2/\text{NDF}$ : 111.4/102

- sign  $0.007 \pm 0.026$   $\chi^2/\text{NDF}$ : 61.2/52

asym\_usl\_atl2\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 116.962 $\pm$ 0.023  $\chi^2$ /NDF: 2139655.2/25

Left Out: 295.800 $\pm$ 0.054  $\chi^2$ /NDF: 5501139.3/23

Right Out: 102.956 $\pm$ 0.020  $\chi^2$ /NDF: 3571035.2/29

Left In: 292.103 $\pm$ 0.053  $\chi^2$ /NDF: 5055695.7/22

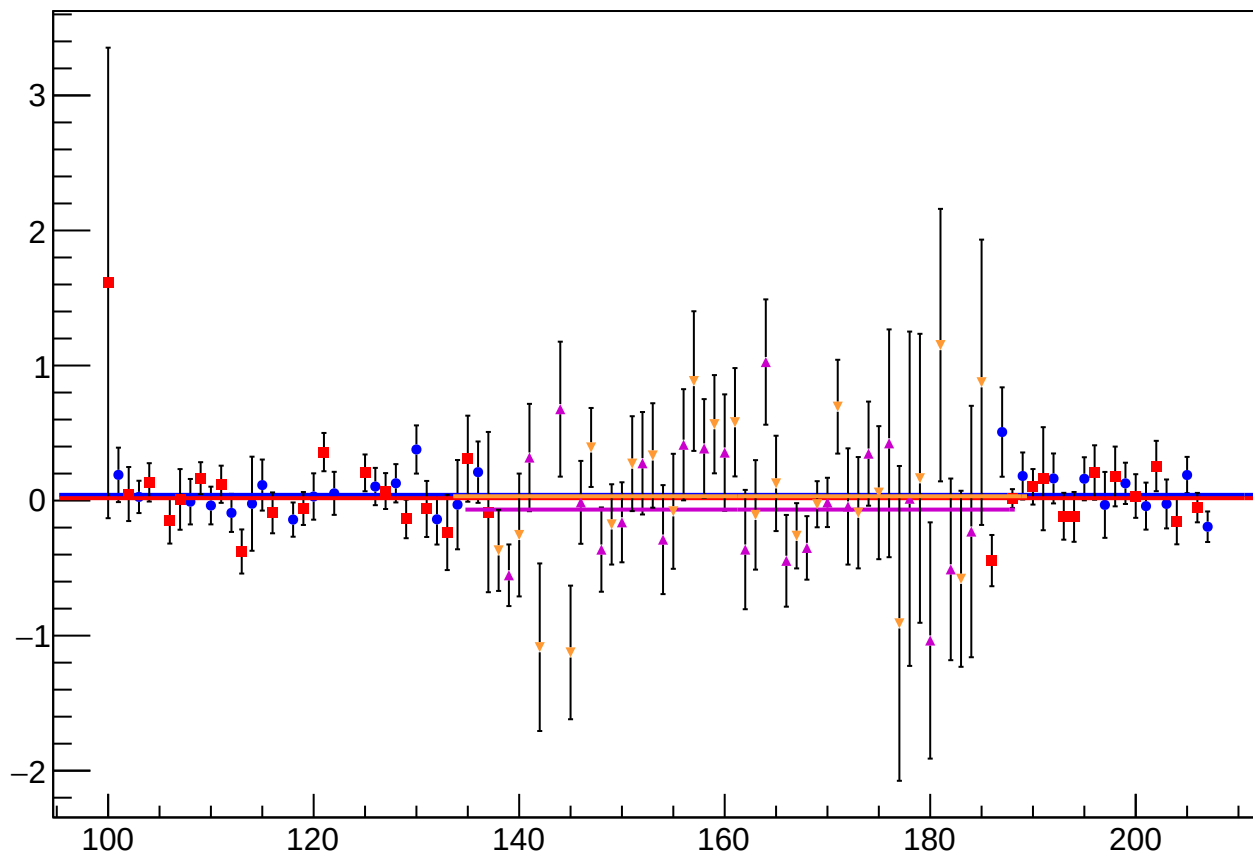
+ sign 144.251 $\pm$ 0.021  $\chi^2$ /NDF: 17024030.8/49

All: 134.404 $\pm$ 0.014  $\chi^2$ /NDF: 37258240.8/10

- sign 126.606 $\pm$ 0.019  $\chi^2$ /NDF: 19839991.7/52



asym\_usl\_atl2\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.042 \pm 0.032$   $\chi^2/\text{NDF}$ : 19.7/25

Left Out:  $0.032 \pm 0.076$   $\chi^2/\text{NDF}$ : 29.7/23

Right Out:  $0.018 \pm 0.028$   $\chi^2/\text{NDF}$ : 34.4/29

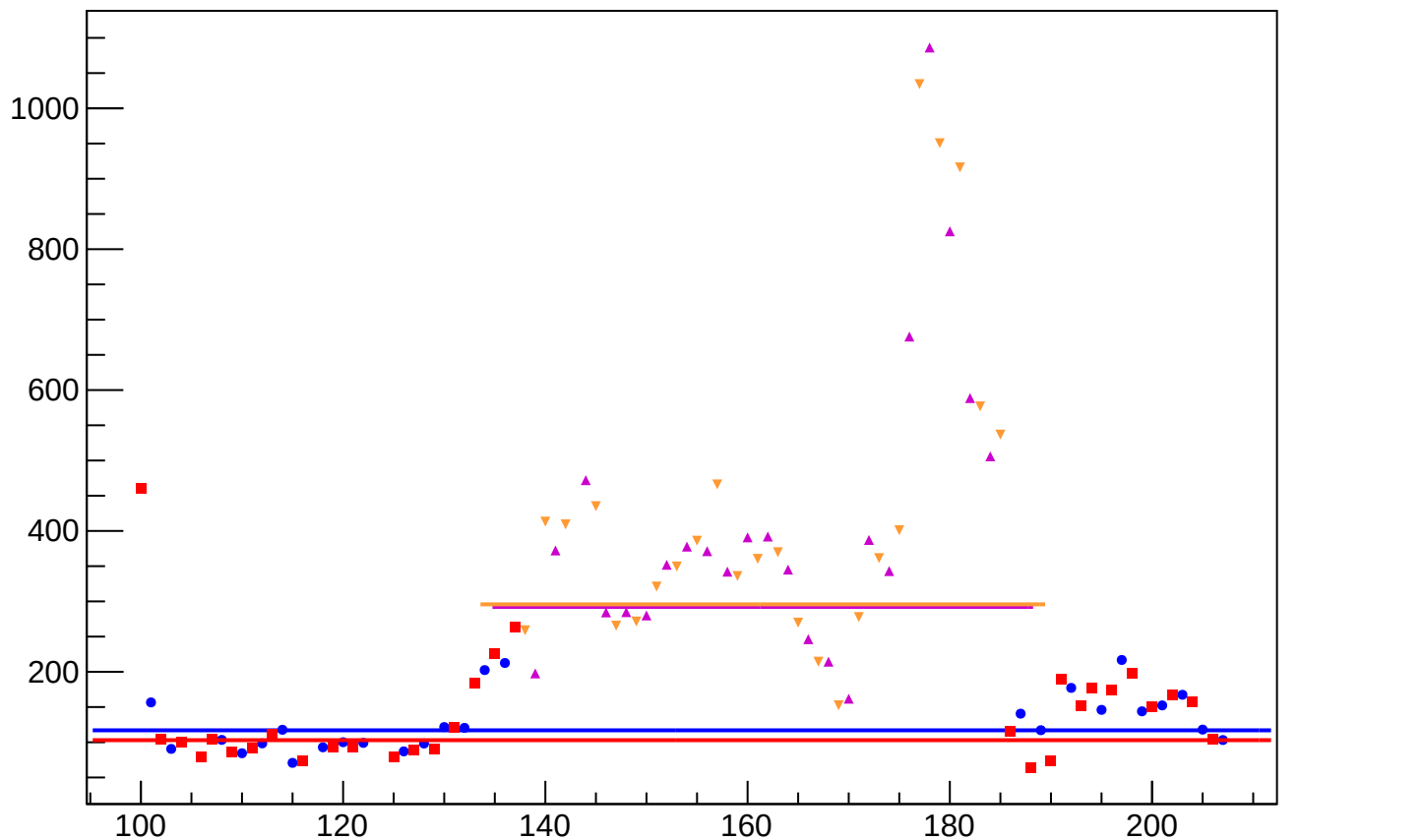
Left In:  $-0.067 \pm 0.075$   $\chi^2/\text{NDF}$ : 25.7/22

+ sign  $0.041 \pm 0.030$   $\chi^2/\text{NDF}$ : 49.4/49

All:  $0.022 \pm 0.020$   $\chi^2/\text{NDF}$ : 111.4/102

- sign  $0.007 \pm 0.026$   $\chi^2/\text{NDF}$ : 61.2/52

asym\_usl\_atl2\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 116.962 $\pm$ 0.023  $\chi^2$ /NDF: 2139655.2/25

Left Out: 295.800 $\pm$ 0.054  $\chi^2$ /NDF:5501139.3/23

Right Out: 102.956 $\pm$ 0.020  $\chi^2$ /NDF: 3571035.2/29

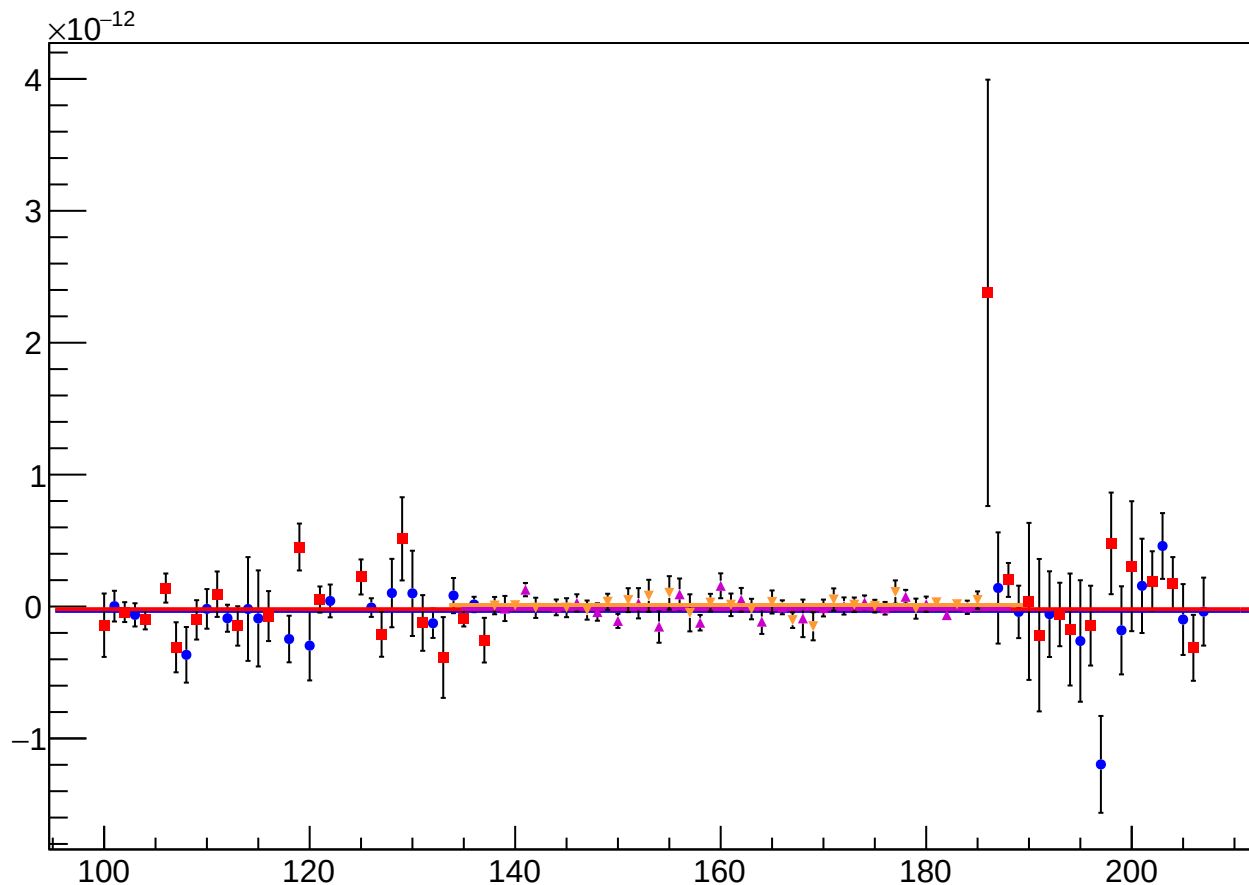
Left In: 292.103 $\pm$ 0.053  $\chi^2$ /NDF:5055695.7/22

+ sign 144.251 $\pm$ 0.021  $\chi^2$ /NDF: 17024030.8/49

All: 134.404 $\pm$ 0.014  $\chi^2$ /NDF: 37258240.8/10

- sign 126.606 $\pm$ 0.019  $\chi^2$ /NDF: 19839991.7/52

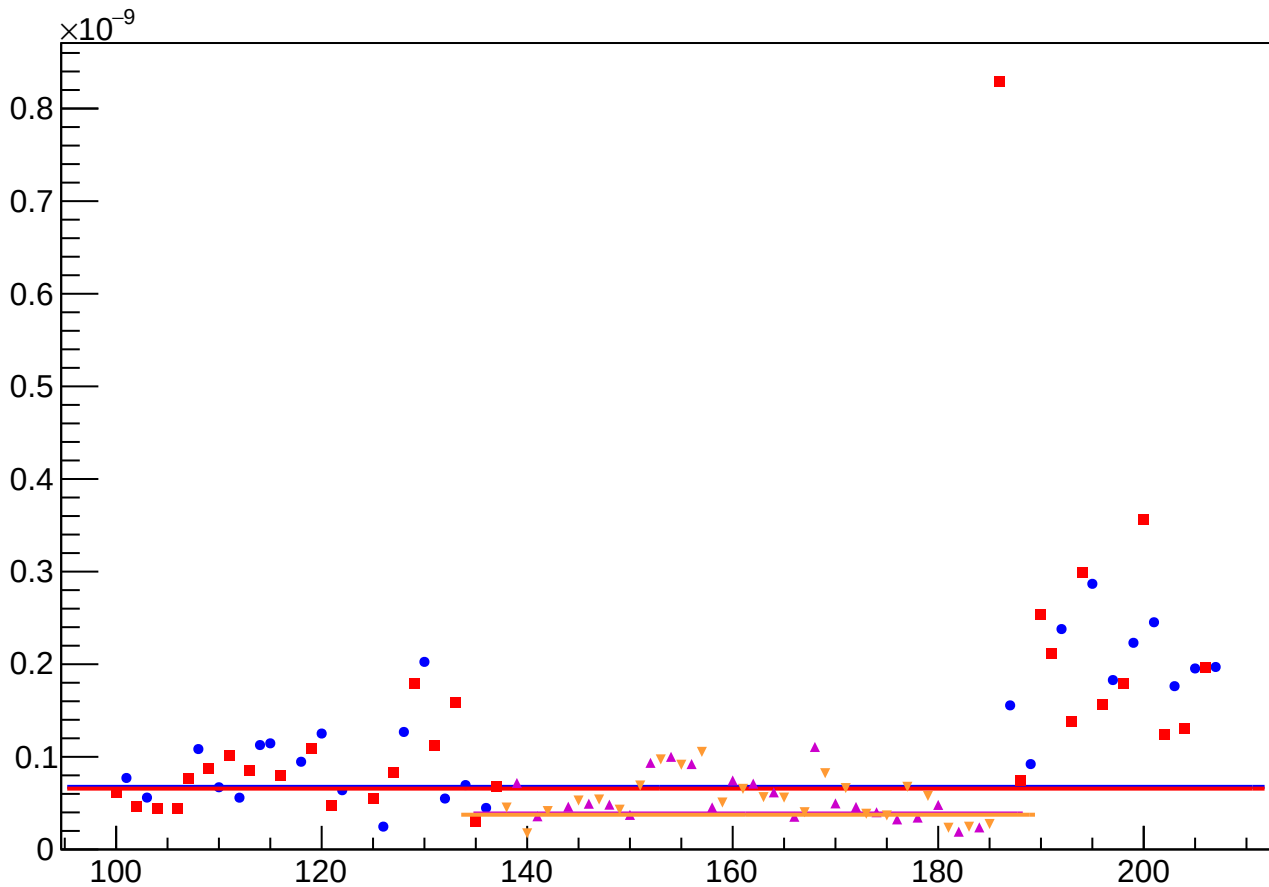
asym\_usl\_atl2\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 23.5/25$   
 Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 10.6/23$   
 Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 38.4/29$   
 Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 30.9/22$

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 36.2/49$   
 All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 107.3/102$   
 - sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 69.3/52$

asym\_usl\_atl2\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5457315.0/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4983727.4/23

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5522845.9/29

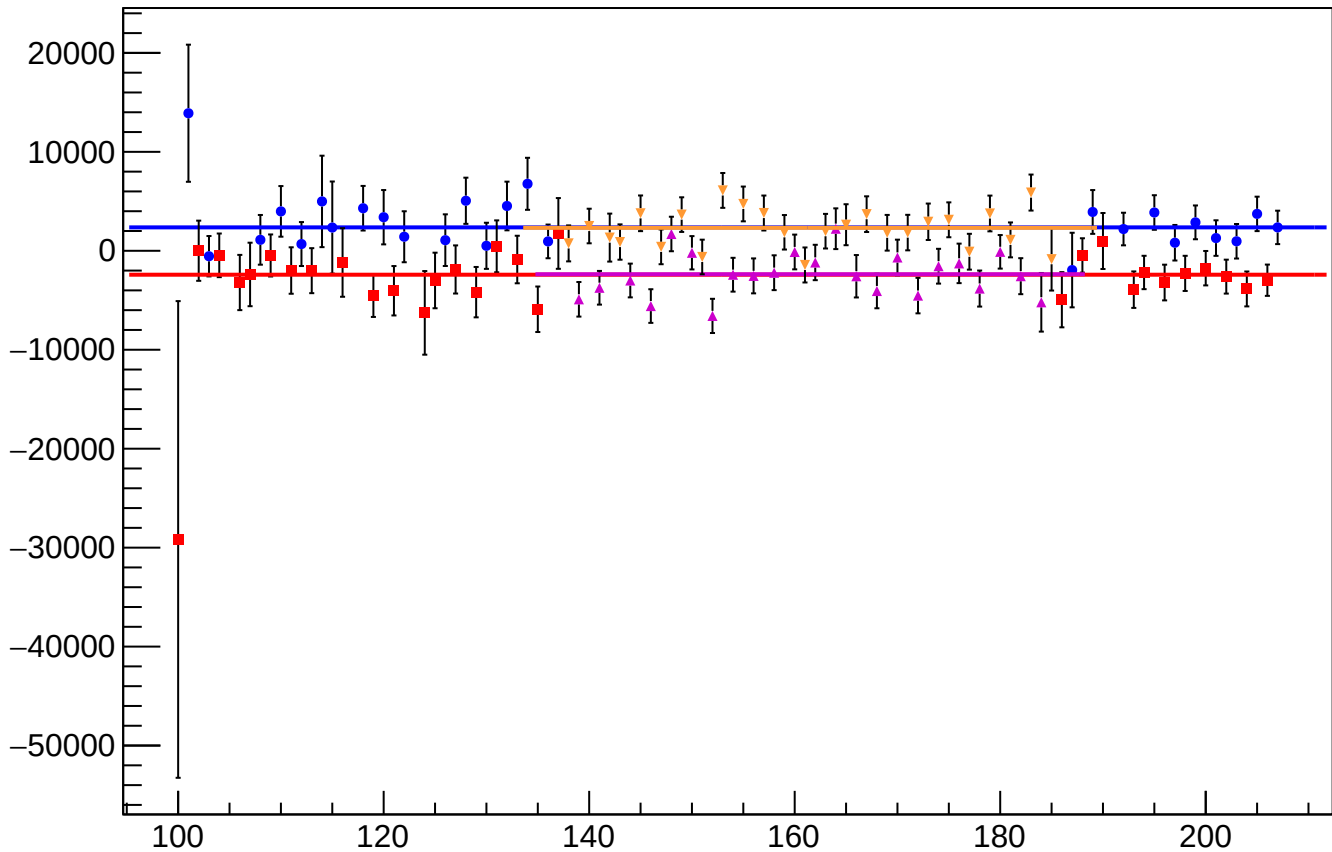
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4577795.4/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12371825.1/49

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 24142363.2/102

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11757127.3/52

# reg\_asym\_usr\_atr1\_avg\_mean vs Slug



Right In:  $2366.951 \pm 427.952$   $\chi^2/\text{NDF}: 18.9/25$

Left Out:  $2321.067 \pm 366.301$   $\chi^2/\text{NDF}: 27.5/24$

Right Out:  $-2417.162 \pm 410.230$   $\chi^2/\text{NDF}: 17.2/29$

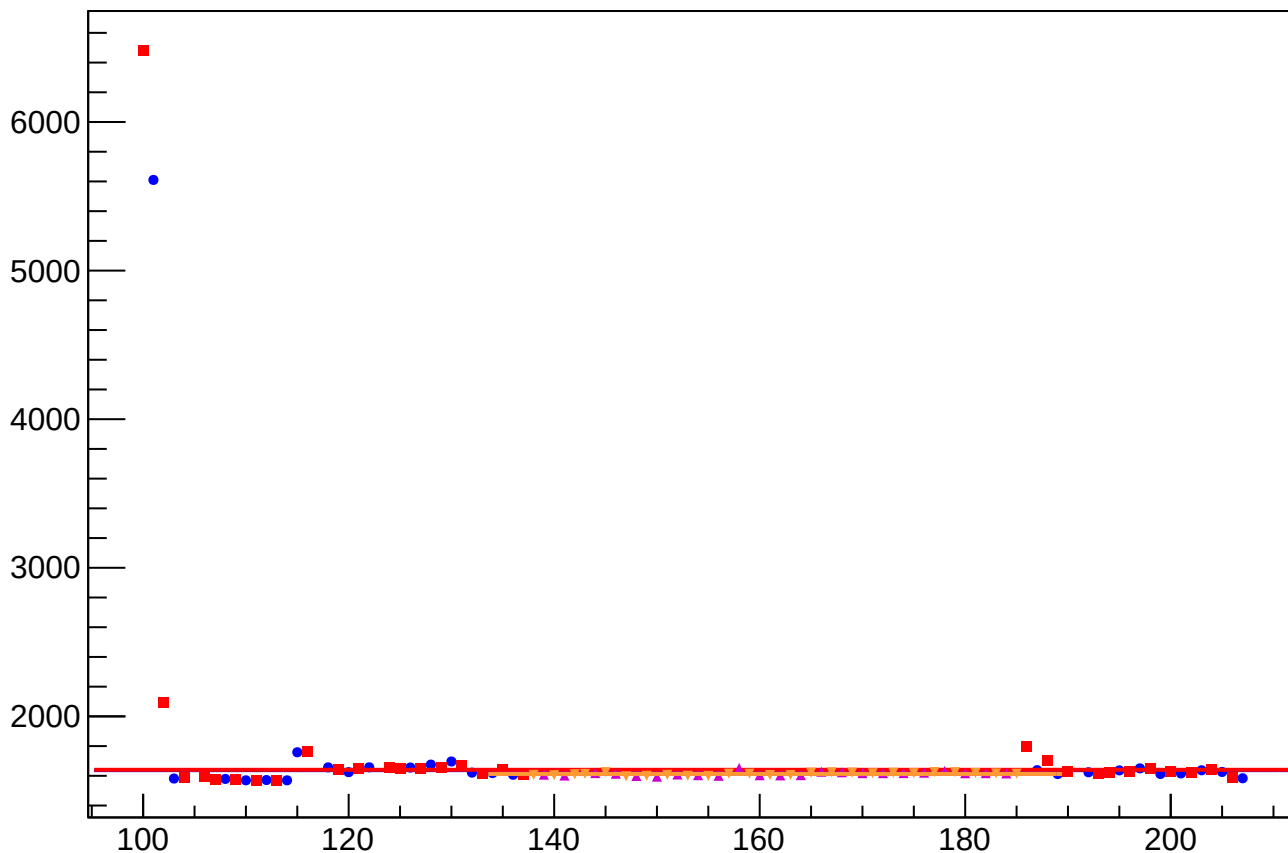
Left In:  $-2370.629 \pm 376.798$   $\chi^2/\text{NDF}: 33.7/22$

+ sign  $2340.469 \pm 278.282$   $\chi^2/\text{NDF}: 46.4/50$

All:  $-32.352 \pm 196.499$   $\chi^2/\text{NDF}: 242.4/103$

- sign  $-2391.922 \pm 277.504$   $\chi^2/\text{NDF}: 51.0/52$

# reg\_asym\_usr\_atr1\_avg\_rms vs Slug



Right In: 1638.172 $\pm$ 0.303  $\chi^2$ /NDF: 671413.4/25

Left Out: 1612.607 $\pm$ 0.259  $\chi^2$ /NDF: 1172.5/24

Right Out: 1640.469 $\pm$ 0.290  $\chi^2$ /NDF: 148609.9/29

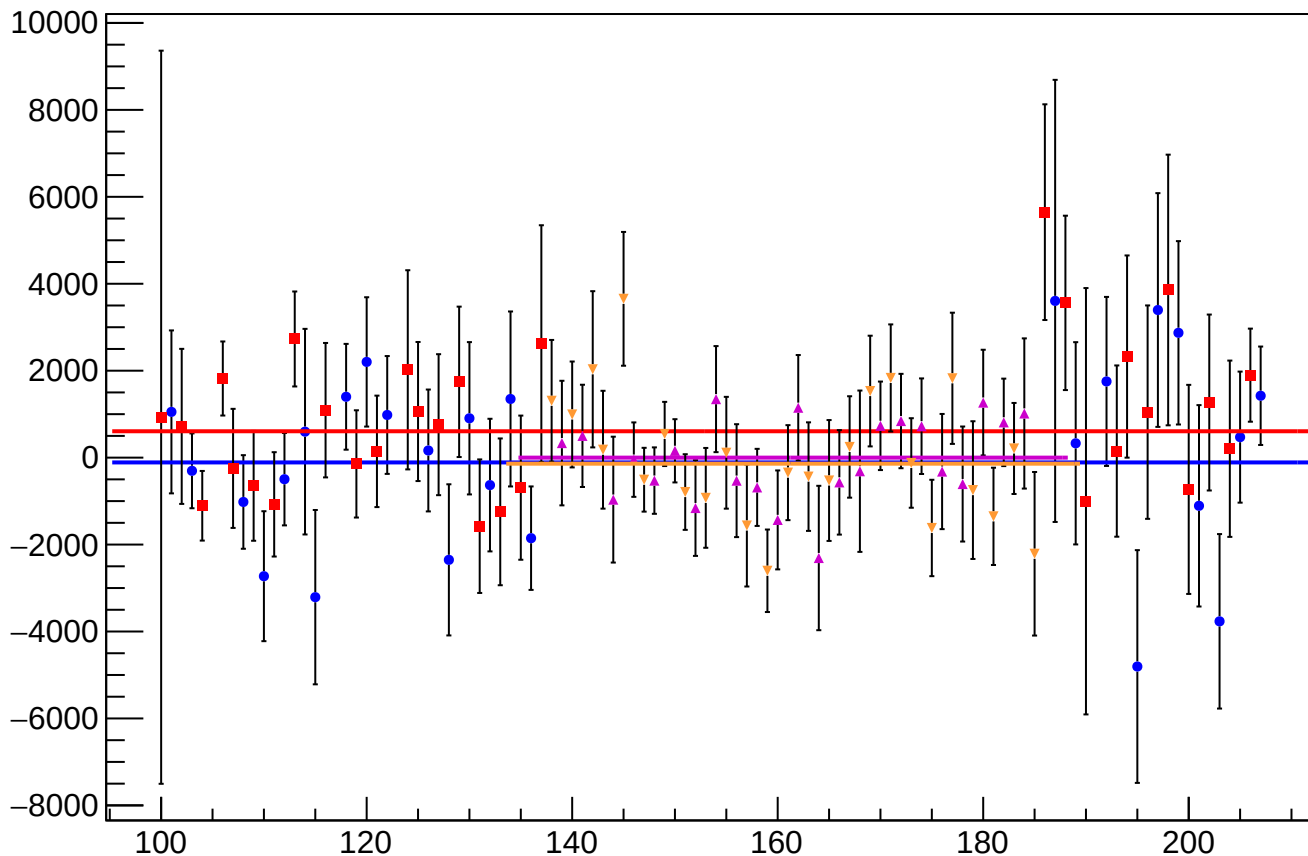
Left In: 1613.793 $\pm$ 0.266  $\chi^2$ /NDF: 2354.6/22

+ sign 1623.417 $\pm$ 0.197  $\chi^2$ /NDF: 676705.0/50

All: 1624.712 $\pm$ 0.139  $\chi^2$ /NDF: 832343.1/103

- sign 1626.000 $\pm$ 0.196  $\chi^2$ /NDF: 155551.7/52

asym\_usr\_atr1\_avg\_reg\_correction\_mean vs Slug



Right In: -110.378 $\pm$ 299.828  $\chi^2/\text{NDF}$ : 30.0/25

Left Out: -139.022 $\pm$ 229.126  $\chi^2/\text{NDF}$ : 30.2/24

Right Out: 606.692 $\pm$ 278.362  $\chi^2/\text{NDF}$ : 29.7/29

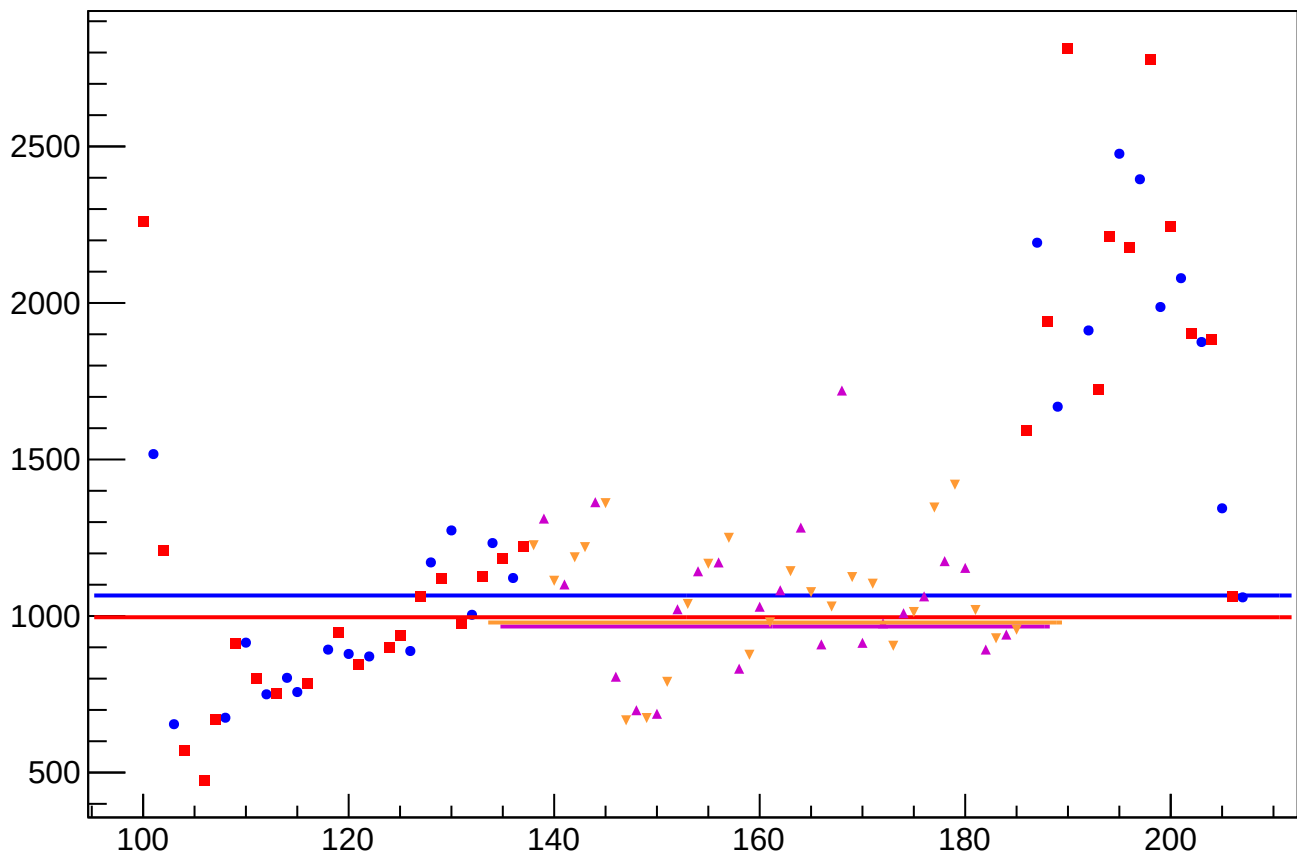
Left In: 0.092 $\pm$ 231.903  $\chi^2/\text{NDF}$ : 12.9/22

+ sign -128.461 $\pm$ 182.053  $\chi^2/\text{NDF}$ : 60.2/50

All: 64.139 $\pm$ 127.337  $\chi^2/\text{NDF}$ : 107.7/103

- sign 248.616 $\pm$ 178.173  $\chi^2/\text{NDF}$ : 45.3/52

# asym\_usr\_atr1\_avg\_reg\_correction\_rms vs Slug



Right In: 1065.577+/-0.212  $\chi^2/\text{NDF}$ : 4122081.3/25

Left Out: 979.294+/-0.162  $\chi^2/\text{NDF}$ :1630623.2/24

Right Out: 996.099+/-0.197  $\chi^2/\text{NDF}$ : 5905073.6/29

Left In: 966.526+/-0.164  $\chi^2/\text{NDF}$ :1602596.2/22

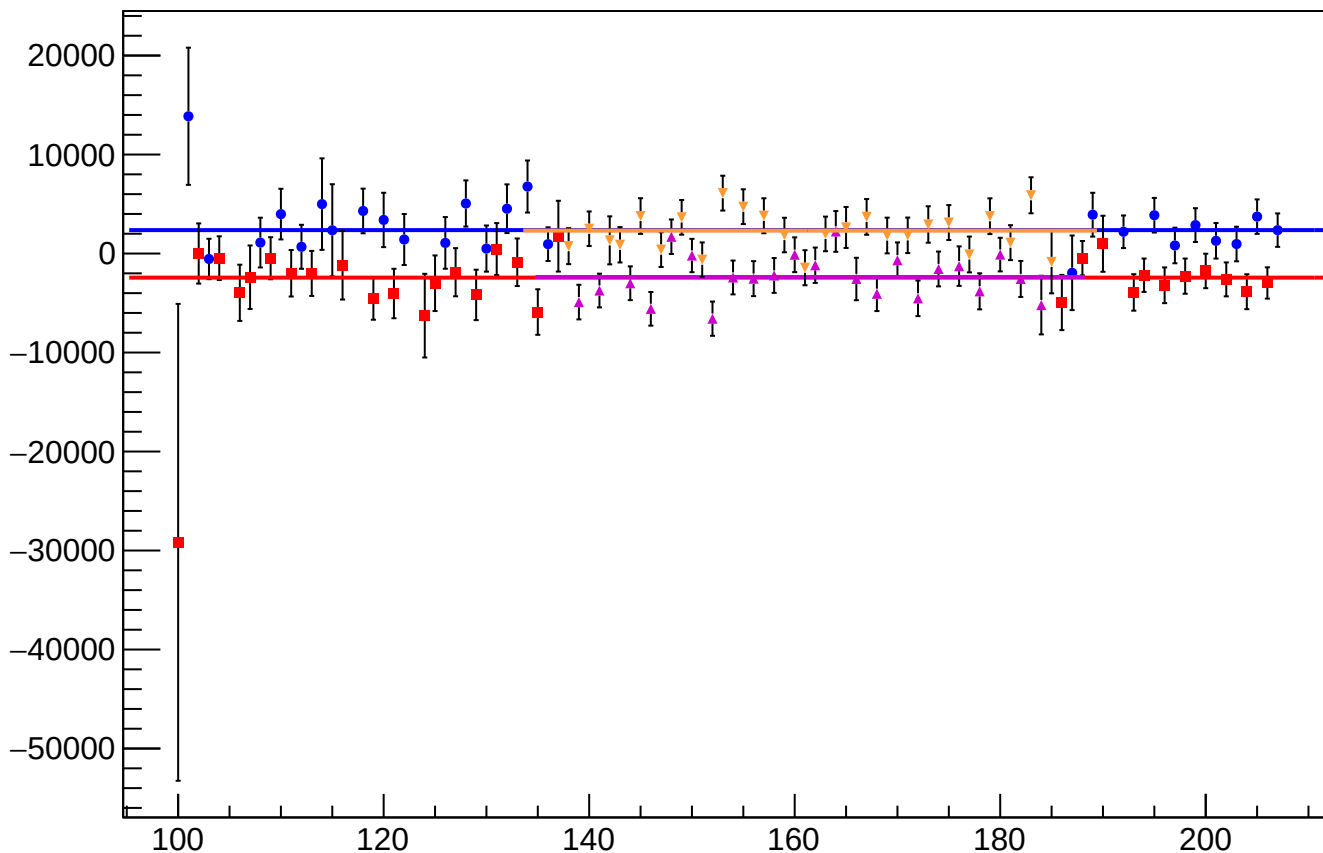
+ sign 1011.105+/-0.129  $\chi^2/\text{NDF}$ : 5857267.0/50

All: 994.524+/-0.090  $\chi^2/\text{NDF}$ : 13410743.8/10

- sign 978.642+/-0.126  $\chi^2/\text{NDF}$ : 7520995.5/52



# cor\_asym\_usr\_atr1\_avg\_mean vs Slug



Right In: 2366.712 $\pm$ 427.952  $\chi^2/\text{NDF}$ : 18.9/25

Left Out: 2321.025 $\pm$ 366.301  $\chi^2/\text{NDF}$ : 27.5/24

Right Out: -2432.615 $\pm$ 410.382  $\chi^2/\text{NDF}$ : 17.5/29

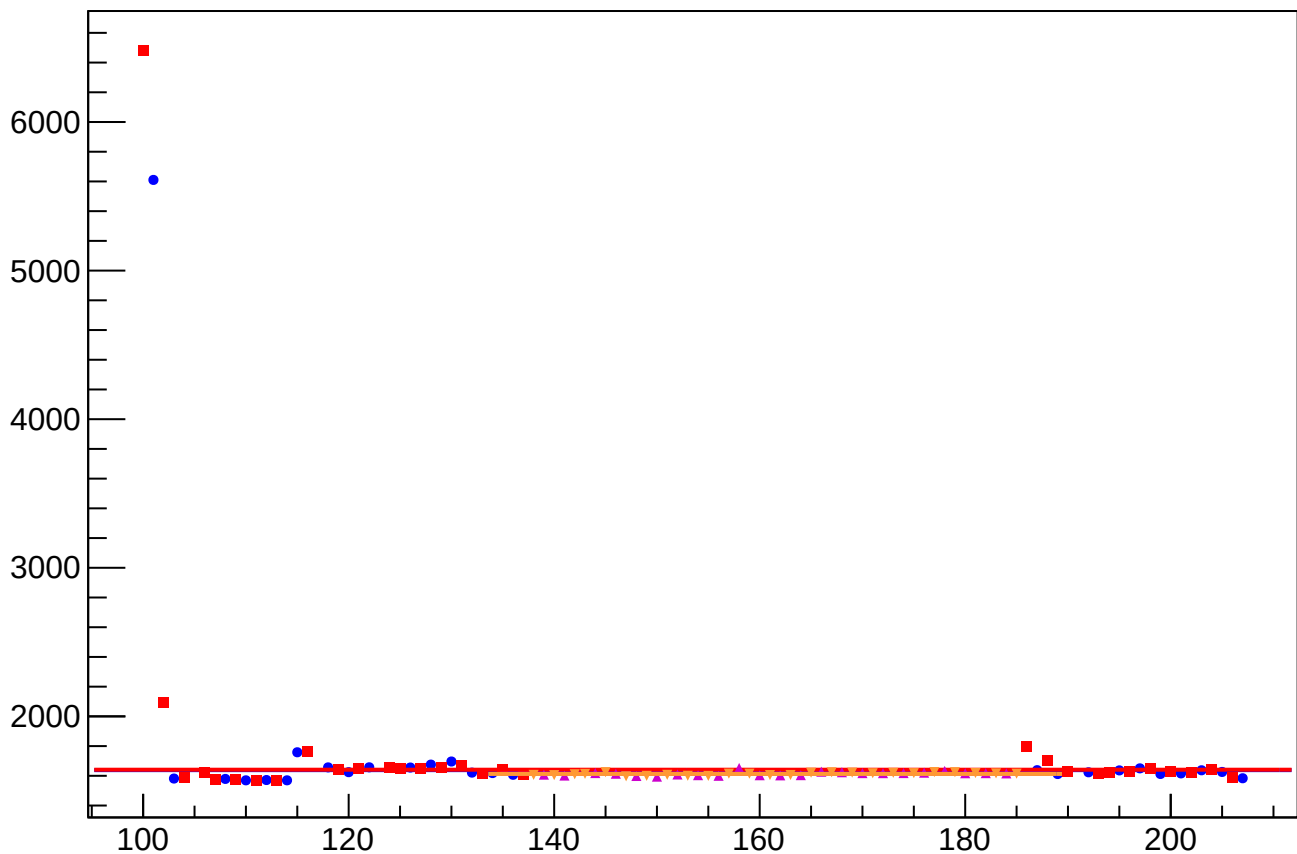
Left In: -2370.700 $\pm$ 376.798  $\chi^2/\text{NDF}$ : 33.7/22

+ sign 2340.343 $\pm$ 278.282  $\chi^2/\text{NDF}$ : 46.4/50

All: -35.571 $\pm$ 196.516  $\chi^2/\text{NDF}$ : 243.0/103

- sign -2399.021 $\pm$ 277.551  $\chi^2/\text{NDF}$ : 51.2/52

# cor\_asym\_usr\_atr1\_avg\_rms vs Slug



Right In: 1638.172 $\pm$ 0.303  $\chi^2$ /NDF: 671412.9/25

Left Out: 1612.607 $\pm$ 0.259  $\chi^2$ /NDF: 1172.5/24

Right Out: 1641.057 $\pm$ 0.290  $\chi^2$ /NDF: 148141.6/29

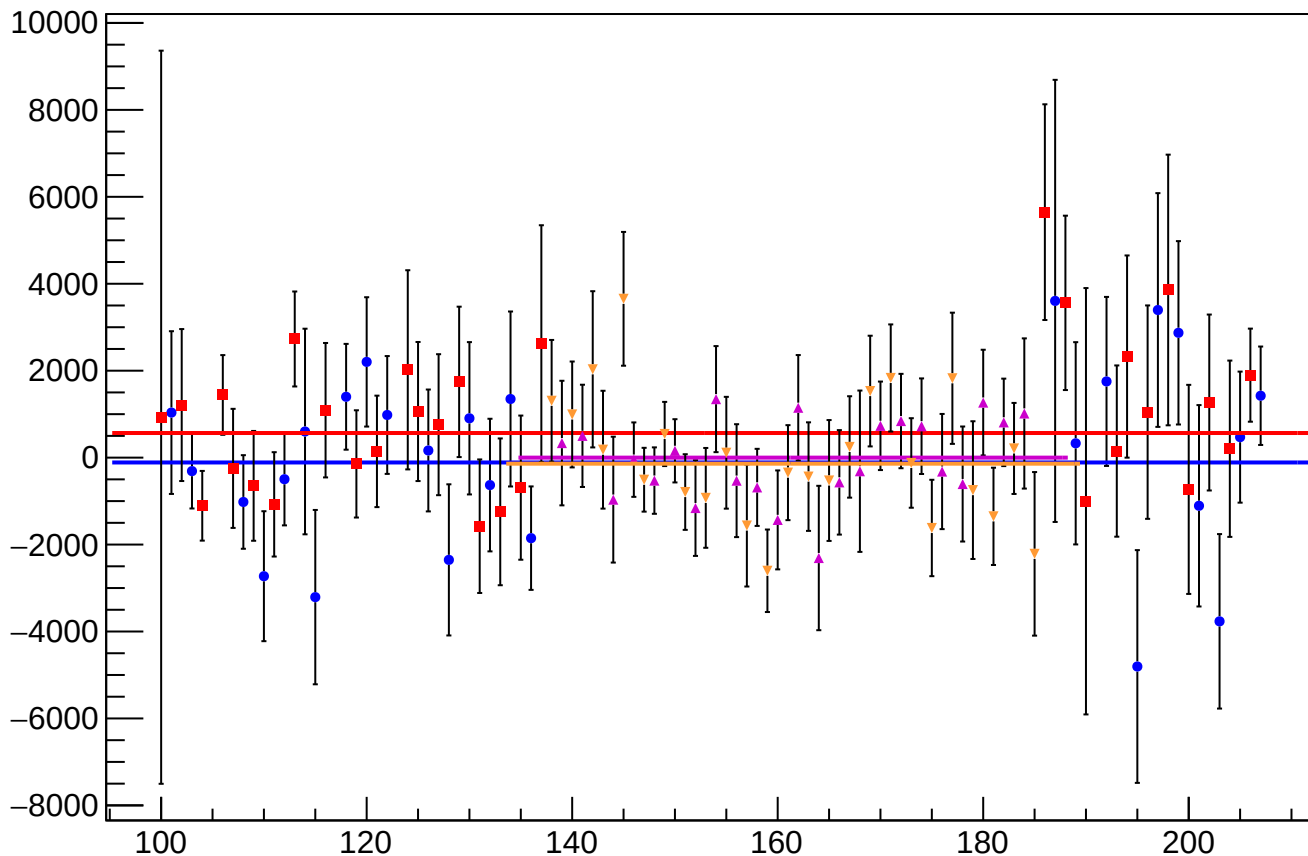
Left In: 1613.793 $\pm$ 0.266  $\chi^2$ /NDF: 2354.6/22

+ sign 1623.417 $\pm$ 0.197  $\chi^2$ /NDF: 676704.6/50

All: 1624.844 $\pm$ 0.139  $\chi^2$ /NDF: 832095.4/103

- sign 1626.264 $\pm$ 0.196  $\chi^2$ /NDF: 155285.9/52

asym\_usr\_atr1\_avg\_cor\_correction\_mean vs Slug



Right In: -111.415+/-299.798  $\chi^2/\text{NDF}$ : 30.0/25

Left Out: -139.074+/-229.125  $\chi^2/\text{NDF}$ : 30.2/24

Right Out: 566.424+/-280.307  $\chi^2/\text{NDF}$ : 28.5/29

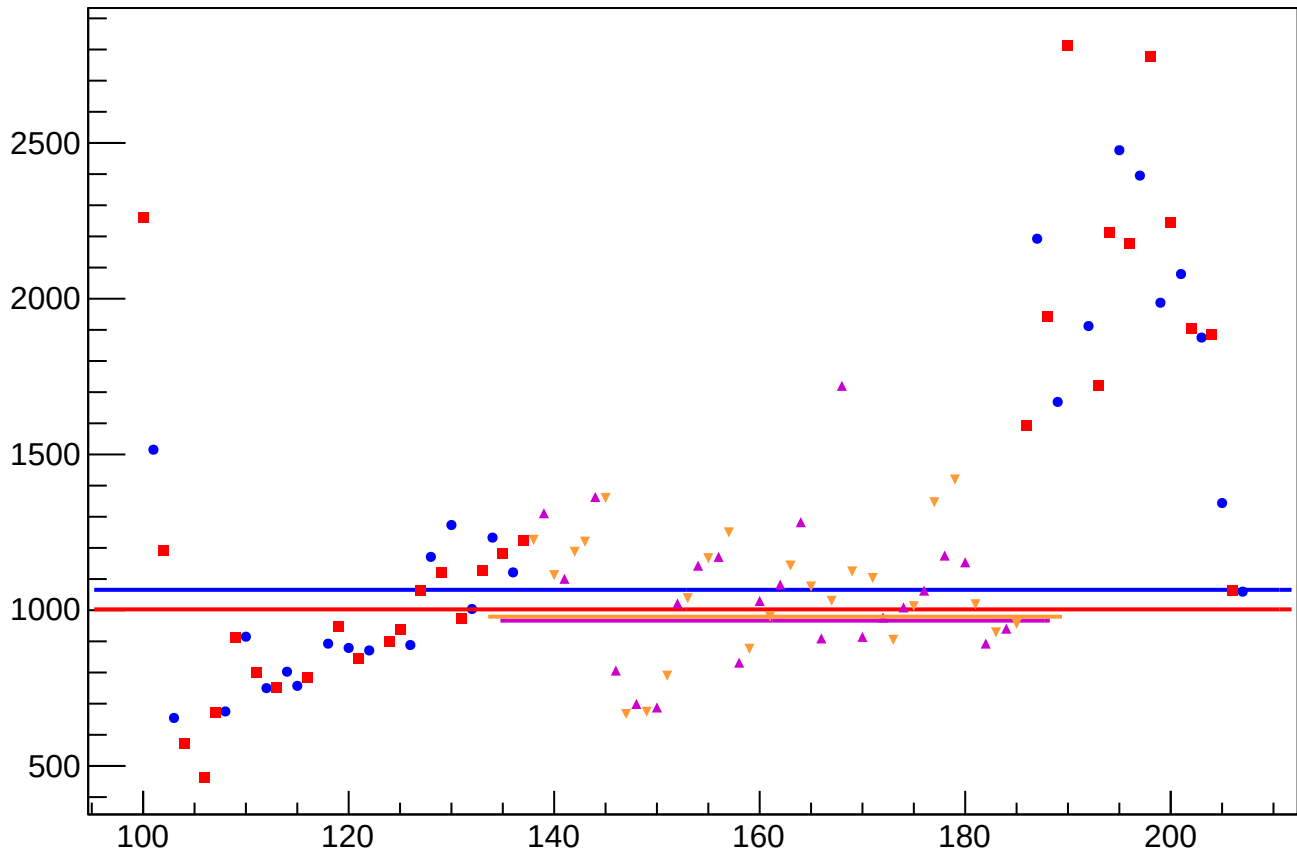
Left In: 0.068+/-231.904  $\chi^2/\text{NDF}$ : 12.9/22

+ sign -128.875+/-182.046  $\chi^2/\text{NDF}$ : 60.2/50

All: 54.012+/-127.520  $\chi^2/\text{NDF}$ : 106.0/103

- sign 230.200+/-178.681  $\chi^2/\text{NDF}$ : 43.8/52

asym\_usr\_atr1\_avg\_cor\_correction\_rms vs Slug



Right In:  $1065.465 \pm 0.212$   $\chi^2/\text{NDF}$ : 4122591.1/25

Left Out:  $979.288 \pm 0.162$   $\chi^2/\text{NDF}$ : 1630731.2/24

Right Out:  $1002.664 \pm 0.198$   $\chi^2/\text{NDF}$ : 5823541.7/29

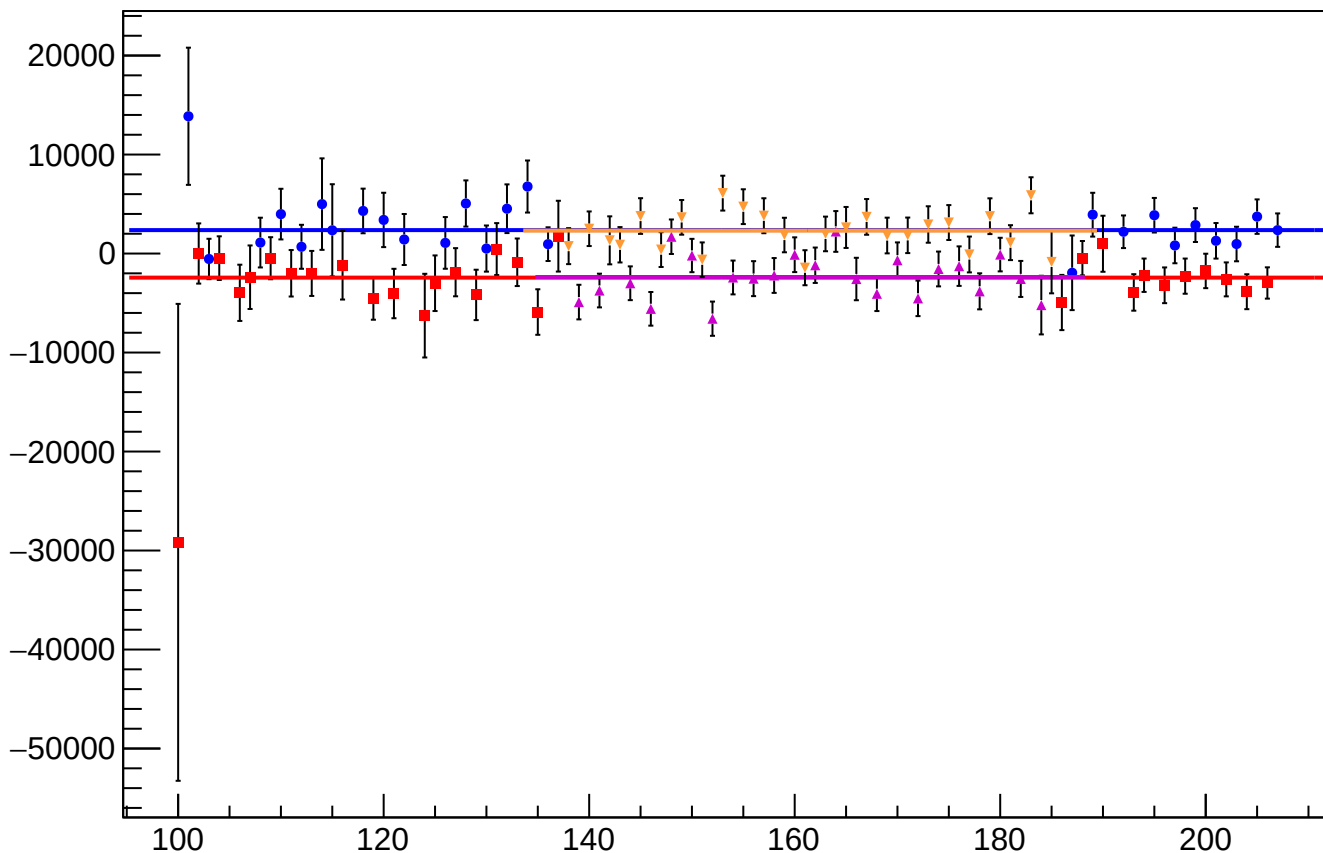
Left In:  $966.531 \pm 0.164$   $\chi^2/\text{NDF}$ : 1602562.1/22

+ sign  $1011.064 \pm 0.129$   $\chi^2/\text{NDF}$ : 5857643.1/50

All:  $995.860 \pm 0.090$   $\chi^2/\text{NDF}$ : 13330864.4/10

- sign  $981.214 \pm 0.126$   $\chi^2/\text{NDF}$ : 7445833.2/52

# eigen\_cor\_asym\_usr\_atr1\_avg\_mean vs Slug



Right In: 2366.712 $\pm$ 427.952  $\chi^2$ /NDF: 18.9/25

Left Out: 2321.025 $\pm$ 366.301  $\chi^2$ /NDF: 27.5/24

Right Out: -2432.615 $\pm$ 410.382  $\chi^2$ /NDF: 17.5/29

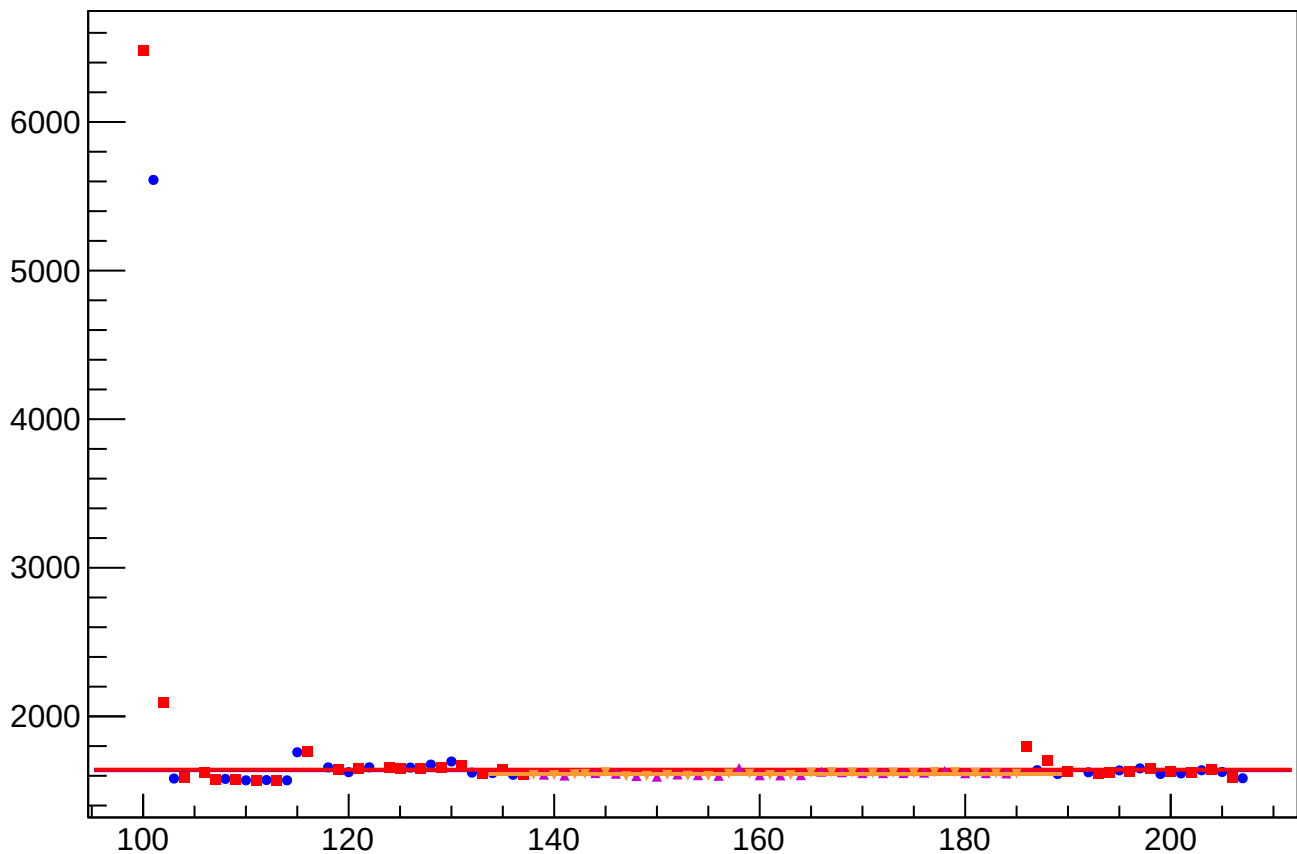
Left In: -2370.700 $\pm$ 376.798  $\chi^2$ /NDF: 33.7/22

+ sign 2340.343 $\pm$ 278.282  $\chi^2$ /NDF: 46.4/50

All: -35.571 $\pm$ 196.516  $\chi^2$ /NDF: 243.0/103

- sign -2399.021 $\pm$ 277.551  $\chi^2$ /NDF: 51.2/52

# eigen\_cor\_asym\_usr\_atr1\_avg\_rms vs Slug



Right In: 1638.172 $\pm$ 0.303  $\chi^2$ /NDF: 671412.9/25

Left Out: 1612.607 $\pm$ 0.259  $\chi^2$ /NDF: 1172.5/24

Right Out: 1641.057 $\pm$ 0.290  $\chi^2$ /NDF: 148141.6/29

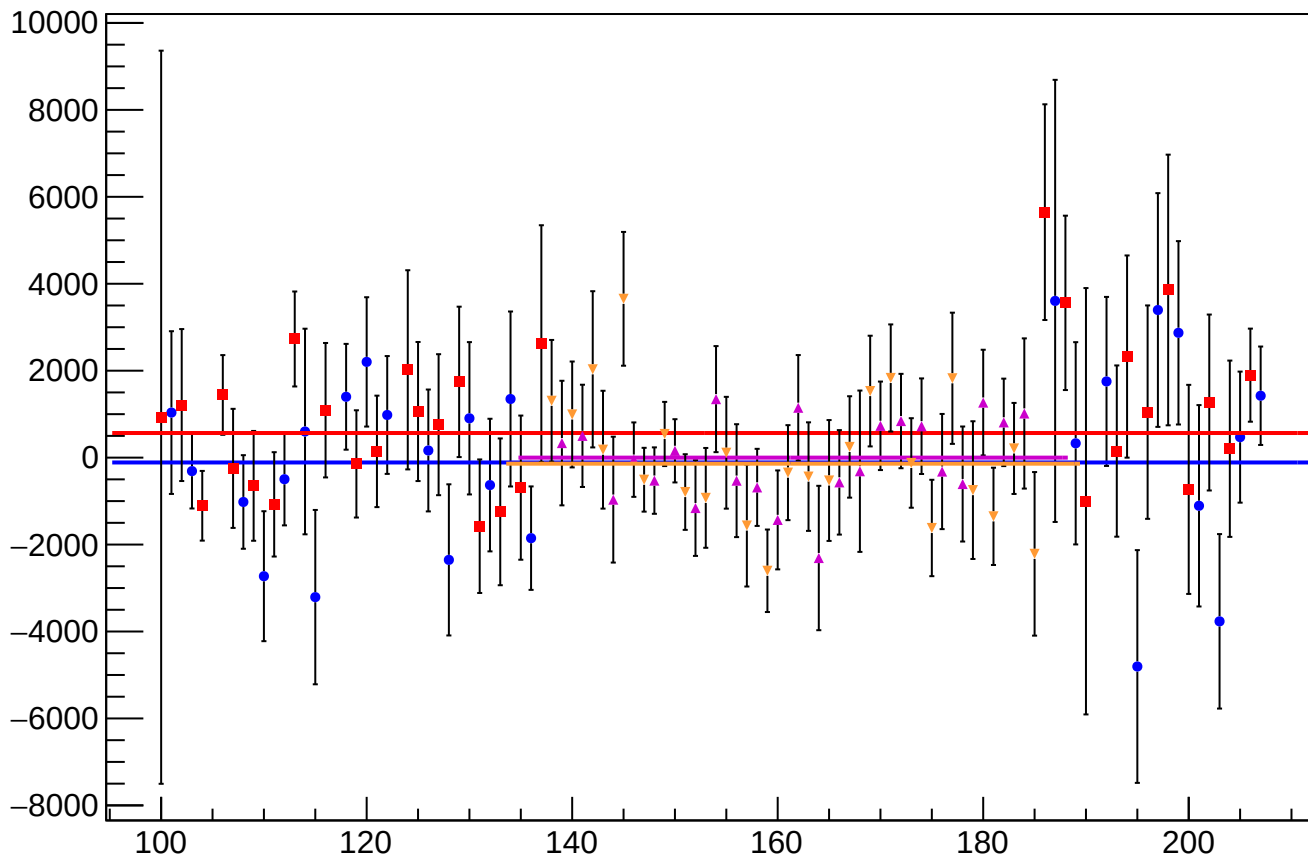
Left In: 1613.793 $\pm$ 0.266  $\chi^2$ /NDF: 2354.6/22

+ sign 1623.417 $\pm$ 0.197  $\chi^2$ /NDF: 676704.6/50

All: 1624.844 $\pm$ 0.139  $\chi^2$ /NDF: 832095.4/103

- sign 1626.264 $\pm$ 0.196  $\chi^2$ /NDF: 155285.9/52

asym\_usr\_atr1\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In: -111.415 $\pm$ 299.798  $\chi^2$ /NDF: 30.0/25

Left Out: -139.074 $\pm$ 229.125  $\chi^2$ /NDF:30.2/24

Right Out: 566.424 $\pm$ 280.307  $\chi^2$ /NDF: 28.5/29

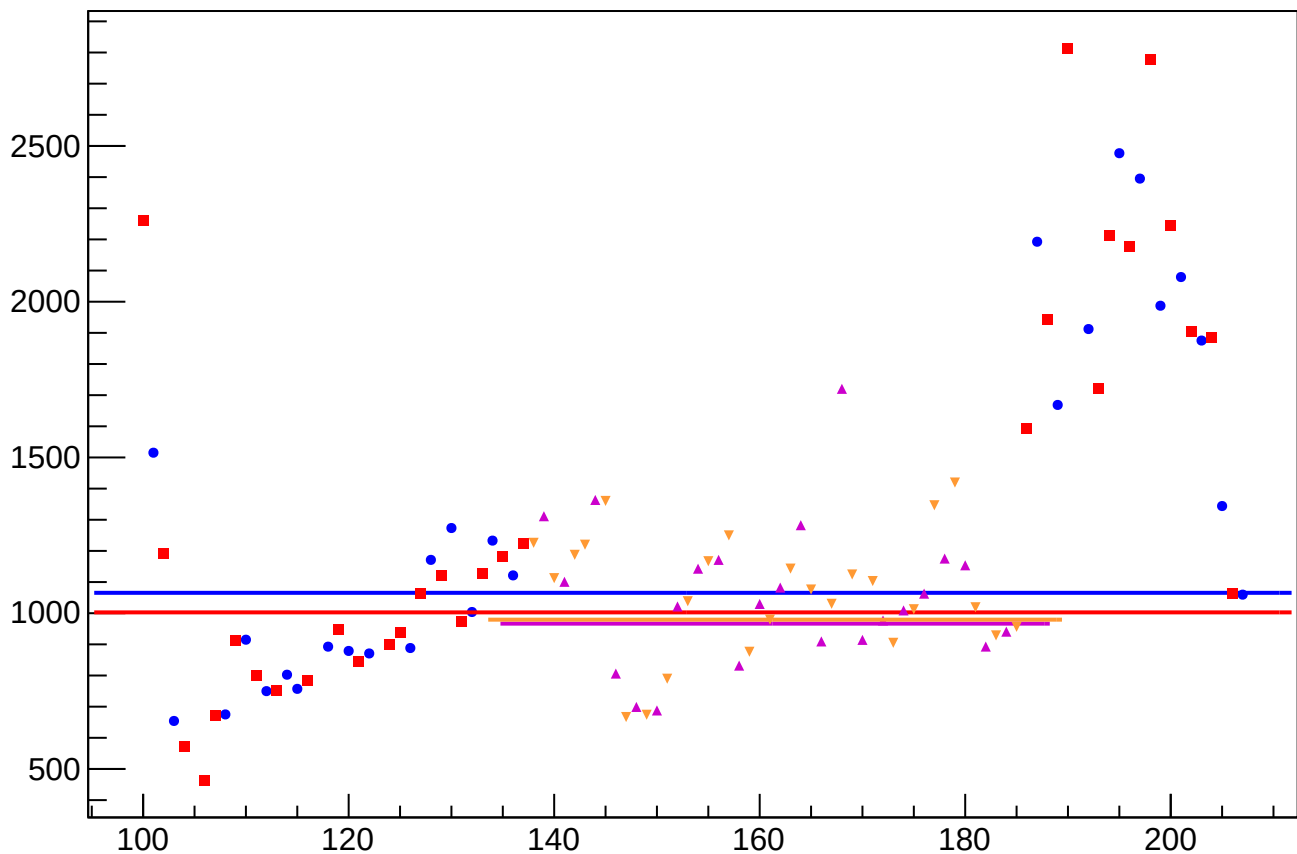
Left In: 0.068 $\pm$ 231.904  $\chi^2$ /NDF:12.9/22

+ sign -128.875 $\pm$ 182.046  $\chi^2$ /NDF: 60.2/50

All: 54.012 $\pm$ 127.520  $\chi^2$ /NDF: 106.0/103

- sign 230.200 $\pm$ 178.681  $\chi^2$ /NDF: 43.8/52

asym\_usr\_atr1\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 1065.465 $\pm$ 0.212  $\chi^2$ /NDF: 4122591.1/25

Left Out: 979.288 $\pm$ 0.162  $\chi^2$ /NDF:1630731.2/24

Right Out: 1002.664 $\pm$ 0.198  $\chi^2$ /NDF: 5823541.7/29

Left In: 966.531 $\pm$ 0.164  $\chi^2$ /NDF:1602562.1/22

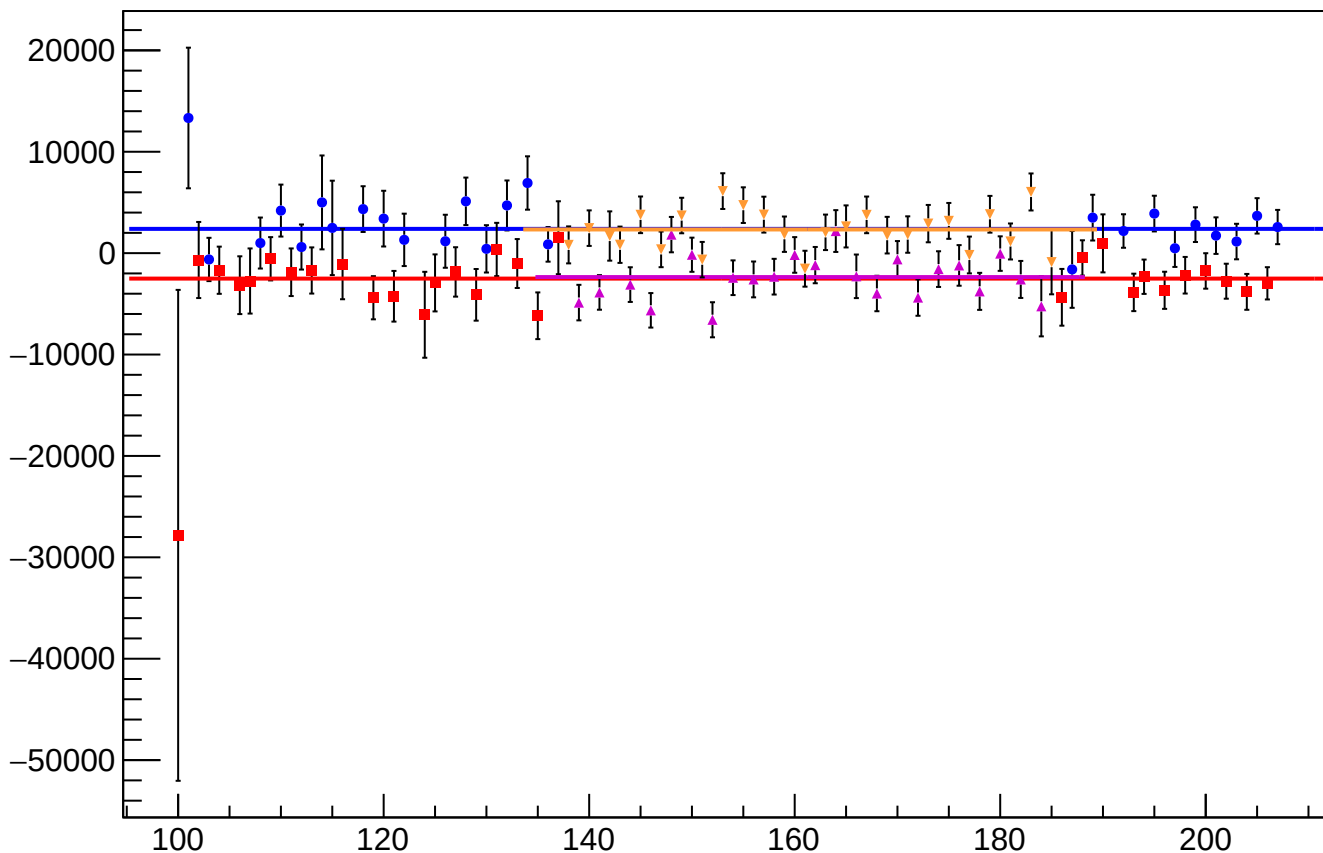
+ sign 1011.064 $\pm$ 0.129  $\chi^2$ /NDF: 5857643.1/50

All: 995.860 $\pm$ 0.090  $\chi^2$ /NDF: 13330864.4/10

- sign 981.214 $\pm$ 0.126  $\chi^2$ /NDF: 7445833.2/52



# dit\_asym\_usr\_atr1\_avg\_mean vs Slug



Right In:  $2393.823 \pm 430.696$   $\chi^2/\text{NDF}$ : 18.7/25

Left Out:  $2334.840 \pm 366.991$   $\chi^2/\text{NDF}$ : 28.3/24

Right Out:  $-2510.120 \pm 414.247$   $\chi^2/\text{NDF}$ : 15.7/29

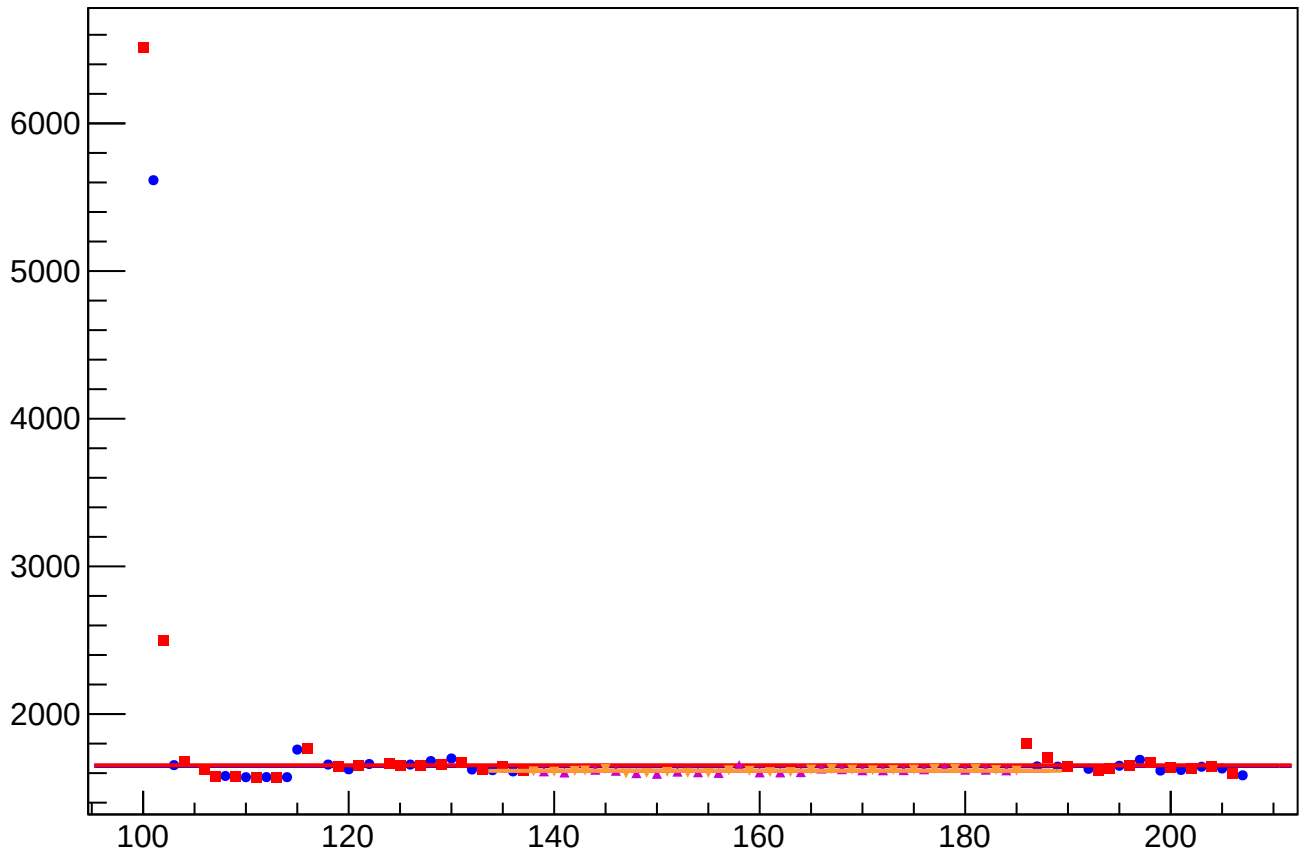
Left In:  $-2360.289 \pm 377.400$   $\chi^2/\text{NDF}$ : 34.0/22

+ sign  $2359.651 \pm 279.337$   $\chi^2/\text{NDF}$ : 46.9/50

All:  $-37.348 \pm 197.395$   $\chi^2/\text{NDF}$ : 243.8/103

- sign  $-2428.246 \pm 278.981$   $\chi^2/\text{NDF}$ : 49.8/52

dit\_asym\_usr\_atr1\_avg\_rms vs Slug



Right In: 1648.560 $\pm$ 0.305  $\chi^2$ /NDF: 669960.7/25

Left Out: 1615.633 $\pm$ 0.260  $\chi^2$ /NDF: 1447.2/24

Right Out: 1653.053 $\pm$ 0.293  $\chi^2$ /NDF: 205255.3/29

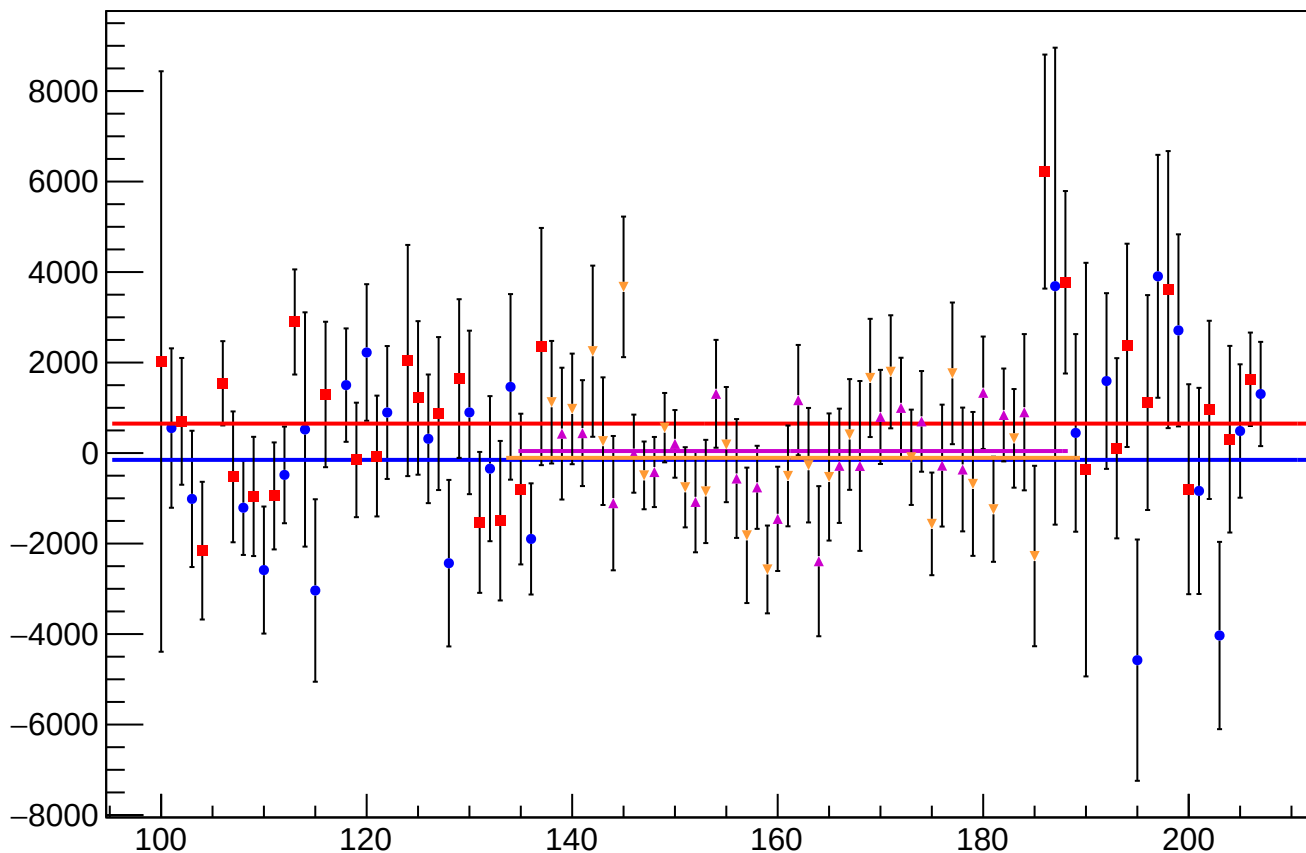
Left In: 1616.361 $\pm$ 0.267  $\chi^2$ /NDF: 2557.7/22

+ sign 1629.483 $\pm$ 0.198  $\chi^2$ /NDF: 678180.0/50

All: 1631.245 $\pm$ 0.140  $\chi^2$ /NDF: 894726.4/103

- sign 1633.003 $\pm$ 0.197  $\chi^2$ /NDF: 216387.5/52

# asym\_usr\_atr1\_avg\_dit\_correction\_mean vs Slug



Right In:  $-150.689 \pm 315.612$   $\chi^2/\text{NDF}$ : 29.8/25

Left Out:  $-106.338 \pm 234.306$   $\chi^2/\text{NDF}$ : 29.0/24

Right Out:  $650.859 \pm 295.994$   $\chi^2/\text{NDF}$ : 28.4/29

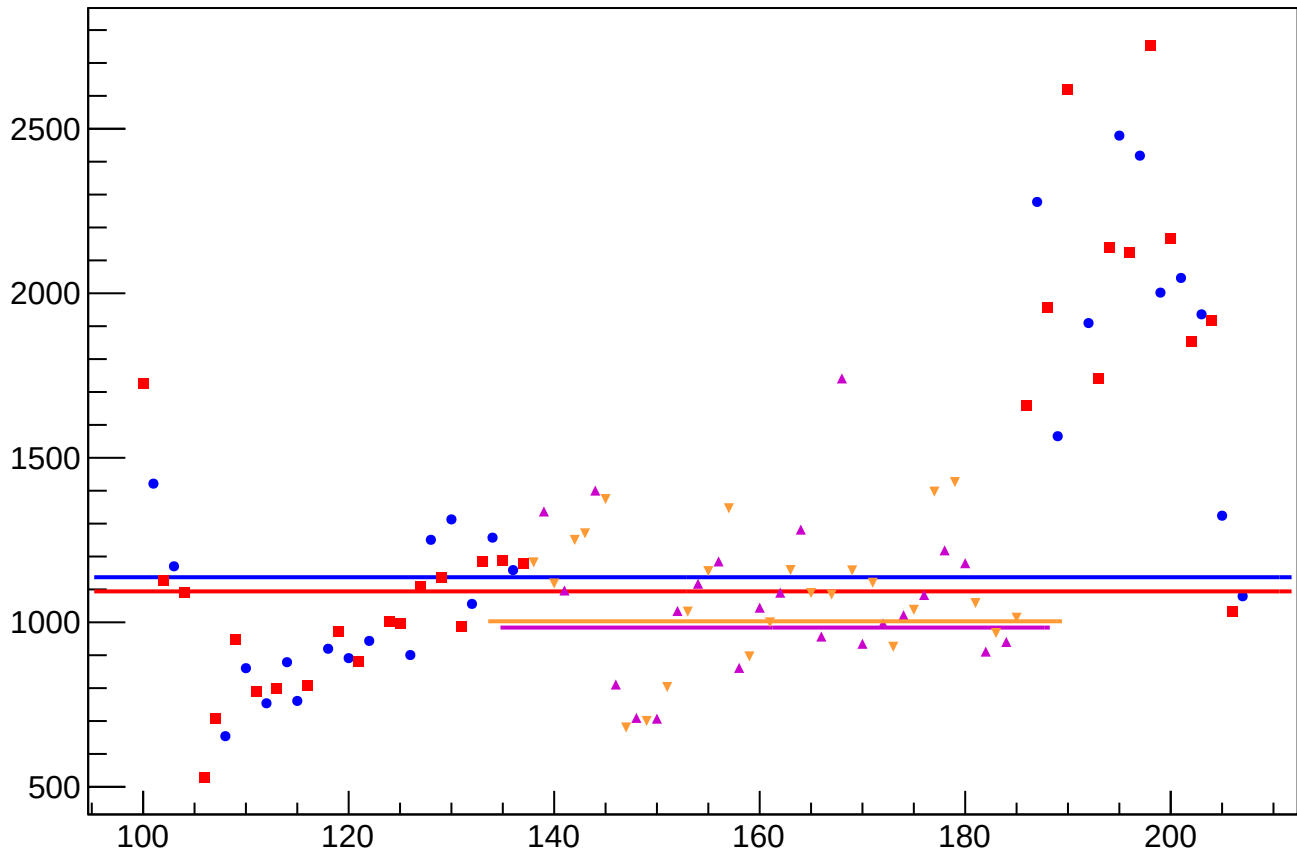
Left In:  $44.469 \pm 235.733$   $\chi^2/\text{NDF}$ : 12.8/22

+ sign  $-122.096 \pm 188.130$   $\chi^2/\text{NDF}$ : 58.8/50

All:  $82.883 \pm 131.689$   $\chi^2/\text{NDF}$ : 104.9/103

- sign  $279.812 \pm 184.399$   $\chi^2/\text{NDF}$ : 43.7/52

# asym\_usr\_atr1\_avg\_dit\_correction\_rms vs Slug



Right In:  $1137.081 \pm 0.223$   $\chi^2/\text{NDF}: 3584876.2/25$

Left Out:  $1003.101 \pm 0.166$   $\chi^2/\text{NDF}: 1598415.6/24$

Right Out:  $1093.989 \pm 0.209$   $\chi^2/\text{NDF}: 4698697.3/29$

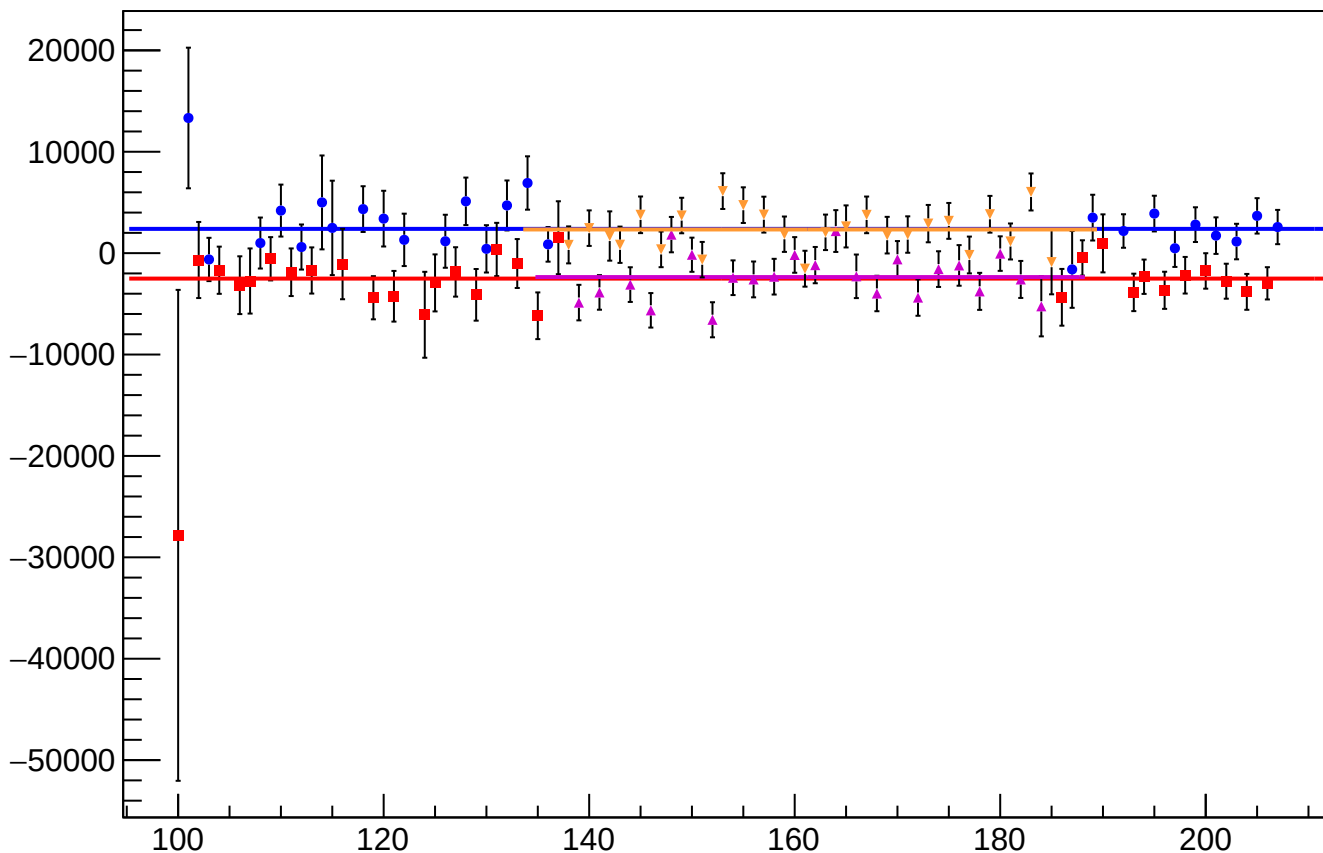
Left In:  $984.053 \pm 0.167$   $\chi^2/\text{NDF}: 1559561.5/22$

+ sign  $1050.706 \pm 0.133$   $\chi^2/\text{NDF}: 5415648.2/50$

All:  $1038.473 \pm 0.093$   $\chi^2/\text{NDF}: 11859304.3/100$

- sign  $1026.720 \pm 0.130$   $\chi^2/\text{NDF}: 6427075.5/52$

# eigen\_dit\_asym\_usr\_atr1\_avg\_mean vs Slug



Right In: 2393.824+/-430.696  $\chi^2/\text{NDF}$ : 18.7/25

Left Out: 2334.839+/-366.991  $\chi^2/\text{NDF}$ : 28.3/24

Right Out: -2510.118+/-414.247  $\chi^2/\text{NDF}$ : 15.7/29

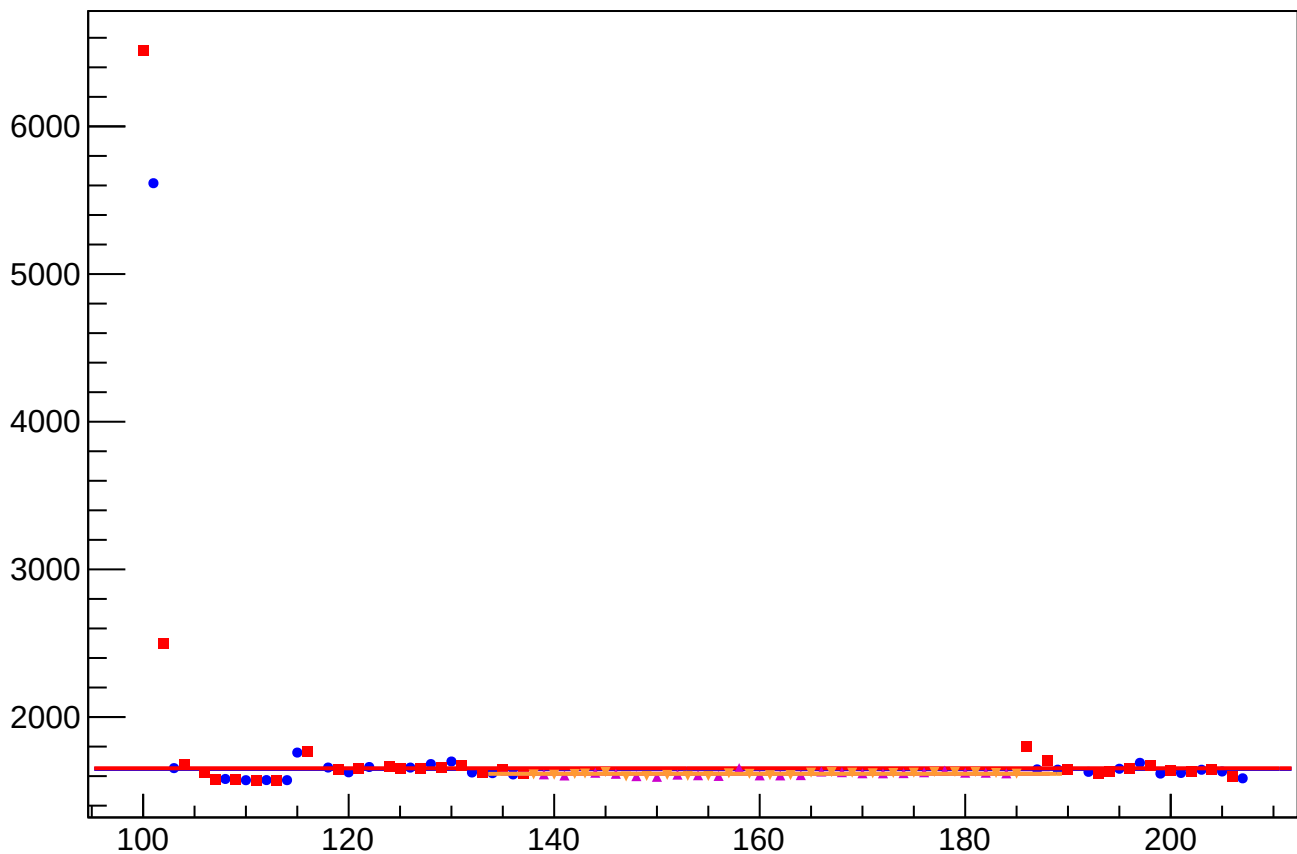
Left In: -2360.289+/-377.400  $\chi^2/\text{NDF}$ : 34.0/22

+ sign 2359.651+/-279.337  $\chi^2/\text{NDF}$ : 46.9/50

All: -37.347+/-197.395  $\chi^2/\text{NDF}$ : 243.8/103

- sign -2428.245+/-278.981  $\chi^2/\text{NDF}$ : 49.8/52

# eigen\_dit\_asym\_usr\_atr1\_avg\_rms vs Slug



Right In: 1648.560 $\pm$ 0.305  $\chi^2$ /NDF: 669960.7/25

Left Out: 1615.633 $\pm$ 0.260  $\chi^2$ /NDF:1447.2/24

Right Out: 1653.053 $\pm$ 0.293  $\chi^2$ /NDF: 205255.2/29

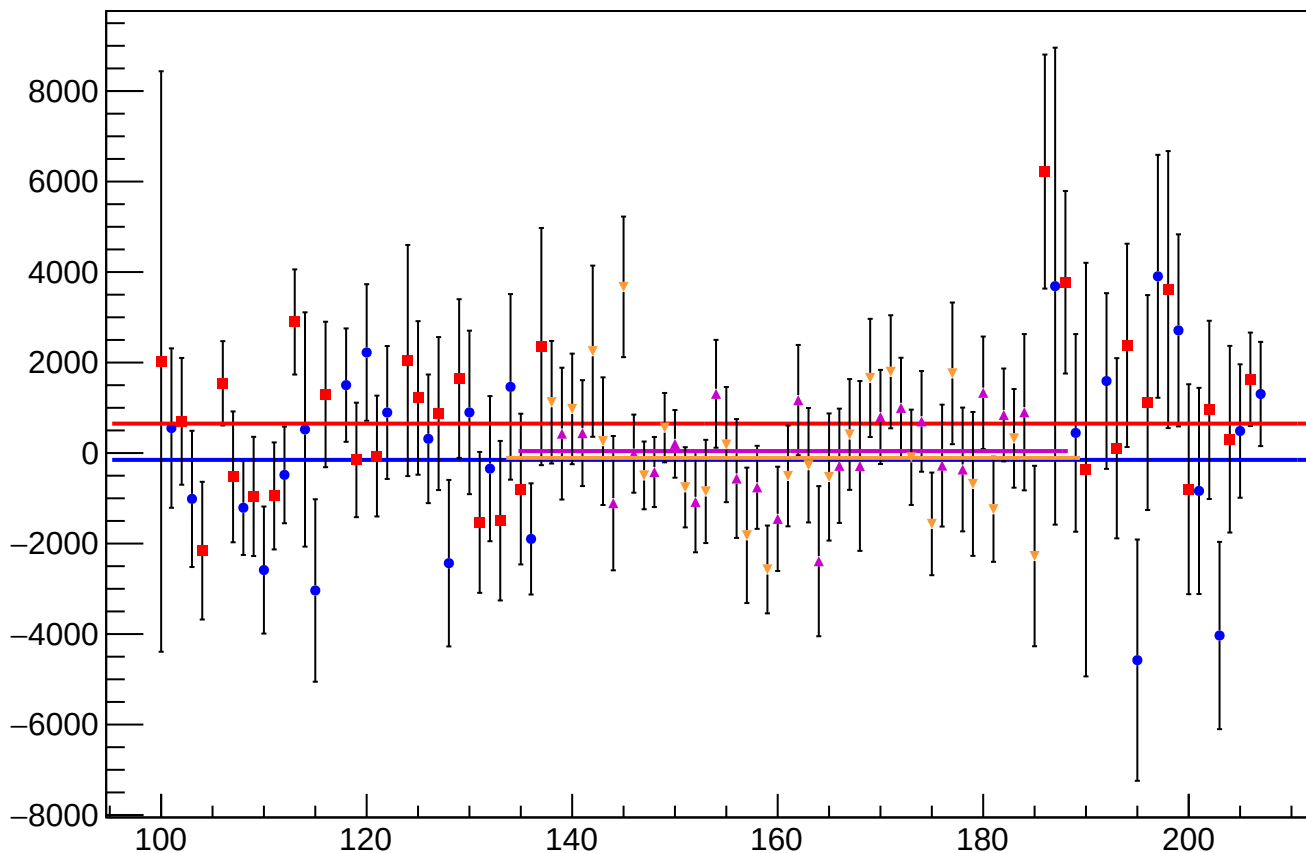
Left In: 1616.361 $\pm$ 0.267  $\chi^2$ /NDF:2557.7/22

+ sign 1629.483 $\pm$ 0.198  $\chi^2$ /NDF: 678179.9/50

All: 1631.245 $\pm$ 0.140  $\chi^2$ /NDF: 894726.2/103

- sign 1633.003 $\pm$ 0.197  $\chi^2$ /NDF: 216387.3/52

asym\_usr\_atr1\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-150.689 \pm 315.612$   $\chi^2/\text{NDF}$ : 29.8/25

Left Out:  $-106.340 \pm 234.307$   $\chi^2/\text{NDF}$ : 29.0/24

Right Out:  $650.856 \pm 295.993$   $\chi^2/\text{NDF}$ : 28.4/29

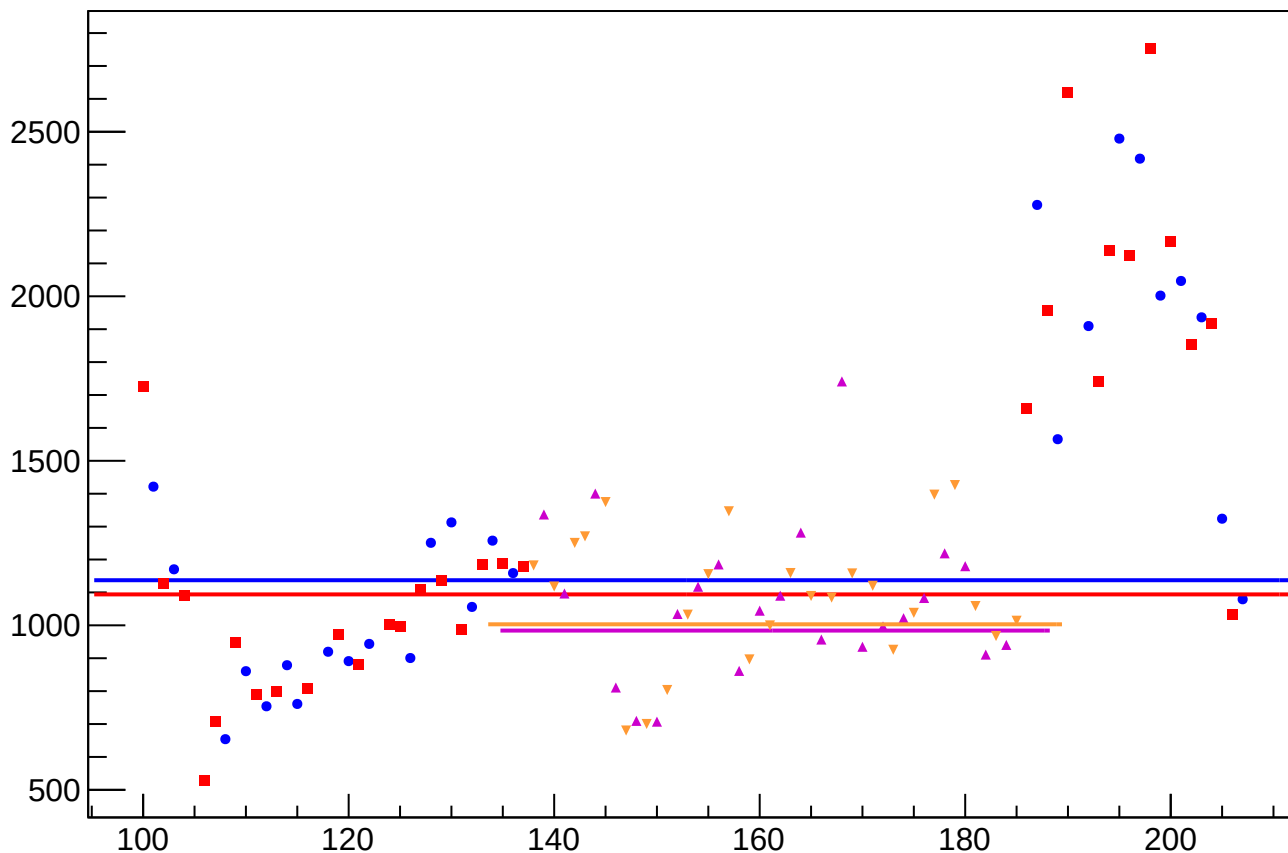
Left In:  $44.468 \pm 235.733$   $\chi^2/\text{NDF}$ : 12.8/22

+ sign  $-122.098 \pm 188.130$   $\chi^2/\text{NDF}$ : 58.8/50

All:  $82.883 \pm 131.689$   $\chi^2/\text{NDF}$ : 104.9/103

- sign  $279.812 \pm 184.399$   $\chi^2/\text{NDF}$ : 43.7/52

asym\_usr\_atr1\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 1137.078 $\pm$ 0.223  $\chi^2$ /NDF: 3584917.9/25

Left Out: 1003.103 $\pm$ 0.166  $\chi^2$ /NDF: 1598417.7/24

Right Out: 1093.986 $\pm$ 0.209  $\chi^2$ /NDF: 4698726.1/29

Left In: 984.055 $\pm$ 0.167  $\chi^2$ /NDF: 1559563.7/22

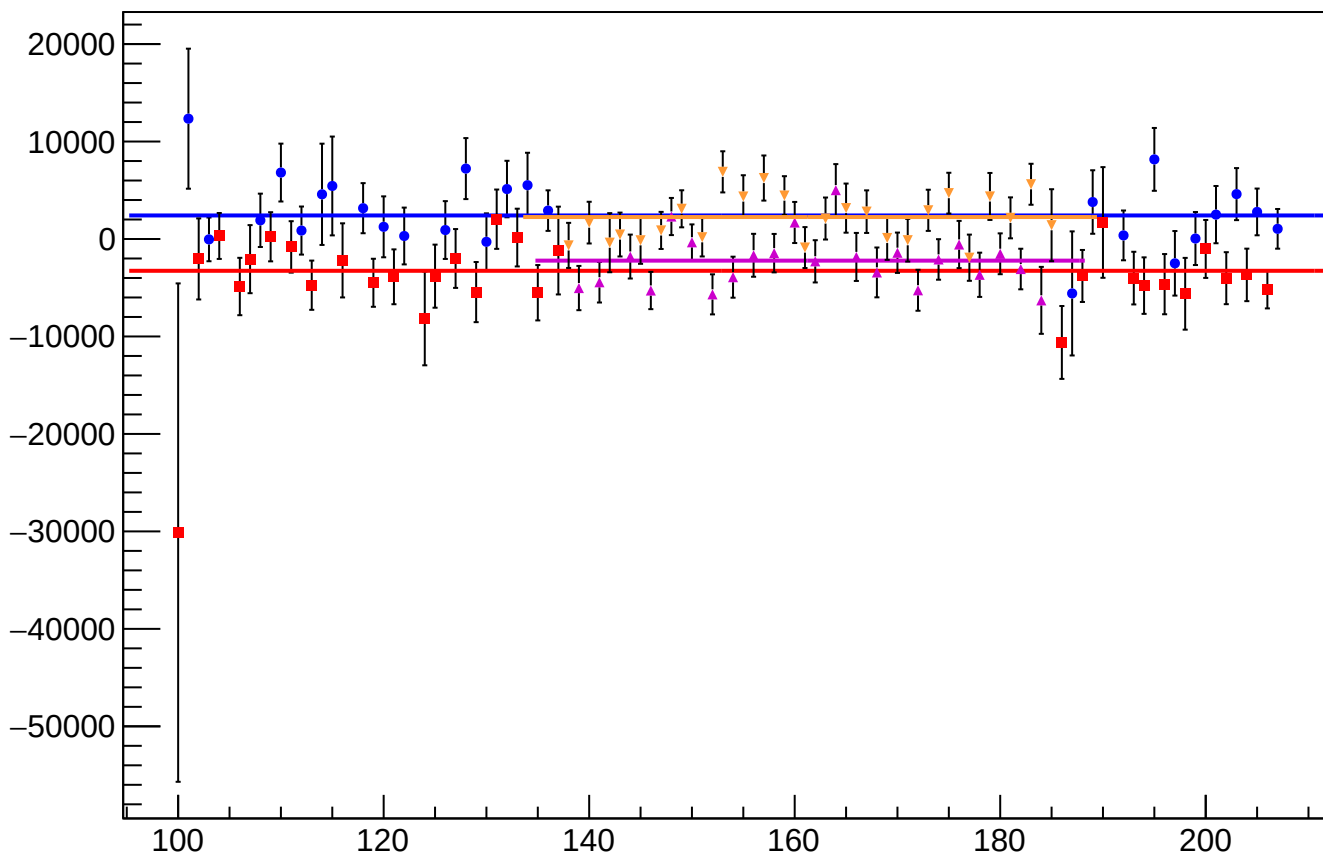
+ sign 1050.706 $\pm$ 0.133  $\chi^2$ /NDF: 5415673.5/50

All: 1038.473 $\pm$ 0.093  $\chi^2$ /NDF: 11859346.8/100

- sign 1026.720 $\pm$ 0.130  $\chi^2$ /NDF: 6427092.6/52



# asym\_usr\_atr1\_avg\_mean vs Slug



Right In:  $2415.900 \pm 566.436$   $\chi^2/\text{NDF}: 22.0/25$

Left Out:  $2252.380 \pm 442.213$   $\chi^2/\text{NDF}: 28.3/24$

Right Out:  $-3262.533 \pm 547.049$   $\chi^2/\text{NDF}: 21.6/29$

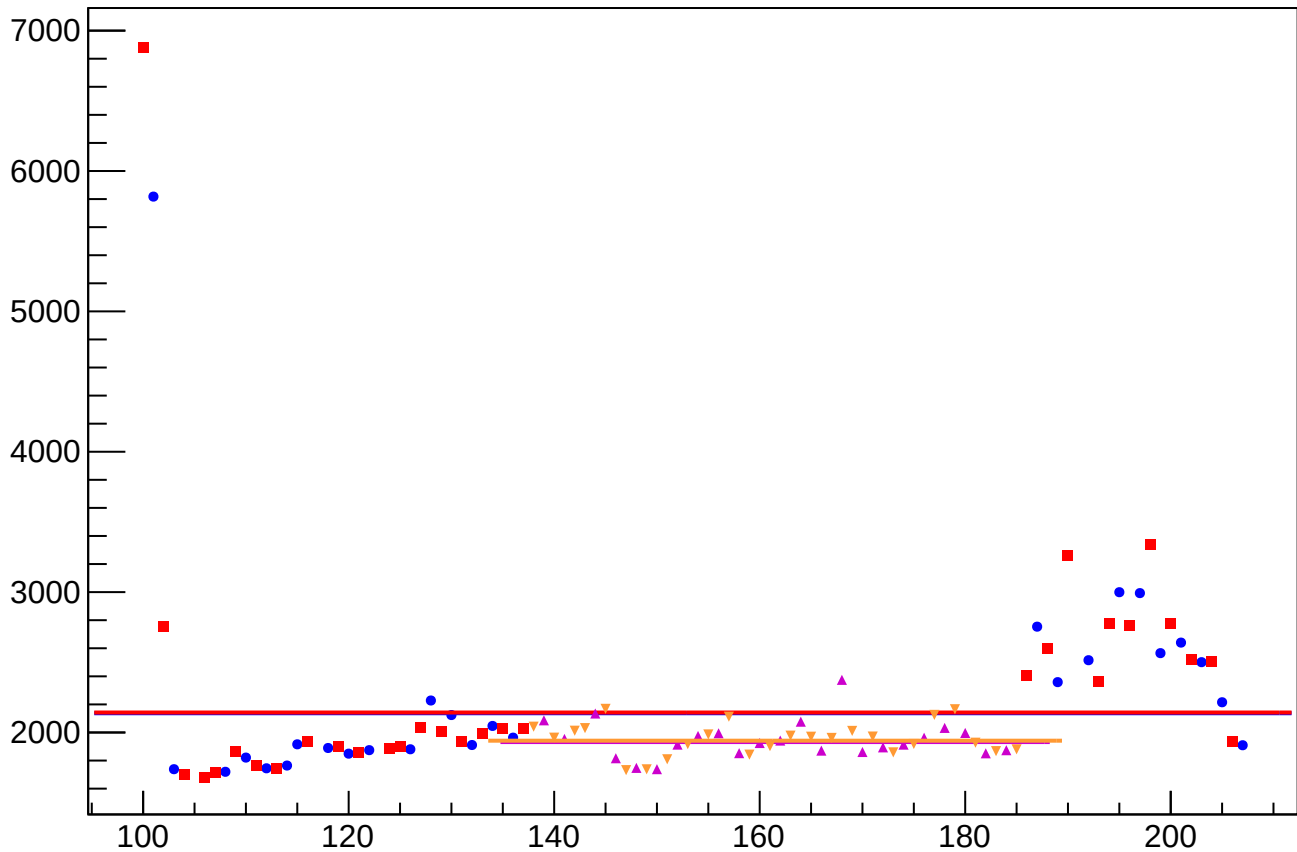
Left In:  $-2219.401 \pm 452.286$   $\chi^2/\text{NDF}: 31.5/22$

+ sign  $2314.302 \pm 348.569$   $\chi^2/\text{NDF}: 50.3/50$

All:  $-164.250 \pm 246.478$   $\chi^2/\text{NDF}: 206.8/103$

- sign  $-2642.933 \pm 348.578$   $\chi^2/\text{NDF}: 55.3/52$

# asym\_usr\_atr1\_avg\_rms vs Slug



Right In: 2137.091+/-0.401  $\chi^2/\text{NDF}$ : 1339133.4/25

Left Out: 1941.583+/-0.313  $\chi^2/\text{NDF}$ :139011.4/24

Right Out: 2142.339+/-0.387  $\chi^2/\text{NDF}$ : 1205616.9/29

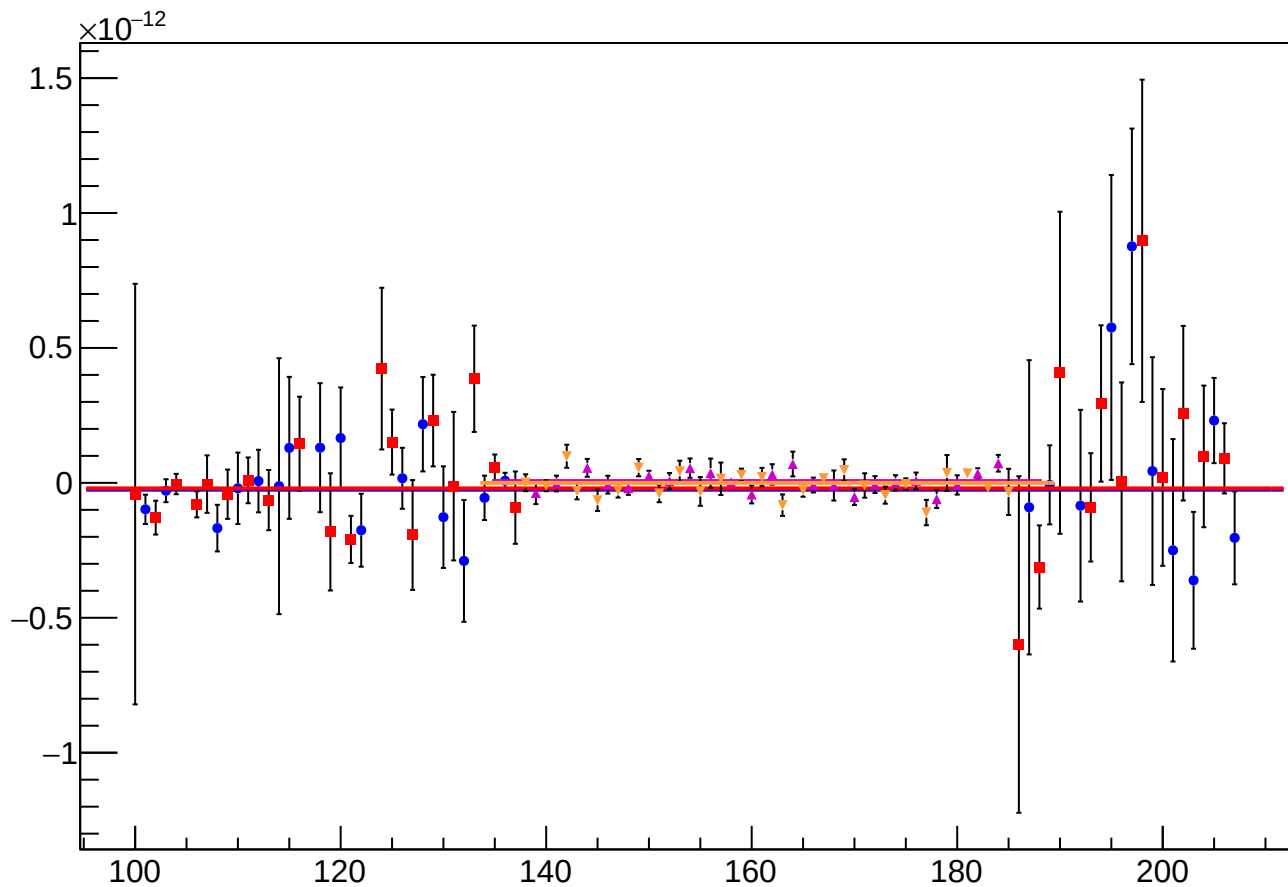
Left In: 1931.812+/-0.320  $\chi^2/\text{NDF}$ :159877.0/22

+ sign 2015.618+/-0.246  $\chi^2/\text{NDF}$ : 1626181.9/50

All: 2016.454+/-0.174  $\chi^2/\text{NDF}$ : 3167638.5/10

- sign 2017.290+/-0.246  $\chi^2/\text{NDF}$ : 1541433.6/52

asym\_usr\_atr1\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 24.0/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 40.3/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 35.7/29

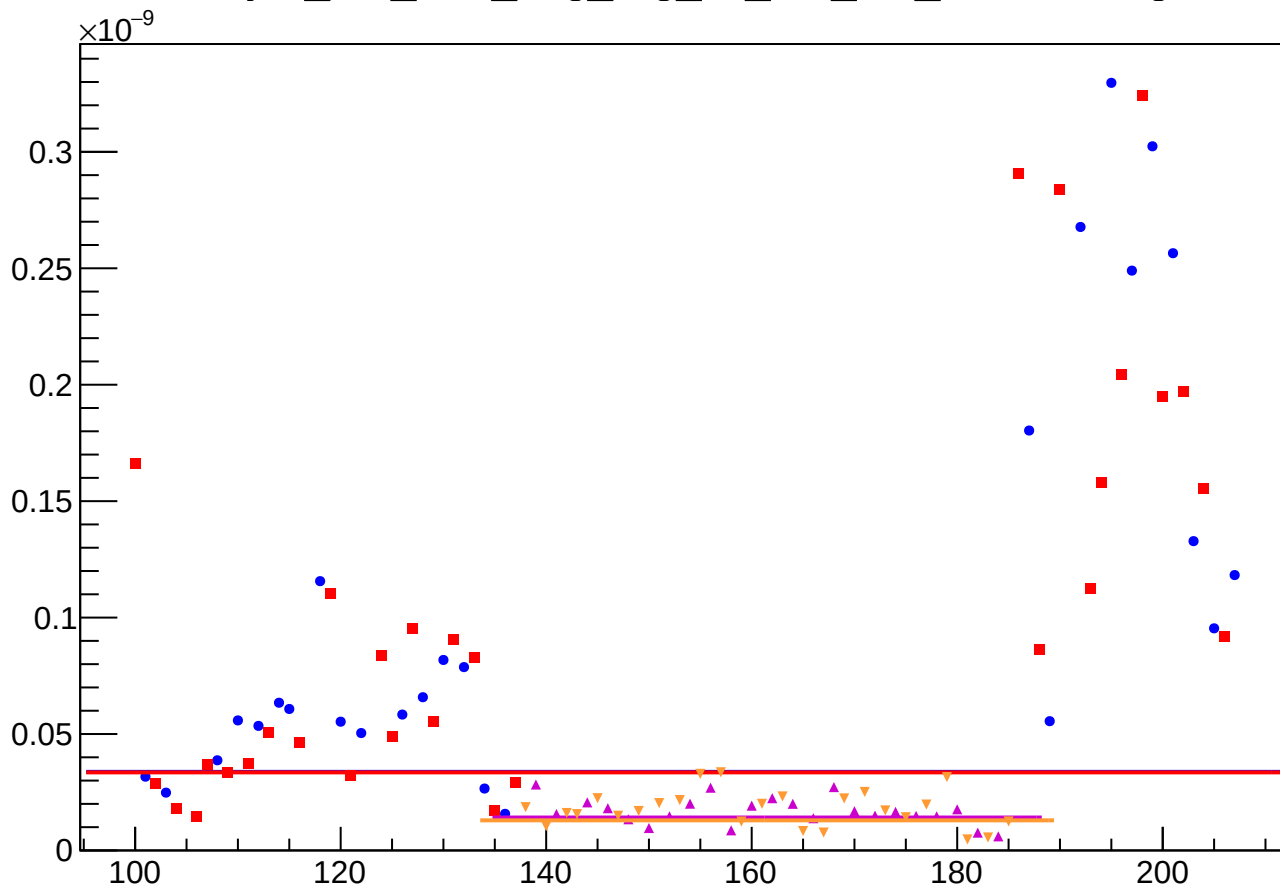
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 27.5/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 66.0/50

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 131.7/103

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 65.1/52

asym\_usr\_atr1\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6236662.9/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2826186.0/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6119986.2/29

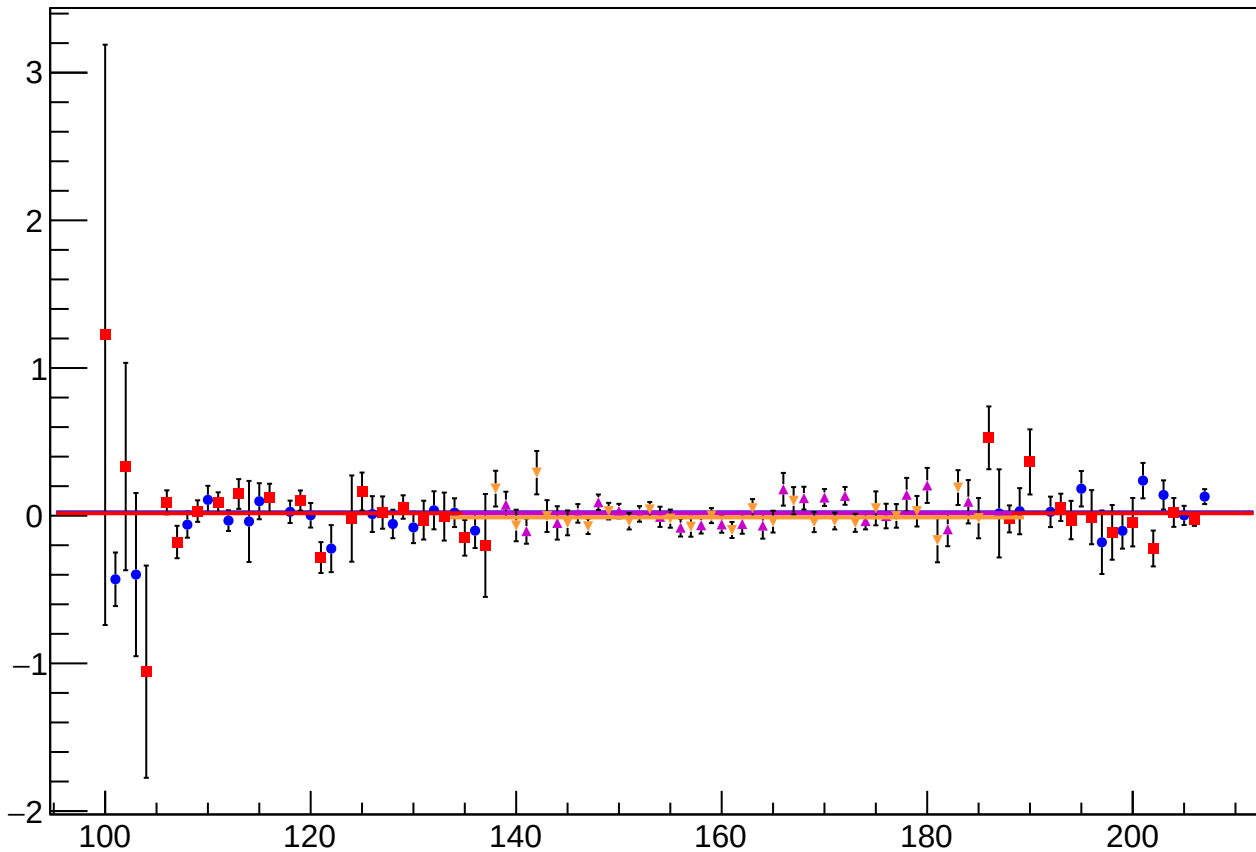
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1522273.8/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11353911.8/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 20988632.9/103

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9581004.6/52

asym\_usr\_atr1\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.023 \pm 0.020$   $\chi^2/\text{NDF}$ : 27.7/25

Left Out:  $-0.012 \pm 0.014$   $\chi^2/\text{NDF}$ : 21.8/24

Right Out:  $0.017 \pm 0.019$   $\chi^2/\text{NDF}$ : 39.0/29

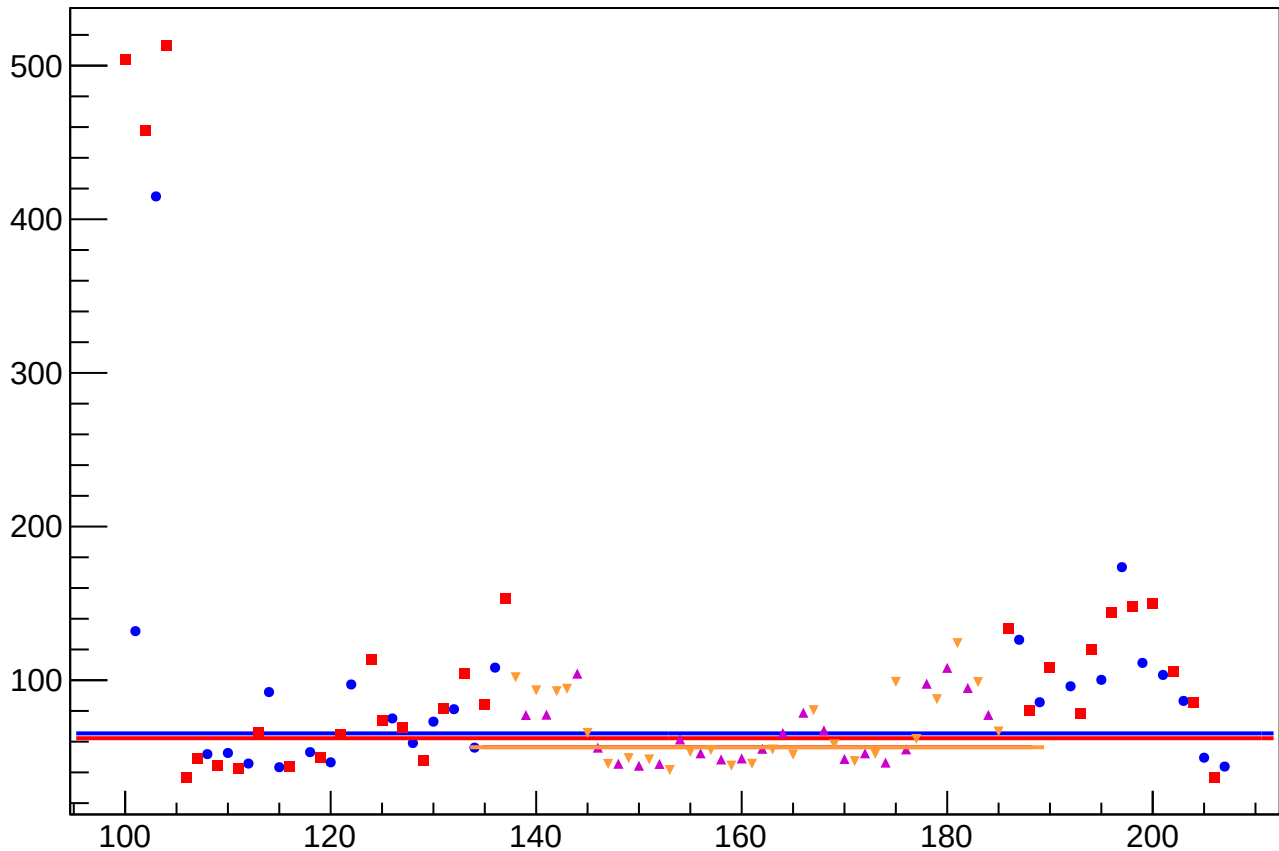
Left In:  $0.017 \pm 0.014$   $\chi^2/\text{NDF}$ : 30.6/22

+ sign  $-0.000 \pm 0.012$   $\chi^2/\text{NDF}$ : 51.4/50

All:  $0.009 \pm 0.008$   $\chi^2/\text{NDF}$ : 122.1/103

- sign  $0.017 \pm 0.012$   $\chi^2/\text{NDF}$ : 69.6/52

# asym\_usr\_atr1\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 65.383 $\pm$ 0.014     $\chi^2/\text{NDF}$ : 4006697.7/25

Left Out: 56.374 $\pm$ 0.010     $\chi^2/\text{NDF}$ : 2797305.0/24

Right Out: 62.237 $\pm$ 0.013     $\chi^2/\text{NDF}$ : 6009731.8/29

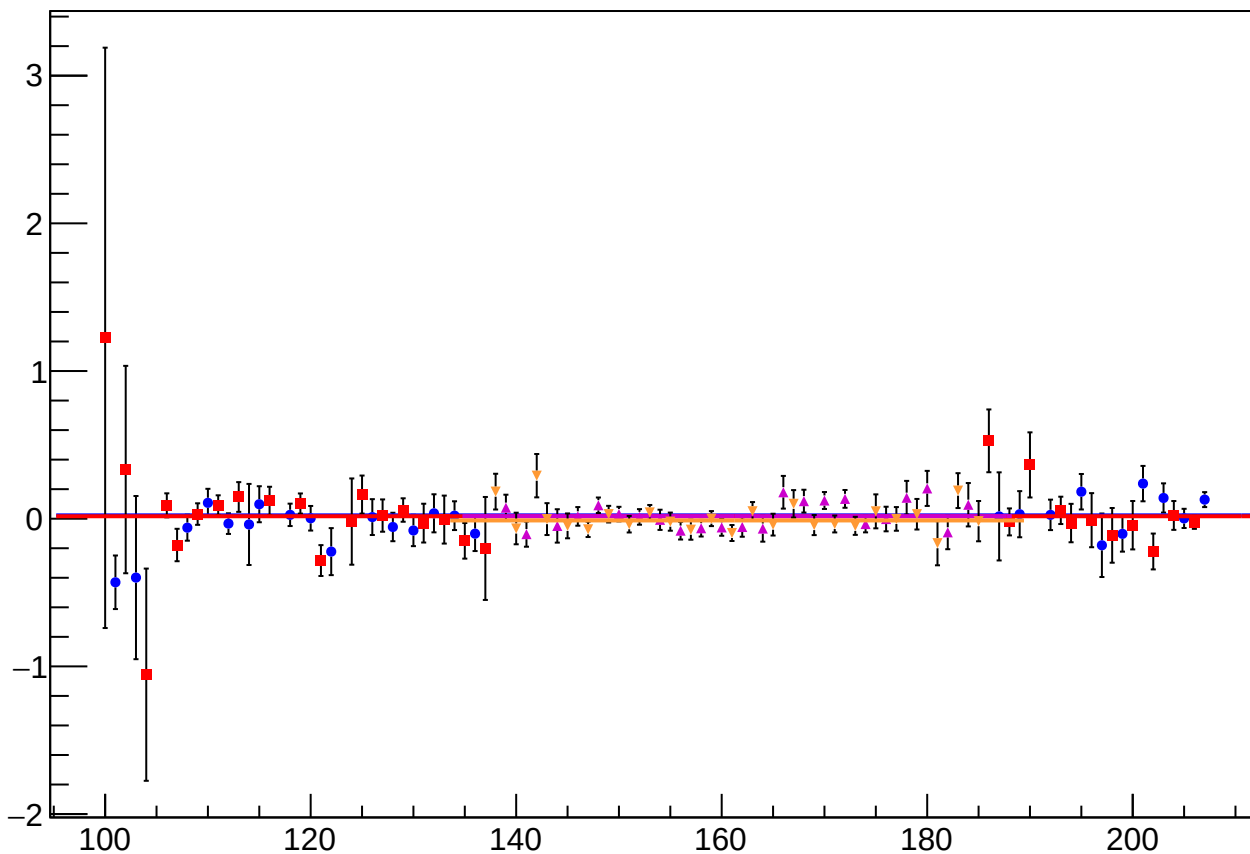
Left In: 56.467 $\pm$ 0.010     $\chi^2/\text{NDF}$ : 2140078.8/22

+ sign 59.444 $\pm$ 0.008     $\chi^2/\text{NDF}$ : 7073940.1/50

All: 59.012 $\pm$ 0.006     $\chi^2/\text{NDF}$ : 15345886.7/103

- sign 58.589 $\pm$ 0.008     $\chi^2/\text{NDF}$ : 8266482.7/52

asym\_usr\_atr1\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.023 \pm 0.020$   $\chi^2/\text{NDF}$ : 27.7/25

Left Out:  $-0.012 \pm 0.014$   $\chi^2/\text{NDF}$ : 21.8/24

Right Out:  $0.017 \pm 0.019$   $\chi^2/\text{NDF}$ : 39.0/29

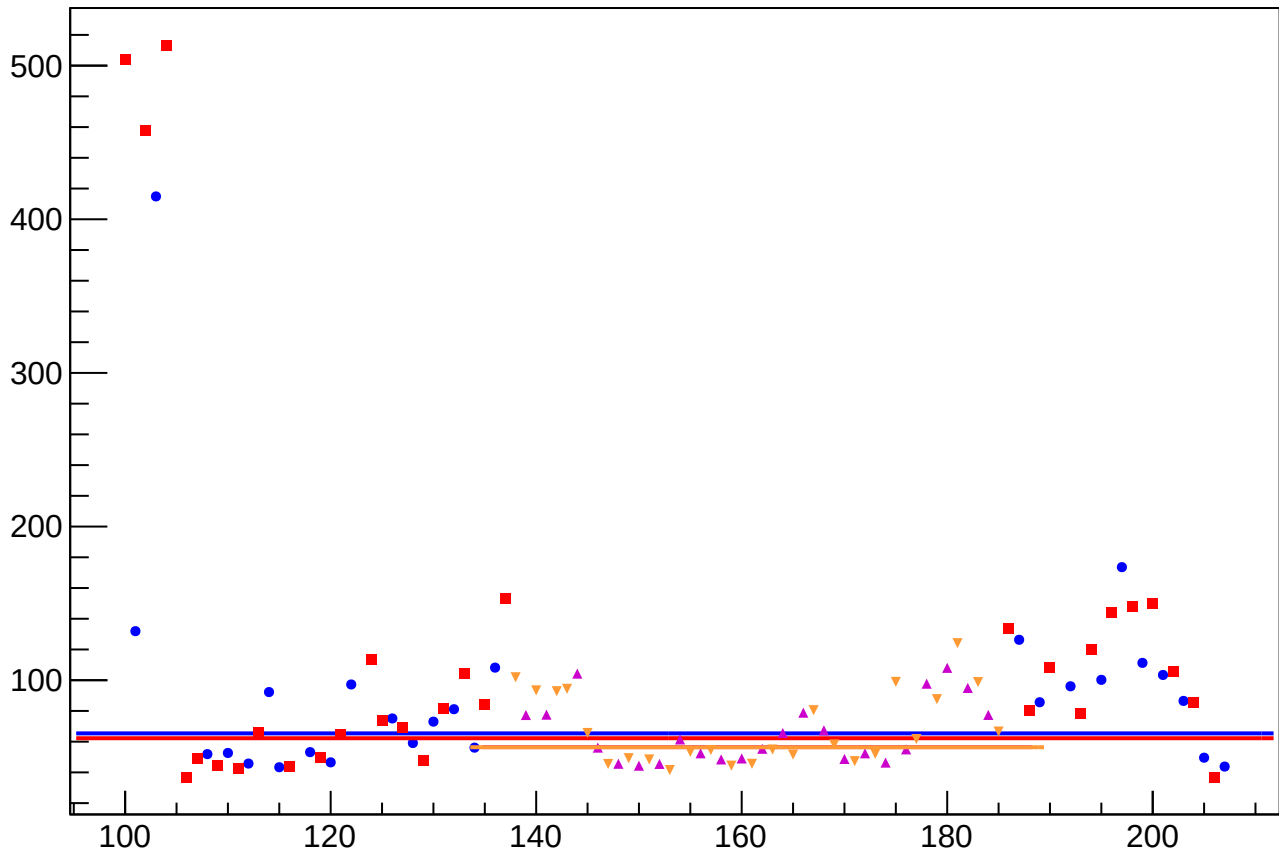
Left In:  $0.017 \pm 0.014$   $\chi^2/\text{NDF}$ : 30.6/22

+ sign  $-0.000 \pm 0.012$   $\chi^2/\text{NDF}$ : 51.4/50

All:  $0.009 \pm 0.008$   $\chi^2/\text{NDF}$ : 122.1/103

- sign  $0.017 \pm 0.012$   $\chi^2/\text{NDF}$ : 69.6/52

asym\_usr\_atr1\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 65.383 $\pm$ 0.014     $\chi^2/\text{NDF}$ : 4006697.7/25

Left Out: 56.374 $\pm$ 0.010     $\chi^2/\text{NDF}$ : 2797305.0/24

Right Out: 62.237 $\pm$ 0.013     $\chi^2/\text{NDF}$ : 6009731.8/29

Left In: 56.467 $\pm$ 0.010     $\chi^2/\text{NDF}$ : 2140078.8/22

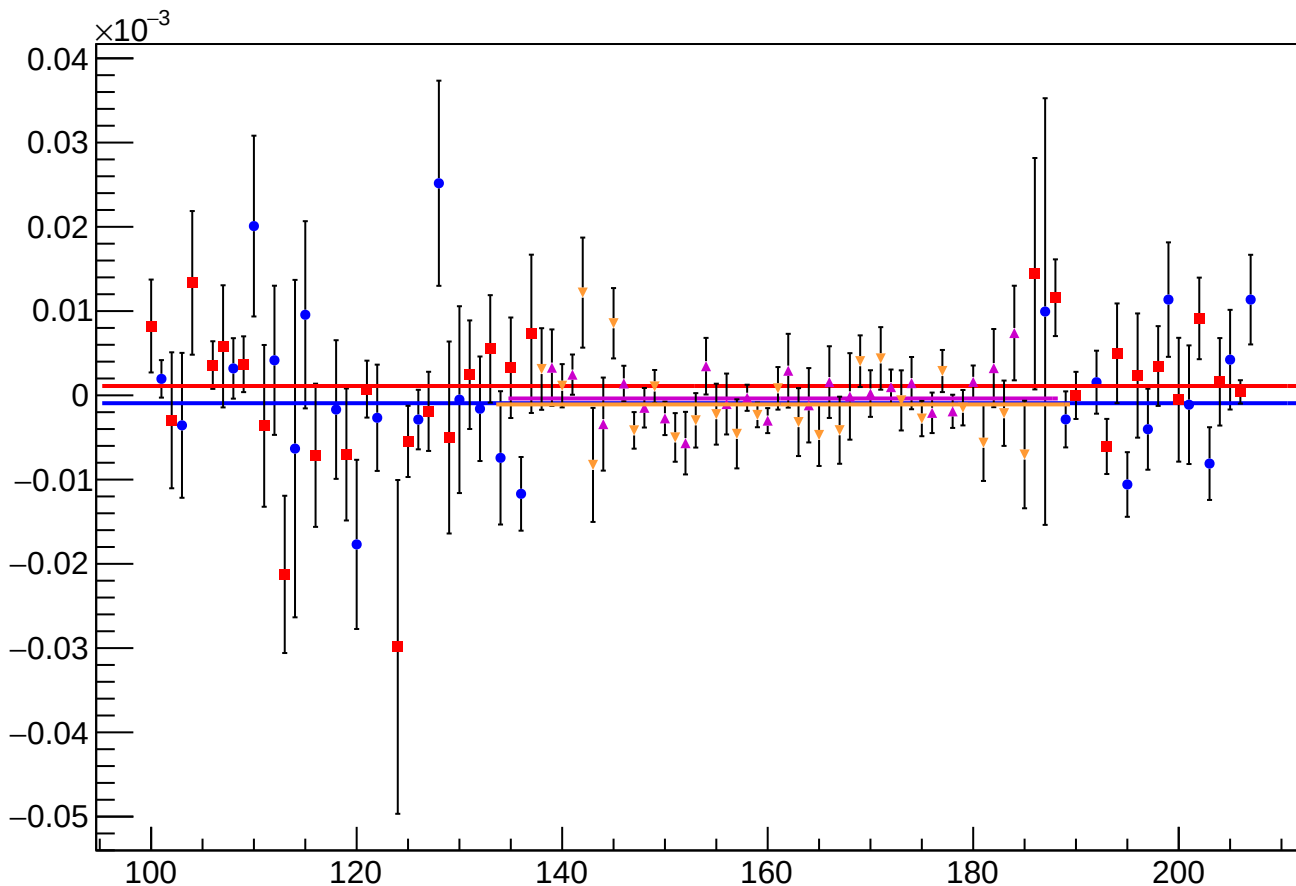
+ sign 59.444 $\pm$ 0.008     $\chi^2/\text{NDF}$ : 7073940.1/50

All: 59.012 $\pm$ 0.006     $\chi^2/\text{NDF}$ : 15345886.7/103

- sign 58.589 $\pm$ 0.008     $\chi^2/\text{NDF}$ : 8266482.7/52



asym\_usr\_atr1\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 42.6/25

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:31.6/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 35.4/29

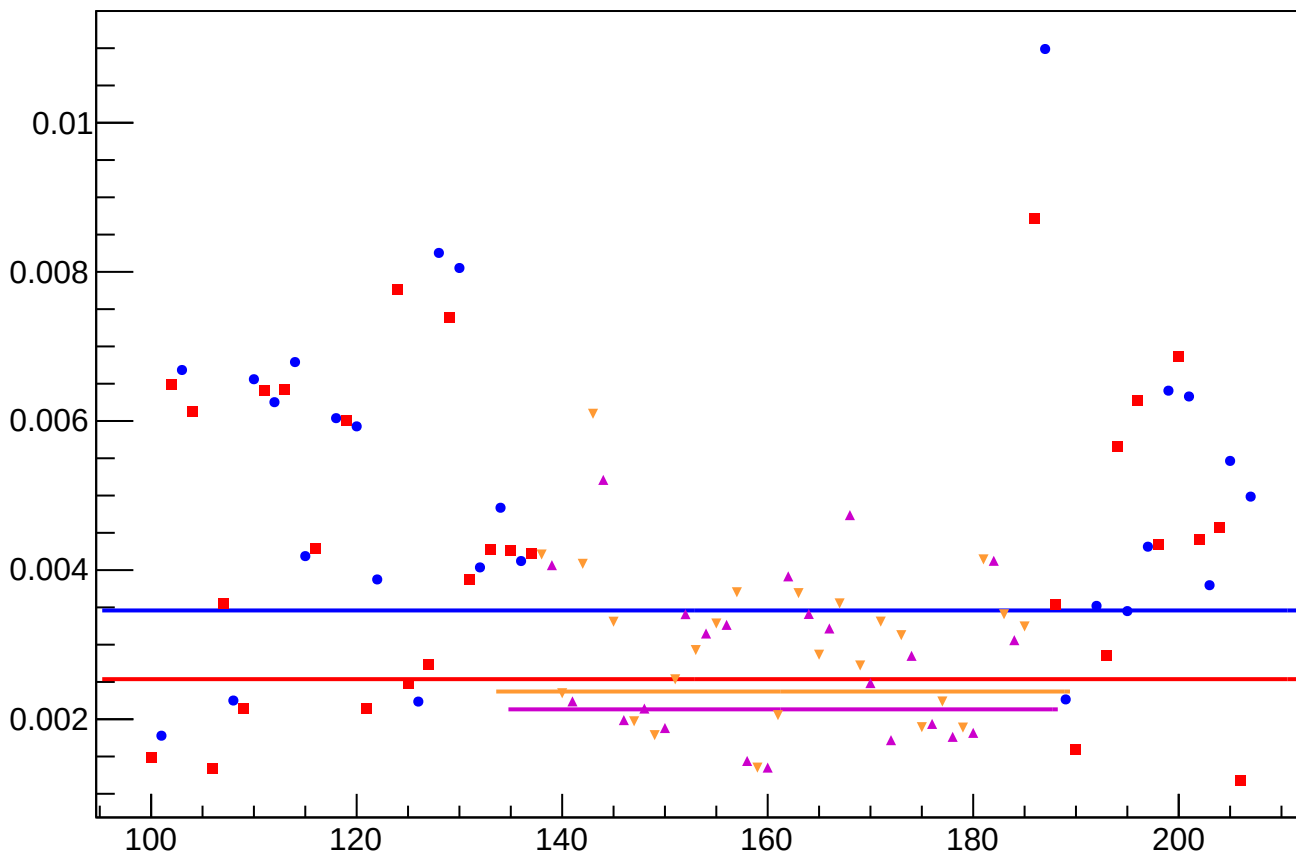
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:17.5/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 74.1/50

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 132.4/103

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 55.3/52

asym\_usr\_atr1\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 5033904.4/25

Left Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 4161142.1/24

Right Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 8817709.8/29

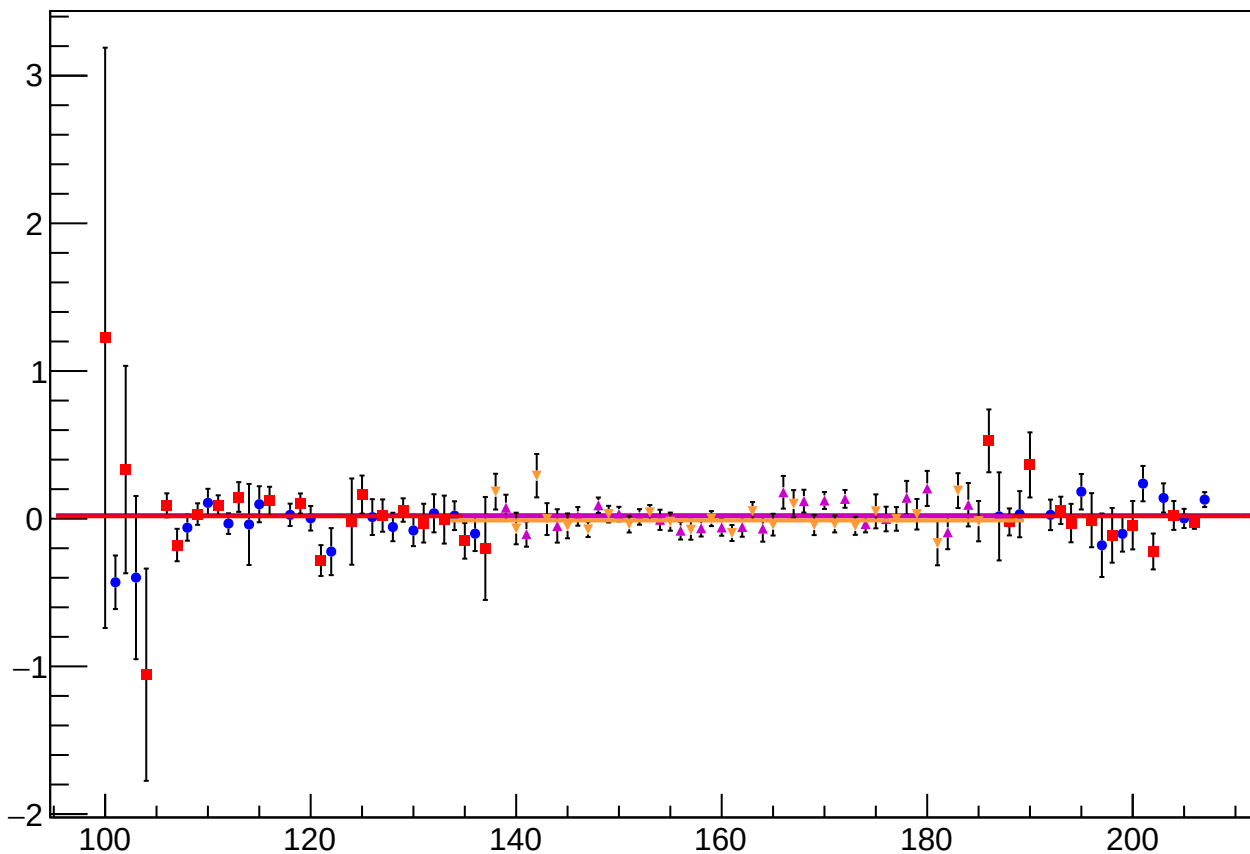
Left In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 4521223.3/22

+ sign 0.003+/-0.000  $\chi^2/\text{NDF}$ : 10960138.8/50

All: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 25318554.2/103

- sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 13701238.8/52

asym\_usr\_atr1\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.023 $\pm$ 0.020  $\chi^2$ /NDF: 27.7/25

Left Out: -0.012 $\pm$ 0.014  $\chi^2$ /NDF:21.8/24

Right Out: 0.017 $\pm$ 0.019  $\chi^2$ /NDF: 38.9/29

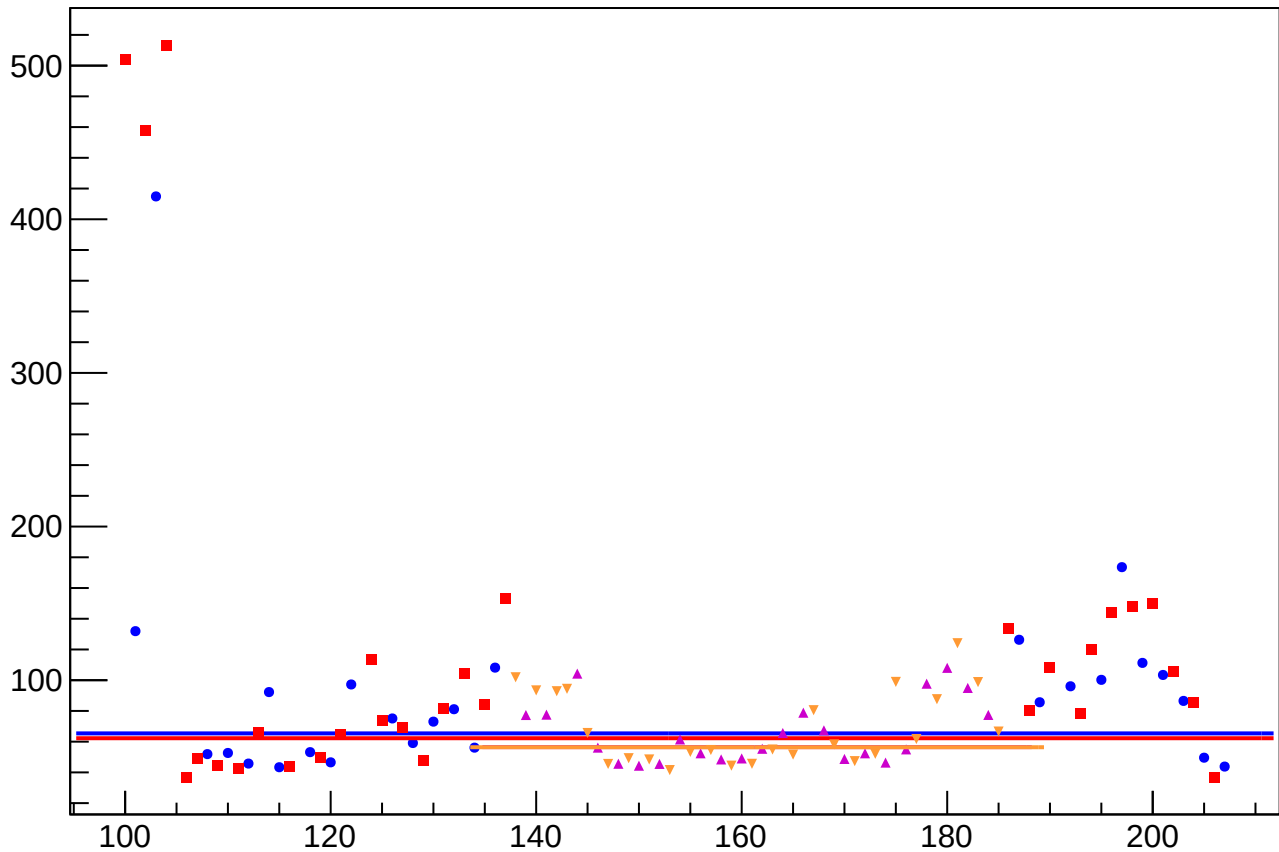
Left In: 0.017 $\pm$ 0.014  $\chi^2$ /NDF:30.6/22

+ sign -0.000 $\pm$ 0.012  $\chi^2$ /NDF: 51.4/50

All: 0.009 $\pm$ 0.008  $\chi^2$ /NDF: 122.1/103

- sign 0.017 $\pm$ 0.012  $\chi^2$ /NDF: 69.6/52

asym\_usr\_atr1\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 65.383 $\pm$ 0.014  $\chi^2$ /NDF: 4006641.3/25

Left Out: 56.374 $\pm$ 0.010  $\chi^2$ /NDF: 2797380.0/24

Right Out: 62.236 $\pm$ 0.013  $\chi^2$ /NDF: 6009762.6/29

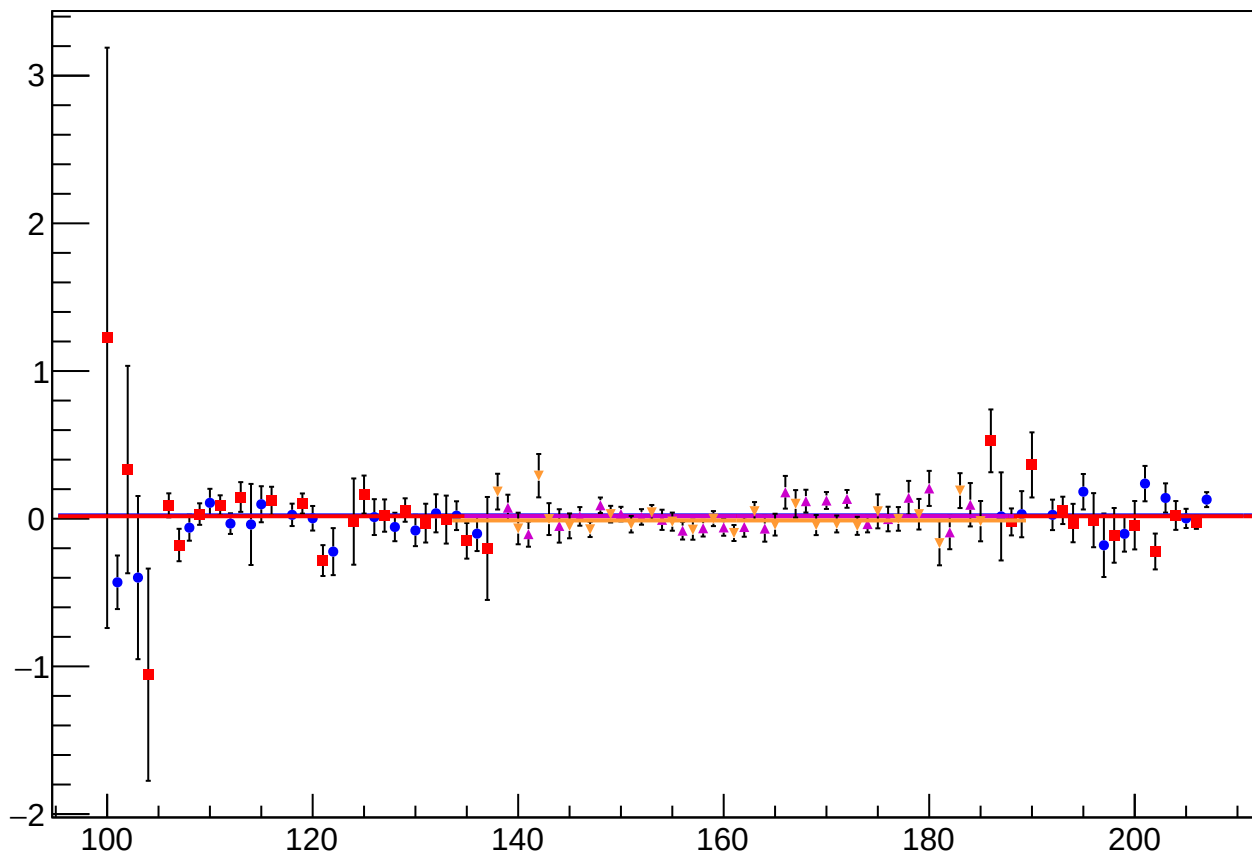
Left In: 56.467 $\pm$ 0.010  $\chi^2$ /NDF: 2140063.7/22

+ sign 59.444 $\pm$ 0.008  $\chi^2$ /NDF: 7073927.5/50

All: 59.012 $\pm$ 0.006  $\chi^2$ /NDF: 15345862.9/103

- sign 58.589 $\pm$ 0.008  $\chi^2$ /NDF: 8266469.3/52

asym\_usr\_atr1\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.023 \pm 0.020$   $\chi^2/\text{NDF}$ : 27.7/25

Left Out:  $-0.012 \pm 0.014$   $\chi^2/\text{NDF}$ : 21.8/24

Right Out:  $0.017 \pm 0.019$   $\chi^2/\text{NDF}$ : 38.9/29

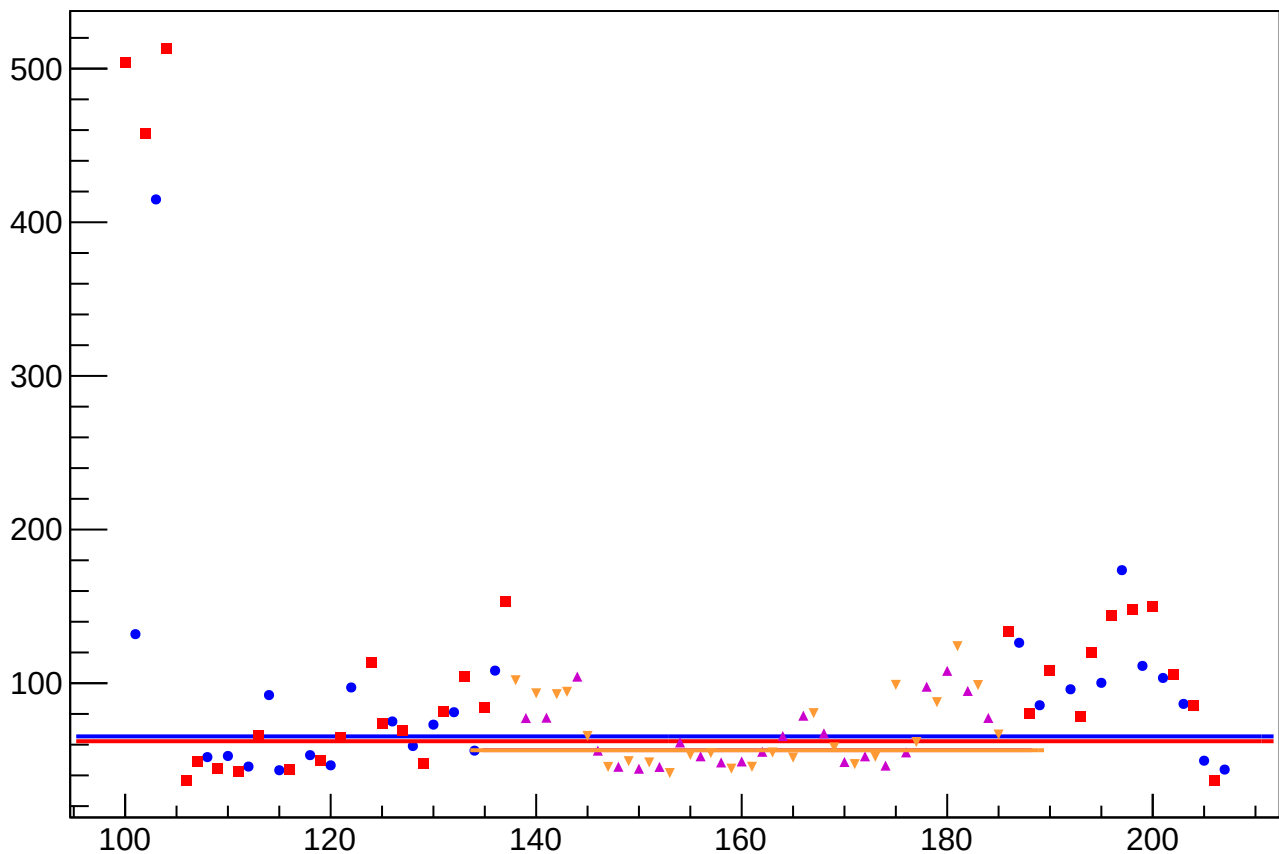
Left In:  $0.017 \pm 0.014$   $\chi^2/\text{NDF}$ : 30.6/22

+ sign  $-0.000 \pm 0.012$   $\chi^2/\text{NDF}$ : 51.4/50

All:  $0.009 \pm 0.008$   $\chi^2/\text{NDF}$ : 122.1/103

- sign  $0.017 \pm 0.012$   $\chi^2/\text{NDF}$ : 69.6/52

asym\_usr\_atr1\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 65.383 $\pm$ 0.014  $\chi^2$ /NDF: 4006641.3/25

Left Out: 56.374 $\pm$ 0.010  $\chi^2$ /NDF: 2797380.0/24

Right Out: 62.236 $\pm$ 0.013  $\chi^2$ /NDF: 6009762.6/29

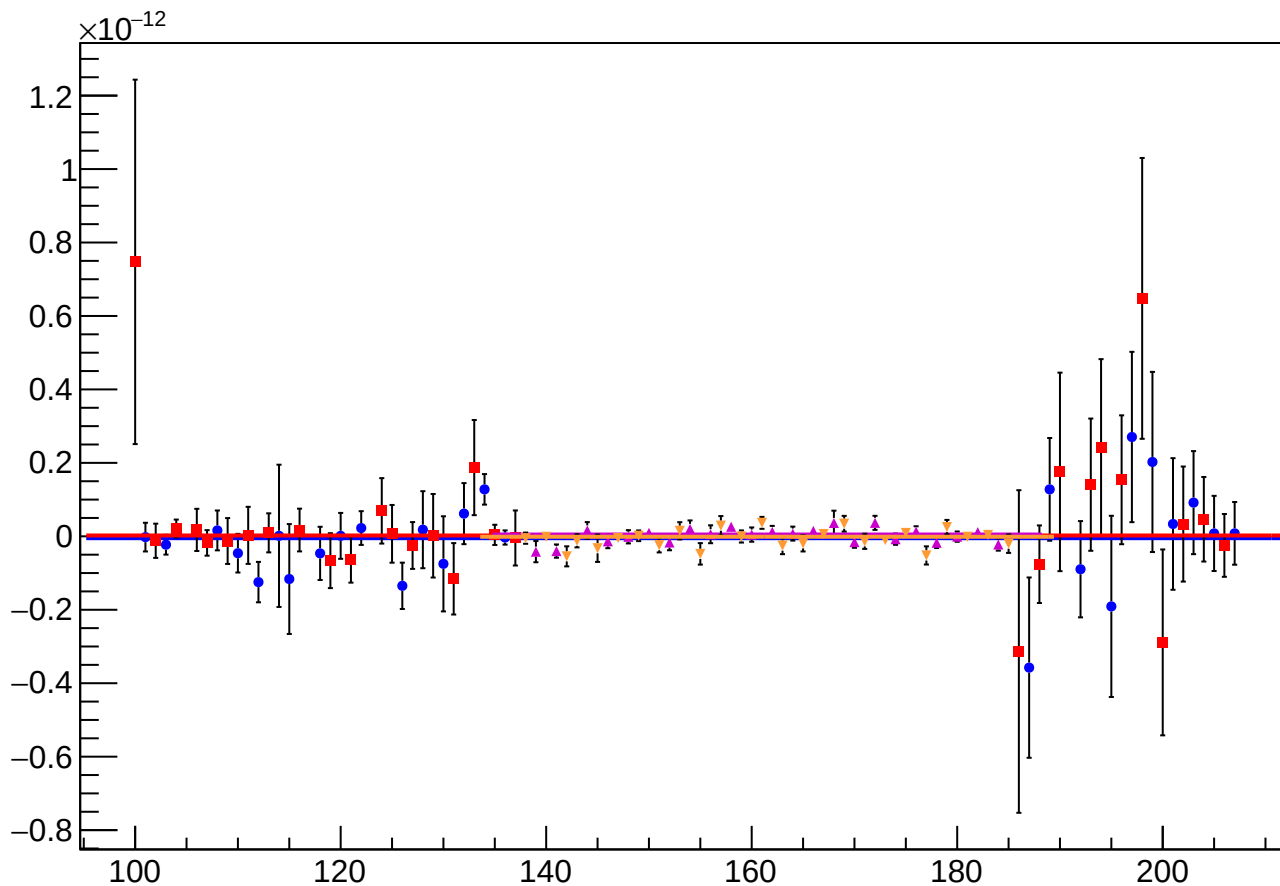
Left In: 56.467 $\pm$ 0.010  $\chi^2$ /NDF: 2140063.7/22

+ sign 59.444 $\pm$ 0.008  $\chi^2$ /NDF: 7073927.5/50

All: 59.012 $\pm$ 0.006  $\chi^2$ /NDF: 15345862.9/103

- sign 58.589 $\pm$ 0.008  $\chi^2$ /NDF: 8266469.3/52

asym\_usr\_atr1\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 29.2/25

Left Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 29.6/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 18.0/29

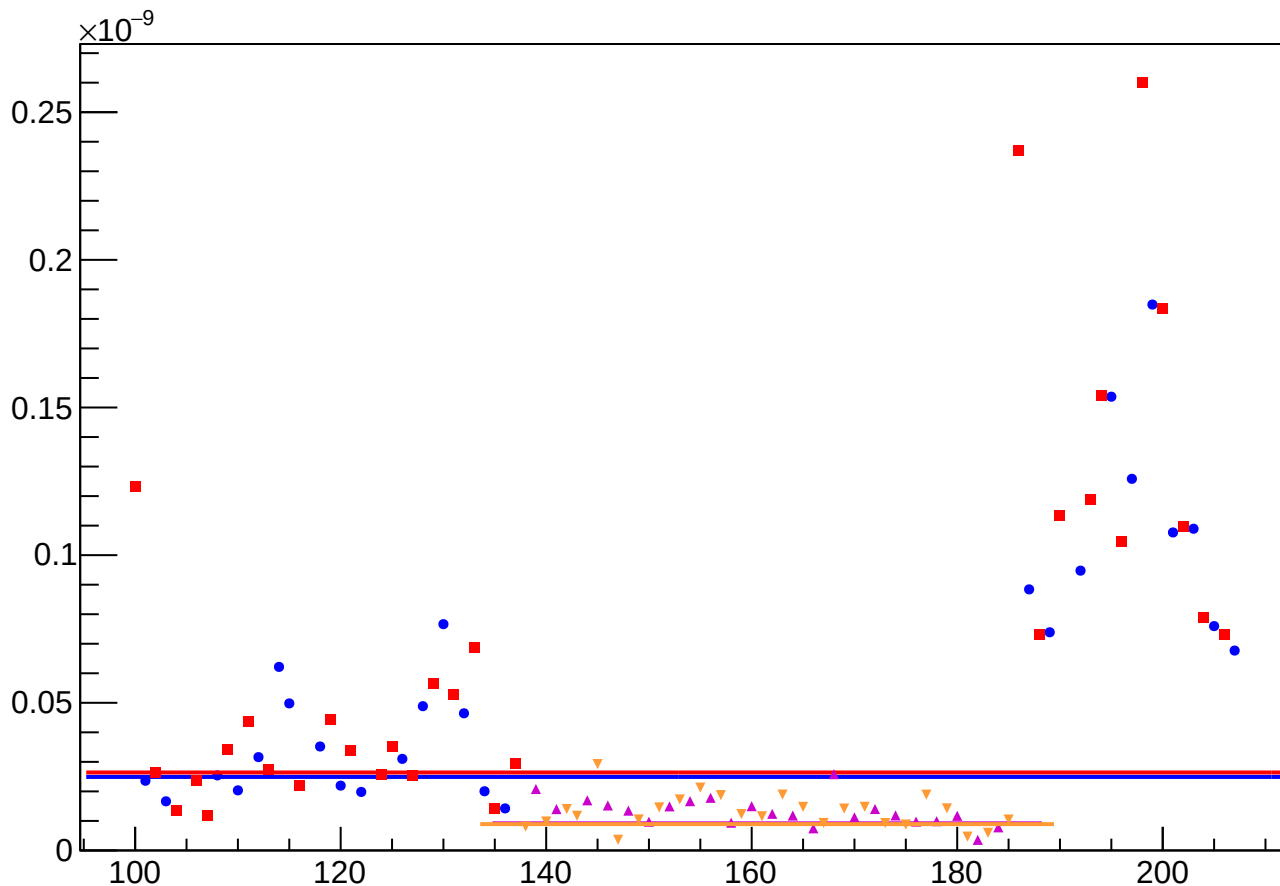
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 28.4/22

+ sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 59.0/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 107.7/103

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 46.4/52

asym\_usr\_atr1\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6511517.6/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5051836.5/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7842958.2/29

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5079391.4/22

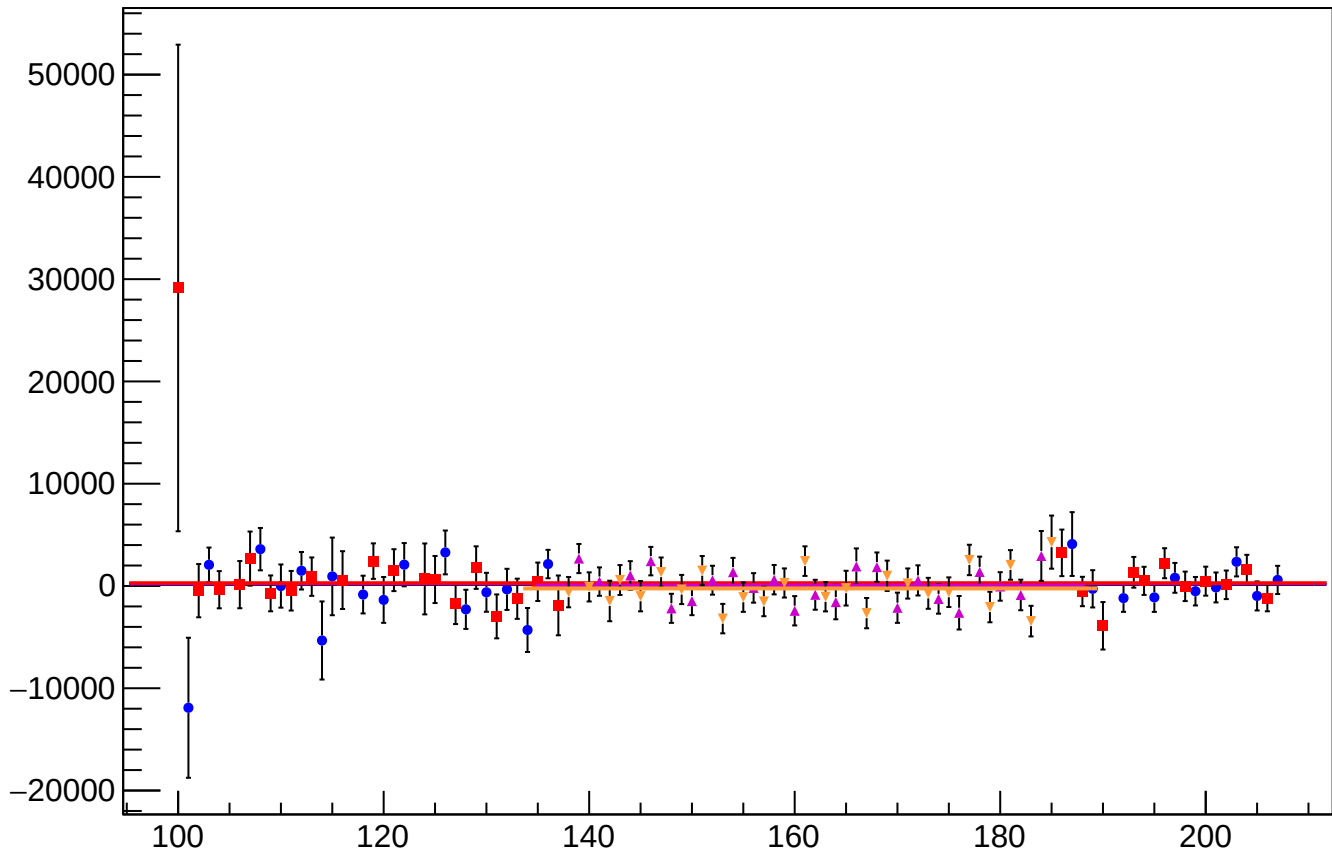
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 15544209.0/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 32659894.6/103

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 17104280.8/52



# reg\_asym\_usr\_atr1\_dd\_mean vs Slug



Right In: 193.851+/-350.274  $\chi^2/\text{NDF}$ : 28.7/25

Left Out: -240.873+/-300.008  $\chi^2/\text{NDF}$ :31.7/24

Right Out: 268.555+/-336.074  $\chi^2/\text{NDF}$ : 19.8/29

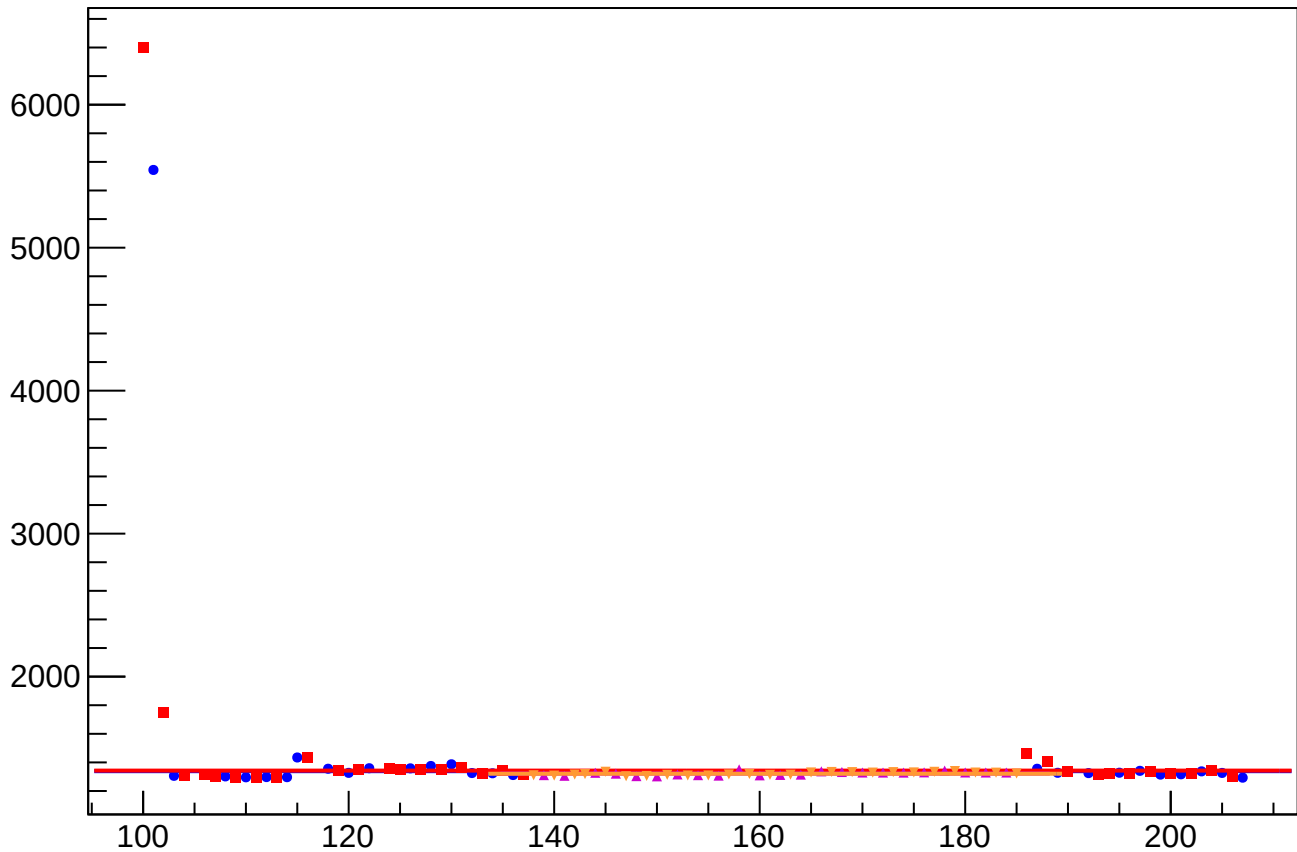
Left In: 39.122+/-308.622  $\chi^2/\text{NDF}$ :27.1/22

+ sign -56.916+/-227.856  $\chi^2/\text{NDF}$ : 61.4/50

All: 43.824+/-160.927  $\chi^2/\text{NDF}$ : 108.9/103

- sign 144.087+/-227.315  $\chi^2/\text{NDF}$ : 47.2/52

# reg\_asym\_usr\_atr1\_dd\_rms vs Slug



Right In: 1338.629+/-0.248  $\chi^2/\text{NDF}$ : 766415.5/25

Left Out: 1320.740+/-0.212  $\chi^2/\text{NDF}$ : 2602.3/24

Right Out: 1342.687+/-0.238  $\chi^2/\text{NDF}$ : 161588.8/29

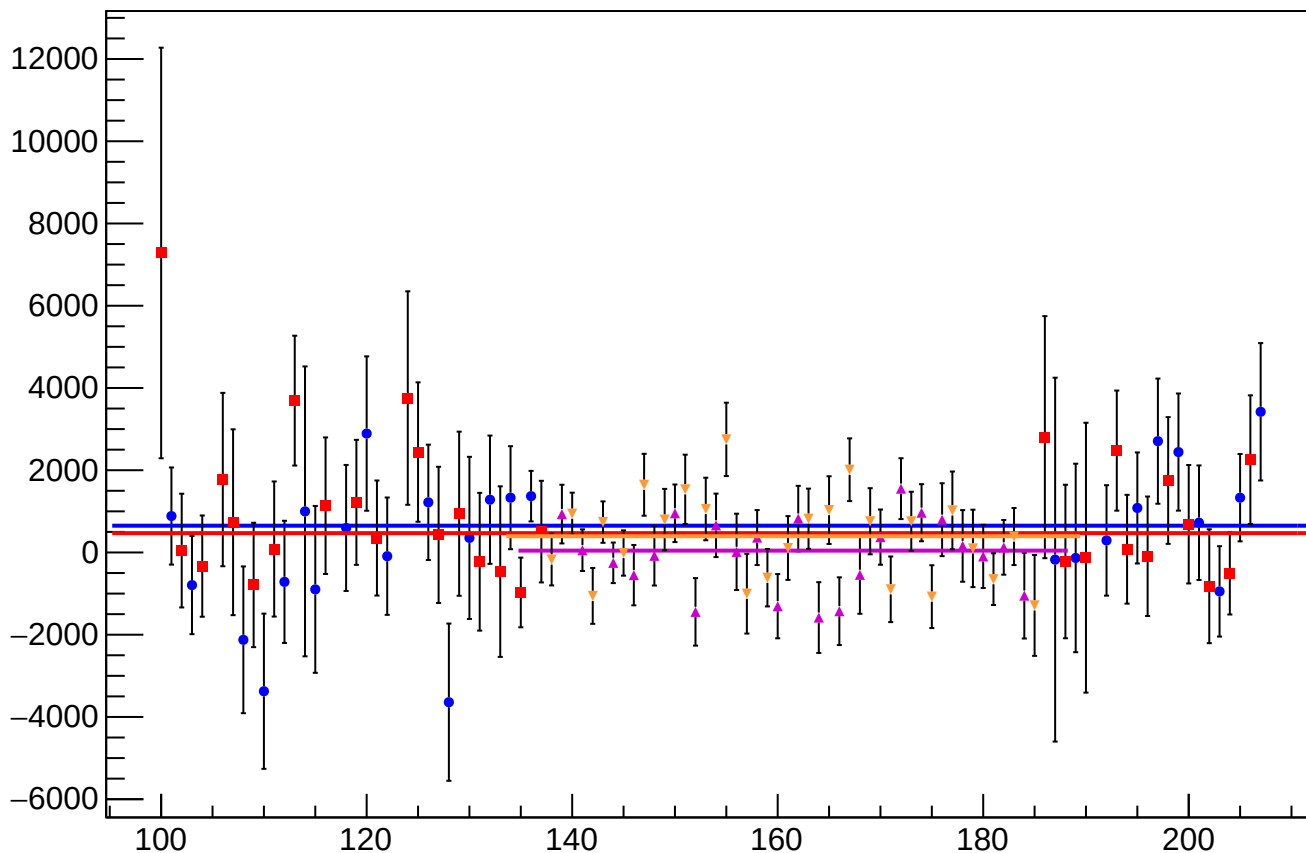
Left In: 1321.782+/-0.218  $\chi^2/\text{NDF}$ : 3553.3/22

+ sign 1328.310+/-0.161  $\chi^2/\text{NDF}$ : 772027.0/50

All: 1329.832+/-0.114  $\chi^2/\text{NDF}$ : 941544.9/103

- sign 1331.346+/-0.161  $\chi^2/\text{NDF}$ : 169340.0/52

# asym\_usr\_atr1\_dd\_reg\_correction\_mean vs Slug



Right In: 651.144 $\pm$ 271.285  $\chi^2$ /NDF: 27.7/25

Left Out: 394.550 $\pm$ 144.562  $\chi^2$ /NDF:41.8/24

Right Out: 470.018 $\pm$ 280.108  $\chi^2$ /NDF: 21.2/29

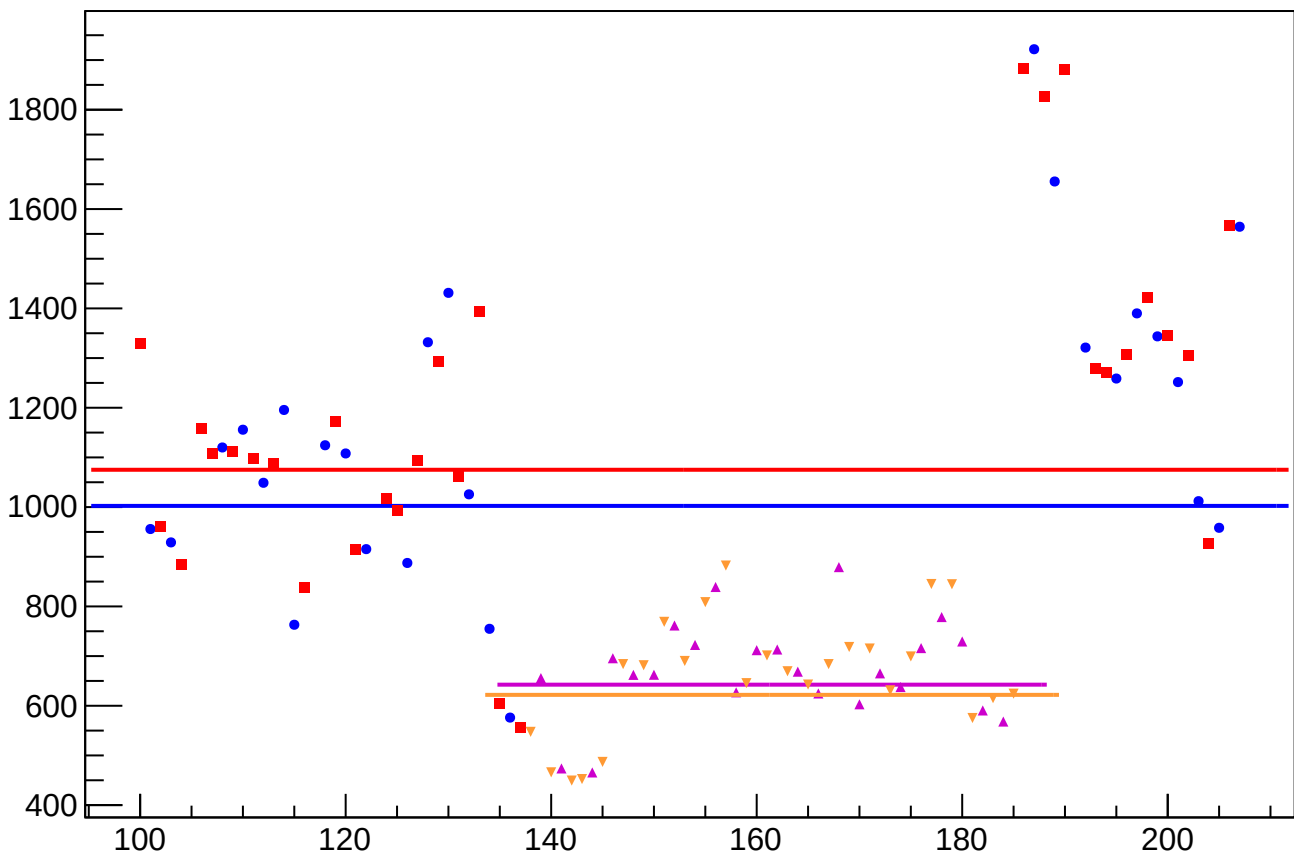
Left In: 44.777 $\pm$ 152.333  $\chi^2$ /NDF:27.6/22

+ sign 451.298 $\pm$ 127.579  $\chi^2$ /NDF: 70.2/50

All: 303.957 $\pm$ 92.340  $\chi^2$ /NDF: 123.5/103

- sign 141.839 $\pm$ 133.823  $\chi^2$ /NDF: 50.5/52

# asym\_usr\_atr1\_dd\_reg\_correction\_rms vs Slug



Right In: 1002.387 $\pm$ 0.192  $\chi^2/\text{NDF}$ : 2276077.7/25

Left Out: 621.950 $\pm$ 0.102  $\chi^2/\text{NDF}$ : 1383473.2/24

Right Out: 1075.126 $\pm$ 0.198  $\chi^2/\text{NDF}$ : 2393916.8/29

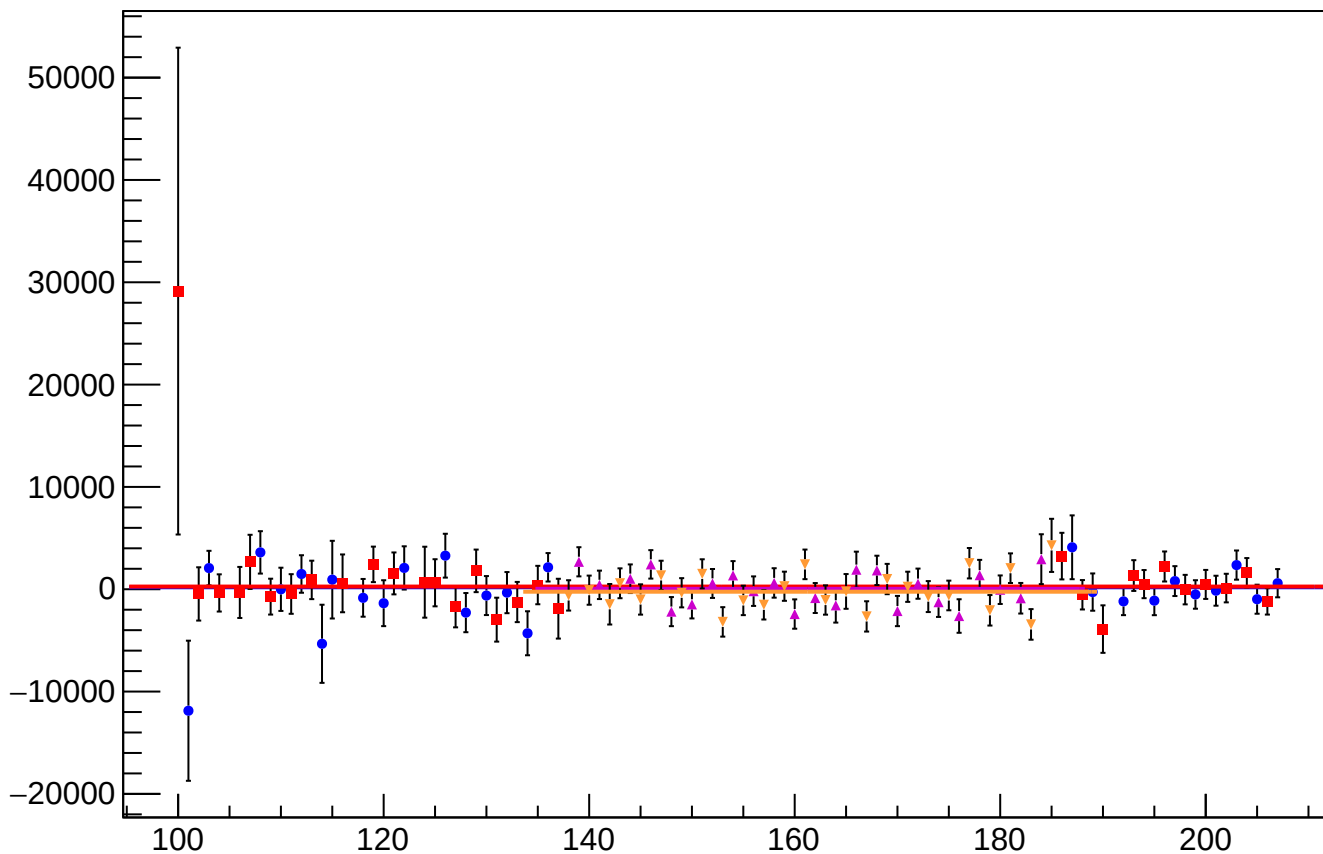
Left In: 642.470 $\pm$ 0.108  $\chi^2/\text{NDF}$ : 926330.5/22

+ sign 706.087 $\pm$ 0.090  $\chi^2/\text{NDF}$ : 6722875.4/50

All: 722.817 $\pm$ 0.065  $\chi^2/\text{NDF}$ : 13797849.5/10

- sign 741.224 $\pm$ 0.095  $\chi^2/\text{NDF}$ : 7002742.4/52

# cor\_asym\_usr\_atr1\_dd\_mean vs Slug



Right In: 193.945 $\pm$ 350.274  $\chi^2$ /NDF: 28.7/25

Left Out: -240.875 $\pm$ 300.008  $\chi^2$ /NDF:31.7/24

Right Out: 261.043 $\pm$ 336.589  $\chi^2$ /NDF: 19.8/29

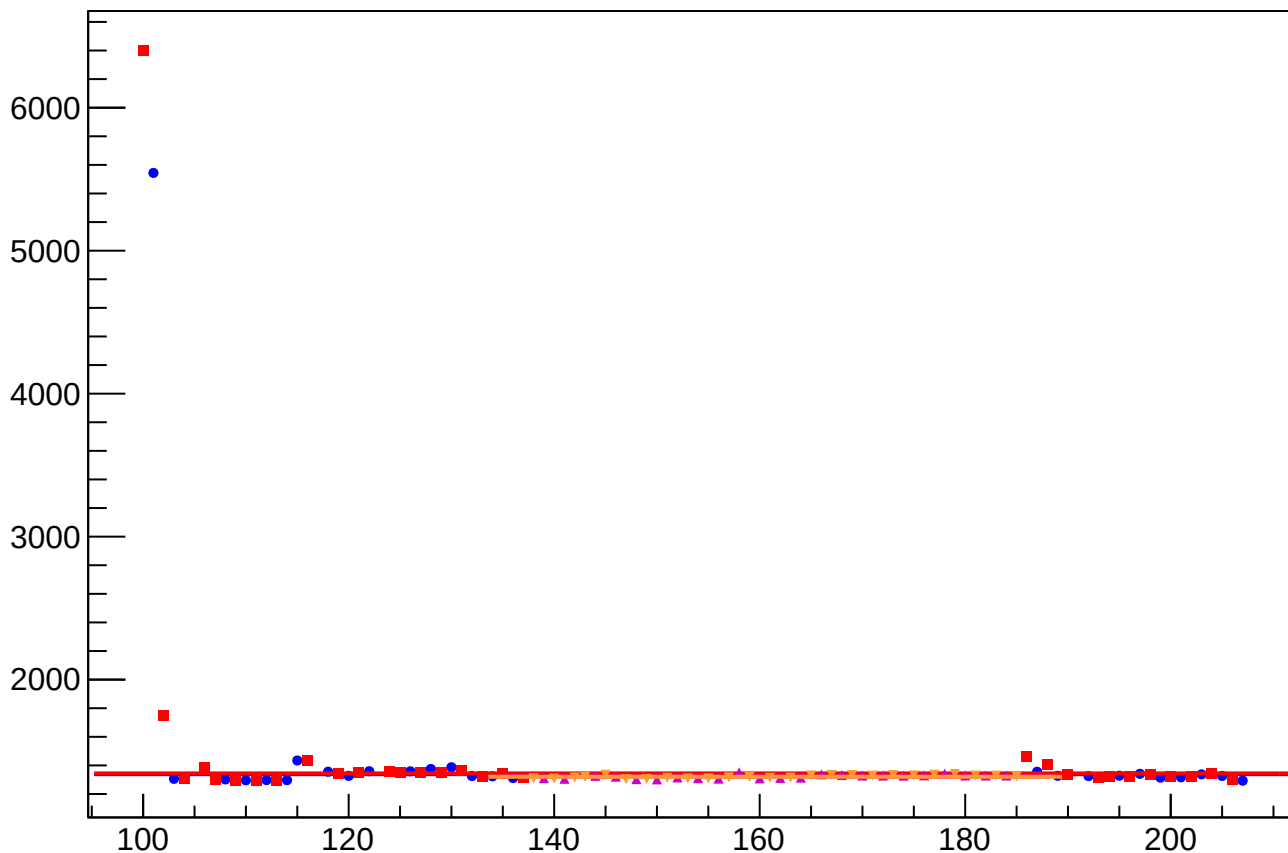
Left In: 39.193 $\pm$ 308.622  $\chi^2$ /NDF:27.1/22

+ sign -56.877 $\pm$ 227.856  $\chi^2$ /NDF: 61.3/50

All: 41.987 $\pm$ 160.983  $\chi^2$ /NDF: 108.9/103

- sign 140.520 $\pm$ 227.474  $\chi^2$ /NDF: 47.2/52

# cor\_asym\_usr\_atr1\_dd\_rms vs Slug



Right In: 1338.629+/-0.248  $\chi^2/\text{NDF}$ : 766414.5/25

Left Out: 1320.740+/-0.212  $\chi^2/\text{NDF}$ : 2602.3/24

Right Out: 1344.061+/-0.238  $\chi^2/\text{NDF}$ : 162000.1/29

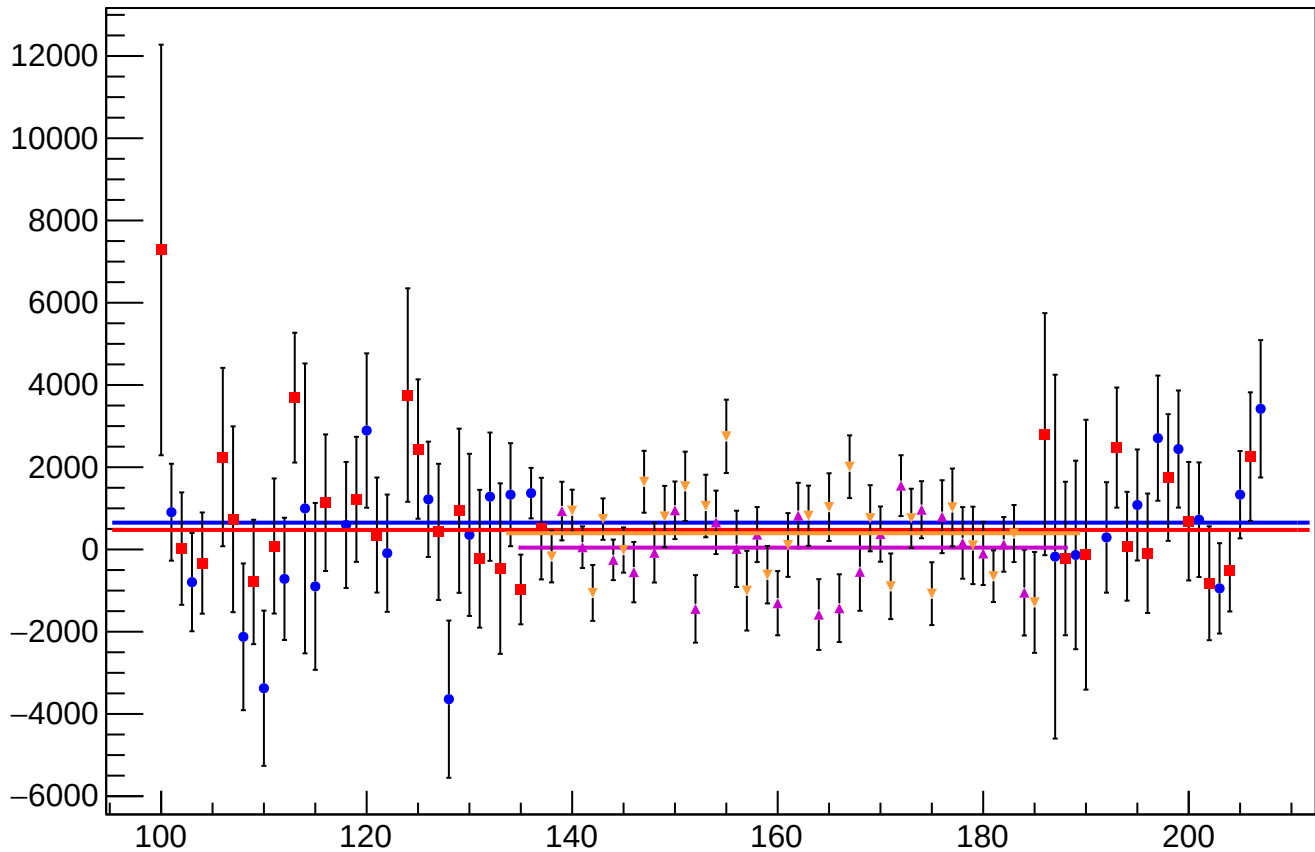
Left In: 1321.783+/-0.218  $\chi^2/\text{NDF}$ : 3553.3/22

+ sign 1328.310+/-0.161  $\chi^2/\text{NDF}$ : 772026.0/50

All: 1330.137+/-0.114  $\chi^2/\text{NDF}$ : 942596.3/103

- sign 1331.958+/-0.161  $\chi^2/\text{NDF}$ : 170313.6/52

asym\_usr\_atr1\_dd\_cor\_correction\_mean vs Slug



Right In: 652.246 $\pm$ 271.256  $\chi^2/\text{NDF}$ : 27.7/25

Left Out: 394.522 $\pm$ 144.562  $\chi^2/\text{NDF}$ : 41.8/24

Right Out: 475.282 $\pm$ 280.110  $\chi^2/\text{NDF}$ : 21.5/29

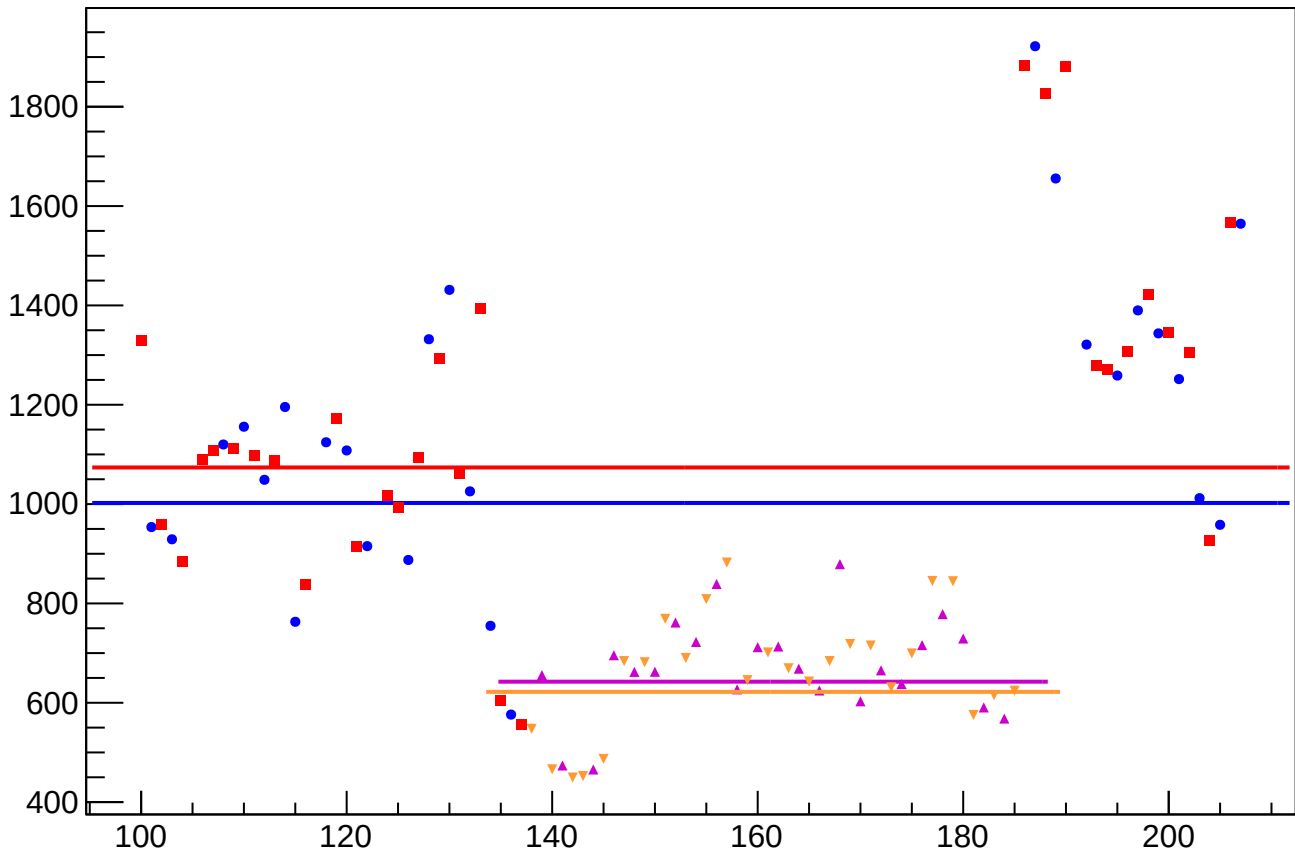
Left In: 44.766 $\pm$ 152.332  $\chi^2/\text{NDF}$ : 27.6/22

+ sign 451.529 $\pm$ 127.576  $\chi^2/\text{NDF}$ : 70.2/50

All: 304.648 $\pm$ 92.339  $\chi^2/\text{NDF}$ : 123.9/103

- sign 143.030 $\pm$ 133.823  $\chi^2/\text{NDF}$ : 50.9/52

# asym\_usr\_atr1\_dd\_cor\_correction\_rms vs Slug



Right In: 1002.280 $\pm$ 0.192  $\chi^2$ /NDF: 2276283.9/25

Left Out: 621.950 $\pm$ 0.102  $\chi^2$ /NDF:1383373.4/24

Right Out: 1073.744 $\pm$ 0.198  $\chi^2$ /NDF: 2391648.9/29

Left In: 642.465 $\pm$ 0.108  $\chi^2$ /NDF:926376.1/22

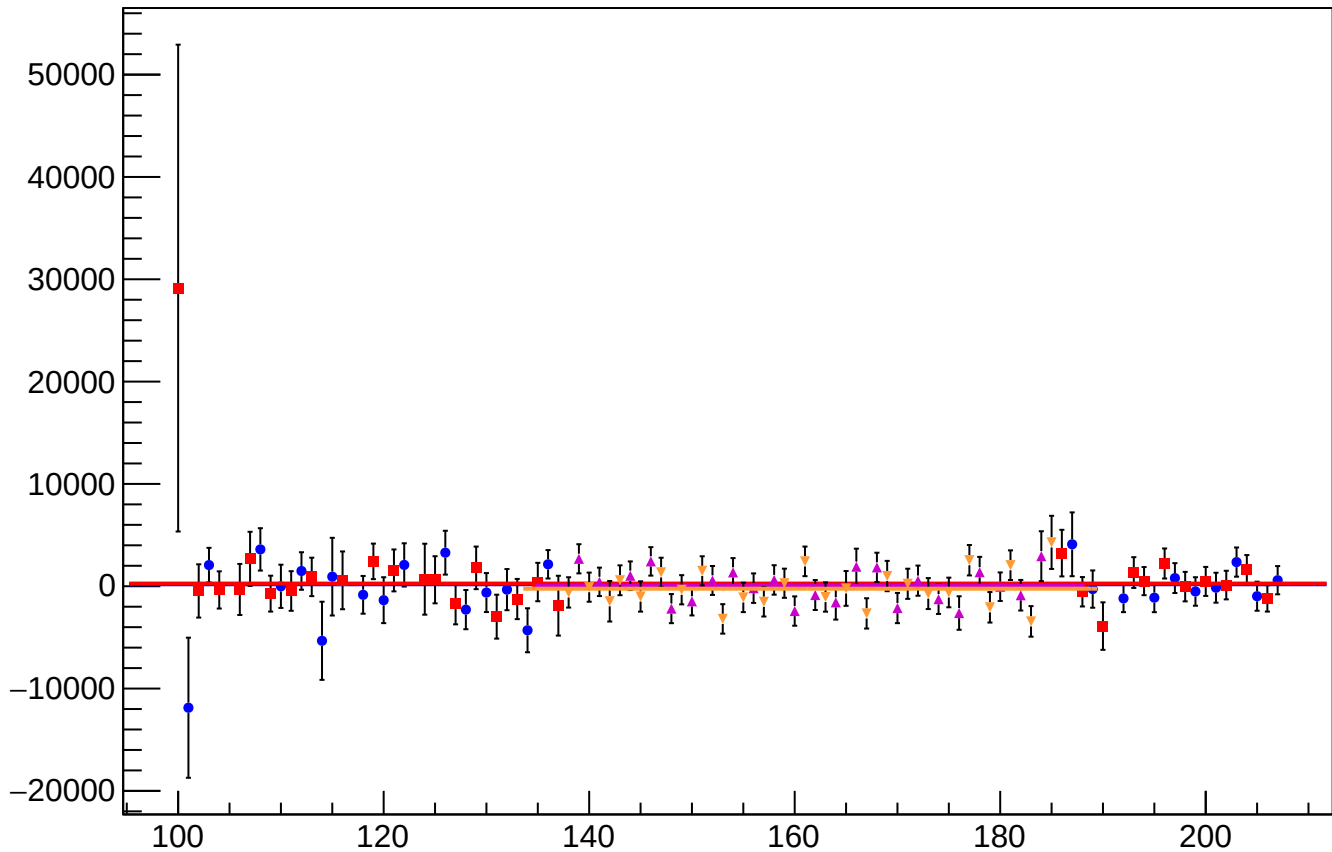
+ sign 706.077 $\pm$ 0.090  $\chi^2$ /NDF: 6721763.7/50

All: 722.658 $\pm$ 0.065  $\chi^2$ /NDF: 13769805.4/10

- sign 740.903 $\pm$ 0.095  $\chi^2$ /NDF: 6977082.9/52



eigen\_cor\_asym\_usr\_atr1\_dd\_mean vs Slug



Right In: 193.945 $\pm$ 350.274  $\chi^2$ /NDF: 28.7/25

Left Out: -240.875 $\pm$ 300.008  $\chi^2$ /NDF:31.7/24

Right Out: 261.043 $\pm$ 336.589  $\chi^2$ /NDF: 19.8/29

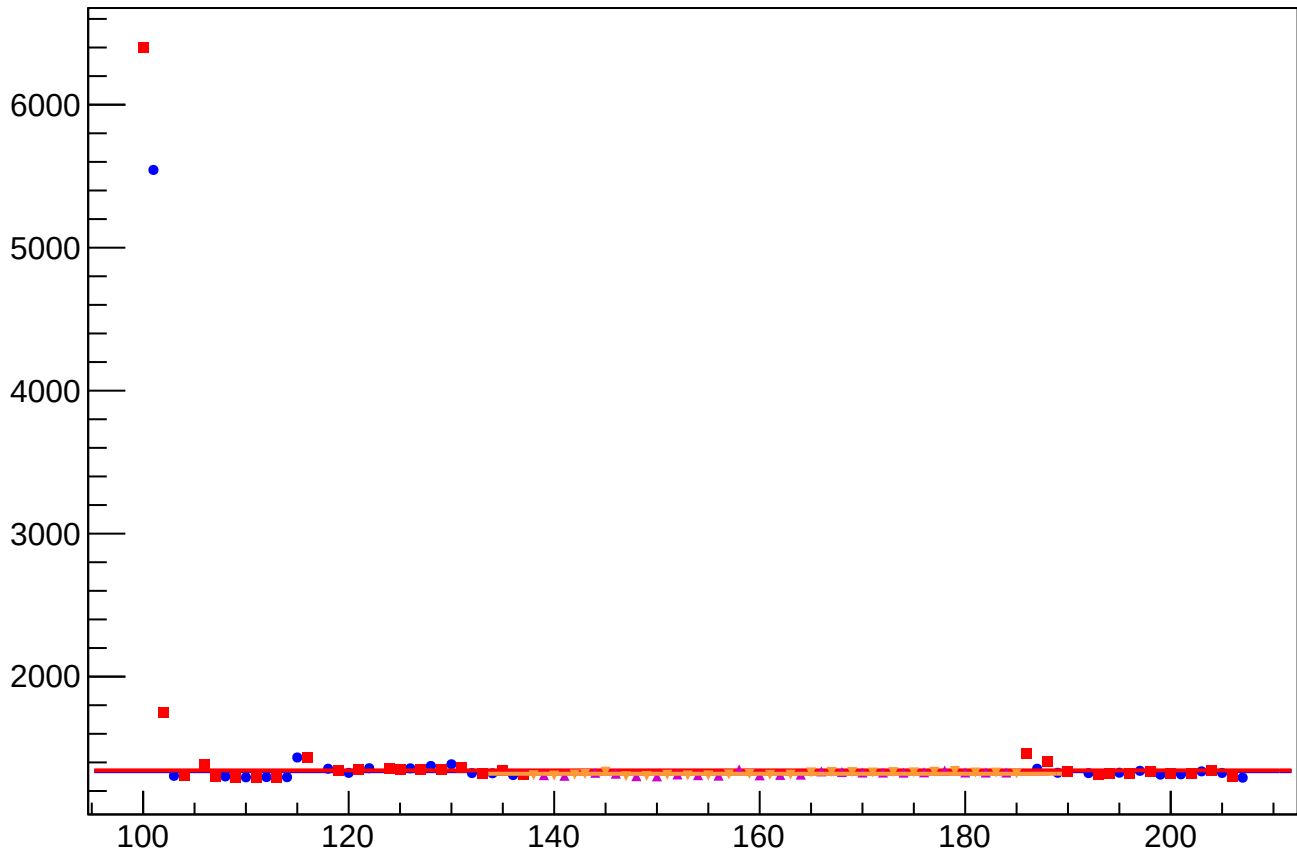
Left In: 39.193 $\pm$ 308.622  $\chi^2$ /NDF:27.1/22

+ sign -56.877 $\pm$ 227.856  $\chi^2$ /NDF: 61.3/50

All: 41.987 $\pm$ 160.983  $\chi^2$ /NDF: 108.9/103

- sign 140.520 $\pm$ 227.474  $\chi^2$ /NDF: 47.2/52

# eigen\_cor\_asym\_usr\_atr1\_dd\_rms vs Slug



Right In: 1338.629+/-0.248  $\chi^2/\text{NDF}$ : 766414.5/25

Left Out: 1320.740+/-0.212  $\chi^2/\text{NDF}$ : 2602.3/24

Right Out: 1344.061+/-0.238  $\chi^2/\text{NDF}$ : 162000.1/29

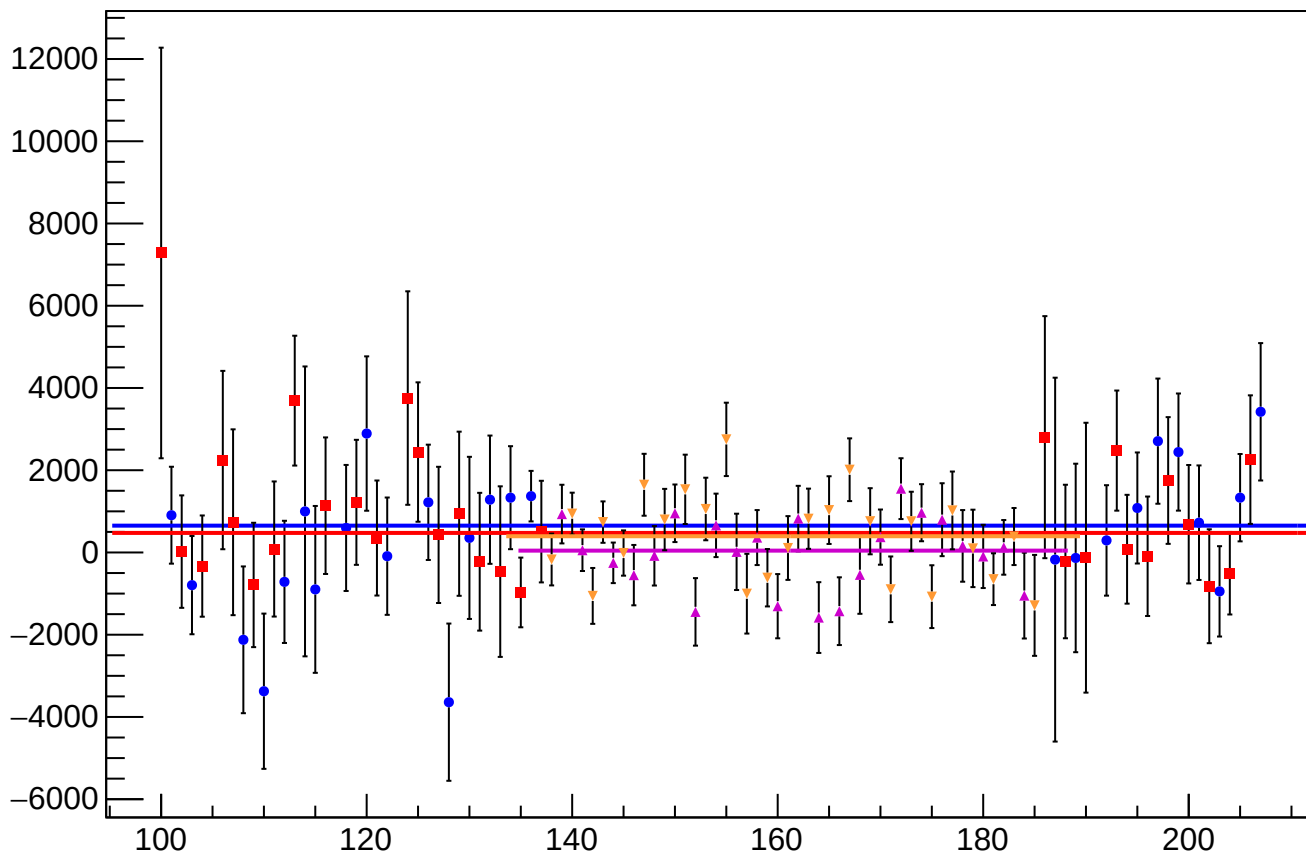
Left In: 1321.783+/-0.218  $\chi^2/\text{NDF}$ : 3553.3/22

+ sign 1328.310+/-0.161  $\chi^2/\text{NDF}$ : 772026.0/50

All: 1330.137+/-0.114  $\chi^2/\text{NDF}$ : 942596.3/103

- sign 1331.958+/-0.161  $\chi^2/\text{NDF}$ : 170313.6/52

asym\_usr\_atr1\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In: 652.246 $\pm$ 271.256  $\chi^2$ /NDF: 27.7/25

Left Out: 394.522 $\pm$ 144.562  $\chi^2$ /NDF:41.8/24

Right Out: 475.282 $\pm$ 280.110  $\chi^2$ /NDF: 21.5/29

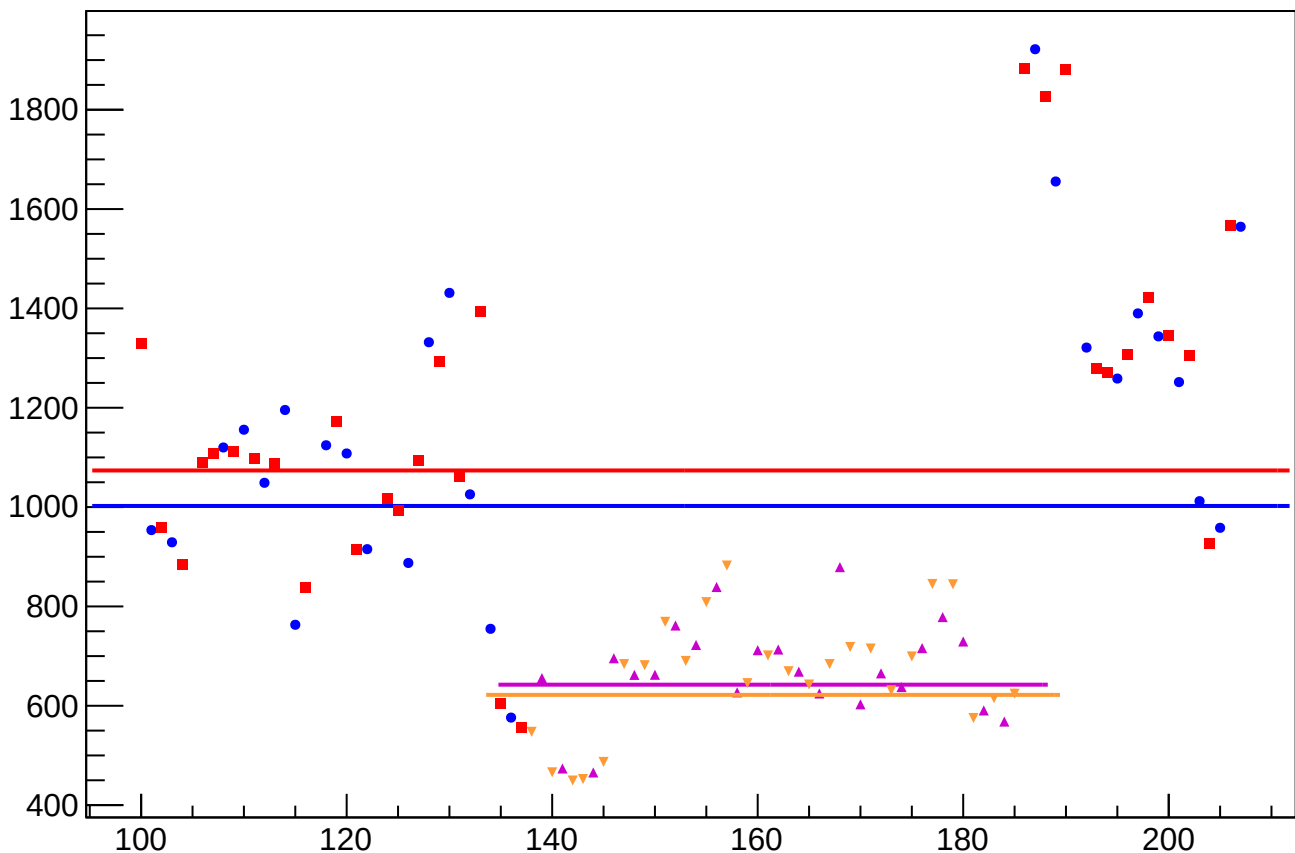
Left In: 44.766 $\pm$ 152.332  $\chi^2$ /NDF:27.6/22

+ sign 451.529 $\pm$ 127.576  $\chi^2$ /NDF: 70.2/50

All: 304.648 $\pm$ 92.339  $\chi^2$ /NDF: 123.9/103

- sign 143.030 $\pm$ 133.823  $\chi^2$ /NDF: 50.9/52

asym\_usr\_atr1\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In:  $1002.280 \pm 0.192$   $\chi^2/\text{NDF}$ : 2276283.9/25

Left Out:  $621.950 \pm 0.102$   $\chi^2/\text{NDF}$ : 1383373.4/24

Right Out:  $1073.744 \pm 0.198$   $\chi^2/\text{NDF}$ : 2391648.9/29

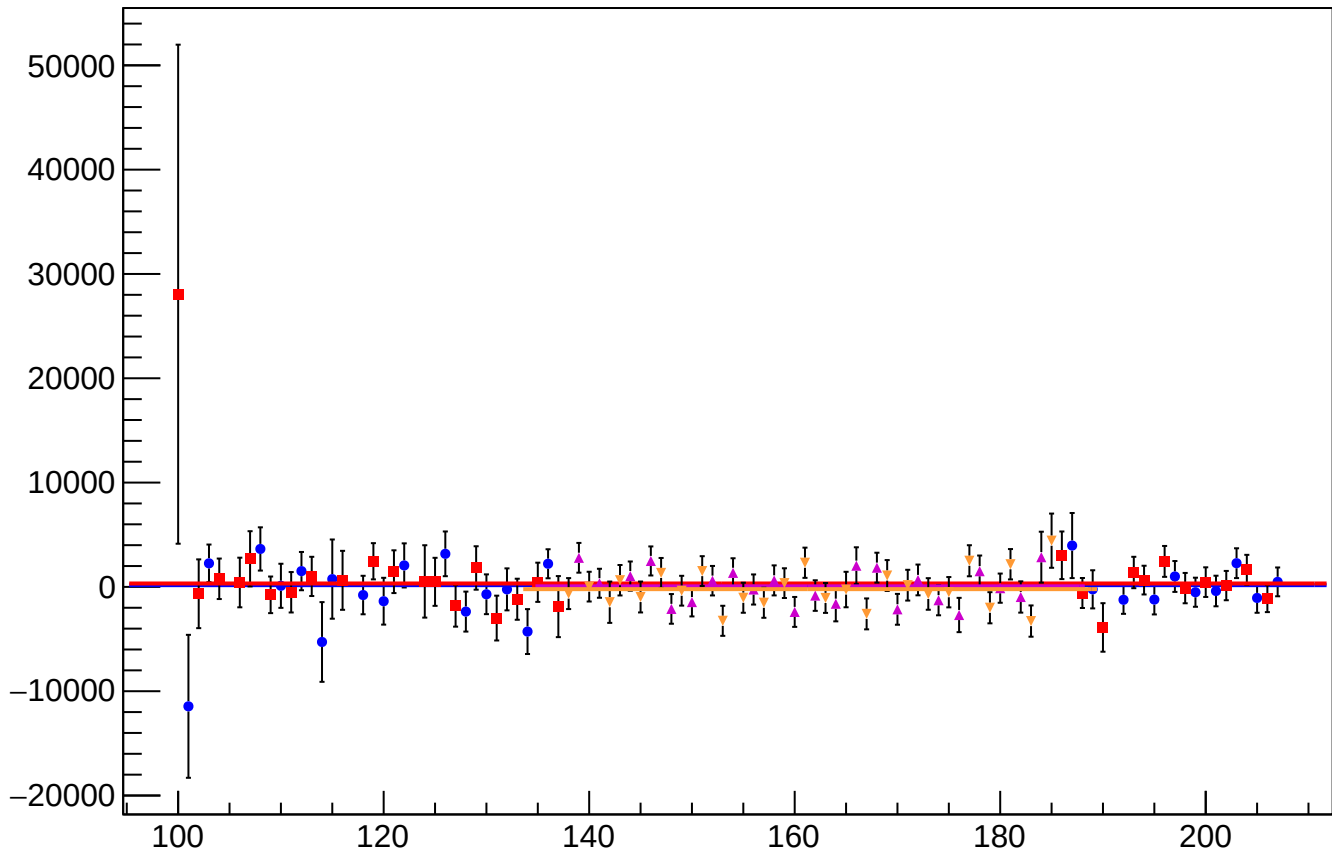
Left In:  $642.465 \pm 0.108$   $\chi^2/\text{NDF}$ : 926376.1/22

+ sign  $706.077 \pm 0.090$   $\chi^2/\text{NDF}$ : 6721763.7/50

All:  $722.658 \pm 0.065$   $\chi^2/\text{NDF}$ : 13769805.4/10

- sign  $740.903 \pm 0.095$   $\chi^2/\text{NDF}$ : 6977082.9/52

# dit\_asym\_usr\_atr1\_dd\_mean vs Slug



Right In: 166.452 $\pm$ 351.951  $\chi^2$ /NDF: 28.8/25

Left Out: -215.033 $\pm$ 300.379  $\chi^2$ /NDF:31.3/24

Right Out: 327.595 $\pm$ 338.911  $\chi^2$ /NDF: 19.9/29

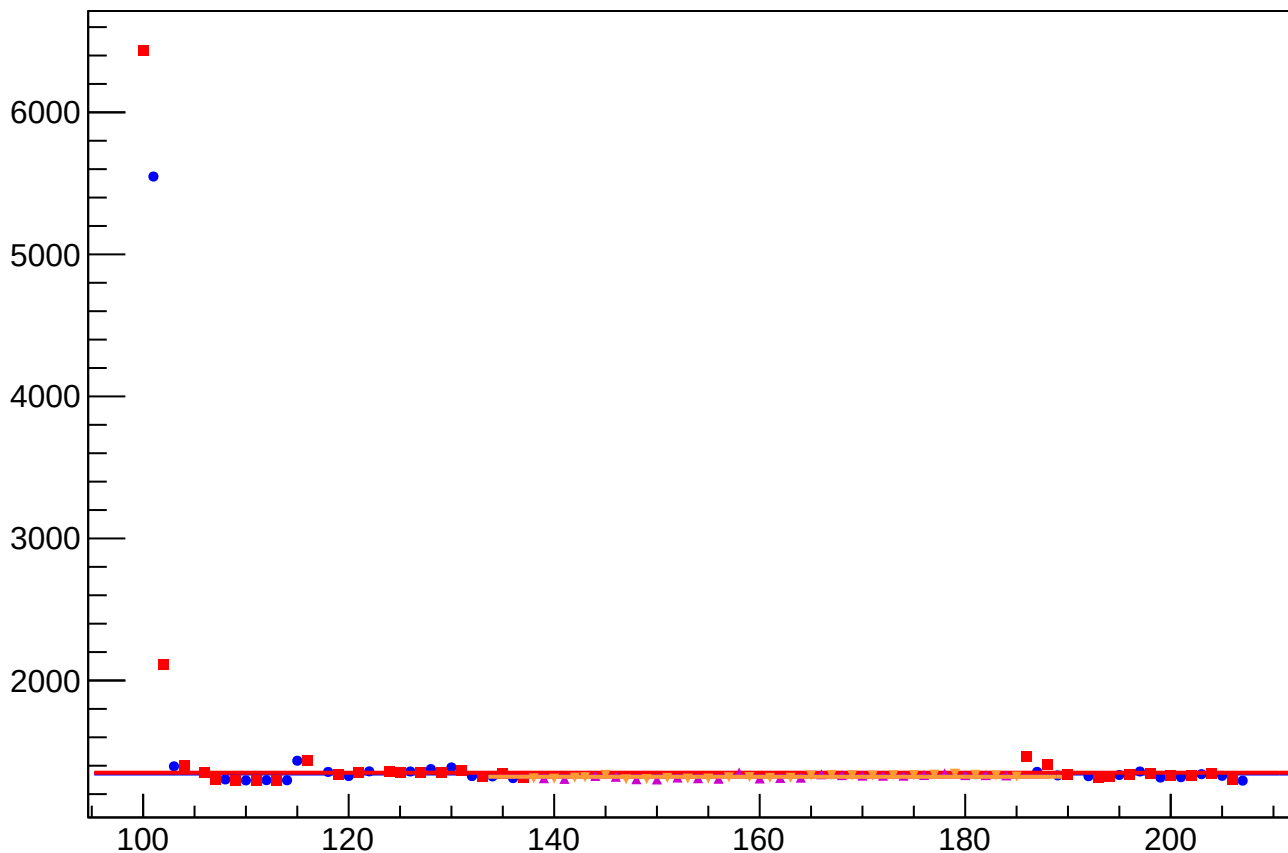
Left In: 50.244 $\pm$ 308.986  $\chi^2$ /NDF:27.8/22

+ sign -54.263 $\pm$ 228.479  $\chi^2$ /NDF: 60.7/50

All: 61.010 $\pm$ 161.508  $\chi^2$ /NDF: 109.3/103

- sign 176.137 $\pm$ 228.334  $\chi^2$ /NDF: 48.1/52

# dit\_asym\_usr\_atr1\_dd\_rms vs Slug



Right In: 1344.990+/-0.249  $\chi^2/\text{NDF}$ : 767135.0/25

Left Out: 1322.369+/-0.212  $\chi^2/\text{NDF}$ : 2931.9/24

Right Out: 1350.711+/-0.240  $\chi^2/\text{NDF}$ : 219837.1/29

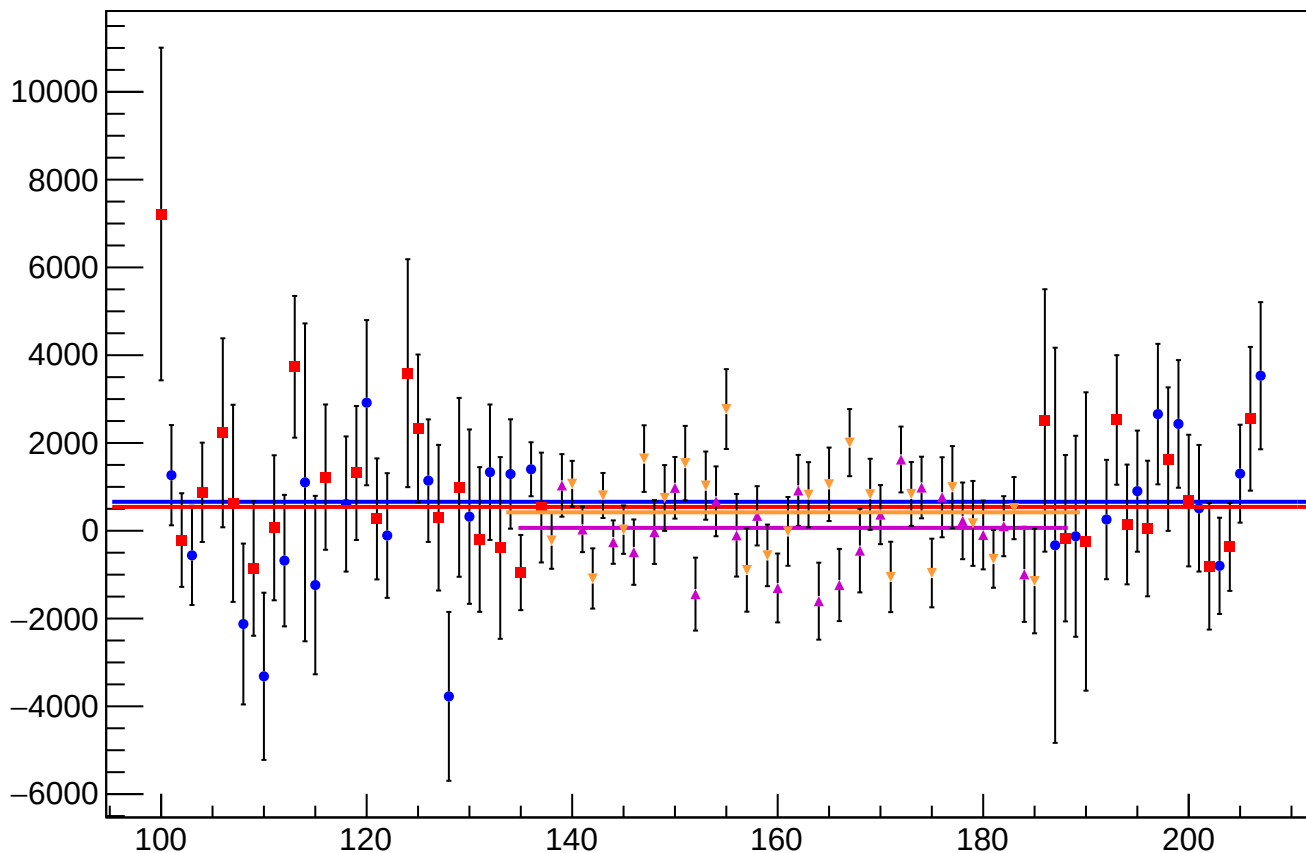
Left In: 1323.337+/-0.218  $\chi^2/\text{NDF}$ : 3856.3/22

+ sign 1331.902+/-0.162  $\chi^2/\text{NDF}$ : 774847.3/50

All: 1333.834+/-0.114  $\chi^2/\text{NDF}$ : 1005951.2/100

- sign 1335.762+/-0.161  $\chi^2/\text{NDF}$ : 230818.3/52

# asym\_usr\_atr1\_dd\_dit\_correction\_mean vs Slug



Right In:  $659.708 \pm 272.457$   $\chi^2/\text{NDF}: 27.3/25$

Left Out:  $419.899 \pm 146.436$   $\chi^2/\text{NDF}: 41.5/24$

Right Out:  $542.945 \pm 278.294$   $\chi^2/\text{NDF}: 21.9/29$

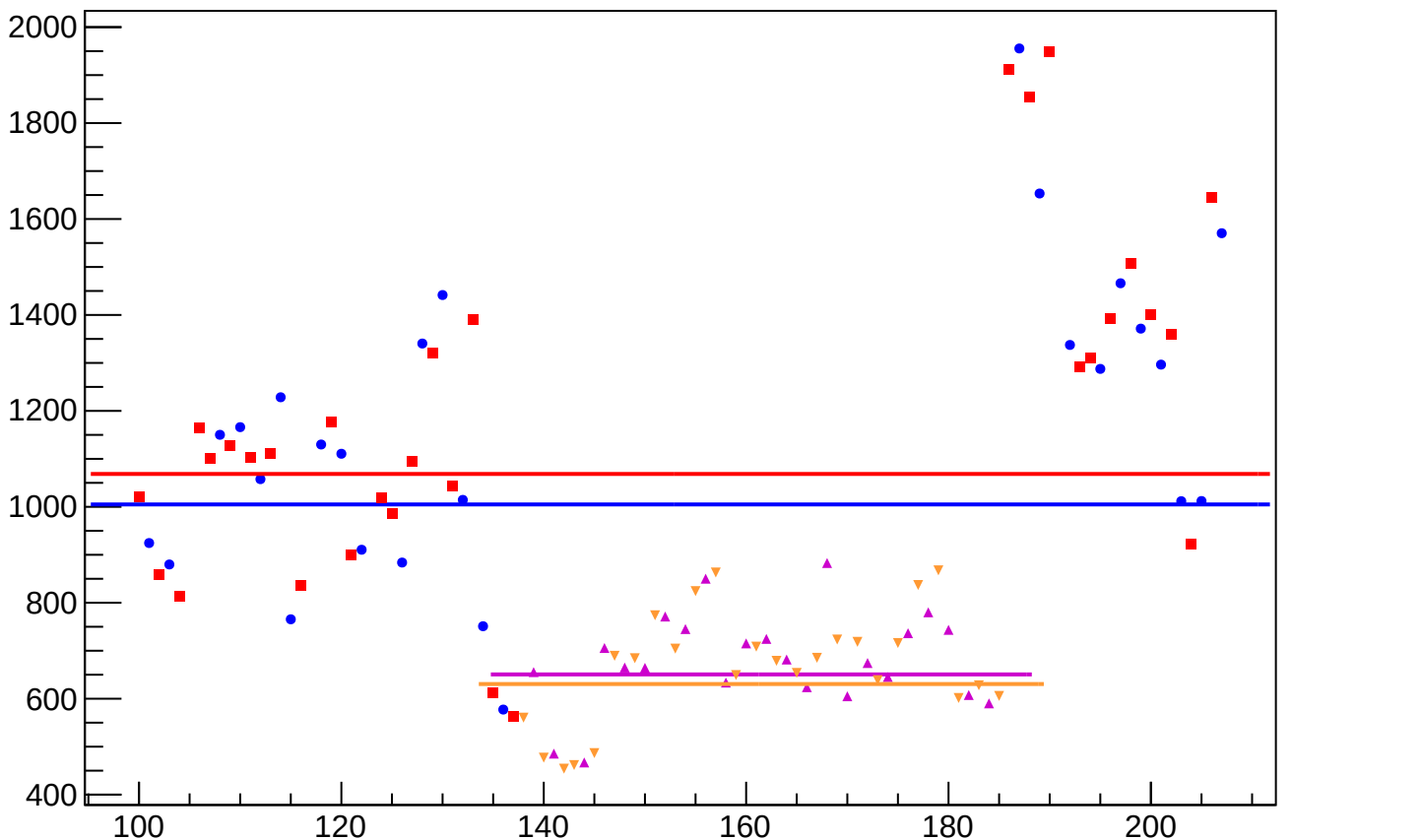
Left In:  $65.405 \pm 154.224$   $\chi^2/\text{NDF}: 27.0/22$

+ sign  $473.646 \pm 128.986$   $\chi^2/\text{NDF}: 69.4/50$

All:  $332.251 \pm 93.226$   $\chi^2/\text{NDF}: 123.1/103$

- sign  $177.606 \pm 134.895$   $\chi^2/\text{NDF}: 51.2/52$

# asym\_usr\_atr1\_dd\_dit\_correction\_rms vs Slug



Right In: 1004.983 $\pm$ 0.193  $\chi^2/\text{NDF}$ : 2405136.3/25

Left Out: 630.592 $\pm$ 0.104  $\chi^2/\text{NDF}$ :1328590.6/24

Right Out: 1068.544 $\pm$ 0.197  $\chi^2/\text{NDF}$ : 2698894.4/29

Left In: 650.637 $\pm$ 0.109  $\chi^2/\text{NDF}$ :922078.1/22

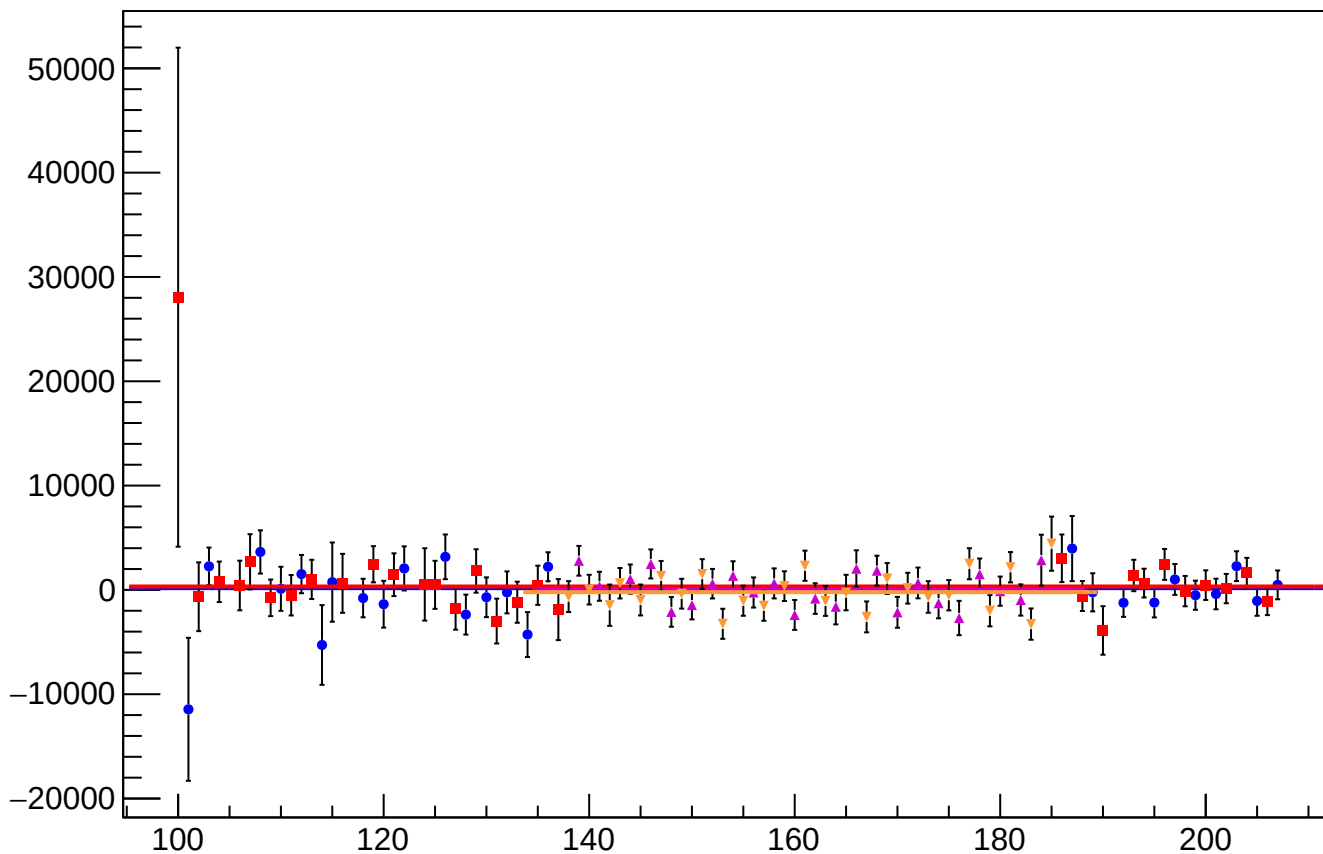
+ sign 714.502 $\pm$ 0.091  $\chi^2/\text{NDF}$ : 6663778.2/50

All: 730.896 $\pm$ 0.066  $\chi^2/\text{NDF}$ : 13802793.9/10

- sign 748.826 $\pm$ 0.095  $\chi^2/\text{NDF}$ : 7071371.9/52



# eigen\_dit\_asym\_usr\_atr1\_dd\_mean vs Slug



Right In: 166.452 $\pm$ 351.951  $\chi^2$ /NDF: 28.8/25

Left Out: -215.035 $\pm$ 300.379  $\chi^2$ /NDF:31.3/24

Right Out: 327.595 $\pm$ 338.911  $\chi^2$ /NDF: 19.9/29

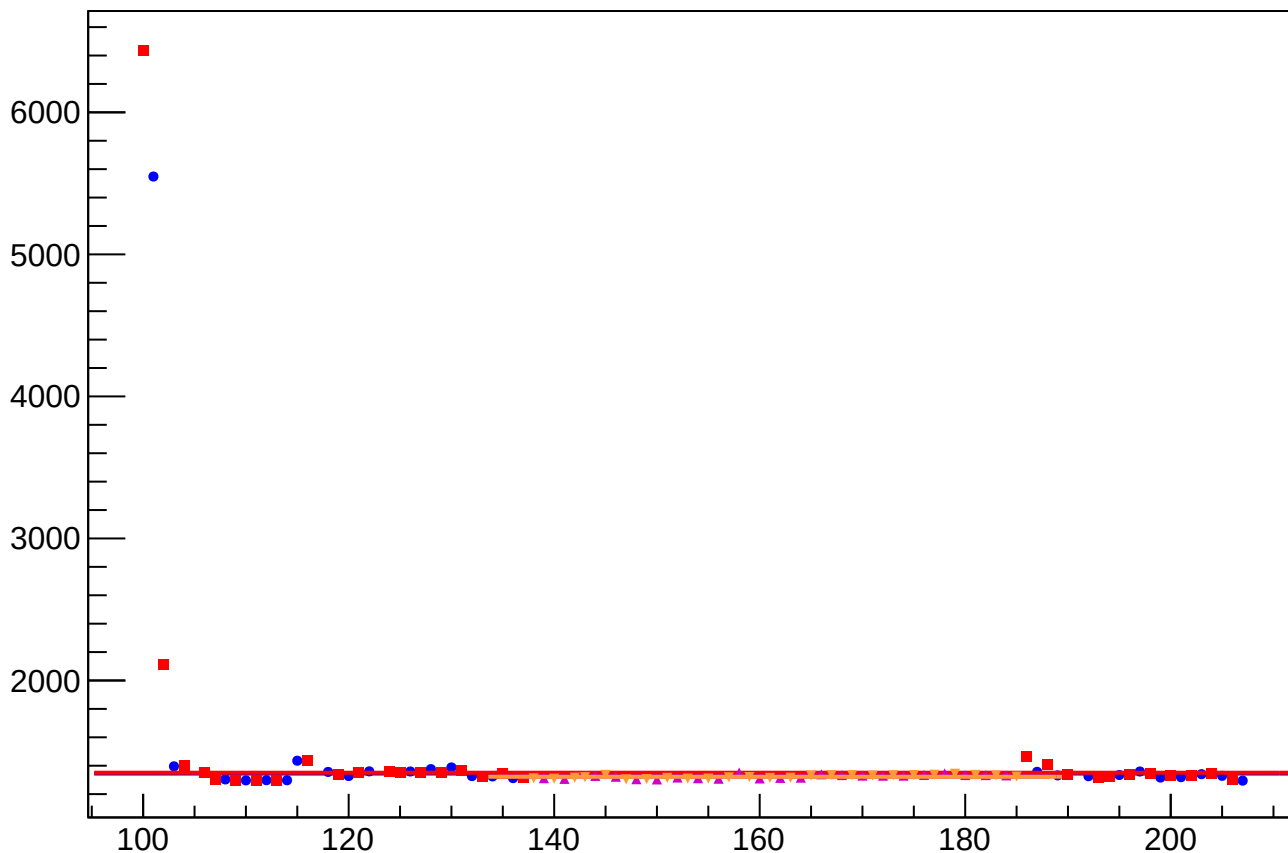
Left In: 50.244 $\pm$ 308.986  $\chi^2$ /NDF:27.8/22

+ sign -54.263 $\pm$ 228.479  $\chi^2$ /NDF: 60.7/50

All: 61.010 $\pm$ 161.508  $\chi^2$ /NDF: 109.3/103

- sign 176.137 $\pm$ 228.334  $\chi^2$ /NDF: 48.1/52

# eigen\_dit\_asym\_usr\_atr1\_dd\_rms vs Slug



Right In: 1344.990+/-0.249     $\chi^2/\text{NDF}$ : 767135.0/25

Left Out: 1322.369+/-0.212     $\chi^2/\text{NDF}$ : 2931.9/24

Right Out: 1350.711+/-0.240     $\chi^2/\text{NDF}$ : 219837.0/29

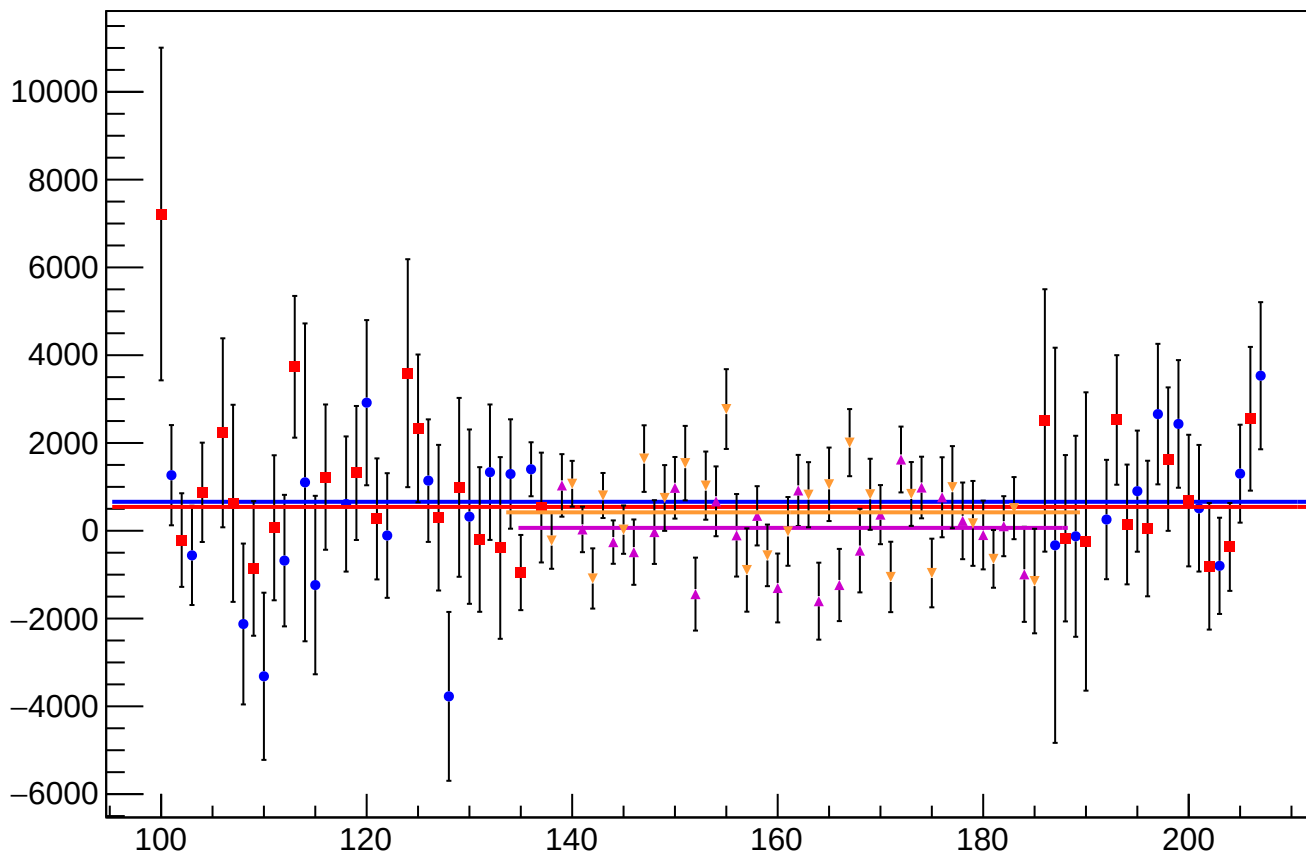
Left In: 1323.337+/-0.218     $\chi^2/\text{NDF}$ : 3856.3/22

+ sign 1331.902+/-0.162     $\chi^2/\text{NDF}$ : 774847.3/50

All: 1333.834+/-0.114     $\chi^2/\text{NDF}$ : 1005951.0/100

- sign 1335.762+/-0.161     $\chi^2/\text{NDF}$ : 230818.2/52

asym\_usr\_atr1\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $659.705 \pm 272.457$   $\chi^2/\text{NDF}$ : 27.3/25

Left Out:  $419.899 \pm 146.436$   $\chi^2/\text{NDF}$ : 41.5/24

Right Out:  $542.945 \pm 278.294$   $\chi^2/\text{NDF}$ : 21.9/29

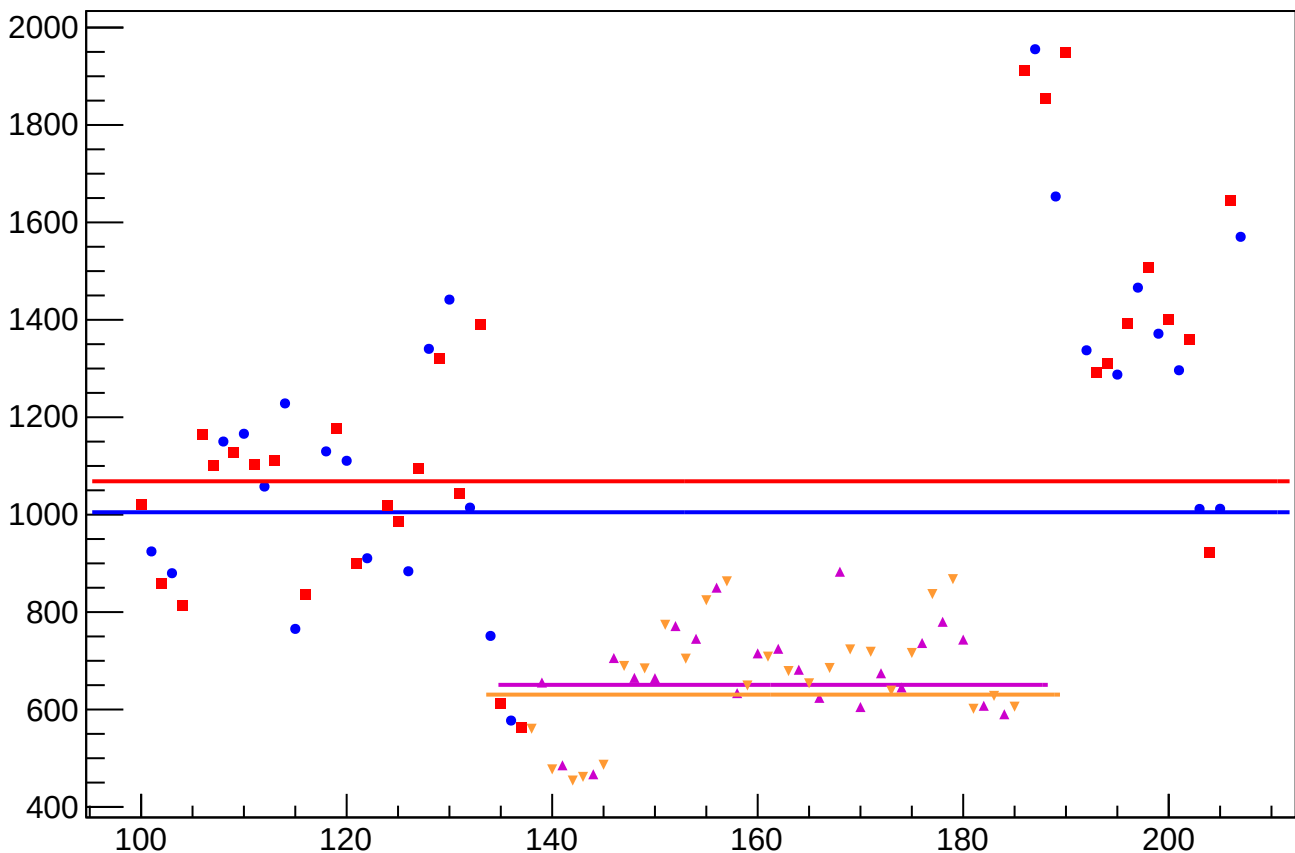
Left In:  $65.405 \pm 154.225$   $\chi^2/\text{NDF}$ : 27.0/22

+ sign  $473.646 \pm 128.986$   $\chi^2/\text{NDF}$ : 69.4/50

All:  $332.252 \pm 93.226$   $\chi^2/\text{NDF}$ : 123.1/103

- sign  $177.606 \pm 134.895$   $\chi^2/\text{NDF}$ : 51.2/52

asym\_usr\_atr1\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 1004.981 $\pm$ 0.193  $\chi^2$ /NDF: 2405150.9/25

Left Out: 630.592 $\pm$ 0.104  $\chi^2$ /NDF:1328610.2/24

Right Out: 1068.543 $\pm$ 0.197  $\chi^2$ /NDF: 2698902.8/29

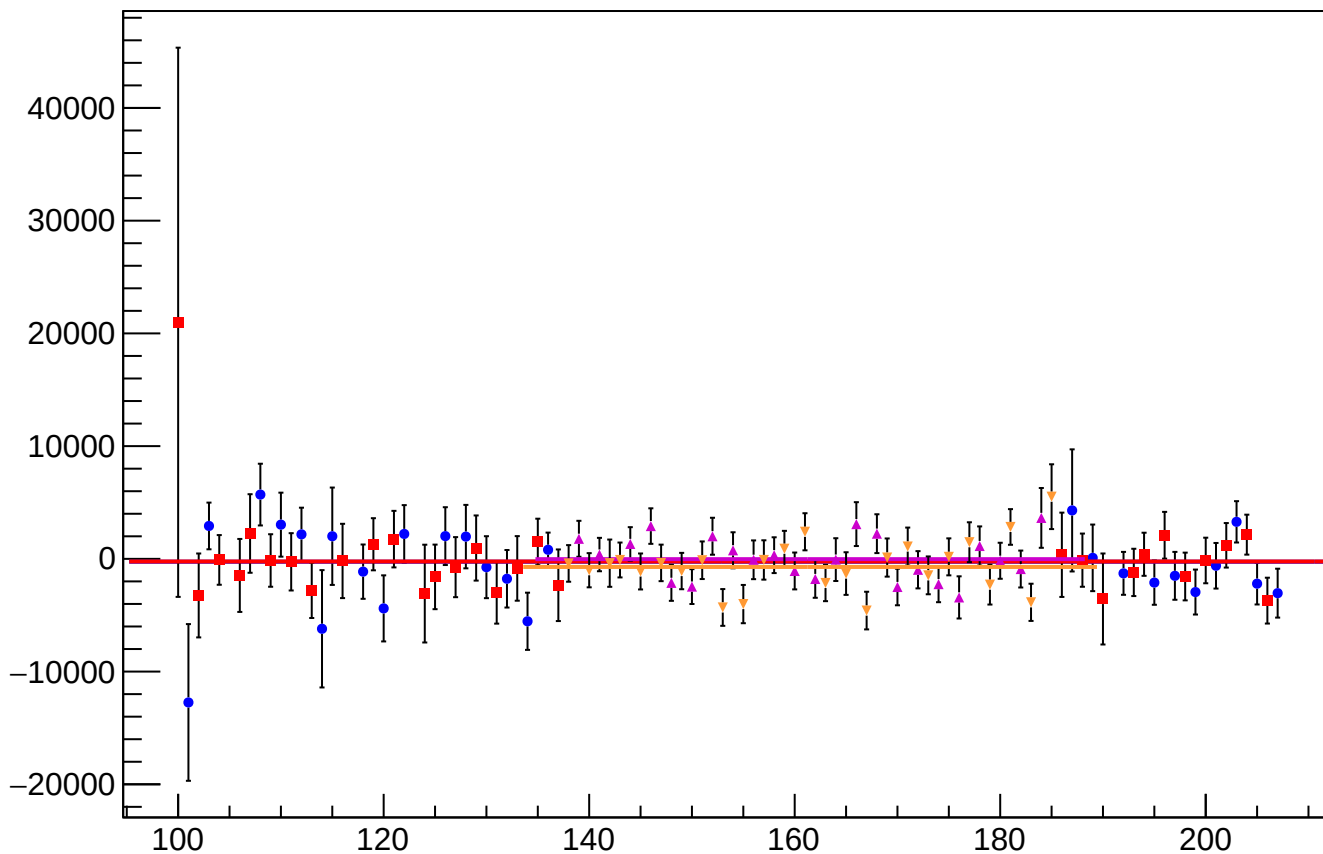
Left In: 650.638 $\pm$ 0.109  $\chi^2$ /NDF:922087.6/22

+ sign 714.502 $\pm$ 0.091  $\chi^2$ /NDF: 6663782.7/50

All: 730.897 $\pm$ 0.066  $\chi^2$ /NDF: 13802781.7/10

- sign 748.827 $\pm$ 0.095  $\chi^2$ /NDF: 7071353.1/52

# asym\_usr\_atr1\_dd\_mean vs Slug



Right In:  $-253.853 \pm 467.415$   $\chi^2/\text{NDF}$ : 34.5/25

Left Out:  $-718.291 \pm 337.578$   $\chi^2/\text{NDF}$ : 37.7/24

Right Out:  $-233.821 \pm 458.530$   $\chi^2/\text{NDF}$ : 15.3/29

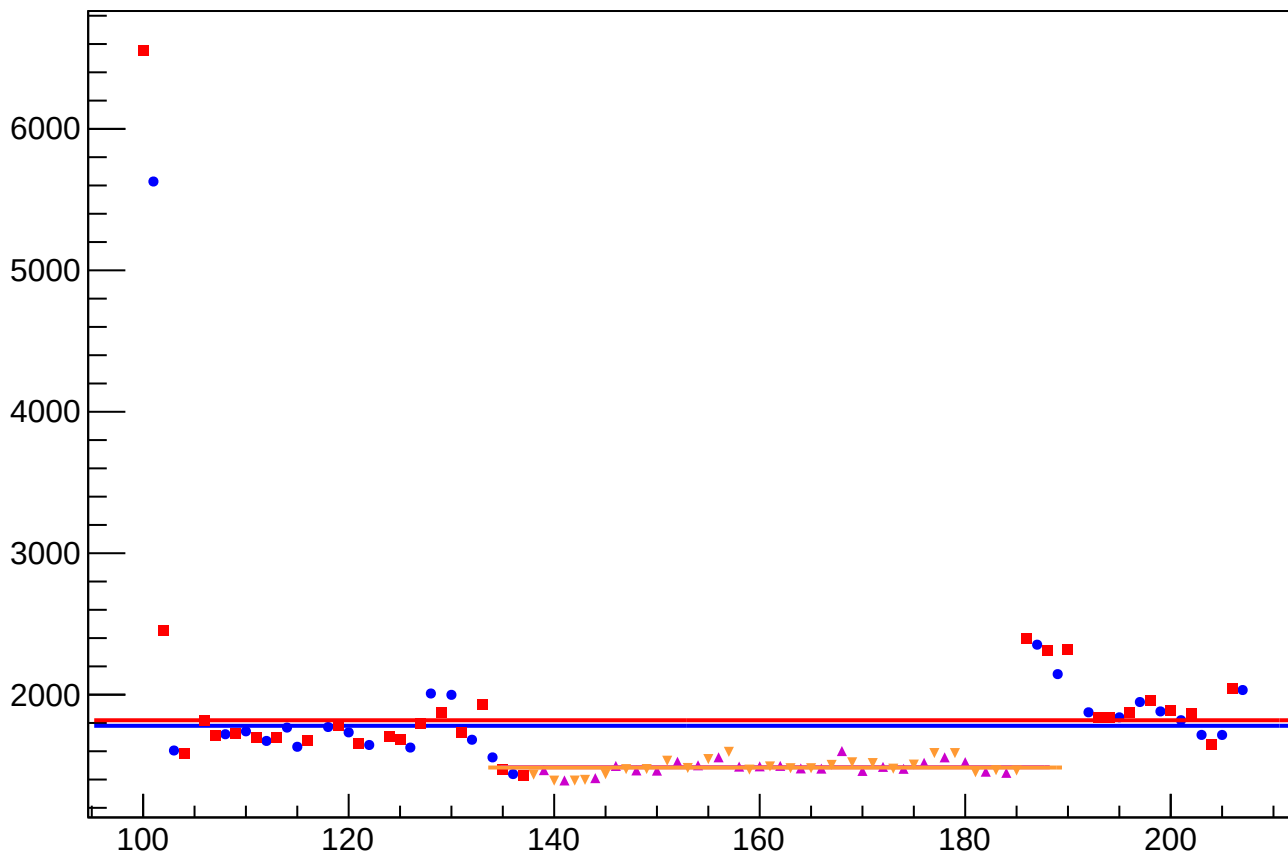
Left In:  $-27.514 \pm 347.415$   $\chi^2/\text{NDF}$ : 28.0/22

+ sign  $-559.082 \pm 273.667$   $\chi^2/\text{NDF}$ : 72.9/50

All:  $-333.605 \pm 194.648$   $\chi^2/\text{NDF}$ : 117.7/103

- sign  $-102.755 \pm 276.909$   $\chi^2/\text{NDF}$ : 43.4/52

# asym\_usr\_atr1\_dd\_rms vs Slug



Right In: 1779.973+/-0.331  $\chi^2$ /NDF: 903477.9/25

Left Out: 1484.960+/-0.239  $\chi^2$ /NDF: 50905.1/24

Right Out: 1819.154+/-0.324  $\chi^2$ /NDF: 505156.5/29

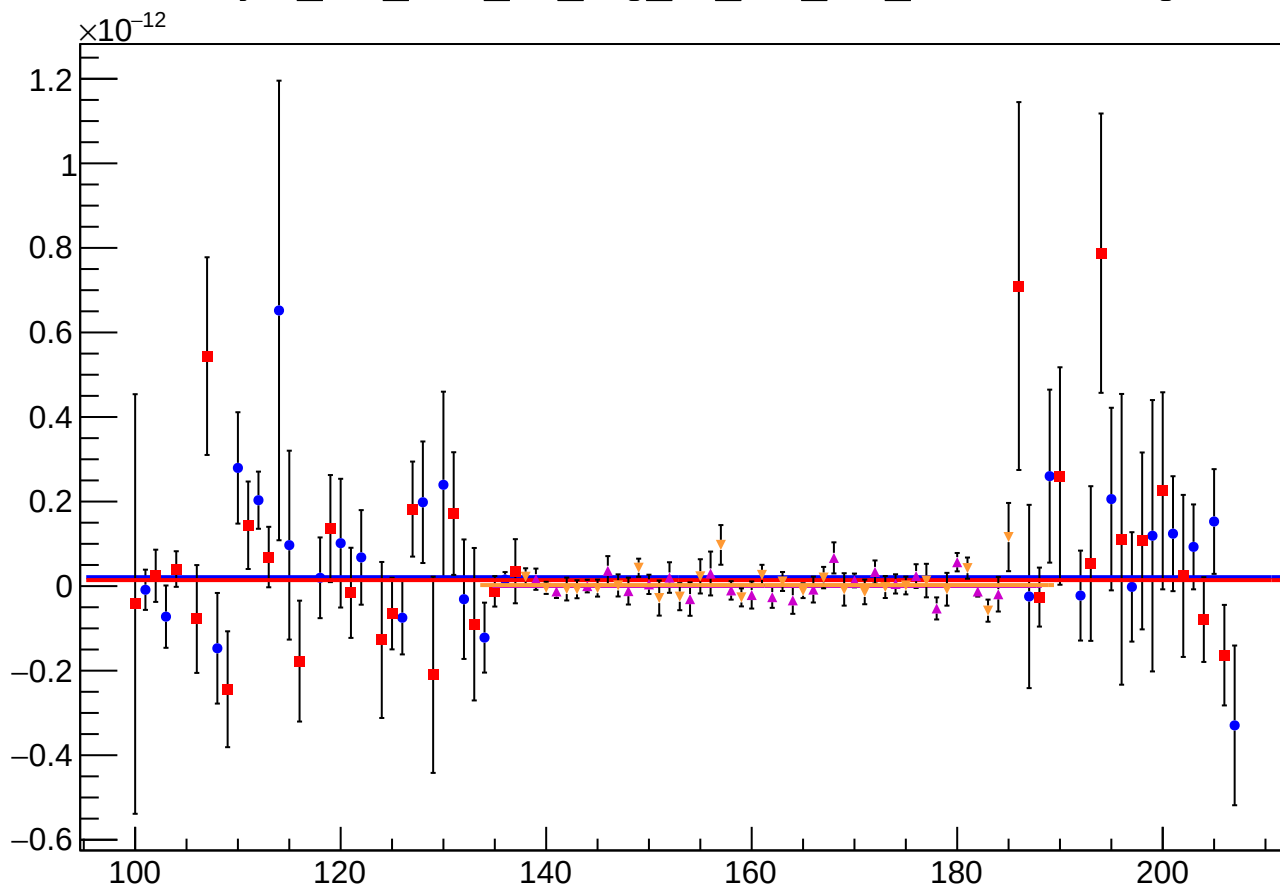
Left In: 1487.112+/-0.246  $\chi^2$ /NDF: 34817.2/22

+ sign 1586.090+/-0.194  $\chi^2$ /NDF: 1477988.9/50

All: 1597.019+/-0.138  $\chi^2$ /NDF: 2690699.8/10

- sign 1608.209+/-0.196  $\chi^2$ /NDF: 1206255.5/52

asym\_usr\_atr1\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 31.7/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:25.4/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 34.9/29

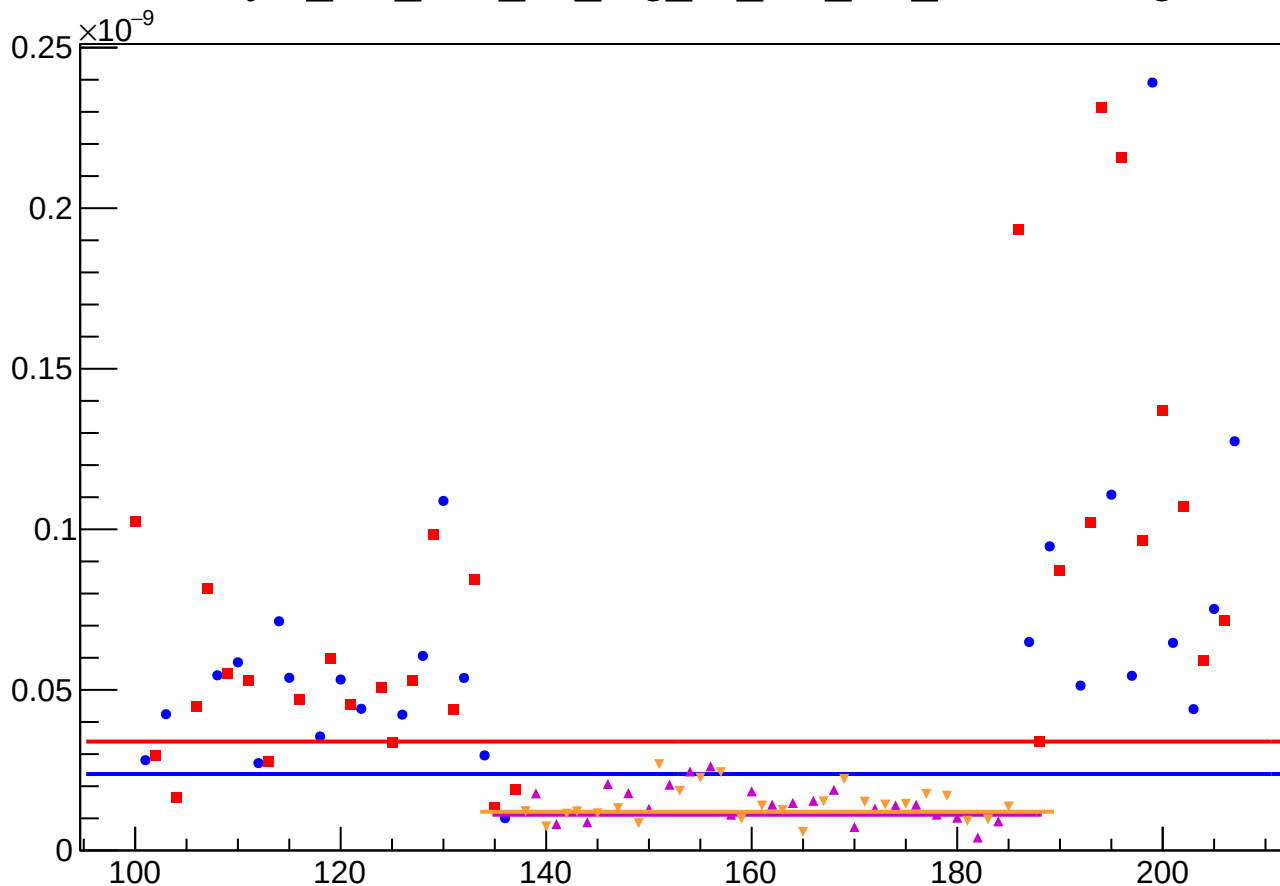
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:24.9/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 58.8/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 119.4/103

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 60.4/52

asym\_usr\_atr1\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5451255.8/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :1520224.5/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4973492.3/29

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :2209676.2/22

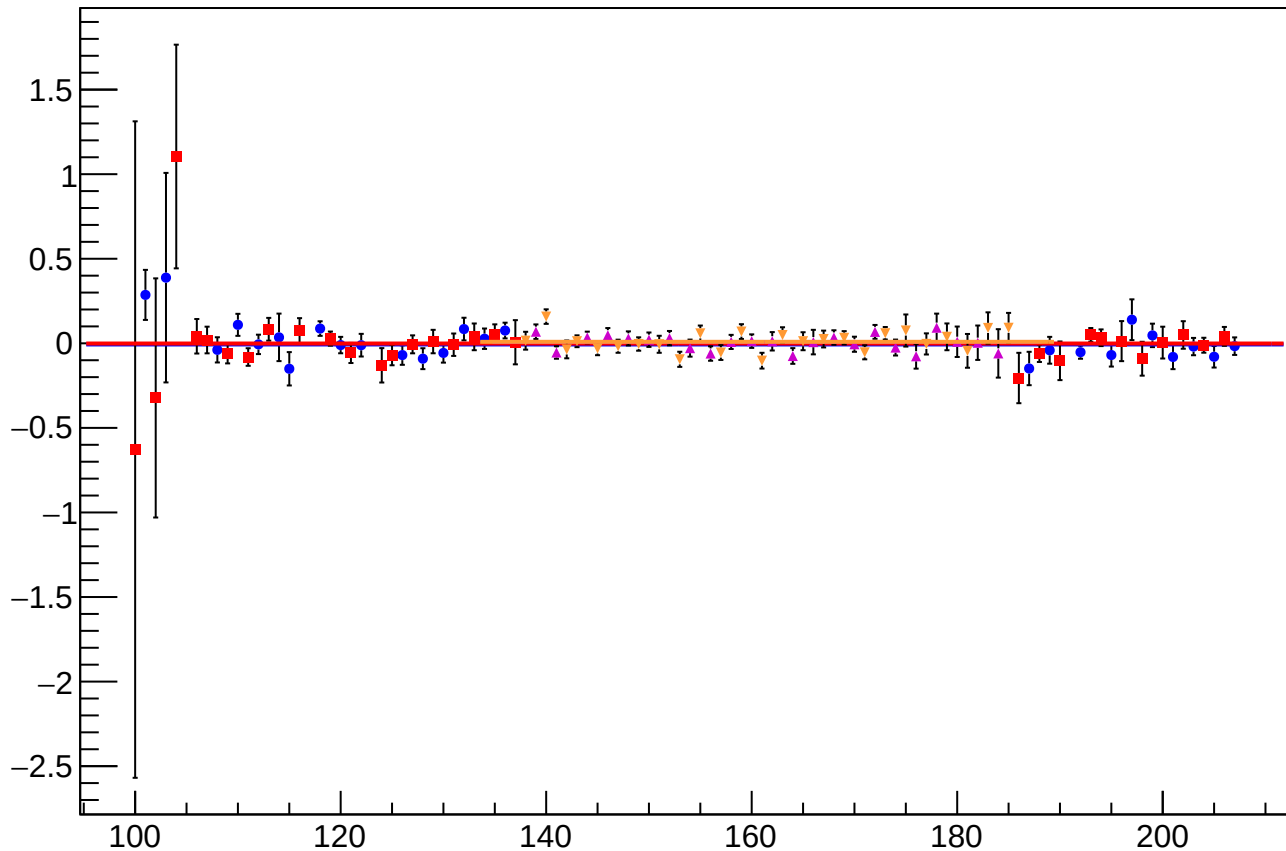
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8269926.0/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 18608057.3/103

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10317978.5/52



# asym\_usr\_atr1\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.007 \pm 0.012$   $\chi^2/\text{NDF}$ : 32.8/25

Left Out:  $0.009 \pm 0.010$   $\chi^2/\text{NDF}$ : 38.6/24

Right Out:  $-0.001 \pm 0.012$   $\chi^2/\text{NDF}$ : 22.8/29

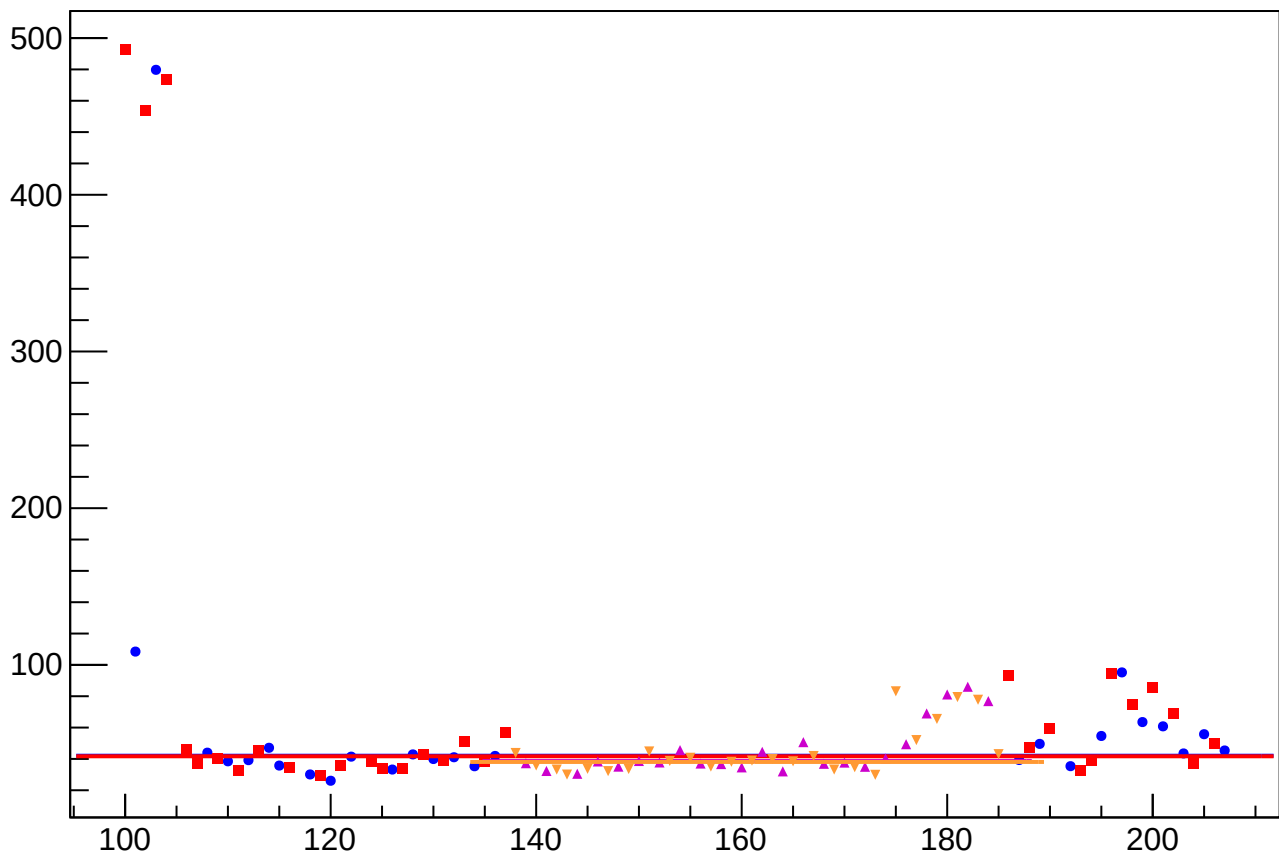
Left In:  $0.008 \pm 0.010$   $\chi^2/\text{NDF}$ : 18.9/22

+ sign  $0.003 \pm 0.008$   $\chi^2/\text{NDF}$ : 72.4/50

All:  $0.004 \pm 0.005$   $\chi^2/\text{NDF}$ : 114.5/103

- sign  $0.004 \pm 0.008$   $\chi^2/\text{NDF}$ : 42.0/52

# asym\_usr\_atr1\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 42.035 $\pm$ 0.009  $\chi^2$ /NDF: 2838662.7/25

Left Out: 38.067 $\pm$ 0.007  $\chi^2$ /NDF:1967115.3/24

Right Out: 41.678 $\pm$ 0.009  $\chi^2$ /NDF: 3839178.5/29

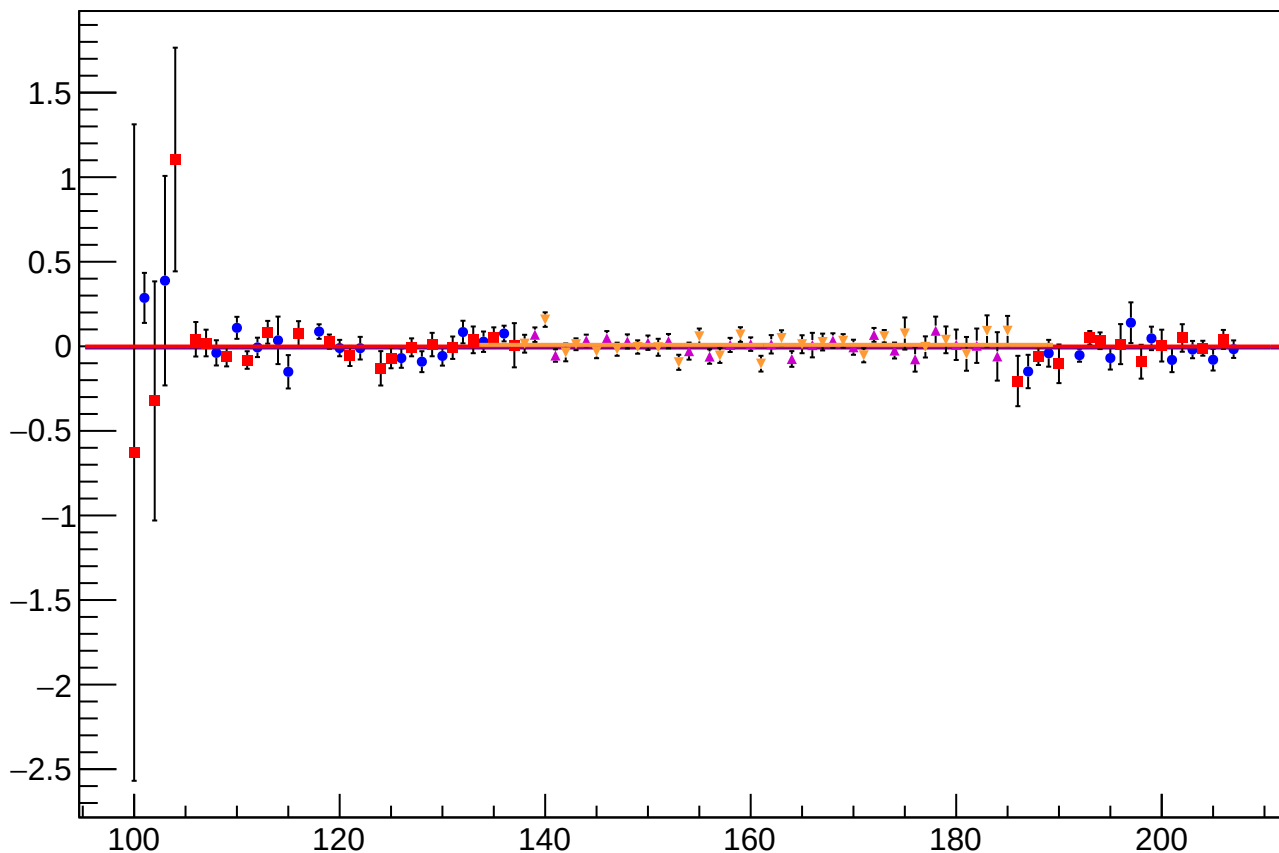
Left In: 38.630 $\pm$ 0.007  $\chi^2$ /NDF:1727664.7/22

+ sign 39.555 $\pm$ 0.005  $\chi^2$ /NDF: 4934727.5/50

All: 39.694 $\pm$ 0.004  $\chi^2$ /NDF: 10577886.5/103

- sign 39.839 $\pm$ 0.005  $\chi^2$ /NDF: 5641783.0/52

asym\_usr\_atr1\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.007 \pm 0.012$   $\chi^2/\text{NDF}$ : 32.8/25

Left Out:  $0.009 \pm 0.010$   $\chi^2/\text{NDF}$ : 38.6/24

Right Out:  $-0.001 \pm 0.012$   $\chi^2/\text{NDF}$ : 22.8/29

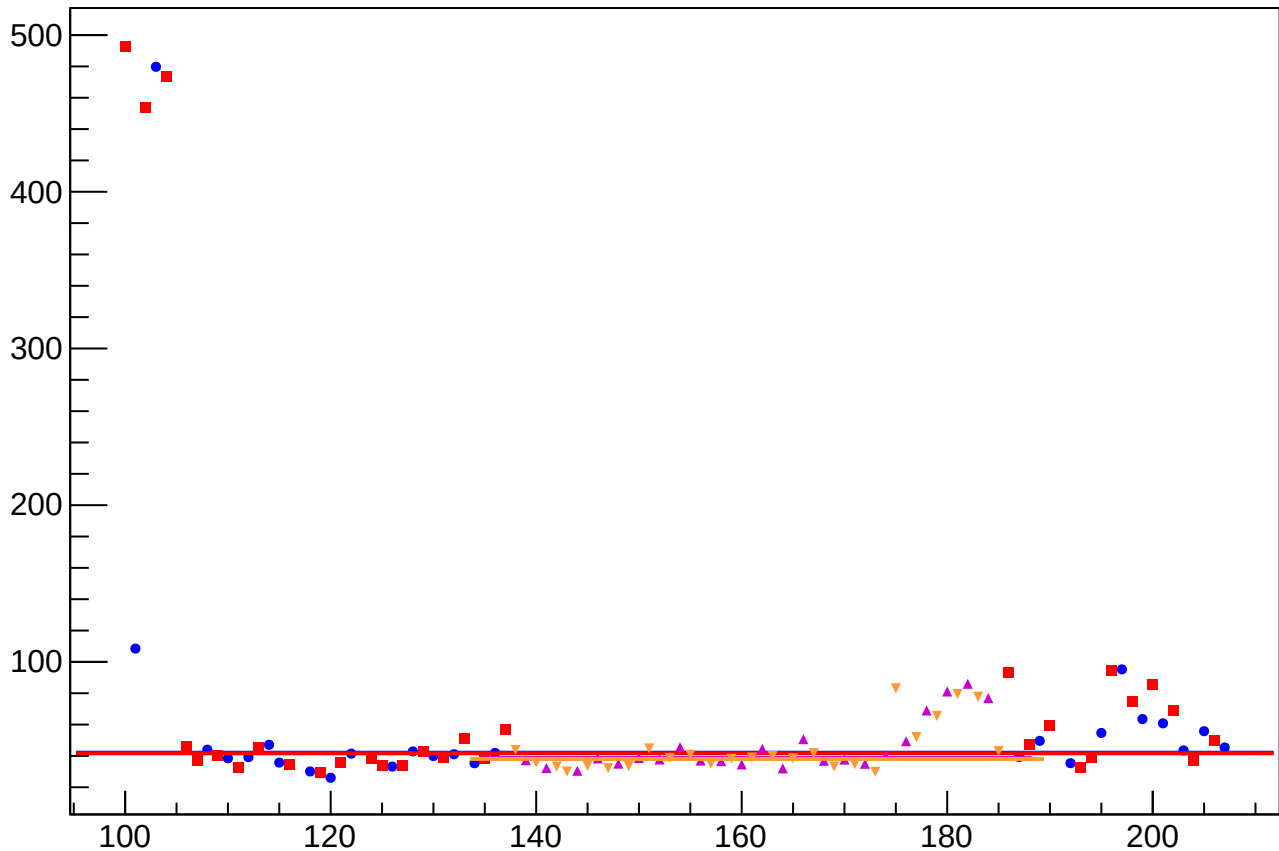
Left In:  $0.008 \pm 0.010$   $\chi^2/\text{NDF}$ : 18.9/22

+ sign  $0.003 \pm 0.008$   $\chi^2/\text{NDF}$ : 72.4/50

All:  $0.004 \pm 0.005$   $\chi^2/\text{NDF}$ : 114.5/103

- sign  $0.004 \pm 0.008$   $\chi^2/\text{NDF}$ : 42.0/52

asym\_usr\_atr1\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 42.035 $\pm$ 0.009  $\chi^2$ /NDF: 2838662.7/25

Left Out: 38.067 $\pm$ 0.007  $\chi^2$ /NDF: 1967115.3/24

Right Out: 41.678 $\pm$ 0.009  $\chi^2$ /NDF: 3839178.5/29

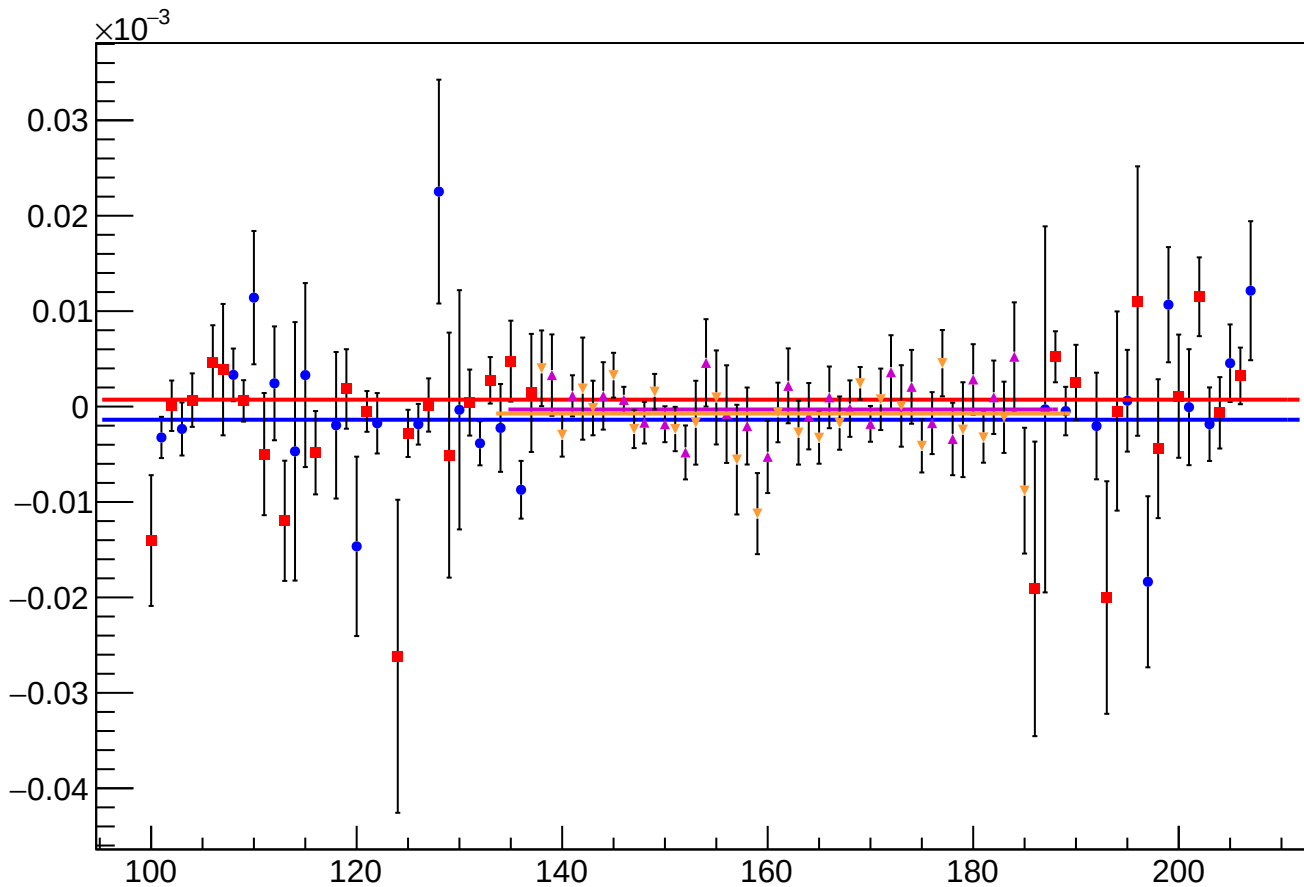
Left In: 38.630 $\pm$ 0.007  $\chi^2$ /NDF: 1727664.7/22

+ sign 39.555 $\pm$ 0.005  $\chi^2$ /NDF: 4934727.5/50

All: 39.694 $\pm$ 0.004  $\chi^2$ /NDF: 10577886.5/103

- sign 39.839 $\pm$ 0.005  $\chi^2$ /NDF: 5641783.0/52

asym\_usr\_atr1\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 34.6/25

Left Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 26.6/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 35.7/29

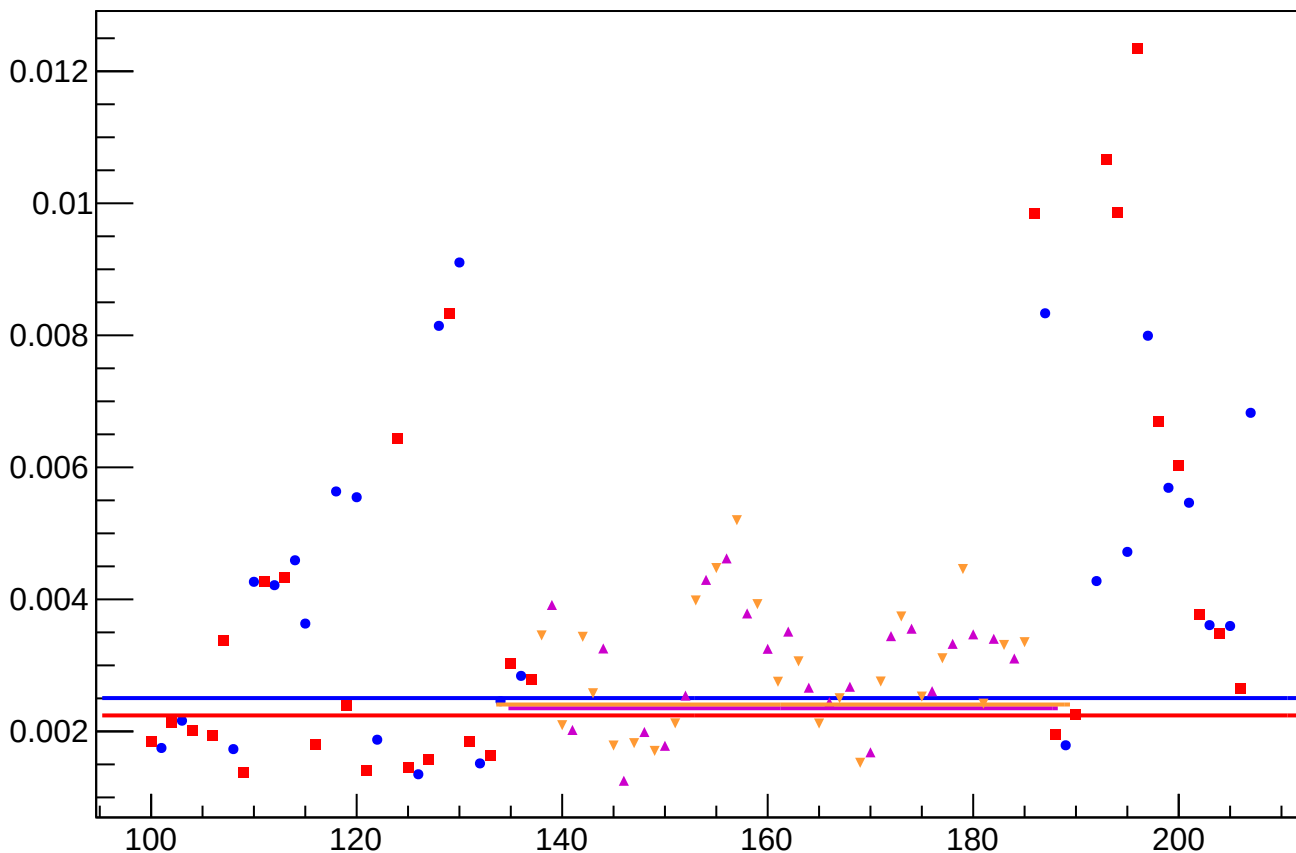
Left In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 13.8/22

+ sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 61.6/50

All: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 115.3/103

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 50.8/52

asym\_usr\_atr1\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 7098505.5/25

Left Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF:3682960.0/24

Right Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 7819649.1/29

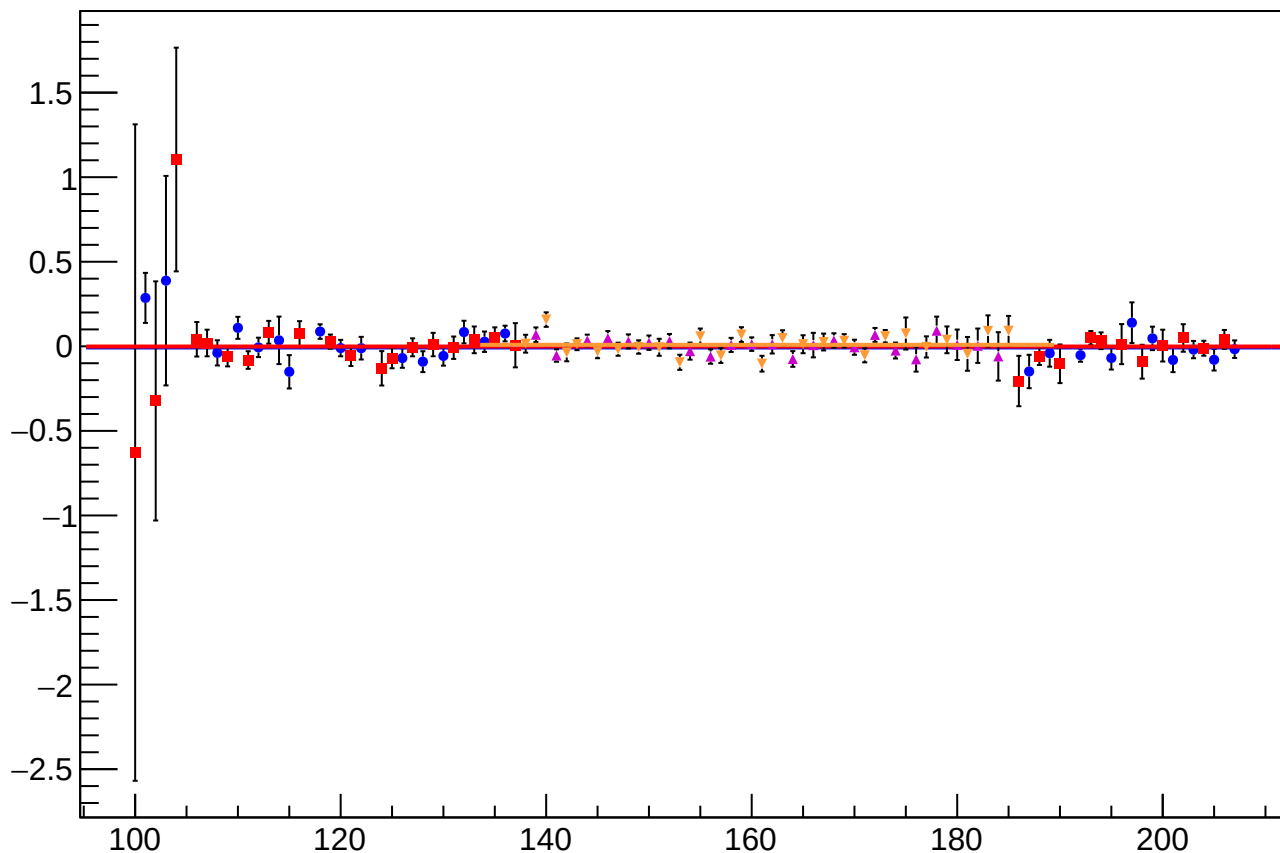
Left In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF:4438139.5/22

+ sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 10801818.3/50

All: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 23180449.5/103

- sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 12286425.2/52

asym\_usr\_atr1\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.007 \pm 0.012$   $\chi^2/\text{NDF}$ : 32.8/25

Left Out:  $0.009 \pm 0.010$   $\chi^2/\text{NDF}$ : 38.6/24

Right Out:  $-0.001 \pm 0.012$   $\chi^2/\text{NDF}$ : 22.8/29

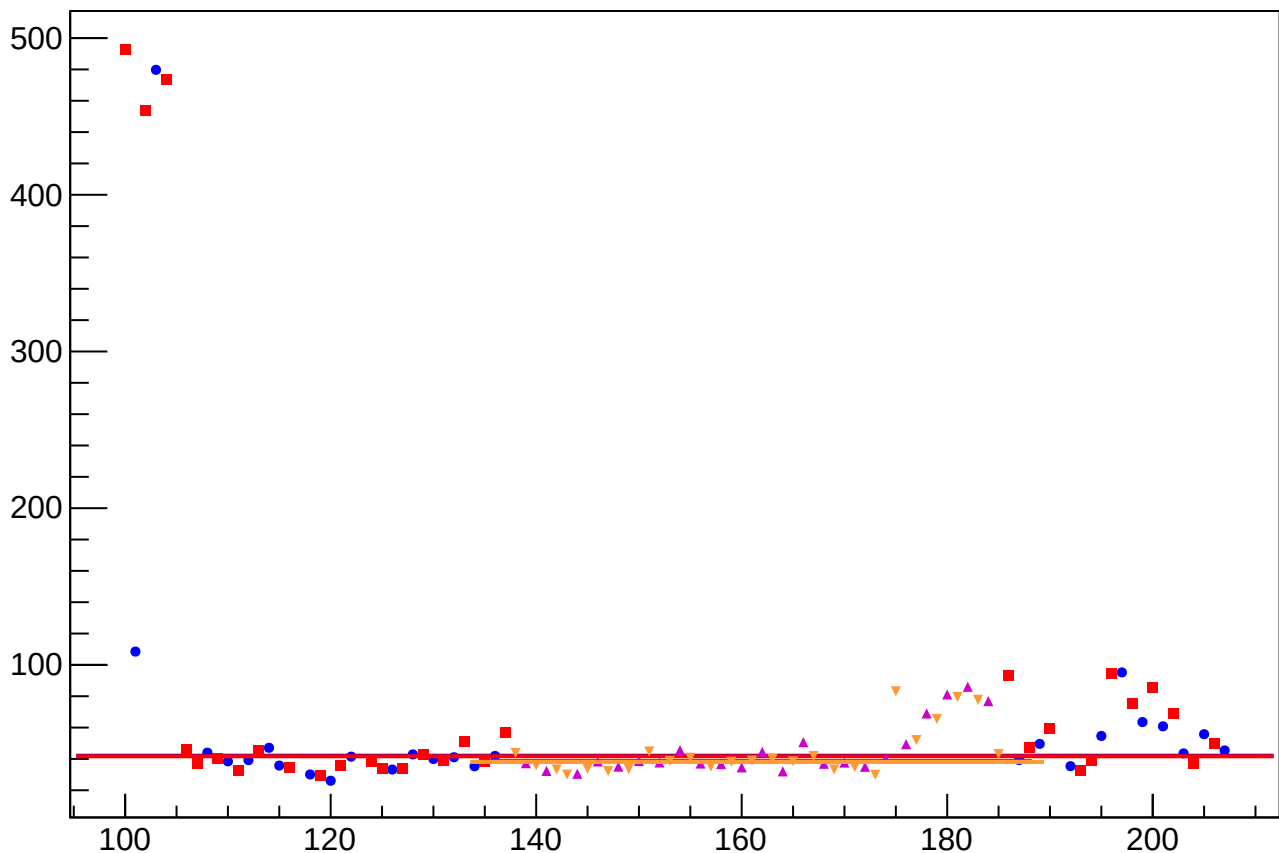
Left In:  $0.008 \pm 0.010$   $\chi^2/\text{NDF}$ : 18.9/22

+ sign  $0.003 \pm 0.008$   $\chi^2/\text{NDF}$ : 72.4/50

All:  $0.004 \pm 0.005$   $\chi^2/\text{NDF}$ : 114.5/103

- sign  $0.004 \pm 0.008$   $\chi^2/\text{NDF}$ : 42.0/52

asym\_usr\_atr1\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 42.035+/-0.009     $\chi^2/\text{NDF}$ : 2838853.3/25

Left Out: 38.067+/-0.007     $\chi^2/\text{NDF}$ : 1967110.9/24

Right Out: 41.675+/-0.009     $\chi^2/\text{NDF}$ : 3839693.3/29

Left In: 38.630+/-0.007     $\chi^2/\text{NDF}$ : 1727699.0/22

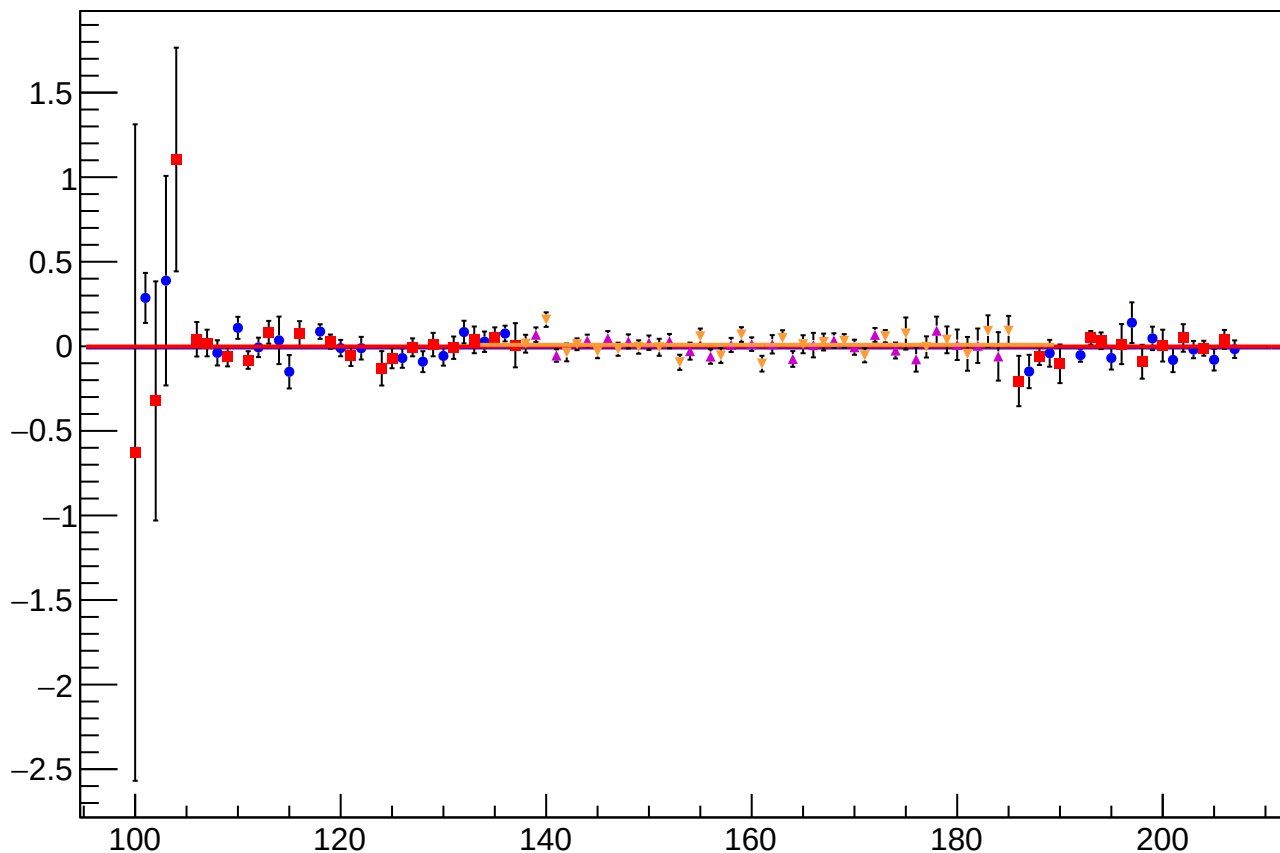
+ sign 39.555+/-0.005     $\chi^2/\text{NDF}$ : 4934890.7/50

All: 39.694+/-0.004     $\chi^2/\text{NDF}$ : 10578457.5/103

- sign 39.837+/-0.005     $\chi^2/\text{NDF}$ : 5642201.1/52



asym\_usr\_atr1\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.007 \pm 0.012$   $\chi^2/\text{NDF}$ : 32.8/25

Left Out:  $0.009 \pm 0.010$   $\chi^2/\text{NDF}$ : 38.6/24

Right Out:  $-0.001 \pm 0.012$   $\chi^2/\text{NDF}$ : 22.8/29

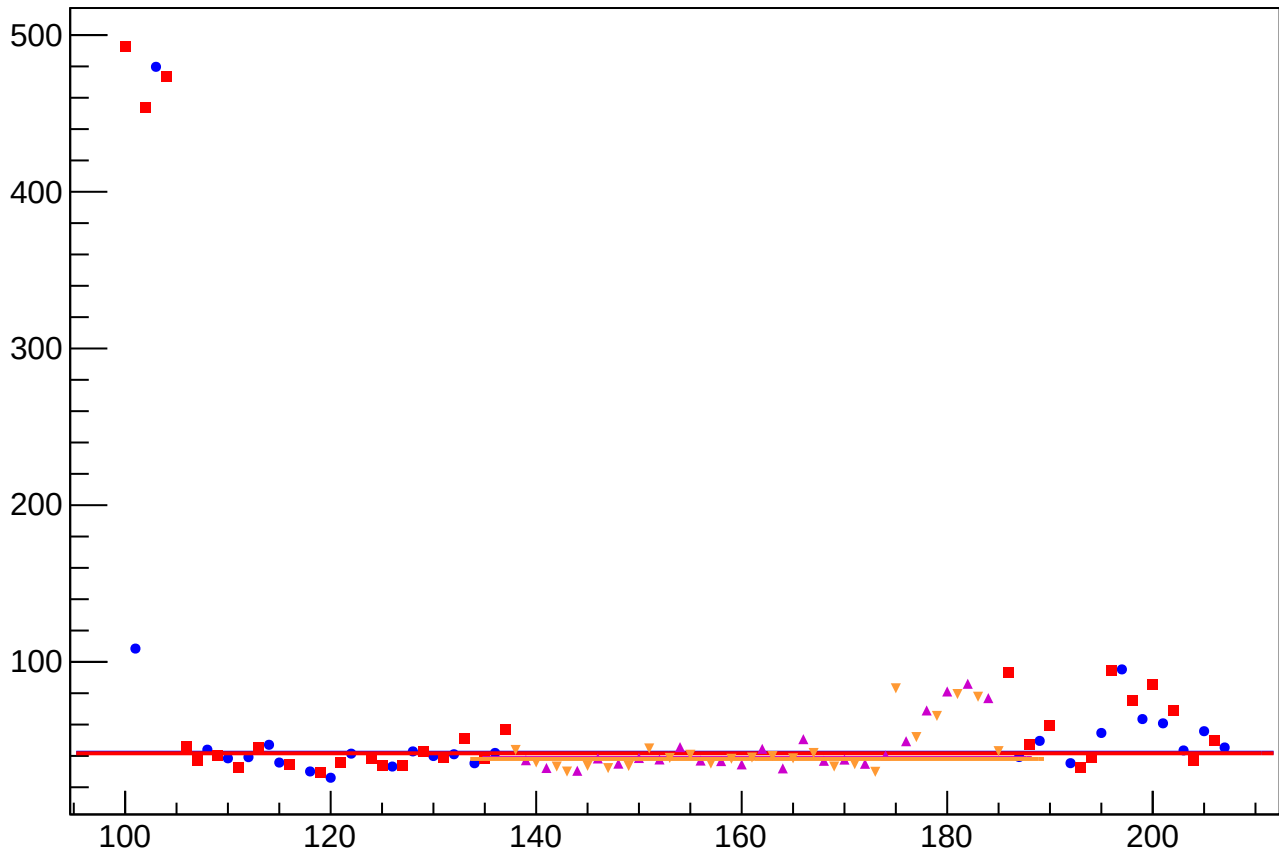
Left In:  $0.008 \pm 0.010$   $\chi^2/\text{NDF}$ : 18.9/22

+ sign  $0.003 \pm 0.008$   $\chi^2/\text{NDF}$ : 72.4/50

All:  $0.004 \pm 0.005$   $\chi^2/\text{NDF}$ : 114.5/103

- sign  $0.004 \pm 0.008$   $\chi^2/\text{NDF}$ : 42.0/52

asym\_usr\_atr1\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 42.035 $\pm$ 0.009  $\chi^2$ /NDF: 2838853.3/25

Left Out: 38.067 $\pm$ 0.007  $\chi^2$ /NDF: 1967110.9/24

Right Out: 41.675 $\pm$ 0.009  $\chi^2$ /NDF: 3839693.3/29

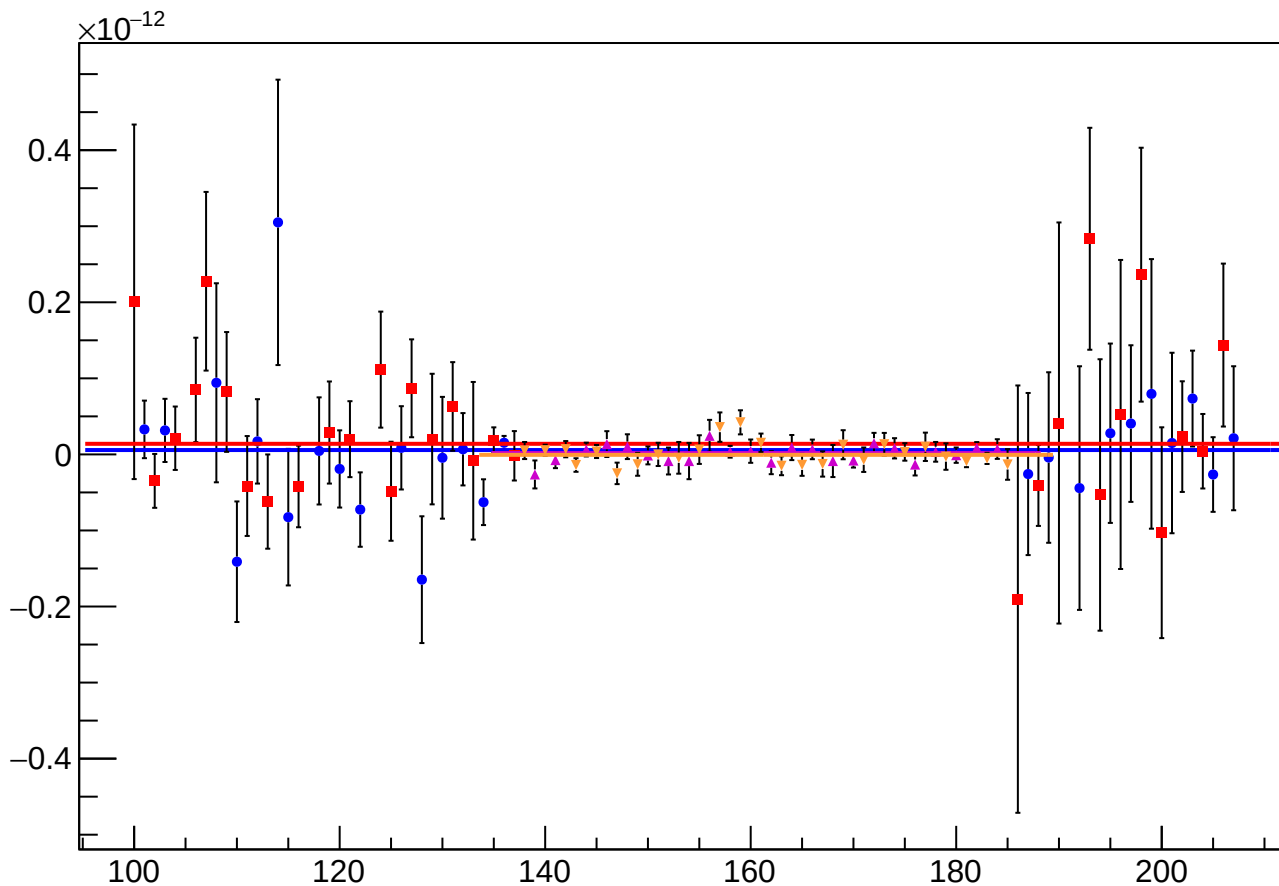
Left In: 38.630 $\pm$ 0.007  $\chi^2$ /NDF: 1727699.0/22

+ sign 39.555 $\pm$ 0.005  $\chi^2$ /NDF: 4934890.7/50

All: 39.694 $\pm$ 0.004  $\chi^2$ /NDF: 10578457.5/103

- sign 39.837 $\pm$ 0.005  $\chi^2$ /NDF: 5642201.1/52

asym\_usr\_atr1\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 23.8/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 26.9/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 25.2/29

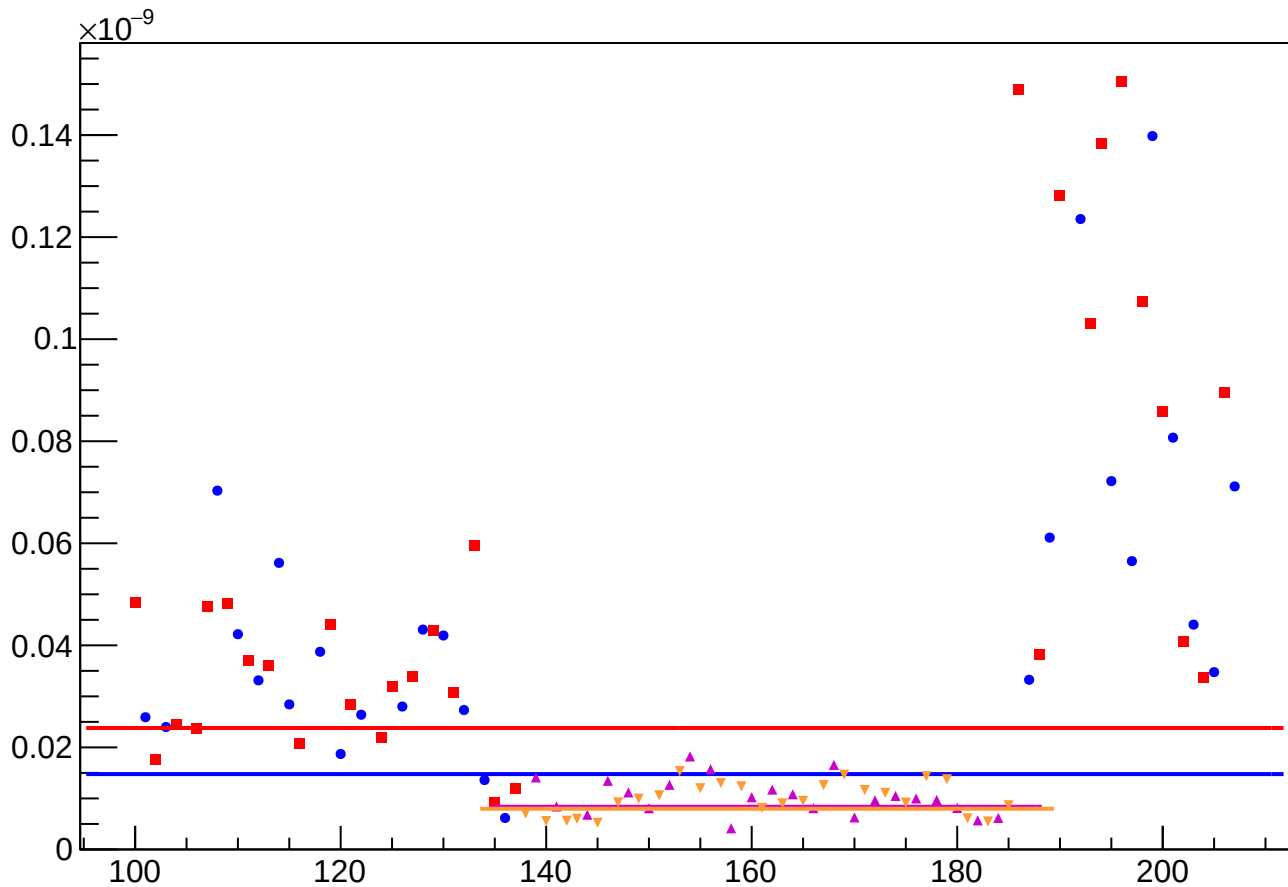
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 11.6/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 51.4/50

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 90.1/103

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 38.2/52

asym\_usr\_atr1\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9348341.6/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2831909.2/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7829472.5/29

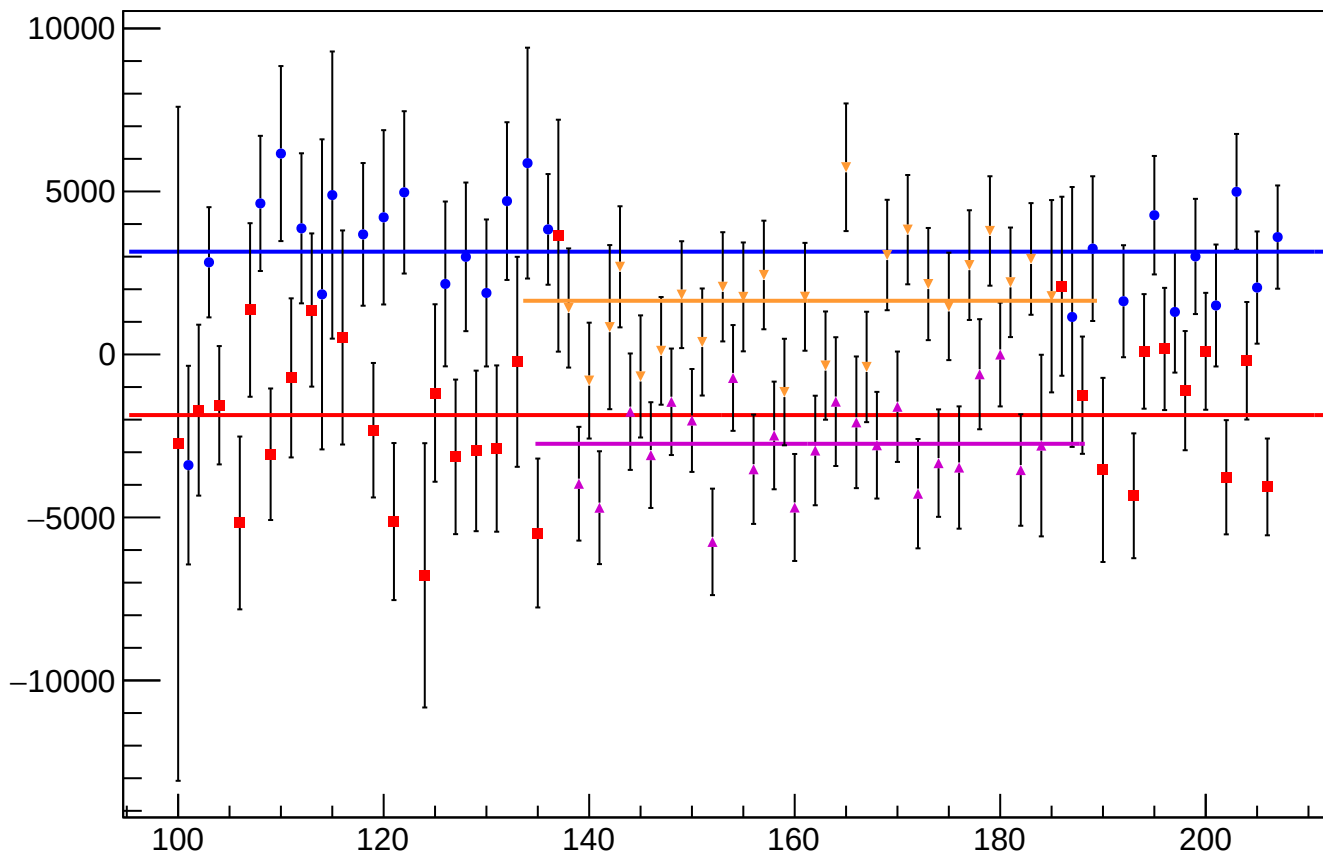
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2786396.2/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13739263.5/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 29005341.9/103

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 15177572.3/52

# reg\_asym\_usr\_atr2\_avg\_mean vs Slug



Right In: 3152.408 $\pm$ 421.719  $\chi^2$ /NDF: 13.9/25

Left Out: 1646.402 $\pm$ 349.758  $\chi^2$ /NDF: 21.0/24

Right Out: -1859.708 $\pm$ 406.836  $\chi^2$ /NDF: 27.5/29

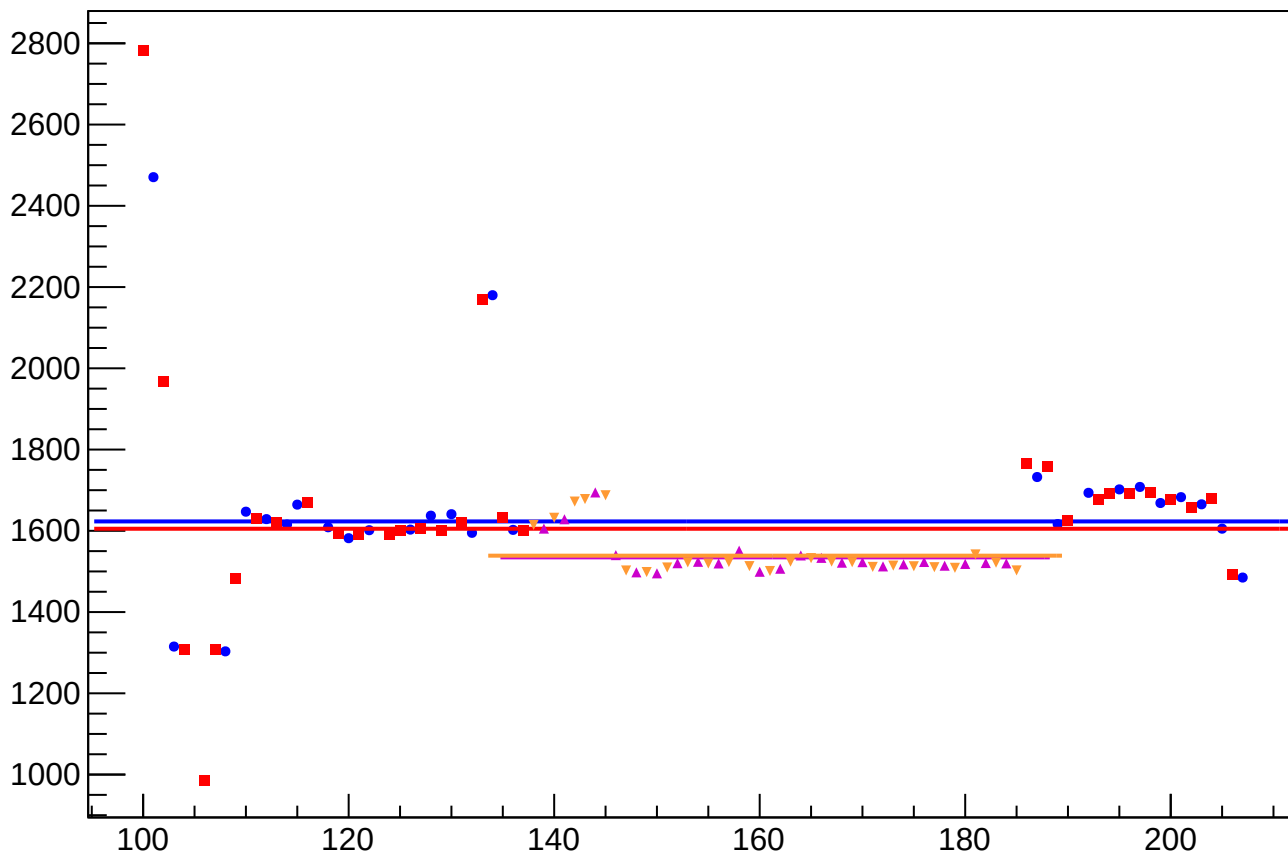
Left In: -2740.924 $\pm$ 358.458  $\chi^2$ /NDF: 16.4/22

+ sign 2260.141 $\pm$ 269.217  $\chi^2$ /NDF: 42.5/50

All: -50.082 $\pm$ 190.272  $\chi^2$ /NDF: 236.2/103

- sign -2355.800 $\pm$ 268.954  $\chi^2$ /NDF: 46.6/52

# reg\_asym\_usr\_atr2\_avg\_rms vs Slug



Right In: 1623.136 $\pm$ 0.298  $\chi^2$ /NDF: 352882.0/25

Left Out: 1538.810 $\pm$ 0.247  $\chi^2$ /NDF:47056.2/24

Right Out: 1605.085 $\pm$ 0.285  $\chi^2$ /NDF: 455751.5/29

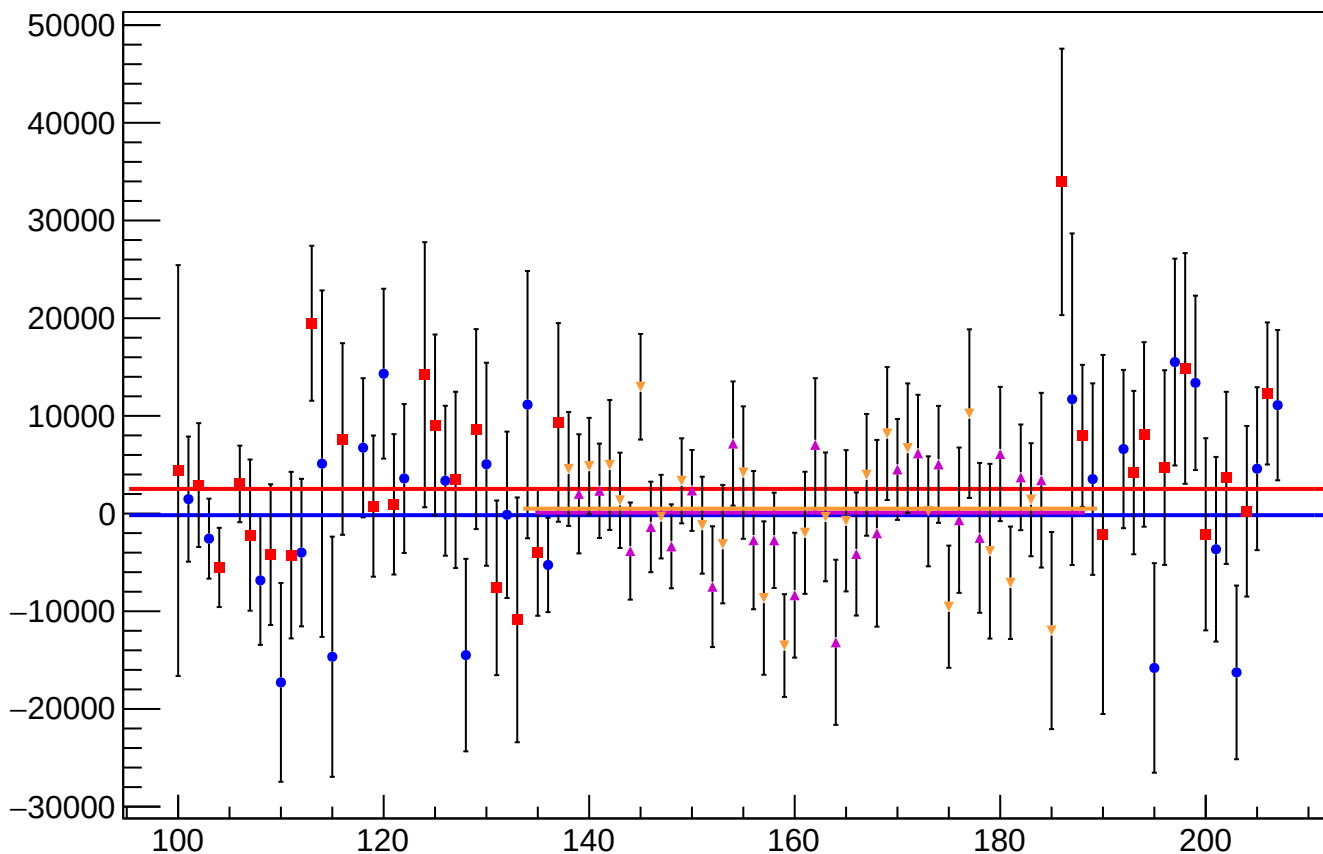
Left In: 1534.615 $\pm$ 0.253  $\chi^2$ /NDF:31120.6/22

+ sign 1573.175 $\pm$ 0.190  $\chi^2$ /NDF: 447316.5/50

All: 1569.418 $\pm$ 0.134  $\chi^2$ /NDF: 969055.9/103

- sign 1565.695 $\pm$ 0.190  $\chi^2$ /NDF: 520964.0/52

asym\_usr\_atr2\_avg\_reg\_correction\_mean vs Slug



Right In:  $-164.170 \pm 1567.208$   $\chi^2/\text{NDF}: 28.2/25$

Left Out:  $503.846 \pm 1187.304$   $\chi^2/\text{NDF}: 26.8/24$

Right Out:  $2523.823 \pm 1437.203$   $\chi^2/\text{NDF}: 25.8/29$

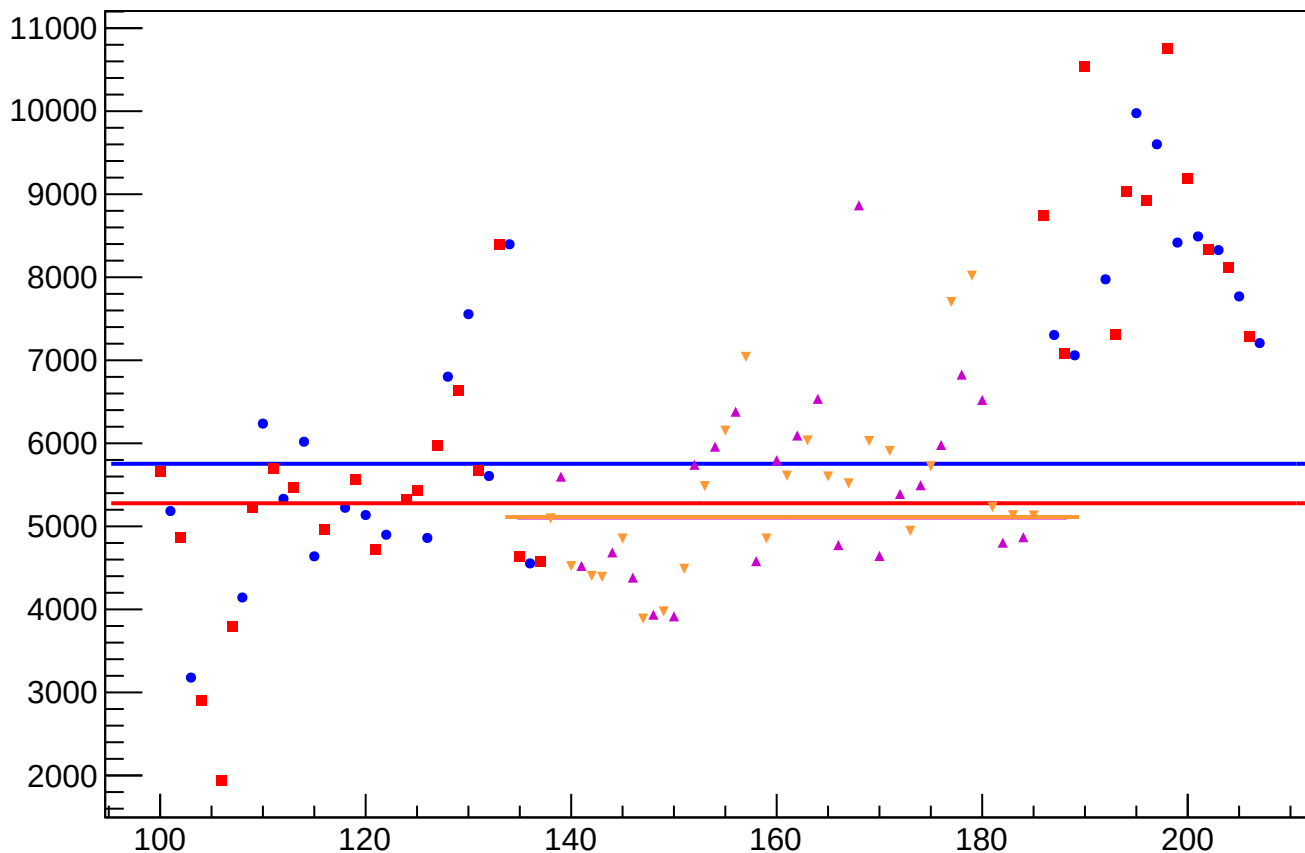
Left In:  $97.910 \pm 1217.585$   $\chi^2/\text{NDF}: 14.9/22$

+ sign  $260.251 \pm 946.383$   $\chi^2/\text{NDF}: 55.1/50$

All:  $693.783 \pm 662.967$   $\chi^2/\text{NDF}: 97.9/103$

- sign  $1111.546 \pm 929.013$   $\chi^2/\text{NDF}: 42.4/52$

# asym\_usr\_atr2\_avg\_reg\_correction\_rms vs Slug



Right In: 5753.688+/-1.108  $\chi^2/\text{NDF}$ : 2787546.3/25

Left Out: 5112.954+/-0.840  $\chi^2/\text{NDF}$ :1159010.4/24

Right Out: 5278.259+/-1.016  $\chi^2/\text{NDF}$ : 4918956.8/29

Left In: 5106.386+/-0.861  $\chi^2/\text{NDF}$ :1251622.3/22

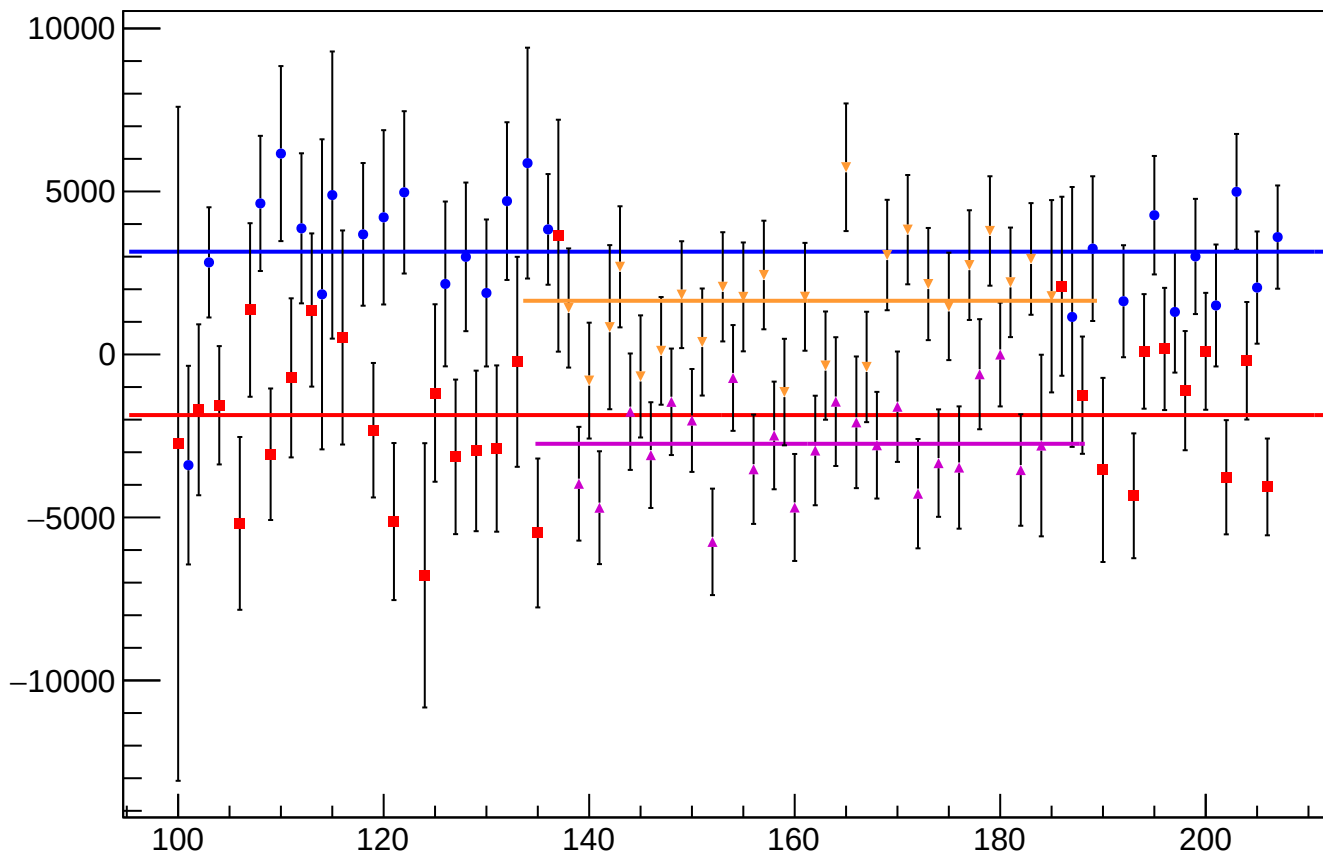
+ sign 5346.600+/-0.669  $\chi^2/\text{NDF}$ : 4158951.3/50

All: 5260.841+/-0.469  $\chi^2/\text{NDF}$ : 10378431.0/100

- sign 5178.201+/-0.657  $\chi^2/\text{NDF}$ : 6187230.7/52



# cor\_asym\_usr\_atr2\_avg\_mean vs Slug



Right In:  $3152.274 \pm 421.719$   $\chi^2/\text{NDF}$ : 13.9/25

Left Out:  $1646.294 \pm 349.758$   $\chi^2/\text{NDF}$ : 21.0/24

Right Out:  $-1859.711 \pm 406.837$   $\chi^2/\text{NDF}$ : 27.5/29

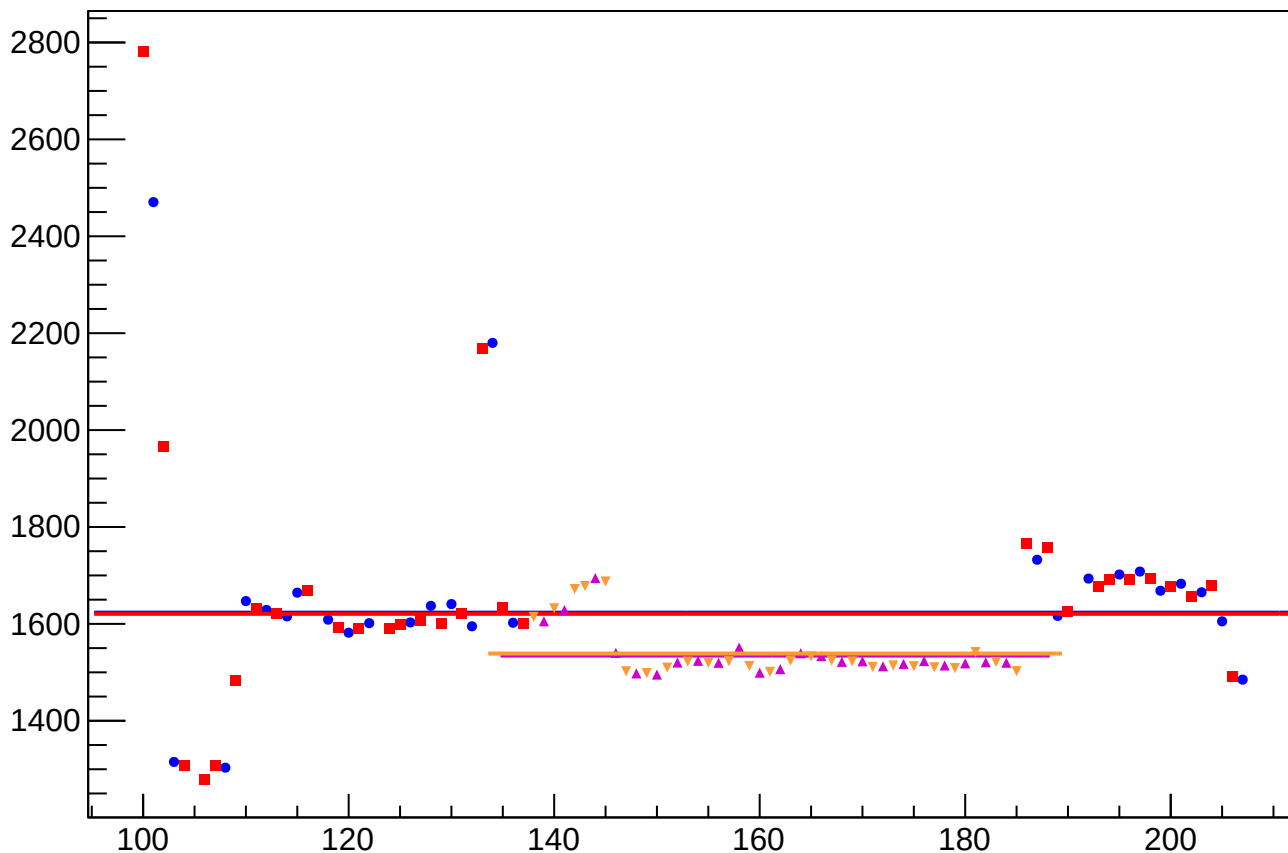
Left In:  $-2740.826 \pm 358.458$   $\chi^2/\text{NDF}$ : 16.4/22

+ sign  $2260.023 \pm 269.217$   $\chi^2/\text{NDF}$ : 42.5/50

All:  $-50.112 \pm 190.272$   $\chi^2/\text{NDF}$ : 236.2/103

- sign  $-2355.747 \pm 268.954$   $\chi^2/\text{NDF}$ : 46.6/52

# cor\_asym\_usr\_atr2\_avg\_rms vs Slug



Right In: 1623.136 $\pm$ 0.298  $\chi^2$ /NDF: 352881.0/25

Left Out: 1538.810 $\pm$ 0.247  $\chi^2$ /NDF: 47056.2/24

Right Out: 1620.807 $\pm$ 0.287  $\chi^2$ /NDF: 303166.7/29

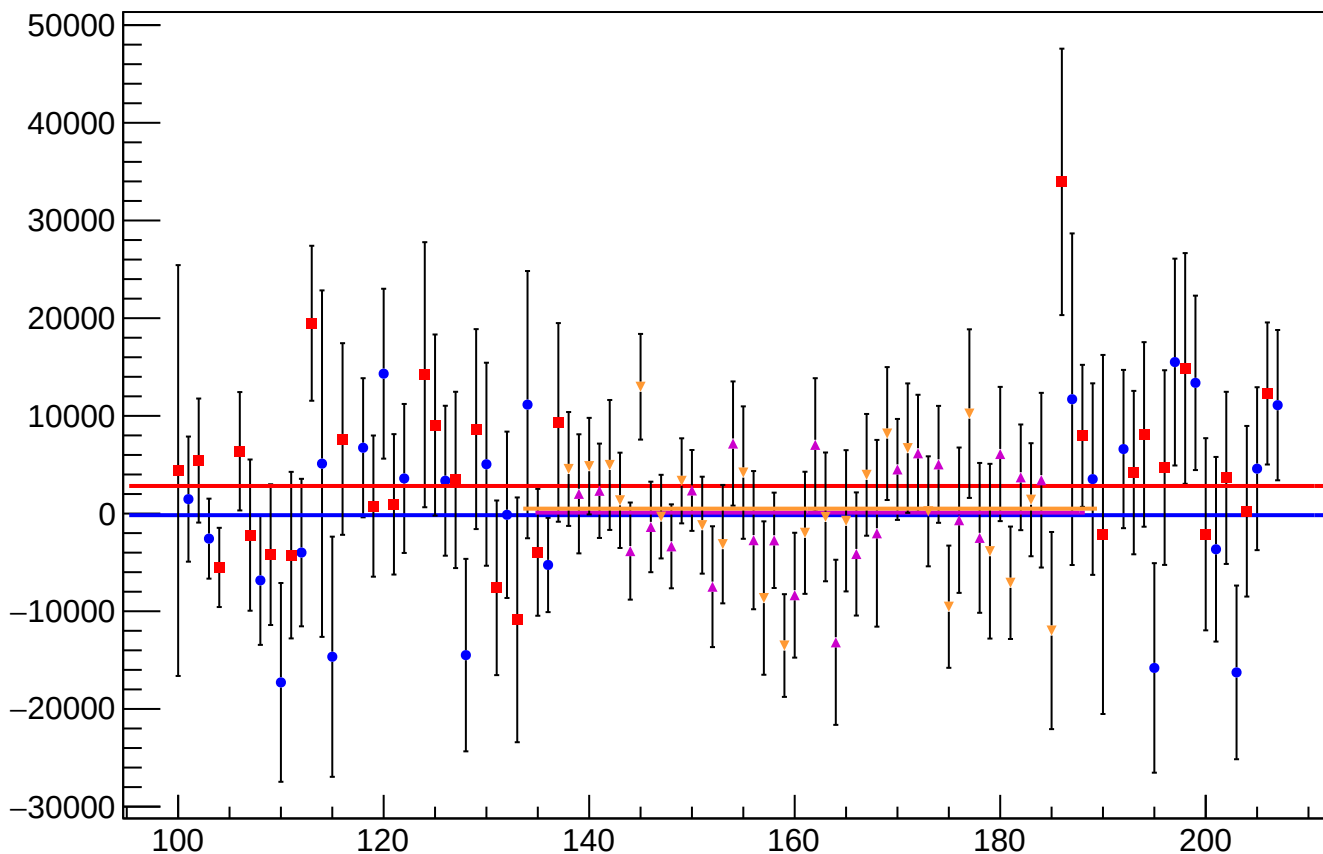
Left In: 1534.615 $\pm$ 0.253  $\chi^2$ /NDF: 31120.6/22

+ sign 1573.175 $\pm$ 0.190  $\chi^2$ /NDF: 447315.7/50

All: 1572.769 $\pm$ 0.134  $\chi^2$ /NDF: 832256.4/103

- sign 1572.364 $\pm$ 0.190  $\chi^2$ /NDF: 384931.7/52

asym\_usr\_atr2\_avg\_cor\_correction\_mean vs Slug



Right In:  $-164.248 \pm 1567.231$   $\chi^2/\text{NDF}$ : 28.2/25

Left Out:  $503.849 \pm 1187.302$   $\chi^2/\text{NDF}$ : 26.8/24

Right Out:  $2824.358 \pm 1497.178$   $\chi^2/\text{NDF}$ : 26.4/29

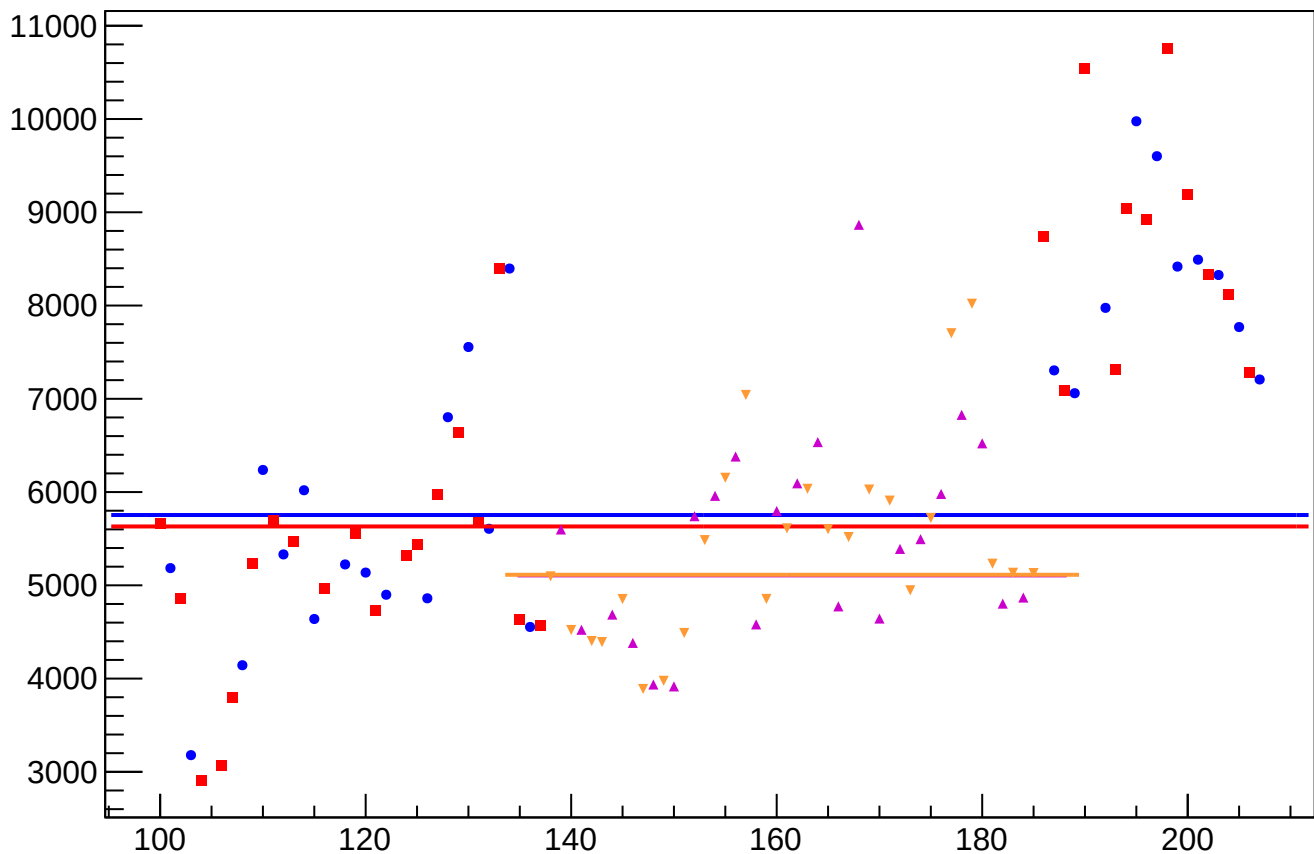
Left In:  $97.930 \pm 1217.585$   $\chi^2/\text{NDF}$ : 14.9/22

+ sign  $260.230 \pm 946.388$   $\chi^2/\text{NDF}$ : 55.1/50

All:  $722.618 \pm 668.577$   $\chi^2/\text{NDF}$ : 98.8/103

- sign  $1183.296 \pm 944.636$   $\chi^2/\text{NDF}$ : 43.3/52

asym\_usr\_atr2\_avg\_cor\_correction\_rms vs Slug



Right In: 5753.814+/-1.108  $\chi^2/\text{NDF}$ : 2787180.6/25

Left Out: 5112.947+/-0.840  $\chi^2/\text{NDF}$ : 1159023.2/24

Right Out: 5631.154+/-1.059  $\chi^2/\text{NDF}$ : 3620430.1/29

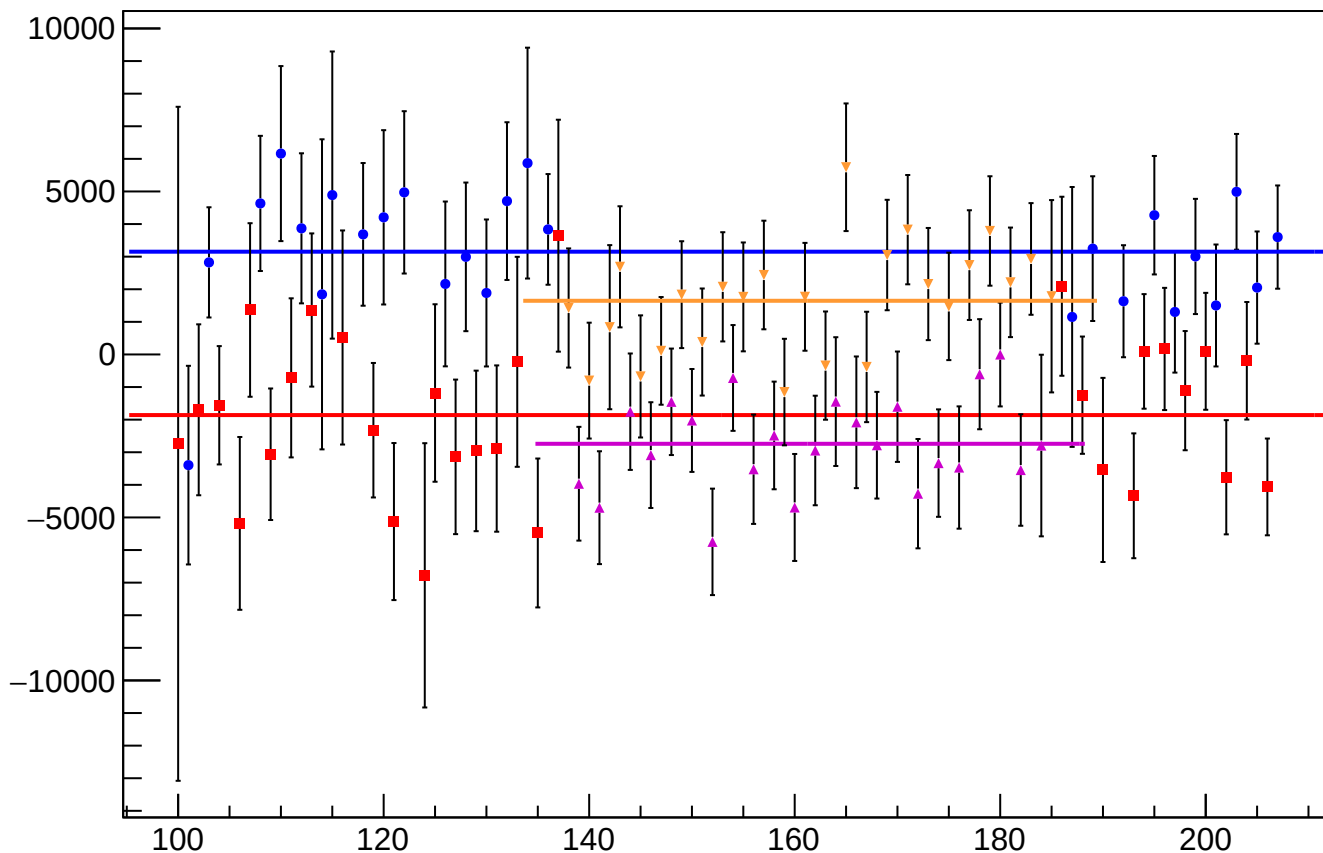
Left In: 5106.384+/-0.861  $\chi^2/\text{NDF}$ : 1251622.9/22

+ sign 5346.637+/-0.669  $\chi^2/\text{NDF}$ : 4158682.6/50

All: 5330.934+/-0.473  $\chi^2/\text{NDF}$ : 9179729.4/100

- sign 5315.290+/-0.668  $\chi^2/\text{NDF}$ : 5019947.8/52

# eigen\_cor\_asym\_usr\_atr2\_avg\_mean vs Slug



Right In: 3152.274 +/- 421.719  $\chi^2/\text{NDF}$ : 13.9/25

Left Out: 1646.294 +/- 349.758  $\chi^2/\text{NDF}$ : 21.0/24

Right Out: -1859.711 +/- 406.837  $\chi^2/\text{NDF}$ : 27.5/29

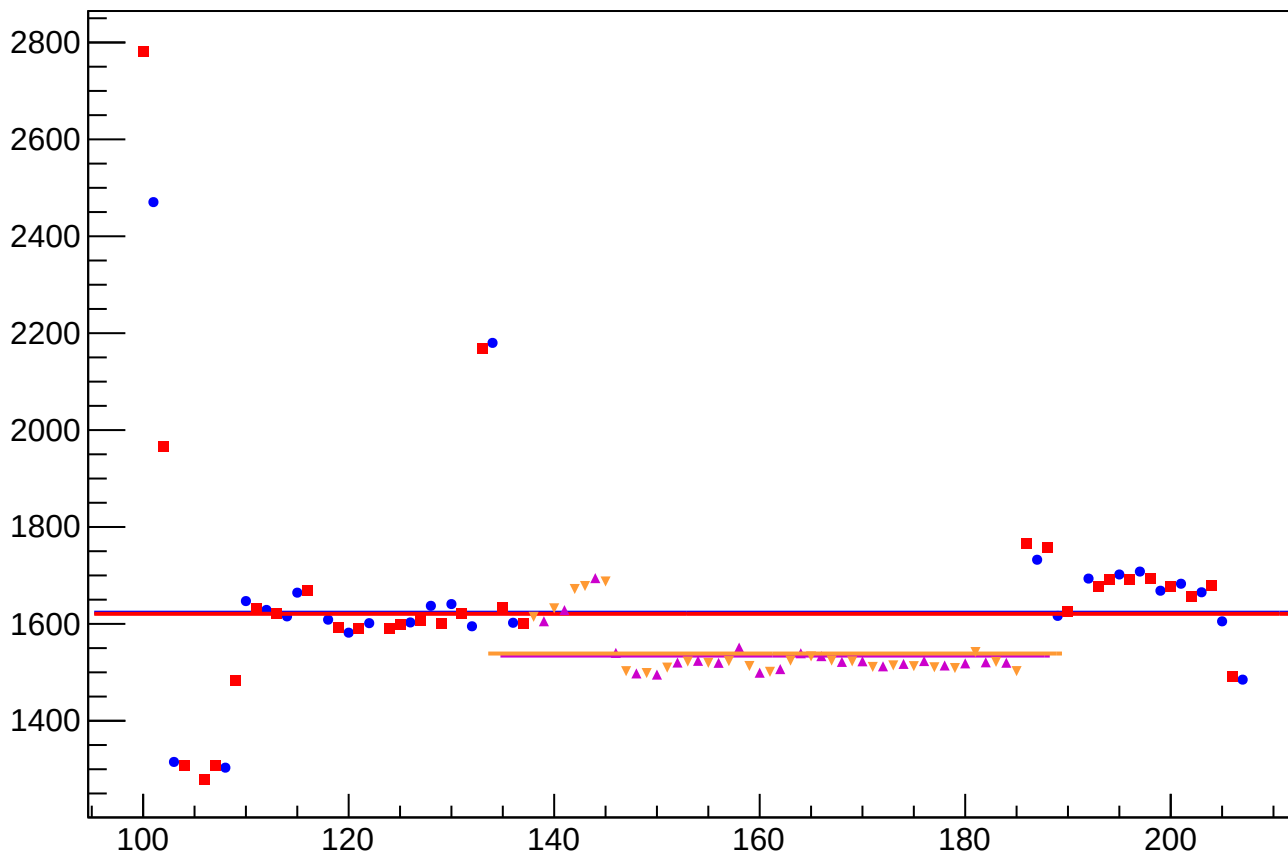
Left In: -2740.826 +/- 358.458  $\chi^2/\text{NDF}$ : 16.4/22

+ sign 2260.023 +/- 269.217  $\chi^2/\text{NDF}$ : 42.5/50

All: -50.112 +/- 190.272  $\chi^2/\text{NDF}$ : 236.2/103

- sign -2355.747 +/- 268.954  $\chi^2/\text{NDF}$ : 46.6/52

# eigen\_cor\_asym\_usr\_atr2\_avg\_rms vs Slug



Right In: 1623.136 $\pm$ 0.298  $\chi^2$ /NDF: 352881.0/25

Left Out: 1538.810 $\pm$ 0.247  $\chi^2$ /NDF: 47056.2/24

Right Out: 1620.807 $\pm$ 0.287  $\chi^2$ /NDF: 303166.7/29

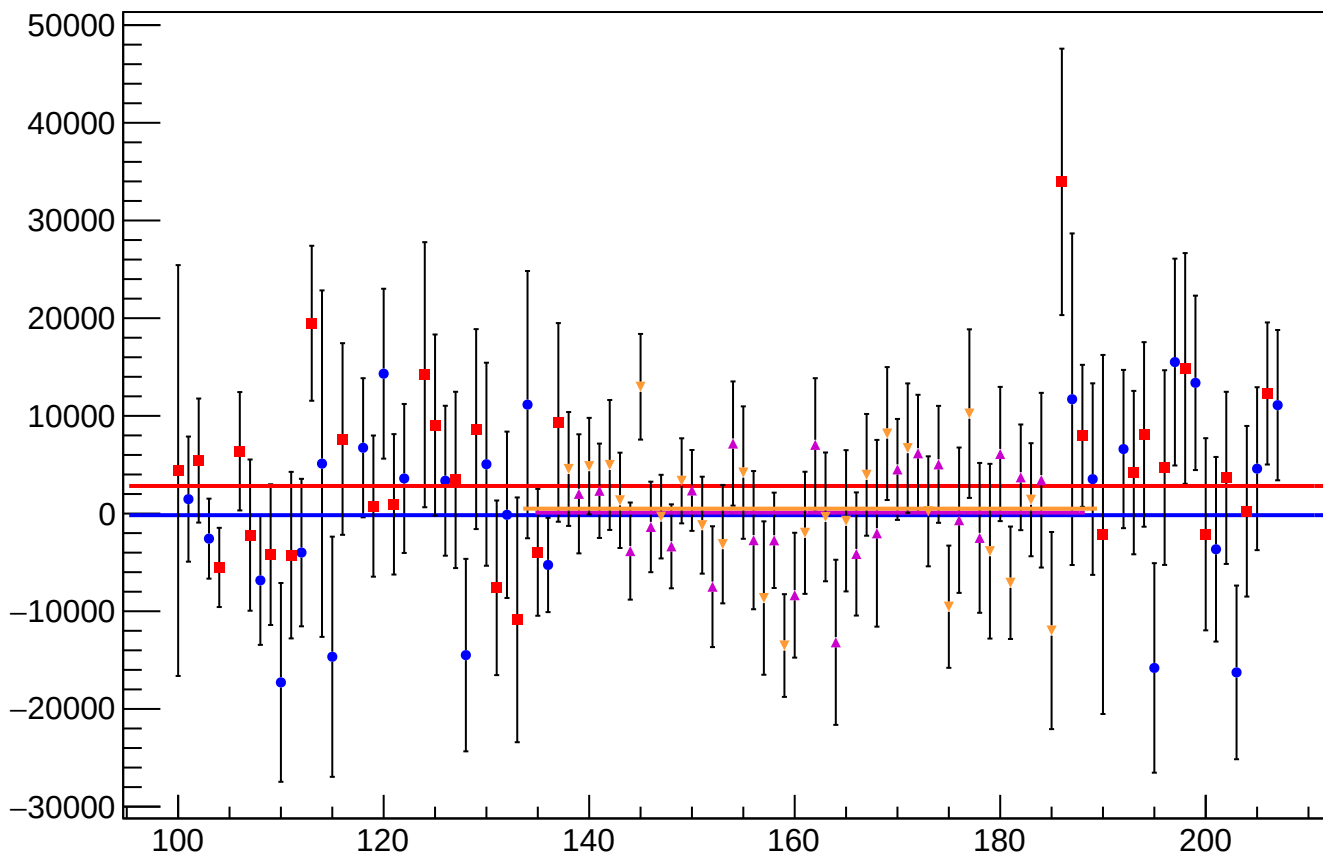
Left In: 1534.615 $\pm$ 0.253  $\chi^2$ /NDF: 31120.6/22

+ sign 1573.175 $\pm$ 0.190  $\chi^2$ /NDF: 447315.7/50

All: 1572.769 $\pm$ 0.134  $\chi^2$ /NDF: 832256.4/103

- sign 1572.364 $\pm$ 0.190  $\chi^2$ /NDF: 384931.7/52

asym\_usr\_atr2\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-164.248 \pm 1567.231$   $\chi^2/\text{NDF}$ : 28.2/25

Left Out:  $503.849 \pm 1187.302$   $\chi^2/\text{NDF}$ : 26.8/24

Right Out:  $2824.358 \pm 1497.178$   $\chi^2/\text{NDF}$ : 26.4/29

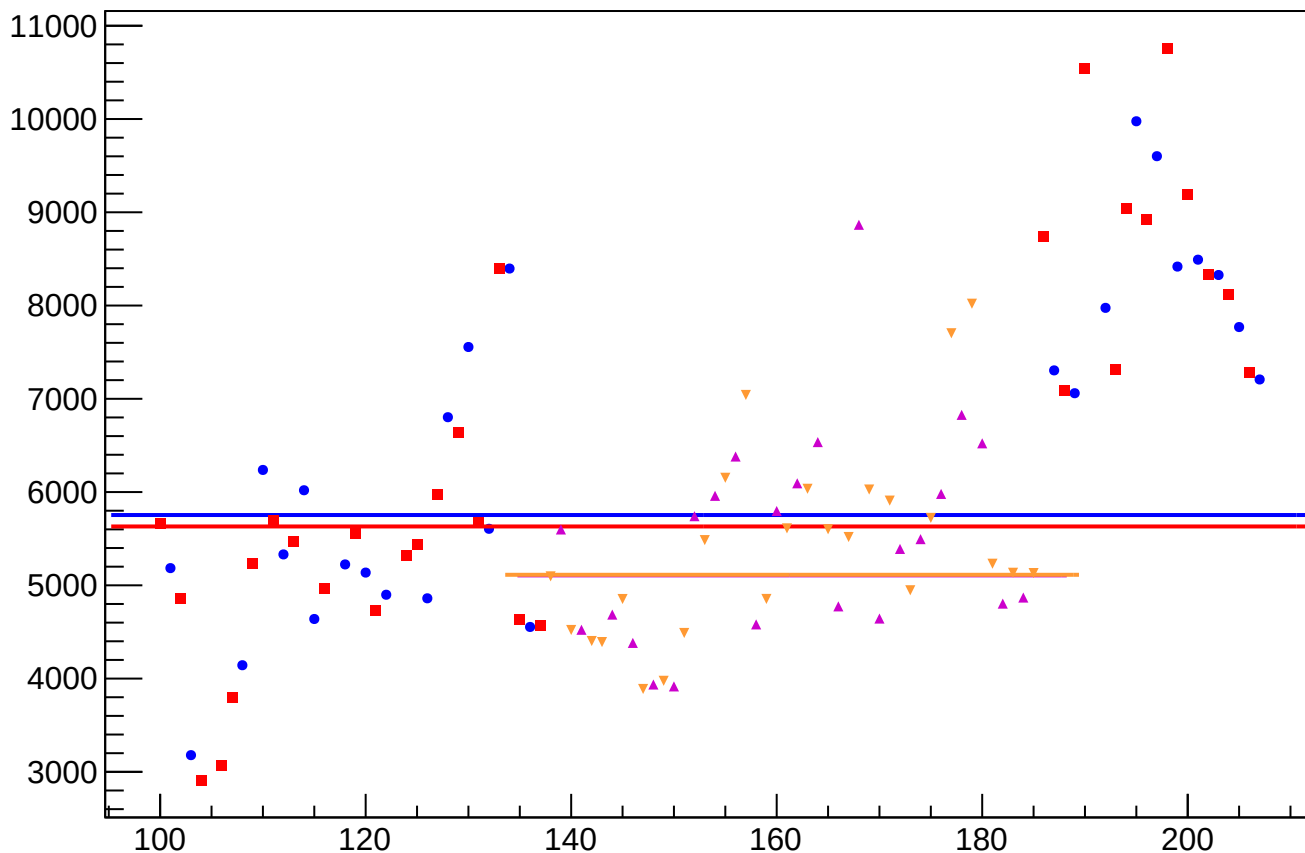
Left In:  $97.930 \pm 1217.585$   $\chi^2/\text{NDF}$ : 14.9/22

+ sign  $260.230 \pm 946.388$   $\chi^2/\text{NDF}$ : 55.1/50

All:  $722.618 \pm 668.577$   $\chi^2/\text{NDF}$ : 98.8/103

- sign  $1183.296 \pm 944.636$   $\chi^2/\text{NDF}$ : 43.3/52

asym\_usr\_atr2\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 5753.814+/-1.108  $\chi^2/\text{NDF}$ : 2787180.6/25

Left Out: 5112.947+/-0.840  $\chi^2/\text{NDF}$ : 1159023.2/24

Right Out: 5631.154+/-1.059  $\chi^2/\text{NDF}$ : 3620430.1/29

Left In: 5106.384+/-0.861  $\chi^2/\text{NDF}$ : 1251622.9/22

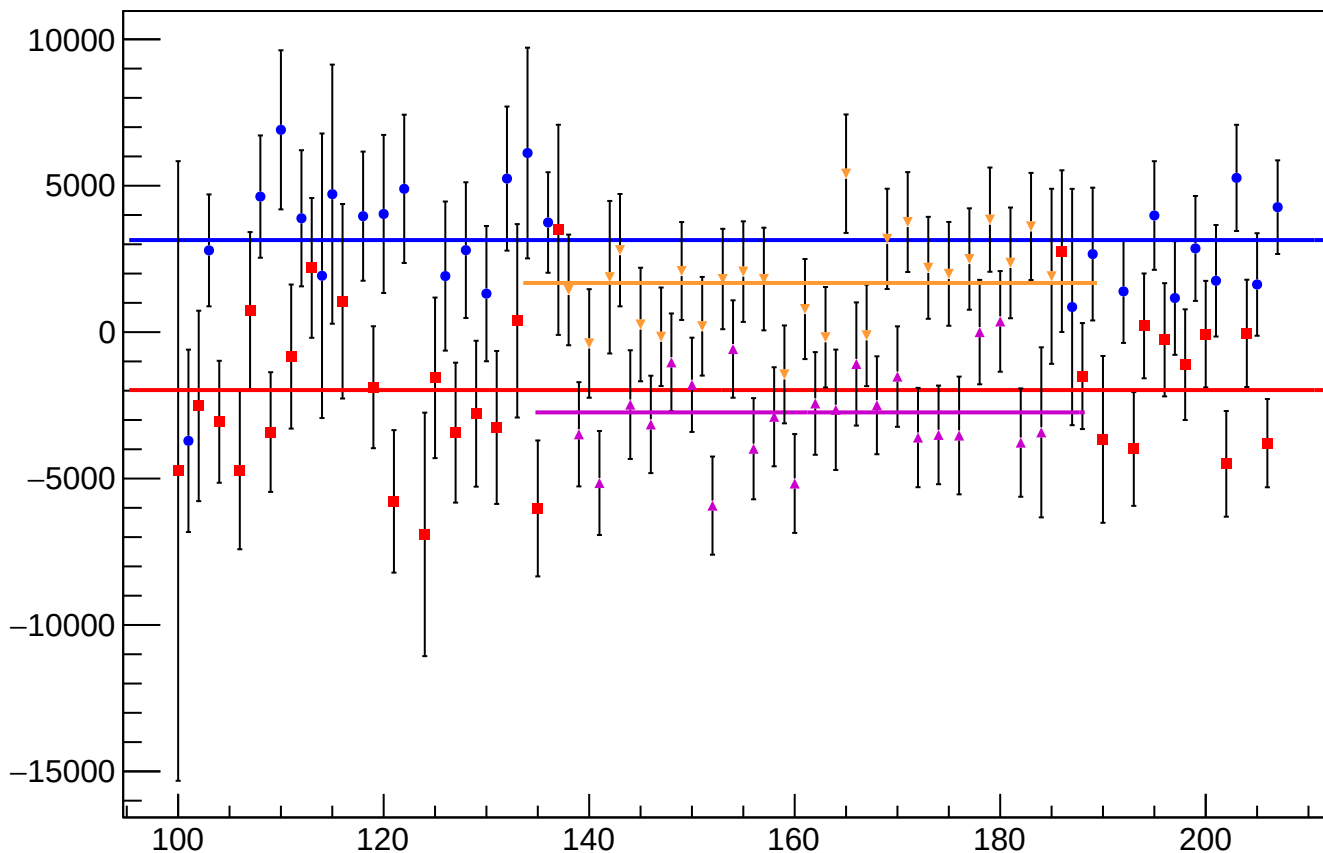
+ sign 5346.637+/-0.669  $\chi^2/\text{NDF}$ : 4158682.6/50

All: 5330.934+/-0.473  $\chi^2/\text{NDF}$ : 9179729.4/10

- sign 5315.290+/-0.668  $\chi^2/\text{NDF}$ : 5019947.8/52



# dit\_asym\_usr\_atr2\_avg\_mean vs Slug



Right In:  $3143.799 \pm 431.426$   $\chi^2/\text{NDF}: 16.5/25$

Left Out:  $1679.163 \pm 362.391$   $\chi^2/\text{NDF}: 19.0/24$

Right Out:  $-1978.246 \pm 417.357$   $\chi^2/\text{NDF}: 30.0/29$

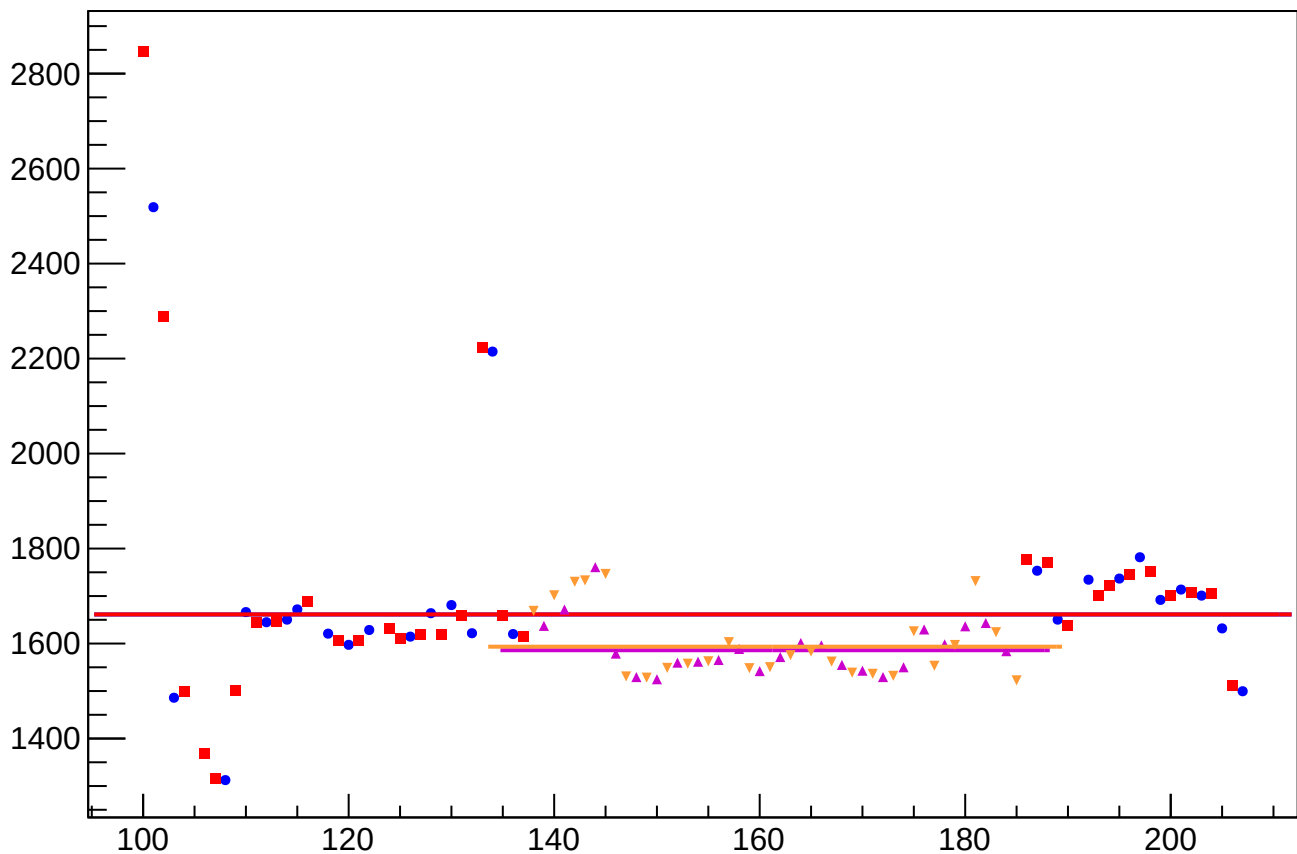
Left In:  $-2740.666 \pm 370.604$   $\chi^2/\text{NDF}: 19.2/22$

+ sign  $2285.064 \pm 277.487$   $\chi^2/\text{NDF}: 42.2/50$

All:  $-62.853 \pm 196.082$   $\chi^2/\text{NDF}: 236.3/103$

- sign  $-2404.534 \pm 277.118$   $\chi^2/\text{NDF}: 51.1/52$

# dit\_asym\_usr\_atr2\_avg\_rms vs Slug



Right In: 1661.170 $\pm$ 0.305  $\chi^2/\text{NDF}$ : 315977.8/25

Left Out: 1593.388 $\pm$ 0.256  $\chi^2/\text{NDF}$ : 71876.4/24

Right Out: 1661.356 $\pm$ 0.295  $\chi^2/\text{NDF}$ : 289477.5/29

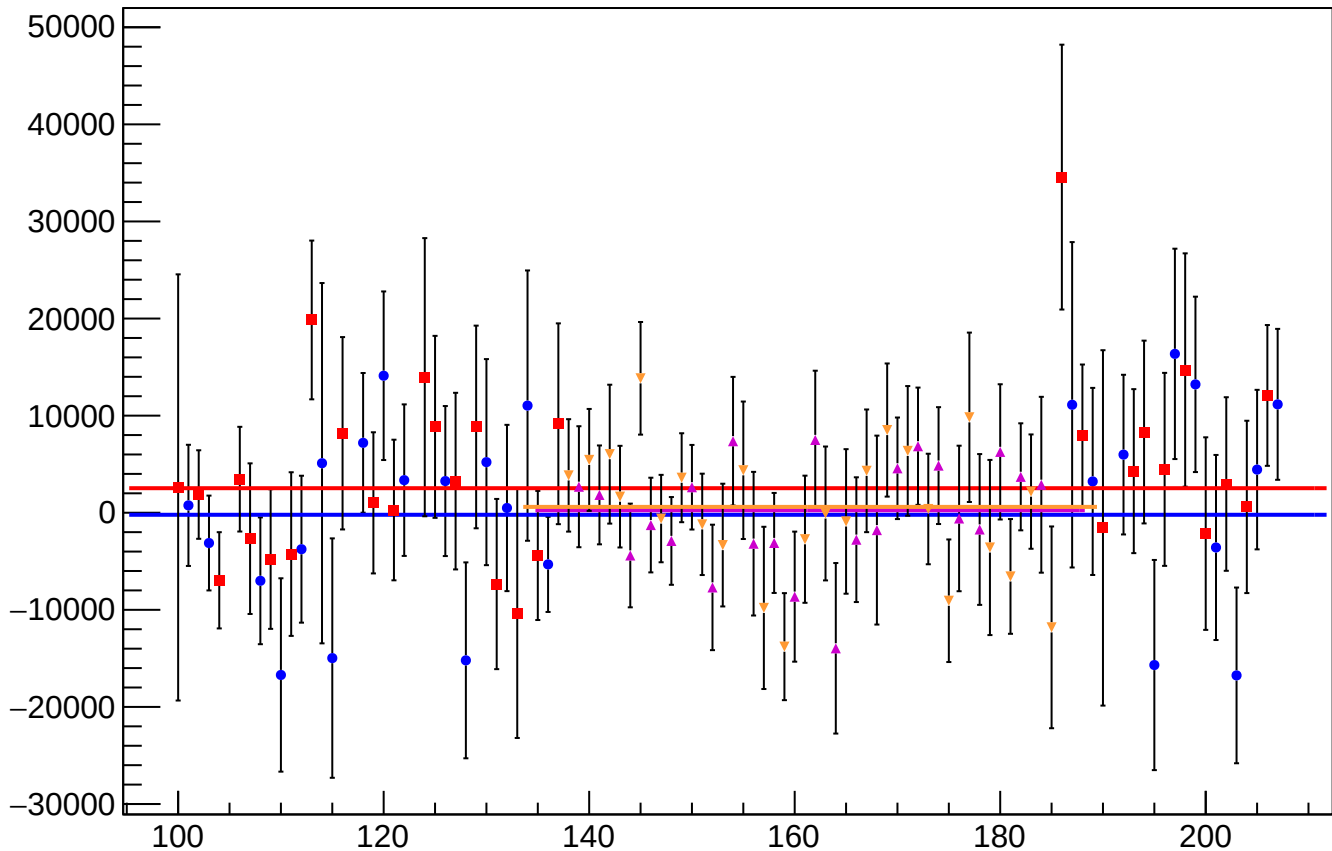
Left In: 1585.918 $\pm$ 0.262  $\chi^2/\text{NDF}$ : 41915.3/22

+ sign 1621.428 $\pm$ 0.196  $\chi^2/\text{NDF}$ : 416799.4/50

All: 1620.308 $\pm$ 0.139  $\chi^2/\text{NDF}$ : 784808.6/103

- sign 1619.192 $\pm$ 0.196  $\chi^2/\text{NDF}$ : 367944.2/52

# asym\_usr\_atr2\_avg\_dit\_correction\_mean vs Slug



Right In:  $-210.525 \pm 1609.432$   $\chi^2/\text{NDF}: 28.0/25$

Left Out:  $601.820 \pm 1233.559$   $\chi^2/\text{NDF}: 26.0/24$

Right Out:  $2527.127 \pm 1489.310$   $\chi^2/\text{NDF}: 25.6/29$

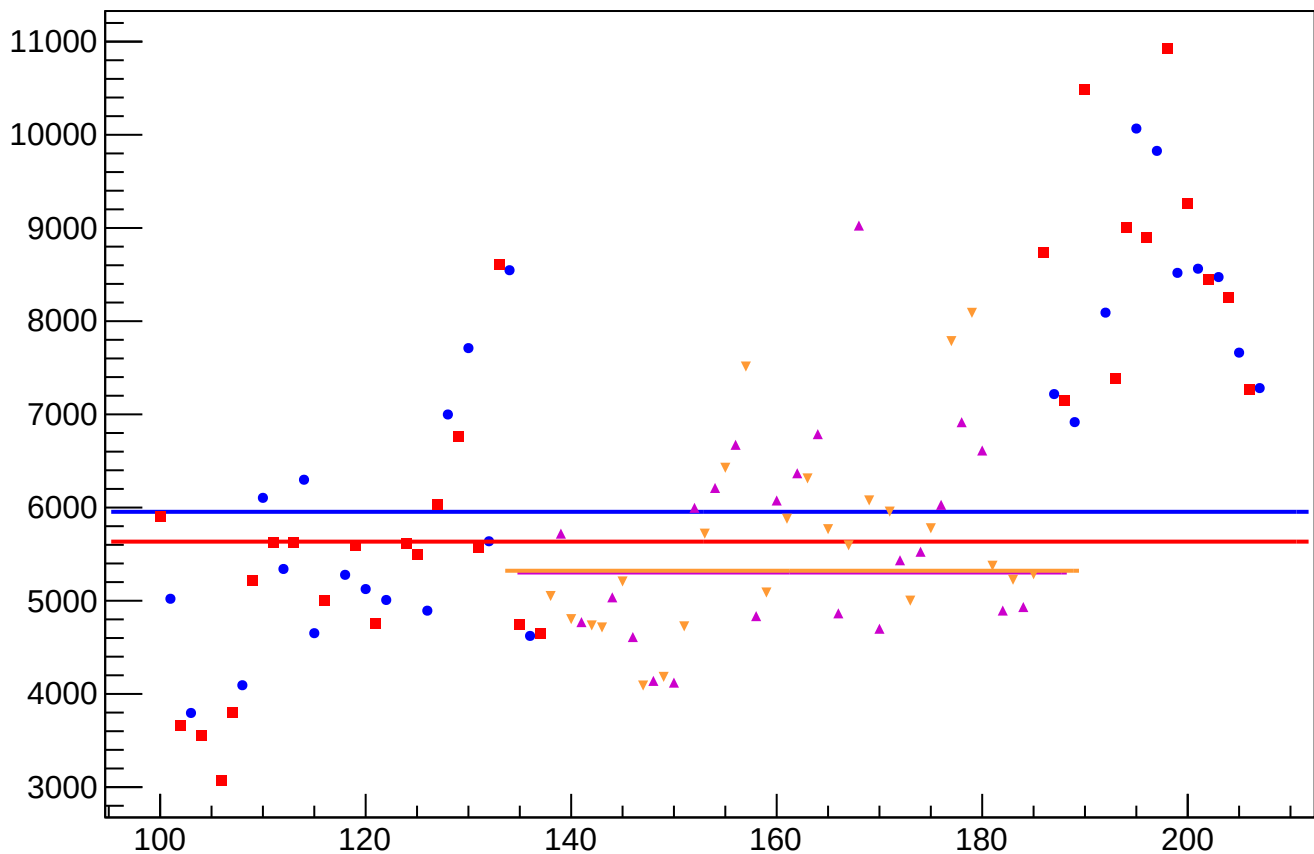
Left In:  $255.905 \pm 1262.607$   $\chi^2/\text{NDF}: 14.6/22$

+ sign  $301.203 \pm 979.060$   $\chi^2/\text{NDF}: 54.2/50$

All:  $760.878 \pm 686.582$   $\chi^2/\text{NDF}: 96.3/103$

- sign  $1205.674 \pm 963.084$   $\chi^2/\text{NDF}: 41.6/52$

# asym\_usr\_atr2\_avg\_dit\_correction\_rms vs Slug



Right In: 5954.325+/-1.138  $\chi^2/\text{NDF}$ : 2355287.2/25

Left Out: 5321.956+/-0.872  $\chi^2/\text{NDF}$ : 1037009.2/24

Right Out: 5634.317+/-1.053  $\chi^2/\text{NDF}$ : 3539572.8/29

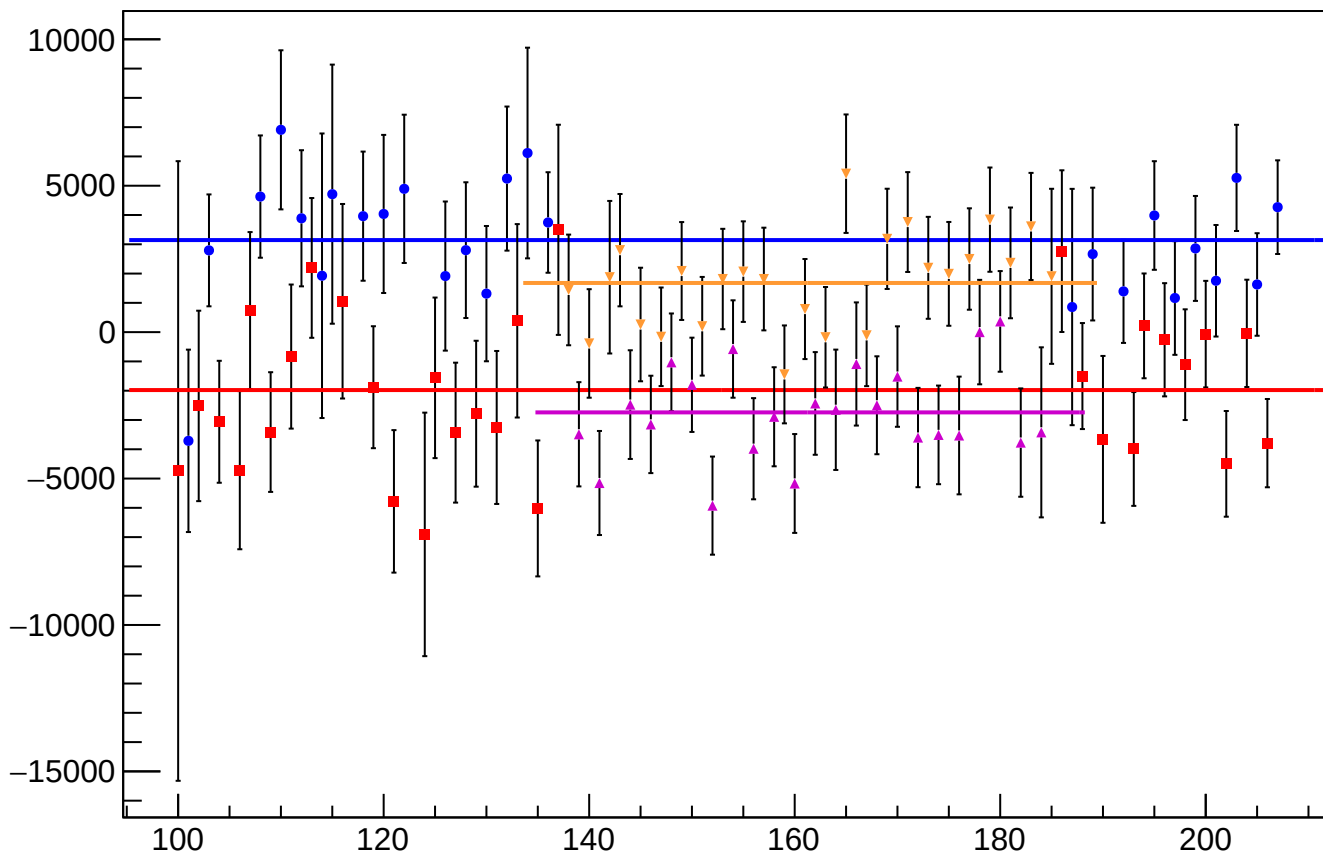
Left In: 5302.849+/-0.893  $\chi^2/\text{NDF}$ : 1152376.1/22

+ sign 5555.971+/-0.692  $\chi^2/\text{NDF}$ : 3586798.6/50

All: 5497.774+/-0.485  $\chi^2/\text{NDF}$ : 8350293.3/10

- sign 5441.461+/-0.681  $\chi^2/\text{NDF}$ : 4749590.3/52

eigen\_dit\_asym\_usr\_atr2\_avg\_mean vs Slug



Right In: 3143.797 $\pm$ 431.426  $\chi^2$ /NDF: 16.5/25

Left Out: 1679.156 $\pm$ 362.392  $\chi^2$ /NDF:19.0/24

Right Out: -1978.244 $\pm$ 417.357  $\chi^2$ /NDF: 30.0/29

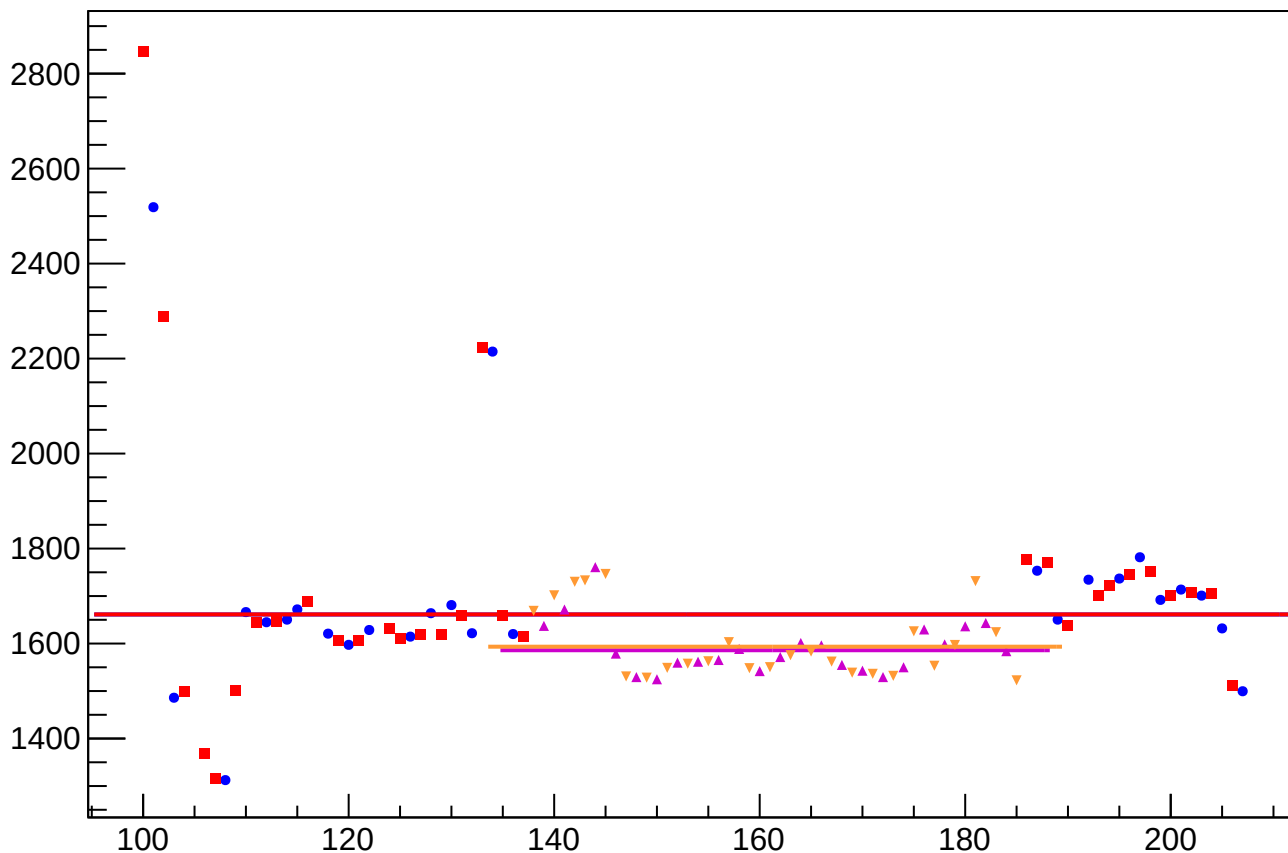
Left In: -2740.666 $\pm$ 370.605  $\chi^2$ /NDF:19.2/22

+ sign 2285.060 $\pm$ 277.487  $\chi^2$ /NDF: 42.2/50

All: -62.855 $\pm$ 196.082  $\chi^2$ /NDF: 236.3/103

- sign -2404.533 $\pm$ 277.118  $\chi^2$ /NDF: 51.1/52

# eigen\_dit\_asym\_usr\_atr2\_avg\_rms vs Slug



Right In: 1661.169 $\pm$ 0.305  $\chi^2$ /NDF: 315978.0/25

Left Out: 1593.388 $\pm$ 0.256  $\chi^2$ /NDF: 71876.3/24

Right Out: 1661.356 $\pm$ 0.295  $\chi^2$ /NDF: 289477.6/29

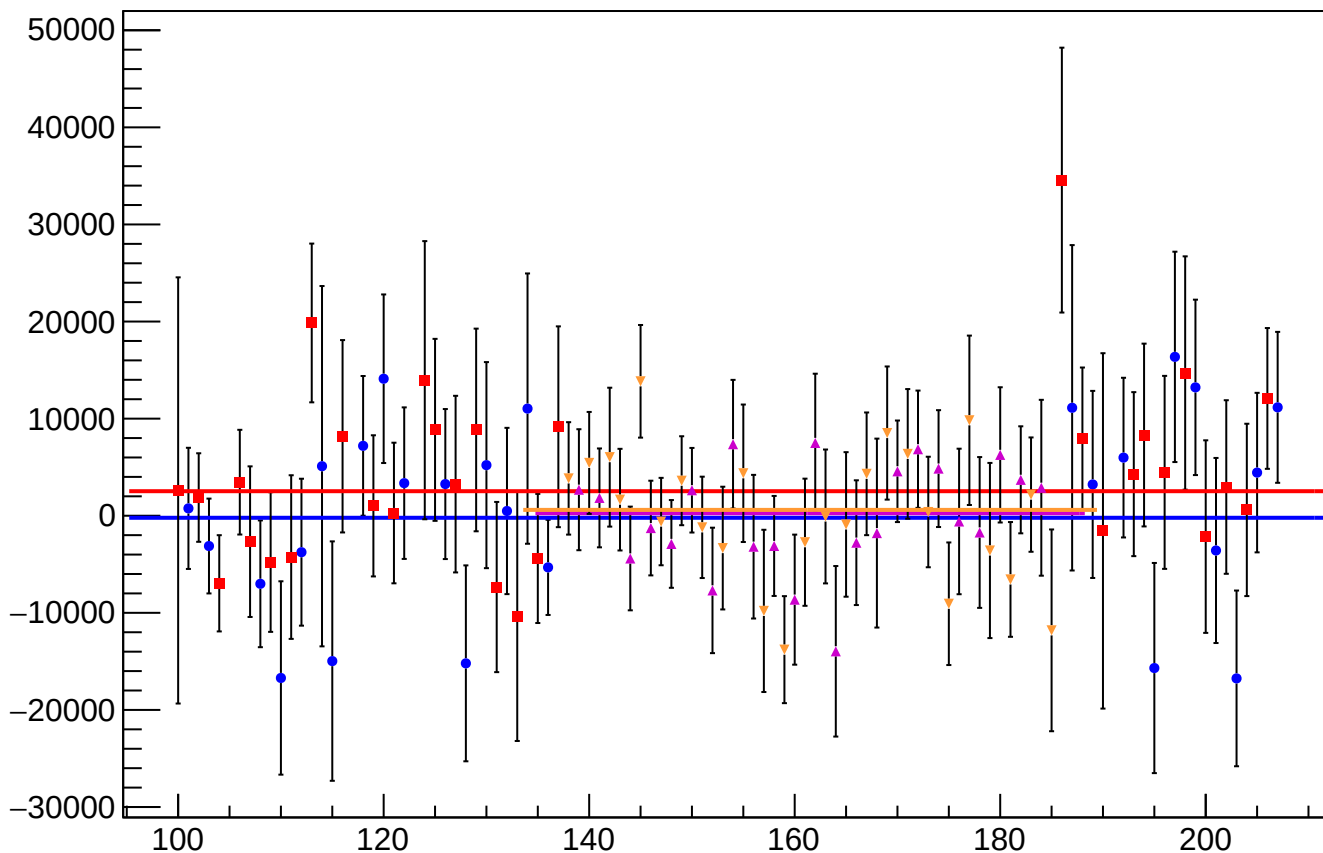
Left In: 1585.919 $\pm$ 0.262  $\chi^2$ /NDF: 41915.1/22

+ sign 1621.429 $\pm$ 0.196  $\chi^2$ /NDF: 416798.3/50

All: 1620.309 $\pm$ 0.139  $\chi^2$ /NDF: 784806.4/103

- sign 1619.193 $\pm$ 0.196  $\chi^2$ /NDF: 367943.1/52

asym\_usr\_atr2\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-210.518 \pm 1609.431$   $\chi^2/\text{NDF}: 28.0/25$

Left Out:  $601.817 \pm 1233.561$   $\chi^2/\text{NDF}: 26.0/24$

Right Out:  $2527.124 \pm 1489.309$   $\chi^2/\text{NDF}: 25.6/29$

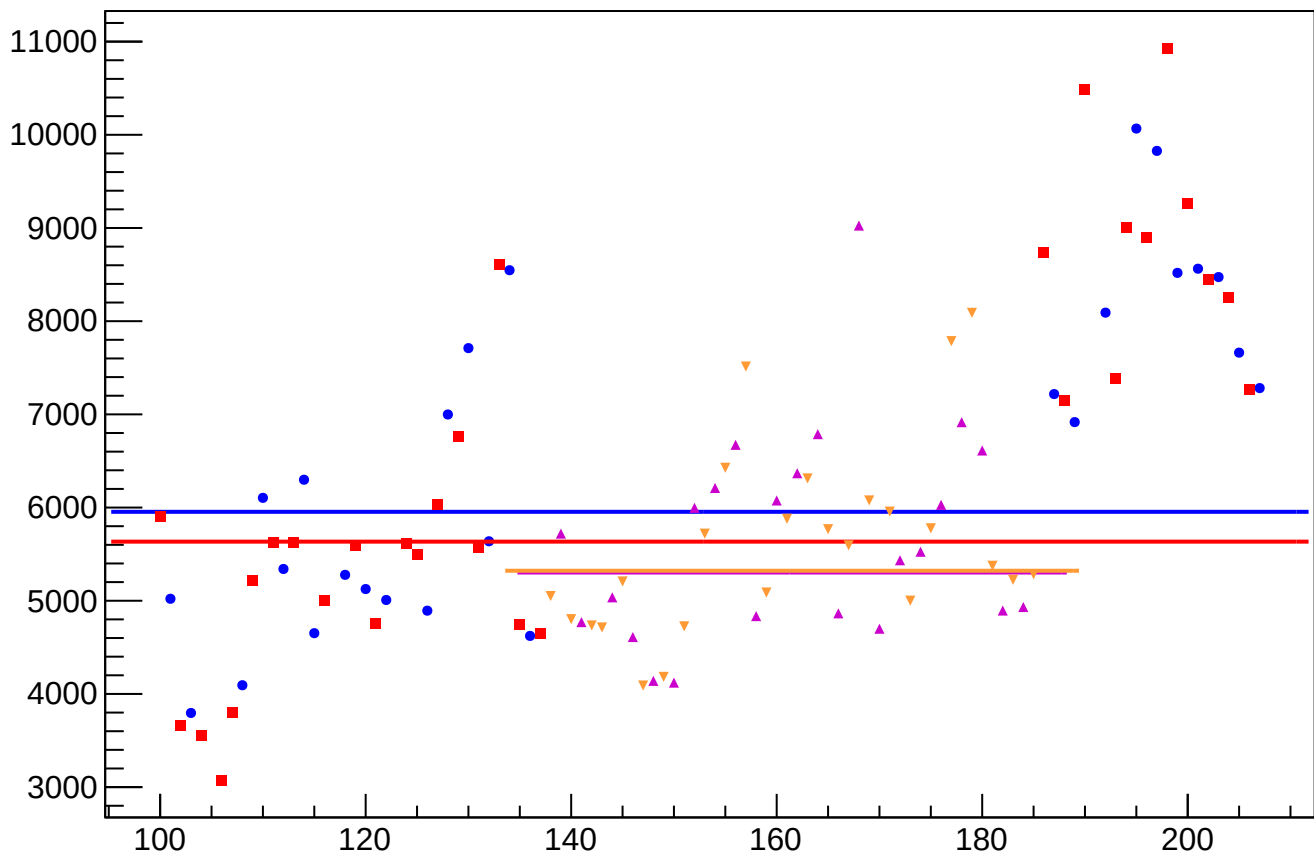
Left In:  $255.907 \pm 1262.609$   $\chi^2/\text{NDF}: 14.6/22$

+ sign  $301.203 \pm 979.061$   $\chi^2/\text{NDF}: 54.2/50$

All:  $760.879 \pm 686.583$   $\chi^2/\text{NDF}: 96.3/103$

- sign  $1205.676 \pm 963.085$   $\chi^2/\text{NDF}: 41.6/52$

asym\_usr\_atr2\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 5954.320+/-1.138  $\chi^2/\text{NDF}$ : 2355298.4/25

Left Out: 5321.965+/-0.872  $\chi^2/\text{NDF}$ : 1037011.4/24

Right Out: 5634.311+/-1.053  $\chi^2/\text{NDF}$ : 3539585.0/29

Left In: 5302.858+/-0.893  $\chi^2/\text{NDF}$ : 1152380.1/22

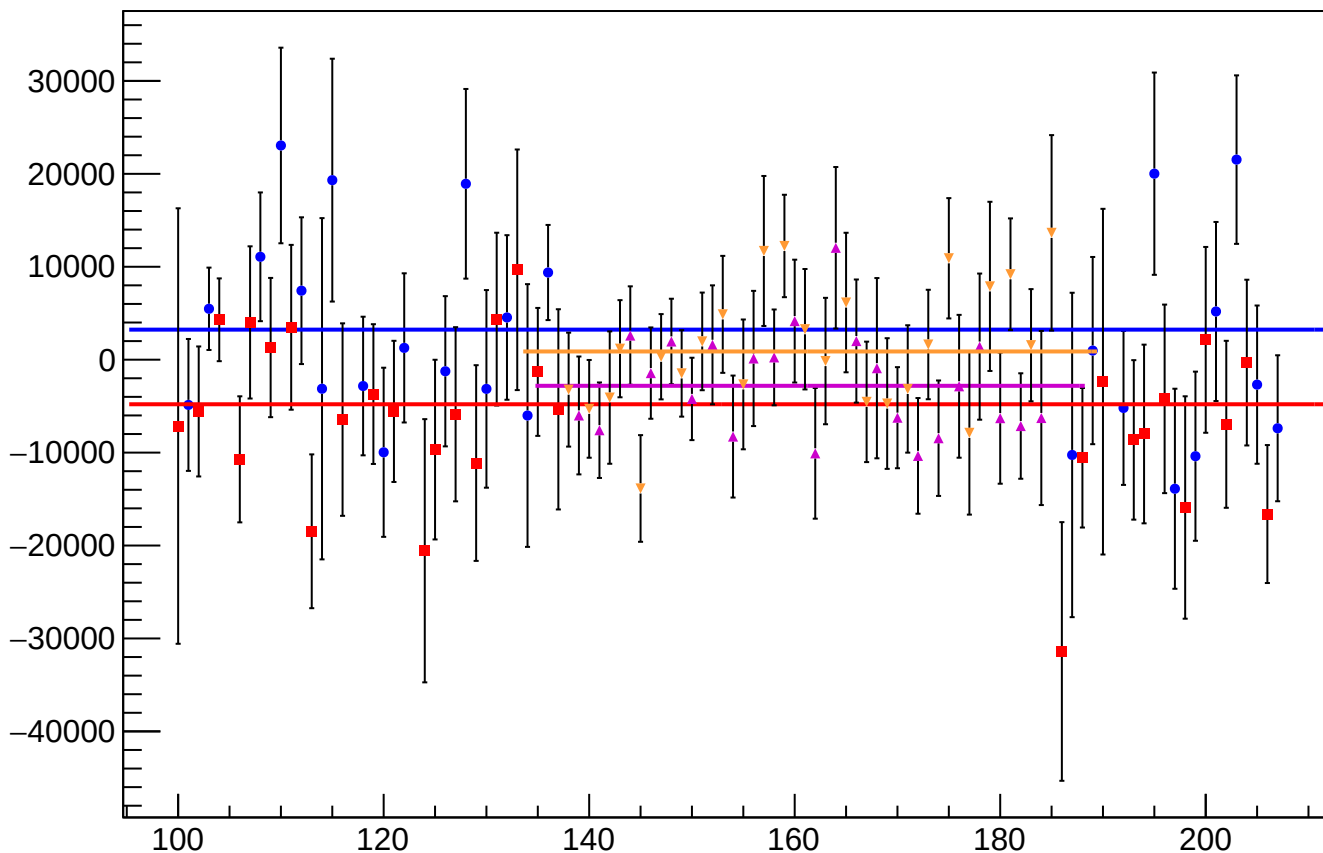
+ sign 5555.976+/-0.692  $\chi^2/\text{NDF}$ : 3586803.2/50

All: 5497.778+/-0.485  $\chi^2/\text{NDF}$ : 8350309.3/10

- sign 5441.464+/-0.681  $\chi^2/\text{NDF}$ : 4749601.3/52



# asym\_usr\_atr2\_avg\_mean vs Slug



Right In: 3234.155+/-1642.882  $\chi^2/\text{NDF}$ : 31.3/25

Left Out: 885.482+/-1246.500  $\chi^2/\text{NDF}$ : 25.7/24

Right Out: -4796.588+/-1577.033  $\chi^2/\text{NDF}$ : 23.5/29

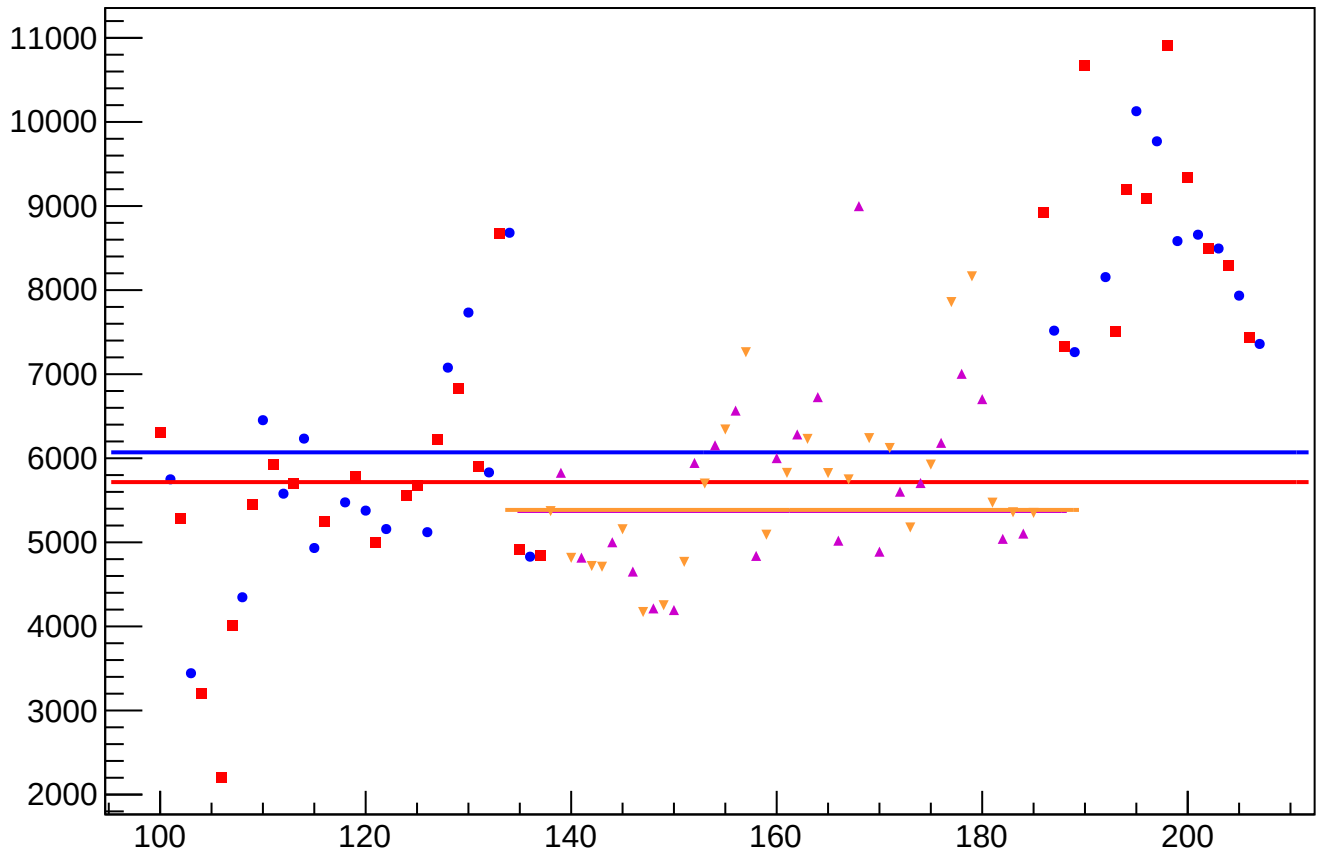
Left In: -2810.702+/-1277.225  $\chi^2/\text{NDF}$ : 14.7/22

+ sign 1743.566+/-993.025  $\chi^2/\text{NDF}$ : 58.3/50

All: -928.189+/-702.002  $\chi^2/\text{NDF}$ : 111.9/103

- sign -3597.326+/-992.538  $\chi^2/\text{NDF}$ : 39.2/52

# asym\_usr\_atr2\_avg\_rms vs Slug



Right In: 6070.465+/-1.162  $\chi^2/\text{NDF}$ : 2461844.5/25

Left Out: 5385.653+/-0.881  $\chi^2/\text{NDF}$ : 987089.3/24

+ sign 5635.848+/-0.702  $\chi^2/\text{NDF}$ : 3669477.6/50

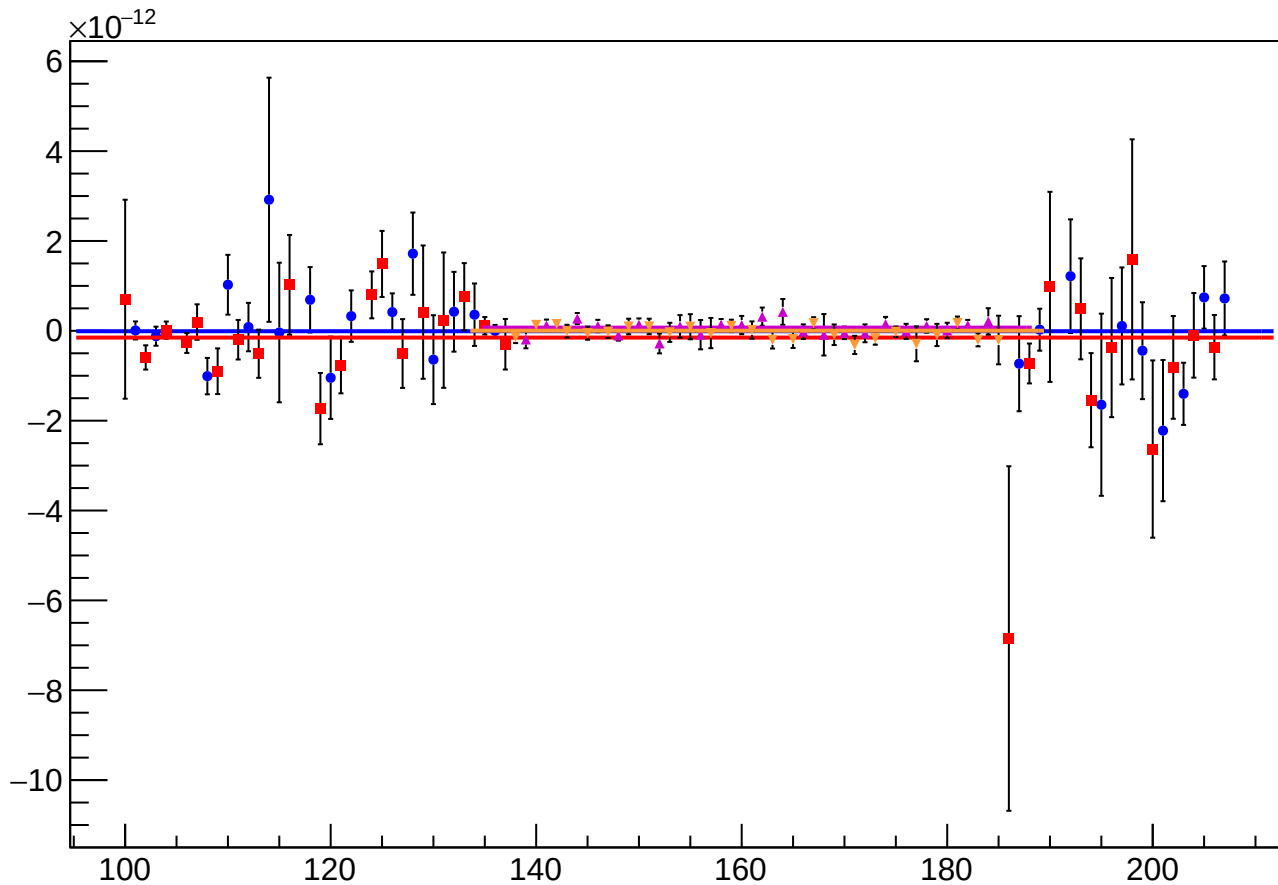
Right Out: 5716.547+/-1.085  $\chi^2/\text{NDF}$ : 4052826.7/29

All: 5574.003+/-0.494  $\chi^2/\text{NDF}$ : 8868753.5/10

Left In: 5372.867+/-0.903  $\chi^2/\text{NDF}$ : 1071821.2/22

- sign 5513.584+/-0.694  $\chi^2/\text{NDF}$ : 5183940.0/52

asym\_usr\_atr2\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 28.3/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 18.3/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 34.9/29

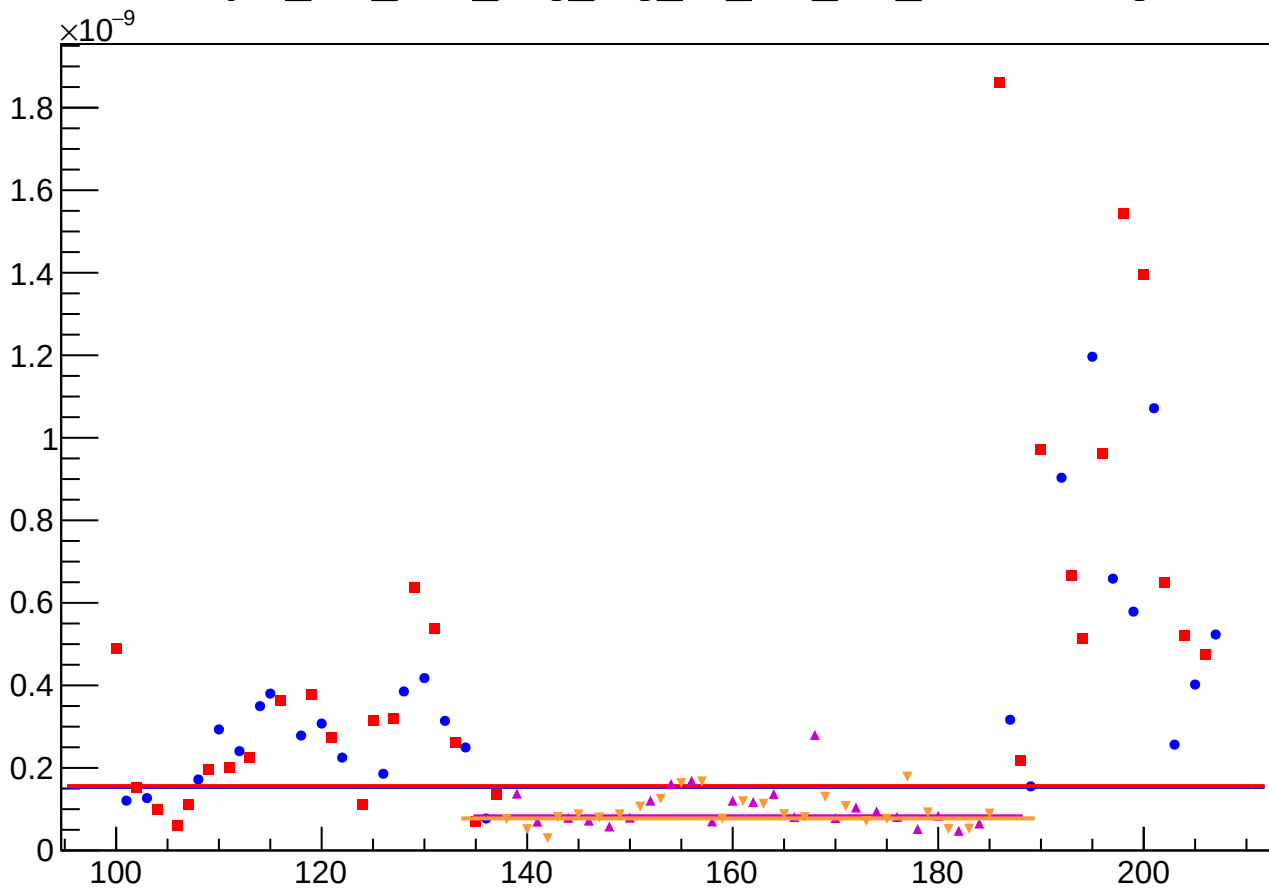
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 15.9/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 46.6/50

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 104.0/103

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 56.6/52

asym\_usr\_atr2\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4751985.1/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1642881.7/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6257166.5/29

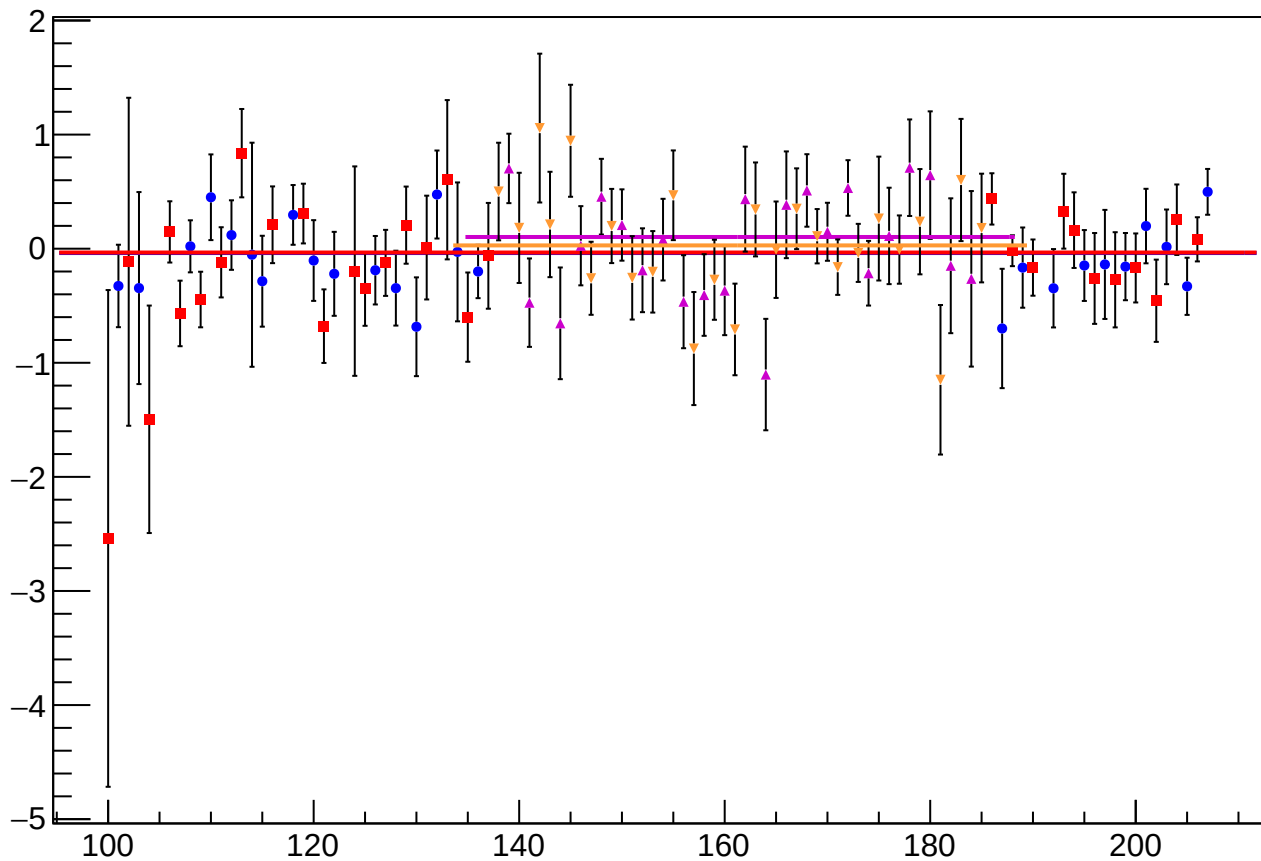
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1552521.9/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7891635.9/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 16992344.0/103

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9071022.3/52

asym\_usr\_atr2\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.038 \pm 0.064$   $\chi^2/\text{NDF}$ : 22.6/25

Left Out:  $0.029 \pm 0.075$   $\chi^2/\text{NDF}$ : 25.3/24

Right Out:  $-0.034 \pm 0.056$   $\chi^2/\text{NDF}$ : 35.9/29

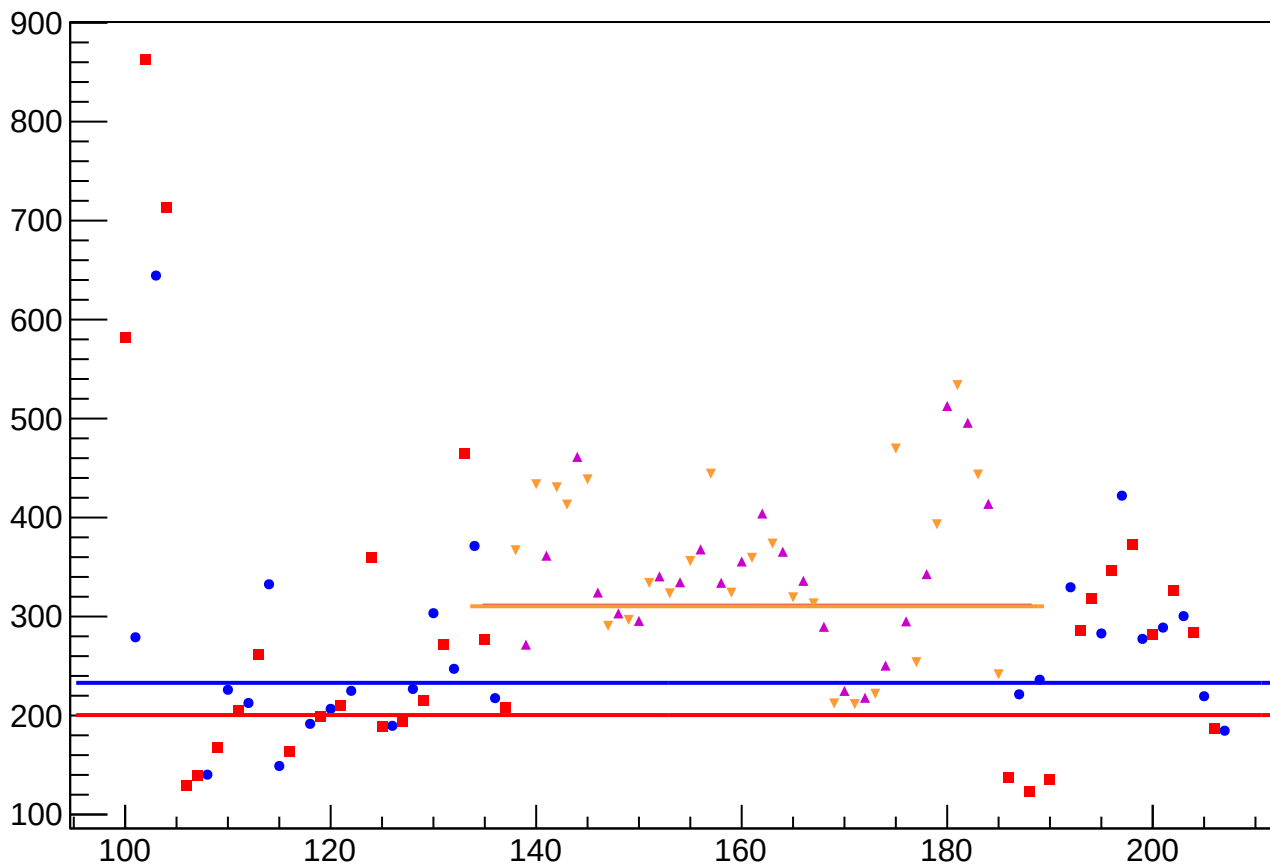
Left In:  $0.103 \pm 0.076$   $\chi^2/\text{NDF}$ : 32.3/22

+ sign  $-0.010 \pm 0.049$   $\chi^2/\text{NDF}$ : 48.4/50

All:  $0.003 \pm 0.033$   $\chi^2/\text{NDF}$ : 118.8/103

- sign  $0.014 \pm 0.045$   $\chi^2/\text{NDF}$ : 70.2/52

asym\_usr\_atr2\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 233.023+/-0.045  $\chi^2/\text{NDF}$ : 2066986.8/25

Left Out: 310.359+/-0.053  $\chi^2/\text{NDF}$ : 2363086.4/24

Right Out: 200.465+/-0.039  $\chi^2/\text{NDF}$ : 4337534.3/29

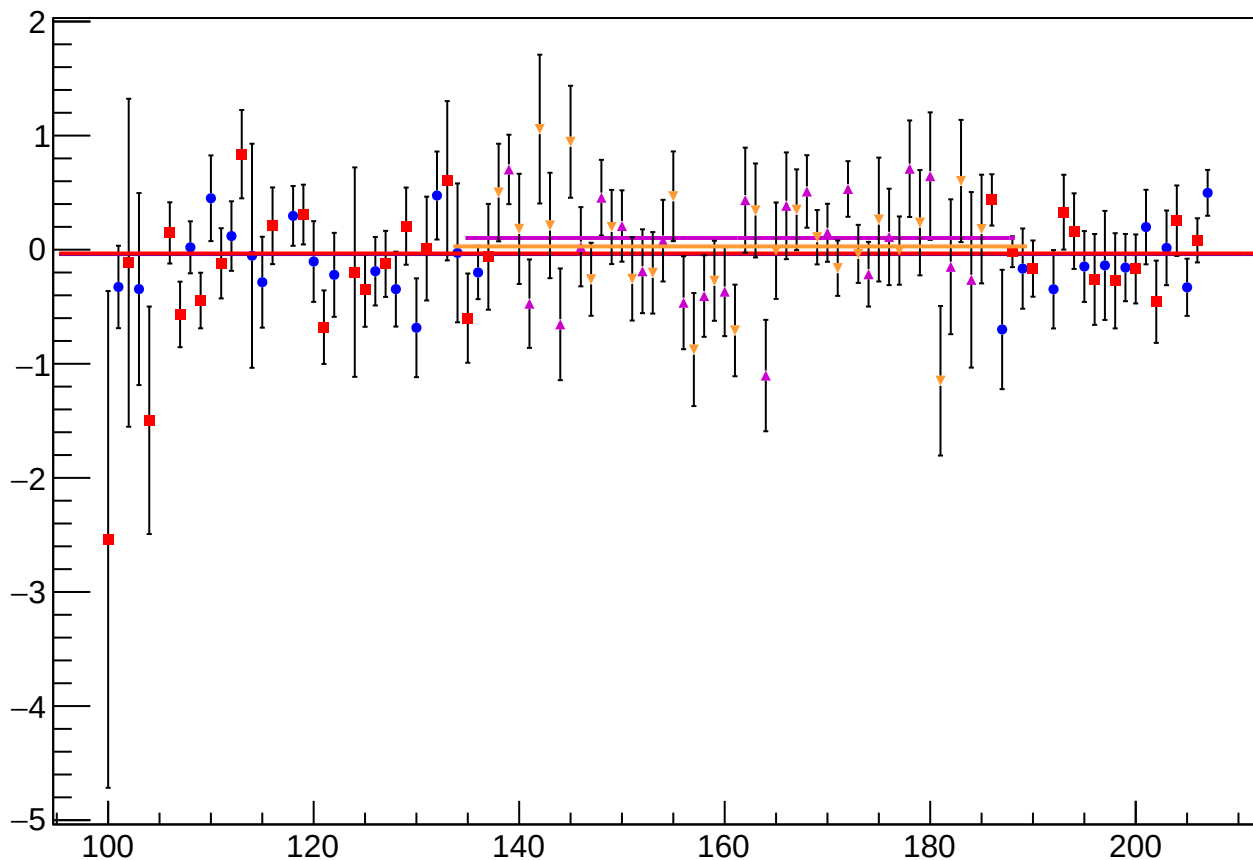
Left In: 310.960+/-0.054  $\chi^2/\text{NDF}$ : 1600370.0/22

+ sign 265.879+/-0.034  $\chi^2/\text{NDF}$ : 5664077.5/50

All: 251.374+/-0.023  $\chi^2/\text{NDF}$ : 14667793.3/10

- sign 238.967+/-0.032  $\chi^2/\text{NDF}$ : 8674112.4/52

asym\_usr\_atr2\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.038 \pm 0.064$   $\chi^2/\text{NDF}$ : 22.6/25

Left Out:  $0.029 \pm 0.075$   $\chi^2/\text{NDF}$ : 25.3/24

Right Out:  $-0.034 \pm 0.056$   $\chi^2/\text{NDF}$ : 35.9/29

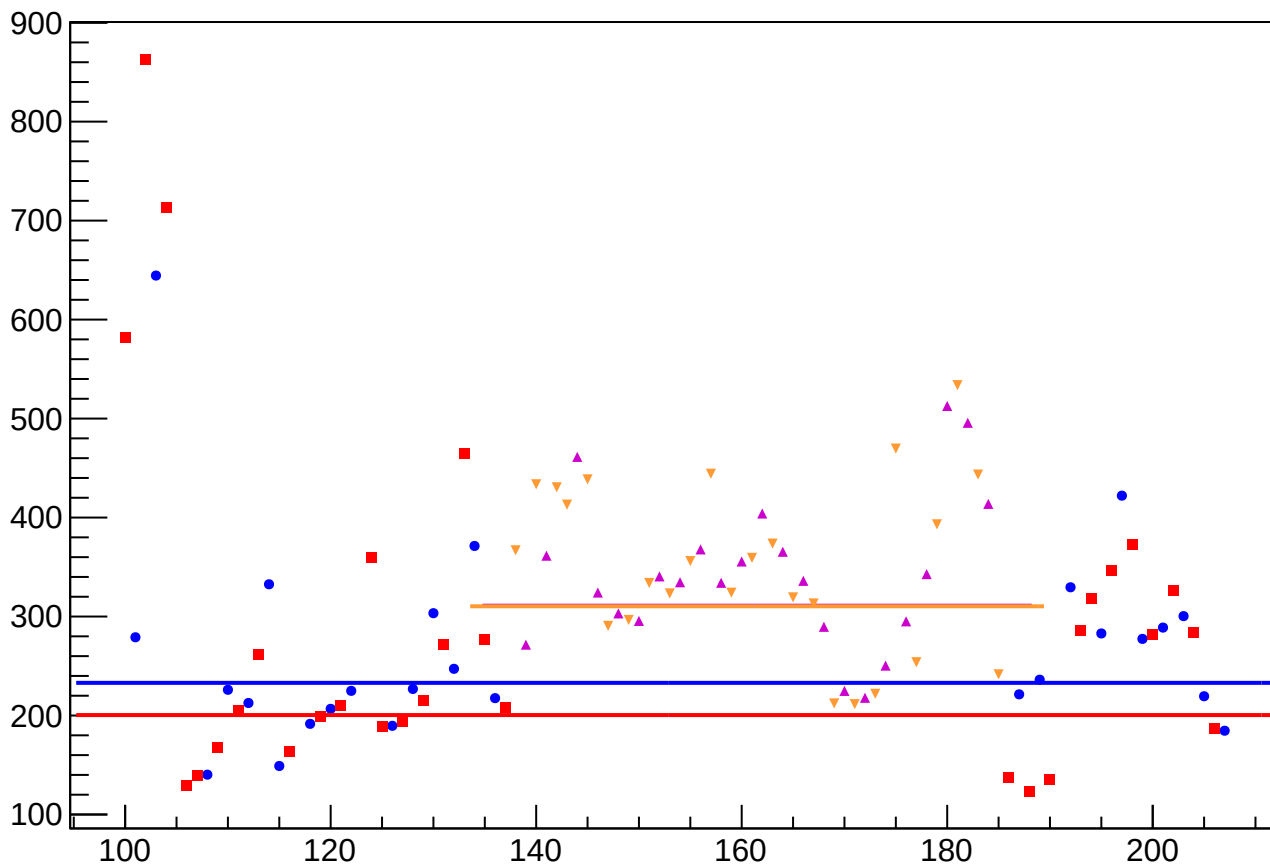
Left In:  $0.103 \pm 0.076$   $\chi^2/\text{NDF}$ : 32.3/22

+ sign  $-0.010 \pm 0.049$   $\chi^2/\text{NDF}$ : 48.4/50

All:  $0.003 \pm 0.033$   $\chi^2/\text{NDF}$ : 118.8/103

- sign  $0.014 \pm 0.045$   $\chi^2/\text{NDF}$ : 70.2/52

asym\_usr\_atr2\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 233.023 $\pm$ 0.045  $\chi^2$ /NDF: 2066986.8/25

Left Out: 310.359 $\pm$ 0.053  $\chi^2$ /NDF:2363086.4/24

Right Out: 200.465 $\pm$ 0.039  $\chi^2$ /NDF: 4337534.3/29

Left In: 310.960 $\pm$ 0.054  $\chi^2$ /NDF:1600370.0/22

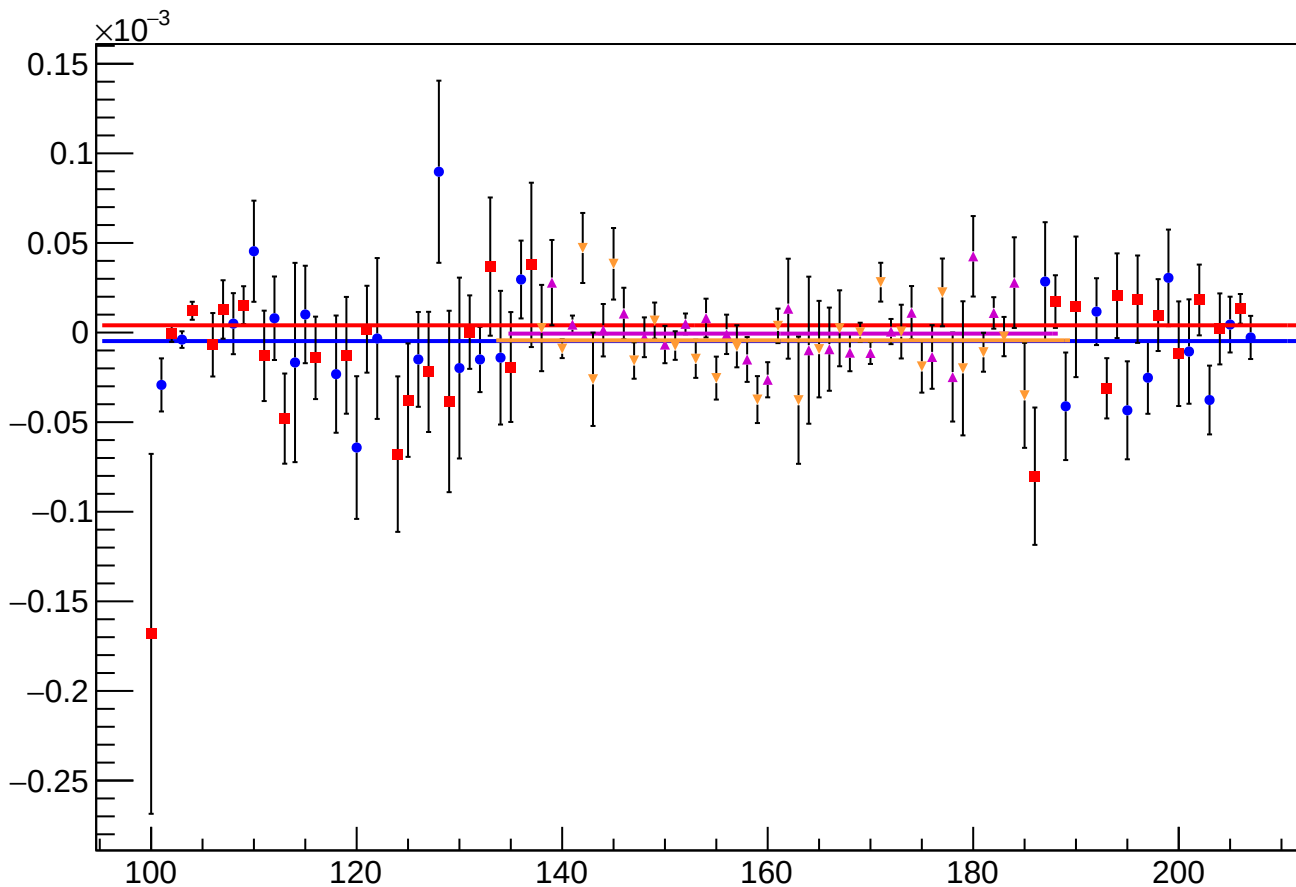
+ sign 265.879 $\pm$ 0.034  $\chi^2$ /NDF: 5664077.5/50

All: 251.374 $\pm$ 0.023  $\chi^2$ /NDF: 14667793.3/10

- sign 238.967 $\pm$ 0.032  $\chi^2$ /NDF: 8674112.4/52



asym\_usr\_atr2\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 27.4/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 42.3/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 34.8/29

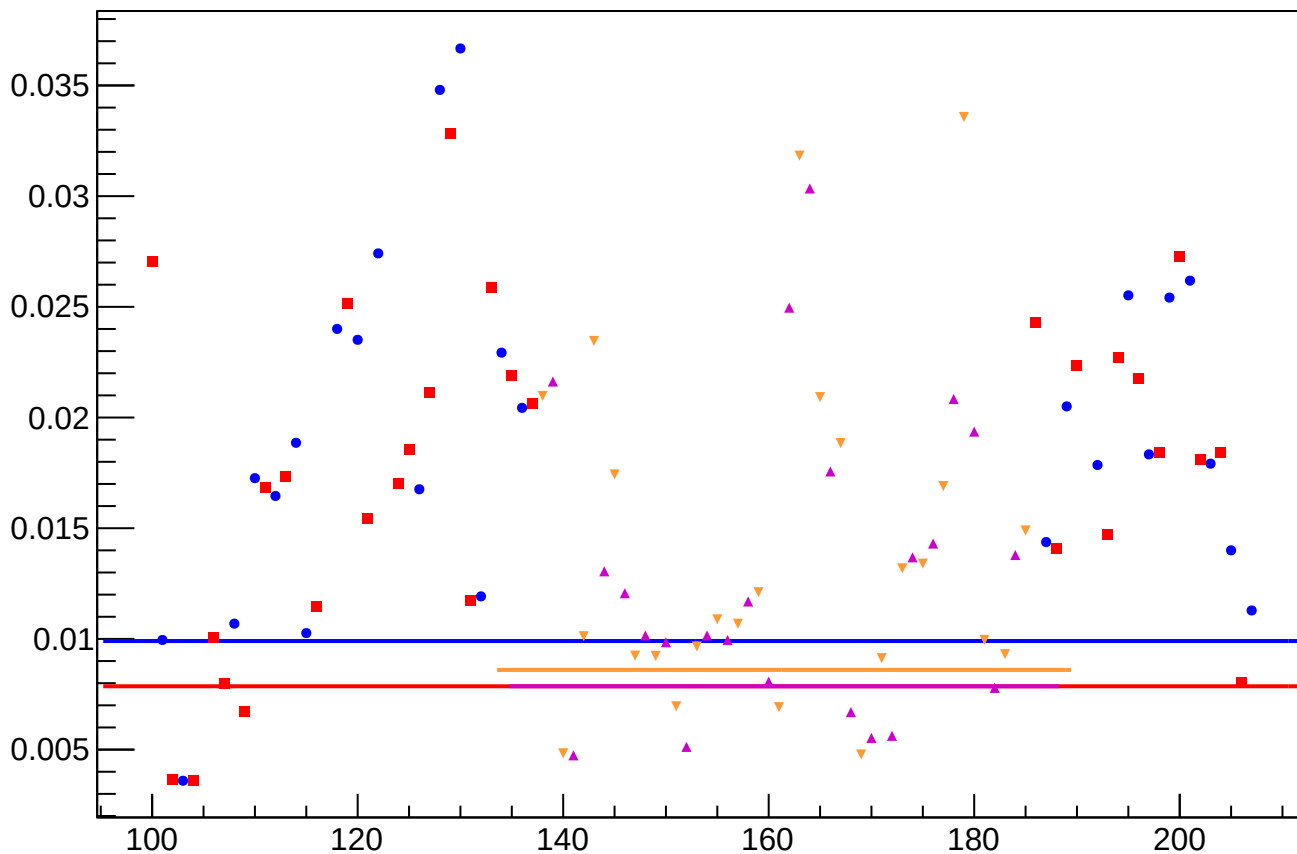
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 26.6/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 69.7/50

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 138.5/103

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 63.3/52

asym\_usr\_atr2\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In:  $0.010 \pm 0.000$   $\chi^2/\text{NDF}$ : 10352112.4/25

Left Out:  $0.009 \pm 0.000$   $\chi^2/\text{NDF}$ : 7653564.7/24

Right Out:  $0.008 \pm 0.000$   $\chi^2/\text{NDF}$ : 12120157.5/29

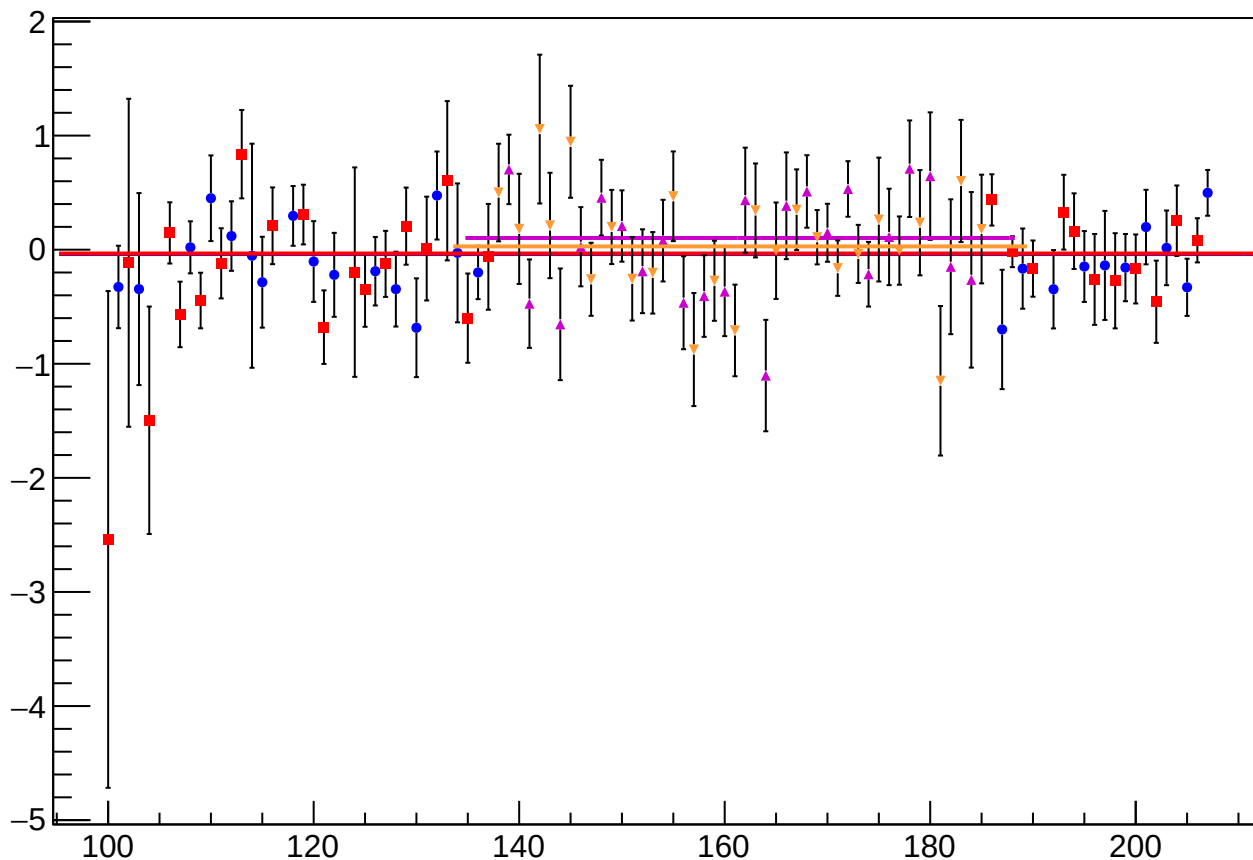
Left In:  $0.008 \pm 0.000$   $\chi^2/\text{NDF}$ : 6779815.5/22

+ sign  $0.009 \pm 0.000$   $\chi^2/\text{NDF}$ : 18223729.5/50

All:  $0.008 \pm 0.000$   $\chi^2/\text{NDF}$ : 37565663.9/103

- sign  $0.008 \pm 0.000$   $\chi^2/\text{NDF}$ : 18899973.1/52

asym\_usr\_atr2\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.038 \pm 0.064$   $\chi^2/\text{NDF}: 22.6/25$

Left Out:  $0.029 \pm 0.075$   $\chi^2/\text{NDF}: 25.3/24$

Right Out:  $-0.034 \pm 0.056$   $\chi^2/\text{NDF}: 35.9/29$

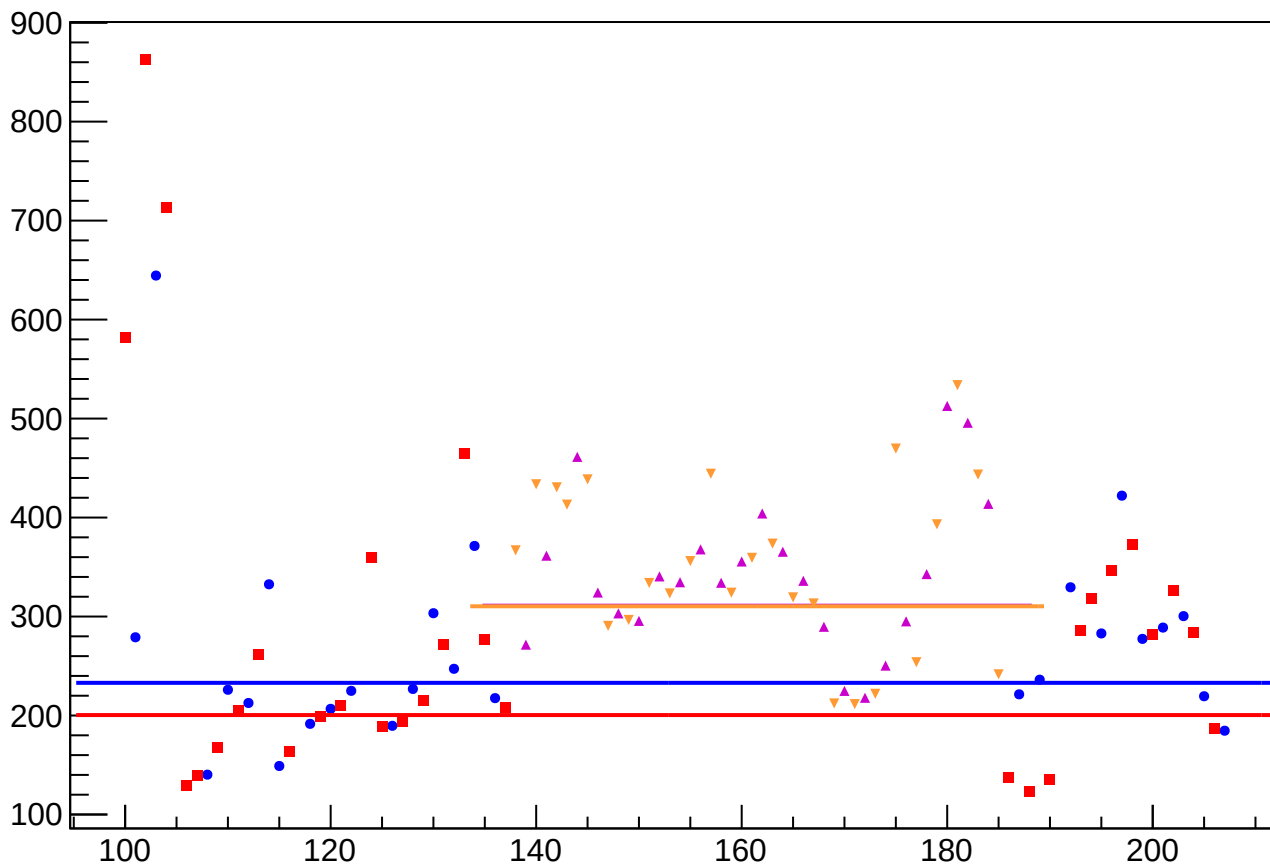
Left In:  $0.103 \pm 0.076$   $\chi^2/\text{NDF}: 32.3/22$

+ sign  $-0.010 \pm 0.049$   $\chi^2/\text{NDF}: 48.4/50$

All:  $0.003 \pm 0.033$   $\chi^2/\text{NDF}: 118.8/103$

- sign  $0.014 \pm 0.045$   $\chi^2/\text{NDF}: 70.2/52$

asym\_usr\_atr2\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 233.022 $\pm$ 0.045  $\chi^2$ /NDF: 2066975.6/25

Left Out: 310.362 $\pm$ 0.053  $\chi^2$ /NDF: 2363148.8/24

Right Out: 200.462 $\pm$ 0.039  $\chi^2$ /NDF: 4337698.2/29

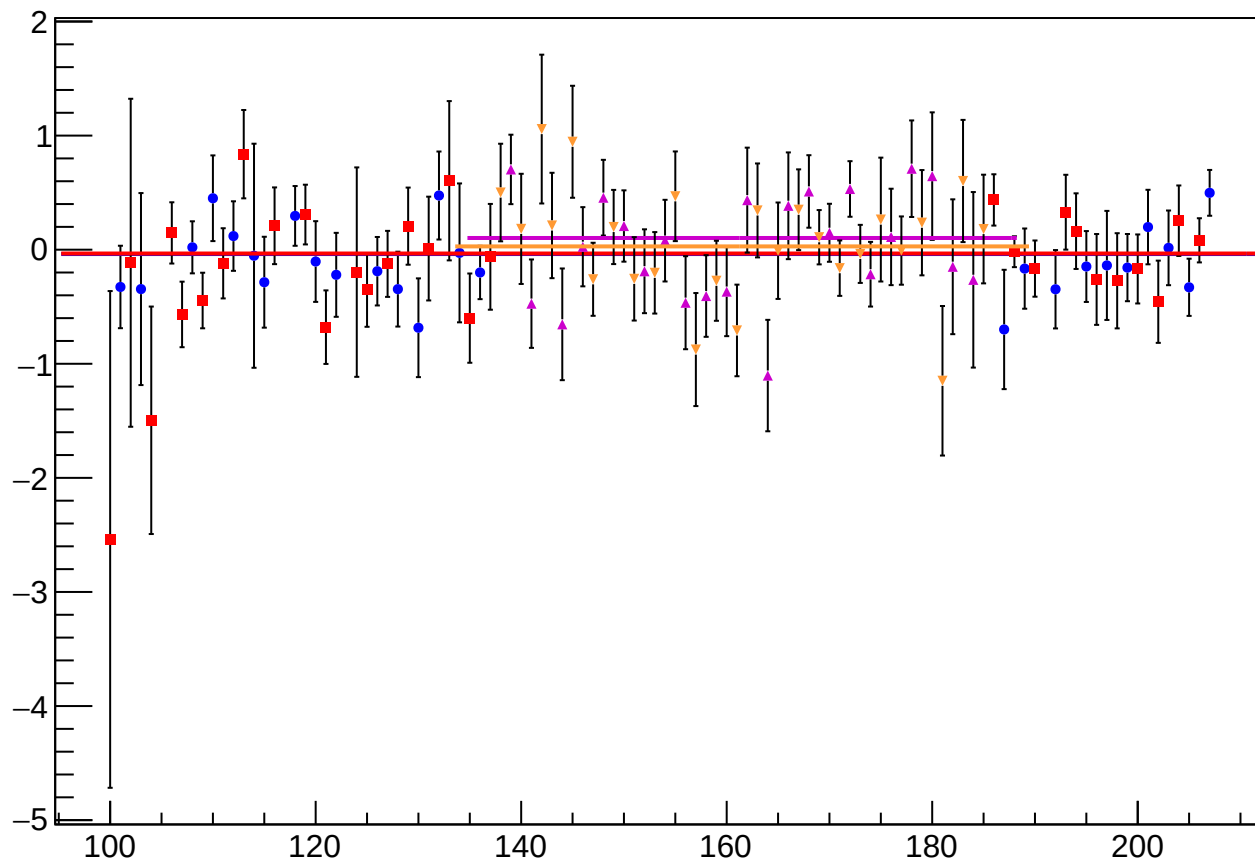
Left In: 310.963 $\pm$ 0.054  $\chi^2$ /NDF: 1600401.1/22

+ sign 265.880 $\pm$ 0.034  $\chi^2$ /NDF: 5664231.2/50

All: 251.374 $\pm$ 0.023  $\chi^2$ /NDF: 14668449.4/10

- sign 238.966 $\pm$ 0.032  $\chi^2$ /NDF: 8674567.0/52

asym\_usr\_atr2\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.038 \pm 0.064$   $\chi^2/\text{NDF}$ : 22.6/25

Left Out:  $0.029 \pm 0.075$   $\chi^2/\text{NDF}$ : 25.3/24

Right Out:  $-0.034 \pm 0.056$   $\chi^2/\text{NDF}$ : 35.9/29

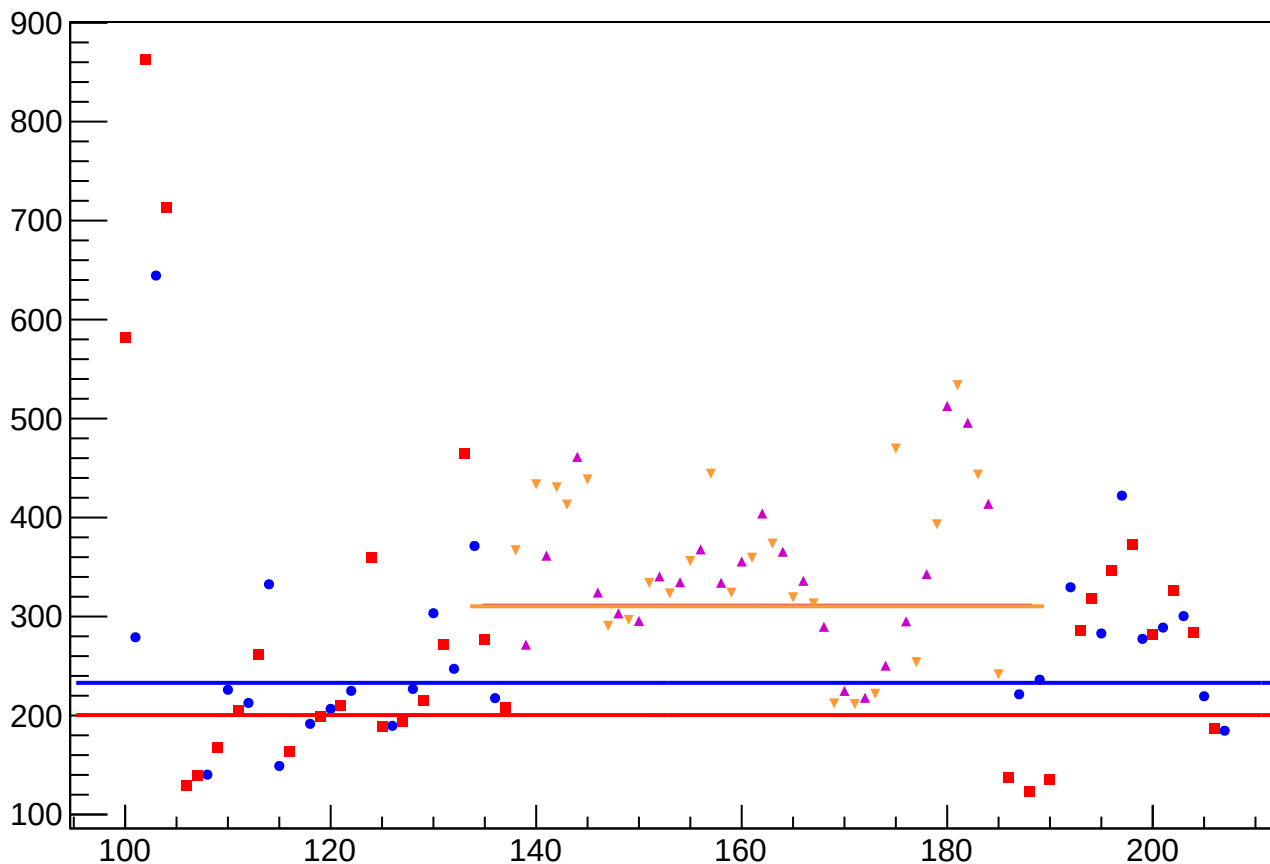
Left In:  $0.103 \pm 0.076$   $\chi^2/\text{NDF}$ : 32.3/22

+ sign  $-0.010 \pm 0.049$   $\chi^2/\text{NDF}$ : 48.4/50

All:  $0.003 \pm 0.033$   $\chi^2/\text{NDF}$ : 118.8/103

- sign  $0.014 \pm 0.045$   $\chi^2/\text{NDF}$ : 70.2/52

asym\_usr\_atr2\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 233.022 $\pm$ 0.045  $\chi^2$ /NDF: 2066975.6/25

Left Out: 310.362 $\pm$ 0.053  $\chi^2$ /NDF: 2363148.8/24

Right Out: 200.462 $\pm$ 0.039  $\chi^2$ /NDF: 4337698.2/29

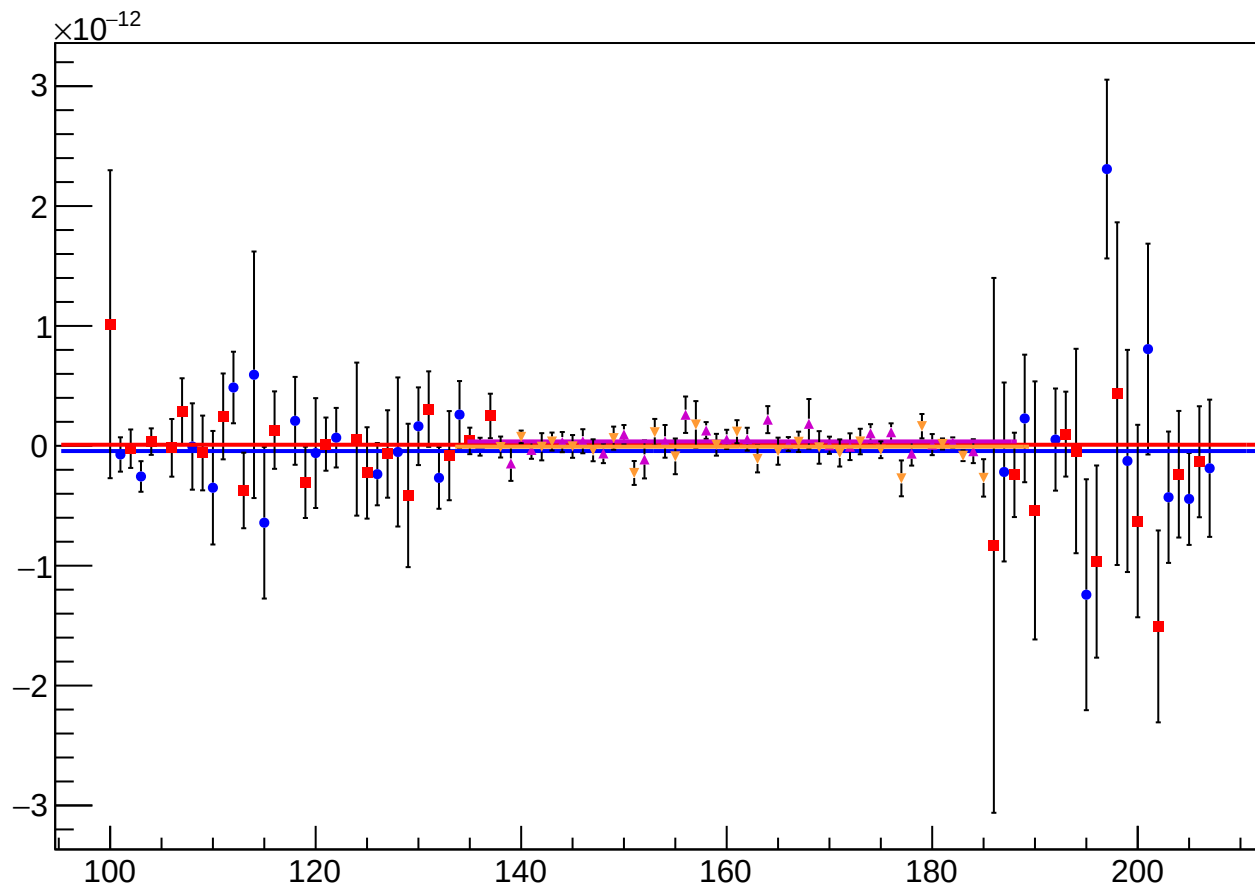
Left In: 310.963 $\pm$ 0.054  $\chi^2$ /NDF: 1600401.1/22

+ sign 265.880 $\pm$ 0.034  $\chi^2$ /NDF: 5664231.2/50

All: 251.374 $\pm$ 0.023  $\chi^2$ /NDF: 14668449.4/10

- sign 238.966 $\pm$ 0.032  $\chi^2$ /NDF: 8674567.0/52

asym\_usr\_atr2\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 25.9/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 25.8/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 15.6/29

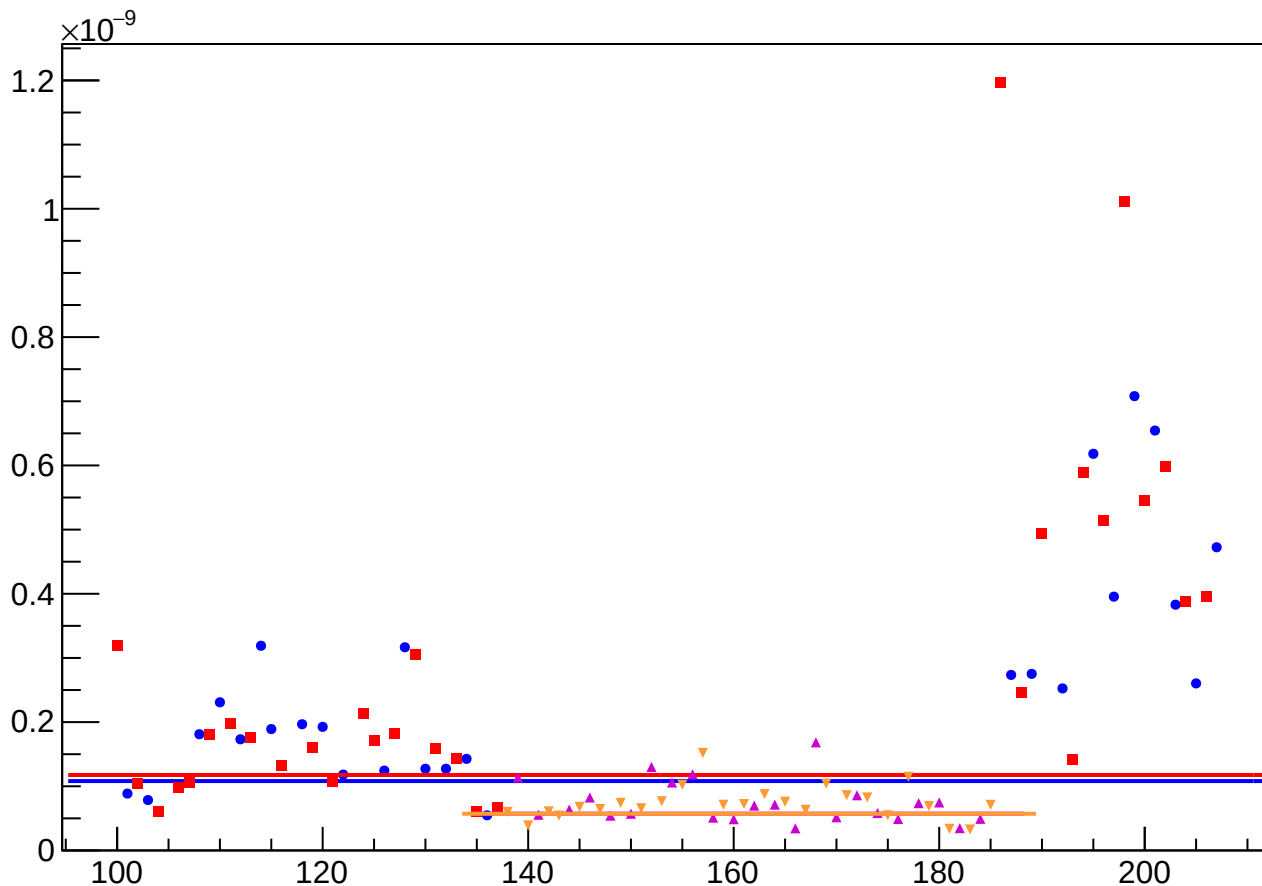
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 16.7/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 52.2/50

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 88.7/103

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 32.6/52

asym\_usr\_atr2\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6690277.9/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3337849.6/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7387498.4/29

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3299416.7/22

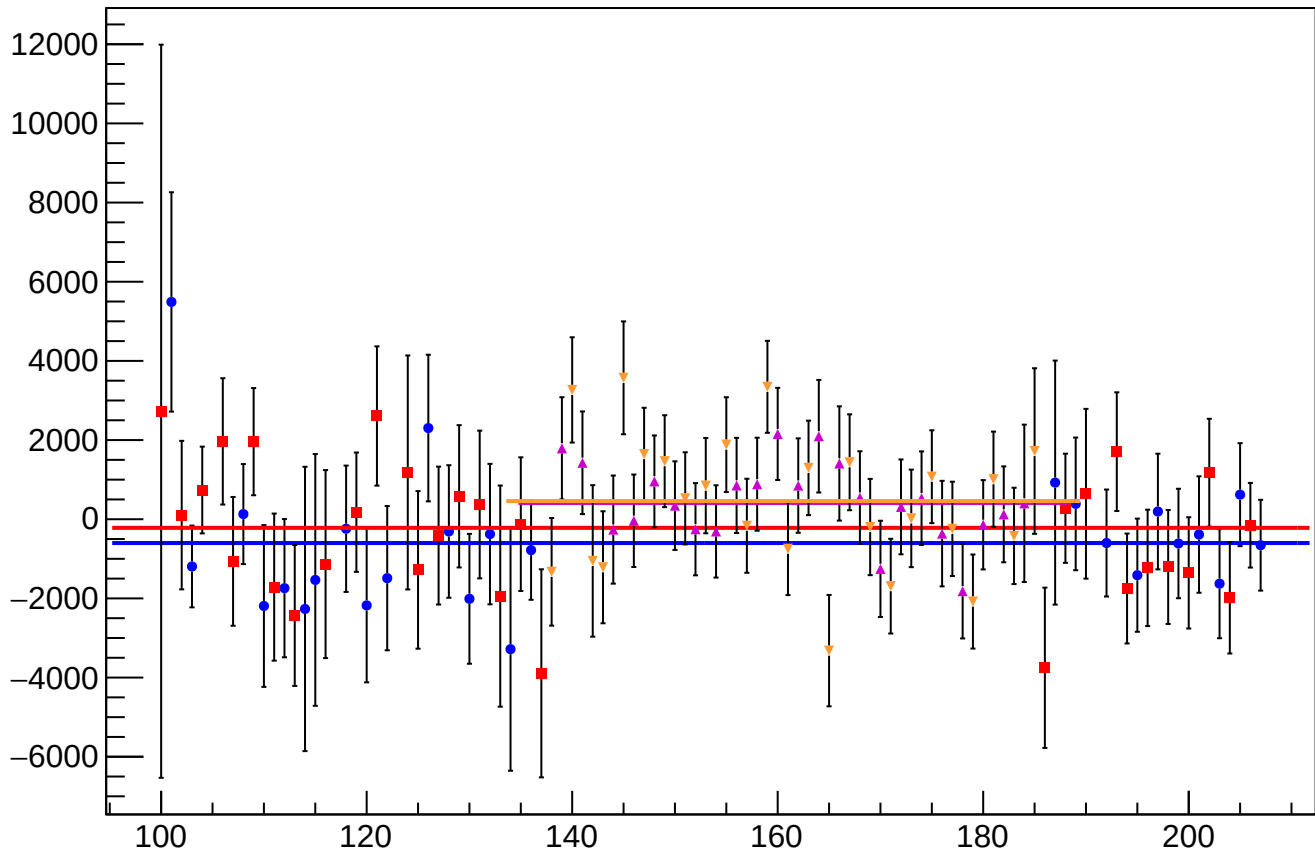
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12010123.5/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 25294798.0/103

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13280383.4/52



# reg\_asym\_usr\_atr2\_dd\_mean vs Slug



Right In:  $-601.129 \pm 311.517$   $\chi^2/\text{NDF}$ : 14.5/25

Left Out:  $458.782 \pm 251.538$   $\chi^2/\text{NDF}$ : 42.1/24

Right Out:  $-217.256 \pm 298.423$   $\chi^2/\text{NDF}$ : 24.2/29

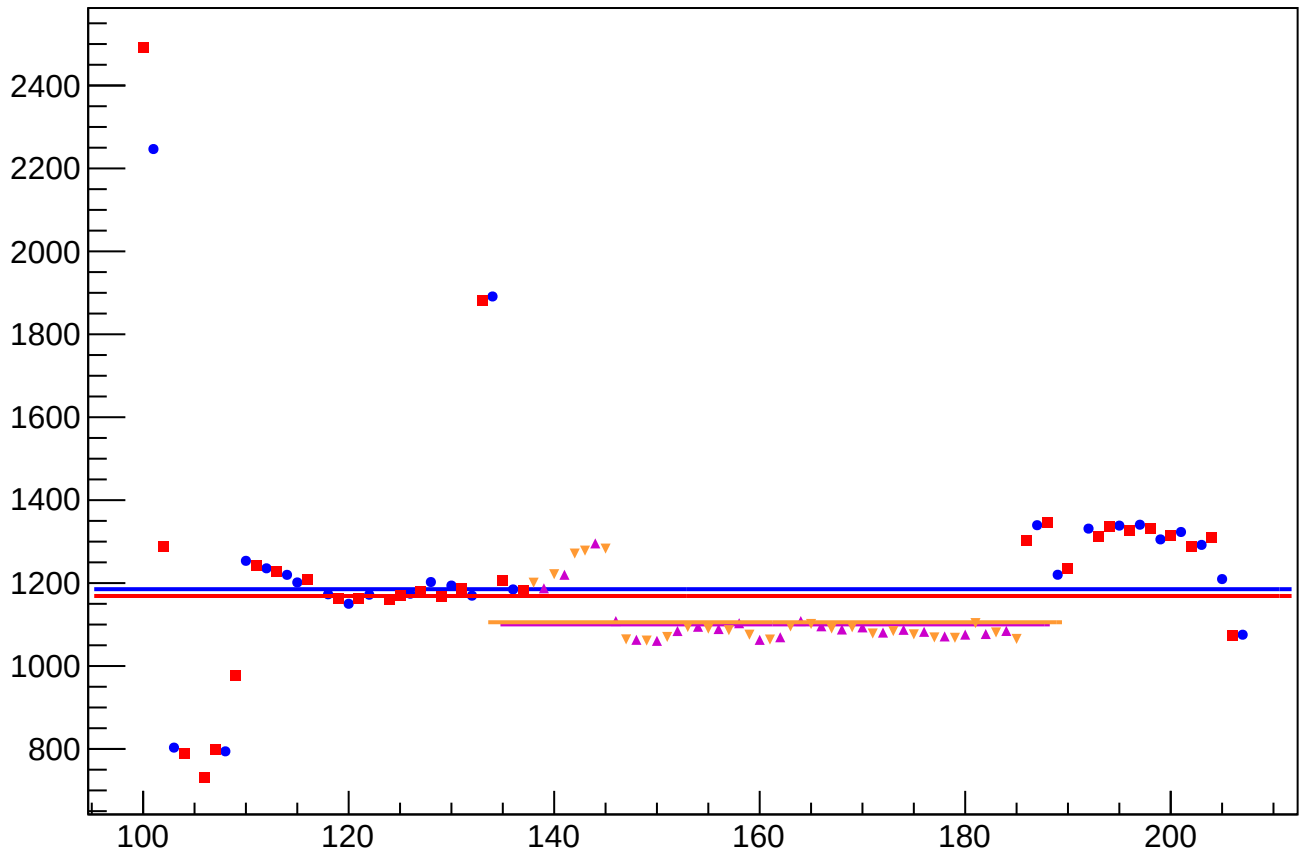
Left In:  $411.262 \pm 257.201$   $\chi^2/\text{NDF}$ : 13.7/22

+ sign  $40.465 \pm 195.704$   $\chi^2/\text{NDF}$ : 63.6/50

All:  $92.153 \pm 138.072$   $\chi^2/\text{NDF}$ : 104.1/103

- sign  $143.378 \pm 194.826$   $\chi^2/\text{NDF}$ : 40.4/52

# reg\_asym\_usr\_atr2\_dd\_rms vs Slug



Right In: 1185.317+/-0.220  $\chi^2/\text{NDF}$ : 1008520.2/25

Left Out: 1105.549+/-0.178  $\chi^2/\text{NDF}$ : 121950.0/24

Right Out: 1168.876+/-0.210  $\chi^2/\text{NDF}$ : 969602.7/29

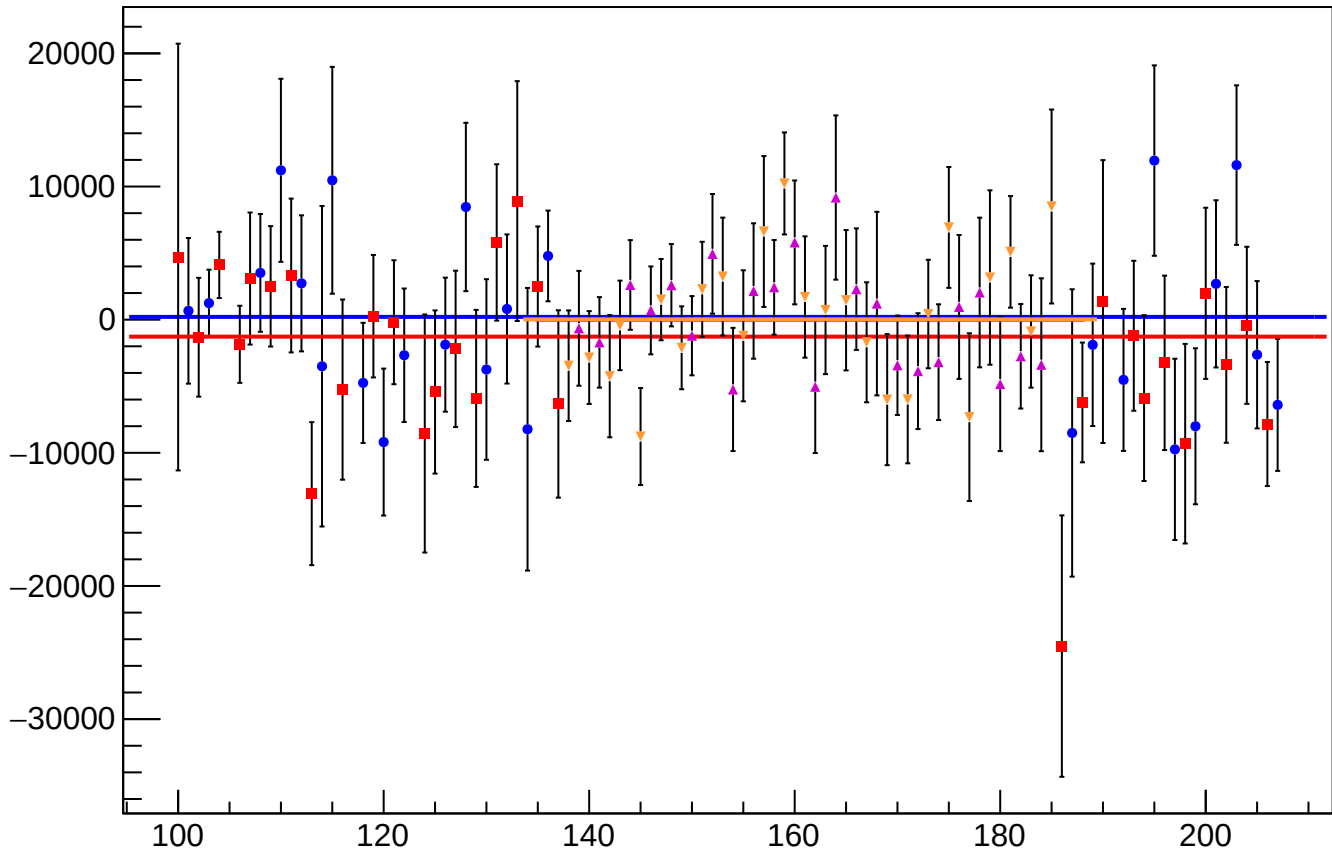
Left In: 1100.350+/-0.182  $\chi^2/\text{NDF}$ : 80240.5/22

+ sign 1137.031+/-0.138  $\chi^2/\text{NDF}$ : 1209851.7/50

All: 1133.344+/-0.098  $\chi^2/\text{NDF}$ : 2321920.4/10

- sign 1129.704+/-0.138  $\chi^2/\text{NDF}$ : 1110658.0/52

asym\_usr\_atr2\_dd\_reg\_correction\_mean vs Slug



Right In: 209.398 $\pm$ 1039.483  $\chi^2$ /NDF: 28.4/25

Left Out: 23.368 $\pm$ 850.404  $\chi^2$ /NDF:28.5/24

Right Out: -1273.962 $\pm$ 952.916  $\chi^2$ /NDF: 28.9/29

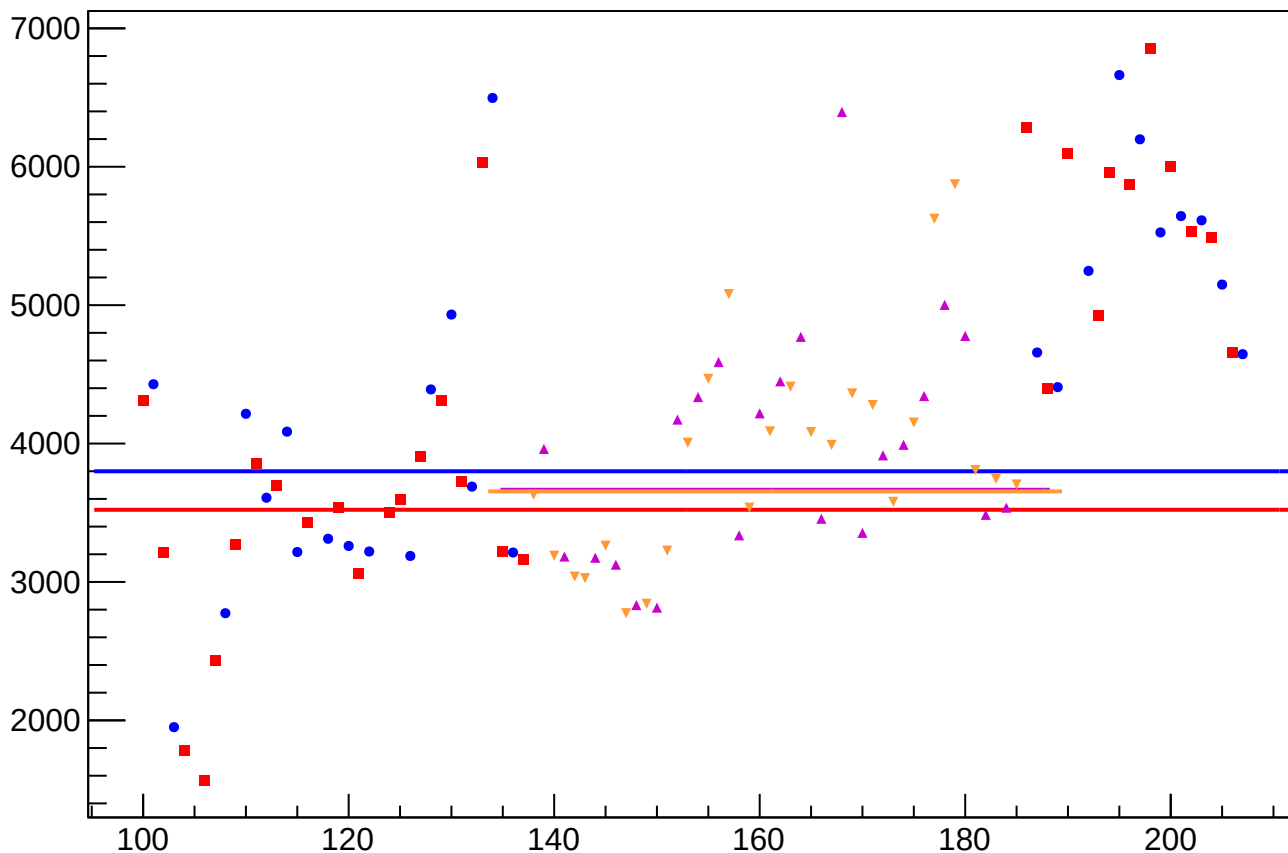
Left In: -6.317 $\pm$ 875.256  $\chi^2$ /NDF:14.0/22

+ sign 97.956 $\pm$ 658.202  $\chi^2$ /NDF: 56.9/50

All: -251.355 $\pm$ 460.538  $\chi^2$ /NDF: 101.3/103

- sign -586.387 $\pm$ 644.609  $\chi^2$ /NDF: 43.9/52

# asym\_usr\_atr2\_dd\_reg\_correction\_rms vs Slug



Right In: 3799.545 $\pm$ 0.735  $\chi^2/\text{NDF}$ : 3053945.8/25

Left Out: 3654.198 $\pm$ 0.601  $\chi^2/\text{NDF}$ :1311761.6/24

Right Out: 3521.589 $\pm$ 0.674  $\chi^2/\text{NDF}$ : 4555682.8/29

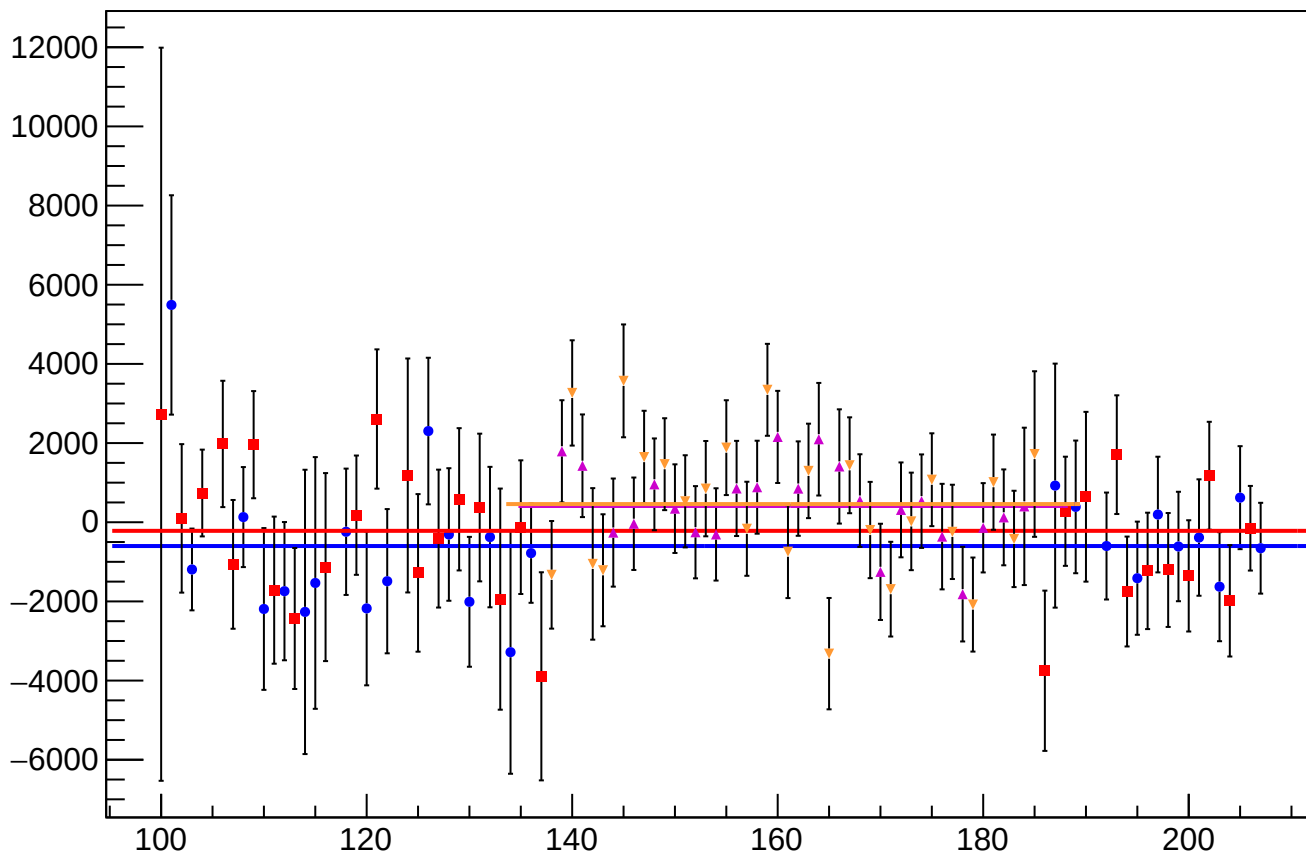
Left In: 3666.118 $\pm$ 0.619  $\chi^2/\text{NDF}$ :1343709.3/22

+ sign 3712.474 $\pm$ 0.465  $\chi^2/\text{NDF}$ : 4389132.3/50

All: 3655.054 $\pm$ 0.326  $\chi^2/\text{NDF}$ : 10343298.2/100

- sign 3599.982 $\pm$ 0.456  $\chi^2/\text{NDF}$ : 5924346.8/52

# cor\_asym\_usr\_atr2\_dd\_mean vs Slug



Right In: -601.149+/-311.517  $\chi^2/\text{NDF}$ : 14.5/25

Left Out: 458.844+/-251.538  $\chi^2/\text{NDF}$ : 42.1/24

Right Out: -217.098+/-298.425  $\chi^2/\text{NDF}$ : 24.2/29

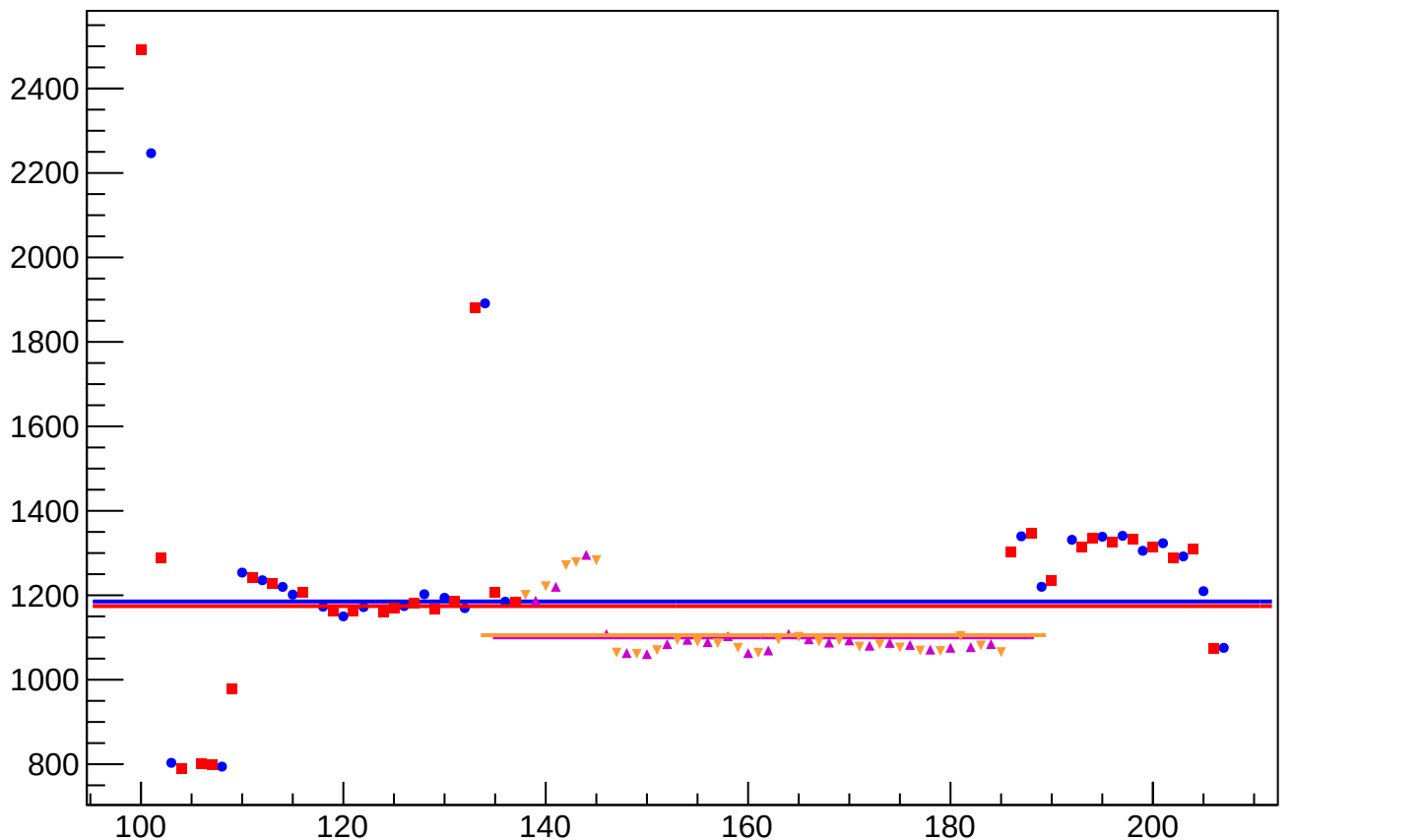
Left In: 411.165+/-257.201  $\chi^2/\text{NDF}$ : 13.7/22

+ sign 40.495+/-195.704  $\chi^2/\text{NDF}$ : 63.6/50

All: 92.174+/-138.072  $\chi^2/\text{NDF}$ : 104.1/103

- sign 143.391+/-194.826  $\chi^2/\text{NDF}$ : 40.4/52

# cor\_asym\_usr\_atr2\_dd\_rms vs Slug



Right In: 1185.318 $\pm$ 0.220  $\chi^2$ /NDF: 1008515.8/25

Left Out: 1105.549 $\pm$ 0.178  $\chi^2$ /NDF:121950.0/24

Right Out: 1174.405 $\pm$ 0.211  $\chi^2$ /NDF: 893237.1/29

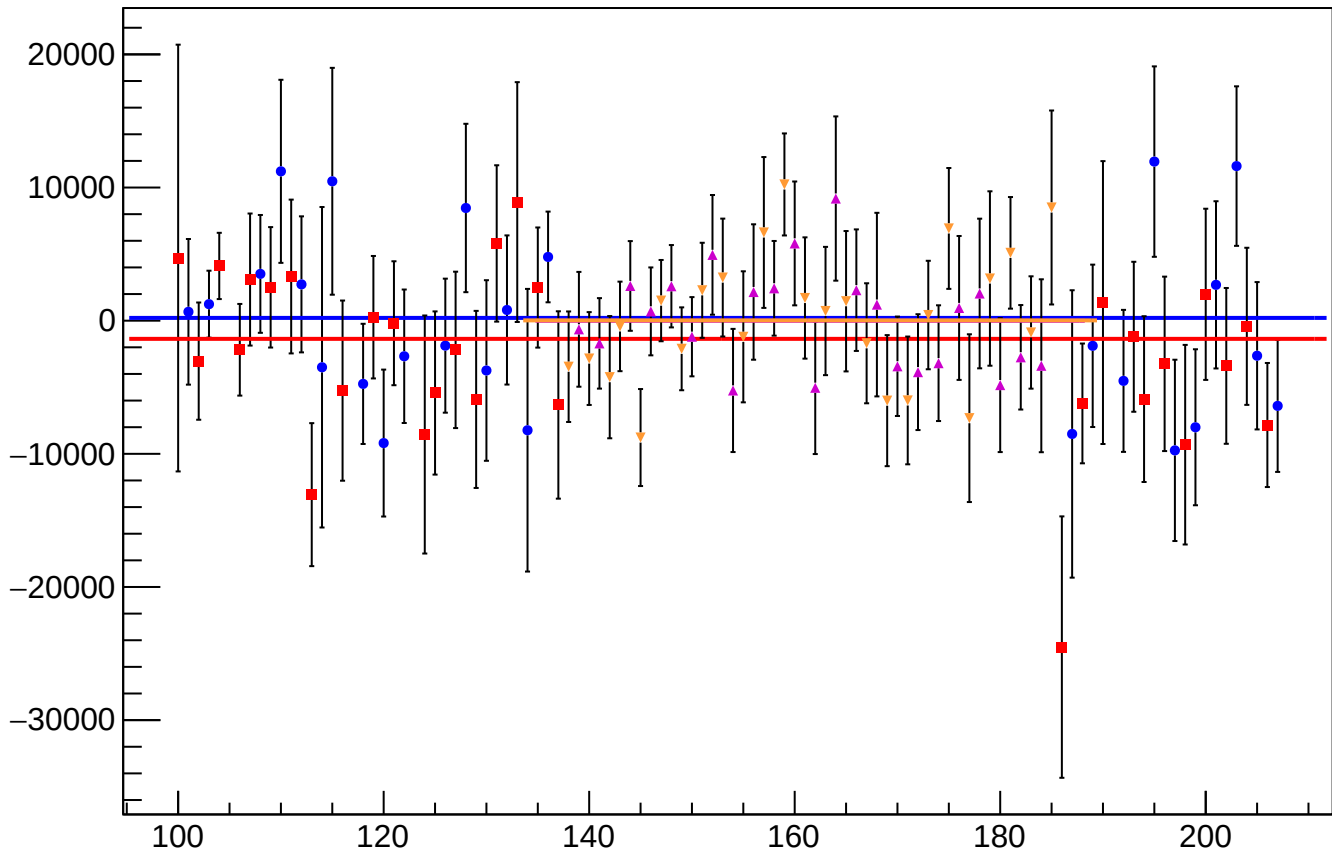
Left In: 1100.350 $\pm$ 0.182  $\chi^2$ /NDF:80240.5/22

+ sign 1137.031 $\pm$ 0.138  $\chi^2$ /NDF: 1209847.9/50

All: 1134.478 $\pm$ 0.098  $\chi^2$ /NDF: 2254754.0/100

- sign 1131.950 $\pm$ 0.138  $\chi^2$ /NDF: 1044228.6/52

# asym\_usr\_atr2\_dd\_cor\_correction\_mean vs Slug



Right In: 208.961 $\pm$ 1039.512  $\chi^2$ /NDF: 28.4/25

Left Out: 23.365 $\pm$ 850.403  $\chi^2$ /NDF:28.5/24

Right Out: -1364.796 $\pm$ 967.809  $\chi^2$ /NDF: 29.1/29

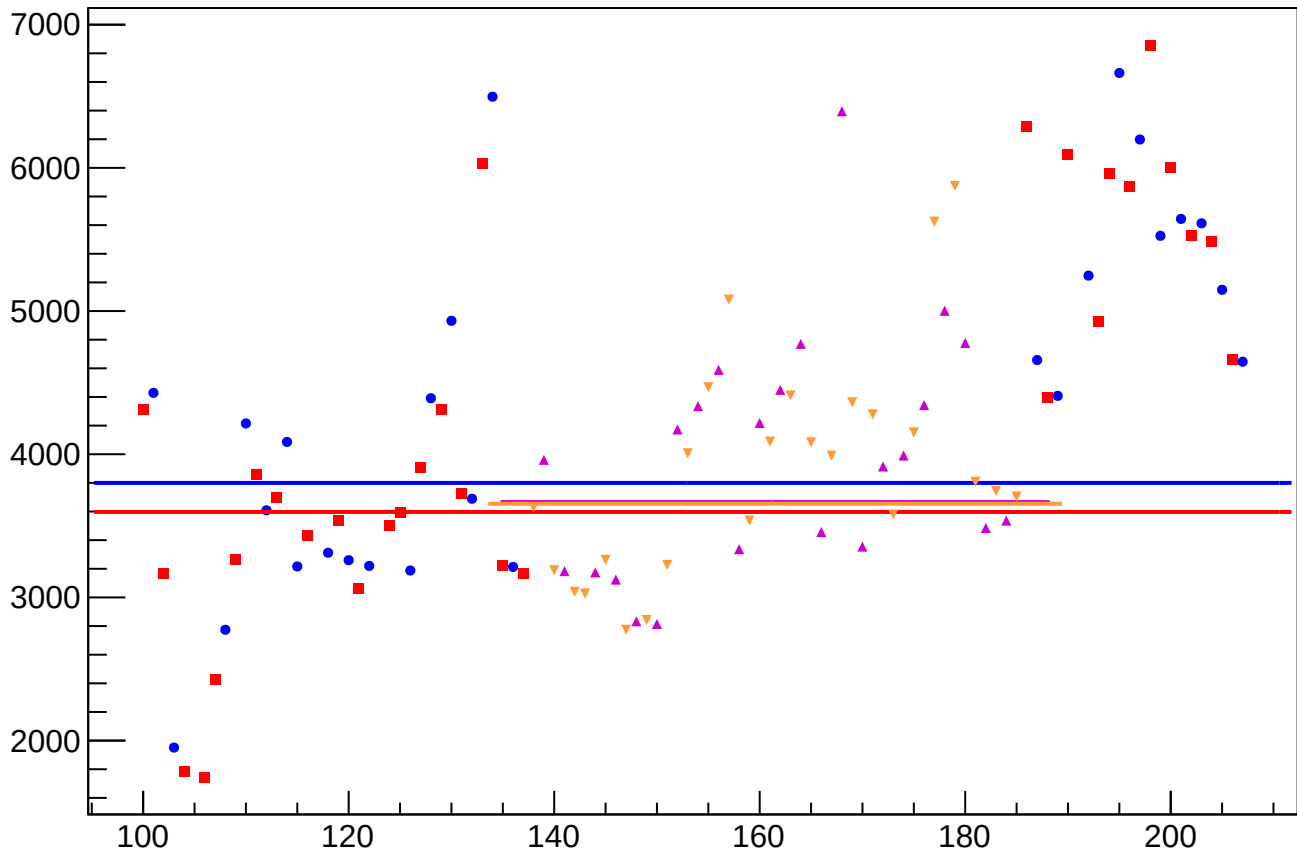
Left In: -6.368 $\pm$ 875.255  $\chi^2$ /NDF:14.0/22

+ sign 97.776 $\pm$ 658.209  $\chi^2$ /NDF: 56.9/50

All: -264.831 $\pm$ 462.192  $\chi^2$ /NDF: 101.7/103

- sign -617.537 $\pm$ 649.160  $\chi^2$ /NDF: 44.2/52

# asym\_usr\_atr2\_dd\_cor\_correction\_rms vs Slug



Right In: 3799.711 $\pm$ 0.735  $\chi^2/\text{NDF}$ : 3053160.9/25

Left Out: 3654.195 $\pm$ 0.601  $\chi^2/\text{NDF}$ :1311769.4/24

Right Out: 3596.823 $\pm$ 0.684  $\chi^2/\text{NDF}$ : 4167809.1/29

Left In: 3666.114 $\pm$ 0.619  $\chi^2/\text{NDF}$ :1343711.6/22

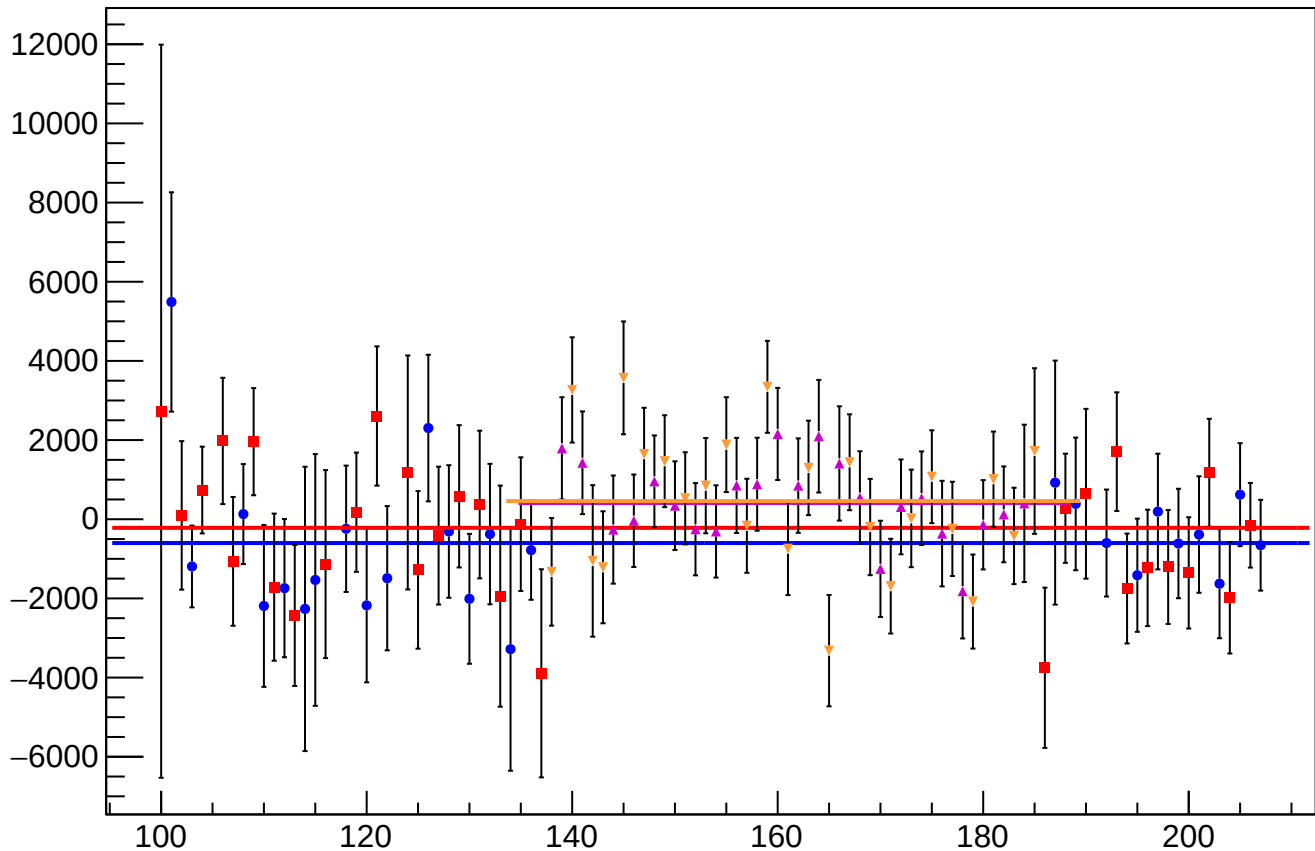
+ sign 3712.537 $\pm$ 0.465  $\chi^2/\text{NDF}$ : 4388408.9/50

All: 3673.201 $\pm$ 0.327  $\chi^2/\text{NDF}$ : 9919660.0/10

- sign 3634.939 $\pm$ 0.459  $\chi^2/\text{NDF}$ : 5517160.2/52



# eigen\_cor\_asym\_usr\_atr2\_dd\_mean vs Slug



Right In:  $-601.149 \pm 311.517$   $\chi^2/\text{NDF}$ : 14.5/25

Left Out:  $458.844 \pm 251.538$   $\chi^2/\text{NDF}$ : 42.1/24

Right Out:  $-217.098 \pm 298.425$   $\chi^2/\text{NDF}$ : 24.2/29

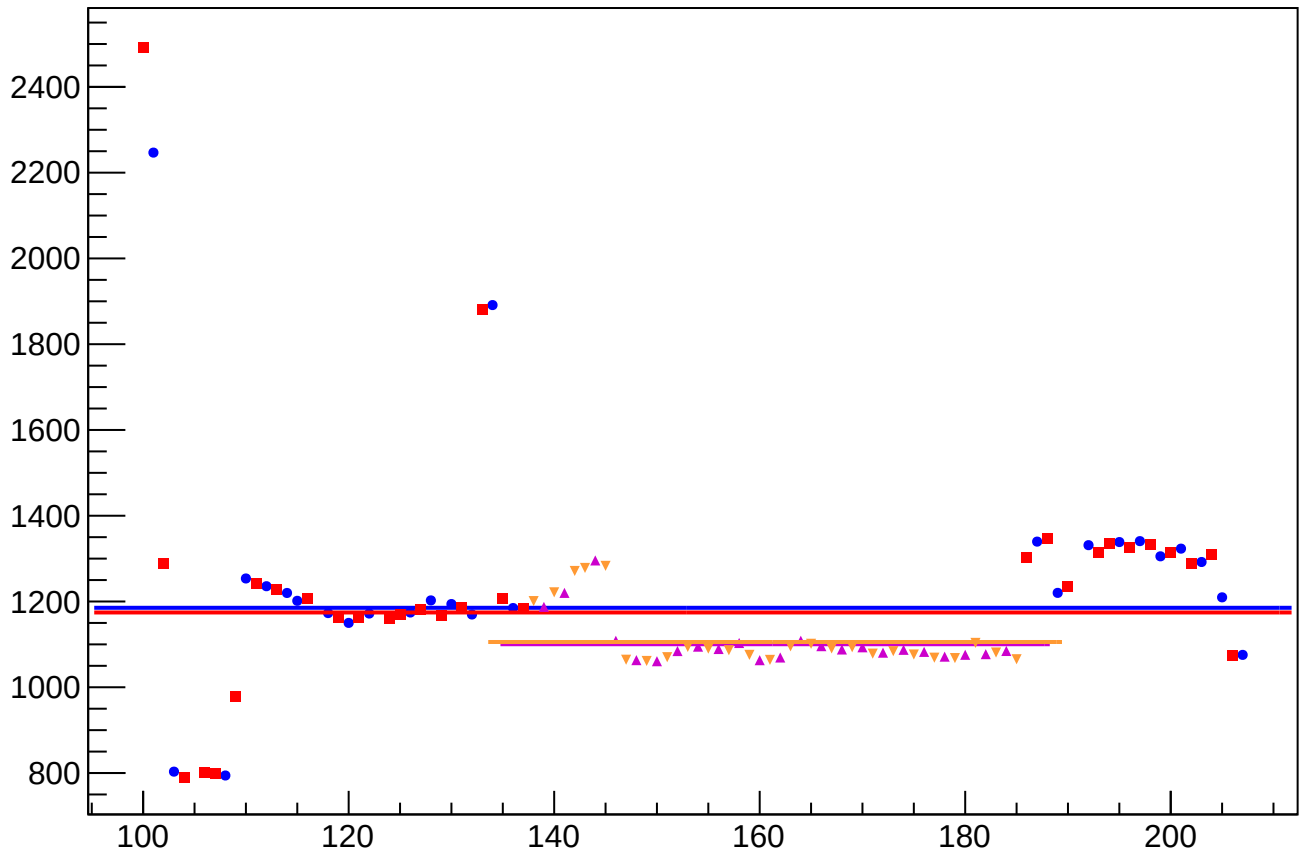
Left In:  $411.165 \pm 257.201$   $\chi^2/\text{NDF}$ : 13.7/22

+ sign  $40.495 \pm 195.704$   $\chi^2/\text{NDF}$ : 63.6/50

All:  $92.174 \pm 138.072$   $\chi^2/\text{NDF}$ : 104.1/103

- sign  $143.391 \pm 194.826$   $\chi^2/\text{NDF}$ : 40.4/52

# eigen\_cor\_asym\_usr\_atr2\_dd\_rms vs Slug



Right In: 1185.318 $\pm$ 0.220  $\chi^2$ /NDF: 1008515.8/25

Left Out: 1105.549 $\pm$ 0.178  $\chi^2$ /NDF:121950.0/24

Right Out: 1174.405 $\pm$ 0.211  $\chi^2$ /NDF: 893237.1/29

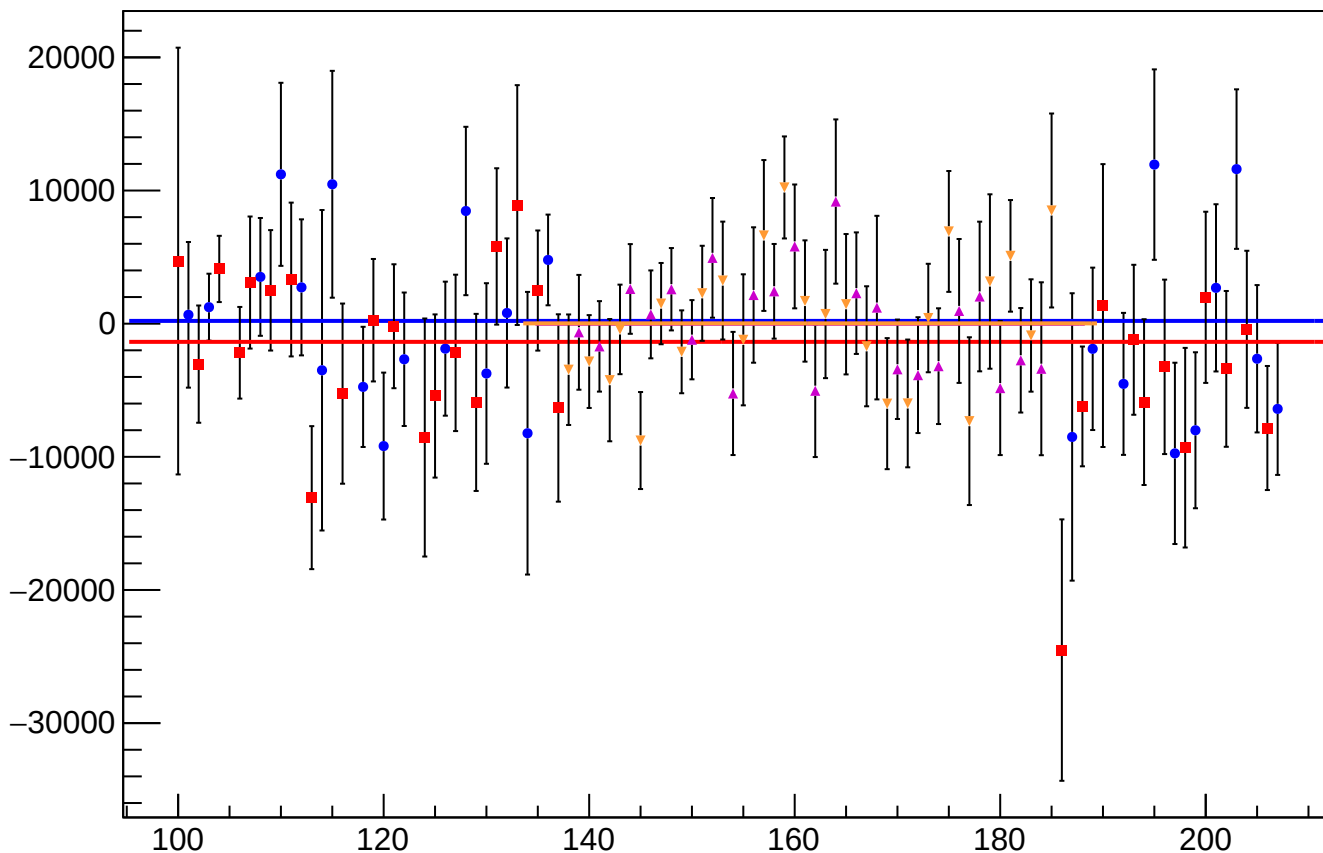
Left In: 1100.350 $\pm$ 0.182  $\chi^2$ /NDF:80240.5/22

+ sign 1137.031 $\pm$ 0.138  $\chi^2$ /NDF: 1209847.9/50

All: 1134.478 $\pm$ 0.098  $\chi^2$ /NDF: 2254754.0/10

- sign 1131.950 $\pm$ 0.138  $\chi^2$ /NDF: 1044228.6/52

asym\_usr\_atr2\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In: 208.961 $\pm$ 1039.512  $\chi^2$ /NDF: 28.4/25

Left Out: 23.365 $\pm$ 850.403  $\chi^2$ /NDF:28.5/24

Right Out: -1364.796 $\pm$ 967.809  $\chi^2$ /NDF: 29.1/29

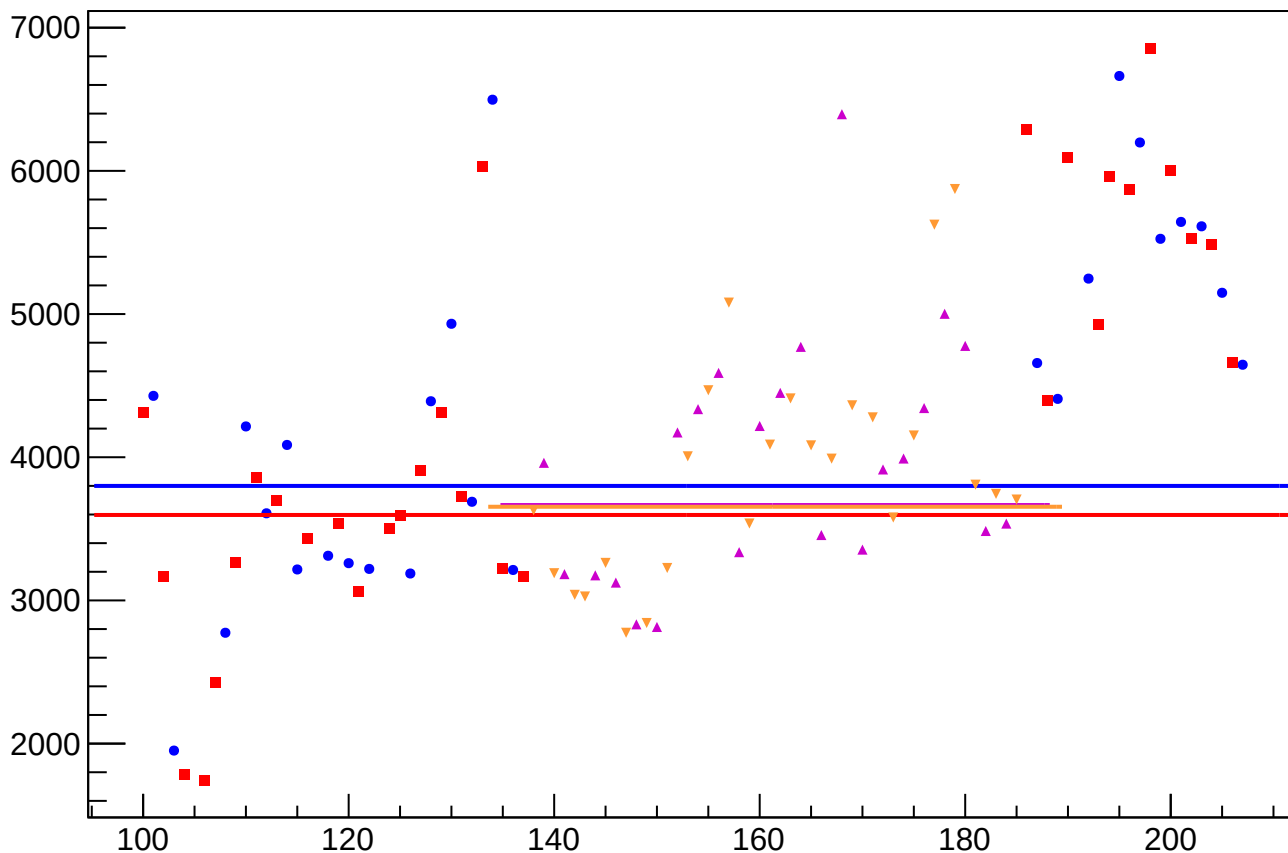
Left In: -6.368 $\pm$ 875.255  $\chi^2$ /NDF:14.0/22

+ sign 97.776 $\pm$ 658.209  $\chi^2$ /NDF: 56.9/50

All: -264.831 $\pm$ 462.192  $\chi^2$ /NDF: 101.7/103

- sign -617.537 $\pm$ 649.160  $\chi^2$ /NDF: 44.2/52

asym\_usr\_atr2\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 3799.711 $\pm$ 0.735  $\chi^2/\text{NDF}$ : 3053160.9/25

Left Out: 3654.195 $\pm$ 0.601  $\chi^2/\text{NDF}$ : 1311769.4/24

Right Out: 3596.823 $\pm$ 0.684  $\chi^2/\text{NDF}$ : 4167809.1/29

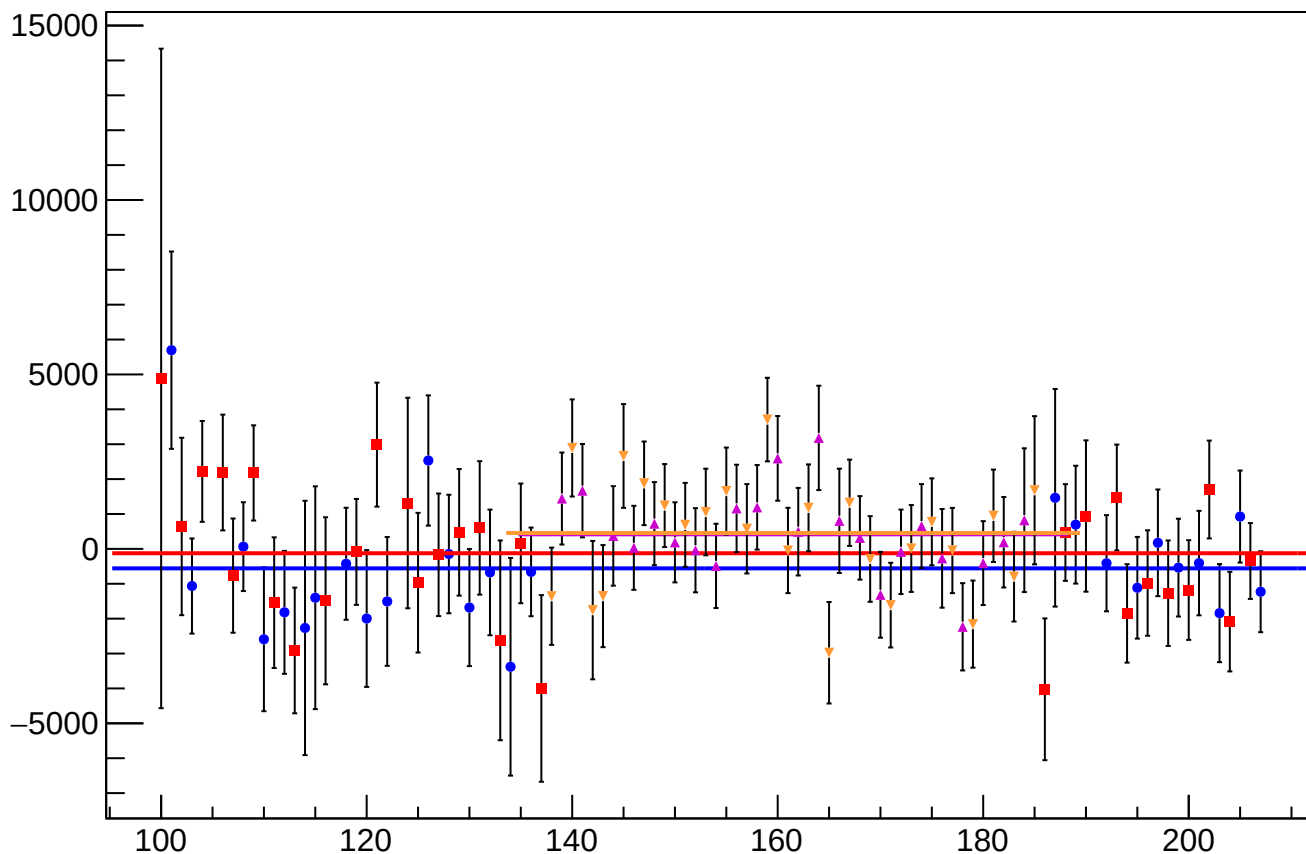
Left In: 3666.114 $\pm$ 0.619  $\chi^2/\text{NDF}$ : 1343711.6/22

+ sign 3712.537 $\pm$ 0.465  $\chi^2/\text{NDF}$ : 4388408.9/50

All: 3673.201 $\pm$ 0.327  $\chi^2/\text{NDF}$ : 9919660.0/100

- sign 3634.939 $\pm$ 0.459  $\chi^2/\text{NDF}$ : 5517160.2/52

# dit\_asym\_usr\_atr2\_dd\_mean vs Slug



Right In:  $-558.319 \pm 322.242$   $\chi^2/\text{NDF}$ : 15.7/25

Left Out:  $455.711 \pm 261.005$   $\chi^2/\text{NDF}$ : 36.1/24

Right Out:  $-124.411 \pm 309.772$   $\chi^2/\text{NDF}$ : 29.6/29

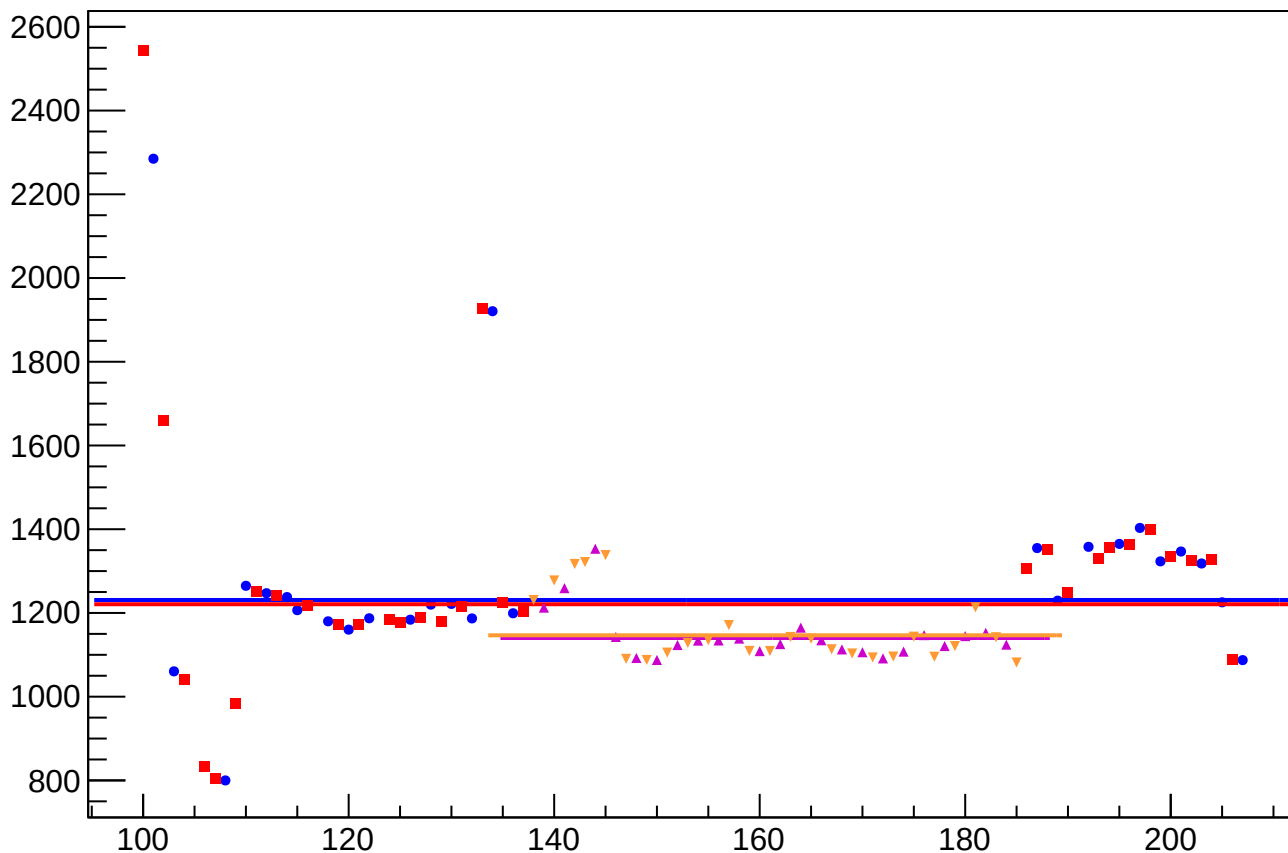
Left In:  $417.202 \pm 266.582$   $\chi^2/\text{NDF}$ : 17.3/22

+ sign  $54.001 \pm 202.821$   $\chi^2/\text{NDF}$ : 57.9/50

All:  $120.627 \pm 143.147$   $\chi^2/\text{NDF}$ : 106.8/103

- sign  $186.755 \pm 202.061$   $\chi^2/\text{NDF}$ : 48.7/52

# dit\_asym\_usr\_atr2\_dd\_rms vs Slug



Right In: 1230.963 $\pm$ 0.228  $\chi^2$ /NDF: 768180.4/25

Left Out: 1146.614 $\pm$ 0.185  $\chi^2$ /NDF:141015.8/24

Right Out: 1220.816 $\pm$ 0.219  $\chi^2$ /NDF: 720853.4/29

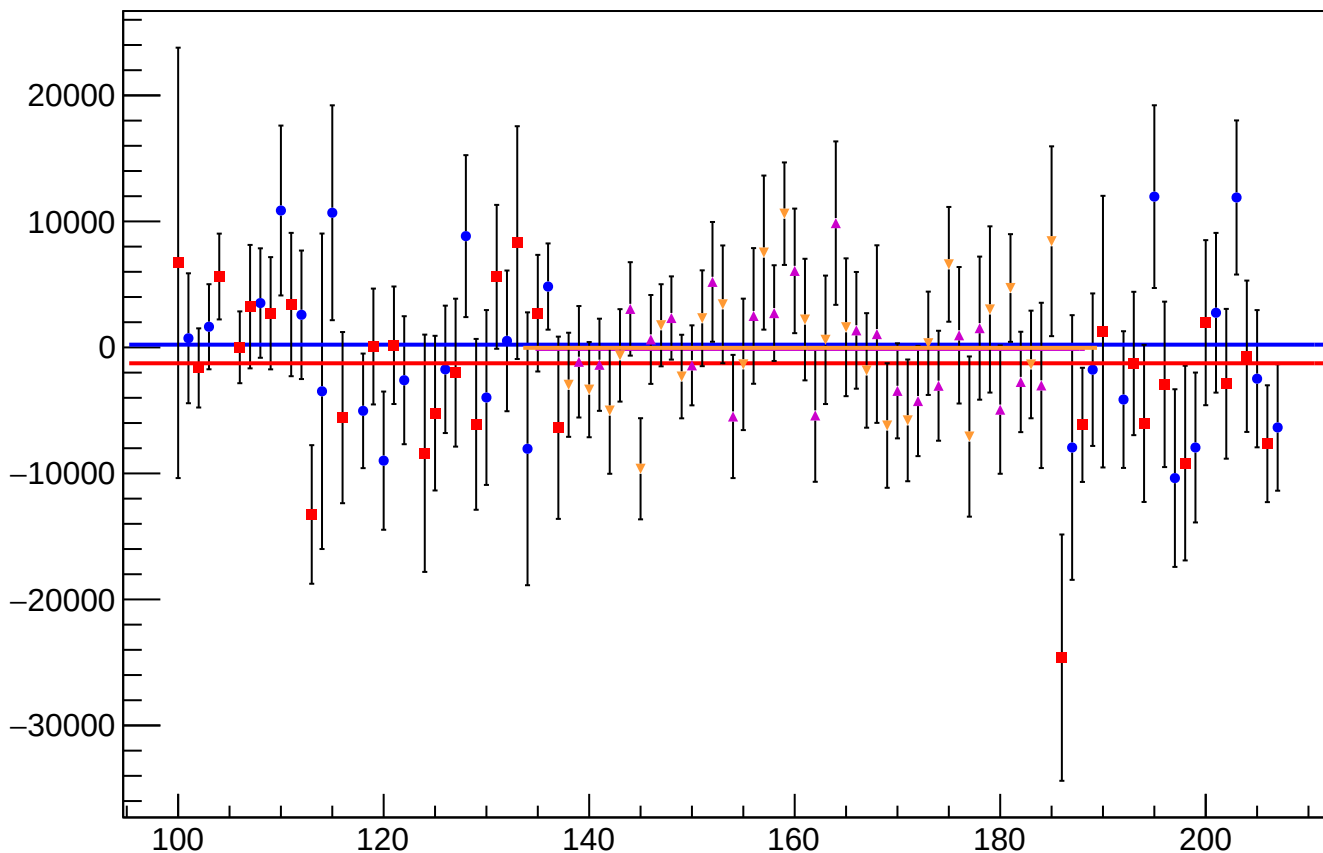
Left In: 1140.168 $\pm$ 0.189  $\chi^2$ /NDF:84737.4/22

+ sign 1180.029 $\pm$ 0.143  $\chi^2$ /NDF: 991944.1/50

All: 1177.250 $\pm$ 0.101  $\chi^2$ /NDF: 1876186.3/10

- sign 1174.492 $\pm$ 0.143  $\chi^2$ /NDF: 883494.0/52

# asym\_usr\_atr2\_dd\_dit\_correction\_mean vs Slug



Right In:  $218.453 \pm 1083.179$   $\chi^2/\text{NDF}$ : 28.1/25

Left Out:  $-33.549 \pm 891.370$   $\chi^2/\text{NDF}$ : 27.8/24

Right Out:  $-1258.950 \pm 965.665$   $\chi^2/\text{NDF}$ : 28.3/29

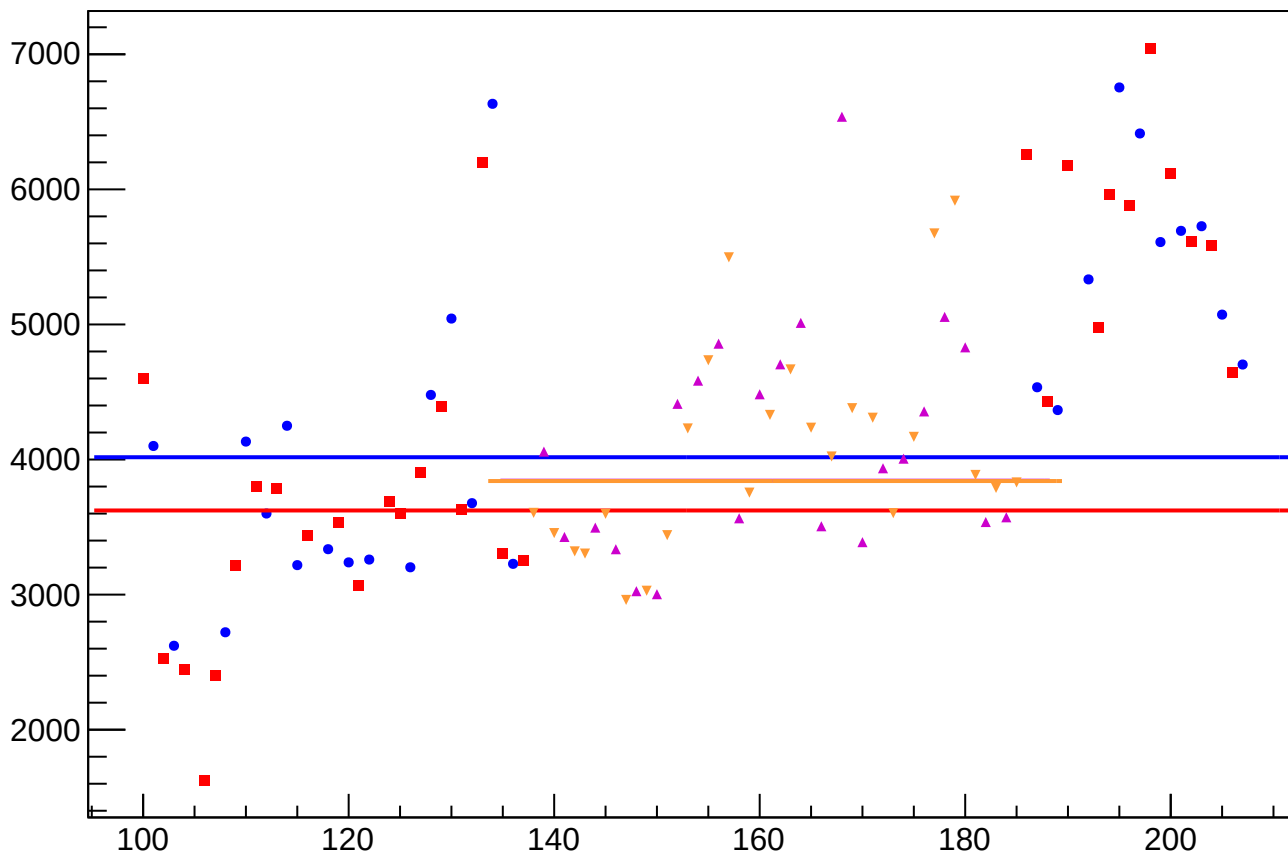
Left In:  $-121.051 \pm 915.714$   $\chi^2/\text{NDF}$ : 13.8/22

+ sign  $68.201 \pm 688.281$   $\chi^2/\text{NDF}$ : 55.9/50

All:  $-308.618 \pm 478.046$   $\chi^2/\text{NDF}$ : 99.3/103

- sign  $-659.811 \pm 664.465$   $\chi^2/\text{NDF}$ : 42.8/52

# asym\_usr\_atr2\_dd\_dit\_correction\_rms vs Slug



Right In: 4017.067 $\pm$ 0.766  $\chi^2/\text{NDF}$ : 2216678.9/25

Left Out: 3840.830 $\pm$ 0.630  $\chi^2/\text{NDF}$ : 1118666.6/24

Right Out: 3622.944 $\pm$ 0.683  $\chi^2/\text{NDF}$ : 4023235.1/29

Left In: 3843.328 $\pm$ 0.648  $\chi^2/\text{NDF}$ : 1196057.8/22

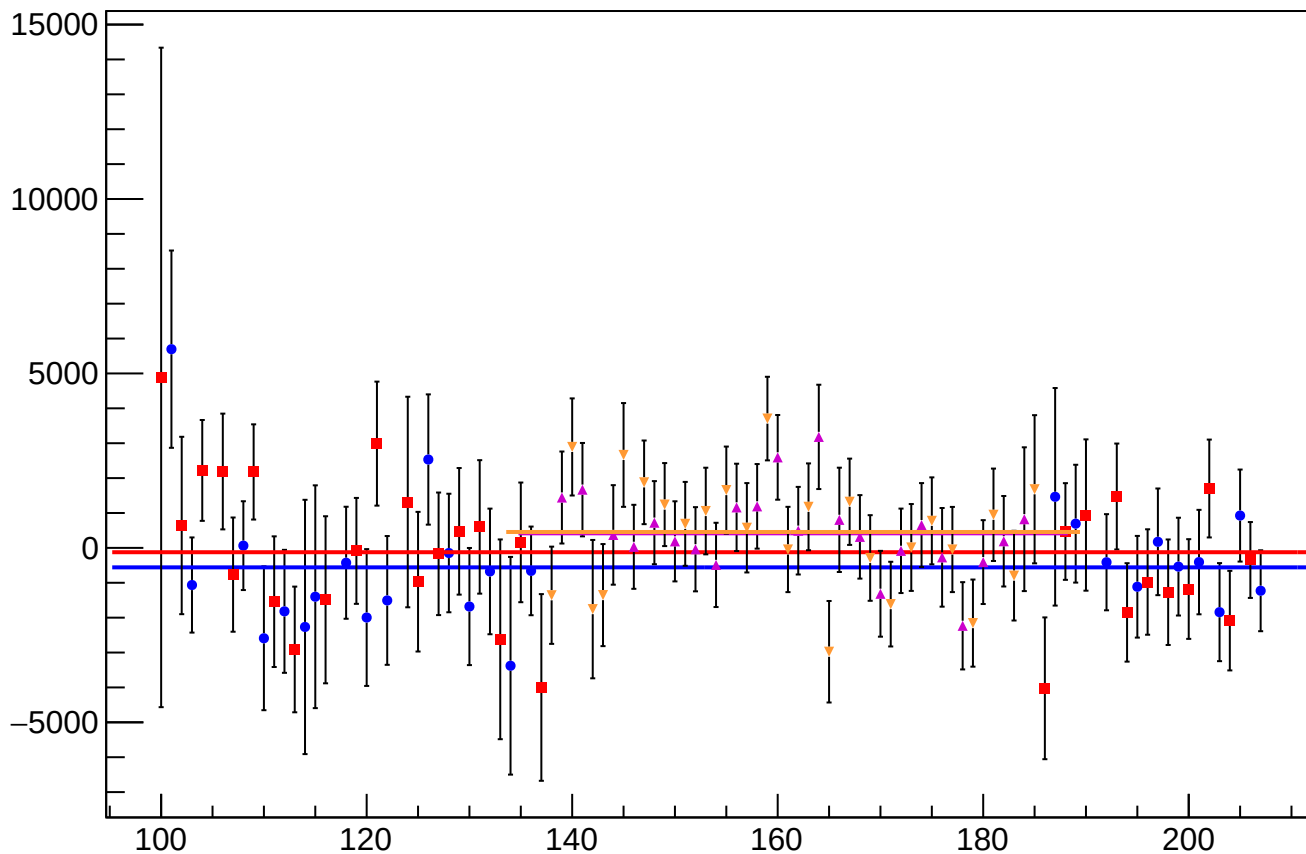
+ sign 3911.989 $\pm$ 0.487  $\chi^2/\text{NDF}$ : 3366912.9/50

All: 3822.441 $\pm$ 0.338  $\chi^2/\text{NDF}$ : 8706459.7/10

- sign 3738.983 $\pm$ 0.470  $\chi^2/\text{NDF}$ : 5274141.1/52



# eigen\_dit\_asym\_usr\_atr2\_dd\_mean vs Slug



Right In: -558.318 $\pm$ 322.242  $\chi^2/\text{NDF}$ : 15.7/25

Left Out: 455.716 $\pm$ 261.006  $\chi^2/\text{NDF}$ : 36.1/24

Right Out: -124.409 $\pm$ 309.772  $\chi^2/\text{NDF}$ : 29.6/29

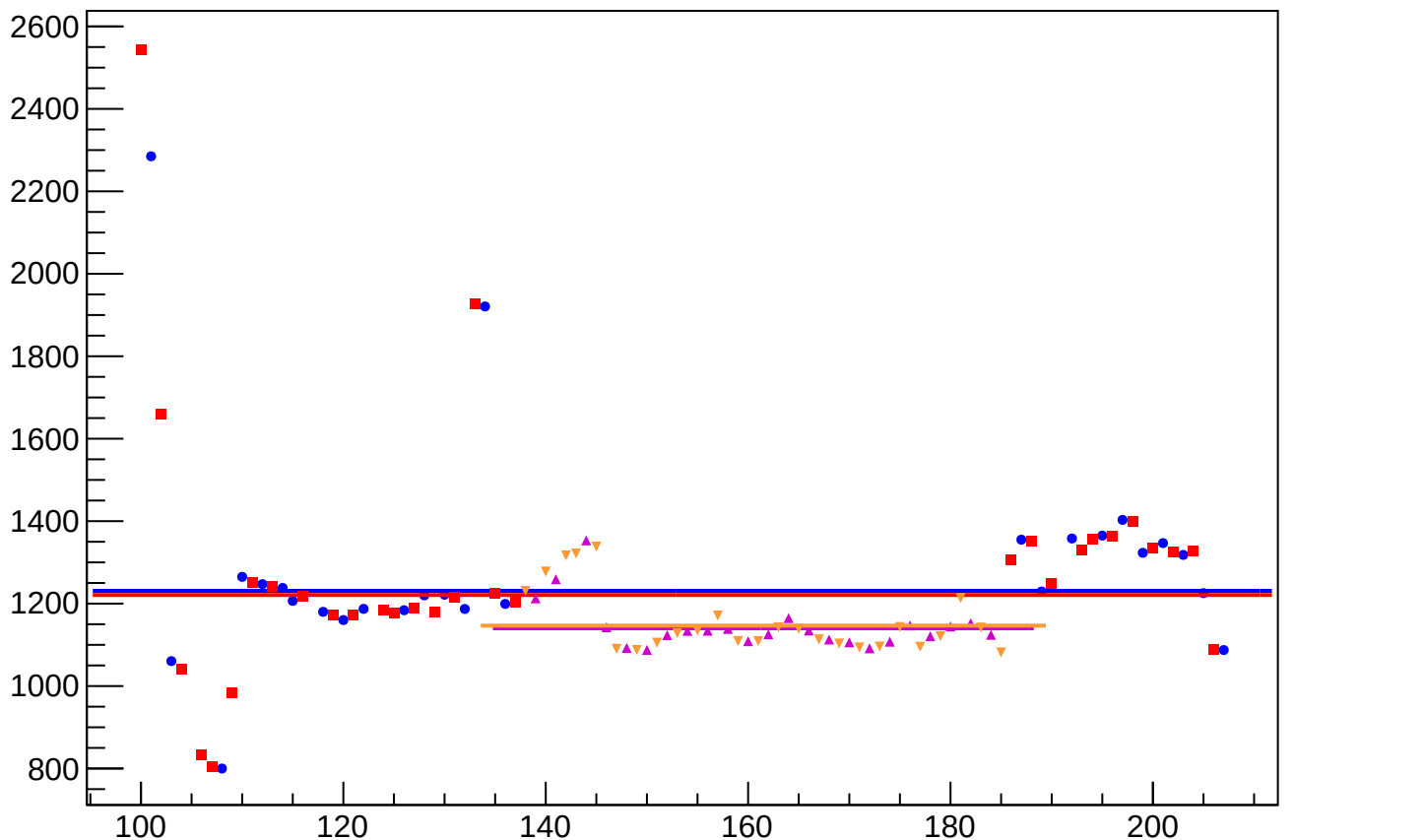
Left In: 417.201 $\pm$ 266.583  $\chi^2/\text{NDF}$ : 17.3/22

+ sign 54.004 $\pm$ 202.821  $\chi^2/\text{NDF}$ : 57.9/50

All: 120.628 $\pm$ 143.147  $\chi^2/\text{NDF}$ : 106.8/103

- sign 186.755 $\pm$ 202.061  $\chi^2/\text{NDF}$ : 48.7/52

eigen\_dit\_asym\_usr\_atr2\_dd\_rms vs Slug



Right In: 1230.963 $\pm$ 0.228  $\chi^2$ /NDF: 768181.1/25

Left Out: 1146.614 $\pm$ 0.185  $\chi^2$ /NDF:141015.8/24

Right Out: 1220.817 $\pm$ 0.219  $\chi^2$ /NDF: 720853.3/29

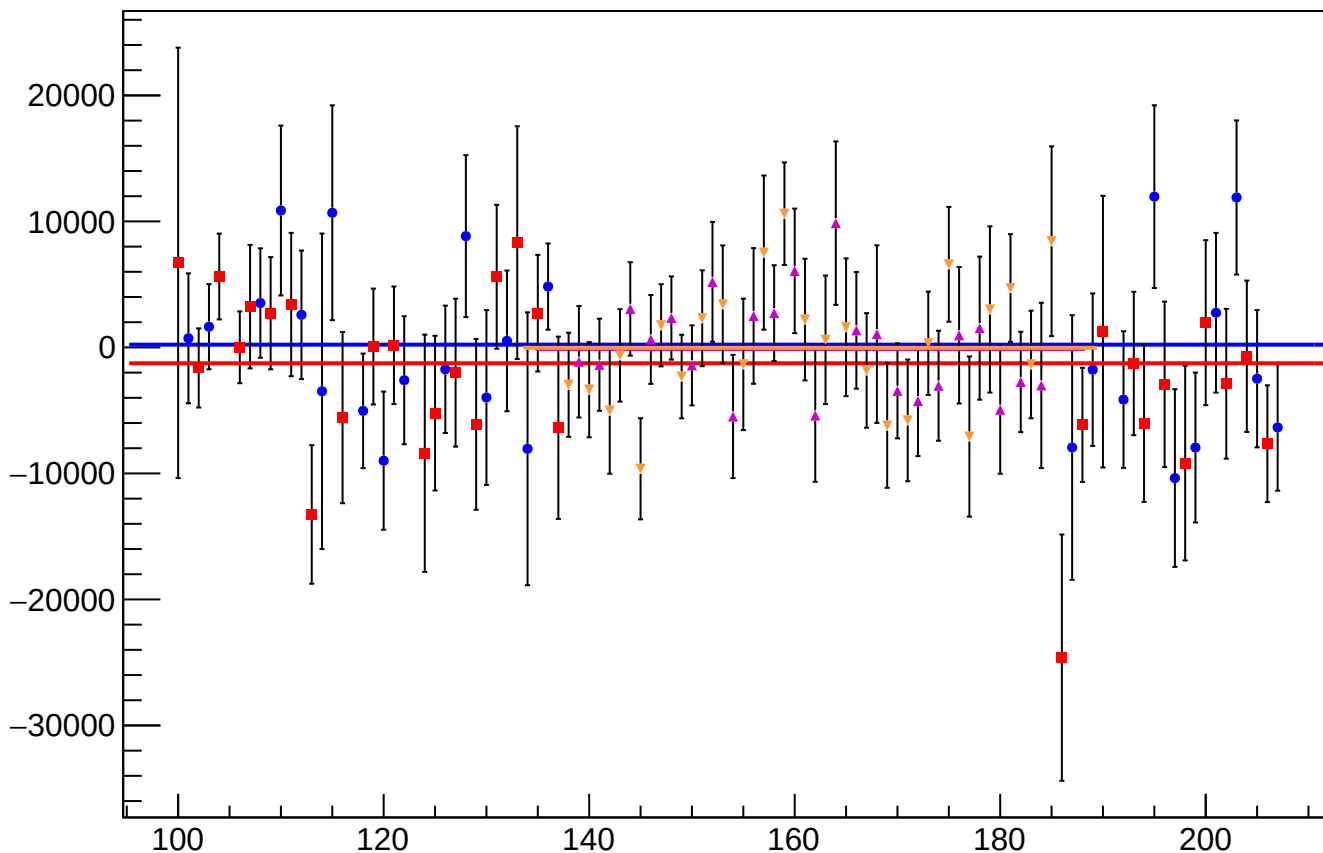
Left In: 1140.169 $\pm$ 0.189  $\chi^2$ /NDF:84737.2/22

+ sign 1180.029 $\pm$ 0.143  $\chi^2$ /NDF: 991943.5/50

All: 1177.250 $\pm$ 0.101  $\chi^2$ /NDF: 1876184.2/10

- sign 1174.492 $\pm$ 0.143  $\chi^2$ /NDF: 883492.6/52

asym\_usr\_atr2\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In: 218.443 $\pm$ 1083.178  $\chi^2$ /NDF: 28.1/25

Left Out: -33.548 $\pm$ 891.372  $\chi^2$ /NDF:27.8/24

Right Out: -1258.942 $\pm$ 965.664  $\chi^2$ /NDF: 28.3/29

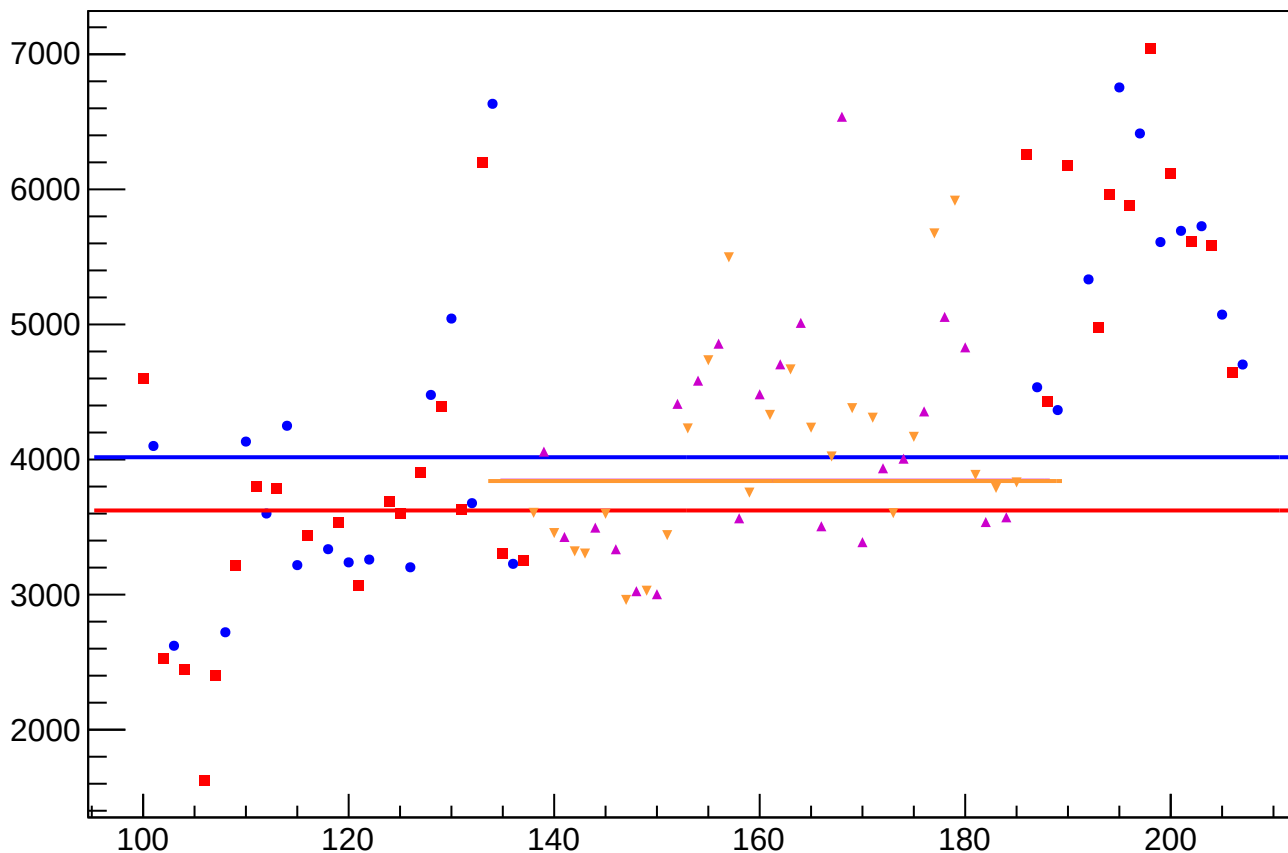
Left In: -121.054 $\pm$ 915.716  $\chi^2$ /NDF:13.8/22

+ sign 68.198 $\pm$ 688.282  $\chi^2$ /NDF: 55.9/50

All: -308.619 $\pm$ 478.046  $\chi^2$ /NDF: 99.3/103

- sign -659.810 $\pm$ 664.465  $\chi^2$ /NDF: 42.8/52

asym\_usr\_atr2\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 4017.065 $\pm$ 0.766  $\chi^2/\text{NDF}$ : 2216688.8/25

Left Out: 3840.836 $\pm$ 0.630  $\chi^2/\text{NDF}$ : 1118668.2/24

Right Out: 3622.939 $\pm$ 0.683  $\chi^2/\text{NDF}$ : 4023255.0/29

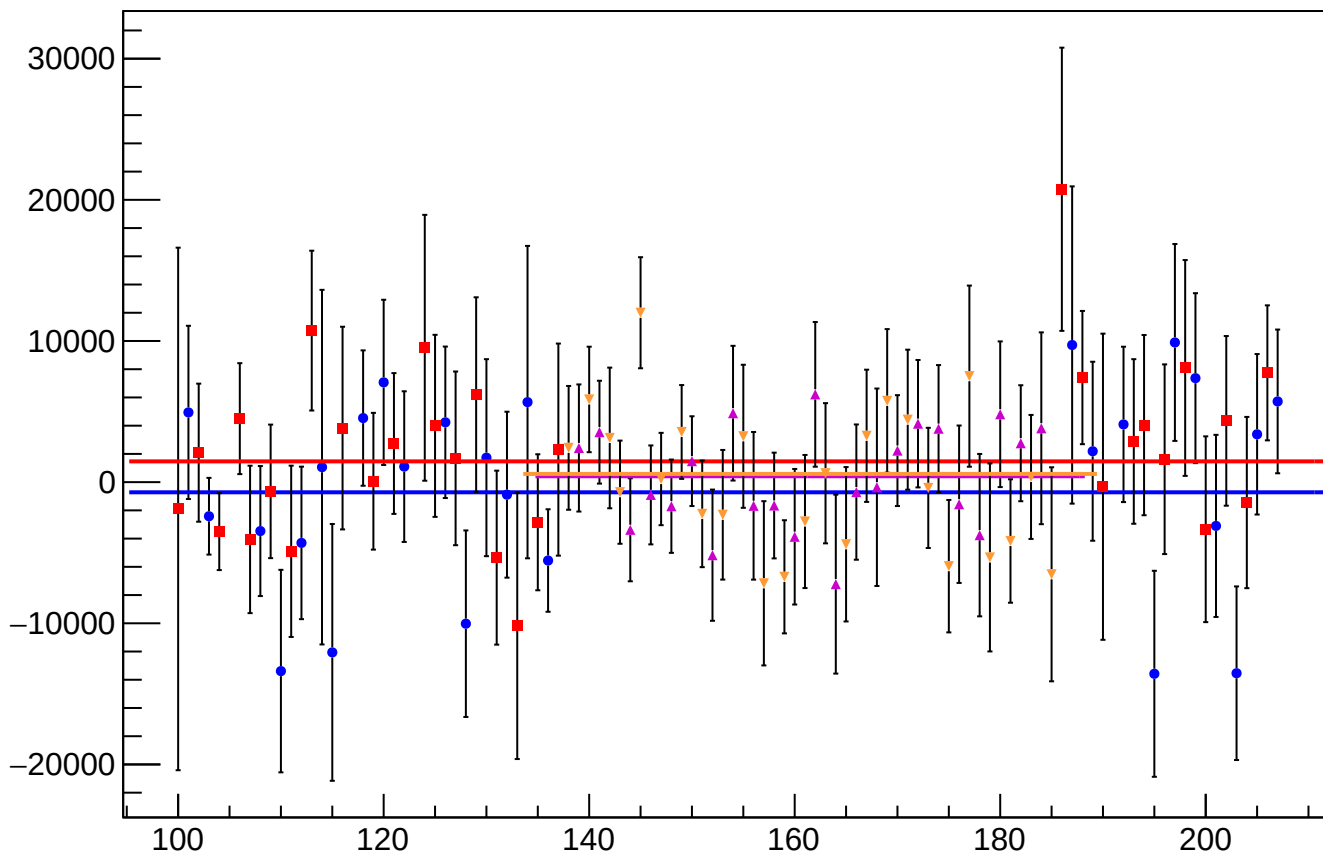
Left In: 3843.333 $\pm$ 0.648  $\chi^2/\text{NDF}$ : 1196061.6/22

+ sign 3911.992 $\pm$ 0.487  $\chi^2/\text{NDF}$ : 3366921.7/50

All: 3822.442 $\pm$ 0.338  $\chi^2/\text{NDF}$ : 8706498.5/10

- sign 3738.983 $\pm$ 0.470  $\chi^2/\text{NDF}$ : 5274169.5/52

# asym\_usr\_atr2\_dd\_mean vs Slug



Right In:  $-719.814 \pm 1095.758$   $\chi^2/\text{NDF}$ : 30.6/25

Left Out:  $583.278 \pm 894.900$   $\chi^2/\text{NDF}$ : 27.4/24

Right Out:  $1471.208 \pm 1028.497$   $\chi^2/\text{NDF}$ : 23.2/29

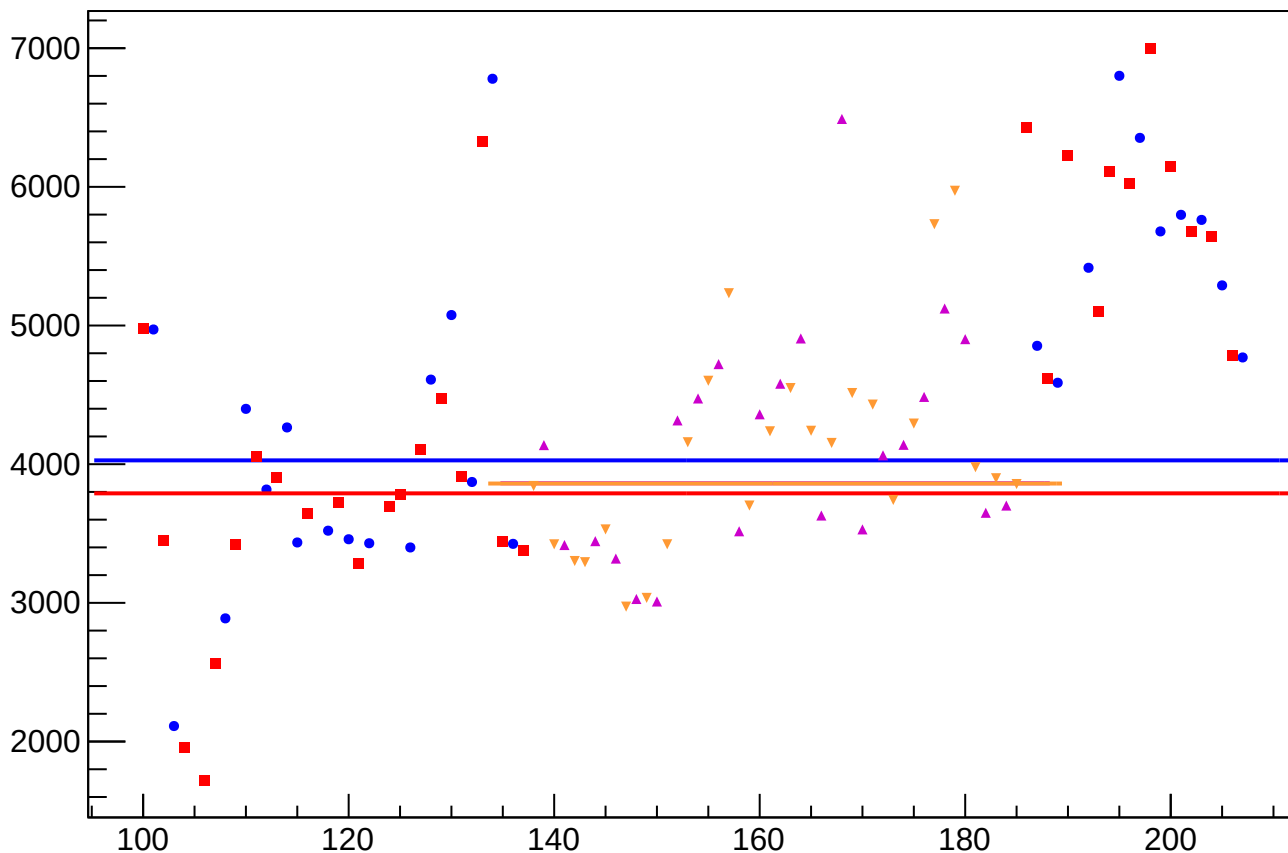
Left In:  $416.803 \pm 919.006$   $\chi^2/\text{NDF}$ : 12.5/22

+ sign  $61.890 \pm 693.119$   $\chi^2/\text{NDF}$ : 58.8/50

All:  $478.077 \pm 487.317$   $\chi^2/\text{NDF}$ : 95.9/103

- sign  $884.912 \pm 685.288$   $\chi^2/\text{NDF}$ : 36.3/52

# asym\_usr\_atr2\_dd\_rms vs Slug



Right In: 4027.533+/-0.775  $\chi^2/\text{NDF}$ : 2781718.9/25

Left Out: 3860.536+/-0.633  $\chi^2/\text{NDF}$ : 1097292.6/24

Right Out: 3789.685+/-0.719  $\chi^2/\text{NDF}$ : 3977407.8/29

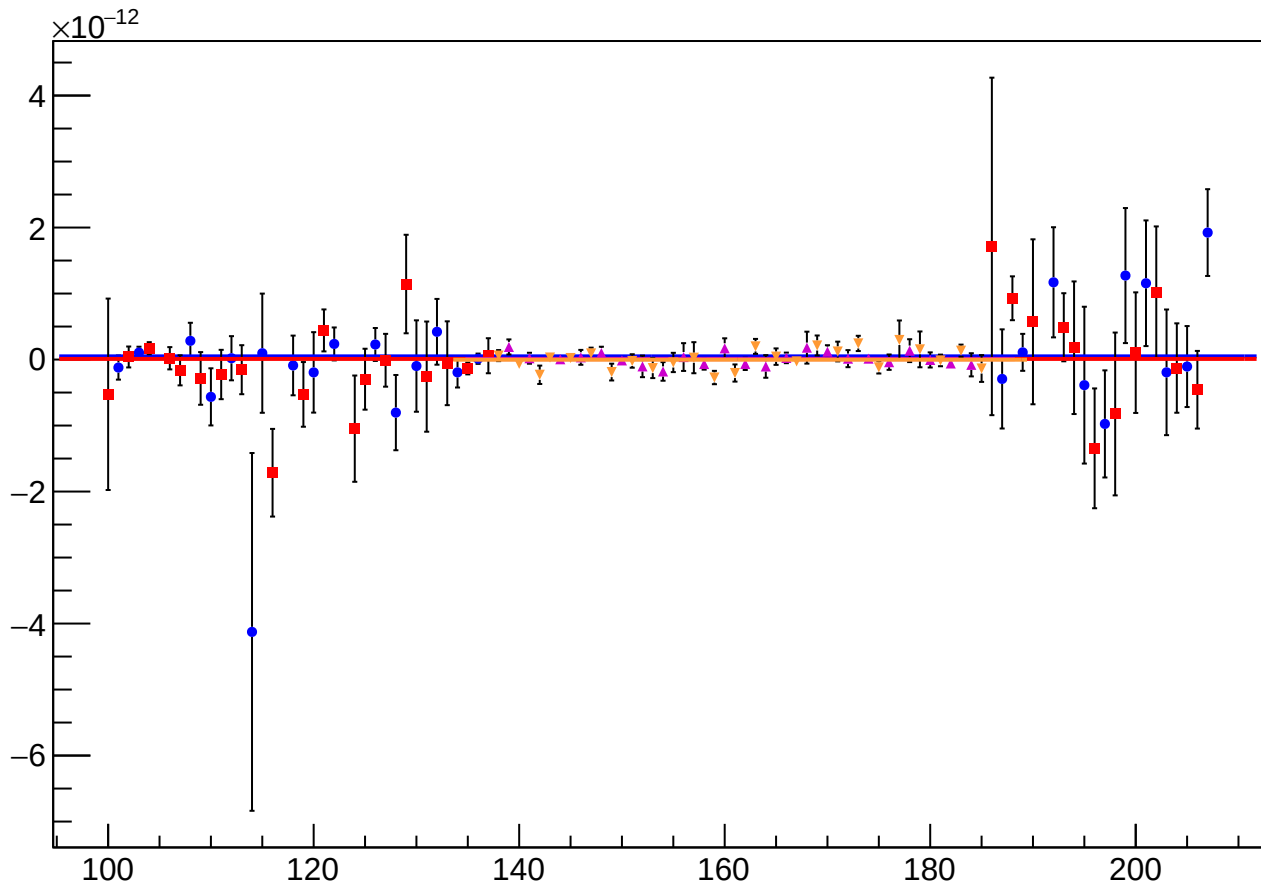
Left In: 3862.339+/-0.650  $\chi^2/\text{NDF}$ : 1142179.8/22

+ sign 3927.354+/-0.490  $\chi^2/\text{NDF}$ : 3906878.1/50

All: 3877.687+/-0.344  $\chi^2/\text{NDF}$ : 9052290.3/10

- sign 3829.654+/-0.482  $\chi^2/\text{NDF}$ : 5125211.0/52

# asym\_usr\_atr2\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 26.7/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 34.3/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 35.6/29

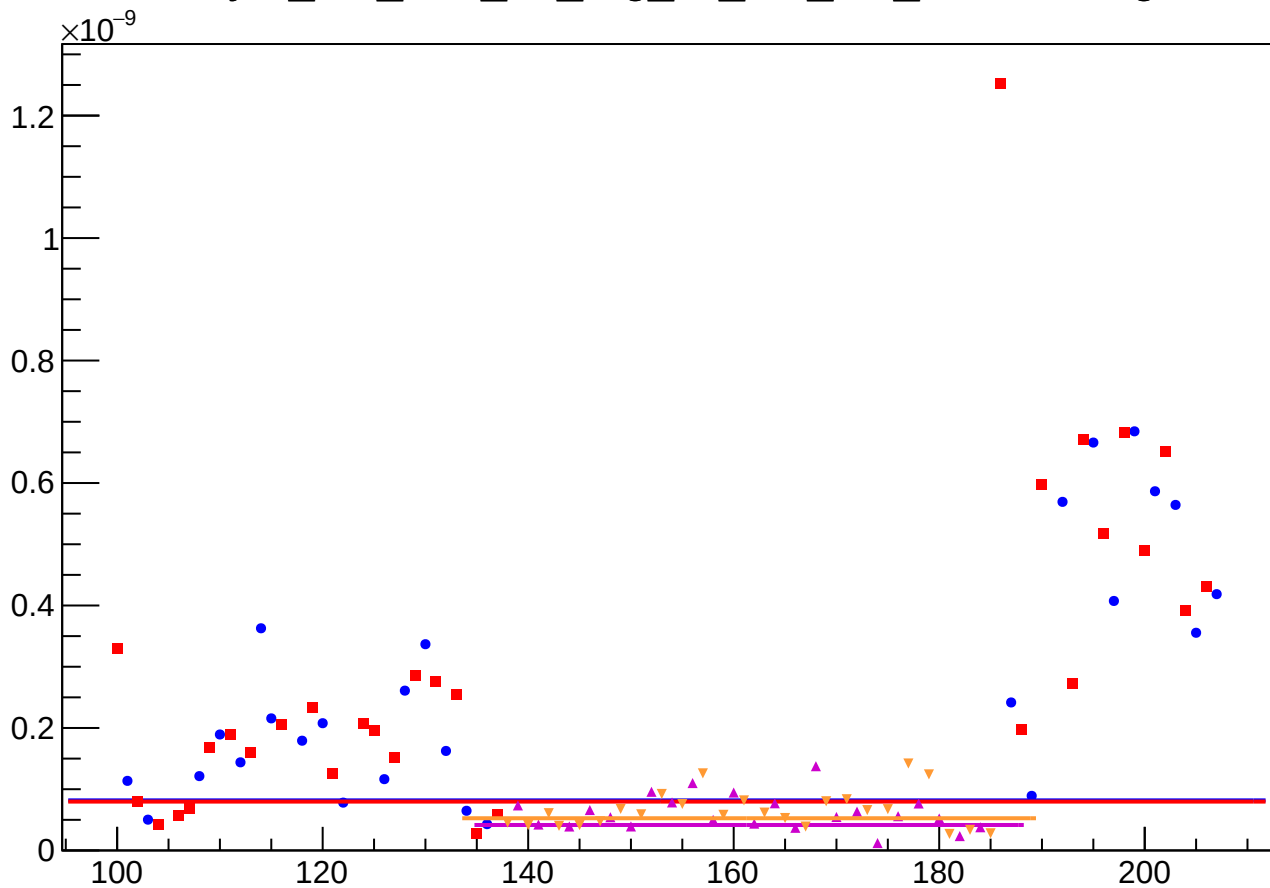
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 12.8/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 61.9/50

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 110.4/103

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 48.5/52

asym\_usr\_atr2\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6129694.7/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1611629.4/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7589810.3/29

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2939628.2/22

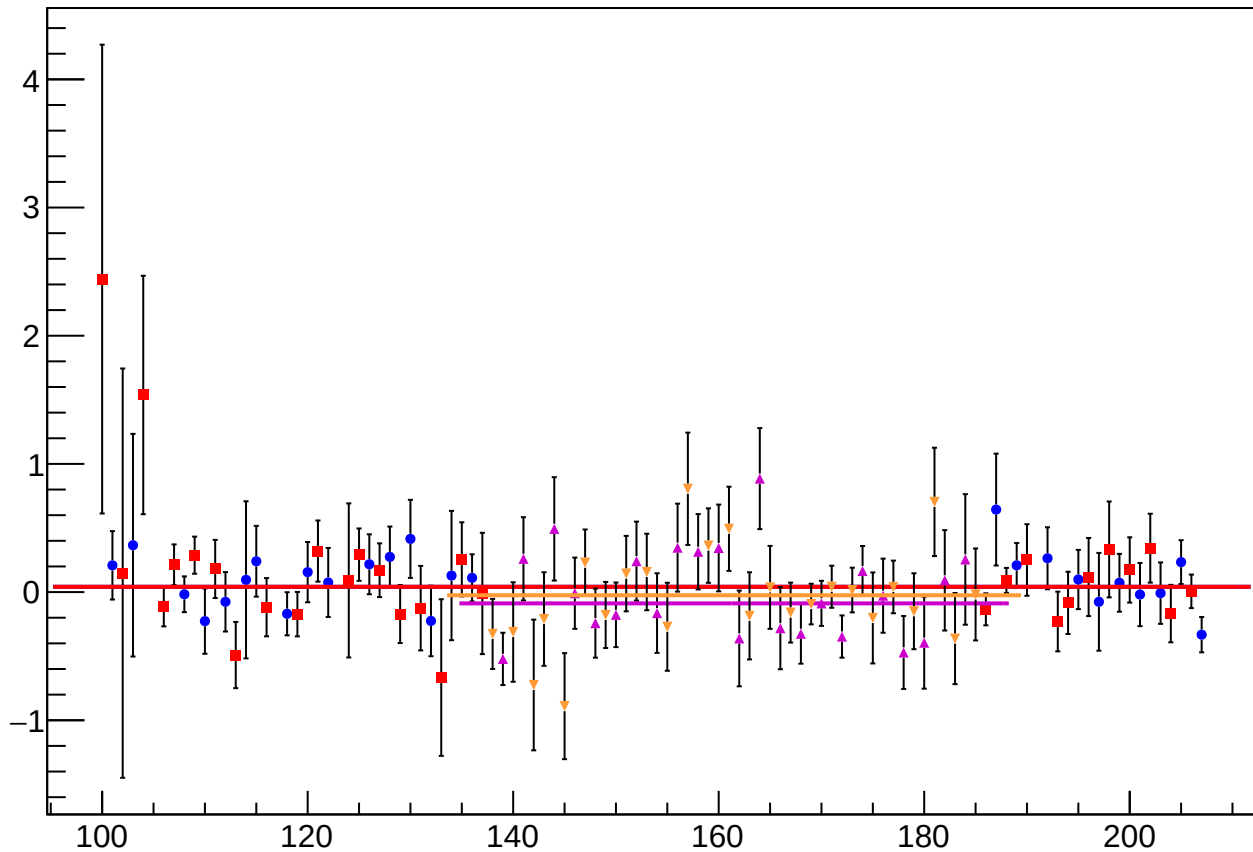
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8369994.9/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 20297822.0/103

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11611606.7/52



# asym\_usr\_atr2\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.041 \pm 0.045$   $\chi^2/\text{NDF}$ : 21.2/25

Left Out:  $-0.025 \pm 0.055$   $\chi^2/\text{NDF}$ : 24.1/24

Right Out:  $0.041 \pm 0.038$   $\chi^2/\text{NDF}$ : 30.0/29

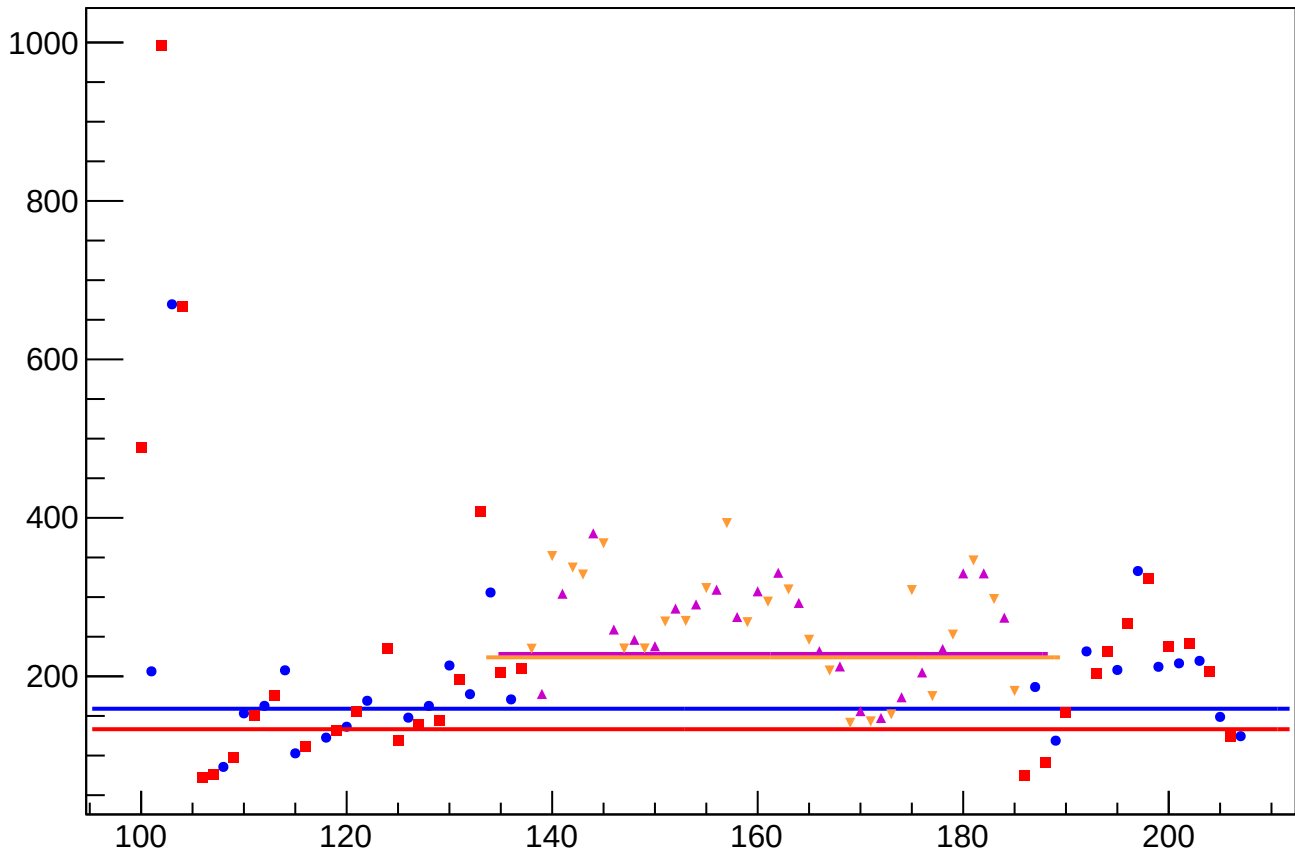
Left In:  $-0.088 \pm 0.057$   $\chi^2/\text{NDF}$ : 30.0/22

+ sign  $0.015 \pm 0.035$   $\chi^2/\text{NDF}$ : 46.1/50

All:  $0.007 \pm 0.023$   $\chi^2/\text{NDF}$ : 109.7/103

- sign  $0.000 \pm 0.032$   $\chi^2/\text{NDF}$ : 63.5/52

# asym\_usr\_atr2\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 159.096+/-0.032  $\chi^2/\text{NDF}: 3054596.9/25$

Left Out: 223.945+/-0.039  $\chi^2/\text{NDF}: 3438444.8/24$

Right Out: 133.248+/-0.027  $\chi^2/\text{NDF}: 5979798.7/29$

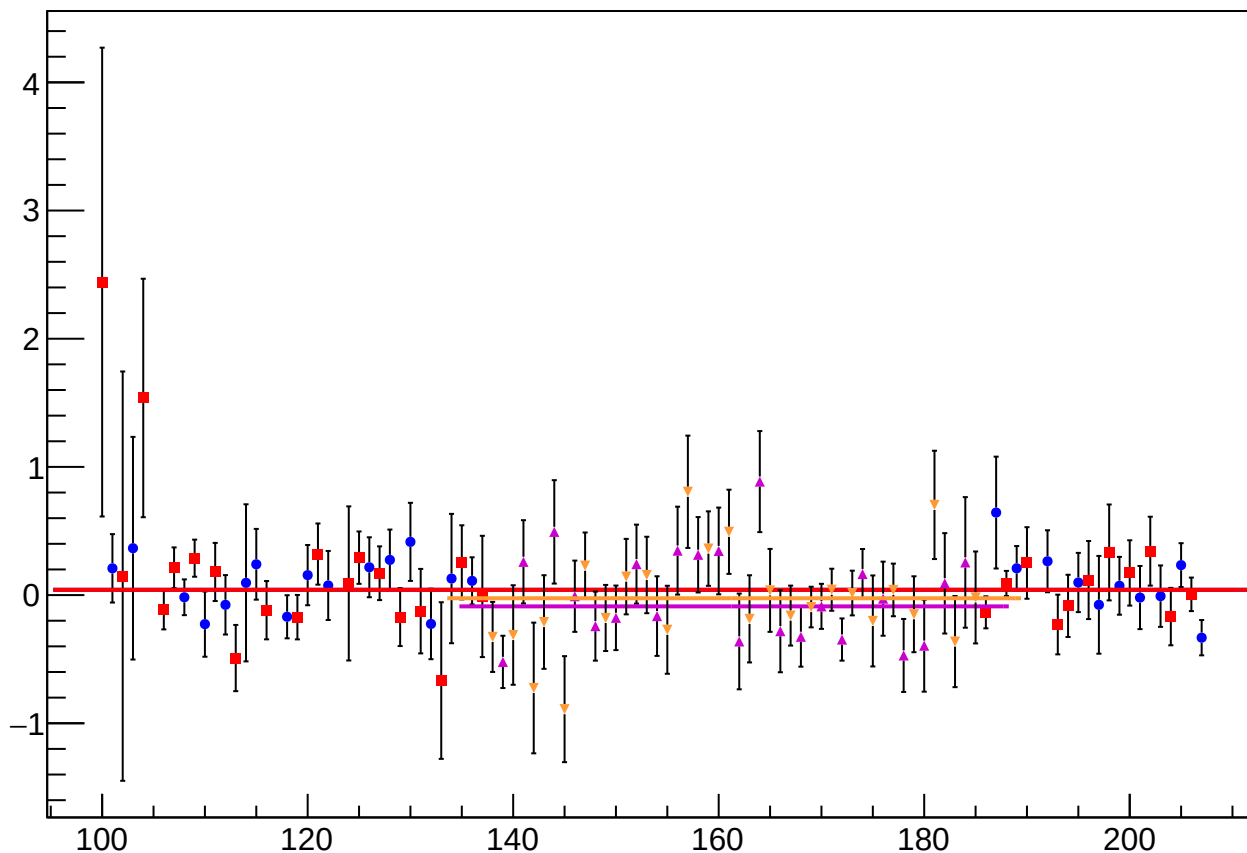
Left In: 228.199+/-0.040  $\chi^2/\text{NDF}: 2488915.3/22$

+ sign 185.160+/-0.024  $\chi^2/\text{NDF}: 8180425.9/50$

All: 173.234+/-0.017  $\chi^2/\text{NDF}: 20934264.5/10$

- sign 163.166+/-0.022  $\chi^2/\text{NDF}: 12315973.3/52$

# asym\_usr\_atr2\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.041 \pm 0.045$   $\chi^2/\text{NDF}$ : 21.2/25

Left Out:  $-0.025 \pm 0.055$   $\chi^2/\text{NDF}$ : 24.1/24

Right Out:  $0.041 \pm 0.038$   $\chi^2/\text{NDF}$ : 30.0/29

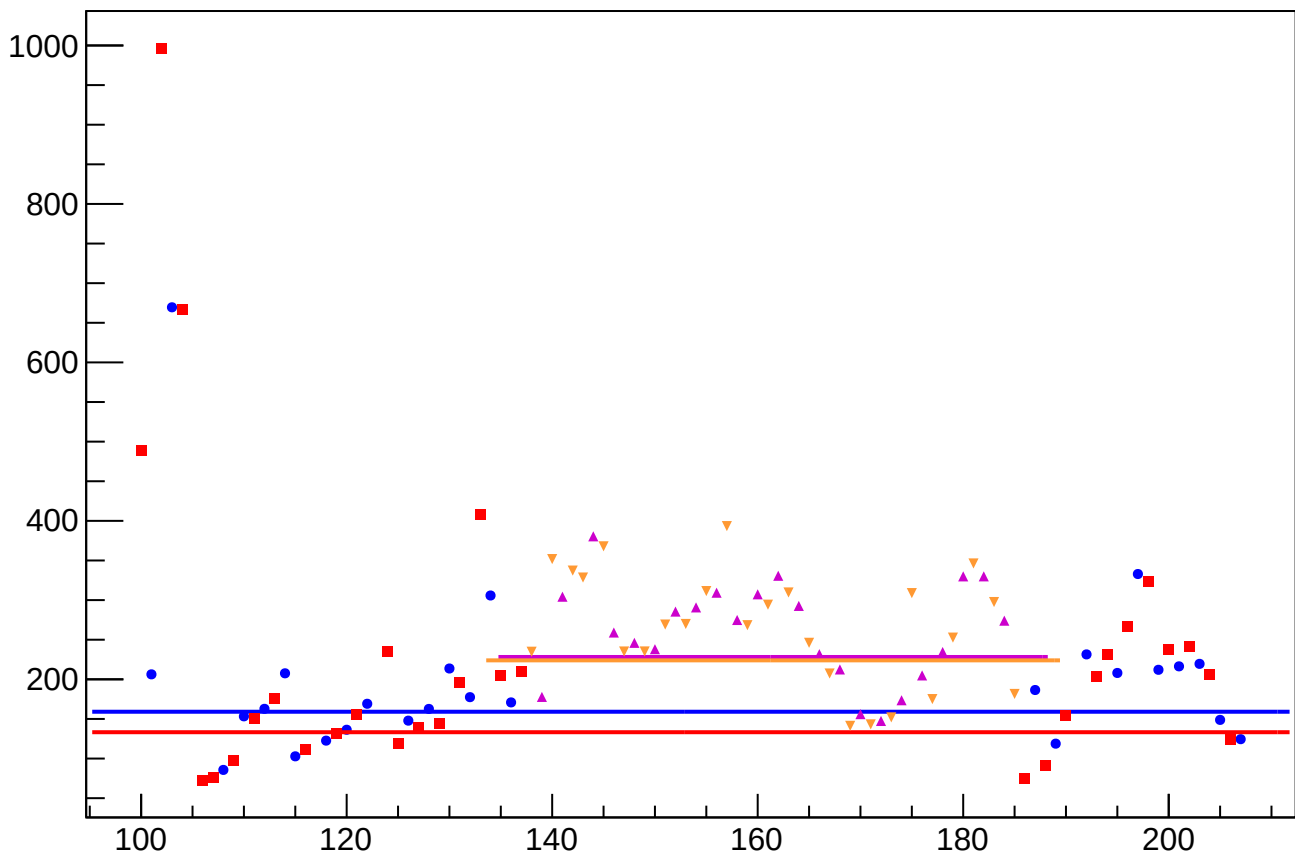
Left In:  $-0.088 \pm 0.057$   $\chi^2/\text{NDF}$ : 30.0/22

+ sign  $0.015 \pm 0.035$   $\chi^2/\text{NDF}$ : 46.1/50

All:  $0.007 \pm 0.023$   $\chi^2/\text{NDF}$ : 109.7/103

- sign  $0.000 \pm 0.032$   $\chi^2/\text{NDF}$ : 63.5/52

asym\_usr\_atr2\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 159.096 $\pm$ 0.032  $\chi^2$ /NDF: 3054596.9/25

Left Out: 223.945 $\pm$ 0.039  $\chi^2$ /NDF: 3438444.8/24

Right Out: 133.248 $\pm$ 0.027  $\chi^2$ /NDF: 5979798.7/29

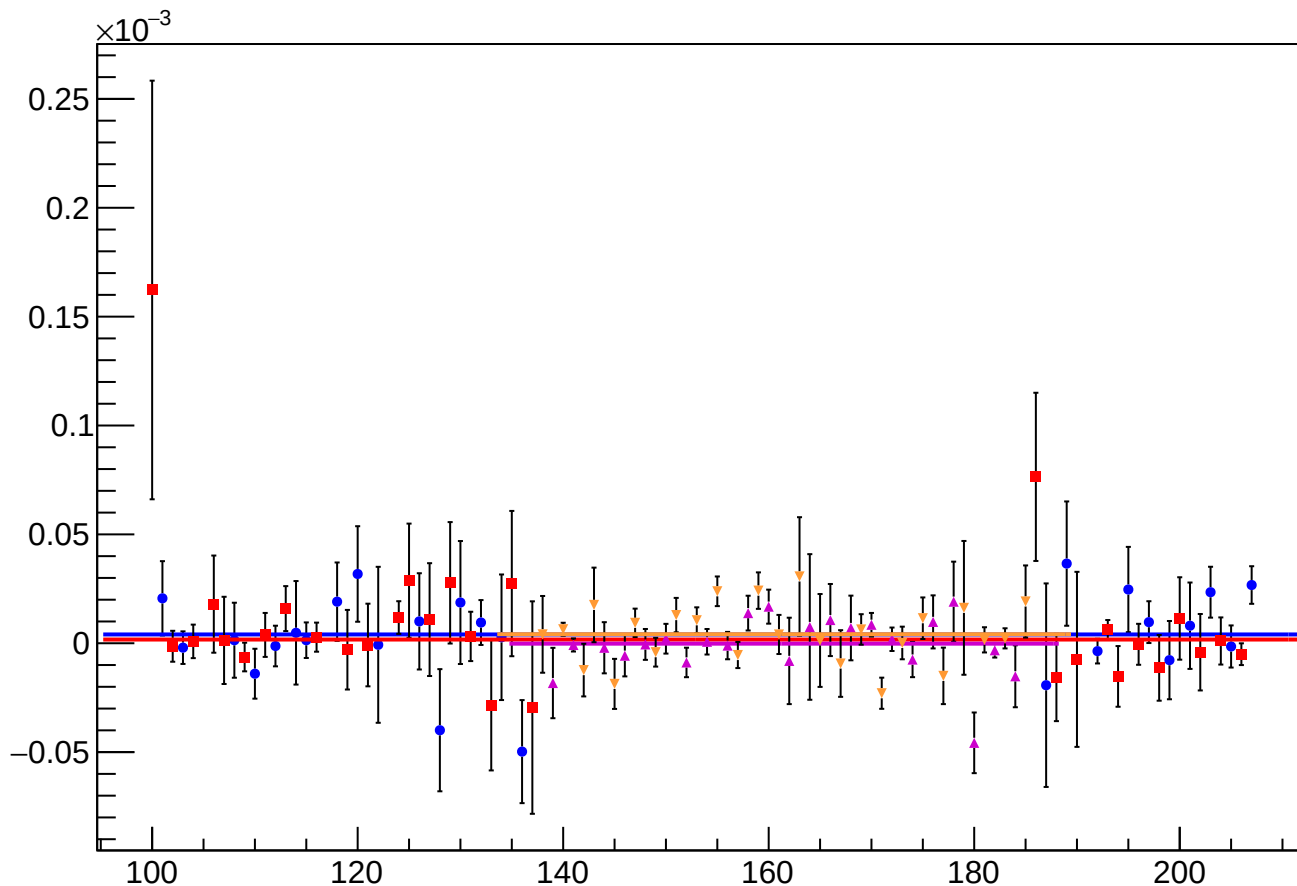
Left In: 228.199 $\pm$ 0.040  $\chi^2$ /NDF: 2488915.3/22

+ sign 185.160 $\pm$ 0.024  $\chi^2$ /NDF: 8180425.9/50

All: 173.234 $\pm$ 0.017  $\chi^2$ /NDF: 20934264.5/10

- sign 163.166 $\pm$ 0.022  $\chi^2$ /NDF: 12315973.3/52

asym\_usr\_atr2\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 30.4/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 48.8/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 23.1/29

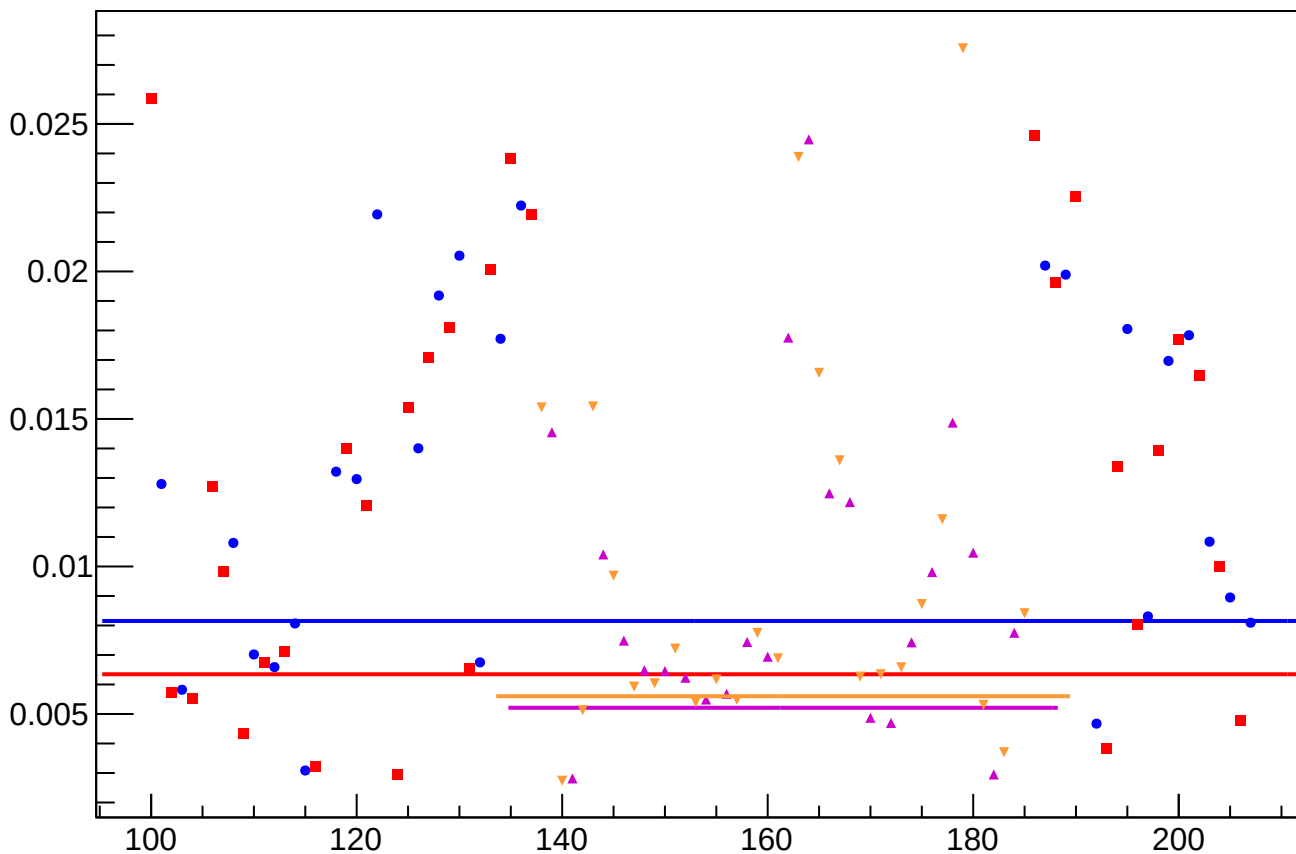
Left In: -0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 30.1/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 79.2/50

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 137.5/103

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 53.7/52

asym\_usr\_atr2\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 6400332.3/25

Left Out: 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 7769287.5/24

Right Out: 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 9231283.0/29

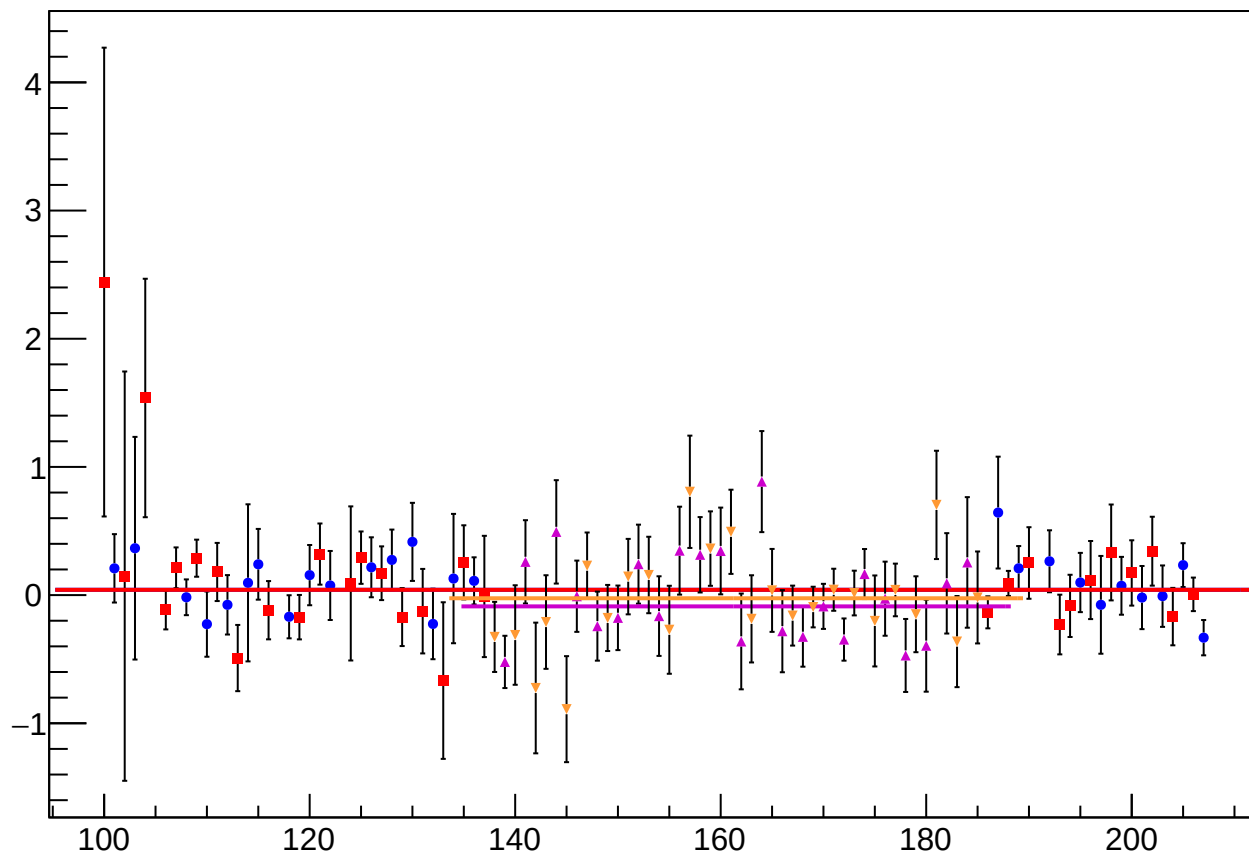
Left In: 0.005 $\pm$ 0.000  $\chi^2$ /NDF: 7460452.2/22

+ sign 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 15767120.1/50

All: 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 33209303.3/103

- sign 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 17145451.1/52

asym\_usr\_atr2\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.041 \pm 0.045$   $\chi^2/\text{NDF}$ : 21.2/25

Left Out:  $-0.025 \pm 0.055$   $\chi^2/\text{NDF}$ : 24.1/24

Right Out:  $0.041 \pm 0.038$   $\chi^2/\text{NDF}$ : 30.0/29

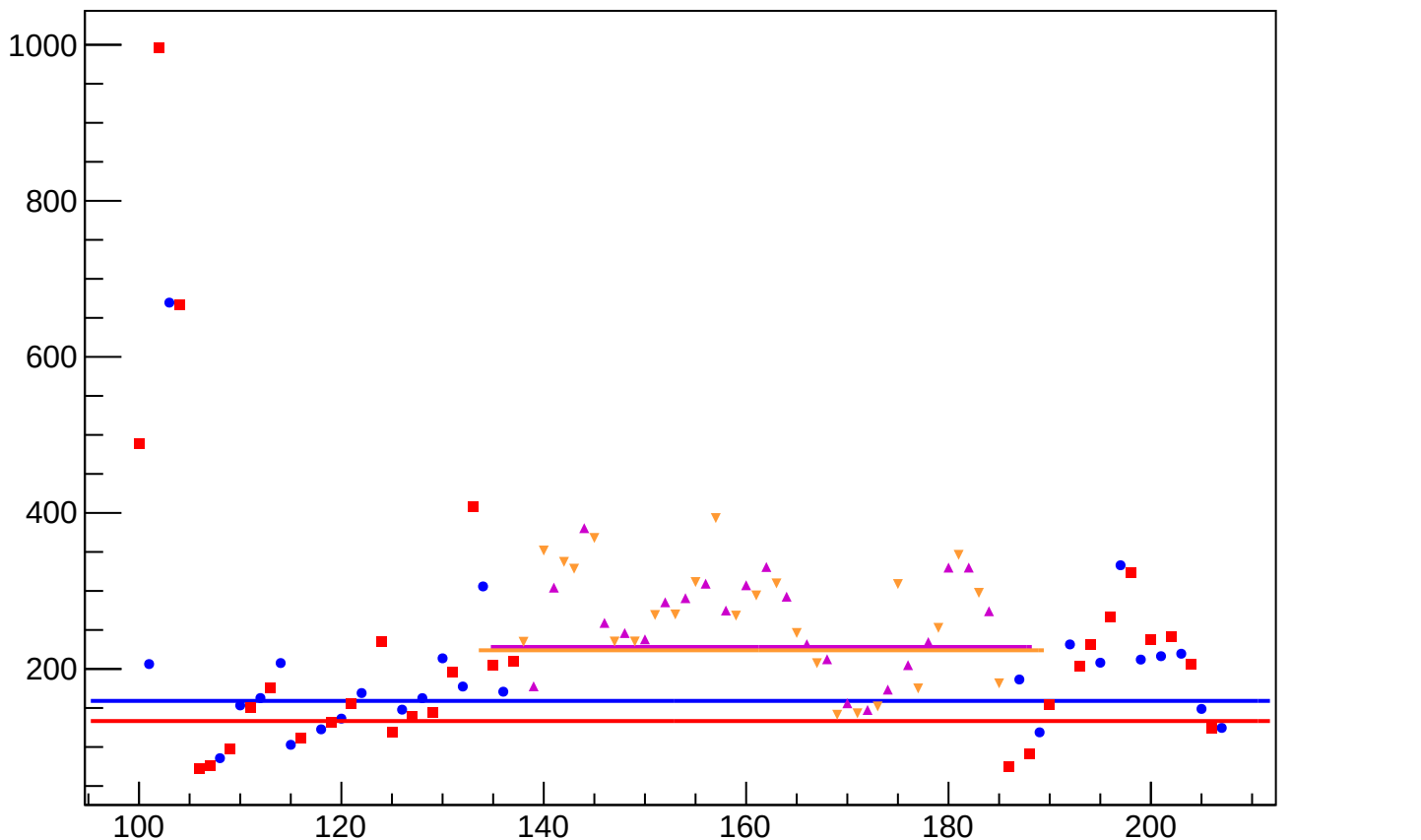
Left In:  $-0.088 \pm 0.057$   $\chi^2/\text{NDF}$ : 30.0/22

+ sign  $0.015 \pm 0.035$   $\chi^2/\text{NDF}$ : 46.1/50

All:  $0.007 \pm 0.023$   $\chi^2/\text{NDF}$ : 109.7/103

- sign  $0.000 \pm 0.032$   $\chi^2/\text{NDF}$ : 63.5/52

asym\_usr\_atr2\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 159.093+/-0.032  $\chi^2/\text{NDF}$ : 3054772.9/25

Left Out: 223.946+/-0.039  $\chi^2/\text{NDF}$ : 3438541.7/24

Right Out: 133.253+/-0.027  $\chi^2/\text{NDF}$ : 5979317.5/29

Left In: 228.201+/-0.040  $\chi^2/\text{NDF}$ : 2488951.6/22

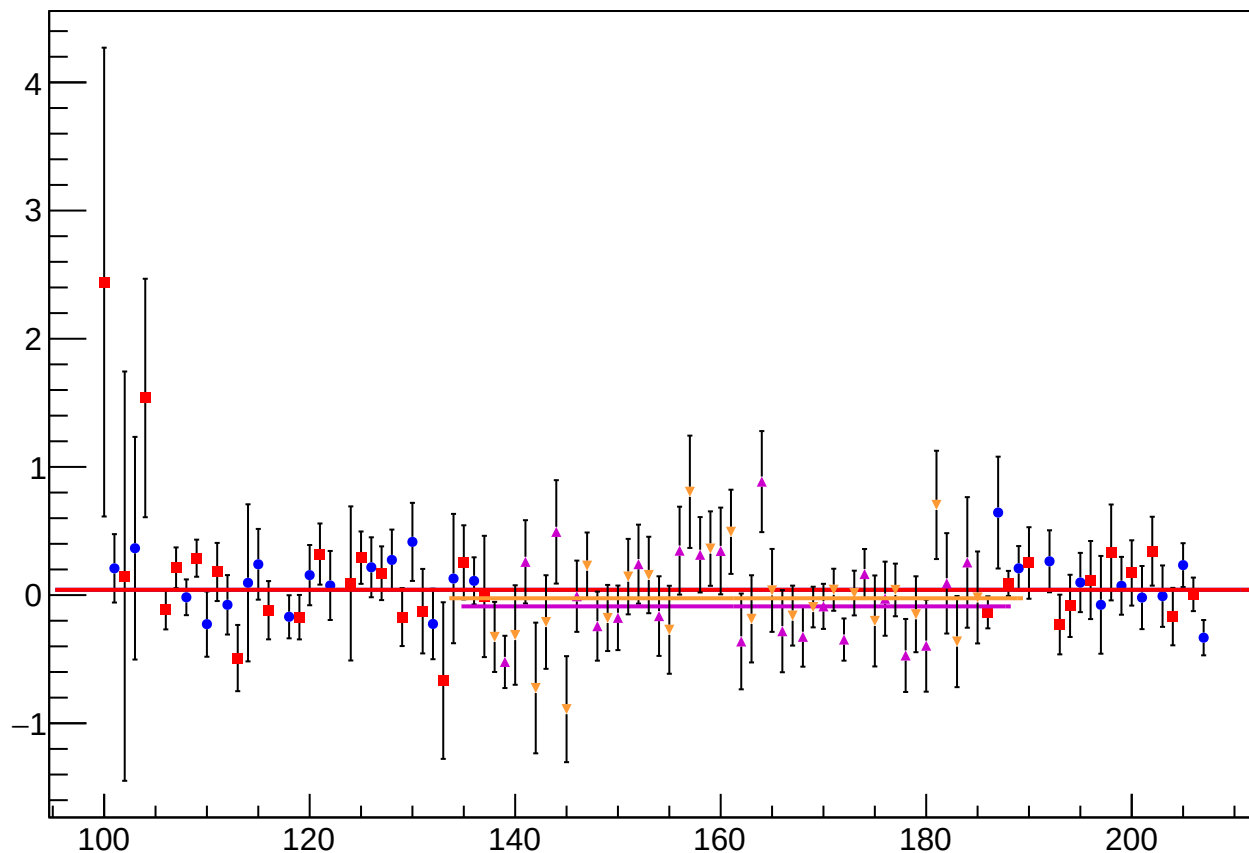
+ sign 185.158+/-0.024  $\chi^2/\text{NDF}$ : 8180915.9/50

All: 173.235+/-0.017  $\chi^2/\text{NDF}$ : 20933746.7/10

- sign 163.170+/-0.022  $\chi^2/\text{NDF}$ : 12315206.7/52



asym\_usr\_atr2\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.041 \pm 0.045$   $\chi^2/\text{NDF}$ : 21.2/25

Left Out:  $-0.025 \pm 0.055$   $\chi^2/\text{NDF}$ : 24.1/24

Right Out:  $0.041 \pm 0.038$   $\chi^2/\text{NDF}$ : 30.0/29

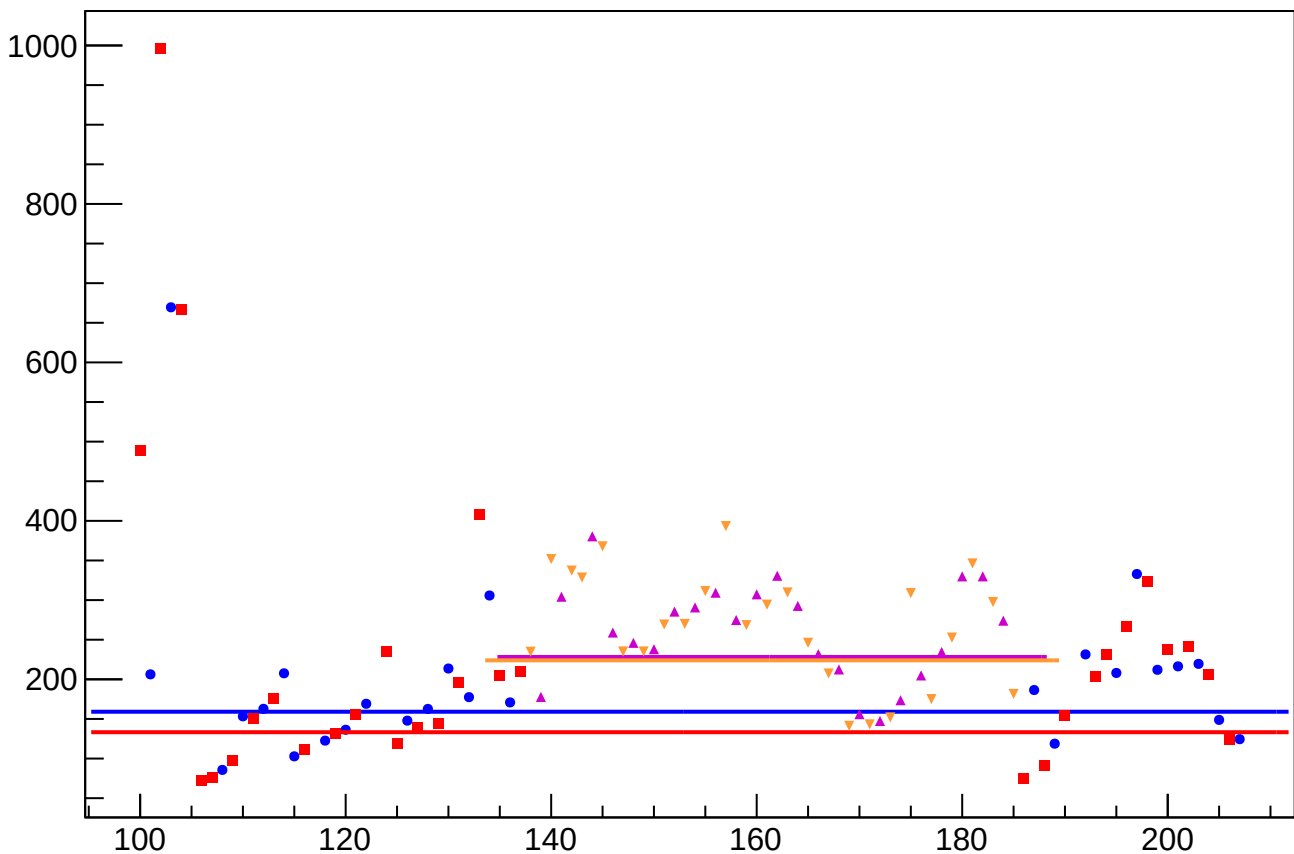
Left In:  $-0.088 \pm 0.057$   $\chi^2/\text{NDF}$ : 30.0/22

+ sign  $0.015 \pm 0.035$   $\chi^2/\text{NDF}$ : 46.1/50

All:  $0.007 \pm 0.023$   $\chi^2/\text{NDF}$ : 109.7/103

- sign  $0.000 \pm 0.032$   $\chi^2/\text{NDF}$ : 63.5/52

asym\_usr\_atr2\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 159.093+/-0.032  $\chi^2/\text{NDF}$ : 3054772.9/25

Left Out: 223.946+/-0.039  $\chi^2/\text{NDF}$ : 3438541.7/24

Right Out: 133.253+/-0.027  $\chi^2/\text{NDF}$ : 5979317.5/29

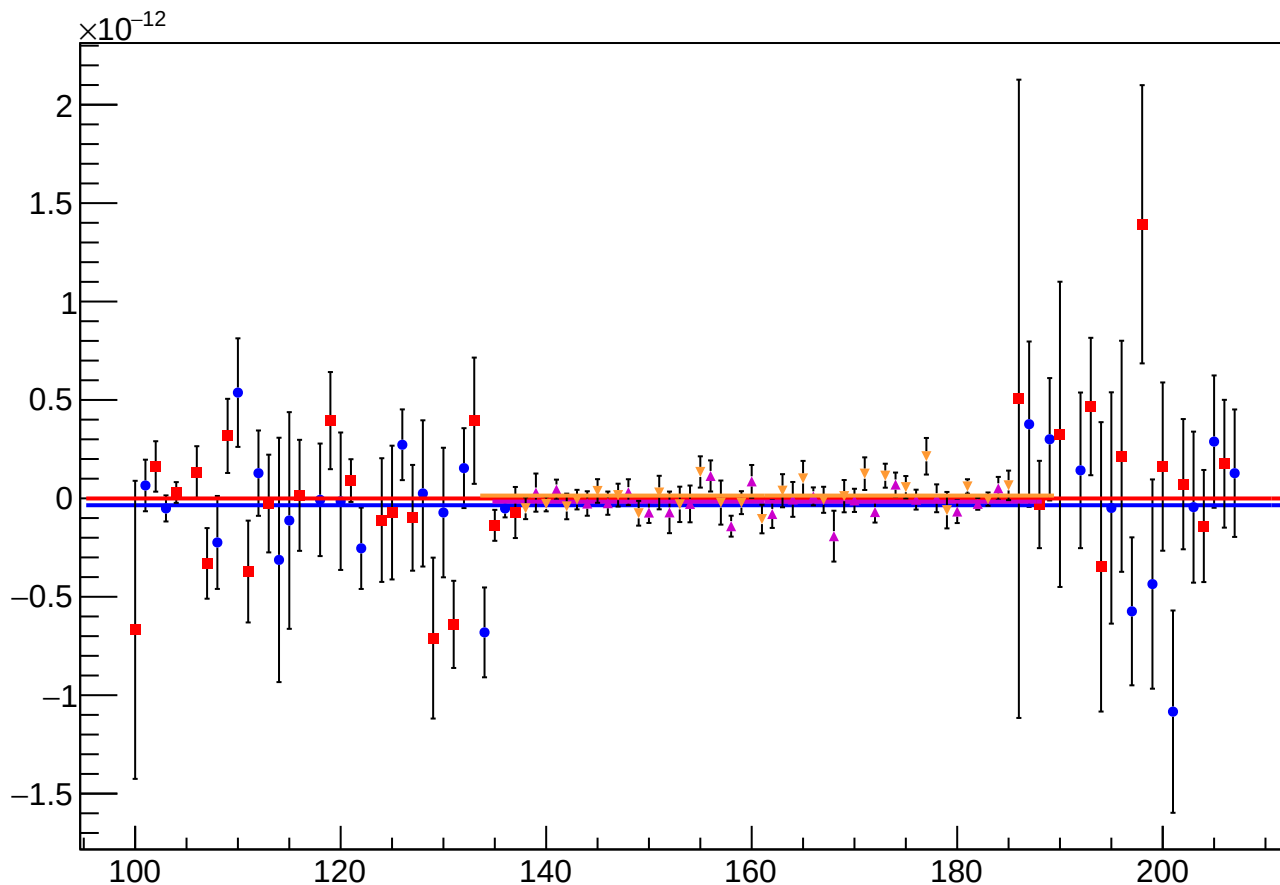
Left In: 228.201+/-0.040  $\chi^2/\text{NDF}$ : 2488951.6/22

+ sign 185.158+/-0.024  $\chi^2/\text{NDF}$ : 8180915.9/50

All: 173.235+/-0.017  $\chi^2/\text{NDF}$ : 20933746.7/10

- sign 163.170+/-0.022  $\chi^2/\text{NDF}$ : 12315206.7/52

asym\_usr\_atr2\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 29.8/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 25.3/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 38.9/29

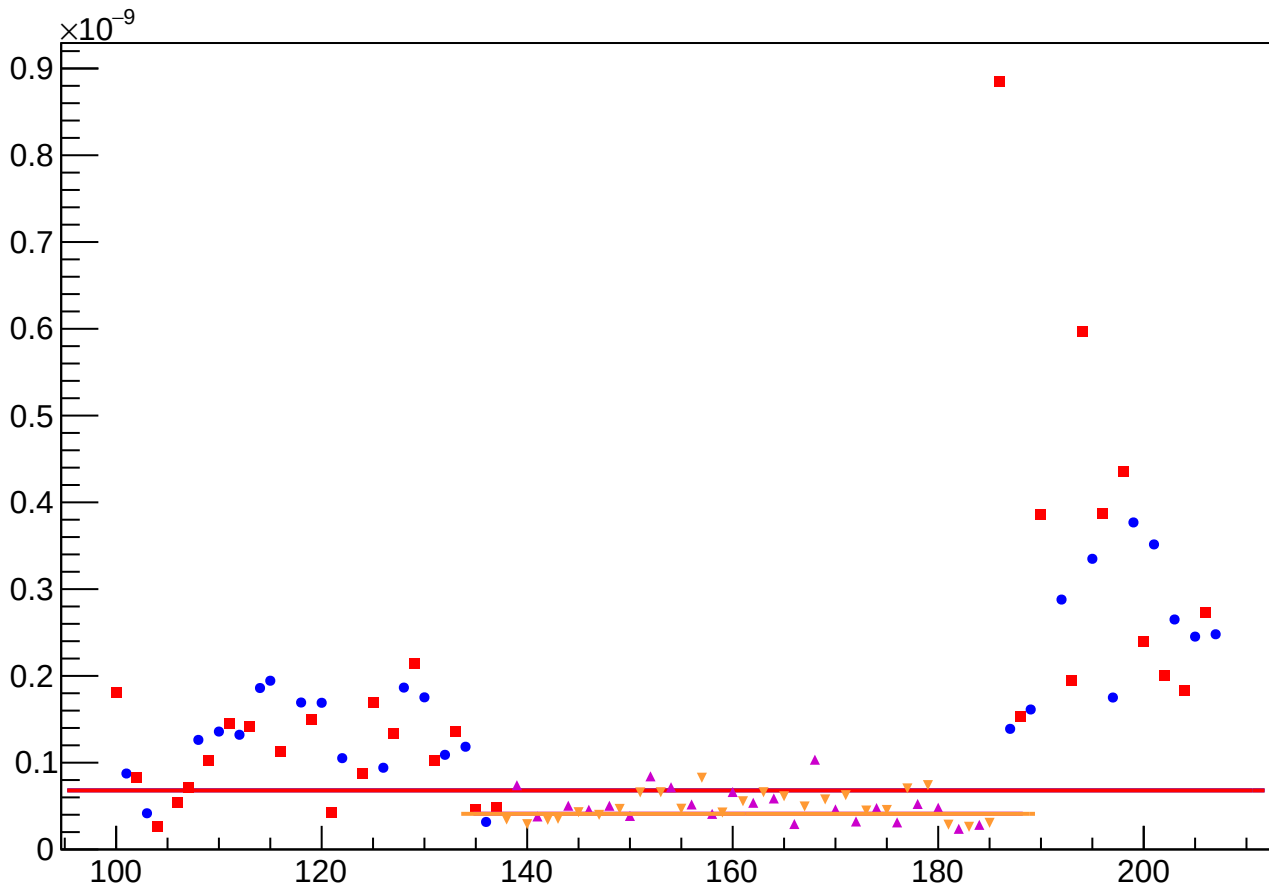
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 21.7/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 57.3/50

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 120.0/103

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 60.9/52

asym\_usr\_atr2\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7779365.2/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2644306.0/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8356540.5/29

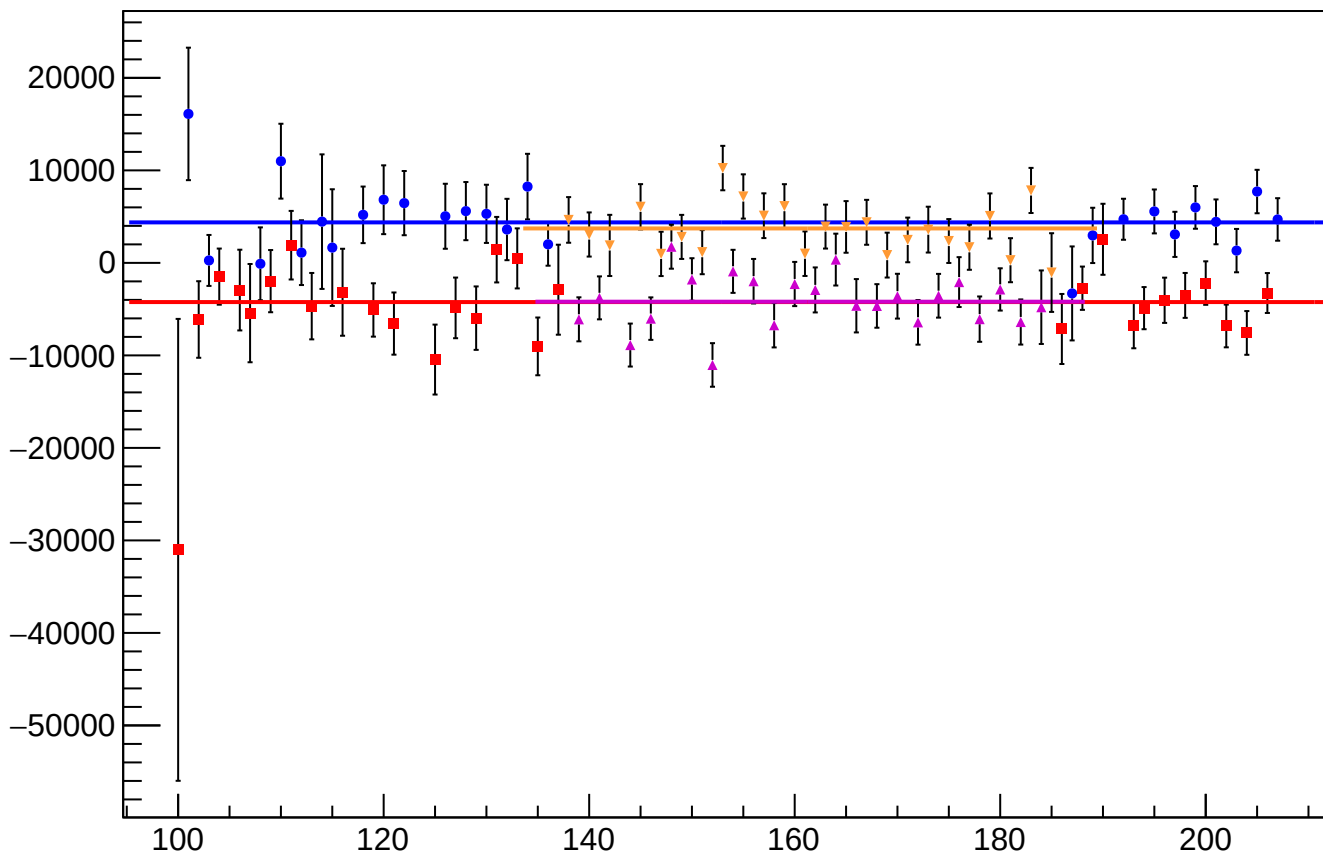
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2852113.9/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11737398.2/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 24244165.9/103

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12505947.1/52

# reg\_asym\_us\_avg\_at1lr\_avg\_avg\_mean vs Slug



Right In:  $4377.454 \pm 585.541$   $\chi^2/\text{NDF}$ : 20.7/25

Left Out:  $3723.486 \pm 507.155$   $\chi^2/\text{NDF}$ : 25.4/23

Right Out:  $-4235.575 \pm 568.713$   $\chi^2/\text{NDF}$ : 25.8/28

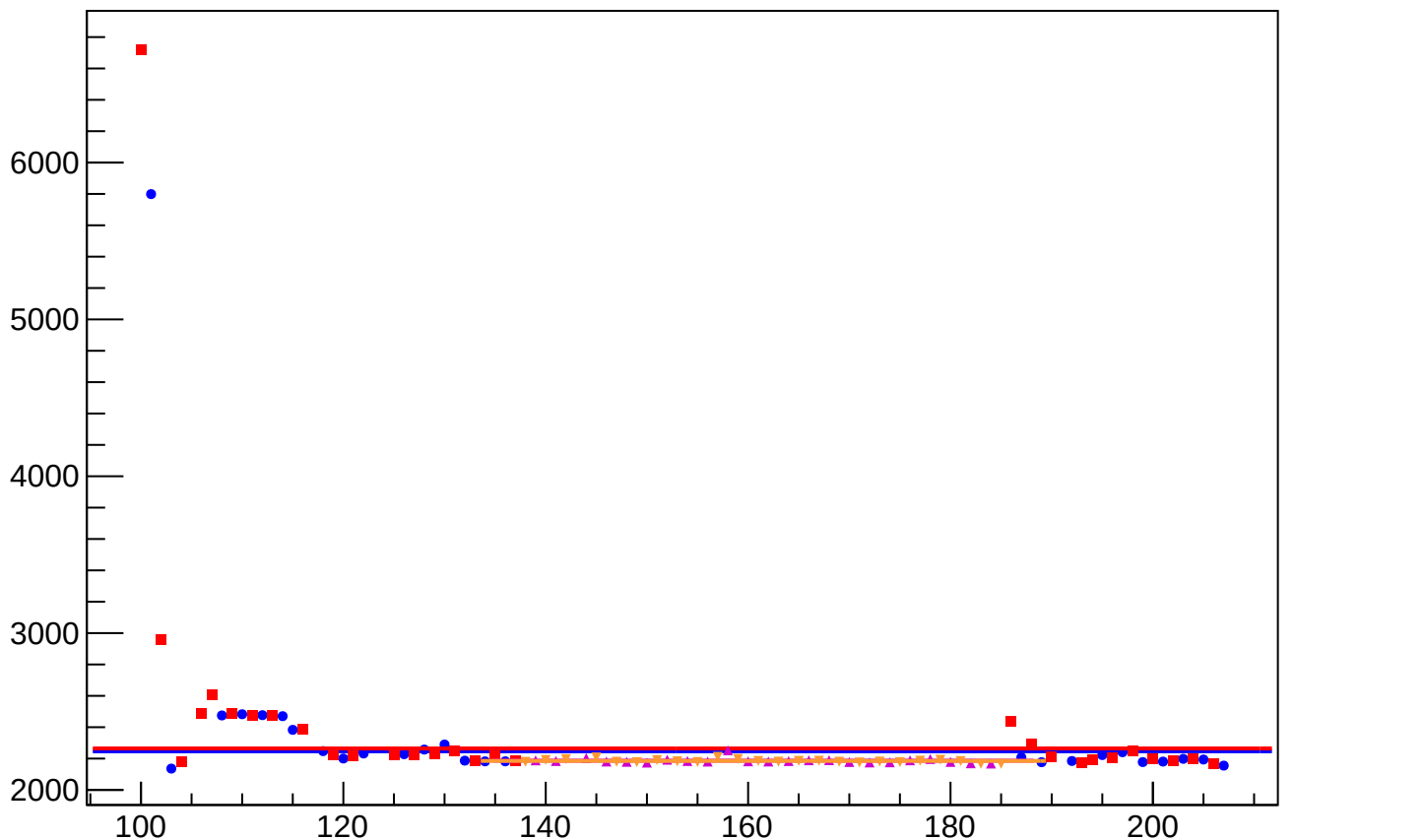
Left In:  $-4195.942 \pm 510.578$   $\chi^2/\text{NDF}$ : 32.1/22

+ sign  $4003.797 \pm 383.353$   $\chi^2/\text{NDF}$ : 46.8/49

All:  $-141.779 \pm 269.853$   $\chi^2/\text{NDF}$ : 336.5/101

- sign  $-4213.630 \pm 379.929$   $\chi^2/\text{NDF}$ : 57.9/51

reg\_asym\_us\_avg\_at1lr\_avg\_avg\_rms vs Slug



Right In: 2246.640+/-0.414  $\chi^2/\text{NDF}$ : 535303.9/25

Left Out: 2185.133+/-0.359  $\chi^2/\text{NDF}$ : 815.1/23

Right Out: 2264.487+/-0.402  $\chi^2/\text{NDF}$ : 182497.0/28

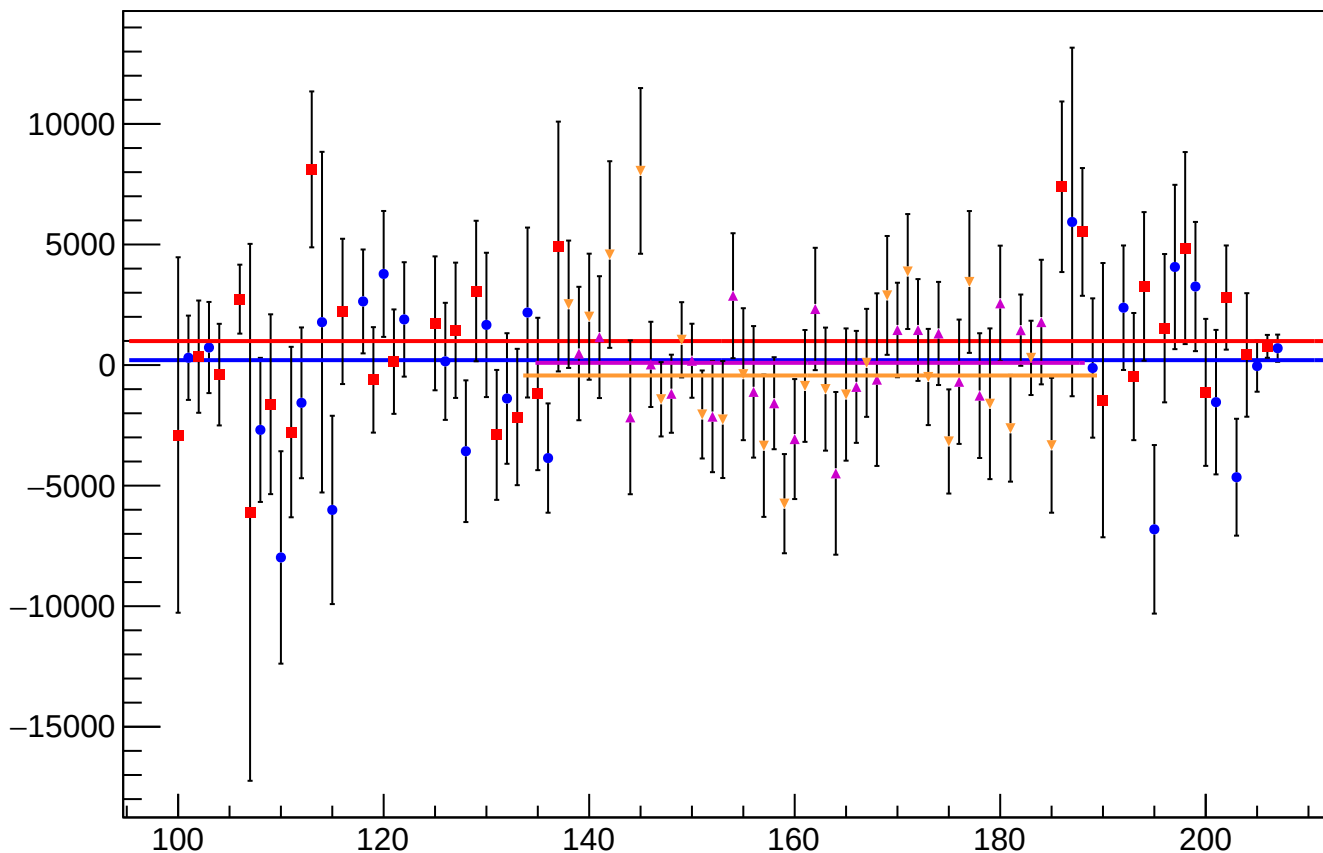
Left In: 2186.745+/-0.361  $\chi^2/\text{NDF}$ : 2063.9/22

+ sign 2211.497+/-0.271  $\chi^2/\text{NDF}$ : 548728.0/49

All: 2216.513+/-0.191  $\chi^2/\text{NDF}$ : 754661.4/101

- sign 2221.441+/-0.269  $\chi^2/\text{NDF}$ : 205254.4/51

asym\_us\_avg\_at1lr\_avg\_avg\_reg\_correction\_mean vs Slug



Right In: 203.432 $\pm$ 372.343  $\chi^2$ /NDF: 29.9/25

Left Out: -432.286 $\pm$ 462.383  $\chi^2$ /NDF:31.3/23

Right Out: 994.343 $\pm$ 351.998  $\chi^2$ /NDF: 24.7/28

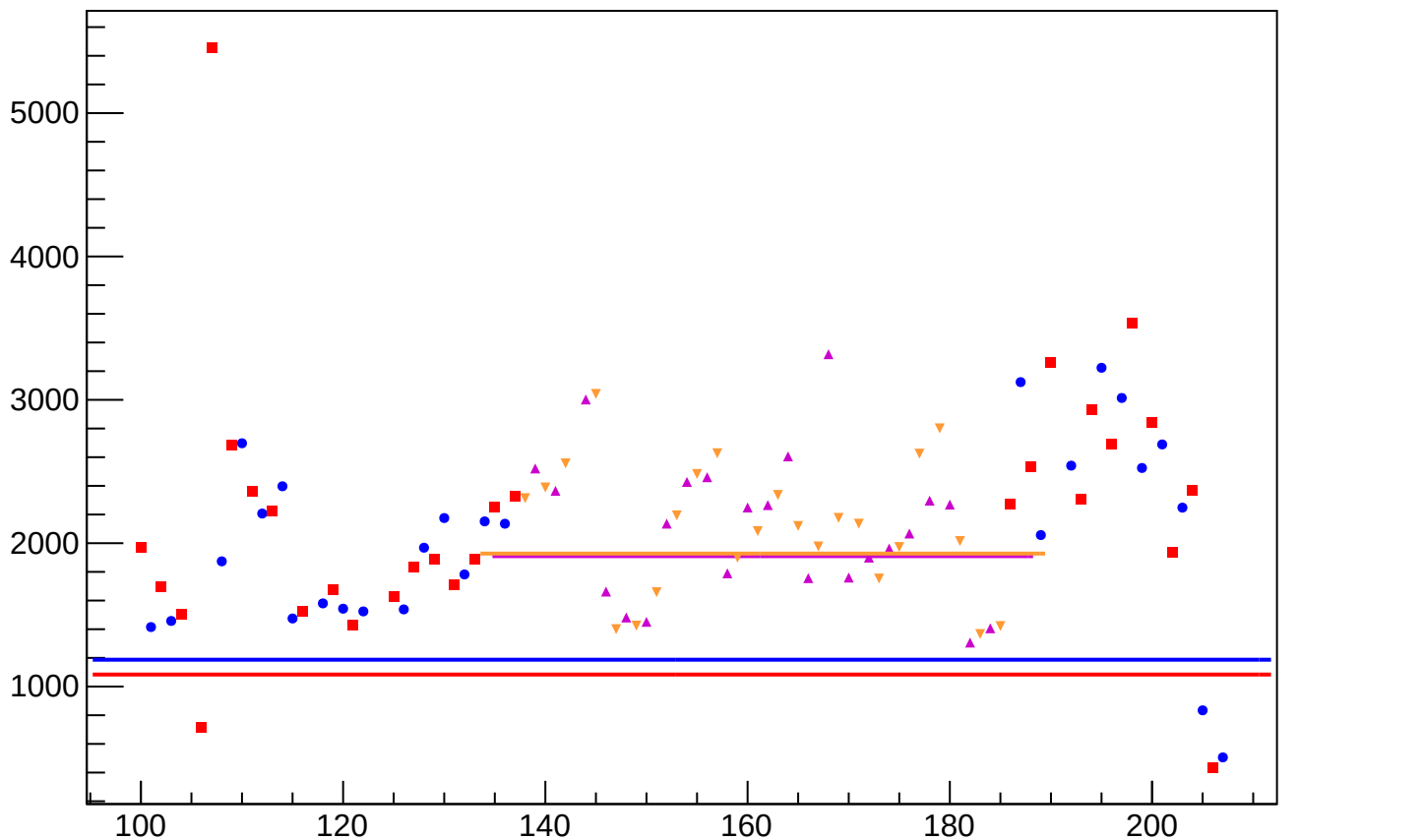
Left In: 92.649 $\pm$ 460.669  $\chi^2$ /NDF:12.8/22

+ sign -46.642 $\pm$ 290.004  $\chi^2$ /NDF: 62.4/49

All: 320.476 $\pm$ 201.320  $\chi^2$ /NDF: 105.3/101

- sign 661.954 $\pm$ 279.694  $\chi^2$ /NDF: 39.8/51

asym\_us\_avg\_at1lr\_avg\_avg\_reg\_correction\_rms vs Slug

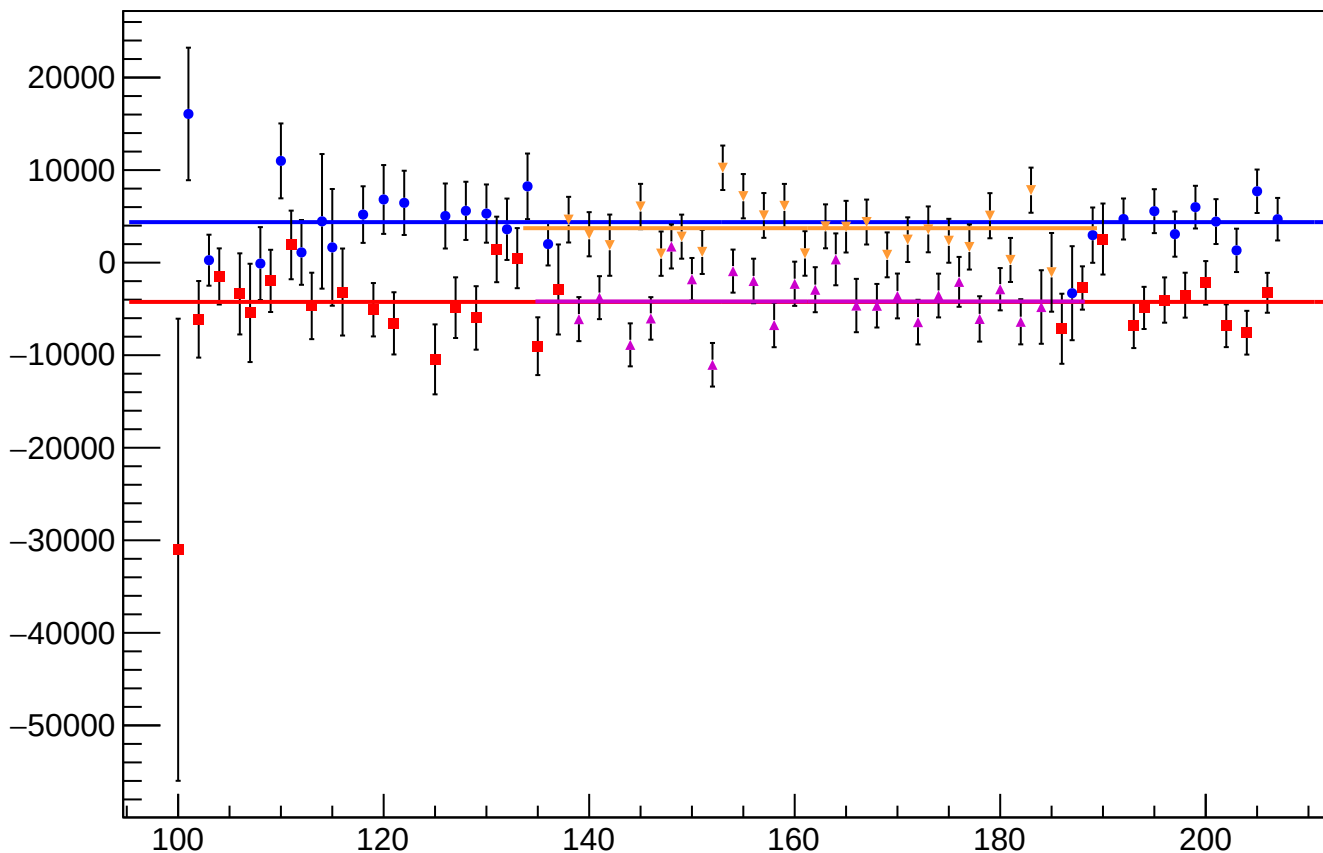


Right In: 1187.341 $\pm$ 0.263  $\chi^2$ /NDF: 8491871.9/25  
 Left Out: 1927.660 $\pm$ 0.327  $\chi^2$ /NDF: 1798383.1/23  
 Right Out: 1083.832 $\pm$ 0.249  $\chi^2$ /NDF: 11676056.4/28  
 Left In: 1909.612 $\pm$ 0.326  $\chi^2$ /NDF: 1942264.8/22

+ sign 1478.562 $\pm$ 0.205  $\chi^2$ /NDF: 13400440.3/49  
 All: 1431.765 $\pm$ 0.142  $\chi^2$ /NDF: 31176863.1/100  
 - sign 1388.237 $\pm$ 0.198  $\chi^2$ /NDF: 17675904.3/51



# cor\_asym\_us\_avg\_at1lr\_avg\_avg\_mean vs Slug



Right In: 4377.210 $\pm$ 585.541  $\chi^2$ /NDF: 20.6/25

Left Out: 3723.433 $\pm$ 507.155  $\chi^2$ /NDF:25.4/23

Right Out: -4243.325 $\pm$ 568.755  $\chi^2$ /NDF: 25.7/28

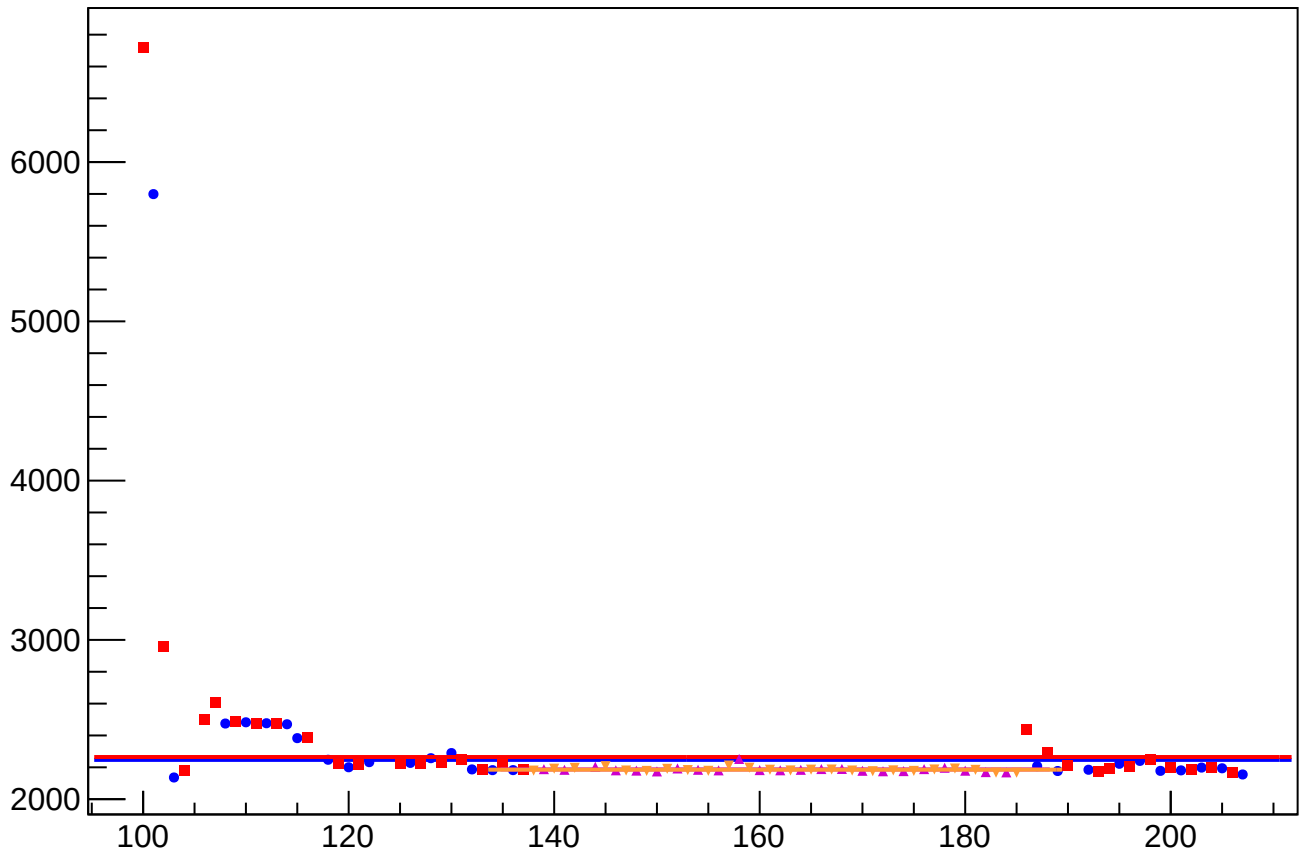
Left In: -4196.060 $\pm$ 510.578  $\chi^2$ /NDF:32.1/22

+ sign 4003.662 $\pm$ 383.353  $\chi^2$ /NDF: 46.8/49

All: -143.488 $\pm$ 269.857  $\chi^2$ /NDF: 336.6/101

- sign -4217.152 $\pm$ 379.942  $\chi^2$ /NDF: 57.9/51

# cor\_asym\_us\_avg\_at1lr\_avg\_avg\_rms vs Slug



Right In: 2246.640 $\pm$ 0.414  $\chi^2$ /NDF: 535304.3/25

Left Out: 2185.133 $\pm$ 0.359  $\chi^2$ /NDF: 815.1/23

Right Out: 2264.635 $\pm$ 0.402  $\chi^2$ /NDF: 182967.2/28

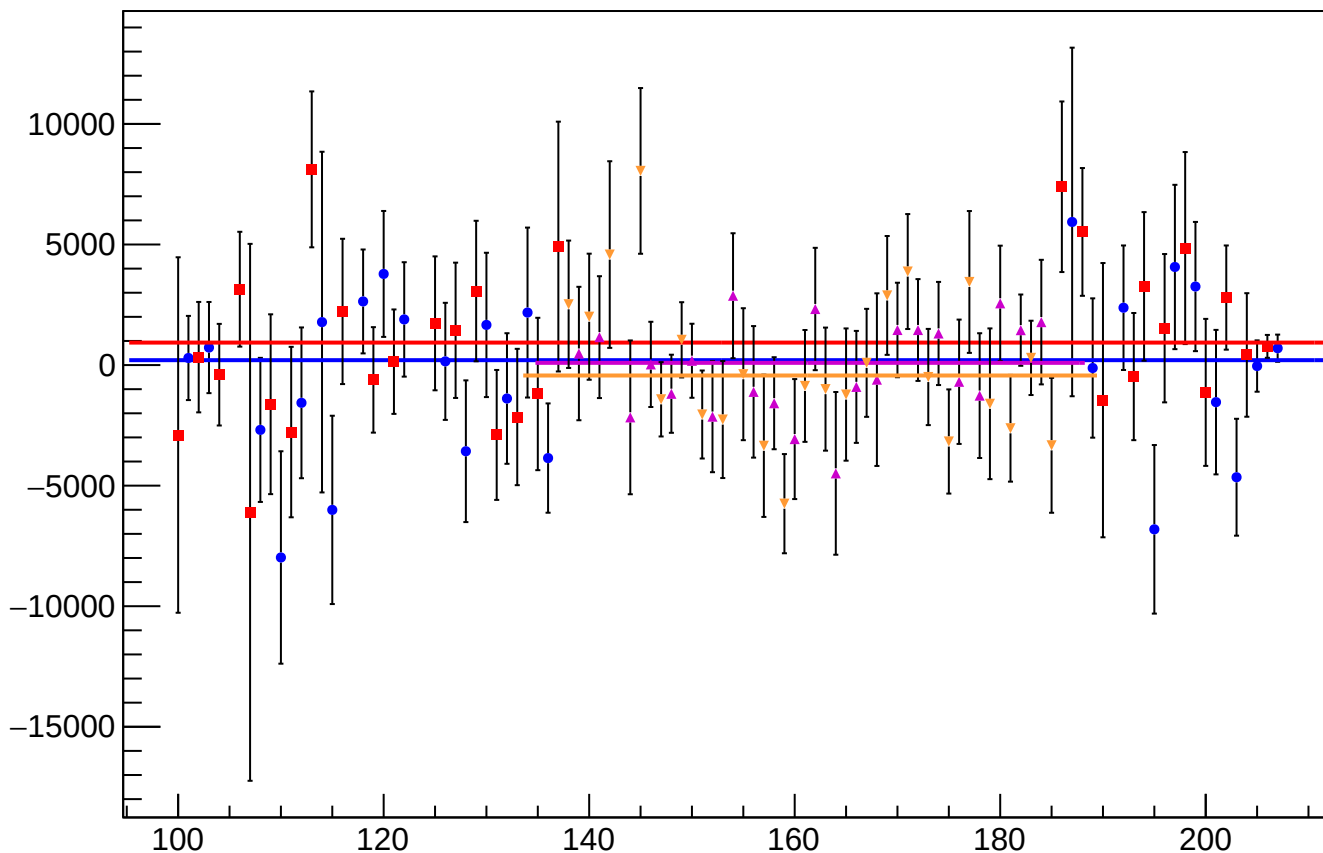
Left In: 2186.745 $\pm$ 0.361  $\chi^2$ /NDF: 2063.9/22

+ sign 2211.497 $\pm$ 0.271  $\chi^2$ /NDF: 548728.4/49

All: 2216.545 $\pm$ 0.191  $\chi^2$ /NDF: 755217.6/101

- sign 2221.504 $\pm$ 0.269  $\chi^2$ /NDF: 205801.7/51

asym\_us\_avg\_at1lr\_avg\_avg\_cor\_correction\_mean vs Slug



Right In: 203.256+/-372.315  $\chi^2/\text{NDF}$ : 29.9/25

Left Out: -432.320+/-462.383  $\chi^2/\text{NDF}$ :31.3/23

Right Out: 932.437+/-358.882  $\chi^2/\text{NDF}$ : 24.0/28

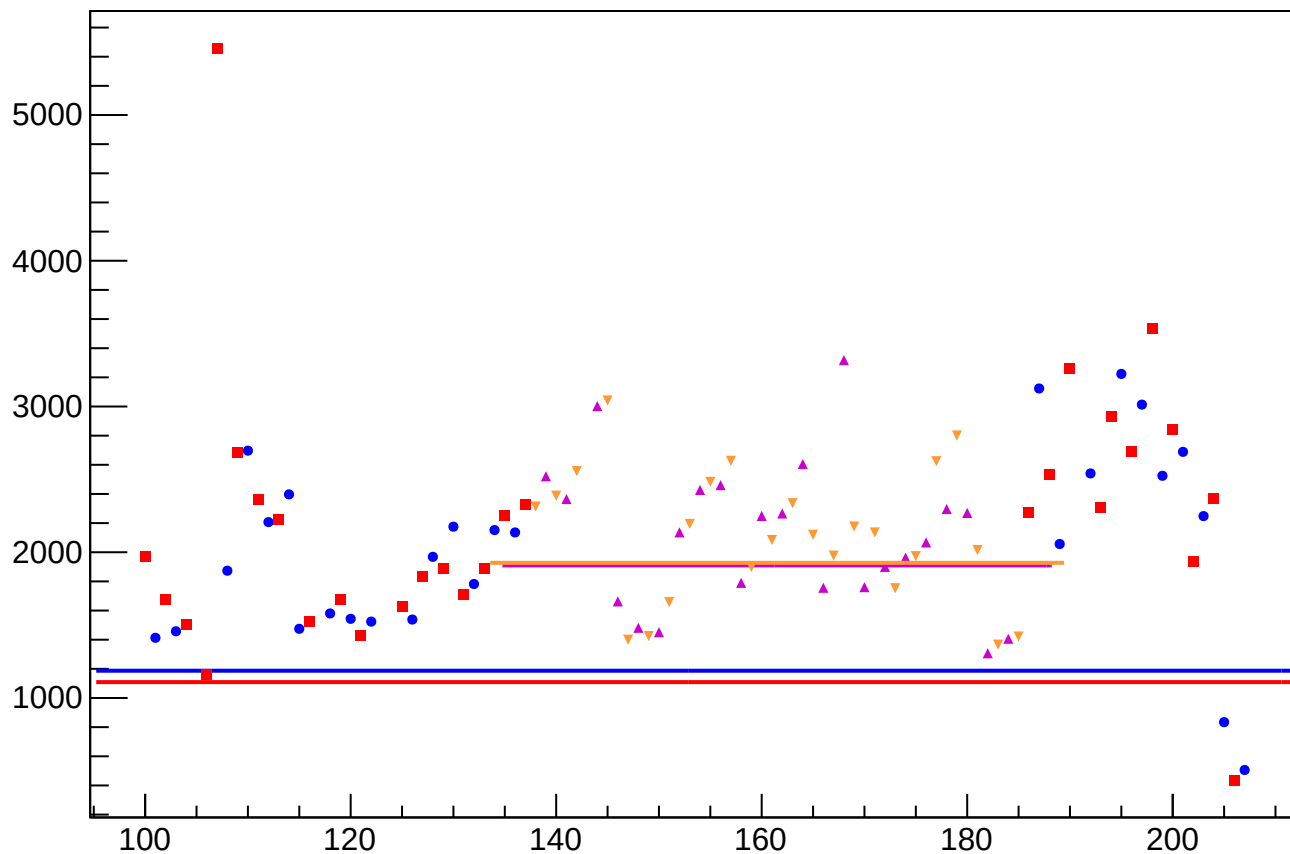
Left In: 92.604+/-460.670  $\chi^2/\text{NDF}$ :12.8/22

+ sign -46.740+/-289.991  $\chi^2/\text{NDF}$ : 62.4/49

All: 292.197+/-202.578  $\chi^2/\text{NDF}$ : 103.8/101

- sign 615.242+/-283.111  $\chi^2/\text{NDF}$ : 38.8/51

asym\_us\_avg\_at1lr\_avg\_avg\_cor\_correction\_rms vs Slug



Right In: 1187.261+/-0.263  $\chi^2/\text{NDF}$ : 8491747.4/25

Left Out: 1927.659+/-0.327  $\chi^2/\text{NDF}$ : 1798407.2/23

Right Out: 1108.995+/-0.254  $\chi^2/\text{NDF}$ : 11531587.8/28

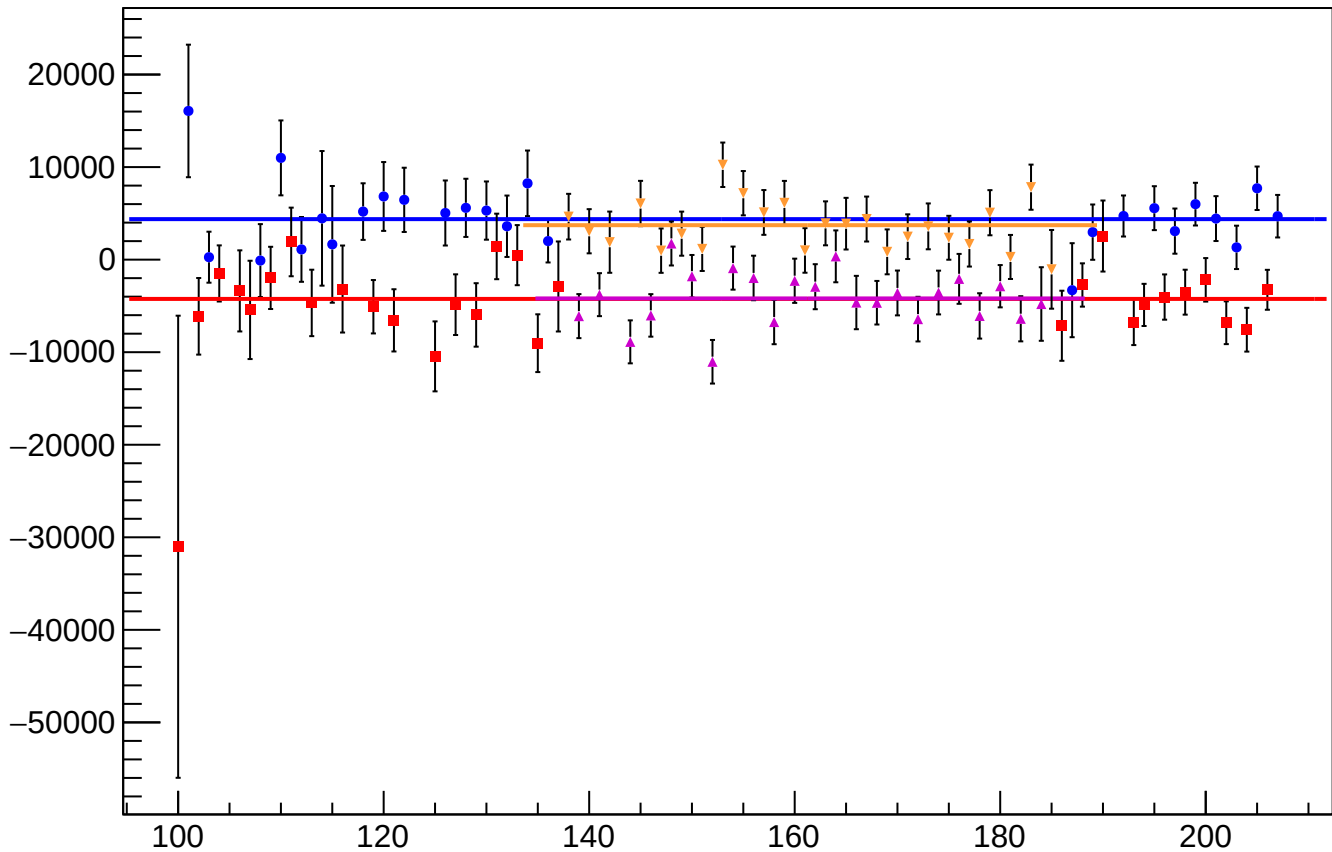
Left In: 1909.618+/-0.326  $\chi^2/\text{NDF}$ : 1942286.8/22

+ sign 1478.488+/-0.205  $\chi^2/\text{NDF}$ : 13401179.3/49

All: 1444.128+/-0.143  $\chi^2/\text{NDF}$ : 30689254.1/100

- sign 1411.380+/-0.200  $\chi^2/\text{NDF}$ : 17233237.8/51

eigen\_cor\_asym\_us\_avg\_at1lr\_avg\_avg\_mean vs Slug



Right In:  $4377.210 \pm 585.541$   $\chi^2/\text{NDF}$ : 20.6/25

Left Out:  $3723.433 \pm 507.155$   $\chi^2/\text{NDF}$ : 25.4/23

Right Out:  $-4243.325 \pm 568.755$   $\chi^2/\text{NDF}$ : 25.7/28

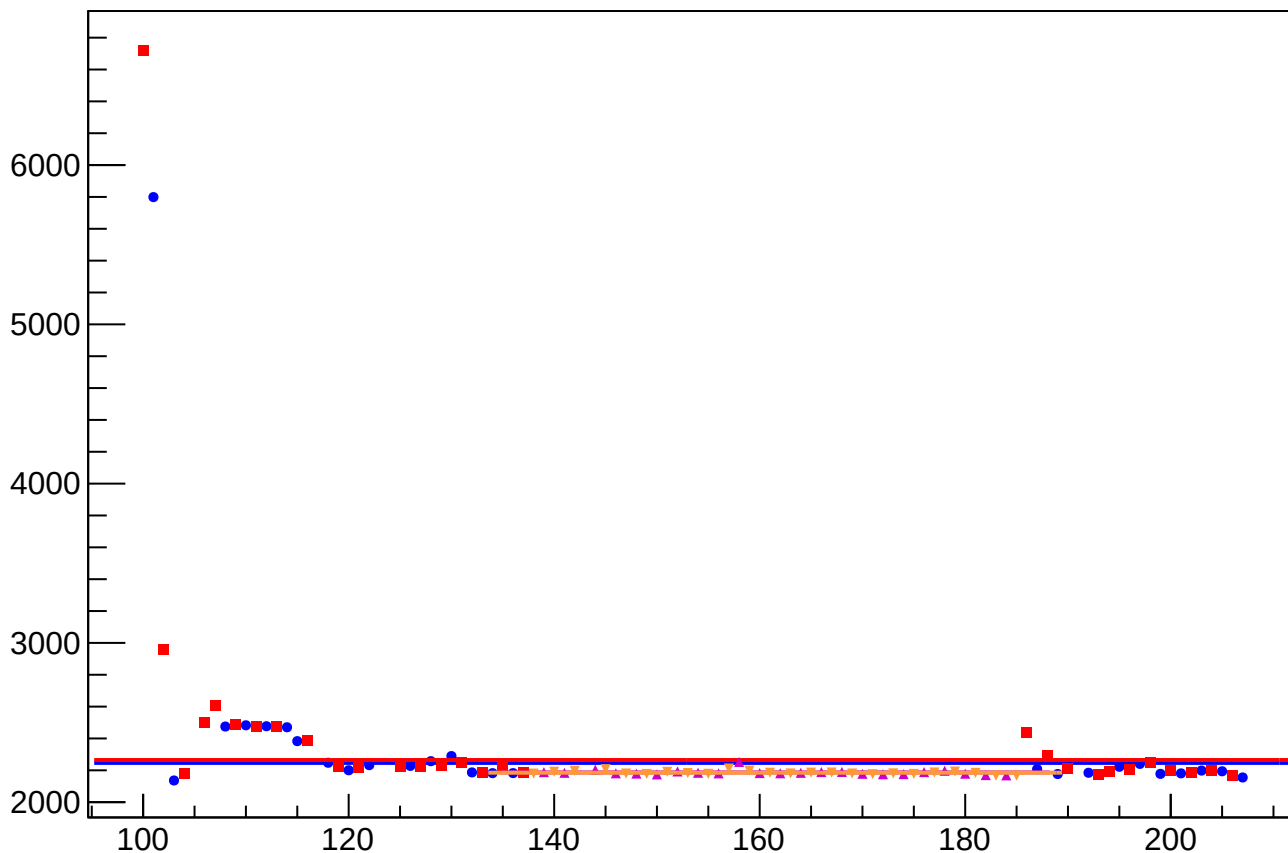
Left In:  $-4196.060 \pm 510.578$   $\chi^2/\text{NDF}$ : 32.1/22

+ sign  $4003.662 \pm 383.353$   $\chi^2/\text{NDF}$ : 46.8/49

All:  $-143.488 \pm 269.857$   $\chi^2/\text{NDF}$ : 336.6/101

- sign  $-4217.152 \pm 379.942$   $\chi^2/\text{NDF}$ : 57.9/51

eigen\_cor\_asym\_us\_avg\_at1lr\_avg\_avg\_rms vs Slug



Right In: 2246.640 $\pm$ 0.414  $\chi^2$ /NDF: 535304.3/25

Left Out: 2185.133 $\pm$ 0.359  $\chi^2$ /NDF: 815.1/23

Right Out: 2264.635 $\pm$ 0.402  $\chi^2$ /NDF: 182967.2/28

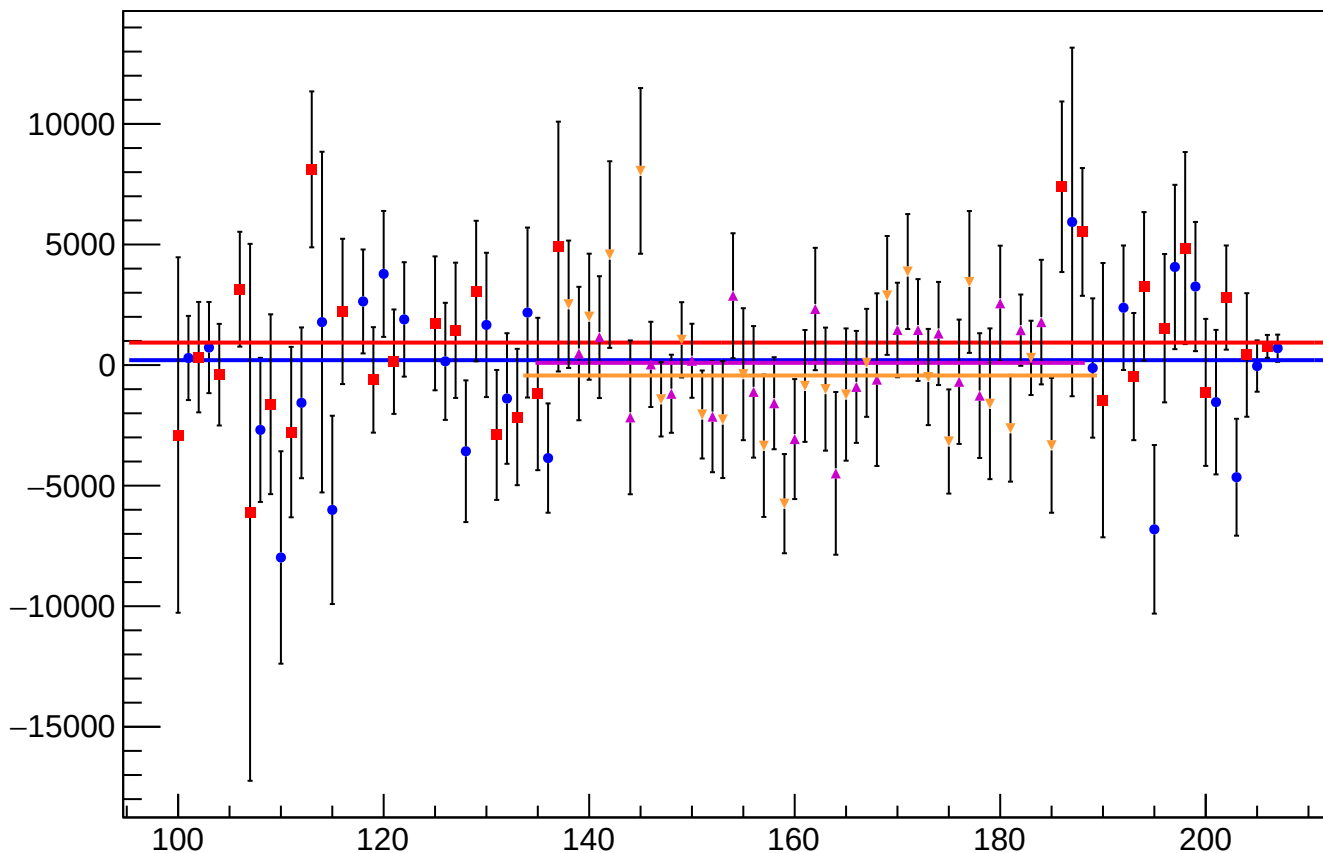
Left In: 2186.745 $\pm$ 0.361  $\chi^2$ /NDF: 2063.9/22

+ sign 2211.497 $\pm$ 0.271  $\chi^2$ /NDF: 548728.4/49

All: 2216.545 $\pm$ 0.191  $\chi^2$ /NDF: 755217.6/101

- sign 2221.504 $\pm$ 0.269  $\chi^2$ /NDF: 205801.7/51

asym\_us\_avg\_at1lr\_avg\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In: 203.256+/-372.315  $\chi^2/\text{NDF}$ : 29.9/25

Left Out: -432.320+/-462.383  $\chi^2/\text{NDF}$ :31.3/23

Right Out: 932.437+/-358.882  $\chi^2/\text{NDF}$ : 24.0/28

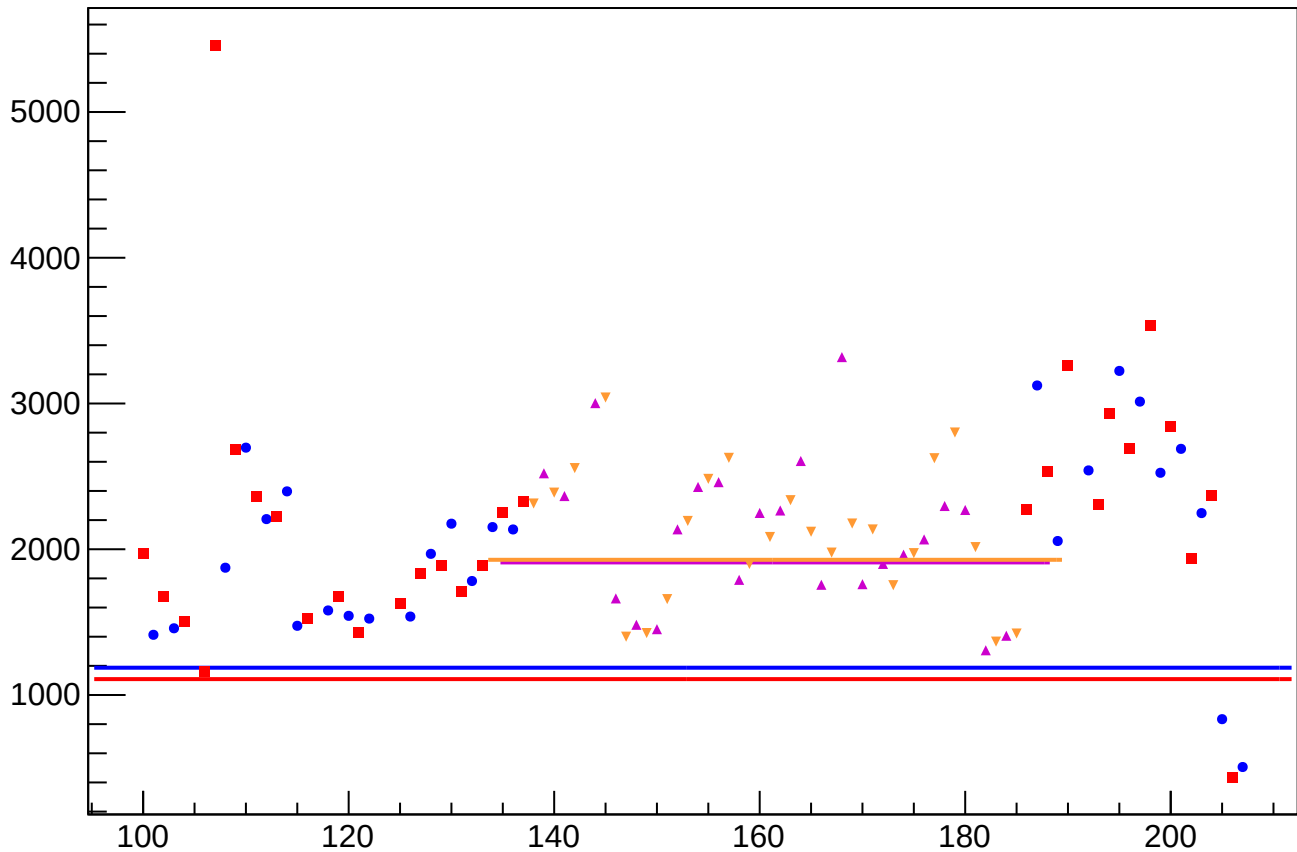
Left In: 92.604+/-460.670  $\chi^2/\text{NDF}$ :12.8/22

+ sign -46.740+/-289.991  $\chi^2/\text{NDF}$ : 62.4/49

All: 292.197+/-202.578  $\chi^2/\text{NDF}$ : 103.8/101

- sign 615.242+/-283.111  $\chi^2/\text{NDF}$ : 38.8/51

asym\_us\_avg\_at1lr\_avg\_avg\_eigen\_cor\_correction\_rms vs Slug

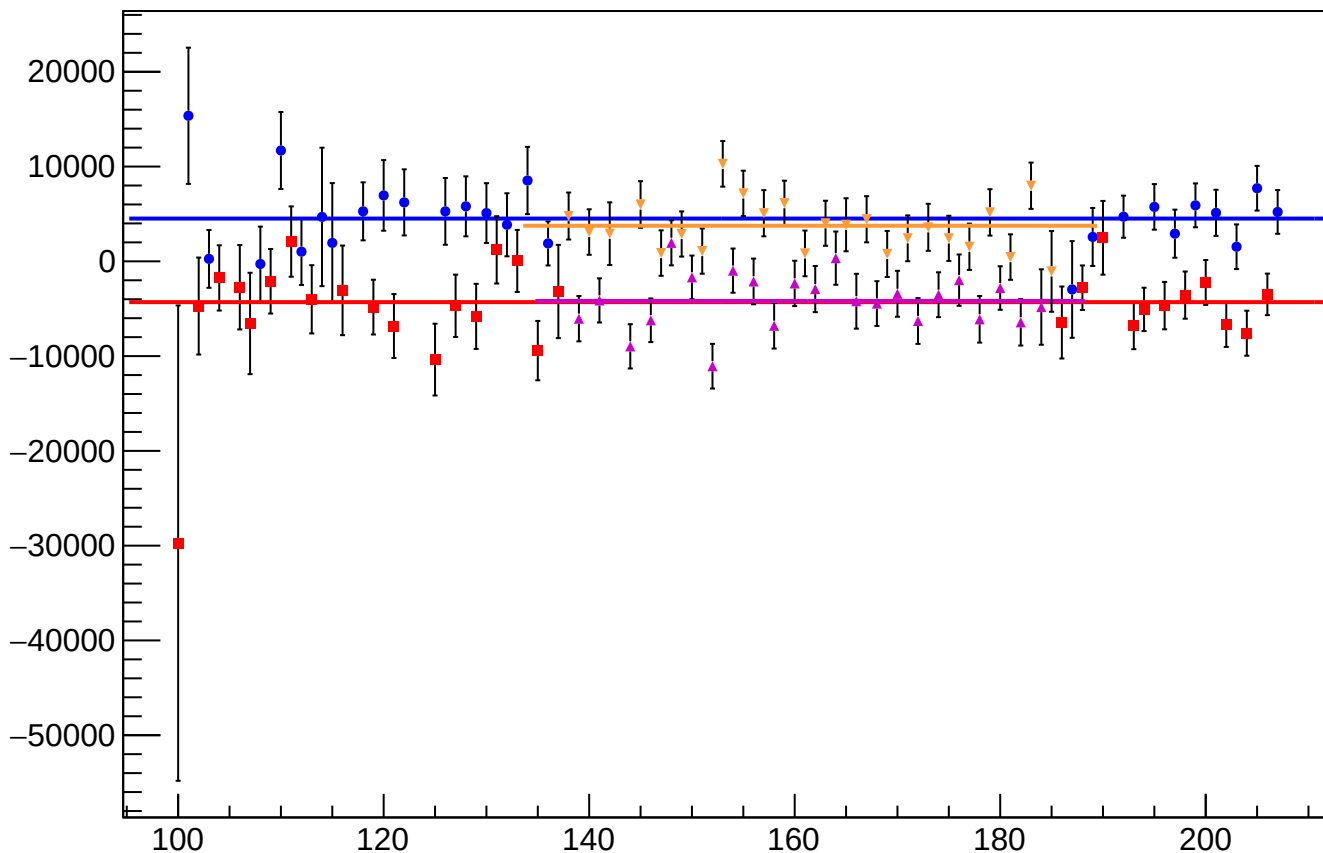


Right In: 1187.261 $\pm$ 0.263  $\chi^2$ /NDF: 8491747.4/25  
 Left Out: 1927.659 $\pm$ 0.327  $\chi^2$ /NDF:1798407.2/23  
 Right Out: 1108.995 $\pm$ 0.254  $\chi^2$ /NDF: 11531587.8/28  
 Left In: 1909.618 $\pm$ 0.326  $\chi^2$ /NDF:1942286.8/22

+ sign 1478.488 $\pm$ 0.205  $\chi^2$ /NDF: 13401179.3/49  
 All: 1444.128 $\pm$ 0.143  $\chi^2$ /NDF: 30689254.1/1  
 - sign 1411.380 $\pm$ 0.200  $\chi^2$ /NDF: 17233237.8/51



# dit\_asym\_us\_avg\_at1lr\_avg\_avg\_mean vs Slug



Right In: 4511.975 $\pm$ 592.000  $\chi^2$ /NDF: 20.7/25

Left Out: 3754.065 $\pm$ 508.568  $\chi^2$ /NDF:25.7/23

Right Out: -4304.223 $\pm$ 577.505  $\chi^2$ /NDF: 24.5/28

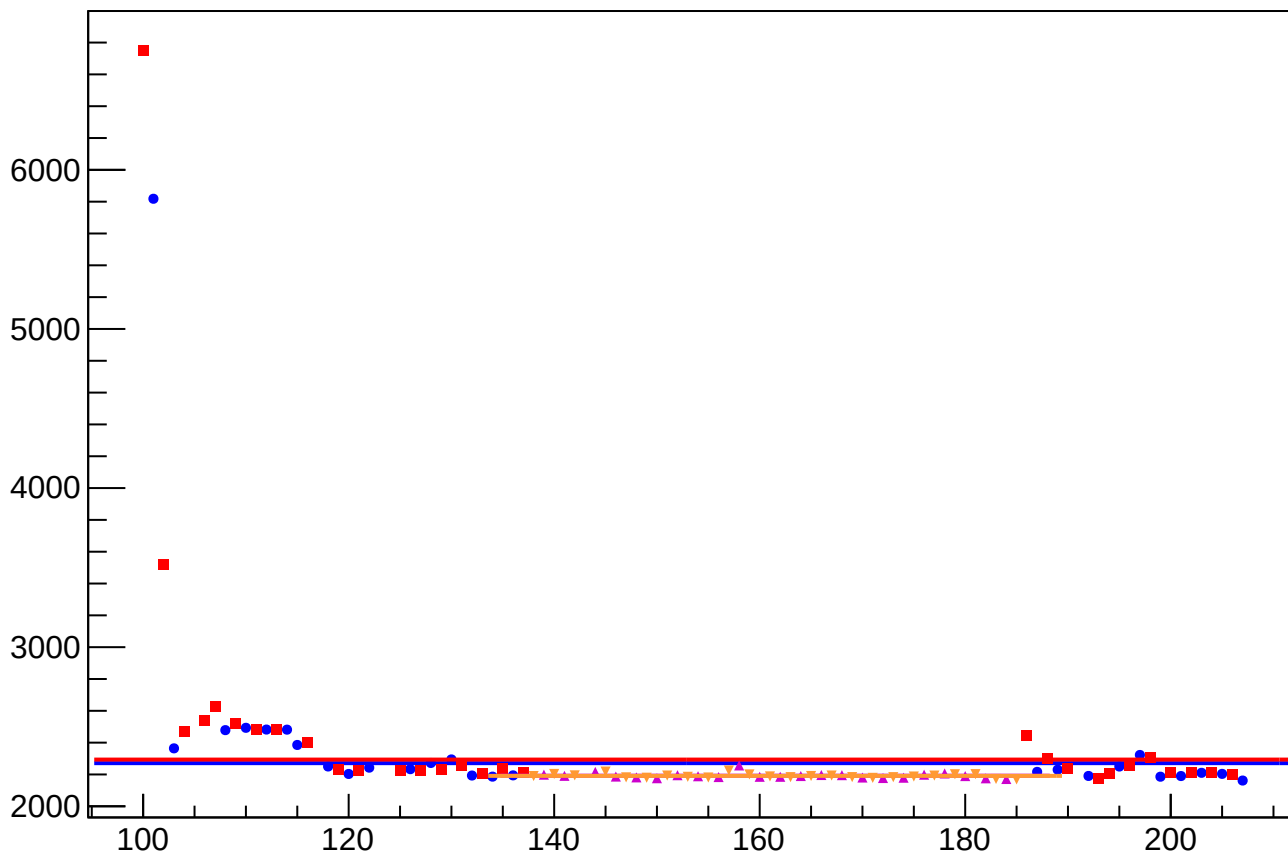
Left In: -4184.214 $\pm$ 511.864  $\chi^2$ /NDF:32.7/22

+ sign 4075.893 $\pm$ 385.767  $\chi^2$ /NDF: 47.3/49

All: -109.864 $\pm$ 271.815  $\chi^2$ /NDF: 338.3/101

- sign -4237.013 $\pm$ 383.057  $\chi^2$ /NDF: 57.2/51

dit\_asym\_us\_avg\_at1lr\_avg\_avg\_rms vs Slug



Right In: 2271.037 $\pm$ 0.419  $\chi^2$ /NDF: 532573.0/25

Left Out: 2191.147 $\pm$ 0.360  $\chi^2$ /NDF:1228.9/23

Right Out: 2293.546 $\pm$ 0.408  $\chi^2$ /NDF: 247057.4/28

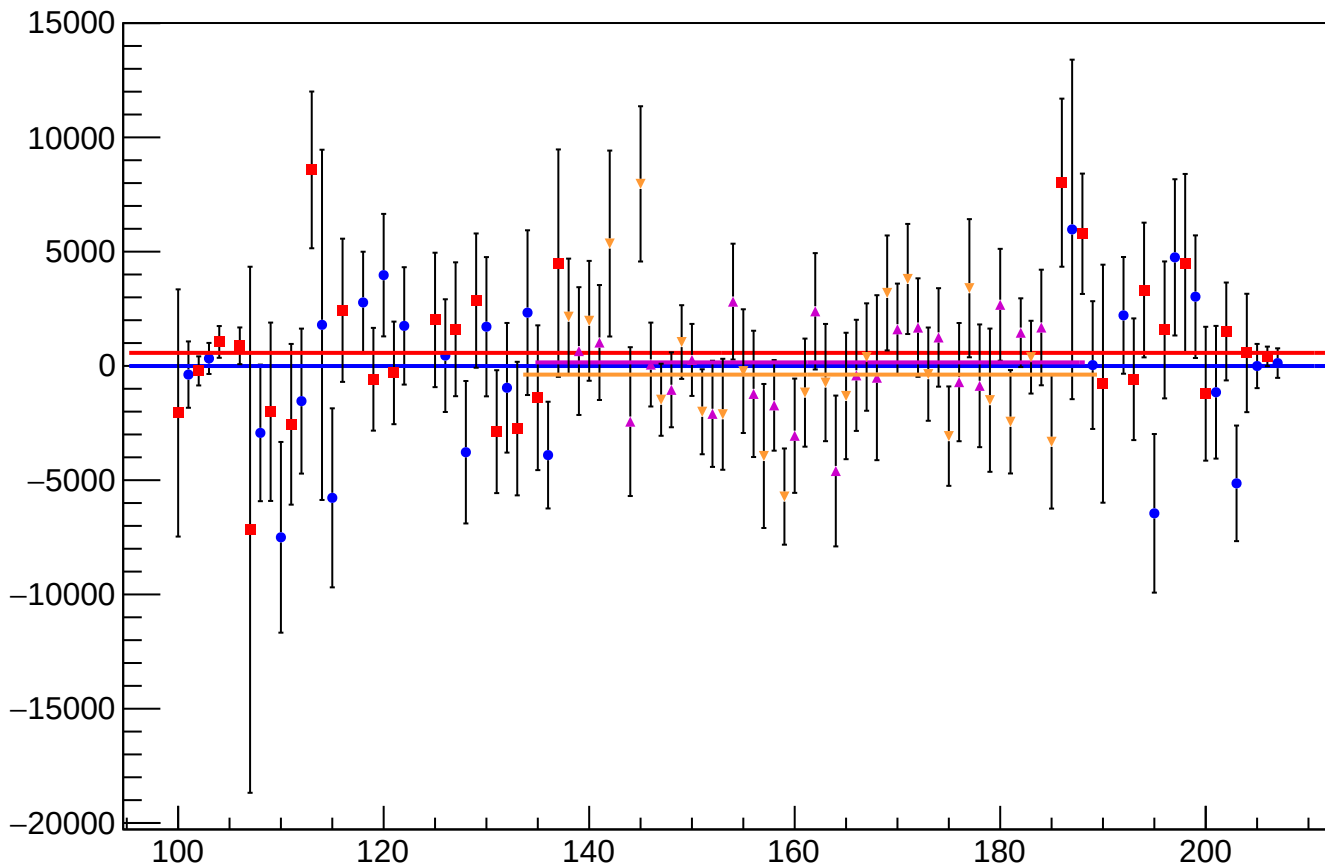
Left In: 2192.201 $\pm$ 0.362  $\chi^2$ /NDF:2281.8/22

+ sign 2225.070 $\pm$ 0.273  $\chi^2$ /NDF: 554758.6/49

All: 2230.971 $\pm$ 0.192  $\chi^2$ /NDF: 839521.1/101

- sign 2236.789 $\pm$ 0.271  $\chi^2$ /NDF: 283833.2/51

asym\_us\_avg\_at1lr\_avg\_avg\_dit\_correction\_mean vs Slug



Right In:  $-4.590 \pm 341.226$   $\chi^2/\text{NDF}$ : 28.7/25

Left Out:  $-380.488 \pm 471.481$   $\chi^2/\text{NDF}$ : 30.8/23

Right Out:  $570.672 \pm 264.902$   $\chi^2/\text{NDF}$ : 26.2/28

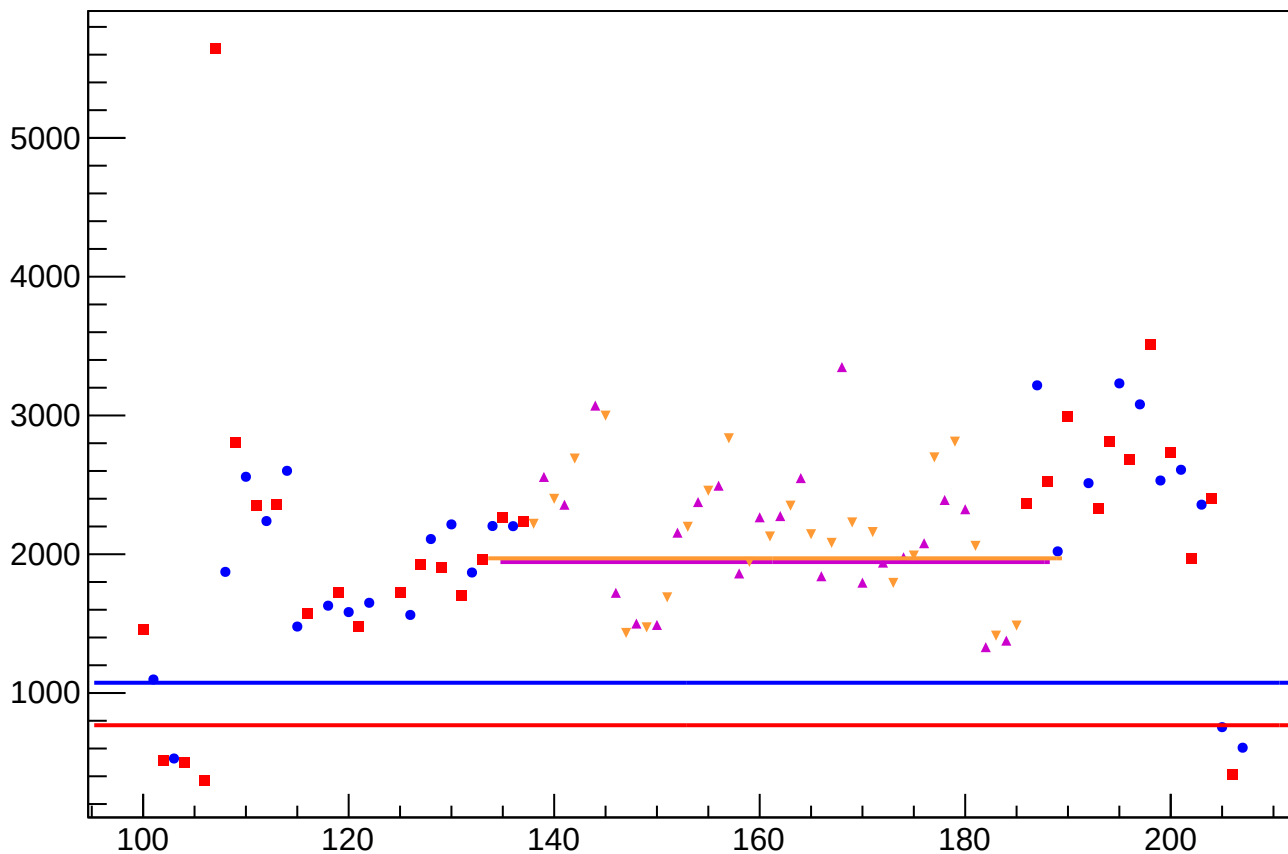
Left In:  $154.512 \pm 467.999$   $\chi^2/\text{NDF}$ : 12.8/22

+ sign  $-133.801 \pm 276.427$   $\chi^2/\text{NDF}$ : 59.9/49

All:  $222.133 \pm 177.045$   $\chi^2/\text{NDF}$ : 102.3/101

- sign  $469.691 \pm 230.534$   $\chi^2/\text{NDF}$ : 39.6/51

asym\_us\_avg\_at1lr\_avg\_avg\_dit\_correction\_rms vs Slug



Right In: 1073.931+/-0.241  $\chi^2/\text{NDF}$ : 9179253.8/25

Left Out: 1970.655+/-0.333  $\chi^2/\text{NDF}$ : 1696659.6/23

Right Out: 767.806+/-0.187  $\chi^2/\text{NDF}$ : 14392713.8/28

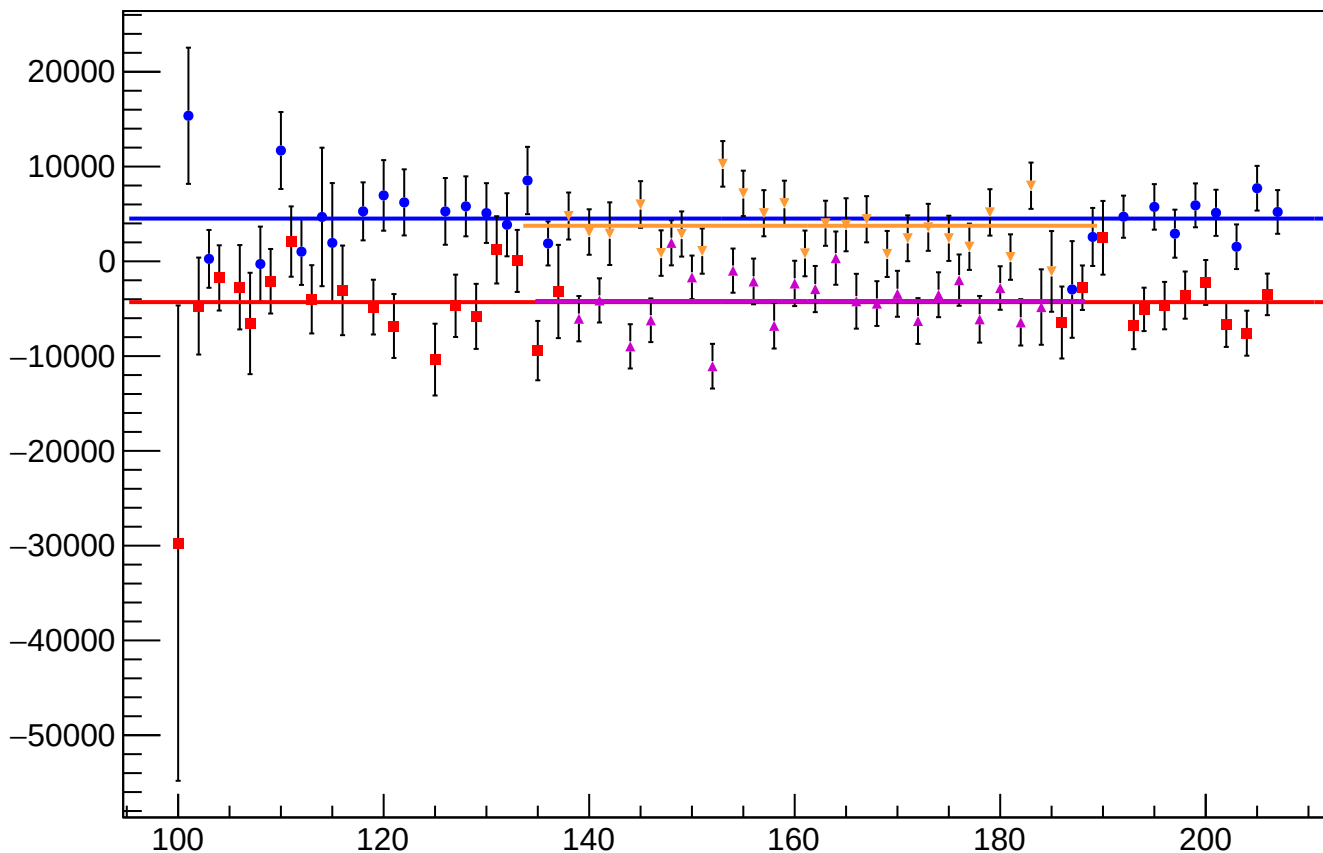
Left In: 1943.628+/-0.331  $\chi^2/\text{NDF}$ : 1882933.7/22

+ sign 1382.172+/-0.195  $\chi^2/\text{NDF}$ : 15623738.3/49

All: 1188.099+/-0.125  $\chi^2/\text{NDF}$ : 43132233.3/100

- sign 1053.118+/-0.163  $\chi^2/\text{NDF}$ : 25837008.8/51

eigen\_dit\_asym\_us\_avg\_at1lr\_avg\_avg\_mean vs Slug



Right In: 4511.973 $\pm$ 592.000  $\chi^2$ /NDF: 20.7/25

Left Out: 3754.064 $\pm$ 508.568  $\chi^2$ /NDF:25.7/23

Right Out: -4304.218 $\pm$ 577.505  $\chi^2$ /NDF: 24.5/28

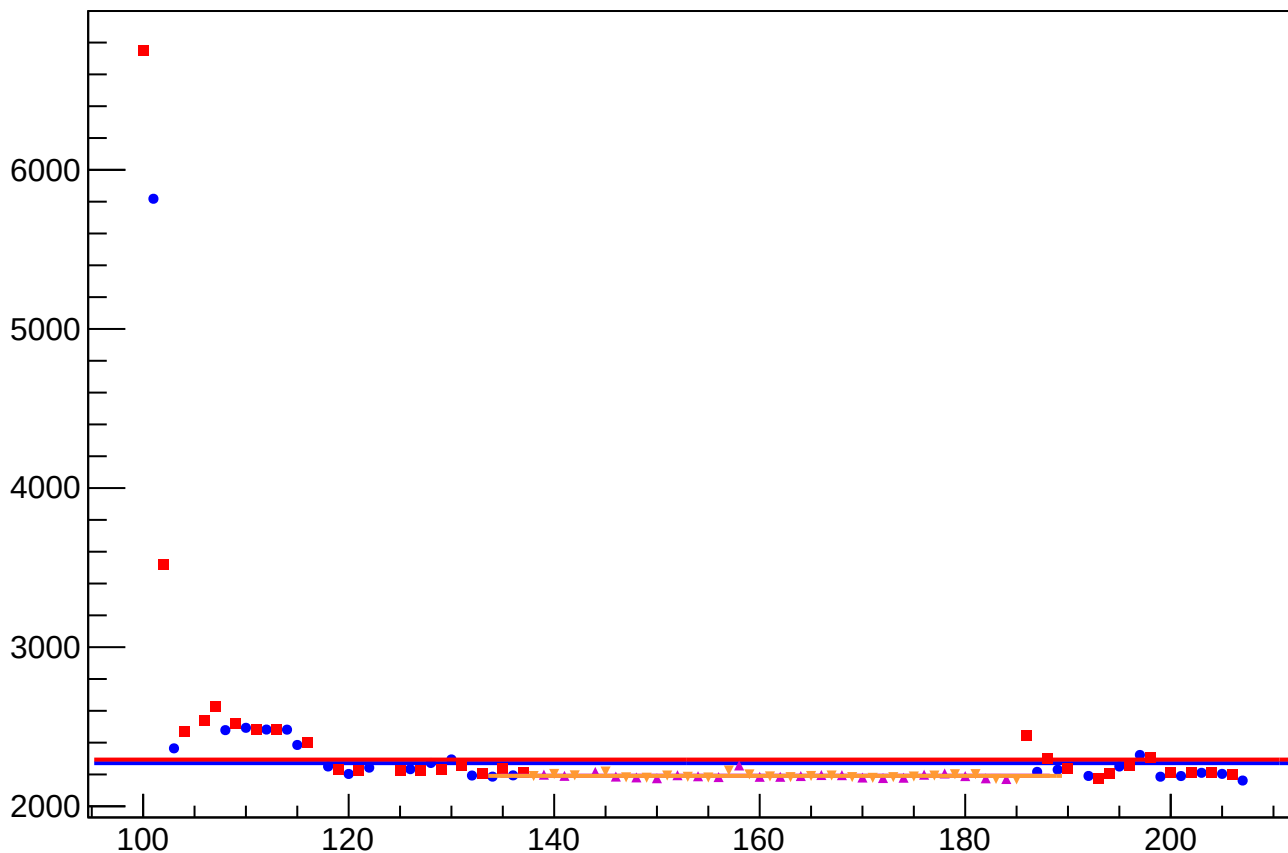
Left In: -4184.214 $\pm$ 511.864  $\chi^2$ /NDF:32.7/22

+ sign 4075.891 $\pm$ 385.767  $\chi^2$ /NDF: 47.3/49

All: -109.864 $\pm$ 271.815  $\chi^2$ /NDF: 338.3/101

- sign -4237.012 $\pm$ 383.057  $\chi^2$ /NDF: 57.2/51

eigen\_dit\_asym\_us\_avg\_at1lr\_avg\_avg\_rms vs Slug



Right In: 2271.036 $\pm$ 0.419  $\chi^2$ /NDF: 532572.9/25

Left Out: 2191.147 $\pm$ 0.360  $\chi^2$ /NDF:1228.9/23

Right Out: 2293.546 $\pm$ 0.408  $\chi^2$ /NDF: 247056.2/28

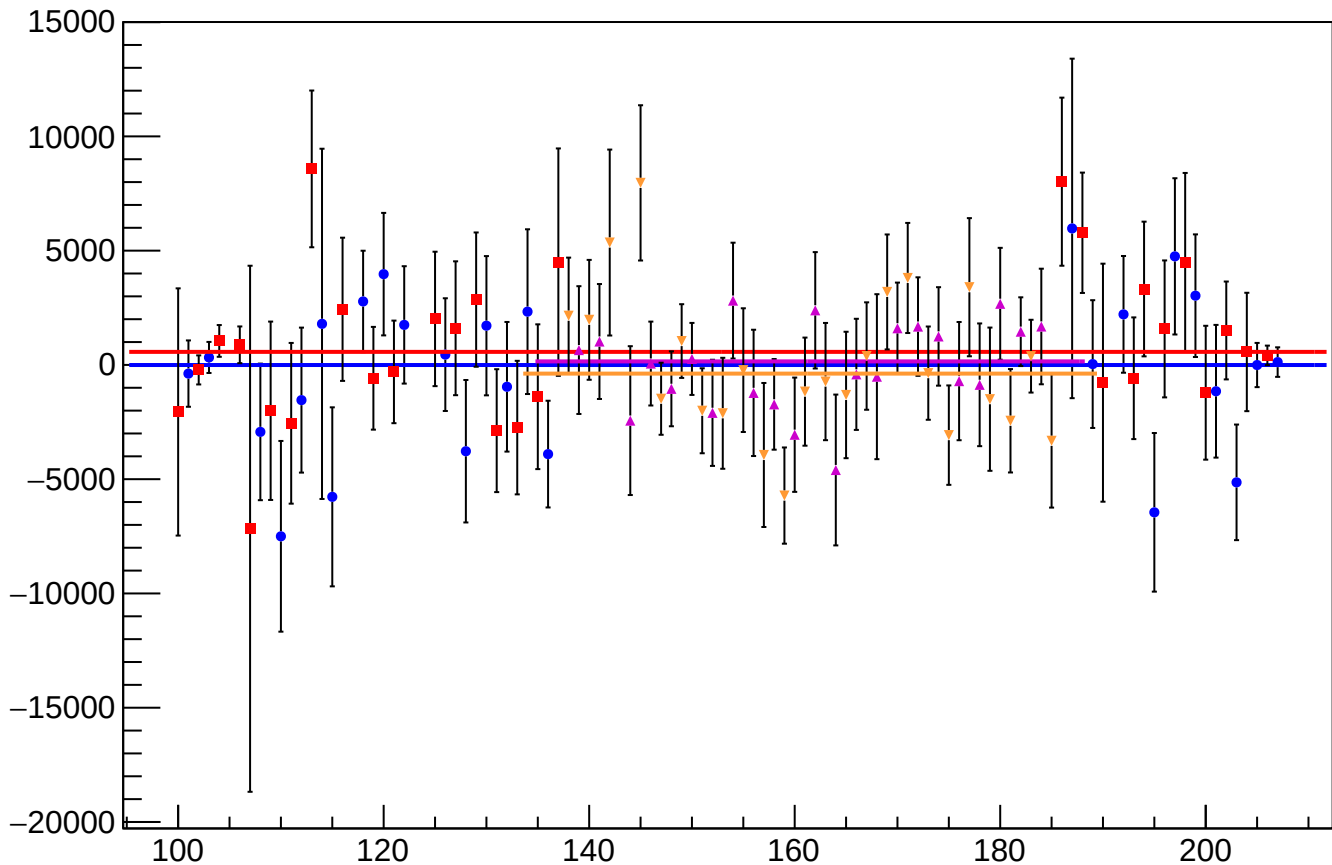
Left In: 2192.201 $\pm$ 0.362  $\chi^2$ /NDF:2281.8/22

+ sign 2225.070 $\pm$ 0.273  $\chi^2$ /NDF: 554758.3/49

All: 2230.971 $\pm$ 0.192  $\chi^2$ /NDF: 839519.4/101

- sign 2236.789 $\pm$ 0.271  $\chi^2$ /NDF: 283831.7/51

asym\_us\_avg\_at1lr\_avg\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-4.590 \pm 341.228$   $\chi^2/\text{NDF}$ : 28.7/25

Left Out:  $-380.492 \pm 471.482$   $\chi^2/\text{NDF}$ : 30.8/23

Right Out:  $570.670 \pm 264.903$   $\chi^2/\text{NDF}$ : 26.2/28

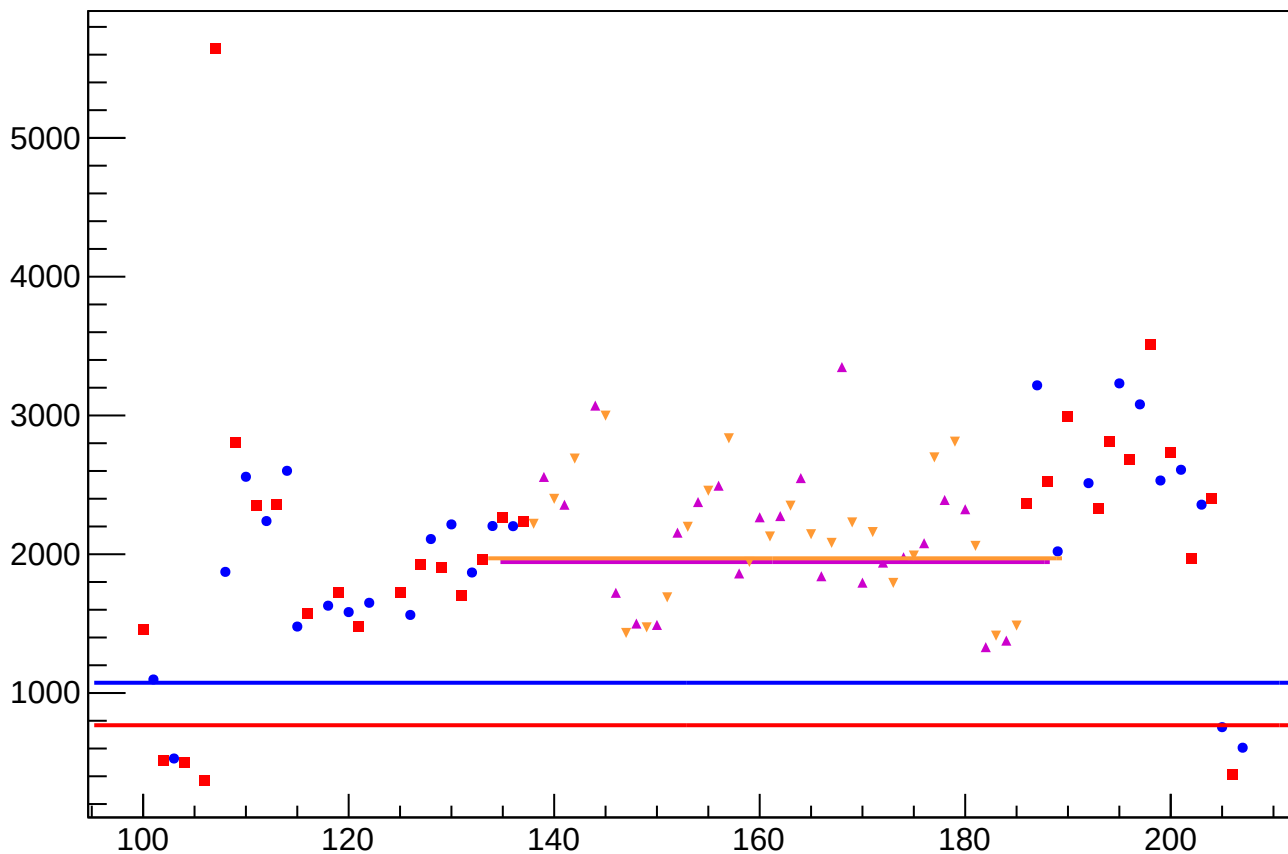
Left In:  $154.512 \pm 468.000$   $\chi^2/\text{NDF}$ : 12.8/22

+ sign  $-133.804 \pm 276.428$   $\chi^2/\text{NDF}$ : 59.9/49

All:  $222.130 \pm 177.045$   $\chi^2/\text{NDF}$ : 102.3/101

- sign  $469.689 \pm 230.535$   $\chi^2/\text{NDF}$ : 39.6/51

asym\_us\_avg\_at1lr\_avg\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 1073.939+/-0.241  $\chi^2/\text{NDF}$ : 9179163.3/25

Left Out: 1970.659+/-0.333  $\chi^2/\text{NDF}$ : 1696658.8/23

Right Out: 767.811+/-0.187  $\chi^2/\text{NDF}$ : 14392649.5/28

Left In: 1943.631+/-0.331  $\chi^2/\text{NDF}$ : 1882931.8/22

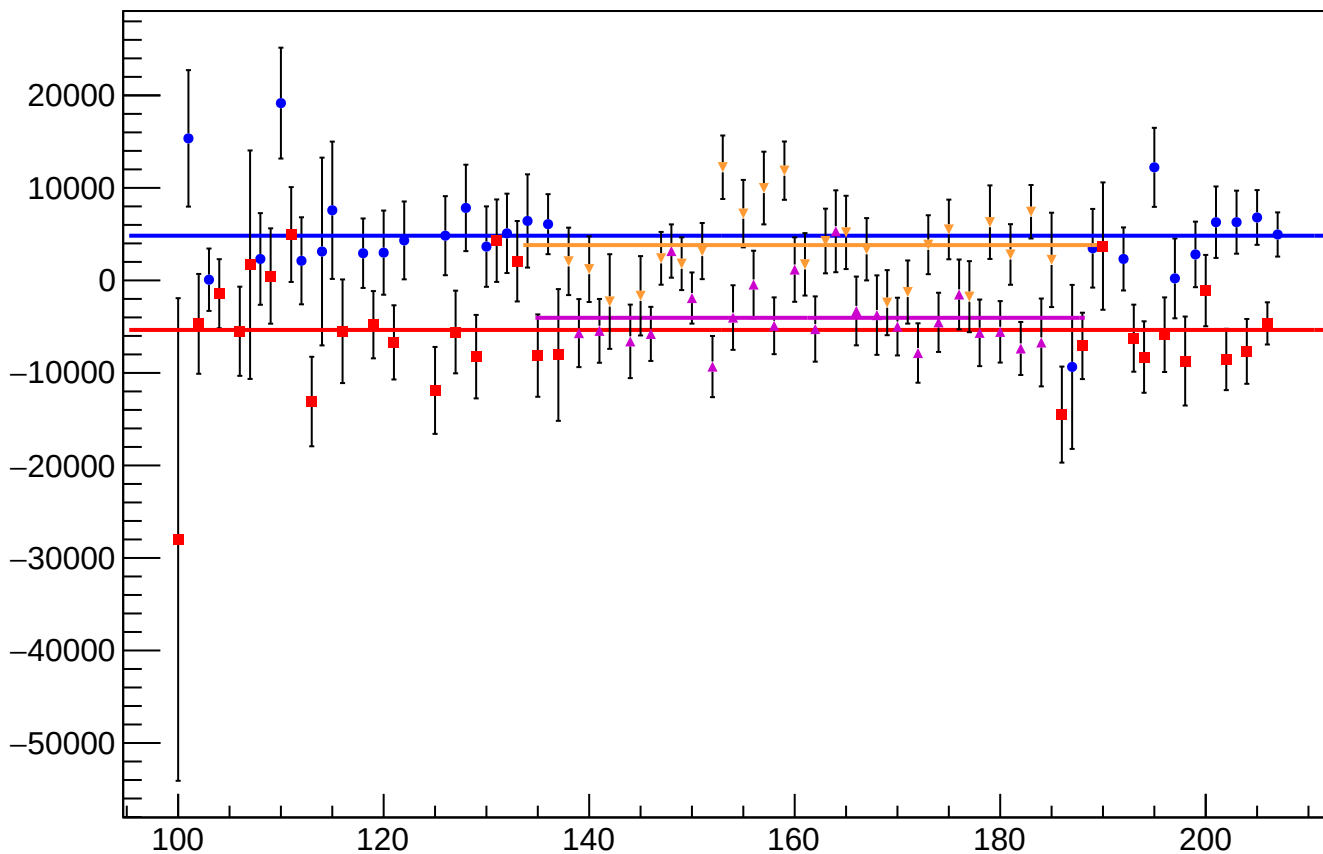
+ sign 1382.180+/-0.195  $\chi^2/\text{NDF}$ : 15623580.5/49

All: 1188.106+/-0.125  $\chi^2/\text{NDF}$ : 43131953.9/100

- sign 1053.123+/-0.163  $\chi^2/\text{NDF}$ : 25836880.3/51



asym\_us\_avg\_at1lr\_avg\_avg\_mean vs Slug



Right In: 4830.916 $\pm$ 802.924  $\chi^2$ /NDF: 20.1/25

Left Out: 3817.837 $\pm$ 708.312  $\chi^2$ /NDF:30.9/23

Right Out: -5352.415 $\pm$ 795.733  $\chi^2$ /NDF: 29.6/28

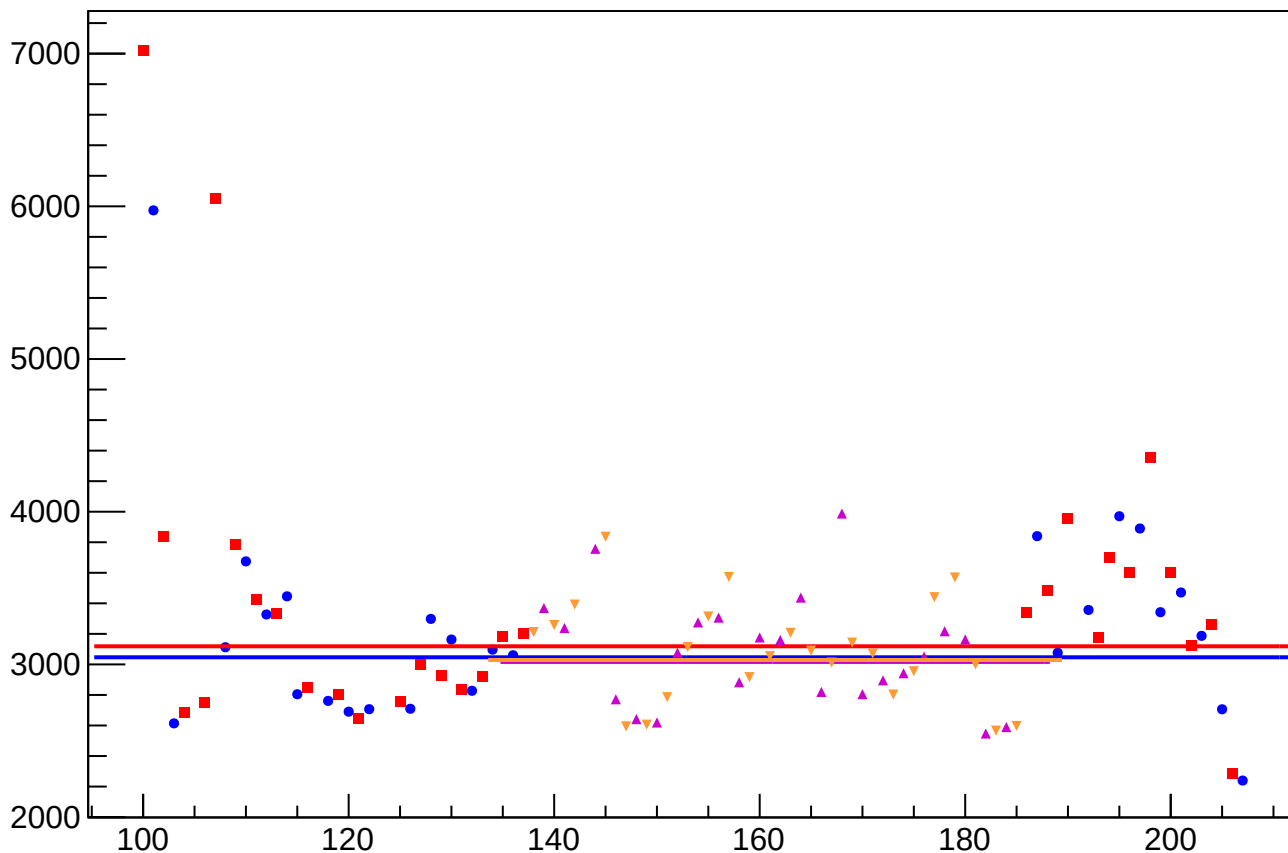
Left In: -4042.422 $\pm$ 709.573  $\chi^2$ /NDF:22.5/22

+ sign 4261.199 $\pm$ 531.169  $\chi^2$ /NDF: 51.9/49

All: -193.918 $\pm$ 375.035  $\chi^2$ /NDF: 245.8/101

- sign -4622.683 $\pm$ 529.595  $\chi^2$ /NDF: 53.6/51

# asym\_us\_avg\_at1lr\_avg\_avg\_rms vs Slug



Right In: 3046.620+/-0.568  $\chi^2/\text{NDF}$ : 943414.5/25

Left Out: 3028.983+/-0.501  $\chi^2/\text{NDF}$ :397111.2/23

Right Out: 3118.645+/-0.563  $\chi^2/\text{NDF}$ : 914193.1/28

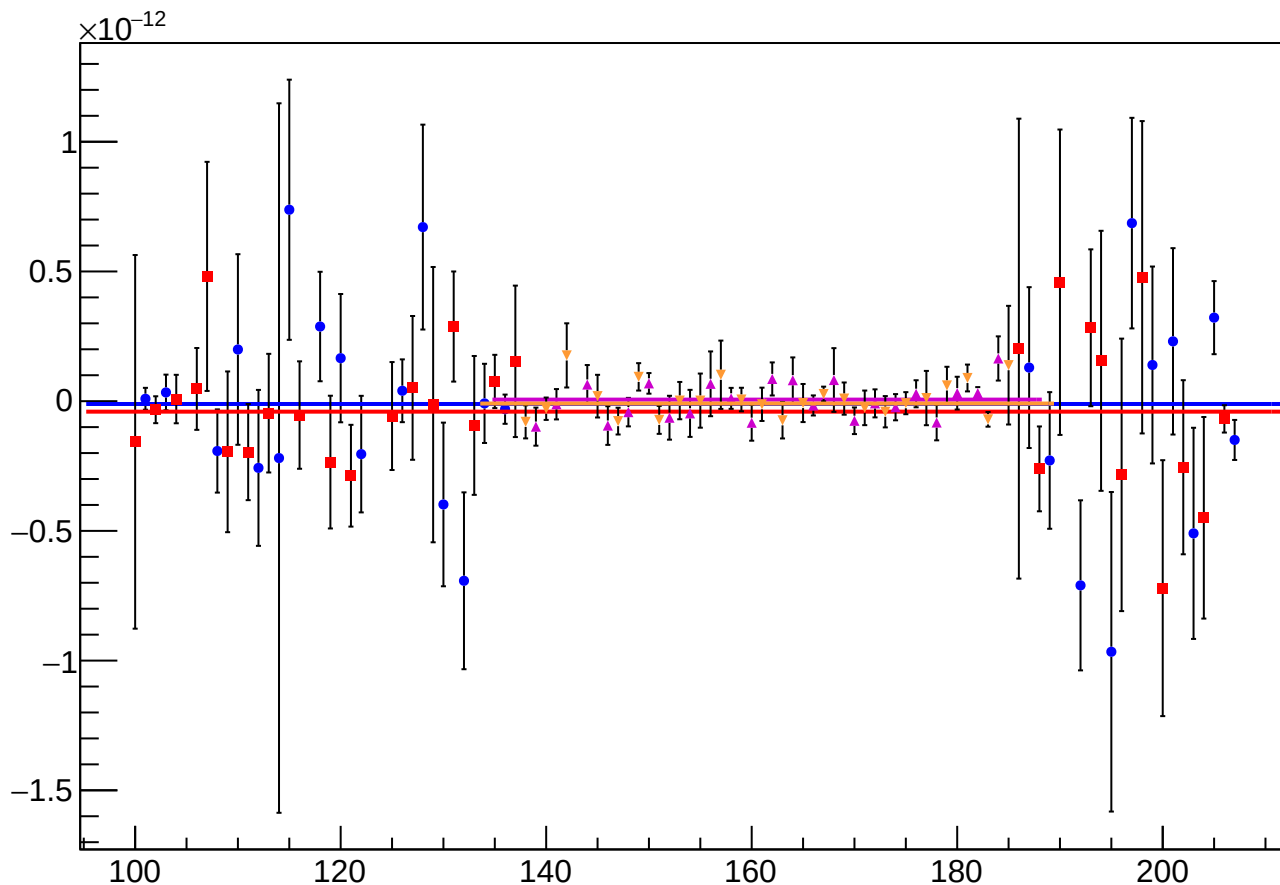
Left In: 3016.252+/-0.502  $\chi^2/\text{NDF}$ :439897.8/22

+ sign 3036.702+/-0.376  $\chi^2/\text{NDF}$ : 1341068.3/49

All: 3049.191+/-0.265  $\chi^2/\text{NDF}$ : 2715811.5/10

- sign 3061.607+/-0.374  $\chi^2/\text{NDF}$ : 1372538.2/51

asym\_us\_avg\_at1lr\_avg\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 38.9/25

Left Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 24.2/23

Right Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 18.0/28

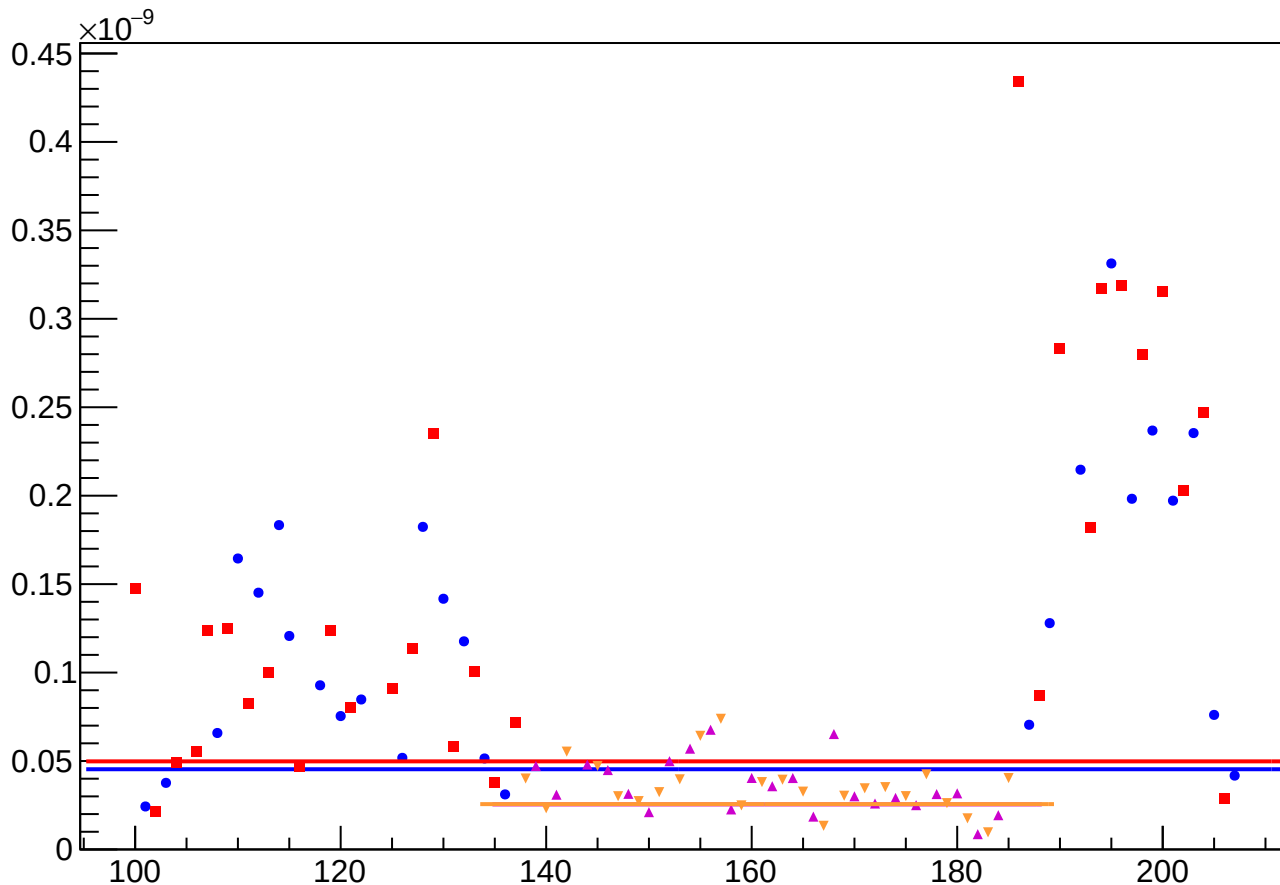
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 23.3/22

+ sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 63.1/49

All: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 107.1/101

- sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 43.6/51

asym\_us\_avg\_at1lr\_avg\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4760865.4/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2439953.3/23

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6116308.8/28

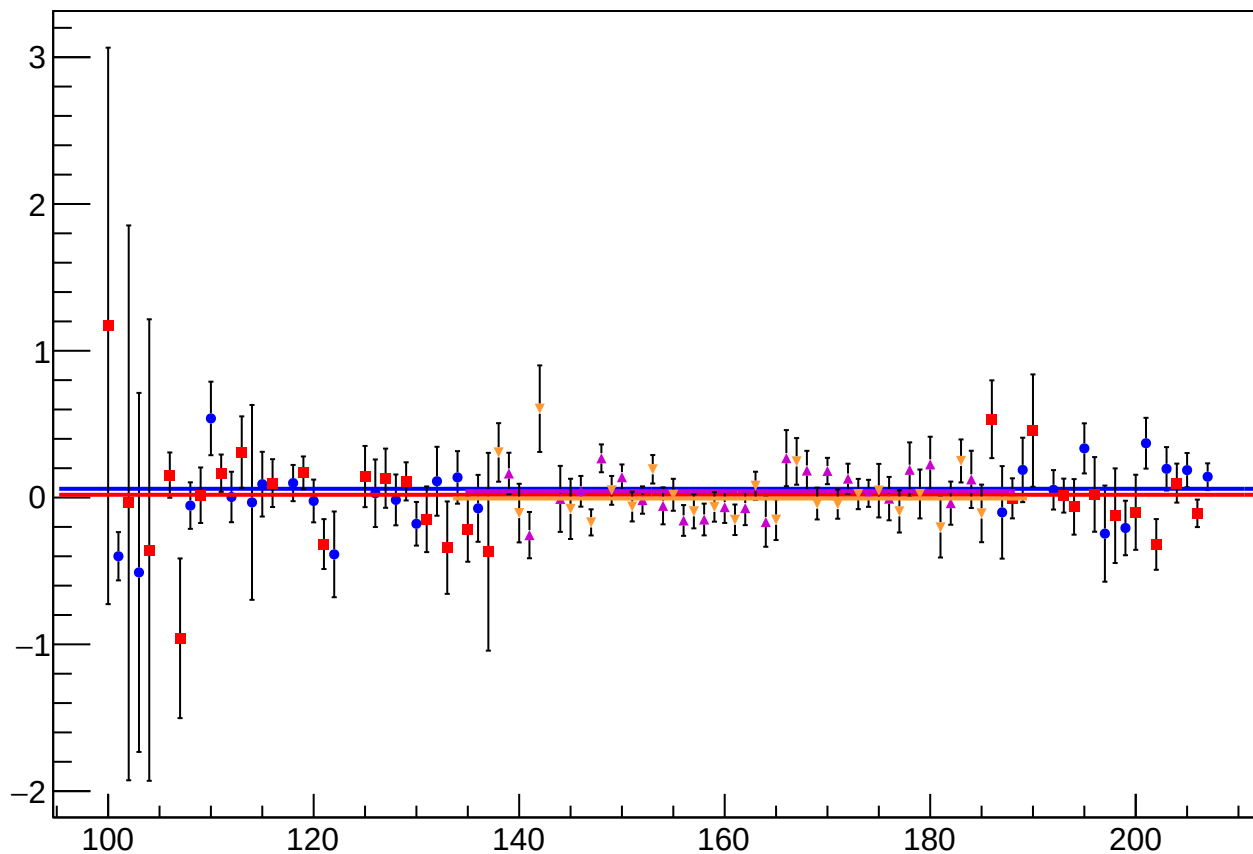
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2808054.6/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8254480.7/49

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 18488286.8/101

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10233643.1/51

asym\_us\_avg\_at1lr\_avg\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.060 \pm 0.034$   $\chi^2/\text{NDF}: 30.7/25$

Left Out:  $-0.007 \pm 0.025$   $\chi^2/\text{NDF}: 27.7/23$

Right Out:  $0.019 \pm 0.034$   $\chi^2/\text{NDF}: 29.3/28$

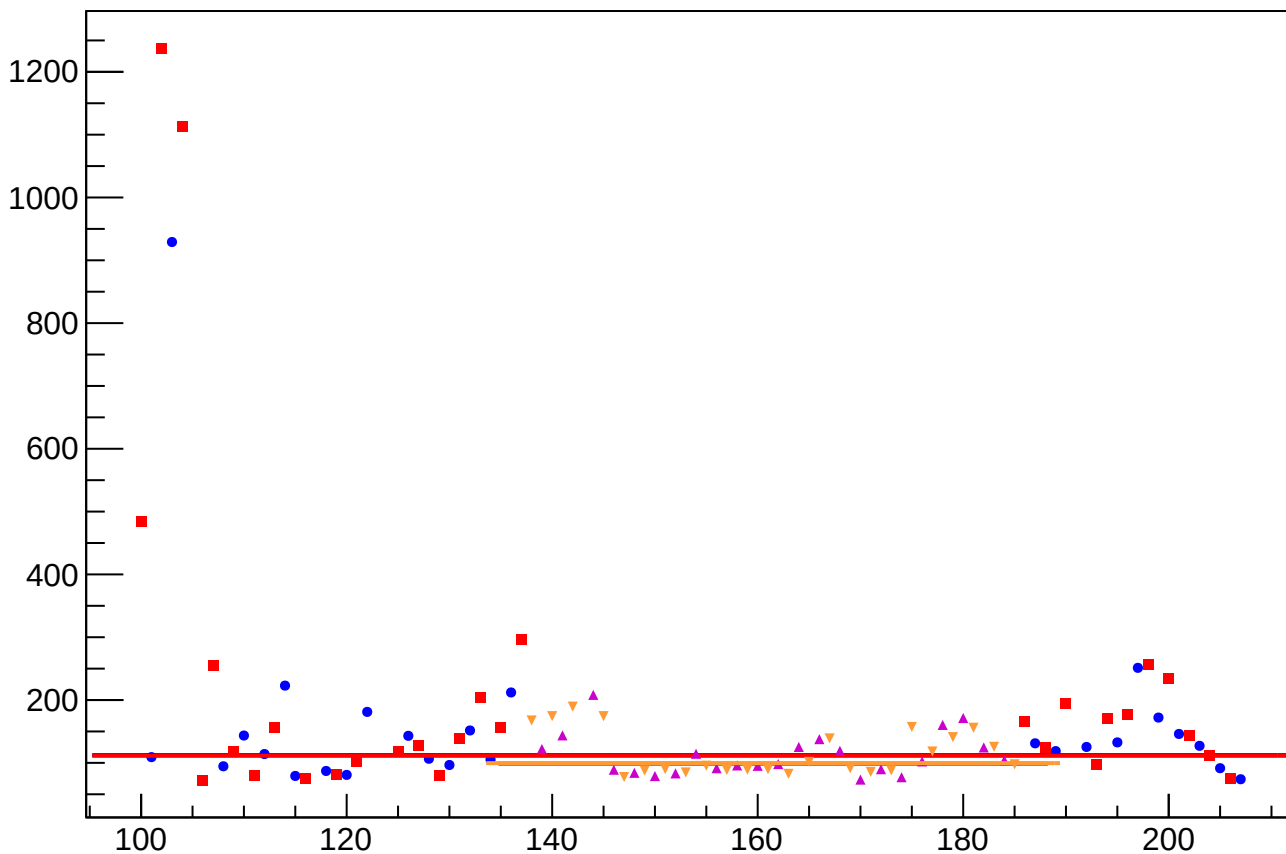
Left In:  $0.044 \pm 0.025$   $\chi^2/\text{NDF}: 30.3/22$

+ sign  $0.017 \pm 0.020$   $\chi^2/\text{NDF}: 60.9/49$

All:  $0.026 \pm 0.014$   $\chi^2/\text{NDF}: 121.1/101$

- sign  $0.035 \pm 0.020$   $\chi^2/\text{NDF}: 59.9/51$

asym\_us\_avg\_at1lr\_avg\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 112.325 $\pm$ 0.024  $\chi^2$ /NDF: 2978851.8/25

Left Out: 99.590 $\pm$ 0.018  $\chi^2$ /NDF: 2070986.6/23

Right Out: 111.272 $\pm$ 0.024  $\chi^2$ /NDF: 4677605.1/28

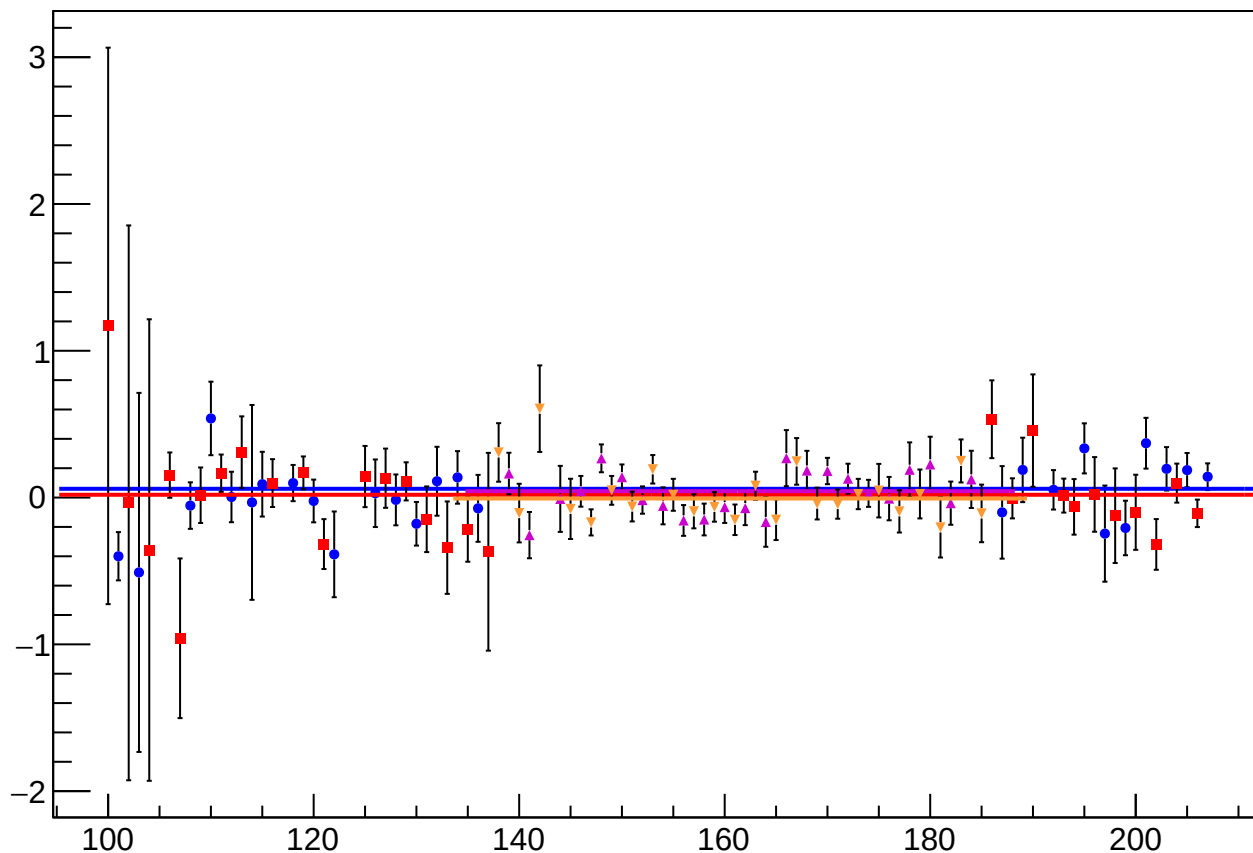
Left In: 98.669 $\pm$ 0.018  $\chi^2$ /NDF: 2003365.1/22

+ sign 104.161 $\pm$ 0.014  $\chi^2$ /NDF: 5231435.1/49

All: 103.664 $\pm$ 0.010  $\chi^2$ /NDF: 12095657.8/10

- sign 103.176 $\pm$ 0.014  $\chi^2$ /NDF: 6861841.5/51

asym\_us\_avg\_at1lr\_avg\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.060 \pm 0.034$   $\chi^2/\text{NDF}$ : 30.7/25

Left Out:  $-0.007 \pm 0.025$   $\chi^2/\text{NDF}$ : 27.7/23

Right Out:  $0.019 \pm 0.034$   $\chi^2/\text{NDF}$ : 29.3/28

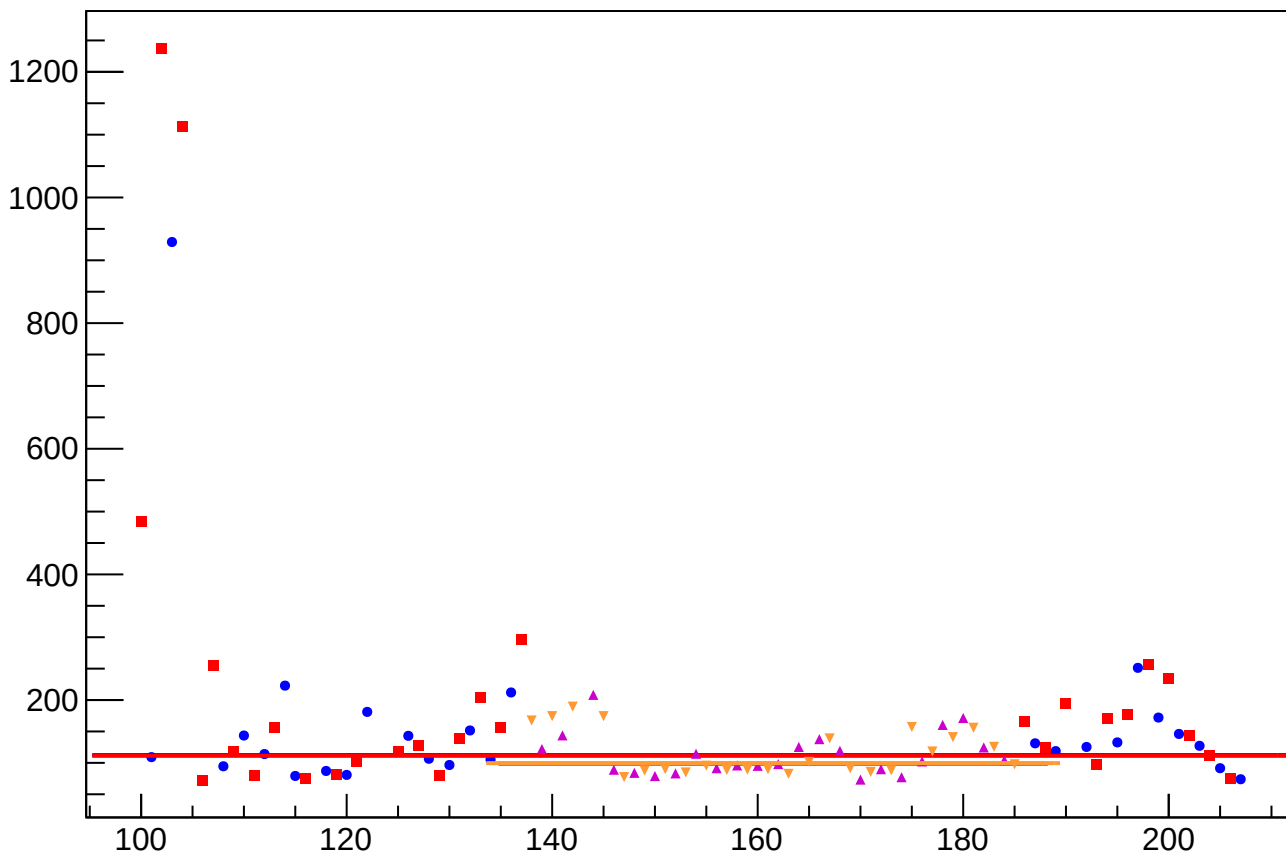
Left In:  $0.044 \pm 0.025$   $\chi^2/\text{NDF}$ : 30.3/22

+ sign  $0.017 \pm 0.020$   $\chi^2/\text{NDF}$ : 60.9/49

All:  $0.026 \pm 0.014$   $\chi^2/\text{NDF}$ : 121.1/101

- sign  $0.035 \pm 0.020$   $\chi^2/\text{NDF}$ : 59.9/51

asym\_us\_avg\_at1lr\_avg\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 112.325 $\pm$ 0.024  $\chi^2$ /NDF: 2978851.8/25

Left Out: 99.590 $\pm$ 0.018  $\chi^2$ /NDF: 2070986.6/23

Right Out: 111.272 $\pm$ 0.024  $\chi^2$ /NDF: 4677605.1/28

Left In: 98.669 $\pm$ 0.018  $\chi^2$ /NDF: 2003365.1/22

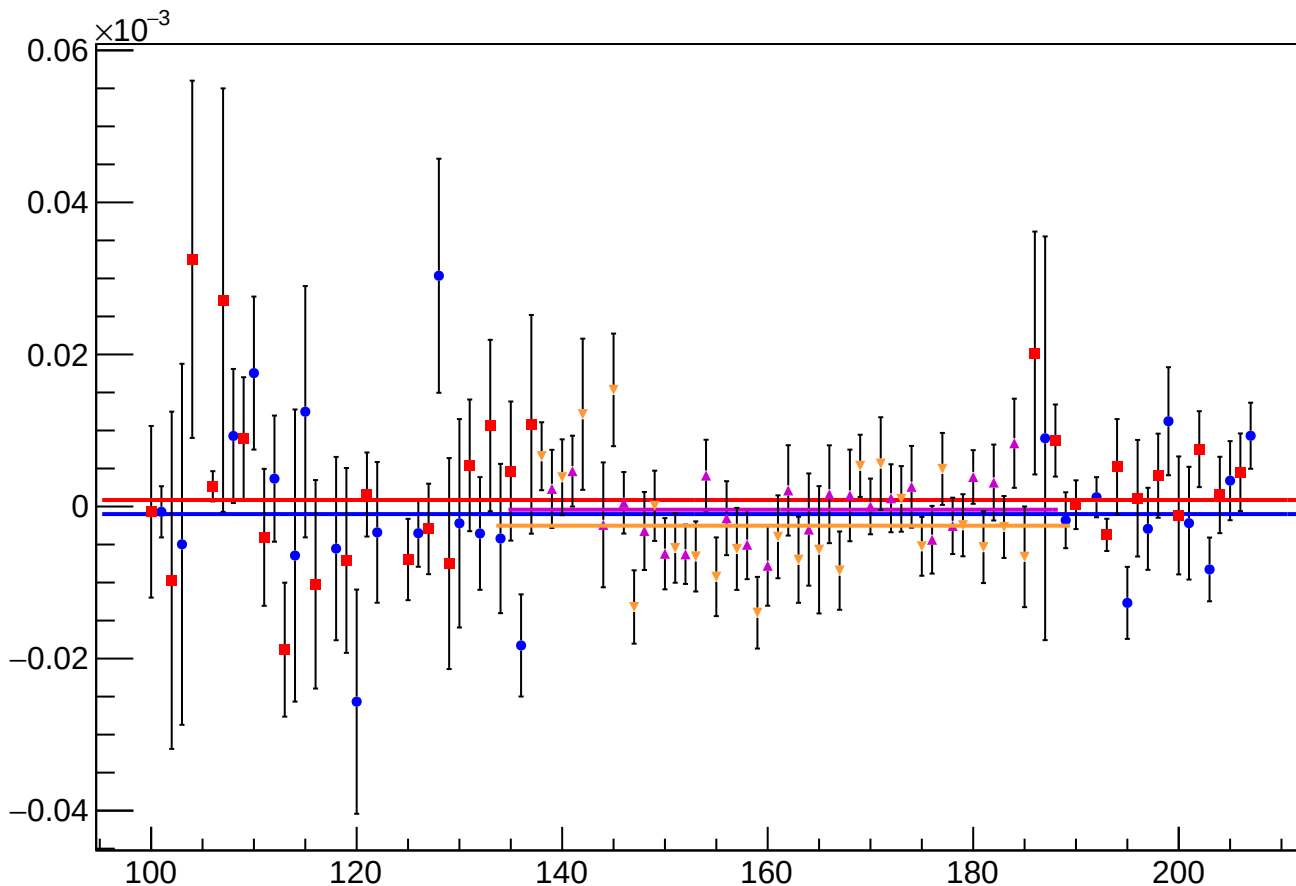
+ sign 104.161 $\pm$ 0.014  $\chi^2$ /NDF: 5231435.1/49

All: 103.664 $\pm$ 0.010  $\chi^2$ /NDF: 12095657.8/10

- sign 103.176 $\pm$ 0.014  $\chi^2$ /NDF: 6861841.5/51



asym\_us\_avg\_at1lr\_avg\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 39.6/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 40.2/23

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 27.9/28

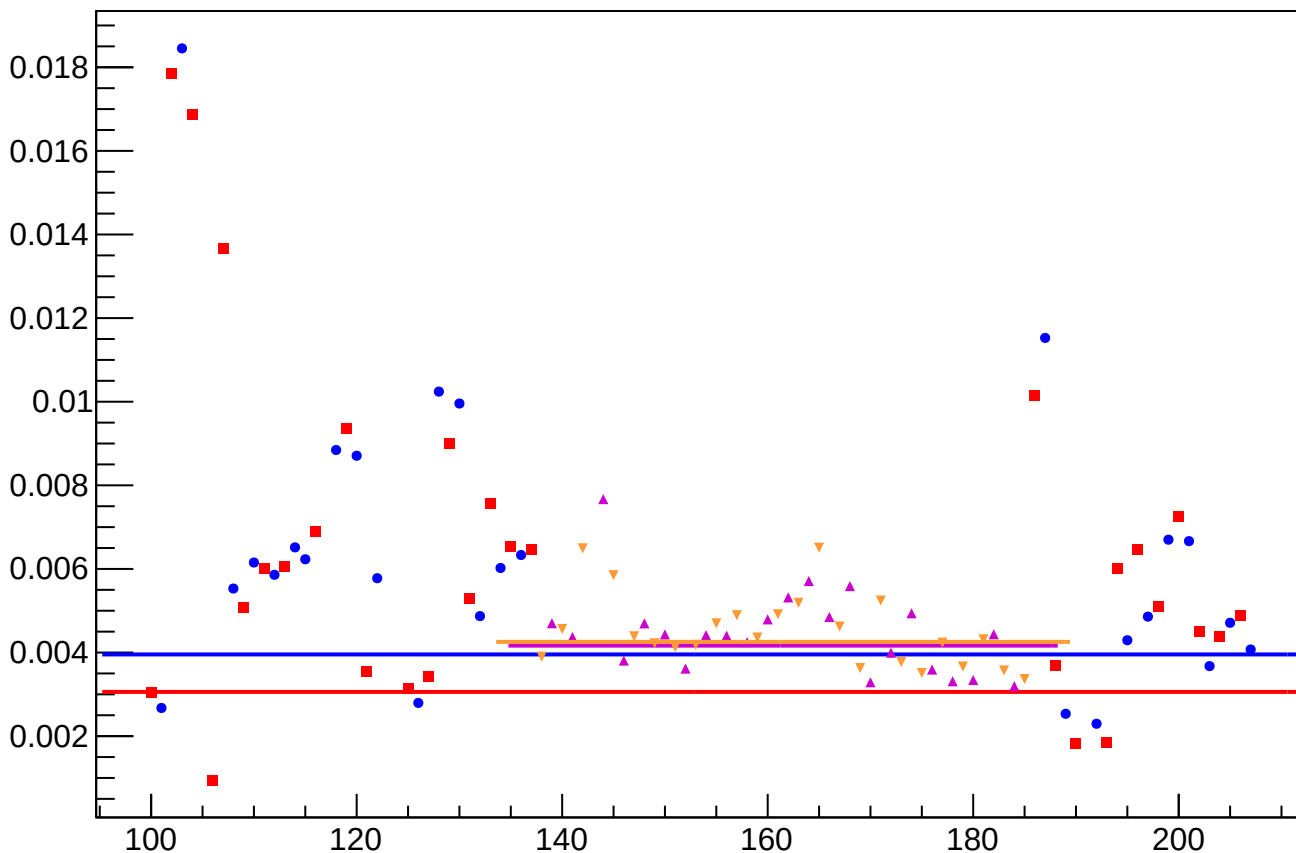
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 15.9/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 80.8/49

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 129.5/101

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 44.6/51

asym\_us\_avg\_at1lr\_avg\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 5149709.8/25

Left Out: 0.004 $\pm$ 0.000  $\chi^2$ /NDF:833222.5/23

Right Out: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 10291333.0/28

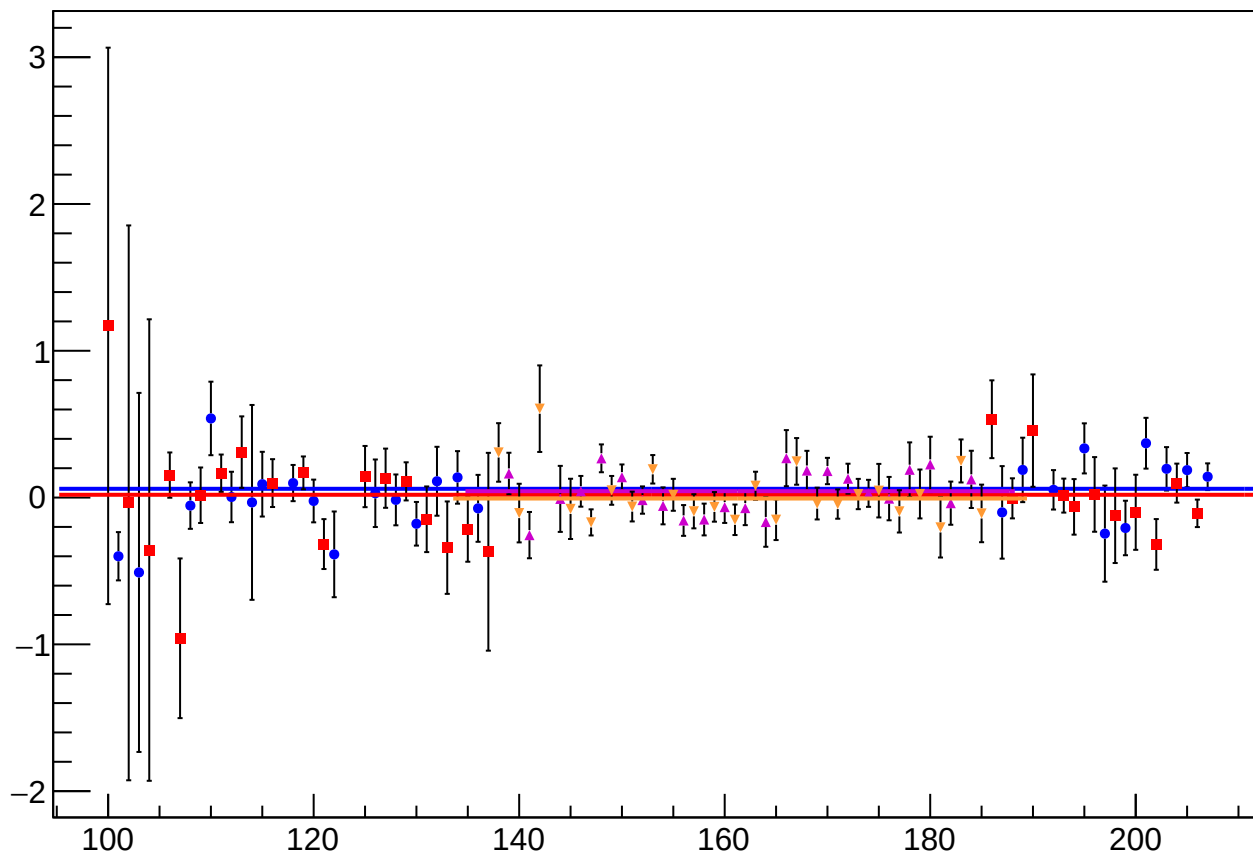
Left In: 0.004 $\pm$ 0.000  $\chi^2$ /NDF:1277434.2/22

+ sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 6059677.5/49

All: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 19387644.4/101

- sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 12823277.6/51

asym\_us\_avg\_at1lr\_avg\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.060 $\pm$ 0.034  $\chi^2$ /NDF: 30.7/25

Left Out: -0.007 $\pm$ 0.025  $\chi^2$ /NDF:27.7/23

Right Out: 0.019 $\pm$ 0.034  $\chi^2$ /NDF: 29.3/28

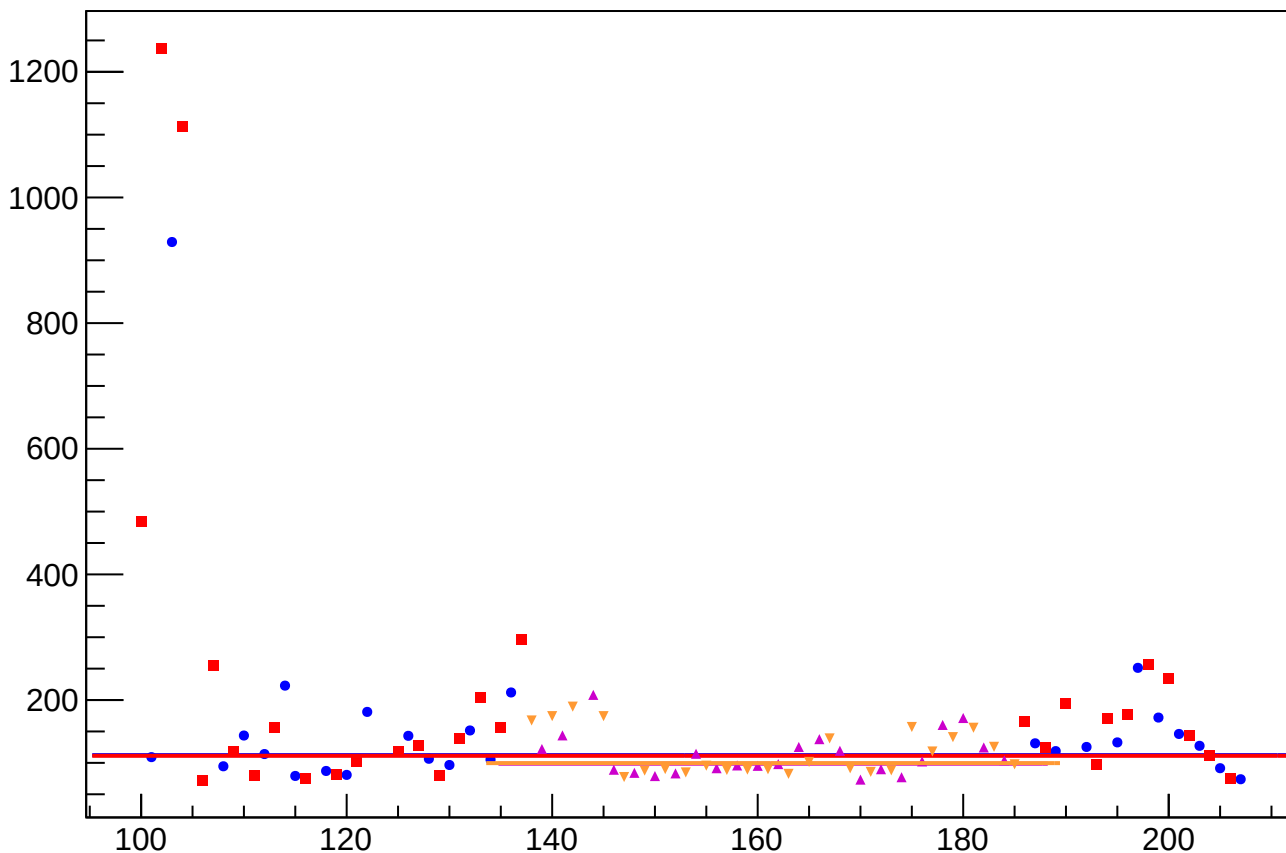
Left In: 0.044 $\pm$ 0.025  $\chi^2$ /NDF:30.3/22

+ sign 0.017 $\pm$ 0.020  $\chi^2$ /NDF: 60.9/49

All: 0.026 $\pm$ 0.014  $\chi^2$ /NDF: 121.1/101

- sign 0.035 $\pm$ 0.020  $\chi^2$ /NDF: 59.9/51

asym\_us\_avg\_at1lr\_avg\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 112.323 $\pm$ 0.024  $\chi^2$ /NDF: 2978952.5/25

Left Out: 99.590 $\pm$ 0.018  $\chi^2$ /NDF: 2070951.9/23

Right Out: 111.271 $\pm$ 0.024  $\chi^2$ /NDF: 4677581.2/28

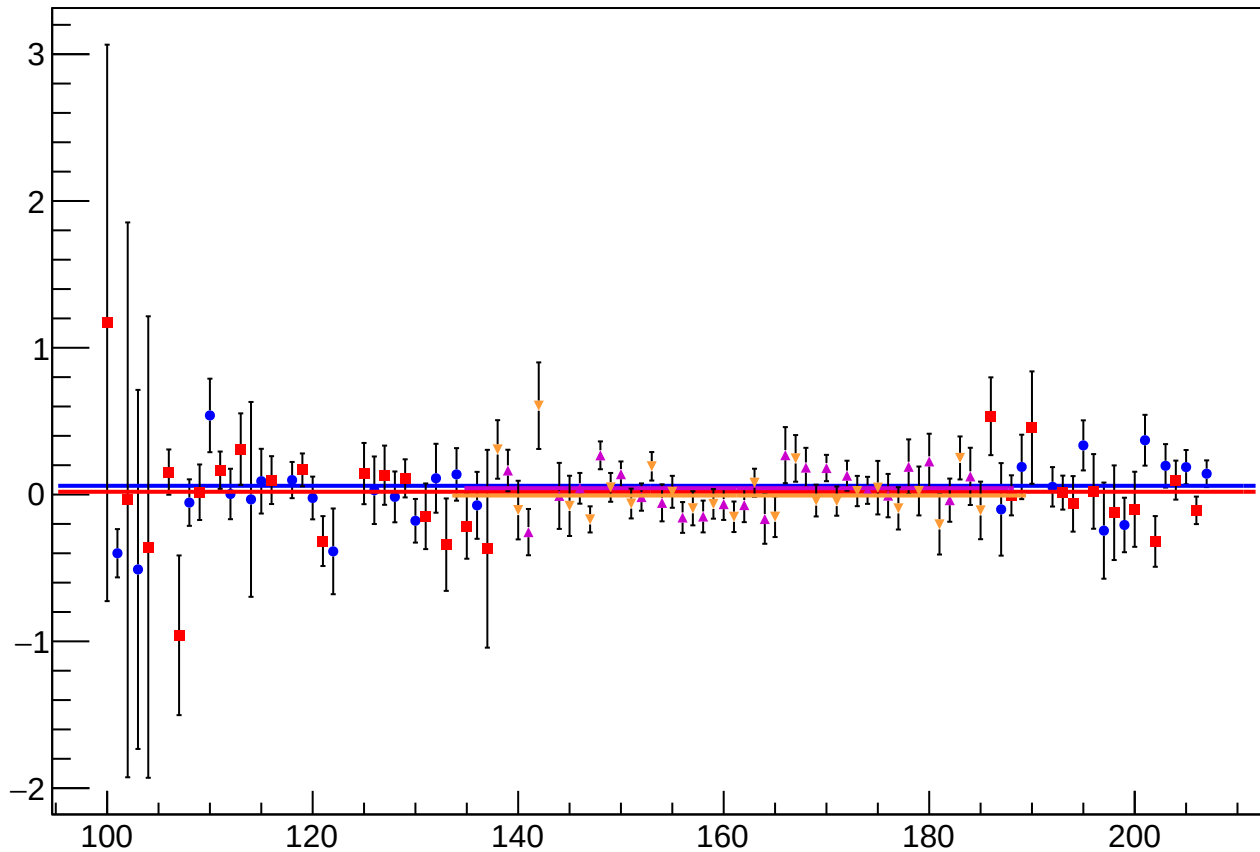
Left In: 98.669 $\pm$ 0.018  $\chi^2$ /NDF: 2003332.7/22

+ sign 104.161 $\pm$ 0.014  $\chi^2$ /NDF: 5231430.4/49

All: 103.664 $\pm$ 0.010  $\chi^2$ /NDF: 12095574.7/10

- sign 103.176 $\pm$ 0.014  $\chi^2$ /NDF: 6861764.5/51

asym\_us\_avg\_at1lr\_avg\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.060 \pm 0.034$   $\chi^2/\text{NDF}$ : 30.7/25

Left Out:  $-0.007 \pm 0.025$   $\chi^2/\text{NDF}$ : 27.7/23

Right Out:  $0.019 \pm 0.034$   $\chi^2/\text{NDF}$ : 29.3/28

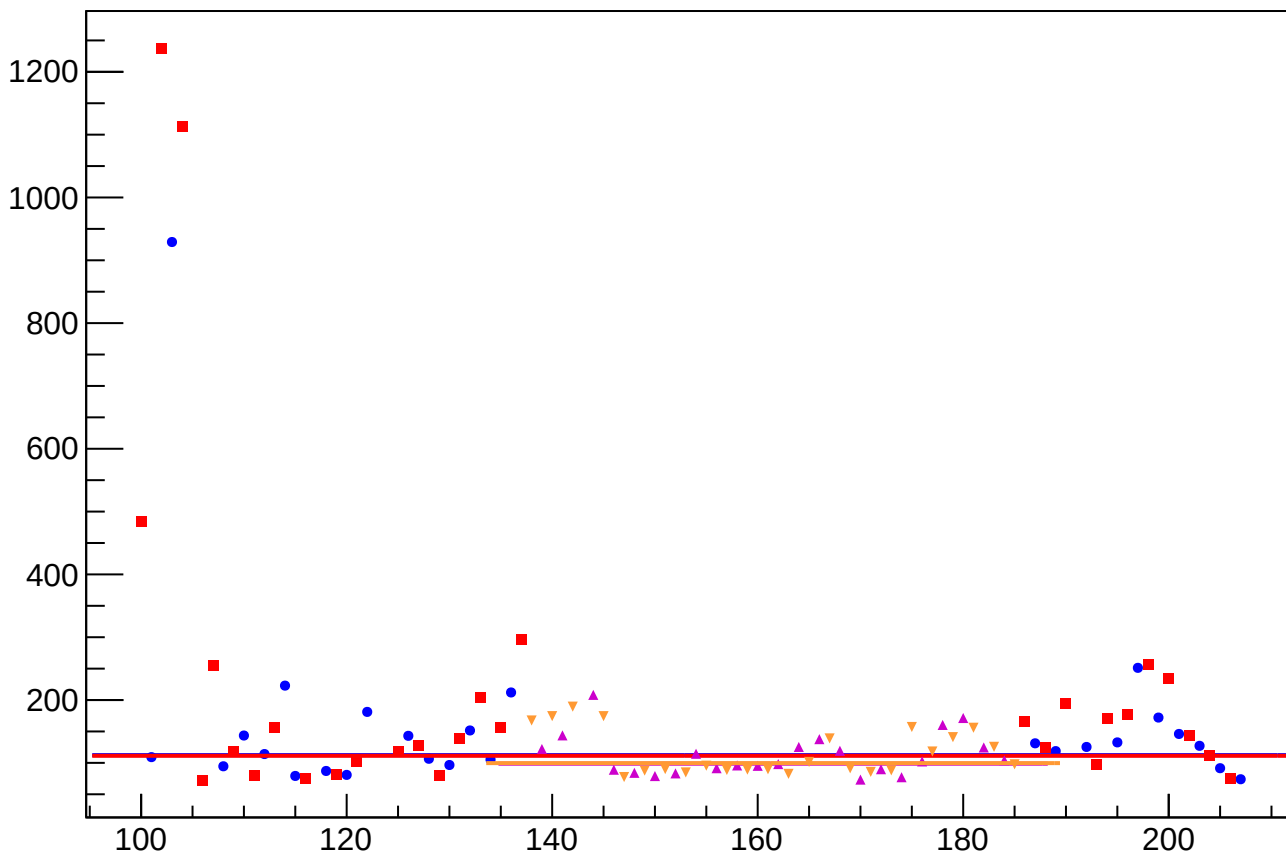
Left In:  $0.044 \pm 0.025$   $\chi^2/\text{NDF}$ : 30.3/22

+ sign  $0.017 \pm 0.020$   $\chi^2/\text{NDF}$ : 60.9/49

All:  $0.026 \pm 0.014$   $\chi^2/\text{NDF}$ : 121.1/101

- sign  $0.035 \pm 0.020$   $\chi^2/\text{NDF}$ : 59.9/51

asym\_us\_avg\_at1lr\_avg\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 112.323 $\pm$ 0.024  $\chi^2$ /NDF: 2978952.5/25

Left Out: 99.590 $\pm$ 0.018  $\chi^2$ /NDF: 2070951.9/23

Right Out: 111.271 $\pm$ 0.024  $\chi^2$ /NDF: 4677581.2/28

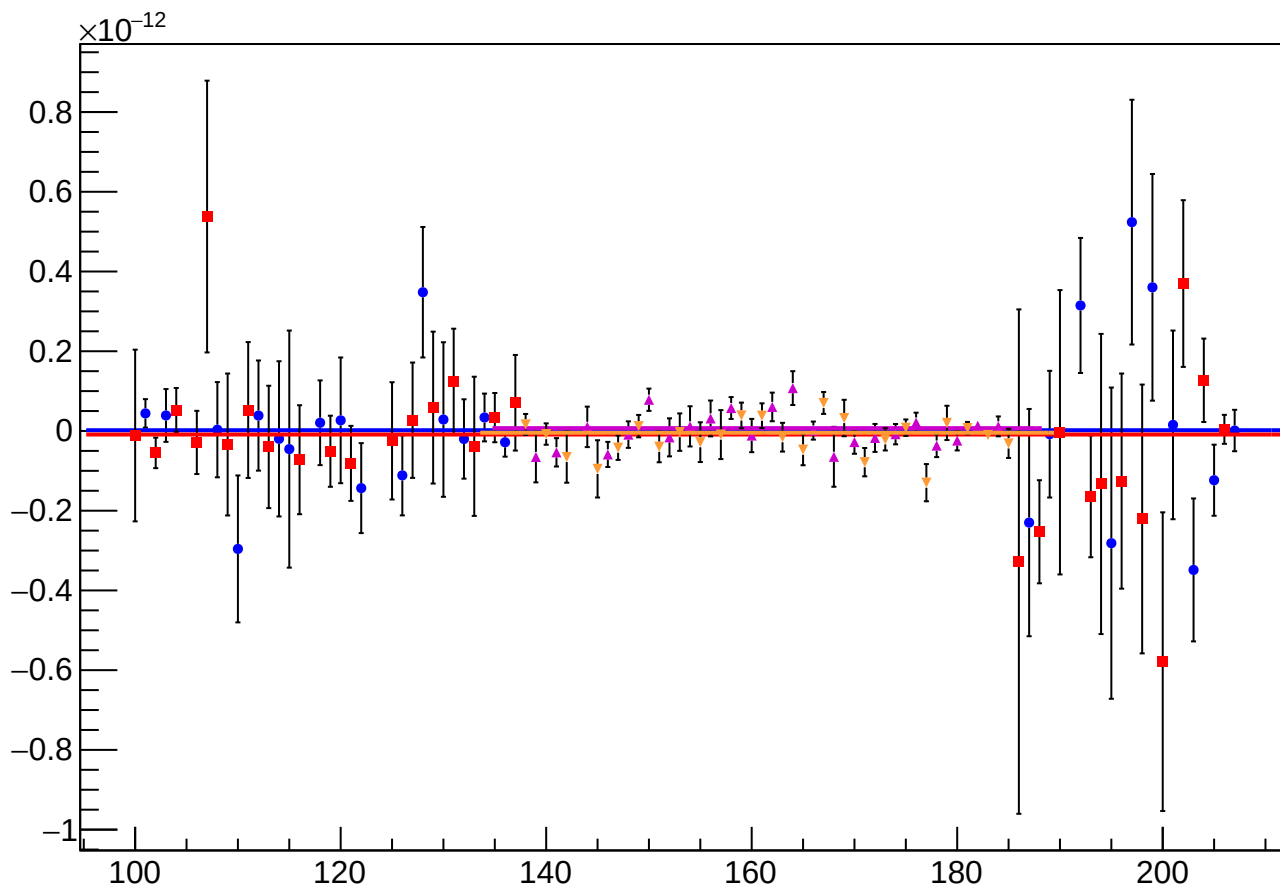
Left In: 98.669 $\pm$ 0.018  $\chi^2$ /NDF: 2003332.7/22

+ sign 104.161 $\pm$ 0.014  $\chi^2$ /NDF: 5231430.4/49

All: 103.664 $\pm$ 0.010  $\chi^2$ /NDF: 12095574.7/10

- sign 103.176 $\pm$ 0.014  $\chi^2$ /NDF: 6861764.5/51

asym\_us\_avg\_at1lr\_avg\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 27.8/25

Left Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 32.9/23

Right Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 21.6/28

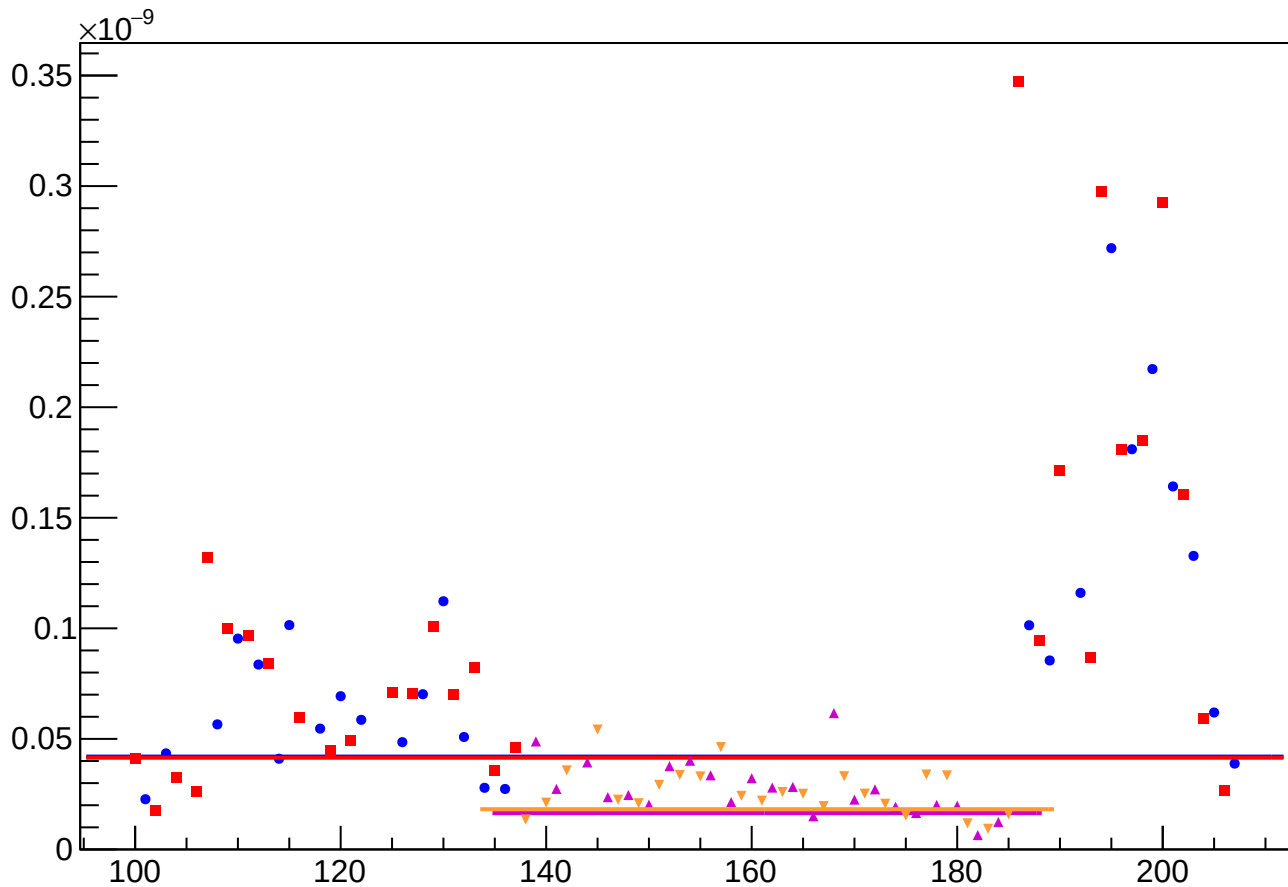
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 35.2/22

+ sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 60.9/49

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 120.0/101

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 57.6/51

asym\_us\_avg\_at1lr\_avg\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5595754.8/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4306302.2/23

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7243262.1/28

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7007463.5/22

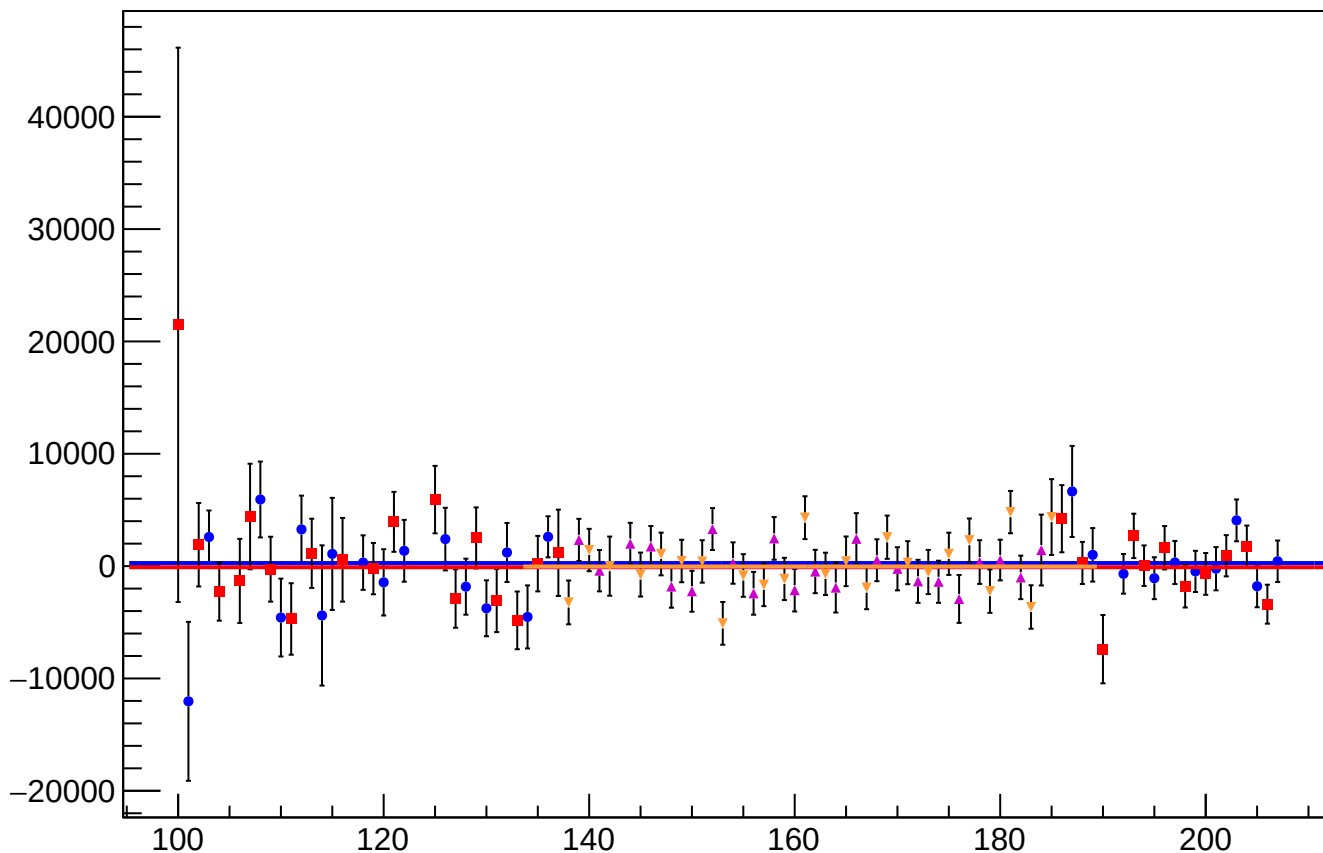
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13338834.4/49

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 31372280.0/101

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 17882900.0/51



# reg\_asym\_us\_avg\_at1lr\_avg\_dd\_mean vs Slug



Right In:  $273.527 \pm 469.382$   $\chi^2/\text{NDF}: 28.4/25$

Left Out:  $-34.799 \pm 401.970$   $\chi^2/\text{NDF}: 35.4/23$

Right Out:  $-100.357 \pm 457.121$   $\chi^2/\text{NDF}: 34.5/28$

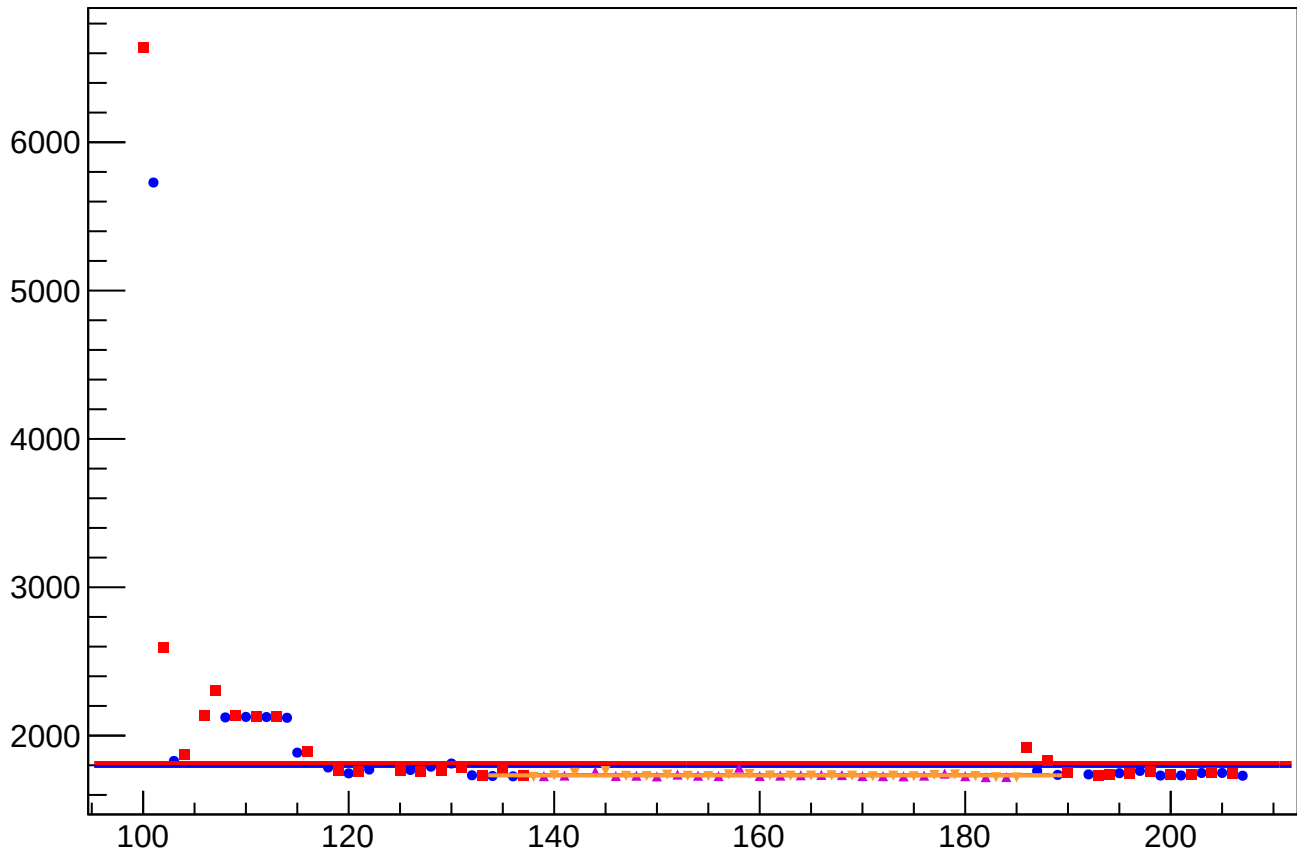
Left In:  $-52.796 \pm 404.703$   $\chi^2/\text{NDF}: 19.4/22$

+ sign  $95.653 \pm 305.313$   $\chi^2/\text{NDF}: 64.1/49$

All:  $10.339 \pm 215.072$   $\chi^2/\text{NDF}: 118.1/101$

- sign  $-73.694 \pm 303.014$   $\chi^2/\text{NDF}: 53.9/51$

# reg\_asym\_us\_avg\_at1lr\_avg\_dd\_rms vs Slug



Right In: 1795.709+/-0.332  $\chi^2/\text{NDF}$ : 707356.1/25

Left Out: 1731.985+/-0.284  $\chi^2/\text{NDF}$ : 937.2/23

Right Out: 1815.384+/-0.323  $\chi^2/\text{NDF}$ : 304422.6/28

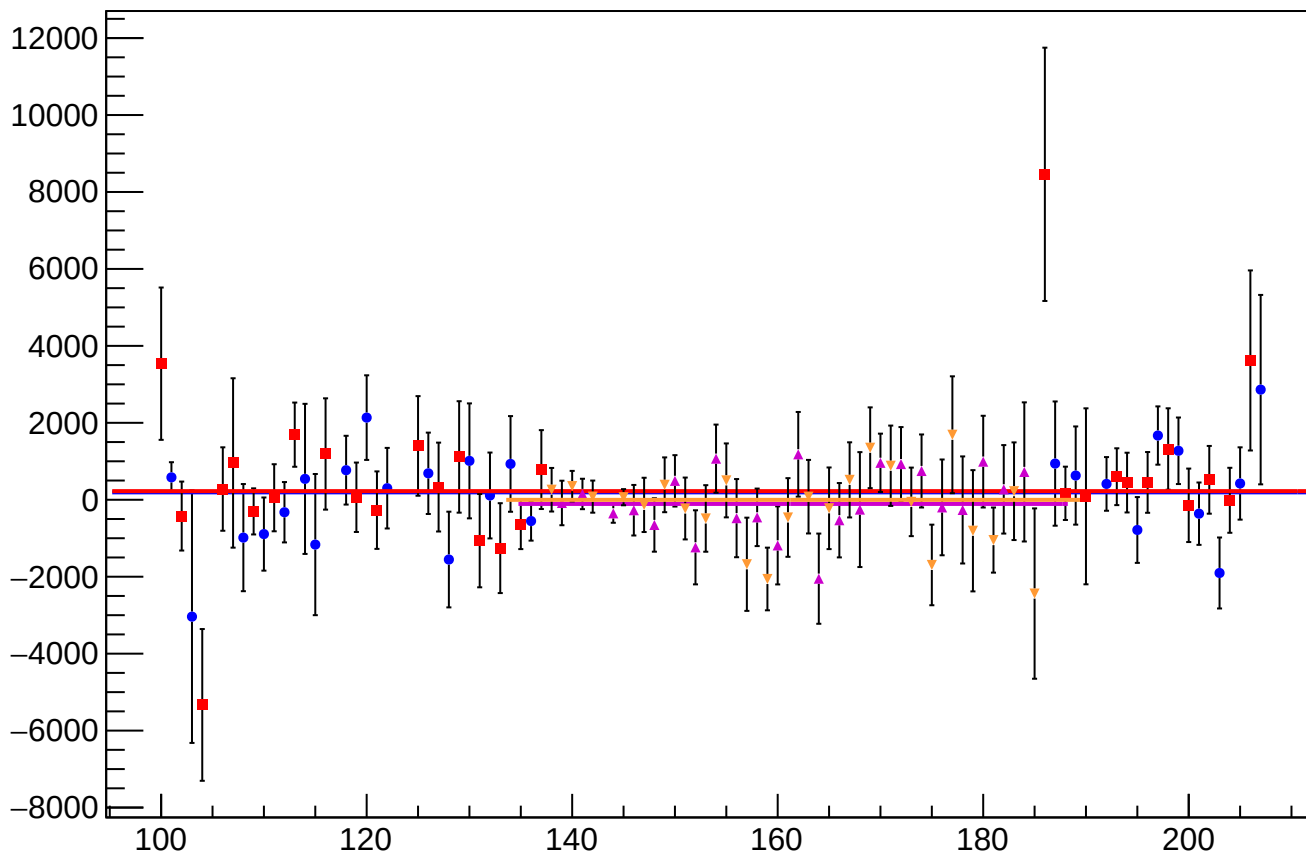
Left In: 1733.315+/-0.286  $\chi^2/\text{NDF}$ : 2230.5/22

+ sign 1758.947+/-0.216  $\chi^2/\text{NDF}$ : 729559.5/49

All: 1764.201+/-0.152  $\chi^2/\text{NDF}$ : 1073526.7/10

- sign 1769.376+/-0.214  $\chi^2/\text{NDF}$ : 342791.5/51

asym\_us\_avg\_at1lr\_avg\_dd\_reg\_correction\_mean vs Slug



Right In: 192.427 $\pm$ 176.398  $\chi^2$ /NDF: 27.5/25

Left Out: -2.406 $\pm$ 130.052  $\chi^2$ /NDF:20.3/23

Right Out: 224.479 $\pm$ 182.742  $\chi^2$ /NDF: 32.2/28

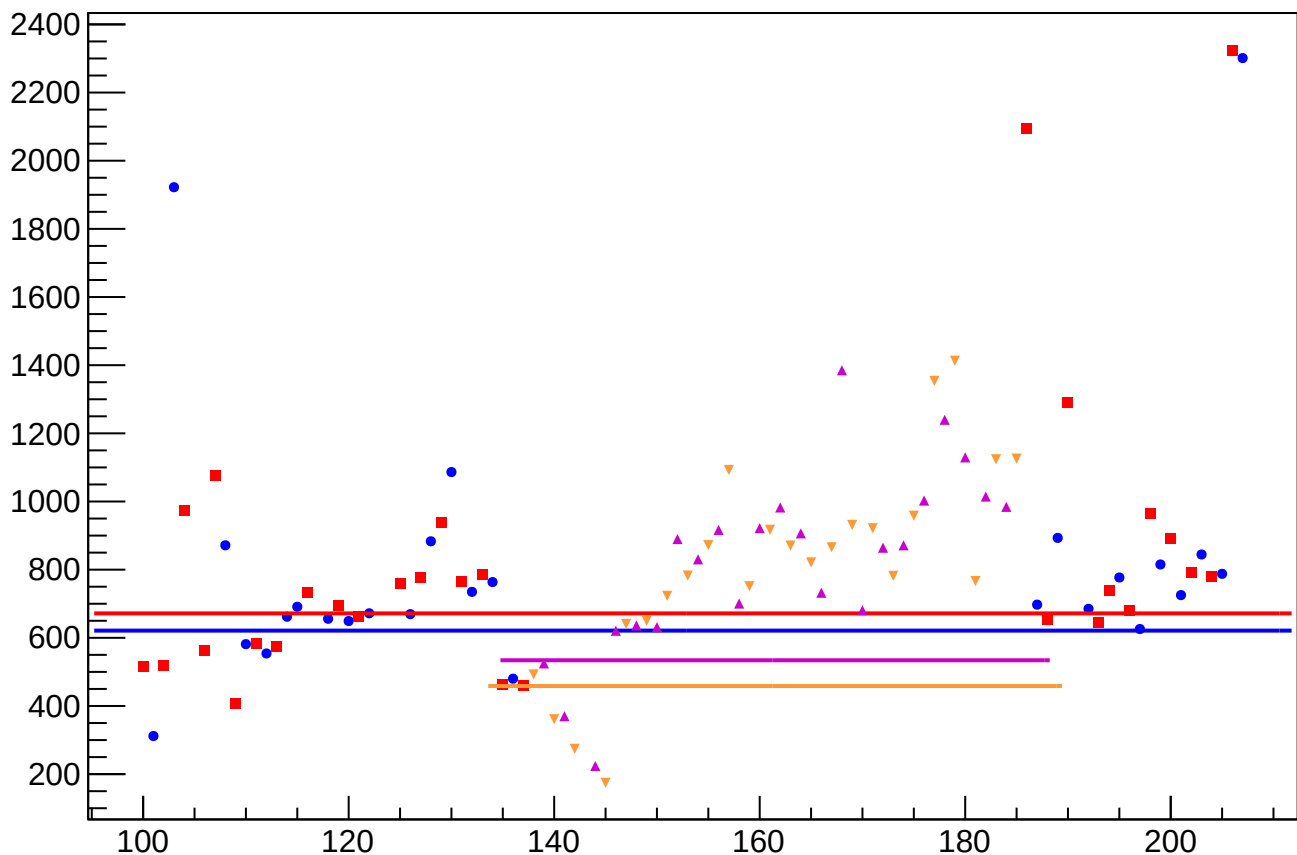
Left In: -108.386 $\pm$ 143.315  $\chi^2$ /NDF:17.0/22

+ sign 66.204 $\pm$ 104.678  $\chi^2$ /NDF: 48.5/49

All: 44.068 $\pm$ 76.720  $\chi^2$ /NDF: 99.9/101

- sign 18.376 $\pm$ 112.771  $\chi^2$ /NDF: 51.3/51

asym\_us\_avg\_at1lr\_avg\_dd\_reg\_correction\_rms vs Slug



Right In: 621.153 $\pm$ 0.125  $\chi^2/\text{NDF}$ : 3557190.3/25

Left Out: 458.579 $\pm$ 0.092  $\chi^2/\text{NDF}$ : 11426734.4/23

Right Out: 671.646 $\pm$ 0.129  $\chi^2/\text{NDF}$ : 2932663.7/28

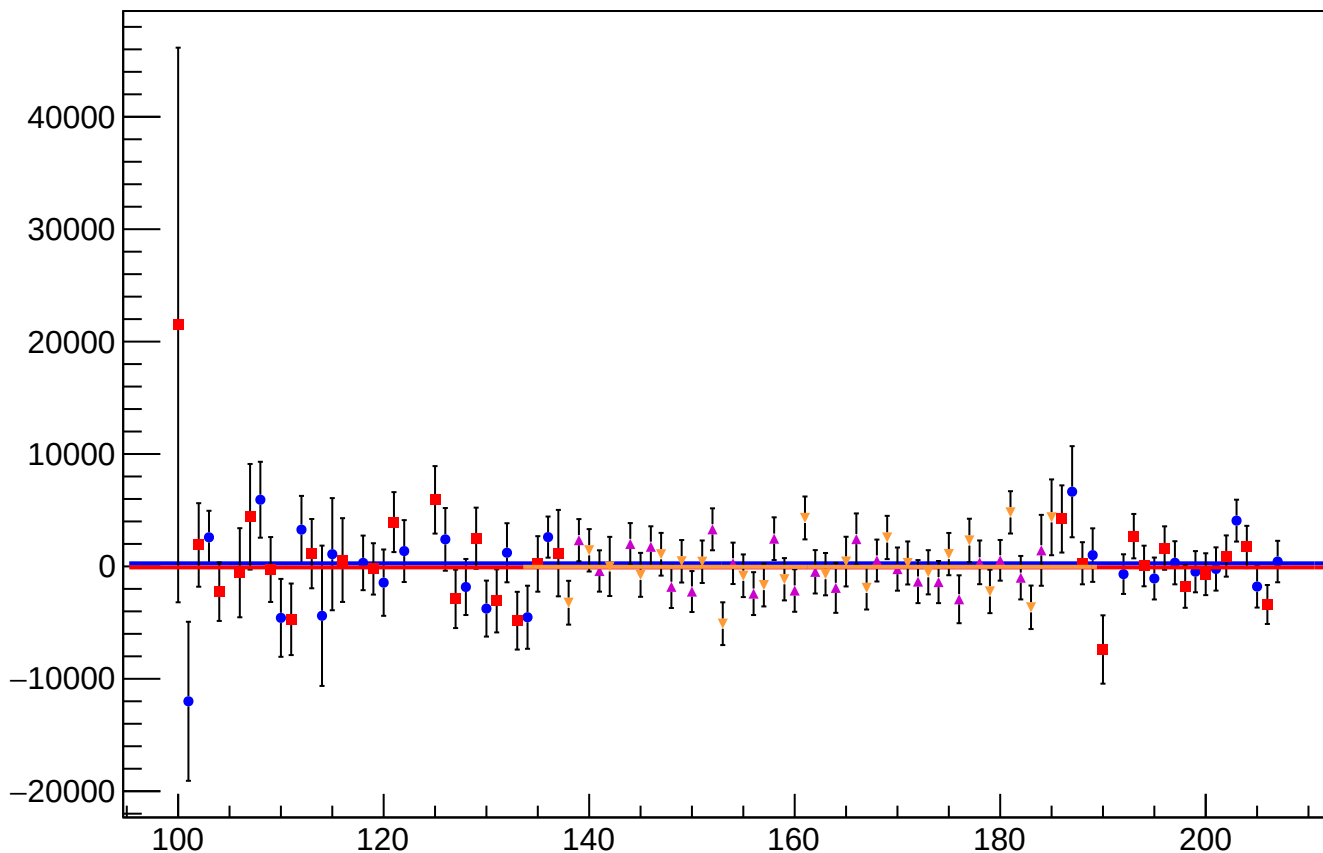
Left In: 534.161 $\pm$ 0.101  $\chi^2/\text{NDF}$ : 8443293.1/22

+ sign 515.829 $\pm$ 0.074  $\chi^2/\text{NDF}$ : 16084514.1/49

All: 548.546 $\pm$ 0.054  $\chi^2/\text{NDF}$ : 28583555.1/10

- sign 586.518 $\pm$ 0.080  $\chi^2/\text{NDF}$ : 12076905.9/51

# cor\_asym\_us\_avg\_at1lr\_avg\_dd\_mean vs Slug



Right In:  $273.508 \pm 469.382$   $\chi^2/\text{NDF}: 28.4/25$

Left Out:  $-34.742 \pm 401.970$   $\chi^2/\text{NDF}: 35.4/23$

Right Out:  $-88.222 \pm 457.493$   $\chi^2/\text{NDF}: 34.4/28$

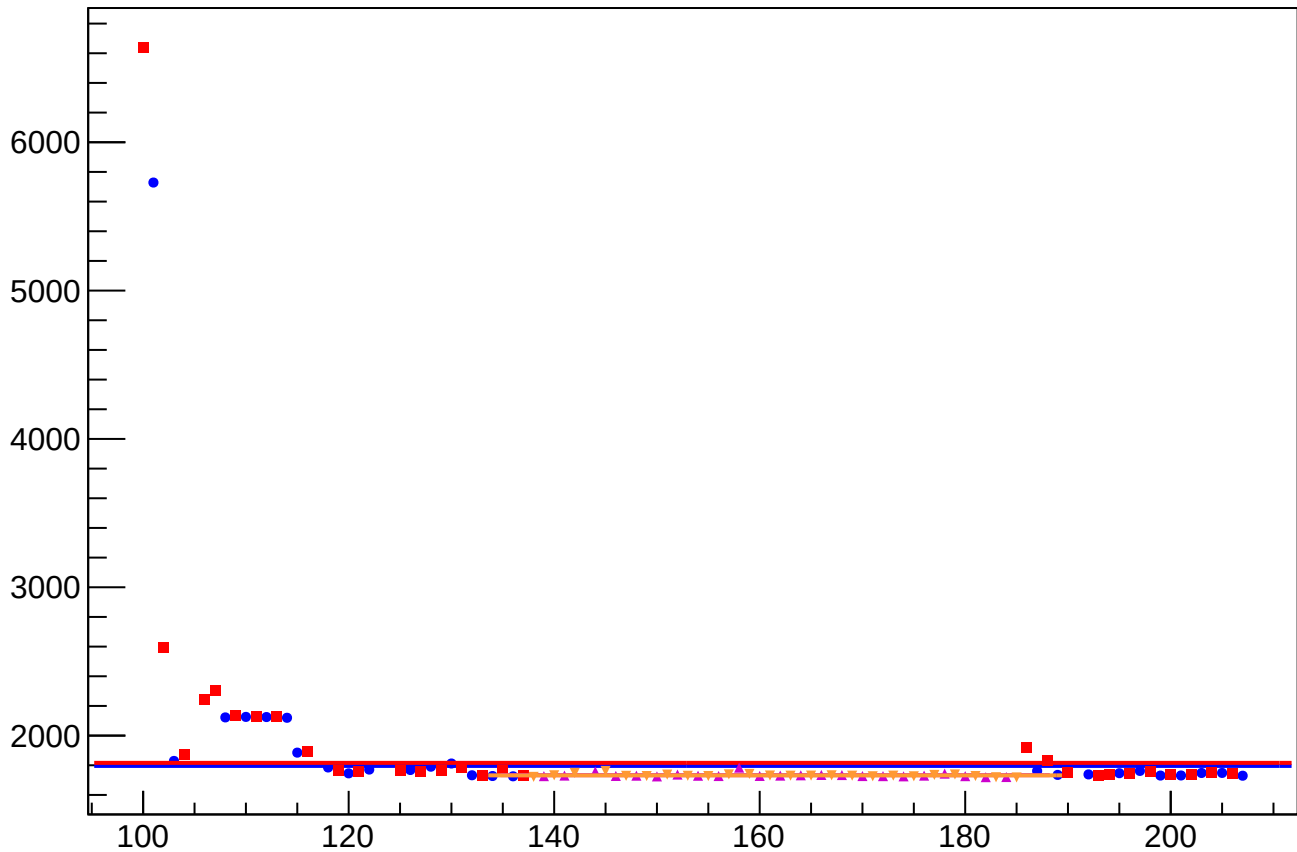
Left In:  $-52.714 \pm 404.703$   $\chi^2/\text{NDF}: 19.4/22$

+ sign  $95.677 \pm 305.313$   $\chi^2/\text{NDF}: 64.0/49$

All:  $13.097 \pm 215.110$   $\chi^2/\text{NDF}: 118.0/101$

- sign  $-68.302 \pm 303.122$   $\chi^2/\text{NDF}: 53.8/51$

# cor\_asym\_us\_avg\_at1lr\_avg\_dd\_rms vs Slug



Right In: 1795.709 $\pm$ 0.332  $\chi^2$ /NDF: 707355.9/25

Left Out: 1731.985 $\pm$ 0.284  $\chi^2$ /NDF: 937.2/23

Right Out: 1816.260 $\pm$ 0.323  $\chi^2$ /NDF: 312804.9/28

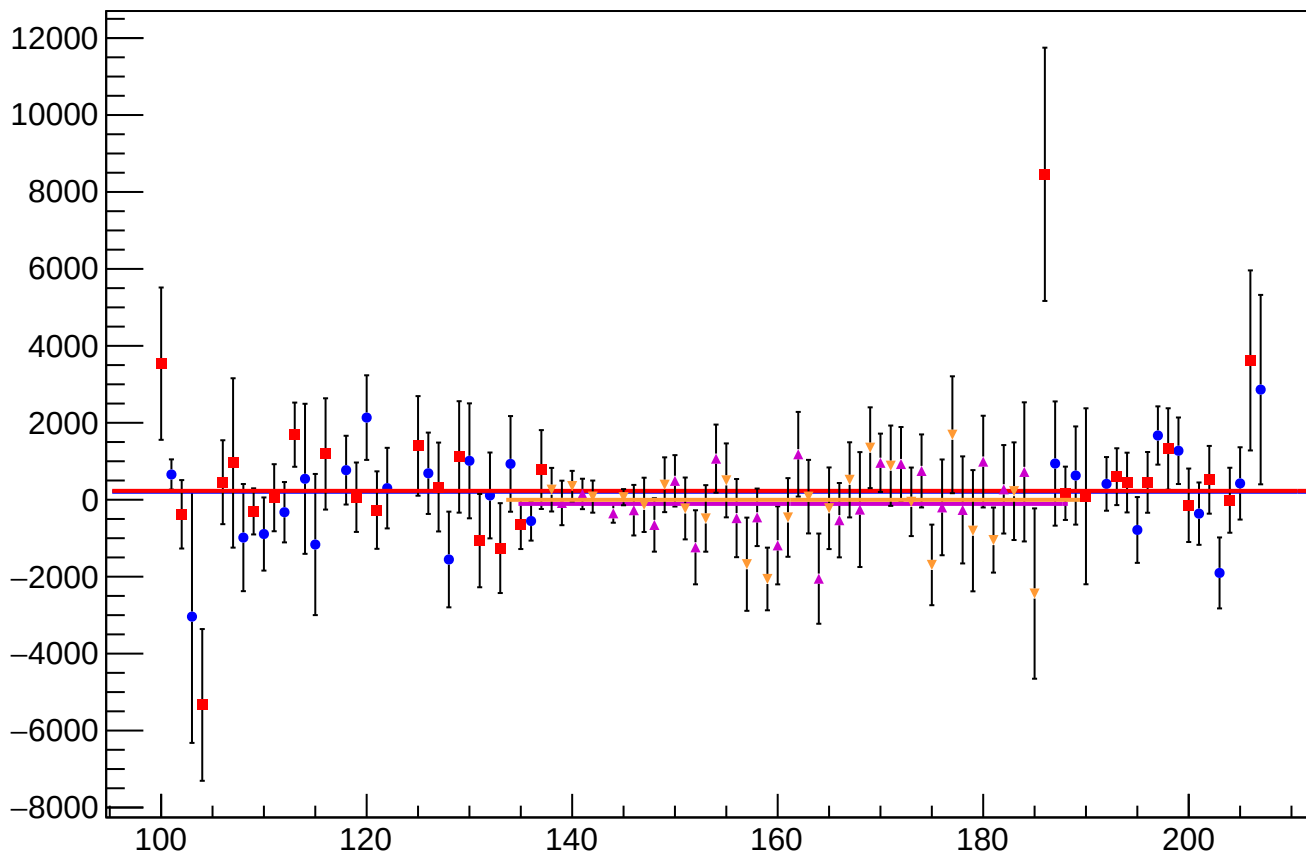
Left In: 1733.315 $\pm$ 0.286  $\chi^2$ /NDF: 2230.5/22

+ sign 1758.947 $\pm$ 0.216  $\chi^2$ /NDF: 729559.3/49

All: 1764.376 $\pm$ 0.152  $\chi^2$ /NDF: 1082731.9/10

- sign 1769.728 $\pm$ 0.214  $\chi^2$ /NDF: 351916.6/51

asym\_us\_avg\_at1lr\_avg\_dd\_cor\_correction\_mean vs Slug



Right In: 207.419 $\pm$ 176.359  $\chi^2$ /NDF: 27.9/25

Left Out: -2.529 $\pm$ 130.054  $\chi^2$ /NDF:20.3/23

Right Out: 230.890 $\pm$ 182.716  $\chi^2$ /NDF: 32.2/28

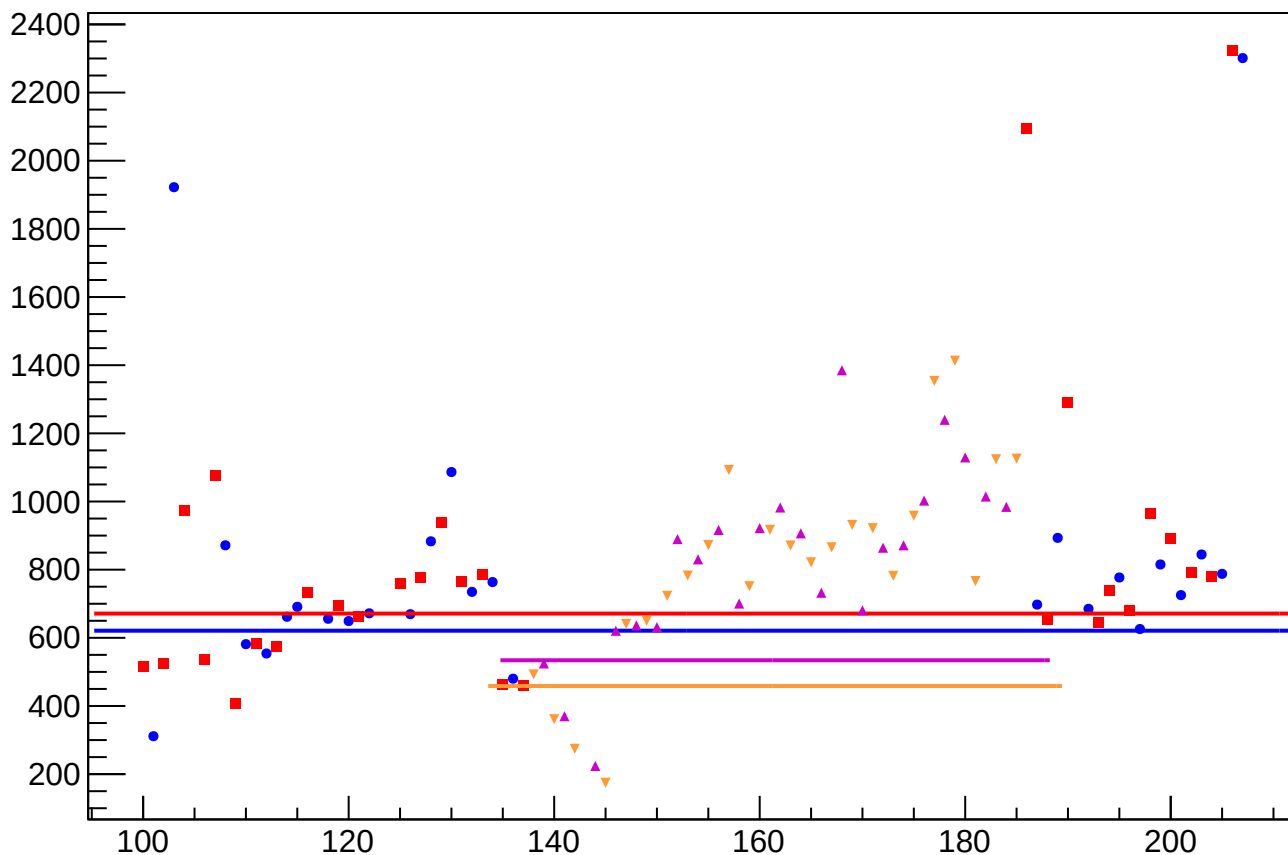
Left In: -108.358 $\pm$ 143.315  $\chi^2$ /NDF:17.0/22

+ sign 71.426 $\pm$ 104.671  $\chi^2$ /NDF: 49.1/49

All: 48.022 $\pm$ 76.716  $\chi^2$ /NDF: 100.5/101

- sign 20.858 $\pm$ 112.766  $\chi^2$ /NDF: 51.3/51

asym\_us\_avg\_at1lr\_avg\_dd\_cor\_correction\_rms vs Slug



Right In: 620.918 $\pm$ 0.125  $\chi^2$ /NDF: 3563898.8/25

Left Out: 458.589 $\pm$ 0.092  $\chi^2$ /NDF:11426319.1/23

Right Out: 671.119 $\pm$ 0.129  $\chi^2$ /NDF: 2939041.6/28

Left In: 534.168 $\pm$ 0.101  $\chi^2$ /NDF:8442812.5/22

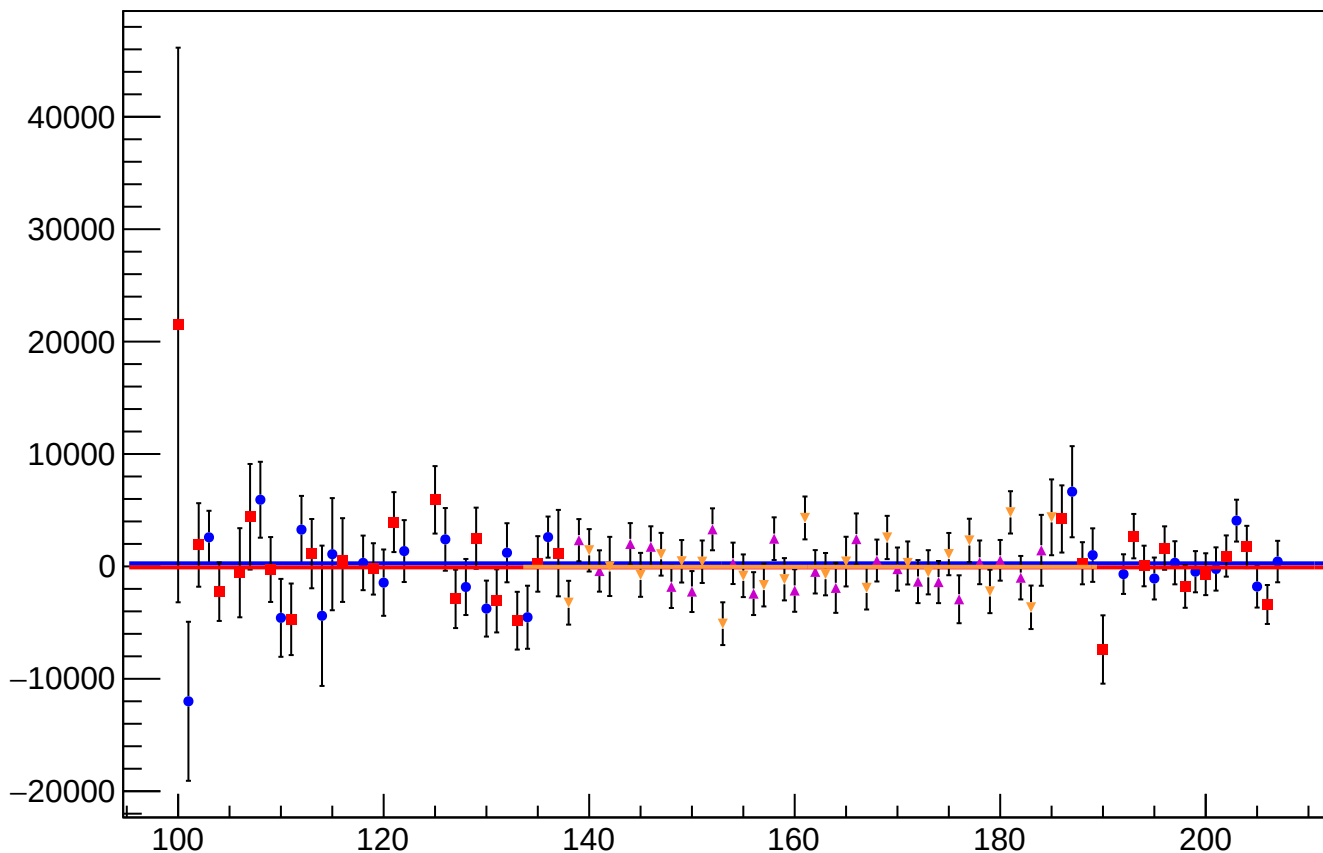
+ sign 515.770 $\pm$ 0.074  $\chi^2$ /NDF: 16087780.0/49

All: 548.427 $\pm$ 0.054  $\chi^2$ /NDF: 28585903.9/10

- sign 586.331 $\pm$ 0.080  $\chi^2$ /NDF: 12077468.7/51



eigen\_cor\_asym\_us\_avg\_at1lr\_avg\_dd\_mean vs Slug



Right In:  $273.508 \pm 469.382$   $\chi^2/\text{NDF}: 28.4/25$

Left Out:  $-34.742 \pm 401.970$   $\chi^2/\text{NDF}: 35.4/23$

Right Out:  $-88.222 \pm 457.493$   $\chi^2/\text{NDF}: 34.4/28$

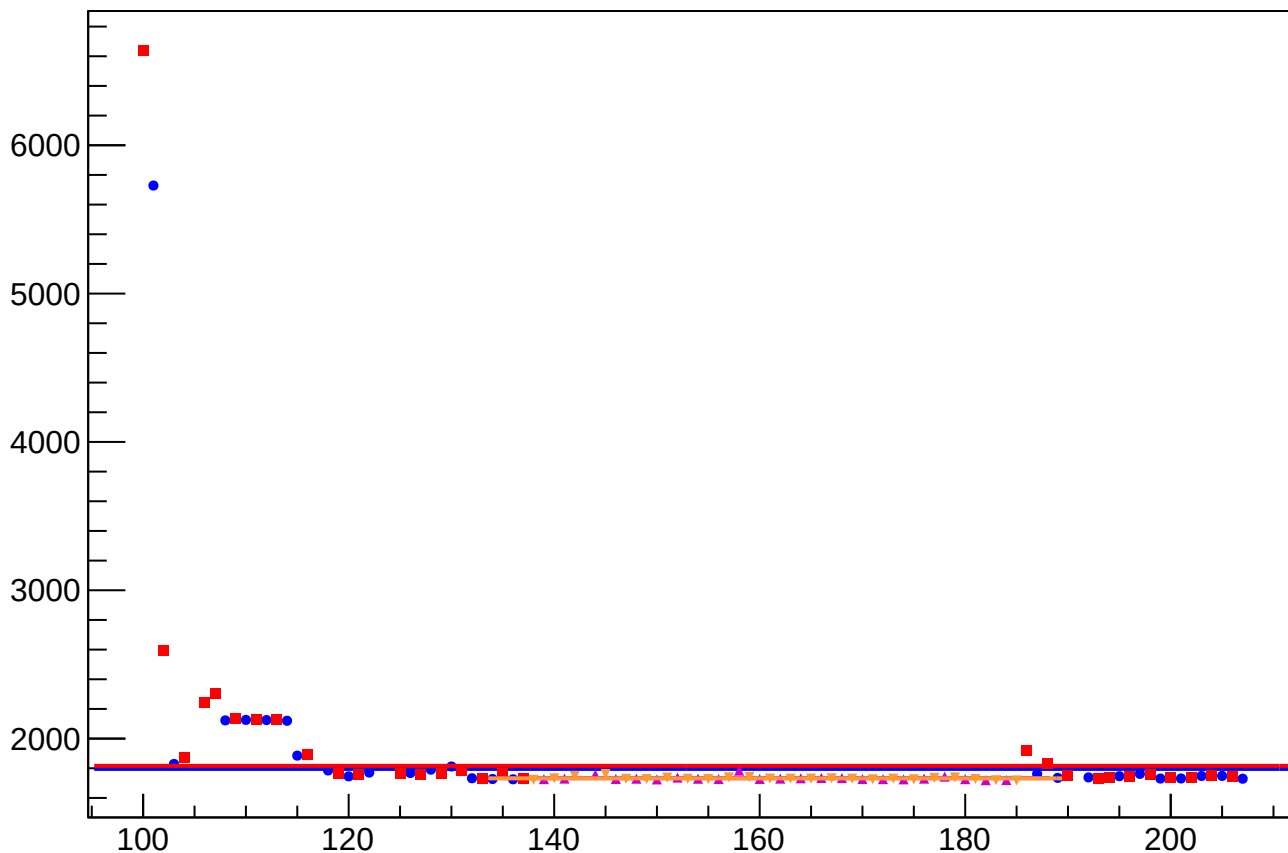
Left In:  $-52.714 \pm 404.703$   $\chi^2/\text{NDF}: 19.4/22$

+ sign  $95.677 \pm 305.313$   $\chi^2/\text{NDF}: 64.0/49$

All:  $13.097 \pm 215.110$   $\chi^2/\text{NDF}: 118.0/101$

- sign  $-68.302 \pm 303.122$   $\chi^2/\text{NDF}: 53.8/51$

eigen\_cor\_asym\_us\_avg\_at1lr\_avg\_dd\_rms vs Slug



Right In: 1795.709 $\pm$ 0.332  $\chi^2$ /NDF: 707355.9/25

Left Out: 1731.985 $\pm$ 0.284  $\chi^2$ /NDF: 937.2/23

Right Out: 1816.260 $\pm$ 0.323  $\chi^2$ /NDF: 312804.9/28

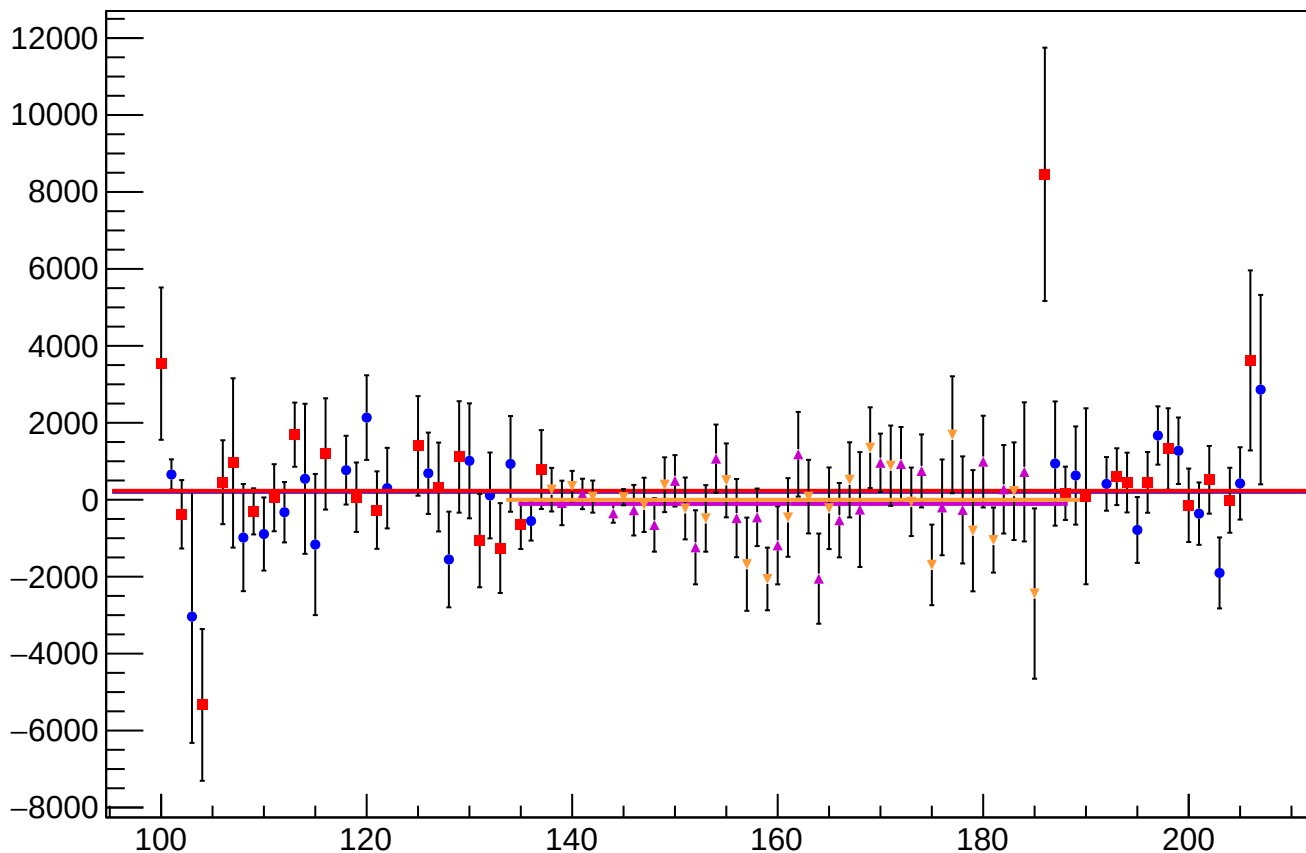
Left In: 1733.315 $\pm$ 0.286  $\chi^2$ /NDF: 2230.5/22

+ sign 1758.947 $\pm$ 0.216  $\chi^2$ /NDF: 729559.3/49

All: 1764.376 $\pm$ 0.152  $\chi^2$ /NDF: 1082731.9/10

- sign 1769.728 $\pm$ 0.214  $\chi^2$ /NDF: 351916.6/51

asym\_us\_avg\_at1lr\_avg\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In: 207.419 $\pm$ 176.359  $\chi^2$ /NDF: 27.9/25

Left Out: -2.529 $\pm$ 130.054  $\chi^2$ /NDF:20.3/23

Right Out: 230.890 $\pm$ 182.716  $\chi^2$ /NDF: 32.2/28

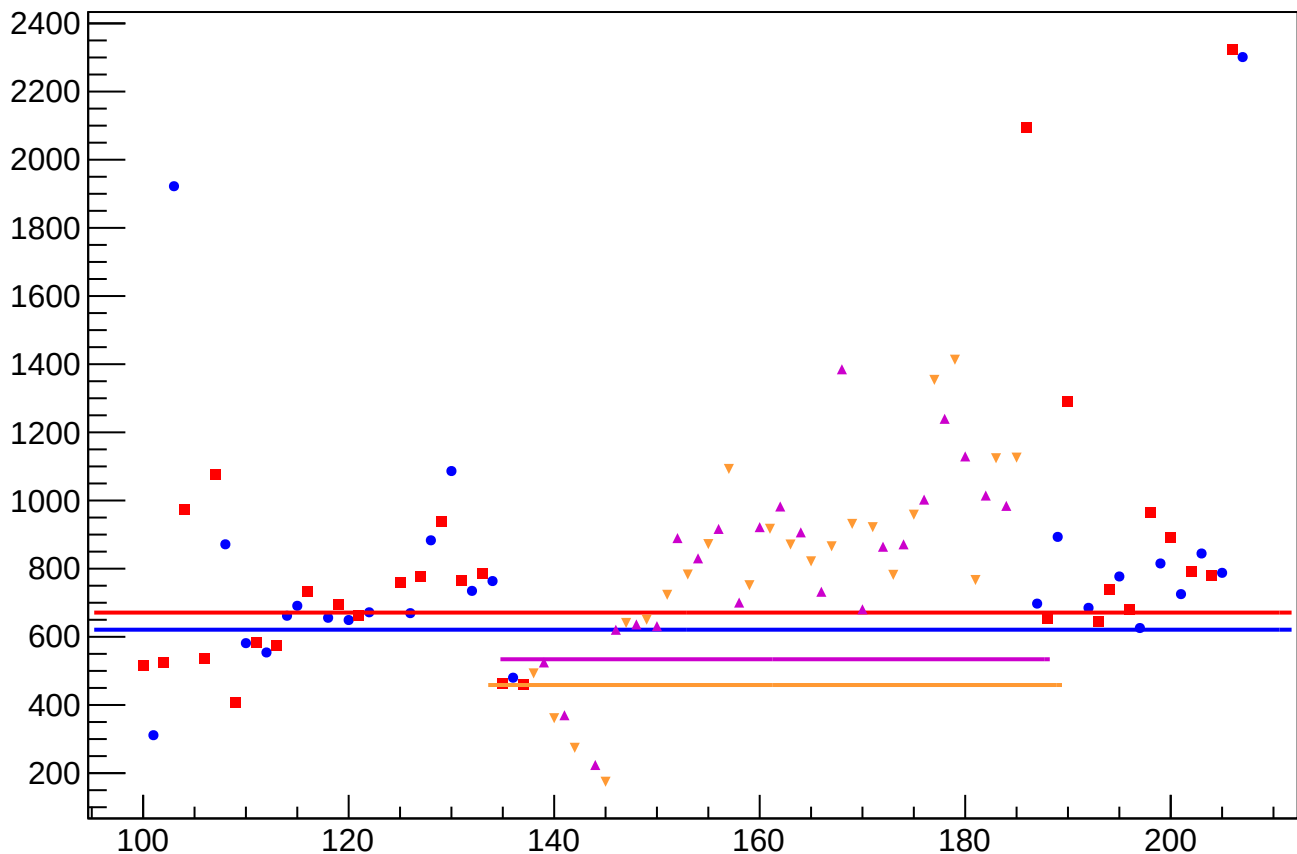
Left In: -108.358 $\pm$ 143.315  $\chi^2$ /NDF:17.0/22

+ sign 71.426 $\pm$ 104.671  $\chi^2$ /NDF: 49.1/49

All: 48.022 $\pm$ 76.716  $\chi^2$ /NDF: 100.5/101

- sign 20.858 $\pm$ 112.766  $\chi^2$ /NDF: 51.3/51

asym\_us\_avg\_at1lr\_avg\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 620.918 $\pm$ 0.125  $\chi^2$ /NDF: 3563898.8/25

Left Out: 458.589 $\pm$ 0.092  $\chi^2$ /NDF:11426319.1/23

Right Out: 671.119 $\pm$ 0.129  $\chi^2$ /NDF: 2939041.6/28

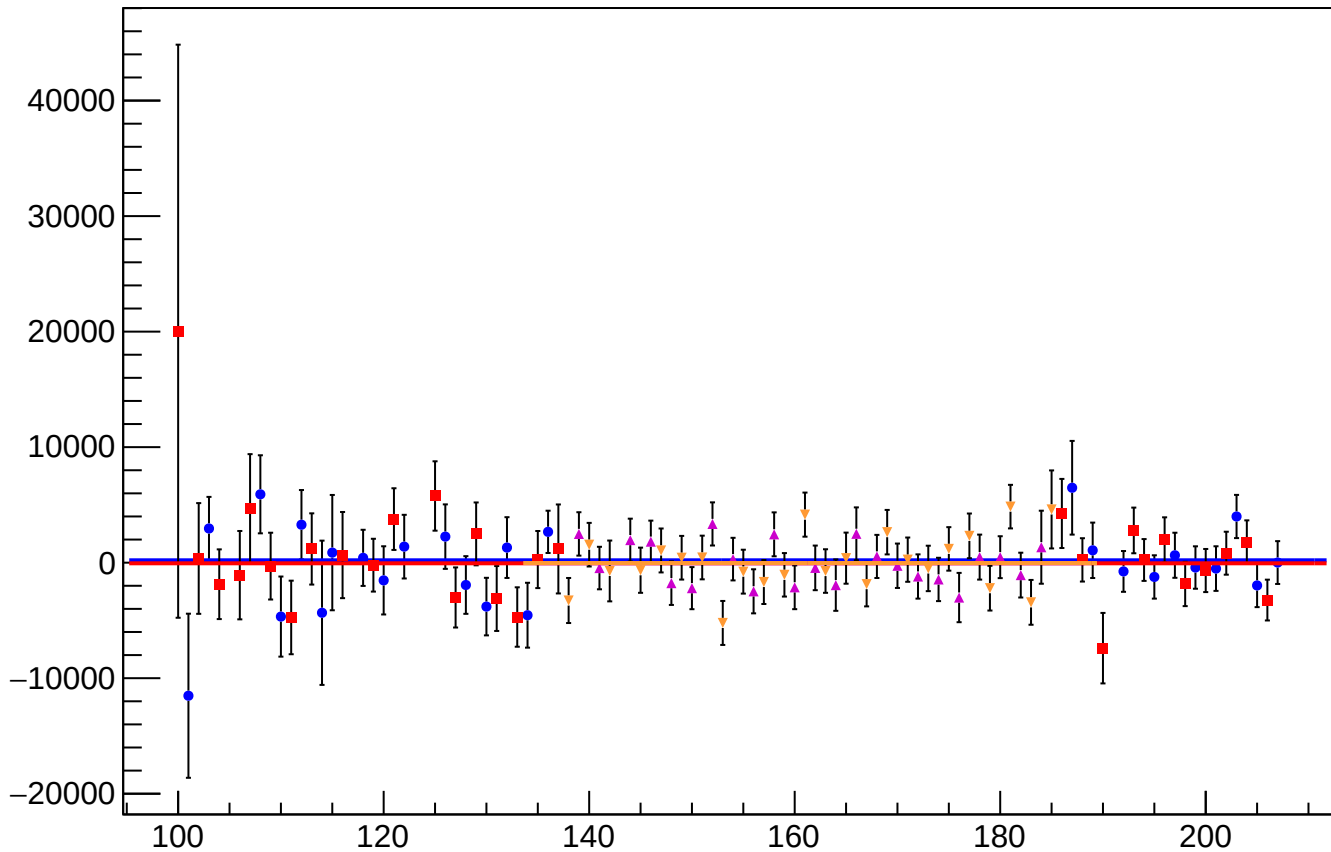
Left In: 534.168 $\pm$ 0.101  $\chi^2$ /NDF:8442812.5/22

+ sign 515.770 $\pm$ 0.074  $\chi^2$ /NDF: 16087780.0/49

All: 548.427 $\pm$ 0.054  $\chi^2$ /NDF: 28585903.9/10

- sign 586.331 $\pm$ 0.080  $\chi^2$ /NDF: 12077468.7/51

# dit\_asym\_us\_avg\_at1lr\_avg\_dd\_mean vs Slug



Right In: 205.125 $\pm$ 473.242  $\chi^2$ /NDF: 28.6/25

Left Out: -29.389 $\pm$ 402.317  $\chi^2$ /NDF:35.4/23

Right Out: -54.736 $\pm$ 462.476  $\chi^2$ /NDF: 33.5/28

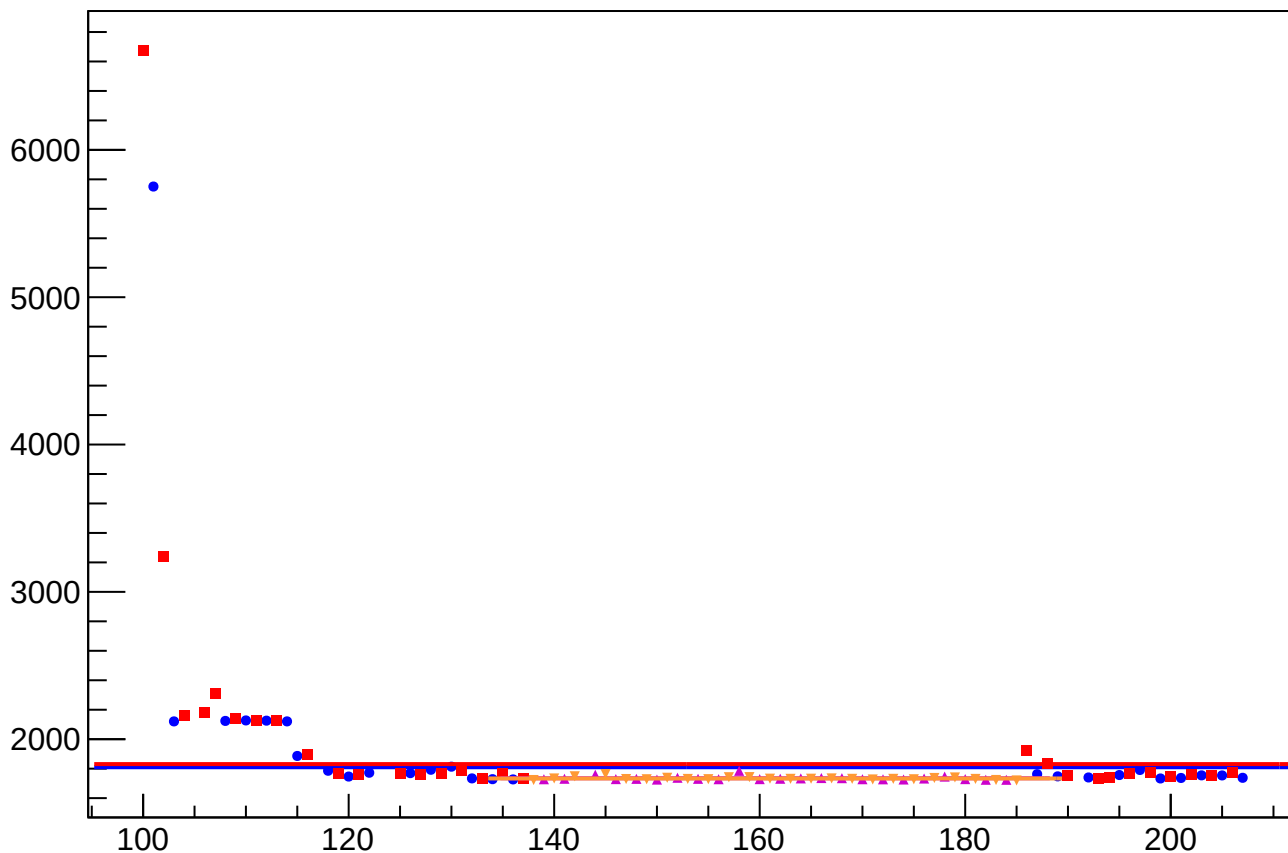
Left In: -42.465 $\pm$ 405.052  $\chi^2$ /NDF:19.9/22

+ sign 68.995 $\pm$ 306.522  $\chi^2$ /NDF: 64.2/49

All: 10.255 $\pm$ 216.099  $\chi^2$ /NDF: 117.6/101

- sign -47.792 $\pm$ 304.707  $\chi^2$ /NDF: 53.4/51

# dit\_asym\_us\_avg\_at1lr\_avg\_dd\_rms vs Slug



Right In: 1809.657 $\pm$ 0.335  $\chi^2$ /NDF: 732050.7/25

Left Out: 1733.478 $\pm$ 0.284  $\chi^2$ /NDF: 901.3/23

Right Out: 1830.998 $\pm$ 0.327  $\chi^2$ /NDF: 412058.4/28

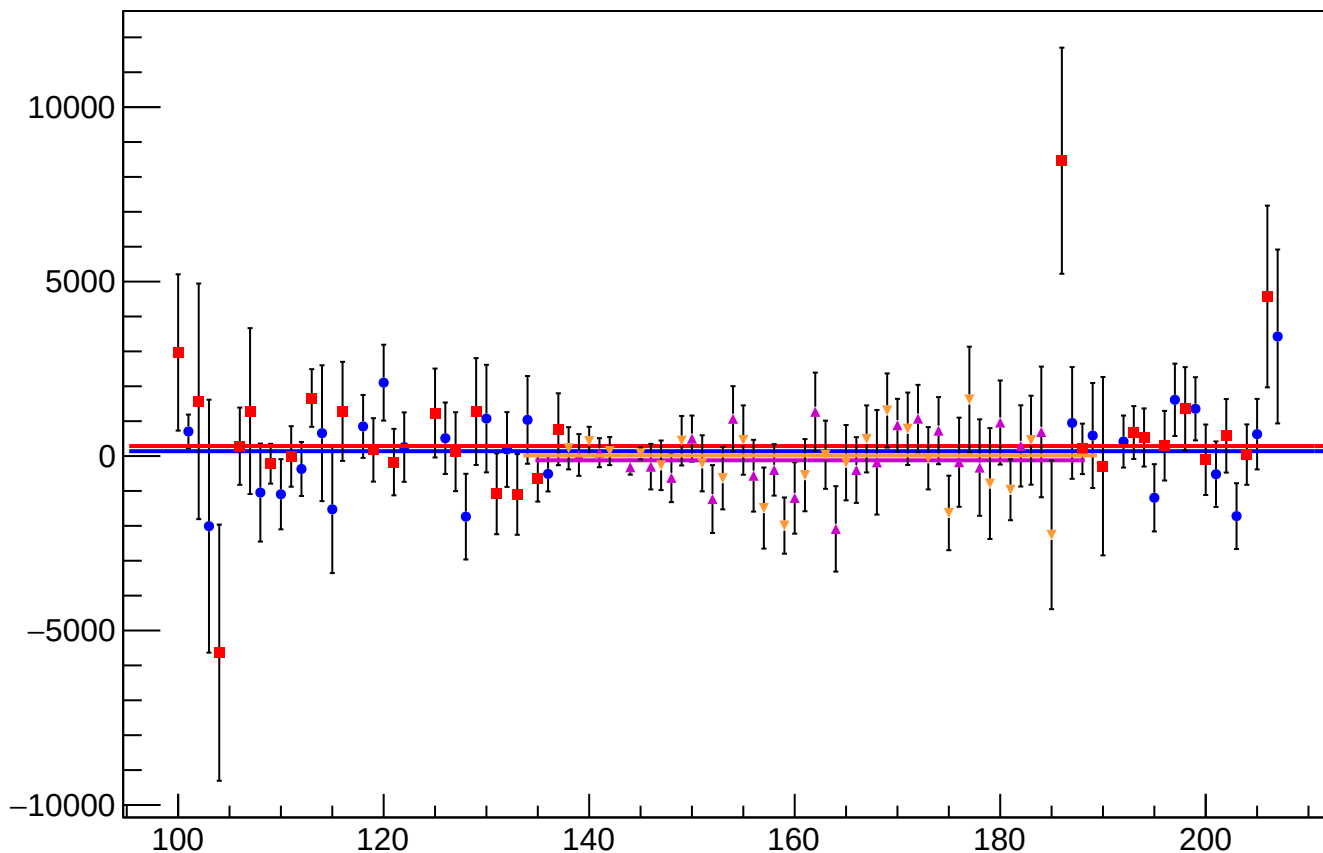
Left In: 1734.810 $\pm$ 0.286  $\chi^2$ /NDF: 2175.7/22

+ sign 1765.437 $\pm$ 0.217  $\chi^2$ /NDF: 763034.3/49

All: 1771.034 $\pm$ 0.153  $\chi^2$ /NDF: 1227554.2/10

- sign 1776.565 $\pm$ 0.215  $\chi^2$ /NDF: 463194.1/51

asym\_us\_avg\_at1lr\_avg\_dd\_dit\_correction\_mean vs Slug



Right In: 139.744 $\pm$ 189.394  $\chi^2$ /NDF: 26.7/25

Left Out: 18.027 $\pm$ 119.333  $\chi^2$ /NDF:19.4/23

Right Out: 287.057 $\pm$ 192.653  $\chi^2$ /NDF: 25.3/28

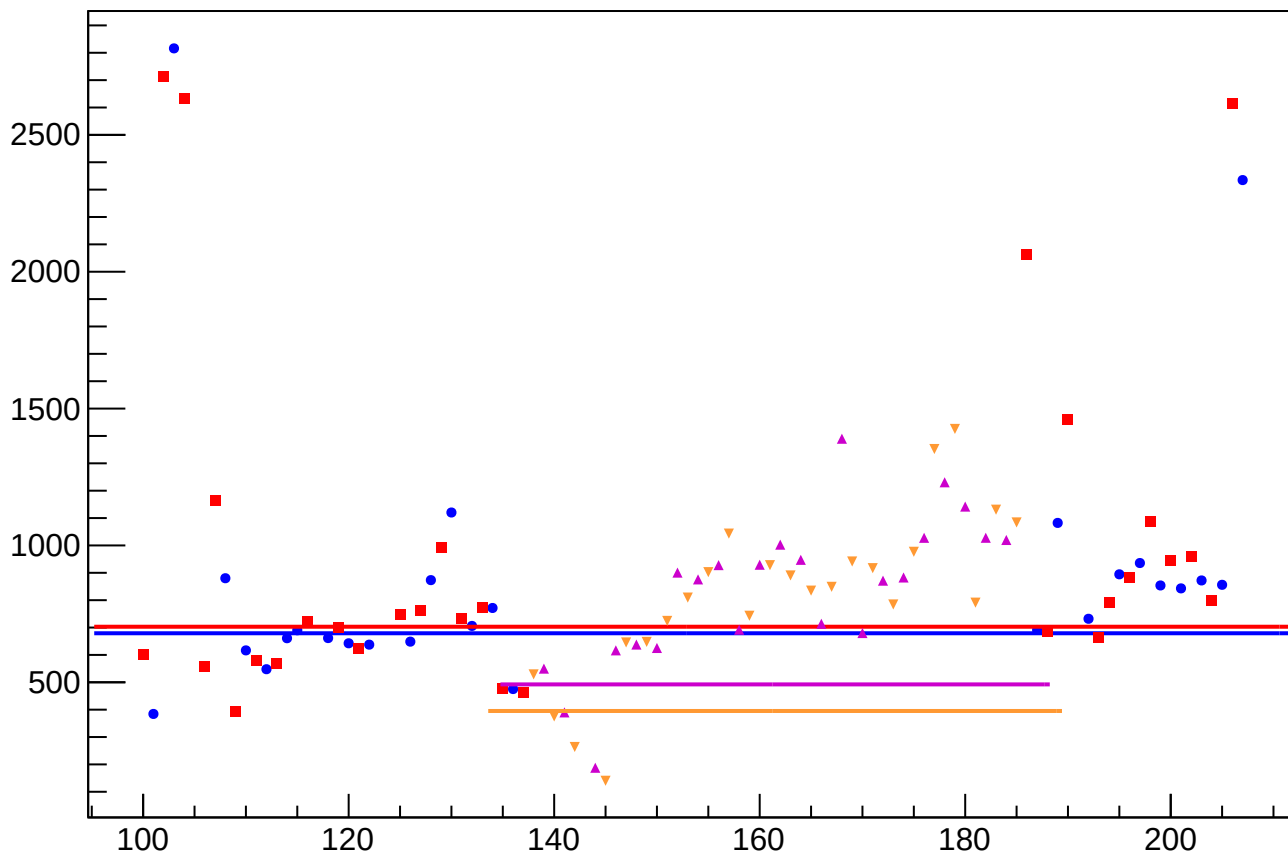
Left In: -121.705 $\pm$ 137.150  $\chi^2$ /NDF:16.5/22

+ sign 52.617 $\pm$ 100.963  $\chi^2$ /NDF: 46.5/49

All: 36.058 $\pm$ 74.910  $\chi^2$ /NDF: 91.3/101

- sign 15.779 $\pm$ 111.729  $\chi^2$ /NDF: 44.8/51

asym\_us\_avg\_at1lr\_avg\_dd\_dit\_correction\_rms vs Slug



Right In: 679.116 $\pm$ 0.134  $\chi^2/\text{NDF}$ : 3642815.6/25

Left Out: 395.188 $\pm$ 0.084  $\chi^2/\text{NDF}$ : 14334419.9/23

Right Out: 702.993 $\pm$ 0.136  $\chi^2/\text{NDF}$ : 4671403.0/28

Left In: 492.294 $\pm$ 0.097  $\chi^2/\text{NDF}$ : 10419498.8/22

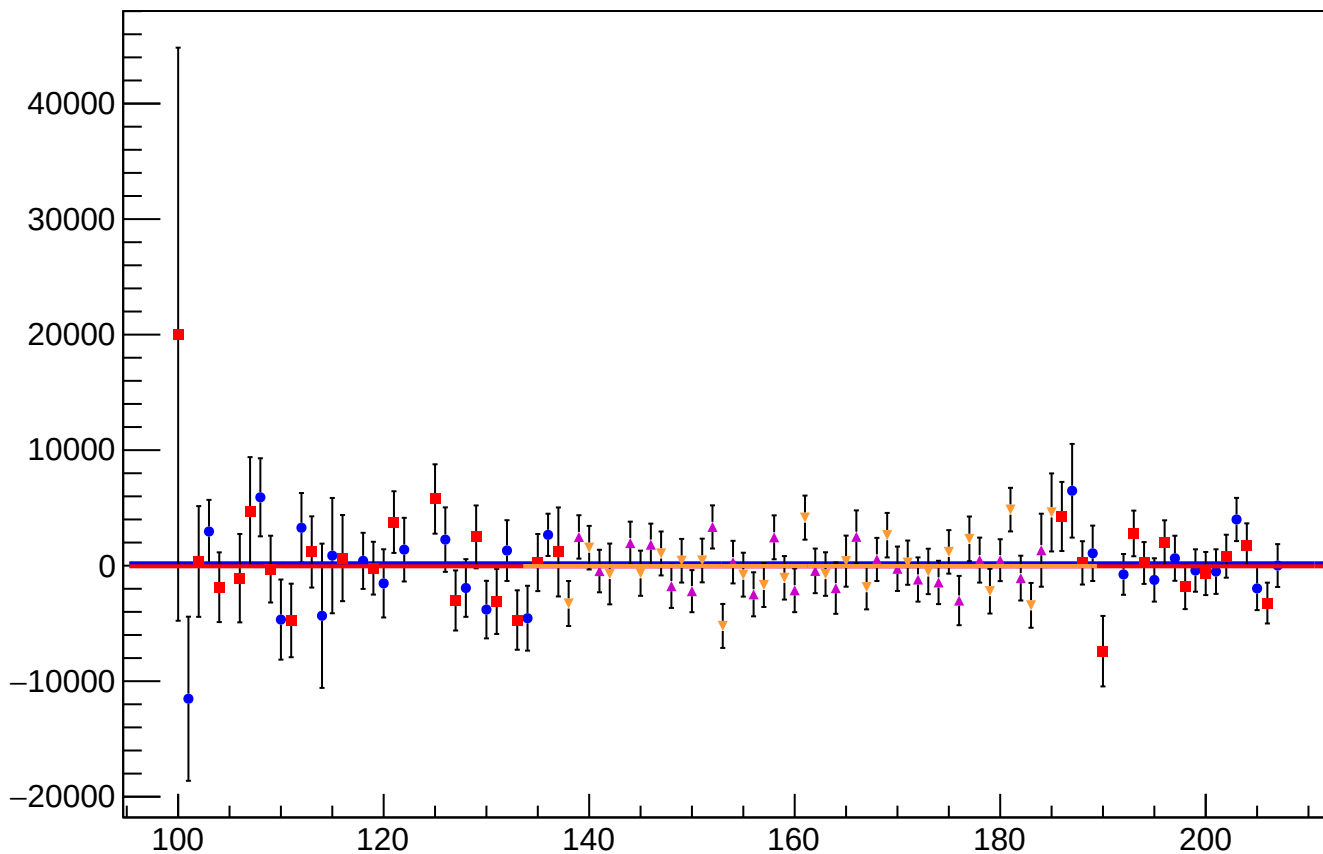
+ sign 475.875 $\pm$ 0.071  $\chi^2/\text{NDF}$ : 21194727.2/49

All: 515.111 $\pm$ 0.053  $\chi^2/\text{NDF}$ : 38545204.6/10

- sign 563.161 $\pm$ 0.079  $\chi^2/\text{NDF}$ : 16678521.0/51



eigen\_dit\_asym\_us\_avg\_at1lr\_avg\_dd\_mean vs Slug



Right In: 205.126 $\pm$ 473.242  $\chi^2$ /NDF: 28.6/25

Left Out: -29.392 $\pm$ 402.317  $\chi^2$ /NDF:35.4/23

Right Out: -54.735 $\pm$ 462.476  $\chi^2$ /NDF: 33.5/28

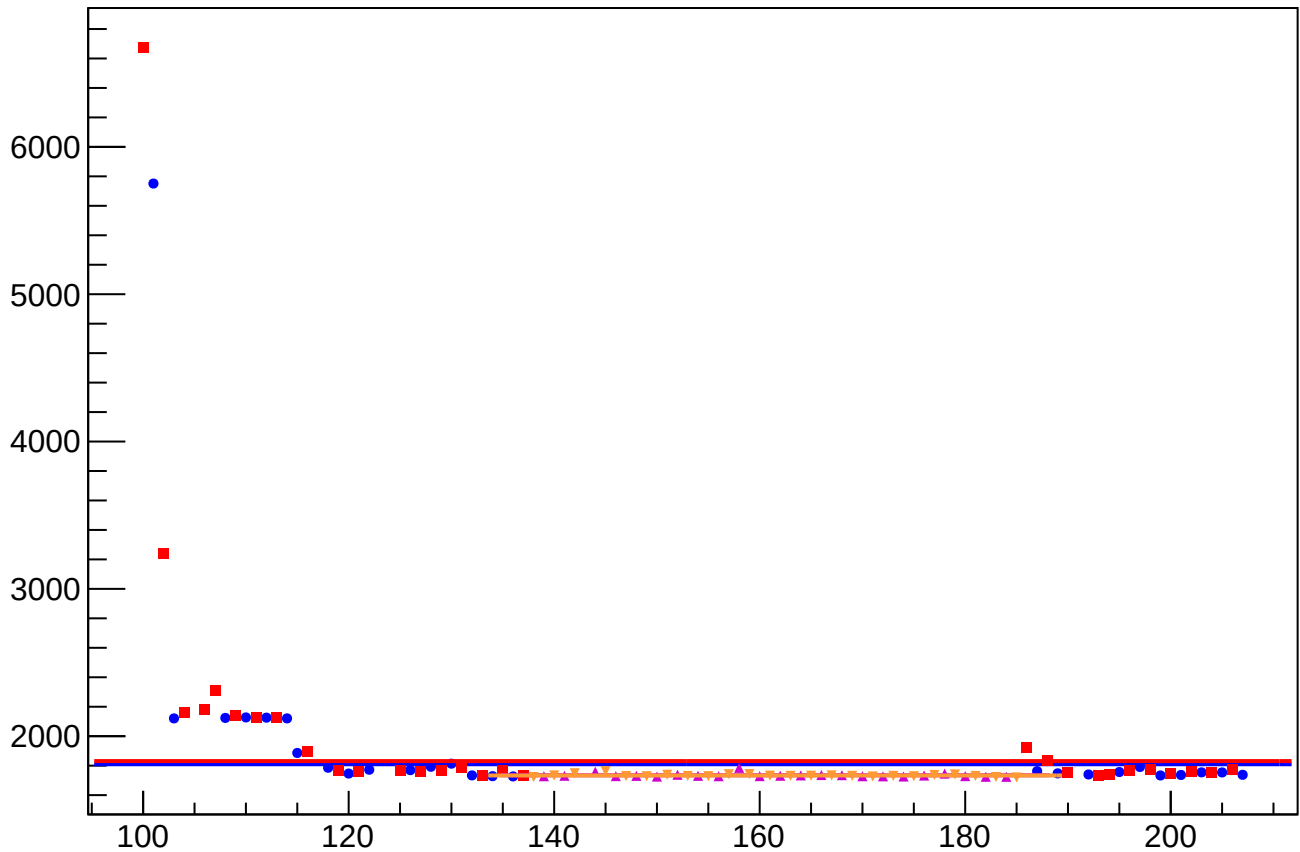
Left In: -42.465 $\pm$ 405.052  $\chi^2$ /NDF:19.9/22

+ sign 68.994 $\pm$ 306.522  $\chi^2$ /NDF: 64.2/49

All: 10.255 $\pm$ 216.099  $\chi^2$ /NDF: 117.6/101

- sign -47.791 $\pm$ 304.707  $\chi^2$ /NDF: 53.4/51

eigen\_dit\_asym\_us\_avg\_at1lr\_avg\_dd\_rms vs Slug



Right In: 1809.657+/-0.335  $\chi^2/\text{NDF}$ : 732050.3/25

Left Out: 1733.478+/-0.284  $\chi^2/\text{NDF}$ : 901.3/23

Right Out: 1830.998+/-0.327  $\chi^2/\text{NDF}$ : 412057.4/28

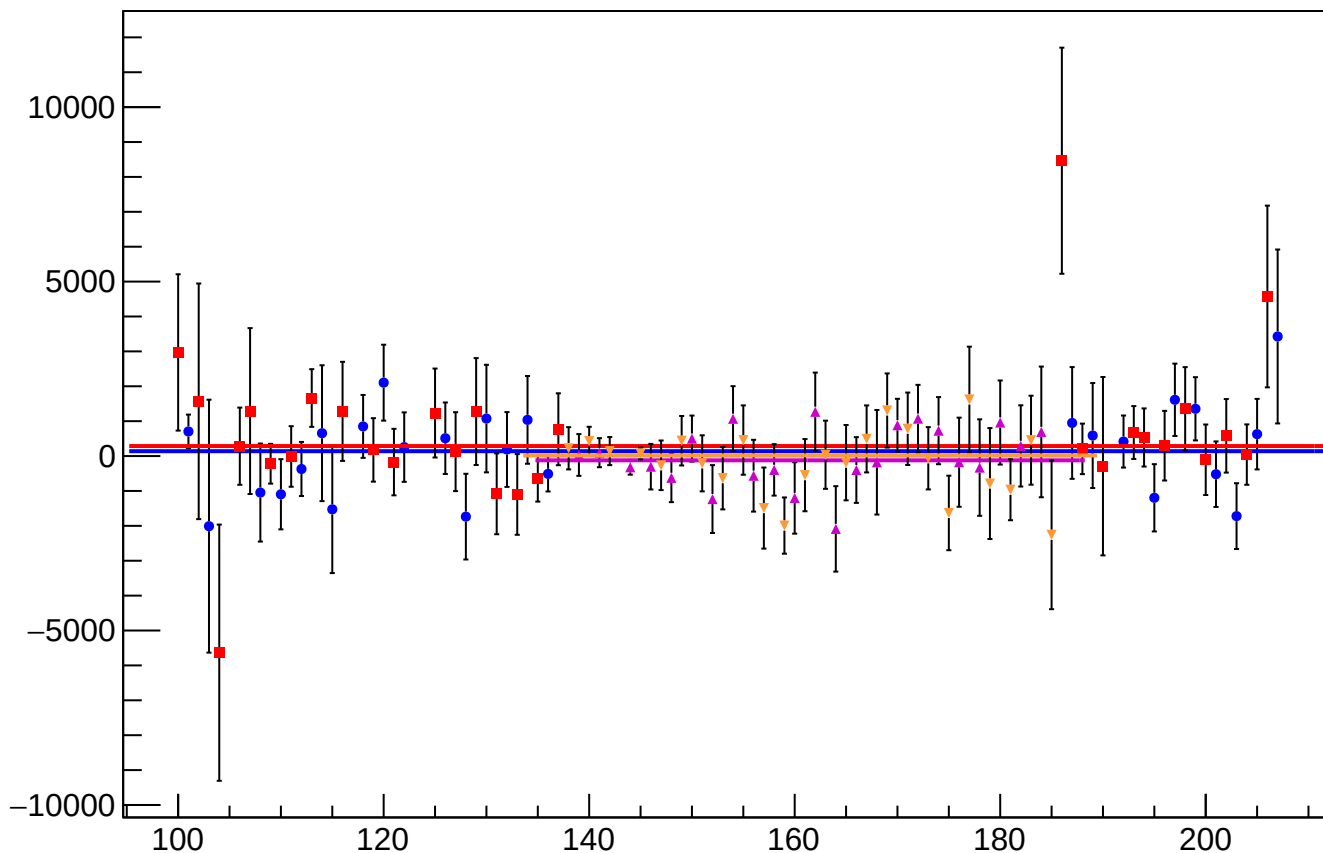
Left In: 1734.810+/-0.286  $\chi^2/\text{NDF}$ : 2175.7/22

+ sign 1765.437+/-0.217  $\chi^2/\text{NDF}$ : 763033.9/49

All: 1771.034+/-0.153  $\chi^2/\text{NDF}$ : 1227552.9/100

- sign 1776.565+/-0.215  $\chi^2/\text{NDF}$ : 463193.2/51

asym\_us\_avg\_at1lr\_avg\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In: 139.743 $\pm$ 189.394  $\chi^2$ /NDF: 26.7/25

Left Out: 18.026 $\pm$ 119.333  $\chi^2$ /NDF:19.4/23

Right Out: 287.054 $\pm$ 192.652  $\chi^2$ /NDF: 25.3/28

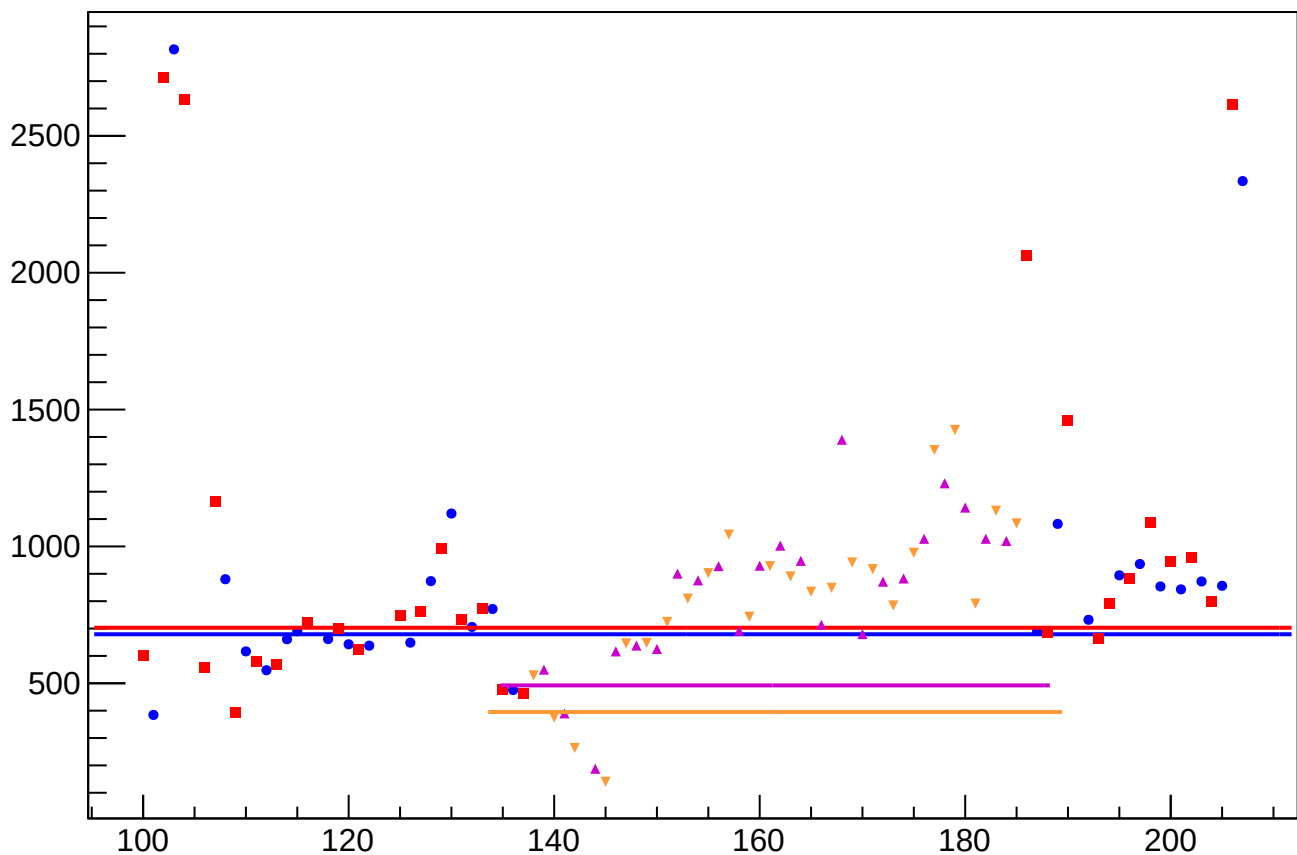
Left In: -121.706 $\pm$ 137.150  $\chi^2$ /NDF:16.5/22

+ sign 52.615 $\pm$ 100.963  $\chi^2$ /NDF: 46.5/49

All: 36.057 $\pm$ 74.910  $\chi^2$ /NDF: 91.3/101

- sign 15.779 $\pm$ 111.729  $\chi^2$ /NDF: 44.8/51

asym\_us\_avg\_at1lr\_avg\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 679.115 $\pm$ 0.134  $\chi^2/\text{NDF}$ : 3642832.9/25

Left Out: 395.188 $\pm$ 0.084  $\chi^2/\text{NDF}$ : 14334464.6/23

Right Out: 702.989 $\pm$ 0.136  $\chi^2/\text{NDF}$ : 4671456.3/28

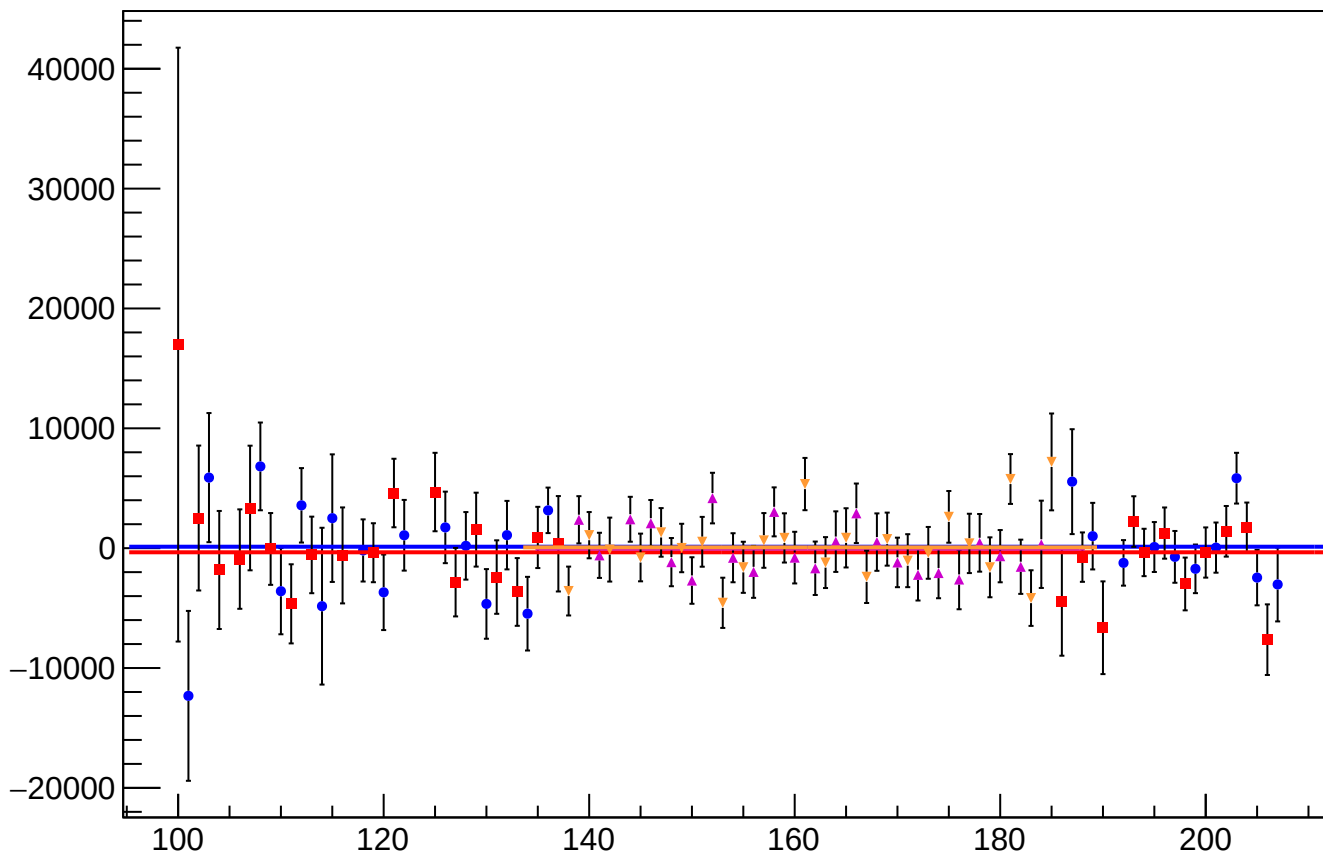
Left In: 492.295 $\pm$ 0.097  $\chi^2/\text{NDF}$ : 10419523.2/22

+ sign 475.875 $\pm$ 0.071  $\chi^2/\text{NDF}$ : 21194758.8/49

All: 515.111 $\pm$ 0.053  $\chi^2/\text{NDF}$ : 38545251.3/10

- sign 563.161 $\pm$ 0.079  $\chi^2/\text{NDF}$ : 16678538.5/51

# asym\_us\_avg\_at1lr\_avg\_dd\_mean vs Slug



Right In: 121.406 $\pm$ 535.664  $\chi^2$ /NDF: 33.9/25

Left Out: 66.661 $\pm$ 449.750  $\chi^2$ /NDF:33.6/23

Right Out: -343.663 $\pm$ 523.890  $\chi^2$ /NDF: 26.5/28

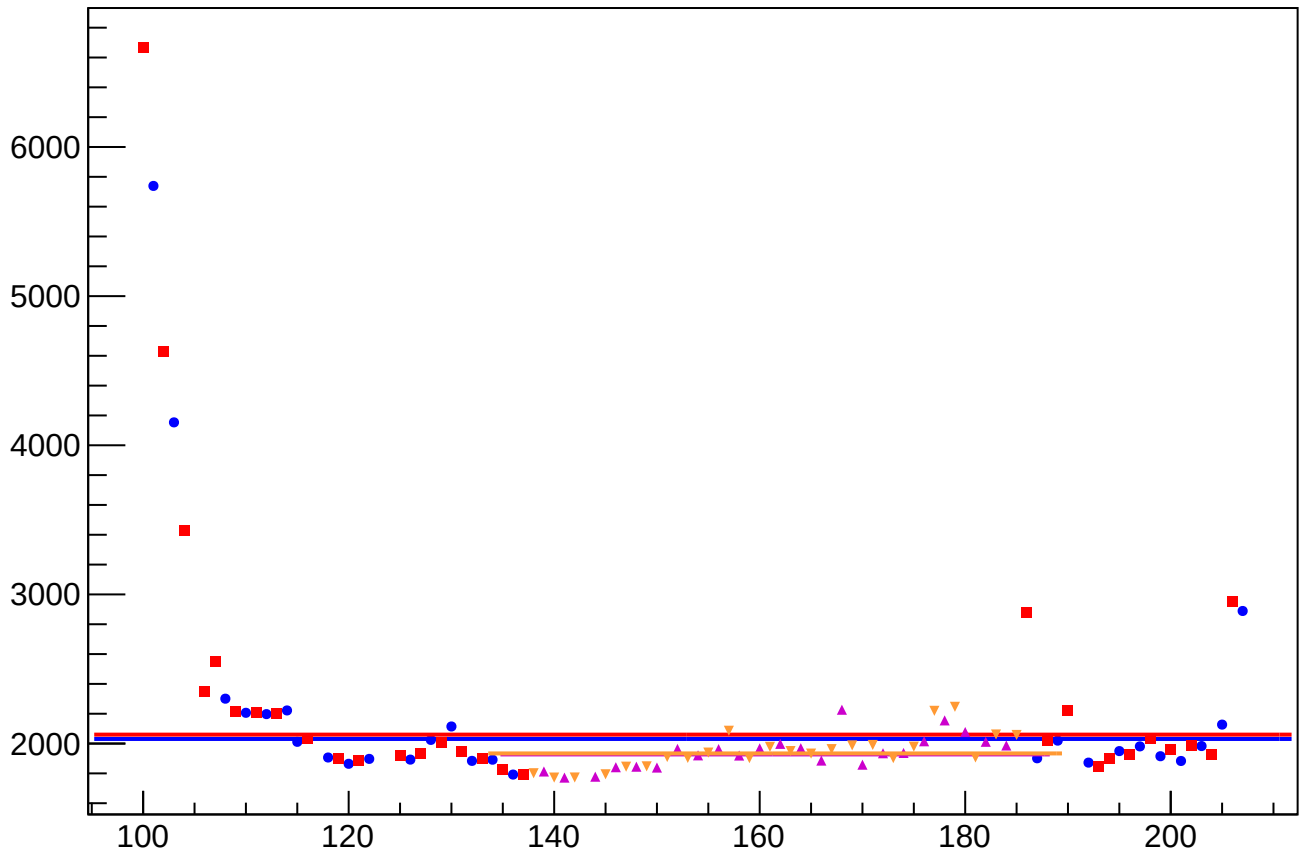
Left In: -25.575 $\pm$ 450.755  $\chi^2$ /NDF:20.0/22

+ sign 89.297 $\pm$ 344.442  $\chi^2$ /NDF: 67.5/49

All: -36.798 $\pm$ 242.578  $\chi^2$ /NDF: 114.4/101

- sign -160.884 $\pm$ 341.688  $\chi^2$ /NDF: 46.6/51

# asym\_us\_avg\_at1lr\_avg\_dd\_rms vs Slug



Right In: 2030.794+/-0.379  $\chi^2/\text{NDF}$ : 1138019.5/25

Left Out: 1933.804+/-0.318  $\chi^2/\text{NDF}$ : 128531.8/23

Right Out: 2059.863+/-0.370  $\chi^2/\text{NDF}$ : 994480.9/28

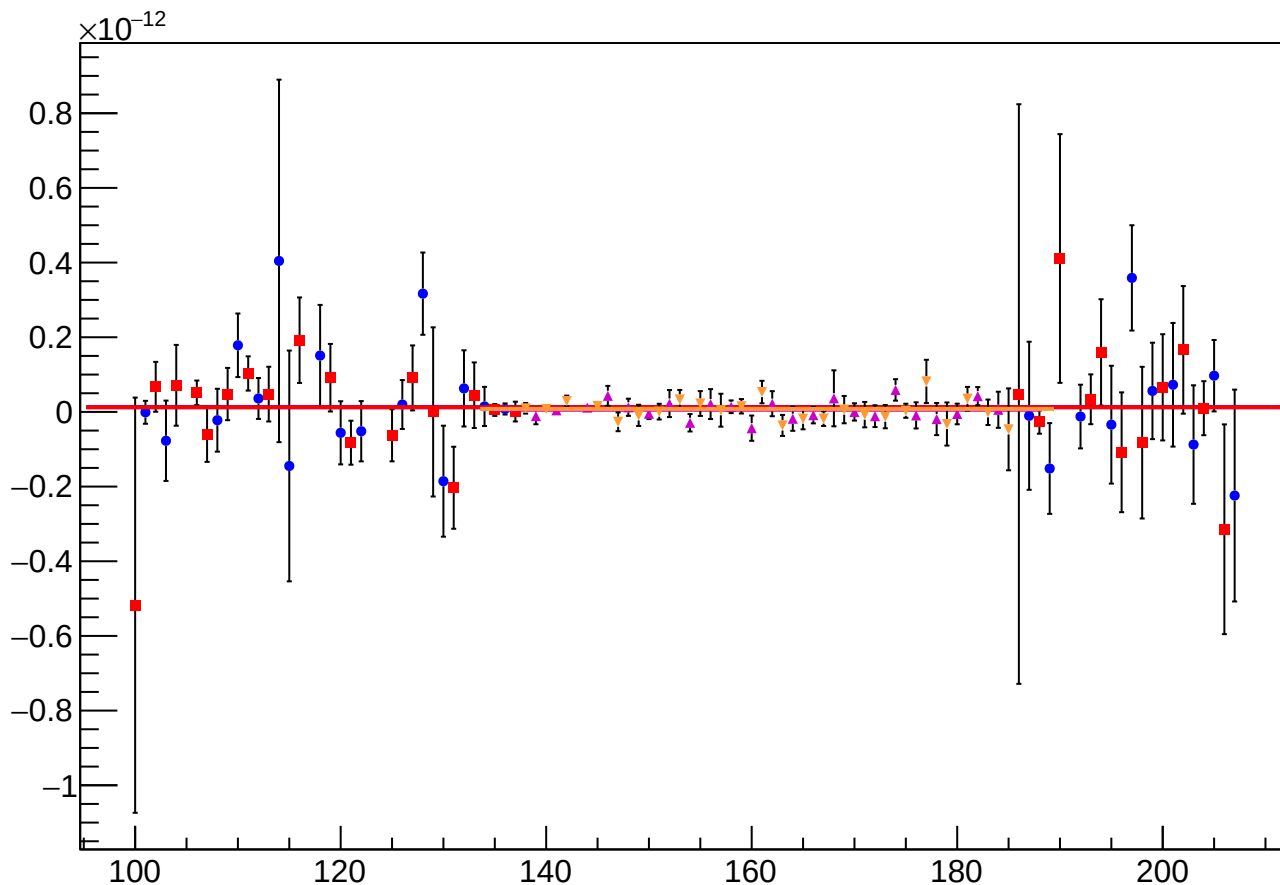
Left In: 1927.125+/-0.319  $\chi^2/\text{NDF}$ : 116436.1/22

+ sign 1973.907+/-0.244  $\chi^2/\text{NDF}$ : 1305009.2/49

All: 1978.787+/-0.172  $\chi^2/\text{NDF}$ : 2490499.5/10

- sign 1983.590+/-0.242  $\chi^2/\text{NDF}$ : 1184693.8/51

asym\_us\_avg\_at1lr\_avg\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 28.2/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:17.3/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 28.0/28

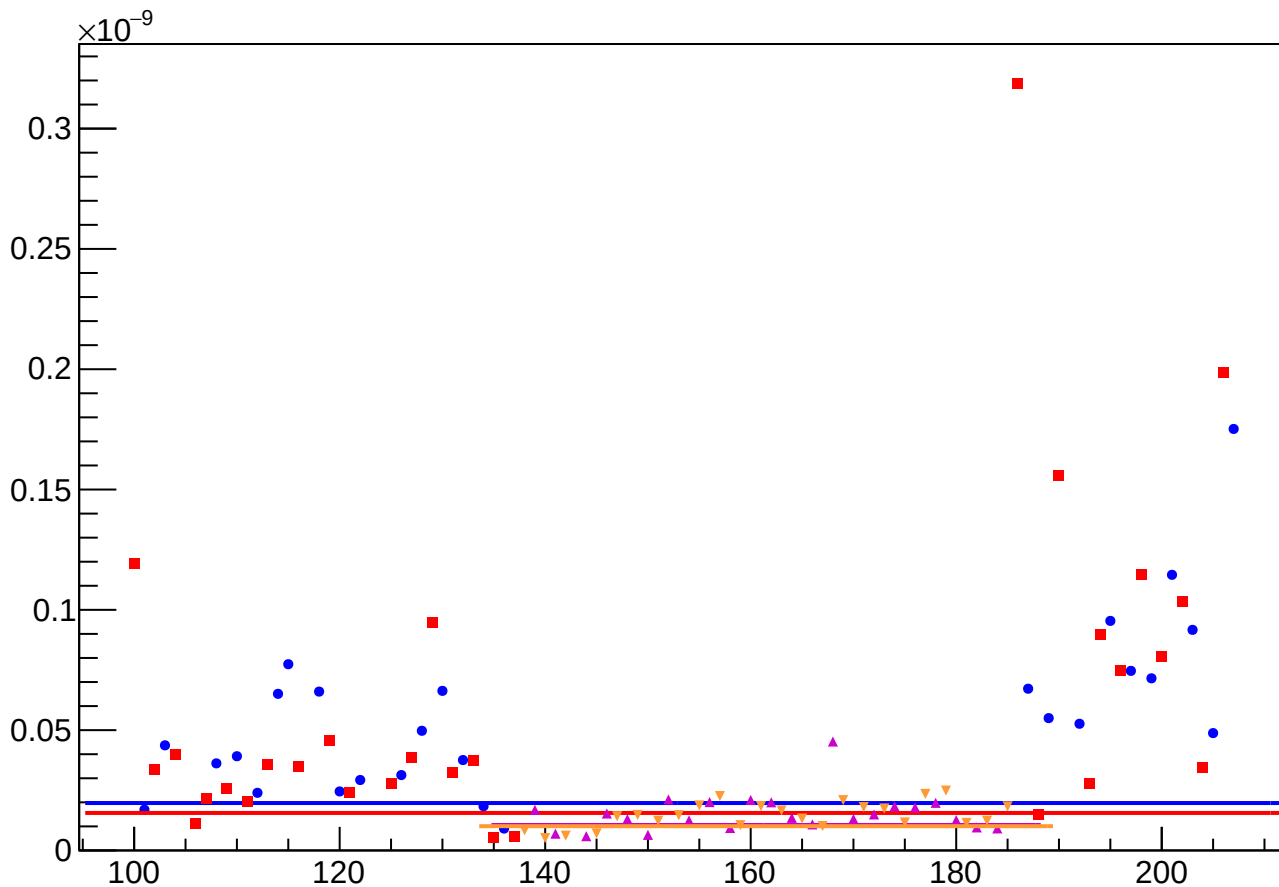
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:16.7/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 45.7/49

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 90.9/101

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 45.1/51

asym\_us\_avg\_at1lr\_avg\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5672013.7/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2274817.9/23

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6571869.7/28

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2578668.0/22

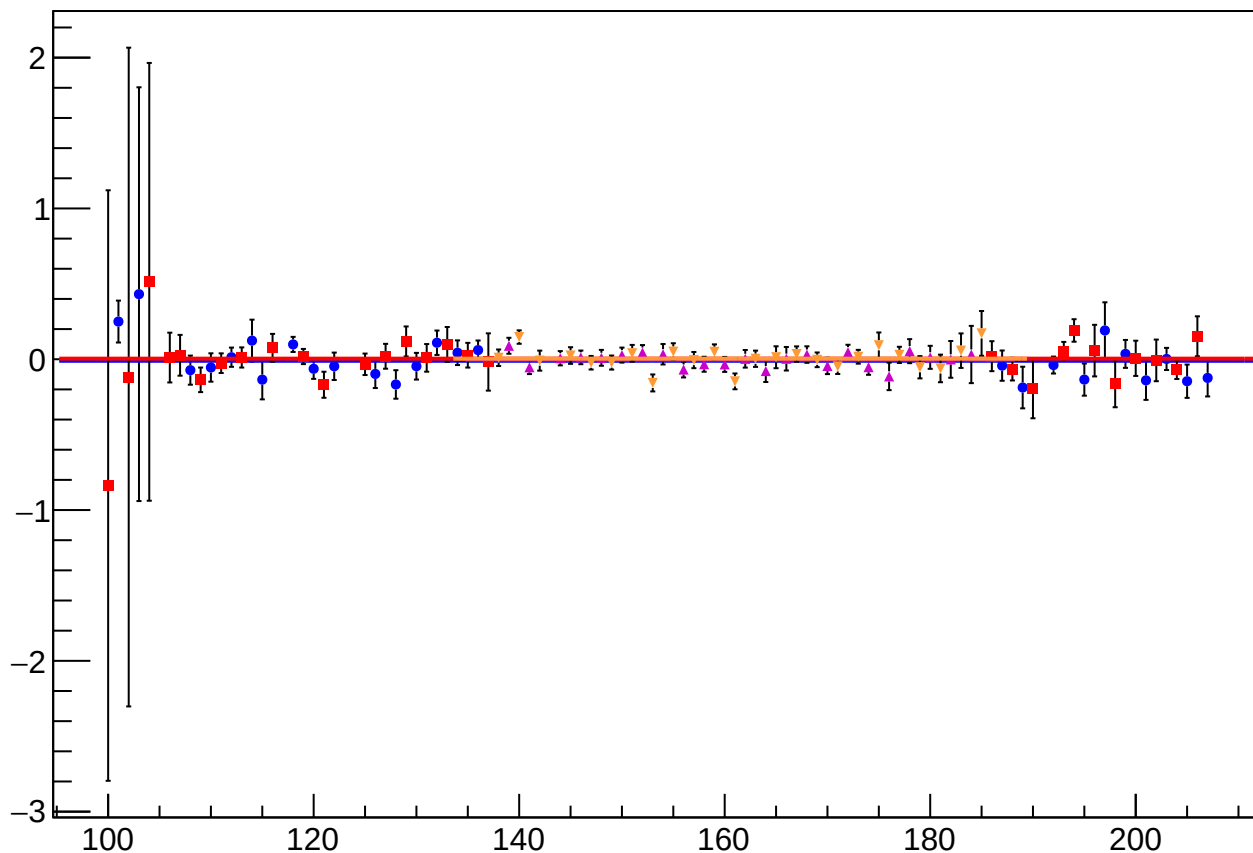
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9237283.0/49

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 18816370.7/101

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9578539.3/51



asym\_us\_avg\_at1lr\_avg\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.010 \pm 0.017$   $\chi^2/\text{NDF}$ : 27.5/25

Left Out:  $0.004 \pm 0.012$   $\chi^2/\text{NDF}$ : 35.0/23

Right Out:  $0.004 \pm 0.017$   $\chi^2/\text{NDF}$ : 23.2/28

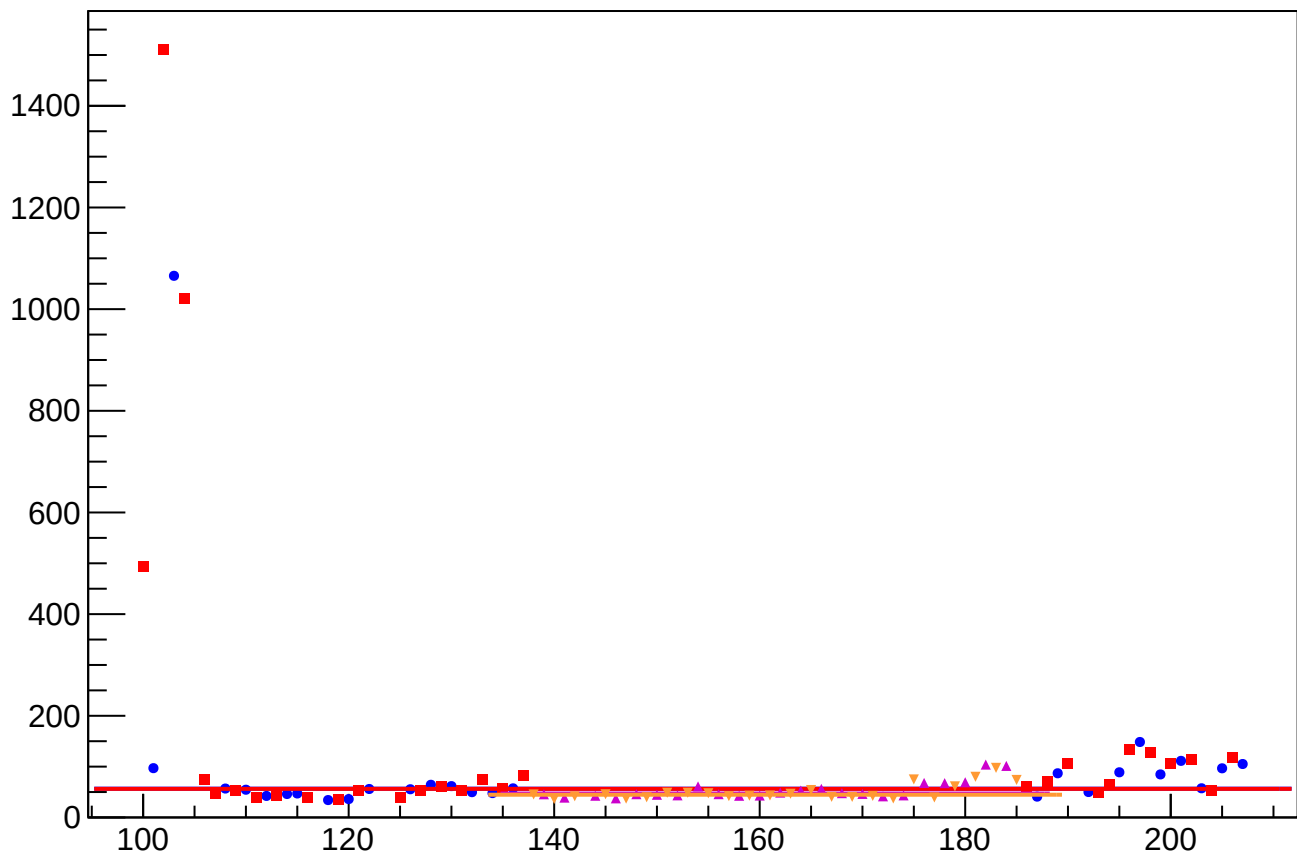
Left In:  $-0.003 \pm 0.012$   $\chi^2/\text{NDF}$ : 14.5/22

+ sign  $-0.000 \pm 0.010$   $\chi^2/\text{NDF}$ : 63.0/49

All:  $-0.001 \pm 0.007$   $\chi^2/\text{NDF}$ : 100.8/101

- sign  $-0.001 \pm 0.010$   $\chi^2/\text{NDF}$ : 37.8/51

asym\_us\_avg\_at1lr\_avg\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 56.619 $\pm$ 0.012  $\chi^2$ /NDF: 3973190.1/25

Left Out: 44.733 $\pm$ 0.008  $\chi^2$ /NDF: 1481436.4/23

Right Out: 56.274 $\pm$ 0.012  $\chi^2$ /NDF: 4964707.3/28

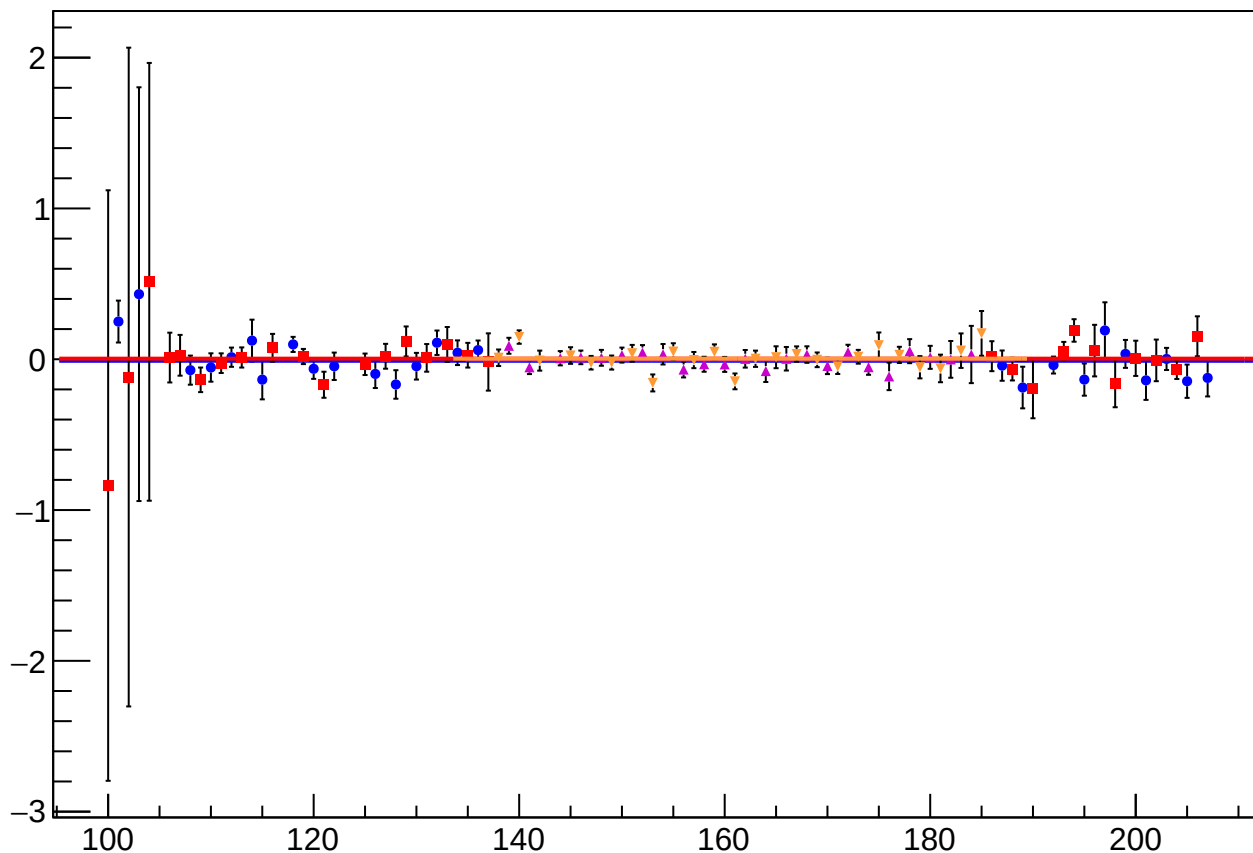
Left In: 47.033 $\pm$ 0.008  $\chi^2$ /NDF: 1383050.4/22

+ sign 48.402 $\pm$ 0.007  $\chi^2$ /NDF: 6113381.1/49

All: 49.216 $\pm$ 0.005  $\chi^2$ /NDF: 12884054.4/101

- sign 50.067 $\pm$ 0.007  $\chi^2$ /NDF: 6741060.2/51

asym\_us\_avg\_at1lr\_avg\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.010 \pm 0.017$   $\chi^2/\text{NDF}$ : 27.5/25

Left Out:  $0.004 \pm 0.012$   $\chi^2/\text{NDF}$ : 35.0/23

Right Out:  $0.004 \pm 0.017$   $\chi^2/\text{NDF}$ : 23.2/28

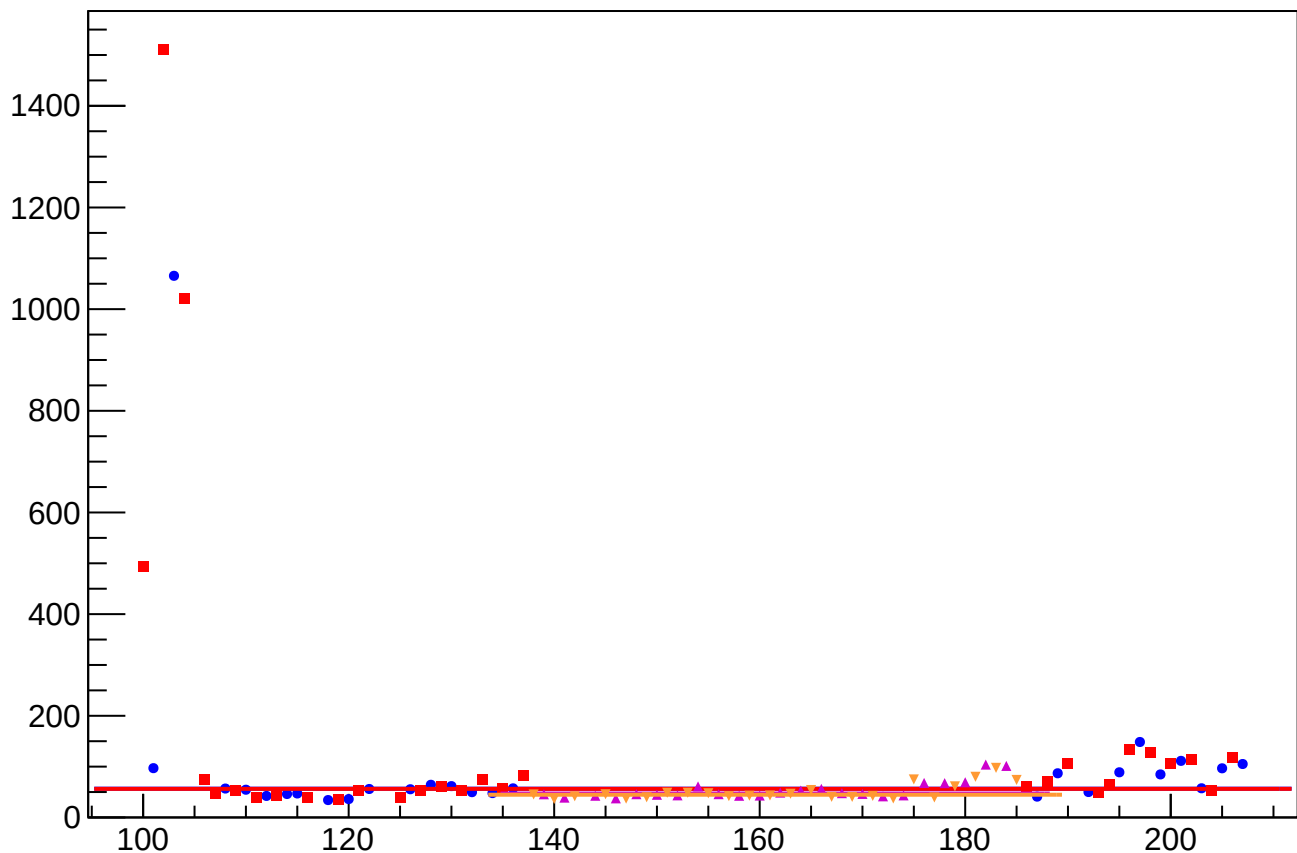
Left In:  $-0.003 \pm 0.012$   $\chi^2/\text{NDF}$ : 14.5/22

+ sign  $-0.000 \pm 0.010$   $\chi^2/\text{NDF}$ : 63.0/49

All:  $-0.001 \pm 0.007$   $\chi^2/\text{NDF}$ : 100.8/101

- sign  $-0.001 \pm 0.010$   $\chi^2/\text{NDF}$ : 37.8/51

asym\_us\_avg\_at1lr\_avg\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 56.619+/-0.012  $\chi^2/\text{NDF}$ : 3973190.1/25

Left Out: 44.733+/-0.008  $\chi^2/\text{NDF}$ : 1481436.4/23

Right Out: 56.274+/-0.012  $\chi^2/\text{NDF}$ : 4964707.3/28

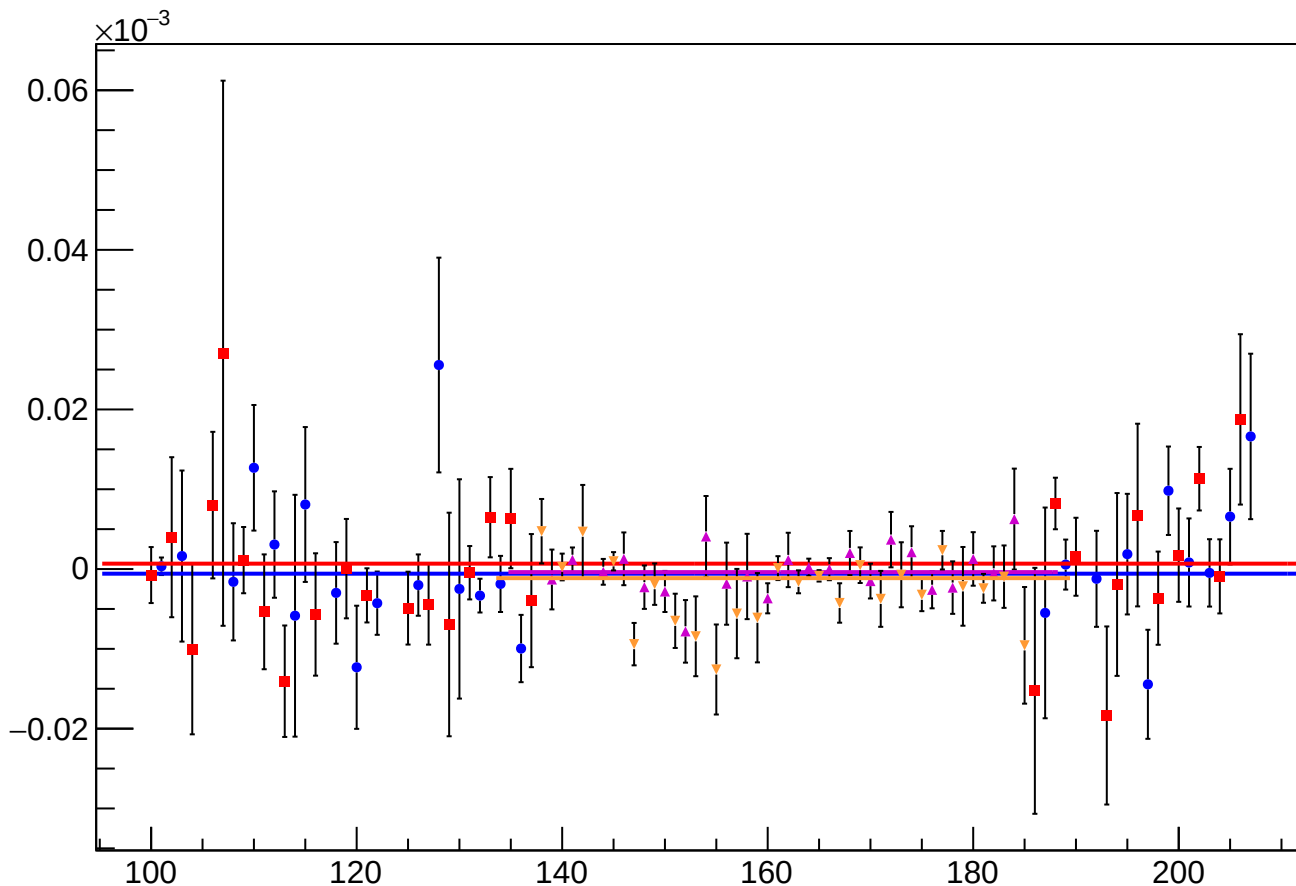
Left In: 47.033+/-0.008  $\chi^2/\text{NDF}$ : 1383050.4/22

+ sign 48.402+/-0.007  $\chi^2/\text{NDF}$ : 6113381.1/49

All: 49.216+/-0.005  $\chi^2/\text{NDF}$ : 12884054.4/101

- sign 50.067+/-0.007  $\chi^2/\text{NDF}$ : 6741060.2/51

asym\_us\_avg\_at1lr\_avg\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 31.1/25

Left Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 35.7/23

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 35.6/28

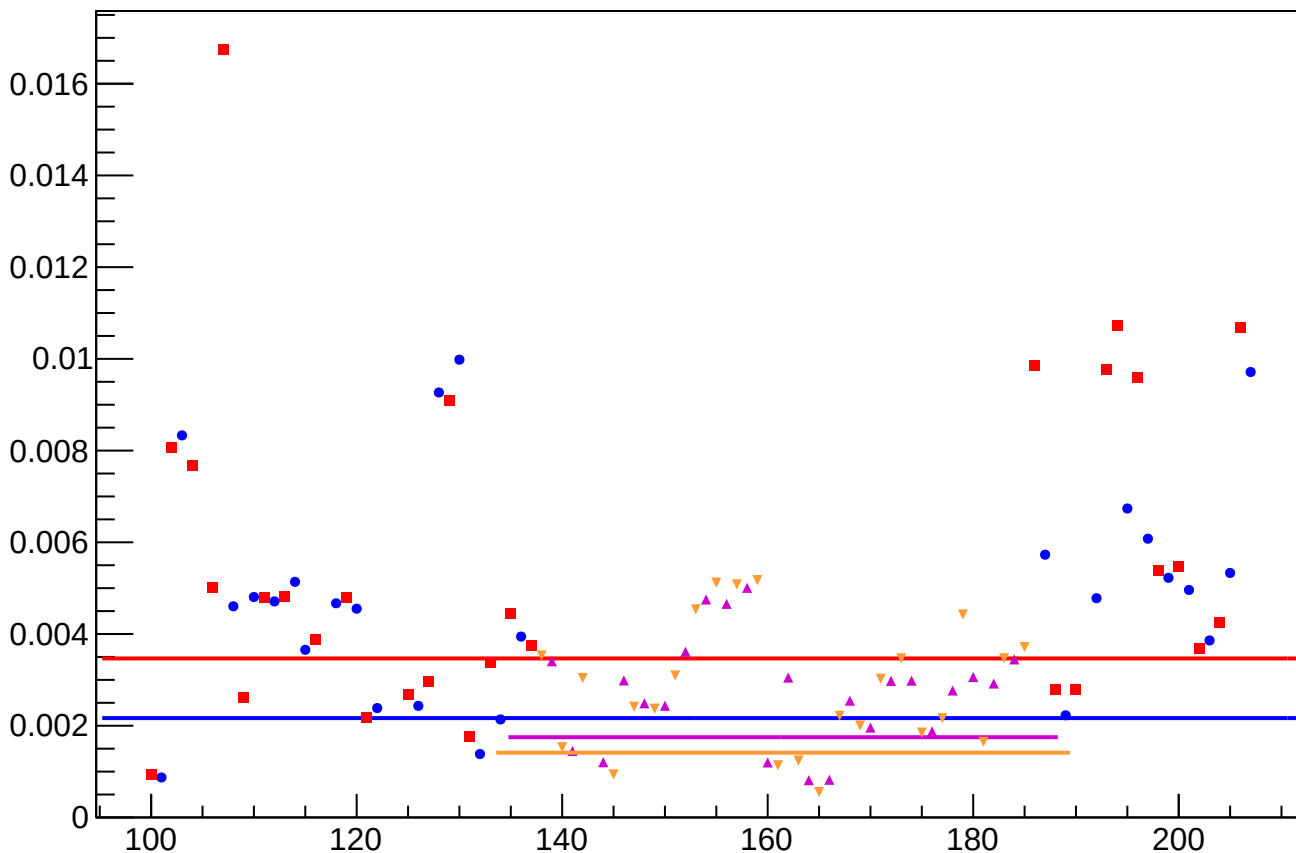
Left In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 16.3/22

+ sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 67.3/49

All: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 122.2/101

- sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 52.8/51

asym\_us\_avg\_at1lr\_avg\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 11622705.7/25

Left Out: 0.001 $\pm$ 0.000  $\chi^2$ /NDF:11586658.8/23

Right Out: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 7613531.1/28

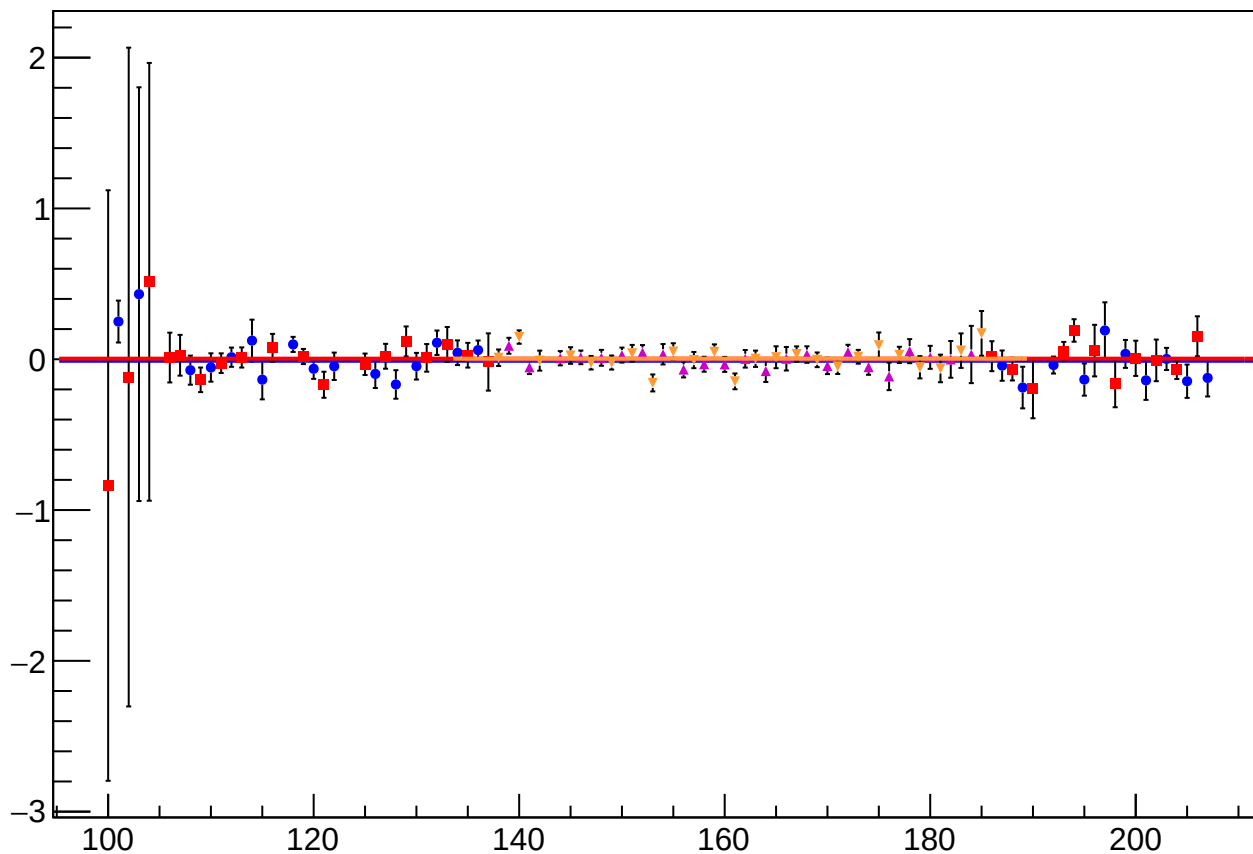
Left In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF:8238945.3/22

+ sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 24771437.1/49

All: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 46580576.0/101

- sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 20388176.2/51

asym\_us\_avg\_at1lr\_avg\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.010 \pm 0.017$   $\chi^2/\text{NDF}$ : 27.5/25

Left Out:  $0.004 \pm 0.012$   $\chi^2/\text{NDF}$ : 35.0/23

Right Out:  $0.004 \pm 0.017$   $\chi^2/\text{NDF}$ : 23.2/28

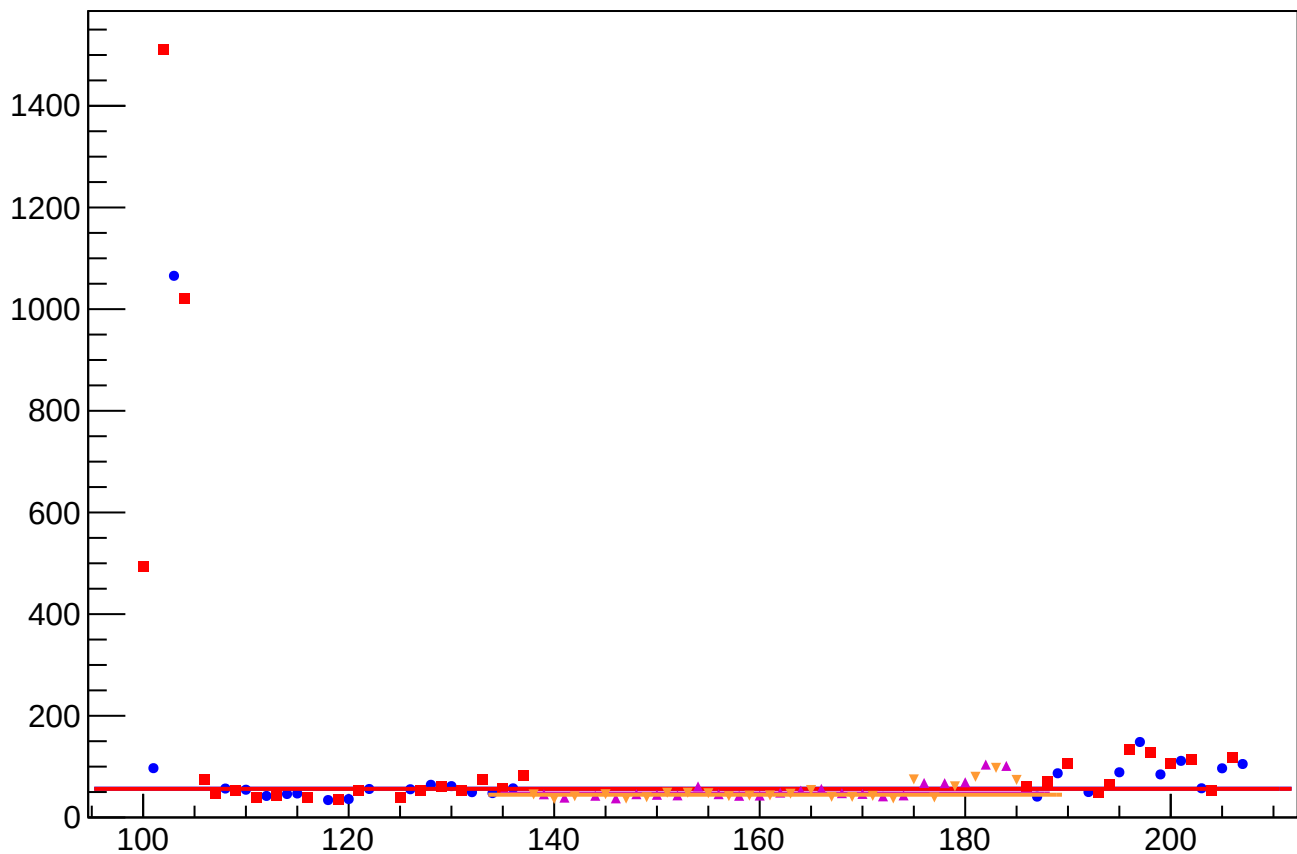
Left In:  $-0.003 \pm 0.012$   $\chi^2/\text{NDF}$ : 14.5/22

+ sign  $-0.000 \pm 0.010$   $\chi^2/\text{NDF}$ : 63.0/49

All:  $-0.001 \pm 0.007$   $\chi^2/\text{NDF}$ : 100.8/101

- sign  $-0.001 \pm 0.010$   $\chi^2/\text{NDF}$ : 37.8/51

asym\_us\_avg\_at1lr\_avg\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 56.619 $\pm$ 0.012  $\chi^2$ /NDF: 3973247.3/25

Left Out: 44.733 $\pm$ 0.008  $\chi^2$ /NDF: 1481436.0/23

Right Out: 56.272 $\pm$ 0.012  $\chi^2$ /NDF: 4964897.2/28

Left In: 47.033 $\pm$ 0.008  $\chi^2$ /NDF: 1383121.1/22

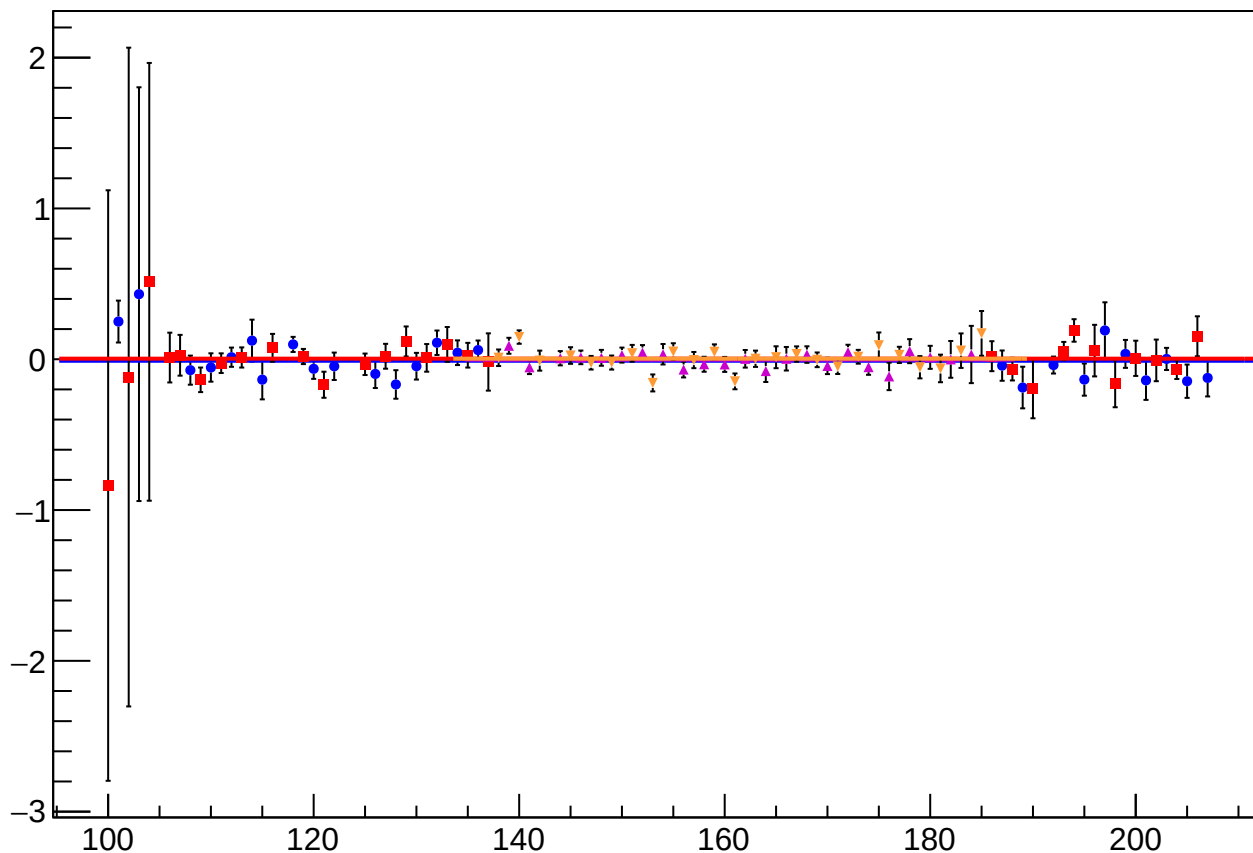
+ sign 48.402 $\pm$ 0.007  $\chi^2$ /NDF: 6113382.4/49

All: 49.215 $\pm$ 0.005  $\chi^2$ /NDF: 12884239.5/101

- sign 50.067 $\pm$ 0.007  $\chi^2$ /NDF: 6741261.5/51



asym\_us\_avg\_at1lr\_avg\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.010 \pm 0.017$   $\chi^2/\text{NDF}$ : 27.5/25

Left Out:  $0.004 \pm 0.012$   $\chi^2/\text{NDF}$ : 35.0/23

Right Out:  $0.004 \pm 0.017$   $\chi^2/\text{NDF}$ : 23.2/28

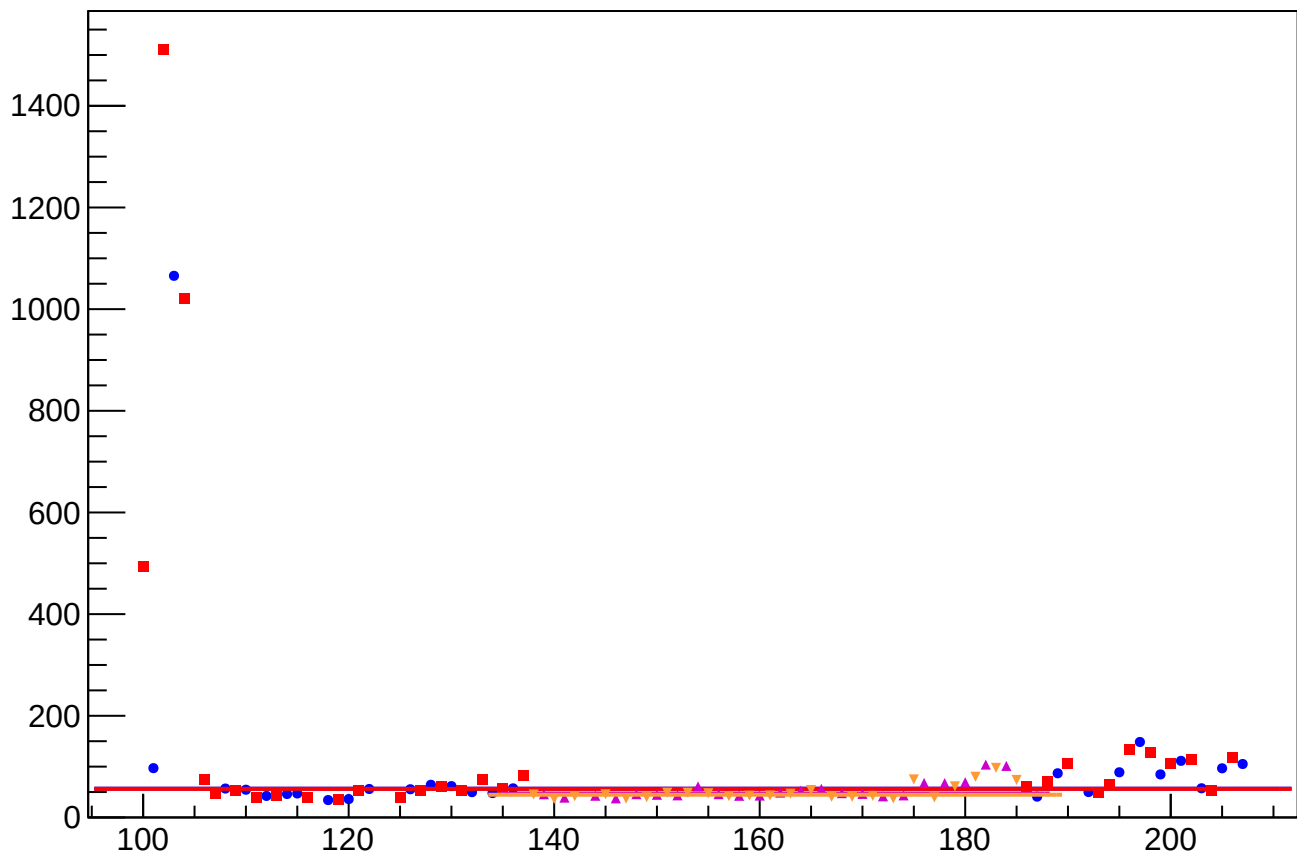
Left In:  $-0.003 \pm 0.012$   $\chi^2/\text{NDF}$ : 14.5/22

+ sign  $-0.000 \pm 0.010$   $\chi^2/\text{NDF}$ : 63.0/49

All:  $-0.001 \pm 0.007$   $\chi^2/\text{NDF}$ : 100.8/101

- sign  $-0.001 \pm 0.010$   $\chi^2/\text{NDF}$ : 37.8/51

asym\_us\_avg\_at1lr\_avg\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 56.619+/-0.012     $\chi^2/\text{NDF}$ : 3973247.3/25

Left Out: 44.733+/-0.008     $\chi^2/\text{NDF}$ : 1481436.0/23

Right Out: 56.272+/-0.012     $\chi^2/\text{NDF}$ : 4964897.2/28

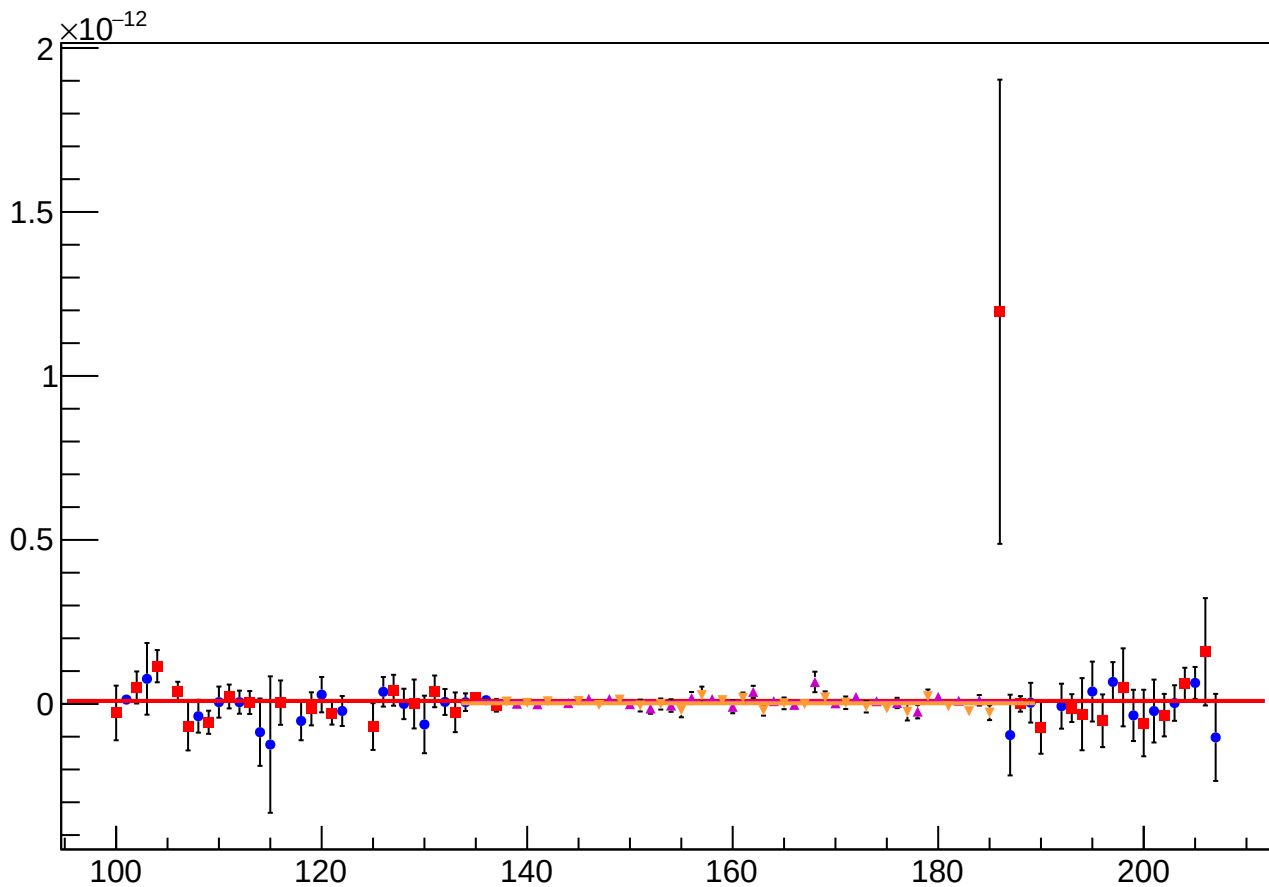
Left In: 47.033+/-0.008     $\chi^2/\text{NDF}$ : 1383121.1/22

+ sign 48.402+/-0.007     $\chi^2/\text{NDF}$ : 6113382.4/49

All: 49.215+/-0.005     $\chi^2/\text{NDF}$ : 12884239.5/101

- sign 50.067+/-0.007     $\chi^2/\text{NDF}$ : 6741261.5/51

asym\_us\_avg\_at1lr\_avg\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 9.6/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:20.6/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 24.2/28

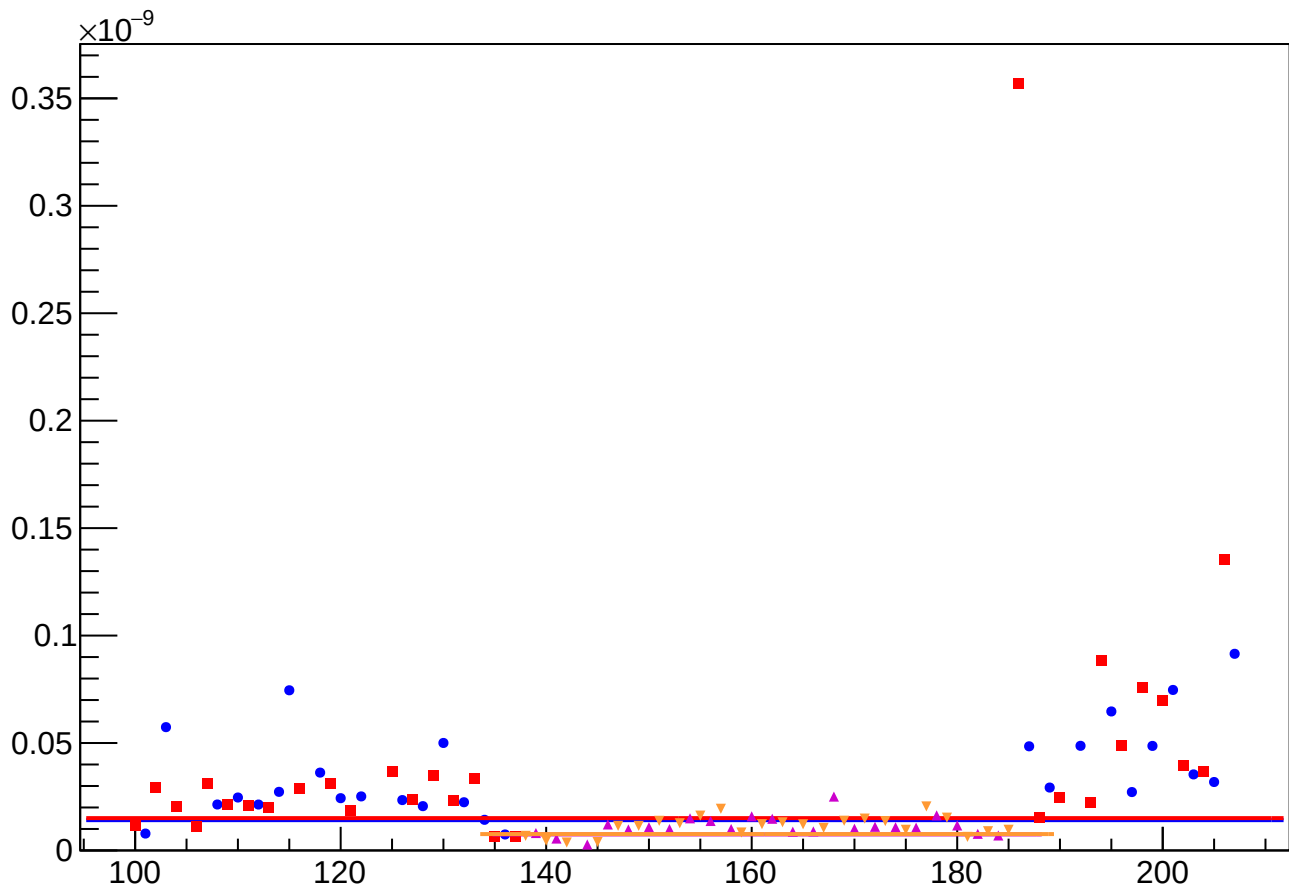
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:17.9/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 31.3/49

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 74.5/101

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 42.4/51

asym\_us\_avg\_at1lr\_avg\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7111400.5/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 5568430.3/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7801305.7/28

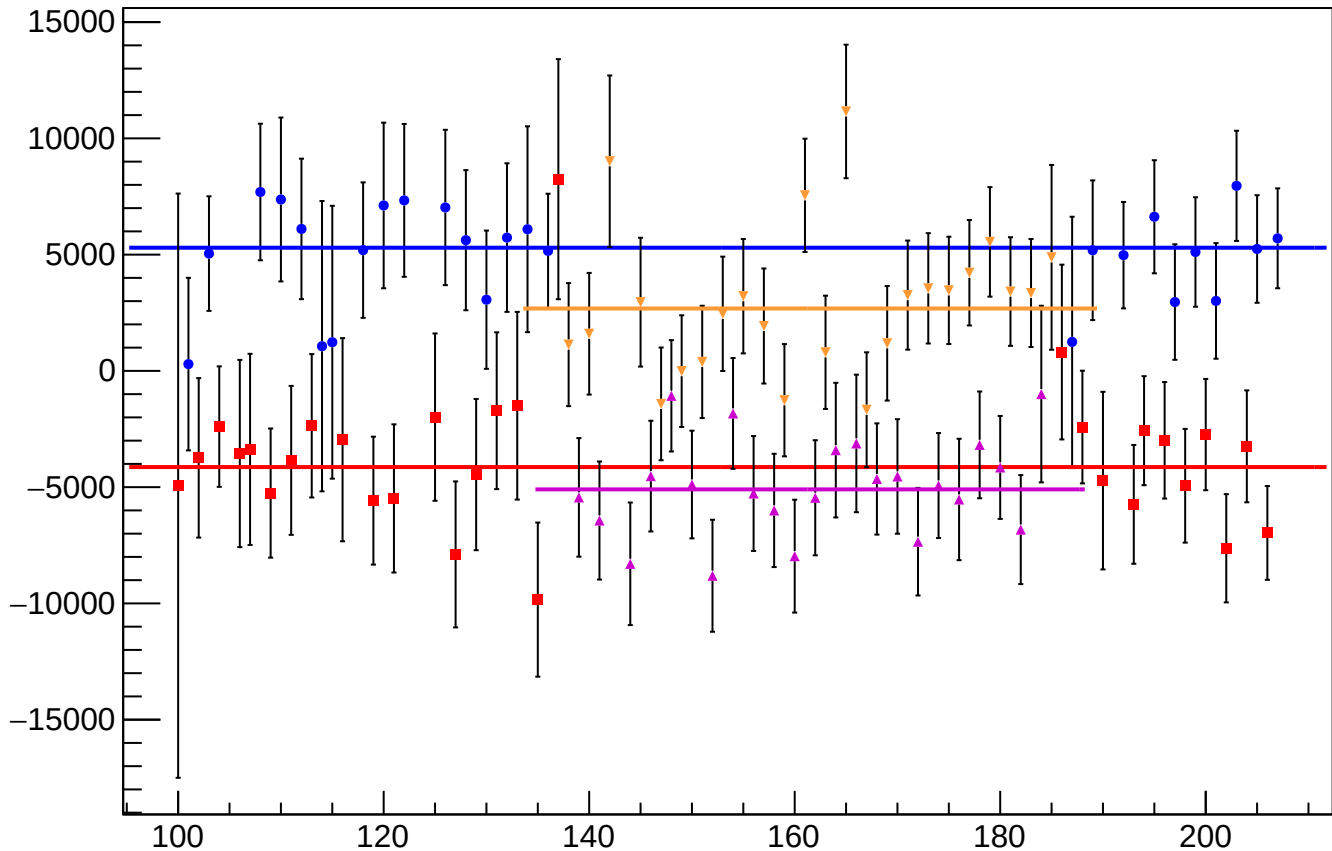
Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 5978033.2/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 14487311.5/49

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 30583843.1/101

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 16094812.7/51

reg\_asym\_us\_avg\_at2lr\_avg\_avg\_mean vs Slug



Right In: 5297.729 $\pm$ 567.405  $\chi^2$ /NDF: 9.3/25

Left Out: 2682.870 $\pm$ 512.020  $\chi^2$ /NDF:30.8/23

Right Out: -4136.412 $\pm$ 552.426  $\chi^2$ /NDF: 21.1/28

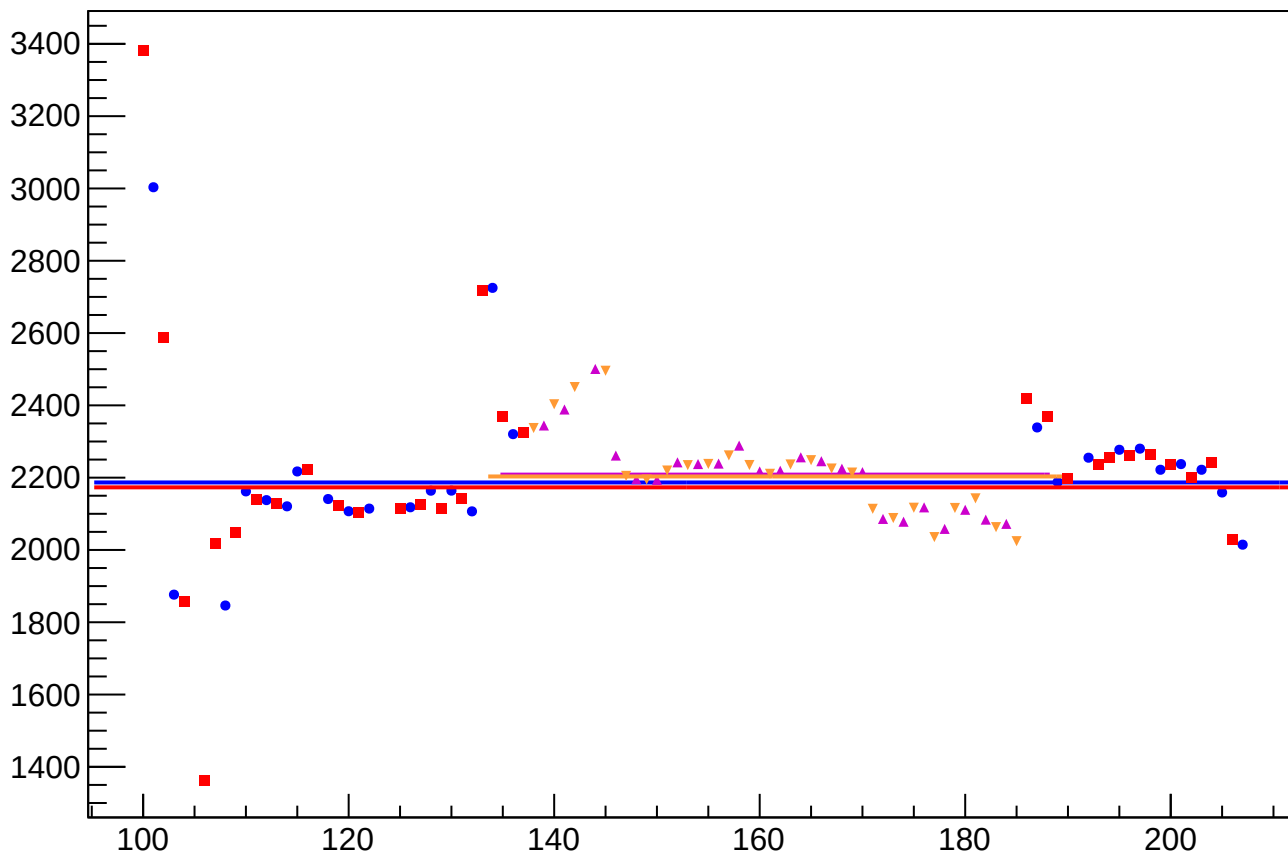
Left In: -5096.427 $\pm$ 516.232  $\chi^2$ /NDF:14.9/22

+ sign 3856.484 $\pm$ 380.130  $\chi^2$ /NDF: 51.9/49

All: -429.356 $\pm$ 267.743  $\chi^2$ /NDF: 341.8/101

- sign -4648.896 $\pm$ 377.178  $\chi^2$ /NDF: 37.7/51

# reg\_asym\_us\_avg\_at2lr\_avg\_avg\_rms vs Slug



Right In: 2186.717 $\pm$ 0.401  $\chi^2$ /NDF: 220476.6/25

Left Out: 2203.297 $\pm$ 0.362  $\chi^2$ /NDF: 88208.3/23

Right Out: 2173.167 $\pm$ 0.388  $\chi^2$ /NDF: 324214.0/28

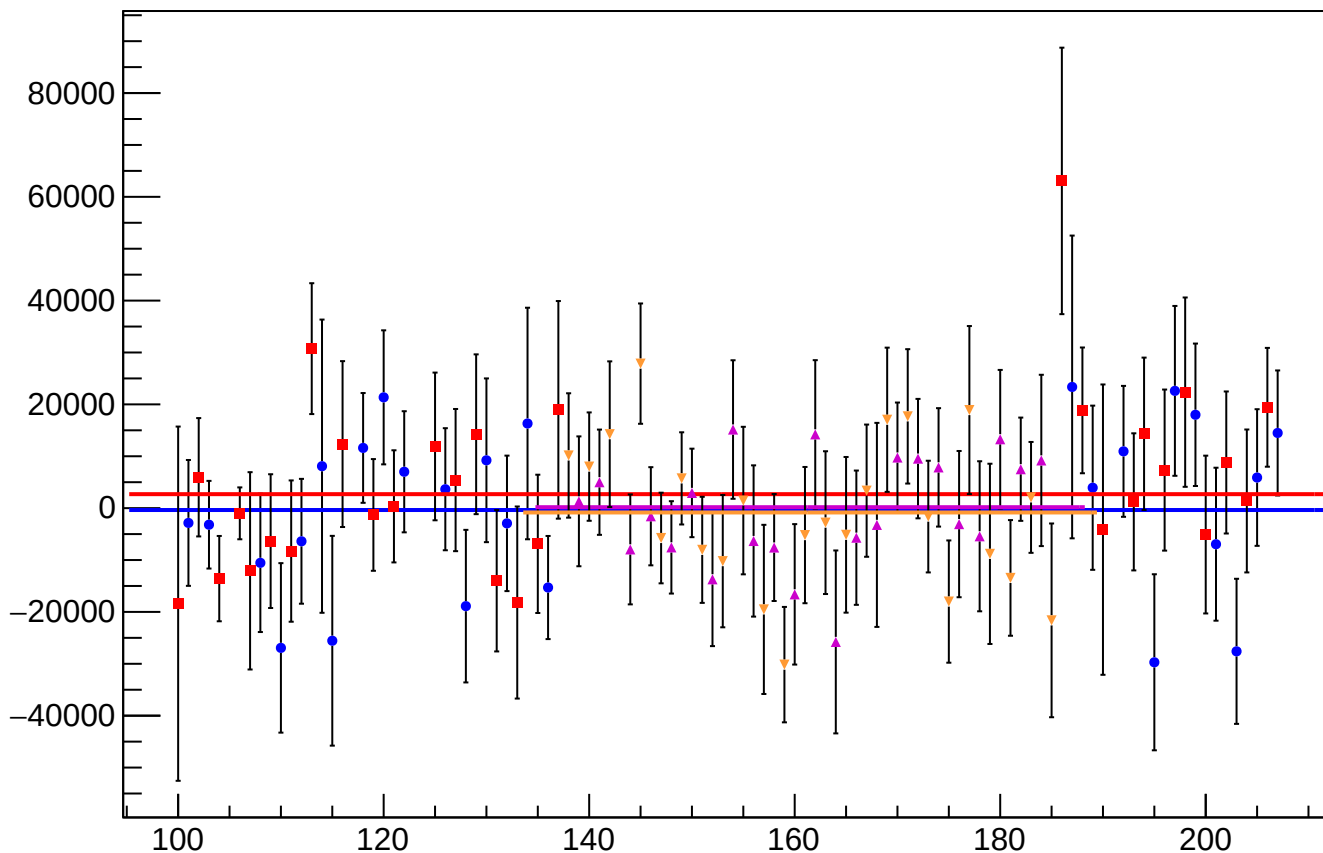
Left In: 2208.379 $\pm$ 0.365  $\chi^2$ /NDF: 80994.3/22

+ sign 2195.855 $\pm$ 0.269  $\chi^2$ /NDF: 309626.1/49

All: 2193.821 $\pm$ 0.189  $\chi^2$ /NDF: 719320.5/103

- sign 2191.832 $\pm$ 0.266  $\chi^2$ /NDF: 409581.1/51

asym\_us\_avg\_at2lr\_avg\_avg\_reg\_correction\_mean vs Slug



Right In:  $-361.859 \pm 2642.034$   $\chi^2/\text{NDF}: 28.7/25$

Left Out:  $-833.485 \pm 2481.469$   $\chi^2/\text{NDF}: 29.5/23$

Right Out:  $2694.907 \pm 2323.157$   $\chi^2/\text{NDF}: 28.9/28$

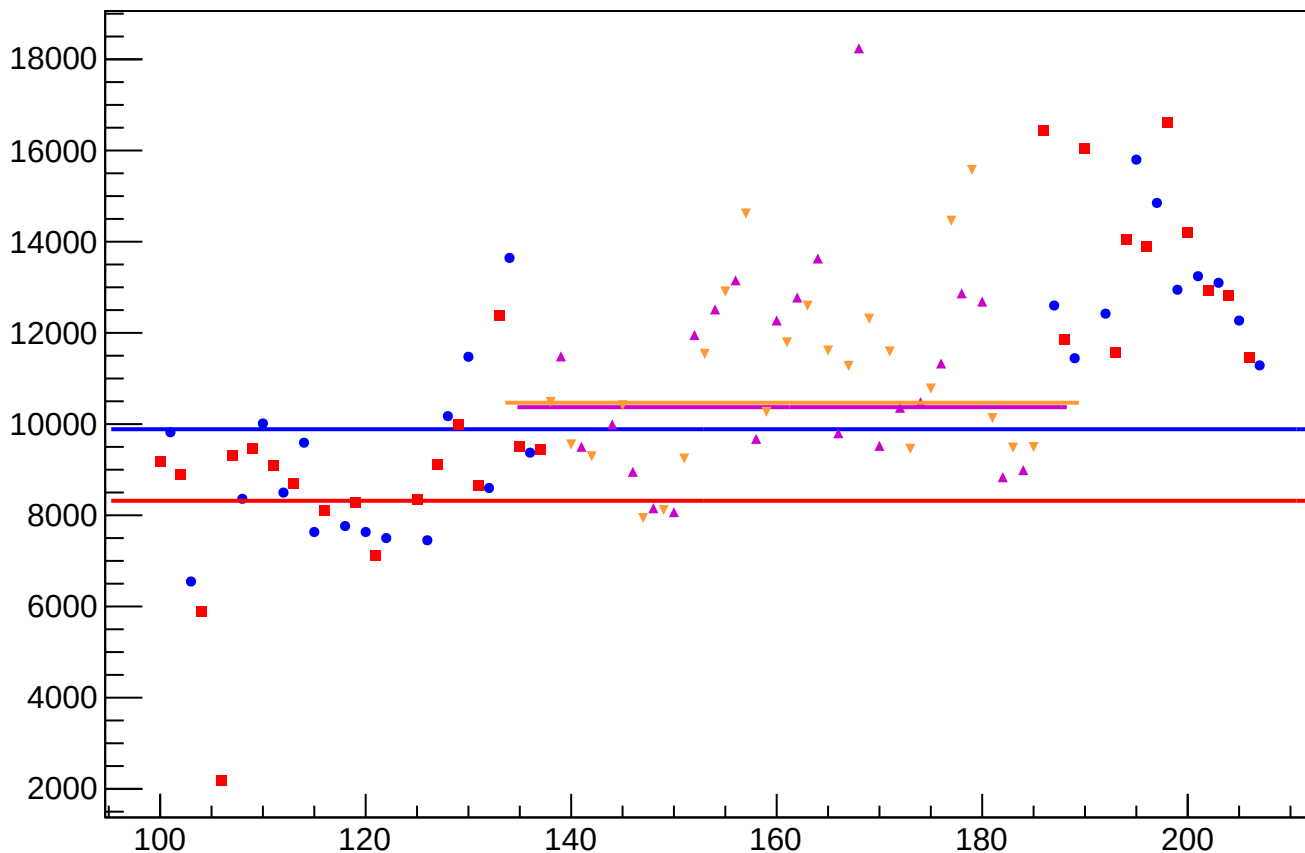
Left In:  $182.426 \pm 2471.223$   $\chi^2/\text{NDF}: 13.8/22$

+ sign  $-612.438 \pm 1808.765$   $\chi^2/\text{NDF}: 58.2/49$

All:  $522.389 \pm 1235.895$   $\chi^2/\text{NDF}: 102.2/101$

- sign  $1516.186 \pm 1692.646$   $\chi^2/\text{NDF}: 43.2/51$

asym\_us\_avg\_at2lr\_avg\_avg\_reg\_correction\_rms vs Slug

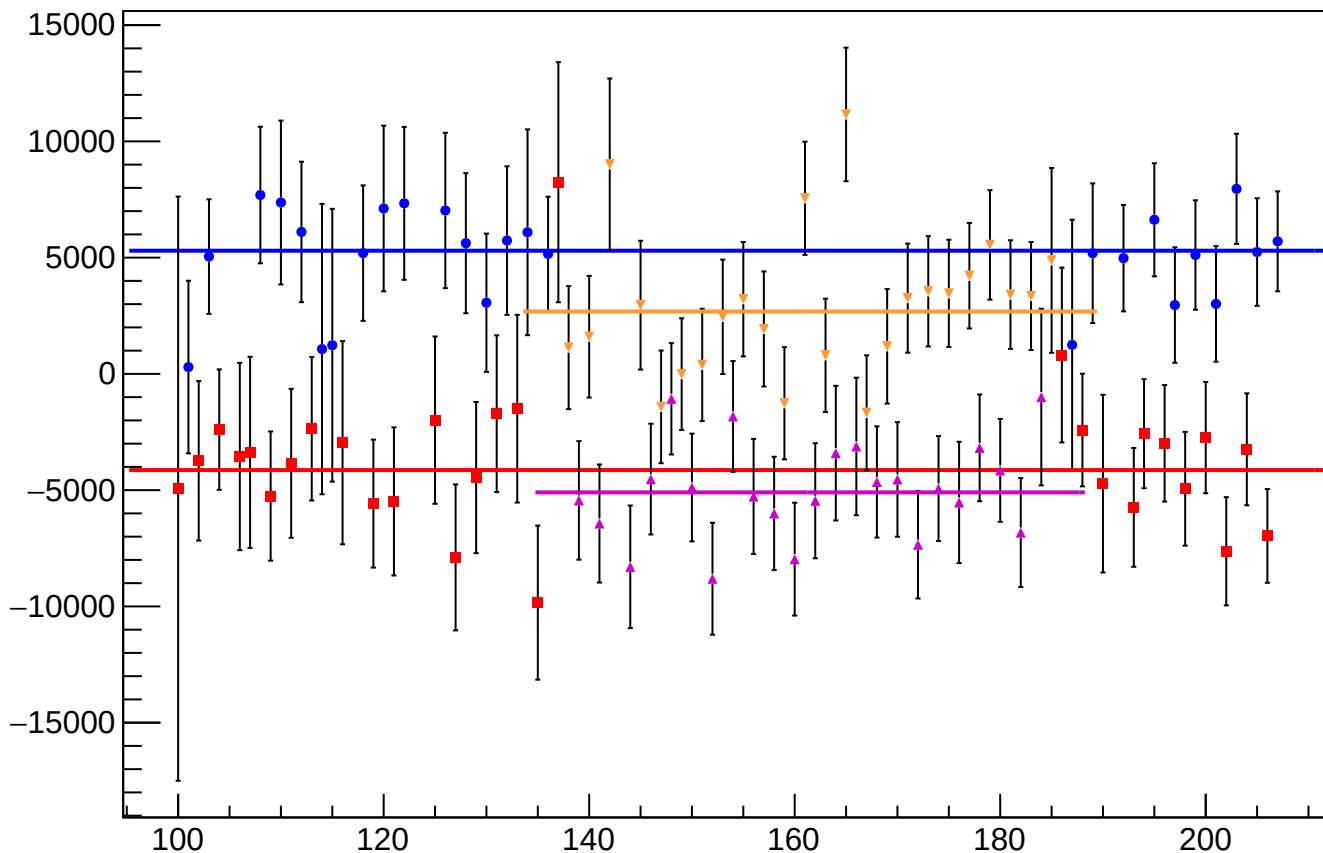


Right In: 9887.183 $\pm$ 1.868     $\chi^2/\text{NDF}$ : 1749134.7/25  
 Left Out: 10468.677 $\pm$ 1.755     $\chi^2/\text{NDF}$ : 1045257.2/23  
 Right Out: 8318.360 $\pm$ 1.643     $\chi^2/\text{NDF}$ : 5909303.0/28  
 Left In: 10370.895 $\pm$ 1.747     $\chi^2/\text{NDF}$ : 1203758.1/22

+ sign 10196.136 $\pm$ 1.279     $\chi^2/\text{NDF}$ : 2845866.1/49  
 All: 9708.412 $\pm$ 0.874     $\chi^2/\text{NDF}$ : 10964112.8/51  
 - sign 9281.299 $\pm$ 1.197     $\chi^2/\text{NDF}$ : 7845484.8/51



cor\_asym\_us\_avg\_at2lr\_avg\_avg\_mean vs Slug



Right In:  $5297.773 \pm 567.405$   $\chi^2/\text{NDF}$ : 9.3/25

Left Out:  $2682.792 \pm 512.020$   $\chi^2/\text{NDF}$ : 30.8/23

Right Out:  $-4136.282 \pm 552.426$   $\chi^2/\text{NDF}$ : 21.1/28

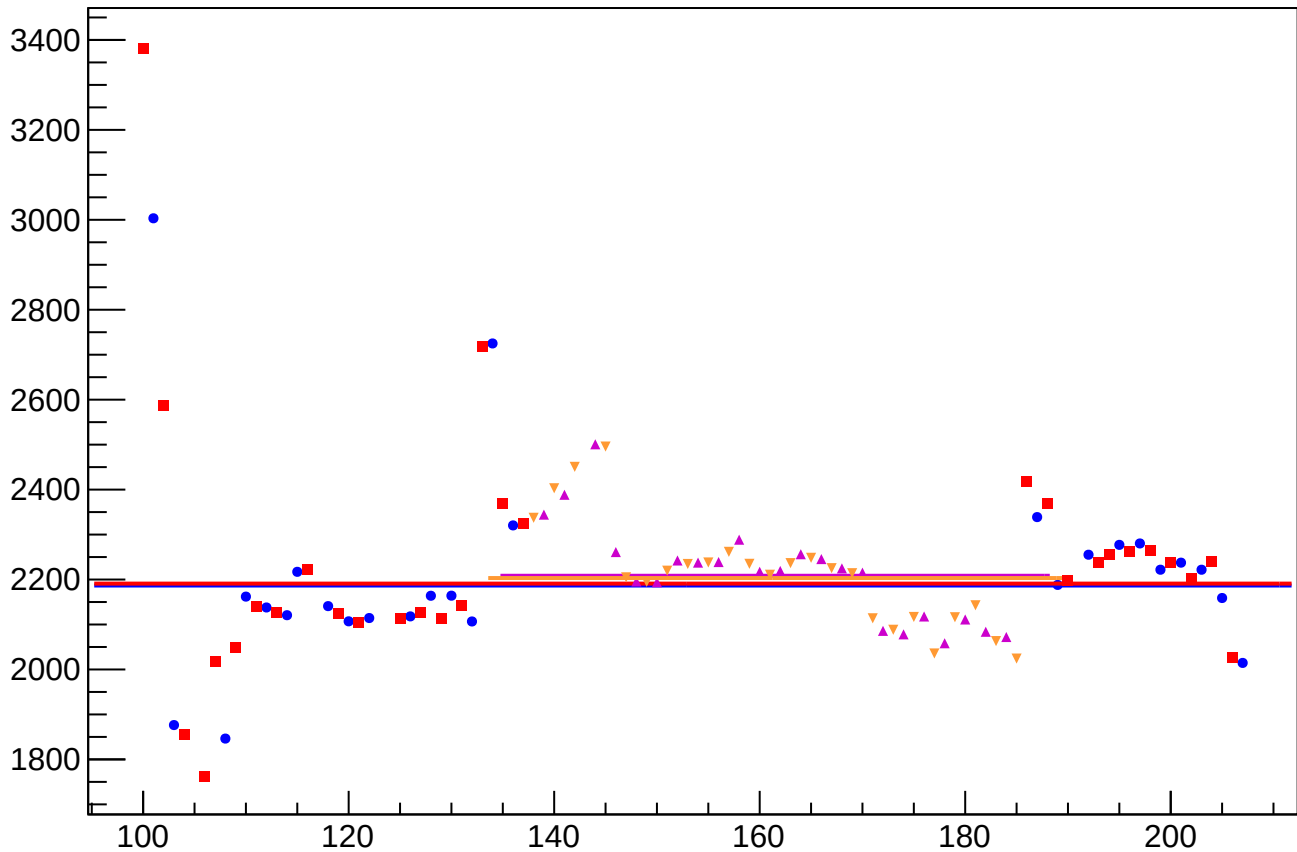
Left In:  $-5096.334 \pm 516.232$   $\chi^2/\text{NDF}$ : 14.9/22

+ sign  $3856.460 \pm 380.130$   $\chi^2/\text{NDF}$ : 51.9/49

All:  $-429.313 \pm 267.743$   $\chi^2/\text{NDF}$ : 341.8/101

- sign  $-4648.787 \pm 377.178$   $\chi^2/\text{NDF}$ : 37.7/51

cor\_asym\_us\_avg\_at2lr\_avg\_avg\_rms vs Slug



Right In: 2186.717 $\pm$ 0.401  $\chi^2$ /NDF: 220477.0/25

Left Out: 2203.297 $\pm$ 0.362  $\chi^2$ /NDF: 88208.3/23

Right Out: 2190.943 $\pm$ 0.390  $\chi^2$ /NDF: 202158.0/28

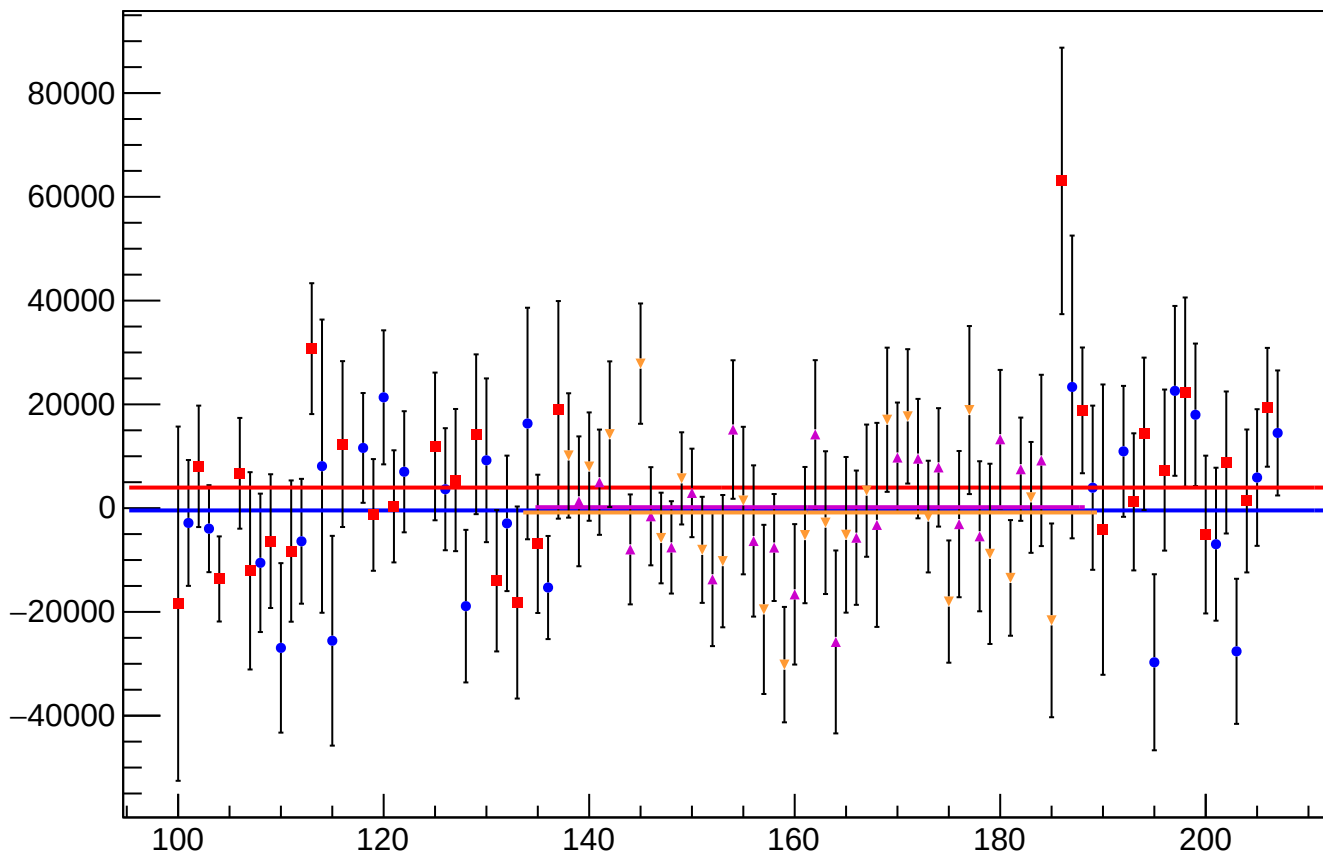
Left In: 2208.379 $\pm$ 0.365  $\chi^2$ /NDF: 80994.3/22

+ sign 2195.855 $\pm$ 0.269  $\chi^2$ /NDF: 309626.5/49

All: 2198.062 $\pm$ 0.189  $\chi^2$ /NDF: 593978.8/101

- sign 2200.231 $\pm$ 0.266  $\chi^2$ /NDF: 284218.6/51

asym\_us\_avg\_at2lr\_avg\_avg\_cor\_correction\_mean vs Slug



Right In:  $-441.838 \pm 2640.047$   $\chi^2/\text{NDF}: 28.8/25$

Left Out:  $-833.458 \pm 2481.469$   $\chi^2/\text{NDF}: 29.5/23$

Right Out:  $3964.427 \pm 2550.362$   $\chi^2/\text{NDF}: 28.5/28$

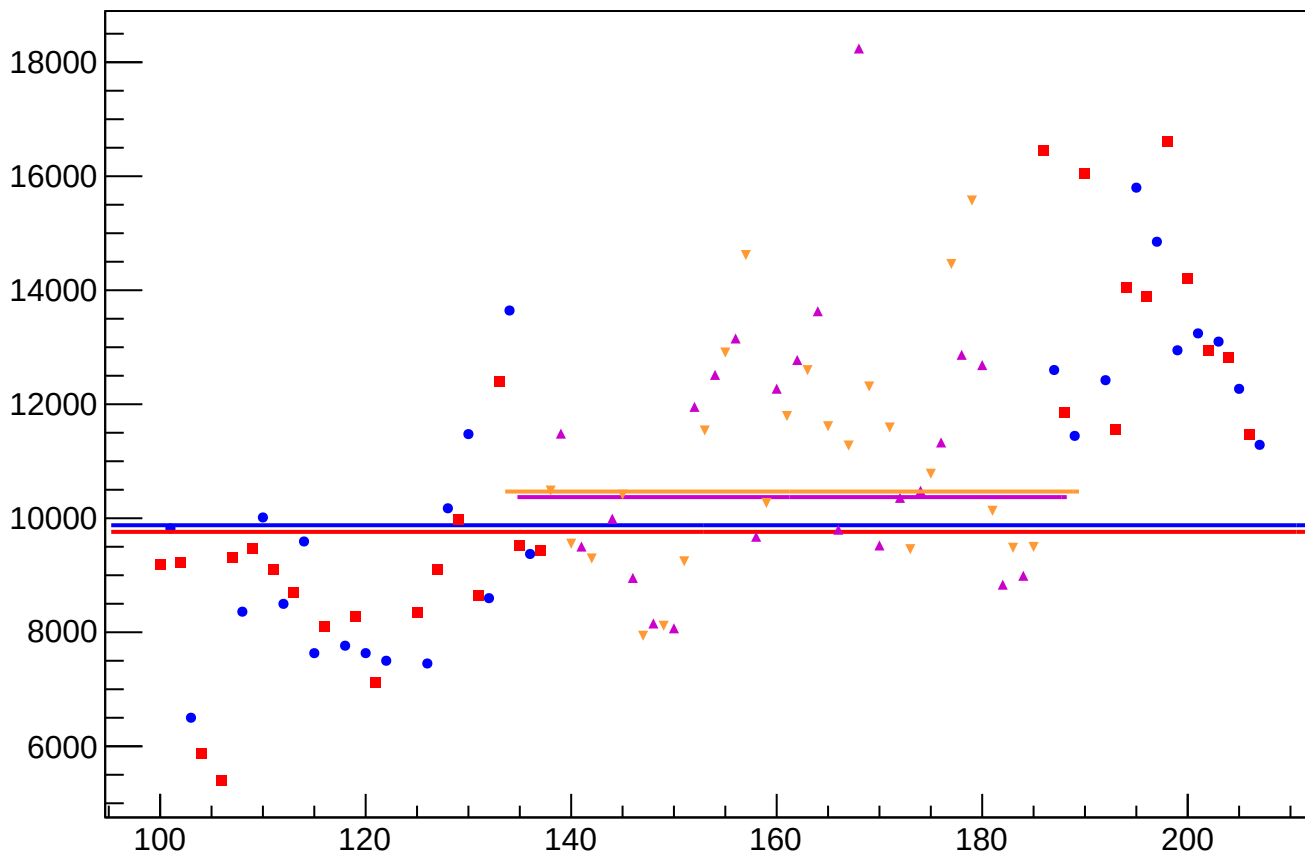
Left In:  $182.360 \pm 2471.221$   $\chi^2/\text{NDF}: 13.8/22$

+ sign  $-649.762 \pm 1808.127$   $\chi^2/\text{NDF}: 58.3/49$

All:  $706.841 \pm 1266.568$   $\chi^2/\text{NDF}: 102.7/101$

- sign  $2013.803 \pm 1774.736$   $\chi^2/\text{NDF}: 43.4/51$

asym\_us\_avg\_at2lr\_avg\_avg\_cor\_correction\_rms vs Slug



Right In: 9877.453+/-1.867  $\chi^2/\text{NDF}$ : 1762954.9/25

Left Out: 10468.676+/-1.755  $\chi^2/\text{NDF}$ : 1045258.5/23

Right Out: 9761.178+/-1.803  $\chi^2/\text{NDF}$ : 2414582.6/28

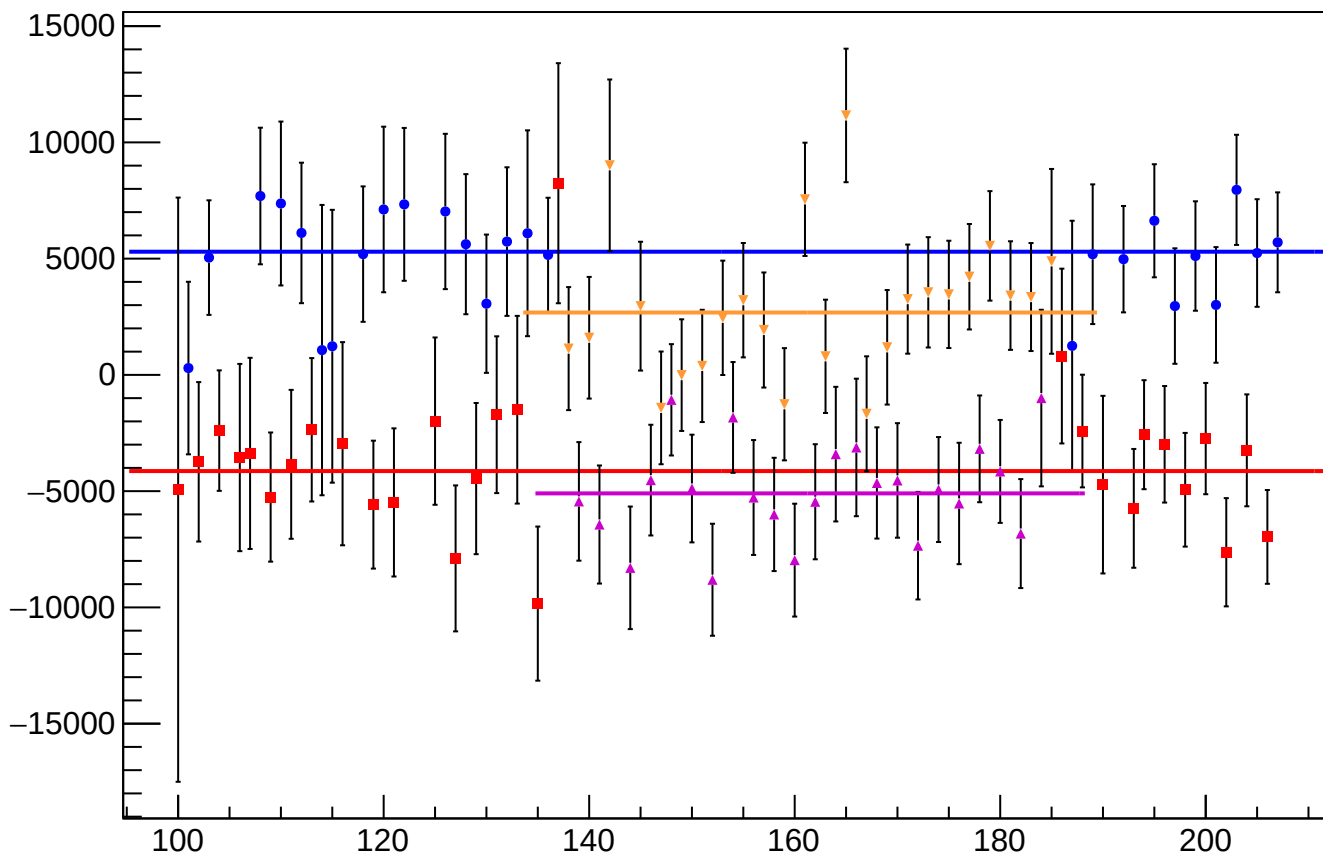
Left In: 10370.886+/-1.747  $\chi^2/\text{NDF}$ : 1203763.9/22

+ sign 10191.353+/-1.279  $\chi^2/\text{NDF}$ : 2861467.1/49

All: 10132.418+/-0.896  $\chi^2/\text{NDF}$ : 6542939.6/100

- sign 10075.639+/-1.255  $\chi^2/\text{NDF}$ : 3677300.5/51

eigen\_cor\_asym\_us\_avg\_at2lr\_avg\_avg\_mean vs Slug



Right In: 5297.773 $\pm$ 567.405  $\chi^2/\text{NDF}$ : 9.3/25

Left Out: 2682.792 $\pm$ 512.020  $\chi^2/\text{NDF}$ :30.8/23

Right Out: -4136.282 $\pm$ 552.426  $\chi^2/\text{NDF}$ : 21.1/28

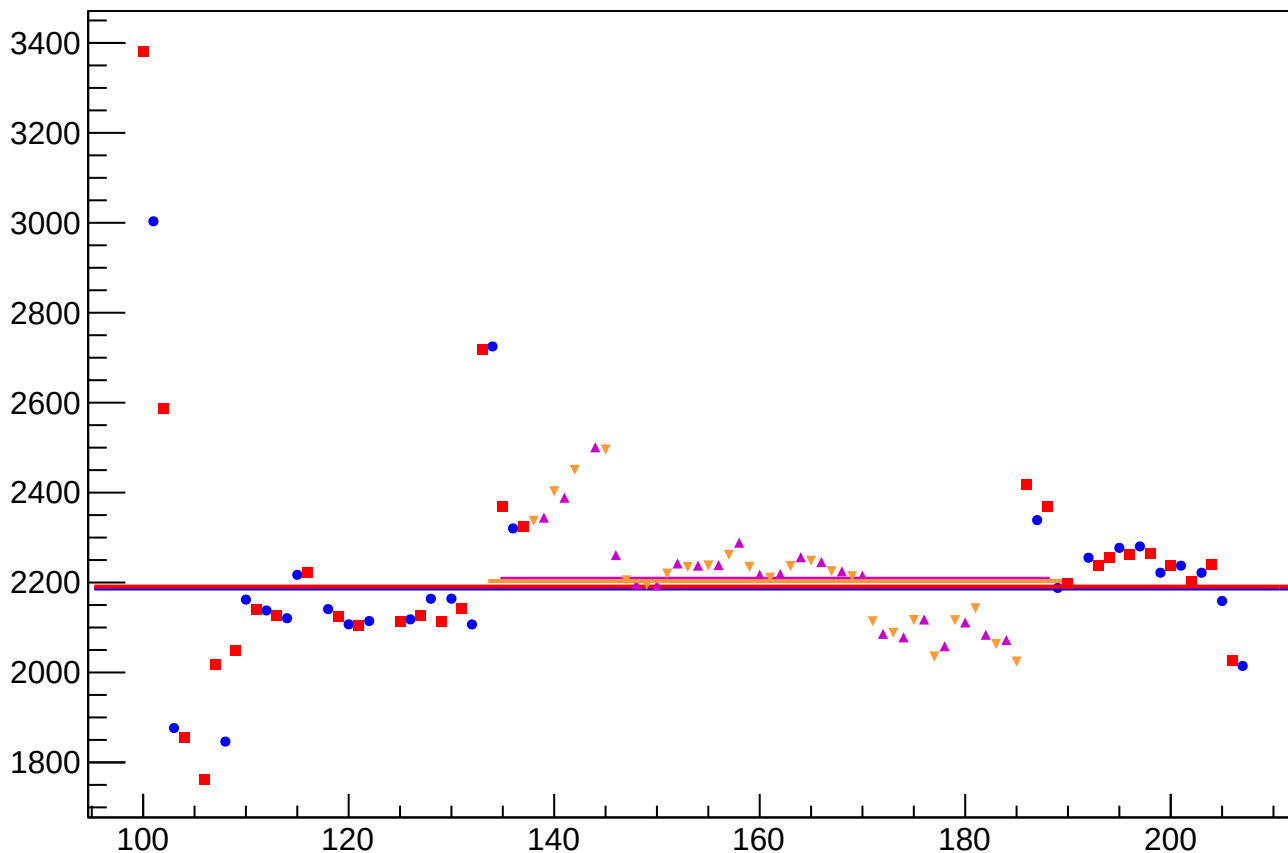
Left In: -5096.334 $\pm$ 516.232  $\chi^2/\text{NDF}$ :14.9/22

+ sign 3856.460 $\pm$ 380.130  $\chi^2/\text{NDF}$ : 51.9/49

All: -429.313 $\pm$ 267.743  $\chi^2/\text{NDF}$ : 341.8/101

- sign -4648.787 $\pm$ 377.178  $\chi^2/\text{NDF}$ : 37.7/51

eigen\_cor\_asym\_us\_avg\_at2lr\_avg\_avg\_rms vs Slug



Right In: 2186.717 $\pm$ 0.401  $\chi^2$ /NDF: 220477.0/25

Left Out: 2203.297 $\pm$ 0.362  $\chi^2$ /NDF: 88208.3/23

Right Out: 2190.943 $\pm$ 0.390  $\chi^2$ /NDF: 202158.0/28

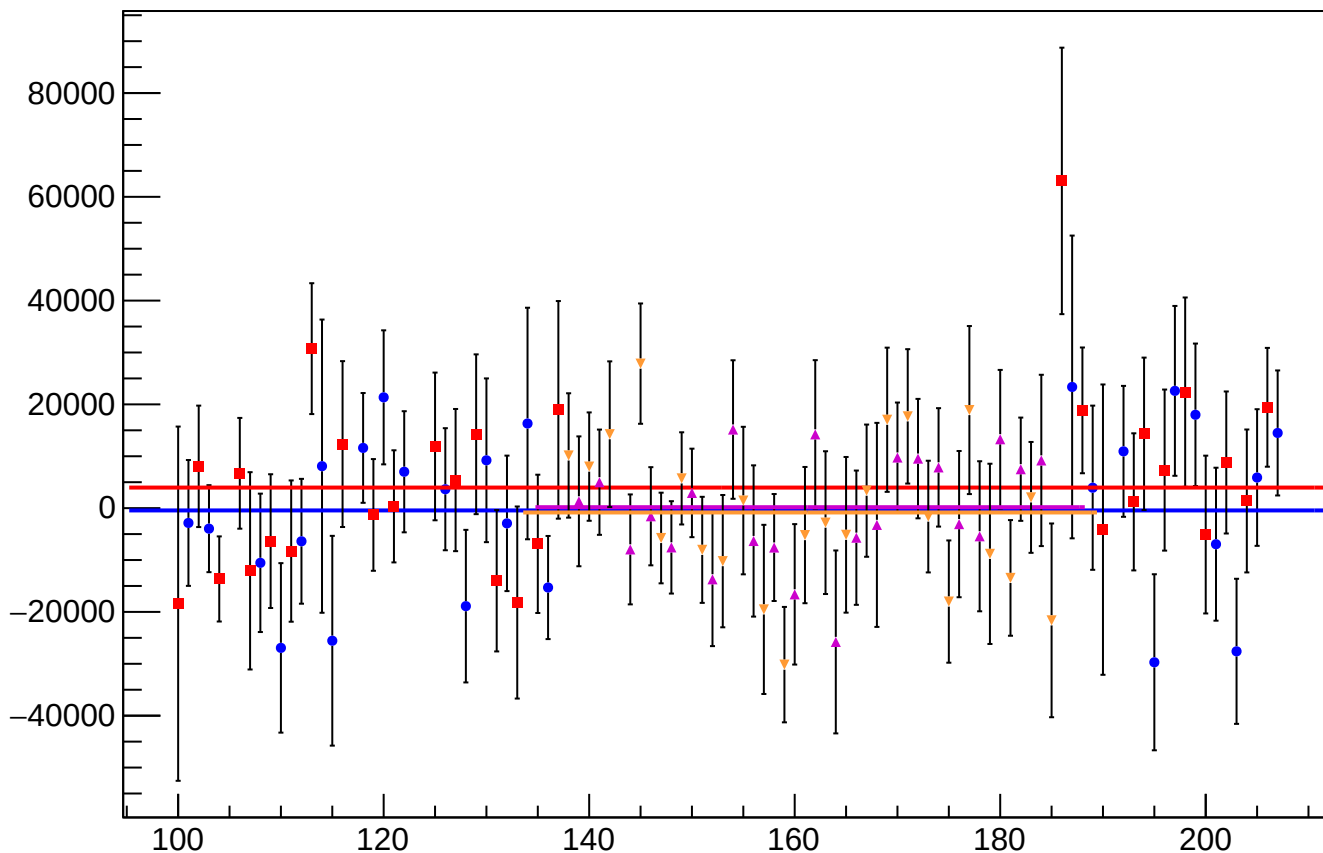
Left In: 2208.379 $\pm$ 0.365  $\chi^2$ /NDF: 80994.3/22

+ sign 2195.855 $\pm$ 0.269  $\chi^2$ /NDF: 309626.5/49

All: 2198.062 $\pm$ 0.189  $\chi^2$ /NDF: 593978.8/101

- sign 2200.231 $\pm$ 0.266  $\chi^2$ /NDF: 284218.6/51

asym\_us\_avg\_at2lr\_avg\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-441.838 \pm 2640.047$   $\chi^2/\text{NDF}$ : 28.8/25

Left Out:  $-833.458 \pm 2481.469$   $\chi^2/\text{NDF}$ : 29.5/23

Right Out:  $3964.427 \pm 2550.362$   $\chi^2/\text{NDF}$ : 28.5/28

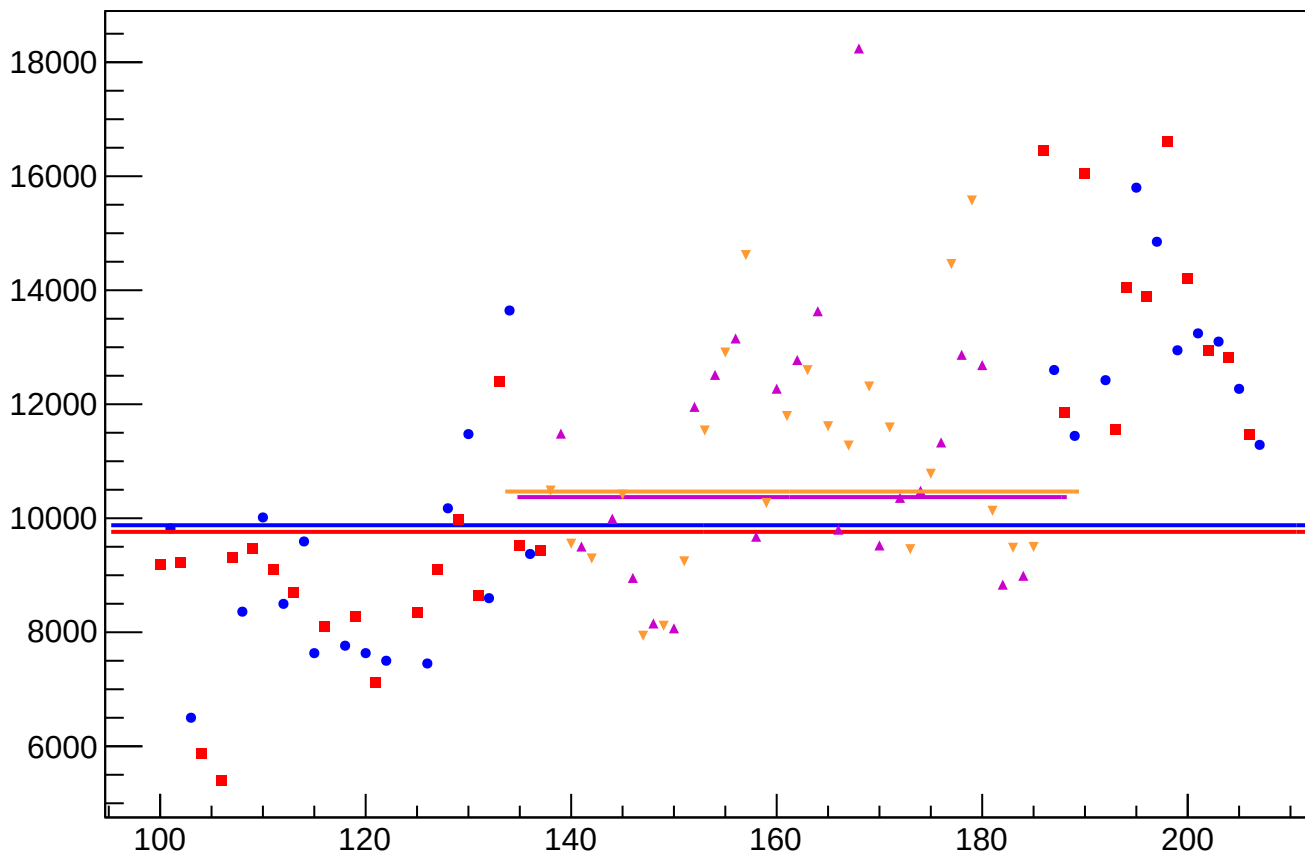
Left In:  $182.360 \pm 2471.221$   $\chi^2/\text{NDF}$ : 13.8/22

+ sign  $-649.762 \pm 1808.127$   $\chi^2/\text{NDF}$ : 58.3/49

All:  $706.841 \pm 1266.568$   $\chi^2/\text{NDF}$ : 102.7/101

- sign  $2013.803 \pm 1774.736$   $\chi^2/\text{NDF}$ : 43.4/51

asym\_us\_avg\_at2lr\_avg\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 9877.453+/-1.867  $\chi^2/\text{NDF}$ : 1762954.9/25

Left Out: 10468.676+/-1.755  $\chi^2/\text{NDF}$ : 1045258.5/23

Right Out: 9761.178+/-1.803  $\chi^2/\text{NDF}$ : 2414582.6/28

Left In: 10370.886+/-1.747  $\chi^2/\text{NDF}$ : 1203763.9/22

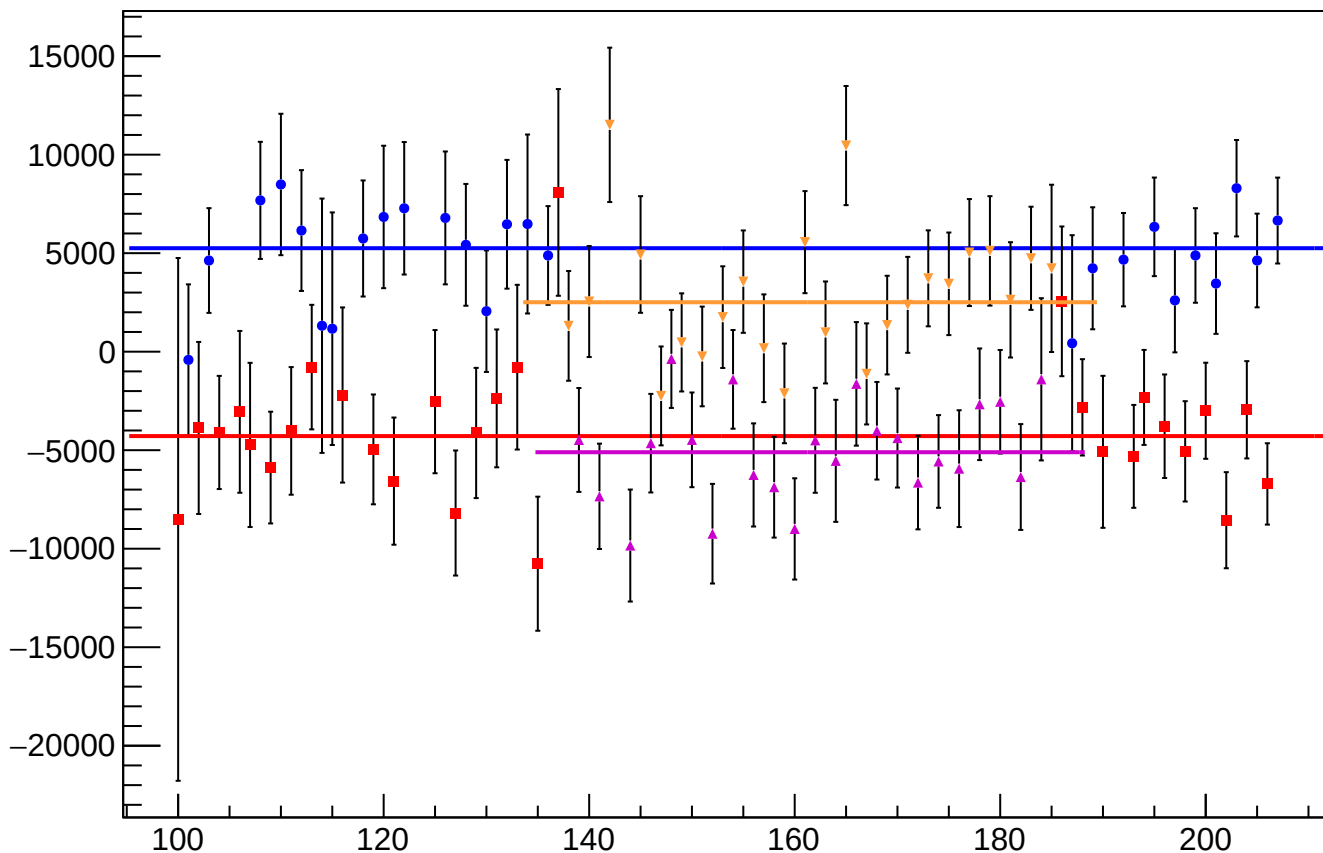
+ sign 10191.353+/-1.279  $\chi^2/\text{NDF}$ : 2861467.1/49

All: 10132.418+/-0.896  $\chi^2/\text{NDF}$ : 6542939.6/1

- sign 10075.639+/-1.255  $\chi^2/\text{NDF}$ : 3677300.5/51



dit\_asym\_us\_avg\_at2lr\_avg\_avg\_mean vs Slug



Right In: 5252.496 $\pm$ 583.327  $\chi^2$ /NDF: 11.4/25

Left Out: 2508.976 $\pm$ 551.601  $\chi^2$ /NDF:29.8/23

Right Out: -4284.142 $\pm$ 570.154  $\chi^2$ /NDF: 24.1/28

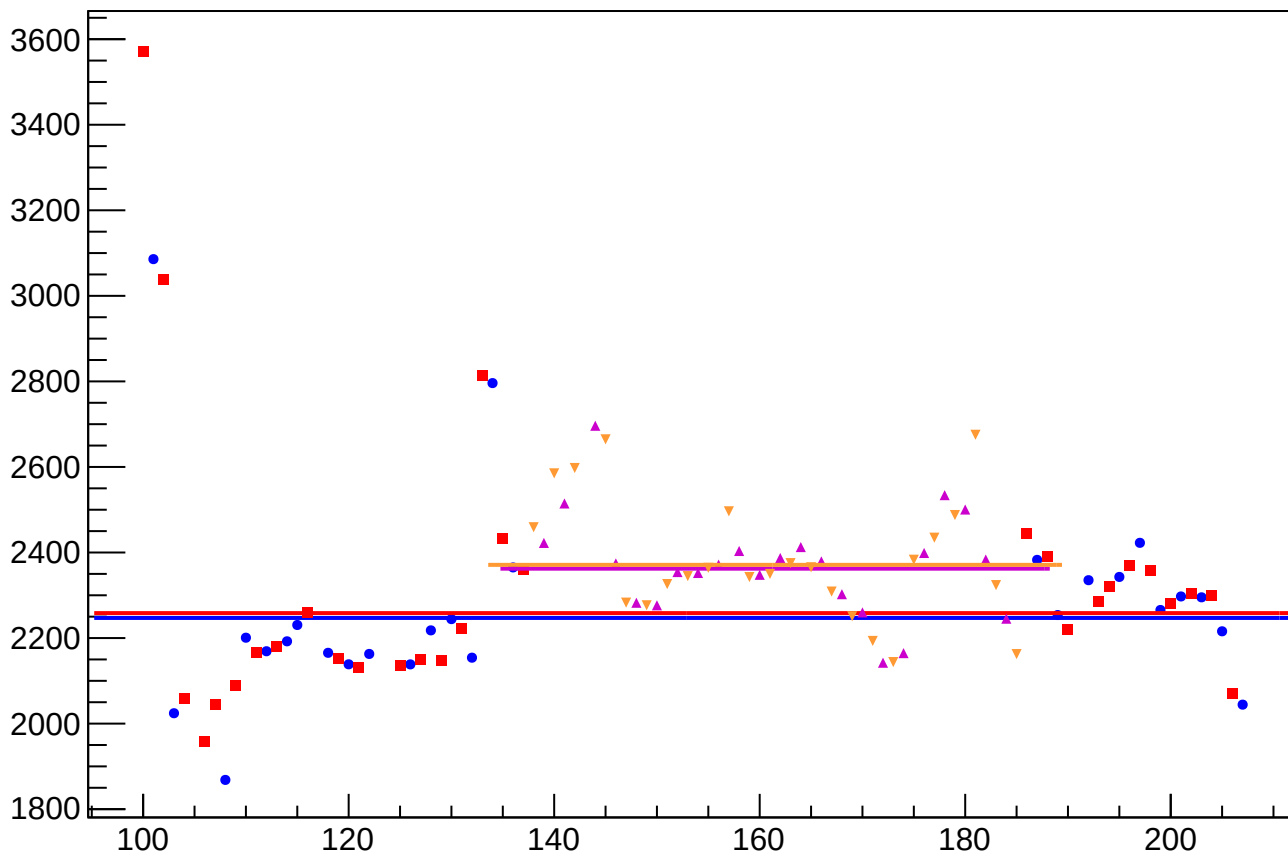
Left In: -5102.993 $\pm$ 552.583  $\chi^2$ /NDF:19.9/22

+ sign 3804.101 $\pm$ 400.788  $\chi^2$ /NDF: 52.9/49

All: -493.670 $\pm$ 281.980  $\chi^2$ /NDF: 325.7/101

- sign -4706.380 $\pm$ 396.802  $\chi^2$ /NDF: 45.0/51

dit\_asym\_us\_avg\_at2lr\_avg\_avg\_rms vs Slug



Right In: 2247.033+/-0.412  $\chi^2/\text{NDF}$ : 221219.6/25

Left Out: 2371.137+/-0.390  $\chi^2/\text{NDF}$ : 116296.5/23

Right Out: 2258.317+/-0.403  $\chi^2/\text{NDF}$ : 210913.0/28

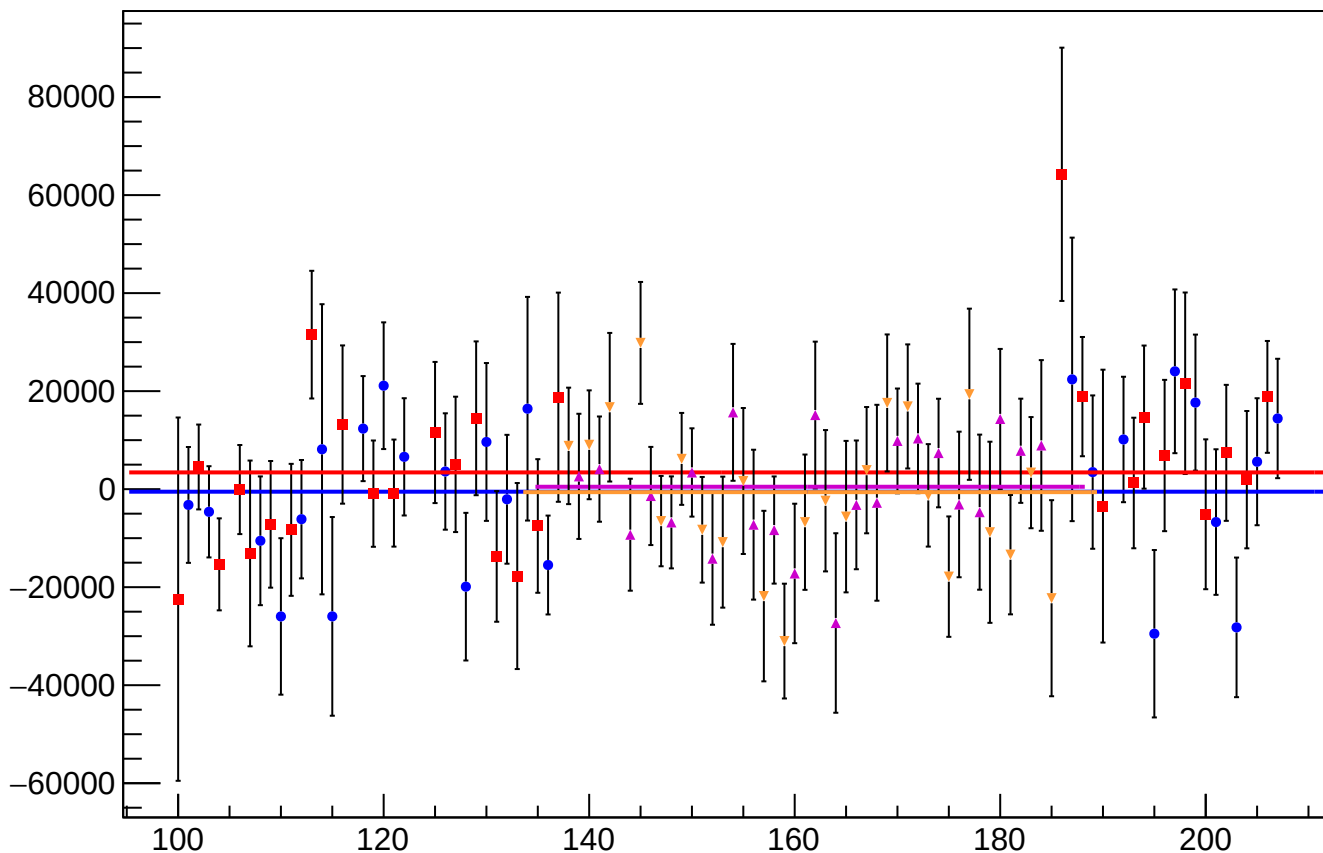
Left In: 2362.218+/-0.391  $\chi^2/\text{NDF}$ : 91896.7/22

+ sign 2312.551+/-0.283  $\chi^2/\text{NDF}$ : 385307.9/49

All: 2312.211+/-0.199  $\chi^2/\text{NDF}$ : 722378.8/101

- sign 2311.878+/-0.281  $\chi^2/\text{NDF}$ : 337068.1/51

asym\_us\_avg\_at2lr\_avg\_avg\_dit\_correction\_mean vs Slug



Right In: -518.308+/-2680.577  $\chi^2/\text{NDF}$ : 28.6/25

Left Out: -608.283+/-2589.919  $\chi^2/\text{NDF}$ : 28.9/23

Right Out: 3416.229+/-2517.644  $\chi^2/\text{NDF}$ : 28.1/28

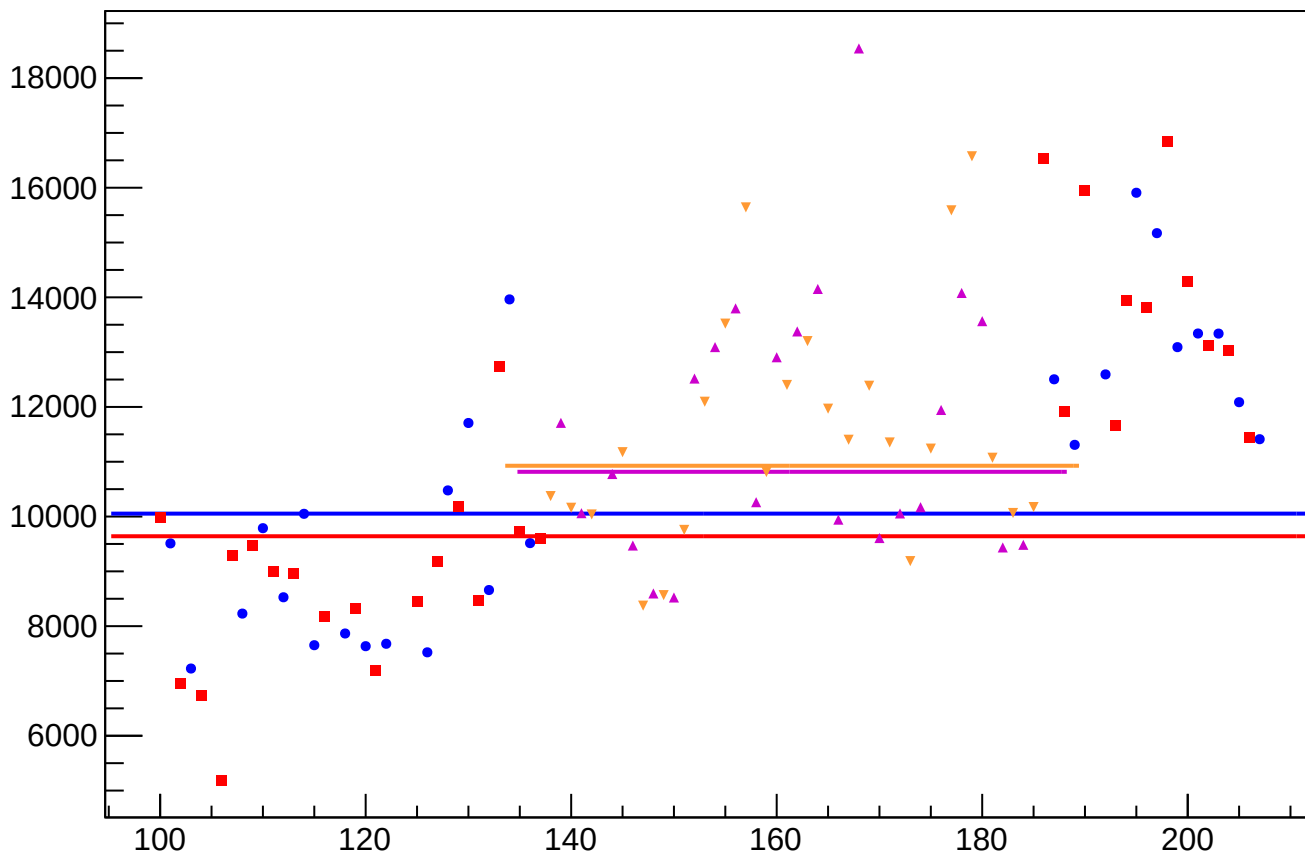
Left In: 490.044+/-2577.213  $\chi^2/\text{NDF}$ : 13.5/22

+ sign -564.843+/-1862.575  $\chi^2/\text{NDF}$ : 57.5/49

All: 754.181+/-1294.696  $\chi^2/\text{NDF}$ : 100.8/101

- sign 1987.345+/-1800.935  $\chi^2/\text{NDF}$ : 42.3/51

asym\_us\_avg\_at2lr\_avg\_avg\_dit\_correction\_rms vs Slug



Right In: 10053.443 $\pm$ 1.895  $\chi^2$ /NDF: 1623390.1/25

Left Out: 10926.860 $\pm$ 1.831  $\chi^2$ /NDF:1057331.1/23

Right Out: 9640.638 $\pm$ 1.780  $\chi^2$ /NDF: 2569760.5/28

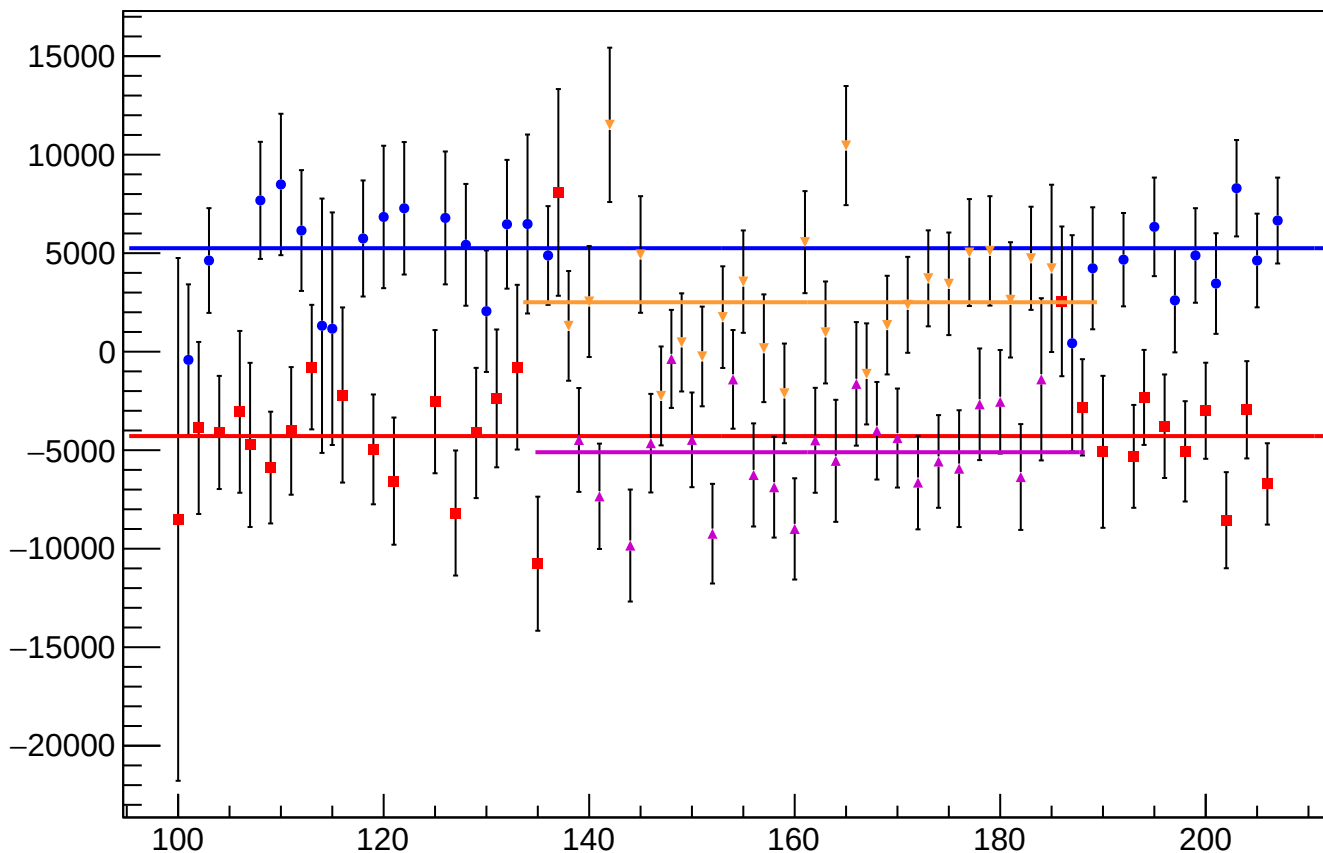
Left In: 10816.320 $\pm$ 1.822  $\chi^2$ /NDF:1196820.9/22

+ sign 10505.171 $\pm$ 1.317  $\chi^2$ /NDF: 2790538.8/49

All: 10355.067 $\pm$ 0.915  $\chi^2$ /NDF: 6795222.0/1

- sign 10214.735 $\pm$ 1.273  $\chi^2$ /NDF: 3979550.3/51

eigen\_dit\_asym\_us\_avg\_at2lr\_avg\_avg\_mean vs Slug



Right In: 5252.491 $\pm$ 583.327  $\chi^2$ /NDF: 11.4/25

Left Out: 2508.963 $\pm$ 551.602  $\chi^2$ /NDF:29.8/23

Right Out: -4284.136 $\pm$ 570.154  $\chi^2$ /NDF: 24.1/28

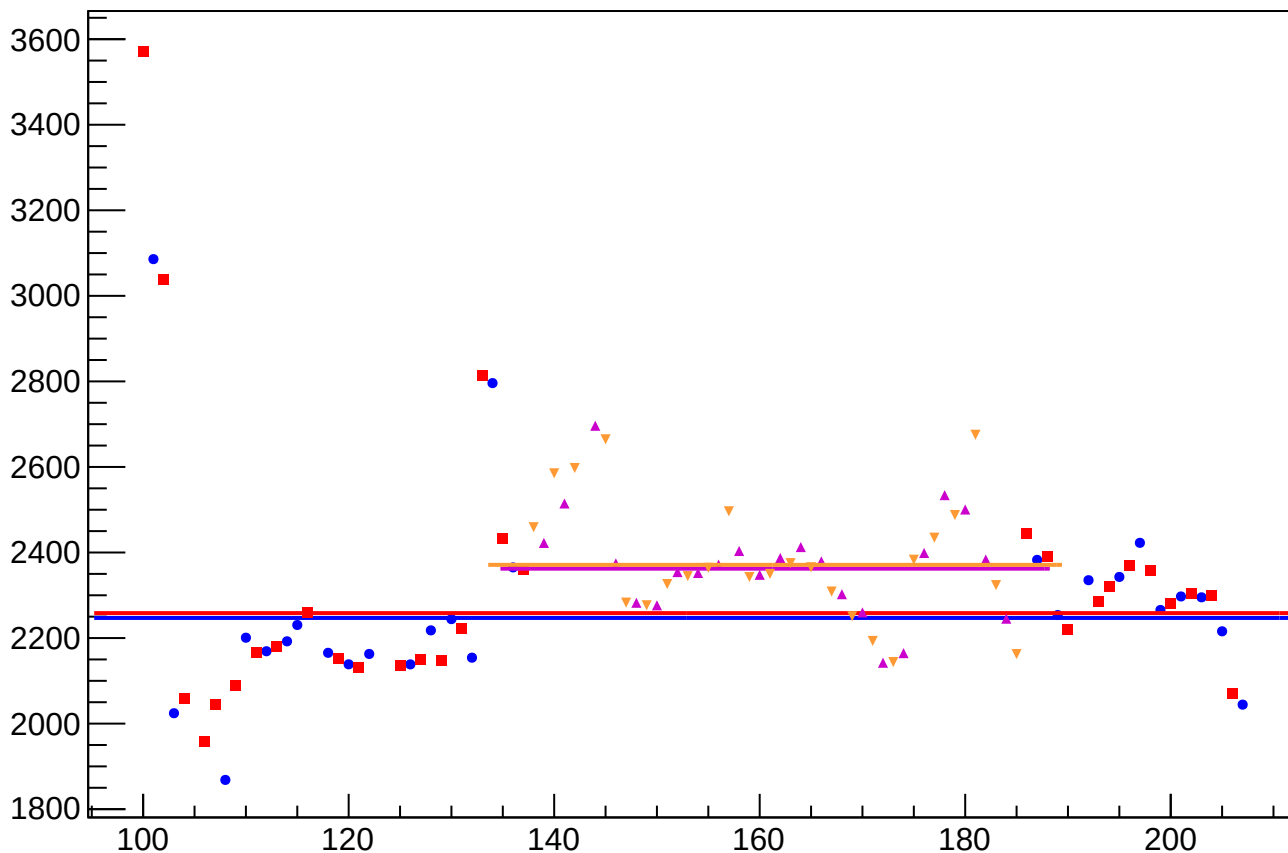
Left In: -5102.996 $\pm$ 552.584  $\chi^2$ /NDF:19.9/22

+ sign 3804.095 $\pm$ 400.788  $\chi^2$ /NDF: 52.9/49

All: -493.672 $\pm$ 281.980  $\chi^2$ /NDF: 325.7/101

- sign -4706.378 $\pm$ 396.802  $\chi^2$ /NDF: 45.0/51

eigen\_dit\_asym\_us\_avg\_at2lr\_avg\_avg\_rms vs Slug



Right In: 2247.033+/-0.412  $\chi^2$ /NDF: 221219.8/25

Left Out: 2371.140+/-0.390  $\chi^2$ /NDF: 116300.8/23

Right Out: 2258.317+/-0.403  $\chi^2$ /NDF: 210913.6/28

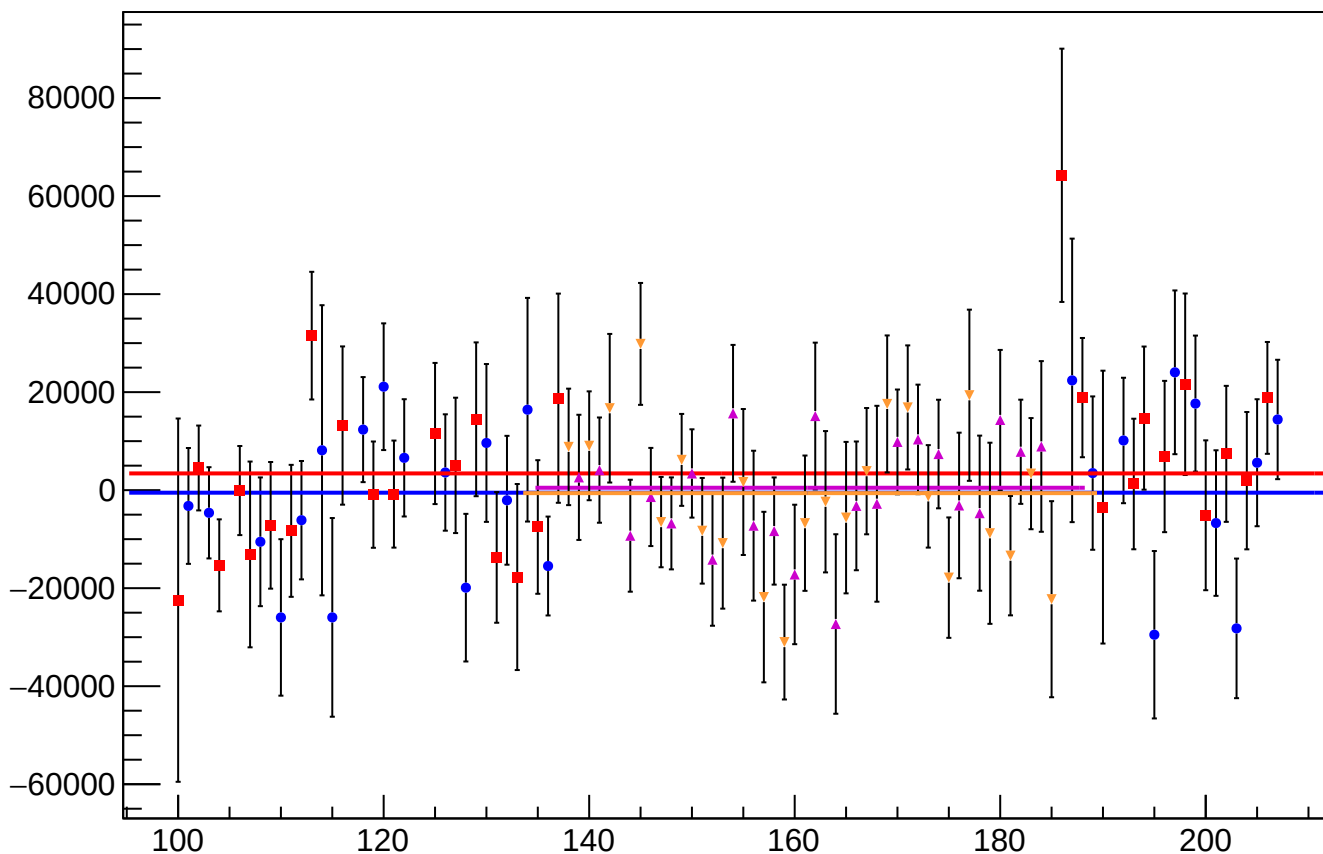
Left In: 2362.221+/-0.391  $\chi^2$ /NDF: 91901.3/22

+ sign 2312.553+/-0.283  $\chi^2$ /NDF: 385315.1/49

All: 2312.213+/-0.199  $\chi^2$ /NDF: 722393.2/101

- sign 2311.880+/-0.281  $\chi^2$ /NDF: 337075.3/51

asym\_us\_avg\_at2lr\_avg\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In: -518.300+/-2680.574  $\chi^2/\text{NDF}$ : 28.6/25

Left Out: -608.291+/-2589.924  $\chi^2/\text{NDF}$ : 28.9/23

Right Out: 3416.213+/-2517.641  $\chi^2/\text{NDF}$ : 28.1/28

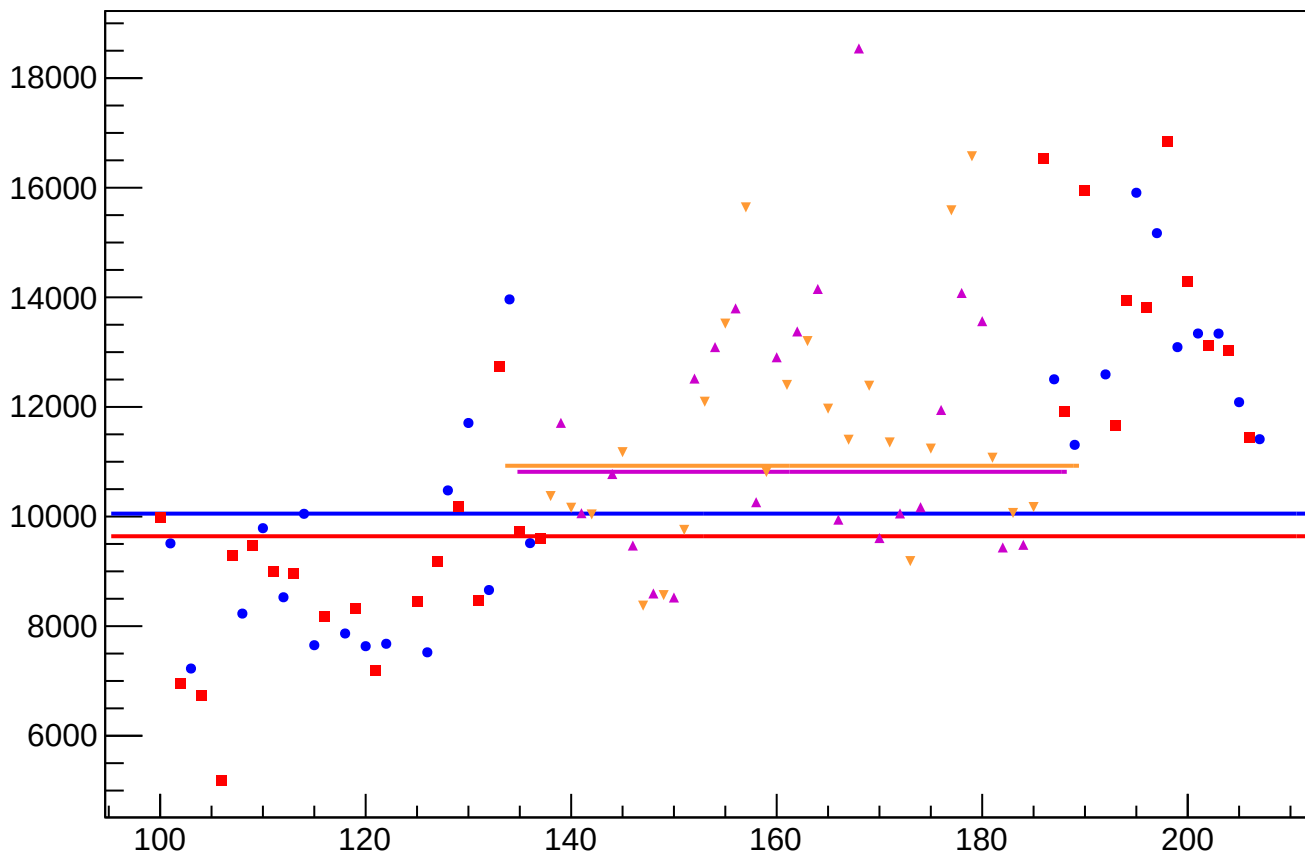
Left In: 490.047+/-2577.218  $\chi^2/\text{NDF}$ : 13.5/22

+ sign -564.843+/-1862.576  $\chi^2/\text{NDF}$ : 57.5/49

All: 754.180+/-1294.697  $\chi^2/\text{NDF}$ : 100.8/101

- sign 1987.342+/-1800.935  $\chi^2/\text{NDF}$ : 42.3/51

asym\_us\_avg\_at2lr\_avg\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 10053.429+/-1.895  $\chi^2/\text{NDF}$ : 1623414.8/25

Left Out: 10926.878+/-1.831  $\chi^2/\text{NDF}$ : 1057333.6/23

Right Out: 9640.624+/-1.780  $\chi^2/\text{NDF}$ : 2569781.7/28

Left In: 10816.337+/-1.822  $\chi^2/\text{NDF}$ : 1196824.5/22

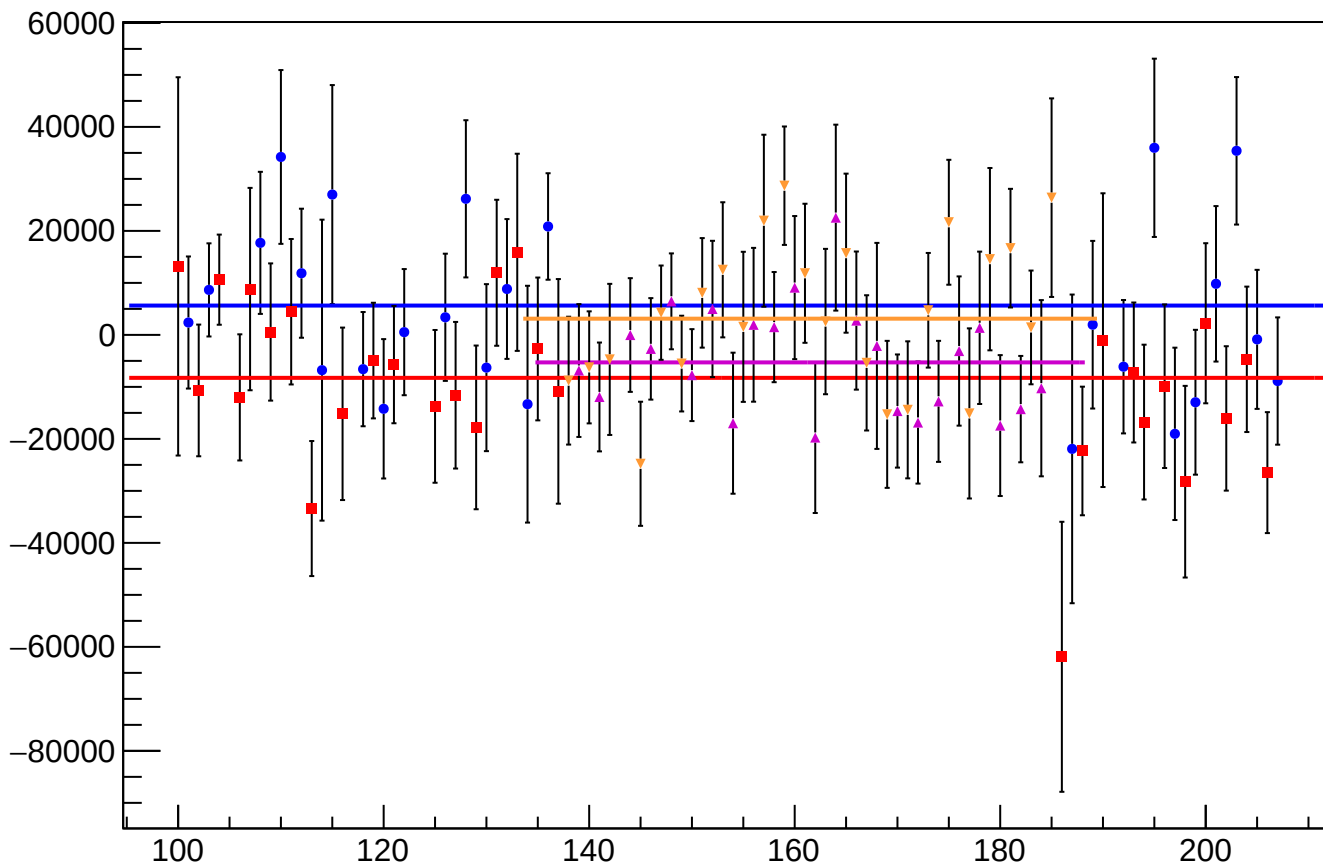
+ sign 10505.172+/-1.317  $\chi^2/\text{NDF}$ : 2790574.0/49

All: 10355.068+/-0.915  $\chi^2/\text{NDF}$ : 6795293.4/1

- sign 10214.734+/-1.273  $\chi^2/\text{NDF}$ : 3979586.2/51



asym\_us\_avg\_at2lr\_avg\_avg\_mean vs Slug



Right In: 5639.670 $\pm$ 2720.609  $\chi^2$ /NDF: 29.4/25

Left Out: 3119.161 $\pm$ 2542.855  $\chi^2$ /NDF: 27.4/23

Right Out: -8261.675 $\pm$ 2641.529  $\chi^2$ /NDF: 26.2/28

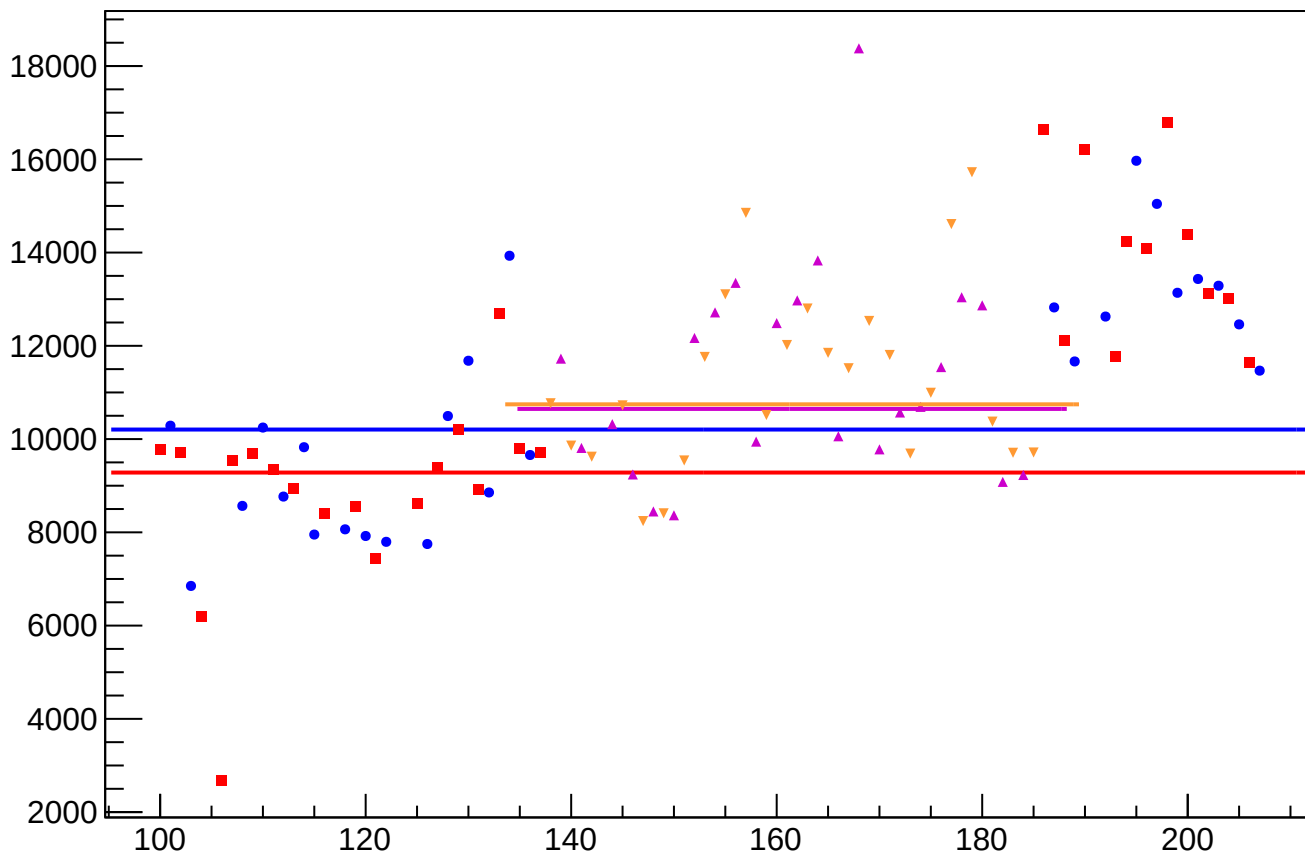
Left In: -5290.718 $\pm$ 2532.995  $\chi^2$ /NDF: 13.3/22

+ sign 4294.392 $\pm$ 1857.734  $\chi^2$ /NDF: 57.3/49

All: -1297.767 $\pm$ 1303.072  $\chi^2$ /NDF: 115.3/10

- sign -6713.909 $\pm$ 1828.264  $\chi^2$ /NDF: 40.2/51

asym\_us\_avg\_at2lr\_avg\_avg\_rms vs Slug



Right In: 10204.477+/-1.924  $\chi^2/\text{NDF}$ : 1604329.9/25

Left Out: 10745.331+/-1.798  $\chi^2/\text{NDF}$ : 964618.1/23

Right Out: 9282.148+/-1.776  $\chi^2/\text{NDF}$ : 4126673.2/28

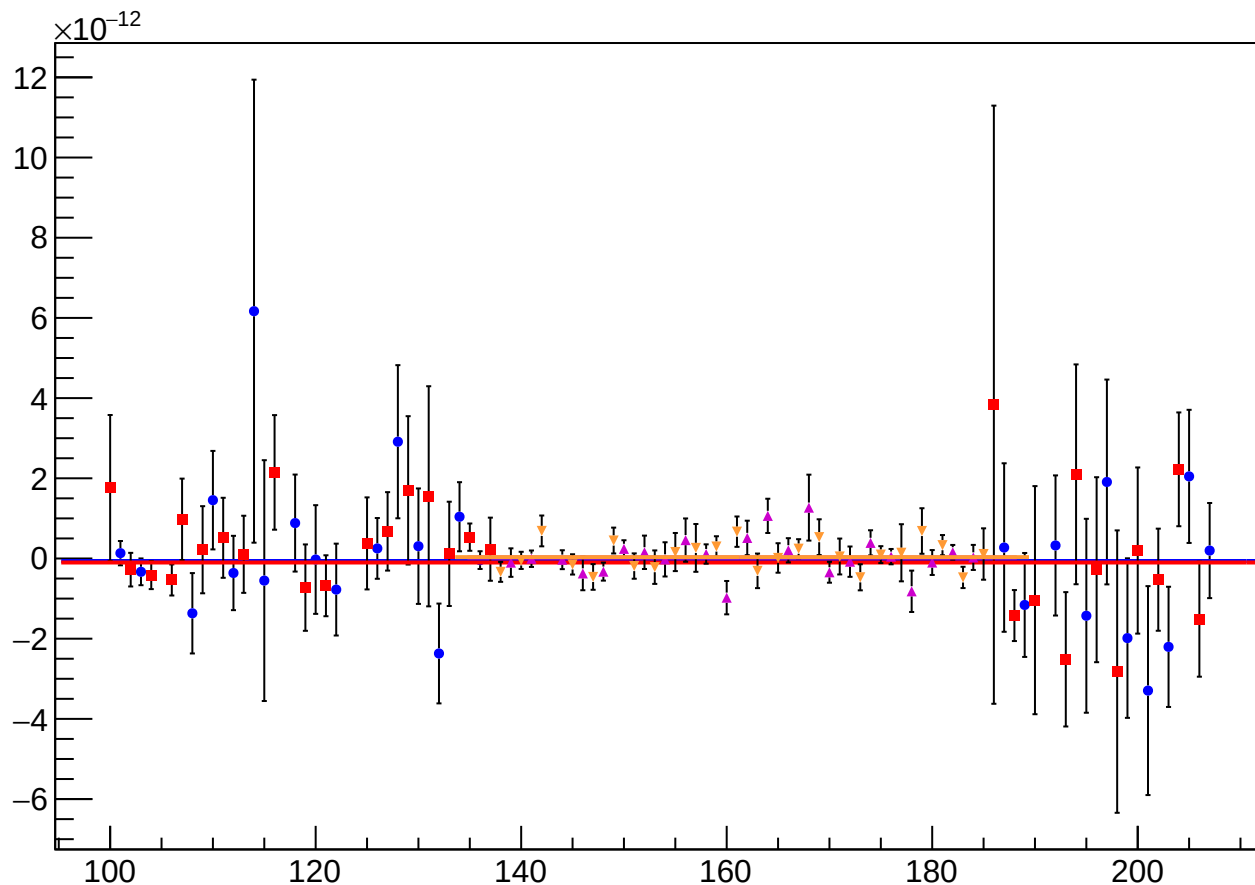
Left In: 10646.477+/-1.791  $\chi^2/\text{NDF}$ : 1114064.0/22

+ sign 10493.146+/-1.314  $\chi^2/\text{NDF}$ : 2611135.6/49

All: 10214.842+/-0.910  $\chi^2/\text{NDF}$ : 8230753.3/1

- sign 9958.389+/-1.261  $\chi^2/\text{NDF}$ : 5533370.8/51

asym\_us\_avg\_at2lr\_avg\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 22.2/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:26.3/23

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 25.9/28

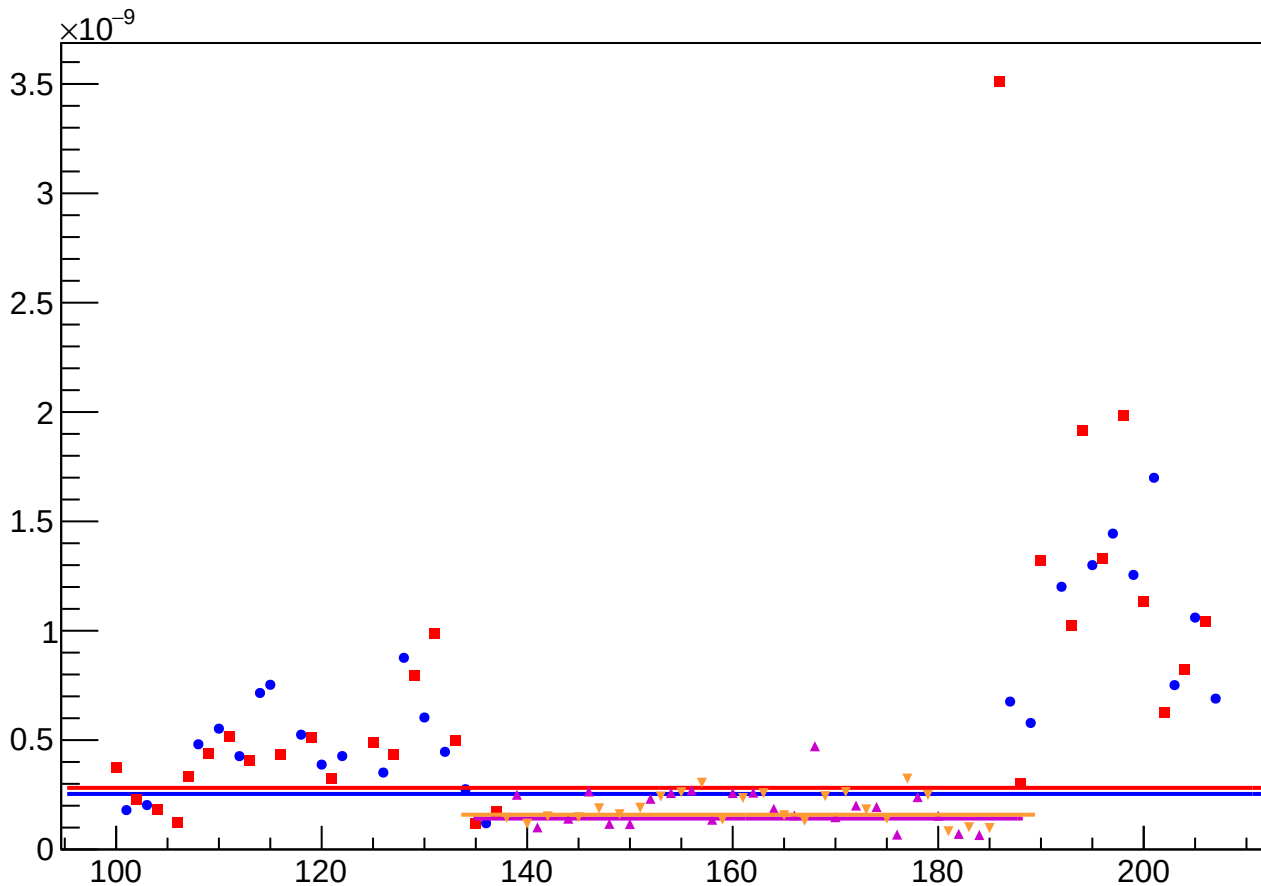
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:27.9/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 48.9/49

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 103.3/101

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 54.4/51

asym\_us\_avg\_at2lr\_avg\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 5523559.2/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 1297018.7/23

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 5746148.6/28

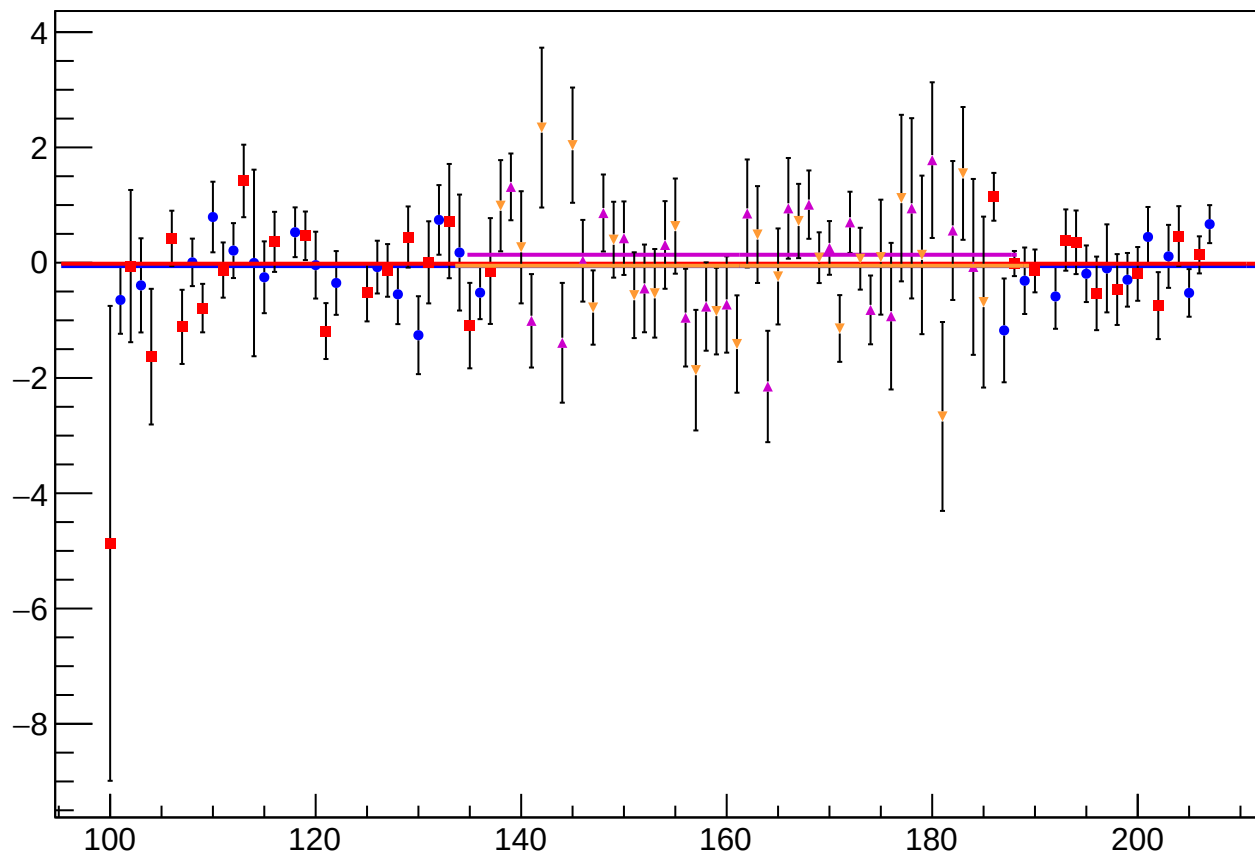
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 2396288.8/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 7599479.0/49

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 17359092.2/101

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 9693327.1/51

asym\_us\_avg\_at2lr\_avg\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.059 \pm 0.105$   $\chi^2/\text{NDF}$ : 22.7/25

Left Out:  $-0.053 \pm 0.161$   $\chi^2/\text{NDF}$ : 30.1/23

Right Out:  $-0.018 \pm 0.091$   $\chi^2/\text{NDF}$ : 40.7/28

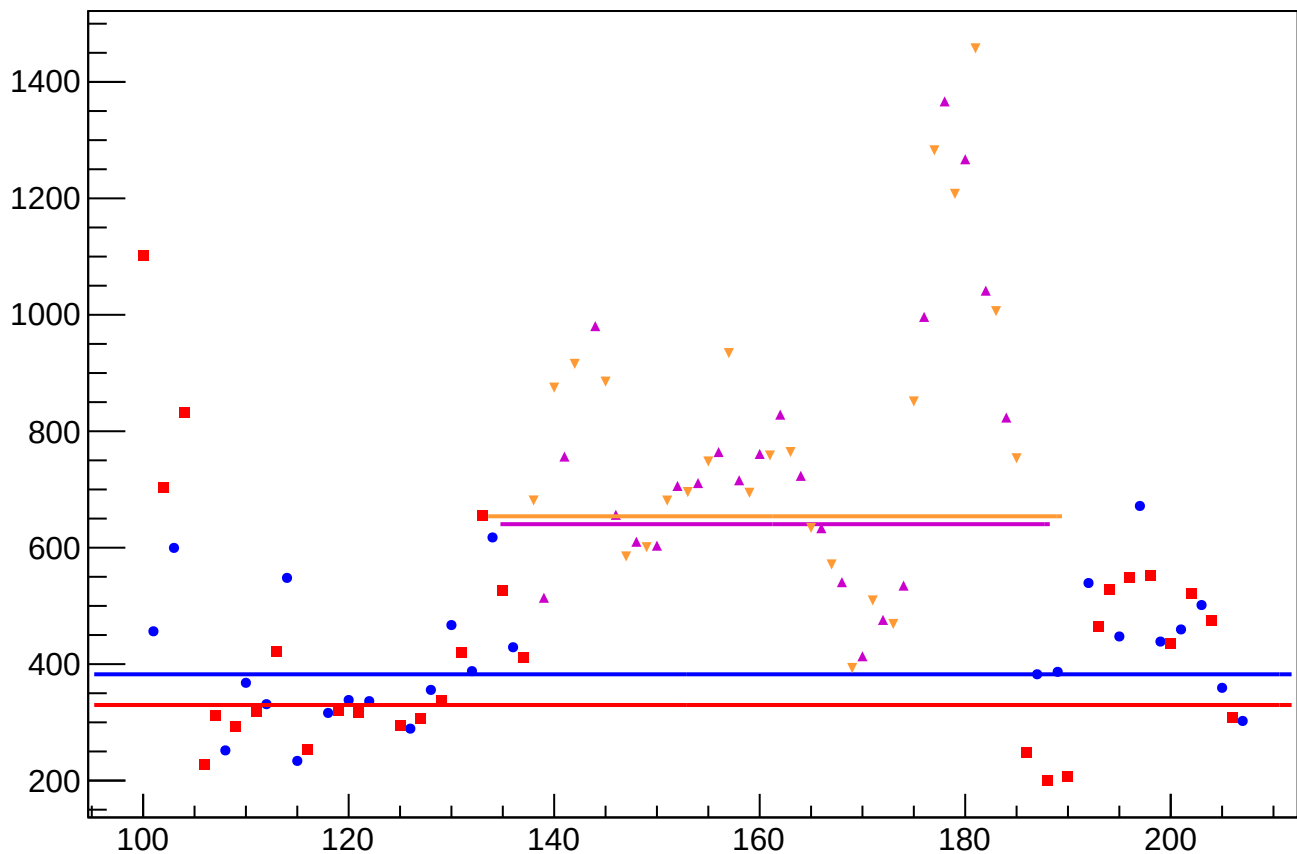
Left In:  $0.138 \pm 0.158$   $\chi^2/\text{NDF}$ : 30.0/22

+ sign  $-0.057 \pm 0.088$   $\chi^2/\text{NDF}$ : 52.8/49

All:  $-0.014 \pm 0.059$   $\chi^2/\text{NDF}$ : 124.7/101

- sign  $0.021 \pm 0.079$   $\chi^2/\text{NDF}$ : 71.4/51

asym\_us\_avg\_at2lr\_avg\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 382.528+/-0.074  $\chi^2/\text{NDF}$ : 1626530.5/25

Left Out: 653.930+/-0.114  $\chi^2/\text{NDF}$ : 3124472.6/23

Right Out: 329.801+/-0.065  $\chi^2/\text{NDF}$ : 3590437.9/28

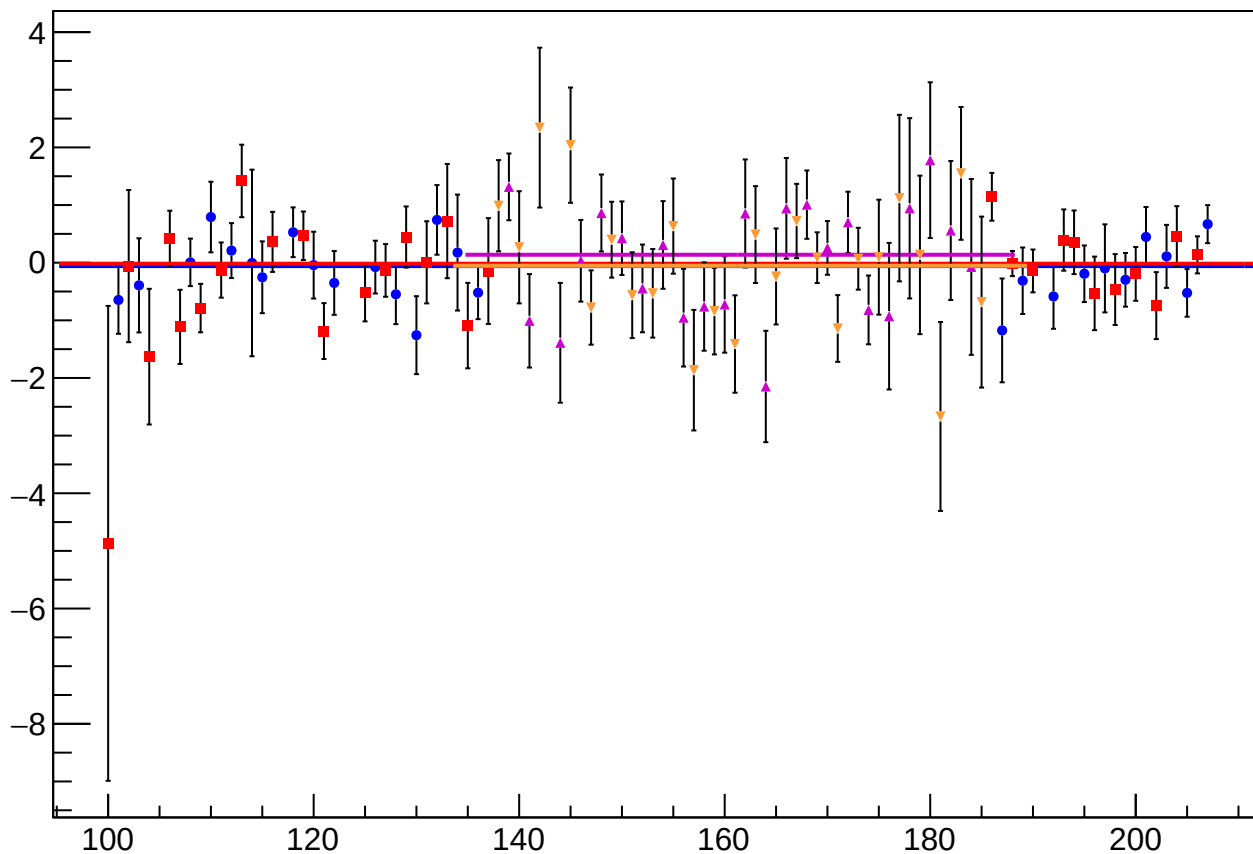
Left In: 640.392+/-0.112  $\chi^2/\text{NDF}$ : 2647967.4/22

+ sign 463.045+/-0.062  $\chi^2/\text{NDF}$ : 8732089.4/49

All: 432.582+/-0.042  $\chi^2/\text{NDF}$ : 21201697.0/10

- sign 407.868+/-0.056  $\chi^2/\text{NDF}$ : 12034220.8/51

asym\_us\_avg\_at2lr\_avg\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.059 \pm 0.105$   $\chi^2/\text{NDF}$ : 22.7/25

Left Out:  $-0.053 \pm 0.161$   $\chi^2/\text{NDF}$ : 30.1/23

Right Out:  $-0.018 \pm 0.091$   $\chi^2/\text{NDF}$ : 40.7/28

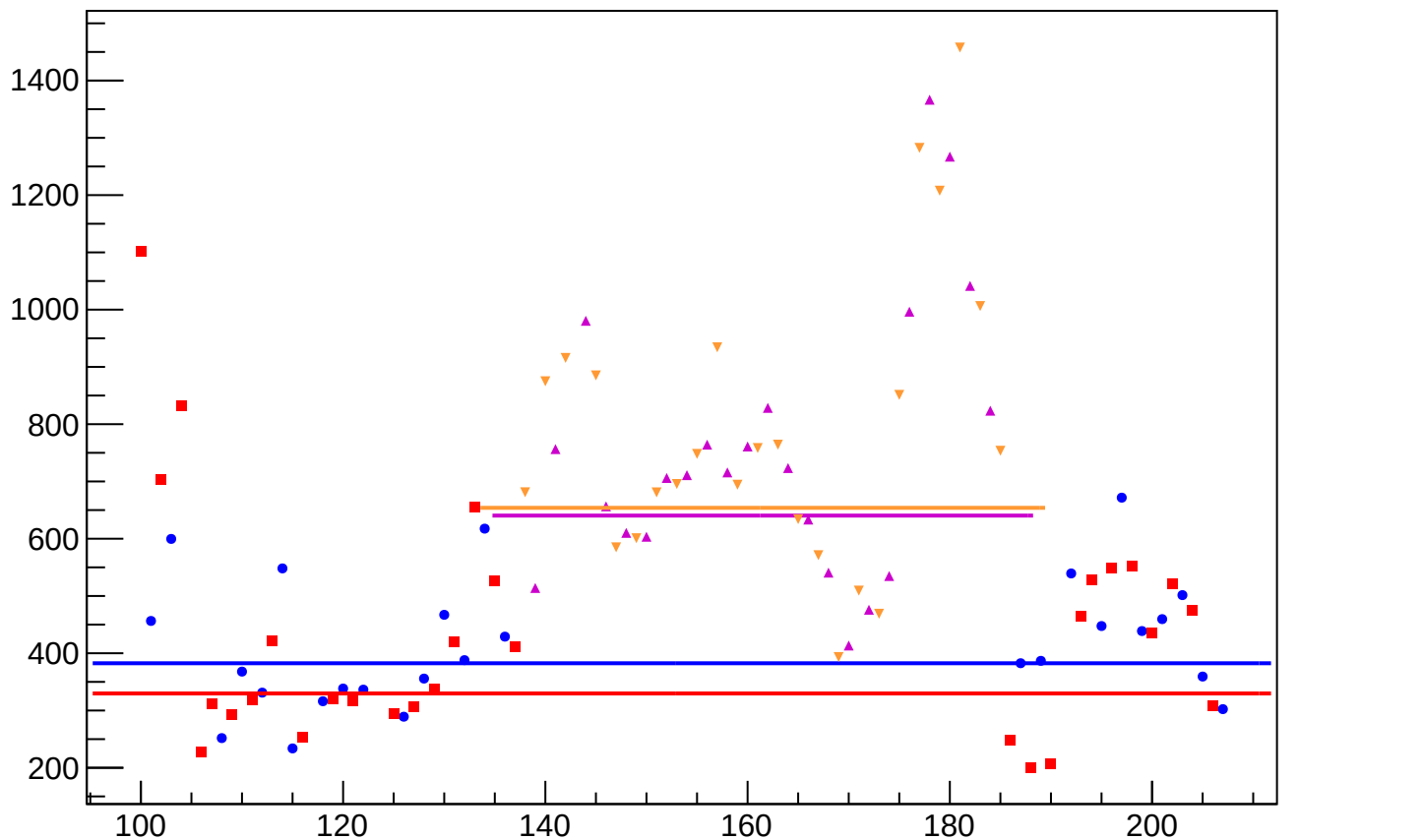
Left In:  $0.138 \pm 0.158$   $\chi^2/\text{NDF}$ : 30.0/22

+ sign  $-0.057 \pm 0.088$   $\chi^2/\text{NDF}$ : 52.8/49

All:  $-0.014 \pm 0.059$   $\chi^2/\text{NDF}$ : 124.7/101

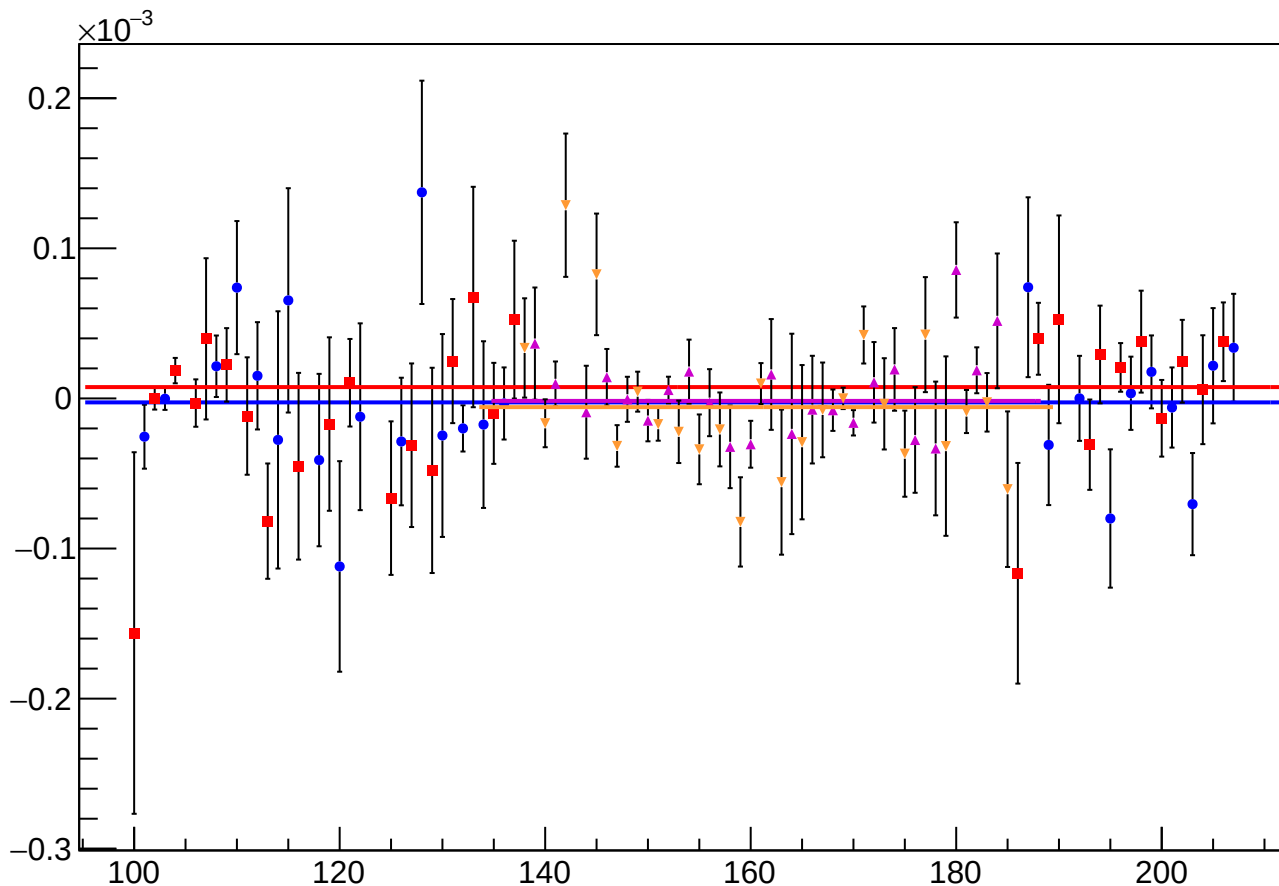
- sign  $0.021 \pm 0.079$   $\chi^2/\text{NDF}$ : 71.4/51

asym\_us\_avg\_at2lr\_avg\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug





asym\_us\_avg\_at2lr\_avg\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 26.2/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 42.6/23

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 28.5/28

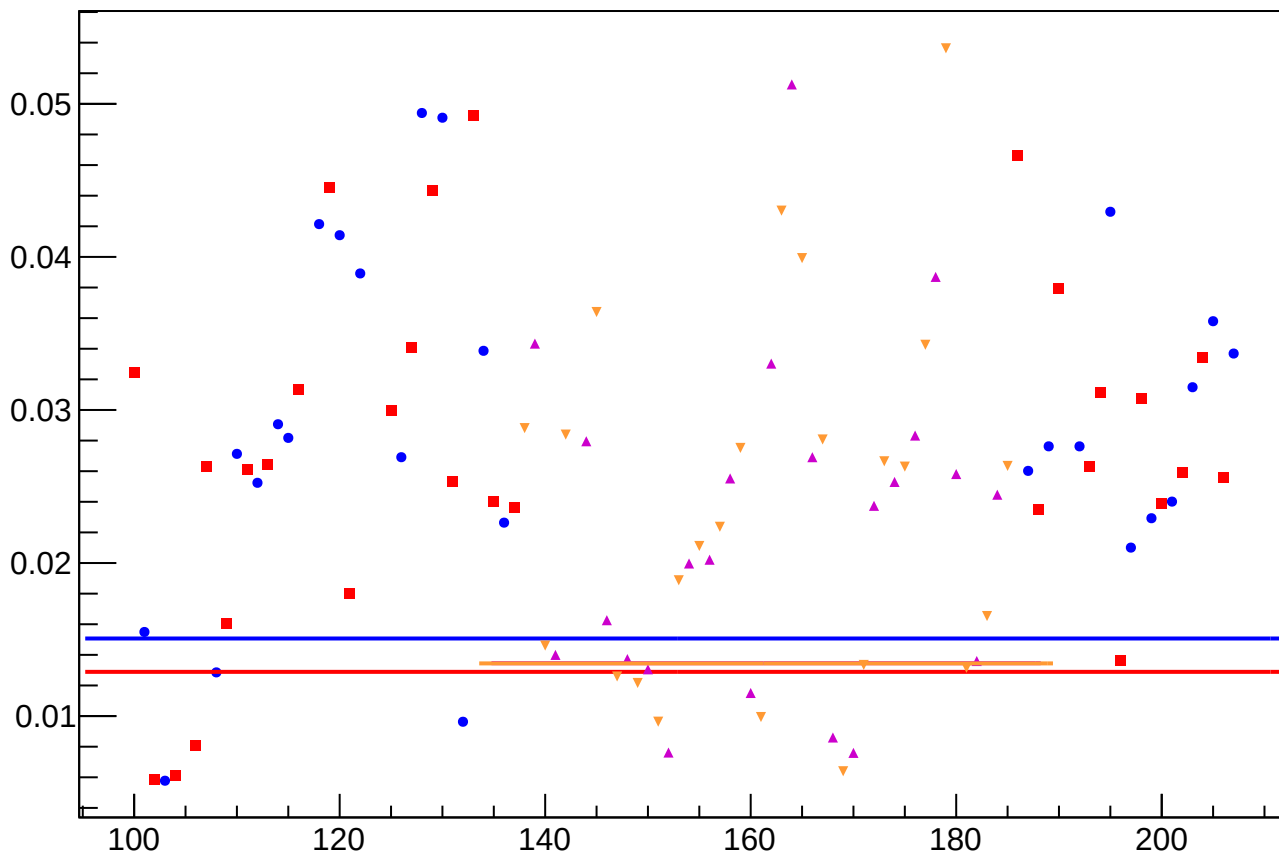
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 25.6/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 69.0/49

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 128.9/101

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 56.8/51

asym\_us\_avg\_at2lr\_avg\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.015 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 9890036.8/25

Left Out: 0.013 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 8856192.5/23

+ sign 0.014 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 18887236.6/49

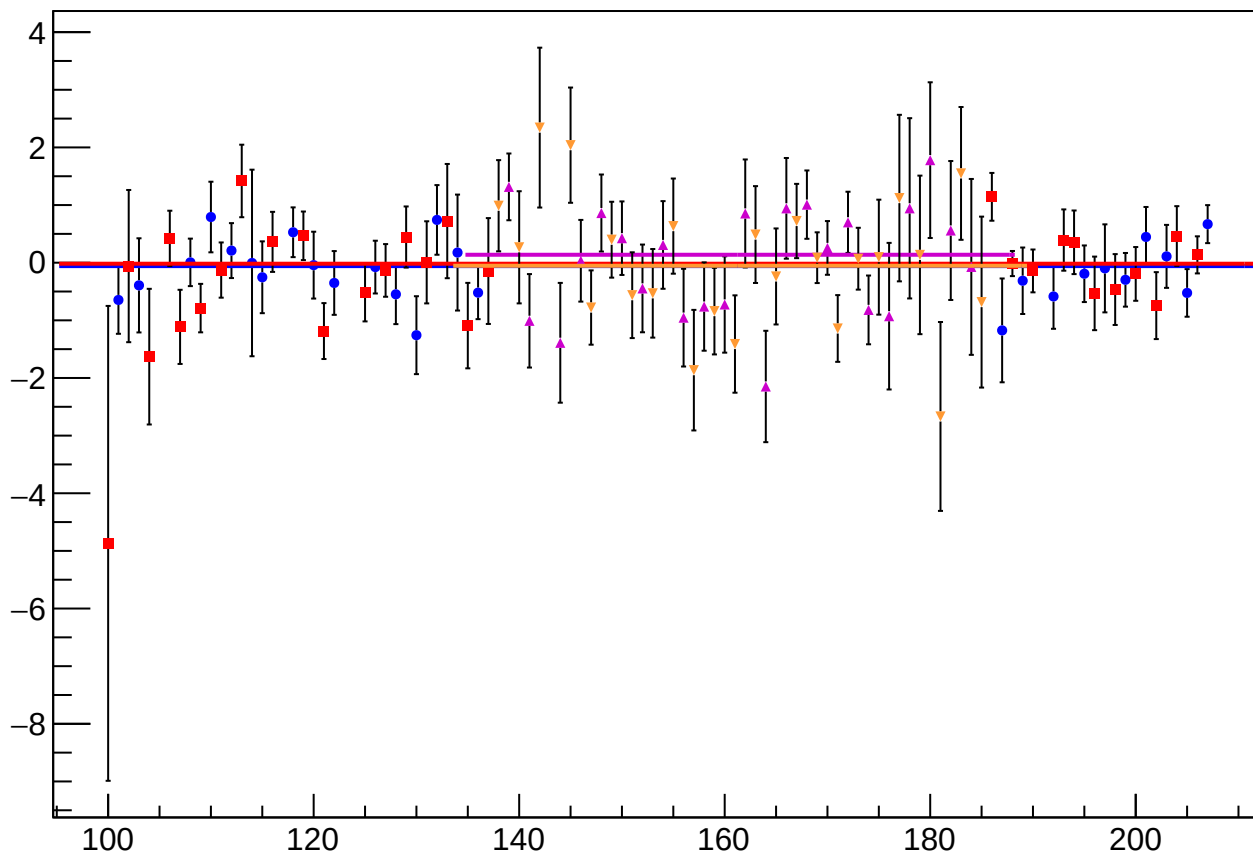
Right Out: 0.013 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 11357485.7/28

All: 0.014 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 37899209.9/101

- sign 0.013 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 18926453.4/51

Left In: 0.013 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7548263.6/22

asym\_us\_avg\_at2lr\_avg\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.059 \pm 0.105$   $\chi^2/\text{NDF}$ : 22.7/25

Left Out:  $-0.053 \pm 0.161$   $\chi^2/\text{NDF}$ : 30.1/23

Right Out:  $-0.018 \pm 0.091$   $\chi^2/\text{NDF}$ : 40.7/28

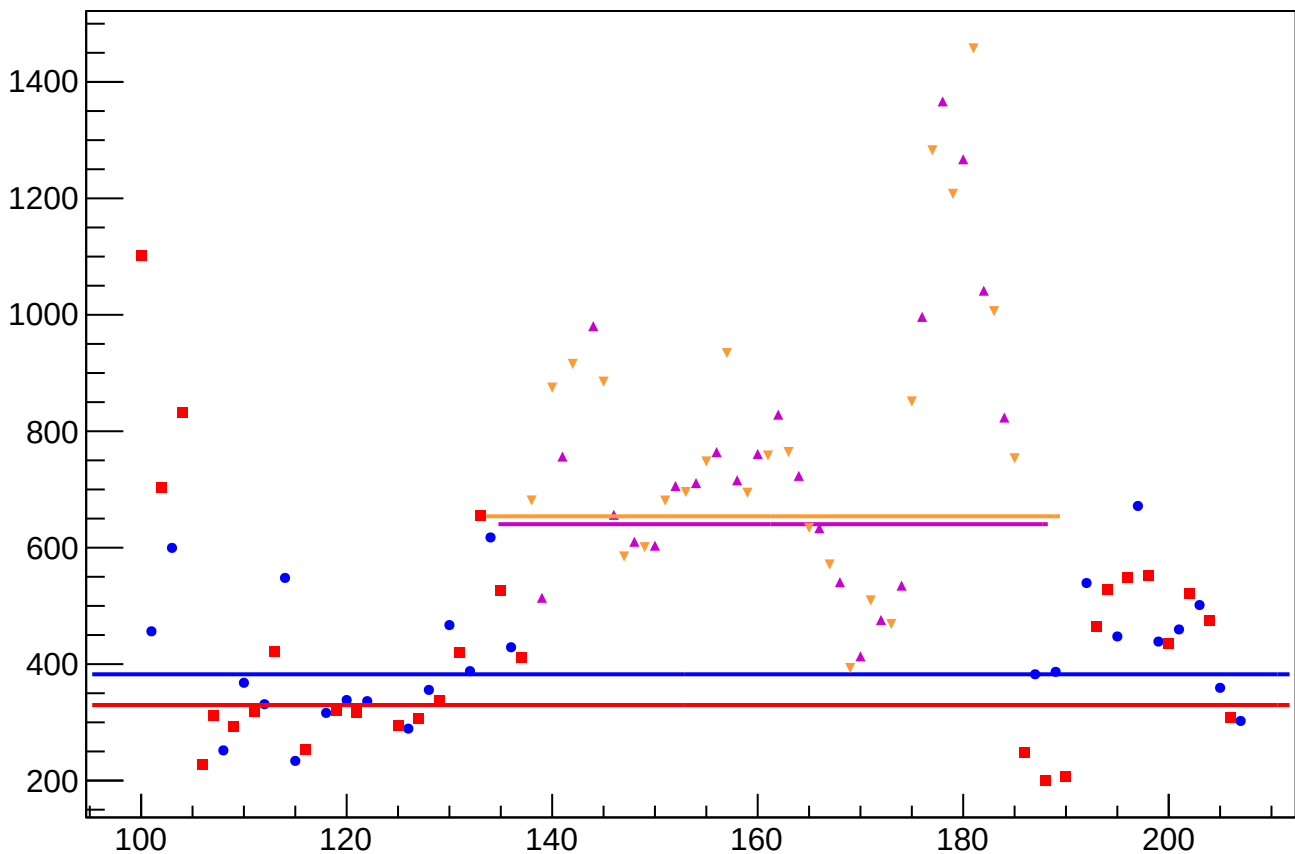
Left In:  $0.138 \pm 0.158$   $\chi^2/\text{NDF}$ : 30.0/22

+ sign  $-0.057 \pm 0.088$   $\chi^2/\text{NDF}$ : 52.8/49

All:  $-0.014 \pm 0.059$   $\chi^2/\text{NDF}$ : 124.7/101

- sign  $0.021 \pm 0.079$   $\chi^2/\text{NDF}$ : 71.4/51

asym\_us\_avg\_at2lr\_avg\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 382.529+/-0.074  $\chi^2/\text{NDF}$ : 1626506.9/25

Left Out: 653.930+/-0.114  $\chi^2/\text{NDF}$ : 3124692.9/23

Right Out: 329.796+/-0.065  $\chi^2/\text{NDF}$ : 3590657.9/28

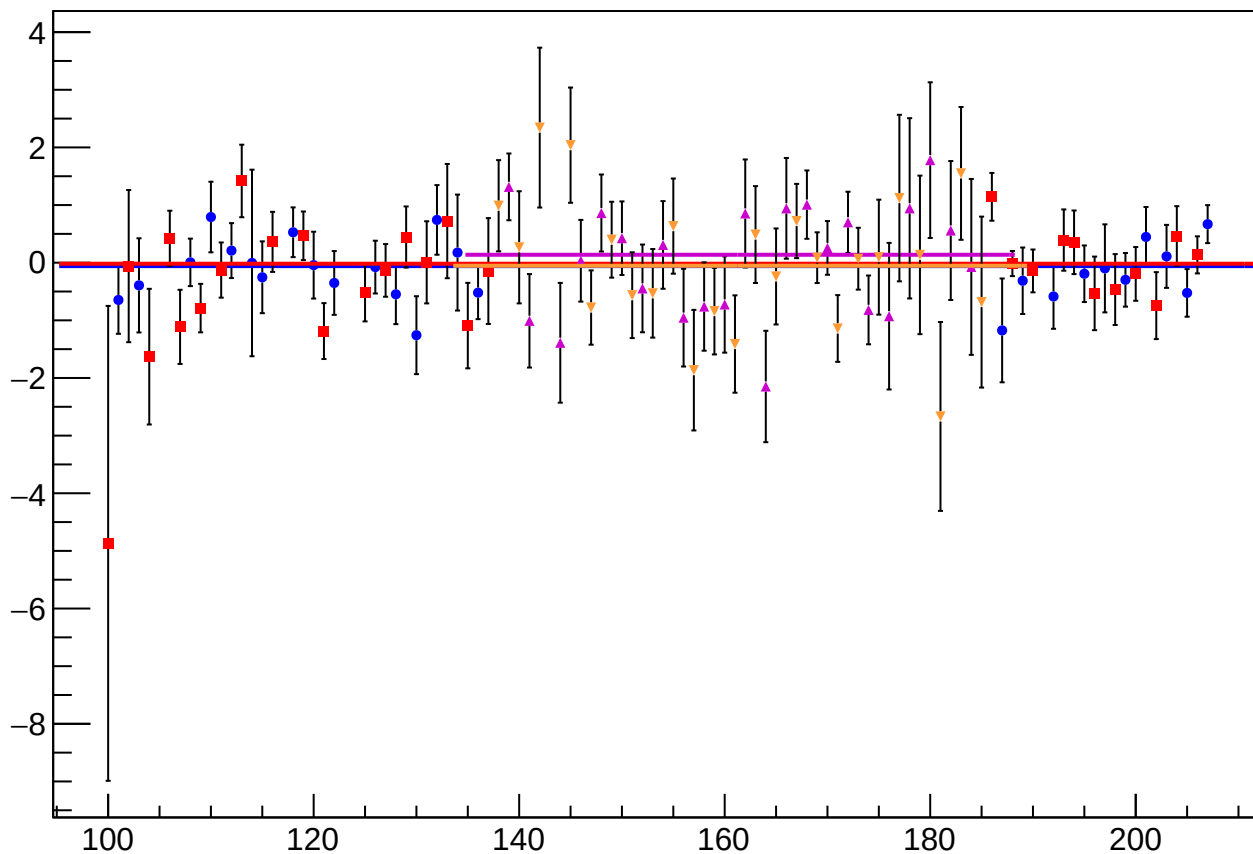
Left In: 640.395+/-0.112  $\chi^2/\text{NDF}$ : 2648118.2/22

+ sign 463.045+/-0.062  $\chi^2/\text{NDF}$ : 8732268.1/49

All: 432.579+/-0.042  $\chi^2/\text{NDF}$ : 21202597.8/10

- sign 407.863+/-0.056  $\chi^2/\text{NDF}$ : 12034861.6/51

asym\_us\_avg\_at2lr\_avg\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.059 \pm 0.105$   $\chi^2/\text{NDF}$ : 22.7/25

Left Out:  $-0.053 \pm 0.161$   $\chi^2/\text{NDF}$ : 30.1/23

Right Out:  $-0.018 \pm 0.091$   $\chi^2/\text{NDF}$ : 40.7/28

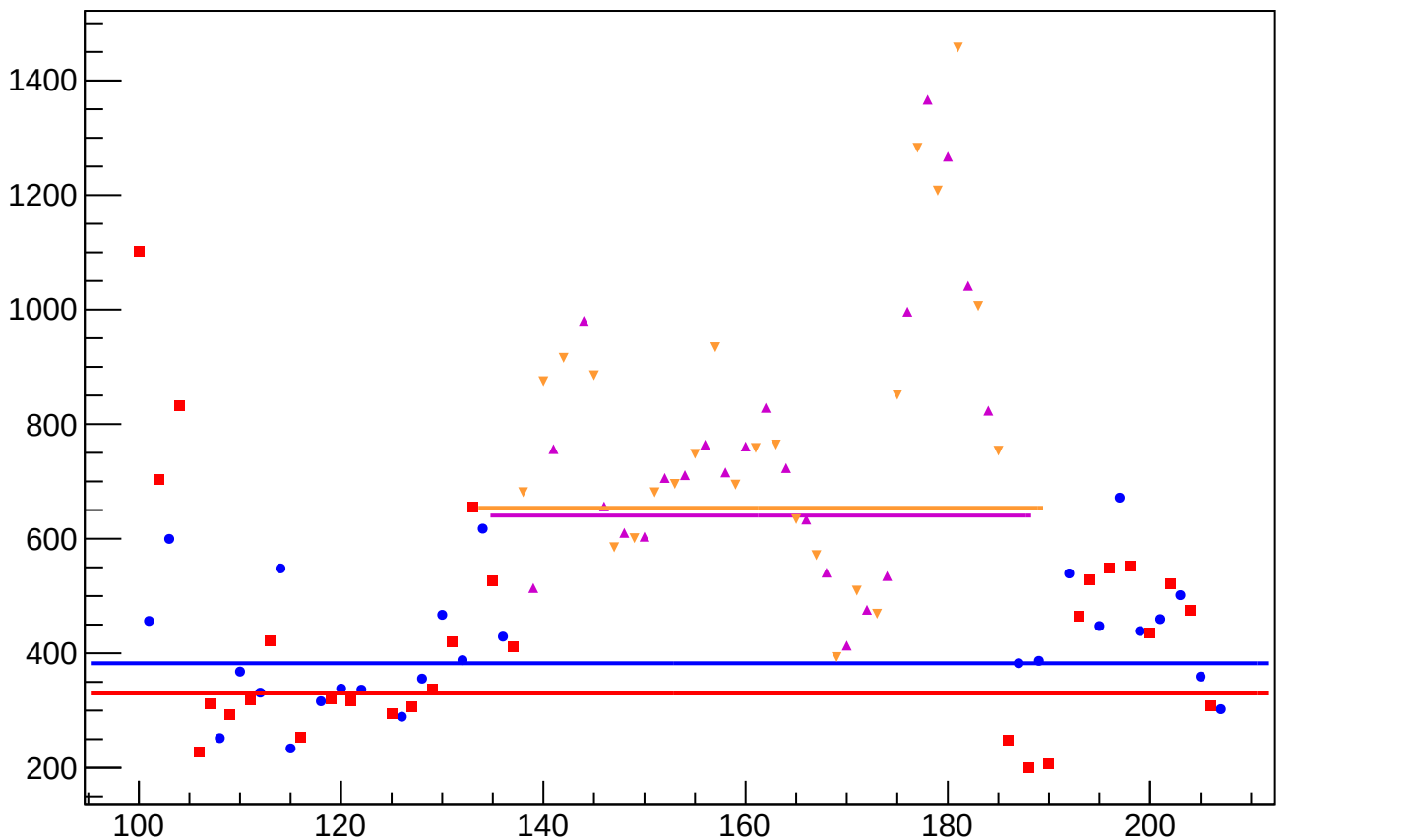
Left In:  $0.138 \pm 0.158$   $\chi^2/\text{NDF}$ : 30.0/22

+ sign  $-0.057 \pm 0.088$   $\chi^2/\text{NDF}$ : 52.8/49

All:  $-0.014 \pm 0.059$   $\chi^2/\text{NDF}$ : 124.7/101

- sign  $0.021 \pm 0.079$   $\chi^2/\text{NDF}$ : 71.4/51

asym\_us\_avg\_at2lr\_avg\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 382.529 $\pm$ 0.074  $\chi^2/\text{NDF}$ : 1626506.9/25

Left Out: 653.930 $\pm$ 0.114  $\chi^2/\text{NDF}$ :3124692.9/23

Right Out: 329.796 $\pm$ 0.065  $\chi^2/\text{NDF}$ : 3590657.9/28

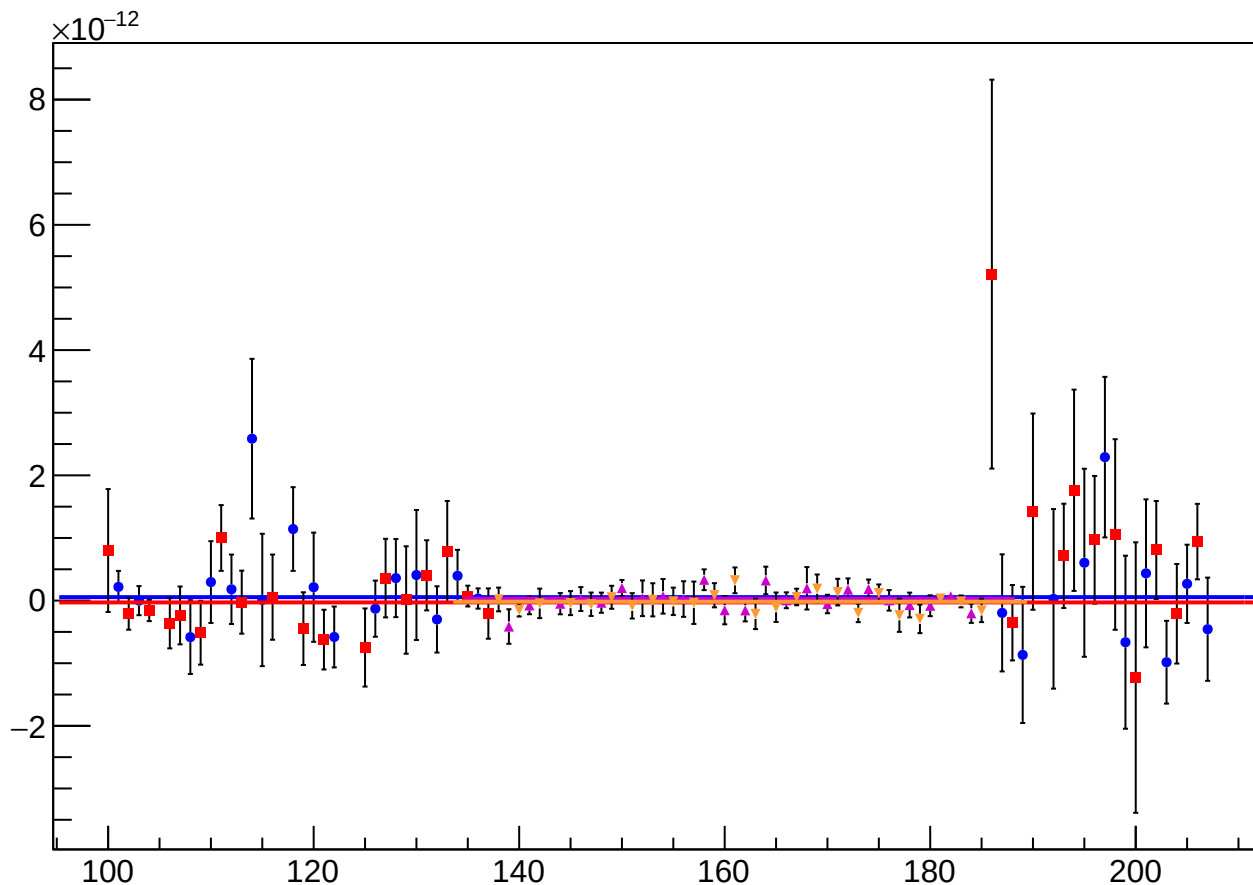
Left In: 640.395 $\pm$ 0.112  $\chi^2/\text{NDF}$ :2648118.2/22

+ sign 463.045 $\pm$ 0.062  $\chi^2/\text{NDF}$ : 8732268.1/49

All: 432.579 $\pm$ 0.042  $\chi^2/\text{NDF}$ : 21202597.8/10

- sign 407.863 $\pm$ 0.056  $\chi^2/\text{NDF}$ : 12034861.6/51

asym\_us\_avg\_at2lr\_avg\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 19.1/25

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:13.1/23

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 25.0/28

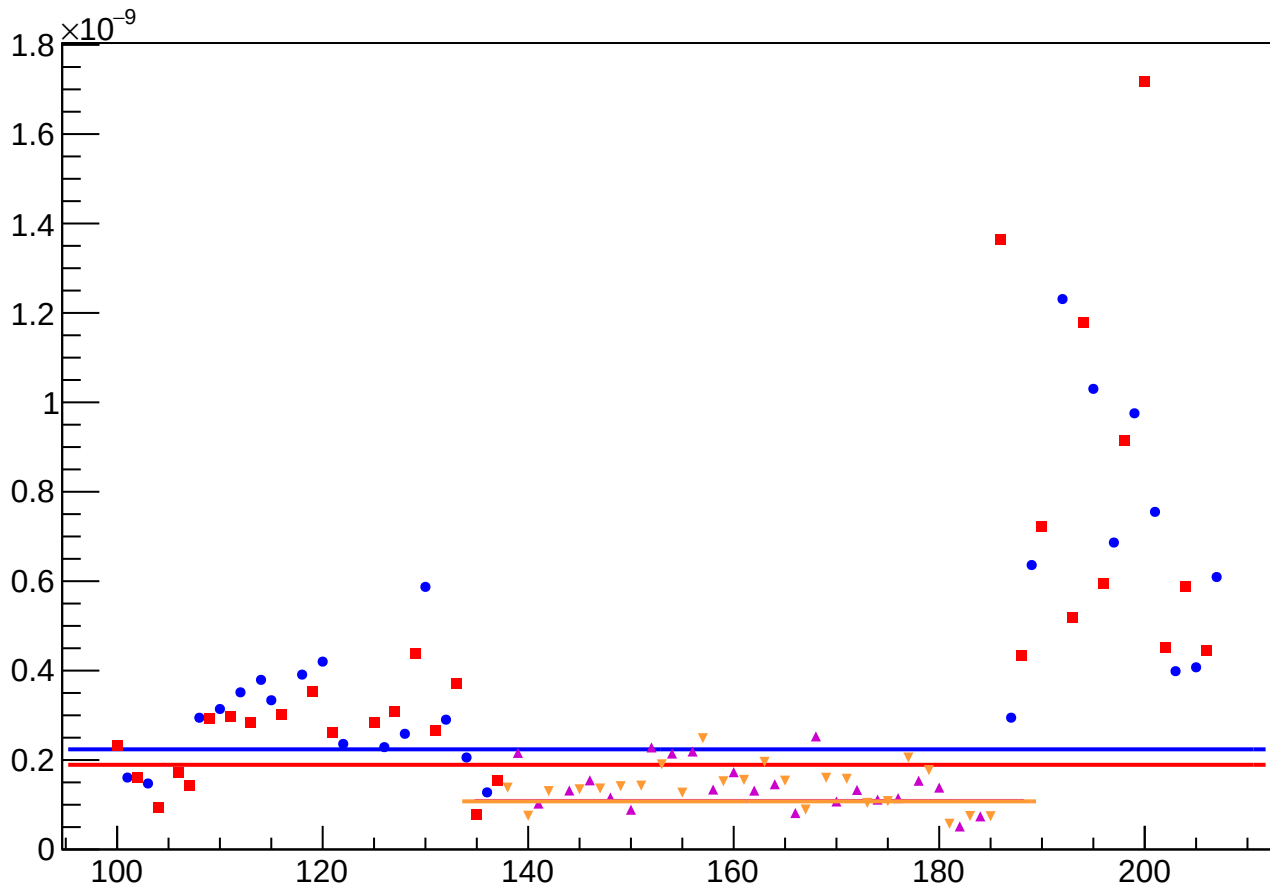
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:17.9/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 32.8/49

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 76.6/101

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 43.3/51

asym\_us\_avg\_at2lr\_avg\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 5653185.3/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 3452023.2/23

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 7295369.7/28

Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 3869719.7/22

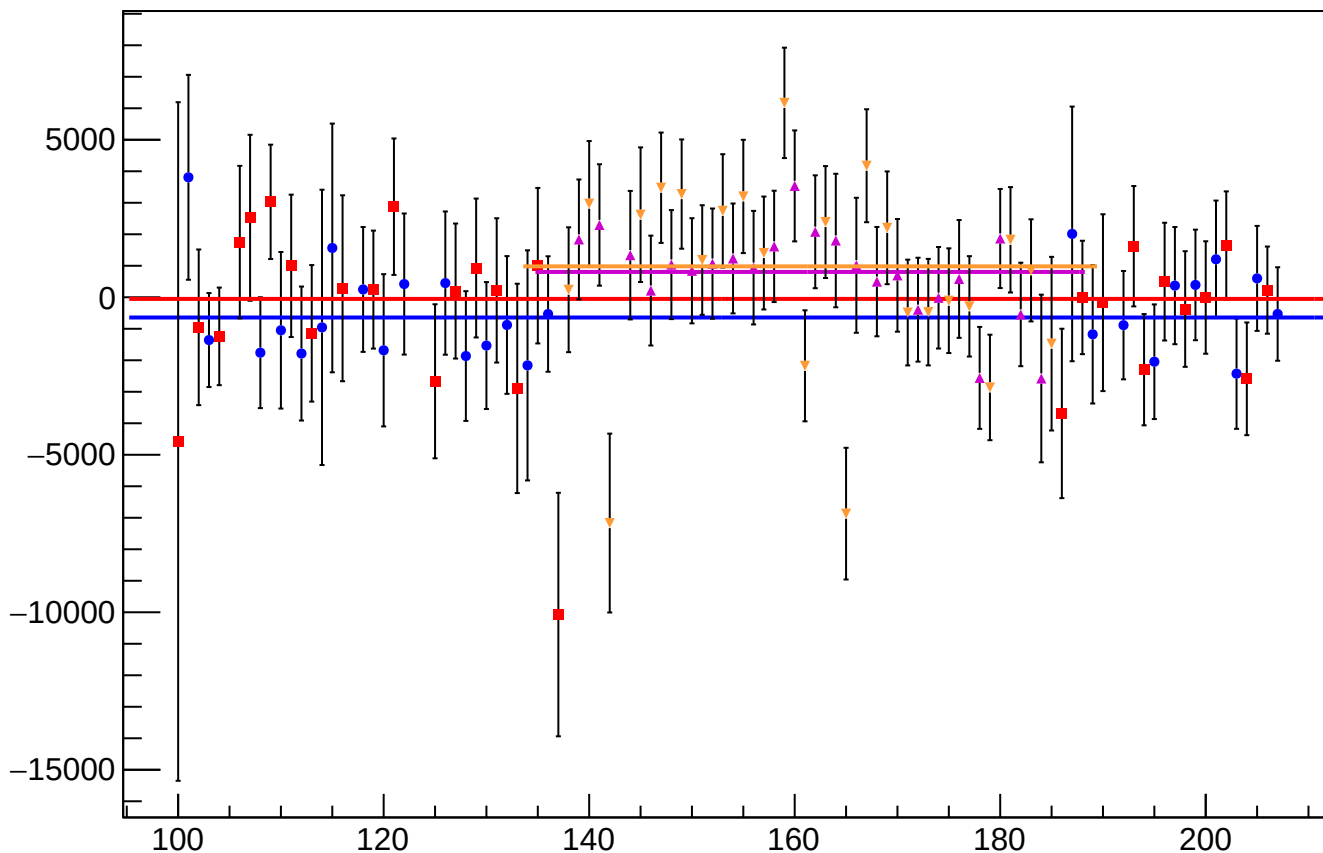
+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 11949604.6/49

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 24796657.1/101

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 12845767.9/51



reg\_asym\_us\_avg\_at2lr\_avg\_dd\_mean vs Slug



Right In: -642.117+/-401.668  $\chi^2/\text{NDF}$ : 9.0/25

Left Out: 981.627+/-370.843  $\chi^2/\text{NDF}$ : 55.5/23

Right Out: -51.664+/-390.130  $\chi^2/\text{NDF}$ : 24.0/28

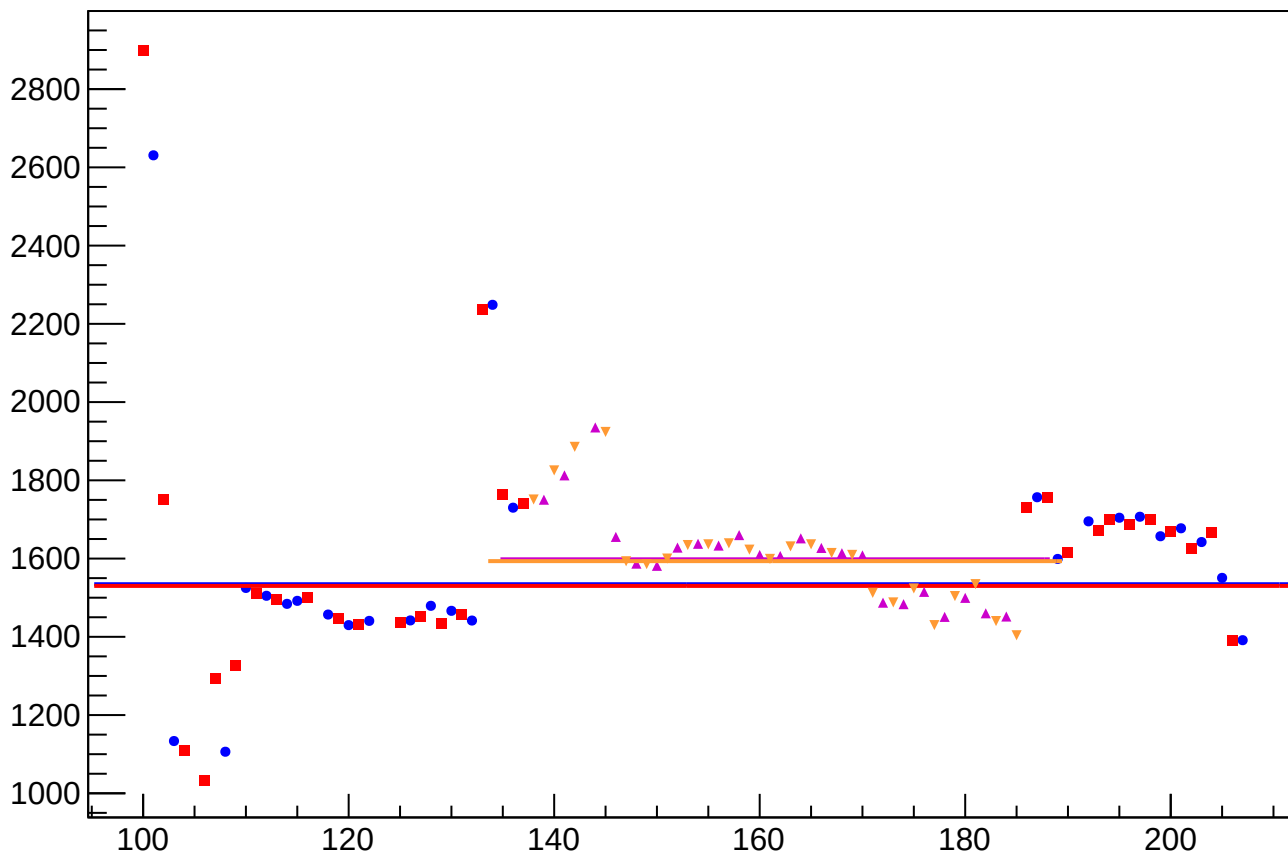
Left In: 803.908+/-374.066  $\chi^2/\text{NDF}$ : 12.4/22

+ sign 234.443+/-272.472  $\chi^2/\text{NDF}$ : 73.4/49

All: 314.998+/-191.789  $\chi^2/\text{NDF}$ : 112.5/101

- sign 394.100+/-270.005  $\chi^2/\text{NDF}$ : 38.9/51

# reg\_asym\_us\_avg\_at2lr\_avg\_dd\_rms vs Slug



Right In: 1534.412 $\pm$ 0.284  $\chi^2$ /NDF: 718879.1/25

Left Out: 1593.482 $\pm$ 0.262  $\chi^2$ /NDF: 187613.7/23

Right Out: 1530.145 $\pm$ 0.275  $\chi^2$ /NDF: 636236.8/28

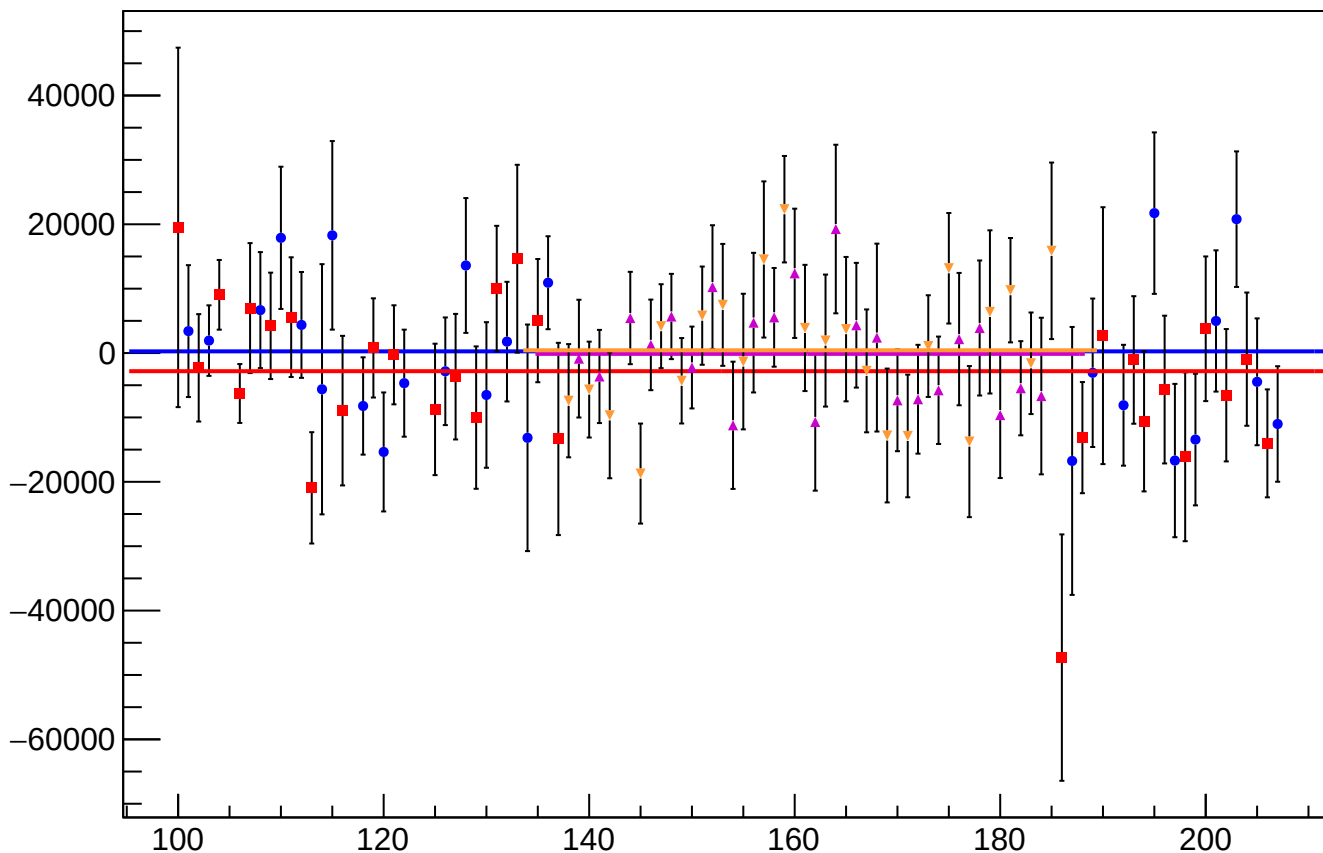
Left In: 1598.119 $\pm$ 0.265  $\chi^2$ /NDF: 169157.7/22

+ sign 1566.300 $\pm$ 0.193  $\chi^2$ /NDF: 929843.2/49

All: 1565.862 $\pm$ 0.135  $\chi^2$ /NDF: 1767005.0/10

- sign 1565.432 $\pm$ 0.191  $\chi^2$ /NDF: 837151.6/51

asym\_us\_avg\_at2lr\_avg\_dd\_reg\_correction\_mean vs Slug



Right In:  $262.865 \pm 1894.423$   $\chi^2/\text{NDF}$ : 28.6/25

Left Out:  $426.701 \pm 1819.878$   $\chi^2/\text{NDF}$ : 29.4/23

Right Out:  $-2818.122 \pm 1717.974$   $\chi^2/\text{NDF}$ : 29.5/28

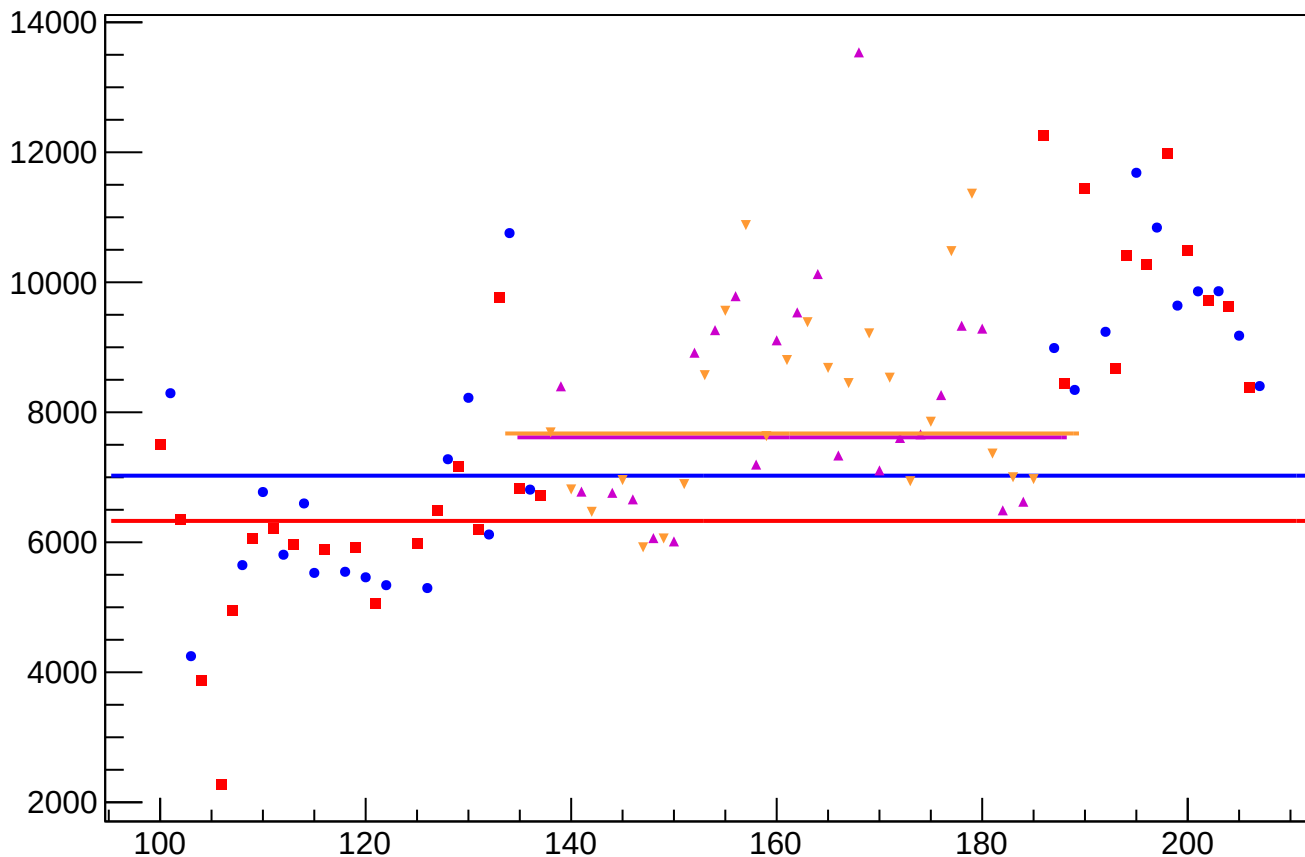
Left In:  $-126.369 \pm 1814.830$   $\chi^2/\text{NDF}$ : 13.9/22

+ sign  $348.070 \pm 1312.411$   $\chi^2/\text{NDF}$ : 58.0/49

All:  $-646.859 \pm 904.241$   $\chi^2/\text{NDF}$ : 103.5/101

- sign  $-1545.988 \pm 1247.627$   $\chi^2/\text{NDF}$ : 44.5/51

asym\_us\_avg\_at2lr\_avg\_dd\_reg\_correction\_rms vs Slug



Right In: 7024.772+/-1.340  $\chi^2/\text{NDF}$ : 2283477.1/25

Left Out: 7674.060+/-1.287  $\chi^2/\text{NDF}$ : 1076713.7/23

Right Out: 6328.701+/-1.215  $\chi^2/\text{NDF}$ : 4488883.6/28

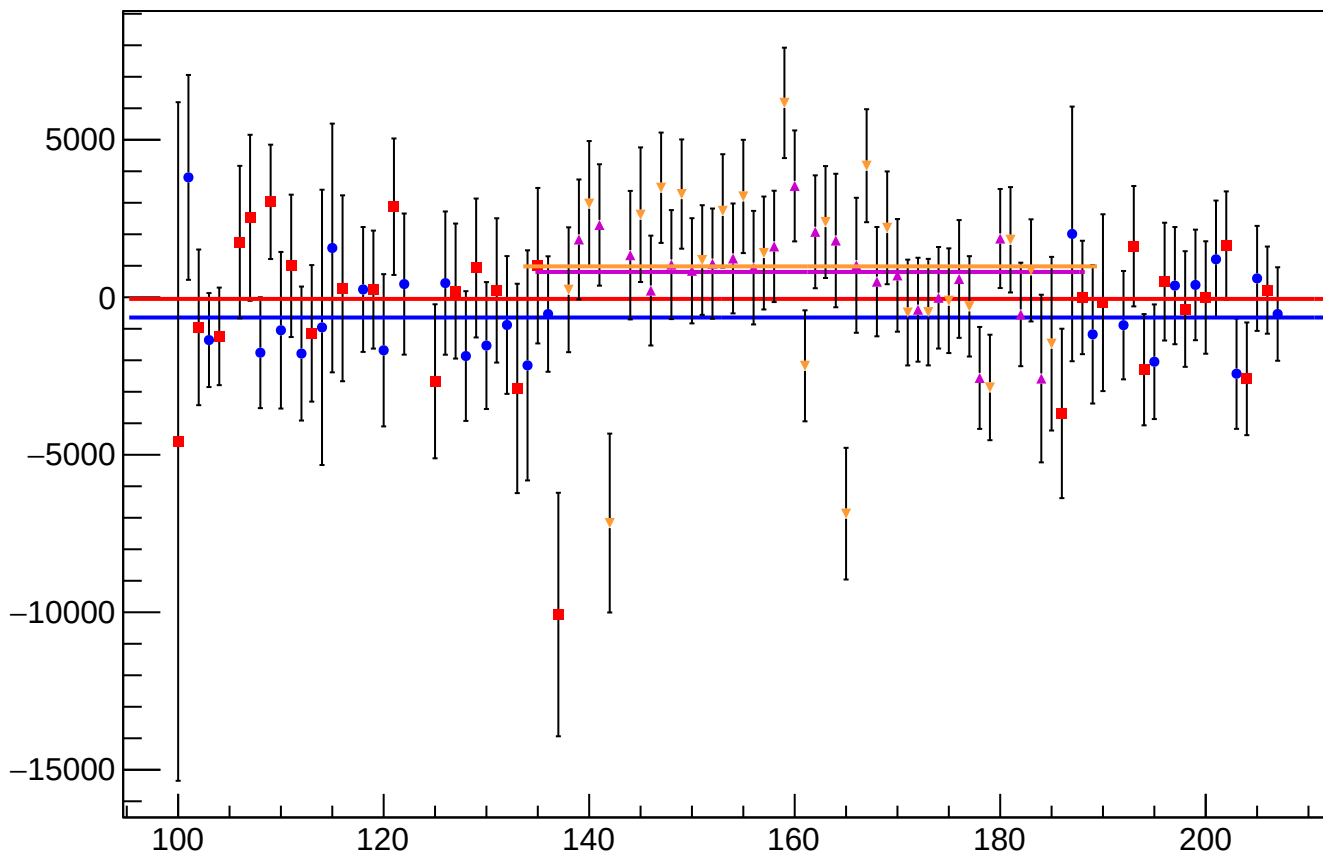
Left In: 7614.974+/-1.283  $\chi^2/\text{NDF}$ : 1224520.2/22

+ sign 7362.442+/-0.928  $\chi^2/\text{NDF}$ : 3482372.2/49

All: 7138.751+/-0.639  $\chi^2/\text{NDF}$ : 9836243.7/10

- sign 6936.599+/-0.882  $\chi^2/\text{NDF}$ : 6243263.1/51

cor\_asym\_us\_avg\_at2lr\_avg\_dd\_mean vs Slug



Right In:  $-642.163 \pm 401.668$   $\chi^2/\text{NDF}$ : 9.0/25

Left Out:  $981.712 \pm 370.843$   $\chi^2/\text{NDF}$ : 55.6/23

Right Out:  $-51.712 \pm 390.130$   $\chi^2/\text{NDF}$ : 24.0/28

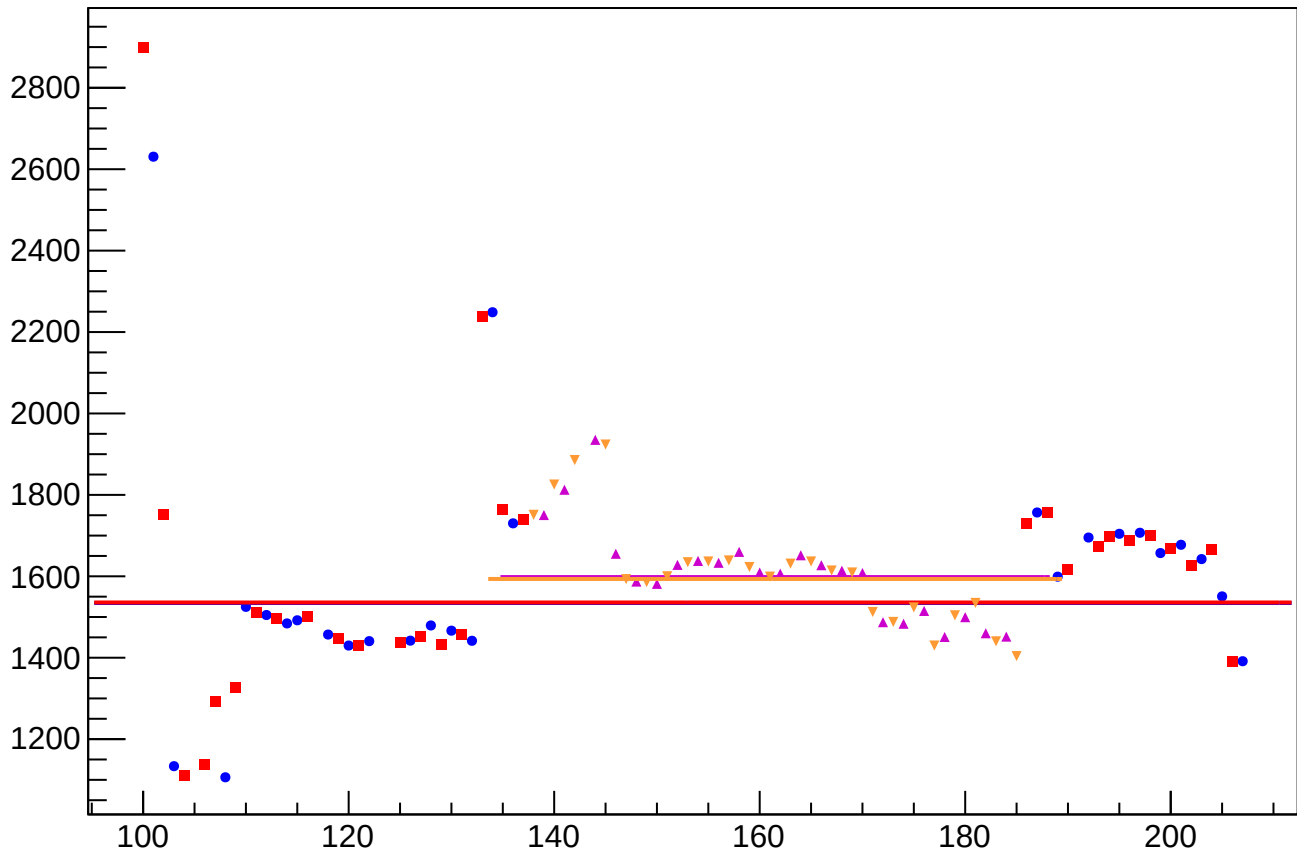
Left In:  $803.783 \pm 374.066$   $\chi^2/\text{NDF}$ : 12.4/22

+ sign  $234.468 \pm 272.472$   $\chi^2/\text{NDF}$ : 73.4/49

All:  $314.965 \pm 191.789$   $\chi^2/\text{NDF}$ : 112.5/101

- sign  $394.011 \pm 270.005$   $\chi^2/\text{NDF}$ : 38.9/51

cor\_asym\_us\_avg\_at2lr\_avg\_dd\_rms vs Slug



Right In: 1534.412 $\pm$ 0.284  $\chi^2$ /NDF: 718879.5/25

Left Out: 1593.482 $\pm$ 0.262  $\chi^2$ /NDF: 187613.7/23

Right Out: 1535.668 $\pm$ 0.276  $\chi^2$ /NDF: 584563.2/28

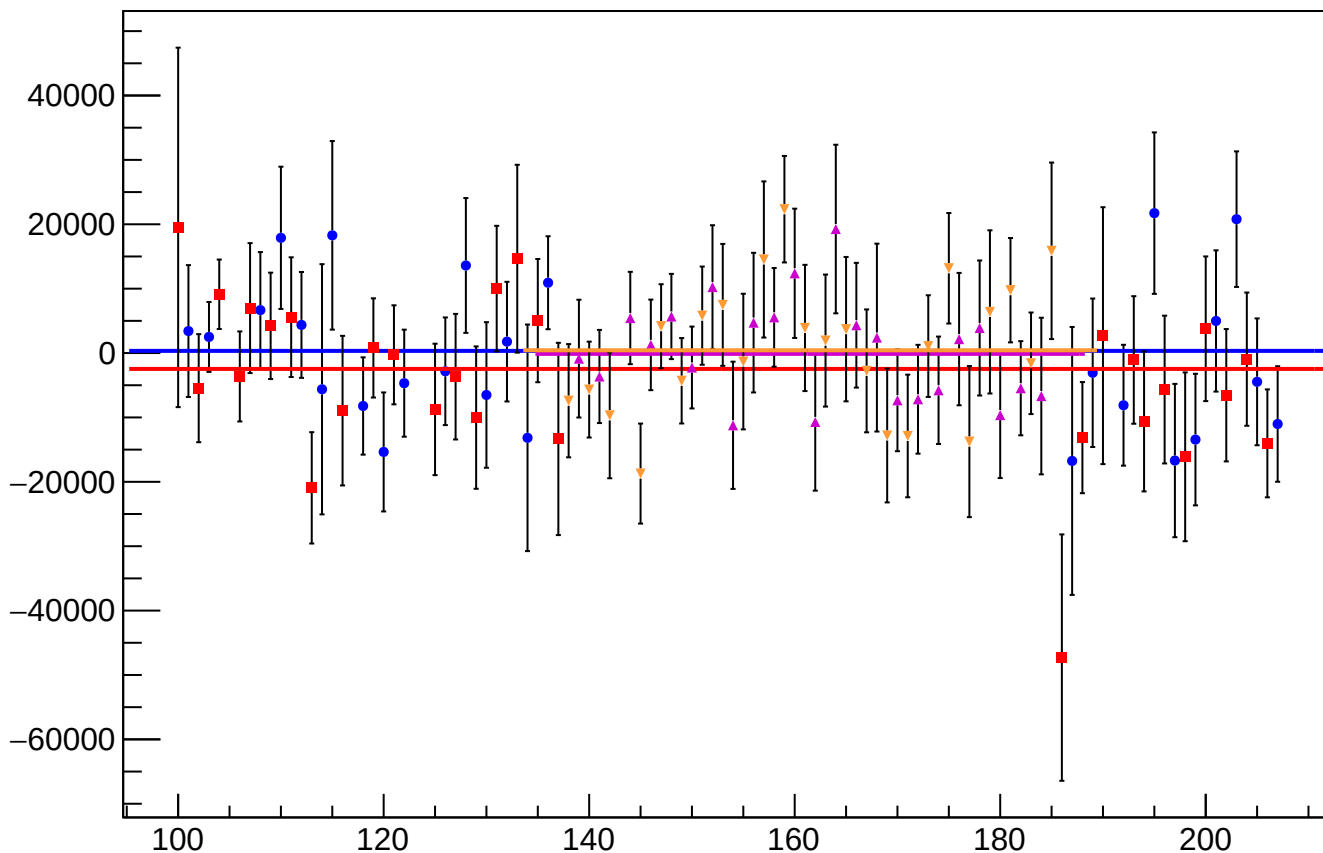
Left In: 1598.119 $\pm$ 0.265  $\chi^2$ /NDF: 169157.7/22

+ sign 1566.300 $\pm$ 0.193  $\chi^2$ /NDF: 929843.6/49

All: 1567.244 $\pm$ 0.136  $\chi^2$ /NDF: 1710345.6/10

- sign 1568.169 $\pm$ 0.191  $\chi^2$ /NDF: 780454.5/51

asym\_us\_avg\_at2lr\_avg\_dd\_cor\_correction\_mean vs Slug



Right In:  $336.371 \pm 1892.226$   $\chi^2/\text{NDF}$ : 28.7/25

Left Out:  $426.702 \pm 1819.879$   $\chi^2/\text{NDF}$ : 29.4/23

Right Out:  $-2465.446 \pm 1791.809$   $\chi^2/\text{NDF}$ : 29.0/28

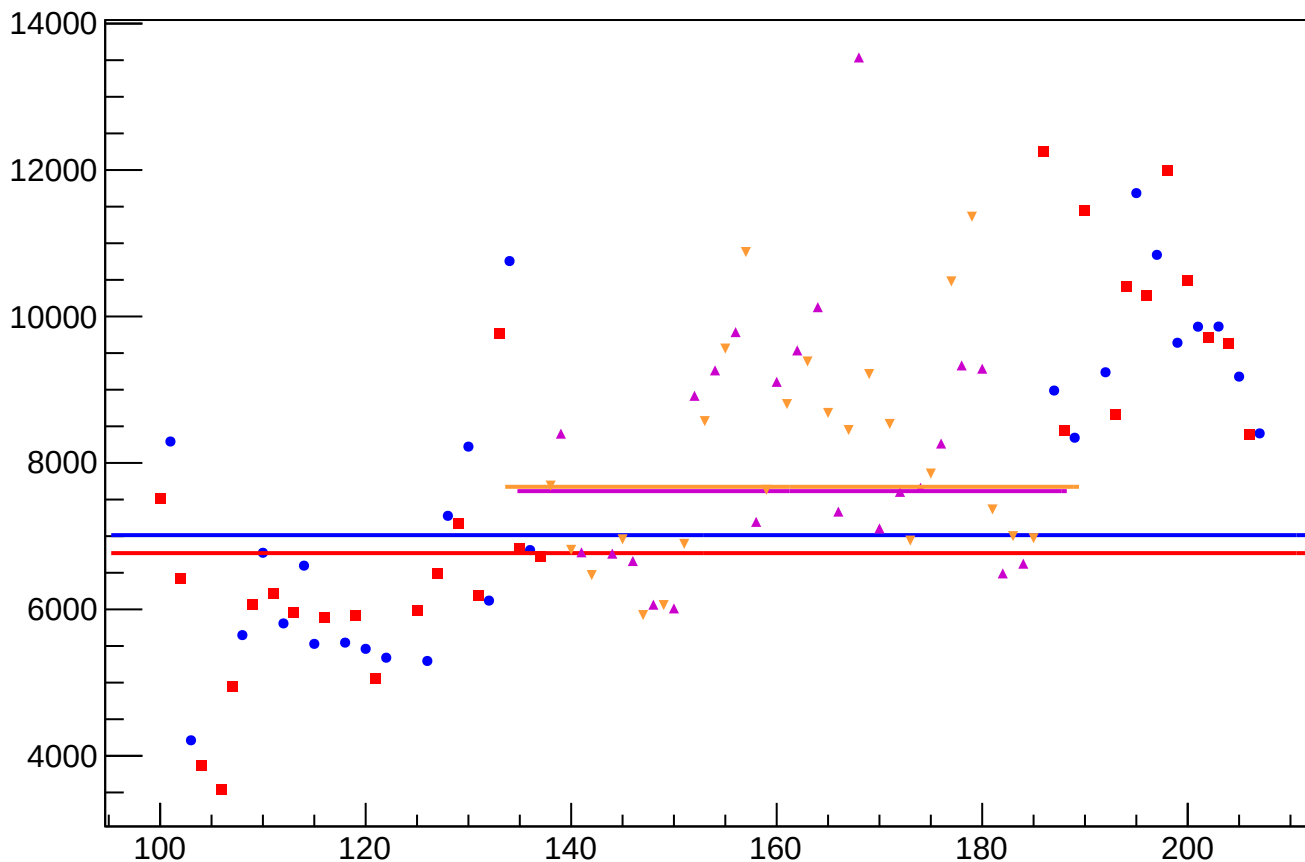
Left In:  $-126.376 \pm 1814.828$   $\chi^2/\text{NDF}$ : 13.9/22

+ sign  $383.296 \pm 1311.680$   $\chi^2/\text{NDF}$ : 58.0/49

All:  $-487.749 \pm 914.276$   $\chi^2/\text{NDF}$ : 102.6/101

- sign  $-1310.839 \pm 1275.061$   $\chi^2/\text{NDF}$ : 43.7/51

asym\_us\_avg\_at2lr\_avg\_dd\_cor\_correction\_rms vs Slug



Right In: 7013.981+/-1.338  $\chi^2/\text{NDF}$ : 2306914.6/25

Left Out: 7674.063+/-1.287  $\chi^2/\text{NDF}$ : 1076712.6/23

Right Out: 6768.456+/-1.267  $\chi^2/\text{NDF}$ : 3118432.5/28

Left In: 7614.964+/-1.283  $\chi^2/\text{NDF}$ : 1224525.6/22

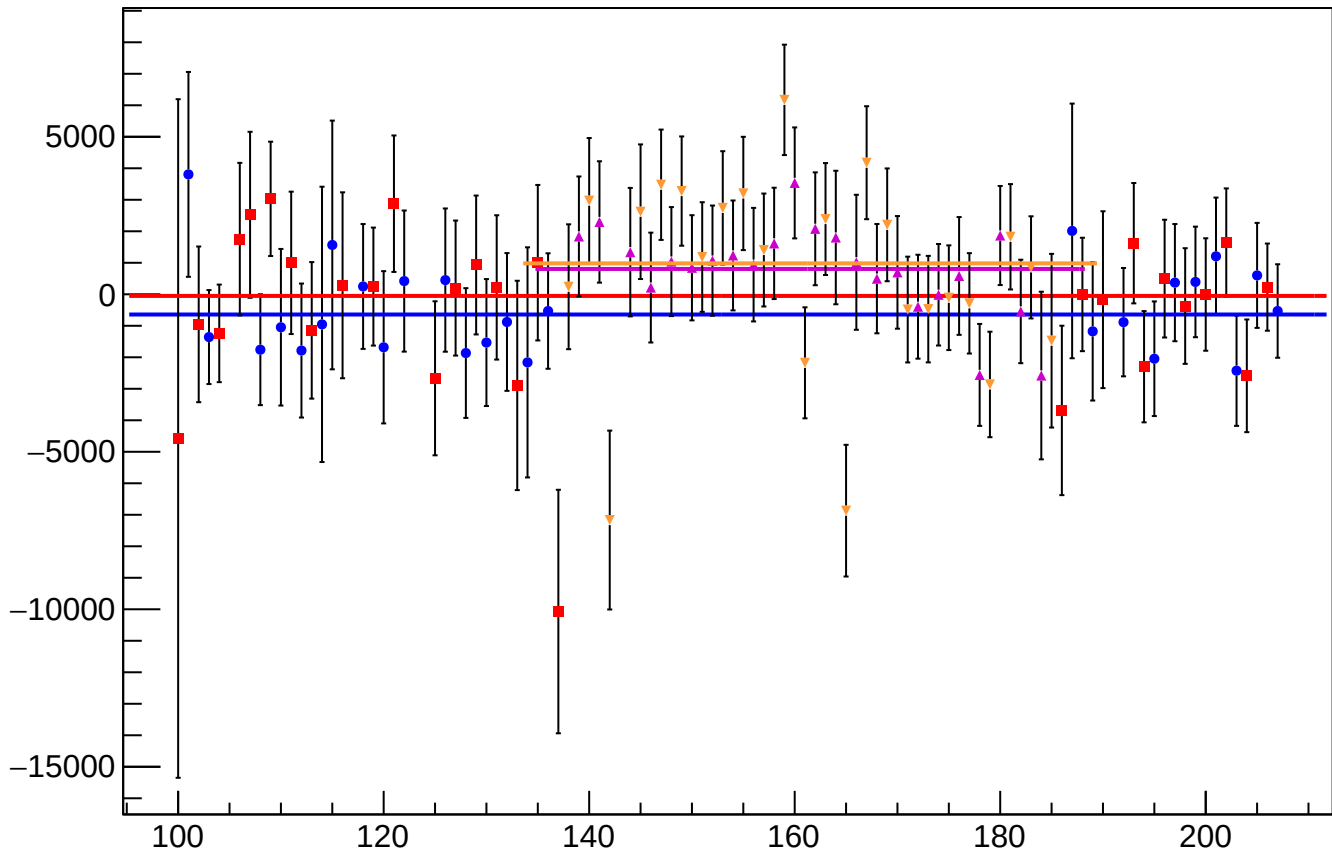
+ sign 7356.881+/-0.927  $\chi^2/\text{NDF}$ : 3510057.3/49

All: 7269.180+/-0.646  $\chi^2/\text{NDF}$ : 8090748.6/10

- sign 7186.307+/-0.902  $\chi^2/\text{NDF}$ : 4563301.6/51



eigen\_cor\_asym\_us\_avg\_at2lr\_avg\_dd\_mean vs Slug



Right In: -642.163+/-401.668  $\chi^2/\text{NDF}$ : 9.0/25

Left Out: 981.712+/-370.843  $\chi^2/\text{NDF}$ : 55.6/23

Right Out: -51.712+/-390.130  $\chi^2/\text{NDF}$ : 24.0/28

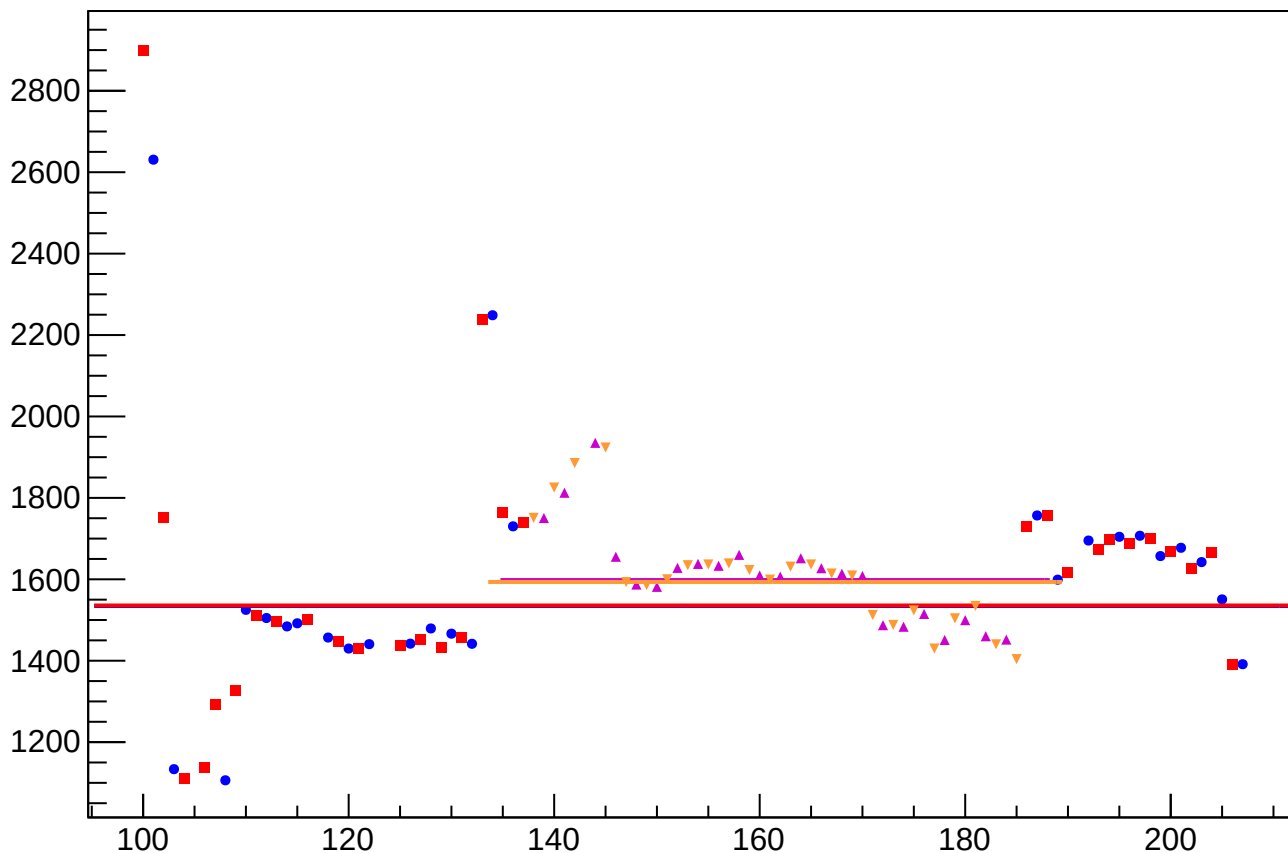
Left In: 803.783+/-374.066  $\chi^2/\text{NDF}$ : 12.4/22

+ sign 234.468+/-272.472  $\chi^2/\text{NDF}$ : 73.4/49

All: 314.965+/-191.789  $\chi^2/\text{NDF}$ : 112.5/101

- sign 394.011+/-270.005  $\chi^2/\text{NDF}$ : 38.9/51

eigen\_cor\_asym\_us\_avg\_at2lr\_avg\_dd\_rms vs Slug



Right In: 1534.412 $\pm$ 0.284  $\chi^2$ /NDF: 718879.5/25

Left Out: 1593.482 $\pm$ 0.262  $\chi^2$ /NDF:187613.7/23

Right Out: 1535.668 $\pm$ 0.276  $\chi^2$ /NDF: 584563.2/28

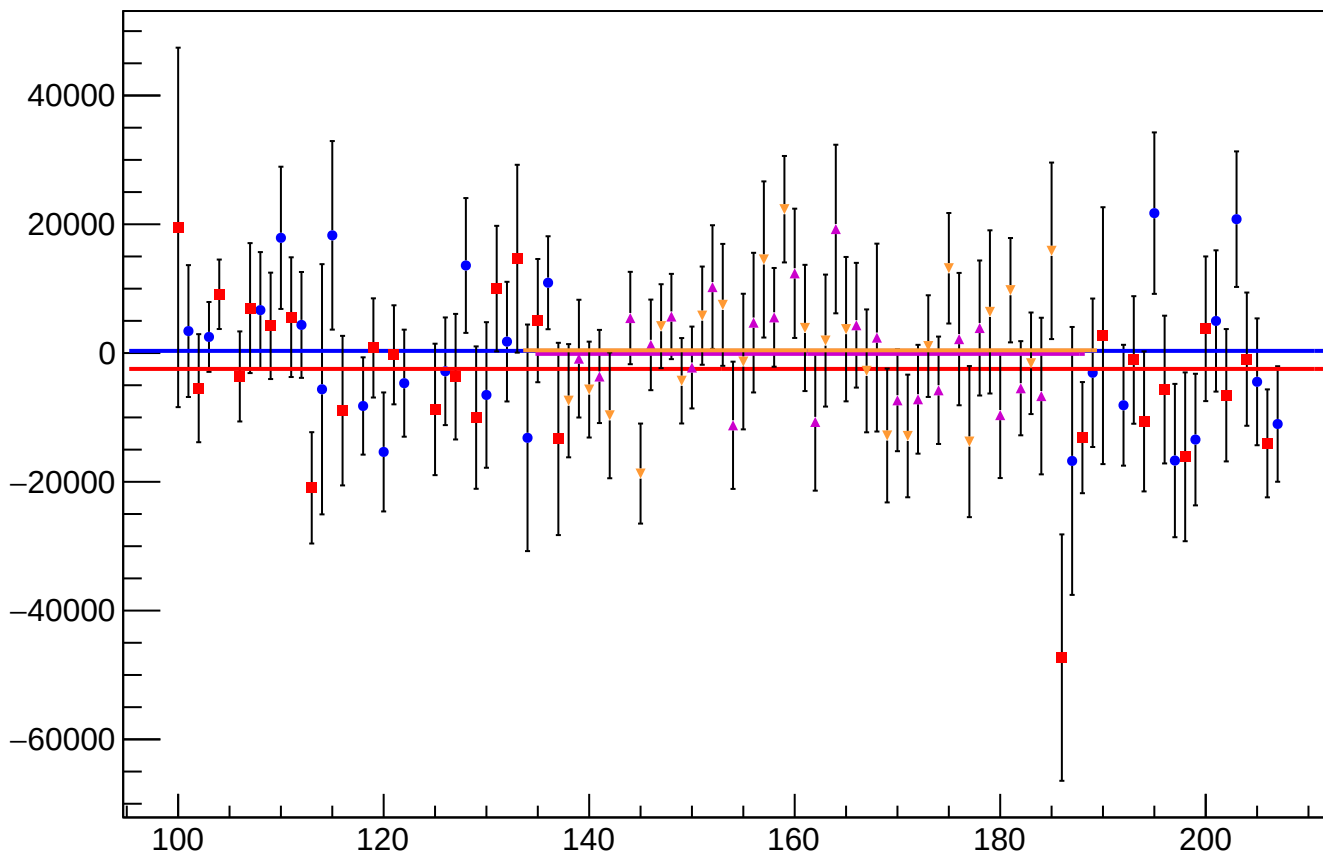
Left In: 1598.119 $\pm$ 0.265  $\chi^2$ /NDF:169157.7/22

+ sign 1566.300 $\pm$ 0.193  $\chi^2$ /NDF: 929843.6/49

All: 1567.244 $\pm$ 0.136  $\chi^2$ /NDF: 1710345.6/10

- sign 1568.169 $\pm$ 0.191  $\chi^2$ /NDF: 780454.5/51

asym\_us\_avg\_at2lr\_avg\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In:  $336.371 \pm 1892.226$   $\chi^2/\text{NDF}$ : 28.7/25

Left Out:  $426.702 \pm 1819.879$   $\chi^2/\text{NDF}$ : 29.4/23

Right Out:  $-2465.446 \pm 1791.809$   $\chi^2/\text{NDF}$ : 29.0/28

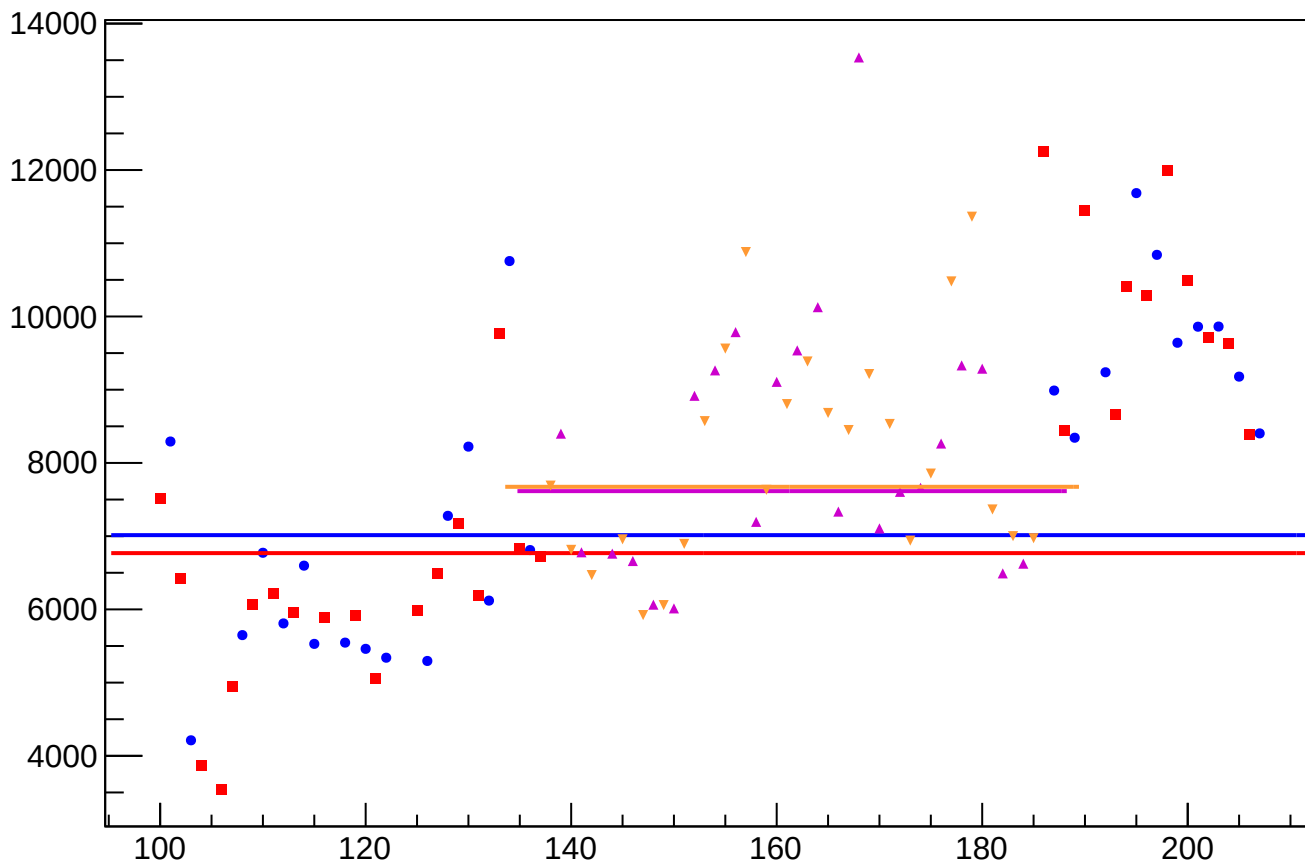
Left In:  $-126.376 \pm 1814.828$   $\chi^2/\text{NDF}$ : 13.9/22

+ sign  $383.296 \pm 1311.680$   $\chi^2/\text{NDF}$ : 58.0/49

All:  $-487.749 \pm 914.276$   $\chi^2/\text{NDF}$ : 102.6/101

- sign  $-1310.839 \pm 1275.061$   $\chi^2/\text{NDF}$ : 43.7/51

asym\_us\_avg\_at2lr\_avg\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 7013.981 $\pm$ 1.338  $\chi^2$ /NDF: 2306914.6/25

Left Out: 7674.063 $\pm$ 1.287  $\chi^2$ /NDF: 1076712.6/23

Right Out: 6768.456 $\pm$ 1.267  $\chi^2$ /NDF: 3118432.5/28

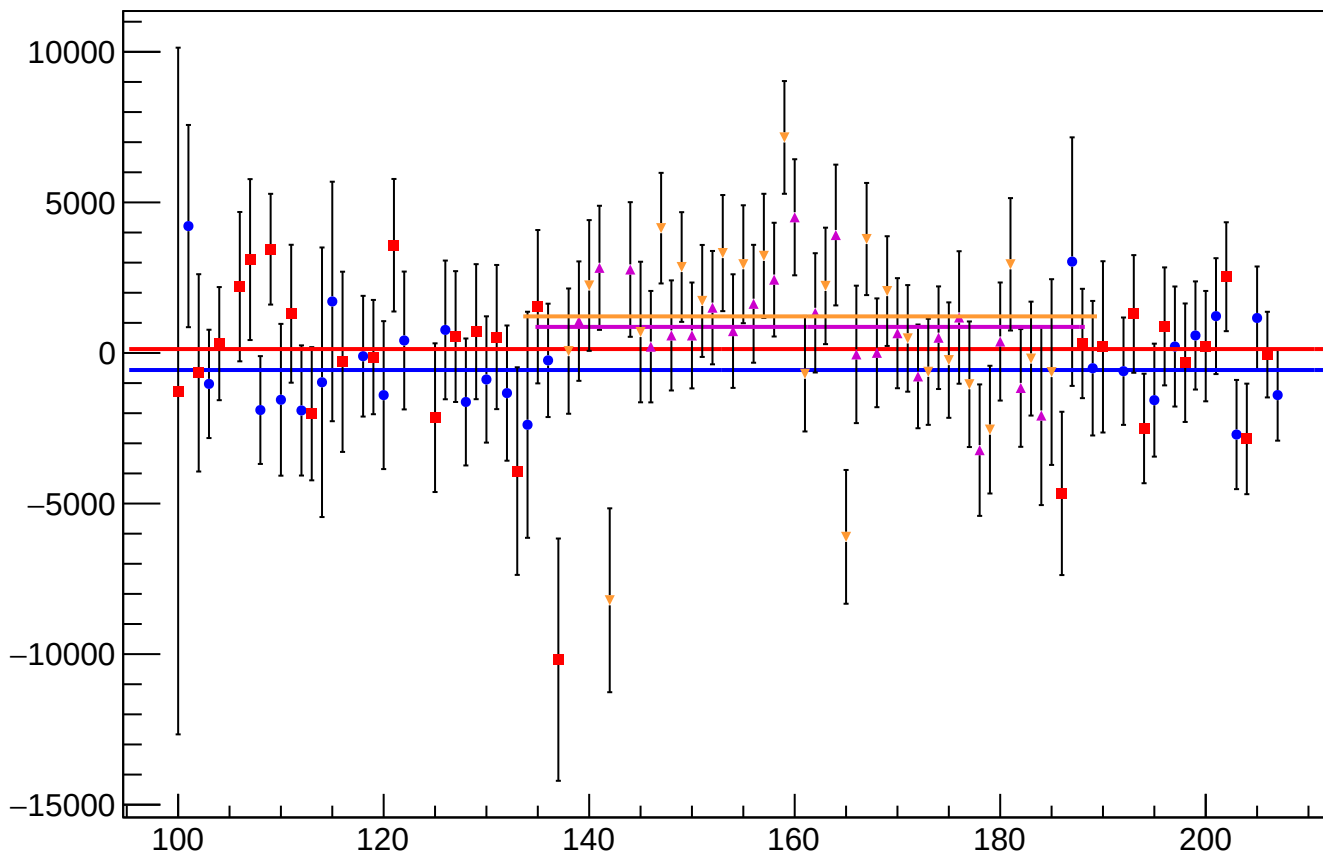
Left In: 7614.964 $\pm$ 1.283  $\chi^2$ /NDF: 1224525.6/22

+ sign 7356.881 $\pm$ 0.927  $\chi^2$ /NDF: 3510057.3/49

All: 7269.180 $\pm$ 0.646  $\chi^2$ /NDF: 8090748.6/10

- sign 7186.307 $\pm$ 0.902  $\chi^2$ /NDF: 4563301.6/51

# dit\_asym\_us\_avg\_at2lr\_avg\_dd\_mean vs Slug



Right In: -565.835 $\pm$ 416.493  $\chi^2/\text{NDF}$ : 10.1/25

Left Out: 1215.353 $\pm$ 409.584  $\chi^2/\text{NDF}$ : 48.5/23

Right Out: 130.129 $\pm$ 406.054  $\chi^2/\text{NDF}$ : 28.4/28

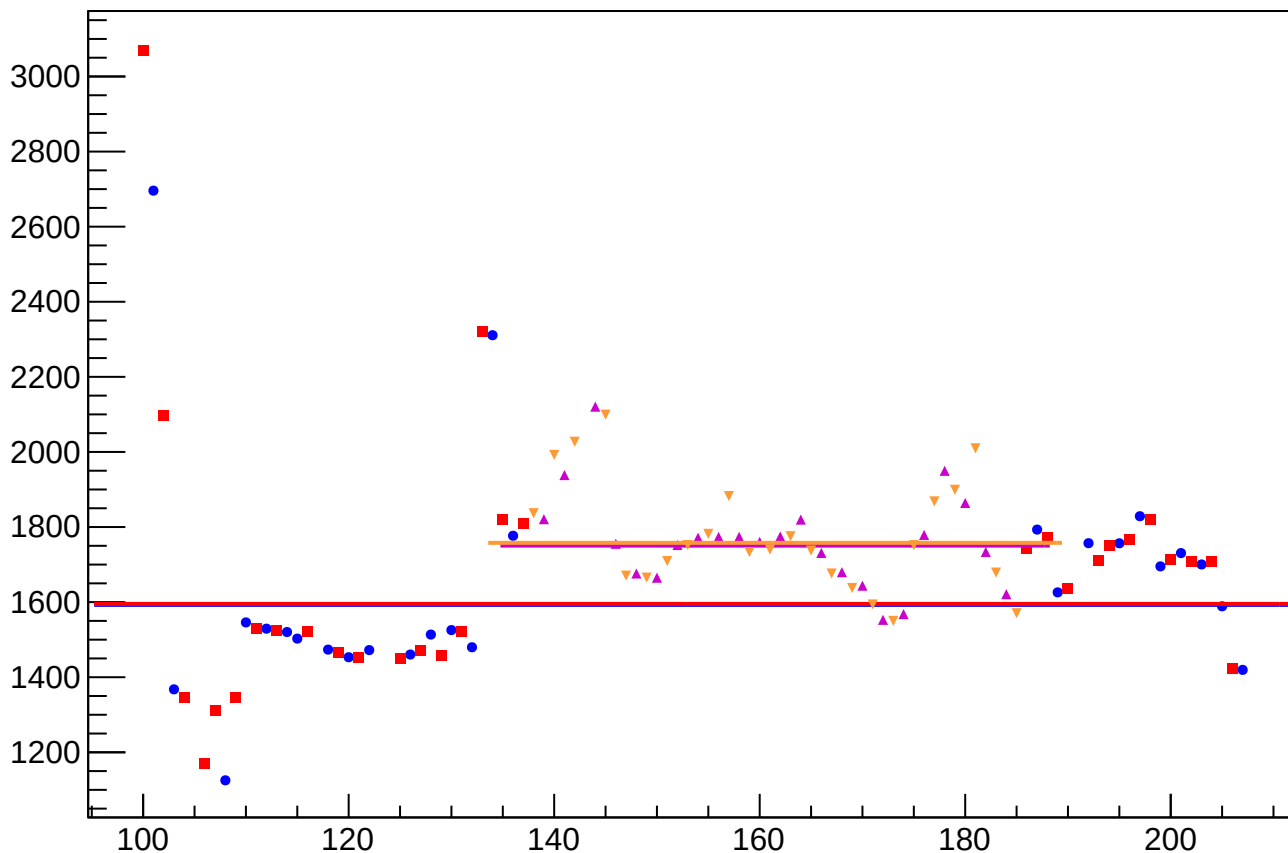
Left In: 866.022 $\pm$ 410.038  $\chi^2/\text{NDF}$ : 15.1/22

+ sign 339.653 $\pm$ 292.032  $\chi^2/\text{NDF}$ : 67.8/49

All: 418.004 $\pm$ 205.245  $\chi^2/\text{NDF}$ : 113.1/101

- sign 494.483 $\pm$ 288.522  $\chi^2/\text{NDF}$ : 45.2/51

# dit\_asym\_us\_avg\_at2lr\_avg\_dd\_rms vs Slug



Right In: 1592.718 $\pm$ 0.295  $\chi^2$ /NDF: 630823.4/25

Left Out: 1757.965 $\pm$ 0.290  $\chi^2$ /NDF: 213284.1/23

Right Out: 1595.239 $\pm$ 0.287  $\chi^2$ /NDF: 531161.5/28

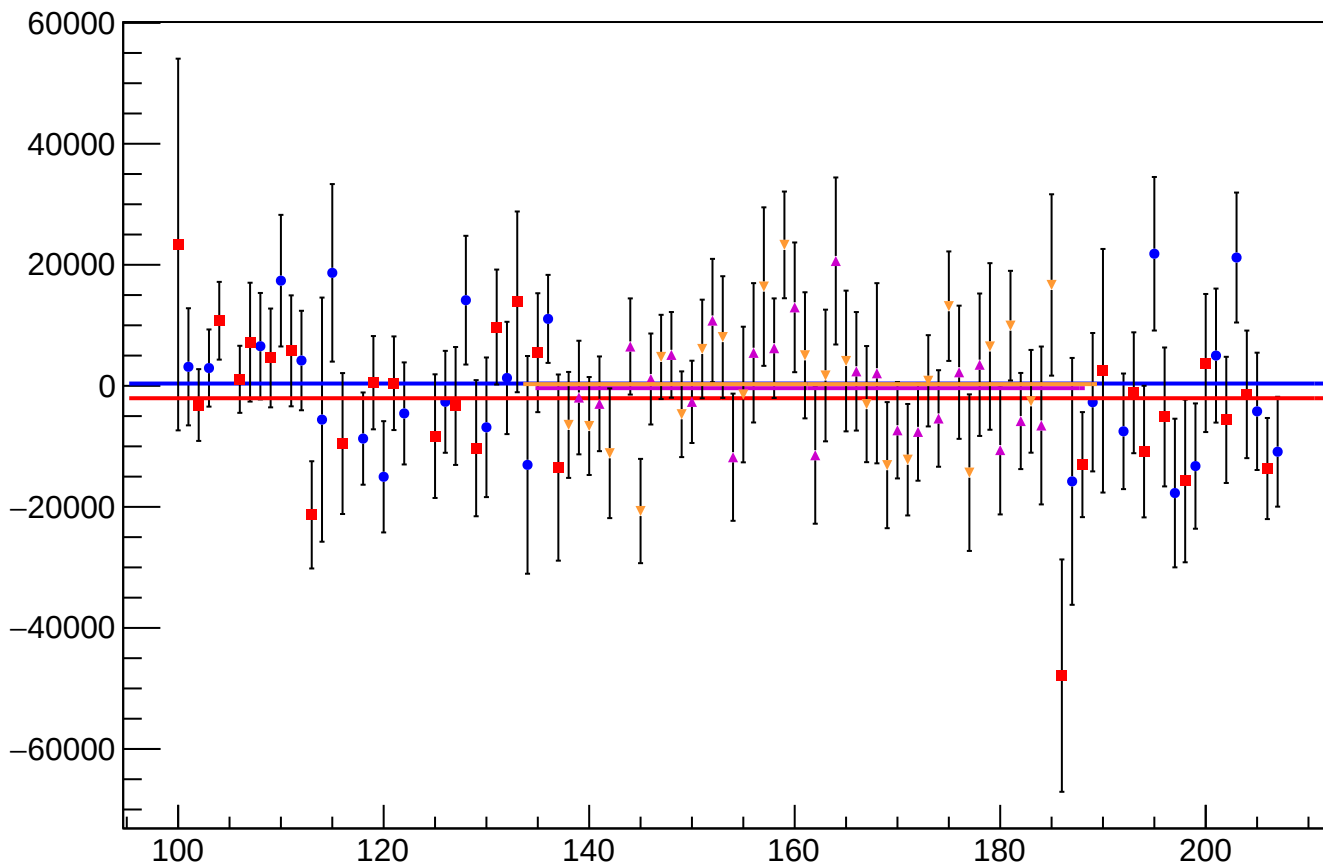
Left In: 1750.477 $\pm$ 0.290  $\chi^2$ /NDF: 171889.4/22

+ sign 1676.723 $\pm$ 0.206  $\chi^2$ /NDF: 1004158.1/49

All: 1674.378 $\pm$ 0.145  $\chi^2$ /NDF: 1852217.1/10

- sign 1672.089 $\pm$ 0.204  $\chi^2$ /NDF: 847804.2/51

asym\_us\_avg\_at2lr\_avg\_dd\_dit\_correction\_mean vs Slug



Right In: 380.230 $\pm$ 1929.525  $\chi^2$ /NDF: 28.4/25

Left Out: 284.925 $\pm$ 1920.134  $\chi^2$ /NDF: 28.7/23

Right Out: -2045.889 $\pm$ 1752.088  $\chi^2$ /NDF: 28.8/28

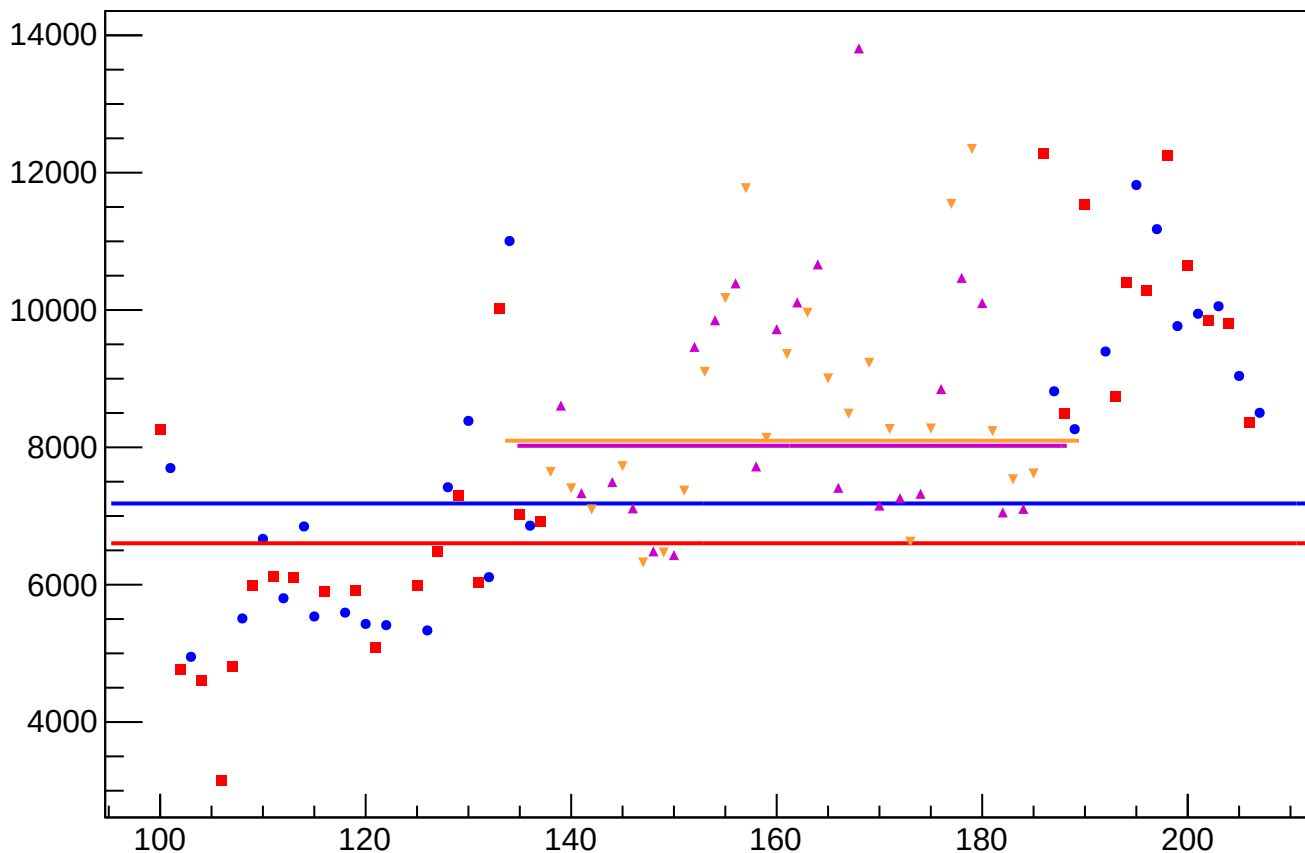
Left In: -382.660 $\pm$ 1912.385  $\chi^2$ /NDF: 13.6/22

+ sign 332.345 $\pm$ 1361.048  $\chi^2$ /NDF: 57.0/49

All: -519.466 $\pm$ 936.993  $\chi^2$ /NDF: 100.6/101

- sign -1286.891 $\pm$ 1291.872  $\chi^2$ /NDF: 42.8/51

asym\_us\_avg\_at2lr\_avg\_dd\_dit\_correction\_rms vs Slug



Right In: 7182.825+/-1.364  $\chi^2/\text{NDF}$ : 2023420.6/25

Left Out: 8096.821+/-1.358  $\chi^2/\text{NDF}$ : 1087790.8/23

Right Out: 6603.454+/-1.239  $\chi^2/\text{NDF}$ : 3492969.8/28

Left In: 8022.726+/-1.352  $\chi^2/\text{NDF}$ : 1225549.2/22

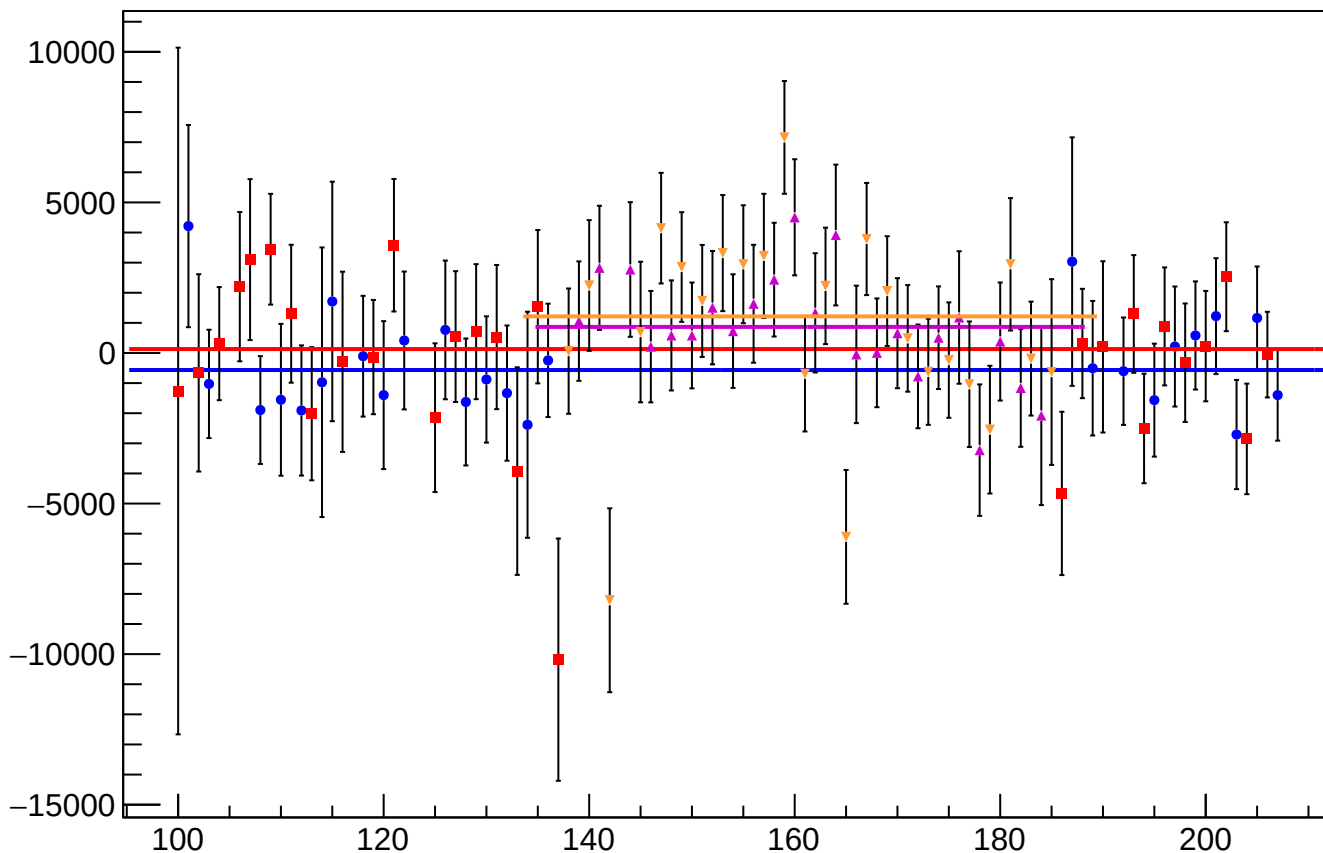
+ sign 7642.053+/-0.962  $\chi^2/\text{NDF}$ : 3336687.9/49

All: 7436.402+/-0.663  $\chi^2/\text{NDF}$ : 8740883.0/10

- sign 7251.124+/-0.913  $\chi^2/\text{NDF}$ : 5317396.9/51



eigen\_dit\_asym\_us\_avg\_at2lr\_avg\_dd\_mean vs Slug



Right In:  $-565.833 \pm 416.493$   $\chi^2/\text{NDF}$ : 10.1/25

Left Out:  $1215.361 \pm 409.585$   $\chi^2/\text{NDF}$ : 48.5/23

Right Out:  $130.131 \pm 406.054$   $\chi^2/\text{NDF}$ : 28.4/28

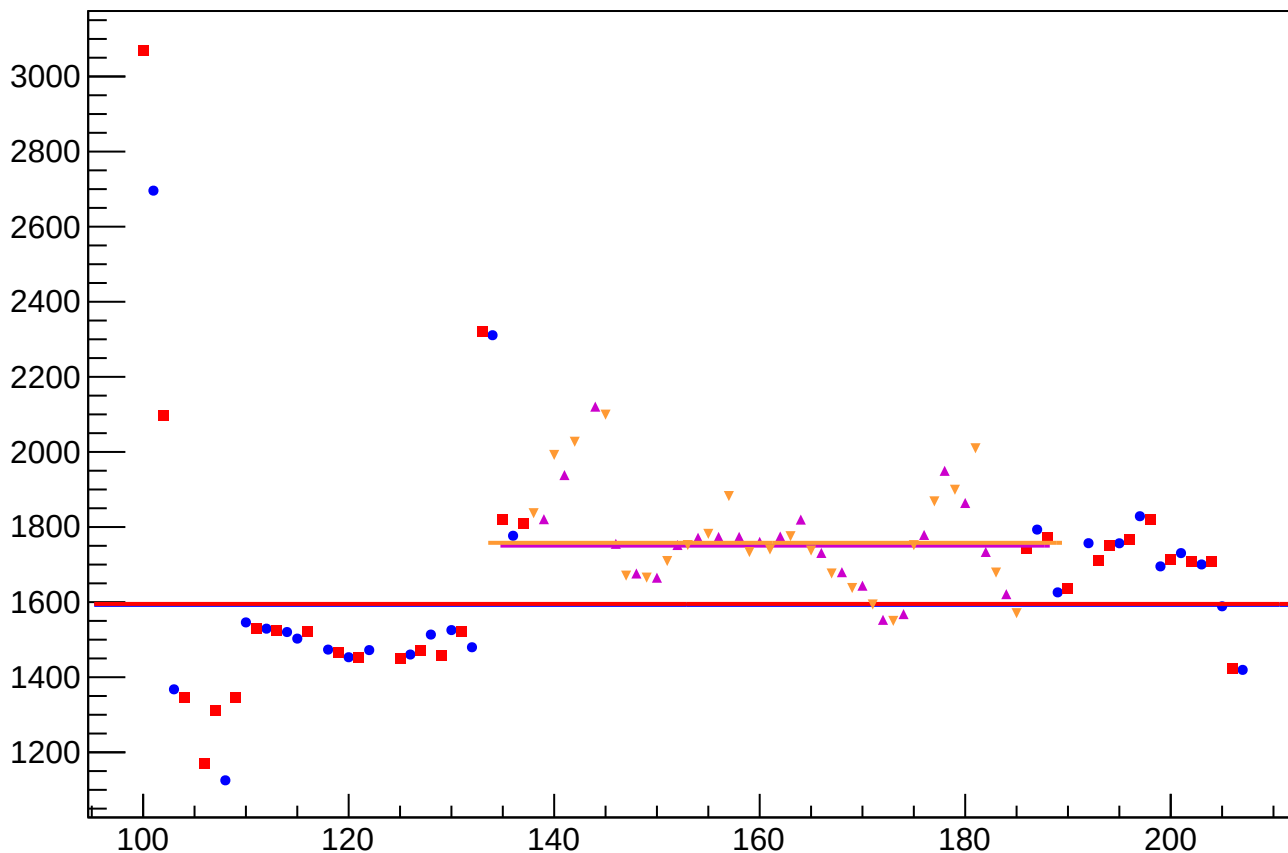
Left In:  $866.021 \pm 410.039$   $\chi^2/\text{NDF}$ : 15.1/22

+ sign  $339.657 \pm 292.032$   $\chi^2/\text{NDF}$ : 67.8/49

All:  $418.006 \pm 205.246$   $\chi^2/\text{NDF}$ : 113.1/101

- sign  $494.483 \pm 288.522$   $\chi^2/\text{NDF}$ : 45.2/51

eigen\_dit\_asym\_us\_avg\_at2lr\_avg\_dd\_rms vs Slug



Right In: 1592.718 $\pm$ 0.295  $\chi^2$ /NDF: 630823.2/25

Left Out: 1757.968 $\pm$ 0.290  $\chi^2$ /NDF:213292.2/23

Right Out: 1595.240 $\pm$ 0.287  $\chi^2$ /NDF: 531163.1/28

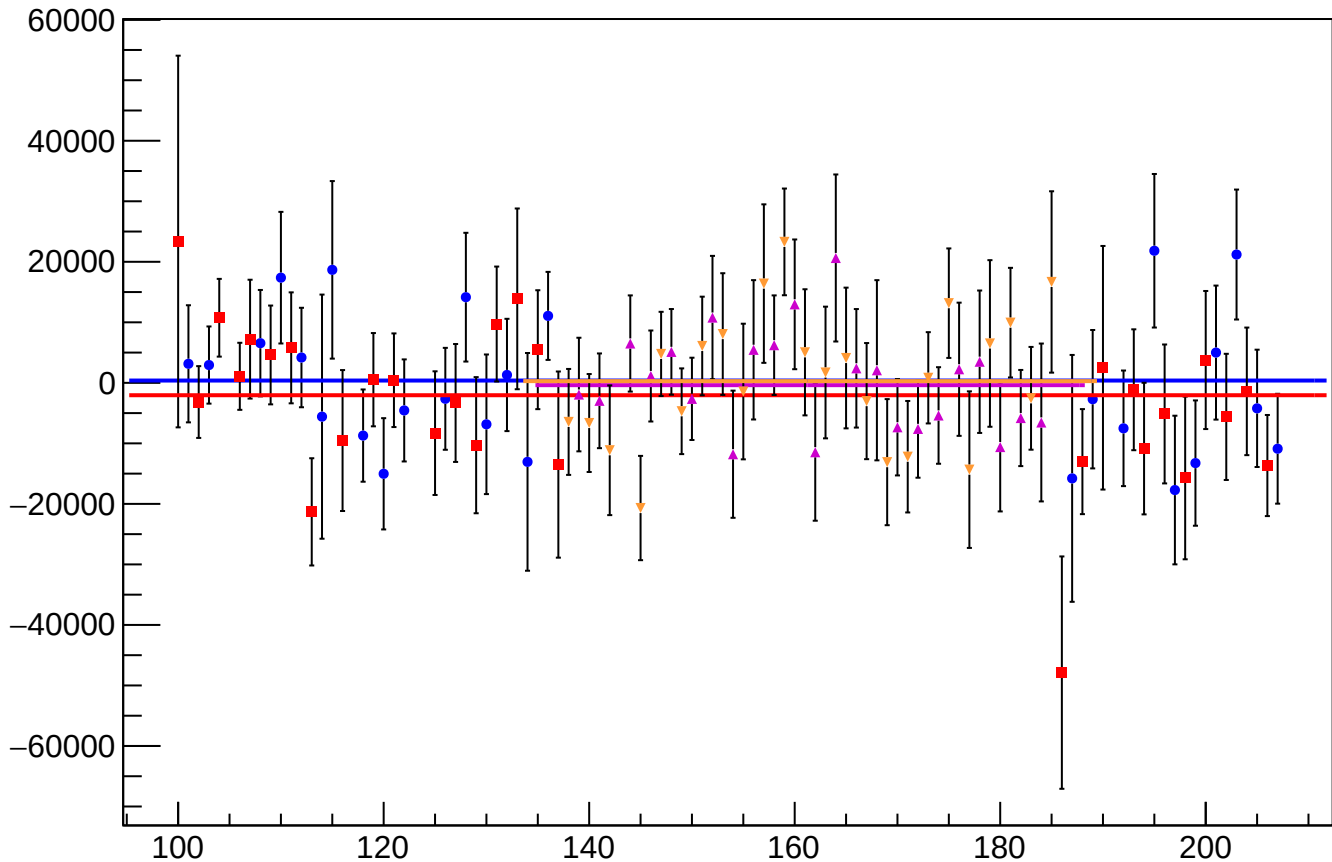
Left In: 1750.480 $\pm$ 0.290  $\chi^2$ /NDF:171897.3/22

+ sign 1676.724 $\pm$ 0.206  $\chi^2$ /NDF: 1004171.1/49

All: 1674.379 $\pm$ 0.145  $\chi^2$ /NDF: 1852244.2/10

- sign 1672.090 $\pm$ 0.204  $\chi^2$ /NDF: 847818.3/51

asym\_us\_avg\_at2lr\_avg\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In: 380.221 $\pm$ 1929.524  $\chi^2$ /NDF: 28.4/25

Left Out: 284.927 $\pm$ 1920.138  $\chi^2$ /NDF:28.7/23

Right Out: -2045.876 $\pm$ 1752.086  $\chi^2$ /NDF: 28.8/28

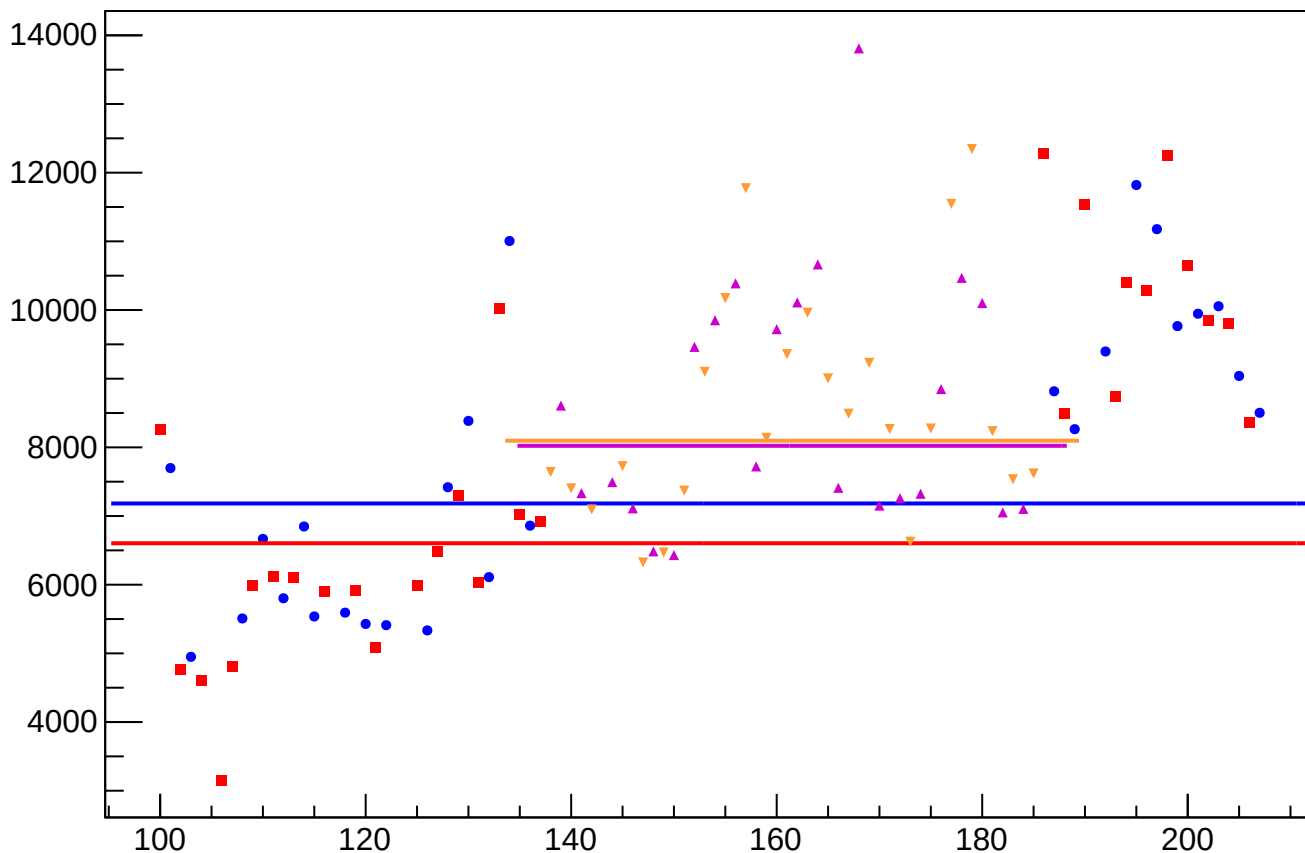
Left In: -382.663 $\pm$ 1912.388  $\chi^2$ /NDF:13.6/22

+ sign 332.342 $\pm$ 1361.049  $\chi^2$ /NDF: 57.0/49

All: -519.467 $\pm$ 936.993  $\chi^2$ /NDF: 100.6/101

- sign -1286.888 $\pm$ 1291.872  $\chi^2$ /NDF: 42.8/51

asym\_us\_avg\_at2lr\_avg\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 7182.815+/-1.364  $\chi^2/\text{NDF}$ : 2023446.1/25

Left Out: 8096.833+/-1.358  $\chi^2/\text{NDF}$ : 1087793.4/23

Right Out: 6603.444+/-1.239  $\chi^2/\text{NDF}$ : 3492994.6/28

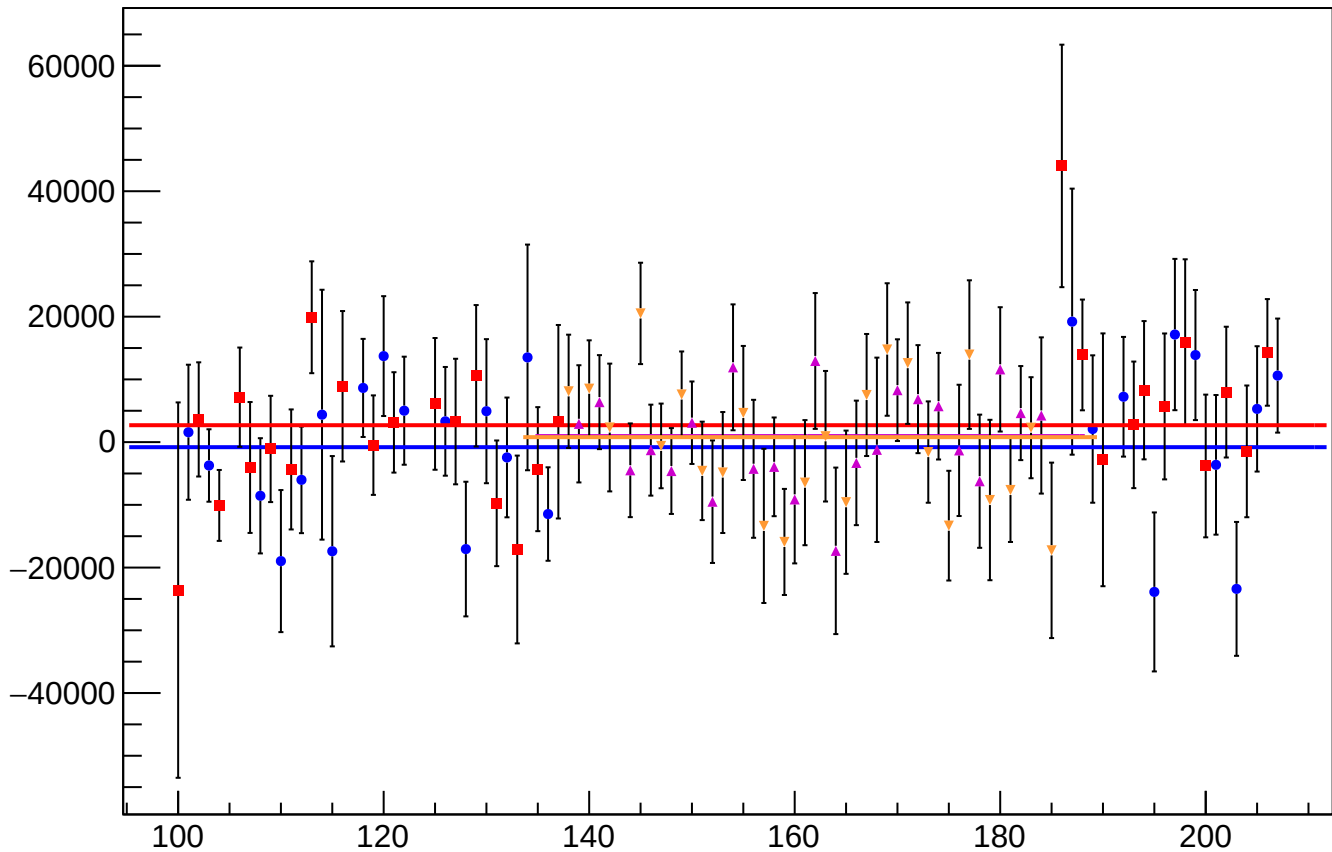
Left In: 8022.738+/-1.352  $\chi^2/\text{NDF}$ : 1225553.6/22

+ sign 7642.053+/-0.962  $\chi^2/\text{NDF}$ : 3336726.8/49

All: 7436.401+/-0.663  $\chi^2/\text{NDF}$ : 8740969.7/10

- sign 7251.122+/-0.913  $\chi^2/\text{NDF}$ : 5317443.8/51

# asym\_us\_avg\_at2lr\_avg\_dd\_mean vs Slug



Right In:  $-805.986 \pm 1949.029$   $\chi^2/\text{NDF}$ : 30.6/25

Left Out:  $791.264 \pm 1865.111$   $\chi^2/\text{NDF}$ : 27.2/23

Right Out:  $2696.332 \pm 1856.176$   $\chi^2/\text{NDF}$ : 26.1/28

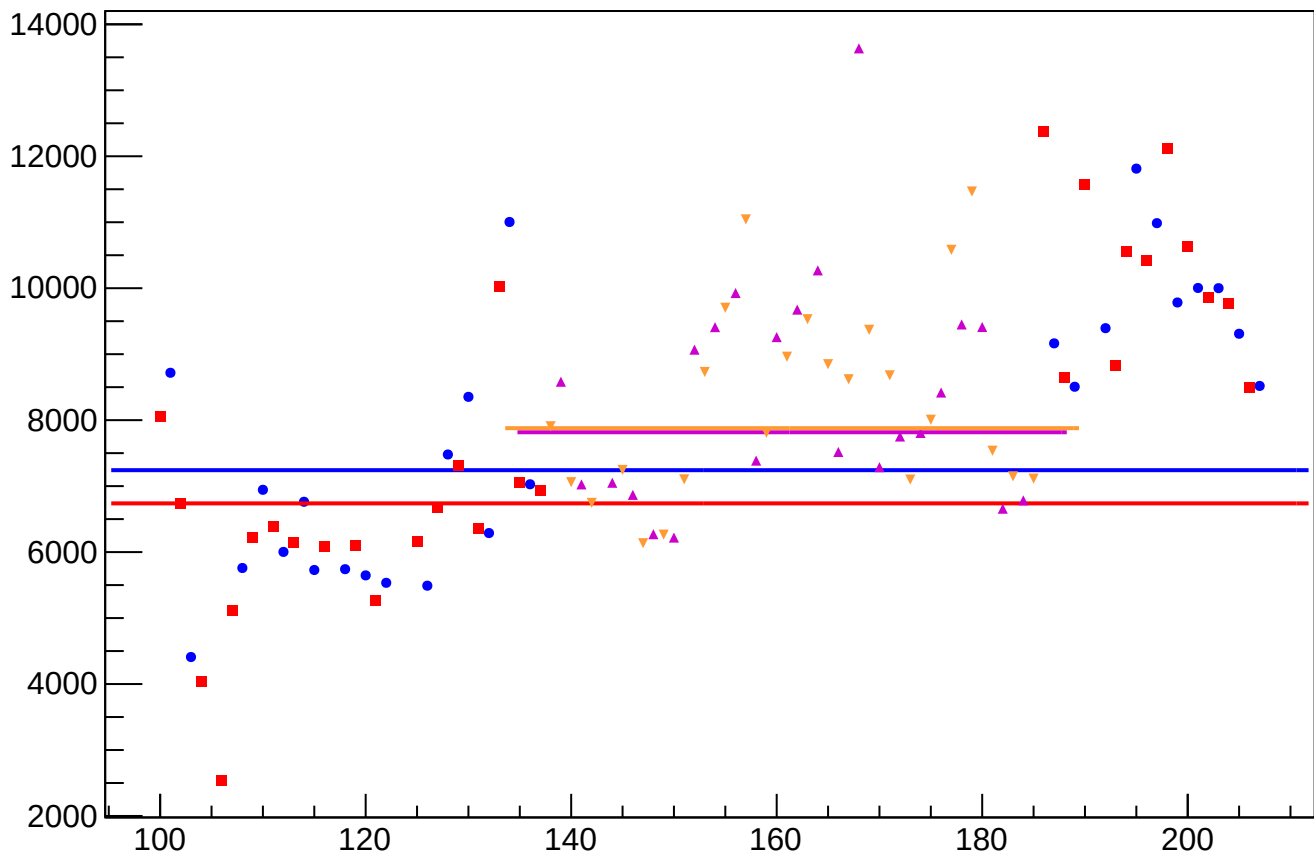
Left In:  $963.967 \pm 1859.926$   $\chi^2/\text{NDF}$ : 12.8/22

+ sign  $27.765 \pm 1347.523$   $\chi^2/\text{NDF}$ : 58.1/49

All:  $952.663 \pm 940.707$   $\chi^2/\text{NDF}$ : 98.4/101

- sign  $1831.898 \pm 1313.838$   $\chi^2/\text{NDF}$ : 39.3/51

# asym\_us\_avg\_at2lr\_avg\_dd\_rms vs Slug



Right In: 7241.652 $\pm$ 1.378  $\chi^2$ /NDF: 2150738.5/25

Left Out: 7878.482 $\pm$ 1.319  $\chi^2$ /NDF:990058.5/23

Right Out: 6738.402 $\pm$ 1.279  $\chi^2$ /NDF: 3729910.0/28

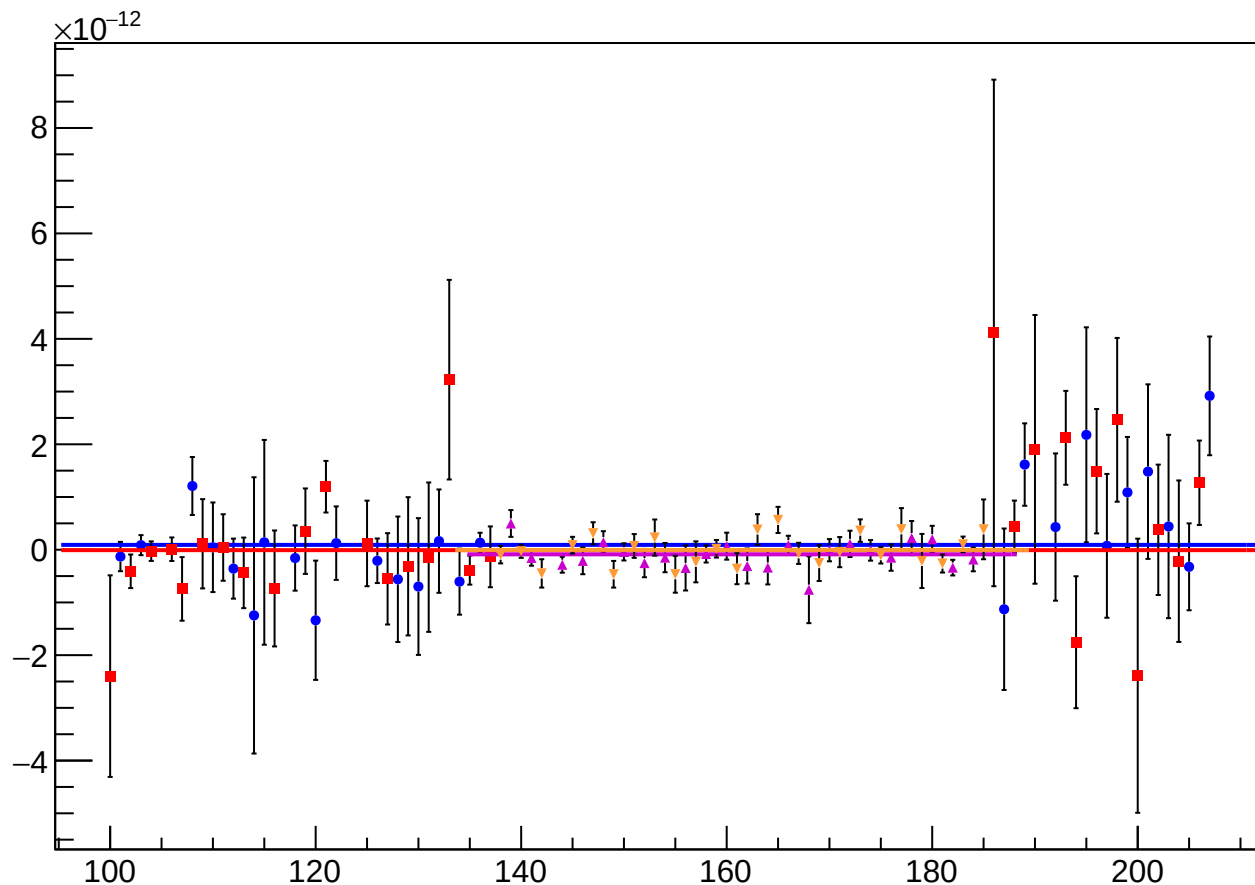
Left In: 7816.447 $\pm$ 1.315  $\chi^2$ /NDF:1132368.2/22

+ sign 7574.070 $\pm$ 0.953  $\chi^2$ /NDF: 3252253.7/49

All: 7412.327 $\pm$ 0.661  $\chi^2$ /NDF: 8515282.7/10

- sign 7262.518 $\pm$ 0.917  $\chi^2$ /NDF: 5207525.7/51

asym\_us\_avg\_at2lr\_avg\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 23.6/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 28.6/23

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 34.5/28

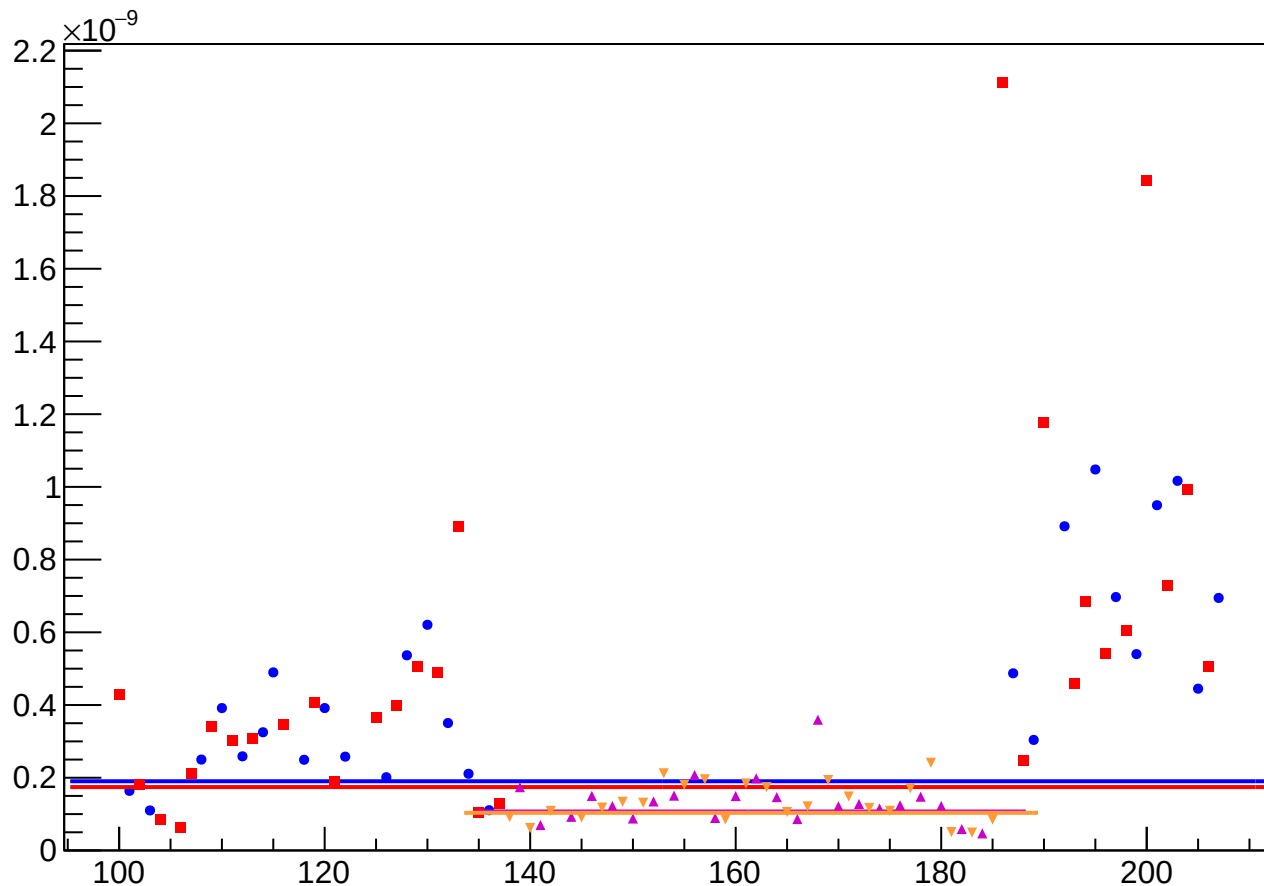
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 19.3/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 53.0/49

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 109.6/101

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 54.4/51

asym\_us\_avg\_at2lr\_avg\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4433927.5/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :1905146.0/23

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6071330.0/28

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :1596017.6/22

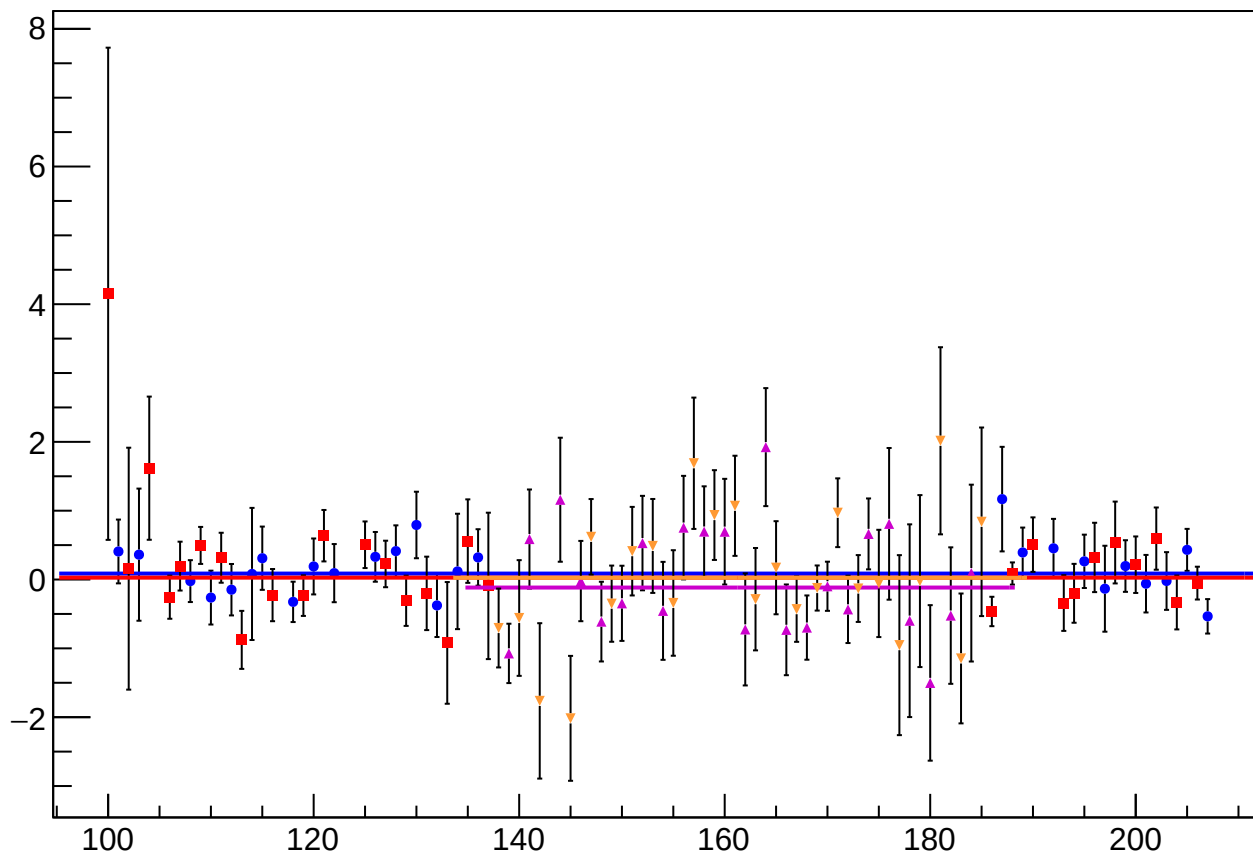
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7602909.2/49

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 16052517.3/101

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8448496.0/51



asym\_us\_avg\_at2lr\_avg\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.086 $\pm$ 0.079  $\chi^2$ /NDF: 20.4/25

Left Out: 0.025 $\pm$ 0.134  $\chi^2$ /NDF: 29.1/23

Right Out: 0.027 $\pm$ 0.067  $\chi^2$ /NDF: 34.0/28

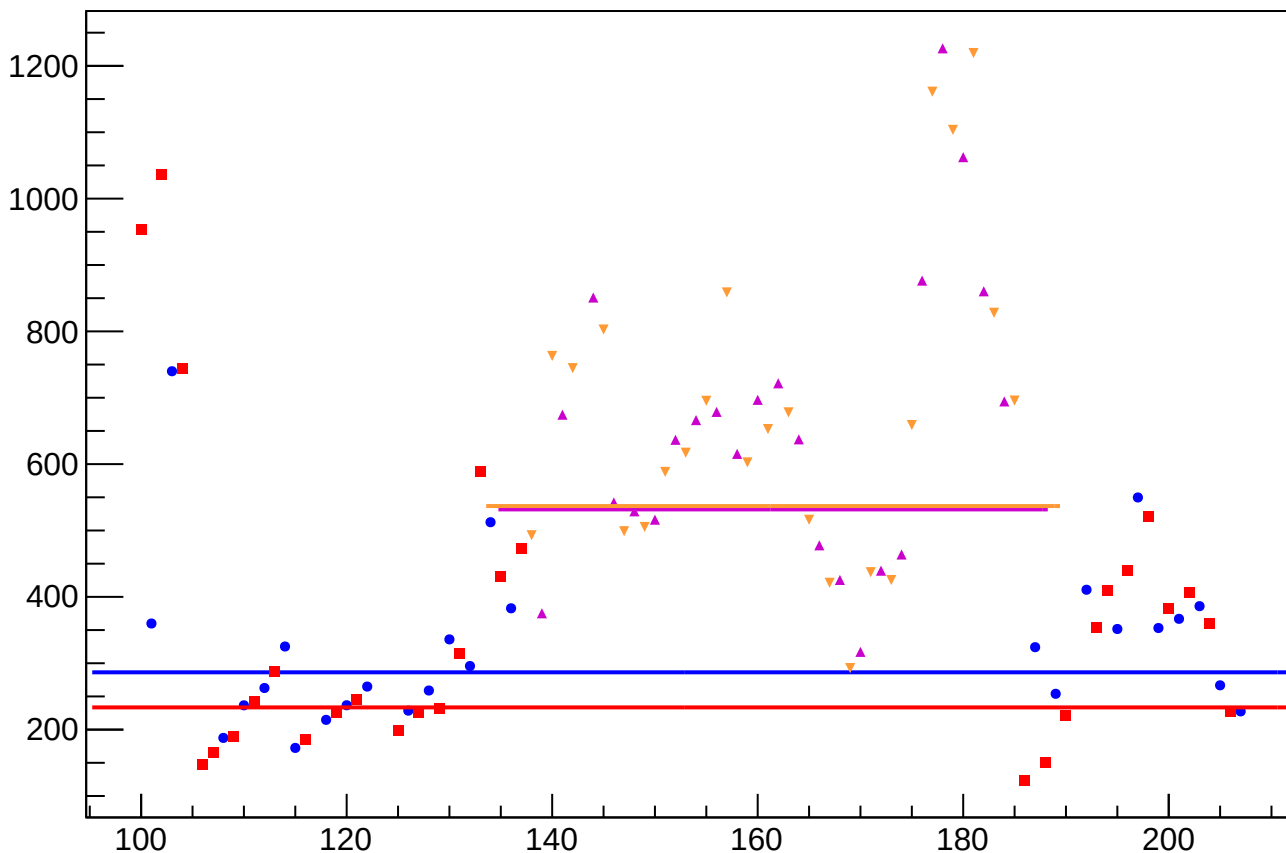
Left In: -0.117 $\pm$ 0.132  $\chi^2$ /NDF: 27.8/22

+ sign 0.071 $\pm$ 0.068  $\chi^2$ /NDF: 49.6/49

All: 0.030 $\pm$ 0.045  $\chi^2$ /NDF: 113.0/101

- sign -0.002 $\pm$ 0.059  $\chi^2$ /NDF: 62.8/51

asym\_us\_avg\_at2lr\_avg\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 286.330+/-0.056  $\chi^2/\text{NDF}$ : 2341934.4/25

Left Out: 536.821+/-0.095  $\chi^2/\text{NDF}$ : 3963242.1/23

Right Out: 233.479+/-0.047  $\chi^2/\text{NDF}$ : 5187454.0/28

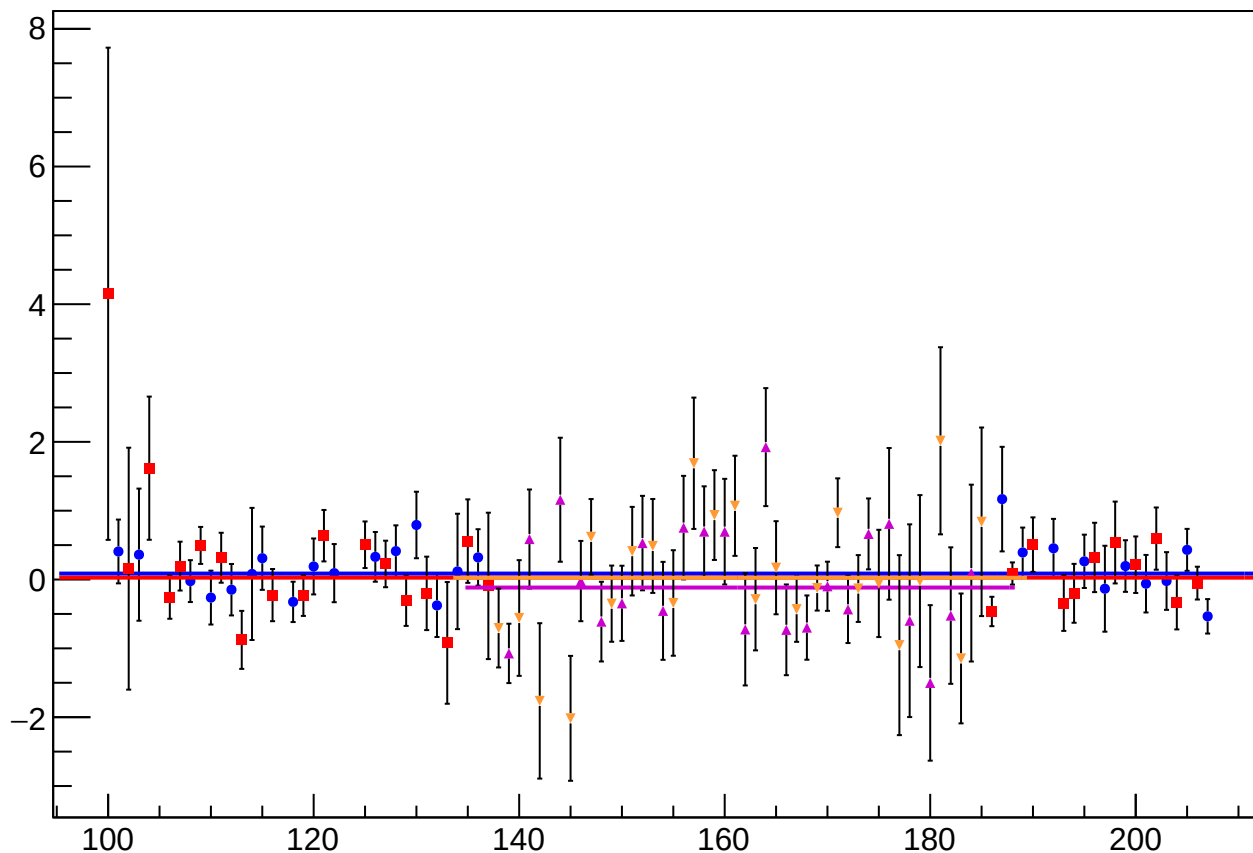
Left In: 531.769+/-0.094  $\chi^2/\text{NDF}$ : 3381209.0/22

+ sign 351.060+/-0.048  $\chi^2/\text{NDF}$ : 11490312.3/49

All: 318.481+/-0.032  $\chi^2/\text{NDF}$ : 28962675.1/10

- sign 293.628+/-0.042  $\chi^2/\text{NDF}$ : 16665515.0/51

asym\_us\_avg\_at2lr\_avg\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.086 $\pm$ 0.079  $\chi^2$ /NDF: 20.4/25

Left Out: 0.025 $\pm$ 0.134  $\chi^2$ /NDF: 29.1/23

Right Out: 0.027 $\pm$ 0.067  $\chi^2$ /NDF: 34.0/28

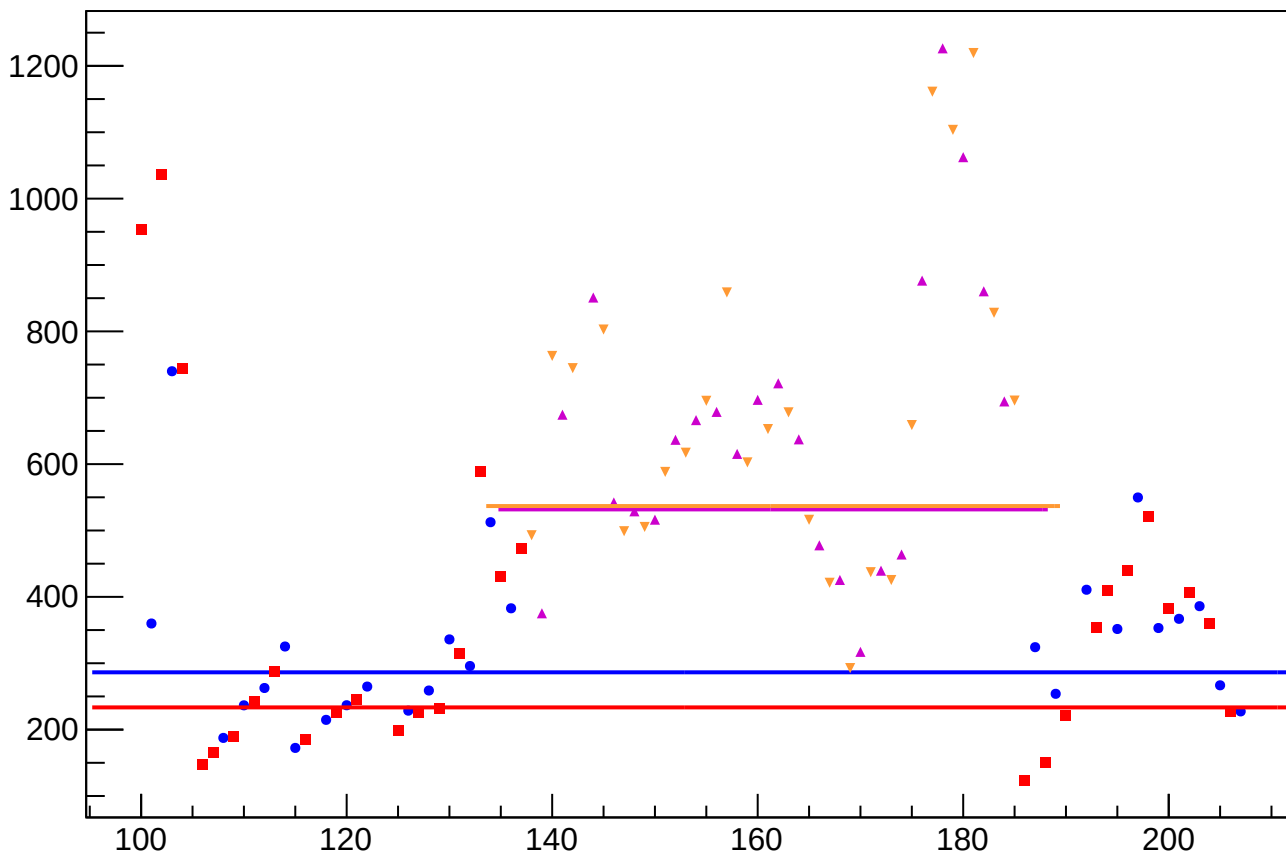
Left In: -0.117 $\pm$ 0.132  $\chi^2$ /NDF: 27.8/22

+ sign 0.071 $\pm$ 0.068  $\chi^2$ /NDF: 49.6/49

All: 0.030 $\pm$ 0.045  $\chi^2$ /NDF: 113.0/101

- sign -0.002 $\pm$ 0.059  $\chi^2$ /NDF: 62.8/51

asym\_us\_avg\_at2lr\_avg\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 286.330 $\pm$ 0.056  $\chi^2$ /NDF: 2341934.4/25

Left Out: 536.821 $\pm$ 0.095  $\chi^2$ /NDF: 3963242.1/23

Right Out: 233.479 $\pm$ 0.047  $\chi^2$ /NDF: 5187454.0/28

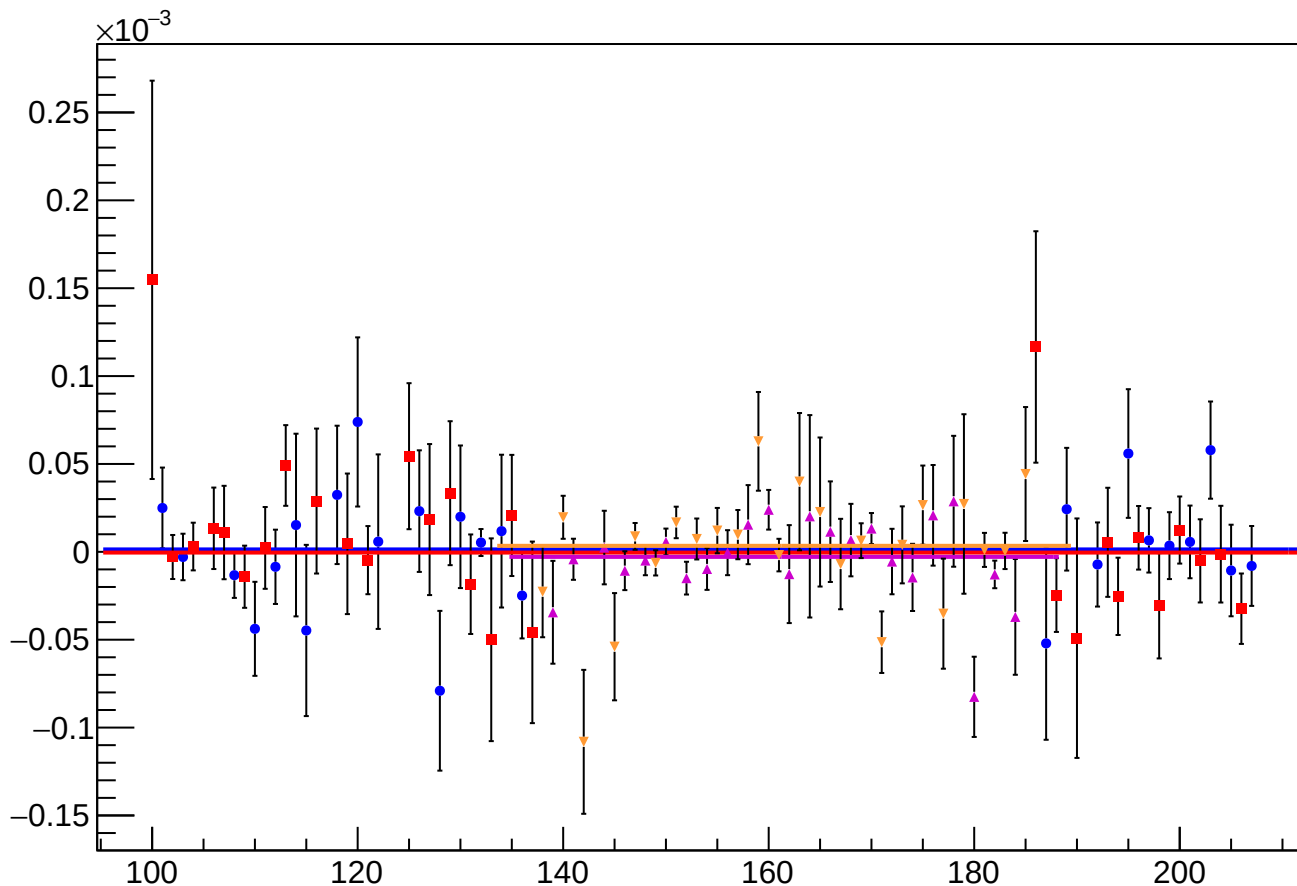
Left In: 531.769 $\pm$ 0.094  $\chi^2$ /NDF: 3381209.0/22

+ sign 351.060 $\pm$ 0.048  $\chi^2$ /NDF: 11490312.3/49

All: 318.481 $\pm$ 0.032  $\chi^2$ /NDF: 28962675.1/10

- sign 293.628 $\pm$ 0.042  $\chi^2$ /NDF: 16665515.0/51

asym\_us\_avg\_at2lr\_avg\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 23.0/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:39.1/23

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 23.9/28

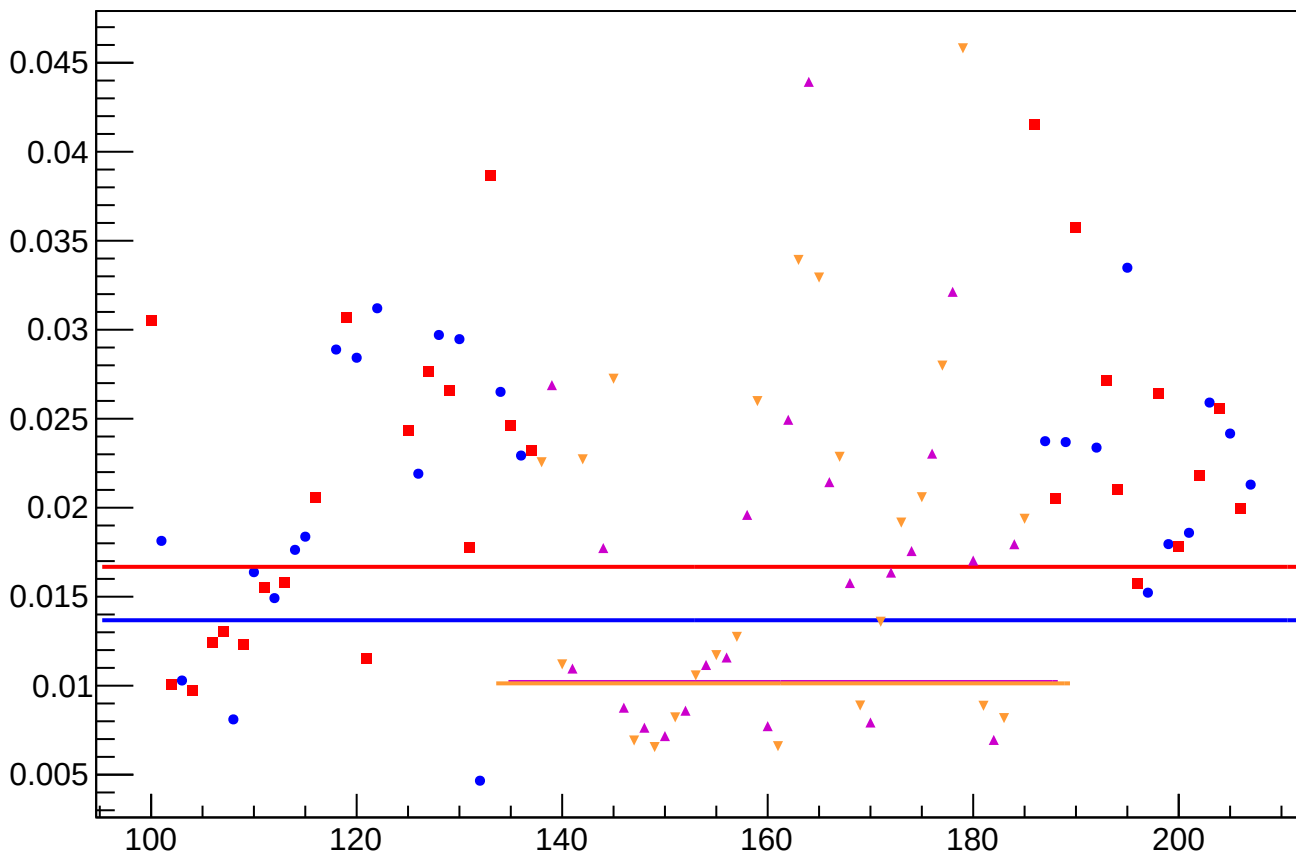
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:32.2/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 62.2/49

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 120.8/101

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 56.3/51

asym\_us\_avg\_at2lr\_avg\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.014 $\pm$ 0.000  $\chi^2$ /NDF: 7572992.6/25

Left Out: 0.010 $\pm$ 0.000  $\chi^2$ /NDF: 7812047.6/23

Right Out: 0.017 $\pm$ 0.000  $\chi^2$ /NDF: 3890011.0/28

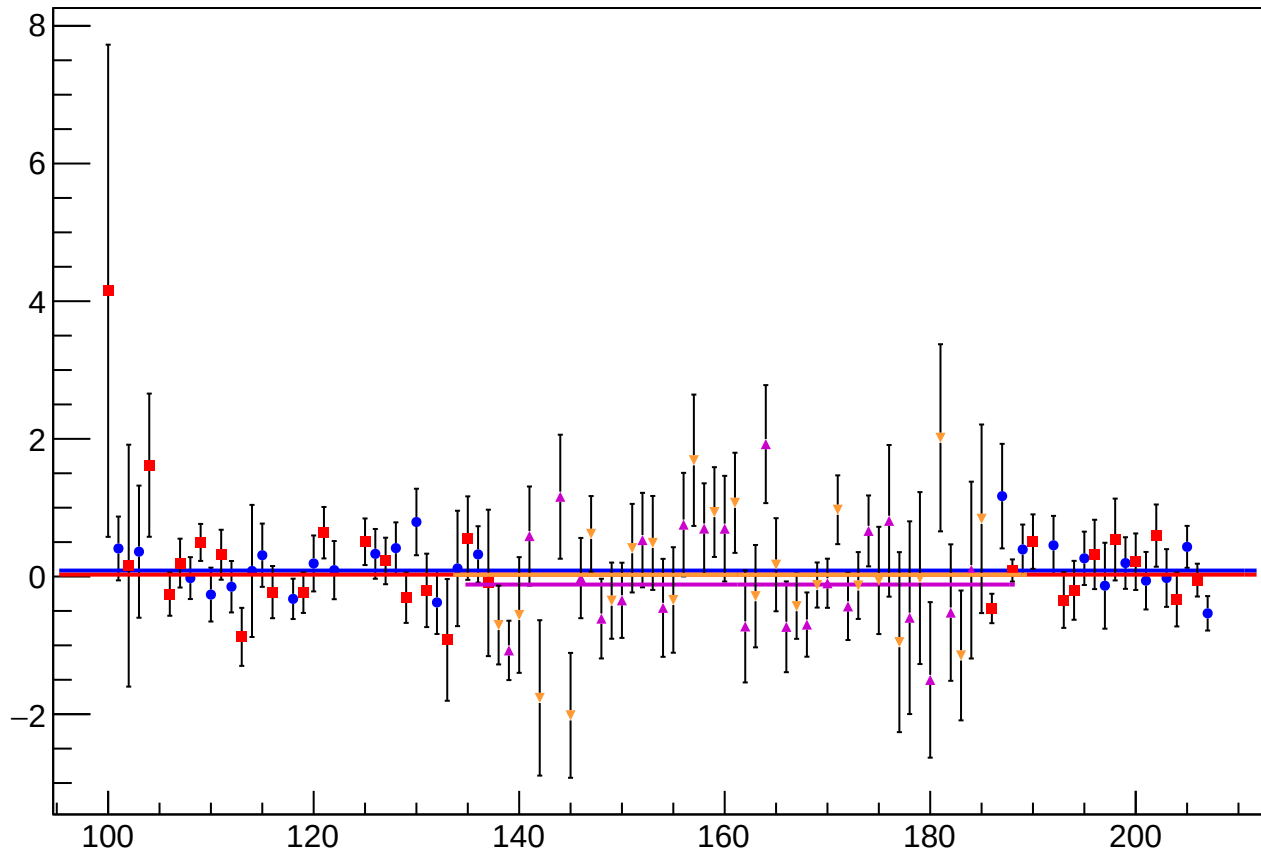
Left In: 0.010 $\pm$ 0.000  $\chi^2$ /NDF: 6075883.8/22

+ sign 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 16389171.9/49

All: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 29436384.1/101

- sign 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 12935580.8/51

asym\_us\_avg\_at2lr\_avg\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.086 $\pm$ 0.079  $\chi^2$ /NDF: 20.4/25

Left Out: 0.025 $\pm$ 0.134  $\chi^2$ /NDF: 29.1/23

Right Out: 0.027 $\pm$ 0.067  $\chi^2$ /NDF: 34.0/28

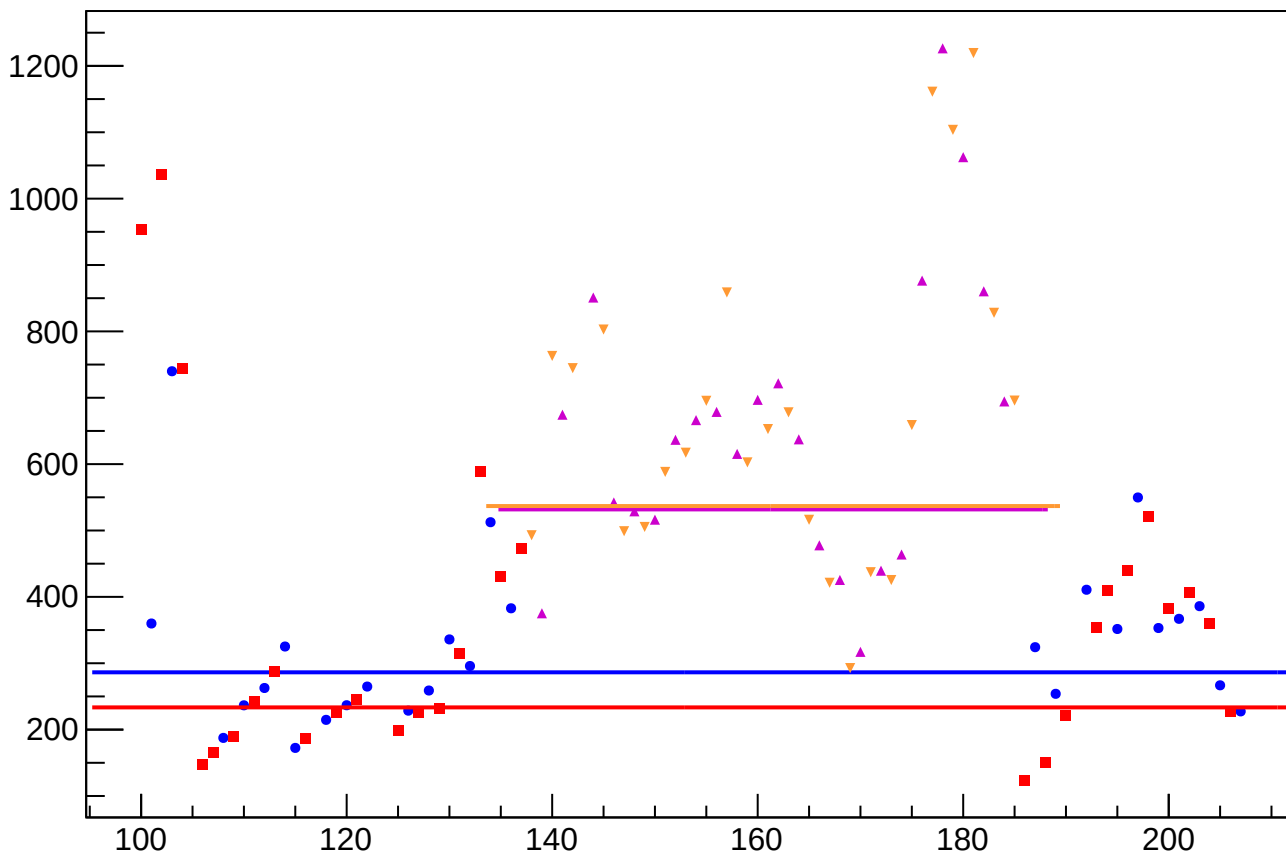
Left In: -0.117 $\pm$ 0.132  $\chi^2$ /NDF: 27.8/22

+ sign 0.071 $\pm$ 0.068  $\chi^2$ /NDF: 49.6/49

All: 0.030 $\pm$ 0.045  $\chi^2$ /NDF: 113.0/101

- sign -0.002 $\pm$ 0.059  $\chi^2$ /NDF: 62.8/51

asym\_us\_avg\_at2lr\_avg\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 286.328+/-0.056  $\chi^2/\text{NDF}$ : 2341938.7/25

Left Out: 536.822+/-0.095  $\chi^2/\text{NDF}$ : 3963422.5/23

Right Out: 233.477+/-0.047  $\chi^2/\text{NDF}$ : 5187609.8/28

Left In: 531.773+/-0.094  $\chi^2/\text{NDF}$ : 3381293.8/22

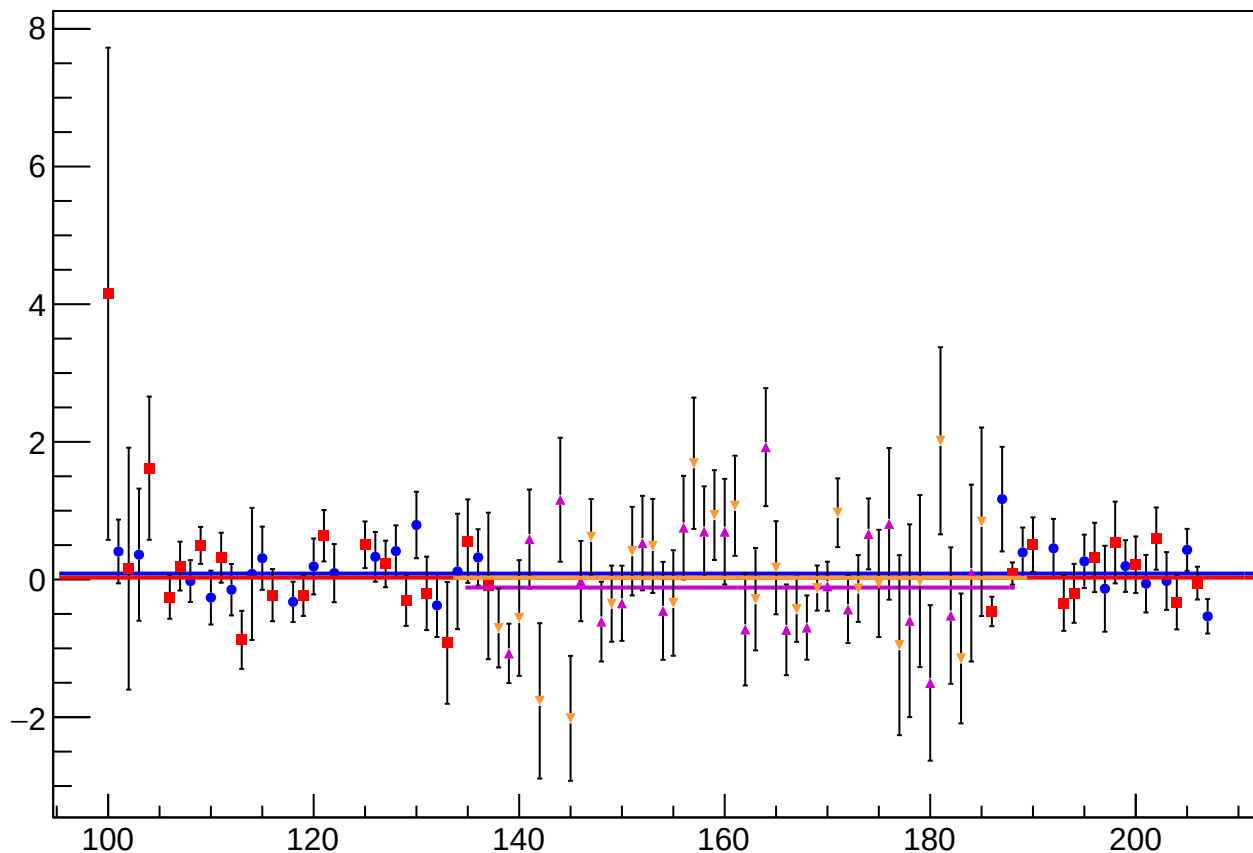
+ sign 351.058+/-0.048  $\chi^2/\text{NDF}$ : 11490563.8/49

All: 318.479+/-0.032  $\chi^2/\text{NDF}$ : 28963411.0/10

- sign 293.625+/-0.042  $\chi^2/\text{NDF}$ : 16665975.6/51



asym\_us\_avg\_at2lr\_avg\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.086 $\pm$ 0.079  $\chi^2$ /NDF: 20.4/25

Left Out: 0.025 $\pm$ 0.134  $\chi^2$ /NDF: 29.1/23

Right Out: 0.027 $\pm$ 0.067  $\chi^2$ /NDF: 34.0/28

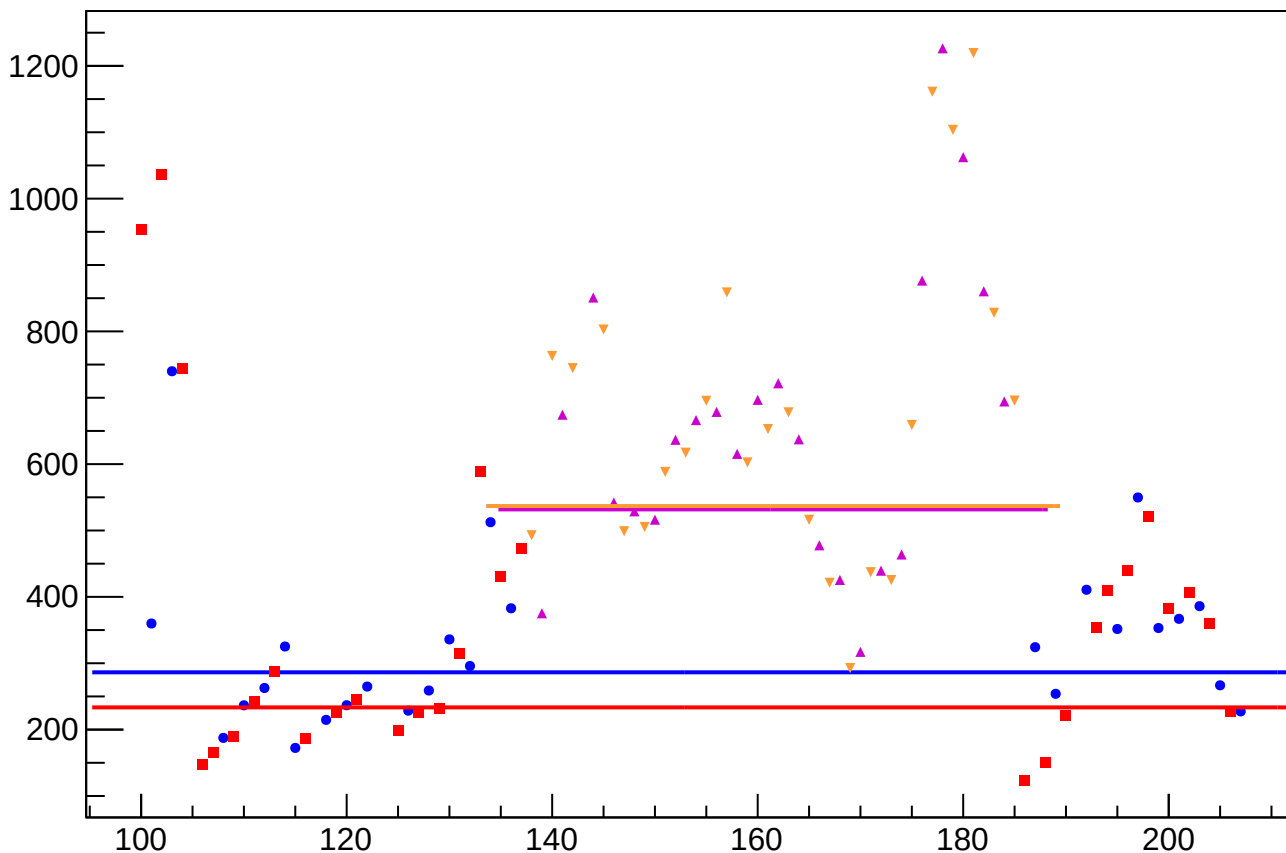
Left In: -0.117 $\pm$ 0.132  $\chi^2$ /NDF: 27.8/22

+ sign 0.071 $\pm$ 0.068  $\chi^2$ /NDF: 49.6/49

All: 0.030 $\pm$ 0.045  $\chi^2$ /NDF: 113.0/101

- sign -0.002 $\pm$ 0.059  $\chi^2$ /NDF: 62.8/51

asym\_us\_avg\_at2lr\_avg\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 286.328+/-0.056  $\chi^2/\text{NDF}$ : 2341938.7/25

Left Out: 536.822+/-0.095  $\chi^2/\text{NDF}$ : 3963422.5/23

Right Out: 233.477+/-0.047  $\chi^2/\text{NDF}$ : 5187609.8/28

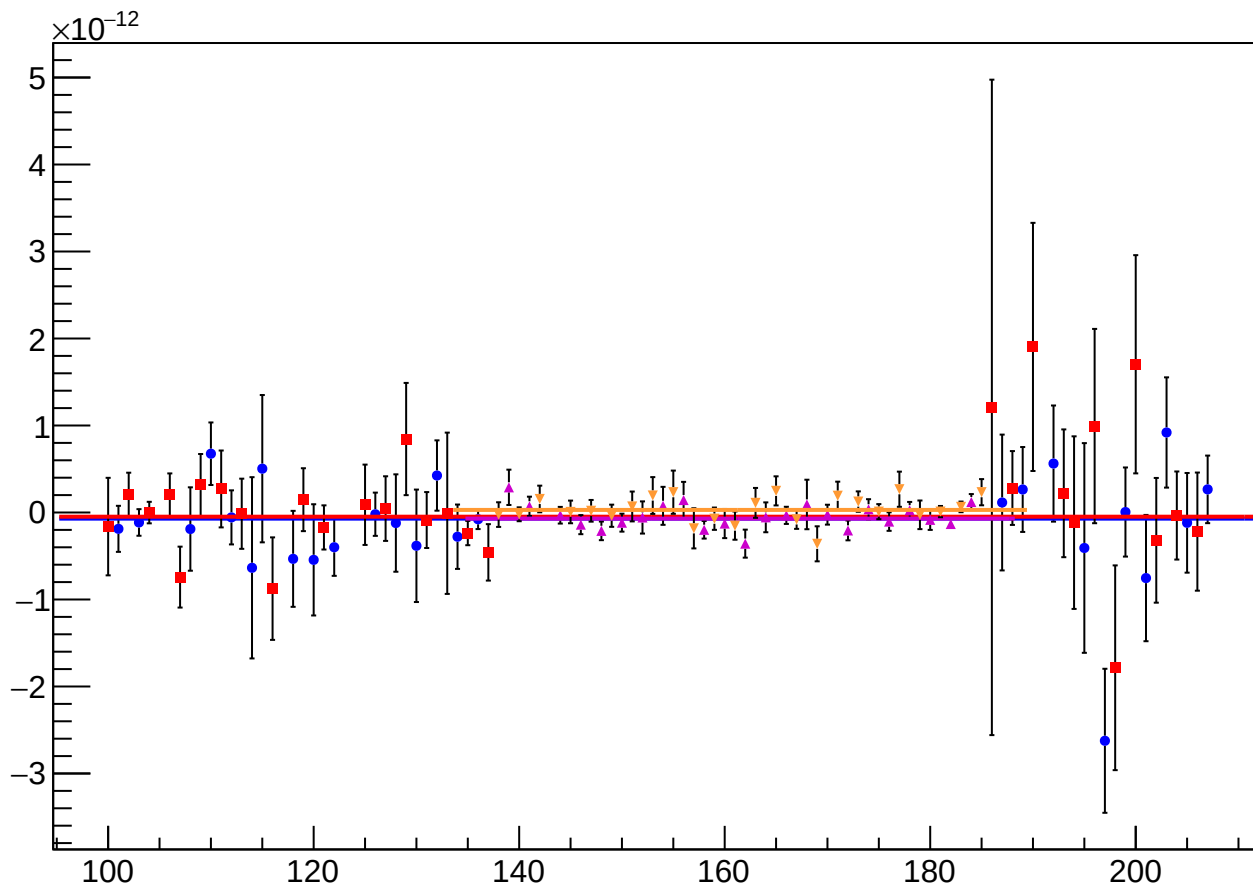
Left In: 531.773+/-0.094  $\chi^2/\text{NDF}$ : 3381293.8/22

+ sign 351.058+/-0.048  $\chi^2/\text{NDF}$ : 11490563.8/49

All: 318.479+/-0.032  $\chi^2/\text{NDF}$ : 28963411.0/10

- sign 293.625+/-0.042  $\chi^2/\text{NDF}$ : 16665975.6/51

asym\_us\_avg\_at2lr\_avg\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 24.9/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 17.7/23

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 23.7/28

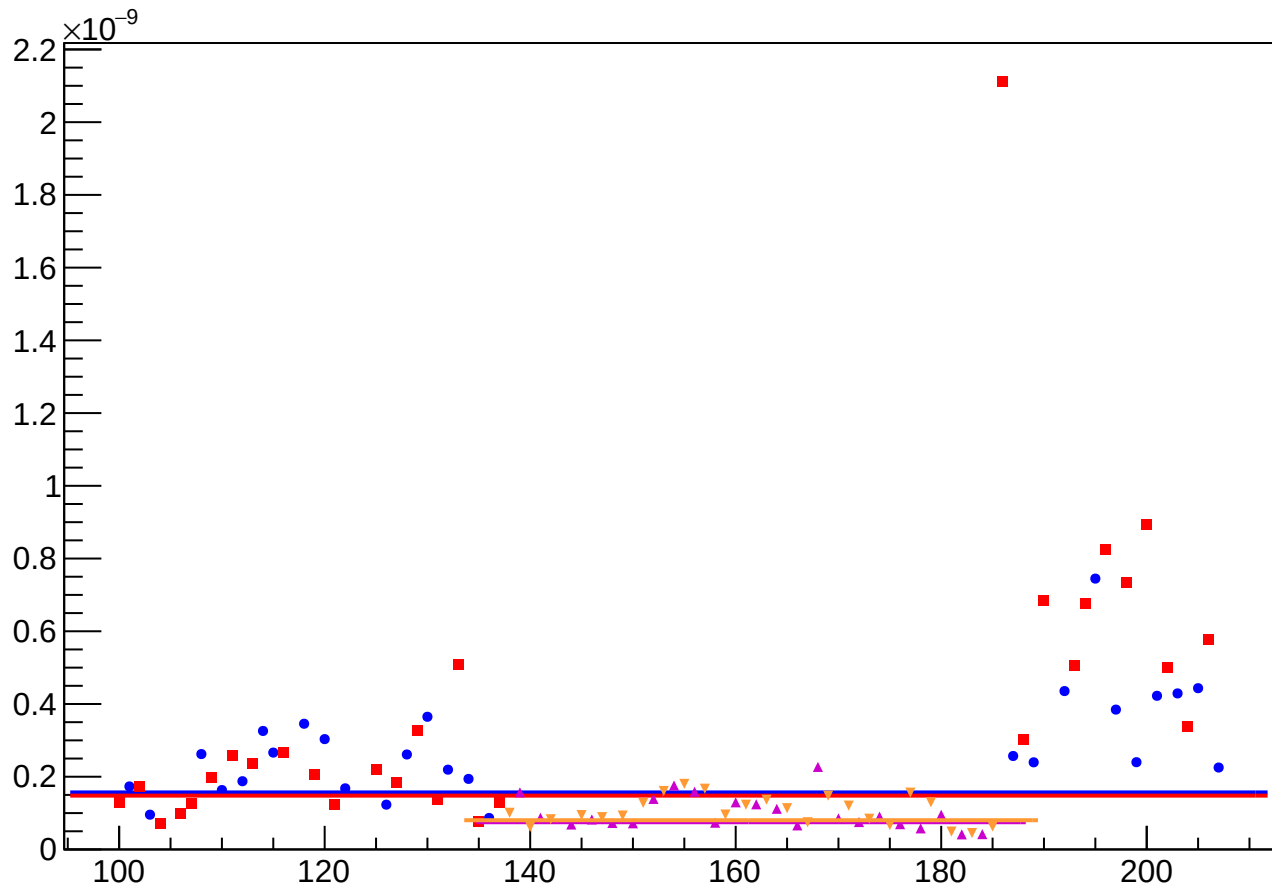
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 23.4/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 44.7/49

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 99.1/101

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 47.2/51

asym\_us\_avg\_at2lr\_avg\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4345405.2/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3732870.2/23

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7961835.3/28

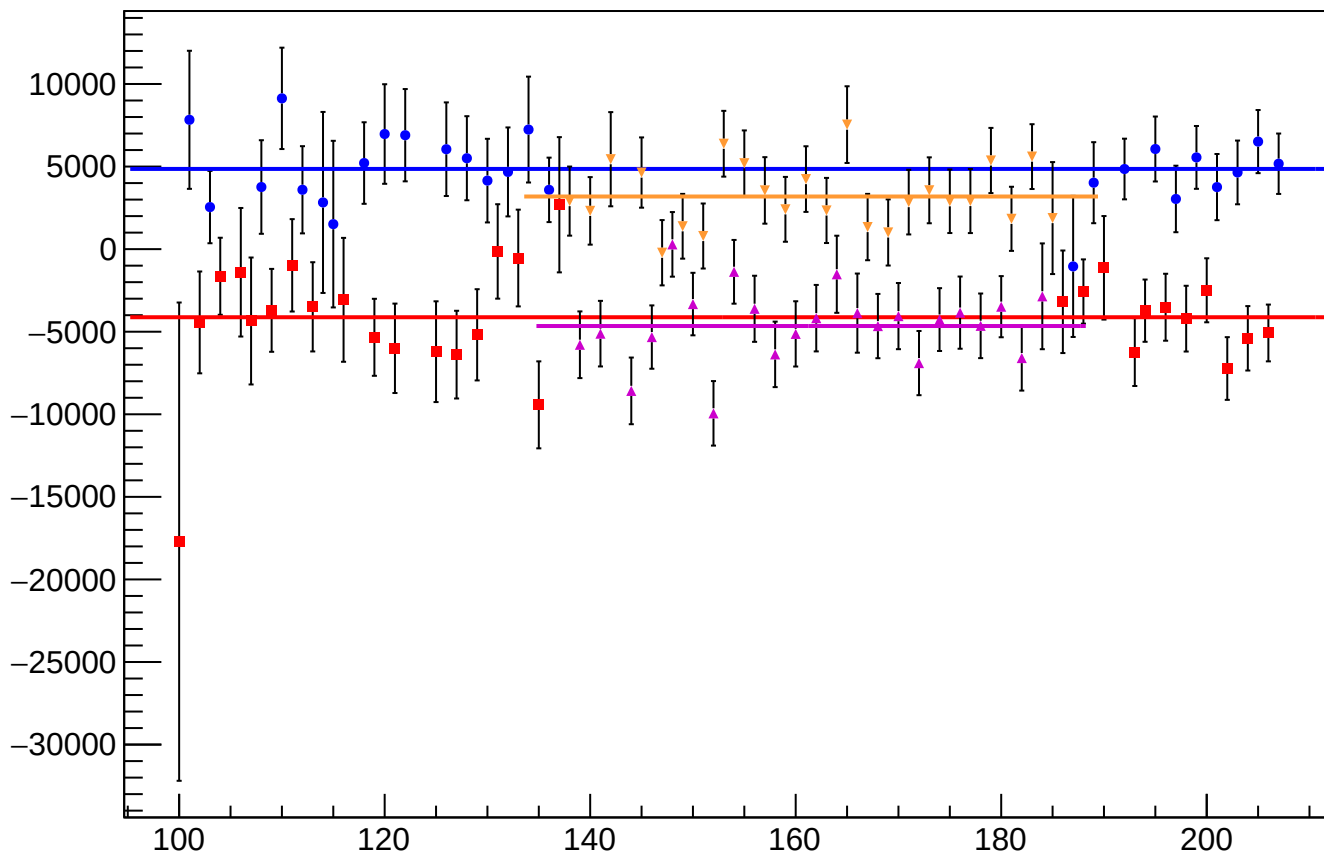
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3665599.9/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10512999.9/49

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 24647553.5/101

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14061394.1/51

# reg\_asym\_us\_avg\_atlr\_avg\_avg\_mean vs Slug



Right In: 4856.989 $\pm$ 474.781  $\chi^2$ /NDF: 11.3/25

Left Out: 3187.125 $\pm$ 418.619  $\chi^2$ /NDF:19.9/23

Right Out: -4123.232 $\pm$ 461.542  $\chi^2$ /NDF: 23.3/28

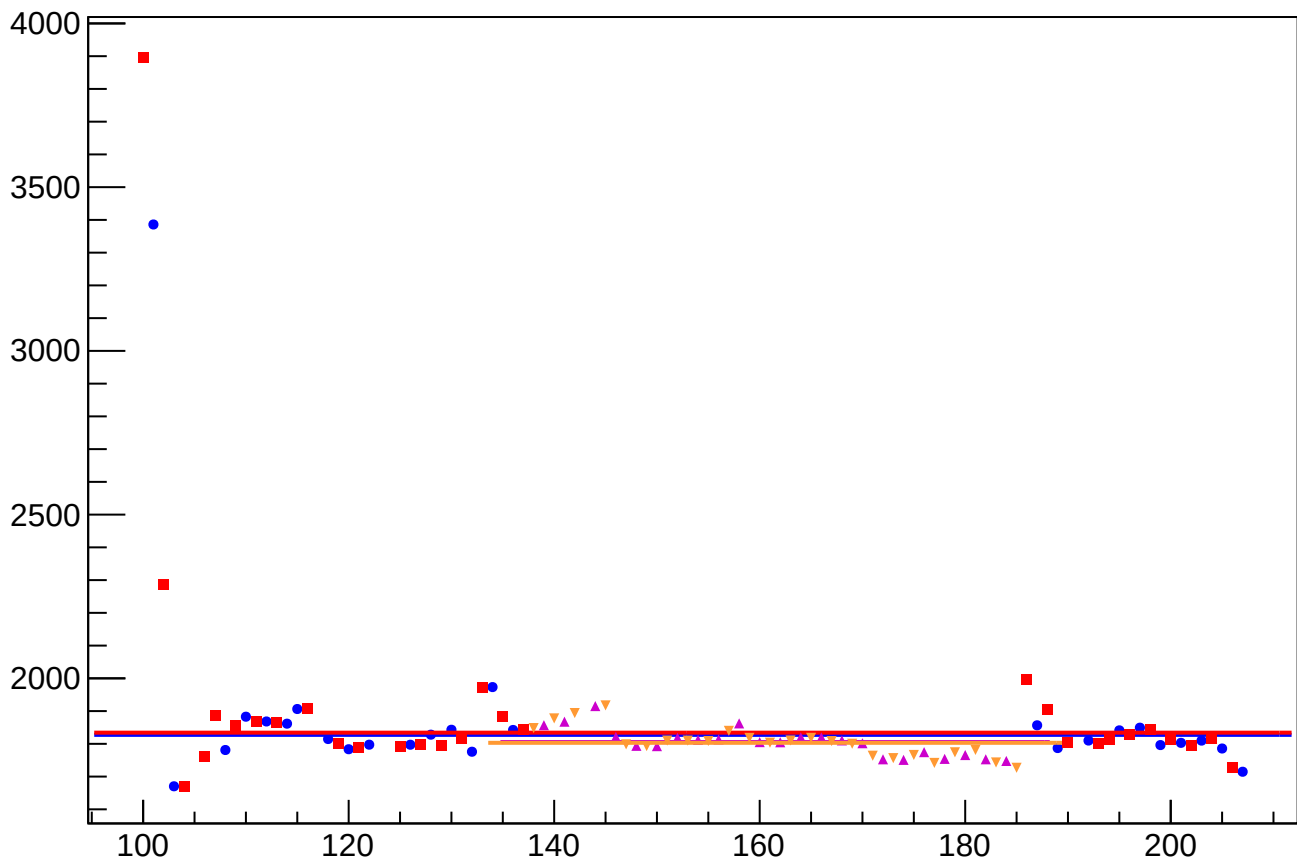
Left In: -4655.206 $\pm$ 421.691  $\chi^2$ /NDF:27.7/22

+ sign 3917.497 $\pm$ 313.996  $\chi^2$ /NDF: 38.1/49

All: -283.522 $\pm$ 221.076  $\chi^2$ /NDF: 444.8/101

- sign -4413.172 $\pm$ 311.318  $\chi^2$ /NDF: 51.7/51

reg\_asym\_us\_avg\_atlr\_avg\_avg\_rms vs Slug



Right In: 1827.391+/-0.336  $\chi^2/\text{NDF}$ : 307238.2/25

Left Out: 1803.115+/-0.296  $\chi^2/\text{NDF}$ : 20641.1/23

Right Out: 1834.126+/-0.326  $\chi^2/\text{NDF}$ : 121393.7/28

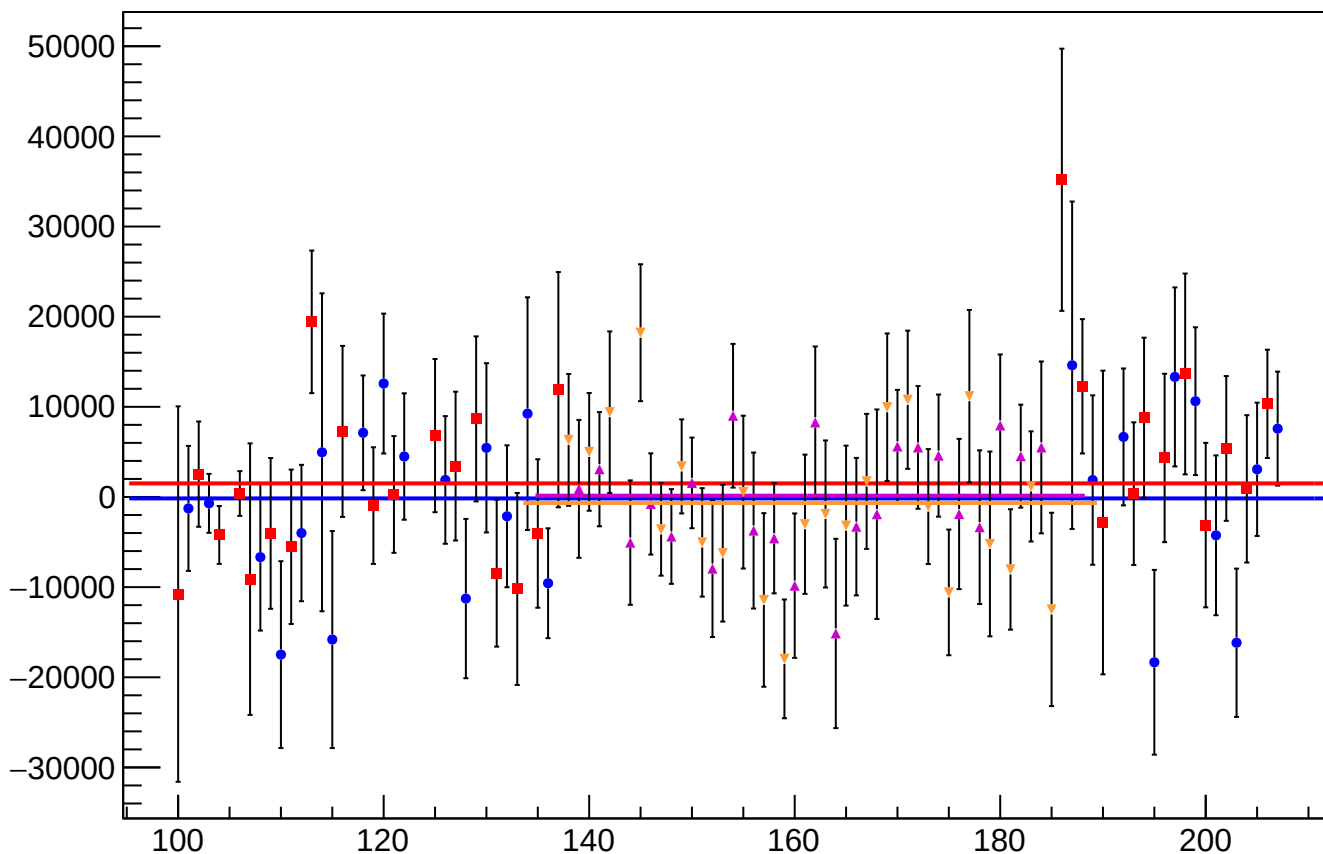
Left In: 1805.559+/-0.298  $\chi^2/\text{NDF}$ : 19314.7/22

+ sign 1813.733+/-0.222  $\chi^2/\text{NDF}$ : 330821.1/49

All: 1816.176+/-0.156  $\chi^2/\text{NDF}$ : 475951.8/103

- sign 1818.575+/-0.220  $\chi^2/\text{NDF}$ : 144890.7/51

asym\_us\_avg\_atlr\_avg\_avg\_reg\_correction\_mean vs Slug



Right In:  $-158.094 \pm 1477.032$   $\chi^2/\text{NDF}$ : 28.9/25

Left Out:  $-667.243 \pm 1478.798$   $\chi^2/\text{NDF}$ : 29.8/23

Right Out:  $1507.759 \pm 1261.962$   $\chi^2/\text{NDF}$ : 28.0/28

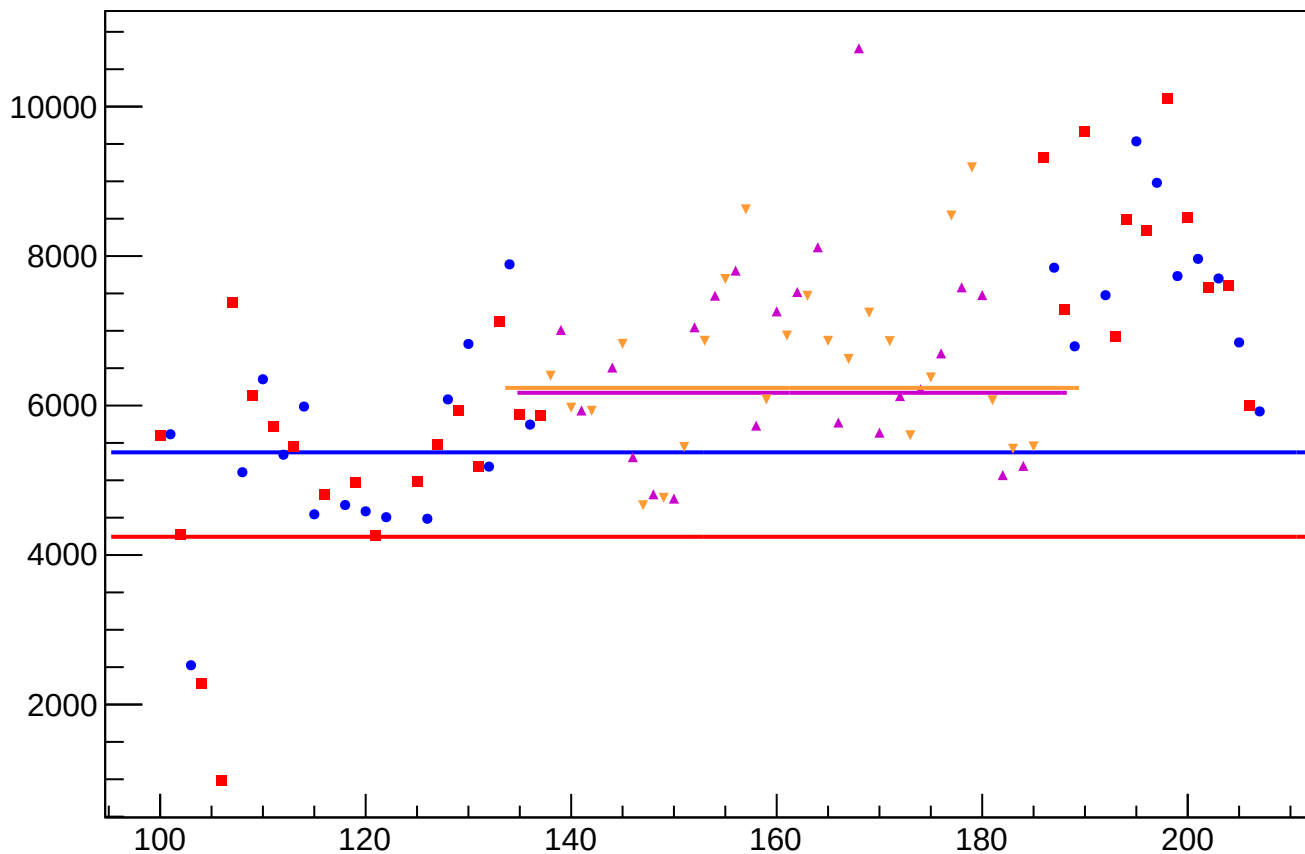
Left In:  $143.435 \pm 1471.371$   $\chi^2/\text{NDF}$ : 13.6/22

+ sign  $-412.364 \pm 1045.043$   $\chi^2/\text{NDF}$ : 58.7/49

All:  $316.846 \pm 706.139$   $\chi^2/\text{NDF}$ : 101.7/101

- sign  $929.512 \pm 957.900$   $\chi^2/\text{NDF}$ : 42.1/51

asym\_us\_avg\_atlr\_avg\_avg\_reg\_correction\_rms vs Slug



Right In: 5373.934+/-1.044  $\chi^2/\text{NDF}$ : 3226290.5/25

Left Out: 6236.636+/-1.046  $\chi^2/\text{NDF}$ : 1067659.4/23

Right Out: 4244.329+/-0.892  $\chi^2/\text{NDF}$ : 8656058.0/28

Left In: 6170.791+/-1.040  $\chi^2/\text{NDF}$ : 1237554.5/22

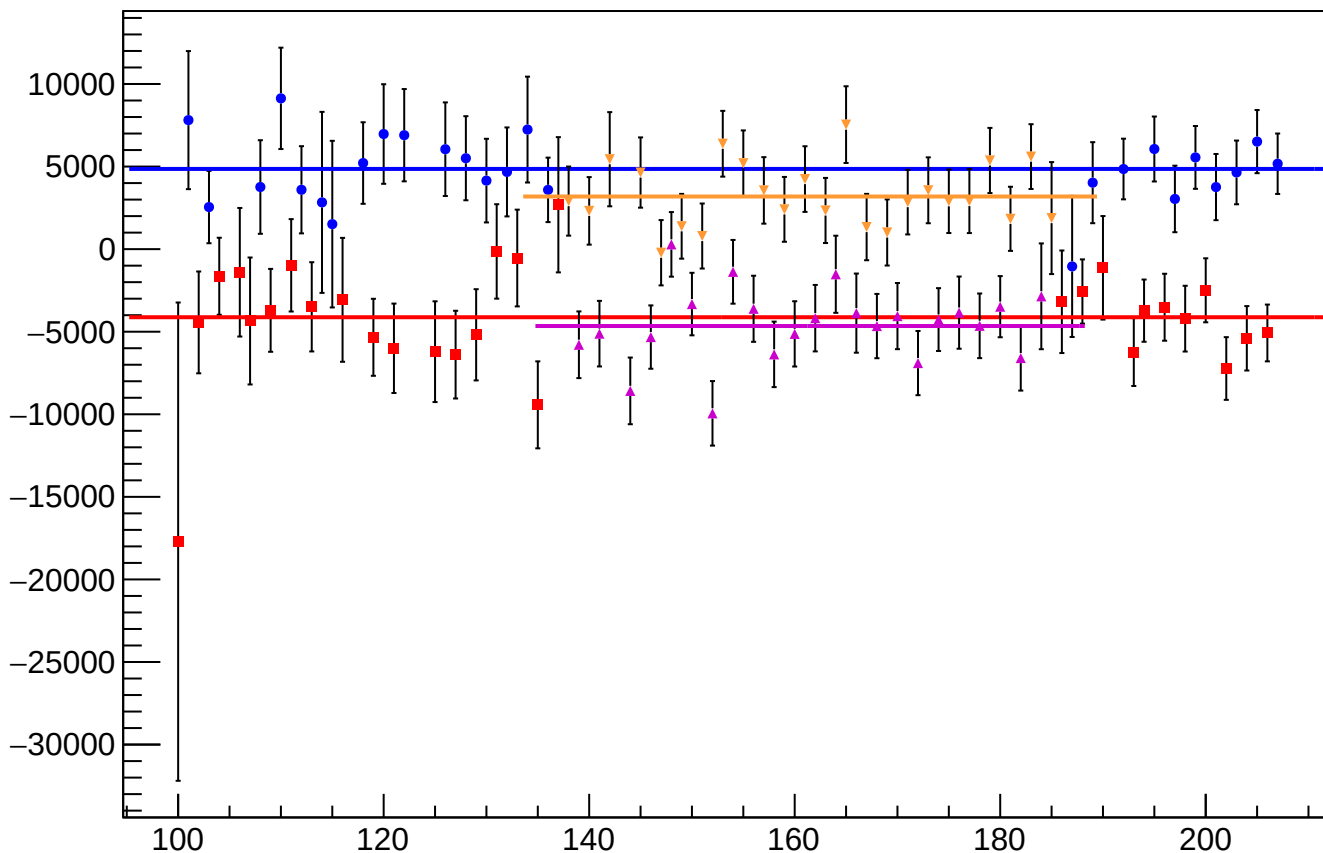
+ sign 5804.769+/-0.739  $\chi^2/\text{NDF}$ : 4634689.7/49

All: 5400.493+/-0.499  $\chi^2/\text{NDF}$ : 17054477.8/100

- sign 5060.829+/-0.677  $\chi^2/\text{NDF}$ : 11869008.9/51



# cor\_asym\_us\_avg\_atlr\_avg\_avg\_mean vs Slug



Right In: 4856.783 $\pm$ 474.781  $\chi^2$ /NDF: 11.3/25

Left Out: 3187.056 $\pm$ 418.619  $\chi^2$ /NDF:19.9/23

Right Out: -4123.112 $\pm$ 461.542  $\chi^2$ /NDF: 23.3/28

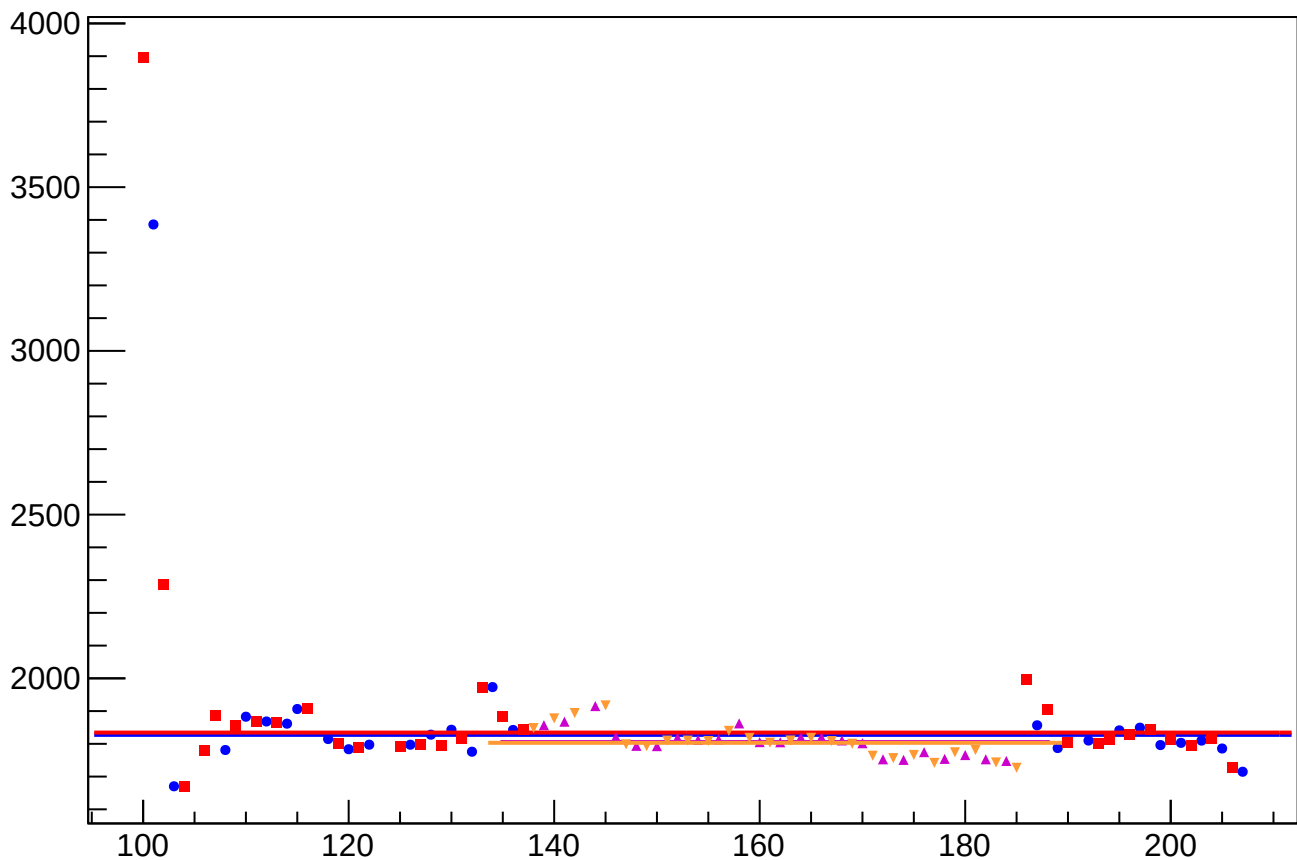
Left In: -4655.225 $\pm$ 421.691  $\chi^2$ /NDF:27.7/22

+ sign 3917.368 $\pm$ 313.996  $\chi^2$ /NDF: 38.1/49

All: -283.563 $\pm$ 221.076  $\chi^2$ /NDF: 444.7/101

- sign -4413.128 $\pm$ 311.318  $\chi^2$ /NDF: 51.7/51

cor\_asym\_us\_avg\_atlr\_avg\_avg\_rms vs Slug



Right In: 1827.391+/-0.336  $\chi^2/\text{NDF}$ : 307240.1/25

Left Out: 1803.115+/-0.296  $\chi^2/\text{NDF}$ : 20641.1/23

Right Out: 1834.433+/-0.326  $\chi^2/\text{NDF}$ : 121037.1/28

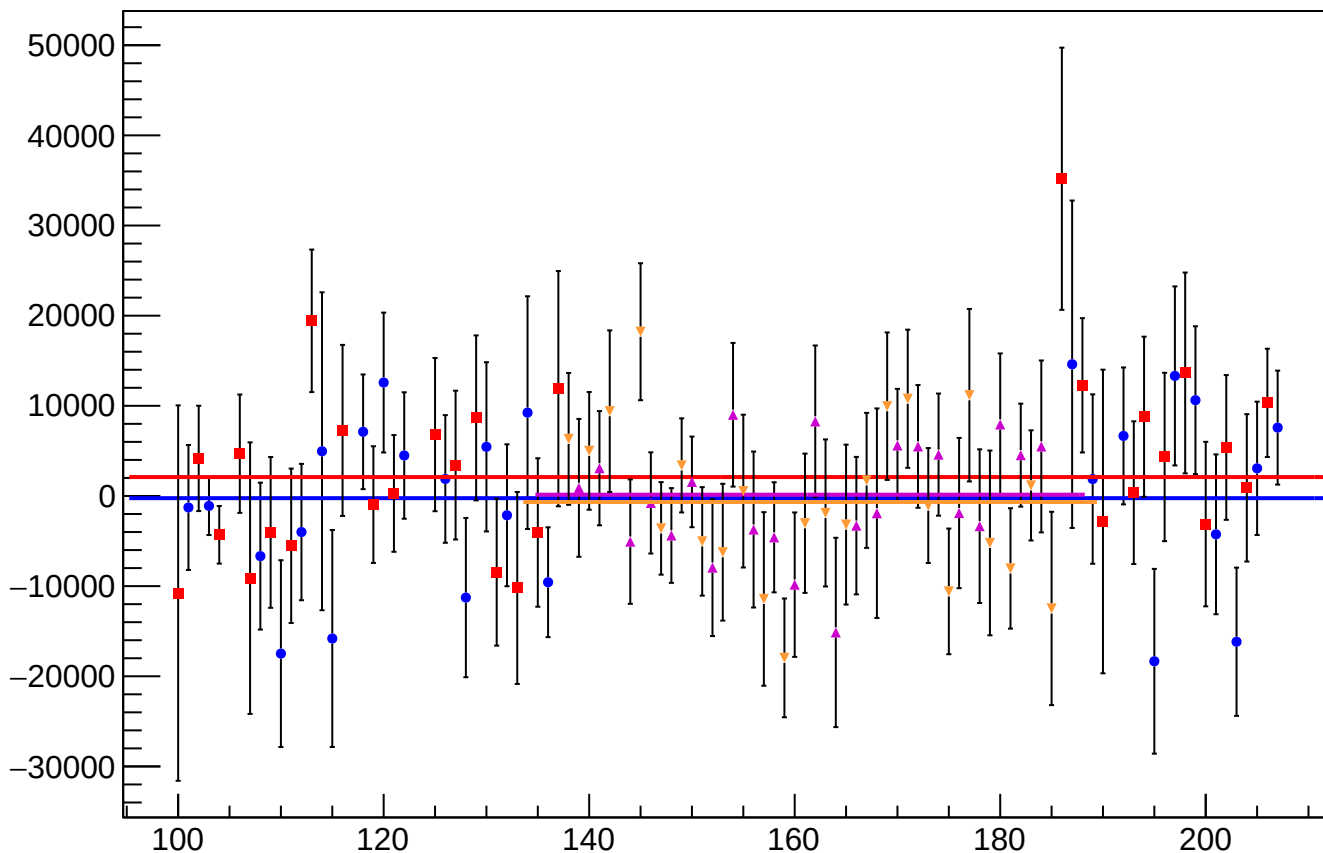
Left In: 1805.559+/-0.298  $\chi^2/\text{NDF}$ : 19314.6/22

+ sign 1813.733+/-0.222  $\chi^2/\text{NDF}$ : 330822.9/49

All: 1816.245+/-0.156  $\chi^2/\text{NDF}$ : 475700.3/101

- sign 1818.713+/-0.220  $\chi^2/\text{NDF}$ : 144623.6/51

asym\_us\_avg\_atlr\_avg\_avg\_cor\_correction\_mean vs Slug



Right In:  $-243.293 \pm 1473.326$   $\chi^2/\text{NDF}: 29.0/25$

Left Out:  $-667.245 \pm 1478.798$   $\chi^2/\text{NDF}: 29.8/23$

Right Out:  $2098.284 \pm 1429.004$   $\chi^2/\text{NDF}: 28.2/28$

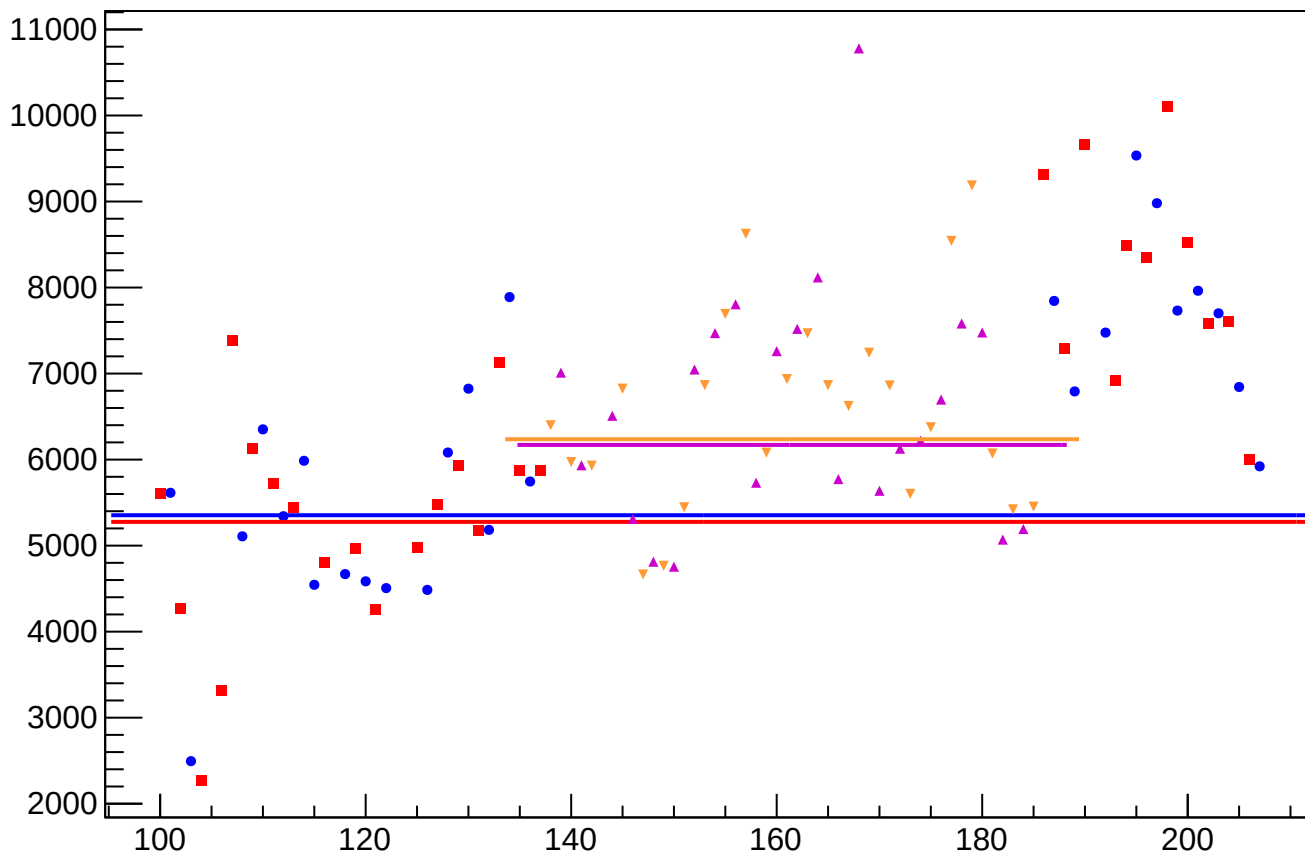
Left In:  $143.369 \pm 1471.371$   $\chi^2/\text{NDF}: 13.6/22$

+ sign  $-454.483 \pm 1043.728$   $\chi^2/\text{NDF}: 58.8/49$

All:  $361.880 \pm 731.356$   $\chi^2/\text{NDF}: 102.7/101$

- sign  $1149.376 \pm 1025.109$   $\chi^2/\text{NDF}: 42.7/51$

asym\_us\_avg\_atlr\_avg\_avg\_cor\_correction\_rms vs Slug



Right In: 5353.231+/-1.042  $\chi^2/\text{NDF}$ : 3297066.4/25

Left Out: 6236.635+/-1.046  $\chi^2/\text{NDF}$ : 1067665.4/23

Right Out: 5276.114+/-1.010  $\chi^2/\text{NDF}$ : 4210937.4/28

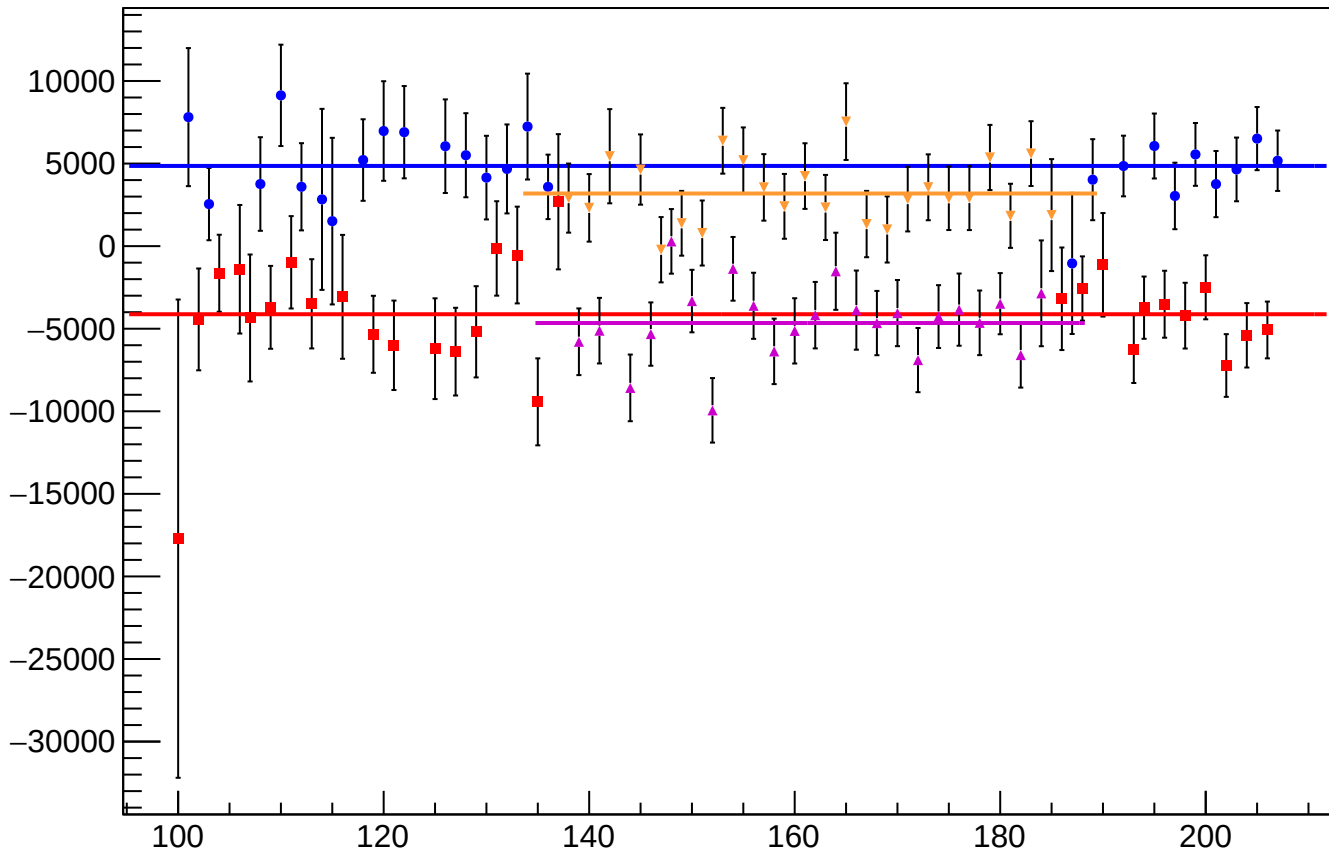
Left In: 6170.789+/-1.040  $\chi^2/\text{NDF}$ : 1237564.5/22

+ sign 5793.296+/-0.738  $\chi^2/\text{NDF}$ : 4722917.0/49

All: 5751.095+/-0.517  $\chi^2/\text{NDF}$ : 10558372.8/101

- sign 5710.386+/-0.725  $\chi^2/\text{NDF}$ : 5829032.0/51

eigen\_cor\_asym\_us\_avg\_atlr\_avg\_avg\_mean vs Slug



Right In: 4856.783 $\pm$ 474.781  $\chi^2$ /NDF: 11.3/25

Left Out: 3187.056 $\pm$ 418.619  $\chi^2$ /NDF:19.9/23

Right Out: -4123.112 $\pm$ 461.542  $\chi^2$ /NDF: 23.3/28

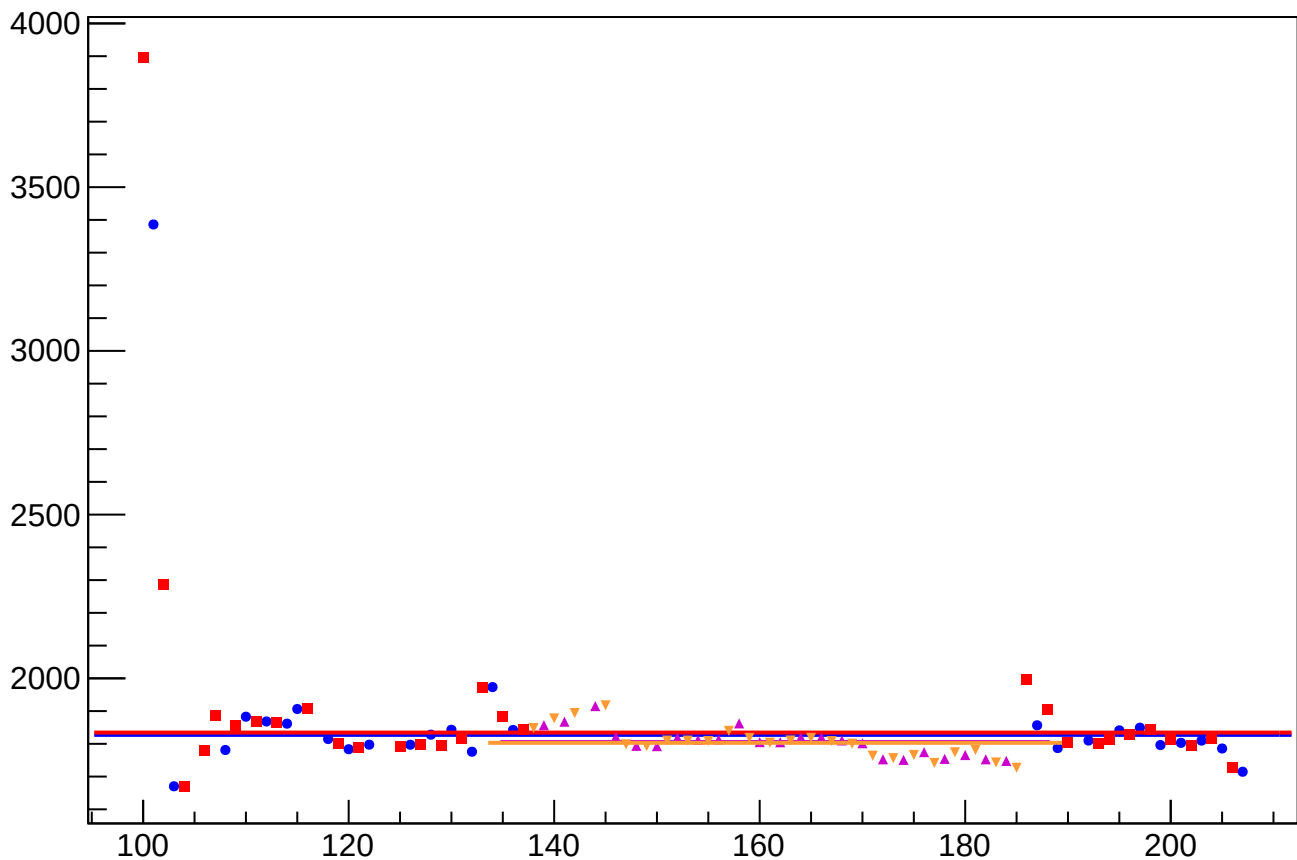
Left In: -4655.225 $\pm$ 421.691  $\chi^2$ /NDF:27.7/22

+ sign 3917.368 $\pm$ 313.996  $\chi^2$ /NDF: 38.1/49

All: -283.563 $\pm$ 221.076  $\chi^2$ /NDF: 444.7/101

- sign -4413.128 $\pm$ 311.318  $\chi^2$ /NDF: 51.7/51

eigen\_cor\_asym\_us\_avg\_atlr\_avg\_avg\_rms vs Slug



Right In: 1827.391+/-0.336  $\chi^2/\text{NDF}$ : 307240.1/25

Left Out: 1803.115+/-0.296  $\chi^2/\text{NDF}$ : 20641.1/23

Right Out: 1834.433+/-0.326  $\chi^2/\text{NDF}$ : 121037.1/28

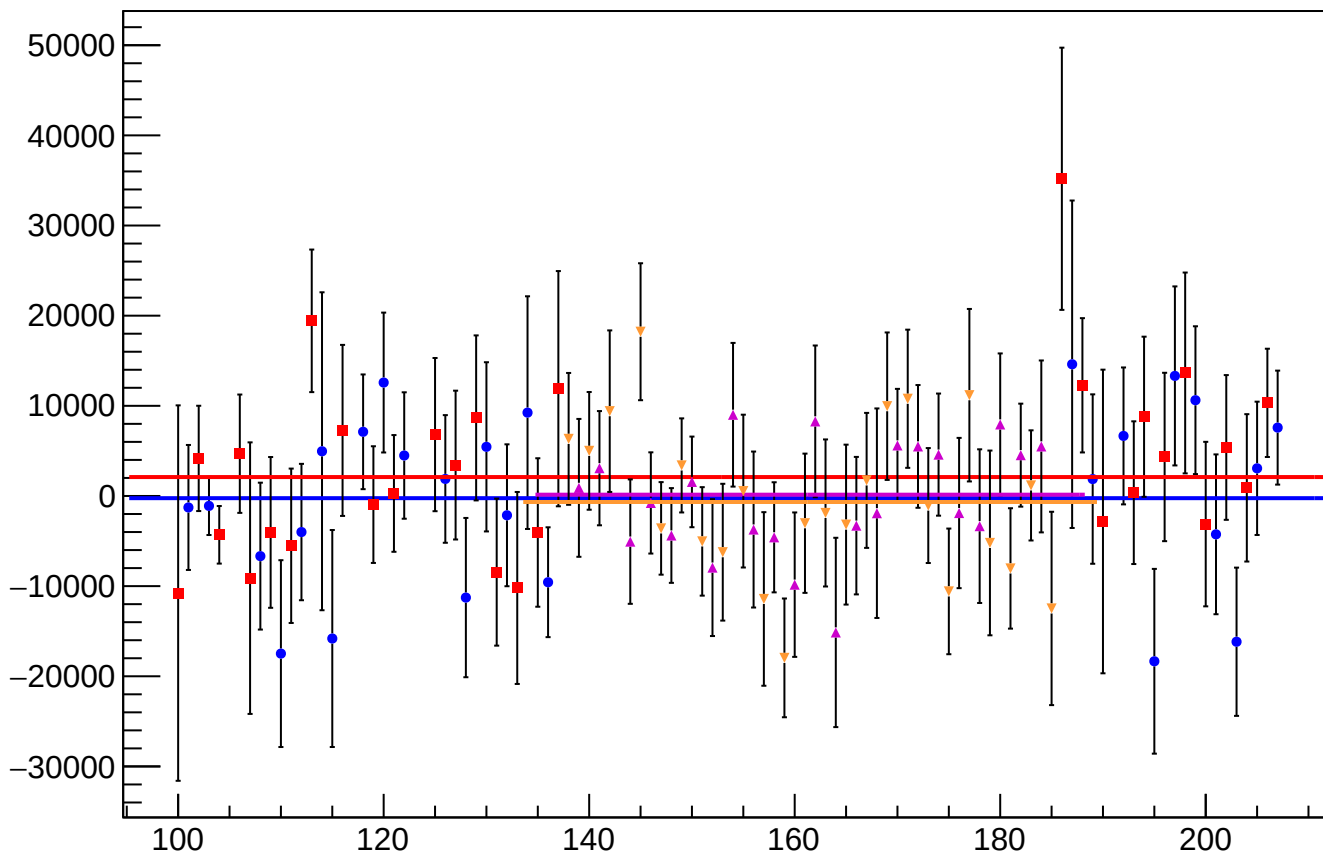
Left In: 1805.559+/-0.298  $\chi^2/\text{NDF}$ : 19314.6/22

+ sign 1813.733+/-0.222  $\chi^2/\text{NDF}$ : 330822.9/49

All: 1816.245+/-0.156  $\chi^2/\text{NDF}$ : 475700.3/103

- sign 1818.713+/-0.220  $\chi^2/\text{NDF}$ : 144623.6/51

asym\_us\_avg\_atlr\_avg\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-243.293 \pm 1473.326$   $\chi^2/\text{NDF}$ : 29.0/25

Left Out:  $-667.245 \pm 1478.798$   $\chi^2/\text{NDF}$ : 29.8/23

Right Out:  $2098.284 \pm 1429.004$   $\chi^2/\text{NDF}$ : 28.2/28

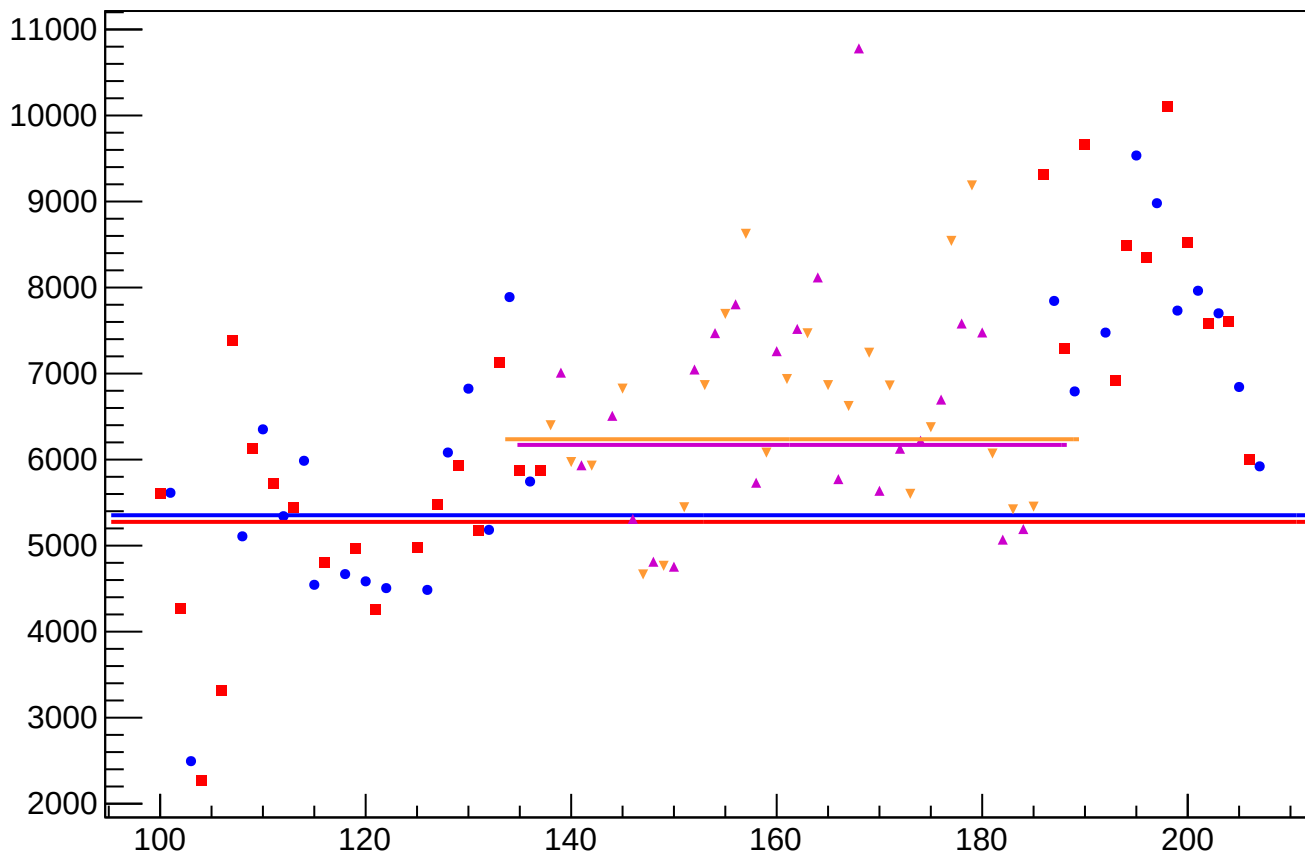
Left In:  $143.369 \pm 1471.371$   $\chi^2/\text{NDF}$ : 13.6/22

+ sign  $-454.483 \pm 1043.728$   $\chi^2/\text{NDF}$ : 58.8/49

All:  $361.880 \pm 731.356$   $\chi^2/\text{NDF}$ : 102.7/101

- sign  $1149.376 \pm 1025.109$   $\chi^2/\text{NDF}$ : 42.7/51

asym\_us\_avg\_atlr\_avg\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 5353.231+/-1.042  $\chi^2/\text{NDF}$ : 3297066.4/25

Left Out: 6236.635+/-1.046  $\chi^2/\text{NDF}$ : 1067665.4/23

Right Out: 5276.114+/-1.010  $\chi^2/\text{NDF}$ : 4210937.4/28

Left In: 6170.789+/-1.040  $\chi^2/\text{NDF}$ : 1237564.5/22

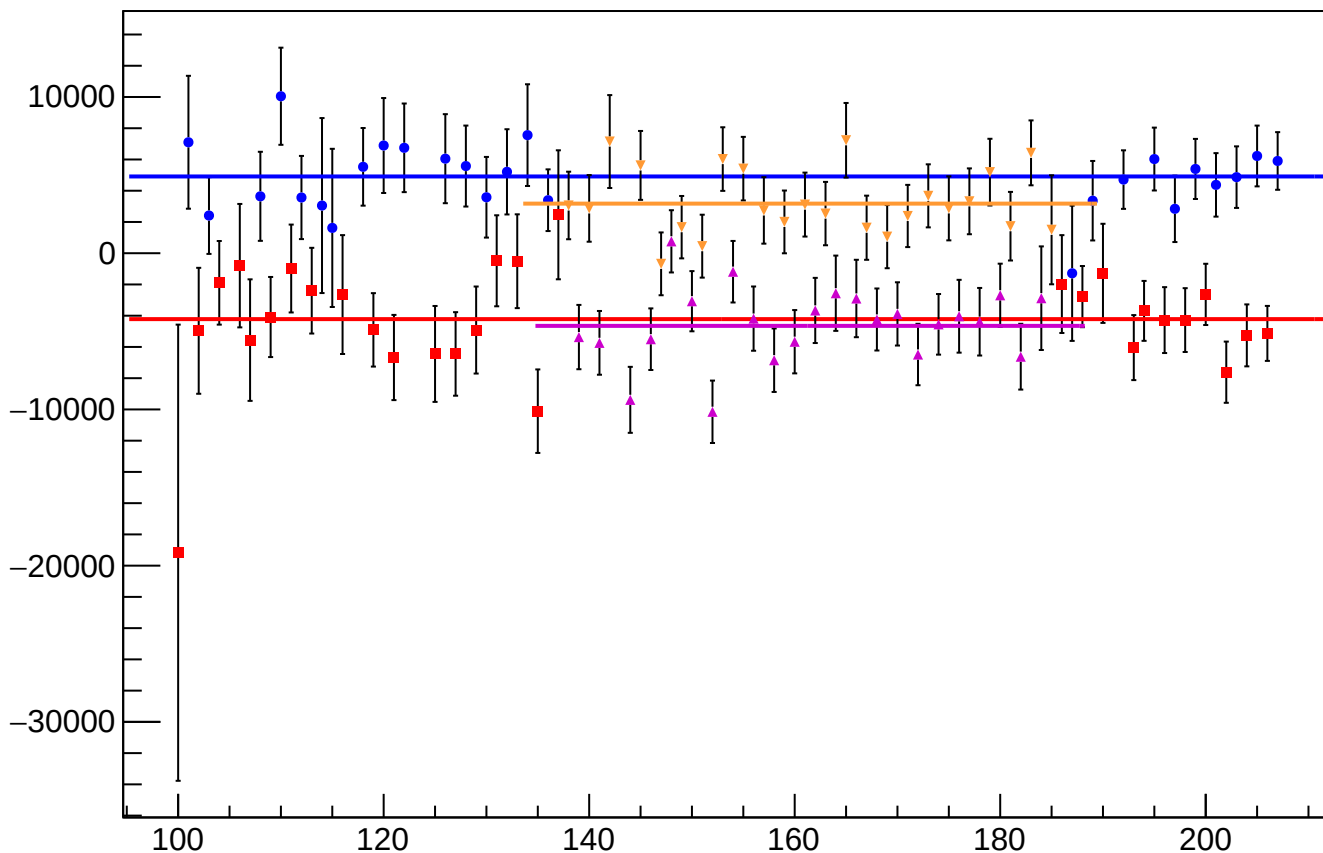
+ sign 5793.296+/-0.738  $\chi^2/\text{NDF}$ : 4722917.0/49

All: 5751.095+/-0.517  $\chi^2/\text{NDF}$ : 10558372.8/100

- sign 5710.386+/-0.725  $\chi^2/\text{NDF}$ : 5829032.0/51



dit\_asym\_us\_avg\_atlr\_avg\_avg\_mean vs Slug



Right In: 4913.287 $\pm$ 485.066  $\chi^2$ /NDF: 12.2/25

Left Out: 3174.550 $\pm$ 434.815  $\chi^2$ /NDF:21.6/23

Right Out: -4218.577 $\pm$ 473.406  $\chi^2$ /NDF: 24.4/28

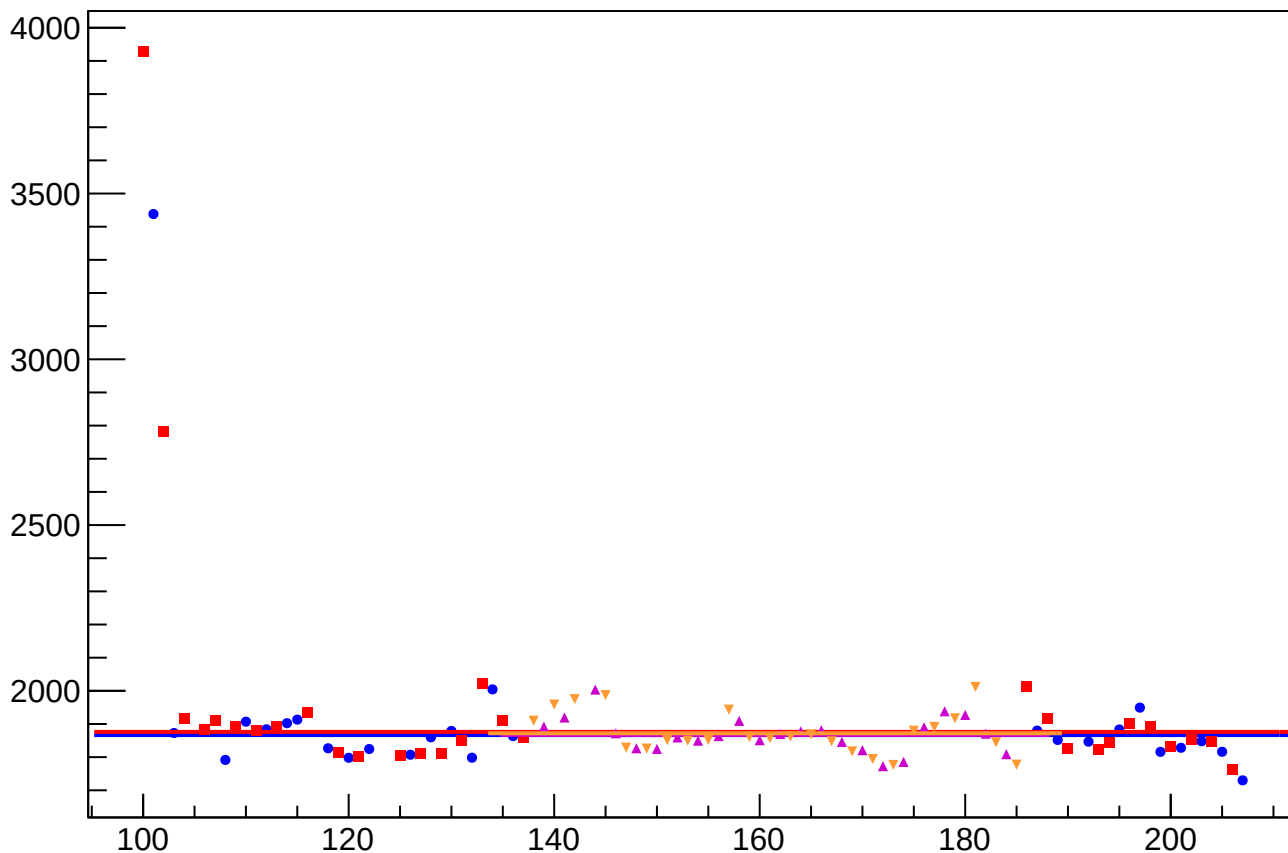
Left In: -4650.461 $\pm$ 436.198  $\chi^2$ /NDF:30.5/22

+ sign 3949.218 $\pm$ 323.774  $\chi^2$ /NDF: 40.9/49

All: -290.396 $\pm$ 227.879  $\chi^2$ /NDF: 436.1/101

- sign -4452.156 $\pm$ 320.787  $\chi^2$ /NDF: 55.4/51

dit\_asym\_us\_avg\_atlr\_avg\_avg\_rms vs Slug



Right In: 1866.526 $\pm$ 0.343  $\chi^2$ /NDF: 300924.9/25

Left Out: 1871.979 $\pm$ 0.307  $\chi^2$ /NDF: 37154.8/23

Right Out: 1876.220 $\pm$ 0.335  $\chi^2$ /NDF: 170460.6/28

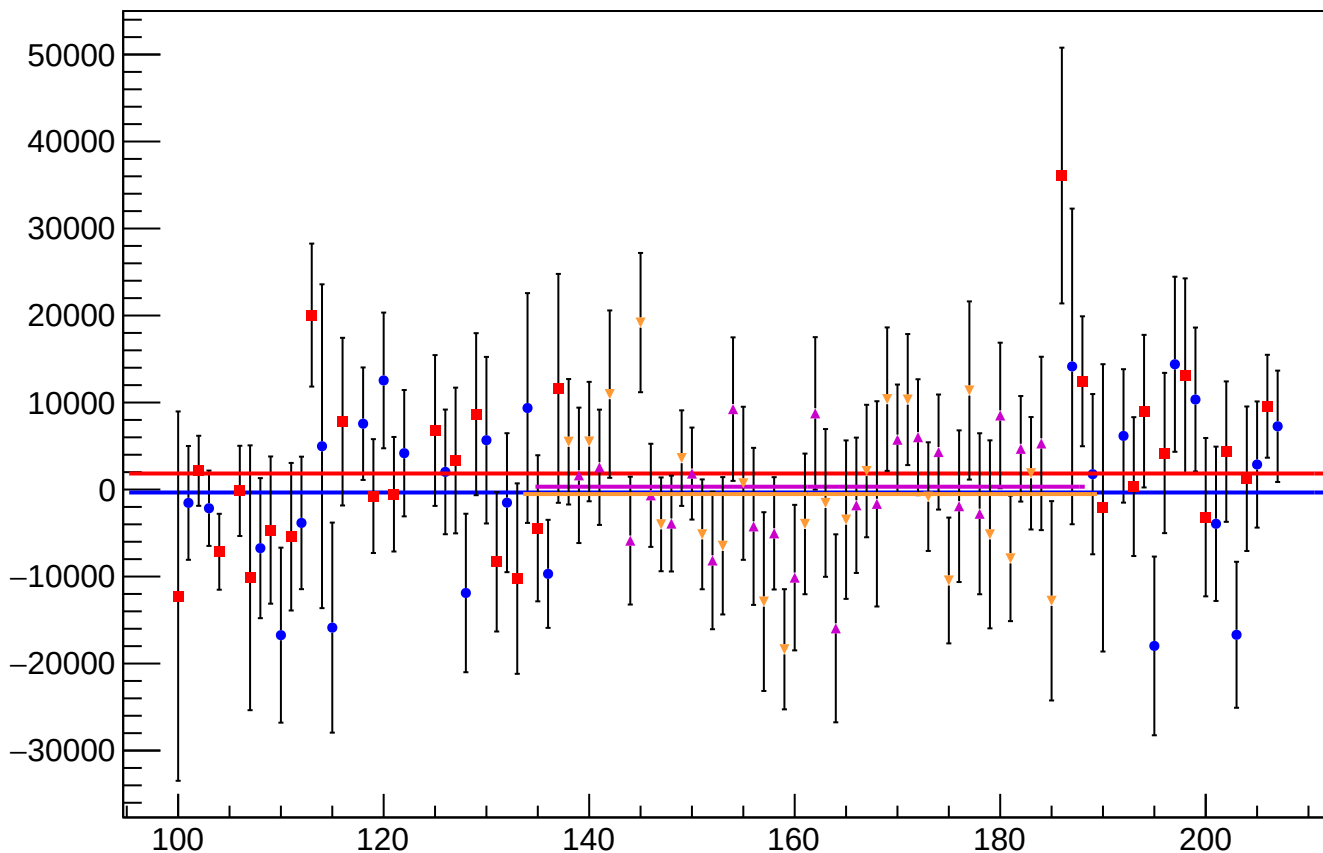
Left In: 1867.079 $\pm$ 0.308  $\chi^2$ /NDF: 27246.7/22

+ sign 1869.550 $\pm$ 0.229  $\chi^2$ /NDF: 338219.9/49

All: 1870.422 $\pm$ 0.161  $\chi^2$ /NDF: 536359.4/101

- sign 1871.278 $\pm$ 0.227  $\chi^2$ /NDF: 198110.8/51

asym\_us\_avg\_atlr\_avg\_avg\_dit\_correction\_mean vs Slug



Right In:  $-339.389 \pm 1553.506$   $\chi^2/\text{NDF}: 28.7/25$

Left Out:  $-520.262 \pm 1536.784$   $\chi^2/\text{NDF}: 29.2/23$

Right Out:  $1843.914 \pm 1434.270$   $\chi^2/\text{NDF}: 28.6/28$

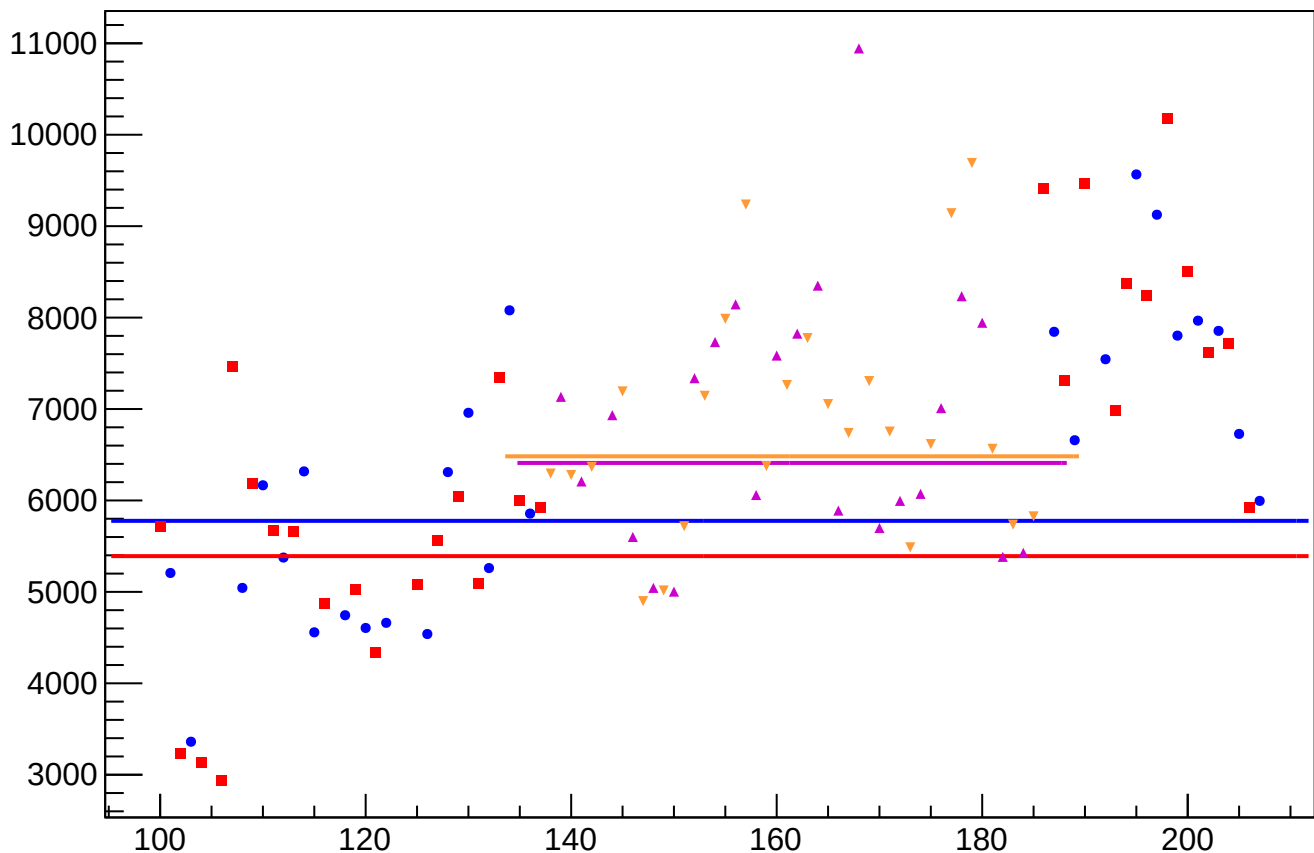
Left In:  $324.625 \pm 1527.995$   $\chi^2/\text{NDF}: 13.4/22$

+ sign  $-430.804 \pm 1092.535$   $\chi^2/\text{NDF}: 57.9/49$

All:  $384.929 \pm 755.454$   $\chi^2/\text{NDF}: 101.5/101$

- sign  $1132.291 \pm 1045.747$   $\chi^2/\text{NDF}: 42.5/51$

asym\_us\_avg\_atlr\_avg\_avg\_dit\_correction\_rms vs Slug



Right In: 5776.918+/-1.098  $\chi^2/\text{NDF}$ : 2040673.1/25

Left Out: 6482.730+/-1.087  $\chi^2/\text{NDF}$ : 1074584.9/23

Right Out: 5391.117+/-1.014  $\chi^2/\text{NDF}$ : 3607200.6/28

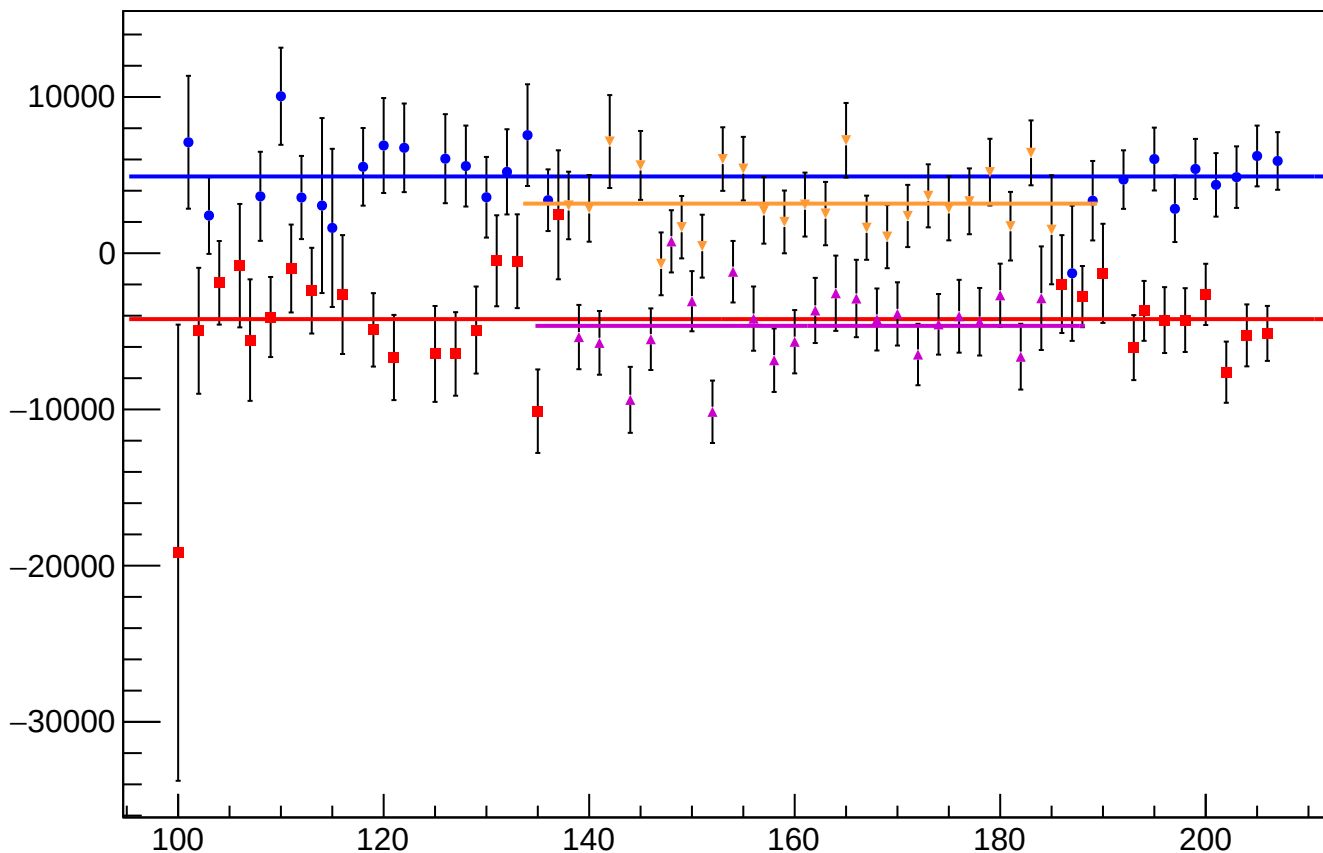
Left In: 6410.419+/-1.080  $\chi^2/\text{NDF}$ : 1219830.0/22

+ sign 6133.643+/-0.773  $\chi^2/\text{NDF}$ : 3323911.7/49

All: 5995.299+/-0.534  $\chi^2/\text{NDF}$ : 8685524.4/10

- sign 5868.550+/-0.739  $\chi^2/\text{NDF}$ : 5300163.2/51

eigen\_dit\_asym\_us\_avg\_atlr\_avg\_avg\_mean vs Slug



Right In: 4913.284 $\pm$ 485.066  $\chi^2$ /NDF: 12.2/25

Left Out: 3174.543 $\pm$ 434.815  $\chi^2$ /NDF:21.6/23

Right Out: -4218.571 $\pm$ 473.406  $\chi^2$ /NDF: 24.4/28

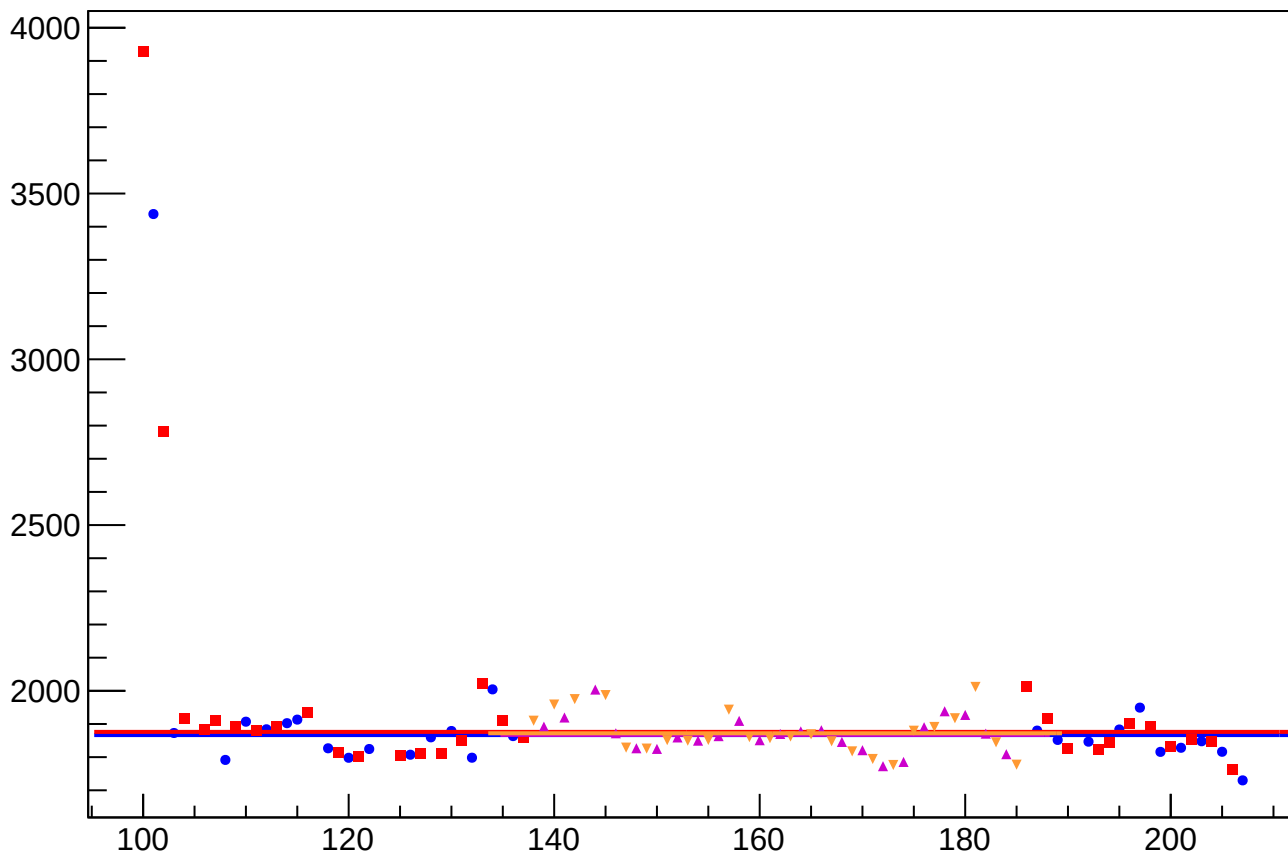
Left In: -4650.462 $\pm$ 436.198  $\chi^2$ /NDF:30.5/22

+ sign 3949.214 $\pm$ 323.774  $\chi^2$ /NDF: 40.9/49

All: -290.397 $\pm$ 227.879  $\chi^2$ /NDF: 436.1/101

- sign -4452.154 $\pm$ 320.787  $\chi^2$ /NDF: 55.4/51

eigen\_dit\_asym\_us\_avg\_atlr\_avg\_avg\_rms vs Slug



Right In: 1866.525+/-0.343  $\chi^2/\text{NDF}$ : 300924.9/25

Left Out: 1871.981+/-0.307  $\chi^2/\text{NDF}$ : 37155.9/23

Right Out: 1876.220+/-0.335  $\chi^2/\text{NDF}$ : 170459.7/28

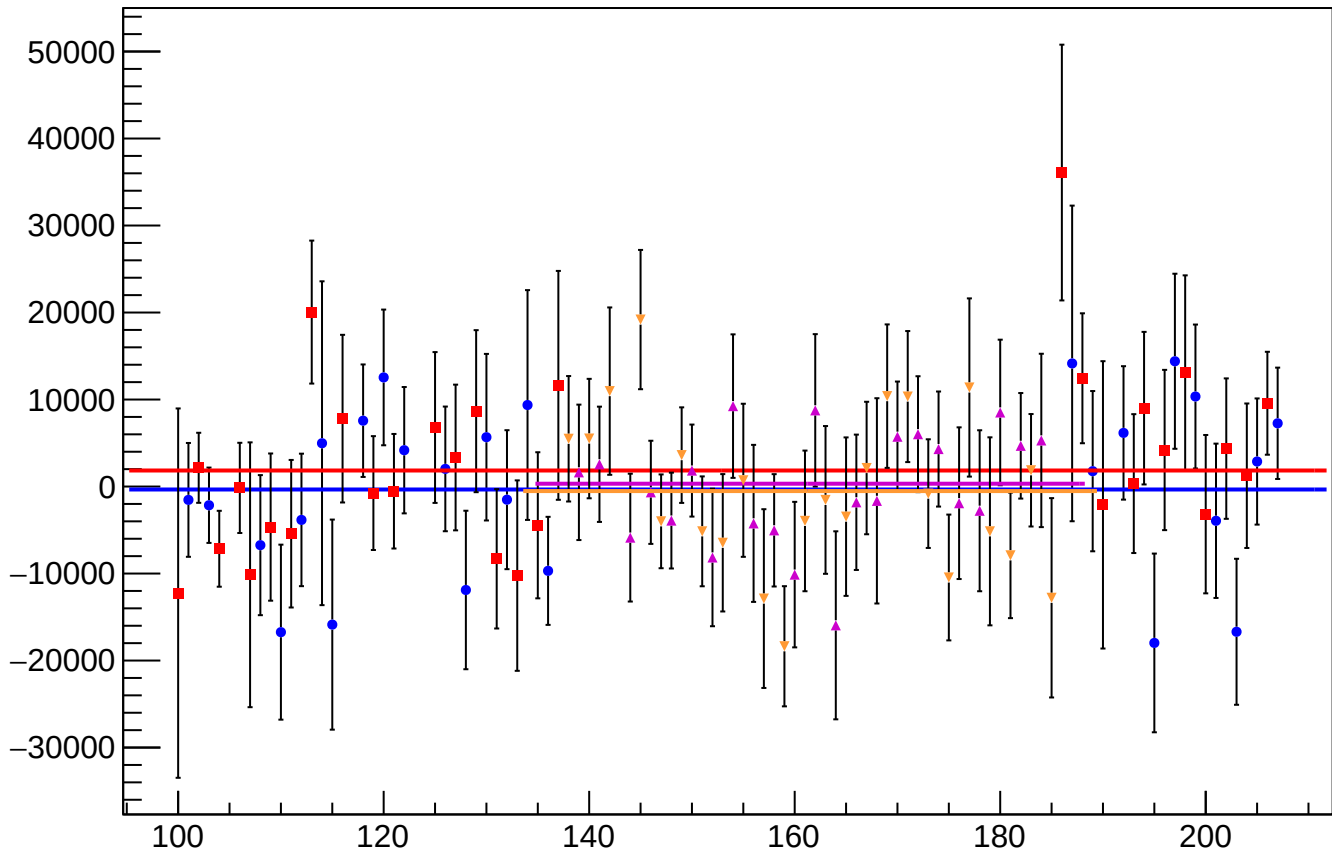
Left In: 1867.080+/-0.308  $\chi^2/\text{NDF}$ : 27247.8/22

+ sign 1869.550+/-0.229  $\chi^2/\text{NDF}$ : 338221.1/49

All: 1870.423+/-0.161  $\chi^2/\text{NDF}$ : 536360.8/101

- sign 1871.279+/-0.227  $\chi^2/\text{NDF}$ : 198110.9/51

asym\_us\_avg\_atlr\_avg\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In: -339.386+/-1553.504  $\chi^2/\text{NDF}$ : 28.7/25

Left Out: -520.268+/-1536.787  $\chi^2/\text{NDF}$ : 29.2/23

Right Out: 1843.904+/-1434.268  $\chi^2/\text{NDF}$ : 28.6/28

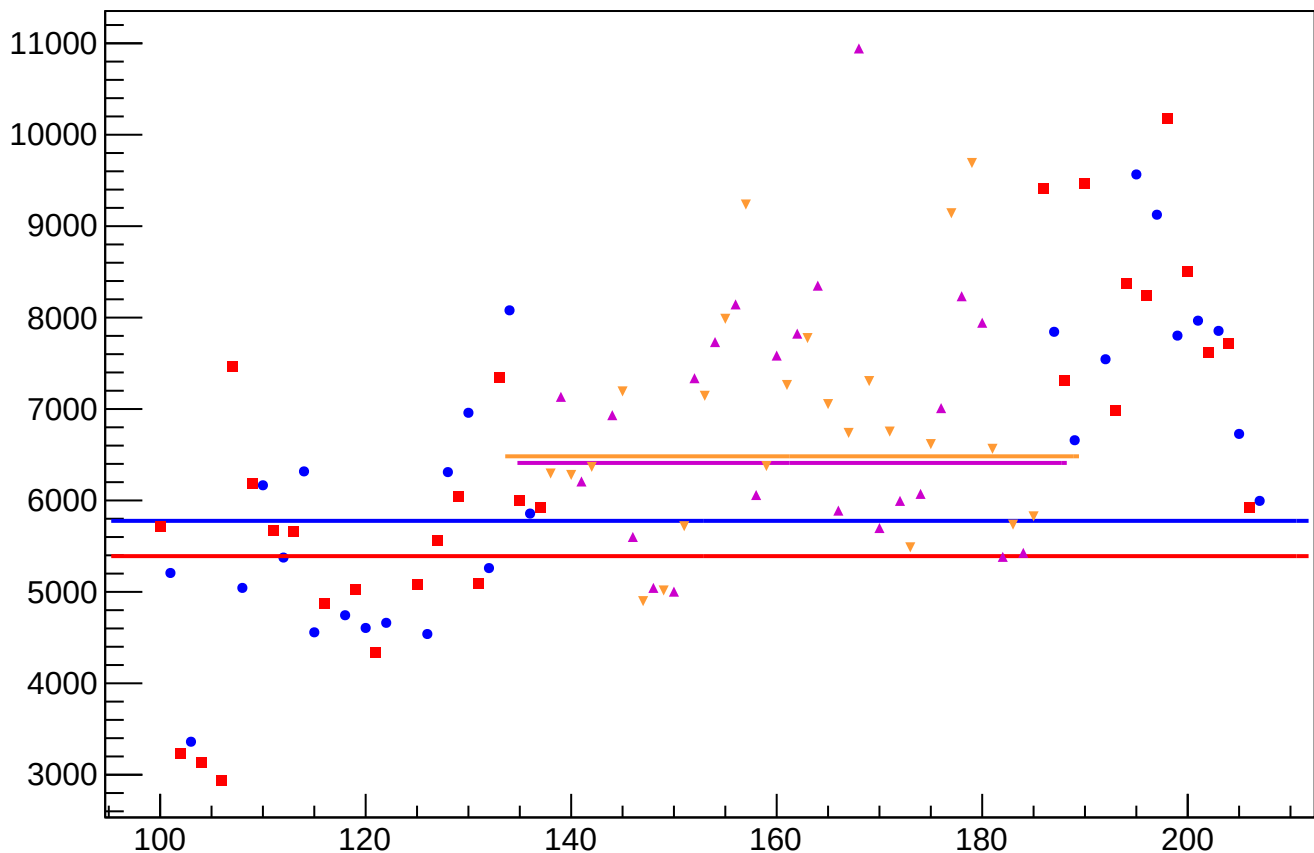
Left In: 324.626+/-1527.998  $\chi^2/\text{NDF}$ : 13.4/22

+ sign -430.806+/-1092.535  $\chi^2/\text{NDF}$ : 57.9/49

All: 384.927+/-755.454  $\chi^2/\text{NDF}$ : 101.5/101

- sign 1132.289+/-1045.747  $\chi^2/\text{NDF}$ : 42.5/51

asym\_us\_avg\_atlr\_avg\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 5776.910+/-1.098  $\chi^2/\text{NDF}$ : 2040698.5/25

Left Out: 6482.740+/-1.087  $\chi^2/\text{NDF}$ : 1074587.3/23

Right Out: 5391.108+/-1.014  $\chi^2/\text{NDF}$ : 3607226.8/28

Left In: 6410.429+/-1.080  $\chi^2/\text{NDF}$ : 1219833.0/22

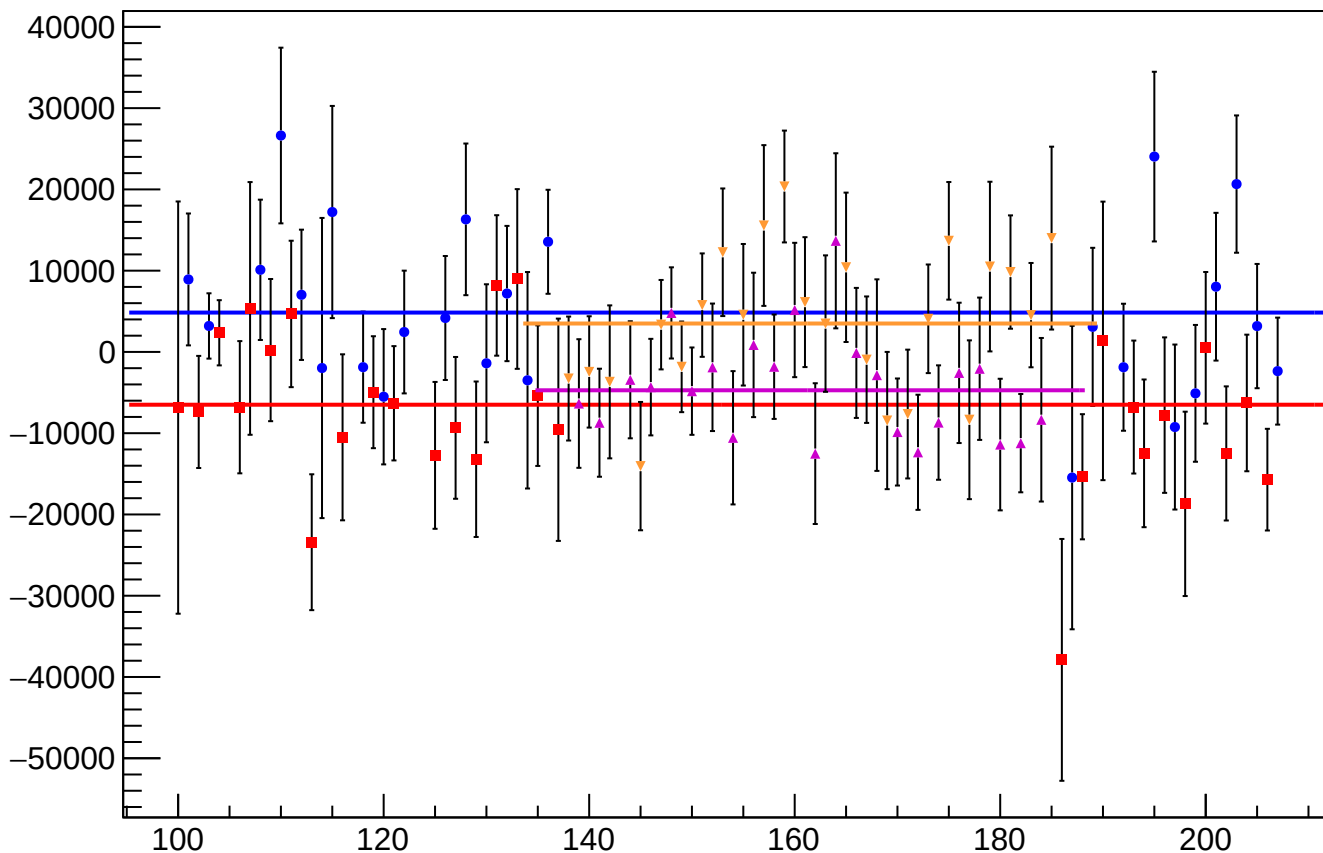
+ sign 6133.643+/-0.773  $\chi^2/\text{NDF}$ : 3323950.8/49

All: 5995.298+/-0.534  $\chi^2/\text{NDF}$ : 8685612.2/10

- sign 5868.548+/-0.739  $\chi^2/\text{NDF}$ : 5300210.8/51



# asym\_us\_avg\_atlr\_avg\_avg\_mean vs Slug



Right In: 4843.348+/-1602.096  $\chi^2/\text{NDF}$ : 26.4/25

Left Out: 3497.162+/-1545.839  $\chi^2/\text{NDF}$ : 27.5/23

Right Out: -6495.481+/-1566.474  $\chi^2/\text{NDF}$ : 28.7/28

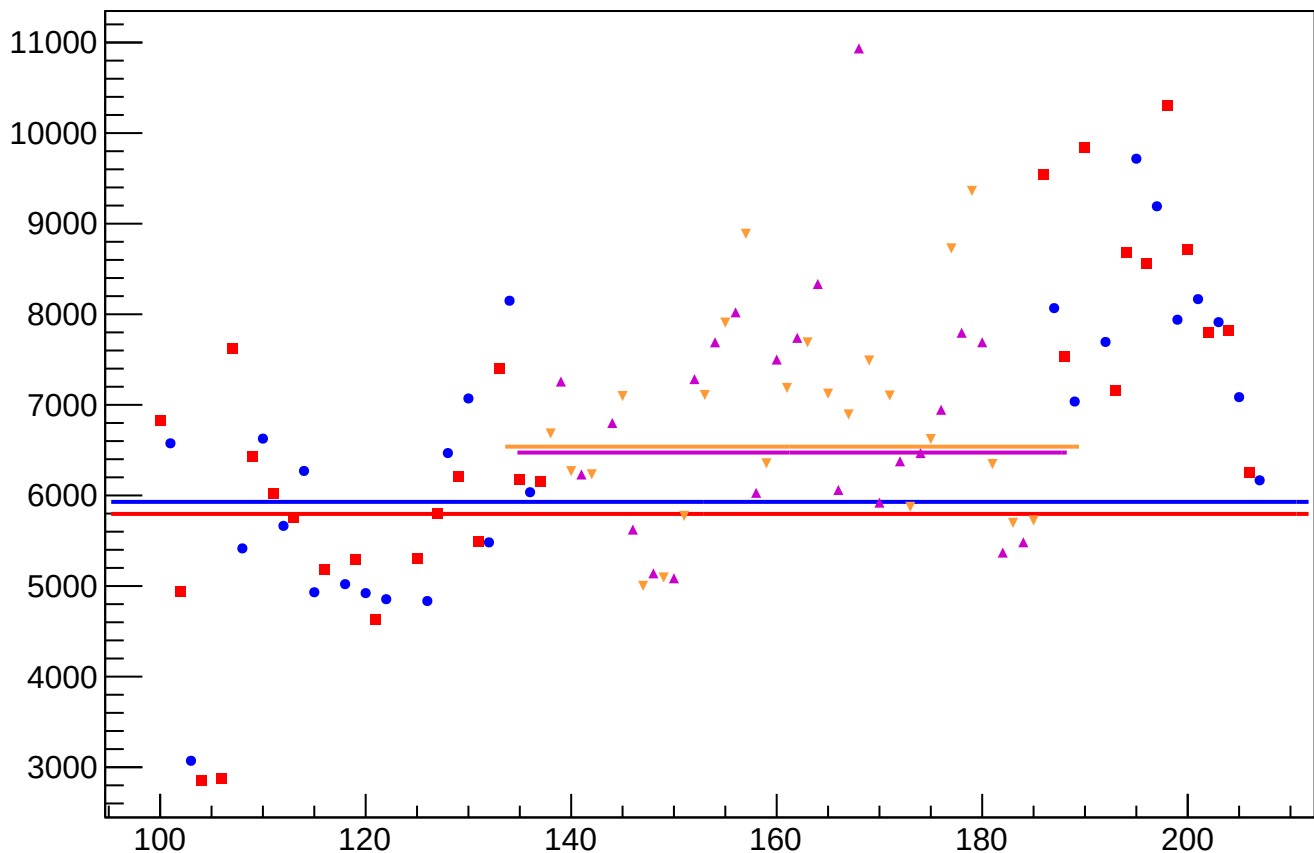
Left In: -4719.535+/-1539.177  $\chi^2/\text{NDF}$ : 14.3/22

+ sign 4146.205+/-1112.430  $\chi^2/\text{NDF}$ : 54.2/49

All: -786.920+/-781.414  $\chi^2/\text{NDF}$ : 136.7/101

- sign -5591.899+/-1097.886  $\chi^2/\text{NDF}$ : 43.7/51

# asym\_us\_avg\_atlr\_avg\_avg\_rms vs Slug



Right In: 5929.077 $\pm$ 1.133  $\chi^2/\text{NDF}$ : 2314638.1/25

Left Out: 6538.706 $\pm$ 1.093  $\chi^2/\text{NDF}$ : 920612.0/23

Right Out: 5796.021 $\pm$ 1.093  $\chi^2/\text{NDF}$ : 3251704.5/28

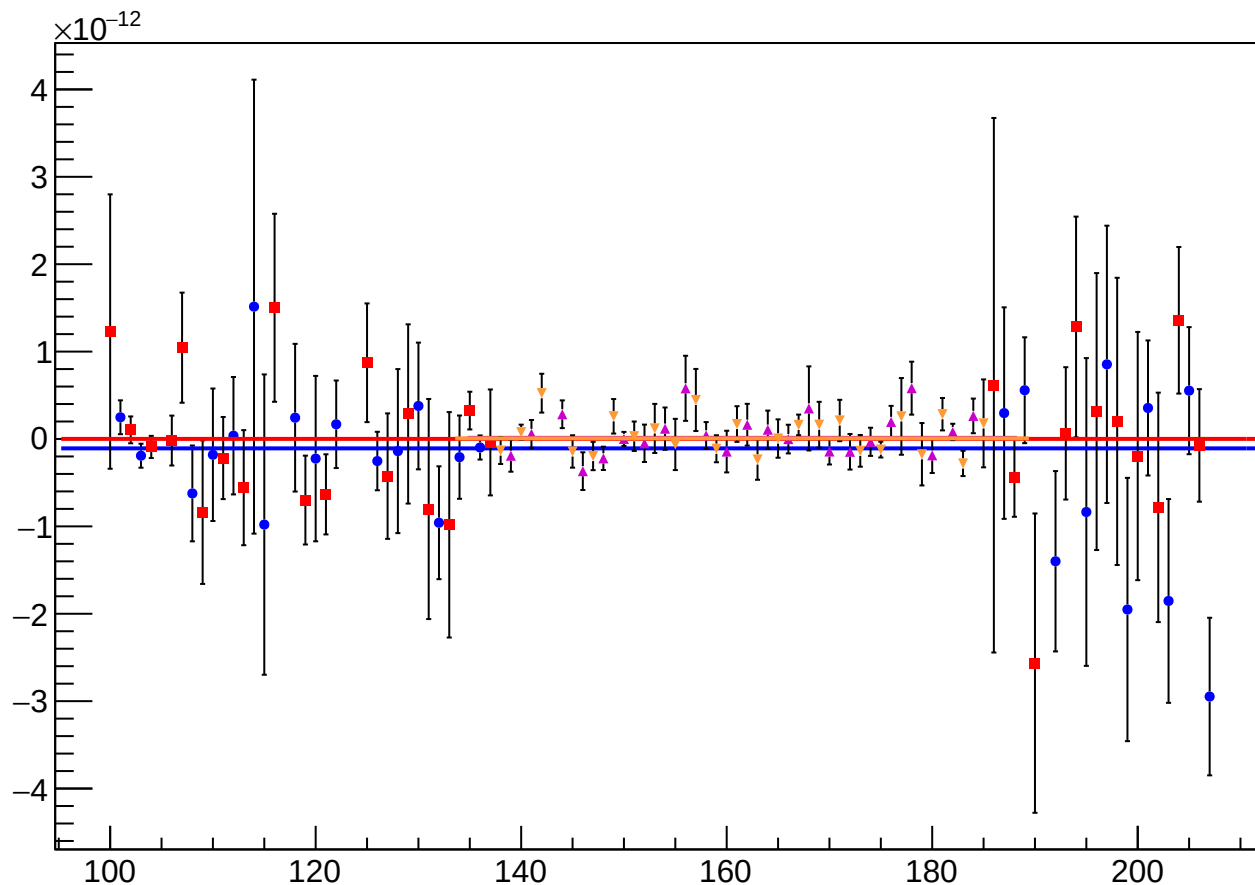
Left In: 6473.481 $\pm$ 1.088  $\chi^2/\text{NDF}$ : 1071757.3/22

+ sign 6244.779 $\pm$ 0.787  $\chi^2/\text{NDF}$ : 3385221.0/49

All: 6189.354 $\pm$ 0.551  $\chi^2/\text{NDF}$ : 7911380.4/10

- sign 6136.090 $\pm$ 0.771  $\chi^2/\text{NDF}$ : 4516423.2/51

asym\_us\_avg\_atlr\_avg\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 26.5/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 27.2/23

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 24.7/28

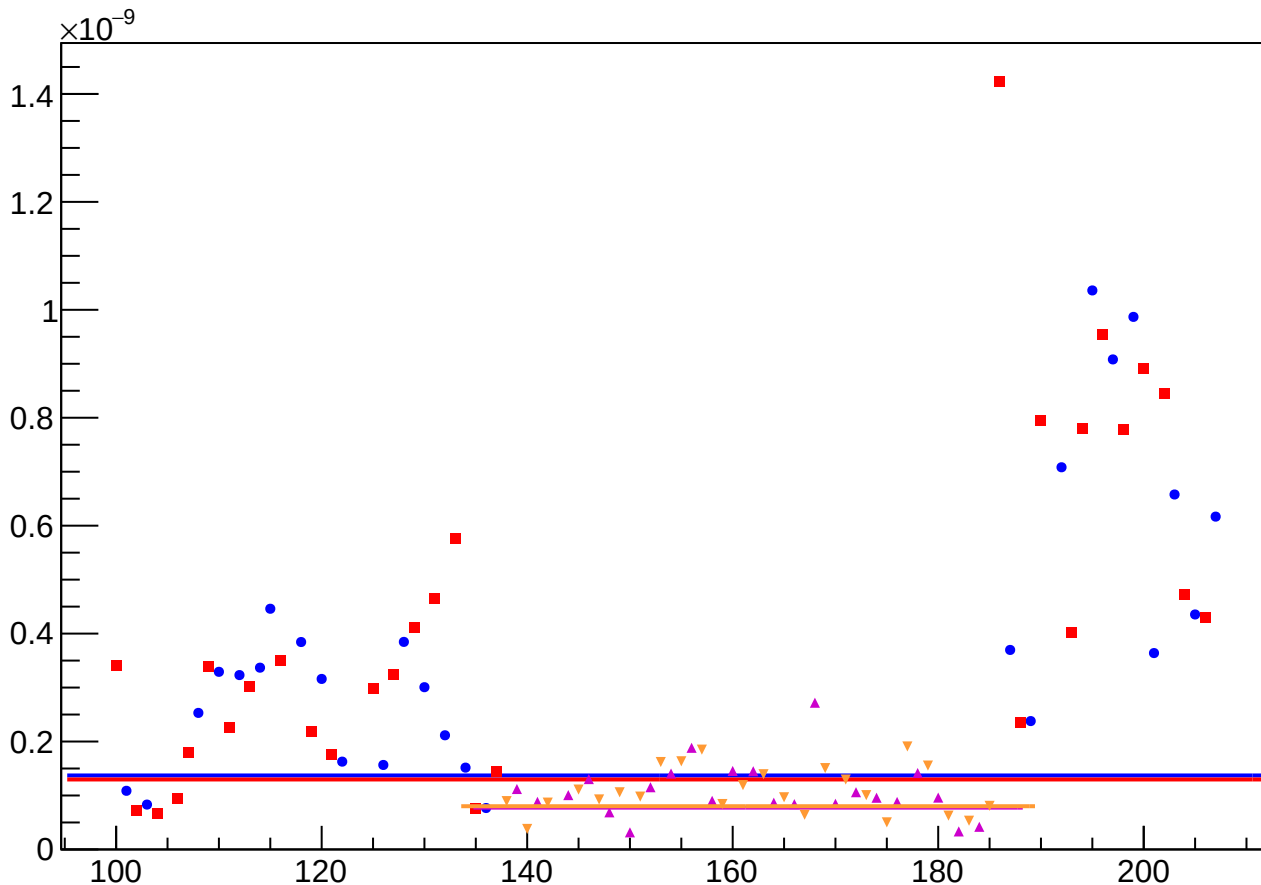
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 24.0/22

+ sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 55.6/49

All: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 104.6/101

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 48.7/51

asym\_us\_avg\_atlr\_avg\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5550407.8/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2153227.2/23

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6662394.1/28

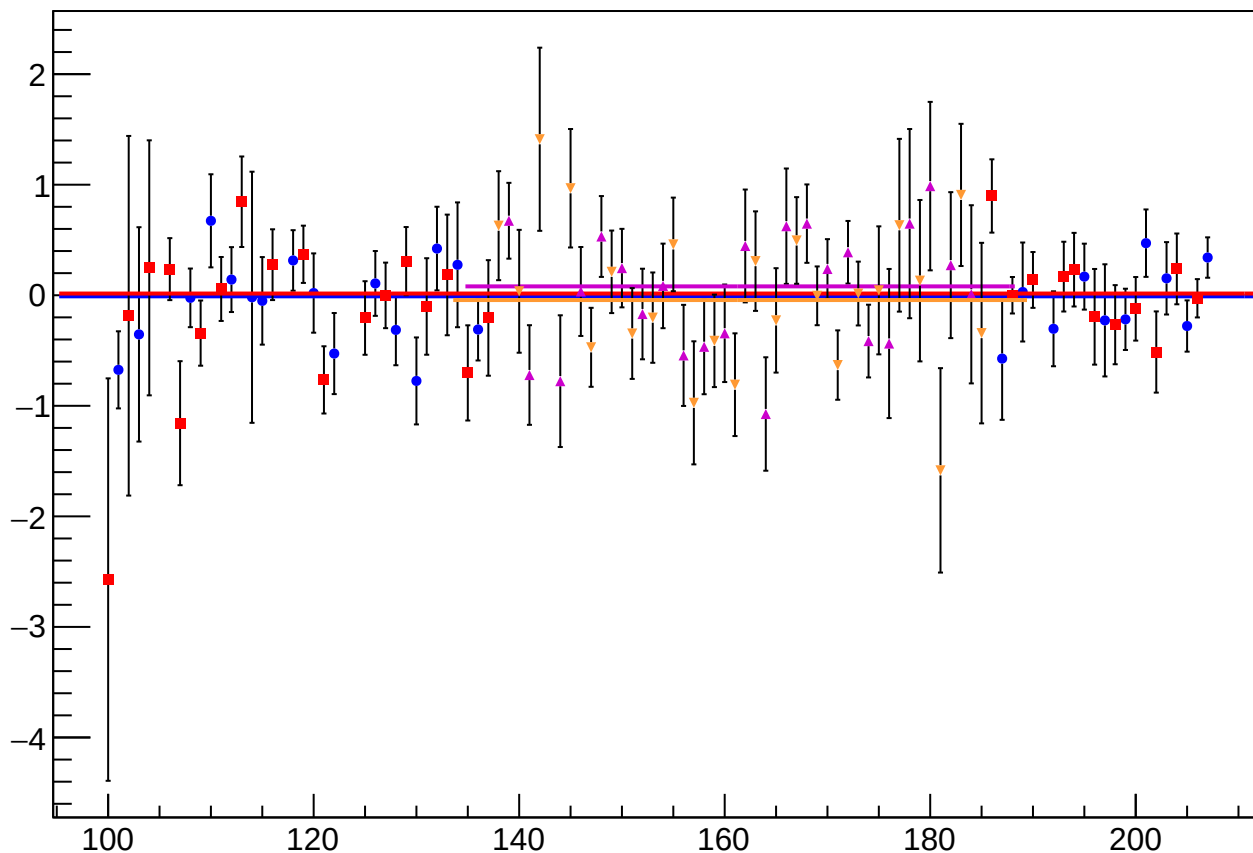
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2642331.8/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8644537.8/49

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 18773371.6/101

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10116607.6/51

asym\_us\_avg\_atlr\_avg\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.010 \pm 0.064$   $\chi^2/\text{NDF}$ : 28.3/25

Left Out:  $-0.043 \pm 0.090$   $\chi^2/\text{NDF}$ : 31.0/23

Right Out:  $0.016 \pm 0.059$   $\chi^2/\text{NDF}$ : 38.0/28

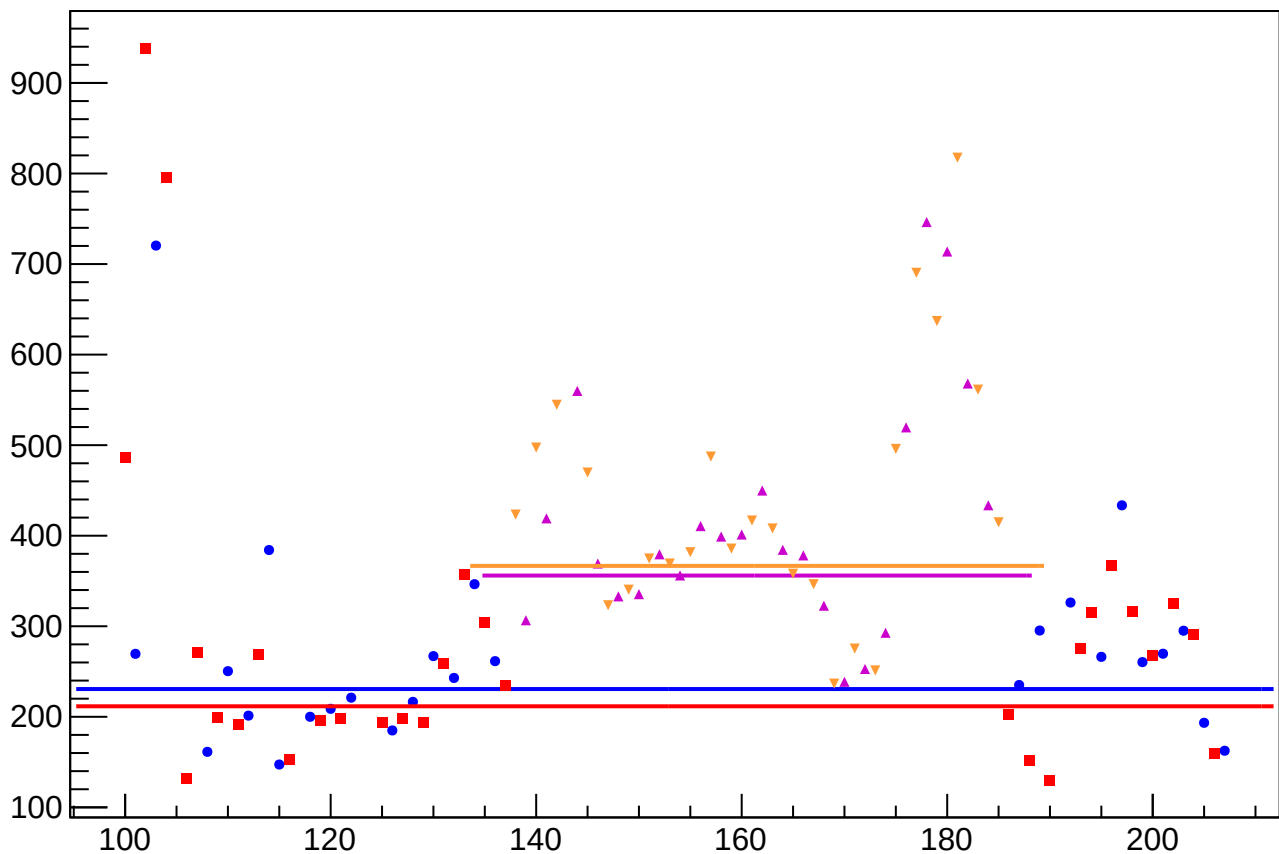
Left In:  $0.080 \pm 0.088$   $\chi^2/\text{NDF}$ : 30.3/22

+ sign  $-0.021 \pm 0.052$   $\chi^2/\text{NDF}$ : 59.4/49

All:  $0.009 \pm 0.036$   $\chi^2/\text{NDF}$ : 128.7/101

- sign  $0.036 \pm 0.049$   $\chi^2/\text{NDF}$ : 68.7/51

asym\_us\_avg\_atlr\_avg\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 230.660 $\pm$ 0.046  $\chi^2$ /NDF: 2047773.6/25

Left Out: 366.670 $\pm$ 0.064  $\chi^2$ /NDF: 2841071.8/23

Right Out: 211.610 $\pm$ 0.042  $\chi^2$ /NDF: 3302448.5/28

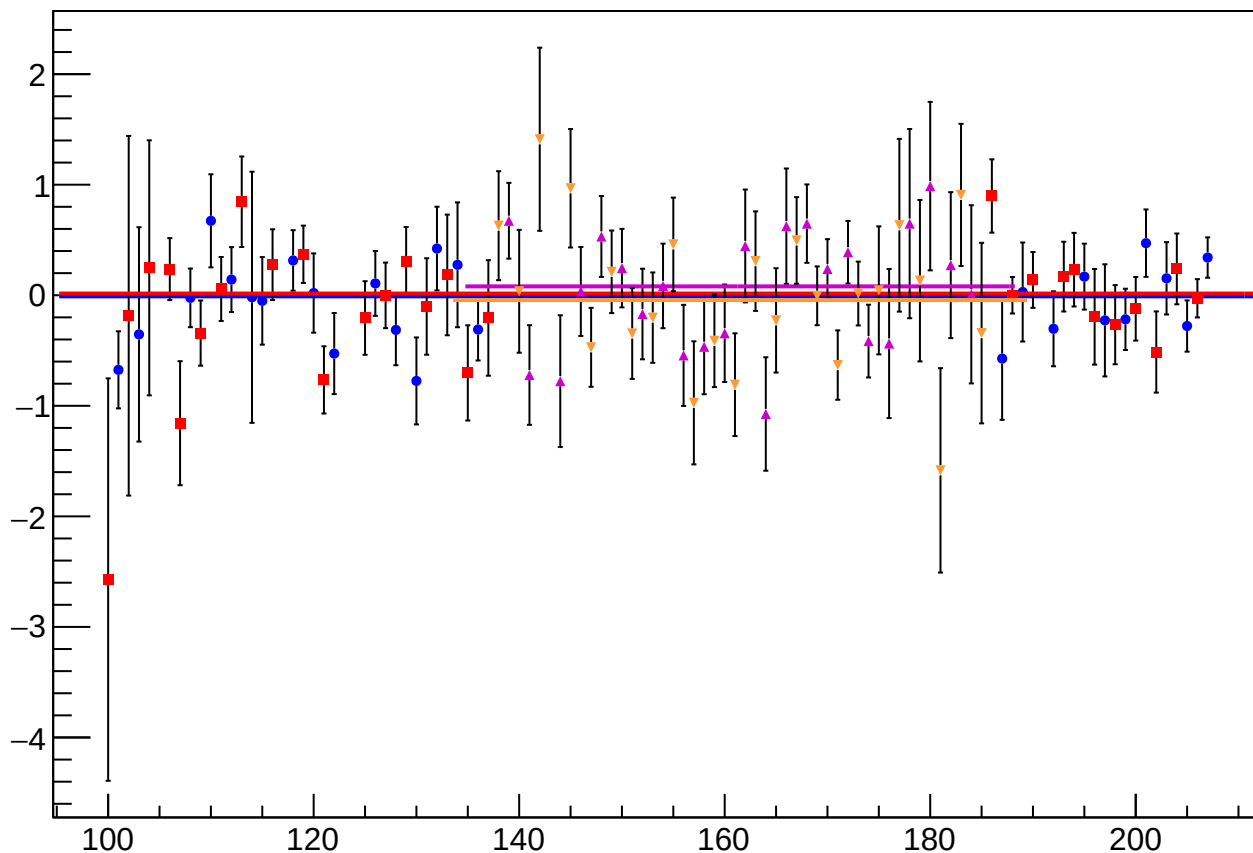
Left In: 355.992 $\pm$ 0.062  $\chi^2$ /NDF: 2420701.1/22

+ sign 276.426 $\pm$ 0.037  $\chi^2$ /NDF: 7889000.9/49

All: 265.813 $\pm$ 0.025  $\chi^2$ /NDF: 17492342.2/10

- sign 256.567 $\pm$ 0.035  $\chi^2$ /NDF: 9450229.0/51

asym\_us\_avg\_atlr\_avg\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.010 \pm 0.064$   $\chi^2/\text{NDF}$ : 28.3/25

Left Out:  $-0.043 \pm 0.090$   $\chi^2/\text{NDF}$ : 31.0/23

Right Out:  $0.016 \pm 0.059$   $\chi^2/\text{NDF}$ : 38.0/28

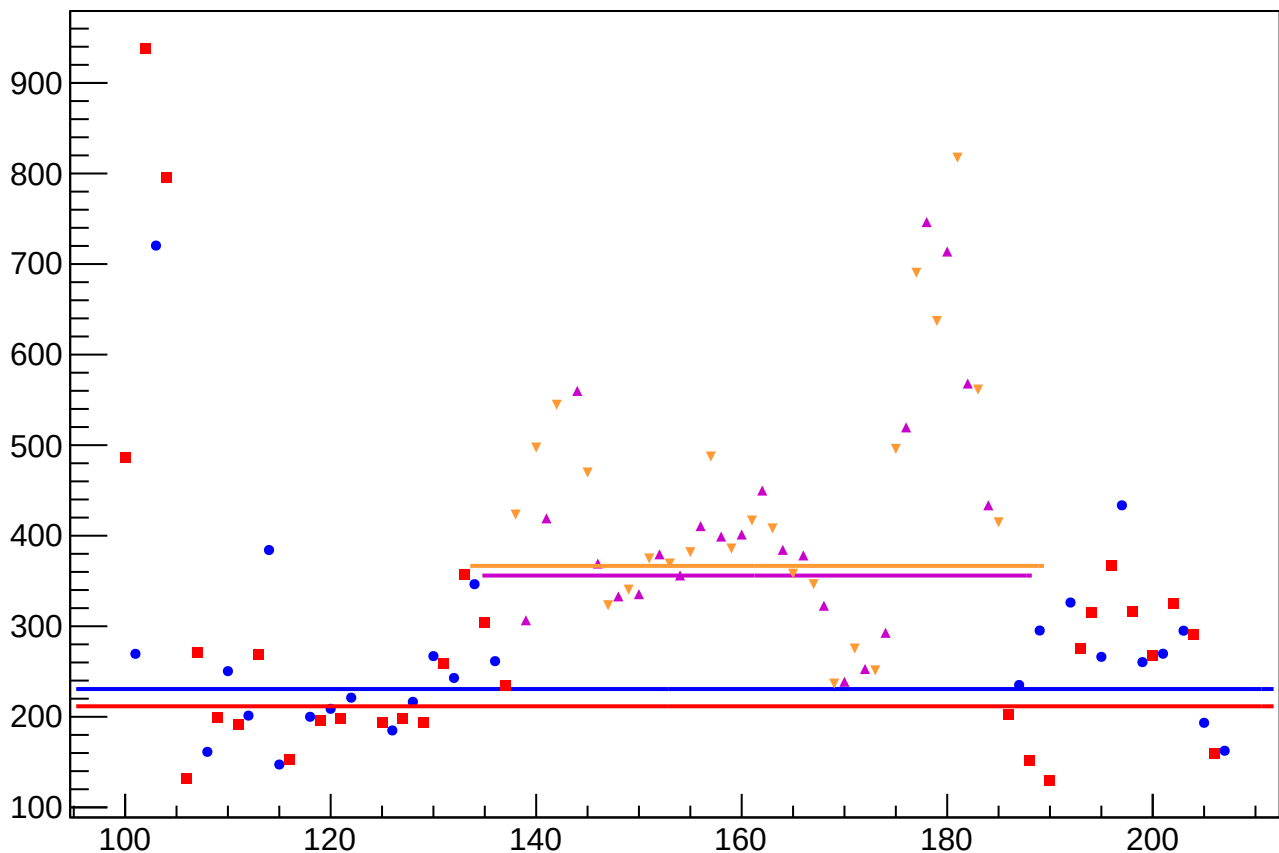
Left In:  $0.080 \pm 0.088$   $\chi^2/\text{NDF}$ : 30.3/22

+ sign  $-0.021 \pm 0.052$   $\chi^2/\text{NDF}$ : 59.4/49

All:  $0.009 \pm 0.036$   $\chi^2/\text{NDF}$ : 128.7/101

- sign  $0.036 \pm 0.049$   $\chi^2/\text{NDF}$ : 68.7/51

asym\_us\_avg\_atlr\_avg\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 230.660+/-0.046  $\chi^2/\text{NDF}$ : 2047773.6/25

Left Out: 366.670+/-0.064  $\chi^2/\text{NDF}$ : 2841071.8/23

Right Out: 211.610+/-0.042  $\chi^2/\text{NDF}$ : 3302448.5/28

Left In: 355.992+/-0.062  $\chi^2/\text{NDF}$ : 2420701.1/22

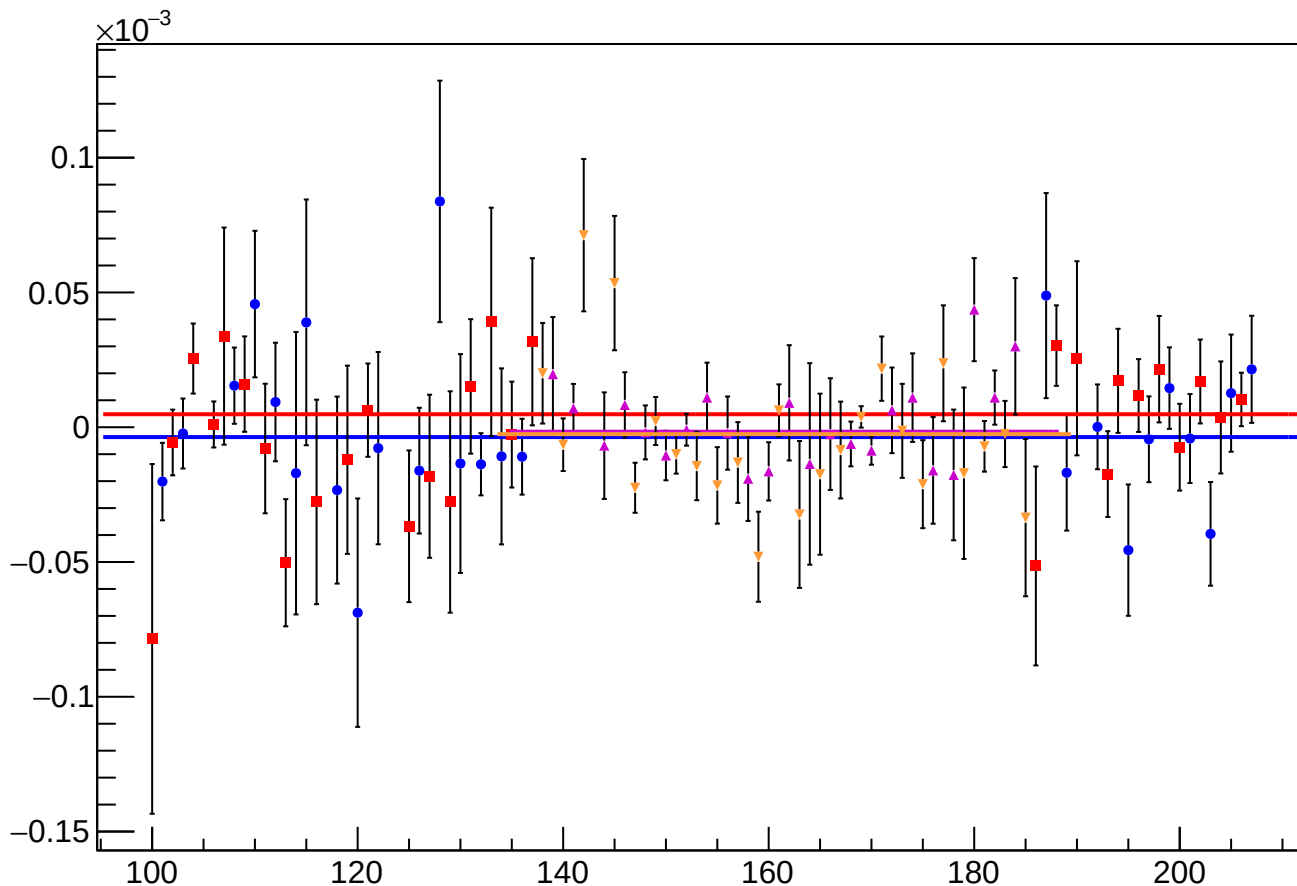
+ sign 276.426+/-0.037  $\chi^2/\text{NDF}$ : 7889000.9/49

All: 265.813+/-0.025  $\chi^2/\text{NDF}$ : 17492342.2/10

- sign 256.567+/-0.035  $\chi^2/\text{NDF}$ : 9450229.0/51



asym\_us\_avg\_atlr\_avg\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 28.1/25

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:43.5/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 28.3/28

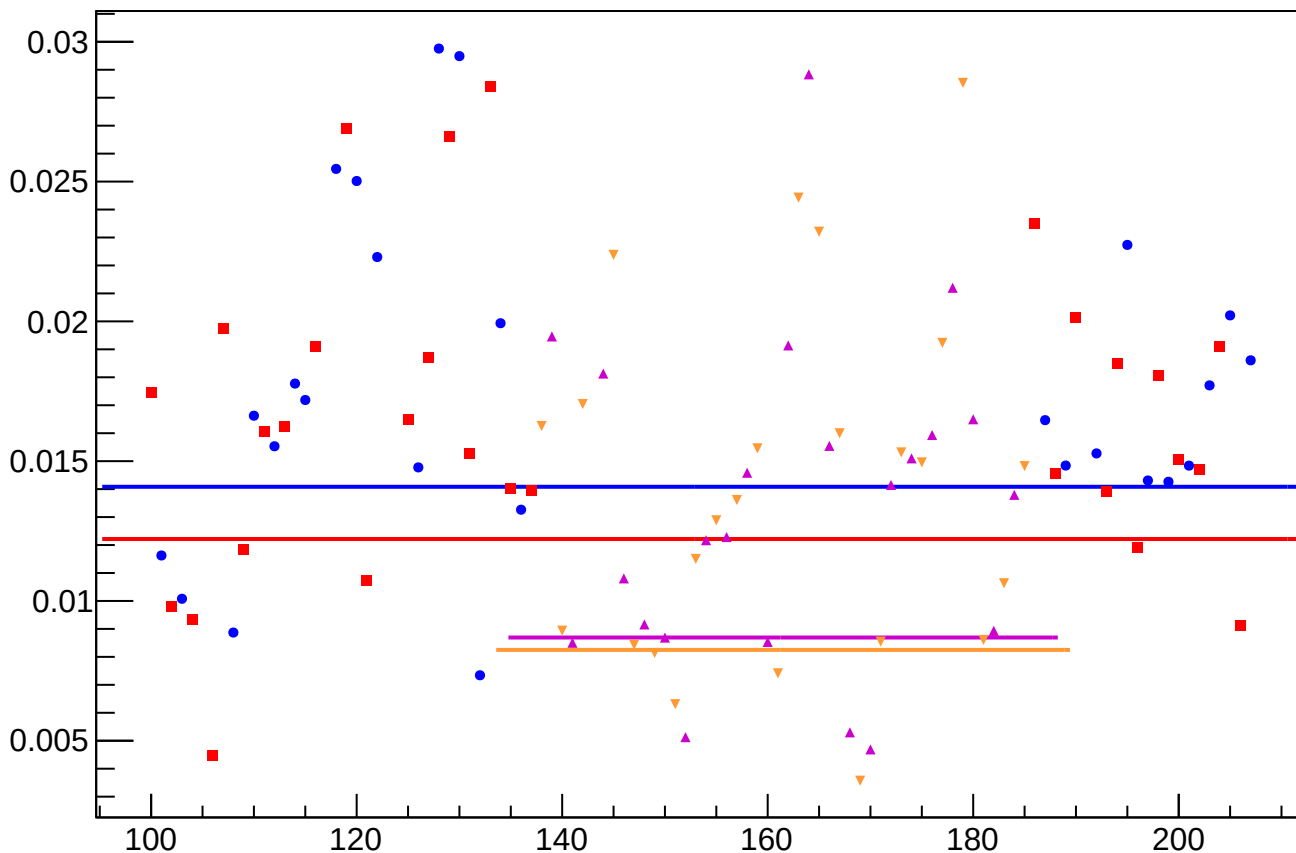
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:20.7/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 71.6/49

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 124.5/101

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 51.4/51

asym\_us\_avg\_atlr\_avg\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.014 $\pm$ 0.000  $\chi^2$ /NDF: 2922801.2/25

Left Out: 0.008 $\pm$ 0.000  $\chi^2$ /NDF:8879581.2/23

Right Out: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 4448740.9/28

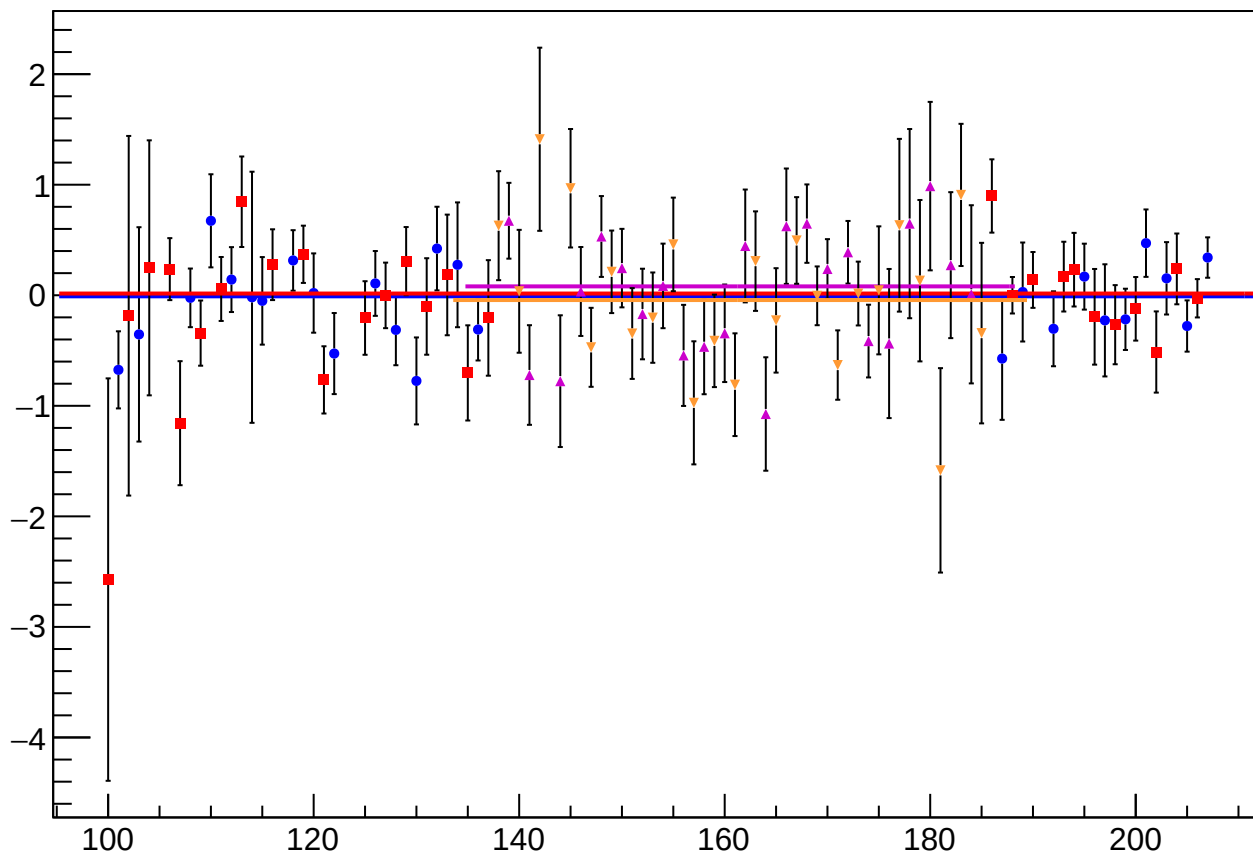
Left In: 0.009 $\pm$ 0.000  $\chi^2$ /NDF:6875072.4/22

+ sign 0.010 $\pm$ 0.000  $\chi^2$ /NDF: 15181495.4/49

All: 0.010 $\pm$ 0.000  $\chi^2$ /NDF: 27986175.8/101

- sign 0.010 $\pm$ 0.000  $\chi^2$ /NDF: 12801148.1/51

asym\_us\_avg\_atlr\_avg\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.010 \pm 0.064$   $\chi^2/\text{NDF}$ : 28.3/25

Left Out:  $-0.043 \pm 0.090$   $\chi^2/\text{NDF}$ : 31.0/23

Right Out:  $0.016 \pm 0.059$   $\chi^2/\text{NDF}$ : 38.0/28

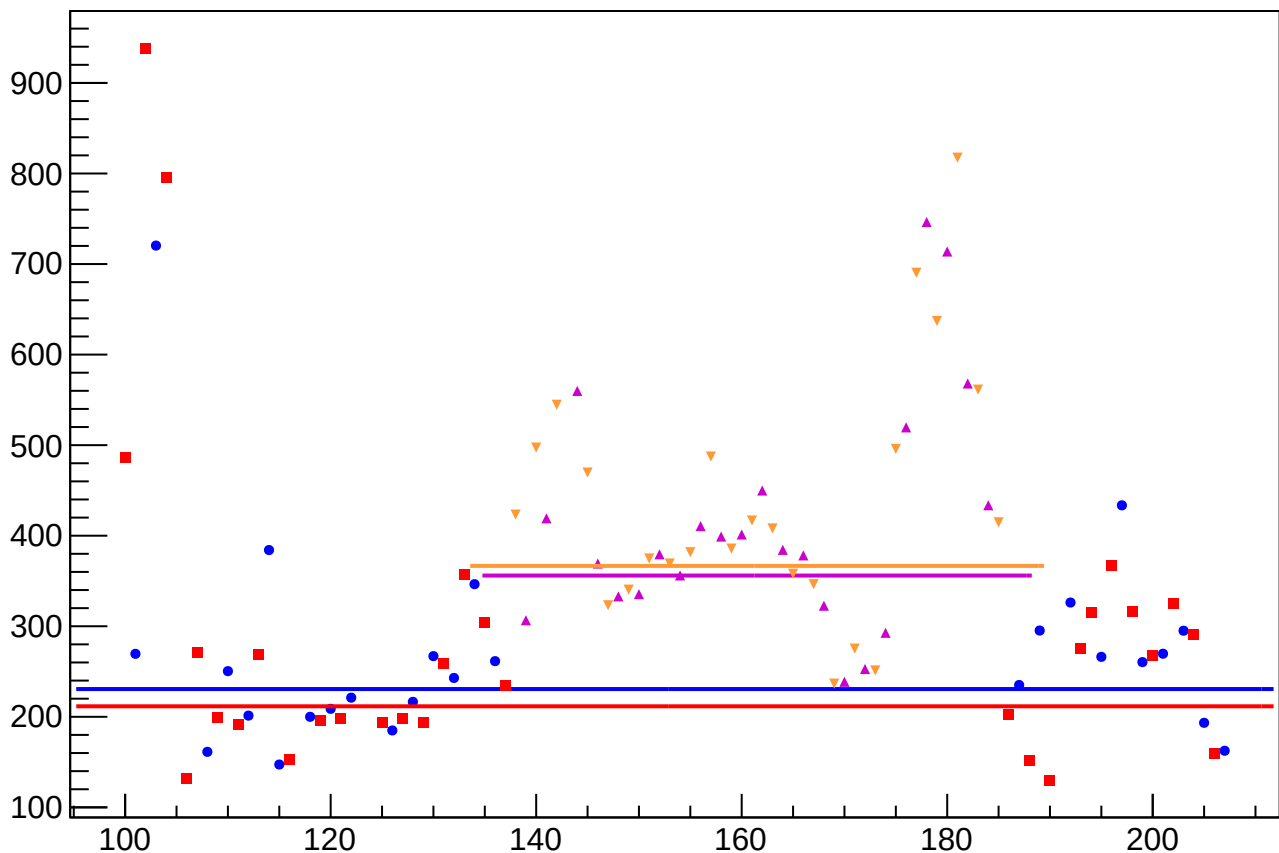
Left In:  $0.080 \pm 0.088$   $\chi^2/\text{NDF}$ : 30.3/22

+ sign  $-0.021 \pm 0.052$   $\chi^2/\text{NDF}$ : 59.4/49

All:  $0.009 \pm 0.036$   $\chi^2/\text{NDF}$ : 128.7/101

- sign  $0.036 \pm 0.049$   $\chi^2/\text{NDF}$ : 68.7/51

asym\_us\_avg\_atlr\_avg\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 230.658 $\pm$ 0.046  $\chi^2$ /NDF: 2047812.7/25

Left Out: 366.671 $\pm$ 0.064  $\chi^2$ /NDF:2841292.6/23

Right Out: 211.608 $\pm$ 0.042  $\chi^2$ /NDF: 3302531.3/28

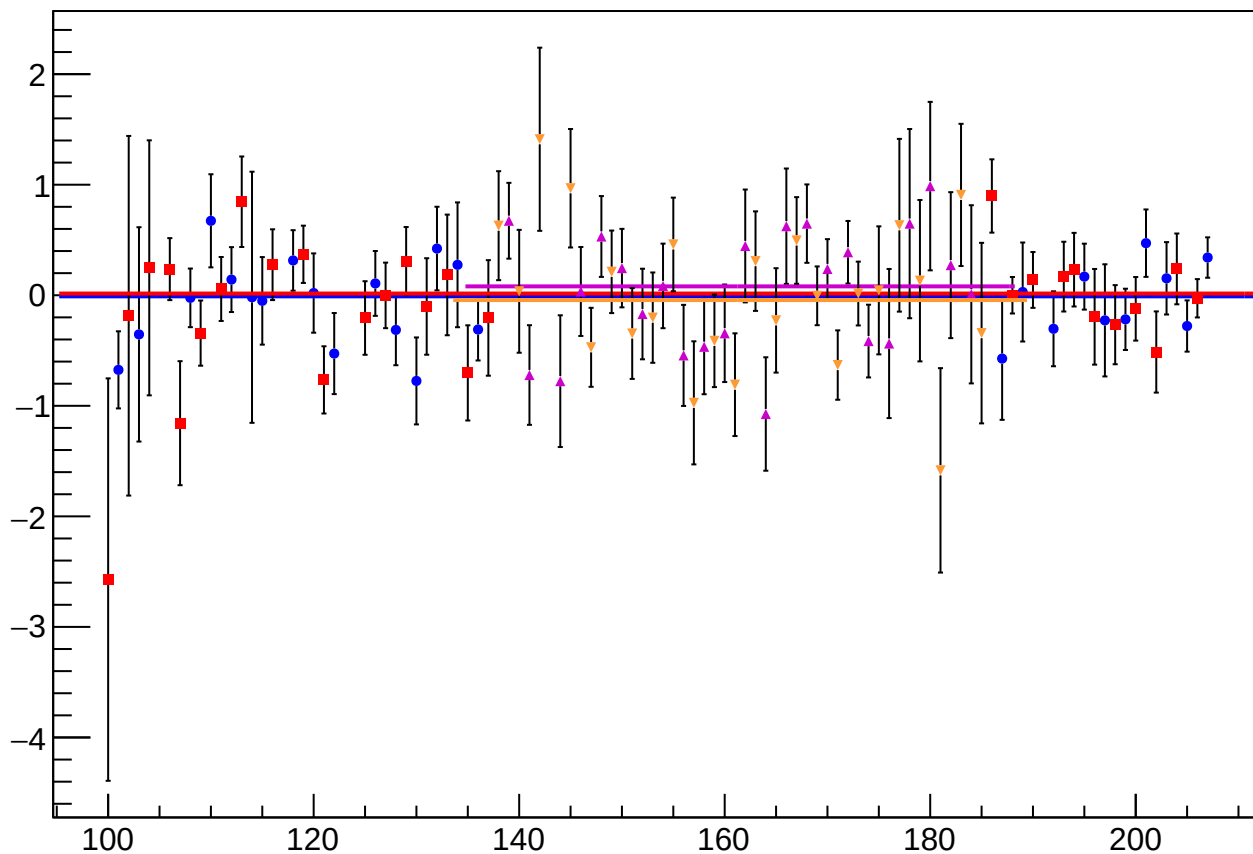
Left In: 355.993 $\pm$ 0.062  $\chi^2$ /NDF:2420863.3/22

+ sign 276.425 $\pm$ 0.037  $\chi^2$ /NDF: 7889346.9/49

All: 265.811 $\pm$ 0.025  $\chi^2$ /NDF: 17493167.3/10

- sign 256.564 $\pm$ 0.035  $\chi^2$ /NDF: 9450692.1/51

asym\_us\_avg\_atlr\_avg\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.010 \pm 0.064$   $\chi^2/\text{NDF}$ : 28.3/25

Left Out:  $-0.043 \pm 0.090$   $\chi^2/\text{NDF}$ : 31.0/23

Right Out:  $0.016 \pm 0.059$   $\chi^2/\text{NDF}$ : 38.0/28

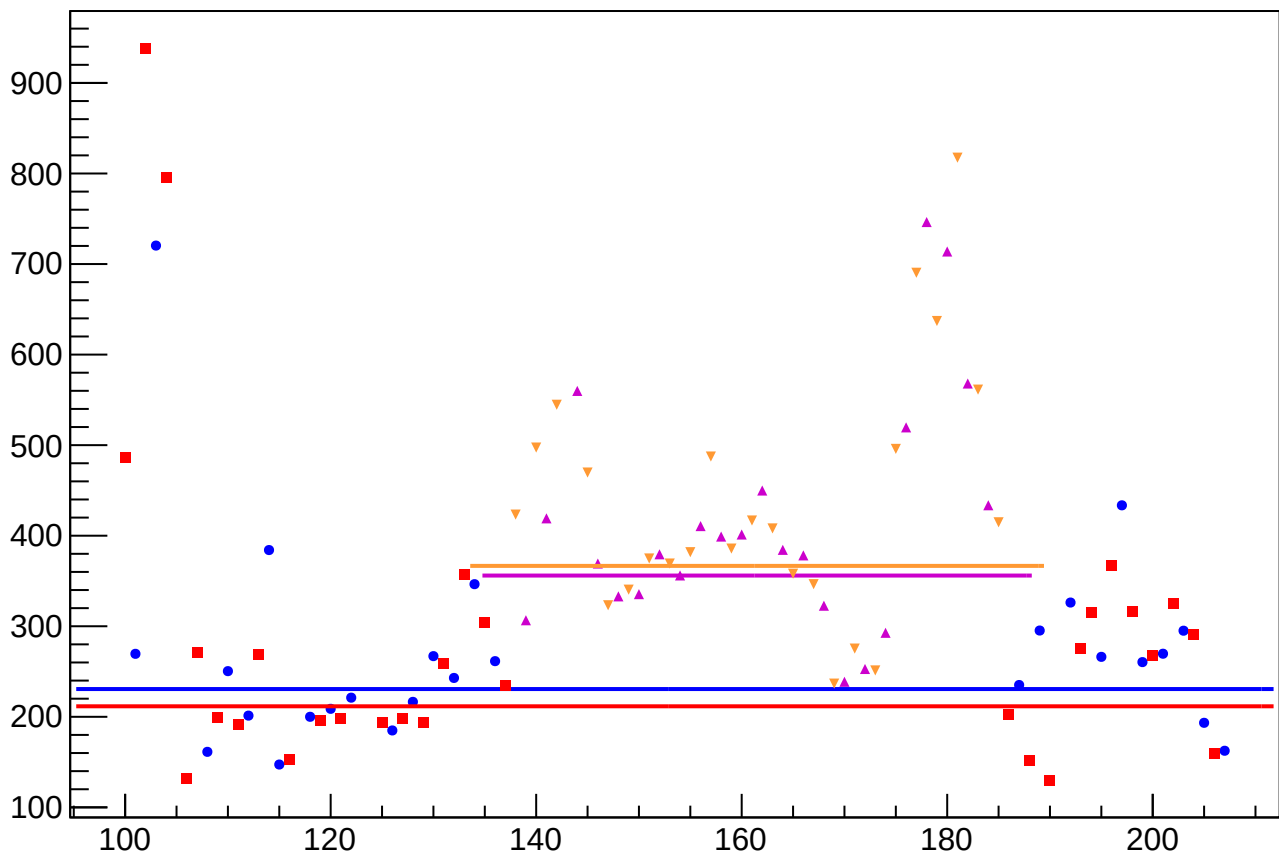
Left In:  $0.080 \pm 0.088$   $\chi^2/\text{NDF}$ : 30.3/22

+ sign  $-0.021 \pm 0.052$   $\chi^2/\text{NDF}$ : 59.4/49

All:  $0.009 \pm 0.036$   $\chi^2/\text{NDF}$ : 128.7/101

- sign  $0.036 \pm 0.049$   $\chi^2/\text{NDF}$ : 68.7/51

asym\_us\_avg\_atlr\_avg\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 230.658 $\pm$ 0.046  $\chi^2$ /NDF: 2047812.7/25

Left Out: 366.671 $\pm$ 0.064  $\chi^2$ /NDF:2841292.6/23

Right Out: 211.608 $\pm$ 0.042  $\chi^2$ /NDF: 3302531.3/28

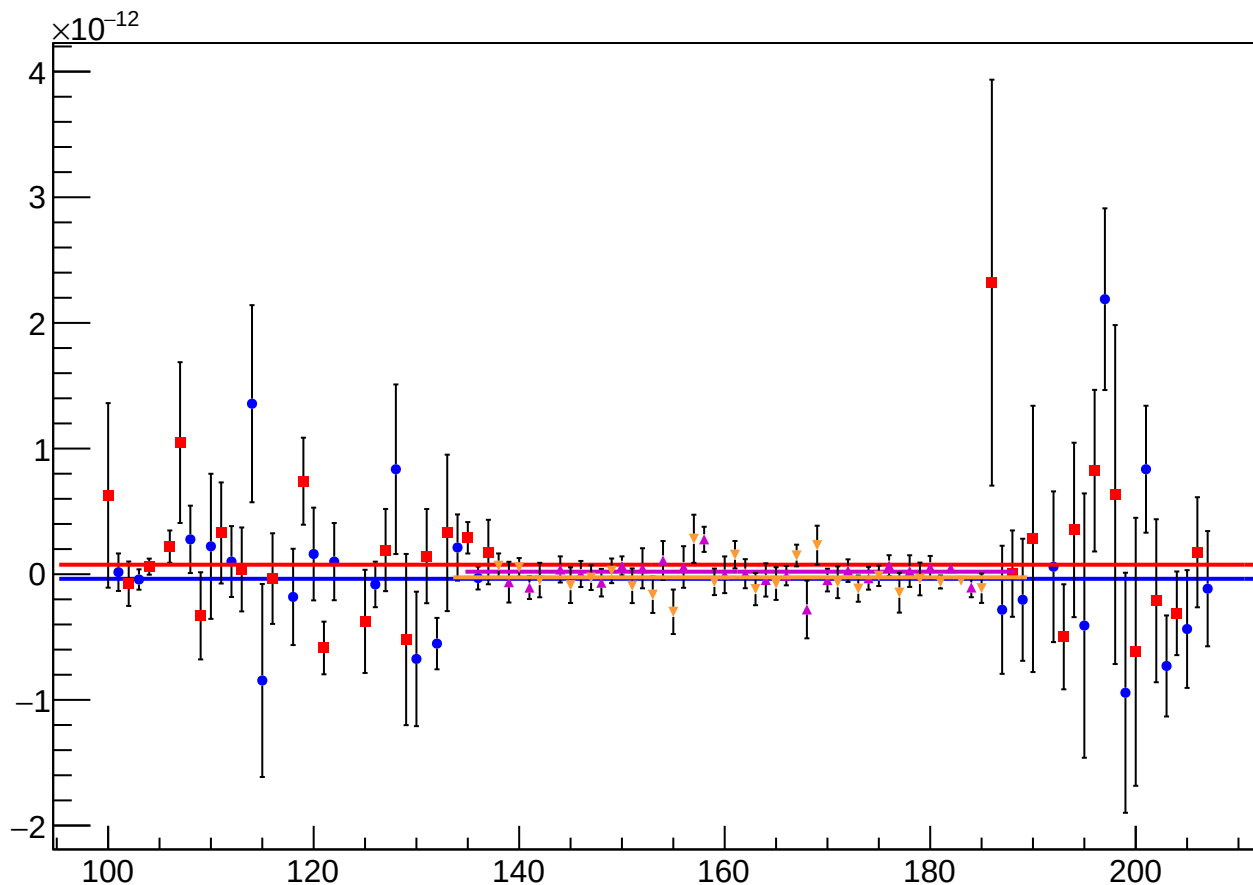
Left In: 355.993 $\pm$ 0.062  $\chi^2$ /NDF:2420863.3/22

+ sign 276.425 $\pm$ 0.037  $\chi^2$ /NDF: 7889346.9/49

All: 265.811 $\pm$ 0.025  $\chi^2$ /NDF: 17493167.3/10

- sign 256.564 $\pm$ 0.035  $\chi^2$ /NDF: 9450692.1/51

asym\_us\_avg\_atlr\_avg\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2$ /NDF: 34.8/25

Left Out: -0.000+/-0.000  $\chi^2$ /NDF:21.9/23

Right Out: 0.000+/-0.000  $\chi^2$ /NDF: 33.5/28

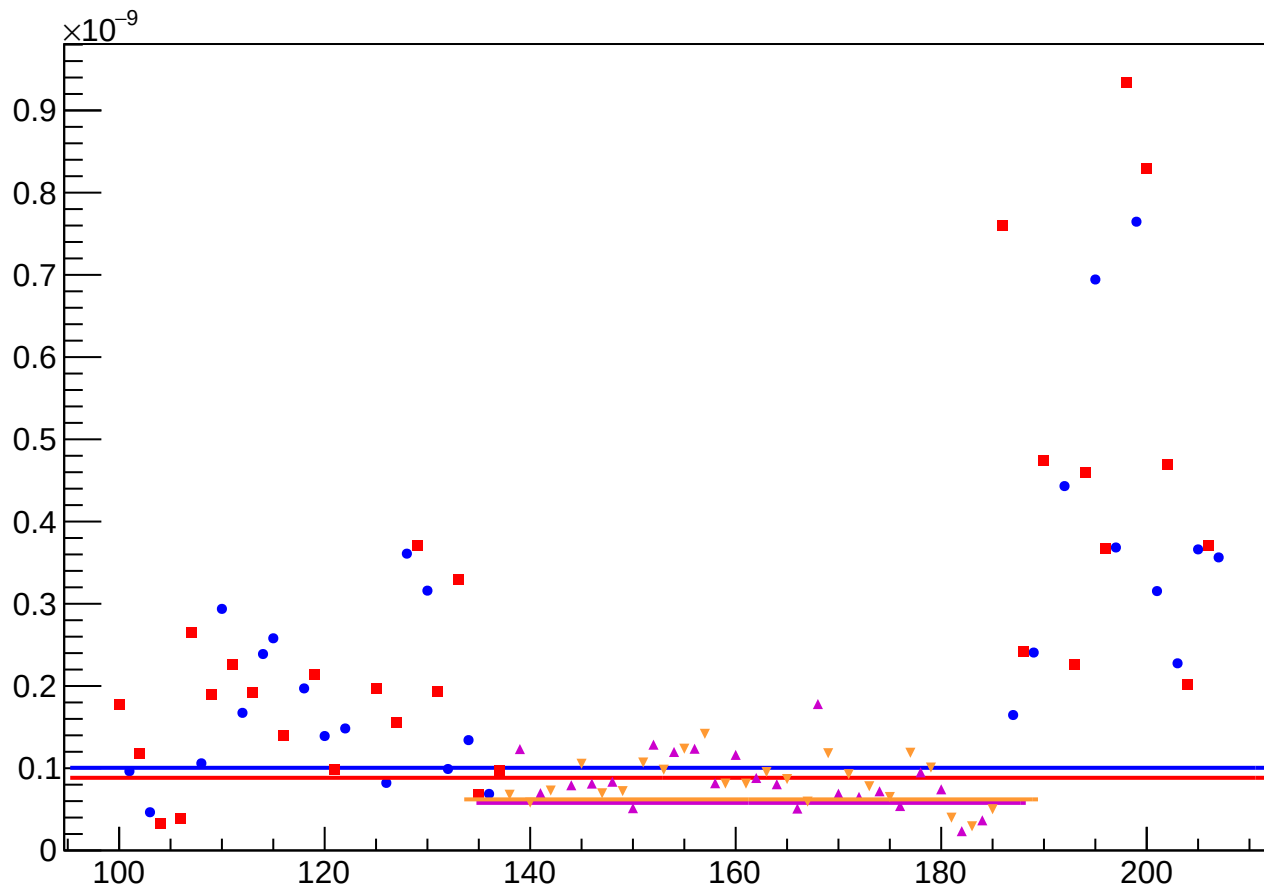
Left In: 0.000+/-0.000  $\chi^2$ /NDF:17.2/22

+ sign -0.000+/-0.000  $\chi^2$ /NDF: 56.8/49

All: 0.000+/-0.000  $\chi^2$ /NDF: 114.0/101

- sign 0.000+/-0.000  $\chi^2$ /NDF: 52.1/51

asym\_us\_avg\_atlr\_avg\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 7050877.8/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:4100152.8/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 9715525.8/28

Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:5512617.8/22

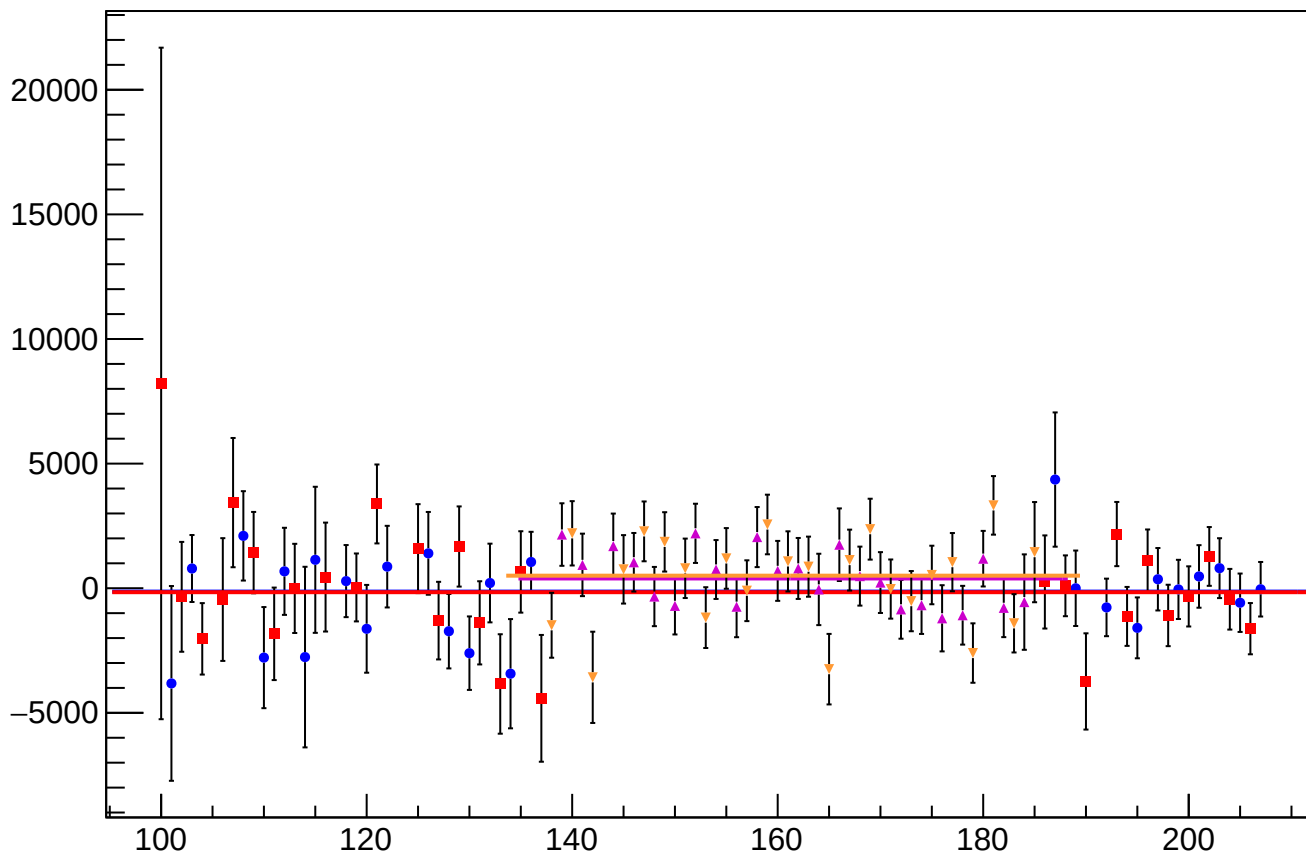
+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 12362902.6/49

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 28544786.7/101

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 16087155.3/51



# reg\_asym\_us\_avg\_atlr\_avg\_dd\_mean vs Slug



Right In:  $-135.291 \pm 292.822$   $\chi^2/\text{NDF}$ : 20.5/25

Left Out:  $503.606 \pm 255.531$   $\chi^2/\text{NDF}$ : 44.6/23

Right Out:  $-158.894 \pm 285.767$   $\chi^2/\text{NDF}$ : 33.3/28

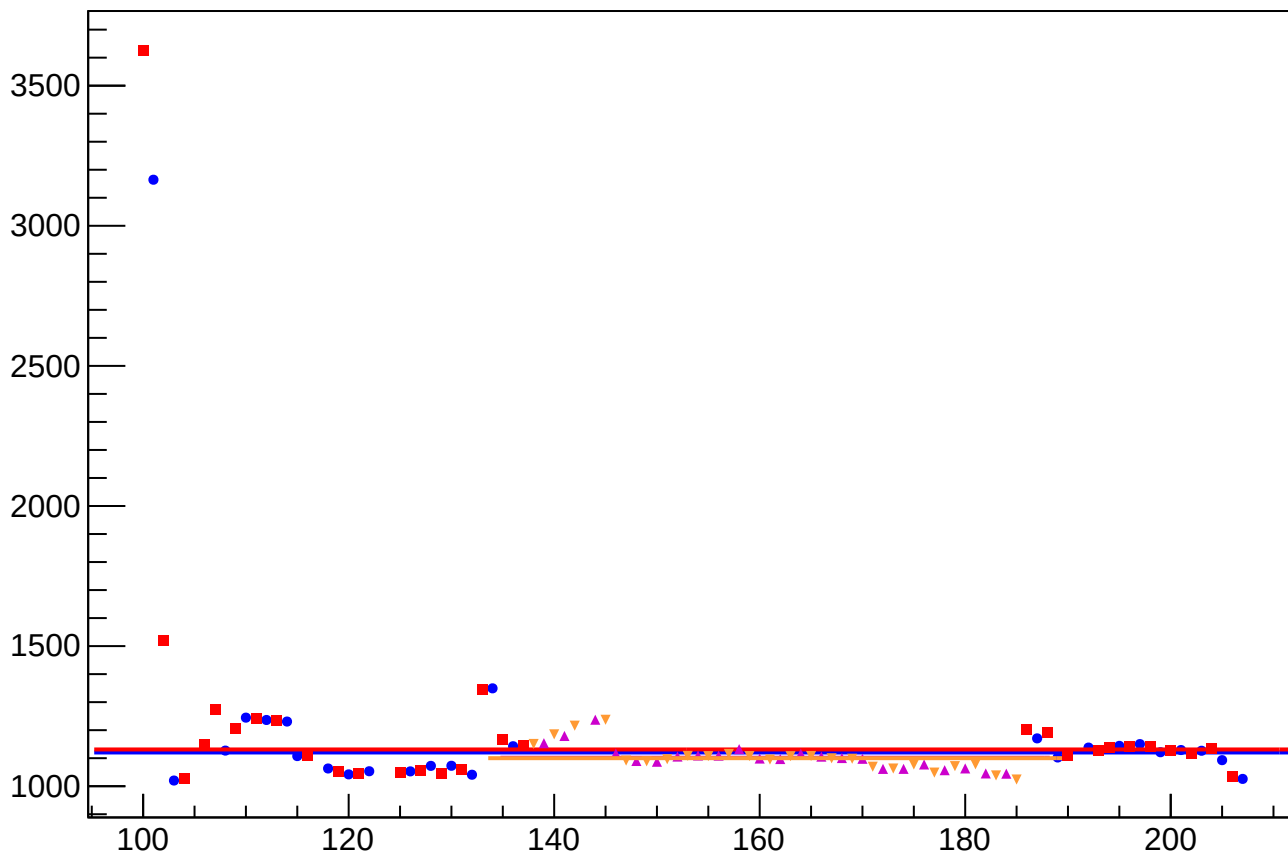
Left In:  $391.701 \pm 257.386$   $\chi^2/\text{NDF}$ : 17.8/22

+ sign  $227.406 \pm 192.531$   $\chi^2/\text{NDF}$ : 67.7/49

All:  $185.975 \pm 135.684$   $\chi^2/\text{NDF}$ : 121.0/101

- sign  $145.095 \pm 191.248$   $\chi^2/\text{NDF}$ : 53.2/51

# reg\_asym\_us\_avg\_atlr\_avg\_dd\_rms vs Slug



Right In: 1120.408 $\pm$ 0.207  $\chi^2$ /NDF: 641440.3/25

Left Out: 1100.063 $\pm$ 0.181  $\chi^2$ /NDF: 58733.9/23

Right Out: 1131.138 $\pm$ 0.202  $\chi^2$ /NDF: 247318.9/28

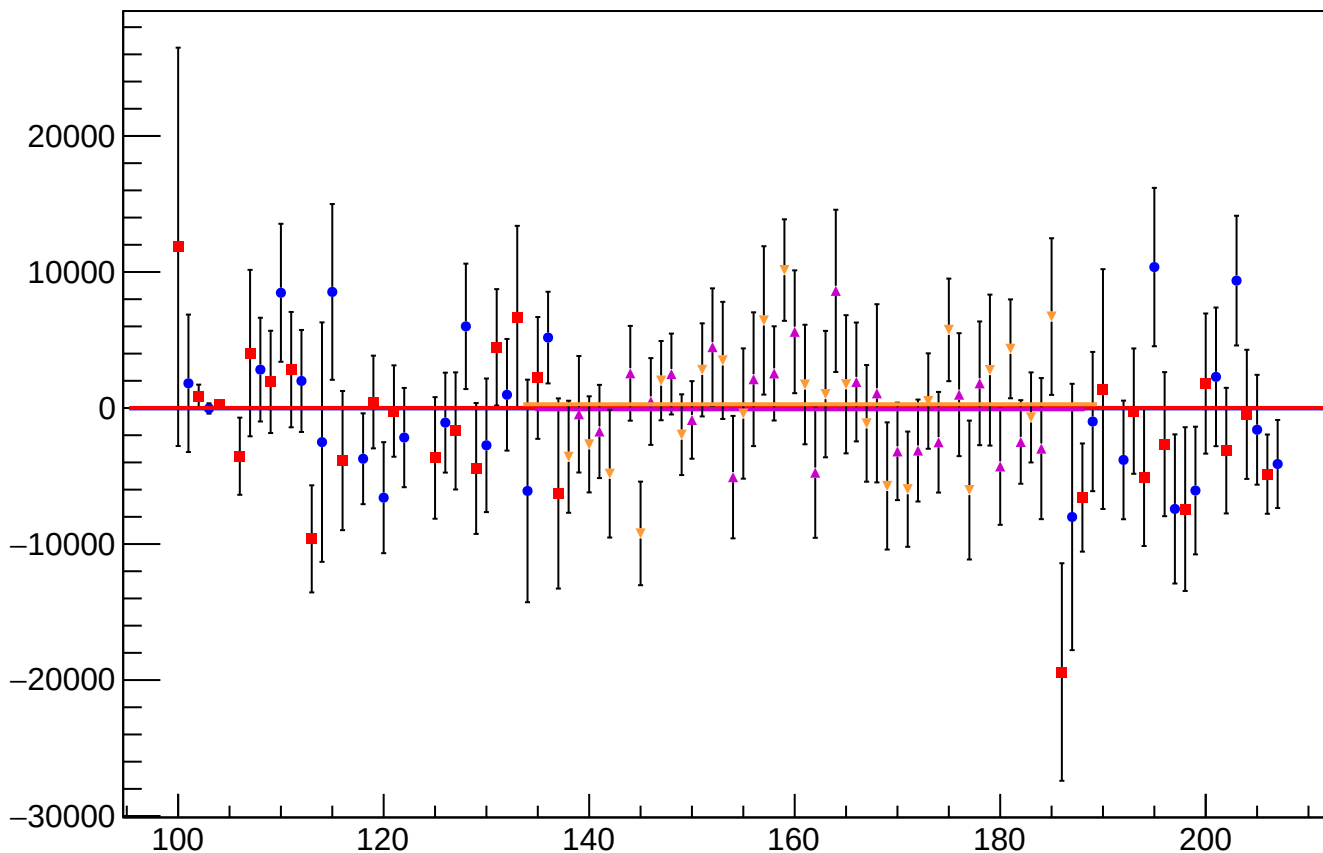
Left In: 1101.530 $\pm$ 0.182  $\chi^2$ /NDF: 52145.9/22

+ sign 1108.859 $\pm$ 0.136  $\chi^2$ /NDF: 705655.0/49

All: 1111.851 $\pm$ 0.096  $\chi^2$ /NDF: 1017943.7/10

- sign 1114.803 $\pm$ 0.135  $\chi^2$ /NDF: 311328.8/51

asym\_us\_avg\_atlr\_avg\_dd\_reg\_correction\_mean vs Slug



Right In:  $-27.770 \pm 347.813$   $\chi^2/\text{NDF}$ : 28.8/25

Left Out:  $277.507 \pm 820.501$   $\chi^2/\text{NDF}$ : 29.9/23

Right Out:  $5.457 \pm 314.659$   $\chi^2/\text{NDF}$ : 30.8/28

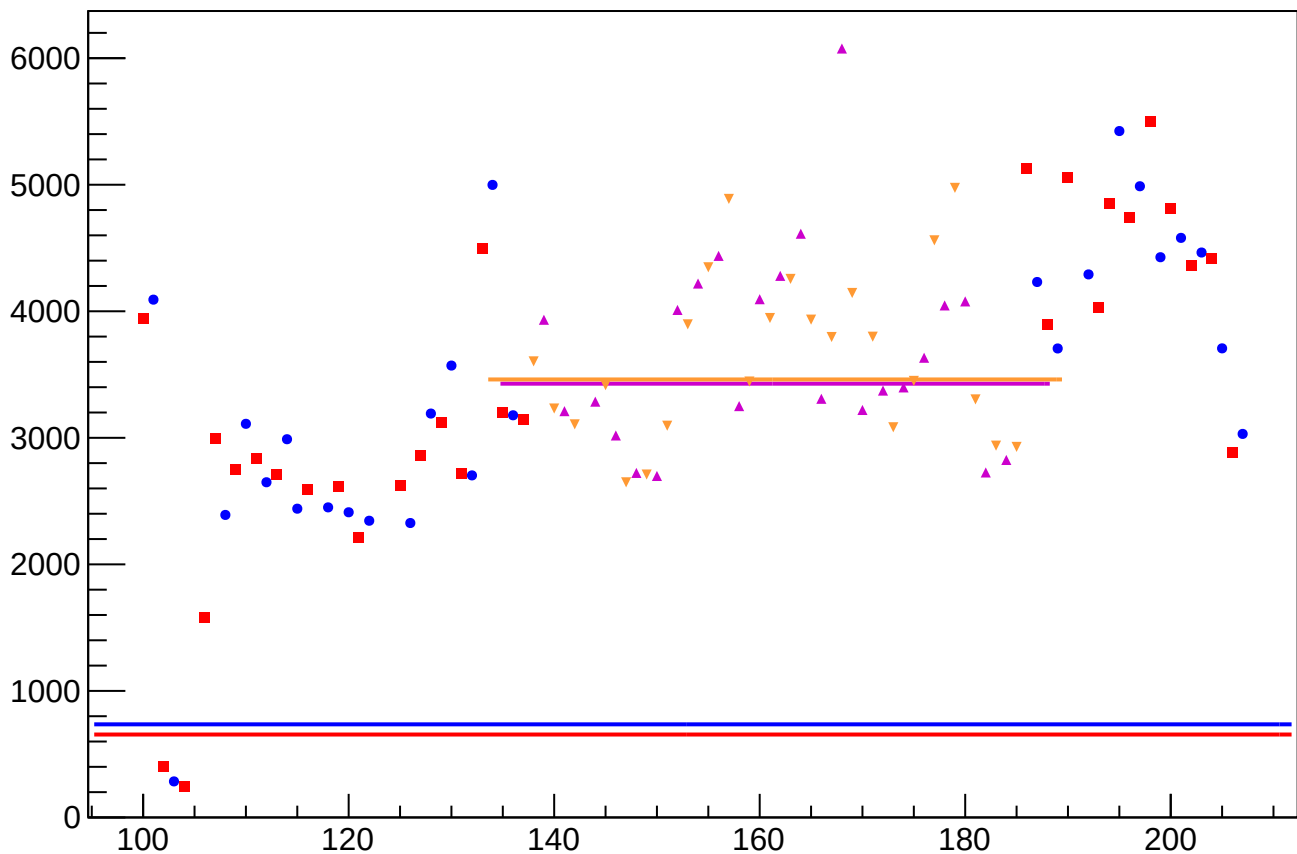
Left In:  $-94.734 \pm 817.223$   $\chi^2/\text{NDF}$ : 13.7/22

+ sign  $18.730 \pm 320.229$   $\chi^2/\text{NDF}$ : 58.8/49

All:  $4.493 \pm 216.427$   $\chi^2/\text{NDF}$ : 103.3/101

- sign  $-7.479 \pm 293.644$   $\chi^2/\text{NDF}$ : 44.5/51

asym\_us\_avg\_atlr\_avg\_dd\_reg\_correction\_rms vs Slug



Right In: 735.861+/-0.246  $\chi^2/\text{NDF}$ : 20700325.6/25

Left Out: 3461.259+/-0.580  $\chi^2/\text{NDF}$ : 1058687.1/23

Right Out: 655.380+/-0.222  $\chi^2/\text{NDF}$ : 22178758.1/28

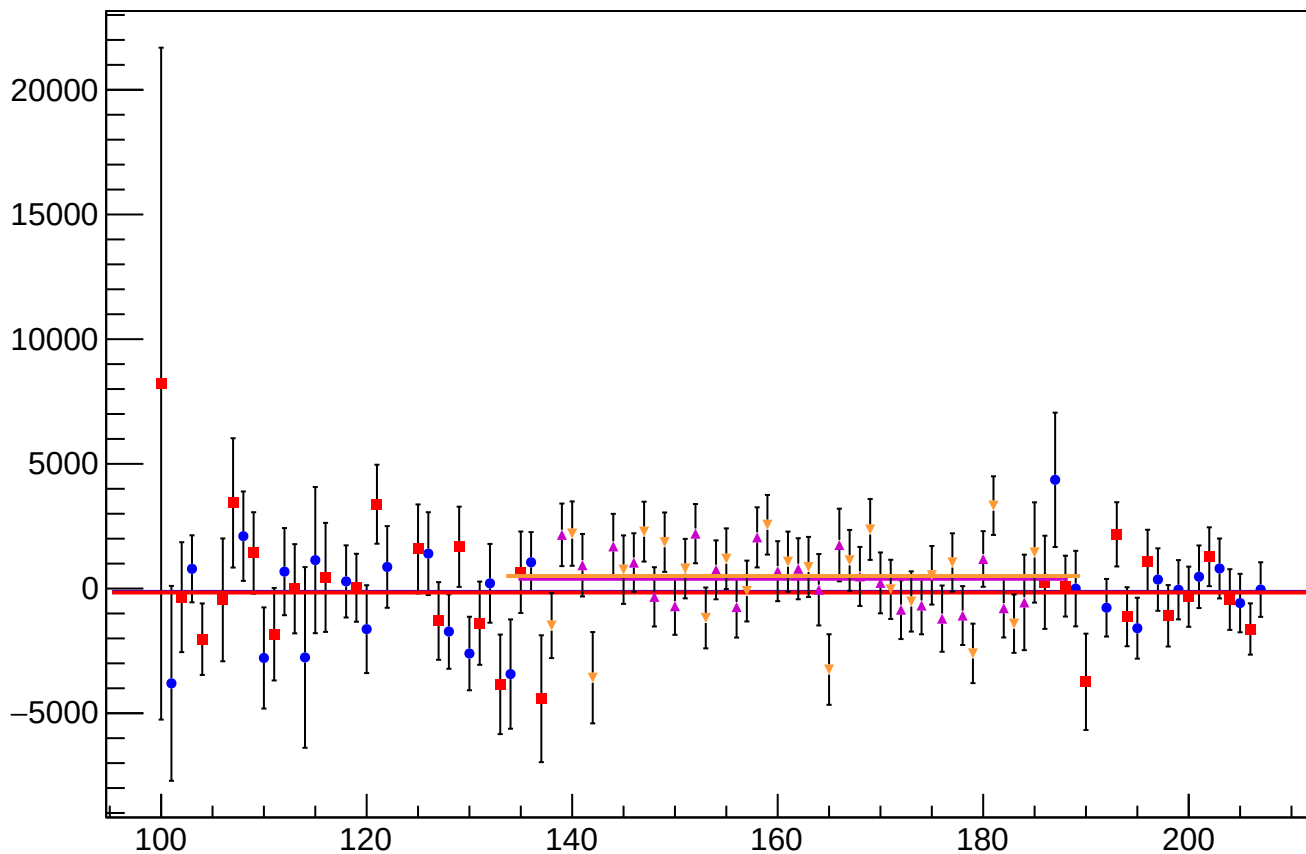
Left In: 3427.860+/-0.578  $\chi^2/\text{NDF}$ : 1243133.8/22

+ sign 1151.000+/-0.226  $\chi^2/\text{NDF}$ : 40464210.4/49

All: 1076.217+/-0.153  $\chi^2/\text{NDF}$ : 84133868.1/101

- sign 1013.336+/-0.208  $\chi^2/\text{NDF}$ : 43468873.8/51

# cor\_asym\_us\_avg\_atlr\_avg\_dd\_mean vs Slug



Right In:  $-135.240 \pm 292.822$   $\chi^2/\text{NDF}$ : 20.5/25

Left Out:  $503.679 \pm 255.531$   $\chi^2/\text{NDF}$ : 44.6/23

Right Out:  $-158.935 \pm 285.767$   $\chi^2/\text{NDF}$ : 33.3/28

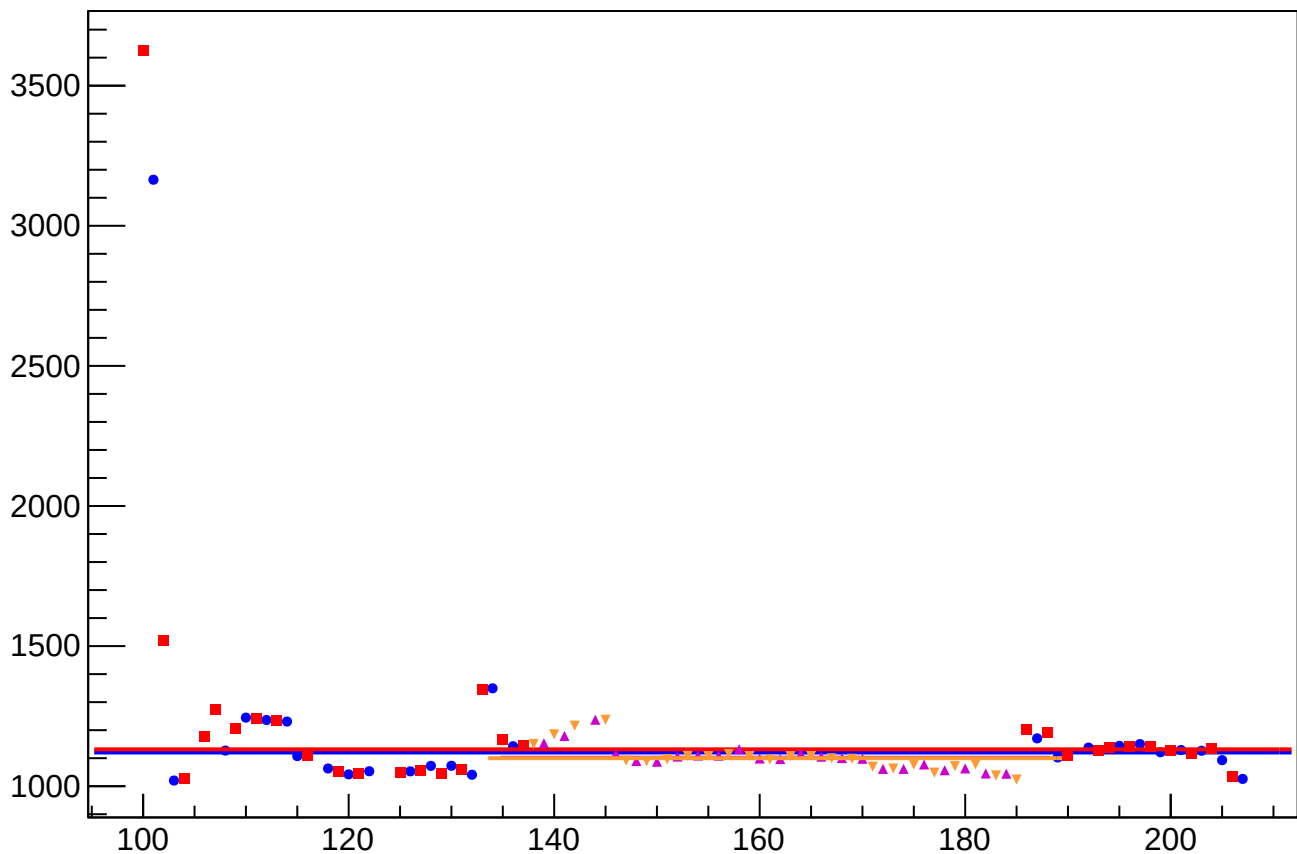
Left In:  $391.689 \pm 257.386$   $\chi^2/\text{NDF}$ : 17.8/22

+ sign  $227.470 \pm 192.531$   $\chi^2/\text{NDF}$ : 67.7/49

All:  $185.994 \pm 135.684$   $\chi^2/\text{NDF}$ : 121.0/101

- sign  $145.070 \pm 191.248$   $\chi^2/\text{NDF}$ : 53.2/51

# cor\_asym\_us\_avg\_atlr\_avg\_dd\_rms vs Slug



Right In: 1120.408 $\pm$ 0.207  $\chi^2$ /NDF: 641441.4/25

Left Out: 1100.063 $\pm$ 0.181  $\chi^2$ /NDF: 58733.9/23

Right Out: 1131.553 $\pm$ 0.202  $\chi^2$ /NDF: 247984.0/28

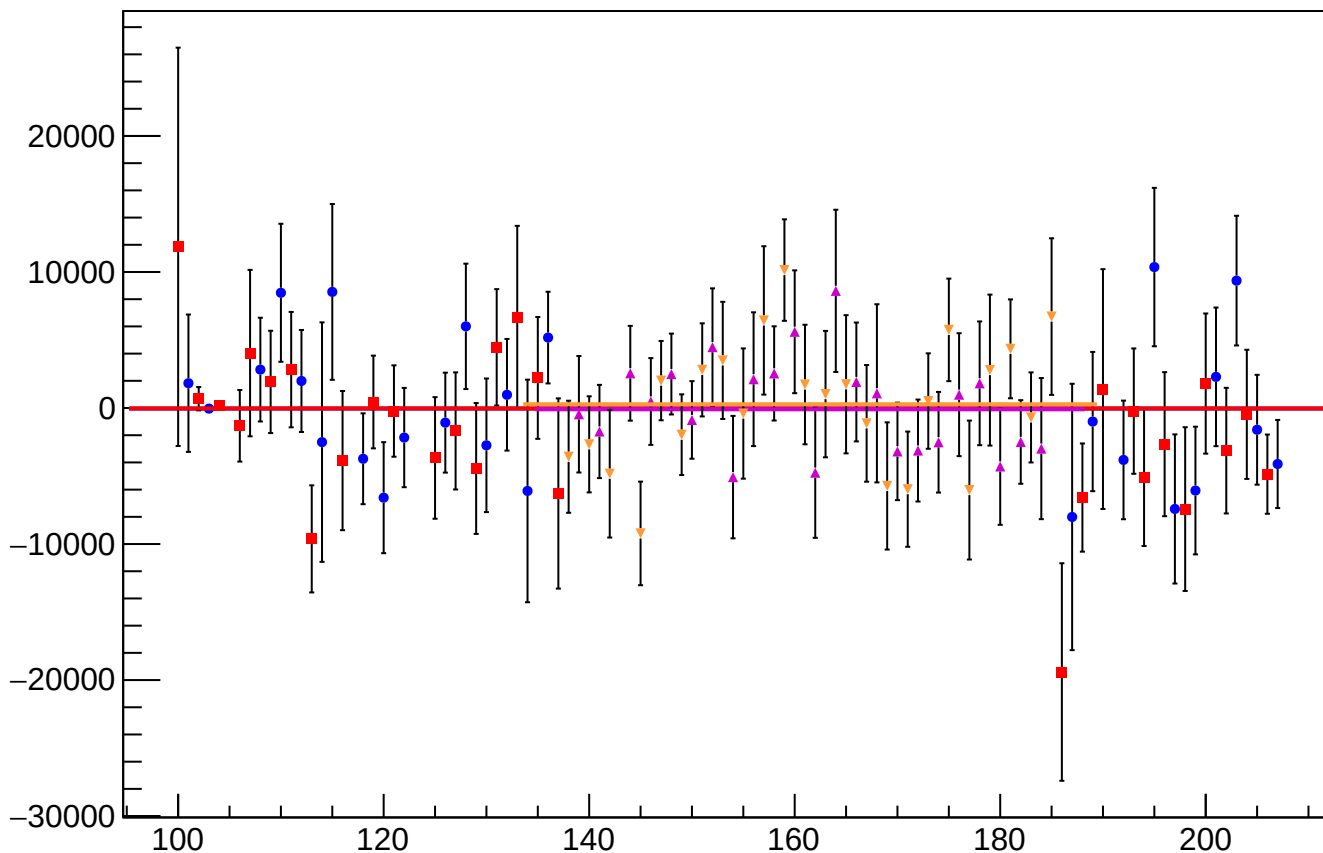
Left In: 1101.530 $\pm$ 0.182  $\chi^2$ /NDF: 52145.9/22

+ sign 1108.859 $\pm$ 0.136  $\chi^2$ /NDF: 705656.1/49

All: 1111.940 $\pm$ 0.096  $\chi^2$ /NDF: 1018995.7/10

- sign 1114.980 $\pm$ 0.135  $\chi^2$ /NDF: 312321.7/51

asym\_us\_avg\_atlr\_avg\_dd\_cor\_correction\_mean vs Slug



Right In:  $-39.067 \pm 335.705$   $\chi^2/\text{NDF}$ : 28.8/25

Left Out:  $277.536 \pm 820.502$   $\chi^2/\text{NDF}$ : 29.9/23

Right Out:  $-31.870 \pm 309.846$   $\chi^2/\text{NDF}$ : 29.0/28

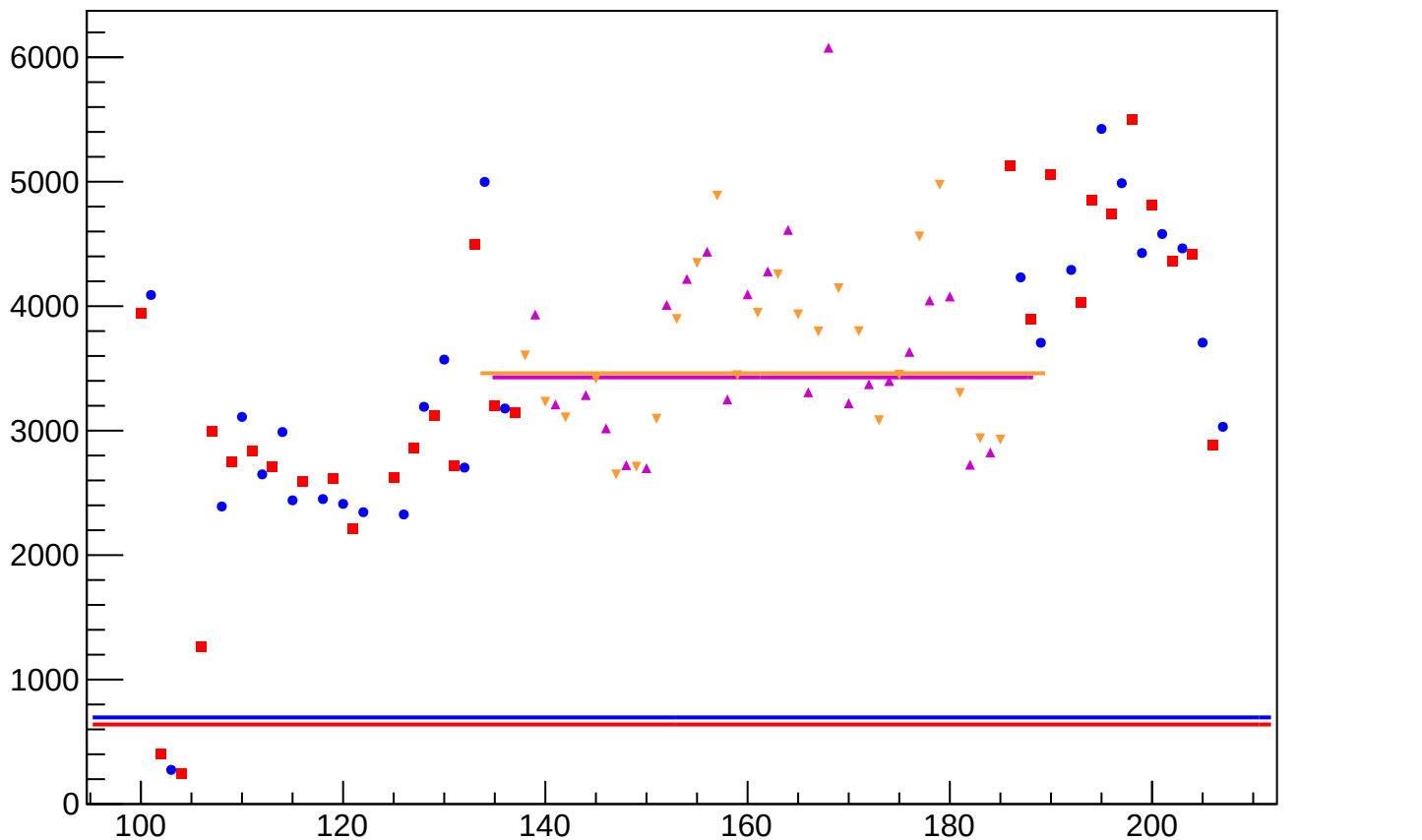
Left In:  $-94.742 \pm 817.222$   $\chi^2/\text{NDF}$ : 13.7/22

+ sign  $6.333 \pm 310.705$   $\chi^2/\text{NDF}$ : 58.8/49

All:  $-18.329 \pm 211.894$   $\chi^2/\text{NDF}$ : 101.6/101

- sign  $-39.772 \pm 289.721$   $\chi^2/\text{NDF}$ : 42.7/51

asym\_us\_avg\_atlr\_avg\_dd\_cor\_correction\_rms vs Slug

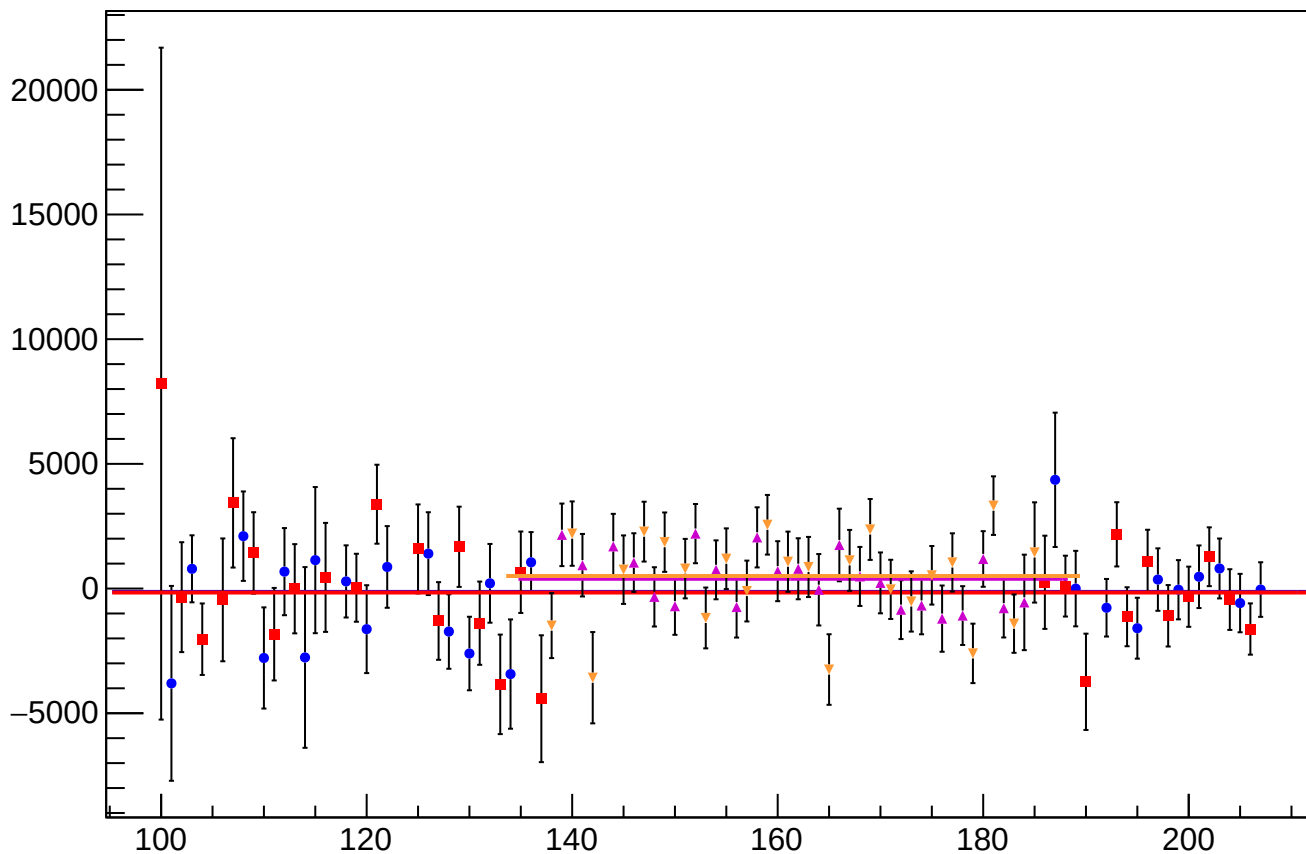


Right In: 696.137+/-0.237  $\chi^2/\text{NDF}$ : 21062773.2/25  
 Left Out: 3461.261+/-0.580  $\chi^2/\text{NDF}$ : 1058691.8/23  
 Right Out: 639.365+/-0.219  $\chi^2/\text{NDF}$ : 22197050.4/28  
 Left In: 3427.857+/-0.578  $\chi^2/\text{NDF}$ : 1243147.4/22

+ sign 1092.644+/-0.220  $\chi^2/\text{NDF}$ : 41578679.9/49  
 All: 1037.650+/-0.150  $\chi^2/\text{NDF}$ : 85495039.0/1  
 - sign 989.833+/-0.205  $\chi^2/\text{NDF}$ : 43799223.6/51



eigen\_cor\_asym\_us\_avg\_atlr\_avg\_dd\_mean vs Slug



Right In:  $-135.240 \pm 292.822$   $\chi^2/\text{NDF}$ : 20.5/25

Left Out:  $503.679 \pm 255.531$   $\chi^2/\text{NDF}$ : 44.6/23

Right Out:  $-158.935 \pm 285.767$   $\chi^2/\text{NDF}$ : 33.3/28

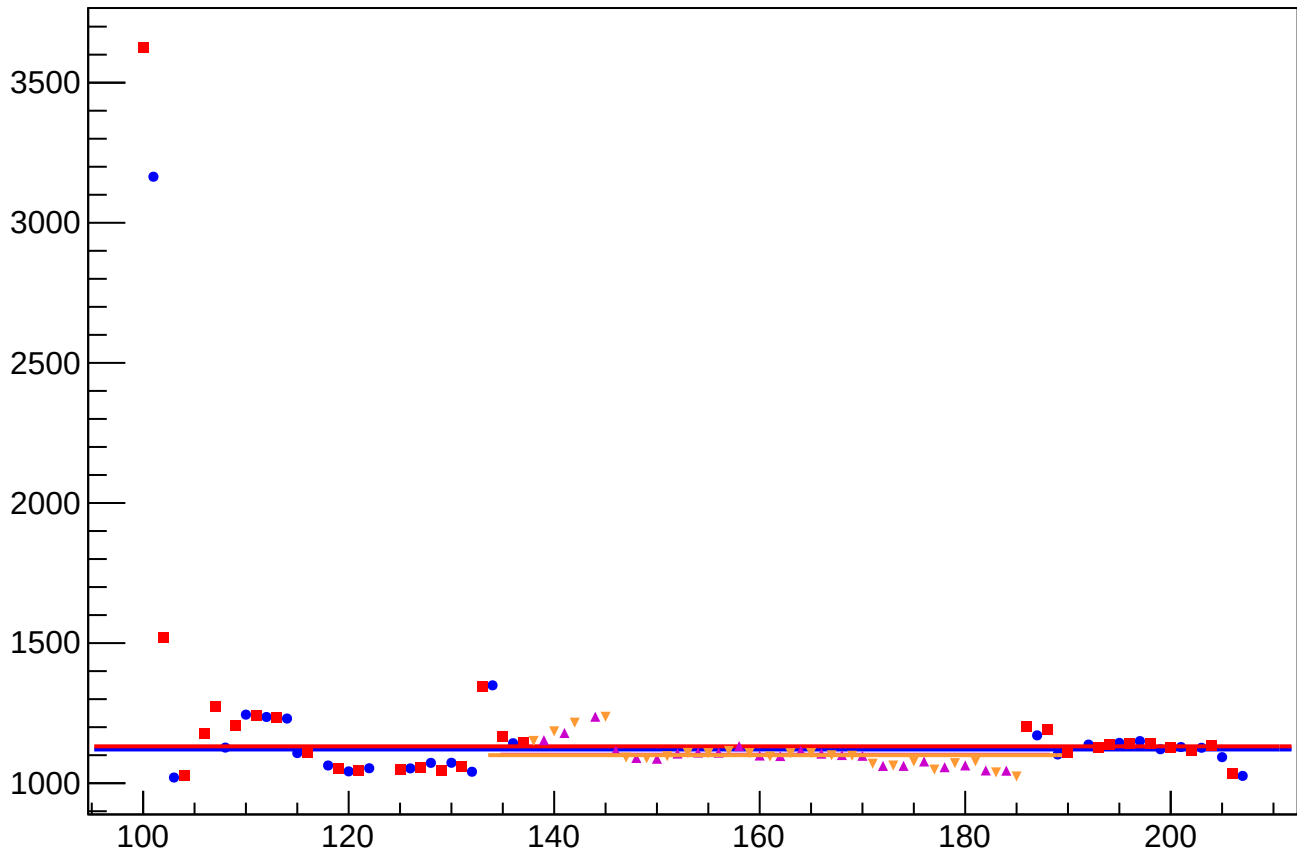
Left In:  $391.689 \pm 257.386$   $\chi^2/\text{NDF}$ : 17.8/22

+ sign  $227.470 \pm 192.531$   $\chi^2/\text{NDF}$ : 67.7/49

All:  $185.994 \pm 135.684$   $\chi^2/\text{NDF}$ : 121.0/101

- sign  $145.070 \pm 191.248$   $\chi^2/\text{NDF}$ : 53.2/51

eigen\_cor\_asym\_us\_avg\_atlr\_avg\_dd\_rms vs Slug



Right In: 1120.408 $\pm$ 0.207  $\chi^2$ /NDF: 641441.4/25

Left Out: 1100.063 $\pm$ 0.181  $\chi^2$ /NDF: 58733.9/23

Right Out: 1131.553 $\pm$ 0.202  $\chi^2$ /NDF: 247984.0/28

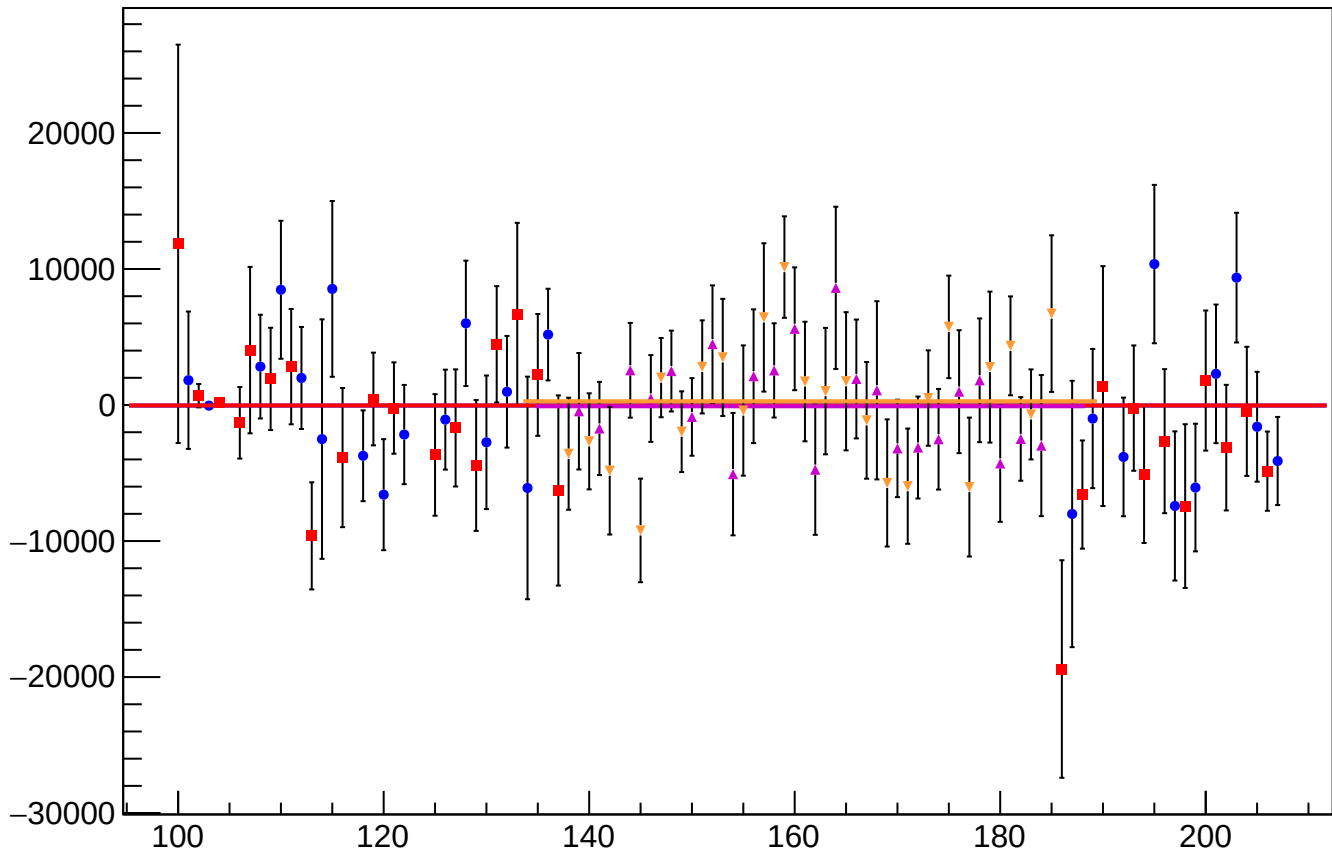
Left In: 1101.530 $\pm$ 0.182  $\chi^2$ /NDF: 52145.9/22

+ sign 1108.859 $\pm$ 0.136  $\chi^2$ /NDF: 705656.1/49

All: 1111.940 $\pm$ 0.096  $\chi^2$ /NDF: 1018995.7/10

- sign 1114.980 $\pm$ 0.135  $\chi^2$ /NDF: 312321.7/51

asym\_us\_avg\_atlr\_avg\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-39.067 \pm 335.705$   $\chi^2/\text{NDF}$ : 28.8/25

Left Out:  $277.536 \pm 820.502$   $\chi^2/\text{NDF}$ : 29.9/23

Right Out:  $-31.870 \pm 309.846$   $\chi^2/\text{NDF}$ : 29.0/28

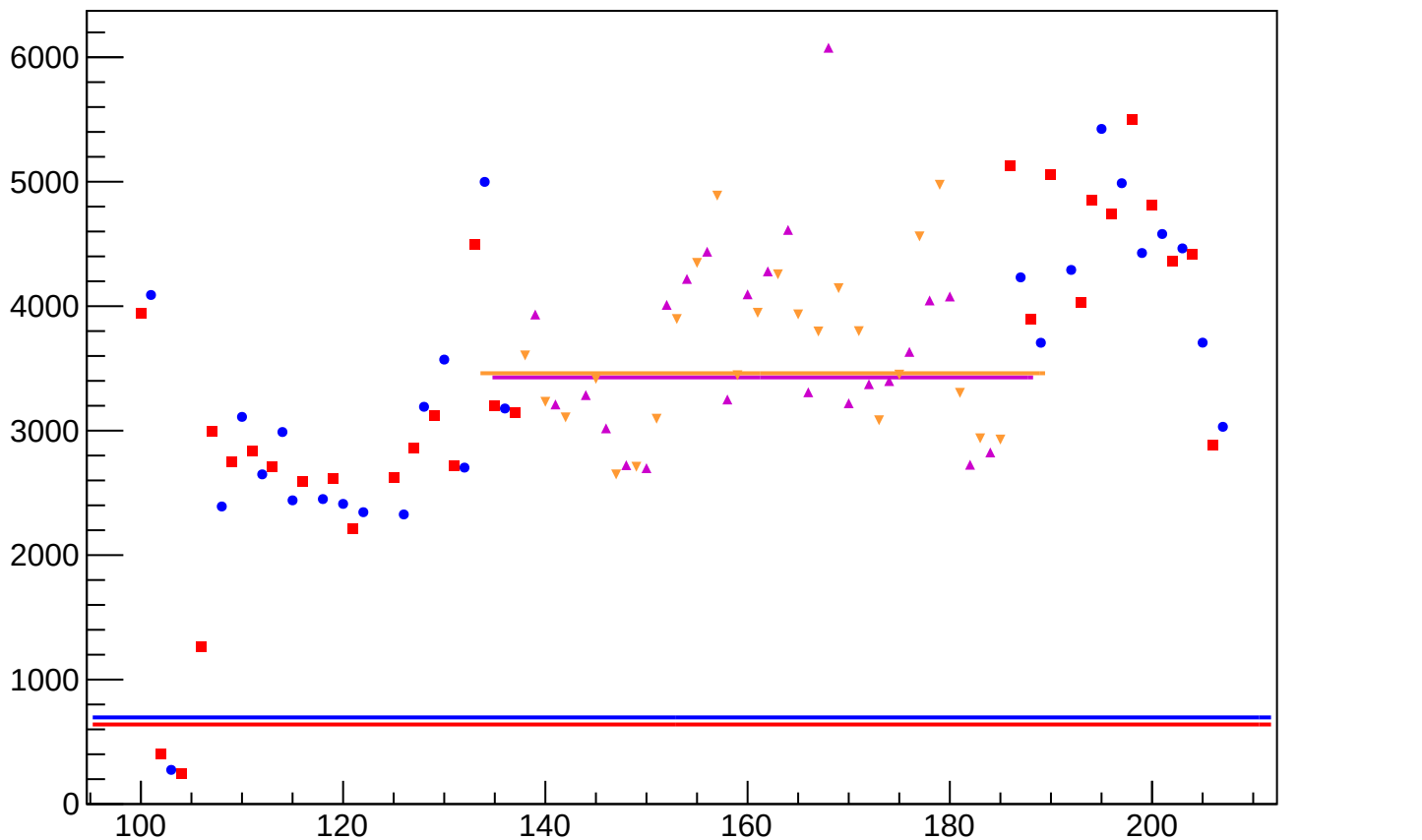
Left In:  $-94.742 \pm 817.222$   $\chi^2/\text{NDF}$ : 13.7/22

+ sign  $6.333 \pm 310.705$   $\chi^2/\text{NDF}$ : 58.8/49

All:  $-18.329 \pm 211.894$   $\chi^2/\text{NDF}$ : 101.6/101

- sign  $-39.772 \pm 289.721$   $\chi^2/\text{NDF}$ : 42.7/51

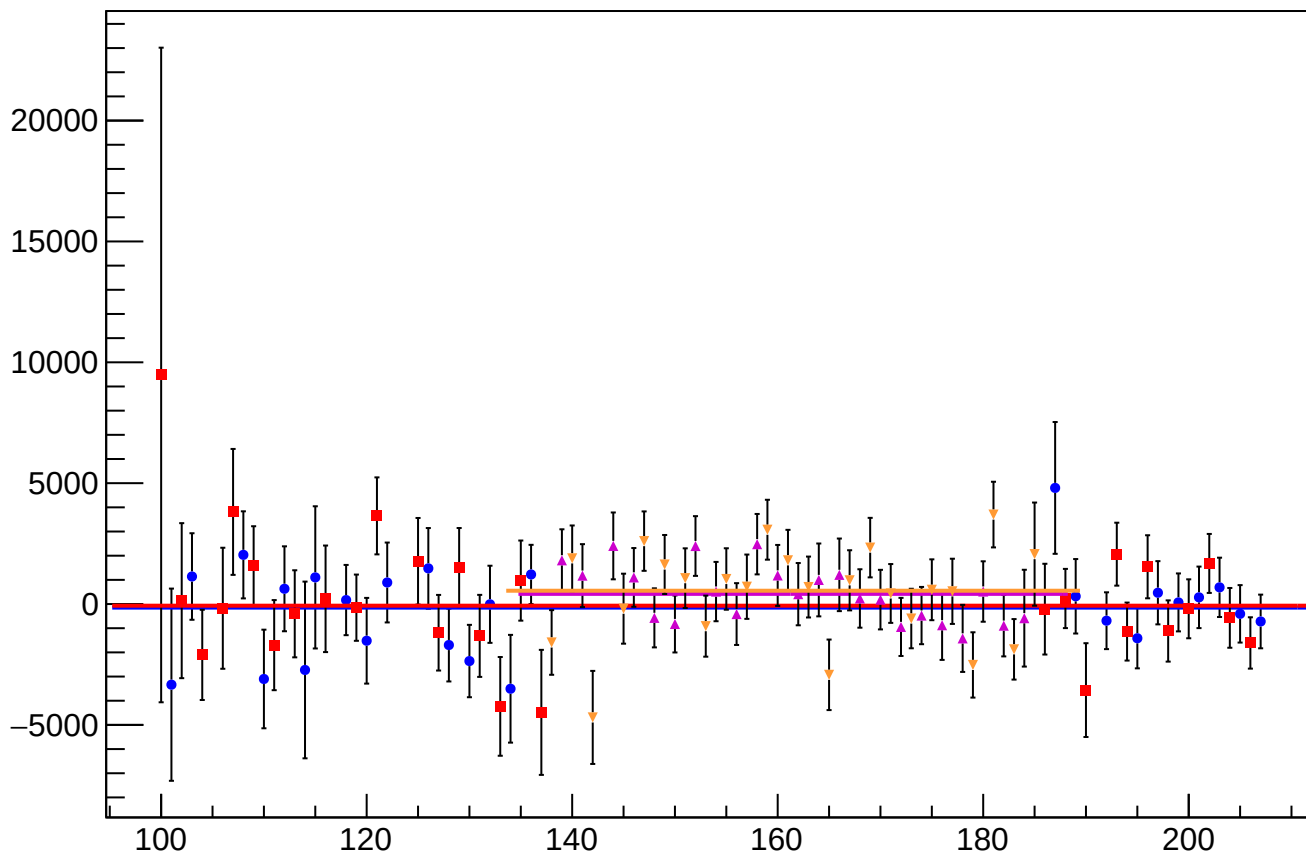
asym\_us\_avg\_atlr\_avg\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 696.137+/-0.237  $\chi^2/\text{NDF}$ : 21062773.2/25  
 Left Out: 3461.261+/-0.580  $\chi^2/\text{NDF}$ : 1058691.8/23  
 Right Out: 639.365+/-0.219  $\chi^2/\text{NDF}$ : 22197050.4/28  
 Left In: 3427.857+/-0.578  $\chi^2/\text{NDF}$ : 1243147.4/22

+ sign 1092.644+/-0.220  $\chi^2/\text{NDF}$ : 41578679.9/49  
 All: 1037.650+/-0.150  $\chi^2/\text{NDF}$ : 85495039.0/1  
 - sign 989.833+/-0.205  $\chi^2/\text{NDF}$ : 43799223.6/51

# dit\_asym\_us\_avg\_atlr\_avg\_dd\_mean vs Slug



Right In:  $-147.594 \pm 300.036$   $\chi^2/\text{NDF}$ : 20.1/25

Left Out:  $550.661 \pm 269.206$   $\chi^2/\text{NDF}$ : 45.2/23

Right Out:  $-68.515 \pm 293.651$   $\chi^2/\text{NDF}$ : 35.0/28

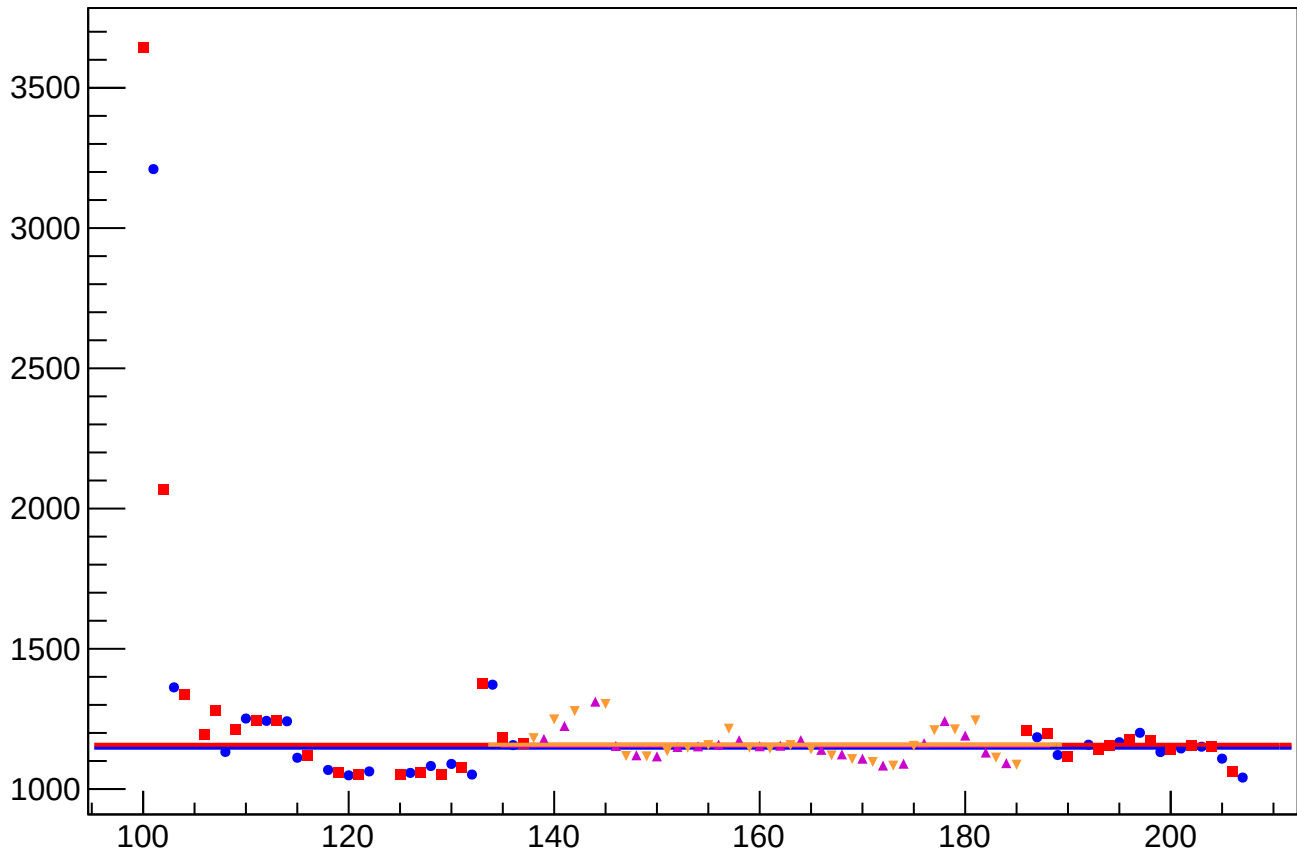
Left In:  $421.023 \pm 269.815$   $\chi^2/\text{NDF}$ : 18.0/22

+ sign  $239.240 \pm 200.373$   $\chi^2/\text{NDF}$ : 68.4/49

All:  $217.903 \pm 141.083$   $\chi^2/\text{NDF}$ : 122.9/101

- sign  $196.926 \pm 198.681$   $\chi^2/\text{NDF}$ : 54.5/51

# dit\_asym\_us\_avg\_atlr\_avg\_dd\_rms vs Slug



Right In: 1147.403+/-0.212  $\chi^2/\text{NDF}$ : 663614.7/25

Left Out: 1158.177+/-0.190  $\chi^2/\text{NDF}$ : 84111.8/23

Right Out: 1157.988+/-0.208  $\chi^2/\text{NDF}$ : 355673.8/28

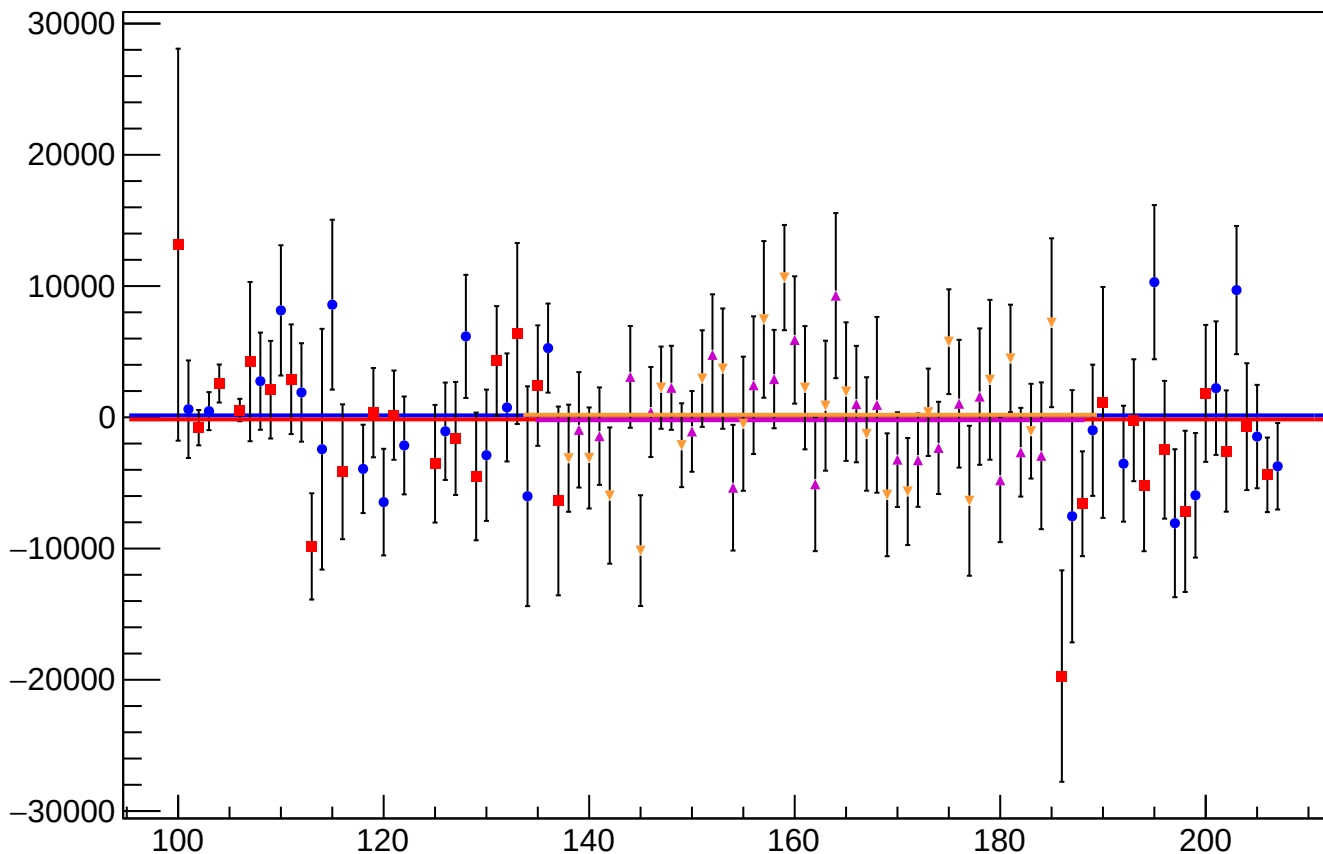
Left In: 1154.231+/-0.191  $\chi^2/\text{NDF}$ : 66476.9/22

+ sign 1153.372+/-0.142  $\chi^2/\text{NDF}$ : 749155.3/49

All: 1154.672+/-0.100  $\chi^2/\text{NDF}$ : 1171650.8/10

- sign 1155.951+/-0.140  $\chi^2/\text{NDF}$ : 422328.4/51

asym\_us\_avg\_atlr\_avg\_dd\_dit\_correction\_mean vs Slug



Right In: 145.685 $\pm$ 755.318  $\chi^2$ /NDF: 28.3/25

Left Out: 189.735 $\pm$ 869.432  $\chi^2$ /NDF: 29.3/23

Right Out: -158.439 $\pm$ 526.107  $\chi^2$ /NDF: 31.3/28

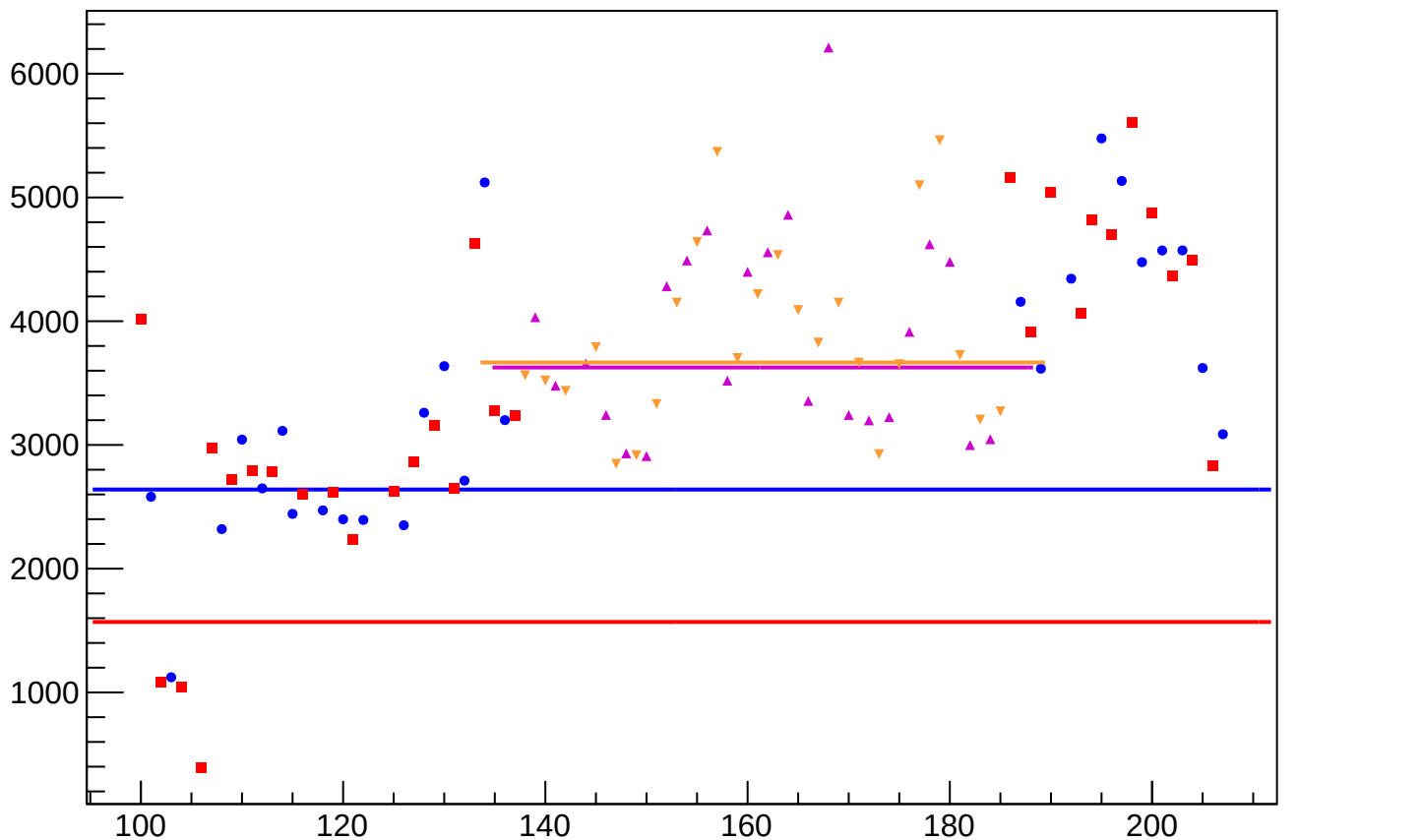
Left In: -221.361 $\pm$ 864.775  $\chi^2$ /NDF: 13.4/22

+ sign 164.631 $\pm$ 570.198  $\chi^2$ /NDF: 57.6/49

All: -45.112 $\pm$ 352.985  $\chi^2$ /NDF: 102.5/101

- sign -175.437 $\pm$ 449.464  $\chi^2$ /NDF: 44.7/51

asym\_us\_avg\_atlr\_avg\_dd\_dit\_correction\_rms vs Slug

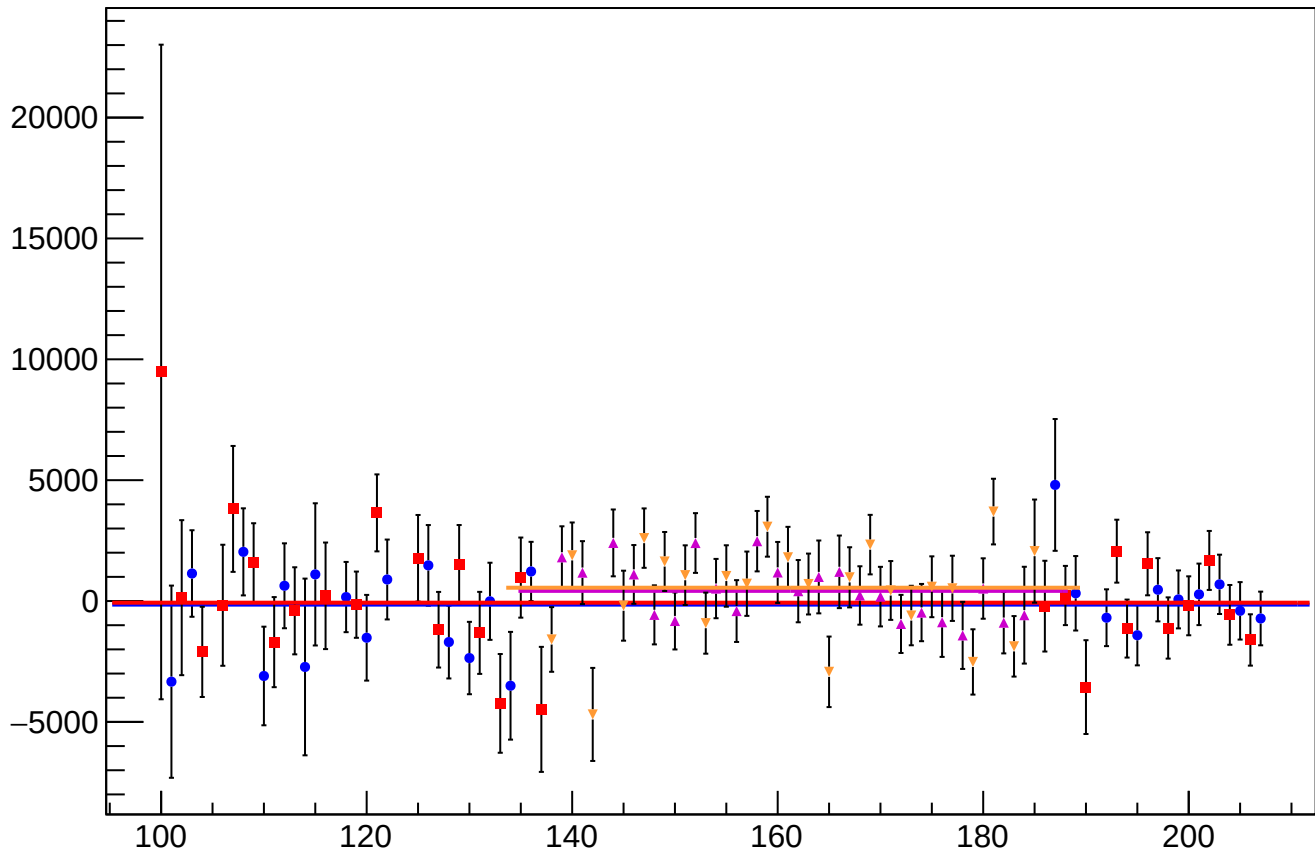


Right In: 2639.640 $\pm$ 0.534  $\chi^2$ /NDF: 4954957.4/25  
 Left Out: 3666.536 $\pm$ 0.615  $\chi^2$ /NDF:1095831.4/23  
 Right Out: 1569.259 $\pm$ 0.372  $\chi^2$ /NDF: 13851257.2/28  
 Left In: 3625.940 $\pm$ 0.611  $\chi^2$ /NDF:1257928.4/22

+ sign 3081.318 $\pm$ 0.403  $\chi^2$ /NDF: 7640807.4/49  
 All: 2491.394 $\pm$ 0.250  $\chi^2$ /NDF: 34477505.6/1  
 - sign 2124.843 $\pm$ 0.318  $\chi^2$ /NDF: 23365745.6/51



eigen\_dit\_asym\_us\_avg\_atlr\_avg\_dd\_mean vs Slug



Right In:  $-147.593 \pm 300.036$   $\chi^2/\text{NDF}: 20.1/25$

Left Out:  $550.663 \pm 269.206$   $\chi^2/\text{NDF}: 45.2/23$

Right Out:  $-68.514 \pm 293.651$   $\chi^2/\text{NDF}: 35.0/28$

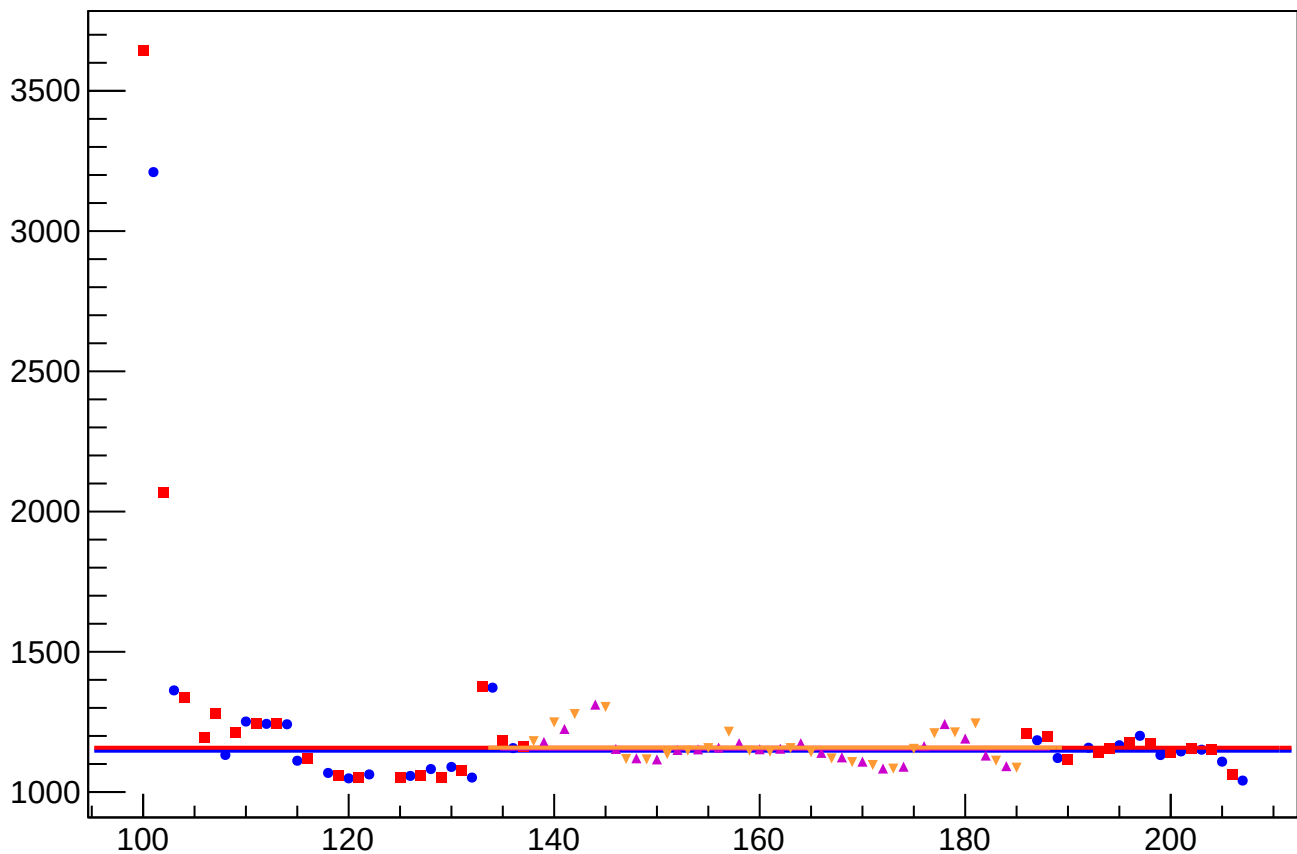
Left In:  $421.022 \pm 269.815$   $\chi^2/\text{NDF}: 18.0/22$

+ sign  $239.241 \pm 200.373$   $\chi^2/\text{NDF}: 68.4/49$

All:  $217.904 \pm 141.083$   $\chi^2/\text{NDF}: 122.9/101$

- sign  $196.925 \pm 198.681$   $\chi^2/\text{NDF}: 54.5/51$

eigen\_dit\_asym\_us\_avg\_atlr\_avg\_dd\_rms vs Slug



Right In: 1147.403+/-0.212  $\chi^2/\text{NDF}$ : 663615.1/25

Left Out: 1158.178+/-0.190  $\chi^2/\text{NDF}$ : 84114.3/23

Right Out: 1157.988+/-0.208  $\chi^2/\text{NDF}$ : 355673.6/28

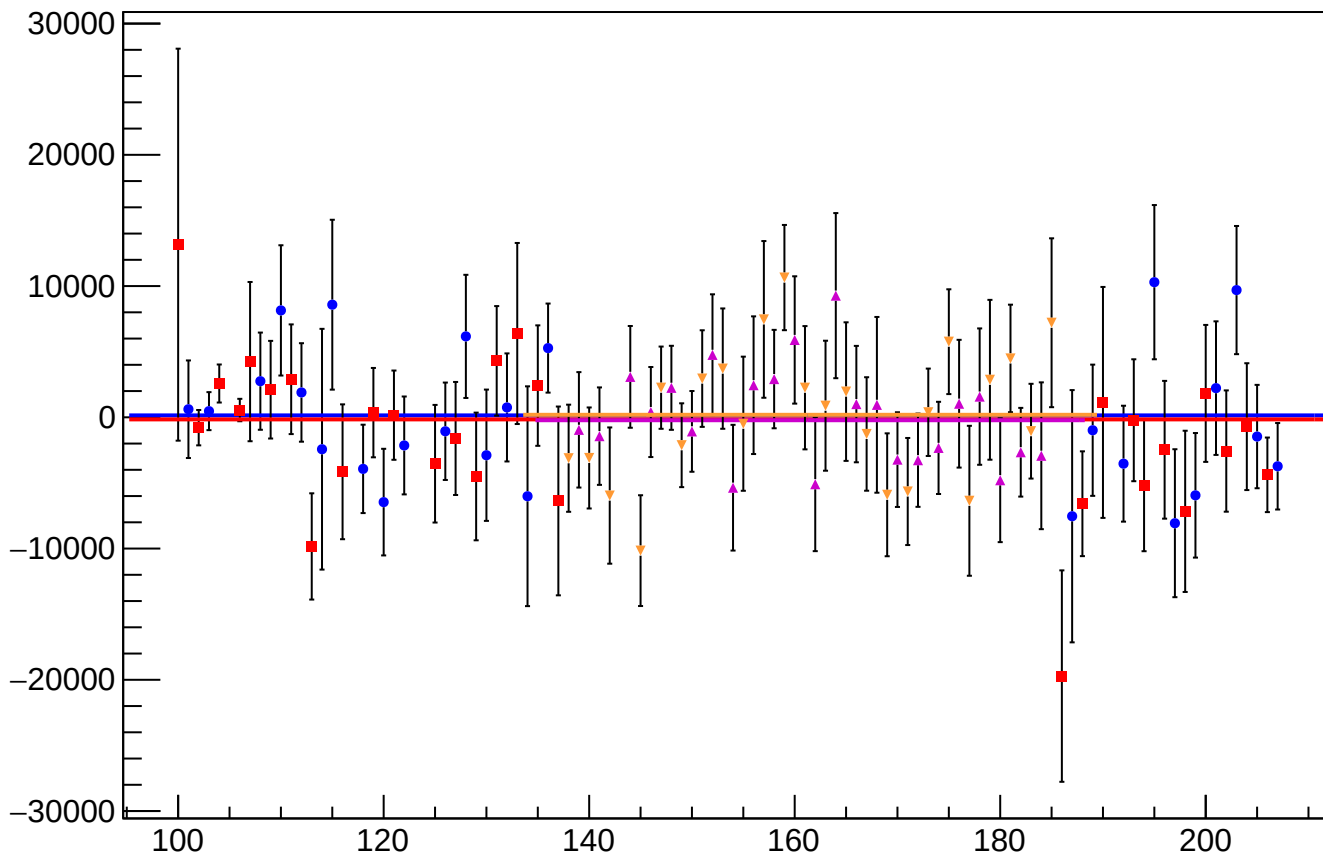
Left In: 1154.232+/-0.191  $\chi^2/\text{NDF}$ : 66479.5/22

+ sign 1153.372+/-0.142  $\chi^2/\text{NDF}$ : 749158.4/49

All: 1154.673+/-0.100  $\chi^2/\text{NDF}$ : 1171656.2/10

- sign 1155.952+/-0.140  $\chi^2/\text{NDF}$ : 422330.6/51

asym\_us\_avg\_atlr\_avg\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $145.681 \pm 755.318$   $\chi^2/\text{NDF}: 28.3/25$

Left Out:  $189.735 \pm 869.434$   $\chi^2/\text{NDF}: 29.3/23$

Right Out:  $-158.426 \pm 526.101$   $\chi^2/\text{NDF}: 31.3/28$

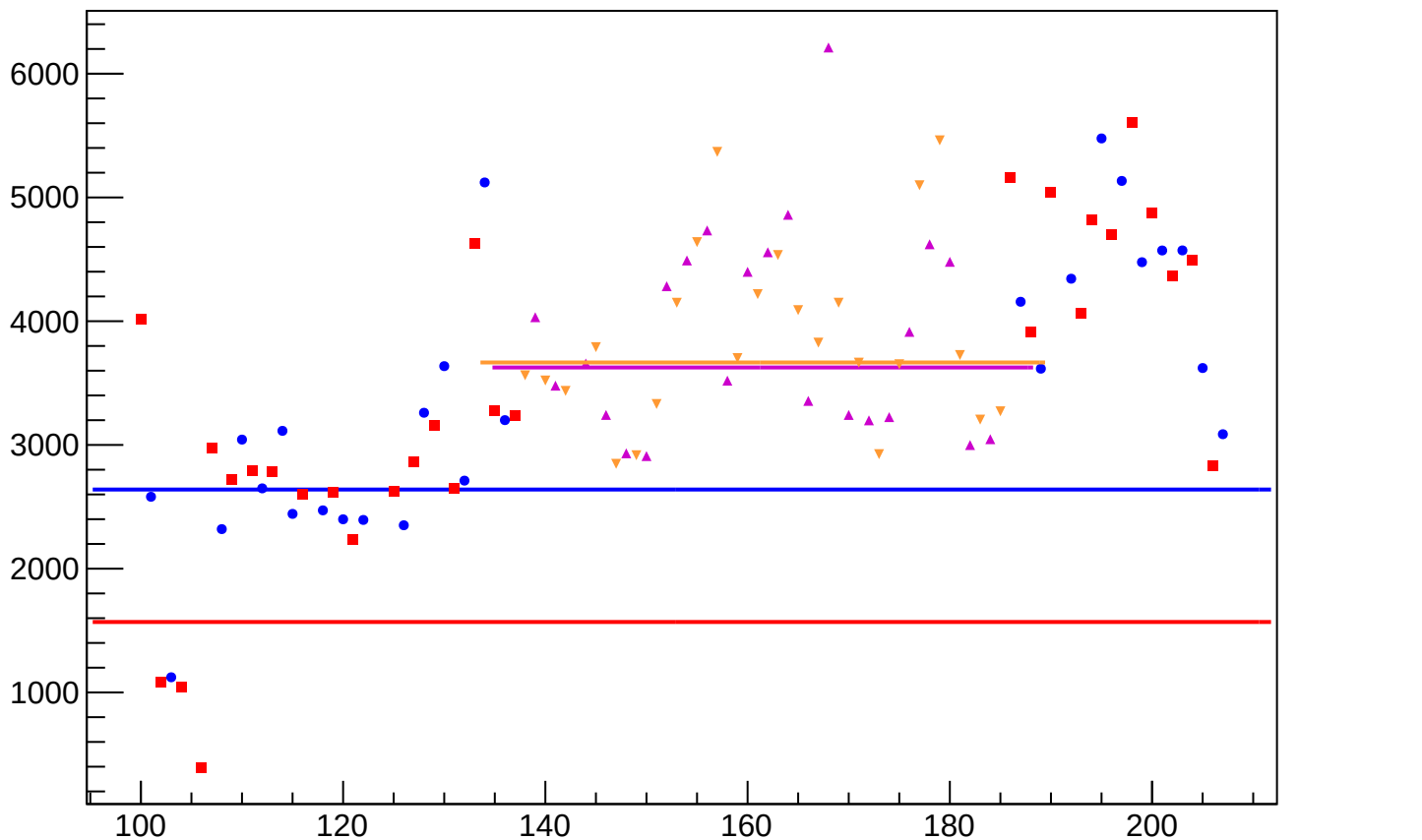
Left In:  $-221.363 \pm 864.776$   $\chi^2/\text{NDF}: 13.4/22$

+ sign  $164.629 \pm 570.198$   $\chi^2/\text{NDF}: 57.6/49$

All:  $-45.108 \pm 352.983$   $\chi^2/\text{NDF}: 102.5/101$

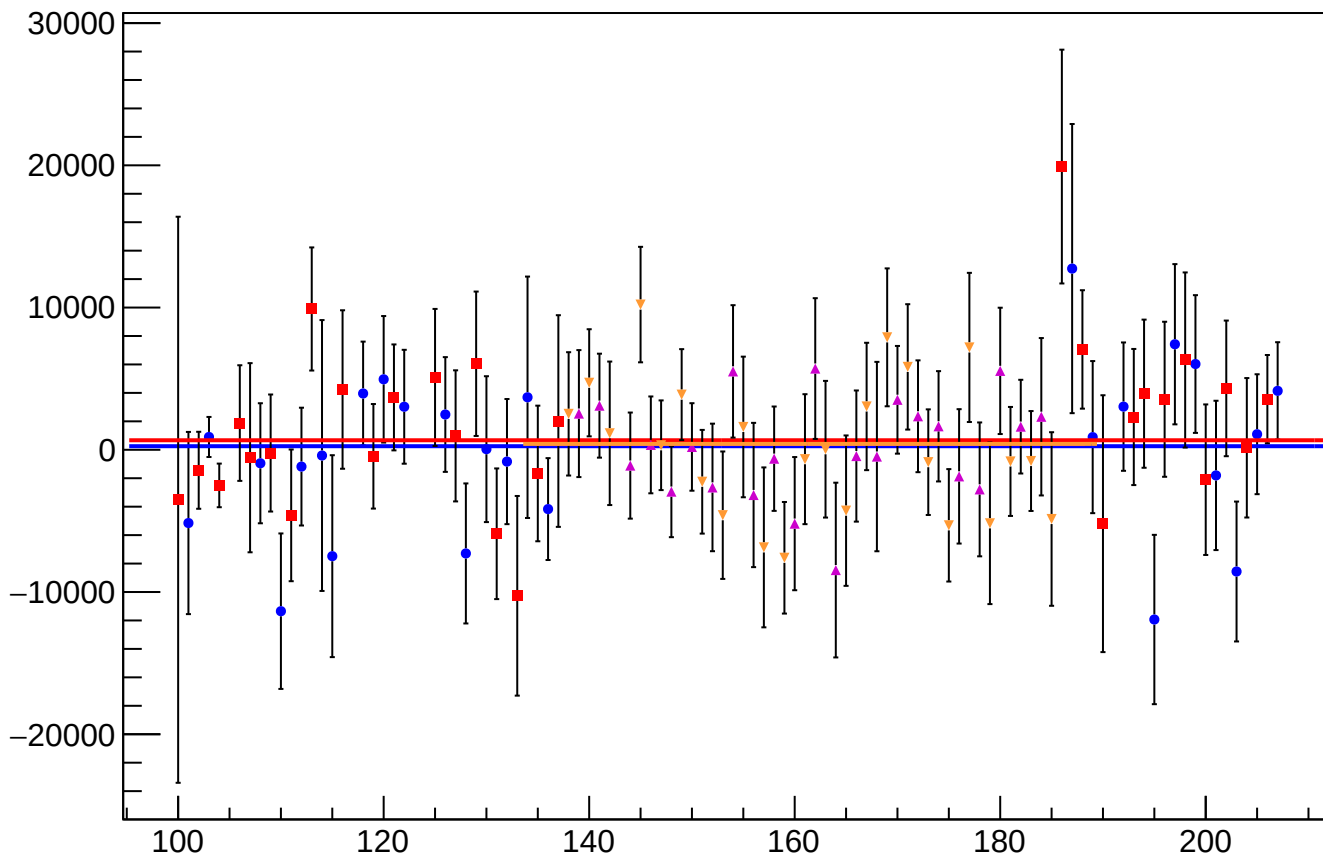
- sign  $-175.428 \pm 449.461$   $\chi^2/\text{NDF}: 44.7/51$

asym\_us\_avg\_atlr\_avg\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 2639.637 $\pm$ 0.534  $\chi^2$ /NDF: 4954975.4/25  
 Left Out: 3666.541 $\pm$ 0.615  $\chi^2$ /NDF:1095834.2/23  
 Right Out: 1569.231 $\pm$ 0.372  $\chi^2$ /NDF: 13851533.5/28  
 Left In: 3625.945 $\pm$ 0.611  $\chi^2$ /NDF:1257933.0/22  
 All: 2491.373 $\pm$ 0.250  $\chi^2$ /NDF: 34478350.9/100  
 + sign 3081.318 $\pm$ 0.403  $\chi^2$ /NDF: 7640852.2/49  
 - sign 2124.814 $\pm$ 0.318  $\chi^2$ /NDF: 23366322.5/51

# asym\_us\_avg\_atlr\_avg\_dd\_mean vs Slug



Right In: 251.539 $\pm$ 791.776  $\chi^2$ /NDF: 27.7/25

Left Out: 413.494 $\pm$ 865.331  $\chi^2$ /NDF:27.2/23

Right Out: 669.500 $\pm$ 768.299  $\chi^2$ /NDF: 30.5/28

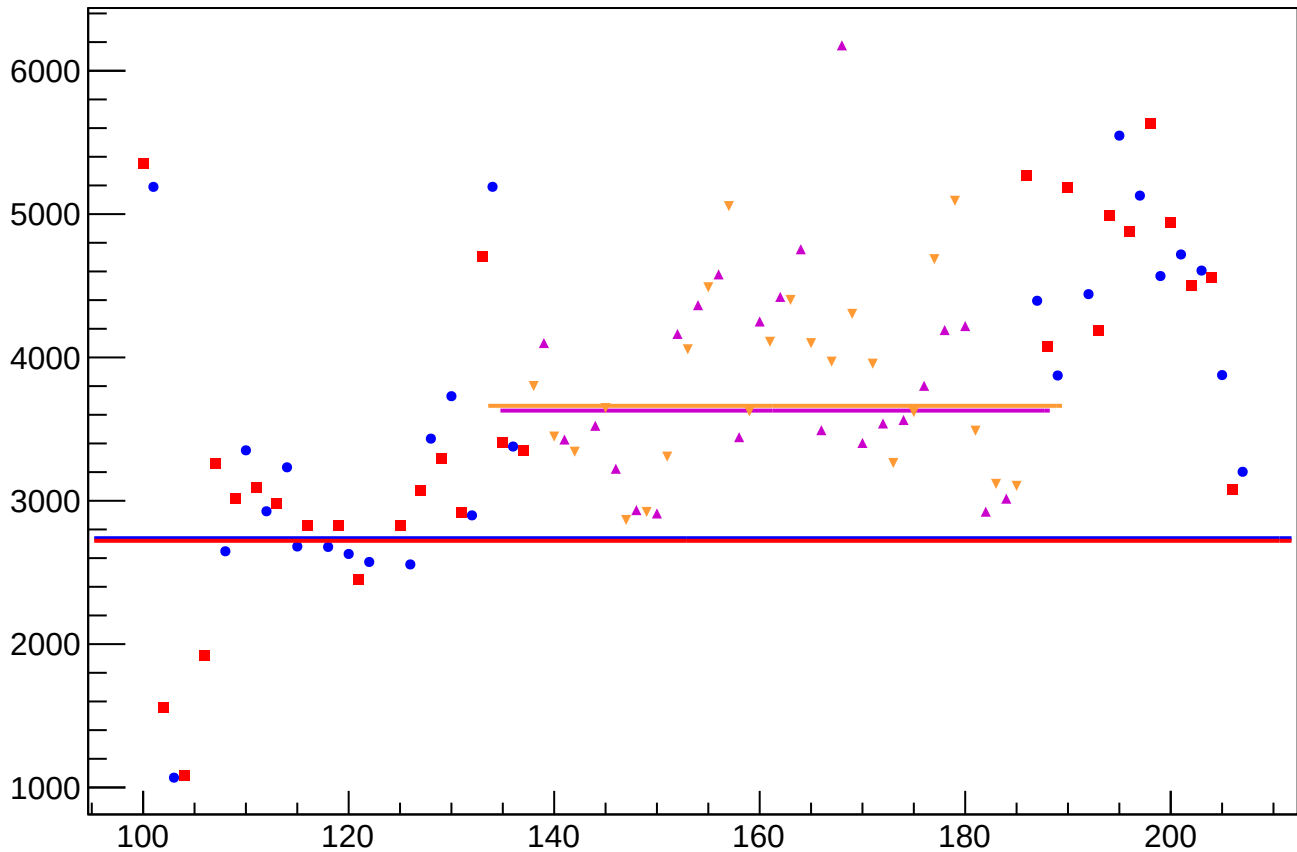
Left In: 403.543 $\pm$ 862.437  $\chi^2$ /NDF:12.3/22

+ sign 325.342 $\pm$ 584.146  $\chi^2$ /NDF: 54.9/49

All: 440.630 $\pm$ 409.302  $\chi^2$ /NDF: 97.8/101

- sign 551.823 $\pm$ 573.676  $\chi^2$ /NDF: 42.8/51

# asym\_us\_avg\_atlr\_avg\_dd\_rms vs Slug



Right In: 2738.918+/-0.560  $\chi^2/\text{NDF}$ : 5772500.6/25

Left Out: 3662.662+/-0.612  $\chi^2/\text{NDF}$ : 893468.3/23

Right Out: 2721.014+/-0.542  $\chi^2/\text{NDF}$ : 5908909.0/28

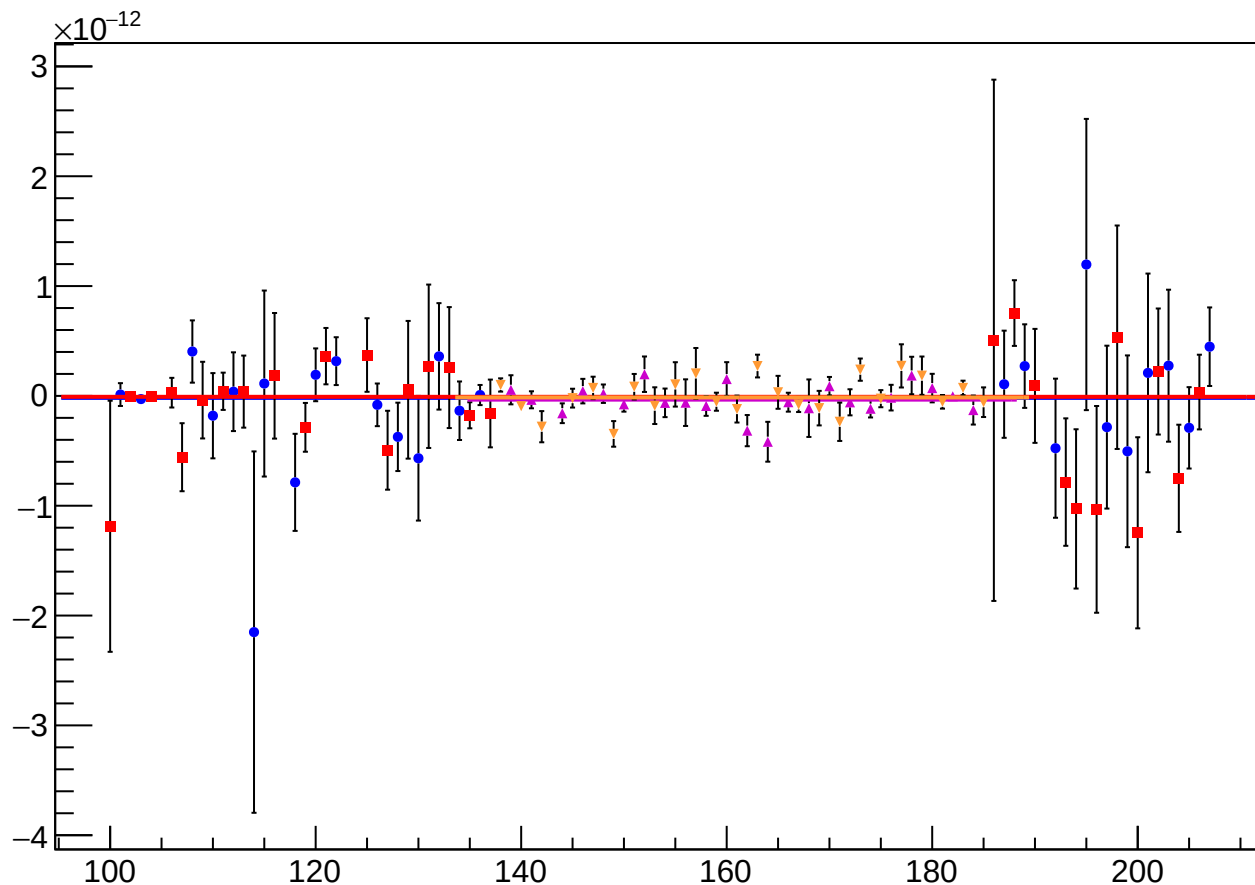
Left In: 3629.184+/-0.610  $\chi^2/\text{NDF}$ : 1054949.6/22

+ sign 3159.866+/-0.413  $\chi^2/\text{NDF}$ : 7906501.5/49

All: 3140.602+/-0.289  $\chi^2/\text{NDF}$ : 16113016.6/100

- sign 3122.059+/-0.405  $\chi^2/\text{NDF}$ : 8202246.3/51

asym\_us\_avg\_atlr\_avg\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2$ /NDF: 18.6/25

Left Out: -0.000+/-0.000  $\chi^2$ /NDF:45.3/23

Right Out: -0.000+/-0.000  $\chi^2$ /NDF: 30.3/28

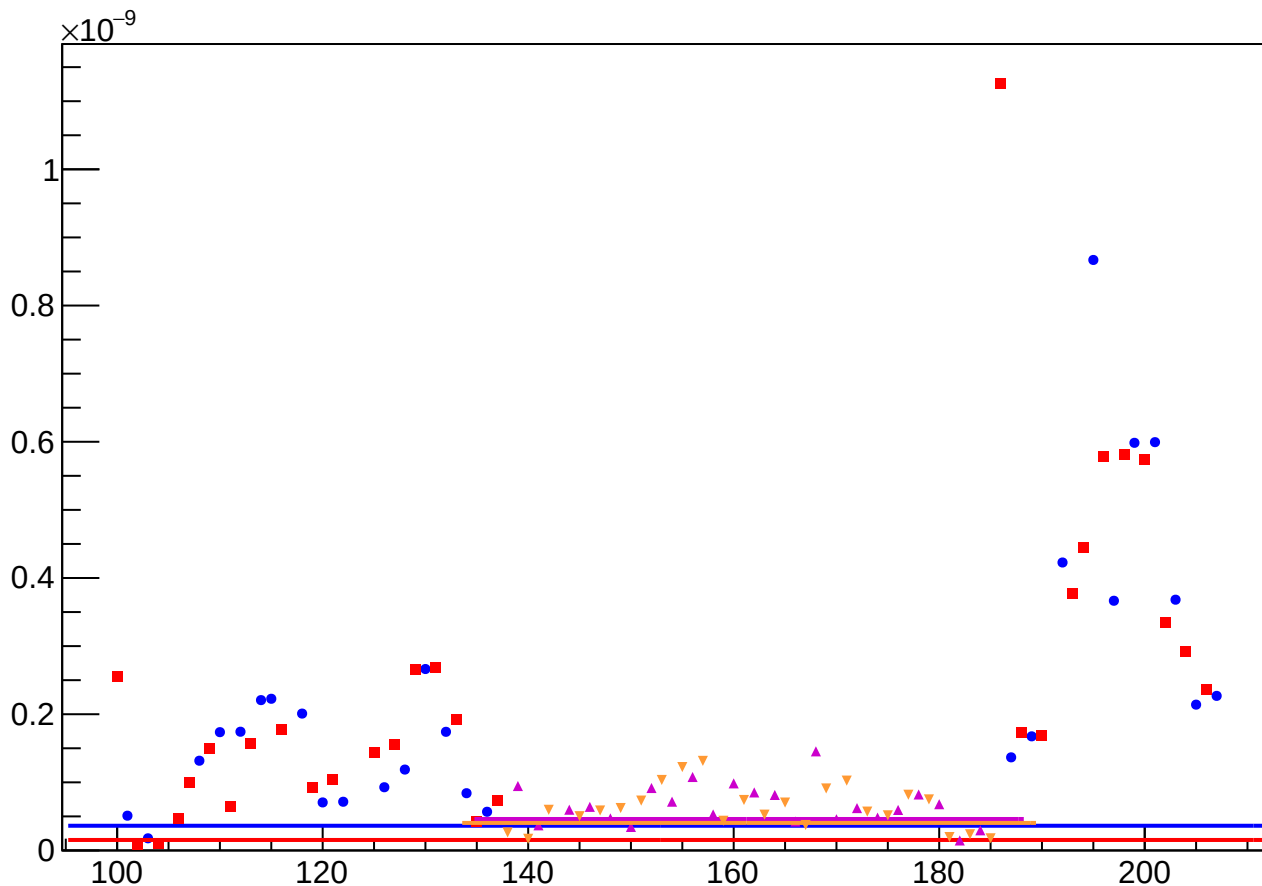
Left In: -0.000+/-0.000  $\chi^2$ /NDF:22.9/22

+ sign -0.000+/-0.000  $\chi^2$ /NDF: 64.0/49

All: -0.000+/-0.000  $\chi^2$ /NDF: 118.2/101

- sign -0.000+/-0.000  $\chi^2$ /NDF: 54.2/51

asym\_us\_avg\_atlr\_avg\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8431017.1/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3432253.9/23

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10620115.2/28

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2954466.9/22

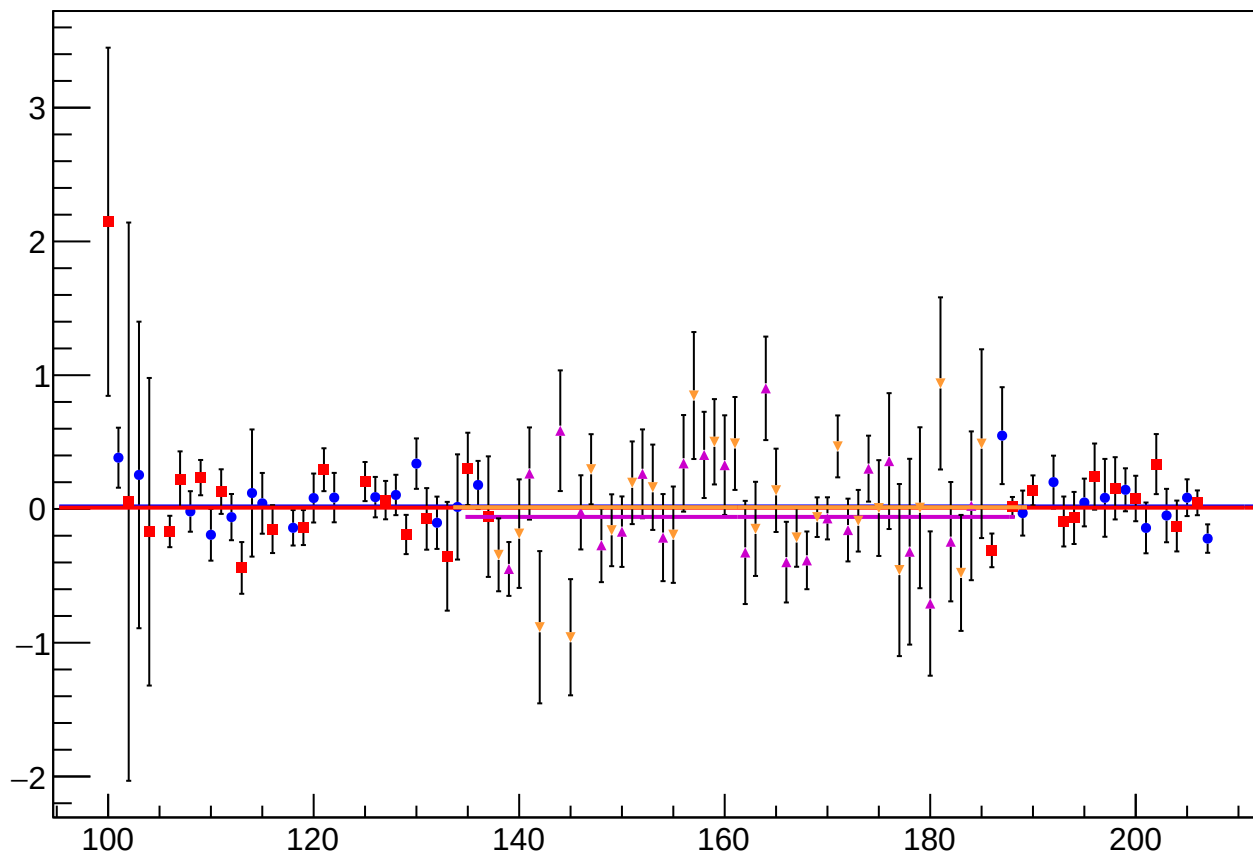
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11898530.1/49

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 29387480.5/101

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 16599543.9/51



asym\_us\_avg\_atlr\_avg\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.019 $\pm$ 0.036  $\chi^2$ /NDF: 20.4/25

Left Out: 0.013 $\pm$ 0.063  $\chi^2$ /NDF:29.3/23

Right Out: 0.010 $\pm$ 0.030  $\chi^2$ /NDF: 38.5/28

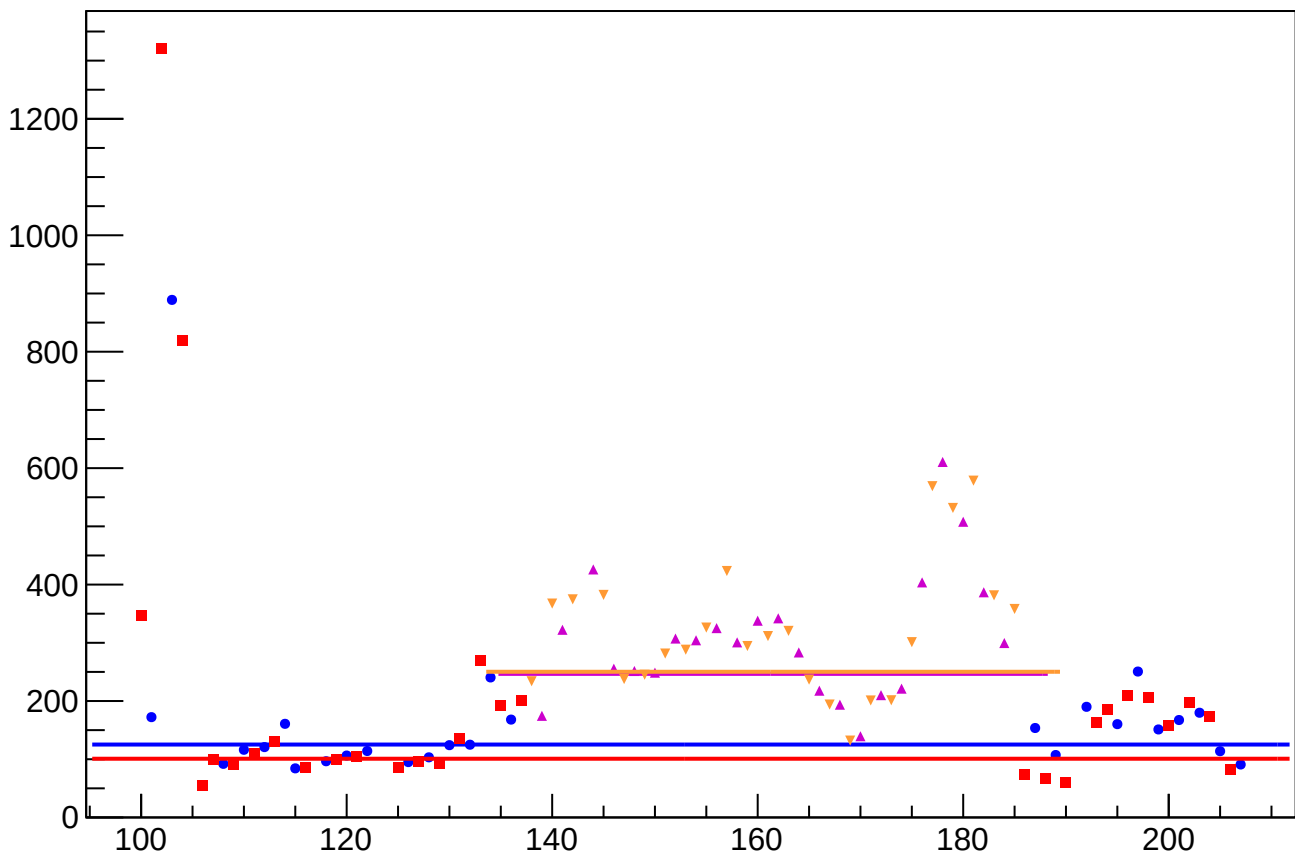
Left In: -0.059 $\pm$ 0.062  $\chi^2$ /NDF:27.9/22

+ sign 0.017 $\pm$ 0.031  $\chi^2$ /NDF: 49.8/49

All: 0.006 $\pm$ 0.020  $\chi^2$ /NDF: 117.4/101

- sign -0.003 $\pm$ 0.027  $\chi^2$ /NDF: 67.4/51

asym\_us\_avg\_atlr\_avg\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 125.236+/-0.025  $\chi^2/\text{NDF}$ : 2903748.7/25

Left Out: 250.247+/-0.045  $\chi^2/\text{NDF}$ : 4353162.7/23

Right Out: 100.869+/-0.021  $\chi^2/\text{NDF}$ : 5806932.2/28

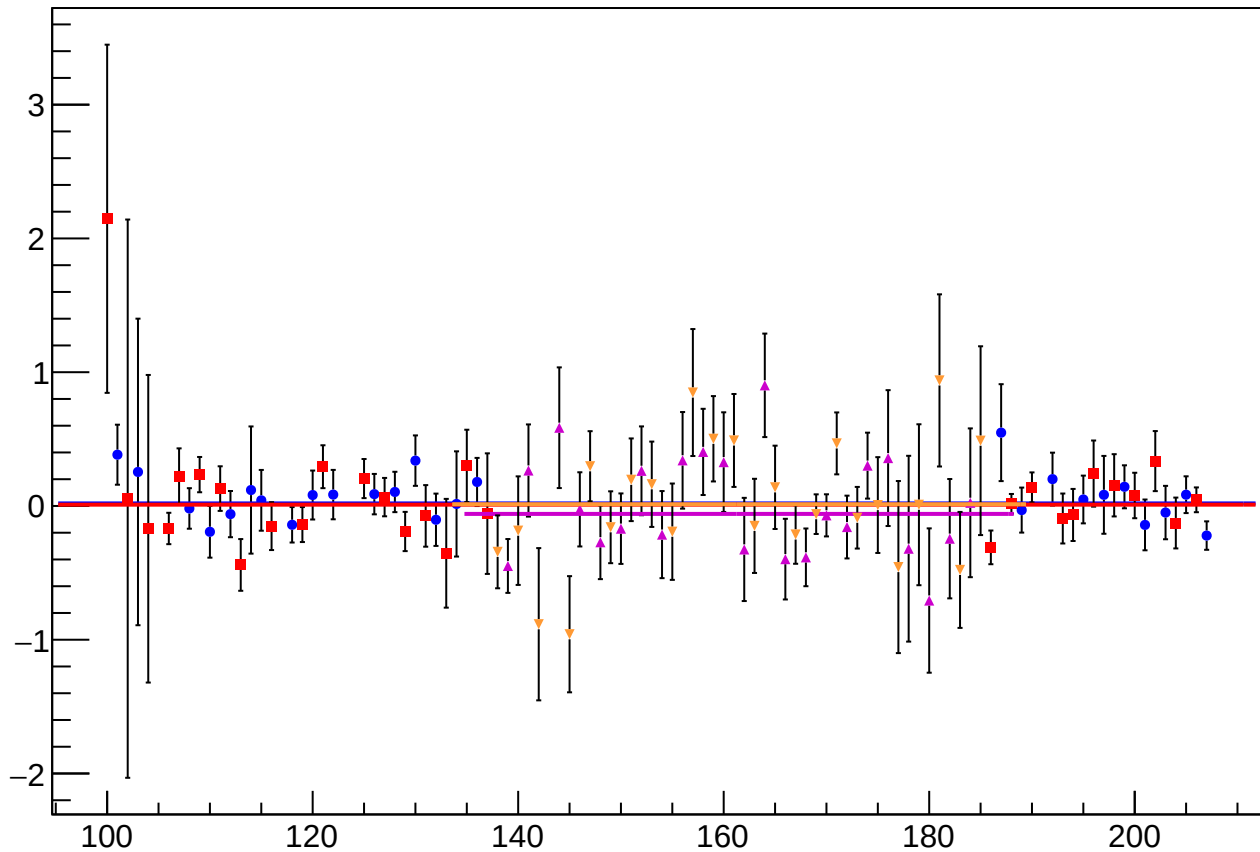
Left In: 246.630+/-0.044  $\chi^2/\text{NDF}$ : 3773083.4/22

+ sign 155.502+/-0.022  $\chi^2/\text{NDF}$ : 13223759.6/49

All: 139.570+/-0.014  $\chi^2/\text{NDF}$ : 32731328.6/10

- sign 127.796+/-0.019  $\chi^2/\text{NDF}$ : 18589109.0/51

asym\_us\_avg\_atlr\_avg\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.019 \pm 0.036$   $\chi^2/\text{NDF}$ : 20.4/25

Left Out:  $0.013 \pm 0.063$   $\chi^2/\text{NDF}$ : 29.3/23

Right Out:  $0.010 \pm 0.030$   $\chi^2/\text{NDF}$ : 38.5/28

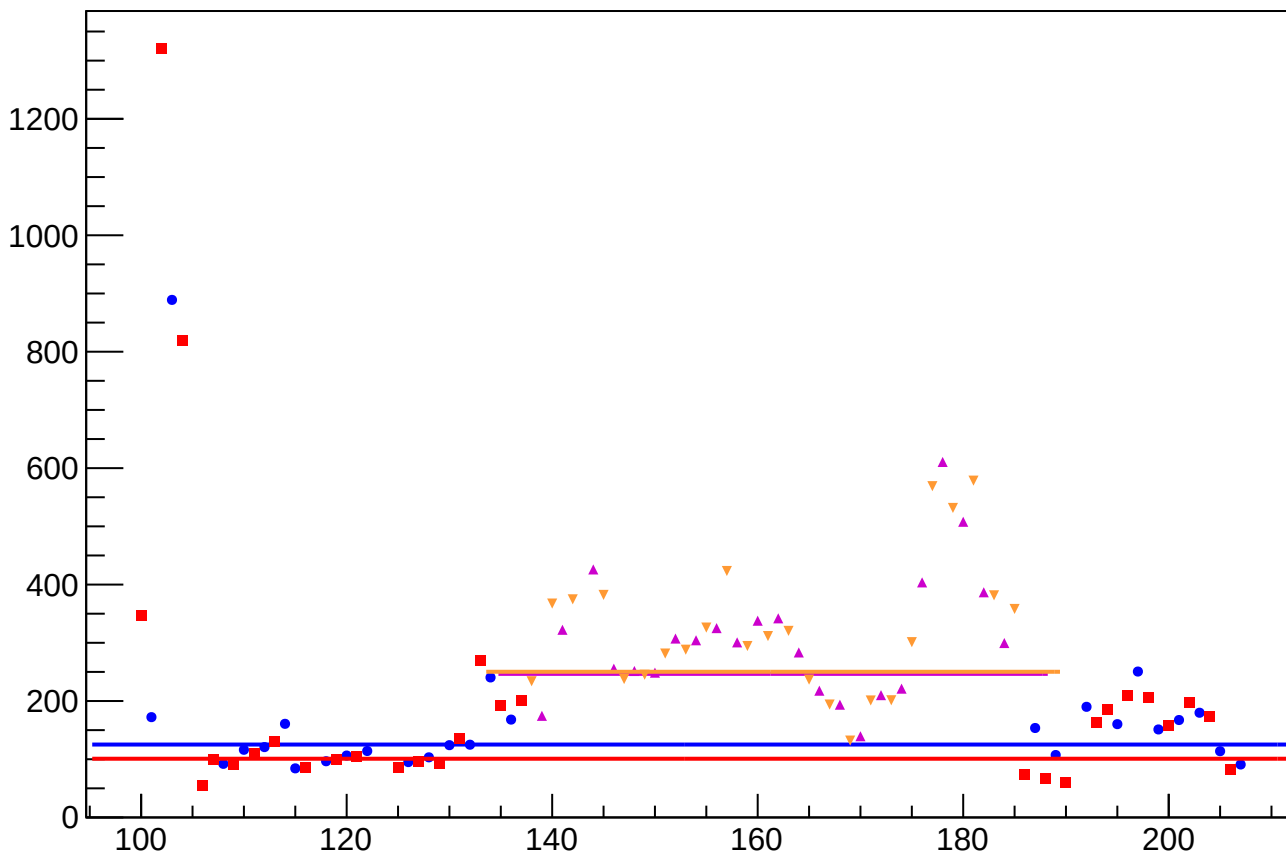
Left In:  $-0.059 \pm 0.062$   $\chi^2/\text{NDF}$ : 27.9/22

+ sign  $0.017 \pm 0.031$   $\chi^2/\text{NDF}$ : 49.8/49

All:  $0.006 \pm 0.020$   $\chi^2/\text{NDF}$ : 117.4/101

- sign  $-0.003 \pm 0.027$   $\chi^2/\text{NDF}$ : 67.4/51

asym\_us\_avg\_atlr\_avg\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 125.236 $\pm$ 0.025  $\chi^2$ /NDF: 2903748.7/25

Left Out: 250.247 $\pm$ 0.045  $\chi^2$ /NDF: 4353162.7/23

Right Out: 100.869 $\pm$ 0.021  $\chi^2$ /NDF: 5806932.2/28

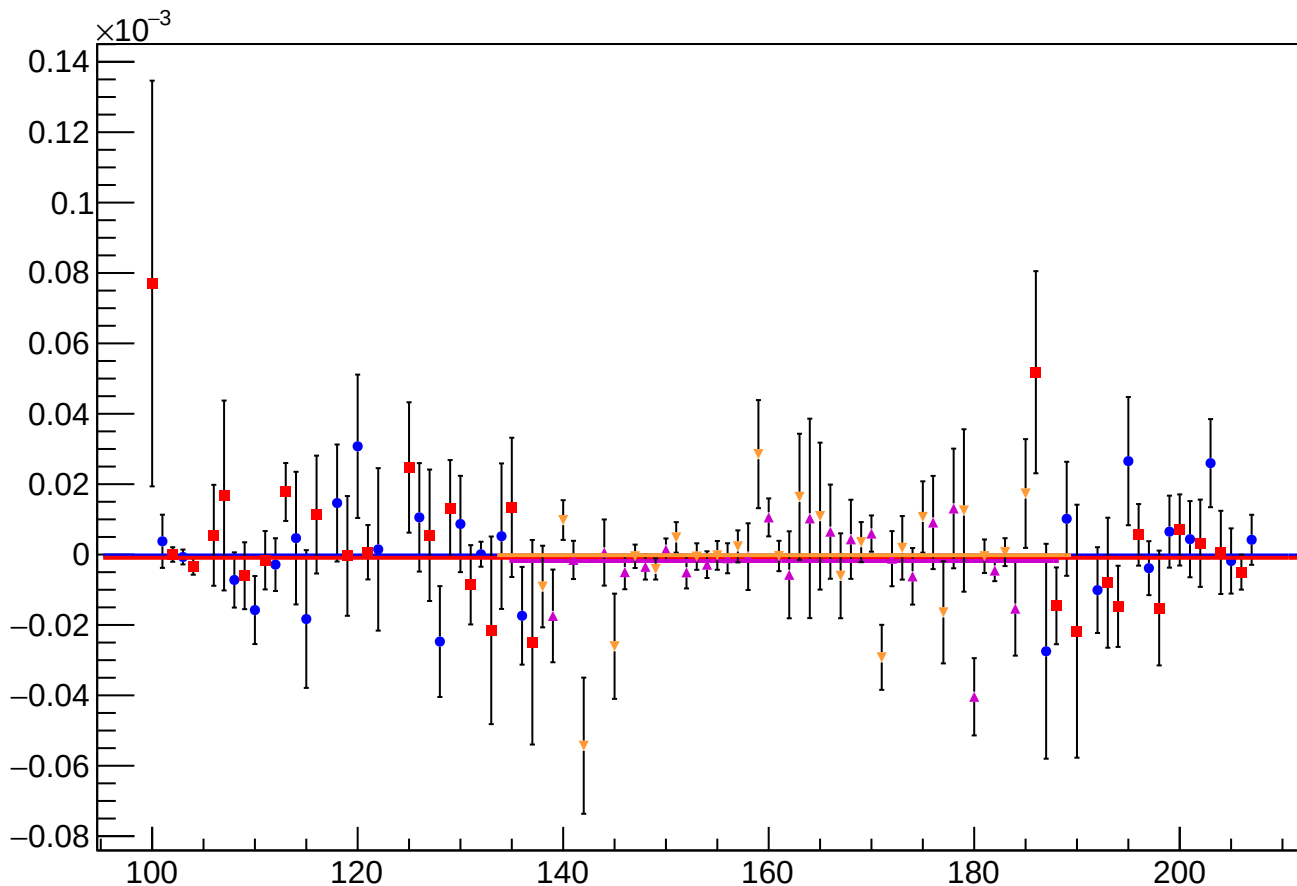
Left In: 246.630 $\pm$ 0.044  $\chi^2$ /NDF: 3773083.4/22

+ sign 155.502 $\pm$ 0.022  $\chi^2$ /NDF: 13223759.6/49

All: 139.570 $\pm$ 0.014  $\chi^2$ /NDF: 32731328.6/10

- sign 127.796 $\pm$ 0.019  $\chi^2$ /NDF: 18589109.0/51

asym\_us\_avg\_atlr\_avg\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 22.5/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 37.2/23

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 24.7/28

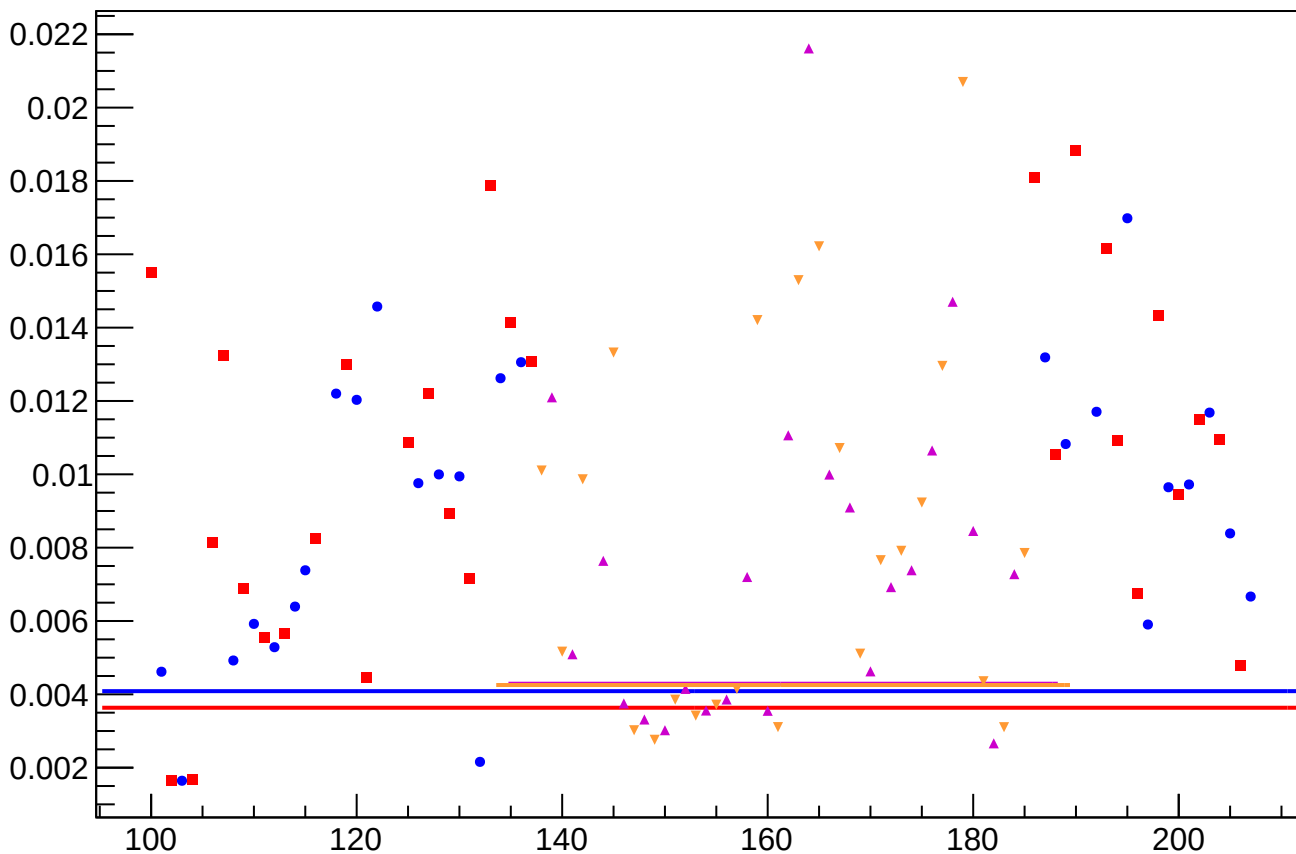
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 28.2/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 59.6/49

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 113.8/101

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 53.2/51

asym\_us\_avg\_atlr\_avg\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 11778668.7/25

Left Out: 0.004 $\pm$ 0.000  $\chi^2$ /NDF:8492565.6/23

Right Out: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 14400407.2/28

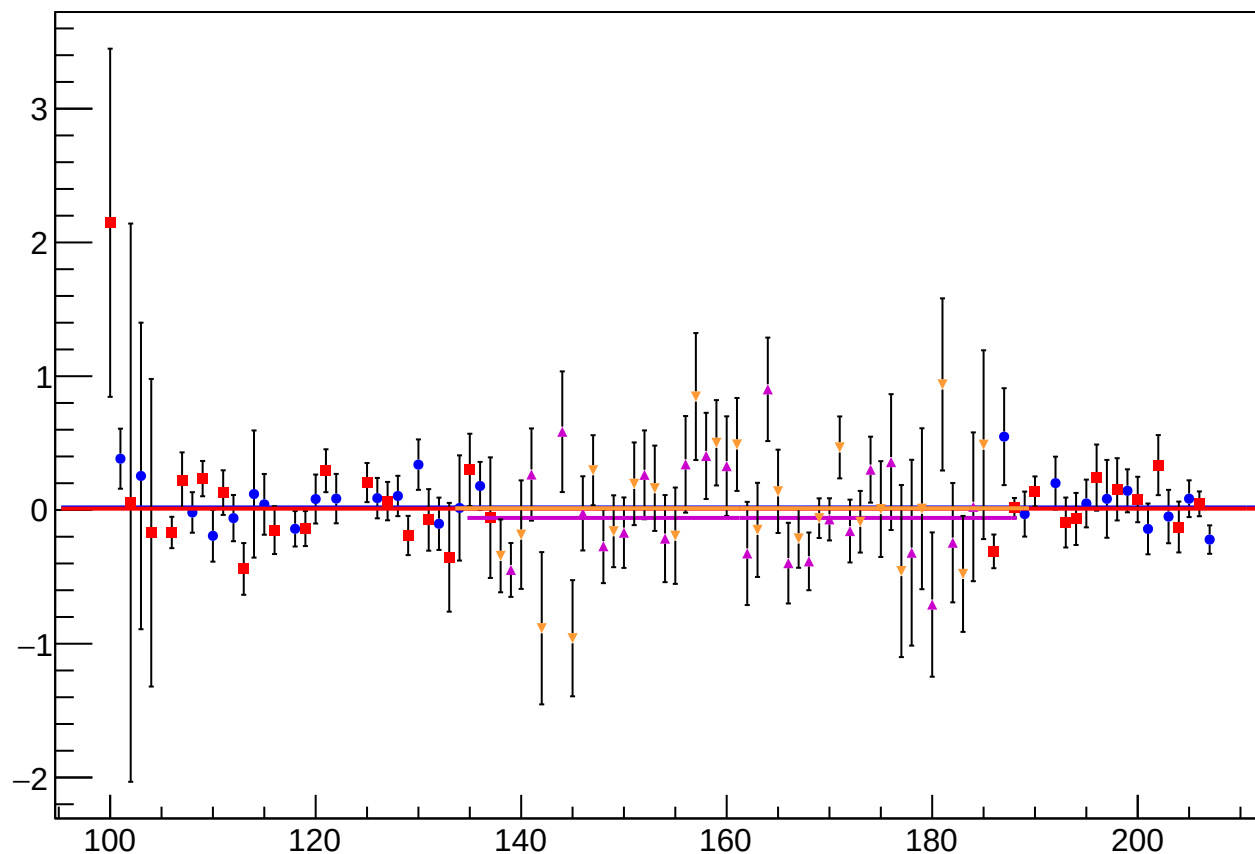
Left In: 0.004 $\pm$ 0.000  $\chi^2$ /NDF:6598609.8/22

+ sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 20287636.9/49

All: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 41620819.5/101

- sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 21281356.1/51

asym\_us\_avg\_atlr\_avg\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.019 \pm 0.036$   $\chi^2/\text{NDF}$ : 20.4/25

Left Out:  $0.013 \pm 0.063$   $\chi^2/\text{NDF}$ : 29.3/23

Right Out:  $0.010 \pm 0.030$   $\chi^2/\text{NDF}$ : 38.5/28

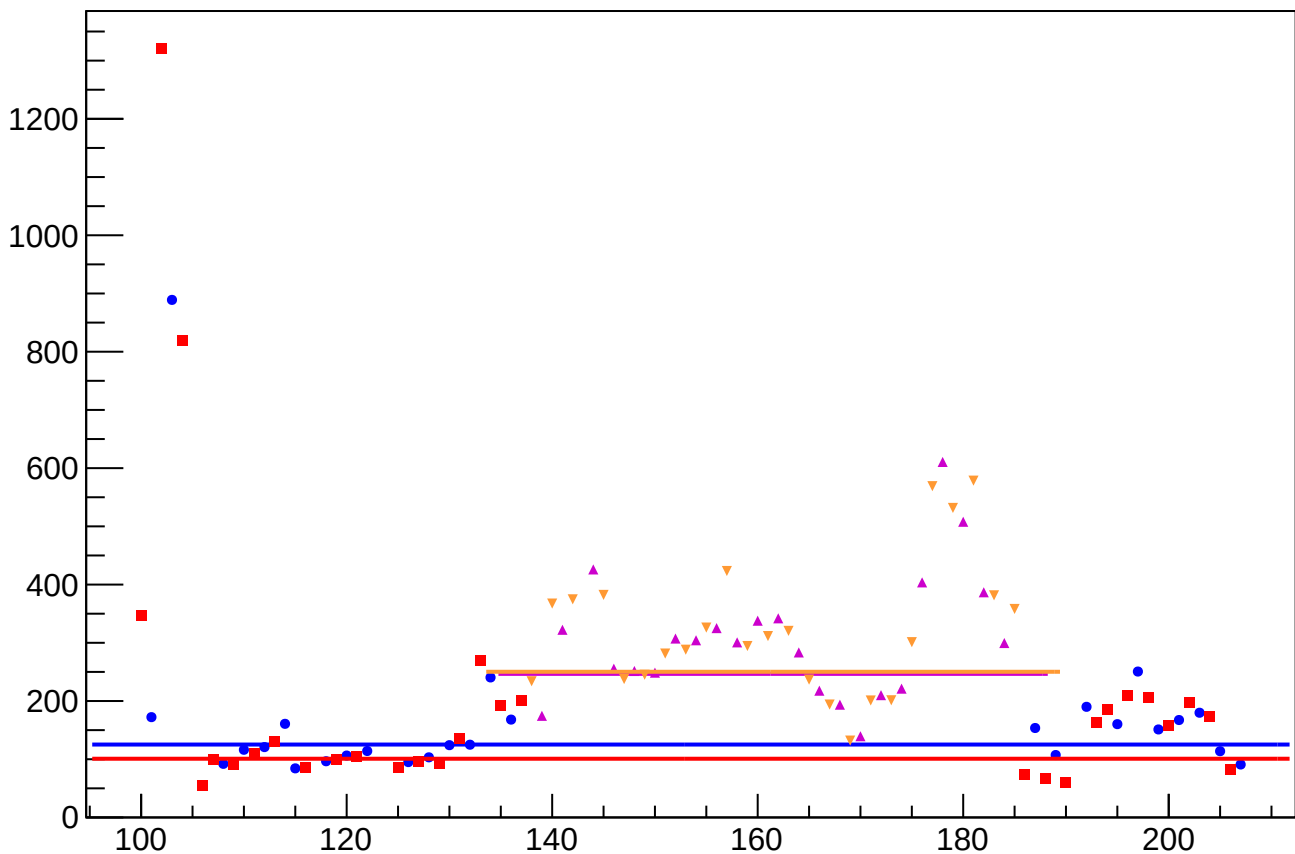
Left In:  $-0.059 \pm 0.062$   $\chi^2/\text{NDF}$ : 27.9/22

+ sign  $0.017 \pm 0.031$   $\chi^2/\text{NDF}$ : 49.8/49

All:  $0.006 \pm 0.020$   $\chi^2/\text{NDF}$ : 117.4/101

- sign  $-0.003 \pm 0.027$   $\chi^2/\text{NDF}$ : 67.4/51

asym\_us\_avg\_atlr\_avg\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 125.234+/-0.025  $\chi^2/\text{NDF}$ : 2903823.5/25

Left Out: 250.248+/-0.045  $\chi^2/\text{NDF}$ : 4353323.9/23

Right Out: 100.865+/-0.021  $\chi^2/\text{NDF}$ : 5807483.8/28

Left In: 246.632+/-0.044  $\chi^2/\text{NDF}$ : 3773144.3/22

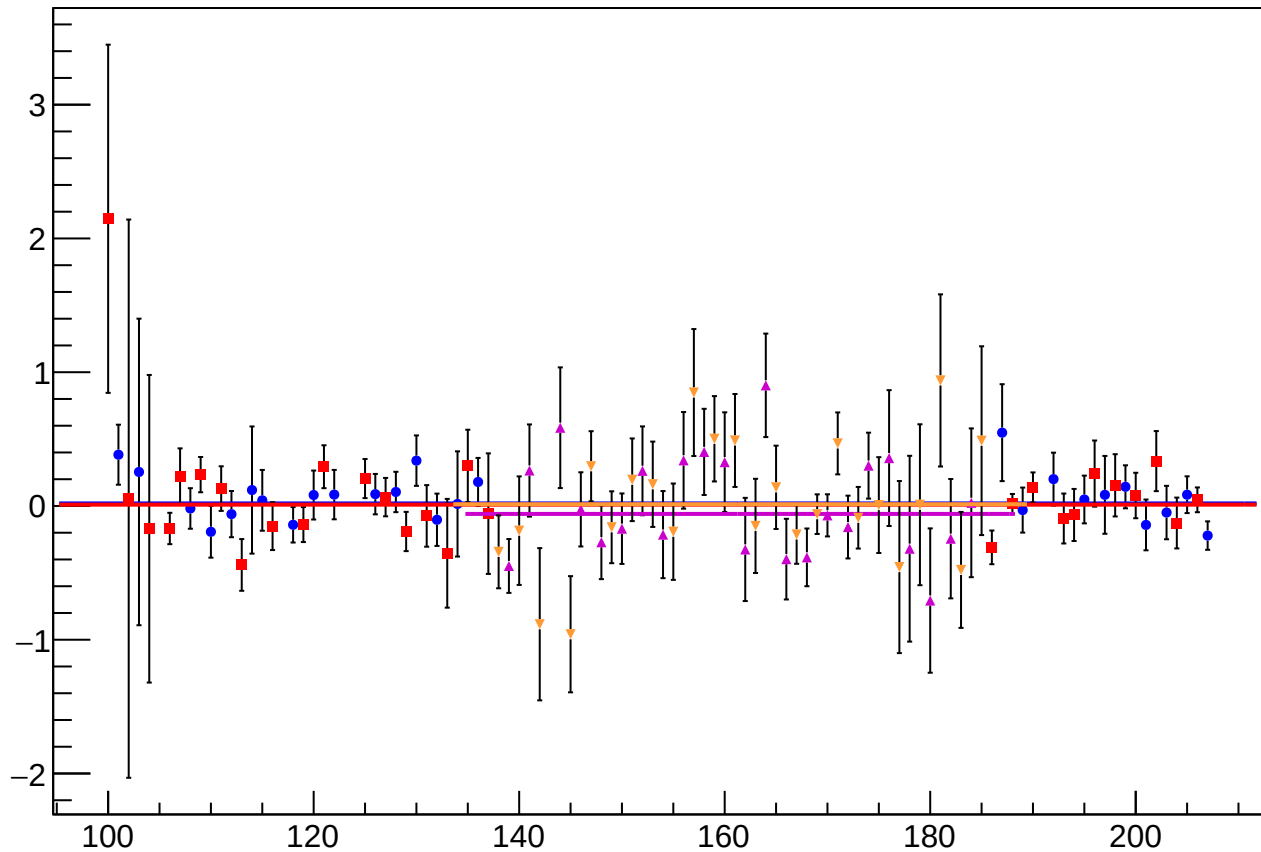
+ sign 155.500+/-0.022  $\chi^2/\text{NDF}$ : 13224141.8/49

All: 139.566+/-0.014  $\chi^2/\text{NDF}$ : 32733274.6/10

- sign 127.791+/-0.019  $\chi^2/\text{NDF}$ : 18590430.2/51



asym\_us\_avg\_atlr\_avg\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.019 \pm 0.036$   $\chi^2/\text{NDF}$ : 20.4/25

Left Out:  $0.013 \pm 0.063$   $\chi^2/\text{NDF}$ : 29.3/23

Right Out:  $0.010 \pm 0.030$   $\chi^2/\text{NDF}$ : 38.5/28

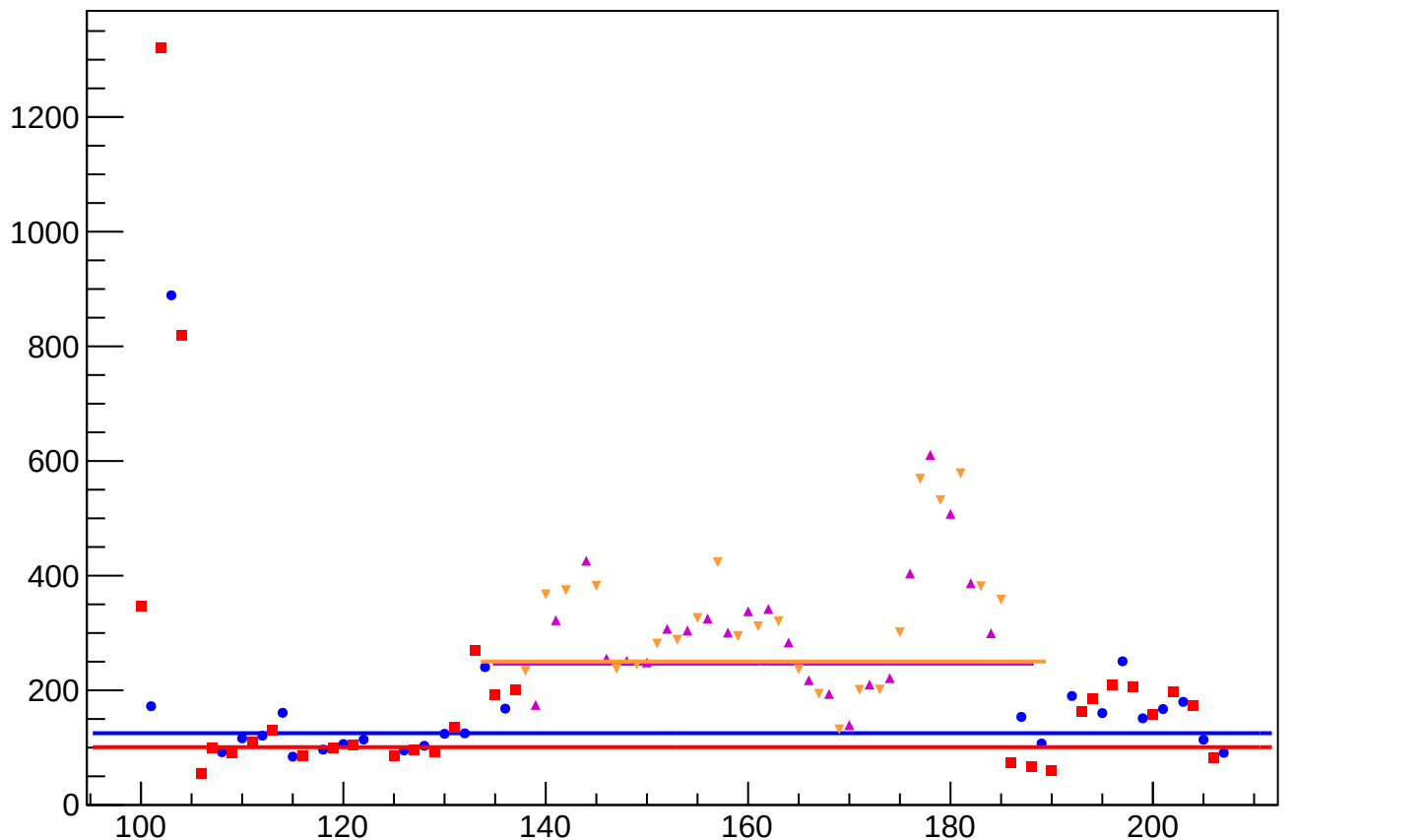
Left In:  $-0.059 \pm 0.062$   $\chi^2/\text{NDF}$ : 27.9/22

+ sign  $0.017 \pm 0.031$   $\chi^2/\text{NDF}$ : 49.8/49

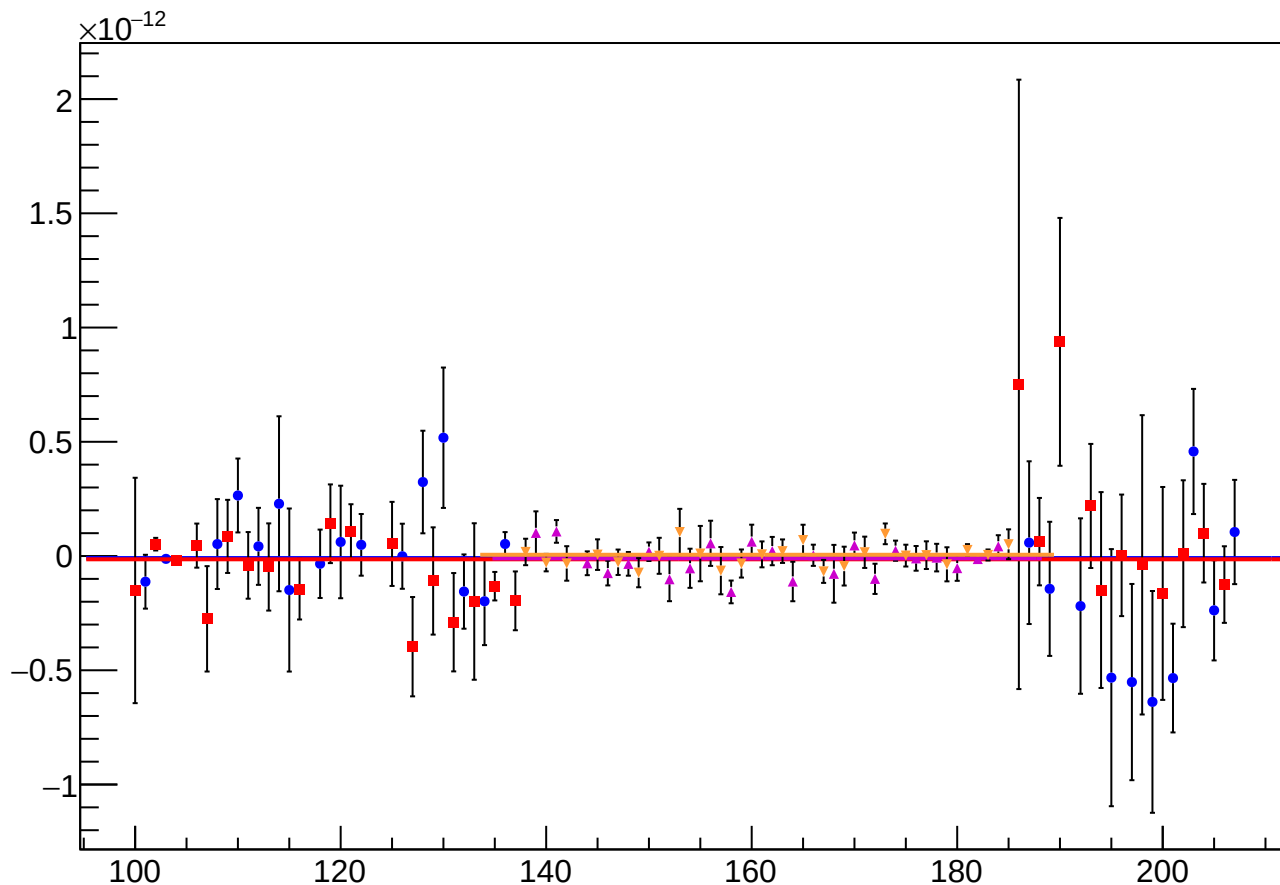
All:  $0.006 \pm 0.020$   $\chi^2/\text{NDF}$ : 117.4/101

- sign  $-0.003 \pm 0.027$   $\chi^2/\text{NDF}$ : 67.4/51

asym\_us\_avg\_atlr\_avg\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



asym\_us\_avg\_atlr\_avg\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 26.9/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:13.8/23

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 27.1/28

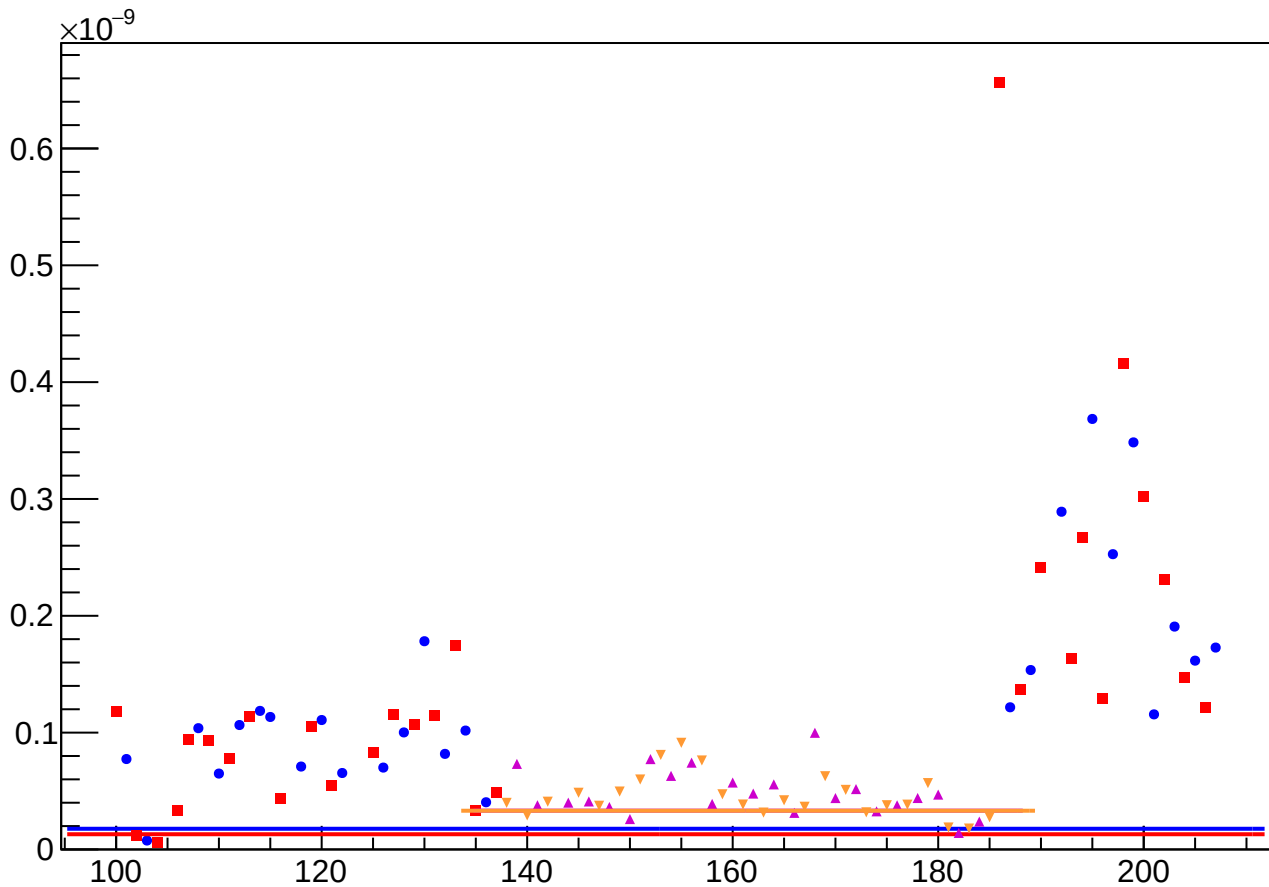
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:27.9/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 41.5/49

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 97.8/101

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 55.1/51

asym\_us\_avg\_atlr\_avg\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12820694.2/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4025318.1/23

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13361190.1/28

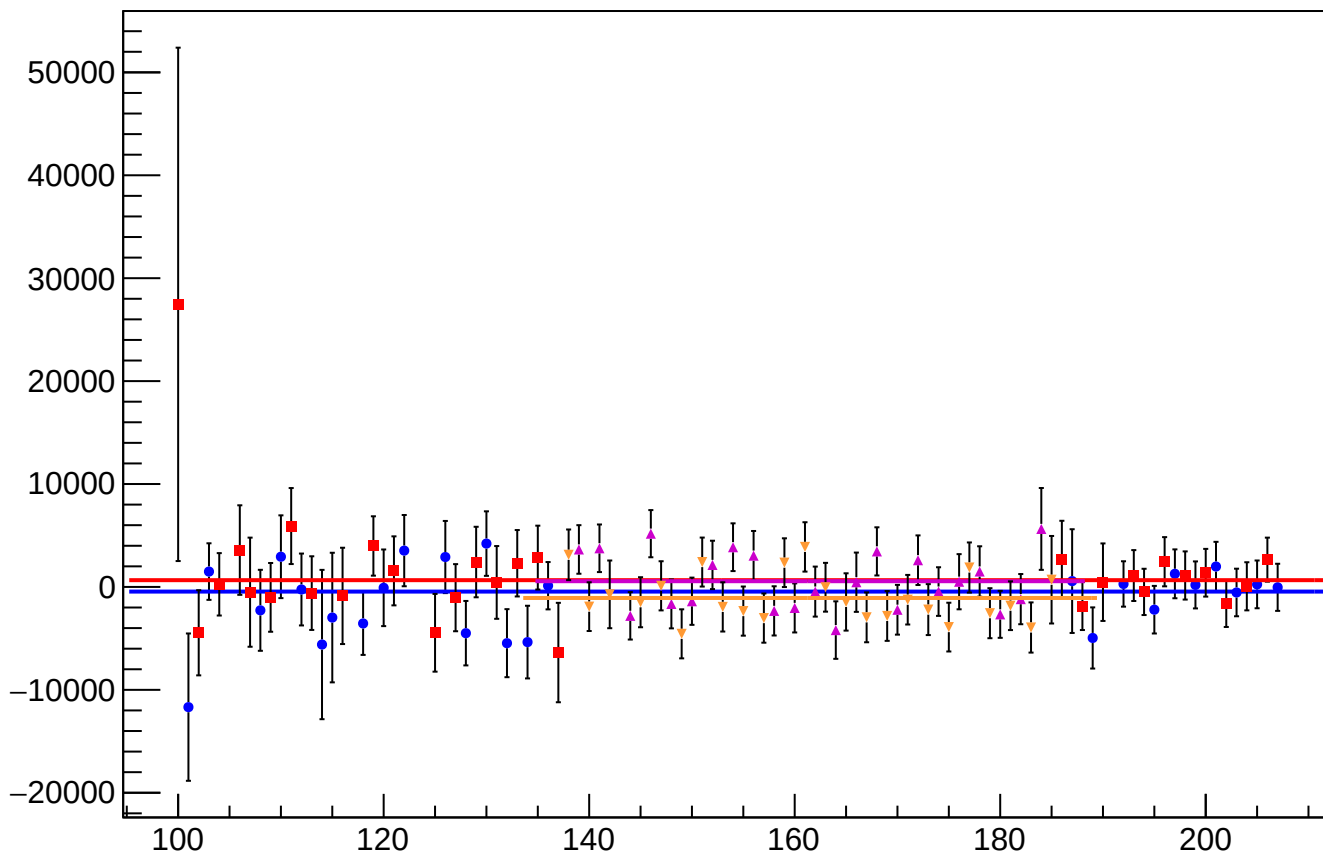
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5018453.7/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 18664493.4/49

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 41316612.3/101

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 22339944.9/51

# reg\_asym\_us\_dd\_at1lr\_dd\_avg\_mean vs Slug



Right In:  $-451.321 \pm 580.764$   $\chi^2/\text{NDF}$ : 20.8/25

Left Out:  $-1072.863 \pm 505.534$   $\chi^2/\text{NDF}$ : 21.6/23

Right Out:  $657.050 \pm 563.439$   $\chi^2/\text{NDF}$ : 16.7/28

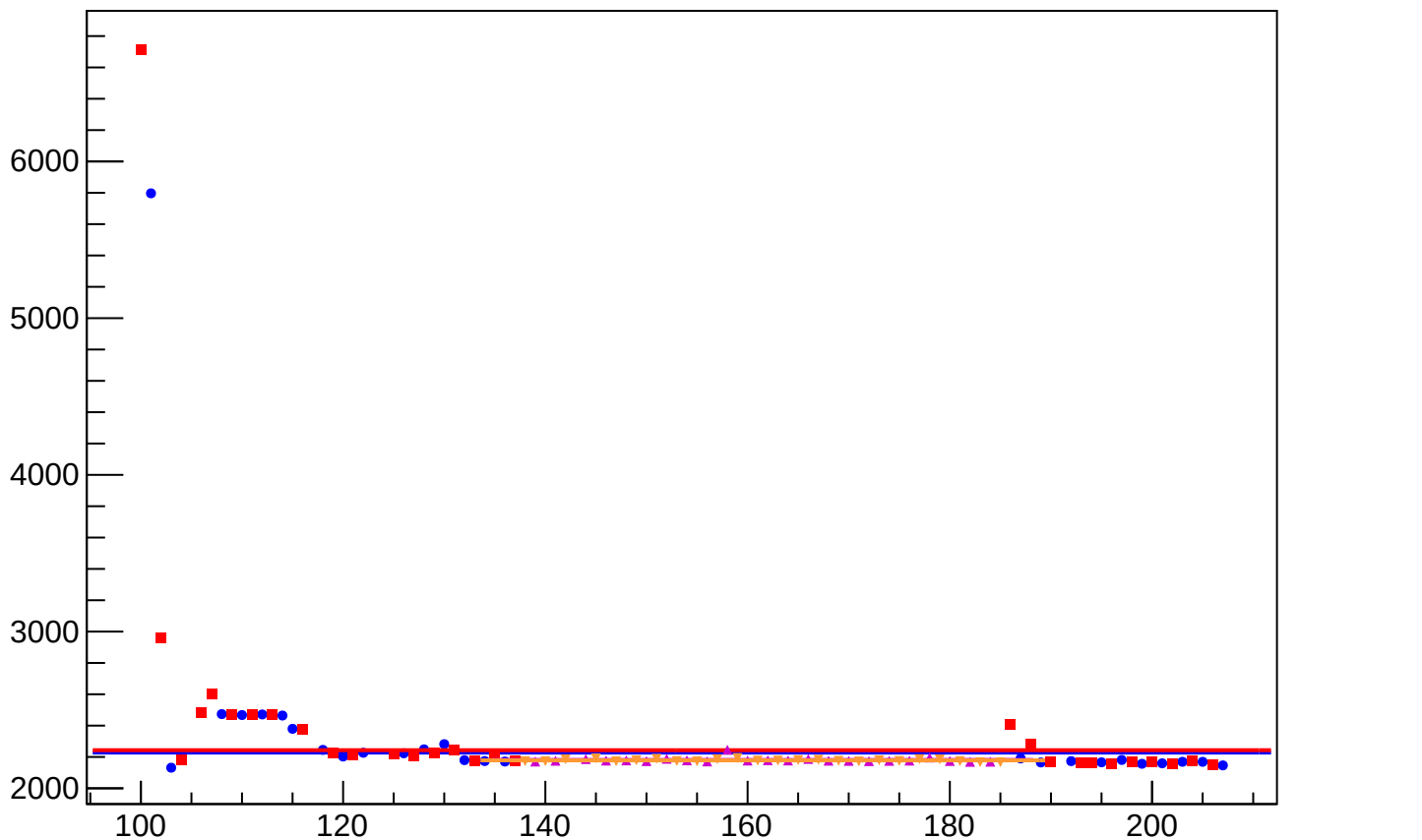
Left In:  $557.052 \pm 509.208$   $\chi^2/\text{NDF}$ : 28.7/22

+ sign  $-804.930 \pm 381.309$   $\chi^2/\text{NDF}$ : 43.0/49

All:  $-94.931 \pm 268.372$   $\chi^2/\text{NDF}$ : 95.3/101

- sign  $602.008 \pm 377.786$   $\chi^2/\text{NDF}$ : 45.4/51

# reg\_asym\_us\_dd\_at1lr\_dd\_avg\_rms vs Slug



Right In: 2228.080 $\pm$ 0.411  $\chi^2$ /NDF: 543601.7/25

Left Out: 2178.244 $\pm$ 0.357  $\chi^2$ /NDF: 389.1/23

Right Out: 2243.217 $\pm$ 0.398  $\chi^2$ /NDF: 193041.8/28

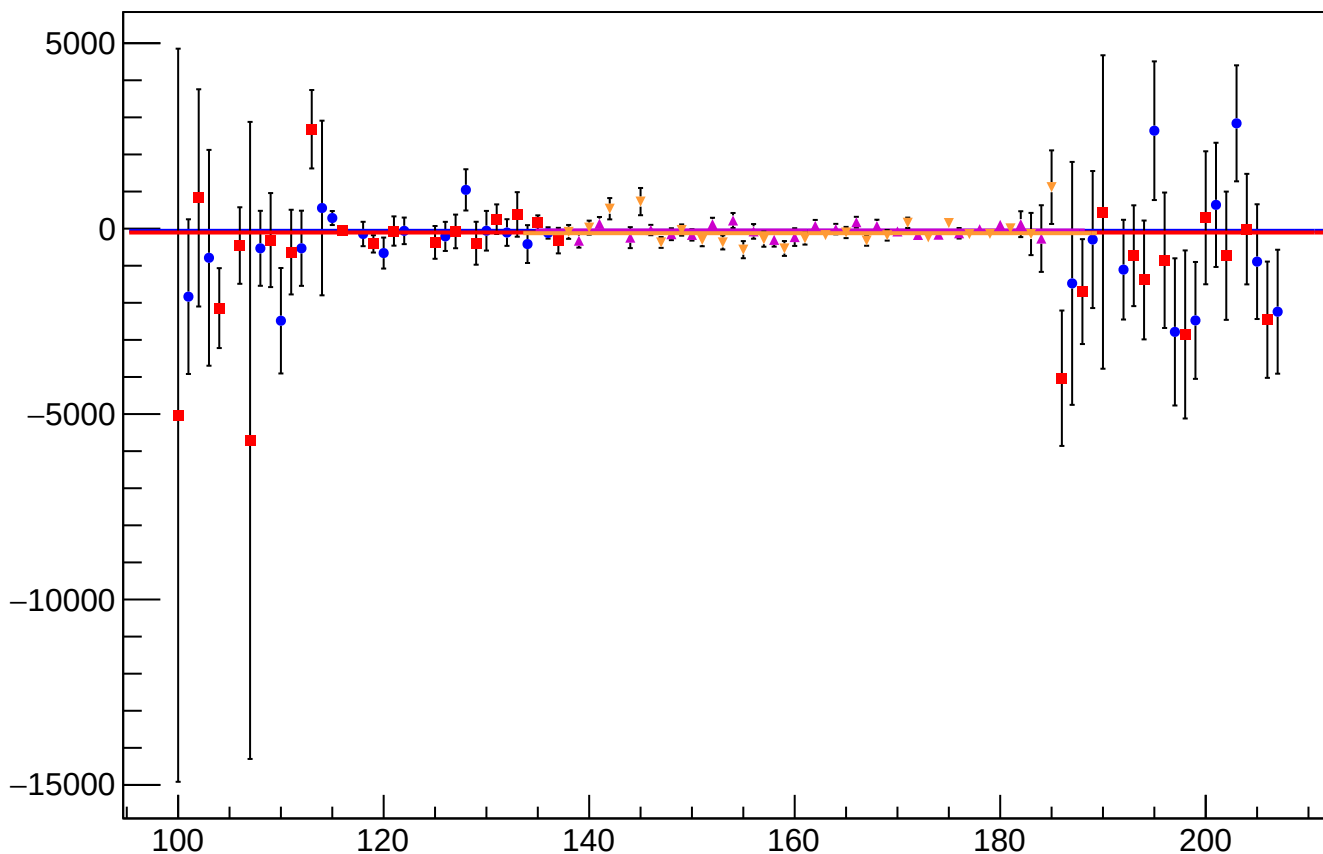
Left In: 2180.919 $\pm$ 0.360  $\chi^2$ /NDF: 1866.2/22

+ sign 2199.727 $\pm$ 0.270  $\chi^2$ /NDF: 552369.3/49

All: 2204.369 $\pm$ 0.190  $\chi^2$ /NDF: 761323.0/101

- sign 2208.926 $\pm$ 0.267  $\chi^2$ /NDF: 208366.3/51

asym\_us\_dd\_at1lr\_dd\_avg\_reg\_correction\_mean vs Slug



Right In:  $-59.220 \pm 89.655$   $\chi^2/\text{NDF}$ : 27.1/25

Left Out:  $-123.007 \pm 31.408$   $\chi^2/\text{NDF}$ : 43.8/23

Right Out:  $-105.029 \pm 81.345$   $\chi^2/\text{NDF}$ : 28.6/28

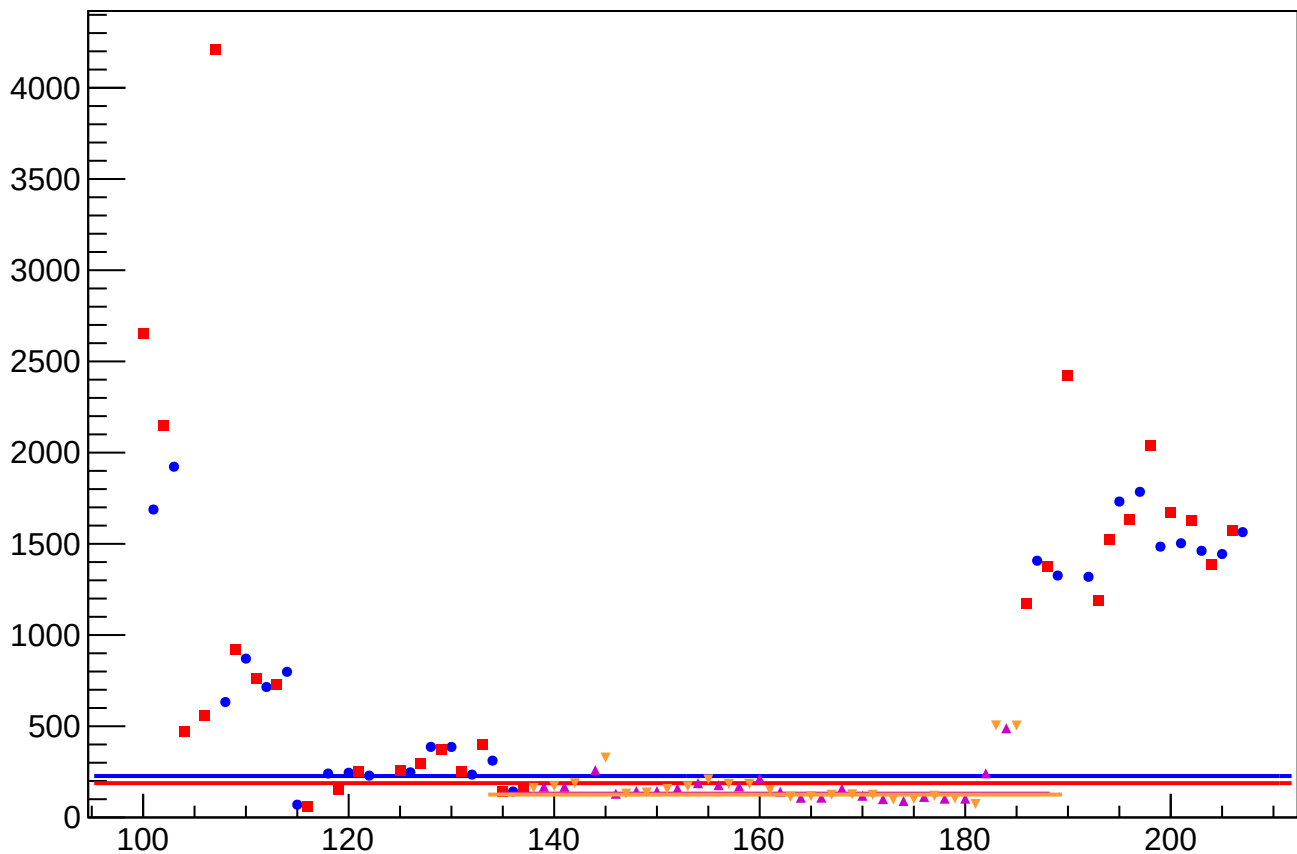
Left In:  $-50.317 \pm 32.545$   $\chi^2/\text{NDF}$ : 18.2/22

+ sign  $-116.035 \pm 29.642$   $\chi^2/\text{NDF}$ : 71.4/49

All:  $-87.509 \pm 21.160$   $\chi^2/\text{NDF}$ : 120.5/101

- sign  $-57.866 \pm 30.216$   $\chi^2/\text{NDF}$ : 47.2/51

asym\_us\_dd\_at1lr\_dd\_avg\_reg\_correction\_rms vs Slug



Right In: 227.053 $\pm$ 0.063  $\chi^2$ /NDF: 16388081.1/25

Left Out: 125.506 $\pm$ 0.022  $\chi^2$ /NDF: 3942746.1/23

Right Out: 188.047 $\pm$ 0.058  $\chi^2$ /NDF: 19707808.5/28

Left In: 130.436 $\pm$ 0.023  $\chi^2$ /NDF: 2679692.6/22

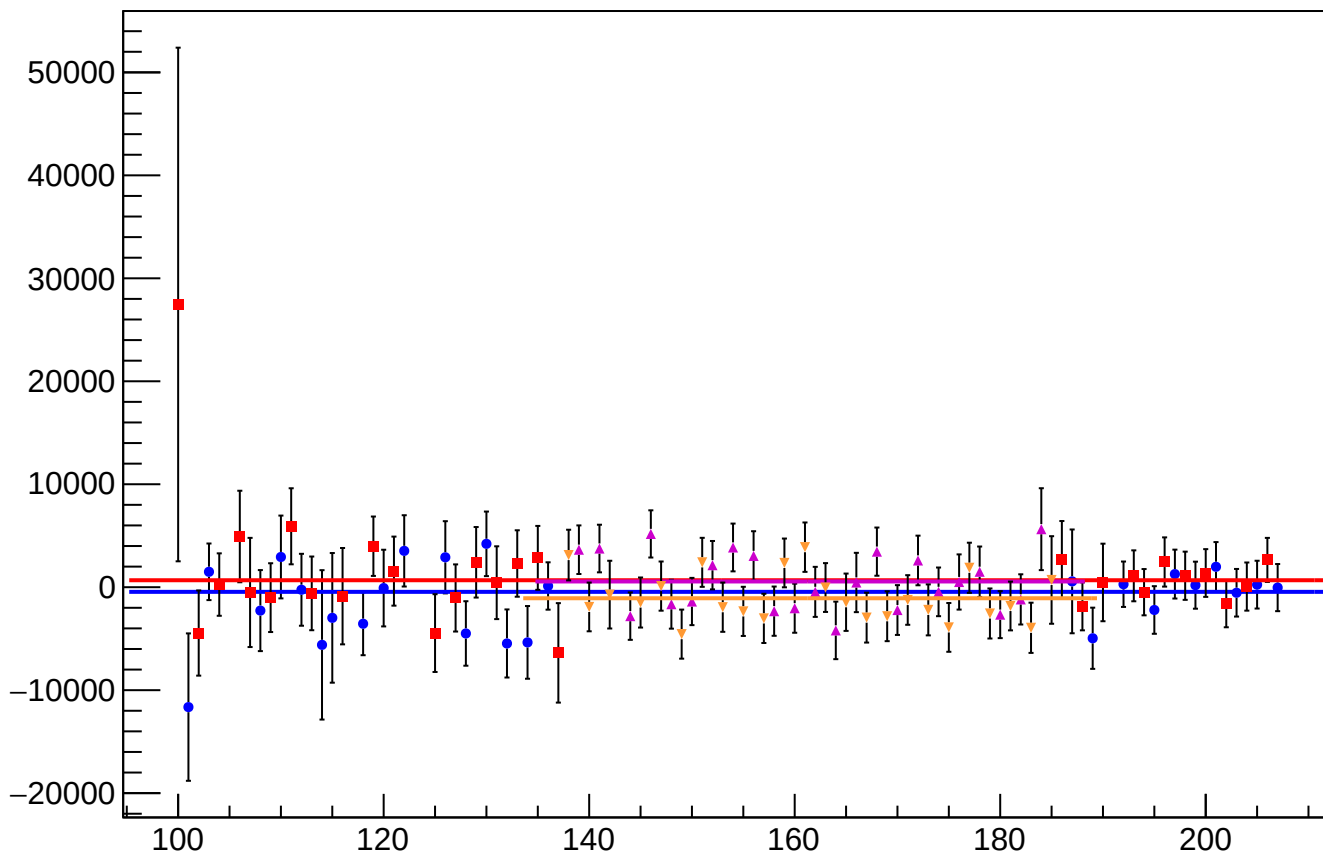
+ sign 136.606 $\pm$ 0.021  $\chi^2$ /NDF: 22616116.5/49

All: 137.479 $\pm$ 0.015  $\chi^2$ /NDF: 45871903.5/10

- sign 138.385 $\pm$ 0.021  $\chi^2$ /NDF: 23252254.0/51



# cor\_asym\_us\_dd\_at1lr\_dd\_avg\_mean vs Slug



Right In:  $-450.871 \pm 580.764$   $\chi^2/\text{NDF}$ : 20.8/25

Left Out:  $-1072.795 \pm 505.534$   $\chi^2/\text{NDF}$ : 21.6/23

Right Out:  $676.761 \pm 563.636$   $\chi^2/\text{NDF}$ : 17.2/28

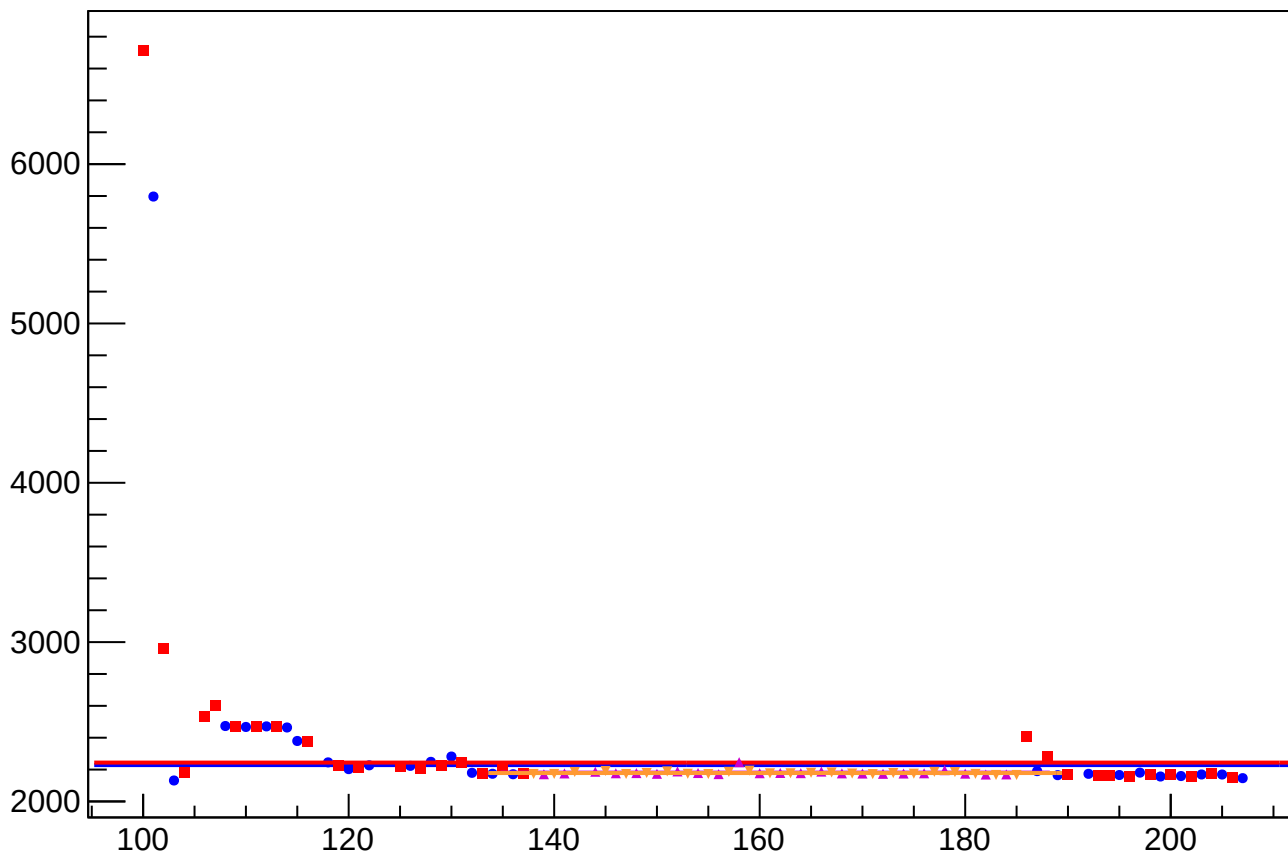
Left In:  $557.079 \pm 509.208$   $\chi^2/\text{NDF}$ : 28.7/22

+ sign  $-804.697 \pm 381.309$   $\chi^2/\text{NDF}$ : 43.0/49

All:  $-90.458 \pm 268.393$   $\chi^2/\text{NDF}$ : 95.9/101

- sign  $610.864 \pm 377.845$   $\chi^2/\text{NDF}$ : 45.9/51

# cor\_asym\_us\_dd\_at1lr\_dd\_avg\_rms vs Slug



Right In: 2228.080 $\pm$ 0.411  $\chi^2$ /NDF: 543602.0/25

Left Out: 2178.244 $\pm$ 0.357  $\chi^2$ /NDF: 389.1/23

Right Out: 2243.865 $\pm$ 0.399  $\chi^2$ /NDF: 195517.2/28

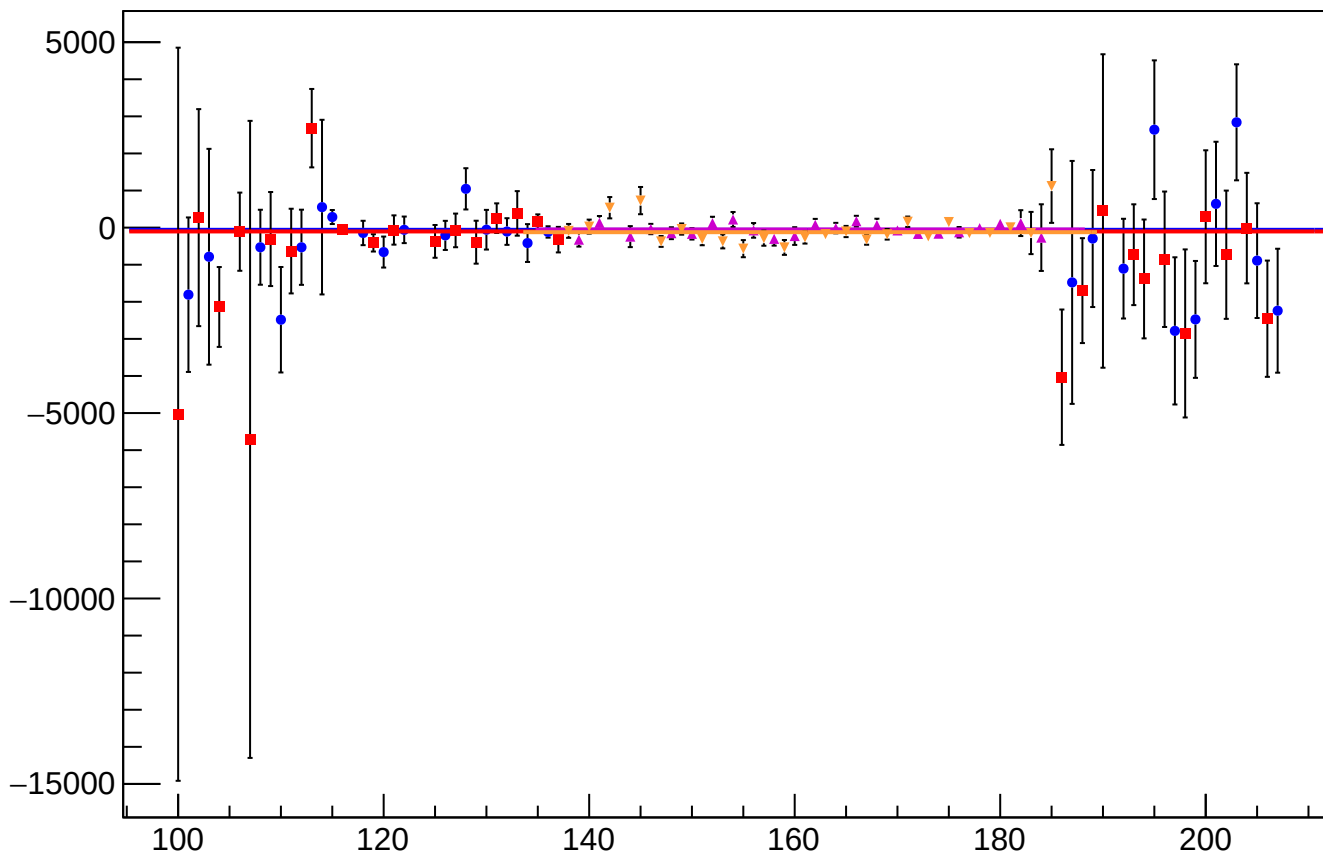
Left In: 2180.919 $\pm$ 0.360  $\chi^2$ /NDF: 1866.2/22

+ sign 2199.727 $\pm$ 0.270  $\chi^2$ /NDF: 552369.6/49

All: 2204.510 $\pm$ 0.190  $\chi^2$ /NDF: 764111.2/103

- sign 2209.207 $\pm$ 0.267  $\chi^2$ /NDF: 211117.9/51

asym\_us\_dd\_at1lr\_dd\_avg\_cor\_correction\_mean vs Slug



Right In: -59.255 $\pm$ 89.660  $\chi^2$ /NDF: 27.1/25

Left Out: -122.928 $\pm$ 31.408  $\chi^2$ /NDF:43.8/23

Right Out: -103.034 $\pm$ 81.286  $\chi^2$ /NDF: 28.4/28

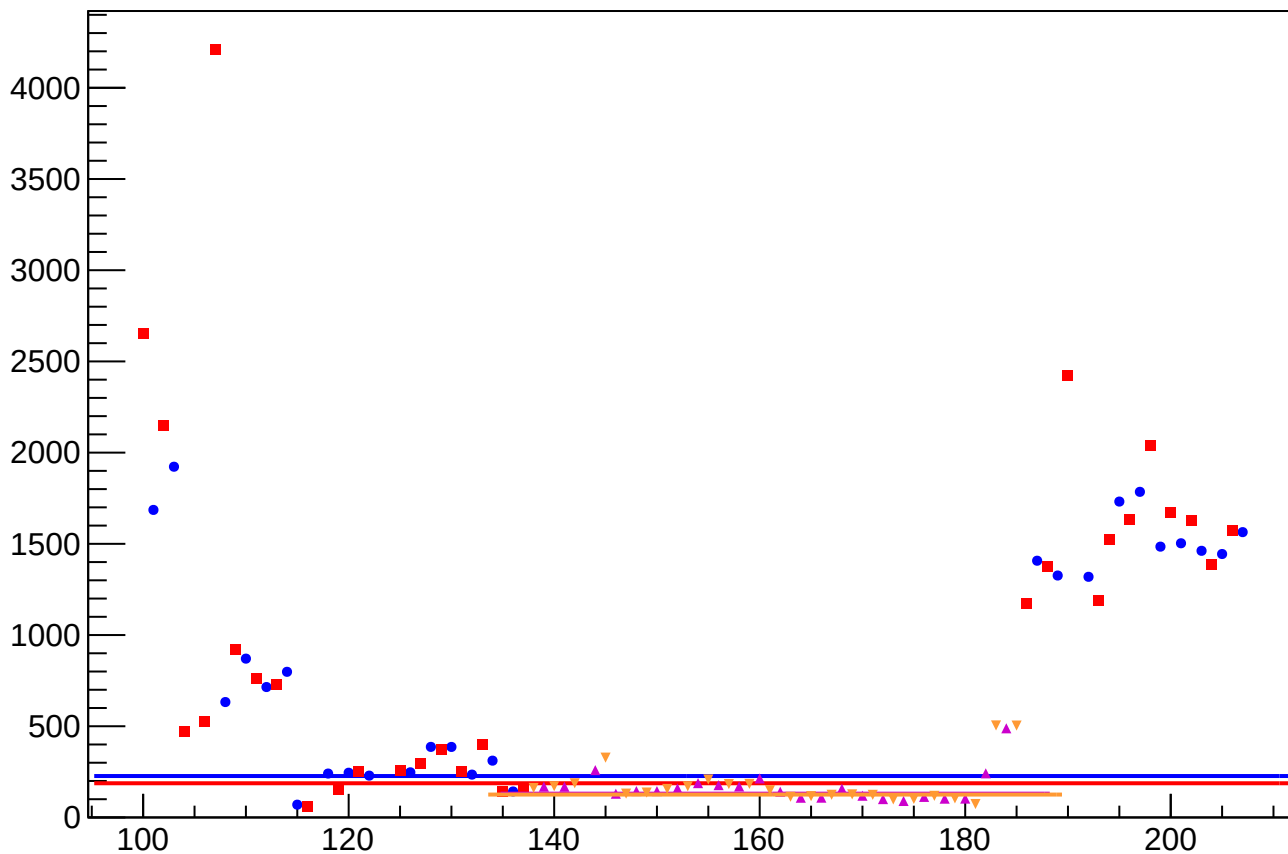
Left In: -50.209 $\pm$ 32.548  $\chi^2$ /NDF:18.3/22

+ sign -115.969 $\pm$ 29.642  $\chi^2$ /NDF: 71.3/49

All: -87.299 $\pm$ 21.160  $\chi^2$ /NDF: 120.3/101

- sign -57.509 $\pm$ 30.216  $\chi^2$ /NDF: 47.0/51

asym\_us\_dd\_at1lr\_dd\_avg\_cor\_correction\_rms vs Slug



Right In: 227.081 $\pm$ 0.063  $\chi^2$ /NDF: 16386508.6/25

Left Out: 125.503 $\pm$ 0.022  $\chi^2$ /NDF: 3943570.9/23

Right Out: 187.457 $\pm$ 0.057  $\chi^2$ /NDF: 19673557.0/28

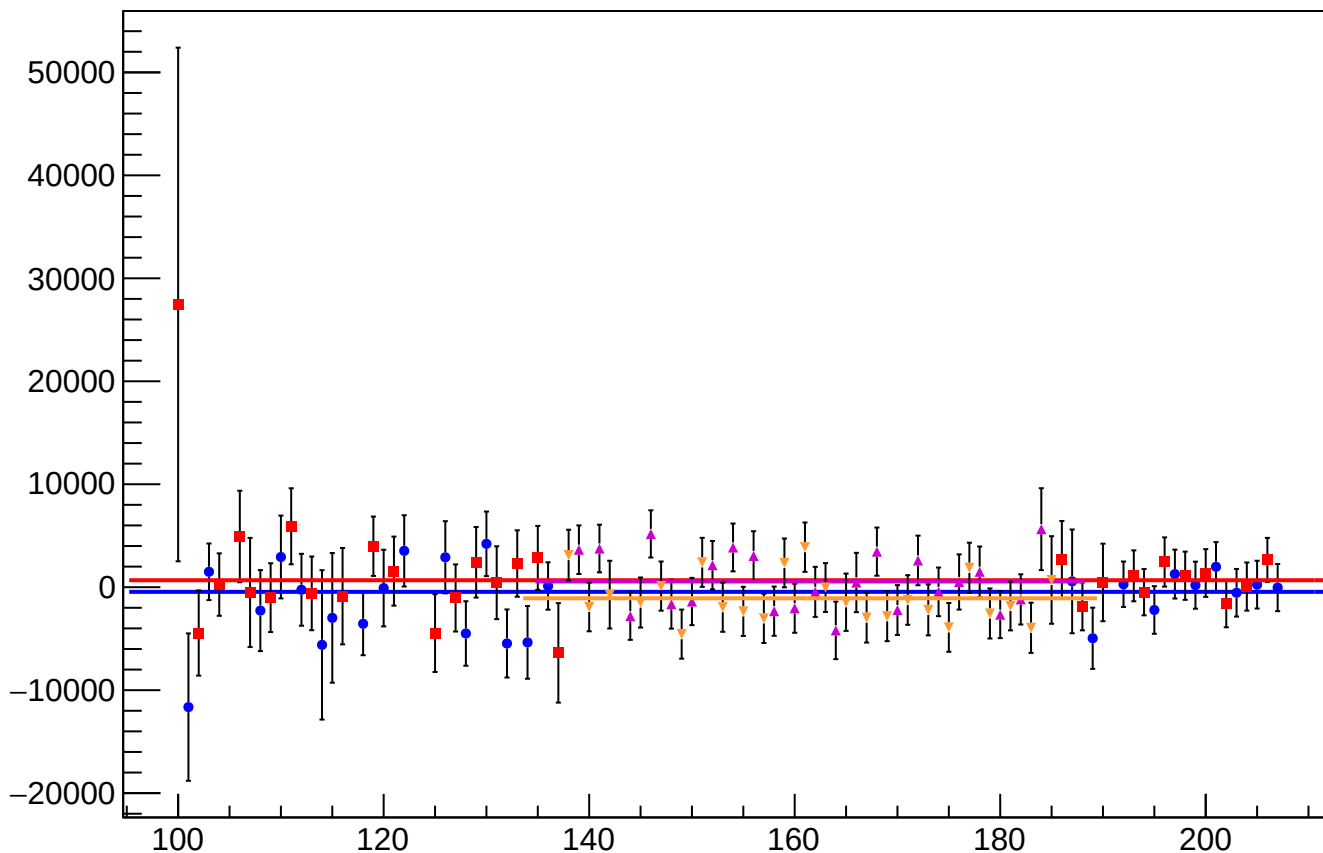
Left In: 130.451 $\pm$ 0.023  $\chi^2$ /NDF: 2679365.4/22

+ sign 136.605 $\pm$ 0.021  $\chi^2$ /NDF: 22616551.1/49

All: 137.450 $\pm$ 0.015  $\chi^2$ /NDF: 45820519.1/10

- sign 138.328 $\pm$ 0.021  $\chi^2$ /NDF: 23200653.9/51

eigen\_cor\_asym\_us\_dd\_at1lr\_dd\_avg\_mean vs Slug



Right In:  $-450.871 \pm 580.764$   $\chi^2/\text{NDF}$ : 20.8/25

Left Out:  $-1072.795 \pm 505.534$   $\chi^2/\text{NDF}$ : 21.6/23

Right Out:  $676.761 \pm 563.636$   $\chi^2/\text{NDF}$ : 17.2/28

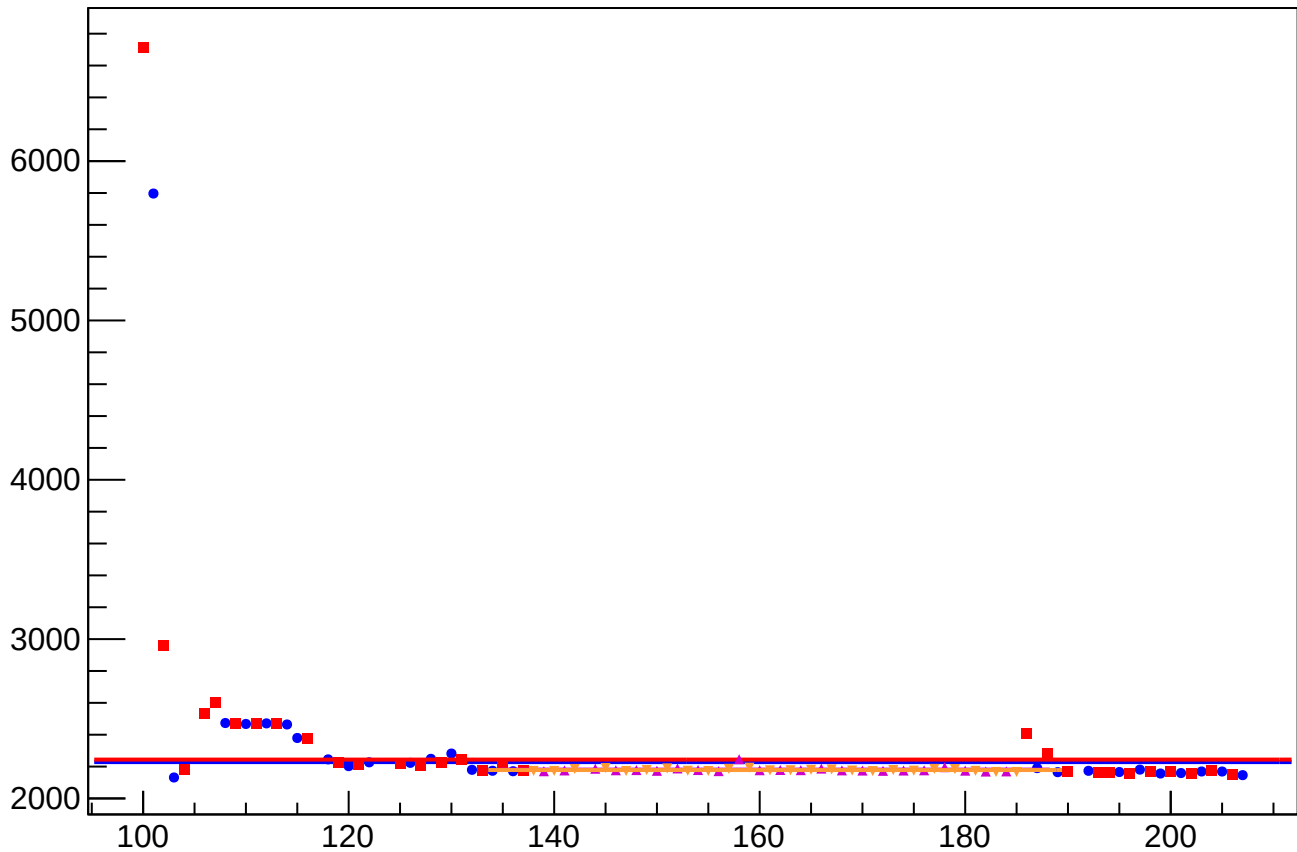
Left In:  $557.079 \pm 509.208$   $\chi^2/\text{NDF}$ : 28.7/22

+ sign  $-804.697 \pm 381.309$   $\chi^2/\text{NDF}$ : 43.0/49

All:  $-90.458 \pm 268.393$   $\chi^2/\text{NDF}$ : 95.9/101

- sign  $610.864 \pm 377.845$   $\chi^2/\text{NDF}$ : 45.9/51

eigen\_cor\_asym\_us\_dd\_at1lr\_dd\_avg\_rms vs Slug



Right In: 2228.080 $\pm$ 0.411  $\chi^2$ /NDF: 543602.0/25

Left Out: 2178.244 $\pm$ 0.357  $\chi^2$ /NDF: 389.1/23

Right Out: 2243.865 $\pm$ 0.399  $\chi^2$ /NDF: 195517.2/28

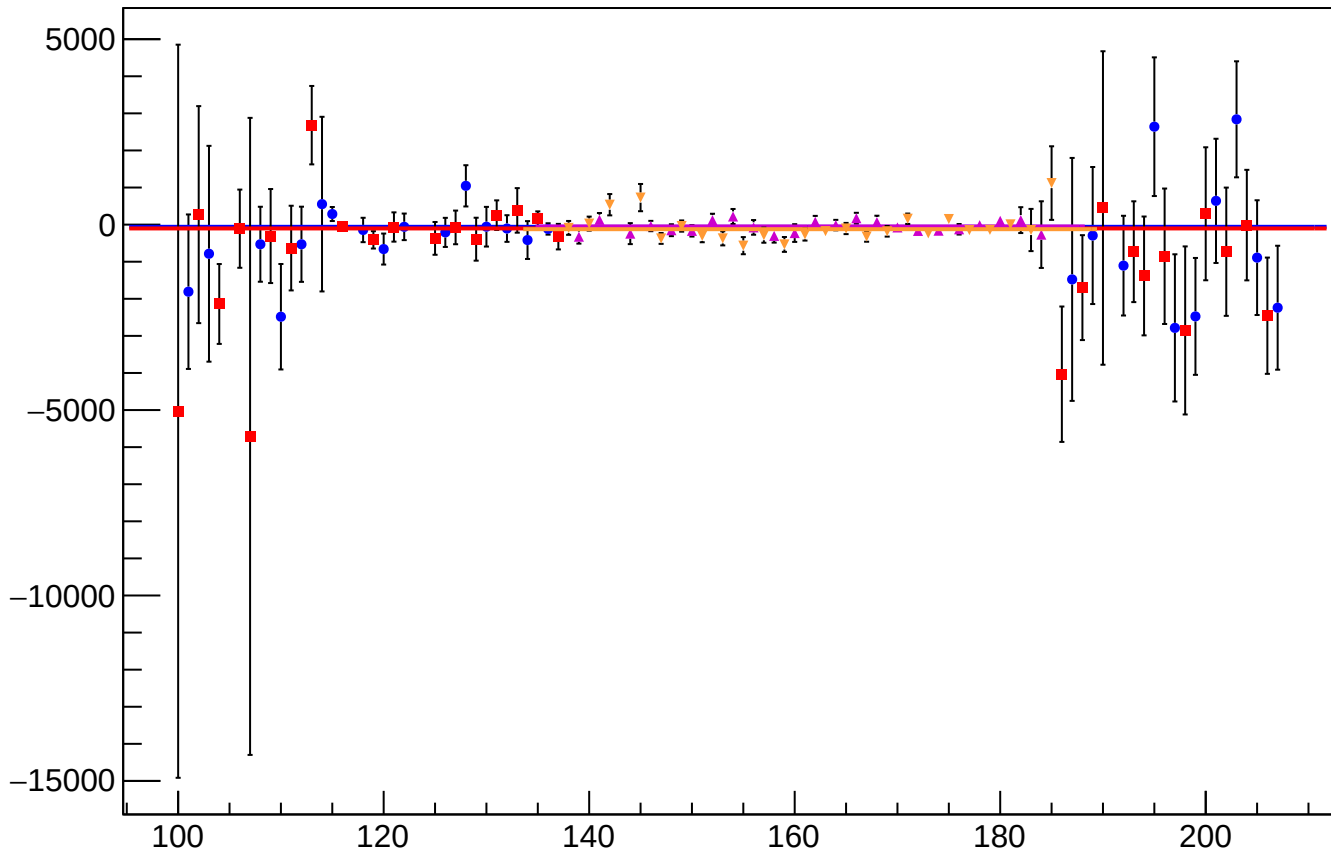
Left In: 2180.919 $\pm$ 0.360  $\chi^2$ /NDF: 1866.2/22

+ sign 2199.727 $\pm$ 0.270  $\chi^2$ /NDF: 552369.6/49

All: 2204.510 $\pm$ 0.190  $\chi^2$ /NDF: 764111.2/103

- sign 2209.207 $\pm$ 0.267  $\chi^2$ /NDF: 211117.9/51

asym\_us\_dd\_at1lr\_dd\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-59.255 \pm 89.660$   $\chi^2/\text{NDF}$ : 27.1/25

Left Out:  $-122.928 \pm 31.408$   $\chi^2/\text{NDF}$ : 43.8/23

Right Out:  $-103.034 \pm 81.286$   $\chi^2/\text{NDF}$ : 28.4/28

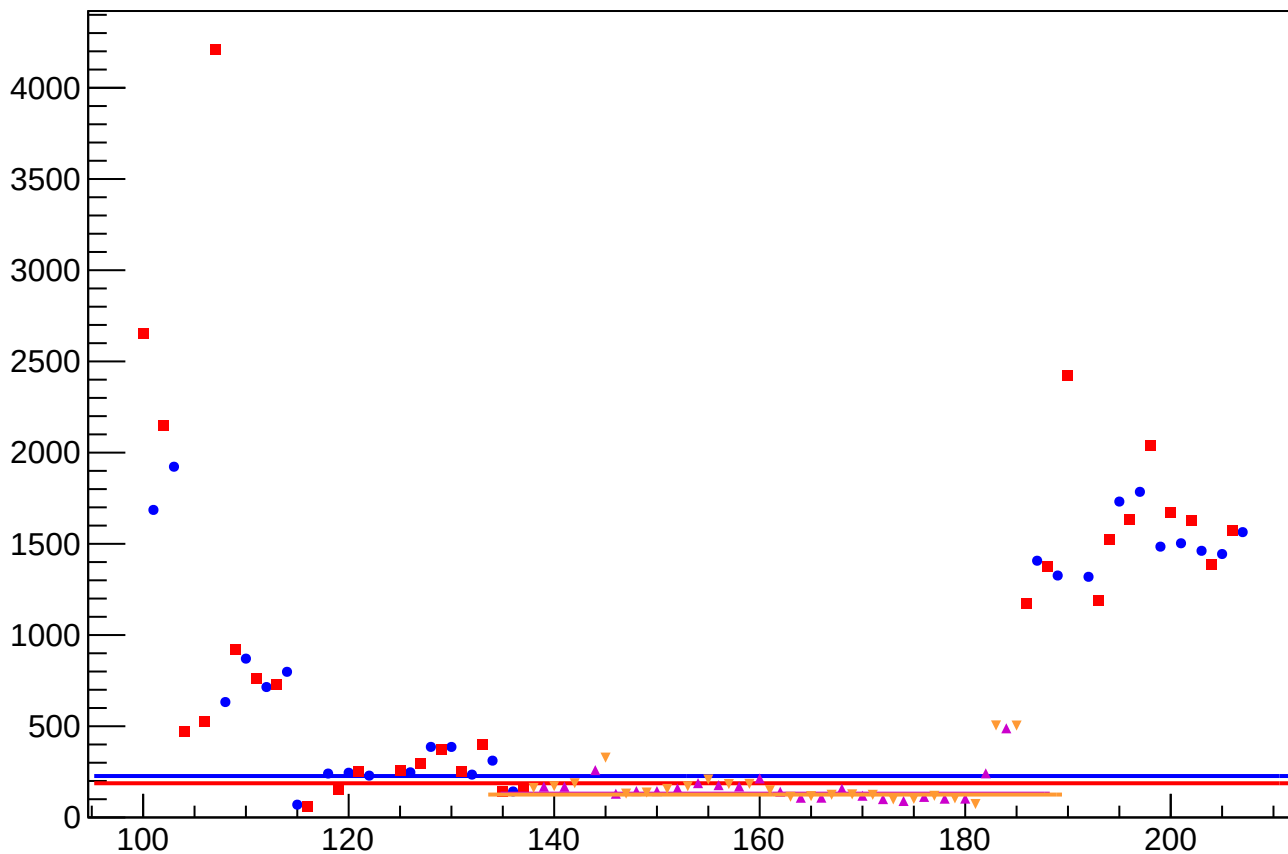
Left In:  $-50.209 \pm 32.548$   $\chi^2/\text{NDF}$ : 18.3/22

+ sign  $-115.969 \pm 29.642$   $\chi^2/\text{NDF}$ : 71.3/49

All:  $-87.299 \pm 21.160$   $\chi^2/\text{NDF}$ : 120.3/101

- sign  $-57.509 \pm 30.216$   $\chi^2/\text{NDF}$ : 47.0/51

asym\_us\_dd\_at1lr\_dd\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 227.081 $\pm$ 0.063  $\chi^2$ /NDF: 16386508.6/25

Left Out: 125.503 $\pm$ 0.022  $\chi^2$ /NDF: 3943570.9/23

Right Out: 187.457 $\pm$ 0.057  $\chi^2$ /NDF: 19673557.0/28

Left In: 130.451 $\pm$ 0.023  $\chi^2$ /NDF: 2679365.4/22

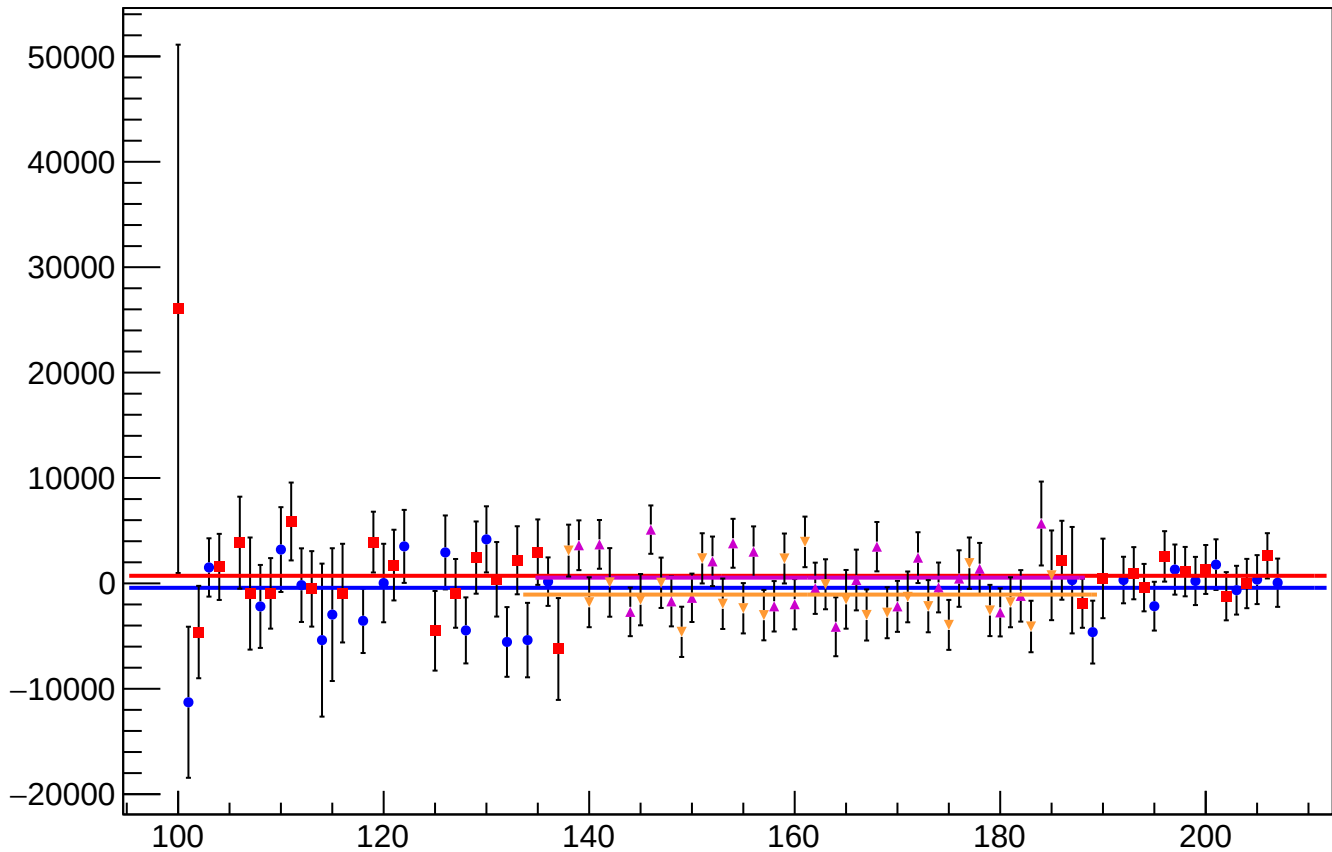
+ sign 136.605 $\pm$ 0.021  $\chi^2$ /NDF: 22616551.1/49

All: 137.450 $\pm$ 0.015  $\chi^2$ /NDF: 45820519.1/10

- sign 138.328 $\pm$ 0.021  $\chi^2$ /NDF: 23200653.9/51



# dit\_asym\_us\_dd\_at1lr\_dd\_avg\_mean vs Slug



Right In:  $-420.823 \pm 581.446$   $\chi^2/\text{NDF}$ : 20.3/25

Left Out:  $-1062.372 \pm 505.627$   $\chi^2/\text{NDF}$ : 21.9/23

Right Out:  $720.110 \pm 565.300$   $\chi^2/\text{NDF}$ : 16.1/28

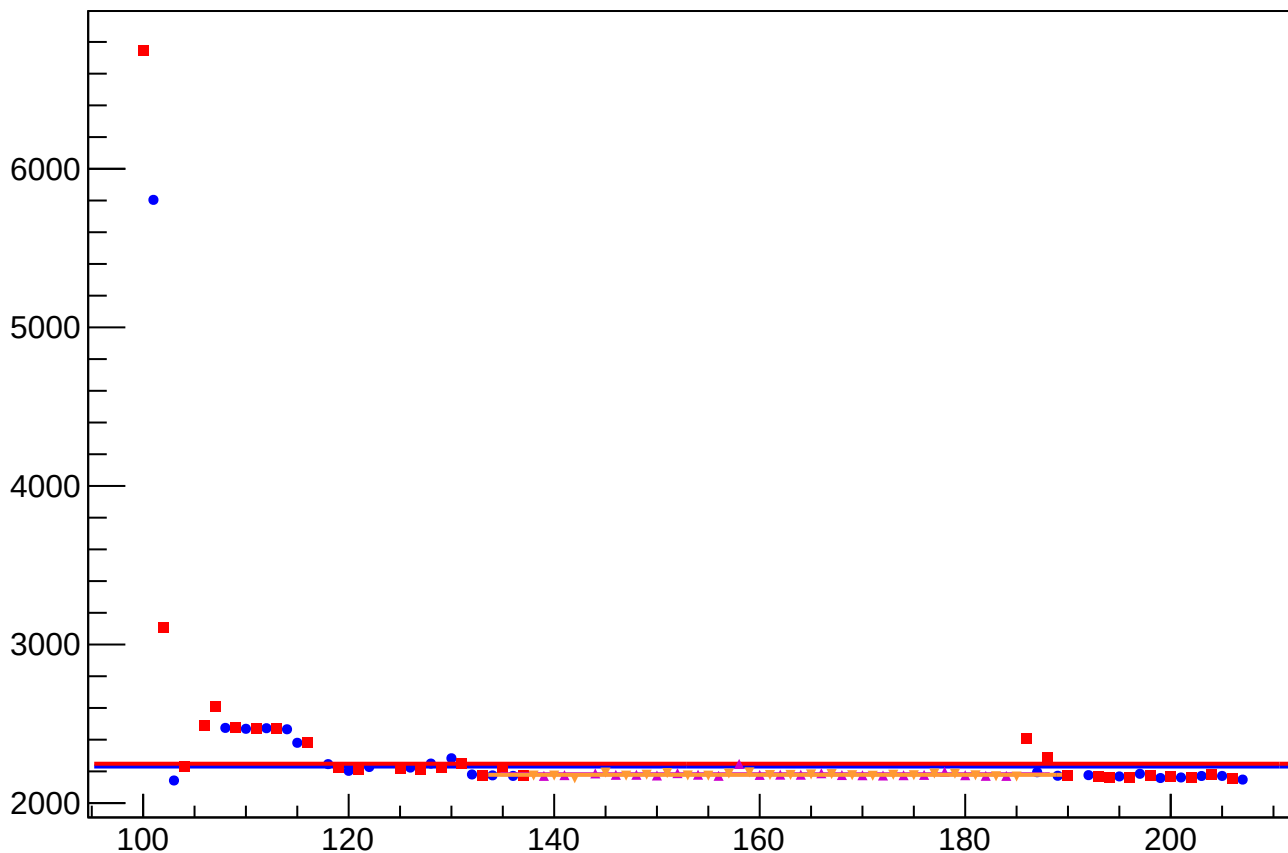
Left In:  $544.260 \pm 509.433$   $\chi^2/\text{NDF}$ : 27.9/22

+ sign  $-786.127 \pm 381.542$   $\chi^2/\text{NDF}$ : 42.8/49

All:  $-75.774 \pm 268.687$   $\chi^2/\text{NDF}$ : 93.8/101

- sign  $623.069 \pm 378.438$   $\chi^2/\text{NDF}$ : 44.1/51

# dit\_asym\_us\_dd\_at1lr\_dd\_avg\_rms vs Slug



Right In: 2230.594 $\pm$ 0.411  $\chi^2$ /NDF: 542875.5/25

Left Out: 2178.503 $\pm$ 0.358  $\chi^2$ /NDF: 456.1/23

Right Out: 2248.333 $\pm$ 0.400  $\chi^2$ /NDF: 210858.4/28

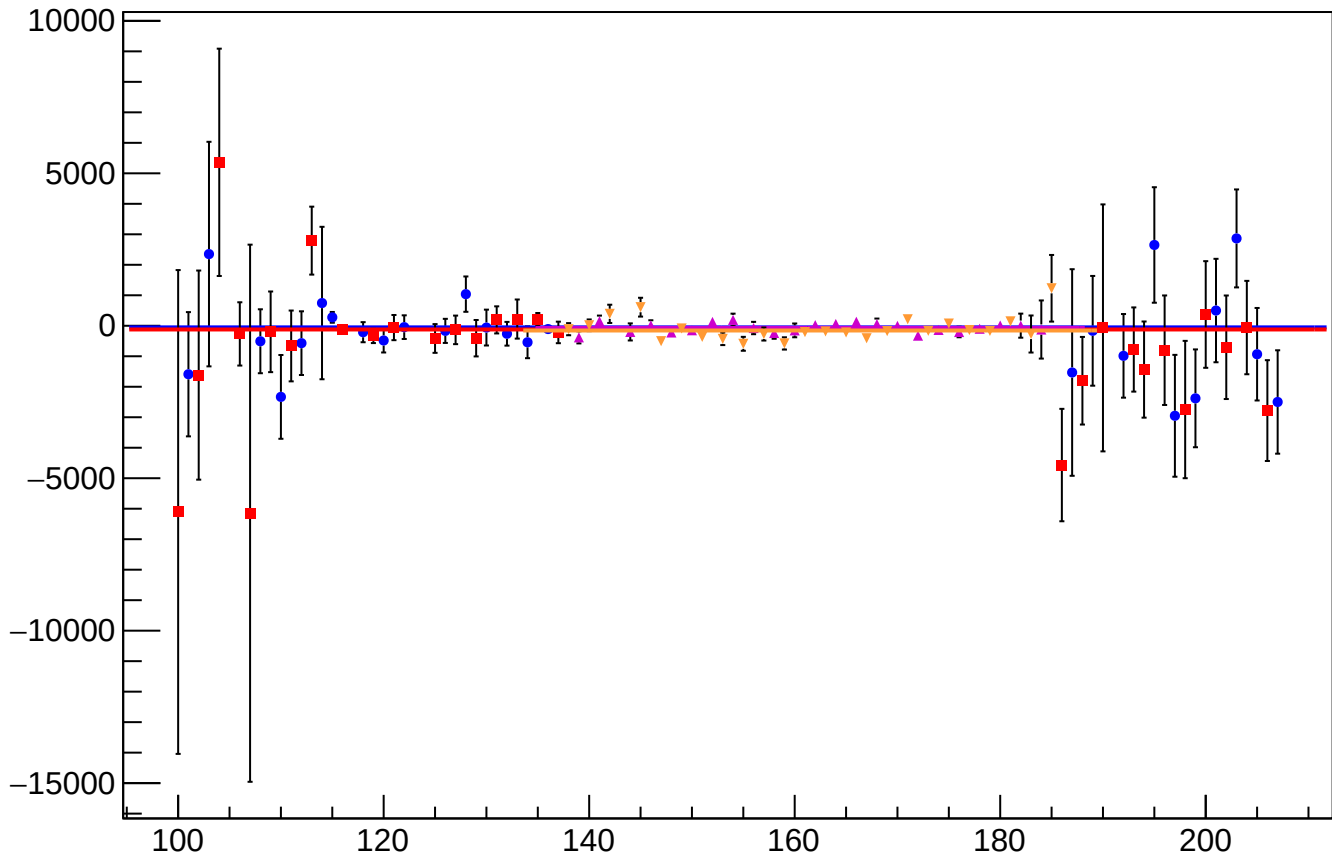
Left In: 2181.882 $\pm$ 0.360  $\chi^2$ /NDF: 1838.2/22

+ sign 2200.933 $\pm$ 0.270  $\chi^2$ /NDF: 552471.7/49

All: 2206.342 $\pm$ 0.190  $\chi^2$ /NDF: 781216.1/103

- sign 2211.663 $\pm$ 0.268  $\chi^2$ /NDF: 227947.1/51

asym\_us\_dd\_at1lr\_dd\_avg\_dit\_correction\_mean vs Slug



Right In:  $-52.493 \pm 91.110$   $\chi^2/\text{NDF}$ : 26.8/25

Left Out:  $-154.725 \pm 34.061$   $\chi^2/\text{NDF}$ : 47.3/23

Right Out:  $-121.291 \pm 84.919$   $\chi^2/\text{NDF}$ : 27.5/28

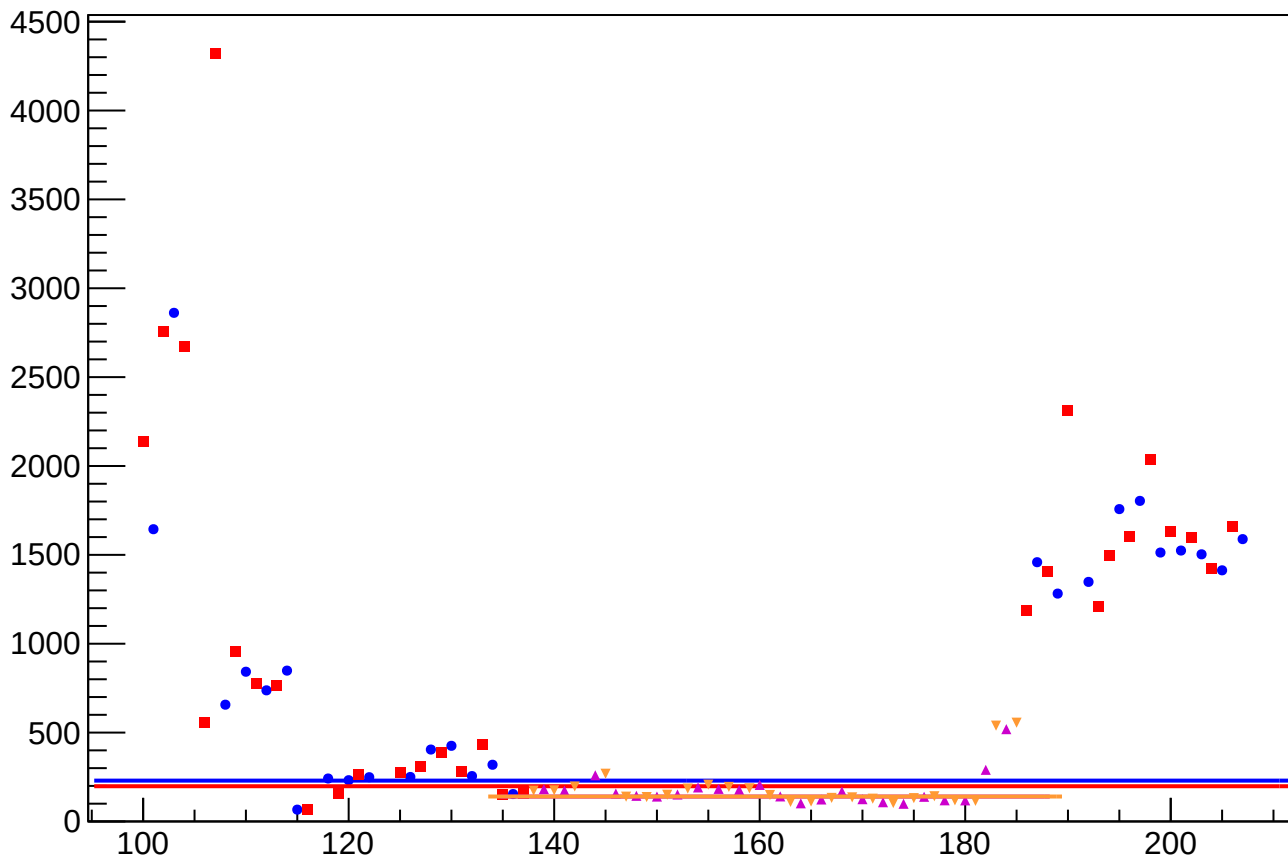
Left In:  $-70.142 \pm 34.204$   $\chi^2/\text{NDF}$ : 18.9/22

+ sign  $-142.189 \pm 31.904$   $\chi^2/\text{NDF}$ : 75.2/49

All:  $-109.555 \pm 22.497$   $\chi^2/\text{NDF}$ : 124.1/101

- sign  $-77.281 \pm 31.727$   $\chi^2/\text{NDF}$ : 46.8/51

asym\_us\_dd\_at1lr\_dd\_avg\_dit\_correction\_rms vs Slug



Right In: 229.761 $\pm$ 0.064  $\chi^2$ /NDF: 16949959.1/25

Left Out: 140.319 $\pm$ 0.024  $\chi^2$ /NDF: 2760284.0/23

Right Out: 198.184 $\pm$ 0.060  $\chi^2$ /NDF: 20487936.1/28

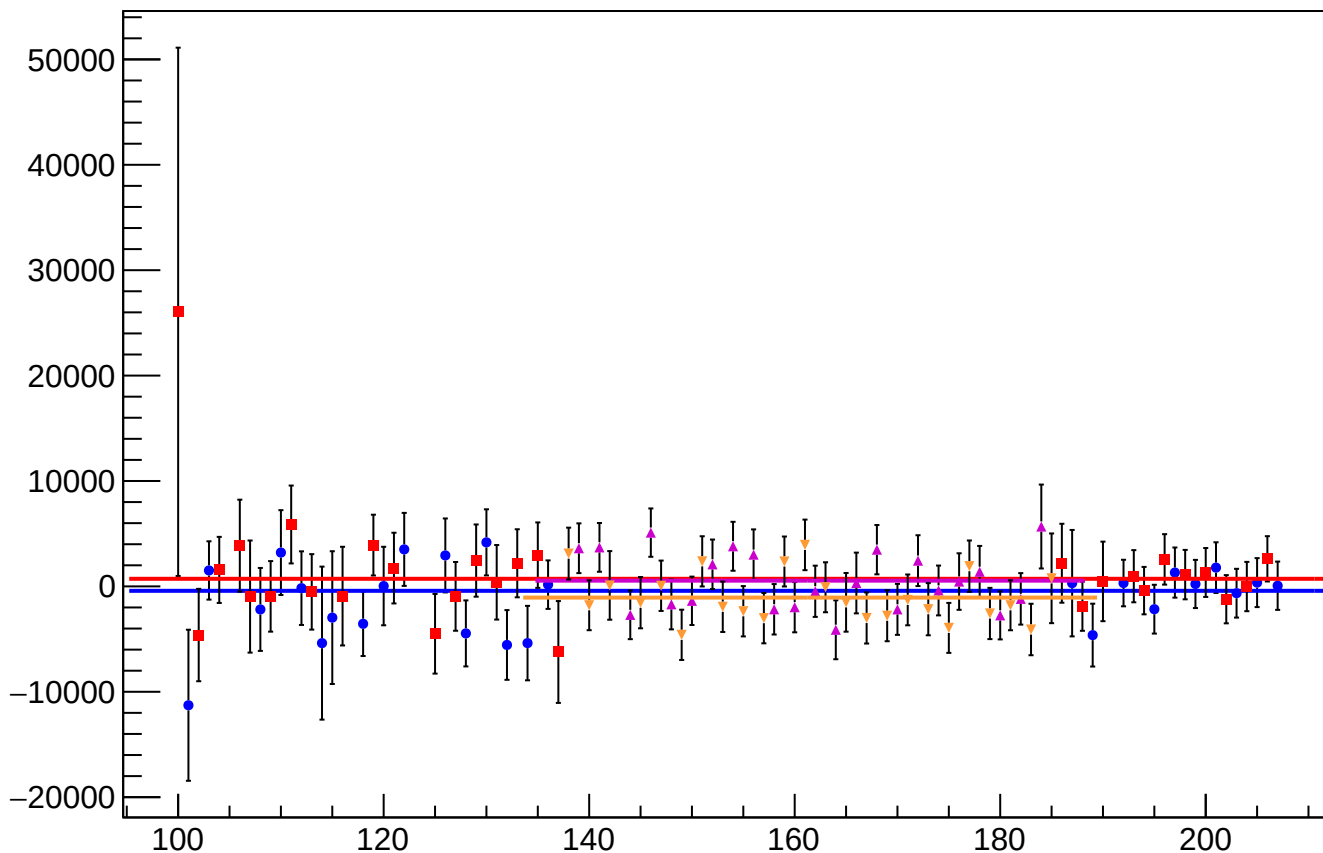
Left In: 139.979 $\pm$ 0.024  $\chi^2$ /NDF: 2412455.4/22

+ sign 151.286 $\pm$ 0.023  $\chi^2$ /NDF: 21401335.5/49

All: 149.686 $\pm$ 0.016  $\chi^2$ /NDF: 45120172.7/10

- sign 148.103 $\pm$ 0.022  $\chi^2$ /NDF: 23708831.5/51

eigen\_dit\_asym\_us\_dd\_at1lr\_dd\_avg\_mean vs Slug



Right In:  $-420.825 \pm 581.446$   $\chi^2/\text{NDF}$ : 20.3/25

Left Out:  $-1062.373 \pm 505.627$   $\chi^2/\text{NDF}$ : 21.9/23

Right Out:  $720.108 \pm 565.300$   $\chi^2/\text{NDF}$ : 16.1/28

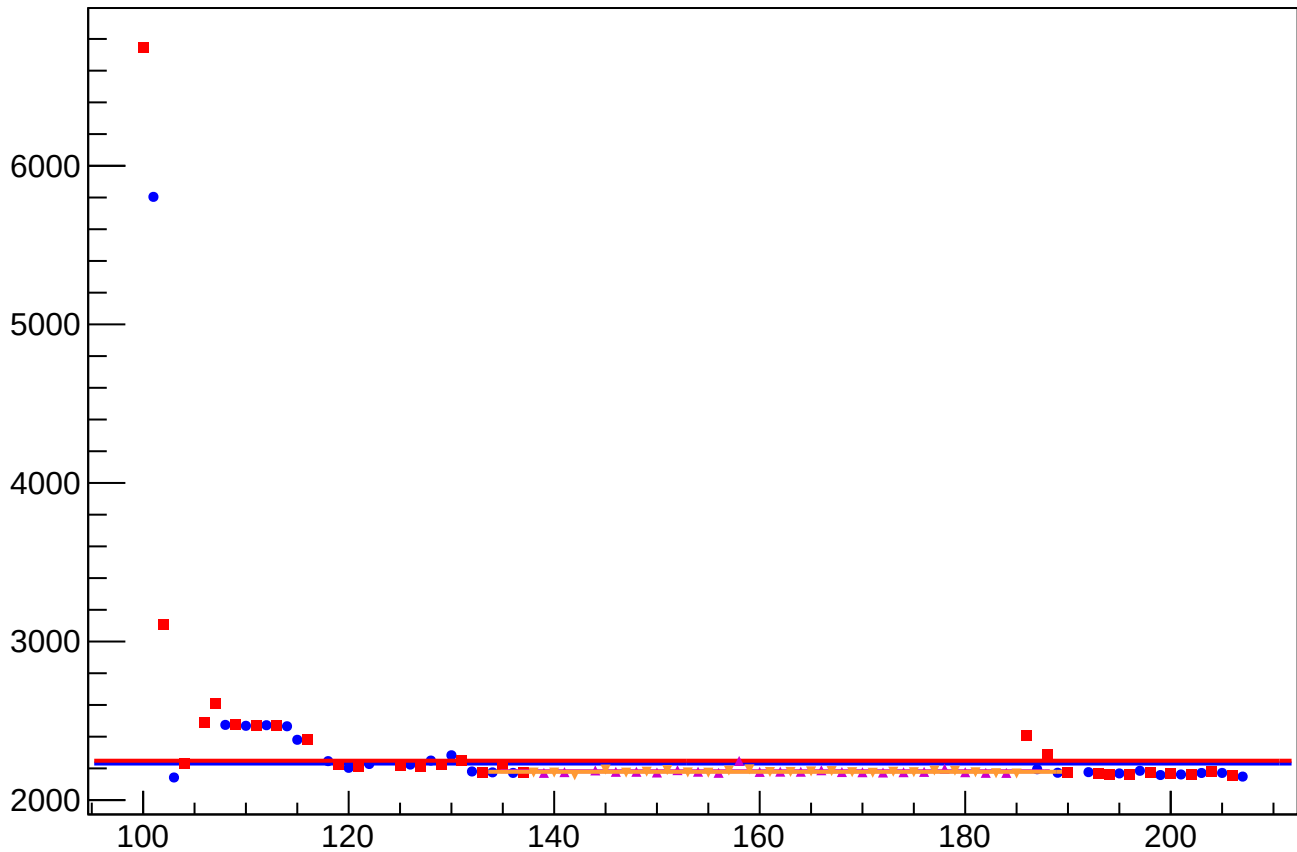
Left In:  $544.259 \pm 509.433$   $\chi^2/\text{NDF}$ : 27.9/22

+ sign  $-786.128 \pm 381.542$   $\chi^2/\text{NDF}$ : 42.8/49

All:  $-75.775 \pm 268.687$   $\chi^2/\text{NDF}$ : 93.8/101

- sign  $623.067 \pm 378.438$   $\chi^2/\text{NDF}$ : 44.1/51

eigen\_dit\_asym\_us\_dd\_at1lr\_dd\_avg\_rms vs Slug



Right In: 2230.594 $\pm$ 0.411  $\chi^2$ /NDF: 542875.5/25

Left Out: 2178.503 $\pm$ 0.358  $\chi^2$ /NDF: 456.1/23

Right Out: 2248.333 $\pm$ 0.400  $\chi^2$ /NDF: 210858.3/28

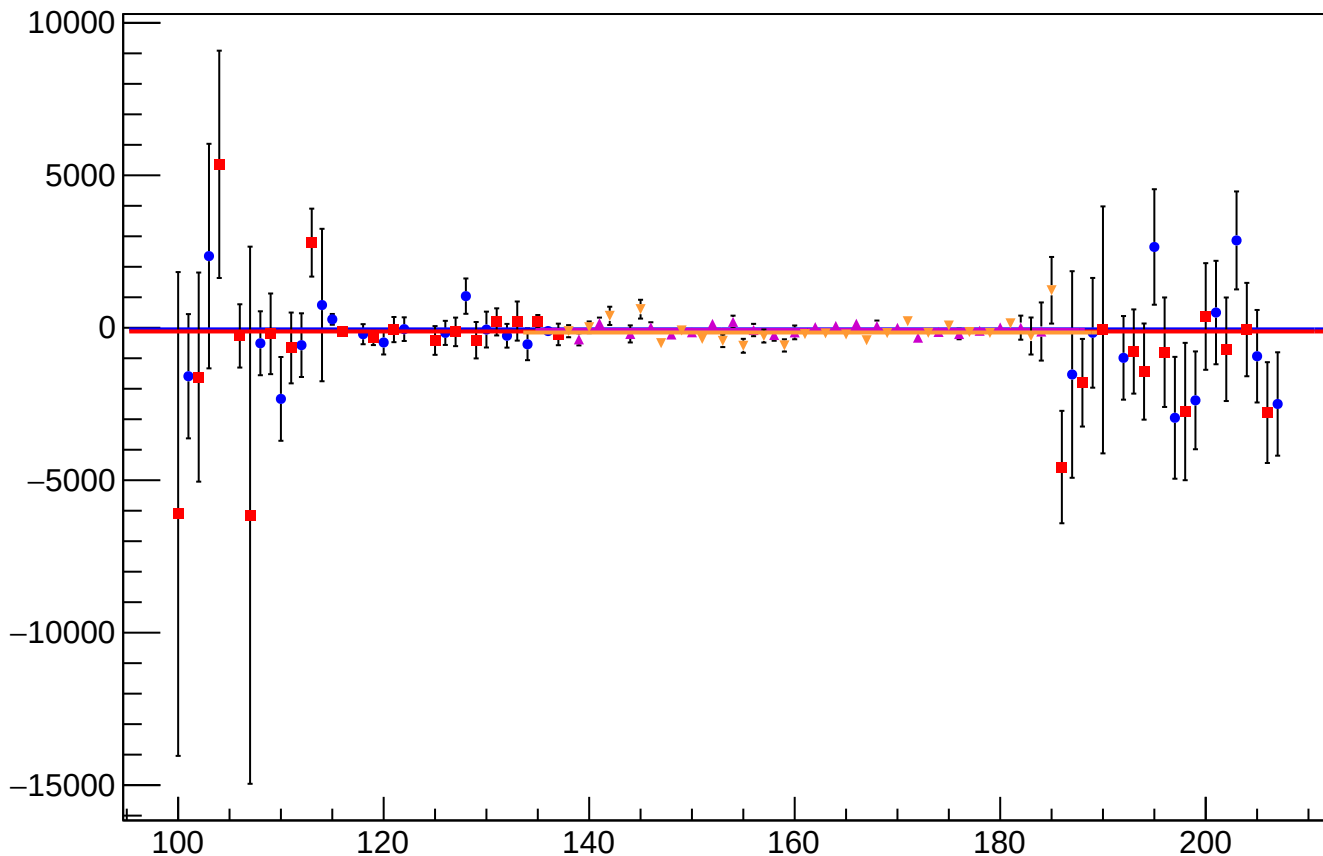
Left In: 2181.882 $\pm$ 0.360  $\chi^2$ /NDF: 1838.2/22

+ sign 2200.933 $\pm$ 0.270  $\chi^2$ /NDF: 552471.7/49

All: 2206.342 $\pm$ 0.190  $\chi^2$ /NDF: 781216.0/103

- sign 2211.663 $\pm$ 0.268  $\chi^2$ /NDF: 227947.0/51

asym\_us\_dd\_at1lr\_dd\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-52.489 \pm 91.109$   $\chi^2/\text{NDF}$ : 26.8/25

Left Out:  $-154.726 \pm 34.061$   $\chi^2/\text{NDF}$ : 47.3/23

Right Out:  $-121.291 \pm 84.918$   $\chi^2/\text{NDF}$ : 27.5/28

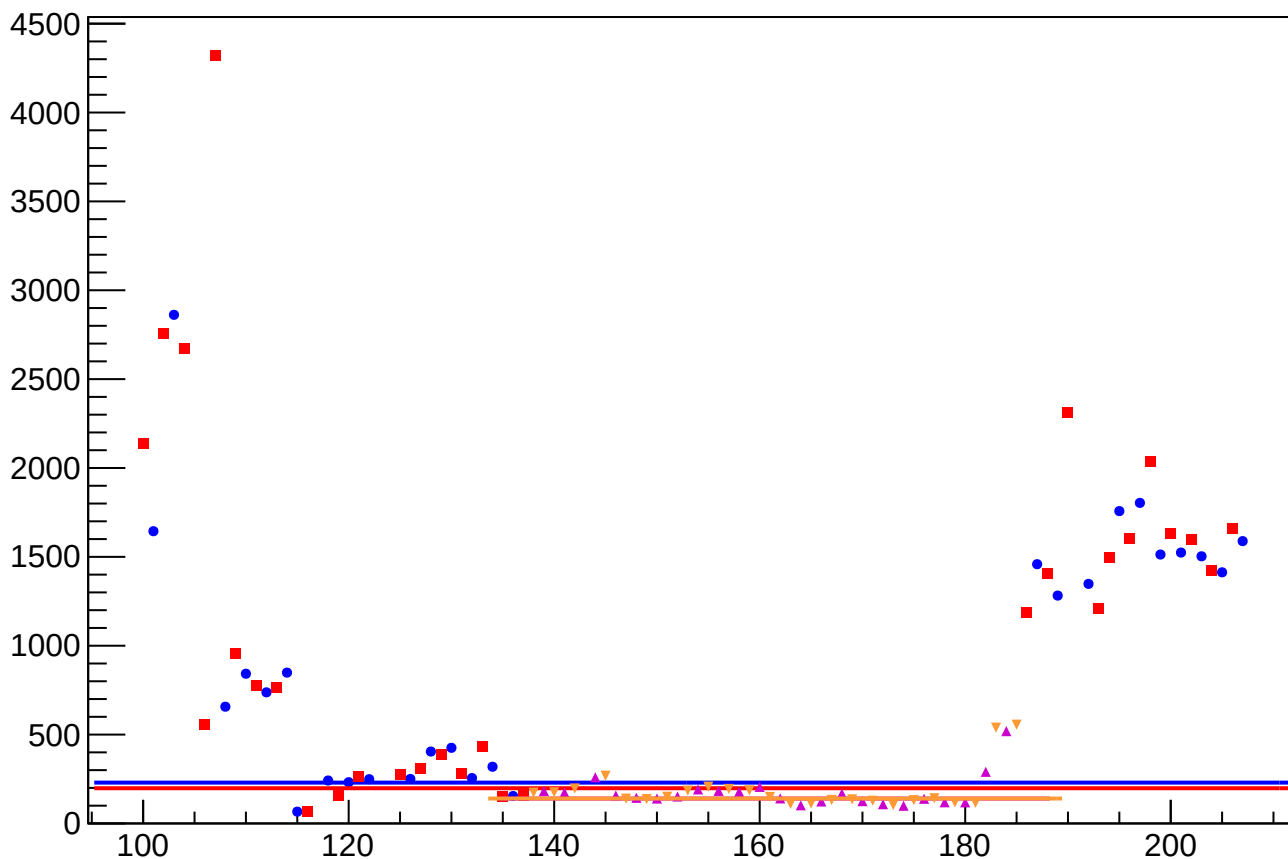
Left In:  $-70.141 \pm 34.204$   $\chi^2/\text{NDF}$ : 18.9/22

+ sign  $-142.190 \pm 31.904$   $\chi^2/\text{NDF}$ : 75.2/49

All:  $-109.555 \pm 22.497$   $\chi^2/\text{NDF}$ : 124.1/101

- sign  $-77.281 \pm 31.727$   $\chi^2/\text{NDF}$ : 46.8/51

asym\_us\_dd\_at1lr\_dd\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 229.758 $\pm$ 0.064  $\chi^2$ /NDF: 16950048.3/25

Left Out: 140.319 $\pm$ 0.024  $\chi^2$ /NDF: 2760280.2/23

Right Out: 198.181 $\pm$ 0.060  $\chi^2$ /NDF: 20488051.0/28

Left In: 139.979 $\pm$ 0.024  $\chi^2$ /NDF: 2412509.5/22

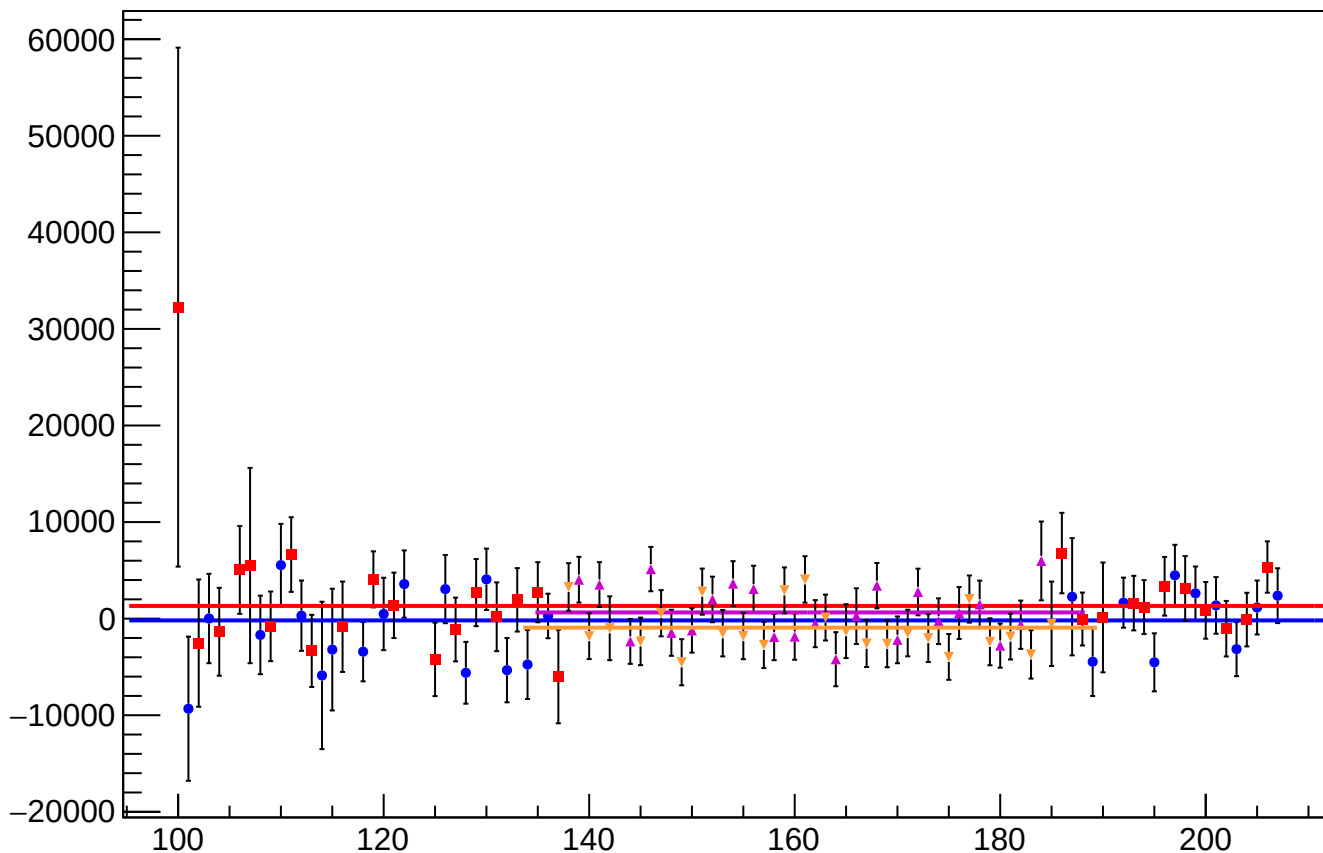
+ sign 151.286 $\pm$ 0.023  $\chi^2$ /NDF: 21401321.6/49

All: 149.686 $\pm$ 0.016  $\chi^2$ /NDF: 45120256.4/10

- sign 148.103 $\pm$ 0.022  $\chi^2$ /NDF: 23708927.3/51



# asym\_us\_dd\_at1lr\_dd\_avg\_mean vs Slug



Right In:  $-181.774 \pm 661.880$   $\chi^2/\text{NDF}$ : 26.0/25

Left Out:  $-932.002 \pm 507.717$   $\chi^2/\text{NDF}$ : 22.4/23

Right Out:  $1318.423 \pm 653.574$   $\chi^2/\text{NDF}$ : 19.2/28

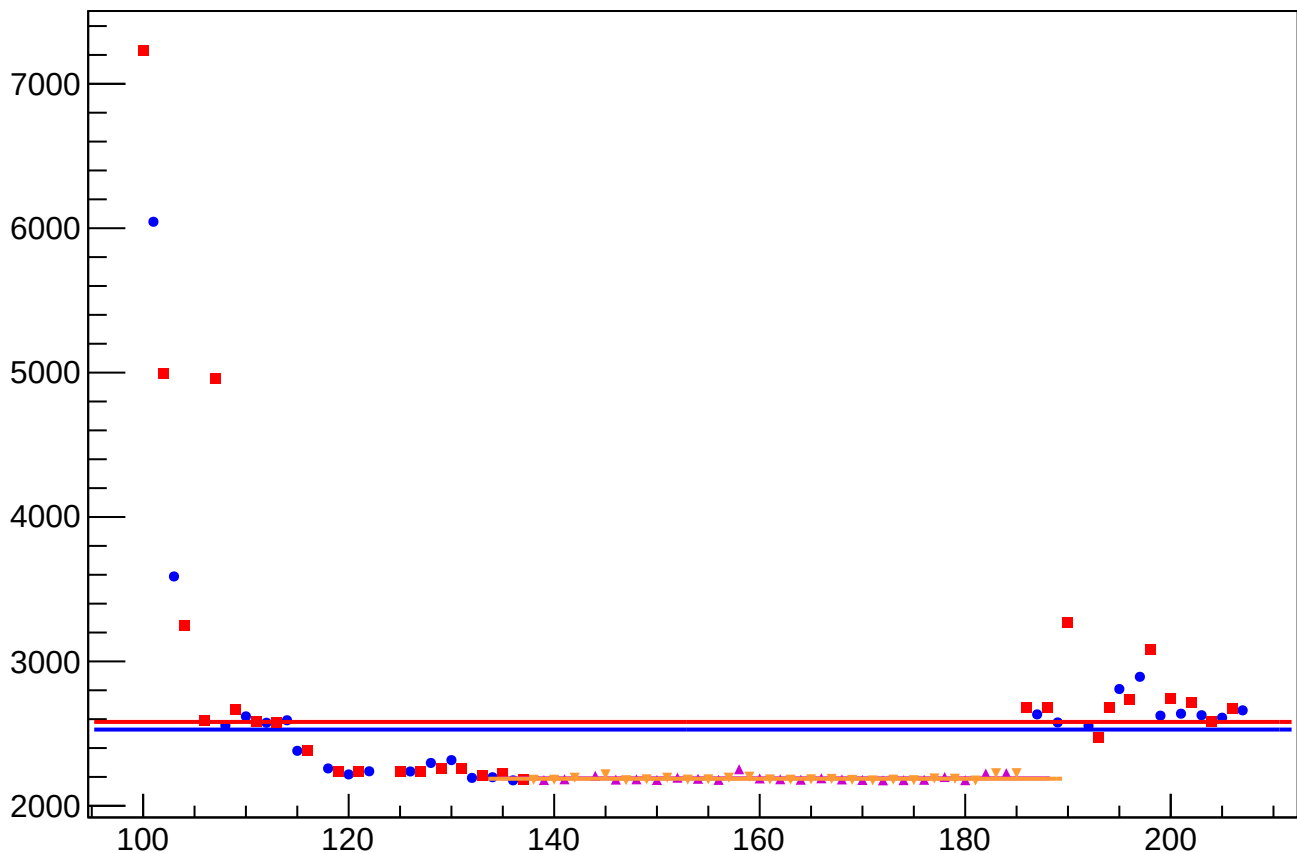
Left In:  $642.773 \pm 511.372$   $\chi^2/\text{NDF}$ : 27.0/22

+ sign  $-654.086 \pm 402.846$   $\chi^2/\text{NDF}$ : 49.2/49

All:  $122.821 \pm 284.819$   $\chi^2/\text{NDF}$ : 103.5/101

- sign  $899.334 \pm 402.744$   $\chi^2/\text{NDF}$ : 46.9/51

# asym\_us\_dd\_at1lr\_dd\_avg\_rms vs Slug



Right In: 2527.999+/-0.468  $\chi^2/\text{NDF}$ : 770530.8/25

Left Out: 2187.620+/-0.359  $\chi^2/\text{NDF}$ :1342.1/23

Right Out: 2580.869+/-0.462  $\chi^2/\text{NDF}$ : 774376.8/28

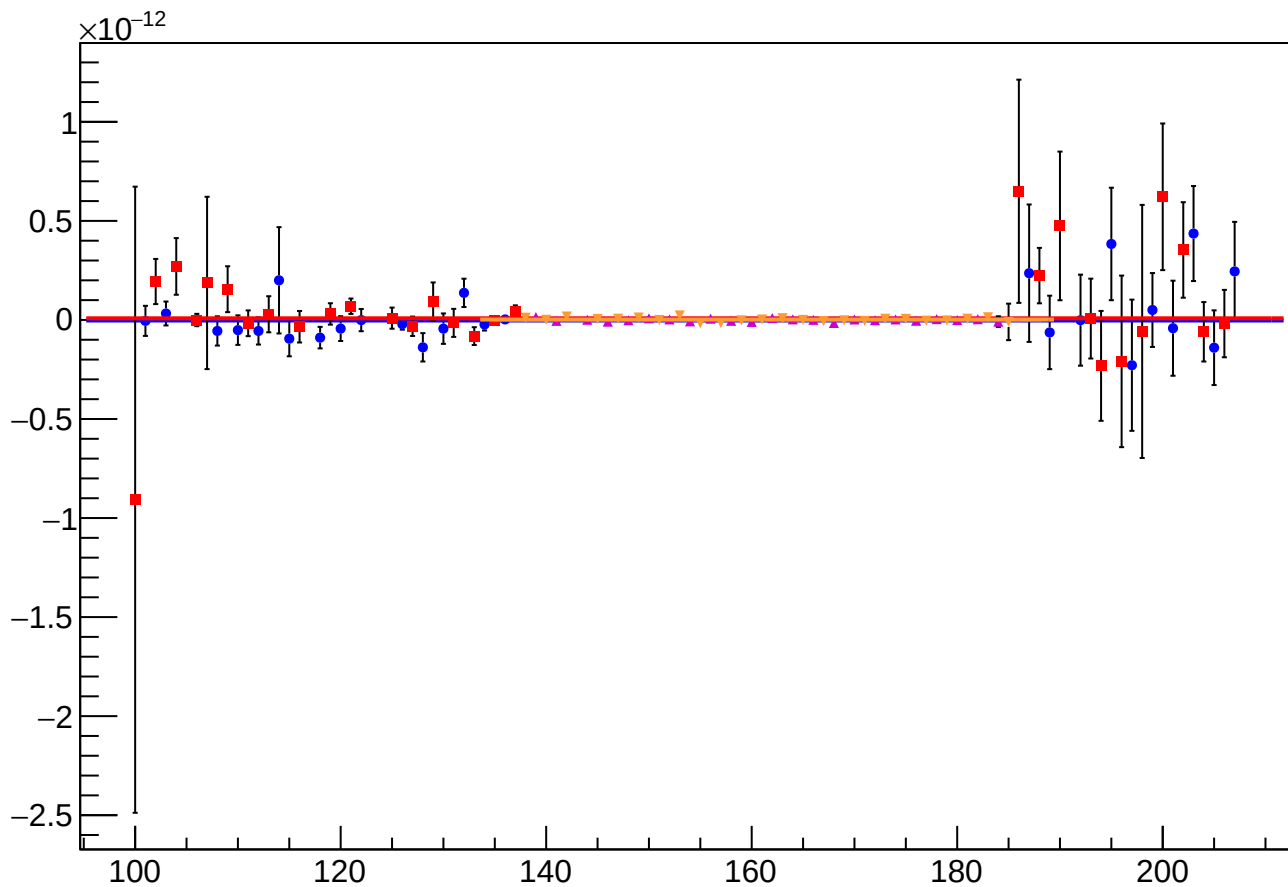
Left In: 2190.163+/-0.362  $\chi^2/\text{NDF}$ :2542.8/22

+ sign 2313.710+/-0.285  $\chi^2/\text{NDF}$ : 1104863.6/49

All: 2326.121+/-0.201  $\chi^2/\text{NDF}$ : 2328907.7/10

- sign 2338.524+/-0.285  $\chi^2/\text{NDF}$ : 1220249.0/51

asym\_us\_dd\_at1lr\_dd\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 23.4/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 19.4/23

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 30.2/28

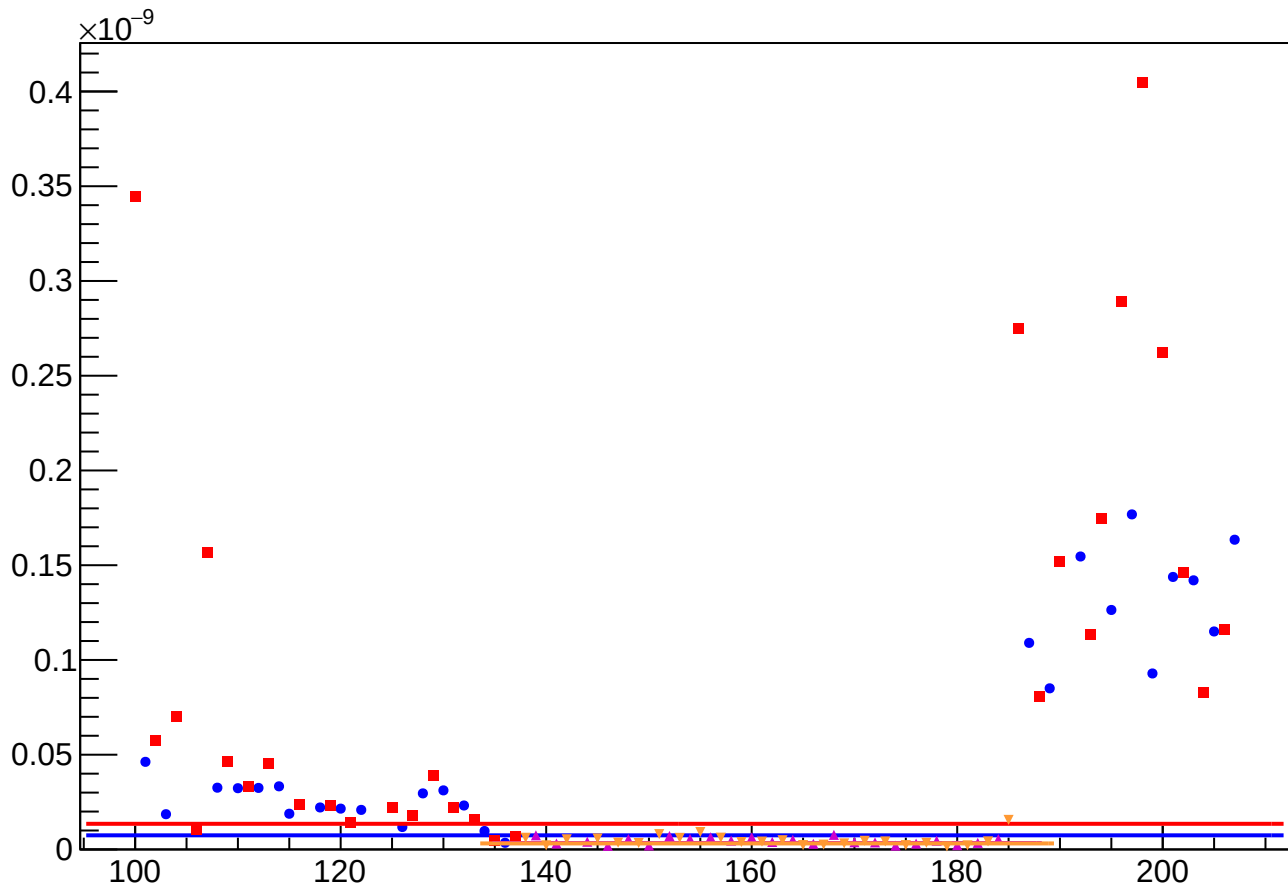
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 13.3/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 43.4/49

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 87.9/101

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 44.2/51

asym\_us\_dd\_at1lr\_dd\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 8233552.1/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2065501.9/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 9347056.5/28

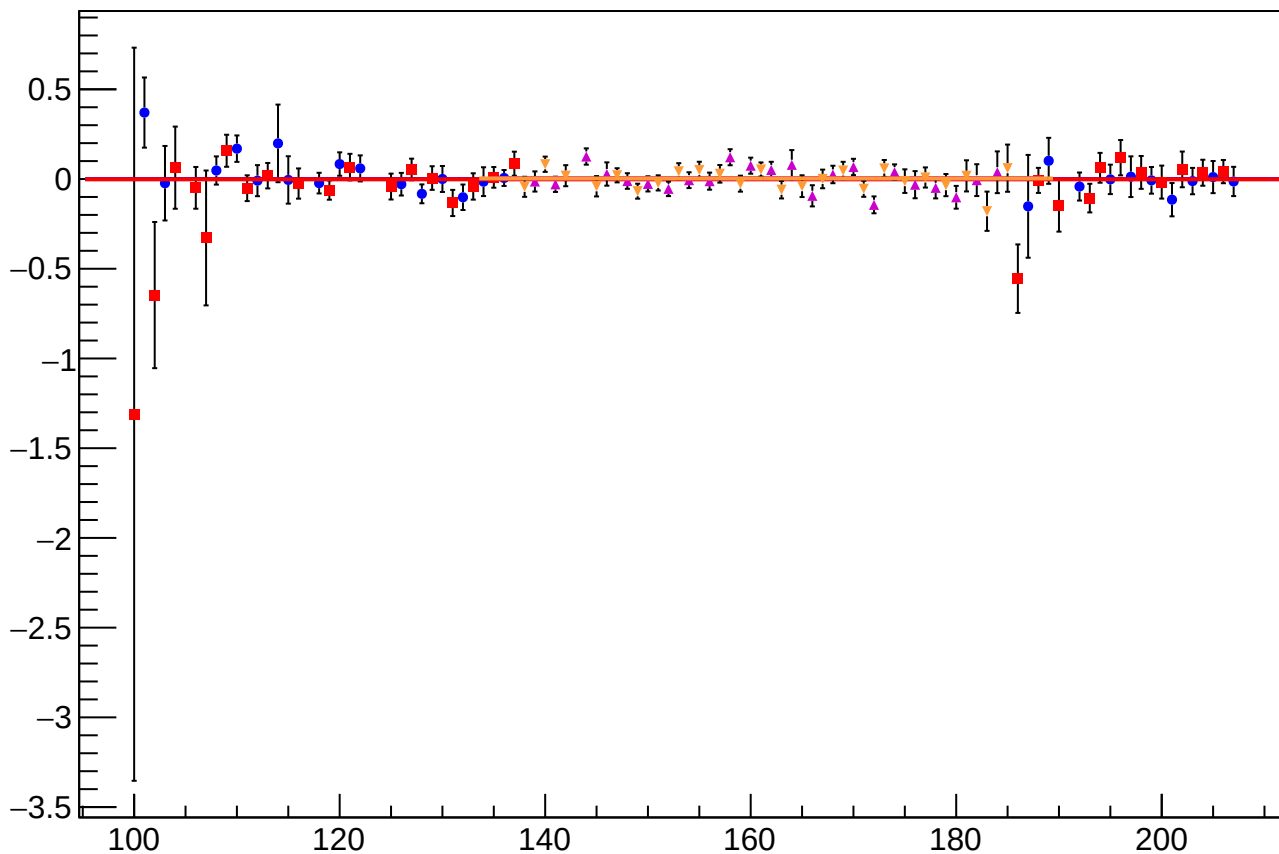
Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1703481.0/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 11178643.3/49

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 24399025.2/101

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 13190850.9/51

asym\_us\_dd\_at1lr\_dd\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.015$   $\chi^2/\text{NDF}: 20.2/25$

Left Out:  $0.003 \pm 0.010$   $\chi^2/\text{NDF}: 21.8/23$

Right Out:  $-0.001 \pm 0.015$   $\chi^2/\text{NDF}: 30.7/28$

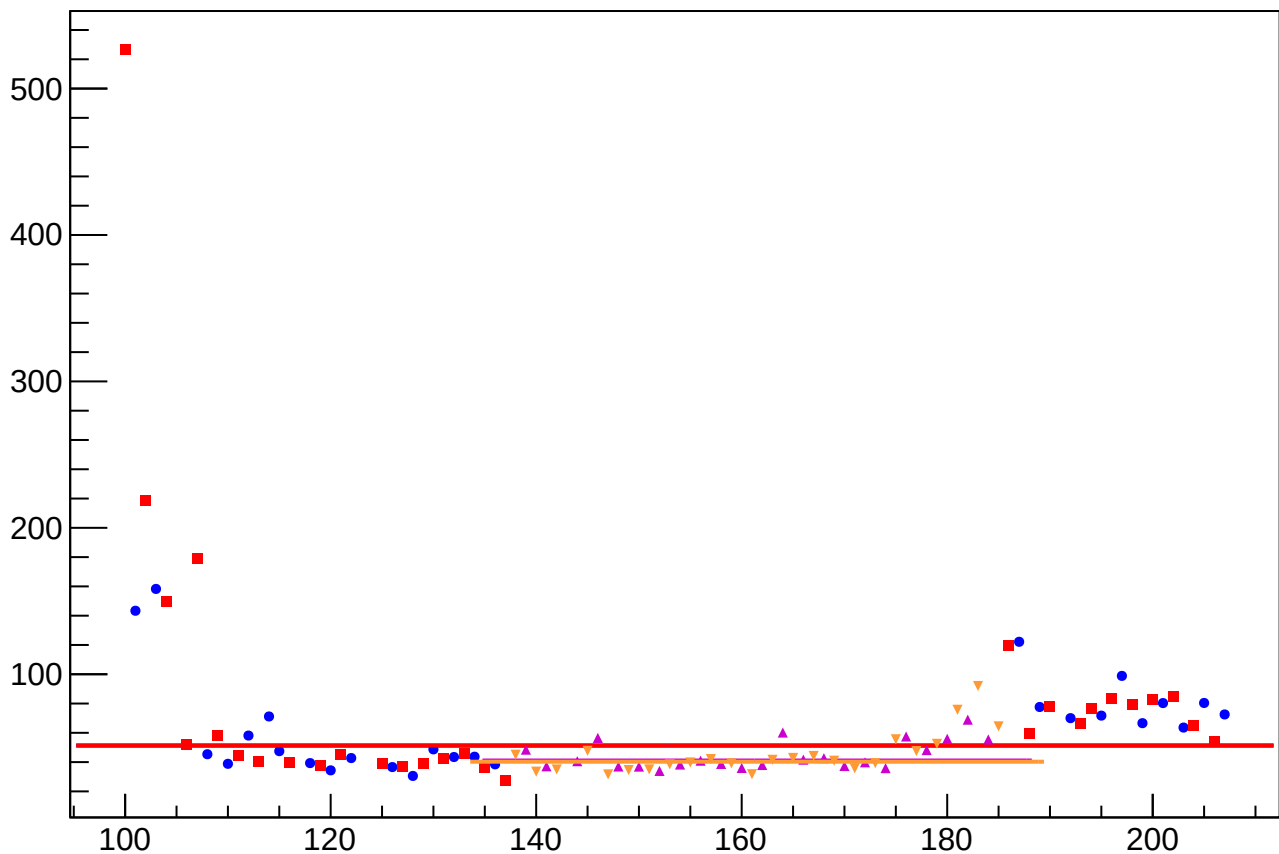
Left In:  $0.005 \pm 0.011$   $\chi^2/\text{NDF}: 41.4/22$

+ sign  $0.002 \pm 0.009$   $\chi^2/\text{NDF}: 42.0/49$

All:  $0.003 \pm 0.006$   $\chi^2/\text{NDF}: 114.3/101$

- sign  $0.003 \pm 0.009$   $\chi^2/\text{NDF}: 72.3/51$

asym\_us\_dd\_at1lr\_dd\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 51.329 $\pm$ 0.011  $\chi^2$ /NDF: 3436472.7/25

Left Out: 40.277 $\pm$ 0.007  $\chi^2$ /NDF: 1489065.3/23

Right Out: 51.302 $\pm$ 0.011  $\chi^2$ /NDF: 3522572.6/28

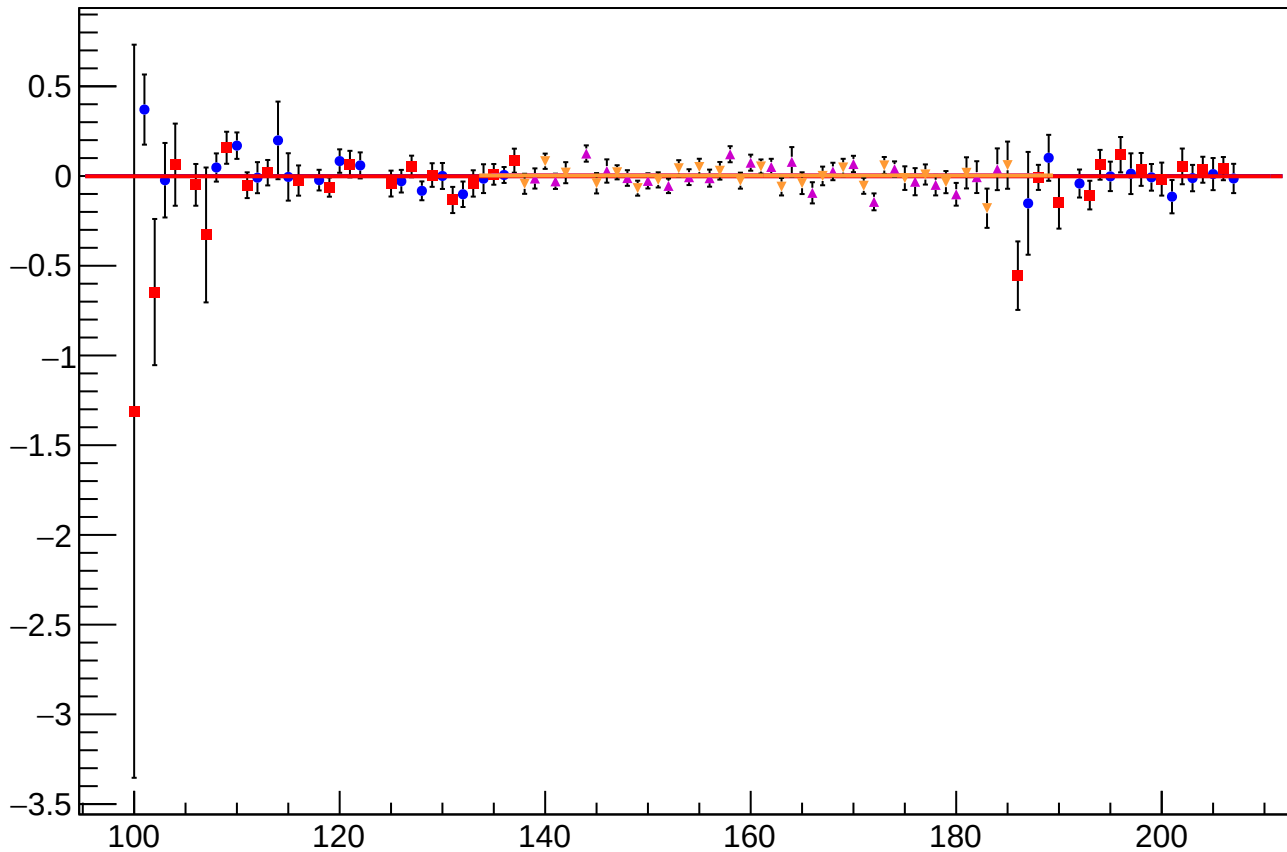
Left In: 41.082 $\pm$ 0.007  $\chi^2$ /NDF: 926843.9/22

+ sign 43.727 $\pm$ 0.006  $\chi^2$ /NDF: 5634756.2/49

All: 44.071 $\pm$ 0.004  $\chi^2$ /NDF: 10702221.1/100

- sign 44.420 $\pm$ 0.006  $\chi^2$ /NDF: 5061021.2/51

asym\_us\_dd\_at1lr\_dd\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.015$   $\chi^2/\text{NDF}$ : 20.2/25

Left Out:  $0.003 \pm 0.010$   $\chi^2/\text{NDF}$ : 21.8/23

Right Out:  $-0.001 \pm 0.015$   $\chi^2/\text{NDF}$ : 30.7/28

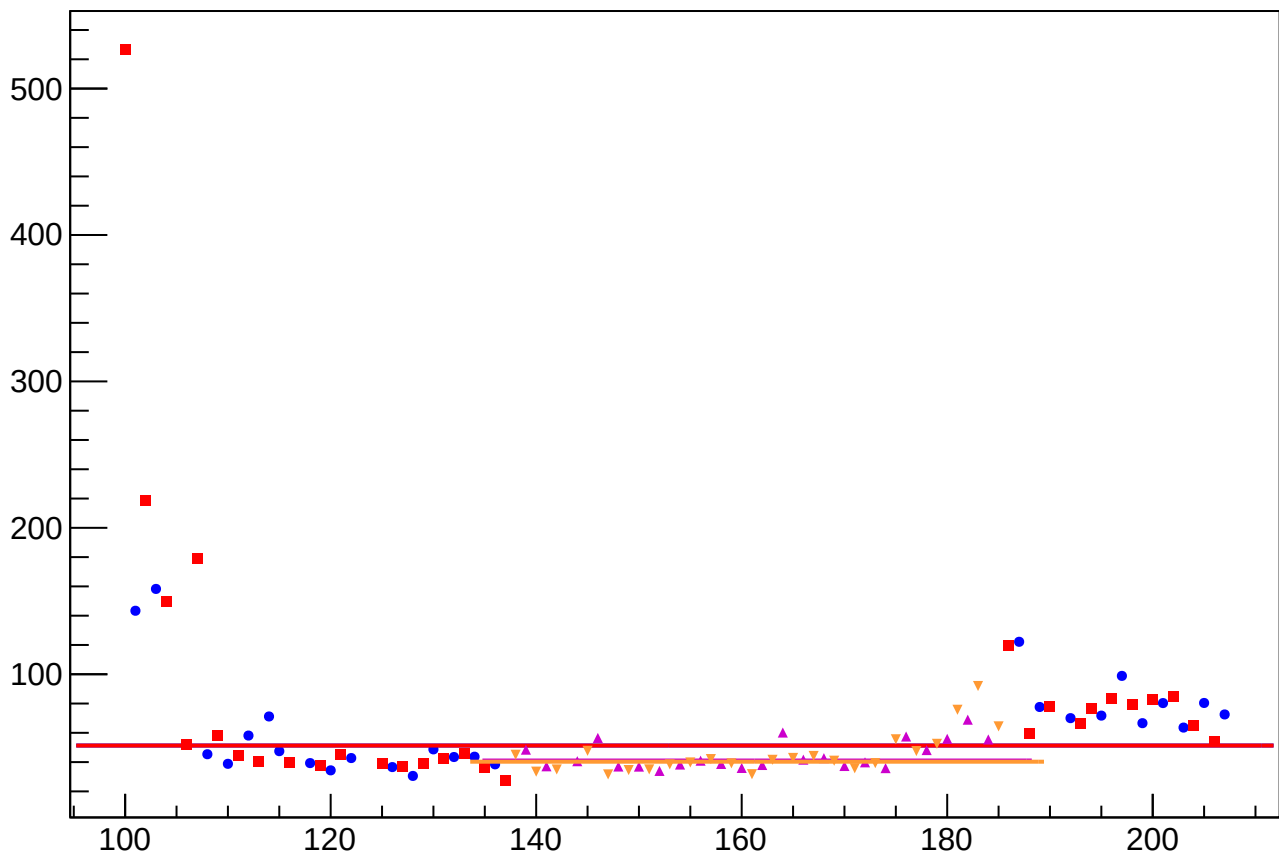
Left In:  $0.005 \pm 0.011$   $\chi^2/\text{NDF}$ : 41.4/22

+ sign  $0.002 \pm 0.009$   $\chi^2/\text{NDF}$ : 42.0/49

All:  $0.003 \pm 0.006$   $\chi^2/\text{NDF}$ : 114.3/101

- sign  $0.003 \pm 0.009$   $\chi^2/\text{NDF}$ : 72.3/51

asym\_us\_dd\_at1lr\_dd\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 51.329 $\pm$ 0.011  $\chi^2$ /NDF: 3436472.7/25

Left Out: 40.277 $\pm$ 0.007  $\chi^2$ /NDF: 1489065.3/23

Right Out: 51.302 $\pm$ 0.011  $\chi^2$ /NDF: 3522572.6/28

Left In: 41.082 $\pm$ 0.007  $\chi^2$ /NDF: 926843.9/22

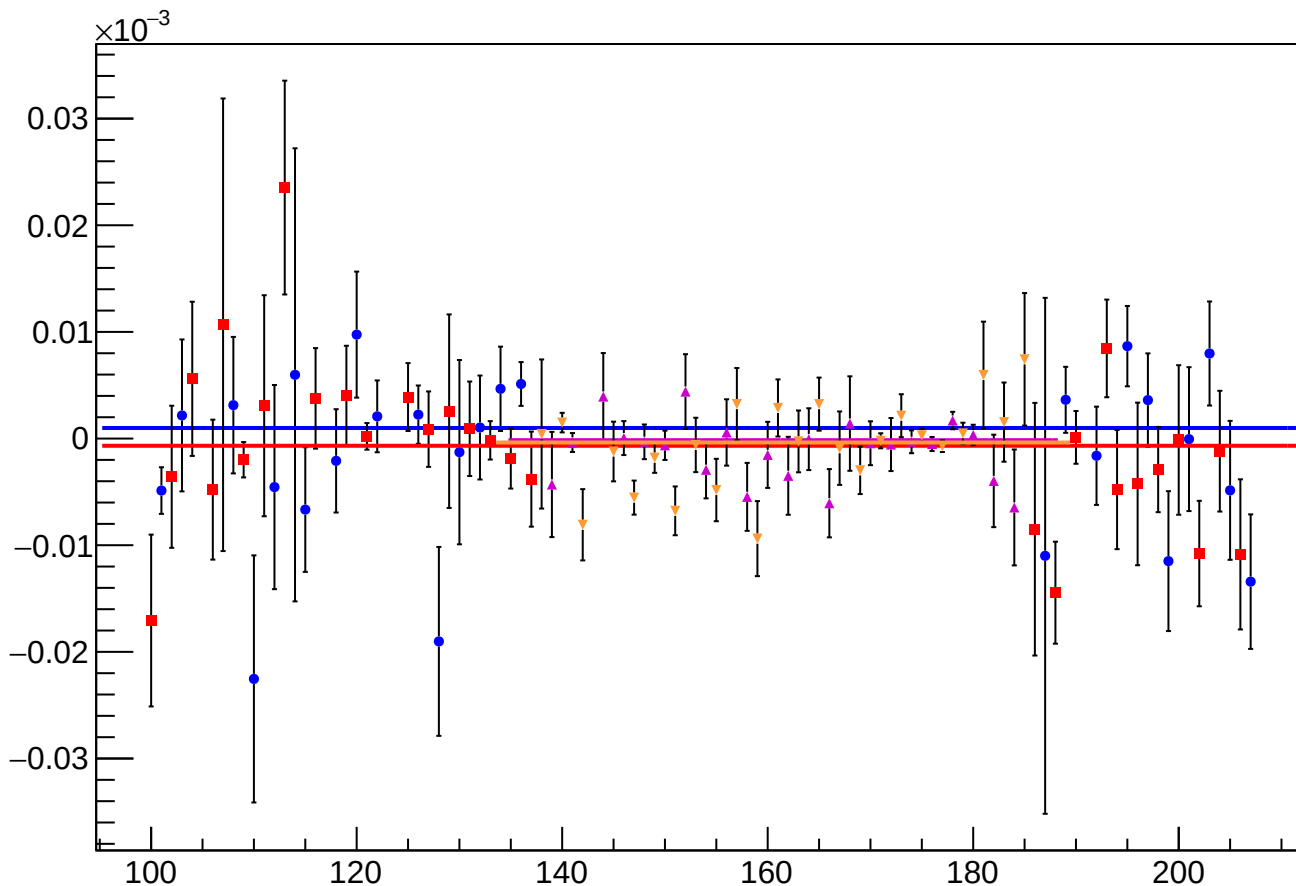
+ sign 43.727 $\pm$ 0.006  $\chi^2$ /NDF: 5634756.2/49

All: 44.071 $\pm$ 0.004  $\chi^2$ /NDF: 10702221.1/100

- sign 44.420 $\pm$ 0.006  $\chi^2$ /NDF: 5061021.2/51



asym\_us\_dd\_at1lr\_dd\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 44.1/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 51.2/23

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 38.2/28

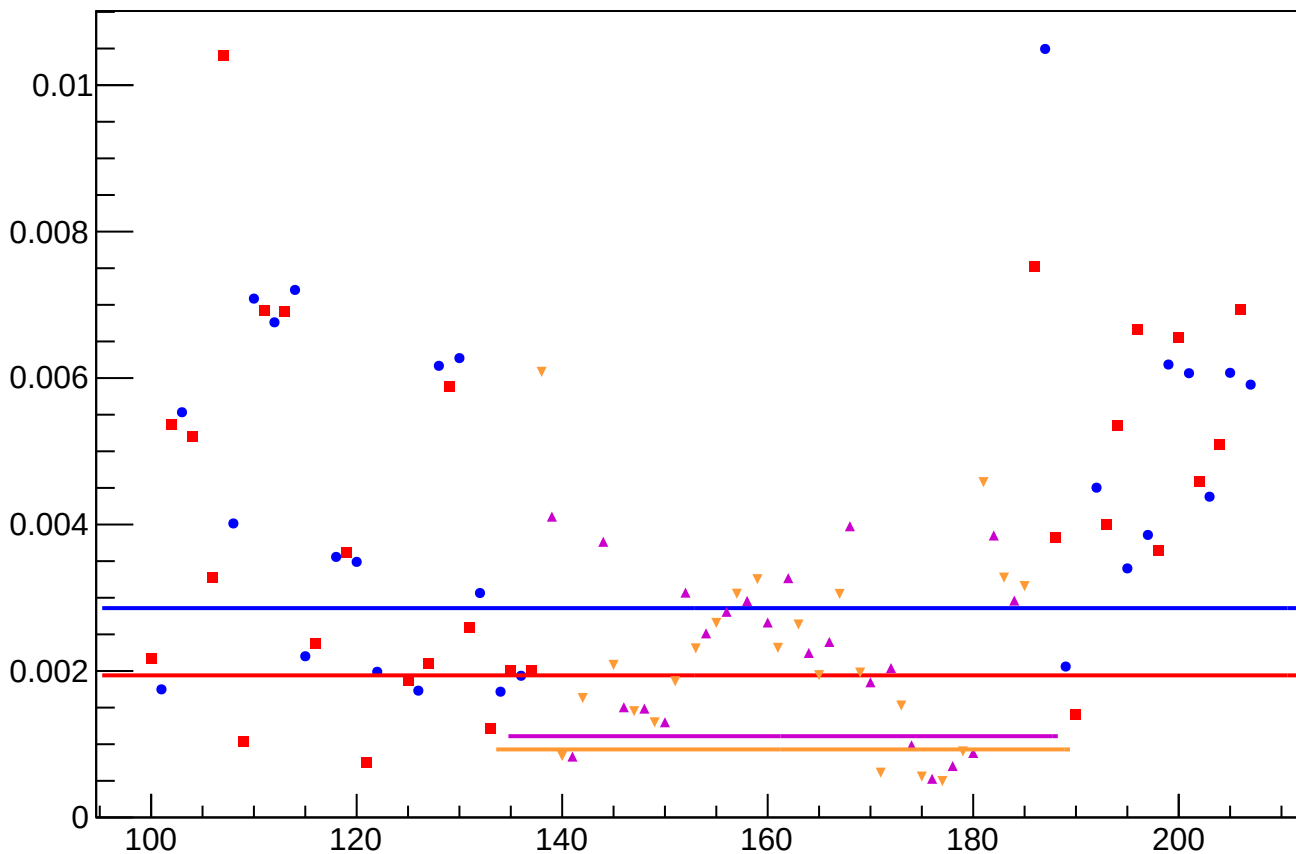
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 19.9/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 97.6/49

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 156.2/101

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 58.6/51

asym\_us\_dd\_at1lr\_dd\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 6122976.4/25

Left Out: 0.001 $\pm$ 0.000  $\chi^2$ /NDF:12568645.9/23

Right Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 11914886.1/28

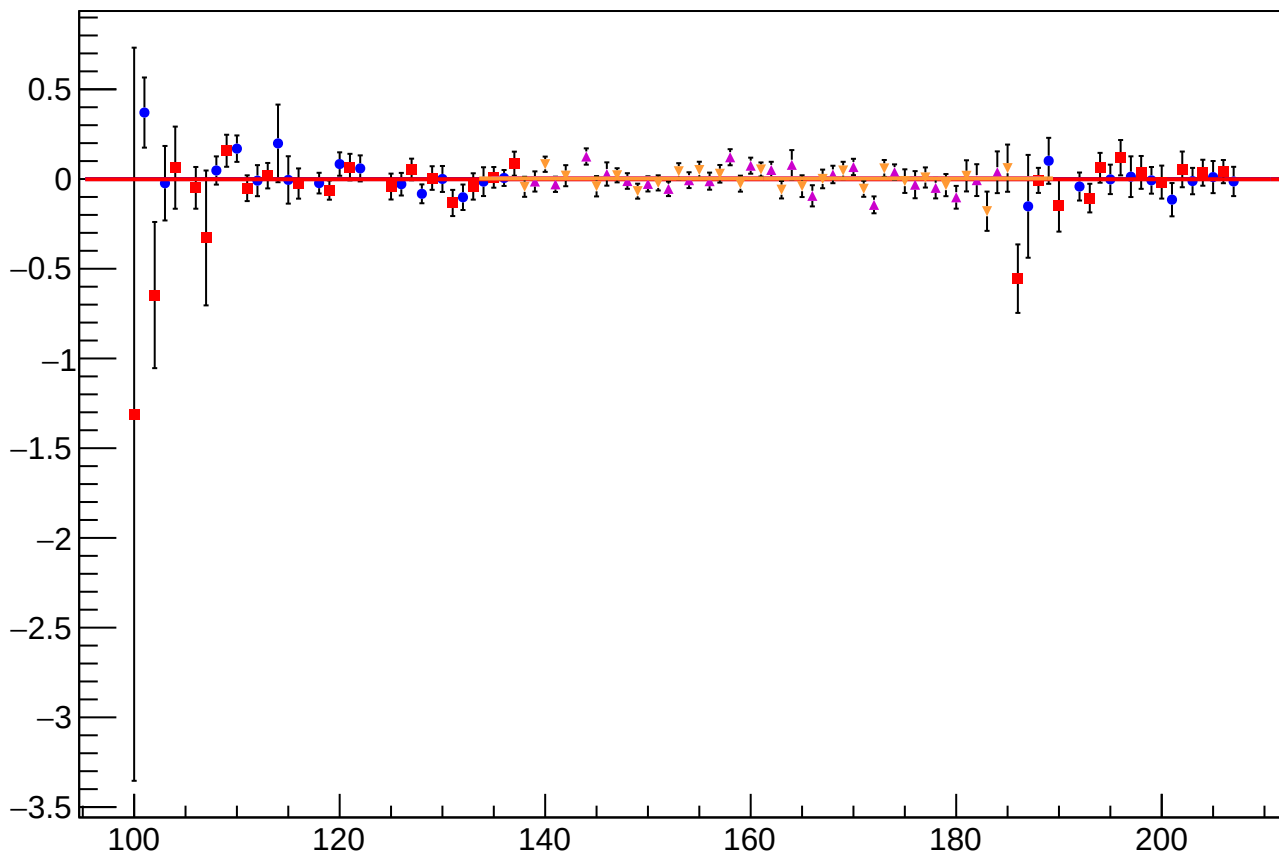
Left In: 0.001 $\pm$ 0.000  $\chi^2$ /NDF:10930077.0/22

+ sign 0.001 $\pm$ 0.000  $\chi^2$ /NDF: 27960621.2/49

All: 0.001 $\pm$ 0.000  $\chi^2$ /NDF: 53805607.0/101

- sign 0.001 $\pm$ 0.000  $\chi^2$ /NDF: 25514352.1/51

asym\_us\_dd\_at1lr\_dd\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.015$   $\chi^2/\text{NDF}: 20.2/25$

Left Out:  $0.003 \pm 0.010$   $\chi^2/\text{NDF}: 21.8/23$

Right Out:  $-0.001 \pm 0.015$   $\chi^2/\text{NDF}: 30.7/28$

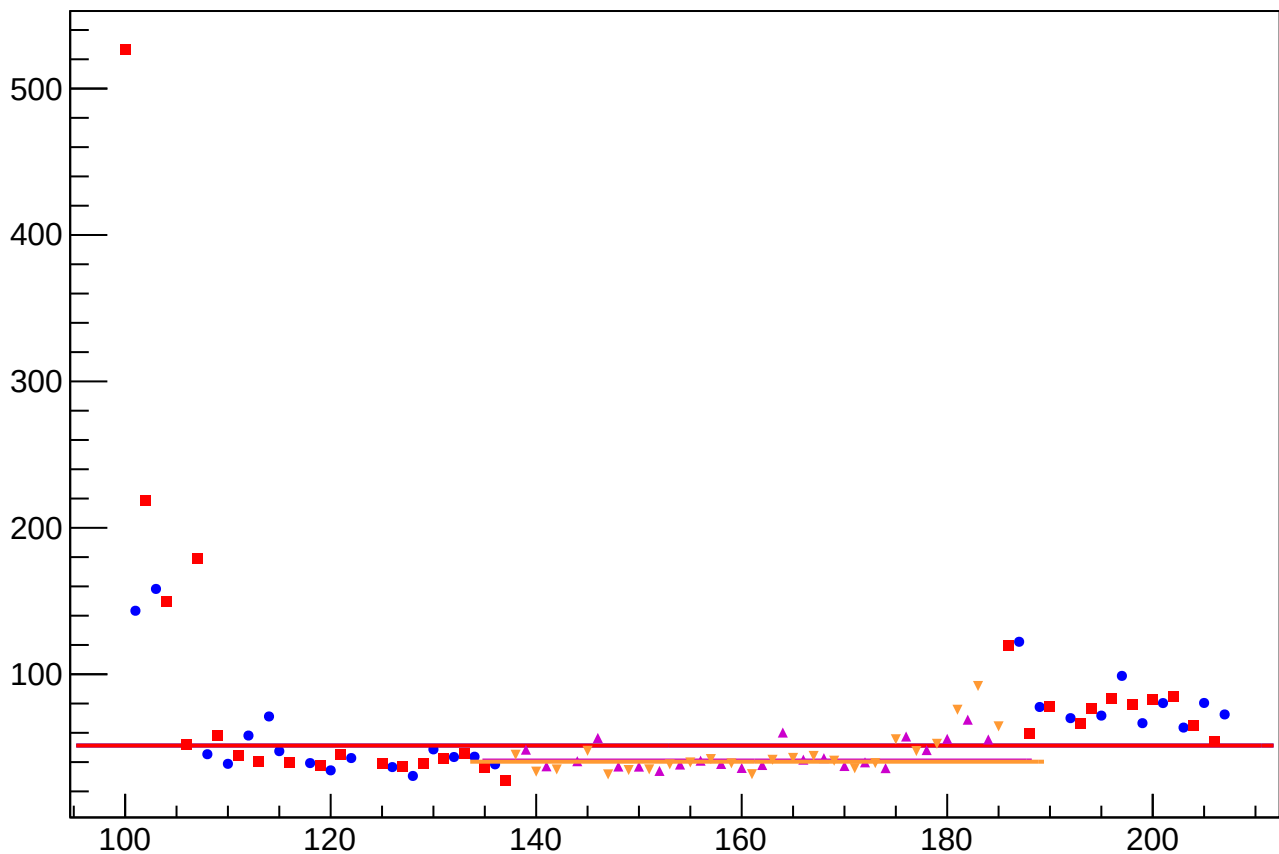
Left In:  $0.005 \pm 0.011$   $\chi^2/\text{NDF}: 41.4/22$

+ sign  $0.002 \pm 0.009$   $\chi^2/\text{NDF}: 42.0/49$

All:  $0.003 \pm 0.006$   $\chi^2/\text{NDF}: 114.3/101$

- sign  $0.003 \pm 0.009$   $\chi^2/\text{NDF}: 72.3/51$

asym\_us\_dd\_at1lr\_dd\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 51.327 $\pm$ 0.011  $\chi^2$ /NDF: 3437033.1/25

Left Out: 40.277 $\pm$ 0.007  $\chi^2$ /NDF: 1489049.7/23

Right Out: 51.303 $\pm$ 0.011  $\chi^2$ /NDF: 3522541.1/28

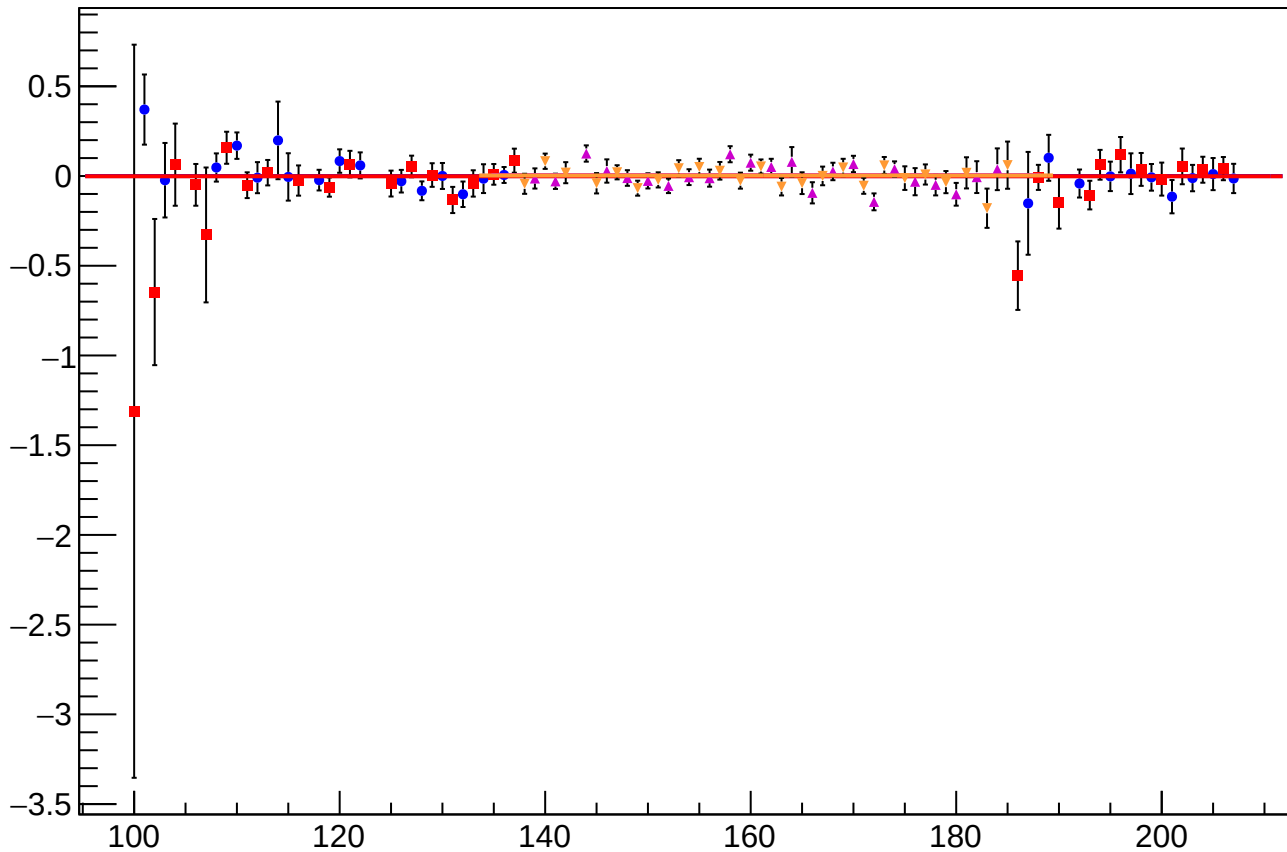
Left In: 41.082 $\pm$ 0.007  $\chi^2$ /NDF: 926883.3/22

+ sign 43.727 $\pm$ 0.006  $\chi^2$ /NDF: 5635031.0/49

All: 44.071 $\pm$ 0.004  $\chi^2$ /NDF: 10702575.3/100

- sign 44.420 $\pm$ 0.006  $\chi^2$ /NDF: 5061088.6/51

asym\_us\_dd\_at1lr\_dd\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.015$   $\chi^2/\text{NDF}$ : 20.2/25

Left Out:  $0.003 \pm 0.010$   $\chi^2/\text{NDF}$ : 21.8/23

Right Out:  $-0.001 \pm 0.015$   $\chi^2/\text{NDF}$ : 30.7/28

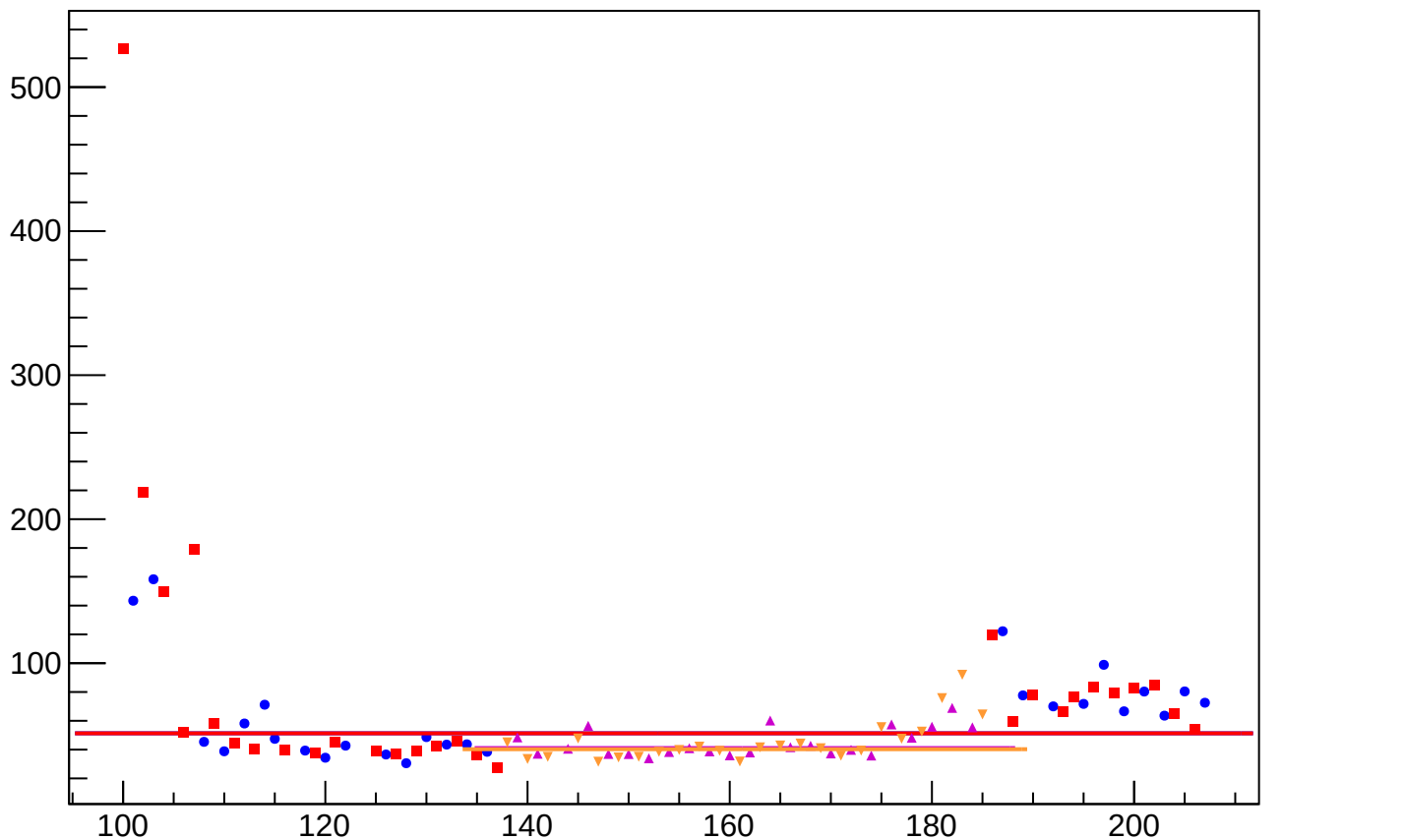
Left In:  $0.005 \pm 0.011$   $\chi^2/\text{NDF}$ : 41.4/22

+ sign  $0.002 \pm 0.009$   $\chi^2/\text{NDF}$ : 42.0/49

All:  $0.003 \pm 0.006$   $\chi^2/\text{NDF}$ : 114.3/101

- sign  $0.003 \pm 0.009$   $\chi^2/\text{NDF}$ : 72.3/51

asym\_us\_dd\_at1lr\_dd\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 51.327 $\pm$ 0.011  $\chi^2$ /NDF: 3437033.1/25

Left Out: 40.277 $\pm$ 0.007  $\chi^2$ /NDF: 1489049.7/23

Right Out: 51.303 $\pm$ 0.011  $\chi^2$ /NDF: 3522541.1/28

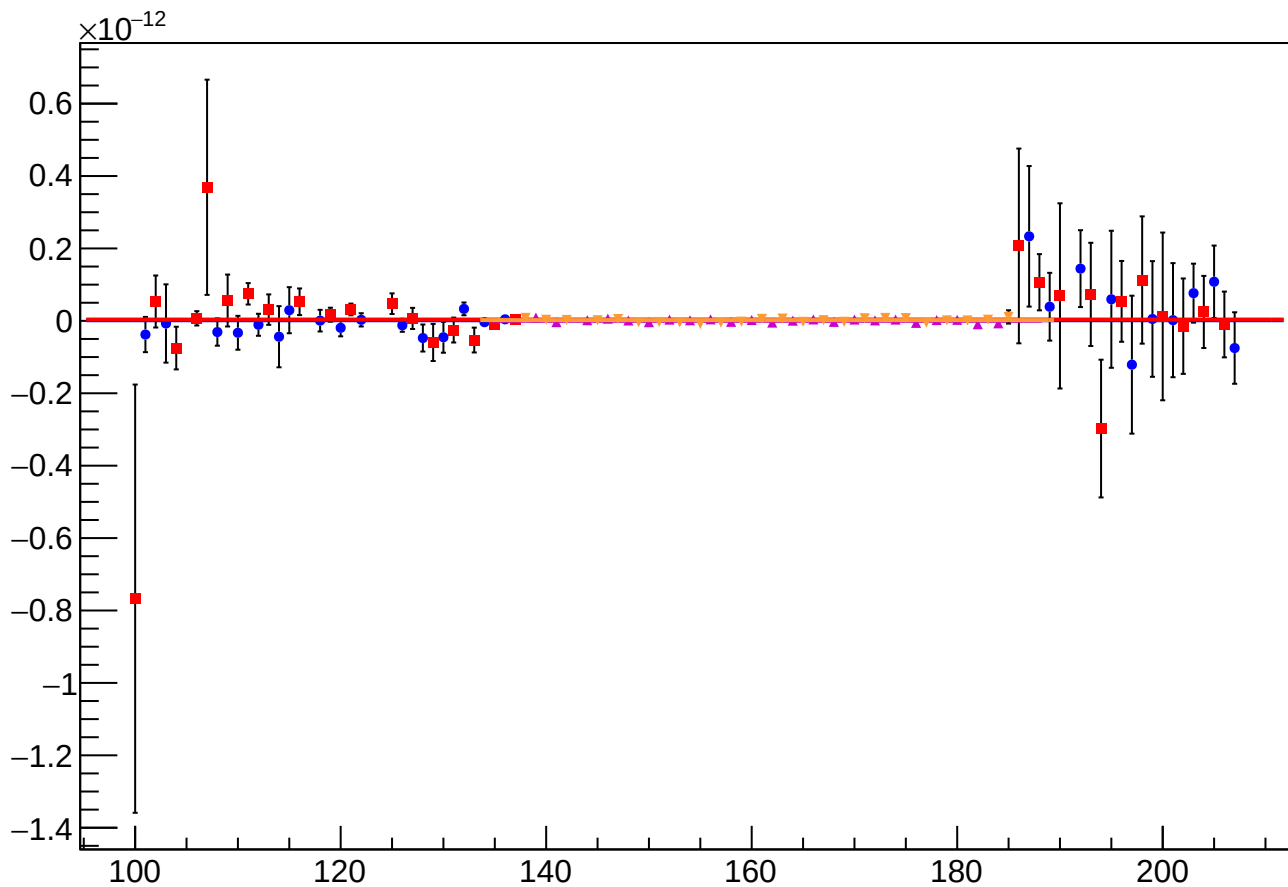
Left In: 41.082 $\pm$ 0.007  $\chi^2$ /NDF: 926883.3/22

+ sign 43.727 $\pm$ 0.006  $\chi^2$ /NDF: 5635031.0/49

All: 44.071 $\pm$ 0.004  $\chi^2$ /NDF: 10702575.3/10

- sign 44.420 $\pm$ 0.006  $\chi^2$ /NDF: 5061088.6/51

asym\_us\_dd\_at1lr\_dd\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 17.0/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 25.2/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 34.7/28

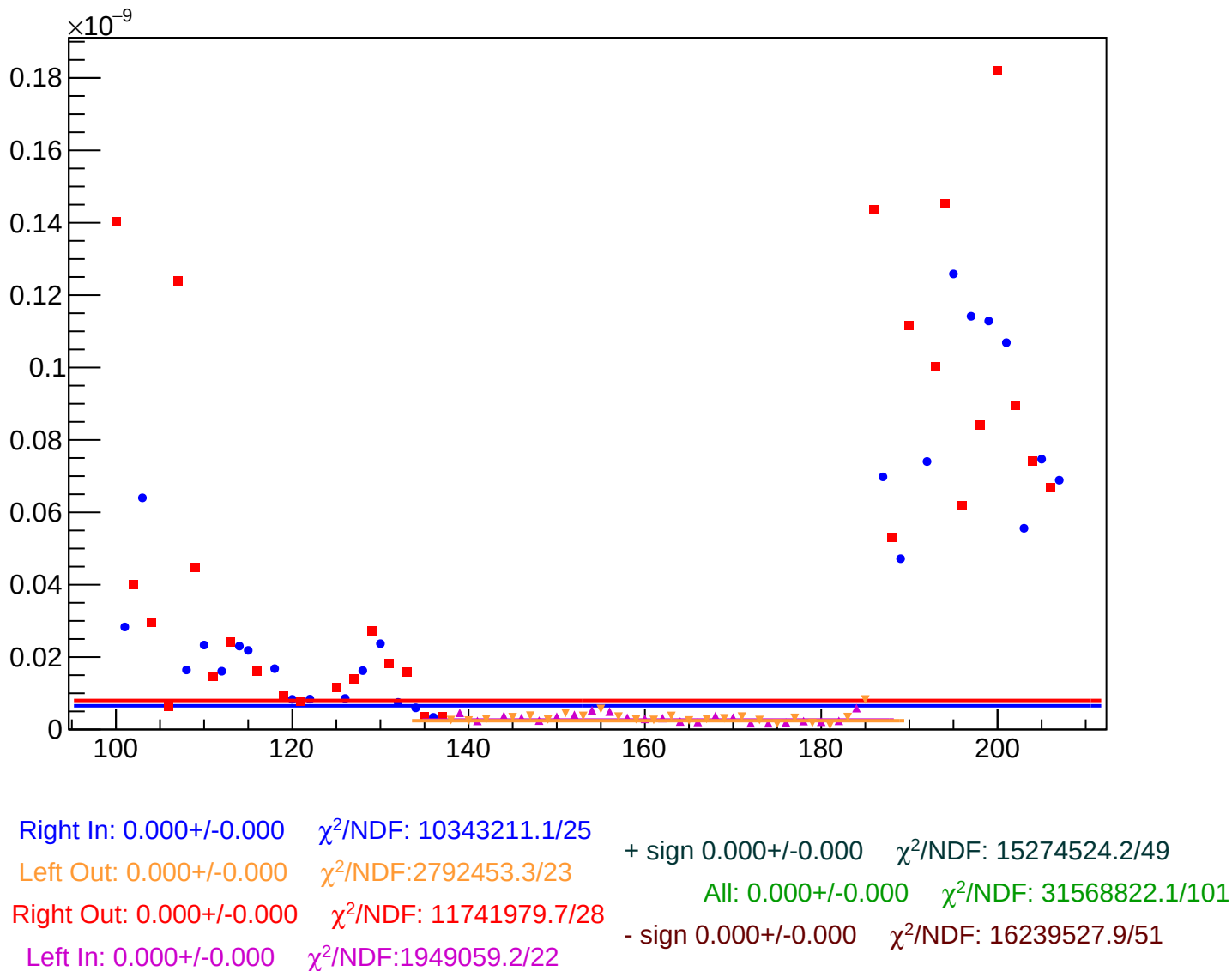
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 23.1/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 42.2/49

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 102.4/101

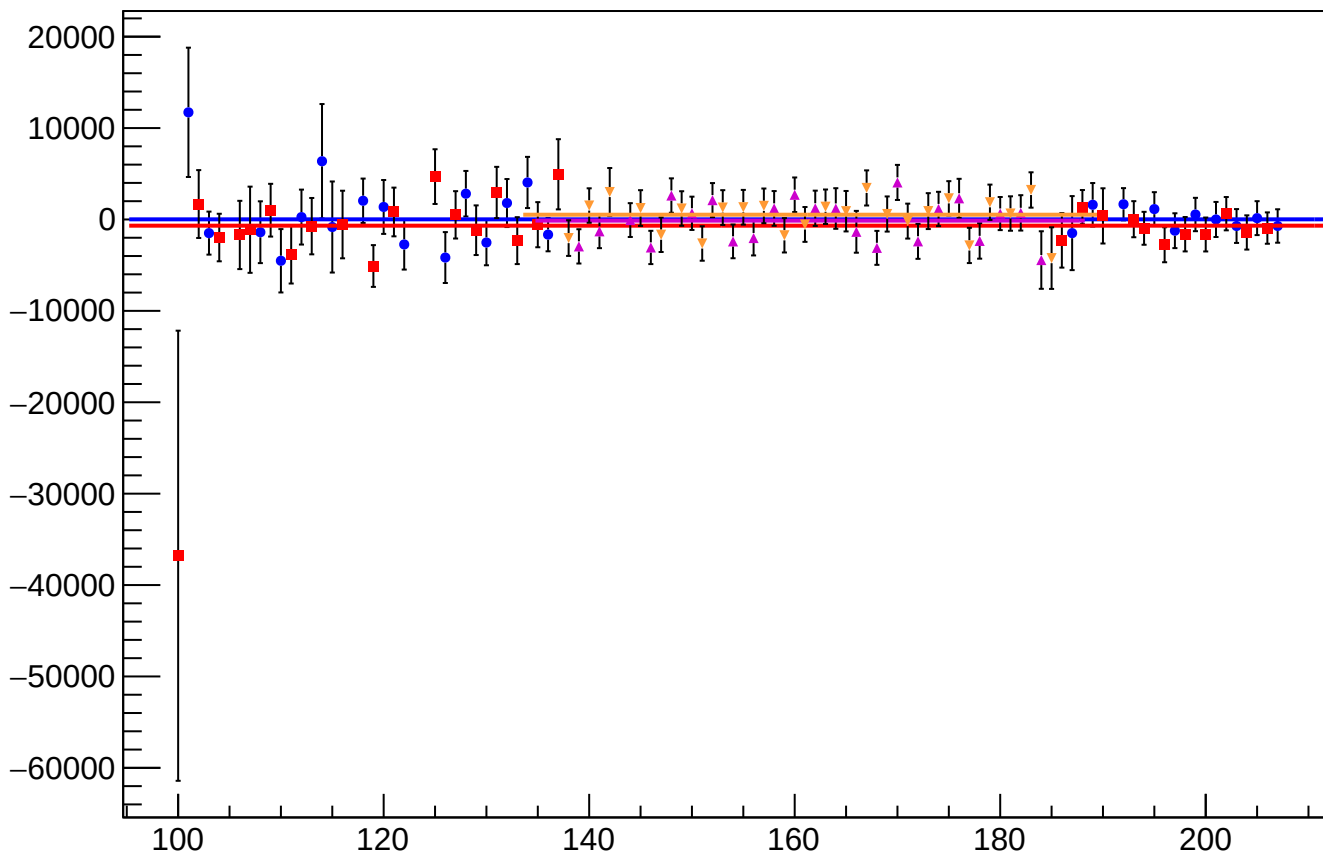
- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 58.2/51

asym\_us\_dd\_at1lr\_dd\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug





# reg\_asym\_us\_dd\_at1lr\_dd\_dd\_mean vs Slug



Right In: 13.700 $\pm$ 467.885  $\chi^2$ /NDF: 18.6/25

Left Out: 519.929 $\pm$ 401.705  $\chi^2$ /NDF: 20.8/23

Right Out: -679.290 $\pm$ 455.467  $\chi^2$ /NDF: 20.1/28

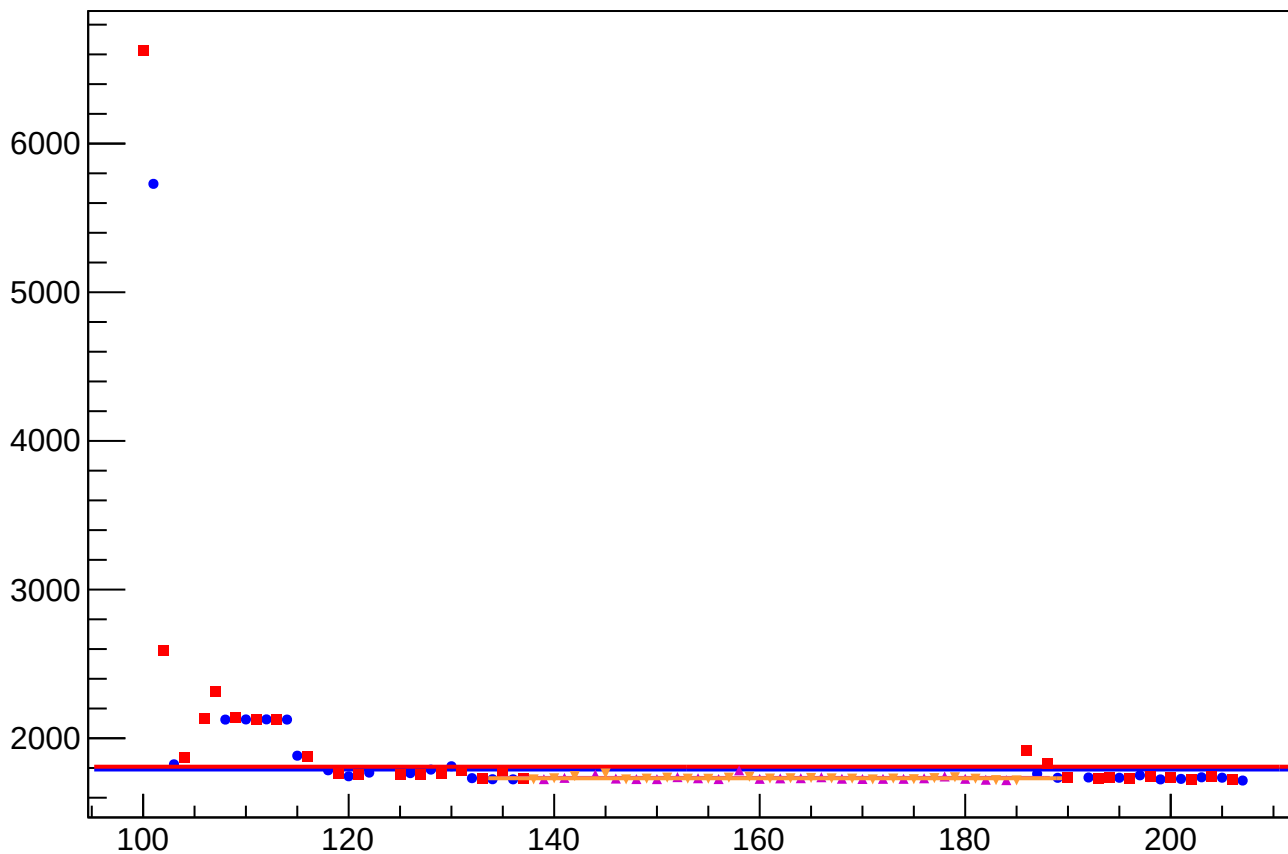
Left In: -126.031 $\pm$ 404.630  $\chi^2$ /NDF: 29.5/22

+ sign 305.119 $\pm$ 304.785  $\chi^2$ /NDF: 40.1/49

All: -35.017 $\pm$ 214.703  $\chi^2$ /NDF: 92.9/101

- sign -370.074 $\pm$ 302.500  $\chi^2$ /NDF: 50.4/51

# reg\_asym\_us\_dd\_at1lr\_dd\_dd\_rms vs Slug



Right In: 1789.795 $\pm$ 0.331  $\chi^2$ /NDF: 713550.7/25

Left Out: 1730.847 $\pm$ 0.284  $\chi^2$ /NDF: 969.7/23

Right Out: 1808.596 $\pm$ 0.322  $\chi^2$ /NDF: 310913.5/28

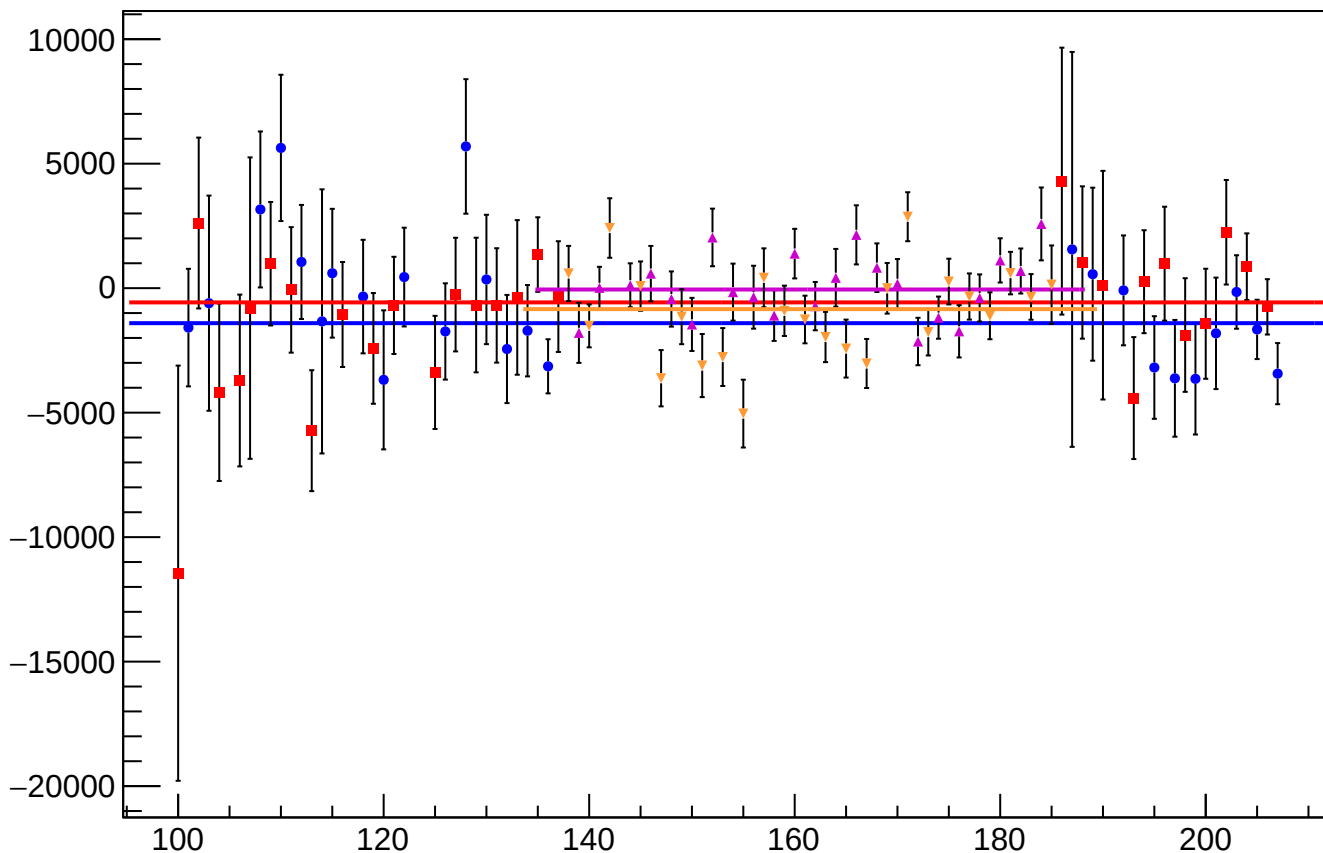
Left In: 1733.007 $\pm$ 0.286  $\chi^2$ /NDF: 2237.4/22

+ sign 1755.861 $\pm$ 0.216  $\chi^2$ /NDF: 732795.6/49

All: 1761.144 $\pm$ 0.152  $\chi^2$ /NDF: 1077926.7/10

- sign 1766.349 $\pm$ 0.214  $\chi^2$ /NDF: 343937.8/51

asym\_us\_dd\_at1lr\_dd\_dd\_reg\_correction\_mean vs Slug



Right In: -1406.030 $\pm$ 399.802  $\chi^2$ /NDF: 28.6/25

Left Out: -842.437 $\pm$ 210.852  $\chi^2$ /NDF:62.7/23

Right Out: -571.955 $\pm$ 418.644  $\chi^2$ /NDF: 21.0/28

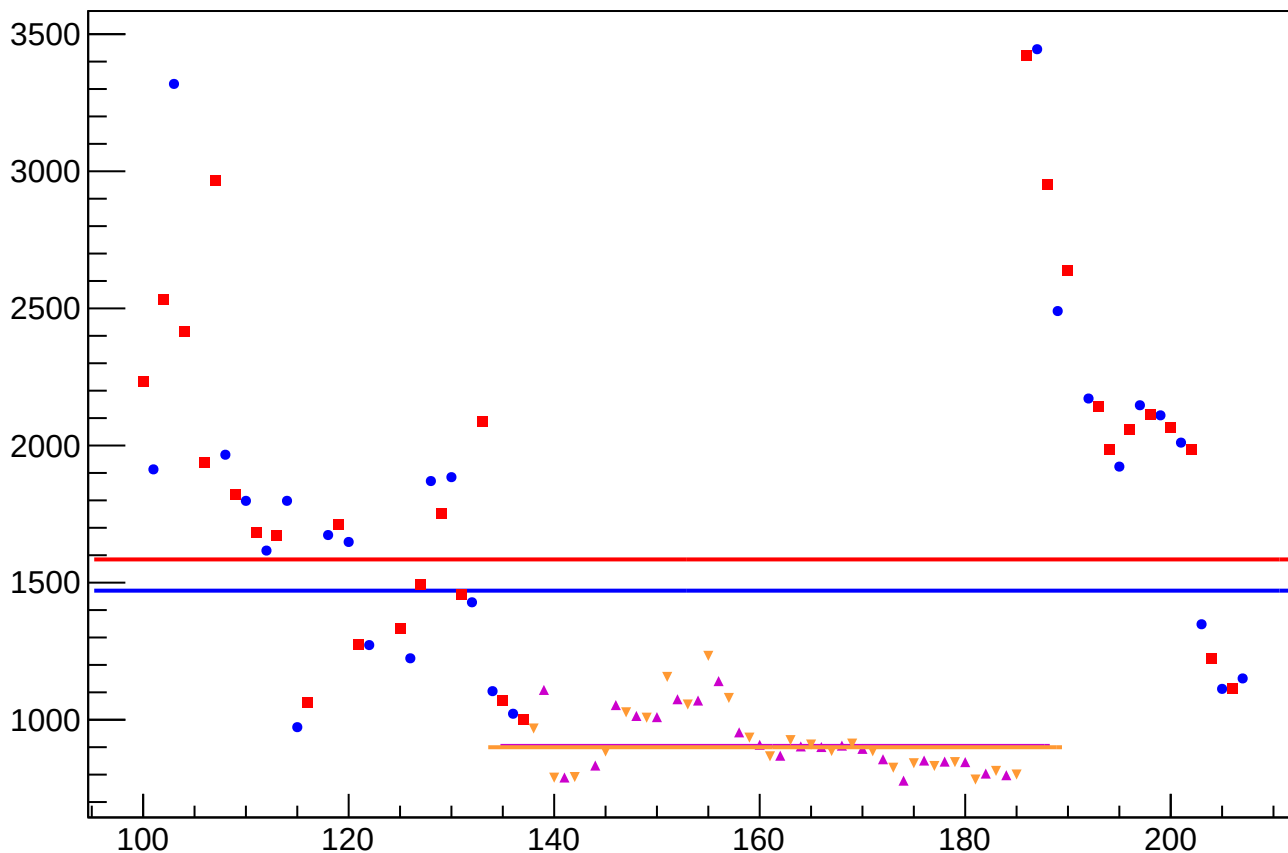
Left In: -53.905 $\pm$ 212.966  $\chi^2$ /NDF:30.6/22

+ sign -965.083 $\pm$ 186.504  $\chi^2$ /NDF: 92.8/49

All: -569.828 $\pm$ 133.034  $\chi^2$ /NDF: 154.8/101

- sign -160.406 $\pm$ 189.817  $\chi^2$ /NDF: 52.8/51

asym\_us\_dd\_at1lr\_dd\_dd\_reg\_correction\_rms vs Slug



Right In: 1470.774 $\pm$ 0.283  $\chi^2$ /NDF: 2563521.9/25

Left Out: 899.811 $\pm$ 0.149  $\chi^2$ /NDF: 495328.4/23

Right Out: 1584.656 $\pm$ 0.296  $\chi^2$ /NDF: 2850696.0/28

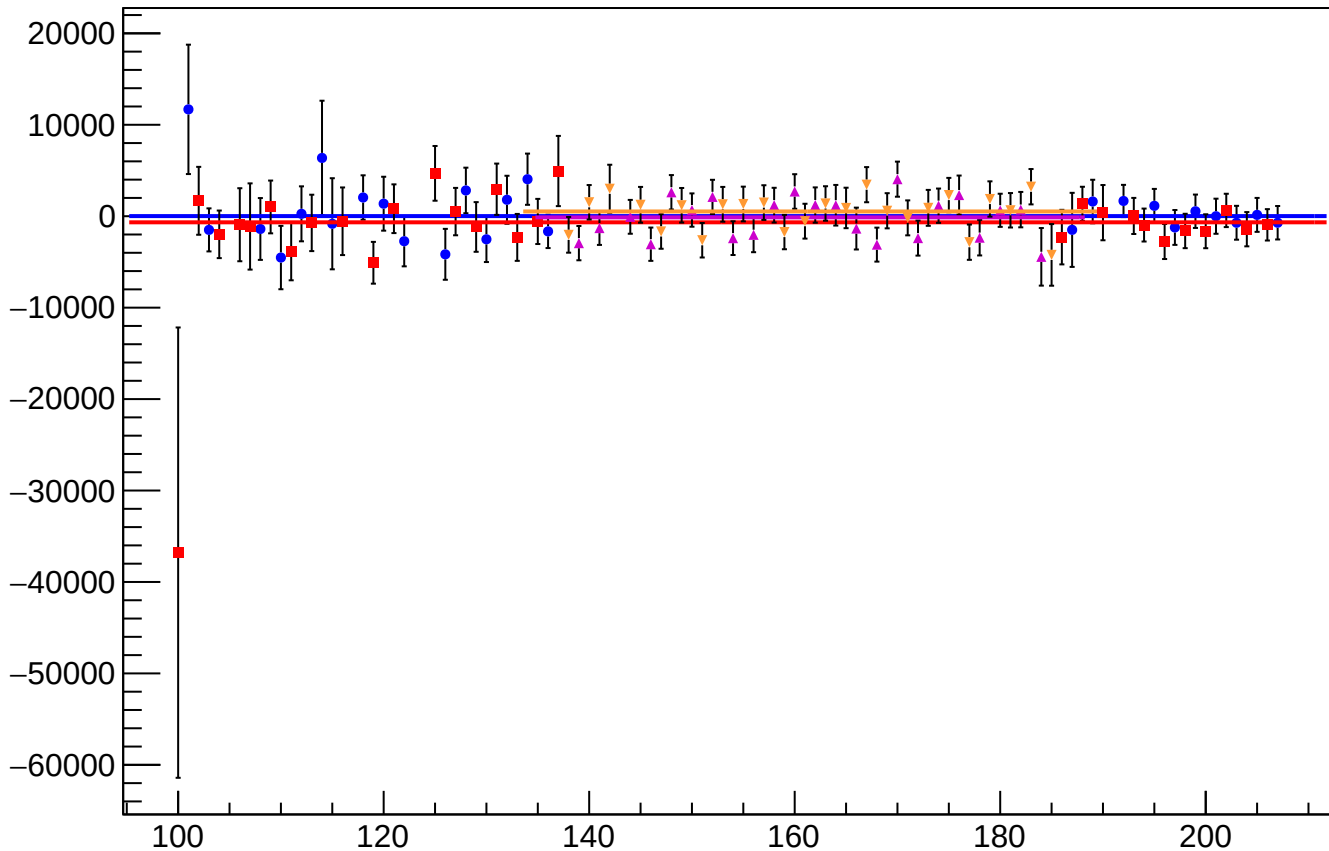
Left In: 904.656 $\pm$ 0.151  $\chi^2$ /NDF: 452251.7/22

+ sign 1024.061 $\pm$ 0.132  $\chi^2$ /NDF: 6250214.9/49

All: 1034.076 $\pm$ 0.094  $\chi^2$ /NDF: 13756779.4/1

- sign 1044.451 $\pm$ 0.134  $\chi^2$ /NDF: 7494823.1/51

# cor\_asym\_us\_dd\_at1lr\_dd\_dd\_mean vs Slug



Right In: 13.361+/-467.885  $\chi^2$ /NDF: 18.6/25

Left Out: 519.957+/-401.705  $\chi^2$ /NDF: 20.8/23

Right Out: -667.590+/-455.892  $\chi^2$ /NDF: 20.0/28

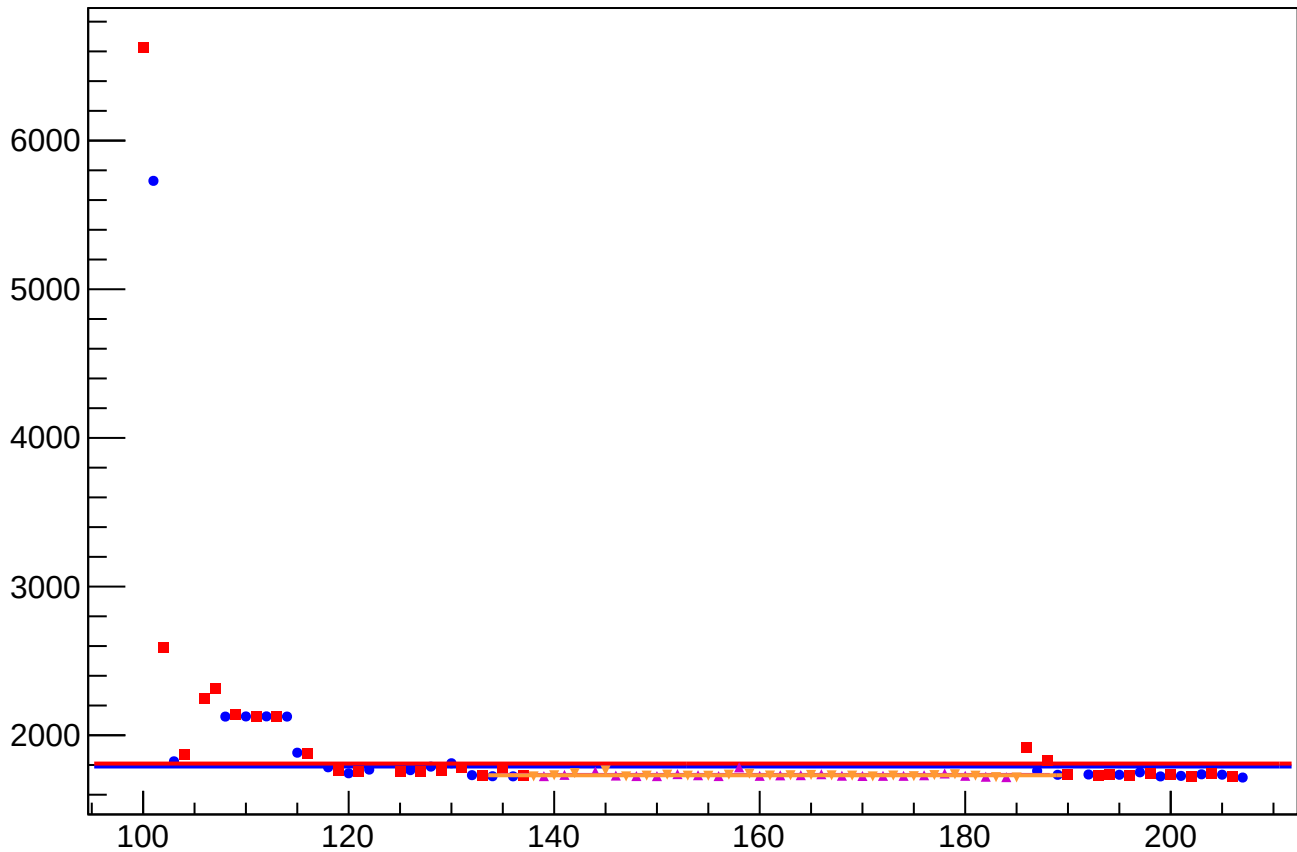
Left In: -126.091+/-404.630  $\chi^2$ /NDF: 29.5/22

+ sign 304.991+/-304.785  $\chi^2$ /NDF: 40.0/49

All: -32.235+/-214.747  $\chi^2$ /NDF: 92.7/101

- sign -364.697+/-302.624  $\chi^2$ /NDF: 50.3/51

# cor\_asym\_us\_dd\_at1lr\_dd\_dd\_rms vs Slug



Right In: 1789.795 $\pm$ 0.331  $\chi^2$ /NDF: 713550.6/25

Left Out: 1730.847 $\pm$ 0.284  $\chi^2$ /NDF: 969.7/23

Right Out: 1809.512 $\pm$ 0.322  $\chi^2$ /NDF: 320204.2/28

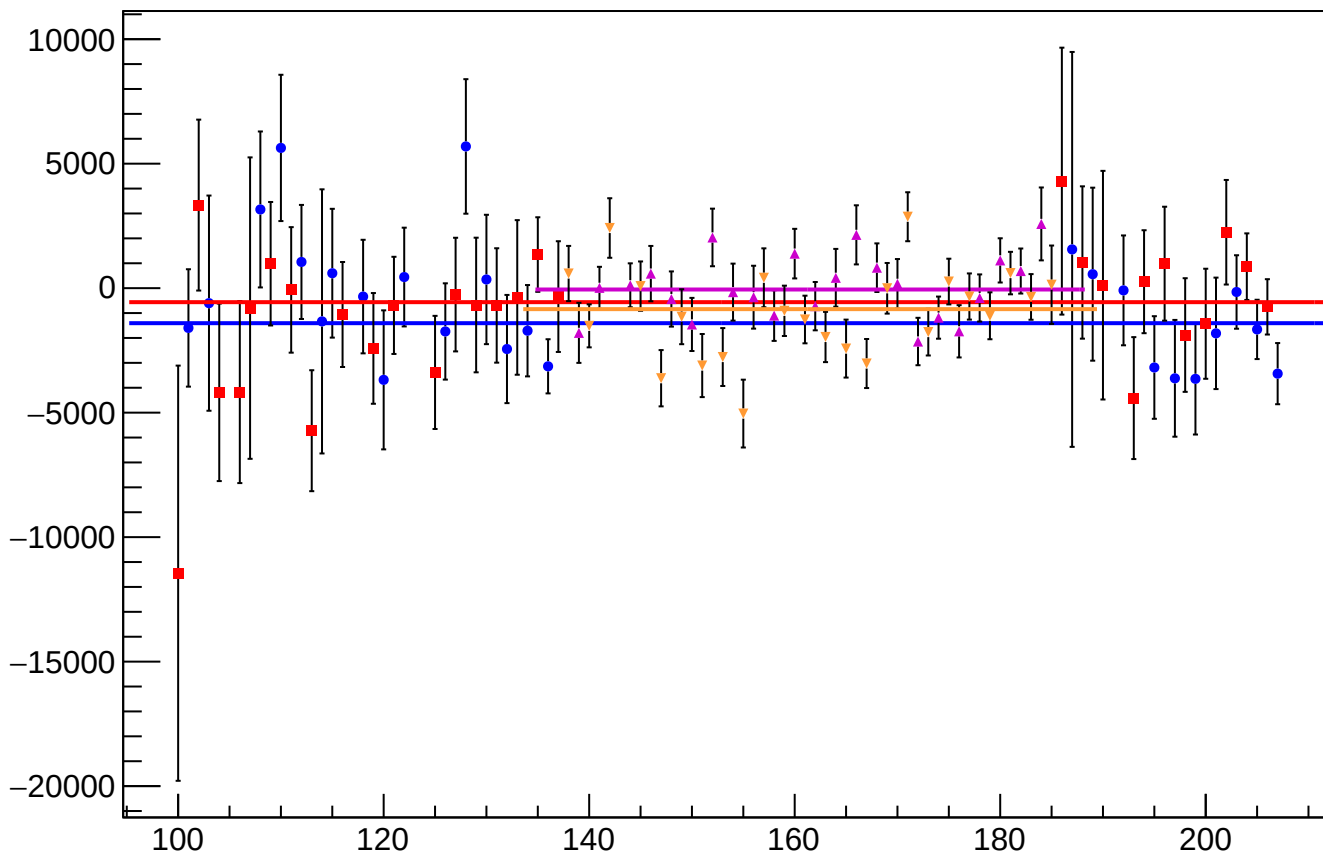
Left In: 1733.007 $\pm$ 0.286  $\chi^2$ /NDF: 2237.4/22

+ sign 1755.861 $\pm$ 0.216  $\chi^2$ /NDF: 732795.4/49

All: 1761.328 $\pm$ 0.152  $\chi^2$ /NDF: 1088019.8/10

- sign 1766.718 $\pm$ 0.214  $\chi^2$ /NDF: 353946.3/51

asym\_us\_dd\_at1lr\_dd\_dd\_cor\_correction\_mean vs Slug



Right In:  $-1406.395 \pm 399.786$   $\chi^2/\text{NDF}$ : 28.6/25

Left Out:  $-842.473 \pm 210.853$   $\chi^2/\text{NDF}$ : 62.7/23

Right Out:  $-562.317 \pm 418.981$   $\chi^2/\text{NDF}$ : 21.6/28

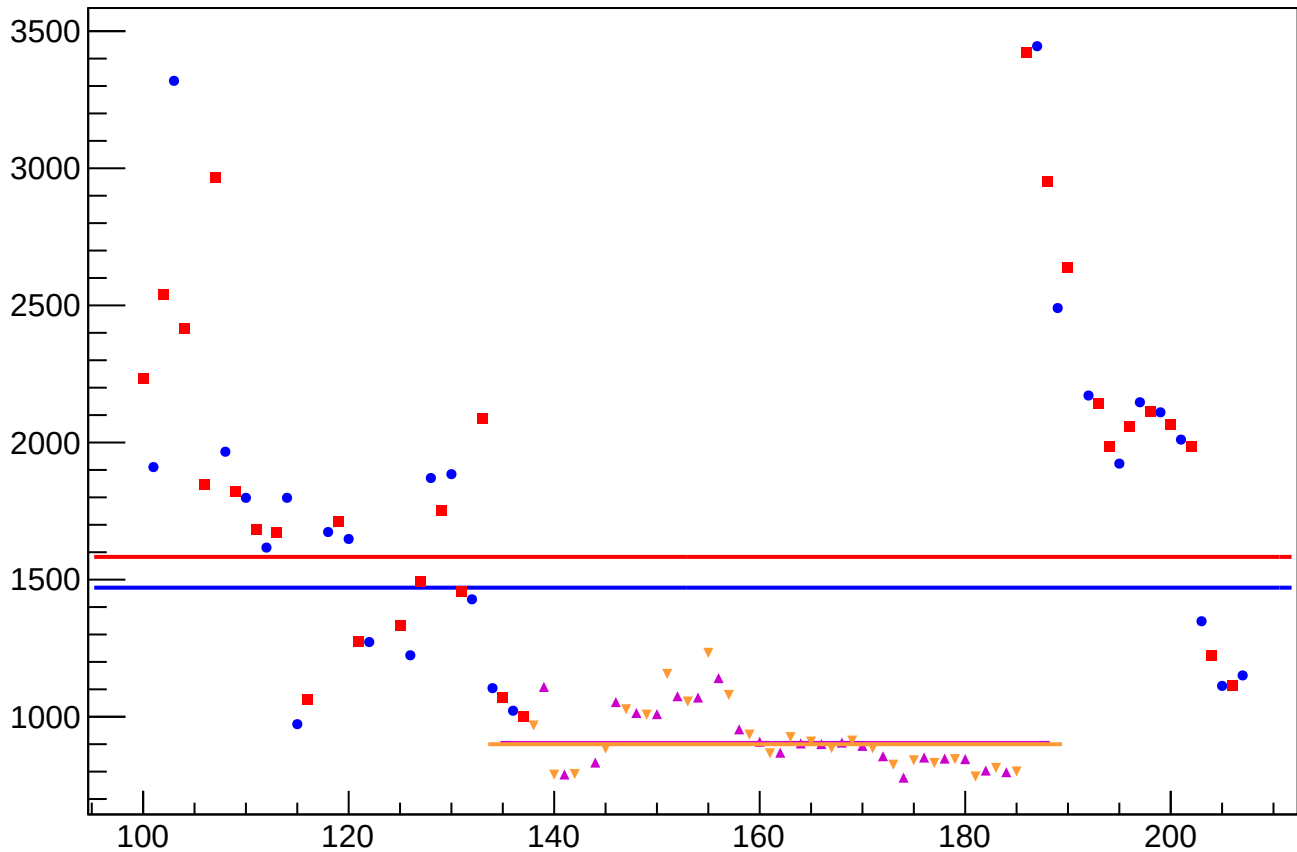
Left In:  $-53.927 \pm 212.965$   $\chi^2/\text{NDF}$ : 30.6/22

+ sign  $-965.198 \pm 186.503$   $\chi^2/\text{NDF}$ : 92.8/49

All:  $-568.924 \pm 133.044$   $\chi^2/\text{NDF}$ : 155.4/101

- sign  $-158.308 \pm 189.848$   $\chi^2/\text{NDF}$ : 53.4/51

asym\_us\_dd\_at1lr\_dd\_dd\_cor\_correction\_rms vs Slug



Right In: 1470.733+/-0.283  $\chi^2/\text{NDF}$ : 2562922.5/25

Left Out: 899.814+/-0.149  $\chi^2/\text{NDF}$ : 495276.2/23

Right Out: 1582.913+/-0.296  $\chi^2/\text{NDF}$ : 2841586.2/28

Left In: 904.653+/-0.151  $\chi^2/\text{NDF}$ : 452259.2/22

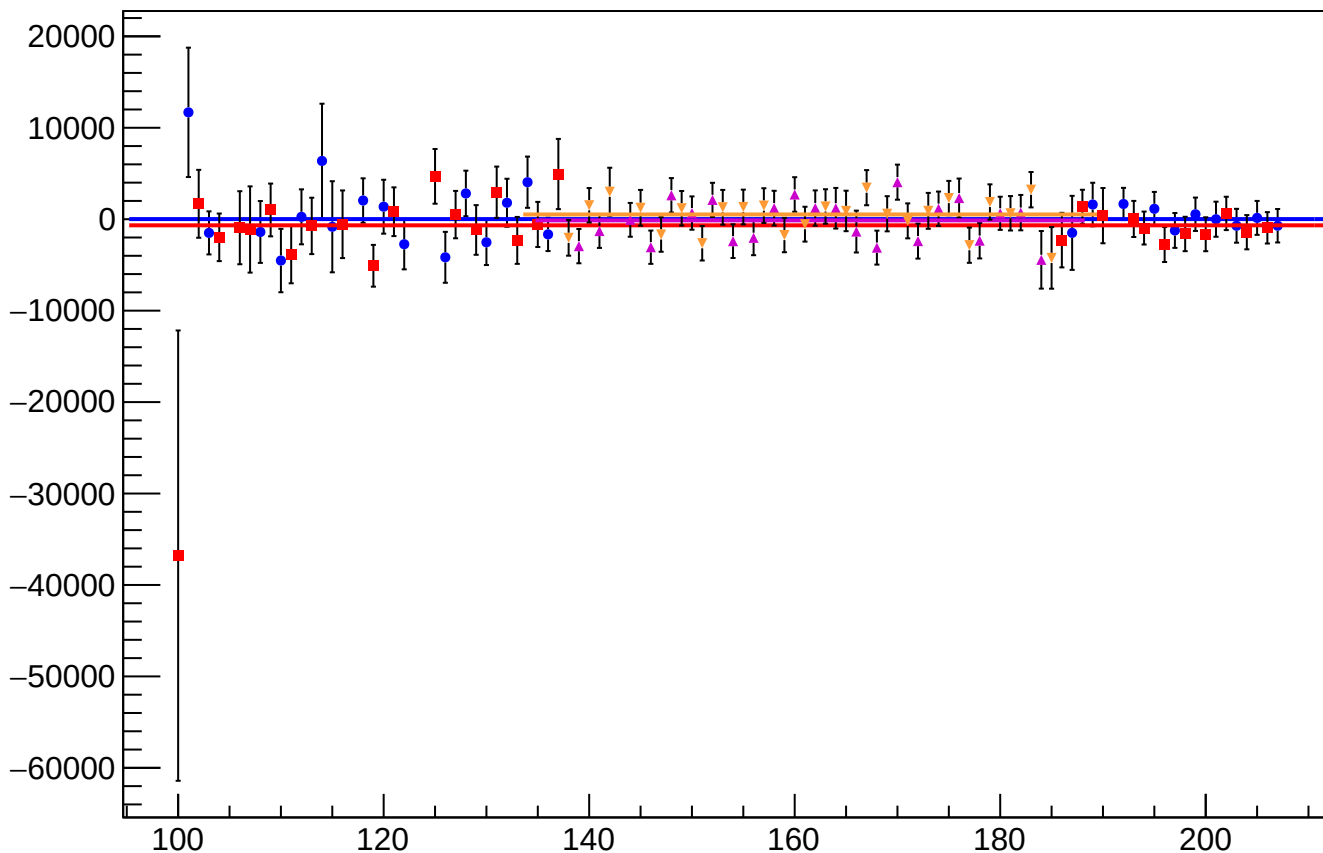
+ sign 1024.062+/-0.132  $\chi^2/\text{NDF}$ : 6249262.0/49

All: 1033.810+/-0.094  $\chi^2/\text{NDF}$ : 13719353.3/51

- sign 1043.911+/-0.134  $\chi^2/\text{NDF}$ : 7458966.8/51



# eigen\_cor\_asym\_us\_dd\_at1lr\_dd\_dd\_mean vs Slug



Right In:  $13.361 \pm 467.885$   $\chi^2/\text{NDF}$ : 18.6/25

Left Out:  $519.957 \pm 401.705$   $\chi^2/\text{NDF}$ : 20.8/23

Right Out:  $-667.590 \pm 455.892$   $\chi^2/\text{NDF}$ : 20.0/28

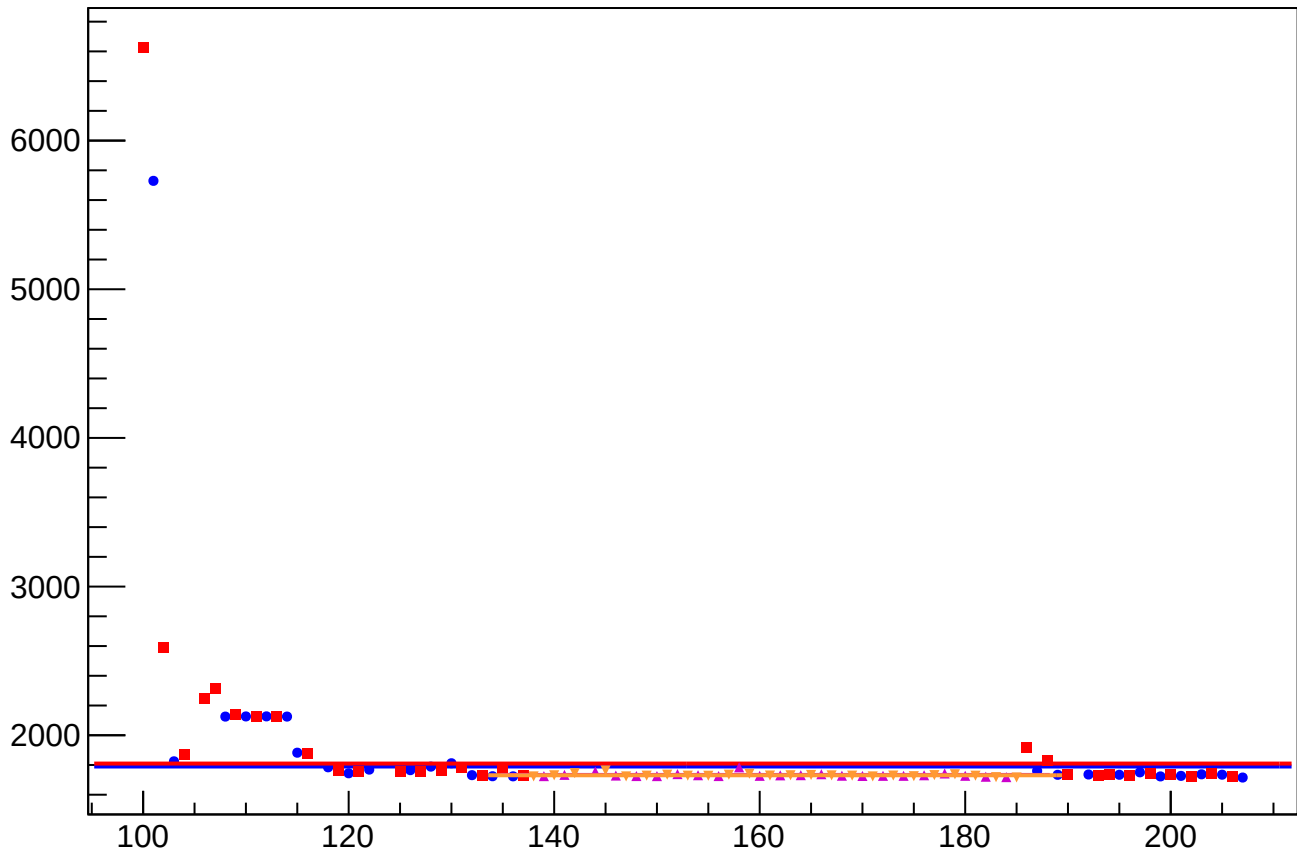
Left In:  $-126.091 \pm 404.630$   $\chi^2/\text{NDF}$ : 29.5/22

+ sign  $304.991 \pm 304.785$   $\chi^2/\text{NDF}$ : 40.0/49

All:  $-32.235 \pm 214.747$   $\chi^2/\text{NDF}$ : 92.7/101

- sign  $-364.697 \pm 302.624$   $\chi^2/\text{NDF}$ : 50.3/51

eigen\_cor\_asym\_us\_dd\_at1lr\_dd\_dd\_rms vs Slug



Right In: 1789.795 $\pm$ 0.331  $\chi^2$ /NDF: 713550.6/25

Left Out: 1730.847 $\pm$ 0.284  $\chi^2$ /NDF: 969.7/23

Right Out: 1809.512 $\pm$ 0.322  $\chi^2$ /NDF: 320204.2/28

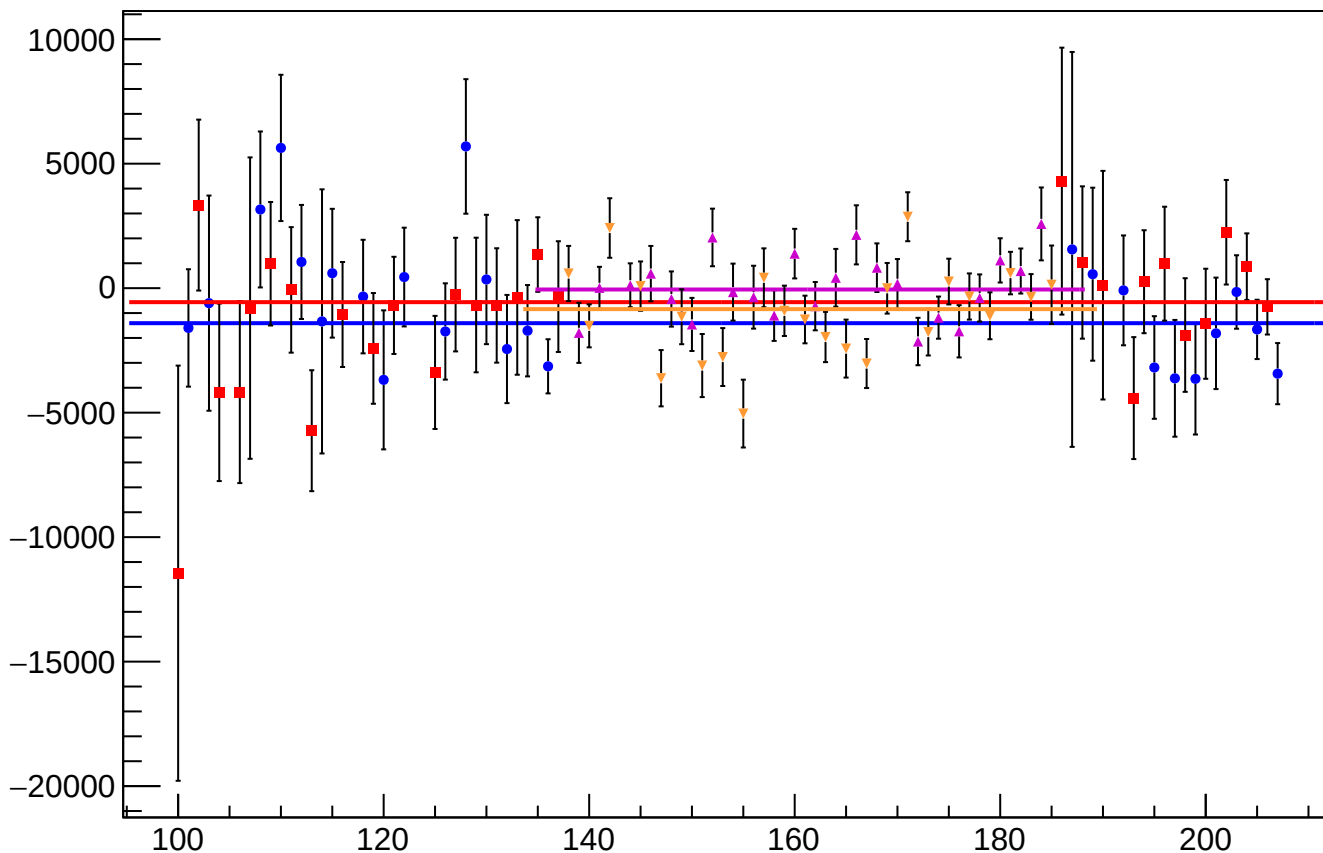
Left In: 1733.007 $\pm$ 0.286  $\chi^2$ /NDF: 2237.4/22

+ sign 1755.861 $\pm$ 0.216  $\chi^2$ /NDF: 732795.4/49

All: 1761.328 $\pm$ 0.152  $\chi^2$ /NDF: 1088019.8/10

- sign 1766.718 $\pm$ 0.214  $\chi^2$ /NDF: 353946.3/51

asym\_us\_dd\_at1lr\_dd\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In: -1406.395 $\pm$ 399.786  $\chi^2$ /NDF: 28.6/25

Left Out: -842.473 $\pm$ 210.853  $\chi^2$ /NDF: 62.7/23

Right Out: -562.317 $\pm$ 418.981  $\chi^2$ /NDF: 21.6/28

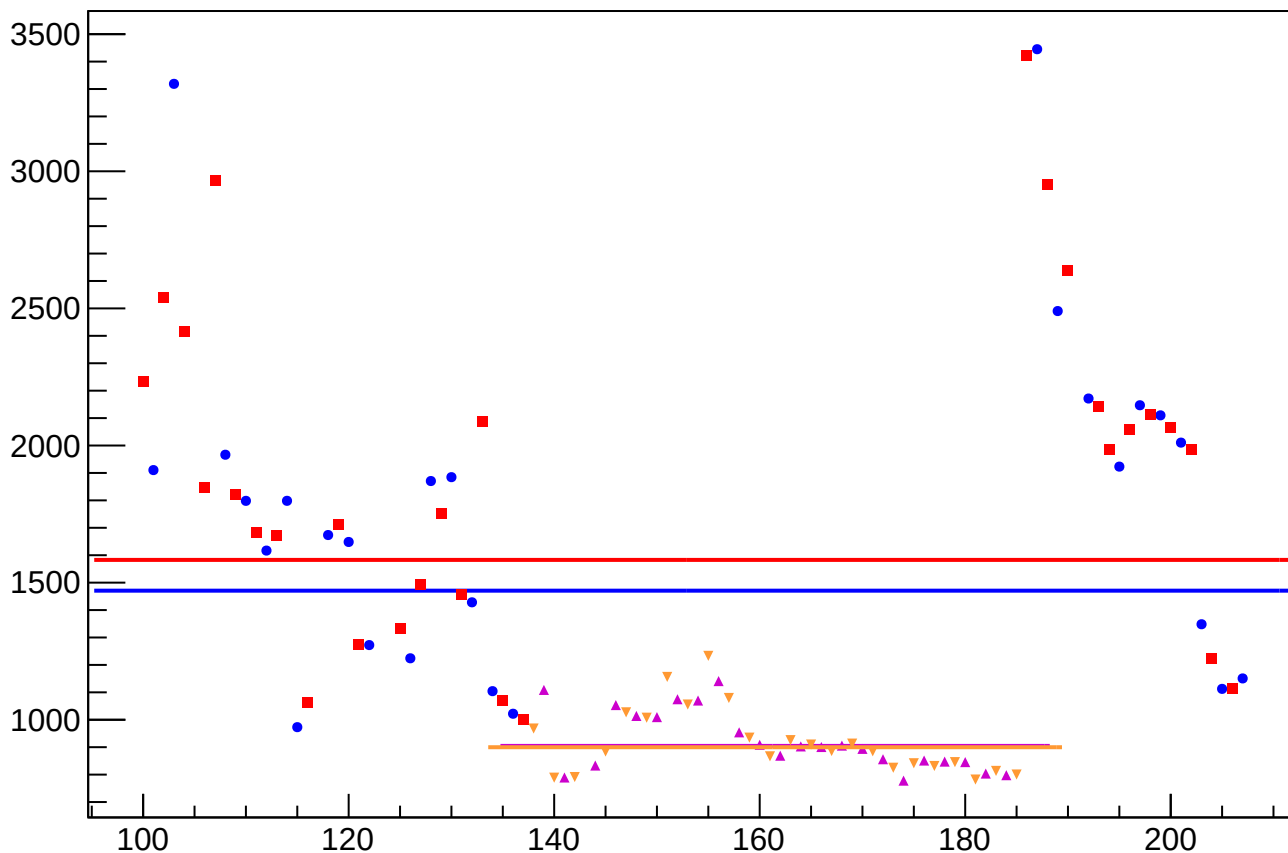
Left In: -53.927 $\pm$ 212.965  $\chi^2$ /NDF: 30.6/22

+ sign -965.198 $\pm$ 186.503  $\chi^2$ /NDF: 92.8/49

All: -568.924 $\pm$ 133.044  $\chi^2$ /NDF: 155.4/101

- sign -158.308 $\pm$ 189.848  $\chi^2$ /NDF: 53.4/51

asym\_us\_dd\_at1lr\_dd\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 1470.733+/-0.283  $\chi^2/\text{NDF}$ : 2562922.5/25

Left Out: 899.814+/-0.149  $\chi^2/\text{NDF}$ : 495276.2/23

Right Out: 1582.913+/-0.296  $\chi^2/\text{NDF}$ : 2841586.2/28

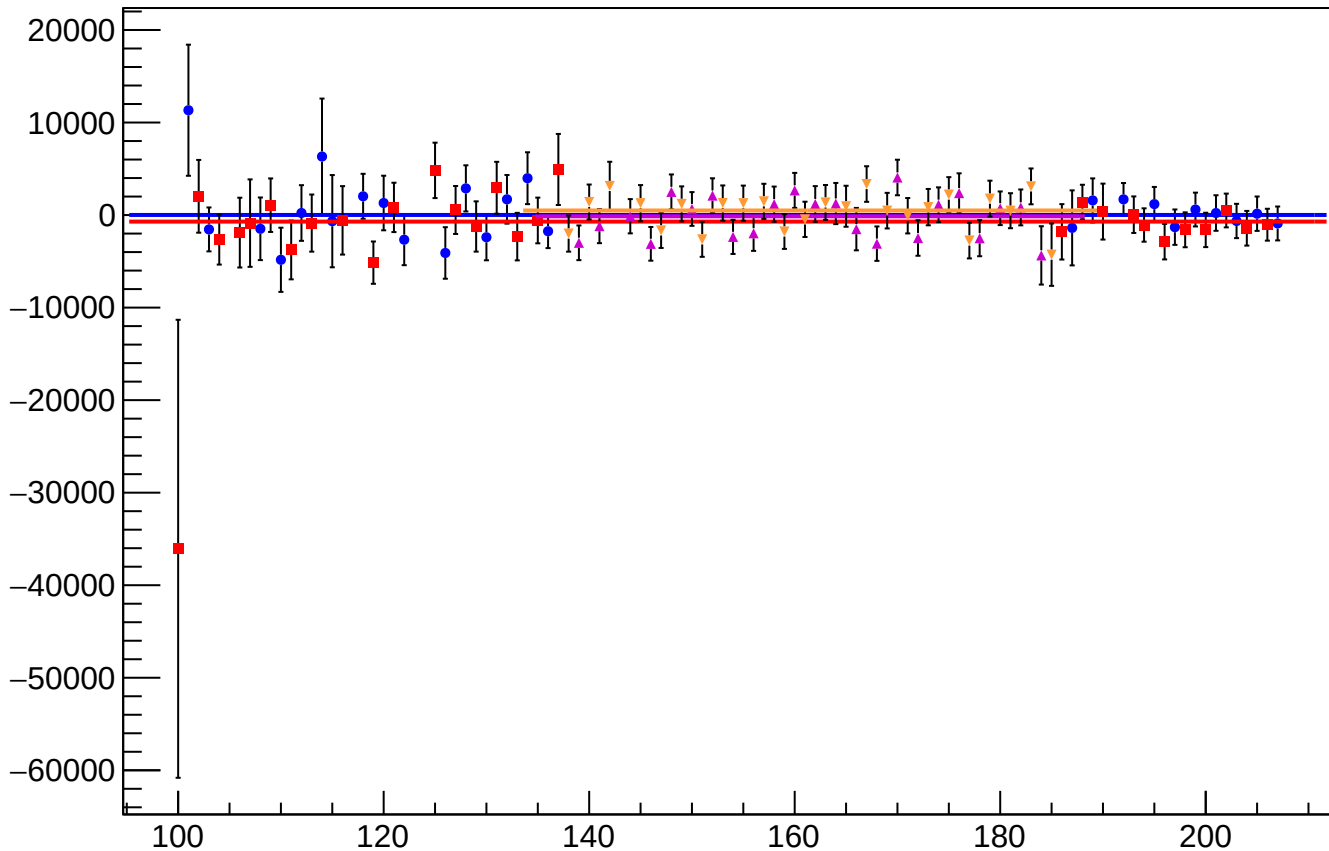
Left In: 904.653+/-0.151  $\chi^2/\text{NDF}$ : 452259.2/22

+ sign 1024.062+/-0.132  $\chi^2/\text{NDF}$ : 6249262.0/49

All: 1033.810+/-0.094  $\chi^2/\text{NDF}$ : 13719353.3/100

- sign 1043.911+/-0.134  $\chi^2/\text{NDF}$ : 7458966.8/51

# dit\_asym\_us\_dd\_at1lr\_dd\_dd\_mean vs Slug



Right In: 11.810 $\pm$ 468.410  $\chi^2$ /NDF: 18.6/25

Left Out: 494.897 $\pm$ 402.069  $\chi^2$ /NDF:20.1/23

Right Out: -705.545 $\pm$ 456.920  $\chi^2$ /NDF: 20.6/28

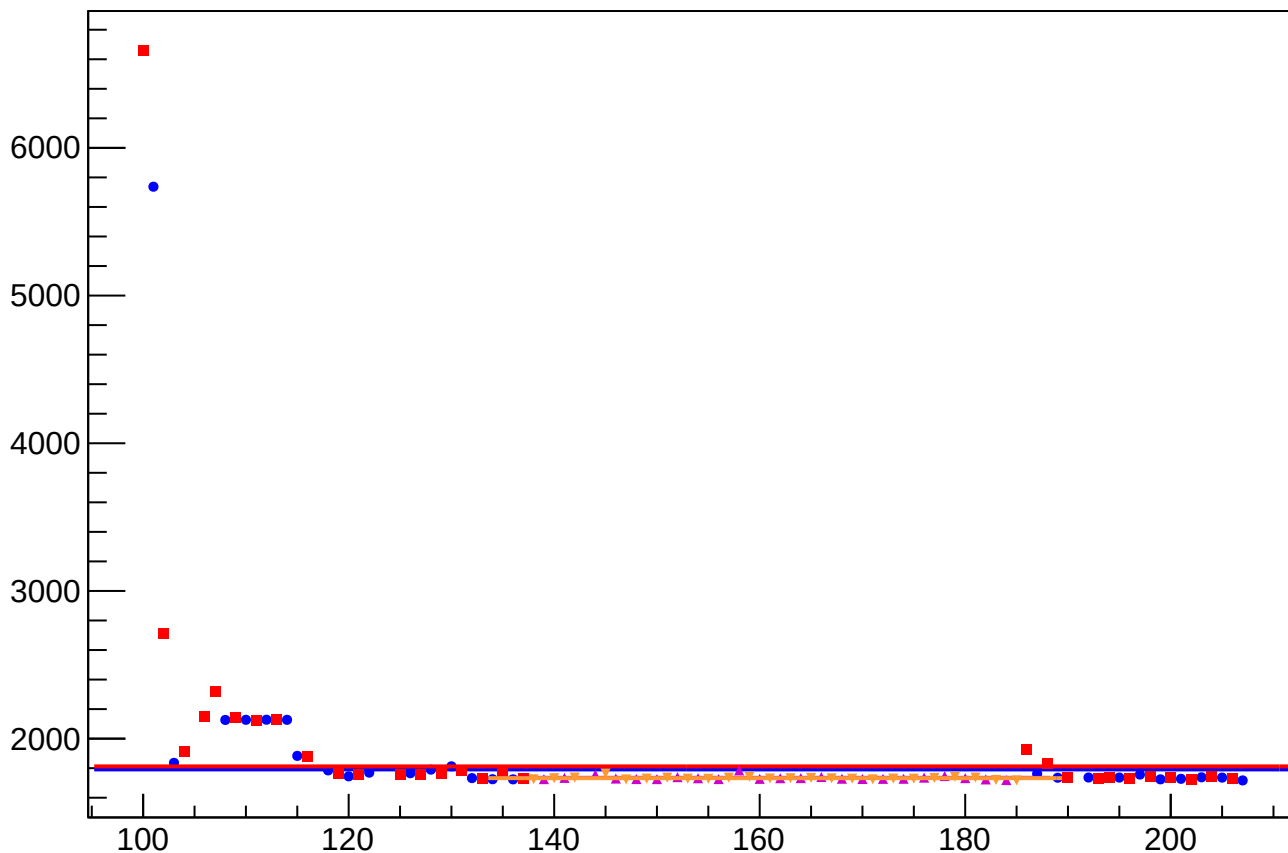
Left In: -137.162 $\pm$ 404.995  $\chi^2$ /NDF:29.6/22

+ sign 289.958 $\pm$ 305.088  $\chi^2$ /NDF: 39.3/49

All: -50.878 $\pm$ 215.016  $\chi^2$ /NDF: 92.8/101

- sign -387.236 $\pm$ 303.077  $\chi^2$ /NDF: 51.0/51

# dit\_asym\_us\_dd\_at1lr\_dd\_dd\_rms vs Slug



Right In: 1791.659+/-0.331  $\chi^2/\text{NDF}$ : 713872.1/25

Left Out: 1732.389+/-0.284  $\chi^2/\text{NDF}$ : 910.8/23

Right Out: 1811.989+/-0.323  $\chi^2/\text{NDF}$ : 330692.0/28

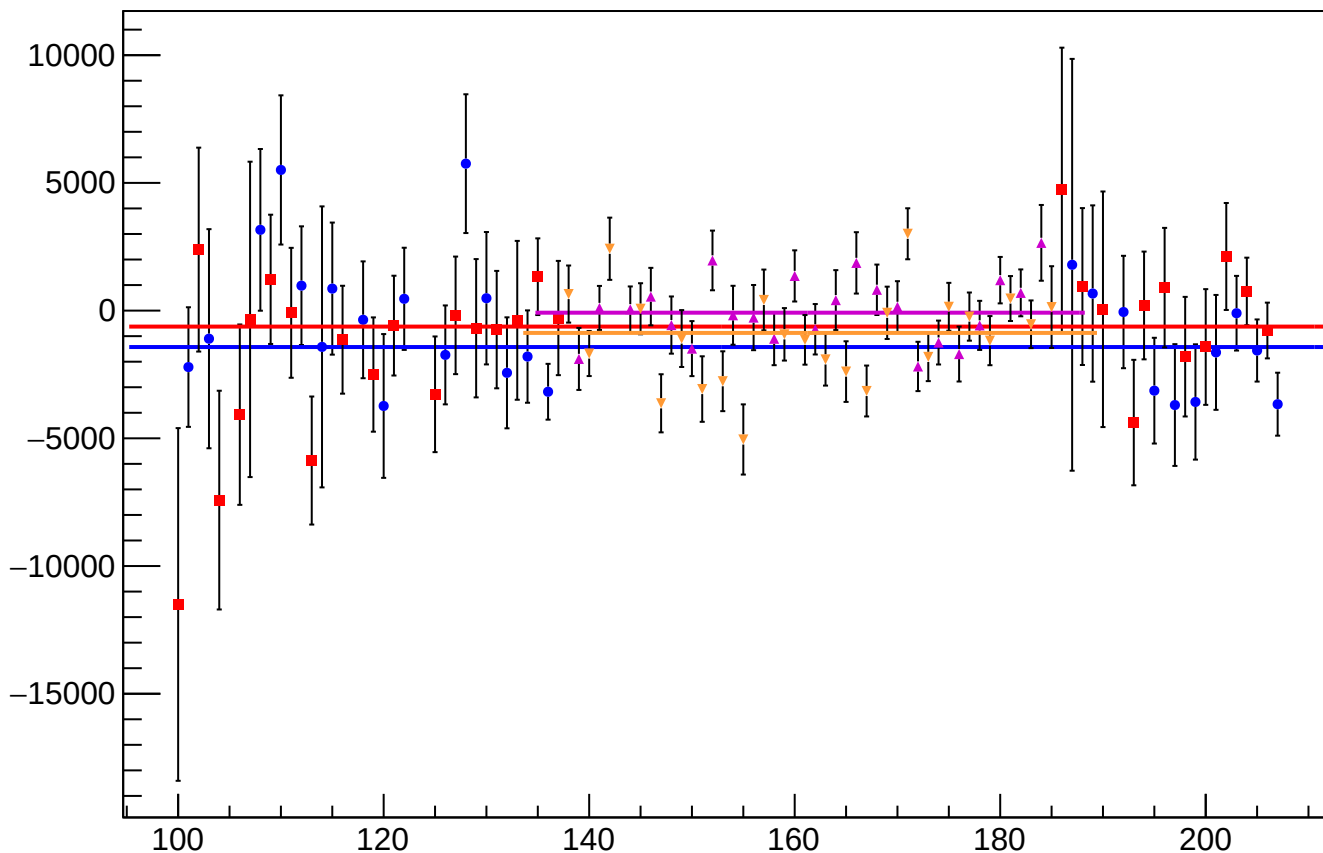
Left In: 1734.568+/-0.286  $\chi^2/\text{NDF}$ : 2215.7/22

+ sign 1757.533+/-0.216  $\chi^2/\text{NDF}$ : 733220.7/49

All: 1763.119+/-0.152  $\chi^2/\text{NDF}$ : 1099617.4/10

- sign 1768.631+/-0.214  $\chi^2/\text{NDF}$ : 365064.6/51

asym\_us\_dd\_at1lr\_dd\_dd\_dit\_correction\_mean vs Slug



Right In: -1426.169 $\pm$ 401.371  $\chi^2$ /NDF: 29.4/25

Left Out: -872.827 $\pm$ 214.008  $\chi^2$ /NDF:62.0/23

Right Out: -625.779 $\pm$ 421.337  $\chi^2$ /NDF: 22.7/28

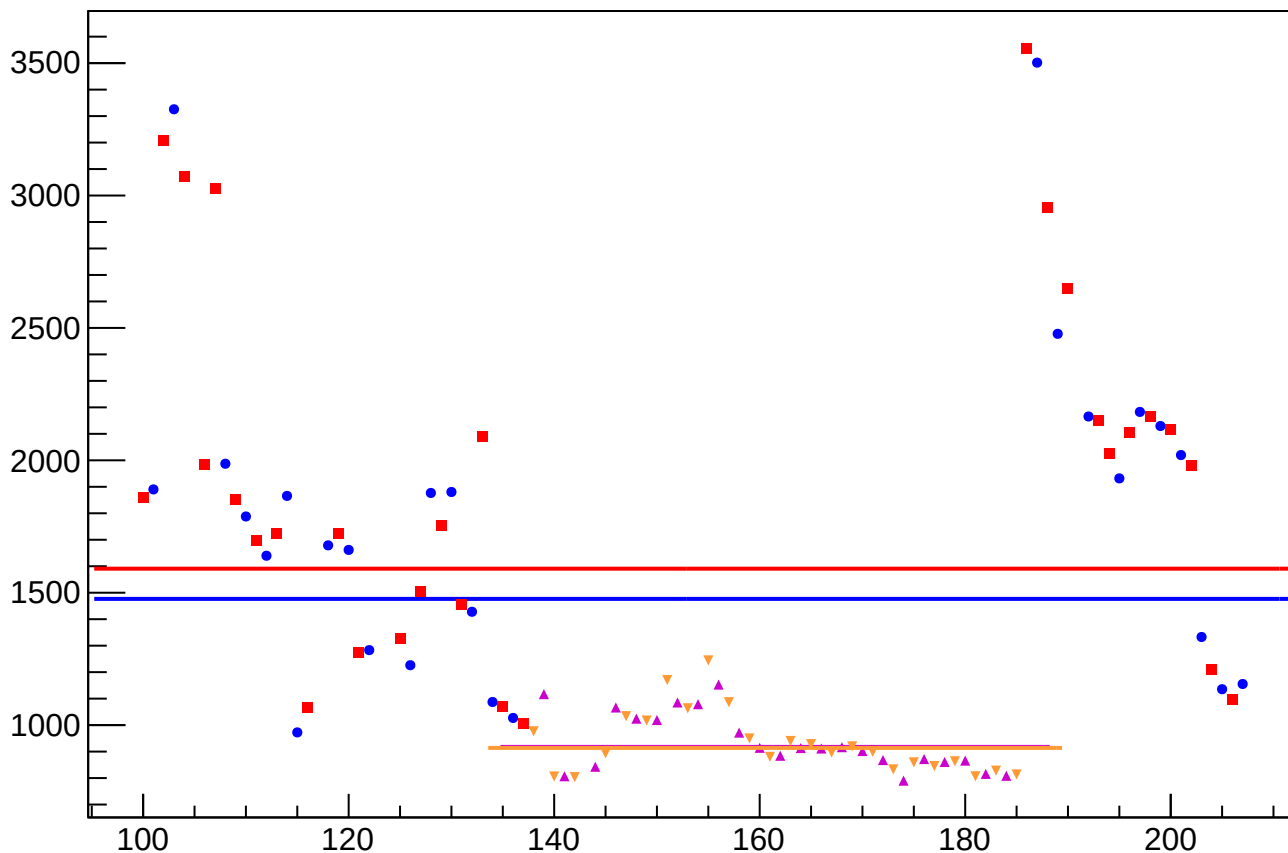
Left In: -81.519 $\pm$ 215.913  $\chi^2$ /NDF:30.0/22

+ sign -995.316 $\pm$ 188.841  $\chi^2$ /NDF: 92.9/49

All: -601.974 $\pm$ 134.686  $\chi^2$ /NDF: 155.7/101

- sign -194.717 $\pm$ 192.153  $\chi^2$ /NDF: 54.0/51

asym\_us\_dd\_at1lr\_dd\_dd\_dit\_correction\_rms vs Slug



Right In: 1476.682 $\pm$ 0.284  $\chi^2$ /NDF: 2564907.3/25

Left Out: 913.899 $\pm$ 0.151  $\chi^2$ /NDF: 462850.2/23

Right Out: 1590.722 $\pm$ 0.298  $\chi^2$ /NDF: 3298975.5/28

Left In: 917.674 $\pm$ 0.153  $\chi^2$ /NDF: 430498.5/22

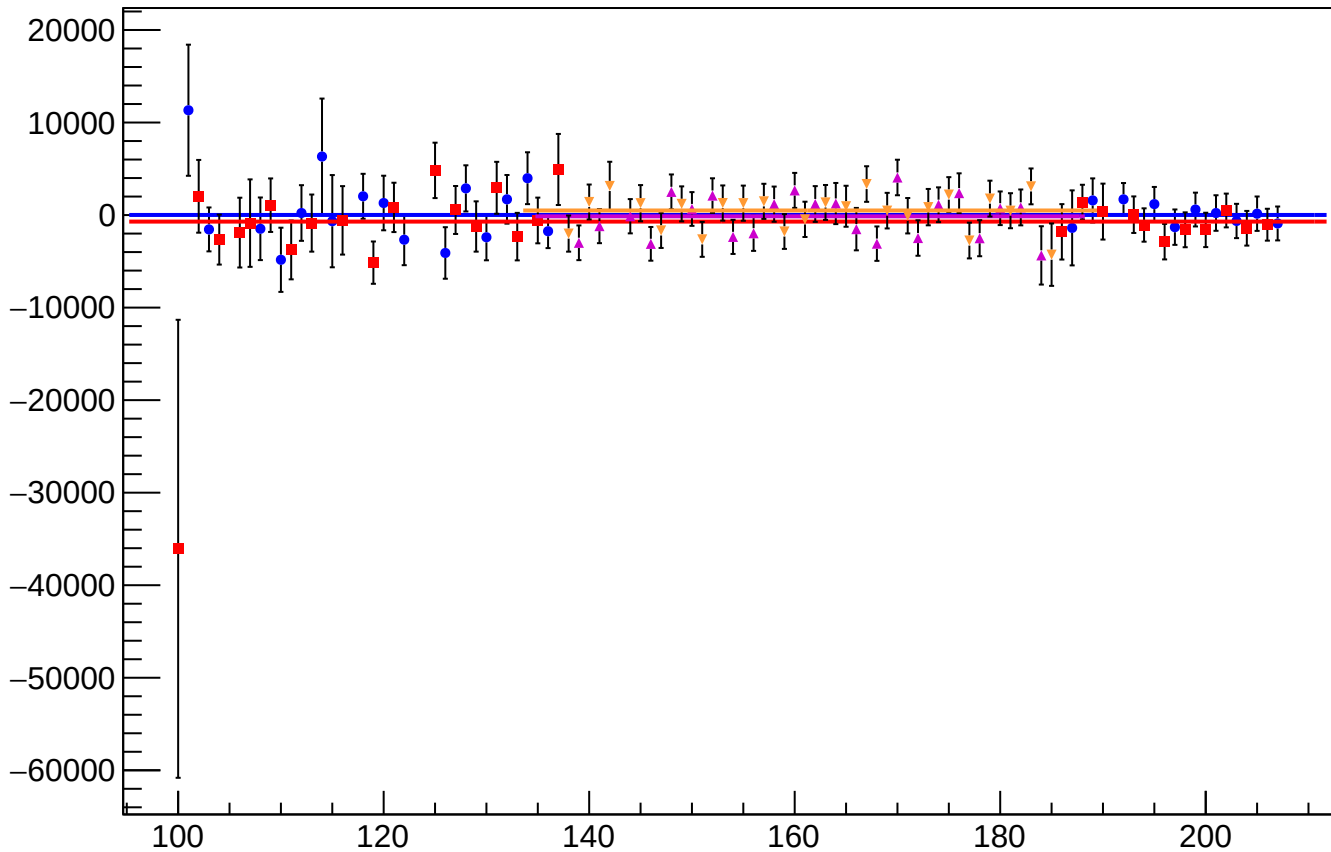
+ sign 1038.478 $\pm$ 0.134  $\chi^2$ /NDF: 6089419.8/49

All: 1047.901 $\pm$ 0.095  $\chi^2$ /NDF: 13871021.8/1

- sign 1057.658 $\pm$ 0.136  $\chi^2$ /NDF: 7771465.1/51



eigen\_dit\_asym\_us\_dd\_at1lr\_dd\_dd\_mean vs Slug



Right In:  $11.811 \pm 468.410$   $\chi^2/\text{NDF}$ : 18.6/25

Left Out:  $494.897 \pm 402.069$   $\chi^2/\text{NDF}$ : 20.1/23

Right Out:  $-705.545 \pm 456.920$   $\chi^2/\text{NDF}$ : 20.6/28

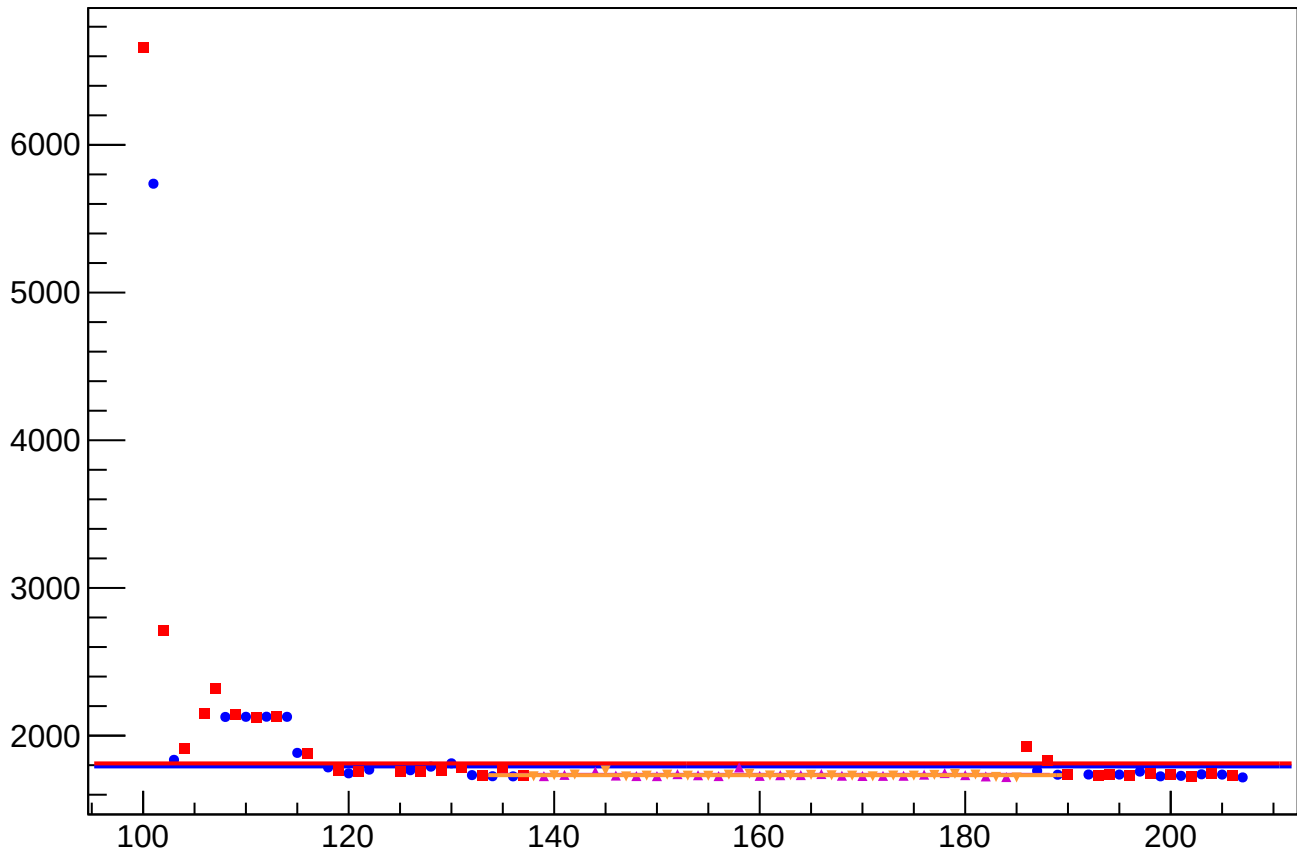
Left In:  $-137.163 \pm 404.995$   $\chi^2/\text{NDF}$ : 29.6/22

+ sign  $289.958 \pm 305.088$   $\chi^2/\text{NDF}$ : 39.3/49

All:  $-50.878 \pm 215.016$   $\chi^2/\text{NDF}$ : 92.8/101

- sign  $-387.236 \pm 303.077$   $\chi^2/\text{NDF}$ : 51.0/51

# eigen\_dit\_asym\_us\_dd\_at1lr\_dd\_dd\_rms vs Slug



Right In: 1791.659+/-0.331  $\chi^2/\text{NDF}$ : 713872.1/25

Left Out: 1732.389+/-0.284  $\chi^2/\text{NDF}$ : 910.8/23

Right Out: 1811.989+/-0.323  $\chi^2/\text{NDF}$ : 330691.7/28

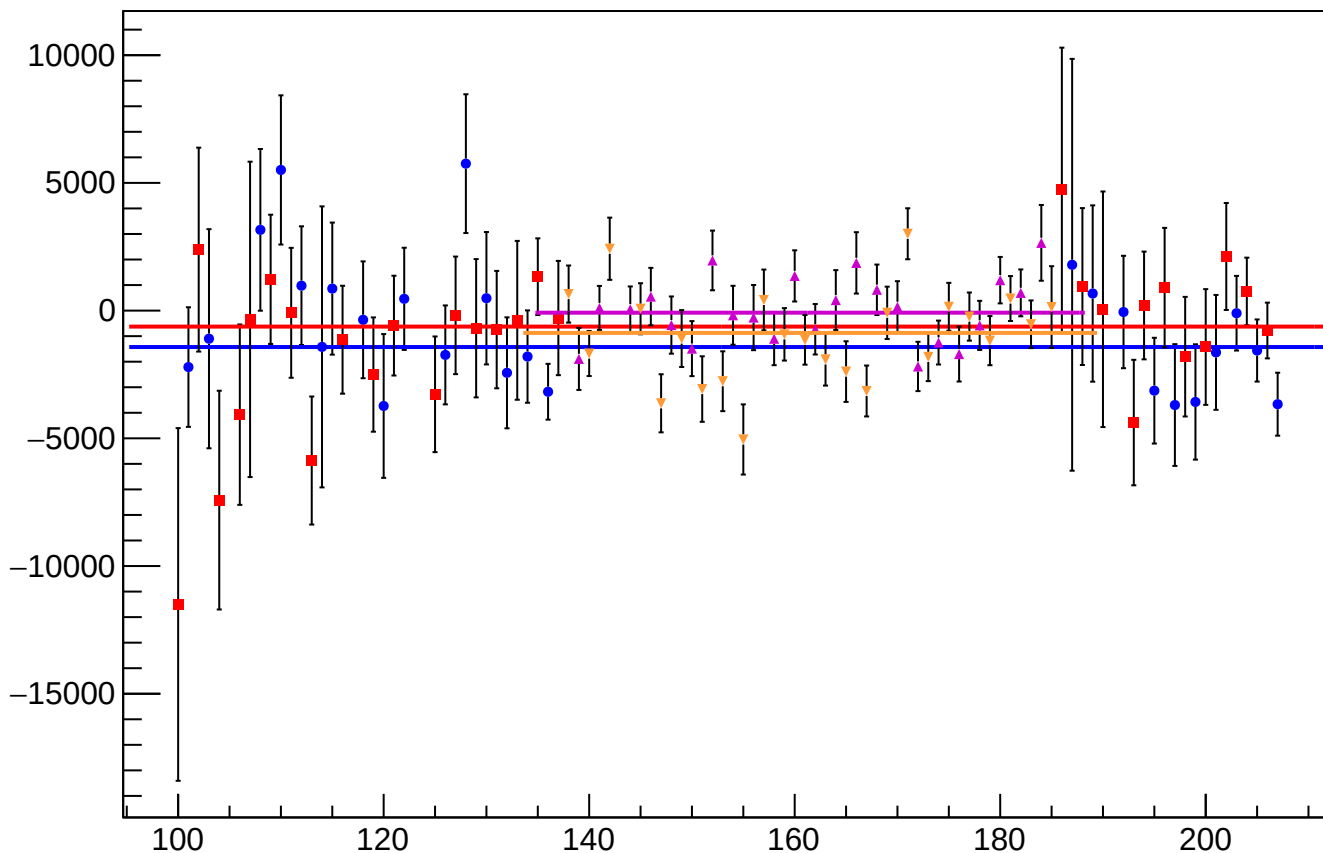
Left In: 1734.568+/-0.286  $\chi^2/\text{NDF}$ : 2215.7/22

+ sign 1757.533+/-0.216  $\chi^2/\text{NDF}$ : 733220.7/49

All: 1763.119+/-0.152  $\chi^2/\text{NDF}$ : 1099617.0/10

- sign 1768.631+/-0.214  $\chi^2/\text{NDF}$ : 365064.3/51

asym\_us\_dd\_at1lr\_dd\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In: -1426.164 $\pm$ 401.370  $\chi^2$ /NDF: 29.4/25

Left Out: -872.826 $\pm$ 214.008  $\chi^2$ /NDF:62.0/23

Right Out: -625.781 $\pm$ 421.337  $\chi^2$ /NDF: 22.7/28

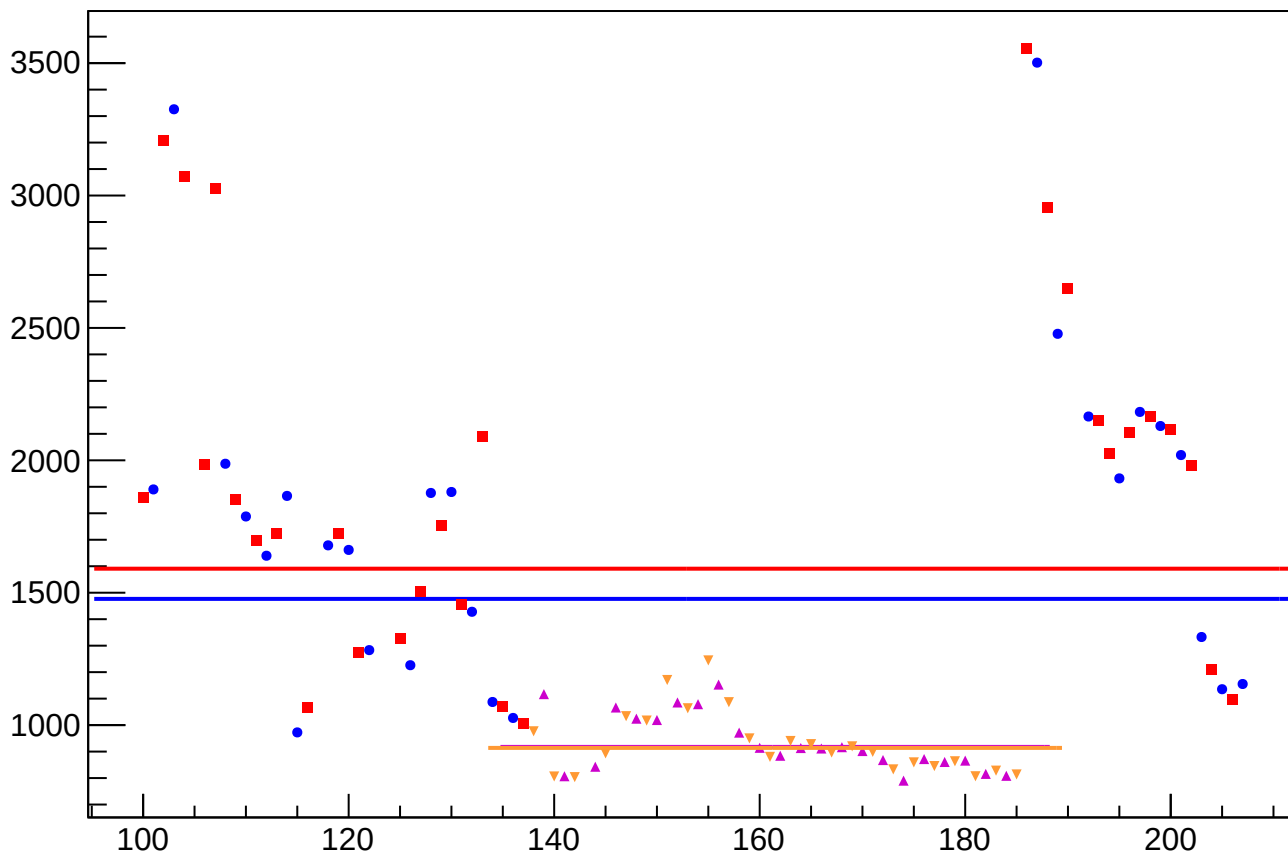
Left In: -81.518 $\pm$ 215.913  $\chi^2$ /NDF:30.0/22

+ sign -995.314 $\pm$ 188.841  $\chi^2$ /NDF: 92.9/49

All: -601.973 $\pm$ 134.686  $\chi^2$ /NDF: 155.7/101

- sign -194.717 $\pm$ 192.152  $\chi^2$ /NDF: 54.0/51

asym\_us\_dd\_at1lr\_dd\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 1476.681 $\pm$ 0.284  $\chi^2$ /NDF: 2564903.0/25

Left Out: 913.898 $\pm$ 0.151  $\chi^2$ /NDF: 462858.6/23

Right Out: 1590.720 $\pm$ 0.298  $\chi^2$ /NDF: 3298983.1/28

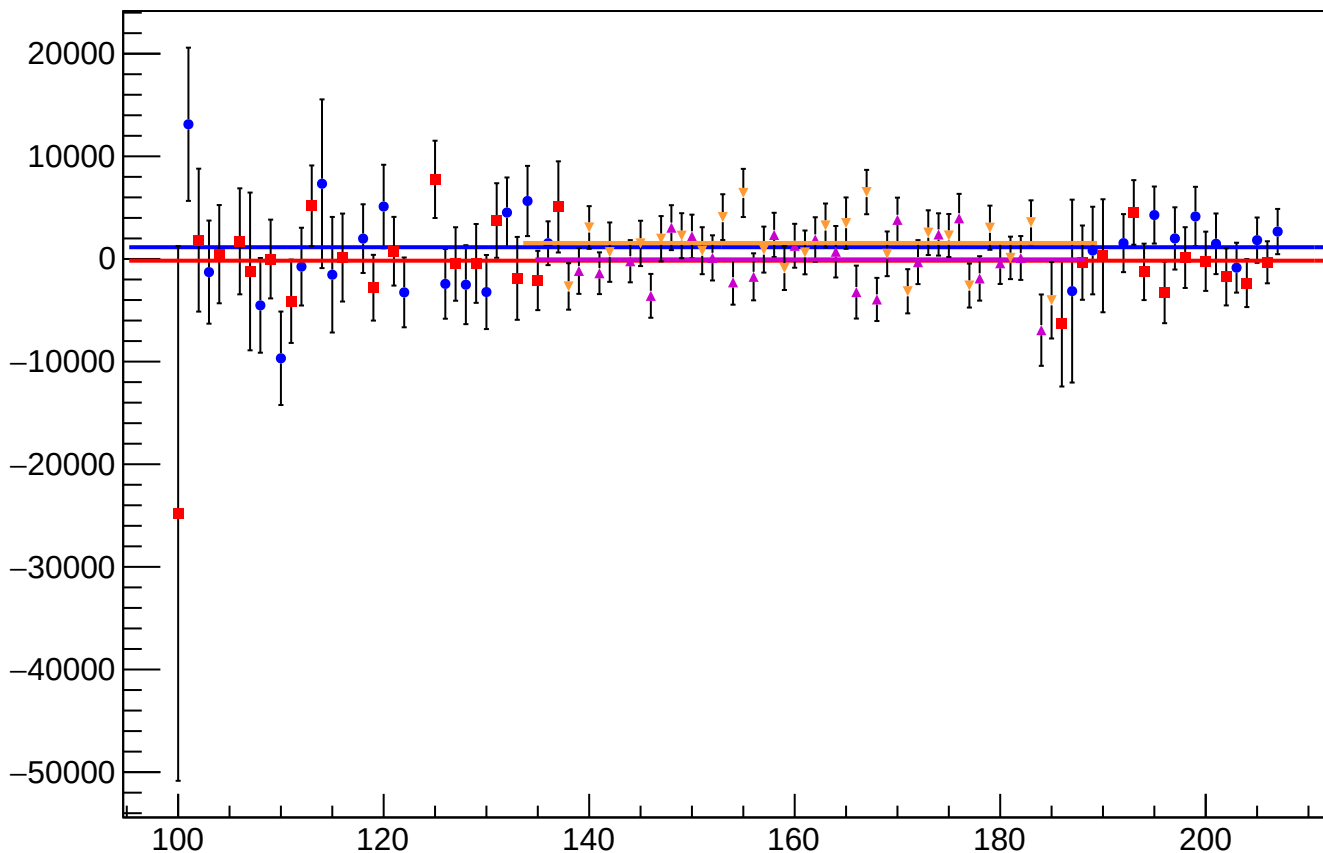
Left In: 917.674 $\pm$ 0.153  $\chi^2$ /NDF: 430509.1/22

+ sign 1038.477 $\pm$ 0.134  $\chi^2$ /NDF: 6089420.5/49

All: 1047.901 $\pm$ 0.095  $\chi^2$ /NDF: 13871030.8/1

- sign 1057.657 $\pm$ 0.136  $\chi^2$ /NDF: 7771473.5/51

# asym\_us\_dd\_at1lr\_dd\_dd\_mean vs Slug



Right In: 1144.992 $\pm$ 649.241  $\chi^2$ /NDF: 23.9/25

Left Out: 1561.357 $\pm$ 456.883  $\chi^2$ /NDF:31.2/23

Right Out: -167.108 $\pm$ 653.286  $\chi^2$ /NDF: 18.0/28

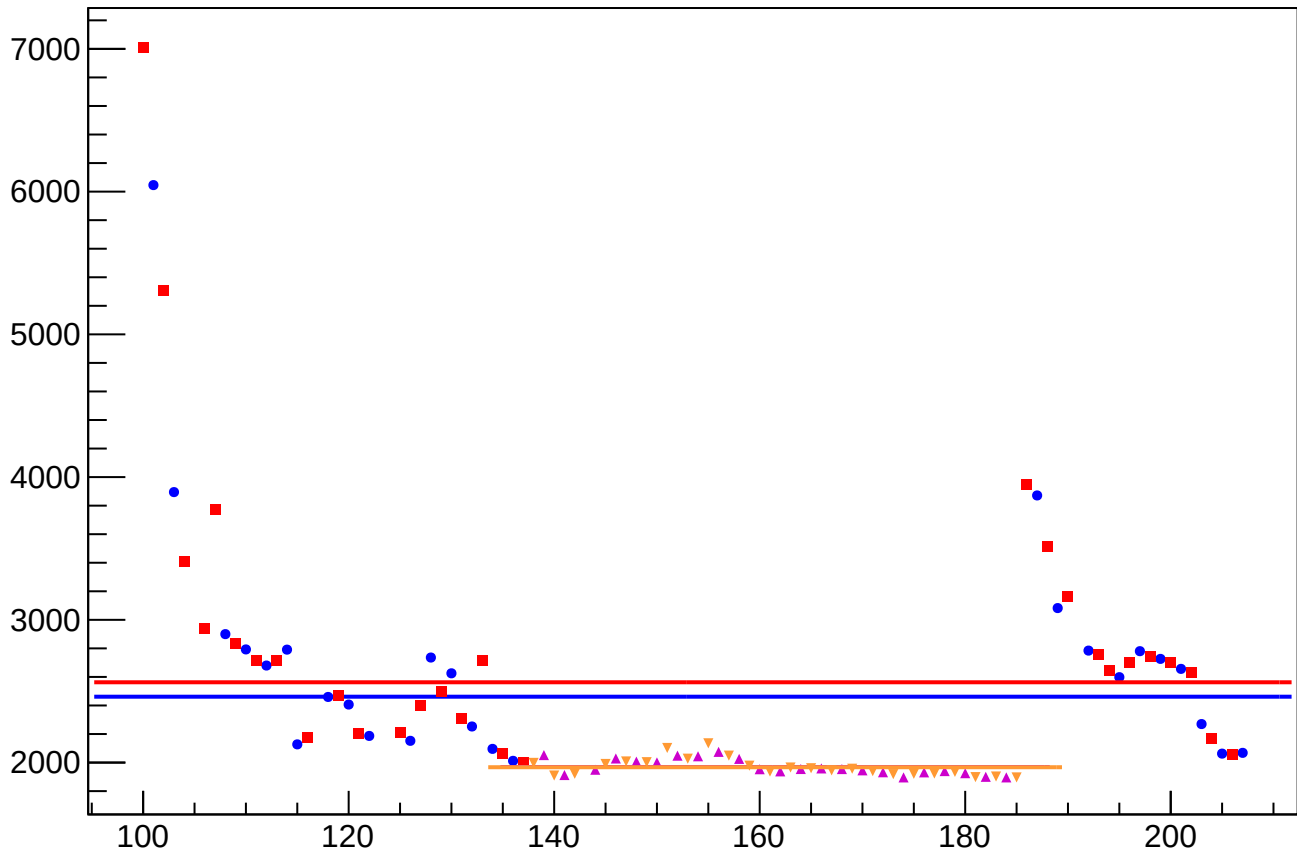
Left In: -39.885 $\pm$ 459.938  $\chi^2$ /NDF:27.8/22

+ sign 1423.456 $\pm$ 373.639  $\chi^2$ /NDF: 55.4/49

All: 675.608 $\pm$ 265.062  $\chi^2$ /NDF: 109.2/101

- sign -82.047 $\pm$ 376.081  $\chi^2$ /NDF: 45.8/51

# asym\_us\_dd\_at1lr\_dd\_dd\_rms vs Slug



Right In: 2461.510+/-0.459  $\chi^2/\text{NDF}$ : 1145307.2/25

Left Out: 1967.416+/-0.323  $\chi^2/\text{NDF}$ : 34217.6/23

+ sign 2131.061+/-0.264  $\chi^2/\text{NDF}$ : 1954225.7/49

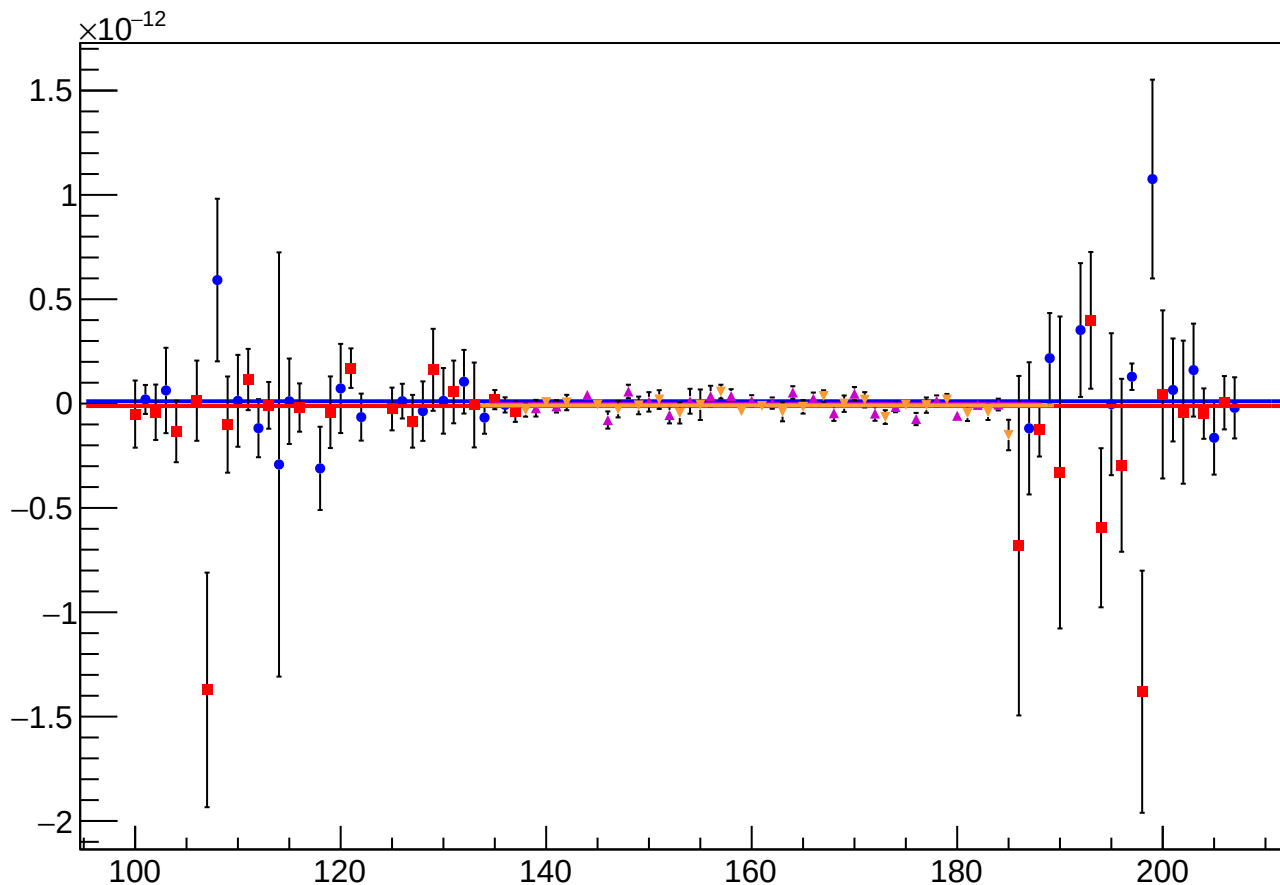
Right Out: 2562.543+/-0.462  $\chi^2/\text{NDF}$ : 1141686.6/28

All: 2148.276+/-0.187  $\chi^2/\text{NDF}$ : 4234708.4/10

- sign 2165.717+/-0.266  $\chi^2/\text{NDF}$ : 2271935.6/51

Left In: 1969.022+/-0.325  $\chi^2/\text{NDF}$ : 26523.0/22

asym\_us\_dd\_at1lr\_dd\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 20.3/25

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:20.8/23

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 25.0/28

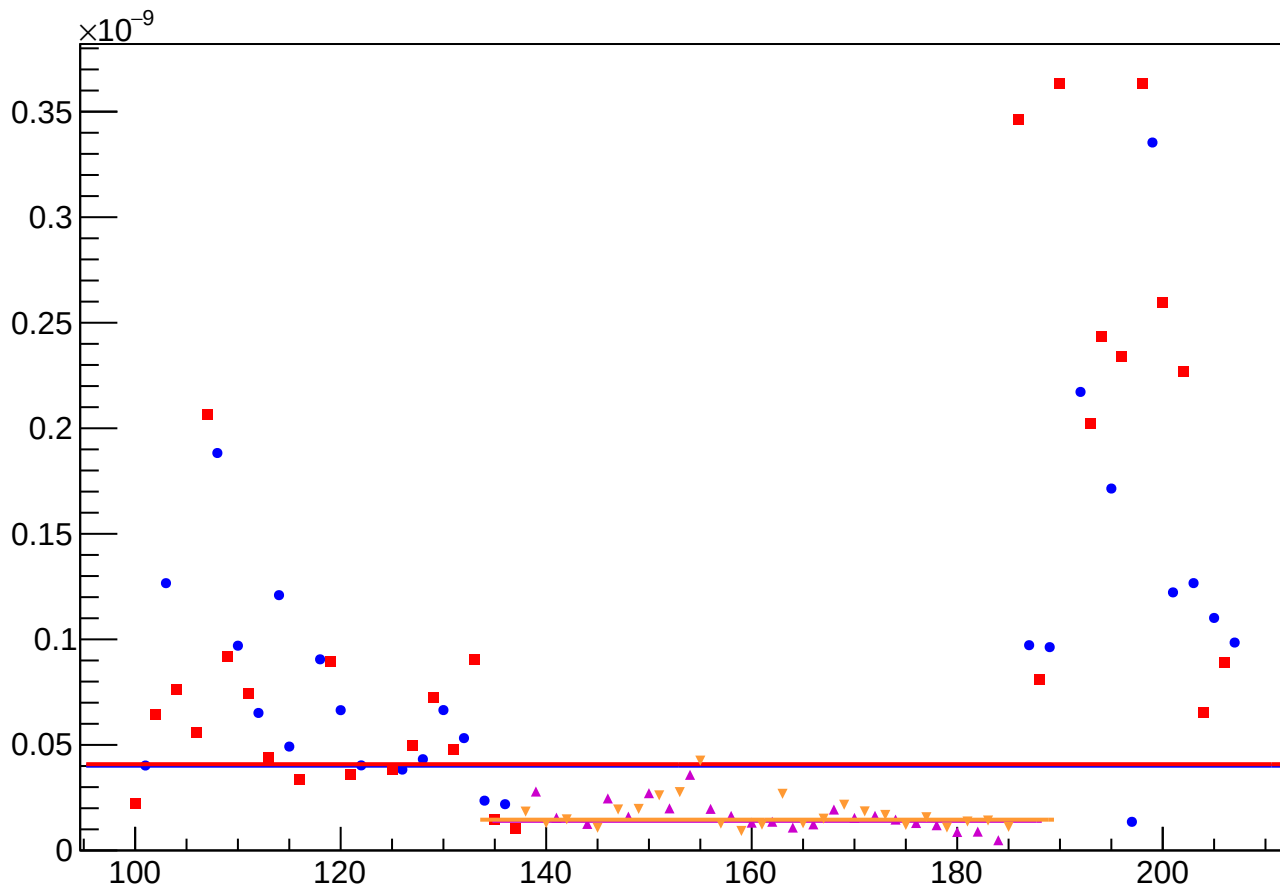
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:38.9/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 41.8/49

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 106.2/101

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 64.1/51

asym\_us\_dd\_at1lr\_dd\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 5069166.9/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1178225.5/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 6864987.5/28

Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1430937.9/22

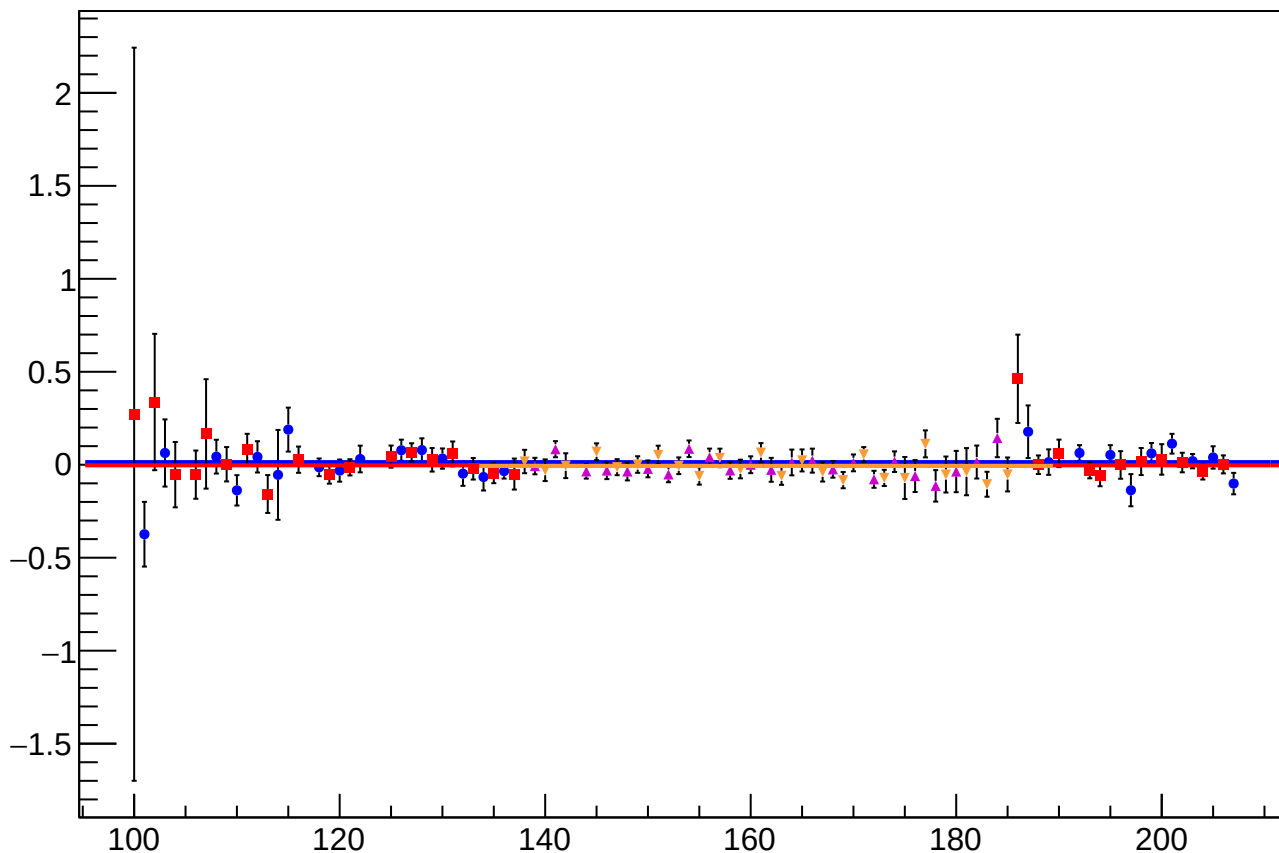
+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 8751216.3/49

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 19624372.2/101

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 10860623.8/51



asym\_us\_dd\_at1lr\_dd\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.014 \pm 0.012$   $\chi^2/\text{NDF}$ : 32.7/25

Left Out:  $-0.007 \pm 0.011$   $\chi^2/\text{NDF}$ : 23.9/23

Right Out:  $-0.003 \pm 0.012$   $\chi^2/\text{NDF}$ : 17.9/28

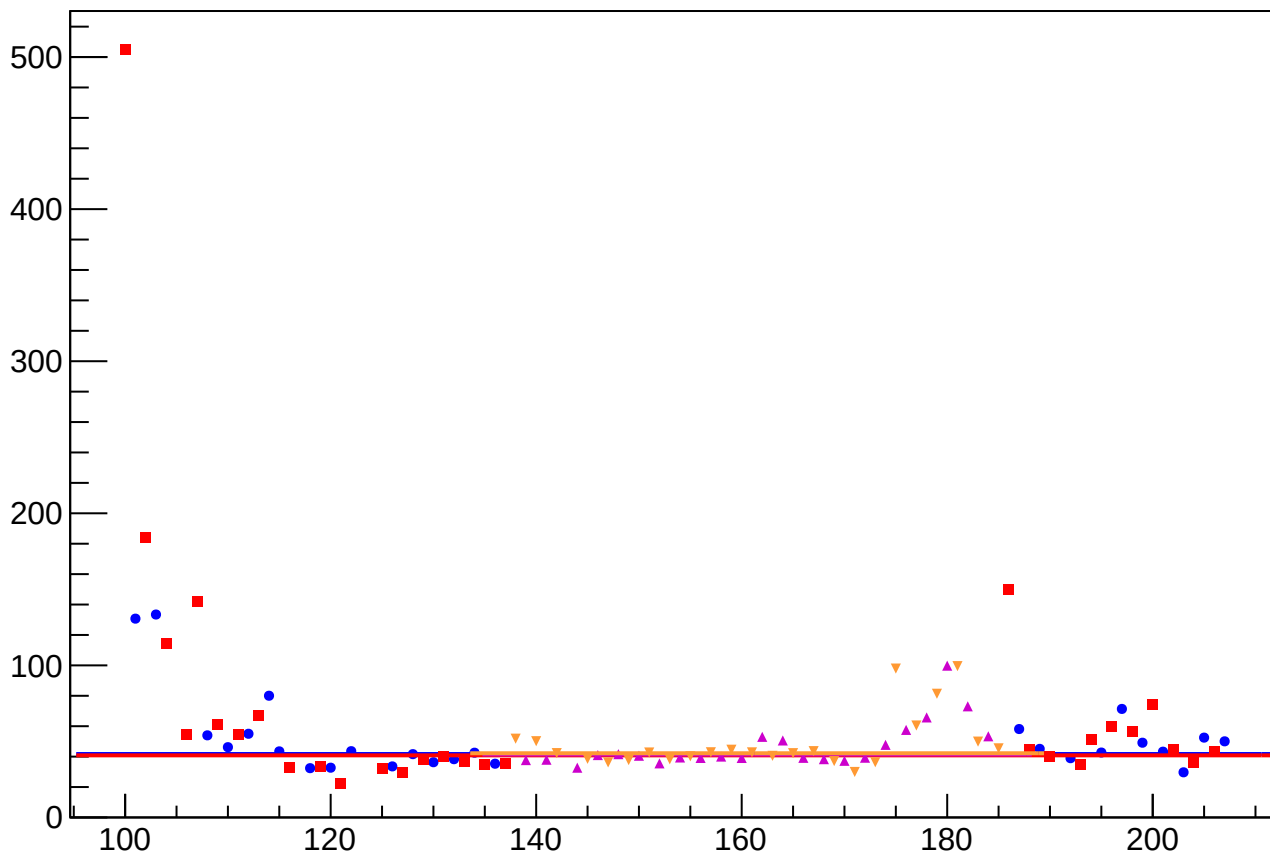
Left In:  $-0.006 \pm 0.011$   $\chi^2/\text{NDF}$ : 20.1/22

+ sign  $0.003 \pm 0.008$   $\chi^2/\text{NDF}$ : 58.2/49

All:  $-0.001 \pm 0.006$   $\chi^2/\text{NDF}$ : 96.7/101

- sign  $-0.005 \pm 0.008$   $\chi^2/\text{NDF}$ : 38.0/51

asym\_us\_dd\_at1lr\_dd\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 41.704 $\pm$ 0.009  $\chi^2$ /NDF: 2038212.6/25

Left Out: 42.208 $\pm$ 0.008  $\chi^2$ /NDF: 1819371.1/23

Right Out: 40.843 $\pm$ 0.008  $\chi^2$ /NDF: 3082824.4/28

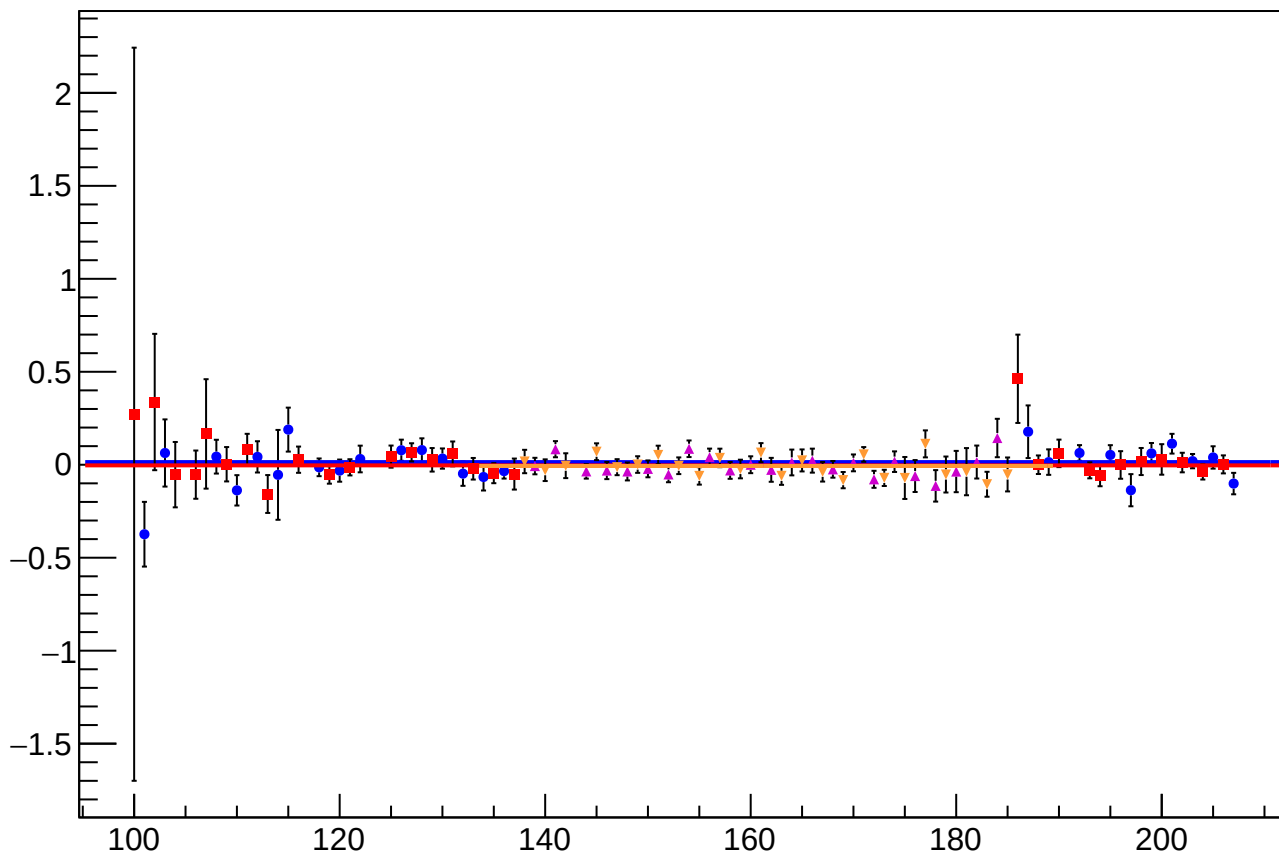
Left In: 41.421 $\pm$ 0.008  $\chi^2$ /NDF: 1412177.5/22

+ sign 41.985 $\pm$ 0.006  $\chi^2$ /NDF: 3859474.7/49

All: 41.567 $\pm$ 0.004  $\chi^2$ /NDF: 8367369.1/101

- sign 41.164 $\pm$ 0.006  $\chi^2$ /NDF: 4497576.8/51

asym\_us\_dd\_at1lr\_dd\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.014 $\pm$ 0.012  $\chi^2$ /NDF: 32.7/25

Left Out: -0.007 $\pm$ 0.011  $\chi^2$ /NDF: 23.9/23

Right Out: -0.003 $\pm$ 0.012  $\chi^2$ /NDF: 17.9/28

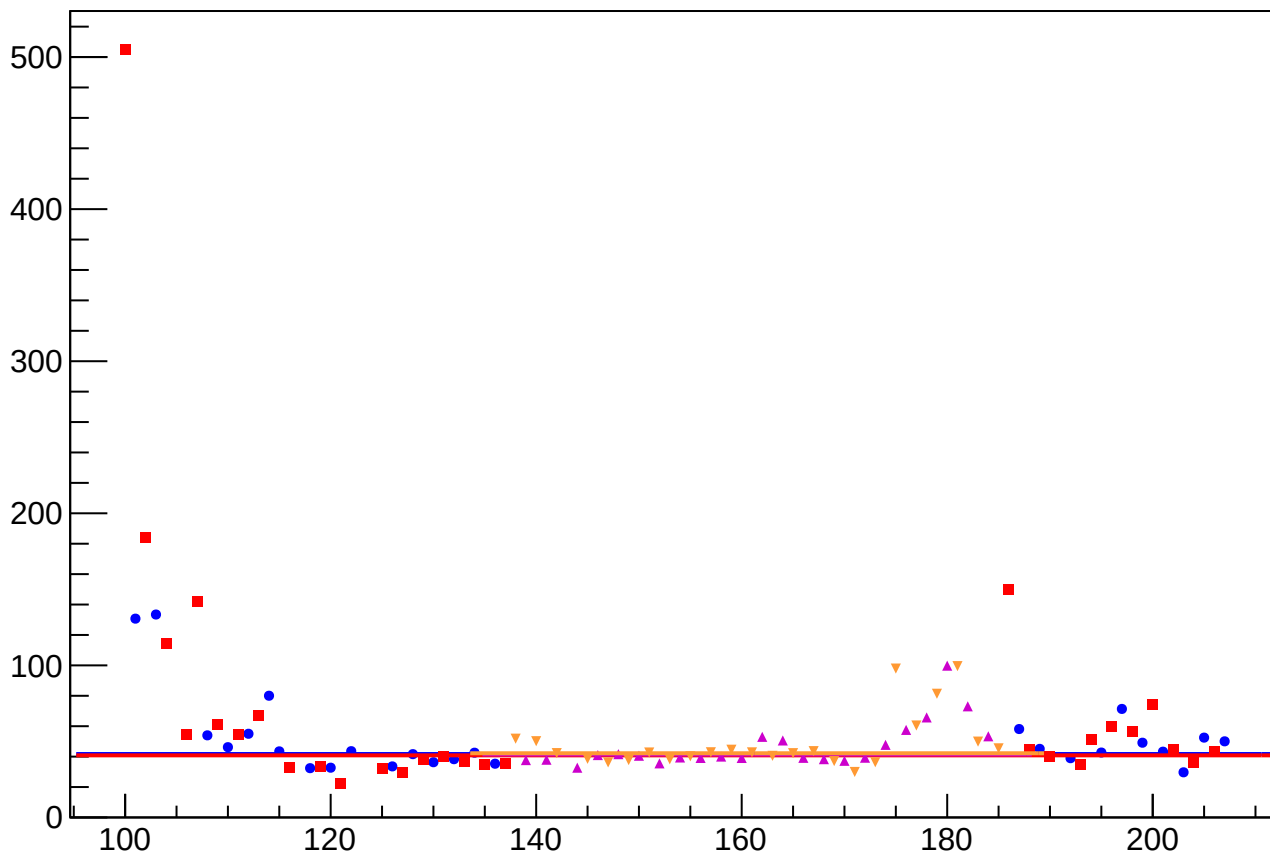
Left In: -0.006 $\pm$ 0.011  $\chi^2$ /NDF: 20.1/22

+ sign 0.003 $\pm$ 0.008  $\chi^2$ /NDF: 58.2/49

All: -0.001 $\pm$ 0.006  $\chi^2$ /NDF: 96.7/101

- sign -0.005 $\pm$ 0.008  $\chi^2$ /NDF: 38.0/51

asym\_us\_dd\_at1lr\_dd\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 41.704 $\pm$ 0.009  $\chi^2$ /NDF: 2038212.6/25

Left Out: 42.208 $\pm$ 0.008  $\chi^2$ /NDF: 1819371.1/23

Right Out: 40.843 $\pm$ 0.008  $\chi^2$ /NDF: 3082824.4/28

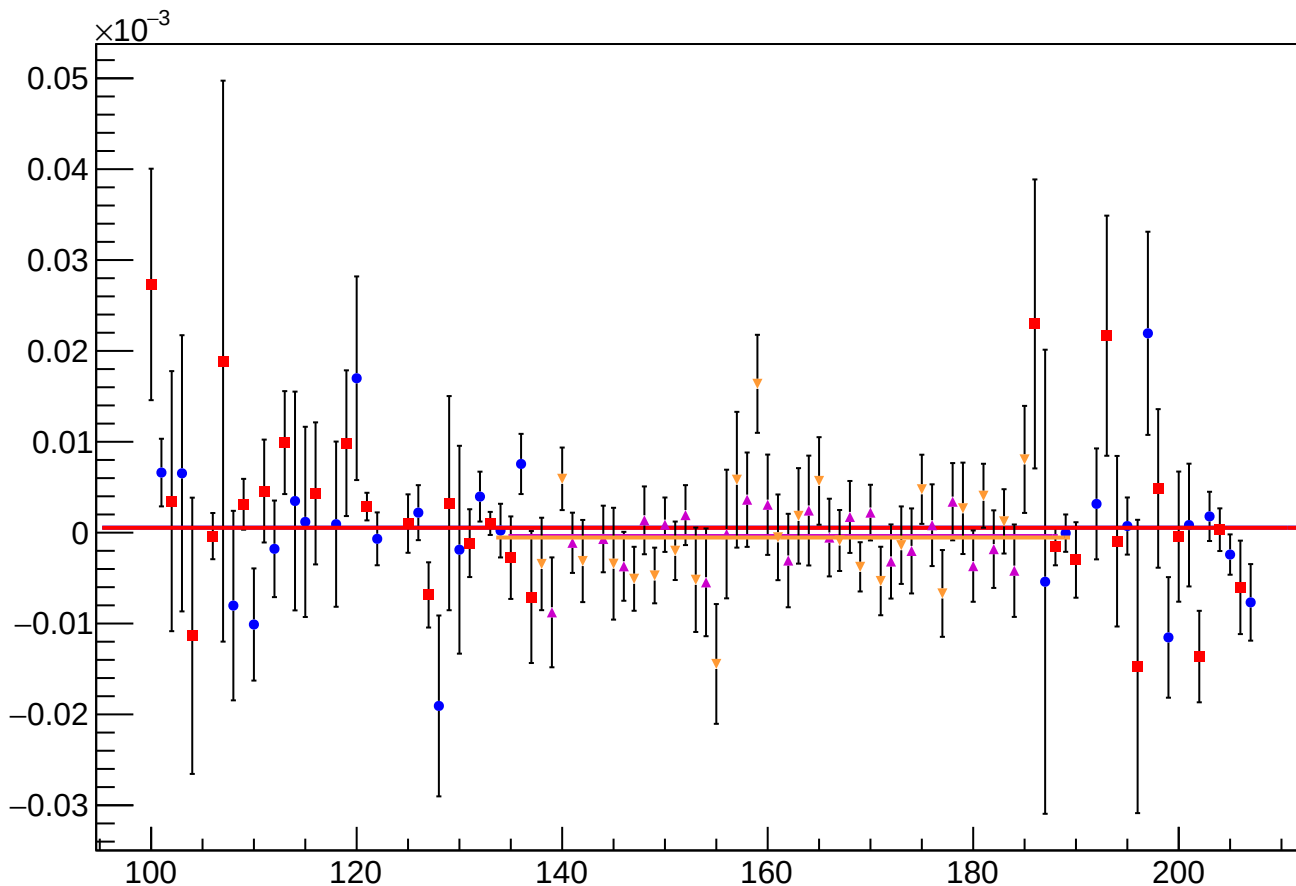
Left In: 41.421 $\pm$ 0.008  $\chi^2$ /NDF: 1412177.5/22

+ sign 41.985 $\pm$ 0.006  $\chi^2$ /NDF: 3859474.7/49

All: 41.567 $\pm$ 0.004  $\chi^2$ /NDF: 8367369.1/101

- sign 41.164 $\pm$ 0.006  $\chi^2$ /NDF: 4497576.8/51

asym\_us\_dd\_at1lr\_dd\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 32.4/25

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:36.8/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 36.9/28

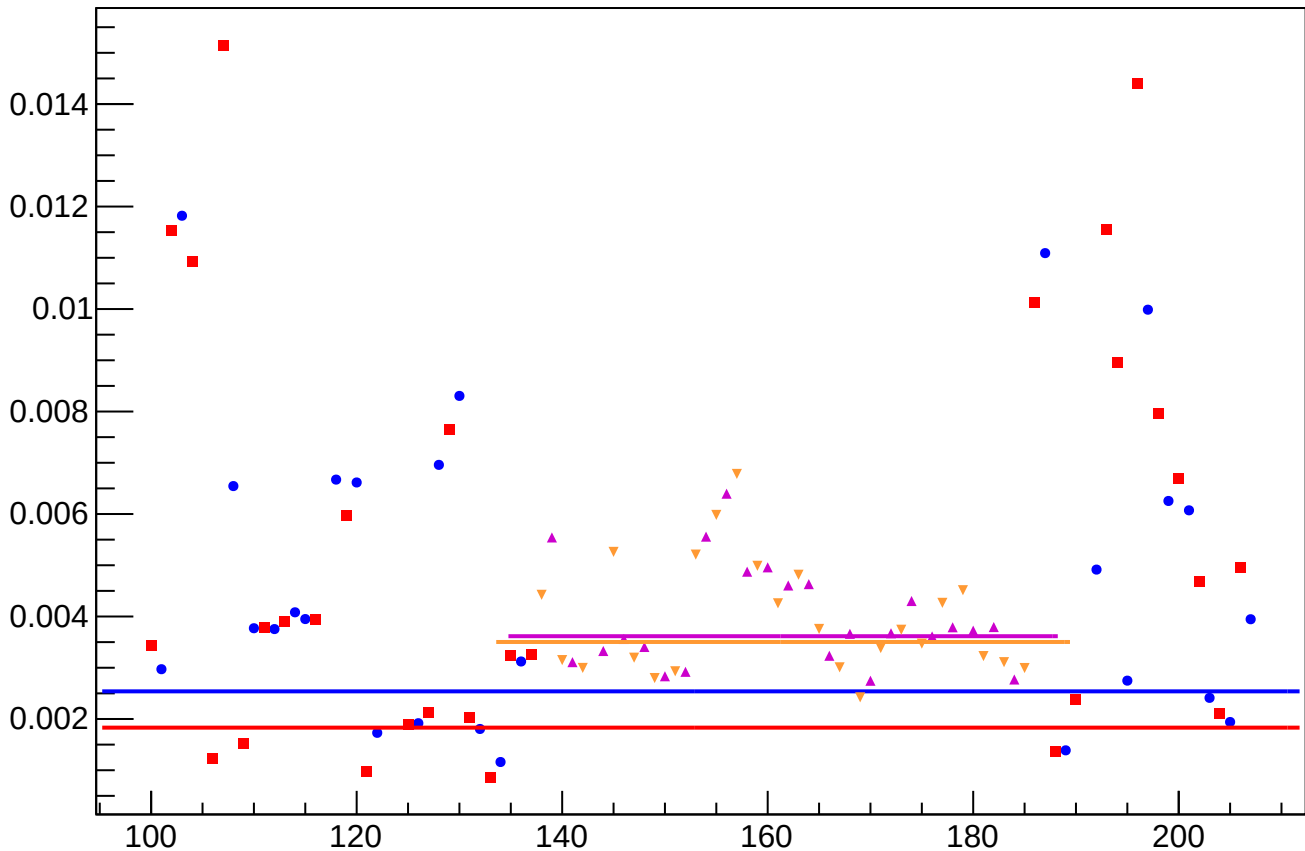
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:9.7/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 70.2/49

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 117.4/101

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 47.2/51

asym\_us\_dd\_at1lr\_dd\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 7381171.2/25

Left Out: 0.004 $\pm$ 0.000  $\chi^2$ /NDF:2190693.7/23

Right Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 13427344.3/28

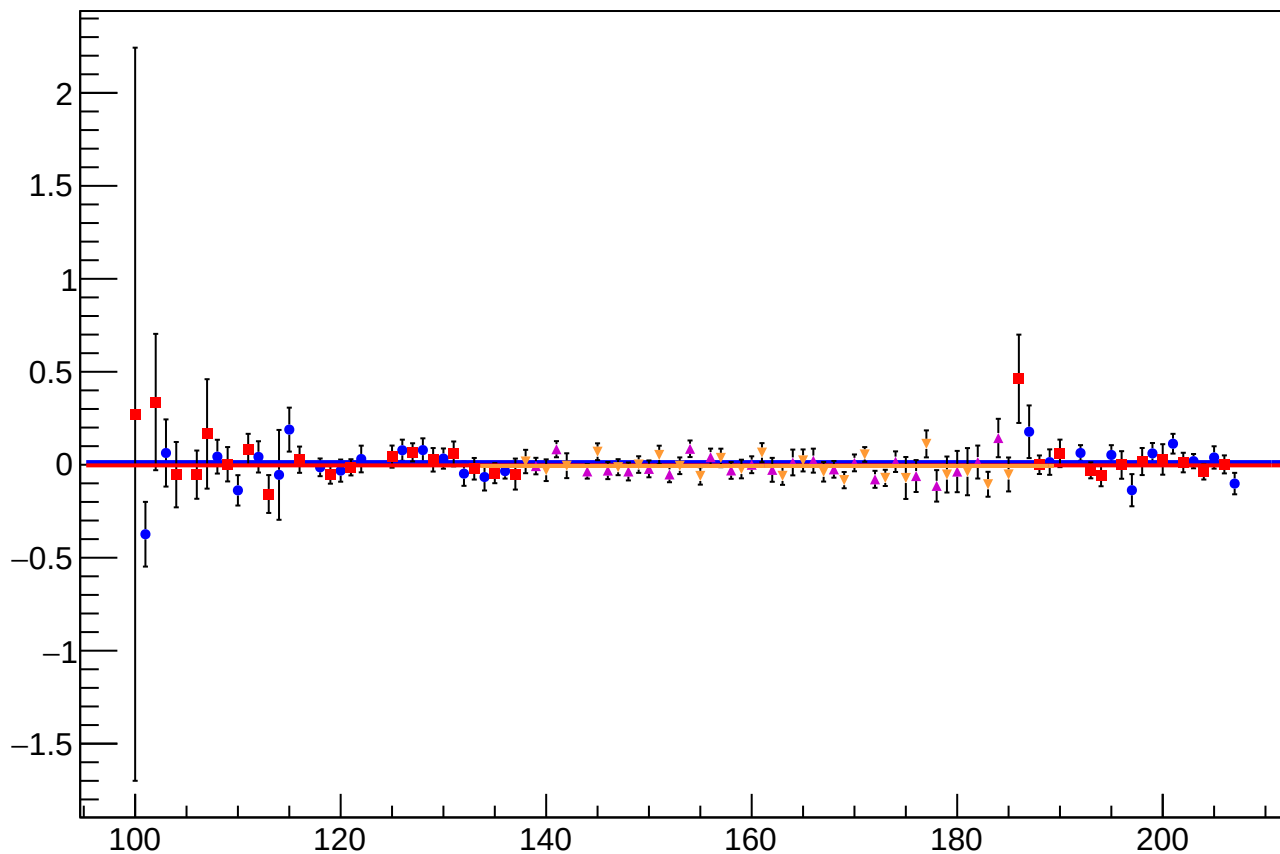
Left In: 0.004 $\pm$ 0.000  $\chi^2$ /NDF:1668896.2/22

+ sign 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 10953184.5/49

All: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 32345196.5/101

- sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 20483751.0/51

asym\_us\_dd\_at1lr\_dd\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.014 $\pm$ 0.012  $\chi^2$ /NDF: 32.7/25

Left Out: -0.007 $\pm$ 0.011  $\chi^2$ /NDF: 23.9/23

Right Out: -0.003 $\pm$ 0.012  $\chi^2$ /NDF: 17.9/28

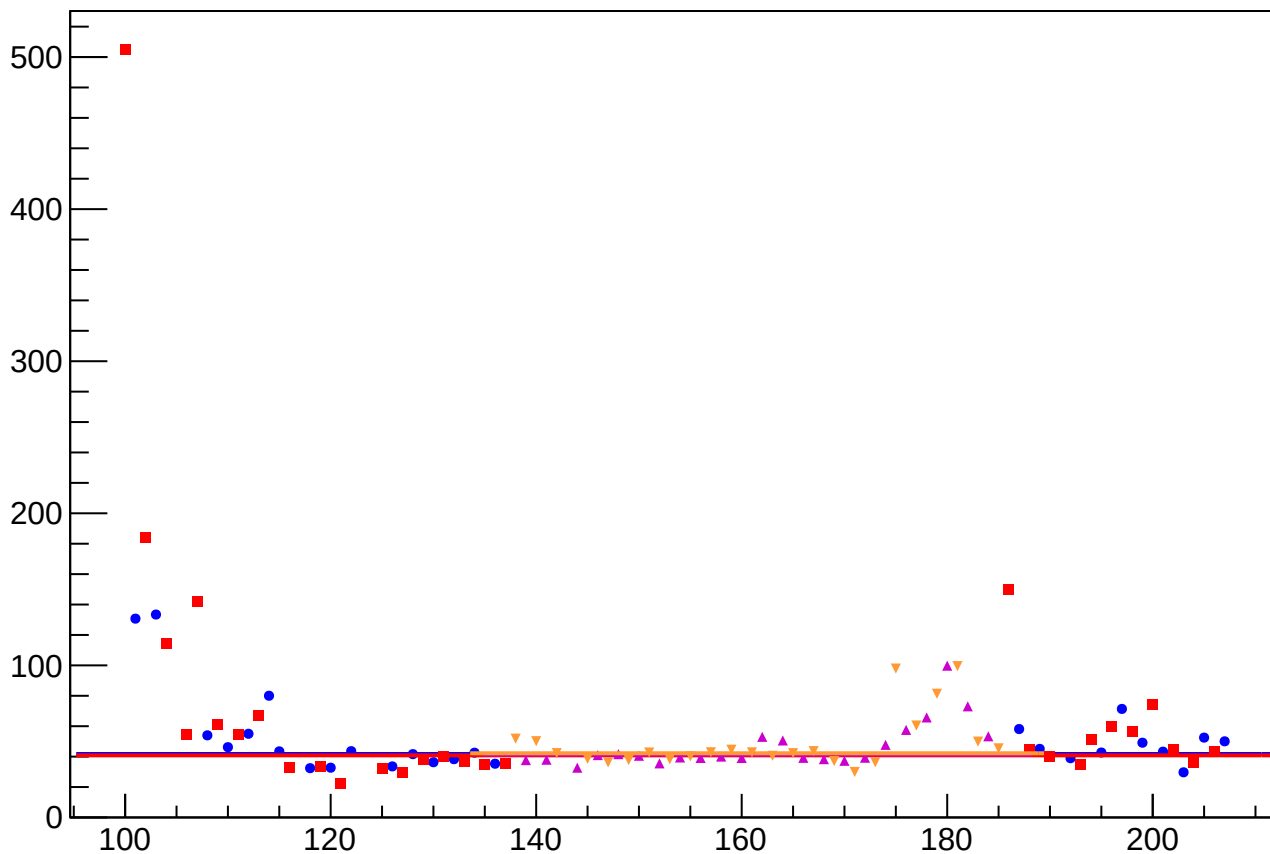
Left In: -0.006 $\pm$ 0.011  $\chi^2$ /NDF: 20.1/22

+ sign 0.003 $\pm$ 0.008  $\chi^2$ /NDF: 58.2/49

All: -0.001 $\pm$ 0.006  $\chi^2$ /NDF: 96.7/101

- sign -0.005 $\pm$ 0.008  $\chi^2$ /NDF: 38.0/51

asym\_us\_dd\_at1lr\_dd\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 41.704 $\pm$ 0.009  $\chi^2$ /NDF: 2038115.5/25

Left Out: 42.208 $\pm$ 0.008  $\chi^2$ /NDF: 1819378.3/23

Right Out: 40.842 $\pm$ 0.008  $\chi^2$ /NDF: 3083019.7/28

Left In: 41.421 $\pm$ 0.008  $\chi^2$ /NDF: 1412111.4/22

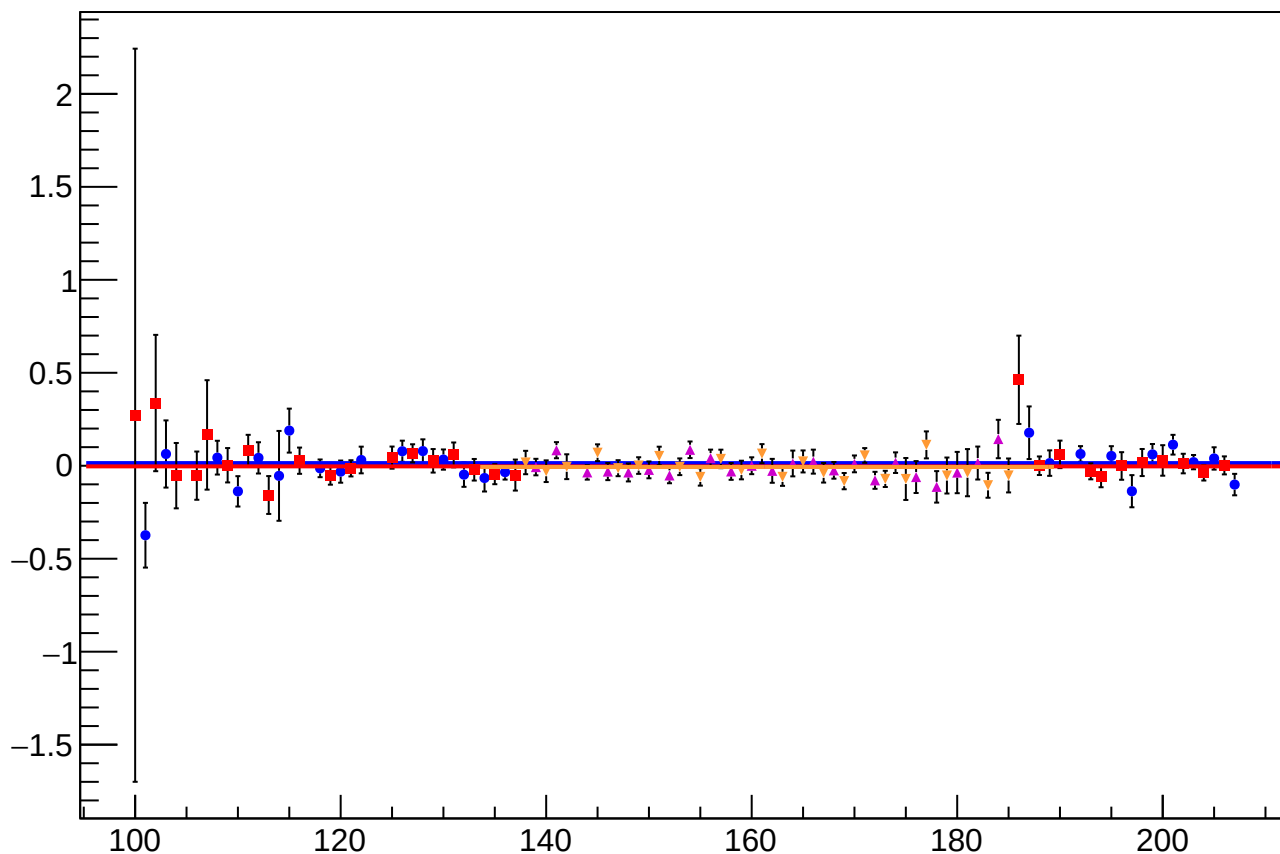
+ sign 41.984 $\pm$ 0.006  $\chi^2$ /NDF: 3859380.3/49

All: 41.567 $\pm$ 0.004  $\chi^2$ /NDF: 8367419.2/101

- sign 41.163 $\pm$ 0.006  $\chi^2$ /NDF: 4497711.6/51



asym\_us\_dd\_at1lr\_dd\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.014 $\pm$ 0.012  $\chi^2/\text{NDF}$ : 32.7/25

Left Out: -0.007 $\pm$ 0.011  $\chi^2/\text{NDF}$ : 23.9/23

Right Out: -0.003 $\pm$ 0.012  $\chi^2/\text{NDF}$ : 17.9/28

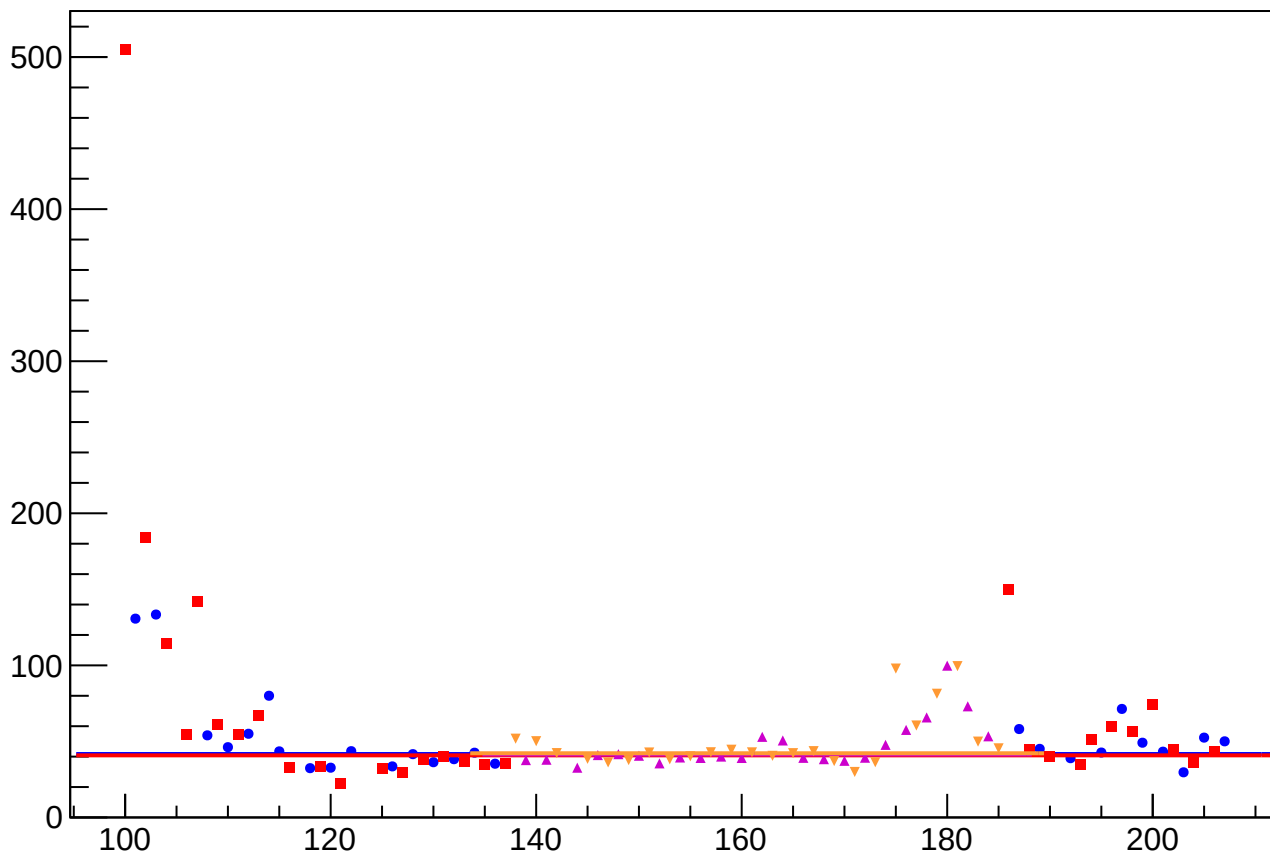
Left In: -0.006 $\pm$ 0.011  $\chi^2/\text{NDF}$ : 20.1/22

+ sign 0.003 $\pm$ 0.008  $\chi^2/\text{NDF}$ : 58.2/49

All: -0.001 $\pm$ 0.006  $\chi^2/\text{NDF}$ : 96.7/101

- sign -0.005 $\pm$ 0.008  $\chi^2/\text{NDF}$ : 38.0/51

asym\_us\_dd\_at1lr\_dd\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 41.704 $\pm$ 0.009  $\chi^2$ /NDF: 2038115.5/25

Left Out: 42.208 $\pm$ 0.008  $\chi^2$ /NDF: 1819378.3/23

Right Out: 40.842 $\pm$ 0.008  $\chi^2$ /NDF: 3083019.7/28

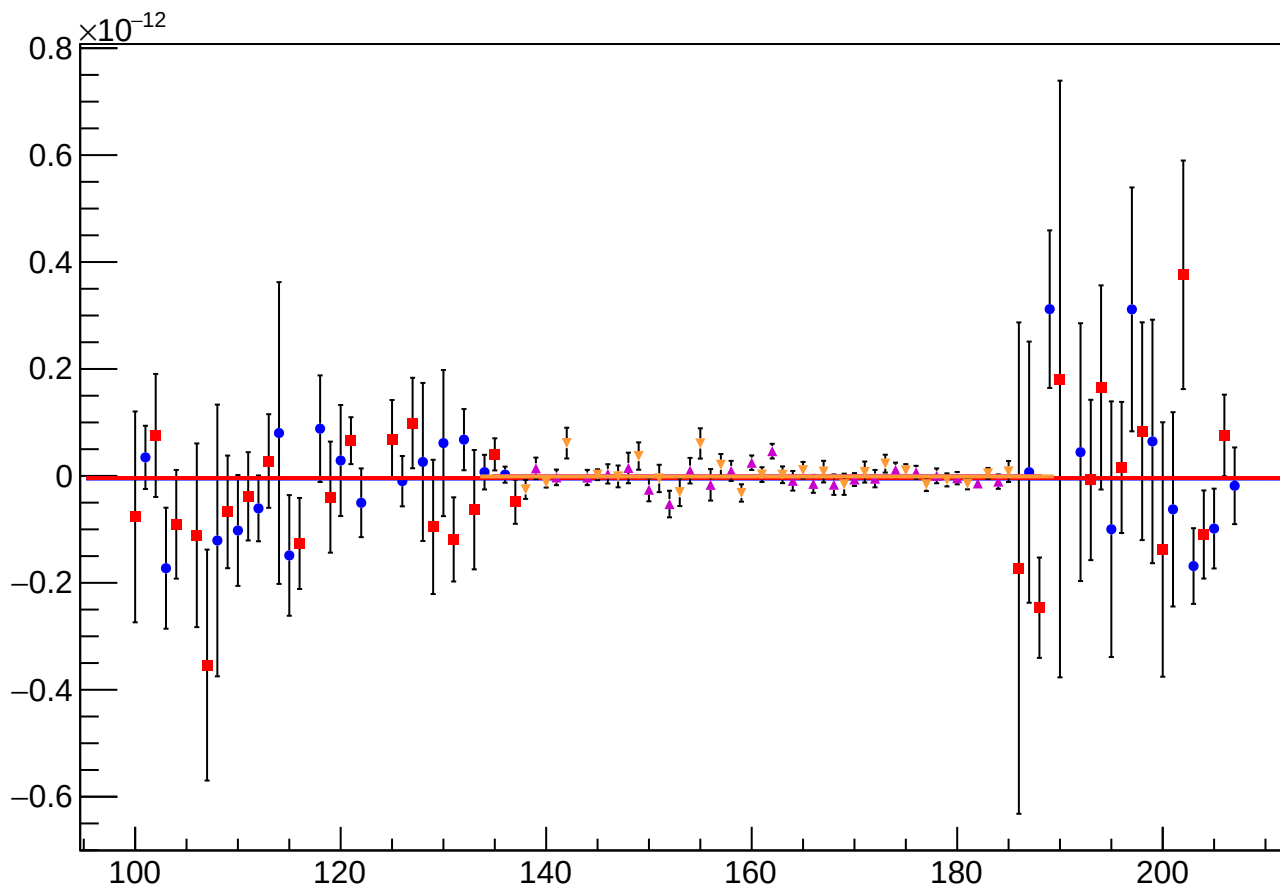
Left In: 41.421 $\pm$ 0.008  $\chi^2$ /NDF: 1412111.4/22

+ sign 41.984 $\pm$ 0.006  $\chi^2$ /NDF: 3859380.3/49

All: 41.567 $\pm$ 0.004  $\chi^2$ /NDF: 8367419.2/101

- sign 41.163 $\pm$ 0.006  $\chi^2$ /NDF: 4497711.6/51

asym\_us\_dd\_at1lr\_dd\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 23.9/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 29.5/23

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 32.5/28

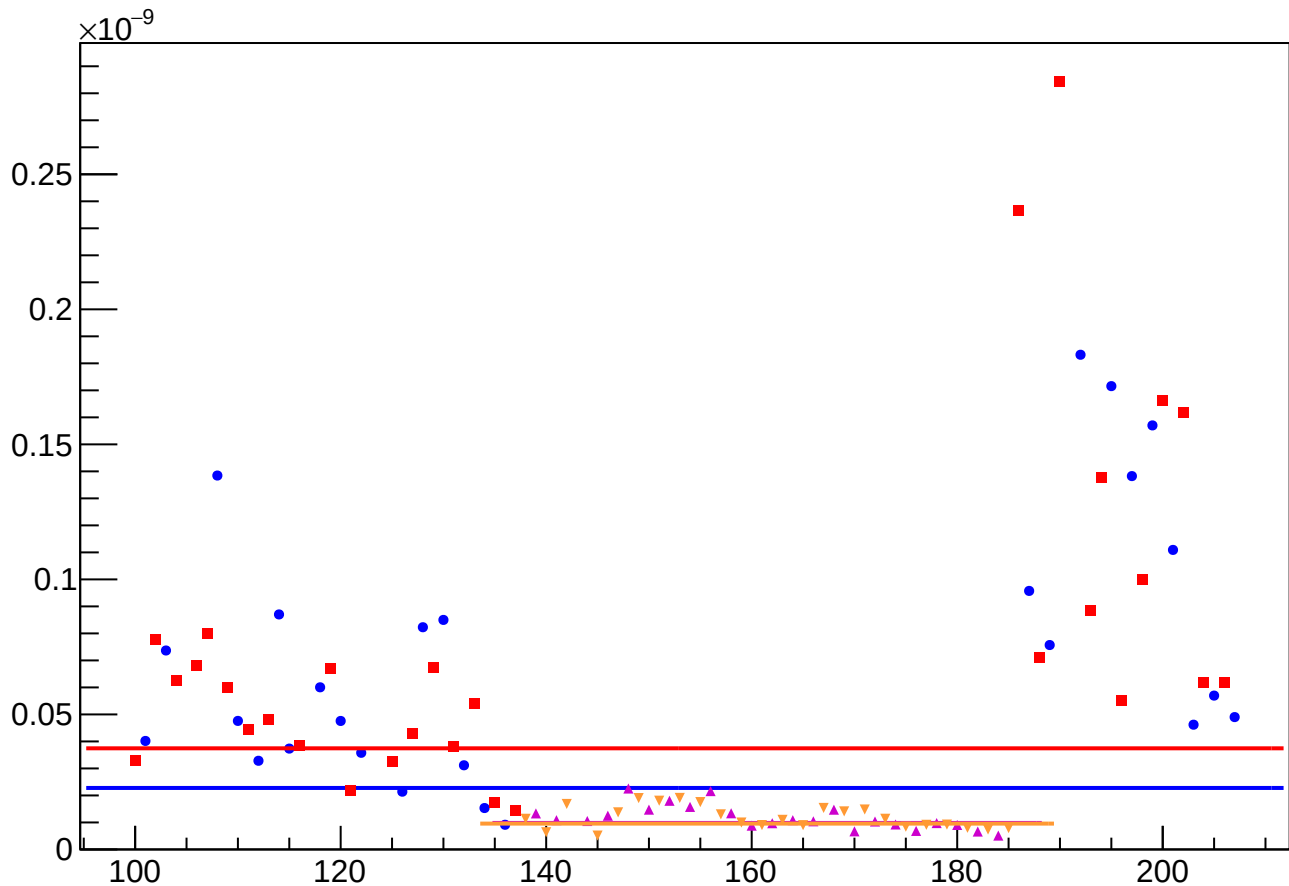
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 28.3/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 53.5/49

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 114.5/101

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 60.9/51

asym\_us\_dd\_at1lr\_dd\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 8985361.0/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:2445128.6/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 6433315.2/28

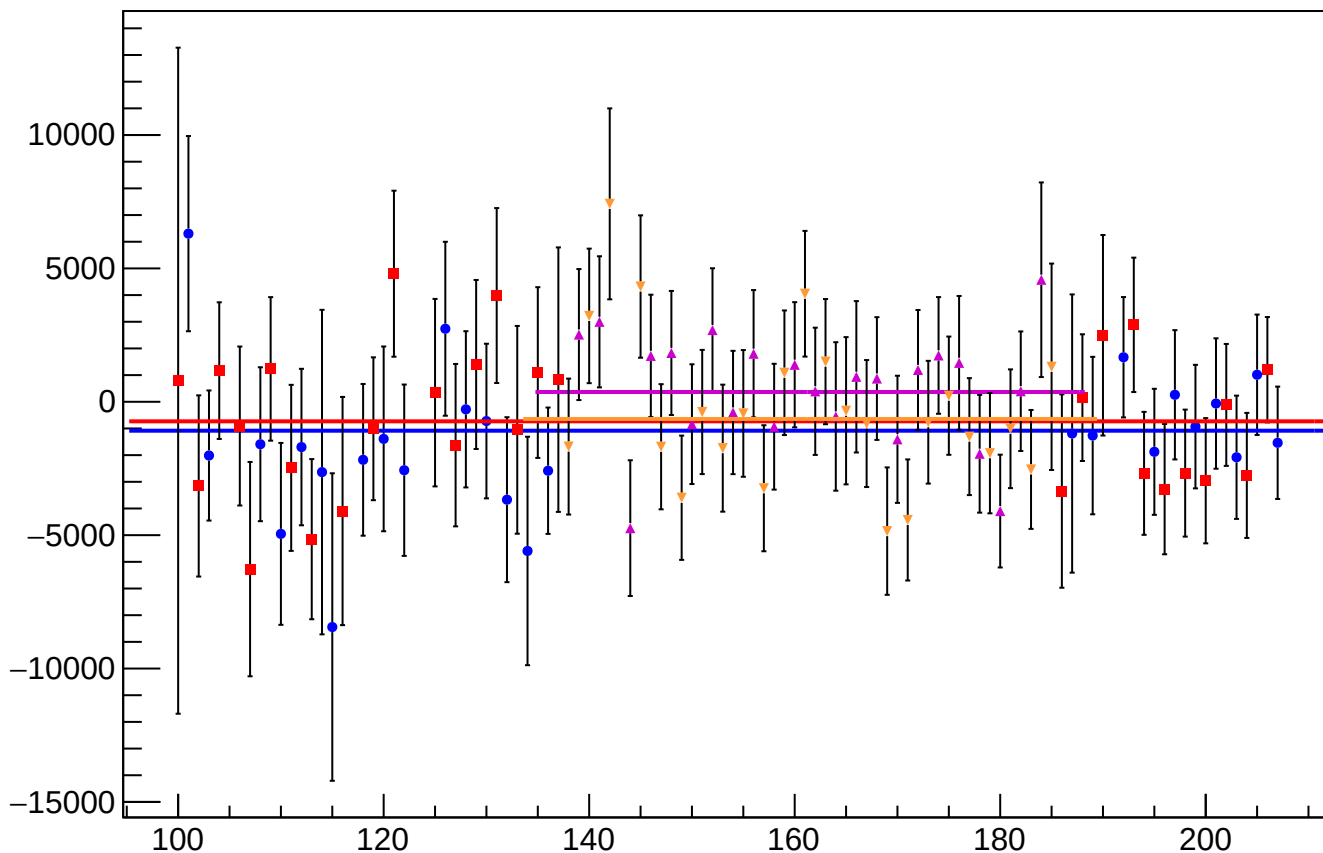
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:2250638.6/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 14090520.2/49

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 29133431.9/101

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 15020497.5/51

# reg\_asym\_us\_dd\_at2lr\_dd\_avg\_mean vs Slug



Right In:  $-1083.655 \pm 554.342$   $\chi^2/\text{NDF}$ : 14.5/25

Left Out:  $-643.811 \pm 493.681$   $\chi^2/\text{NDF}$ : 27.1/23

Right Out:  $-732.295 \pm 535.960$   $\chi^2/\text{NDF}$ : 21.5/28

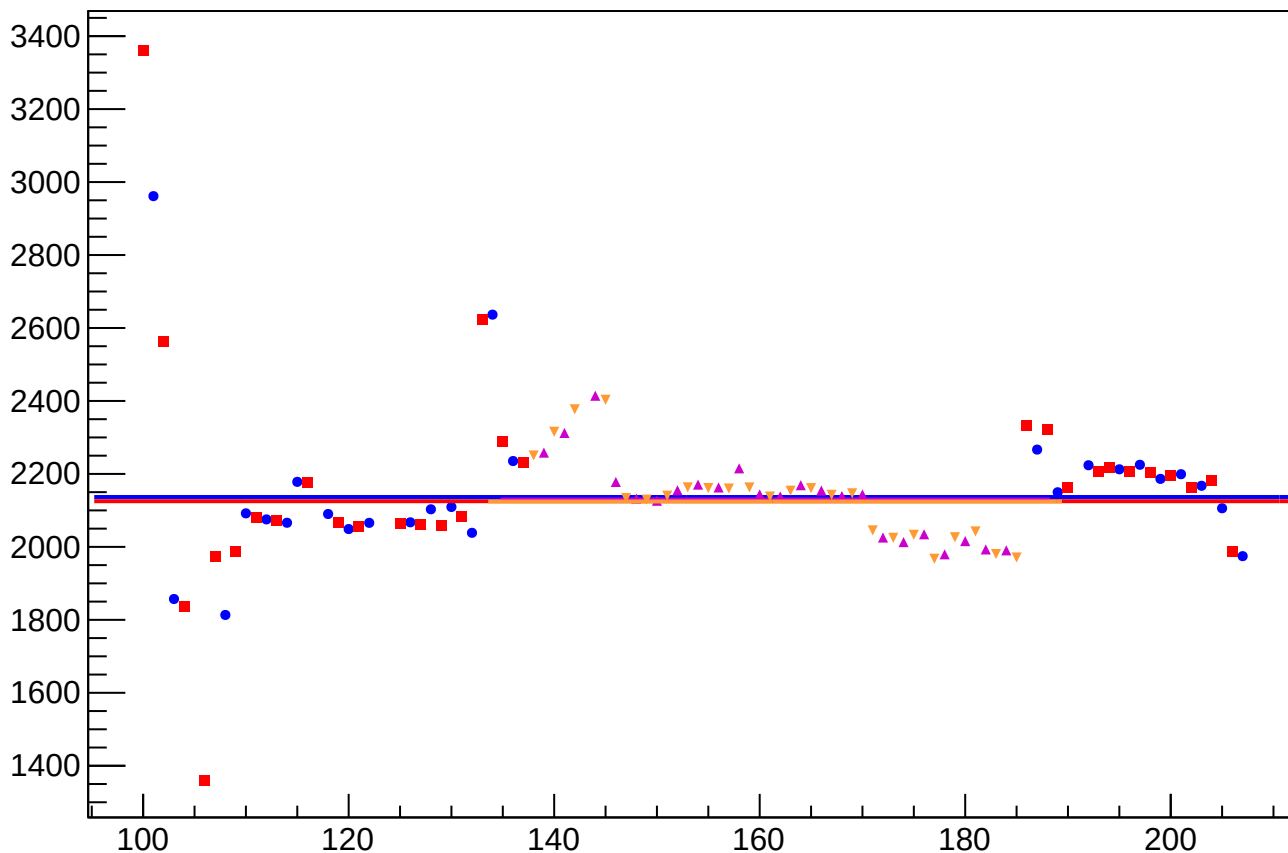
Left In:  $366.759 \pm 497.896$   $\chi^2/\text{NDF}$ : 17.3/22

+ sign  $-838.359 \pm 368.674$   $\chi^2/\text{NDF}$ : 42.0/49

All:  $-486.665 \pm 259.304$   $\chi^2/\text{NDF}$ : 84.9/101

- sign  $-142.358 \pm 364.781$   $\chi^2/\text{NDF}$ : 41.1/51

# reg\_asym\_us\_dd\_at2lr\_dd\_avg\_rms vs Slug



Right In: 2136.689 $\pm$ 0.392  $\chi^2$ /NDF: 215256.2/25

Left Out: 2124.437 $\pm$ 0.349  $\chi^2$ /NDF: 89184.0/23

Right Out: 2125.214 $\pm$ 0.379  $\chi^2$ /NDF: 306184.3/28

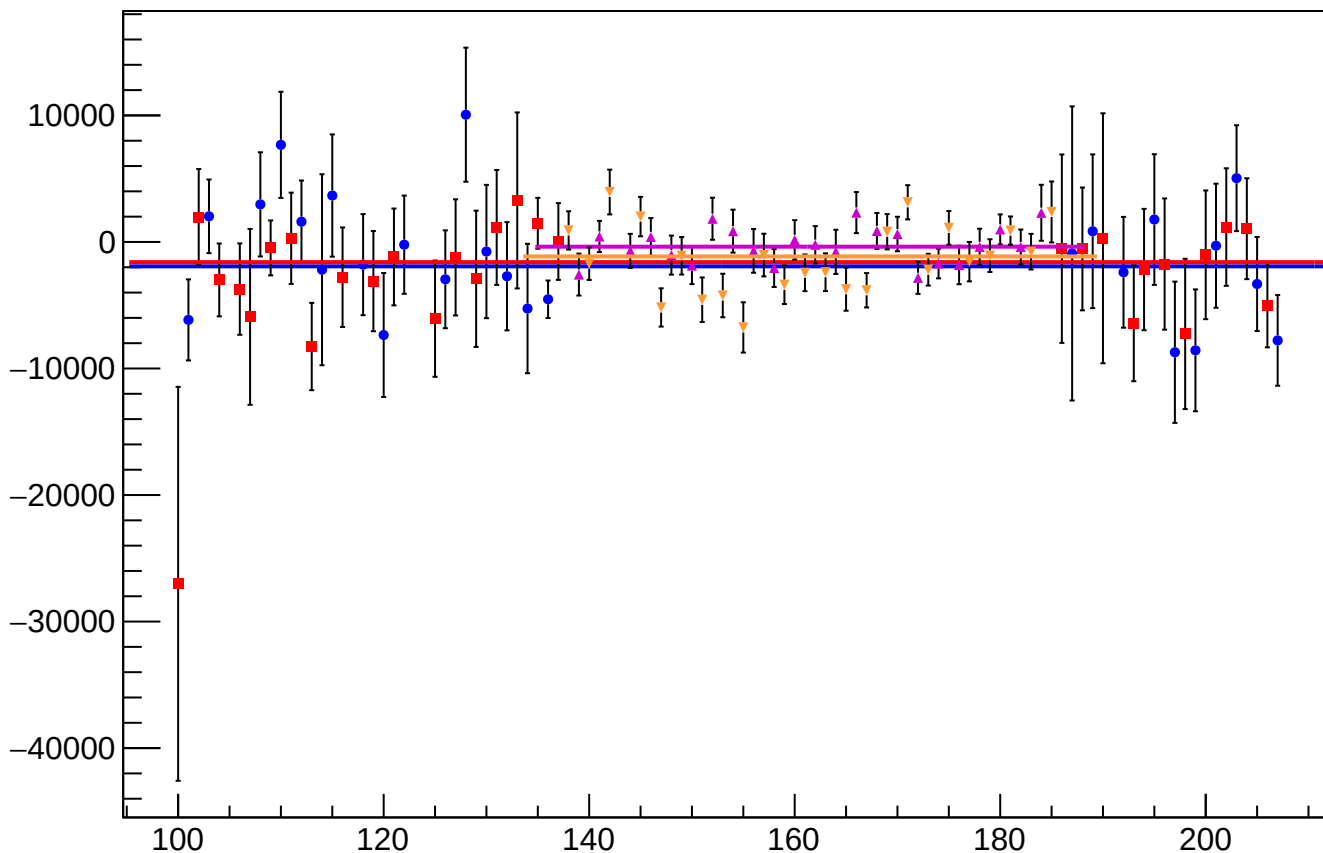
Left In: 2129.897 $\pm$ 0.352  $\chi^2$ /NDF: 85354.5/22

+ sign 2129.856 $\pm$ 0.261  $\chi^2$ /NDF: 304985.0/49

All: 2128.781 $\pm$ 0.183  $\chi^2$ /NDF: 696639.4/103

- sign 2127.728 $\pm$ 0.258  $\chi^2$ /NDF: 391620.7/51

asym\_us\_dd\_at2lr\_dd\_avg\_reg\_correction\_mean vs Slug



Right In:  $-1926.825 \pm 746.850$   $\chi^2/\text{NDF}$ : 32.8/25

Left Out:  $-1144.817 \pm 302.488$   $\chi^2/\text{NDF}$ : 67.5/23

Right Out:  $-1595.356 \pm 728.970$   $\chi^2/\text{NDF}$ : 17.5/28

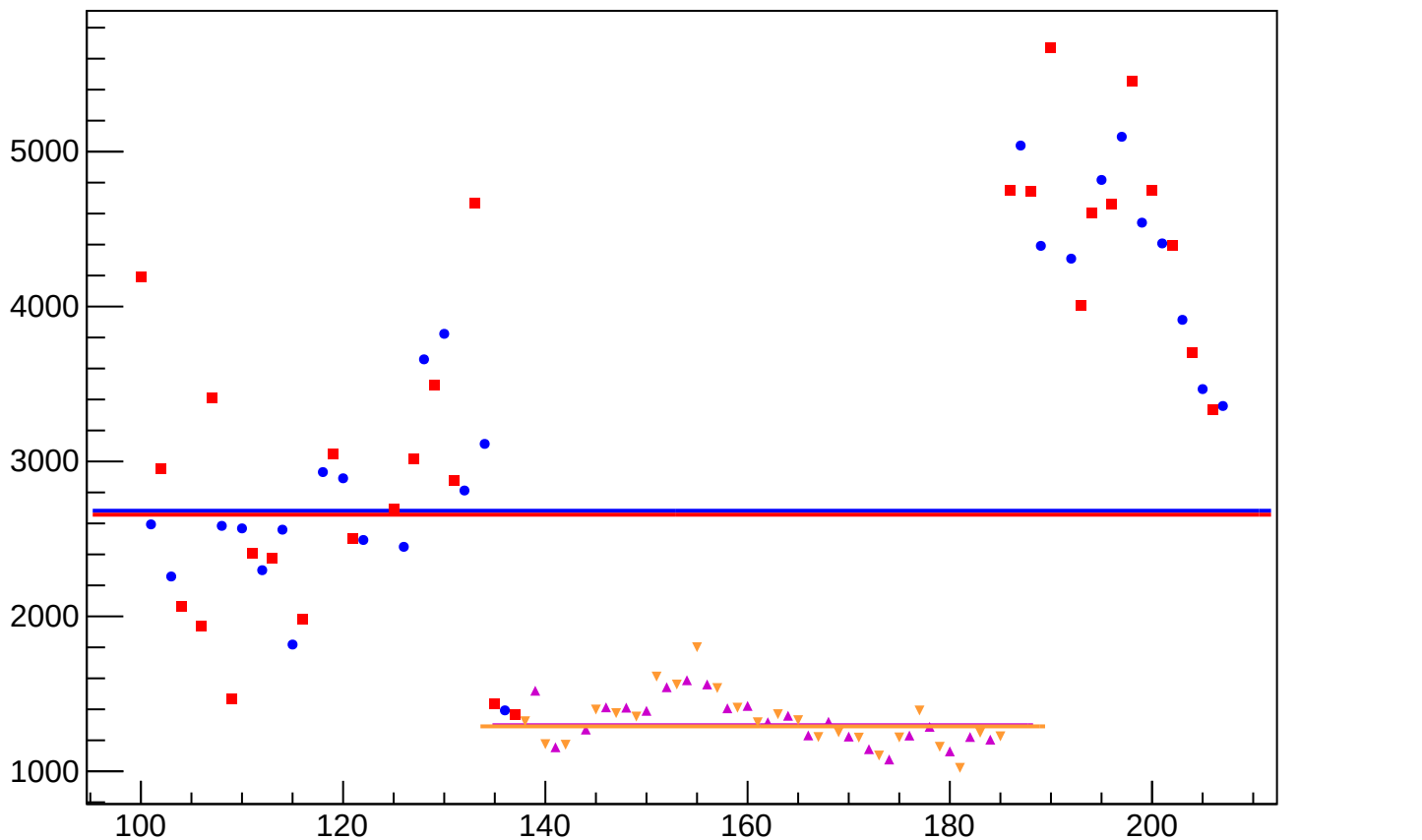
Left In:  $-373.302 \pm 305.378$   $\chi^2/\text{NDF}$ : 20.3/22

+ sign  $-1255.019 \pm 280.365$   $\chi^2/\text{NDF}$ : 101.2/49

All:  $-906.995 \pm 198.705$   $\chi^2/\text{NDF}$ : 144.6/101

- sign  $-555.745 \pm 281.662$   $\chi^2/\text{NDF}$ : 40.2/51

asym\_us\_dd\_at2lr\_dd\_avg\_reg\_correction\_rms vs Slug

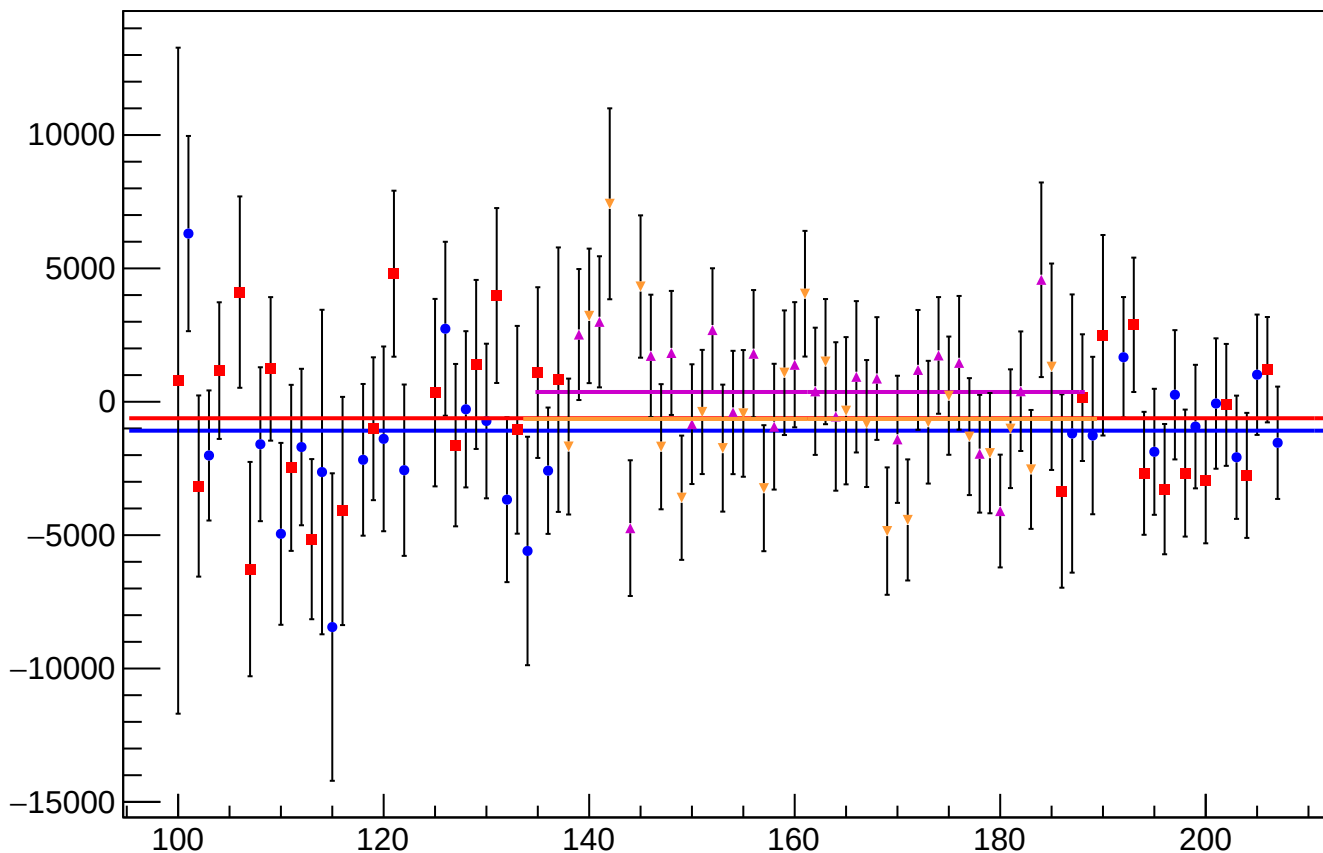


Right In: 2681.817 $\pm$ 0.528  $\chi^2$ /NDF: 3967881.3/25  
 Left Out: 1290.029 $\pm$ 0.214  $\chi^2$ /NDF: 567950.9/23  
 Right Out: 2656.375 $\pm$ 0.515  $\chi^2$ /NDF: 5051811.2/28  
 Left In: 1297.454 $\pm$ 0.216  $\chi^2$ /NDF: 433995.4/22

+ sign 1486.164 $\pm$ 0.198  $\chi^2$ /NDF: 10502628.9/49  
 All: 1493.215 $\pm$ 0.141  $\chi^2$ /NDF: 21903590.3/1  
 - sign 1500.330 $\pm$ 0.199  $\chi^2$ /NDF: 11398420.1/51



# cor\_asym\_us\_dd\_at2lr\_dd\_avg\_mean vs Slug



Right In:  $-1083.707 \pm 554.342$   $\chi^2/\text{NDF}: 14.5/25$

Left Out:  $-643.673 \pm 493.681$   $\chi^2/\text{NDF}: 27.1/23$

Right Out:  $-617.490 \pm 538.667$   $\chi^2/\text{NDF}: 23.3/28$

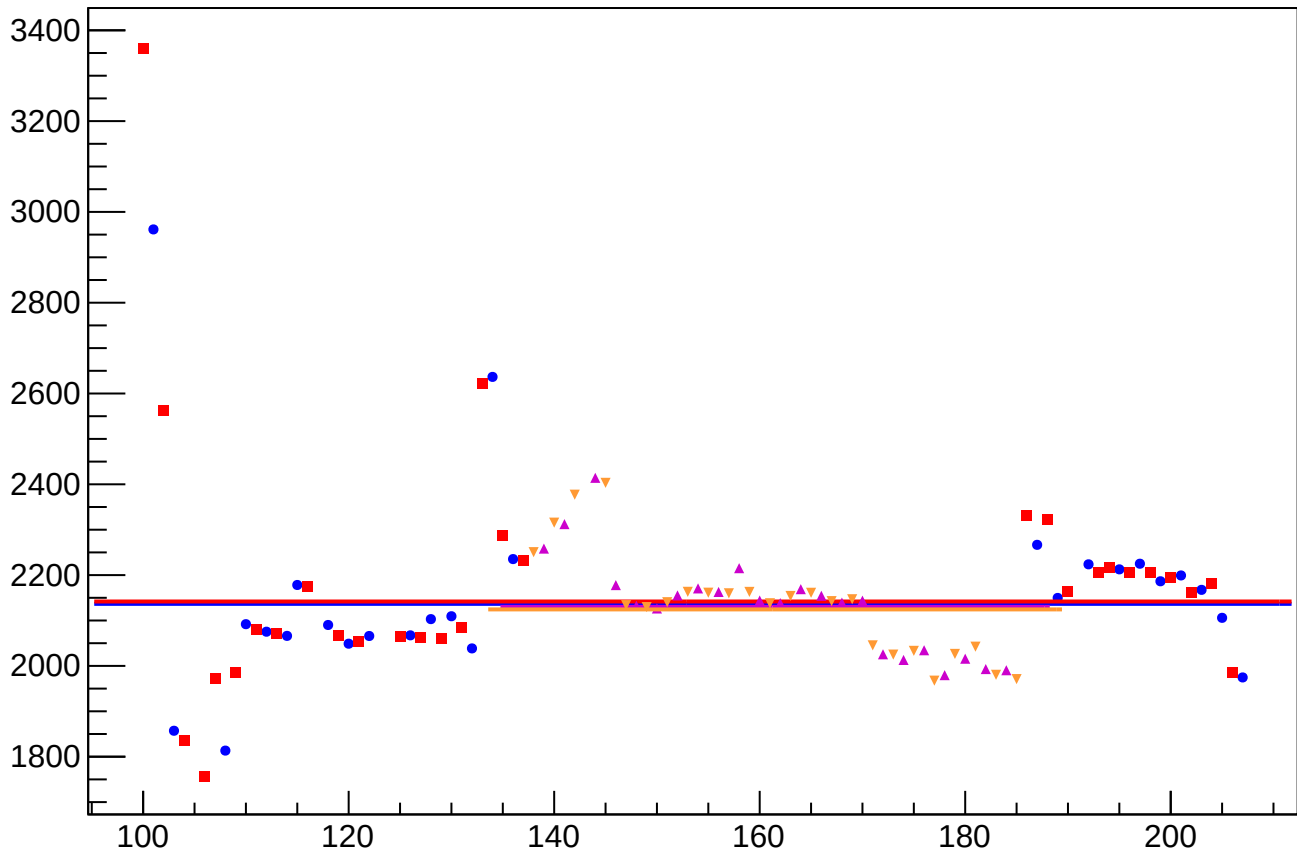
Left In:  $366.649 \pm 497.896$   $\chi^2/\text{NDF}: 17.3/22$

+ sign  $-838.306 \pm 368.674$   $\chi^2/\text{NDF}: 42.0/49$

All:  $-459.424 \pm 259.609$   $\chi^2/\text{NDF}: 86.5/101$

- sign  $-86.771 \pm 365.631$   $\chi^2/\text{NDF}: 42.4/51$

# cor\_asym\_us\_dd\_at2lr\_dd\_avg\_rms vs Slug



Right In: 2136.689 $\pm$ 0.392  $\chi^2$ /NDF: 215256.5/25

Left Out: 2124.437 $\pm$ 0.349  $\chi^2$ /NDF: 89184.0/23

Right Out: 2141.866 $\pm$ 0.381  $\chi^2$ /NDF: 193872.9/28

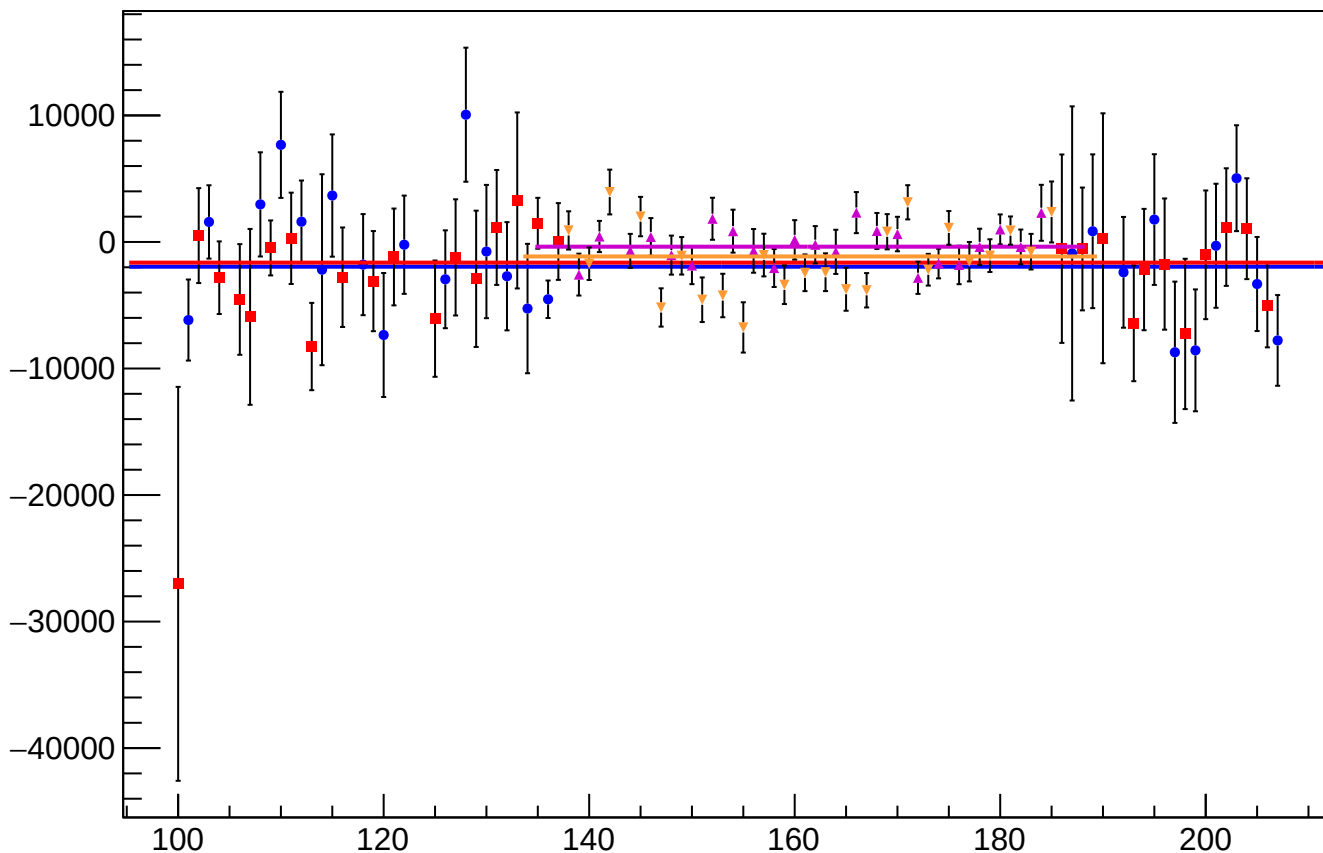
Left In: 2129.897 $\pm$ 0.352  $\chi^2$ /NDF: 85354.4/22

+ sign 2129.856 $\pm$ 0.261  $\chi^2$ /NDF: 304985.3/49

All: 2132.657 $\pm$ 0.184  $\chi^2$ /NDF: 584974.2/103

- sign 2135.412 $\pm$ 0.259  $\chi^2$ /NDF: 279759.9/51

asym\_us\_dd\_at2lr\_dd\_avg\_cor\_correction\_mean vs Slug



Right In:  $-1955.256 \pm 746.661$   $\chi^2/\text{NDF}$ : 32.4/25

Left Out:  $-1144.779 \pm 302.490$   $\chi^2/\text{NDF}$ : 67.5/23

Right Out:  $-1632.699 \pm 733.297$   $\chi^2/\text{NDF}$ : 17.0/28

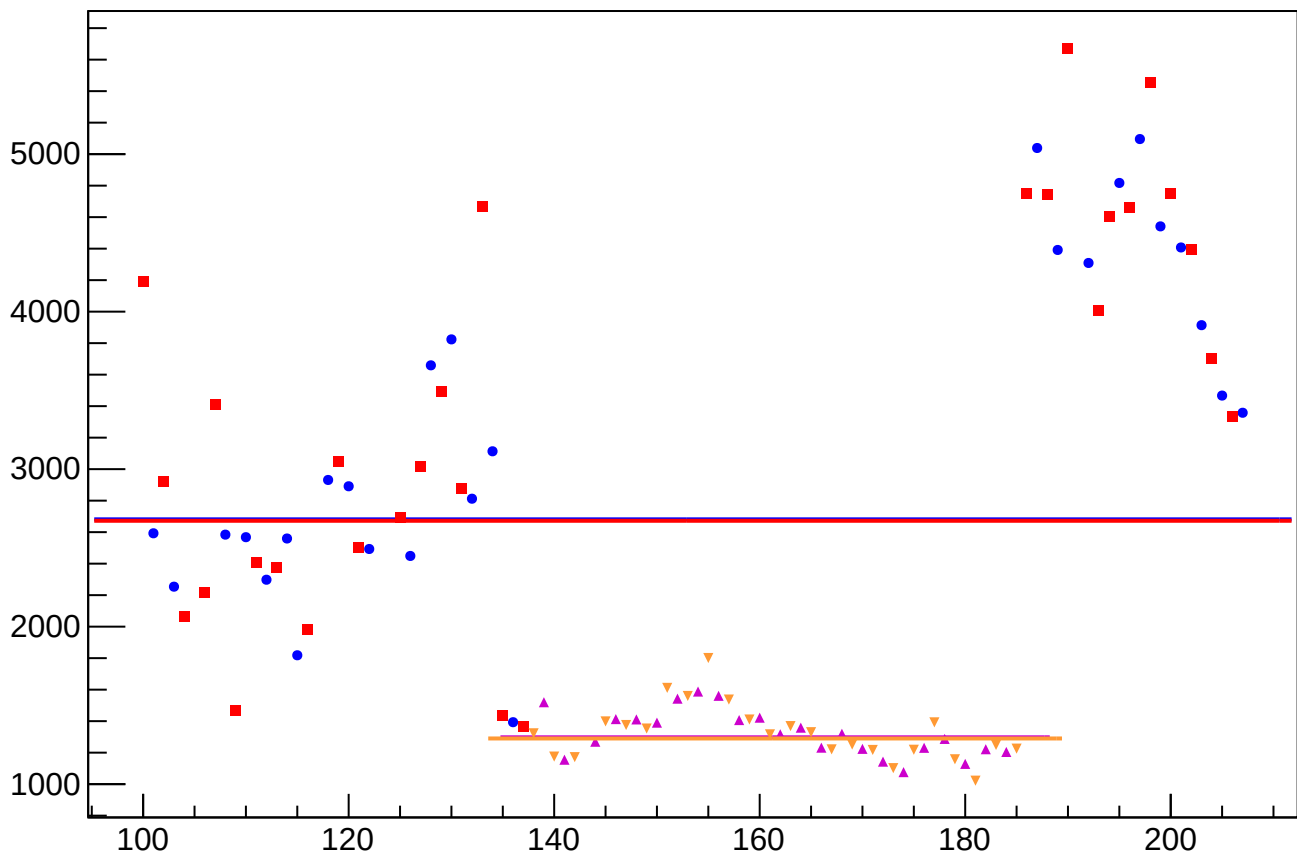
Left In:  $-373.186 \pm 305.379$   $\chi^2/\text{NDF}$ : 20.3/22

+ sign  $-1259.045 \pm 280.357$   $\chi^2/\text{NDF}$ : 100.9/49

All:  $-911.123 \pm 198.789$   $\chi^2/\text{NDF}$ : 143.9/101

- sign  $-559.337 \pm 281.910$   $\chi^2/\text{NDF}$ : 39.8/51

asym\_us\_dd\_at2lr\_dd\_avg\_cor\_correction\_rms vs Slug



Right In: 2681.325+/-0.528  $\chi^2/\text{NDF}$ : 3968904.7/25

Left Out: 1290.041+/-0.214  $\chi^2/\text{NDF}$ : 567883.5/23

Right Out: 2672.295+/-0.519  $\chi^2/\text{NDF}$ : 4991370.6/28

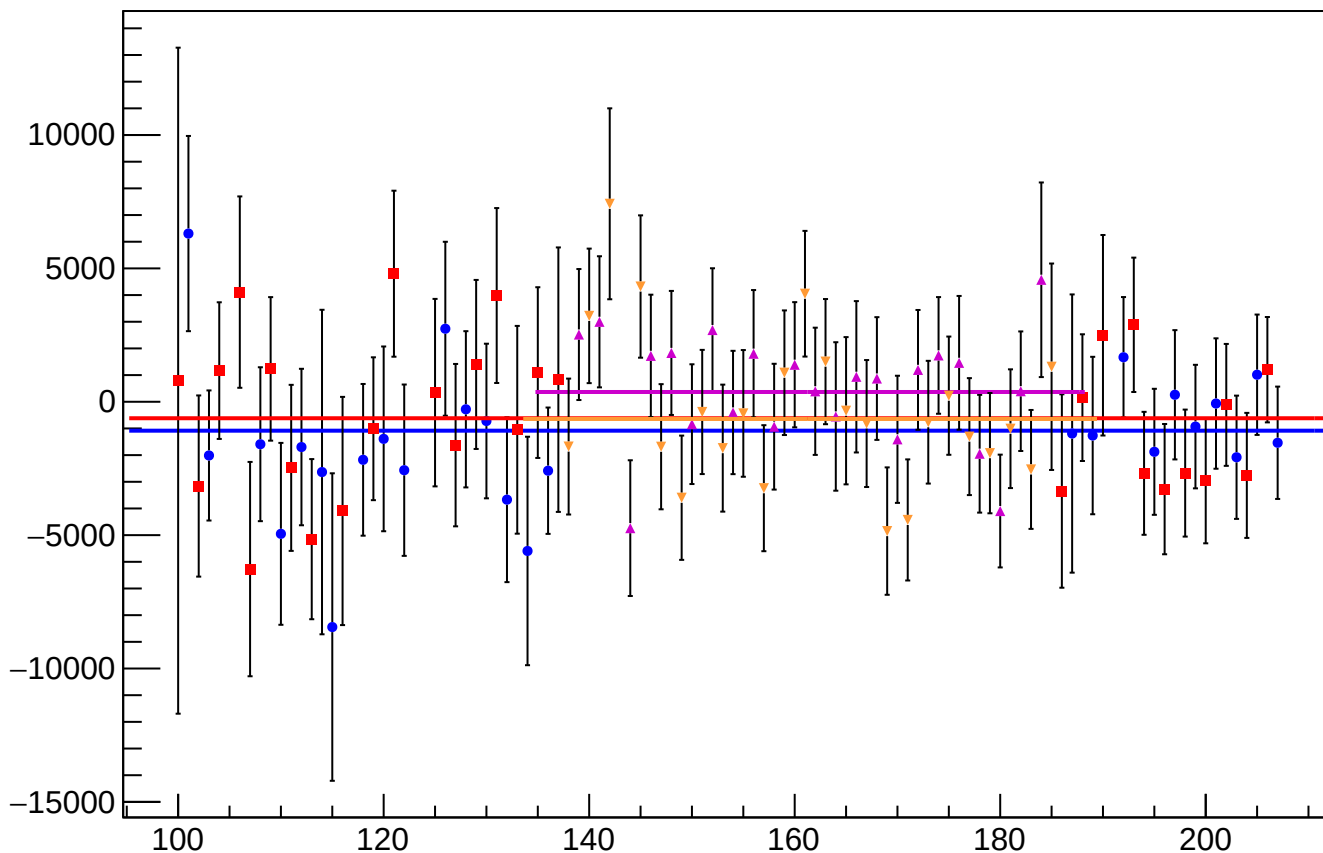
Left In: 1297.458+/-0.216  $\chi^2/\text{NDF}$ : 434006.2/22

+ sign 1486.192+/-0.198  $\chi^2/\text{NDF}$ : 10501851.6/49

All: 1493.382+/-0.141  $\chi^2/\text{NDF}$ : 21921112.2/1

- sign 1500.652+/-0.199  $\chi^2/\text{NDF}$ : 11416615.1/51

eigen\_cor\_asym\_us\_dd\_at2lr\_dd\_avg\_mean vs Slug



Right In:  $-1083.707 \pm 554.342$   $\chi^2/\text{NDF}$ : 14.5/25

Left Out:  $-643.673 \pm 493.681$   $\chi^2/\text{NDF}$ : 27.1/23

Right Out:  $-617.490 \pm 538.667$   $\chi^2/\text{NDF}$ : 23.3/28

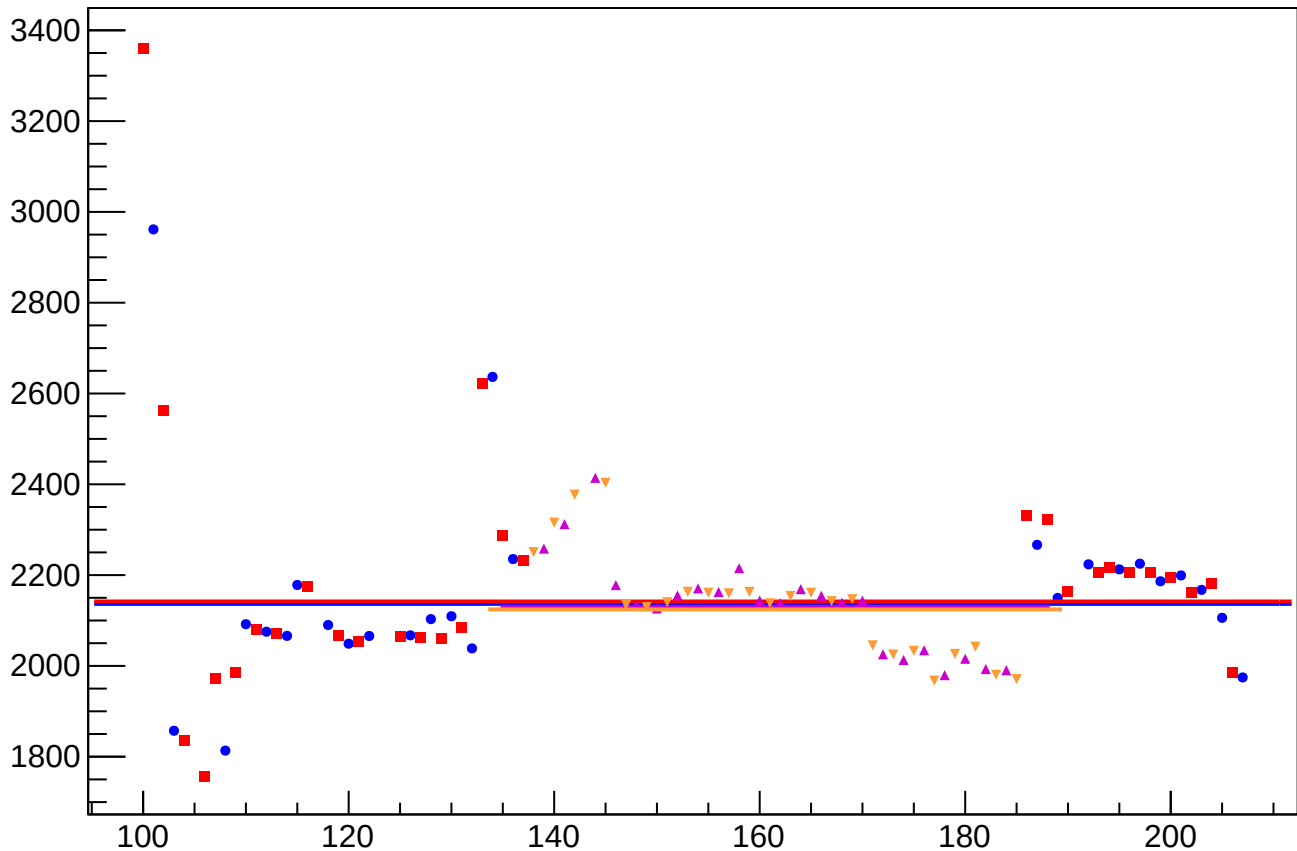
Left In:  $366.649 \pm 497.896$   $\chi^2/\text{NDF}$ : 17.3/22

+ sign  $-838.306 \pm 368.674$   $\chi^2/\text{NDF}$ : 42.0/49

All:  $-459.424 \pm 259.609$   $\chi^2/\text{NDF}$ : 86.5/101

- sign  $-86.771 \pm 365.631$   $\chi^2/\text{NDF}$ : 42.4/51

eigen\_cor\_asym\_us\_dd\_at2lr\_dd\_avg\_rms vs Slug



Right In: 2136.689 $\pm$ 0.392  $\chi^2$ /NDF: 215256.5/25

Left Out: 2124.437 $\pm$ 0.349  $\chi^2$ /NDF: 89184.0/23

Right Out: 2141.866 $\pm$ 0.381  $\chi^2$ /NDF: 193872.9/28

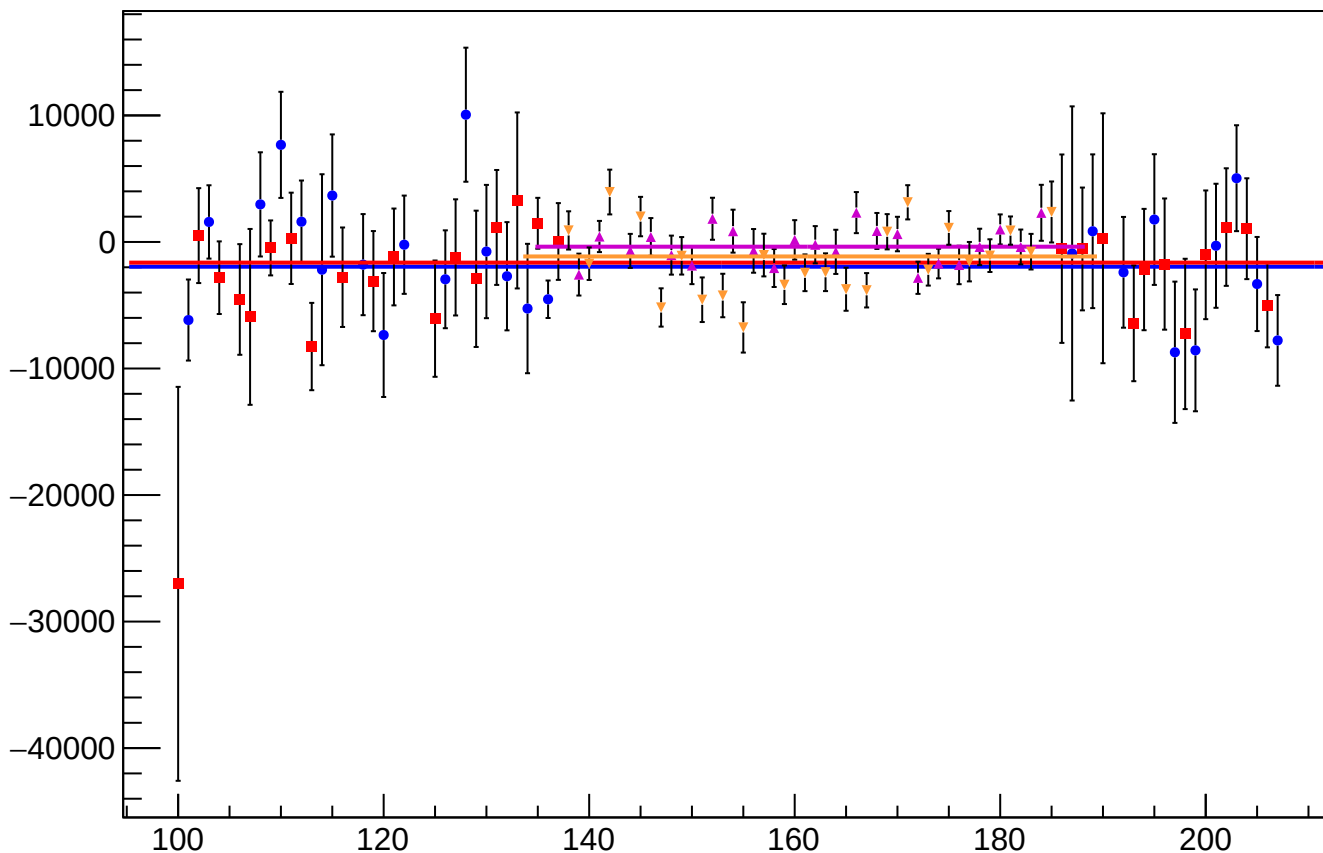
Left In: 2129.897 $\pm$ 0.352  $\chi^2$ /NDF: 85354.4/22

+ sign 2129.856 $\pm$ 0.261  $\chi^2$ /NDF: 304985.3/49

All: 2132.657 $\pm$ 0.184  $\chi^2$ /NDF: 584974.2/103

- sign 2135.412 $\pm$ 0.259  $\chi^2$ /NDF: 279759.9/51

asym\_us\_dd\_at2lr\_dd\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-1955.256 \pm 746.661$   $\chi^2/\text{NDF}$ : 32.4/25

Left Out:  $-1144.779 \pm 302.490$   $\chi^2/\text{NDF}$ : 67.5/23

Right Out:  $-1632.699 \pm 733.297$   $\chi^2/\text{NDF}$ : 17.0/28

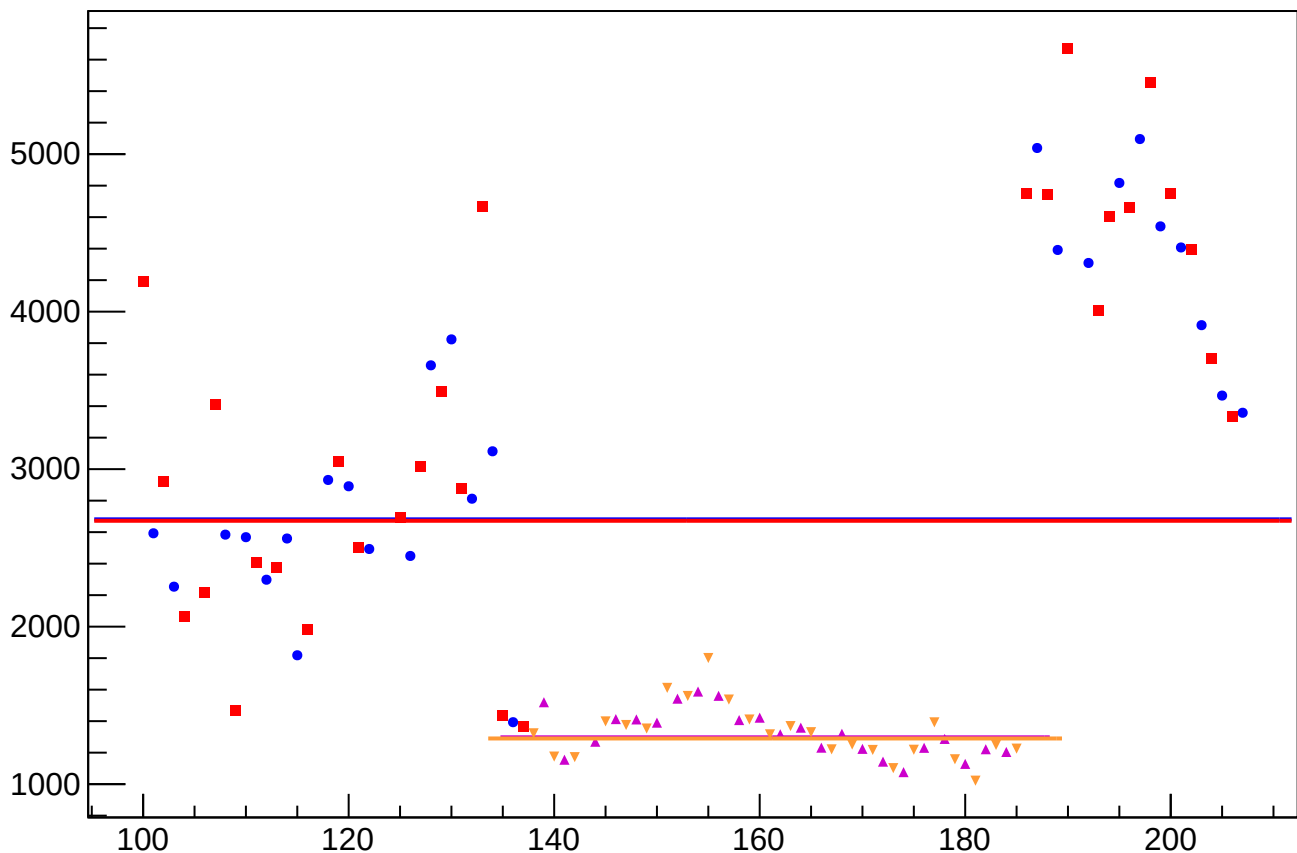
Left In:  $-373.186 \pm 305.379$   $\chi^2/\text{NDF}$ : 20.3/22

+ sign  $-1259.045 \pm 280.357$   $\chi^2/\text{NDF}$ : 100.9/49

All:  $-911.123 \pm 198.789$   $\chi^2/\text{NDF}$ : 143.9/101

- sign  $-559.337 \pm 281.910$   $\chi^2/\text{NDF}$ : 39.8/51

asym\_us\_dd\_at2lr\_dd\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 2681.325+/-0.528  $\chi^2/\text{NDF}$ : 3968904.7/25

Left Out: 1290.041+/-0.214  $\chi^2/\text{NDF}$ : 567883.5/23

Right Out: 2672.295+/-0.519  $\chi^2/\text{NDF}$ : 4991370.6/28

Left In: 1297.458+/-0.216  $\chi^2/\text{NDF}$ : 434006.2/22

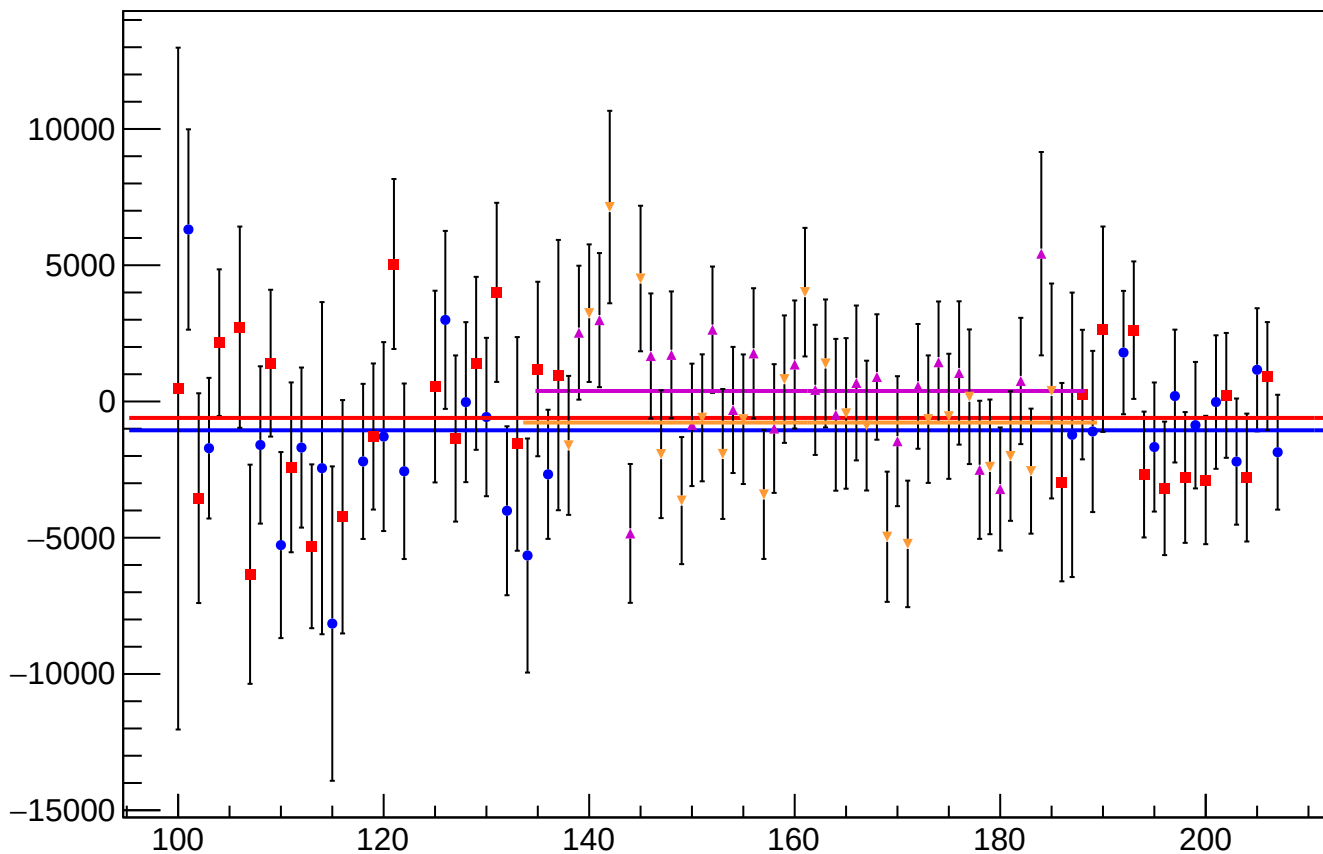
+ sign 1486.192+/-0.198  $\chi^2/\text{NDF}$ : 10501851.6/49

All: 1493.382+/-0.141  $\chi^2/\text{NDF}$ : 21921112.2/1

- sign 1500.652+/-0.199  $\chi^2/\text{NDF}$ : 11416615.1/51



# dit\_asym\_us\_dd\_at2lr\_dd\_avg\_mean vs Slug



Right In:  $-1057.635 \pm 557.014$   $\chi^2/\text{NDF}$ : 15.3/25

Left Out:  $-773.579 \pm 502.816$   $\chi^2/\text{NDF}$ : 28.6/23

Right Out:  $-603.342 \pm 542.830$   $\chi^2/\text{NDF}$ : 23.1/28

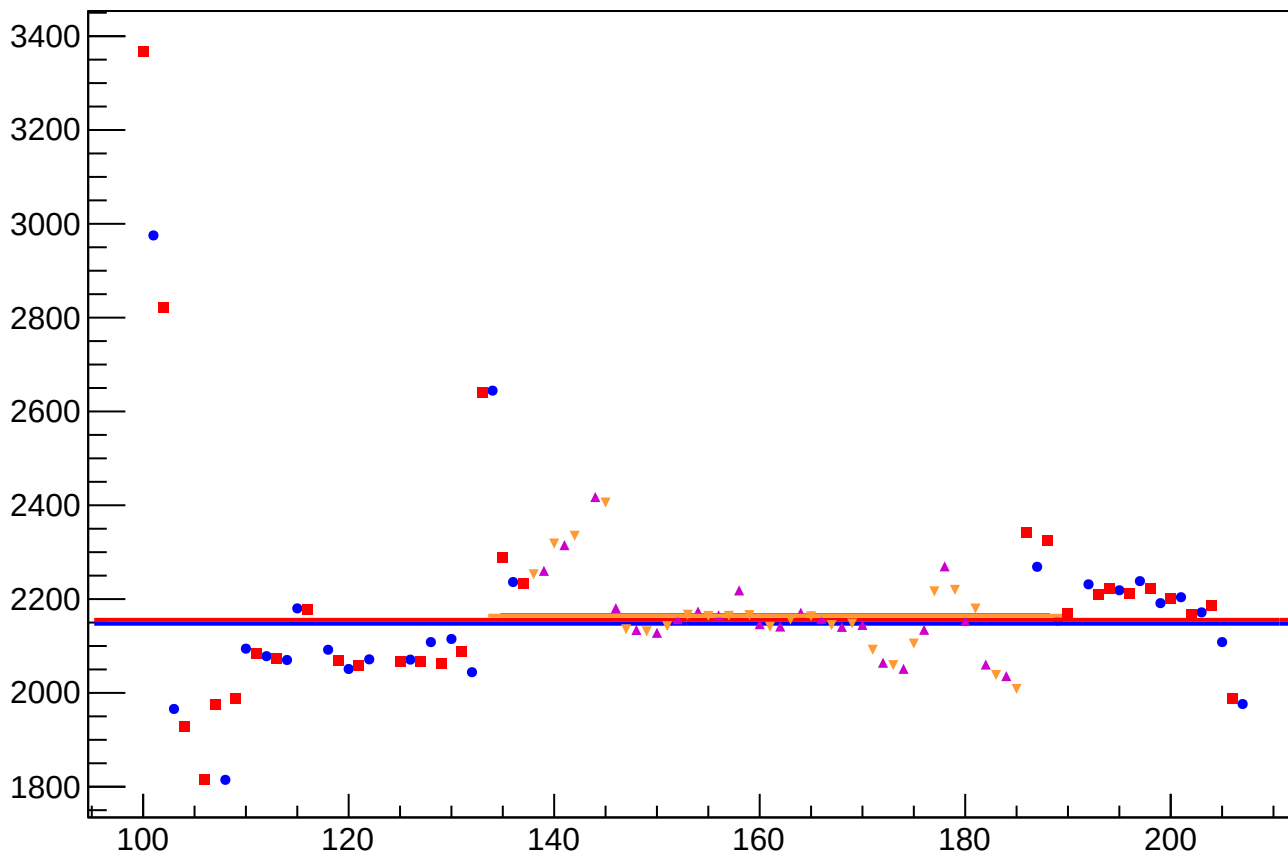
Left In:  $385.269 \pm 506.052$   $\chi^2/\text{NDF}$ : 15.6/22

+ sign  $-901.119 \pm 373.239$   $\chi^2/\text{NDF}$ : 44.0/49

All:  $-484.334 \pm 262.822$   $\chi^2/\text{NDF}$ : 87.0/101

- sign  $-74.415 \pm 370.152$   $\chi^2/\text{NDF}$ : 40.5/51

dit\_asym\_us\_dd\_at2lr\_dd\_avg\_rms vs Slug



Right In: 2147.505 $\pm$ 0.394  $\chi^2$ /NDF: 200984.1/25

Left Out: 2164.532 $\pm$ 0.356  $\chi^2$ /NDF: 50676.3/23

Right Out: 2155.725 $\pm$ 0.384  $\chi^2$ /NDF: 204199.8/28

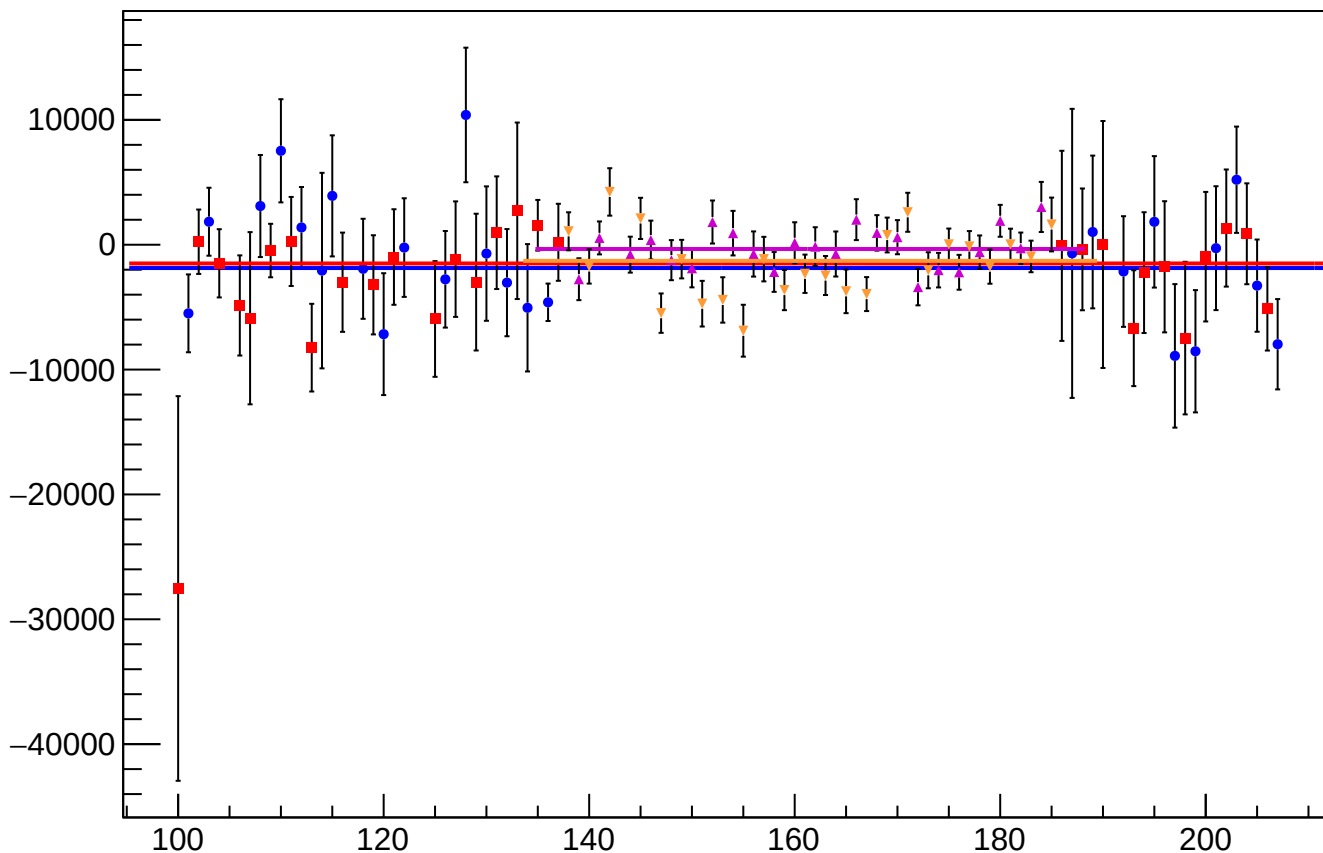
Left In: 2165.643 $\pm$ 0.358  $\chi^2$ /NDF: 52124.5/22

+ sign 2156.887 $\pm$ 0.264  $\chi^2$ /NDF: 252690.1/49

All: 2158.977 $\pm$ 0.186  $\chi^2$ /NDF: 509495.8/101

- sign 2161.032 $\pm$ 0.262  $\chi^2$ /NDF: 256681.4/51

asym\_us\_dd\_at2lr\_dd\_avg\_dit\_correction\_mean vs Slug



Right In:  $-1867.037 \pm 747.109$   $\chi^2/\text{NDF}$ : 32.7/25

Left Out:  $-1293.716 \pm 310.622$   $\chi^2/\text{NDF}$ : 58.7/23

Right Out:  $-1501.092 \pm 717.302$   $\chi^2/\text{NDF}$ : 17.4/28

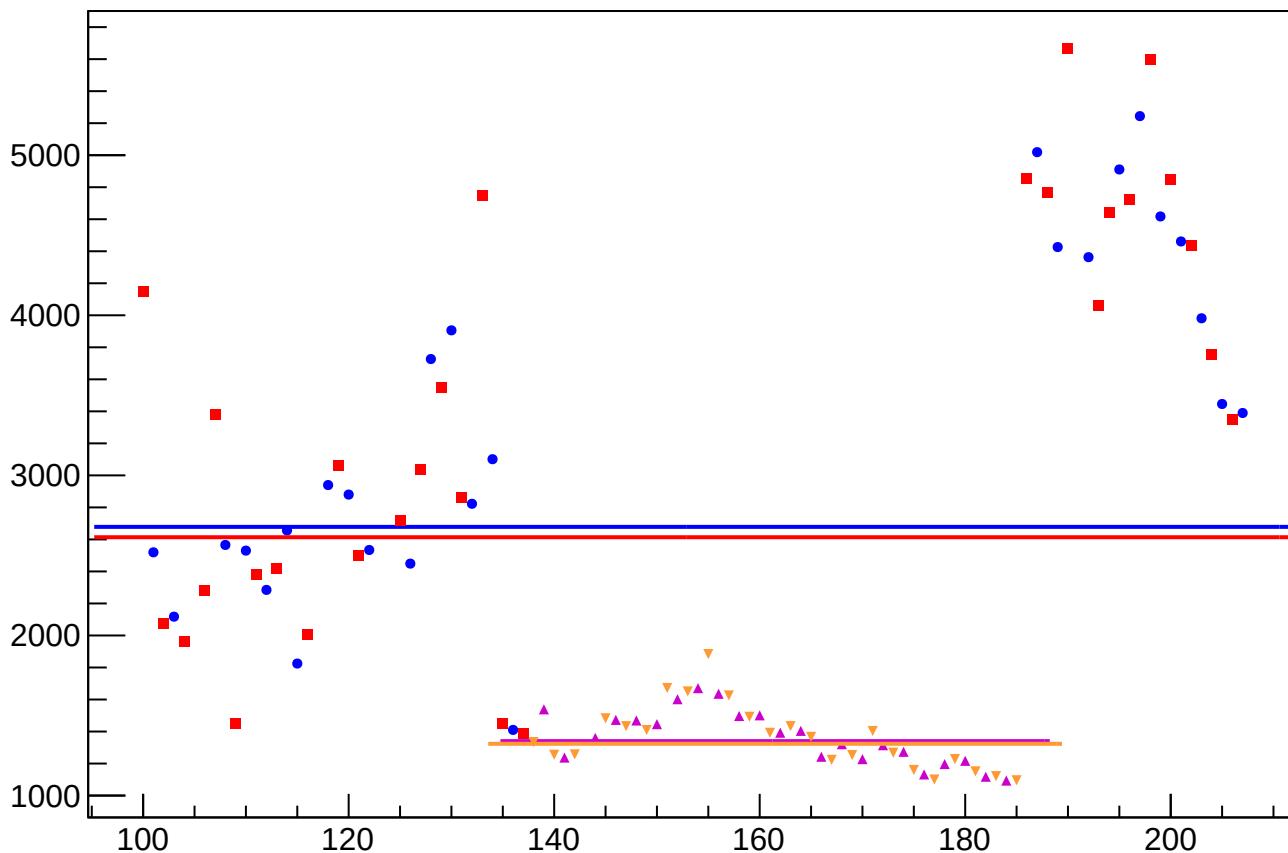
Left In:  $-341.259 \pm 315.566$   $\chi^2/\text{NDF}$ : 24.8/22

+ sign  $-1378.214 \pm 286.820$   $\chi^2/\text{NDF}$ : 91.9/49

All:  $-956.768 \pm 203.526$   $\chi^2/\text{NDF}$ : 140.6/101

- sign  $-529.335 \pm 288.849$   $\chi^2/\text{NDF}$ : 44.4/51

asym\_us\_dd\_at2lr\_dd\_avg\_dit\_correction\_rms vs Slug



Right In: 2678.412 $\pm$ 0.528  $\chi^2$ /NDF: 4051296.2/25

Left Out: 1323.402 $\pm$ 0.220  $\chi^2$ /NDF: 663859.2/23

Right Out: 2613.655 $\pm$ 0.507  $\chi^2$ /NDF: 5205865.7/28

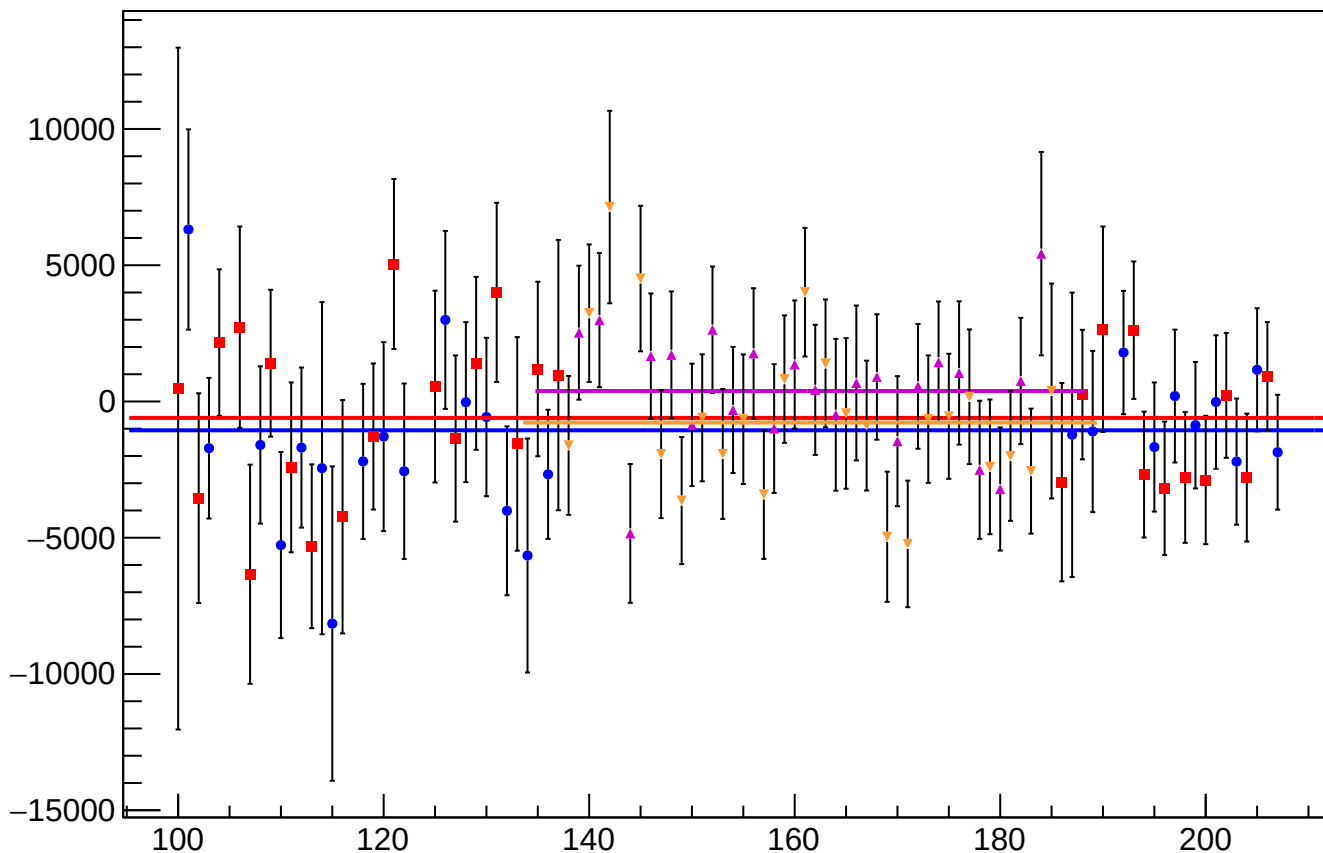
Left In: 1340.084 $\pm$ 0.223  $\chi^2$ /NDF: 494267.4/22

+ sign 1523.109 $\pm$ 0.203  $\chi^2$ /NDF: 10324347.7/49

All: 1534.774 $\pm$ 0.144  $\chi^2$ /NDF: 21313572.3/100

- sign 1546.604 $\pm$ 0.204  $\chi^2$ /NDF: 10982561.7/51

eigen\_dit\_asym\_us\_dd\_at2lr\_dd\_avg\_mean vs Slug



Right In:  $-1057.633 \pm 557.014$   $\chi^2/\text{NDF}$ : 15.3/25

Left Out:  $-773.576 \pm 502.816$   $\chi^2/\text{NDF}$ : 28.6/23

Right Out:  $-603.341 \pm 542.830$   $\chi^2/\text{NDF}$ : 23.1/28

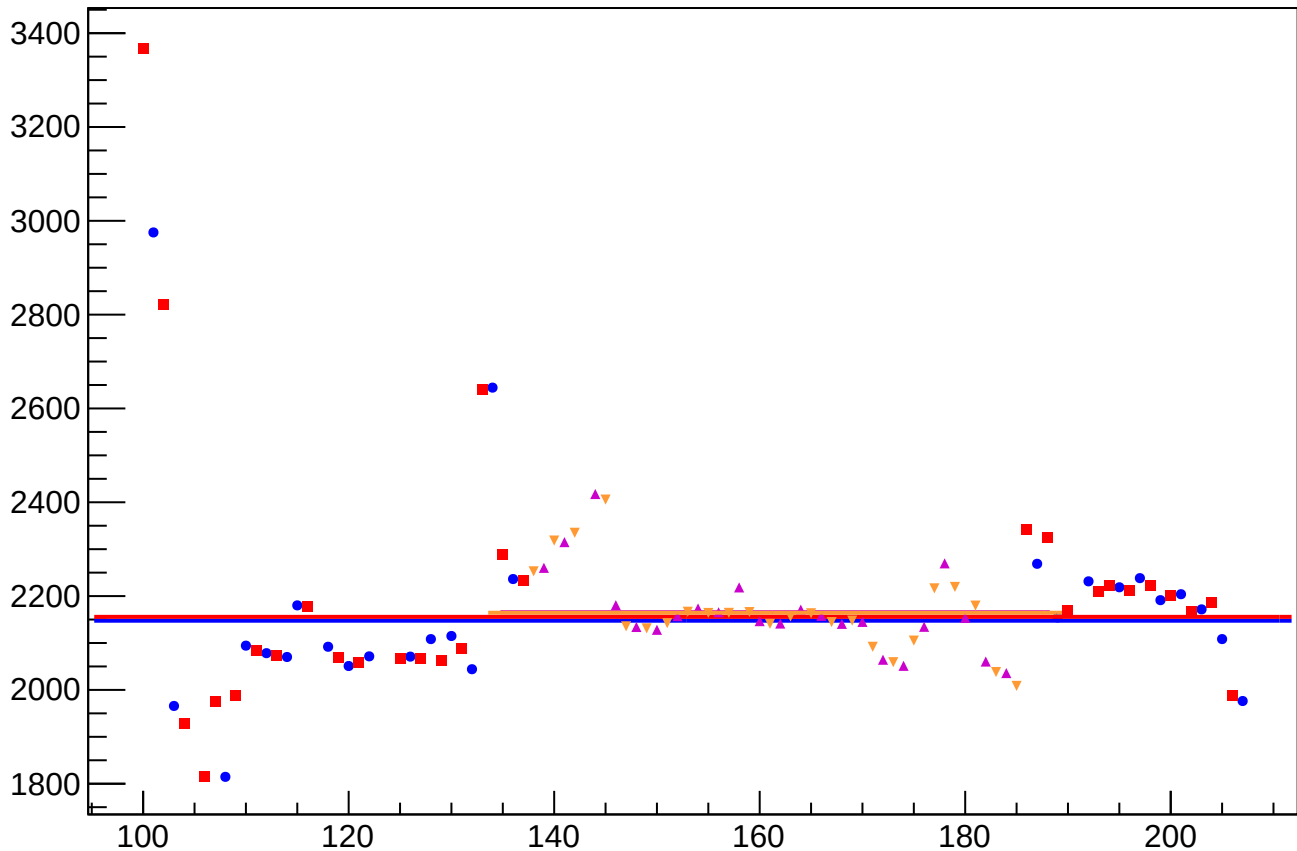
Left In:  $385.269 \pm 506.052$   $\chi^2/\text{NDF}$ : 15.6/22

+ sign  $-901.116 \pm 373.239$   $\chi^2/\text{NDF}$ : 44.0/49

All:  $-484.333 \pm 262.822$   $\chi^2/\text{NDF}$ : 87.0/101

- sign  $-74.414 \pm 370.152$   $\chi^2/\text{NDF}$ : 40.5/51

eigen\_dit\_asym\_us\_dd\_at2lr\_dd\_avg\_rms vs Slug



Right In: 2147.505+/-0.394  $\chi^2/\text{NDF}$ : 200984.0/25

Left Out: 2164.532+/-0.356  $\chi^2/\text{NDF}$ : 50676.3/23

Right Out: 2155.725+/-0.384  $\chi^2/\text{NDF}$ : 204199.6/28

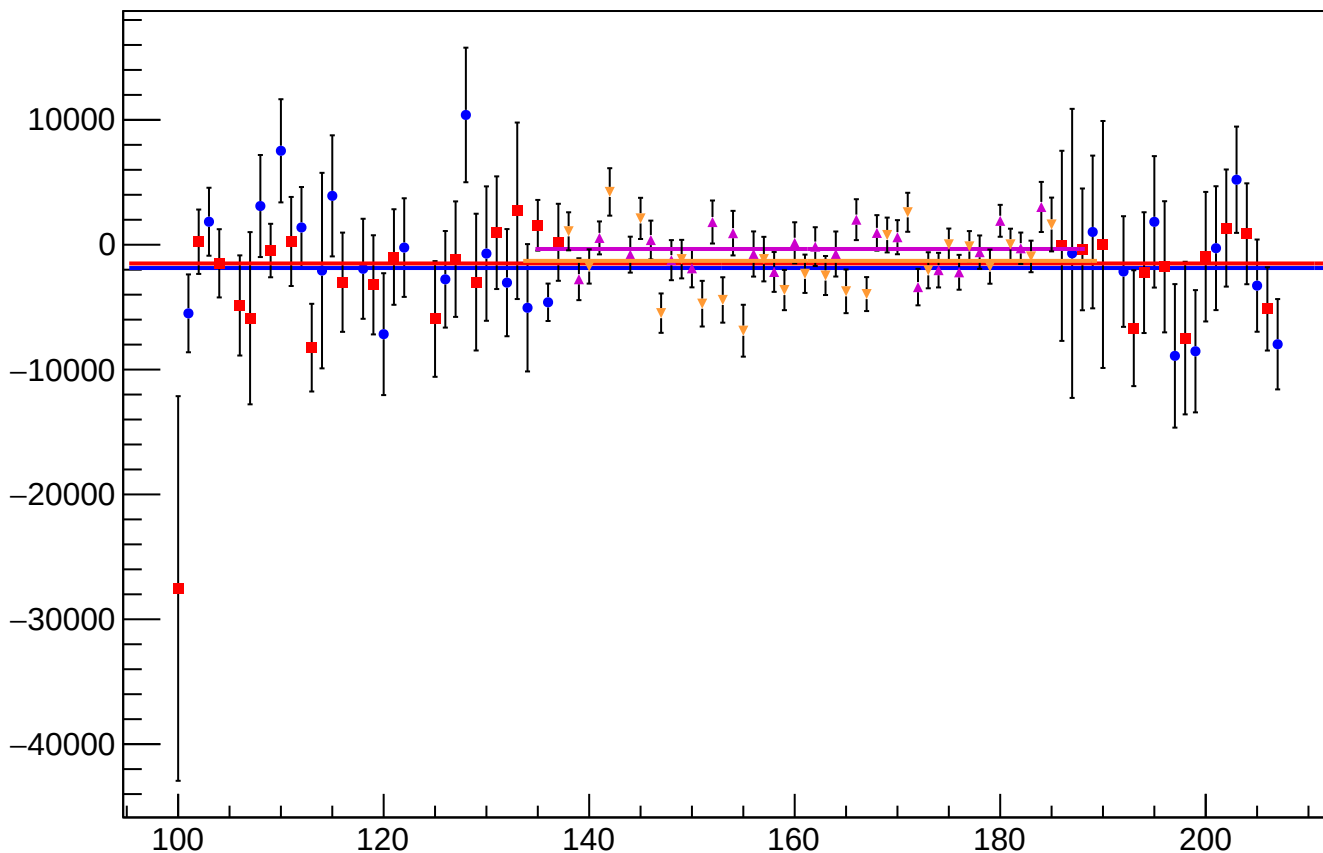
Left In: 2165.643+/-0.358  $\chi^2/\text{NDF}$ : 52124.4/22

+ sign 2156.887+/-0.264  $\chi^2/\text{NDF}$ : 252690.1/49

All: 2158.976+/-0.186  $\chi^2/\text{NDF}$ : 509495.6/101

- sign 2161.031+/-0.262  $\chi^2/\text{NDF}$ : 256681.3/51

asym\_us\_dd\_at2lr\_dd\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-1867.028 \pm 747.111$   $\chi^2/\text{NDF}$ : 32.7/25

Left Out:  $-1293.717 \pm 310.622$   $\chi^2/\text{NDF}$ : 58.7/23

Right Out:  $-1501.107 \pm 717.304$   $\chi^2/\text{NDF}$ : 17.4/28

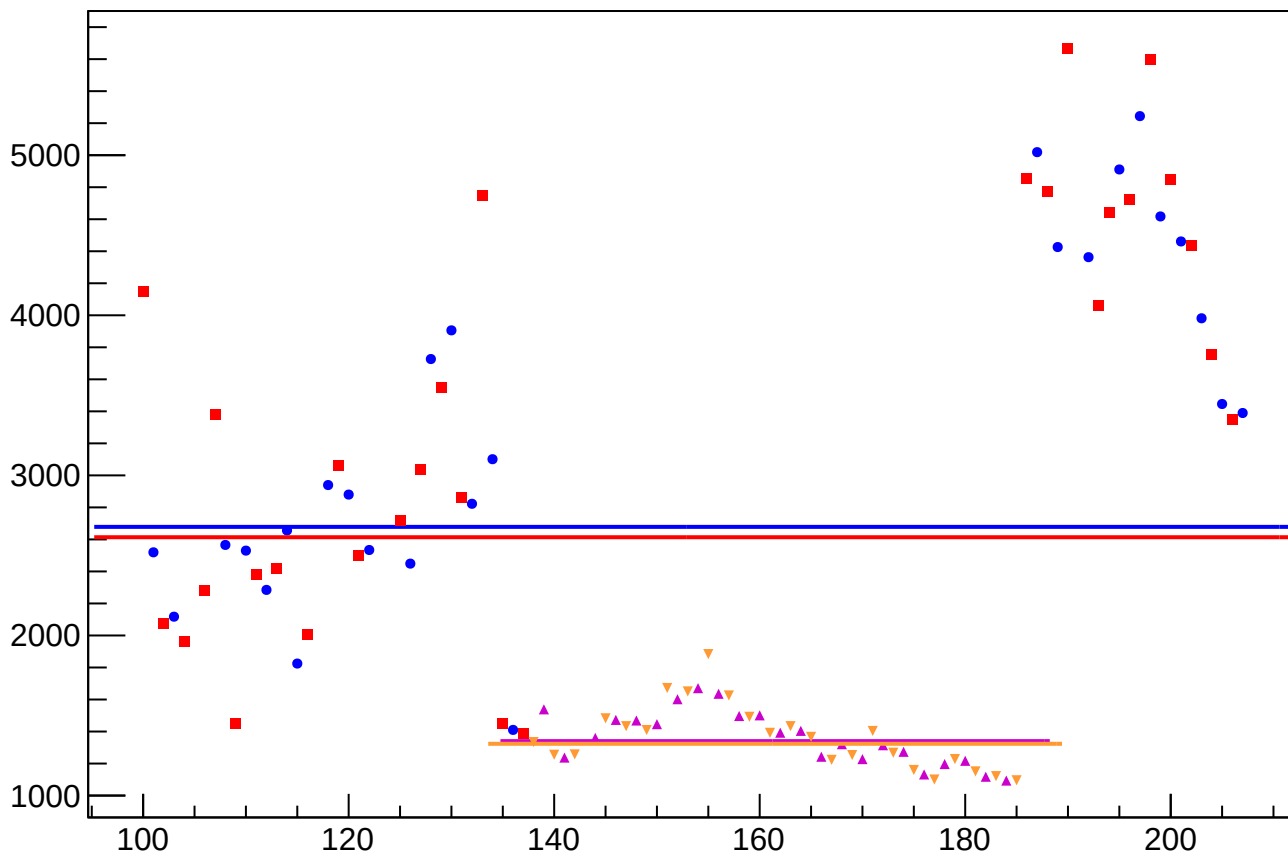
Left In:  $-341.256 \pm 315.566$   $\chi^2/\text{NDF}$ : 24.8/22

+ sign  $-1378.213 \pm 286.820$   $\chi^2/\text{NDF}$ : 91.9/49

All:  $-956.766 \pm 203.526$   $\chi^2/\text{NDF}$ : 140.6/101

- sign  $-529.334 \pm 288.849$   $\chi^2/\text{NDF}$ : 44.4/51

asym\_us\_dd\_at2lr\_dd\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 2678.423+/-0.528  $\chi^2/\text{NDF}$ : 4051201.4/25

Left Out: 1323.402+/-0.220  $\chi^2/\text{NDF}$ : 663857.6/23

Right Out: 2613.667+/-0.507  $\chi^2/\text{NDF}$ : 5205776.6/28

Left In: 1340.083+/-0.223  $\chi^2/\text{NDF}$ : 494276.1/22

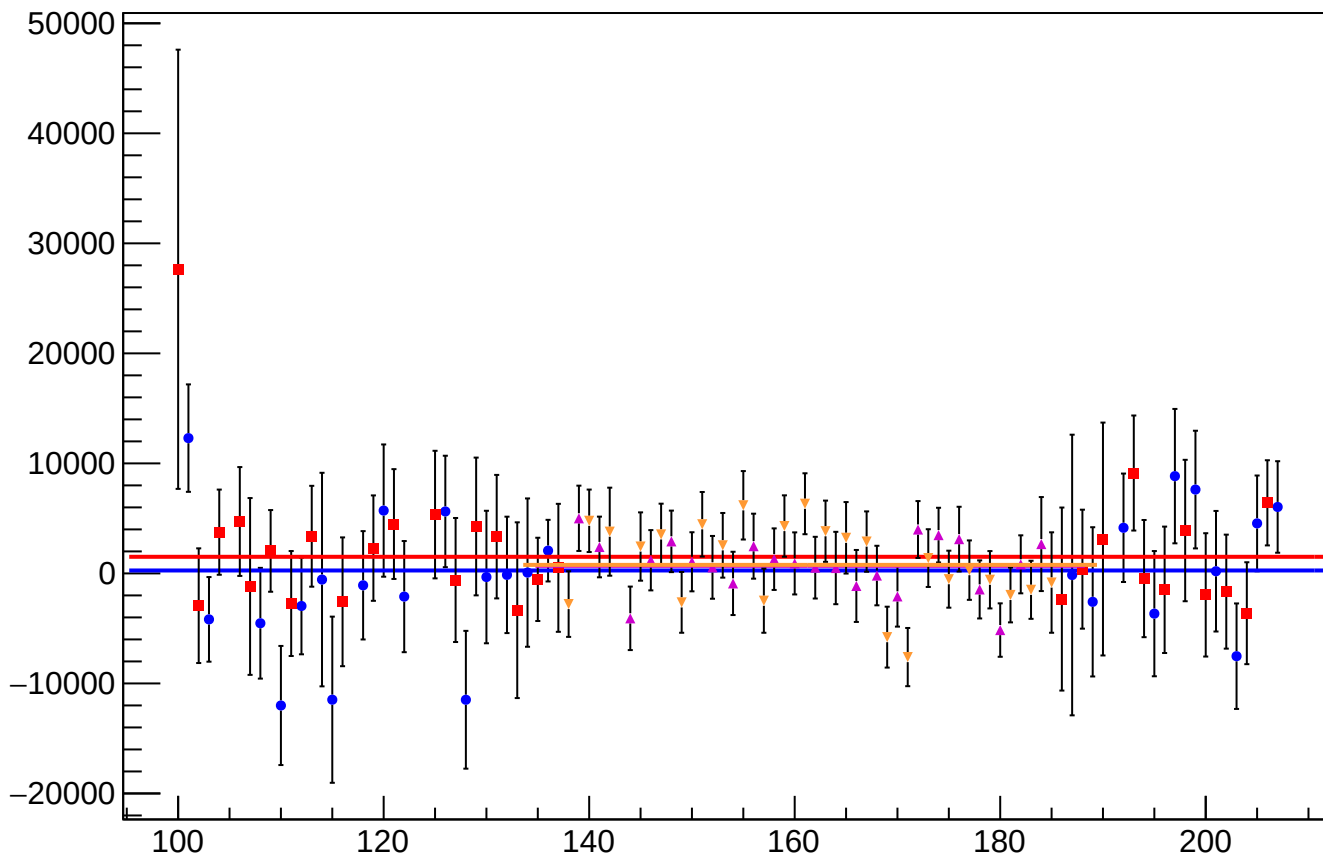
+ sign 1523.109+/-0.203  $\chi^2/\text{NDF}$ : 10324323.6/49

All: 1534.774+/-0.144  $\chi^2/\text{NDF}$ : 21313556.1/100

- sign 1546.603+/-0.204  $\chi^2/\text{NDF}$ : 10982570.3/51



# asym\_us\_dd\_at2lr\_dd\_avg\_mean vs Slug



Right In:  $266.394 \pm 1001.140$   $\chi^2/\text{NDF}$ : 33.3/25

Left Out:  $774.788 \pm 583.692$   $\chi^2/\text{NDF}$ : 39.3/23

Right Out:  $1509.751 \pm 980.862$   $\chi^2/\text{NDF}$ : 13.3/28

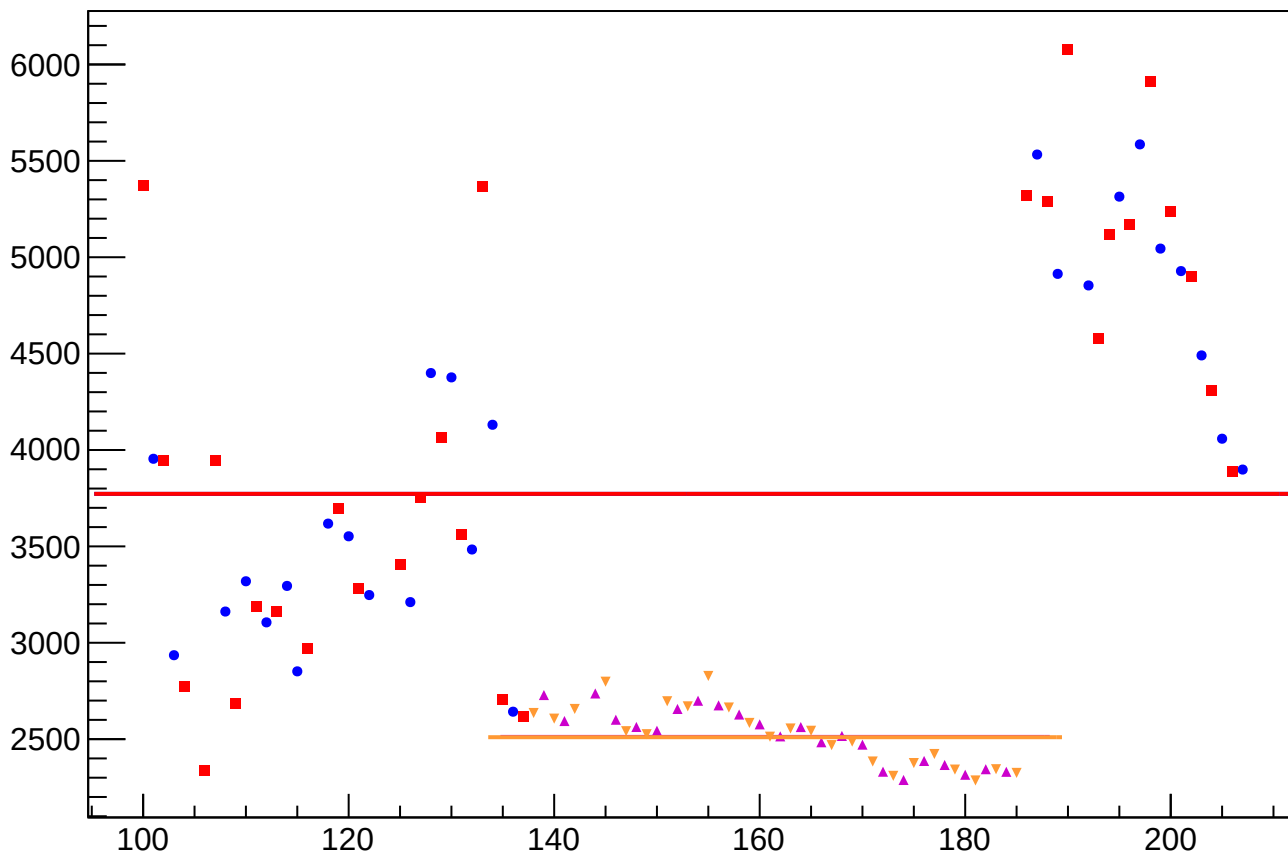
Left In:  $689.981 \pm 587.431$   $\chi^2/\text{NDF}$ : 18.3/22

+ sign  $645.814 \pm 504.248$   $\chi^2/\text{NDF}$ : 72.8/49

All:  $776.176 \pm 356.457$   $\chi^2/\text{NDF}$ : 105.1/101

- sign  $906.390 \pm 503.964$   $\chi^2/\text{NDF}$ : 32.1/51

asym\_us\_dd\_at2lr\_dd\_avg\_rms vs Slug



Right In: 3772.338 $\pm$ 0.708  $\chi^2$ /NDF: 1421515.6/25

Left Out: 2510.069 $\pm$ 0.413  $\chi^2$ /NDF:128632.5/23

Right Out: 3772.541 $\pm$ 0.694  $\chi^2$ /NDF: 2041366.1/28

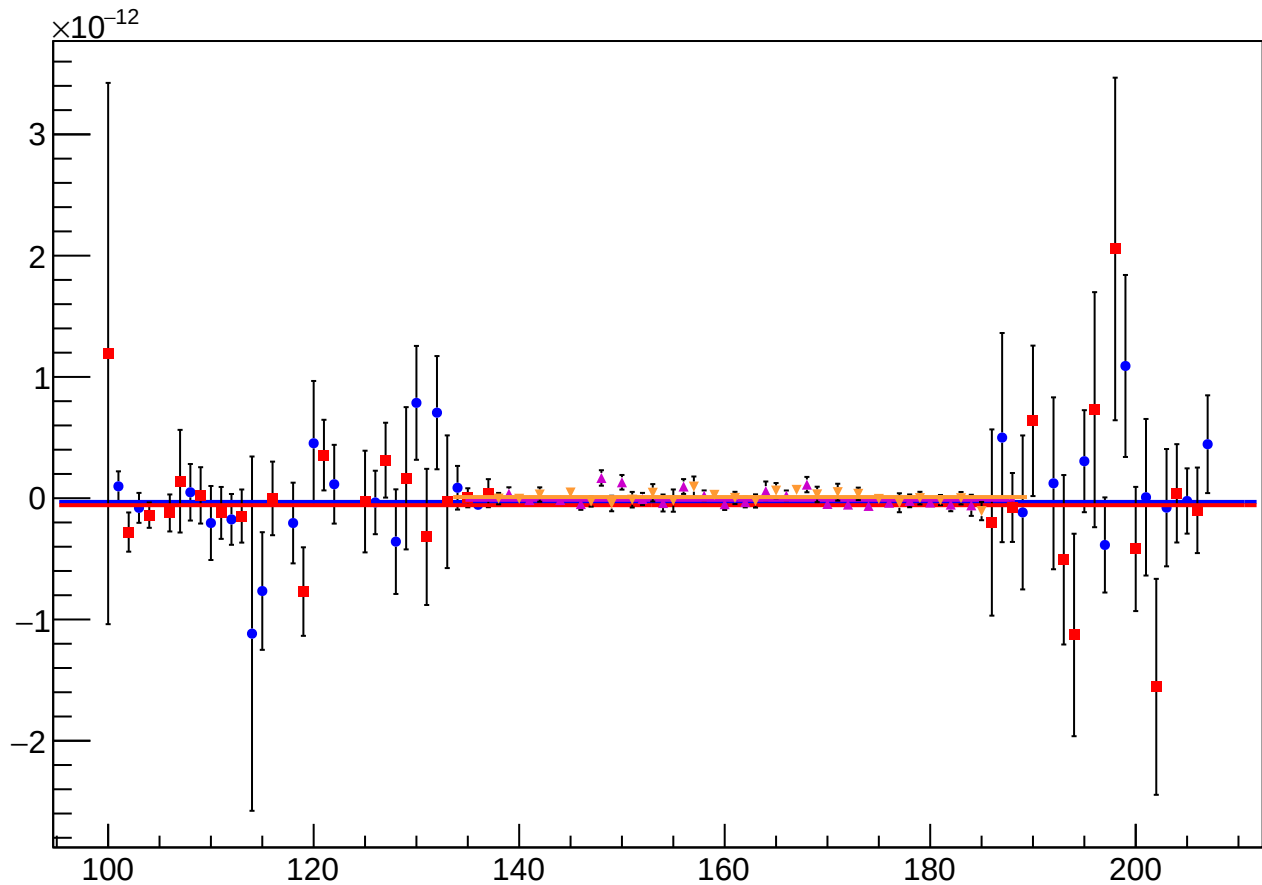
Left In: 2511.613 $\pm$ 0.415  $\chi^2$ /NDF:113485.5/22

+ sign 2830.291 $\pm$ 0.357  $\chi^2$ /NDF: 3922974.6/49

All: 2837.393 $\pm$ 0.252  $\chi^2$ /NDF: 8511307.4/10

- sign 2844.486 $\pm$ 0.356  $\chi^2$ /NDF: 4587539.9/51

asym\_us\_dd\_at2lr\_dd\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 18.7/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :12.2/23

Right Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 22.2/28

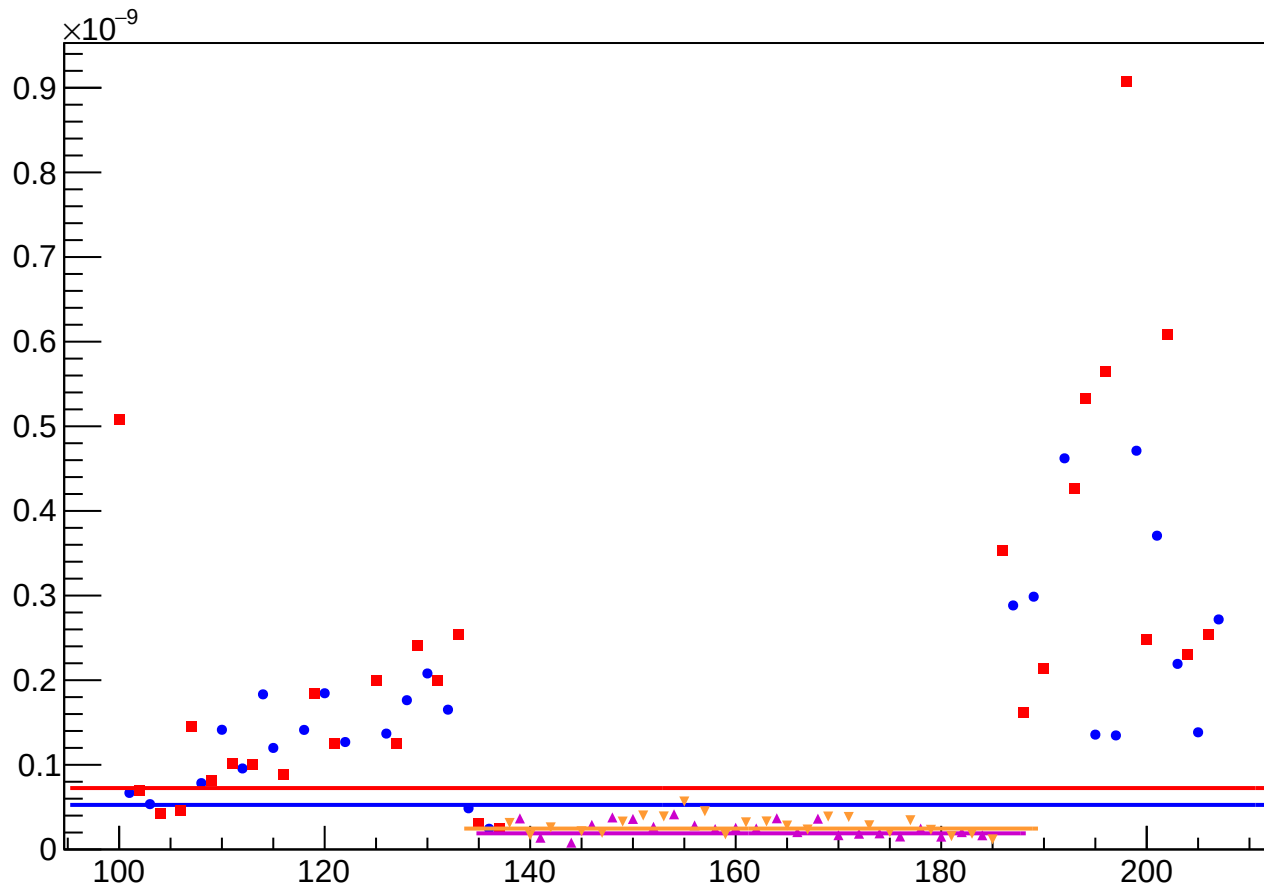
Left In: -0.000+/-0.000  $\chi^2/\text{NDF}$ :30.9/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 32.2/49

All: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 89.3/101

- sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 54.3/51

asym\_us\_dd\_at2lr\_dd\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5783234.3/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :1413212.9/23

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7022808.1/28

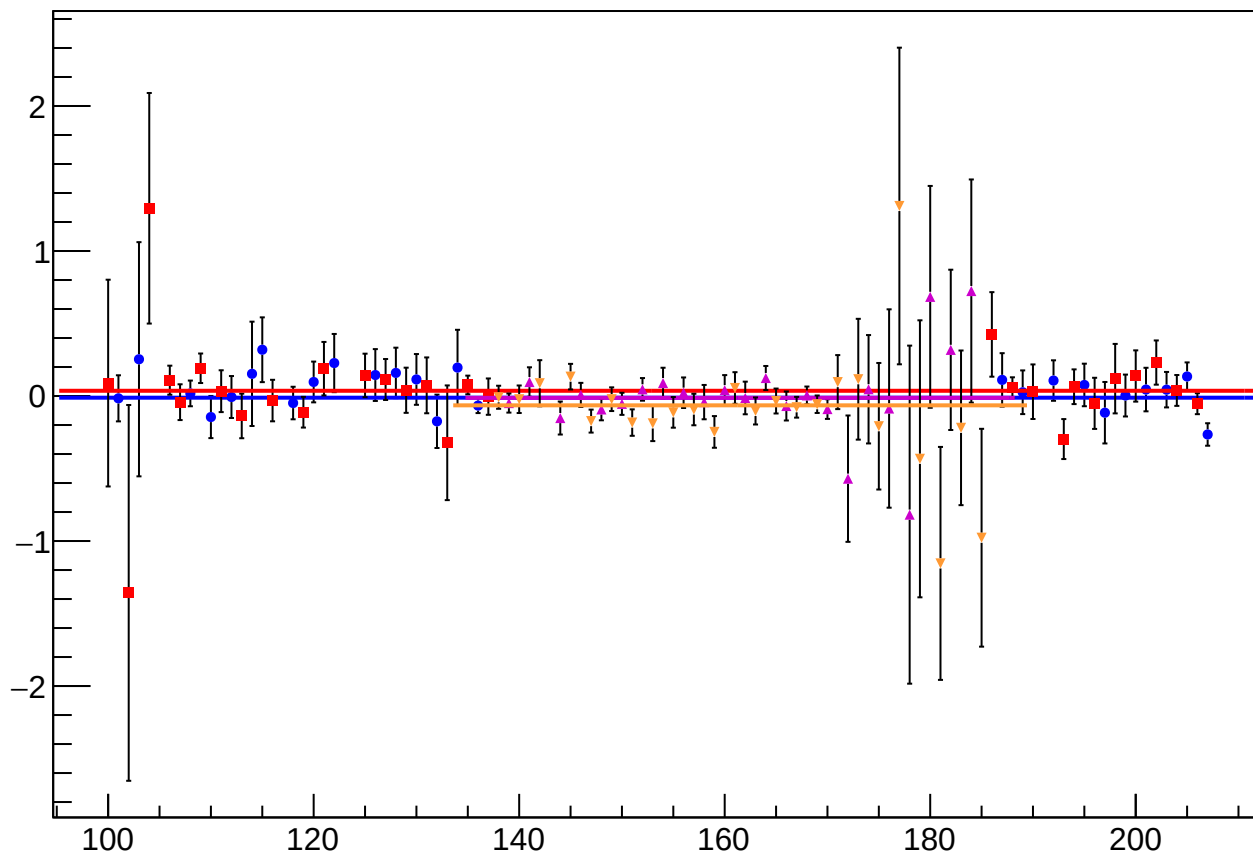
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :2190334.0/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8478883.0/49

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 21255848.4/101

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12362119.5/51

asym\_us\_dd\_at2lr\_dd\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.012 \pm 0.025$   $\chi^2/\text{NDF}$ : 25.5/25

Left Out:  $-0.064 \pm 0.022$   $\chi^2/\text{NDF}$ : 22.3/23

Right Out:  $0.036 \pm 0.024$   $\chi^2/\text{NDF}$ : 24.8/28

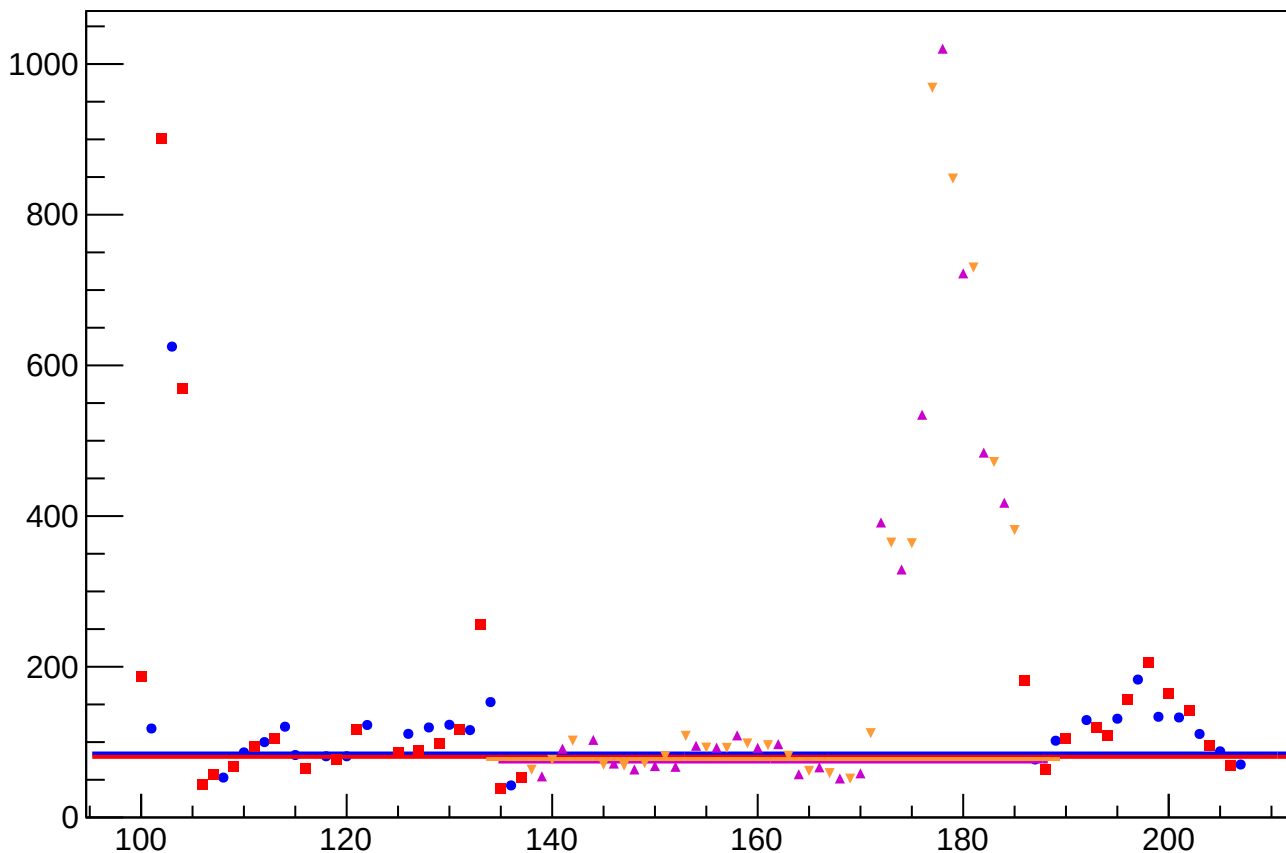
Left In:  $-0.013 \pm 0.021$   $\chi^2/\text{NDF}$ : 15.0/22

+ sign  $-0.041 \pm 0.017$   $\chi^2/\text{NDF}$ : 50.3/49

All:  $-0.015 \pm 0.011$   $\chi^2/\text{NDF}$ : 97.3/101

- sign  $0.009 \pm 0.016$   $\chi^2/\text{NDF}$ : 42.2/51

asym\_us\_dd\_at2lr\_dd\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 84.862 $\pm$ 0.018  $\chi^2$ /NDF: 4567187.9/25

Left Out: 77.533 $\pm$ 0.016  $\chi^2$ /NDF: 8331194.0/23

Right Out: 80.462 $\pm$ 0.017  $\chi^2$ /NDF: 6044187.1/28

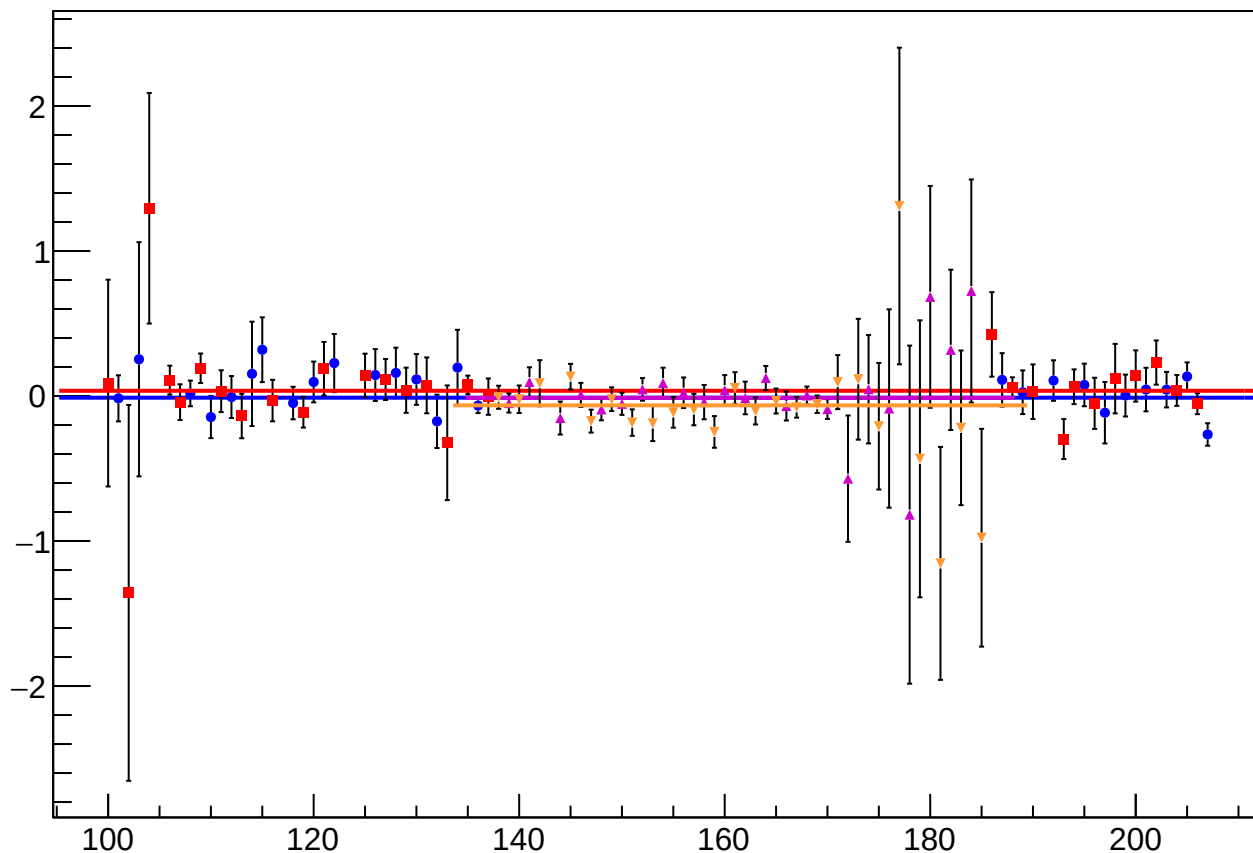
Left In: 74.216 $\pm$ 0.015  $\chi^2$ /NDF: 8514080.5/22

+ sign 80.735 $\pm$ 0.012  $\chi^2$ /NDF: 12994436.1/49

All: 78.759 $\pm$ 0.008  $\chi^2$ /NDF: 27683798.4/101

- sign 76.965 $\pm$ 0.011  $\chi^2$ /NDF: 14635204.4/51

asym\_us\_dd\_at2lr\_dd\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.012 \pm 0.025$   $\chi^2/\text{NDF}$ : 25.5/25

Left Out:  $-0.064 \pm 0.022$   $\chi^2/\text{NDF}$ : 22.3/23

Right Out:  $0.036 \pm 0.024$   $\chi^2/\text{NDF}$ : 24.8/28

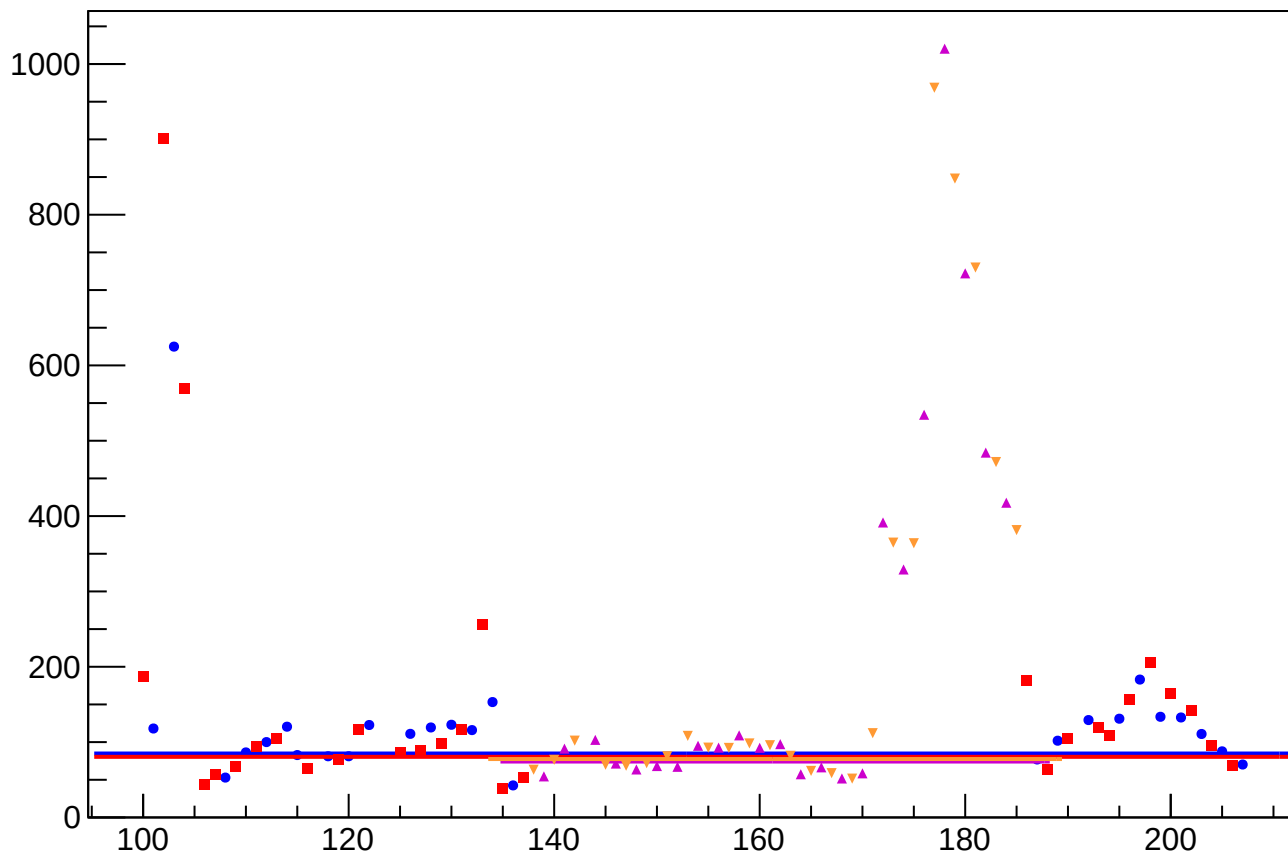
Left In:  $-0.013 \pm 0.021$   $\chi^2/\text{NDF}$ : 15.0/22

+ sign  $-0.041 \pm 0.017$   $\chi^2/\text{NDF}$ : 50.3/49

All:  $-0.015 \pm 0.011$   $\chi^2/\text{NDF}$ : 97.3/101

- sign  $0.009 \pm 0.016$   $\chi^2/\text{NDF}$ : 42.2/51

asym\_us\_dd\_at2lr\_dd\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 84.862 $\pm$ 0.018  $\chi^2$ /NDF: 4567187.9/25

Left Out: 77.533 $\pm$ 0.016  $\chi^2$ /NDF: 8331194.0/23

Right Out: 80.462 $\pm$ 0.017  $\chi^2$ /NDF: 6044187.1/28

Left In: 74.216 $\pm$ 0.015  $\chi^2$ /NDF: 8514080.5/22

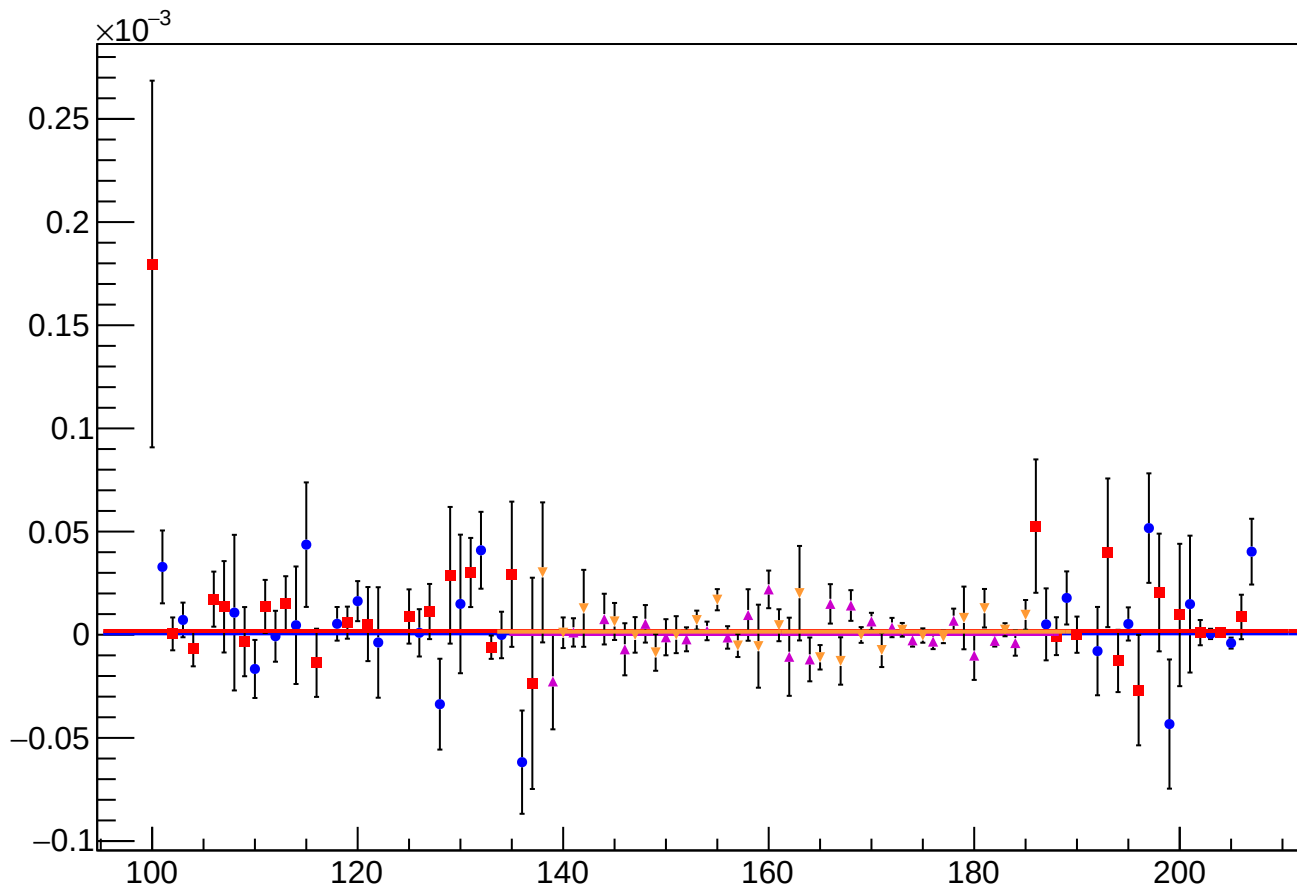
+ sign 80.735 $\pm$ 0.012  $\chi^2$ /NDF: 12994436.1/49

All: 78.759 $\pm$ 0.008  $\chi^2$ /NDF: 27683798.4/101

- sign 76.965 $\pm$ 0.011  $\chi^2$ /NDF: 14635204.4/51



asym\_us\_dd\_at2lr\_dd\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 41.5/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 27.1/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 23.6/28

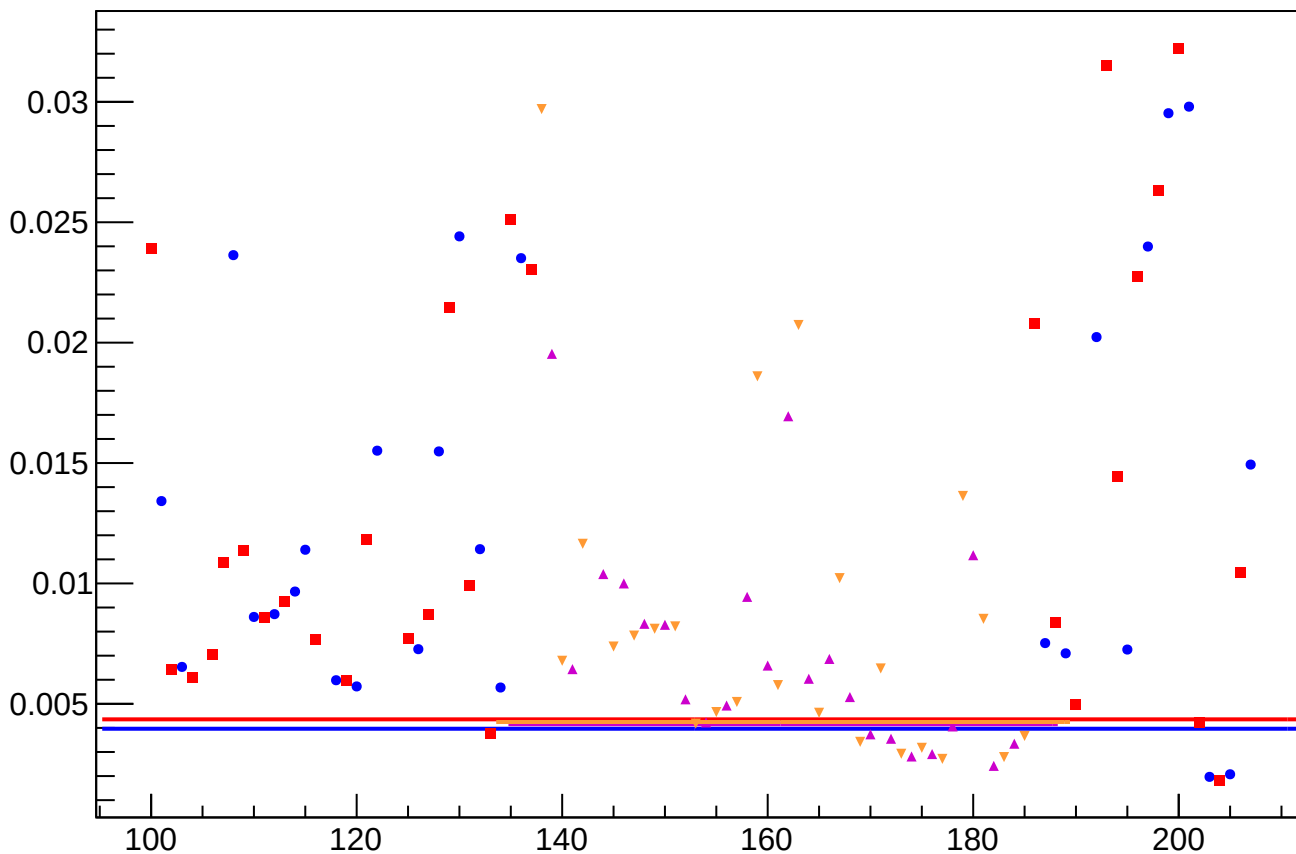
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 24.6/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 68.8/49

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 117.6/101

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 48.8/51

asym\_us\_dd\_at2lr\_dd\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 14234967.7/25

Left Out: 0.004 $\pm$ 0.000  $\chi^2$ /NDF:8650909.7/23

Right Out: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 13939290.0/28

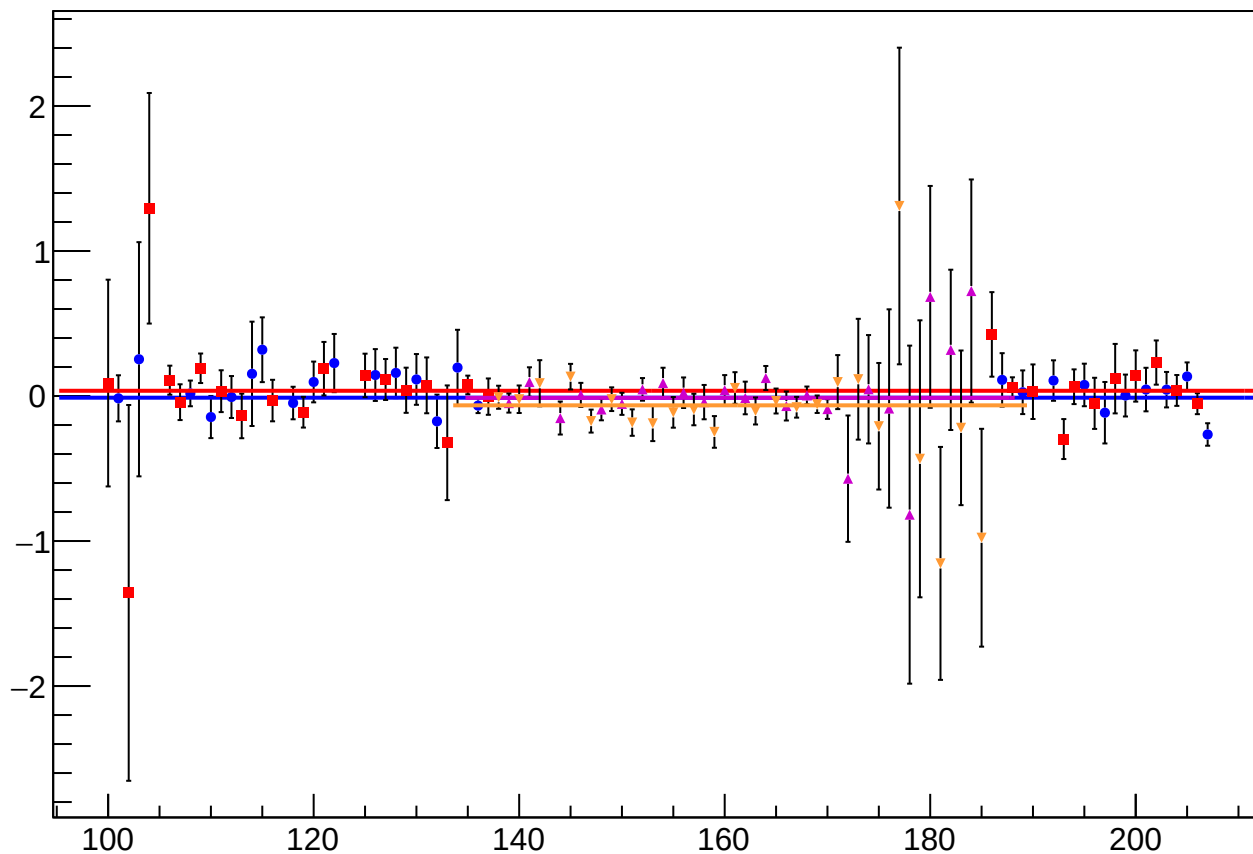
Left In: 0.004 $\pm$ 0.000  $\chi^2$ /NDF:6886421.5/22

+ sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 22927649.4/49

All: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 43783076.1/101

- sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 20847414.4/51

asym\_us\_dd\_at2lr\_dd\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.012 \pm 0.025$   $\chi^2/\text{NDF}$ : 25.5/25

Left Out:  $-0.064 \pm 0.022$   $\chi^2/\text{NDF}$ : 22.3/23

Right Out:  $0.036 \pm 0.024$   $\chi^2/\text{NDF}$ : 24.8/28

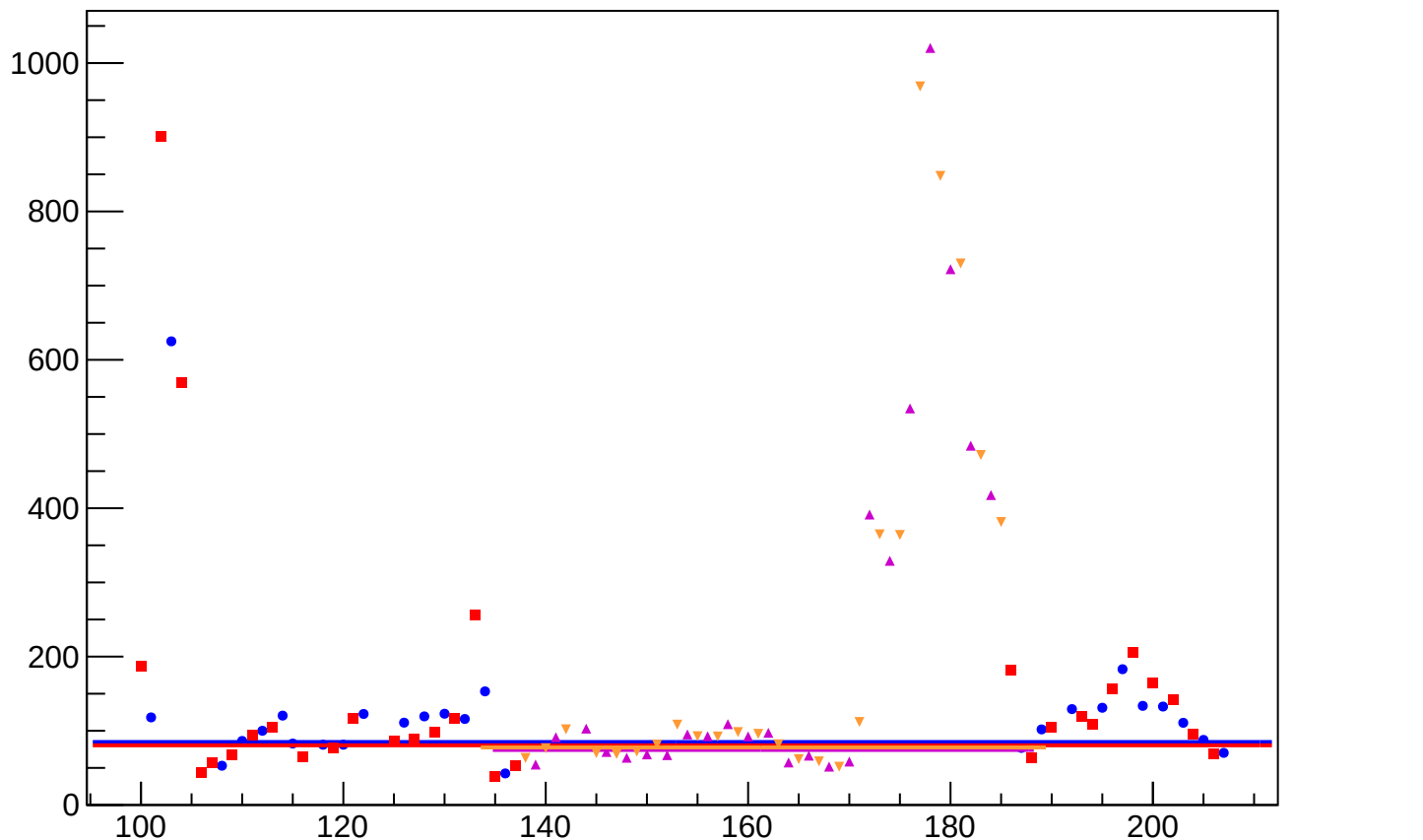
Left In:  $-0.013 \pm 0.021$   $\chi^2/\text{NDF}$ : 15.0/22

+ sign  $-0.041 \pm 0.017$   $\chi^2/\text{NDF}$ : 50.3/49

All:  $-0.015 \pm 0.011$   $\chi^2/\text{NDF}$ : 97.3/101

- sign  $0.009 \pm 0.016$   $\chi^2/\text{NDF}$ : 42.2/51

asym\_us\_dd\_at2lr\_dd\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 84.879+/-0.018  $\chi^2/\text{NDF}$ : 4563729.8/25

Left Out: 77.533+/-0.016  $\chi^2/\text{NDF}$ : 8331106.7/23

Right Out: 80.455+/-0.017  $\chi^2/\text{NDF}$ : 6045762.2/28

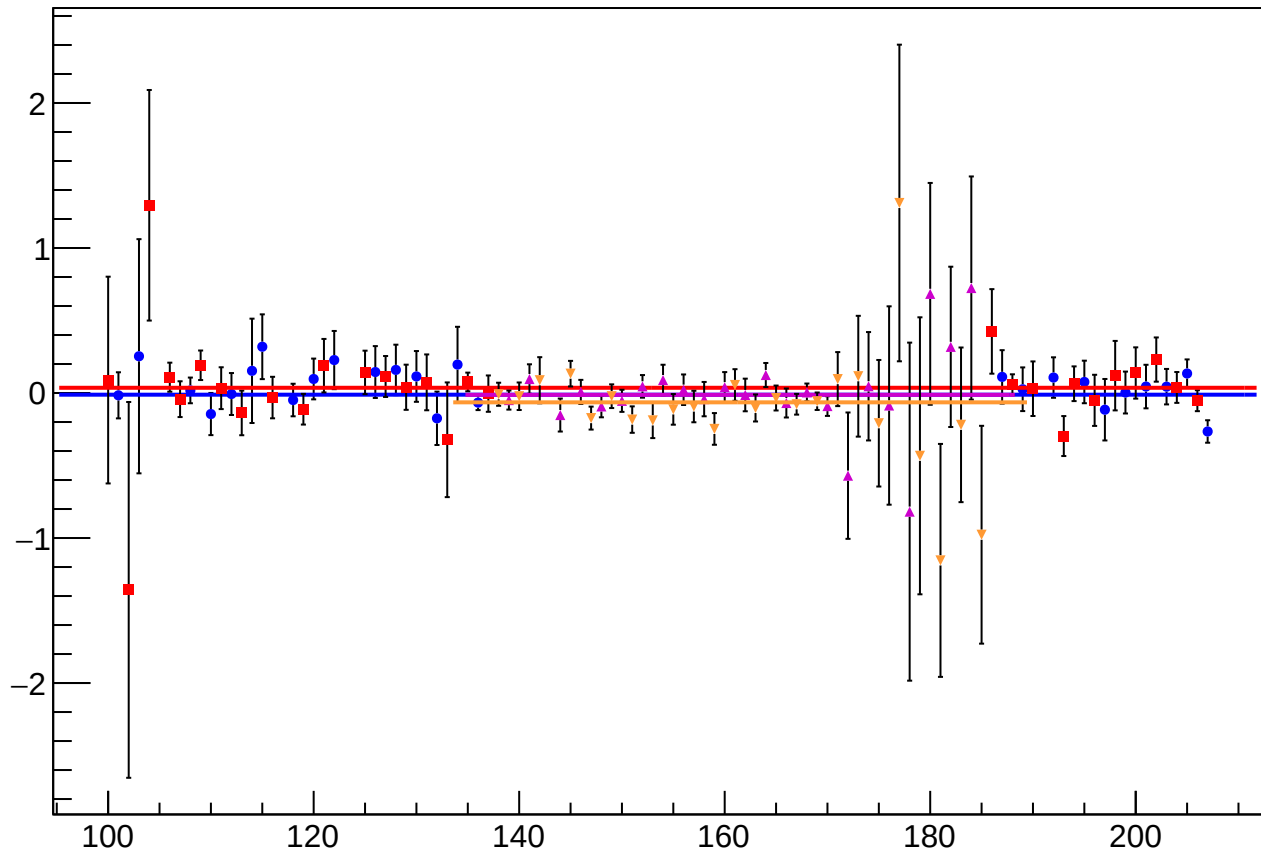
Left In: 74.217+/-0.015  $\chi^2/\text{NDF}$ : 8513791.3/22

+ sign 80.742+/-0.012  $\chi^2/\text{NDF}$ : 12991340.2/49

All: 78.761+/-0.008  $\chi^2/\text{NDF}$ : 27682048.0/101

- sign 76.962+/-0.011  $\chi^2/\text{NDF}$ : 14636286.7/51

asym\_us\_dd\_at2lr\_dd\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.012 \pm 0.025$   $\chi^2/\text{NDF}$ : 25.5/25

Left Out:  $-0.064 \pm 0.022$   $\chi^2/\text{NDF}$ : 22.3/23

Right Out:  $0.036 \pm 0.024$   $\chi^2/\text{NDF}$ : 24.8/28

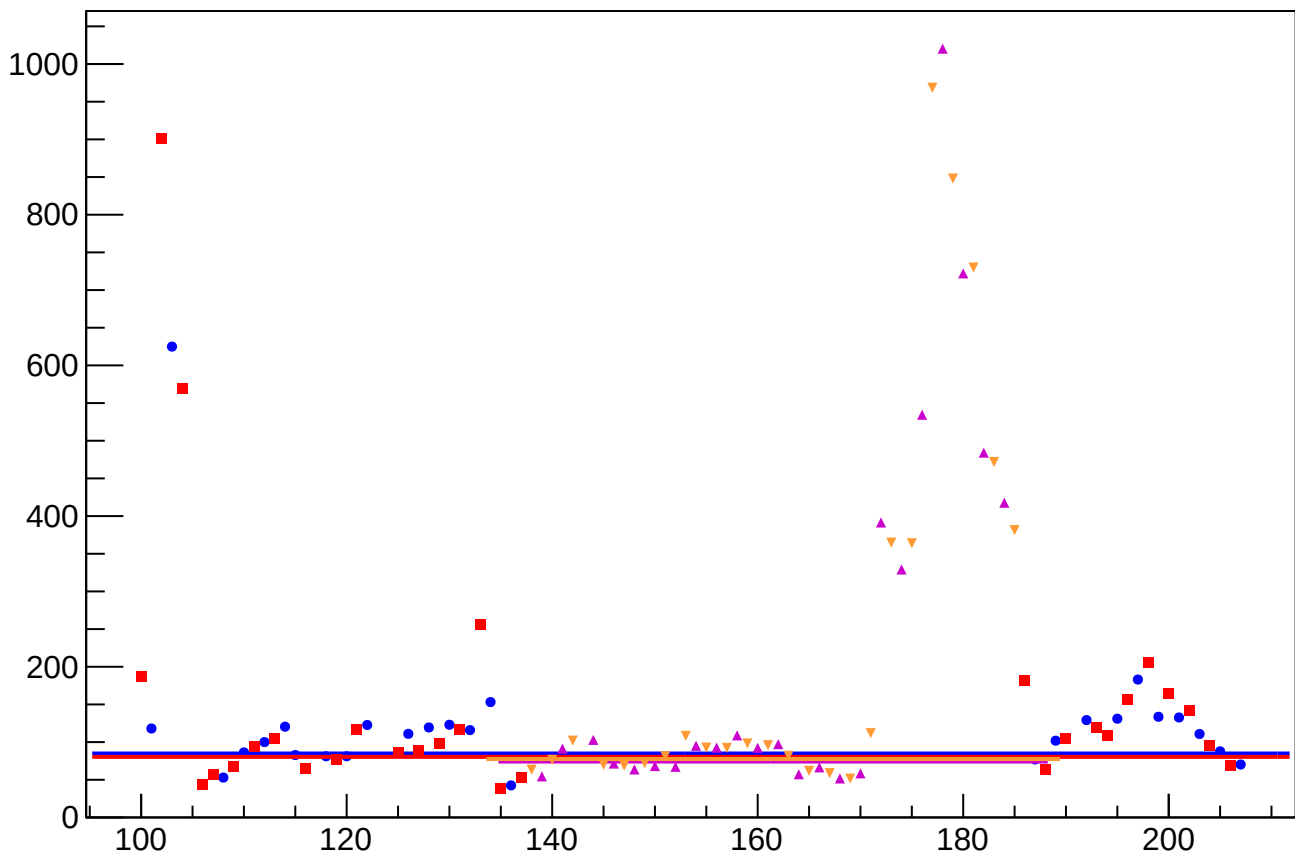
Left In:  $-0.013 \pm 0.021$   $\chi^2/\text{NDF}$ : 15.0/22

+ sign  $-0.041 \pm 0.017$   $\chi^2/\text{NDF}$ : 50.3/49

All:  $-0.015 \pm 0.011$   $\chi^2/\text{NDF}$ : 97.3/101

- sign  $0.009 \pm 0.016$   $\chi^2/\text{NDF}$ : 42.2/51

asym\_us\_dd\_at2lr\_dd\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 84.879+/-0.018  $\chi^2/\text{NDF}$ : 4563729.8/25

Left Out: 77.533+/-0.016  $\chi^2/\text{NDF}$ : 8331106.7/23

Right Out: 80.455+/-0.017  $\chi^2/\text{NDF}$ : 6045762.2/28

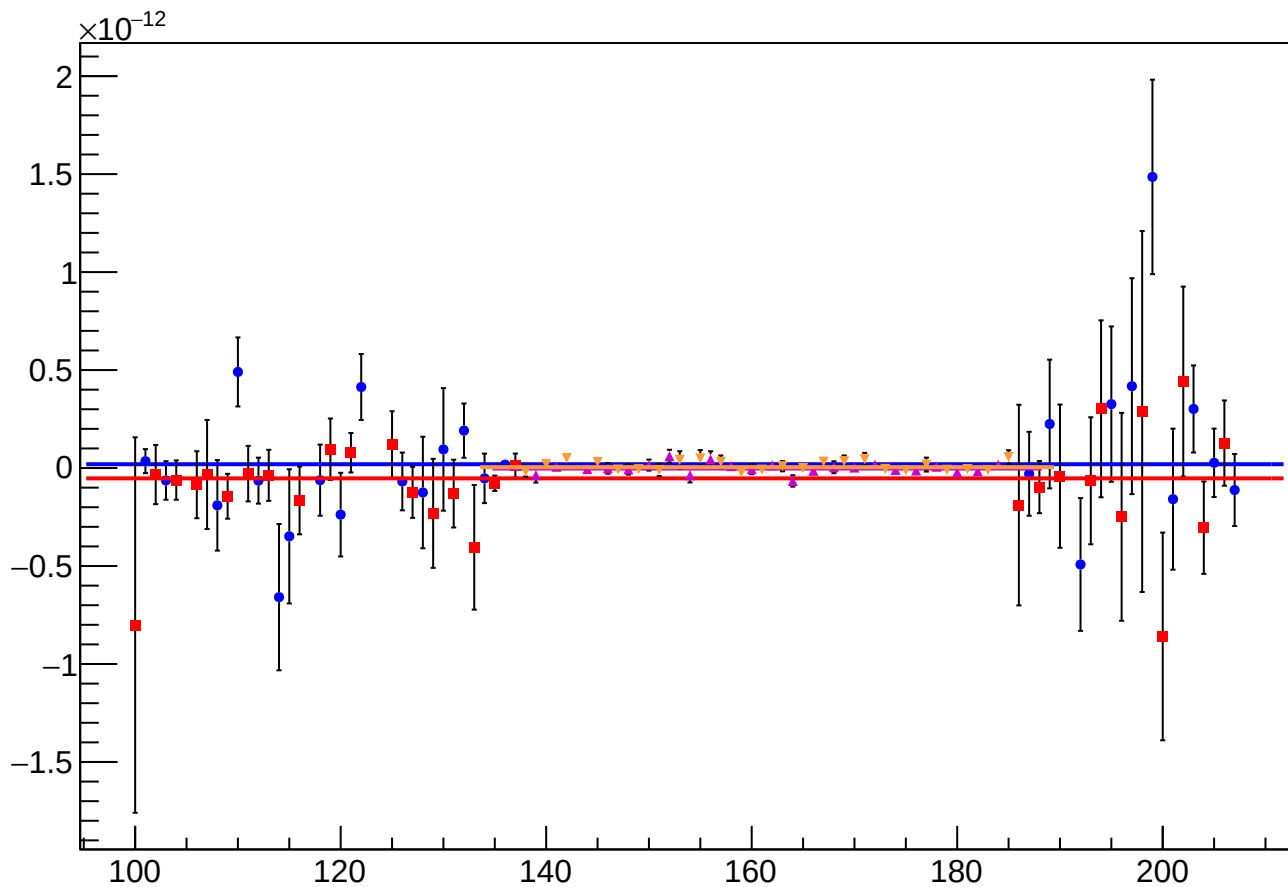
Left In: 74.217+/-0.015  $\chi^2/\text{NDF}$ : 8513791.3/22

+ sign 80.742+/-0.012  $\chi^2/\text{NDF}$ : 12991340.2/49

All: 78.761+/-0.008  $\chi^2/\text{NDF}$ : 27682048.0/101

- sign 76.962+/-0.011  $\chi^2/\text{NDF}$ : 14636286.7/51

asym\_us\_dd\_at2lr\_dd\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 38.3/25$

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 21.7/23$

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 15.3/28$

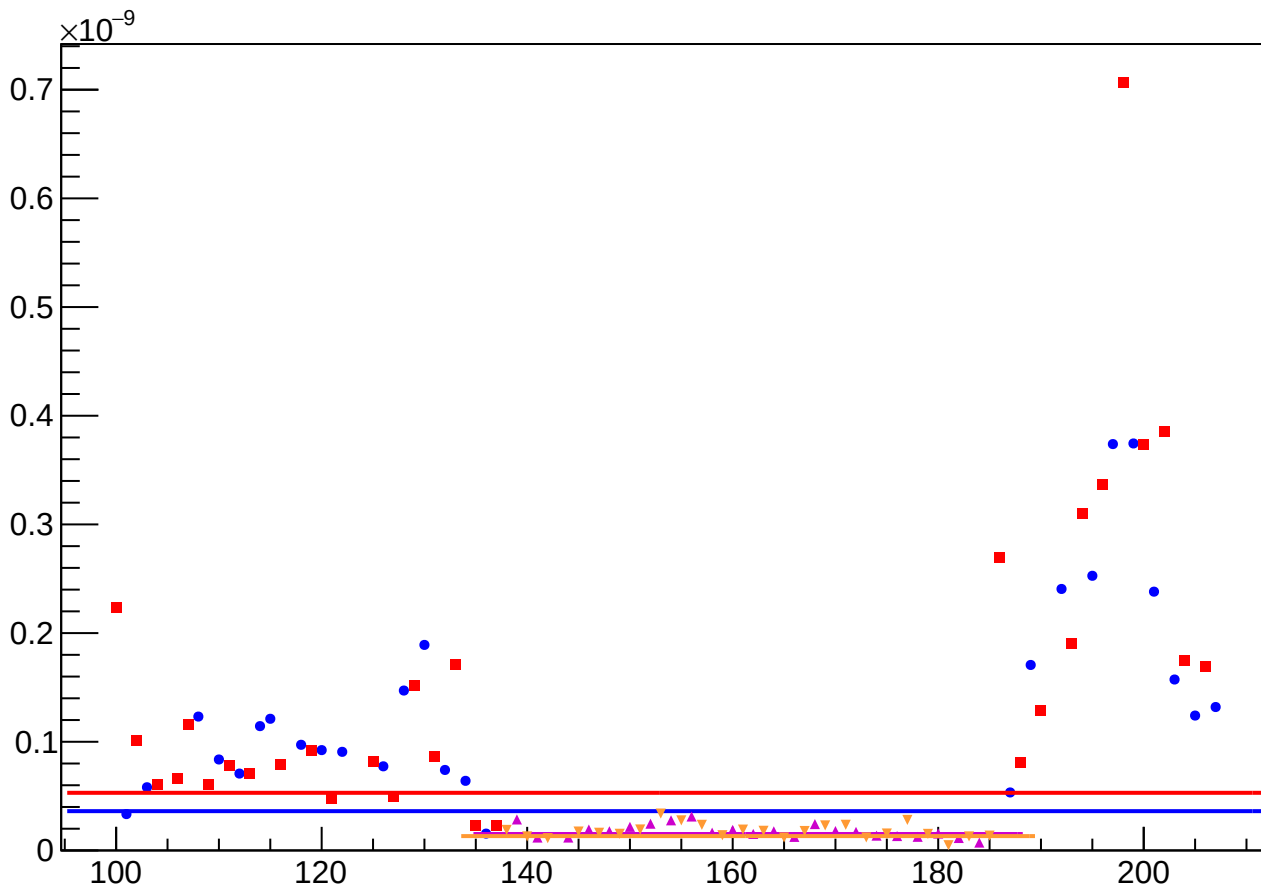
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 17.5/22$

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 60.6/49$

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 100.1/101$

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 37.1/51$

asym\_us\_dd\_at2lr\_dd\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9927878.9/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4237321.5/23

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8926577.0/28

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2148796.4/22

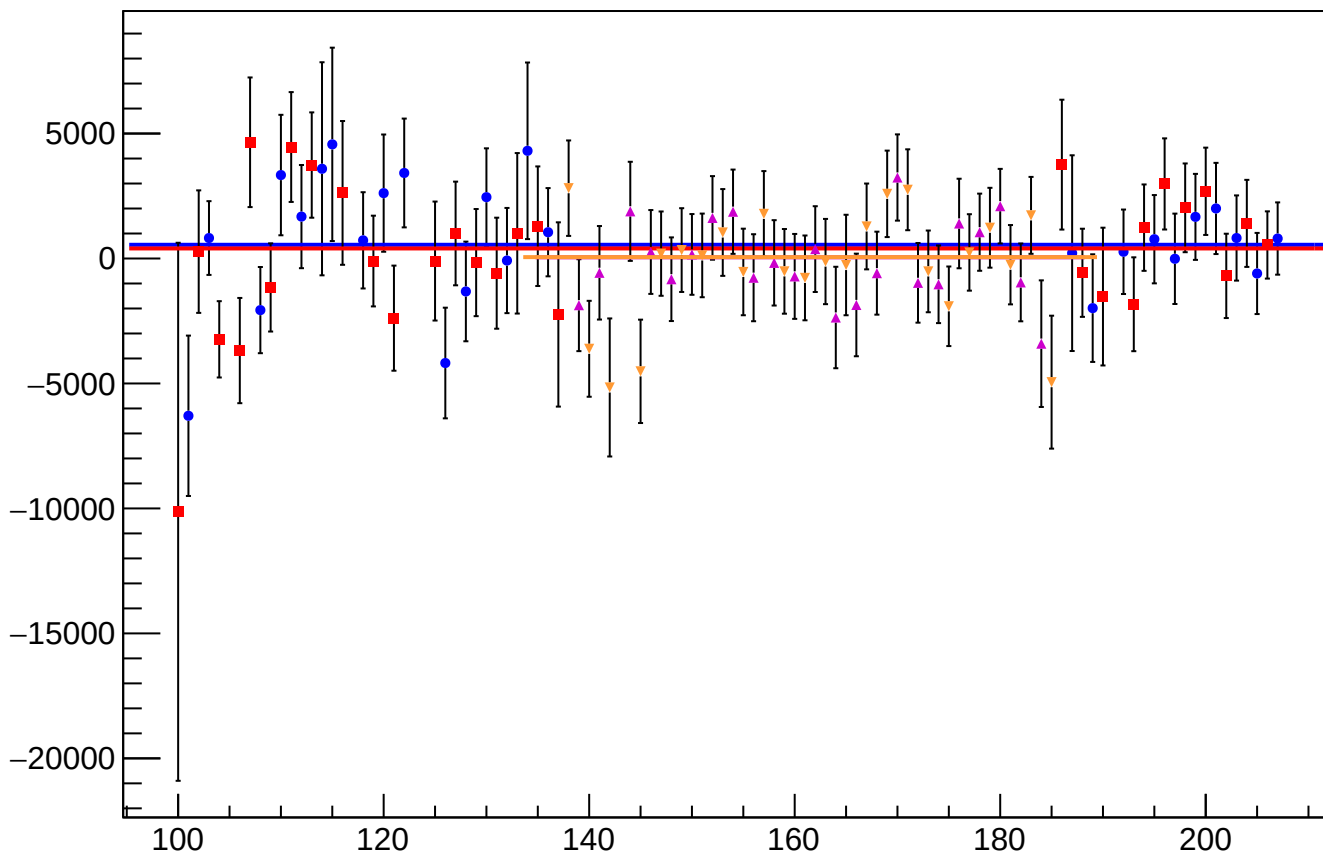
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 16985244.9/49

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 33176392.3/101

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 15950694.5/51



reg\_asym\_us\_dd\_at2lr\_dd\_dd\_mean vs Slug



Right In:  $548.884 \pm 391.436$   $\chi^2/\text{NDF}$ : 23.5/25

Left Out:  $54.770 \pm 356.375$   $\chi^2/\text{NDF}$ : 28.5/23

Right Out:  $401.898 \pm 379.149$   $\chi^2/\text{NDF}$ : 32.7/28

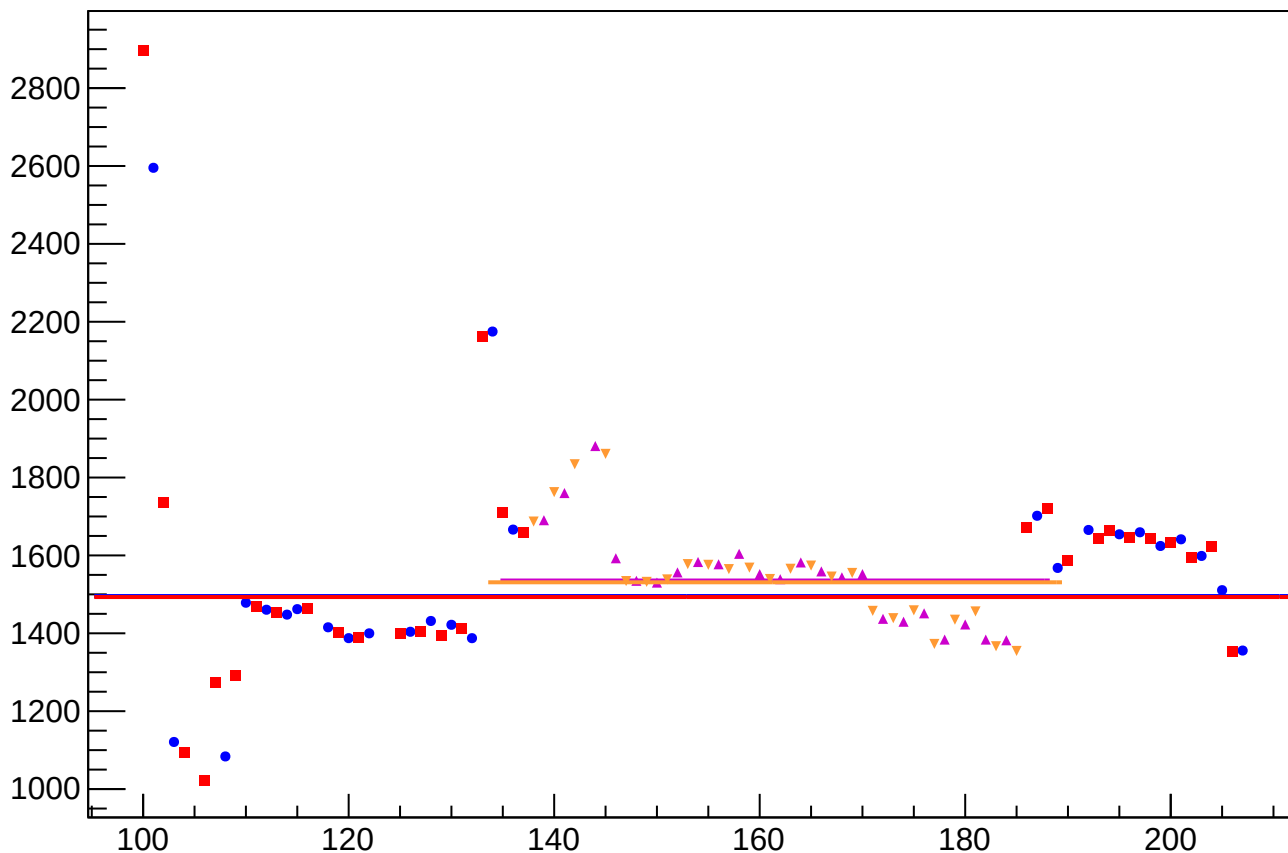
Left In:  $48.177 \pm 359.531$   $\chi^2/\text{NDF}$ : 16.8/22

+ sign  $278.712 \pm 263.520$   $\chi^2/\text{NDF}$ : 52.8/49

All:  $246.864 \pm 185.399$   $\chi^2/\text{NDF}$ : 102.8/101

- sign  $215.650 \pm 260.886$   $\chi^2/\text{NDF}$ : 50.0/51

# reg\_asym\_us\_dd\_at2lr\_dd\_dd\_rms vs Slug



Right In: 1495.674 $\pm$ 0.277  $\chi^2$ /NDF: 707586.8/25

Left Out: 1530.976 $\pm$ 0.252  $\chi^2$ /NDF: 203539.8/23

Right Out: 1493.116 $\pm$ 0.268  $\chi^2$ /NDF: 622378.8/28

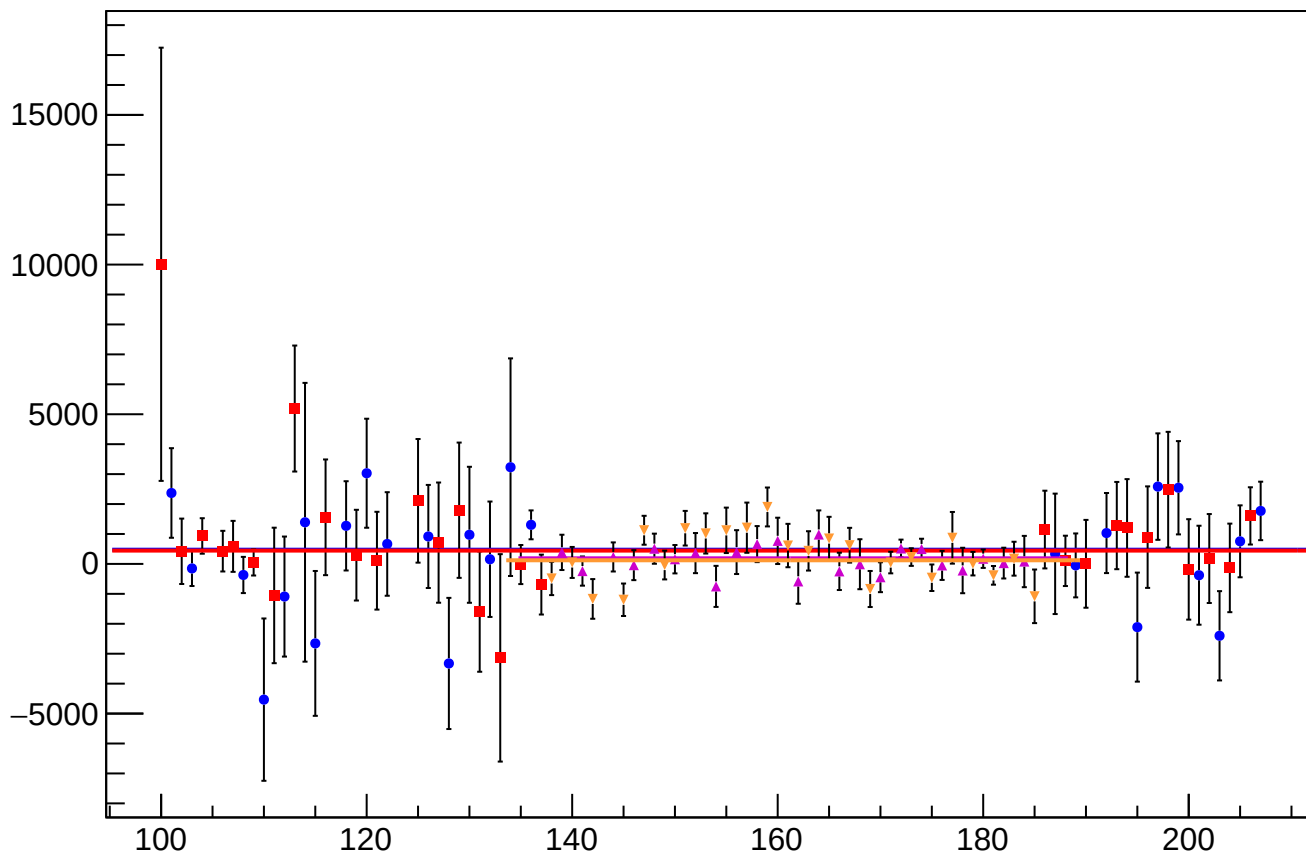
Left In: 1535.551 $\pm$ 0.254  $\chi^2$ /NDF: 192432.7/22

+ sign 1514.976 $\pm$ 0.186  $\chi^2$ /NDF: 920021.2/49

All: 1515.220 $\pm$ 0.131  $\chi^2$ /NDF: 1748027.1/10

- sign 1515.460 $\pm$ 0.184  $\chi^2$ /NDF: 828002.6/51

asym\_us\_dd\_at2lr\_dd\_dd\_reg\_correction\_mean vs Slug



Right In: 474.778 $\pm$ 233.102  $\chi^2$ /NDF: 30.8/25

Left Out: 121.327 $\pm$ 105.060  $\chi^2$ /NDF: 43.6/23

Right Out: 444.968 $\pm$ 201.636  $\chi^2$ /NDF: 18.2/28

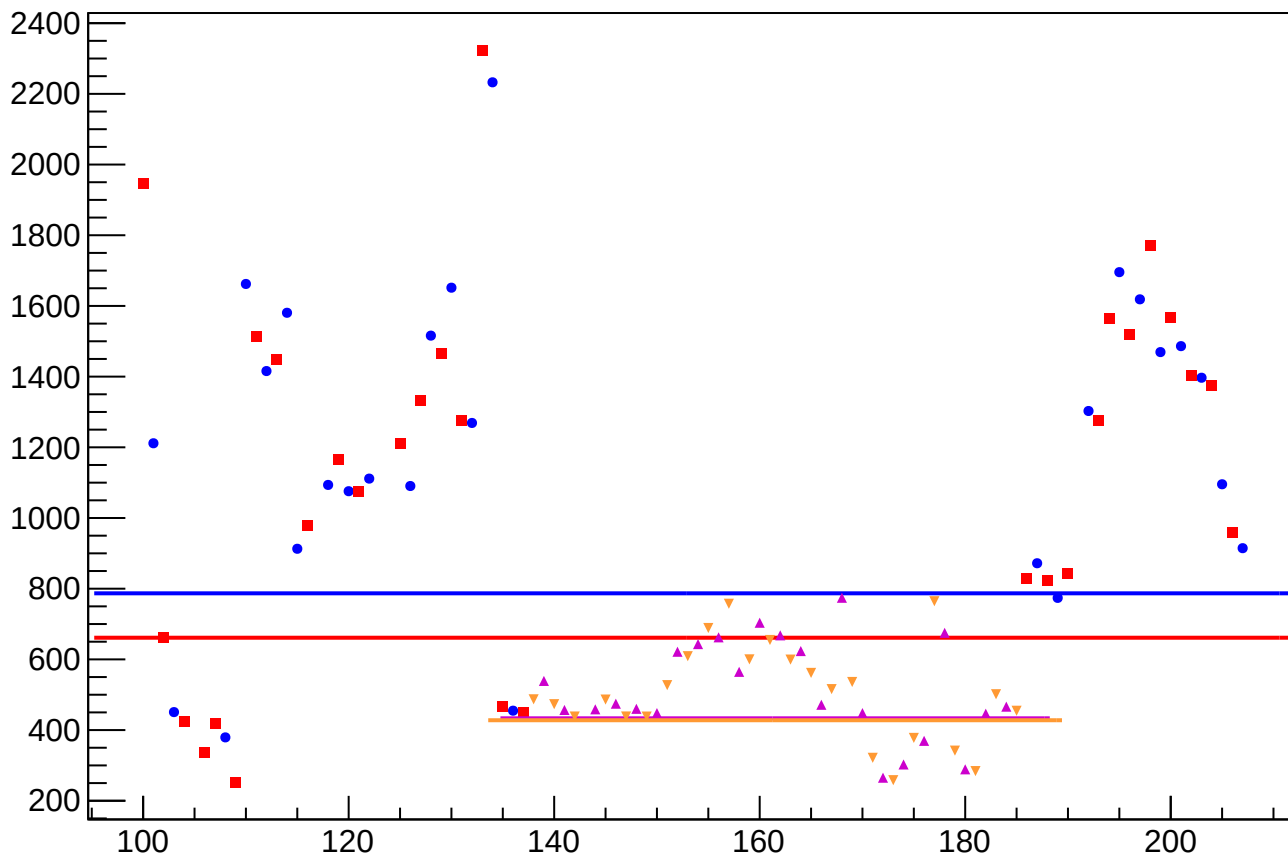
Left In: 186.828 $\pm$ 106.975  $\chi^2$ /NDF: 11.6/22

+ sign 181.003 $\pm$ 95.781  $\chi^2$ /NDF: 76.3/49

All: 212.686 $\pm$ 67.270  $\chi^2$ /NDF: 107.6/101

- sign 243.527 $\pm$ 94.500  $\chi^2$ /NDF: 31.0/51

asym\_us\_dd\_at2lr\_dd\_dd\_reg\_correction\_rms vs Slug



Right In: 786.905 +/- 0.165  $\chi^2/\text{NDF}$ : 6836430.9/25

Left Out: 427.814 +/- 0.074  $\chi^2/\text{NDF}$ : 3188159.5/23

Right Out: 661.284 +/- 0.143  $\chi^2/\text{NDF}$ : 9278854.3/28

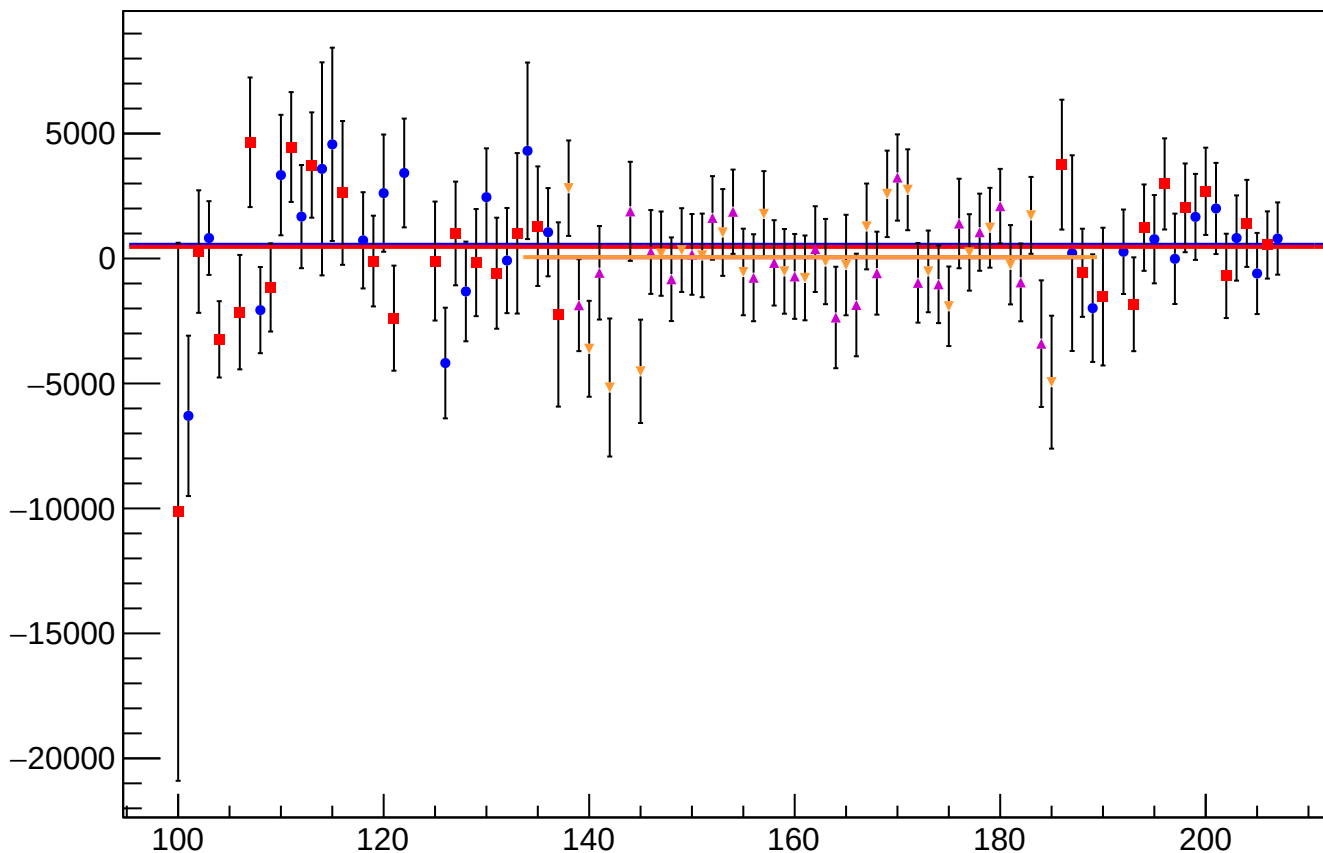
Left In: 433.283 +/- 0.076  $\chi^2/\text{NDF}$ : 3247998.9/22

+ sign 488.442 +/- 0.068  $\chi^2/\text{NDF}$ : 13969465.4/49

All: 485.868 +/- 0.048  $\chi^2/\text{NDF}$ : 28494700.9/10

- sign 483.363 +/- 0.067  $\chi^2/\text{NDF}$ : 14522385.3/51

cor\_asym\_us\_dd\_at2lr\_dd\_dd\_mean vs Slug



Right In: 548.914 $\pm$ 391.436  $\chi^2$ /NDF: 23.5/25

Left Out: 54.734 $\pm$ 356.375  $\chi^2$ /NDF:28.5/23

Right Out: 465.000 $\pm$ 380.104  $\chi^2$ /NDF: 30.2/28

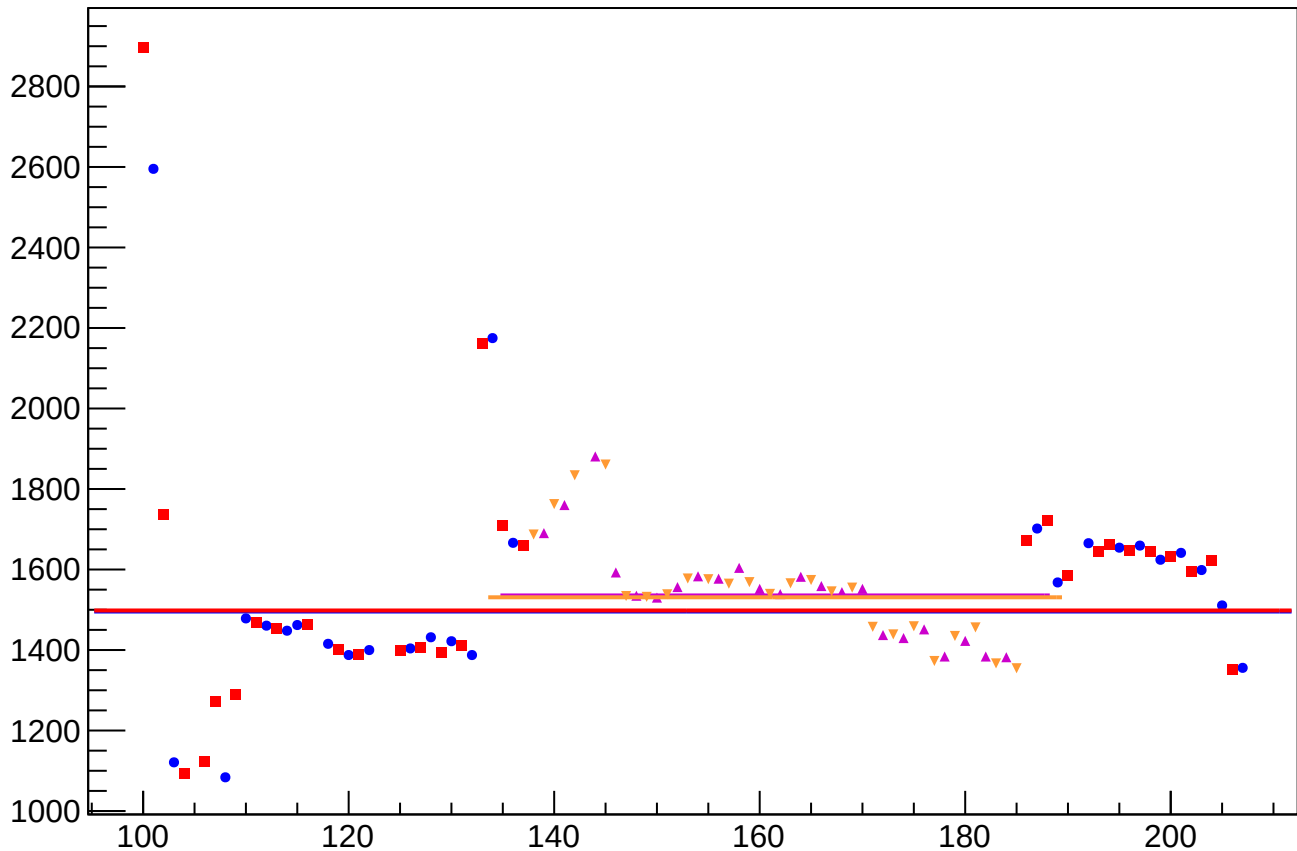
Left In: 48.256 $\pm$ 359.531  $\chi^2$ /NDF:16.8/22

+ sign 278.705 $\pm$ 263.520  $\chi^2$ /NDF: 52.8/49

All: 261.726 $\pm$ 185.510  $\chi^2$ /NDF: 100.4/101

- sign 245.045 $\pm$ 261.197  $\chi^2$ /NDF: 47.6/51

# cor\_asym\_us\_dd\_at2lr\_dd\_dd\_rms vs Slug



Right In: 1495.674 $\pm$ 0.277  $\chi^2$ /NDF: 707587.1/25

Left Out: 1530.976 $\pm$ 0.252  $\chi^2$ /NDF: 203539.7/23

Right Out: 1498.220 $\pm$ 0.269  $\chi^2$ /NDF: 574744.1/28

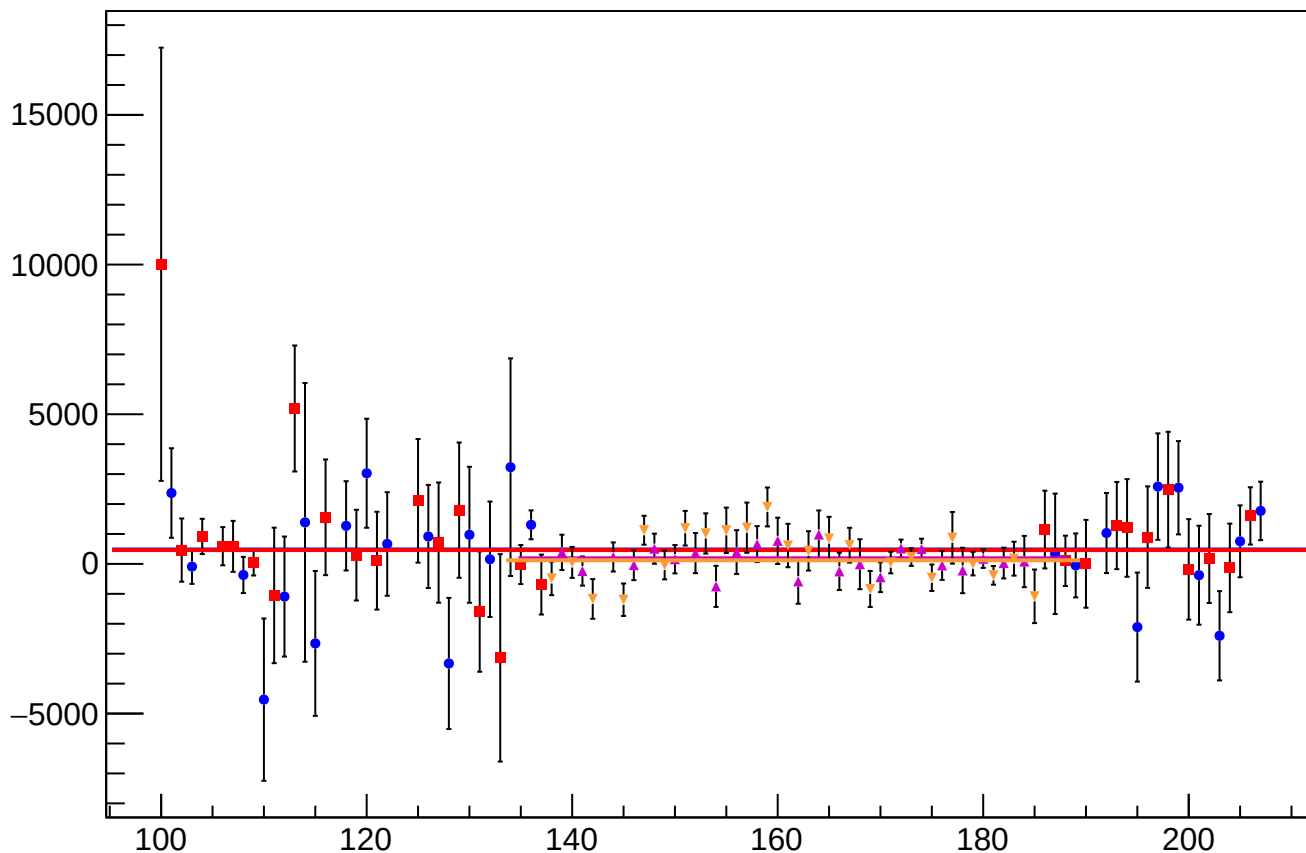
Left In: 1535.551 $\pm$ 0.254  $\chi^2$ /NDF: 192432.7/22

+ sign 1514.976 $\pm$ 0.186  $\chi^2$ /NDF: 920021.5/49

All: 1516.463 $\pm$ 0.131  $\chi^2$ /NDF: 1697506.1/10

- sign 1517.923 $\pm$ 0.185  $\chi^2$ /NDF: 777358.5/51

asym\_us\_dd\_at2lr\_dd\_dd\_cor\_correction\_mean vs Slug



Right In: 480.726 $\pm$ 232.389  $\chi^2$ /NDF: 30.6/25

Left Out: 121.325 $\pm$ 105.060  $\chi^2$ /NDF:43.7/23

Right Out: 461.408 $\pm$ 200.095  $\chi^2$ /NDF: 18.2/28

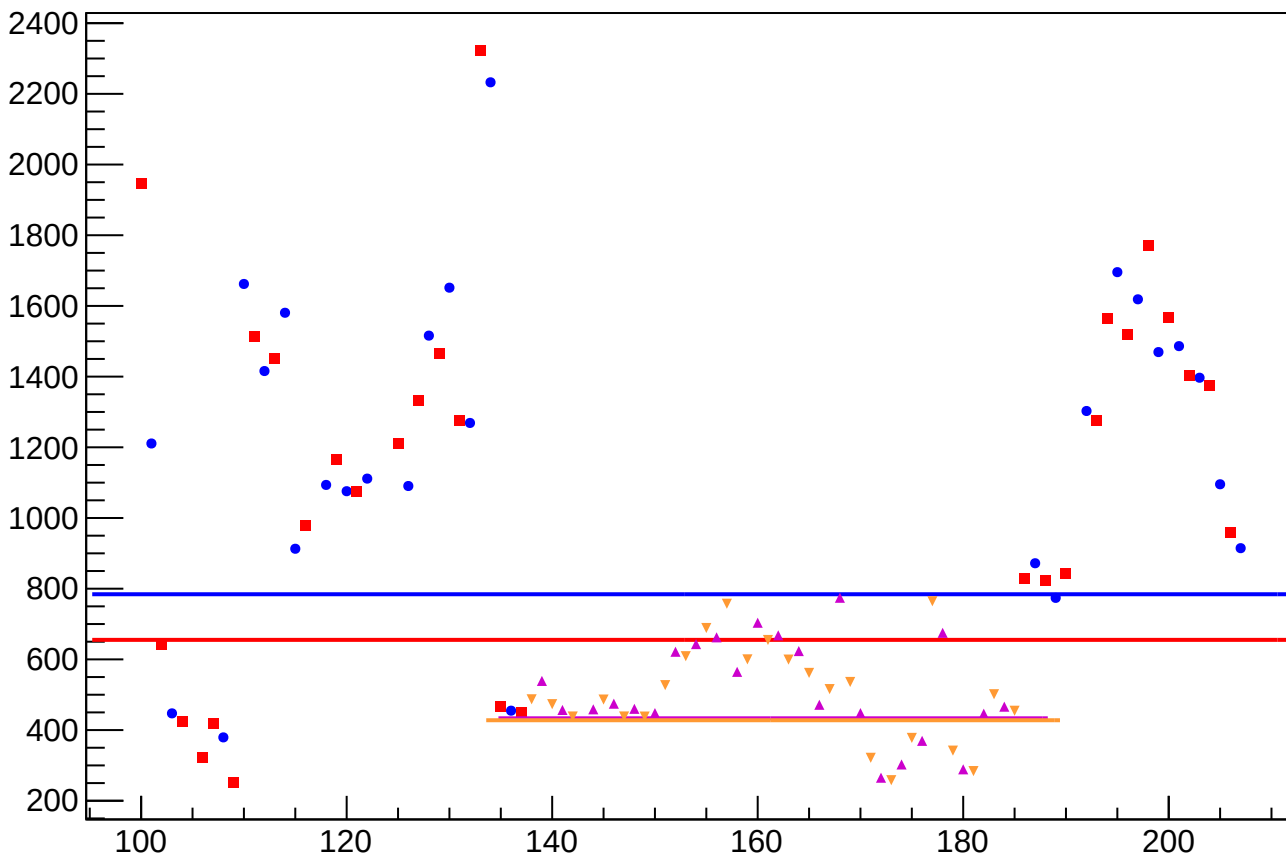
Left In: 187.037 $\pm$ 106.975  $\chi^2$ /NDF:11.6/22

+ sign 182.315 $\pm$ 95.732  $\chi^2$ /NDF: 76.2/49

All: 215.652 $\pm$ 67.195  $\chi^2$ /NDF: 107.7/101

- sign 248.026 $\pm$ 94.339  $\chi^2$ /NDF: 31.2/51

asym\_us\_dd\_at2lr\_dd\_dd\_cor\_correction\_rms vs Slug



Right In: 784.274 $\pm$ 0.164  $\chi^2$ /NDF: 6875821.4/25

Left Out: 427.814 $\pm$ 0.074  $\chi^2$ /NDF:3188396.1/23

Right Out: 655.203 $\pm$ 0.141  $\chi^2$ /NDF: 9384396.8/28

Left In: 433.285 $\pm$ 0.076  $\chi^2$ /NDF:3247871.5/22

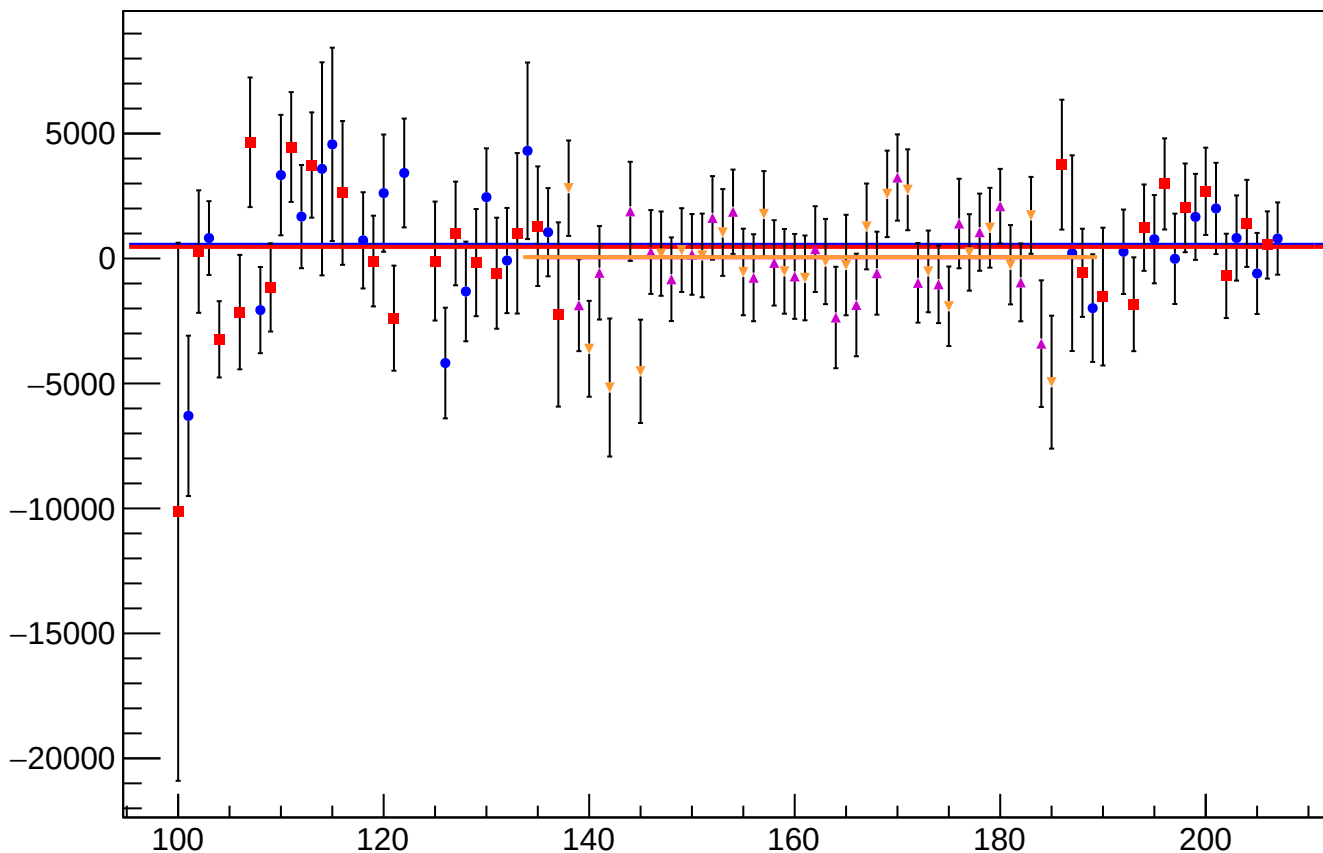
+ sign 488.305 $\pm$ 0.068  $\chi^2$ /NDF: 13971325.0/49

All: 485.418 $\pm$ 0.048  $\chi^2$ /NDF: 28520387.3/10

- sign 482.615 $\pm$ 0.067  $\chi^2$ /NDF: 14545477.2/51



# eigen\_cor\_asym\_us\_dd\_at2lr\_dd\_dd\_mean vs Slug



Right In: 548.914 $\pm$ 391.436  $\chi^2$ /NDF: 23.5/25

Left Out: 54.734 $\pm$ 356.375  $\chi^2$ /NDF:28.5/23

Right Out: 465.000 $\pm$ 380.104  $\chi^2$ /NDF: 30.2/28

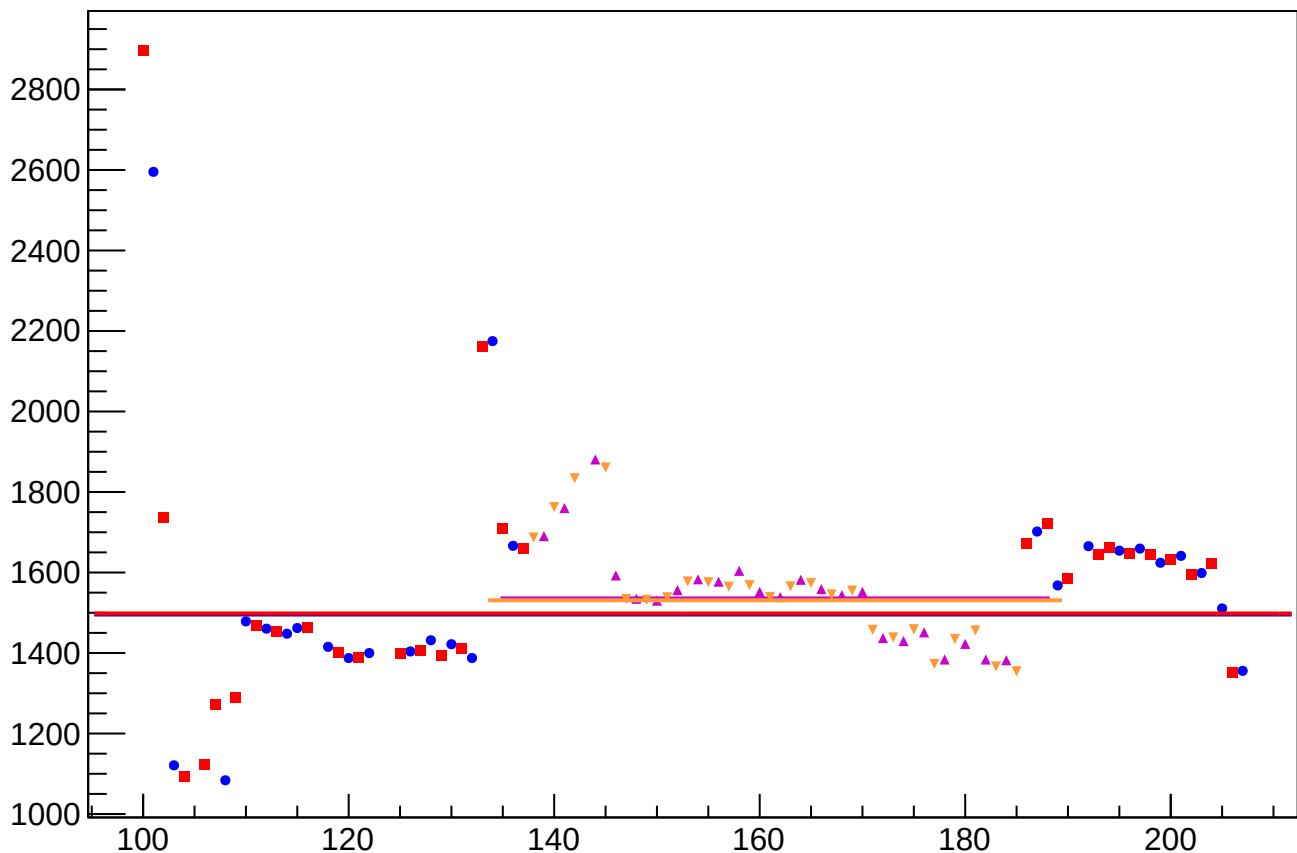
Left In: 48.256 $\pm$ 359.531  $\chi^2$ /NDF:16.8/22

+ sign 278.705 $\pm$ 263.520  $\chi^2$ /NDF: 52.8/49

All: 261.726 $\pm$ 185.510  $\chi^2$ /NDF: 100.4/101

- sign 245.045 $\pm$ 261.197  $\chi^2$ /NDF: 47.6/51

eigen\_cor\_asym\_us\_dd\_at2lr\_dd\_dd\_rms vs Slug



Right In: 1495.674 $\pm$ 0.277  $\chi^2$ /NDF: 707587.1/25

Left Out: 1530.976 $\pm$ 0.252  $\chi^2$ /NDF: 203539.7/23

Right Out: 1498.220 $\pm$ 0.269  $\chi^2$ /NDF: 574744.1/28

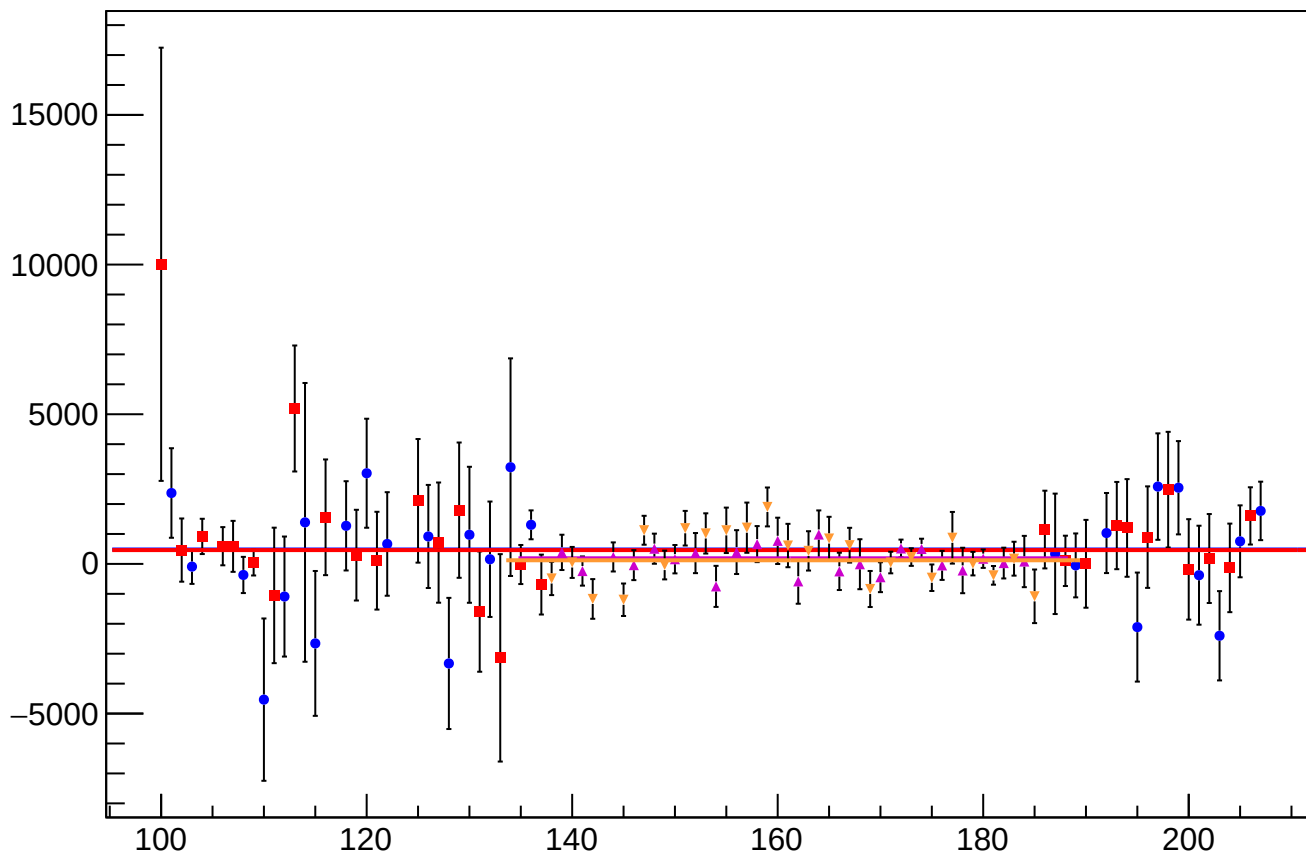
Left In: 1535.551 $\pm$ 0.254  $\chi^2$ /NDF: 192432.7/22

+ sign 1514.976 $\pm$ 0.186  $\chi^2$ /NDF: 920021.5/49

All: 1516.463 $\pm$ 0.131  $\chi^2$ /NDF: 1697506.1/10

- sign 1517.923 $\pm$ 0.185  $\chi^2$ /NDF: 777358.5/51

asym\_us\_dd\_at2lr\_dd\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In: 480.726 $\pm$ 232.389  $\chi^2$ /NDF: 30.6/25

Left Out: 121.325 $\pm$ 105.060  $\chi^2$ /NDF:43.7/23

Right Out: 461.408 $\pm$ 200.095  $\chi^2$ /NDF: 18.2/28

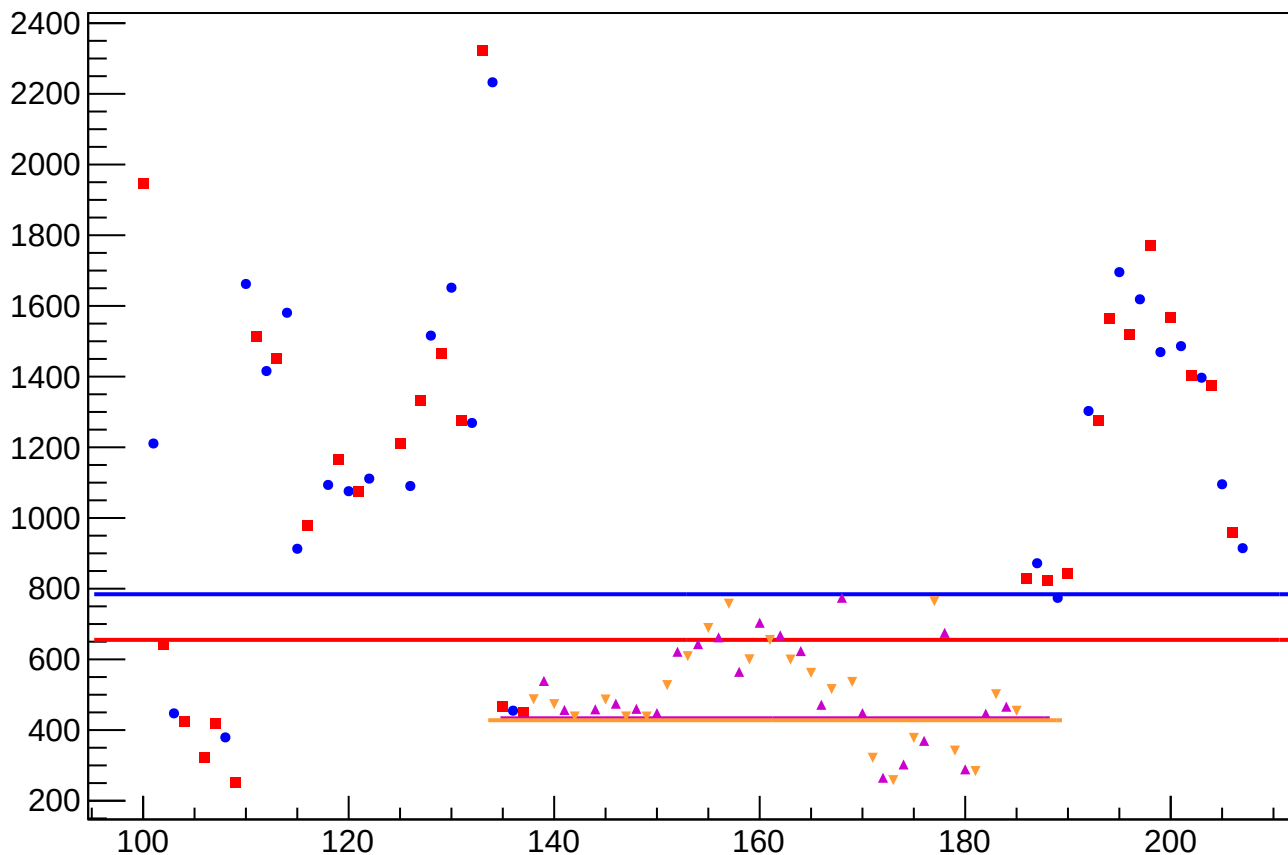
Left In: 187.037 $\pm$ 106.975  $\chi^2$ /NDF:11.6/22

+ sign 182.315 $\pm$ 95.732  $\chi^2$ /NDF: 76.2/49

All: 215.652 $\pm$ 67.195  $\chi^2$ /NDF: 107.7/101

- sign 248.026 $\pm$ 94.339  $\chi^2$ /NDF: 31.2/51

asym\_us\_dd\_at2lr\_dd\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 784.274 $\pm$ 0.164  $\chi^2$ /NDF: 6875821.4/25

Left Out: 427.814 $\pm$ 0.074  $\chi^2$ /NDF: 3188396.1/23

Right Out: 655.203 $\pm$ 0.141  $\chi^2$ /NDF: 9384396.8/28

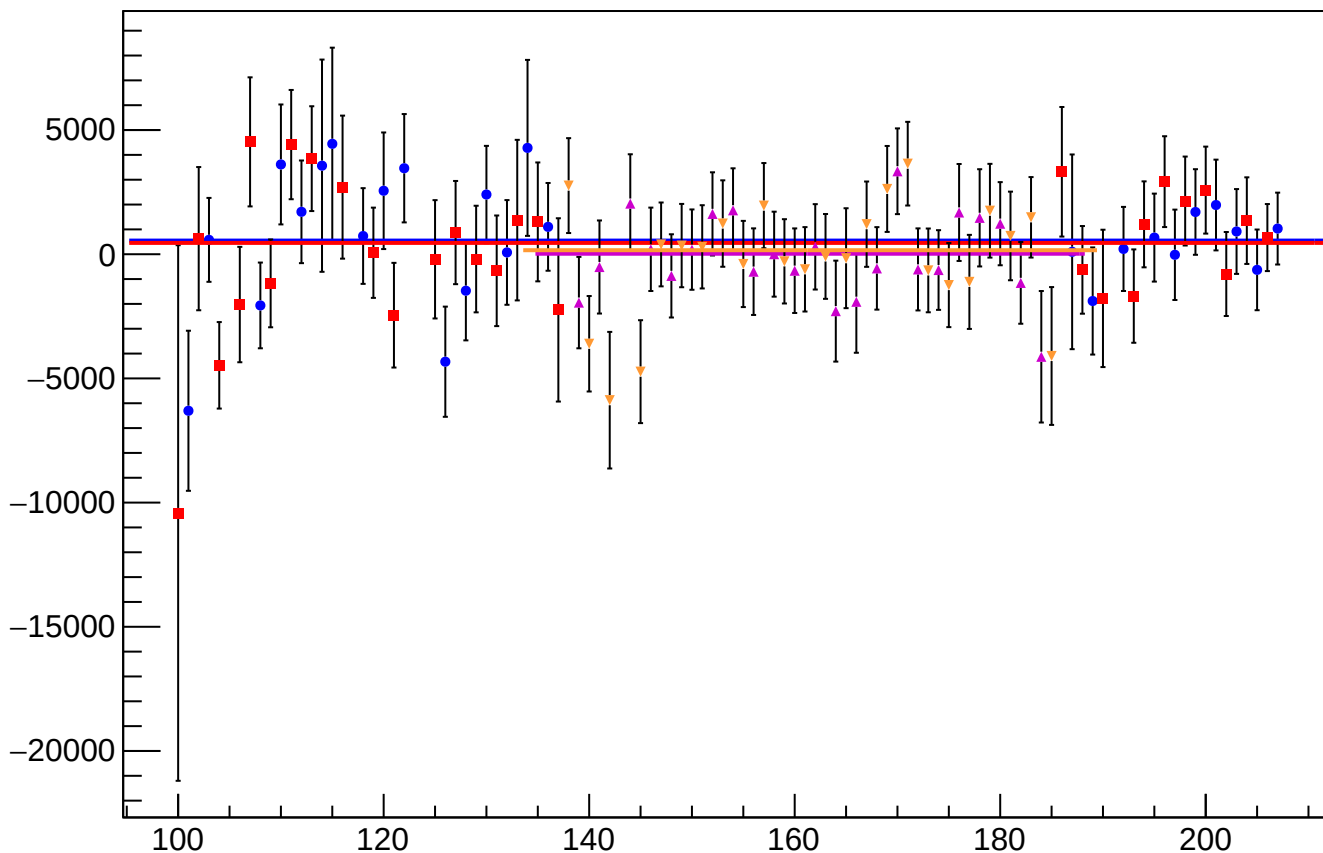
Left In: 433.285 $\pm$ 0.076  $\chi^2$ /NDF: 3247871.5/22

+ sign 488.305 $\pm$ 0.068  $\chi^2$ /NDF: 13971325.0/49

All: 485.418 $\pm$ 0.048  $\chi^2$ /NDF: 28520387.3/10

- sign 482.615 $\pm$ 0.067  $\chi^2$ /NDF: 14545477.2/51

# dit\_asym\_us\_dd\_at2lr\_dd\_dd\_mean vs Slug



Right In:  $548.983 \pm 395.407$   $\chi^2/\text{NDF}$ : 24.0/25

Left Out:  $161.591 \pm 368.366$   $\chi^2/\text{NDF}$ : 29.9/23

Right Out:  $456.314 \pm 385.101$   $\chi^2/\text{NDF}$ : 31.8/28

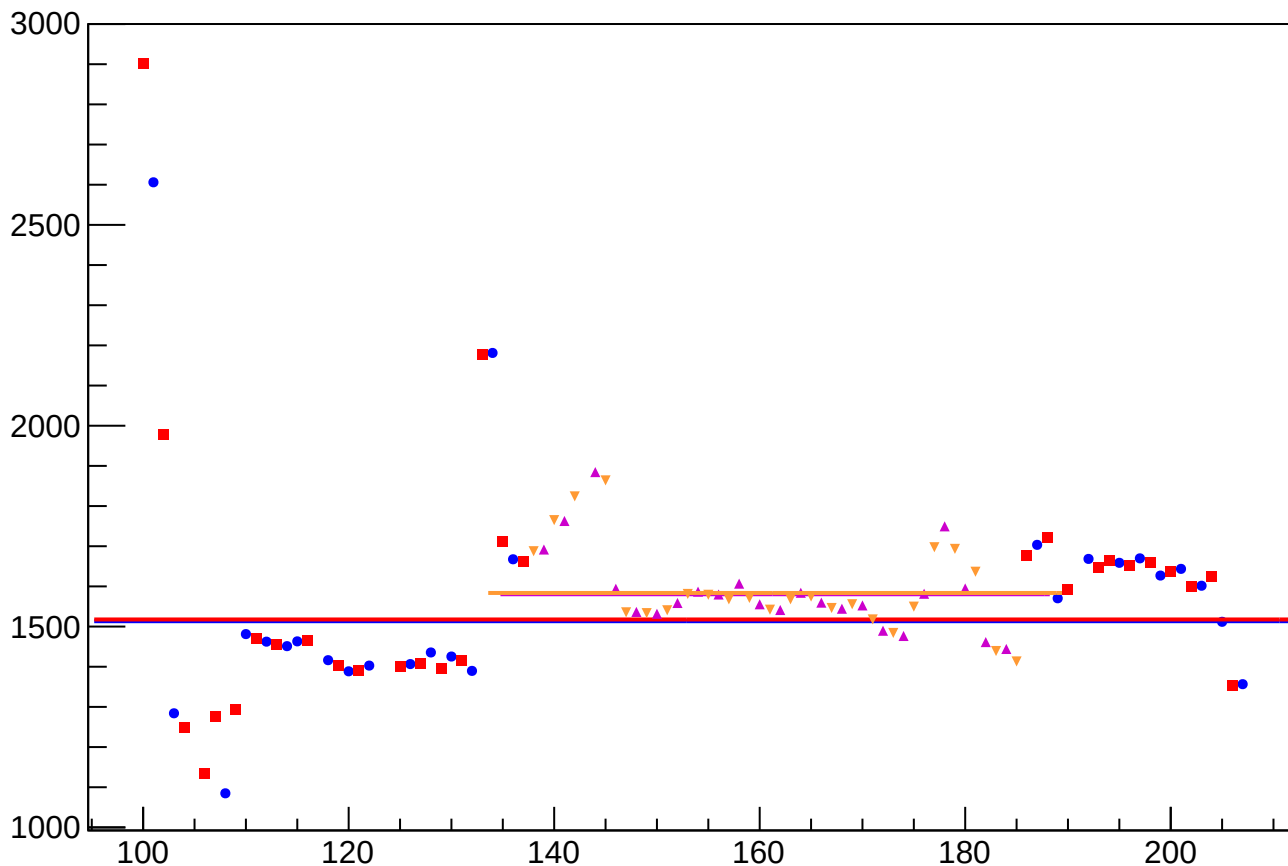
Left In:  $20.252 \pm 369.781$   $\chi^2/\text{NDF}$ : 16.0/22

+ sign  $341.588 \pm 269.527$   $\chi^2/\text{NDF}$ : 54.4/49

All:  $284.927 \pm 189.586$   $\chi^2/\text{NDF}$ : 102.9/101

- sign  $229.437 \pm 266.726$   $\chi^2/\text{NDF}$ : 48.5/51

dit\_asym\_us\_dd\_at2lr\_dd\_dd\_rms vs Slug



Right In: 1513.356+/-0.280  $\chi^2/\text{NDF}$ : 611942.9/25

Left Out: 1583.673+/-0.260  $\chi^2/\text{NDF}$ : 133583.1/23

Right Out: 1517.673+/-0.272  $\chi^2/\text{NDF}$ : 509058.9/28

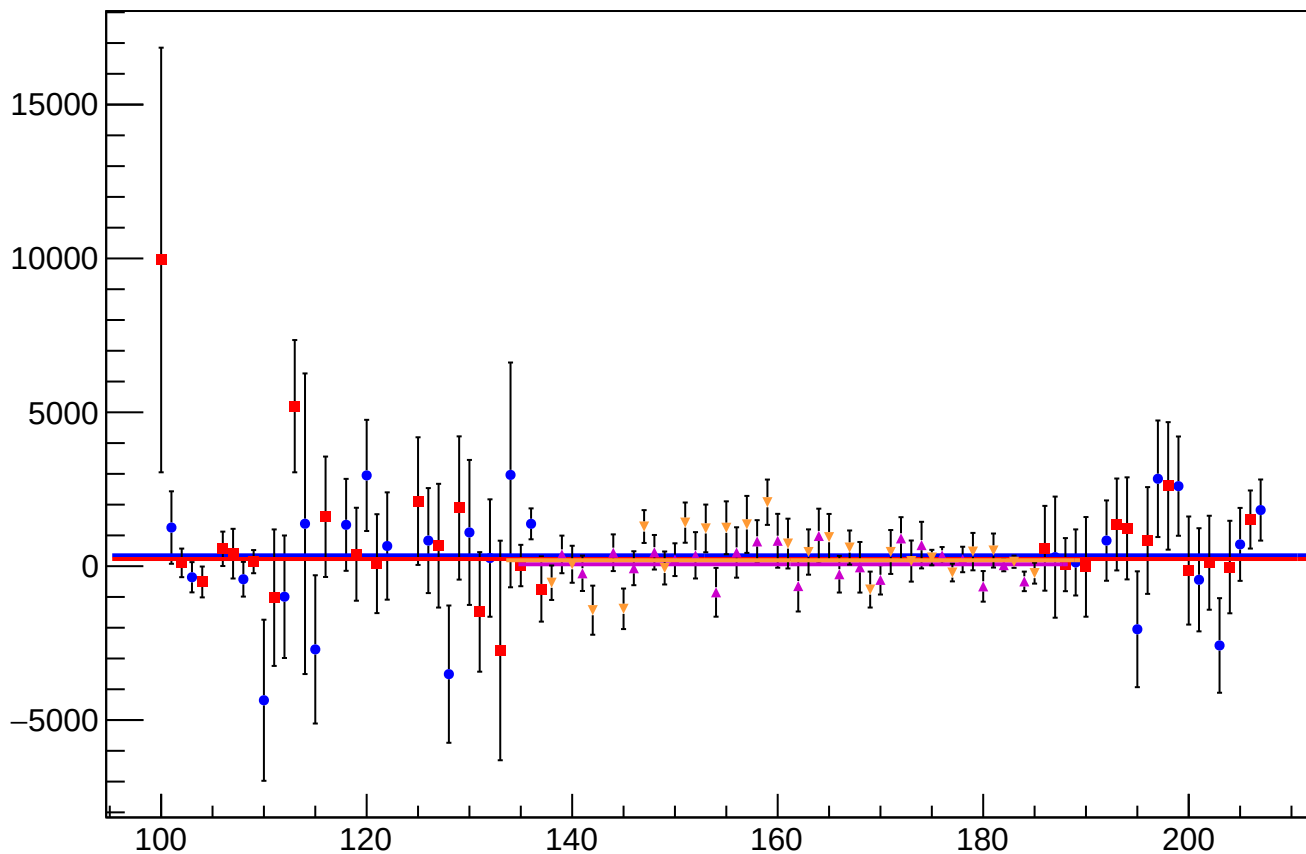
Left In: 1580.464+/-0.261  $\chi^2/\text{NDF}$ : 125745.6/22

+ sign 1551.001+/-0.191  $\chi^2/\text{NDF}$ : 779387.7/49

All: 1550.668+/-0.134  $\chi^2/\text{NDF}$ : 1441862.7/10

- sign 1550.342+/-0.189  $\chi^2/\text{NDF}$ : 662469.0/51

asym\_us\_dd\_at2lr\_dd\_dd\_dit\_correction\_mean vs Slug



Right In: 352.666 $\pm$ 224.196  $\chi^2$ /NDF: 31.9/25

Left Out: 193.307 $\pm$ 95.894  $\chi^2$ /NDF:40.1/23

Right Out: 232.826 $\pm$ 176.788  $\chi^2$ /NDF: 19.1/28

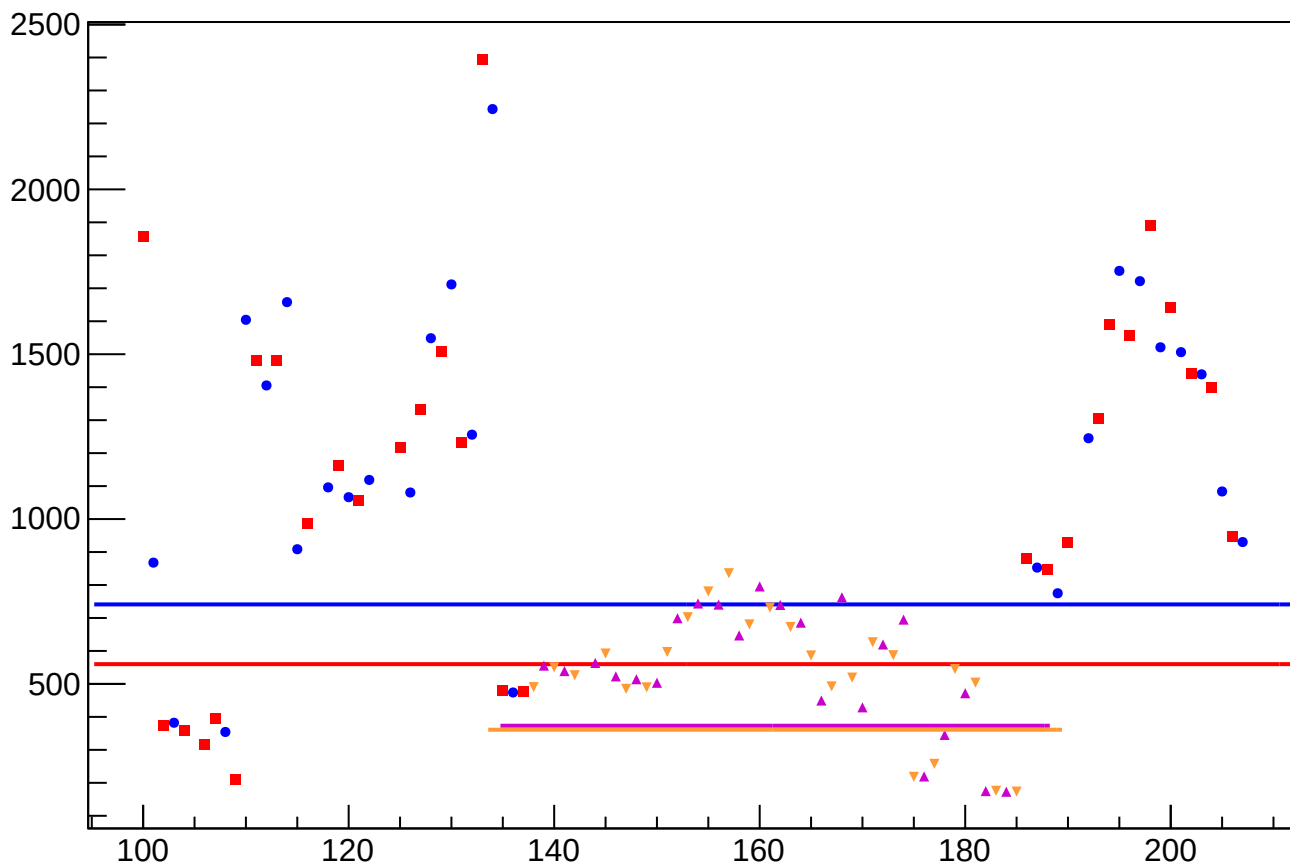
Left In: 62.183 $\pm$ 99.717  $\chi^2$ /NDF:17.0/22

+ sign 217.952 $\pm$ 88.167  $\chi^2$ /NDF: 72.4/49

All: 159.801 $\pm$ 61.874  $\chi^2$ /NDF: 110.1/101

- sign 103.369 $\pm$ 86.853  $\chi^2$ /NDF: 36.8/51

asym\_us\_dd\_at2lr\_dd\_dd\_dit\_correction\_rms vs Slug



Right In: 741.172 $\pm$ 0.159  $\chi^2$ /NDF: 7508765.9/25

Left Out: 361.100 $\pm$ 0.068  $\chi^2$ /NDF: 8183123.9/23

Right Out: 559.979 $\pm$ 0.125  $\chi^2$ /NDF: 11410748.0/28

Left In: 373.140 $\pm$ 0.071  $\chi^2$ /NDF: 8207354.5/22

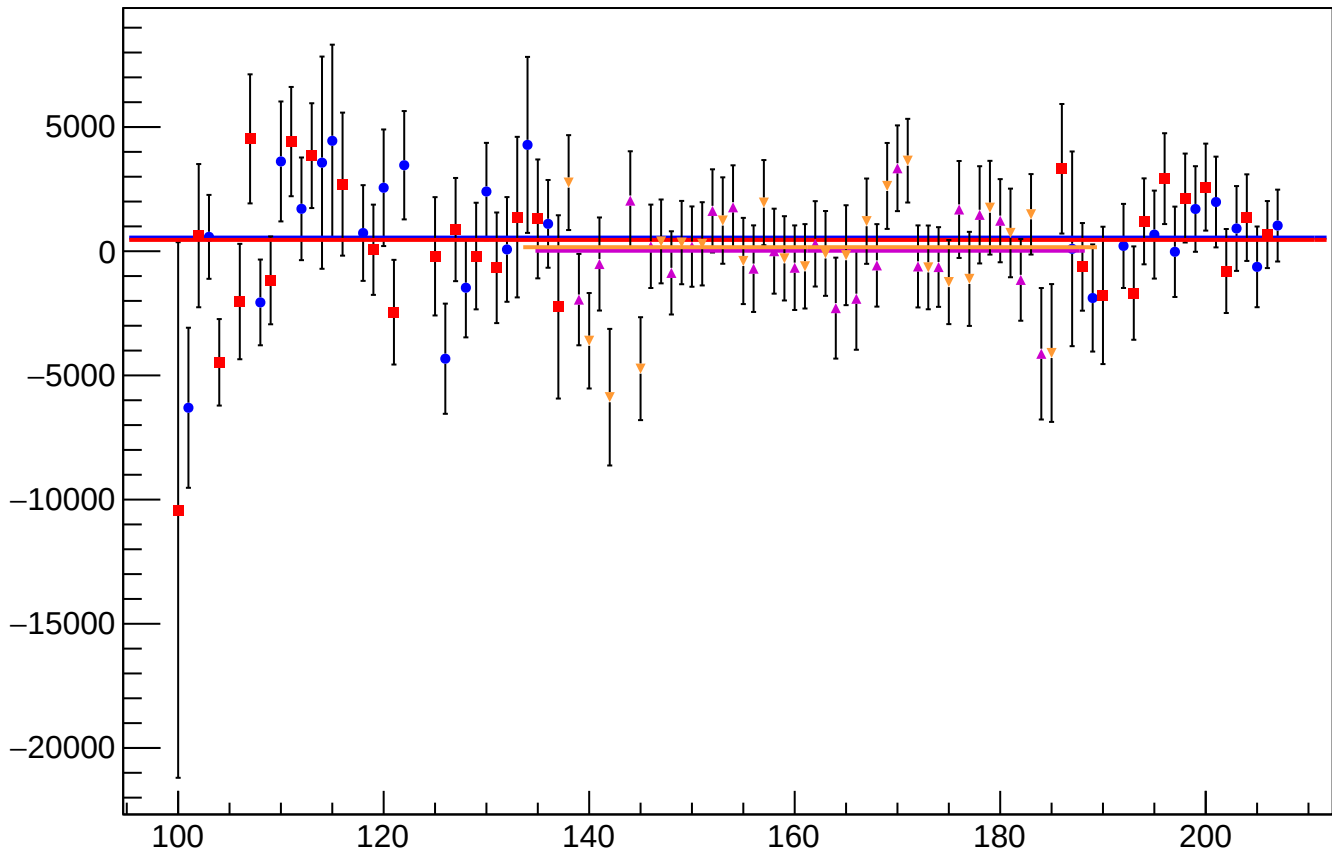
+ sign 419.879 $\pm$ 0.062  $\chi^2$ /NDF: 20550834.1/49

All: 419.045 $\pm$ 0.044  $\chi^2$ /NDF: 41863997.4/10

- sign 418.236 $\pm$ 0.061  $\chi^2$ /NDF: 21312810.8/51



eigen\_dit\_asym\_us\_dd\_at2lr\_dd\_dd\_mean vs Slug



Right In:  $548.980 \pm 395.407$   $\chi^2/\text{NDF}$ : 24.0/25

Left Out:  $161.587 \pm 368.366$   $\chi^2/\text{NDF}$ : 29.9/23

Right Out:  $456.312 \pm 385.101$   $\chi^2/\text{NDF}$ : 31.8/28

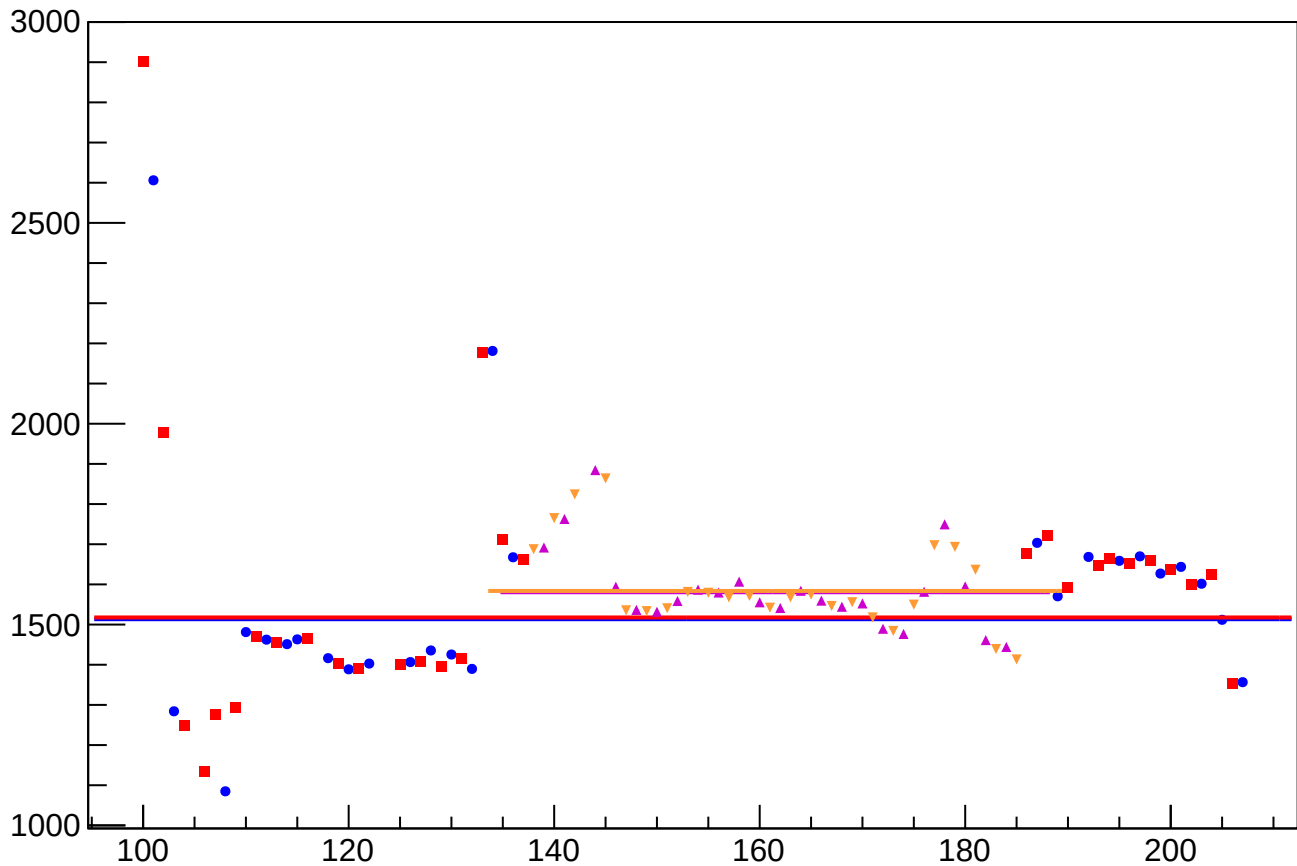
Left In:  $20.250 \pm 369.781$   $\chi^2/\text{NDF}$ : 16.0/22

+ sign  $341.585 \pm 269.527$   $\chi^2/\text{NDF}$ : 54.4/49

All:  $284.924 \pm 189.586$   $\chi^2/\text{NDF}$ : 102.9/101

- sign  $229.435 \pm 266.726$   $\chi^2/\text{NDF}$ : 48.5/51

eigen\_dit\_asym\_us\_dd\_at2lr\_dd\_dd\_rms vs Slug



Right In: 1513.356 $\pm$ 0.280  $\chi^2$ /NDF: 611942.4/25

Left Out: 1583.673 $\pm$ 0.260  $\chi^2$ /NDF: 133583.3/23

Right Out: 1517.673 $\pm$ 0.272  $\chi^2$ /NDF: 509058.8/28

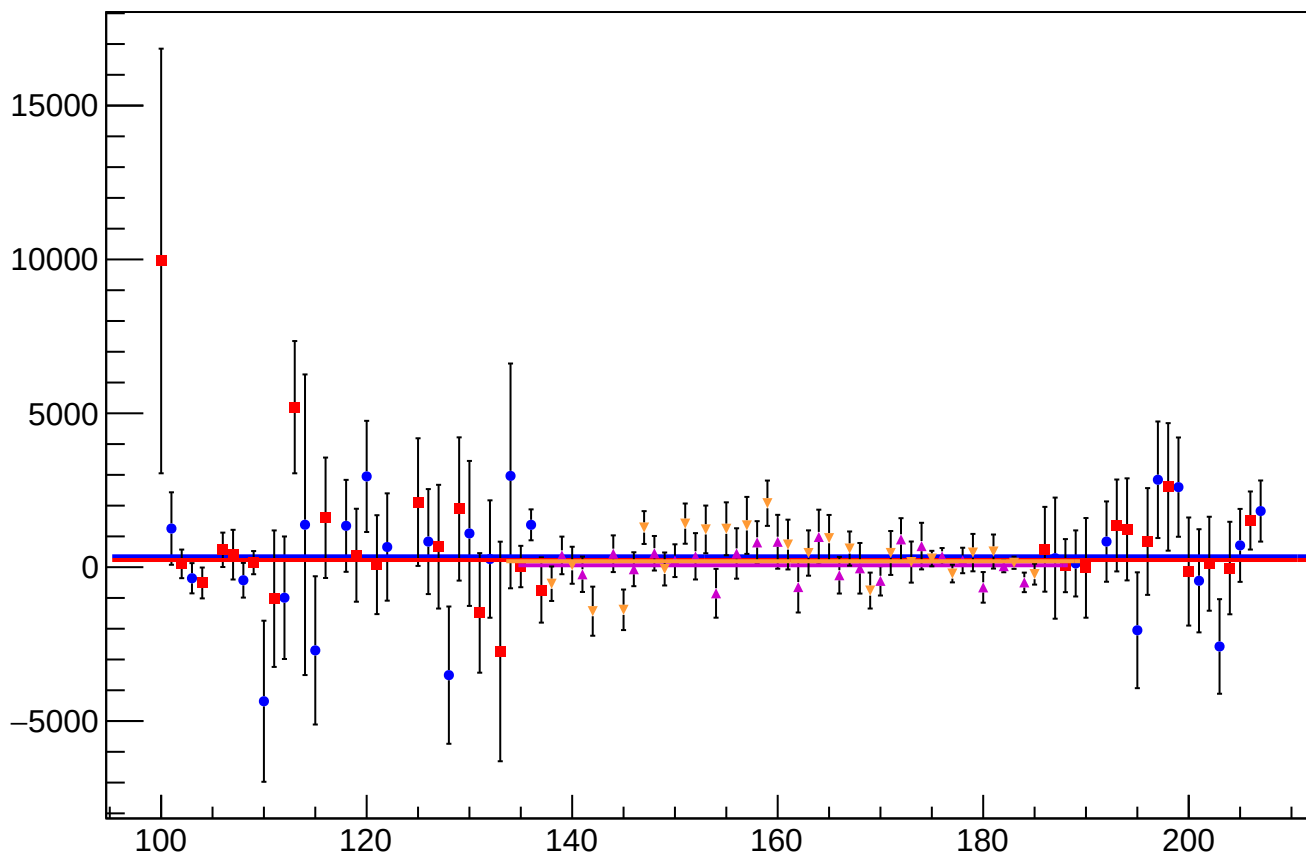
Left In: 1580.464 $\pm$ 0.261  $\chi^2$ /NDF: 125745.6/22

+ sign 1551.001 $\pm$ 0.191  $\chi^2$ /NDF: 779387.3/49

All: 1550.668 $\pm$ 0.134  $\chi^2$ /NDF: 1441862.0/10

- sign 1550.342 $\pm$ 0.189  $\chi^2$ /NDF: 662468.7/51

asym\_us\_dd\_at2lr\_dd\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In: 352.661 $\pm$ 224.196  $\chi^2$ /NDF: 31.9/25

Left Out: 193.312 $\pm$ 95.894  $\chi^2$ /NDF:40.1/23

Right Out: 232.825 $\pm$ 176.789  $\chi^2$ /NDF: 19.1/28

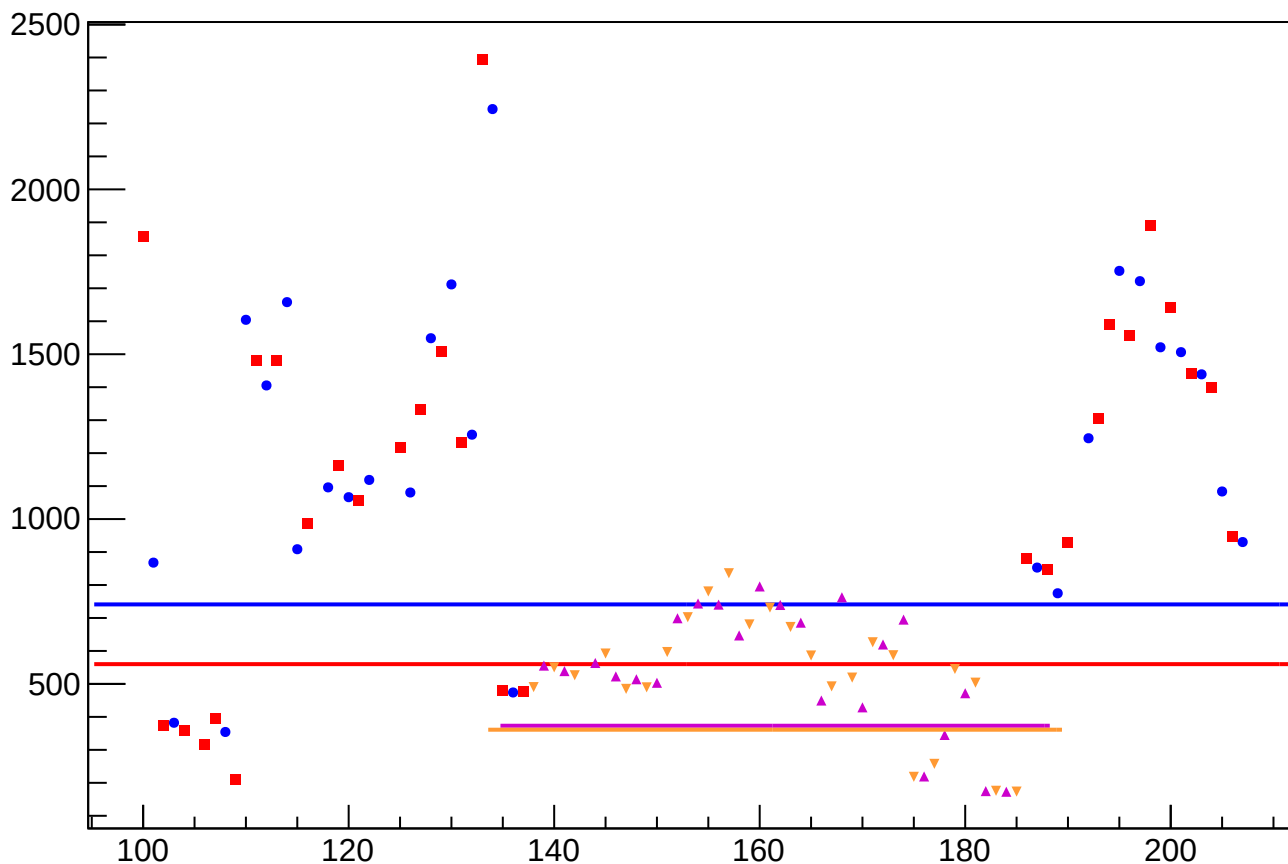
Left In: 62.181 $\pm$ 99.718  $\chi^2$ /NDF:17.0/22

+ sign 217.956 $\pm$ 88.168  $\chi^2$ /NDF: 72.4/49

All: 159.802 $\pm$ 61.874  $\chi^2$ /NDF: 110.1/101

- sign 103.368 $\pm$ 86.854  $\chi^2$ /NDF: 36.8/51

asym\_us\_dd\_at2lr\_dd\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 741.170 $\pm$ 0.159  $\chi^2$ /NDF: 7508788.4/25

Left Out: 361.103 $\pm$ 0.068  $\chi^2$ /NDF: 8182968.2/23

Right Out: 559.986 $\pm$ 0.125  $\chi^2$ /NDF: 11410579.2/28

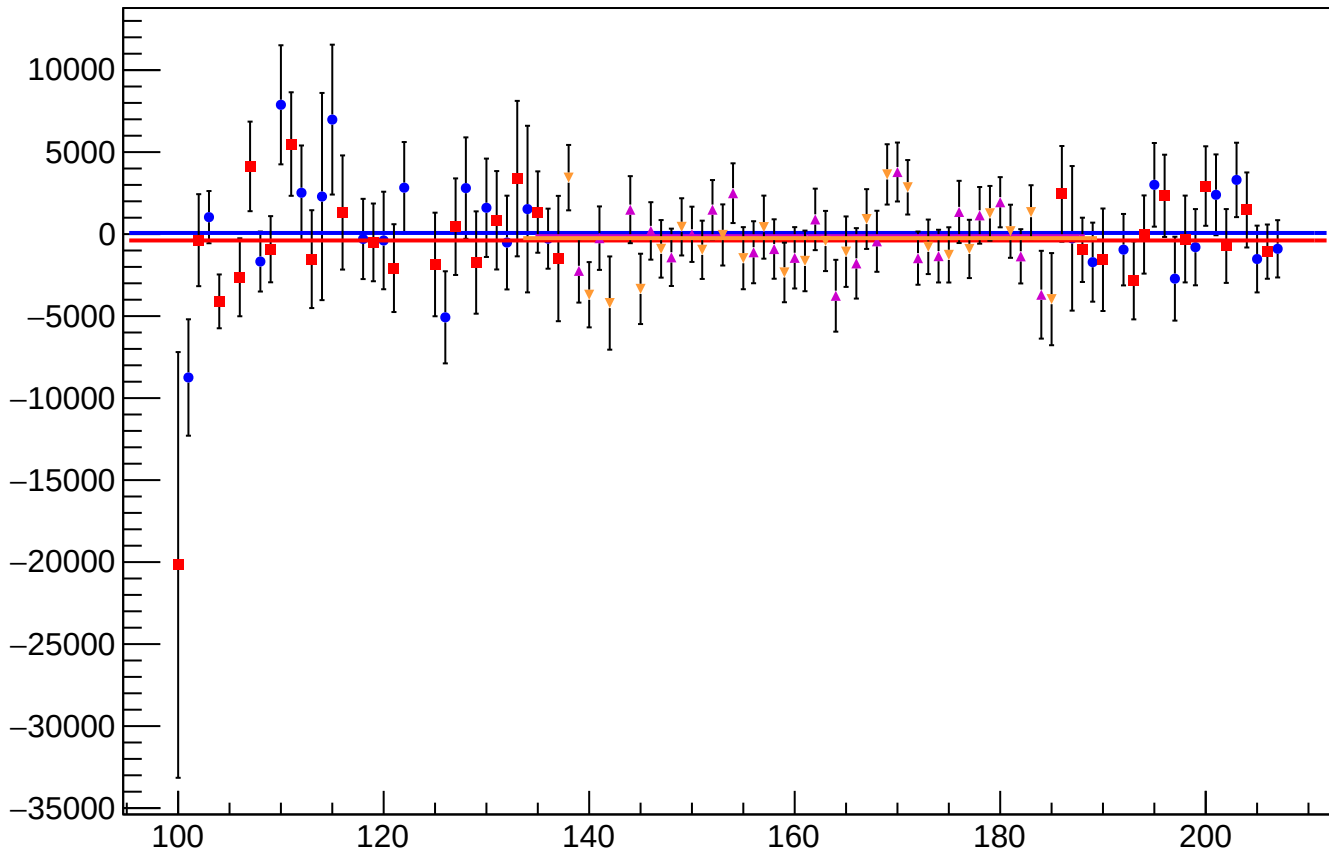
Left In: 373.145 $\pm$ 0.071  $\chi^2$ /NDF: 8207110.6/22

+ sign 419.882 $\pm$ 0.062  $\chi^2$ /NDF: 20550555.7/49

All: 419.049 $\pm$ 0.044  $\chi^2$ /NDF: 41863312.9/10

- sign 418.241 $\pm$ 0.061  $\chi^2$ /NDF: 21312405.4/51

# asym\_us\_dd\_at2lr\_dd\_dd\_mean vs Slug



Right In:  $69.938 \pm 493.451$   $\chi^2/\text{NDF}$ : 28.1/25

Left Out:  $-247.110 \pm 378.224$   $\chi^2/\text{NDF}$ : 26.0/23

Right Out:  $-387.337 \pm 474.700$   $\chi^2/\text{NDF}$ : 23.4/28

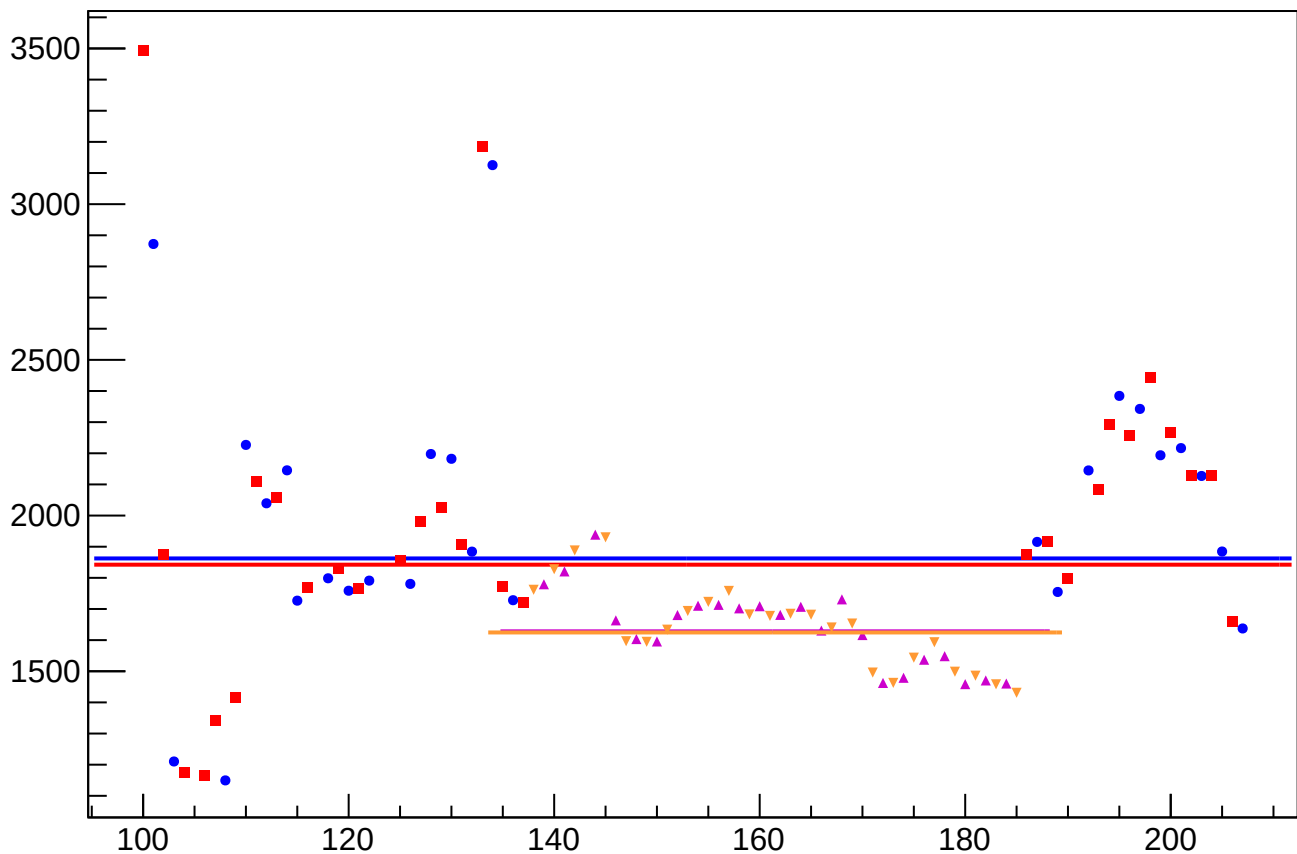
Left In:  $-126.114 \pm 381.305$   $\chi^2/\text{NDF}$ : 21.2/22

+ sign  $-129.777 \pm 300.187$   $\chi^2/\text{NDF}$ : 54.4/49

All:  $-179.649 \pm 211.228$   $\chi^2/\text{NDF}$ : 99.2/101

- sign  $-228.560 \pm 297.277$   $\chi^2/\text{NDF}$ : 44.8/51

# asym\_us\_dd\_at2lr\_dd\_dd\_rms vs Slug



Right In: 1862.312 $\pm$ 0.349  $\chi^2$ /NDF: 1356961.9/25

Left Out: 1624.614 $\pm$ 0.267  $\chi^2$ /NDF: 207257.7/23

Right Out: 1842.264 $\pm$ 0.336  $\chi^2$ /NDF: 1288150.6/28

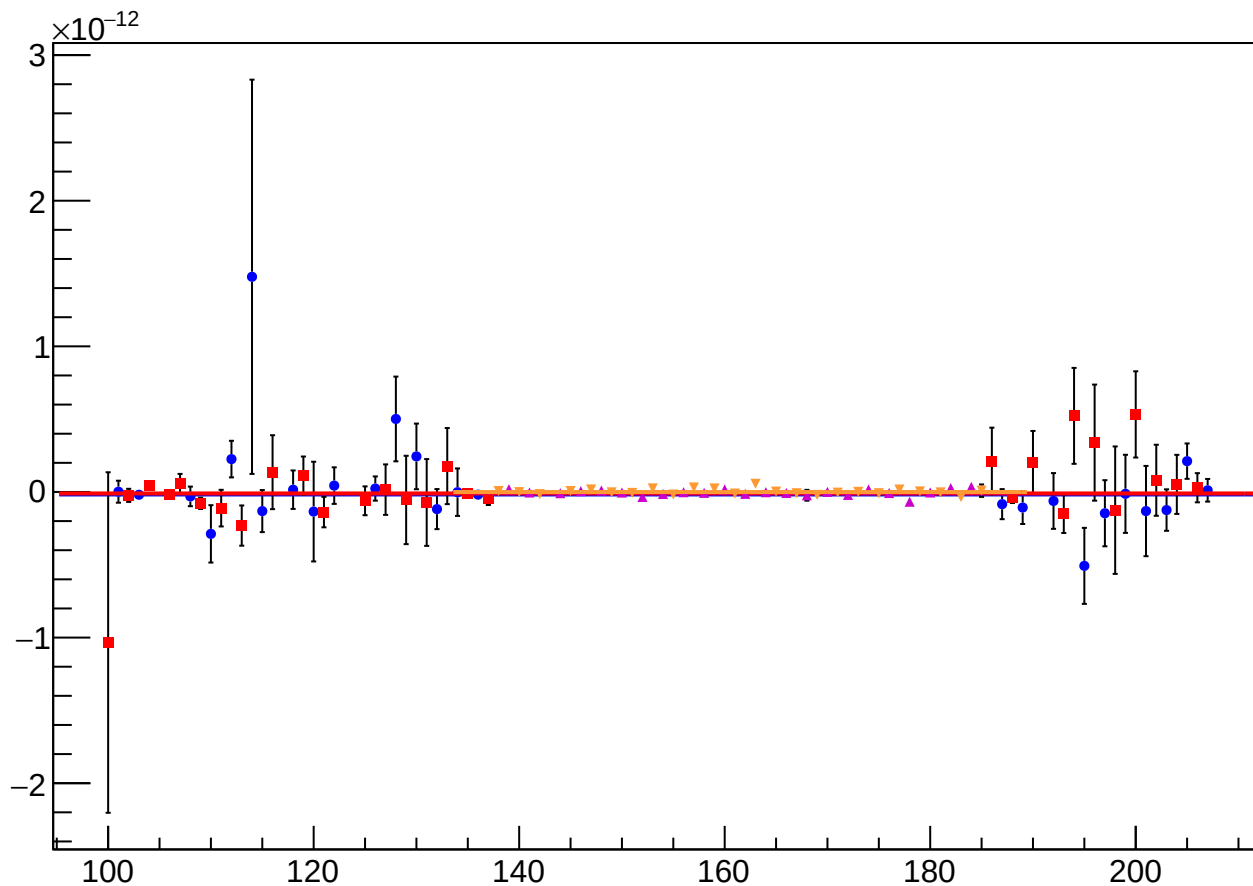
Left In: 1628.221 $\pm$ 0.270  $\chi^2$ /NDF: 204880.6/22

+ sign 1712.582 $\pm$ 0.212  $\chi^2$ /NDF: 1856552.6/49

All: 1712.371 $\pm$ 0.149  $\chi^2$ /NDF: 3596741.6/10

- sign 1712.164 $\pm$ 0.210  $\chi^2$ /NDF: 1740187.1/51

asym\_us\_dd\_at2lr\_dd\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 22.6/25

Left Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 22.6/23

Right Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 27.2/28

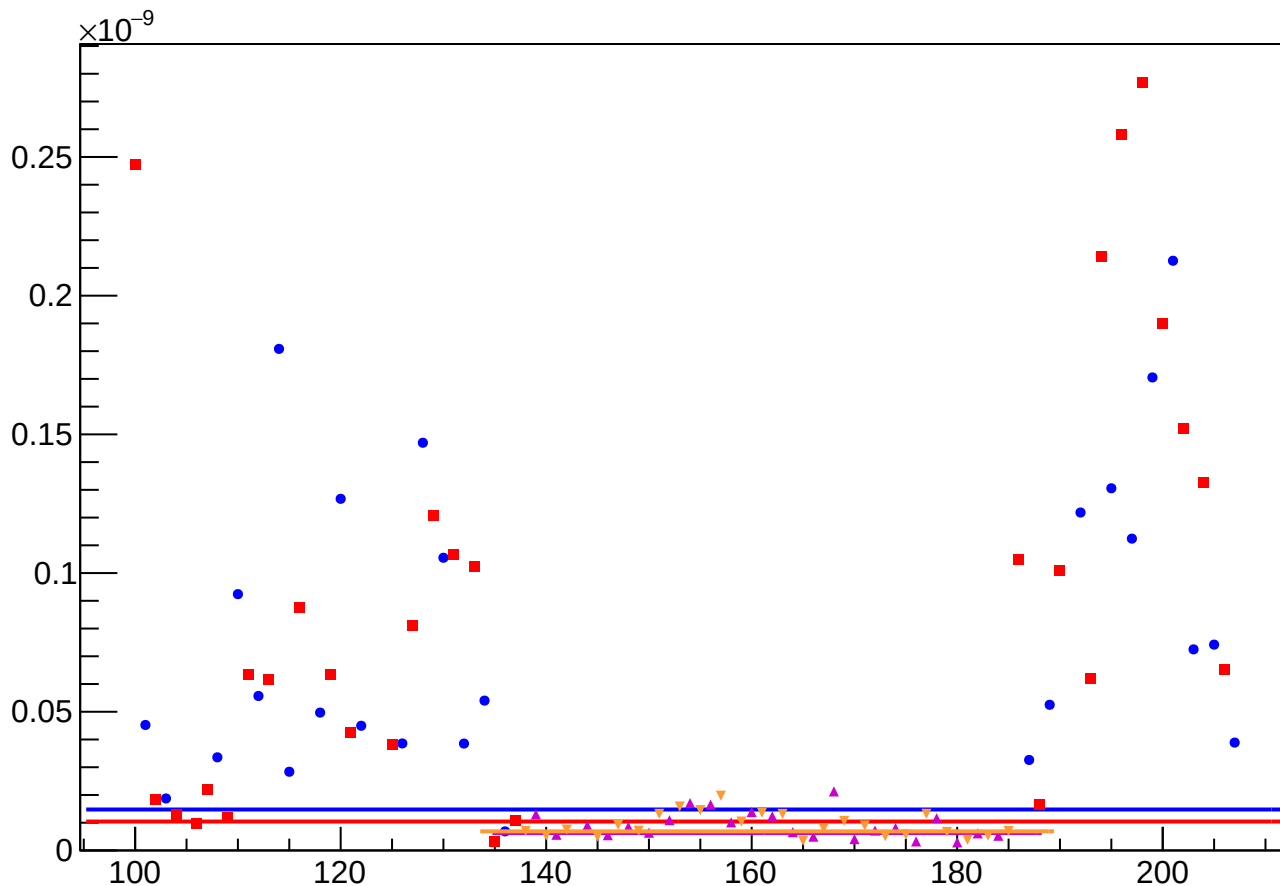
Left In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 24.2/22

+ sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 47.8/49

All: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 100.2/101

- sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 52.3/51

asym\_us\_dd\_at2lr\_dd\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7732542.5/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2256547.8/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 9695829.8/28

Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2888385.6/22

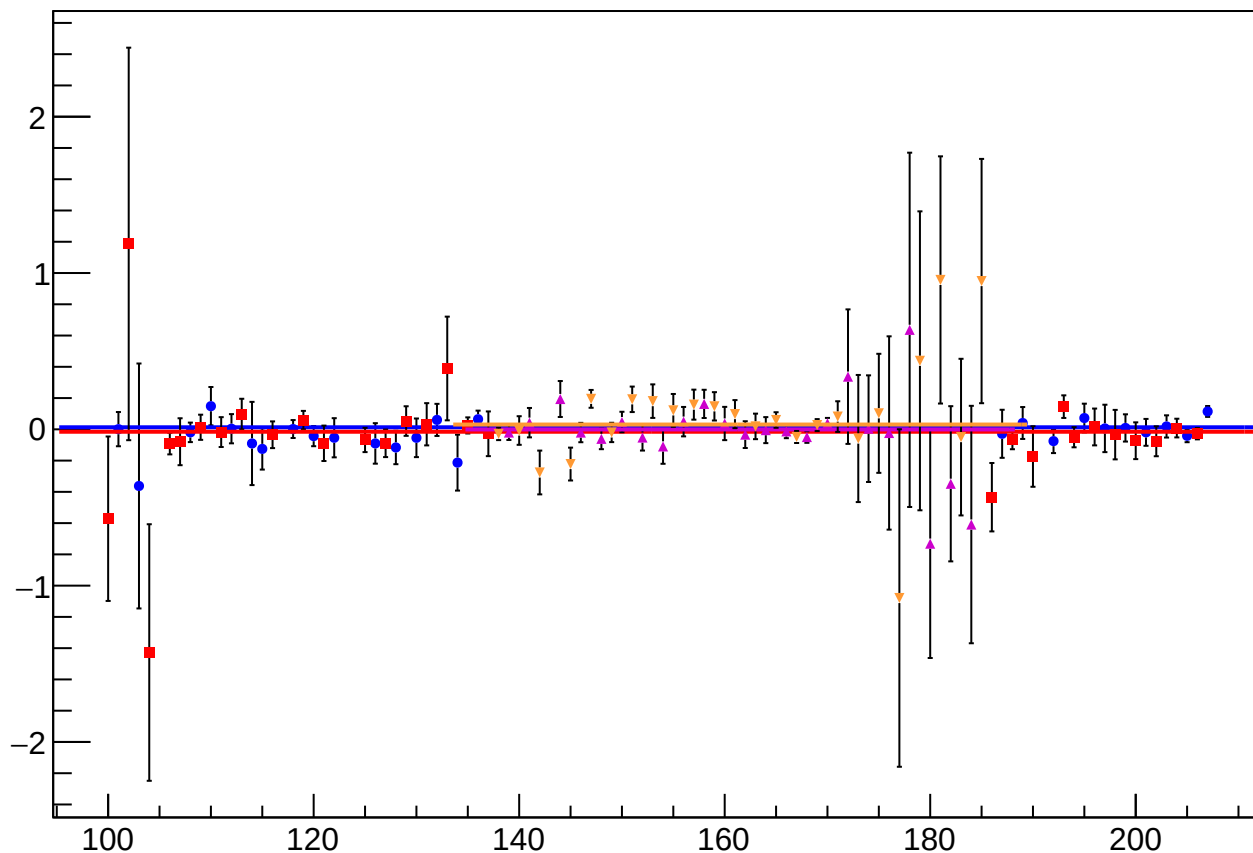
+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 11137961.4/49

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 24253100.2/101

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 13024363.2/51



asym\_us\_dd\_at2lr\_dd\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.013 \pm 0.015$   $\chi^2/\text{NDF}$ : 21.5/25

Left Out:  $0.031 \pm 0.015$   $\chi^2/\text{NDF}$ : 41.5/23

Right Out:  $-0.015 \pm 0.016$   $\chi^2/\text{NDF}$ : 25.1/28

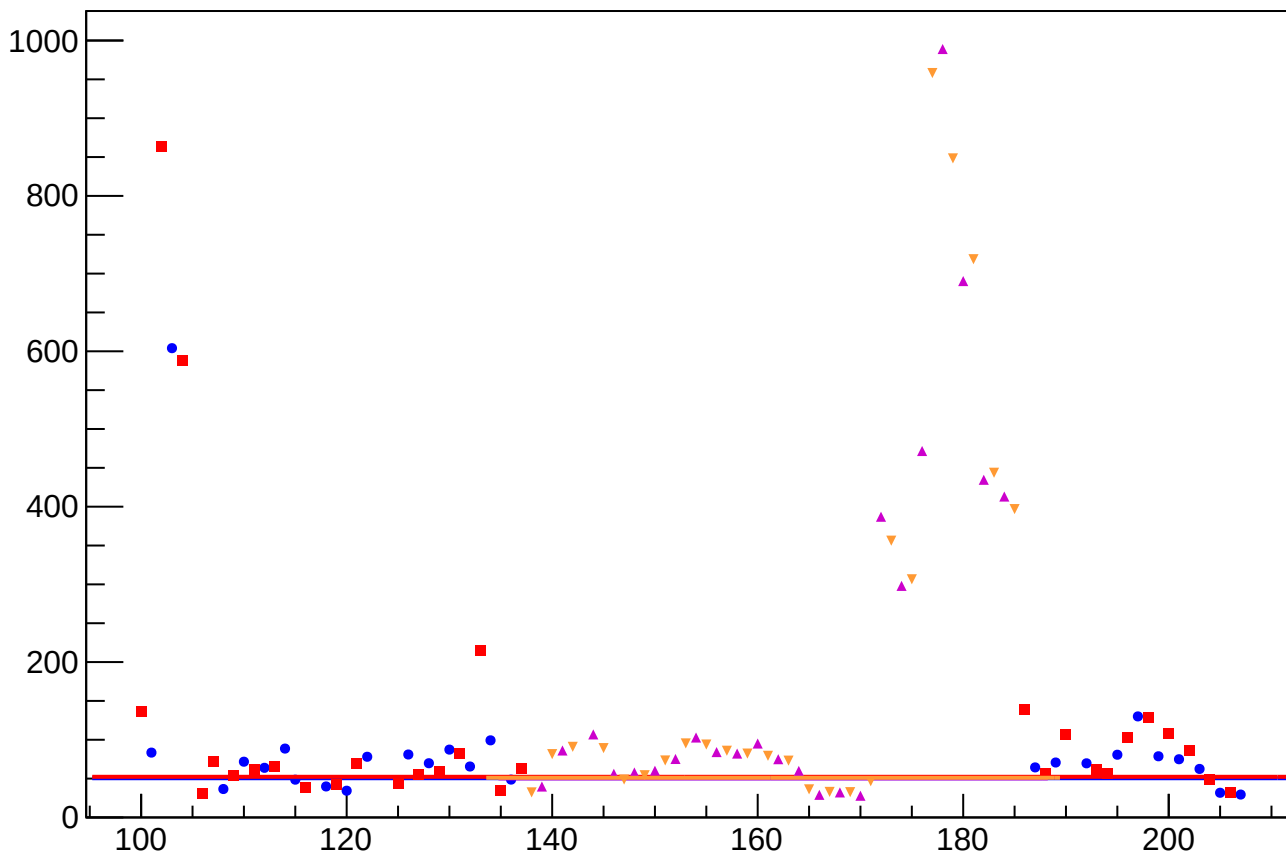
Left In:  $-0.001 \pm 0.015$   $\chi^2/\text{NDF}$ : 16.0/22

+ sign  $0.022 \pm 0.011$   $\chi^2/\text{NDF}$ : 63.7/49

All:  $0.007 \pm 0.008$   $\chi^2/\text{NDF}$ : 109.0/101

- sign  $-0.008 \pm 0.011$   $\chi^2/\text{NDF}$ : 41.6/51

asym\_us\_dd\_at2lr\_dd\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 50.490 $\pm$ 0.011  $\chi^2$ /NDF: 4828412.4/25

Left Out: 51.081 $\pm$ 0.011  $\chi^2$ /NDF: 11736636.7/23

Right Out: 52.334 $\pm$ 0.011  $\chi^2$ /NDF: 5699277.6/28

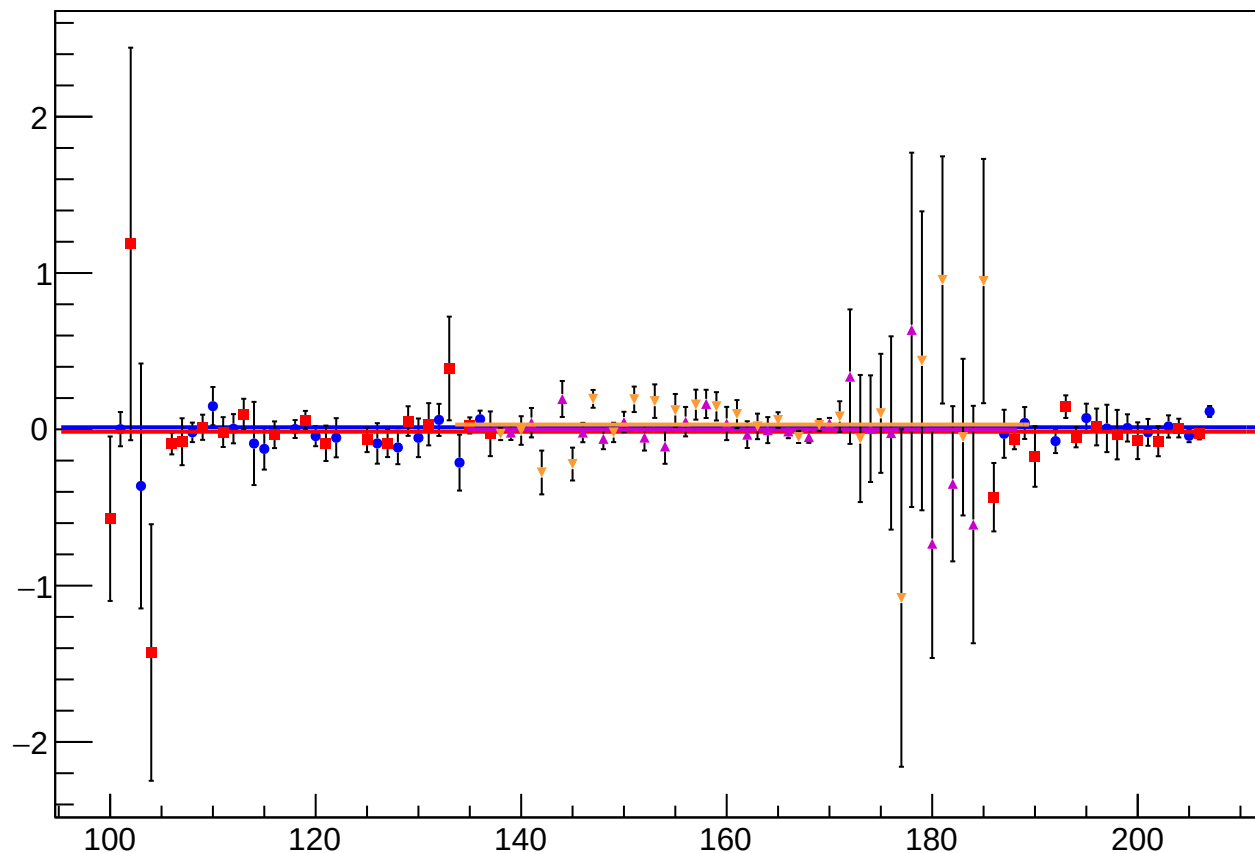
Left In: 50.251 $\pm$ 0.011  $\chi^2$ /NDF: 12195723.8/22

+ sign 50.783 $\pm$ 0.008  $\chi^2$ /NDF: 16566518.1/49

All: 51.026 $\pm$ 0.005  $\chi^2$ /NDF: 34481707.7/101

- sign 51.268 $\pm$ 0.008  $\chi^2$ /NDF: 17913212.0/51

asym\_us\_dd\_at2lr\_dd\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.013 \pm 0.015$   $\chi^2/\text{NDF}: 21.5/25$

Left Out:  $0.031 \pm 0.015$   $\chi^2/\text{NDF}: 41.5/23$

Right Out:  $-0.015 \pm 0.016$   $\chi^2/\text{NDF}: 25.1/28$

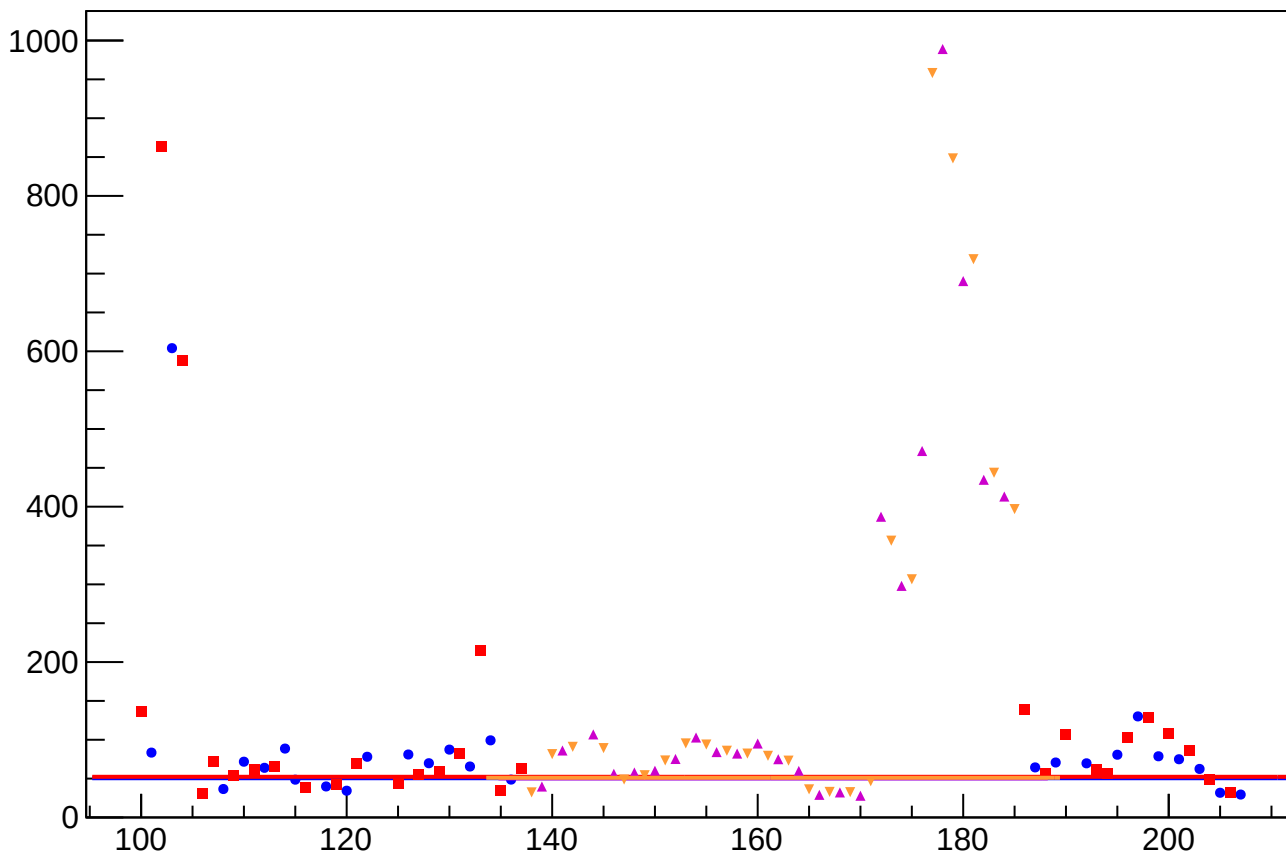
Left In:  $-0.001 \pm 0.015$   $\chi^2/\text{NDF}: 16.0/22$

+ sign  $0.022 \pm 0.011$   $\chi^2/\text{NDF}: 63.7/49$

All:  $0.007 \pm 0.008$   $\chi^2/\text{NDF}: 109.0/101$

- sign  $-0.008 \pm 0.011$   $\chi^2/\text{NDF}: 41.6/51$

asym\_us\_dd\_at2lr\_dd\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 50.490 $\pm$ 0.011  $\chi^2$ /NDF: 4828412.4/25

Left Out: 51.081 $\pm$ 0.011  $\chi^2$ /NDF: 11736636.7/23

Right Out: 52.334 $\pm$ 0.011  $\chi^2$ /NDF: 5699277.6/28

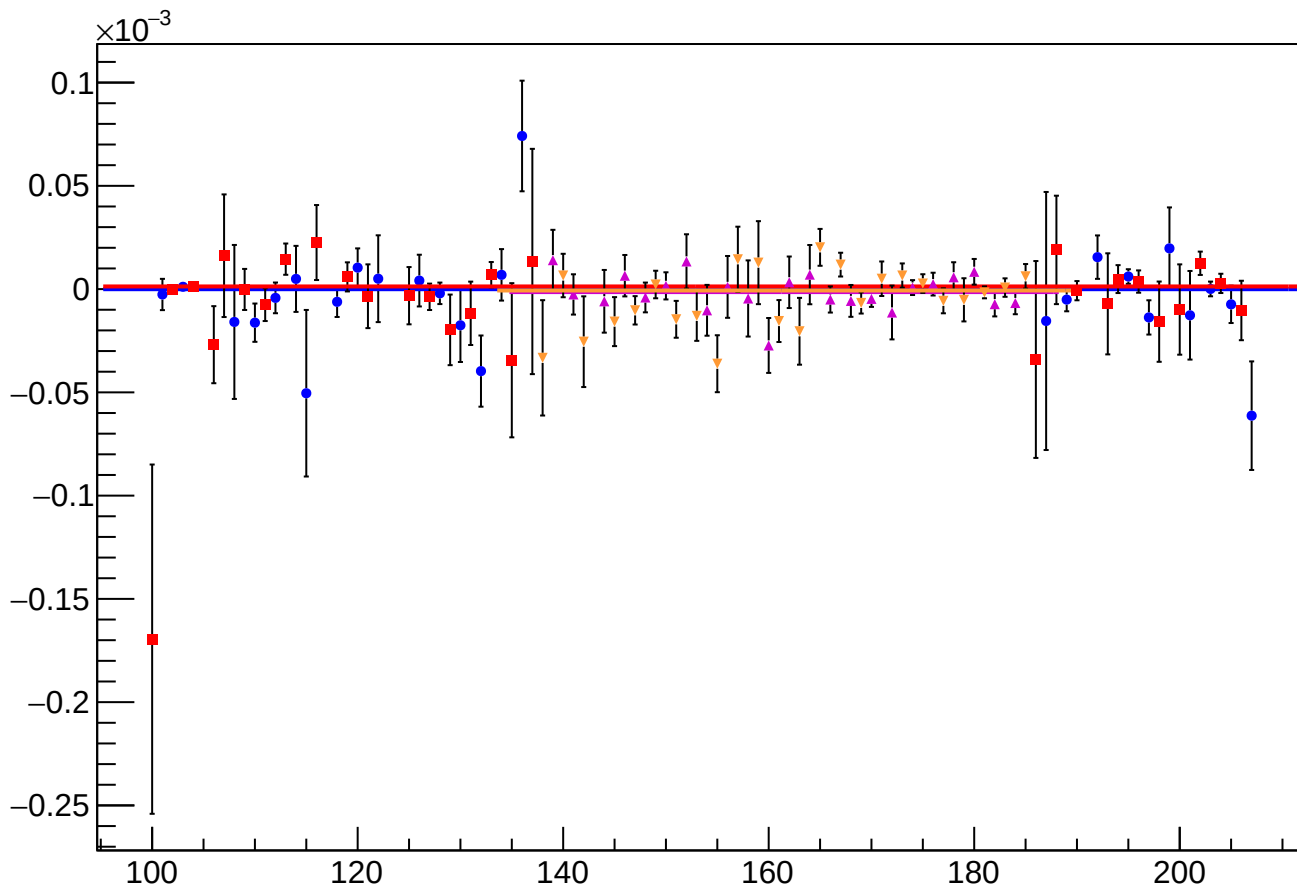
Left In: 50.251 $\pm$ 0.011  $\chi^2$ /NDF: 12195723.8/22

+ sign 50.783 $\pm$ 0.008  $\chi^2$ /NDF: 16566518.1/49

All: 51.026 $\pm$ 0.005  $\chi^2$ /NDF: 34481707.7/101

- sign 51.268 $\pm$ 0.008  $\chi^2$ /NDF: 17913212.0/51

asym\_us\_dd\_at2lr\_dd\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 38.3/25

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 38.5/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 25.6/28

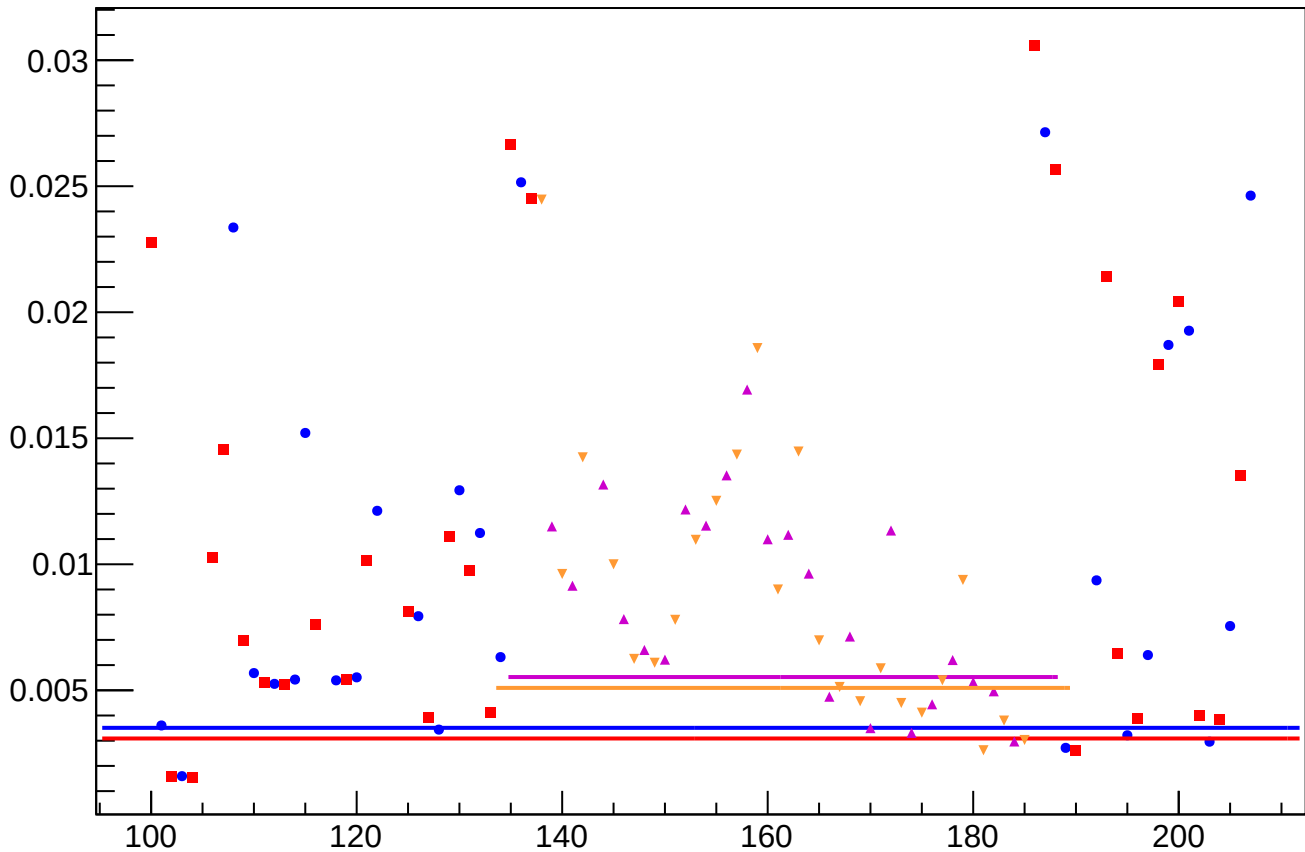
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 16.4/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 76.9/49

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 121.3/101

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 44.1/51

asym\_us\_dd\_at2lr\_dd\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 11108618.5/25

Left Out: 0.005 $\pm$ 0.000  $\chi^2$ /NDF:8380878.9/23

Right Out: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 14021833.3/28

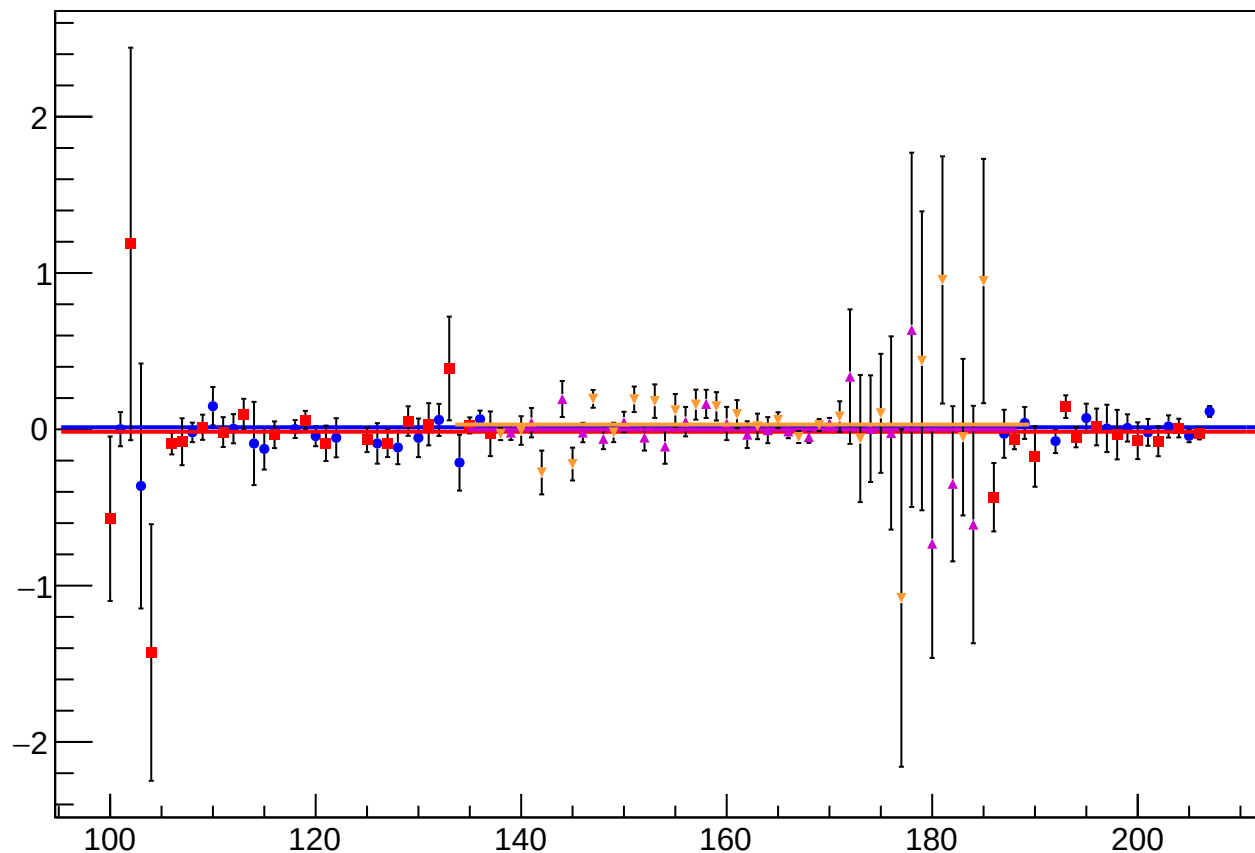
Left In: 0.006 $\pm$ 0.000  $\chi^2$ /NDF:6892708.8/22

+ sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 20896695.1/49

All: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 45302745.5/101

- sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 24304470.7/51

asym\_us\_dd\_at2lr\_dd\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.013 \pm 0.015$   $\chi^2/\text{NDF}$ : 21.5/25

Left Out:  $0.031 \pm 0.015$   $\chi^2/\text{NDF}$ : 41.5/23

Right Out:  $-0.015 \pm 0.016$   $\chi^2/\text{NDF}$ : 25.1/28

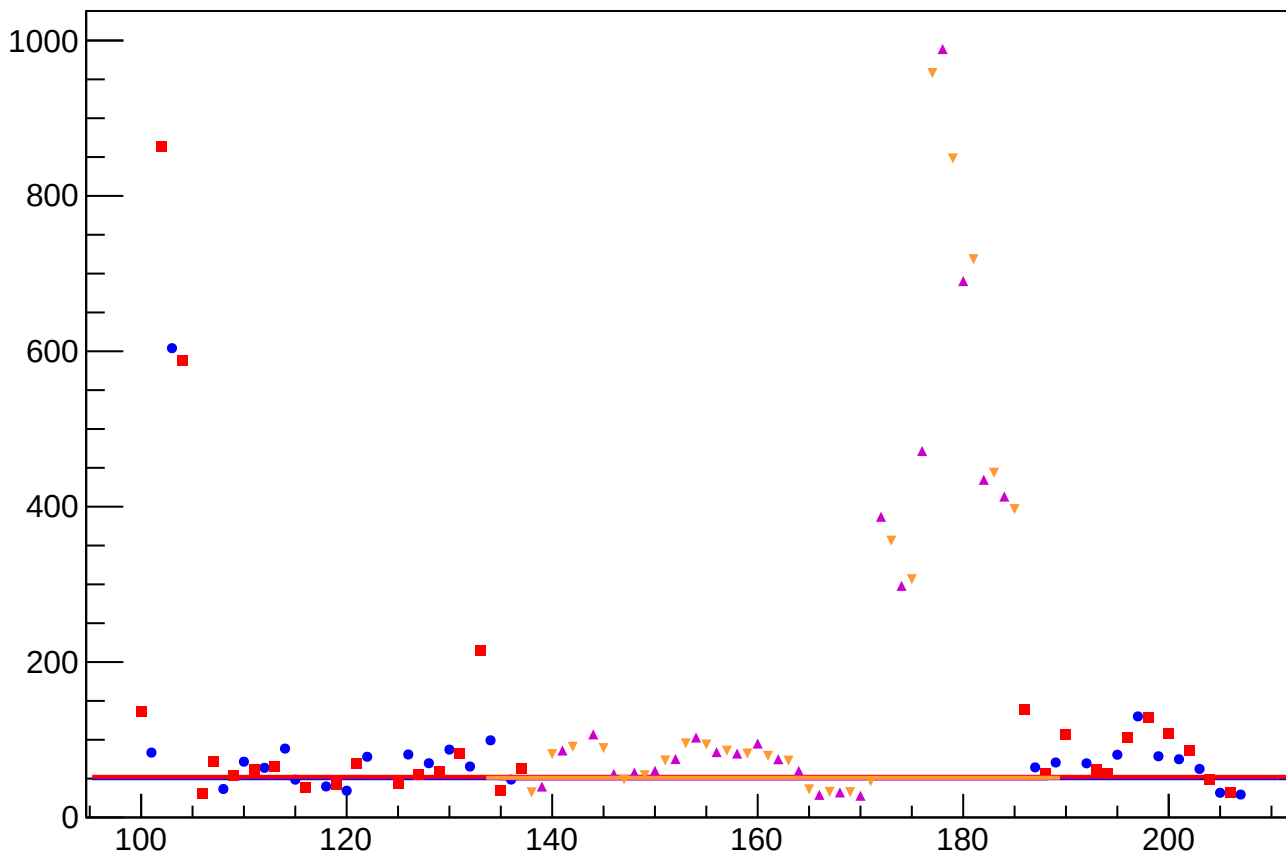
Left In:  $-0.001 \pm 0.015$   $\chi^2/\text{NDF}$ : 16.0/22

+ sign  $0.022 \pm 0.011$   $\chi^2/\text{NDF}$ : 63.7/49

All:  $0.007 \pm 0.008$   $\chi^2/\text{NDF}$ : 109.0/101

- sign  $-0.008 \pm 0.011$   $\chi^2/\text{NDF}$ : 41.6/51

asym\_us\_dd\_at2lr\_dd\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 50.491 $\pm$ 0.011  $\chi^2$ /NDF: 4828158.4/25

Left Out: 51.083 $\pm$ 0.011  $\chi^2$ /NDF: 11735805.5/23

Right Out: 52.335 $\pm$ 0.011  $\chi^2$ /NDF: 5699045.0/28

Left In: 50.251 $\pm$ 0.011  $\chi^2$ /NDF: 12195665.4/22

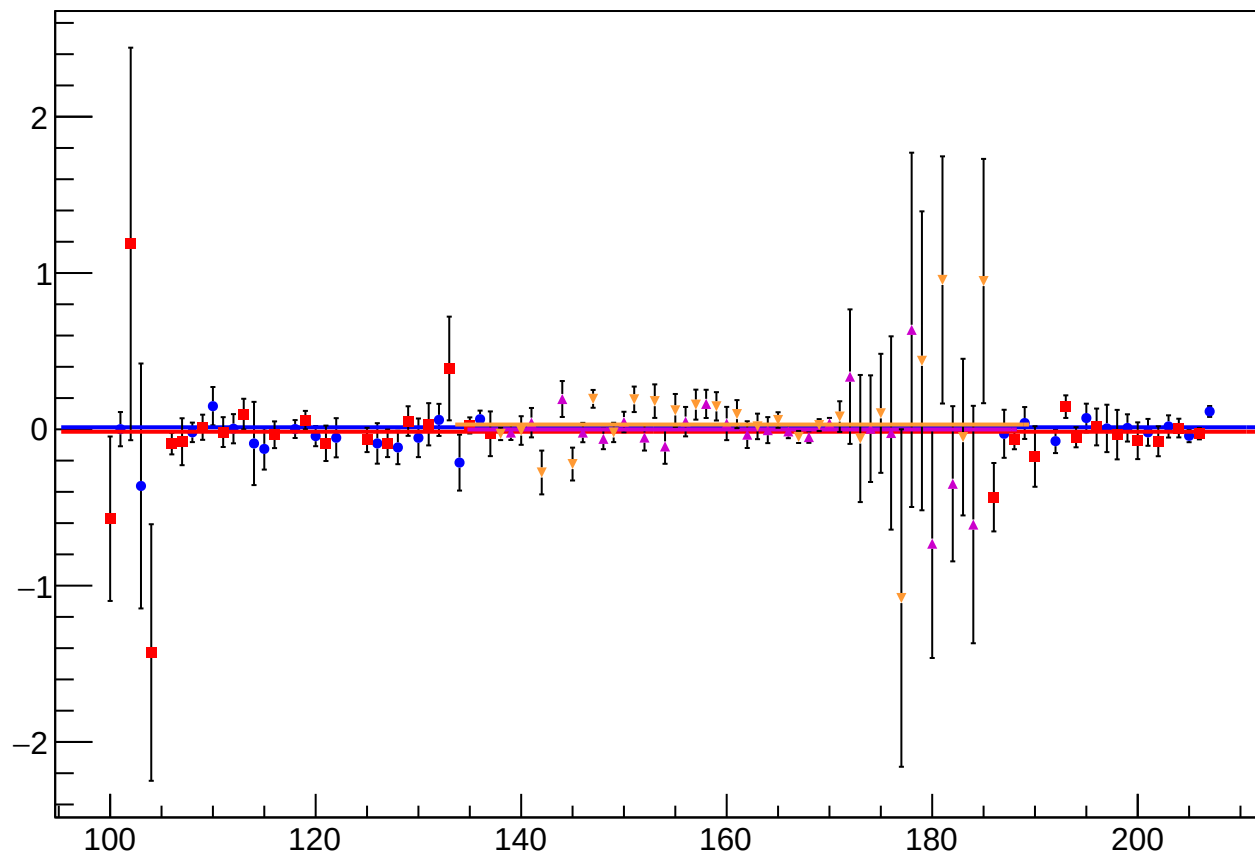
+ sign 50.785 $\pm$ 0.008  $\chi^2$ /NDF: 16565440.4/49

All: 51.027 $\pm$ 0.005  $\chi^2$ /NDF: 34480349.3/101

- sign 51.269 $\pm$ 0.008  $\chi^2$ /NDF: 17912940.3/51



asym\_us\_dd\_at2lr\_dd\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.013 \pm 0.015$   $\chi^2/\text{NDF}$ : 21.5/25

Left Out:  $0.031 \pm 0.015$   $\chi^2/\text{NDF}$ : 41.5/23

Right Out:  $-0.015 \pm 0.016$   $\chi^2/\text{NDF}$ : 25.1/28

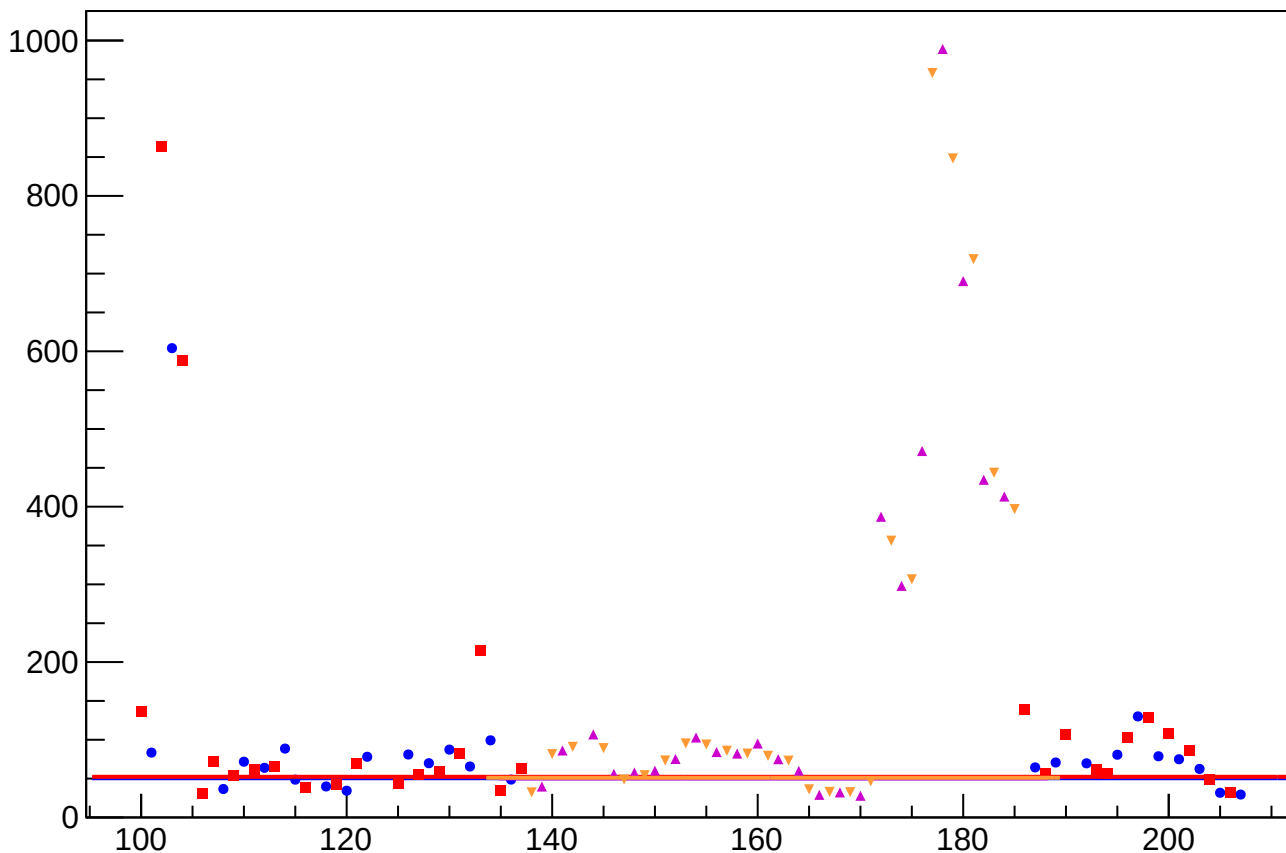
Left In:  $-0.001 \pm 0.015$   $\chi^2/\text{NDF}$ : 16.0/22

+ sign  $0.022 \pm 0.011$   $\chi^2/\text{NDF}$ : 63.7/49

All:  $0.007 \pm 0.008$   $\chi^2/\text{NDF}$ : 109.0/101

- sign  $-0.008 \pm 0.011$   $\chi^2/\text{NDF}$ : 41.6/51

asym\_us\_dd\_at2lr\_dd\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 50.491 $\pm$ 0.011  $\chi^2$ /NDF: 4828158.4/25

Left Out: 51.083 $\pm$ 0.011  $\chi^2$ /NDF: 11735805.5/23

Right Out: 52.335 $\pm$ 0.011  $\chi^2$ /NDF: 5699045.0/28

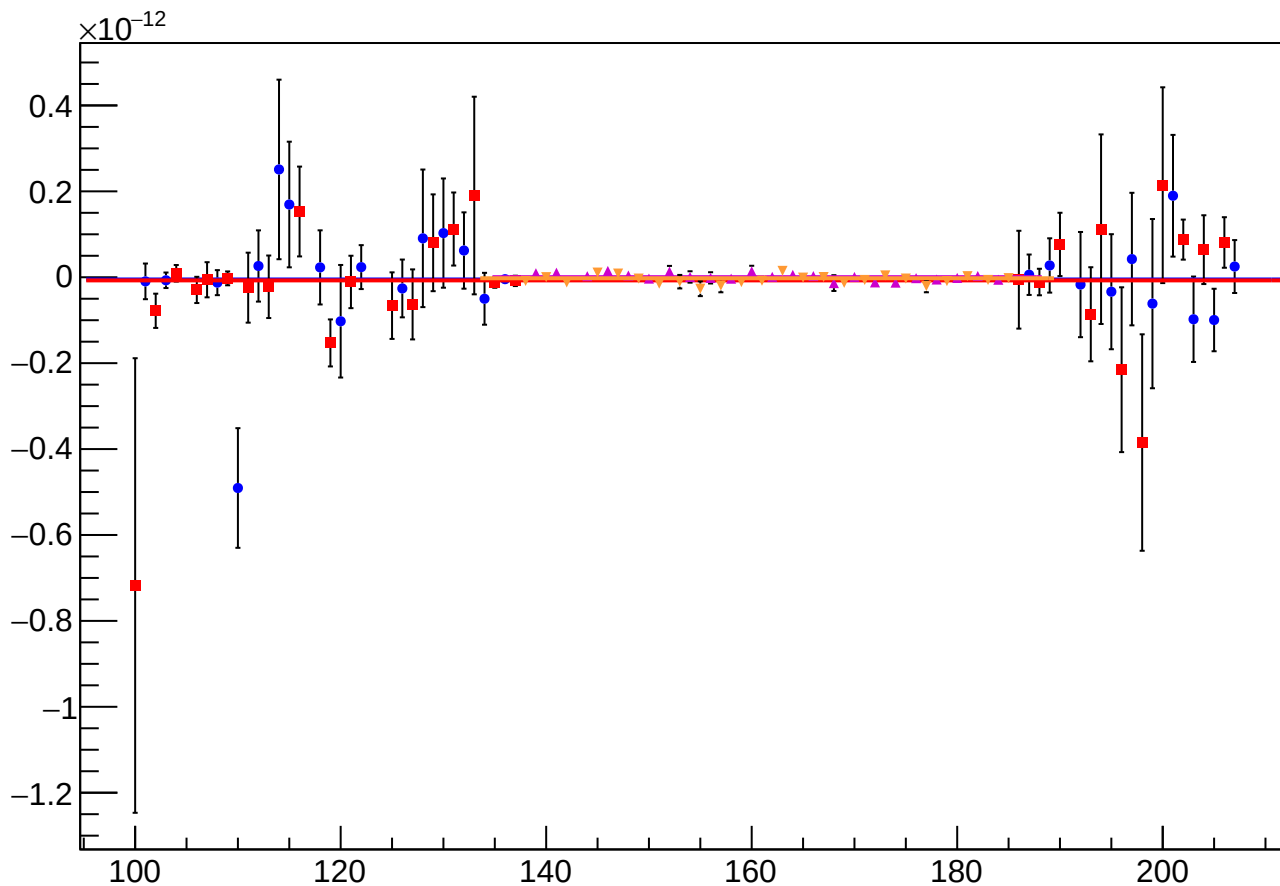
Left In: 50.251 $\pm$ 0.011  $\chi^2$ /NDF: 12195665.4/22

+ sign 50.785 $\pm$ 0.008  $\chi^2$ /NDF: 16565440.4/49

All: 51.027 $\pm$ 0.005  $\chi^2$ /NDF: 34480349.3/101

- sign 51.269 $\pm$ 0.008  $\chi^2$ /NDF: 17912940.3/51

asym\_us\_dd\_at2lr\_dd\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2$ /NDF: 23.8/25

Left Out: -0.000+/-0.000  $\chi^2$ /NDF:22.2/23

Right Out: -0.000+/-0.000  $\chi^2$ /NDF: 34.0/28

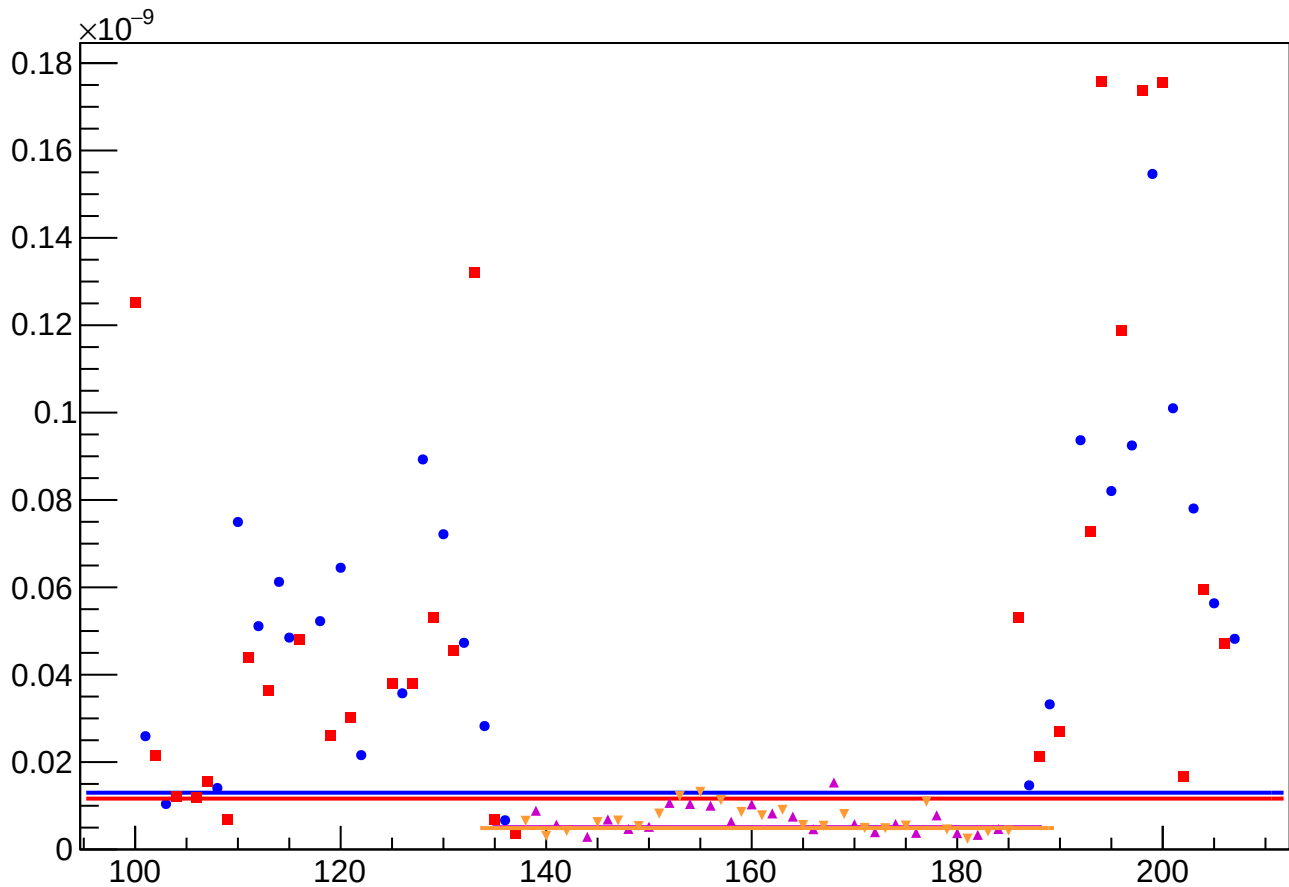
Left In: 0.000+/-0.000  $\chi^2$ /NDF:18.2/22

+ sign -0.000+/-0.000  $\chi^2$ /NDF: 46.2/49

All: -0.000+/-0.000  $\chi^2$ /NDF: 101.0/101

- sign -0.000+/-0.000  $\chi^2$ /NDF: 53.6/51

asym\_us\_dd\_at2lr\_dd\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10960111.9/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4312108.9/23

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10493894.0/28

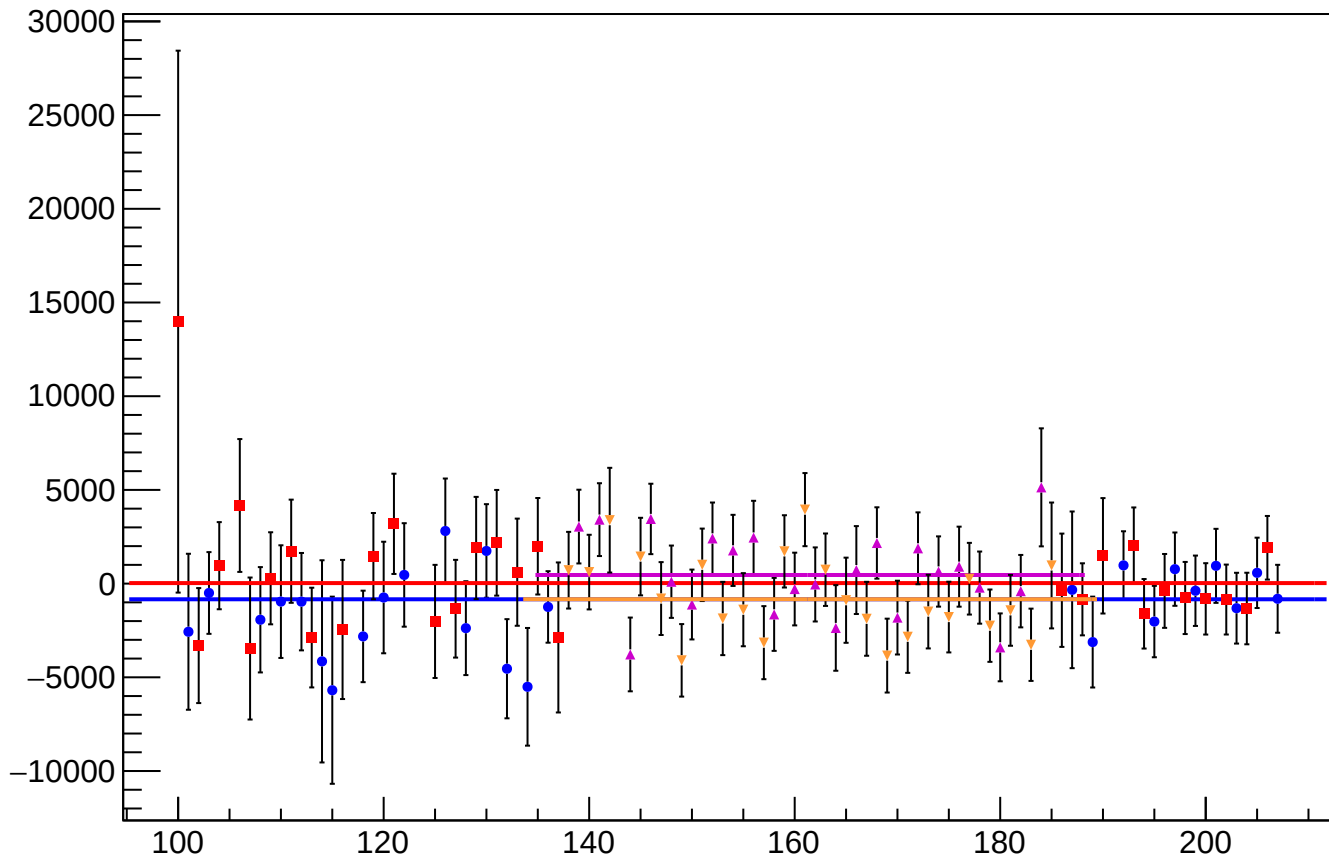
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3777059.0/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 18122121.3/49

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 34529428.9/101

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 16388899.4/51

reg\_asym\_us\_dd\_atlr\_dd\_avg\_mean vs Slug



Right In:  $-836.481 \pm 467.192$   $\chi^2/\text{NDF}$ : 14.4/25

Left Out:  $-832.582 \pm 410.448$   $\chi^2/\text{NDF}$ : 25.4/23

Right Out:  $28.047 \pm 453.273$   $\chi^2/\text{NDF}$ : 15.8/28

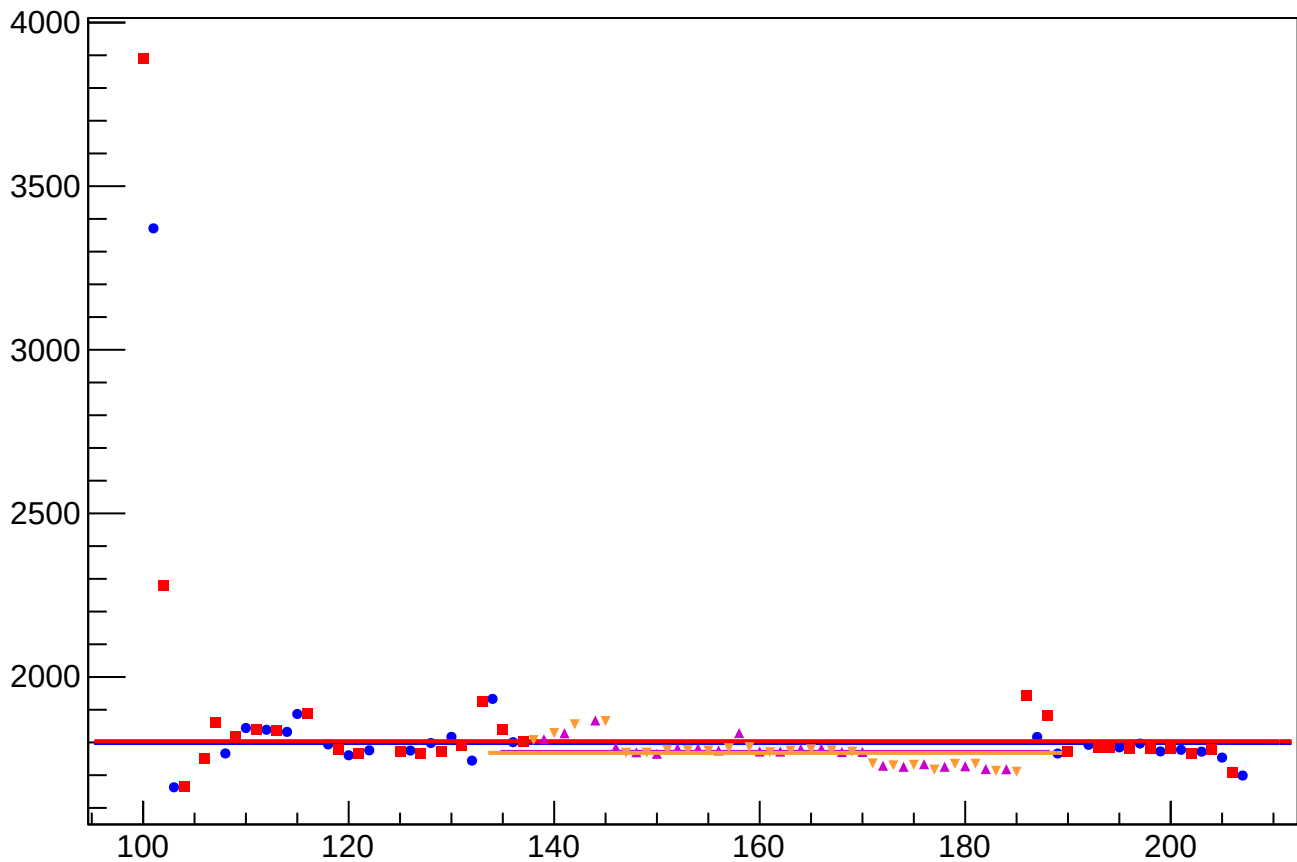
Left In:  $459.594 \pm 413.637$   $\chi^2/\text{NDF}$ : 27.3/22

+ sign  $-834.281 \pm 308.352$   $\chi^2/\text{NDF}$ : 39.8/49

All:  $-280.356 \pm 217.036$   $\chi^2/\text{NDF}$ : 89.8/101

- sign  $263.510 \pm 305.539$   $\chi^2/\text{NDF}$ : 43.6/51

# reg\_asym\_us\_dd\_atlr\_dd\_avg\_rms vs Slug



Right In: 1798.260 $\pm$ 0.330  $\chi^2$ /NDF: 309134.6/25

Left Out: 1768.125 $\pm$ 0.290  $\chi^2$ /NDF:16358.2/23

Right Out: 1803.968 $\pm$ 0.321  $\chi^2$ /NDF: 121890.6/28

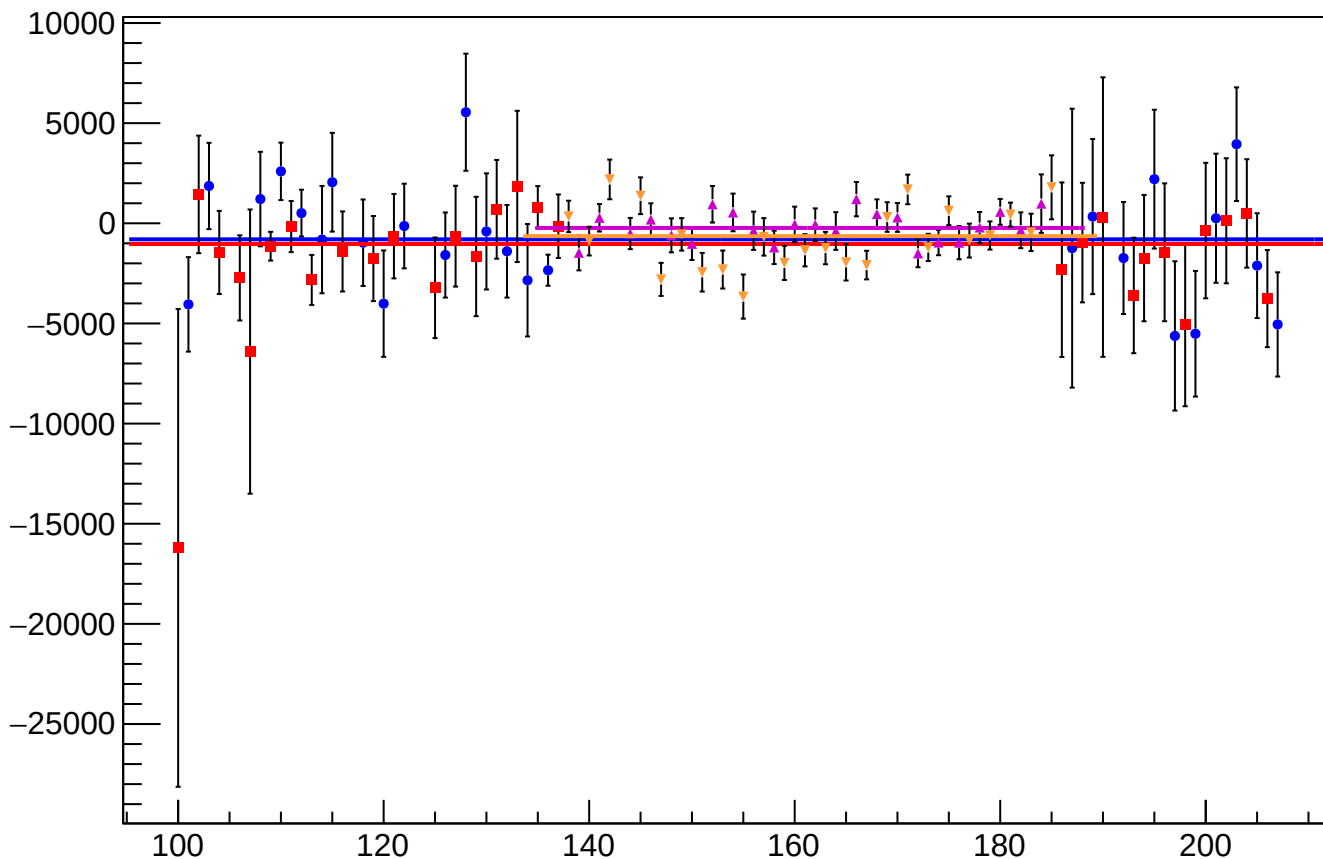
Left In: 1771.217 $\pm$ 0.292  $\chi^2$ /NDF:16425.7/22

+ sign 1781.252 $\pm$ 0.218  $\chi^2$ /NDF: 330188.9/49

All: 1783.698 $\pm$ 0.153  $\chi^2$ /NDF: 474451.5/101

- sign 1786.099 $\pm$ 0.216  $\chi^2$ /NDF: 144013.3/51

asym\_us\_dd\_atlr\_dd\_avg\_reg\_correction\_mean vs Slug



Right In: -799.870+/-404.825  $\chi^2/\text{NDF}$ : 34.1/25

Left Out: -641.029+/-166.449  $\chi^2/\text{NDF}$ : 66.7/23

Right Out: -1033.847+/-364.929  $\chi^2/\text{NDF}$ : 15.4/28

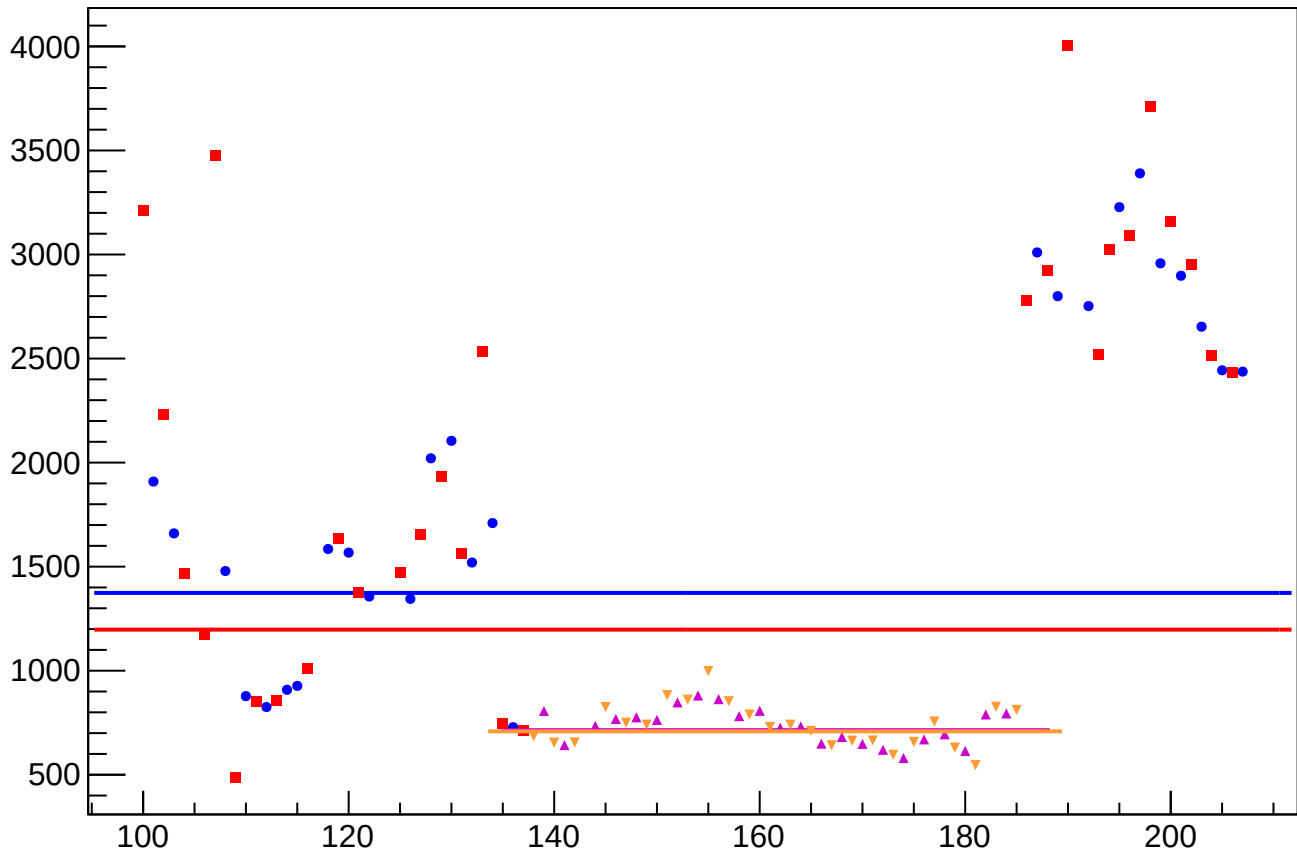
Left In: -230.653+/-168.319  $\chi^2/\text{NDF}$ : 19.9/22

+ sign -663.999+/-153.944  $\chi^2/\text{NDF}$ : 100.9/49

All: -516.726+/-108.464  $\chi^2/\text{NDF}$ : 142.0/101

- sign -371.550+/-152.844  $\chi^2/\text{NDF}$ : 39.3/51

asym\_us\_dd\_atlr\_dd\_avg\_reg\_correction\_rms vs Slug



Right In: 1373.858 $\pm$ 0.286  $\chi^2$ /NDF: 6685343.6/25

Left Out: 708.503 $\pm$ 0.118  $\chi^2$ /NDF: 700473.3/23

+ sign 804.719 $\pm$ 0.109  $\chi^2$ /NDF: 12007156.5/49

Right Out: 1197.402 $\pm$ 0.258  $\chi^2$ /NDF: 10000176.2/28

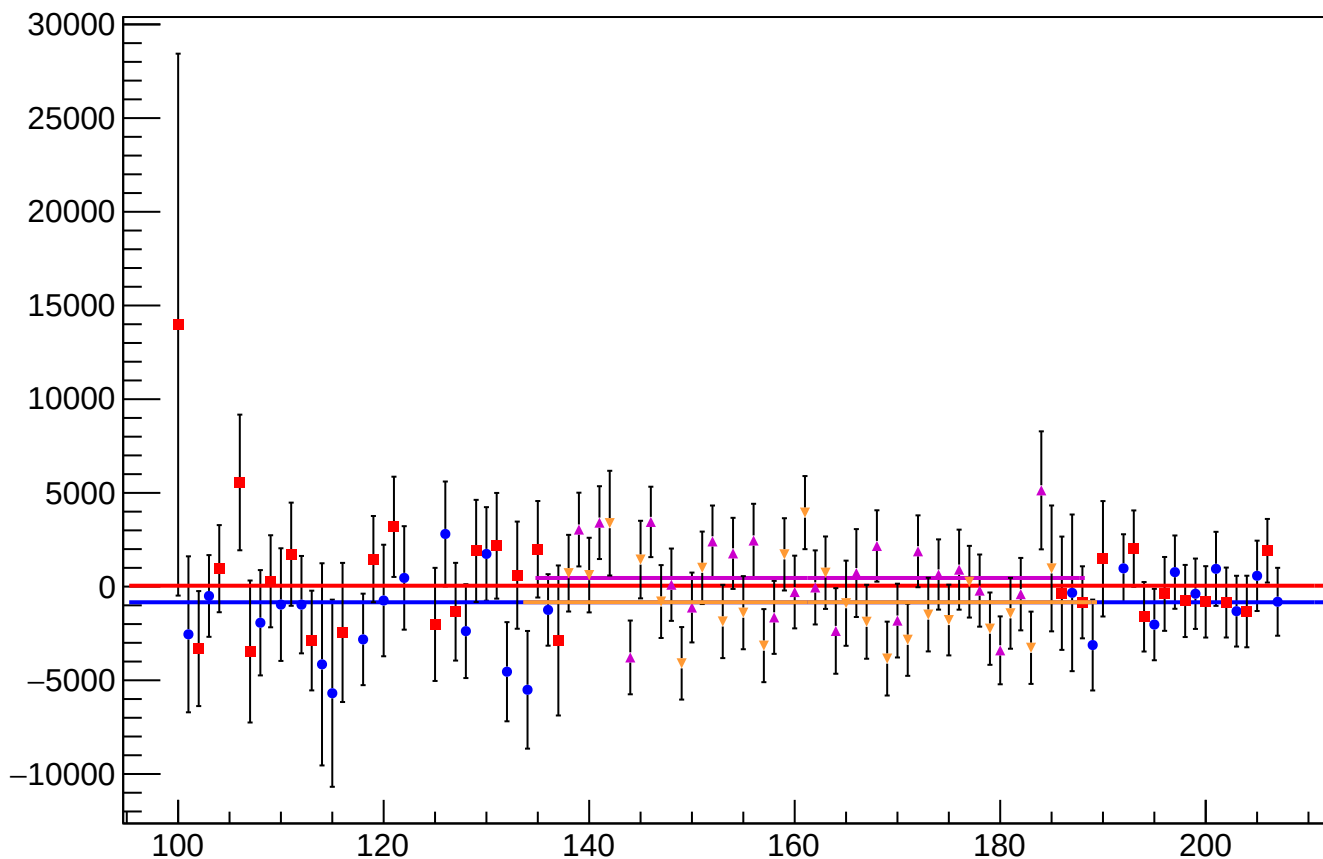
All: 801.805 $\pm$ 0.077  $\chi^2$ /NDF: 25397827.1/10

Left In: 714.162 $\pm$ 0.119  $\chi^2$ /NDF: 497246.5/22

- sign 798.933 $\pm$ 0.108  $\chi^2$ /NDF: 13389247.9/51



cor\_asym\_us\_dd\_atlr\_dd\_avg\_mean vs Slug



Right In:  $-836.230 \pm 467.192$   $\chi^2/\text{NDF}$ : 14.4/25

Left Out:  $-832.476 \pm 410.448$   $\chi^2/\text{NDF}$ : 25.4/23

Right Out:  $47.036 \pm 453.425$   $\chi^2/\text{NDF}$ : 16.8/28

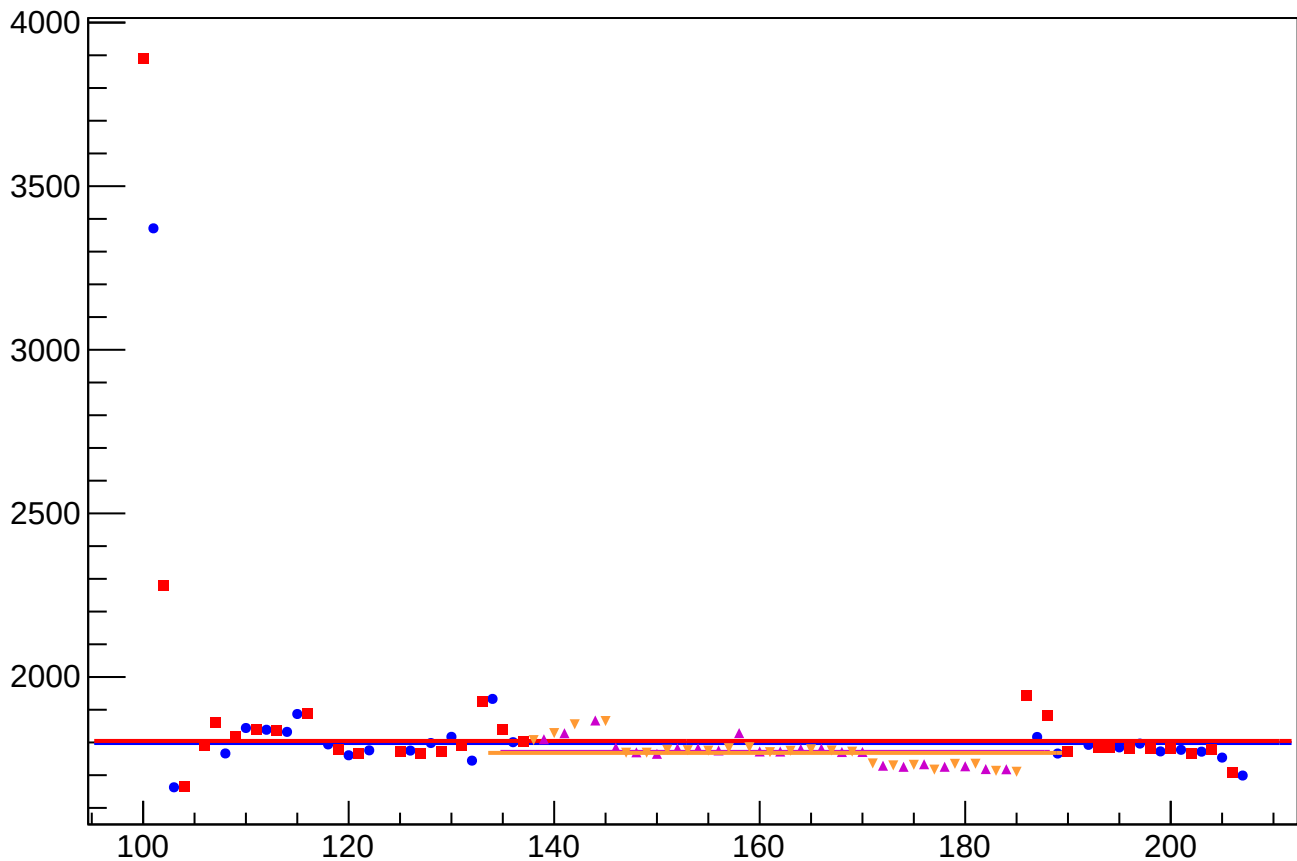
Left In:  $459.554 \pm 413.637$   $\chi^2/\text{NDF}$ : 27.3/22

+ sign  $-834.111 \pm 308.352$   $\chi^2/\text{NDF}$ : 39.8/49

All:  $-275.979 \pm 217.053$   $\chi^2/\text{NDF}$ : 90.8/101

- sign  $272.184 \pm 305.586$   $\chi^2/\text{NDF}$ : 44.5/51

cor\_asym\_us\_dd\_atlr\_dd\_avg\_rms vs Slug



Right In: 1798.260 $\pm$ 0.330  $\chi^2$ /NDF: 309136.5/25

Left Out: 1768.125 $\pm$ 0.290  $\chi^2$ /NDF:16358.2/23

Right Out: 1804.645 $\pm$ 0.321  $\chi^2$ /NDF: 121456.8/28

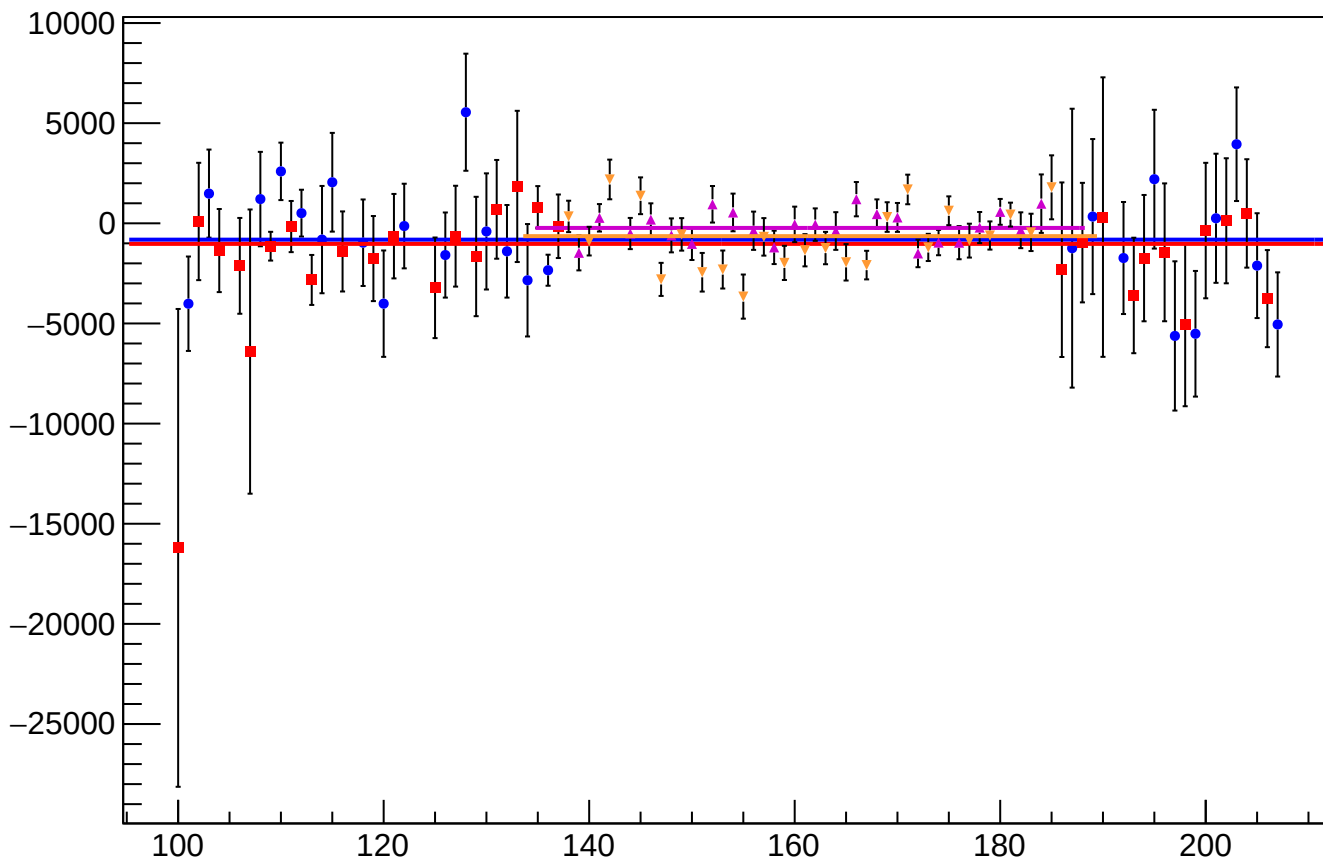
Left In: 1771.217 $\pm$ 0.292  $\chi^2$ /NDF:16425.7/22

+ sign 1781.252 $\pm$ 0.218  $\chi^2$ /NDF: 330190.7/49

All: 1783.850 $\pm$ 0.153  $\chi^2$ /NDF: 474287.4/101

- sign 1786.401 $\pm$ 0.216  $\chi^2$ /NDF: 143815.4/51

asym\_us\_dd\_atlr\_dd\_avg\_cor\_correction\_mean vs Slug



Right In: -815.694 $\pm$ 405.109  $\chi^2$ /NDF: 33.6/25

Left Out: -641.004 $\pm$ 166.450  $\chi^2$ /NDF:66.7/23

Right Out: -1026.977 $\pm$ 366.040  $\chi^2$ /NDF: 14.4/28

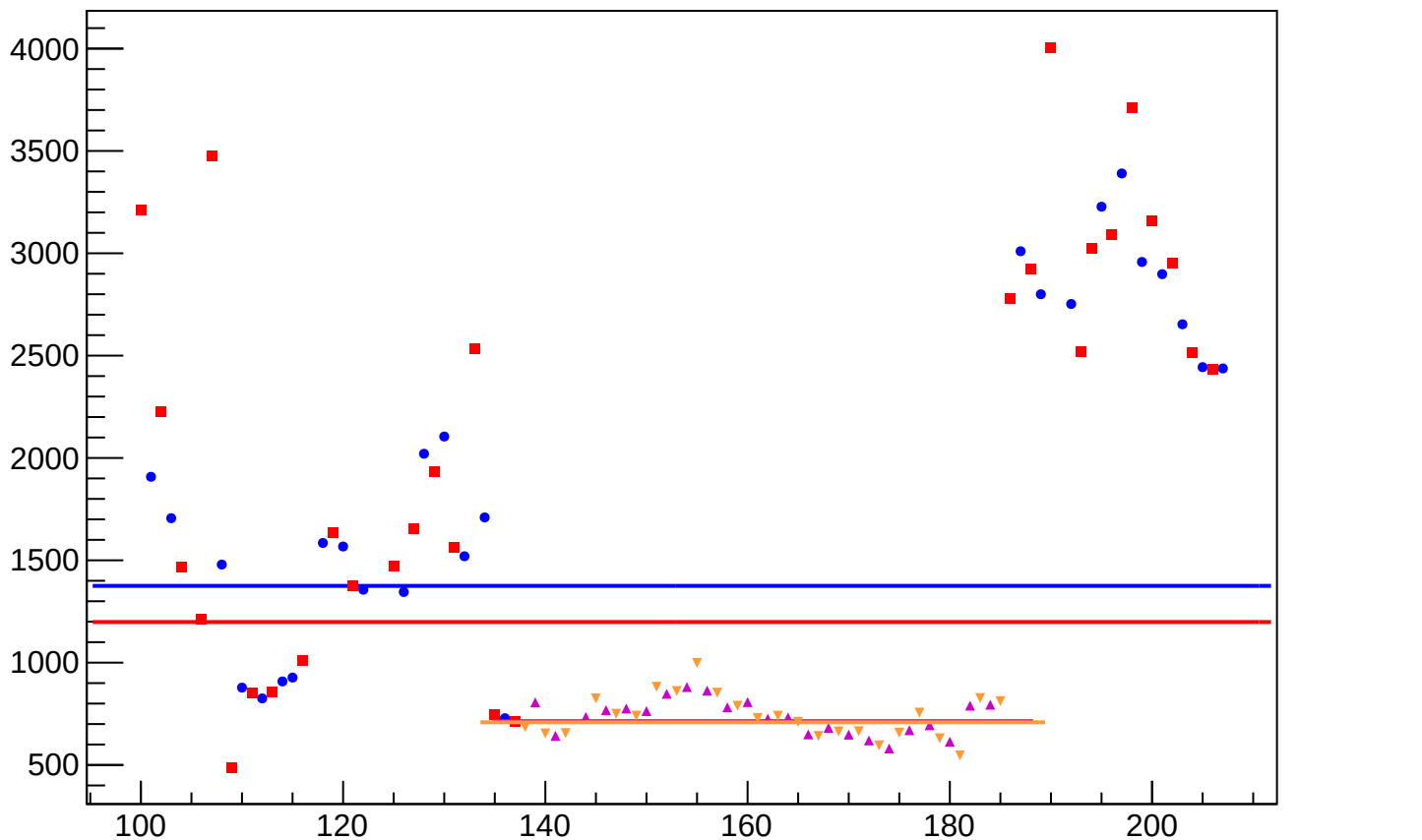
Left In: -230.572 $\pm$ 168.320  $\chi^2$ /NDF:19.9/22

+ sign -666.236 $\pm$ 153.961  $\chi^2$ /NDF: 100.4/49

All: -516.909 $\pm$ 108.499  $\chi^2$ /NDF: 140.5/101

- sign -369.582 $\pm$ 152.927  $\chi^2$ /NDF: 38.2/51

asym\_us\_dd\_atlr\_dd\_avg\_cor\_correction\_rms vs Slug



Right In: 1375.008 $\pm$ 0.286  $\chi^2$ /NDF: 6695307.6/25

Left Out: 708.508 $\pm$ 0.118  $\chi^2$ /NDF: 700448.7/23

Right Out: 1198.411 $\pm$ 0.259  $\chi^2$ /NDF: 9998909.4/28

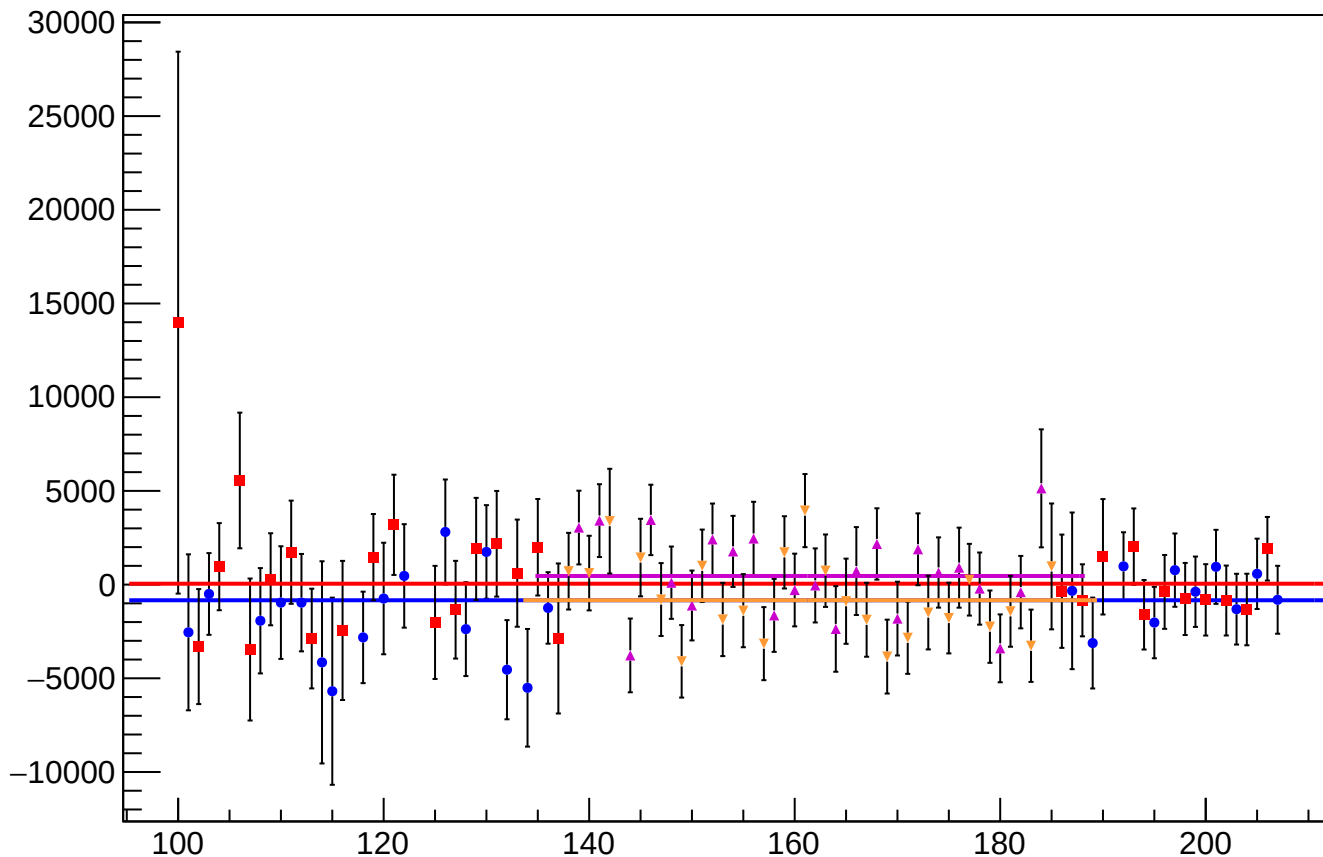
Left In: 714.168 $\pm$ 0.119  $\chi^2$ /NDF: 497252.3/22

+ sign 804.775 $\pm$ 0.109  $\chi^2$ /NDF: 12027440.0/49

All: 801.713 $\pm$ 0.077  $\chi^2$ /NDF: 25414483.0/10

- sign 798.691 $\pm$ 0.108  $\chi^2$ /NDF: 13385470.6/51

eigen\_cor\_asym\_us\_dd\_atlr\_dd\_avg\_mean vs Slug



Right In: -836.230+/-467.192  $\chi^2/\text{NDF}$ : 14.4/25

Left Out: -832.476+/-410.448  $\chi^2/\text{NDF}$ : 25.4/23

Right Out: 47.036+/-453.425  $\chi^2/\text{NDF}$ : 16.8/28

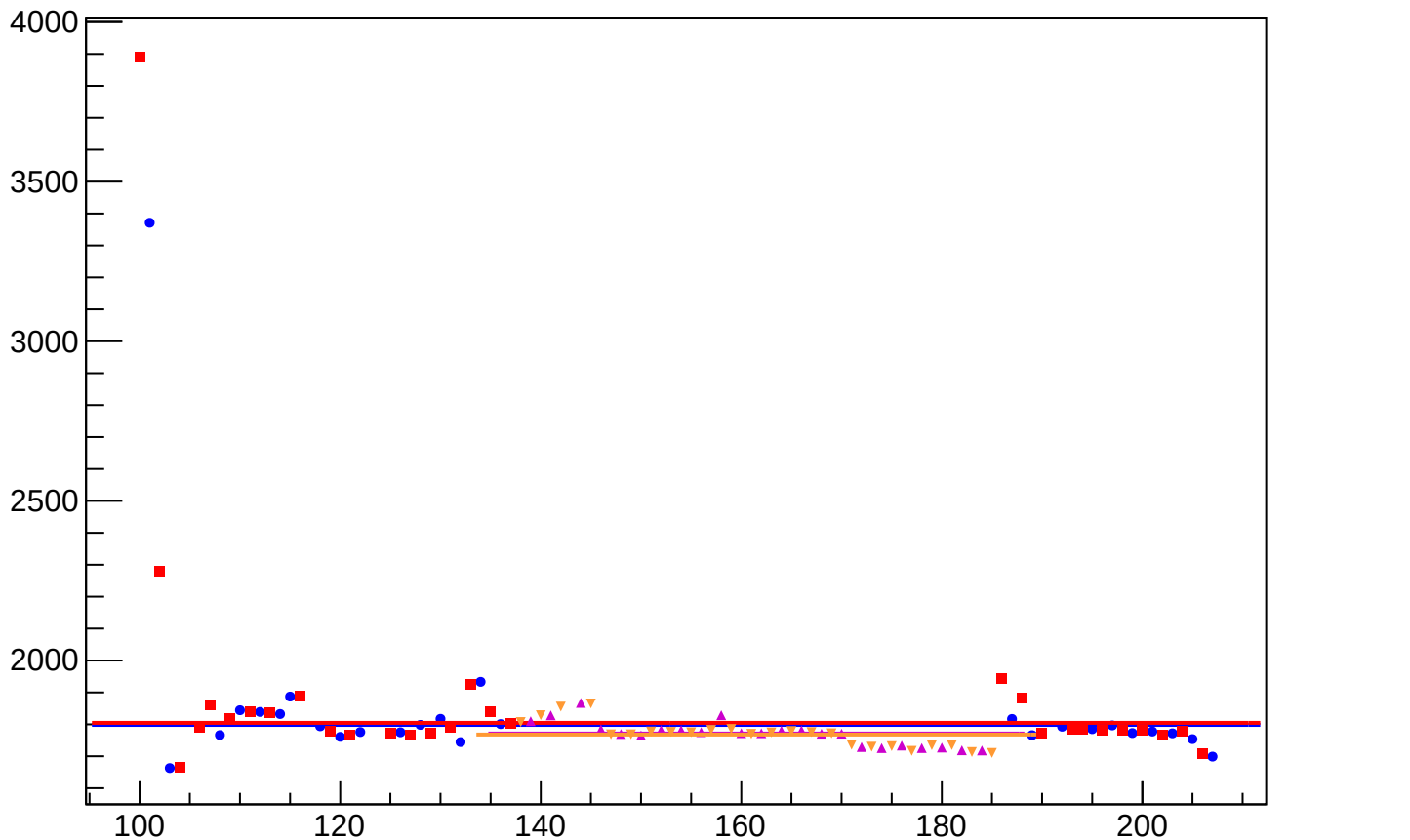
Left In: 459.554+/-413.637  $\chi^2/\text{NDF}$ : 27.3/22

+ sign -834.111+/-308.352  $\chi^2/\text{NDF}$ : 39.8/49

All: -275.979+/-217.053  $\chi^2/\text{NDF}$ : 90.8/101

- sign 272.184+/-305.586  $\chi^2/\text{NDF}$ : 44.5/51

eigen\_cor\_asym\_us\_dd\_atlr\_dd\_avg\_rms vs Slug



Right In: 1798.260 $\pm$ 0.330  $\chi^2$ /NDF: 309136.5/25

Left Out: 1768.125 $\pm$ 0.290  $\chi^2$ /NDF:16358.2/23

Right Out: 1804.645 $\pm$ 0.321  $\chi^2$ /NDF: 121456.8/28

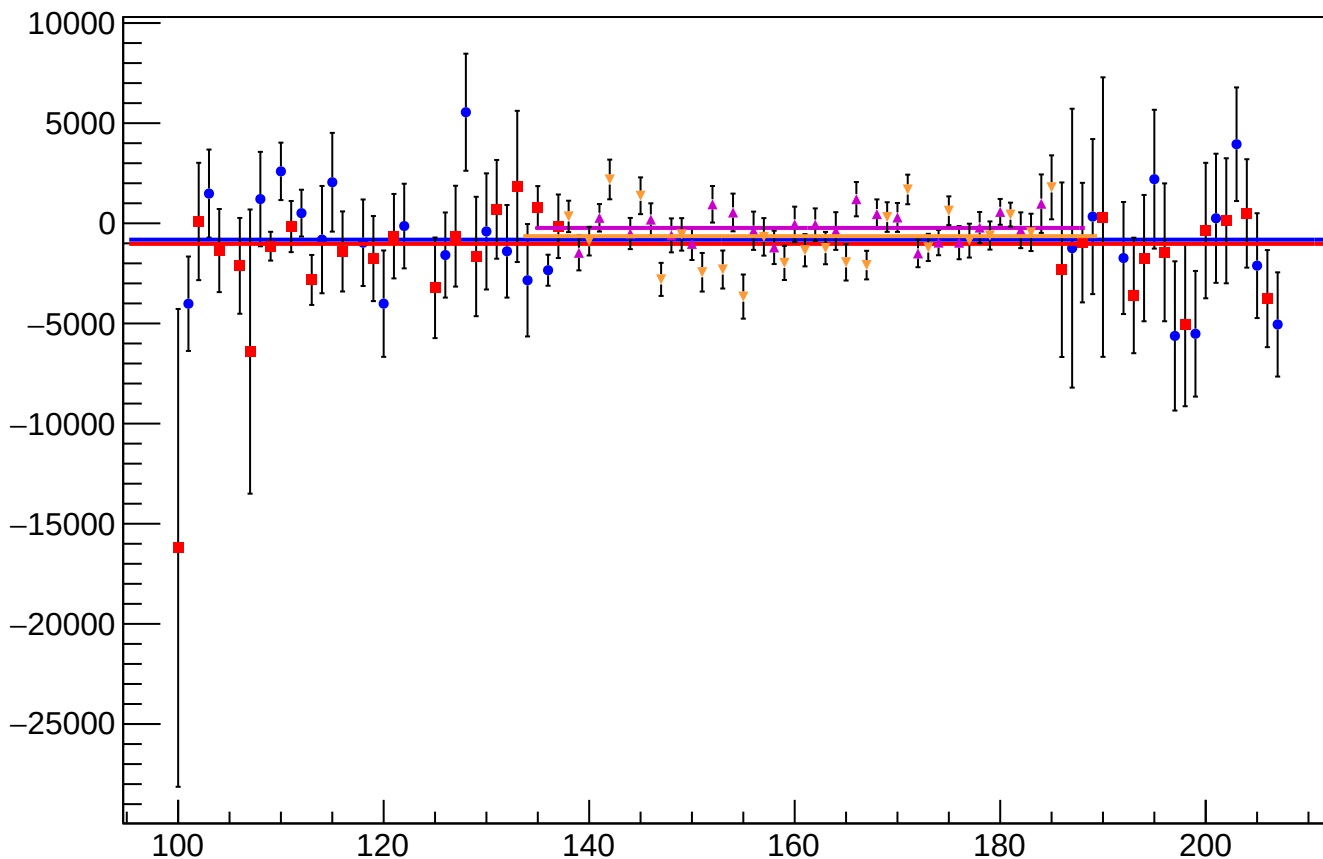
Left In: 1771.217 $\pm$ 0.292  $\chi^2$ /NDF:16425.7/22

+ sign 1781.252 $\pm$ 0.218  $\chi^2$ /NDF: 330190.7/49

All: 1783.850 $\pm$ 0.153  $\chi^2$ /NDF: 474287.4/101

- sign 1786.401 $\pm$ 0.216  $\chi^2$ /NDF: 143815.4/51

asym\_us\_dd\_atlr\_dd\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-815.694 \pm 405.109$   $\chi^2/\text{NDF}$ : 33.6/25

Left Out:  $-641.004 \pm 166.450$   $\chi^2/\text{NDF}$ : 66.7/23

Right Out:  $-1026.977 \pm 366.040$   $\chi^2/\text{NDF}$ : 14.4/28

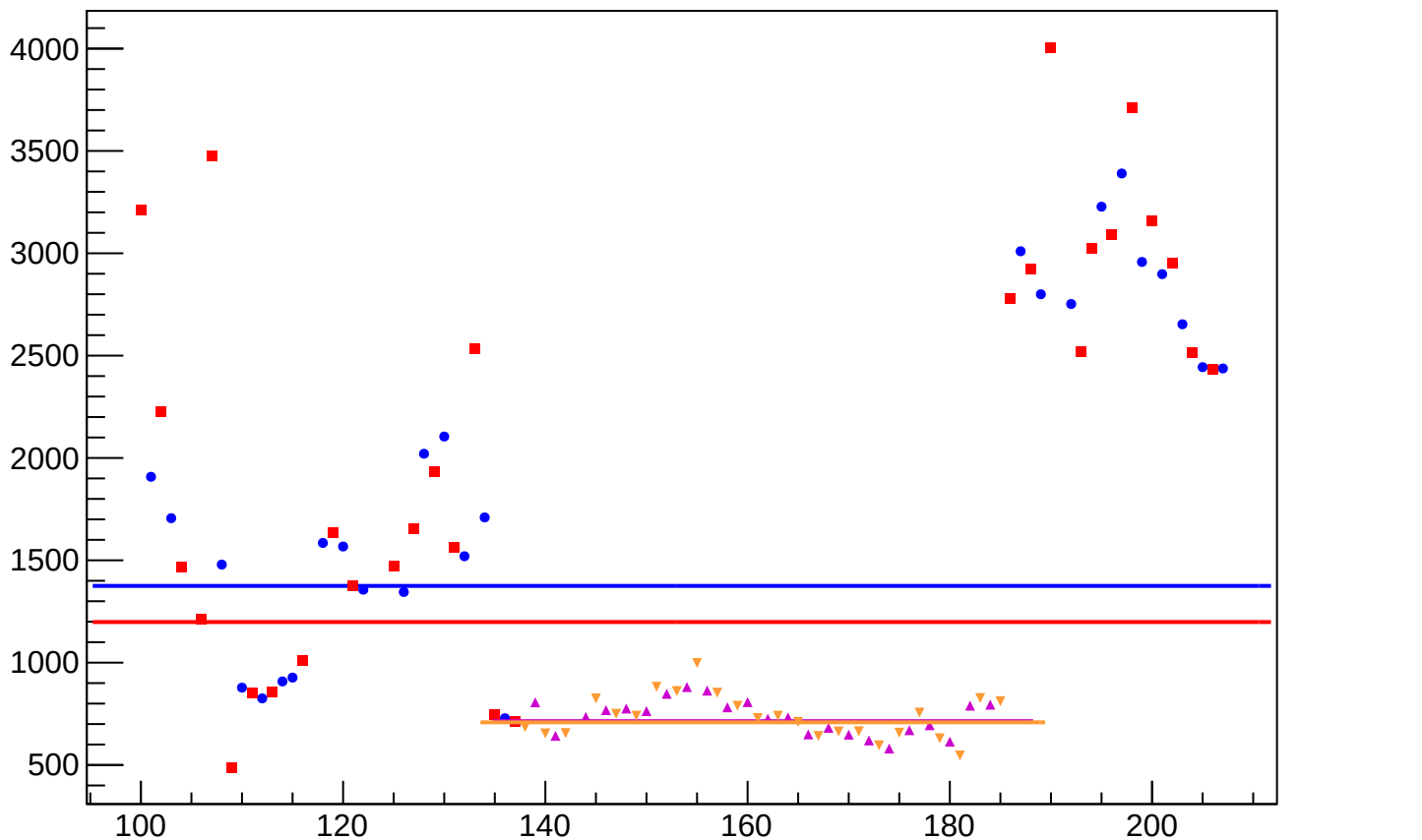
Left In:  $-230.572 \pm 168.320$   $\chi^2/\text{NDF}$ : 19.9/22

+ sign  $-666.236 \pm 153.961$   $\chi^2/\text{NDF}$ : 100.4/49

All:  $-516.909 \pm 108.499$   $\chi^2/\text{NDF}$ : 140.5/101

- sign  $-369.582 \pm 152.927$   $\chi^2/\text{NDF}$ : 38.2/51

asym\_us\_dd\_atlr\_dd\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 1375.008+/-0.286  $\chi^2/\text{NDF}$ : 6695307.6/25

Left Out: 708.508+/-0.118  $\chi^2/\text{NDF}$ : 700448.7/23

Right Out: 1198.411+/-0.259  $\chi^2/\text{NDF}$ : 9998909.4/28

Left In: 714.168+/-0.119  $\chi^2/\text{NDF}$ : 497252.3/22

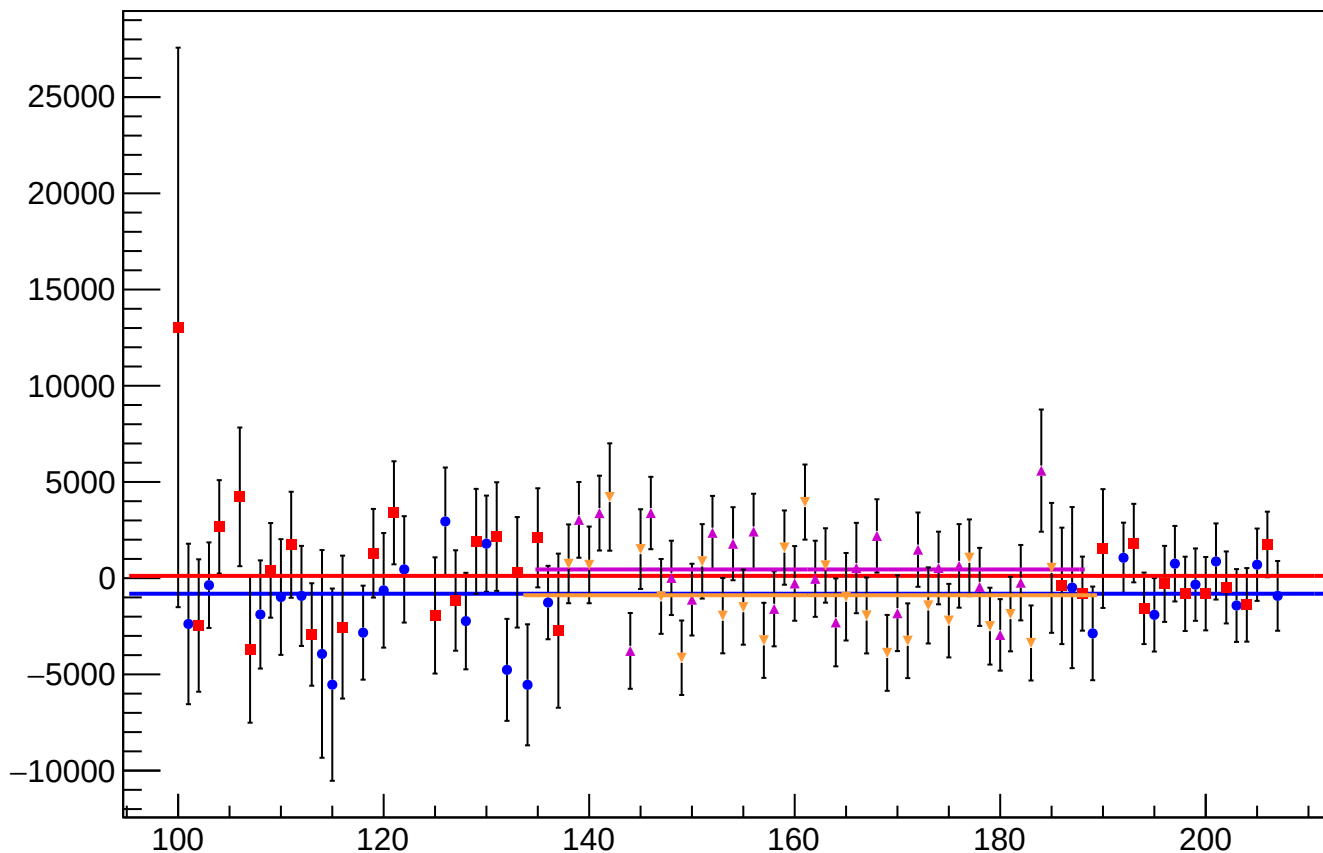
+ sign 804.775+/-0.109  $\chi^2/\text{NDF}$ : 12027440.0/49

All: 801.713+/-0.077  $\chi^2/\text{NDF}$ : 25414483.0/10

- sign 798.691+/-0.108  $\chi^2/\text{NDF}$ : 13385470.6/51



# dit\_asym\_us\_dd\_atlr\_dd\_avg\_mean vs Slug



Right In:  $-808.919 \pm 468.324$   $\chi^2/\text{NDF}$ : 14.5/25

Left Out:  $-886.354 \pm 413.227$   $\chi^2/\text{NDF}$ : 28.1/23

Right Out:  $119.496 \pm 455.859$   $\chi^2/\text{NDF}$ : 15.6/28

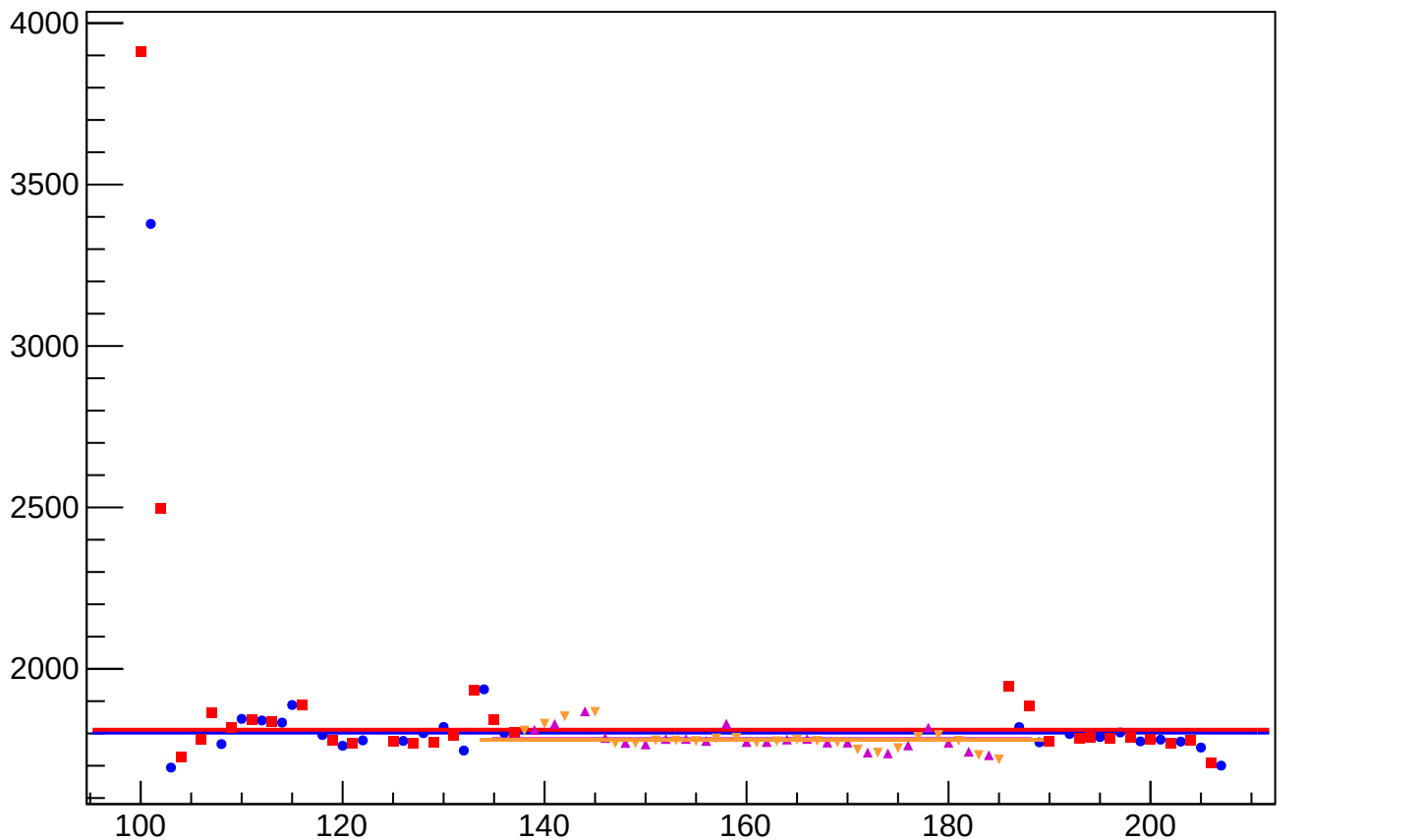
Left In:  $453.237 \pm 416.200$   $\chi^2/\text{NDF}$ : 25.8/22

+ sign  $-852.457 \pm 309.853$   $\chi^2/\text{NDF}$ : 42.6/49

All:  $-270.819 \pm 218.214$   $\chi^2/\text{NDF}$ : 91.3/101

- sign  $301.513 \pm 307.364$   $\chi^2/\text{NDF}$ : 41.7/51

dit\_asym\_us\_dd\_atlr\_dd\_avg\_rms vs Slug



Right In: 1802.653 $\pm$ 0.331  $\chi^2$ /NDF: 306394.2/25

Left Out: 1780.220 $\pm$ 0.292  $\chi^2$ /NDF:10380.2/23

Right Out: 1811.473 $\pm$ 0.322  $\chi^2$ /NDF: 149070.7/28

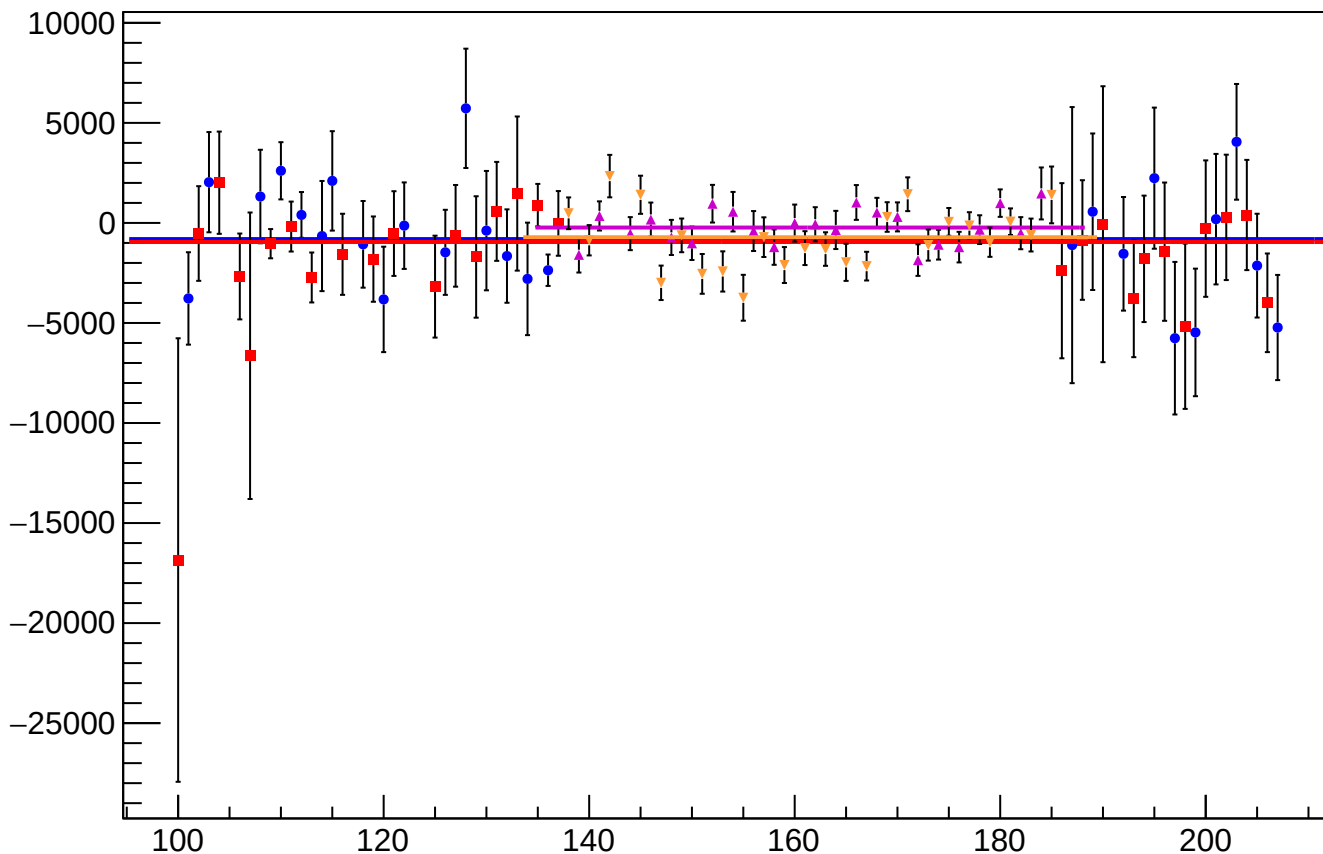
Left In: 1782.298 $\pm$ 0.294  $\chi^2$ /NDF:11232.1/22

+ sign 1790.040 $\pm$ 0.219  $\chi^2$ /NDF: 319354.4/49

All: 1792.823 $\pm$ 0.154  $\chi^2$ /NDF: 484445.1/101

- sign 1795.562 $\pm$ 0.217  $\chi^2$ /NDF: 164770.5/51

asym\_us\_dd\_atlr\_dd\_avg\_dit\_correction\_mean vs Slug



Right In: -807.686+/-408.437  $\chi^2/\text{NDF}$ : 33.6/25

Left Out: -716.600+/-170.602  $\chi^2/\text{NDF}$ : 59.4/23

Right Out: -952.211+/-368.415  $\chi^2/\text{NDF}$ : 16.5/28

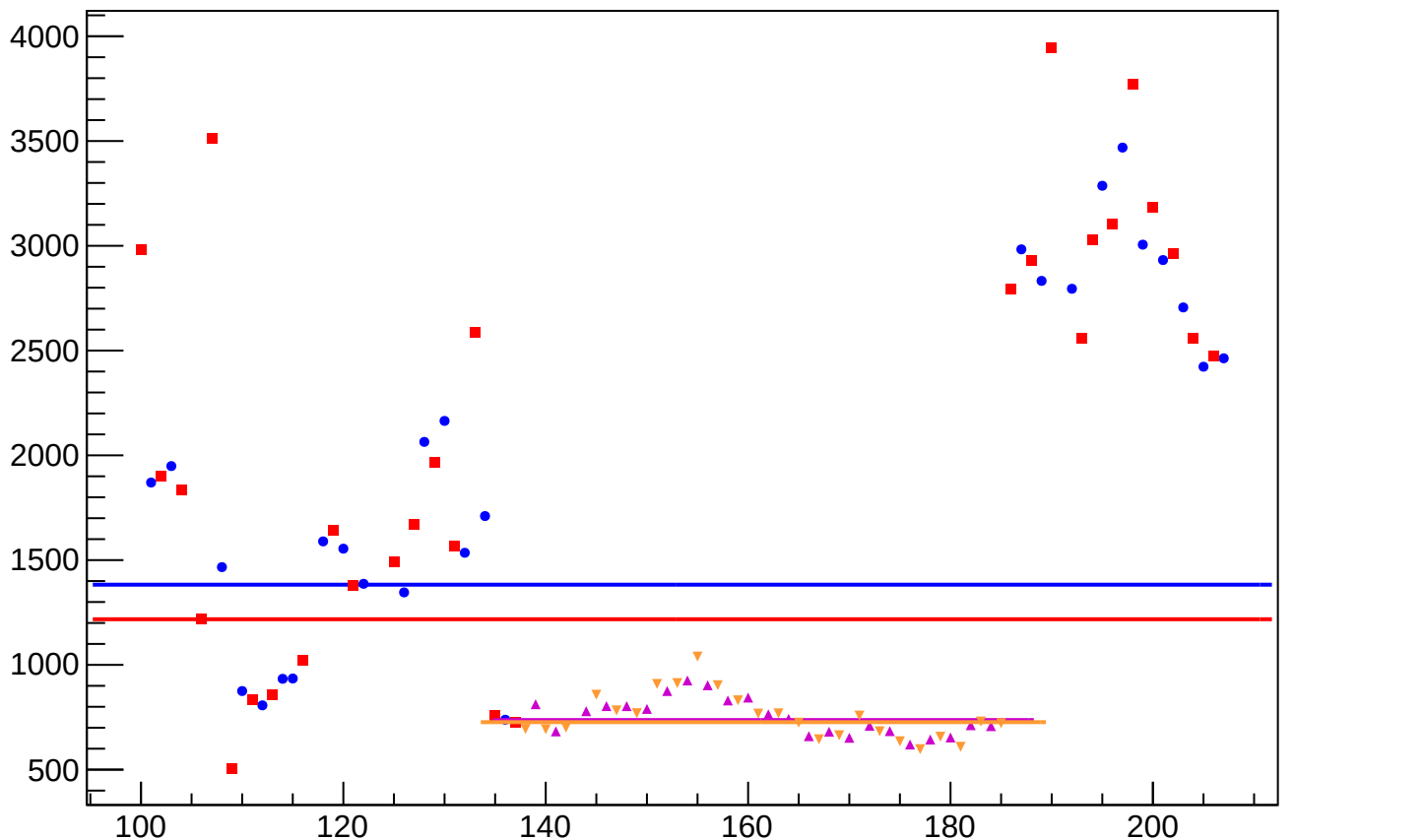
Left In: -231.320+/-173.436  $\chi^2/\text{NDF}$ : 24.1/22

+ sign -730.131+/-157.422  $\chi^2/\text{NDF}$ : 93.0/49

All: -545.524+/-111.135  $\chi^2/\text{NDF}$ : 139.5/101

- sign -362.099+/-156.917  $\chi^2/\text{NDF}$ : 43.7/51

asym\_us\_dd\_atlr\_dd\_avg\_dit\_correction\_rms vs Slug



Right In: 1382.711+/-0.289  $\chi^2/\text{NDF}$ : 6831938.1/25

Left Out: 726.604+/-0.121  $\chi^2/\text{NDF}$ : 684784.1/23

Right Out: 1217.791+/-0.261  $\chi^2/\text{NDF}$ : 9917261.8/28

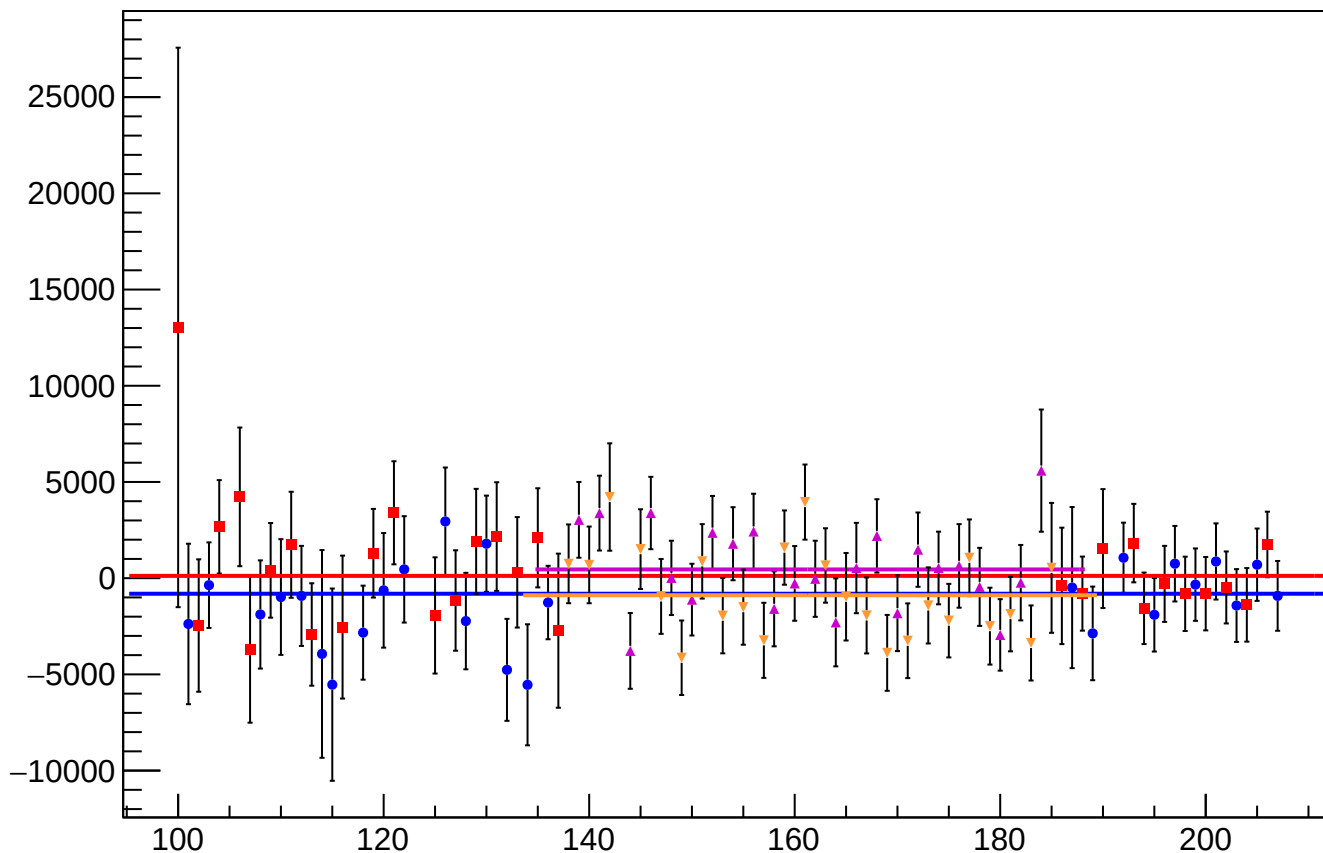
Left In: 736.709+/-0.123  $\chi^2/\text{NDF}$ : 465041.6/22

+ sign 824.070+/-0.111  $\chi^2/\text{NDF}$ : 11910982.8/49

All: 824.027+/-0.079  $\chi^2/\text{NDF}$ : 25084916.4/10

- sign 823.984+/-0.111  $\chi^2/\text{NDF}$ : 13173933.3/51

eigen\_dit\_asym\_us\_dd\_atlr\_dd\_avg\_mean vs Slug



Right In: -808.920+/-468.324  $\chi^2/\text{NDF}$ : 14.5/25

Left Out: -886.352+/-413.227  $\chi^2/\text{NDF}$ : 28.1/23

Right Out: 119.495+/-455.859  $\chi^2/\text{NDF}$ : 15.6/28

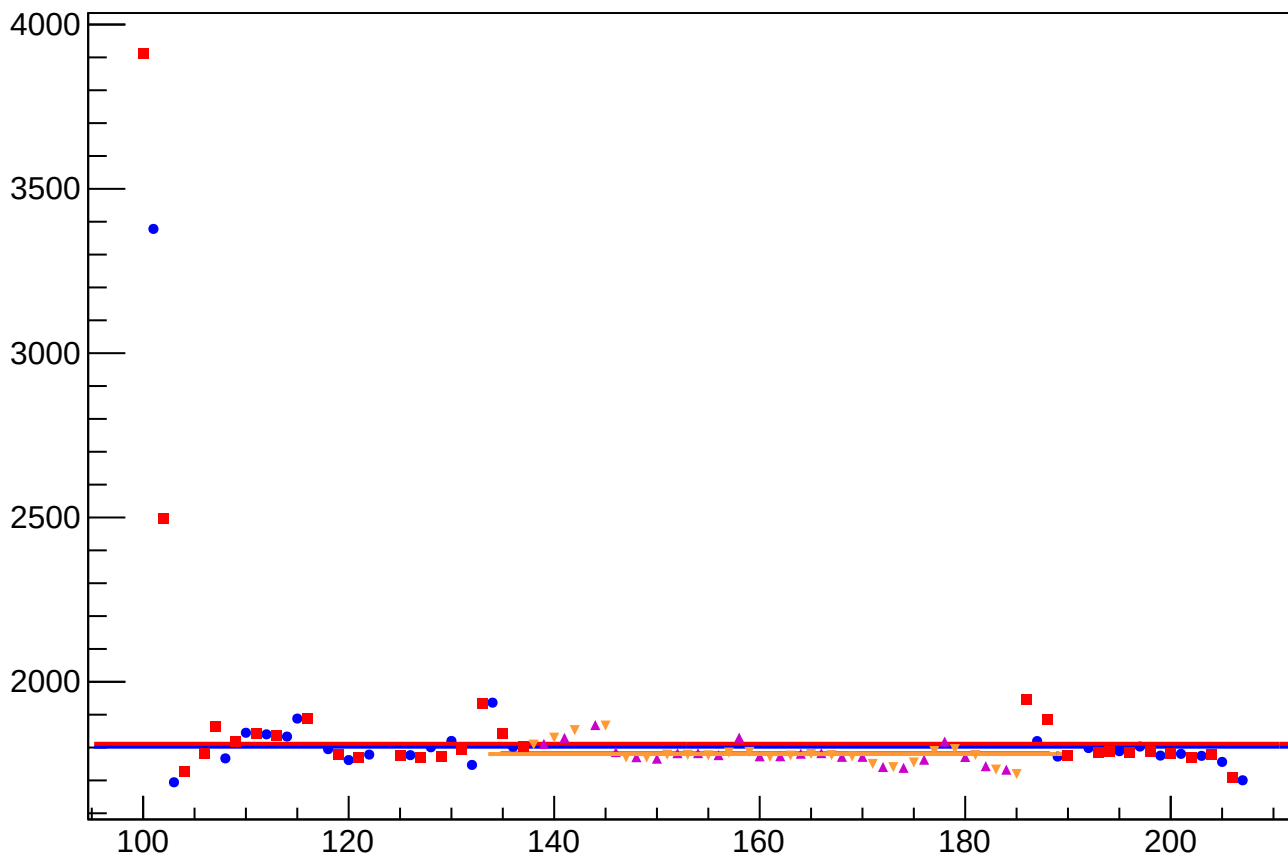
Left In: 453.236+/-416.200  $\chi^2/\text{NDF}$ : 25.8/22

+ sign -852.457+/-309.853  $\chi^2/\text{NDF}$ : 42.6/49

All: -270.819+/-218.214  $\chi^2/\text{NDF}$ : 91.3/101

- sign 301.512+/-307.364  $\chi^2/\text{NDF}$ : 41.7/51

eigen\_dit\_asym\_us\_dd\_atlr\_dd\_avg\_rms vs Slug



Right In: 1802.653+/-0.331  $\chi^2/\text{NDF}$ : 306394.2/25

Left Out: 1780.220+/-0.292  $\chi^2/\text{NDF}$ : 10380.2/23

Right Out: 1811.473+/-0.322  $\chi^2/\text{NDF}$ : 149070.8/28

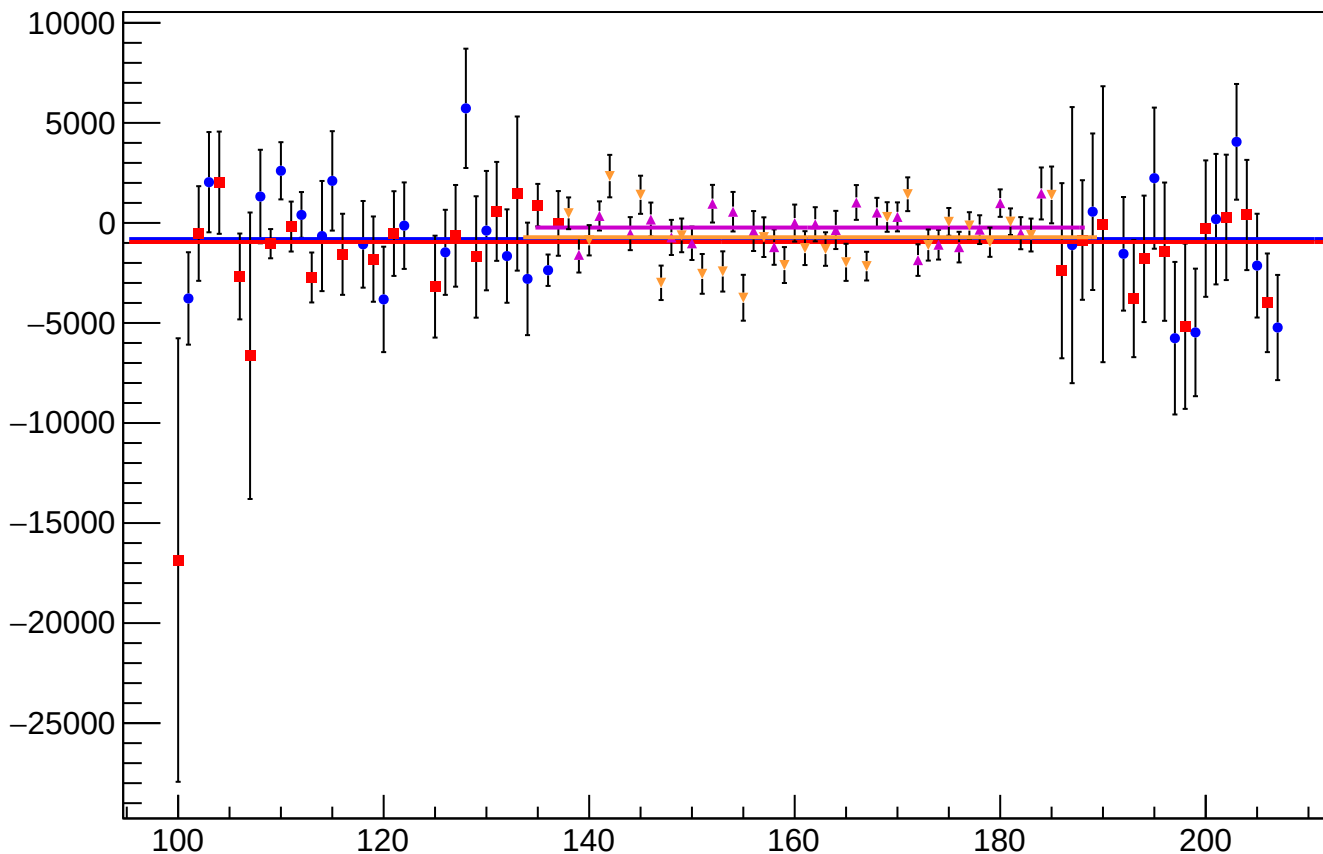
Left In: 1782.298+/-0.294  $\chi^2/\text{NDF}$ : 11232.1/22

+ sign 1790.040+/-0.219  $\chi^2/\text{NDF}$ : 319354.4/49

All: 1792.823+/-0.154  $\chi^2/\text{NDF}$ : 484445.2/101

- sign 1795.561+/-0.217  $\chi^2/\text{NDF}$ : 164770.7/51

asym\_us\_dd\_atlr\_dd\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In: -807.675+/-408.438  $\chi^2/\text{NDF}$ : 33.6/25

Left Out: -716.601+/-170.602  $\chi^2/\text{NDF}$ : 59.4/23

Right Out: -952.217+/-368.415  $\chi^2/\text{NDF}$ : 16.5/28

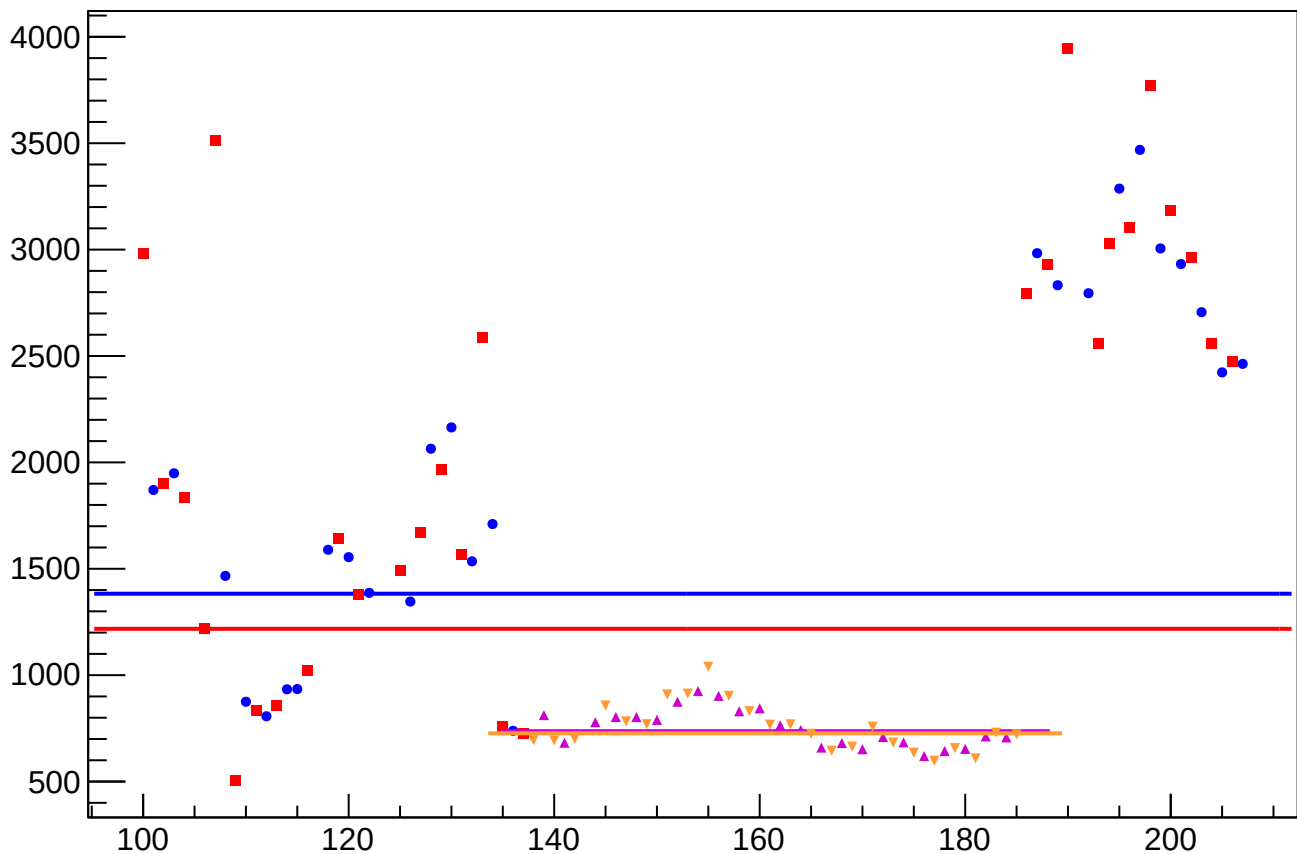
Left In: -231.318+/-173.435  $\chi^2/\text{NDF}$ : 24.1/22

+ sign -730.130+/-157.422  $\chi^2/\text{NDF}$ : 93.0/49

All: -545.523+/-111.135  $\chi^2/\text{NDF}$ : 139.5/101

- sign -362.098+/-156.917  $\chi^2/\text{NDF}$ : 43.7/51

asym\_us\_dd\_atlr\_dd\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 1382.714 +/- 0.289  $\chi^2/\text{NDF}$ : 6831886.3/25

Left Out: 726.605 +/- 0.121  $\chi^2/\text{NDF}$ : 684780.2/23

Right Out: 1217.793 +/- 0.261  $\chi^2/\text{NDF}$ : 9917222.0/28

Left In: 736.709 +/- 0.123  $\chi^2/\text{NDF}$ : 465053.4/22

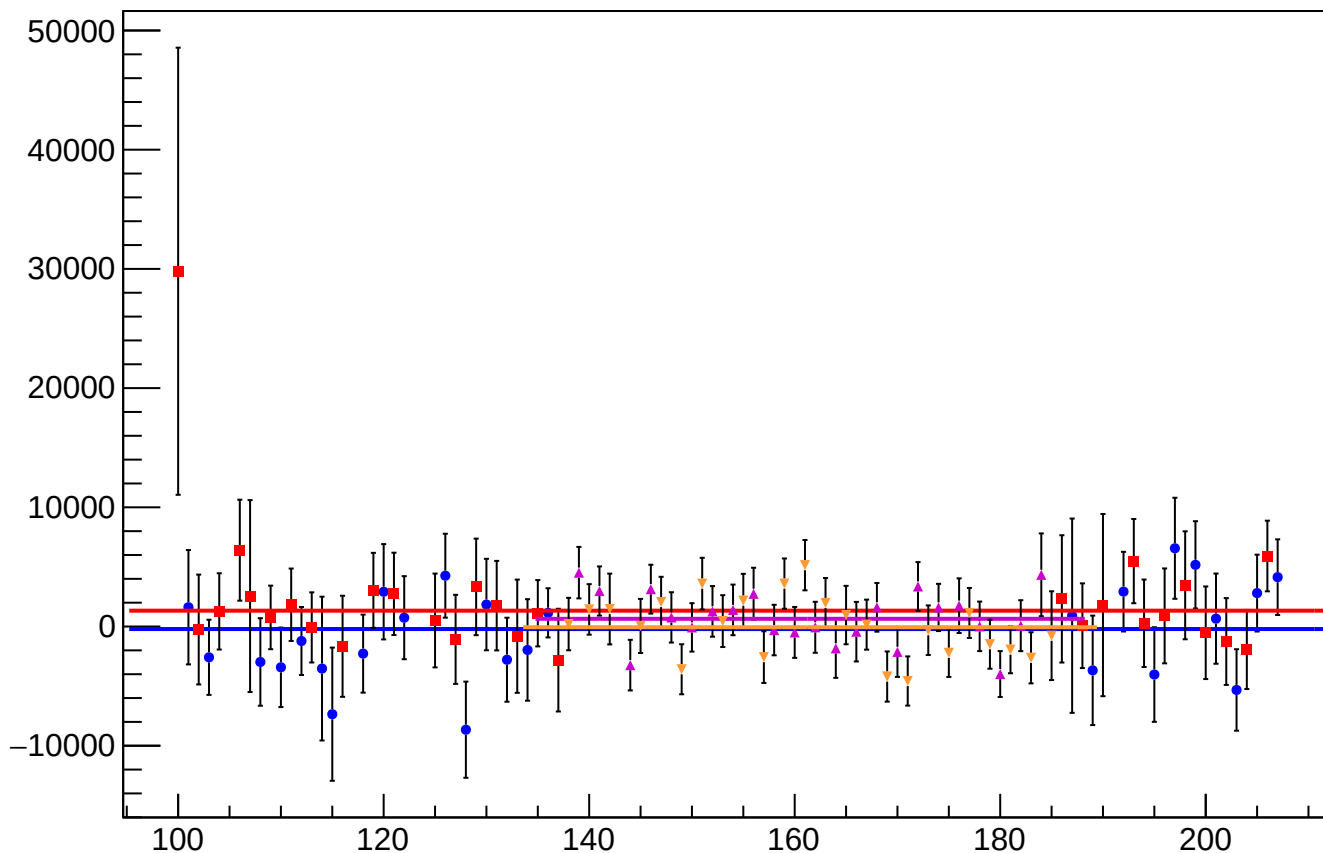
+ sign 824.071 +/- 0.111  $\chi^2/\text{NDF}$ : 11910954.8/49

All: 824.027 +/- 0.079  $\chi^2/\text{NDF}$ : 25084892.3/10

- sign 823.983 +/- 0.111  $\chi^2/\text{NDF}$ : 13173937.2/51



# asym\_us\_dd\_atlr\_dd\_avg\_mean vs Slug



Right In:  $-211.323 \pm 705.935$   $\chi^2/\text{NDF}$ : 24.9/25

Left Out:  $-59.589 \pm 445.601$   $\chi^2/\text{NDF}$ : 33.0/23

Right Out:  $1329.898 \pm 696.058$   $\chi^2/\text{NDF}$ : 12.9/28

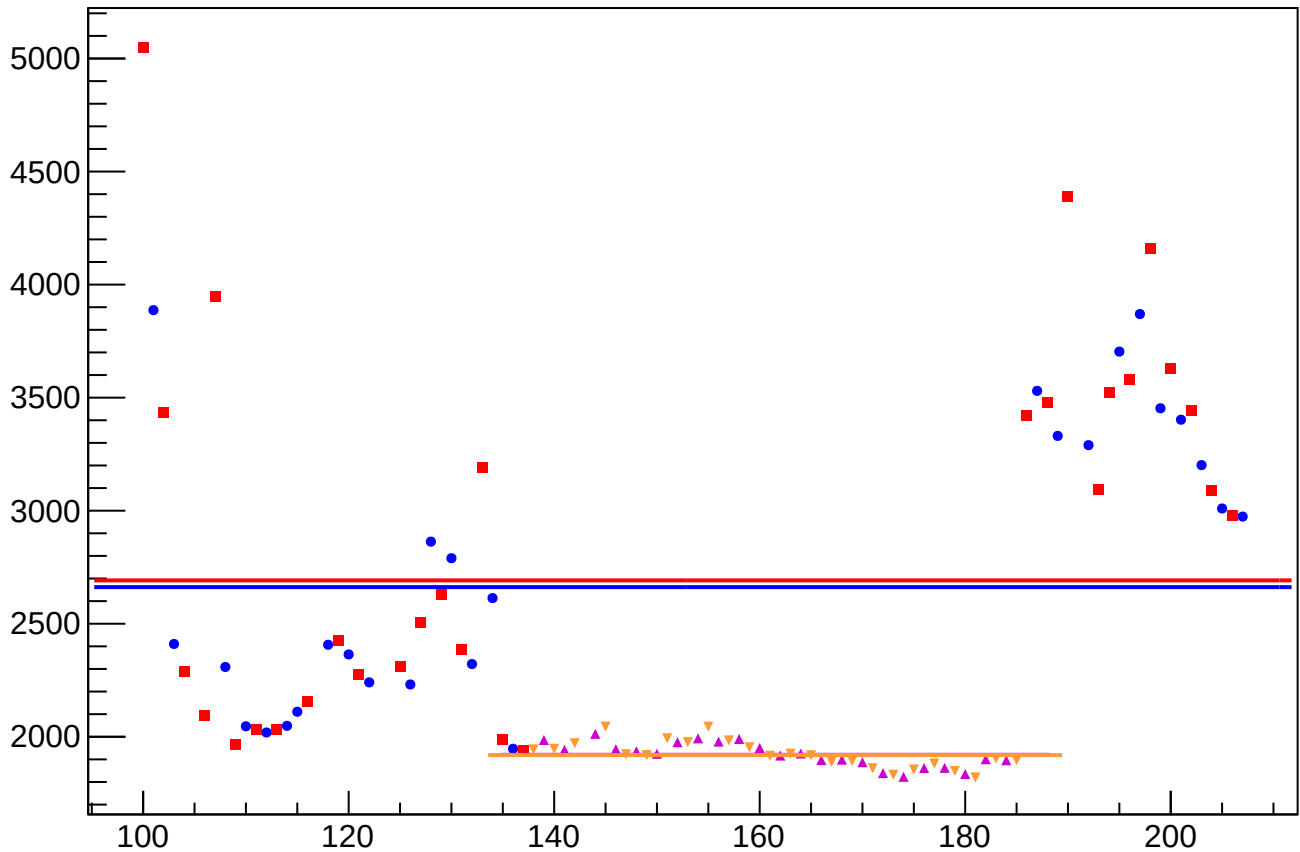
Left In:  $646.910 \pm 448.538$   $\chi^2/\text{NDF}$ : 23.7/22

+ sign  $-102.821 \pm 376.812$   $\chi^2/\text{NDF}$ : 58.0/49

All:  $371.959 \pm 266.525$   $\chi^2/\text{NDF}$ : 98.4/101

- sign  $847.306 \pm 377.036$   $\chi^2/\text{NDF}$ : 37.3/51

# asym\_us\_dd\_atlr\_dd\_avg\_rms vs Slug



Right In: 2661.909+/-0.499  $\chi^2/\text{NDF}$ : 1418915.5/25

Left Out: 1918.975+/-0.315  $\chi^2/\text{NDF}$ : 35574.5/23

Right Out: 2691.714+/-0.492  $\chi^2/\text{NDF}$ : 1793359.6/28

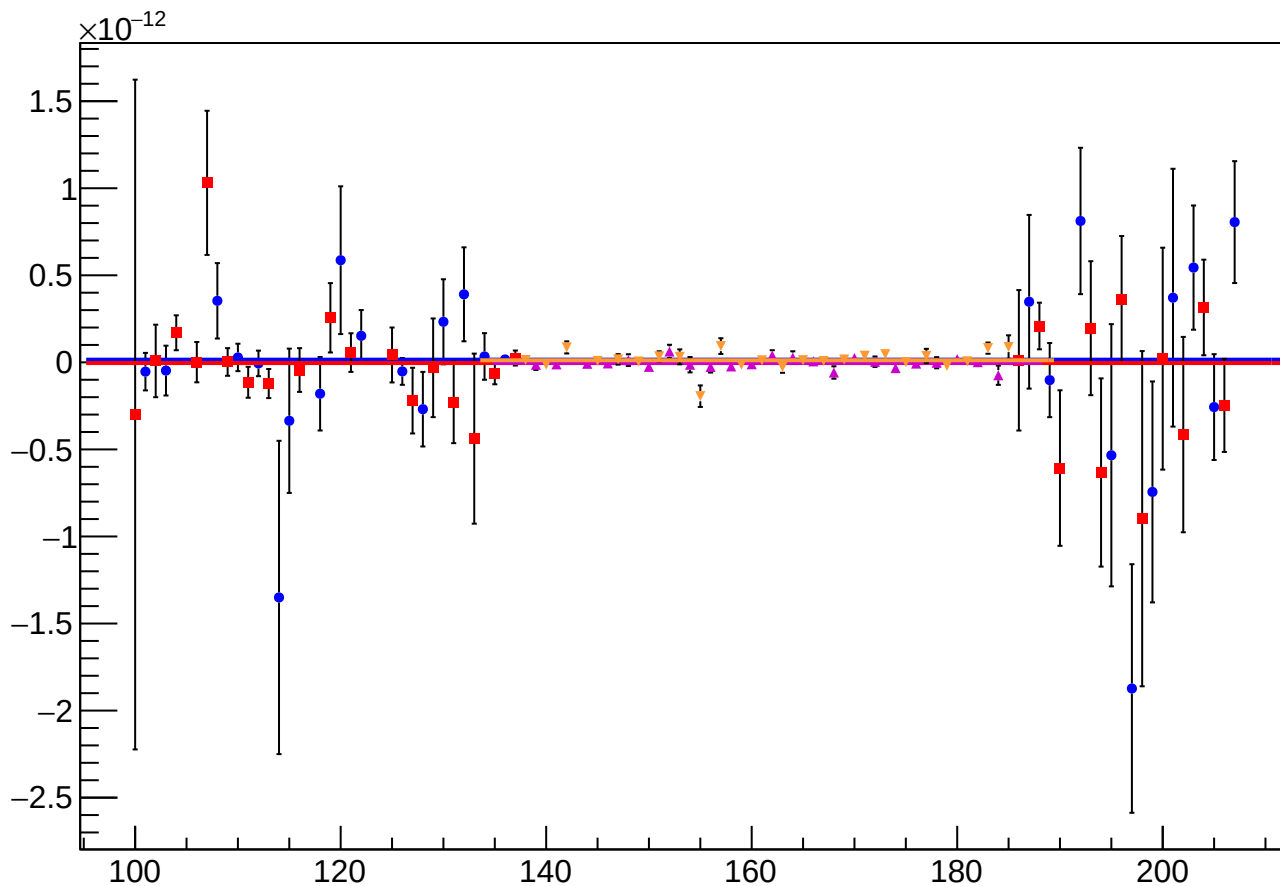
Left In: 1920.214+/-0.317  $\chi^2/\text{NDF}$ : 29912.0/22

+ sign 2130.651+/-0.266  $\chi^2/\text{NDF}$ : 3038499.7/49

All: 2138.612+/-0.188  $\chi^2/\text{NDF}$ : 6599685.8/10

- sign 2146.582+/-0.267  $\chi^2/\text{NDF}$ : 3559399.6/51

asym\_us\_dd\_atlr\_dd\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 36.6/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:38.1/23

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 30.1/28

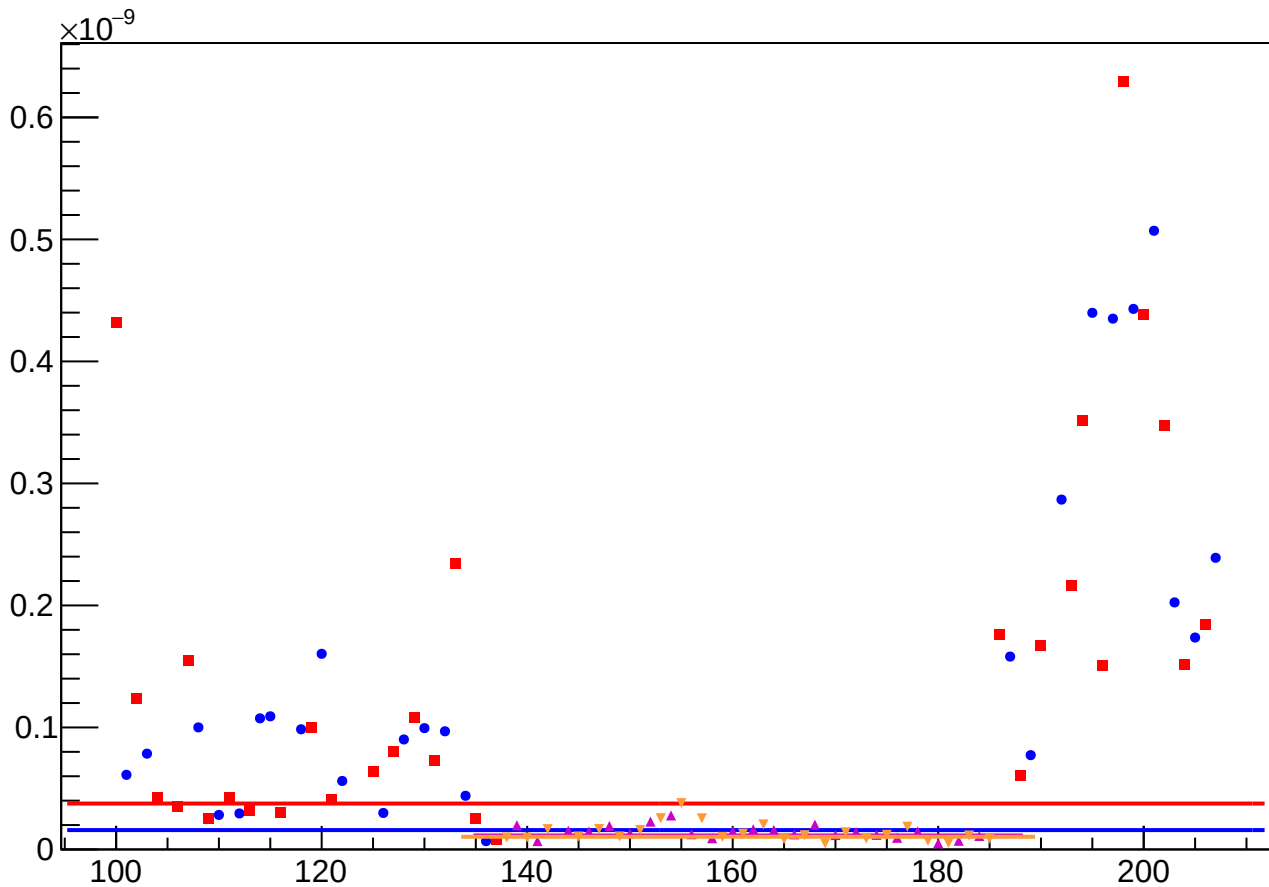
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:19.6/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 74.8/49

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 129.7/101

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 49.7/51

asym\_us\_dd\_atlr\_dd\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 9642034.1/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 2075235.5/23

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 7386683.7/28

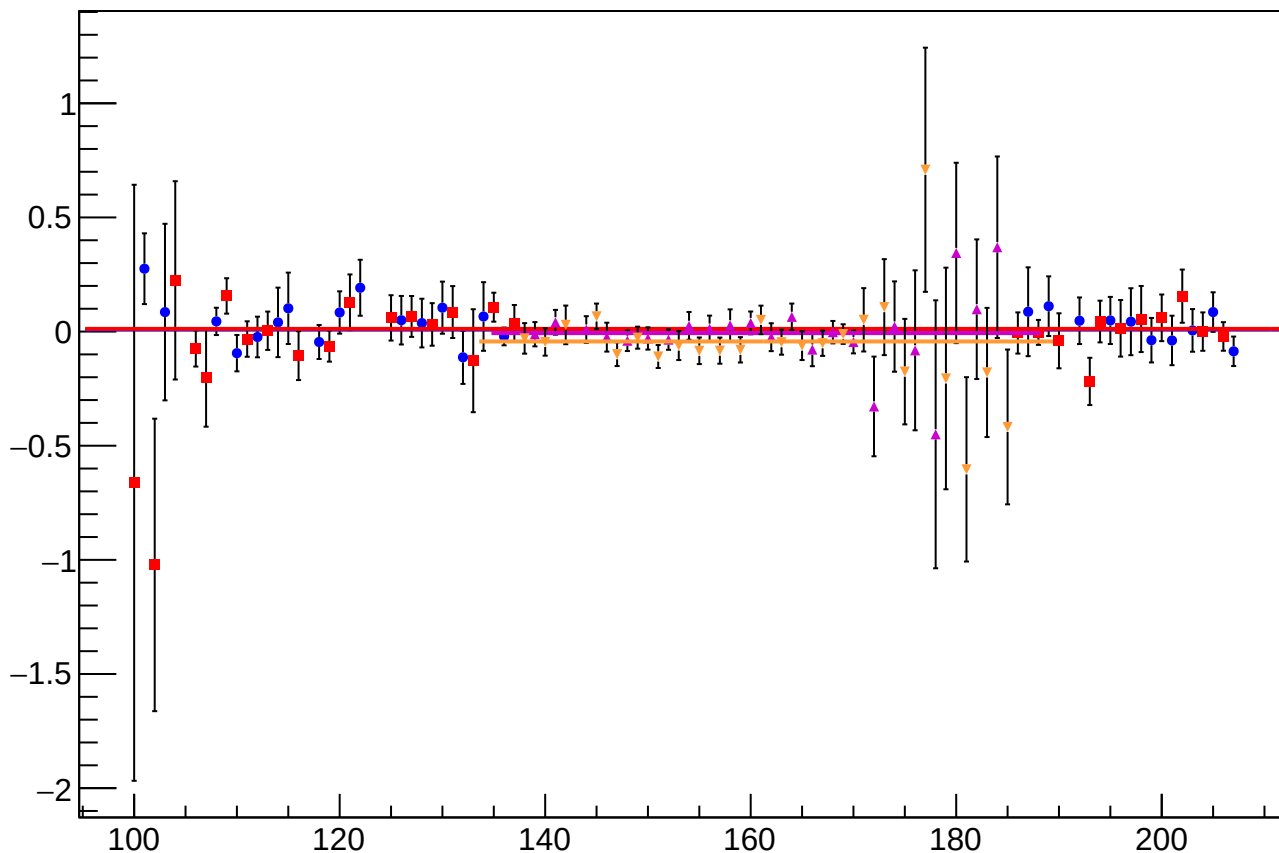
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 1894438.8/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 11993598.9/49

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 23806755.8/101

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 11689447.6/51

asym\_us\_dd\_atlr\_dd\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.009 \pm 0.018$   $\chi^2/\text{NDF}$ : 16.3/25

Left Out:  $-0.043 \pm 0.014$   $\chi^2/\text{NDF}$ : 18.9/23

Right Out:  $0.012 \pm 0.017$   $\chi^2/\text{NDF}$ : 23.7/28

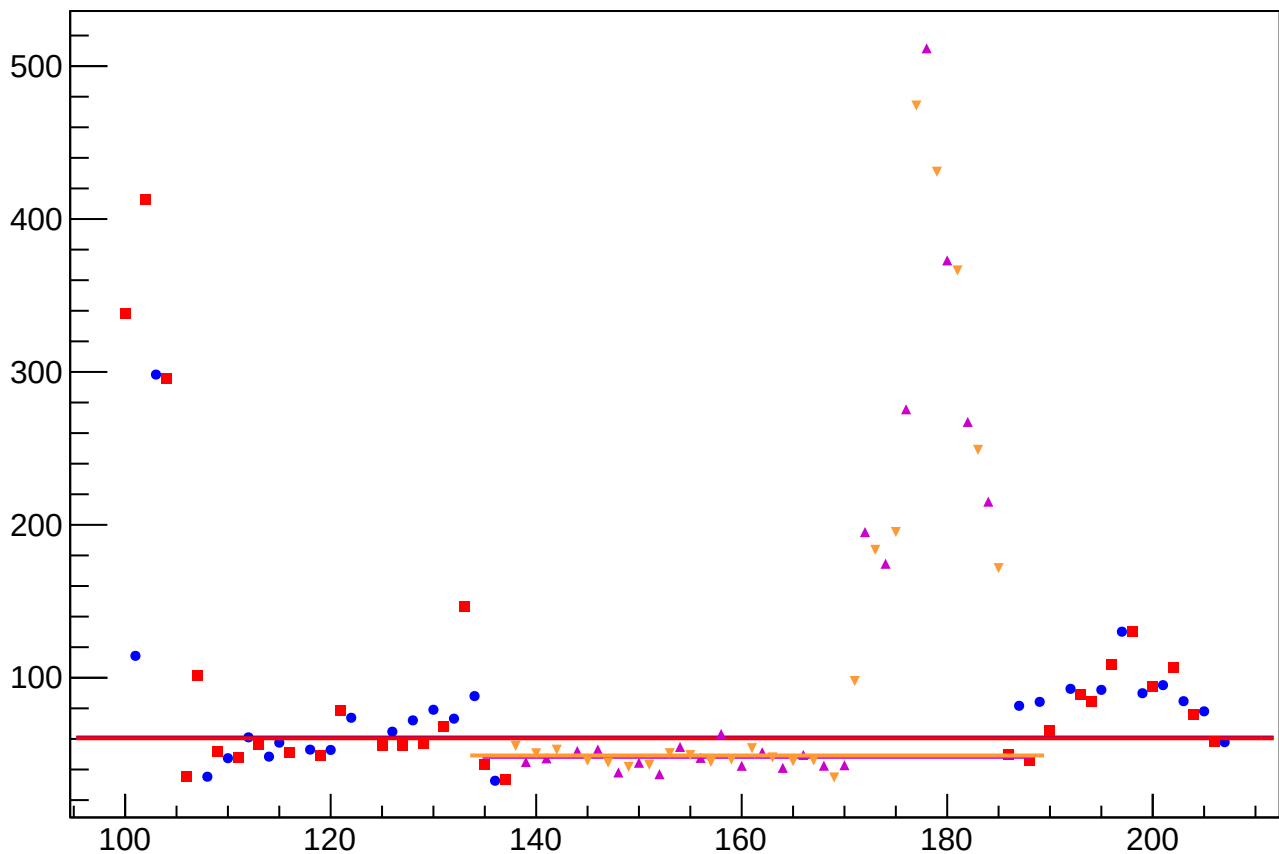
Left In:  $-0.007 \pm 0.014$   $\chi^2/\text{NDF}$ : 11.3/22

+ sign  $-0.024 \pm 0.011$   $\chi^2/\text{NDF}$ : 40.3/49

All:  $-0.011 \pm 0.008$   $\chi^2/\text{NDF}$ : 78.5/101

- sign  $0.000 \pm 0.011$   $\chi^2/\text{NDF}$ : 35.7/51

asym\_us\_dd\_atlr\_dd\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 60.879+/-0.013  $\chi^2/\text{NDF}$ : 4205285.0/25

Left Out: 49.180+/-0.010  $\chi^2/\text{NDF}$ : 7250092.4/23

Right Out: 60.429+/-0.012  $\chi^2/\text{NDF}$ : 4272394.0/28

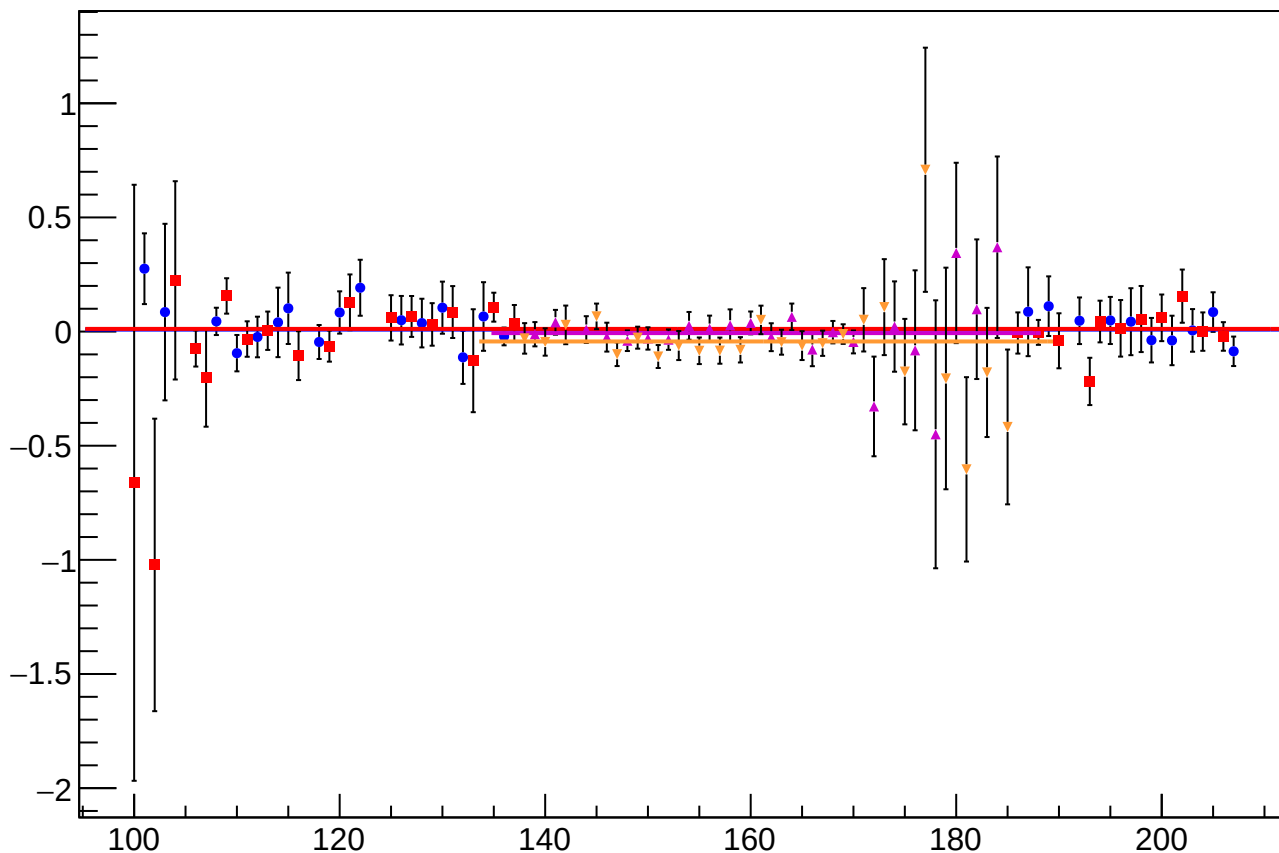
Left In: 48.307+/-0.010  $\chi^2/\text{NDF}$ : 7040663.5/22

+ sign 53.556+/-0.008  $\chi^2/\text{NDF}$ : 11984859.1/49

All: 53.198+/-0.005  $\chi^2/\text{NDF}$ : 23905846.9/101

- sign 52.861+/-0.008  $\chi^2/\text{NDF}$ : 11916888.1/51

asym\_us\_dd\_atlr\_dd\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.009 \pm 0.018$   $\chi^2/\text{NDF}$ : 16.3/25

Left Out:  $-0.043 \pm 0.014$   $\chi^2/\text{NDF}$ : 18.9/23

Right Out:  $0.012 \pm 0.017$   $\chi^2/\text{NDF}$ : 23.7/28

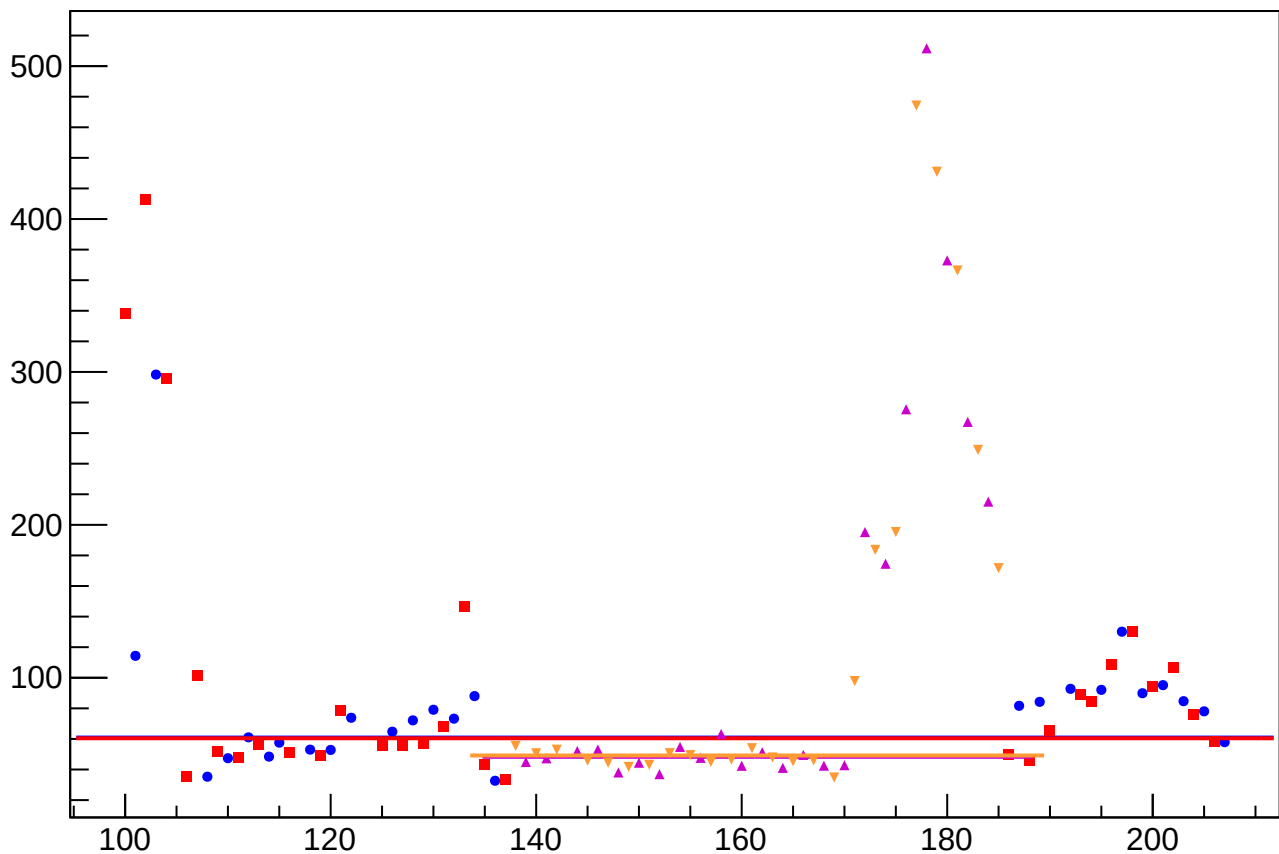
Left In:  $-0.007 \pm 0.014$   $\chi^2/\text{NDF}$ : 11.3/22

+ sign  $-0.024 \pm 0.011$   $\chi^2/\text{NDF}$ : 40.3/49

All:  $-0.011 \pm 0.008$   $\chi^2/\text{NDF}$ : 78.5/101

- sign  $0.000 \pm 0.011$   $\chi^2/\text{NDF}$ : 35.7/51

asym\_us\_dd\_atlr\_dd\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 60.879+/-0.013  $\chi^2/\text{NDF}$ : 4205285.0/25

Left Out: 49.180+/-0.010  $\chi^2/\text{NDF}$ : 7250092.4/23

Right Out: 60.429+/-0.012  $\chi^2/\text{NDF}$ : 4272394.0/28

Left In: 48.307+/-0.010  $\chi^2/\text{NDF}$ : 7040663.5/22

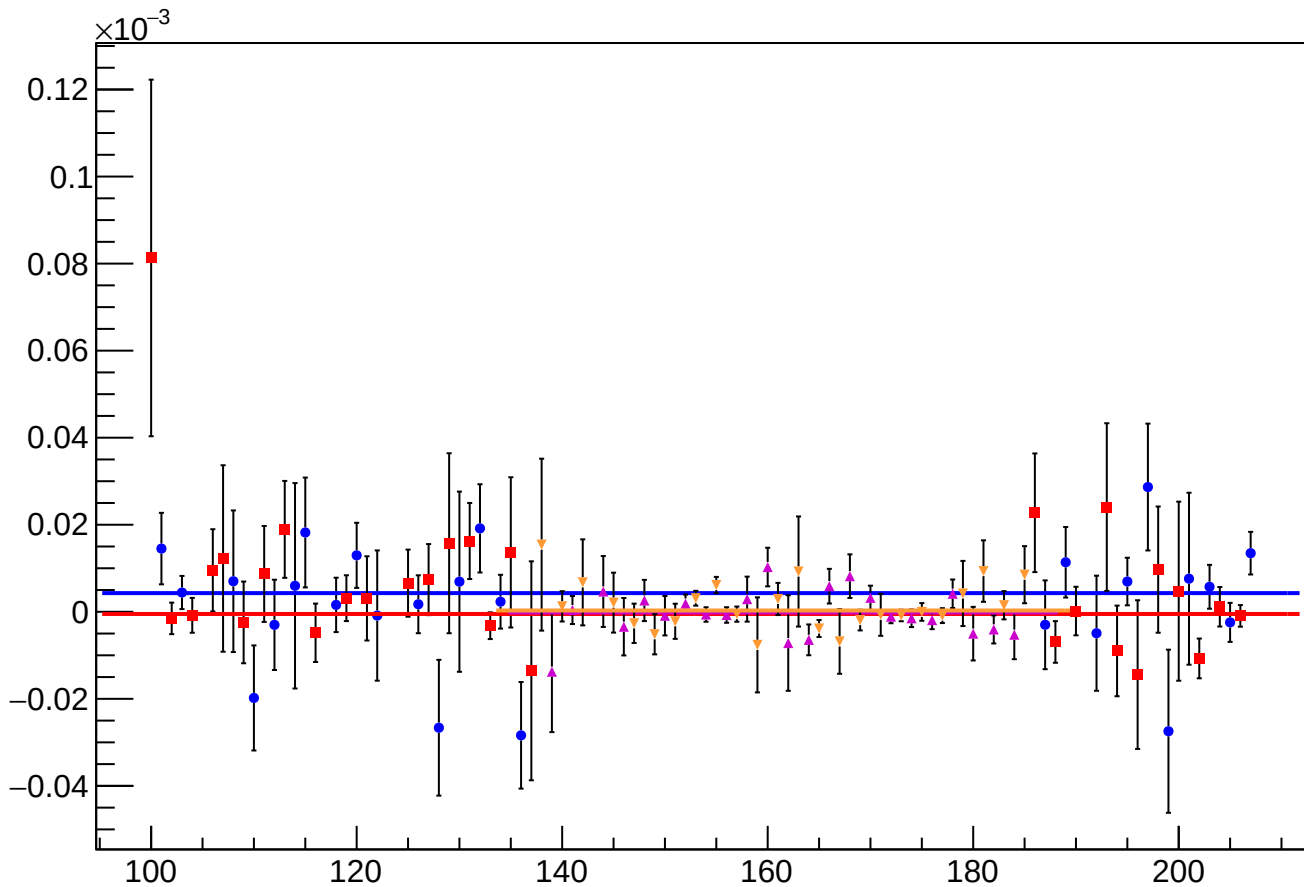
+ sign 53.556+/-0.008  $\chi^2/\text{NDF}$ : 11984859.1/49

All: 53.198+/-0.005  $\chi^2/\text{NDF}$ : 23905846.9/101

- sign 52.861+/-0.008  $\chi^2/\text{NDF}$ : 11916888.1/51



asym\_us\_dd\_atlr\_dd\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 35.9/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:28.8/23

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 31.6/28

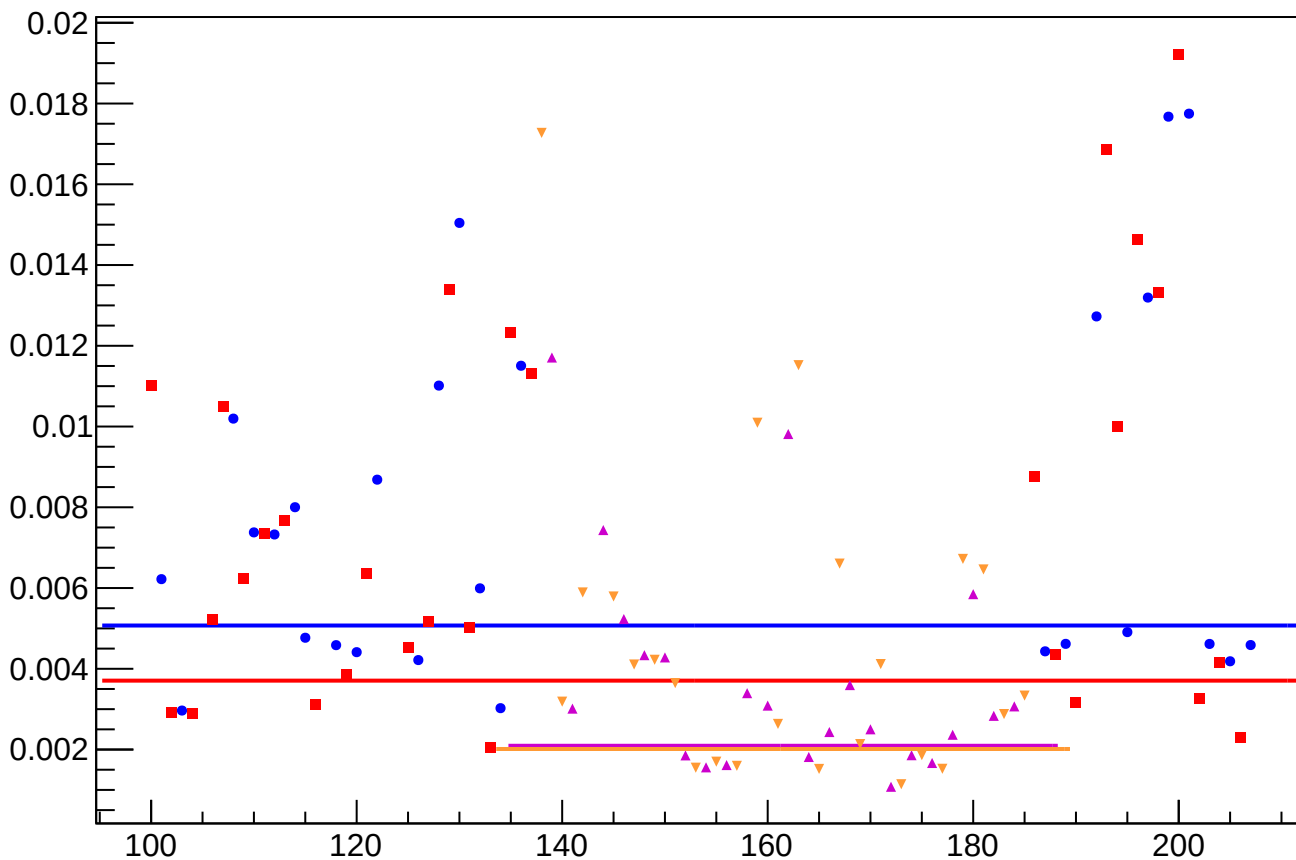
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:25.3/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 70.9/49

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 129.6/101

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 56.9/51

asym\_us\_dd\_atlr\_dd\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.005 $\pm$ 0.000  $\chi^2$ /NDF: 5916621.3/25

Left Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF:10262318.5/23

Right Out: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 8616952.5/28

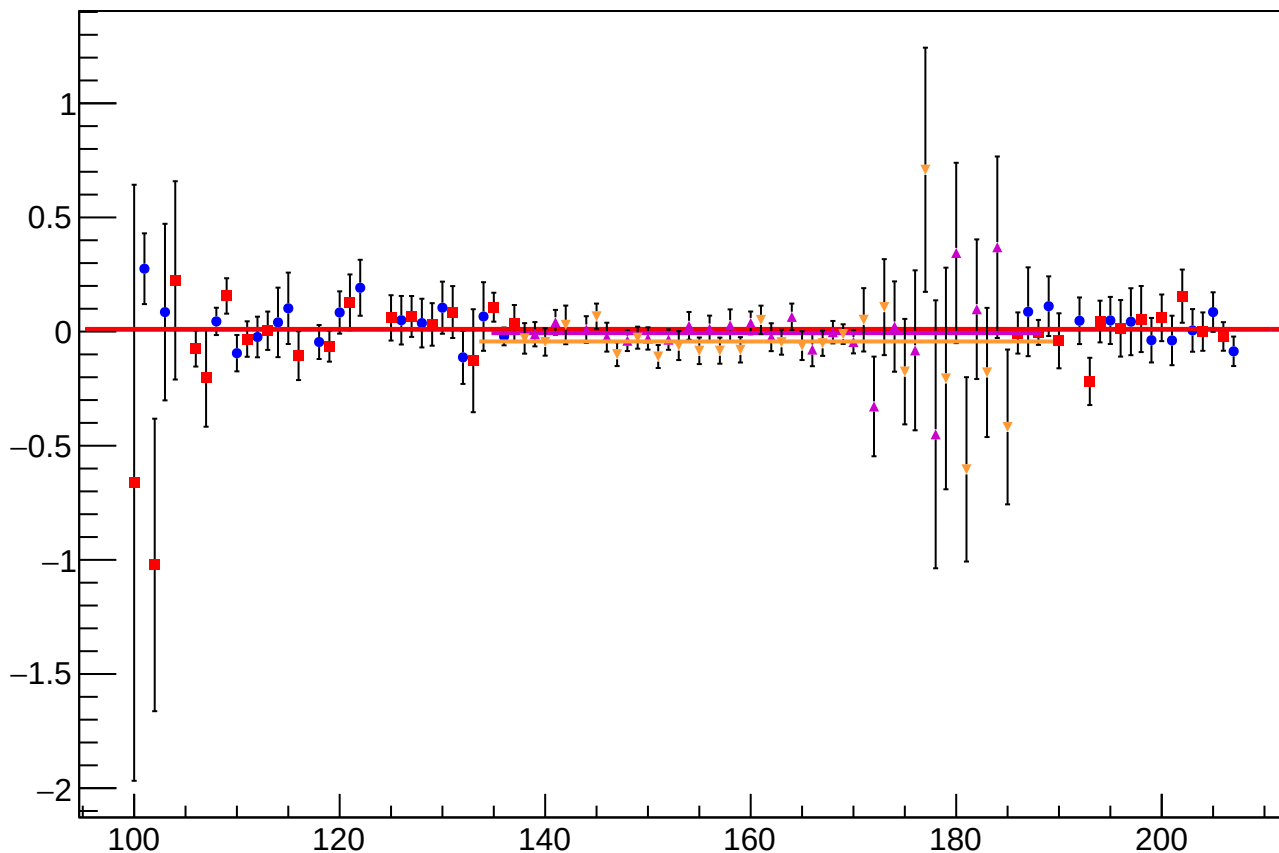
Left In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF:7141979.6/22

+ sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 23335495.9/49

All: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 42228970.7/101

- sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 18880100.1/51

asym\_us\_dd\_atlr\_dd\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.009 \pm 0.018$   $\chi^2/\text{NDF}$ : 16.3/25

Left Out:  $-0.043 \pm 0.014$   $\chi^2/\text{NDF}$ : 18.9/23

Right Out:  $0.012 \pm 0.017$   $\chi^2/\text{NDF}$ : 23.7/28

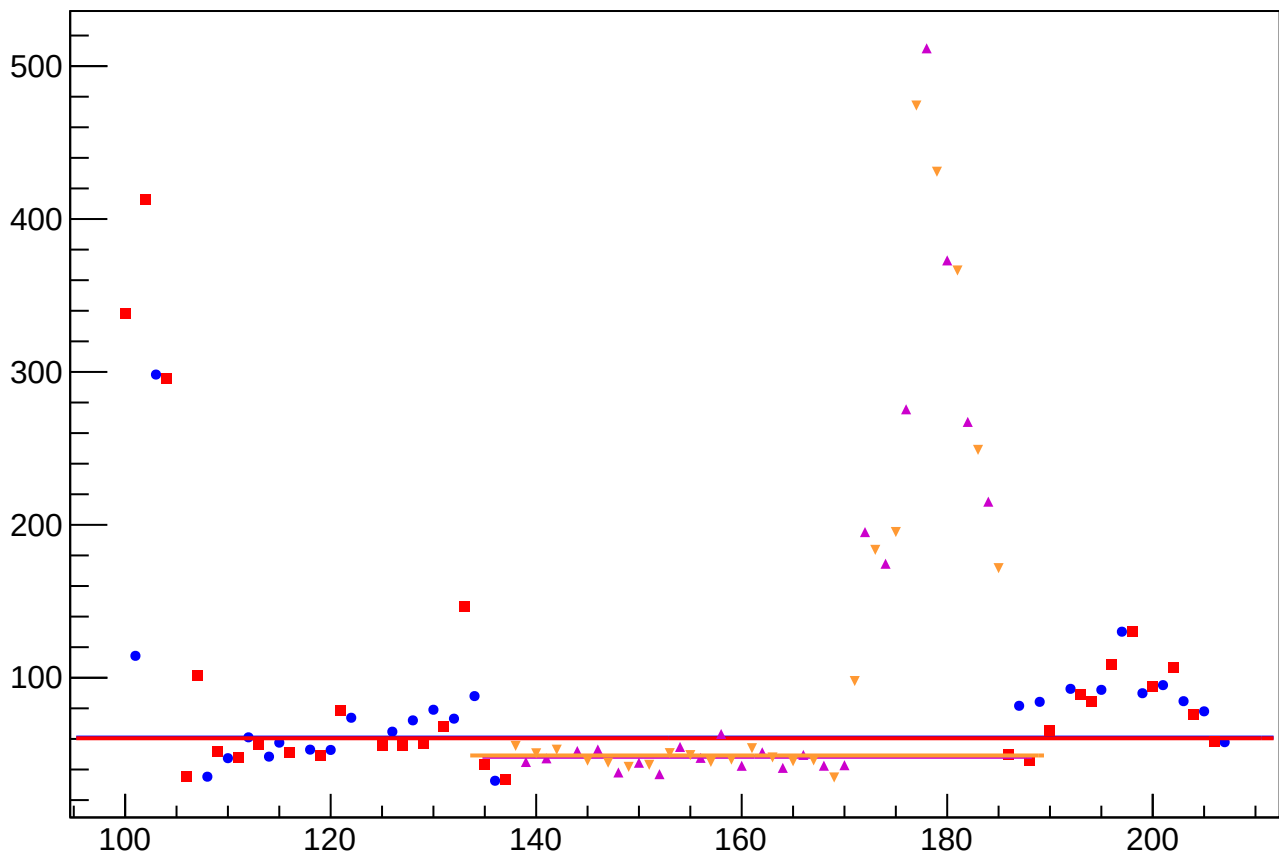
Left In:  $-0.007 \pm 0.014$   $\chi^2/\text{NDF}$ : 11.3/22

+ sign  $-0.024 \pm 0.011$   $\chi^2/\text{NDF}$ : 40.3/49

All:  $-0.011 \pm 0.008$   $\chi^2/\text{NDF}$ : 78.5/101

- sign  $0.000 \pm 0.011$   $\chi^2/\text{NDF}$ : 35.7/51

asym\_us\_dd\_atlr\_dd\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 60.880 $\pm$ 0.013  $\chi^2$ /NDF: 4205123.0/25

Left Out: 49.180 $\pm$ 0.010  $\chi^2$ /NDF: 7250102.5/23

Right Out: 60.429 $\pm$ 0.012  $\chi^2$ /NDF: 4272258.3/28

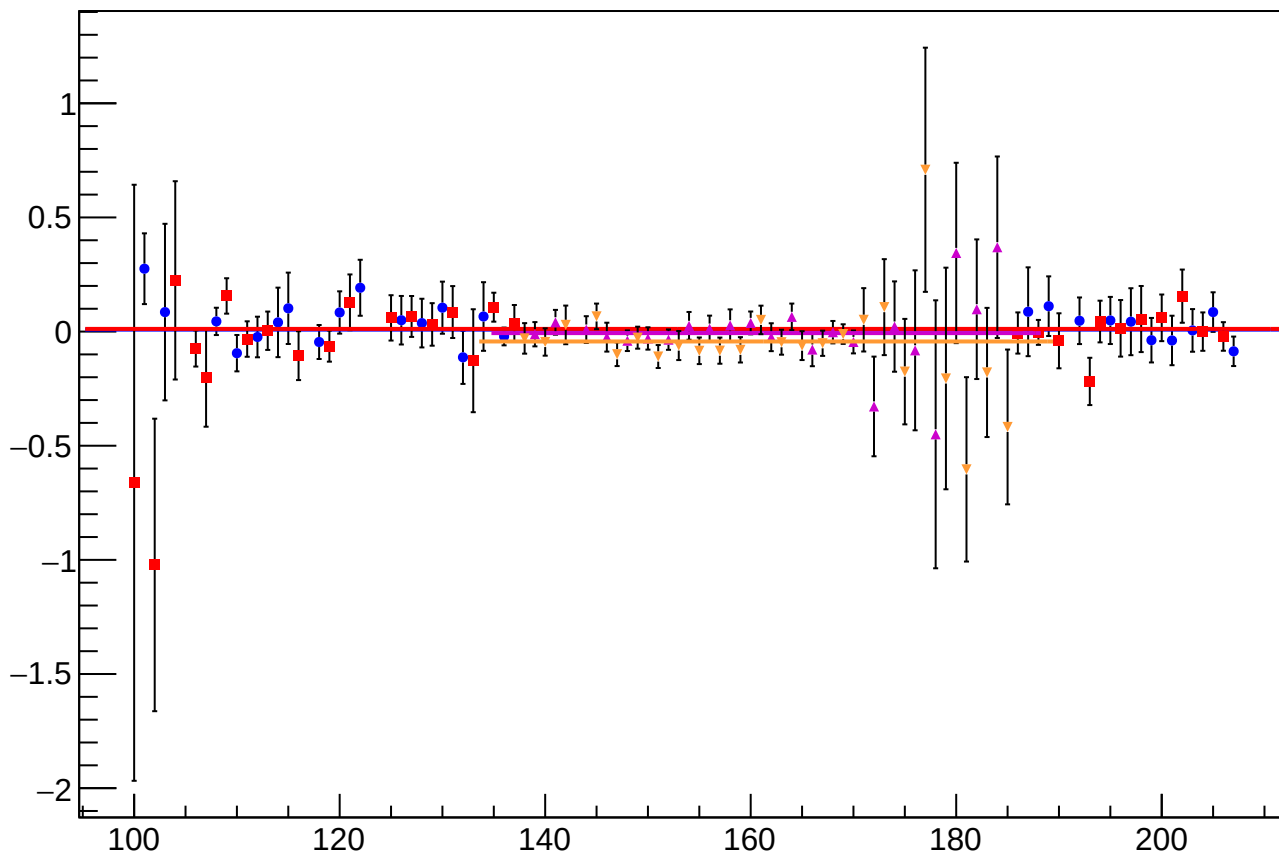
Left In: 48.307 $\pm$ 0.010  $\chi^2$ /NDF: 7040585.4/22

+ sign 53.555 $\pm$ 0.008  $\chi^2$ /NDF: 11984760.7/49

All: 53.198 $\pm$ 0.005  $\chi^2$ /NDF: 23905559.2/101

- sign 52.862 $\pm$ 0.008  $\chi^2$ /NDF: 11916705.3/51

asym\_us\_dd\_atlr\_dd\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.009 $\pm$ 0.018  $\chi^2$ /NDF: 16.3/25

Left Out: -0.043 $\pm$ 0.014  $\chi^2$ /NDF:18.9/23

Right Out: 0.012 $\pm$ 0.017  $\chi^2$ /NDF: 23.7/28

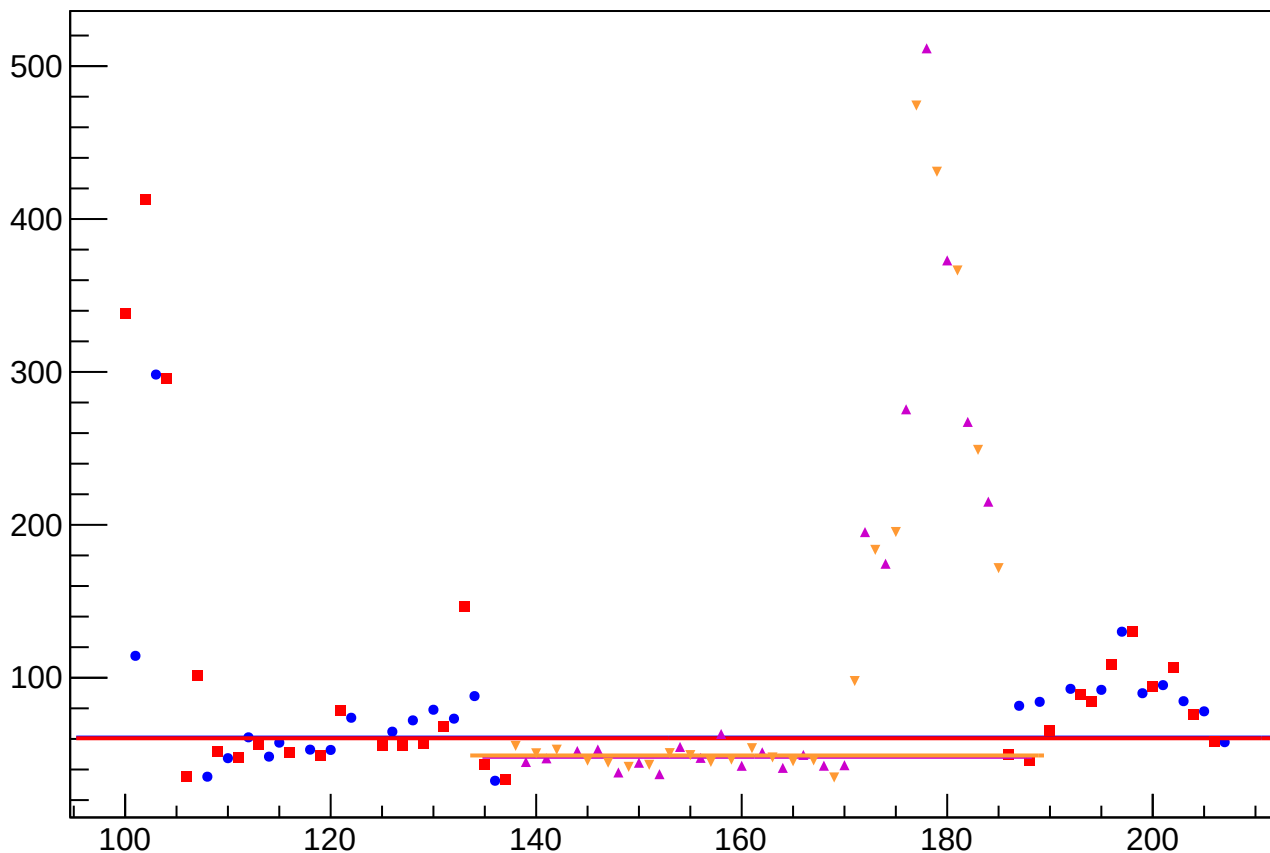
Left In: -0.007 $\pm$ 0.014  $\chi^2$ /NDF:11.3/22

+ sign -0.024 $\pm$ 0.011  $\chi^2$ /NDF: 40.3/49

All: -0.011 $\pm$ 0.008  $\chi^2$ /NDF: 78.5/101

- sign 0.000 $\pm$ 0.011  $\chi^2$ /NDF: 35.7/51

asym\_us\_dd\_atlr\_dd\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 60.880 $\pm$ 0.013  $\chi^2$ /NDF: 4205123.0/25

Left Out: 49.180 $\pm$ 0.010  $\chi^2$ /NDF: 7250102.5/23

Right Out: 60.429 $\pm$ 0.012  $\chi^2$ /NDF: 4272258.3/28

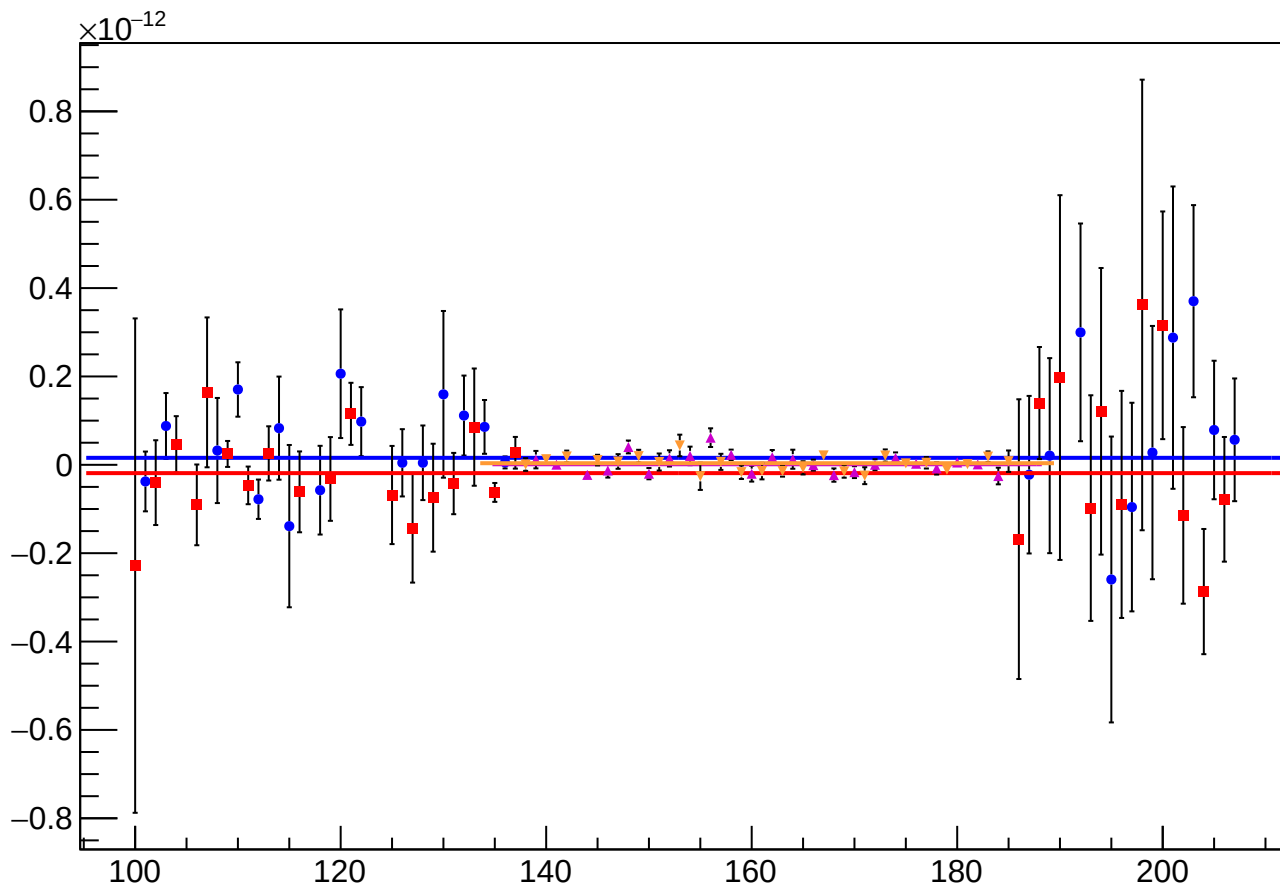
Left In: 48.307 $\pm$ 0.010  $\chi^2$ /NDF: 7040585.4/22

+ sign 53.555 $\pm$ 0.008  $\chi^2$ /NDF: 11984760.7/49

All: 53.198 $\pm$ 0.005  $\chi^2$ /NDF: 23905559.2/101

- sign 52.862 $\pm$ 0.008  $\chi^2$ /NDF: 11916705.3/51

asym\_us\_dd\_atlr\_dd\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 26.2/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:24.6/23

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 26.7/28

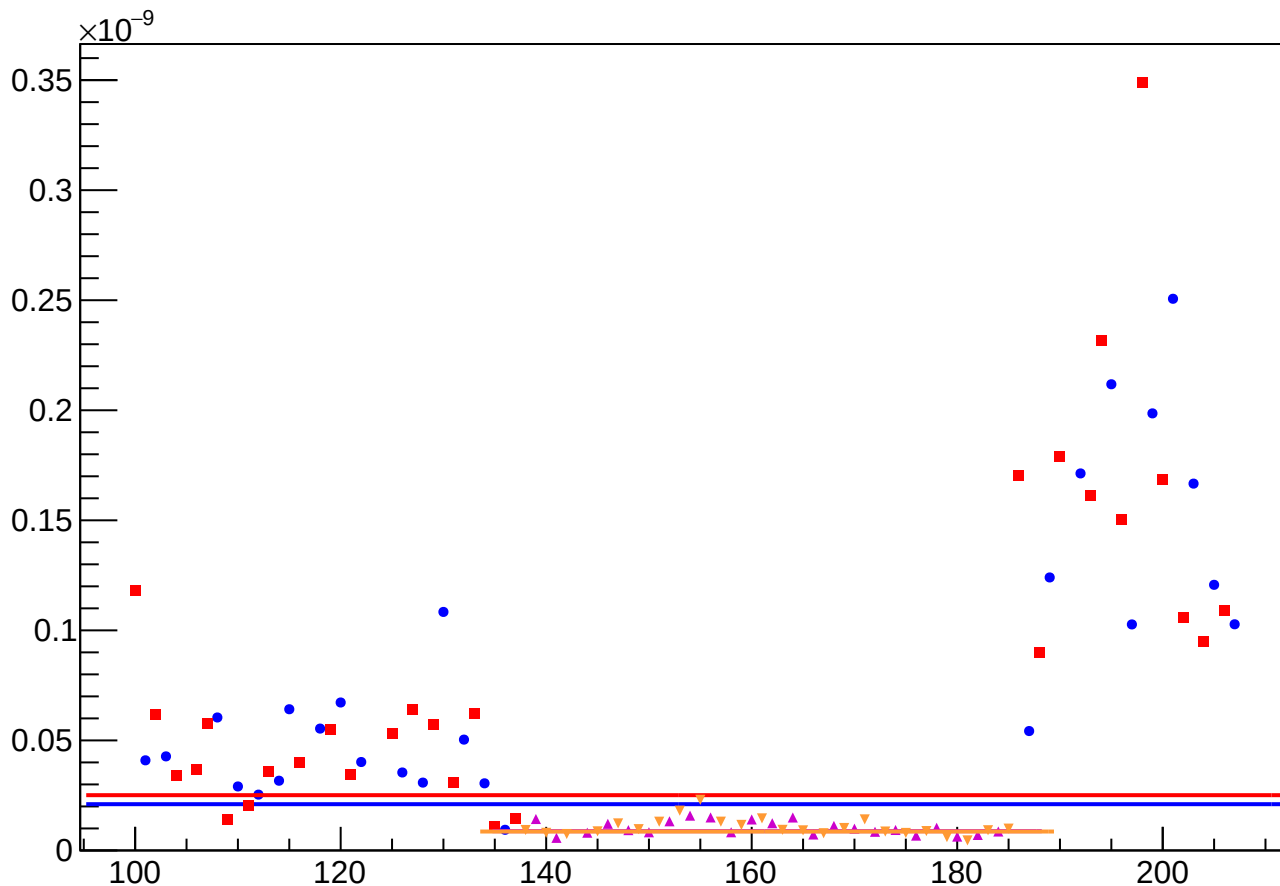
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:40.0/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 51.9/49

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 122.3/101

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 69.3/51

asym\_us\_dd\_atlr\_dd\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 9802438.6/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 2499872.6/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 8842162.8/28

Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 1954811.1/22

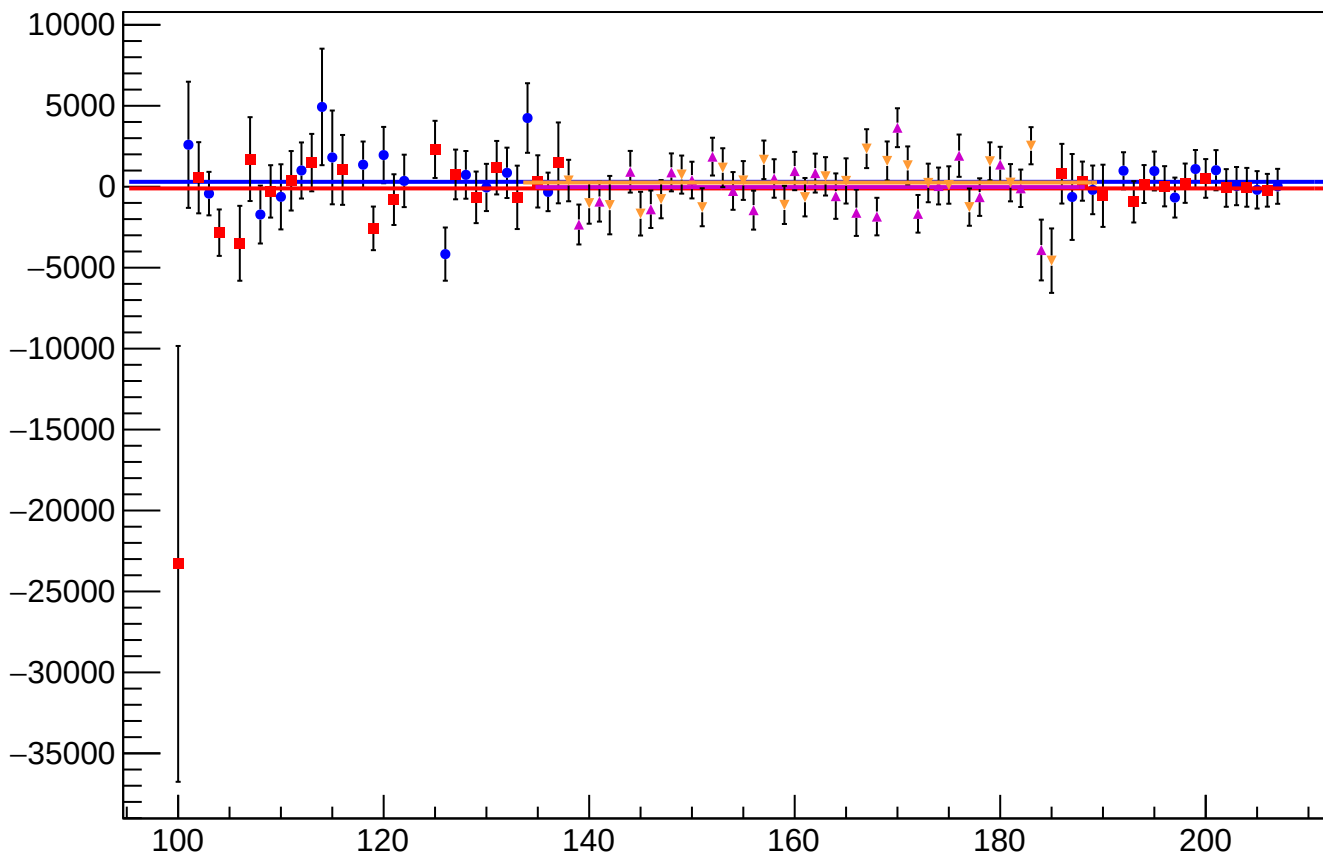
+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 14646630.6/49

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 28834321.4/101

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 14178951.2/51



# reg\_asym\_us\_dd\_atlr\_dd\_dd\_mean vs Slug



Right In:  $302.993 \pm 289.386$   $\chi^2/\text{NDF}$ : 19.6/25

Left Out:  $260.650 \pm 251.401$   $\chi^2/\text{NDF}$ : 28.2/23

Right Out:  $-104.404 \pm 282.347$   $\chi^2/\text{NDF}$ : 18.8/28

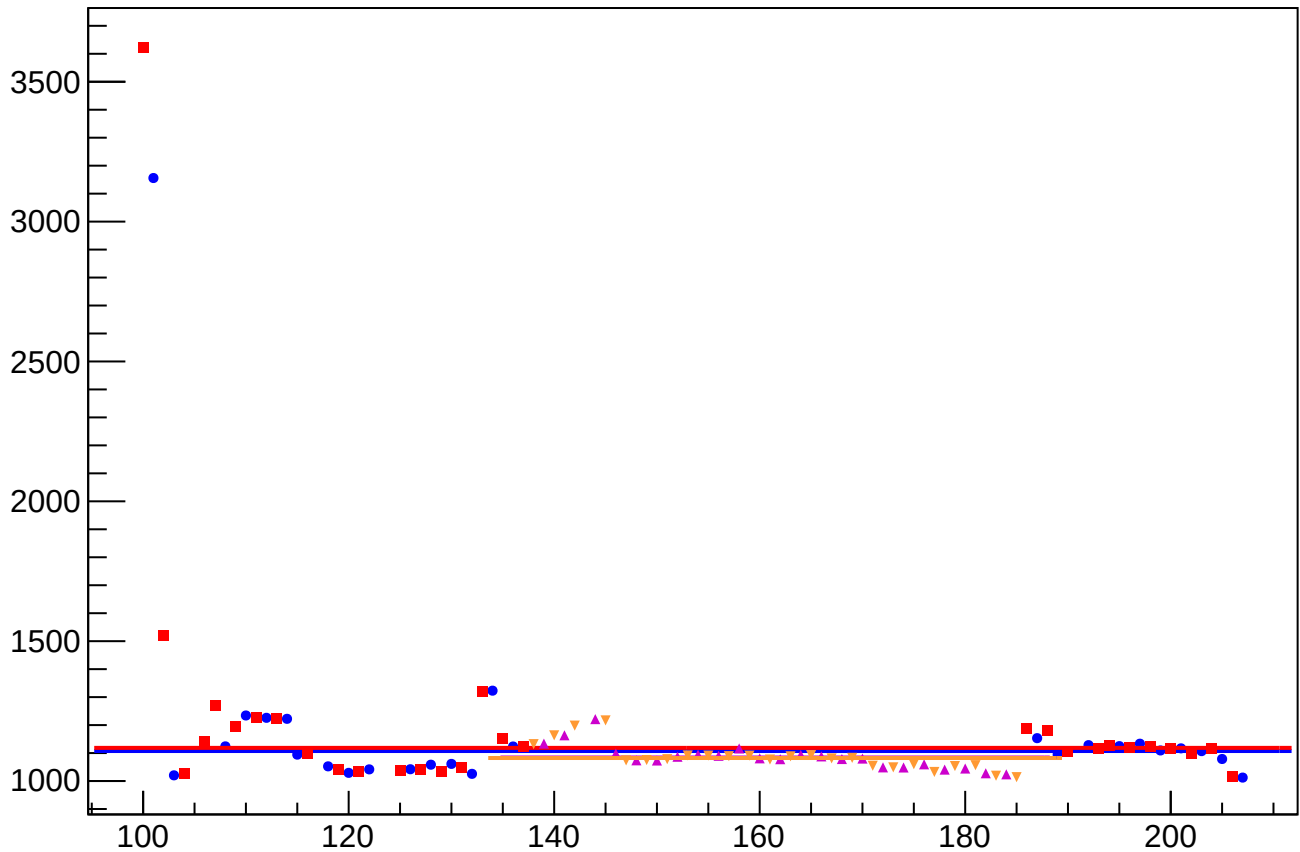
Left In:  $-22.368 \pm 253.332$   $\chi^2/\text{NDF}$ : 35.8/22

+ sign  $278.862 \pm 189.786$   $\chi^2/\text{NDF}$ : 47.8/49

All:  $108.858 \pm 133.763$   $\chi^2/\text{NDF}$ : 104.0/101

- sign  $-58.956 \pm 188.559$   $\chi^2/\text{NDF}$ : 54.6/51

# reg\_asym\_us\_dd\_atlr\_dd\_dd\_rms vs Slug



Right In: 1107.258 $\pm$ 0.205  $\chi^2$ /NDF: 643806.5/25

Left Out: 1082.308 $\pm$ 0.178  $\chi^2$ /NDF: 57873.0/23

Right Out: 1118.545 $\pm$ 0.200  $\chi^2$ /NDF: 251516.3/28

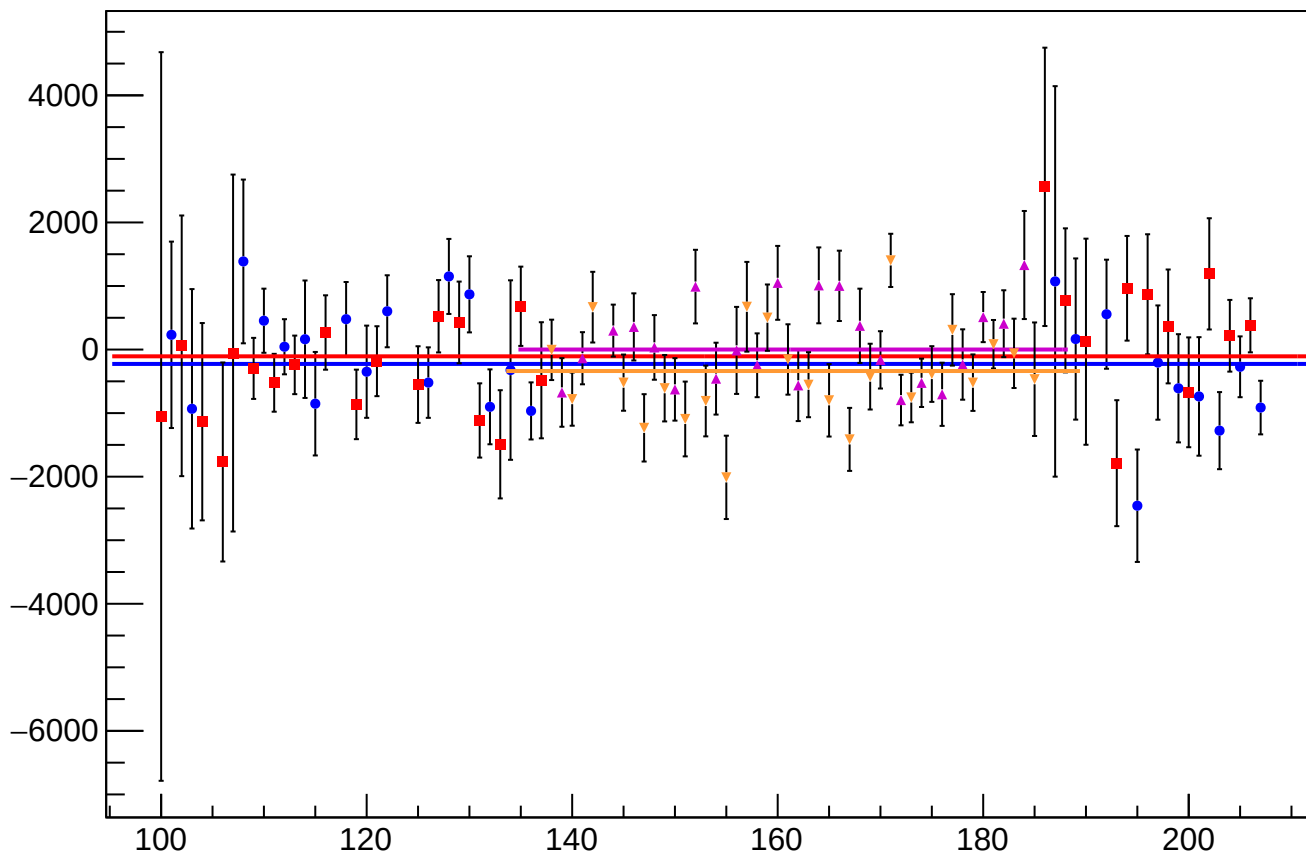
Left In: 1084.166 $\pm$ 0.179  $\chi^2$ /NDF: 53438.8/22

+ sign 1093.039 $\pm$ 0.134  $\chi^2$ /NDF: 710152.3/49

All: 1096.290 $\pm$ 0.095  $\chi^2$ /NDF: 1032700.9/10

- sign 1099.499 $\pm$ 0.133  $\chi^2$ /NDF: 321382.5/51

asym\_us\_dd\_atlr\_dd\_dd\_reg\_correction\_mean vs Slug



Right In: -226.152+/-130.964  $\chi^2/\text{NDF}$ : 35.1/25

Left Out: -337.727+/-102.601  $\chi^2/\text{NDF}$ : 48.8/23

Right Out: -106.432+/-130.709  $\chi^2/\text{NDF}$ : 27.2/28

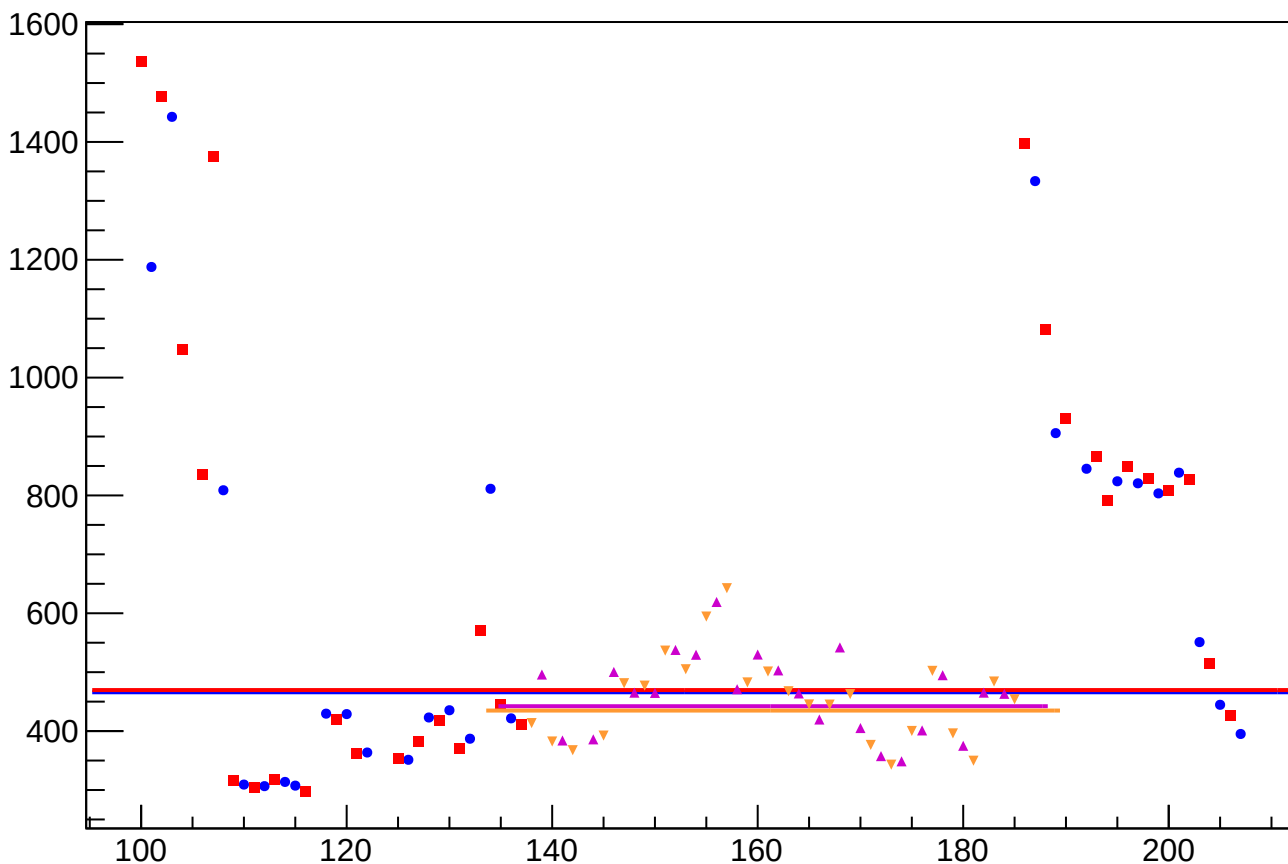
Left In: 0.547+/-104.733  $\chi^2/\text{NDF}$ : 31.9/22

+ sign -295.291+/-80.767  $\chi^2/\text{NDF}$ : 84.4/49

All: -169.796+/-57.449  $\chi^2/\text{NDF}$ : 148.7/101

- sign -41.282+/-81.732  $\chi^2/\text{NDF}$ : 59.4/51

asym\_us\_dd\_atlr\_dd\_dd\_reg\_correction\_rms vs Slug



Right In: 465.900 $\pm$ 0.093  $\chi^2$ /NDF: 4274757.6/25

Left Out: 434.858 $\pm$ 0.073  $\chi^2$ /NDF: 878416.4/23

Right Out: 469.634 $\pm$ 0.092  $\chi^2$ /NDF: 5376286.8/28

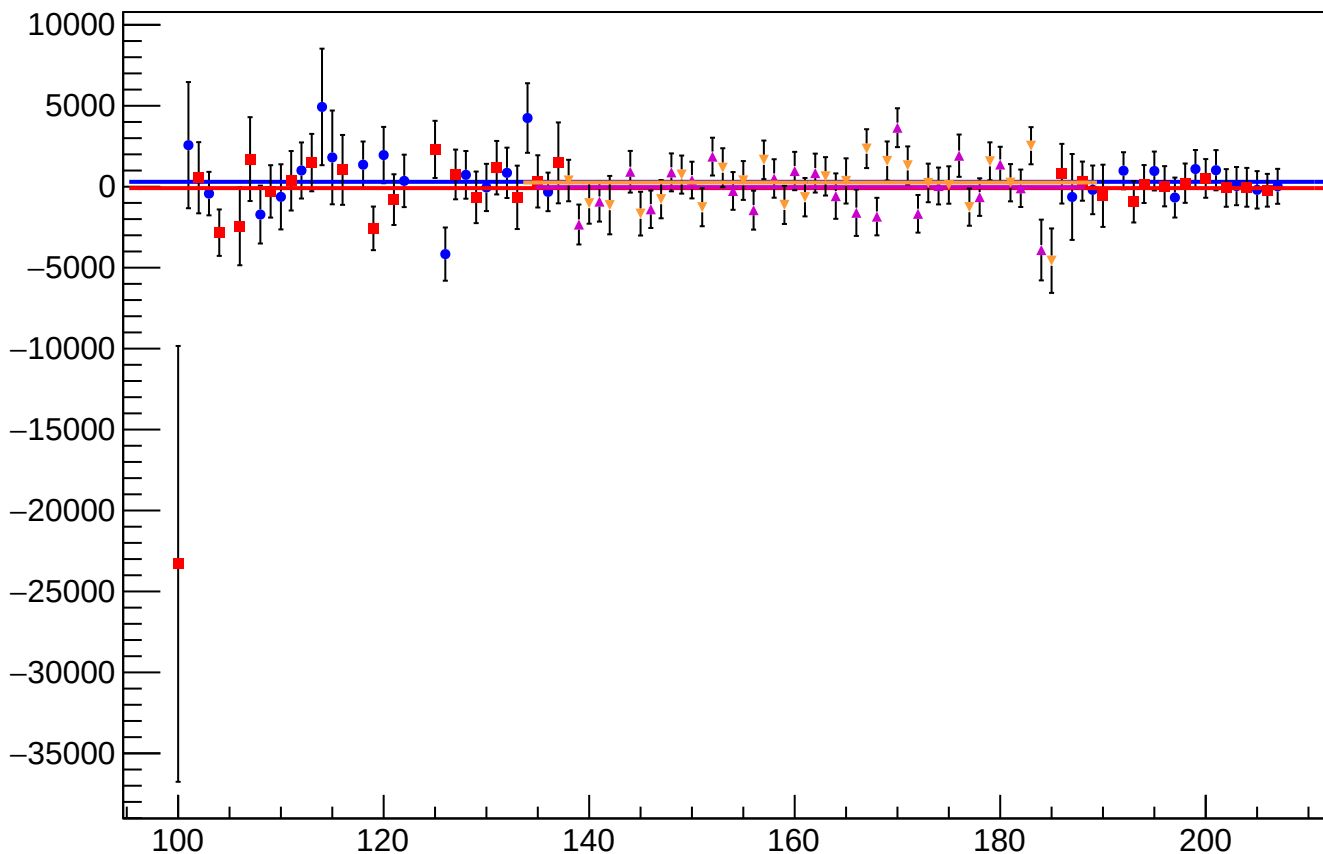
Left In: 442.209 $\pm$ 0.074  $\chi^2$ /NDF: 825972.2/22

+ sign 446.664 $\pm$ 0.057  $\chi^2$ /NDF: 5222799.7/49

All: 449.761 $\pm$ 0.041  $\chi^2$ /NDF: 11484632.2/10

- sign 452.932 $\pm$ 0.058  $\chi^2$ /NDF: 6255882.2/51

# cor\_asym\_us\_dd\_atlr\_dd\_dd\_mean vs Slug



Right In: 302.867 $\pm$ 289.386  $\chi^2$ /NDF: 19.6/25

Left Out: 260.639 $\pm$ 251.401  $\chi^2$ /NDF:28.2/23

Right Out: -86.007 $\pm$ 282.509  $\chi^2$ /NDF: 17.6/28

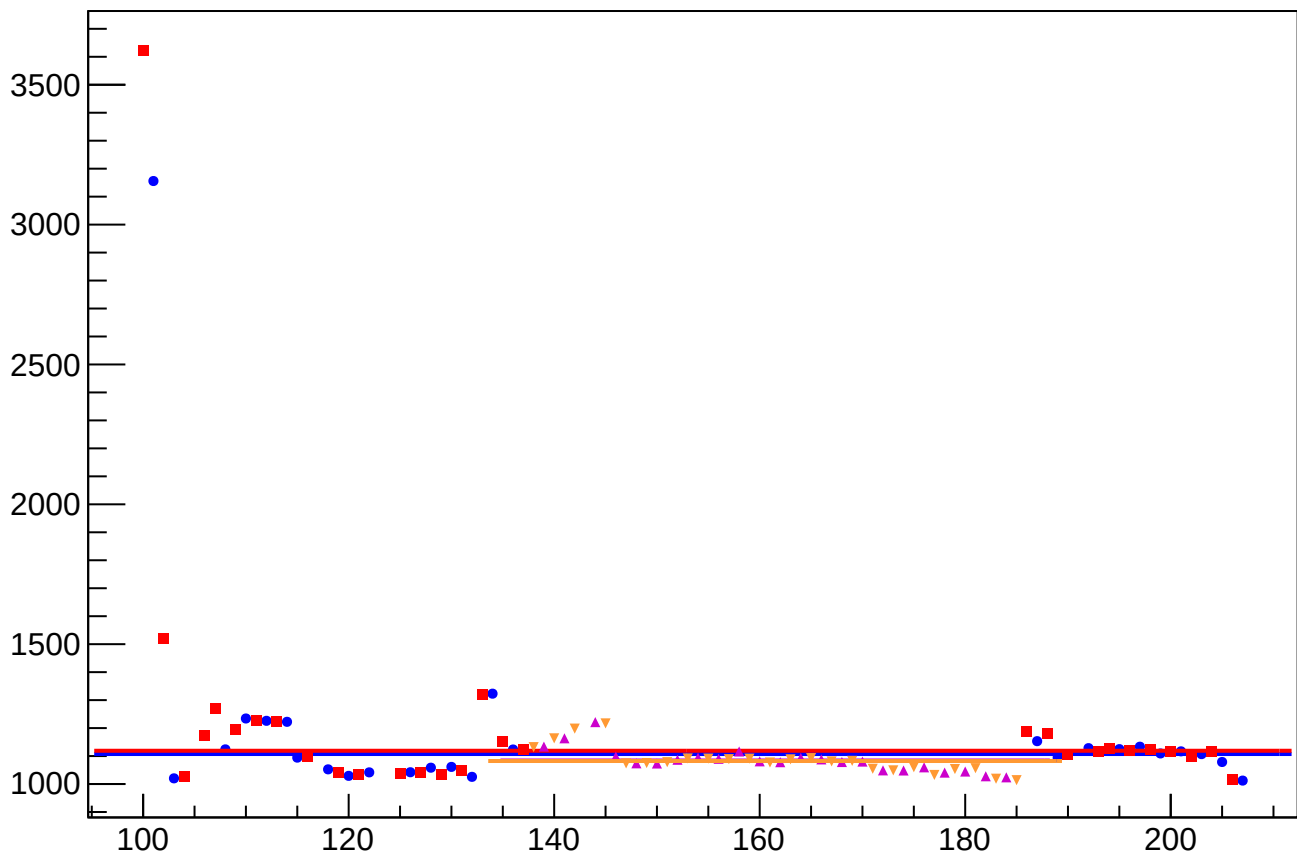
Left In: -22.362 $\pm$ 253.332  $\chi^2$ /NDF:35.8/22

+ sign 278.802 $\pm$ 189.786  $\chi^2$ /NDF: 47.8/49

All: 113.010 $\pm$ 133.780  $\chi^2$ /NDF: 102.7/101

- sign -50.730 $\pm$ 188.607  $\chi^2$ /NDF: 53.4/51

# cor\_asym\_us\_dd\_atlr\_dd\_dd\_rms vs Slug



Right In: 1107.258+/-0.205  $\chi^2/\text{NDF}$ : 643807.5/25

Left Out: 1082.308+/-0.178  $\chi^2/\text{NDF}$ : 57873.0/23

Right Out: 1118.951+/-0.200  $\chi^2/\text{NDF}$ : 252309.9/28

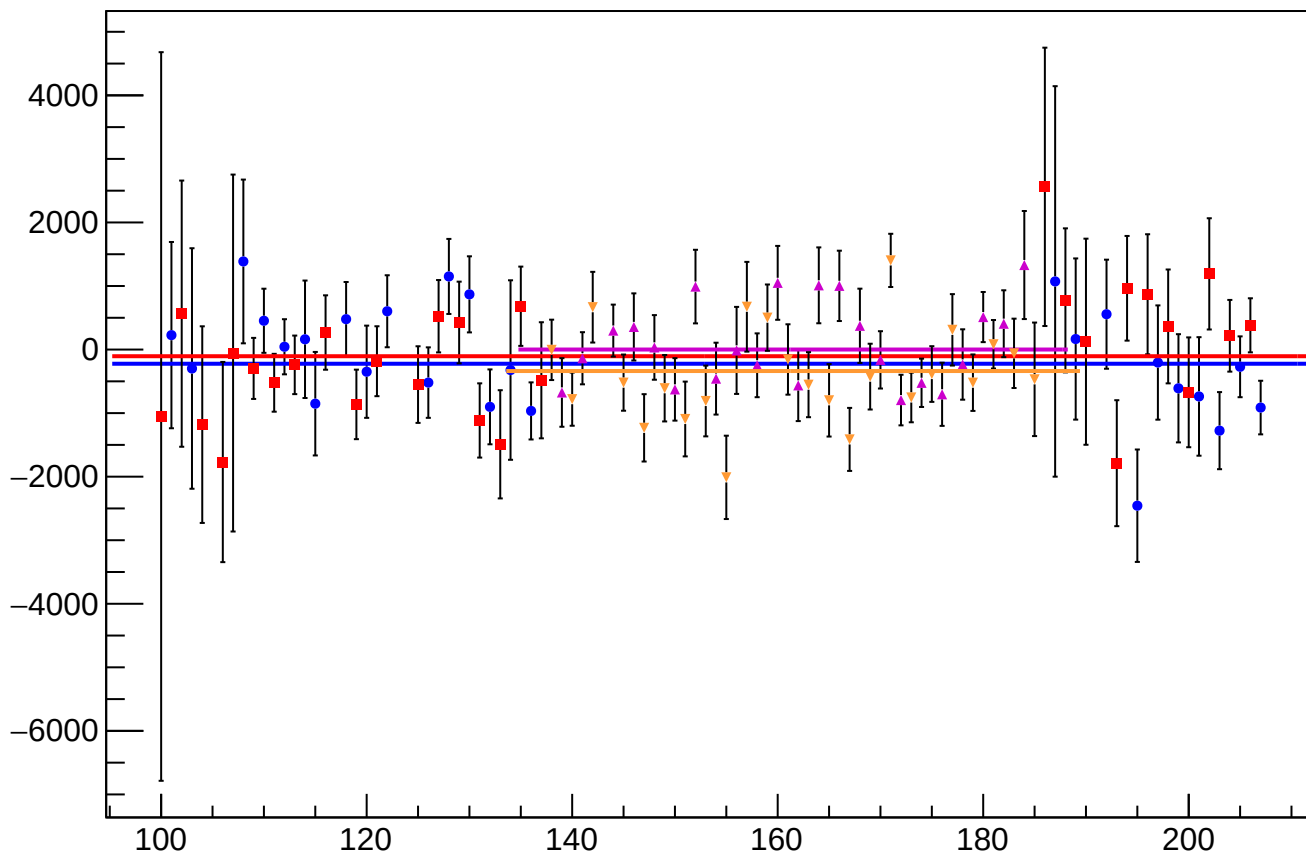
Left In: 1084.166+/-0.179  $\chi^2/\text{NDF}$ : 53438.8/22

+ sign 1093.039+/-0.134  $\chi^2/\text{NDF}$ : 710153.2/49

All: 1096.375+/-0.095  $\chi^2/\text{NDF}$ : 1033937.5/10

- sign 1099.670+/-0.133  $\chi^2/\text{NDF}$ : 322555.8/51

asym\_us\_dd\_atlr\_dd\_dd\_cor\_correction\_mean vs Slug



Right In:  $-223.172 \pm 130.965$   $\chi^2/\text{NDF}$ : 35.0/25

Left Out:  $-337.816 \pm 102.601$   $\chi^2/\text{NDF}$ : 48.8/23

Right Out:  $-104.769 \pm 130.723$   $\chi^2/\text{NDF}$ : 27.3/28

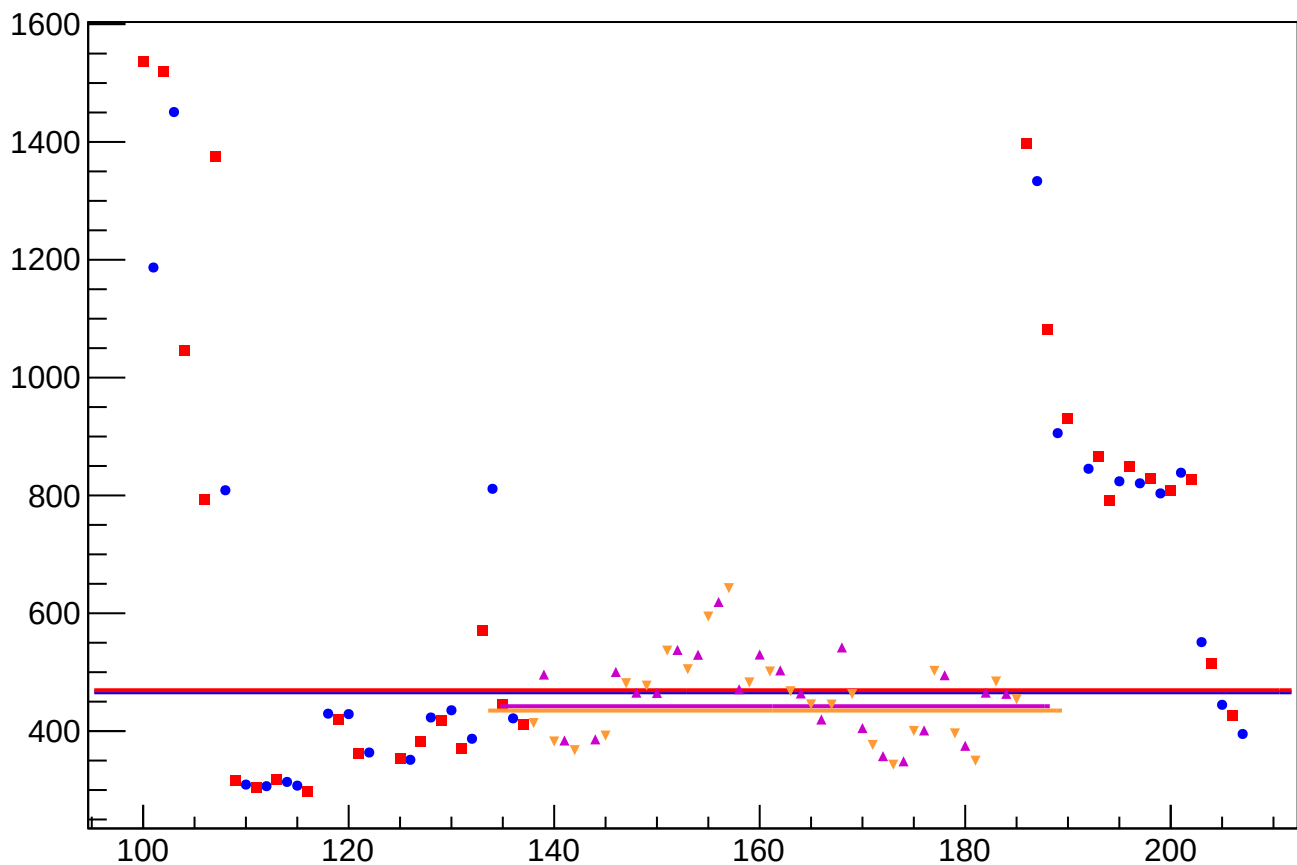
Left In:  $0.567 \pm 104.733$   $\chi^2/\text{NDF}$ : 31.9/22

+ sign  $-294.214 \pm 80.767$   $\chi^2/\text{NDF}$ : 84.2/49

All:  $-168.926 \pm 57.450$   $\chi^2/\text{NDF}$ : 148.7/101

- sign  $-40.614 \pm 81.736$   $\chi^2/\text{NDF}$ : 59.5/51

asym\_us\_dd\_atlr\_dd\_dd\_cor\_correction\_rms vs Slug



Right In: 465.894 $\pm$ 0.093  $\chi^2$ /NDF: 4278547.5/25

Left Out: 434.856 $\pm$ 0.073  $\chi^2$ /NDF: 878507.3/23

Right Out: 469.327 $\pm$ 0.092  $\chi^2$ /NDF: 5370554.4/28

Left In: 442.210 $\pm$ 0.074  $\chi^2$ /NDF: 825844.5/22

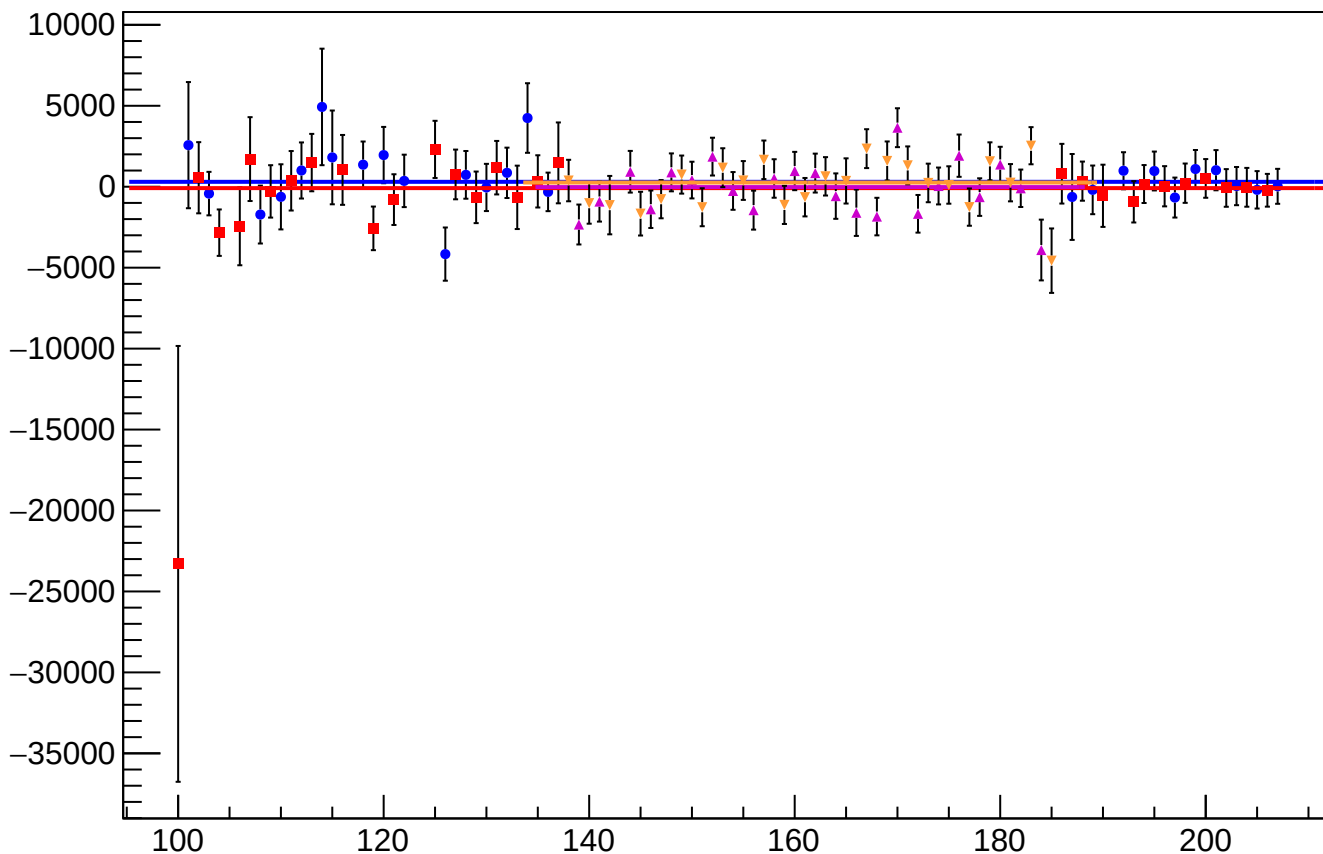
+ sign 446.661 $\pm$ 0.057  $\chi^2$ /NDF: 5226666.2/49

All: 449.699 $\pm$ 0.041  $\chi^2$ /NDF: 11481213.3/10

- sign 452.811 $\pm$ 0.058  $\chi^2$ /NDF: 6248816.9/51



eigen\_cor\_asym\_us\_dd\_atlr\_dd\_dd\_mean vs Slug



Right In: 302.867 $\pm$ 289.386  $\chi^2$ /NDF: 19.6/25

Left Out: 260.639 $\pm$ 251.401  $\chi^2$ /NDF:28.2/23

Right Out: -86.007 $\pm$ 282.509  $\chi^2$ /NDF: 17.6/28

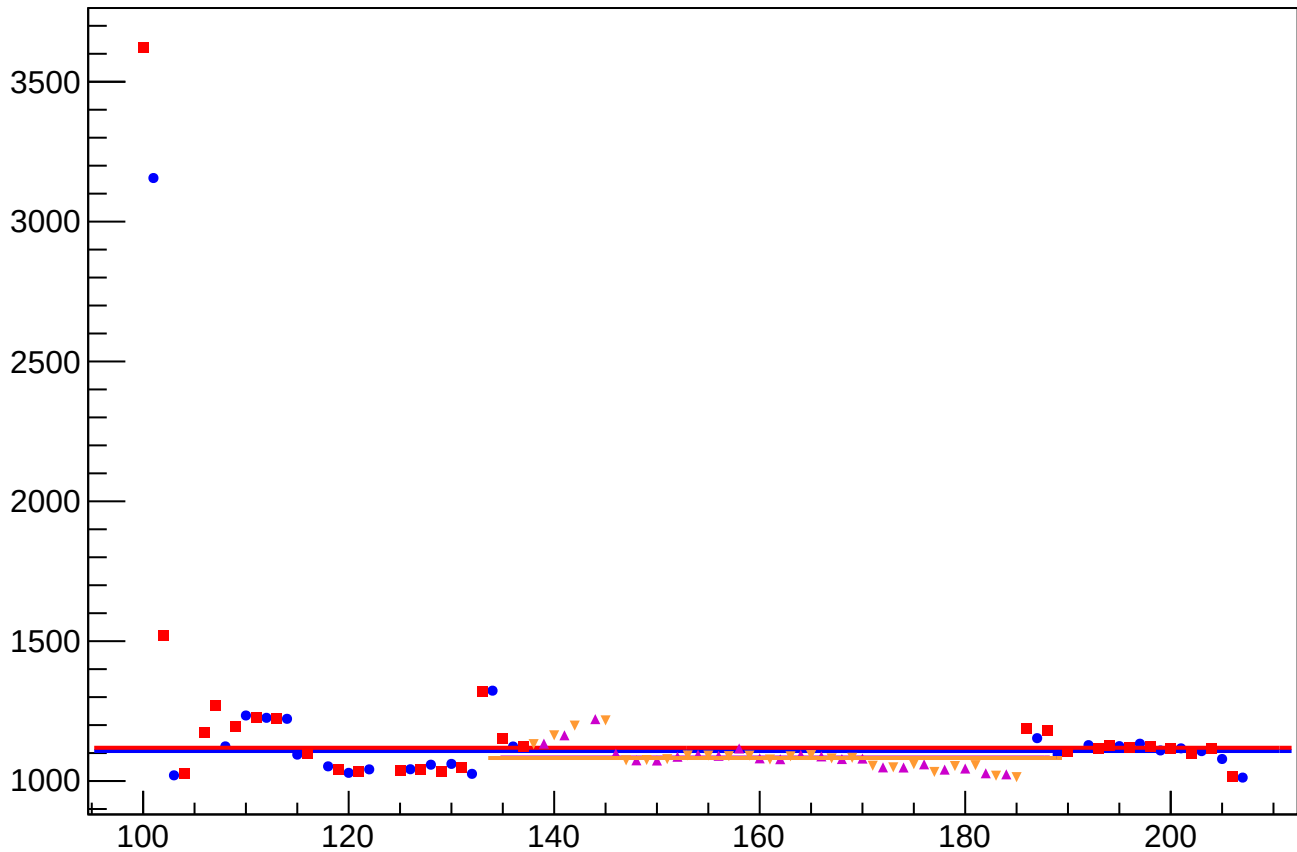
Left In: -22.362 $\pm$ 253.332  $\chi^2$ /NDF:35.8/22

+ sign 278.802 $\pm$ 189.786  $\chi^2$ /NDF: 47.8/49

All: 113.010 $\pm$ 133.780  $\chi^2$ /NDF: 102.7/101

- sign -50.730 $\pm$ 188.607  $\chi^2$ /NDF: 53.4/51

eigen\_cor\_asym\_us\_dd\_atlr\_dd\_dd\_rms vs Slug



Right In: 1107.258 $\pm$ 0.205  $\chi^2$ /NDF: 643807.5/25

Left Out: 1082.308 $\pm$ 0.178  $\chi^2$ /NDF: 57873.0/23

Right Out: 1118.951 $\pm$ 0.200  $\chi^2$ /NDF: 252309.9/28

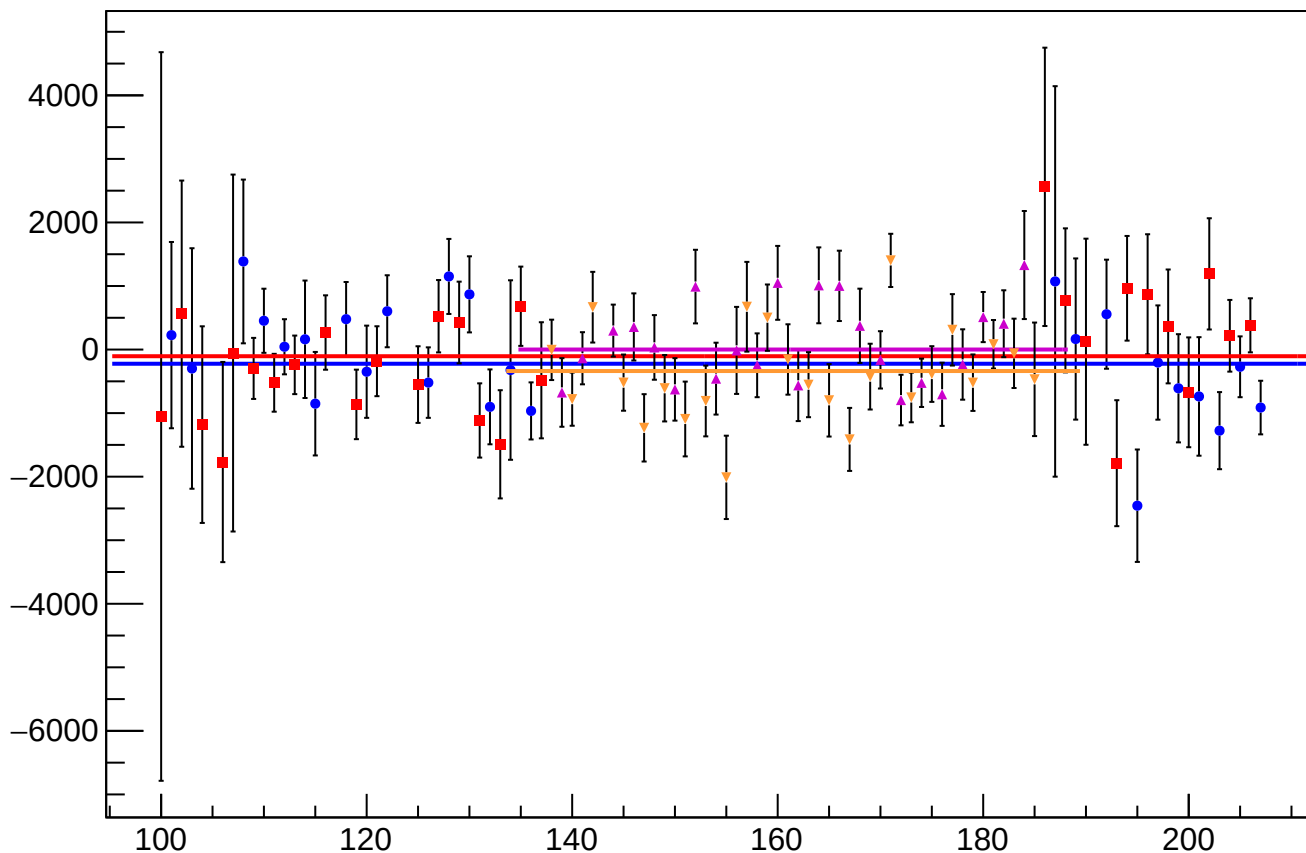
Left In: 1084.166 $\pm$ 0.179  $\chi^2$ /NDF: 53438.8/22

+ sign 1093.039 $\pm$ 0.134  $\chi^2$ /NDF: 710153.2/49

All: 1096.375 $\pm$ 0.095  $\chi^2$ /NDF: 1033937.5/10

- sign 1099.670 $\pm$ 0.133  $\chi^2$ /NDF: 322555.8/51

asym\_us\_dd\_atlr\_dd\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-223.172 \pm 130.965$   $\chi^2/\text{NDF}$ : 35.0/25

Left Out:  $-337.816 \pm 102.601$   $\chi^2/\text{NDF}$ : 48.8/23

Right Out:  $-104.769 \pm 130.723$   $\chi^2/\text{NDF}$ : 27.3/28

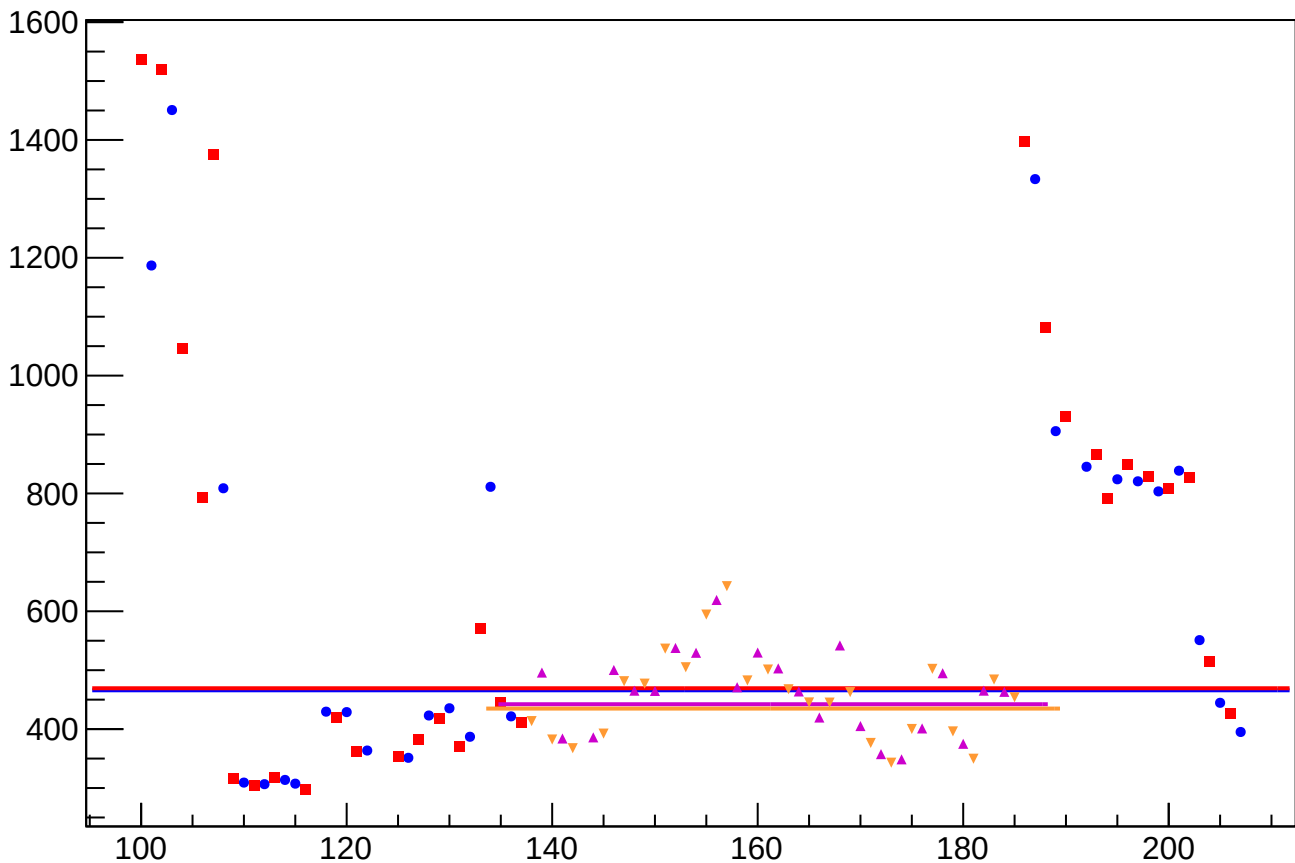
Left In:  $0.567 \pm 104.733$   $\chi^2/\text{NDF}$ : 31.9/22

+ sign  $-294.214 \pm 80.767$   $\chi^2/\text{NDF}$ : 84.2/49

All:  $-168.926 \pm 57.450$   $\chi^2/\text{NDF}$ : 148.7/101

- sign  $-40.614 \pm 81.736$   $\chi^2/\text{NDF}$ : 59.5/51

asym\_us\_dd\_atlr\_dd\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 465.894 $\pm$ 0.093  $\chi^2$ /NDF: 4278547.5/25

Left Out: 434.856 $\pm$ 0.073  $\chi^2$ /NDF: 878507.3/23

Right Out: 469.327 $\pm$ 0.092  $\chi^2$ /NDF: 5370554.4/28

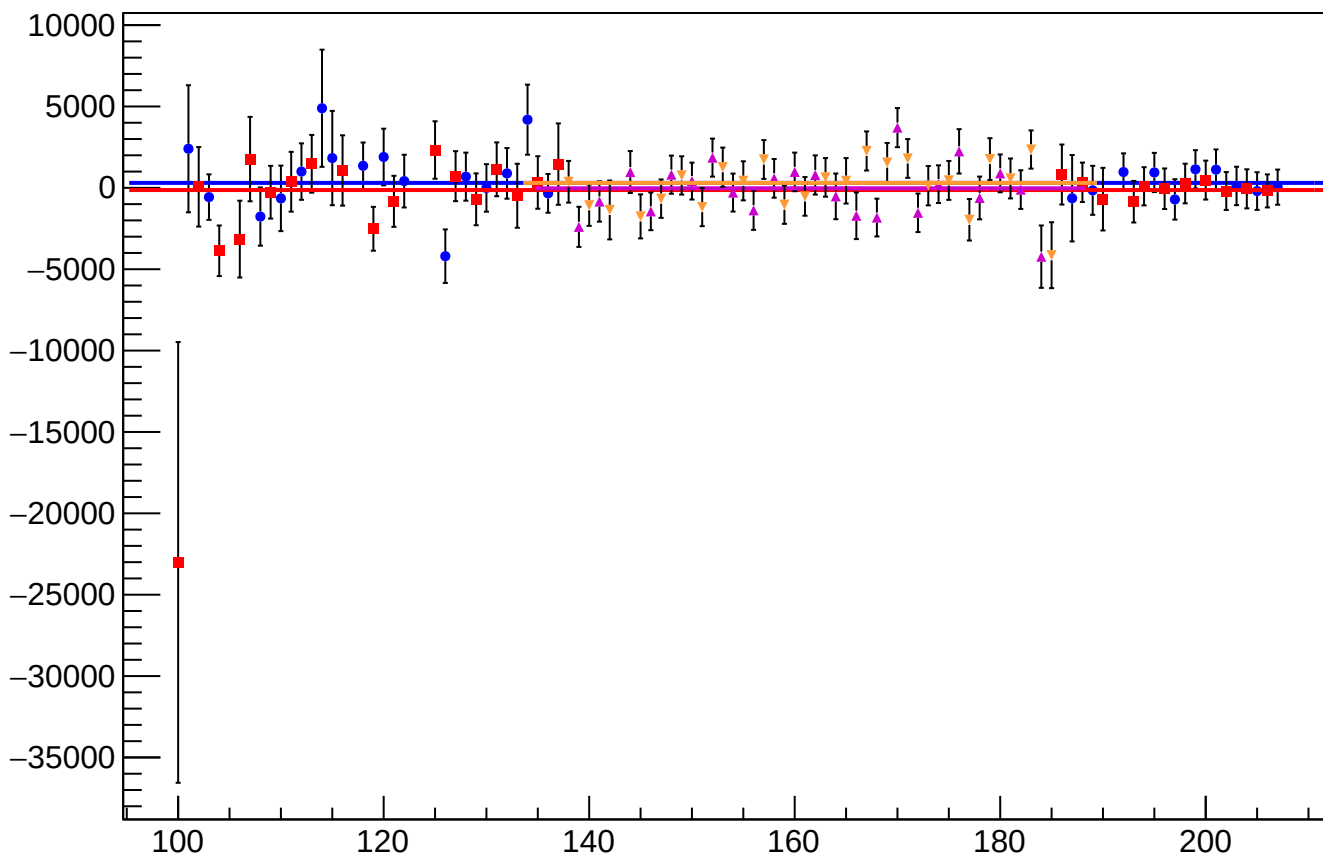
Left In: 442.210 $\pm$ 0.074  $\chi^2$ /NDF: 825844.5/22

+ sign 446.661 $\pm$ 0.057  $\chi^2$ /NDF: 5226666.2/49

All: 449.699 $\pm$ 0.041  $\chi^2$ /NDF: 11481213.3/10

- sign 452.811 $\pm$ 0.058  $\chi^2$ /NDF: 6248816.9/51

# dit\_asym\_us\_dd\_atlr\_dd\_dd\_mean vs Slug



Right In:  $304.821 \pm 290.242$   $\chi^2/\text{NDF}$ : 19.7/25

Left Out:  $303.404 \pm 255.556$   $\chi^2/\text{NDF}$ : 28.5/23

Right Out:  $-134.446 \pm 284.029$   $\chi^2/\text{NDF}$ : 20.1/28

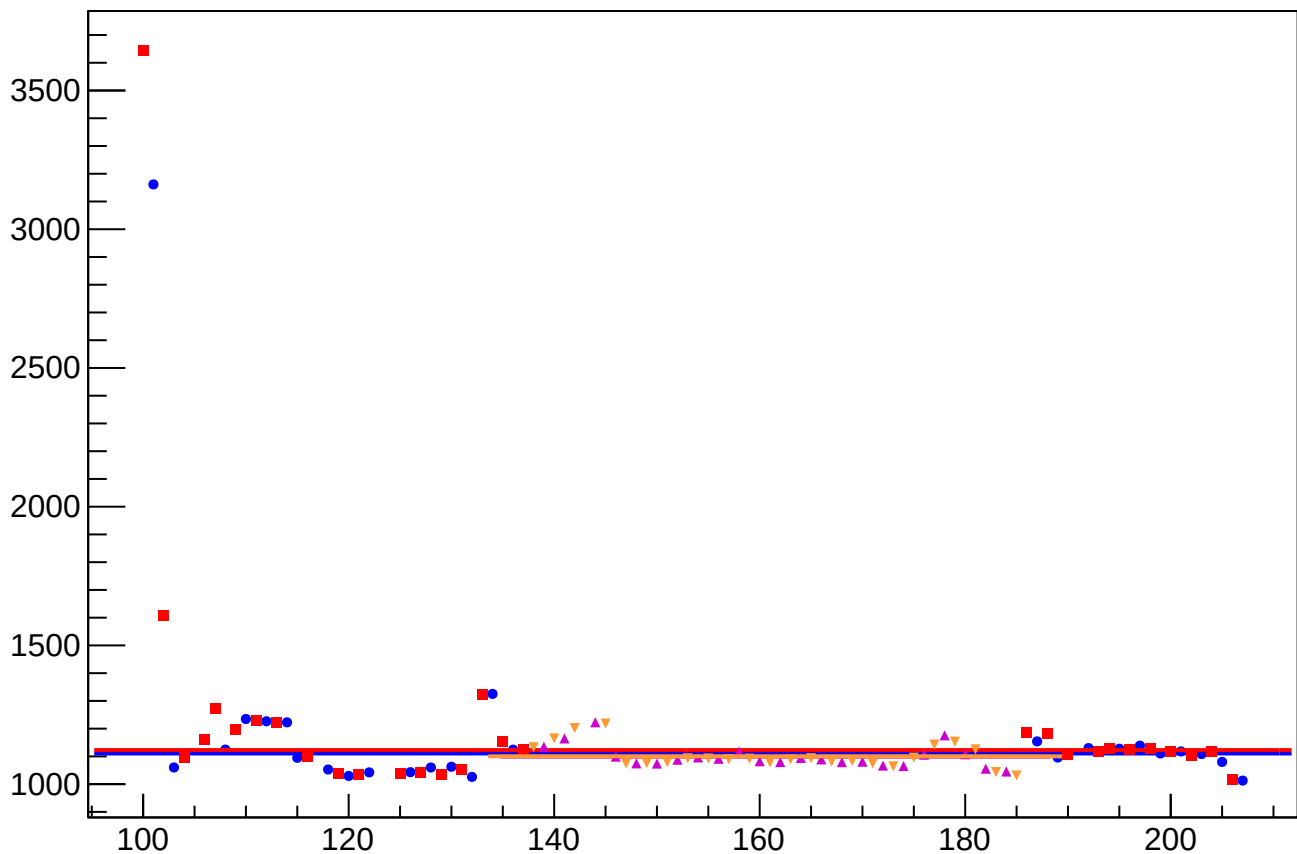
Left In:  $-25.319 \pm 256.866$   $\chi^2/\text{NDF}$ : 35.9/22

+ sign  $304.023 \pm 191.803$   $\chi^2/\text{NDF}$ : 48.2/49

All:  $113.527 \pm 135.167$   $\chi^2/\text{NDF}$ : 106.1/101

- sign  $-74.416 \pm 190.513$   $\chi^2/\text{NDF}$ : 56.0/51

# dit\_asym\_us\_dd\_atlr\_dd\_dd\_rms vs Slug



Right In: 1110.562 $\pm$ 0.205  $\chi^2$ /NDF: 638857.6/25

Left Out: 1100.258 $\pm$ 0.181  $\chi^2$ /NDF: 48774.1/23

Right Out: 1122.714 $\pm$ 0.201  $\chi^2$ /NDF: 258259.2/28

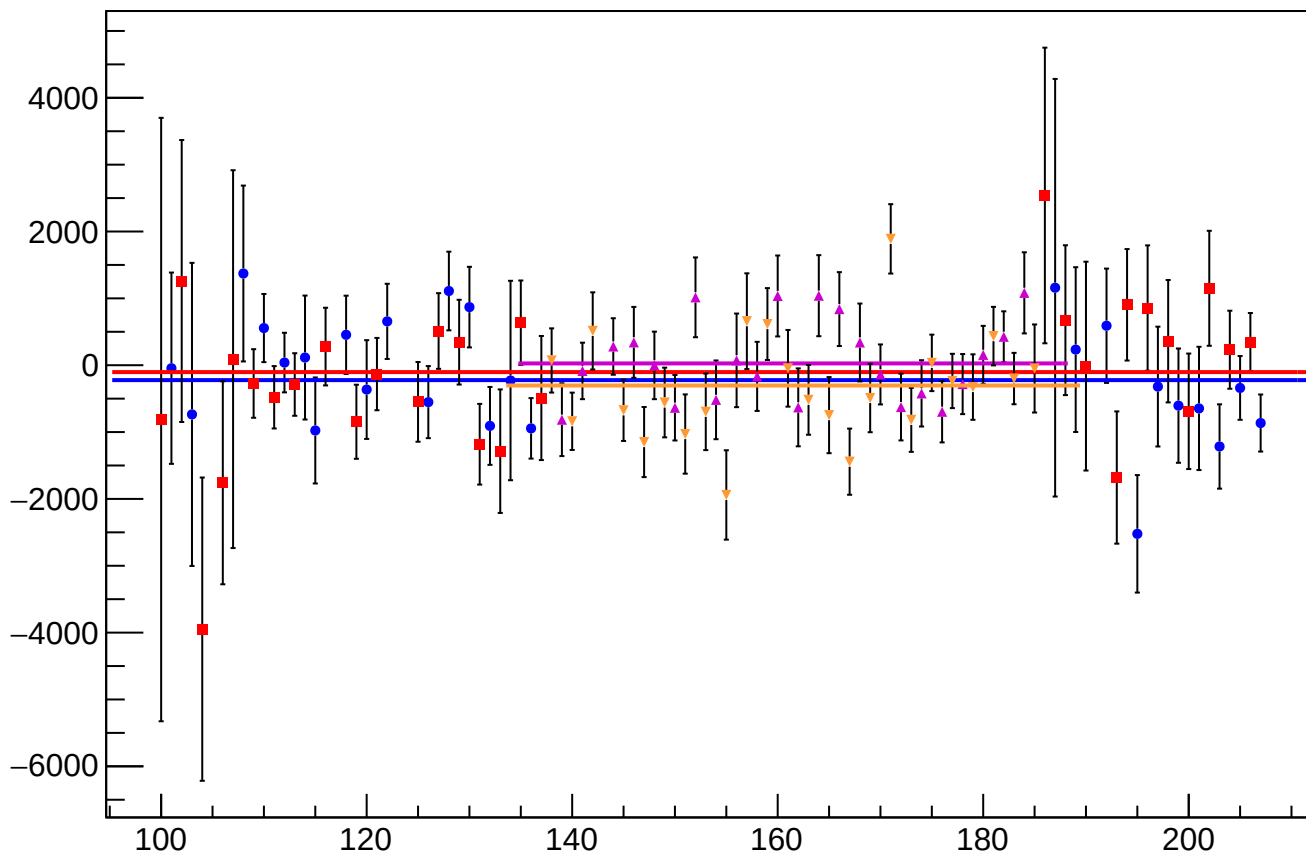
Left In: 1099.342 $\pm$ 0.182  $\chi^2$ /NDF: 44785.6/22

+ sign 1104.758 $\pm$ 0.136  $\chi^2$ /NDF: 689051.5/49

All: 1107.325 $\pm$ 0.096  $\chi^2$ /NDF: 1000257.9/10

- sign 1109.857 $\pm$ 0.135  $\chi^2$ /NDF: 310494.7/51

asym\_us\_dd\_atlr\_dd\_dd\_dit\_correction\_mean vs Slug



Right In: -222.974 $\pm$ 131.542  $\chi^2$ /NDF: 35.1/25

Left Out: -303.217 $\pm$ 102.979  $\chi^2$ /NDF: 49.5/23

Right Out: -102.843 $\pm$ 132.701  $\chi^2$ /NDF: 27.5/28

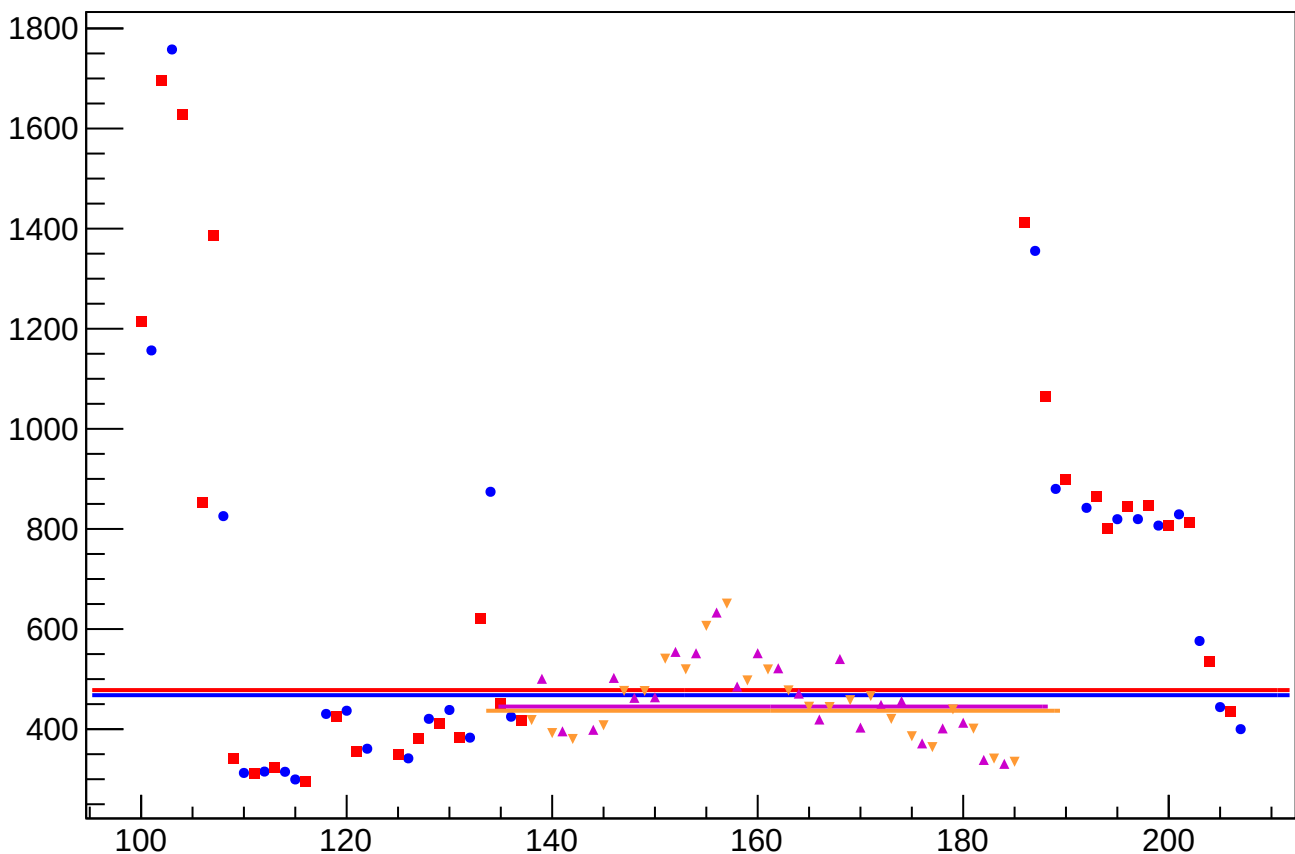
Left In: 26.740 $\pm$ 105.420  $\chi^2$ /NDF: 27.9/22

+ sign -272.725 $\pm$ 81.087  $\chi^2$ /NDF: 84.9/49

All: -150.282 $\pm$ 57.845  $\chi^2$ /NDF: 145.4/101

- sign -23.398 $\pm$ 82.544  $\chi^2$ /NDF: 55.9/51

asym\_us\_dd\_atlr\_dd\_dd\_dit\_correction\_rms vs Slug



Right In: 467.869 $\pm$ 0.093  $\chi^2$ /NDF: 4377301.1/25

Left Out: 436.787 $\pm$ 0.073  $\chi^2$ /NDF: 855206.3/23

Right Out: 478.075 $\pm$ 0.094  $\chi^2$ /NDF: 5696007.9/28

Left In: 445.109 $\pm$ 0.075  $\chi^2$ /NDF: 874534.9/22

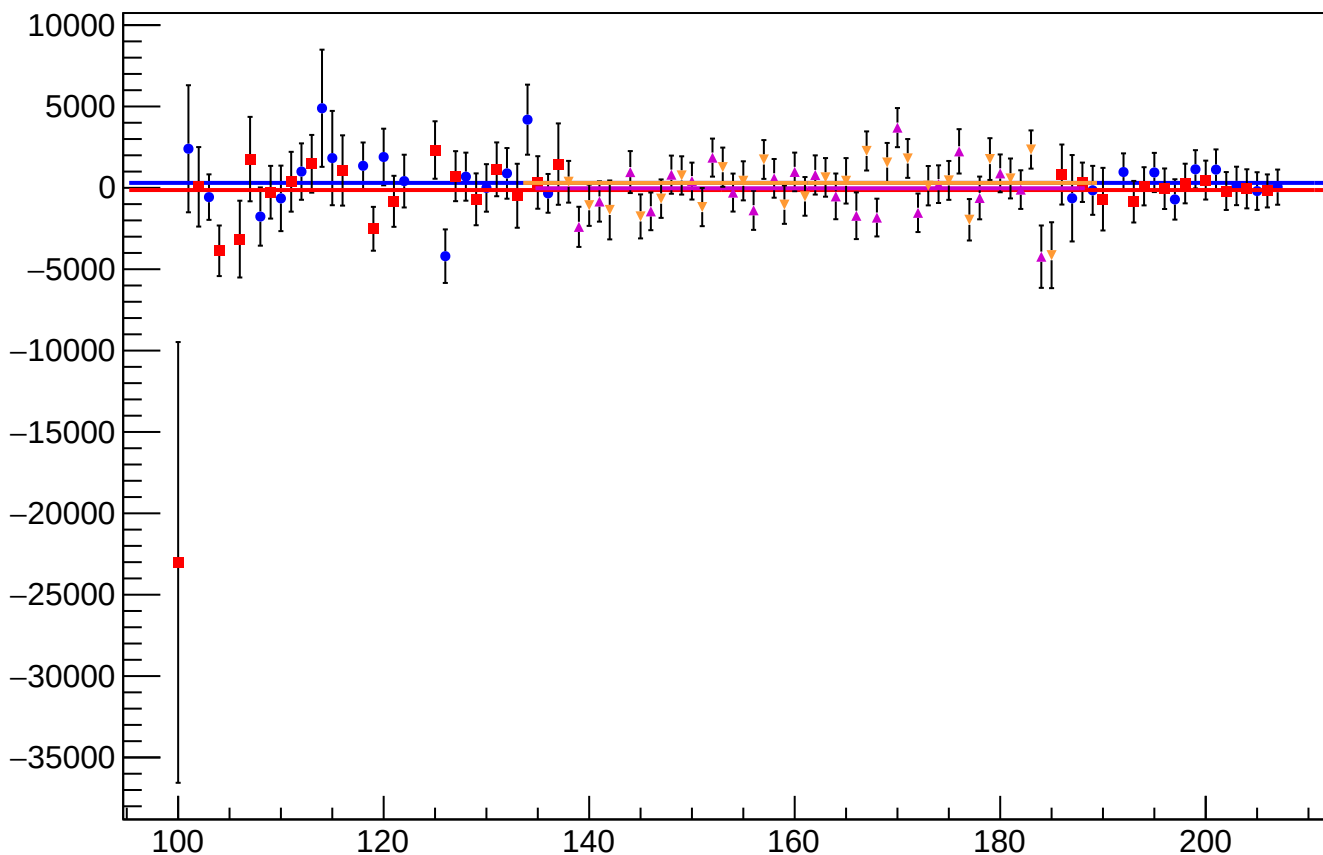
+ sign 448.598 $\pm$ 0.057  $\chi^2$ /NDF: 5301743.1/49

All: 453.148 $\pm$ 0.041  $\chi^2$ /NDF: 11960781.8/10

- sign 457.864 $\pm$ 0.058  $\chi^2$ /NDF: 6646213.4/51



eigen\_dit\_asym\_us\_dd\_atlr\_dd\_dd\_mean vs Slug



Right In: 304.821 $\pm$ 290.242  $\chi^2$ /NDF: 19.7/25

Left Out: 303.402 $\pm$ 255.556  $\chi^2$ /NDF:28.5/23

Right Out: -134.447 $\pm$ 284.029  $\chi^2$ /NDF: 20.1/28

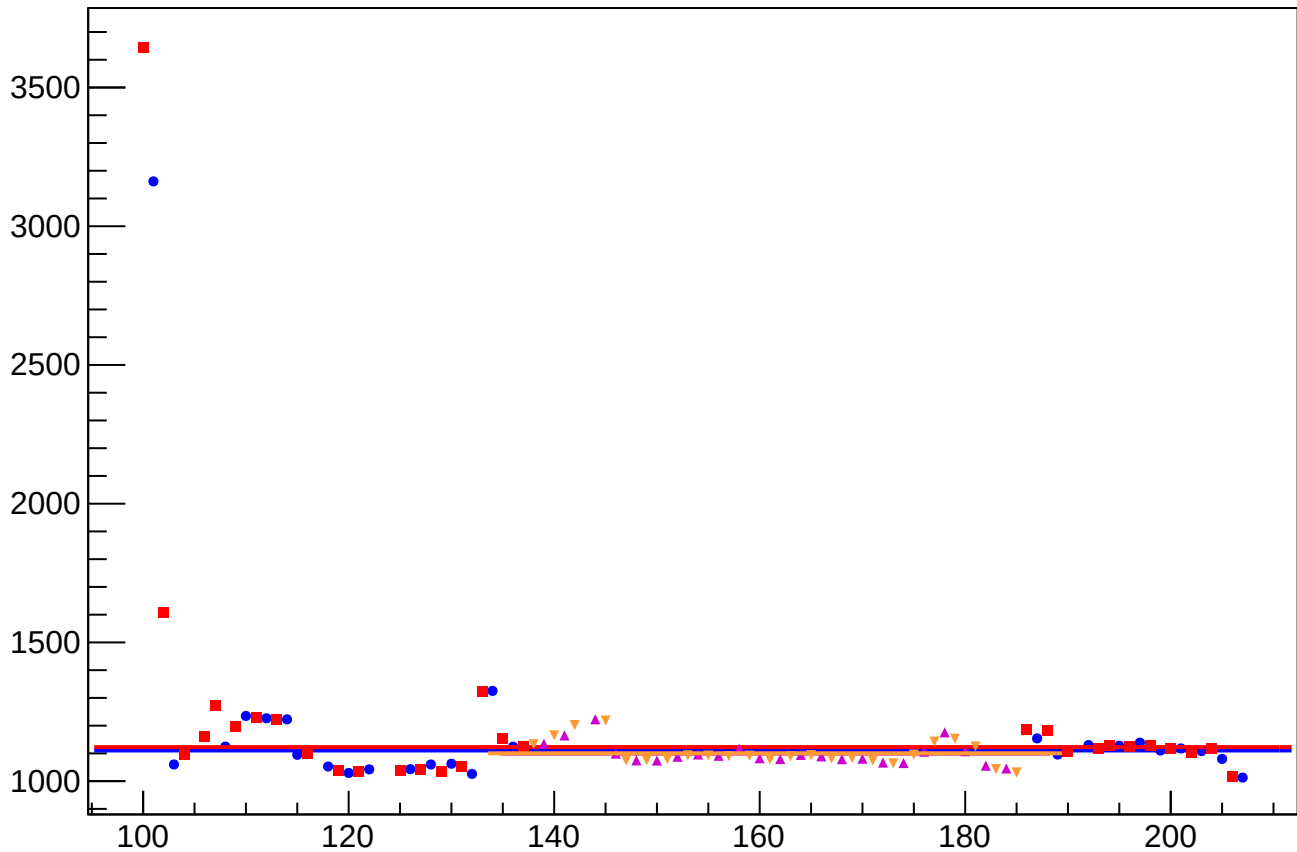
Left In: -25.320 $\pm$ 256.866  $\chi^2$ /NDF:35.9/22

+ sign 304.021 $\pm$ 191.803  $\chi^2$ /NDF: 48.2/49

All: 113.526 $\pm$ 135.167  $\chi^2$ /NDF: 106.1/101

- sign -74.417 $\pm$ 190.513  $\chi^2$ /NDF: 56.0/51

# eigen\_dit\_asym\_us\_dd\_atlr\_dd\_dd\_rms vs Slug



Right In: 1110.562 $\pm$ 0.205  $\chi^2$ /NDF: 638857.7/25

Left Out: 1100.258 $\pm$ 0.181  $\chi^2$ /NDF: 48774.3/23

Right Out: 1122.714 $\pm$ 0.201  $\chi^2$ /NDF: 258259.3/28

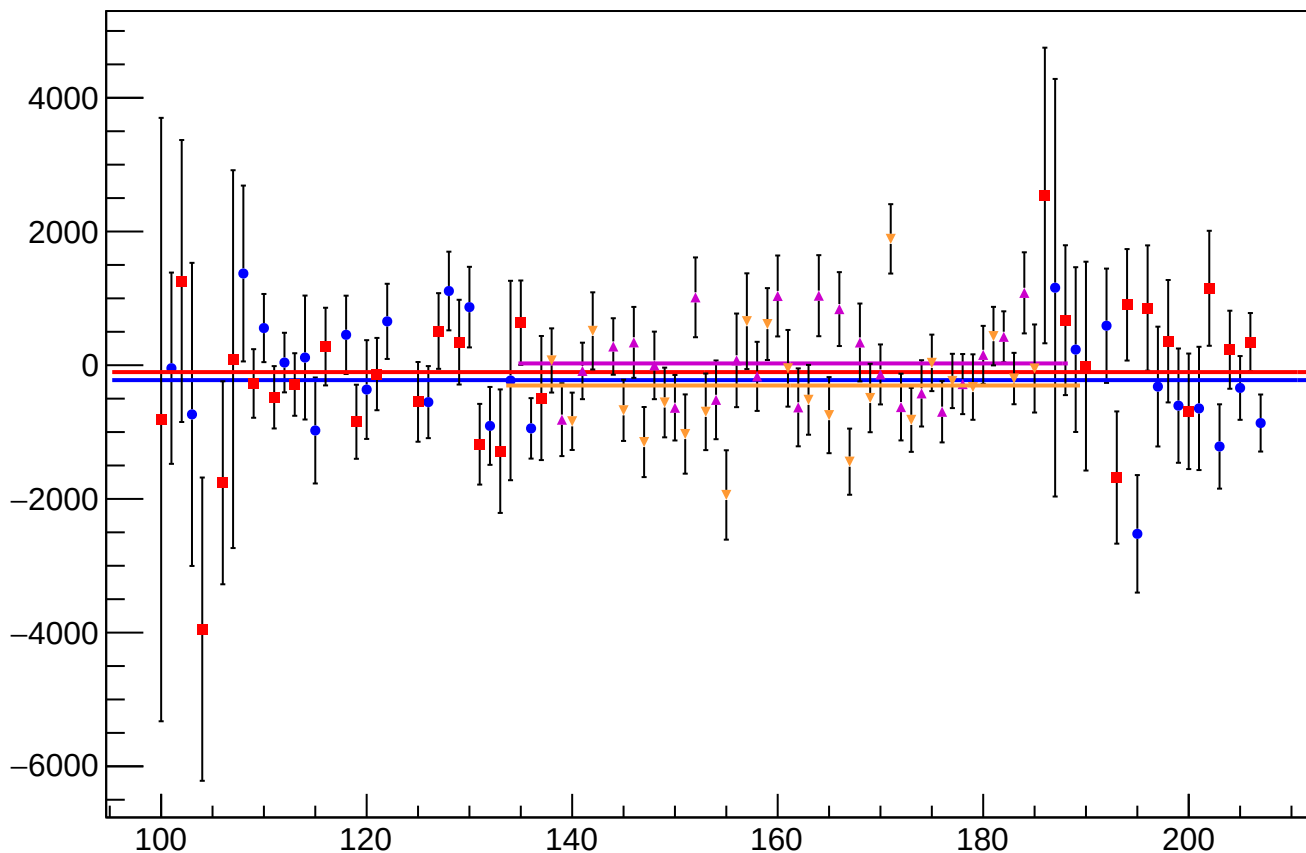
Left In: 1099.342 $\pm$ 0.182  $\chi^2$ /NDF: 44785.7/22

+ sign 1104.758 $\pm$ 0.136  $\chi^2$ /NDF: 689051.8/49

All: 1107.325 $\pm$ 0.096  $\chi^2$ /NDF: 1000258.3/10

- sign 1109.857 $\pm$ 0.135  $\chi^2$ /NDF: 310494.8/51

asym\_us\_dd\_atlr\_dd\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In: -222.977 $\pm$ 131.541  $\chi^2$ /NDF: 35.1/25

Left Out: -303.218 $\pm$ 102.979  $\chi^2$ /NDF:49.5/23

Right Out: -102.845 $\pm$ 132.701  $\chi^2$ /NDF: 27.5/28

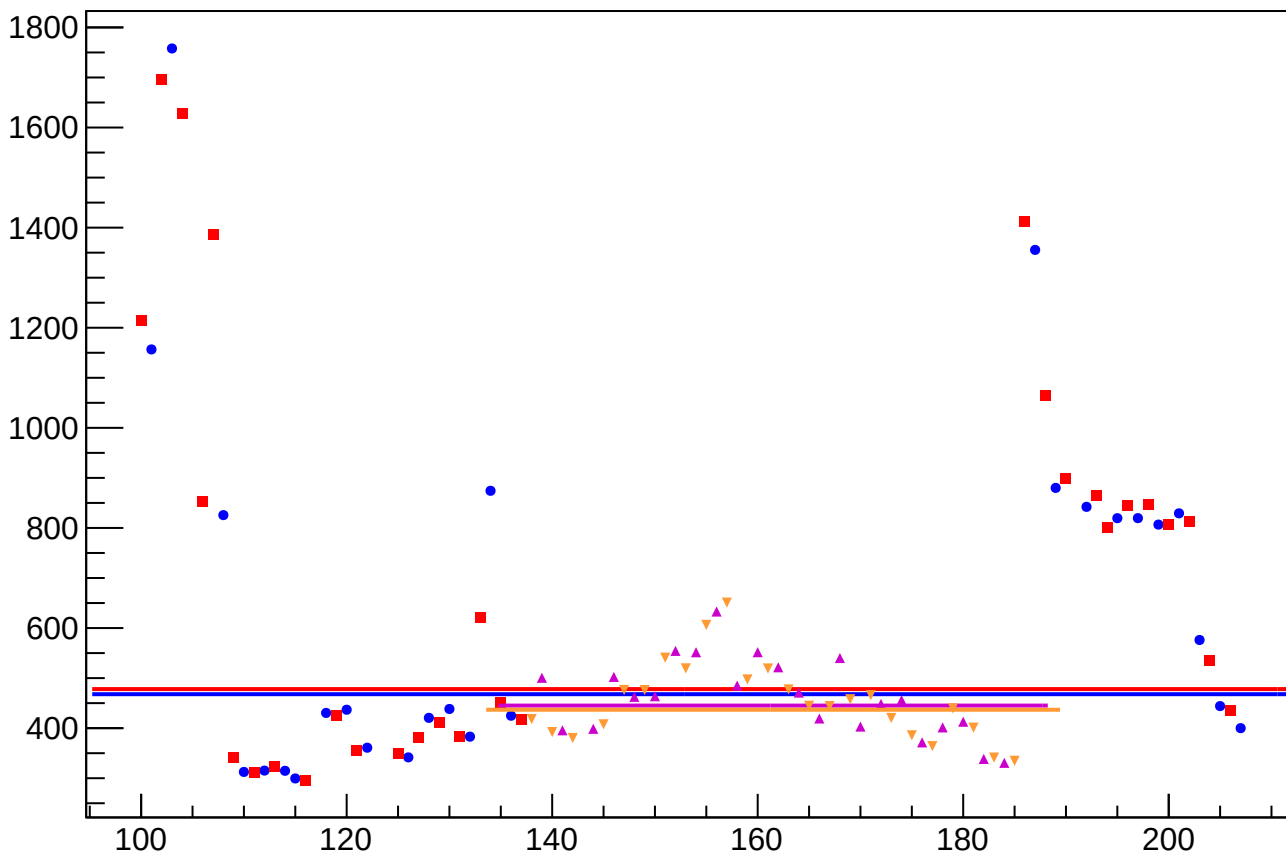
Left In: 26.739 $\pm$ 105.420  $\chi^2$ /NDF:27.9/22

+ sign -272.727 $\pm$ 81.087  $\chi^2$ /NDF: 84.9/49

All: -150.283 $\pm$ 57.845  $\chi^2$ /NDF: 145.4/101

- sign -23.399 $\pm$ 82.544  $\chi^2$ /NDF: 55.9/51

asym\_us\_dd\_atlr\_dd\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 467.867 $\pm$ 0.093  $\chi^2$ /NDF: 4377334.4/25

Left Out: 436.787 $\pm$ 0.073  $\chi^2$ /NDF: 855236.5/23

Right Out: 478.071 $\pm$ 0.094  $\chi^2$ /NDF: 5696067.9/28

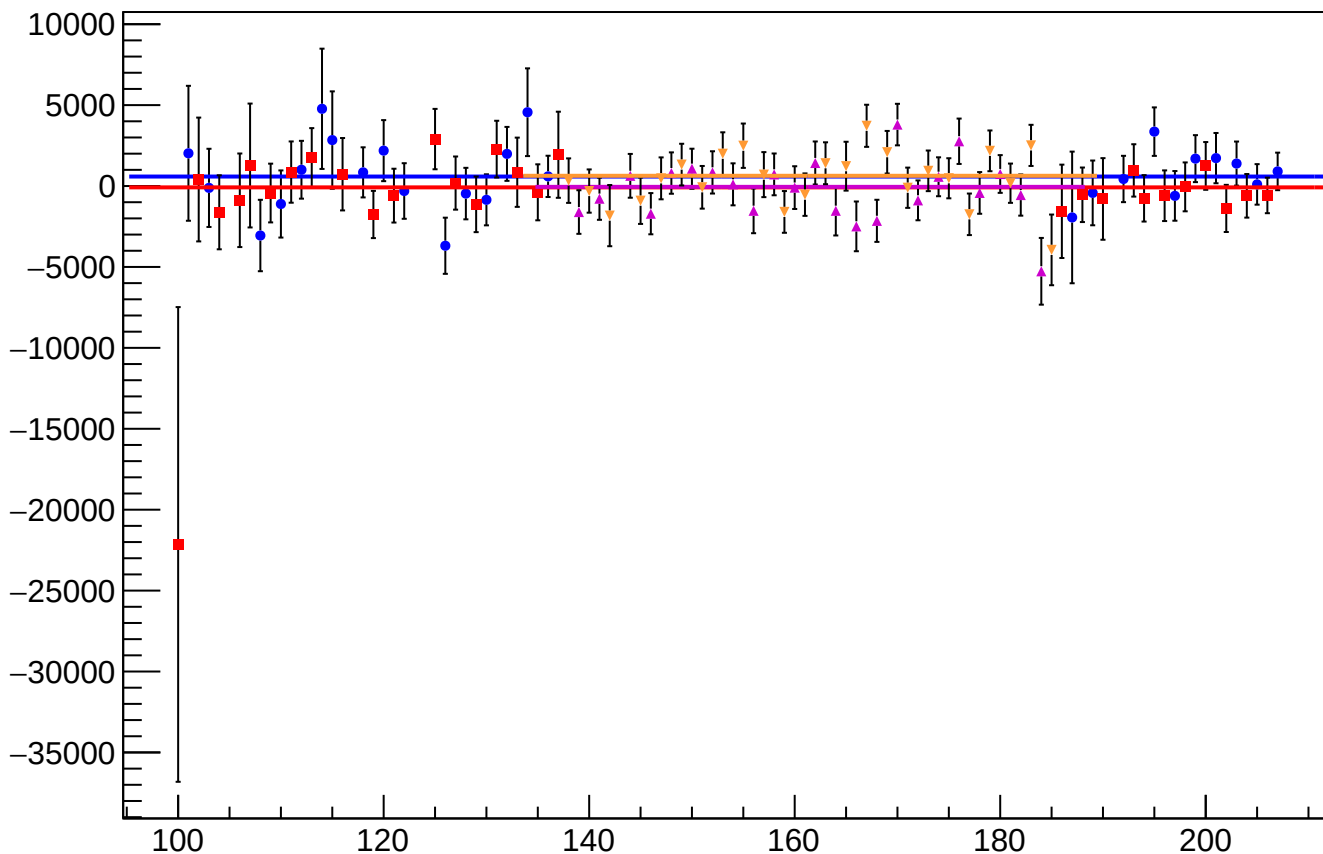
Left In: 445.108 $\pm$ 0.075  $\chi^2$ /NDF: 874568.8/22

+ sign 448.597 $\pm$ 0.057  $\chi^2$ /NDF: 5301796.9/49

All: 453.147 $\pm$ 0.041  $\chi^2$ /NDF: 11960915.3/10

- sign 457.862 $\pm$ 0.058  $\chi^2$ /NDF: 6646293.9/51

# asym\_us\_dd\_atlr\_dd\_dd\_mean vs Slug



Right In: 586.245 $\pm$ 334.854  $\chi^2$ /NDF: 23.1/25

Left Out: 632.875 $\pm$ 274.060  $\chi^2$ /NDF:30.1/23

Right Out: -82.810 $\pm$ 332.714  $\chi^2$ /NDF: 14.5/28

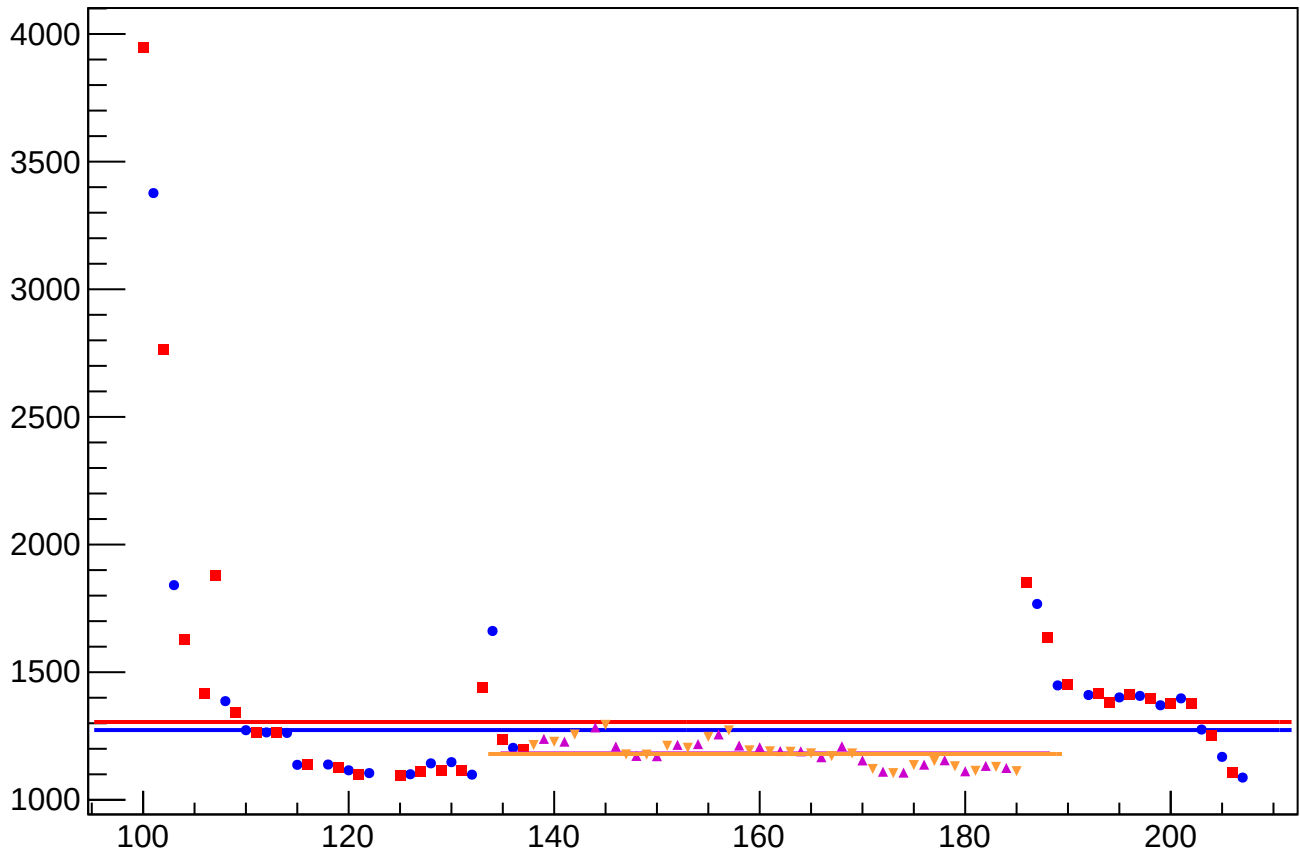
Left In: -50.835 $\pm$ 276.213  $\chi^2$ /NDF:35.0/22

+ sign 614.169 $\pm$ 212.083  $\chi^2$ /NDF: 53.2/49

All: 275.844 $\pm$ 150.120  $\chi^2$ /NDF: 107.8/101

- sign -63.881 $\pm$ 212.522  $\chi^2$ /NDF: 49.5/51

# asym\_us\_dd\_atlr\_dd\_dd\_rms vs Slug



Right In: 1273.367 $\pm$ 0.237  $\chi^2/\text{NDF}$ : 972838.0/25

Left Out: 1179.713 $\pm$ 0.194  $\chi^2/\text{NDF}$ : 64667.7/23

Right Out: 1304.982 $\pm$ 0.235  $\chi^2/\text{NDF}$ : 899731.9/28

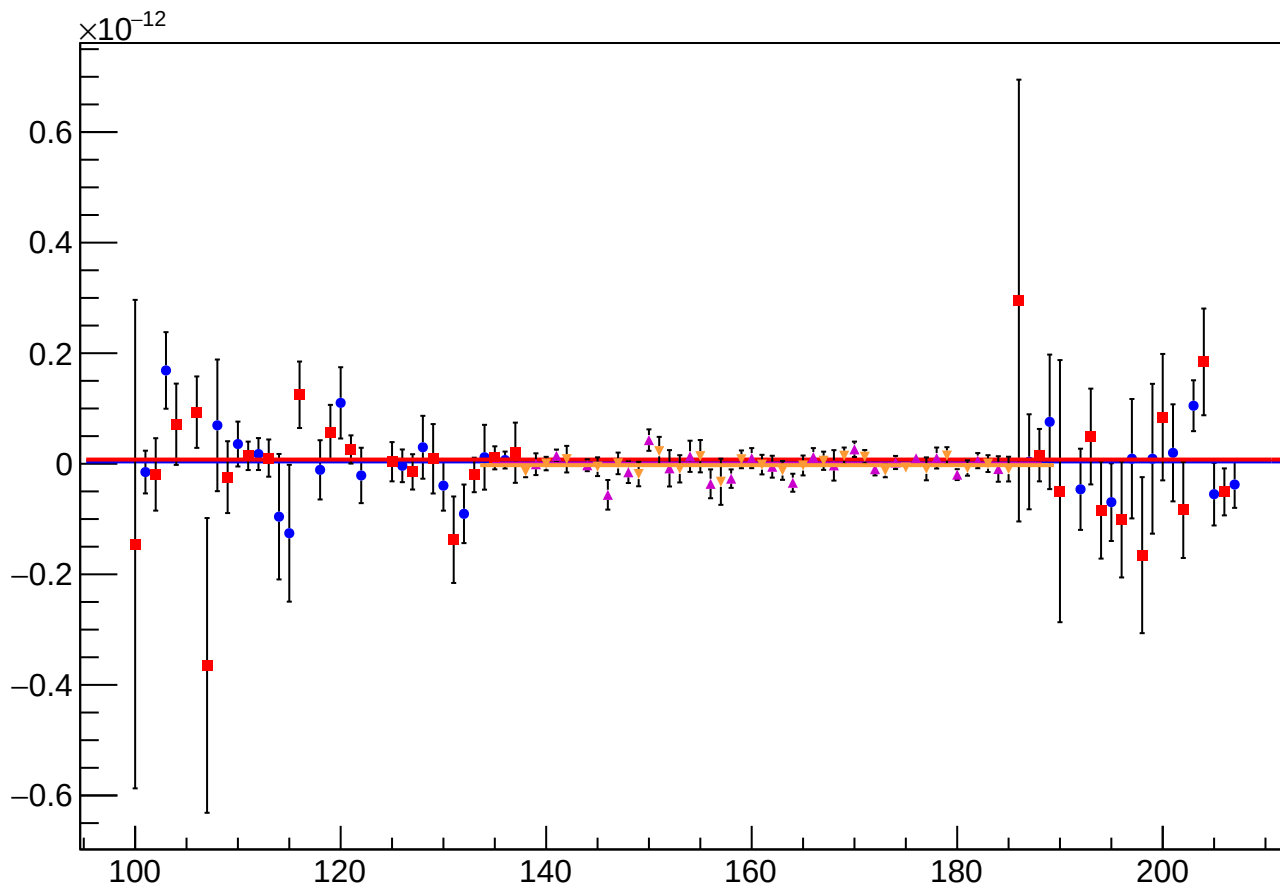
Left In: 1181.929 $\pm$ 0.195  $\chi^2/\text{NDF}$ : 60355.9/22

+ sign 1217.282 $\pm$ 0.150  $\chi^2/\text{NDF}$ : 1131195.7/49

All: 1224.693 $\pm$ 0.106  $\chi^2/\text{NDF}$ : 2258131.7/10

- sign 1232.135 $\pm$ 0.150  $\chi^2/\text{NDF}$ : 1122041.5/51

asym\_us\_dd\_atlr\_dd\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 25.2/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 10.5/23

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 26.5/28

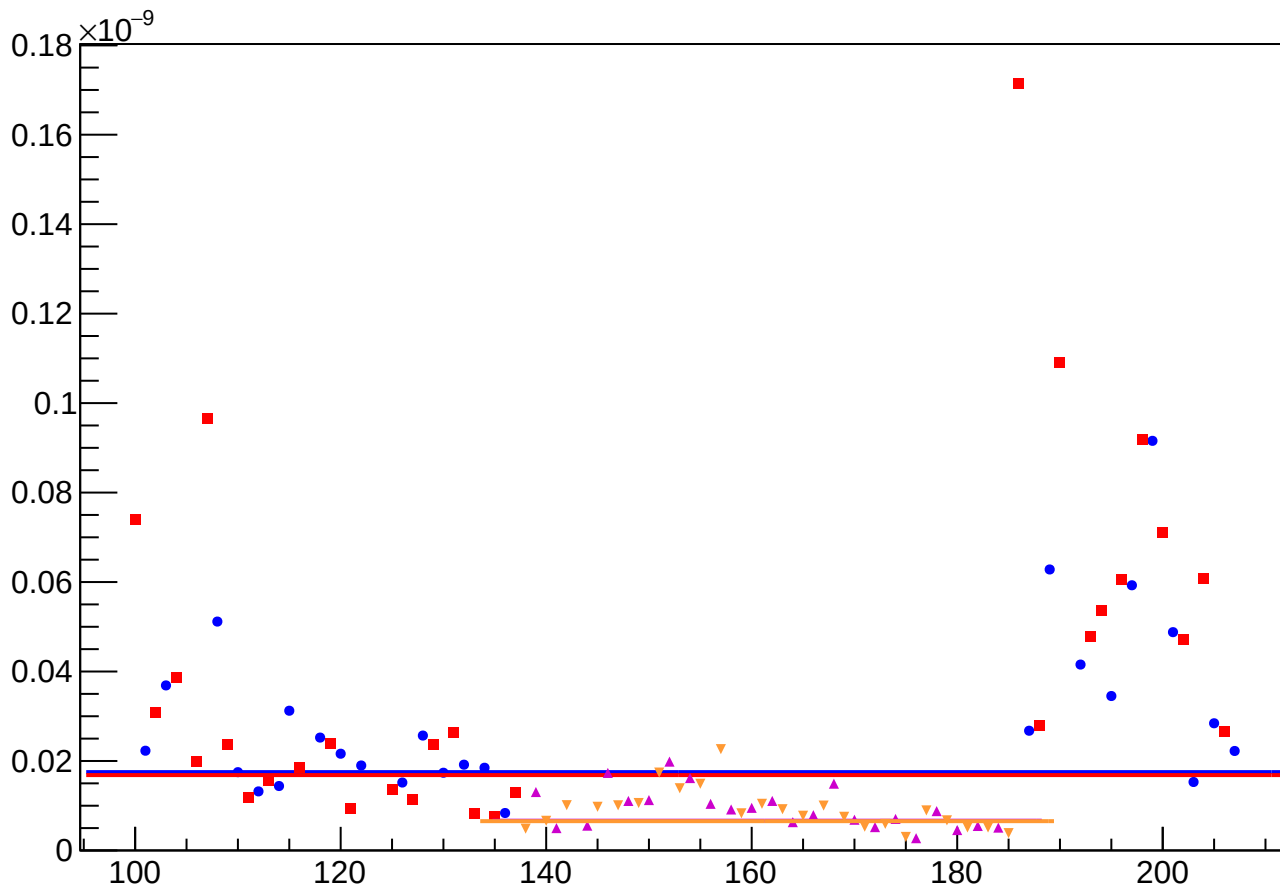
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 32.5/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 36.2/49

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 96.2/101

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 59.7/51

asym\_us\_dd\_atlr\_dd\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3123687.2/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2332749.6/23

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4941573.7/28

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2542530.1/22

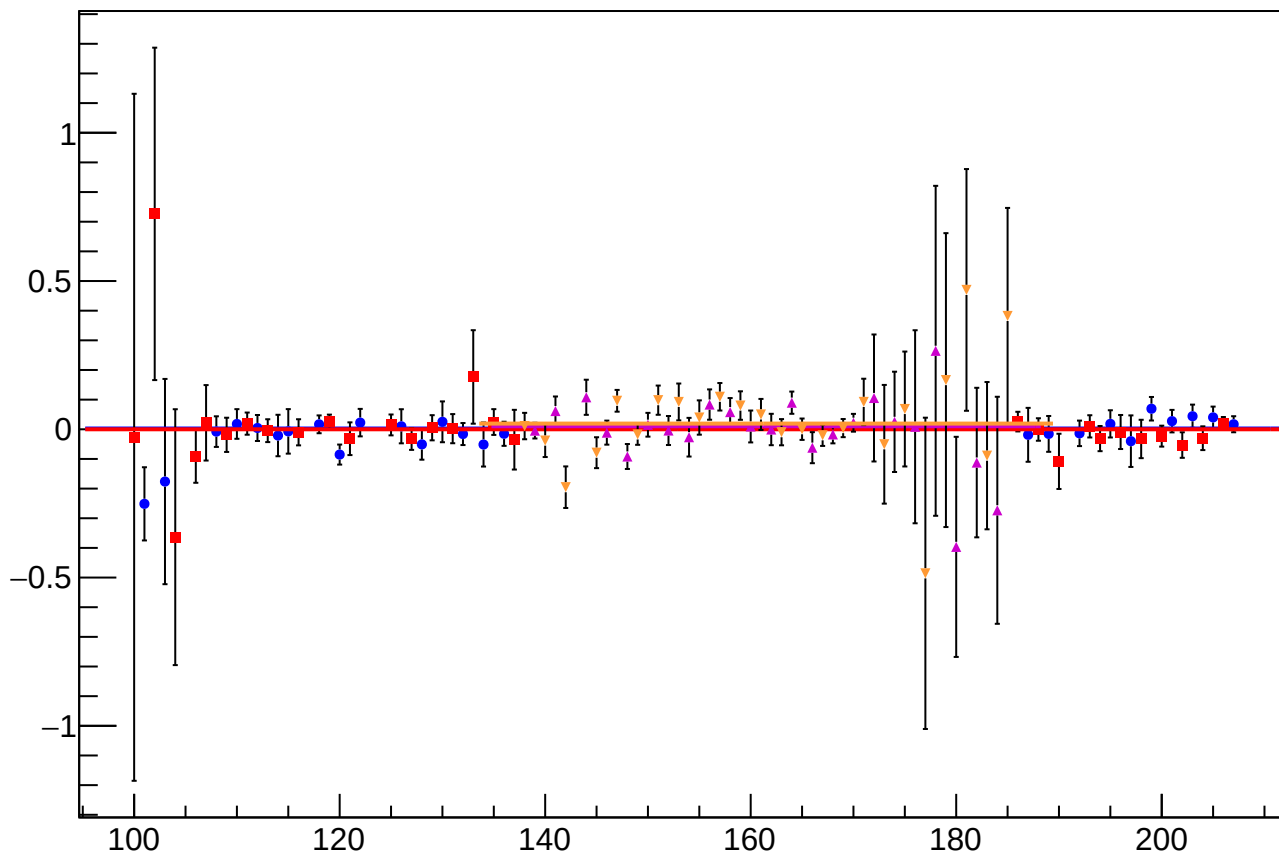
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8239532.6/49

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 18154544.2/101

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9914461.2/51



asym\_us\_dd\_atlr\_dd\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.003 $\pm$ 0.009  $\chi^2$ /NDF: 20.5/25

Left Out: 0.019 $\pm$ 0.011  $\chi^2$ /NDF: 35.9/23

Right Out: 0.000 $\pm$ 0.008  $\chi^2$ /NDF: 14.2/28

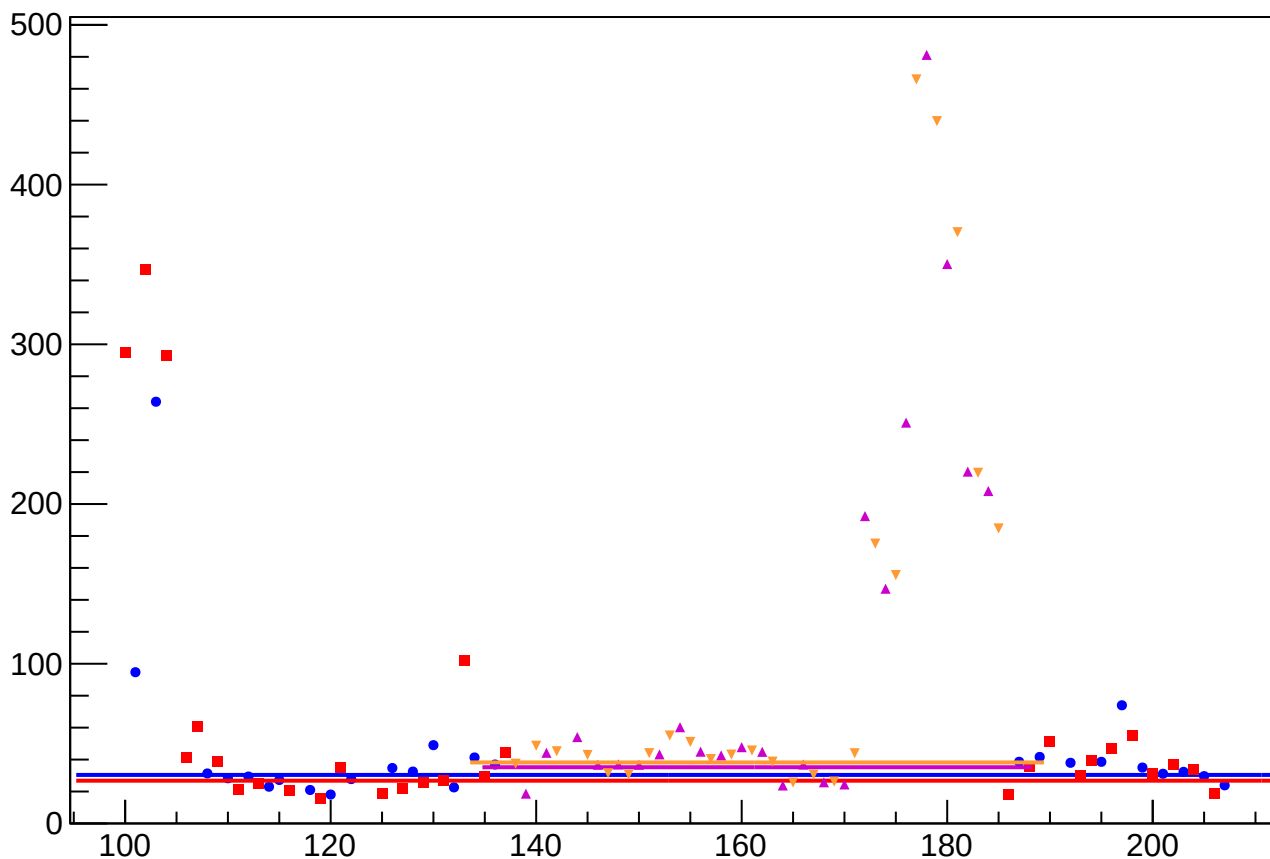
Left In: 0.010 $\pm$ 0.010  $\chi^2$ /NDF: 23.6/22

+ sign 0.009 $\pm$ 0.007  $\chi^2$ /NDF: 57.8/49

All: 0.006 $\pm$ 0.005  $\chi^2$ /NDF: 96.6/101

- sign 0.004 $\pm$ 0.006  $\chi^2$ /NDF: 38.5/51

asym\_us\_dd\_atlr\_dd\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 30.388+/-0.006  $\chi^2/\text{NDF}$ : 3162596.7/25

Left Out: 38.211+/-0.008  $\chi^2/\text{NDF}$ : 8285024.8/23

Right Out: 26.784+/-0.006  $\chi^2/\text{NDF}$ : 4696567.8/28

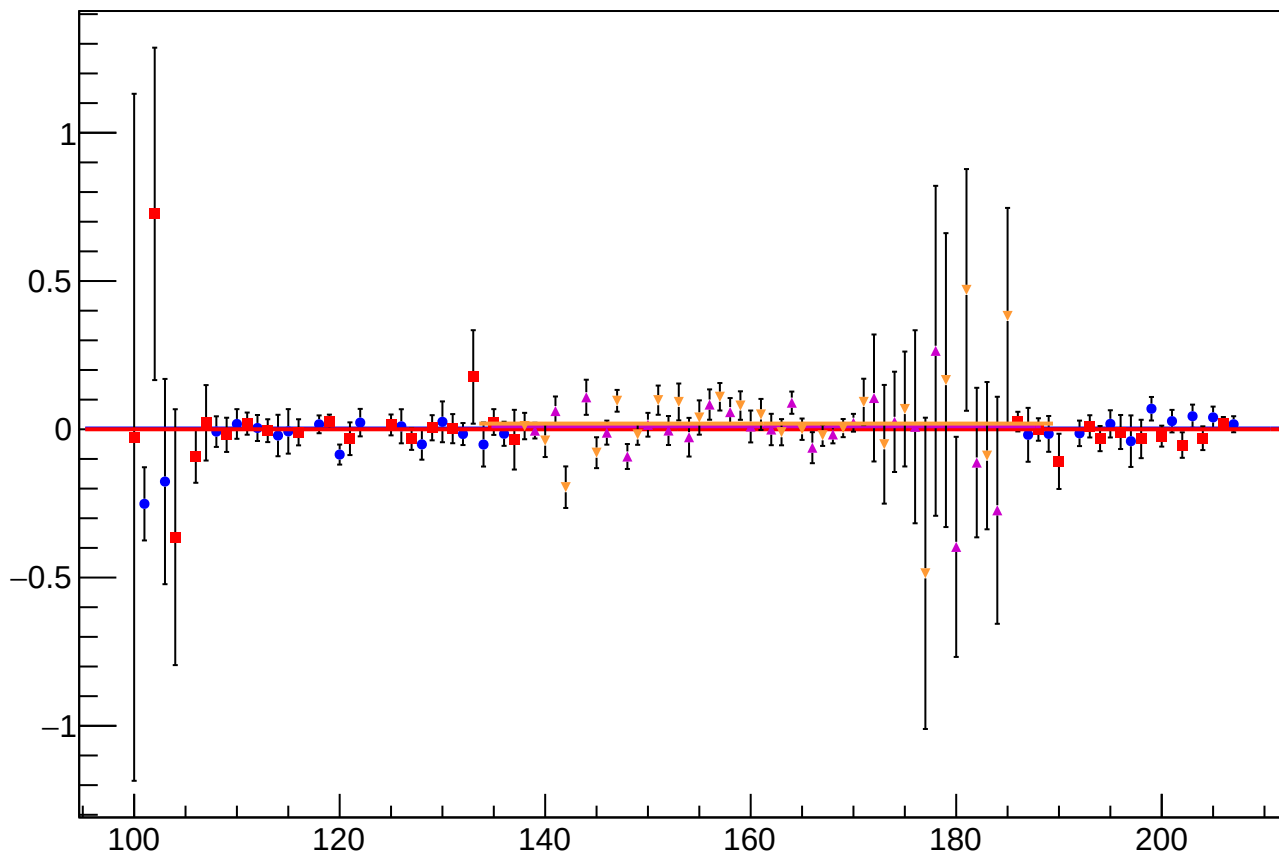
Left In: 35.195+/-0.007  $\chi^2/\text{NDF}$ : 9390926.6/22

+ sign 33.606+/-0.005  $\chi^2/\text{NDF}$ : 12064381.5/49

All: 31.645+/-0.003  $\chi^2/\text{NDF}$ : 27276112.5/101

- sign 30.000+/-0.004  $\chi^2/\text{NDF}$ : 14917268.1/51

asym\_us\_dd\_atlr\_dd\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.003 \pm 0.009$   $\chi^2/\text{NDF}$ : 20.5/25

Left Out:  $0.019 \pm 0.011$   $\chi^2/\text{NDF}$ : 35.9/23

Right Out:  $0.000 \pm 0.008$   $\chi^2/\text{NDF}$ : 14.2/28

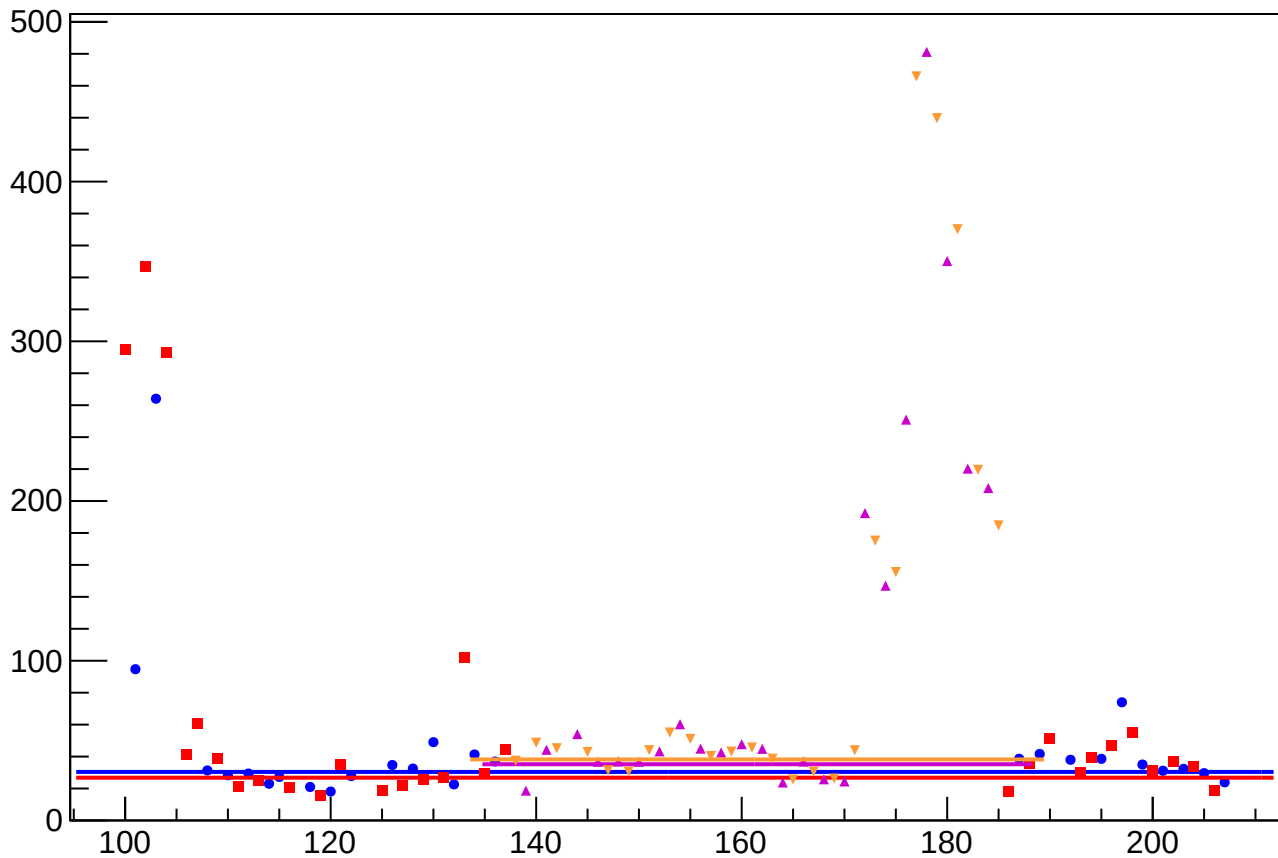
Left In:  $0.010 \pm 0.010$   $\chi^2/\text{NDF}$ : 23.6/22

+ sign  $0.009 \pm 0.007$   $\chi^2/\text{NDF}$ : 57.8/49

All:  $0.006 \pm 0.005$   $\chi^2/\text{NDF}$ : 96.6/101

- sign  $0.004 \pm 0.006$   $\chi^2/\text{NDF}$ : 38.5/51

asym\_us\_dd\_atlr\_dd\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 30.388 $\pm$ 0.006  $\chi^2$ /NDF: 3162596.7/25

Left Out: 38.211 $\pm$ 0.008  $\chi^2$ /NDF: 8285024.8/23

Right Out: 26.784 $\pm$ 0.006  $\chi^2$ /NDF: 4696567.8/28

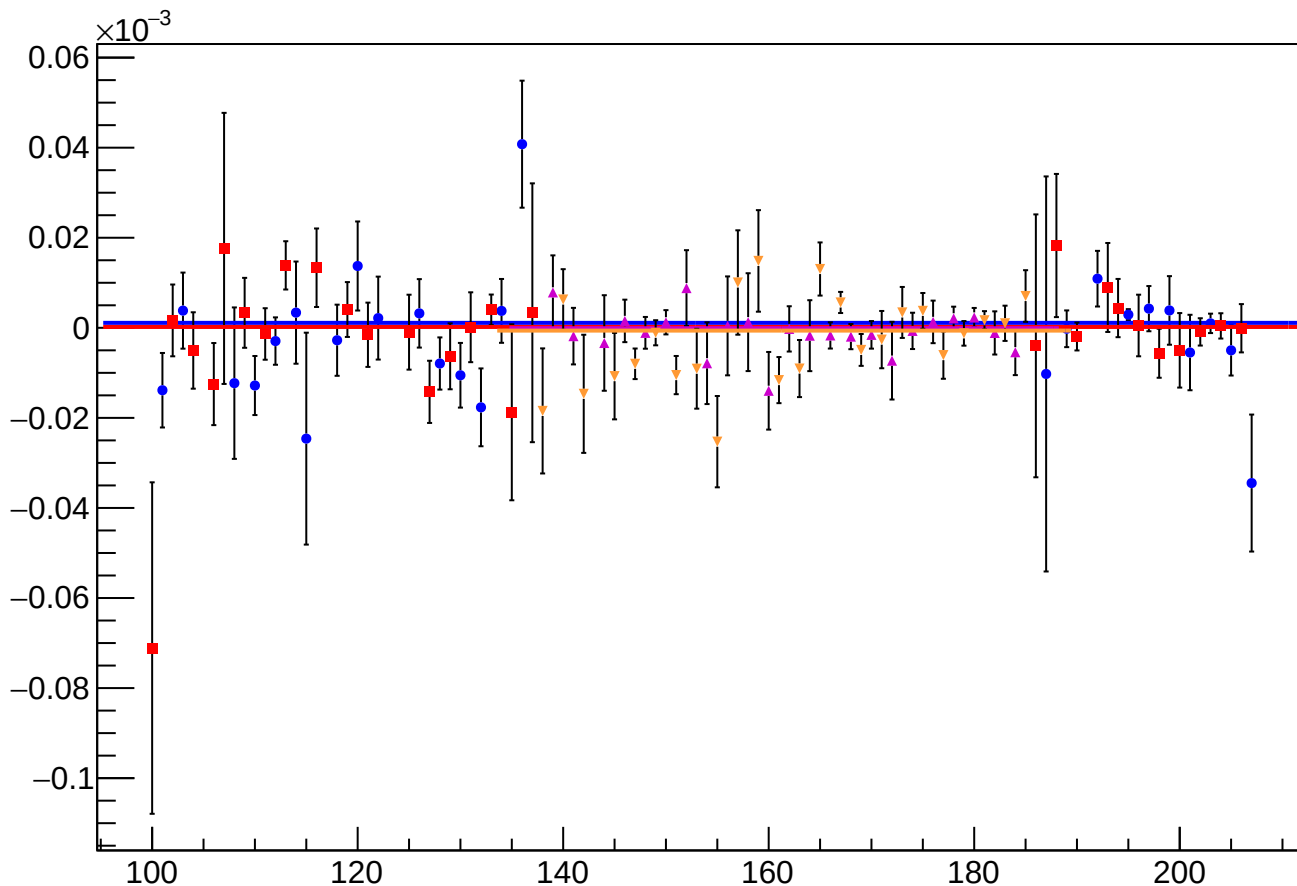
Left In: 35.195 $\pm$ 0.007  $\chi^2$ /NDF: 9390926.6/22

+ sign 33.606 $\pm$ 0.005  $\chi^2$ /NDF: 12064381.5/49

All: 31.645 $\pm$ 0.003  $\chi^2$ /NDF: 27276112.5/101

- sign 30.000 $\pm$ 0.004  $\chi^2$ /NDF: 14917268.1/51

asym\_us\_dd\_atlr\_dd\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 42.8/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 51.2/23

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 28.0/28

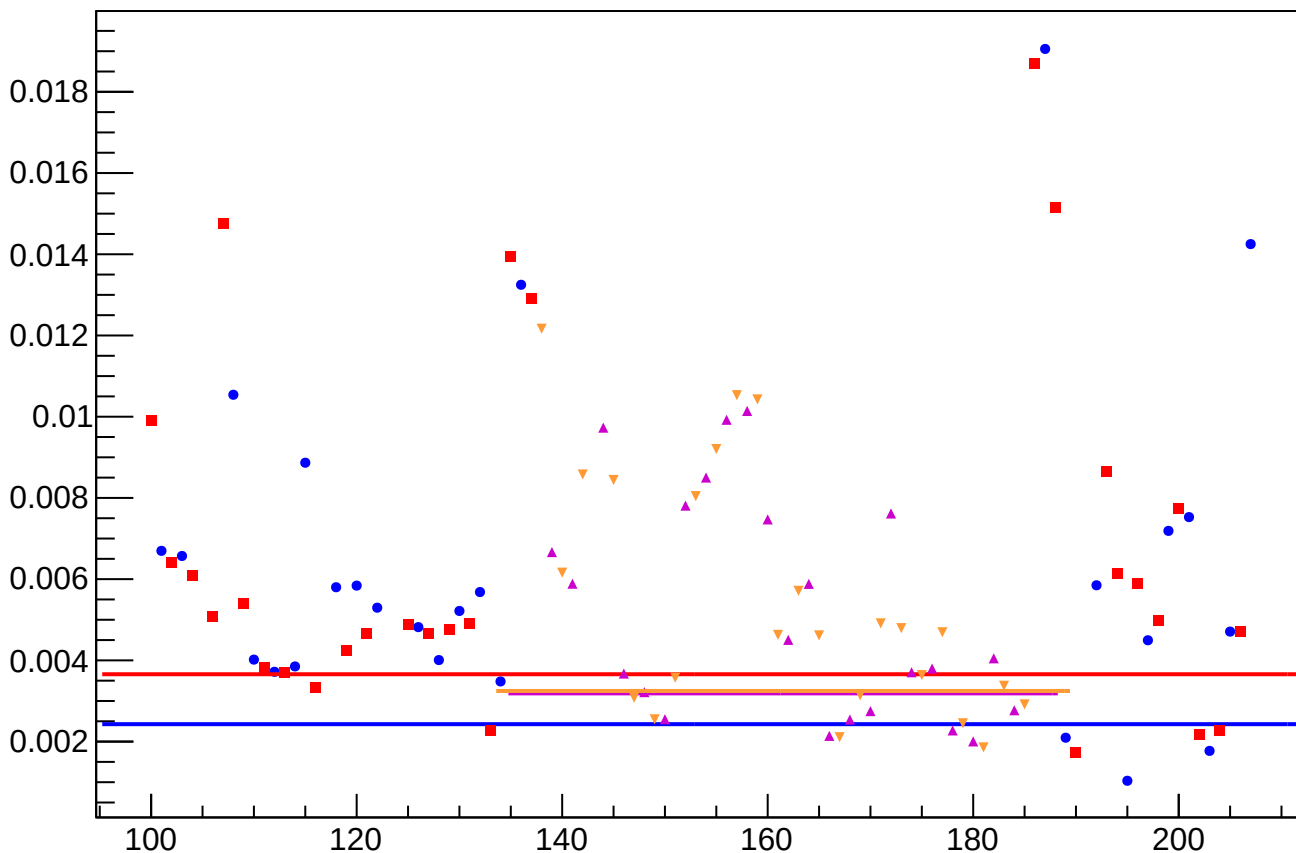
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 11.0/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 96.0/49

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 135.1/101

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 39.0/51

asym\_us\_dd\_atlr\_dd\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 11956008.8/25

Left Out: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 7736973.1/23

Right Out: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 7237083.3/28

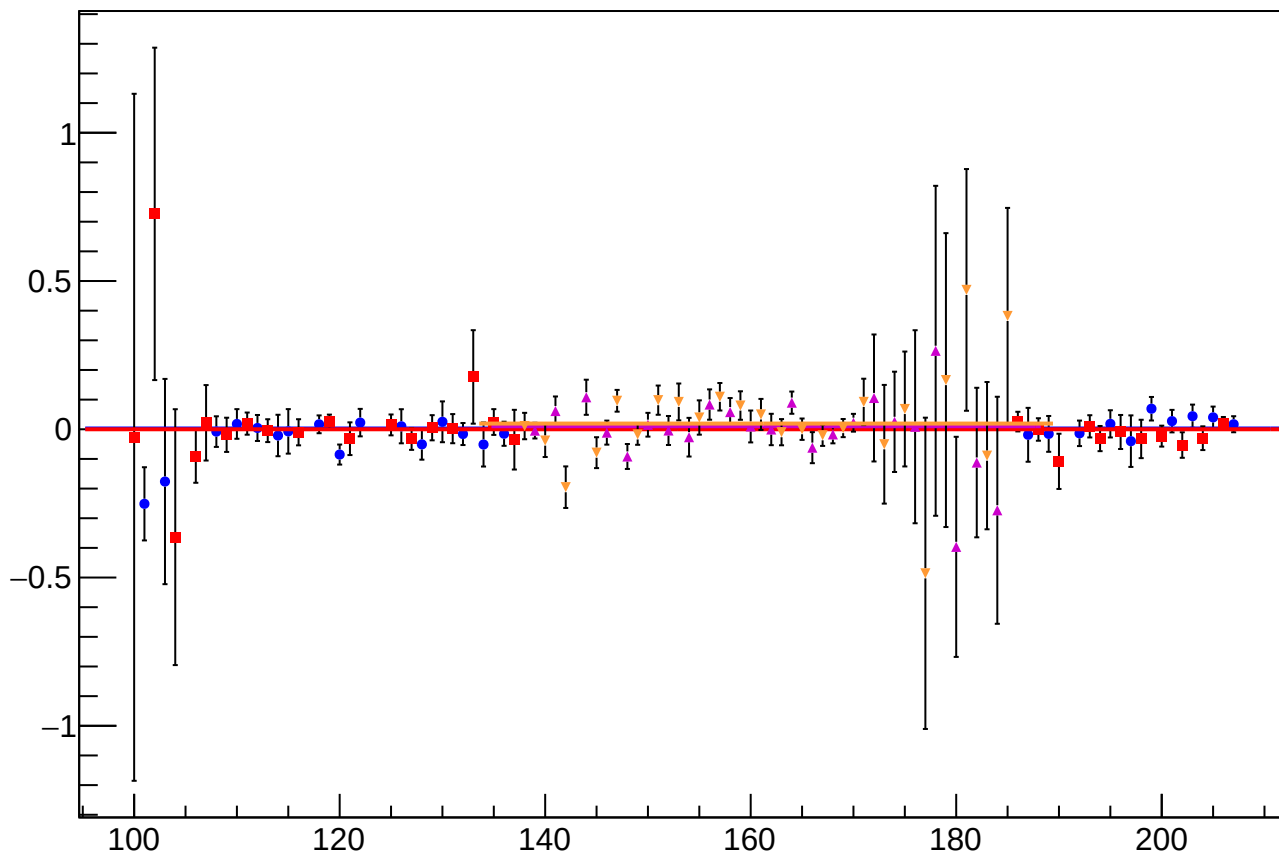
Left In: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 7301771.9/22

+ sign 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 20581739.1/49

All: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 36016199.6/101

- sign 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 14767446.8/51

asym\_us\_dd\_atlr\_dd\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.003 \pm 0.009$   $\chi^2/\text{NDF}$ : 20.5/25

Left Out:  $0.019 \pm 0.011$   $\chi^2/\text{NDF}$ : 35.9/23

Right Out:  $0.000 \pm 0.008$   $\chi^2/\text{NDF}$ : 14.2/28

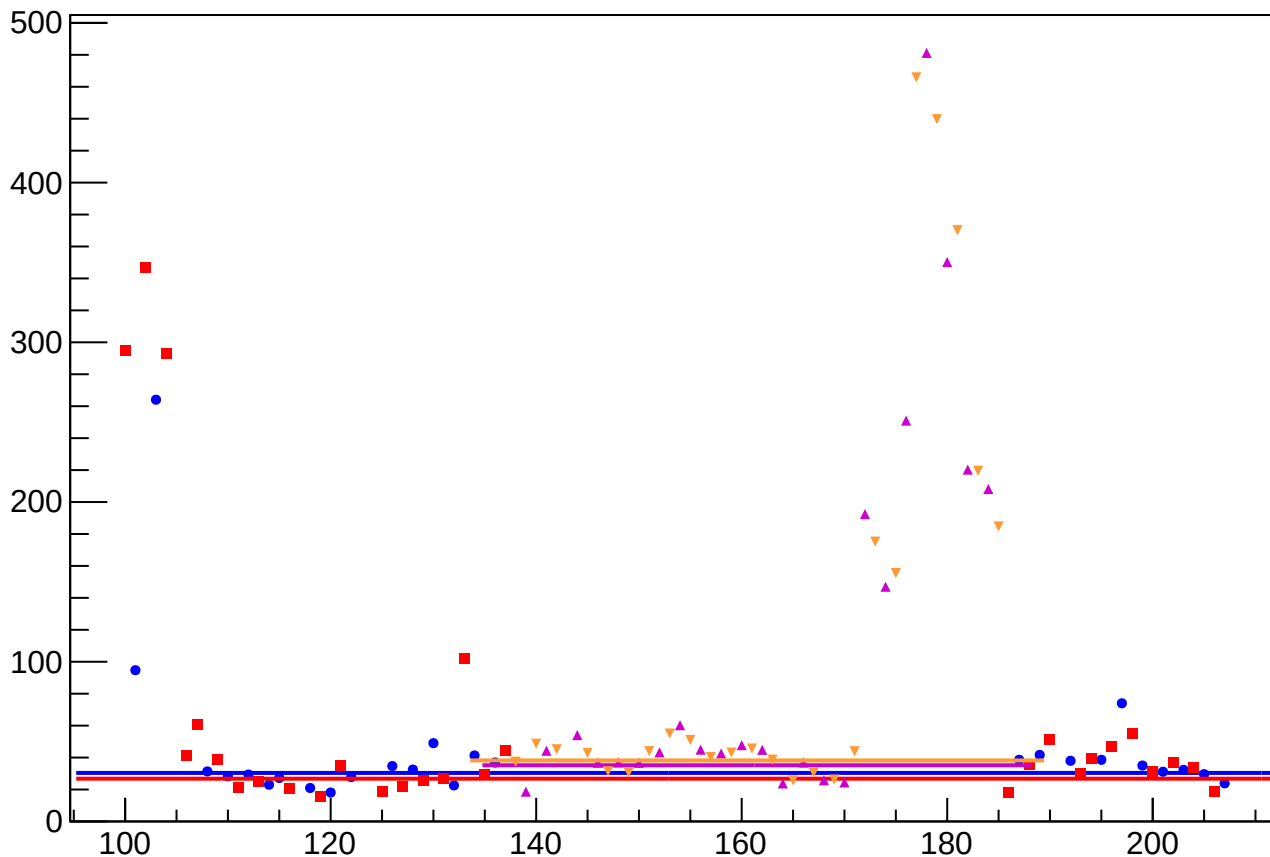
Left In:  $0.010 \pm 0.010$   $\chi^2/\text{NDF}$ : 23.6/22

+ sign  $0.009 \pm 0.007$   $\chi^2/\text{NDF}$ : 57.8/49

All:  $0.006 \pm 0.005$   $\chi^2/\text{NDF}$ : 96.6/101

- sign  $0.004 \pm 0.006$   $\chi^2/\text{NDF}$ : 38.5/51

asym\_us\_dd\_atlr\_dd\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 30.388 $\pm$ 0.006  $\chi^2$ /NDF: 3162738.6/25

Left Out: 38.210 $\pm$ 0.008  $\chi^2$ /NDF: 8285200.7/23

Right Out: 26.782 $\pm$ 0.006  $\chi^2$ /NDF: 4696805.9/28

Left In: 35.195 $\pm$ 0.007  $\chi^2$ /NDF: 9391361.4/22

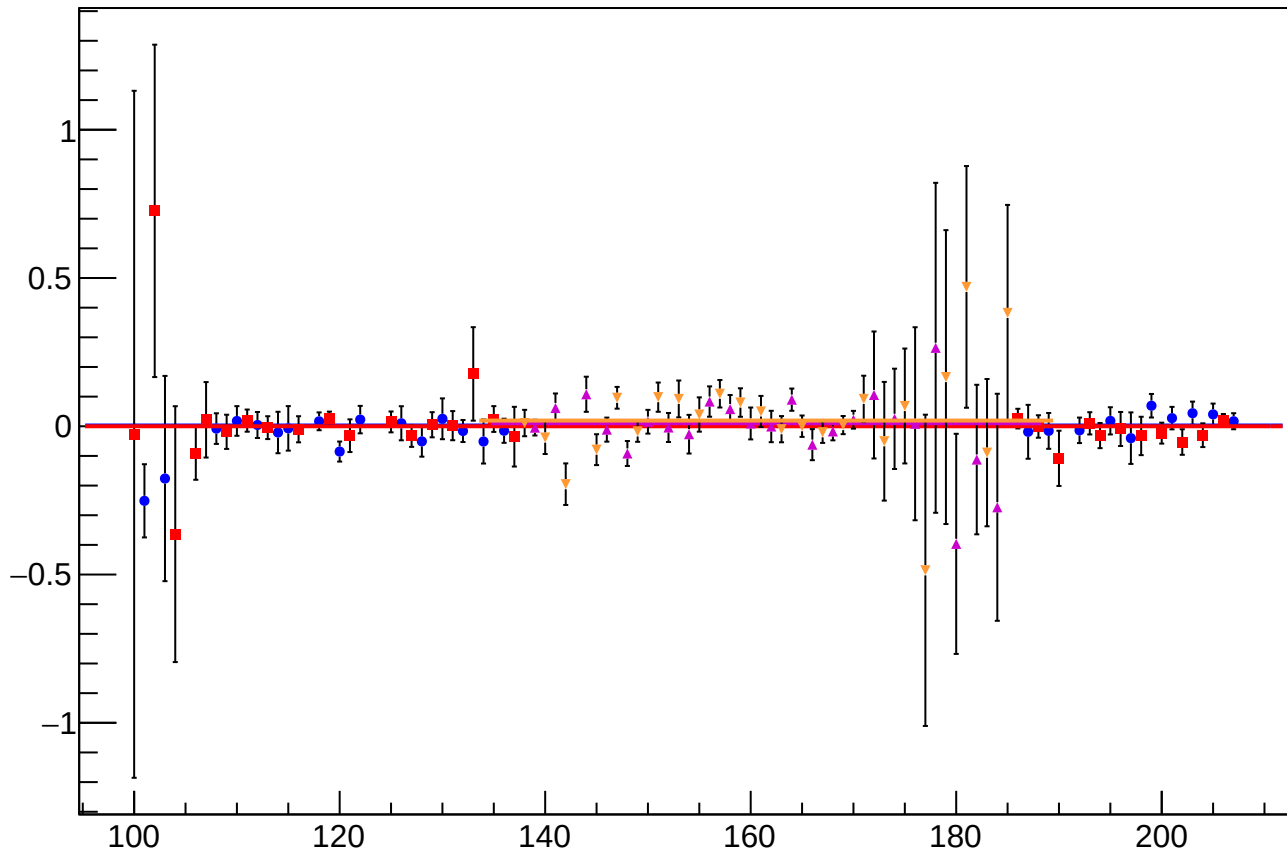
+ sign 33.605 $\pm$ 0.005  $\chi^2$ /NDF: 12064791.6/49

All: 31.644 $\pm$ 0.003  $\chi^2$ /NDF: 27277548.4/101

- sign 29.999 $\pm$ 0.004  $\chi^2$ /NDF: 14918201.1/51



asym\_us\_dd\_atlr\_dd\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.003 $\pm$ 0.009  $\chi^2$ /NDF: 20.5/25

Left Out: 0.019 $\pm$ 0.011  $\chi^2$ /NDF: 35.9/23

Right Out: 0.000 $\pm$ 0.008  $\chi^2$ /NDF: 14.2/28

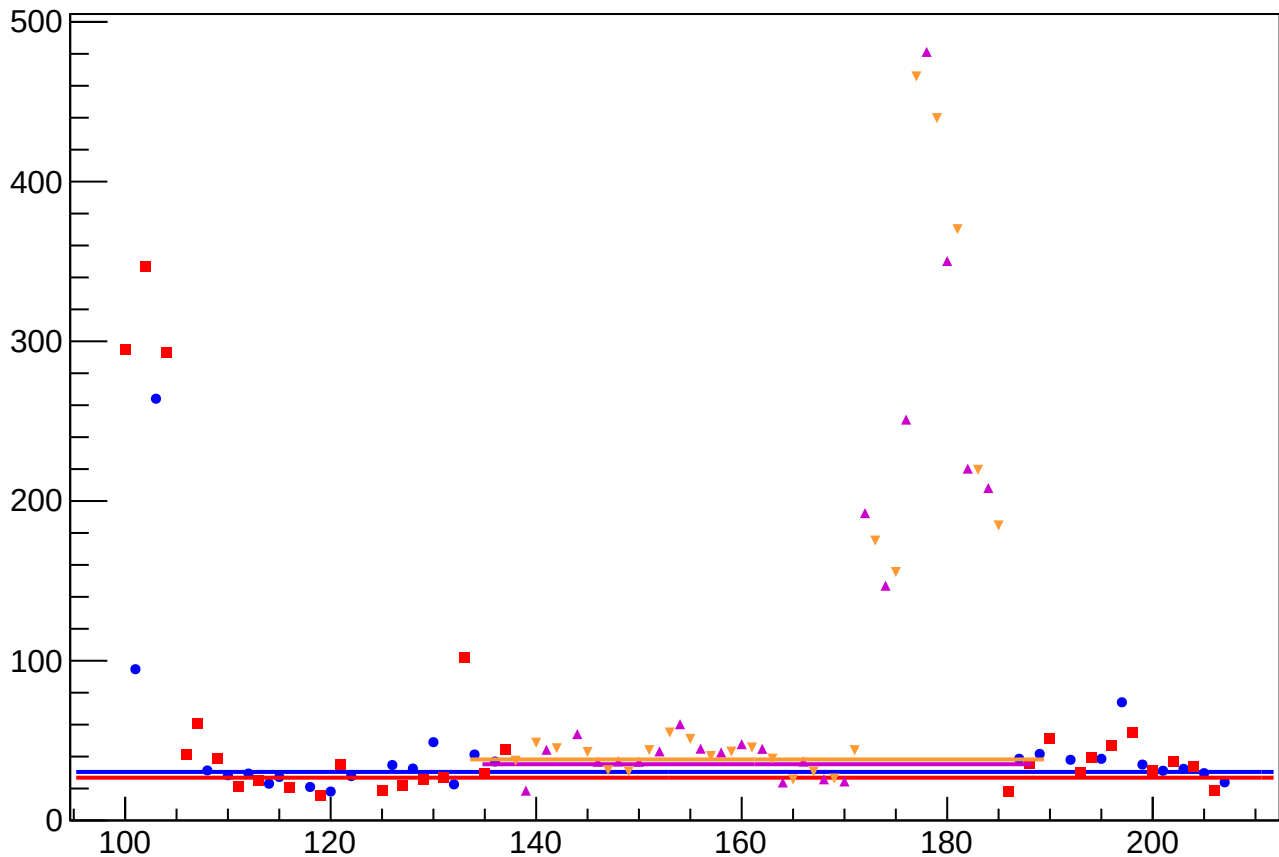
Left In: 0.010 $\pm$ 0.010  $\chi^2$ /NDF: 23.6/22

+ sign 0.009 $\pm$ 0.007  $\chi^2$ /NDF: 57.8/49

All: 0.006 $\pm$ 0.005  $\chi^2$ /NDF: 96.6/101

- sign 0.004 $\pm$ 0.006  $\chi^2$ /NDF: 38.5/51

asym\_us\_dd\_atlr\_dd\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 30.388 $\pm$ 0.006  $\chi^2$ /NDF: 3162738.6/25

Left Out: 38.210 $\pm$ 0.008  $\chi^2$ /NDF: 8285200.7/23

Right Out: 26.782 $\pm$ 0.006  $\chi^2$ /NDF: 4696805.9/28

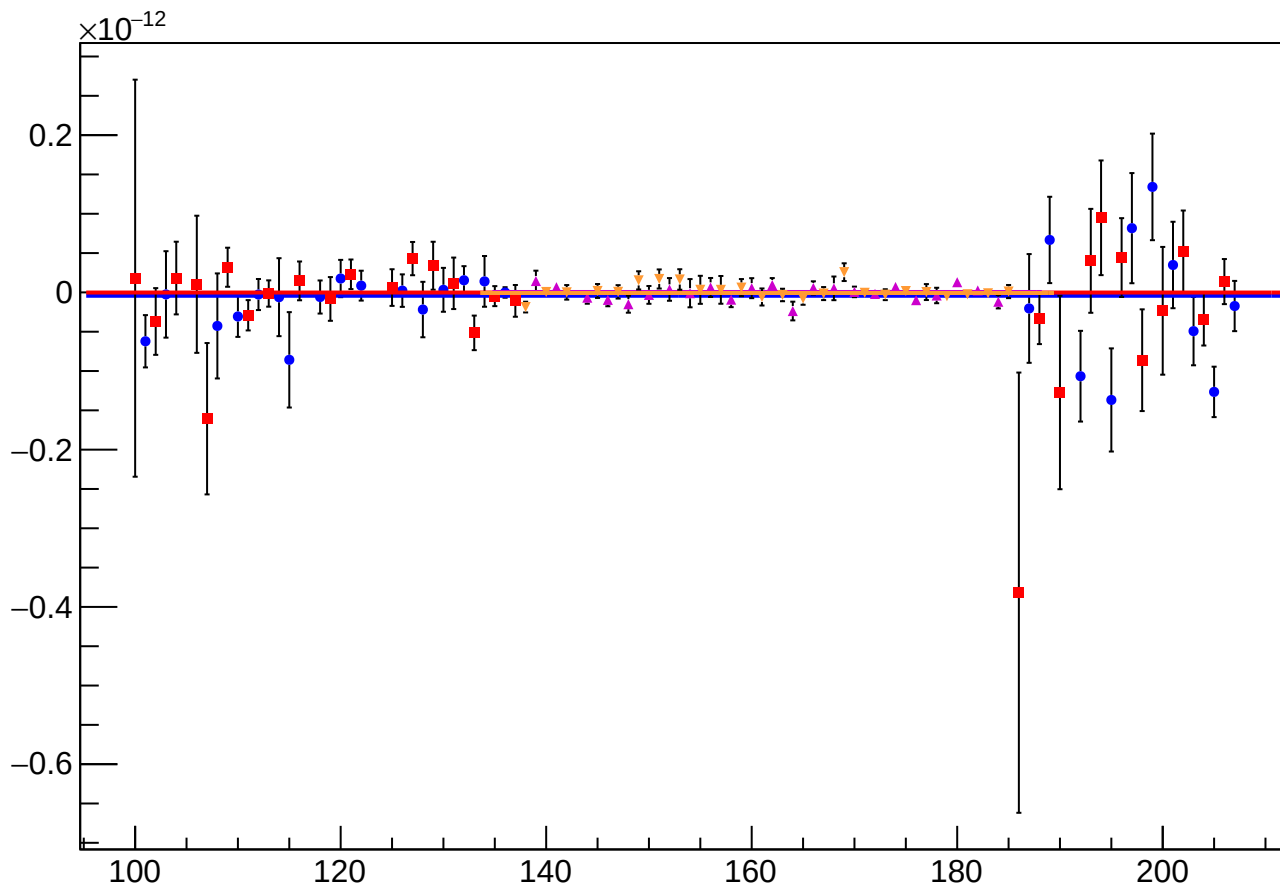
Left In: 35.195 $\pm$ 0.007  $\chi^2$ /NDF: 9391361.4/22

+ sign 33.605 $\pm$ 0.005  $\chi^2$ /NDF: 12064791.6/49

All: 31.644 $\pm$ 0.003  $\chi^2$ /NDF: 27277548.4/101

- sign 29.999 $\pm$ 0.004  $\chi^2$ /NDF: 14918201.1/51

asym\_us\_dd\_atlr\_dd\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2$ /NDF: 40.8/25

Left Out: -0.000+/-0.000  $\chi^2$ /NDF:21.1/23

Right Out: -0.000+/-0.000  $\chi^2$ /NDF: 32.0/28

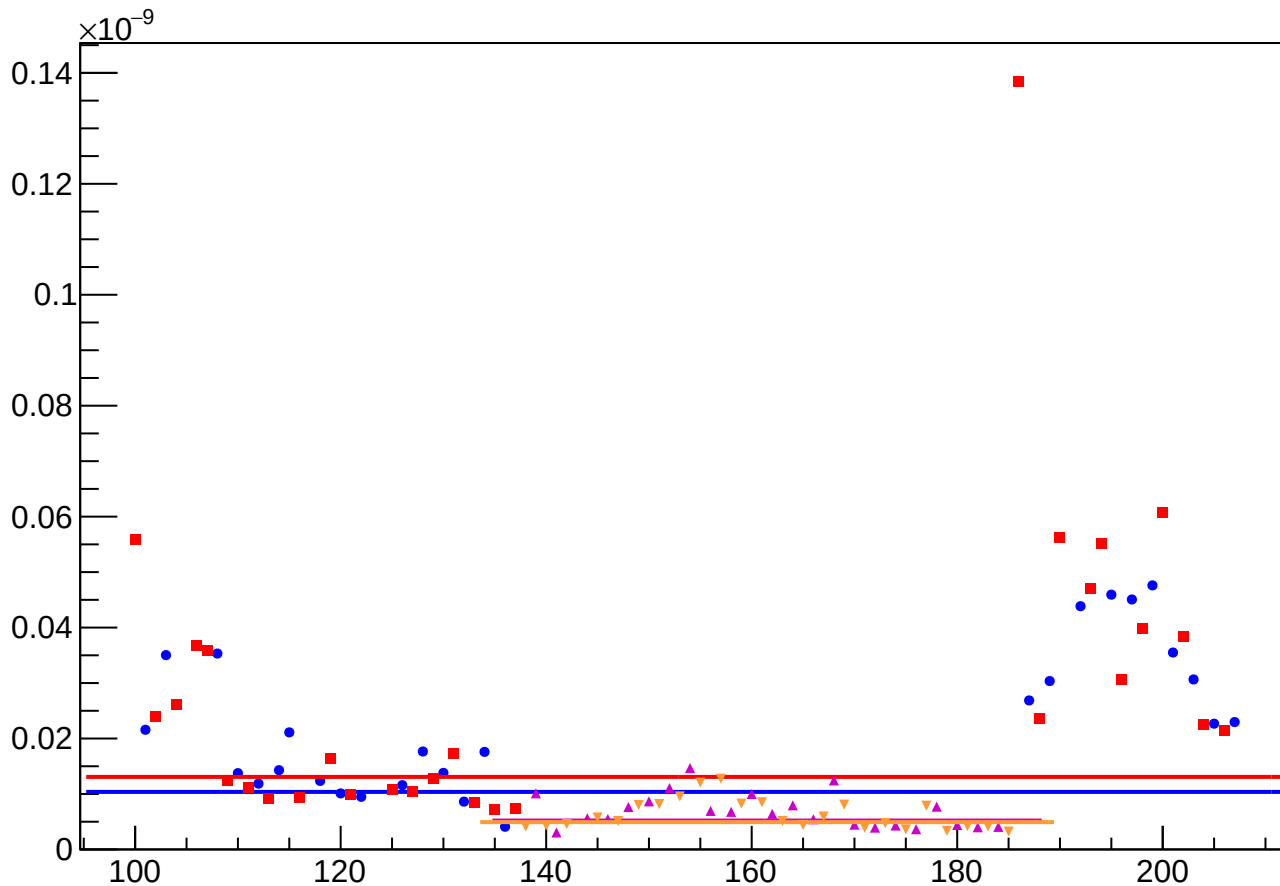
Left In: 0.000+/-0.000  $\chi^2$ /NDF:26.2/22

+ sign -0.000+/-0.000  $\chi^2$ /NDF: 62.4/49

All: -0.000+/-0.000  $\chi^2$ /NDF: 121.2/101

- sign 0.000+/-0.000  $\chi^2$ /NDF: 58.2/51

asym\_us\_dd\_atlr\_dd\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7247278.2/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2632036.7/23

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5743302.4/28

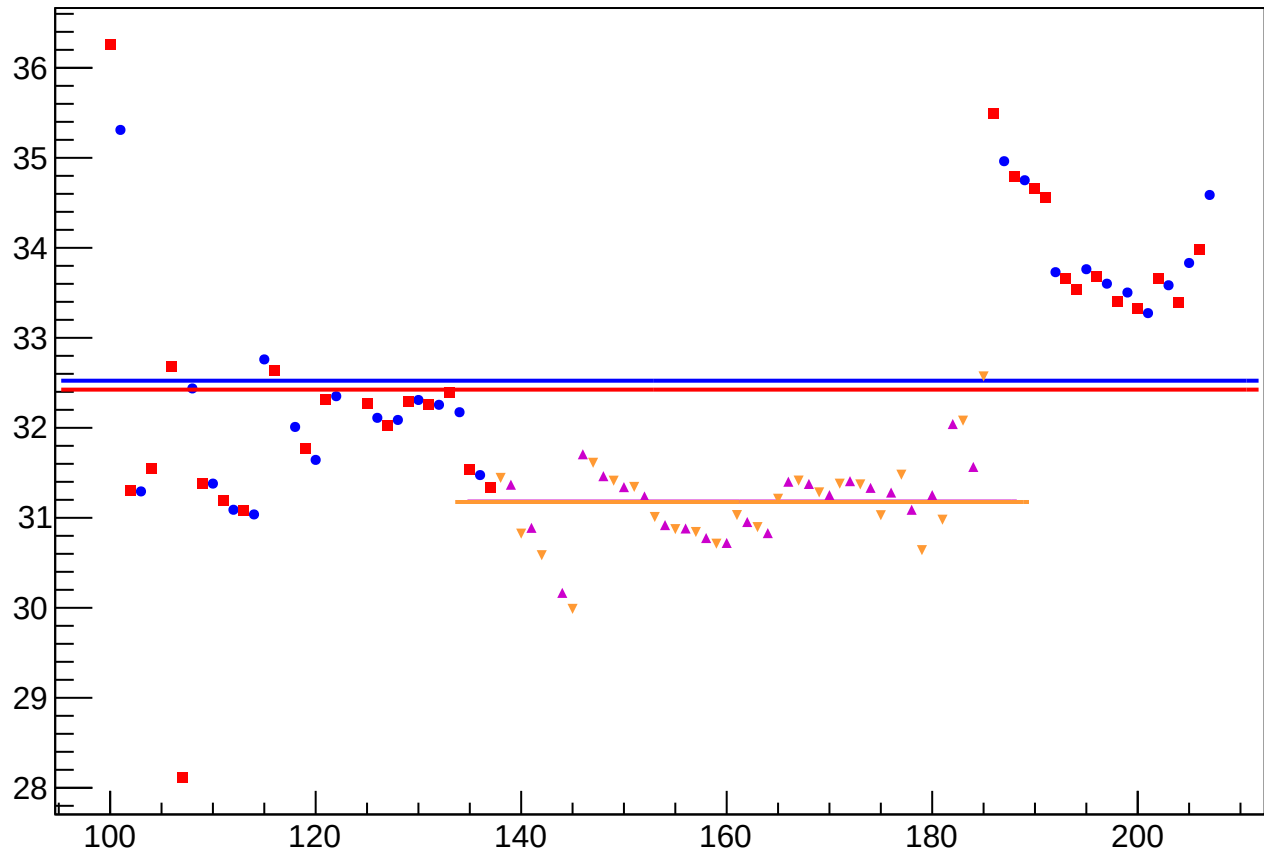
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3449719.7/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12431408.8/49

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 25795895.9/101

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13291396.4/51

# yield\_usl\_mean vs Slug



Right In: 32.524 $\pm$ 0.000  $\chi^2$ /NDF: 2186641134.8/25

Left Out: 31.176 $\pm$ 0.000  $\chi^2$ /NDF: 529824418.6/23

Right Out: 32.424 $\pm$ 0.000  $\chi^2$ /NDF: 2005075442.2/29

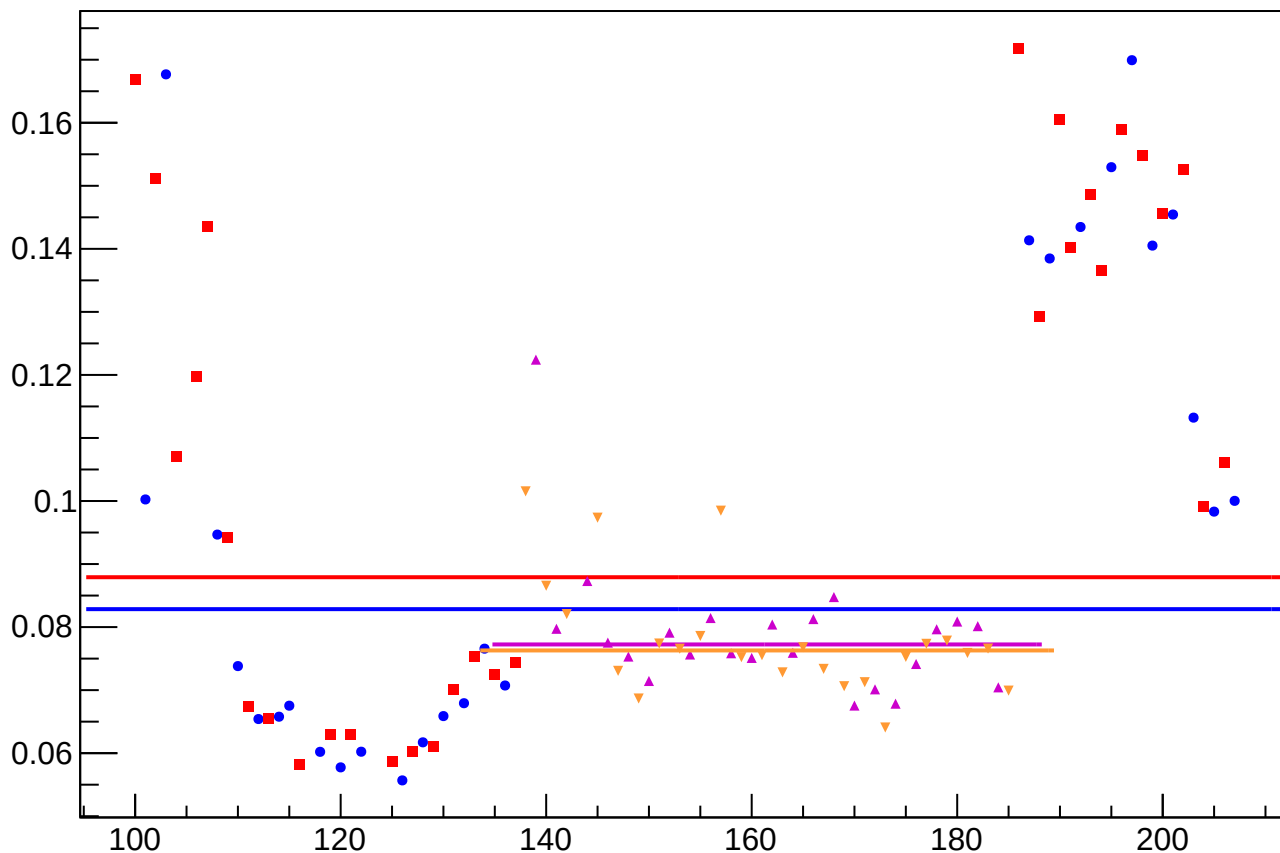
Left In: 31.181 $\pm$ 0.000  $\chi^2$ /NDF: 376263410.1/22

+ sign 31.694 $\pm$ 0.000  $\chi^2$ /NDF: 4727022459.4/49

All: 31.677 $\pm$ 0.000  $\chi^2$ /NDF: 8757604755.3/100

- sign 31.659 $\pm$ 0.000  $\chi^2$ /NDF: 4027705598.9/52

# yield\_usl\_rms vs Slug



Right In: 0.083+/-0.000  $\chi^2/\text{NDF}$ : 3395442.6/25

Left Out: 0.076+/-0.000  $\chi^2/\text{NDF}$ : 356697.3/23

Right Out: 0.088+/-0.000  $\chi^2/\text{NDF}$ : 3939244.9/29

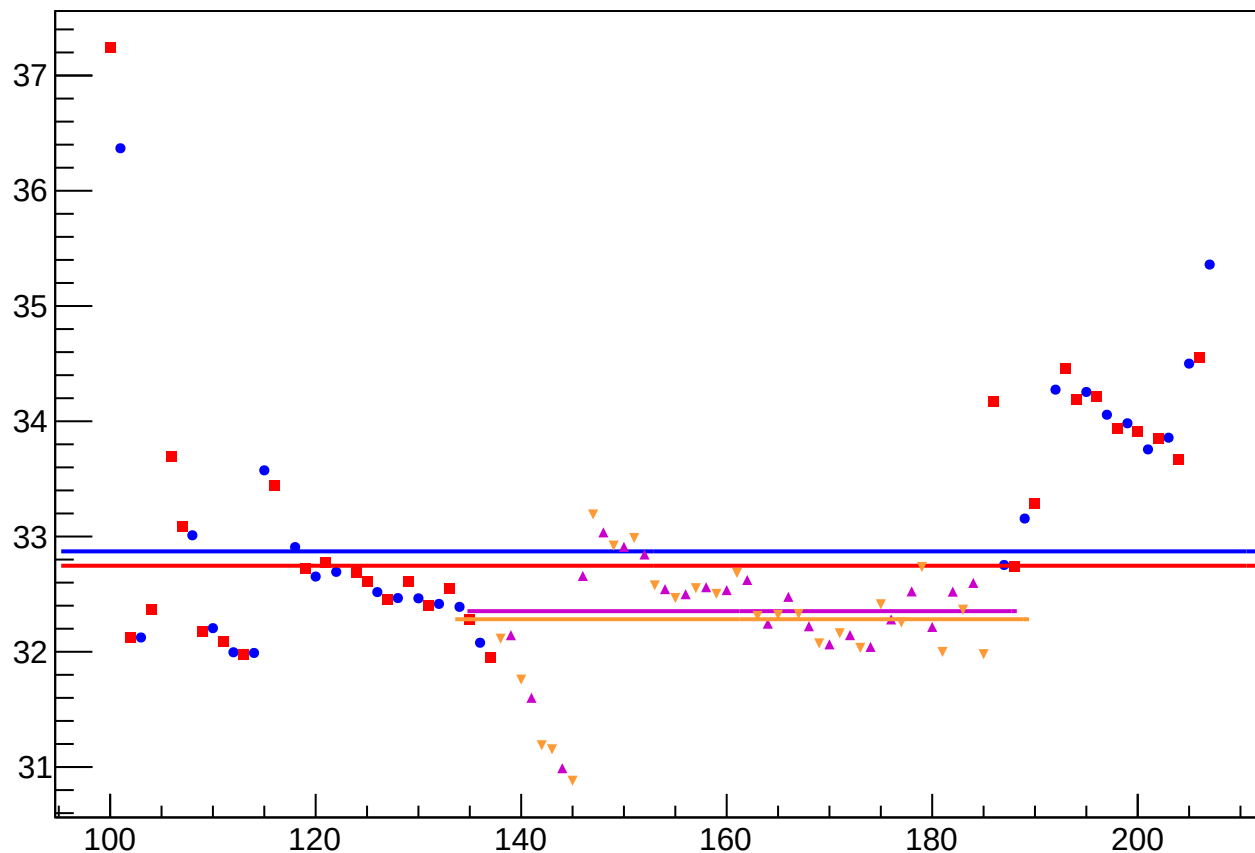
Left In: 0.077+/-0.000  $\chi^2/\text{NDF}$ : 365206.5/22

+ sign 0.079+/-0.000  $\chi^2/\text{NDF}$ : 3847122.7/49

All: 0.080+/-0.000  $\chi^2/\text{NDF}$ : 8423064.9/102

- sign 0.081+/-0.000  $\chi^2/\text{NDF}$ : 4546591.9/52

# yield\_usr\_mean vs Slug



Right In: 32.871+/-0.000  $\chi^2$ /NDF: 1122952461.1/25

Left Out: 32.282+/-0.000  $\chi^2$ /NDF: 838959313.2/24

Right Out: 32.747+/-0.000  $\chi^2$ /NDF: 529551502.6/29

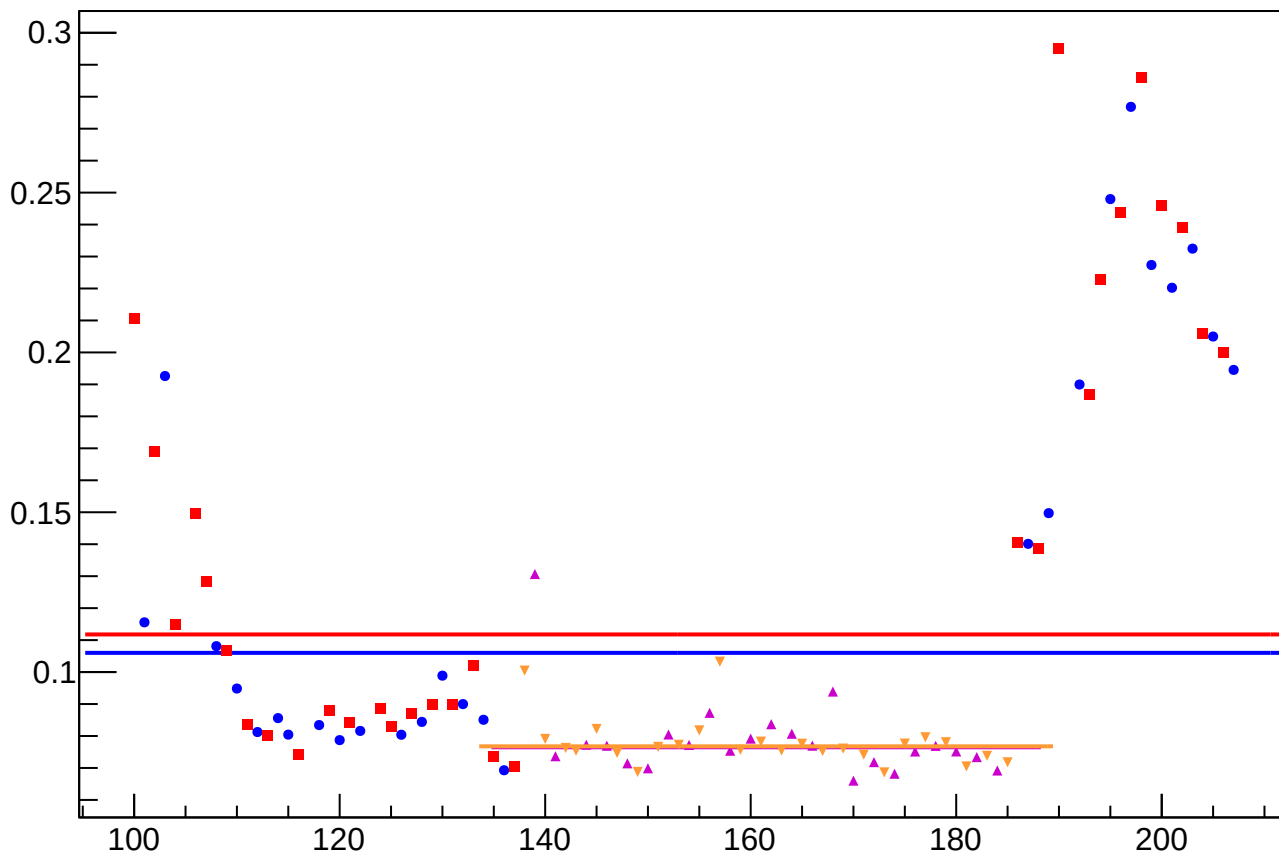
Left In: 32.353+/-0.000  $\chi^2$ /NDF: 589893462.0/22

+ sign 32.431+/-0.000  $\chi^2$ /NDF: 2224423669.9/50

All: 32.442+/-0.000  $\chi^2$ /NDF: 3459844824.6/100

- sign 32.454+/-0.000  $\chi^2$ /NDF: 1234391137.9/52

# yield\_usr\_rms vs Slug



Right In: 0.106 $\pm$ 0.000  $\chi^2$ /NDF: 4994956.4/25

Left Out: 0.077 $\pm$ 0.000  $\chi^2$ /NDF:250795.7/24

Right Out: 0.112 $\pm$ 0.000  $\chi^2$ /NDF: 5163159.9/29

Left In: 0.076 $\pm$ 0.000  $\chi^2$ /NDF:482593.3/22

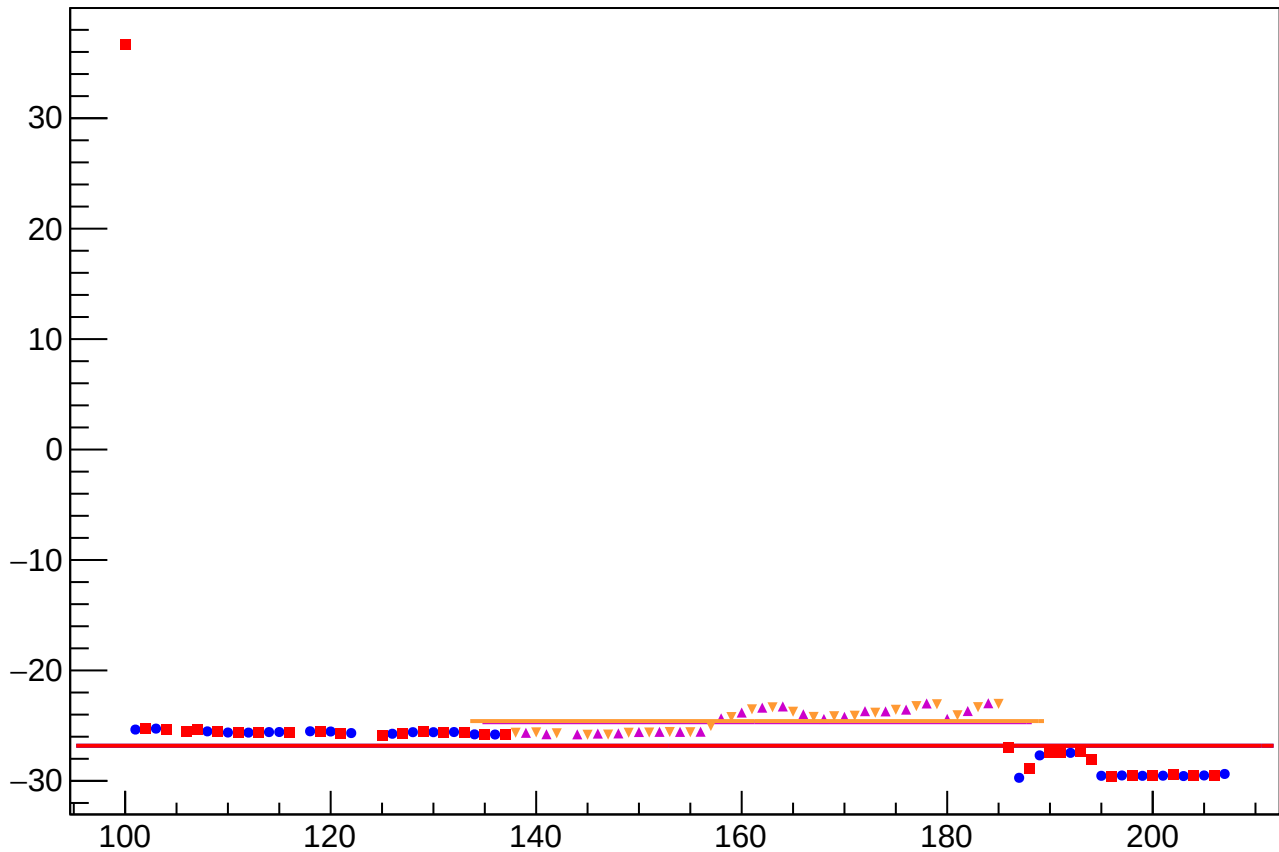
+ sign 0.084 $\pm$ 0.000  $\chi^2$ /NDF: 6541111.5/50

All: 0.085 $\pm$ 0.000  $\chi^2$ /NDF: 14040501.6/103

- sign 0.086 $\pm$ 0.000  $\chi^2$ /NDF: 7491660.1/52



# yield\_dsl\_mean vs Slug



Right In:  $-26.821 \pm 0.000$   $\chi^2/\text{NDF}: 19389283304.6/25$

Left Out:  $-24.587 \pm 0.000$   $\chi^2/\text{NDF}: 9182387434.6/23$

Right Out:  $-26.817 \pm 0.000$   $\chi^2/\text{NDF}: 27859199827.2/29$

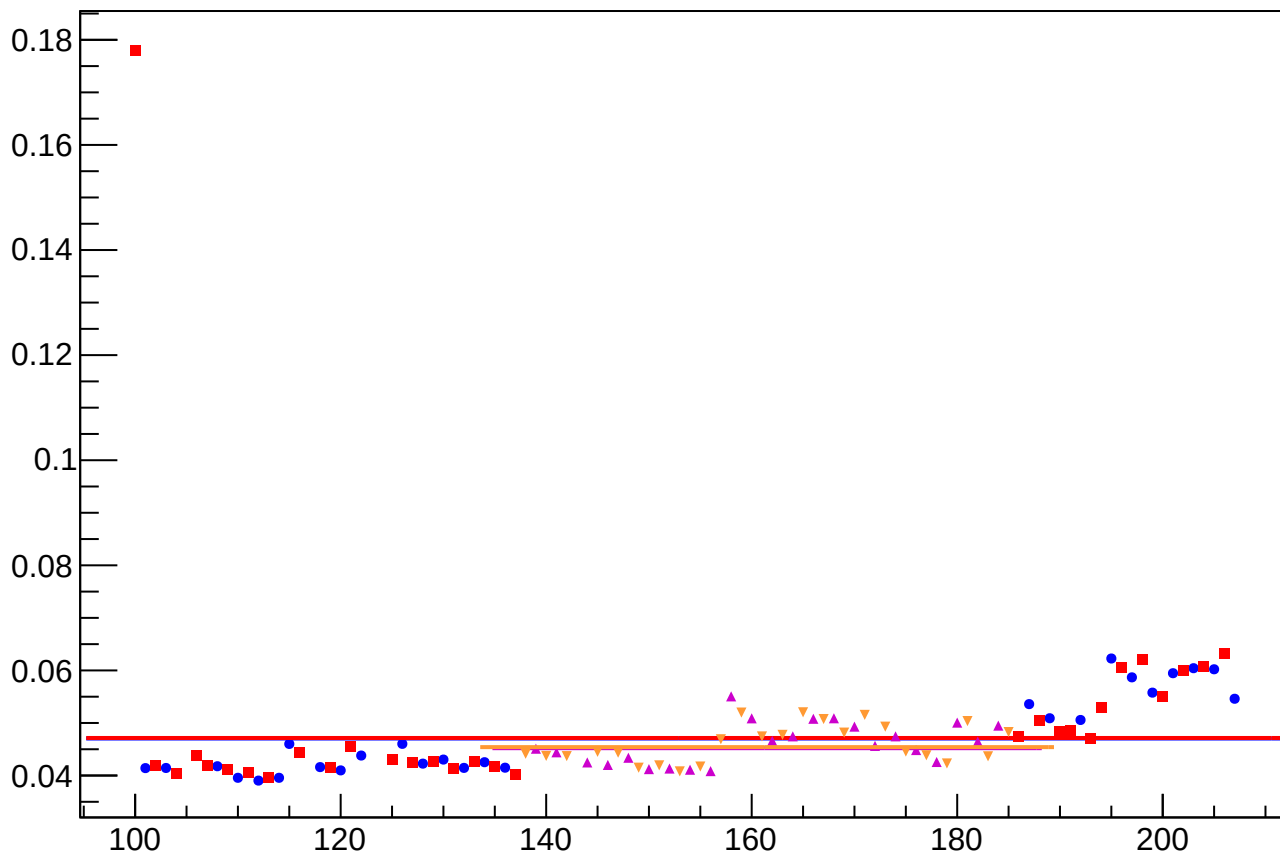
Left In:  $-24.689 \pm 0.000$   $\chi^2/\text{NDF}: 8820957974.3/22$

+ sign  $-25.534 \pm 0.000$   $\chi^2/\text{NDF}: 47044592709.8/49$

All:  $-25.585 \pm 0.000$   $\chi^2/\text{NDF}: 101337063833$

- sign  $-25.634 \pm 0.000$   $\chi^2/\text{NDF}: 54215255142.2/52$

# yield\_dsl\_rms vs Slug



Right In: 0.047+/-0.000  $\chi^2/\text{NDF}$ : 736749.8/25

Left Out: 0.045+/-0.000  $\chi^2/\text{NDF}$ : 205535.7/23

Right Out: 0.047+/-0.000  $\chi^2/\text{NDF}$ : 843336.9/29

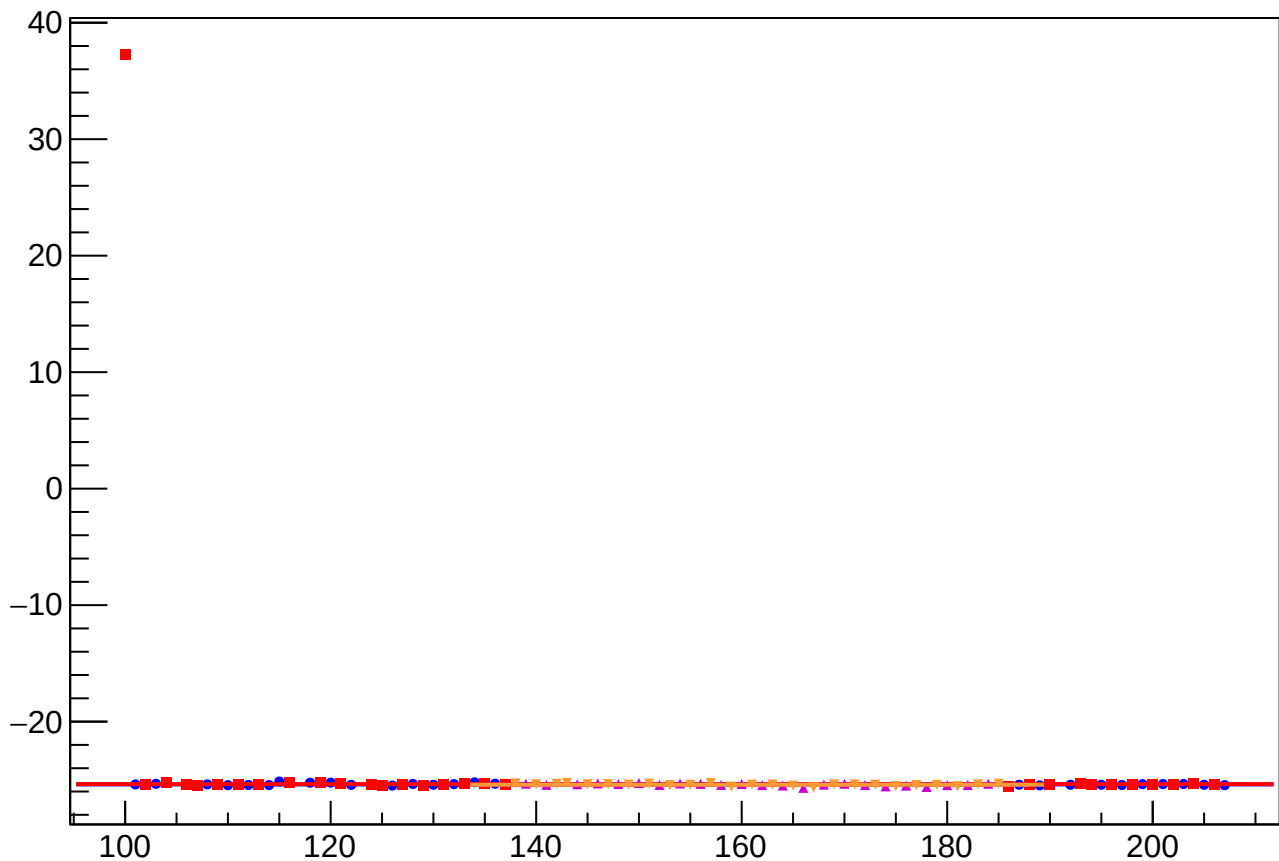
Left In: 0.045+/-0.000  $\chi^2/\text{NDF}$ : 244675.5/22

+ sign 0.046+/-0.000  $\chi^2/\text{NDF}$ : 962217.8/49

All: 0.046+/-0.000  $\chi^2/\text{NDF}$ : 2079464.2/102

- sign 0.046+/-0.000  $\chi^2/\text{NDF}$ : 1117229.7/52

yield\_dsr\_mean vs Slug



Right In: -25.390 $\pm$ 0.000  $\chi^2$ /NDF: 21069227.6/25

Left Out: -25.417 $\pm$ 0.000  $\chi^2$ /NDF: 52213098.9/24

Right Out: -25.367 $\pm$ 0.000  $\chi^2$ /NDF: 6331886386.3/29

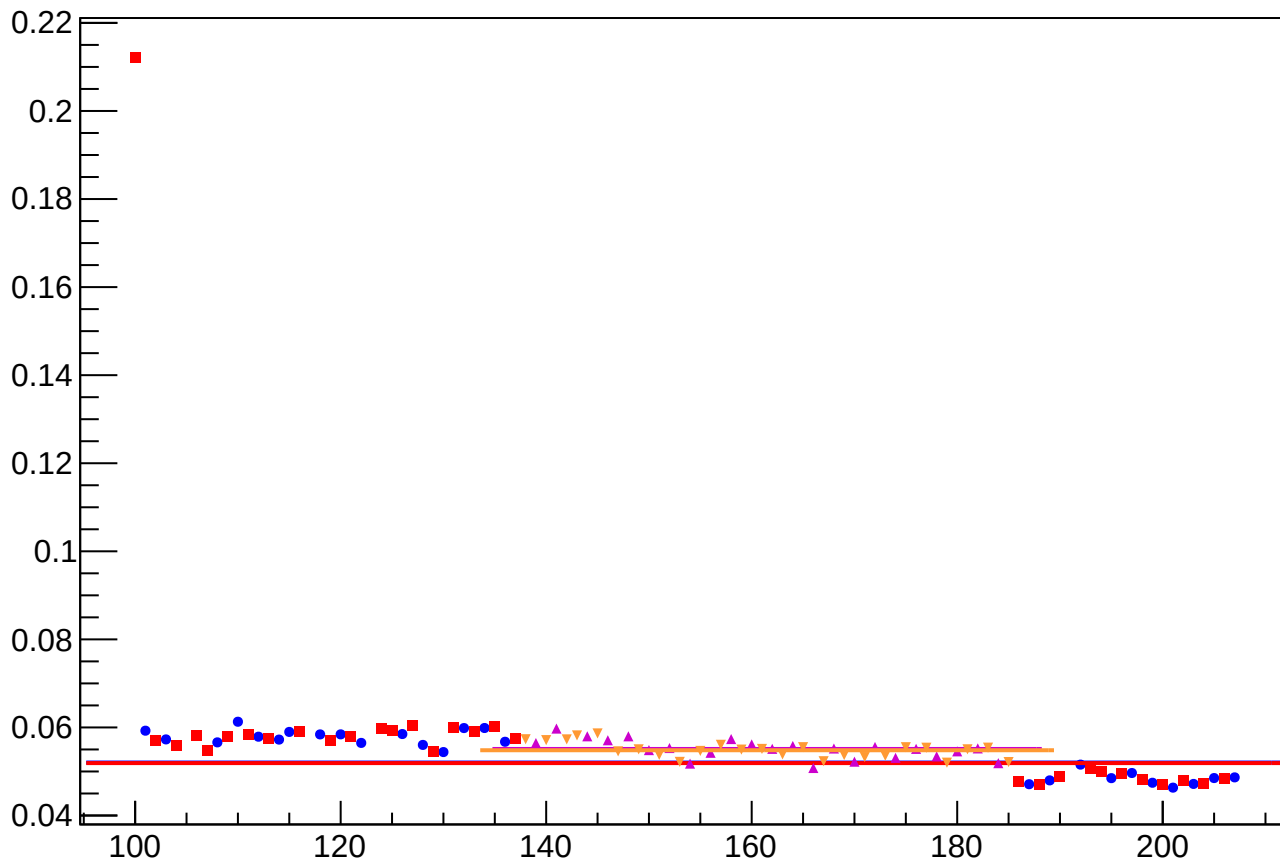
Left In: -25.414 $\pm$ 0.000  $\chi^2$ /NDF: 55851916.1/22

+ sign -25.404 $\pm$ 0.000  $\chi^2$ /NDF: 75342207.0/50

All: -25.398 $\pm$ 0.000  $\chi^2$ /NDF: 6470527922.9/100

- sign -25.391 $\pm$ 0.000  $\chi^2$ /NDF: 6394114914.7/52

# yield\_dsr\_rms vs Slug



Right In: 0.052 $\pm$ 0.000  $\chi^2$ /NDF: 247598.2/25

Left Out: 0.055 $\pm$ 0.000  $\chi^2$ /NDF:38095.1/24

Right Out: 0.052 $\pm$ 0.000  $\chi^2$ /NDF: 352188.9/29

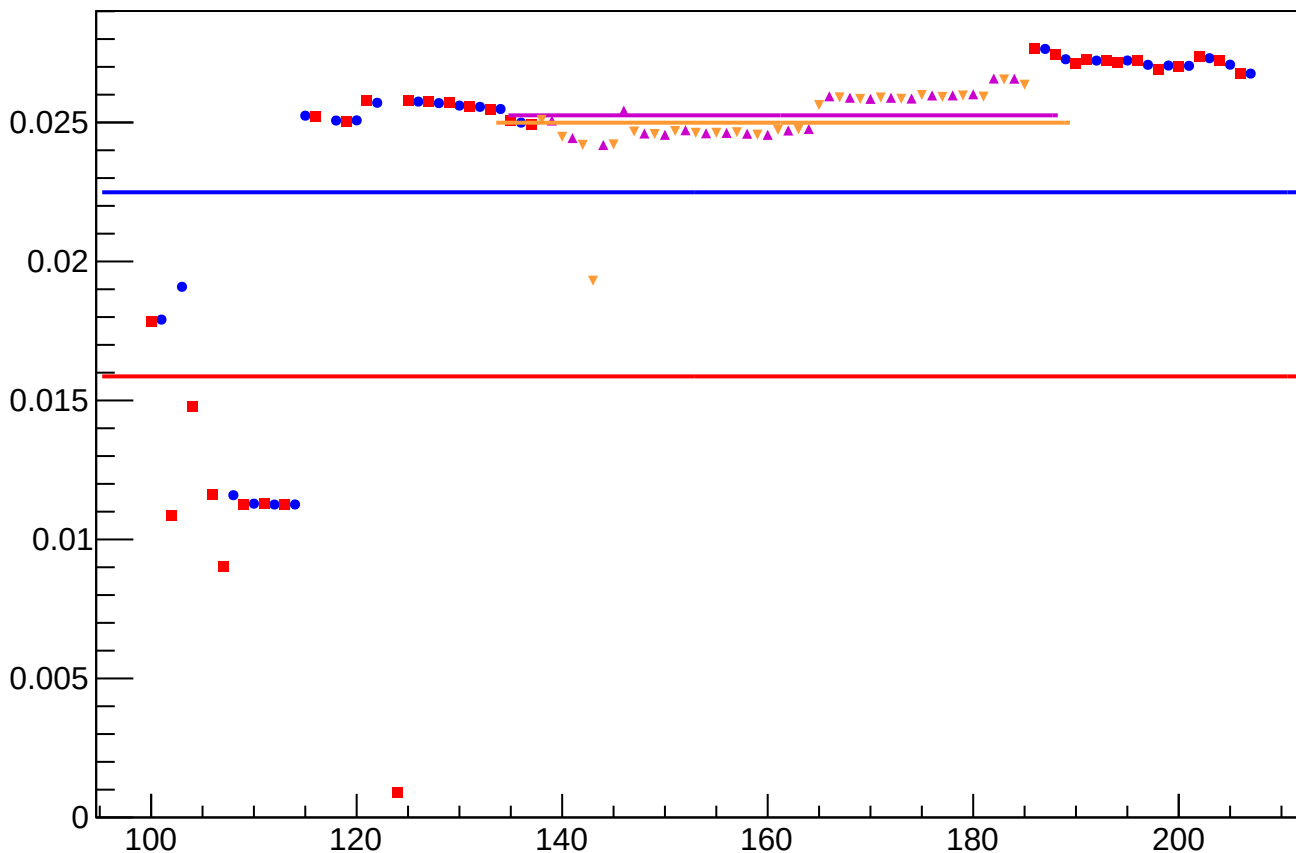
Left In: 0.055 $\pm$ 0.000  $\chi^2$ /NDF:51531.3/22

+ sign 0.054 $\pm$ 0.000  $\chi^2$ /NDF: 330531.2/50

All: 0.054 $\pm$ 0.000  $\chi^2$ /NDF: 794038.0/103

- sign 0.054 $\pm$ 0.000  $\chi^2$ /NDF: 463502.2/52

# yield\_atl1\_mean vs Slug



Right In: 0.022 $\pm$ 0.000  $\chi^2$ /NDF: 91152982714.1/25

Left Out: 0.025 $\pm$ 0.000  $\chi^2$ /NDF: 7880064969.5/24

Right Out: 0.016 $\pm$ 0.000  $\chi^2$ /NDF: 429639270604.0/30

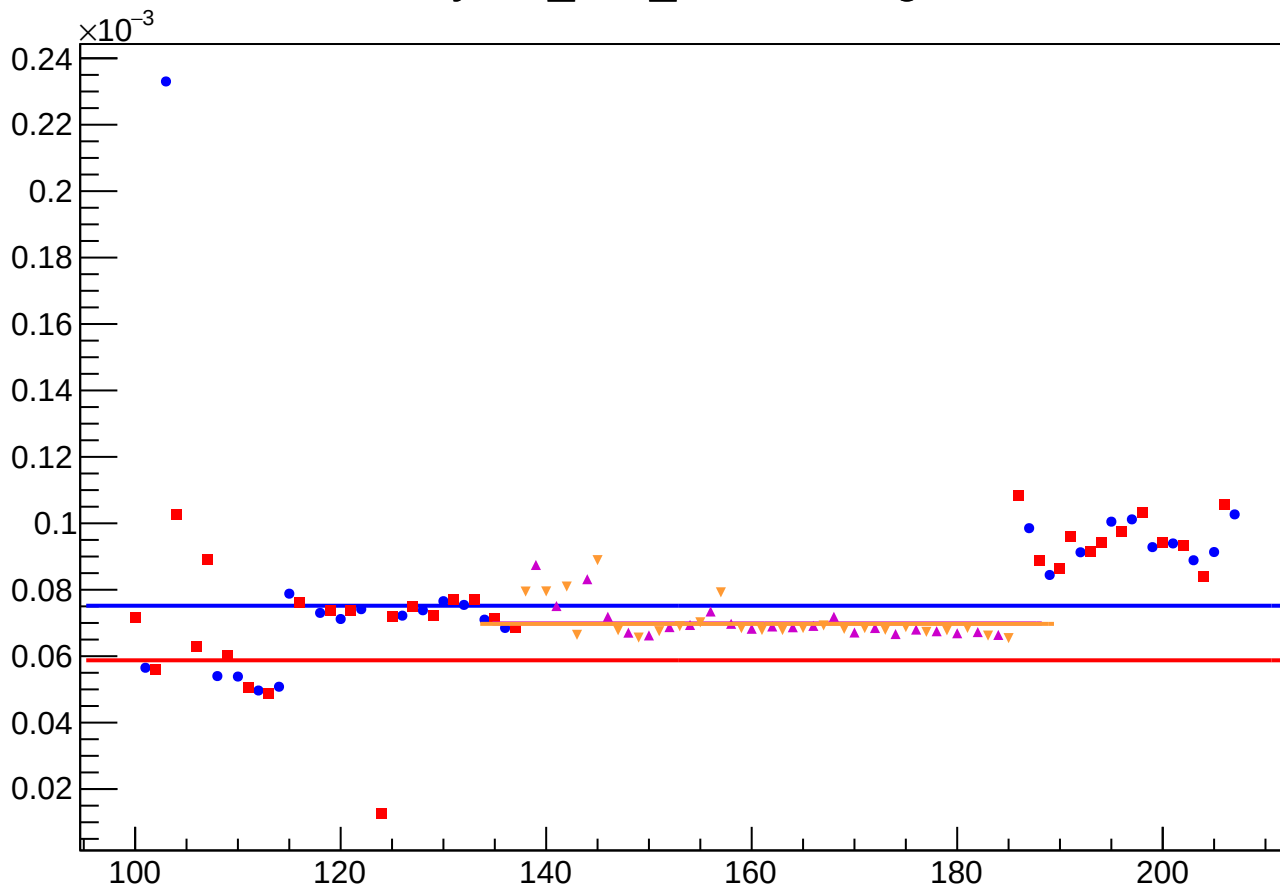
Left In: 0.025 $\pm$ 0.000  $\chi^2$ /NDF: 1884783780.3/22

+ sign 0.024 $\pm$ 0.000  $\chi^2$ /NDF: 108369464901.3/50

All: 0.022 $\pm$ 0.000  $\chi^2$ /NDF: 736189429680.2

- sign 0.021 $\pm$ 0.000  $\chi^2$ /NDF: 589927221194.2/53

# yield\_atl1\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 1801315.8/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:188211.8/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 7302844.6/30

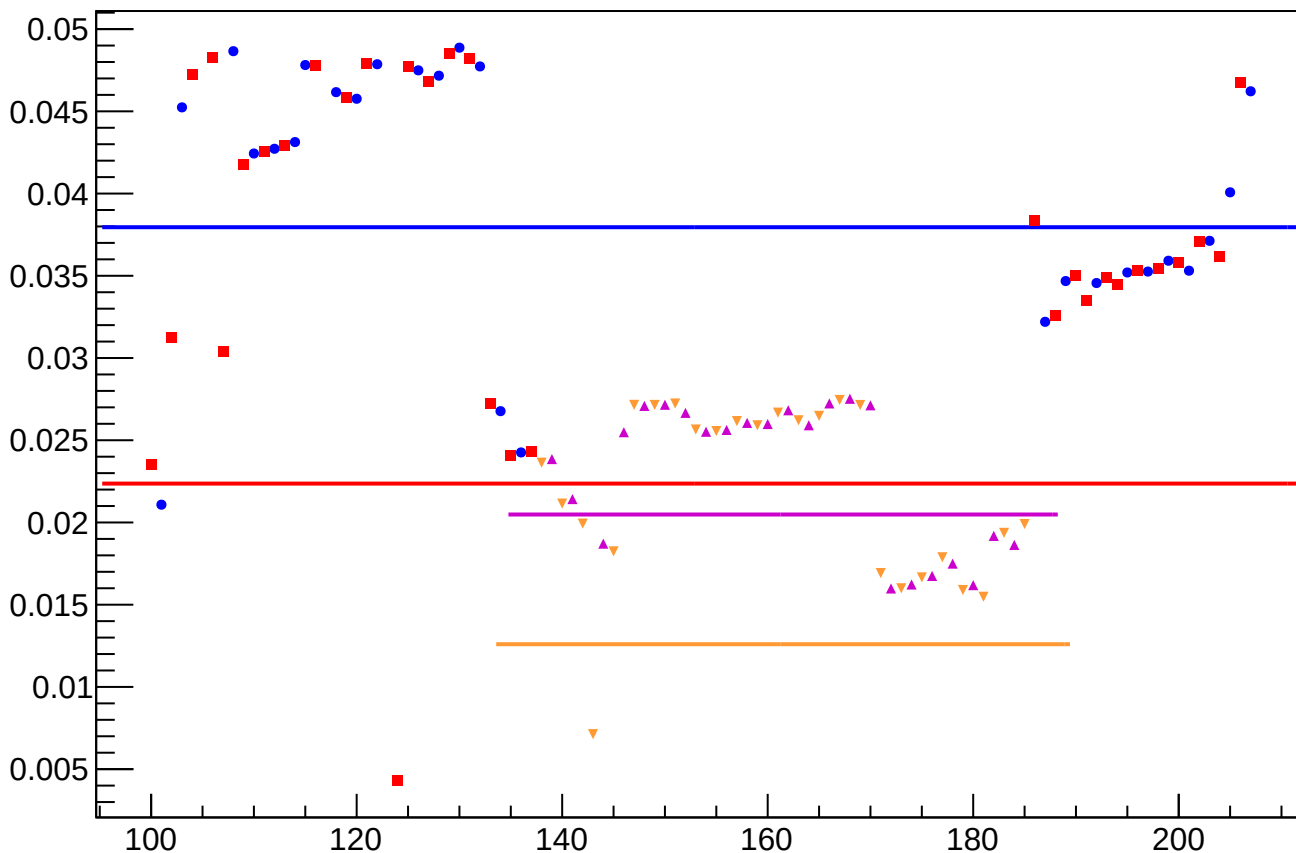
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:152421.9/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 2078431.2/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 10342005.2/104

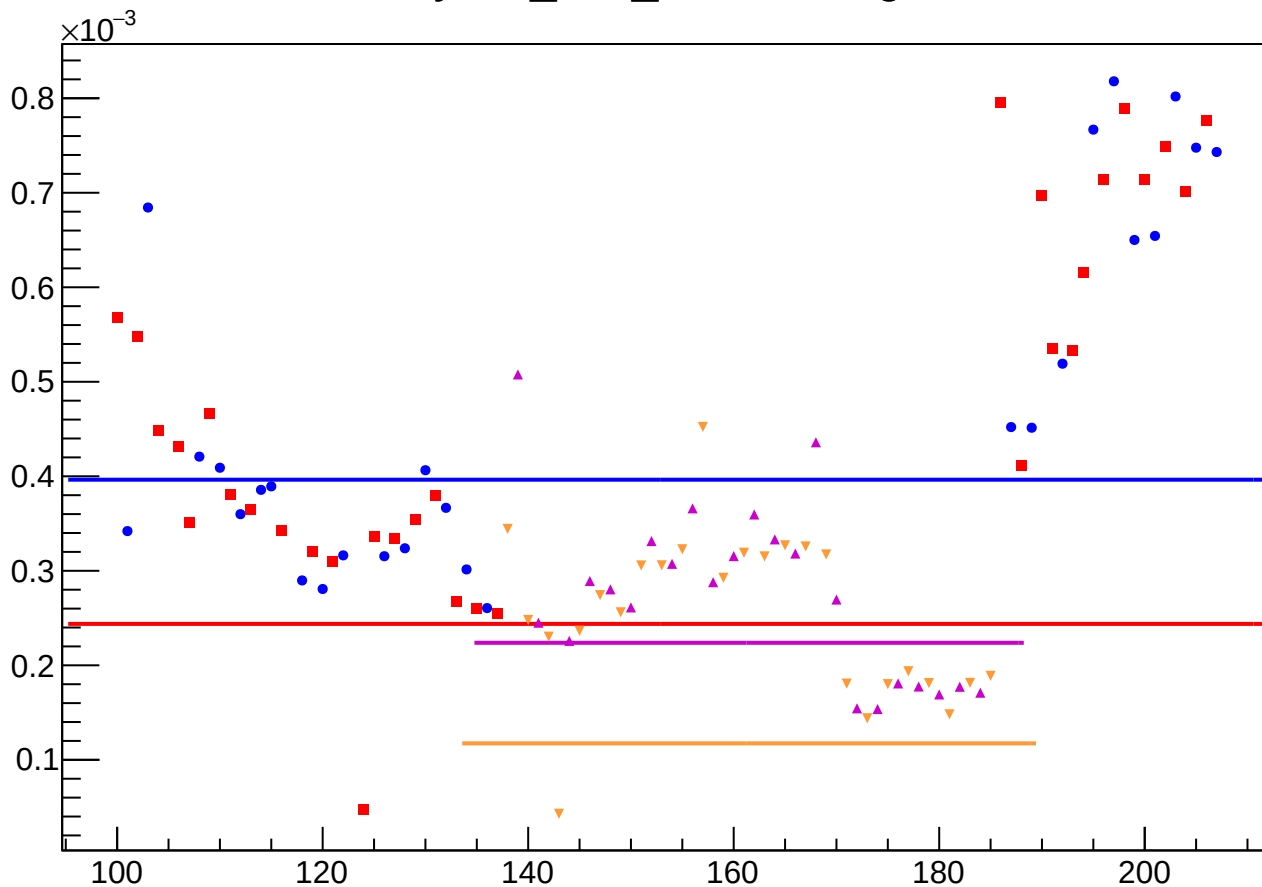
- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 7898718.9/53

# yield\_atl2\_mean vs Slug



|                              |                                 |                          |                                 |
|------------------------------|---------------------------------|--------------------------|---------------------------------|
| Right In: 0.038 $\pm$ 0.000  | $\chi^2$ /NDF: 7334277348.4/25  | + sign 0.015 $\pm$ 0.000 | $\chi^2$ /NDF: 89326395300.6/50 |
| Left Out: 0.013 $\pm$ 0.000  | $\chi^2$ /NDF: 37338500367.6/24 | All: 0.017 $\pm$ 0.000   | $\chi^2$ /NDF: 153600852699.4   |
| Right Out: 0.022 $\pm$ 0.000 | $\chi^2$ /NDF: 46853034264.6/30 | - sign 0.021 $\pm$ 0.000 | $\chi^2$ /NDF: 53296854451.8/53 |
| Left In: 0.020 $\pm$ 0.000   | $\chi^2$ /NDF: 6099907424.9/22  |                          |                                 |

# yield\_atl2\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3708696.2/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :14390785.9/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13337677.8/30

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :3388230.8/22

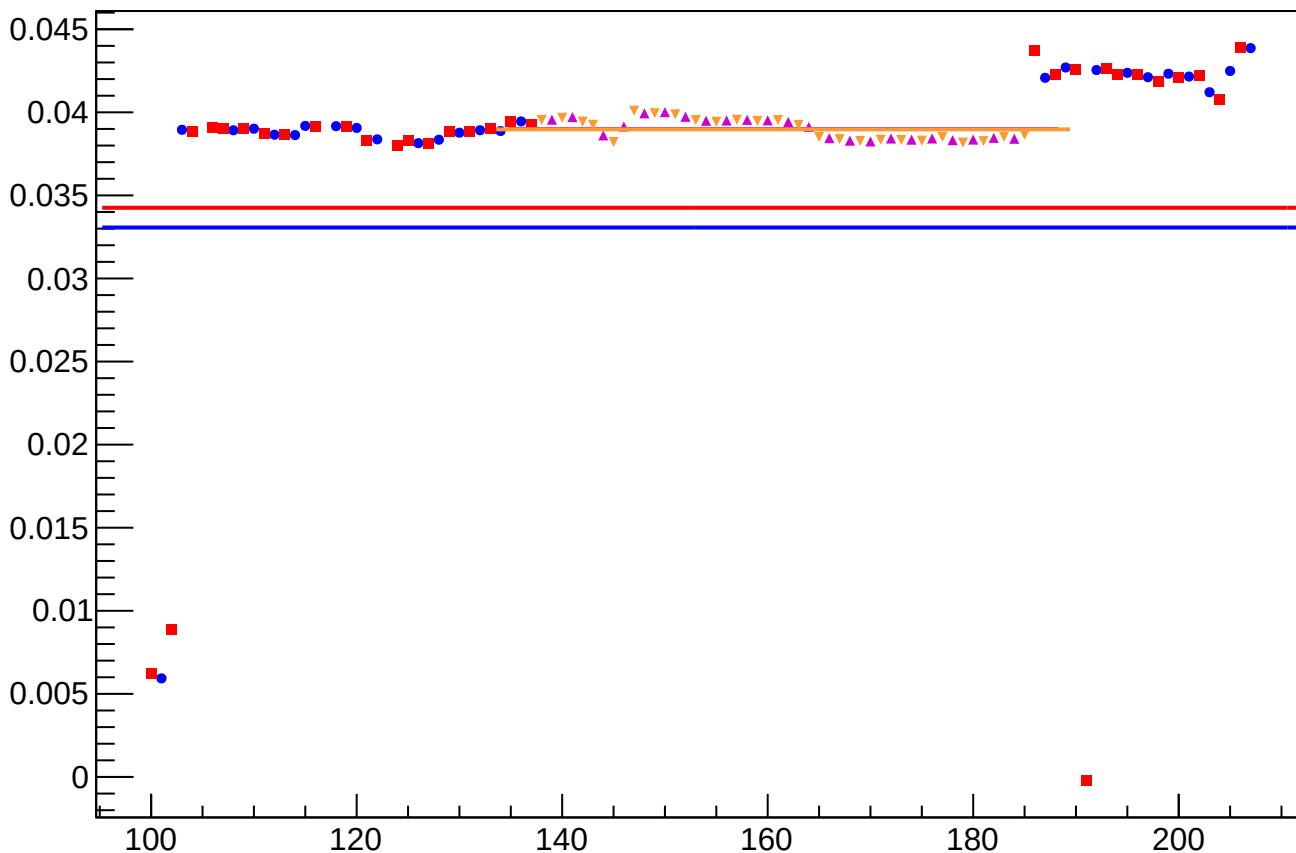
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 28909222.5/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 50111505.2/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 16803694.9/53



# yield\_atr1\_mean vs Slug



Right In: 0.033+/-0.000  $\chi^2/\text{NDF}$ : 128134253889.5/25

Left Out: 0.039+/-0.000  $\chi^2/\text{NDF}$ : 477670162.8/24

Right Out: 0.034+/-0.000  $\chi^2/\text{NDF}$ : 118865602388.4/30

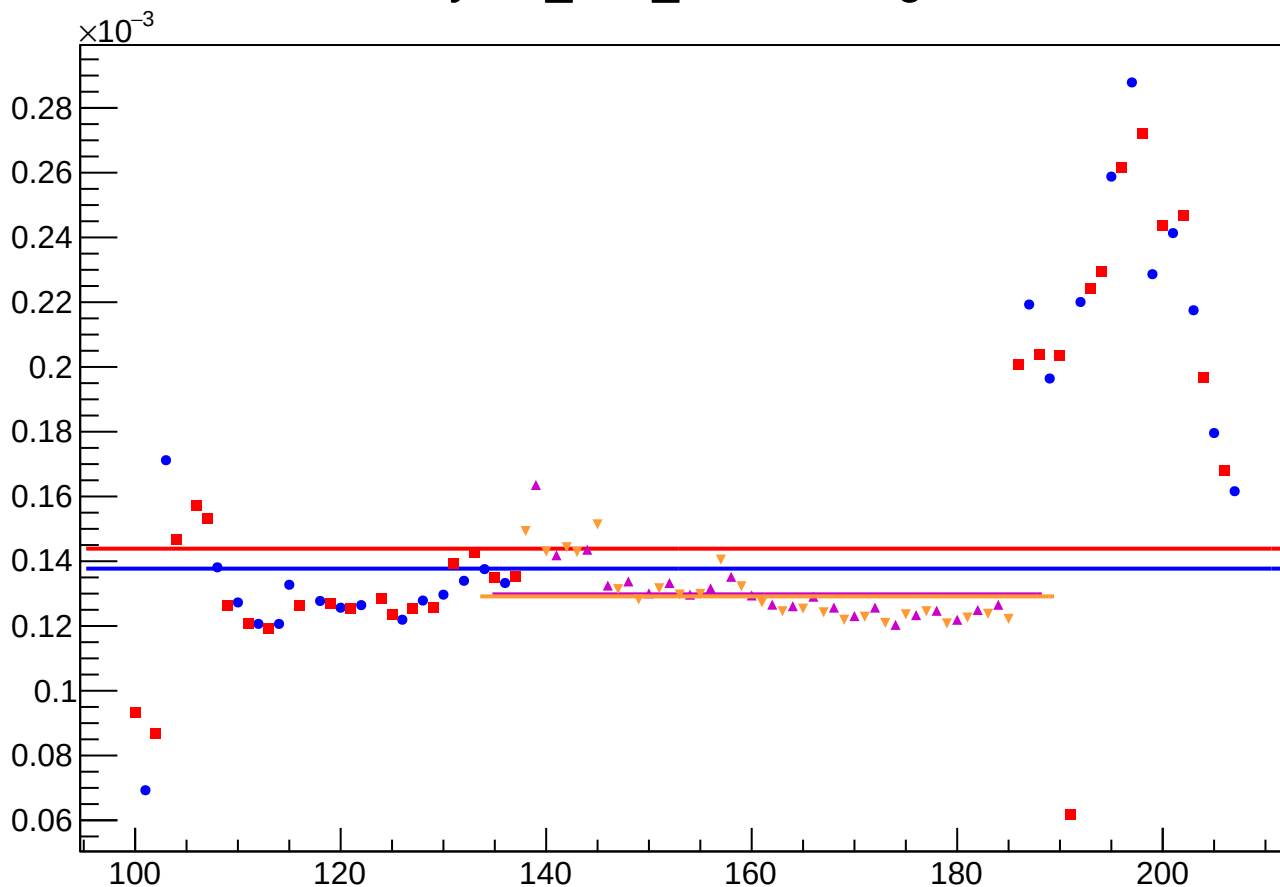
Left In: 0.039+/-0.000  $\chi^2/\text{NDF}$ : 408808029.6/22

+ sign 0.037+/-0.000  $\chi^2/\text{NDF}$ : 143323909167.9/50

All: 0.037+/-0.000  $\chi^2/\text{NDF}$ : 272002057001.8

- sign 0.037+/-0.000  $\chi^2/\text{NDF}$ : 128549652937.0/53

# yield\_atr1\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3515760.8/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :157557.5/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3406806.9/30

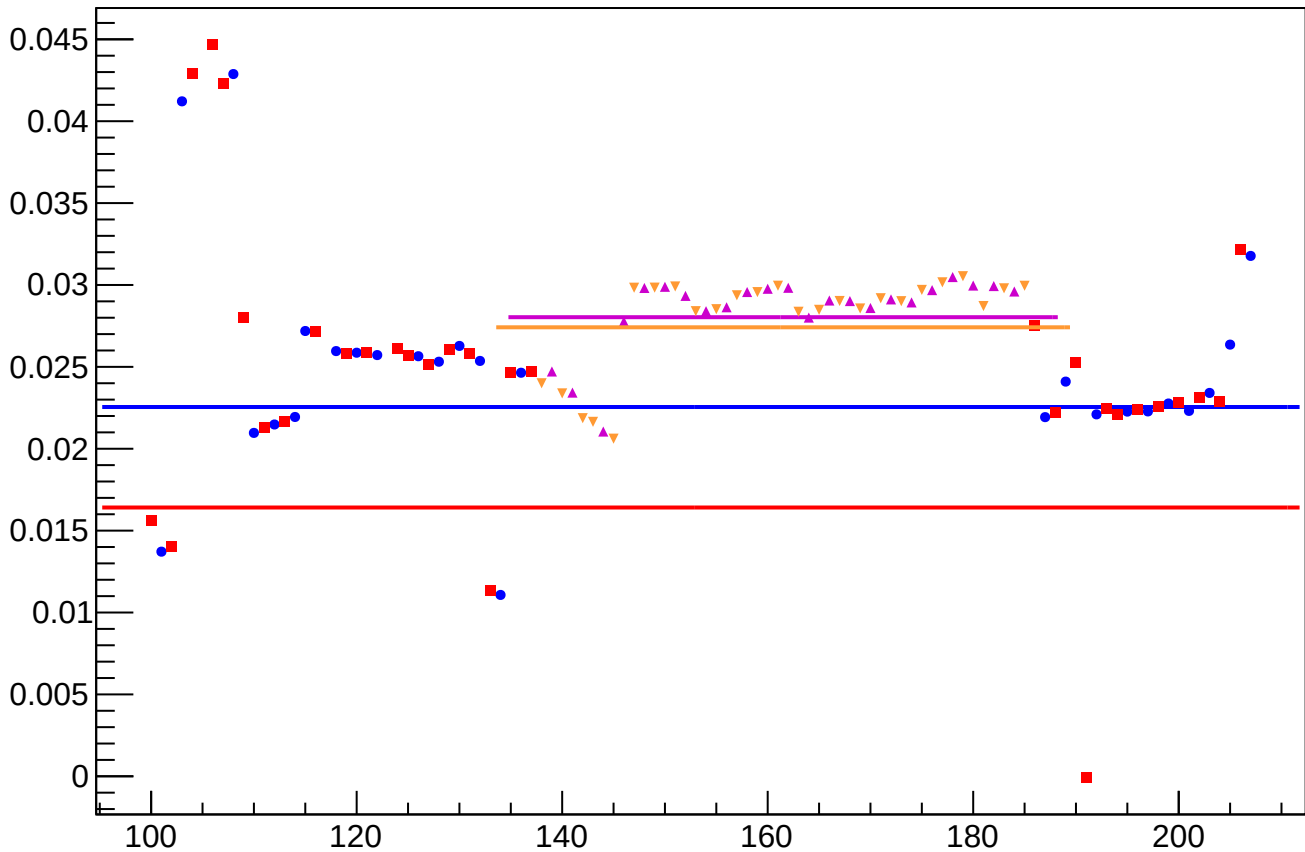
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :141831.6/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3735306.8/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7463300.0/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3712922.0/53

# yield\_atr2\_mean vs Slug



Right In: 0.023 $\pm$ 0.000  $\chi^2$ /NDF: 5185940571.6/25

Left Out: 0.027 $\pm$ 0.000  $\chi^2$ /NDF: 2240091851.9/24

Right Out: 0.016 $\pm$ 0.000  $\chi^2$ /NDF: 25645452163.6/30

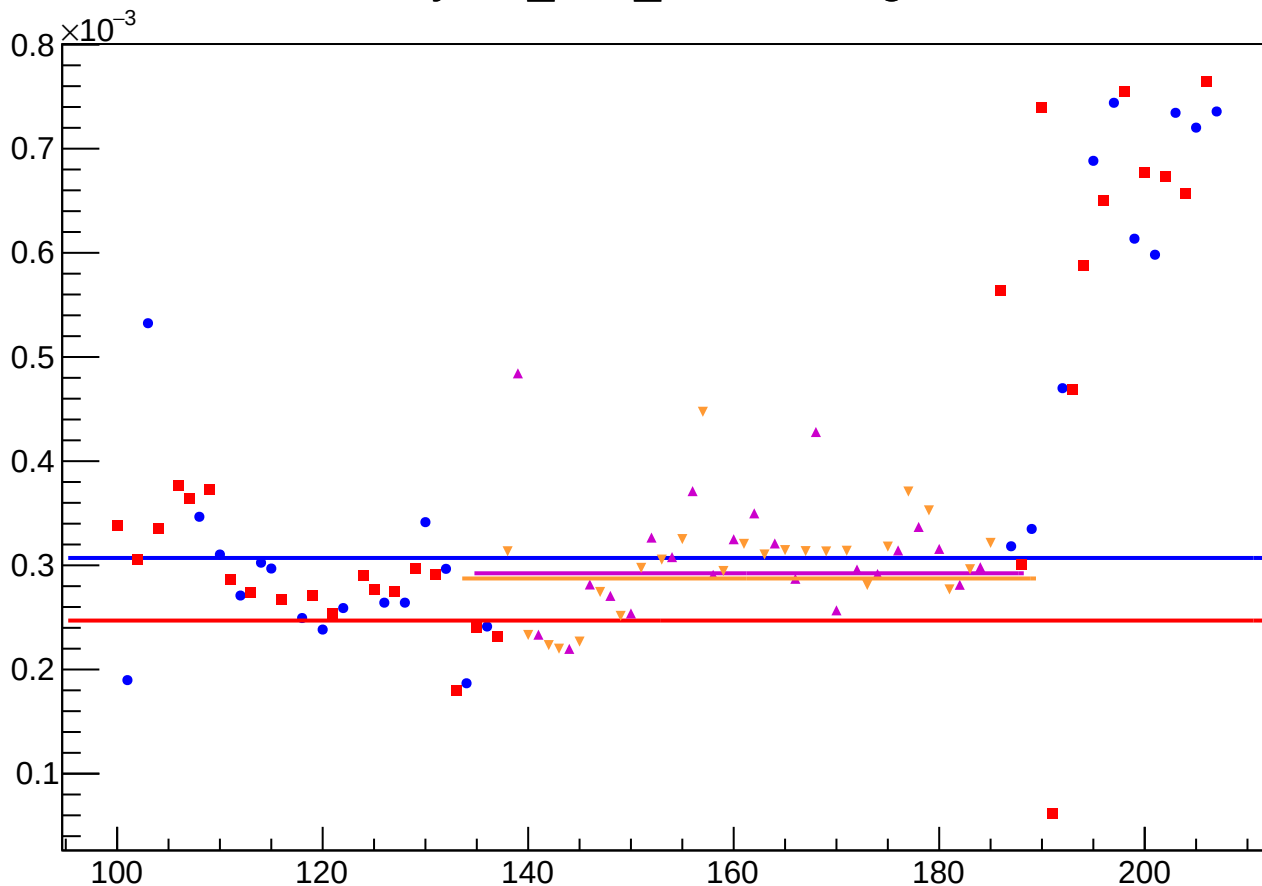
Left In: 0.028 $\pm$ 0.000  $\chi^2$ /NDF: 1490587051.3/22

+ sign 0.026 $\pm$ 0.000  $\chi^2$ /NDF: 9226272167.4/50

All: 0.024 $\pm$ 0.000  $\chi^2$ /NDF: 50006208020.5/100

- sign 0.023 $\pm$ 0.000  $\chi^2$ /NDF: 39236159885.2/53

# yield\_atr2\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 5007270.5/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:821515.6/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 9710737.7/30

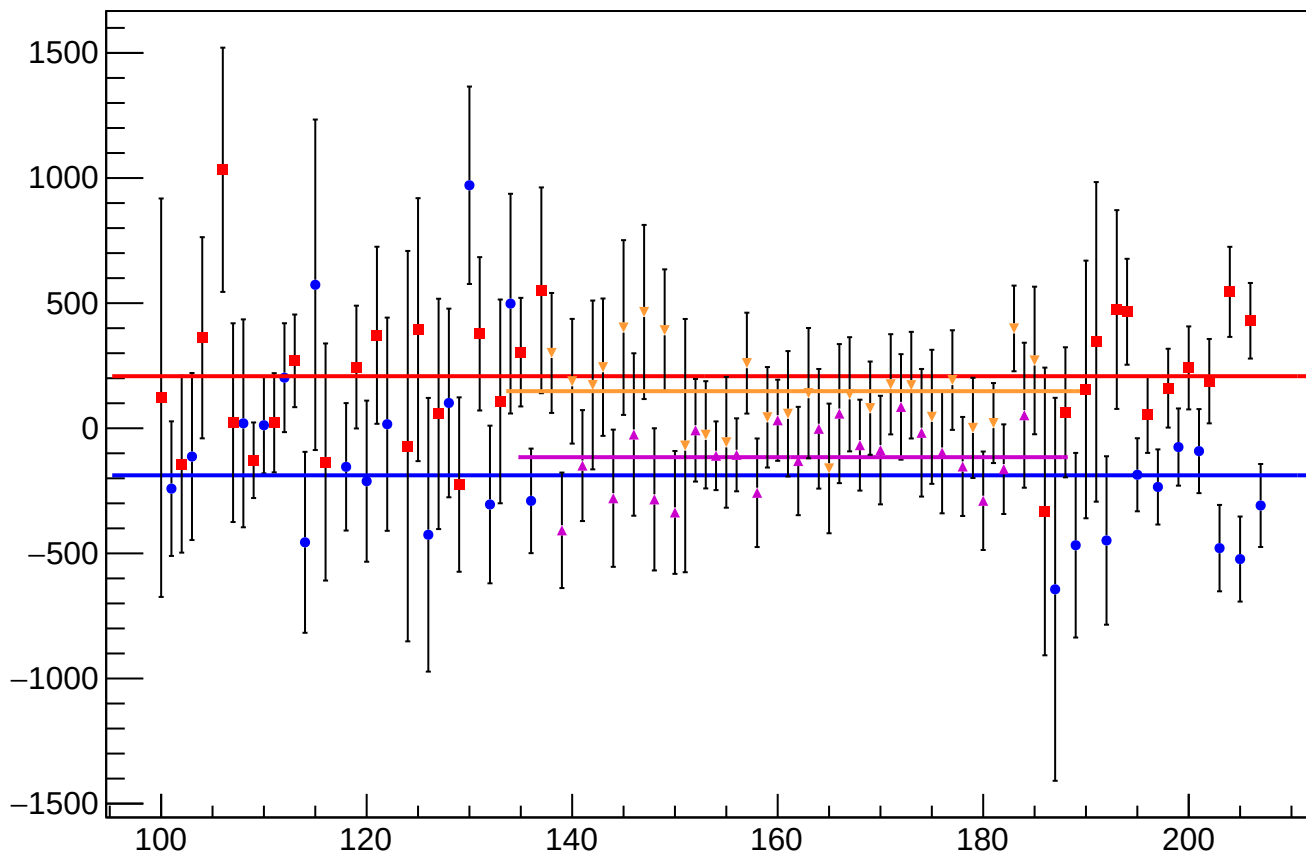
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:970483.1/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 5887753.6/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 17124612.0/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 11050305.3/53

asym\_bcm\_an\_us\_bcm\_an\_ds\_agg\_avg\_mean vs Slug



Right In:  $-188.008 \pm 46.452$   $\chi^2/\text{NDF}$ : 28.7/25

Left Out:  $148.273 \pm 46.219$   $\chi^2/\text{NDF}$ : 10.4/24

Right Out:  $208.126 \pm 44.796$   $\chi^2/\text{NDF}$ : 24.1/30

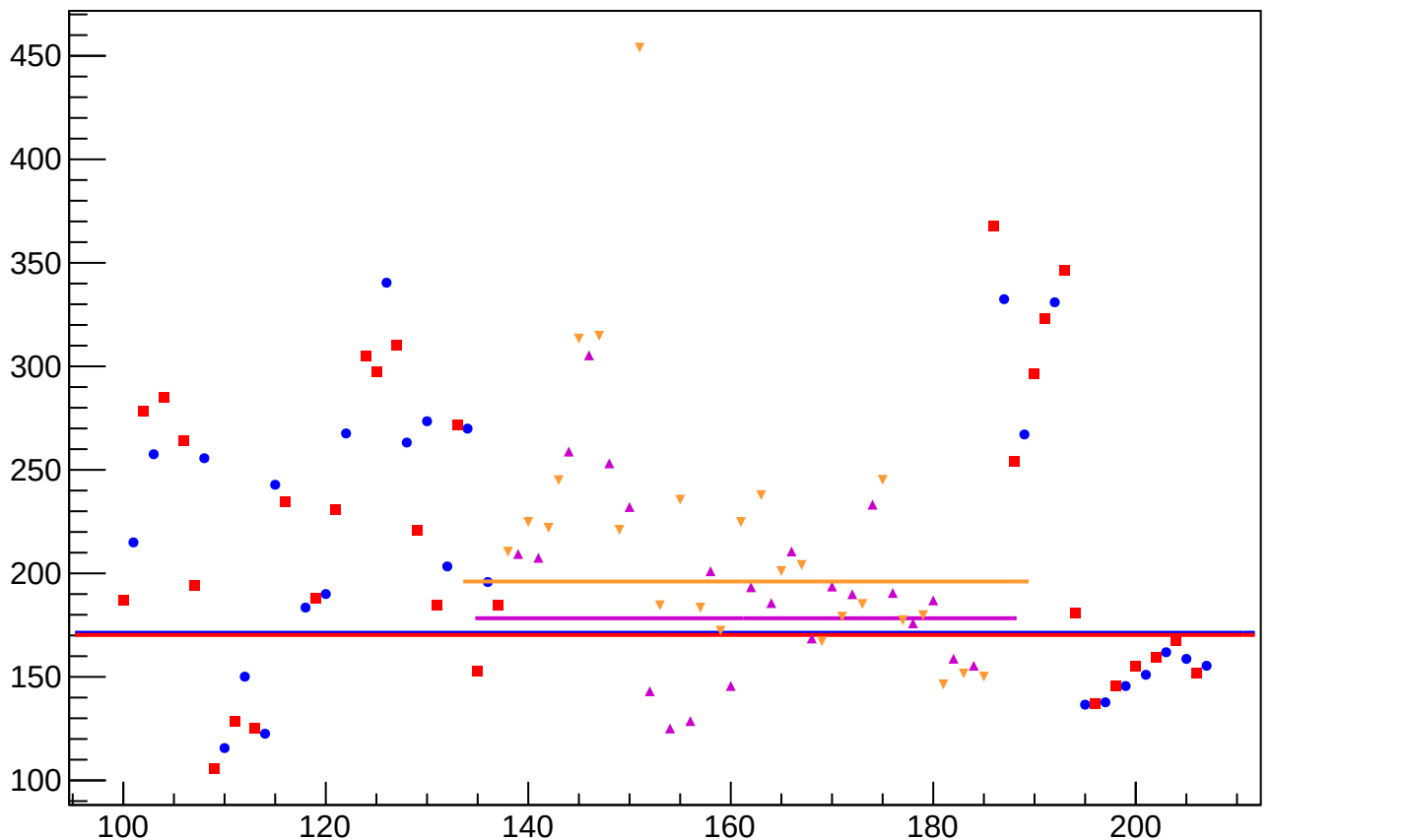
Left In:  $-115.487 \pm 43.568$   $\chi^2/\text{NDF}$ : 7.8/22

+ sign  $-19.024 \pm 32.764$   $\chi^2/\text{NDF}$ : 65.4/50

All:  $12.856 \pm 22.607$   $\chi^2/\text{NDF}$ : 125.9/104

- sign  $41.825 \pm 31.232$   $\chi^2/\text{NDF}$ : 58.7/53

asym\_bcm\_an\_us\_bcm\_an\_ds\_agg\_avg\_rms vs Slug



Right In: 171.316 $\pm$ 0.033  $\chi^2$ /NDF: 2228954.8/25

Left Out: 196.087 $\pm$ 0.033  $\chi^2$ /NDF:1818492.9/24

Right Out: 170.276 $\pm$ 0.032  $\chi^2$ /NDF: 2935421.8/30

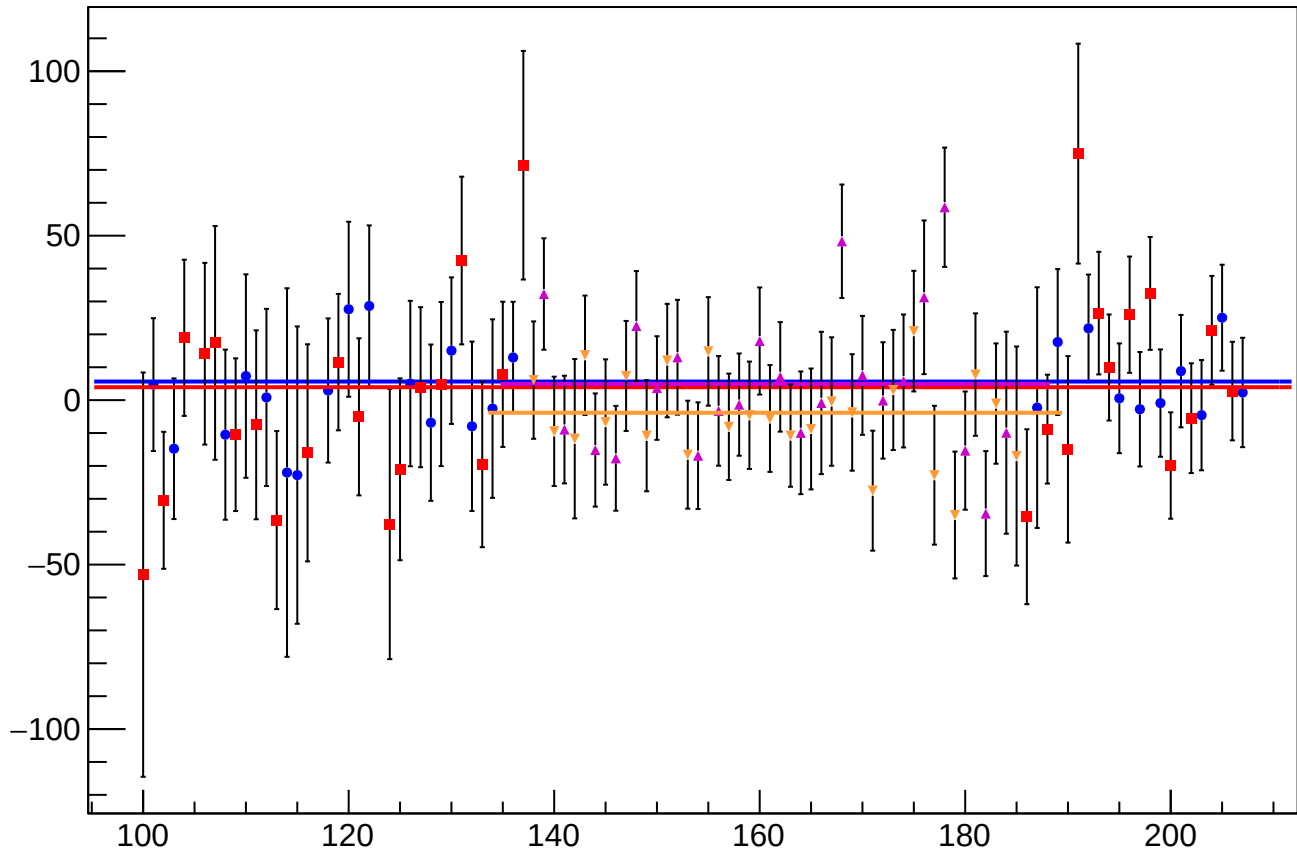
Left In: 178.318 $\pm$ 0.031  $\chi^2$ /NDF:1678336.4/22

+ sign 183.763 $\pm$ 0.023  $\chi^2$ /NDF: 4333237.2/50

All: 178.862 $\pm$ 0.016  $\chi^2$ /NDF: 9065543.7/104

- sign 174.409 $\pm$ 0.022  $\chi^2$ /NDF: 4646882.9/53

asym\_bcm\_an\_avg\_bcm\_dg\_ds\_agg\_dd\_mean vs Slug



Right In: 5.652 $\pm$ 4.157  $\chi^2$ /NDF: 8.3/25

Left Out: -3.834 $\pm$ 3.603  $\chi^2$ /NDF:12.9/24

Right Out: 3.933 $\pm$ 3.980  $\chi^2$ /NDF: 33.7/30

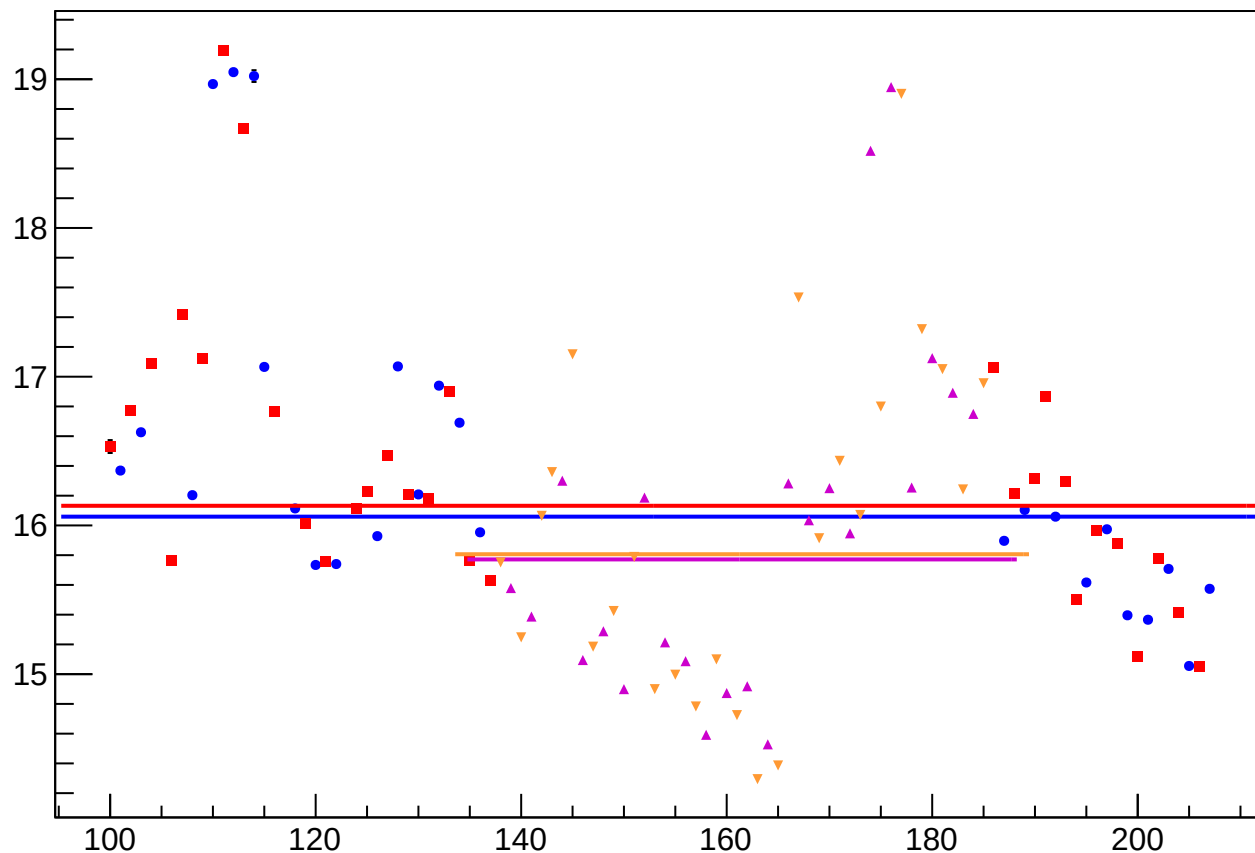
Left In: 4.903 $\pm$ 3.695  $\chi^2$ /NDF:33.9/22

+ sign 0.235 $\pm$ 2.722  $\chi^2$ /NDF: 24.1/50

All: 2.355 $\pm$ 1.920  $\chi^2$ /NDF: 92.9/104

- sign 4.454 $\pm$ 2.708  $\chi^2$ /NDF: 67.6/53

asym\_bcm\_an\_avg\_bcm\_dg\_ds\_agg\_dd\_rms vs Slug



Right In: 16.059 $\pm$ 0.003  $\chi^2$ /NDF: 77196.0/25

Left Out: 15.806 $\pm$ 0.003  $\chi^2$ /NDF:172651.3/24

Right Out: 16.132 $\pm$ 0.003  $\chi^2$ /NDF: 86976.7/30

Left In: 15.771 $\pm$ 0.003  $\chi^2$ /NDF:152136.7/22

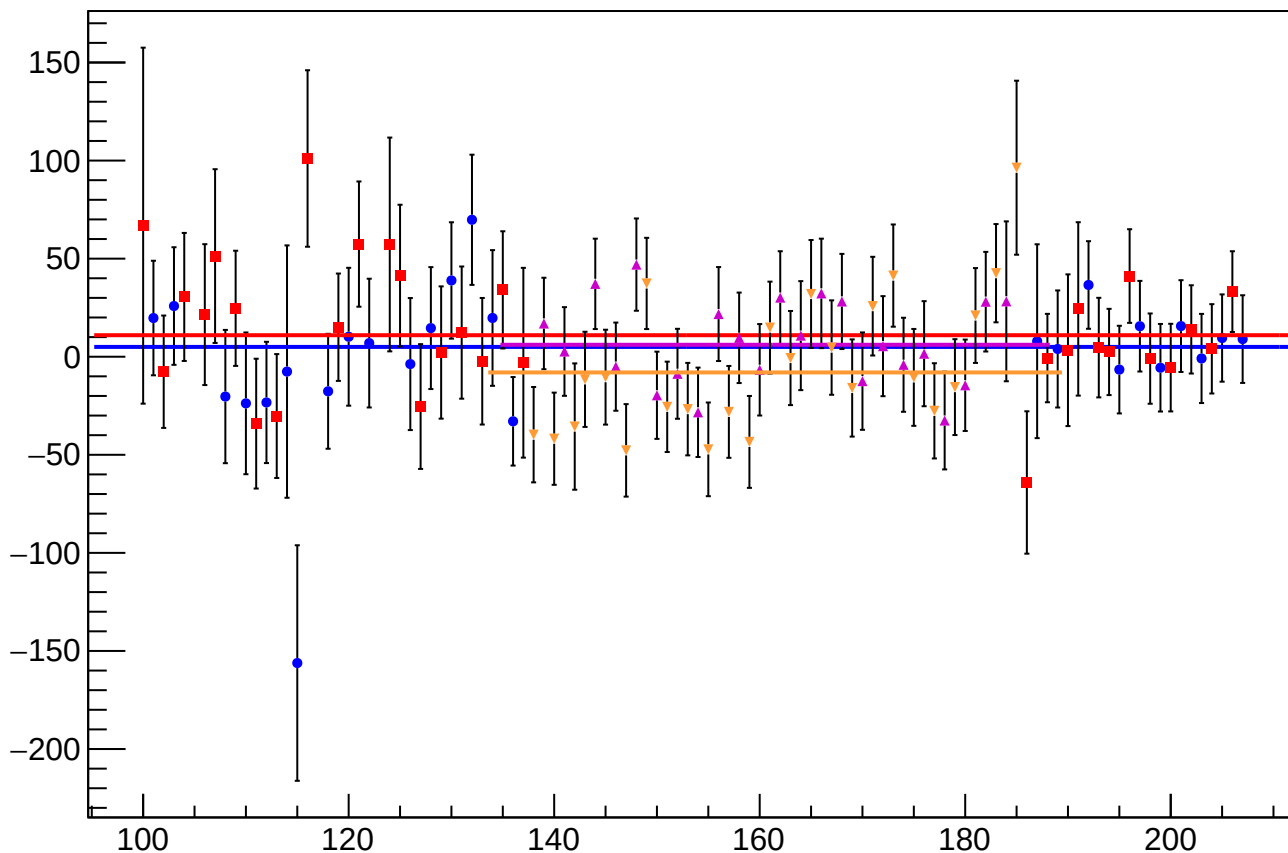
+ sign 15.915 $\pm$ 0.002  $\chi^2$ /NDF: 254069.6/50

All: 15.927 $\pm$ 0.001  $\chi^2$ /NDF: 502075.3/104

- sign 15.938 $\pm$ 0.002  $\chi^2$ /NDF: 247930.0/53



asym\_bcm\_an\_avg\_bcm\_dg\_us\_agg\_dd\_mean vs Slug



Right In: 5.000 $\pm$ 5.559  $\chi^2$ /NDF: 22.0/25

Left Out: -8.016 $\pm$ 4.956  $\chi^2$ /NDF:38.9/24

Right Out: 10.967 $\pm$ 5.326  $\chi^2$ /NDF: 24.2/30

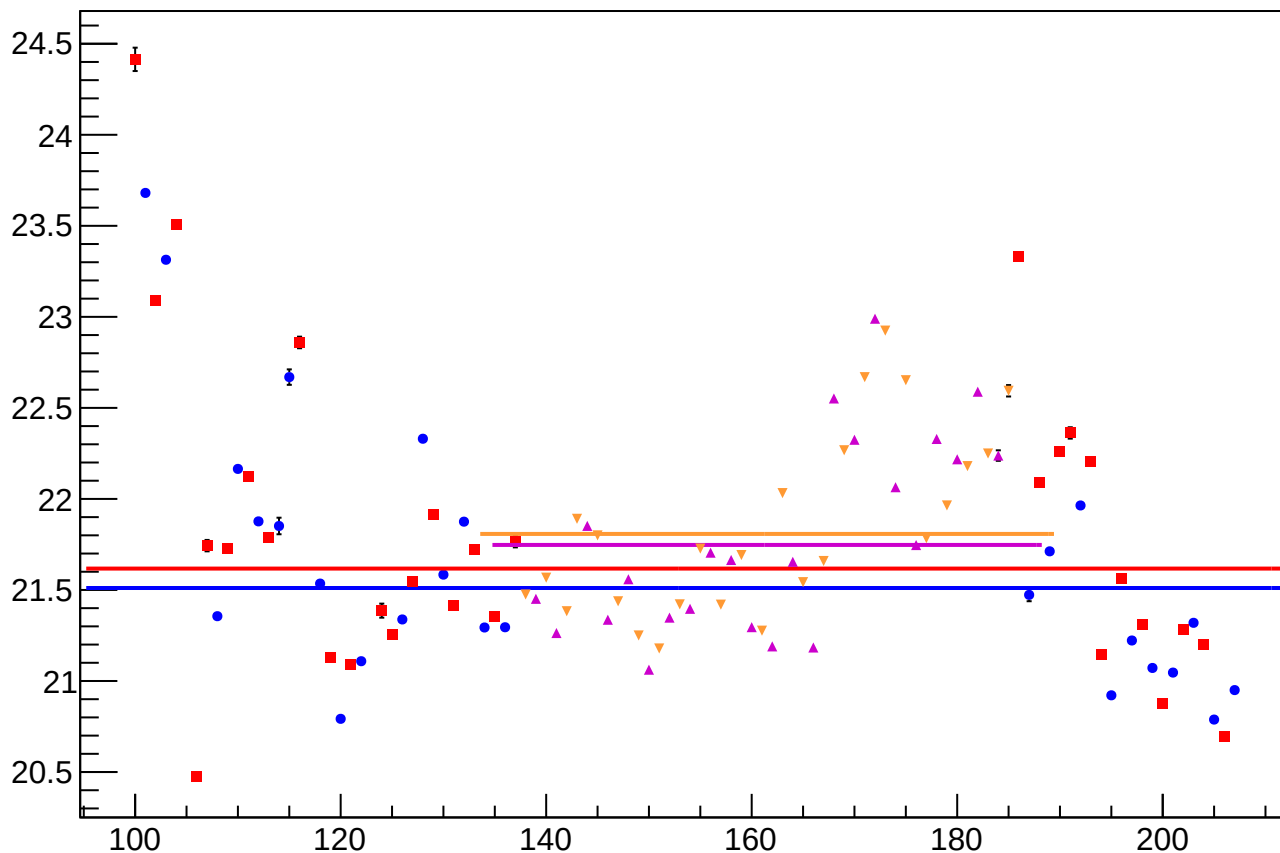
Left In: 6.086 $\pm$ 5.080  $\chi^2$ /NDF:17.9/22

+ sign -2.252 $\pm$ 3.699  $\chi^2$ /NDF: 63.9/50

All: 3.114 $\pm$ 2.608  $\chi^2$ /NDF: 110.6/104

- sign 8.411 $\pm$ 3.676  $\chi^2$ /NDF: 42.6/53

asym\_bcm\_an\_avg\_bcm\_dg\_us\_agg\_dd\_rms vs Slug



Right In: 21.511 $\pm$ 0.004  $\chi^2$ /NDF: 30848.8/25

Left Out: 21.808 $\pm$ 0.004  $\chi^2$ /NDF:17561.0/24

Right Out: 21.617 $\pm$ 0.004  $\chi^2$ /NDF: 36036.0/30

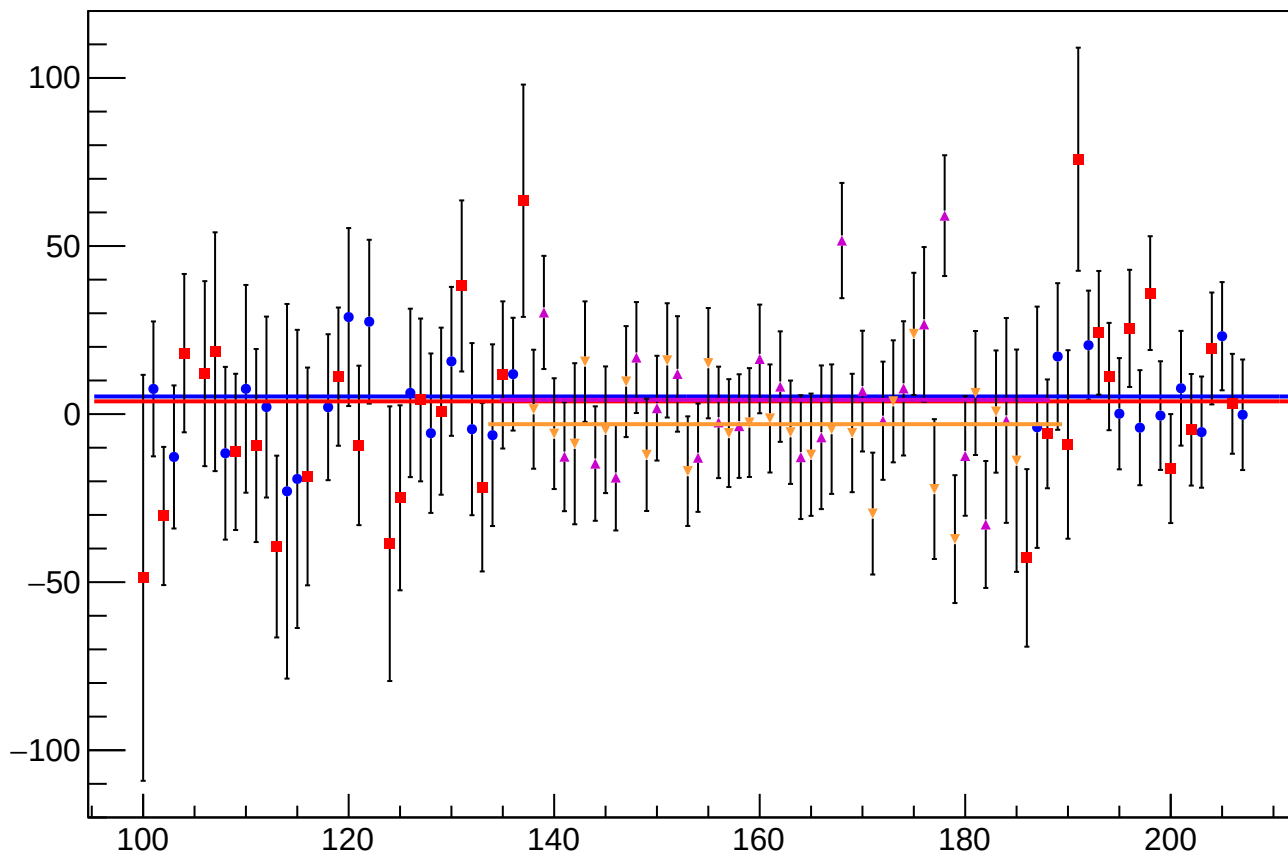
Left In: 21.747 $\pm$ 0.004  $\chi^2$ /NDF:20560.9/22

+ sign 21.676 $\pm$ 0.003  $\chi^2$ /NDF: 51590.2/50

All: 21.681 $\pm$ 0.002  $\chi^2$ /NDF: 108816.0/104

- sign 21.685 $\pm$ 0.003  $\chi^2$ /NDF: 57219.5/53

asym\_bcm\_an\_us\_ds3\_avg\_bcm\_dg\_ds\_agg\_dd\_mean vs Slug



Right In:  $5.242 \pm 4.125$   $\chi^2/\text{NDF}: 7.9/25$

Left Out:  $-3.002 \pm 3.569$   $\chi^2/\text{NDF}: 14.6/24$

Right Out:  $3.790 \pm 3.951$   $\chi^2/\text{NDF}: 34.1/30$

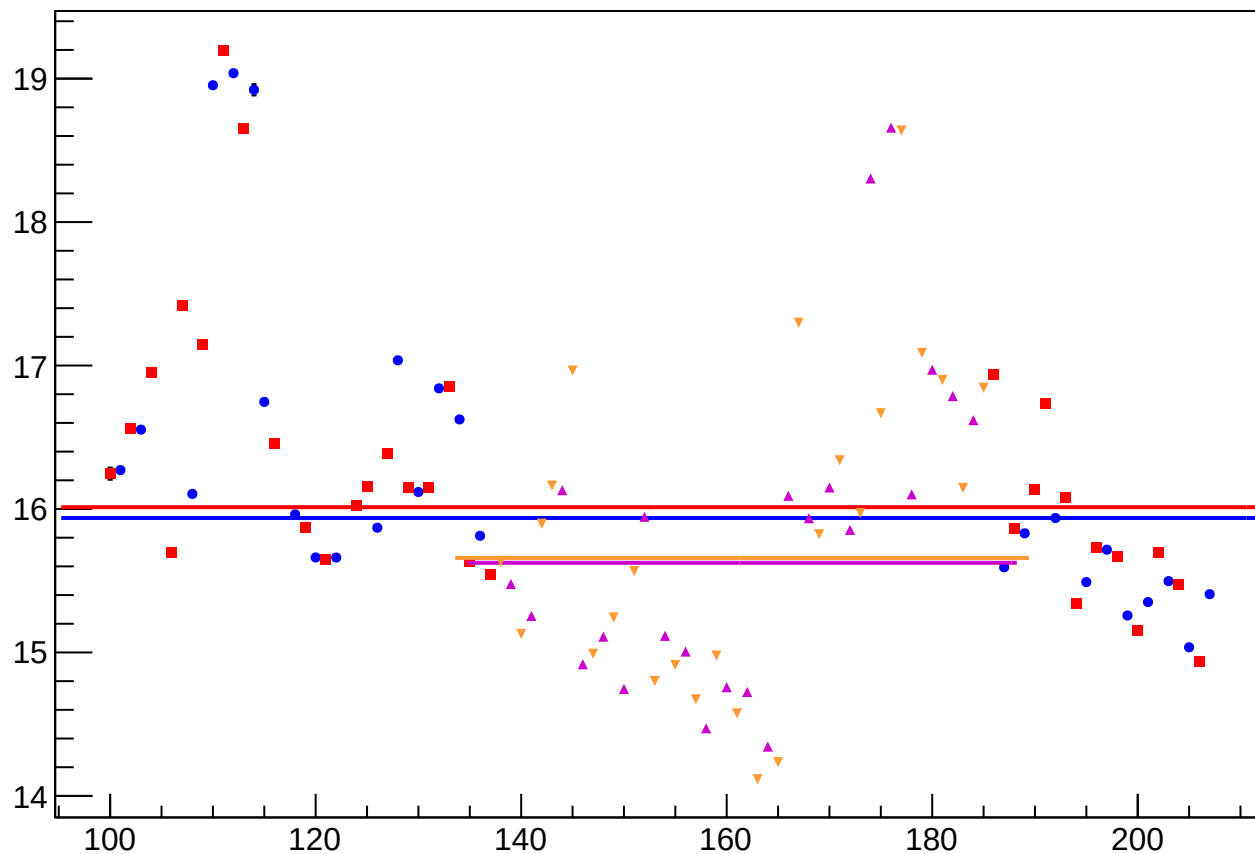
Left In:  $4.249 \pm 3.661$   $\chi^2/\text{NDF}: 33.8/22$

+ sign  $0.526 \pm 2.699$   $\chi^2/\text{NDF}: 24.8/50$

All:  $2.290 \pm 1.904$   $\chi^2/\text{NDF}: 93.5/104$

- sign  $4.037 \pm 2.685$   $\chi^2/\text{NDF}: 67.9/53$

asym\_bcm\_an\_us\_ds3\_avg\_bcm\_dg\_ds\_agg\_dd\_rms vs Slug



Right In: 15.937 $\pm$ 0.003  $\chi^2/\text{NDF}$ : 80810.0/25

Left Out: 15.659 $\pm$ 0.003  $\chi^2/\text{NDF}$ : 169838.6/24

Right Out: 16.012 $\pm$ 0.003  $\chi^2/\text{NDF}$ : 88631.3/30

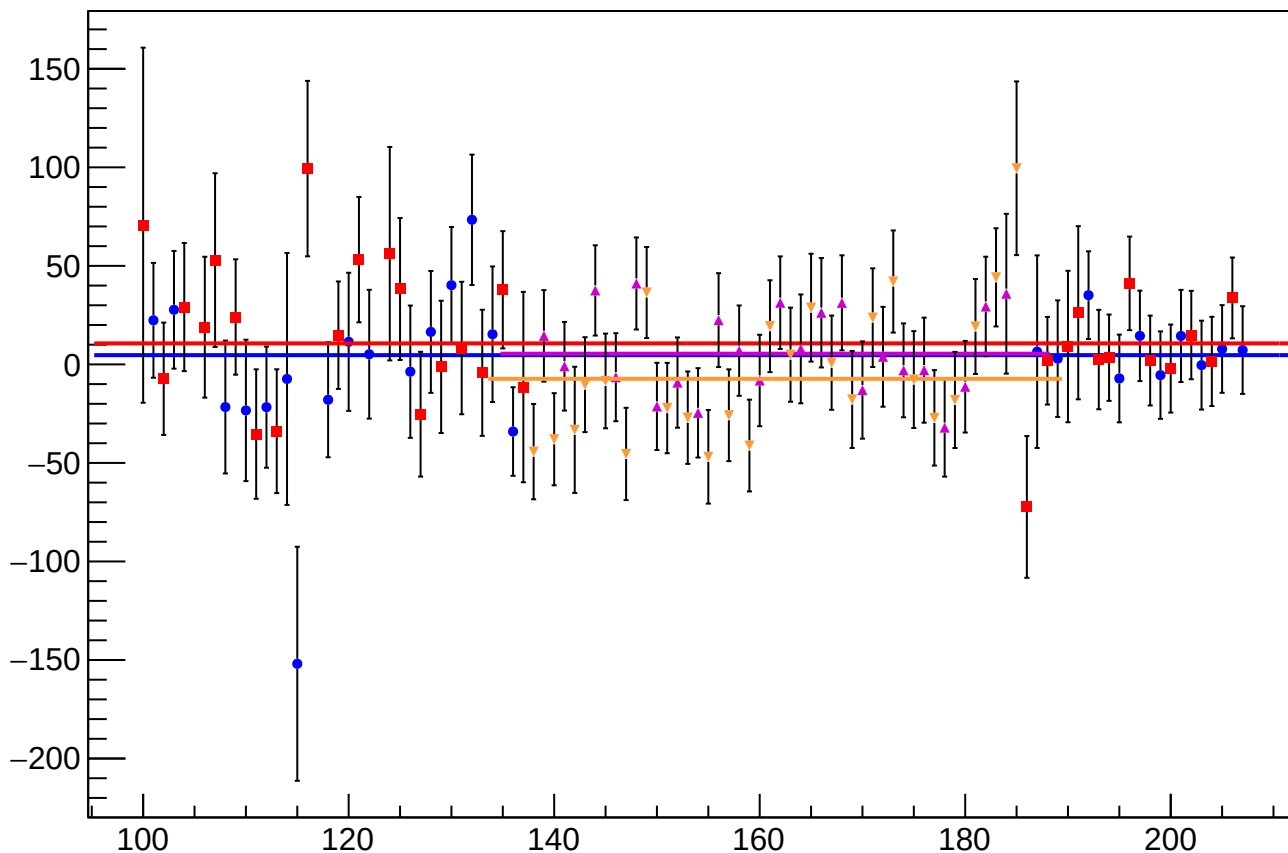
Left In: 15.625 $\pm$ 0.003  $\chi^2/\text{NDF}$ : 150431.7/22

+ sign 15.778 $\pm$ 0.002  $\chi^2/\text{NDF}$ : 255858.9/50

All: 15.791 $\pm$ 0.001  $\chi^2/\text{NDF}$ : 505364.3/104

- sign 15.804 $\pm$ 0.002  $\chi^2/\text{NDF}$ : 249412.9/53

asym\_bcm\_an\_us\_ds3\_avg\_bcm\_dg\_us\_agg\_dd\_mean vs Slug



Right In: 4.696 $\pm$ 5.534  $\chi^2$ /NDF: 22.4/25

Left Out: -7.318 $\pm$ 4.929  $\chi^2$ /NDF:38.6/24

Right Out: 10.665 $\pm$ 5.298  $\chi^2$ /NDF: 25.5/30

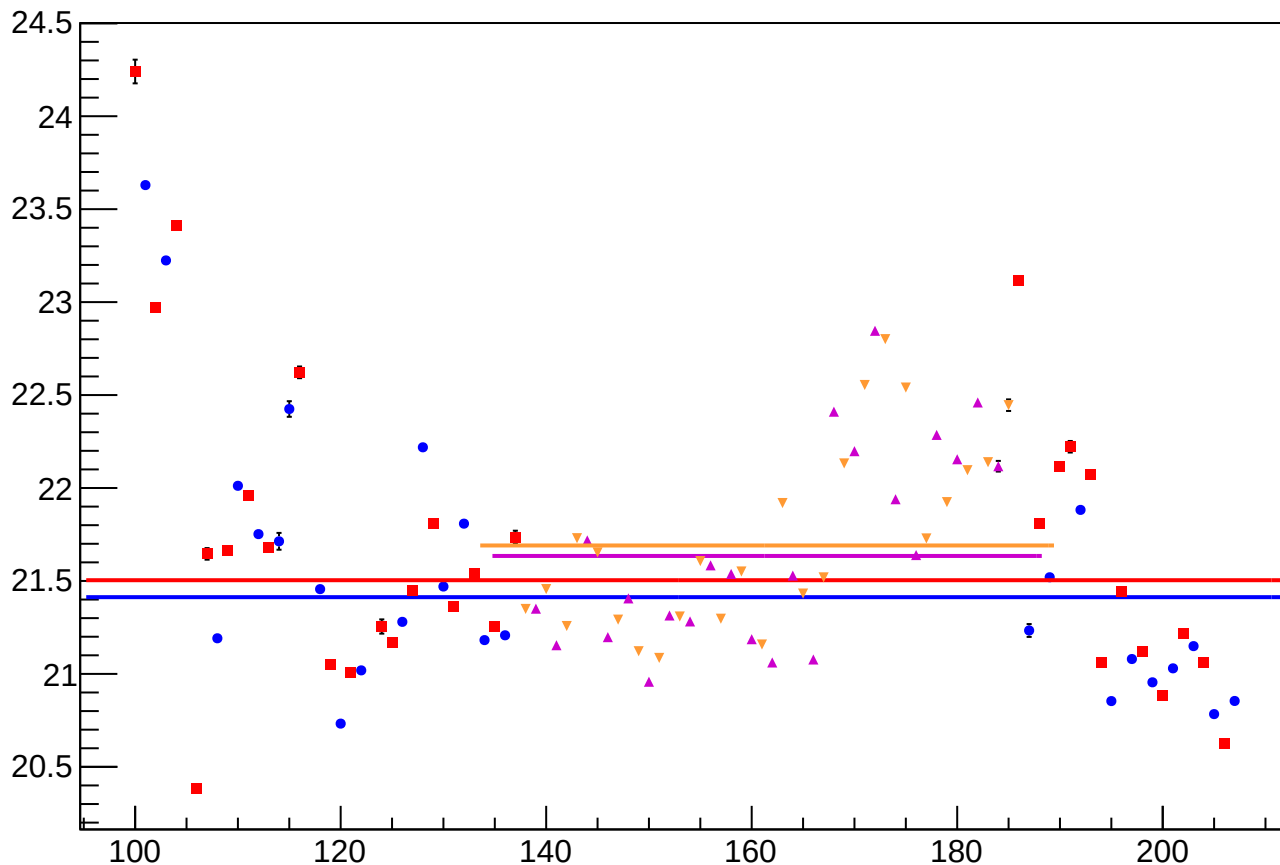
Left In: 5.435 $\pm$ 5.054  $\chi^2$ /NDF:17.3/22

+ sign -2.003 $\pm$ 3.681  $\chi^2$ /NDF: 63.6/50

All: 2.994 $\pm$ 2.594  $\chi^2$ /NDF: 110.6/104

- sign 7.926 $\pm$ 3.657  $\chi^2$ /NDF: 43.3/53

asym\_bcm\_an\_us\_ds3\_avg\_bcm\_dg\_us\_agg\_dd\_rms vs Slug



Right In: 21.413 $\pm$ 0.004  $\chi^2$ /NDF: 30582.2/25

Left Out: 21.691 $\pm$ 0.003  $\chi^2$ /NDF:17934.9/24

Right Out: 21.504 $\pm$ 0.004  $\chi^2$ /NDF: 33574.4/30

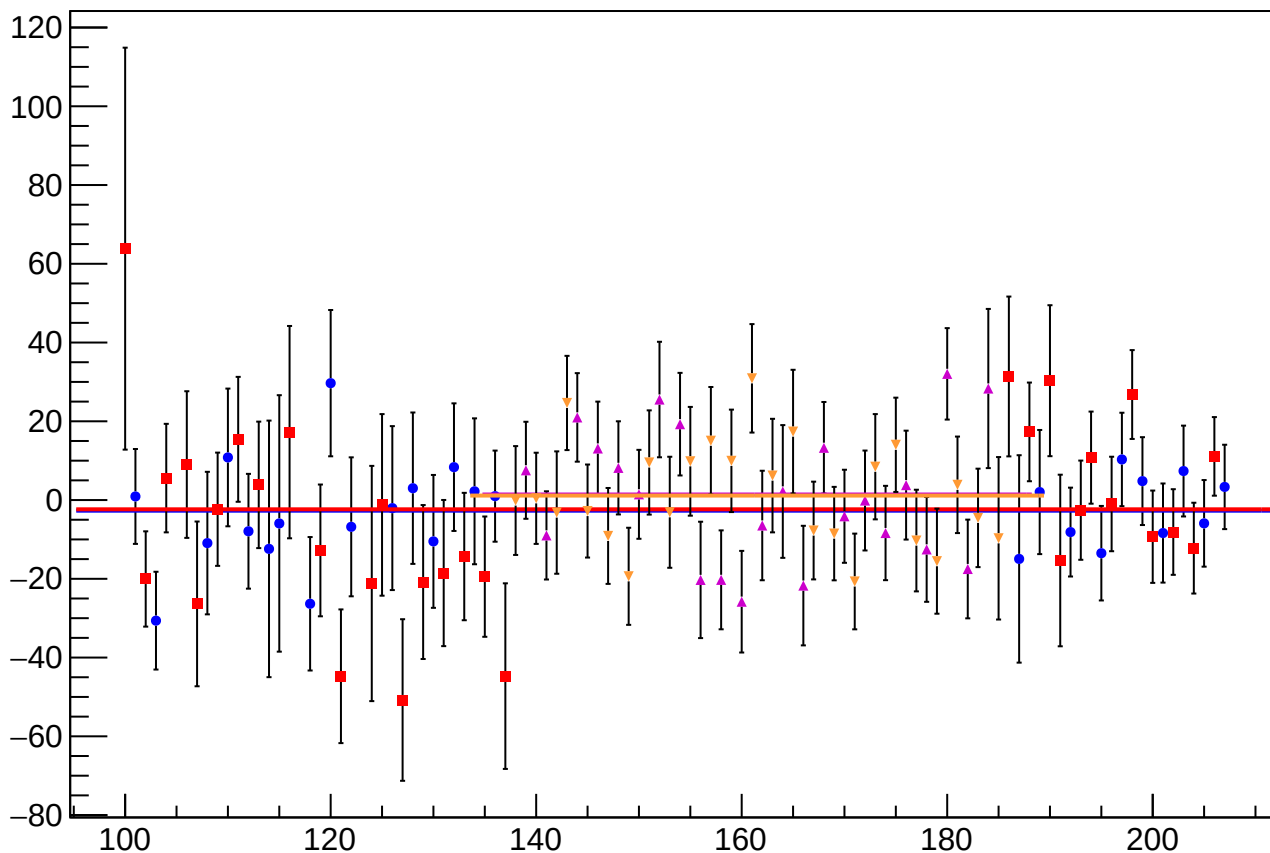
Left In: 21.635 $\pm$ 0.004  $\chi^2$ /NDF:20561.5/22

+ sign 21.568 $\pm$ 0.003  $\chi^2$ /NDF: 51332.7/50

All: 21.570 $\pm$ 0.002  $\chi^2$ /NDF: 106105.7/104

- sign 21.572 $\pm$ 0.003  $\chi^2$ /NDF: 54771.5/53

asym\_bcm\_an\_us\_bcm\_an\_ds\_agg\_dd\_mean vs Slug



Right In:  $-2.697 \pm 2.830$   $\chi^2/\text{NDF}$ : 16.5/25

Left Out:  $1.138 \pm 2.620$   $\chi^2/\text{NDF}$ : 24.5/24

Right Out:  $-2.354 \pm 2.723$   $\chi^2/\text{NDF}$ : 46.7/30

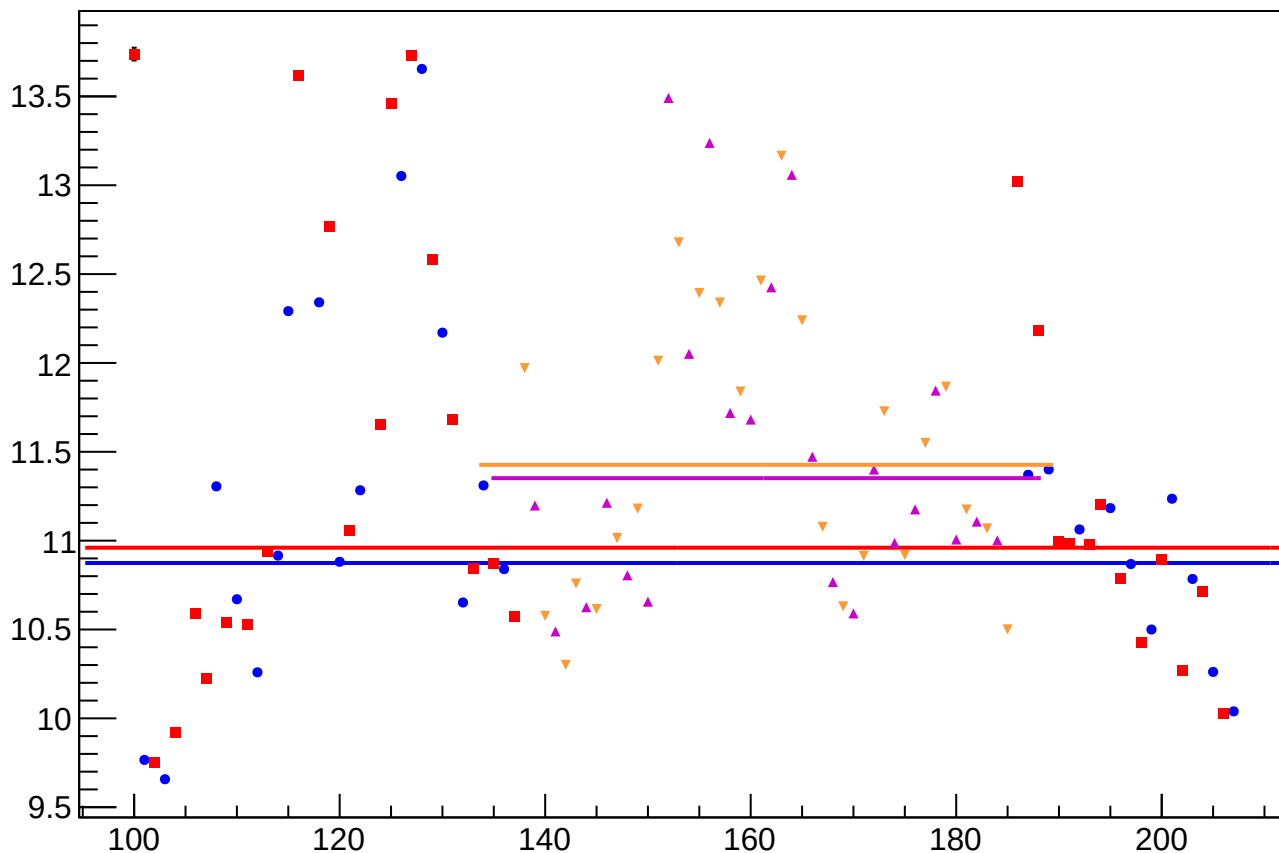
Left In:  $1.407 \pm 2.674$   $\chi^2/\text{NDF}$ : 36.3/22

+ sign  $-0.632 \pm 1.923$   $\chi^2/\text{NDF}$ : 42.0/50

All:  $-0.535 \pm 1.354$   $\chi^2/\text{NDF}$ : 126.0/104

- sign  $-0.440 \pm 1.908$   $\chi^2/\text{NDF}$ : 84.0/53

asym\_bcm\_an\_us\_bcm\_an\_ds\_agg\_dd\_rms vs Slug



Right In: 10.874 $\pm$ 0.002  $\chi^2$ /NDF: 165192.5/25

Left Out: 11.426 $\pm$ 0.002  $\chi^2$ /NDF:156973.4/24

Right Out: 10.960 $\pm$ 0.002  $\chi^2$ /NDF: 237096.7/30

Left In: 11.352 $\pm$ 0.002  $\chi^2$ /NDF:170563.6/22

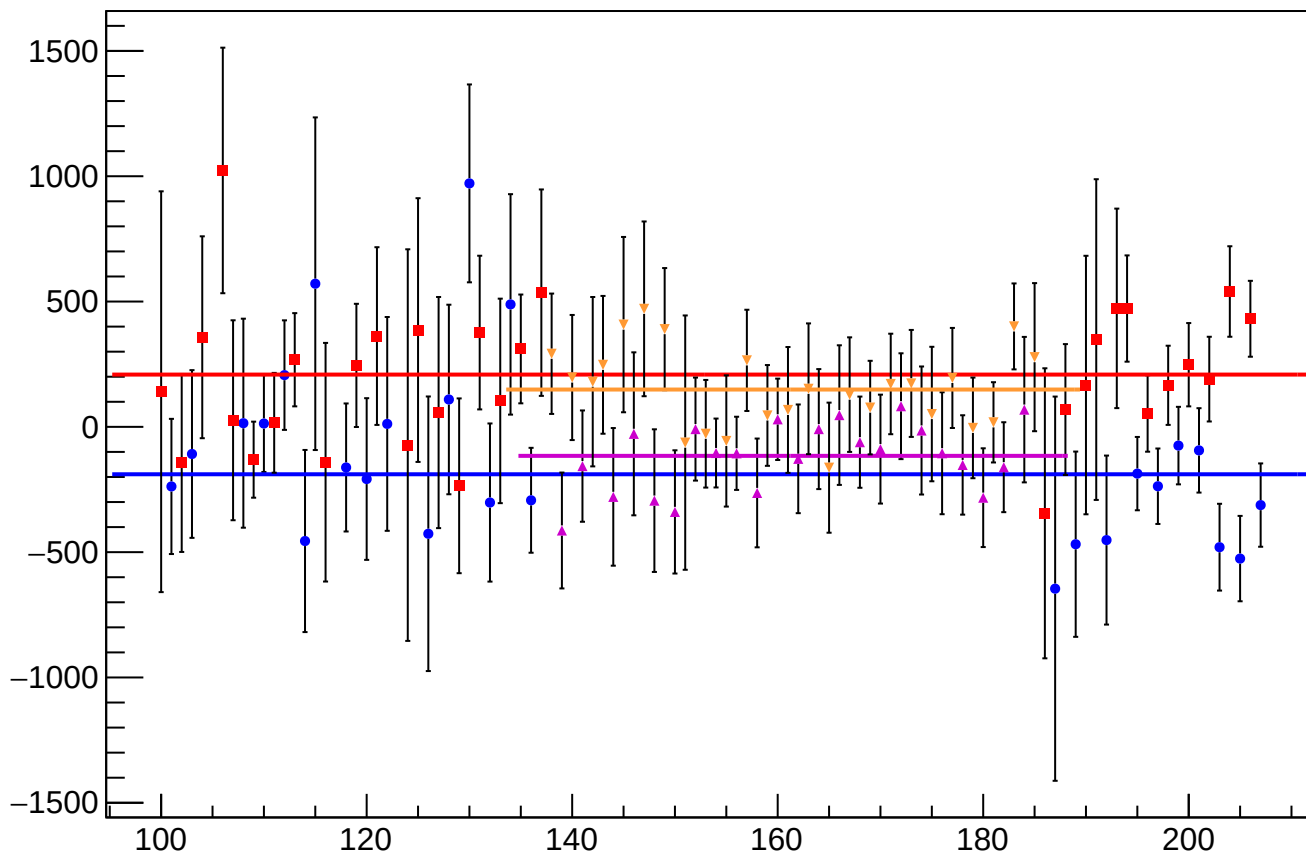
+ sign 11.172 $\pm$ 0.001  $\chi^2$ /NDF: 363179.0/50

All: 11.166 $\pm$ 0.001  $\chi^2$ /NDF: 791921.2/104

- sign 11.160 $\pm$ 0.001  $\chi^2$ /NDF: 428702.3/53



asym\_bcm\_an\_us\_bcm\_an\_ds3\_agg\_avg\_mean vs Slug



Right In:  $-189.182 \pm 46.577$   $\chi^2/\text{NDF}$ : 28.8/25

Left Out:  $148.905 \pm 46.306$   $\chi^2/\text{NDF}$ : 10.5/24

Right Out:  $208.581 \pm 44.918$   $\chi^2/\text{NDF}$ : 24.0/30

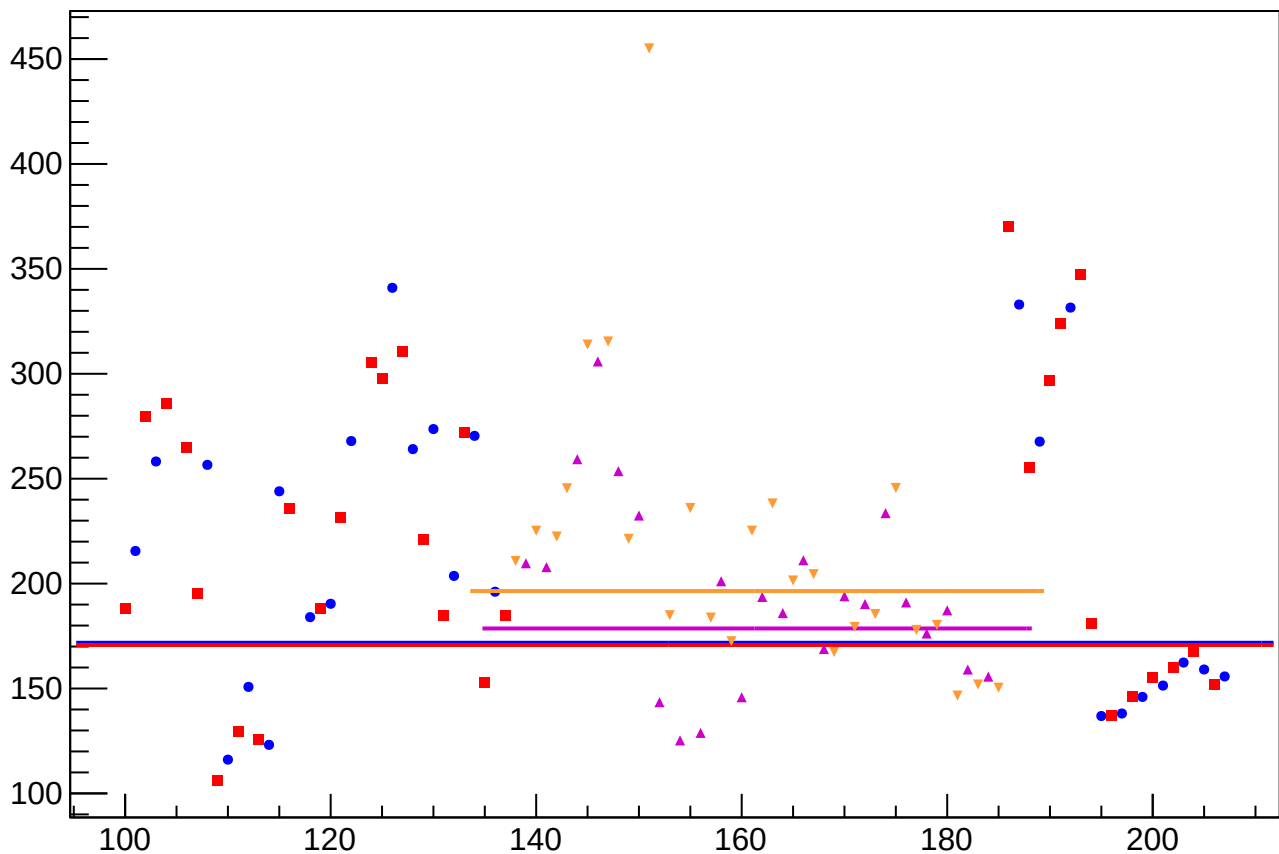
Left In:  $-115.709 \pm 43.641$   $\chi^2/\text{NDF}$ : 7.8/22

+ sign  $-19.155 \pm 32.839$   $\chi^2/\text{NDF}$ : 65.7/50

All:  $12.762 \pm 22.657$   $\chi^2/\text{NDF}$ : 126.2/104

- sign  $41.758 \pm 31.301$   $\chi^2/\text{NDF}$ : 58.7/53

asym\_bcm\_an\_us\_bcm\_an\_ds3\_agg\_avg\_rms vs Slug



Right In: 171.793 $\pm$ 0.033  $\chi^2$ /NDF: 2223610.6/25

Left Out: 196.454 $\pm$ 0.033  $\chi^2$ /NDF:1818746.1/24

Right Out: 170.751 $\pm$ 0.032  $\chi^2$ /NDF: 2932548.9/30

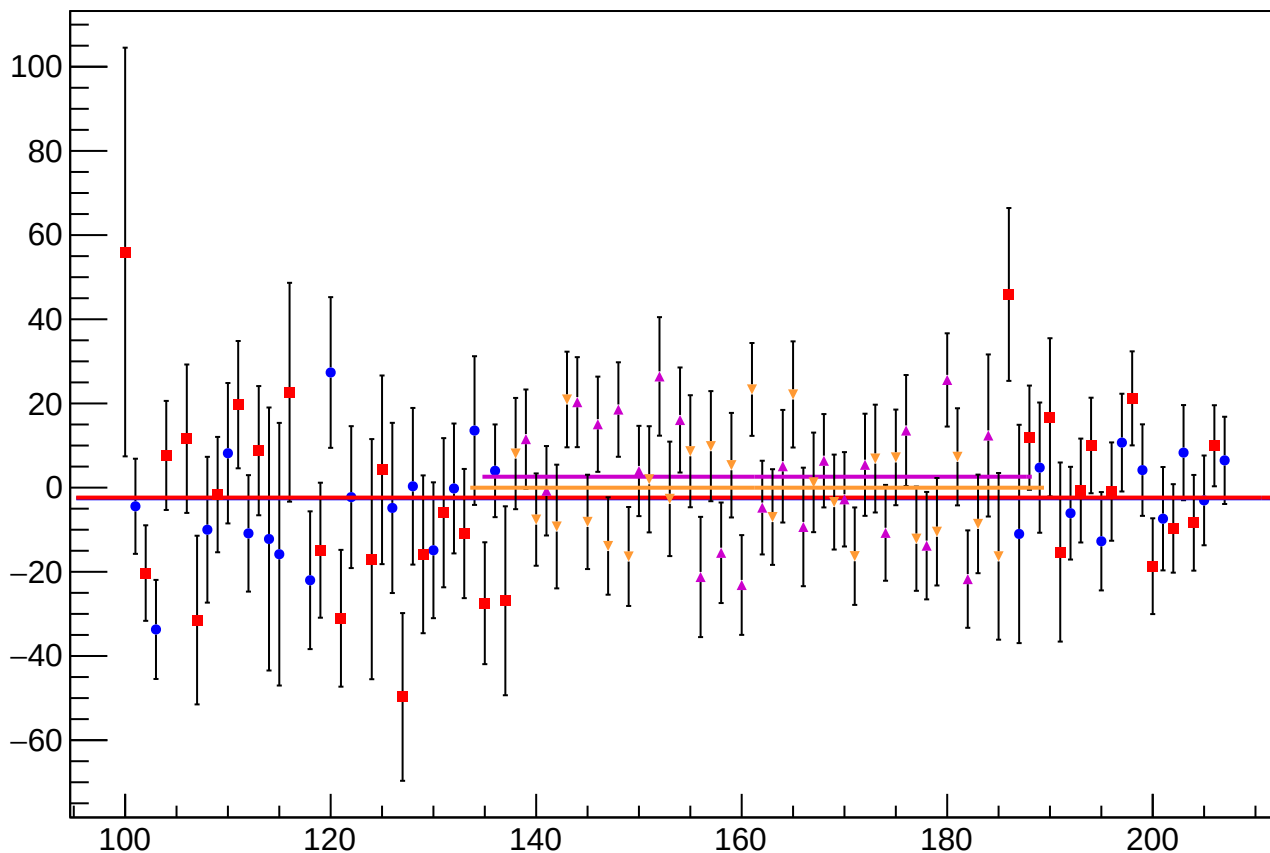
Left In: 178.614 $\pm$ 0.031  $\chi^2$ /NDF:1678859.8/22

+ sign 184.195 $\pm$ 0.023  $\chi^2$ /NDF: 4324345.5/50

All: 179.270 $\pm$ 0.016  $\chi^2$ /NDF: 9053125.0/104

- sign 174.796 $\pm$ 0.022  $\chi^2$ /NDF: 4642931.0/53

asym\_bcm\_an\_us\_bcm\_an\_ds3\_agg\_dd\_mean vs Slug



Right In:  $-2.536 \pm 2.731$   $\chi^2/\text{NDF}$ : 19.0/25

Left Out:  $-0.018 \pm 2.445$   $\chi^2/\text{NDF}$ : 23.7/24

Right Out:  $-2.365 \pm 2.630$   $\chi^2/\text{NDF}$ : 44.0/30

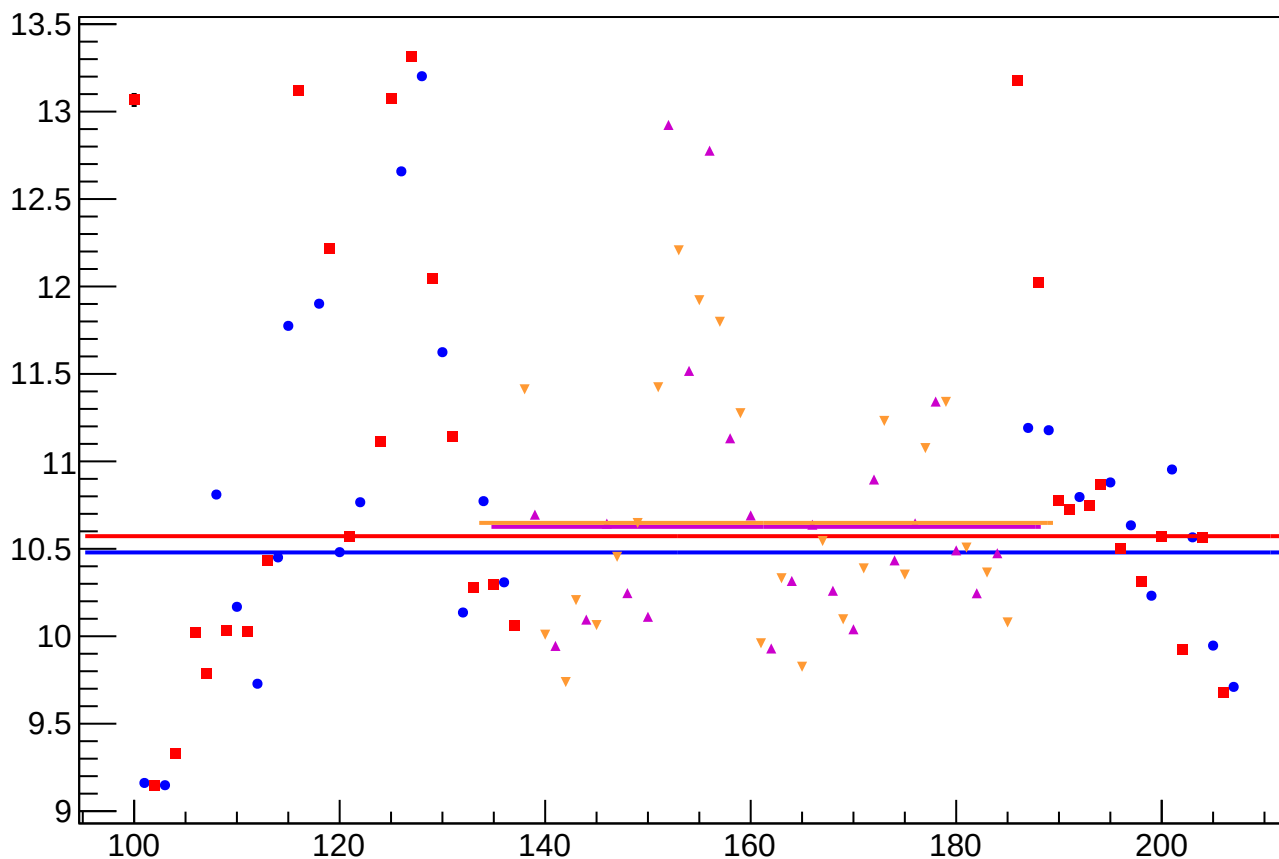
Left In:  $2.591 \pm 2.506$   $\chi^2/\text{NDF}$ : 34.8/22

+ sign  $-1.138 \pm 1.821$   $\chi^2/\text{NDF}$ : 43.2/50

All:  $-0.450 \pm 1.285$   $\chi^2/\text{NDF}$ : 124.2/104

- sign  $0.232 \pm 1.814$   $\chi^2/\text{NDF}$ : 80.7/53

asym\_bcm\_an\_us\_bcm\_an\_ds3\_agg\_dd\_rms vs Slug



Right In: 10.479 $\pm$ 0.002  $\chi^2$ /NDF: 187455.2/25

Left Out: 10.648 $\pm$ 0.002  $\chi^2$ /NDF:143535.9/24

Right Out: 10.572 $\pm$ 0.002  $\chi^2$ /NDF: 274738.9/30

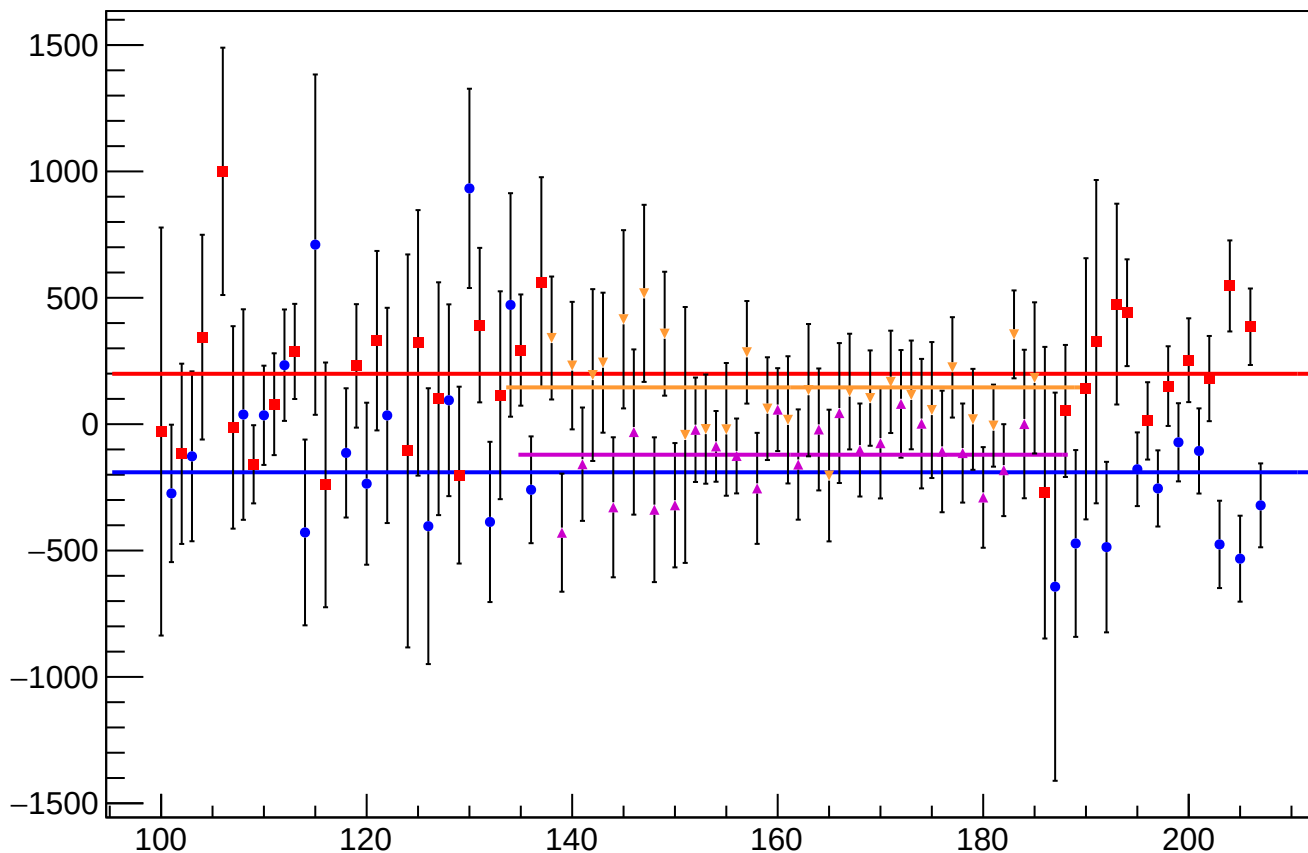
Left In: 10.626 $\pm$ 0.002  $\chi^2$ /NDF:159543.1/22

+ sign 10.573 $\pm$ 0.001  $\chi^2$ /NDF: 335242.8/50

All: 10.587 $\pm$ 0.001  $\chi^2$ /NDF: 770180.4/104

- sign 10.600 $\pm$ 0.001  $\chi^2$ /NDF: 434713.6/53

asym\_bcm\_dg\_us\_bcm\_an\_ds\_agg\_avg\_mean vs Slug



Right In:  $-190.346 \pm 46.659$   $\chi^2/\text{NDF}$ : 29.7/25

Left Out:  $145.545 \pm 46.613$   $\chi^2/\text{NDF}$ : 10.3/24

Right Out:  $199.312 \pm 45.069$   $\chi^2/\text{NDF}$ : 23.6/30

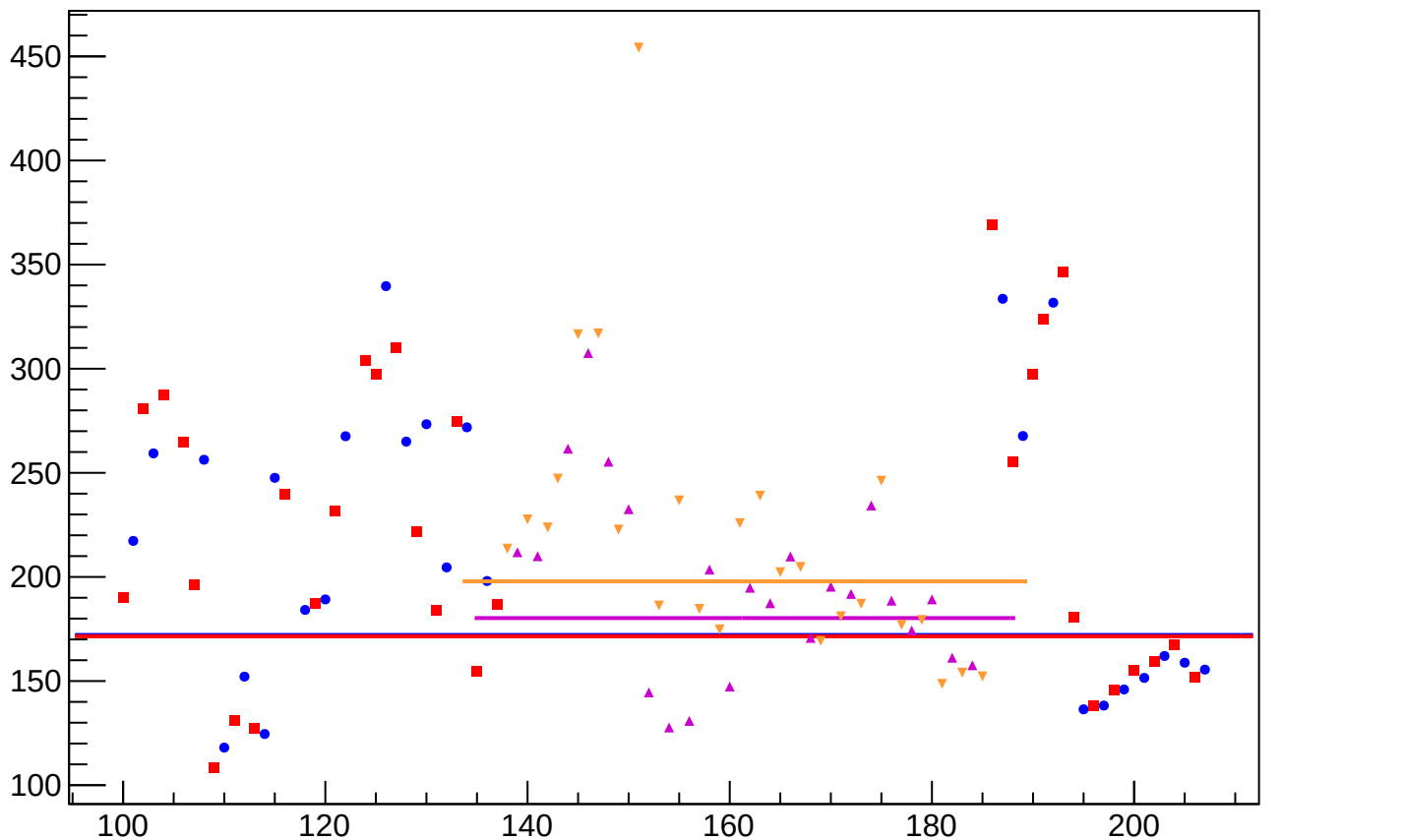
Left In:  $-120.888 \pm 43.994$   $\chi^2/\text{NDF}$ : 8.2/22

+ sign  $-22.235 \pm 32.977$   $\chi^2/\text{NDF}$ : 65.9/50

All:  $7.892 \pm 22.771$   $\chi^2/\text{NDF}$ : 125.2/104

- sign  $35.350 \pm 31.482$   $\chi^2/\text{NDF}$ : 57.6/53

asym\_bcm\_dg\_us\_bcm\_an\_ds\_agg\_avg\_rms vs Slug



Right In: 172.124 $\pm$ 0.033  $\chi^2$ /NDF: 2219286.9/25

Left Out: 197.890 $\pm$ 0.033  $\chi^2$ /NDF:1788849.3/24

Right Out: 171.504 $\pm$ 0.032  $\chi^2$ /NDF: 2879899.3/30

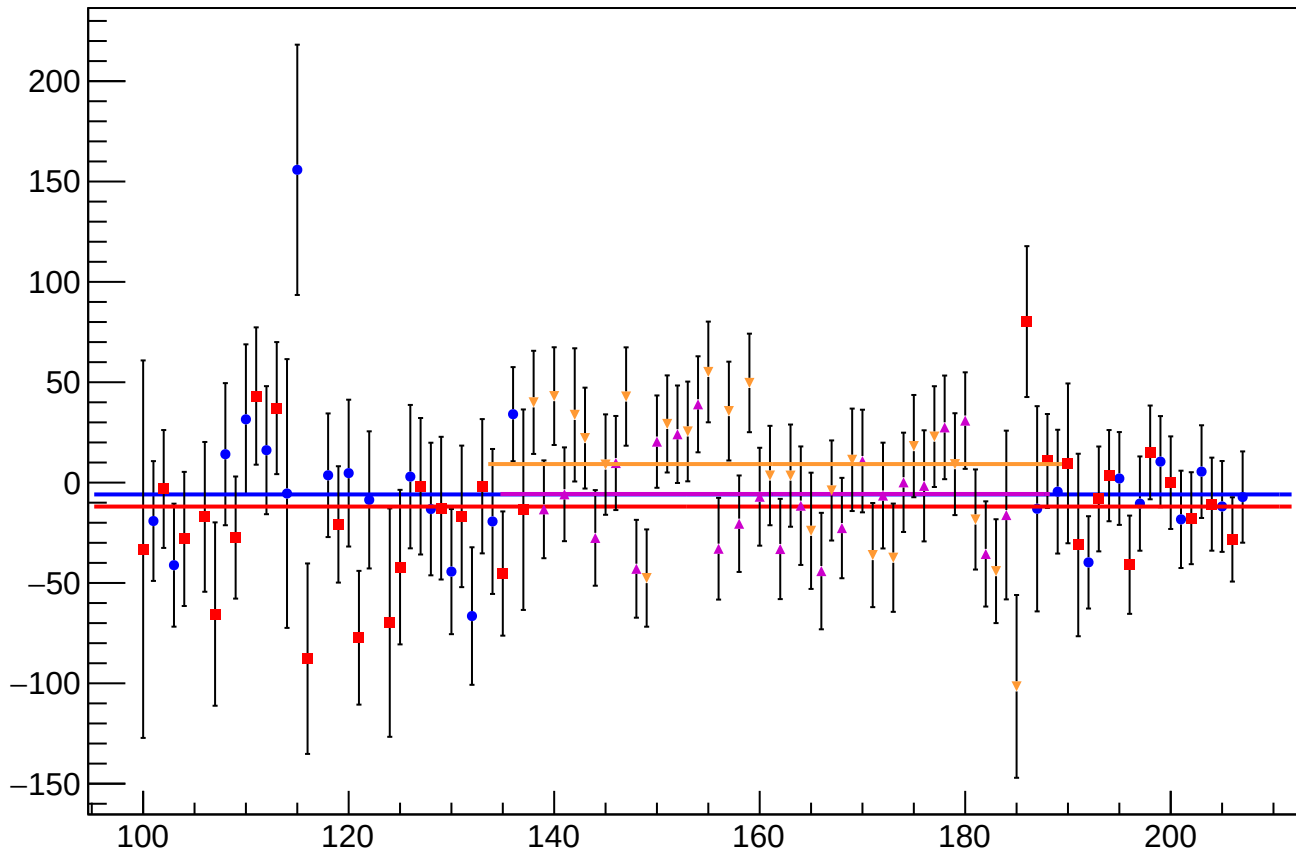
Left In: 180.248 $\pm$ 0.031  $\chi^2$ /NDF:1627777.0/22

+ sign 185.020 $\pm$ 0.023  $\chi^2$ /NDF: 4313386.1/50

All: 180.291 $\pm$ 0.016  $\chi^2$ /NDF: 8938223.4/104

- sign 175.981 $\pm$ 0.022  $\chi^2$ /NDF: 4546228.4/53

asym\_bcm\_dg\_us\_bcm\_an\_ds\_agg\_dd\_mean vs Slug



Right In:  $-5.894 \pm 5.735$   $\chi^2/\text{NDF}$ : 21.5/25

Left Out:  $9.234 \pm 5.162$   $\chi^2/\text{NDF}$ : 39.4/24

Right Out:  $-11.937 \pm 5.503$   $\chi^2/\text{NDF}$ : 27.9/30

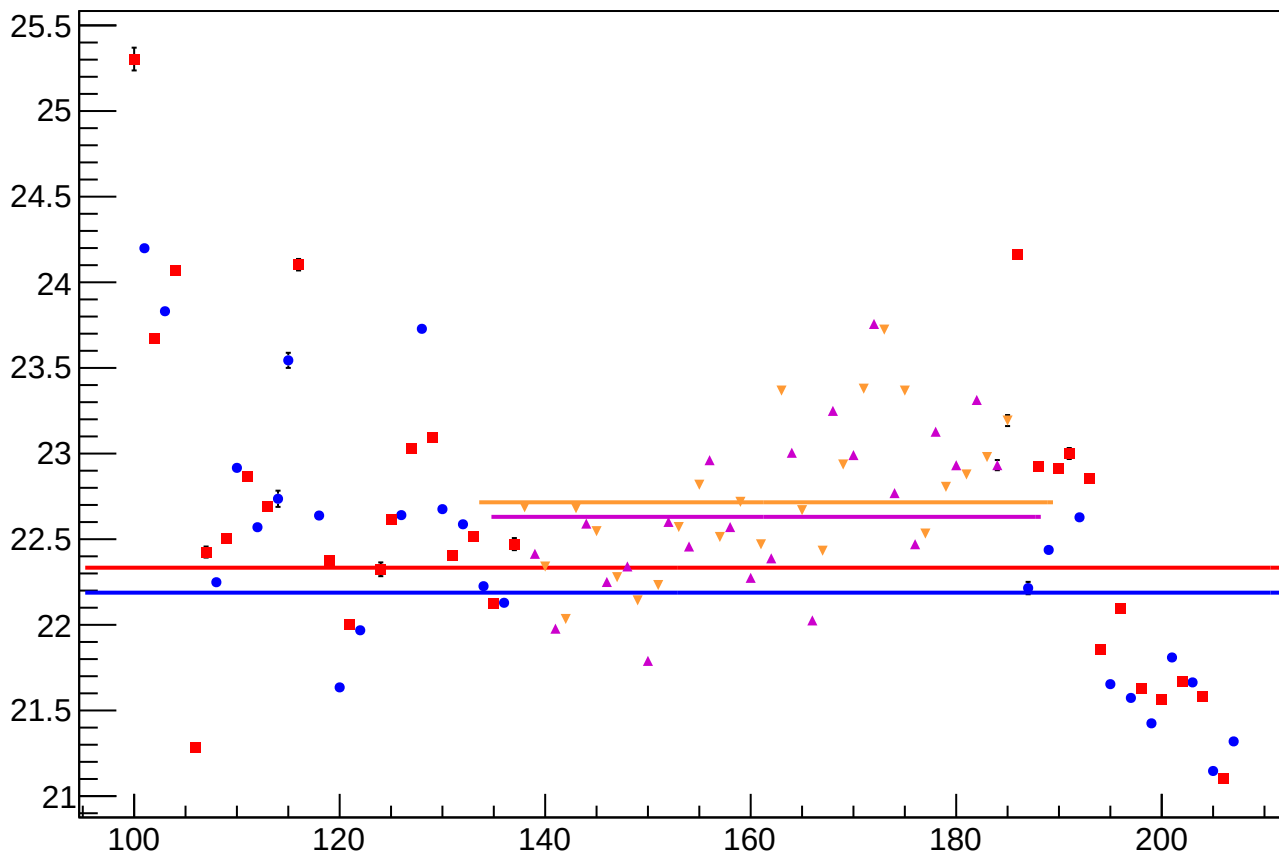
Left In:  $-5.668 \pm 5.286$   $\chi^2/\text{NDF}$ : 20.8/22

+ sign  $2.463 \pm 3.837$   $\chi^2/\text{NDF}$ : 64.8/50

All:  $-3.142 \pm 2.704$   $\chi^2/\text{NDF}$ : 118.4/104

- sign  $-8.676 \pm 3.812$   $\chi^2/\text{NDF}$ : 49.4/53

asym\_bcm\_dg\_us\_bcm\_an\_ds\_agg\_dd\_rms vs Slug



Right In: 22.188 $\pm$ 0.004  $\chi^2$ /NDF: 37613.5/25

Left Out: 22.715 $\pm$ 0.004  $\chi^2$ /NDF:12181.4/24

Right Out: 22.334 $\pm$ 0.004  $\chi^2$ /NDF: 42334.6/30

Left In: 22.631 $\pm$ 0.004  $\chi^2$ /NDF:15391.4/22

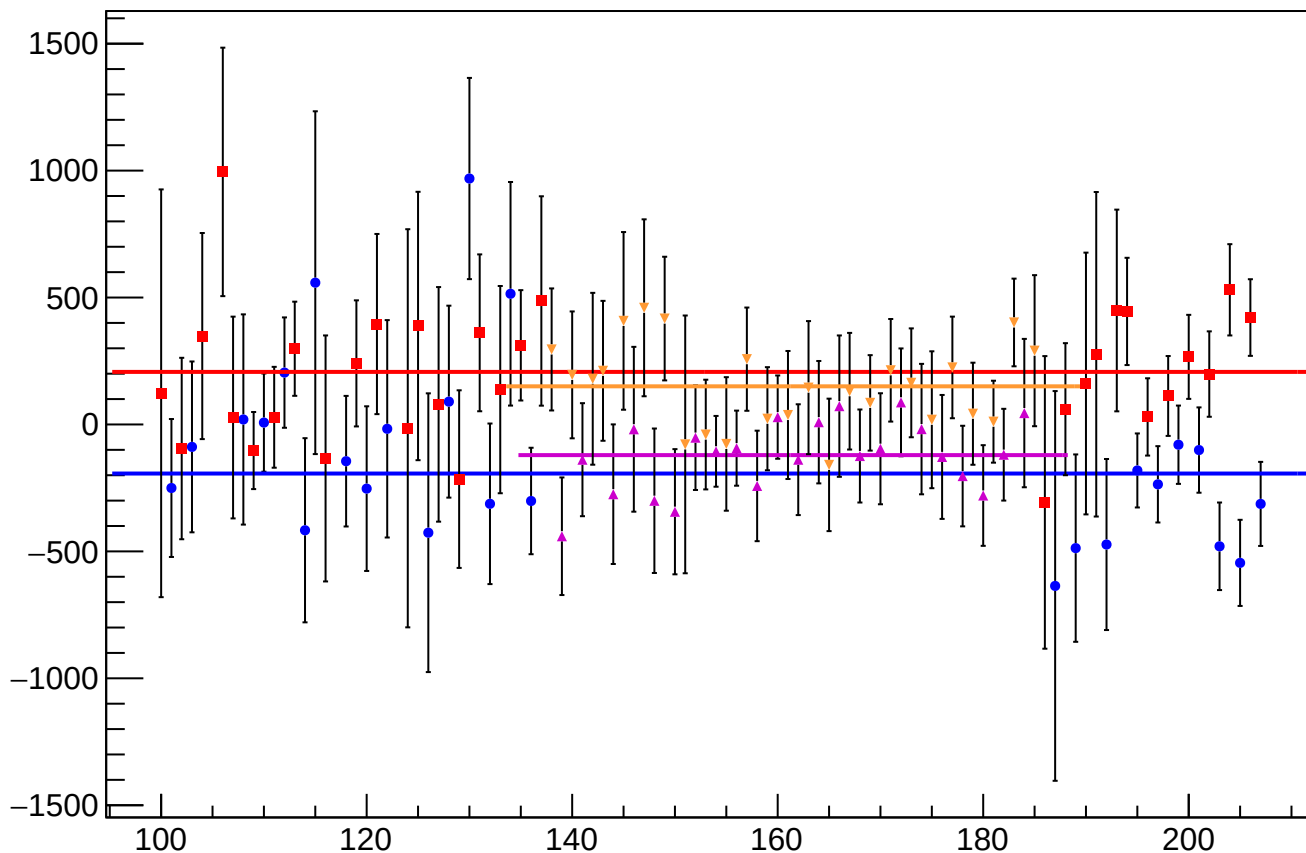
+ sign 22.479 $\pm$ 0.003  $\chi^2$ /NDF: 59143.5/50

All: 22.484 $\pm$ 0.002  $\chi^2$ /NDF: 119901.9/104

- sign 22.488 $\pm$ 0.003  $\chi^2$ /NDF: 60753.1/53



asym\_bcm\_dg\_ds\_bcm\_an\_ds\_agg\_avg\_mean vs Slug



Right In:  $-193.318 \pm 46.525$   $\chi^2/\text{NDF}$ : 29.2/25

Left Out:  $150.218 \pm 46.535$   $\chi^2/\text{NDF}$ : 11.0/24

Right Out:  $207.052 \pm 44.871$   $\chi^2/\text{NDF}$ : 22.2/30

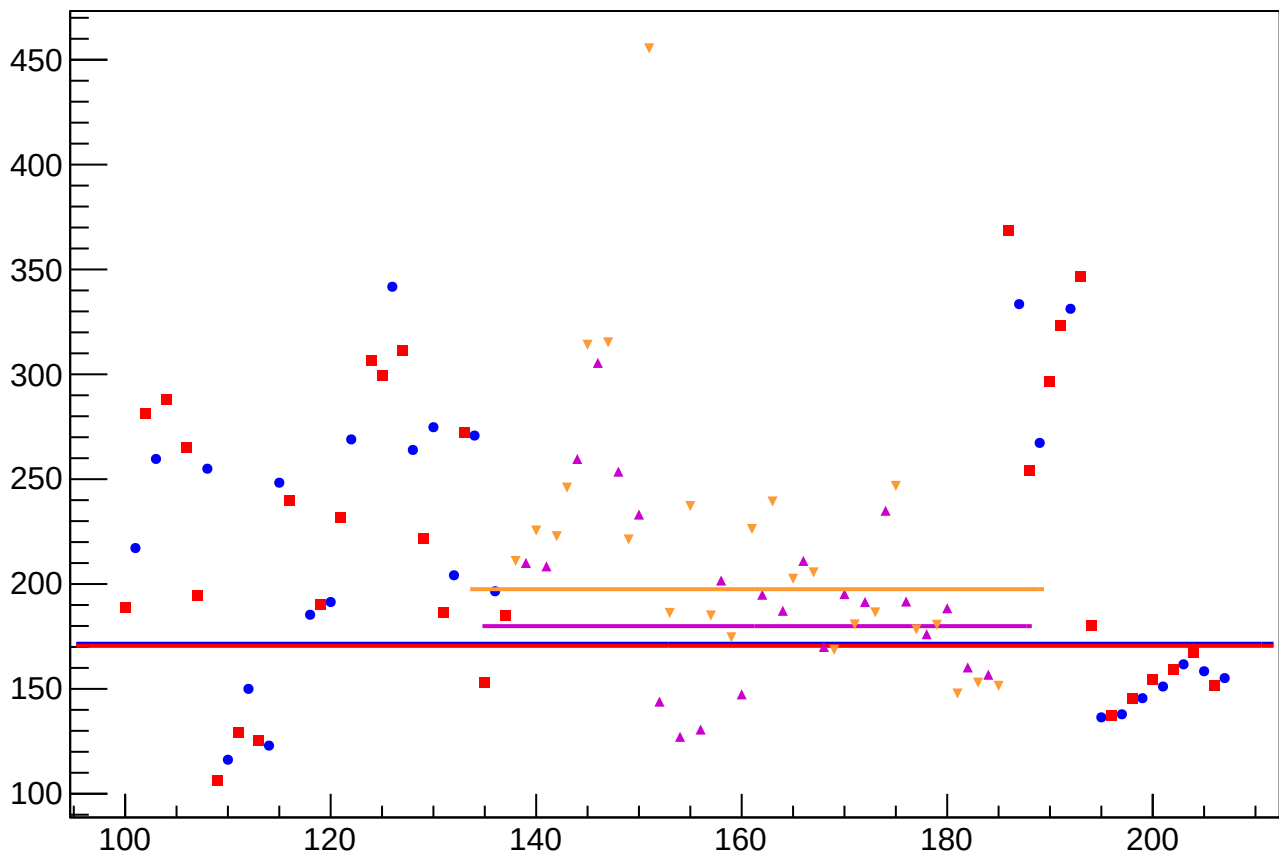
Left In:  $-120.760 \pm 43.920$   $\chi^2/\text{NDF}$ : 7.9/22

+ sign  $-21.586 \pm 32.902$   $\chi^2/\text{NDF}$ : 67.4/50

All:  $10.468 \pm 22.711$   $\chi^2/\text{NDF}$ : 126.6/104

- sign  $39.637 \pm 31.387$   $\chi^2/\text{NDF}$ : 57.4/53

asym\_bcm\_dg\_ds\_bcm\_an\_ds\_agg\_avg\_rms vs Slug



Right In: 171.534 $\pm$ 0.033  $\chi^2$ /NDF: 2248947.9/25

Left Out: 197.534 $\pm$ 0.033  $\chi^2$ /NDF:1789891.0/24

Right Out: 170.529 $\pm$ 0.032  $\chi^2$ /NDF: 2953076.3/30

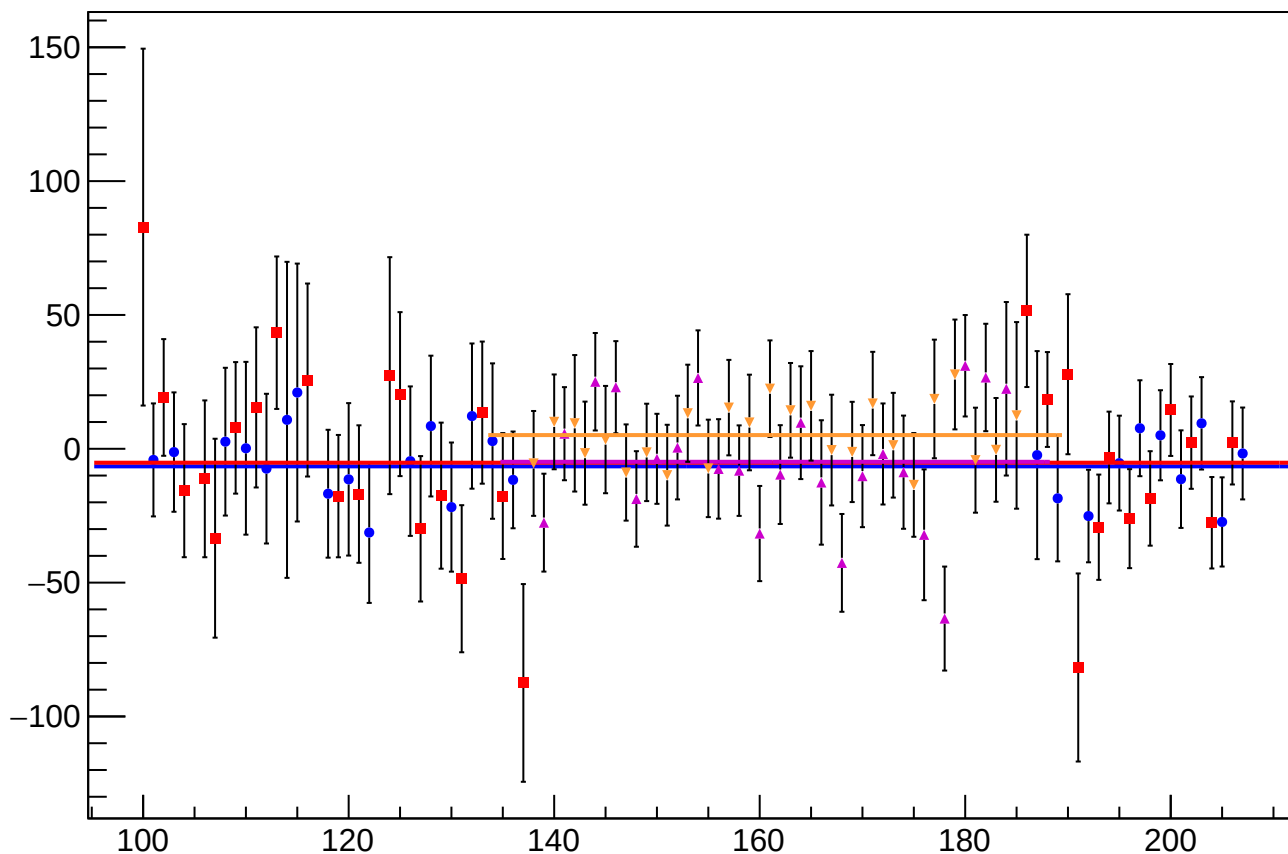
Left In: 179.923 $\pm$ 0.031  $\chi^2$ /NDF:1624144.3/22

+ sign 184.531 $\pm$ 0.023  $\chi^2$ /NDF: 4351076.0/50

All: 179.712 $\pm$ 0.016  $\chi^2$ /NDF: 9055021.6/104

- sign 175.327 $\pm$ 0.022  $\chi^2$ /NDF: 4621994.2/53

asym\_bcm\_dg\_ds\_bcm\_an\_ds\_agg\_dd\_mean vs Slug



Right In:  $-6.568 \pm 4.385$   $\chi^2/\text{NDF}$ : 8.2/25

Left Out:  $5.119 \pm 3.890$   $\chi^2/\text{NDF}$ : 7.9/24

Right Out:  $-5.201 \pm 4.211$   $\chi^2/\text{NDF}$ : 37.7/30

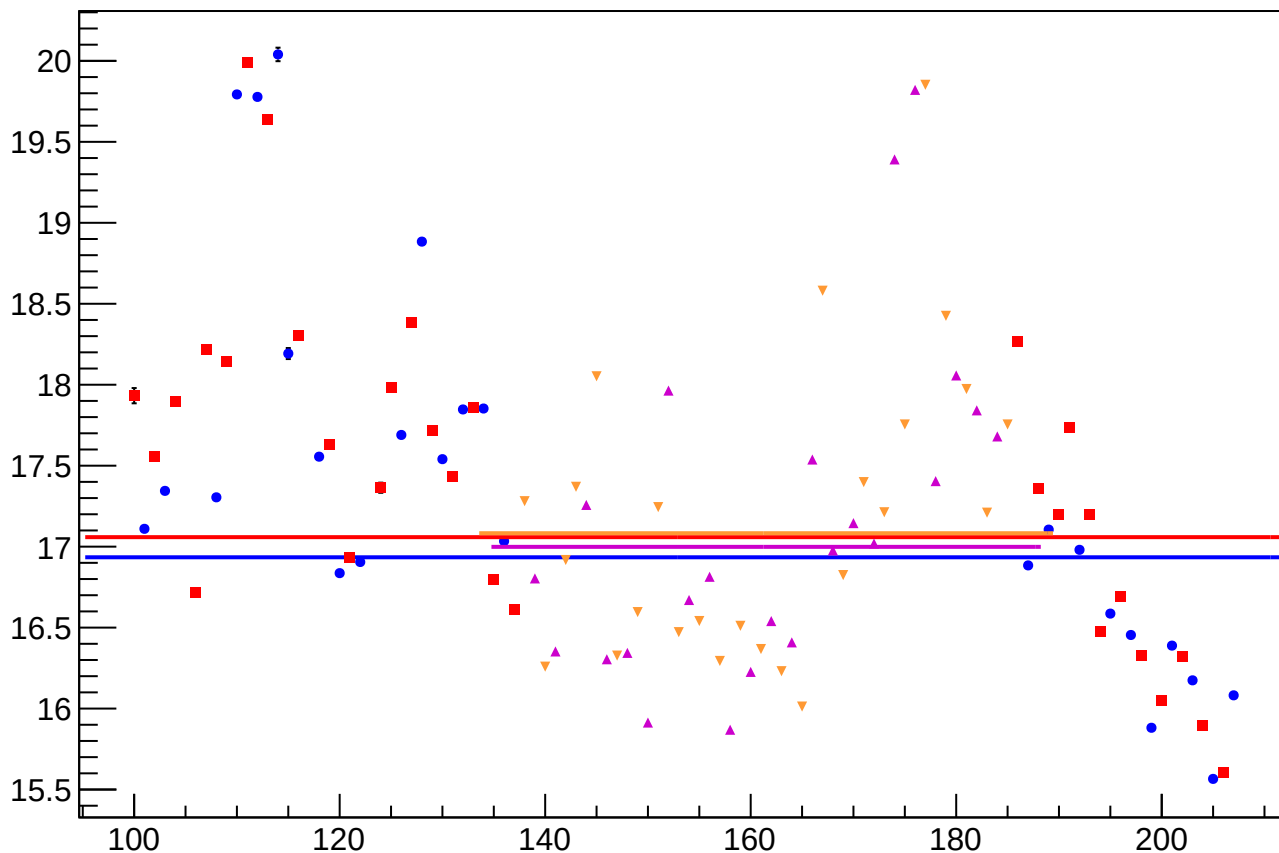
Left In:  $-4.858 \pm 3.980$   $\chi^2/\text{NDF}$ : 35.5/22

+ sign  $-0.028 \pm 2.910$   $\chi^2/\text{NDF}$ : 20.1/50

All:  $-2.539 \pm 2.051$   $\chi^2/\text{NDF}$ : 94.8/104

- sign  $-5.020 \pm 2.892$   $\chi^2/\text{NDF}$ : 73.2/53

asym\_bcm\_dg\_ds\_bcm\_an\_ds\_agg\_dd\_rms vs Slug



Right In: 16.934 $\pm$ 0.003  $\chi^2$ /NDF: 98124.5/25

Left Out: 17.083 $\pm$ 0.003  $\chi^2$ /NDF: 96774.9/24

Right Out: 17.059 $\pm$ 0.003  $\chi^2$ /NDF: 108625.6/30

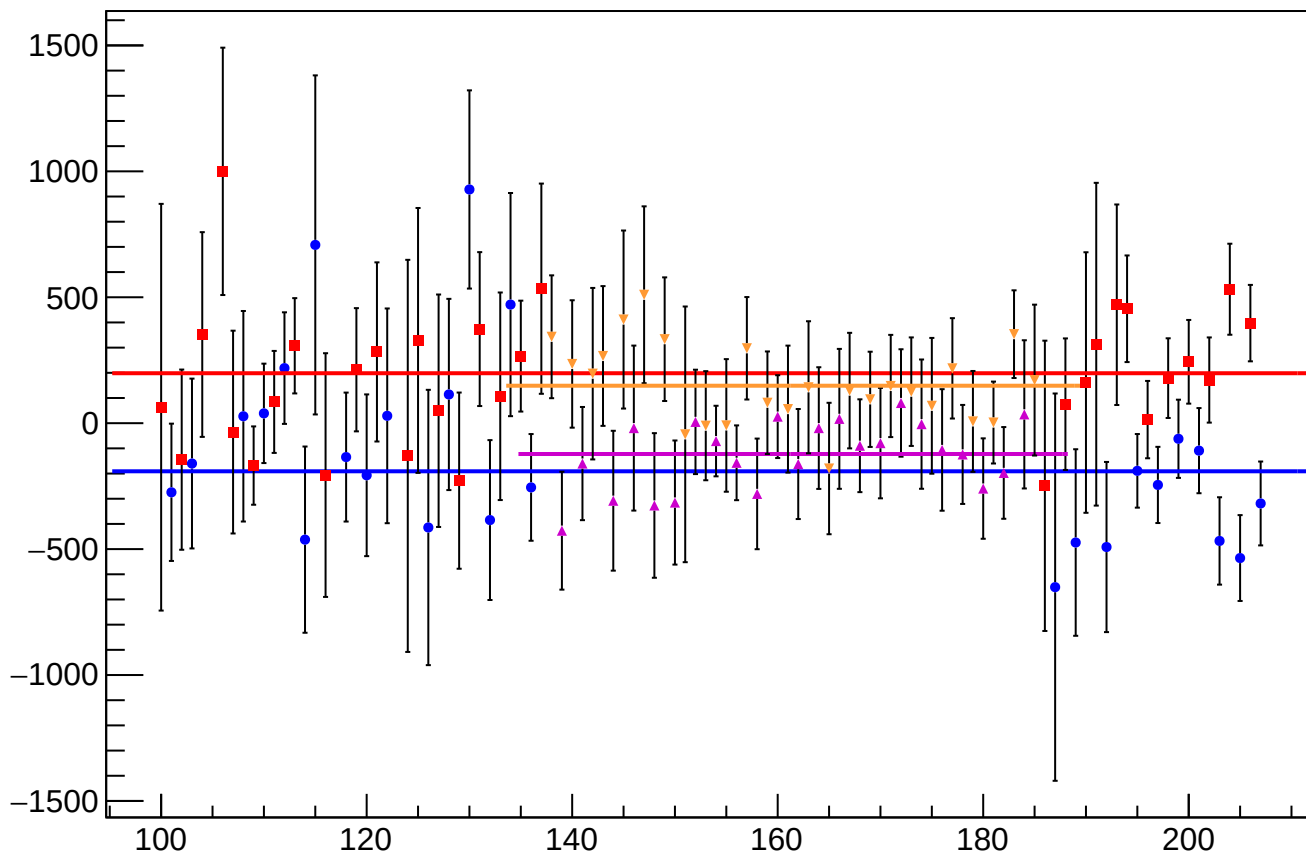
Left In: 16.999 $\pm$ 0.003  $\chi^2$ /NDF: 104021.0/22

+ sign 17.017 $\pm$ 0.002  $\chi^2$ /NDF: 196185.1/50

All: 17.022 $\pm$ 0.001  $\chi^2$ /NDF: 409056.1/104

- sign 17.027 $\pm$ 0.002  $\chi^2$ /NDF: 212860.3/53

asym\_bcm\_dg\_us\_bcm\_an\_us\_agg\_avg\_mean vs Slug



Right In:  $-191.019 \pm 46.805$   $\chi^2/\text{NDF}$ : 29.4/25

Left Out:  $148.758 \pm 46.714$   $\chi^2/\text{NDF}$ : 9.5/24

Right Out:  $198.369 \pm 45.201$   $\chi^2/\text{NDF}$ : 23.5/30

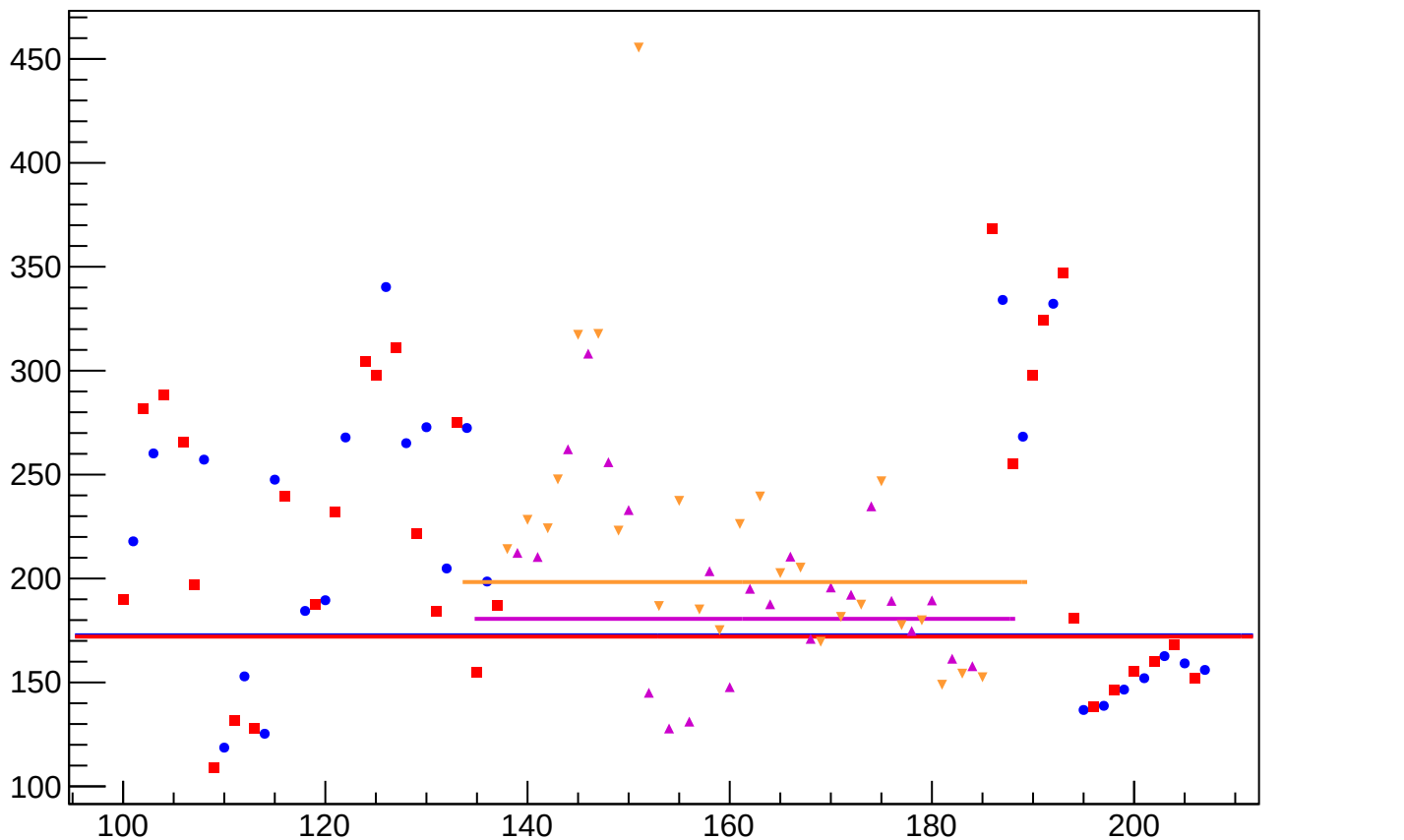
Left In:  $-122.376 \pm 44.081$   $\chi^2/\text{NDF}$ : 7.9/22

+ sign  $-20.800 \pm 33.064$   $\chi^2/\text{NDF}$ : 65.3/50

All:  $7.862 \pm 22.829$   $\chi^2/\text{NDF}$ : 123.9/104

- sign  $33.974 \pm 31.558$   $\chi^2/\text{NDF}$ : 57.2/53

asym\_bcm\_dg\_us\_bcm\_an\_us\_agg\_avg\_rms vs Slug



Right In: 172.703 $\pm$ 0.033  $\chi^2$ /NDF: 2206253.0/25

Left Out: 198.313 $\pm$ 0.033  $\chi^2$ /NDF: 1790279.4/24

Right Out: 172.055 $\pm$ 0.032  $\chi^2$ /NDF: 2862622.9/30

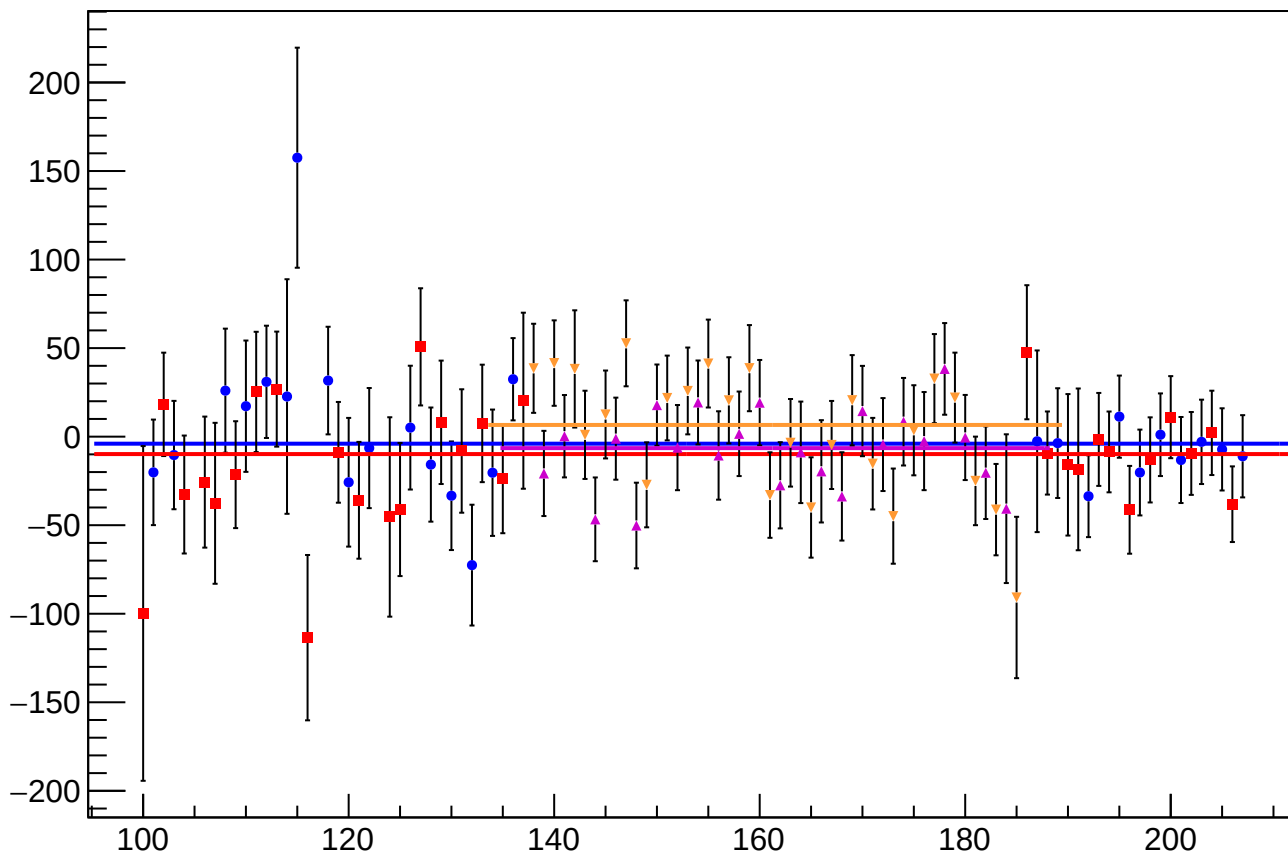
Left In: 180.601 $\pm$ 0.031  $\chi^2$ /NDF: 1628072.3/22

+ sign 185.533 $\pm$ 0.023  $\chi^2$ /NDF: 4296521.0/50

All: 180.772 $\pm$ 0.016  $\chi^2$ /NDF: 8903097.7/104

- sign 176.435 $\pm$ 0.022  $\chi^2$ /NDF: 4527343.7/53

asym\_bcm\_dg\_us\_bcm\_an\_us\_agg\_dd\_mean vs Slug



Right In:  $-3.971 \pm 5.761$   $\chi^2/\text{NDF}$ : 21.9/25

Left Out:  $6.611 \pm 5.117$   $\chi^2/\text{NDF}$ : 36.9/24

Right Out:  $-9.837 \pm 5.515$   $\chi^2/\text{NDF}$ : 23.4/30

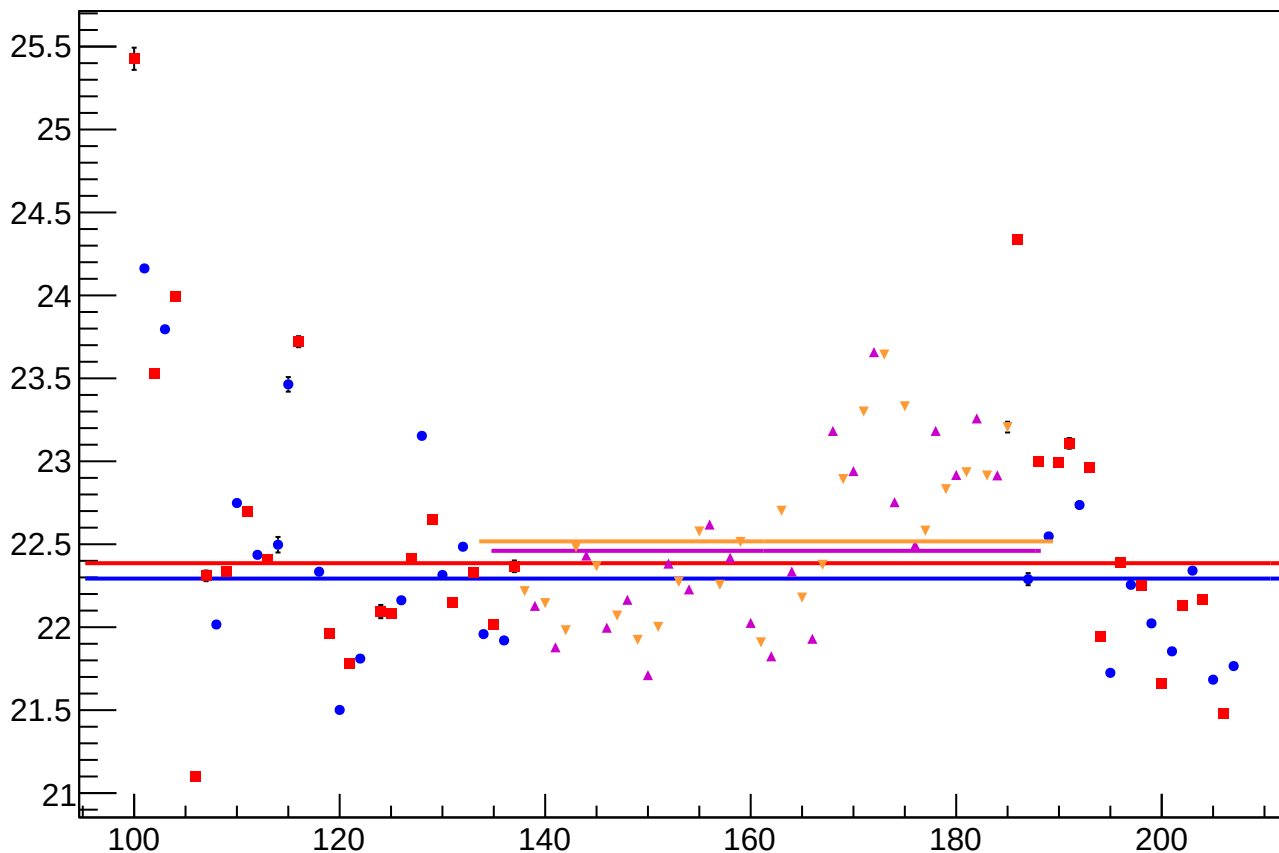
Left In:  $-6.482 \pm 5.247$   $\chi^2/\text{NDF}$ : 17.4/22

+ sign  $1.944 \pm 3.826$   $\chi^2/\text{NDF}$ : 60.7/50

All:  $-3.098 \pm 2.697$   $\chi^2/\text{NDF}$ : 105.2/104

- sign  $-8.076 \pm 3.801$   $\chi^2/\text{NDF}$ : 41.0/53

asym\_bcm\_dg\_us\_bcm\_an\_us\_agg\_dd\_rms vs Slug



Right In: 22.293 $\pm$ 0.004  $\chi^2$ /NDF: 22879.6/25

Left Out: 22.517 $\pm$ 0.004  $\chi^2$ /NDF:16002.5/24

Right Out: 22.386 $\pm$ 0.004  $\chi^2$ /NDF: 31219.8/30

Left In: 22.460 $\pm$ 0.004  $\chi^2$ /NDF:19117.2/22

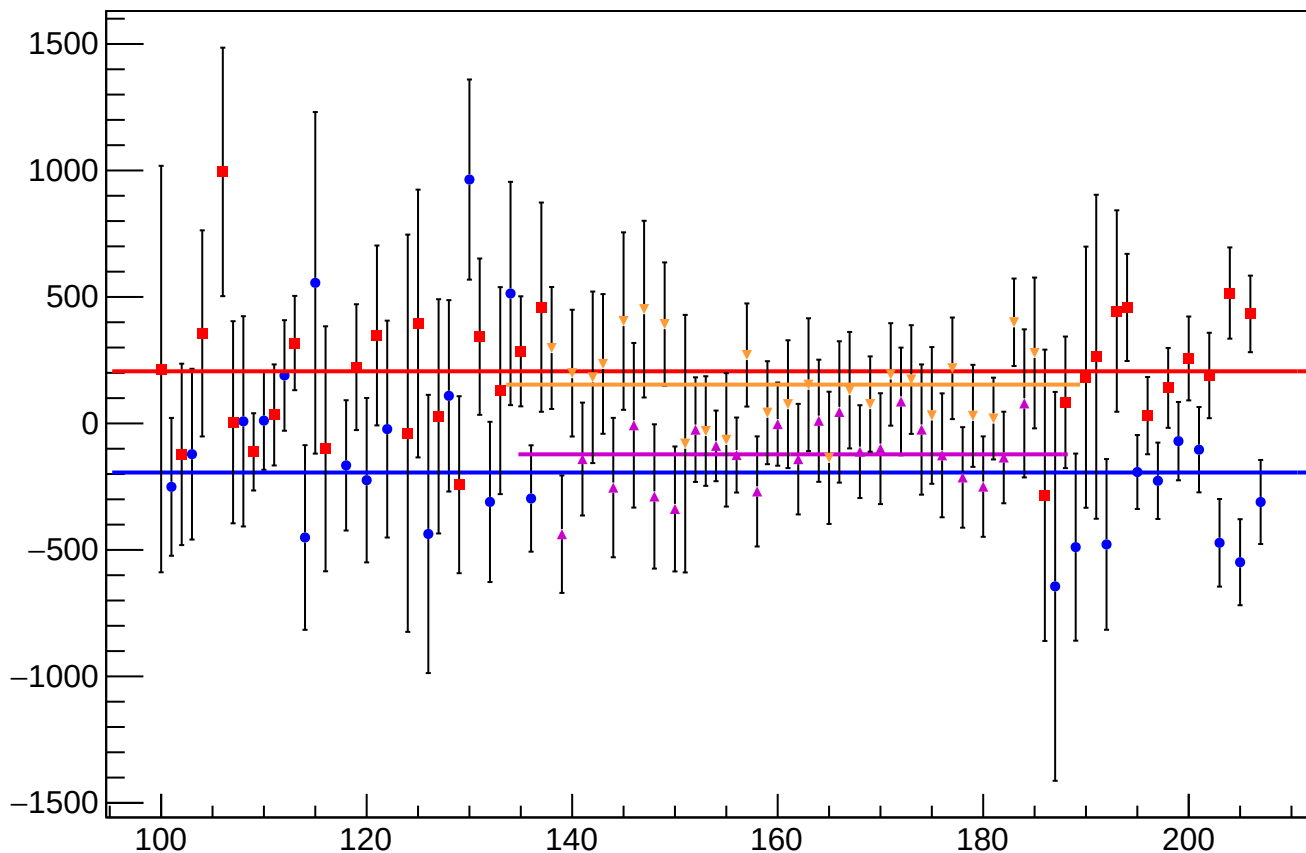
+ sign 22.418 $\pm$ 0.003  $\chi^2$ /NDF: 40577.8/50

All: 22.422 $\pm$ 0.002  $\chi^2$ /NDF: 91108.7/104

- sign 22.425 $\pm$ 0.003  $\chi^2$ /NDF: 50528.0/53



asym\_bcm\_dg\_ds\_bcm\_an\_us\_agg\_avg\_mean vs Slug



Right In:  $-194.025 \pm 46.673$   $\chi^2/\text{NDF}$ : 28.9/25

Left Out:  $153.507 \pm 46.636$   $\chi^2/\text{NDF}$ : 10.1/24

Right Out:  $206.132 \pm 45.004$   $\chi^2/\text{NDF}$ : 22.1/30

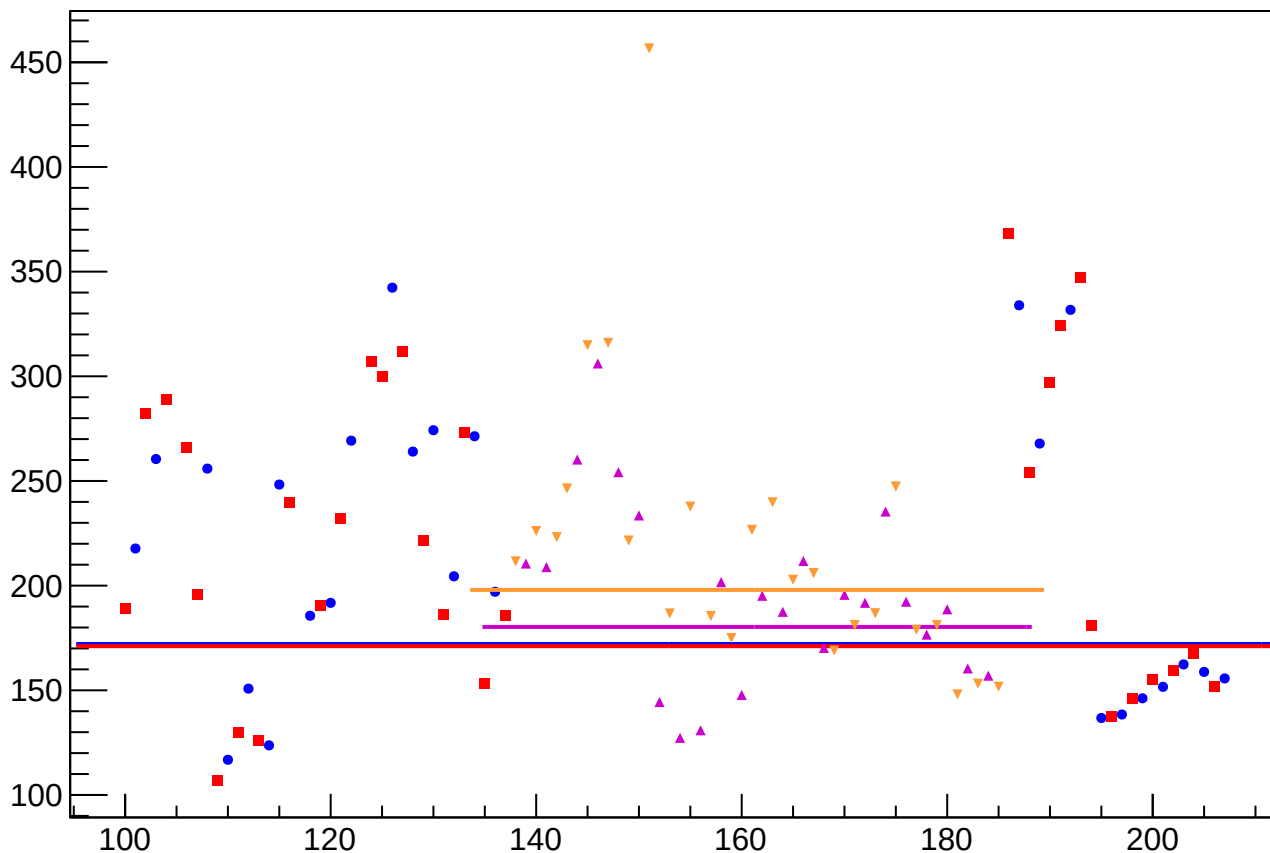
Left In:  $-122.165 \pm 44.006$   $\chi^2/\text{NDF}$ : 7.5/22

+ sign  $-20.122 \pm 32.990$   $\chi^2/\text{NDF}$ : 66.7/50

All:  $10.473 \pm 22.769$   $\chi^2/\text{NDF}$ : 125.1/104

- sign  $38.303 \pm 31.464$   $\chi^2/\text{NDF}$ : 56.8/53

asym\_bcm\_dg\_ds\_bcm\_an\_us\_agg\_avg\_rms vs Slug



Right In: 172.118 $\pm$ 0.033  $\chi^2$ /NDF: 2235386.6/25

Left Out: 197.957 $\pm$ 0.033  $\chi^2$ /NDF:1791354.6/24

Right Out: 171.087 $\pm$ 0.032  $\chi^2$ /NDF: 2934914.3/30

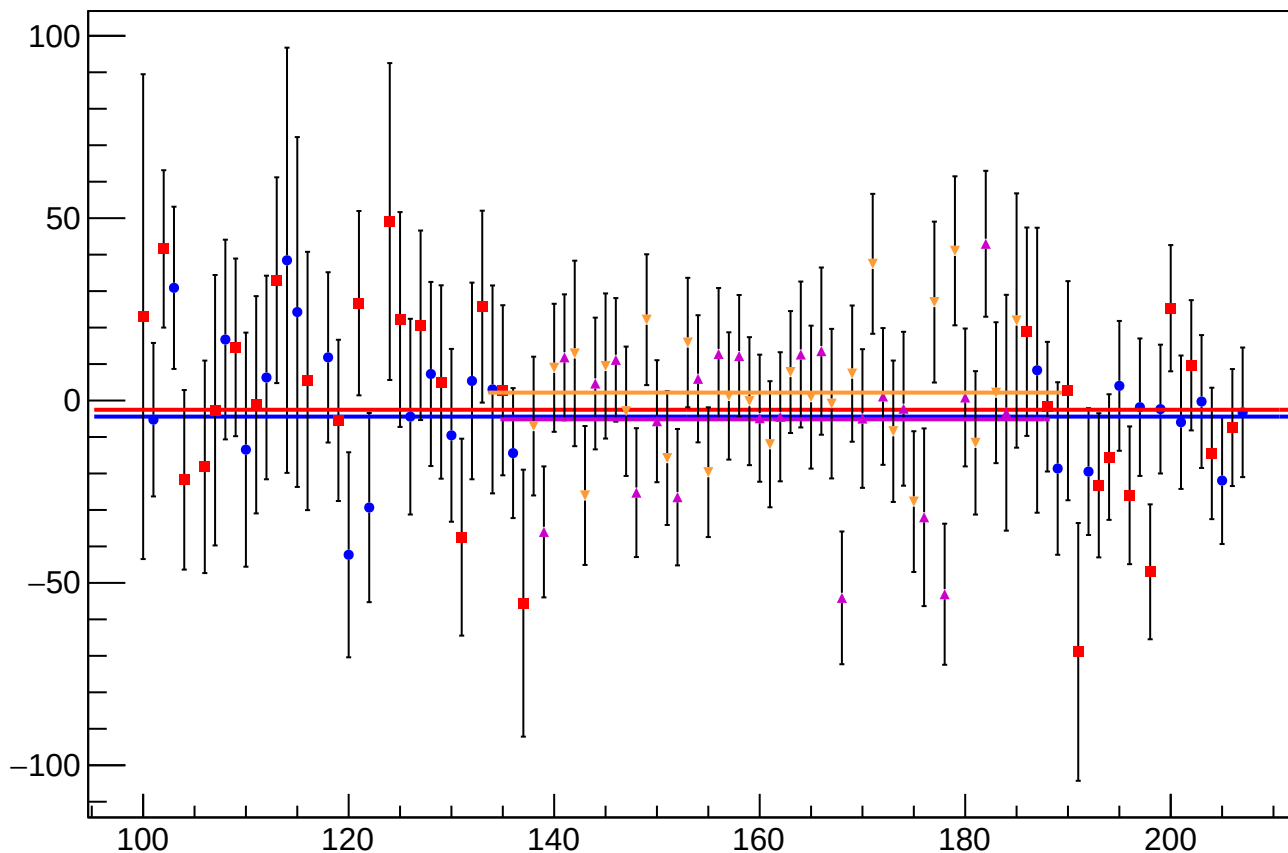
Left In: 180.274 $\pm$ 0.031  $\chi^2$ /NDF:1624682.7/22

+ sign 185.048 $\pm$ 0.023  $\chi^2$ /NDF: 4333482.9/50

All: 180.197 $\pm$ 0.016  $\chi^2$ /NDF: 9018276.0/104

- sign 175.784 $\pm$ 0.022  $\chi^2$ /NDF: 4602203.7/53

asym\_bcm\_dg\_ds\_bcm\_an\_us\_agg\_dd\_mean vs Slug



Right In:  $-4.407 \pm 4.424$   $\chi^2/\text{NDF}$ : 10.8/25

Left Out:  $2.174 \pm 3.825$   $\chi^2/\text{NDF}$ : 20.0/24

Right Out:  $-2.529 \pm 4.233$   $\chi^2/\text{NDF}$ : 33.4/30

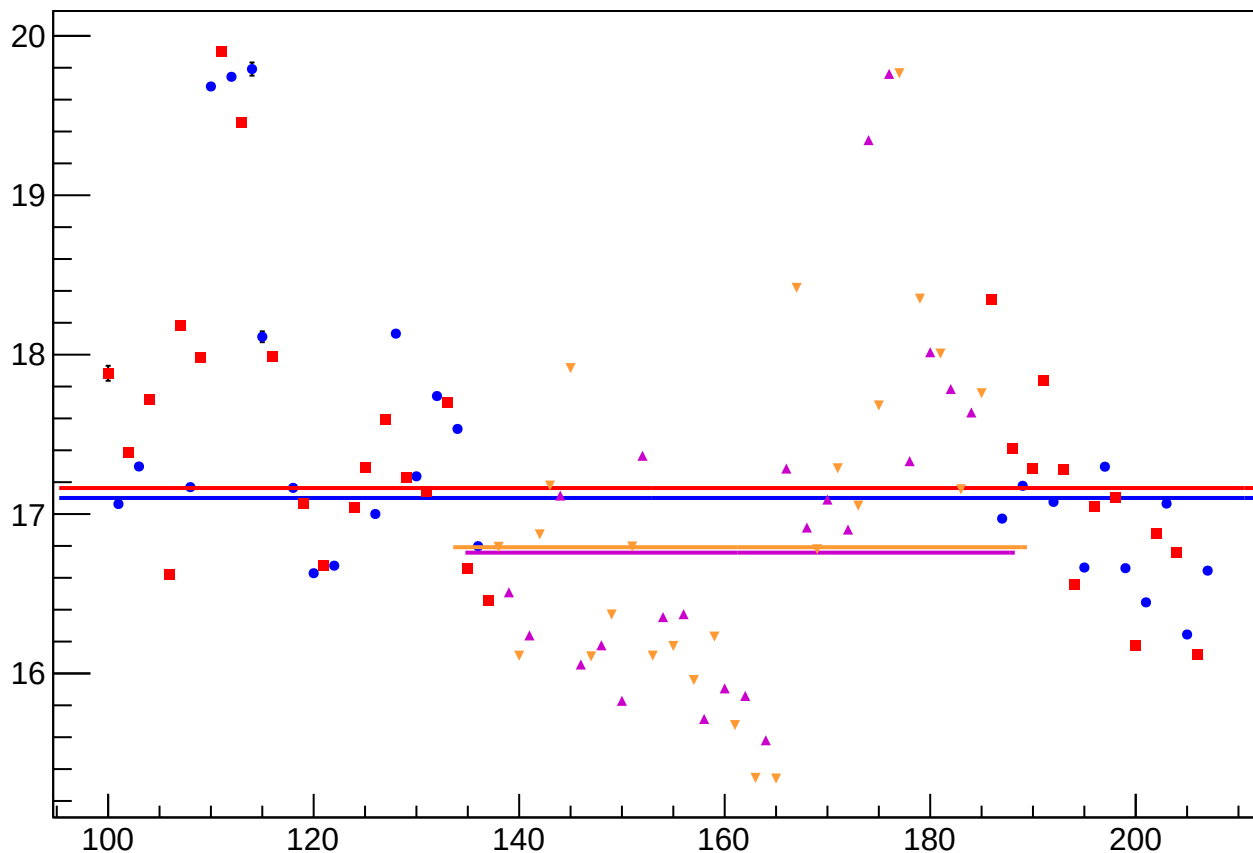
Left In:  $-5.150 \pm 3.924$   $\chi^2/\text{NDF}$ : 32.3/22

+ sign  $-0.641 \pm 2.894$   $\chi^2/\text{NDF}$ : 32.0/50

All:  $-2.299 \pm 2.040$   $\chi^2/\text{NDF}$ : 98.6/104

- sign  $-3.939 \pm 2.878$   $\chi^2/\text{NDF}$ : 65.9/53

asym\_bcm\_dg\_ds\_bcm\_an\_us\_agg\_dd\_rms vs Slug



Right In: 17.101 $\pm$ 0.003  $\chi^2$ /NDF: 54348.4/25

Left Out: 16.792 $\pm$ 0.003  $\chi^2$ /NDF:137000.5/24

Right Out: 17.163 $\pm$ 0.003  $\chi^2$ /NDF: 64784.4/30

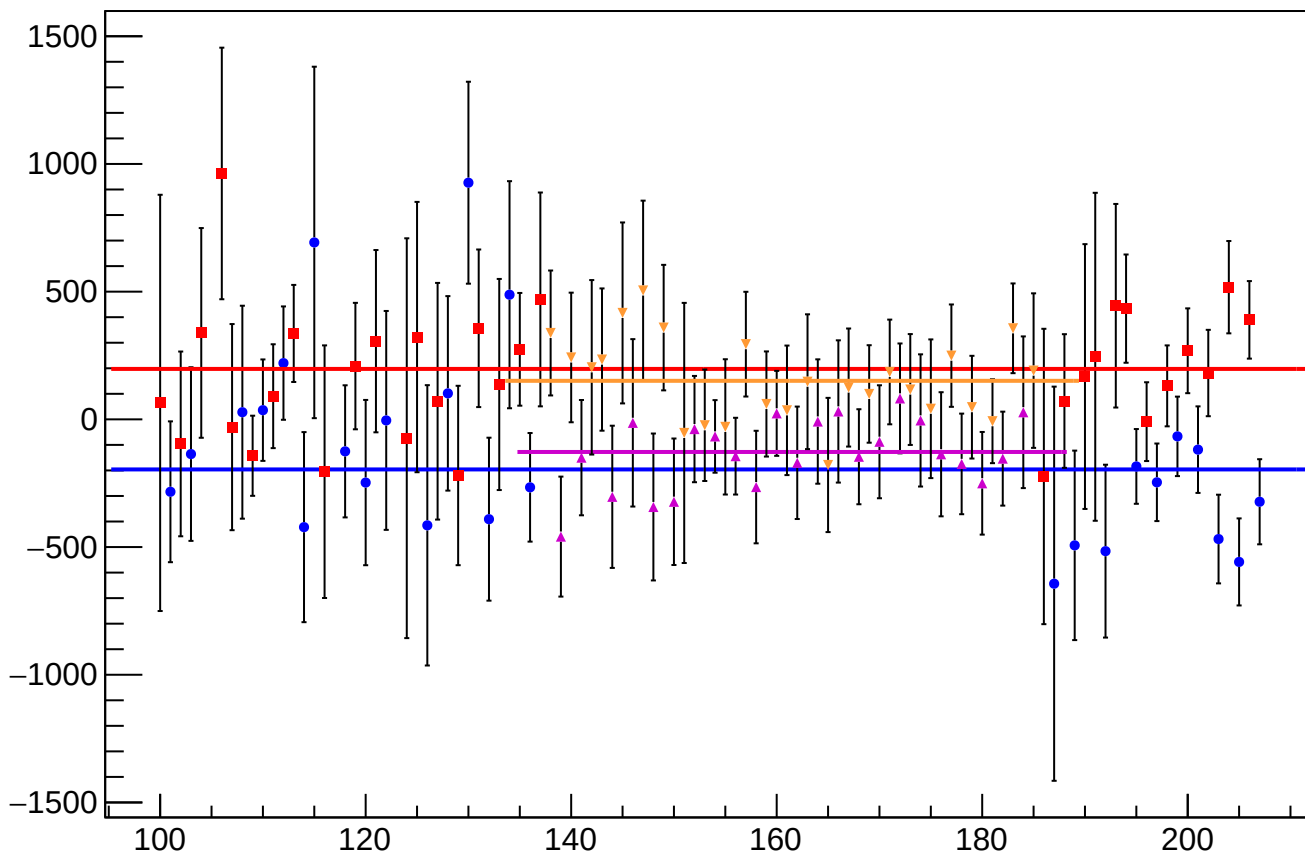
Left In: 16.758 $\pm$ 0.003  $\chi^2$ /NDF:123306.8/22

+ sign 16.924 $\pm$ 0.002  $\chi^2$ /NDF: 196925.8/50

All: 16.935 $\pm$ 0.001  $\chi^2$ /NDF: 394935.2/104

- sign 16.945 $\pm$ 0.002  $\chi^2$ /NDF: 197956.1/53

asym\_bcm\_dg\_us\_bcm\_dg\_ds\_agg\_avg\_mean vs Slug



Right In:  $-196.066 \pm 46.950$   $\chi^2/\text{NDF}$ : 29.8/25

Left Out:  $150.884 \pm 47.035$   $\chi^2/\text{NDF}$ : 10.0/24

Right Out:  $197.482 \pm 45.356$   $\chi^2/\text{NDF}$ : 21.6/30

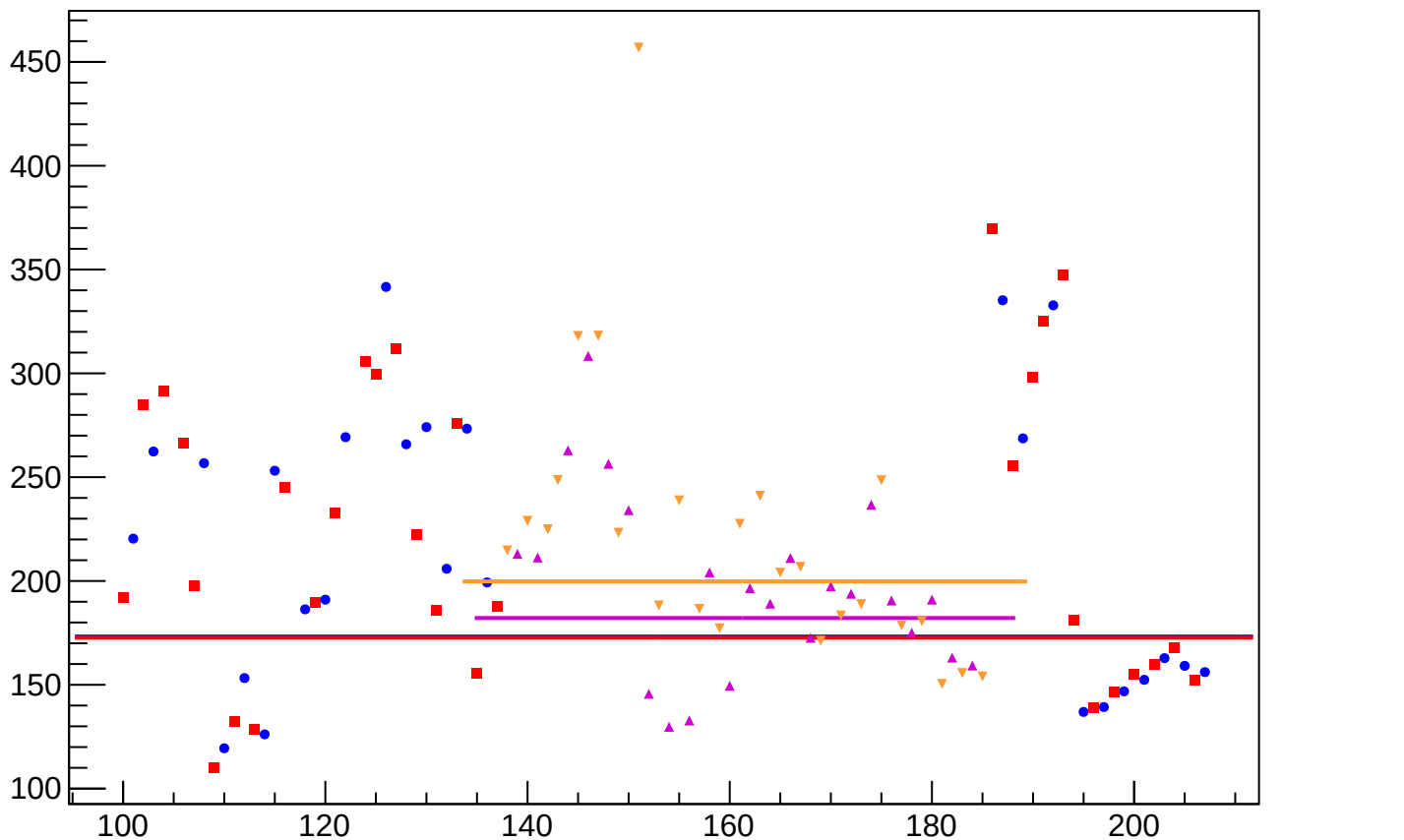
Left In:  $-127.710 \pm 44.426$   $\chi^2/\text{NDF}$ : 7.8/22

+ sign  $-22.904 \pm 33.229$   $\chi^2/\text{NDF}$ : 67.0/50

All:  $5.556 \pm 22.951$   $\chi^2/\text{NDF}$ : 124.1/104

- sign  $31.519 \pm 31.738$   $\chi^2/\text{NDF}$ : 55.7/53

asym\_bcm\_dg\_us\_bcm\_dg\_ds\_agg\_avg\_rms vs Slug



Right In: 173.216 $\pm$ 0.033  $\chi^2$ /NDF: 2217264.5/25

Left Out: 199.785 $\pm$ 0.033  $\chi^2$ /NDF: 1760326.2/24

Right Out: 172.663 $\pm$ 0.032  $\chi^2$ /NDF: 2866803.5/30

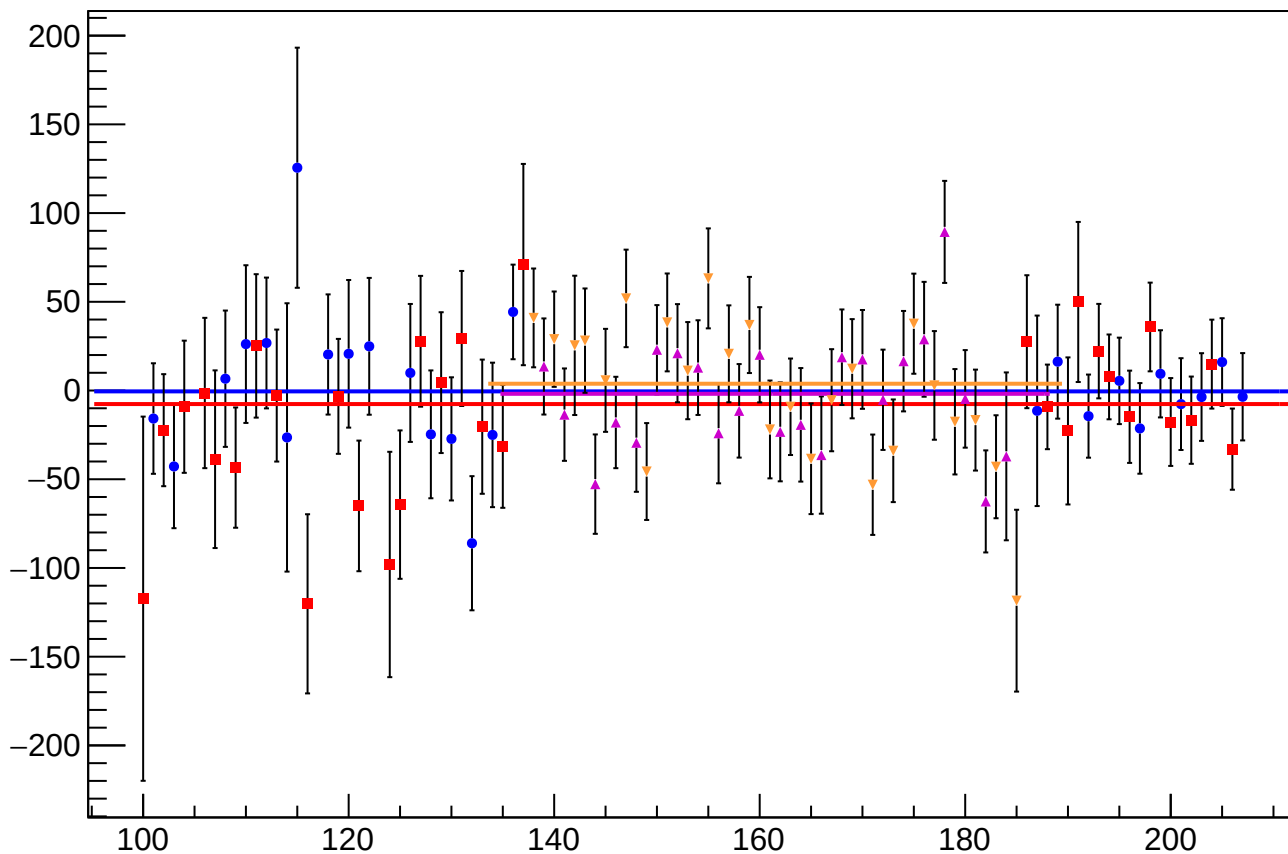
Left In: 182.150 $\pm$ 0.031  $\chi^2$ /NDF: 1584358.1/22

+ sign 186.477 $\pm$ 0.023  $\chi^2$ /NDF: 4297237.5/50

All: 181.785 $\pm$ 0.016  $\chi^2$ /NDF: 8869295.7/104

- sign 177.505 $\pm$ 0.022  $\chi^2$ /NDF: 4495816.2/53

asym\_bcm\_dg\_us\_bcm\_dg\_ds\_agg\_dd\_mean vs Slug



Right In:  $-0.483 \pm 6.237$   $\chi^2/\text{NDF}$ : 18.9/25

Left Out:  $3.831 \pm 5.789$   $\chi^2/\text{NDF}$ : 37.6/24

Right Out:  $-7.627 \pm 5.937$   $\chi^2/\text{NDF}$ : 29.1/30

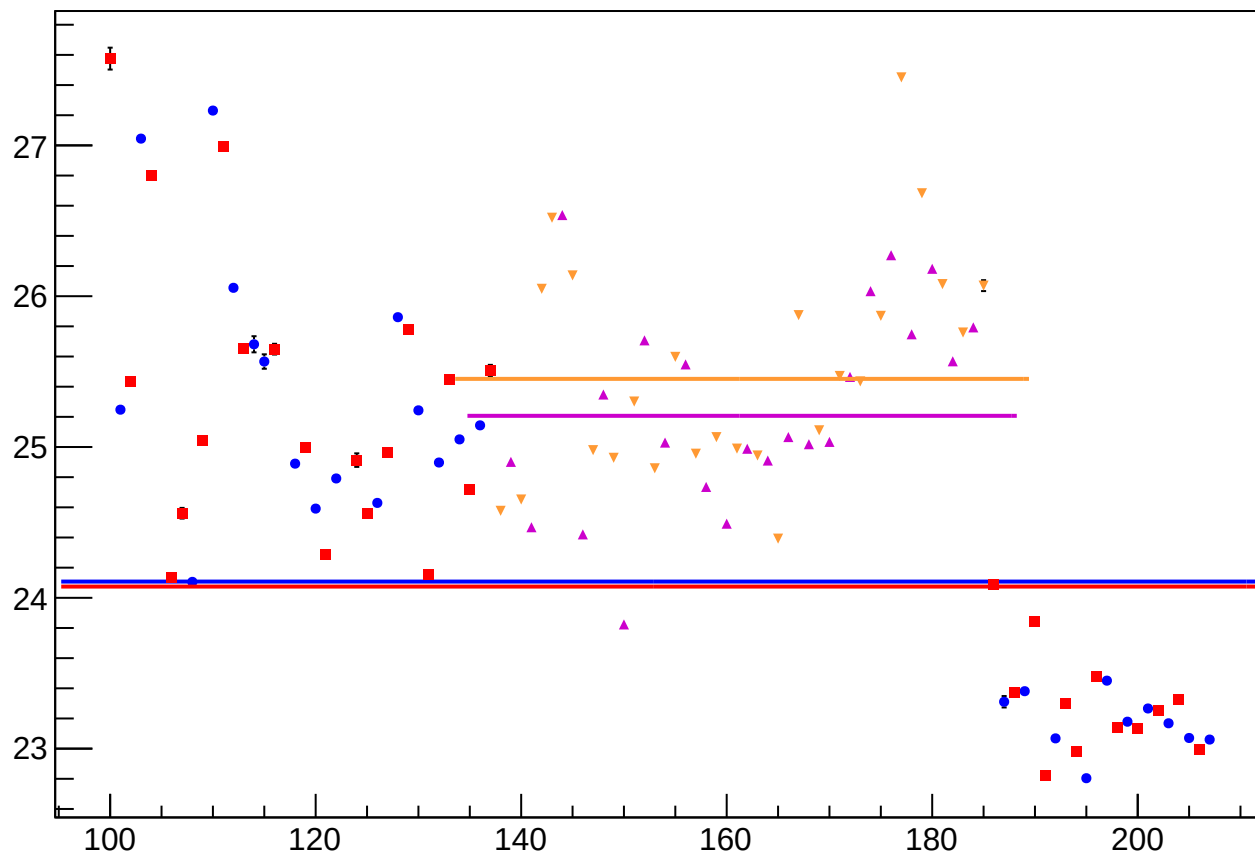
Left In:  $-1.850 \pm 5.893$   $\chi^2/\text{NDF}$ : 28.1/22

+ sign  $1.834 \pm 4.243$   $\chi^2/\text{NDF}$ : 56.7/50

All:  $-1.488 \pm 2.979$   $\chi^2/\text{NDF}$ : 115.6/104

- sign  $-4.717 \pm 4.182$   $\chi^2/\text{NDF}$ : 57.6/53

asym\_bcm\_dg\_us\_bcm\_dg\_ds\_agg\_dd\_rms vs Slug



Right In: 24.108 $\pm$ 0.004  $\chi^2$ /NDF: 75841.6/25

Left Out: 25.452 $\pm$ 0.004  $\chi^2$ /NDF: 29612.4/24

Right Out: 24.075 $\pm$ 0.004  $\chi^2$ /NDF: 70776.9/30

Left In: 25.207 $\pm$ 0.004  $\chi^2$ /NDF: 25827.4/22

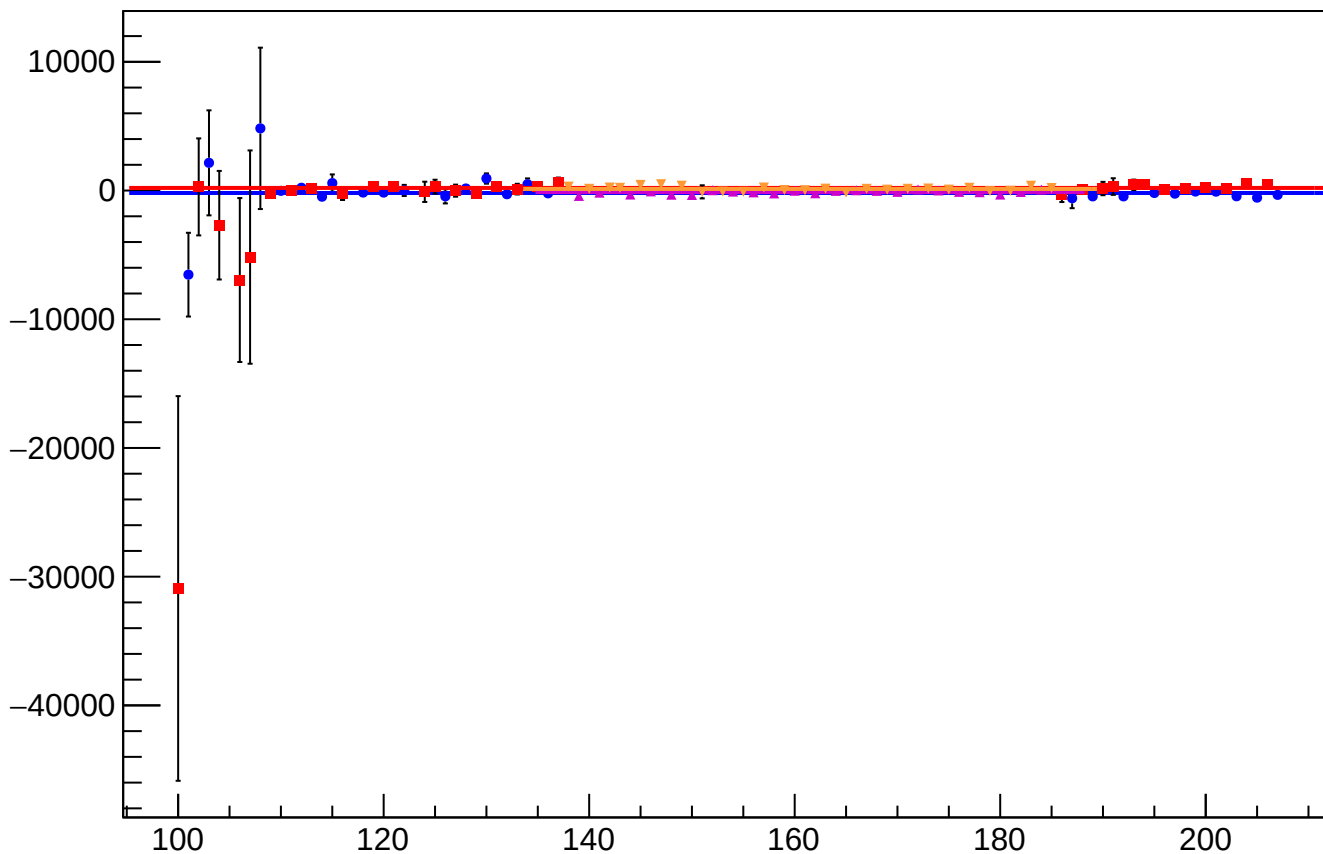
+ sign 24.830 $\pm$ 0.003  $\chi^2$ /NDF: 155346.3/50

All: 24.736 $\pm$ 0.002  $\chi^2$ /NDF: 290515.6/104

- sign 24.645 $\pm$ 0.003  $\chi^2$ /NDF: 133242.0/53



asym\_bcm\_cav4cQ\_bcm\_an\_us\_agg\_avg\_mean vs Slug



Right In:  $-189.298 \pm 49.298$   $\chi^2/\text{NDF}$ : 32.0/25

Left Out:  $125.161 \pm 46.925$   $\chi^2/\text{NDF}$ : 11.1/24

Right Out:  $203.577 \pm 48.250$   $\chi^2/\text{NDF}$ : 24.5/30

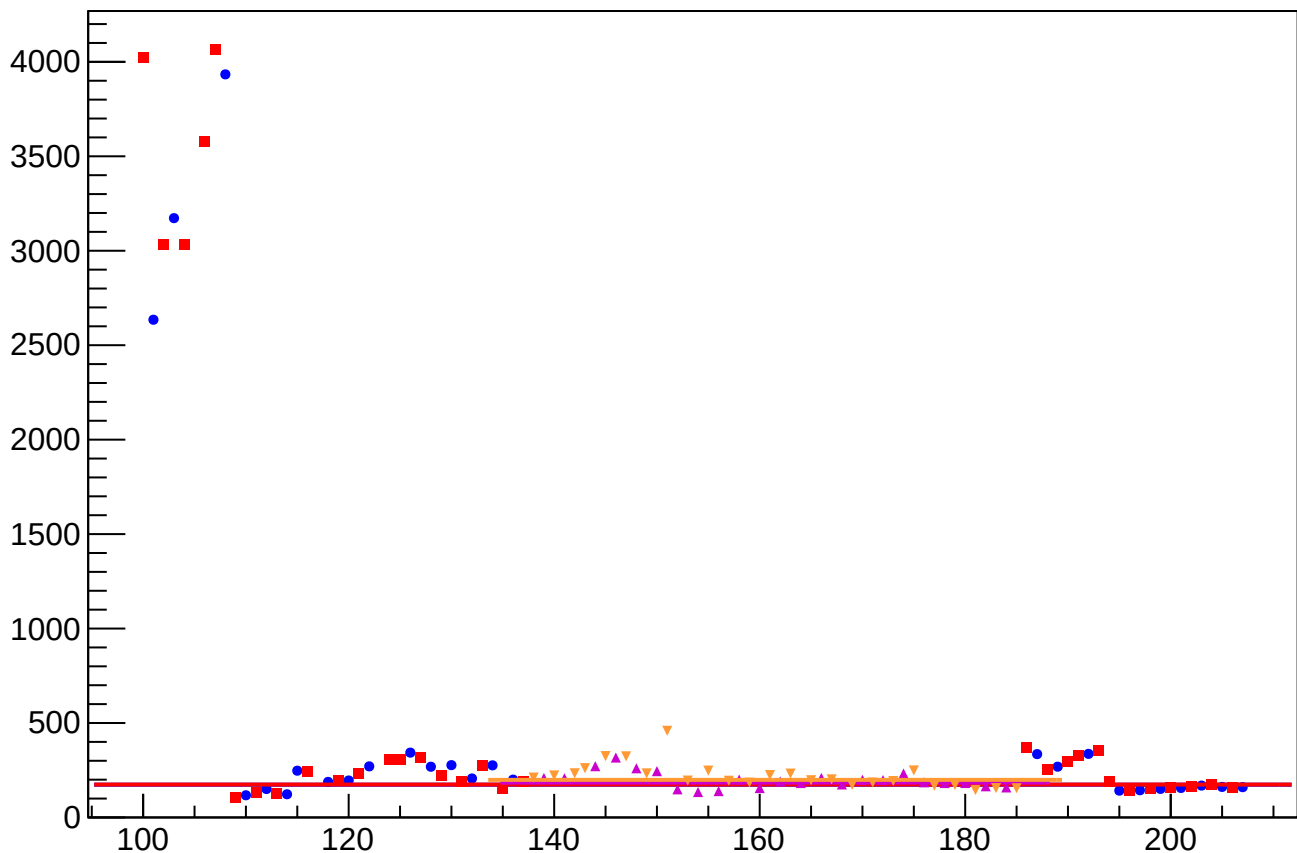
Left In:  $-117.291 \pm 44.871$   $\chi^2/\text{NDF}$ : 8.0/22

+ sign  $-24.321 \pm 33.989$   $\chi^2/\text{NDF}$ : 64.4/50

All:  $4.542 \pm 23.624$   $\chi^2/\text{NDF}$ : 122.0/104

- sign  $31.517 \pm 32.858$   $\chi^2/\text{NDF}$ : 56.2/53

asym\_bcm\_cav4cQ\_bcm\_an\_us\_agg\_avg\_rms vs Slug



Right In: 173.230 $\pm$ 0.035  $\chi^2$ /NDF: 4826975.4/25

Left Out: 198.994 $\pm$ 0.033  $\chi^2$ /NDF: 1902155.1/24

Right Out: 174.159 $\pm$ 0.034  $\chi^2$ /NDF: 5509344.1/30

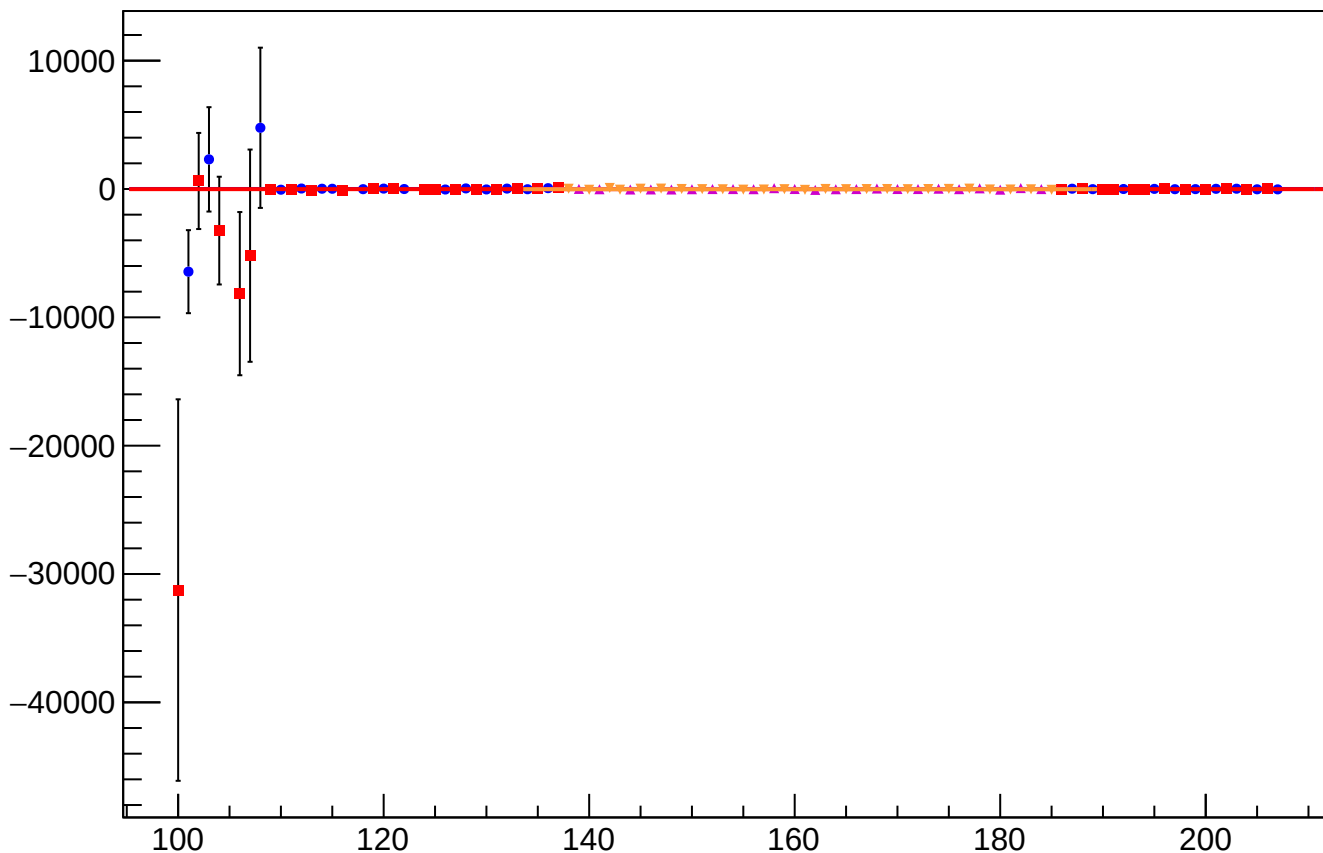
Left In: 184.399 $\pm$ 0.032  $\chi^2$ /NDF: 1446306.0/22

+ sign 186.747 $\pm$ 0.024  $\chi^2$ /NDF: 7015709.7/50

All: 183.078 $\pm$ 0.017  $\chi^2$ /NDF: 14064737.6/10

- sign 179.650 $\pm$ 0.023  $\chi^2$ /NDF: 7003953.7/53

asym\_bcm\_cav4cQ\_bcm\_an\_us\_agg\_dd\_mean vs Slug



Right In: 1.340 $\pm$ 7.508  $\chi^2$ /NDF: 19.8/25

Left Out: -14.827 $\pm$ 6.512  $\chi^2$ /NDF: 22.2/24

Right Out: -10.695 $\pm$ 7.258  $\chi^2$ /NDF: 30.3/30

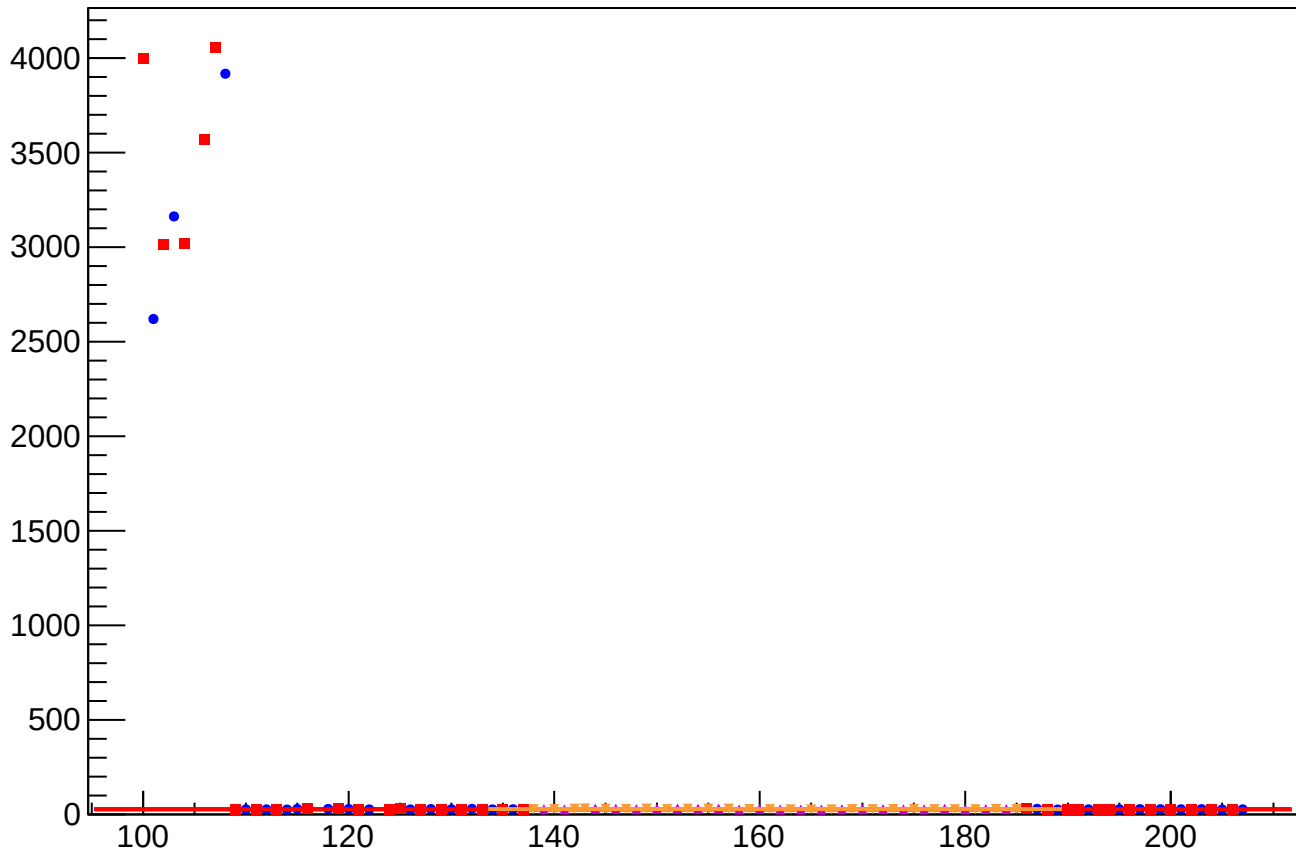
Left In: -2.172 $\pm$ 6.703  $\chi^2$ /NDF: 28.3/22

+ sign -7.887 $\pm$ 4.919  $\chi^2$ /NDF: 44.7/50

All: -6.992 $\pm$ 3.480  $\chi^2$ /NDF: 104.1/104

- sign -6.096 $\pm$ 4.924  $\chi^2$ /NDF: 59.3/53

asym\_bcm\_cav4cQ\_bcm\_an\_us\_agg\_dd\_rms vs Slug



Right In: 27.403 $\pm$ 0.005  $\chi^2$ /NDF: 3279518.3/25

Left Out: 28.586 $\pm$ 0.005  $\chi^2$ /NDF: 88130.9/24

Right Out: 27.503 $\pm$ 0.005  $\chi^2$ /NDF: 3583724.6/30

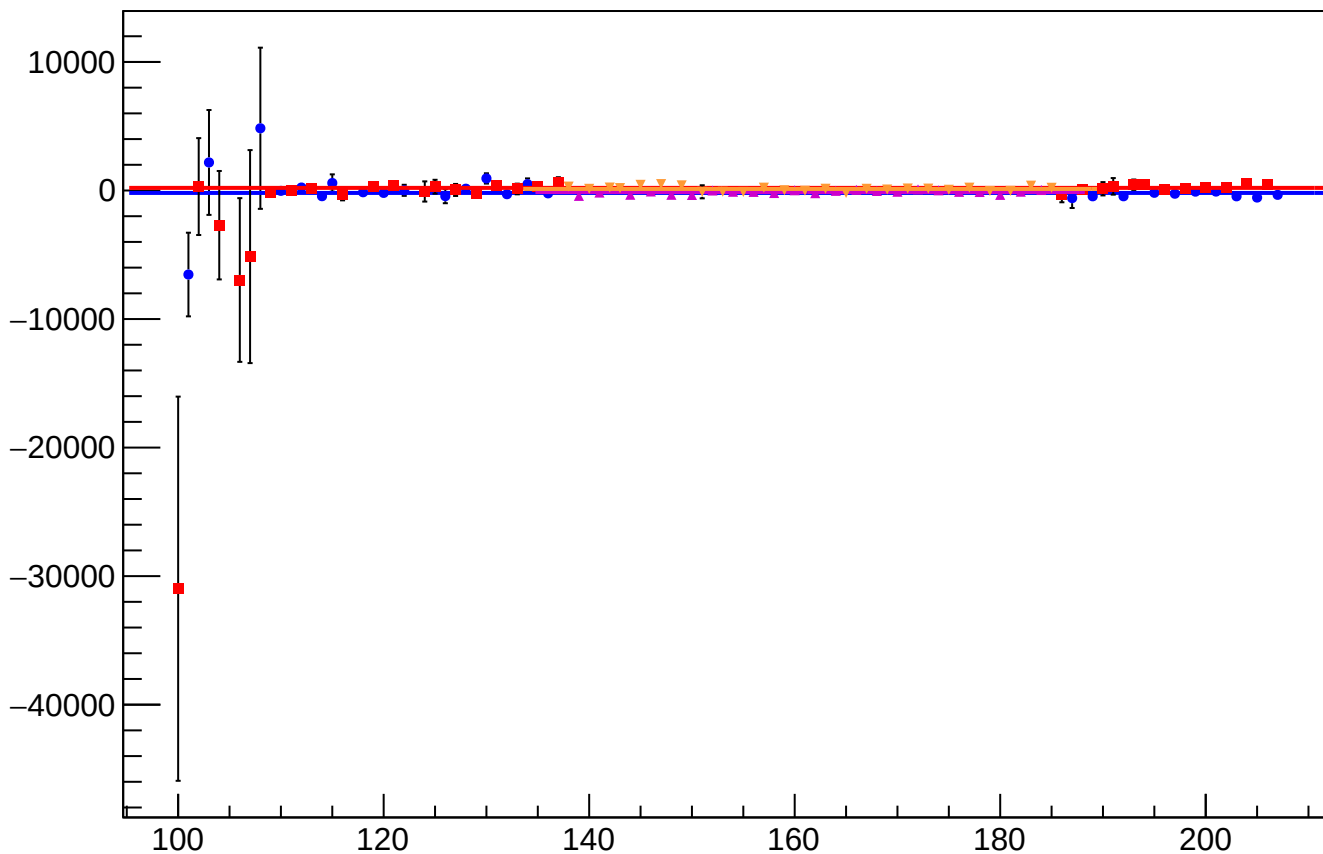
Left In: 28.606 $\pm$ 0.005  $\chi^2$ /NDF: 122928.2/22

+ sign 28.078 $\pm$ 0.003  $\chi^2$ /NDF: 3395974.0/50

All: 28.088 $\pm$ 0.002  $\chi^2$ /NDF: 7127549.7/104

- sign 28.098 $\pm$ 0.003  $\chi^2$ /NDF: 3731558.6/53

asym\_bcm\_cav4cQ\_bcm\_an\_ds\_agg\_avg\_mean vs Slug



Right In: -189.215+/-49.149  $\chi^2/\text{NDF}$ : 32.2/25

Left Out: 121.915+/-46.825  $\chi^2/\text{NDF}$ : 12.0/24

Right Out: 204.180+/-48.118  $\chi^2/\text{NDF}$ : 24.9/30

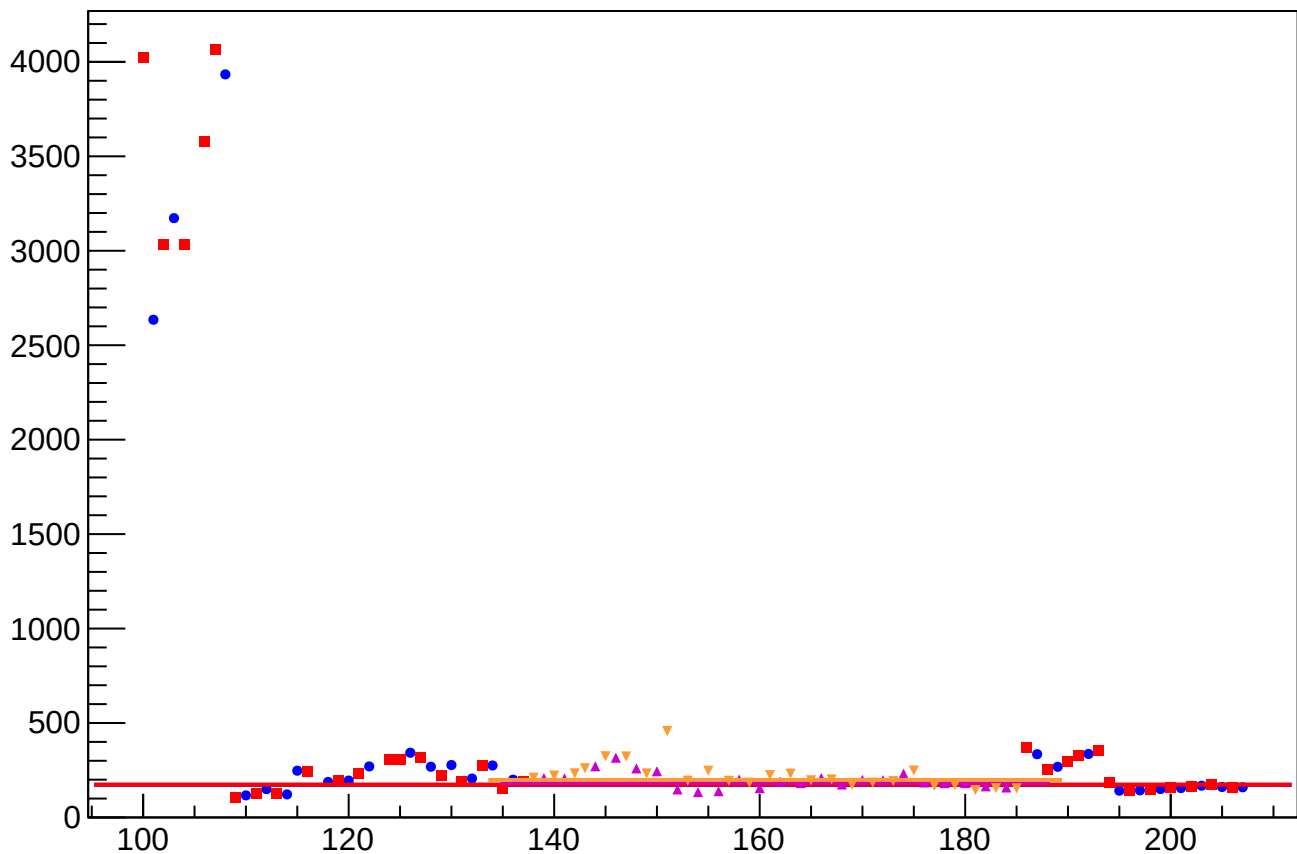
Left In: -116.243+/-44.786  $\chi^2/\text{NDF}$ : 8.4/22

+ sign -26.121+/-33.902  $\chi^2/\text{NDF}$ : 65.2/50

All: 4.167+/-23.567  $\chi^2/\text{NDF}$ : 123.8/104

- sign 32.490+/-32.783  $\chi^2/\text{NDF}$ : 57.1/53

asym\_bcm\_cav4cQ\_bcm\_an\_ds\_agg\_avg\_rms vs Slug



Right In: 172.659 $\pm$ 0.035  $\chi^2$ /NDF: 4840902.1/25

Left Out: 198.571 $\pm$ 0.033  $\chi^2$ /NDF: 1901504.1/24

Right Out: 173.627 $\pm$ 0.034  $\chi^2$ /NDF: 5527367.4/30

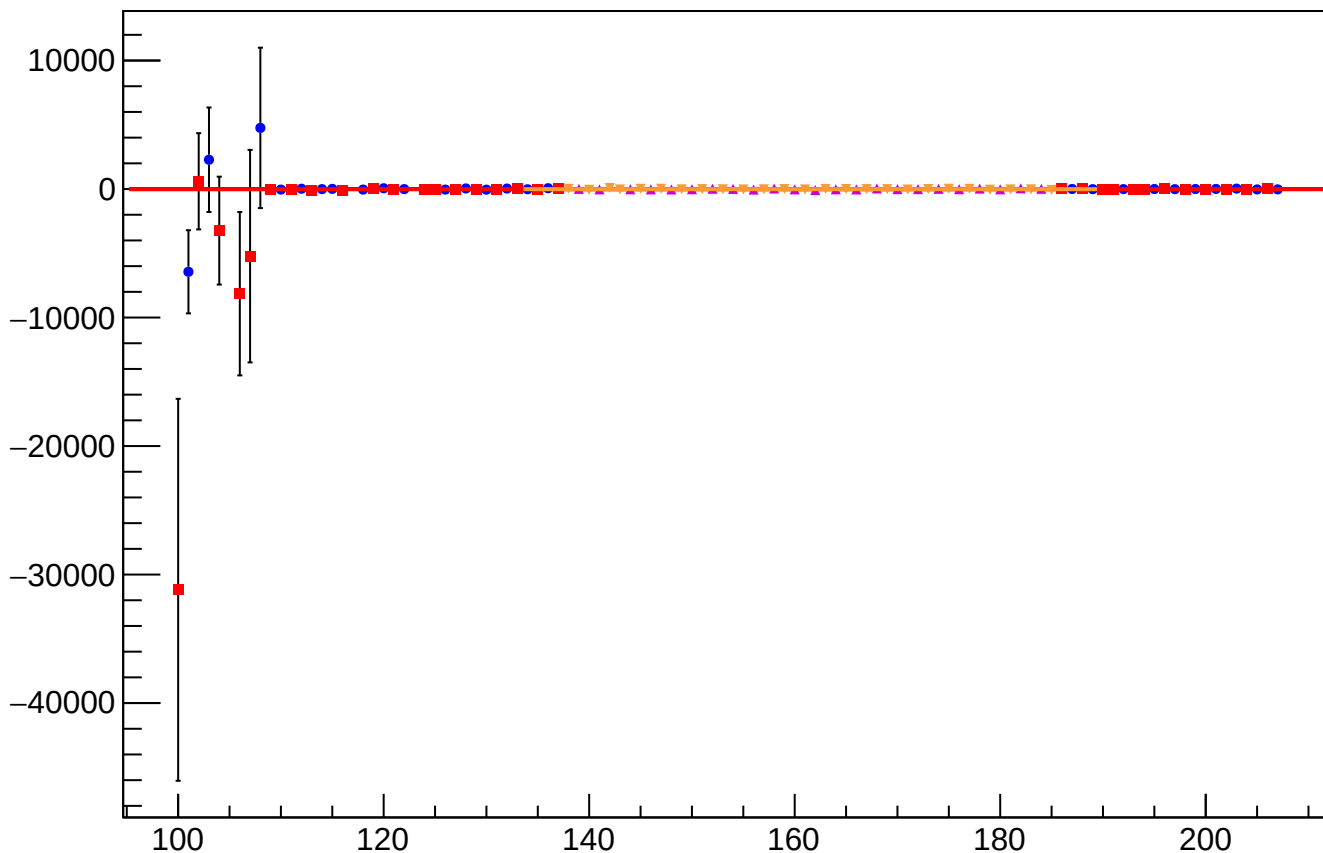
Left In: 184.051 $\pm$ 0.032  $\chi^2$ /NDF: 1445426.0/22

+ sign 186.242 $\pm$ 0.024  $\chi^2$ /NDF: 7033806.5/50

All: 182.609 $\pm$ 0.017  $\chi^2$ /NDF: 14101332.9/10

- sign 179.212 $\pm$ 0.023  $\chi^2$ /NDF: 7023089.0/53

asym\_bcm\_cav4cQ\_bcm\_an\_ds\_agg\_dd\_mean vs Slug



Right In:  $-0.044 \pm 7.487$   $\chi^2/\text{NDF}$ : 22.1/25

Left Out:  $-11.862 \pm 6.541$   $\chi^2/\text{NDF}$ : 17.9/24

Right Out:  $-12.402 \pm 7.244$   $\chi^2/\text{NDF}$ : 30.7/30

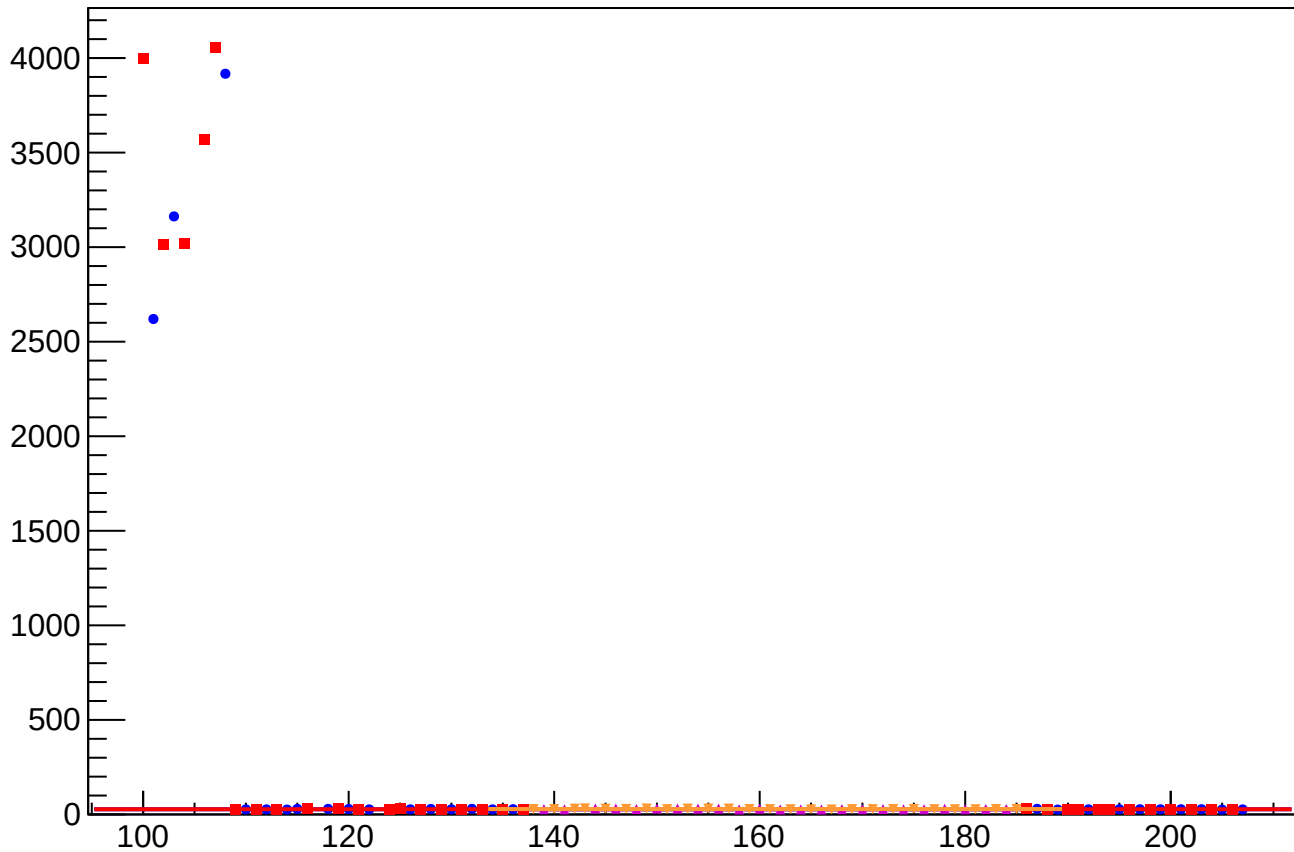
Left In:  $-2.576 \pm 6.732$   $\chi^2/\text{NDF}$ : 22.2/22

+ sign  $-6.747 \pm 4.926$   $\chi^2/\text{NDF}$ : 41.3/50

All:  $-6.938 \pm 3.485$   $\chi^2/\text{NDF}$ : 95.2/104

- sign  $-7.130 \pm 4.931$   $\chi^2/\text{NDF}$ : 53.8/53

asym\_bcm\_cav4cQ\_bcm\_an\_ds\_agg\_dd\_rms vs Slug



Right In: 27.321+/-0.005  $\chi^2/\text{NDF}$ : 3284730.5/25

Left Out: 28.707+/-0.005  $\chi^2/\text{NDF}$ : 98865.9/24

Right Out: 27.452+/-0.005  $\chi^2/\text{NDF}$ : 3583729.5/30

Left In: 28.728+/-0.005  $\chi^2/\text{NDF}$ : 127383.0/22

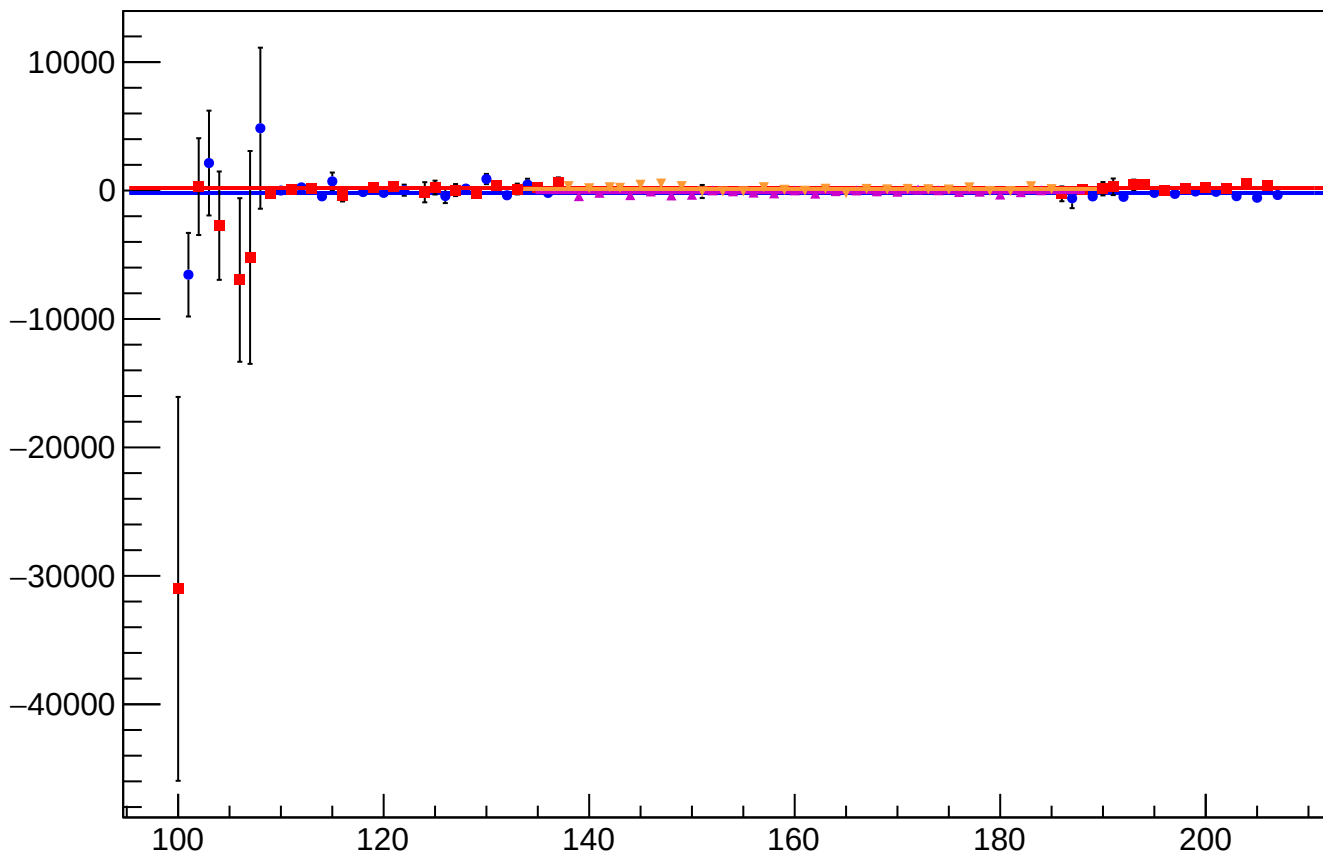
+ sign 28.107+/-0.003  $\chi^2/\text{NDF}$ : 3422479.4/50

All: 28.122+/-0.002  $\chi^2/\text{NDF}$ : 7166893.9/104

- sign 28.137+/-0.003  $\chi^2/\text{NDF}$ : 3744379.4/53



asym\_bcm\_cav4cQ\_bcm\_dg\_us\_agg\_avg\_mean vs Slug



Right In:  $-190.088 \pm 49.504$   $\chi^2/\text{NDF}$ : 32.9/25

Left Out:  $122.864 \pm 47.300$   $\chi^2/\text{NDF}$ : 11.3/24

Right Out:  $197.526 \pm 48.495$   $\chi^2/\text{NDF}$ : 23.3/30

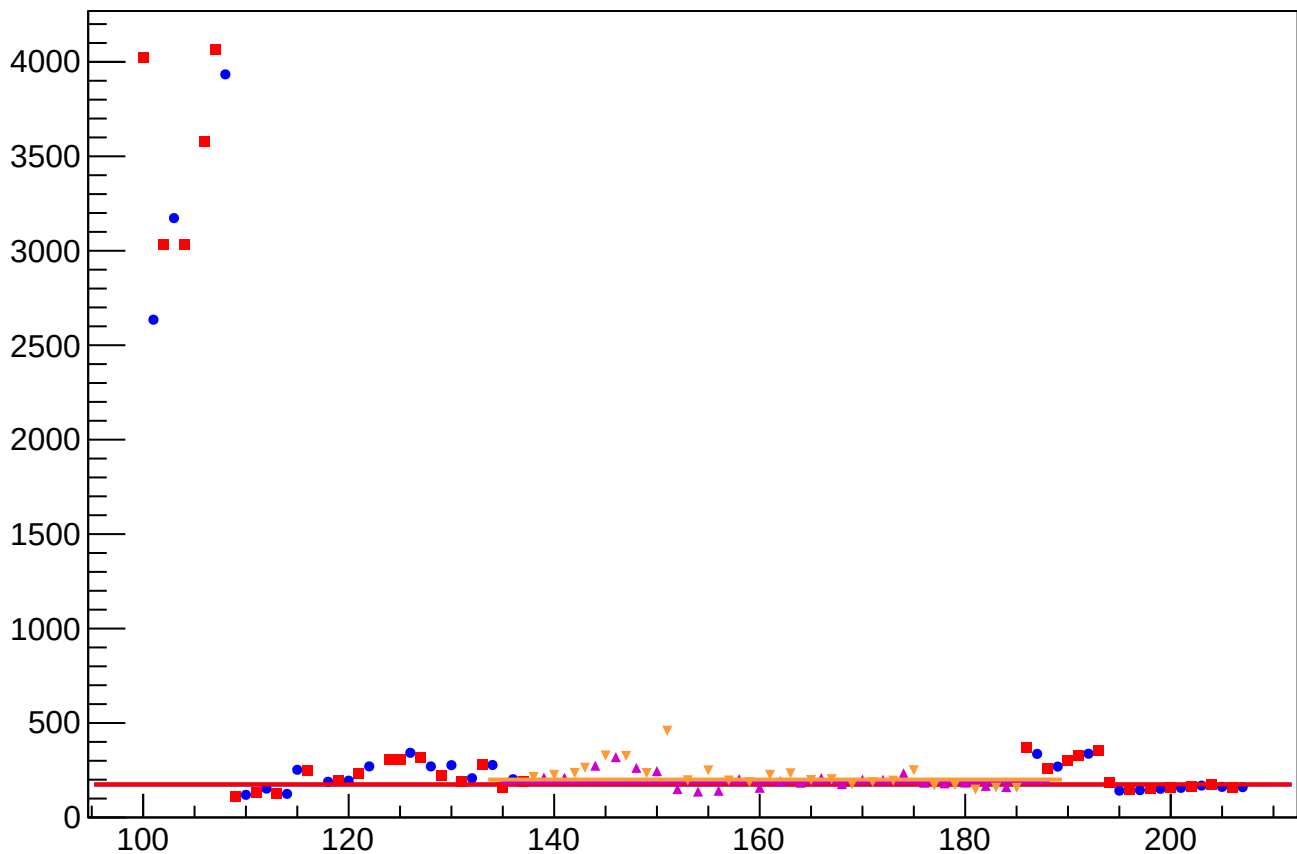
Left In:  $-123.046 \pm 45.269$   $\chi^2/\text{NDF}$ : 8.5/22

+ sign  $-26.488 \pm 34.199$   $\chi^2/\text{NDF}$ : 65.2/50

All:  $0.735 \pm 23.781$   $\chi^2/\text{NDF}$ : 121.5/104

- sign  $26.225 \pm 33.092$   $\chi^2/\text{NDF}$ : 55.1/53

asym\_bcm\_cav4cQ\_bcm\_dg\_us\_agg\_avg\_rms vs Slug



Right In: 174.028 $\pm$ 0.035  $\chi^2$ /NDF: 4810260.2/25

Left Out: 200.686 $\pm$ 0.033  $\chi^2$ /NDF:1880083.2/24

Right Out: 175.208 $\pm$ 0.034  $\chi^2$ /NDF: 5465094.6/30

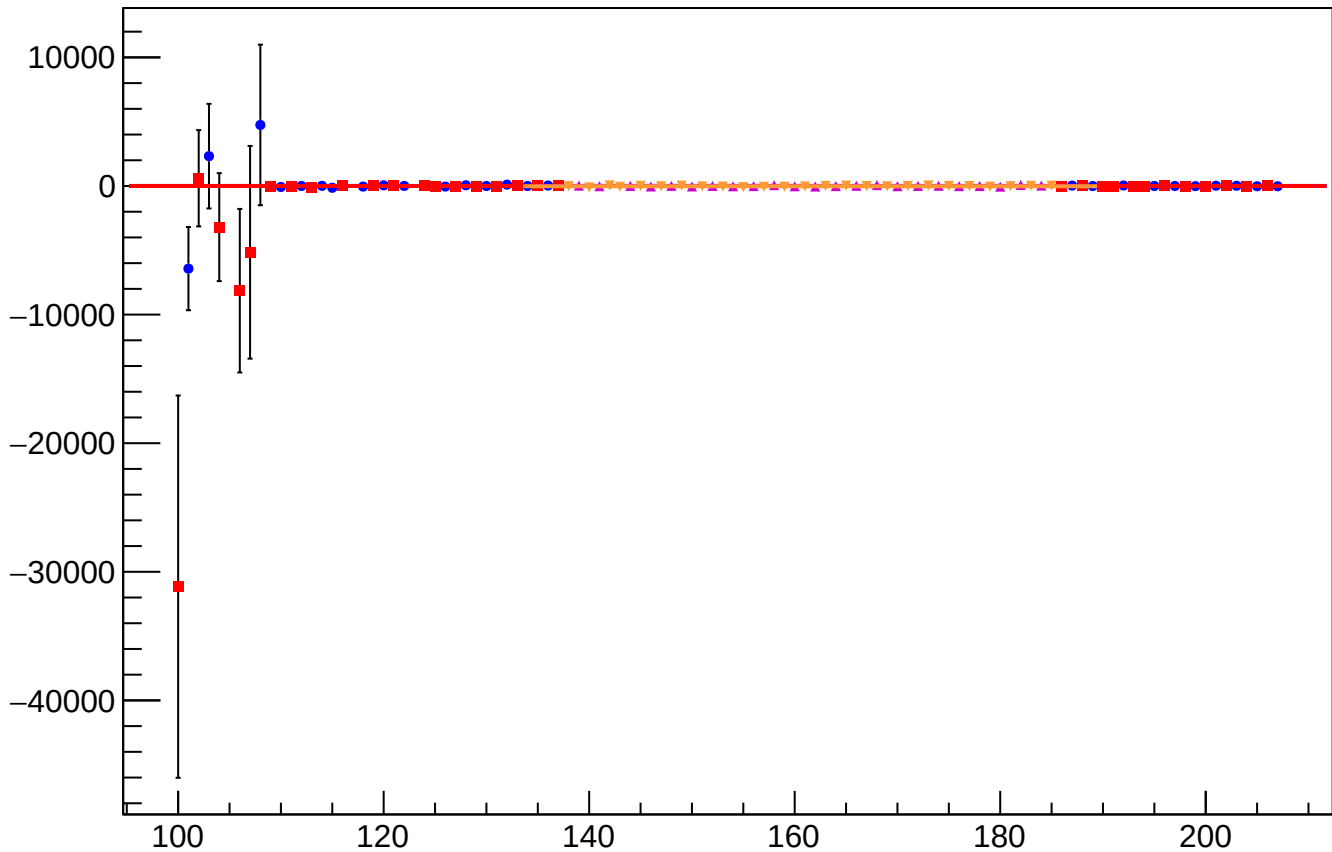
Left In: 186.169 $\pm$ 0.032  $\chi^2$ /NDF:1413387.1/22

+ sign 187.964 $\pm$ 0.024  $\chi^2$ /NDF: 6993518.2/50

All: 184.401 $\pm$ 0.017  $\chi^2$ /NDF: 13968622.9/10

- sign 181.065 $\pm$ 0.023  $\chi^2$ /NDF: 6933077.6/53

asym\_bcm\_cav4cQ\_bcm\_dg\_us\_agg\_dd\_mean vs Slug



Right In: 4.437 $\pm$ 9.137  $\chi^2$ /NDF: 20.2/25

Left Out: -21.228 $\pm$ 7.835  $\chi^2$ /NDF:22.9/24

Right Out: -0.816 $\pm$ 8.829  $\chi^2$ /NDF: 33.6/30

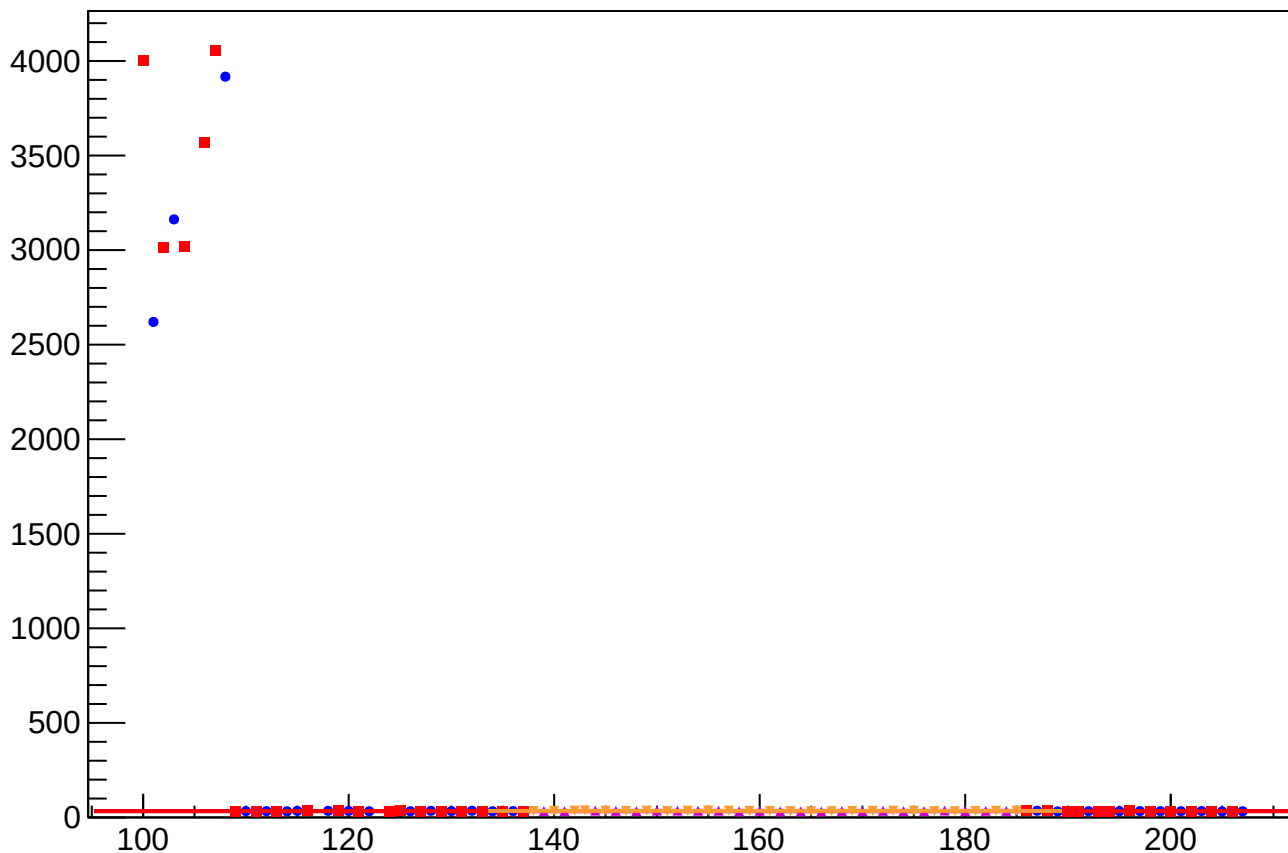
Left In: 4.029 $\pm$ 8.083  $\chi^2$ /NDF:18.9/22

+ sign -10.352 $\pm$ 5.948  $\chi^2$ /NDF: 47.7/50

All: -4.281 $\pm$ 4.211  $\chi^2$ /NDF: 102.5/104

- sign 1.820 $\pm$ 5.962  $\chi^2$ /NDF: 52.7/53

asym\_bcm\_cav4cQ\_bcm\_dg\_us\_agg\_dd\_rms vs Slug



Right In: 33.377 $\pm$ 0.006  $\chi^2$ /NDF: 3255616.4/25

Left Out: 34.439 $\pm$ 0.006  $\chi^2$ /NDF: 44686.3/24

Right Out: 33.505 $\pm$ 0.006  $\chi^2$ /NDF: 3542877.1/30

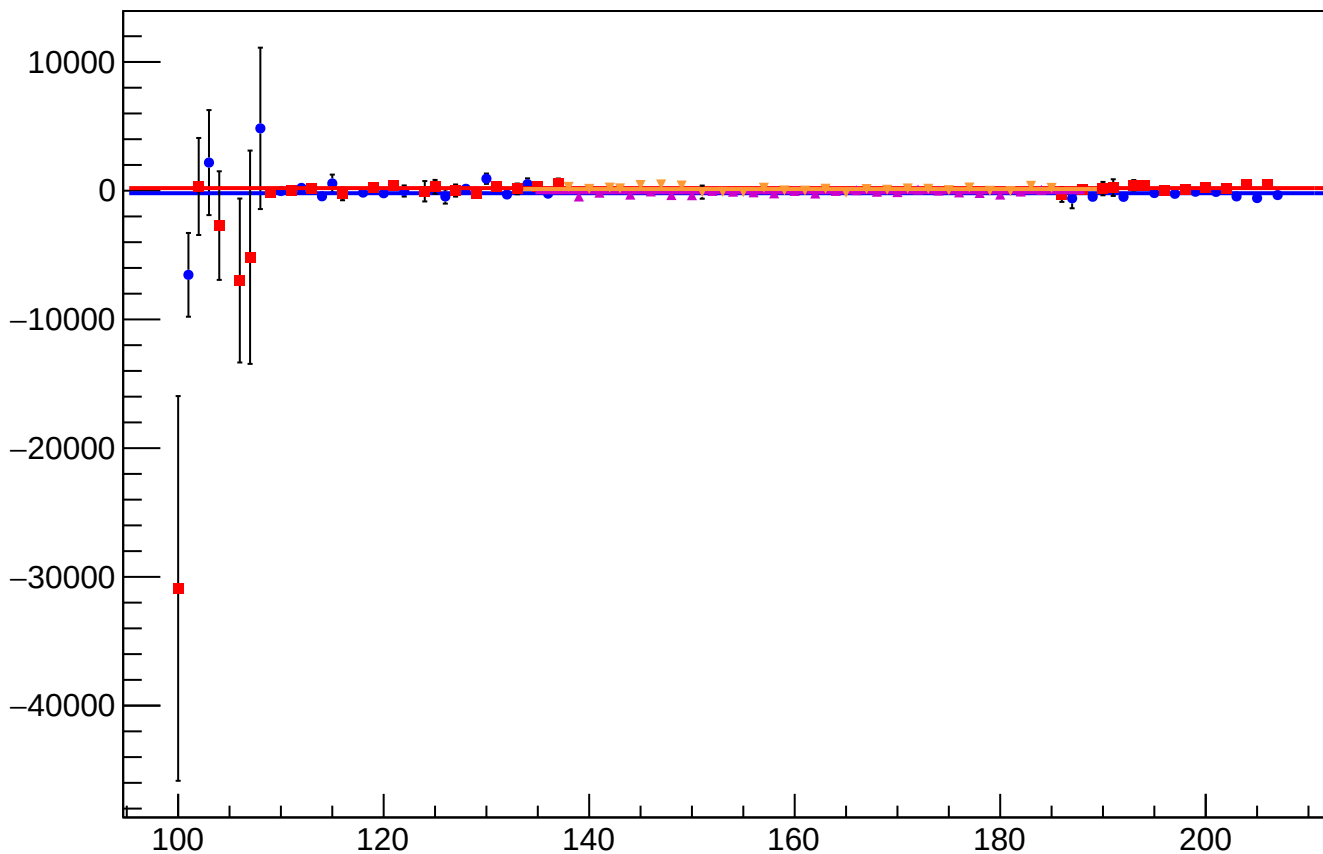
Left In: 34.552 $\pm$ 0.006  $\chi^2$ /NDF: 59280.9/22

+ sign 33.989 $\pm$ 0.004  $\chi^2$ /NDF: 3315855.2/50

All: 34.032 $\pm$ 0.003  $\chi^2$ /NDF: 6933513.0/104

- sign 34.075 $\pm$ 0.004  $\chi^2$ /NDF: 3617449.8/53

asym\_bcm\_cav4cQ\_bcm\_dg\_ds\_agg\_avg\_mean vs Slug



Right In: -195.064 $\pm$ 49.359  $\chi^2$ /NDF: 32.3/25

Left Out: 127.689 $\pm$ 47.228  $\chi^2$ /NDF: 11.6/24

Right Out: 201.313 $\pm$ 48.312  $\chi^2$ /NDF: 23.1/30

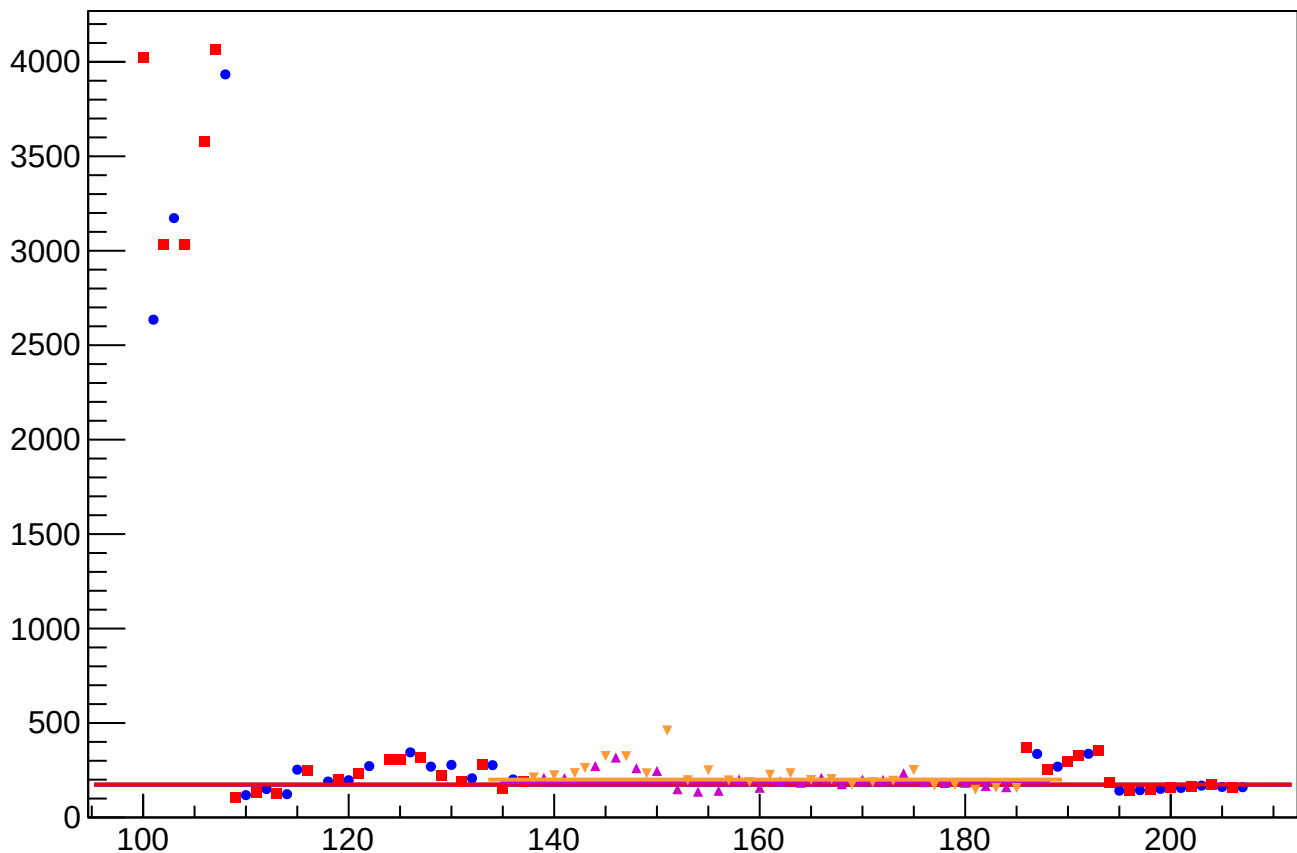
Left In: -122.809 $\pm$ 45.199  $\chi^2$ /NDF: 8.0/22

+ sign -26.571 $\pm$ 34.124  $\chi^2$ /NDF: 66.3/50

All: 1.867 $\pm$ 23.724  $\chi^2$ /NDF: 122.8/104

- sign 28.472 $\pm$ 33.006  $\chi^2$ /NDF: 55.1/53

asym\_bcm\_cav4cQ\_bcm\_dg\_ds\_agg\_avg\_rms vs Slug



Right In: 173.409+/-0.035  $\chi^2/\text{NDF}$ : 4838541.7/25

Left Out: 200.372+/-0.033  $\chi^2/\text{NDF}$ : 1876533.6/24

Right Out: 174.372+/-0.034  $\chi^2/\text{NDF}$ : 5516664.3/30

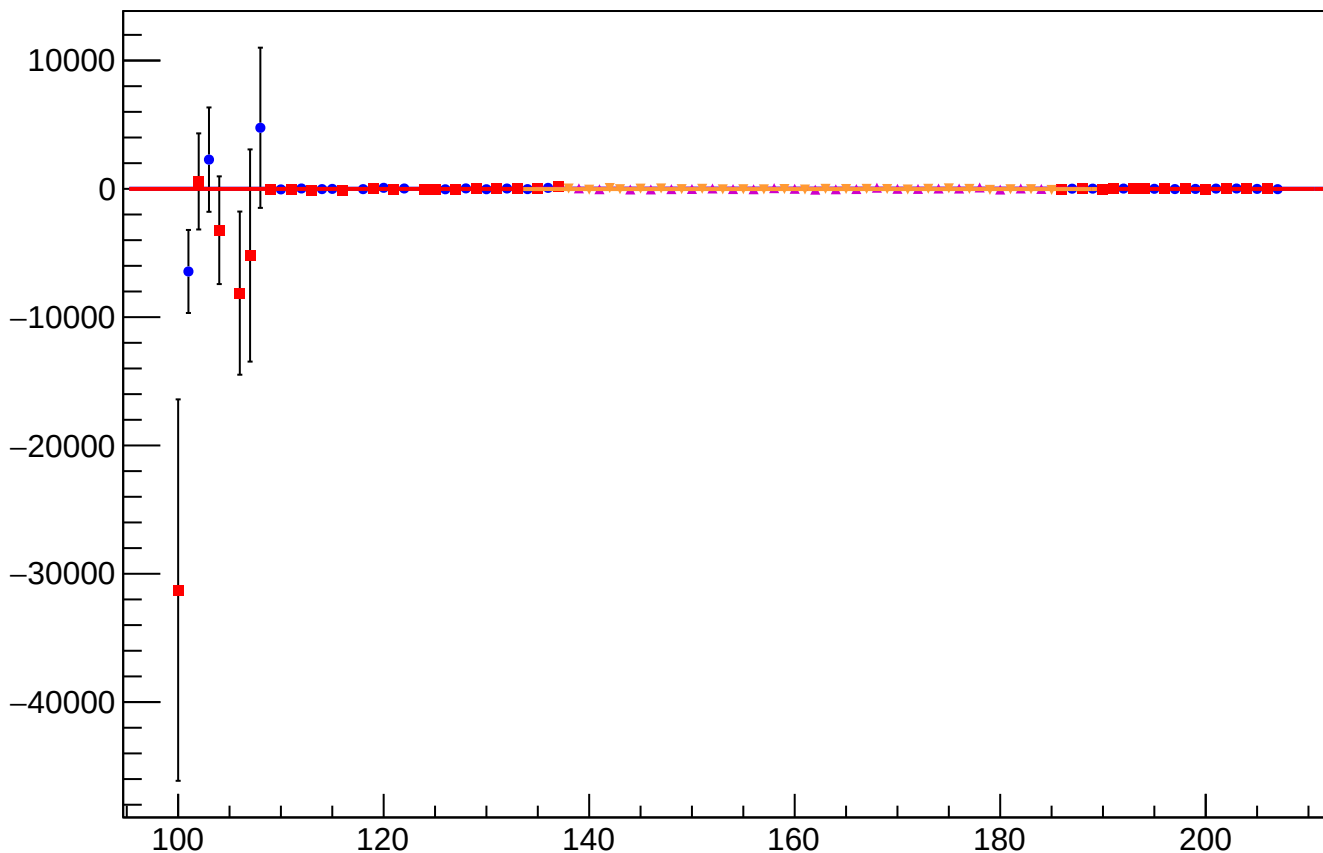
Left In: 185.871+/-0.032  $\chi^2/\text{NDF}$ : 1405525.2/22

+ sign 187.485+/-0.024  $\chi^2/\text{NDF}$ : 7026648.6/50

All: 183.878+/-0.017  $\chi^2/\text{NDF}$ : 14052500.0/10

- sign 180.504+/-0.023  $\chi^2/\text{NDF}$ : 6982610.4/53

asym\_bcm\_cav4cQ\_bcm\_dg\_ds\_agg\_dd\_mean vs Slug



Right In:  $7.626 \pm 8.274$   $\chi^2/\text{NDF}$ : 18.4/25

Left Out:  $-18.581 \pm 7.135$   $\chi^2/\text{NDF}$ : 20.4/24

Right Out:  $-5.448 \pm 7.995$   $\chi^2/\text{NDF}$ : 39.3/30

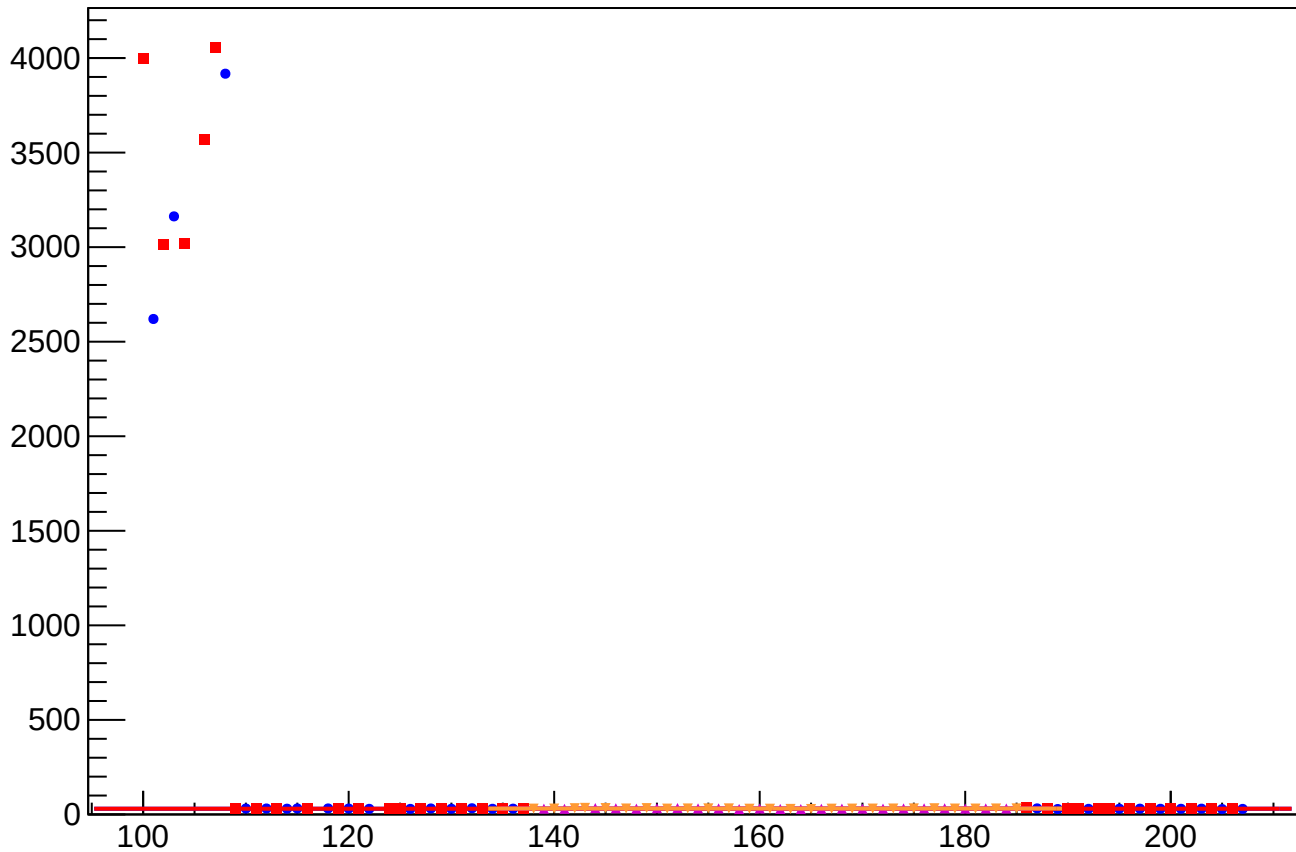
Left In:  $2.709 \pm 7.348$   $\chi^2/\text{NDF}$ : 35.5/22

+ sign  $-7.404 \pm 5.403$   $\chi^2/\text{NDF}$ : 44.5/50

All:  $-4.219 \pm 3.823$   $\chi^2/\text{NDF}$ : 120.6/104

- sign  $-1.026 \pm 5.410$   $\chi^2/\text{NDF}$ : 75.4/53

asym\_bcm\_cav4cQ\_bcm\_dg\_ds\_agg\_dd\_rms vs Slug



Right In: 30.205 $\pm$ 0.006  $\chi^2$ /NDF: 3273507.5/25

Left Out: 31.340 $\pm$ 0.005  $\chi^2$ /NDF: 63017.9/24

Right Out: 30.315 $\pm$ 0.006  $\chi^2$ /NDF: 3561584.2/30

Left In: 31.379 $\pm$ 0.005  $\chi^2$ /NDF: 85229.7/22

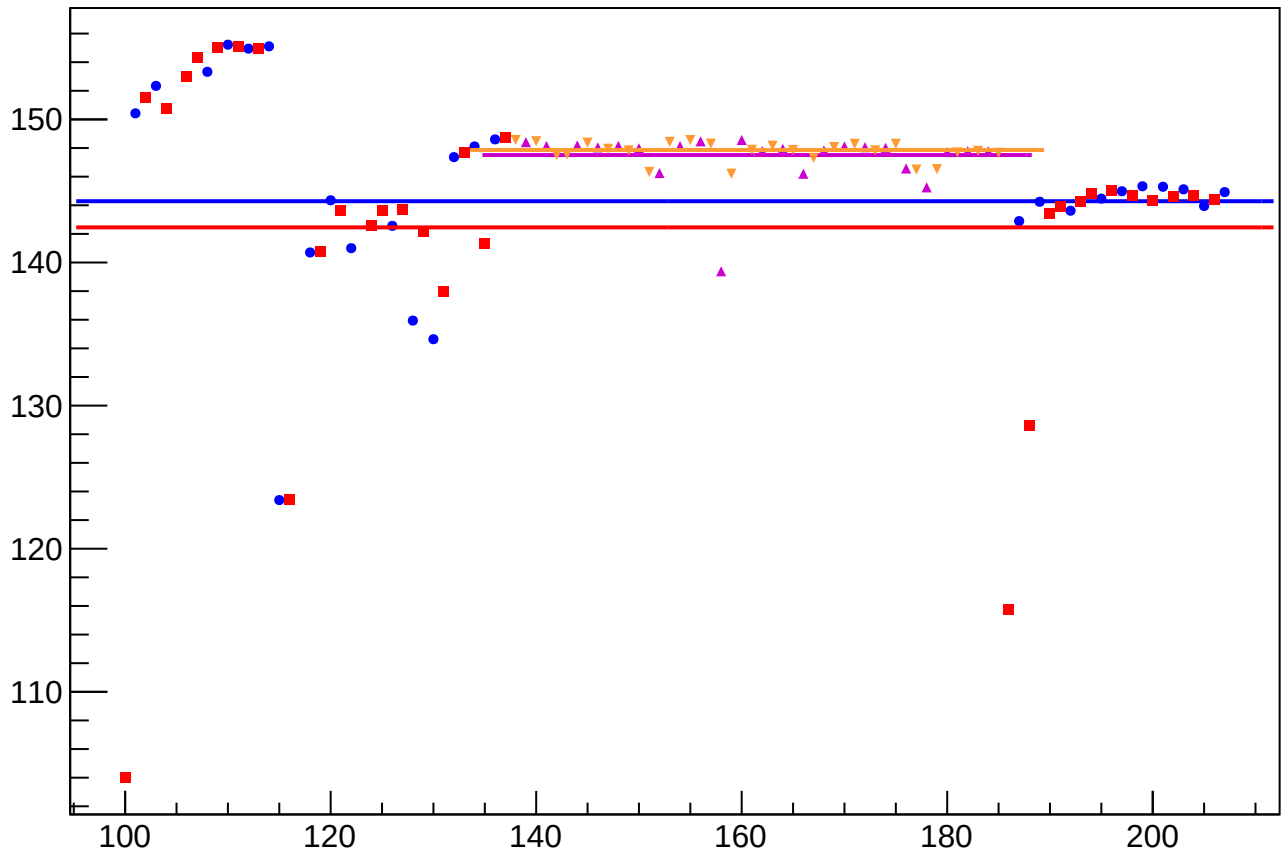
+ sign 30.856 $\pm$ 0.004  $\chi^2$ /NDF: 3358100.5/50

All: 30.874 $\pm$ 0.003  $\chi^2$ /NDF: 7024185.1/104

- sign 30.892 $\pm$ 0.004  $\chi^2$ /NDF: 3666040.2/53

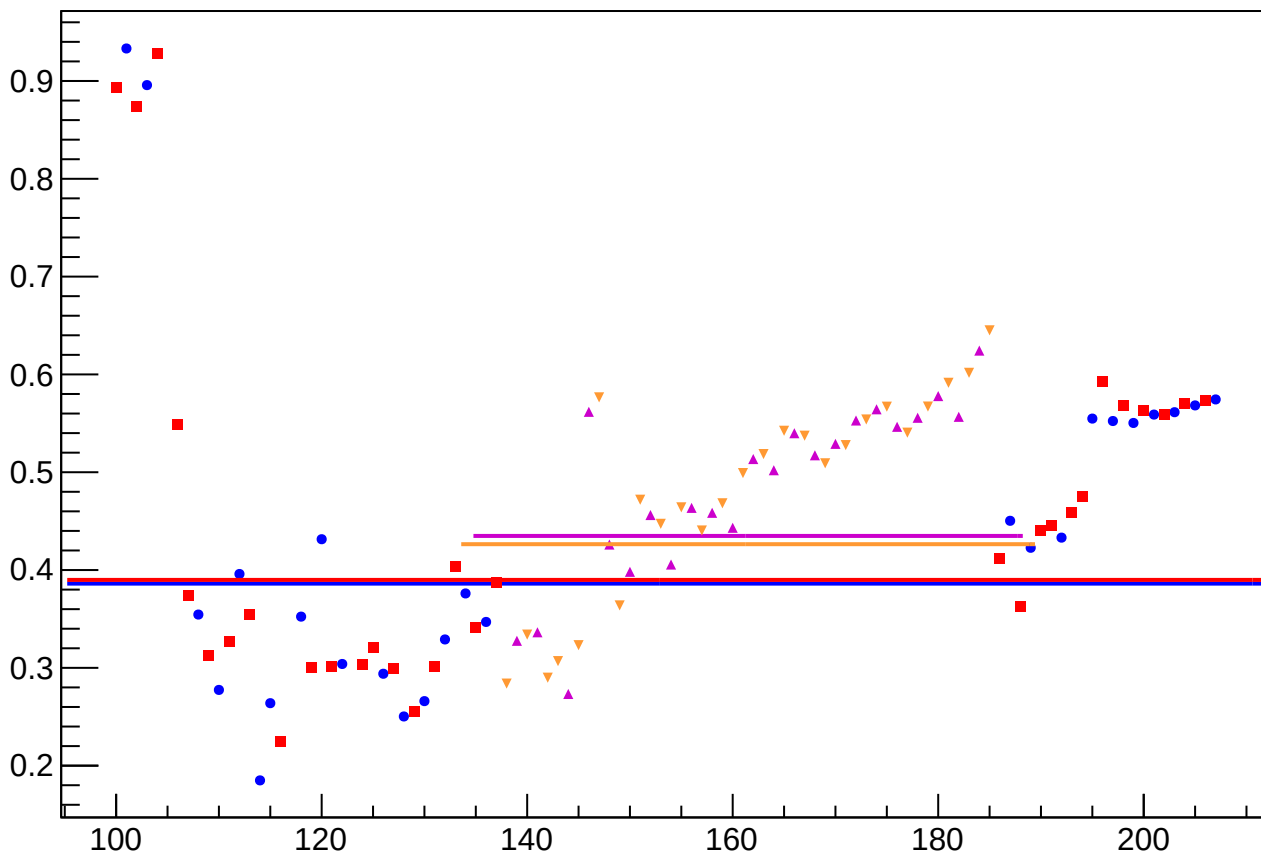


# yield\_bcm\_target\_mean vs Slug



|                                |                                |                            |                                |
|--------------------------------|--------------------------------|----------------------------|--------------------------------|
| Right In: 144.284 $\pm$ 0.000  | $\chi^2$ /NDF: 3739403362.7/25 | + sign 146.202 $\pm$ 0.000 | $\chi^2$ /NDF: 4361623036.3/50 |
| Left Out: 147.864 $\pm$ 0.000  | $\chi^2$ /NDF: 44922014.2/24   | All: 145.573 $\pm$ 0.000   | $\chi^2$ /NDF: 13516555004.    |
| Right Out: 142.456 $\pm$ 0.000 | $\chi^2$ /NDF: 7547771240.1/30 | - sign 144.944 $\pm$ 0.000 | $\chi^2$ /NDF: 9011604322.8/53 |
| Left In: 147.511 $\pm$ 0.000   | $\chi^2$ /NDF: 306421789.5/22  |                            |                                |

# yield\_bcm\_target\_rms vs Slug



Right In: 0.386 $\pm$ 0.000  $\chi^2$ /NDF: 3012854.6/25

Left Out: 0.426 $\pm$ 0.000  $\chi^2$ /NDF:2259192.5/24

Right Out: 0.390 $\pm$ 0.000  $\chi^2$ /NDF: 2886388.6/30

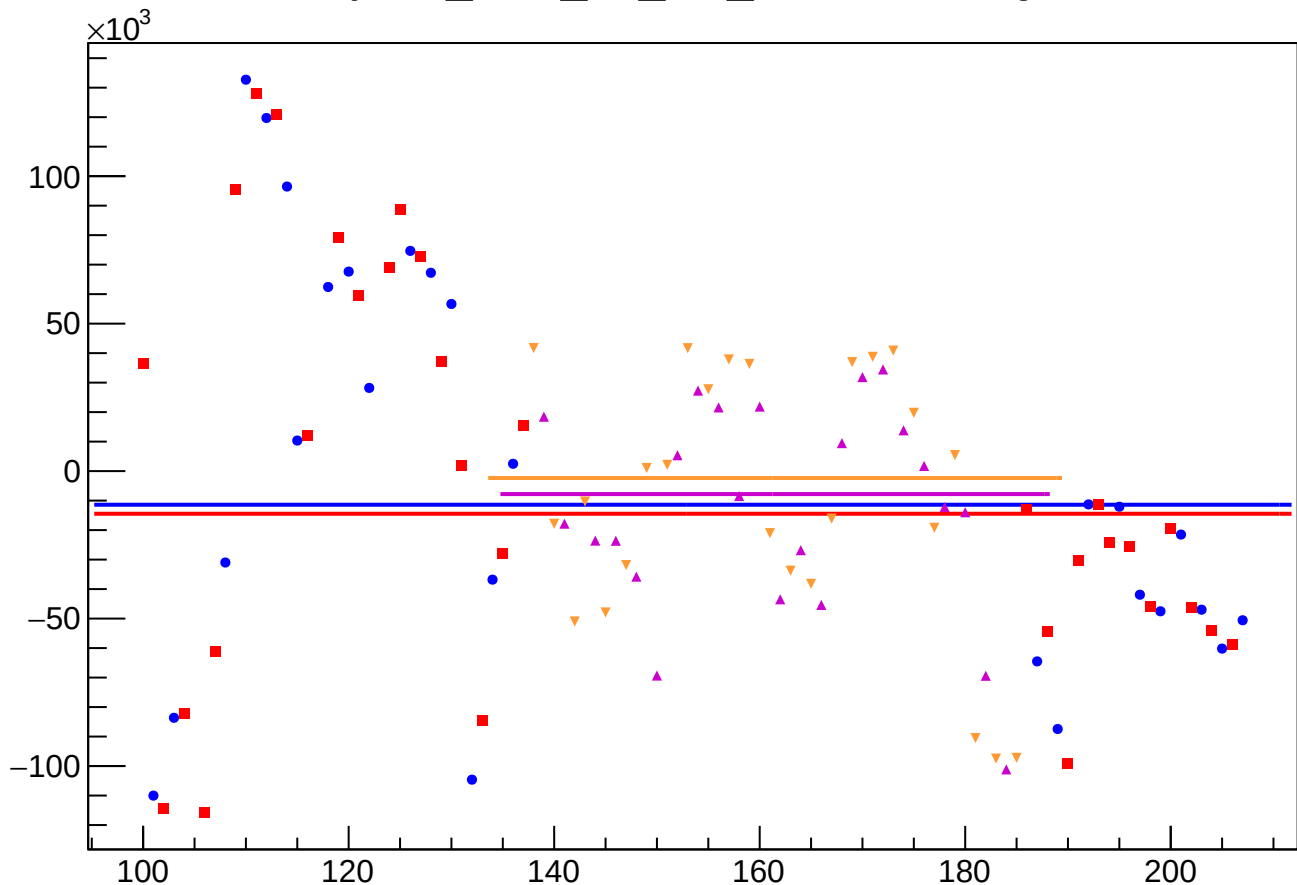
Left In: 0.435 $\pm$ 0.000  $\chi^2$ /NDF:1774903.7/22

+ sign 0.408 $\pm$ 0.000  $\chi^2$ /NDF: 5418355.5/50

All: 0.410 $\pm$ 0.000  $\chi^2$ /NDF: 10266161.8/104

- sign 0.412 $\pm$ 0.000  $\chi^2$ /NDF: 4844406.4/53

# yield\_bcm\_an\_diff\_mean vs Slug



Right In: -11400.516+/-1.416  $\chi^2/\text{NDF}$ : 1936378535.8/25

Left Out: -2344.855+/-1.123  $\chi^2/\text{NDF}$ : 1230029339.6/24

Right Out: -14461.416+/-1.319  $\chi^2/\text{NDF}$ : 2387809233.8/30

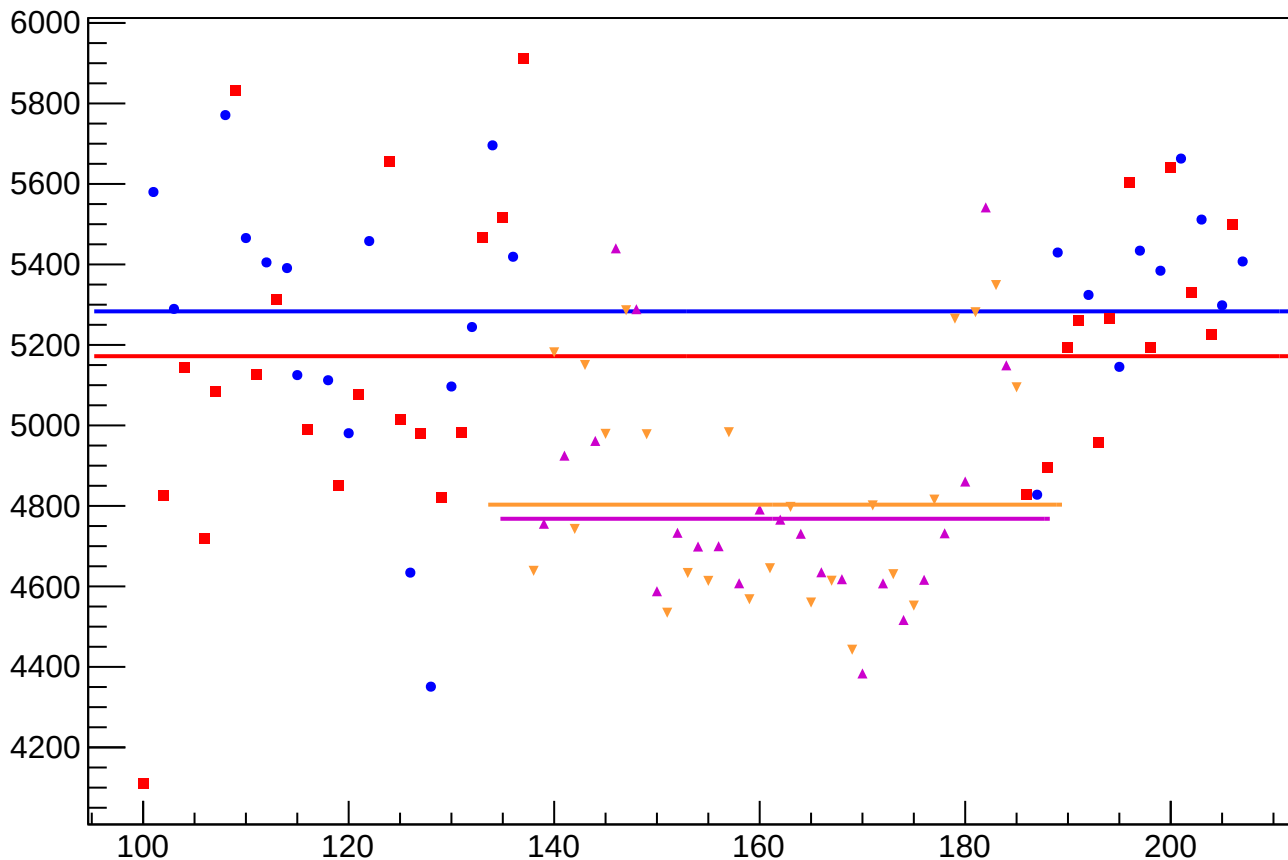
Left In: -7787.808+/-1.145  $\chi^2/\text{NDF}$ : 762496621.5/22

+ sign -5841.943+/-0.880  $\chi^2/\text{NDF}$ : 3191507414.2/5

All: -8290.630+/-0.617  $\chi^2/\text{NDF}$ : 6371627585

- sign -10653.773+/-0.865  $\chi^2/\text{NDF}$ : 3164906307.9/5

# yield\_bcm\_an\_diff\_rms vs Slug



Right In: 5283.420+/-1.001  $\chi^2/\text{NDF}$ : 98303.0/25

Left Out: 4803.136+/-0.794  $\chi^2/\text{NDF}$ : 114681.5/24

Right Out: 5172.022+/-0.933  $\chi^2/\text{NDF}$ : 104202.5/30

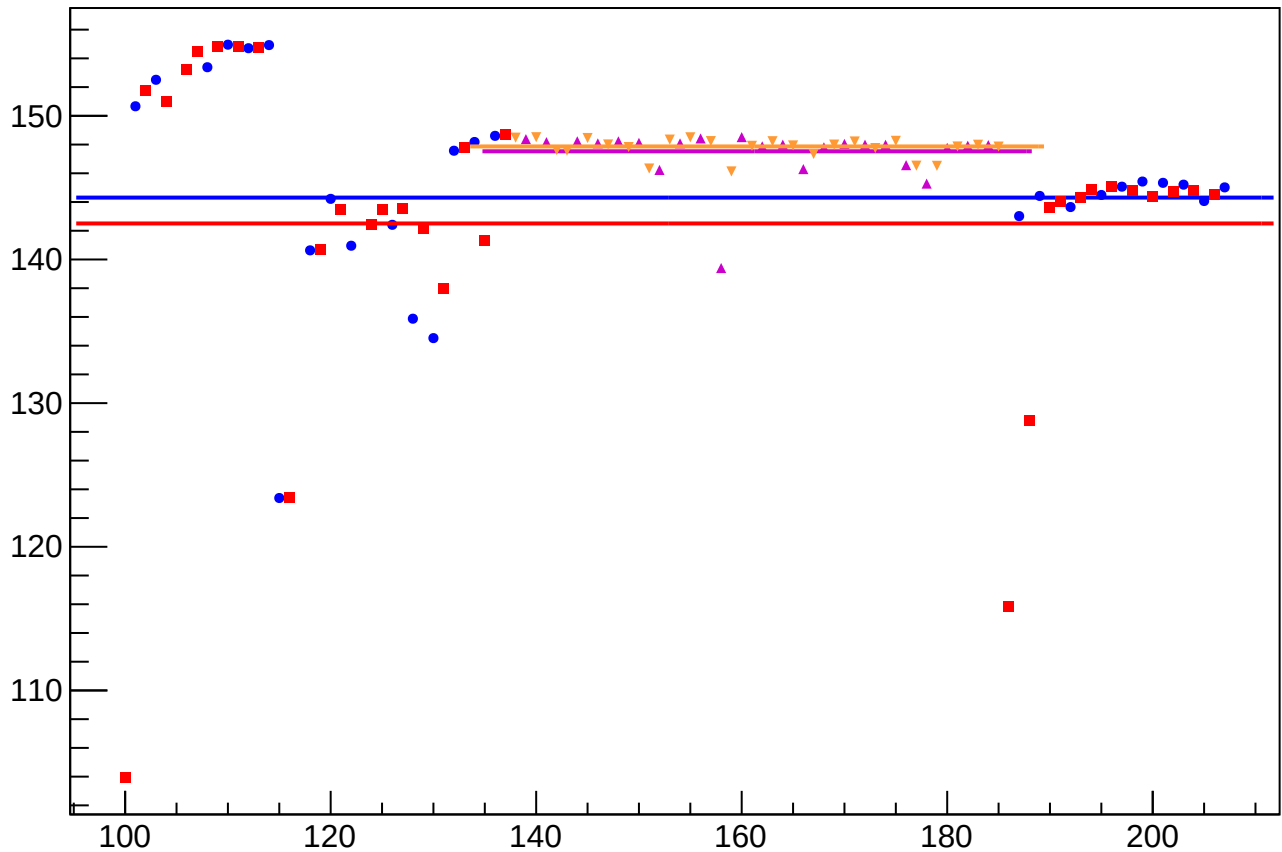
Left In: 4768.055+/-0.809  $\chi^2/\text{NDF}$ : 102355.5/22

+ sign 4988.611+/-0.622  $\chi^2/\text{NDF}$ : 354189.8/50

All: 4964.656+/-0.436  $\chi^2/\text{NDF}$ : 670655.4/104

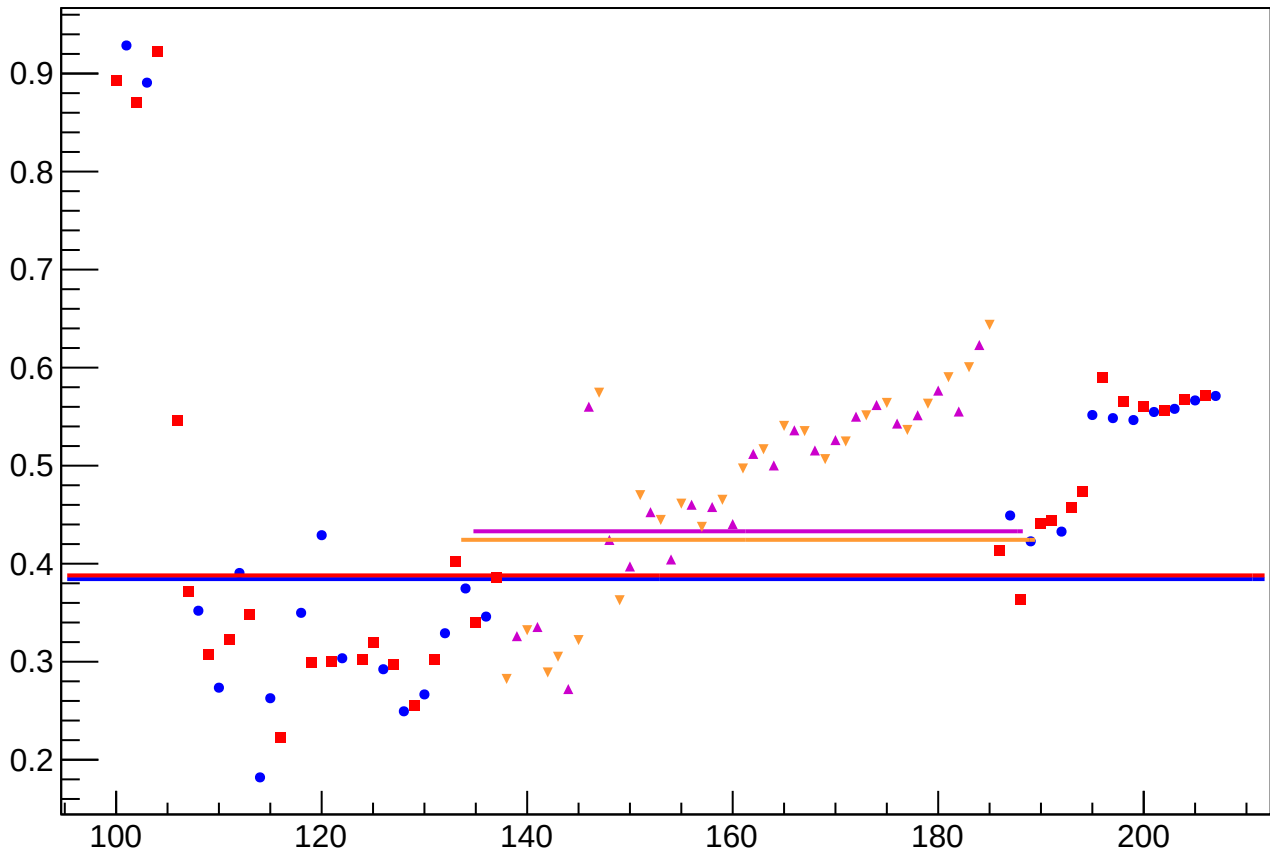
- sign 4941.538+/-0.611  $\chi^2/\text{NDF}$ : 313553.5/53

# yield\_bcm\_an\_ds\_mean vs Slug



|                            |                                       |                        |                                       |
|----------------------------|---------------------------------------|------------------------|---------------------------------------|
| Right In: 144.308+/-0.000  | $\chi^2/\text{NDF}$ : 3781030177.0/25 | + sign 146.217+/-0.000 | $\chi^2/\text{NDF}$ : 4402338697.6/50 |
| Left Out: 147.870+/-0.000  | $\chi^2/\text{NDF}$ : 44483332.4/24   | All: 145.598+/-0.000   | $\chi^2/\text{NDF}$ : 13526363344.    |
| Right Out: 142.507+/-0.000 | $\chi^2/\text{NDF}$ : 7523816319.2/30 | - sign 144.980+/-0.000 | $\chi^2/\text{NDF}$ : 8984221008.7/53 |
| Left In: 147.532+/-0.000   | $\chi^2/\text{NDF}$ : 307143604.6/22  |                        |                                       |

# yield\_bcm\_an\_ds\_rms vs Slug



Right In: 0.384 $\pm$ 0.000  $\chi^2$ /NDF: 3010365.9/25

Left Out: 0.424 $\pm$ 0.000  $\chi^2$ /NDF:2260723.7/24

Right Out: 0.388 $\pm$ 0.000  $\chi^2$ /NDF: 2894155.2/30

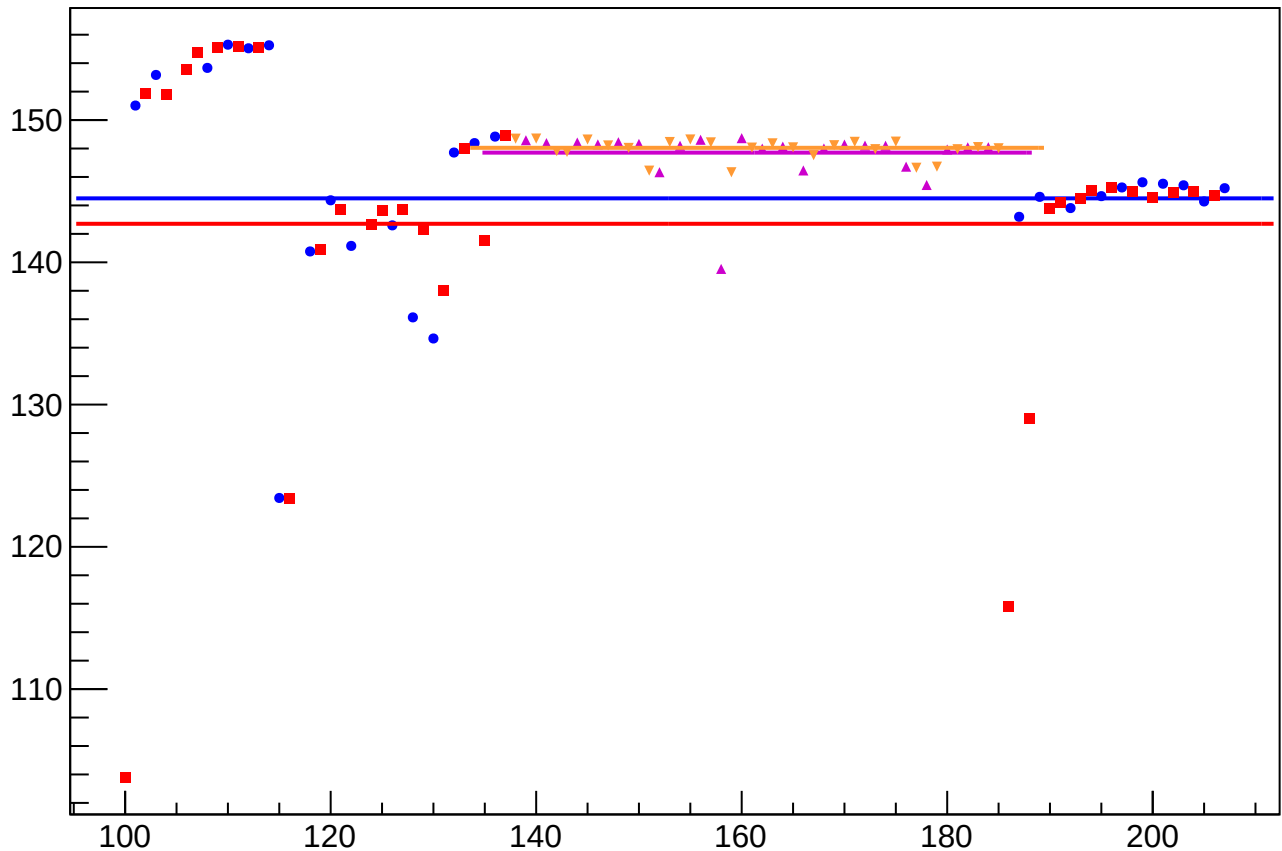
Left In: 0.433 $\pm$ 0.000  $\chi^2$ /NDF:1771141.8/22

+ sign 0.406 $\pm$ 0.000  $\chi^2$ /NDF: 5417056.4/50

All: 0.408 $\pm$ 0.000  $\chi^2$ /NDF: 10270869.4/104

- sign 0.410 $\pm$ 0.000  $\chi^2$ /NDF: 4850213.8/53

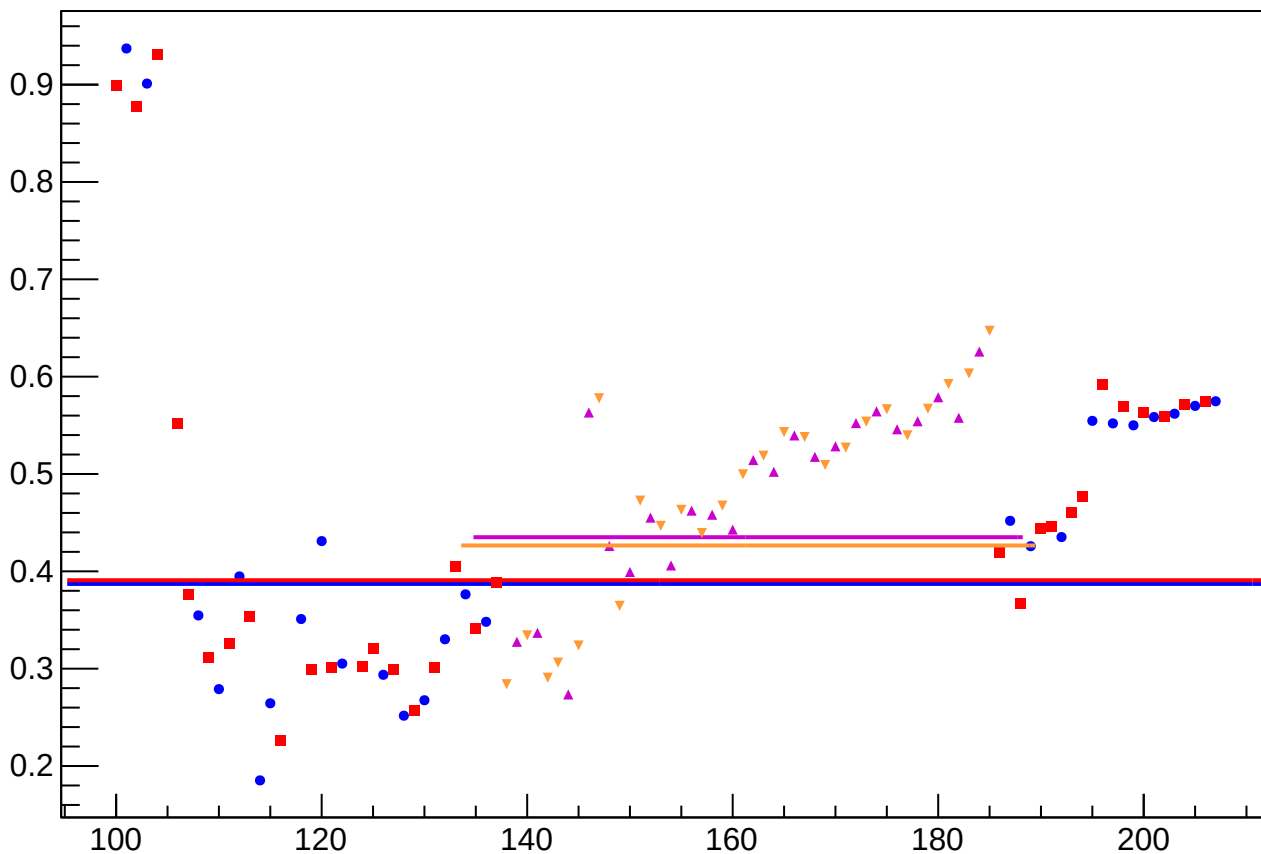
# yield\_bcm\_an\_ds3\_mean vs Slug



Right In:  $144.496 \pm 0.000$   $\chi^2/\text{NDF}$ : 3774929614.1/25  
 Left Out:  $148.049 \pm 0.000$   $\chi^2/\text{NDF}$ : 44901895.1/24  
 Right Out:  $142.708 \pm 0.000$   $\chi^2/\text{NDF}$ : 7458493279.0/30  
 Left In:  $147.710 \pm 0.000$   $\chi^2/\text{NDF}$ : 311841433.9/22

+ sign  $146.403 \pm 0.000$   $\chi^2/\text{NDF}$ : 4387014412.9/50  
 All:  $145.790 \pm 0.000$   $\chi^2/\text{NDF}$ : 13423315642.  
 - sign  $145.176 \pm 0.000$   $\chi^2/\text{NDF}$ : 8900205104.2/53

# yield\_bcm\_an\_ds3\_rms vs Slug



Right In:  $0.387 \pm 0.000$   $\chi^2/\text{NDF}$ : 2999866.2/25

Left Out:  $0.427 \pm 0.000$   $\chi^2/\text{NDF}$ : 2257492.3/24

Right Out:  $0.391 \pm 0.000$   $\chi^2/\text{NDF}$ : 2888330.2/30

Left In:  $0.435 \pm 0.000$   $\chi^2/\text{NDF}$ : 1769716.0/22

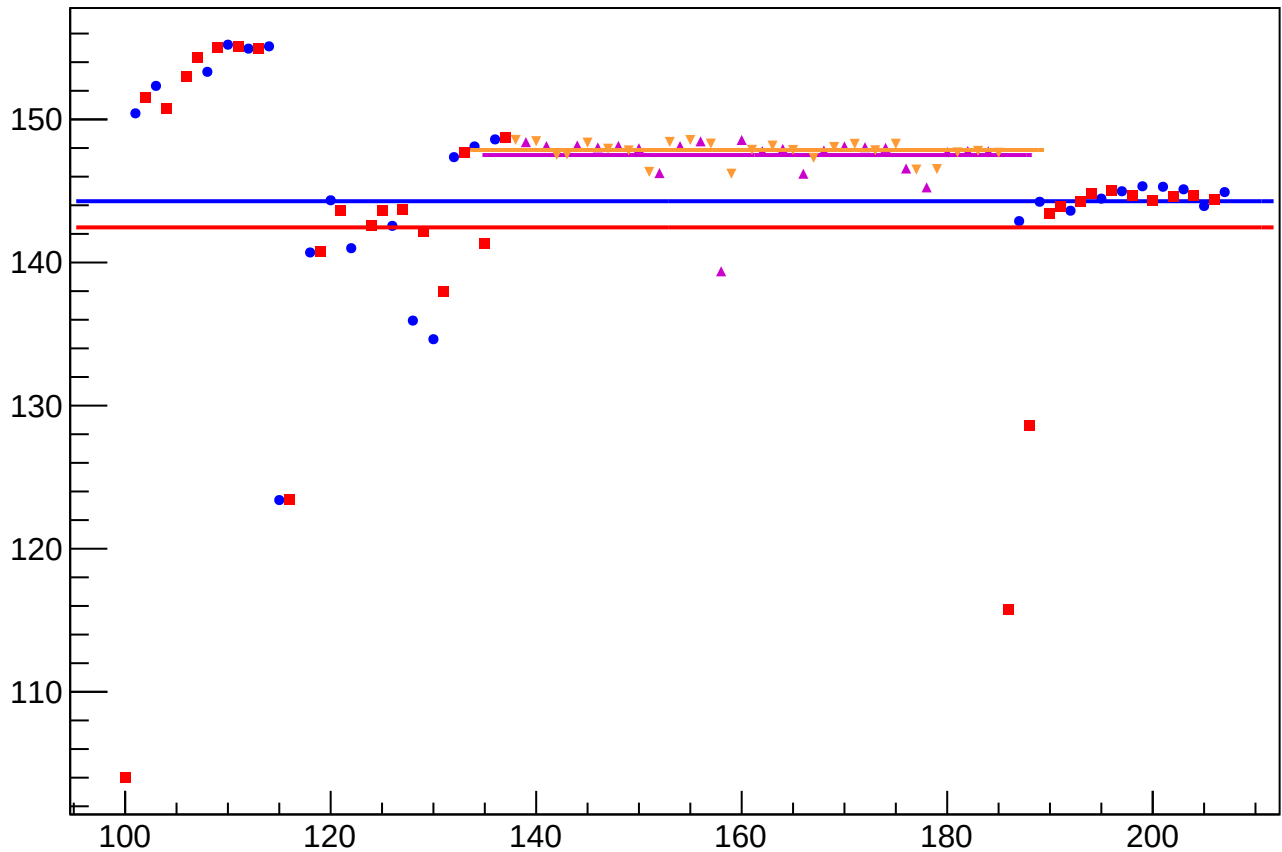
+ sign  $0.408 \pm 0.000$   $\chi^2/\text{NDF}$ : 5397398.2/50

All:  $0.410 \pm 0.000$   $\chi^2/\text{NDF}$ : 10235461.7/104

- sign  $0.413 \pm 0.000$   $\chi^2/\text{NDF}$ : 4834584.6/53

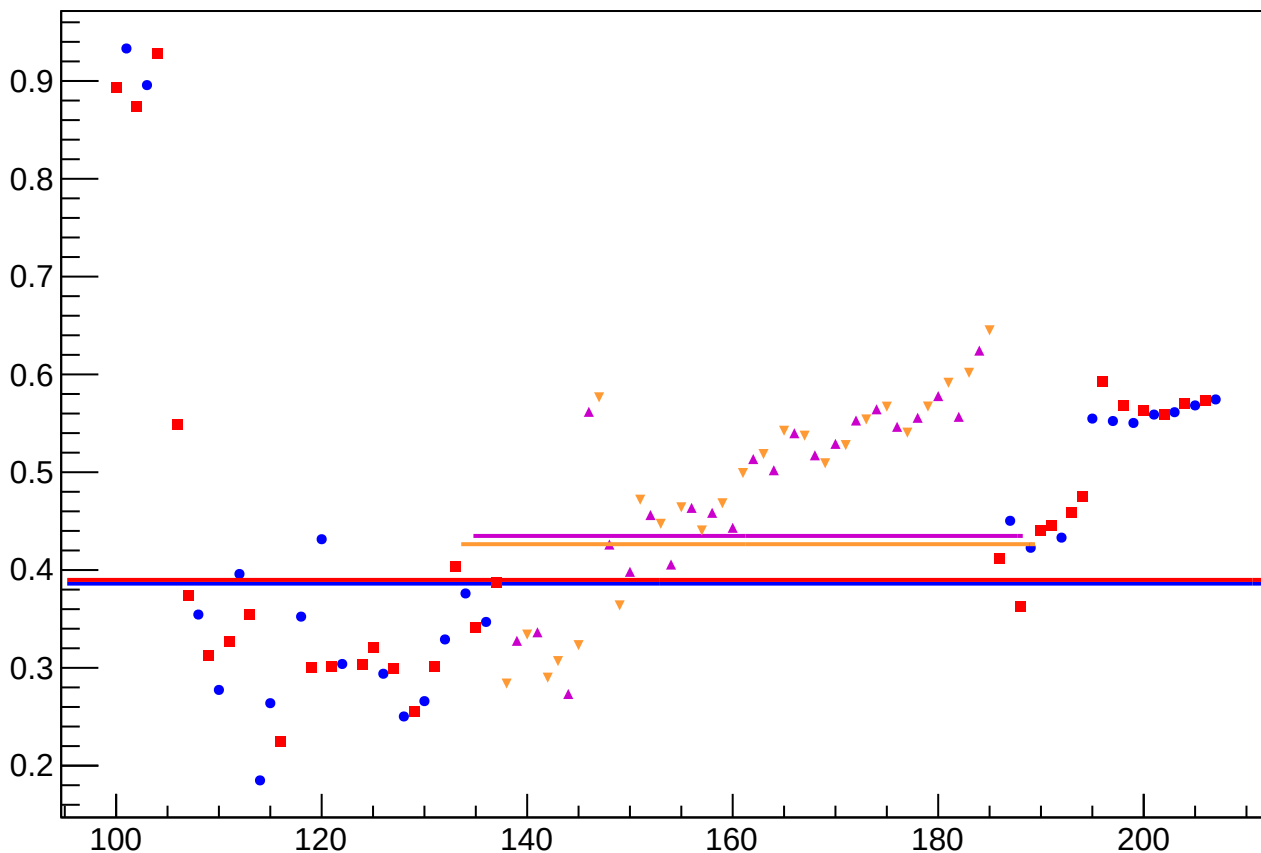


# yield\_bcm\_an\_us\_mean vs Slug



|                            |                                       |                        |                                       |
|----------------------------|---------------------------------------|------------------------|---------------------------------------|
| Right In: 144.284+/-0.000  | $\chi^2/\text{NDF}$ : 3739403362.7/25 | + sign 146.202+/-0.000 | $\chi^2/\text{NDF}$ : 4361623036.3/50 |
| Left Out: 147.864+/-0.000  | $\chi^2/\text{NDF}$ : 44922014.2/24   | All: 145.573+/-0.000   | $\chi^2/\text{NDF}$ : 13516555004.    |
| Right Out: 142.456+/-0.000 | $\chi^2/\text{NDF}$ : 7547771240.1/30 | - sign 144.944+/-0.000 | $\chi^2/\text{NDF}$ : 9011604322.8/53 |
| Left In: 147.511+/-0.000   | $\chi^2/\text{NDF}$ : 306421789.5/22  |                        |                                       |

# yield\_bcm\_an\_us\_rms vs Slug



Right In: 0.386 $\pm$ 0.000  $\chi^2$ /NDF: 3012854.6/25

Left Out: 0.426 $\pm$ 0.000  $\chi^2$ /NDF:2259192.5/24

Right Out: 0.390 $\pm$ 0.000  $\chi^2$ /NDF: 2886388.6/30

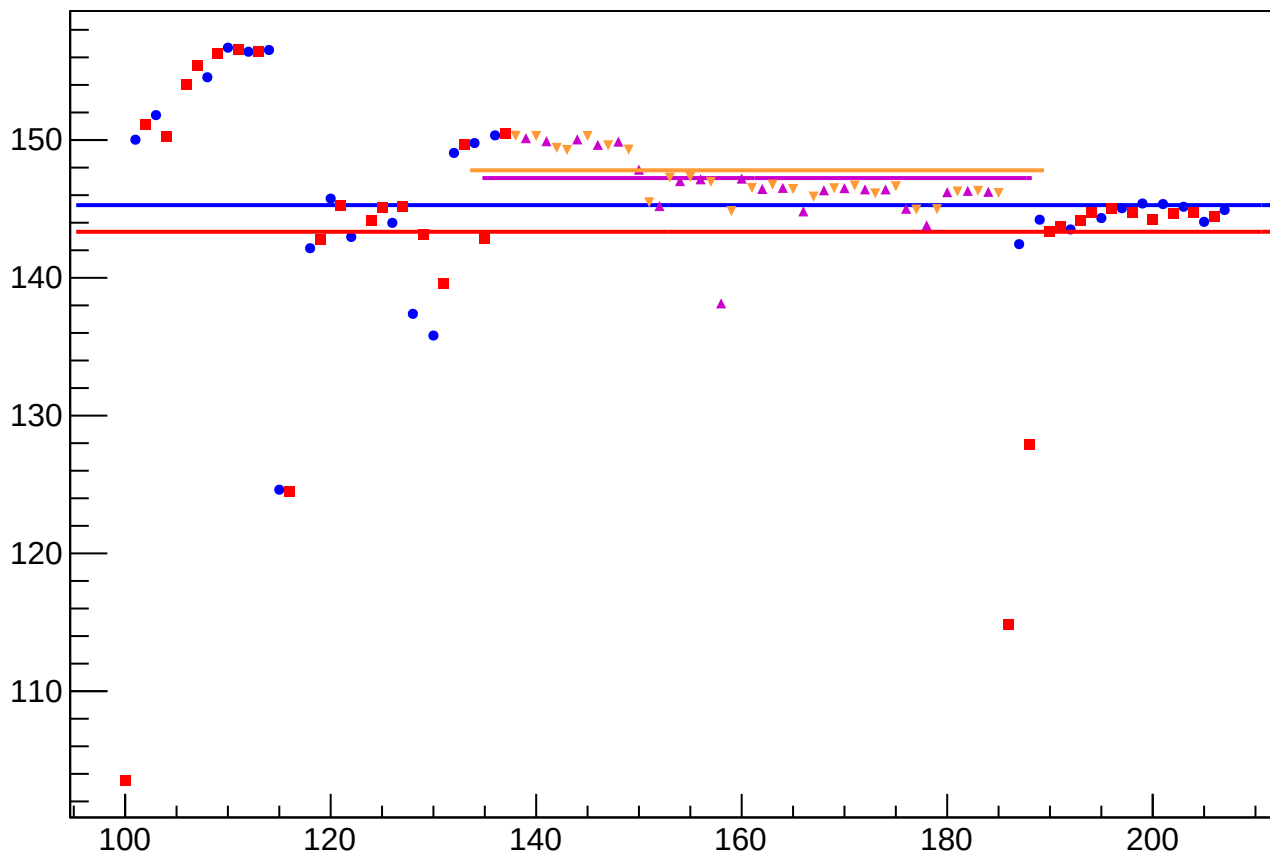
Left In: 0.435 $\pm$ 0.000  $\chi^2$ /NDF:1774903.7/22

+ sign 0.408 $\pm$ 0.000  $\chi^2$ /NDF: 5418355.5/50

All: 0.410 $\pm$ 0.000  $\chi^2$ /NDF: 10266161.8/104

- sign 0.412 $\pm$ 0.000  $\chi^2$ /NDF: 4844406.4/53

# yield\_bcm\_dg\_us\_mean vs Slug



Right In: 145.277 $\pm$ 0.000  $\chi^2$ /NDF: 3519433049.2/25

Left Out: 147.804 $\pm$ 0.000  $\chi^2$ /NDF: 327059704.2/24

Right Out: 143.343 $\pm$ 0.000  $\chi^2$ /NDF: 7614555066.2/30

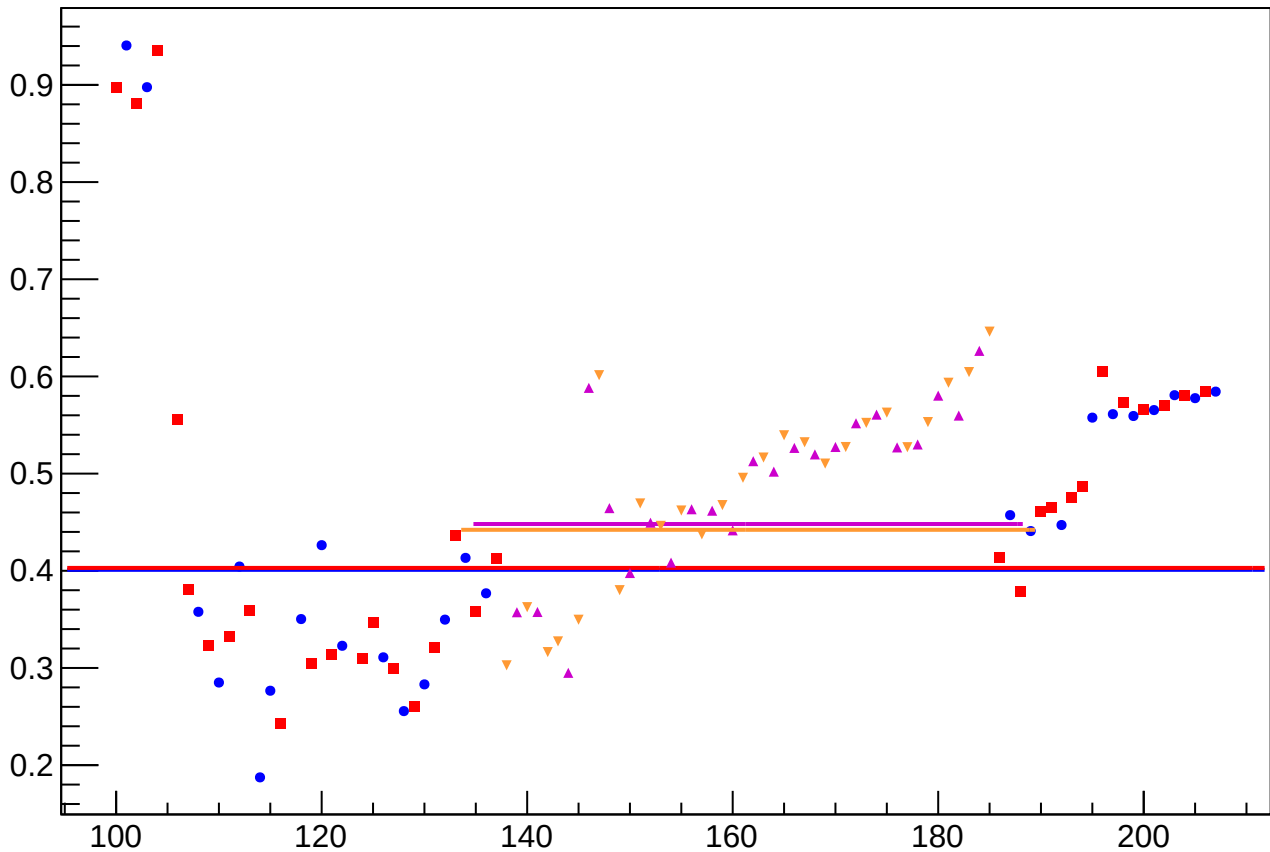
Left In: 147.241 $\pm$ 0.000  $\chi^2$ /NDF: 618679483.9/22

+ sign 146.639 $\pm$ 0.000  $\chi^2$ /NDF: 4115821802.2/50

All: 145.955 $\pm$ 0.000  $\chi^2$ /NDF: 13157950439.

- sign 145.277 $\pm$ 0.000  $\chi^2$ /NDF: 8884063258.9/53

# yield\_bcm\_dg\_us\_rms vs Slug



Right In: 0.401 $\pm$ 0.000  $\chi^2$ /NDF: 2854761.1/25

Left Out: 0.442 $\pm$ 0.000  $\chi^2$ /NDF:1704199.1/24

Right Out: 0.403 $\pm$ 0.000  $\chi^2$ /NDF: 2755183.7/30

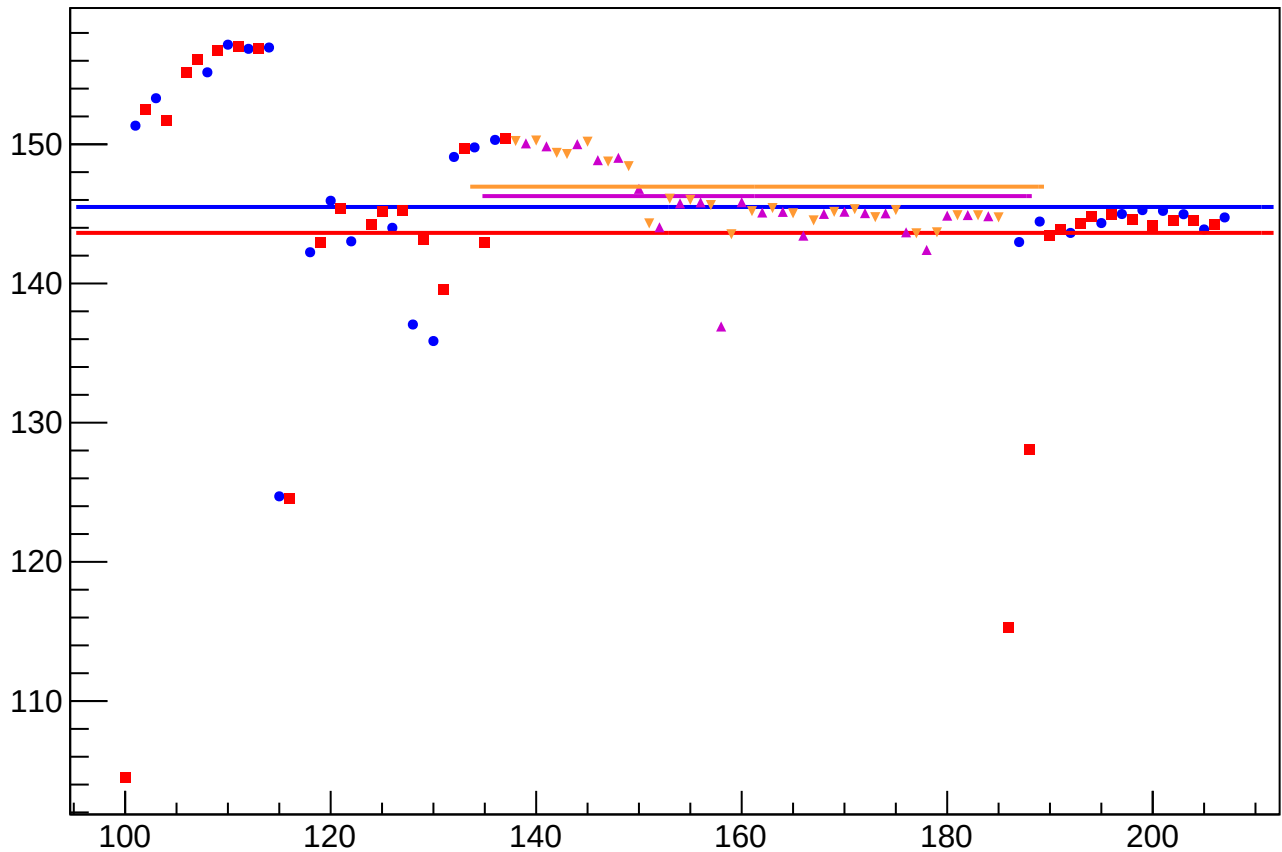
Left In: 0.448 $\pm$ 0.000  $\chi^2$ /NDF:1347802.9/22

+ sign 0.423 $\pm$ 0.000  $\chi^2$ /NDF: 4701945.1/50

All: 0.424 $\pm$ 0.000  $\chi^2$ /NDF: 8980551.8/104

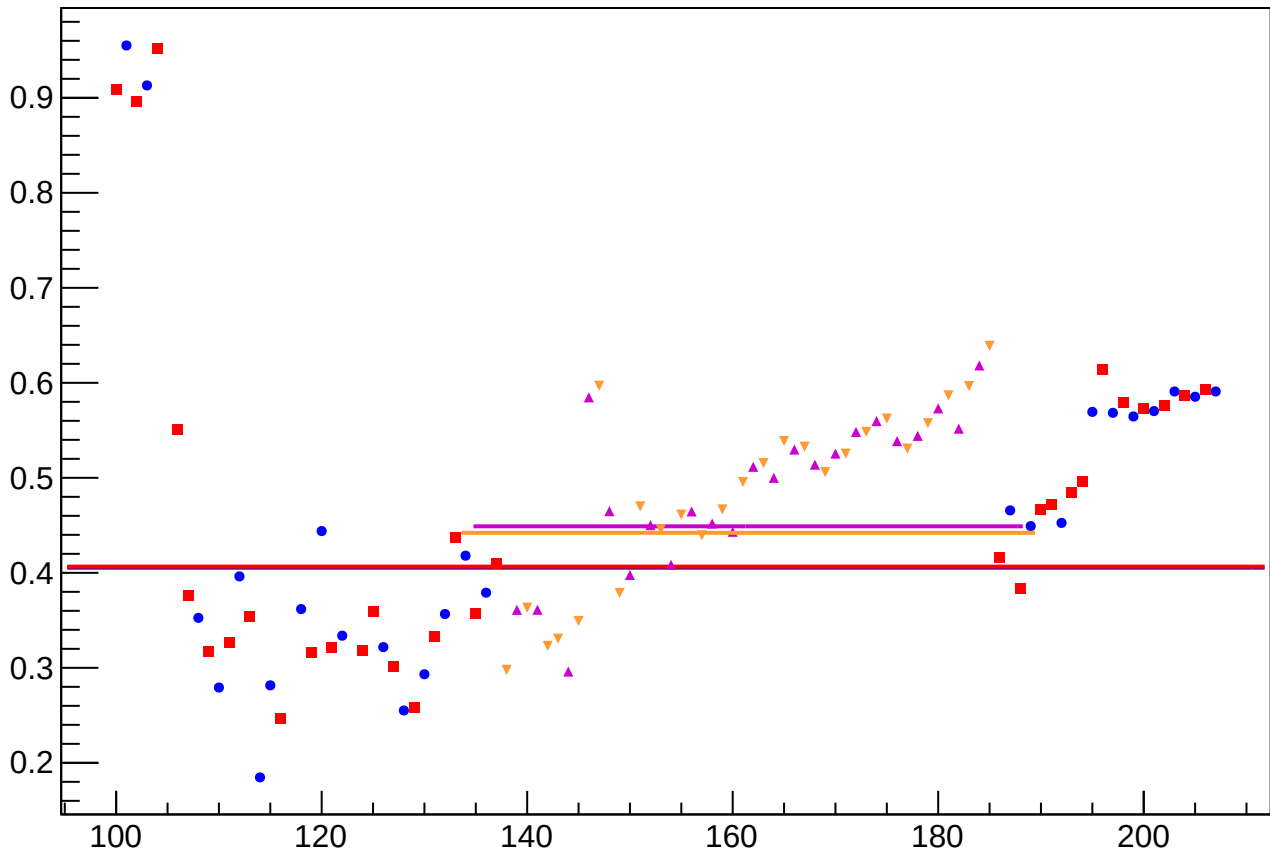
- sign 0.425 $\pm$ 0.000  $\chi^2$ /NDF: 4277783.7/53

# yield\_bcm\_dg\_ds\_mean vs Slug



|                                |                                |                            |                                |
|--------------------------------|--------------------------------|----------------------------|--------------------------------|
| Right In: 145.497 $\pm$ 0.000  | $\chi^2$ /NDF: 3670393993.0/25 | + sign 146.292 $\pm$ 0.000 | $\chi^2$ /NDF: 4301744253.7/50 |
| Left Out: 146.956 $\pm$ 0.000  | $\chi^2$ /NDF: 542800379.5/24  | All: 145.622 $\pm$ 0.000   | $\chi^2$ /NDF: 13246148705.    |
| Right Out: 143.635 $\pm$ 0.000 | $\chi^2$ /NDF: 7673791057.2/30 | - sign 144.958 $\pm$ 0.000 | $\chi^2$ /NDF: 8794516481.0/53 |
| Left In: 146.278 $\pm$ 0.000   | $\chi^2$ /NDF: 825161532.5/22  |                            |                                |

# yield\_bcm\_dg\_ds\_rms vs Slug



Right In: 0.405 $\pm$ 0.000  $\chi^2$ /NDF: 2893594.0/25

Left Out: 0.442 $\pm$ 0.000  $\chi^2$ /NDF:1676682.9/24

Right Out: 0.407 $\pm$ 0.000  $\chi^2$ /NDF: 2783741.0/30

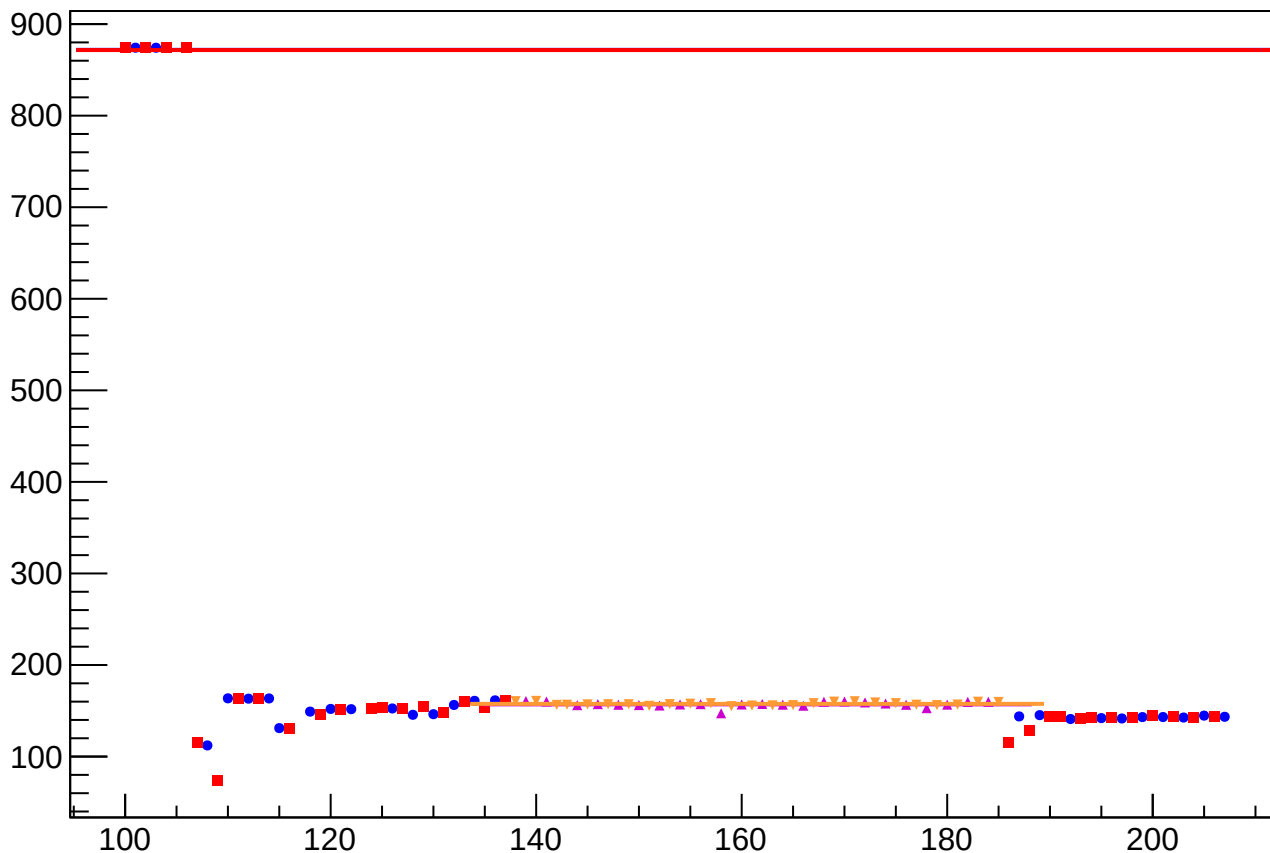
Left In: 0.449 $\pm$ 0.000  $\chi^2$ /NDF:1300658.3/22

+ sign 0.425 $\pm$ 0.000  $\chi^2$ /NDF: 4681994.9/50

All: 0.427 $\pm$ 0.000  $\chi^2$ /NDF: 8919688.2/104

- sign 0.428 $\pm$ 0.000  $\chi^2$ /NDF: 4236787.6/53

# yield\_cav4bQ\_mean vs Slug



Right In: 871.868 $\pm$ 0.000  $\chi^2$ /NDF: 12152621824775.2/25

Left Out: 157.566 $\pm$ 0.000  $\chi^2$ /NDF: 104641292.0/24

Right Out: 871.644 $\pm$ 0.000  $\chi^2$ /NDF: 15385034286896.8/30

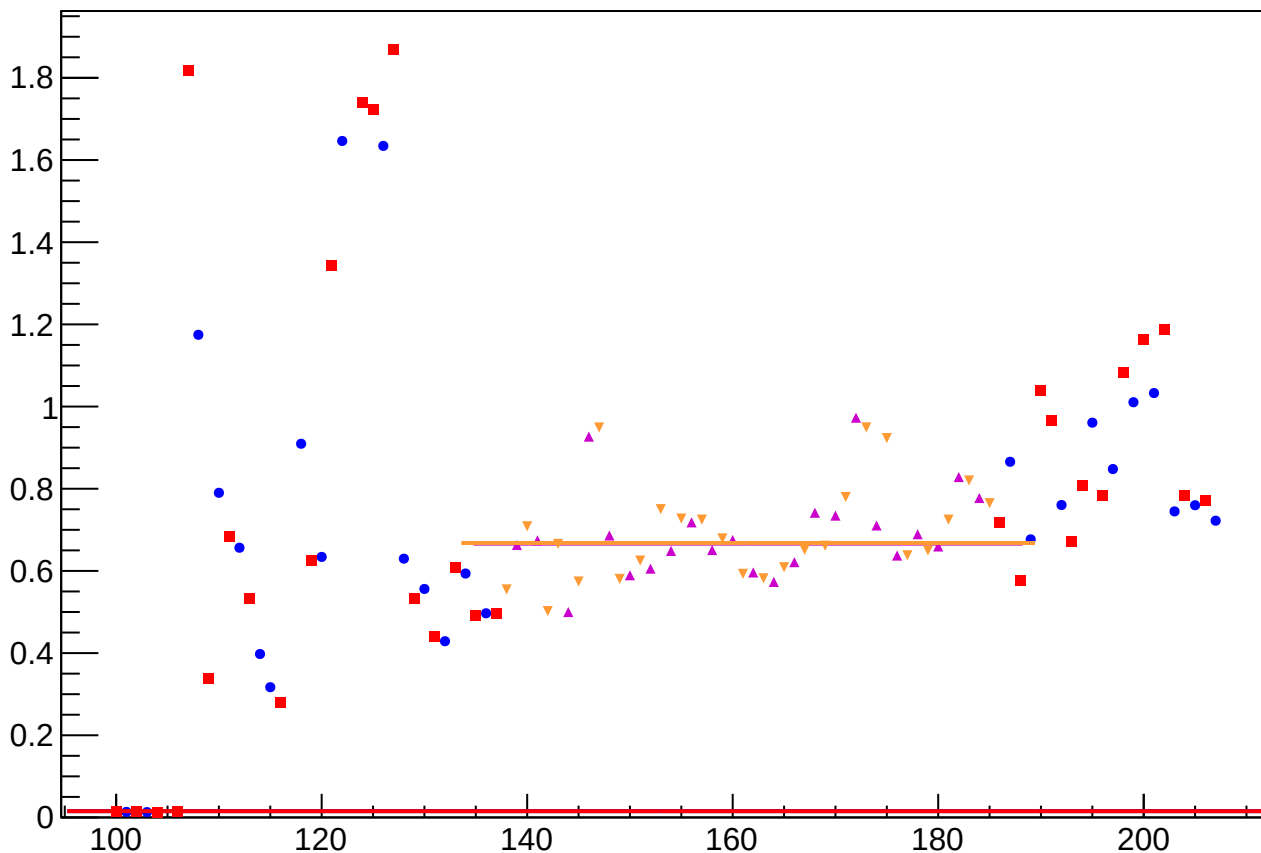
Left In: 157.013 $\pm$ 0.000  $\chi^2$ /NDF: 239819941.9/22

+ sign 868.491 $\pm$ 0.000  $\chi^2$ /NDF: 29357853723305.2/25

All: 868.677 $\pm$ 0.000  $\chi^2$ /NDF: 612296728260.0/25

- sign 868.838 $\pm$ 0.000  $\chi^2$ /NDF: 31871358384736.7/25

# yield\_cav4bQ\_rms vs Slug



Right In: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 21555009.1/25

Left Out: 0.668+/-0.000  $\chi^2/\text{NDF}$ : 681720.2/24

Right Out: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 23740678.1/30

Left In: 0.666+/-0.000  $\chi^2/\text{NDF}$ : 536078.9/22

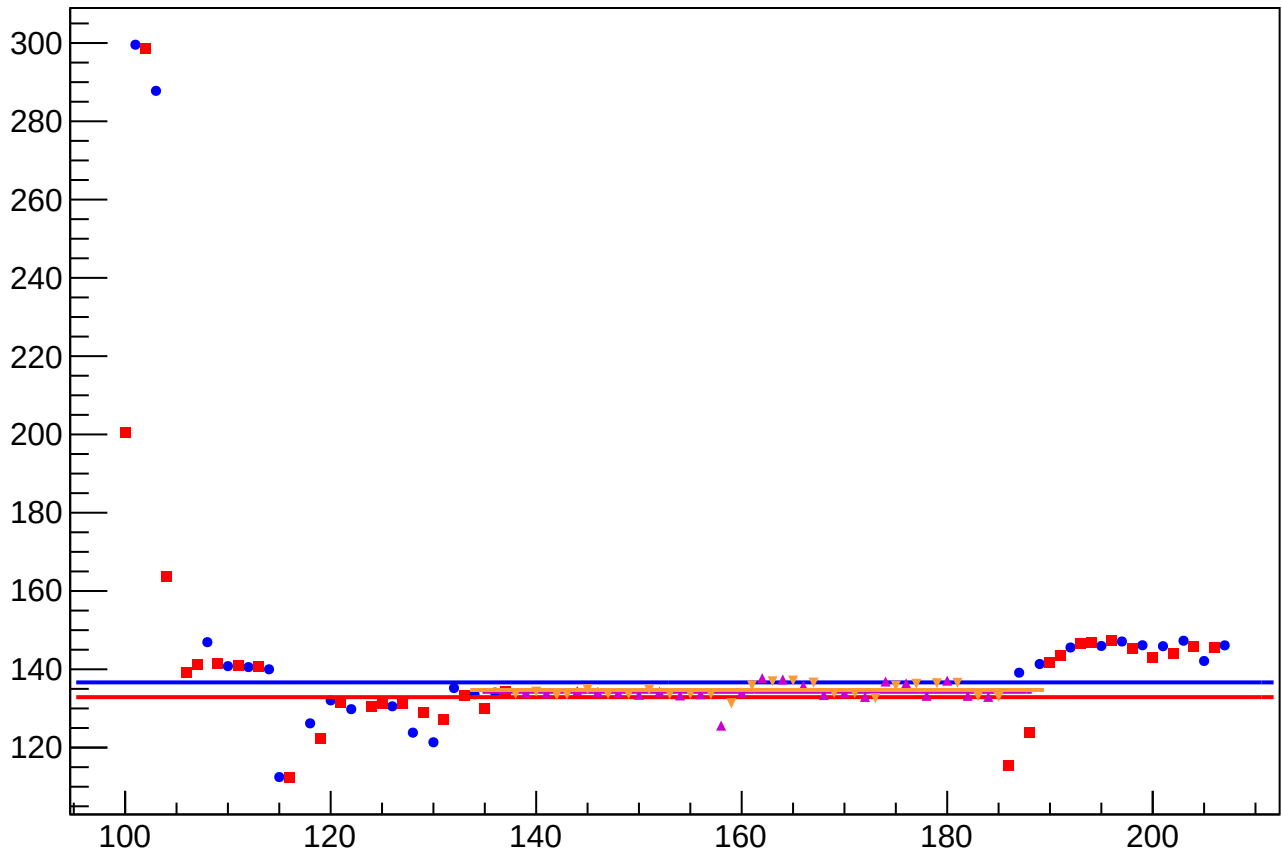
+ sign 0.019+/-0.000  $\chi^2/\text{NDF}$ : 50955203.0/50

All: 0.018+/-0.000  $\chi^2/\text{NDF}$ : 102608925.3/104

- sign 0.018+/-0.000  $\chi^2/\text{NDF}$ : 51650715.0/53

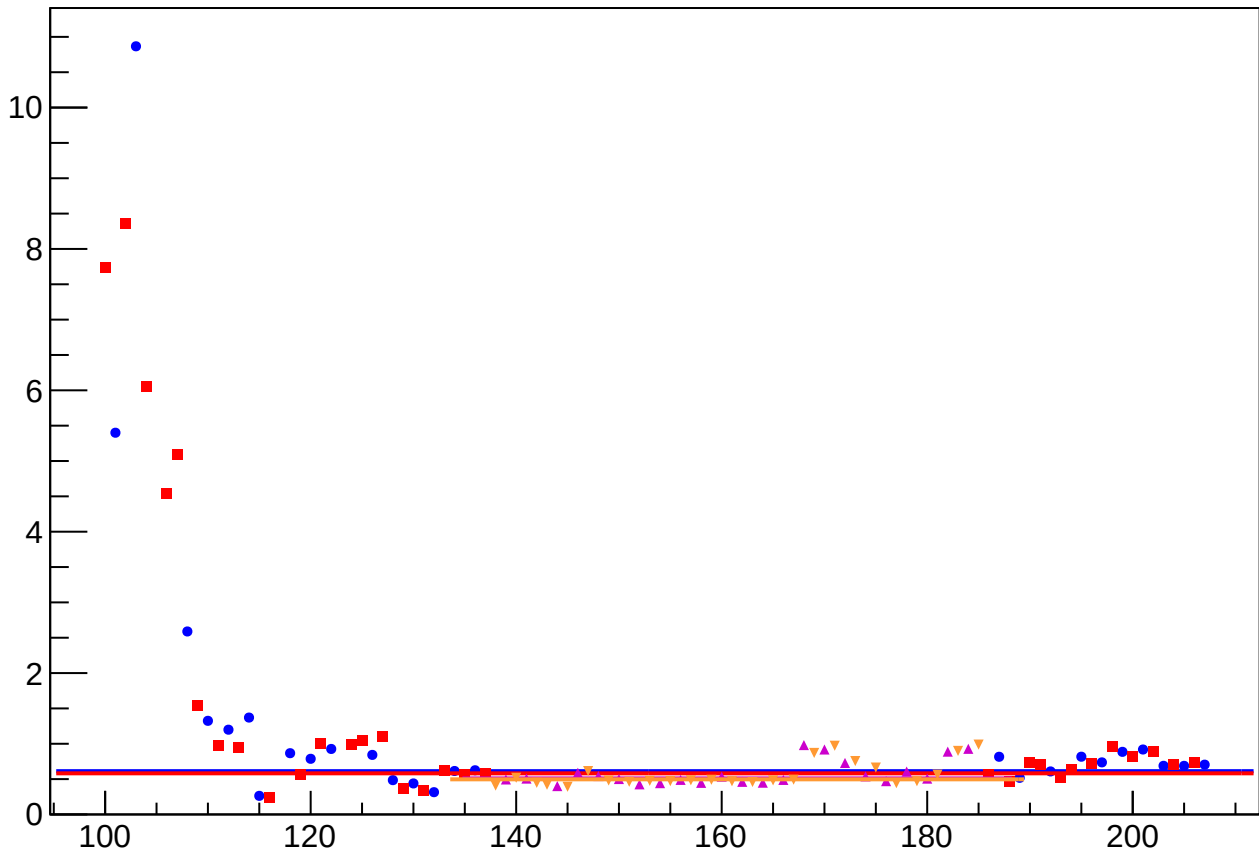


# yield\_cav4cQ\_mean vs Slug



|                            |                                       |                        |                                       |
|----------------------------|---------------------------------------|------------------------|---------------------------------------|
| Right In: 136.654+/-0.000  | $\chi^2/\text{NDF}$ : 3451943791.1/25 | + sign 135.258+/-0.000 | $\chi^2/\text{NDF}$ : 3682453142.9/50 |
| Left Out: 134.714+/-0.000  | $\chi^2/\text{NDF}$ : 159886495.0/24  | All: 134.525+/-0.000   | $\chi^2/\text{NDF}$ : 9244184582.7    |
| Right Out: 132.885+/-0.000 | $\chi^2/\text{NDF}$ : 4981191413.9/30 | - sign 133.783+/-0.000 | $\chi^2/\text{NDF}$ : 5461243110.2/53 |
| Left In: 134.250+/-0.000   | $\chi^2/\text{NDF}$ : 441522664.4/22  |                        |                                       |

# yield\_cav4cQ\_rms vs Slug



Right In: 0.612 $\pm$ 0.000  $\chi^2$ /NDF: 4885058.4/25

Left Out: 0.497 $\pm$ 0.000  $\chi^2$ /NDF:1572512.9/24

Right Out: 0.582 $\pm$ 0.000  $\chi^2$ /NDF: 5947824.1/30

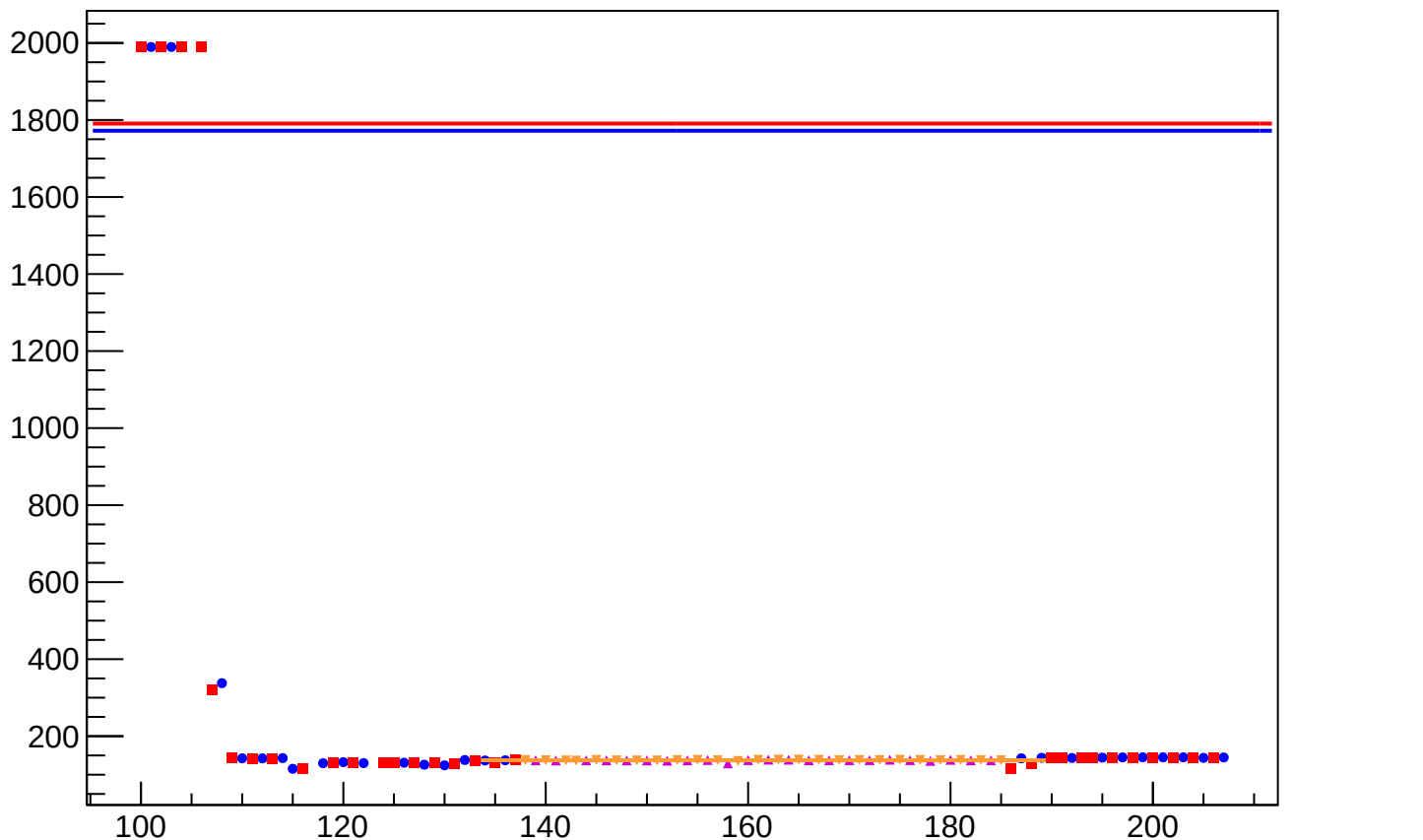
Left In: 0.510 $\pm$ 0.000  $\chi^2$ /NDF:1485489.4/22

+ sign 0.529 $\pm$ 0.000  $\chi^2$ /NDF: 6958626.9/50

All: 0.532 $\pm$ 0.000  $\chi^2$ /NDF: 14609926.4/104

- sign 0.534 $\pm$ 0.000  $\chi^2$ /NDF: 7649007.5/53

# yield\_cav4dQ\_mean vs Slug



Right In: 1772.107+/-0.000  $\chi^2/\text{NDF}$ : 211354151683428.5/25

Left Out: 137.578+/-0.000  $\chi^2/\text{NDF}$ : 64111345.2/24

+ sign 1551.169+/-0.000  $\chi^2/\text{NDF}$ : 42587857379038

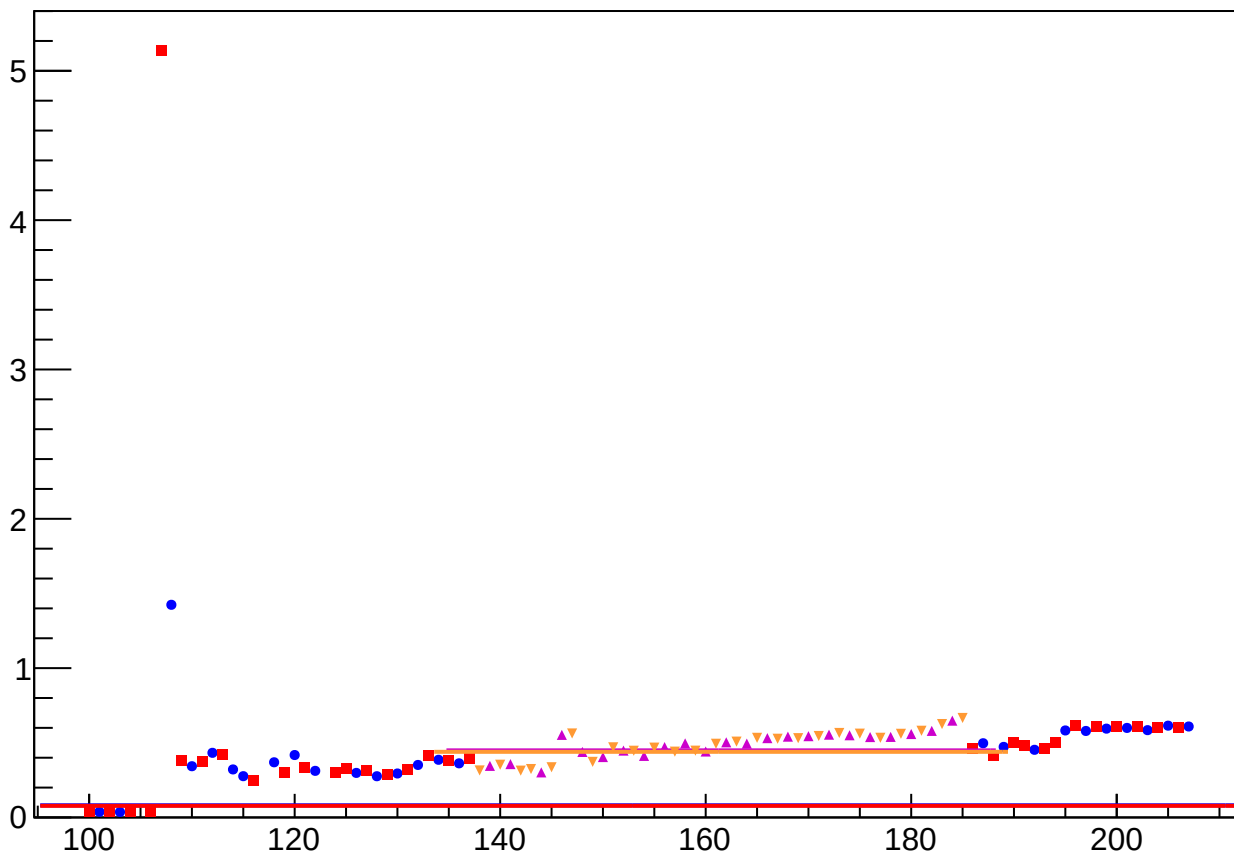
Right Out: 1790.680+/-0.000  $\chi^2/\text{NDF}$ : 229314531910712.4/30

All: 1583.023+/-0.000  $\chi^2/\text{NDF}$ : 86331555987

- sign 1611.032+/-0.000  $\chi^2/\text{NDF}$ : 43612717695041

Left In: 137.349+/-0.000  $\chi^2/\text{NDF}$ : 248752254.7/22

# yield\_cav4dQ\_rms vs Slug



Right In: 0.081+/-0.000  $\chi^2/\text{NDF}$ : 19395434.8/25

Left Out: 0.440+/-0.000  $\chi^2/\text{NDF}$ :1765604.0/24

Right Out: 0.078+/-0.000  $\chi^2/\text{NDF}$ : 20993853.9/30

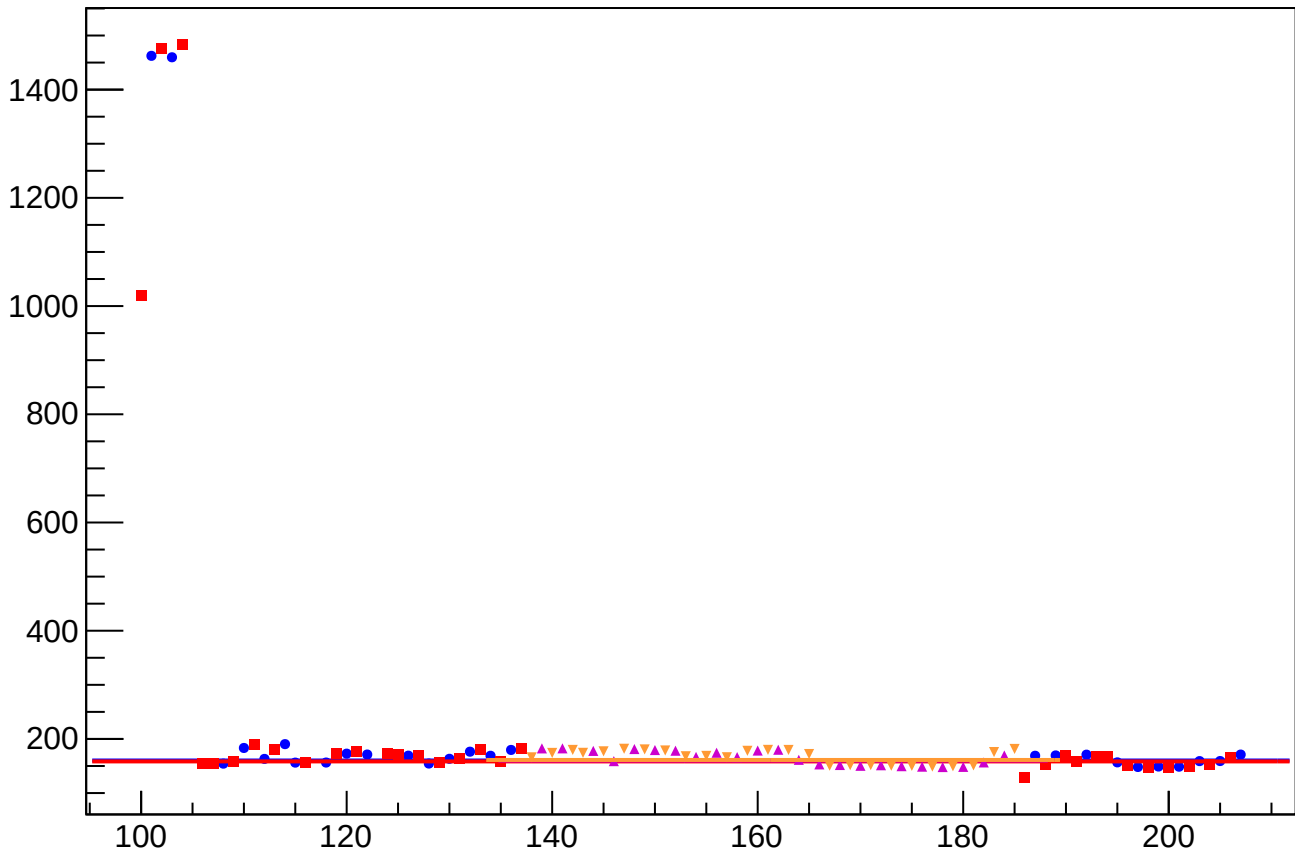
Left In: 0.449+/-0.000  $\chi^2/\text{NDF}$ :1340860.2/22

+ sign 0.130+/-0.000  $\chi^2/\text{NDF}$ : 41758140.6/50

All: 0.124+/-0.000  $\chi^2/\text{NDF}$ : 85068552.8/104

- sign 0.118+/-0.000  $\chi^2/\text{NDF}$ : 43211254.2/53

# yield\_bcm0l02\_mean vs Slug



Right In: 160.159+/-0.000  $\chi^2/\text{NDF}$ : 15780598152.2/25

Left Out: 161.147+/-0.000  $\chi^2/\text{NDF}$ : 3739064587.8/24

Right Out: 158.476+/-0.000  $\chi^2/\text{NDF}$ : 18187760514.8/30

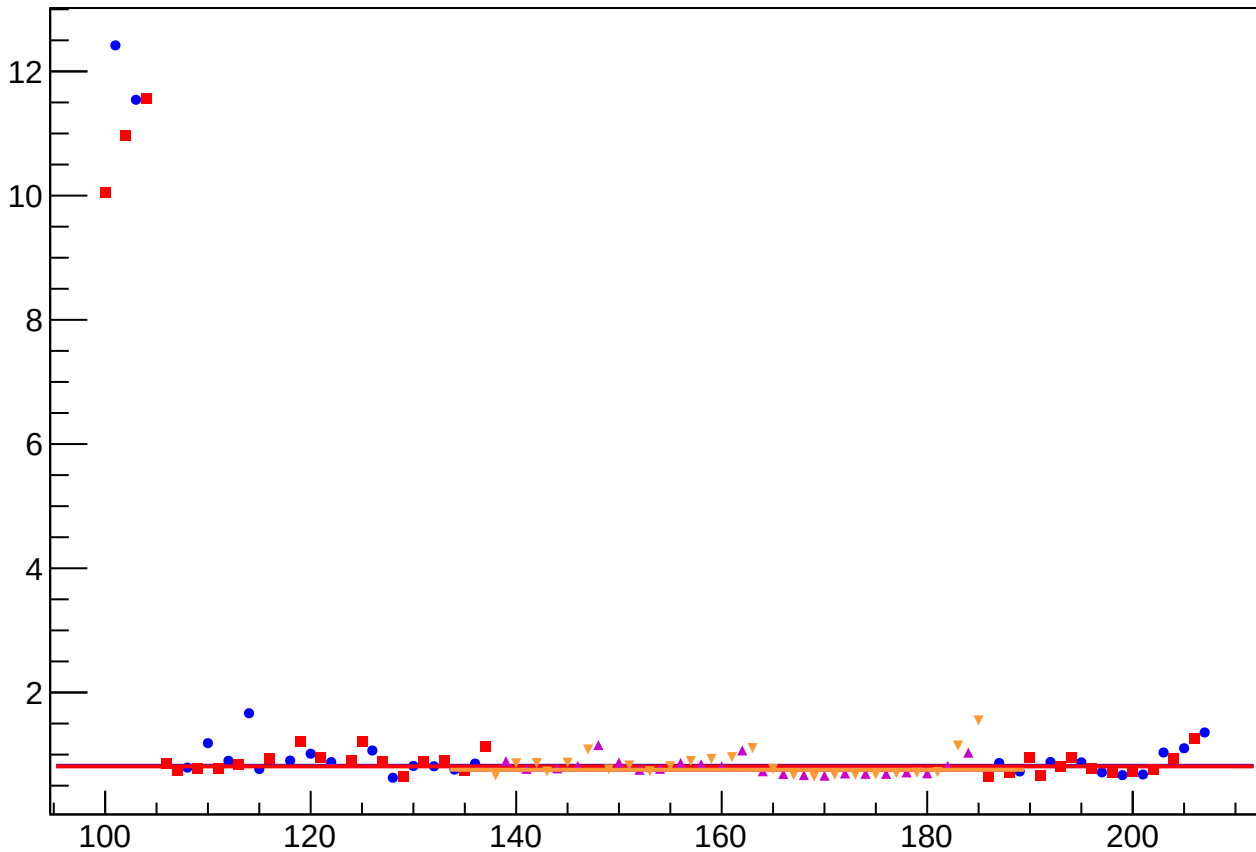
Left In: 160.140+/-0.000  $\chi^2/\text{NDF}$ : 3738383186.1/22

+ sign 160.779+/-0.000  $\chi^2/\text{NDF}$ : 19528588102.5/50

All: 160.102+/-0.000  $\chi^2/\text{NDF}$ : 41517188186.1/100

- sign 159.447+/-0.000  $\chi^2/\text{NDF}$ : 21953335240.4/53

# yield\_bcm0l02\_rms vs Slug



Right In:  $0.819 \pm 0.000$   $\chi^2/\text{NDF}$ : 2853352.4/25

Left Out:  $0.756 \pm 0.000$   $\chi^2/\text{NDF}$ : 750259.3/24

Right Out:  $0.811 \pm 0.000$   $\chi^2/\text{NDF}$ : 2616239.0/30

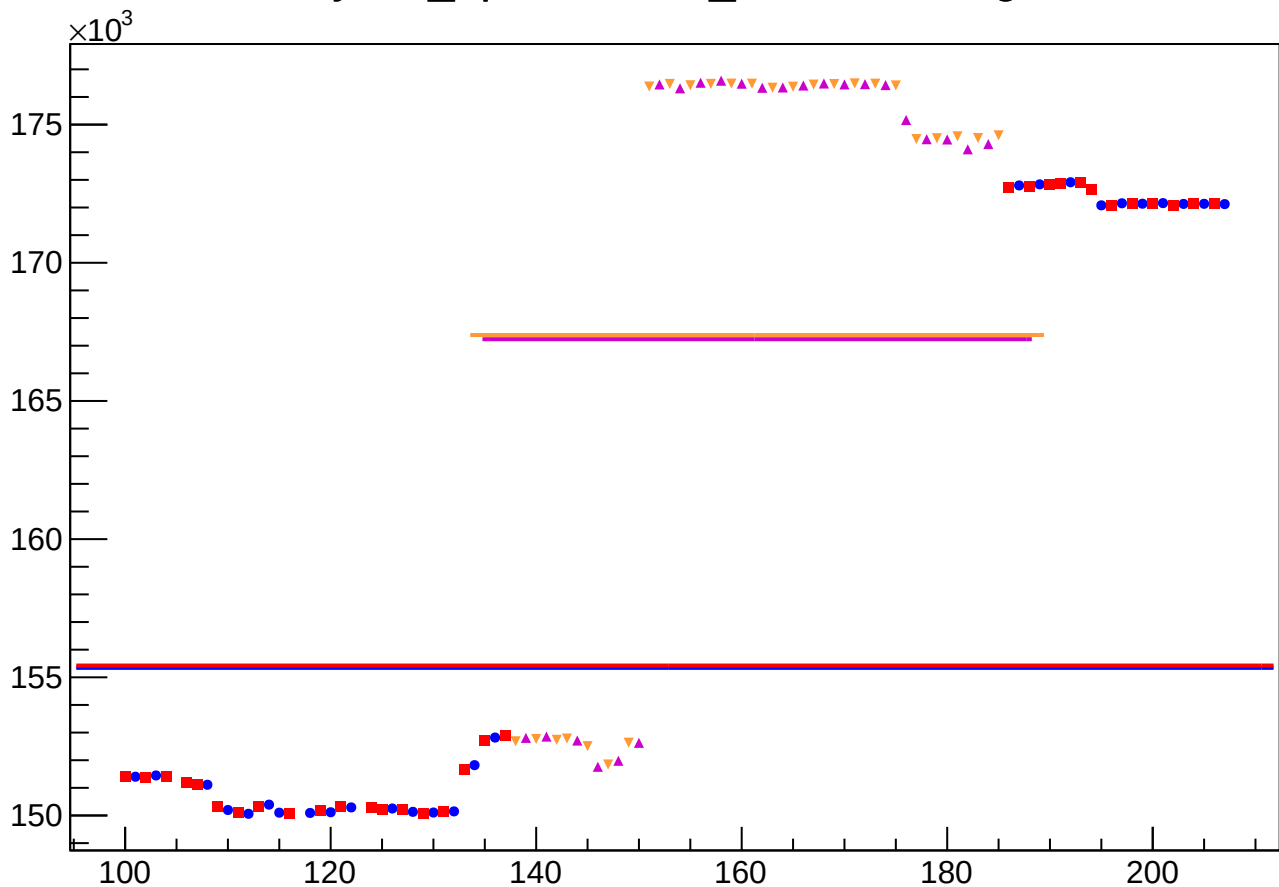
Left In:  $0.755 \pm 0.000$   $\chi^2/\text{NDF}$ : 472792.1/22

+ sign  $0.780 \pm 0.000$   $\chi^2/\text{NDF}$ : 3676062.0/50

All:  $0.779 \pm 0.000$   $\chi^2/\text{NDF}$ : 6824809.2/104

- sign  $0.778 \pm 0.000$   $\chi^2/\text{NDF}$ : 3148670.3/53

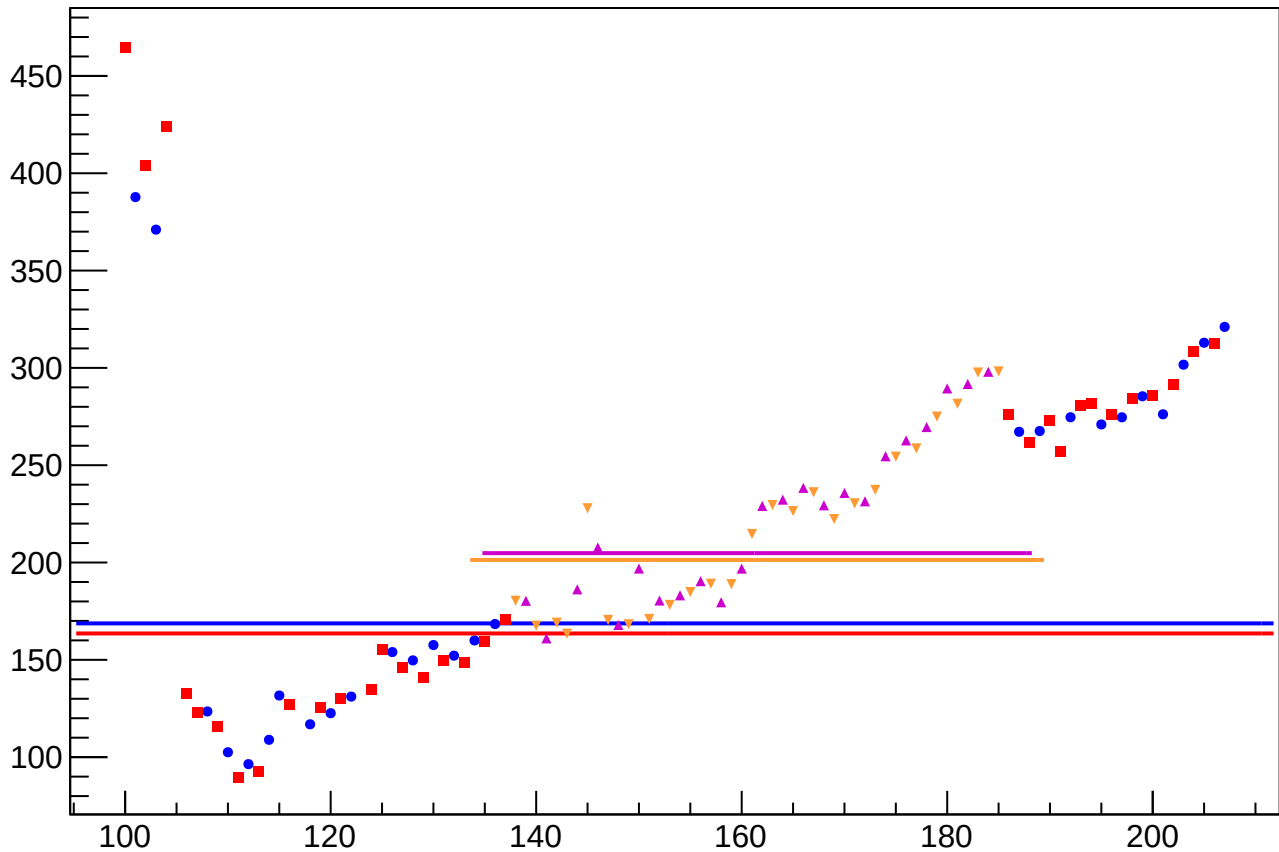
# yield\_bpm2i01WS\_mean vs Slug



Right In: 155342.729 $\pm$ 0.048  $\chi^2$ /NDF: 35051560005.2/25  
 Left Out: 167385.483 $\pm$ 0.047  $\chi^2$ /NDF: 59602607546.2/24  
 Right Out: 155426.313 $\pm$ 0.045  $\chi^2$ /NDF: 41100535494.8/30  
 Left In: 167234.214 $\pm$ 0.049  $\chi^2$ /NDF: 55099214555.0/22

+ sign 161555.690 $\pm$ 0.034  $\chi^2$ /NDF: 126801223074  
 All: 161191.443 $\pm$ 0.024  $\chi^2$ /NDF: 254858336  
 - sign 160837.607 $\pm$ 0.033  $\chi^2$ /NDF: 127824968565

# yield\_bpm2i01WS\_rms vs Slug



Right In: 168.725 $\pm$ 0.034  $\chi^2$ /NDF: 4766863.3/25

Left Out: 201.329 $\pm$ 0.033  $\chi^2$ /NDF:1230655.6/24

Right Out: 163.554 $\pm$ 0.032  $\chi^2$ /NDF: 5761039.2/30

Left In: 204.826 $\pm$ 0.035  $\chi^2$ /NDF:1053130.7/22

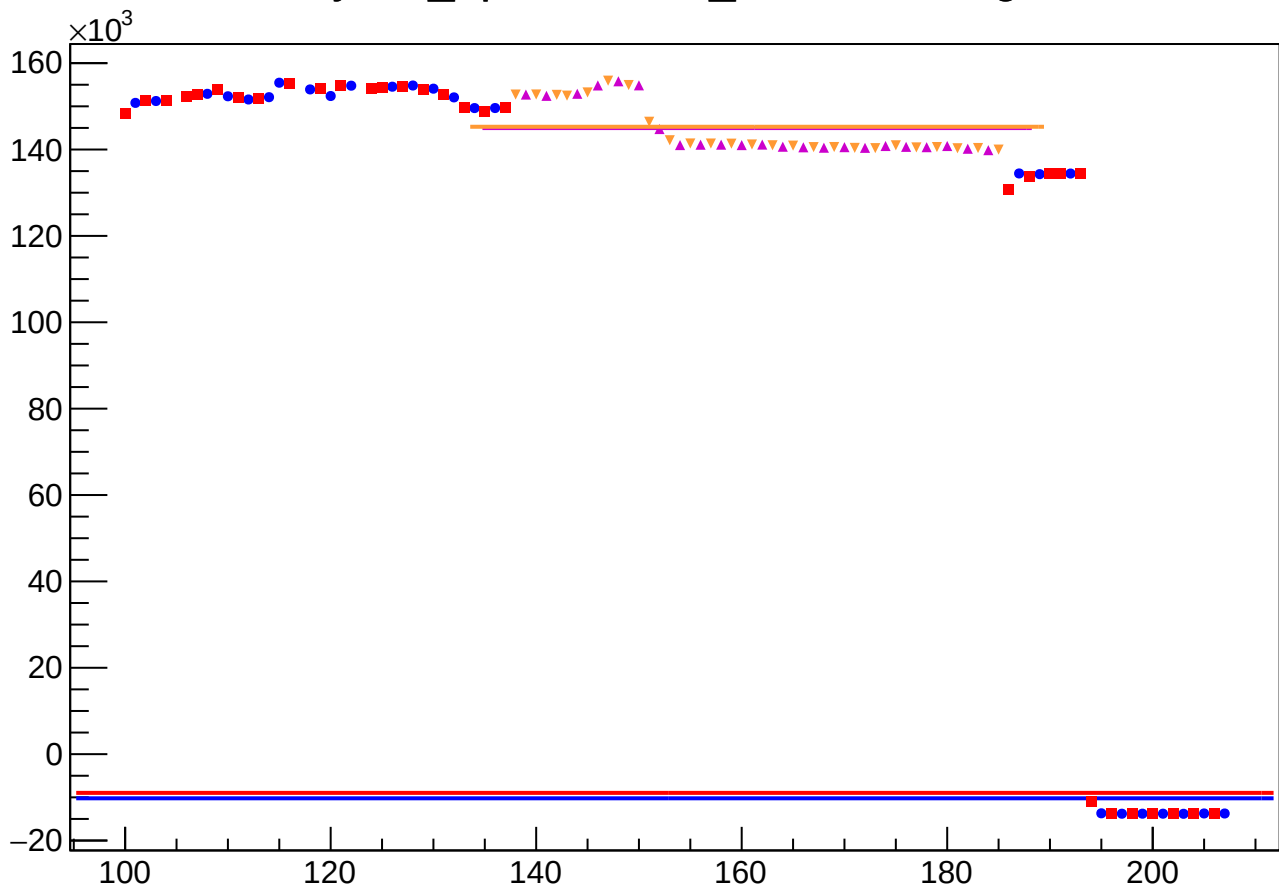
+ sign 185.546 $\pm$ 0.024  $\chi^2$ /NDF: 6468760.8/50

All: 183.984 $\pm$ 0.017  $\chi^2$ /NDF: 14064177.0/10

- sign 182.468 $\pm$ 0.023  $\chi^2$ /NDF: 7586888.6/53



# yield\_bpm0i07WS\_mean vs Slug



Right In:  $-10224.621 \pm 0.010$

$\chi^2/\text{NDF}$ : 5854163625634.0/25

Left Out:  $145269.857 \pm 0.049$

$\chi^2/\text{NDF}$ : 13706269279.5/24

Right Out:  $-8965.225 \pm 0.010$

$\chi^2/\text{NDF}$ : 7105444131591.2/30

Left In:  $144966.398 \pm 0.051$

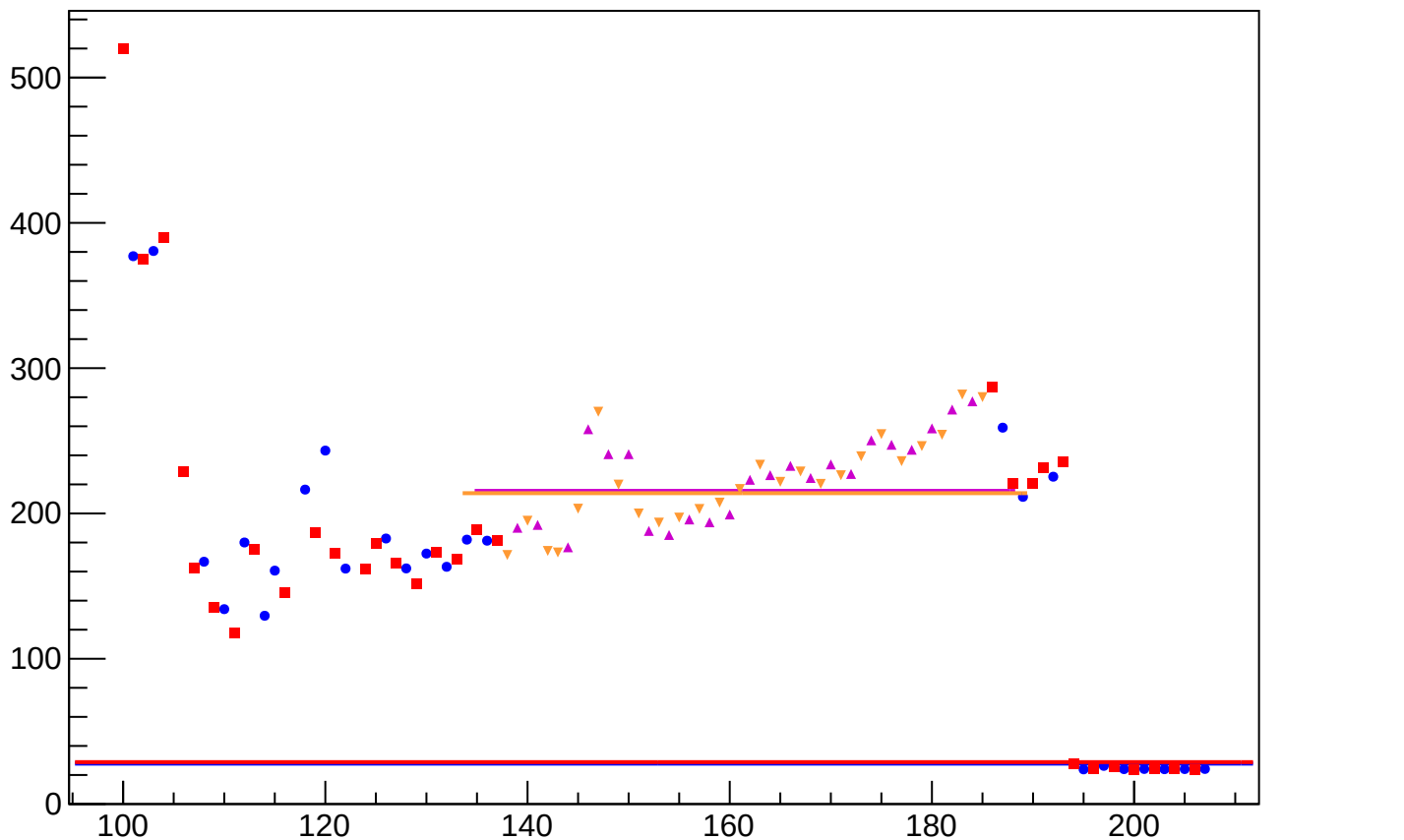
$\chi^2/\text{NDF}$ : 13154547043.3/22

+ sign  $-4287.313 \pm 0.010$   $\chi^2/\text{NDF}$ : 1540213593993

All:  $-3737.406 \pm 0.007$   $\chi^2/\text{NDF}$ : 3122359072

- sign  $-3152.862 \pm 0.010$   $\chi^2/\text{NDF}$ : 15814756464152

# yield\_bpm0i07WS\_rms vs Slug



Right In: 27.836+/-0.007  $\chi^2/\text{NDF}$ : 12632710.0/25

Left Out: 213.951+/-0.035  $\chi^2/\text{NDF}$ : 650607.8/24

Right Out: 28.861+/-0.007  $\chi^2/\text{NDF}$ : 14370701.6/30

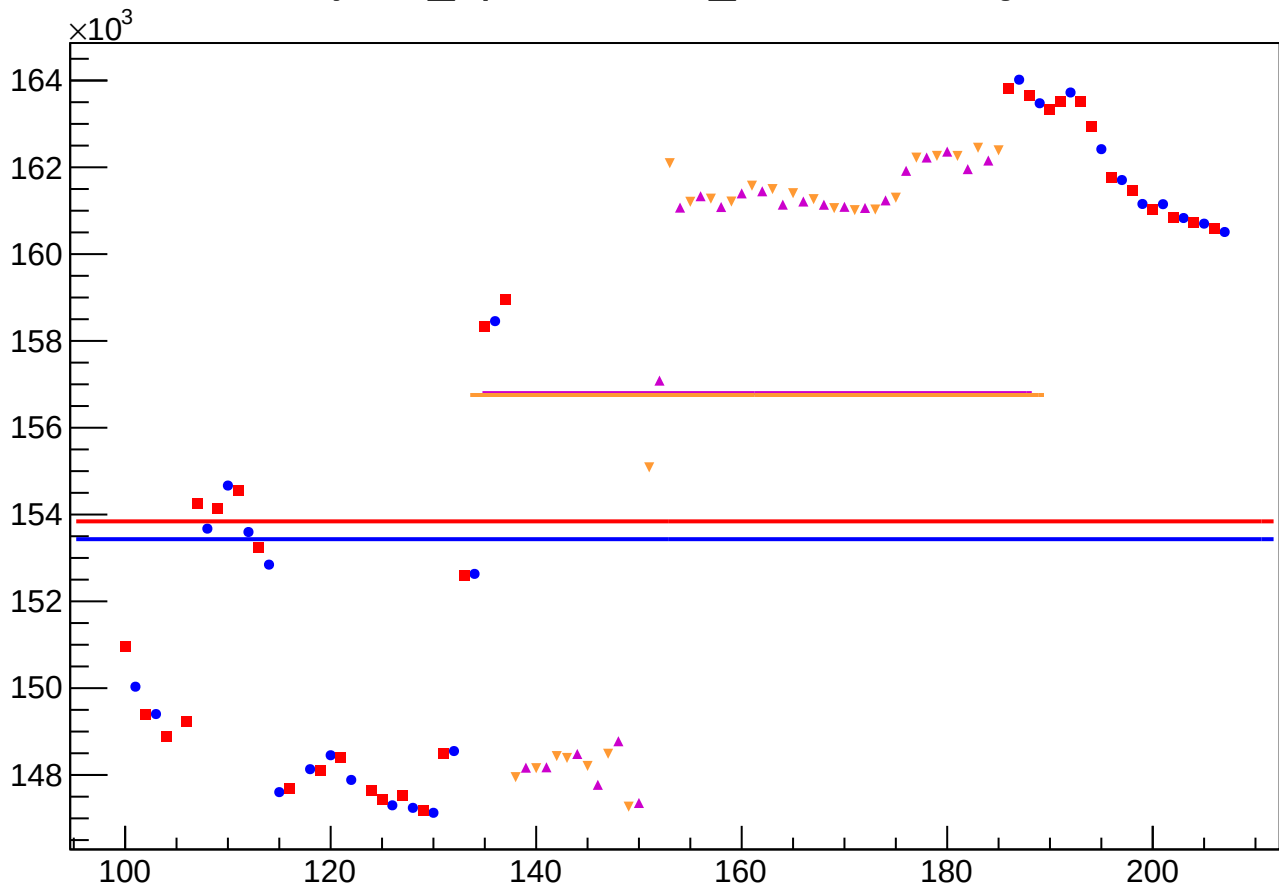
Left In: 215.539+/-0.036  $\chi^2/\text{NDF}$ : 600575.7/22

+ sign 34.943+/-0.007  $\chi^2/\text{NDF}$ : 40601399.9/50

All: 35.412+/-0.005  $\chi^2/\text{NDF}$ : 81161523.4/104

- sign 35.910+/-0.007  $\chi^2/\text{NDF}$ : 40550382.3/53

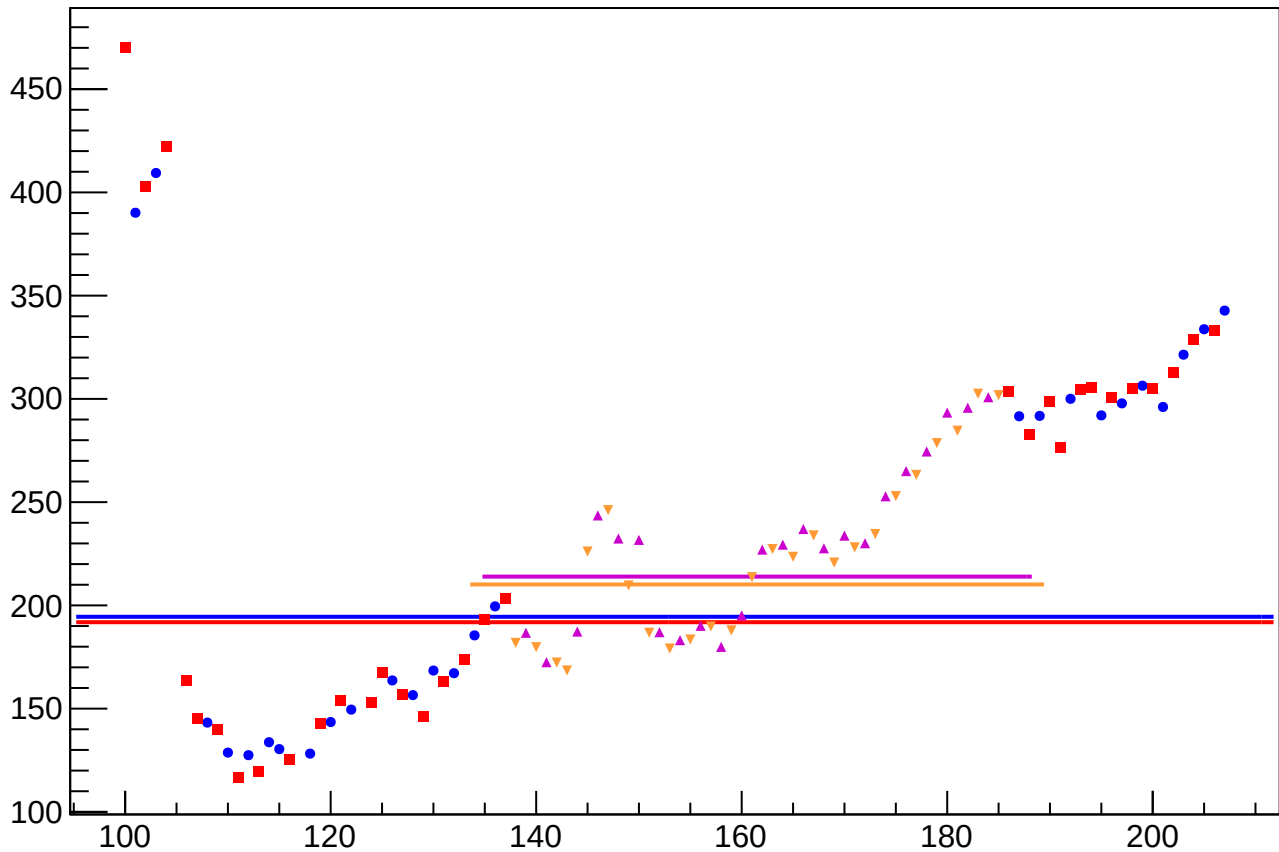
# yield\_bpm0i01WS\_mean vs Slug



Right In:  $153432.356 \pm 0.055$   $\chi^2/\text{NDF}: 10966045797.4/25$   
 Left Out:  $156754.233 \pm 0.049$   $\chi^2/\text{NDF}: 16380807583.4/24$   
 Right Out:  $153842.887 \pm 0.052$   $\chi^2/\text{NDF}: 12111729080.1/30$   
 Left In:  $156798.005 \pm 0.051$   $\chi^2/\text{NDF}: 14344098884.4/22$

+ sign  $155288.047 \pm 0.036$   $\chi^2/\text{NDF}: 29405587028.5/24$   
 All:  $155317.094 \pm 0.026$   $\chi^2/\text{NDF}: 575154019.5/24$   
 - sign  $155346.118 \pm 0.036$   $\chi^2/\text{NDF}: 28108538587.5/24$

# yield\_bpm0i01WS\_rms vs Slug



Right In: 194.489 $\pm$ 0.039  $\chi^2$ /NDF: 3989967.2/25

Left Out: 210.142 $\pm$ 0.034  $\chi^2$ /NDF: 997802.7/24

Right Out: 191.850 $\pm$ 0.037  $\chi^2$ /NDF: 4618790.1/30

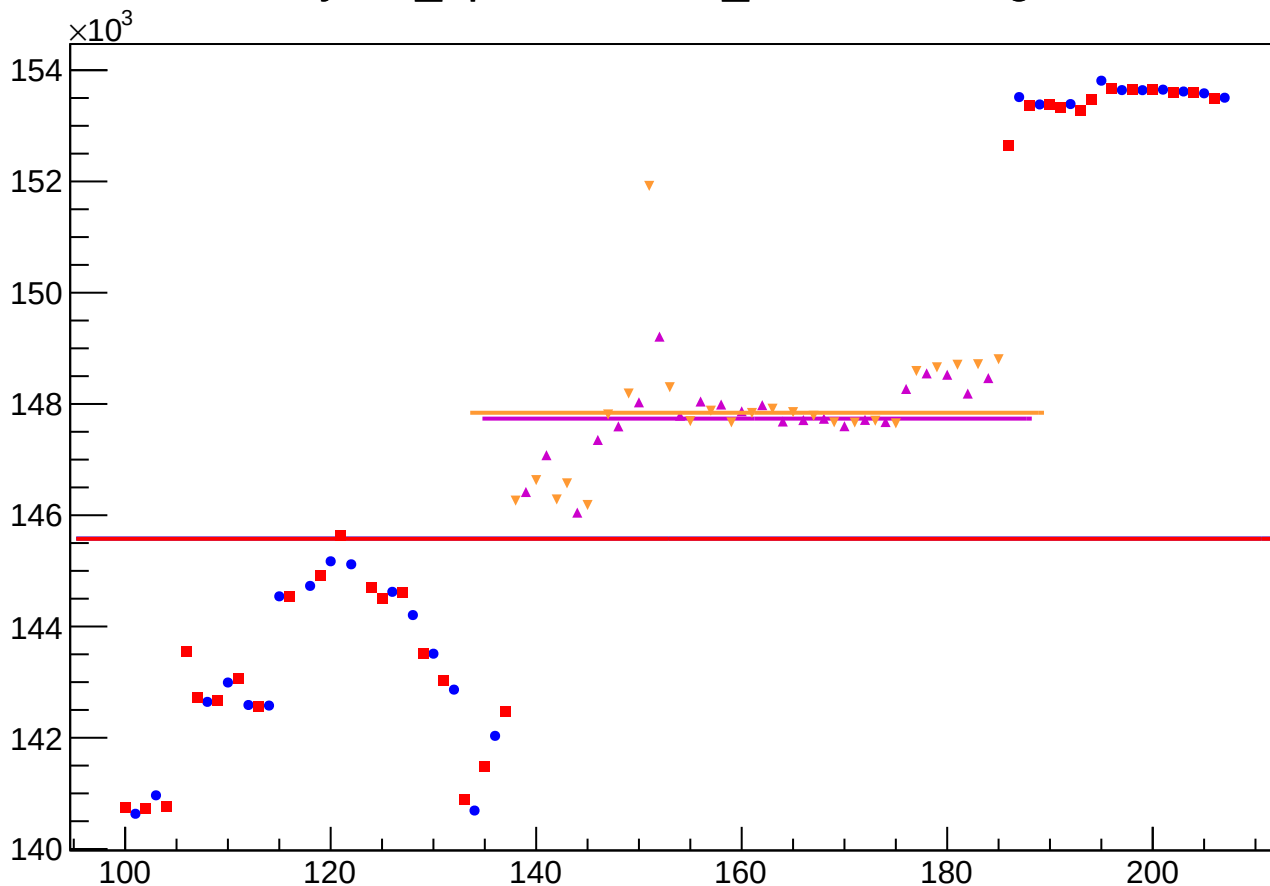
Left In: 213.945 $\pm$ 0.036  $\chi^2$ /NDF: 914465.3/22

+ sign 203.233 $\pm$ 0.026  $\chi^2$ /NDF: 5079198.0/50

All: 203.161 $\pm$ 0.018  $\chi^2$ /NDF: 10797260.1/10

- sign 203.089 $\pm$ 0.026  $\chi^2$ /NDF: 5718046.5/53

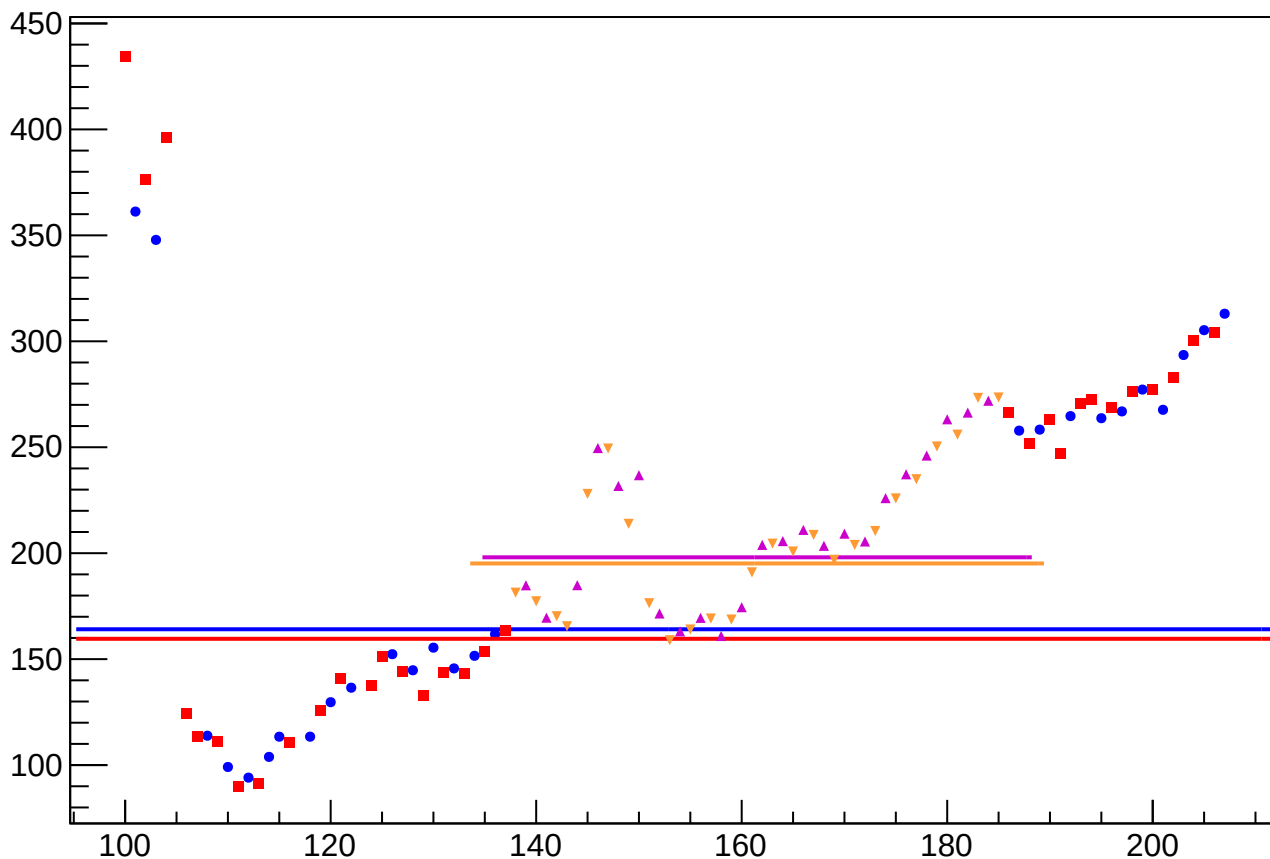
# yield\_bpm0i01aWS\_mean vs Slug



Right In:  $145581.114 \pm 0.047$   $\chi^2/\text{NDF}: 8786782765.5/25$   
 Left Out:  $147842.157 \pm 0.045$   $\chi^2/\text{NDF}: 713066054.2/24$   
 Right Out:  $145576.354 \pm 0.044$   $\chi^2/\text{NDF}: 10061083179.4/30$   
 Left In:  $147736.722 \pm 0.047$   $\chi^2/\text{NDF}: 227077133.0/22$

+ sign  $146755.307 \pm 0.033$   $\chi^2/\text{NDF}: 10706369220.0$   
 All:  $146664.143 \pm 0.023$   $\chi^2/\text{NDF}: 221369730.0$   
 - sign  $146575.409 \pm 0.032$   $\chi^2/\text{NDF}: 11415098857.8$

# yield\_bpm0i01aWS\_rms vs Slug



Right In: 164.097 $\pm$ 0.033  $\chi^2$ /NDF: 4715518.9/25

Left Out: 195.145 $\pm$ 0.032  $\chi^2$ /NDF:903994.2/24

Right Out: 159.598 $\pm$ 0.031  $\chi^2$ /NDF: 5621818.0/30

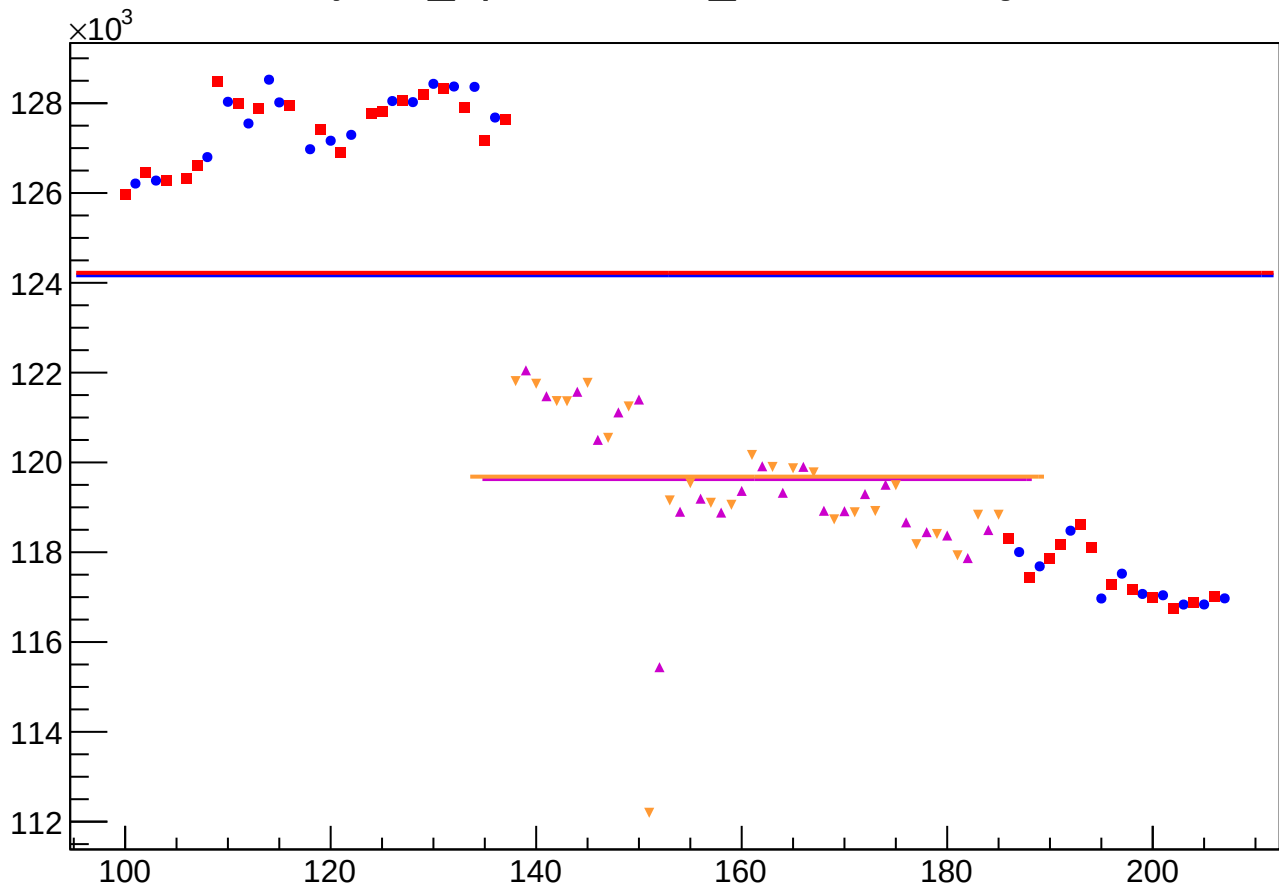
Left In: 198.057 $\pm$ 0.033  $\chi^2$ /NDF:900359.1/22

+ sign 180.221 $\pm$ 0.023  $\chi^2$ /NDF: 6074520.1/50

All: 178.783 $\pm$ 0.016  $\chi^2$ /NDF: 13318704.2/10

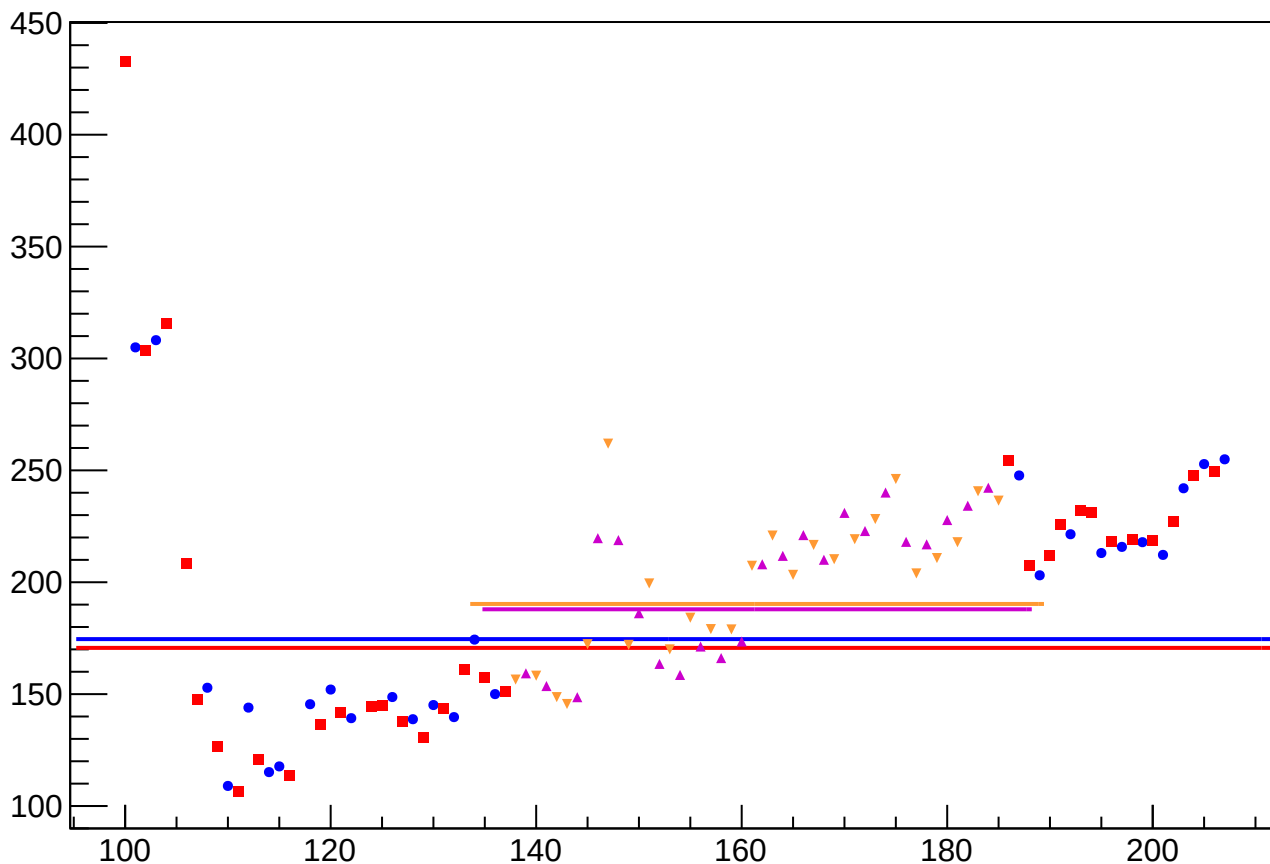
- sign 177.383 $\pm$ 0.023  $\chi^2$ /NDF: 7236465.7/53

# yield\_bpm0l01WS\_mean vs Slug



Right In: 124167.638 $\pm$ 0.047  $\chi^2$ /NDF: 10924864753.5/25  
 Left Out: 119683.519 $\pm$ 0.044  $\chi^2$ /NDF: 1985993997.6/24  
 Right Out: 124222.605 $\pm$ 0.045  $\chi^2$ /NDF: 12167635372.5/30  
 Left In: 119629.600 $\pm$ 0.045  $\chi^2$ /NDF: 1317214801.7/22

# yield\_bpm0l01WS\_rms vs Slug



Right In: 174.588 $\pm$ 0.034  $\chi^2$ /NDF: 2077402.8/25

Left Out: 190.298 $\pm$ 0.031  $\chi^2$ /NDF: 924542.3/24

Right Out: 170.666 $\pm$ 0.032  $\chi^2$ /NDF: 2715798.2/30

Left In: 187.909 $\pm$ 0.032  $\chi^2$ /NDF: 926037.0/22

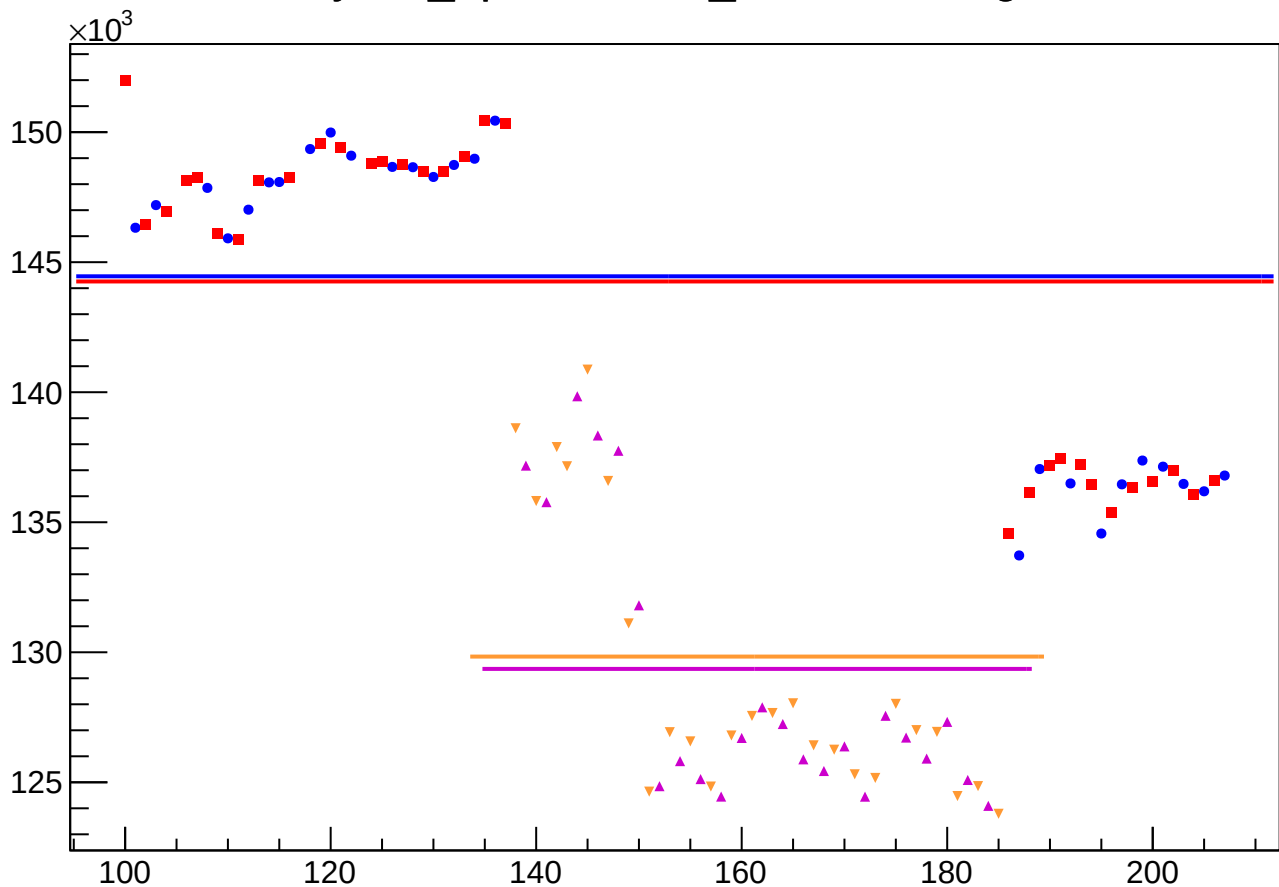
+ sign 182.987 $\pm$ 0.023  $\chi^2$ /NDF: 3119165.1/50

All: 181.058 $\pm$ 0.016  $\chi^2$ /NDF: 6923147.7/104

- sign 179.210 $\pm$ 0.022  $\chi^2$ /NDF: 3790064.9/53



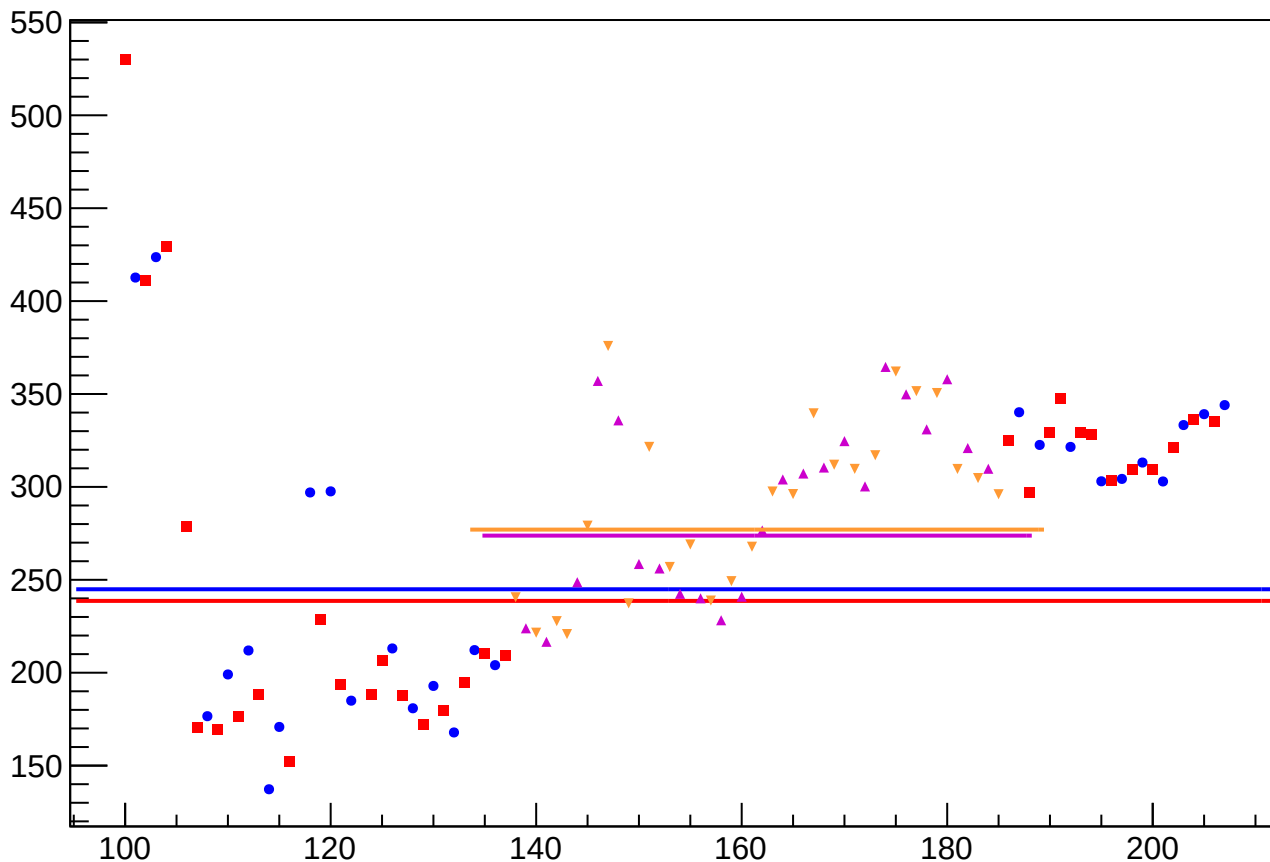
# yield\_bpm0l02WS\_mean vs Slug



Right In: 144457.058 $\pm$ 0.067  $\chi^2$ /NDF: 7619223002.8/25  
 Left Out: 129834.437 $\pm$ 0.064  $\chi^2$ /NDF: 6793515279.7/24  
 Right Out: 144258.957 $\pm$ 0.062  $\chi^2$ /NDF: 8494777029.7/30  
 Left In: 129360.487 $\pm$ 0.065  $\chi^2$ /NDF: 6626094577.9/22

+ sign 136857.574 $\pm$ 0.046  $\chi^2$ /NDF: 39330227958.  
 All: 137013.366 $\pm$ 0.032  $\chi^2$ /NDF: 816846692  
 - sign 137161.357 $\pm$ 0.045  $\chi^2$ /NDF: 42332346106.9

# yield\_bpm0l02WS\_rms vs Slug



Right In: 244.911+/-0.047  $\chi^2/\text{NDF}$ : 2272318.4/25

Left Out: 277.021+/-0.045  $\chi^2/\text{NDF}$ : 946602.2/24

Right Out: 238.650+/-0.044  $\chi^2/\text{NDF}$ : 2640780.9/30

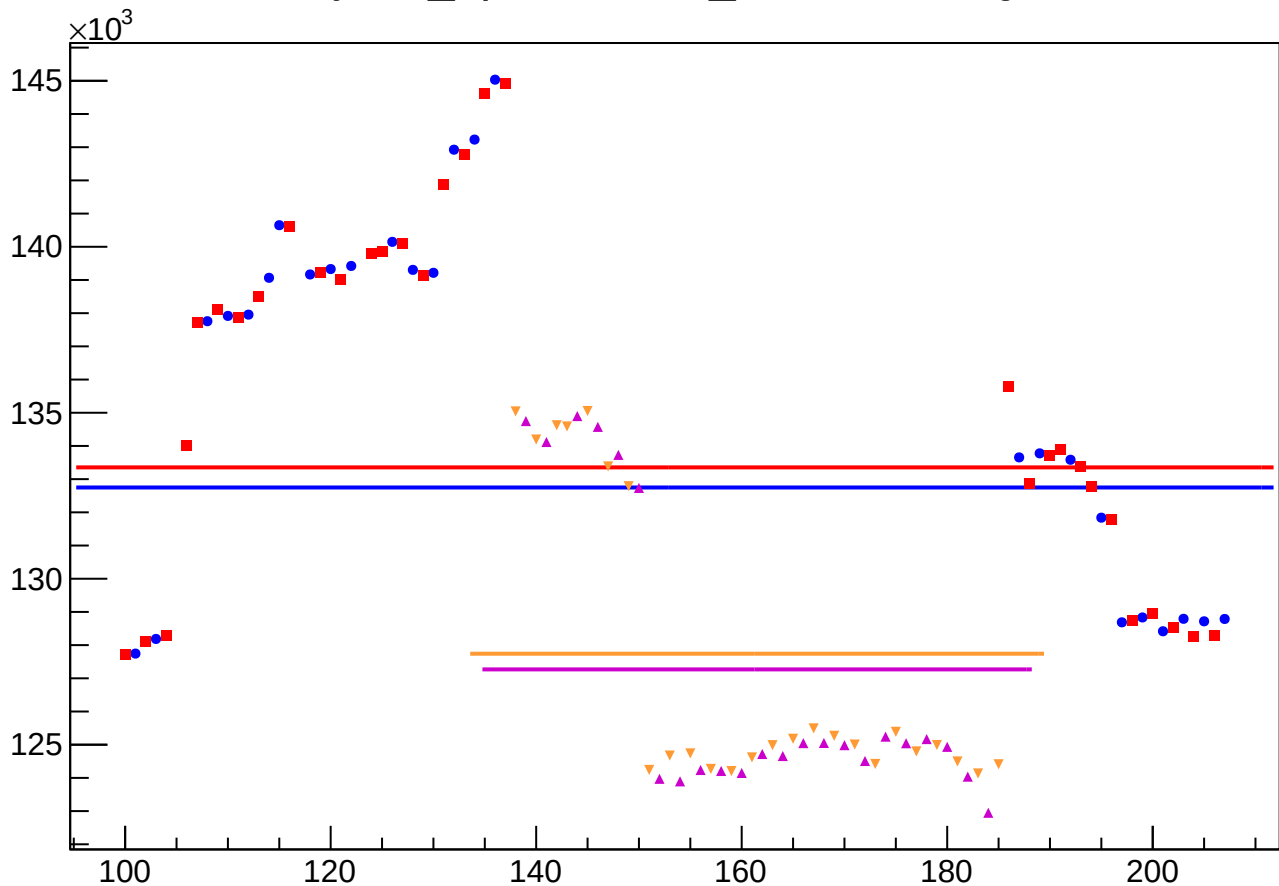
Left In: 273.784+/-0.046  $\chi^2/\text{NDF}$ : 1003910.6/22

+ sign 261.599+/-0.033  $\chi^2/\text{NDF}$ : 3459232.3/50

All: 258.414+/-0.023  $\chi^2/\text{NDF}$ : 7425057.9/104

- sign 255.388+/-0.032  $\chi^2/\text{NDF}$ : 3947356.6/53

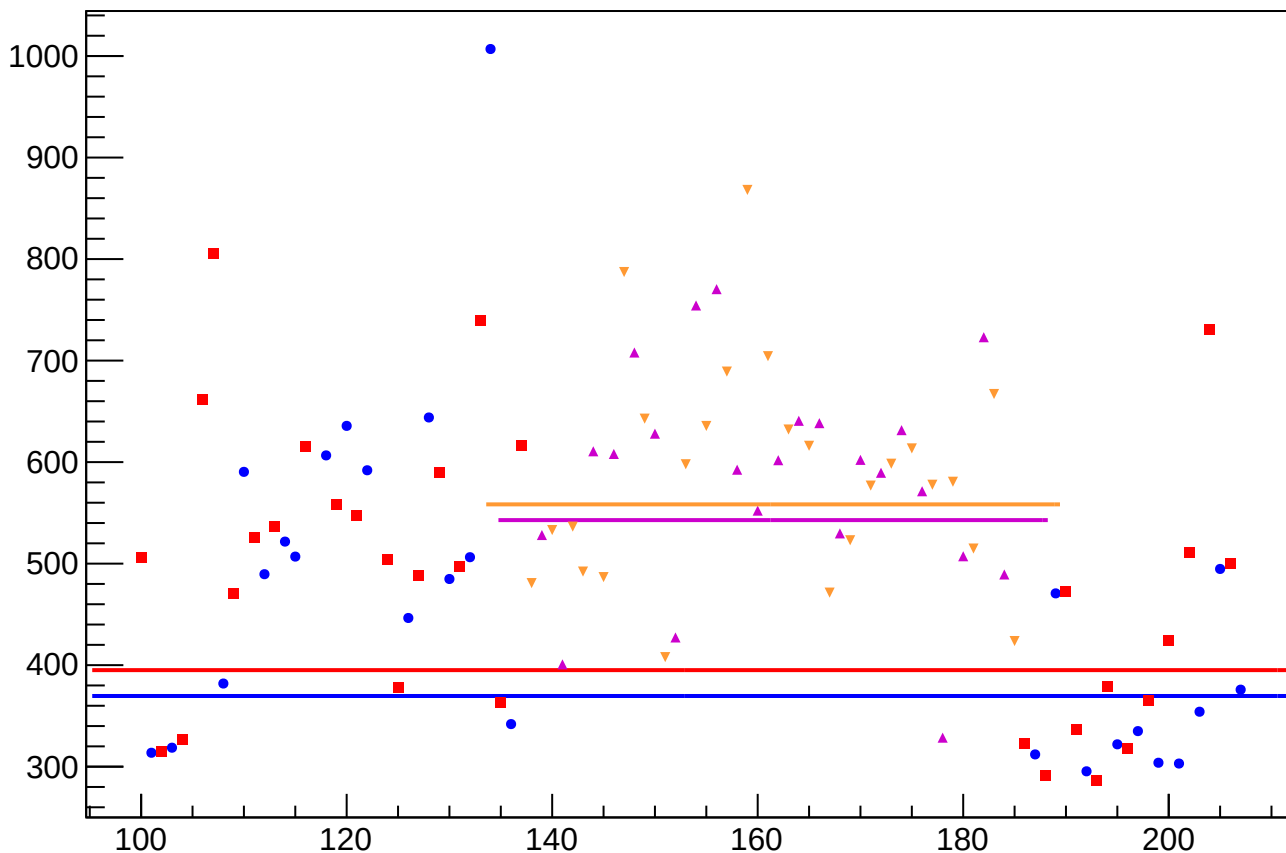
# yield\_bpm0l03WS\_mean vs Slug



Right In:  $132748.760 \pm 0.108$   $\chi^2/\text{NDF}: 2597777013.0/25$   
 Left Out:  $127741.156 \pm 0.136$   $\chi^2/\text{NDF}: 1092529845.6/24$   
 Right Out:  $133354.290 \pm 0.112$   $\chi^2/\text{NDF}: 1723758911.2/30$   
 Left In:  $127268.542 \pm 0.139$   $\chi^2/\text{NDF}: 971404491.0/22$

+ sign  $130800.890 \pm 0.085$   $\chi^2/\text{NDF}: 4523895290.5$   
 - sign  $130940.181 \pm 0.087$   $\chi^2/\text{NDF}: 3858345114.4$   
 All:  $130868.317 \pm 0.061$   $\chi^2/\text{NDF}: 838355401$

# yield\_bpm0l03WS\_rms vs Slug



Right In:  $369.622 \pm 0.076$   $\chi^2/\text{NDF}: 1573940.5/25$

Left Out:  $558.373 \pm 0.096$   $\chi^2/\text{NDF}: 968289.3/24$

Right Out:  $395.093 \pm 0.079$   $\chi^2/\text{NDF}: 1957282.9/30$

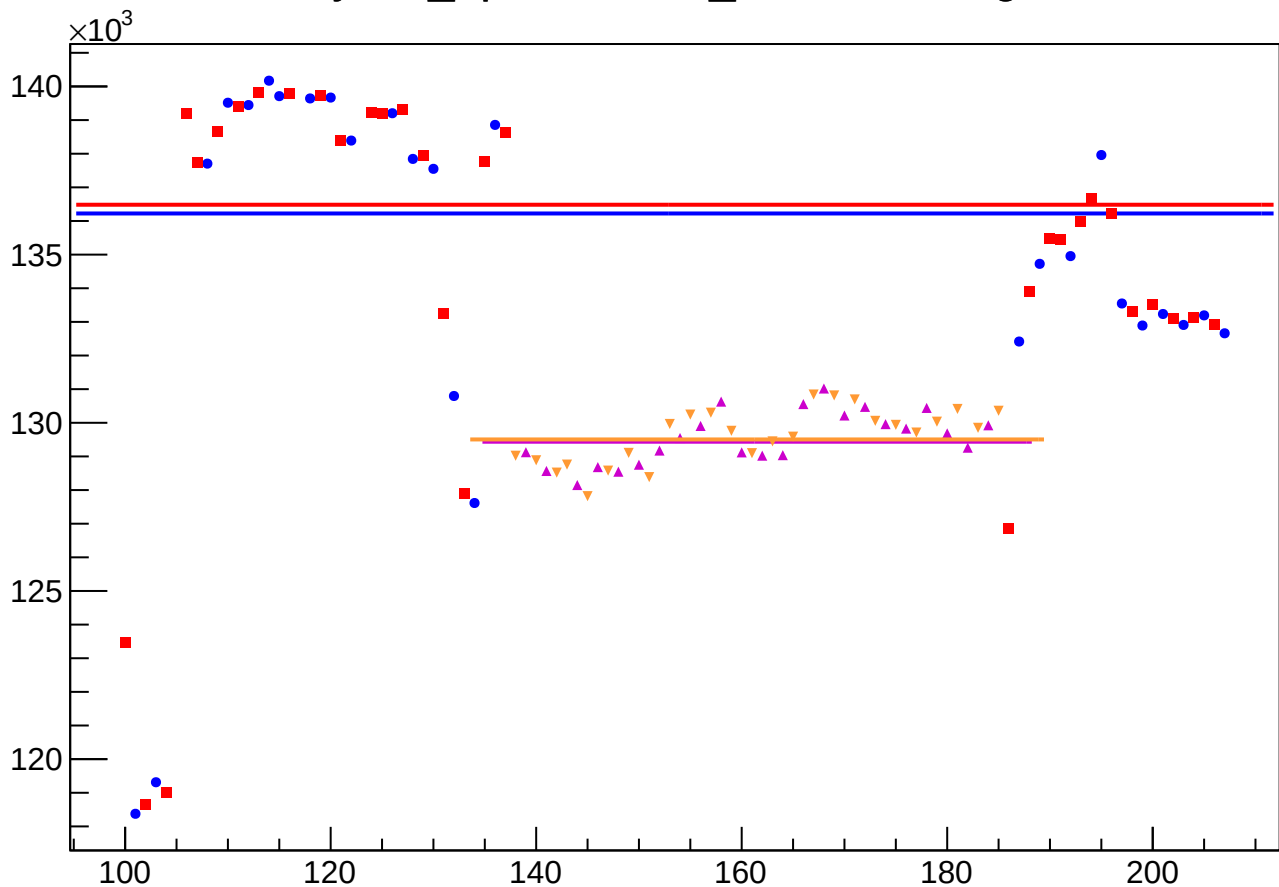
Left In:  $542.872 \pm 0.098$   $\chi^2/\text{NDF}: 1416690.9/22$

+ sign  $443.043 \pm 0.060$   $\chi^2/\text{NDF}: 4910879.6/50$

All:  $448.208 \pm 0.043$   $\chi^2/\text{NDF}: 9672027.7/104$

- sign  $453.714 \pm 0.062$   $\chi^2/\text{NDF}: 4745727.4/53$

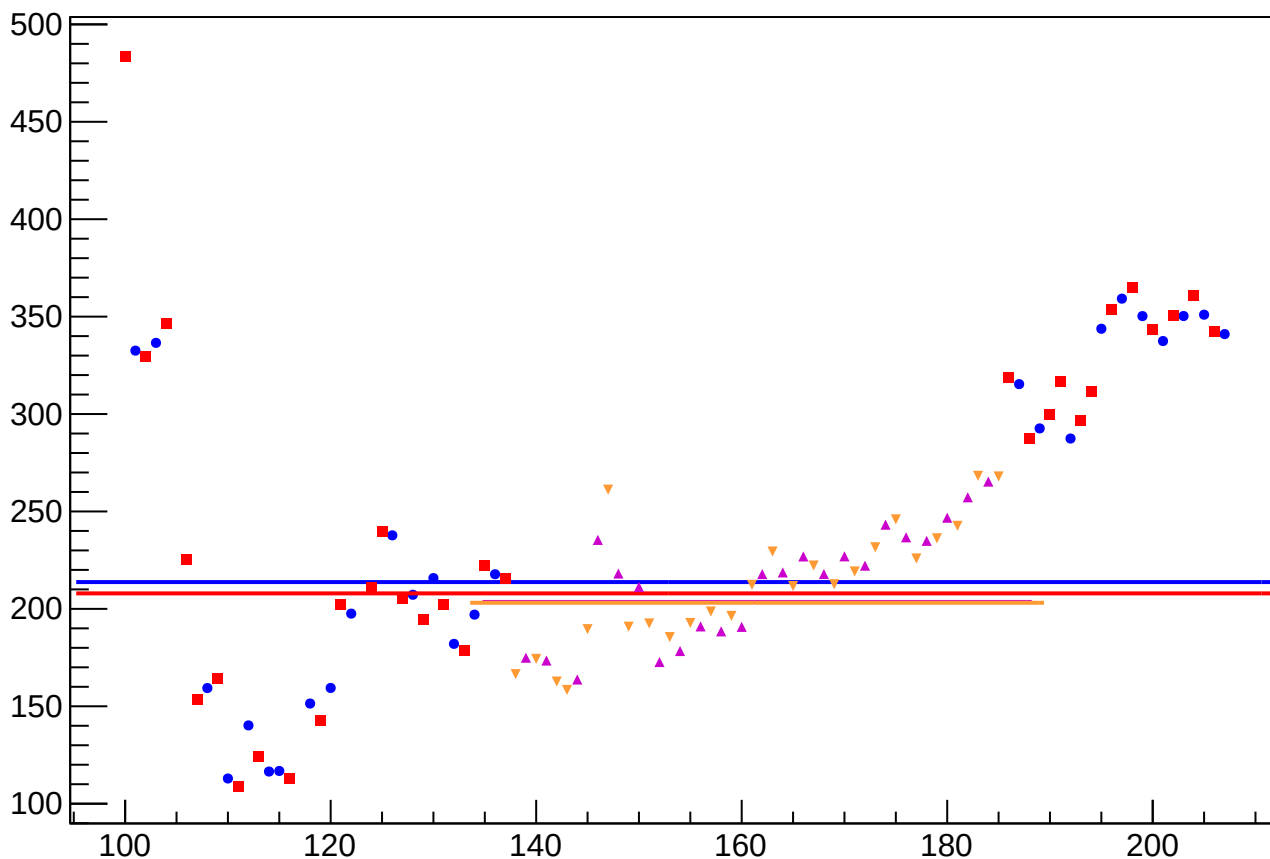
# yield\_bpm0l04WS\_mean vs Slug



Right In: 136223.280 $\pm$ 0.060  $\chi^2$ /NDF: 6430074262.6/25  
 Left Out: 129504.922 $\pm$ 0.047  $\chi^2$ /NDF: 299464438.2/24  
 Right Out: 136483.138 $\pm$ 0.056  $\chi^2$ /NDF: 6742370689.4/30  
 Left In: 129437.551 $\pm$ 0.048  $\chi^2$ /NDF: 269025464.3/22

+ sign 132044.072 $\pm$ 0.037  $\chi^2$ /NDF: 14452817110.  
 All: 132236.723 $\pm$ 0.026  $\chi^2$ /NDF: 304947843  
 - sign 132426.099 $\pm$ 0.037  $\chi^2$ /NDF: 15988402162.5

# yield\_bpm0l04WS\_rms vs Slug



Right In:  $213.752 \pm 0.043$   $\chi^2/\text{NDF}$ : 3862028.3/25

Left Out:  $203.129 \pm 0.033$   $\chi^2/\text{NDF}$ : 758448.5/24

Right Out:  $207.952 \pm 0.040$   $\chi^2/\text{NDF}$ : 4721959.0/30

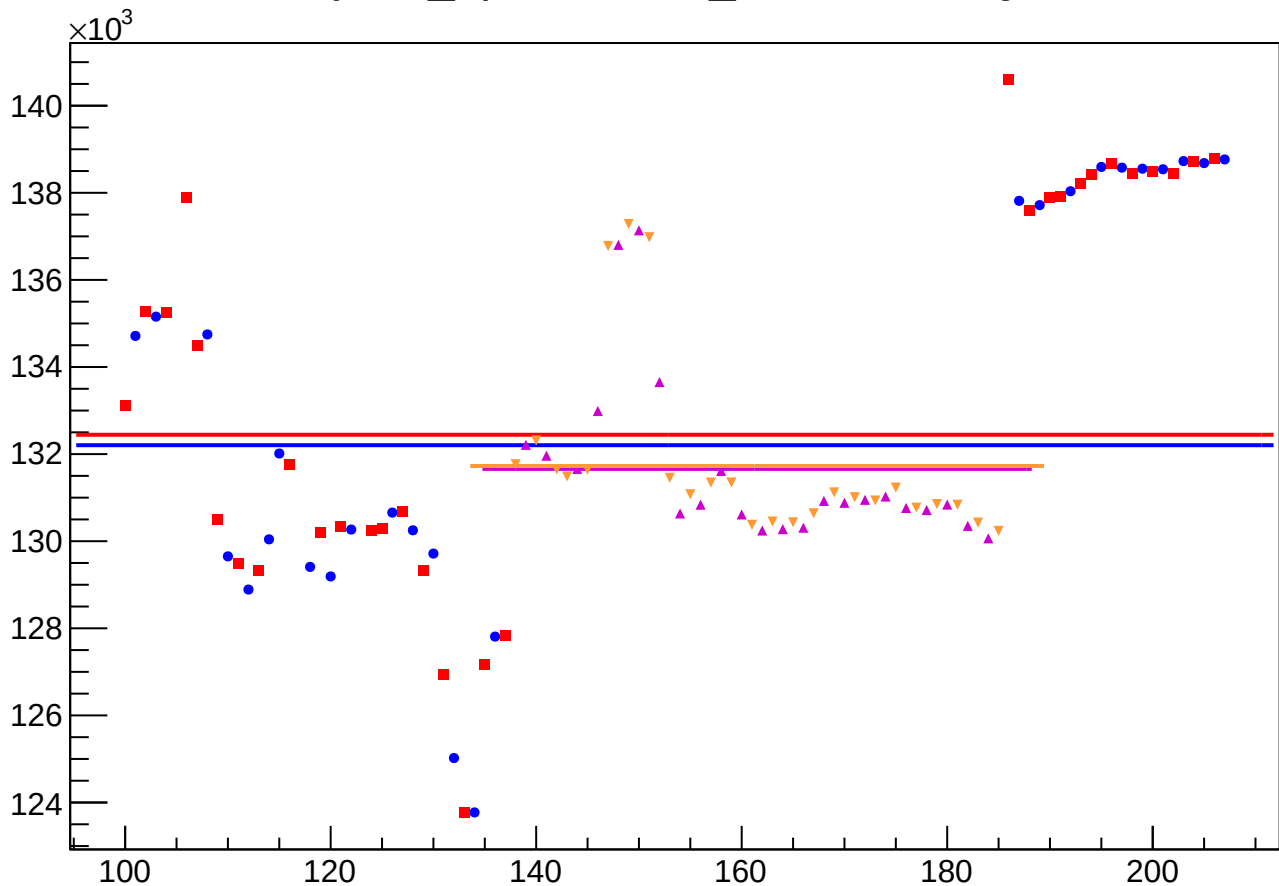
Left In:  $203.546 \pm 0.034$   $\chi^2/\text{NDF}$ : 666043.6/22

+ sign  $207.144 \pm 0.026$   $\chi^2/\text{NDF}$ : 4659093.2/50

All:  $206.272 \pm 0.018$   $\chi^2/\text{NDF}$ : 10056308.4/100

- sign  $205.415 \pm 0.026$   $\chi^2/\text{NDF}$ : 5395021.8/53

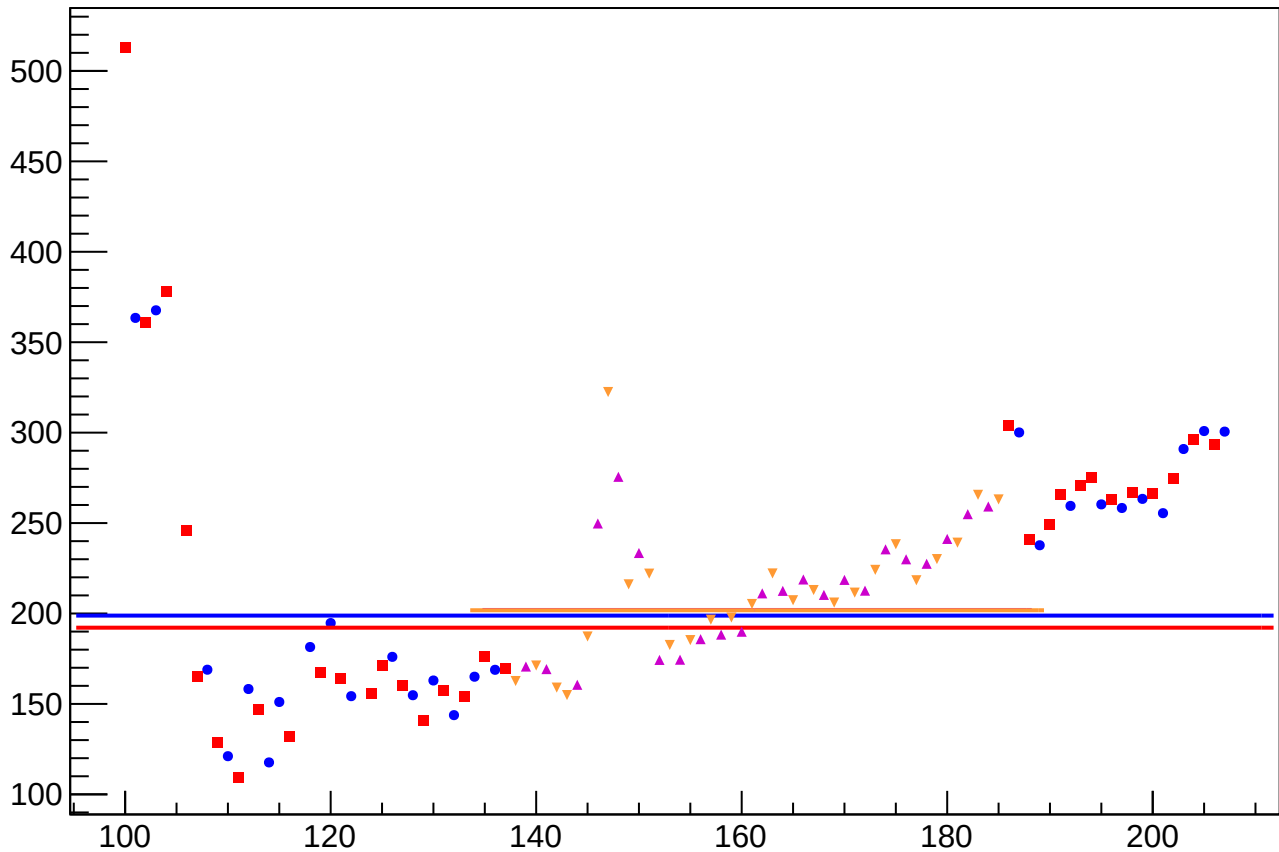
# yield\_bpm0l05WS\_mean vs Slug



Right In:  $132204.479 \pm 0.055$   $\chi^2/\text{NDF}: 7714862152.5/25$   
 Left Out:  $131727.086 \pm 0.047$   $\chi^2/\text{NDF}: 1425045697.6/24$   
 Right Out:  $132444.079 \pm 0.051$   $\chi^2/\text{NDF}: 8130889451.2/30$   
 Left In:  $131660.490 \pm 0.048$   $\chi^2/\text{NDF}: 1164380319.7/22$

+ sign  $131929.052 \pm 0.036$   $\chi^2/\text{NDF}: 9183843868.4$   
 All:  $131980.480 \pm 0.025$   $\chi^2/\text{NDF}: 186080667$   
 - sign  $132030.268 \pm 0.035$   $\chi^2/\text{NDF}: 9420111471.9/$

# yield\_bpm0l05WS\_rms vs Slug



Right In: 198.839 $\pm$ 0.039  $\chi^2$ /NDF: 2545106.3/25

Left Out: 201.798 $\pm$ 0.033  $\chi^2$ /NDF: 905352.1/24

Right Out: 192.157 $\pm$ 0.036  $\chi^2$ /NDF: 3401370.9/30

Left In: 201.947 $\pm$ 0.034  $\chi^2$ /NDF: 802700.2/22

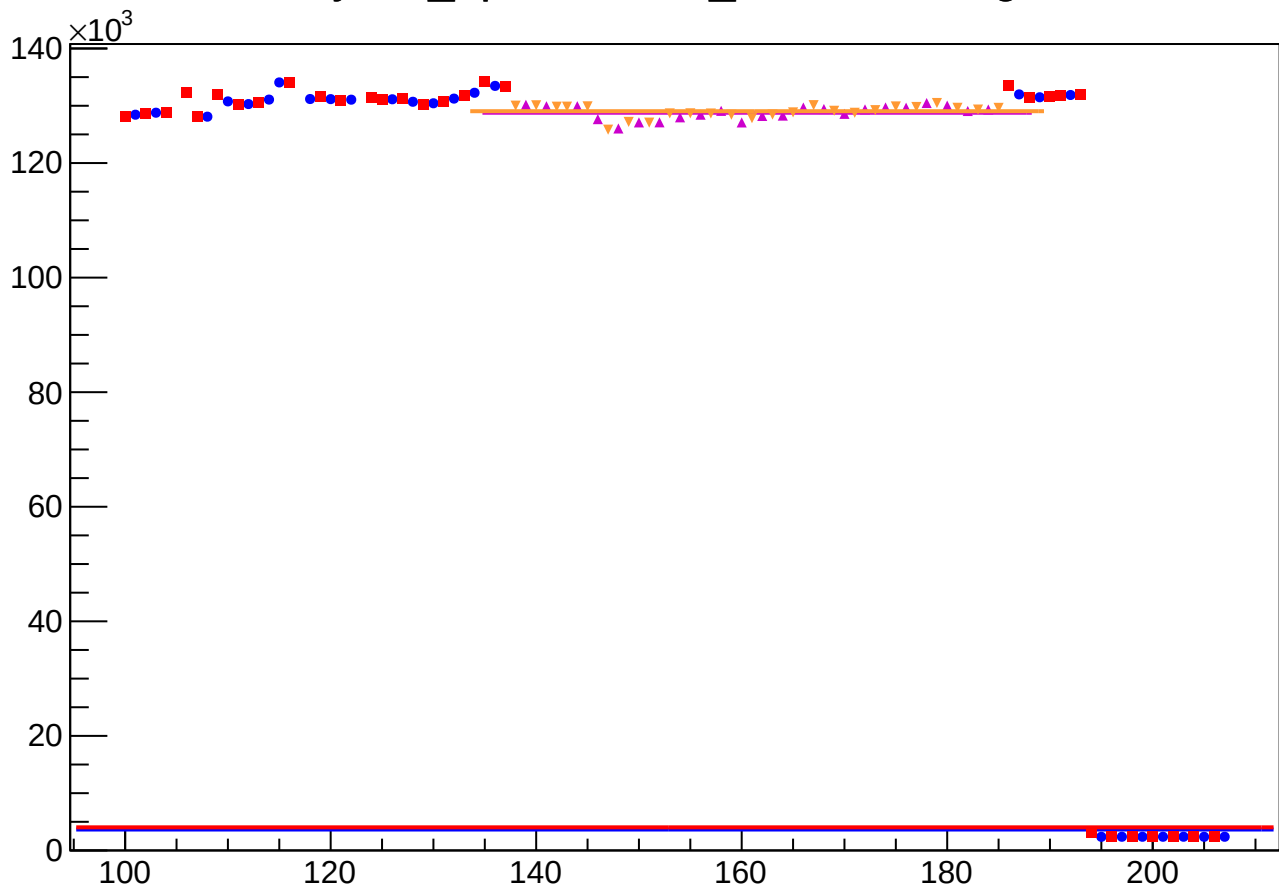
+ sign 200.546 $\pm$ 0.025  $\chi^2$ /NDF: 3453833.9/50

All: 198.911 $\pm$ 0.018  $\chi^2$ /NDF: 7705191.6/104

- sign 197.327 $\pm$ 0.025  $\chi^2$ /NDF: 4243041.0/53

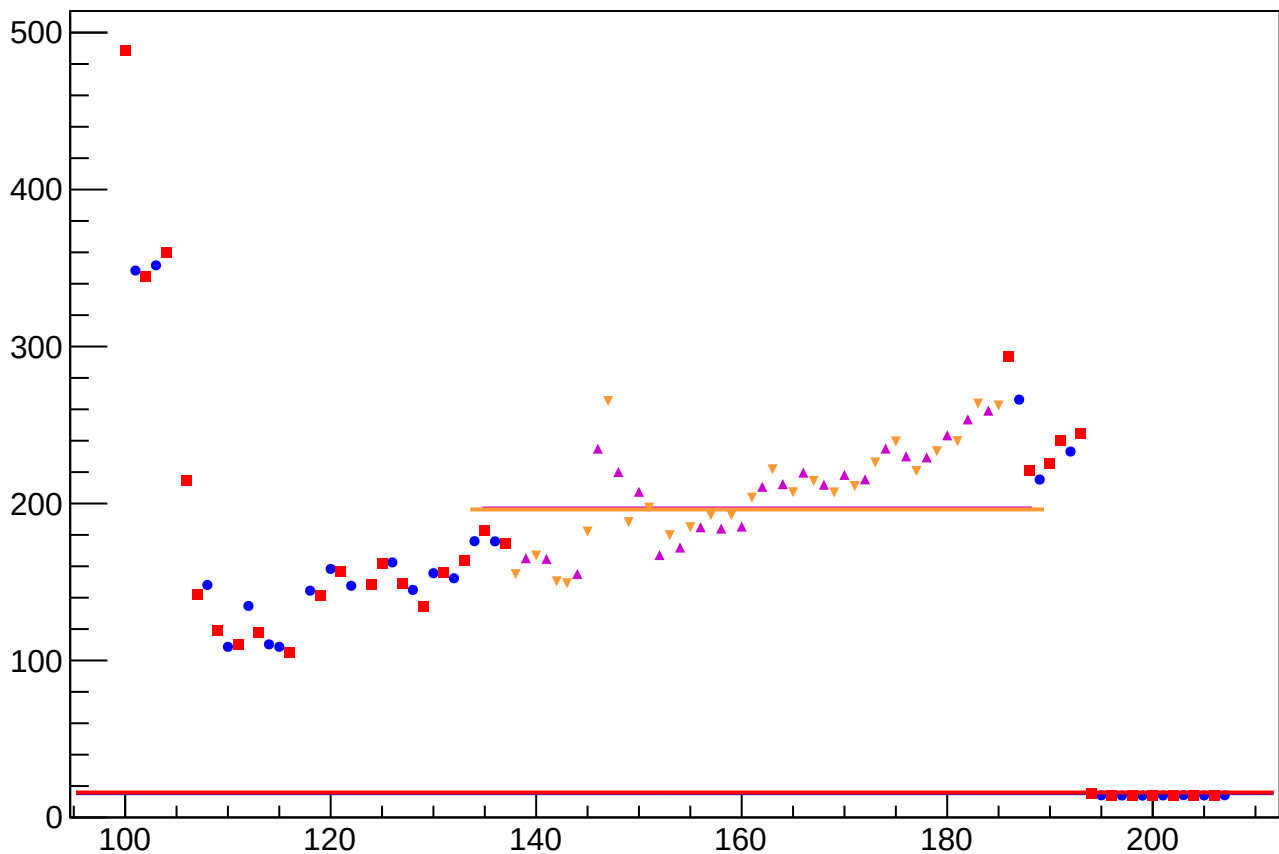


# yield\_bpm0l06WS\_mean vs Slug



Right In: 3654.995 $\pm$ 0.006  $\chi^2$ /NDF: 4985826944381.7/25  
 Left Out: 129050.458 $\pm$ 0.045  $\chi^2$ /NDF: 530879250.1/24  
 Right Out: 4035.367 $\pm$ 0.006  $\chi^2$ /NDF: 5891974370032.4/30  
 Left In: 128783.852 $\pm$ 0.047  $\chi^2$ /NDF: 655675405.6/22  
 + sign 5585.351 $\pm$ 0.006  $\chi^2$ /NDF: 12467519455616  
 All: 5770.012 $\pm$ 0.004  $\chi^2$ /NDF: 25328697717  
 - sign 5967.456 $\pm$ 0.006  $\chi^2$ /NDF: 12858963408201

# yield\_bpm0l06WS\_rms vs Slug



Right In: 15.498 $\pm$ 0.004  $\chi^2$ /NDF: 14405098.1/25

Left Out: 196.203 $\pm$ 0.032  $\chi^2$ /NDF: 922826.1/24

Right Out: 15.879 $\pm$ 0.004  $\chi^2$ /NDF: 16485613.3/30

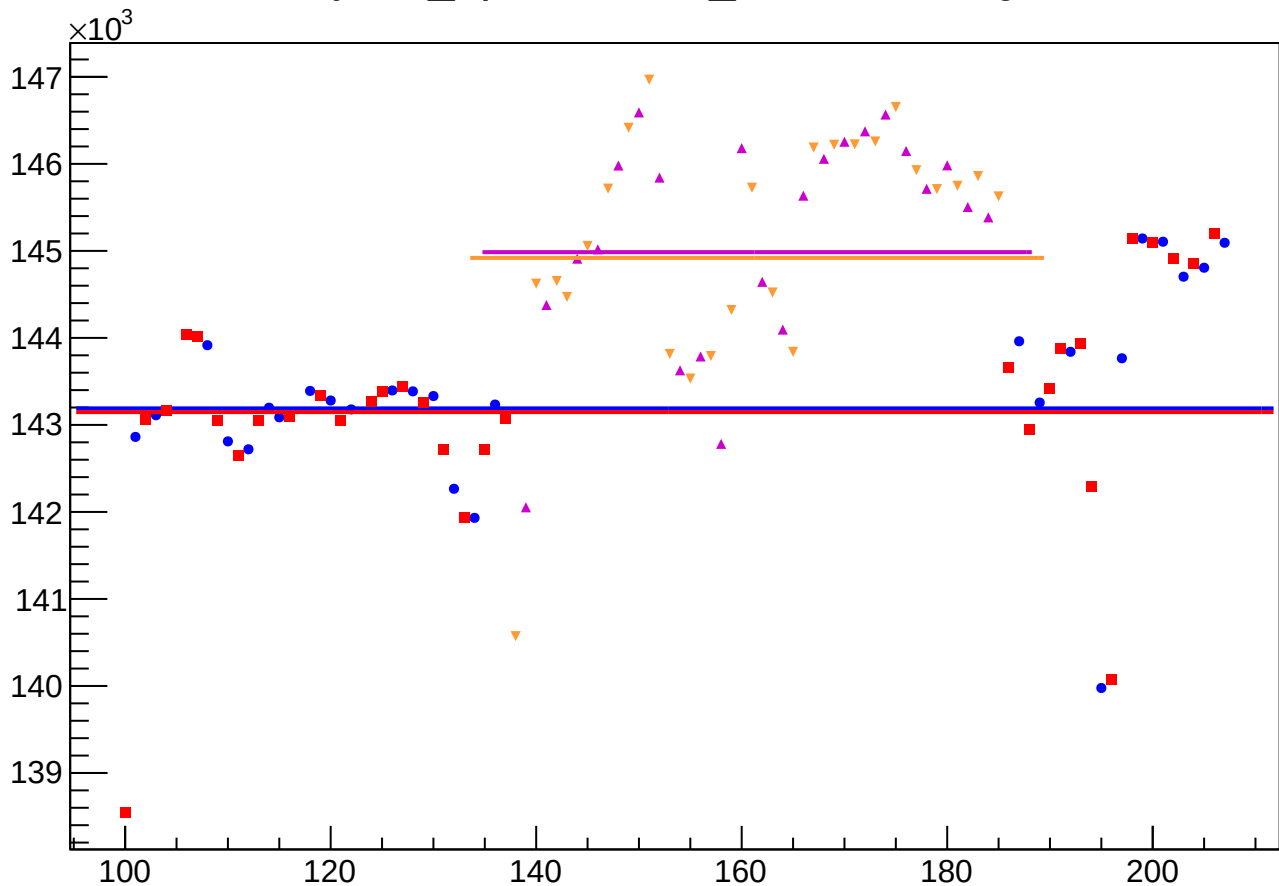
Left In: 196.840 $\pm$ 0.033  $\chi^2$ /NDF: 773052.6/22

+ sign 18.280 $\pm$ 0.004  $\chi^2$ /NDF: 46400235.4/50

All: 18.474 $\pm$ 0.003  $\chi^2$ /NDF: 92981761.0/104

- sign 18.682 $\pm$ 0.004  $\chi^2$ /NDF: 46576635.5/53

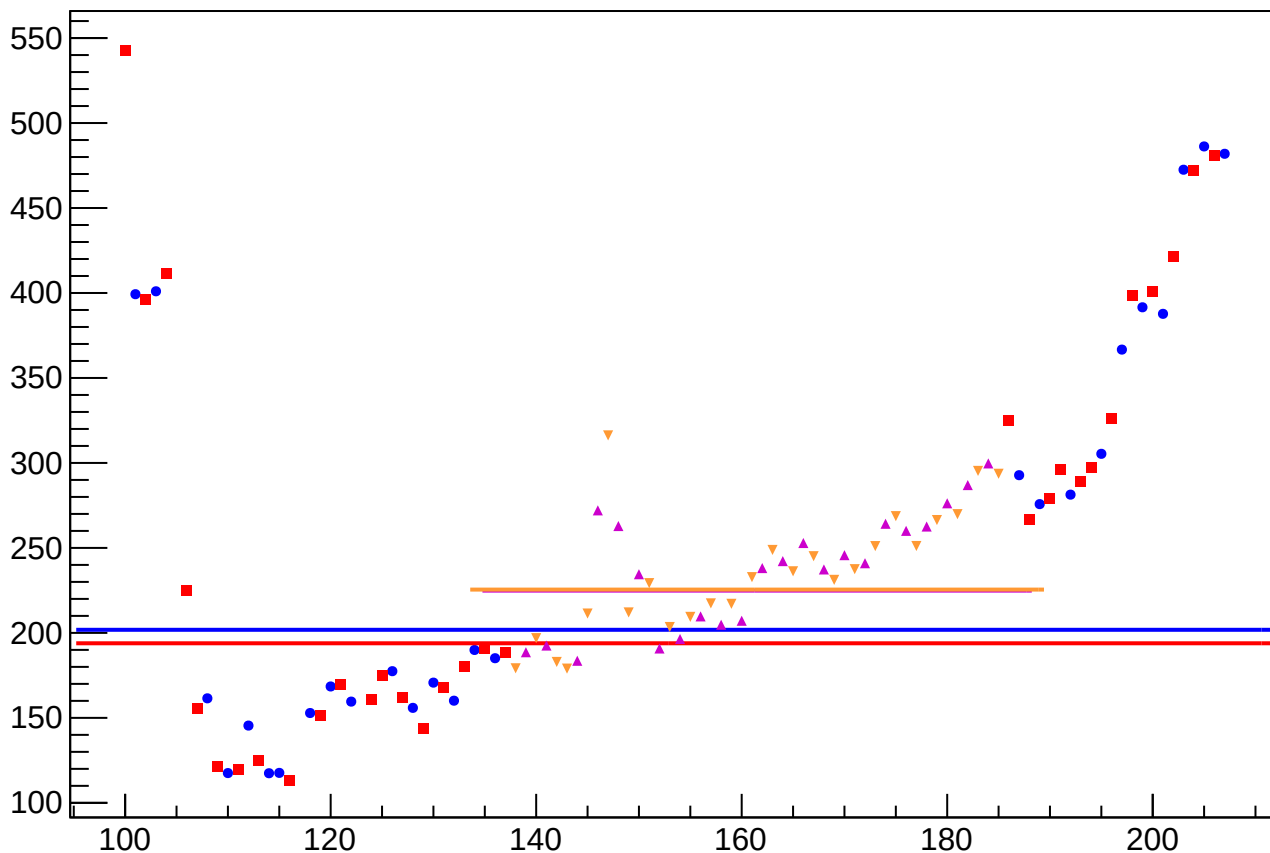
# yield\_bpm0l07WS\_mean vs Slug



Right In: 143190.064 $\pm$ 0.058  $\chi^2$ /NDF: 227110305.8/25  
 Left Out: 144919.479 $\pm$ 0.052  $\chi^2$ /NDF: 835478710.7/24  
 Right Out: 143147.487 $\pm$ 0.054  $\chi^2$ /NDF: 226856905.4/30  
 Left In: 144985.586 $\pm$ 0.054  $\chi^2$ /NDF: 618782558.7/22

+ sign 144147.972 $\pm$ 0.039  $\chi^2$ /NDF: 1551680867.4  
 All: 144107.409 $\pm$ 0.027  $\chi^2$ /NDF: 298656062  
 - sign 144068.789 $\pm$ 0.038  $\chi^2$ /NDF: 1432754118.5/

# yield\_bpm0l07WS\_rms vs Slug



Right In: 201.820 $\pm$ 0.041  $\chi^2$ /NDF: 5134223.4/25

Left Out: 225.478 $\pm$ 0.037  $\chi^2$ /NDF: 775365.4/24

Right Out: 193.885 $\pm$ 0.038  $\chi^2$ /NDF: 5977479.3/30

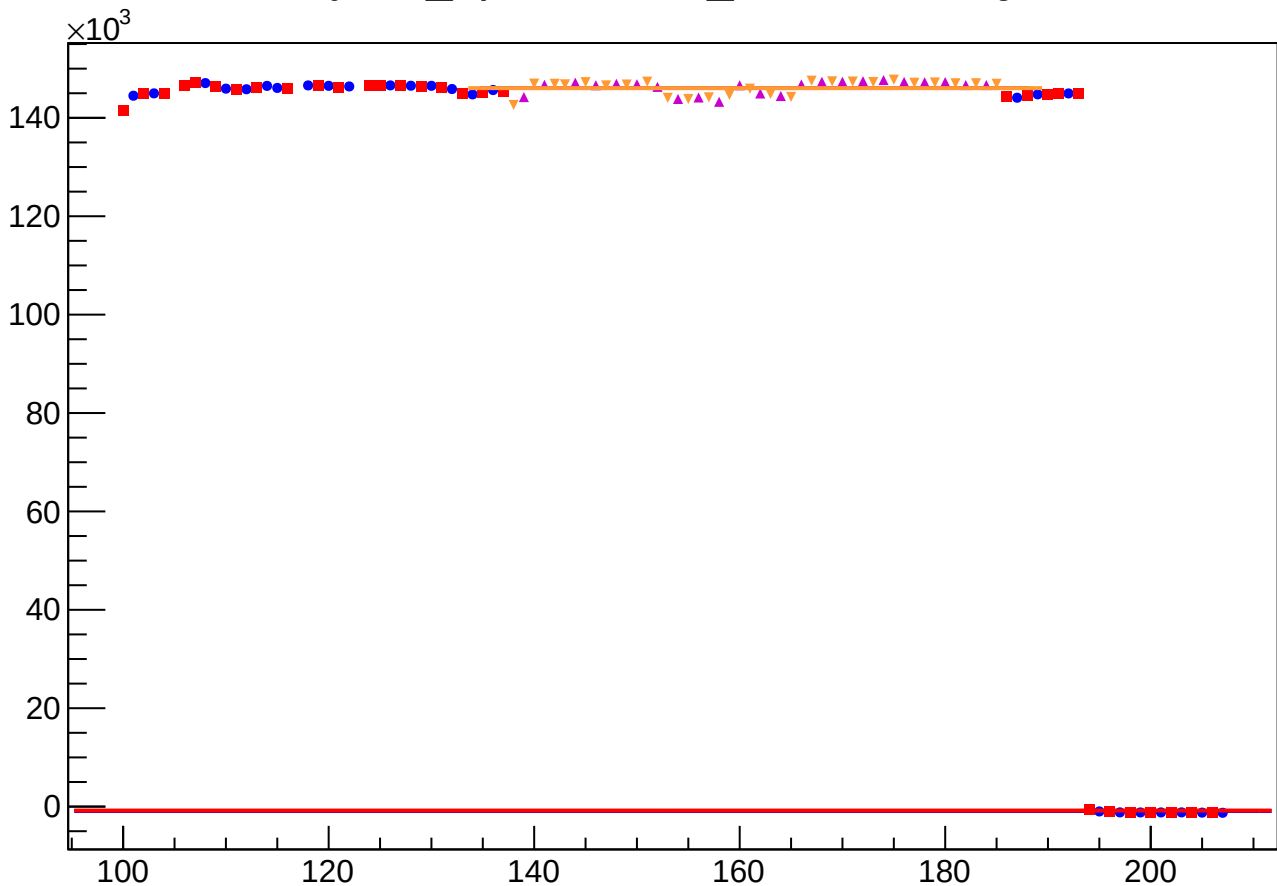
Left In: 224.869 $\pm$ 0.038  $\chi^2$ /NDF: 723816.1/22

+ sign 214.924 $\pm$ 0.027  $\chi^2$ /NDF: 6092650.4/50

All: 212.102 $\pm$ 0.019  $\chi^2$ /NDF: 13148169.6/10

- sign 209.415 $\pm$ 0.027  $\chi^2$ /NDF: 7034937.9/53

# yield\_bpm0l08WS\_mean vs Slug



Right In:  $-889.249 \pm 0.003$   $\chi^2/\text{NDF}: 5373250423441.2/25$

Left Out:  $146042.636 \pm 0.052$   $\chi^2/\text{NDF}: 882705044.1/24$

Right Out:  $-805.042 \pm 0.003$   $\chi^2/\text{NDF}: 6461636713825.1/30$

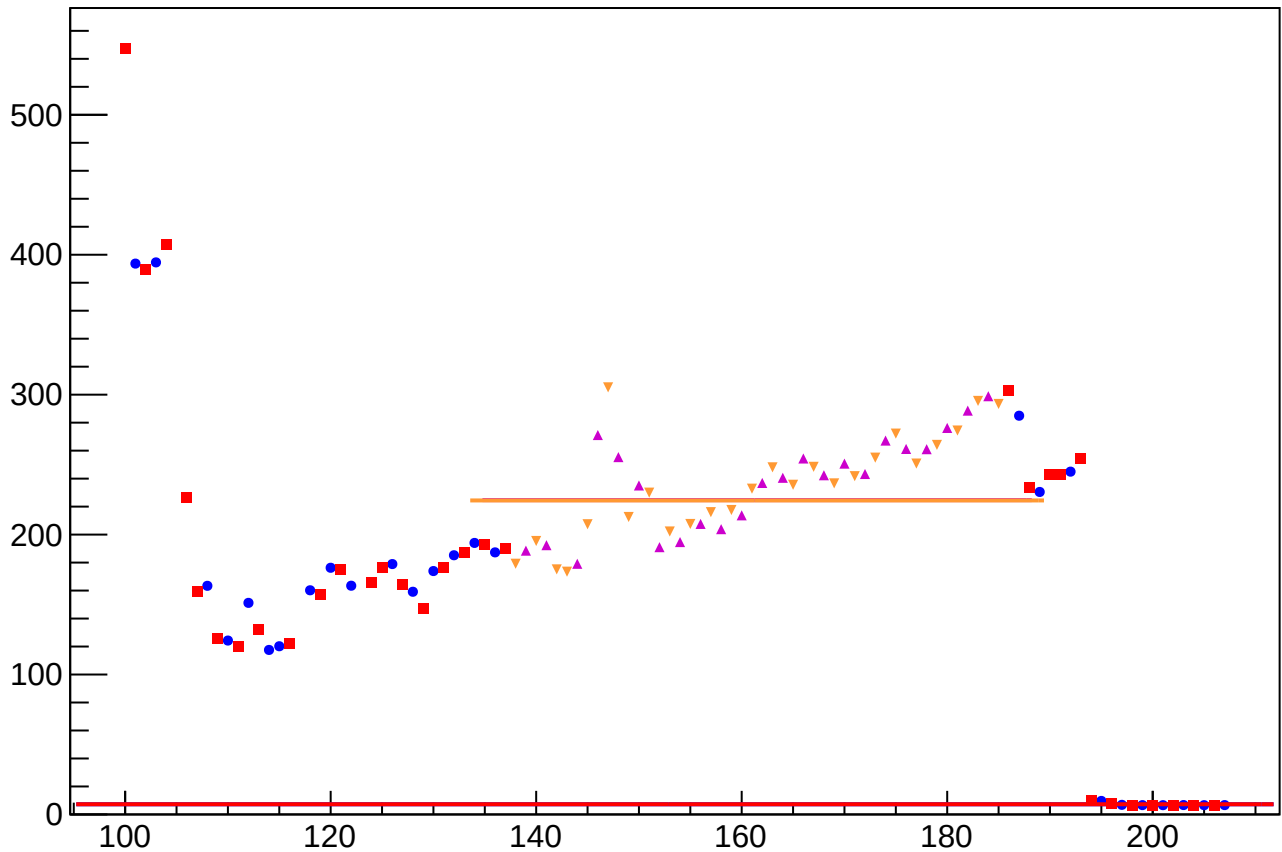
Left In:  $146056.687 \pm 0.054$   $\chi^2/\text{NDF}: 698743124.4/22$

+ sign  $-453.659 \pm 0.003$   $\chi^2/\text{NDF}: 13331506743649$

All:  $-414.406 \pm 0.002$   $\chi^2/\text{NDF}: 27290221865$

- sign  $-373.106 \pm 0.003$   $\chi^2/\text{NDF}: 13958320827525$

# yield\_bpm0l08WS\_rms vs Slug



Right In:  $7.268 \pm 0.002$   $\chi^2/\text{NDF}$ : 16107391.0/25

Left Out:  $224.409 \pm 0.037$   $\chi^2/\text{NDF}$ : 849100.4/24

Right Out:  $7.298 \pm 0.002$   $\chi^2/\text{NDF}$ : 18419562.6/30

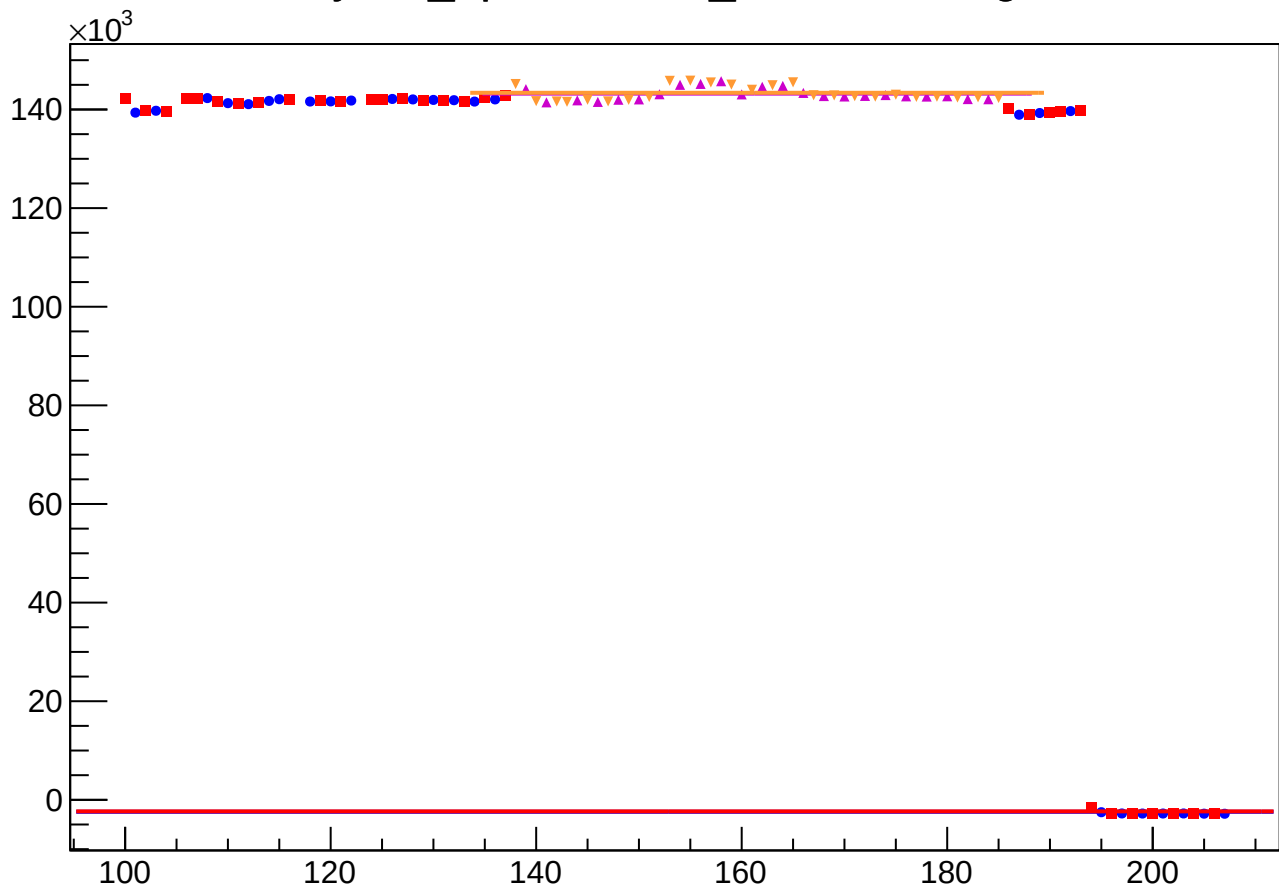
Left In:  $224.655 \pm 0.038$   $\chi^2/\text{NDF}$ : 756996.8/22

+ sign  $7.912 \pm 0.002$   $\chi^2/\text{NDF}$ : 51714179.4/50

All:  $7.924 \pm 0.001$   $\chi^2/\text{NDF}$ : 103729681.7/104

- sign  $7.937 \pm 0.002$   $\chi^2/\text{NDF}$ : 52015427.7/53

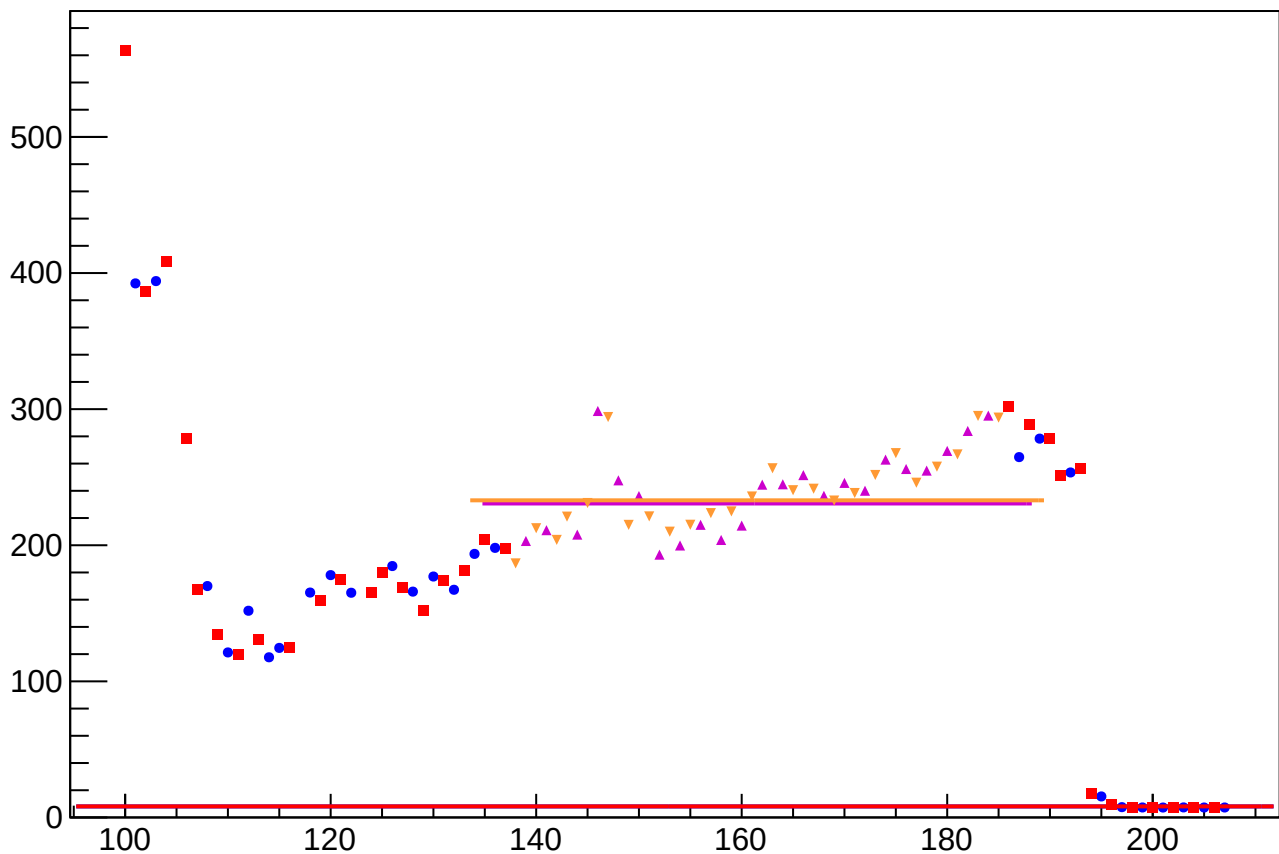
# yield\_bpm0l09WS\_mean vs Slug



Right In:  $-2423.164 \pm 0.003$   $\chi^2/\text{NDF}: 4961377569473.6/25$   
 Left Out:  $143386.915 \pm 0.054$   $\chi^2/\text{NDF}: 784001363.1/24$   
 Right Out:  $-2337.407 \pm 0.003$   $\chi^2/\text{NDF}: 5829967559782.9/30$   
 Left In:  $143221.802 \pm 0.055$   $\chi^2/\text{NDF}: 540234973.1/22$

+ sign  $-1910.907 \pm 0.003$   $\chi^2/\text{NDF}: 1231334172529$   
 All:  $-1868.499 \pm 0.002$   $\chi^2/\text{NDF}: 2516706550$   
 - sign  $-1824.094 \pm 0.003$   $\chi^2/\text{NDF}: 12853360170529$

# yield\_bpm0l09WS\_rms vs Slug



Right In:  $8.090 \pm 0.002$   $\chi^2/\text{NDF}$ : 16268914.6/25

Left Out:  $233.007 \pm 0.038$   $\chi^2/\text{NDF}$ : 446120.9/24

Right Out:  $8.126 \pm 0.002$   $\chi^2/\text{NDF}$ : 18461304.0/30

Left In:  $230.693 \pm 0.039$   $\chi^2/\text{NDF}$ : 512017.9/22

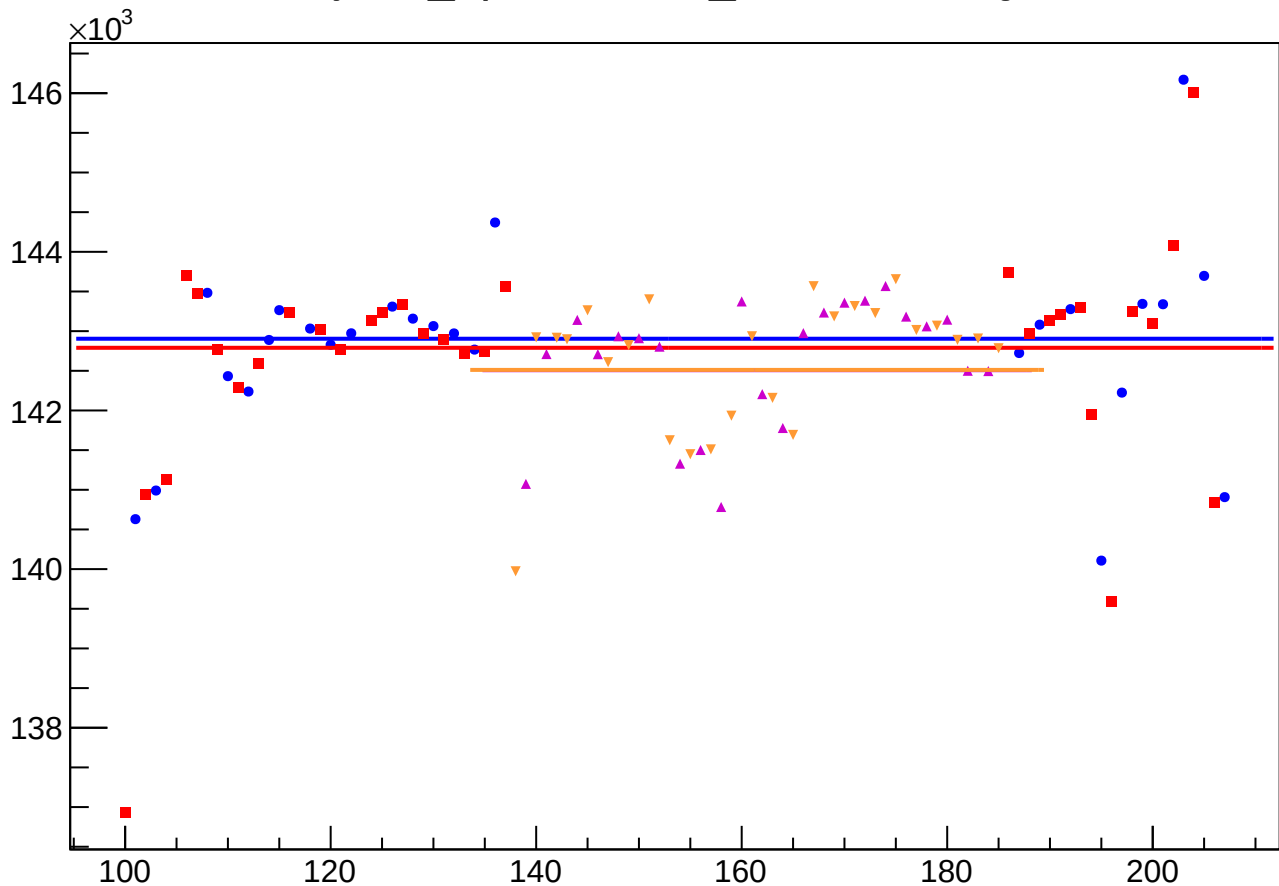
+ sign  $8.881 \pm 0.002$   $\chi^2/\text{NDF}$ : 51697822.3/50

All:  $8.895 \pm 0.002$   $\chi^2/\text{NDF}$ : 103509980.6/104

- sign  $8.911 \pm 0.002$   $\chi^2/\text{NDF}$ : 51812072.0/53



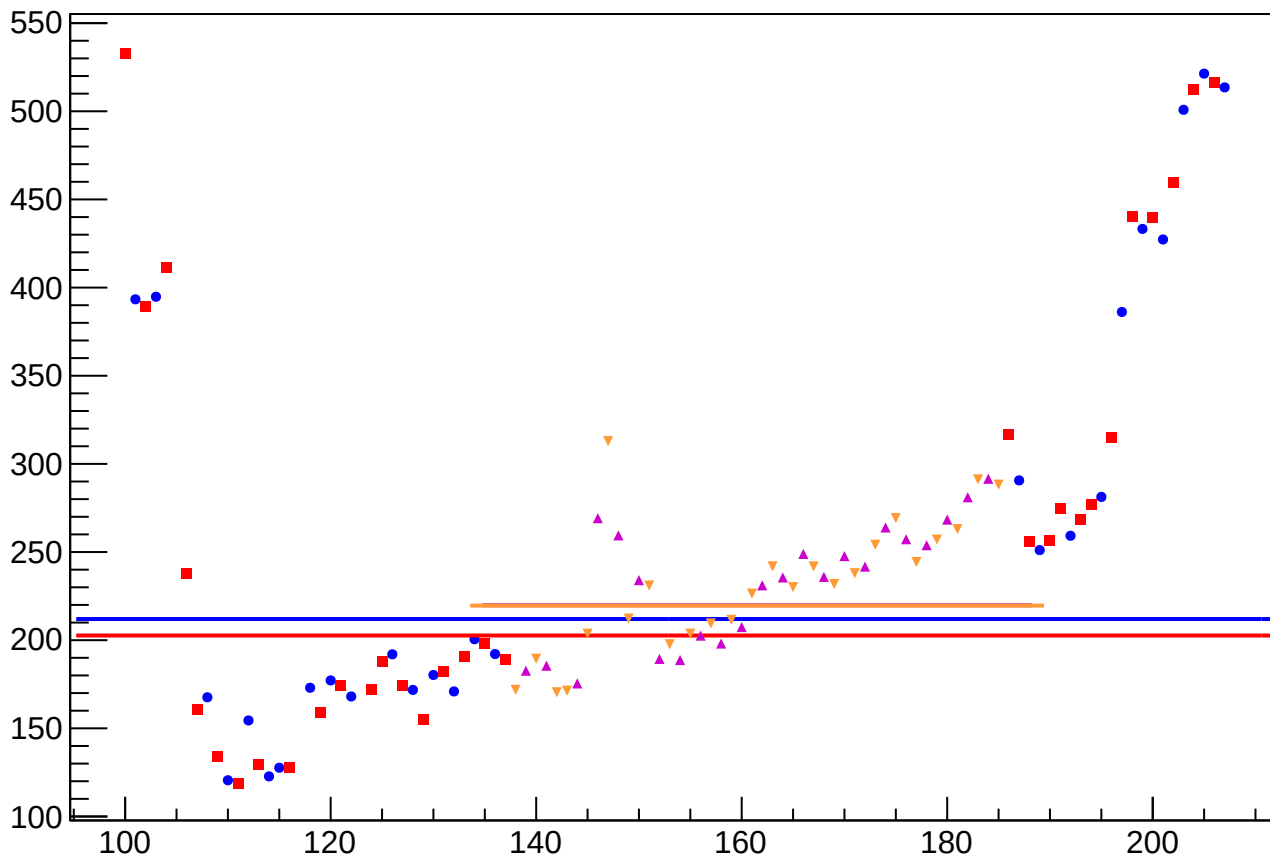
# yield\_bpm0l10WS\_mean vs Slug



Right In:  $142904.401 \pm 0.061$   $\chi^2/\text{NDF}: 252891390.8/25$   
 Left Out:  $142511.381 \pm 0.051$   $\chi^2/\text{NDF}: 338087157.2/24$   
 Right Out:  $142790.212 \pm 0.056$   $\chi^2/\text{NDF}: 215759565.0/30$   
 Left In:  $142507.563 \pm 0.052$   $\chi^2/\text{NDF}: 269272097.4/22$

+ sign  $142673.051 \pm 0.039$   $\chi^2/\text{NDF}: 615503613.0/5$   
 All:  $142656.152 \pm 0.027$   $\chi^2/\text{NDF}: 111453233$   
 - sign  $142639.980 \pm 0.038$   $\chi^2/\text{NDF}: 498662301.6/5$

# yield\_bpm0l10WS\_rms vs Slug



Right In: 212.007 $\pm$ 0.043  $\chi^2$ /NDF: 4852063.7/25

Left Out: 219.618 $\pm$ 0.036  $\chi^2$ /NDF: 902026.4/24

Right Out: 202.654 $\pm$ 0.039  $\chi^2$ /NDF: 5617700.5/30

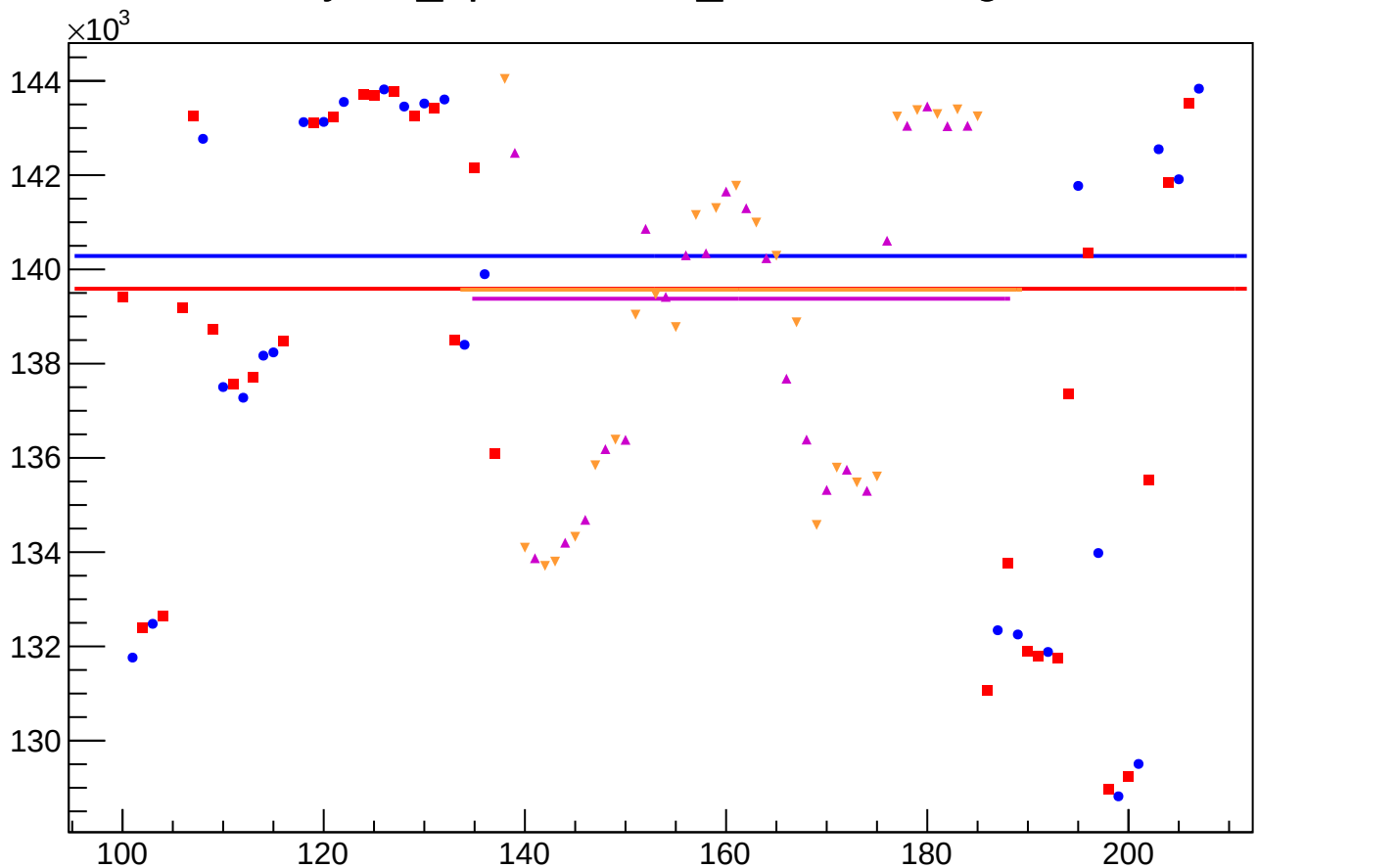
Left In: 219.813 $\pm$ 0.037  $\chi^2$ /NDF: 805501.8/22

+ sign 216.487 $\pm$ 0.028  $\chi^2$ /NDF: 5772484.8/50

All: 214.079 $\pm$ 0.019  $\chi^2$ /NDF: 12311036.3/10

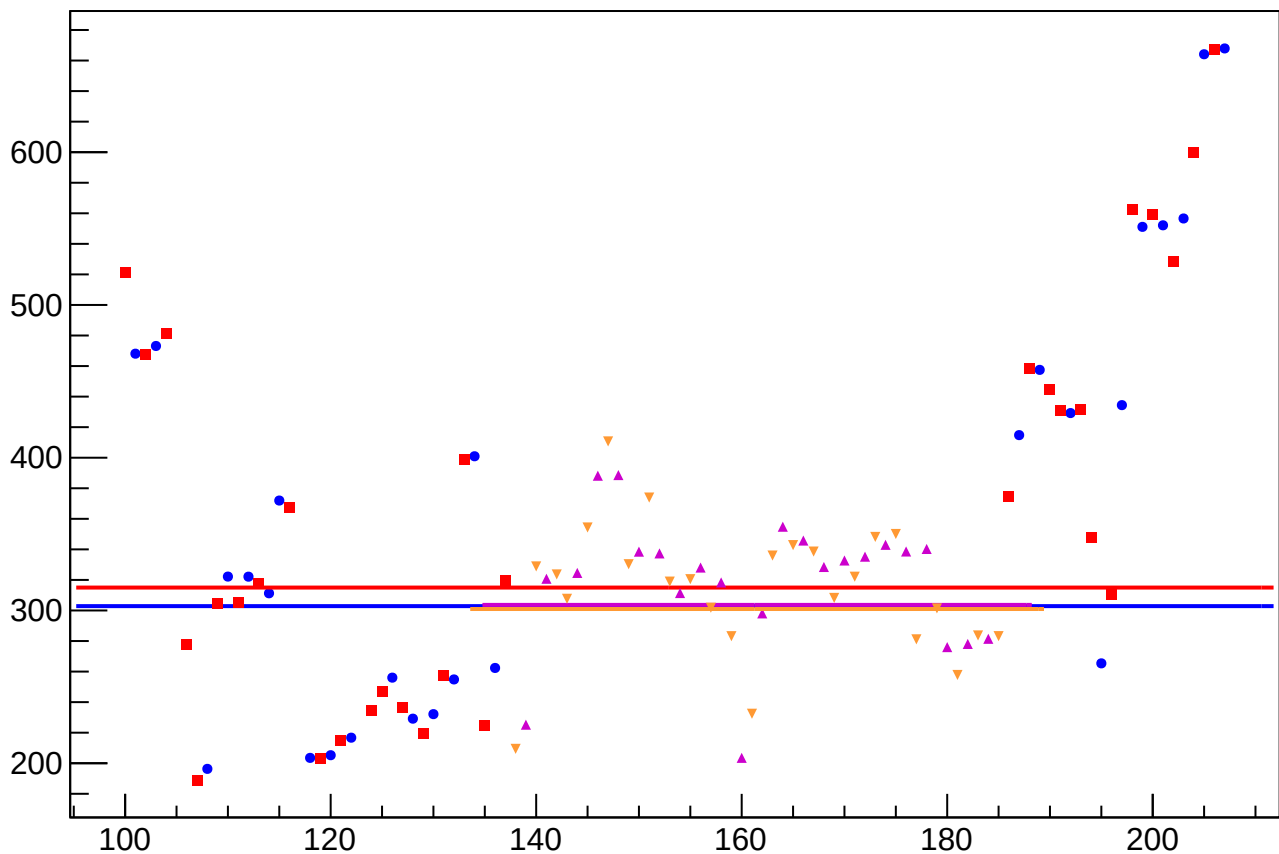
- sign 211.775 $\pm$ 0.027  $\chi^2$ /NDF: 6523669.5/53

# yield\_bpm0r03WS\_mean vs Slug



|                                   |                                |                               |                             |
|-----------------------------------|--------------------------------|-------------------------------|-----------------------------|
| Right In: 140284.445 $\pm$ 0.086  | $\chi^2$ /NDF: 2605848712.3/25 | + sign 139854.384 $\pm$ 0.054 | $\chi^2$ /NDF: 5234176625.2 |
| Left Out: 139568.750 $\pm$ 0.070  | $\chi^2$ /NDF: 2586638805.4/24 | All: 139664.414 $\pm$ 0.039   | $\chi^2$ /NDF: 994721823    |
| Right Out: 139589.054 $\pm$ 0.084 | $\chi^2$ /NDF: 2763103015.2/30 | - sign 139467.996 $\pm$ 0.055 | $\chi^2$ /NDF: 4688130552.2 |
| Left In: 139377.582 $\pm$ 0.073   | $\chi^2$ /NDF: 1921434868.2/22 |                               |                             |

# yield\_bpm0r03WS\_rms vs Slug



Right In:  $302.848 \pm 0.061$   $\chi^2/\text{NDF}: 3953708.5/25$

Left Out:  $300.964 \pm 0.050$   $\chi^2/\text{NDF}: 876889.9/24$

Right Out:  $314.999 \pm 0.060$   $\chi^2/\text{NDF}: 3894849.9/30$

Left In:  $303.658 \pm 0.052$   $\chi^2/\text{NDF}: 976252.9/22$

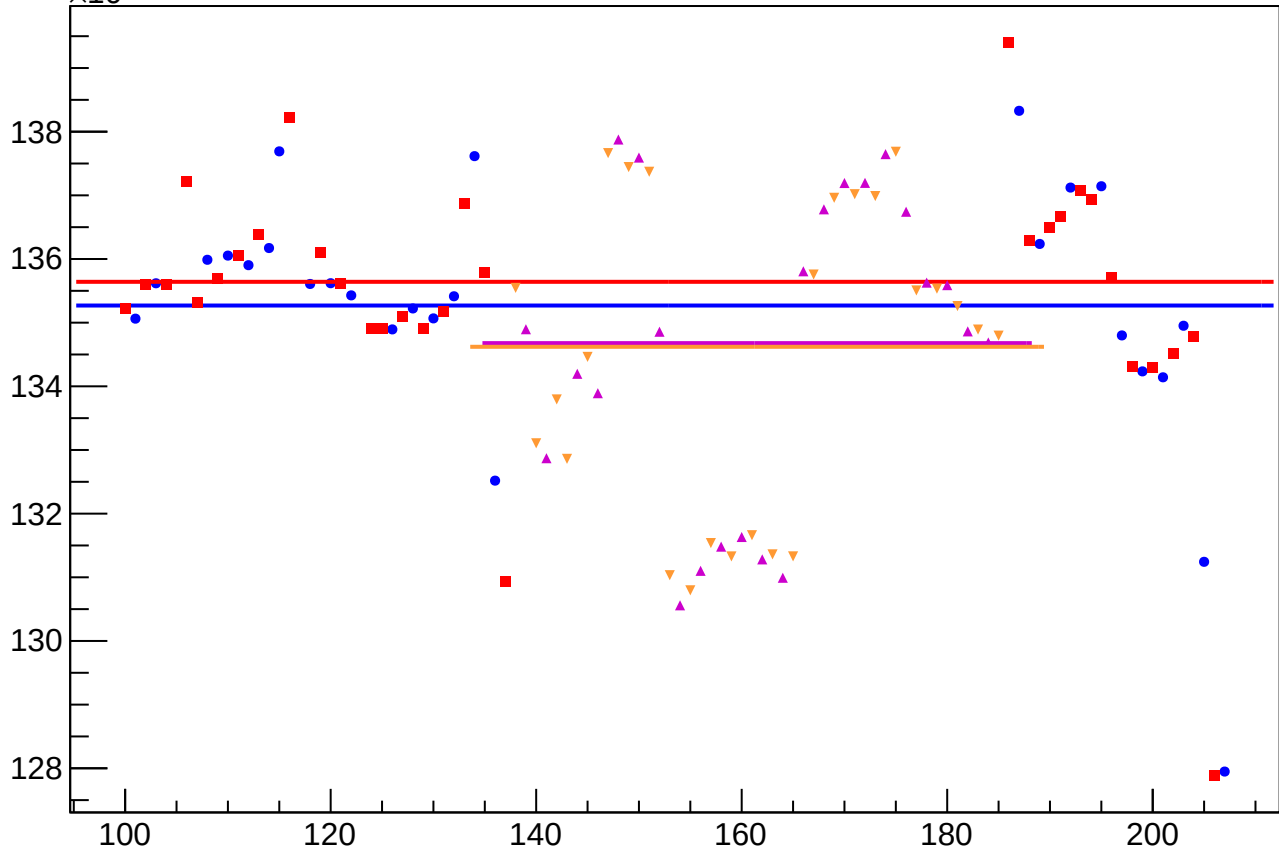
+ sign  $301.716 \pm 0.038$   $\chi^2/\text{NDF}: 4831176.0/50$

All:  $305.055 \pm 0.027$   $\chi^2/\text{NDF}: 9738331.2/104$

- sign  $308.507 \pm 0.039$   $\chi^2/\text{NDF}: 4891765.1/53$

# yield\_bpm0r05WS\_mean vs Slug

$\times 10^3$



Right In: 135269.181 $\pm$ 0.081  $\chi^2$ /NDF: 493093113.2/25

Left Out: 134620.993 $\pm$ 0.064  $\chi^2$ /NDF: 1201492843.7/24

Right Out: 135641.615 $\pm$ 0.073  $\chi^2$ /NDF: 539200621.9/30

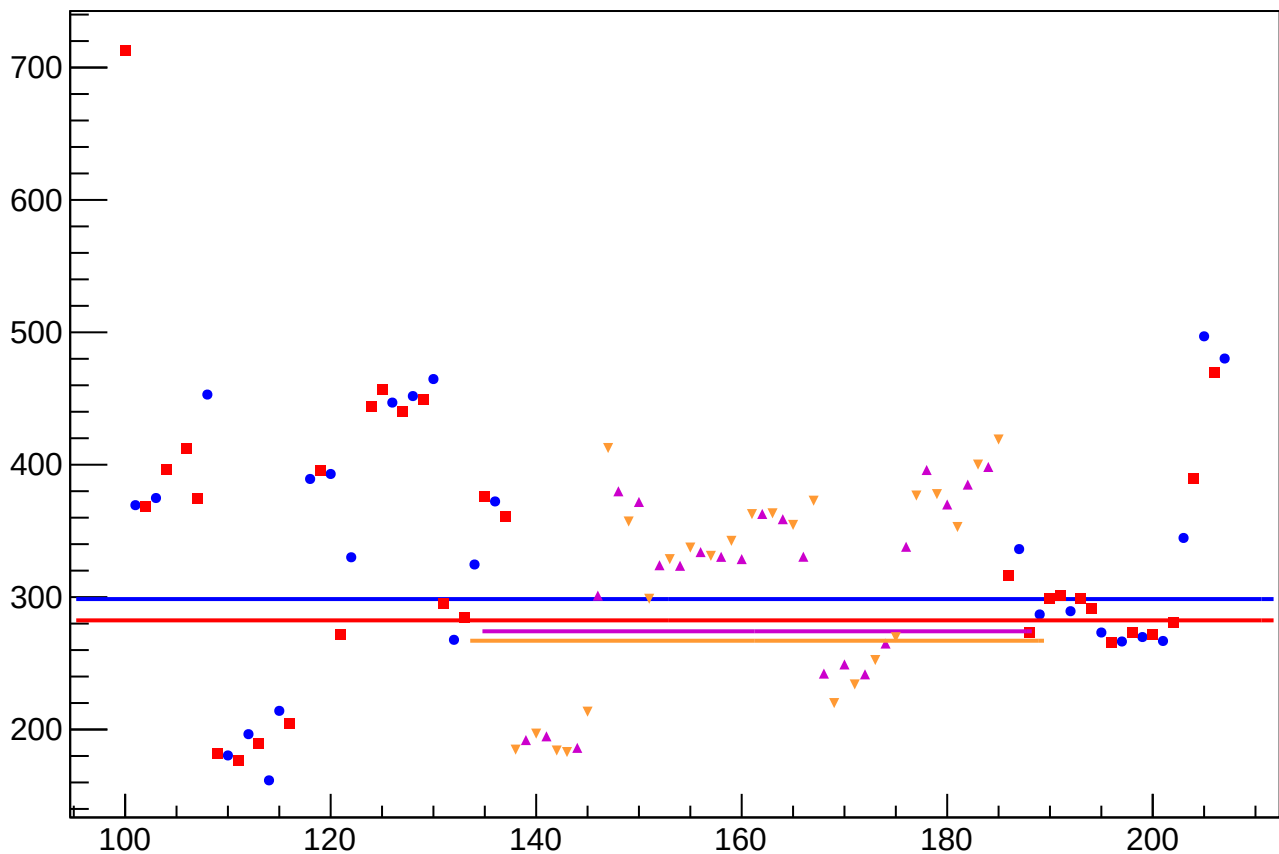
Left In: 134678.497 $\pm$ 0.067  $\chi^2$ /NDF: 1096295429.9/22

+ sign 134868.596 $\pm$ 0.050  $\chi^2$ /NDF: 1734095158.4

All: 134994.302 $\pm$ 0.035  $\chi^2$ /NDF: 347626475

- sign 135116.482 $\pm$ 0.049  $\chi^2$ /NDF: 1729757194.2

# yield\_bpm0r05WS\_rms vs Slug



Right In:  $298.516 \pm 0.057$   $\chi^2/\text{NDF}: 2092050.6/25$

Left Out:  $267.053 \pm 0.045$   $\chi^2/\text{NDF}: 2843307.1/24$

Right Out:  $282.433 \pm 0.052$   $\chi^2/\text{NDF}: 2200839.9/30$

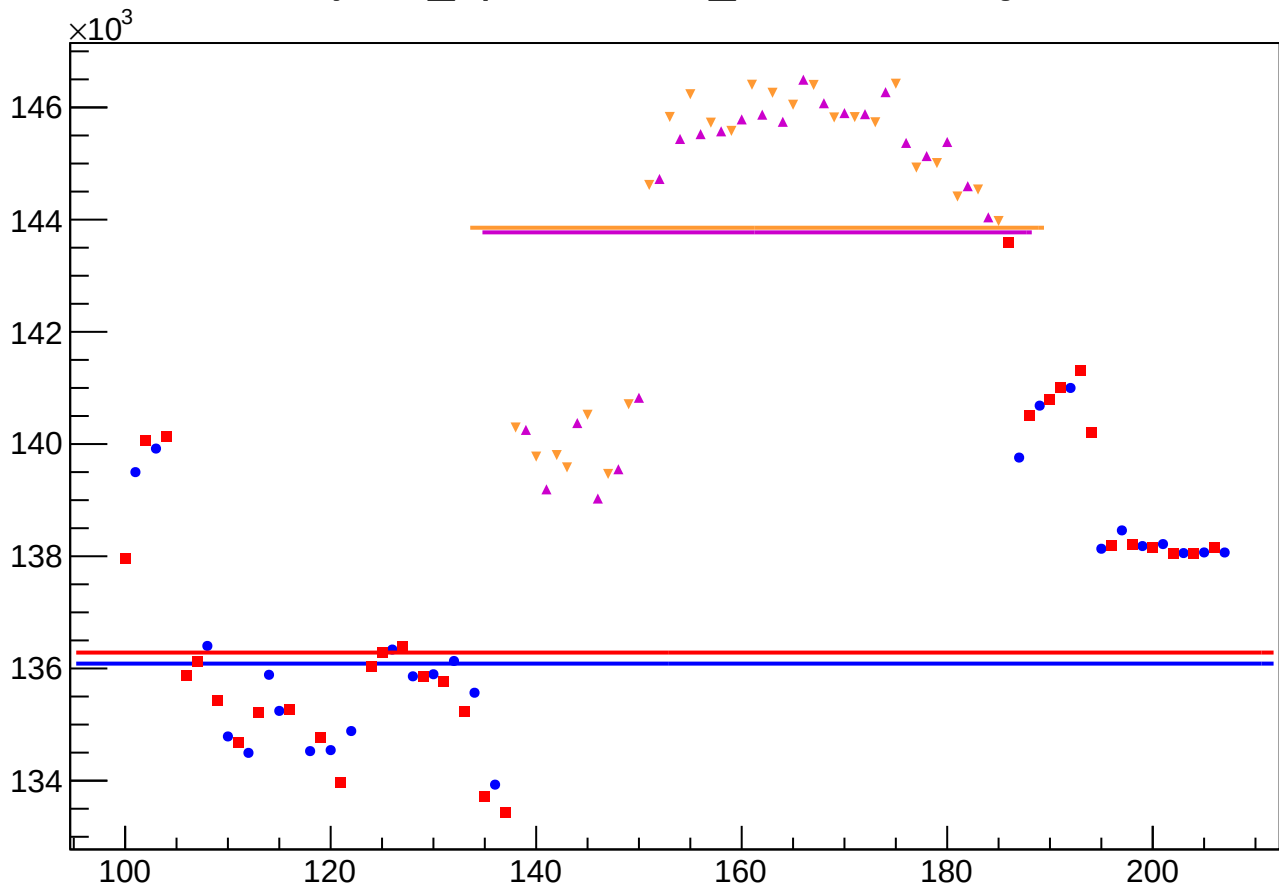
Left In:  $274.177 \pm 0.047$   $\chi^2/\text{NDF}: 2236755.2/22$

+ sign  $279.072 \pm 0.035$   $\chi^2/\text{NDF}: 5121530.4/50$

All:  $278.493 \pm 0.025$   $\chi^2/\text{NDF}: 9573501.9/104$

- sign  $277.931 \pm 0.035$   $\chi^2/\text{NDF}: 4451446.0/53$

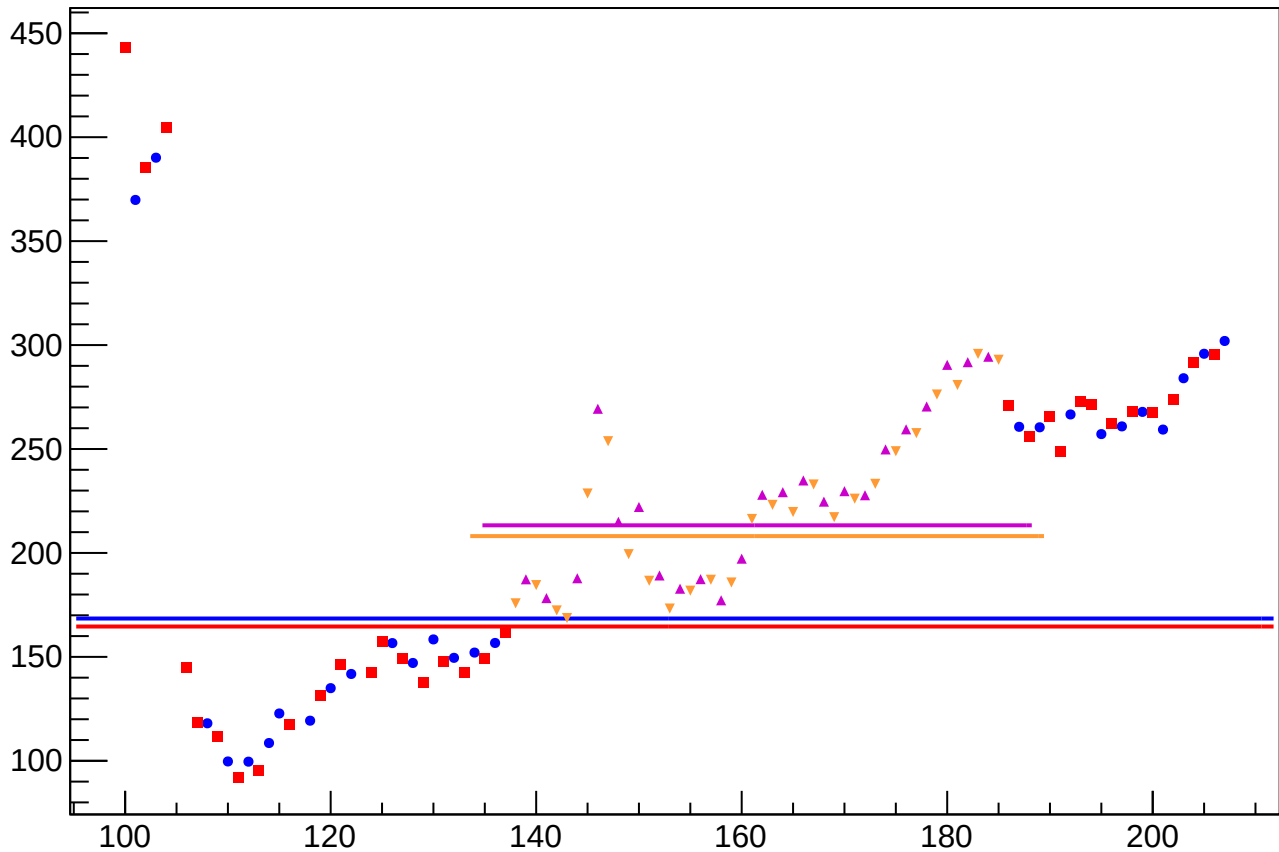
# yield\_bpm0i02WS\_mean vs Slug



Right In:  $136086.604 \pm 0.048$   $\chi^2/\text{NDF}: 1506669929.0/25$   
 Left Out:  $143855.894 \pm 0.048$   $\chi^2/\text{NDF}: 3130204188.4/24$   
 Right Out:  $136283.358 \pm 0.045$   $\chi^2/\text{NDF}: 2177336257.1/30$   
 Left In:  $143773.112 \pm 0.051$   $\chi^2/\text{NDF}: 2803362782.2/22$

+ sign  $139924.868 \pm 0.034$   $\chi^2/\text{NDF}: 17709923354.0/24$   
 - sign  $139567.744 \pm 0.034$   $\chi^2/\text{NDF}: 17128143943.5/24$   
 All:  $139744.972 \pm 0.024$   $\chi^2/\text{NDF}: 348937318.0/24$

# yield\_bpm0i02WS\_rms vs Slug



Right In: 168.455 $\pm$ 0.034  $\chi^2$ /NDF: 4333662.3/25

Left Out: 208.100 $\pm$ 0.034  $\chi^2$ /NDF:993011.6/24

Right Out: 164.608 $\pm$ 0.032  $\chi^2$ /NDF: 5181099.5/30

Left In: 213.288 $\pm$ 0.036  $\chi^2$ /NDF:865525.4/22

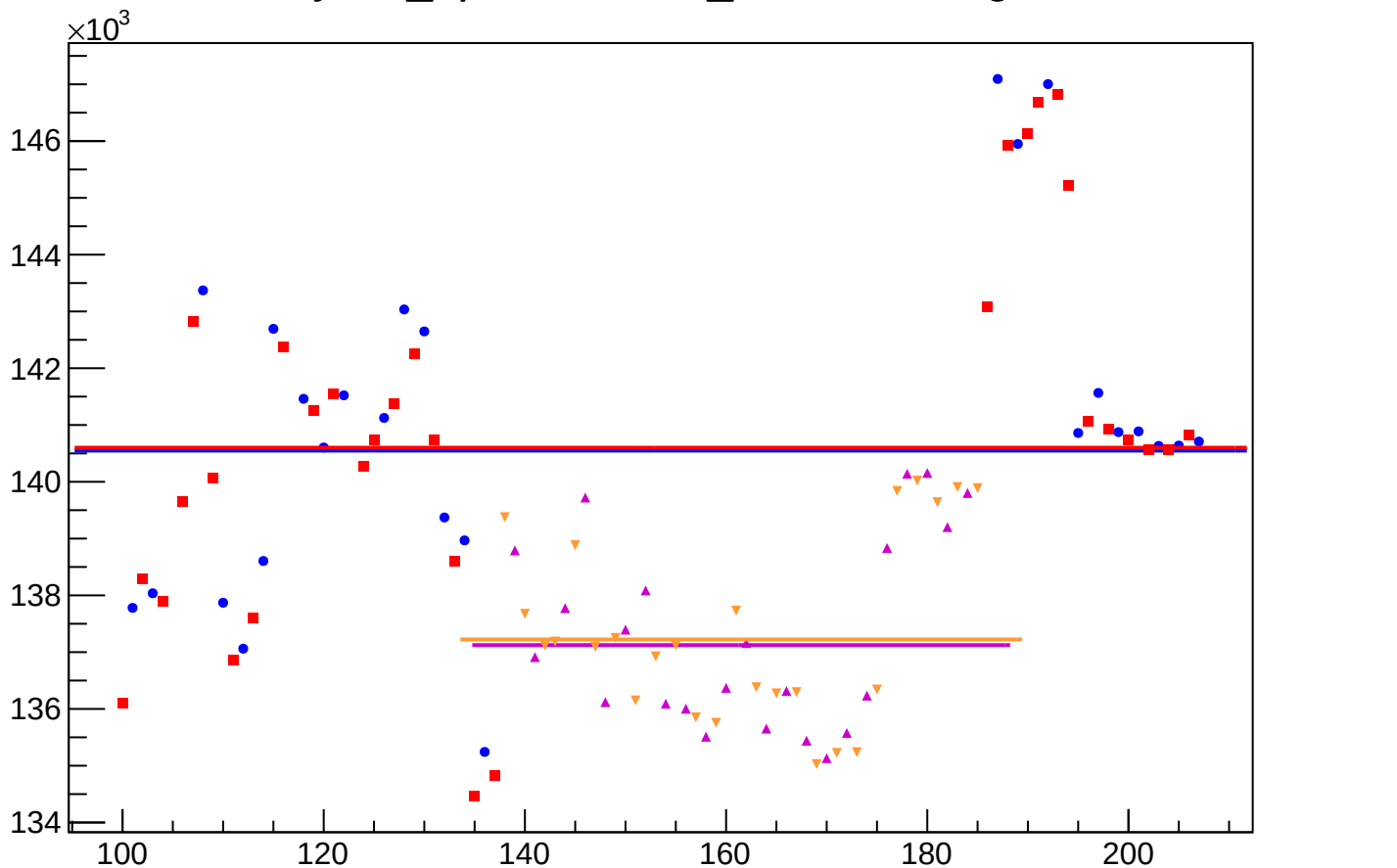
+ sign 188.041 $\pm$ 0.024  $\chi^2$ /NDF: 6007491.5/50

All: 186.990 $\pm$ 0.017  $\chi^2$ /NDF: 13084205.9/10

- sign 185.955 $\pm$ 0.024  $\chi^2$ /NDF: 7072916.6/53

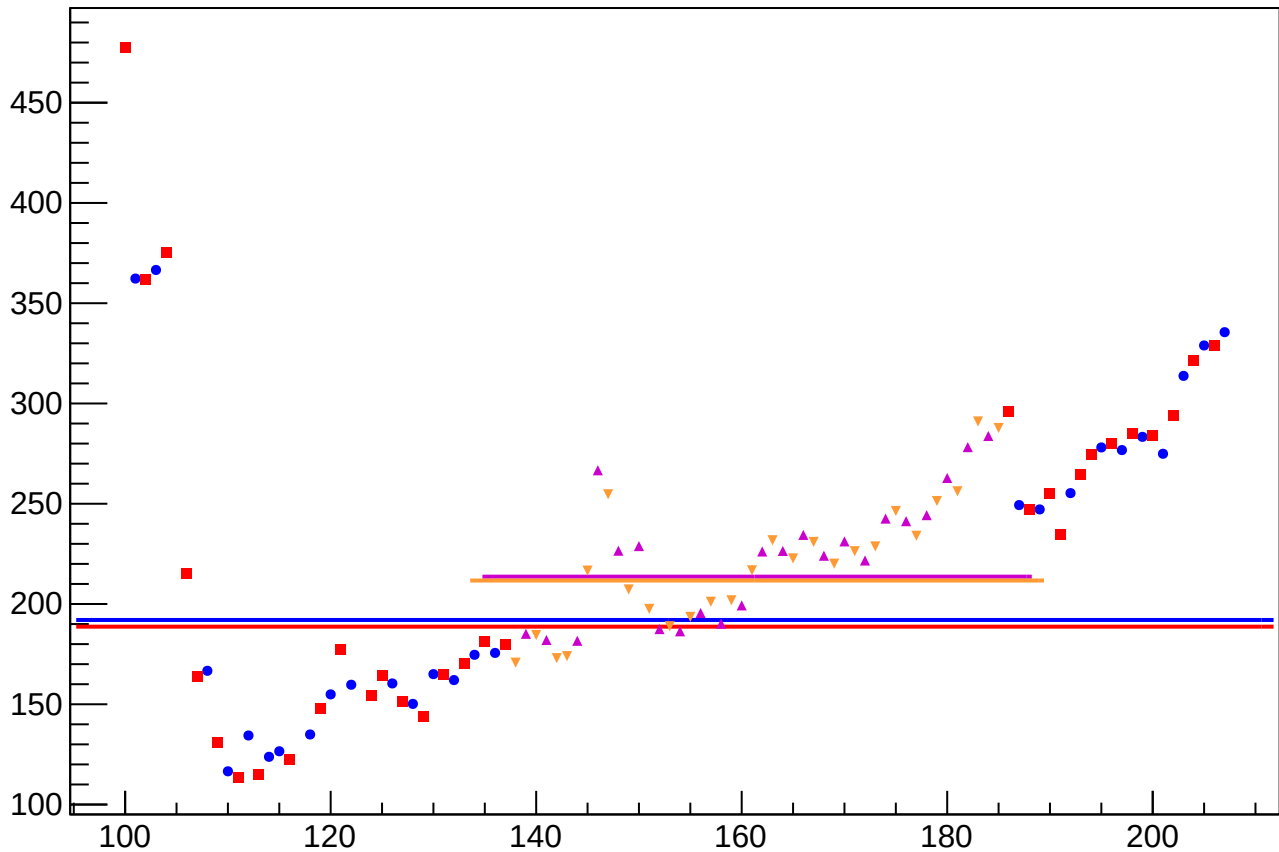


# yield\_bpm0i02aWS\_mean vs Slug



Right In: 140550.041+/-0.053  $\chi^2/\text{NDF}$ : 2807730365.9/25  
 Left Out: 137223.651+/-0.049  $\chi^2/\text{NDF}$ : 894565924.0/24  
 Right Out: 140599.867+/-0.051  $\chi^2/\text{NDF}$ : 3239694280.7/30  
 Left In: 137123.557+/-0.051  $\chi^2/\text{NDF}$ : 860635149.0/22  
 + sign 138744.671+/-0.036  $\chi^2/\text{NDF}$ : 5805506042.5  
 All: 138810.594+/-0.025  $\chi^2/\text{NDF}$ : 122625265  
 - sign 138875.500+/-0.036  $\chi^2/\text{NDF}$ : 6450414850.3/

# yield\_bpm0i02aWS\_rms vs Slug



Right In: 192.038 $\pm$ 0.038  $\chi^2$ /NDF: 3336983.3/25

Left Out: 211.714 $\pm$ 0.035  $\chi^2$ /NDF:675587.4/24

Right Out: 188.701 $\pm$ 0.036  $\chi^2$ /NDF: 4003487.1/30

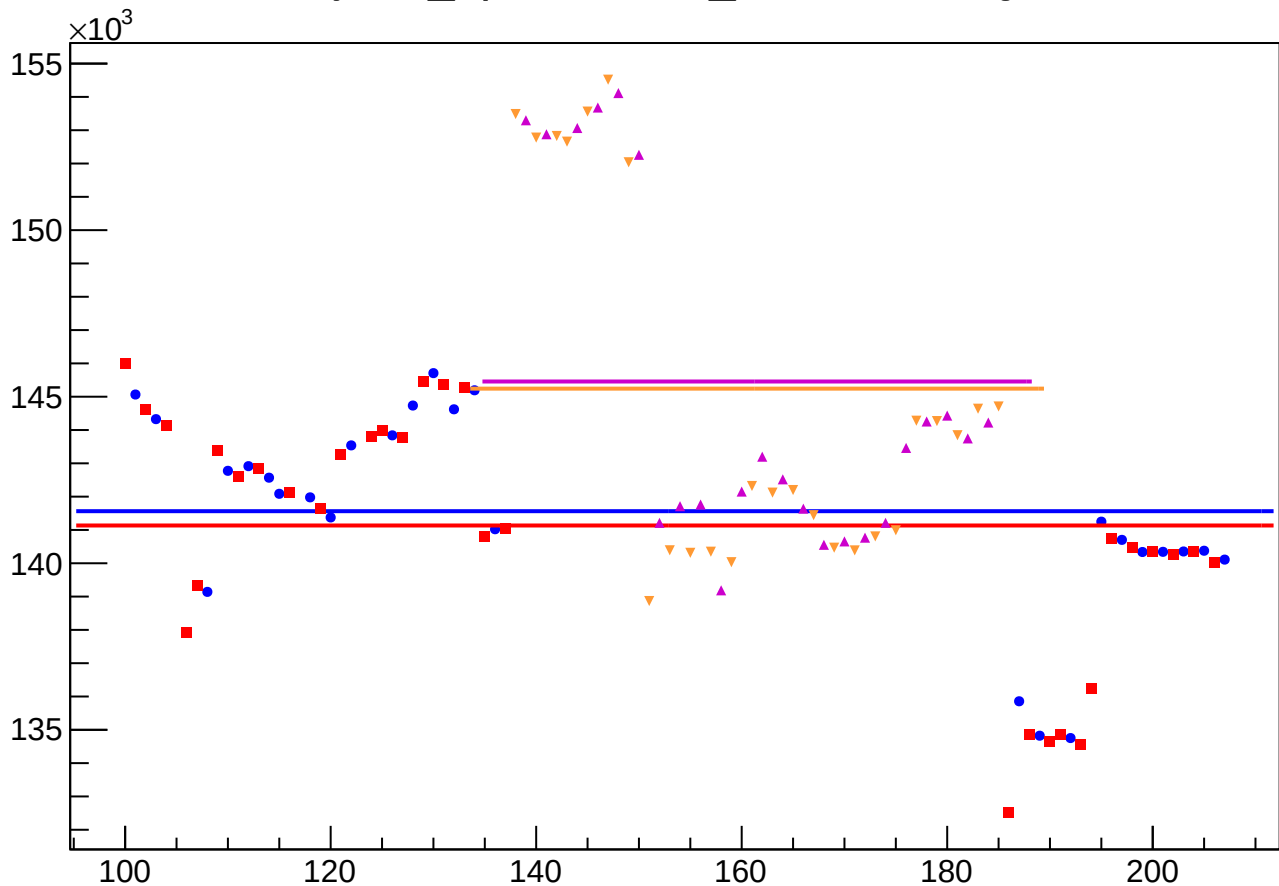
Left In: 213.641 $\pm$ 0.036  $\chi^2$ /NDF:621332.1/22

+ sign 202.717 $\pm$ 0.026  $\chi^2$ /NDF: 4159741.3/50

All: 201.888 $\pm$ 0.018  $\chi^2$ /NDF: 9028551.8/104

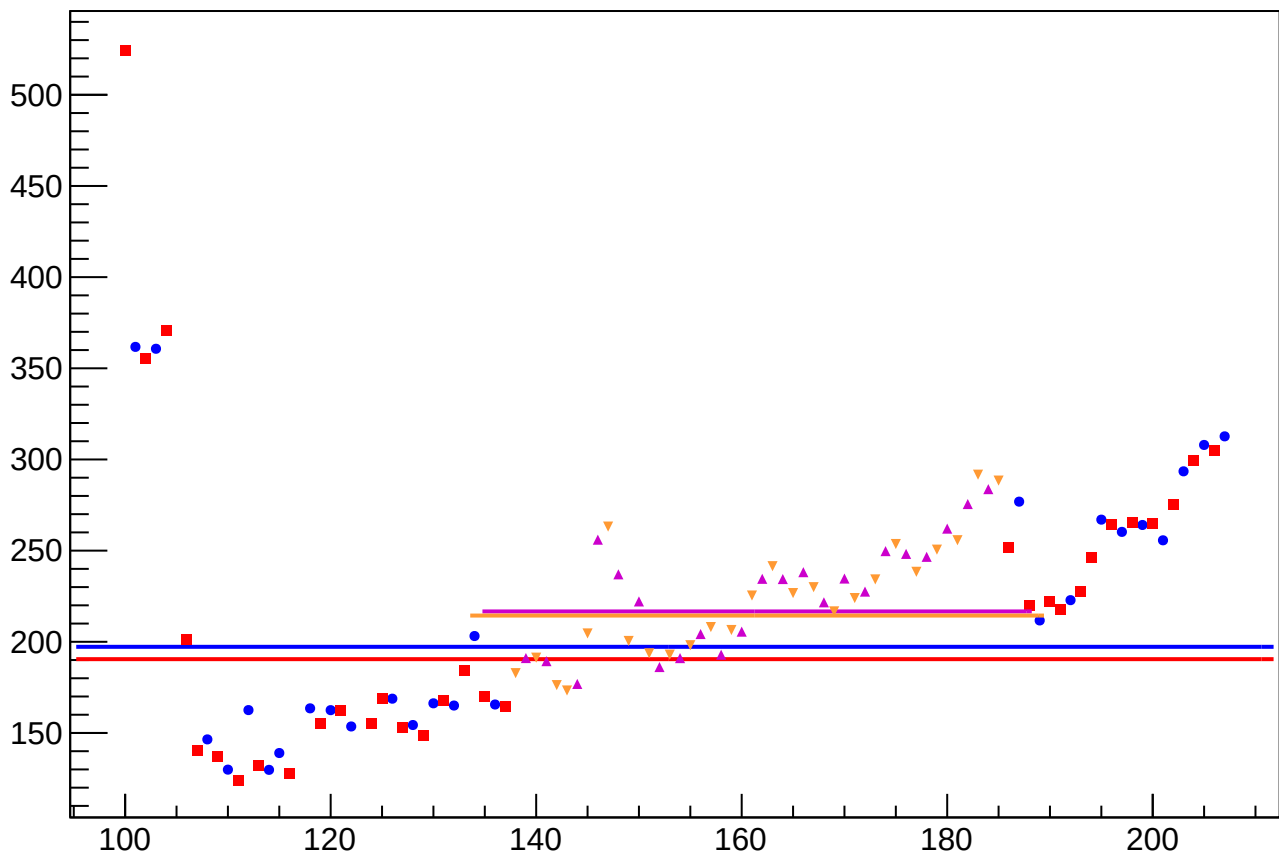
- sign 201.072 $\pm$ 0.025  $\chi^2$ /NDF: 4866722.3/53

# yield\_bpm0i05WS\_mean vs Slug



|                                   |                                 |                               |                              |
|-----------------------------------|---------------------------------|-------------------------------|------------------------------|
| Right In: 141563.457 $\pm$ 0.054  | $\chi^2$ /NDF: 2782912009.9/25  | + sign 143556.893 $\pm$ 0.037 | $\chi^2$ /NDF: 18334156630.0 |
| Left Out: 145242.337 $\pm$ 0.050  | $\chi^2$ /NDF: 13032998081.1/24 | All: 143390.623 $\pm$ 0.026   | $\chi^2$ /NDF: 374751735.0   |
| Right Out: 141134.029 $\pm$ 0.050 | $\chi^2$ /NDF: 4409073645.4/30  | - sign 143229.873 $\pm$ 0.036 | $\chi^2$ /NDF: 19100262912.7 |
| Left In: 145456.704 $\pm$ 0.052   | $\chi^2$ /NDF: 11073020116.4/22 |                               |                              |

# yield\_bpm0i05WS\_rms vs Slug



Right In: 197.250+/-0.038  $\chi^2/\text{NDF}$ : 2425344.8/25

Left Out: 214.391+/-0.035  $\chi^2/\text{NDF}$ : 643384.3/24

Right Out: 190.481+/-0.035  $\chi^2/\text{NDF}$ : 2897000.3/30

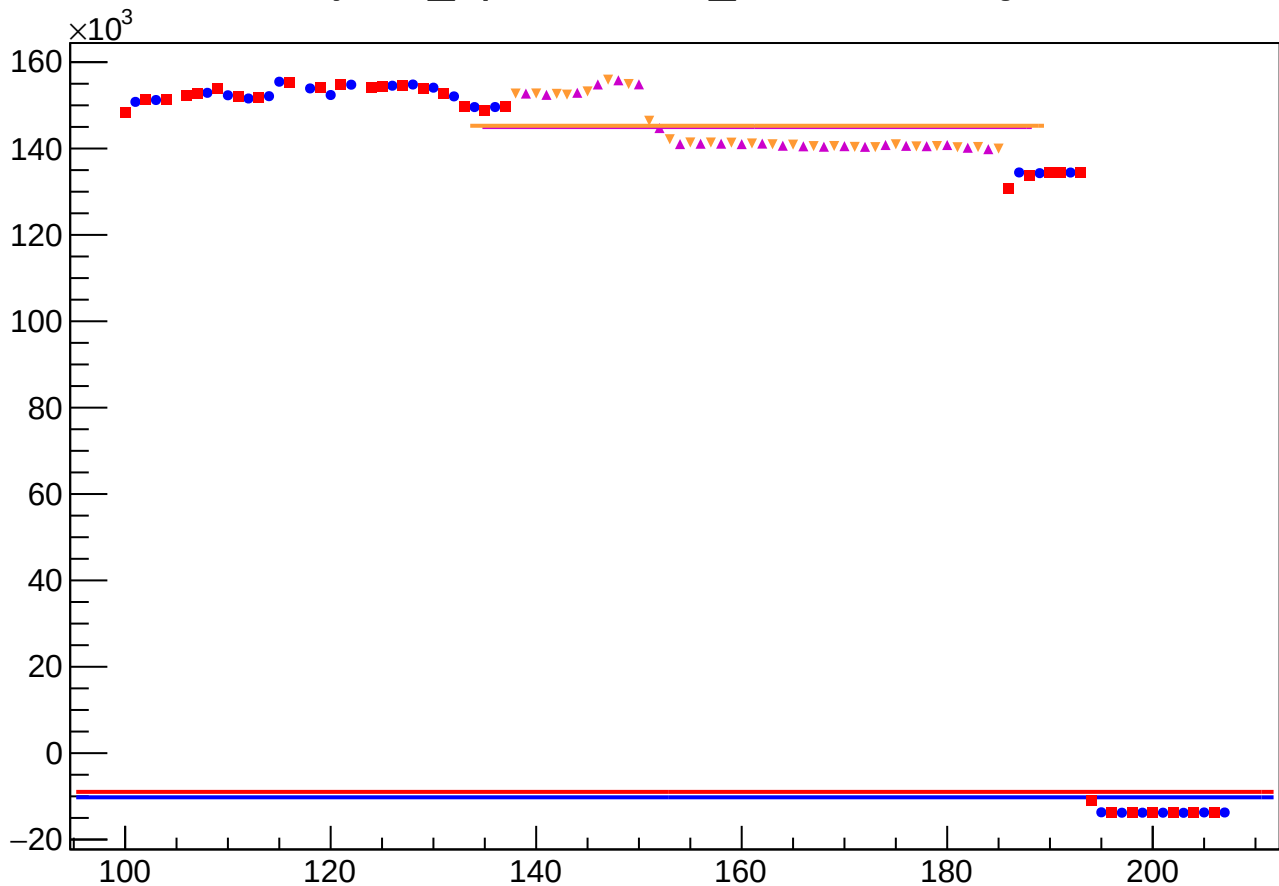
Left In: 216.654+/-0.036  $\chi^2/\text{NDF}$ : 587166.8/22

+ sign 206.538+/-0.026  $\chi^2/\text{NDF}$ : 3178071.8/50

All: 204.826+/-0.018  $\chi^2/\text{NDF}$ : 6936163.8/104

- sign 203.171+/-0.025  $\chi^2/\text{NDF}$ : 3749452.7/53

# yield\_bpm0i07WS\_mean vs Slug



Right In:  $-10224.621 \pm 0.010$

$\chi^2/\text{NDF}$ : 5854163625634.0/25

Left Out:  $145269.857 \pm 0.049$

$\chi^2/\text{NDF}$ : 13706269279.5/24

Right Out:  $-8965.225 \pm 0.010$

$\chi^2/\text{NDF}$ : 7105444131591.2/30

Left In:  $144966.398 \pm 0.051$

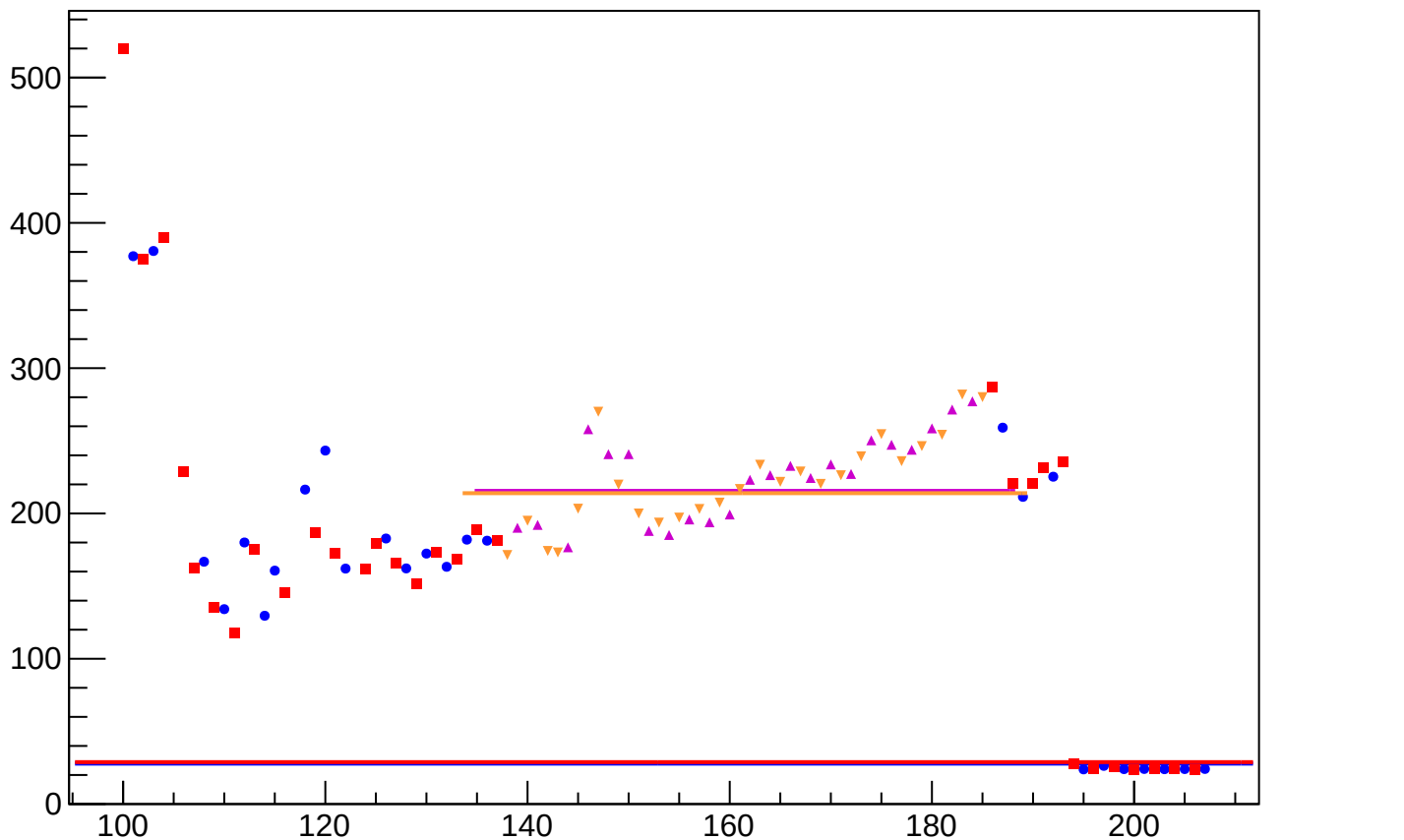
$\chi^2/\text{NDF}$ : 13154547043.3/22

+ sign  $-4287.313 \pm 0.010$   $\chi^2/\text{NDF}$ : 1540213593993

All:  $-3737.406 \pm 0.007$   $\chi^2/\text{NDF}$ : 3122359072

- sign  $-3152.862 \pm 0.010$   $\chi^2/\text{NDF}$ : 15814756464152

# yield\_bpm0i07WS\_rms vs Slug



Right In: 27.836+/-0.007  $\chi^2/\text{NDF}$ : 12632710.0/25

Left Out: 213.951+/-0.035  $\chi^2/\text{NDF}$ : 650607.8/24

Right Out: 28.861+/-0.007  $\chi^2/\text{NDF}$ : 14370701.6/30

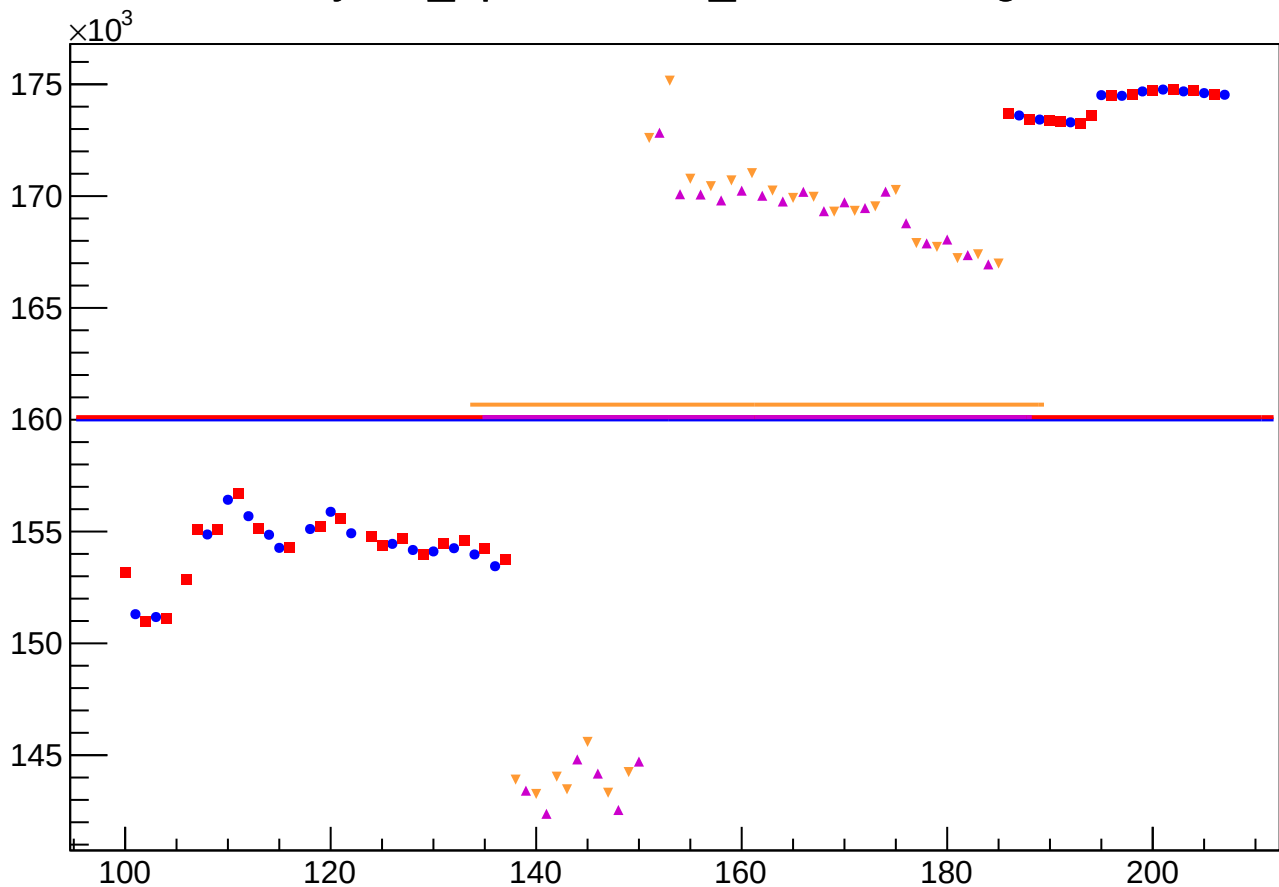
Left In: 215.539+/-0.036  $\chi^2/\text{NDF}$ : 600575.7/22

+ sign 34.943+/-0.007  $\chi^2/\text{NDF}$ : 40601399.9/50

All: 35.412+/-0.005  $\chi^2/\text{NDF}$ : 81161523.4/104

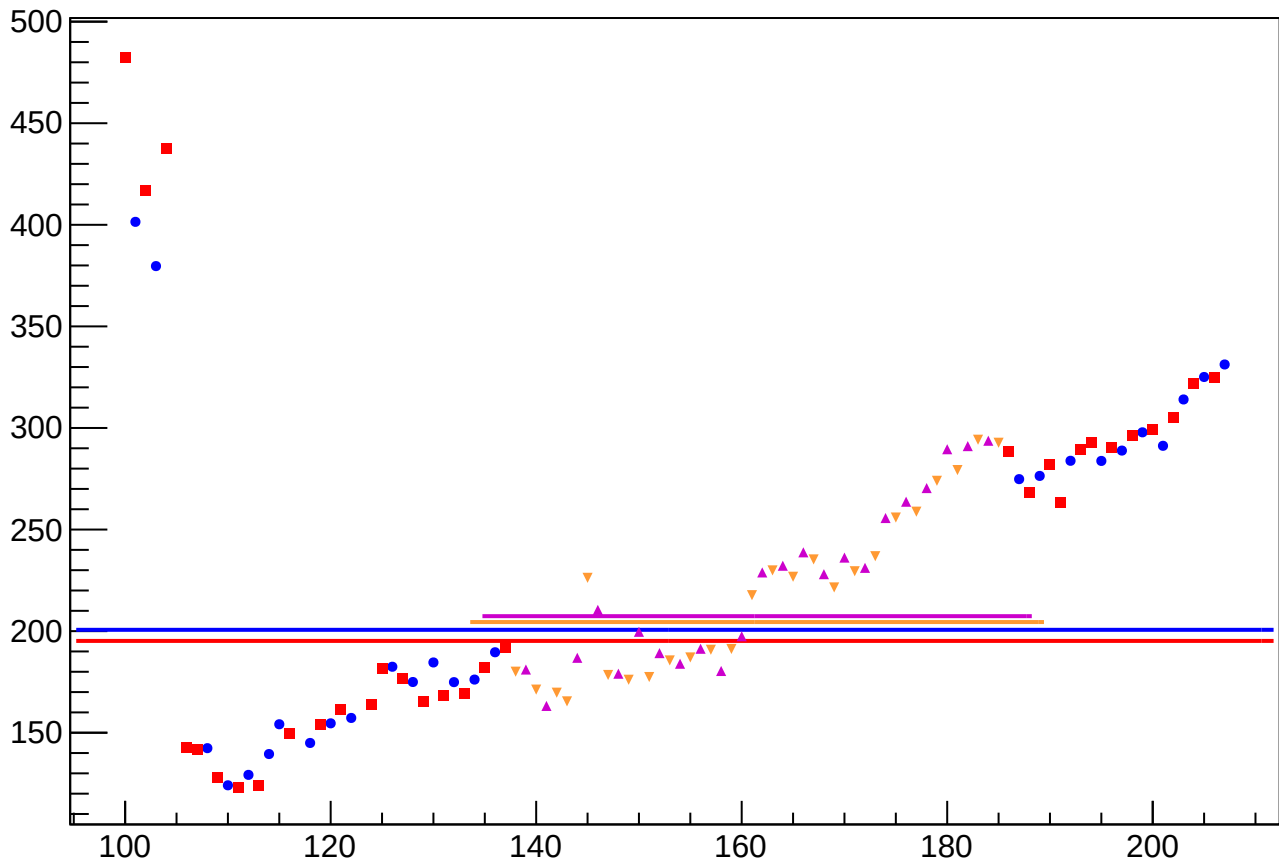
- sign 35.910+/-0.007  $\chi^2/\text{NDF}$ : 40550382.3/53

# yield\_bpm1i02WS\_mean vs Slug



Right In: 160014.159 $\pm$ 0.056  $\chi^2$ /NDF: 24617179788.8/25  
 Left Out: 160674.818 $\pm$ 0.047  $\chi^2$ /NDF: 74155131898.4/24  
 Right Out: 160116.035 $\pm$ 0.052  $\chi^2$ /NDF: 27881264448.9/30  
 Left In: 160117.460 $\pm$ 0.049  $\chi^2$ /NDF: 66553191753.2/22  
 + sign 160397.445 $\pm$ 0.036  $\chi^2$ /NDF: 98853903096.  
 All: 160255.976 $\pm$ 0.025  $\chi^2$ /NDF: 19331883.  
 - sign 160116.784 $\pm$ 0.036  $\chi^2$ /NDF: 94434456596.7

# yield\_bpm1i02WS\_rms vs Slug



Right In: 200.650+/-0.039  $\chi^2/\text{NDF}$ : 3355864.2/25

Left Out: 204.476+/-0.034  $\chi^2/\text{NDF}$ :1073199.0/24

Right Out: 195.188+/-0.037  $\chi^2/\text{NDF}$ : 4111836.8/30

Left In: 207.368+/-0.035  $\chi^2/\text{NDF}$ :956644.0/22

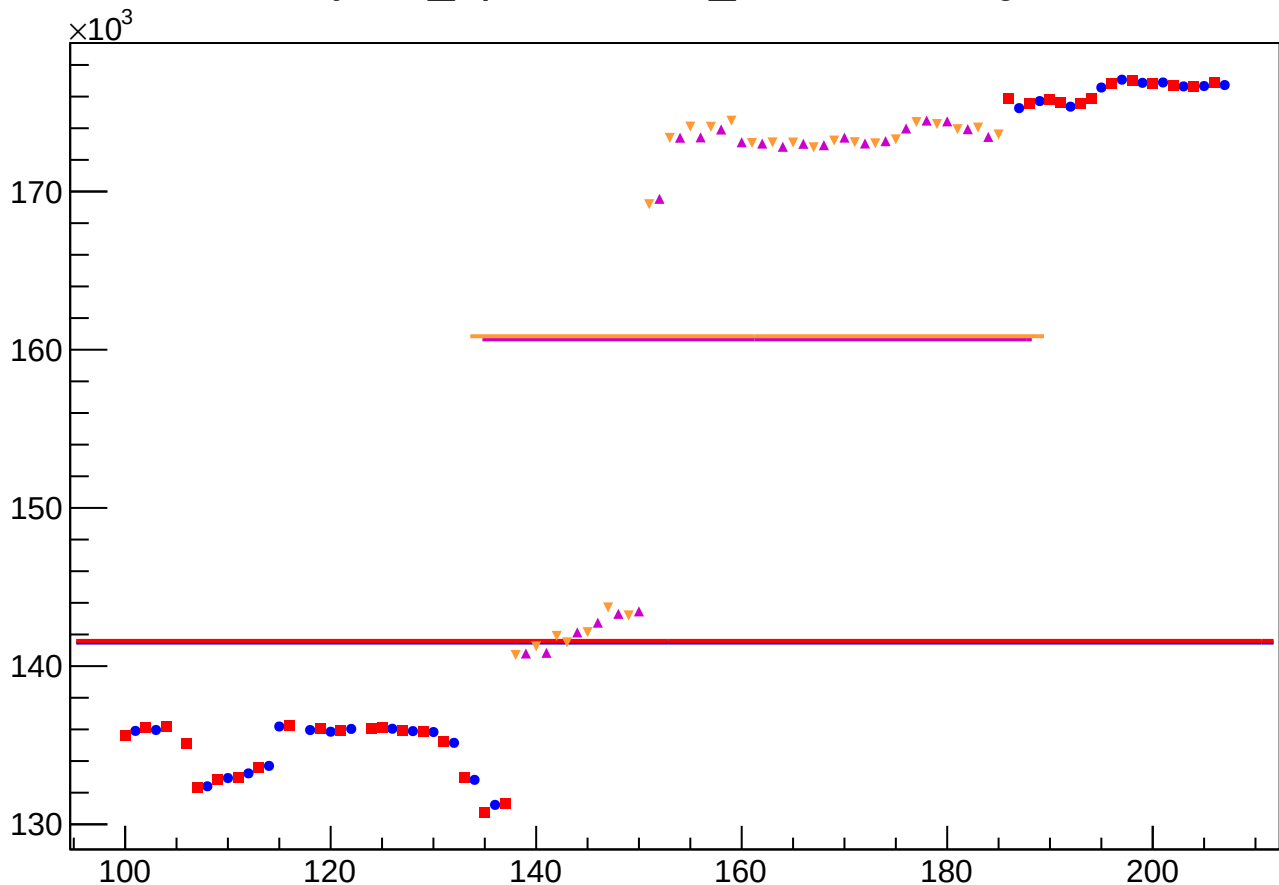
+ sign 202.870+/-0.026  $\chi^2/\text{NDF}$ : 4434535.6/50

All: 202.223+/-0.018  $\chi^2/\text{NDF}$ : 9562002.4/104

- sign 201.587+/-0.025  $\chi^2/\text{NDF}$ : 5126194.1/53



# yield\_bpm1i04WS\_mean vs Slug



Right In: 141489.883 $\pm$ 0.046  $\chi^2$ /NDF: 119003723891.7/25

Left Out: 160851.077 $\pm$ 0.048  $\chi^2$ /NDF: 99202825178.3/24

Right Out: 141594.500 $\pm$ 0.044  $\chi^2$ /NDF: 136710314517.2/30

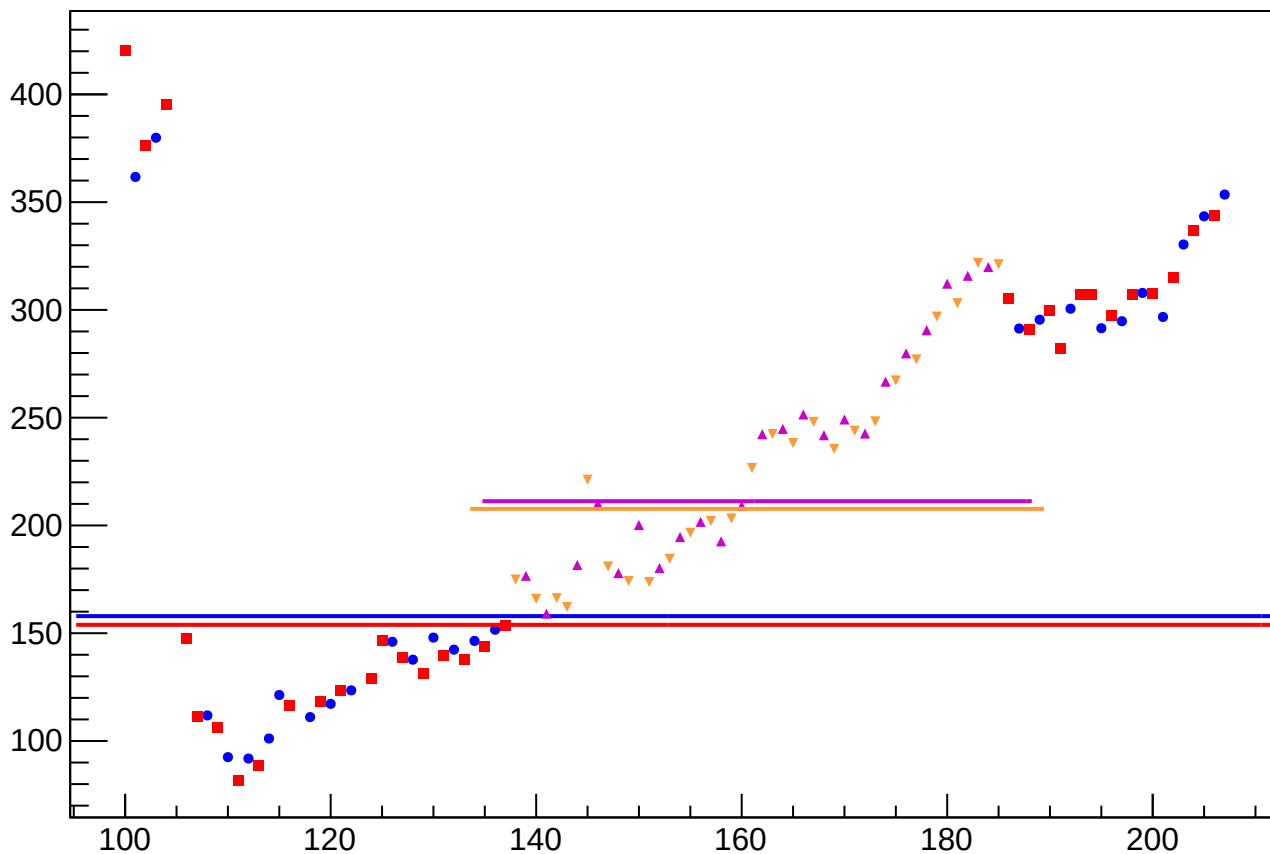
Left In: 160654.189 $\pm$ 0.051  $\chi^2$ /NDF: 90149721861.0/22

+ sign 150730.729 $\pm$ 0.033  $\chi^2$ /NDF: 301749283974

All: 150211.435 $\pm$ 0.023  $\chi^2$ /NDF: 610564212

- sign 149705.834 $\pm$ 0.033  $\chi^2$ /NDF: 308339489978

# yield\_bpm1i04WS\_rms vs Slug



Right In: 157.934 $\pm$ 0.033  $\chi^2$ /NDF: 6008188.5/25

Left Out: 207.689 $\pm$ 0.034  $\chi^2$ /NDF:1500711.5/24

Right Out: 153.893 $\pm$ 0.031  $\chi^2$ /NDF: 7126180.0/30

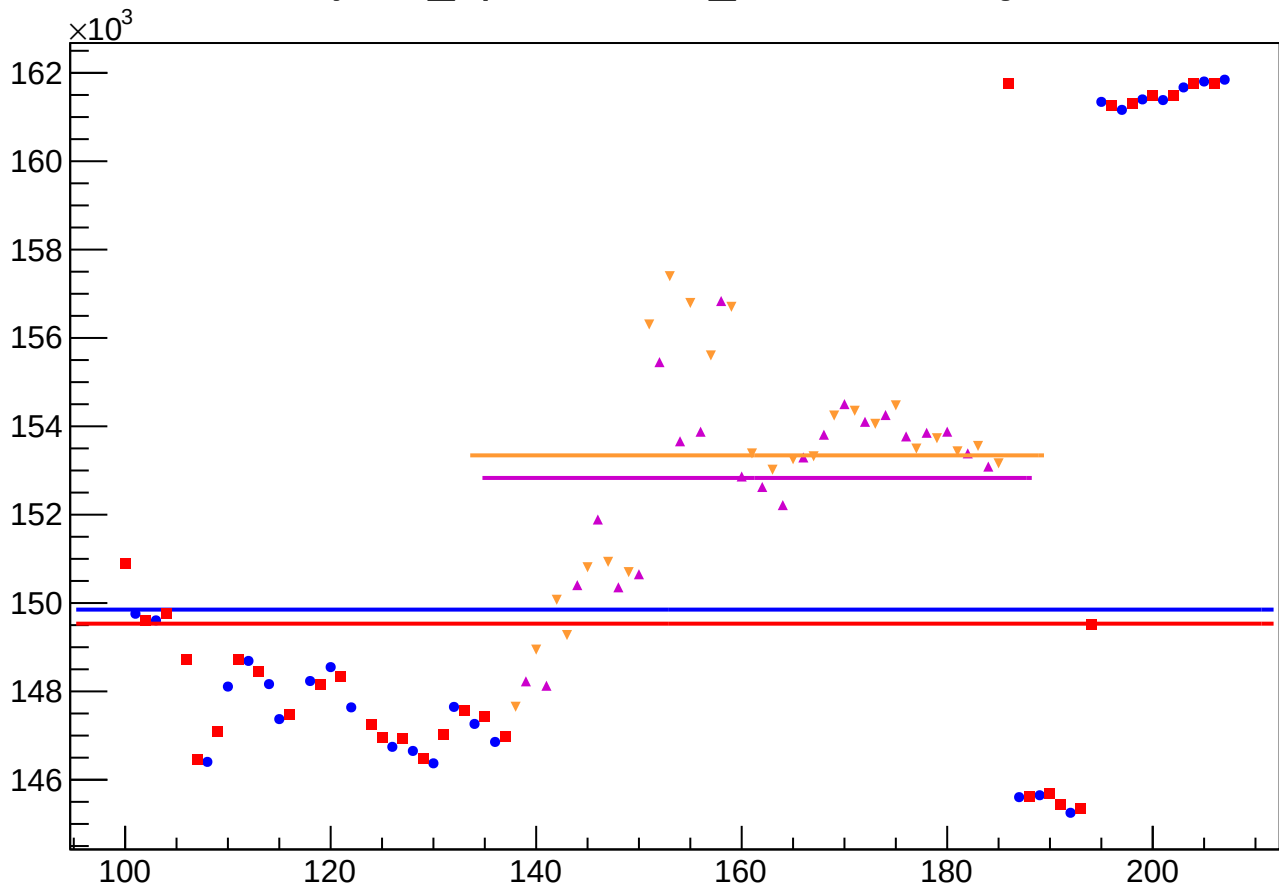
Left In: 211.254 $\pm$ 0.036  $\chi^2$ /NDF:1305730.5/22

+ sign 181.681 $\pm$ 0.024  $\chi^2$ /NDF: 8612355.2/50

All: 179.970 $\pm$ 0.017  $\chi^2$ /NDF: 18530596.1/10

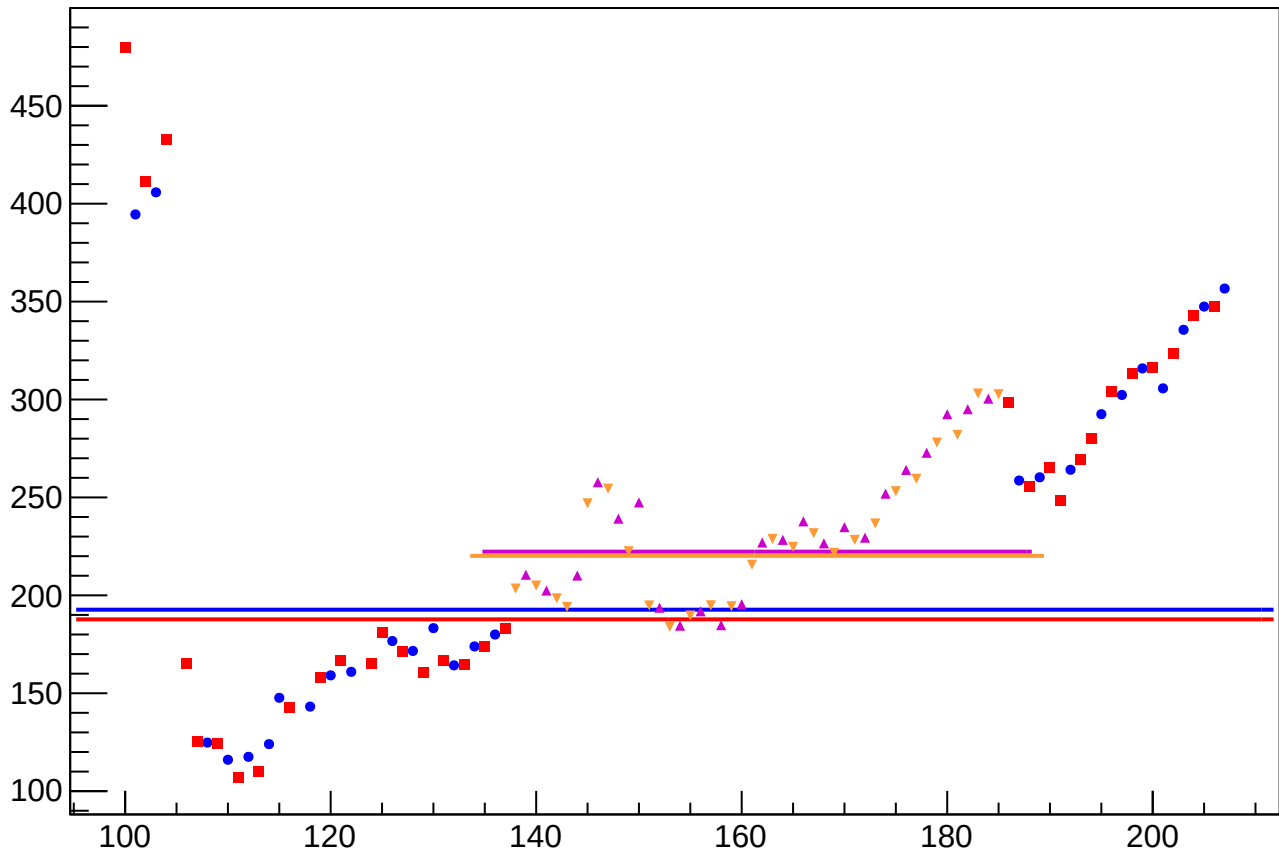
- sign 178.305 $\pm$ 0.023  $\chi^2$ /NDF: 9907918.7/53

# yield\_bpm1i06WS\_mean vs Slug



Right In:  $149851.384 \pm 0.054$   $\chi^2/\text{NDF}: 9935109759.8/25$   $+ \text{sign } 151712.341 \pm 0.037$   $\chi^2/\text{NDF}: 15119010116.$   
 Left Out:  $153342.472 \pm 0.051$   $\chi^2/\text{NDF}: 2978670616.9/24$  All:  $151410.766 \pm 0.026$   $\chi^2/\text{NDF}: 287339095$   
 Right Out:  $149533.111 \pm 0.051$   $\chi^2/\text{NDF}: 9542002985.0/30$   $- \text{sign } 151117.234 \pm 0.037$   $\chi^2/\text{NDF}: 13484436978.7$   
 Left In:  $152831.399 \pm 0.053$   $\chi^2/\text{NDF}: 1914395326.4/22$

# yield\_bpm1i06WS\_rms vs Slug



Right In: 192.671+/-0.038  $\chi^2/\text{NDF}$ : 4107621.2/25

Left Out: 220.156+/-0.036  $\chi^2/\text{NDF}$ : 685590.6/24

Right Out: 187.741+/-0.036  $\chi^2/\text{NDF}$ : 4830160.6/30

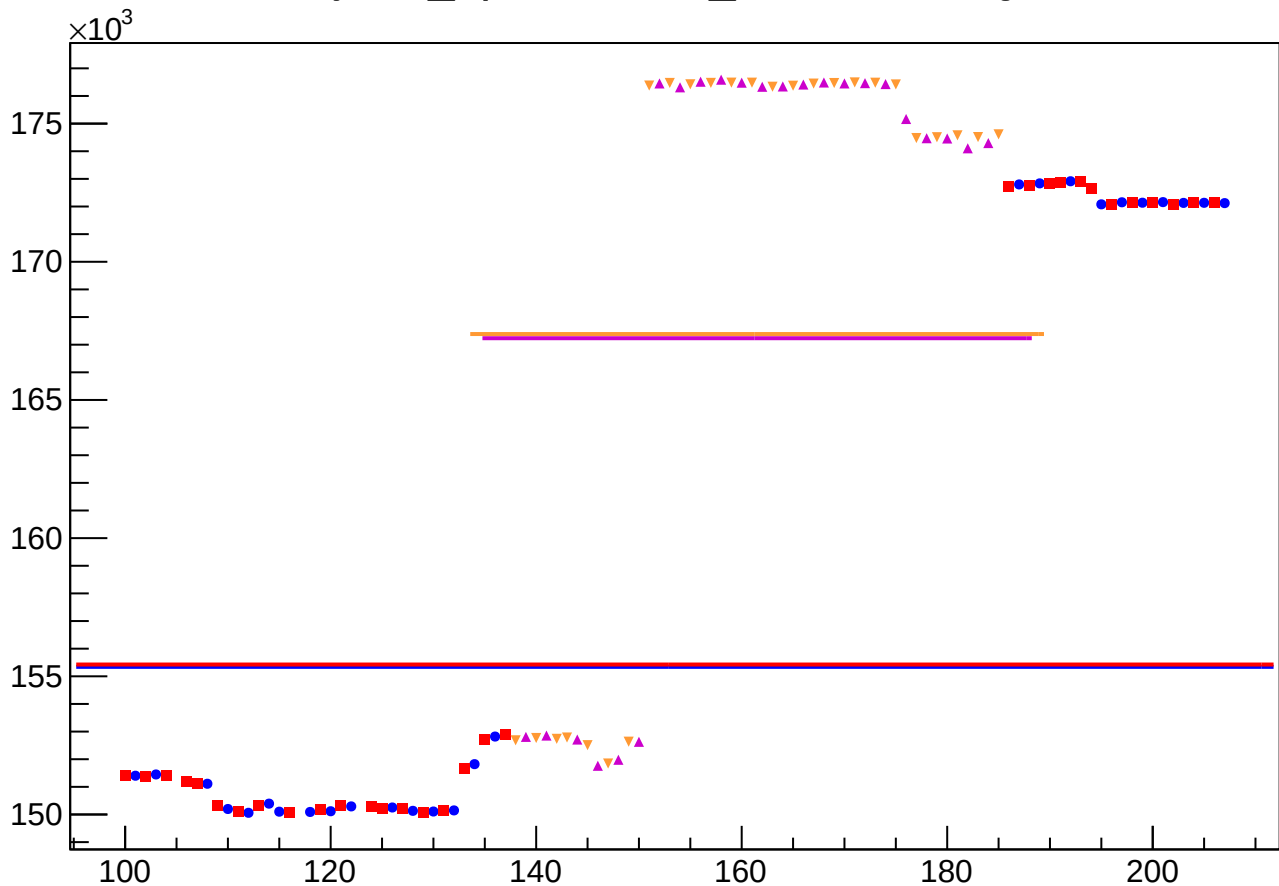
Left In: 222.304+/-0.037  $\chi^2/\text{NDF}$ : 697605.9/22

+ sign 207.322+/-0.026  $\chi^2/\text{NDF}$ : 5066572.9/50

All: 205.811+/-0.018  $\chi^2/\text{NDF}$ : 11046306.1/10

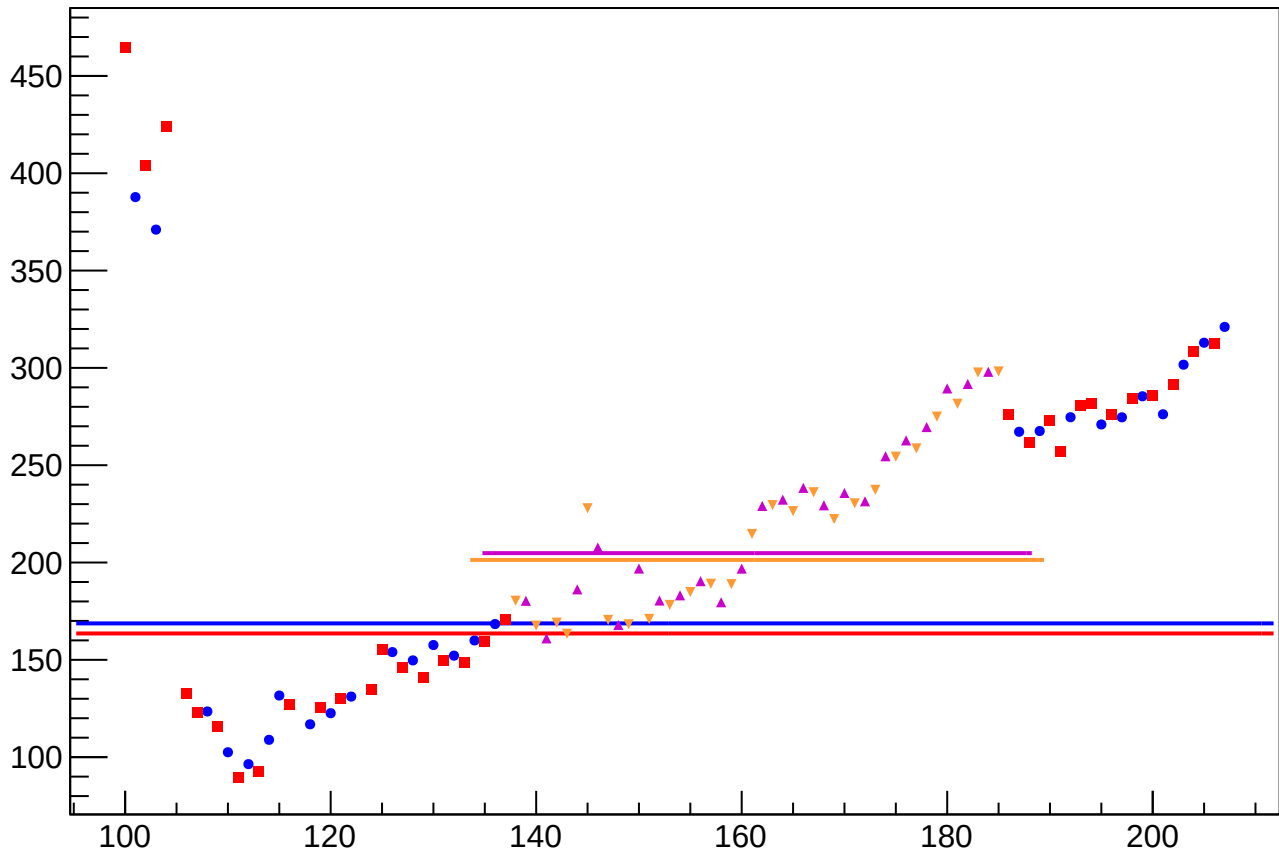
- sign 204.341+/-0.026  $\chi^2/\text{NDF}$ : 5973185.7/53

# yield\_bpm2i01WS\_mean vs Slug



Right In: 155342.729 $\pm$ 0.048  $\chi^2/\text{NDF}$ : 35051560005.2/25  
 Left Out: 167385.483 $\pm$ 0.047  $\chi^2/\text{NDF}$ : 59602607546.2/24  
 Right Out: 155426.313 $\pm$ 0.045  $\chi^2/\text{NDF}$ : 41100535494.8/30  
 Left In: 167234.214 $\pm$ 0.049  $\chi^2/\text{NDF}$ : 55099214555.0/22

# yield\_bpm2i01WS\_rms vs Slug



Right In: 168.725 $\pm$ 0.034  $\chi^2$ /NDF: 4766863.3/25

Left Out: 201.329 $\pm$ 0.033  $\chi^2$ /NDF:1230655.6/24

Right Out: 163.554 $\pm$ 0.032  $\chi^2$ /NDF: 5761039.2/30

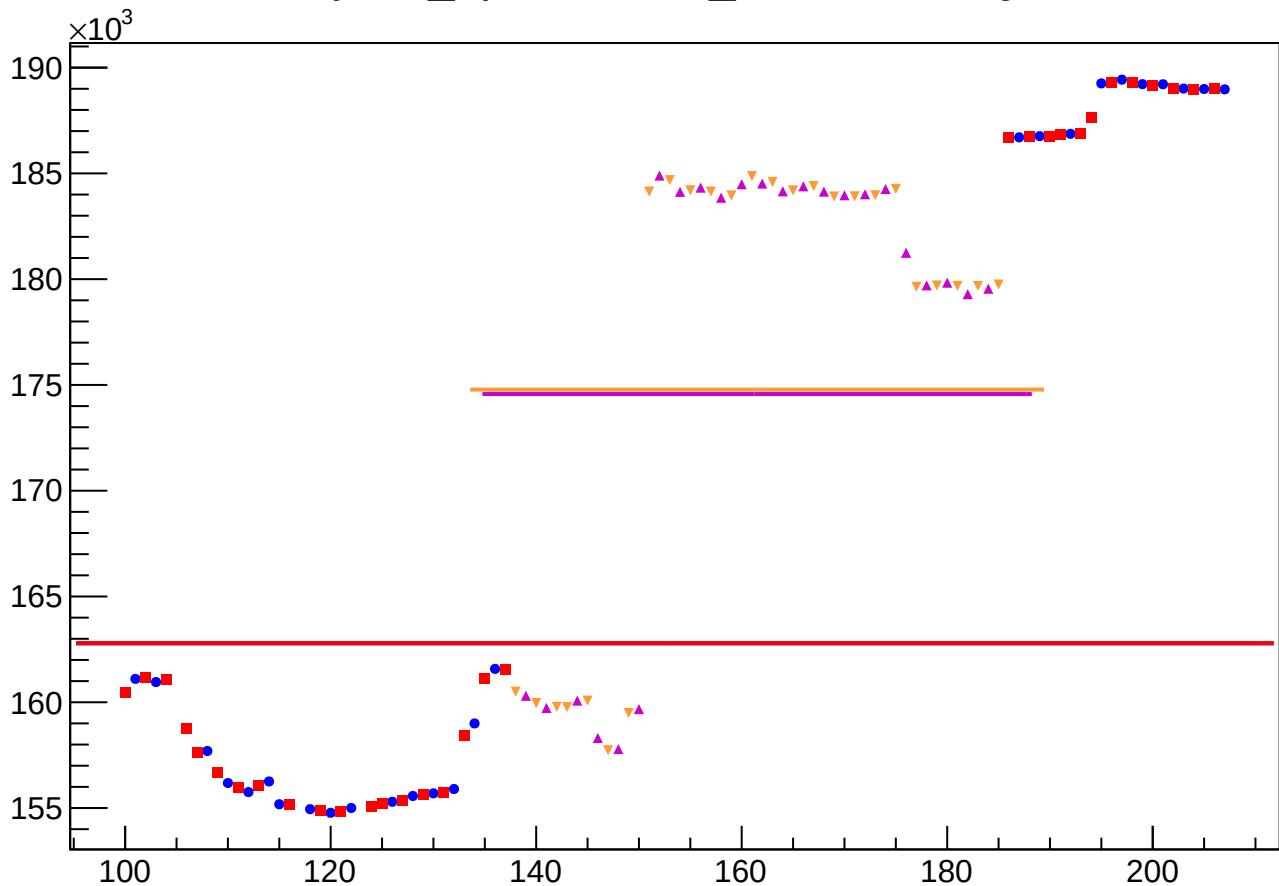
Left In: 204.826 $\pm$ 0.035  $\chi^2$ /NDF:1053130.7/22

+ sign 185.546 $\pm$ 0.024  $\chi^2$ /NDF: 6468760.8/50

All: 183.984 $\pm$ 0.017  $\chi^2$ /NDF: 14064177.0/10

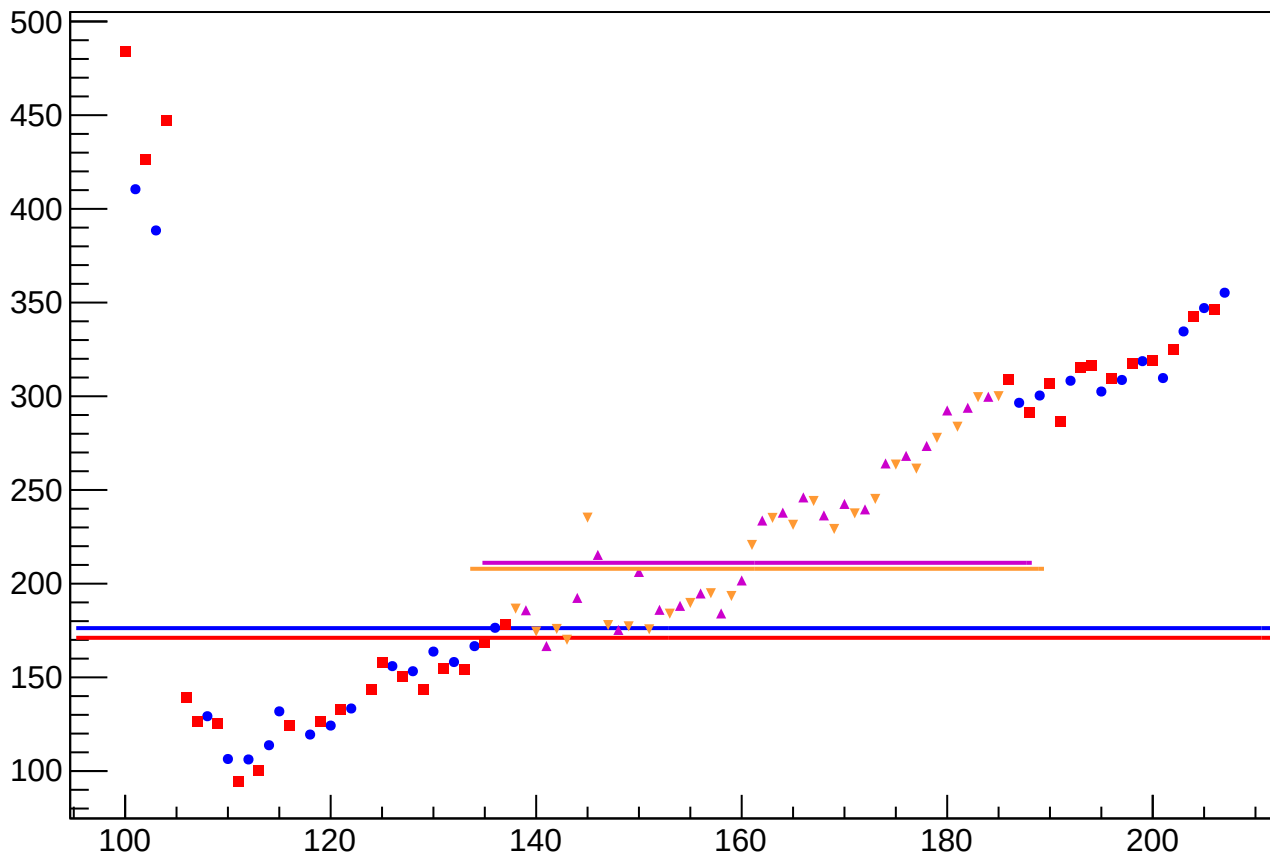
- sign 182.468 $\pm$ 0.023  $\chi^2$ /NDF: 7586888.6/53

# yield\_bpm2i02WS\_mean vs Slug



Right In: 162783.996 $\pm$ 0.051  $\chi^2$ /NDF: 64127665173.1/25  
 Left Out: 174780.651 $\pm$ 0.048  $\chi^2$ /NDF: 58132787948.0/24  
 Right Out: 162795.750 $\pm$ 0.048  $\chi^2$ /NDF: 72418605275.6/30  
 Left In: 174570.001 $\pm$ 0.050  $\chi^2$ /NDF: 54757801795.4/22  
 + sign 169112.214 $\pm$ 0.035  $\chi^2$ /NDF: 151523750713  
 All: 168723.726 $\pm$ 0.025  $\chi^2$ /NDF: 307870666  
 - sign 168345.264 $\pm$ 0.035  $\chi^2$ /NDF: 156103849703

# yield\_bpm2i02WS\_rms vs Slug



Right In: 176.278 $\pm$ 0.036  $\chi^2$ /NDF: 5267144.5/25

Left Out: 207.940 $\pm$ 0.034  $\chi^2$ /NDF:1132127.7/24

Right Out: 171.110 $\pm$ 0.034  $\chi^2$ /NDF: 6319261.4/30

Left In: 211.133 $\pm$ 0.036  $\chi^2$ /NDF:993720.4/22

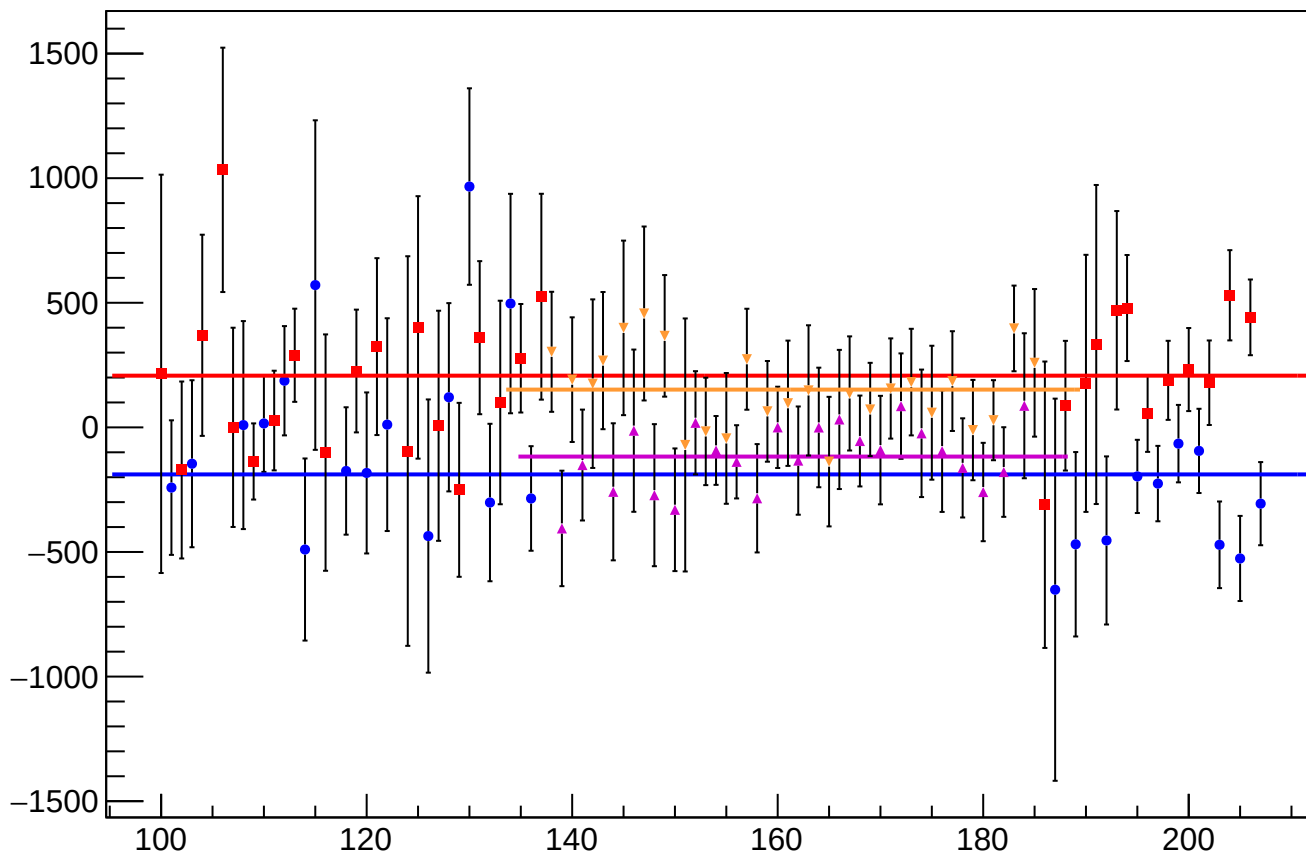
+ sign 192.979 $\pm$ 0.025  $\chi^2$ /NDF: 6806942.4/50

All: 191.457 $\pm$ 0.017  $\chi^2$ /NDF: 14795903.4/10

- sign 189.974 $\pm$ 0.024  $\chi^2$ /NDF: 7981495.6/53



# asym\_bcm\_target\_mean vs Slug



Right In:  $-188.729 \pm 46.725$   $\chi^2/\text{NDF}$ : 28.4/25

Left Out:  $151.598 \pm 46.419$   $\chi^2/\text{NDF}$ : 9.6/24

Right Out:  $207.512 \pm 45.060$   $\chi^2/\text{NDF}$ : 24.0/30

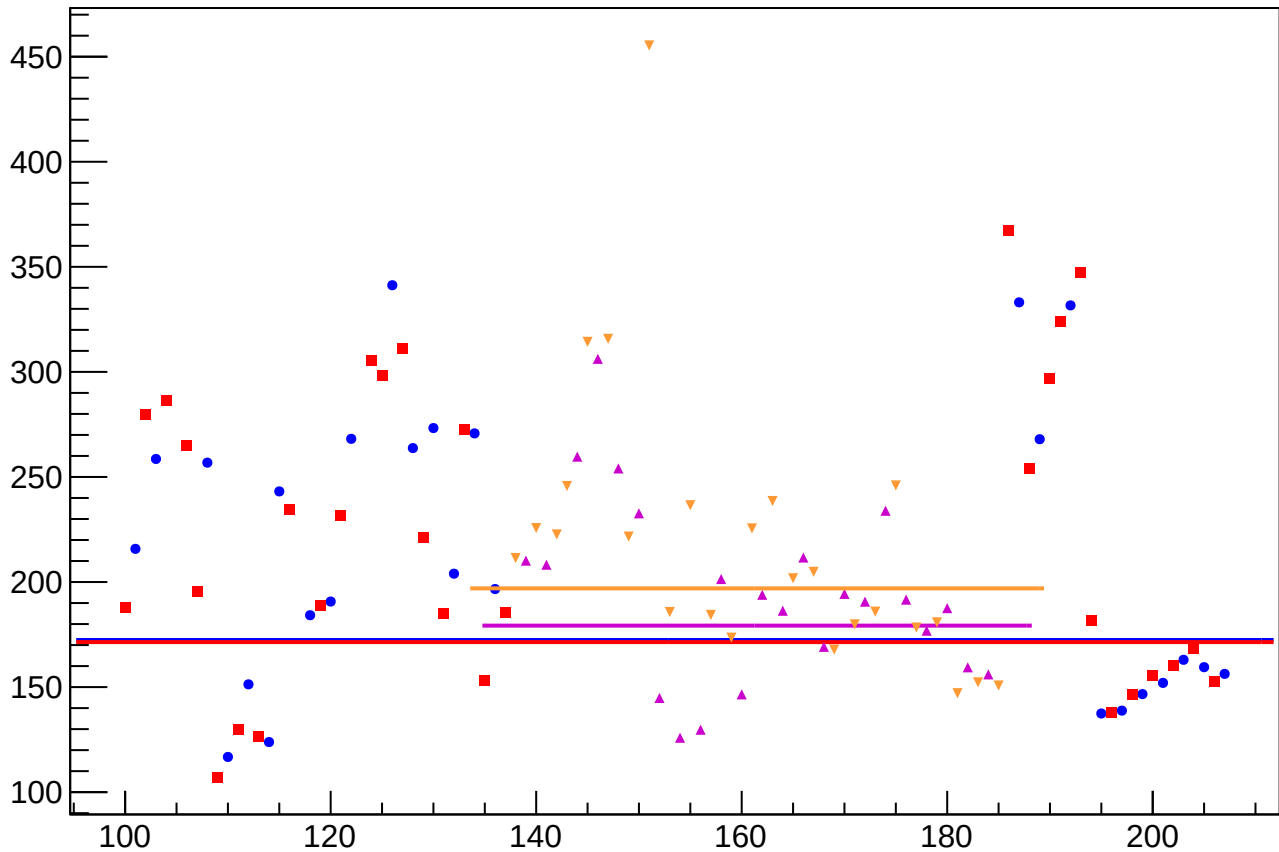
Left In:  $-117.163 \pm 43.778$   $\chi^2/\text{NDF}$ : 7.5/22

+ sign  $-17.448 \pm 32.931$   $\chi^2/\text{NDF}$ : 64.7/50

All:  $12.900 \pm 22.725$   $\chi^2/\text{NDF}$ : 124.4/104

- sign  $40.490 \pm 31.399$   $\chi^2/\text{NDF}$ : 58.1/53

# asym\_bcm\_target\_rms vs Slug



Right In: 172.417 $\pm$ 0.033  $\chi^2$ /NDF: 2200966.7/25

Left Out: 196.975 $\pm$ 0.033  $\chi^2$ /NDF:1809307.4/24

Right Out: 171.411 $\pm$ 0.032  $\chi^2$ /NDF: 2896701.5/30

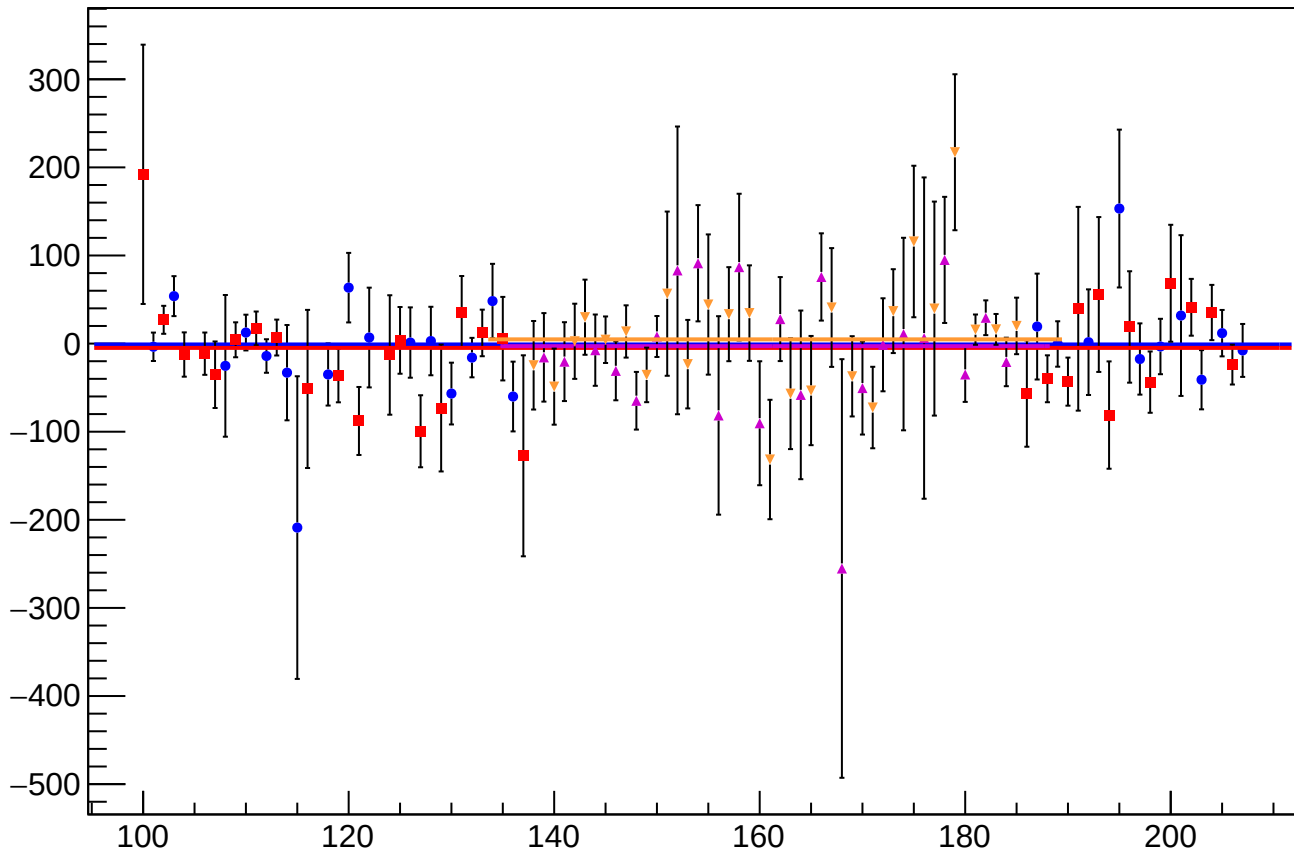
Left In: 179.256 $\pm$ 0.031  $\chi^2$ /NDF:1656023.5/22

+ sign 184.777 $\pm$ 0.023  $\chi^2$ /NDF: 4288326.5/50

All: 179.890 $\pm$ 0.016  $\chi^2$ /NDF: 8956339.4/104

- sign 175.446 $\pm$ 0.022  $\chi^2$ /NDF: 4583912.5/53

# asym\_bcm\_an\_diff\_mean vs Slug



Right In:  $-0.979 \pm 6.211$   $\chi^2/\text{NDF}$ : 24.0/25

Left Out:  $4.803 \pm 7.601$   $\chi^2/\text{NDF}$ : 24.3/24

Right Out:  $-4.872 \pm 5.718$   $\chi^2/\text{NDF}$ : 37.0/30

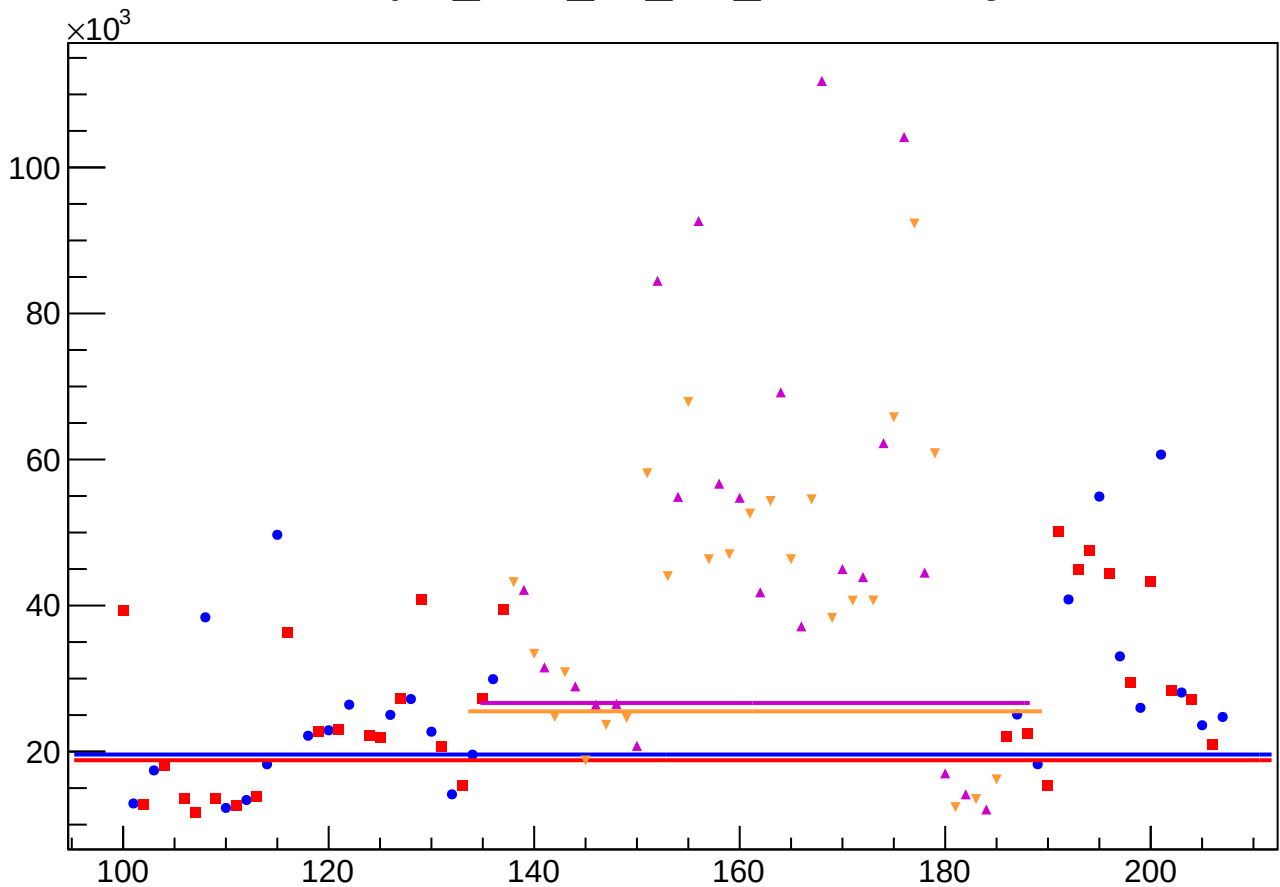
Left In:  $-2.918 \pm 8.840$   $\chi^2/\text{NDF}$ : 21.5/22

+ sign  $1.336 \pm 4.809$   $\chi^2/\text{NDF}$ : 48.7/50

All:  $-1.484 \pm 3.398$   $\chi^2/\text{NDF}$ : 107.9/104

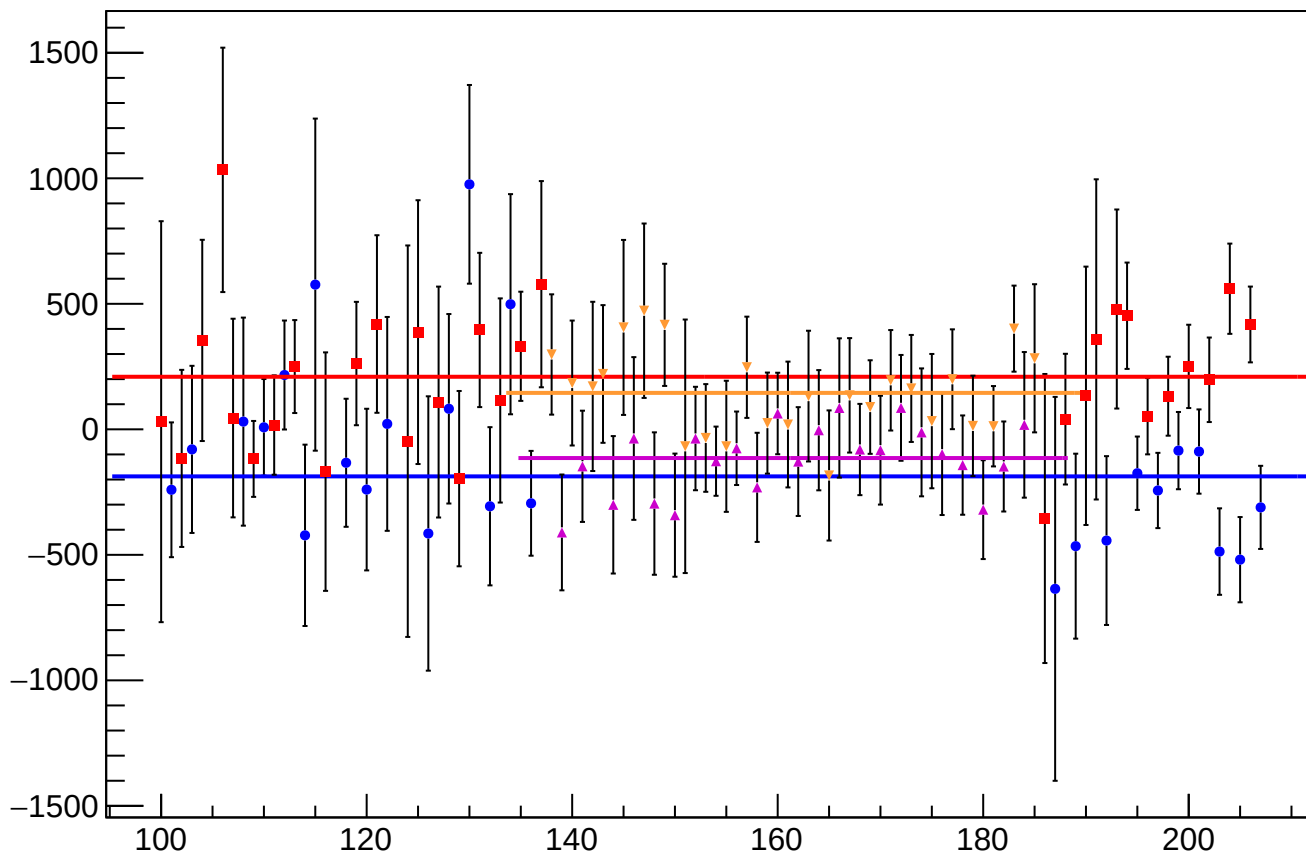
- sign  $-4.295 \pm 4.801$   $\chi^2/\text{NDF}$ : 58.6/53

# asym\_bcm\_an\_diff\_rms vs Slug



|                              |                                    |                          |                                     |
|------------------------------|------------------------------------|--------------------------|-------------------------------------|
| Right In: 19597.731+/-4.392  | $\chi^2/\text{NDF}$ : 2973508.0/25 | + sign 21965.849+/-3.401 | $\chi^2/\text{NDF}$ : 11442313.2/50 |
| Left Out: 25512.643+/-5.375  | $\chi^2/\text{NDF}$ : 7742585.8/24 | All: 21548.276+/-2.403   | $\chi^2/\text{NDF}$ : 21990373.7    |
| Right Out: 18818.633+/-4.044 | $\chi^2/\text{NDF}$ : 3525158.5/30 | - sign 21132.094+/-3.395 | $\chi^2/\text{NDF}$ : 10517958.2/53 |
| Left In: 26660.853+/-6.251   | $\chi^2/\text{NDF}$ : 5883195.1/22 |                          |                                     |

# asym\_bcm\_an\_ds\_mean vs Slug



Right In:  $-187.455 \pm 46.412$   $\chi^2/\text{NDF}$ : 29.0/25

Left Out:  $145.172 \pm 46.225$   $\chi^2/\text{NDF}$ : 11.2/24

Right Out:  $209.406 \pm 44.785$   $\chi^2/\text{NDF}$ : 24.3/30

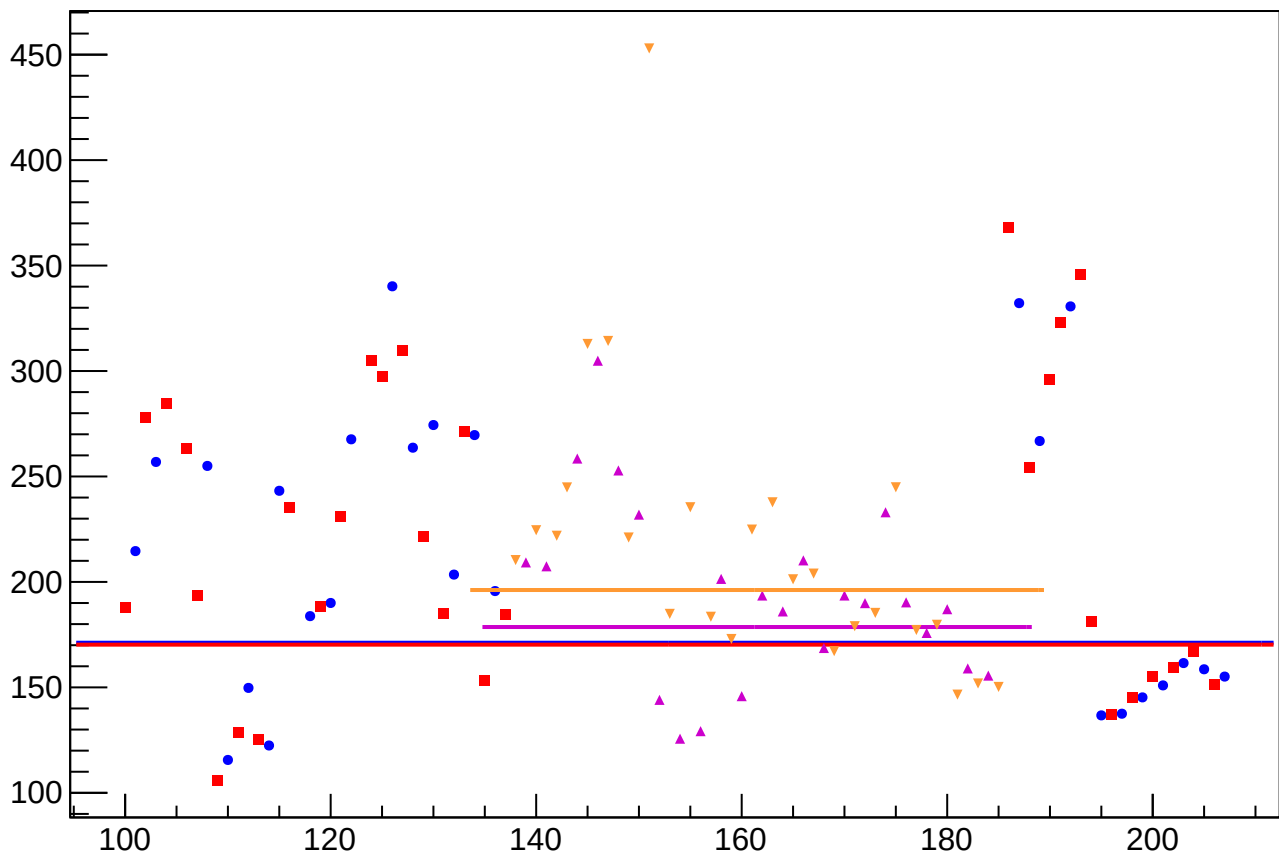
Left In:  $-114.400 \pm 43.619$   $\chi^2/\text{NDF}$ : 8.4/22

+ sign  $-20.471 \pm 32.752$   $\chi^2/\text{NDF}$ : 66.0/50

All:  $12.878 \pm 22.609$   $\chi^2/\text{NDF}$ : 127.4/104

- sign  $43.234 \pm 31.248$   $\chi^2/\text{NDF}$ : 59.5/53

# asym\_bcm\_an\_ds\_rms vs Slug



Right In: 171.170 $\pm$ 0.033  $\chi^2$ /NDF: 2231371.9/25

Left Out: 196.166 $\pm$ 0.033  $\chi^2$ /NDF:1806871.5/24

Right Out: 170.262 $\pm$ 0.032  $\chi^2$ /NDF: 2933541.7/30

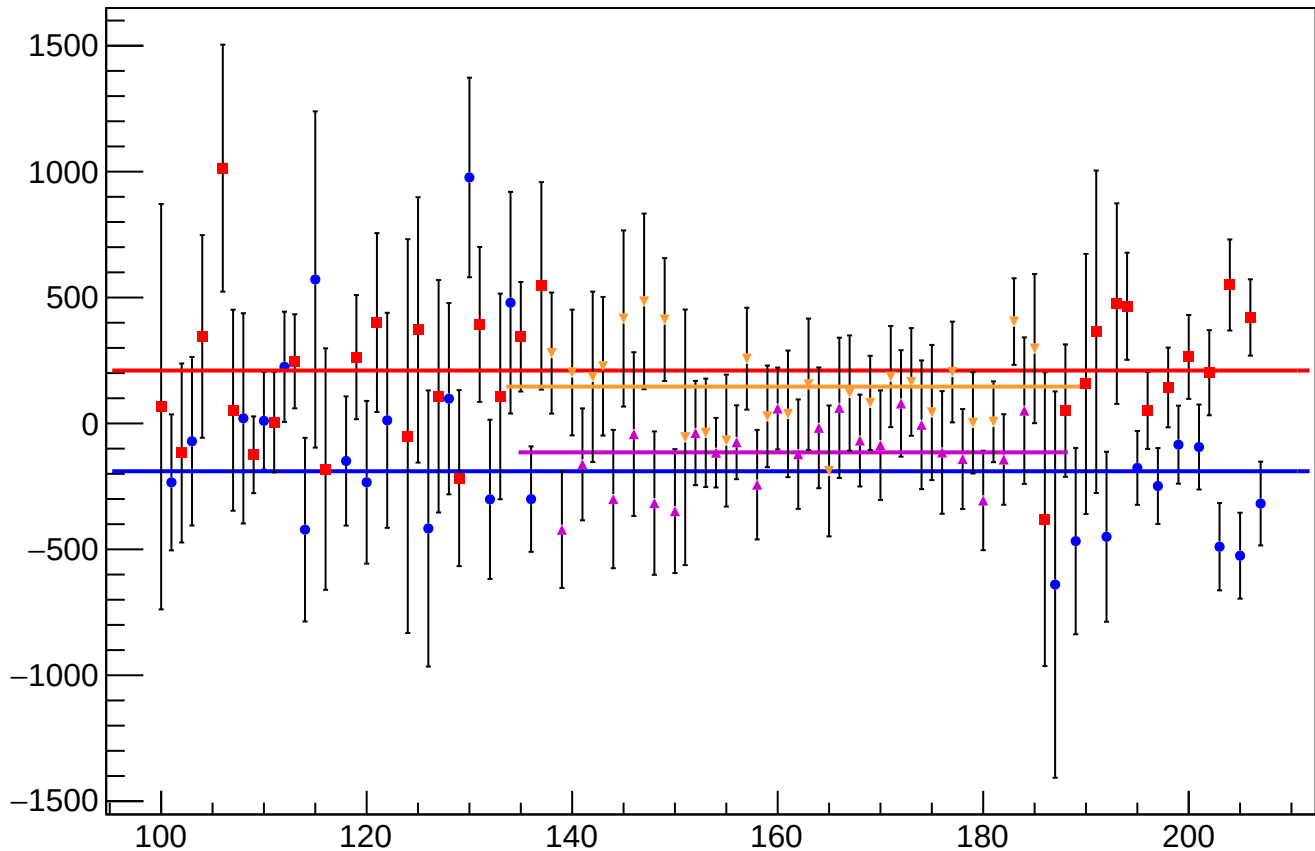
Left In: 178.621 $\pm$ 0.031  $\chi^2$ /NDF:1651873.8/22

+ sign 183.718 $\pm$ 0.023  $\chi^2$ /NDF: 4329456.5/50

All: 178.919 $\pm$ 0.016  $\chi^2$ /NDF: 9032638.5/104

- sign 174.552 $\pm$ 0.022  $\chi^2$ /NDF: 4621169.6/53

# asym\_bcm\_an\_ds3\_mean vs Slug



Right In:  $-189.769 \pm 46.648$   $\chi^2/\text{NDF}$ : 29.1/25

Left Out:  $146.417 \pm 46.379$   $\chi^2/\text{NDF}$ : 11.4/24

Right Out:  $210.300 \pm 45.015$   $\chi^2/\text{NDF}$ : 24.1/30

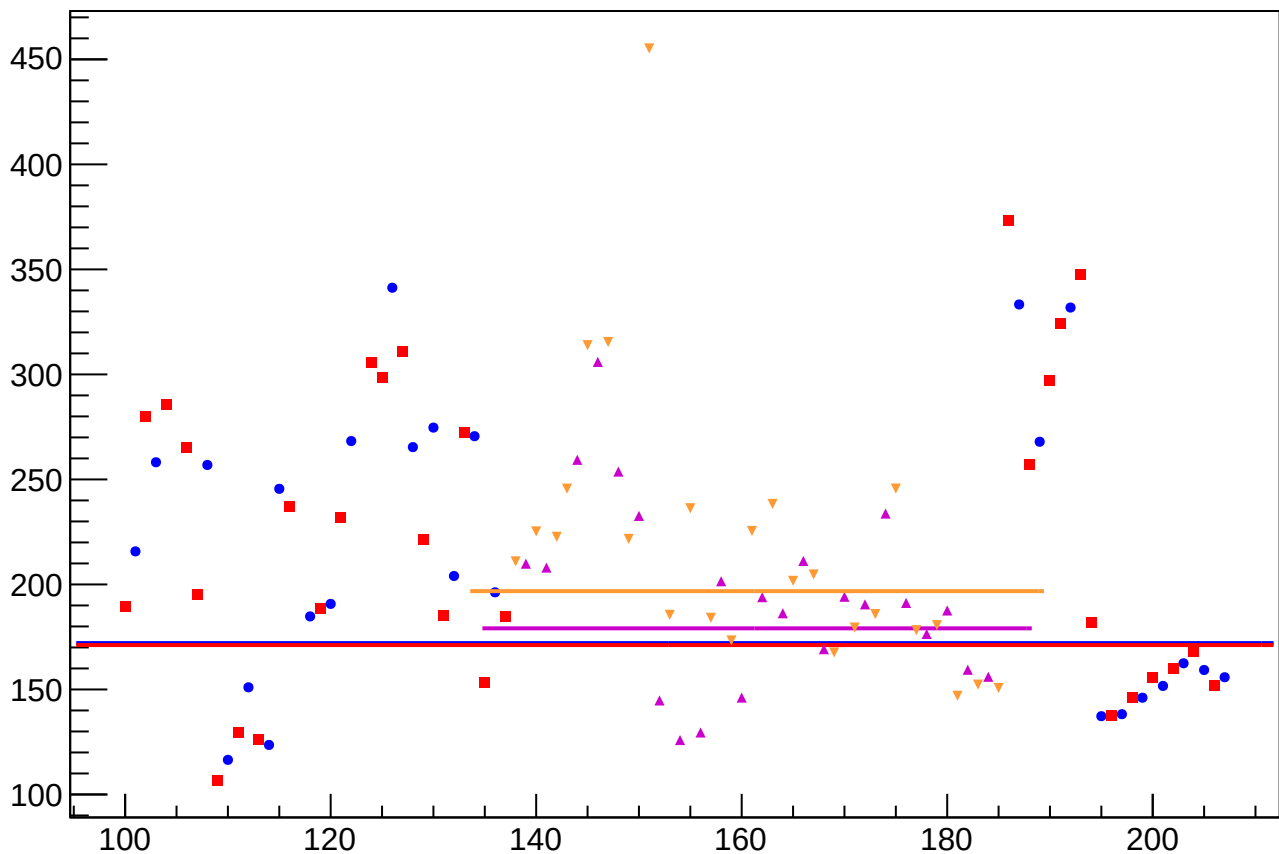
Left In:  $-114.807 \pm 43.740$   $\chi^2/\text{NDF}$ : 8.4/22

+ sign  $-20.703 \pm 32.890$   $\chi^2/\text{NDF}$ : 66.6/50

All:  $12.696 \pm 22.700$   $\chi^2/\text{NDF}$ : 128.0/104

- sign  $43.080 \pm 31.370$   $\chi^2/\text{NDF}$ : 59.4/53

# asym\_bcm\_an\_ds3\_rms vs Slug



Right In: 172.068 $\pm$ 0.033  $\chi^2$ /NDF: 2222028.9/25

Left Out: 196.805 $\pm$ 0.033  $\chi^2$ /NDF:1808608.7/24

Right Out: 171.140 $\pm$ 0.032  $\chi^2$ /NDF: 2930663.9/30

Left In: 179.101 $\pm$ 0.031  $\chi^2$ /NDF:1655866.1/22

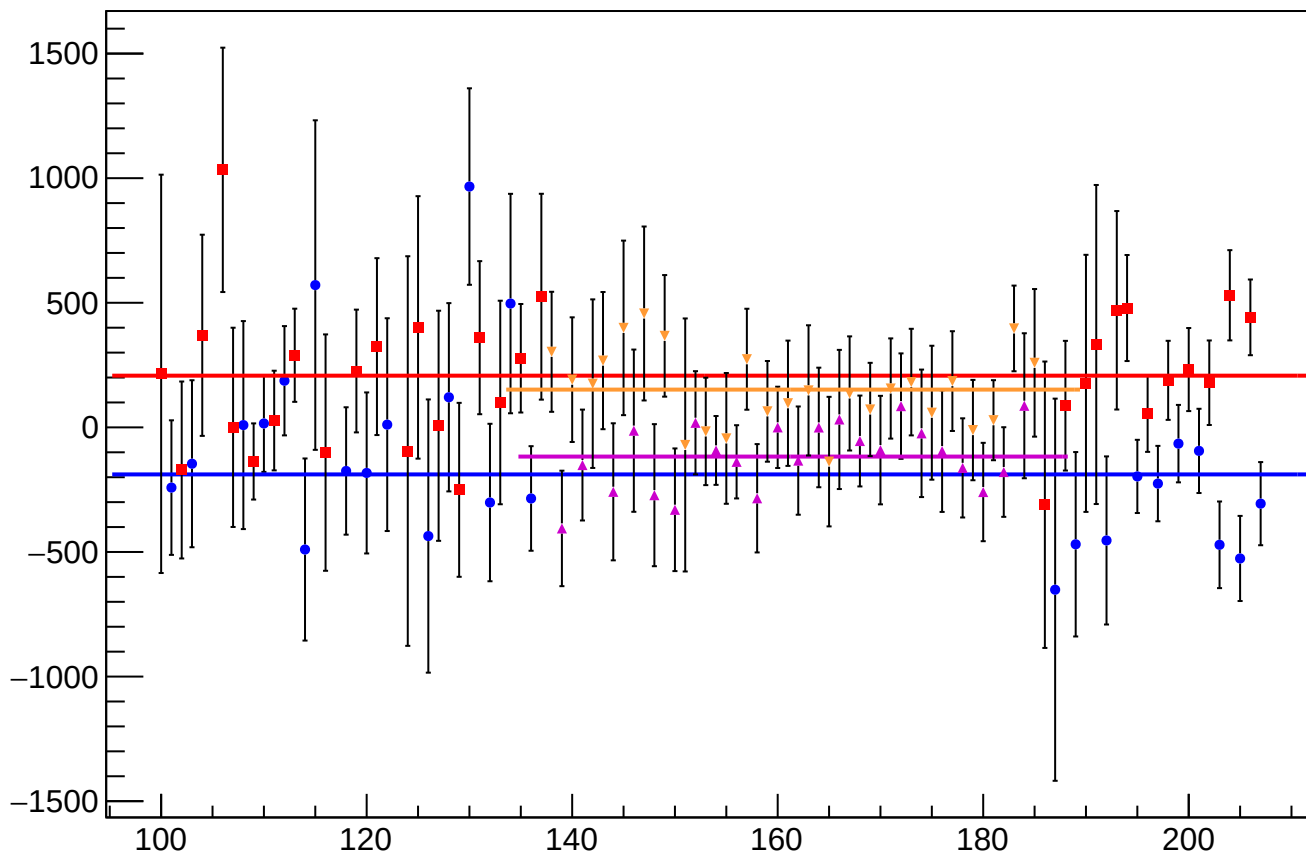
+ sign 184.508 $\pm$ 0.023  $\chi^2$ /NDF: 4313485.6/50

All: 179.652 $\pm$ 0.016  $\chi^2$ /NDF: 9015440.1/104

- sign 175.235 $\pm$ 0.022  $\chi^2$ /NDF: 4618699.7/53



# asym\_bcm\_an\_us\_mean vs Slug



Right In:  $-188.729 \pm 46.725$   $\chi^2/\text{NDF}$ : 28.4/25

Left Out:  $151.598 \pm 46.419$   $\chi^2/\text{NDF}$ : 9.6/24

Right Out:  $207.512 \pm 45.060$   $\chi^2/\text{NDF}$ : 24.0/30

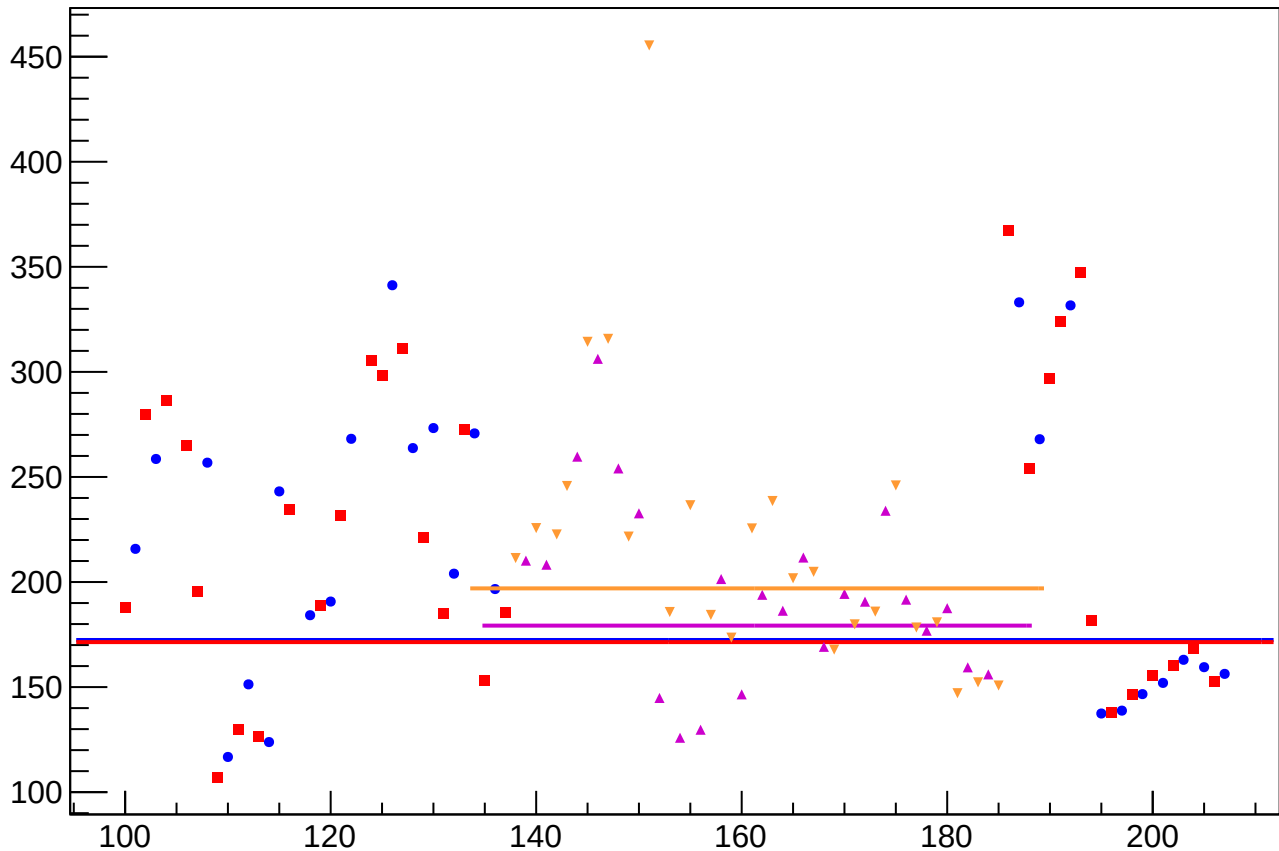
Left In:  $-117.163 \pm 43.778$   $\chi^2/\text{NDF}$ : 7.5/22

+ sign  $-17.448 \pm 32.931$   $\chi^2/\text{NDF}$ : 64.7/50

All:  $12.900 \pm 22.725$   $\chi^2/\text{NDF}$ : 124.4/104

- sign  $40.490 \pm 31.399$   $\chi^2/\text{NDF}$ : 58.1/53

# asym\_bcm\_an\_us\_rms vs Slug



Right In: 172.417 $\pm$ 0.033  $\chi^2$ /NDF: 2200966.7/25

Left Out: 196.975 $\pm$ 0.033  $\chi^2$ /NDF:1809307.4/24

Right Out: 171.411 $\pm$ 0.032  $\chi^2$ /NDF: 2896701.5/30

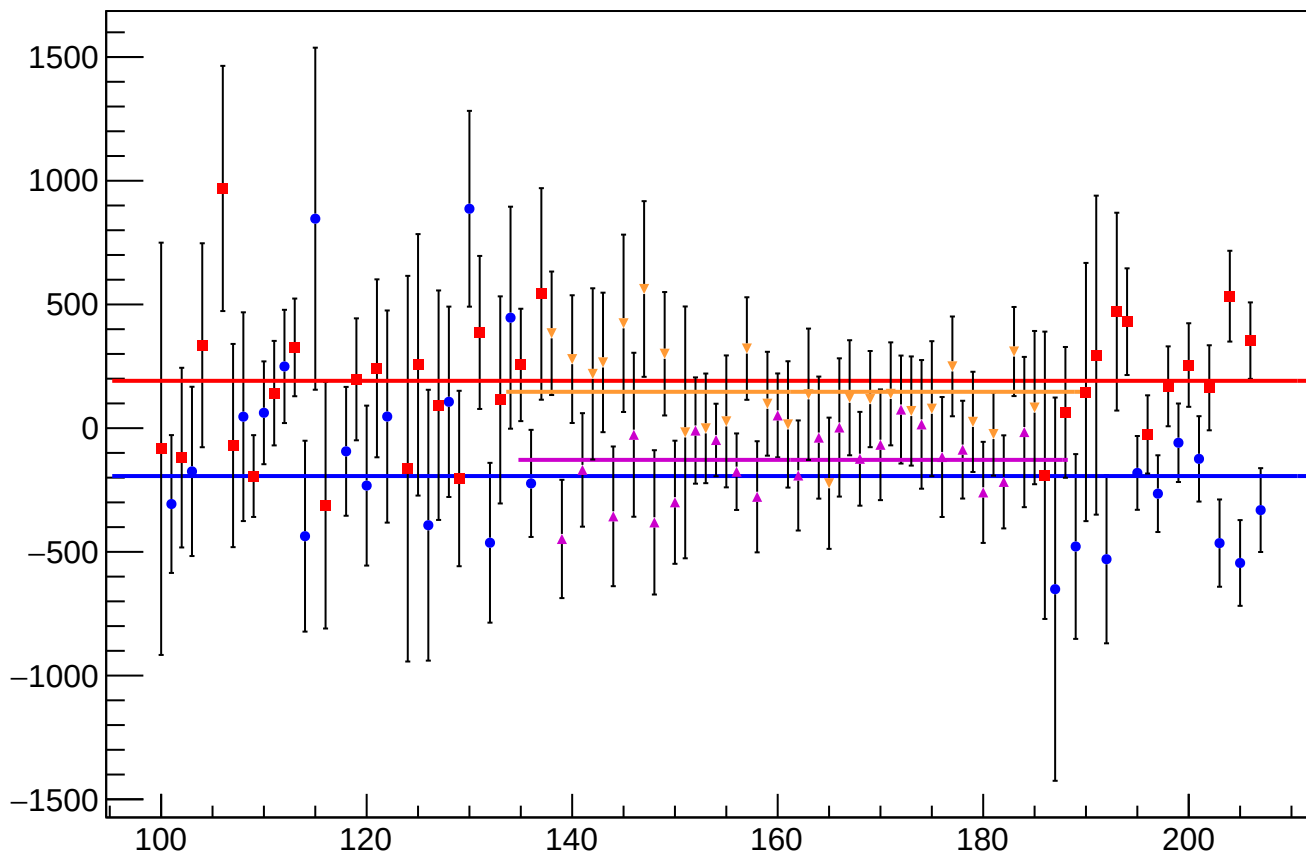
Left In: 179.256 $\pm$ 0.031  $\chi^2$ /NDF:1656023.5/22

+ sign 184.777 $\pm$ 0.023  $\chi^2$ /NDF: 4288326.5/50

All: 179.890 $\pm$ 0.016  $\chi^2$ /NDF: 8956339.4/104

- sign 175.446 $\pm$ 0.022  $\chi^2$ /NDF: 4583912.5/53

# asym\_bcm\_dg\_us\_mean vs Slug



Right In:  $-193.560 \pm 47.791$   $\chi^2/\text{NDF}$ : 30.0/25

Left Out:  $146.973 \pm 47.709$   $\chi^2/\text{NDF}$ : 10.2/24

Right Out:  $191.338 \pm 46.293$   $\chi^2/\text{NDF}$ : 22.6/30

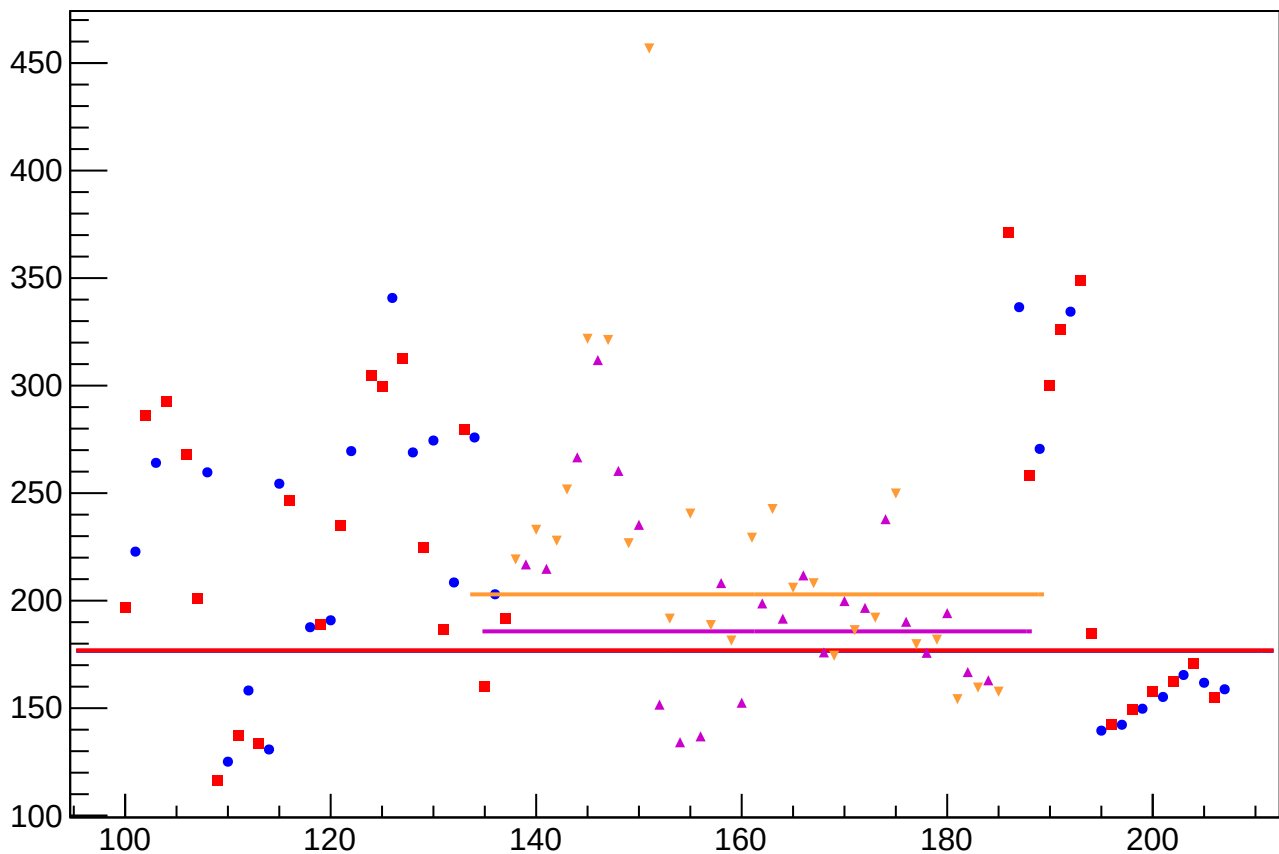
Left In:  $-128.159 \pm 45.200$   $\chi^2/\text{NDF}$ : 8.6/22

+ sign  $-22.999 \pm 33.764$   $\chi^2/\text{NDF}$ : 65.6/50

All:  $3.480 \pm 23.355$   $\chi^2/\text{NDF}$ : 122.3/104

- sign  $27.772 \pm 32.341$   $\chi^2/\text{NDF}$ : 55.5/53

# asym\_bcm\_dg\_us\_rms vs Slug



Right In: 176.695 $\pm$ 0.034  $\chi^2$ /NDF: 2114887.3/25

Left Out: 202.920 $\pm$ 0.034  $\chi^2$ /NDF:1700115.2/24

Right Out: 176.870 $\pm$ 0.033  $\chi^2$ /NDF: 2688610.0/30

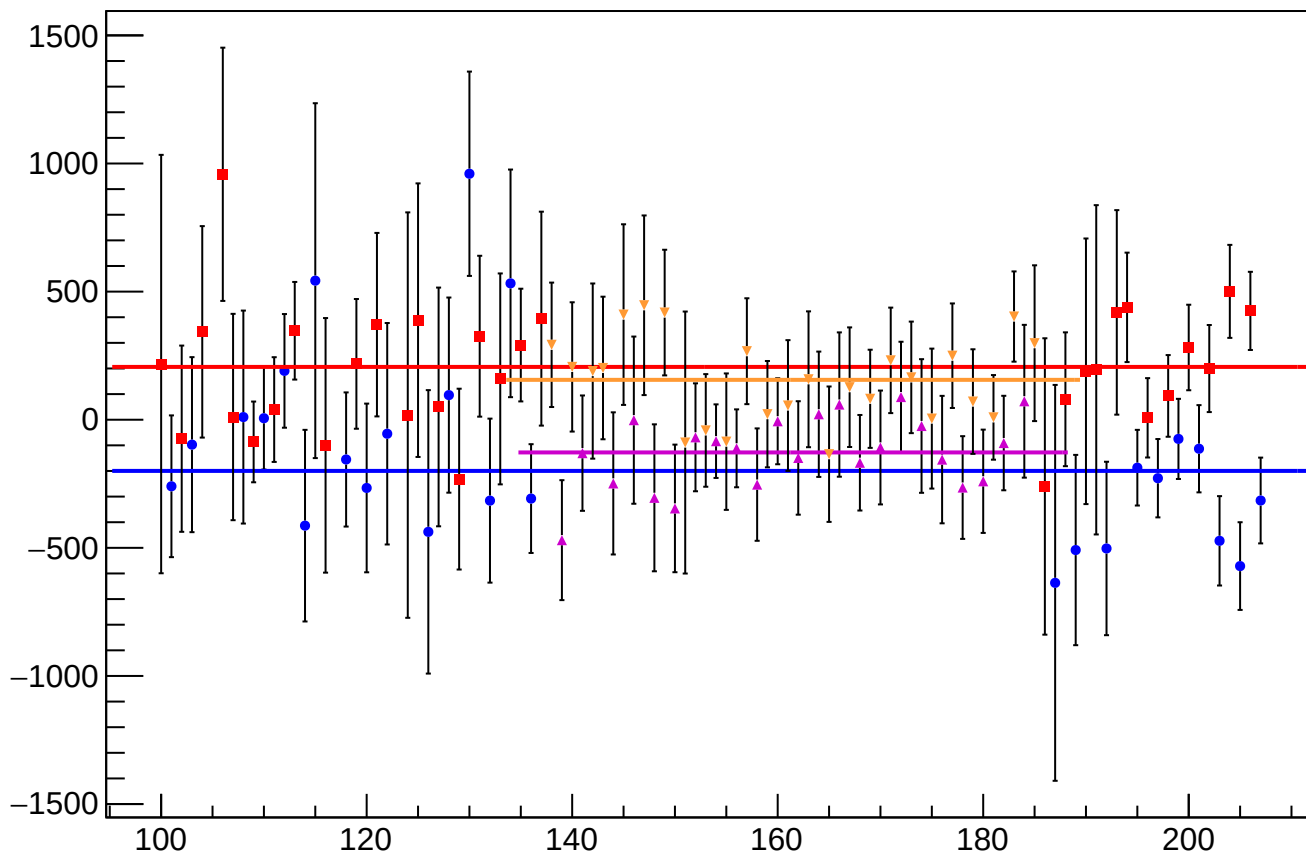
Left In: 185.716 $\pm$ 0.032  $\chi^2$ /NDF:1489487.2/22

+ sign 189.831 $\pm$ 0.024  $\chi^2$ /NDF: 4116634.9/50

All: 185.433 $\pm$ 0.017  $\chi^2$ /NDF: 8397162.8/104

- sign 181.399 $\pm$ 0.023  $\chi^2$ /NDF: 4215480.9/53

# asym\_bcm\_dg\_ds\_mean vs Slug



Right In:  $-199.741 \pm 47.192$   $\chi^2/\text{NDF}$ : 28.9/25

Left Out:  $155.646 \pm 47.263$   $\chi^2/\text{NDF}$ : 10.7/24

Right Out:  $206.110 \pm 45.568$   $\chi^2/\text{NDF}$ : 20.3/30

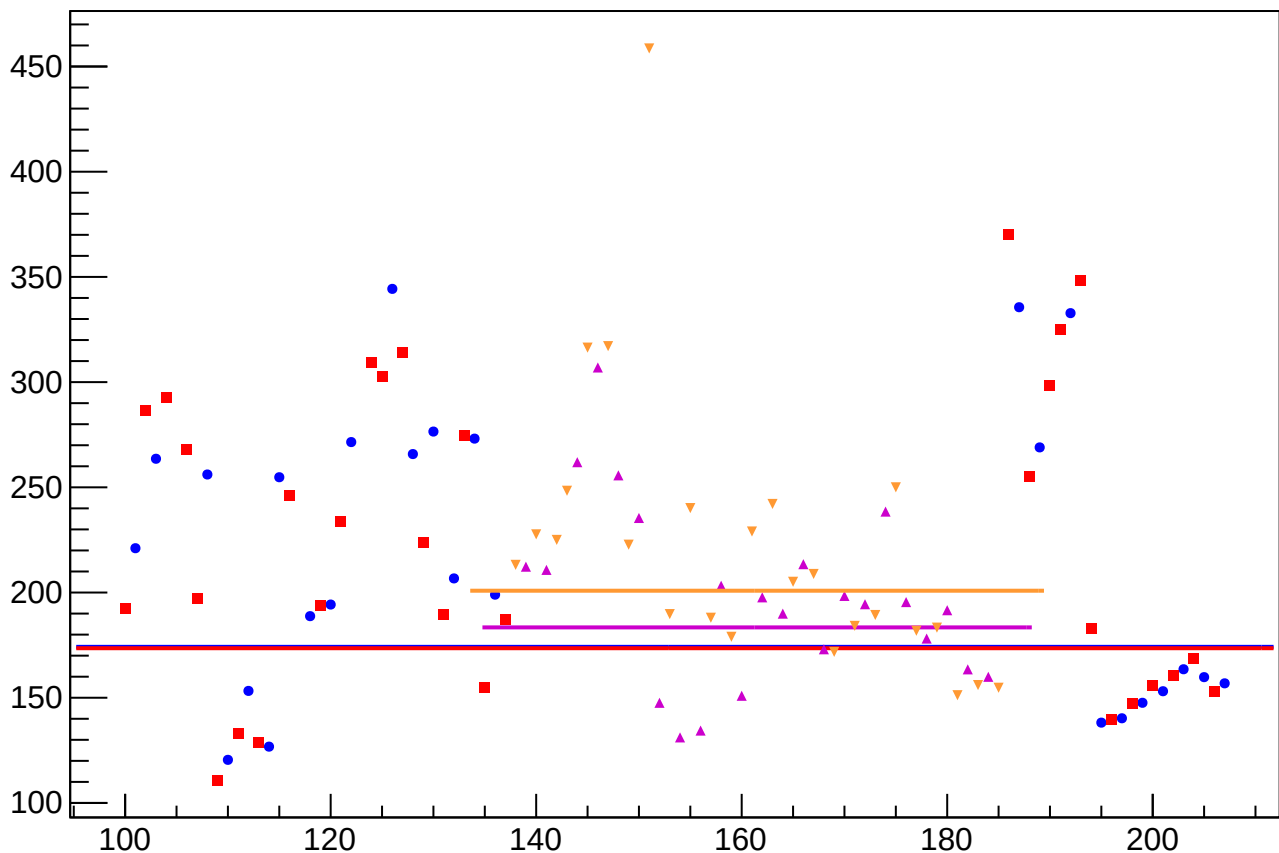
Left In:  $-127.660 \pm 44.698$   $\chi^2/\text{NDF}$ : 8.0/22

+ sign  $-22.314 \pm 33.395$   $\chi^2/\text{NDF}$ : 67.9/50

All:  $8.173 \pm 23.071$   $\chi^2/\text{NDF}$ : 125.1/104

- sign  $36.008 \pm 31.909$   $\chi^2/\text{NDF}$ : 55.6/53

# asym\_bcm\_dg\_ds\_rms vs Slug



Right In: 174.188 $\pm$ 0.033  $\chi^2$ /NDF: 2198171.1/25

Left Out: 200.865 $\pm$ 0.033  $\chi^2$ /NDF:1727404.3/24

Right Out: 173.535 $\pm$ 0.032  $\chi^2$ /NDF: 2860369.5/30

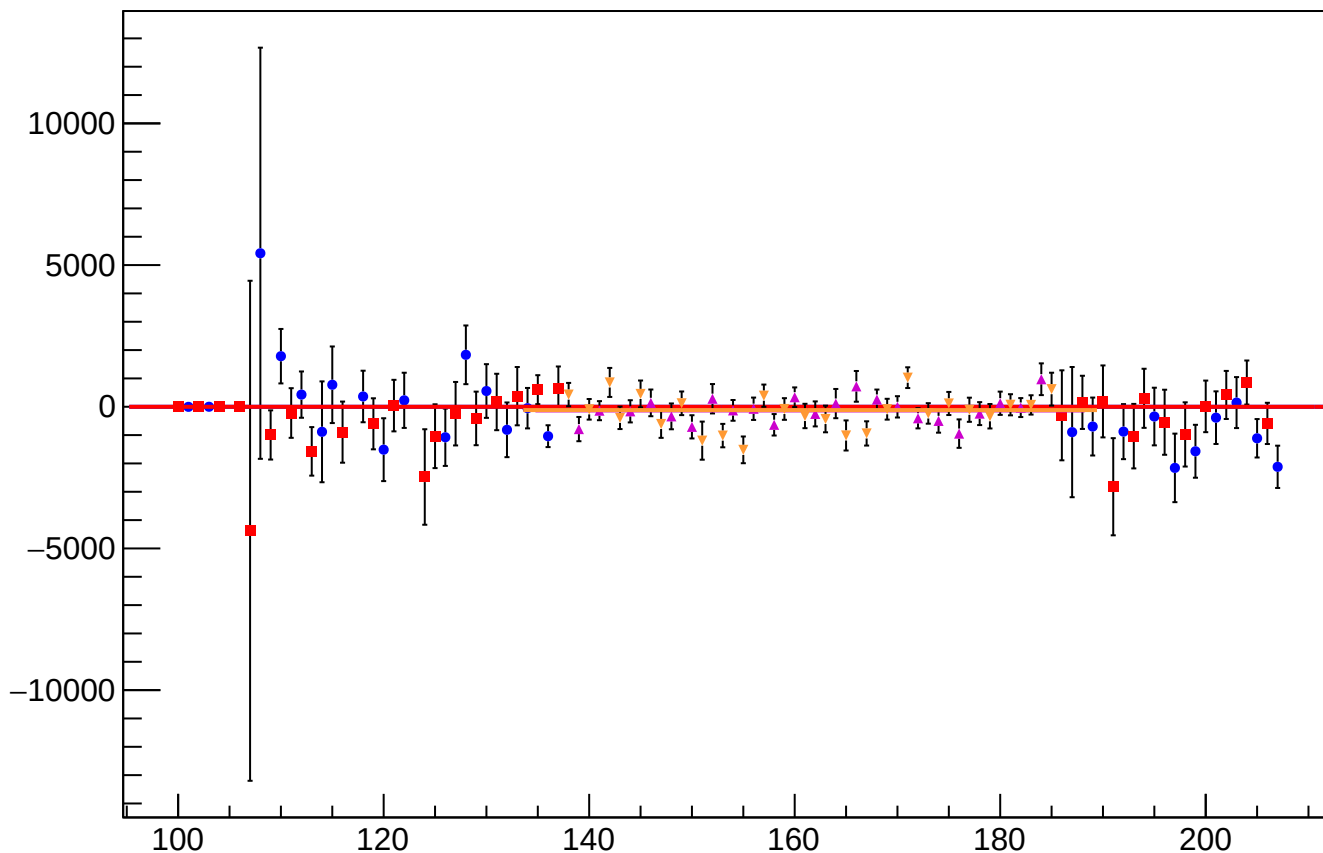
Left In: 183.433 $\pm$ 0.032  $\chi^2$ /NDF:1530678.8/22

+ sign 187.506 $\pm$ 0.024  $\chi^2$ /NDF: 4244628.4/50

All: 182.840 $\pm$ 0.016  $\chi^2$ /NDF: 8758481.1/104

- sign 178.579 $\pm$ 0.023  $\chi^2$ /NDF: 4439146.3/53

# asym\_cav4bQ\_mean vs Slug



Right In:  $-1.295 \pm 2.171$   $\chi^2/\text{NDF}: 38.4/25$

Left Out:  $-117.658 \pm 84.207$   $\chi^2/\text{NDF}: 46.4/24$

Right Out:  $-1.384 \pm 2.022$   $\chi^2/\text{NDF}: 23.6/30$

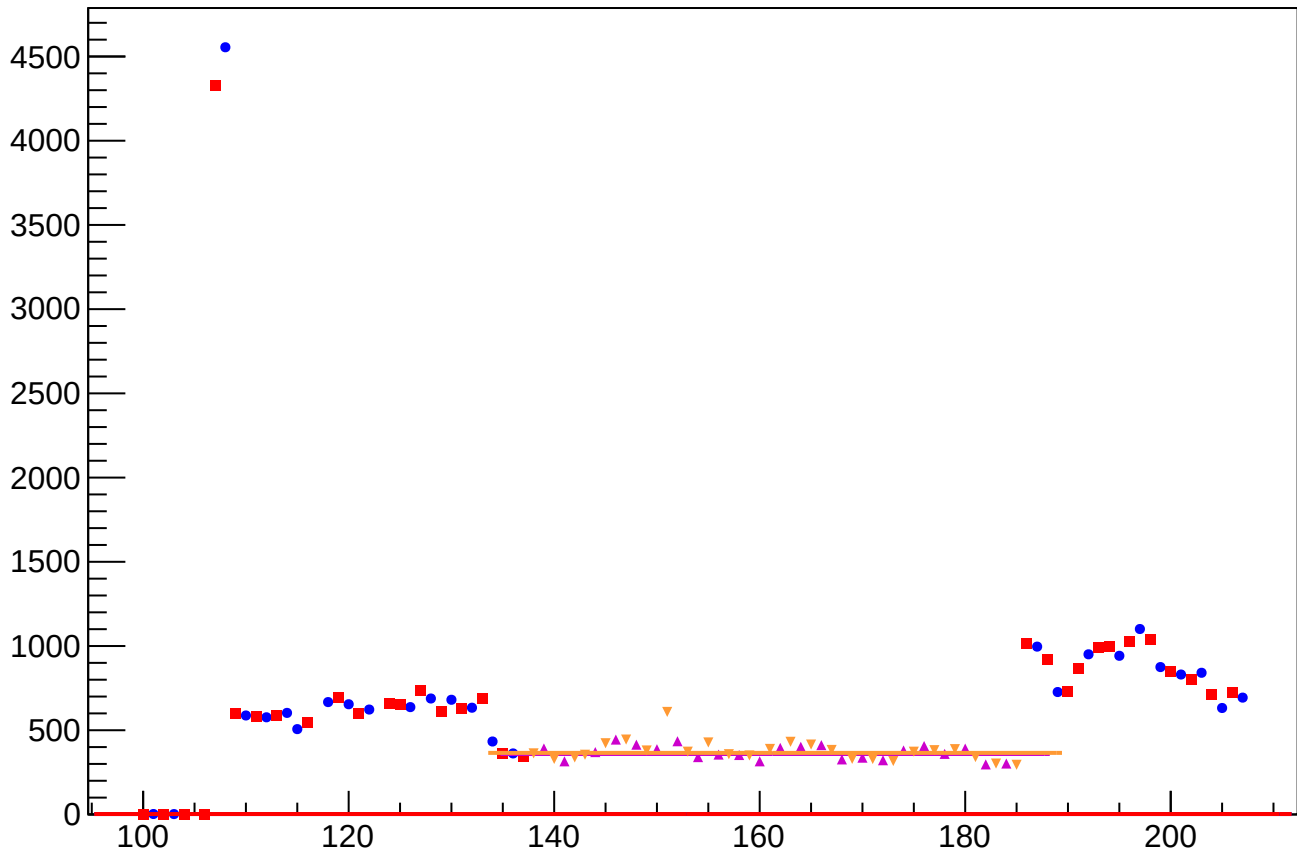
Left In:  $-129.738 \pm 85.075$   $\chi^2/\text{NDF}: 21.7/22$

+ sign  $-1.372 \pm 2.170$   $\chi^2/\text{NDF}: 86.7/50$

All:  $-1.417 \pm 1.479$   $\chi^2/\text{NDF}: 134.3/104$

- sign  $-1.456 \pm 2.022$   $\chi^2/\text{NDF}: 47.6/53$

# asym\_cav4bQ\_rms vs Slug



Right In: 2.520 $\pm$ 0.002  $\chi^2$ /NDF: 26784669.7/25

Left Out: 365.603 $\pm$ 0.060  $\chi^2$ /NDF: 668124.0/24

Right Out: 2.504 $\pm$ 0.001  $\chi^2$ /NDF: 29159844.7/30

Left In: 359.024 $\pm$ 0.060  $\chi^2$ /NDF: 446263.1/22

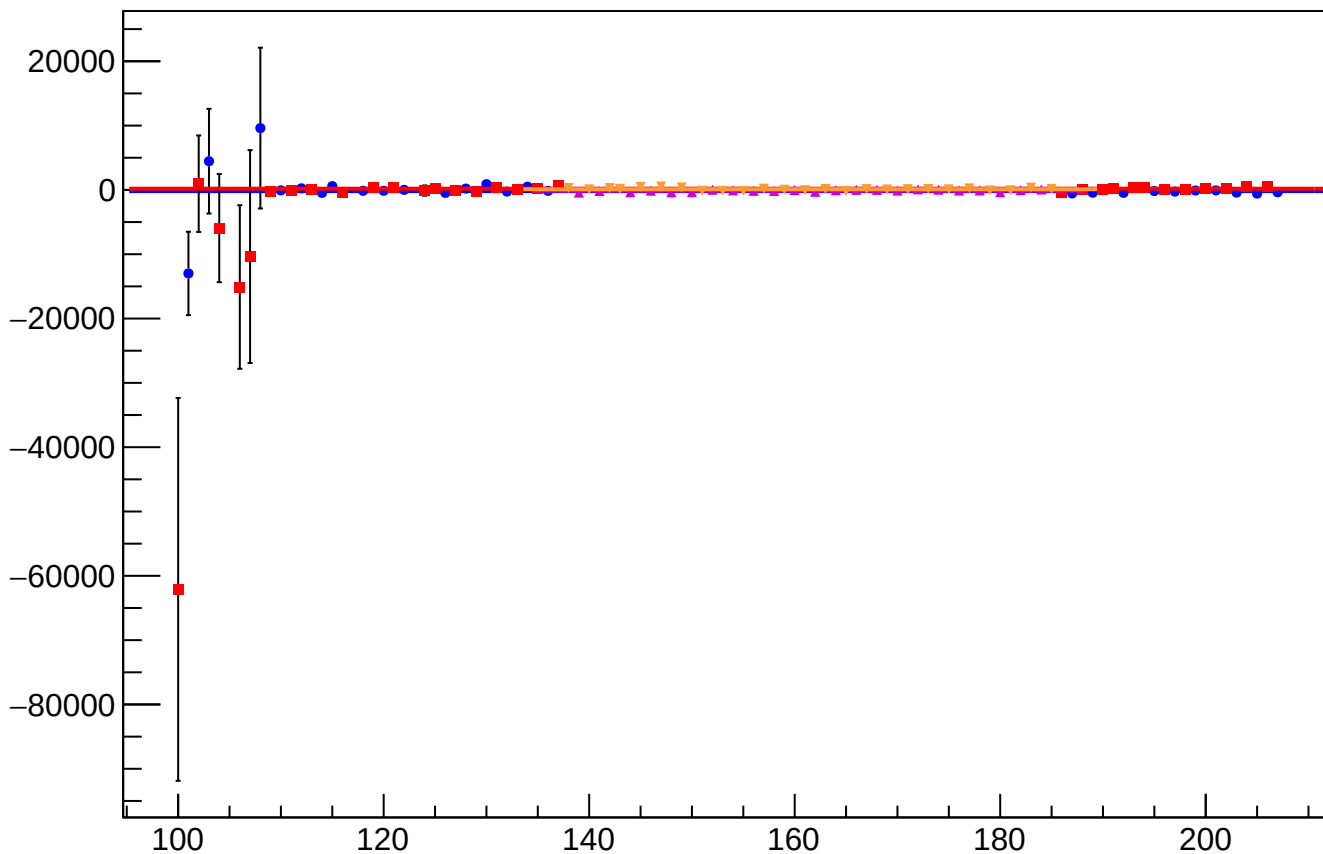
+ sign 2.761 $\pm$ 0.002  $\chi^2$ /NDF: 64610776.0/50

All: 2.731 $\pm$ 0.001  $\chi^2$ /NDF: 129321292.8/104

- sign 2.705 $\pm$ 0.001  $\chi^2$ /NDF: 64709802.5/53



# asym\_cav4cQ\_mean vs Slug



Right In:  $-186.335 \pm 51.705$   $\chi^2/\text{NDF}$ : 30.6/25

Left Out:  $99.601 \pm 48.250$   $\chi^2/\text{NDF}$ : 12.7/24

Right Out:  $190.865 \pm 50.605$   $\chi^2/\text{NDF}$ : 24.8/30

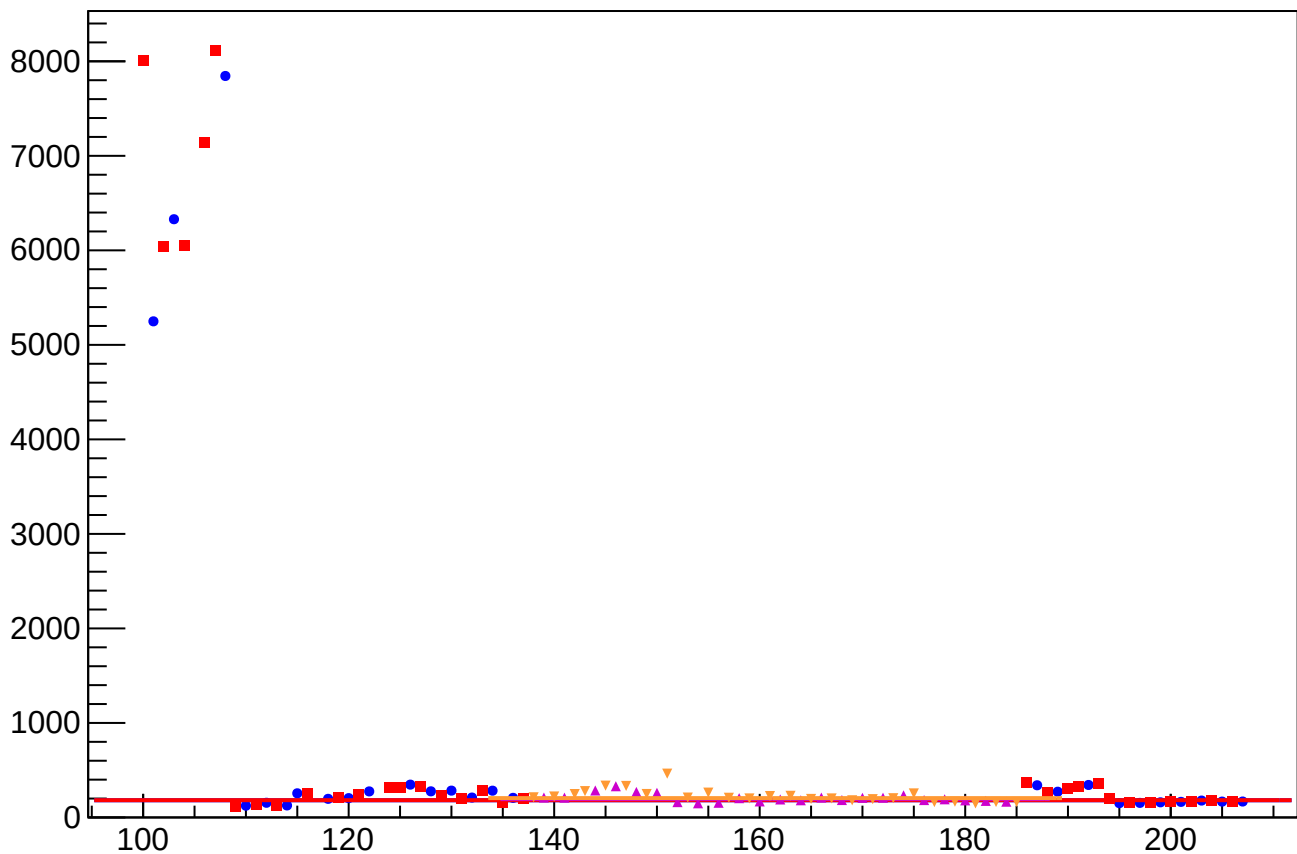
Left In:  $-119.345 \pm 46.957$   $\chi^2/\text{NDF}$ : 9.3/22

+ sign  $-33.495 \pm 35.276$   $\chi^2/\text{NDF}$ : 59.7/50

All:  $-3.951 \pm 24.636$   $\chi^2/\text{NDF}$ : 115.3/104

- sign  $24.177 \pm 34.421$   $\chi^2/\text{NDF}$ : 54.2/53

# asym\_cav4cQ\_rms vs Slug



Right In: 181.666 $\pm$ 0.037  $\chi^2$ /NDF: 4847147.8/25

Left Out: 204.581 $\pm$ 0.034  $\chi^2$ /NDF:1975114.7/24

Right Out: 182.752 $\pm$ 0.036  $\chi^2$ /NDF: 5526101.0/30

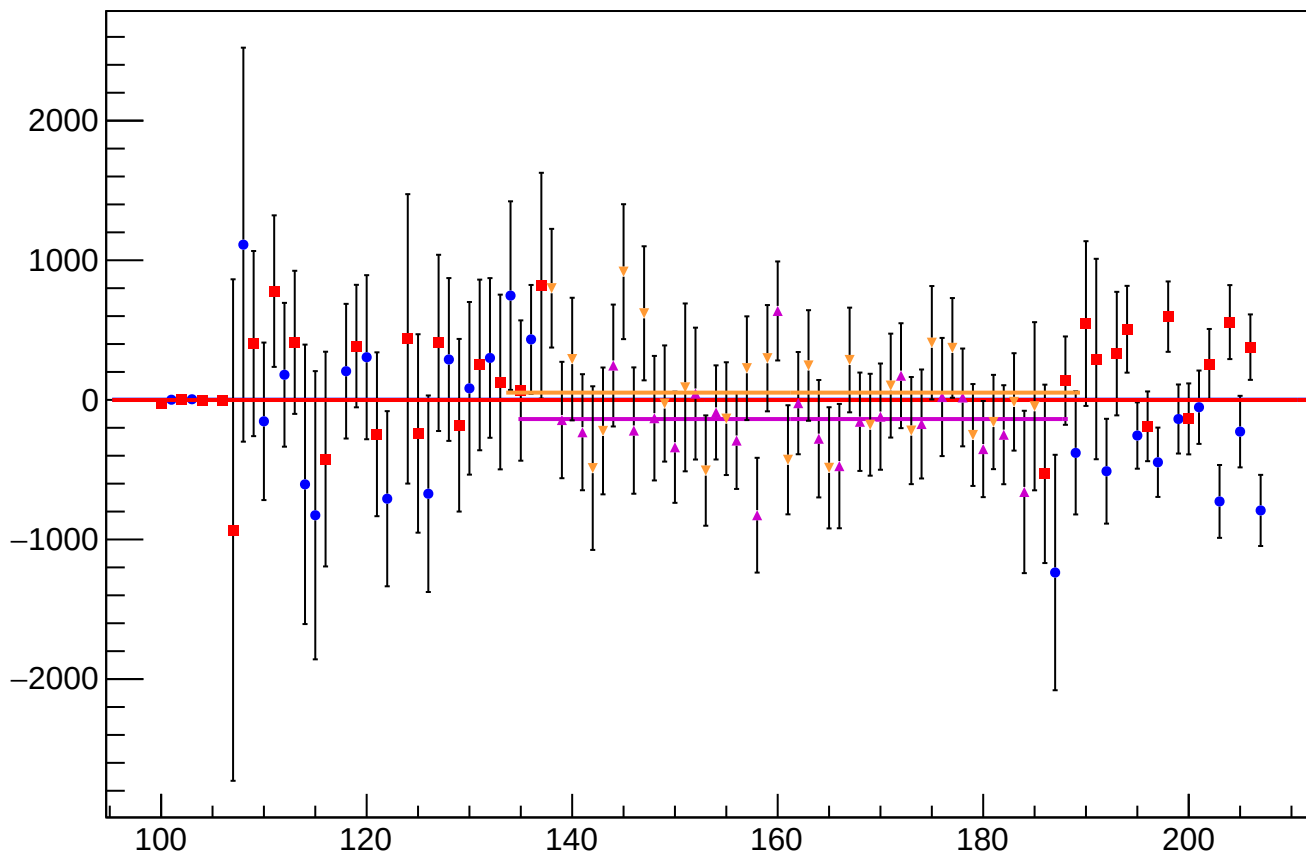
Left In: 193.895 $\pm$ 0.033  $\chi^2$ /NDF:1191589.3/22

+ sign 193.915 $\pm$ 0.025  $\chi^2$ /NDF: 7032243.2/50

All: 191.264 $\pm$ 0.017  $\chi^2$ /NDF: 13824090.5/10

- sign 188.740 $\pm$ 0.024  $\chi^2$ /NDF: 6769799.0/53

# asym\_cav4dQ\_mean vs Slug



Right In:  $1.322 \pm 1.660$   $\chi^2/\text{NDF}: 35.7/25$

Left Out:  $51.829 \pm 81.555$   $\chi^2/\text{NDF}: 19.4/24$

Right Out:  $-1.018 \pm 1.528$   $\chi^2/\text{NDF}: 28.8/30$

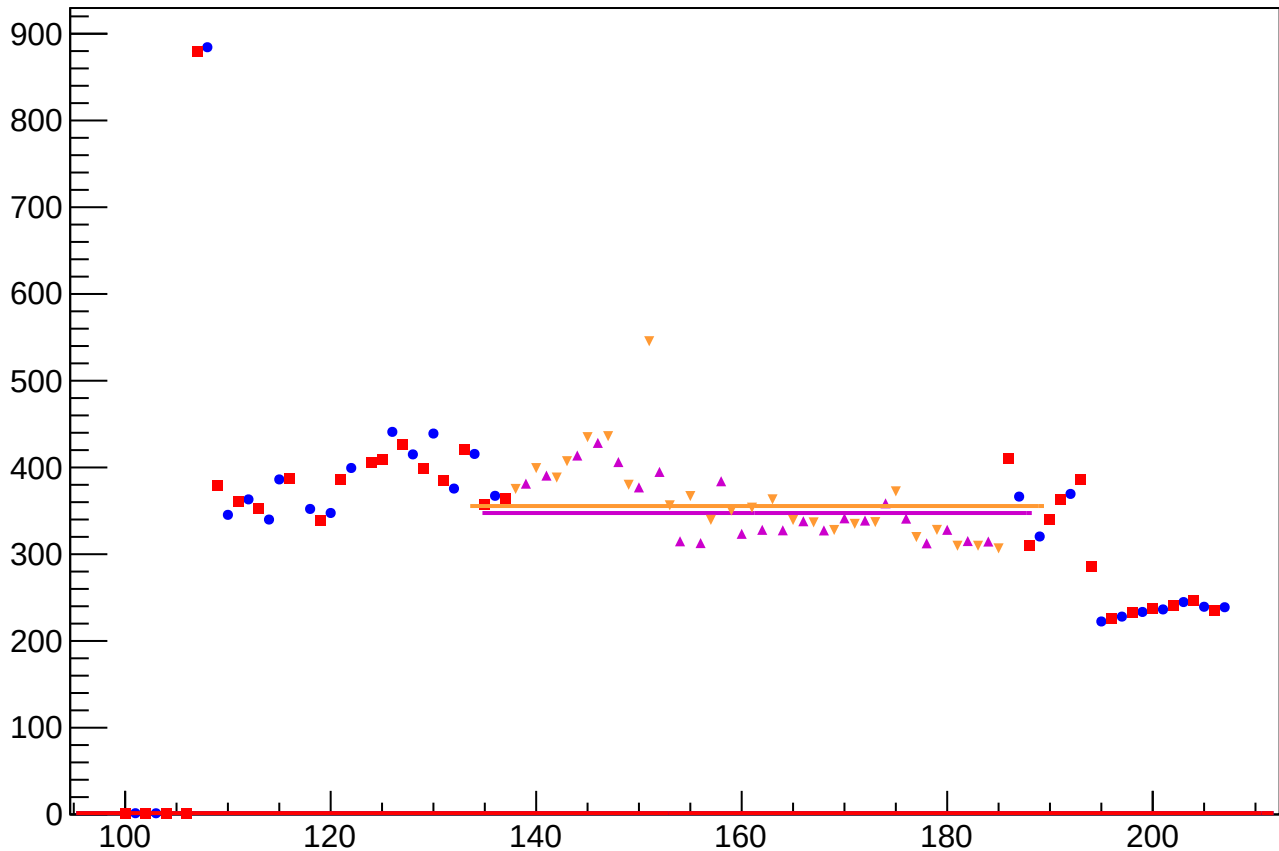
Left In:  $-137.399 \pm 82.111$   $\chi^2/\text{NDF}: 12.2/22$

+ sign  $1.343 \pm 1.660$   $\chi^2/\text{NDF}: 55.5/50$

All:  $0.039 \pm 1.124$   $\chi^2/\text{NDF}: 100.4/104$

- sign  $-1.066 \pm 1.527$   $\chi^2/\text{NDF}: 43.7/53$

# asym\_cav4dQ\_rms vs Slug



Right In:  $1.554 \pm 0.001$   $\chi^2/\text{NDF}$ : 27027583.6/25

Left Out:  $355.535 \pm 0.058$   $\chi^2/\text{NDF}$ : 528878.5/24

Right Out:  $1.544 \pm 0.001$   $\chi^2/\text{NDF}$ : 28839952.2/30

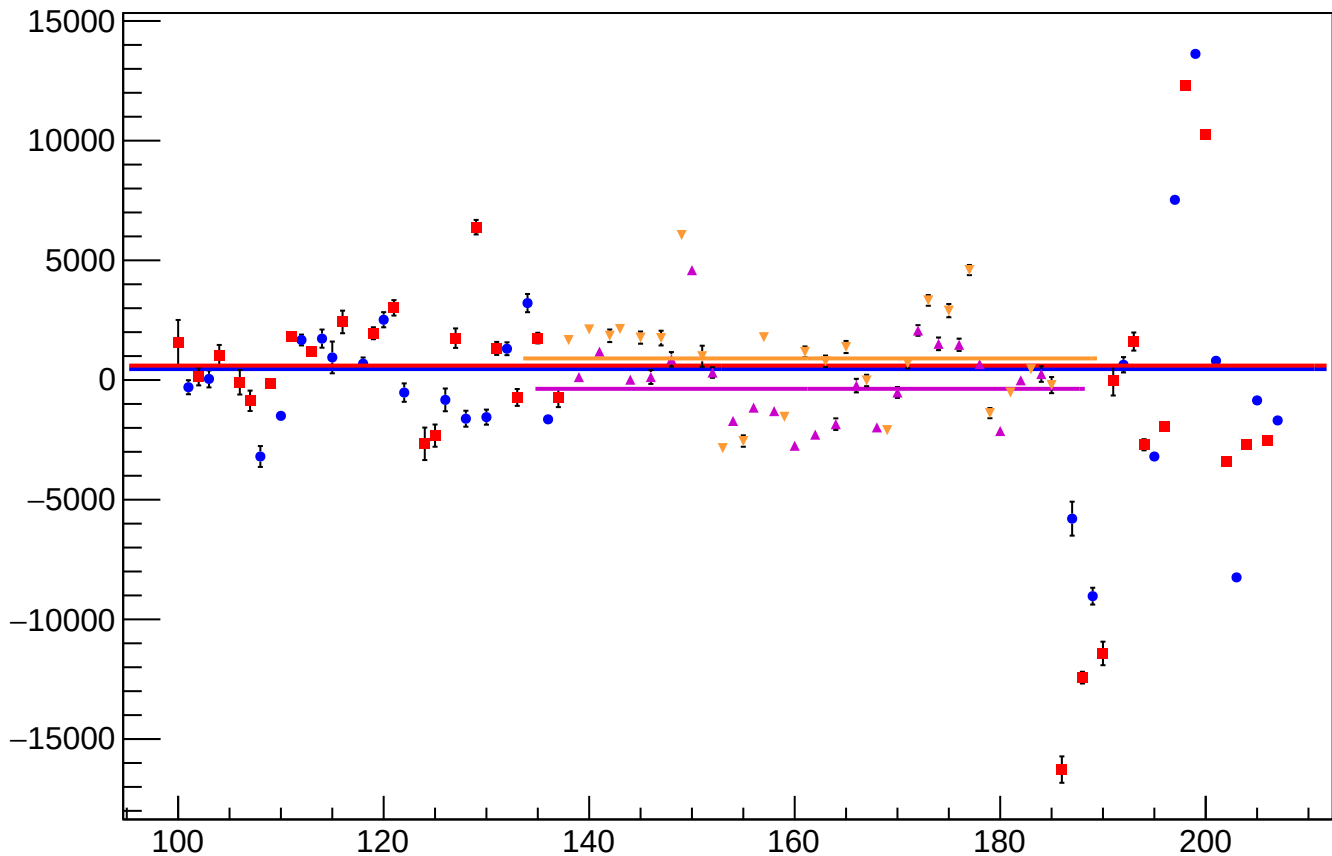
Left In:  $347.484 \pm 0.058$   $\chi^2/\text{NDF}$ : 344530.3/22

+ sign  $1.701 \pm 0.001$   $\chi^2/\text{NDF}$ : 65219019.8/50

All:  $1.681 \pm 0.001$   $\chi^2/\text{NDF}$ : 129891822.8/104

- sign  $1.664 \pm 0.001$   $\chi^2/\text{NDF}$ : 64672273.4/53

# asym\_bcm0l02\_mean vs Slug



Right In: 457.306 $\pm$ 49.009  $\chi^2$ /NDF: 11490.0/25

Left Out: 901.476 $\pm$ 44.481  $\chi^2$ /NDF:2411.0/24

Right Out: 602.989 $\pm$ 47.111  $\chi^2$ /NDF: 13728.0/30

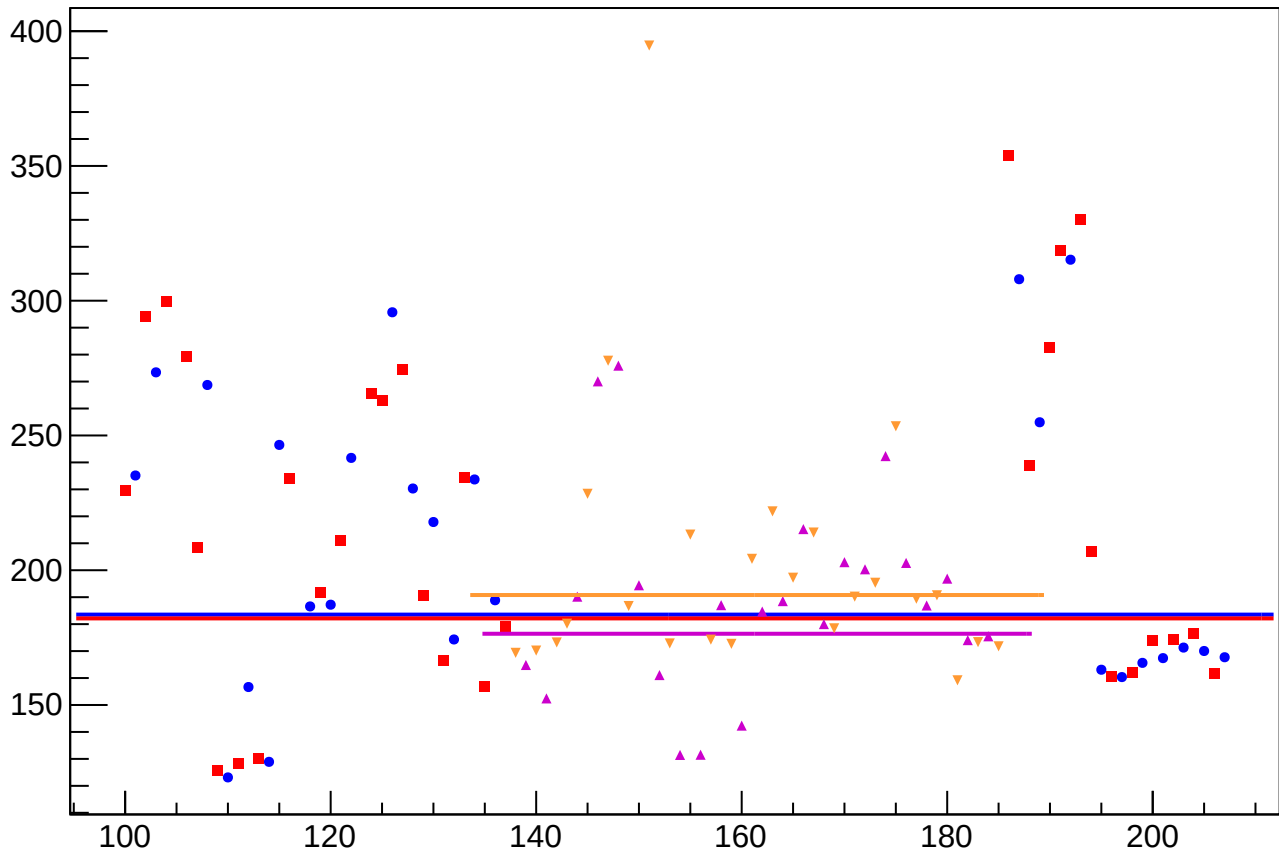
Left In: -368.252 $\pm$ 42.700  $\chi^2$ /NDF:1593.0/22

+ sign 700.851 $\pm$ 32.937  $\chi^2$ /NDF: 13946.0/50

All: 372.621 $\pm$ 22.817  $\chi^2$ /NDF: 29691.2/104

- sign 69.778 $\pm$ 31.638  $\chi^2$ /NDF: 15554.3/53

# asym\_bcm0l02\_rms vs Slug



Right In: 183.531 $\pm$ 0.035  $\chi^2$ /NDF: 1404728.4/25

Left Out: 190.801 $\pm$ 0.031  $\chi^2$ /NDF:1019598.1/24

Right Out: 182.123 $\pm$ 0.033  $\chi^2$ /NDF: 2140967.1/30

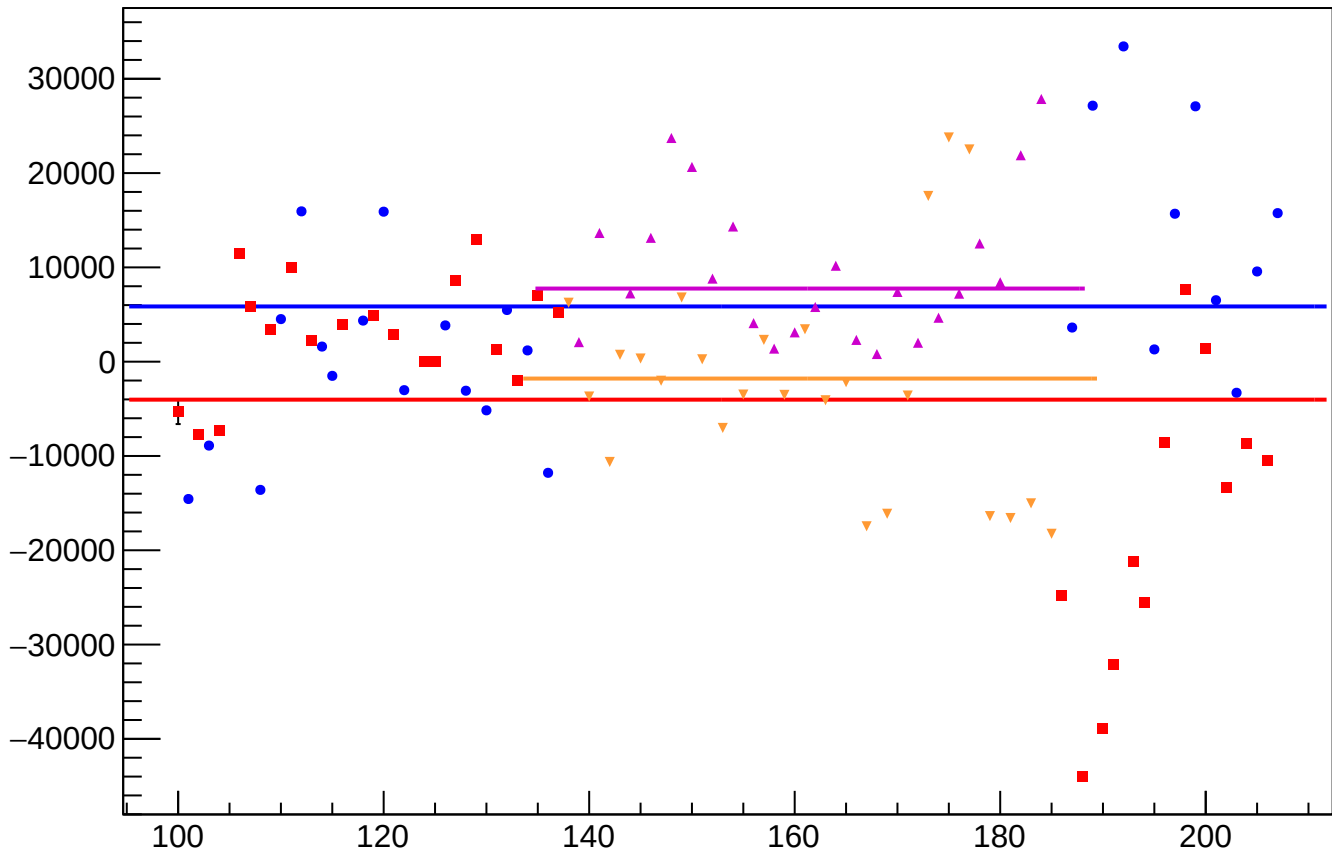
Left In: 176.431 $\pm$ 0.030  $\chi^2$ /NDF:1257661.0/22

+ sign 187.517 $\pm$ 0.023  $\chi^2$ /NDF: 2448455.2/50

All: 183.086 $\pm$ 0.016  $\chi^2$ /NDF: 5932699.5/104

- sign 178.998 $\pm$ 0.022  $\chi^2$ /NDF: 3414654.1/53

# asym\_bpm0i02WS\_mean vs Slug



Right In:  $5856.968 \pm 41.796$   $\chi^2/\text{NDF}: 92564.5/25$

Left Out:  $-1790.289 \pm 40.910$   $\chi^2/\text{NDF}: 65745.9/24$

+ sign  $1951.464 \pm 29.236$   $\chi^2/\text{NDF}: 175407.4/50$

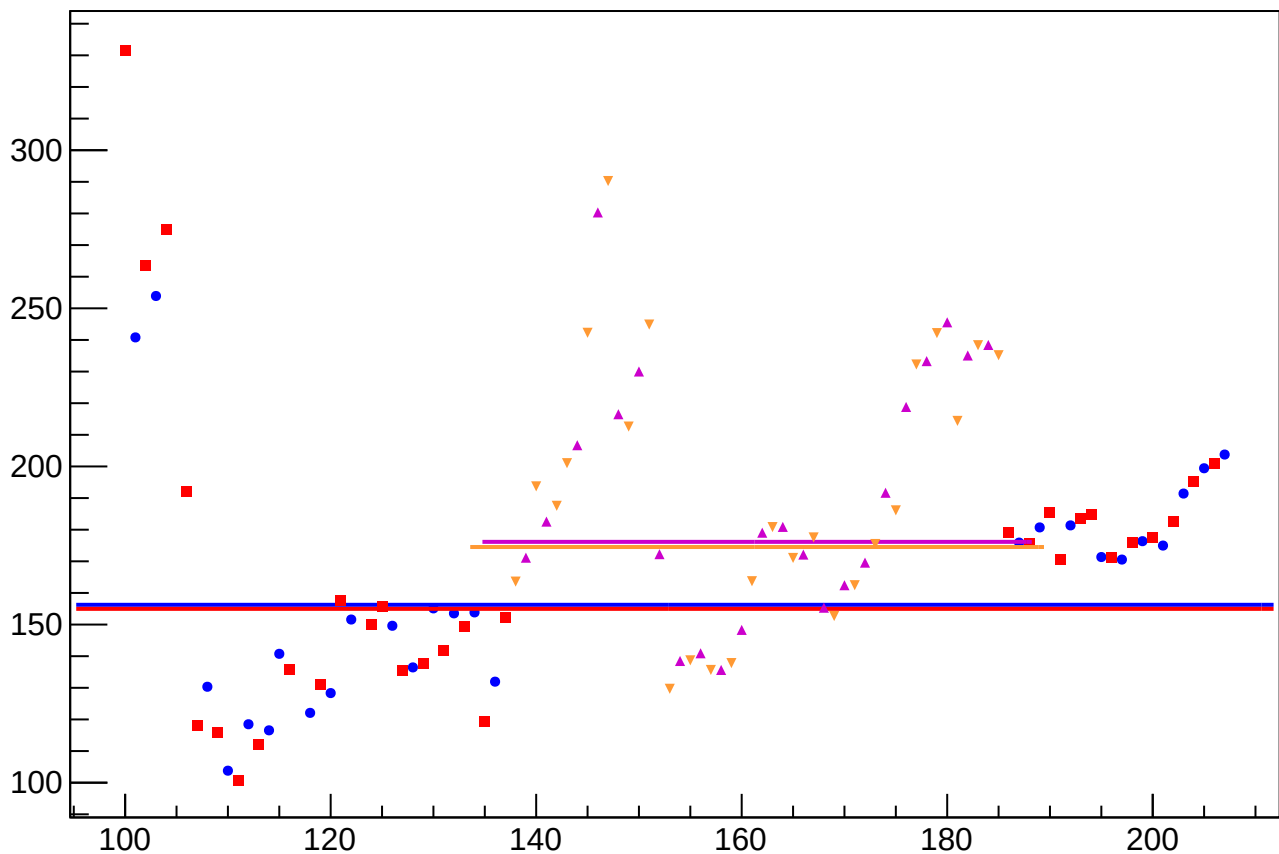
Right Out:  $-4027.617 \pm 39.615$   $\chi^2/\text{NDF}: 137269.9/30$

All:  $1693.782 \pm 20.589$   $\chi^2/\text{NDF}: 377159.5/10$

- sign  $1440.224 \pm 29.001$   $\chi^2/\text{NDF}: 201597.9/53$

Left In:  $7754.468 \pm 42.571$   $\chi^2/\text{NDF}: 23278.0/22$

# asym\_bpm0i02WS\_rms vs Slug



Right In: 156.249+/-0.030  $\chi^2/\text{NDF}$ : 1231226.6/25

Left Out: 174.520+/-0.029  $\chi^2/\text{NDF}$ : 1659469.6/24

Right Out: 154.968+/-0.028  $\chi^2/\text{NDF}$ : 1611051.6/30

Left In: 176.155+/-0.030  $\chi^2/\text{NDF}$ : 1367059.2/22

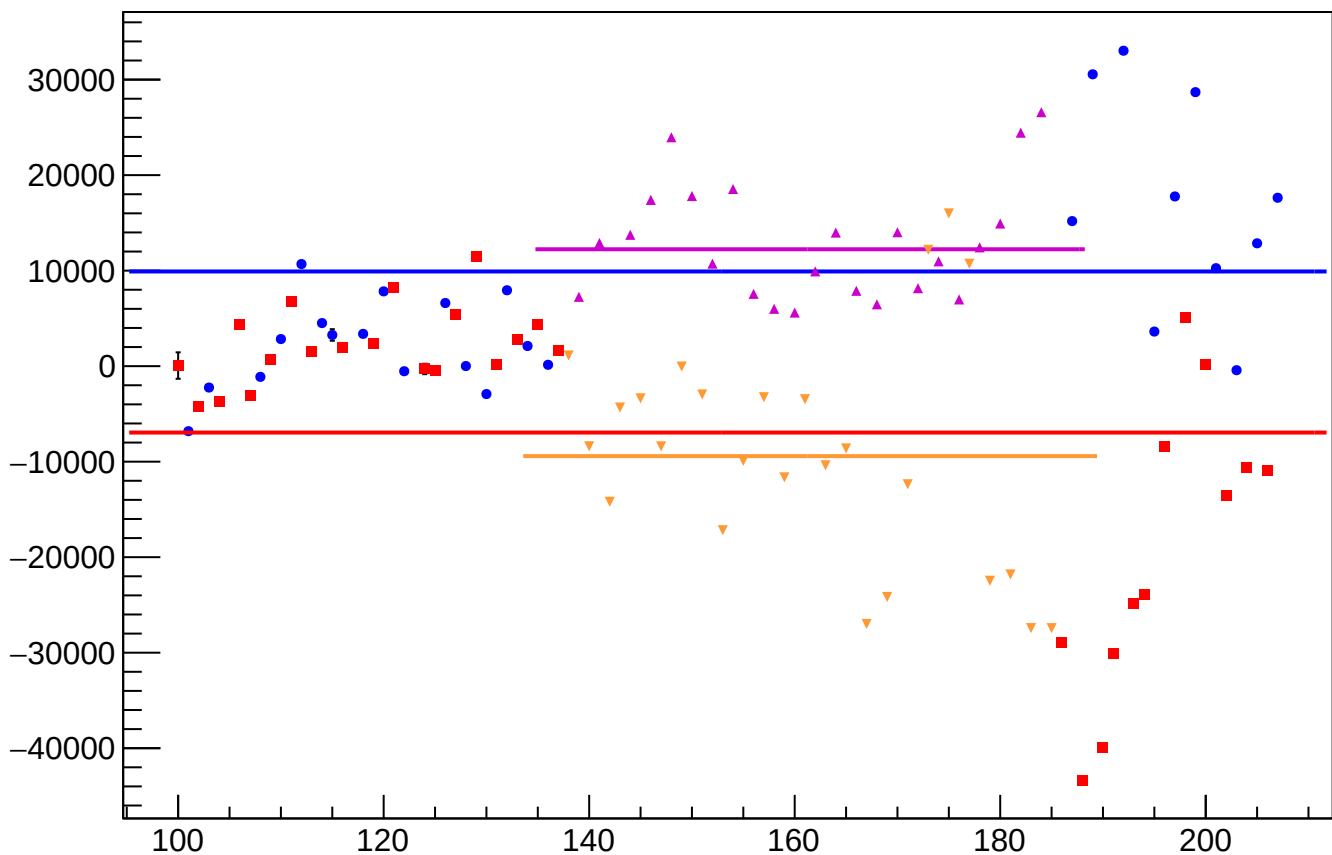
+ sign 165.580+/-0.021  $\chi^2/\text{NDF}$ : 3085897.8/50

All: 165.187+/-0.015  $\chi^2/\text{NDF}$ : 6330191.8/104

- sign 164.800+/-0.021  $\chi^2/\text{NDF}$ : 3243576.4/53



# asym\_bpm0i02aWS\_mean vs Slug



Right In: 9914.055+/-46.919  $\chi^2/\text{NDF}$ : 52836.7/25

Left Out: -9420.181+/-45.698  $\chi^2/\text{NDF}$ : 64719.0/24

Right Out: -6950.226+/-44.320  $\chi^2/\text{NDF}$ : 105809.8/30

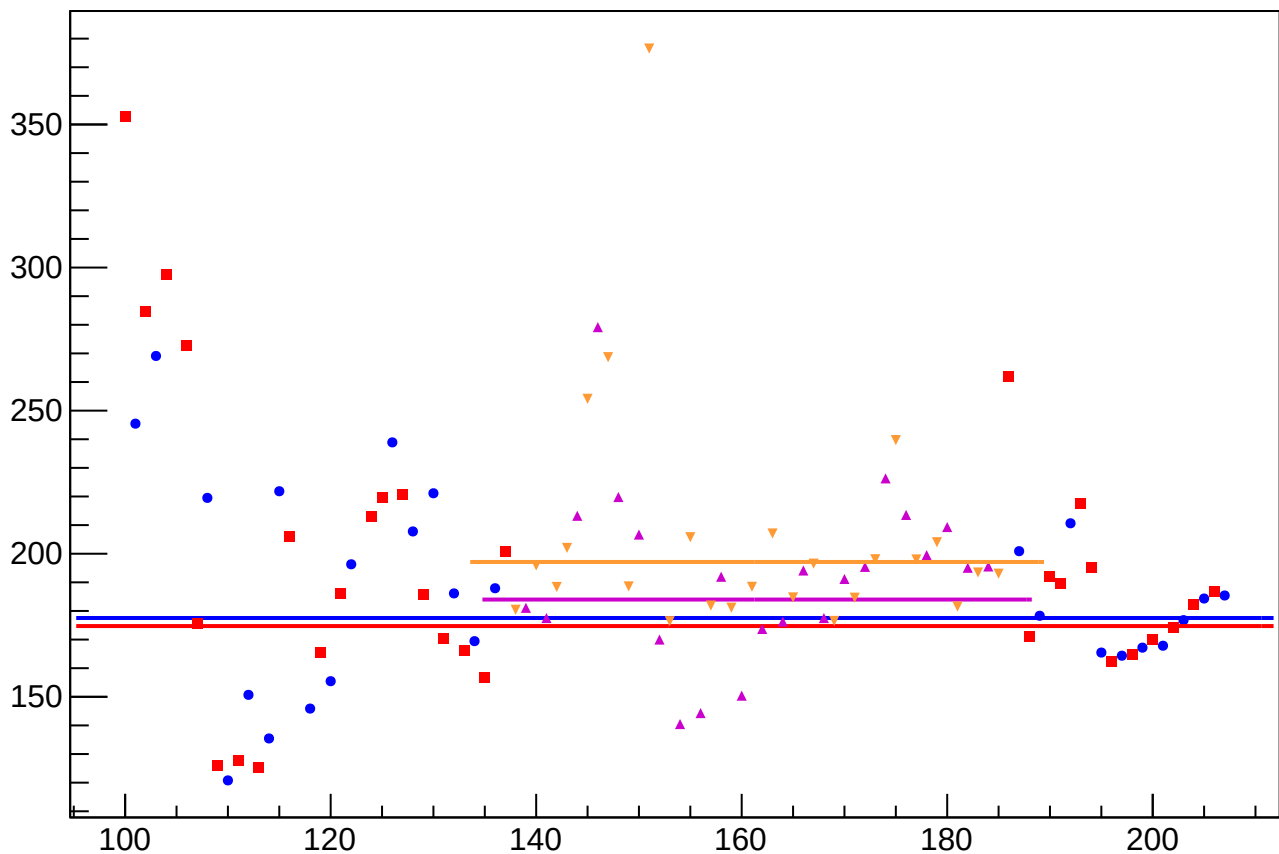
Left In: 12238.678+/-44.195  $\chi^2/\text{NDF}$ : 16015.8/22

+ sign -7.927+/-32.736  $\chi^2/\text{NDF}$ : 204697.8/50

All: 1392.012+/-22.621  $\chi^2/\text{NDF}$ : 424015.9/10

- sign 2671.359+/-31.295  $\chi^2/\text{NDF}$ : 215818.1/53

# asym\_bpm0i02aWS\_rms vs Slug



Right In: 177.541+/-0.033  $\chi^2/\text{NDF}$ : 765716.3/25

Left Out: 197.122+/-0.032  $\chi^2/\text{NDF}$ : 732529.8/24

Right Out: 174.722+/-0.031  $\chi^2/\text{NDF}$ : 1206158.1/30

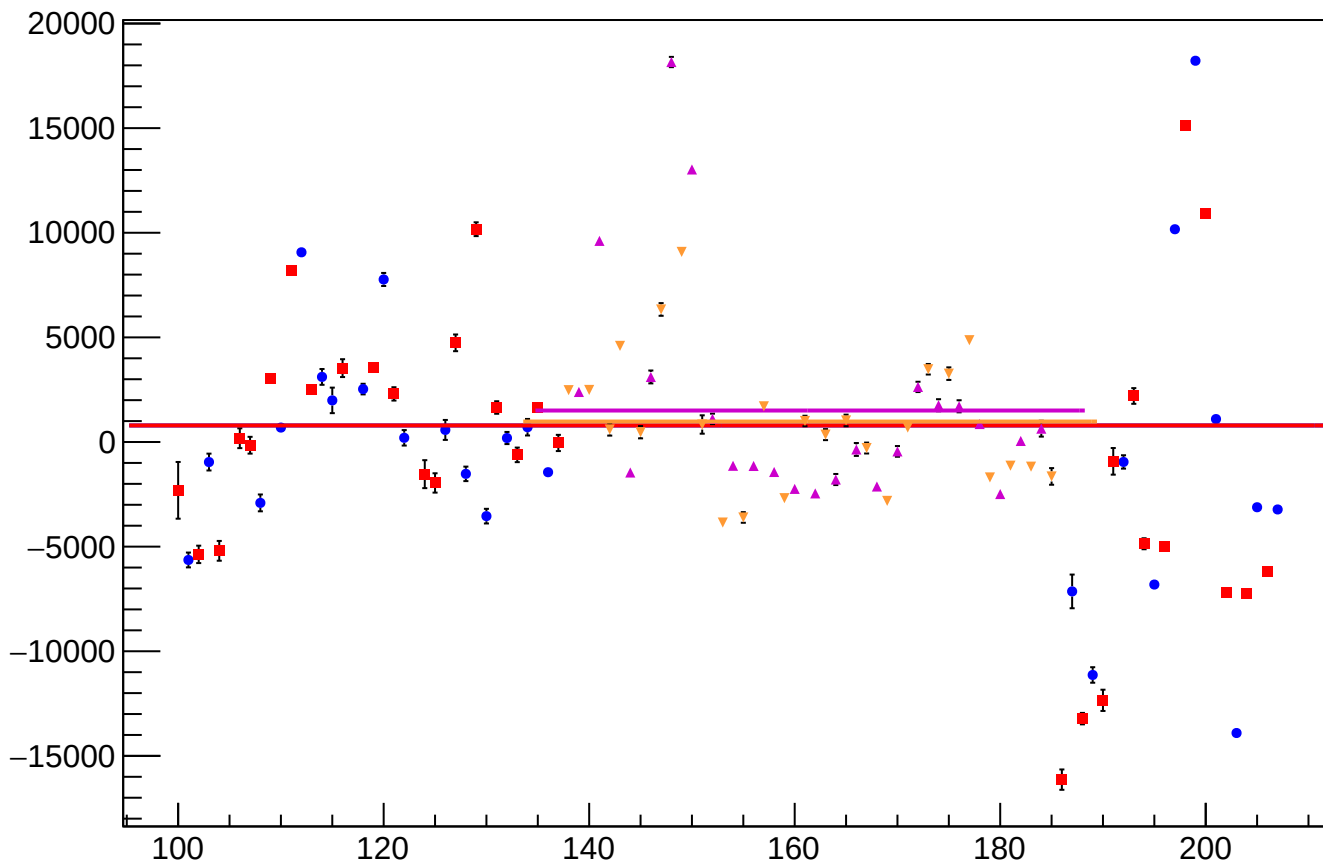
Left In: 183.985+/-0.031  $\chi^2/\text{NDF}$ : 829778.1/22

+ sign 187.590+/-0.023  $\chi^2/\text{NDF}$ : 1677007.5/50

All: 183.293+/-0.016  $\chi^2/\text{NDF}$ : 3822691.0/104

- sign 179.367+/-0.022  $\chi^2/\text{NDF}$ : 2079745.8/53

# asym\_bpm0i05WS\_mean vs Slug



Right In: 790.509+/-52.909     $\chi^2/\text{NDF}$ : 21040.5/25

Left Out: 978.429+/-49.607     $\chi^2/\text{NDF}$ : 4322.9/24

Right Out: 791.403+/-50.150     $\chi^2/\text{NDF}$ : 20901.1/30

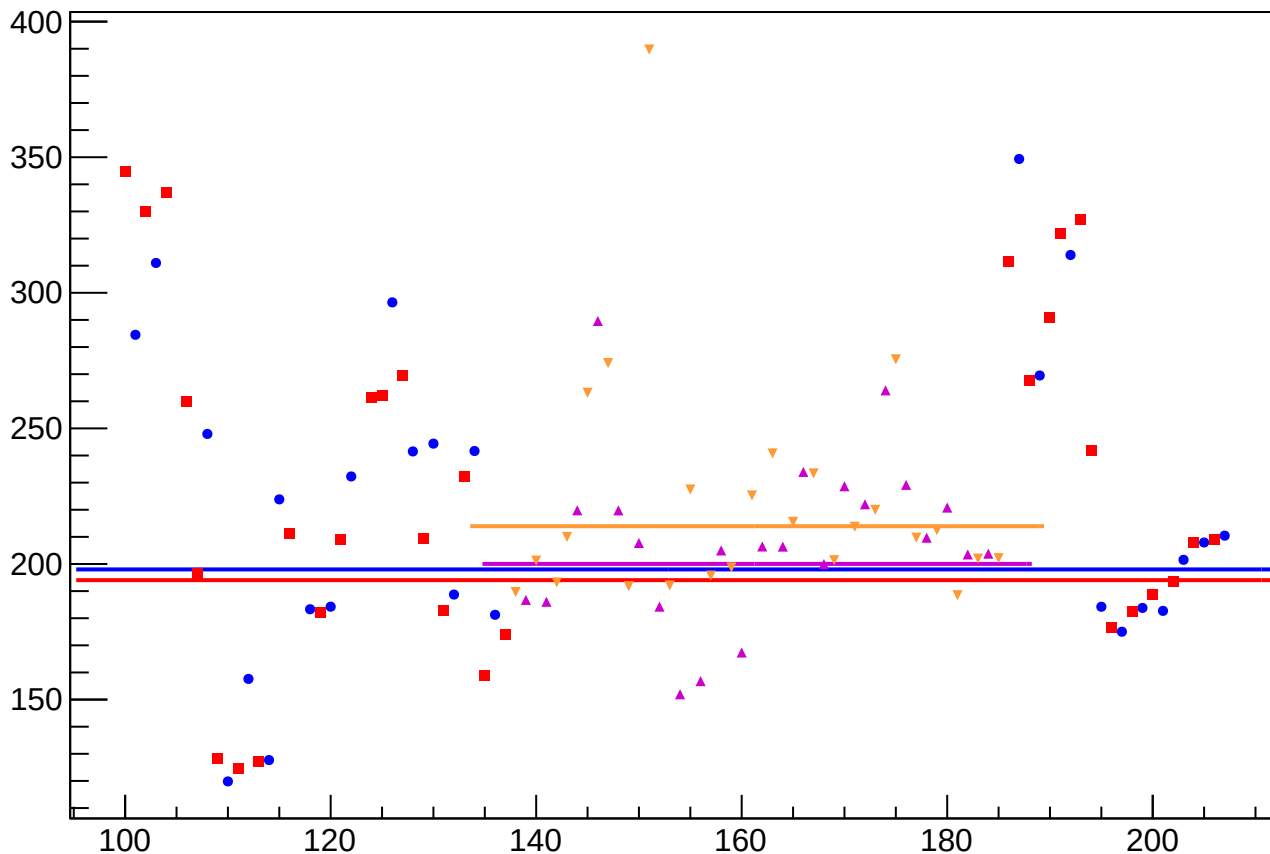
Left In: 1505.093+/-48.051     $\chi^2/\text{NDF}$ : 11480.6/22

+ sign 890.515+/-36.188     $\chi^2/\text{NDF}$ : 25370.1/50

All: 1032.754+/-25.045     $\chi^2/\text{NDF}$ : 57887.0/104

- sign 1163.500+/-34.695     $\chi^2/\text{NDF}$ : 32487.3/53

# asym\_bpm0i05WS\_rms vs Slug



Right In: 197.998 $\pm$ 0.037  $\chi^2$ /NDF: 1451496.1/25

Left Out: 213.931 $\pm$ 0.035  $\chi^2$ /NDF: 733638.6/24

Right Out: 194.035 $\pm$ 0.035  $\chi^2$ /NDF: 2254355.9/30

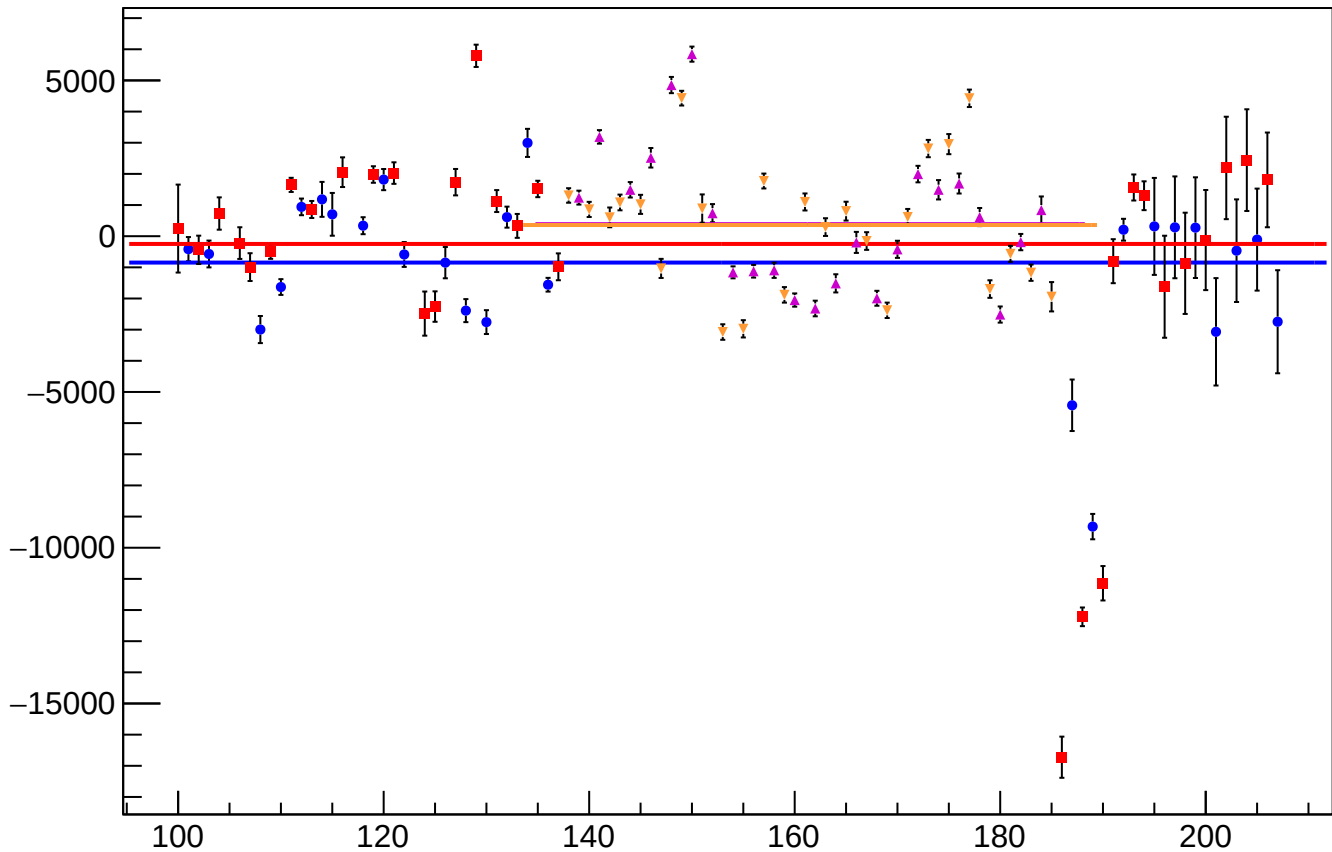
Left In: 200.031 $\pm$ 0.034  $\chi^2$ /NDF: 785525.4/22

+ sign 206.477 $\pm$ 0.026  $\chi^2$ /NDF: 2281659.1/50

All: 201.623 $\pm$ 0.018  $\chi^2$ /NDF: 5405503.5/104

- sign 197.161 $\pm$ 0.025  $\chi^2$ /NDF: 3054782.8/53

# asym\_bpm0i07WS\_mean vs Slug



Right In:  $-846.748 \pm 81.287$   $\chi^2/\text{NDF}$ : 801.0/25

Left Out:  $358.680 \pm 54.992$   $\chi^2/\text{NDF}$ : 1418.9/24

Right Out:  $-248.871 \pm 73.711$   $\chi^2/\text{NDF}$ : 3275.7/30

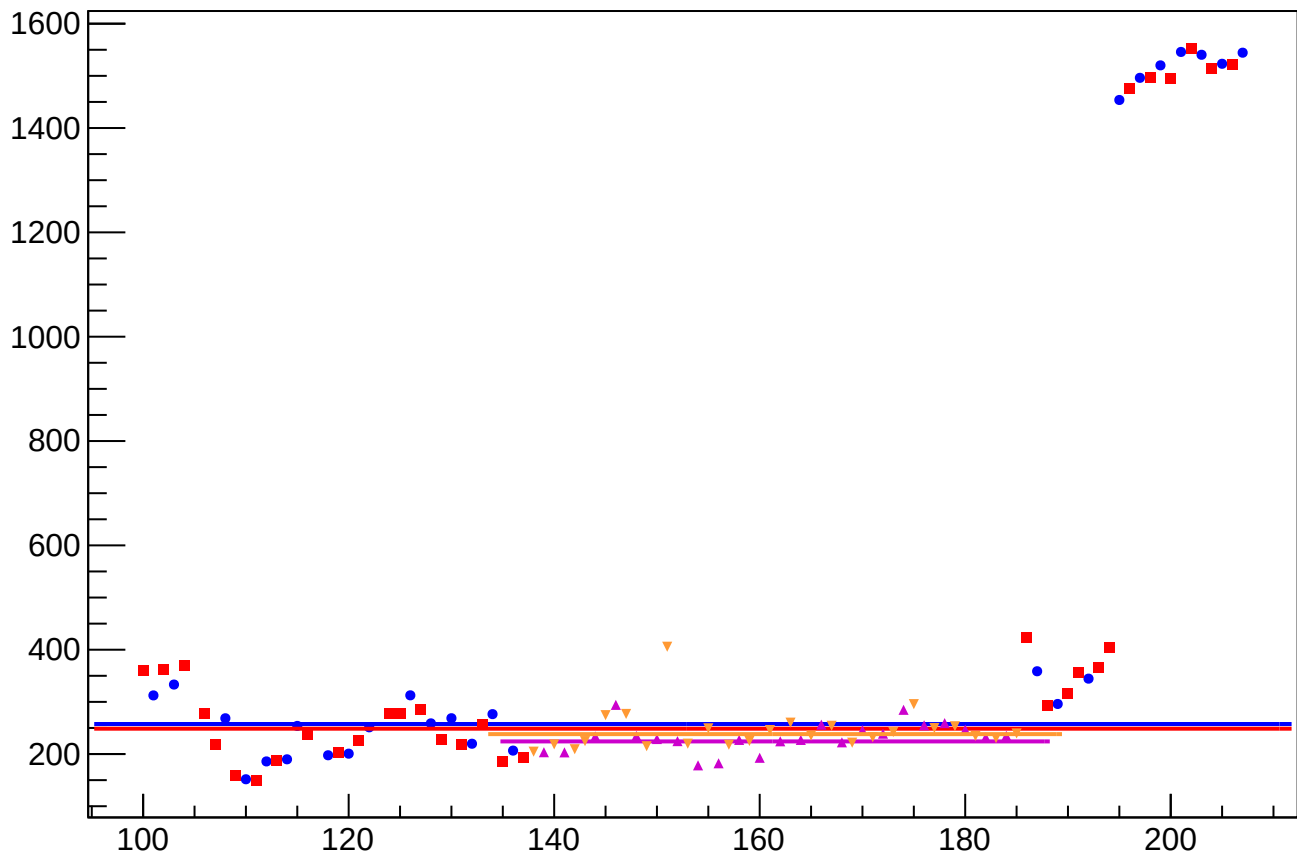
Left In:  $386.941 \pm 53.528$   $\chi^2/\text{NDF}$ : 1804.2/22

+ sign  $-19.792 \pm 45.548$   $\chi^2/\text{NDF}$ : 2370.8/50

All:  $78.516 \pm 31.387$   $\chi^2/\text{NDF}$ : 7508.2/104

- sign  $167.411 \pm 43.312$   $\chi^2/\text{NDF}$ : 5128.6/53

# asym\_bpm0i07WS\_rms vs Slug



Right In: 257.586 $\pm$ 0.057  $\chi^2$ /NDF: 9399141.9/25

Left Out: 238.199 $\pm$ 0.039  $\chi^2$ /NDF:567935.3/24

Right Out: 248.632 $\pm$ 0.052  $\chi^2$ /NDF: 9366590.5/30

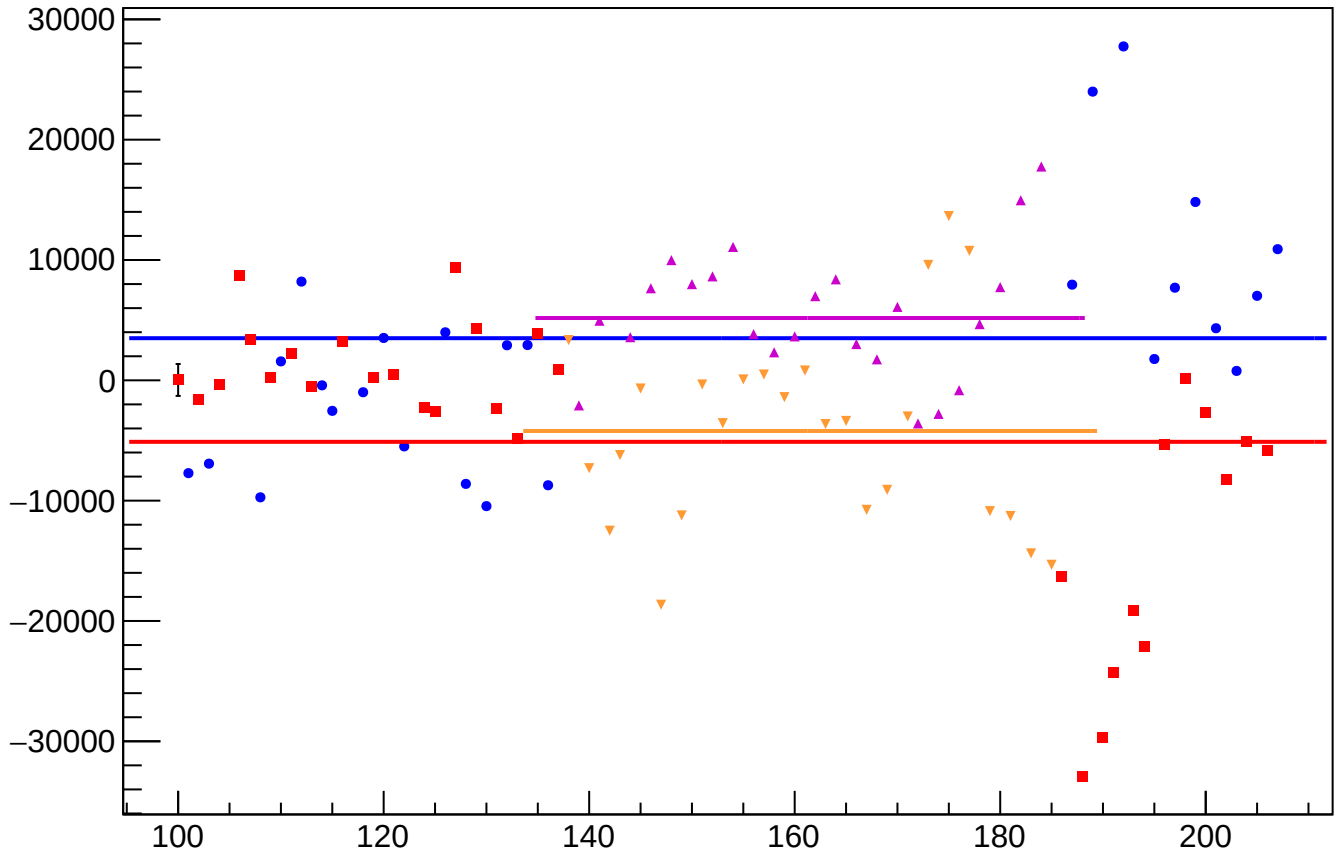
Left In: 224.212 $\pm$ 0.038  $\chi^2$ /NDF:563231.1/22

+ sign 244.286 $\pm$ 0.032  $\chi^2$ /NDF: 10045124.5/50

All: 238.172 $\pm$ 0.022  $\chi^2$ /NDF: 20187294.2/10

- sign 232.644 $\pm$ 0.031  $\chi^2$ /NDF: 10073546.6/53

# asym\_bpm1i02WS\_mean vs Slug



Right In:  $3502.114 \pm 35.473$   $\chi^2/\text{NDF}: 77968.6/25$

Left Out:  $-4210.601 \pm 30.828$   $\chi^2/\text{NDF}: 56802.7/24$

+ sign  $-891.898 \pm 23.269$   $\chi^2/\text{NDF}: 161703.8/50$

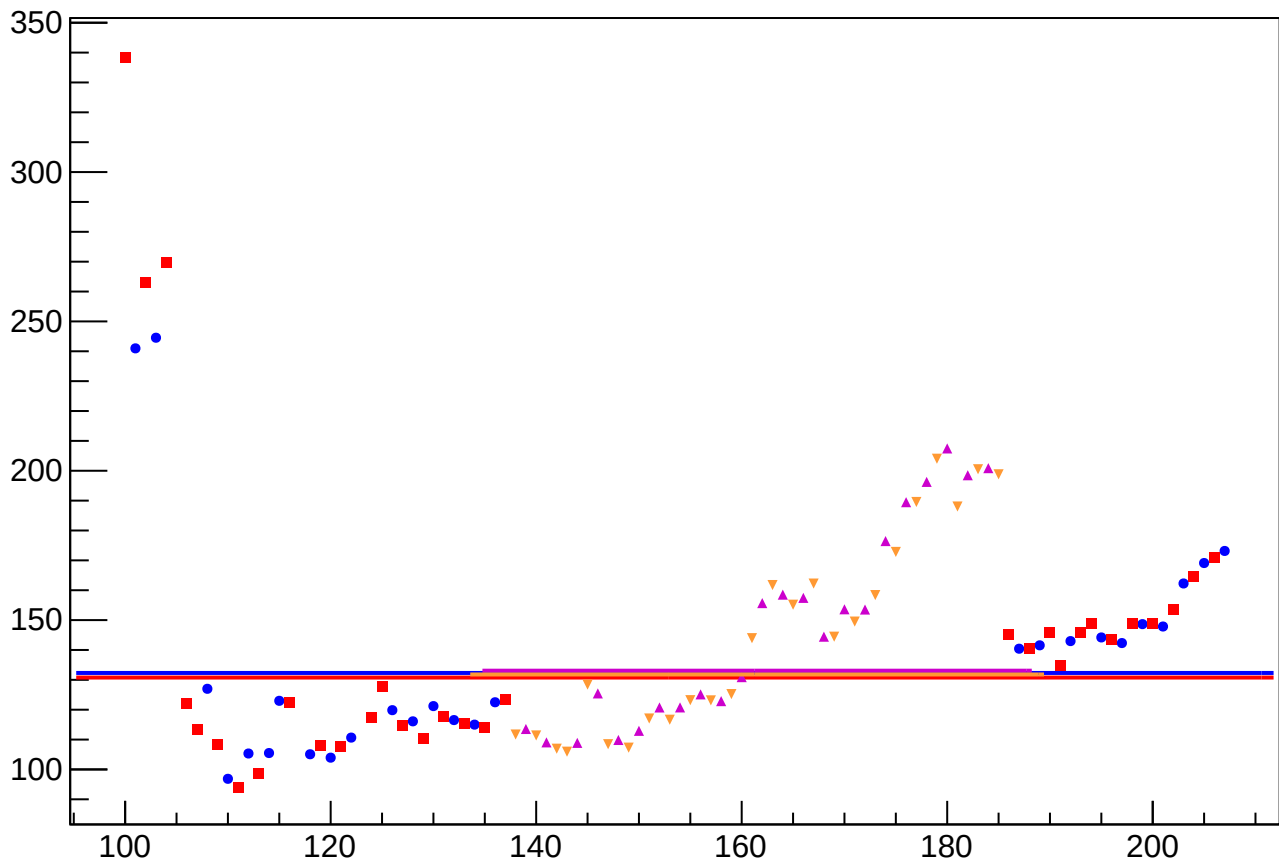
Right Out:  $-5111.560 \pm 33.402$   $\chi^2/\text{NDF}: 102903.5/30$

All:  $-312.310 \pm 16.392$   $\chi^2/\text{NDF}: 333909.8/10$

- sign  $258.670 \pm 23.095$   $\chi^2/\text{NDF}: 170974.3/53$

Left In:  $5178.213 \pm 31.969$   $\chi^2/\text{NDF}: 18541.3/22$

# asym\_bpm1i02WS\_rms vs Slug



Right In: 132.306+/-0.025  $\chi^2/\text{NDF}$ : 1222069.7/25

Left Out: 131.798+/-0.022  $\chi^2/\text{NDF}$ : 1544340.3/24

Right Out: 130.767+/-0.024  $\chi^2/\text{NDF}$ : 1445766.6/30

Left In: 133.061+/-0.023  $\chi^2/\text{NDF}$ : 1418252.2/22

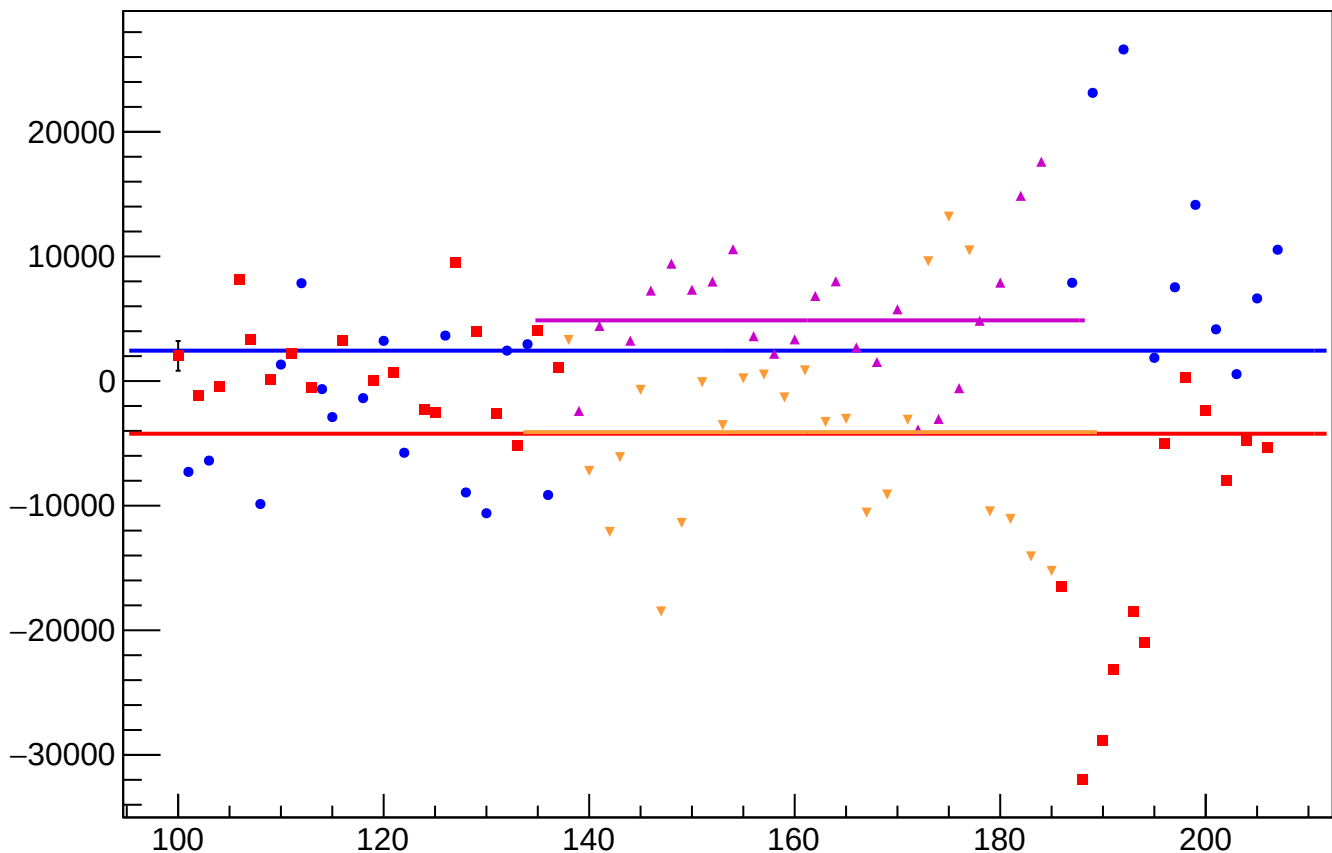
+ sign 132.016+/-0.016  $\chi^2/\text{NDF}$ : 2766644.5/50

All: 131.990+/-0.012  $\chi^2/\text{NDF}$ : 5635594.4/104

- sign 131.964+/-0.016  $\chi^2/\text{NDF}$ : 2868944.8/53



# asym\_bpm2i01WS\_mean vs Slug



Right In: 2439.945+/-32.382  $\chi^2/\text{NDF}$ : 85446.8/25

Left Out: -4098.897+/-27.771  $\chi^2/\text{NDF}$ : 66271.3/24

Right Out: -4225.974+/-30.697  $\chi^2/\text{NDF}$ : 108643.9/30

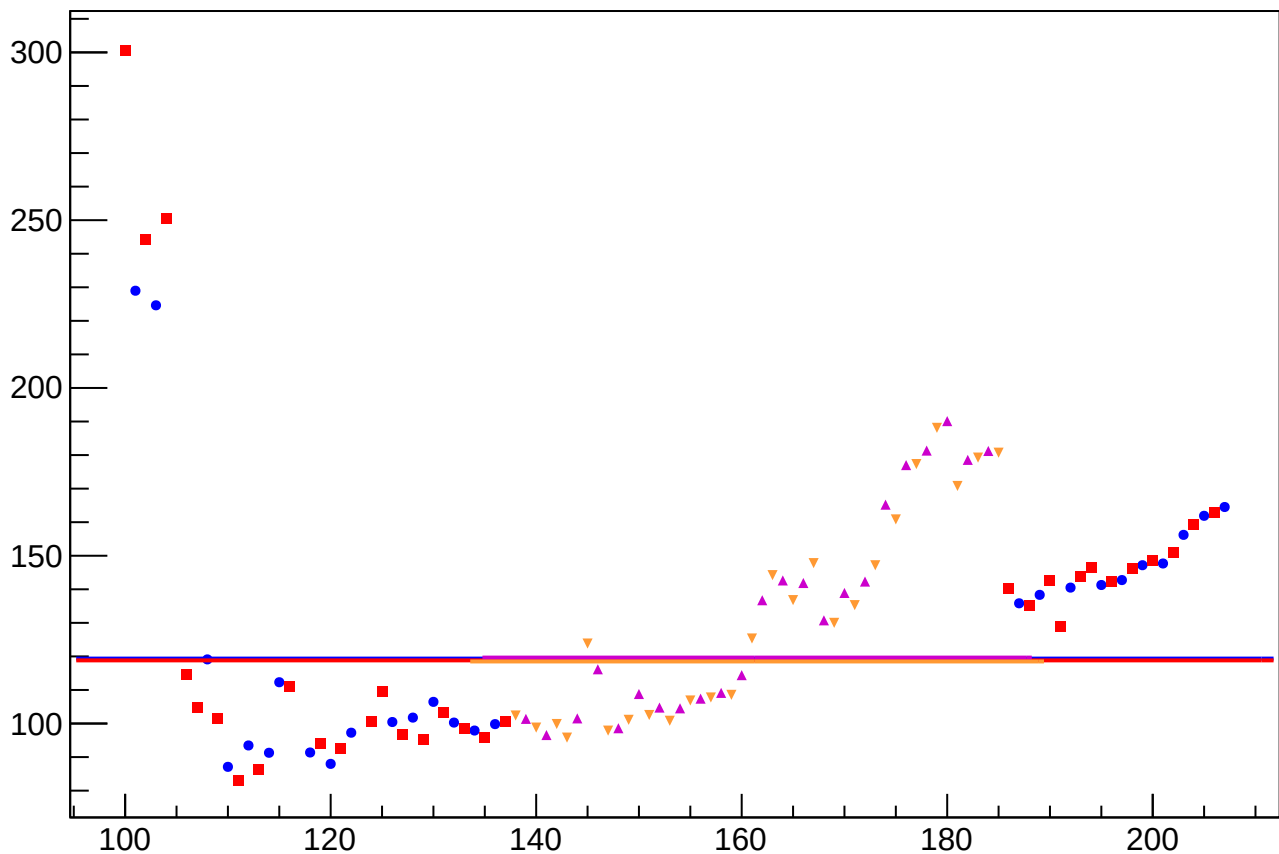
Left In: 4869.740+/-28.809  $\chi^2/\text{NDF}$ : 21913.6/22

+ sign -1327.717+/-21.081  $\chi^2/\text{NDF}$ : 175212.8/50

All: -355.345+/-14.880  $\chi^2/\text{NDF}$ : 356692.4/10

- sign 610.220+/-21.007  $\chi^2/\text{NDF}$ : 177239.2/53

# asym\_bpm2i01WS\_rms vs Slug



Right In: 119.350 $\pm$ 0.023  $\chi^2$ /NDF: 1789572.1/25

Left Out: 118.502 $\pm$ 0.020  $\chi^2$ /NDF:1627138.9/24

Right Out: 118.822 $\pm$ 0.022  $\chi^2$ /NDF: 2031933.7/30

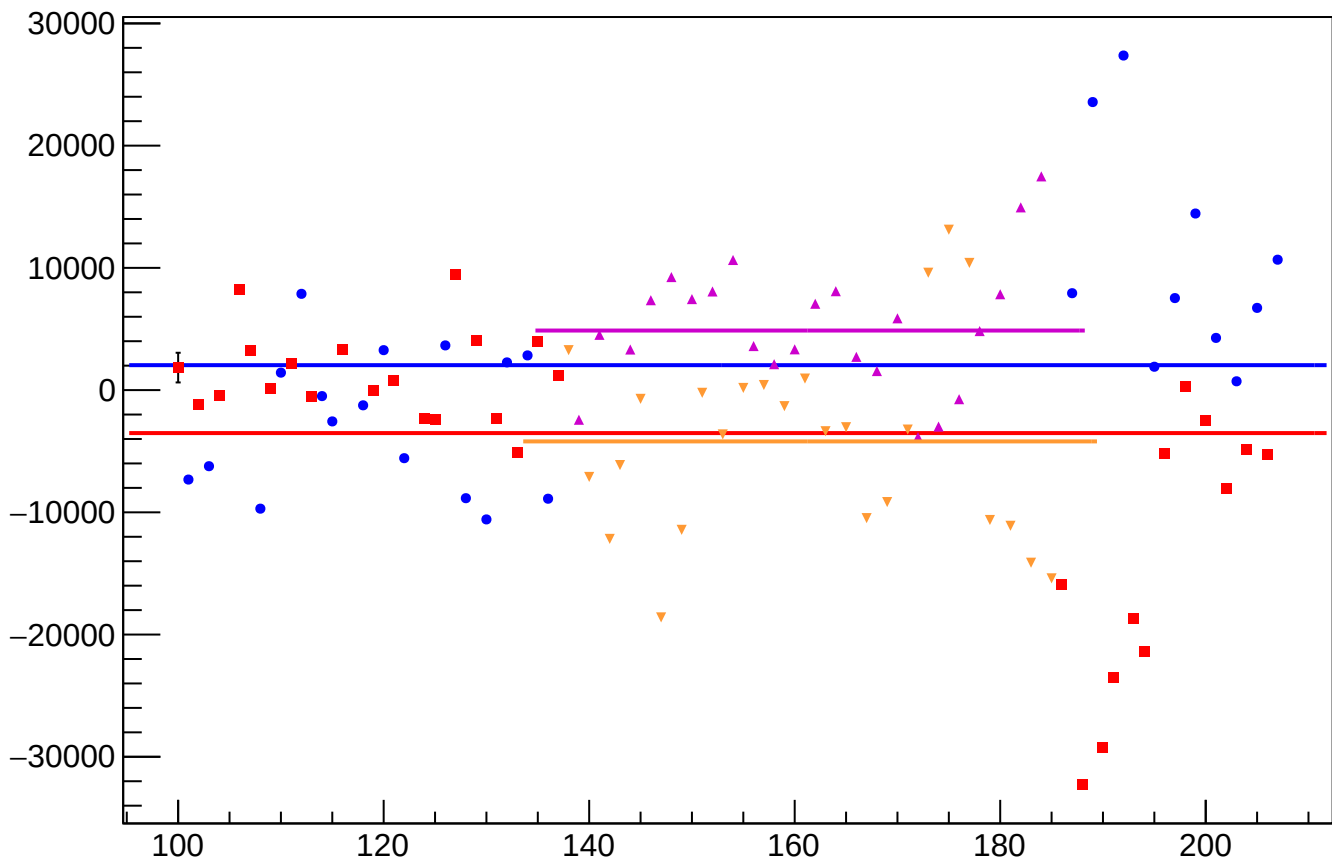
Left In: 119.645 $\pm$ 0.020  $\chi^2$ /NDF:1512380.5/22

+ sign 118.861 $\pm$ 0.015  $\chi^2$ /NDF: 3417501.2/50

All: 119.061 $\pm$ 0.011  $\chi^2$ /NDF: 6962938.5/104

- sign 119.259 $\pm$ 0.015  $\chi^2$ /NDF: 3545079.2/53

# asym\_bpm2i02WS\_mean vs Slug



Right In: 2040.196+/-31.910  $\chi^2/\text{NDF}$ : 84351.6/25

Left Out: -4197.414+/-27.211  $\chi^2/\text{NDF}$ : 70415.4/24

Right Out: -3516.261+/-30.302  $\chi^2/\text{NDF}$ : 102022.0/30

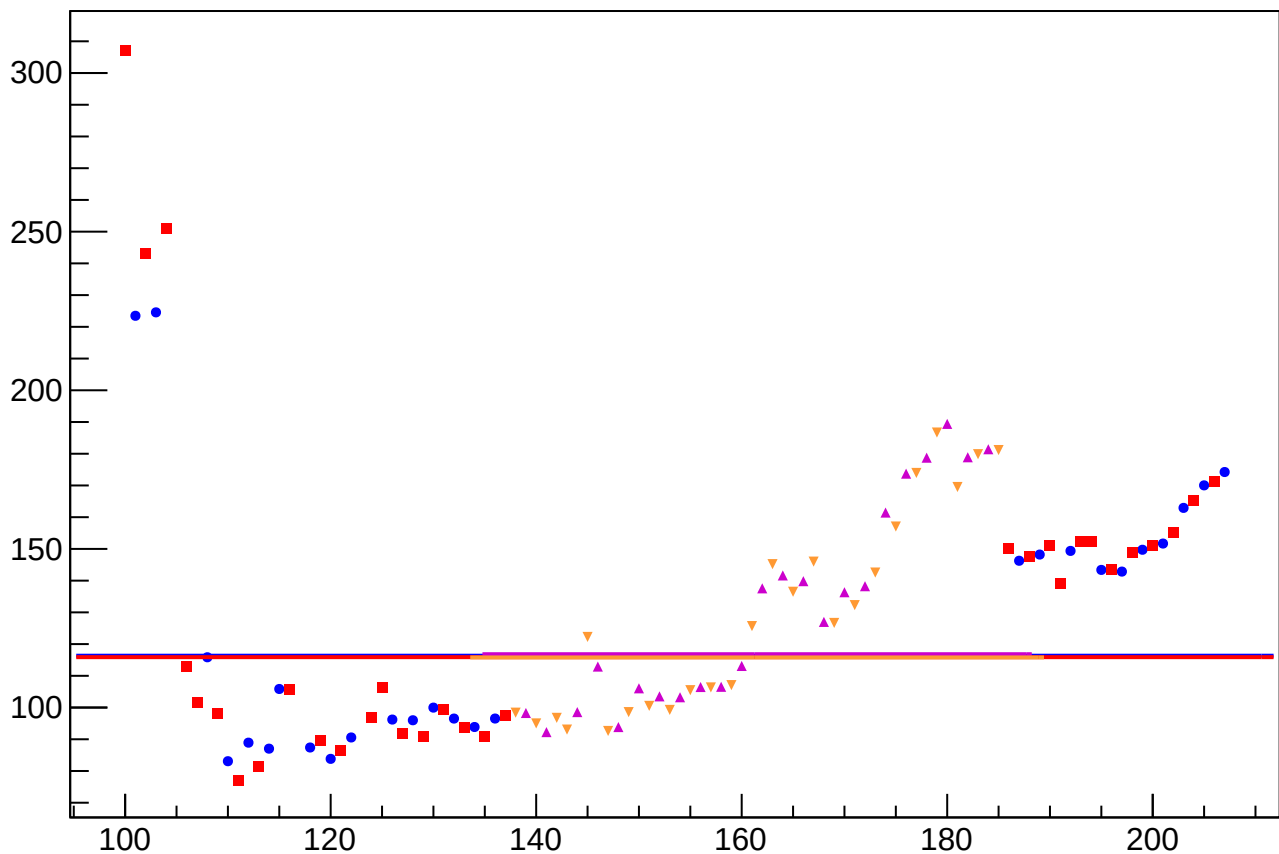
Left In: 4873.124+/-28.200  $\chi^2/\text{NDF}$ : 22923.8/22

+ sign -1571.305+/-20.705  $\chi^2/\text{NDF}$ : 176890.4/50

All: -292.171+/-14.619  $\chi^2/\text{NDF}$ : 350523.0/10

- sign 979.391+/-20.644  $\chi^2/\text{NDF}$ : 166021.8/53

# asym\_bpm2i02WS\_rms vs Slug



Right In: 116.338 $\pm$ 0.023  $\chi^2$ /NDF: 2276208.9/25

Left Out: 115.798 $\pm$ 0.019  $\chi^2$ /NDF:1749021.2/24

Right Out: 115.880 $\pm$ 0.021  $\chi^2$ /NDF: 2660984.2/30

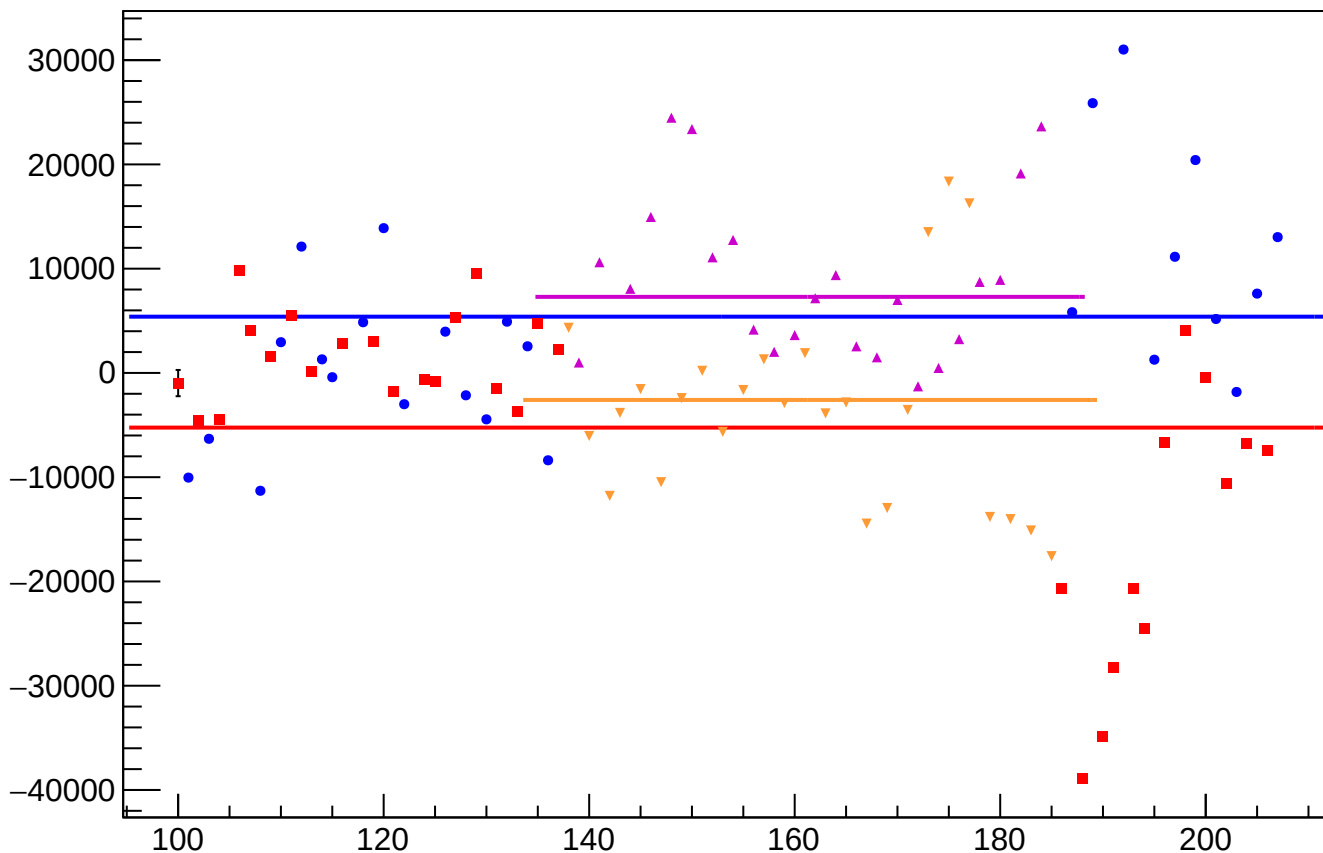
Left In: 116.808 $\pm$ 0.020  $\chi^2$ /NDF:1617645.9/22

+ sign 116.025 $\pm$ 0.015  $\chi^2$ /NDF: 4025561.4/50

All: 116.202 $\pm$ 0.010  $\chi^2$ /NDF: 8305488.8/104

- sign 116.377 $\pm$ 0.015  $\chi^2$ /NDF: 4279637.2/53

# asym\_bpm0i01WS\_mean vs Slug



Right In: 5395.676+/-42.460  $\chi^2/\text{NDF}$ : 63791.0/25

Left Out: -2591.379+/-37.643  $\chi^2/\text{NDF}$ : 47994.7/24

Right Out: -5243.191+/-40.419  $\chi^2/\text{NDF}$ : 97097.4/30

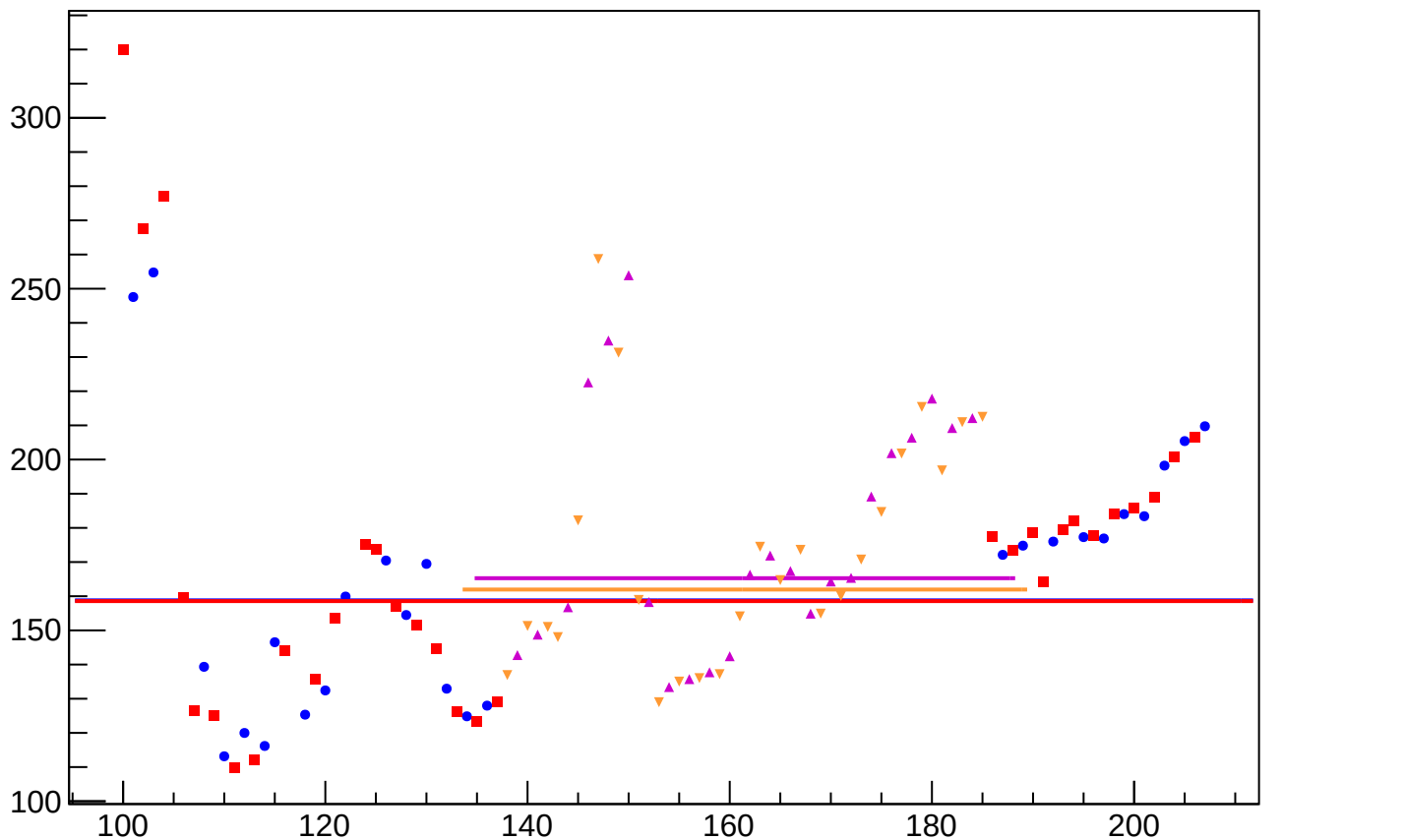
Left In: 7296.193+/-39.576  $\chi^2/\text{NDF}$ : 24743.4/22

+ sign 923.629+/-28.167  $\chi^2/\text{NDF}$ : 131598.2/50

All: 1040.694+/-19.956  $\chi^2/\text{NDF}$ : 302611.2/100

- sign 1158.676+/-28.278  $\chi^2/\text{NDF}$ : 170978.3/53

# asym\_bpm0i01WS\_rms vs Slug



Right In: 158.783 $\pm$ 0.030  $\chi^2$ /NDF: 1283651.0/25

Left Out: 161.957 $\pm$ 0.027  $\chi^2$ /NDF: 1144808.3/24

Right Out: 158.575 $\pm$ 0.029  $\chi^2$ /NDF: 1465348.7/30

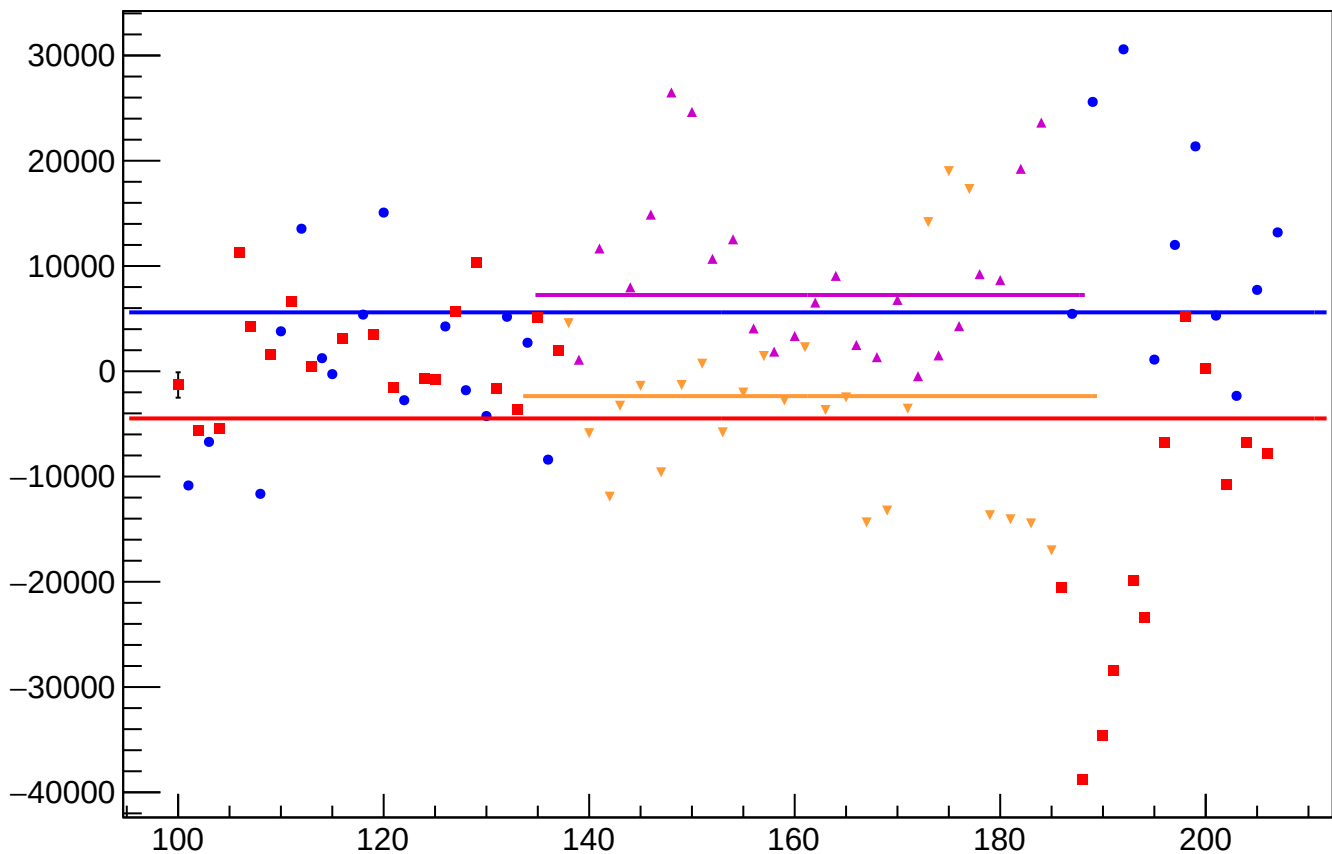
Left In: 165.273 $\pm$ 0.028  $\chi^2$ /NDF: 1179090.6/22

+ sign 160.560 $\pm$ 0.020  $\chi^2$ /NDF: 2434717.1/50

All: 161.274 $\pm$ 0.014  $\chi^2$ /NDF: 5109774.2/104

- sign 161.994 $\pm$ 0.020  $\chi^2$ /NDF: 2672474.3/53

# asym\_bpm0i01aWS\_mean vs Slug



Right In: 5596.497+/-36.021  $\chi^2/\text{NDF}$ : 89141.4/25

Left Out: -2360.753+/-33.680  $\chi^2/\text{NDF}$ : 58566.4/24

Right Out: -4481.238+/-34.092  $\chi^2/\text{NDF}$ : 134969.8/30

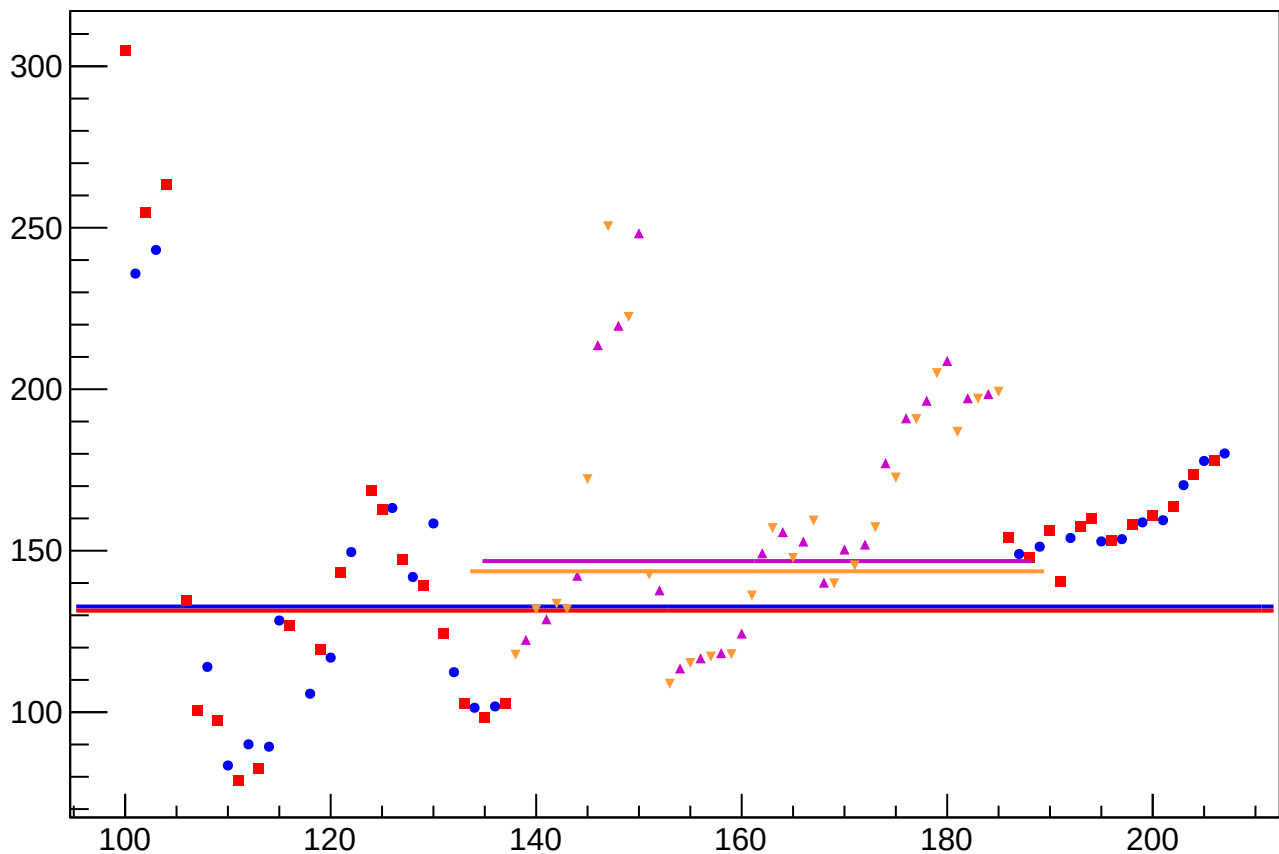
Left In: 7244.763+/-35.507  $\chi^2/\text{NDF}$ : 30447.9/22

+ sign 1350.951+/-24.601  $\chi^2/\text{NDF}$ : 173744.6/50

All: 1247.170+/-17.392  $\chi^2/\text{NDF}$ : 395944.3/100

- sign 1143.469+/-24.592  $\chi^2/\text{NDF}$ : 222164.1/53

# asym\_bpm0i01aWS\_rms vs Slug



Right In: 132.723+/-0.025  $\chi^2/\text{NDF}$ : 1936271.5/25

Left Out: 143.622+/-0.024  $\chi^2/\text{NDF}$ :1662825.4/24

Right Out: 131.444+/-0.024  $\chi^2/\text{NDF}$ : 2314001.0/30

Left In: 146.793+/-0.025  $\chi^2/\text{NDF}$ :1694524.1/22

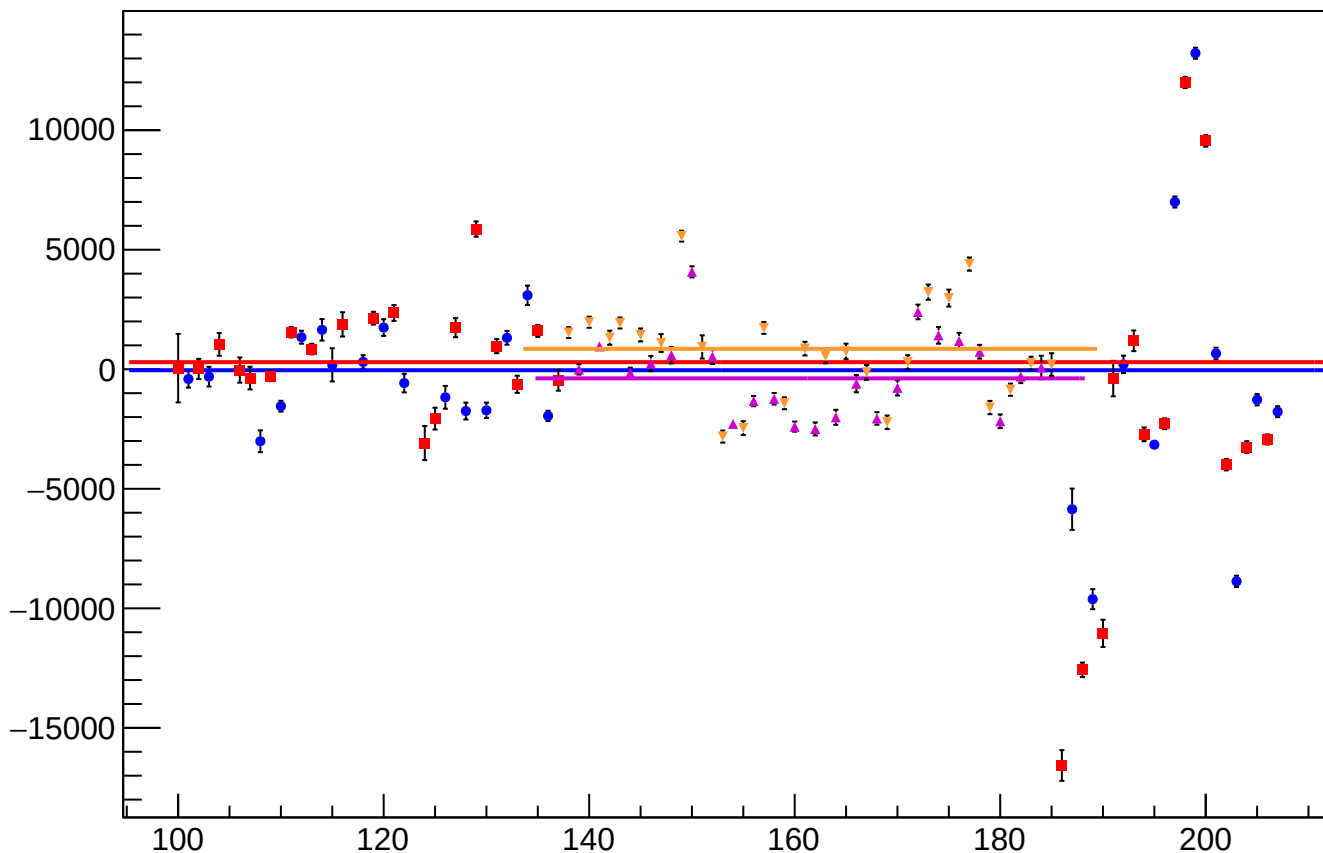
+ sign 138.538+/-0.017  $\chi^2/\text{NDF}$ : 3696799.3/50

All: 138.672+/-0.012  $\chi^2/\text{NDF}$ : 7899911.5/104

- sign 138.807+/-0.017  $\chi^2/\text{NDF}$ : 4202993.0/53



# asym\_bpm0l01WS\_mean vs Slug



Right In:  $-39.946 \pm 58.335$   $\chi^2/\text{NDF}$ : 6859.3/25

Left Out:  $853.916 \pm 56.237$   $\chi^2/\text{NDF}$ : 1443.8/24

Right Out:  $297.650 \pm 56.088$   $\chi^2/\text{NDF}$ : 8397.9/30

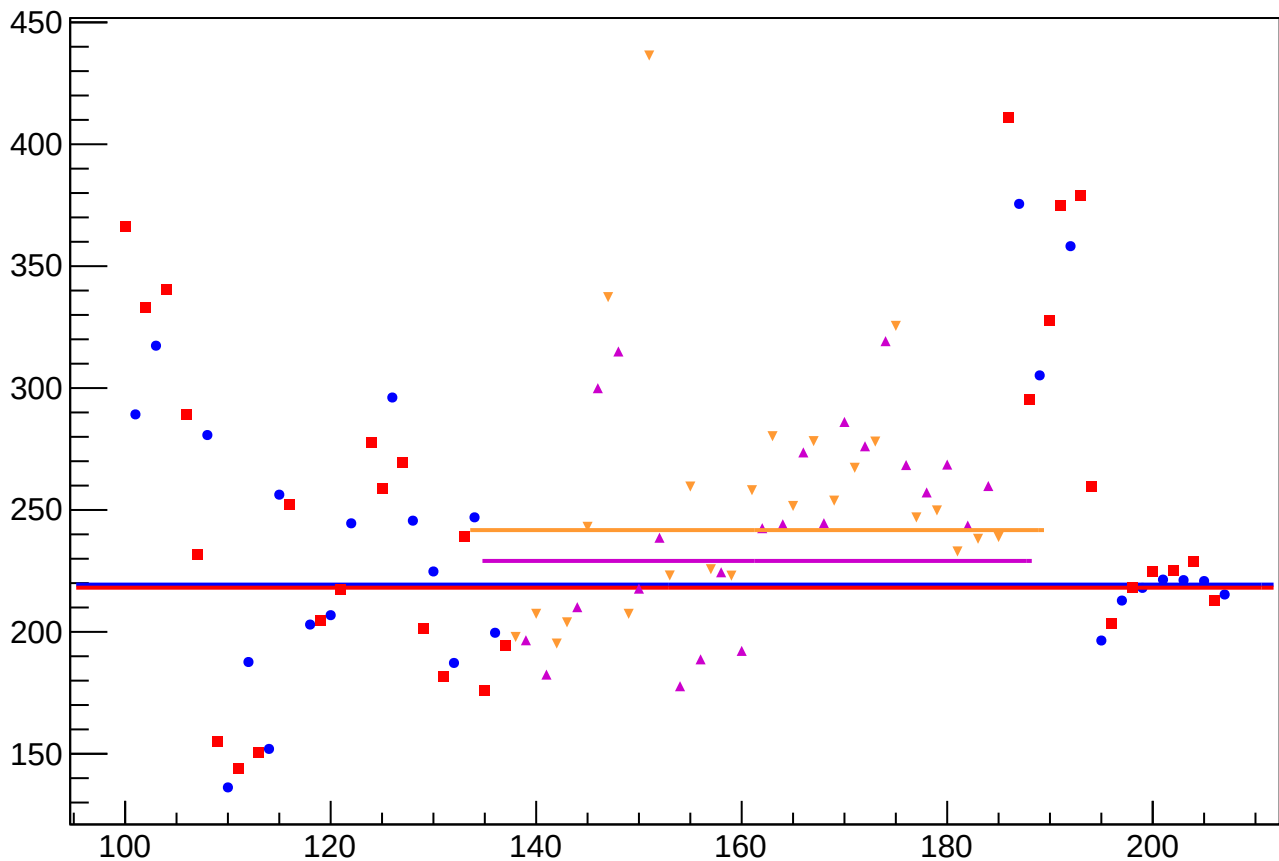
Left In:  $-380.865 \pm 55.135$   $\chi^2/\text{NDF}$ : 982.4/22

+ sign  $423.347 \pm 40.487$   $\chi^2/\text{NDF}$ : 8424.8/50

All:  $181.078 \pm 28.207$   $\chi^2/\text{NDF}$ : 17949.2/104

- sign  $-47.419 \pm 39.319$   $\chi^2/\text{NDF}$ : 9454.7/53

# asym\_bpm0l01WS\_rms vs Slug



Right In: 219.387 $\pm$ 0.041  $\chi^2$ /NDF: 1172071.7/25

Left Out: 241.746 $\pm$ 0.040  $\chi^2$ /NDF: 986390.8/24

Right Out: 218.128 $\pm$ 0.040  $\chi^2$ /NDF: 1910079.4/30

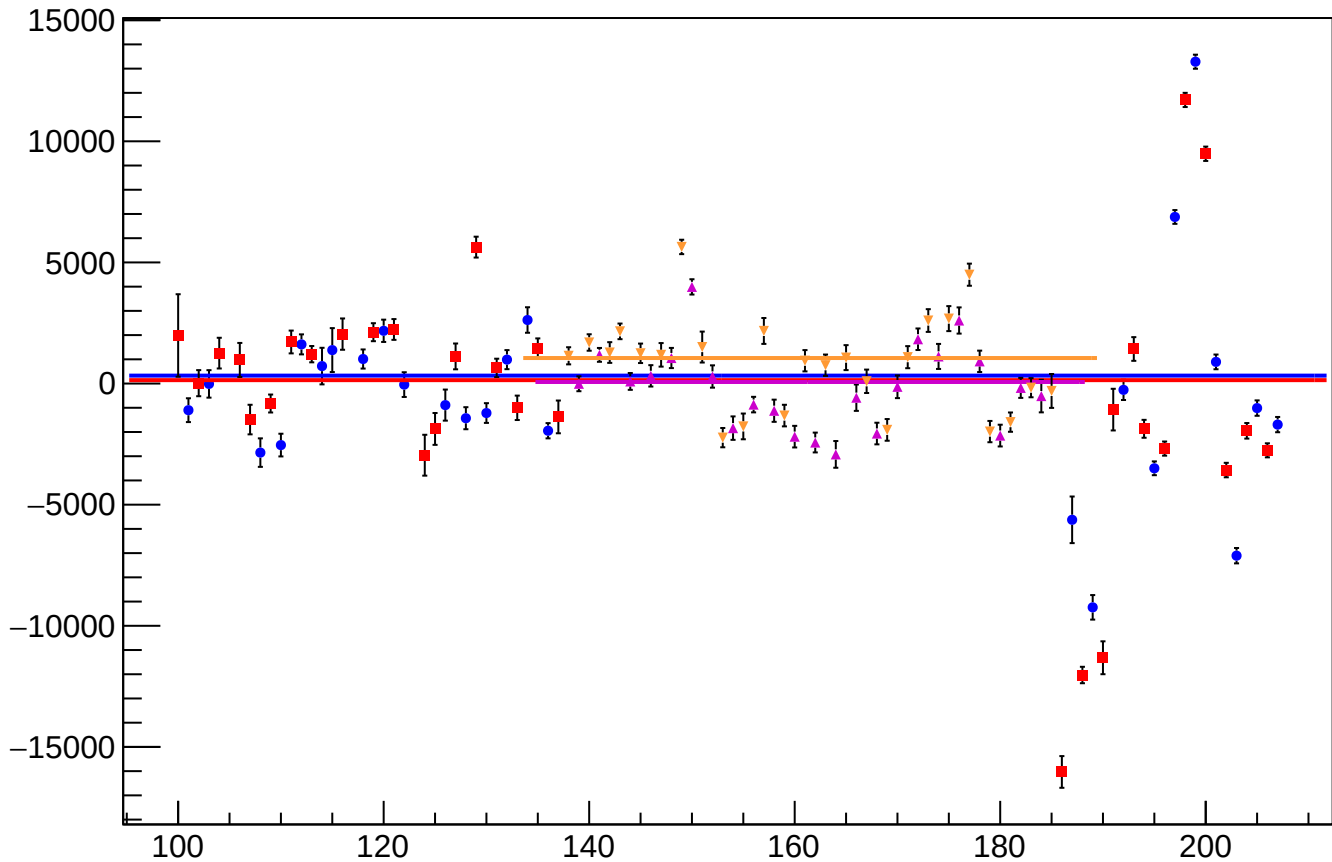
Left In: 229.103 $\pm$ 0.039  $\chi^2$ /NDF: 1068960.6/22

+ sign 230.976 $\pm$ 0.029  $\chi^2$ /NDF: 2310743.5/50

All: 227.237 $\pm$ 0.020  $\chi^2$ /NDF: 5361881.5/104

- sign 223.710 $\pm$ 0.028  $\chi^2$ /NDF: 3017985.5/53

# asym\_bpm0l02WS\_mean vs Slug



Right In: 327.167+/-79.076  $\chi^2/\text{NDF}$ : 3923.7/25

Left Out: 1053.354+/-85.895  $\chi^2/\text{NDF}$ : 614.6/24

Right Out: 140.408+/-76.310  $\chi^2/\text{NDF}$ : 5478.2/30

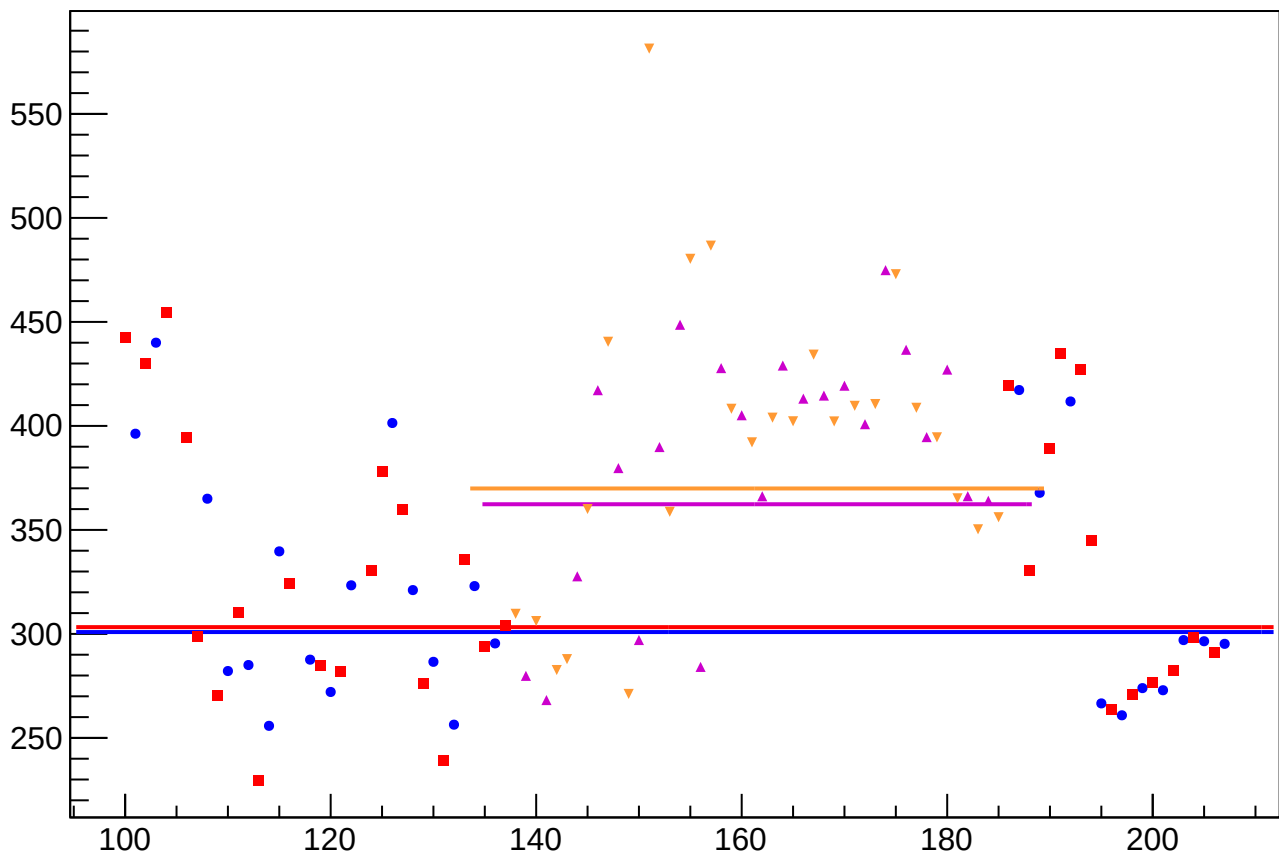
Left In: 64.646+/-86.660  $\chi^2/\text{NDF}$ : 394.4/22

+ sign 660.291+/-58.177  $\chi^2/\text{NDF}$ : 4577.0/50

All: 379.466+/-40.813  $\chi^2/\text{NDF}$ : 10496.0/104

- sign 107.319+/-57.271  $\chi^2/\text{NDF}$ : 5873.1/53

# asym\_bpm0l02WS\_rms vs Slug



Right In: 300.893+/-0.056  $\chi^2/\text{NDF}$ : 644079.9/25

Left Out: 369.923+/-0.061  $\chi^2/\text{NDF}$ :1230300.9/24

Right Out: 303.261+/-0.054  $\chi^2/\text{NDF}$ : 920406.1/30

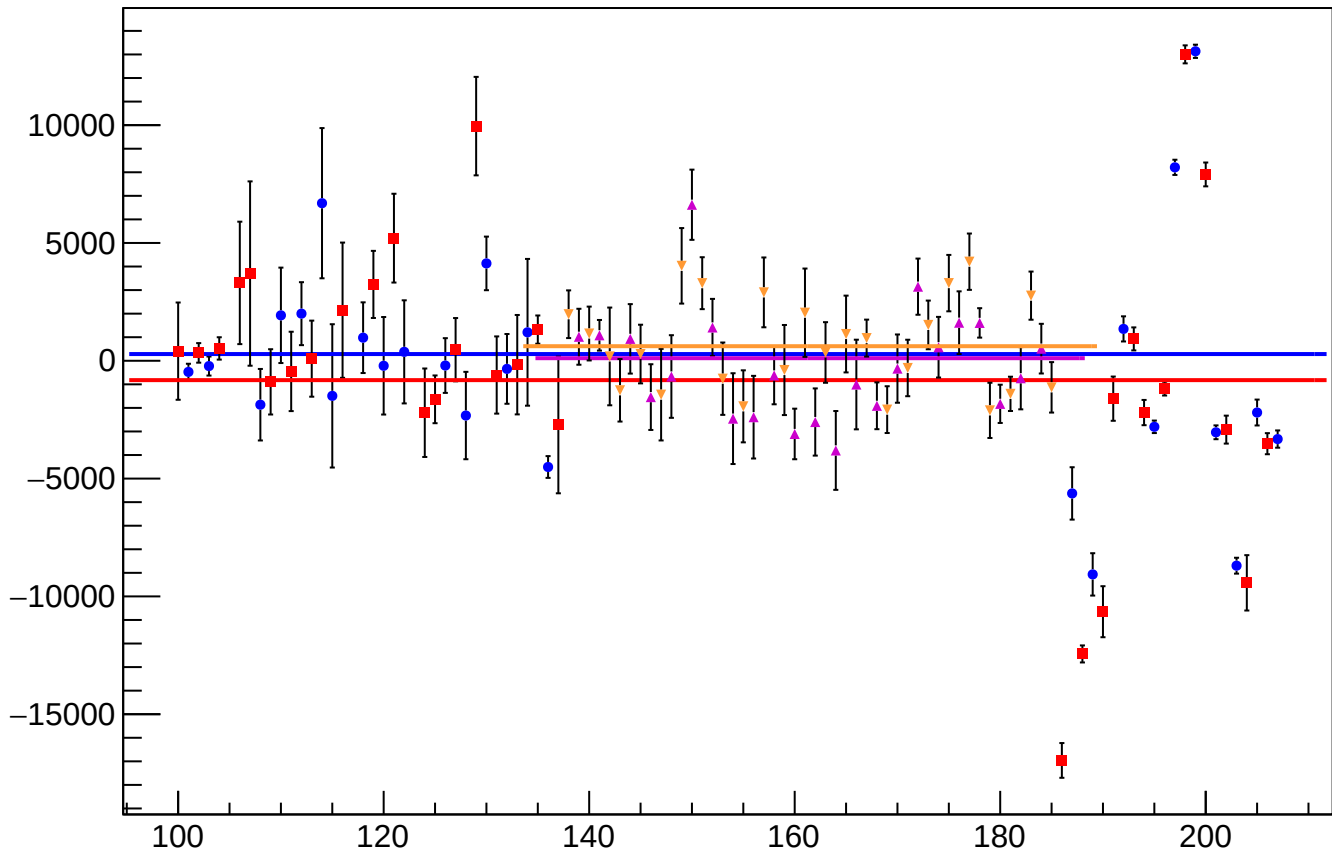
Left In: 362.341+/-0.061  $\chi^2/\text{NDF}$ :1053395.6/22

+ sign 332.559+/-0.041  $\chi^2/\text{NDF}$ : 2573556.3/50

All: 330.784+/-0.029  $\chi^2/\text{NDF}$ : 5074607.4/104

- sign 329.064+/-0.040  $\chi^2/\text{NDF}$ : 2497384.3/53

# asym\_bpm0l03WS\_mean vs Slug



Right In:  $285.119 \pm 101.489$   $\chi^2/\text{NDF}: 4060.0/25$

Left Out:  $618.538 \pm 238.150$   $\chi^2/\text{NDF}: 65.7/24$

Right Out:  $-821.557 \pm 120.827$   $\chi^2/\text{NDF}: 3408.4/30$

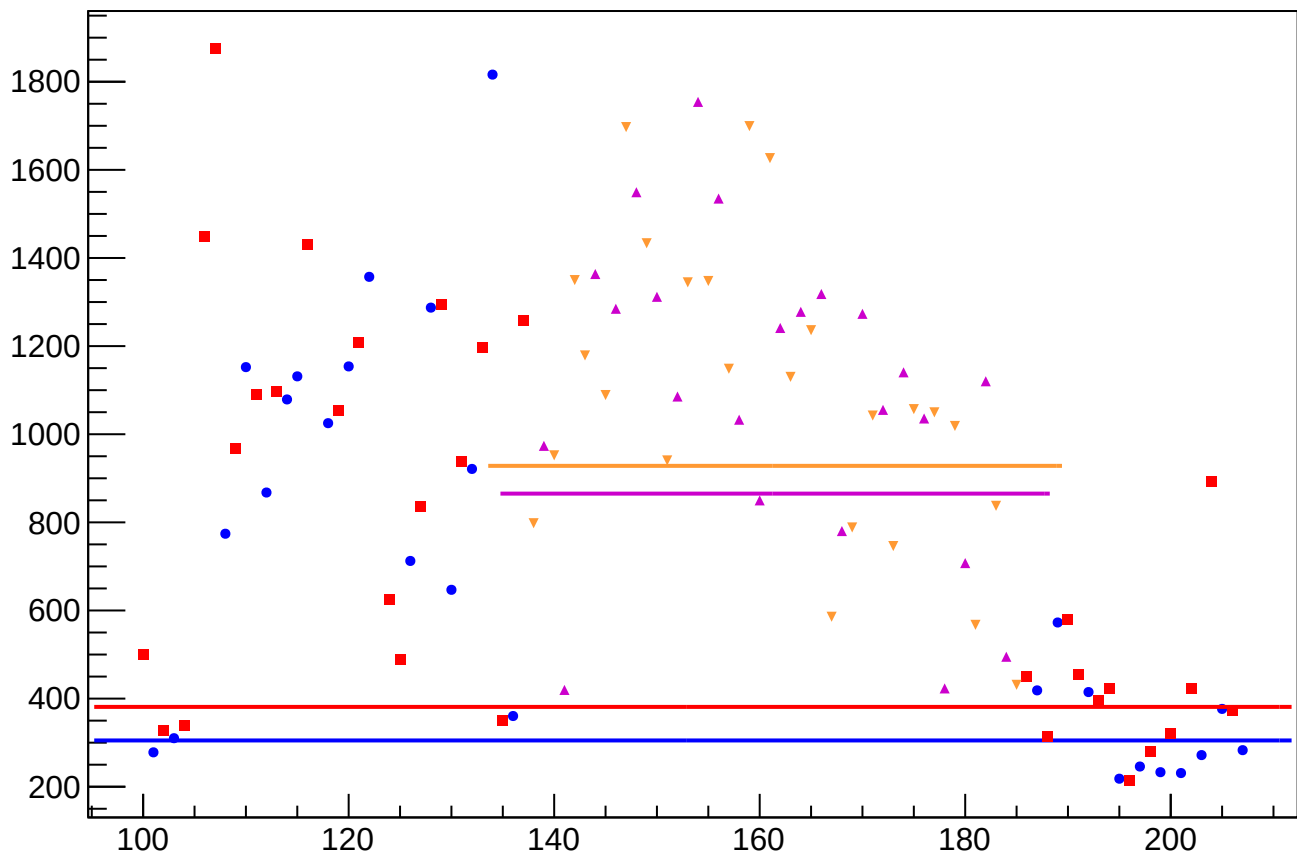
Left In:  $109.519 \pm 237.827$   $\chi^2/\text{NDF}: 71.7/22$

+ sign  $336.364 \pm 93.365$   $\chi^2/\text{NDF}: 4127.4/50$

All:  $-78.403 \pm 70.553$   $\chi^2/\text{NDF}: 7665.7/104$

- sign  $-630.540 \pm 107.722$   $\chi^2/\text{NDF}: 3492.3/53$

# asym\_bpm0l03WS\_rms vs Slug



Right In: 305.031+/-0.072  $\chi^2/\text{NDF}$ : 5152314.9/25

Left Out: 928.240+/-0.168  $\chi^2/\text{NDF}$ : 3294716.2/24

Right Out: 381.179+/-0.085  $\chi^2/\text{NDF}$ : 5666005.6/30

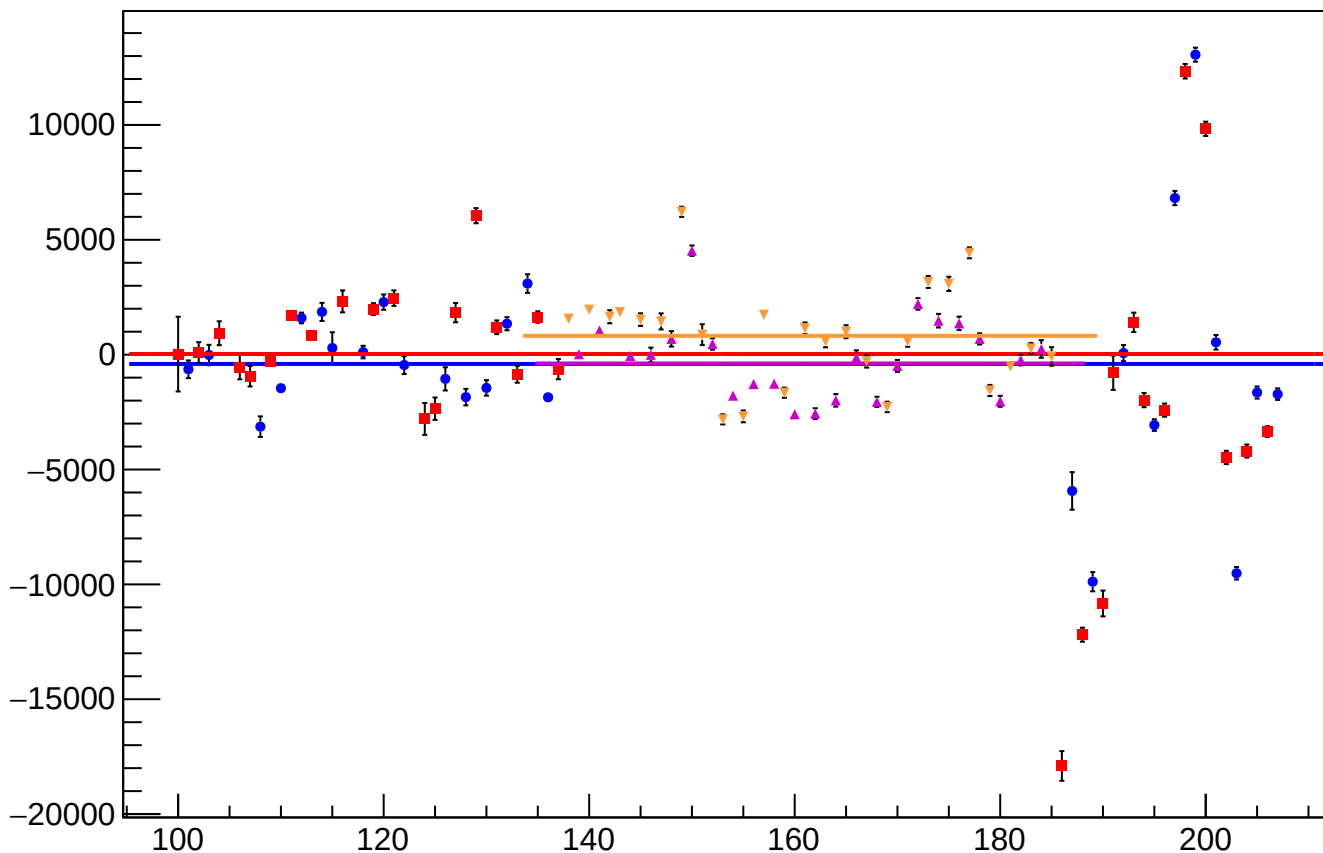
Left In: 865.223+/-0.168  $\chi^2/\text{NDF}$ : 4792678.4/22

+ sign 400.816+/-0.066  $\chi^2/\text{NDF}$ : 20038059.6/50

All: 434.991+/-0.050  $\chi^2/\text{NDF}$ : 37706438.0/10

- sign 480.484+/-0.076  $\chi^2/\text{NDF}$ : 17043709.7/53

# asym\_bpm0l04WS\_mean vs Slug



Right In:  $-404.000 \pm 61.707$   $\chi^2/\text{NDF}: 4782.9/25$

Left Out:  $820.821 \pm 49.996$   $\chi^2/\text{NDF}: 1990.8/24$

Right Out:  $28.454 \pm 58.087$   $\chi^2/\text{NDF}: 6734.8/30$

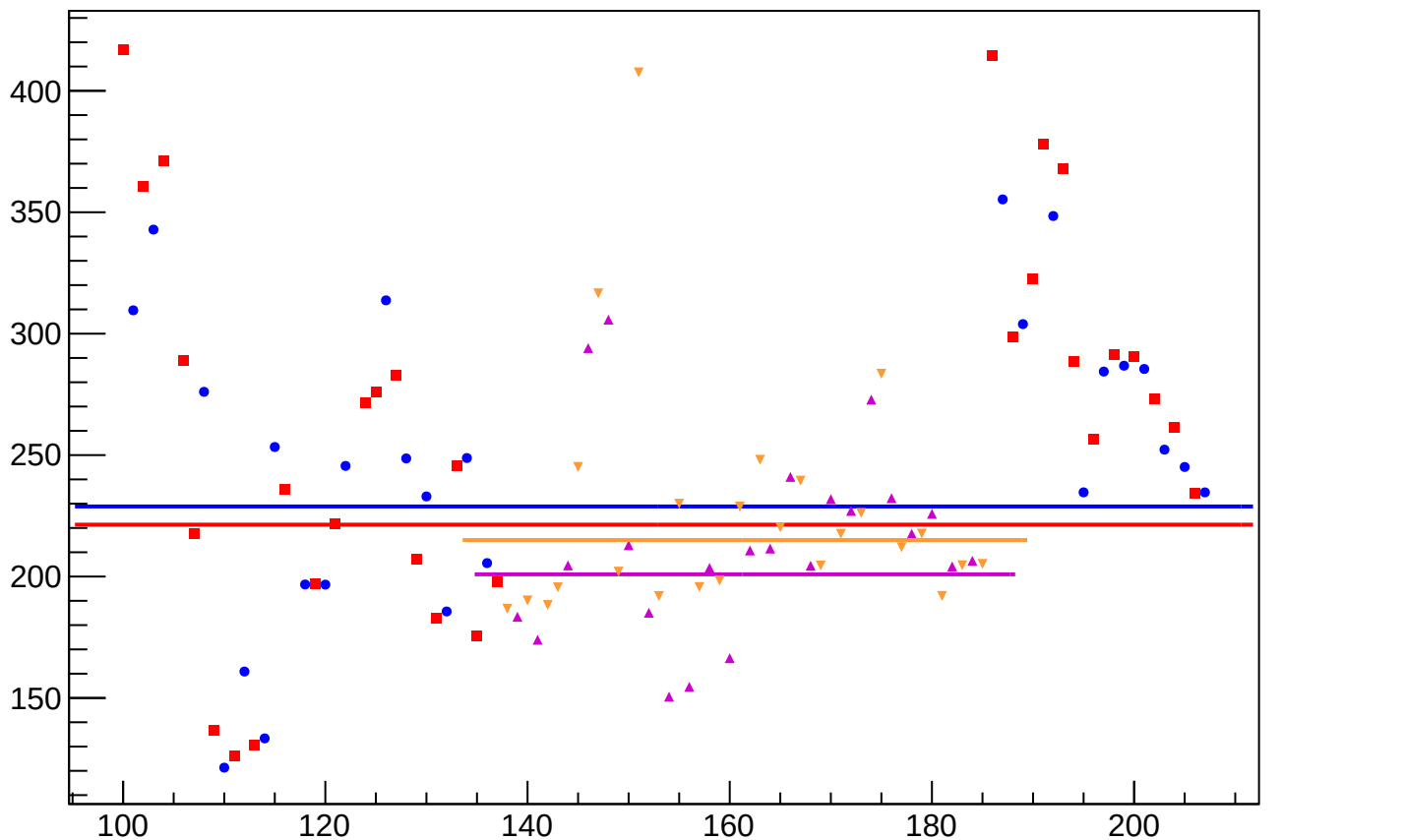
Left In:  $-385.002 \pm 48.455$   $\chi^2/\text{NDF}: 1253.3/22$

+ sign  $335.427 \pm 38.846$   $\chi^2/\text{NDF}: 7011.6/50$

All:  $48.184 \pm 26.871$   $\chi^2/\text{NDF}: 15134.4/104$

- sign  $-215.352 \pm 37.209$   $\chi^2/\text{NDF}: 8018.0/53$

# asym\_bpm0l04WS\_rms vs Slug



Right In:  $228.857 \pm 0.044$   $\chi^2/\text{NDF}$ : 1846292.6/25

Left Out:  $215.027 \pm 0.035$   $\chi^2/\text{NDF}$ : 897791.6/24

Right Out:  $221.364 \pm 0.041$   $\chi^2/\text{NDF}$ : 3077790.0/30

Left In:  $200.917 \pm 0.034$   $\chi^2/\text{NDF}$ : 1105842.5/22

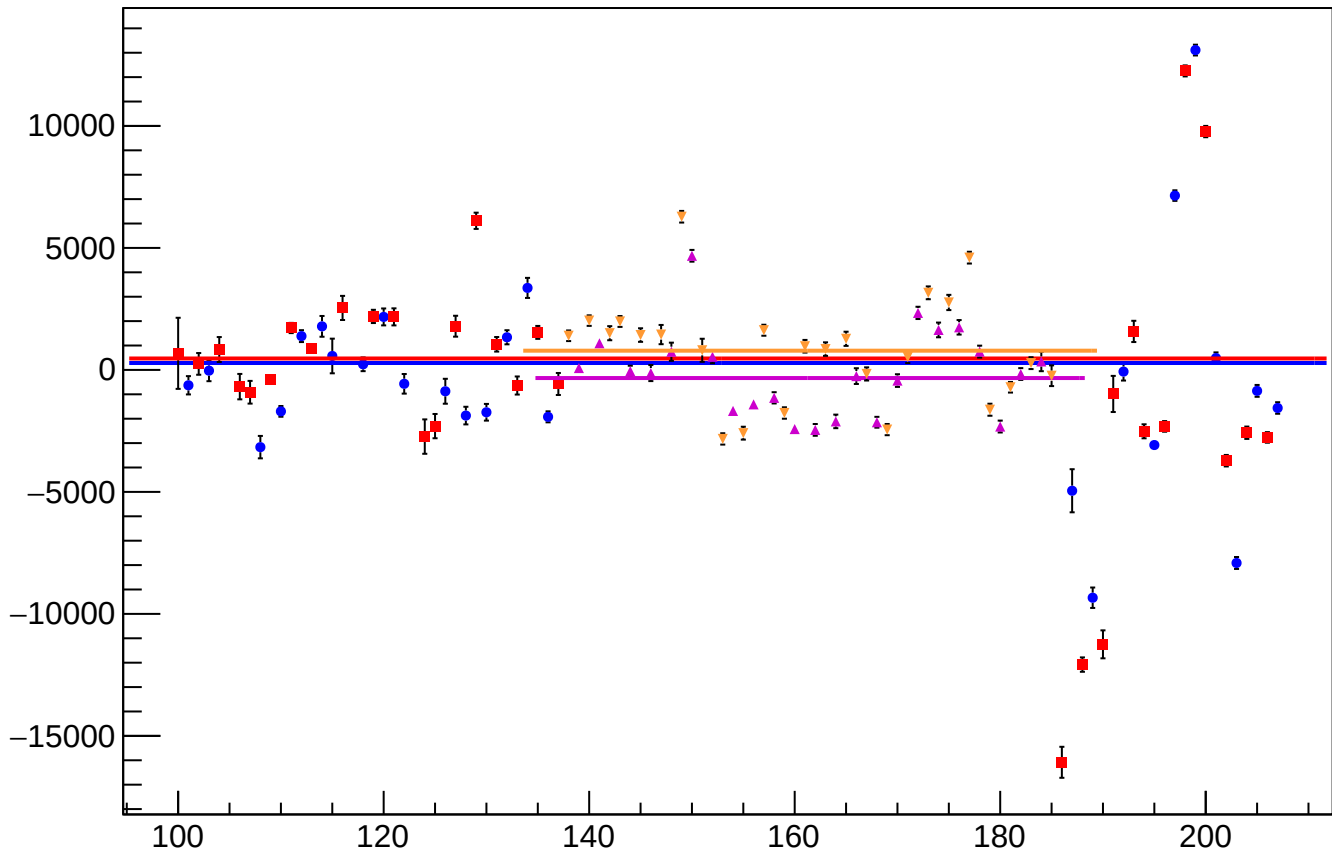
+ sign  $220.508 \pm 0.027$   $\chi^2/\text{NDF}$ : 2804738.4/50

All:  $214.666 \pm 0.019$   $\chi^2/\text{NDF}$ : 7221220.7/104

- sign  $209.307 \pm 0.026$   $\chi^2/\text{NDF}$ : 4329759.9/53



# asym\_bpm0l05WS\_mean vs Slug



Right In:  $283.223 \pm 58.098$   $\chi^2/\text{NDF}$ : 6842.7/25

Left Out:  $788.110 \pm 51.424$   $\chi^2/\text{NDF}$ : 1890.2/24

Right Out:  $468.136 \pm 55.587$   $\chi^2/\text{NDF}$ : 8734.4/30

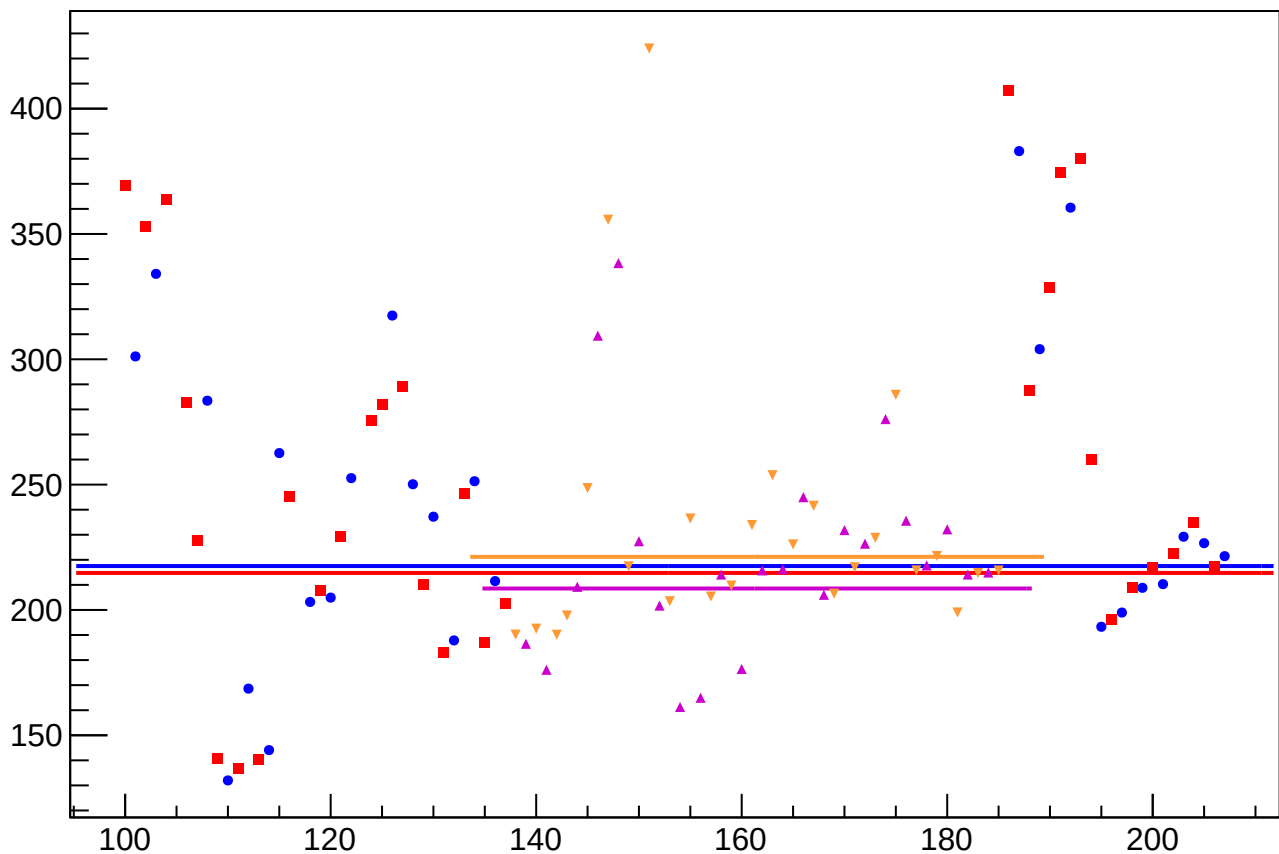
Left In:  $-333.303 \pm 50.194$   $\chi^2/\text{NDF}$ : 1215.2/22

+ sign  $566.317 \pm 38.507$   $\chi^2/\text{NDF}$ : 8775.3/50

All:  $287.570 \pm 26.774$   $\chi^2/\text{NDF}$ : 18940.9/104

- sign  $26.669 \pm 37.254$   $\chi^2/\text{NDF}$ : 10064.1/53

# asym\_bpm0l05WS\_rms vs Slug



Right In: 217.513+/-0.041  $\chi^2/\text{NDF}$ : 1411107.3/25

Left Out: 221.185+/-0.036  $\chi^2/\text{NDF}$ :939520.0/24

Right Out: 214.767+/-0.039  $\chi^2/\text{NDF}$ : 2265258.0/30

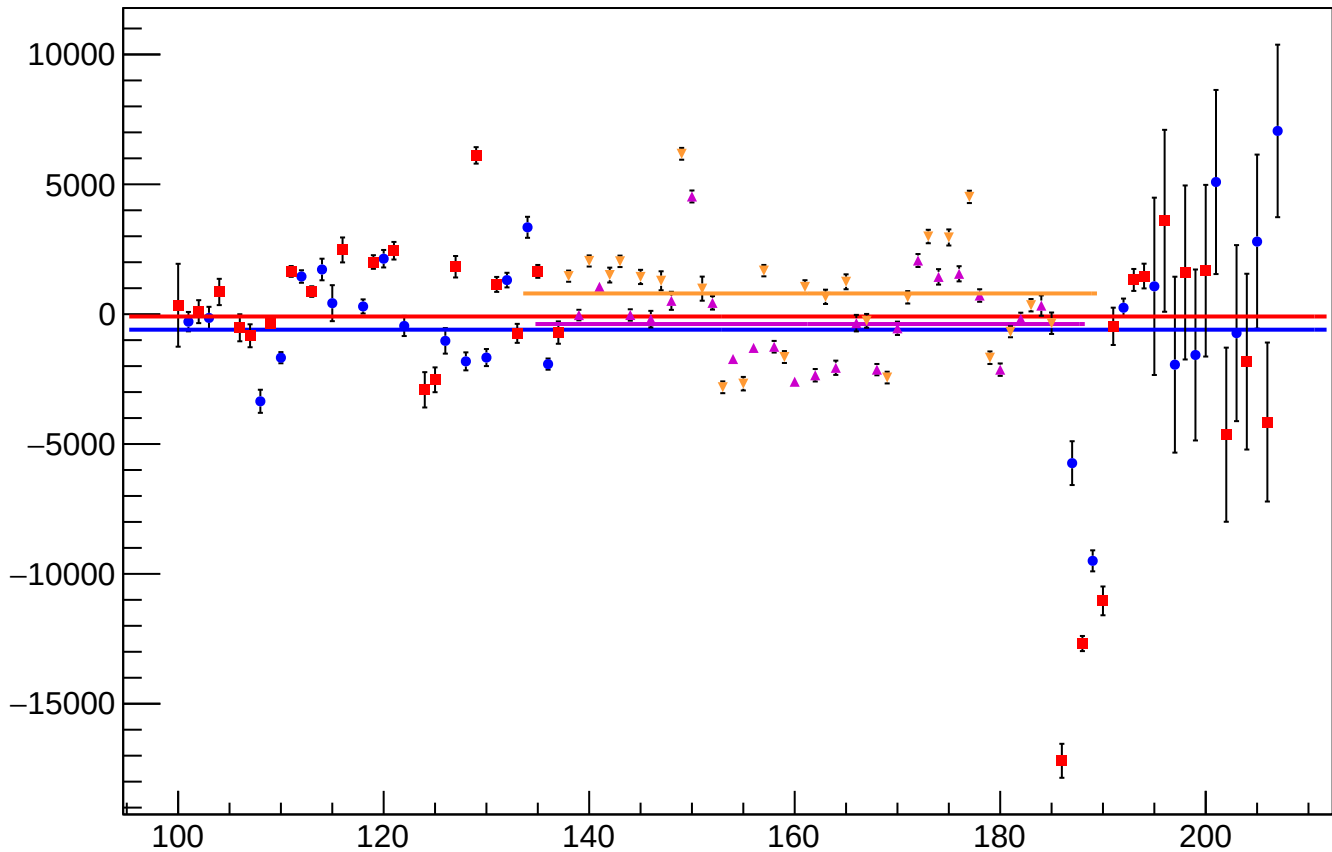
Left In: 208.556+/-0.035  $\chi^2/\text{NDF}$ :1035638.0/22

+ sign 219.572+/-0.027  $\chi^2/\text{NDF}$ : 2355107.3/50

All: 215.323+/-0.019  $\chi^2/\text{NDF}$ : 5716905.8/104

- sign 211.346+/-0.026  $\chi^2/\text{NDF}$ : 3314649.0/53

# asym\_bpm0l06WS\_mean vs Slug



Right In:  $-597.572 \pm 76.357$   $\chi^2/\text{NDF}: 985.9/25$

Left Out:  $797.475 \pm 50.495$   $\chi^2/\text{NDF}: 1960.8/24$

Right Out:  $-89.547 \pm 68.098$   $\chi^2/\text{NDF}: 3735.6/30$

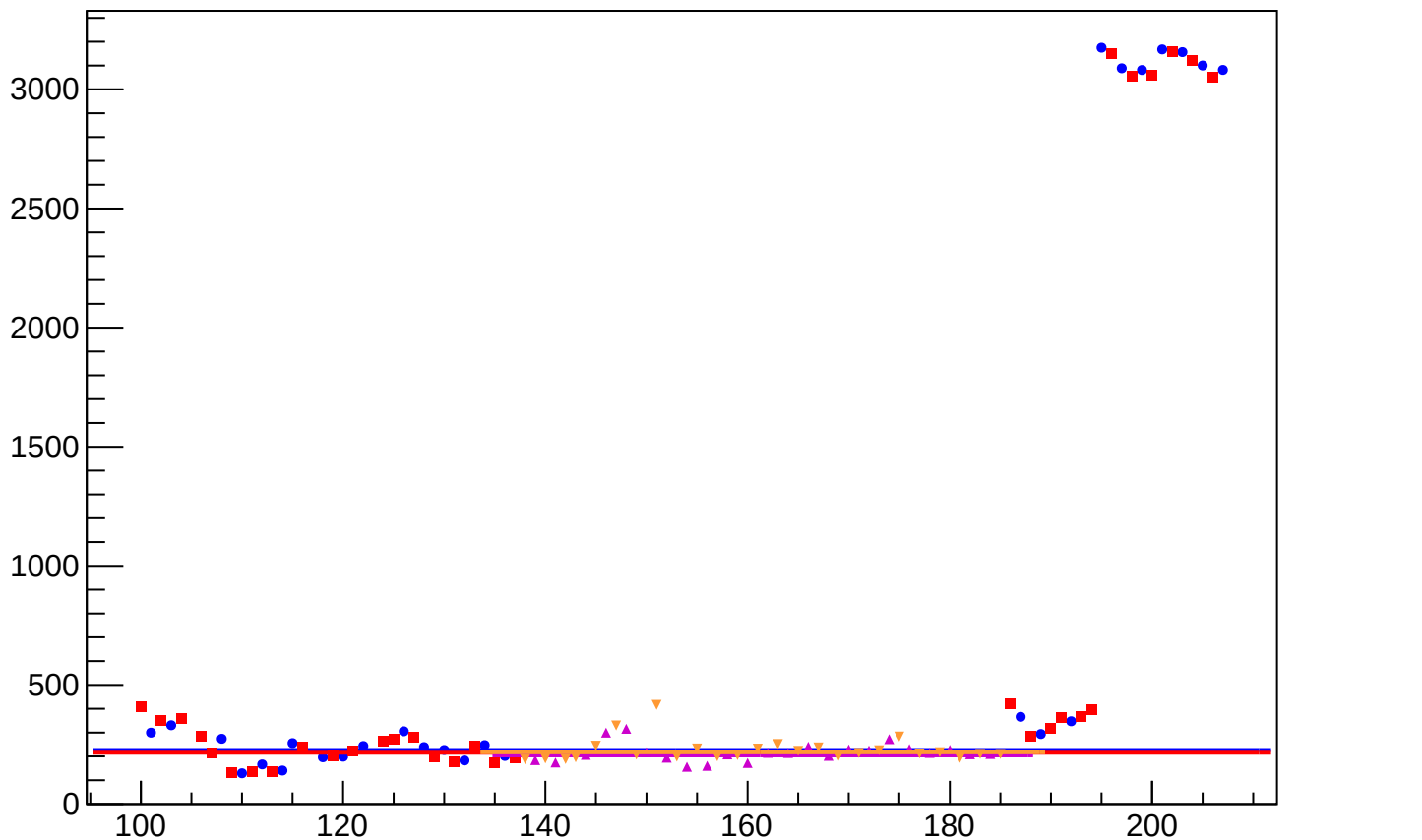
Left In:  $-379.578 \pm 49.183$   $\chi^2/\text{NDF}: 1201.2/22$

+ sign  $373.021 \pm 42.118$   $\chi^2/\text{NDF}: 3179.0/50$

All:  $28.548 \pm 28.955$   $\chi^2/\text{NDF}: 8254.6/104$

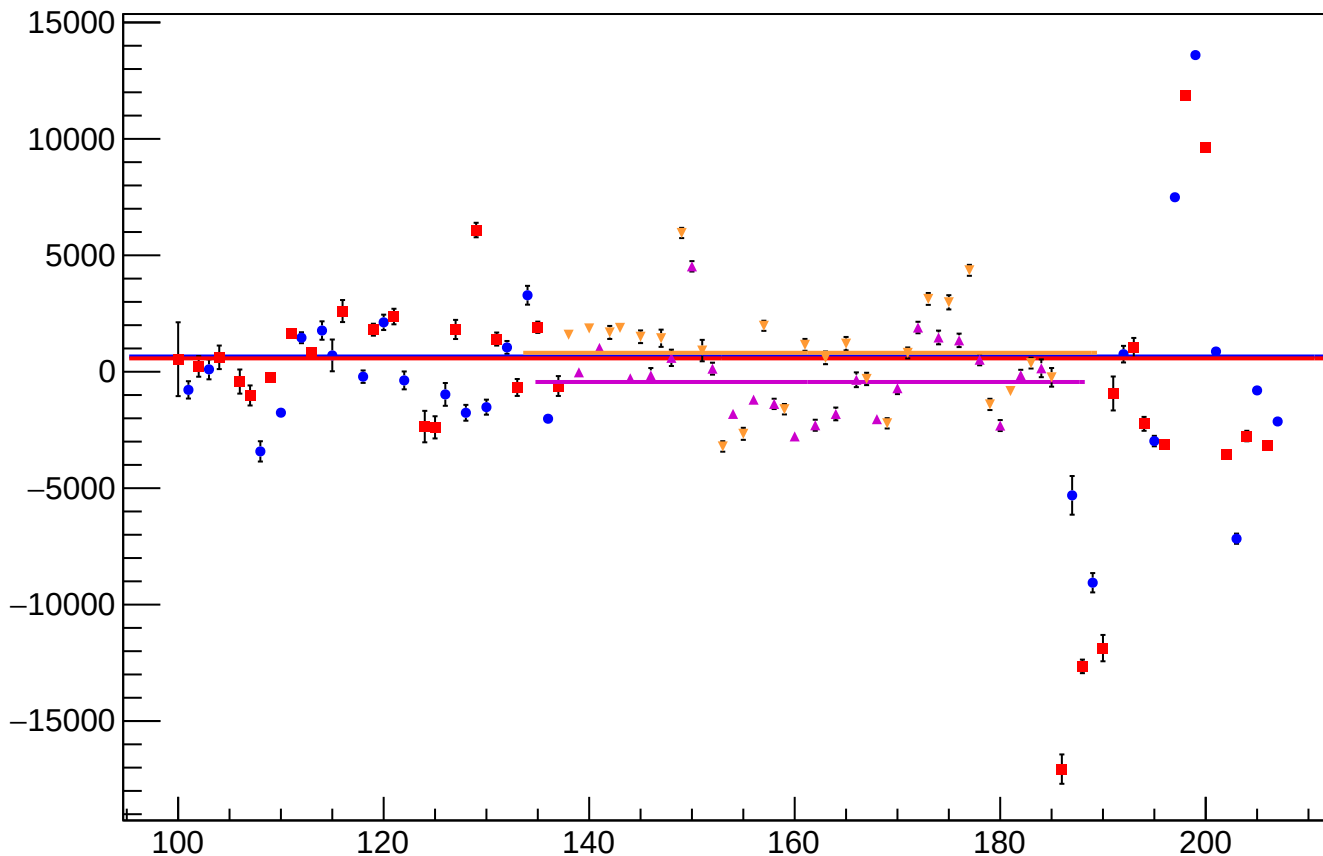
- sign  $-280.152 \pm 39.872$   $\chi^2/\text{NDF}: 4948.8/53$

# asym\_bpm0l06WS\_rms vs Slug



|                            |                                     |                        |                                     |
|----------------------------|-------------------------------------|------------------------|-------------------------------------|
| Right In: 226.849+/-0.054  | $\chi^2/\text{NDF}$ : 11607514.2/25 | + sign 220.153+/-0.030 | $\chi^2/\text{NDF}$ : 12540064.6/50 |
| Left Out: 217.224+/-0.036  | $\chi^2/\text{NDF}$ : 910445.0/24   | All: 213.821+/-0.020   | $\chi^2/\text{NDF}$ : 25364201.0/10 |
| Right Out: 215.507+/-0.048 | $\chi^2/\text{NDF}$ : 11687841.6/30 | - sign 208.147+/-0.028 | $\chi^2/\text{NDF}$ : 12738440.1/53 |
| Left In: 204.308+/-0.035   | $\chi^2/\text{NDF}$ : 1015049.0/22  |                        |                                     |

# asym\_bpm0l07WS\_mean vs Slug



Right In:  $654.844 \pm 54.173$   $\chi^2/\text{NDF}$ : 8930.3/25

Left Out:  $814.275 \pm 49.760$   $\chi^2/\text{NDF}$ : 2000.4/24

Right Out:  $573.929 \pm 51.678$   $\chi^2/\text{NDF}$ : 10636.8/30

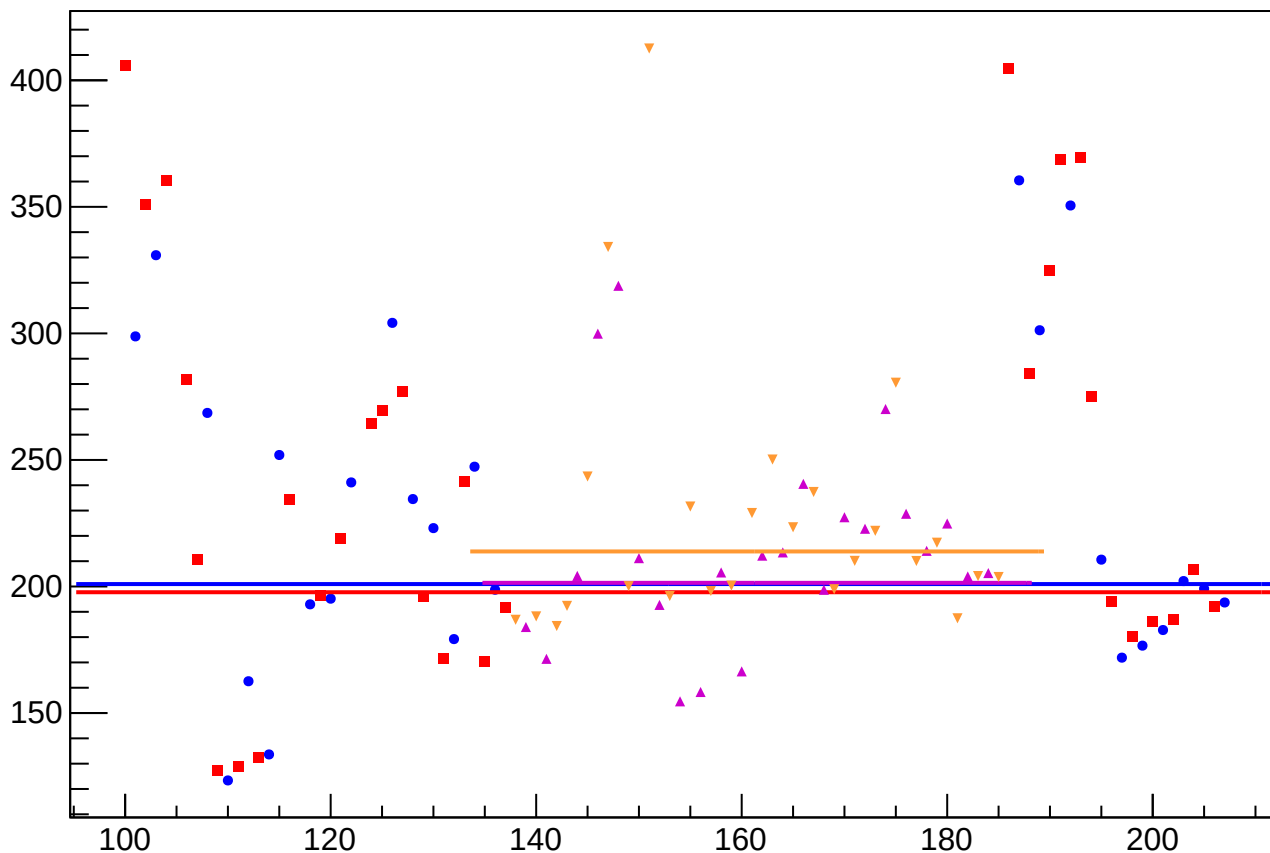
Left In:  $-439.674 \pm 48.535$   $\chi^2/\text{NDF}$ : 1235.0/22

+ sign  $741.316 \pm 36.646$   $\chi^2/\text{NDF}$ : 10935.4/50

All:  $375.922 \pm 25.453$   $\chi^2/\text{NDF}$ : 23203.7/104

- sign  $35.373 \pm 35.379$   $\chi^2/\text{NDF}$ : 12076.2/53

# asym\_bpm0l07WS\_rms vs Slug



Right In: 200.960 $\pm$ 0.038  $\chi^2$ /NDF: 1603512.5/25

Left Out: 213.848 $\pm$ 0.035  $\chi^2$ /NDF:963582.3/24

Right Out: 197.734 $\pm$ 0.037  $\chi^2$ /NDF: 2638881.6/30

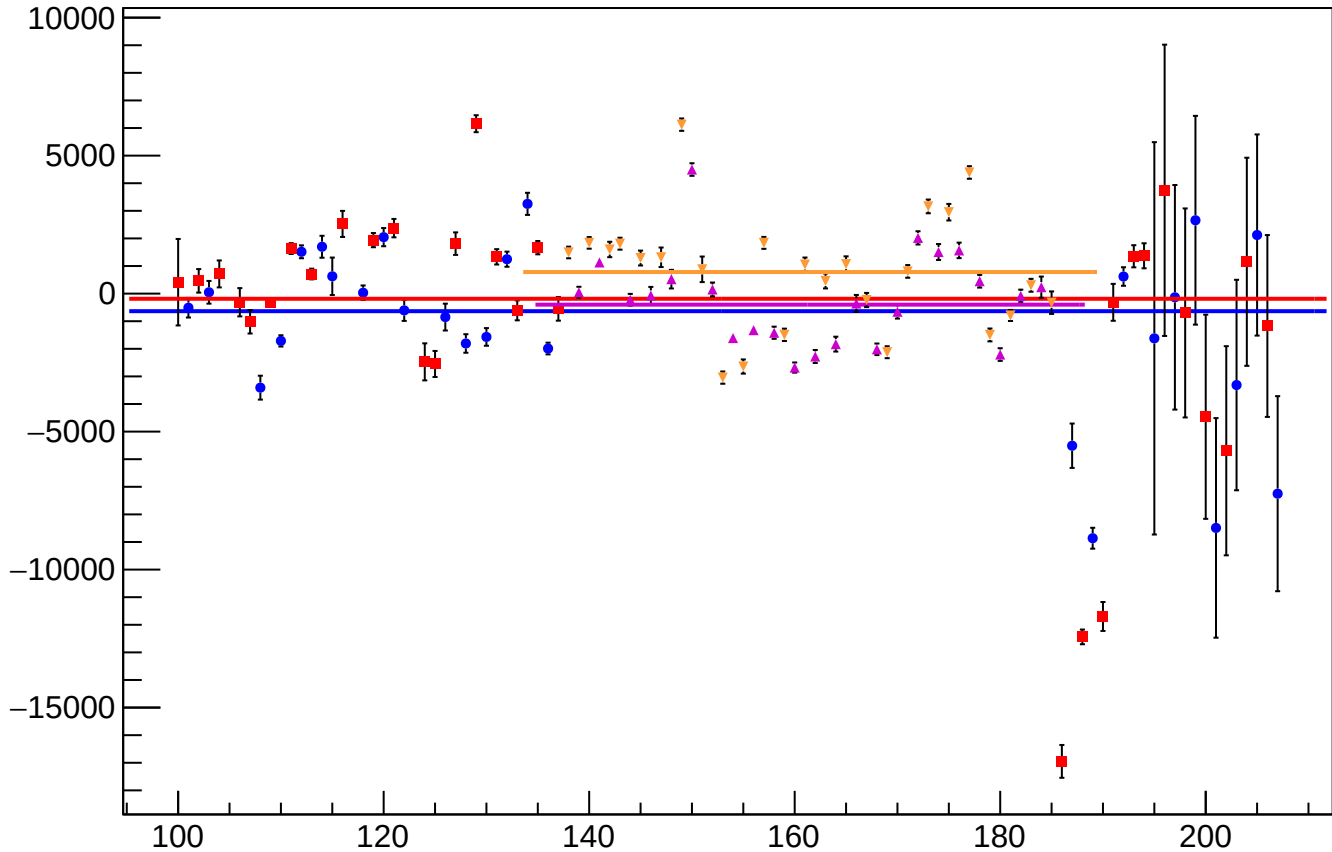
Left In: 201.446 $\pm$ 0.034  $\chi^2$ /NDF:1061972.3/22

+ sign 207.950 $\pm$ 0.026  $\chi^2$ /NDF: 2628496.7/50

All: 203.683 $\pm$ 0.018  $\chi^2$ /NDF: 6387220.4/104

- sign 199.706 $\pm$ 0.025  $\chi^2$ /NDF: 3706335.0/53

# asym\_bpm0l08WS\_mean vs Slug



Right In:  $-636.374 \pm 73.977$   $\chi^2/\text{NDF}$ : 1001.7/25

Left Out:  $782.388 \pm 49.199$   $\chi^2/\text{NDF}$ : 2001.3/24

Right Out:  $-186.620 \pm 65.423$   $\chi^2/\text{NDF}$ : 4276.2/30

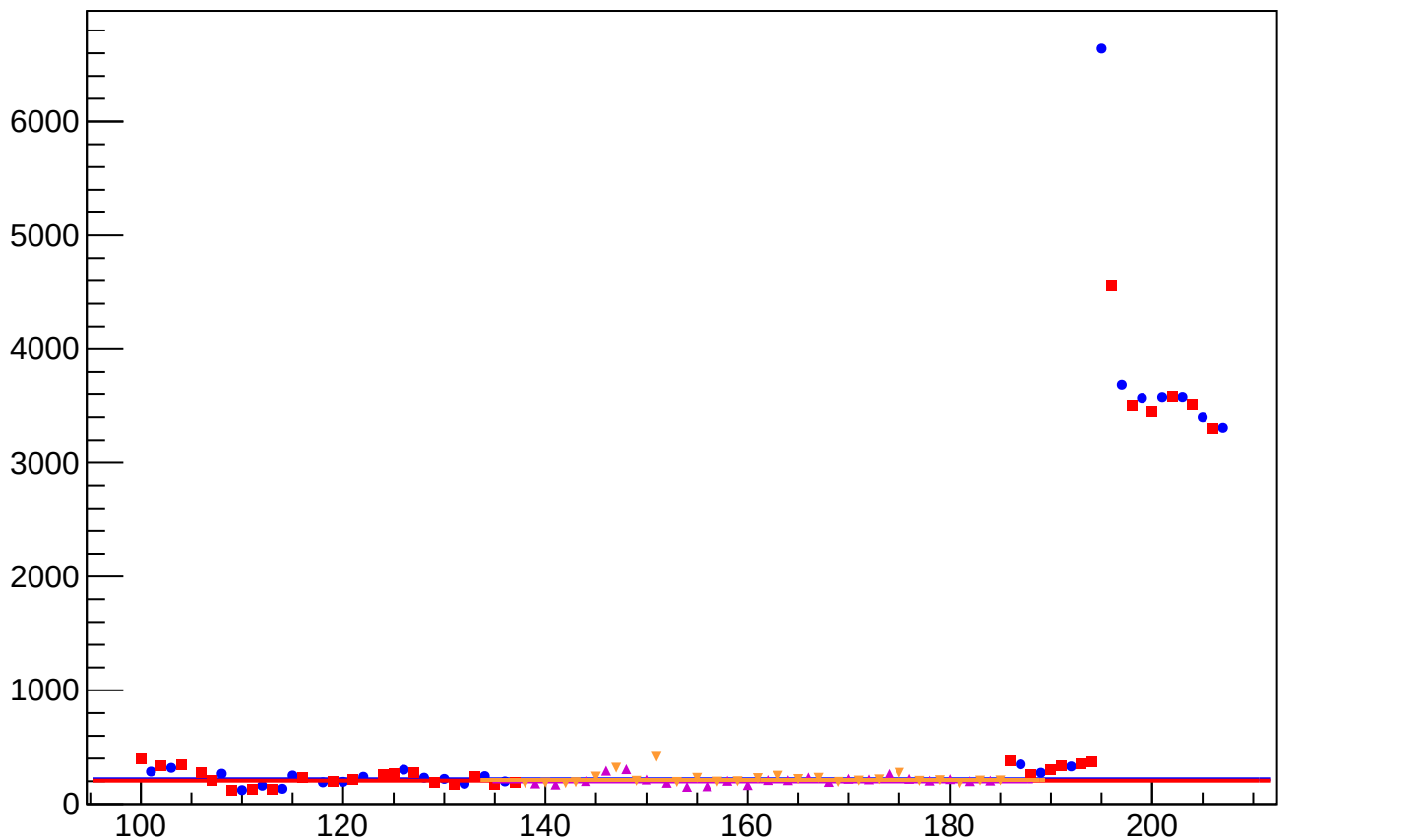
Left In:  $-399.798 \pm 47.819$   $\chi^2/\text{NDF}$ : 1232.0/22

+ sign  $347.304 \pm 40.966$   $\chi^2/\text{NDF}$ : 3258.0/50

All:  $-9.076 \pm 28.096$   $\chi^2/\text{NDF}$ : 8916.0/104

- sign  $-325.567 \pm 38.606$   $\chi^2/\text{NDF}$ : 5515.1/53

# asym\_bpm0l08WS\_rms vs Slug



Right In: 217.708+/-0.052  $\chi^2/\text{NDF}$ : 12033363.7/25

Left Out: 211.496+/-0.035  $\chi^2/\text{NDF}$ : 934978.4/24

Right Out: 205.424+/-0.046  $\chi^2/\text{NDF}$ : 11908066.2/30

Left In: 198.524+/-0.034  $\chi^2/\text{NDF}$ : 1006458.6/22

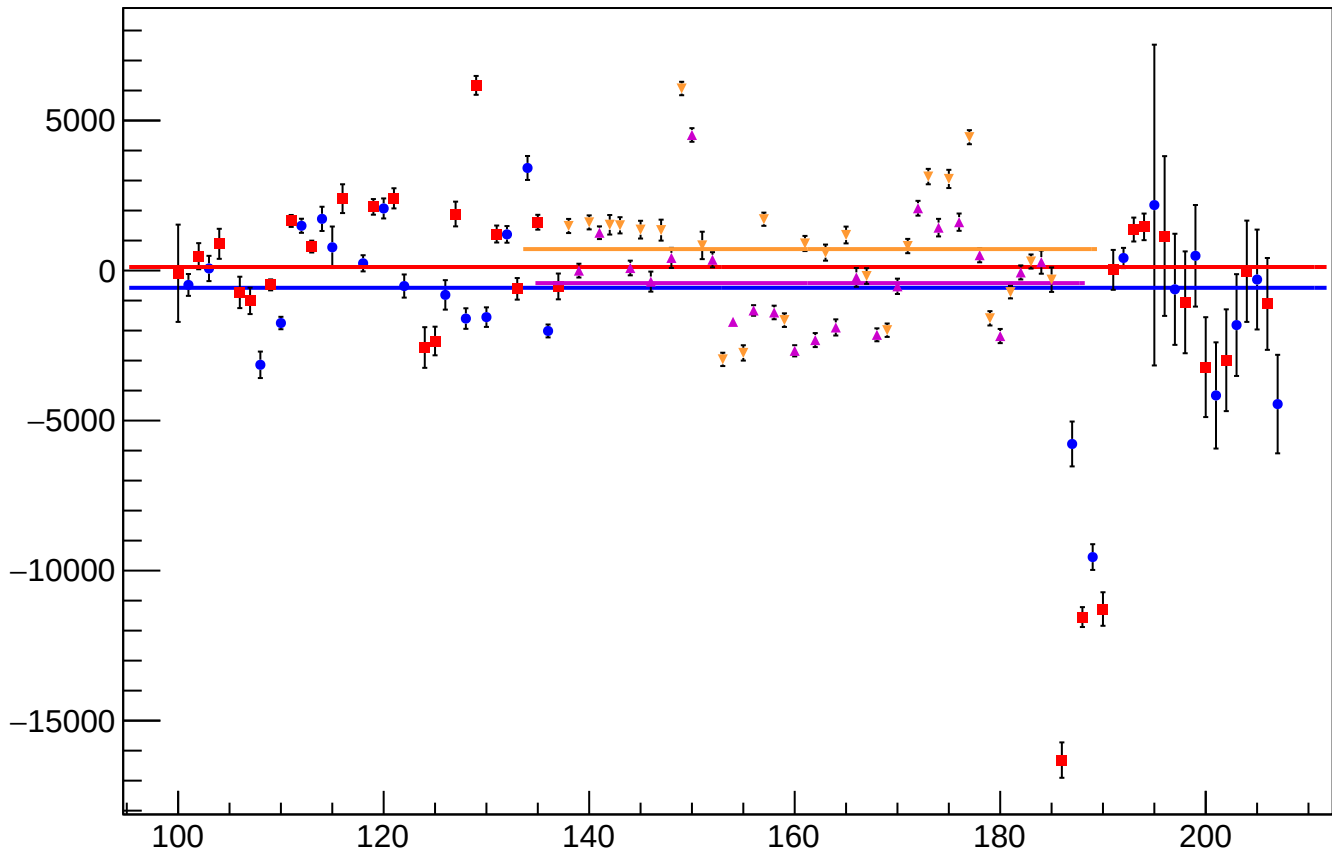
+ sign 213.401+/-0.029  $\chi^2/\text{NDF}$ : 12978120.5/50

All: 206.794+/-0.020  $\chi^2/\text{NDF}$ : 26005352.5/100

- sign 200.927+/-0.027  $\chi^2/\text{NDF}$ : 12929023.0/53



# asym\_bpm0l09WS\_mean vs Slug



Right In:  $-574.847 \pm 74.855$   $\chi^2/\text{NDF}$ : 964.0/25

Left Out:  $715.643 \pm 51.110$   $\chi^2/\text{NDF}$ : 1918.0/24

Right Out:  $118.114 \pm 67.016$   $\chi^2/\text{NDF}$ : 3167.2/30

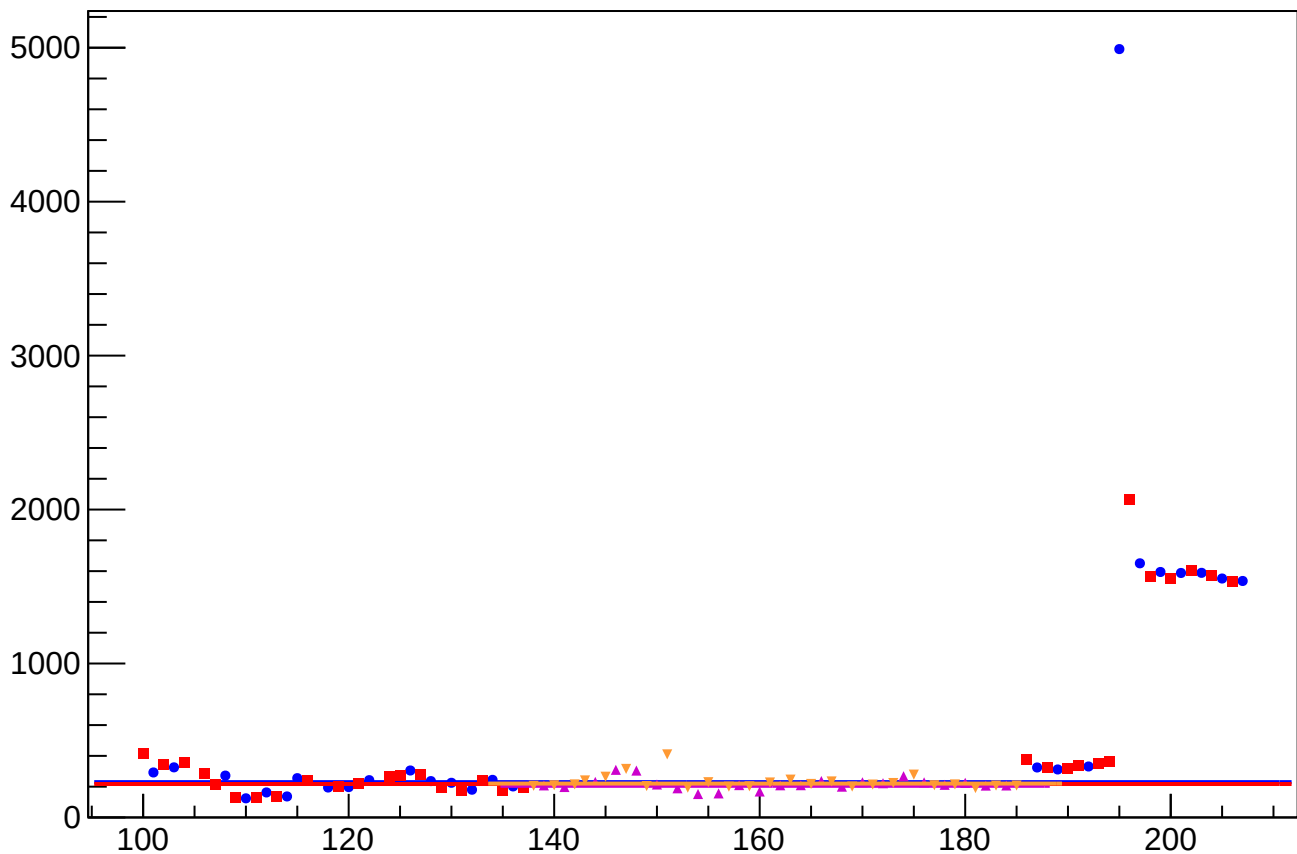
Left In:  $-418.574 \pm 49.523$   $\chi^2/\text{NDF}$ : 1241.0/22

+ sign  $305.318 \pm 42.209$   $\chi^2/\text{NDF}$ : 3084.7/50

All:  $22.658 \pm 28.968$   $\chi^2/\text{NDF}$ : 7619.1/104

- sign  $-229.011 \pm 39.828$   $\chi^2/\text{NDF}$ : 4449.6/53

# asym\_bpm0l09WS\_rms vs Slug



Right In: 229.417 $\pm$ 0.053  $\chi^2$ /NDF: 10518845.2/25

Left Out: 220.145 $\pm$ 0.036  $\chi^2$ /NDF: 799699.4/24

Right Out: 217.238 $\pm$ 0.047  $\chi^2$ /NDF: 10362795.0/30

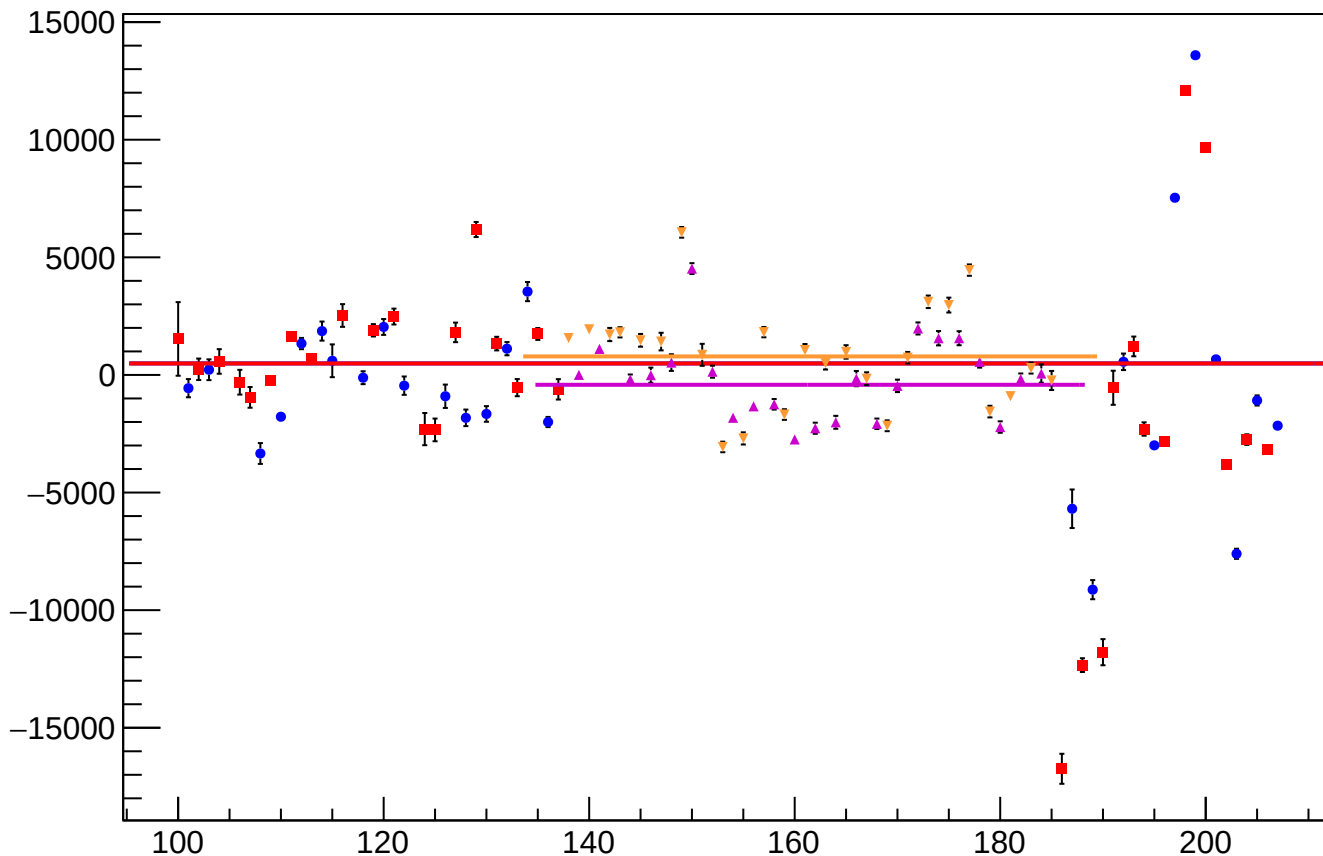
Left In: 205.481 $\pm$ 0.035  $\chi^2$ /NDF: 1013965.4/22

+ sign 223.093 $\pm$ 0.030  $\chi^2$ /NDF: 11339472.0/50

All: 215.973 $\pm$ 0.020  $\chi^2$ /NDF: 22863613.7/10

- sign 209.634 $\pm$ 0.028  $\chi^2$ /NDF: 11416573.8/53

# asym\_bpm0l10WS\_mean vs Slug



Right In:  $489.898 \pm 54.705$   $\chi^2/\text{NDF}$ : 8928.6/25

Left Out:  $786.922 \pm 50.524$   $\chi^2/\text{NDF}$ : 1937.6/24

Right Out:  $487.823 \pm 52.480$   $\chi^2/\text{NDF}$ : 10280.8/30

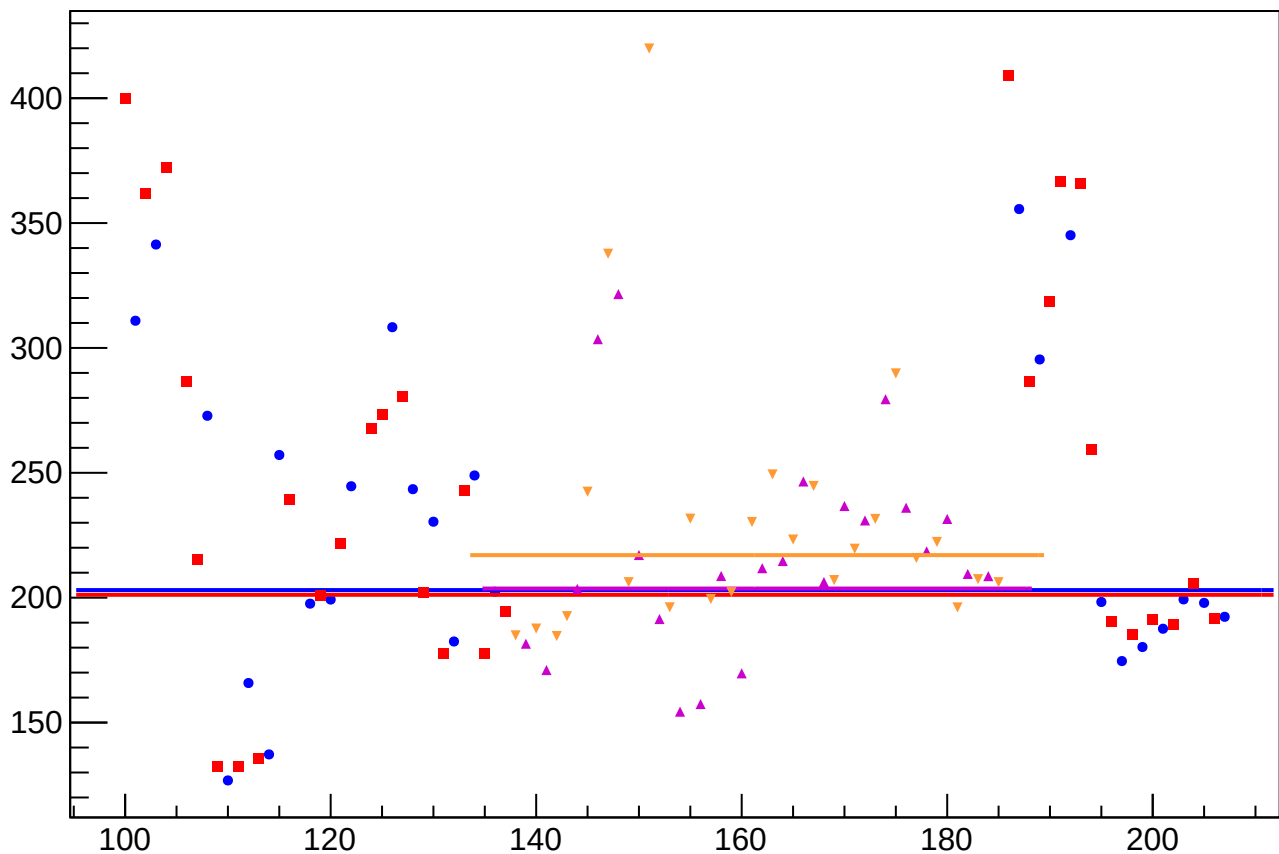
Left In:  $-418.824 \pm 49.152$   $\chi^2/\text{NDF}$ : 1211.0/22

+ sign  $650.192 \pm 37.116$   $\chi^2/\text{NDF}$ : 10882.0/50

All:  $316.541 \pm 25.795$   $\chi^2/\text{NDF}$ : 22689.1/104

- sign  $4.836 \pm 35.875$   $\chi^2/\text{NDF}$ : 11650.8/53

# asym\_bpm0l10WS\_rms vs Slug



Right In: 203.046 $\pm$ 0.039  $\chi^2$ /NDF: 1553752.0/25

Left Out: 217.040 $\pm$ 0.036  $\chi^2$ /NDF:983170.6/24

Right Out: 201.158 $\pm$ 0.037  $\chi^2$ /NDF: 2481802.9/30

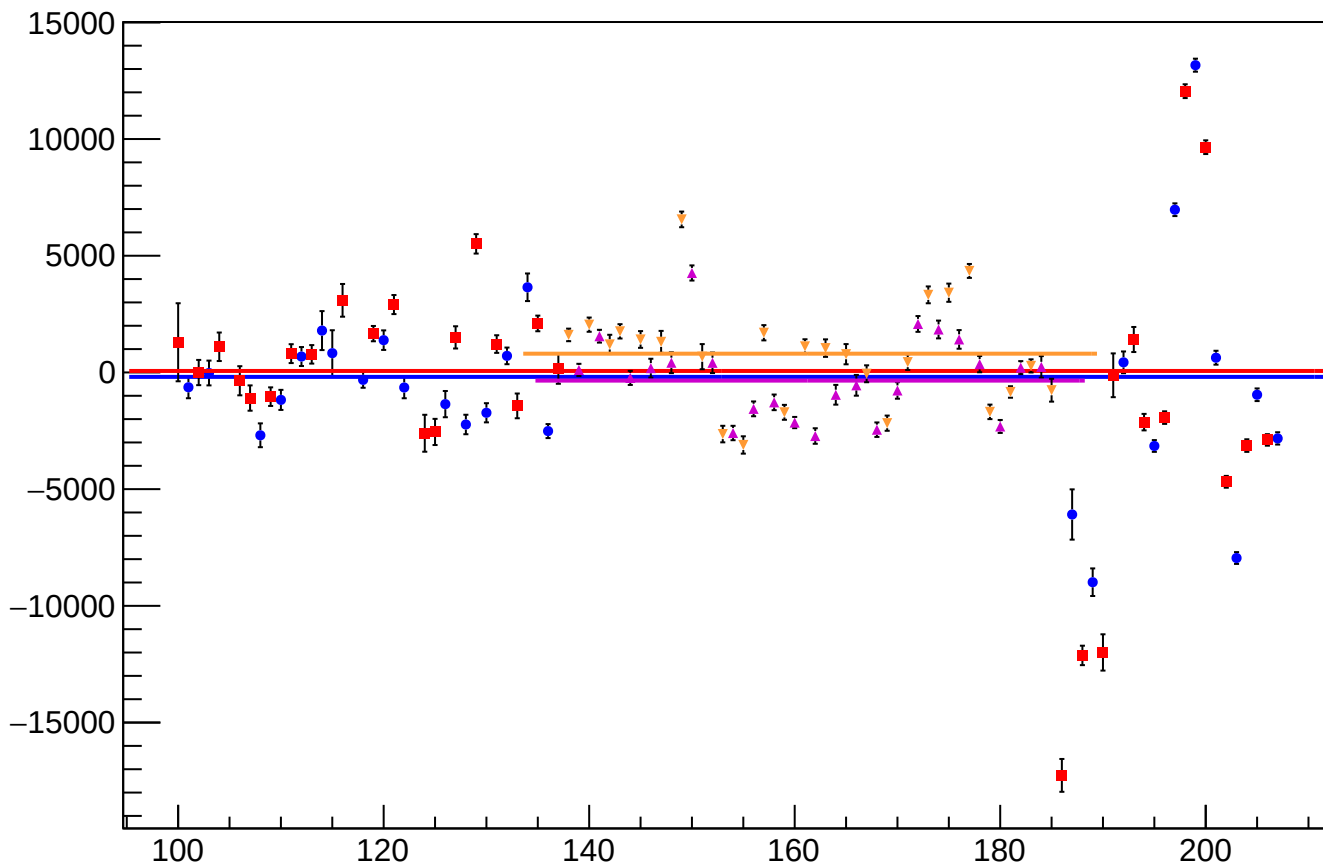
Left In: 203.660 $\pm$ 0.035  $\chi^2$ /NDF:1165334.8/22

+ sign 210.598 $\pm$ 0.026  $\chi^2$ /NDF: 2607548.6/50

All: 206.407 $\pm$ 0.018  $\chi^2$ /NDF: 6306443.1/104

- sign 202.491 $\pm$ 0.025  $\chi^2$ /NDF: 3649559.2/53

# asym\_bpm0r03WS\_mean vs Slug



Right In:  $-190.426 \pm 73.140$   $\chi^2/\text{NDF}: 4637.4/25$

Left Out:  $803.752 \pm 67.693$   $\chi^2/\text{NDF}: 1057.7/24$

Right Out:  $63.352 \pm 72.566$   $\chi^2/\text{NDF}: 5525.1/30$

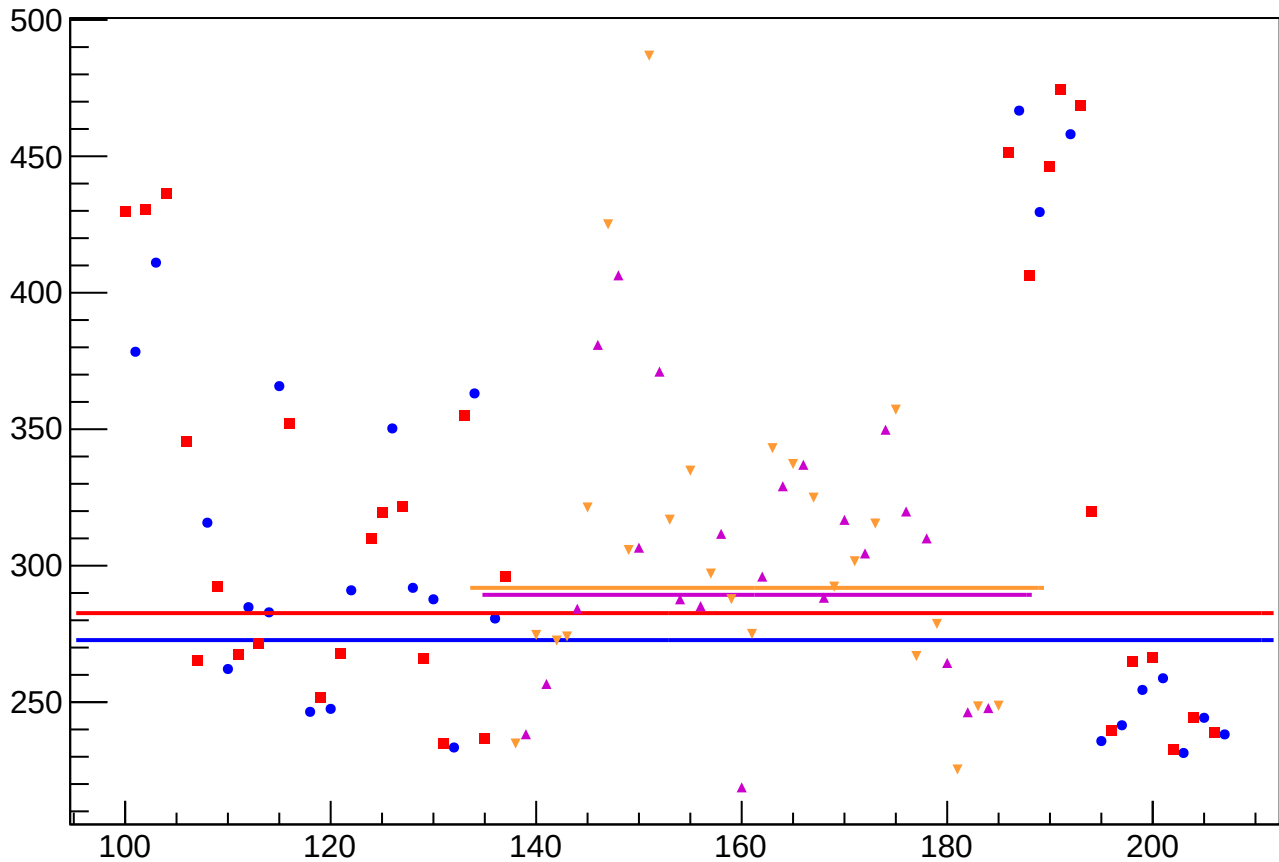
Left In:  $-350.095 \pm 68.985$   $\chi^2/\text{NDF}: 656.1/22$

+ sign  $345.059 \pm 49.680$   $\chi^2/\text{NDF}: 5794.6/50$

All:  $97.205 \pm 35.241$   $\chi^2/\text{NDF}: 12043.0/104$

- sign  $-153.824 \pm 49.998$   $\chi^2/\text{NDF}: 6198.2/53$

# asym\_bpm0r03WS\_rms vs Slug



Right In: 272.737 $\pm$ 0.052  $\chi^2$ /NDF: 1126331.2/25

Left Out: 291.882 $\pm$ 0.048  $\chi^2$ /NDF: 959919.3/24

Right Out: 282.624 $\pm$ 0.051  $\chi^2$ /NDF: 1466547.3/30

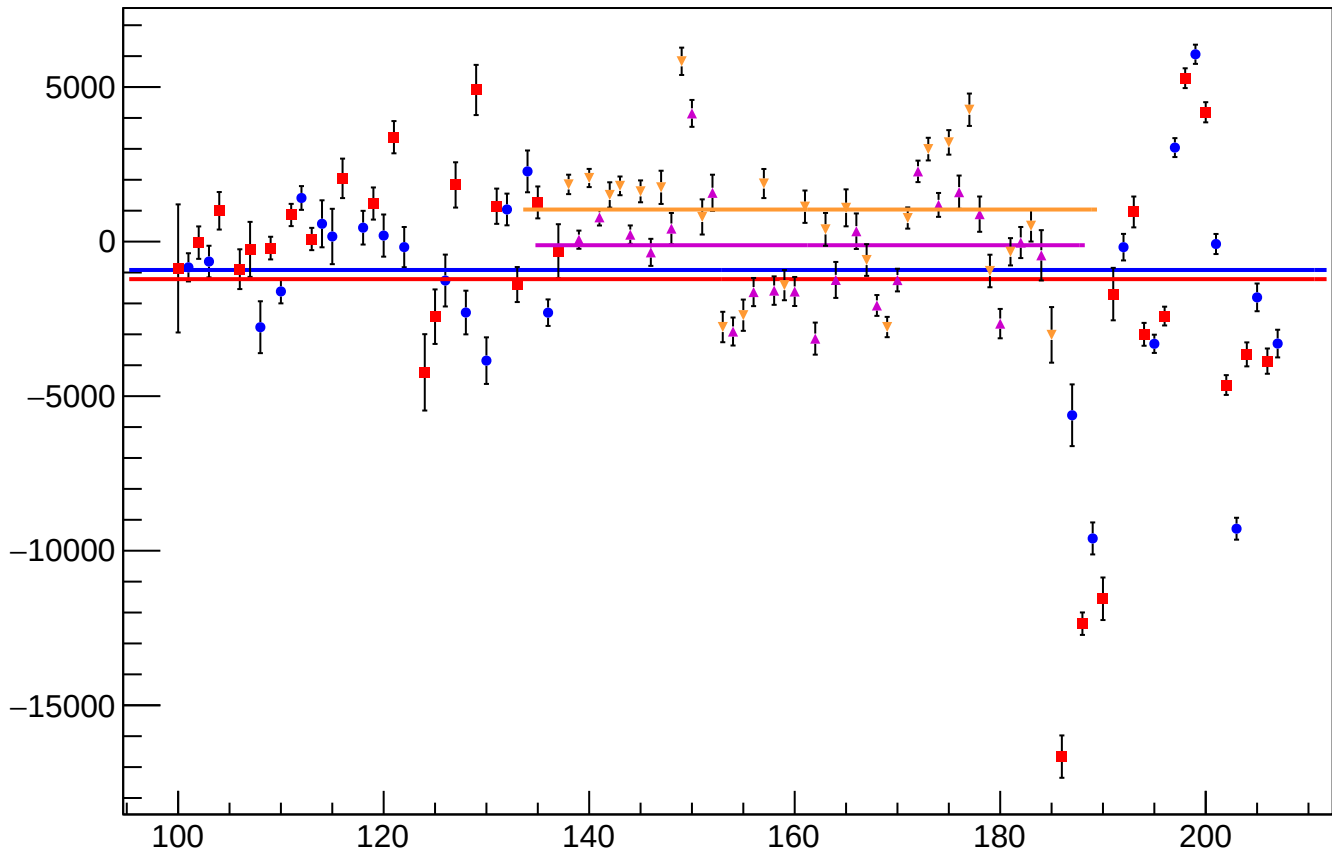
Left In: 289.321 $\pm$ 0.049  $\chi^2$ /NDF: 808605.3/22

+ sign 283.049 $\pm$ 0.035  $\chi^2$ /NDF: 2160061.8/50

All: 284.586 $\pm$ 0.025  $\chi^2$ /NDF: 4448012.5/104

- sign 286.142 $\pm$ 0.035  $\chi^2$ /NDF: 2284100.4/53

# asym\_bpm0r05WS\_mean vs Slug



Right In:  $-918.079 \pm 90.880$   $\chi^2/\text{NDF}$ : 1768.1/25

Left Out:  $1037.330 \pm 85.200$   $\chi^2/\text{NDF}$ : 570.2/24

Right Out:  $-1214.609 \pm 85.623$   $\chi^2/\text{NDF}$ : 2936.6/30

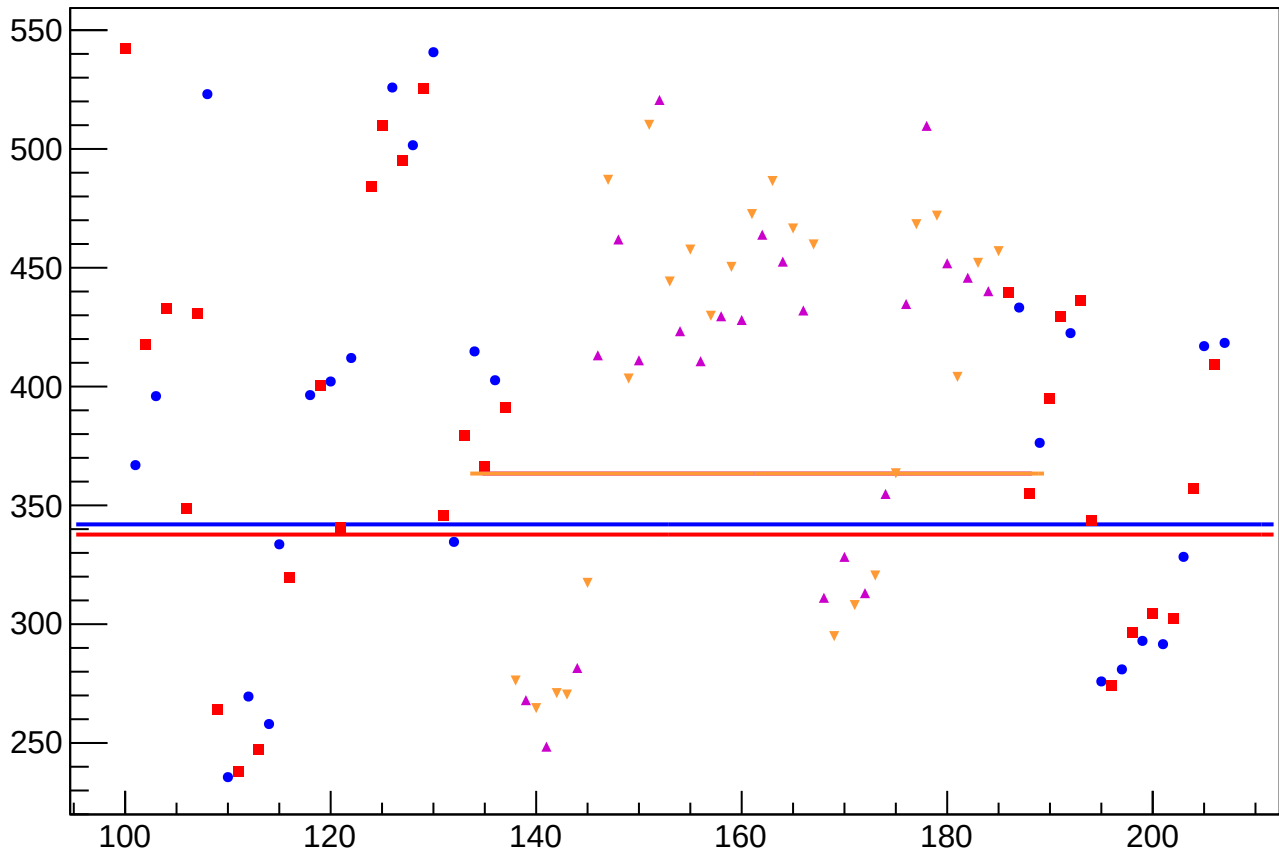
Left In:  $-117.211 \pm 87.461$   $\chi^2/\text{NDF}$ : 370.4/22

+ sign  $122.639 \pm 62.157$   $\chi^2/\text{NDF}$ : 2584.7/50

All:  $-283.772 \pm 43.604$   $\chi^2/\text{NDF}$ : 6056.2/104

- sign  $-677.563 \pm 61.184$   $\chi^2/\text{NDF}$ : 3387.3/53

# asym\_bpm0r05WS\_rms vs Slug



Right In:  $341.997 \pm 0.064$   $\chi^2/\text{NDF}: 1318750.2/25$

Left Out:  $363.387 \pm 0.060$   $\chi^2/\text{NDF}: 1940497.4/24$

Right Out:  $337.714 \pm 0.061$   $\chi^2/\text{NDF}: 1253042.7/30$

Left In:  $363.386 \pm 0.062$   $\chi^2/\text{NDF}: 1711599.2/22$

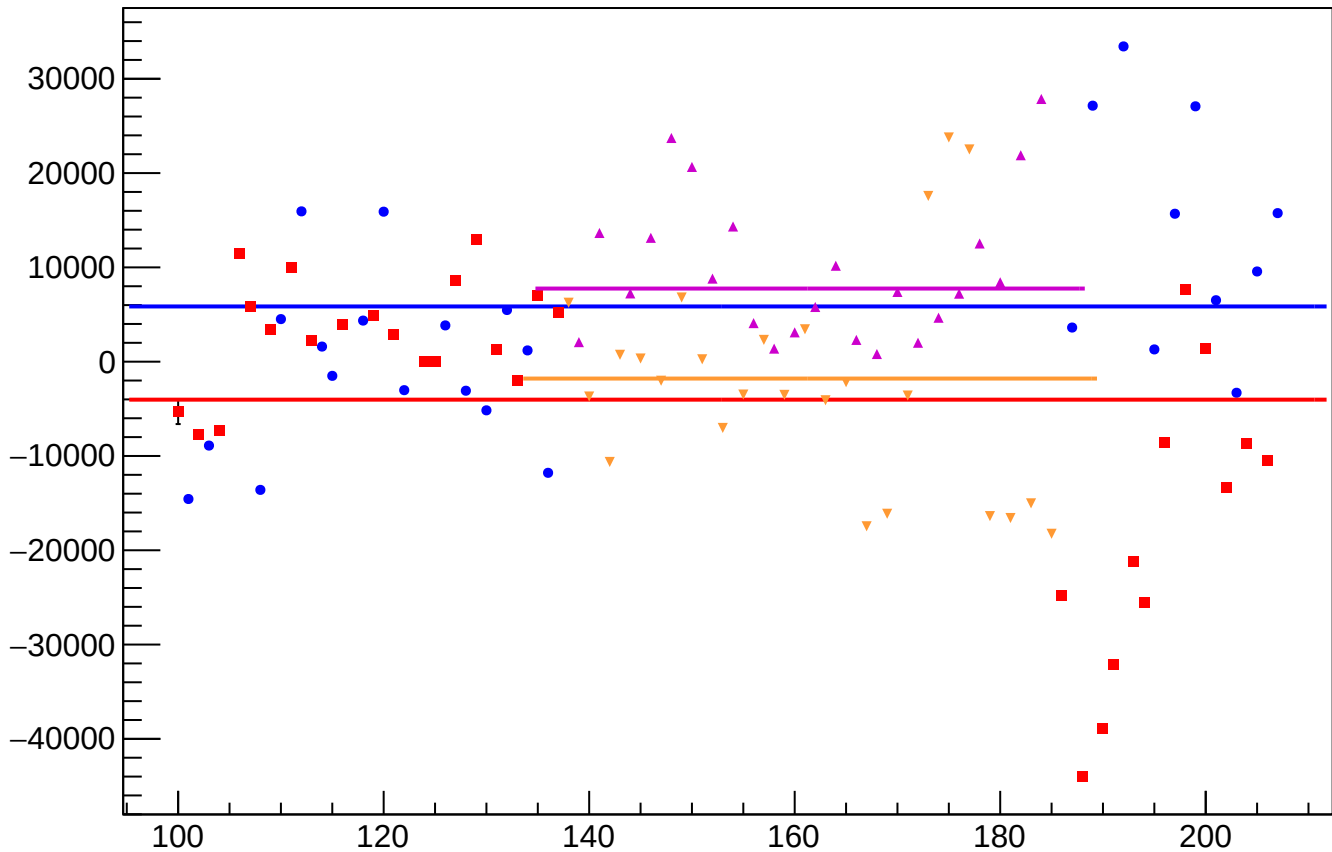
+ sign  $353.382 \pm 0.044$   $\chi^2/\text{NDF}: 3318211.8/50$

All:  $351.805 \pm 0.031$   $\chi^2/\text{NDF}: 6373378.4/104$

- sign  $350.277 \pm 0.043$   $\chi^2/\text{NDF}: 3052633.1/53$



# asym\_bpm0i02WS\_mean vs Slug



Right In: 5856.968+/-41.796  $\chi^2/\text{NDF}$ : 92564.5/25

Left Out: -1790.289+/-40.910  $\chi^2/\text{NDF}$ : 65745.9/24

+ sign 1951.464+/-29.236  $\chi^2/\text{NDF}$ : 175407.4/50

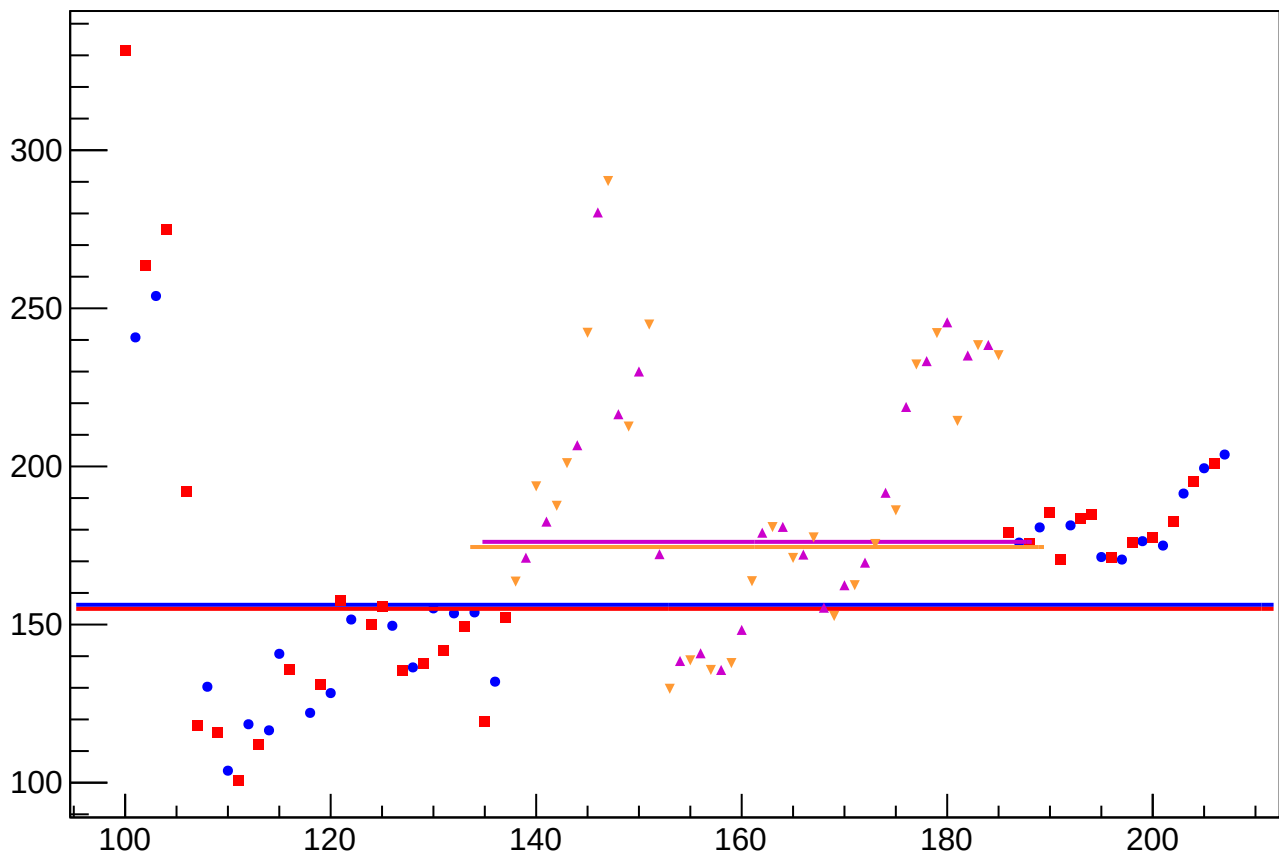
Right Out: -4027.617+/-39.615  $\chi^2/\text{NDF}$ : 137269.9/30

All: 1693.782+/-20.589  $\chi^2/\text{NDF}$ : 377159.5/10

Left In: 7754.468+/-42.571  $\chi^2/\text{NDF}$ : 23278.0/22

- sign 1440.224+/-29.001  $\chi^2/\text{NDF}$ : 201597.9/53

# asym\_bpm0i02WS\_rms vs Slug



Right In: 156.249 $\pm$ 0.030  $\chi^2$ /NDF: 1231226.6/25

Left Out: 174.520 $\pm$ 0.029  $\chi^2$ /NDF: 1659469.6/24

Right Out: 154.968 $\pm$ 0.028  $\chi^2$ /NDF: 1611051.6/30

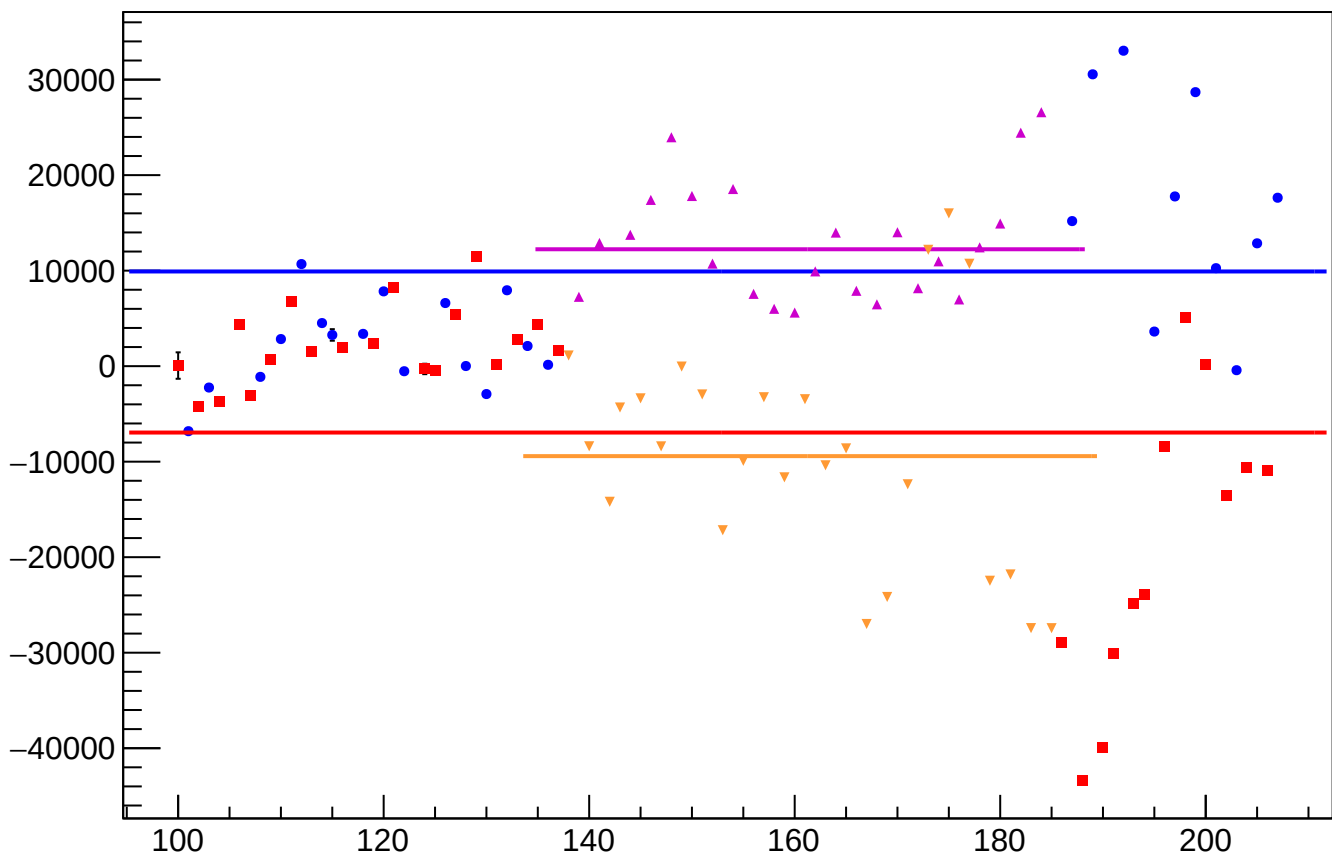
Left In: 176.155 $\pm$ 0.030  $\chi^2$ /NDF: 1367059.2/22

+ sign 165.580 $\pm$ 0.021  $\chi^2$ /NDF: 3085897.8/50

All: 165.187 $\pm$ 0.015  $\chi^2$ /NDF: 6330191.8/104

- sign 164.800 $\pm$ 0.021  $\chi^2$ /NDF: 3243576.4/53

# asym\_bpm0i02aWS\_mean vs Slug



Right In: 9914.055+/-46.919  $\chi^2/\text{NDF}$ : 52836.7/25

Left Out: -9420.181+/-45.698  $\chi^2/\text{NDF}$ : 64719.0/24

Right Out: -6950.226+/-44.320  $\chi^2/\text{NDF}$ : 105809.8/30

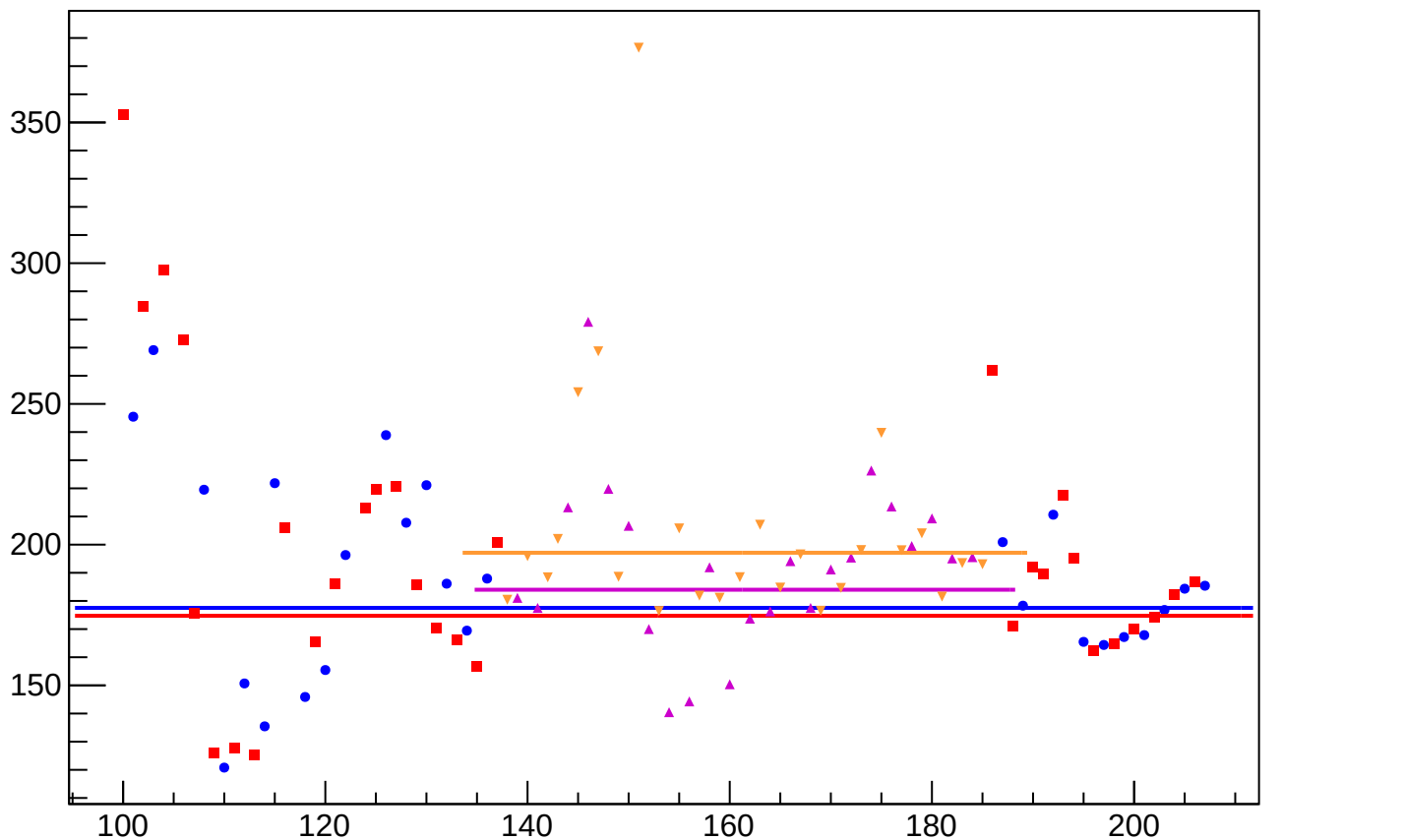
Left In: 12238.678+/-44.195  $\chi^2/\text{NDF}$ : 16015.8/22

+ sign -7.927+/-32.736  $\chi^2/\text{NDF}$ : 204697.8/50

All: 1392.012+/-22.621  $\chi^2/\text{NDF}$ : 424015.9/10

- sign 2671.359+/-31.295  $\chi^2/\text{NDF}$ : 215818.1/53

# asym\_bpm0i02aWS\_rms vs Slug



Right In: 177.541+/-0.033  $\chi^2/\text{NDF}$ : 765716.3/25

Left Out: 197.122+/-0.032  $\chi^2/\text{NDF}$ : 732529.8/24

Right Out: 174.722+/-0.031  $\chi^2/\text{NDF}$ : 1206158.1/30

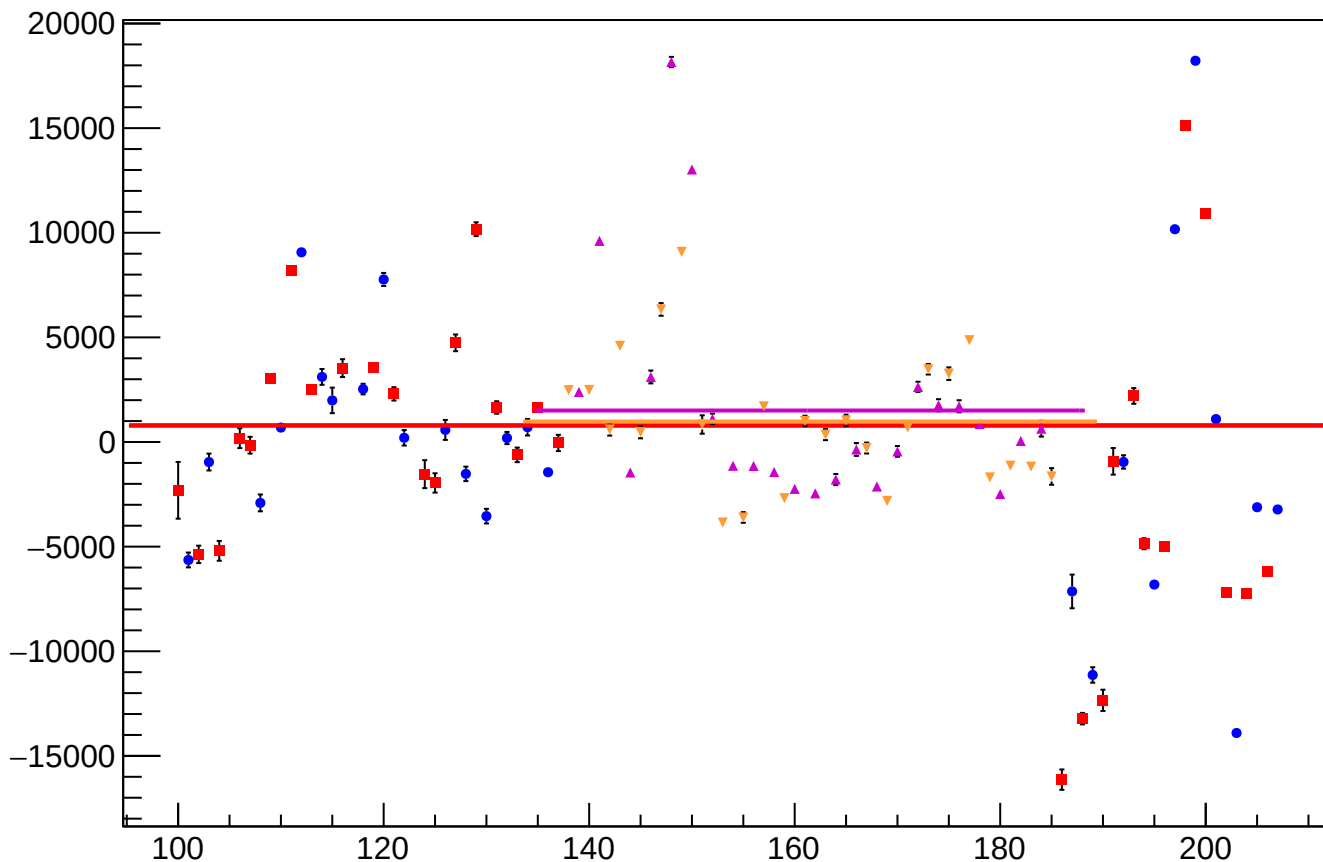
Left In: 183.985+/-0.031  $\chi^2/\text{NDF}$ : 829778.1/22

+ sign 187.590+/-0.023  $\chi^2/\text{NDF}$ : 1677007.5/50

All: 183.293+/-0.016  $\chi^2/\text{NDF}$ : 3822691.0/104

- sign 179.367+/-0.022  $\chi^2/\text{NDF}$ : 2079745.8/53

# asym\_bpm0i05WS\_mean vs Slug



Right In: 790.509+/-52.909     $\chi^2/\text{NDF}$ : 21040.5/25

Left Out: 978.429+/-49.607     $\chi^2/\text{NDF}$ : 4322.9/24

Right Out: 791.403+/-50.150     $\chi^2/\text{NDF}$ : 20901.1/30

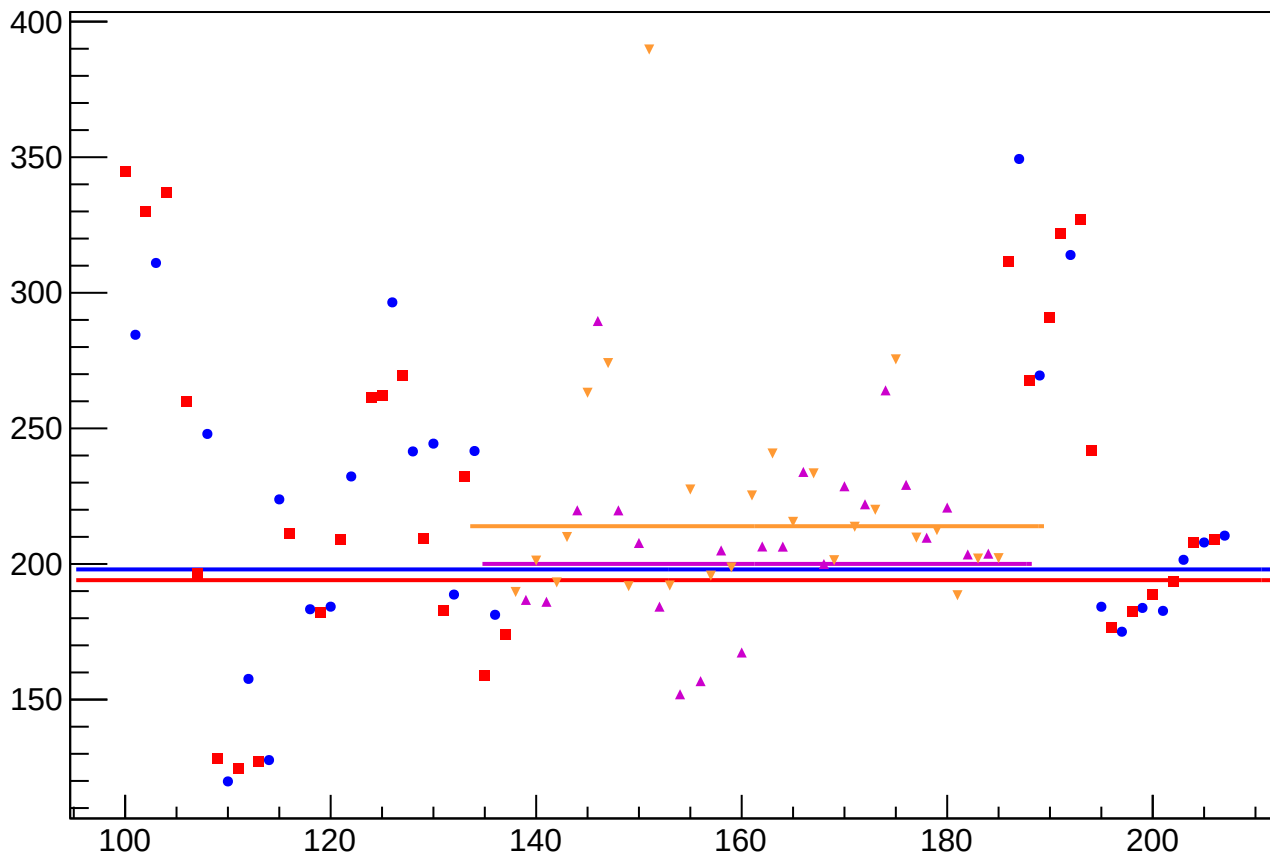
Left In: 1505.093+/-48.051     $\chi^2/\text{NDF}$ : 11480.6/22

+ sign 890.515+/-36.188     $\chi^2/\text{NDF}$ : 25370.1/50

All: 1032.754+/-25.045     $\chi^2/\text{NDF}$ : 57887.0/104

- sign 1163.500+/-34.695     $\chi^2/\text{NDF}$ : 32487.3/53

# asym\_bpm0i05WS\_rms vs Slug



Right In: 197.998 $\pm$ 0.037  $\chi^2$ /NDF: 1451496.1/25

Left Out: 213.931 $\pm$ 0.035  $\chi^2$ /NDF: 733638.6/24

Right Out: 194.035 $\pm$ 0.035  $\chi^2$ /NDF: 2254355.9/30

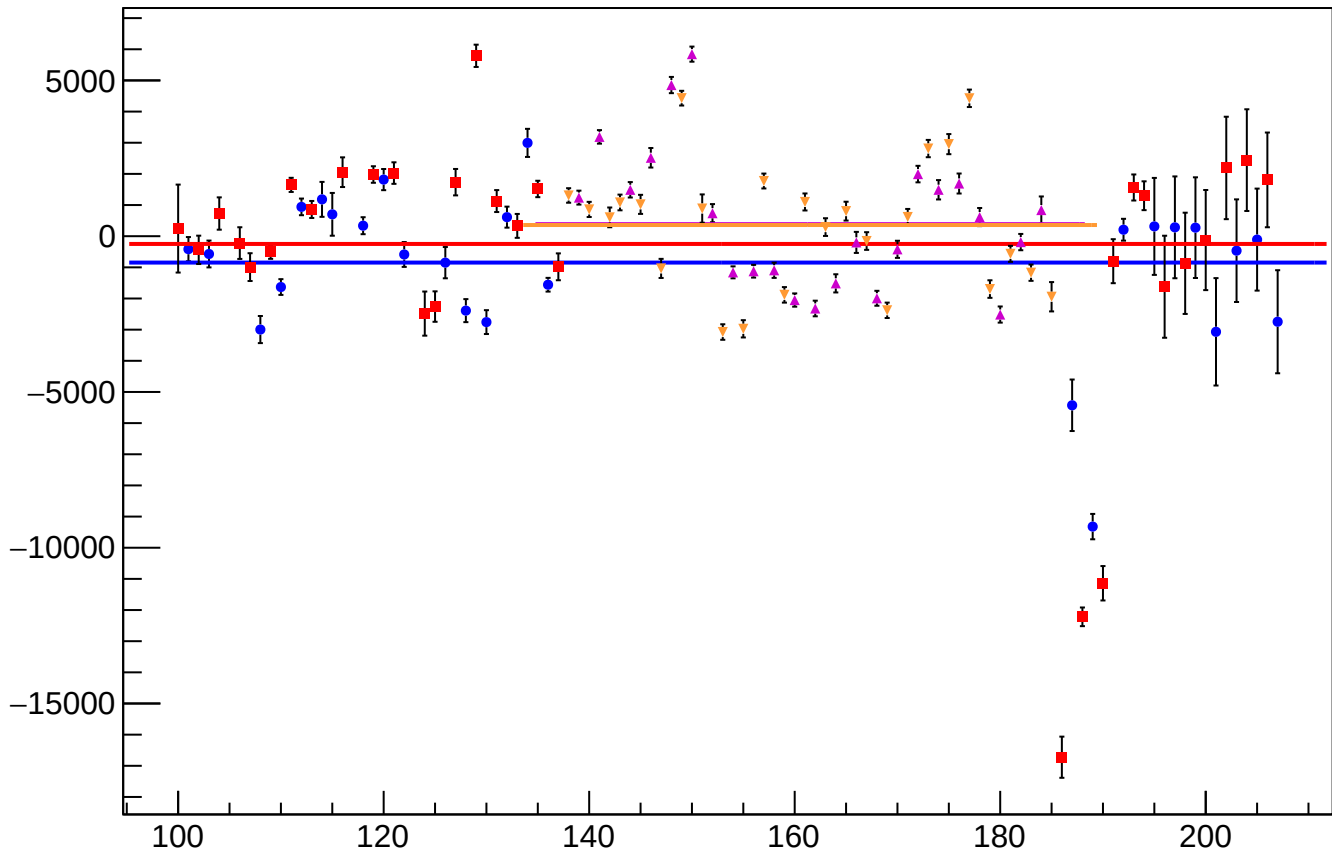
Left In: 200.031 $\pm$ 0.034  $\chi^2$ /NDF: 785525.4/22

+ sign 206.477 $\pm$ 0.026  $\chi^2$ /NDF: 2281659.1/50

All: 201.623 $\pm$ 0.018  $\chi^2$ /NDF: 5405503.5/104

- sign 197.161 $\pm$ 0.025  $\chi^2$ /NDF: 3054782.8/53

# asym\_bpm0i07WS\_mean vs Slug



Right In:  $-846.748 \pm 81.287$   $\chi^2/\text{NDF}$ : 801.0/25

Left Out:  $358.680 \pm 54.992$   $\chi^2/\text{NDF}$ : 1418.9/24

Right Out:  $-248.871 \pm 73.711$   $\chi^2/\text{NDF}$ : 3275.7/30

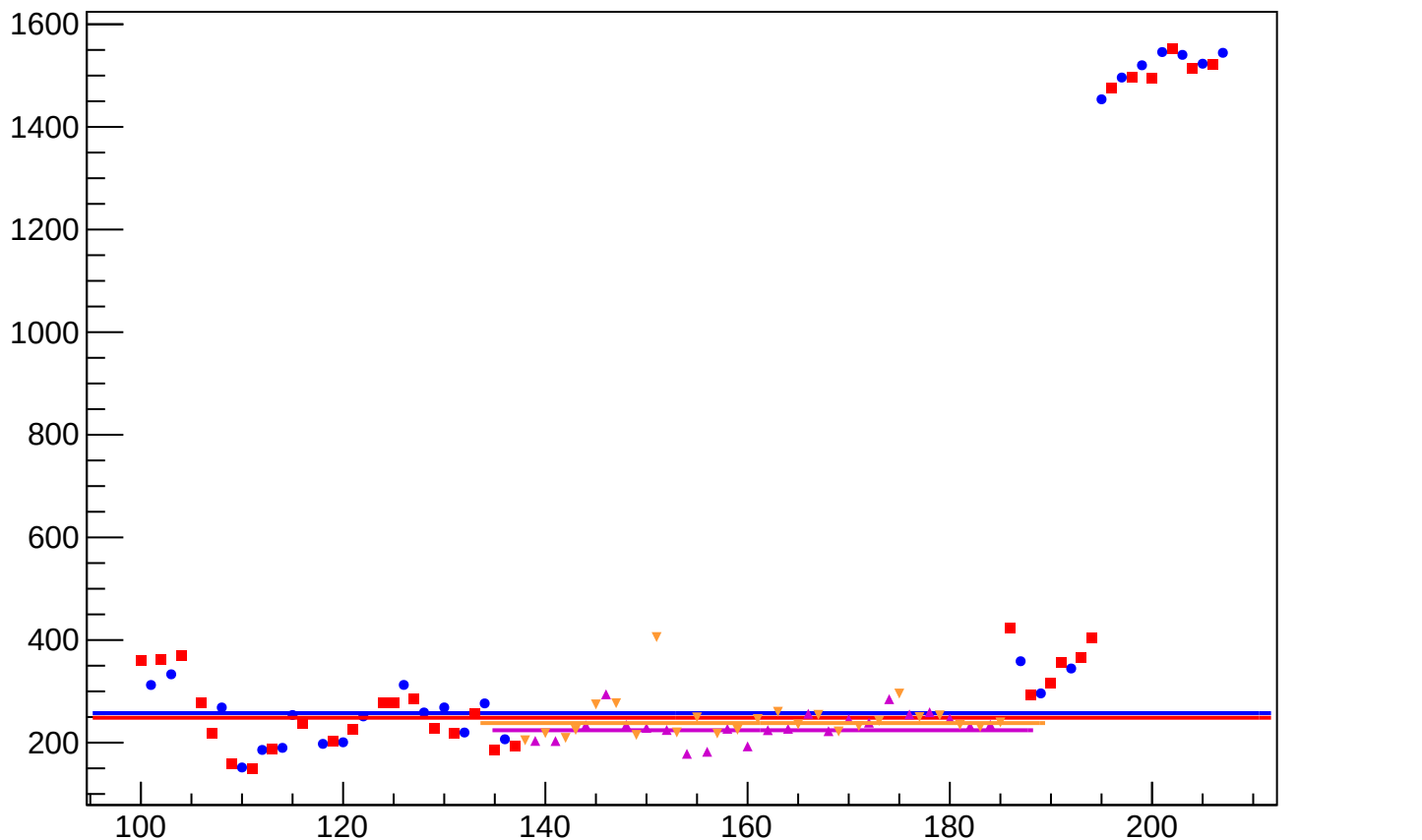
Left In:  $386.941 \pm 53.528$   $\chi^2/\text{NDF}$ : 1804.2/22

+ sign  $-19.792 \pm 45.548$   $\chi^2/\text{NDF}$ : 2370.8/50

All:  $78.516 \pm 31.387$   $\chi^2/\text{NDF}$ : 7508.2/104

- sign  $167.411 \pm 43.312$   $\chi^2/\text{NDF}$ : 5128.6/53

# asym\_bpm0i07WS\_rms vs Slug



Right In:  $257.586 \pm 0.057$   $\chi^2/\text{NDF}$ : 9399141.9/25

Left Out:  $238.199 \pm 0.039$   $\chi^2/\text{NDF}$ : 567935.3/24

Right Out:  $248.632 \pm 0.052$   $\chi^2/\text{NDF}$ : 9366590.5/30

Left In:  $224.212 \pm 0.038$   $\chi^2/\text{NDF}$ : 563231.1/22

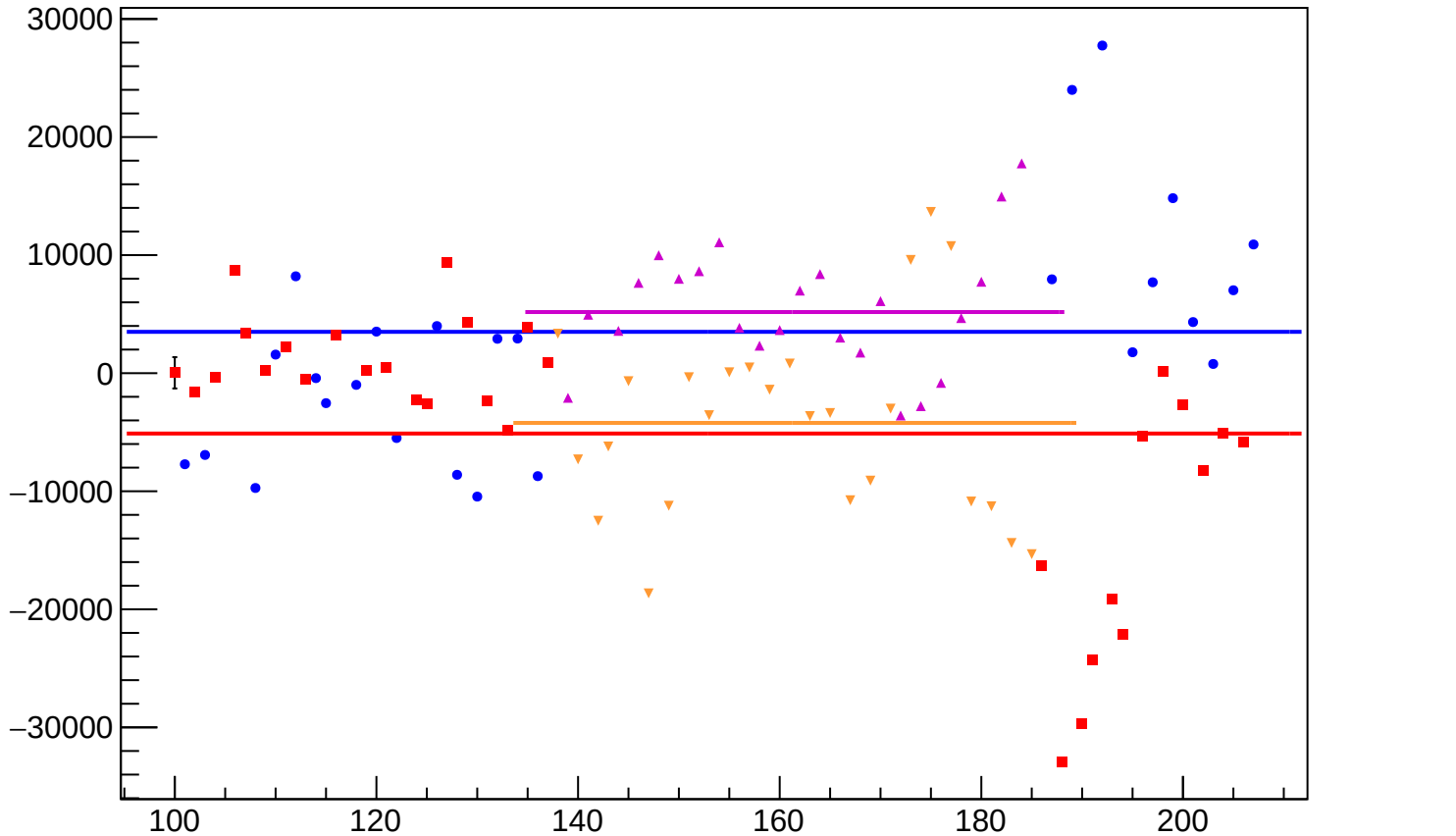
+ sign  $244.286 \pm 0.032$   $\chi^2/\text{NDF}$ : 10045124.5/50

All:  $238.172 \pm 0.022$   $\chi^2/\text{NDF}$ : 20187294.2/10

- sign  $232.644 \pm 0.031$   $\chi^2/\text{NDF}$ : 10073546.6/53



# asym\_bpm1i02WS\_mean vs Slug



Right In:  $3502.114 \pm 35.473$   $\chi^2/\text{NDF}$ : 77968.6/25

Left Out:  $-4210.601 \pm 30.828$   $\chi^2/\text{NDF}$ : 56802.7/24

+ sign  $-891.898 \pm 23.269$   $\chi^2/\text{NDF}$ : 161703.8/50

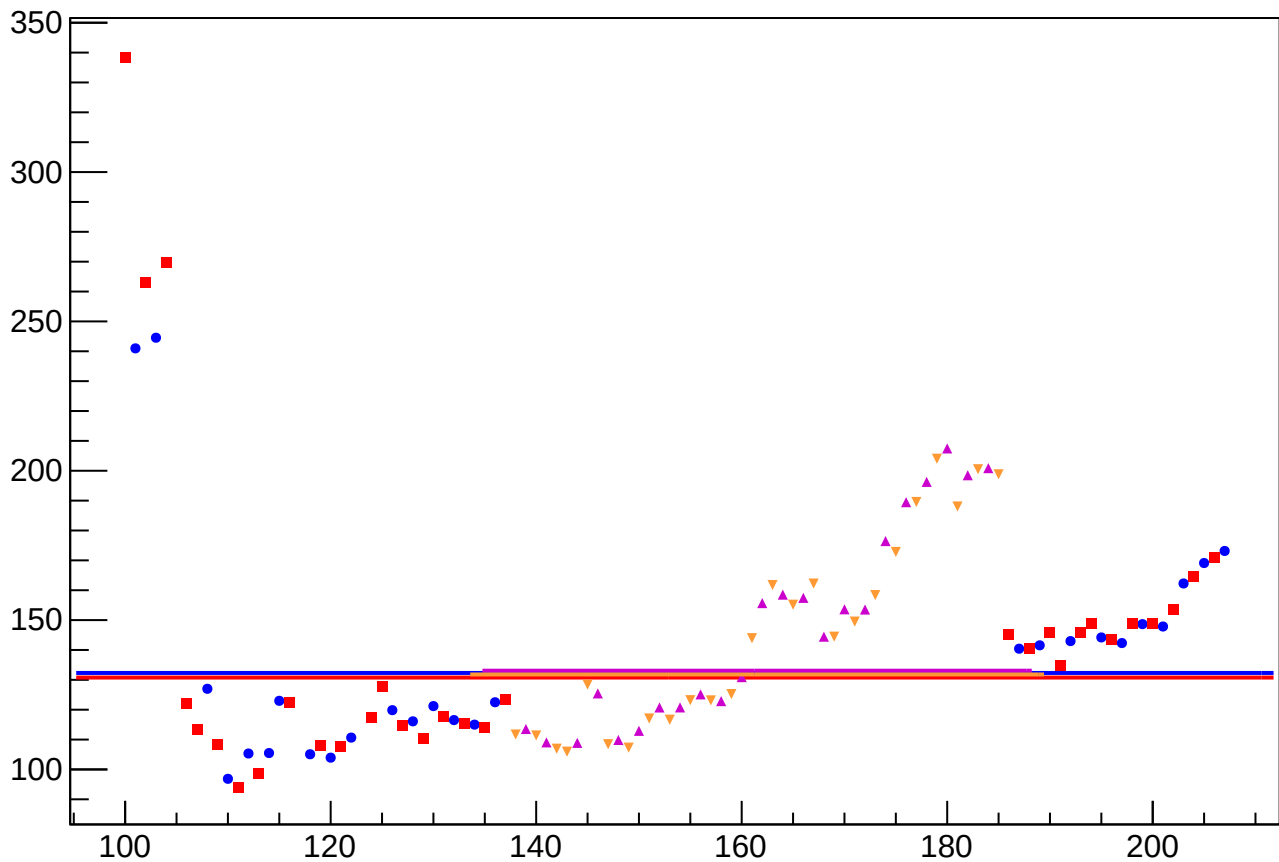
Right Out:  $-5111.560 \pm 33.402$   $\chi^2/\text{NDF}$ : 102903.5/30

All:  $-312.310 \pm 16.392$   $\chi^2/\text{NDF}$ : 333909.8/10

- sign  $258.670 \pm 23.095$   $\chi^2/\text{NDF}$ : 170974.3/53

Left In:  $5178.213 \pm 31.969$   $\chi^2/\text{NDF}$ : 18541.3/22

# asym\_bpm1i02WS\_rms vs Slug



Right In: 132.306+/-0.025  $\chi^2/\text{NDF}$ : 1222069.7/25

Left Out: 131.798+/-0.022  $\chi^2/\text{NDF}$ : 1544340.3/24

Right Out: 130.767+/-0.024  $\chi^2/\text{NDF}$ : 1445766.6/30

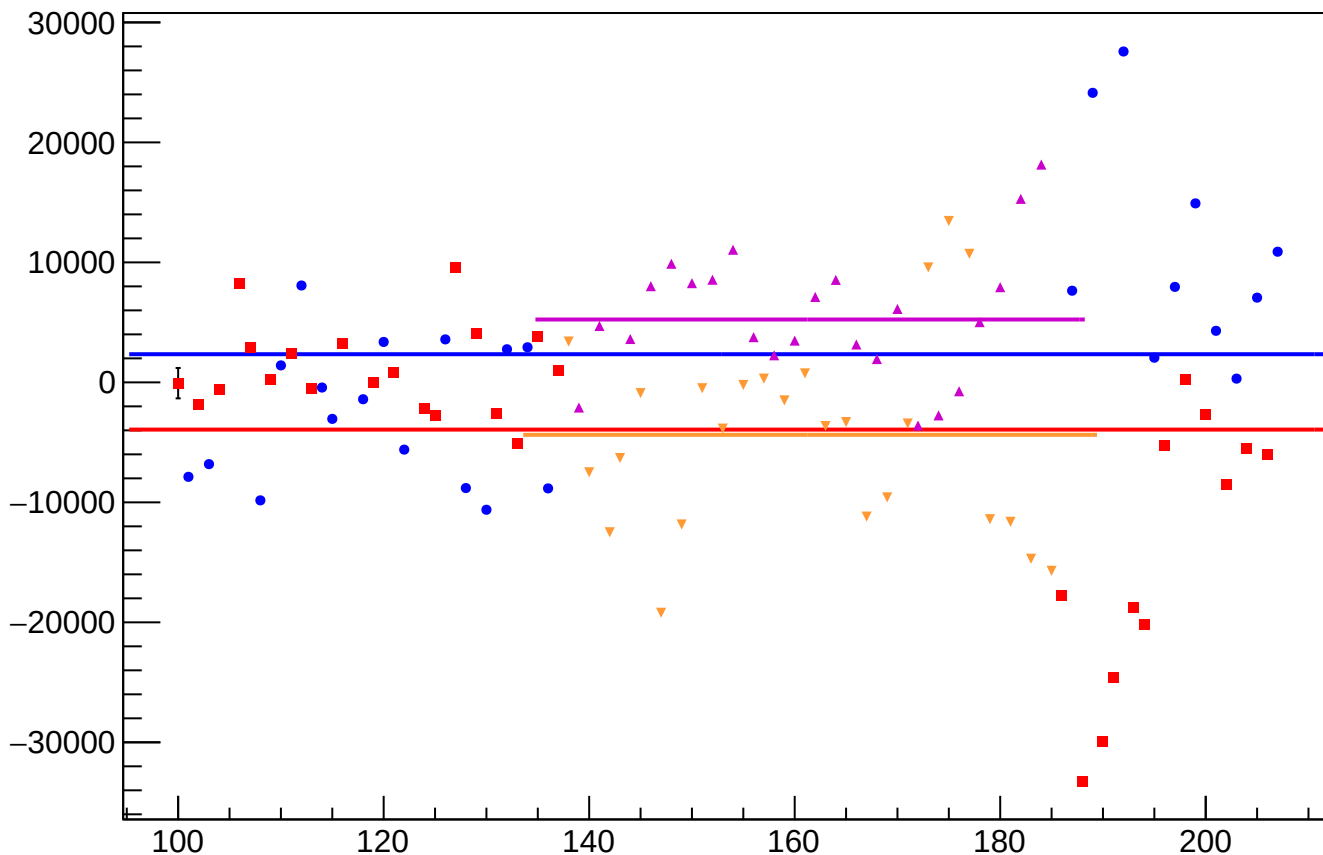
Left In: 133.061+/-0.023  $\chi^2/\text{NDF}$ : 1418252.2/22

+ sign 132.016+/-0.016  $\chi^2/\text{NDF}$ : 2766644.5/50

All: 131.990+/-0.012  $\chi^2/\text{NDF}$ : 5635594.4/104

- sign 131.964+/-0.016  $\chi^2/\text{NDF}$ : 2868944.8/53

# asym\_bpm1i04WS\_mean vs Slug



Right In: 2346.227+/-31.773  $\chi^2/\text{NDF}$ : 86540.3/25

Left Out: -4372.743+/-27.955  $\chi^2/\text{NDF}$ : 67218.5/24

Right Out: -3935.383+/-30.127  $\chi^2/\text{NDF}$ : 110899.9/30

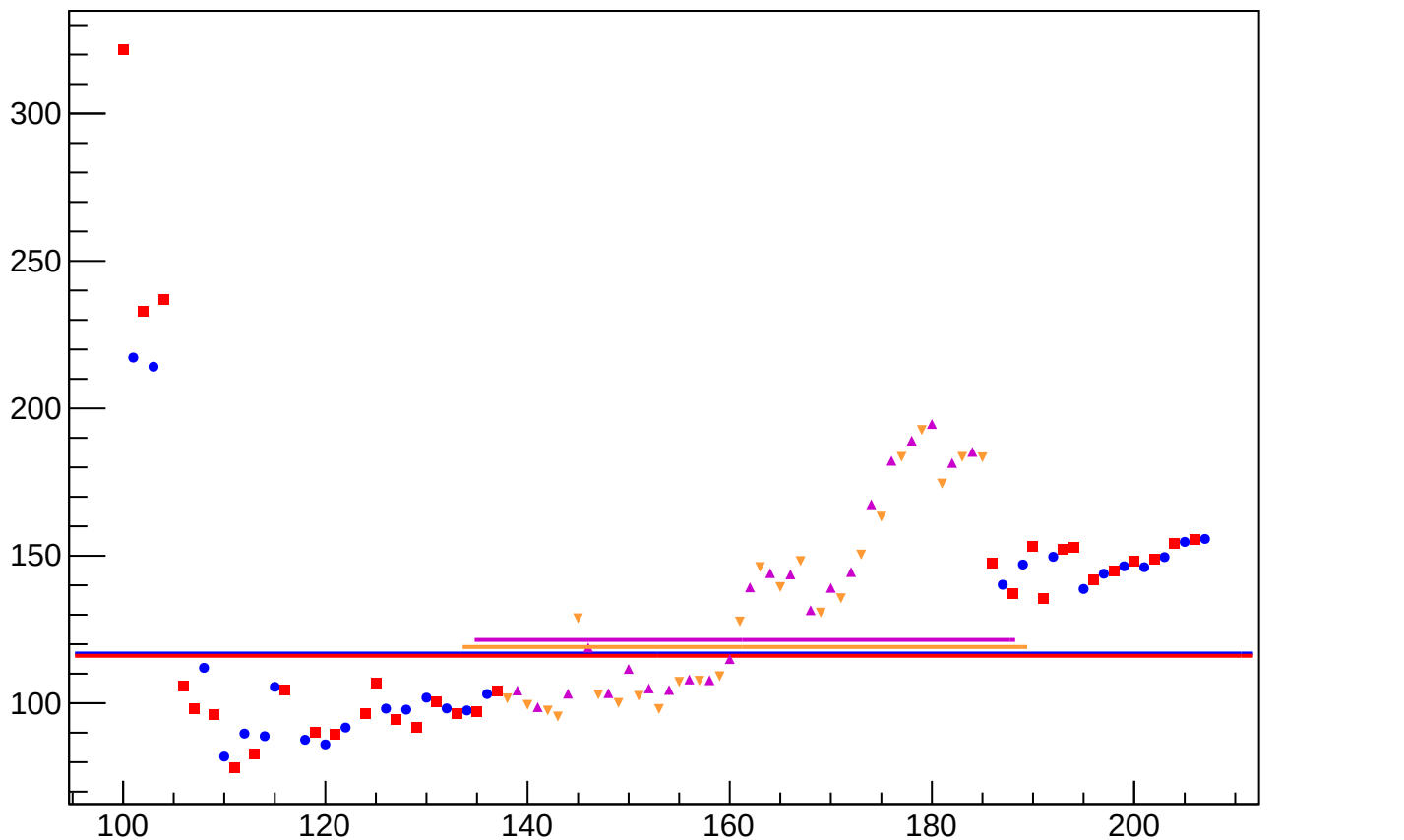
Left In: 5239.784+/-29.252  $\chi^2/\text{NDF}$ : 22273.2/22

+ sign -1441.020+/-20.988  $\chi^2/\text{NDF}$ : 178964.6/50

All: -326.696+/-14.840  $\chi^2/\text{NDF}$ : 365516.8/10

- sign 787.482+/-20.987  $\chi^2/\text{NDF}$ : 180914.9/53

# asym\_bpm1i04WS\_rms vs Slug



Right In: 116.837 $\pm$ 0.022  $\chi^2$ /NDF: 1865434.6/25

Left Out: 119.064 $\pm$ 0.020  $\chi^2$ /NDF:1755428.3/24

Right Out: 116.074 $\pm$ 0.021  $\chi^2$ /NDF: 2258322.8/30

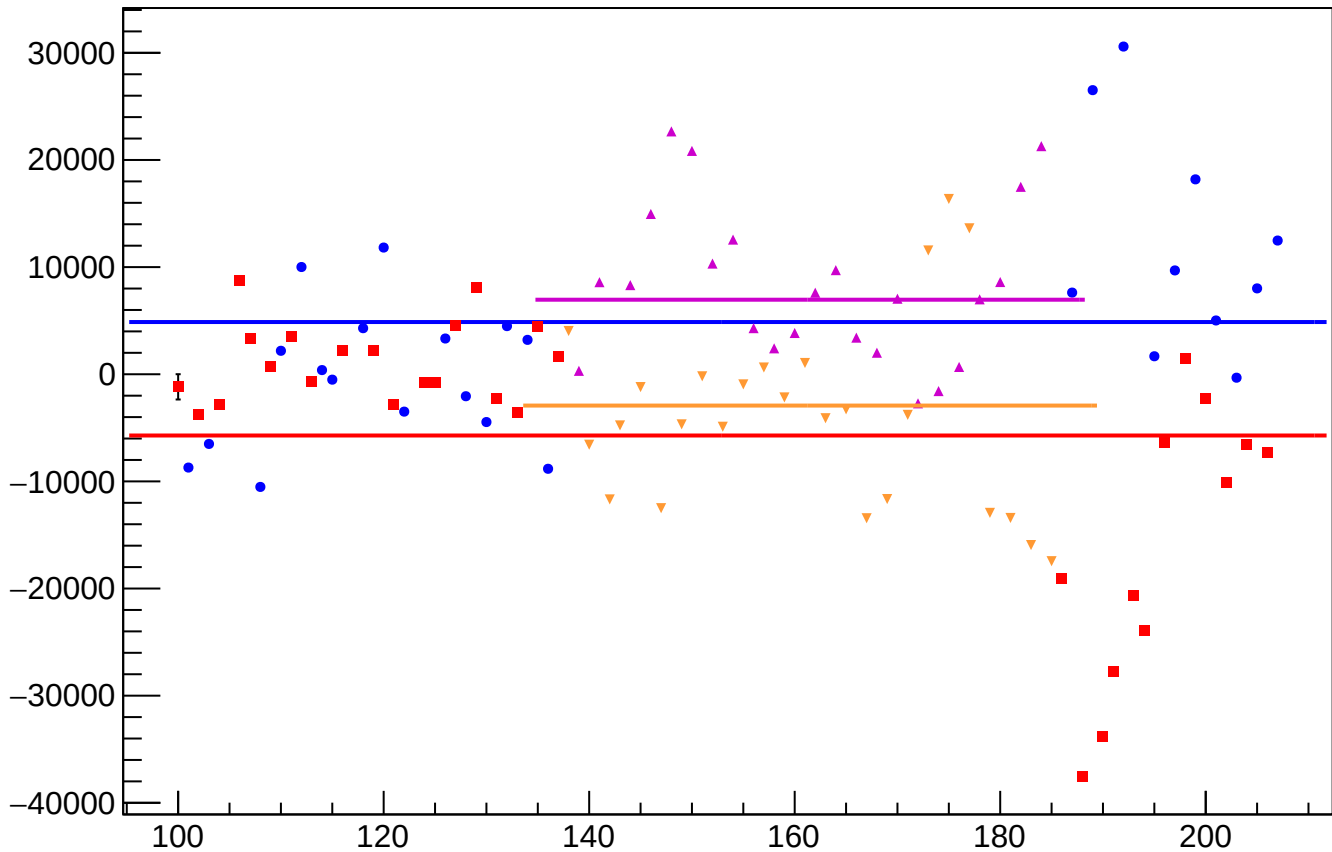
Left In: 121.468 $\pm$ 0.021  $\chi^2$ /NDF:1529379.8/22

+ sign 118.092 $\pm$ 0.015  $\chi^2$ /NDF: 3626402.4/50

All: 118.471 $\pm$ 0.010  $\chi^2$ /NDF: 7448410.5/104

- sign 118.850 $\pm$ 0.015  $\chi^2$ /NDF: 3820703.8/53

# asym\_bpm1i06WS\_mean vs Slug



Right In:  $4873.521 \pm 41.741$   $\chi^2/\text{NDF}: 62454.8/25$

Left Out:  $-2923.060 \pm 38.185$   $\chi^2/\text{NDF}: 38052.4/24$

Right Out:  $-5716.725 \pm 39.628$   $\chi^2/\text{NDF}: 92521.4/30$

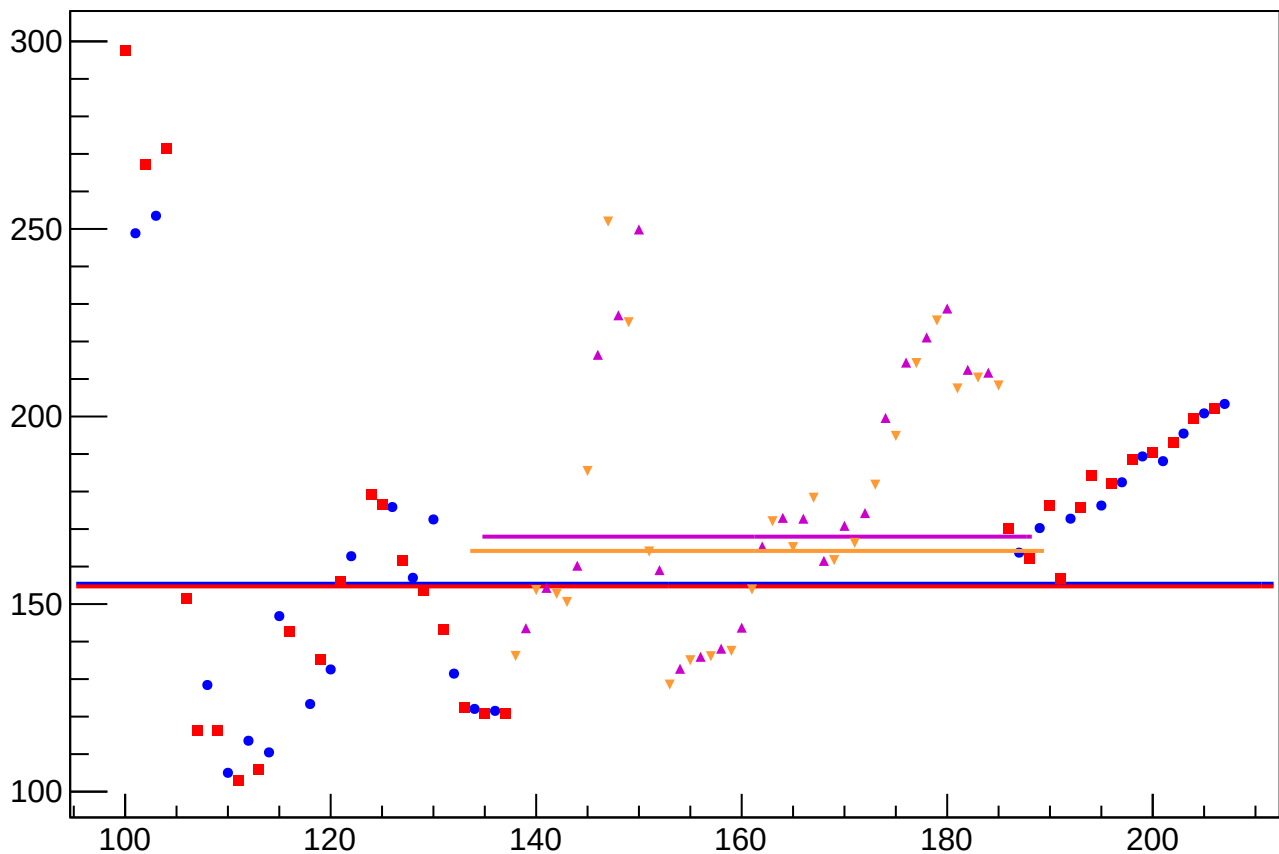
Left In:  $6956.884 \pm 40.245$   $\chi^2/\text{NDF}: 22339.0/22$

+ sign  $629.044 \pm 28.174$   $\chi^2/\text{NDF}: 119500.8/50$

All:  $575.764 \pm 19.944$   $\chi^2/\text{NDF}: 284718.4/104$

- sign  $522.246 \pm 28.237$   $\chi^2/\text{NDF}: 165210.5/53$

# asym\_bpm1i06WS\_rms vs Slug



Right In: 155.418 $\pm$ 0.030  $\chi^2$ /NDF: 1506013.2/25

Left Out: 164.172 $\pm$ 0.027  $\chi^2$ /NDF:1224405.6/24

Right Out: 154.712 $\pm$ 0.028  $\chi^2$ /NDF: 1730097.2/30

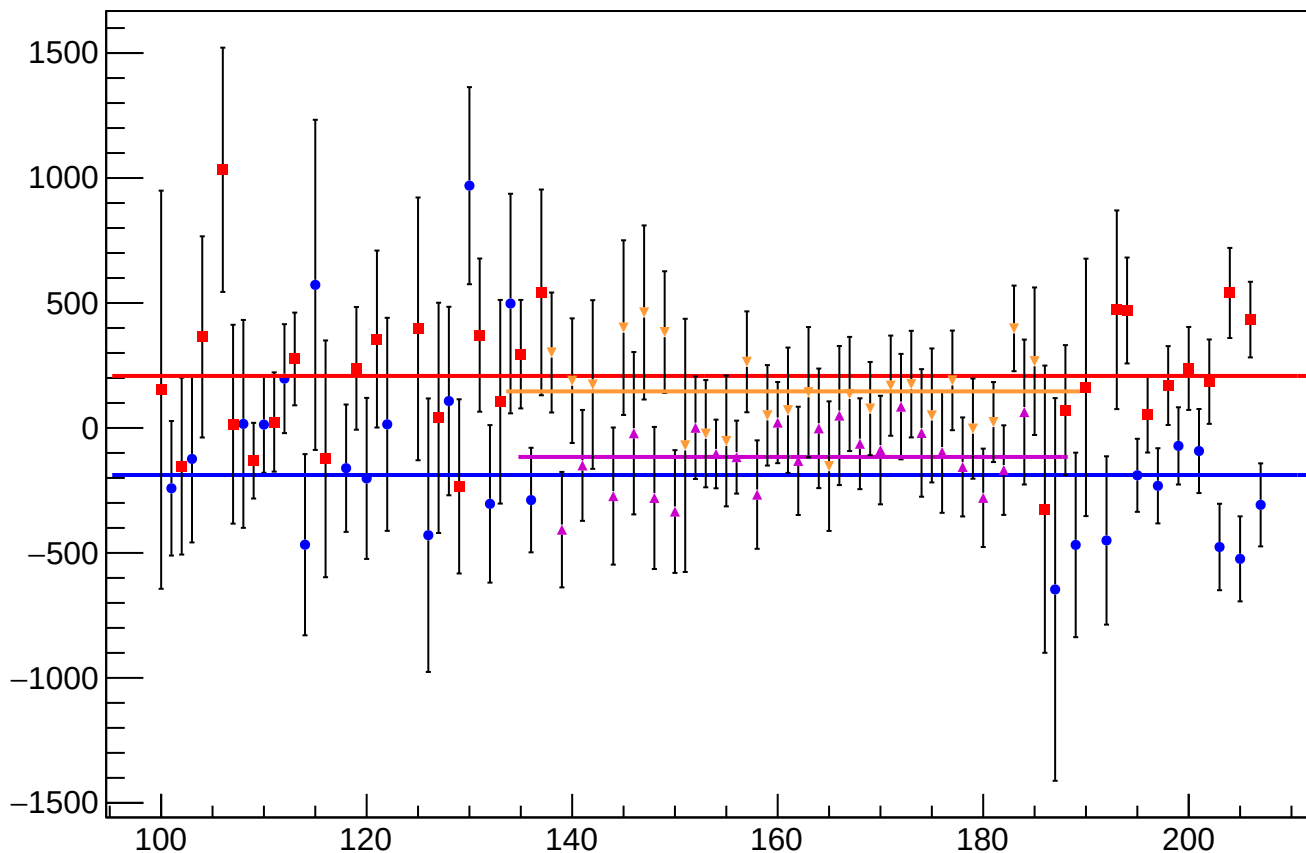
Left In: 167.975 $\pm$ 0.028  $\chi^2$ /NDF:1222745.4/22

+ sign 160.184 $\pm$ 0.020  $\chi^2$ /NDF: 2778313.8/50

All: 160.711 $\pm$ 0.014  $\chi^2$ /NDF: 5842844.7/104

- sign 161.241 $\pm$ 0.020  $\chi^2$ /NDF: 3063125.2/53

# asym\_bcm\_2an\_us\_an\_ds\_avg\_mean vs Slug



Right In:  $-188.211 \pm 46.513$   $\chi^2/\text{NDF}$ : 28.6/25

Left Out:  $146.352 \pm 46.929$   $\chi^2/\text{NDF}$ : 10.0/23

Right Out:  $208.123 \pm 45.037$   $\chi^2/\text{NDF}$ : 23.9/28

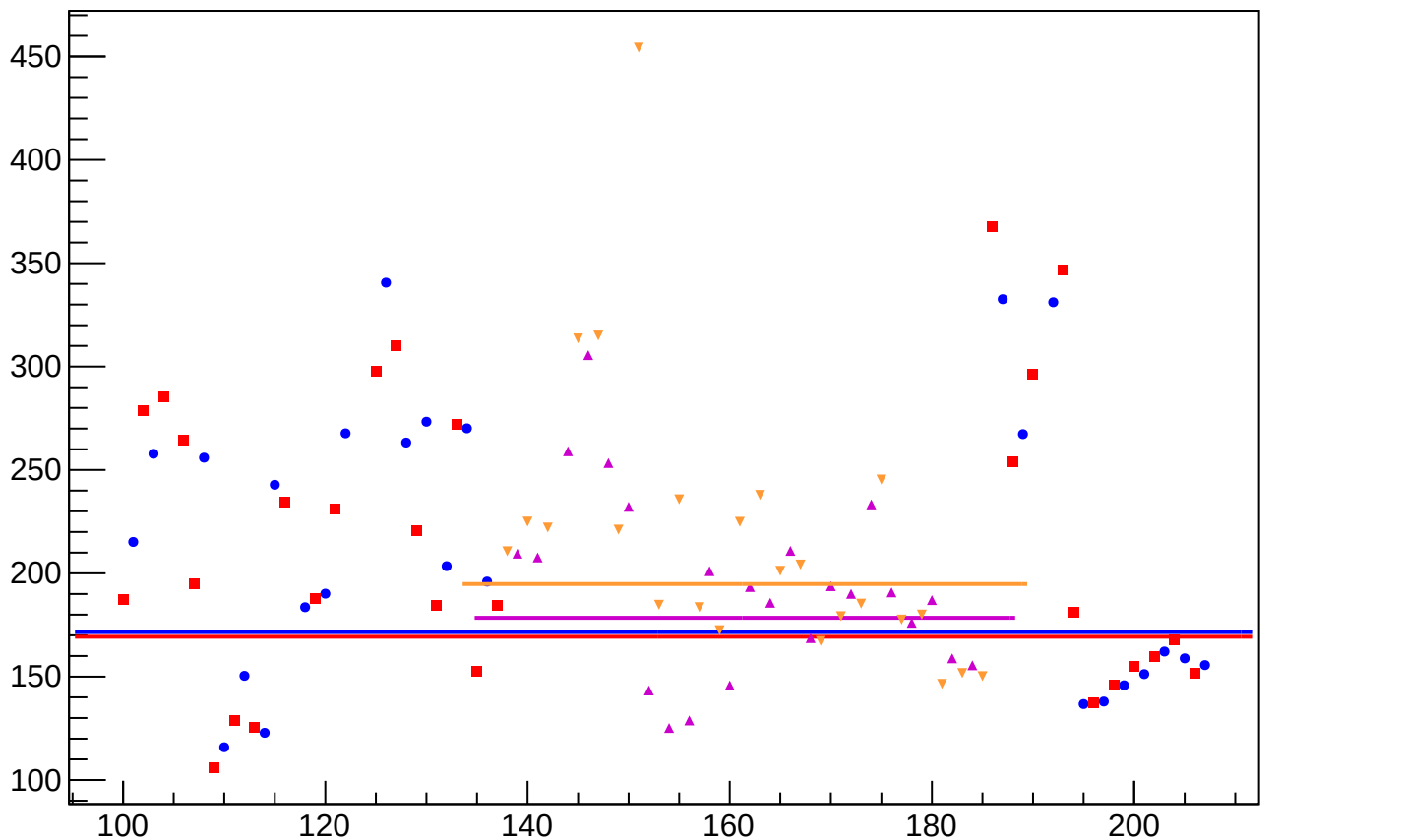
Left In:  $-115.974 \pm 43.605$   $\chi^2/\text{NDF}$ : 7.6/22

+ sign  $-22.420 \pm 33.036$   $\chi^2/\text{NDF}$ : 64.2/49

All:  $10.887 \pm 22.732$   $\chi^2/\text{NDF}$ : 124.4/101

- sign  $40.839 \pm 31.327$   $\chi^2/\text{NDF}$ : 58.2/51

asym\_bcm\_2an\_us\_an\_ds\_avg\_rms vs Slug



Right In:  $171.561 \pm 0.033$   $\chi^2/\text{NDF}$ : 2222404.0/25

Left Out:  $194.828 \pm 0.033$   $\chi^2/\text{NDF}$ : 1752475.1/23

Right Out:  $169.306 \pm 0.032$   $\chi^2/\text{NDF}$ : 2751580.8/28

Left In:  $178.475 \pm 0.031$   $\chi^2/\text{NDF}$ : 1676266.4/22

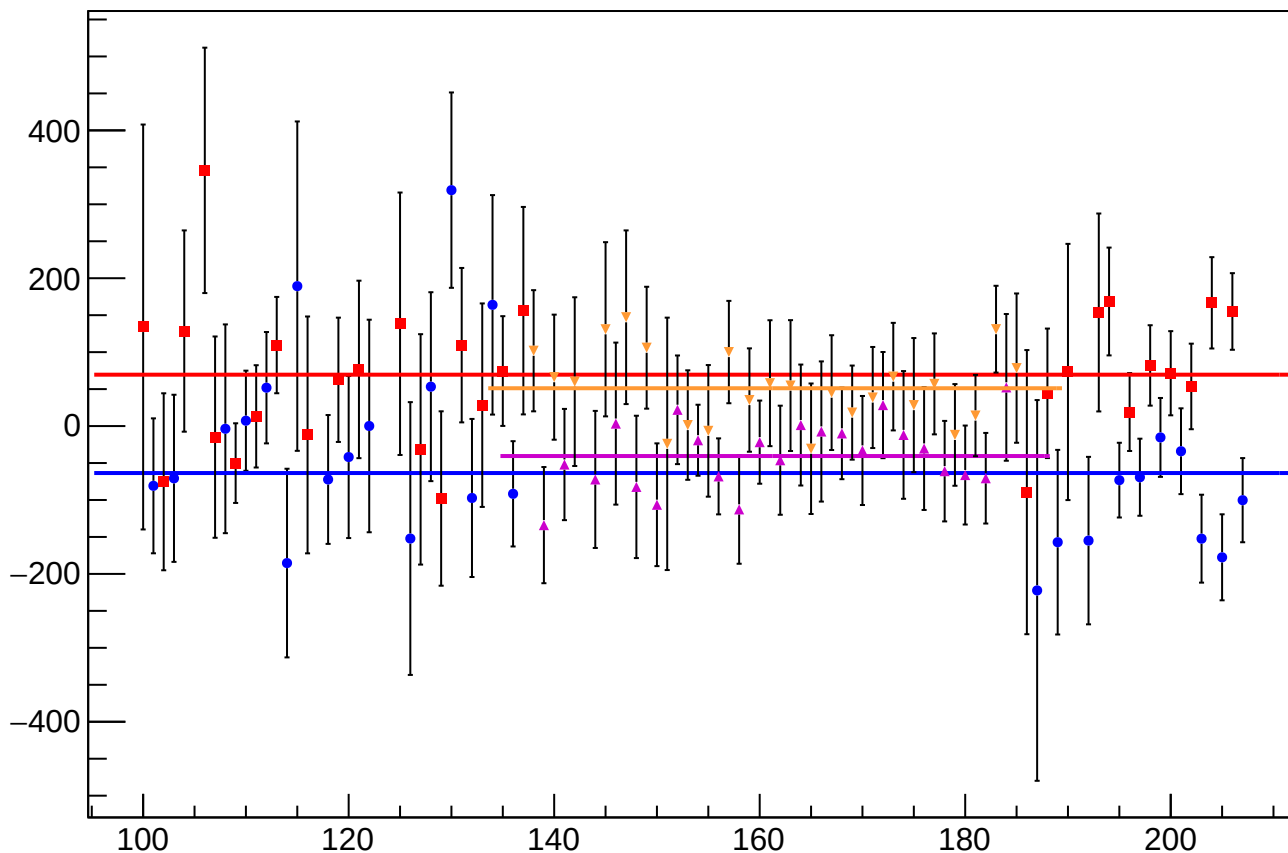
+ sign  $183.091 \pm 0.023$   $\chi^2/\text{NDF}$ : 4222898.6/49

All:  $178.325 \pm 0.016$   $\chi^2/\text{NDF}$ : 8772596.1/103

- sign  $174.039 \pm 0.022$   $\chi^2/\text{NDF}$ : 4470636.2/51



# asym\_bcm\_2an\_us\_an\_ds\_dd\_mean vs Slug



Right In:  $-63.538 \pm 15.978$   $\chi^2/\text{NDF}: 27.4/25$

Left Out:  $51.161 \pm 16.037$   $\chi^2/\text{NDF}: 8.1/23$

Right Out:  $69.510 \pm 15.501$   $\chi^2/\text{NDF}: 23.6/28$

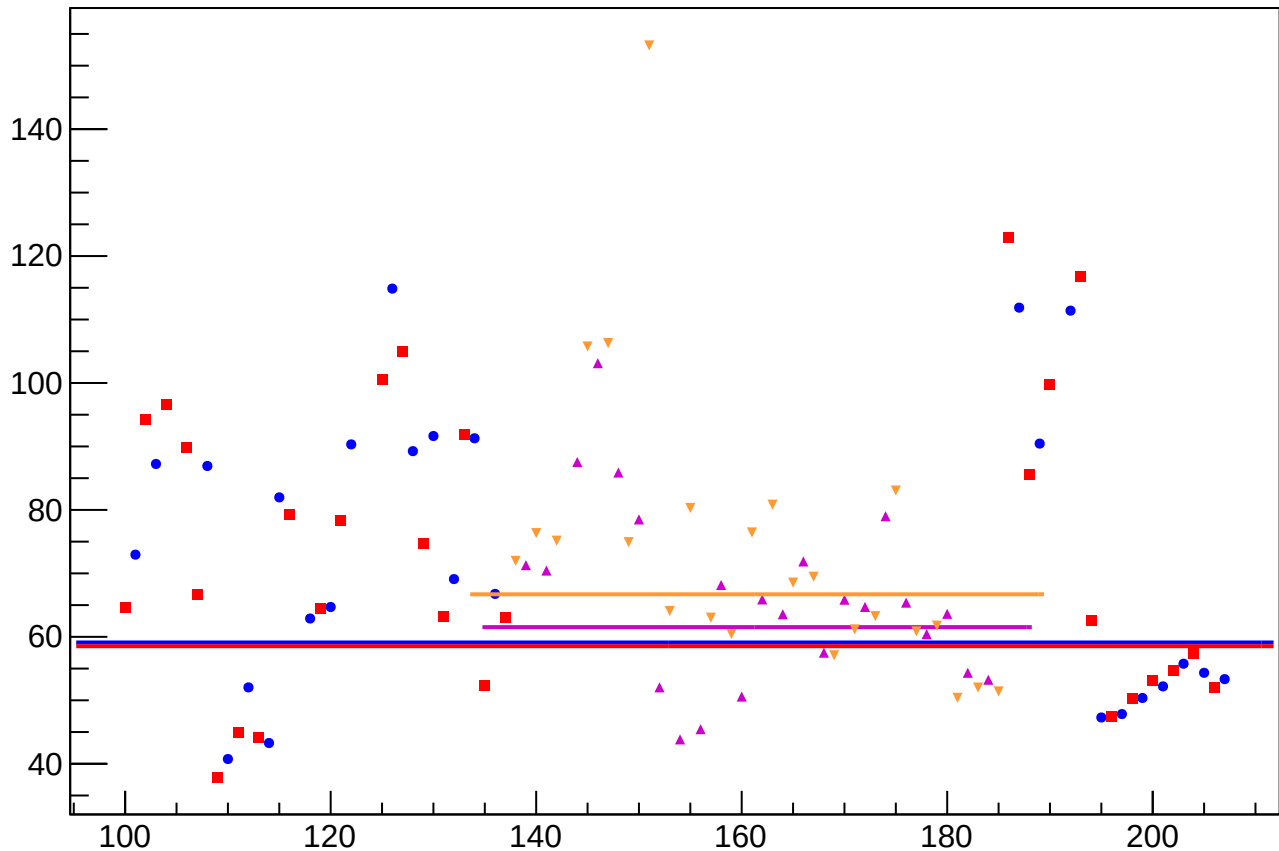
Left In:  $-40.540 \pm 14.978$   $\chi^2/\text{NDF}: 7.9/22$

+ sign  $-6.399 \pm 11.319$   $\chi^2/\text{NDF}: 61.2/49$

All:  $3.570 \pm 7.803$   $\chi^2/\text{NDF}: 120.1/101$

- sign  $12.596 \pm 10.771$   $\chi^2/\text{NDF}: 57.5/51$

# asym\_bcm\_2an\_us\_an\_ds\_dd\_rms vs Slug



Right In: 59.110 $\pm$ 0.011  $\chi^2$ /NDF: 2078393.0/25

Left Out: 66.703 $\pm$ 0.011  $\chi^2$ /NDF:1676329.9/23

Right Out: 58.524 $\pm$ 0.011  $\chi^2$ /NDF: 2553071.8/28

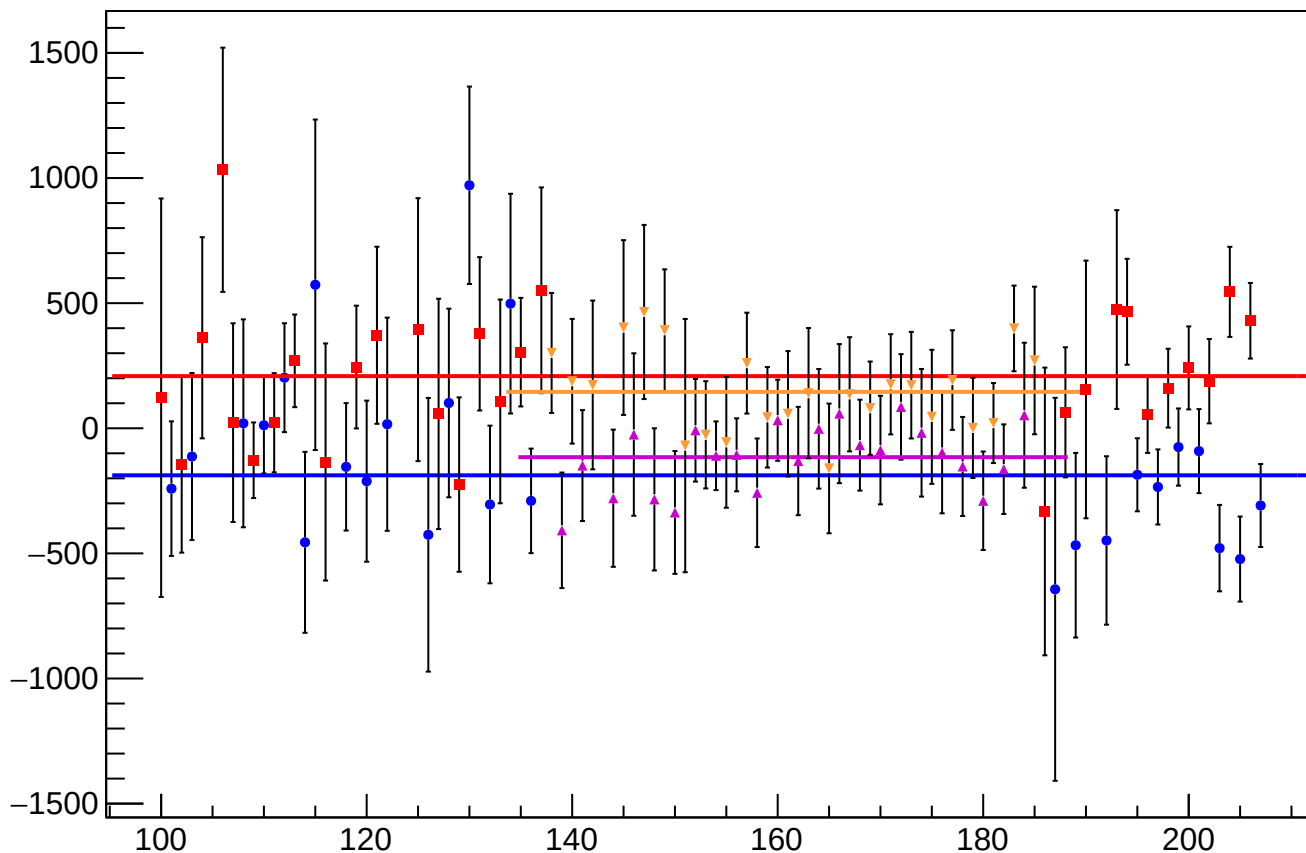
Left In: 61.529 $\pm$ 0.011  $\chi^2$ /NDF:1489848.4/22

+ sign 62.892 $\pm$ 0.008  $\chi^2$ /NDF: 3979727.7/49

All: 61.415 $\pm$ 0.006  $\chi^2$ /NDF: 8126413.3/101

- sign 60.078 $\pm$ 0.008  $\chi^2$ /NDF: 4081789.7/51

asym\_bcm\_an\_us\_an\_ds\_avg\_mean vs Slug



Right In:  $-188.008 \pm 46.452$   $\chi^2/\text{NDF}$ : 28.7/25

Left Out:  $145.476 \pm 46.889$   $\chi^2/\text{NDF}$ : 10.2/23

Right Out:  $208.375 \pm 44.981$   $\chi^2/\text{NDF}$ : 23.9/28

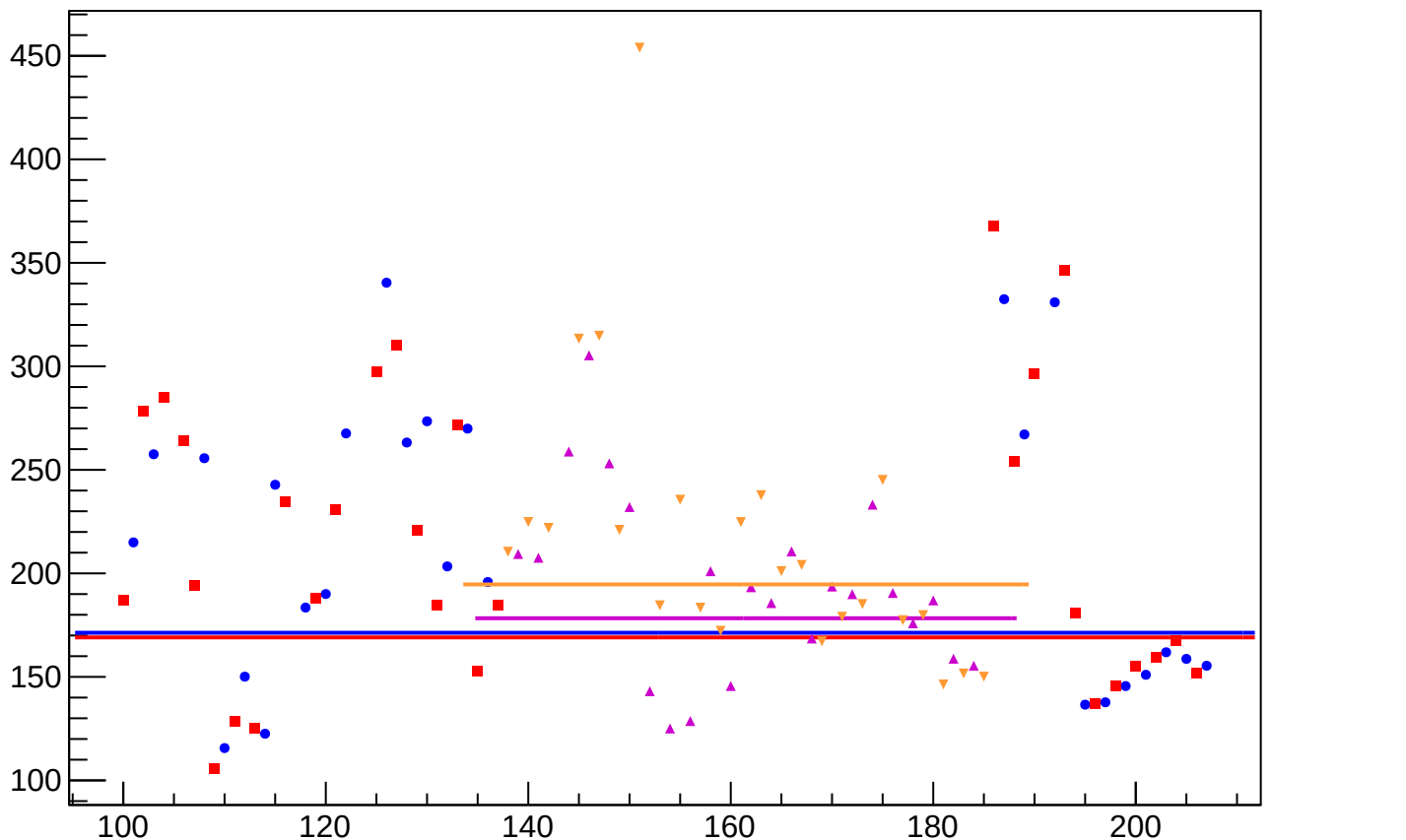
Left In:  $-115.487 \pm 43.568$   $\chi^2/\text{NDF}$ : 7.8/22

+ sign  $-22.828 \pm 33.000$   $\chi^2/\text{NDF}$ : 64.5/49

All:  $10.924 \pm 22.708$   $\chi^2/\text{NDF}$ : 124.9/101

- sign  $41.278 \pm 31.295$   $\chi^2/\text{NDF}$ : 58.4/51

# asym\_bcm\_an\_us\_an\_ds\_avg\_rms vs Slug



Right In: 171.316+/-0.033  $\chi^2/\text{NDF}$ : 2228954.8/25

Left Out: 194.659+/-0.033  $\chi^2/\text{NDF}$ :1753119.9/23

Right Out: 169.070+/-0.032  $\chi^2/\text{NDF}$ : 2759731.8/28

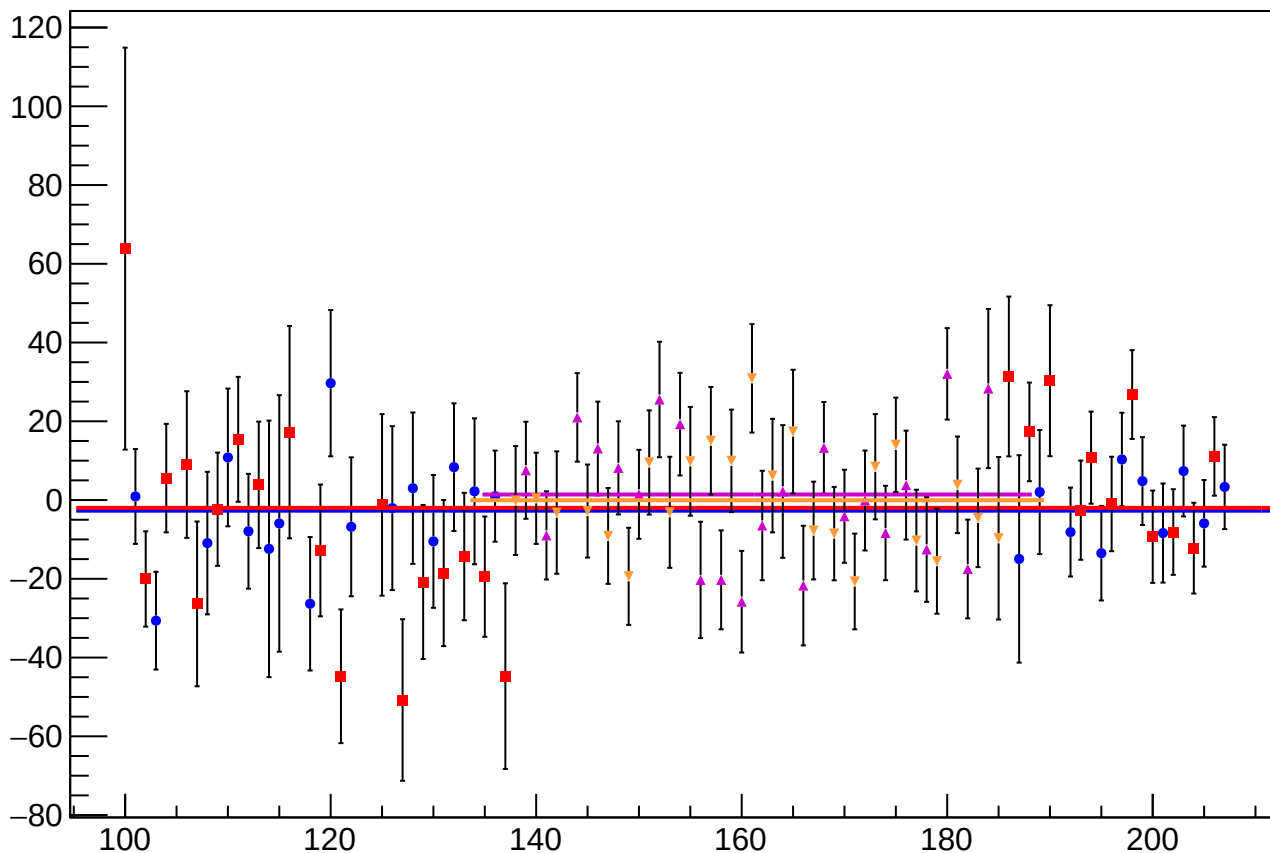
Left In: 178.318+/-0.031  $\chi^2/\text{NDF}$ :1678336.4/22

+ sign 182.878+/-0.023  $\chi^2/\text{NDF}$ : 4232241.5/49

All: 178.120+/-0.016  $\chi^2/\text{NDF}$ : 8792899.2/100

- sign 173.841+/-0.022  $\chi^2/\text{NDF}$ : 4481689.9/51

# asym\_bcm\_an\_us\_an\_ds\_dd\_mean vs Slug



Right In:  $-2.697 \pm 2.830$   $\chi^2/\text{NDF}$ : 16.5/25

Left Out:  $-0.047 \pm 2.685$   $\chi^2/\text{NDF}$ : 20.5/23

Right Out:  $-1.985 \pm 2.756$   $\chi^2/\text{NDF}$ : 45.9/28

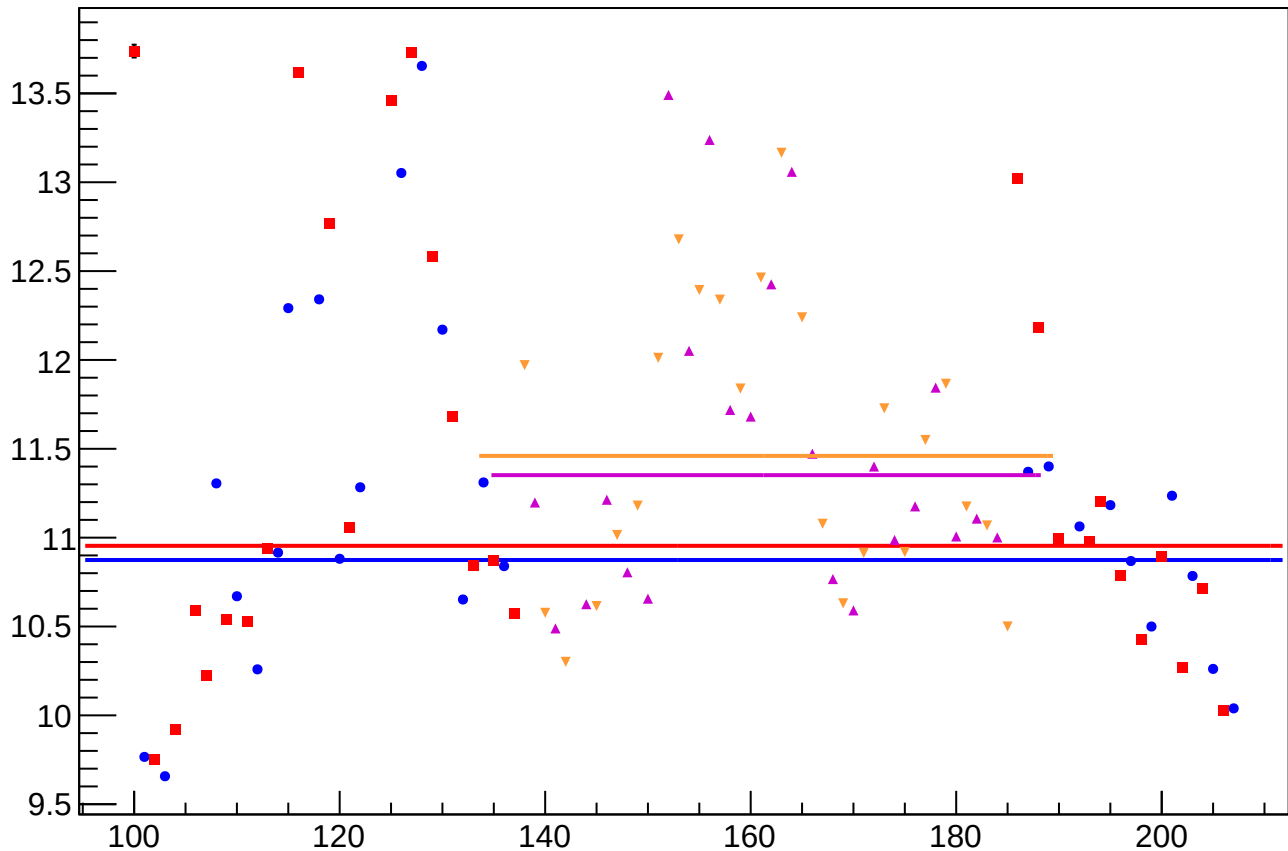
Left In:  $1.407 \pm 2.674$   $\chi^2/\text{NDF}$ : 36.3/22

+ sign  $-1.302 \pm 1.948$   $\chi^2/\text{NDF}$ : 37.5/49

All:  $-0.762 \pm 1.367$   $\chi^2/\text{NDF}$ : 120.6/101

- sign  $-0.238 \pm 1.919$   $\chi^2/\text{NDF}$ : 83.0/51

# asym\_bcm\_an\_us\_an\_ds\_dd\_rms vs Slug



Right In: 10.874 $\pm$ 0.002  $\chi^2$ /NDF: 165192.5/25

Left Out: 11.460 $\pm$ 0.002  $\chi^2$ /NDF:150430.0/23

Right Out: 10.954 $\pm$ 0.002  $\chi^2$ /NDF: 236013.4/28

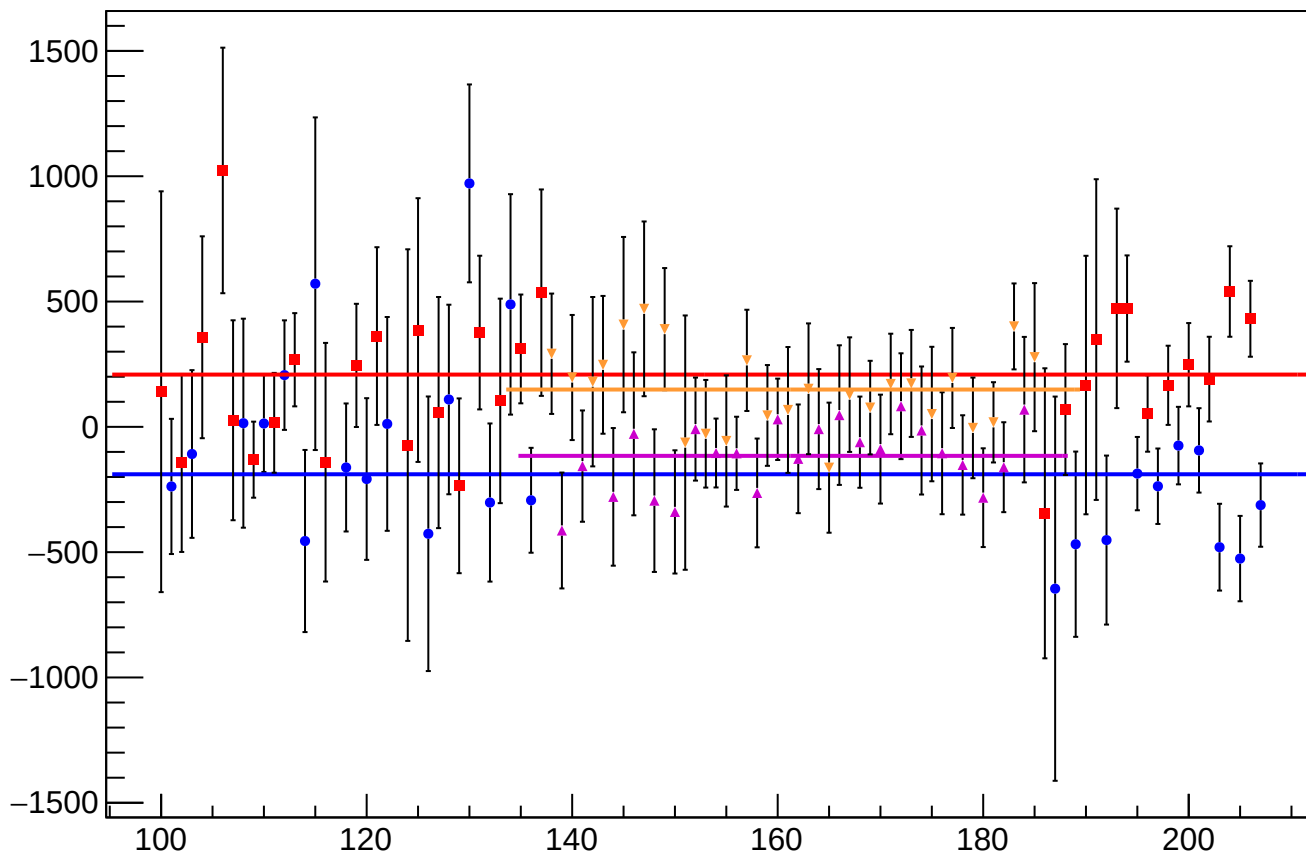
Left In: 11.352 $\pm$ 0.002  $\chi^2$ /NDF:170563.6/22

+ sign 11.183 $\pm$ 0.001  $\chi^2$ /NDF: 360733.8/49

All: 11.171 $\pm$ 0.001  $\chi^2$ /NDF: 788916.7/101

- sign 11.159 $\pm$ 0.001  $\chi^2$ /NDF: 428032.5/51

# asym\_bcm\_an\_us\_an\_ds3\_avg\_mean vs Slug



Right In:  $-189.182 \pm 46.577$   $\chi^2/\text{NDF}$ : 28.8/25

Left Out:  $148.905 \pm 46.306$   $\chi^2/\text{NDF}$ : 10.5/24

Right Out:  $208.581 \pm 44.918$   $\chi^2/\text{NDF}$ : 24.0/30

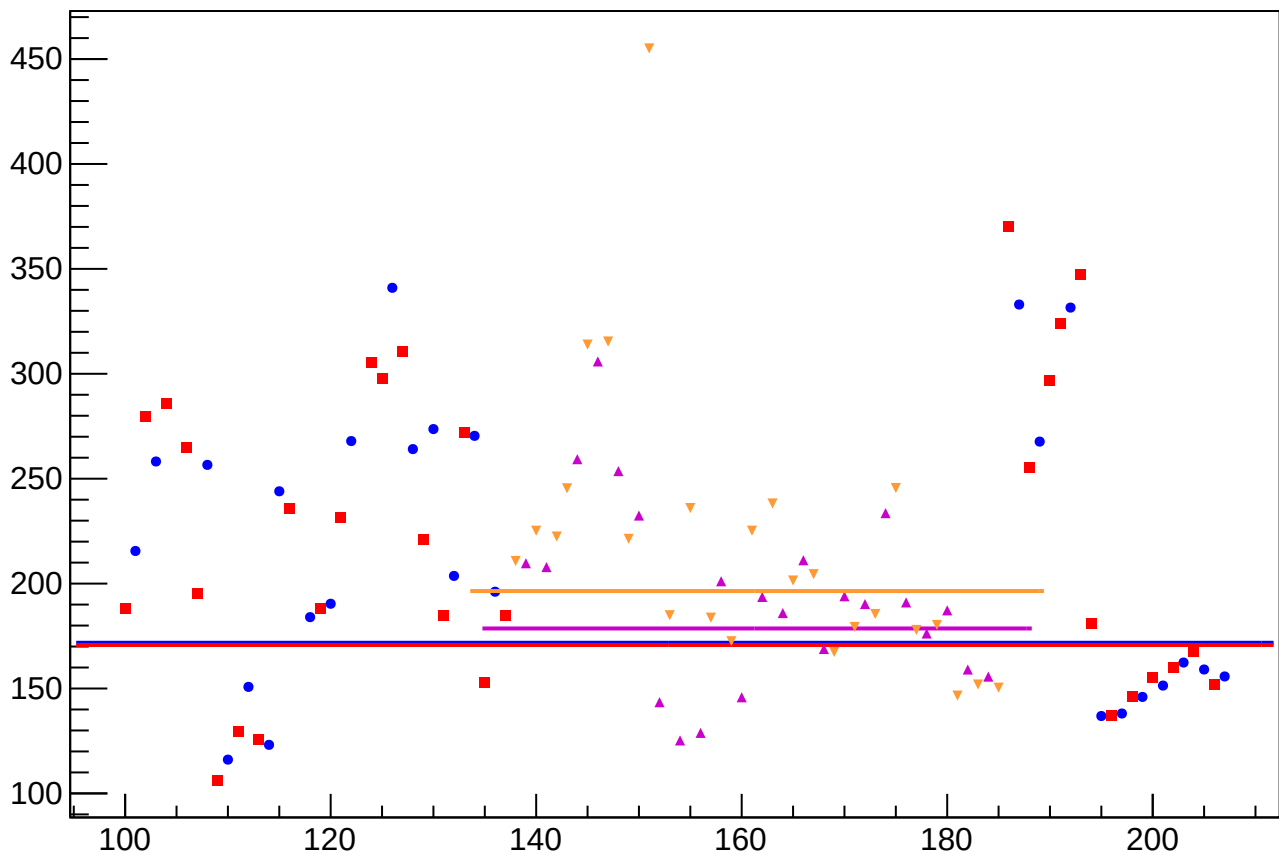
Left In:  $-115.709 \pm 43.641$   $\chi^2/\text{NDF}$ : 7.8/22

+ sign  $-19.155 \pm 32.839$   $\chi^2/\text{NDF}$ : 65.7/50

All:  $12.762 \pm 22.657$   $\chi^2/\text{NDF}$ : 126.2/104

- sign  $41.758 \pm 31.301$   $\chi^2/\text{NDF}$ : 58.7/53

asym\_bcm\_an\_us\_an\_ds3\_avg\_rms vs Slug



Right In: 171.793 $\pm$ 0.033  $\chi^2$ /NDF: 2223610.6/25

Left Out: 196.454 $\pm$ 0.033  $\chi^2$ /NDF:1818746.1/24

Right Out: 170.751 $\pm$ 0.032  $\chi^2$ /NDF: 2932548.9/30

Left In: 178.614 $\pm$ 0.031  $\chi^2$ /NDF:1678859.8/22

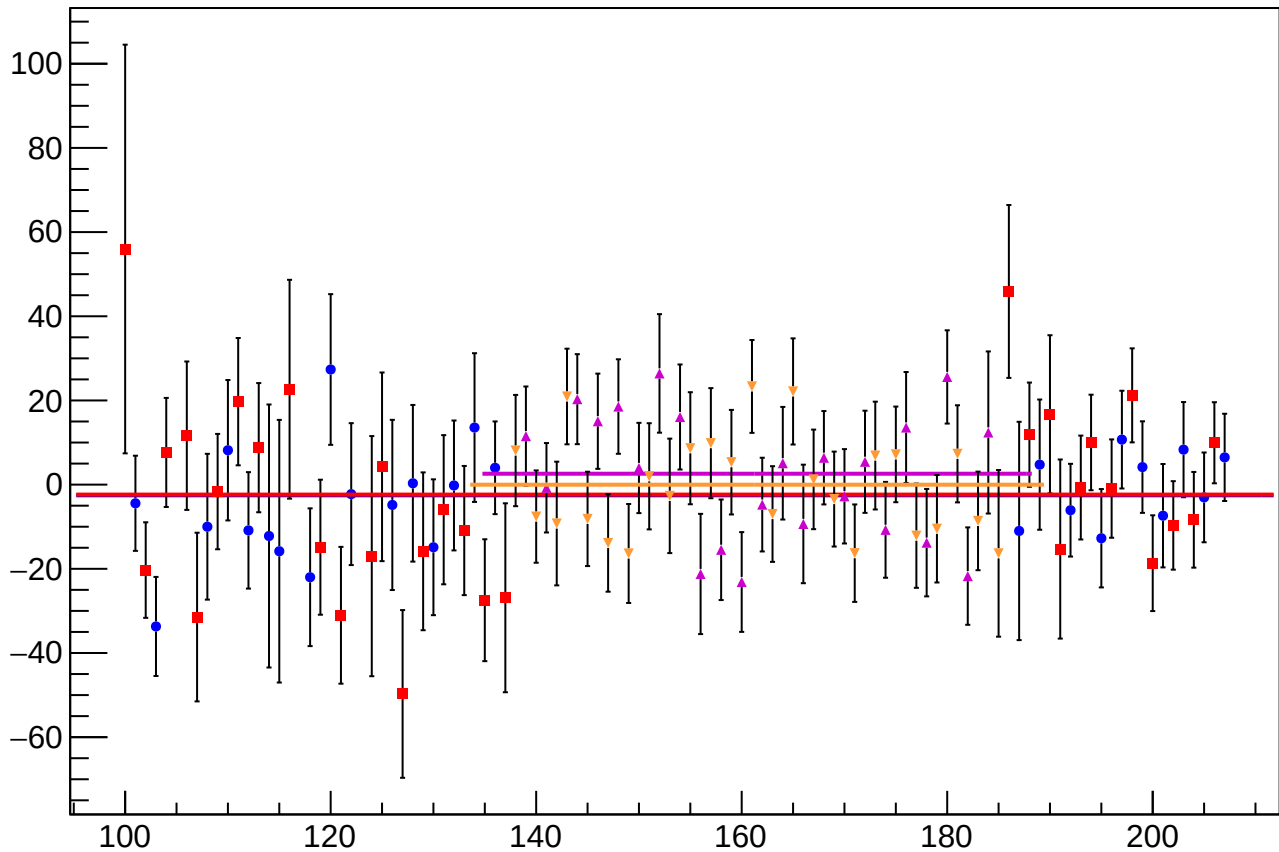
+ sign 184.195 $\pm$ 0.023  $\chi^2$ /NDF: 4324345.5/50

All: 179.270 $\pm$ 0.016  $\chi^2$ /NDF: 9053125.0/104

- sign 174.796 $\pm$ 0.022  $\chi^2$ /NDF: 4642931.0/53



# asym\_bcm\_an\_us\_an\_ds3\_dd\_mean vs Slug



Right In:  $-2.536 \pm 2.731$   $\chi^2/\text{NDF}$ : 19.0/25

Left Out:  $-0.018 \pm 2.445$   $\chi^2/\text{NDF}$ : 23.7/24

Right Out:  $-2.365 \pm 2.630$   $\chi^2/\text{NDF}$ : 44.0/30

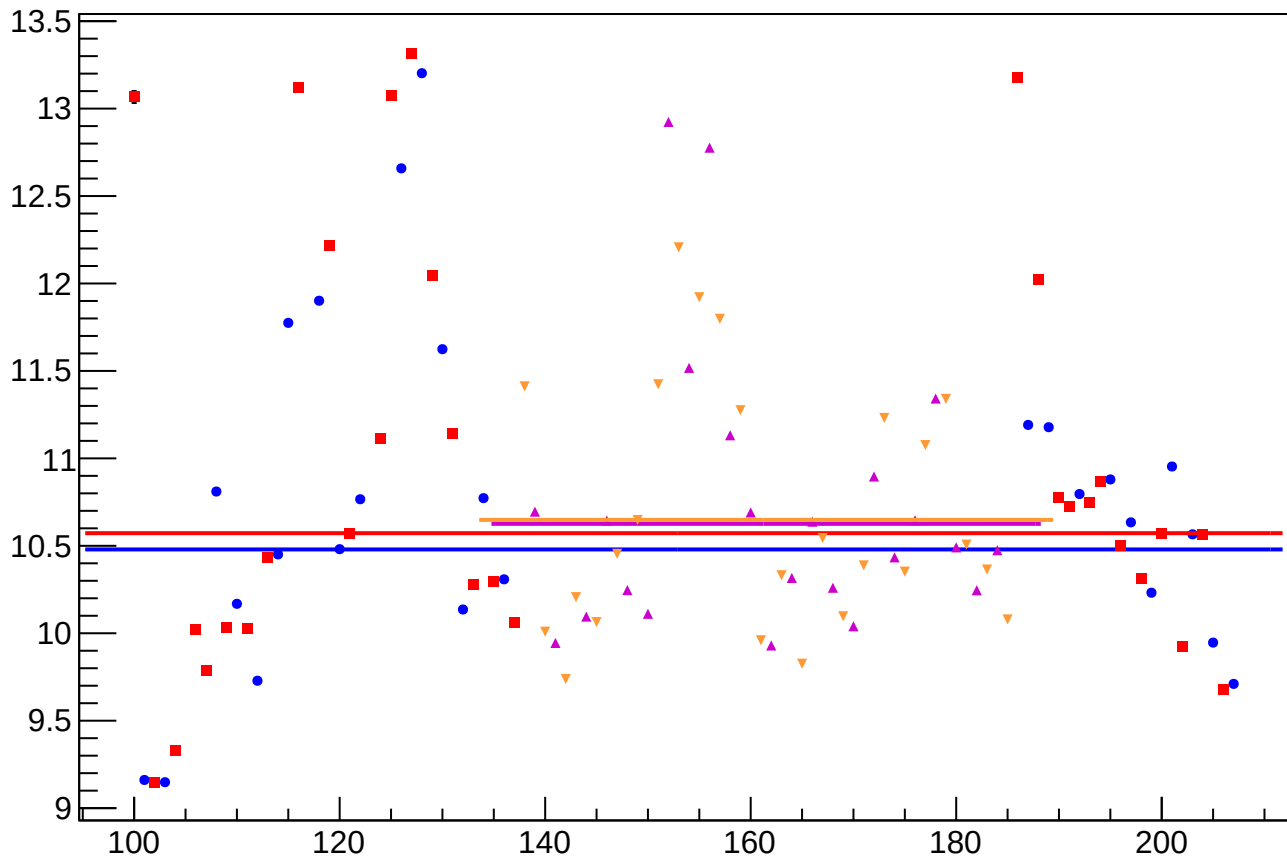
Left In:  $2.591 \pm 2.506$   $\chi^2/\text{NDF}$ : 34.8/22

+ sign  $-1.138 \pm 1.821$   $\chi^2/\text{NDF}$ : 43.2/50

All:  $-0.450 \pm 1.285$   $\chi^2/\text{NDF}$ : 124.2/104

- sign  $0.232 \pm 1.814$   $\chi^2/\text{NDF}$ : 80.7/53

# asym\_bcm\_an\_us\_an\_ds3\_dd\_rms vs Slug



Right In: 10.479 $\pm$ 0.002     $\chi^2$ /NDF: 187455.2/25

Left Out: 10.648 $\pm$ 0.002     $\chi^2$ /NDF:143535.9/24

Right Out: 10.572 $\pm$ 0.002     $\chi^2$ /NDF: 274738.9/30

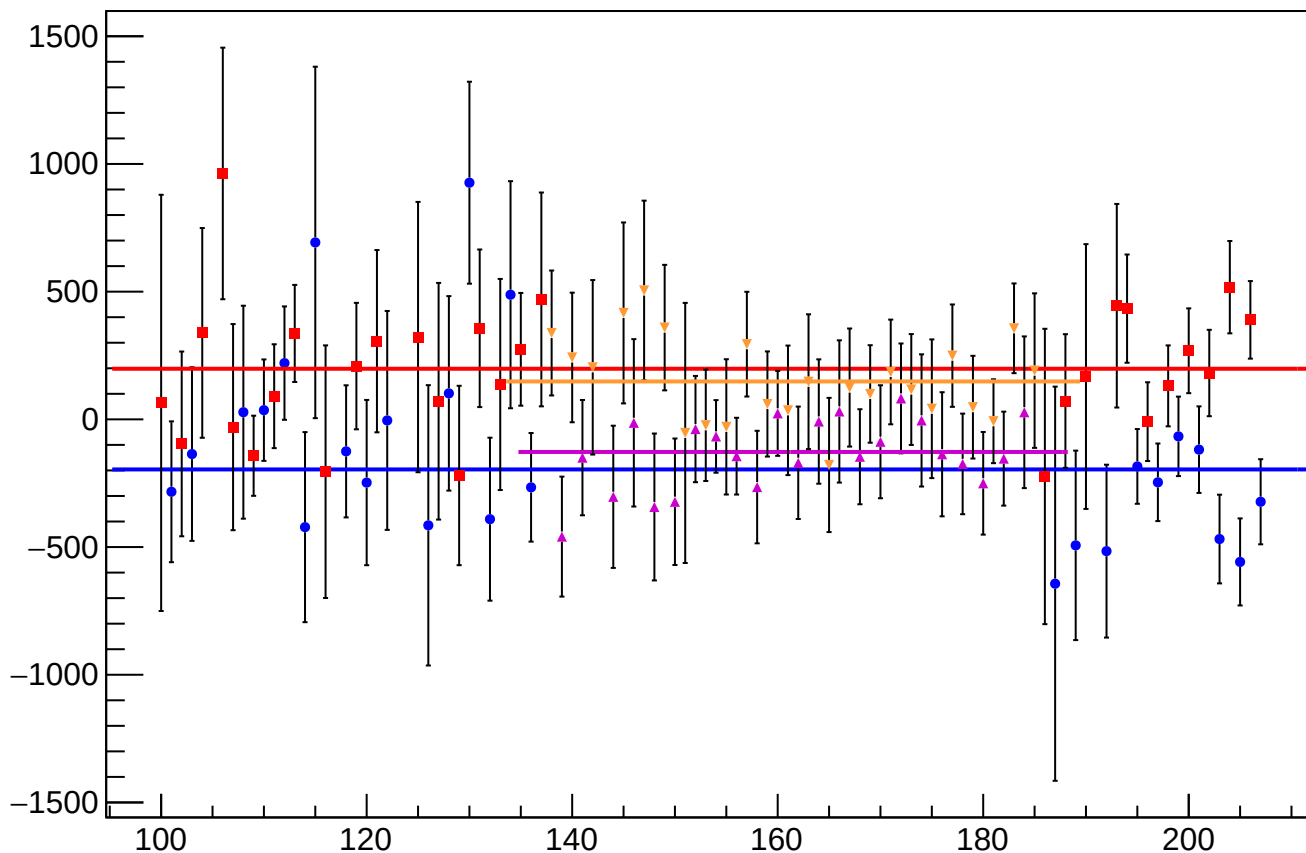
Left In: 10.626 $\pm$ 0.002     $\chi^2$ /NDF:159543.1/22

+ sign 10.573 $\pm$ 0.001     $\chi^2$ /NDF: 335242.8/50

All: 10.587 $\pm$ 0.001     $\chi^2$ /NDF: 770180.4/104

- sign 10.600 $\pm$ 0.001     $\chi^2$ /NDF: 434713.6/53

asym\_bcm\_dg\_us\_dg\_ds\_avg\_mean vs Slug



Right In:  $-196.066 \pm 46.950$   $\chi^2/\text{NDF}$ : 29.8/25

Left Out:  $148.441 \pm 47.720$   $\chi^2/\text{NDF}$ : 9.9/23

Right Out:  $198.162 \pm 45.547$   $\chi^2/\text{NDF}$ : 21.5/28

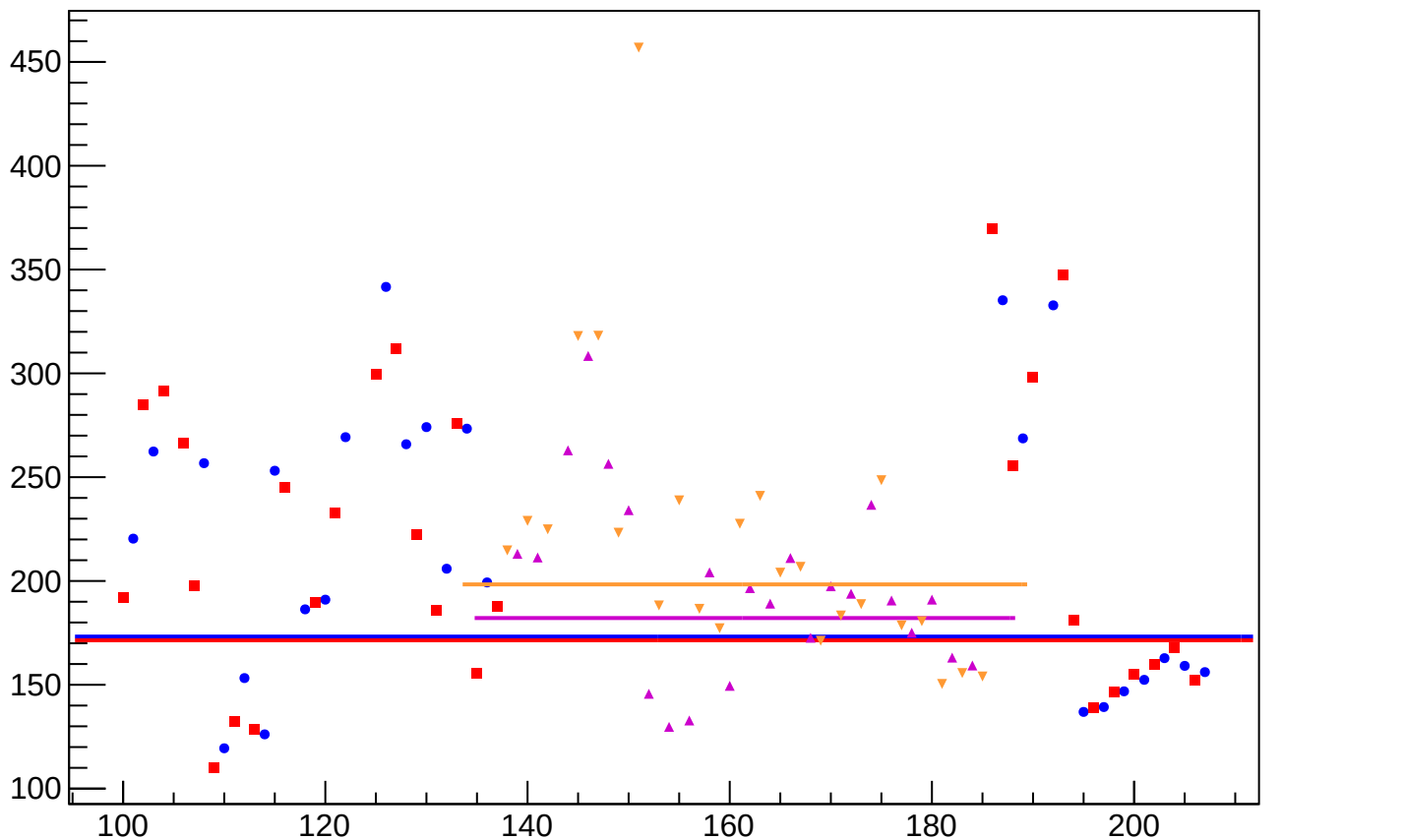
Left In:  $-127.710 \pm 44.426$   $\chi^2/\text{NDF}$ : 7.8/22

+ sign  $-26.615 \pm 33.468$   $\chi^2/\text{NDF}$ : 66.1/49

All:  $3.750 \pm 23.054$   $\chi^2/\text{NDF}$ : 123.2/101

- sign  $31.169 \pm 31.803$   $\chi^2/\text{NDF}$ : 55.5/51

# asym\_bcm\_dg\_us\_dg\_ds\_avg\_rms vs Slug



Right In: 173.216+/-0.033  $\chi^2/\text{NDF}$ : 2217264.5/25

Left Out: 198.351+/-0.034  $\chi^2/\text{NDF}$ : 1697058.2/23

Right Out: 171.446+/-0.032  $\chi^2/\text{NDF}$ : 2694887.9/28

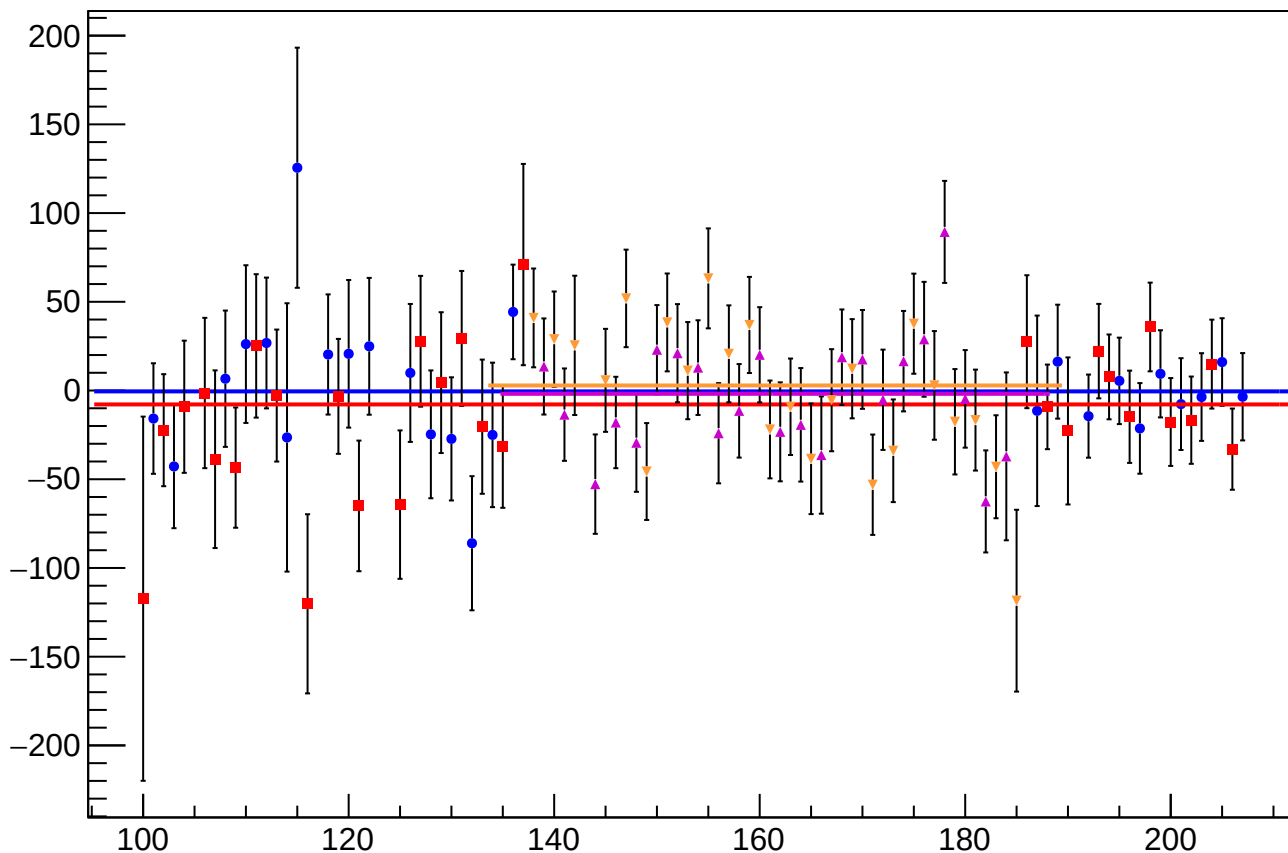
Left In: 182.150+/-0.031  $\chi^2/\text{NDF}$ : 1584358.1/22

+ sign 185.579+/-0.024  $\chi^2/\text{NDF}$ : 4196262.5/49

All: 181.035+/-0.016  $\chi^2/\text{NDF}$ : 8602294.5/103

- sign 176.931+/-0.022  $\chi^2/\text{NDF}$ : 4335855.9/51

# asym\_bcm\_dg\_us\_dg\_ds\_dd\_mean vs Slug



Right In:  $-0.483 \pm 6.237$   $\chi^2/\text{NDF}$ : 18.9/25

Left Out:  $2.851 \pm 5.904$   $\chi^2/\text{NDF}$ : 36.9/23

Right Out:  $-7.839 \pm 6.016$   $\chi^2/\text{NDF}$ : 25.4/28

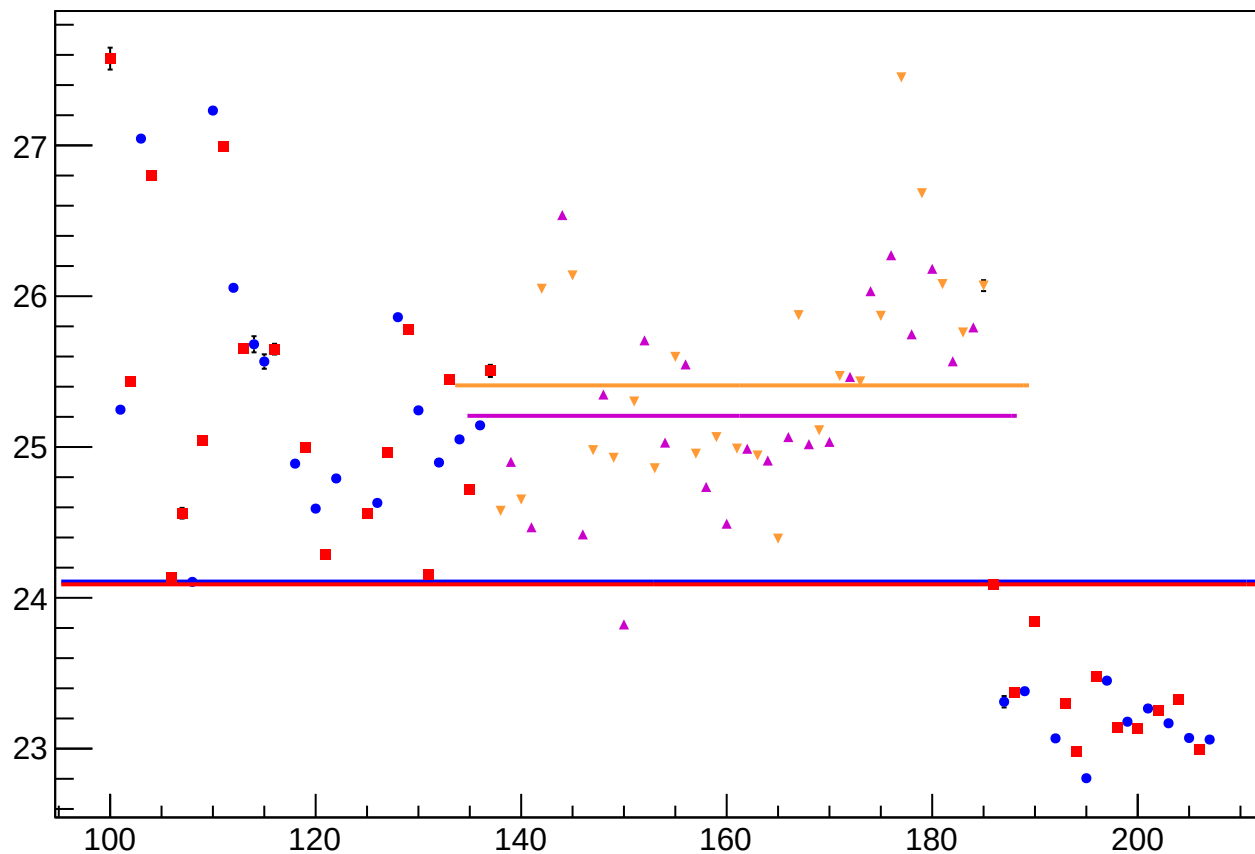
Left In:  $-1.850 \pm 5.893$   $\chi^2/\text{NDF}$ : 28.1/22

+ sign  $1.275 \pm 4.288$   $\chi^2/\text{NDF}$ : 55.9/49

All:  $-1.809 \pm 3.004$   $\chi^2/\text{NDF}$ : 110.9/101

- sign  $-4.783 \pm 4.210$   $\chi^2/\text{NDF}$ : 54.0/51

# asym\_bcm\_dg\_us\_dg\_ds\_dd\_rms vs Slug



Right In: 24.108 $\pm$ 0.004  $\chi^2$ /NDF: 75841.6/25

Left Out: 25.409 $\pm$ 0.004  $\chi^2$ /NDF: 26863.6/23

Right Out: 24.089 $\pm$ 0.004  $\chi^2$ /NDF: 68873.3/28

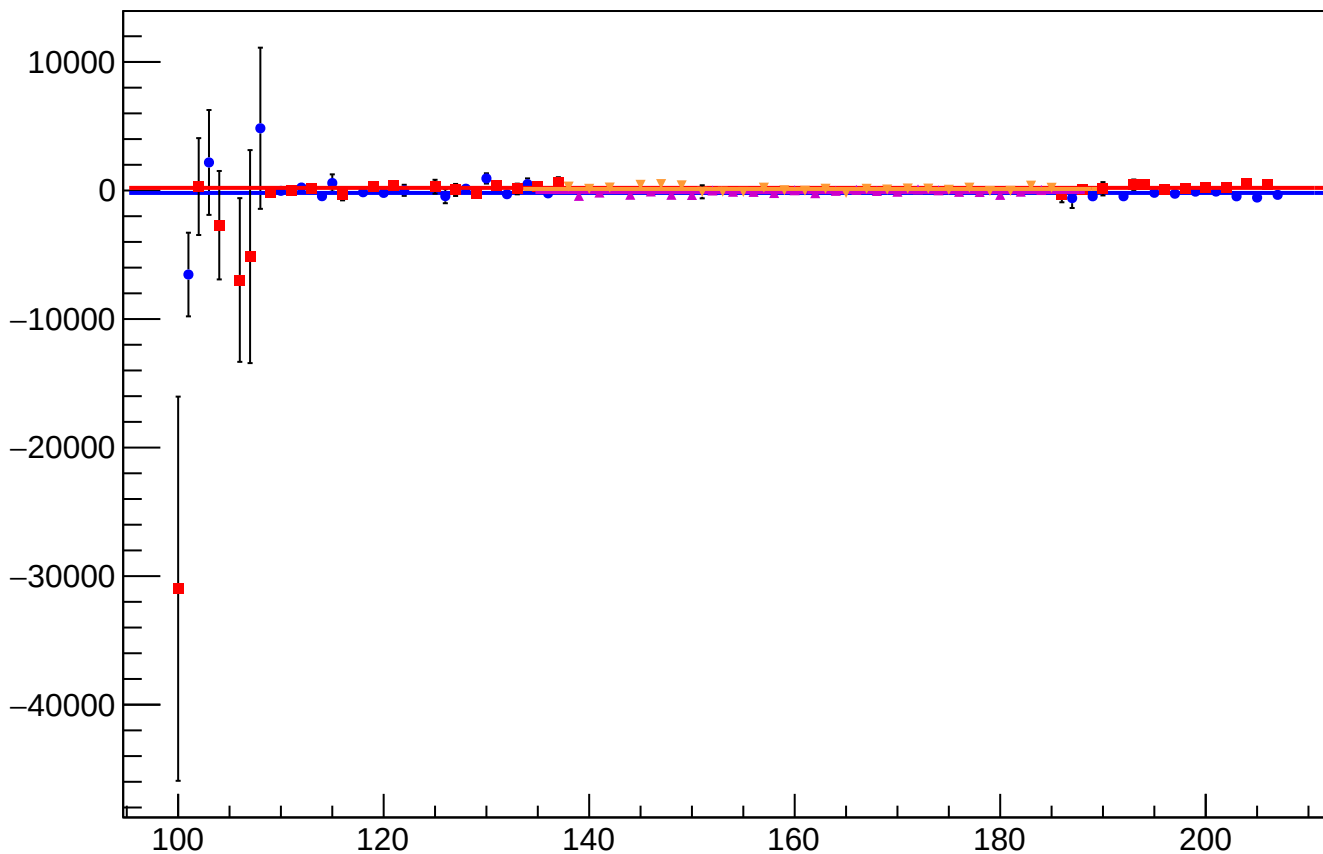
Left In: 25.207 $\pm$ 0.004  $\chi^2$ /NDF: 25827.4/22

+ sign 24.794 $\pm$ 0.003  $\chi^2$ /NDF: 148592.1/49

All: 24.726 $\pm$ 0.002  $\chi^2$ /NDF: 279505.8/101

- sign 24.660 $\pm$ 0.003  $\chi^2$ /NDF: 129915.0/51

# asym\_bcm\_cav4cQ\_an\_ds\_avg\_mean vs Slug



Right In:  $-189.215 \pm 49.149$   $\chi^2/\text{NDF}$ : 32.2/25

Left Out:  $120.221 \pm 47.440$   $\chi^2/\text{NDF}$ : 11.9/23

Right Out:  $204.571 \pm 48.344$   $\chi^2/\text{NDF}$ : 24.7/28

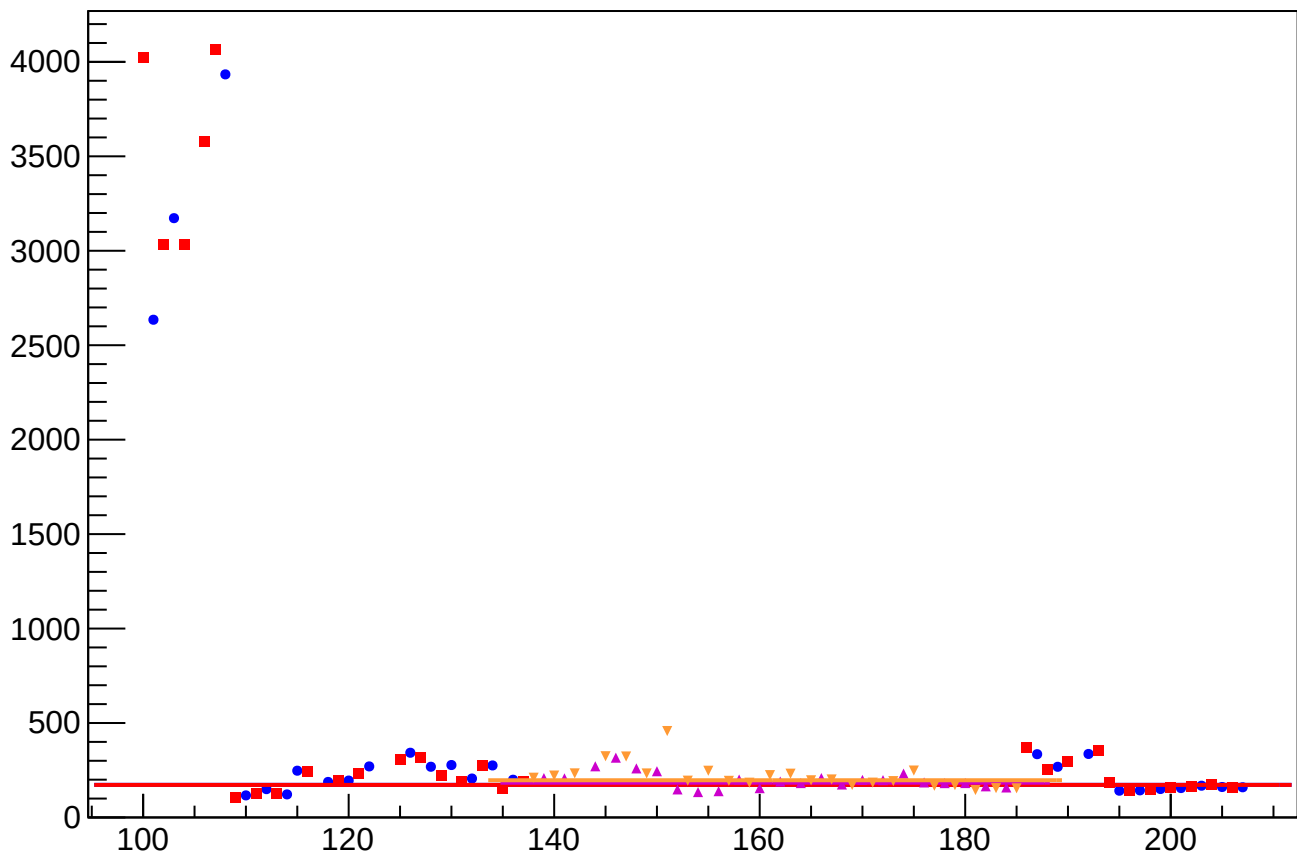
Left In:  $-116.243 \pm 44.786$   $\chi^2/\text{NDF}$ : 8.4/22

+ sign  $-29.025 \pm 34.133$   $\chi^2/\text{NDF}$ : 64.6/49

All:  $2.613 \pm 23.671$   $\chi^2/\text{NDF}$ : 123.1/101

- sign  $31.925 \pm 32.854$   $\chi^2/\text{NDF}$ : 56.8/51

# asym\_bcm\_cav4cQ\_an\_ds\_avg\_rms vs Slug



Right In: 172.659+/-0.035     $\chi^2/\text{NDF}$ : 4840902.1/25

Left Out: 196.935+/-0.034     $\chi^2/\text{NDF}$ : 1809266.5/23

Right Out: 172.263+/-0.034     $\chi^2/\text{NDF}$ : 5355940.8/28

Left In: 184.051+/-0.032     $\chi^2/\text{NDF}$ : 1445426.0/22

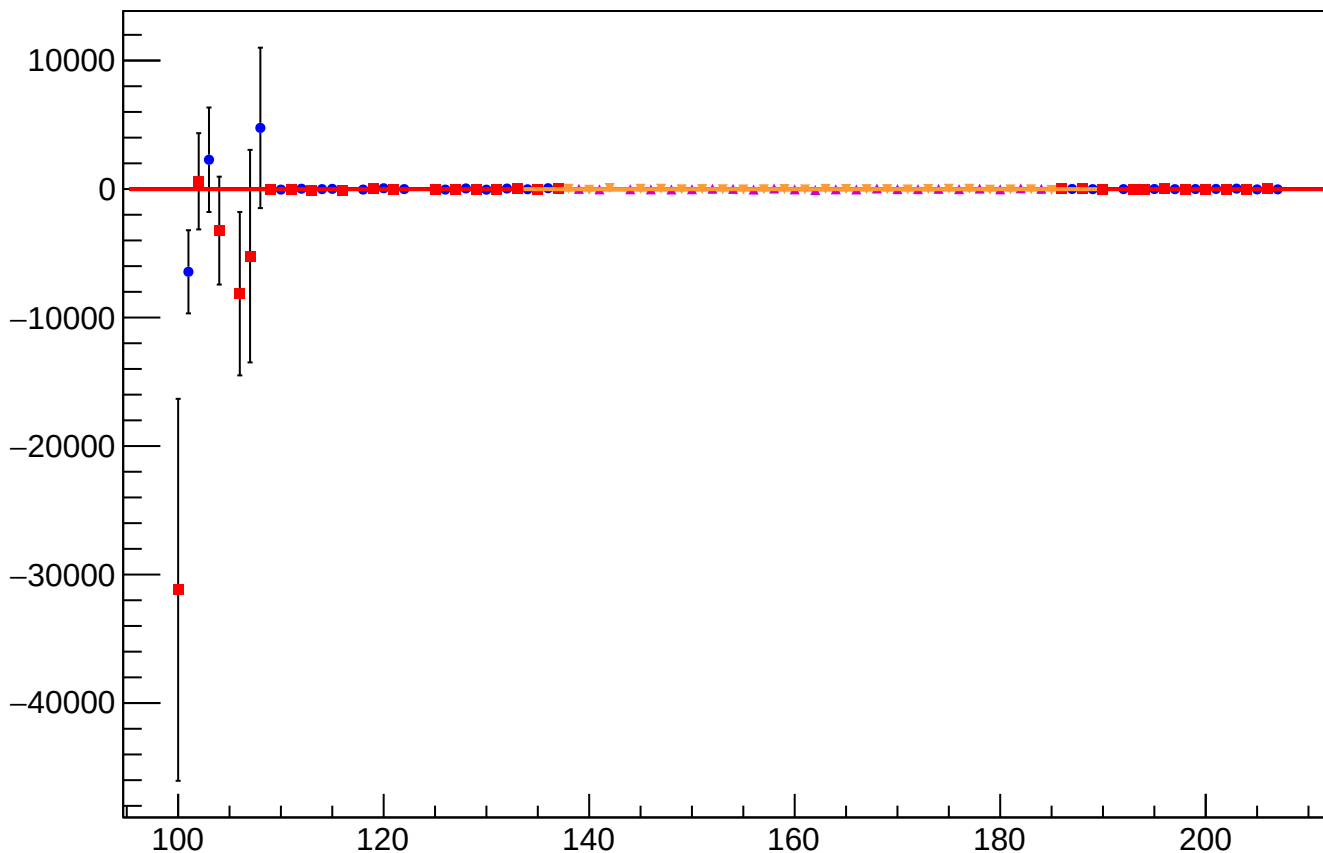
+ sign 185.226+/-0.024     $\chi^2/\text{NDF}$ : 6902767.2/49

All: 181.790+/-0.017     $\chi^2/\text{NDF}$ : 13807173.1/10

- sign 178.607+/-0.023     $\chi^2/\text{NDF}$ : 6865358.5/51



asym\_bcm\_cav4cQ\_an\_ds\_dd\_mean vs Slug



Right In:  $-0.044 \pm 7.487$   $\chi^2/\text{NDF}$ : 22.1/25

Left Out:  $-11.111 \pm 6.653$   $\chi^2/\text{NDF}$ : 17.5/23

Right Out:  $-11.776 \pm 7.359$   $\chi^2/\text{NDF}$ : 30.4/28

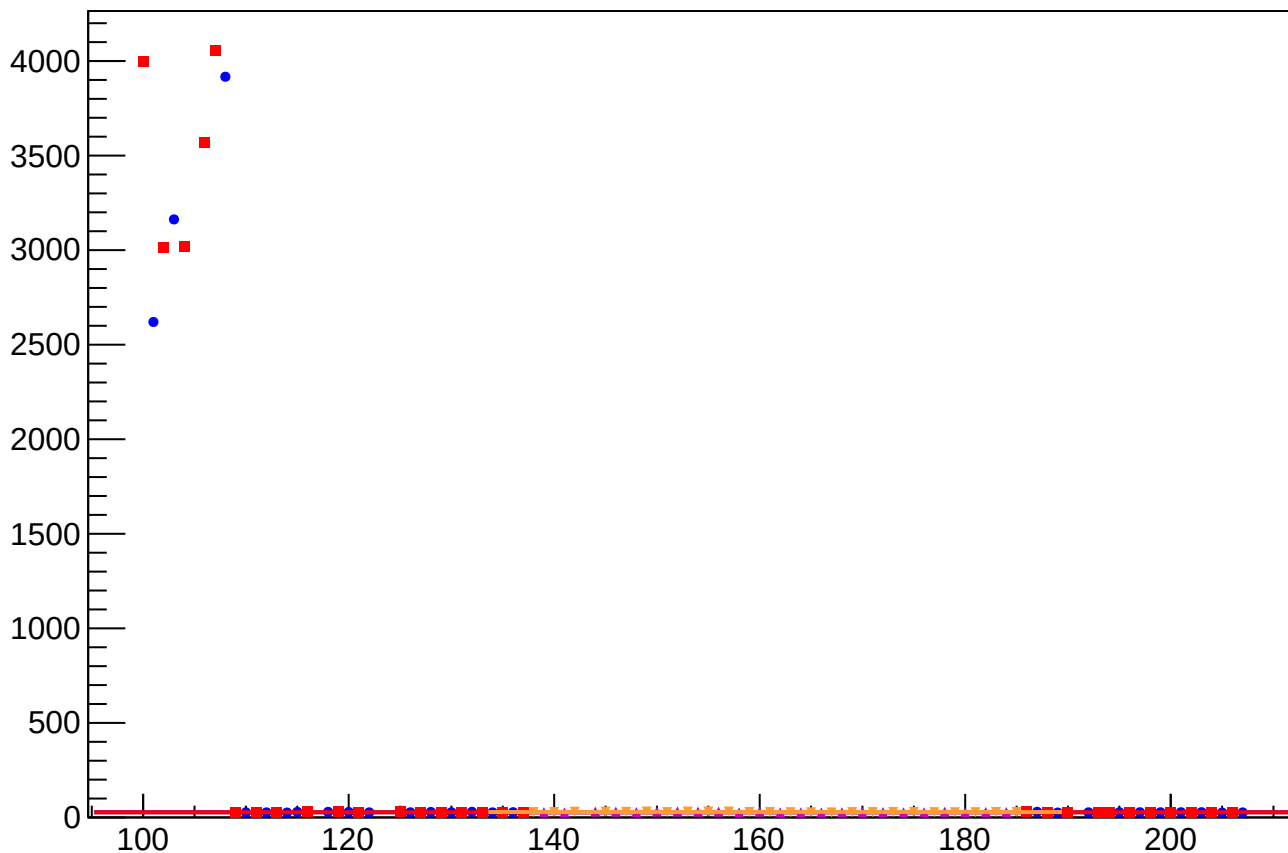
Left In:  $-2.576 \pm 6.732$   $\chi^2/\text{NDF}$ : 22.2/22

+ sign  $-6.228 \pm 4.973$   $\chi^2/\text{NDF}$ : 40.8/49

All:  $-6.498 \pm 3.514$   $\chi^2/\text{NDF}$ : 94.2/101

- sign  $-6.768 \pm 4.967$   $\chi^2/\text{NDF}$ : 53.5/51

# asym\_bcm\_cav4cQ\_an\_ds\_dd\_rms vs Slug



Right In: 27.321+/-0.005  $\chi^2/\text{NDF}$ : 3284730.5/25

Left Out: 28.592+/-0.005  $\chi^2/\text{NDF}$ : 80997.4/23

Right Out: 27.485+/-0.005  $\chi^2/\text{NDF}$ : 3582291.6/28

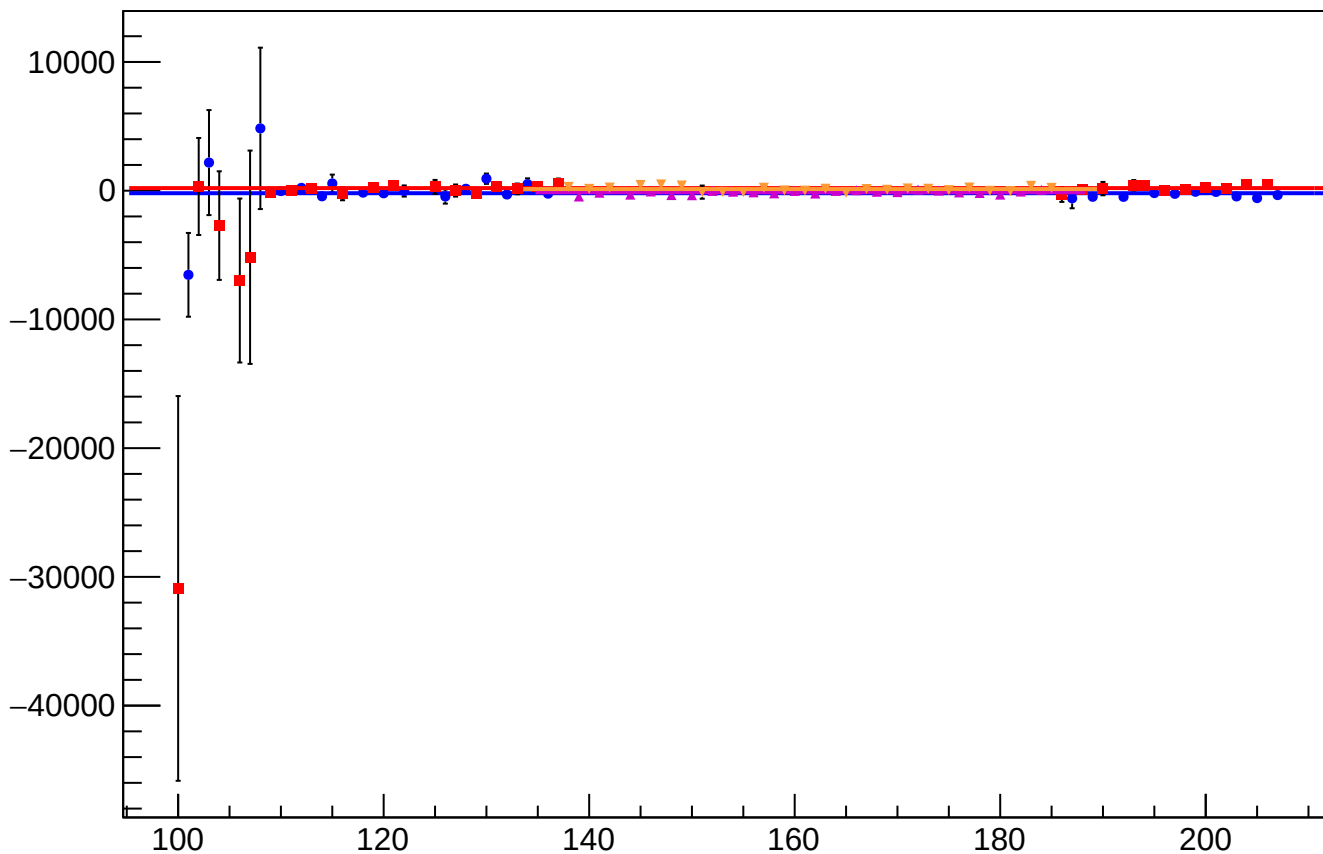
Left In: 28.728+/-0.005  $\chi^2/\text{NDF}$ : 127383.0/22

+ sign 28.031+/-0.004  $\chi^2/\text{NDF}$ : 3397938.0/49

All: 28.096+/-0.002  $\chi^2/\text{NDF}$ : 7139364.9/101

- sign 28.161+/-0.004  $\chi^2/\text{NDF}$ : 3740744.8/51

# asym\_bcm\_cav4cQ\_dg\_ds\_avg\_mean vs Slug



Right In:  $-195.064 \pm 49.359$   $\chi^2/\text{NDF}$ : 32.3/25

Left Out:  $126.373 \pm 47.852$   $\chi^2/\text{NDF}$ : 11.6/23

Right Out:  $202.010 \pm 48.539$   $\chi^2/\text{NDF}$ : 23.0/28

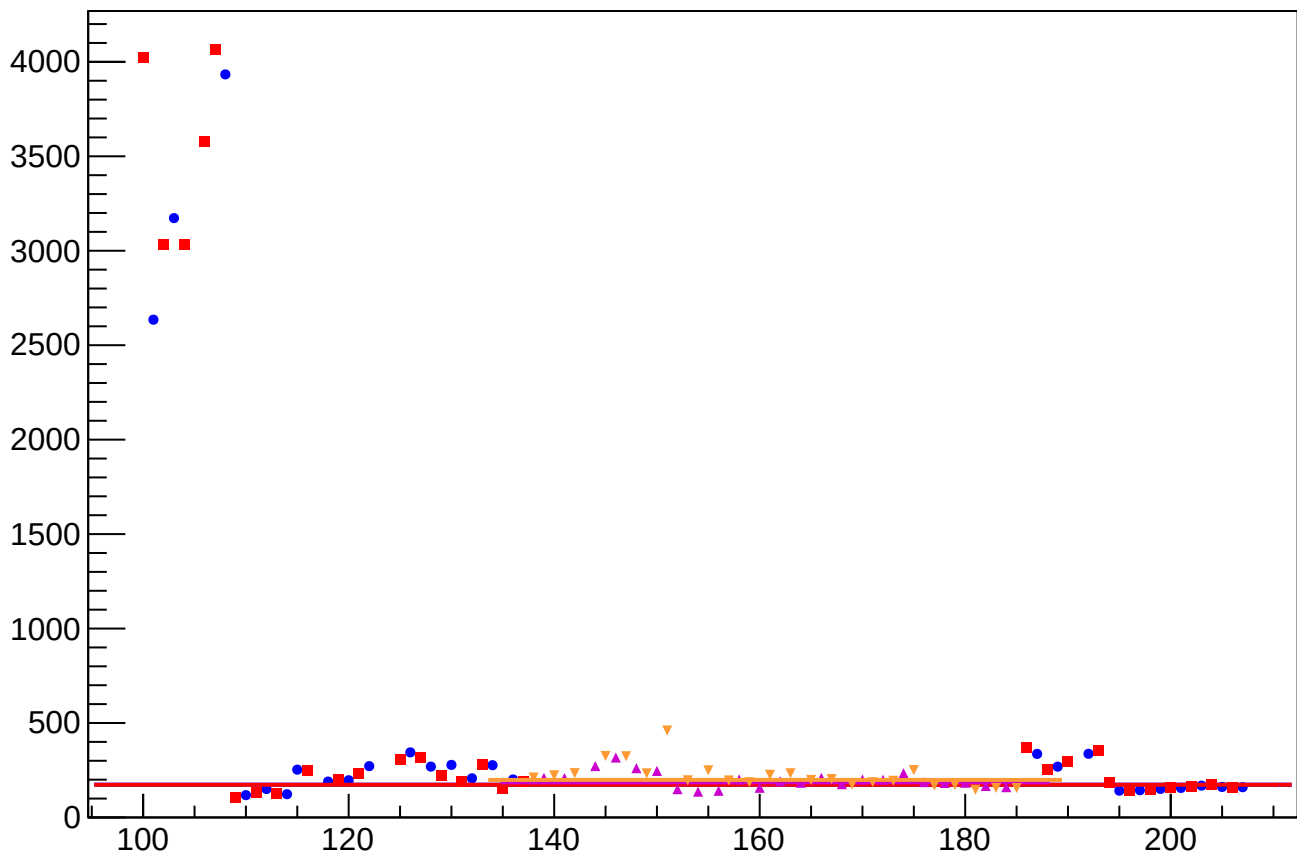
Left In:  $-122.809 \pm 45.199$   $\chi^2/\text{NDF}$ : 8.0/22

+ sign  $-29.366 \pm 34.357$   $\chi^2/\text{NDF}$ : 65.8/49

All:  $0.426 \pm 23.829$   $\chi^2/\text{NDF}$ : 122.3/101

- sign  $28.041 \pm 33.078$   $\chi^2/\text{NDF}$ : 55.0/51

# asym\_bcm\_cav4cQ\_dg\_ds\_avg\_rms vs Slug



Right In: 173.409 $\pm$ 0.035     $\chi^2$ /NDF: 4838541.7/25

Left Out: 198.736 $\pm$ 0.034     $\chi^2$ /NDF: 1786406.6/23

Right Out: 173.003 $\pm$ 0.034     $\chi^2$ /NDF: 5345301.2/28

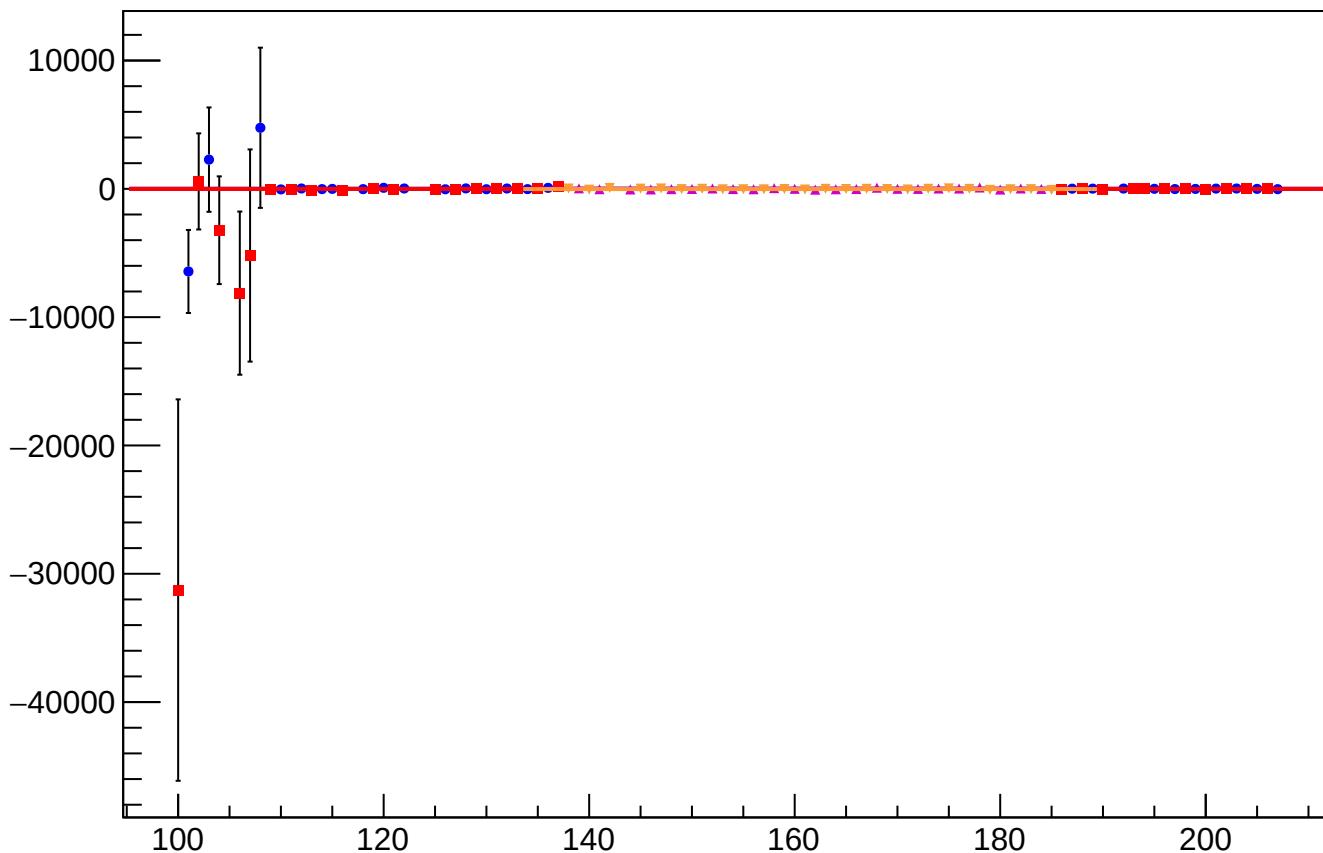
Left In: 185.871 $\pm$ 0.032     $\chi^2$ /NDF: 1405525.2/22

+ sign 186.465 $\pm$ 0.024     $\chi^2$ /NDF: 6896407.6/49

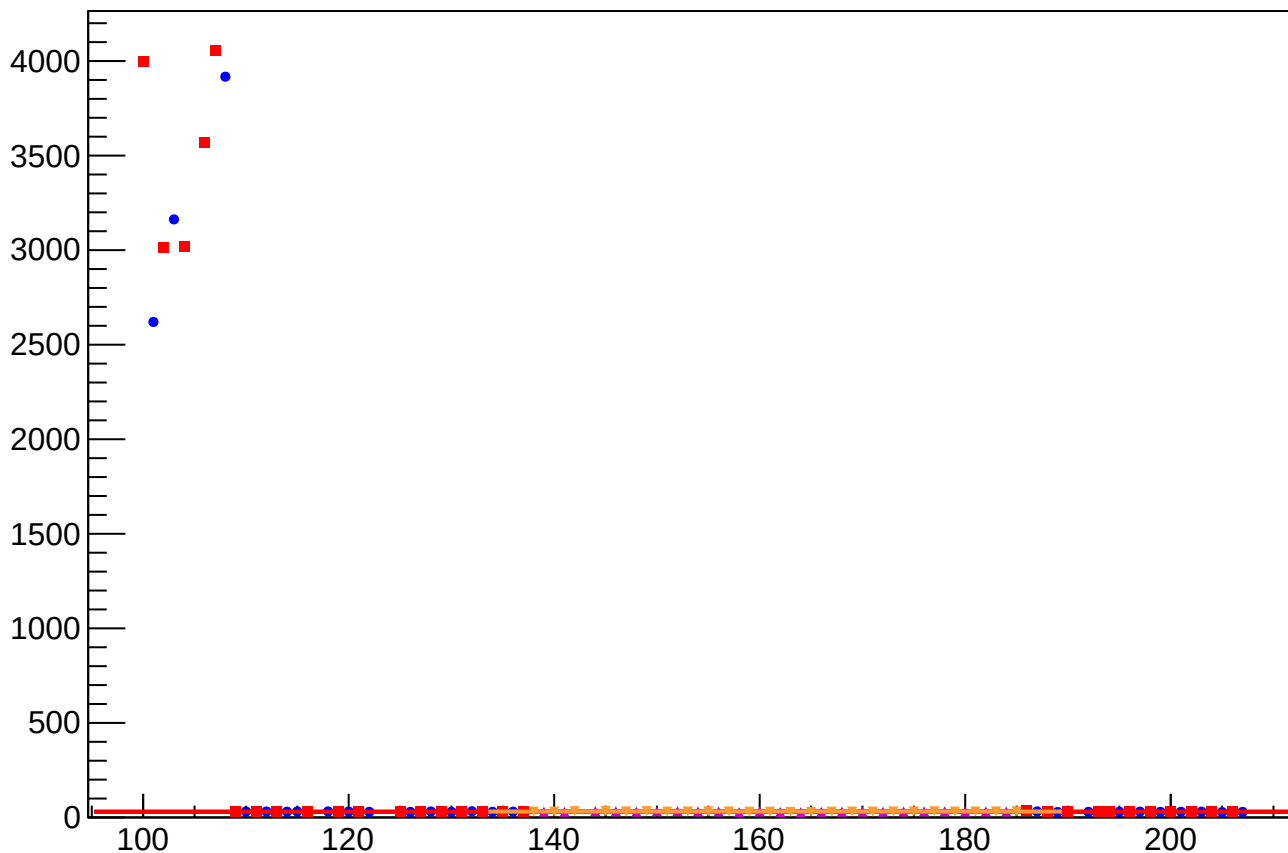
All: 183.056 $\pm$ 0.017     $\chi^2$ /NDF: 13760465.7/10

- sign 179.895 $\pm$ 0.023     $\chi^2$ /NDF: 6826110.7/51

# asym\_bcm\_cav4cQ\_dg\_ds\_dd\_mean vs Slug



# asym\_bcm\_cav4cQ\_dg\_ds\_dd\_rms vs Slug



Right In: 30.205 $\pm$ 0.006  $\chi^2$ /NDF: 3273507.5/25

Left Out: 31.221 $\pm$ 0.005  $\chi^2$ /NDF: 47423.0/23

Right Out: 30.340 $\pm$ 0.006  $\chi^2$ /NDF: 3560858.4/28

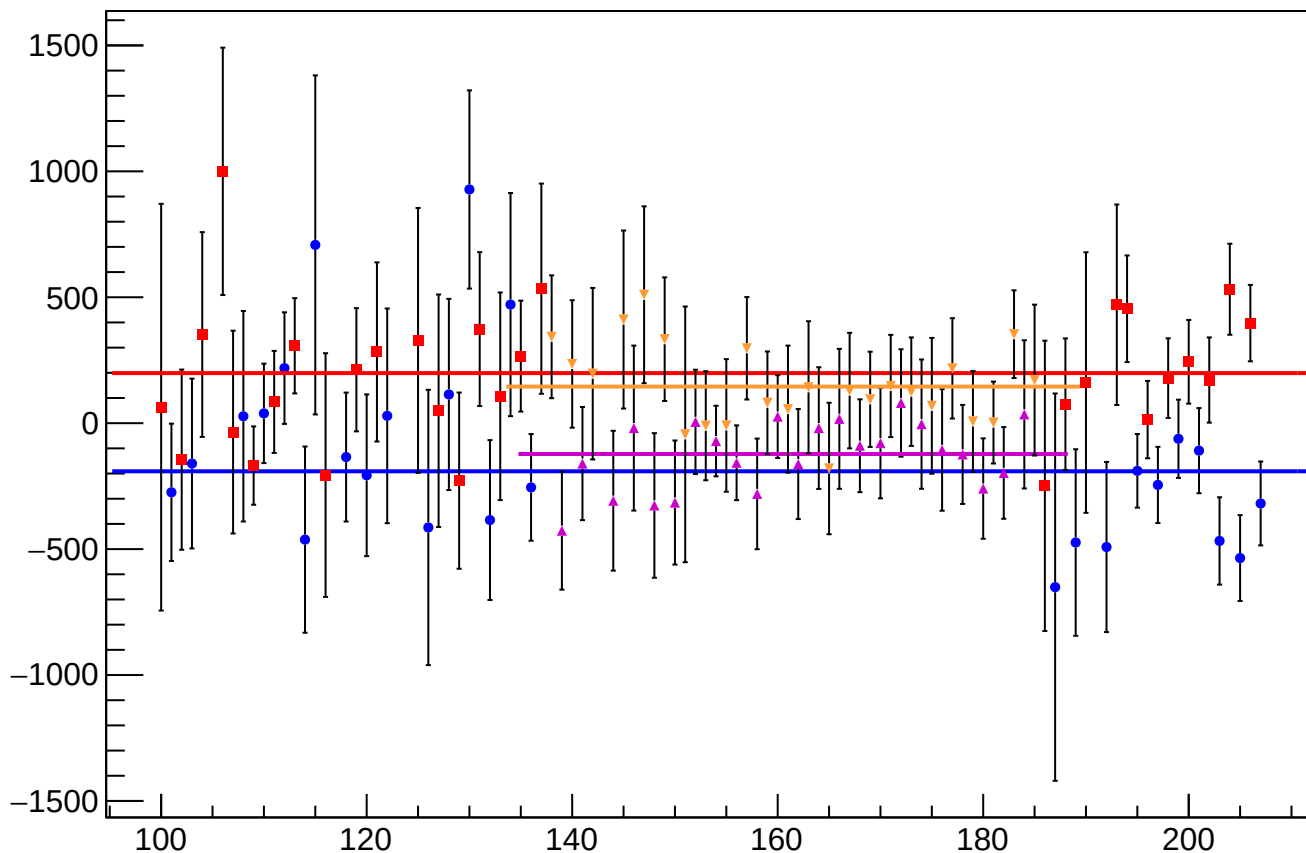
Left In: 31.379 $\pm$ 0.005  $\chi^2$ /NDF: 85229.7/22

+ sign 30.779 $\pm$ 0.004  $\chi^2$ /NDF: 3337983.1/49

All: 30.845 $\pm$ 0.003  $\chi^2$ /NDF: 7002680.7/101

- sign 30.911 $\pm$ 0.004  $\chi^2$ /NDF: 3664111.9/51

asym\_bcm\_dg\_us\_an\_us\_avg\_mean vs Slug



Right In:  $-191.019 \pm 46.805$   $\chi^2/\text{NDF}: 29.4/25$

Left Out:  $145.314 \pm 47.390$   $\chi^2/\text{NDF}: 9.4/23$

Right Out:  $198.907 \pm 45.391$   $\chi^2/\text{NDF}: 23.3/28$

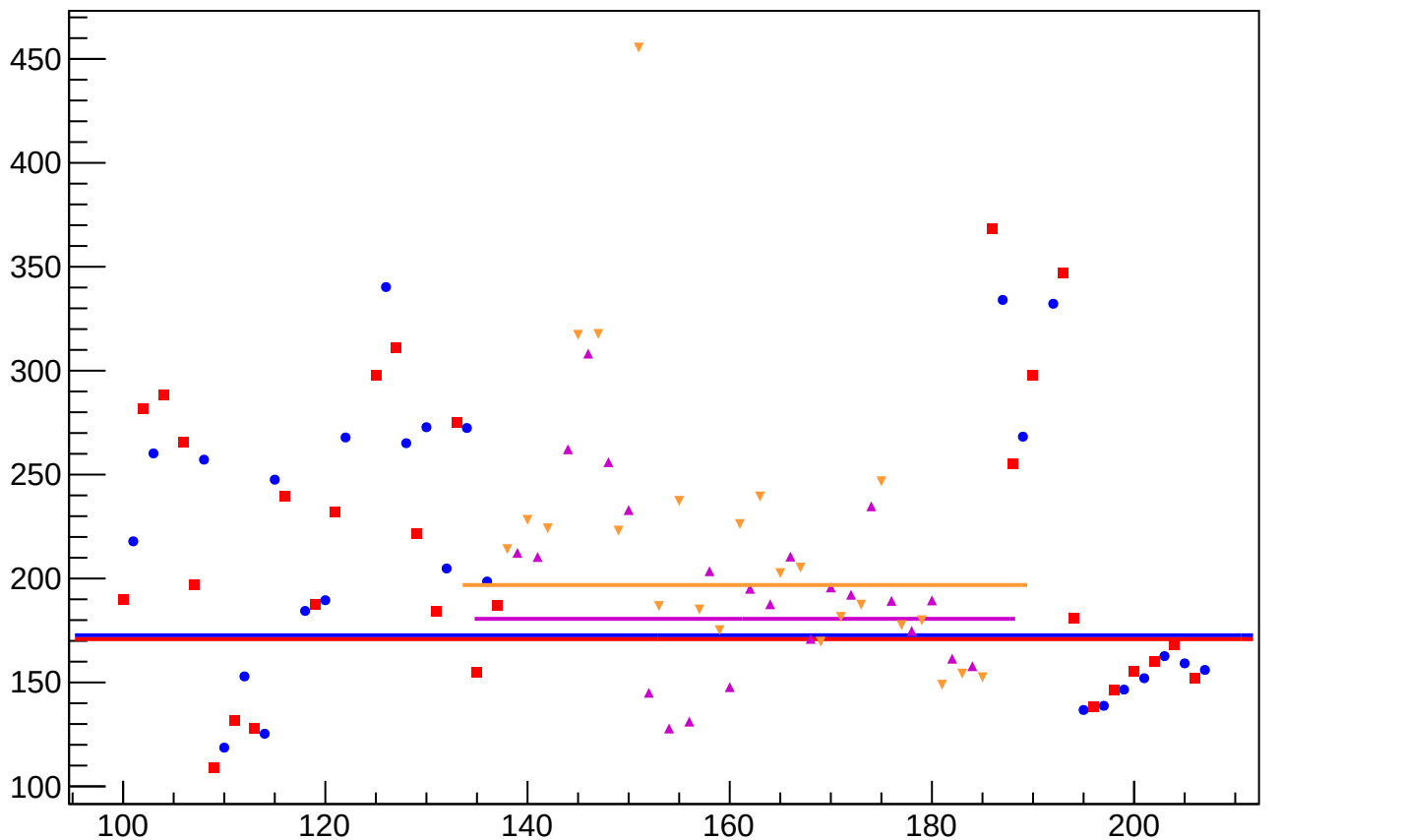
Left In:  $-122.376 \pm 44.081$   $\chi^2/\text{NDF}: 7.9/22$

+ sign  $-24.943 \pm 33.301$   $\chi^2/\text{NDF}: 64.2/49$

All:  $5.822 \pm 22.931$   $\chi^2/\text{NDF}: 122.8/101$

- sign  $33.564 \pm 31.623$   $\chi^2/\text{NDF}: 56.9/51$

# asym\_bcm\_dg\_us\_an\_us\_avg\_rms vs Slug



Right In: 172.703+/-0.033  $\chi^2/\text{NDF}$ : 2206253.0/25

Left Out: 196.873+/-0.034  $\chi^2/\text{NDF}$ : 1725106.9/23

Right Out: 170.841+/-0.032  $\chi^2/\text{NDF}$ : 2690579.4/28

Left In: 180.601+/-0.031  $\chi^2/\text{NDF}$ : 1628072.3/22

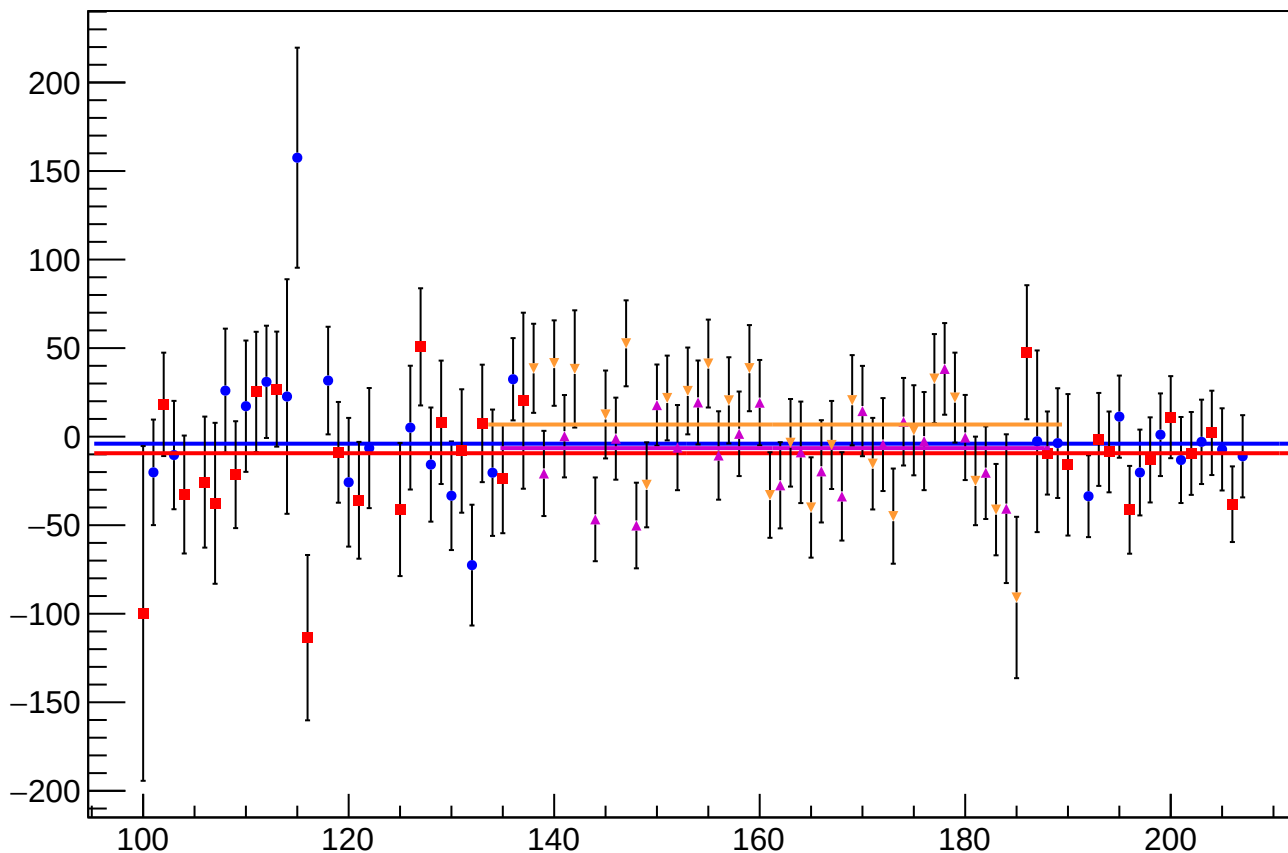
+ sign 184.638+/-0.024  $\chi^2/\text{NDF}$ : 4194722.9/49

All: 180.024+/-0.016  $\chi^2/\text{NDF}$ : 8633958.0/100

- sign 175.864+/-0.022  $\chi^2/\text{NDF}$ : 4366240.6/51



# asym\_bcm\_dg\_us\_an\_us\_dd\_mean vs Slug



Right In:  $-3.971 \pm 5.761$   $\chi^2/\text{NDF}$ : 21.9/25

Left Out:  $6.857 \pm 5.229$   $\chi^2/\text{NDF}$ : 36.8/23

Right Out:  $-9.358 \pm 5.583$   $\chi^2/\text{NDF}$ : 22.9/28

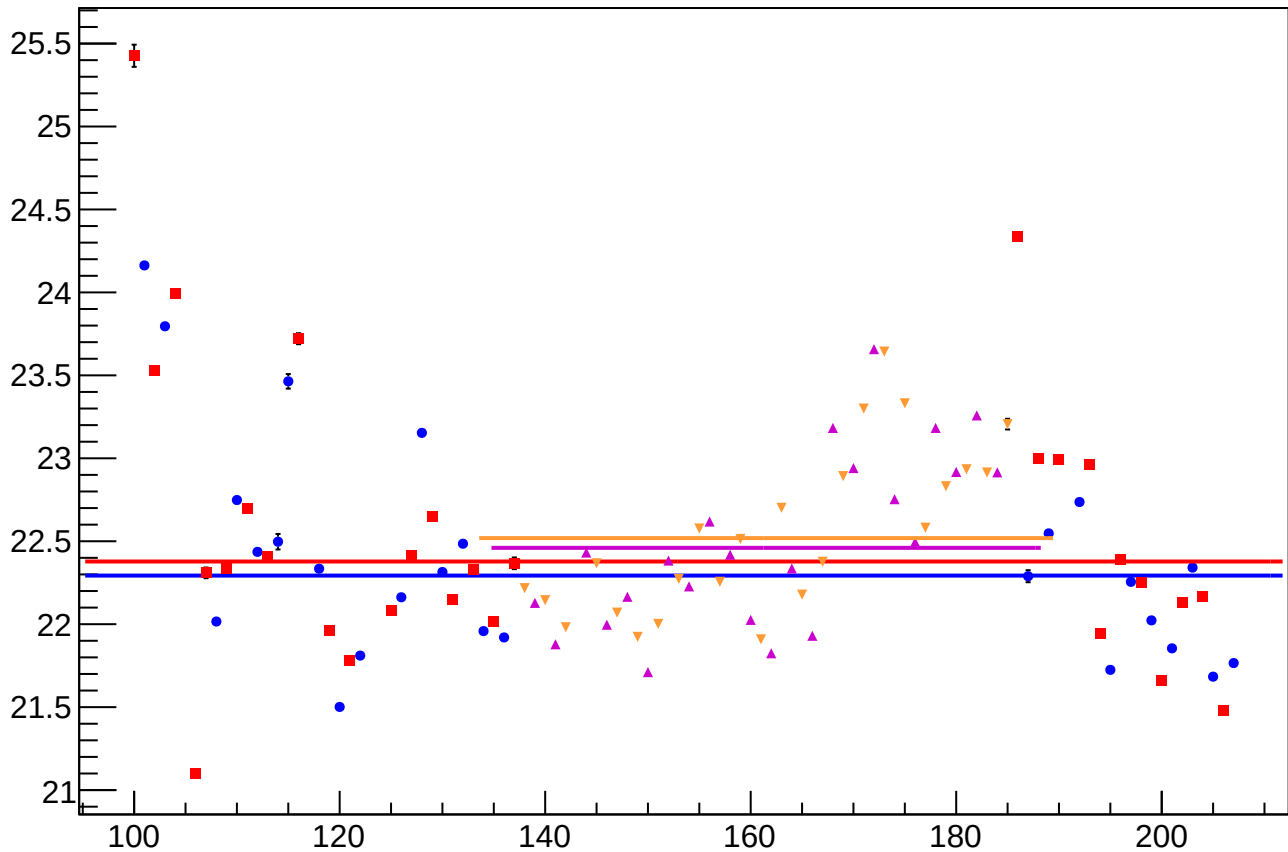
Left In:  $-6.482 \pm 5.247$   $\chi^2/\text{NDF}$ : 17.4/22

+ sign  $1.966 \pm 3.872$   $\chi^2/\text{NDF}$ : 60.7/49

All:  $-2.994 \pm 2.720$   $\chi^2/\text{NDF}$ : 104.5/101

- sign  $-7.831 \pm 3.823$   $\chi^2/\text{NDF}$ : 40.5/51

# asym\_bcm\_dg\_us\_an\_us\_dd\_rms vs Slug



Right In:  $22.293 \pm 0.004$   $\chi^2/\text{NDF}: 22879.6/25$

Left Out:  $22.519 \pm 0.004$   $\chi^2/\text{NDF}: 15998.2/23$

Right Out:  $22.378 \pm 0.004$   $\chi^2/\text{NDF}: 30661.8/28$

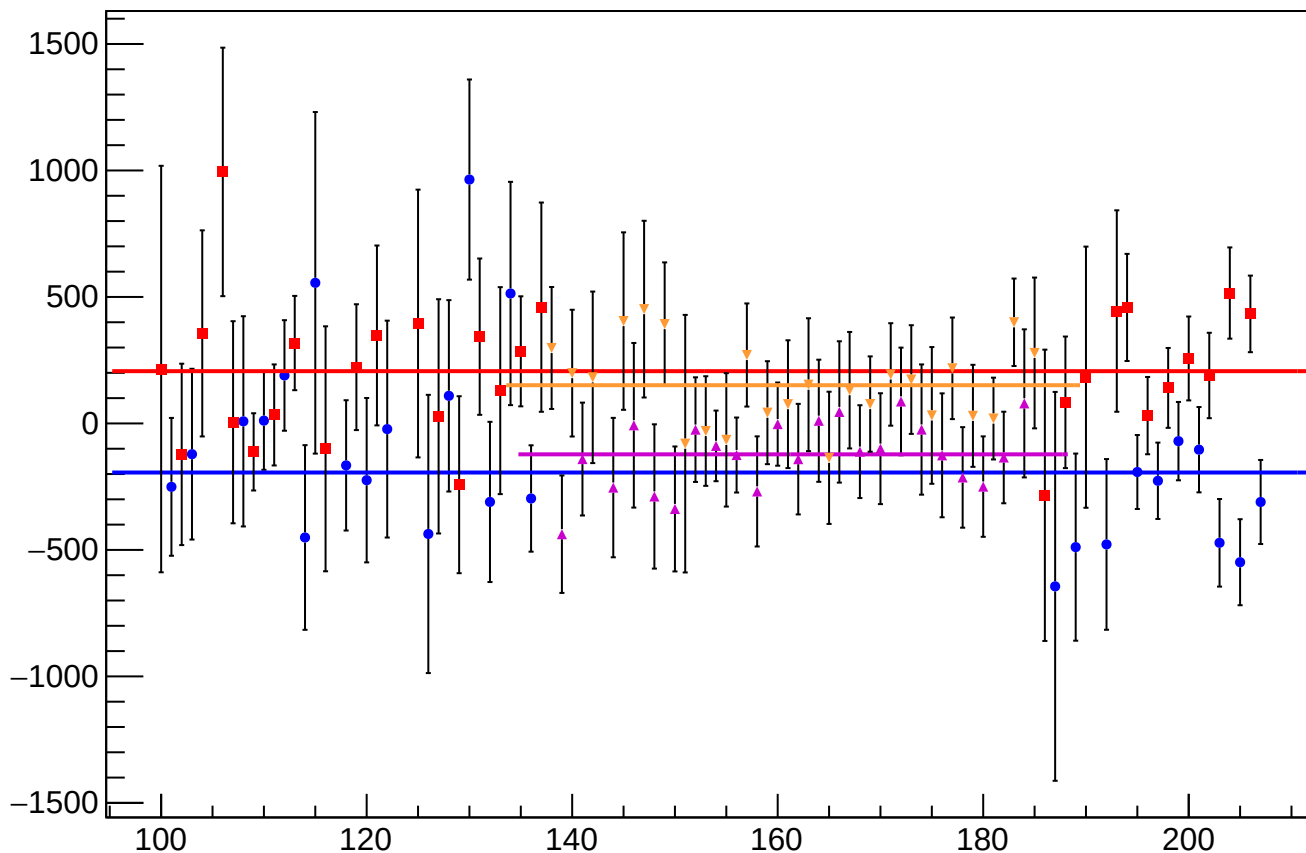
Left In:  $22.460 \pm 0.004$   $\chi^2/\text{NDF}: 19117.2/22$

+ sign  $22.417 \pm 0.003$   $\chi^2/\text{NDF}: 40564.6/49$

All:  $22.419 \pm 0.002$   $\chi^2/\text{NDF}: 90575.9/101$

- sign  $22.422 \pm 0.003$   $\chi^2/\text{NDF}: 50009.9/51$

asym\_bcm\_dg\_ds\_an\_us\_avg\_mean vs Slug



Right In:  $-194.025 \pm 46.673$   $\chi^2/\text{NDF}$ : 28.9/25

Left Out:  $151.108 \pm 47.316$   $\chi^2/\text{NDF}$ : 10.0/23

Right Out:  $206.657 \pm 45.190$   $\chi^2/\text{NDF}$ : 22.0/28

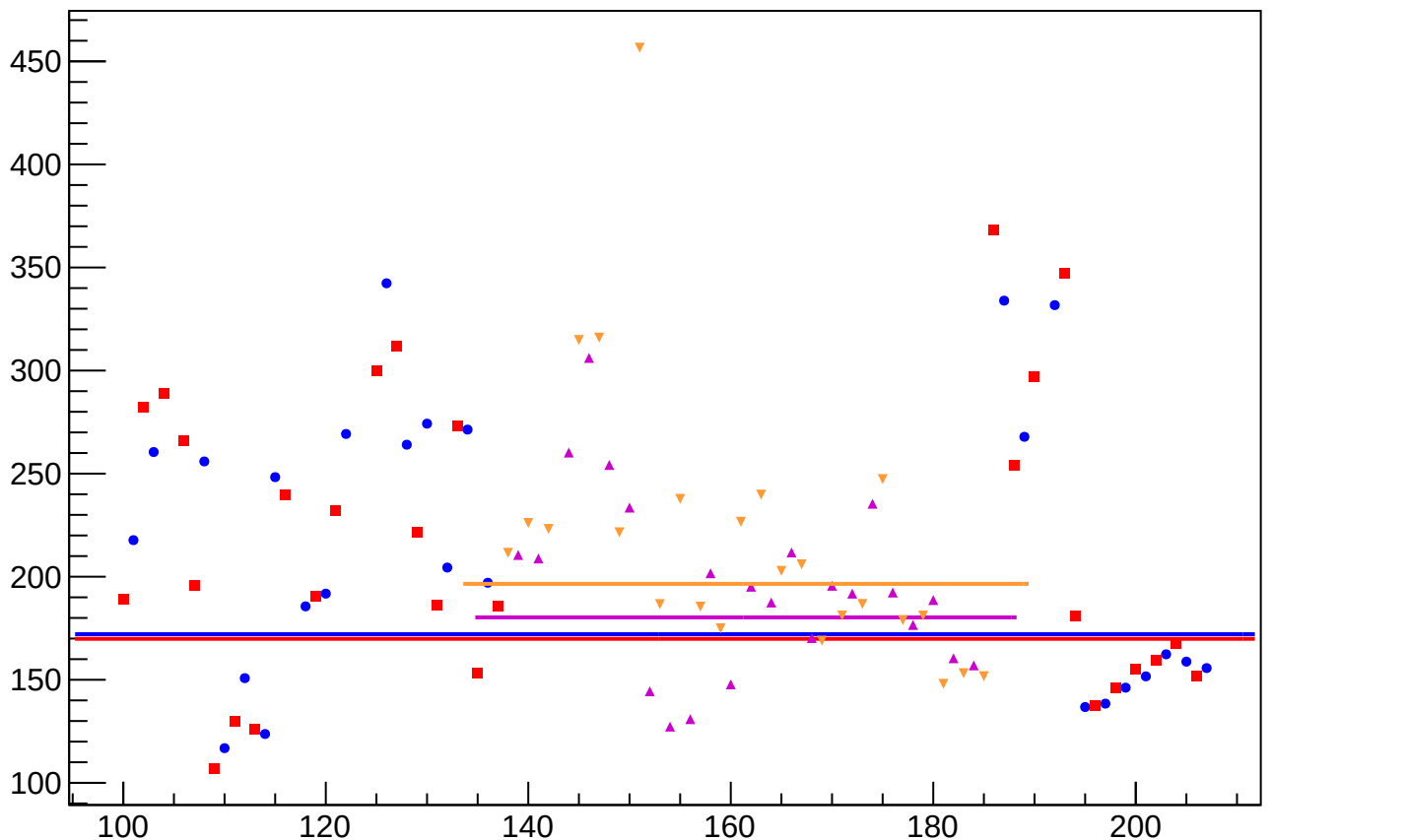
Left In:  $-122.165 \pm 44.006$   $\chi^2/\text{NDF}$ : 7.5/22

+ sign  $-23.821 \pm 33.228$   $\chi^2/\text{NDF}$ : 65.8/49

All:  $8.649 \pm 22.871$   $\chi^2/\text{NDF}$ : 124.3/101

- sign  $37.881 \pm 31.527$   $\chi^2/\text{NDF}$ : 56.6/51

# asym\_bcm\_dg\_ds\_an\_us\_avg\_rms vs Slug



Right In: 172.118+/-0.033  $\chi^2/\text{NDF}$ : 2235386.6/25

Left Out: 196.533+/-0.033  $\chi^2/\text{NDF}$ :1727888.6/23

Right Out: 169.875+/-0.032  $\chi^2/\text{NDF}$ : 2759453.1/28

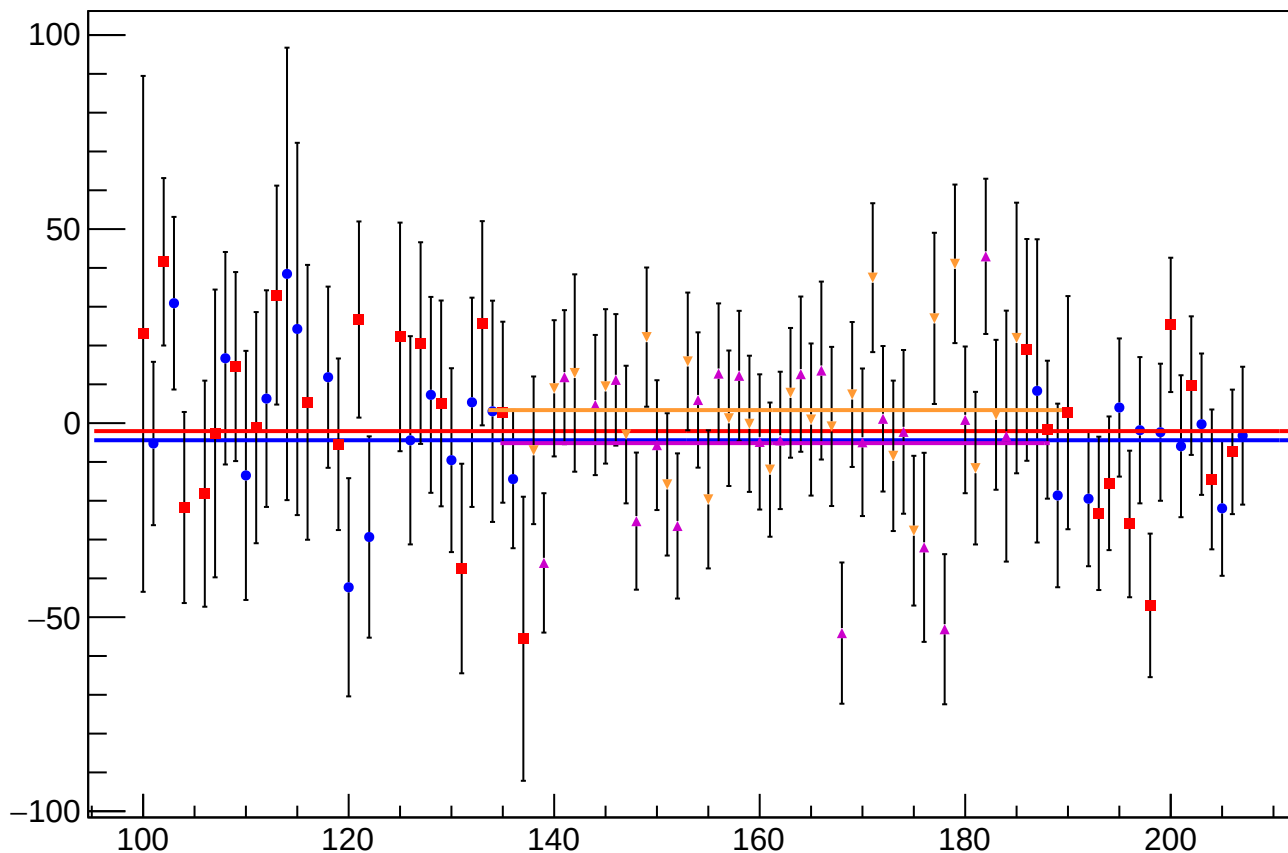
Left In: 180.274+/-0.031  $\chi^2/\text{NDF}$ :1624682.7/22

+ sign 184.159+/-0.023  $\chi^2/\text{NDF}$ : 4233181.6/49

All: 179.451+/-0.016  $\chi^2/\text{NDF}$ : 8747960.8/100

- sign 175.213+/-0.022  $\chi^2/\text{NDF}$ : 4438493.4/51

# asym\_bcm\_dg\_ds\_an\_us\_dd\_mean vs Slug



Right In:  $-4.407 \pm 4.424$   $\chi^2/\text{NDF}$ : 10.8/25

Left Out:  $3.359 \pm 3.905$   $\chi^2/\text{NDF}$ : 17.7/23

Right Out:  $-2.055 \pm 4.285$   $\chi^2/\text{NDF}$ : 28.4/28

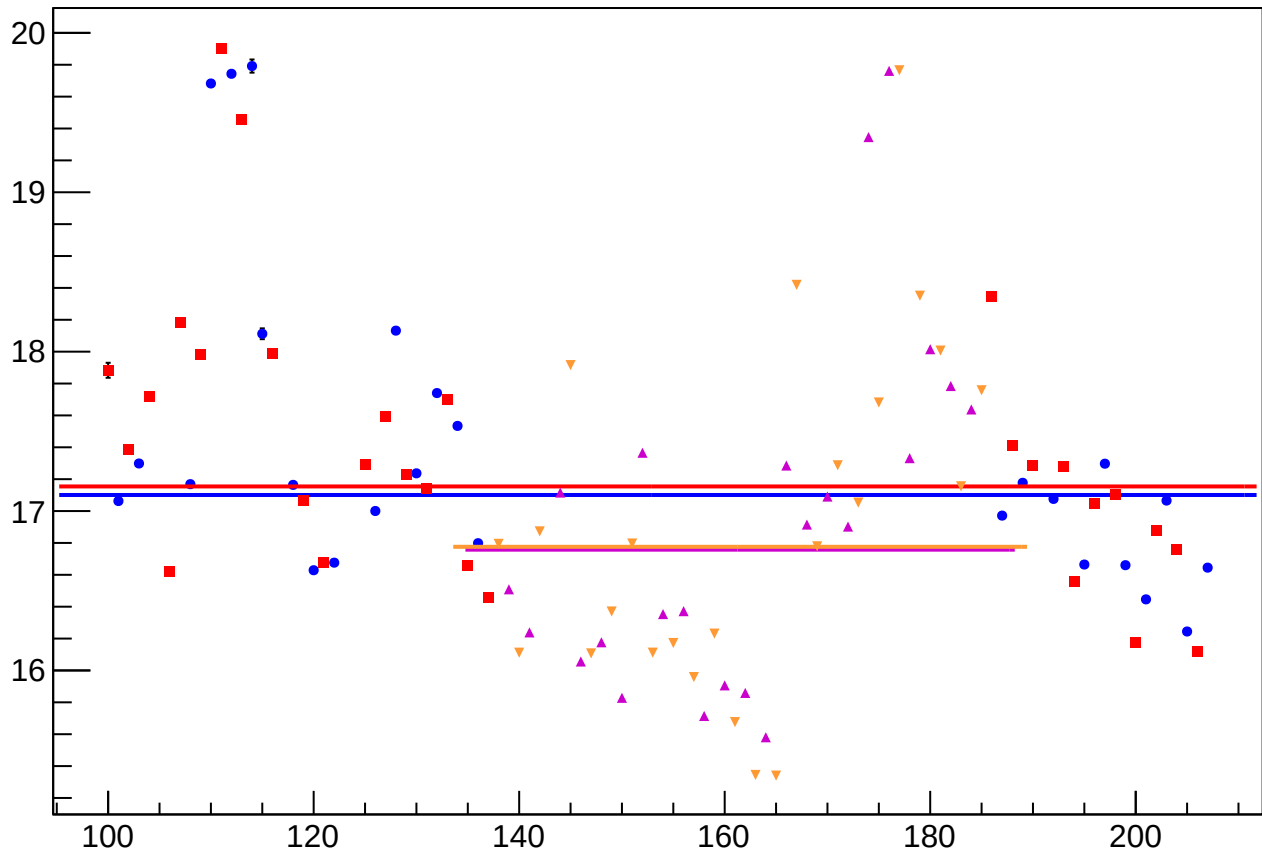
Left In:  $-5.150 \pm 3.924$   $\chi^2/\text{NDF}$ : 32.3/22

+ sign  $-0.041 \pm 2.928$   $\chi^2/\text{NDF}$ : 30.2/49

All:  $-1.911 \pm 2.058$   $\chi^2/\text{NDF}$ : 92.0/101

- sign  $-3.738 \pm 2.894$   $\chi^2/\text{NDF}$ : 61.0/51

# asym\_bcm\_dg\_ds\_an\_us\_dd\_rms vs Slug



Right In: 17.101 $\pm$ 0.003     $\chi^2$ /NDF: 54348.4/25

Left Out: 16.776 $\pm$ 0.003     $\chi^2$ /NDF:136142.5/23

Right Out: 17.154 $\pm$ 0.003     $\chi^2$ /NDF: 64025.3/28

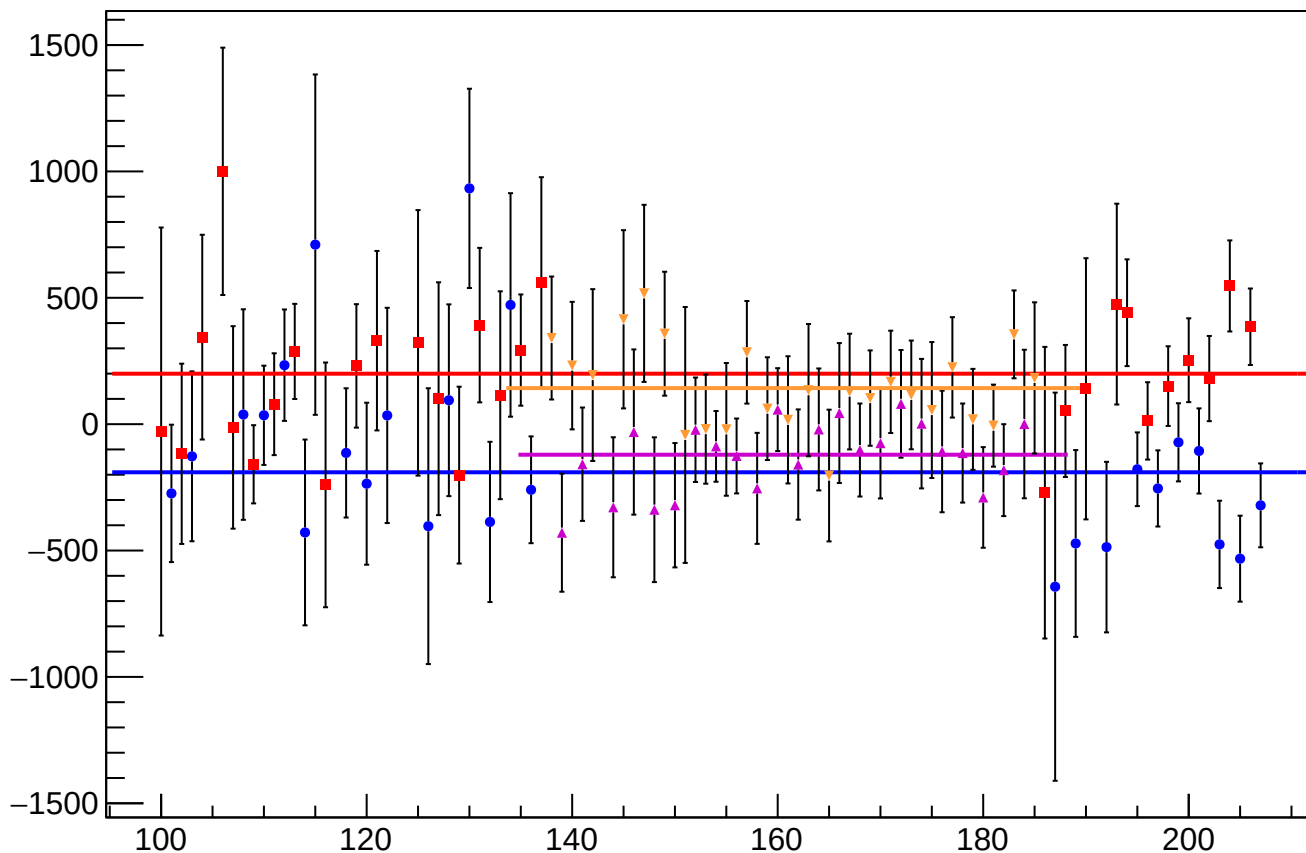
Left In: 16.758 $\pm$ 0.003     $\chi^2$ /NDF:123306.8/22

+ sign 16.918 $\pm$ 0.002     $\chi^2$ /NDF: 196560.7/49

All: 16.929 $\pm$ 0.001     $\chi^2$ /NDF: 393262.3/101

- sign 16.939 $\pm$ 0.002     $\chi^2$ /NDF: 196651.3/51

asym\_bcm\_dg\_us\_an\_ds\_avg\_mean vs Slug



Right In:  $-190.346 \pm 46.659$   $\chi^2/\text{NDF}$ : 29.7/25

Left Out:  $142.696 \pm 47.288$   $\chi^2/\text{NDF}$ : 10.2/23

Right Out:  $199.710 \pm 45.258$   $\chi^2/\text{NDF}$ : 23.4/28

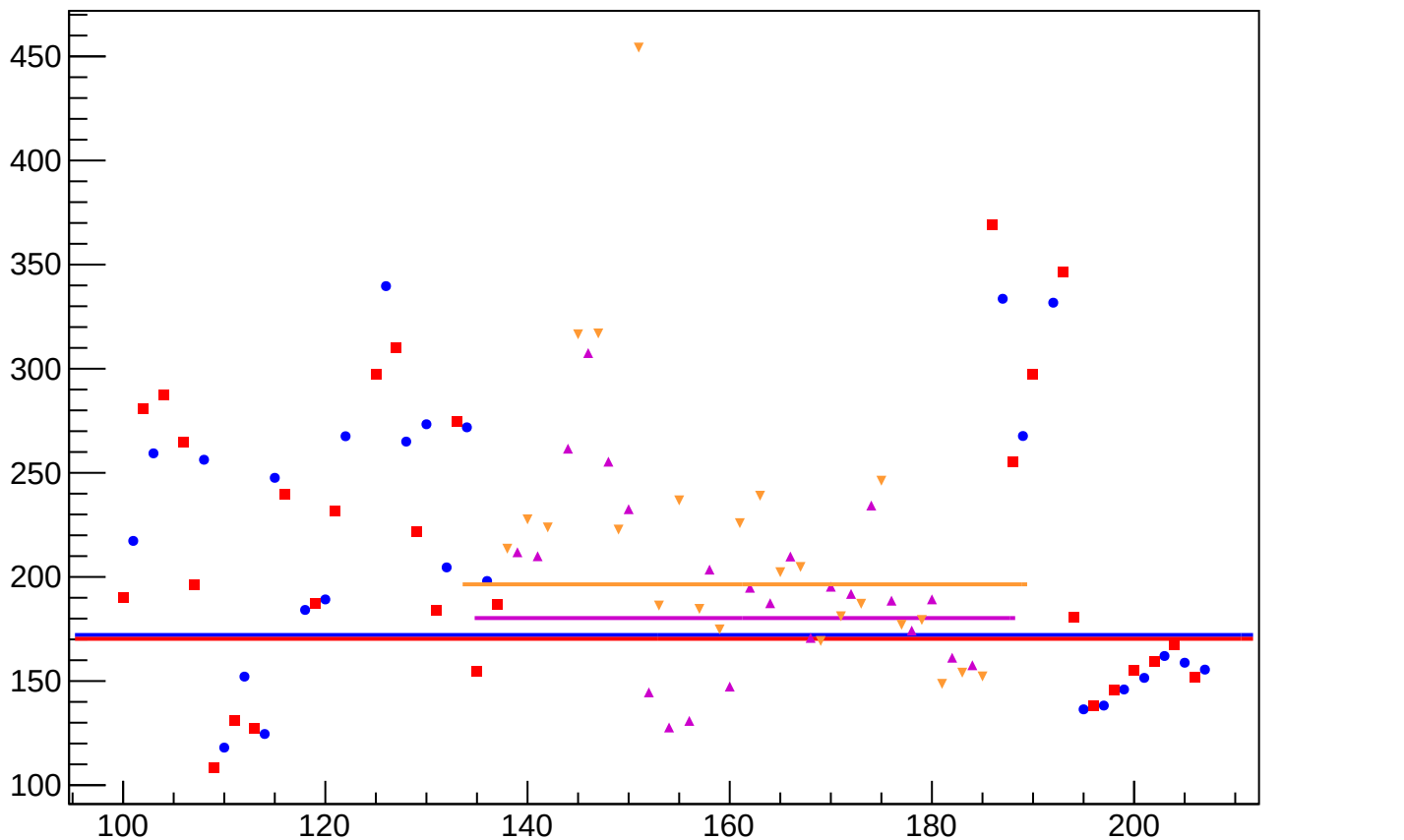
Left In:  $-120.888 \pm 43.994$   $\chi^2/\text{NDF}$ : 8.2/22

+ sign  $-26.053 \pm 33.213$   $\chi^2/\text{NDF}$ : 65.0/49

All:  $5.978 \pm 22.873$   $\chi^2/\text{NDF}$ : 124.2/101

- sign  $34.874 \pm 31.546$   $\chi^2/\text{NDF}$ : 57.4/51

# asym\_bcm\_dg\_us\_an\_ds\_avg\_rms vs Slug



Right In: 172.124 $\pm$ 0.033  $\chi^2$ /NDF: 2219286.9/25

Left Out: 196.452 $\pm$ 0.033  $\chi^2$ /NDF:1723529.1/23

Right Out: 170.293 $\pm$ 0.032  $\chi^2$ /NDF: 2707230.1/28

Left In: 180.248 $\pm$ 0.031  $\chi^2$ /NDF:1627777.0/22

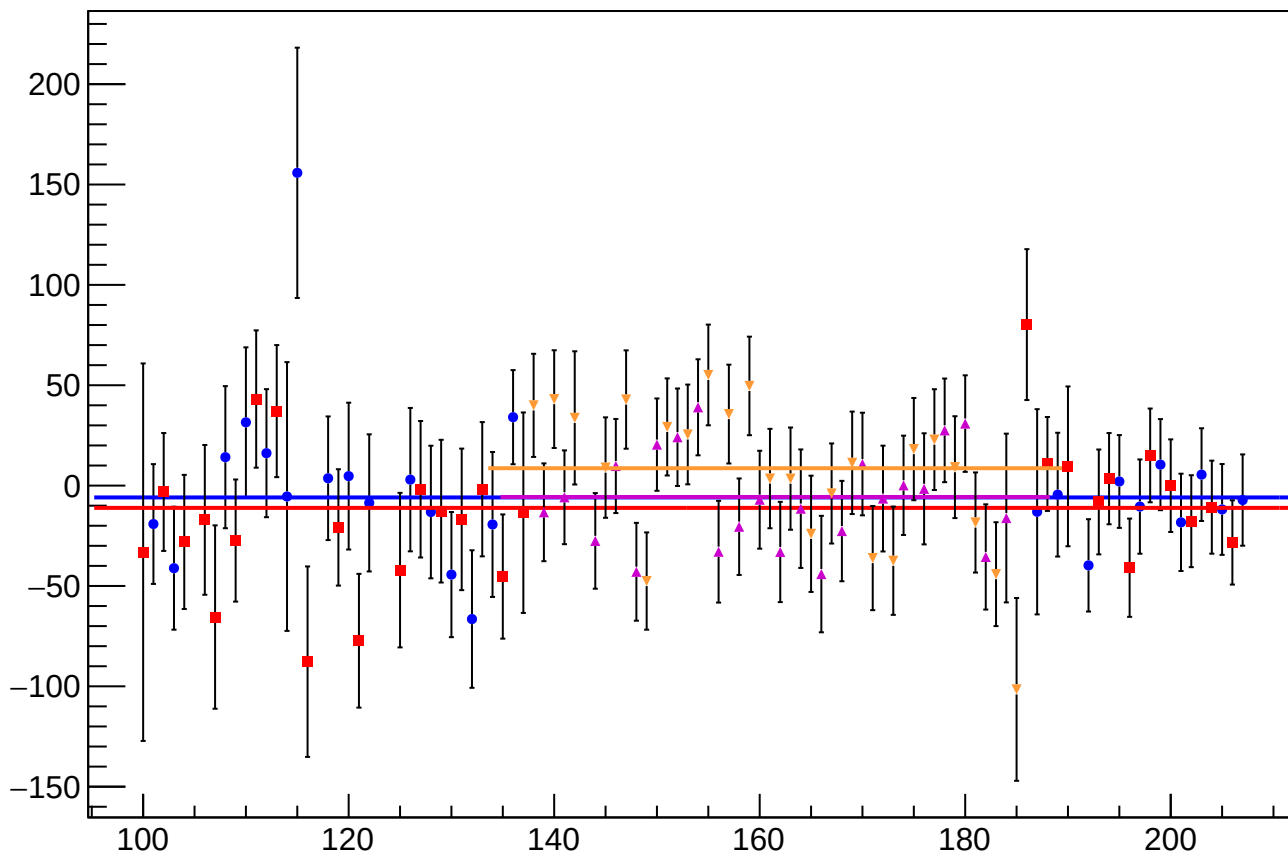
+ sign 184.125 $\pm$ 0.023  $\chi^2$ /NDF: 4211032.1/49

All: 179.544 $\pm$ 0.016  $\chi^2$ /NDF: 8668168.6/103

- sign 175.411 $\pm$ 0.022  $\chi^2$ /NDF: 4384759.3/51



asym\_bcm\_dg\_us\_an\_ds\_dd\_mean vs Slug



Right In:  $-5.894 \pm 5.735$   $\chi^2/\text{NDF}$ : 21.5/25

Left Out:  $8.664 \pm 5.275$   $\chi^2/\text{NDF}$ : 39.2/23

Right Out:  $-11.095 \pm 5.571$   $\chi^2/\text{NDF}$ : 26.7/28

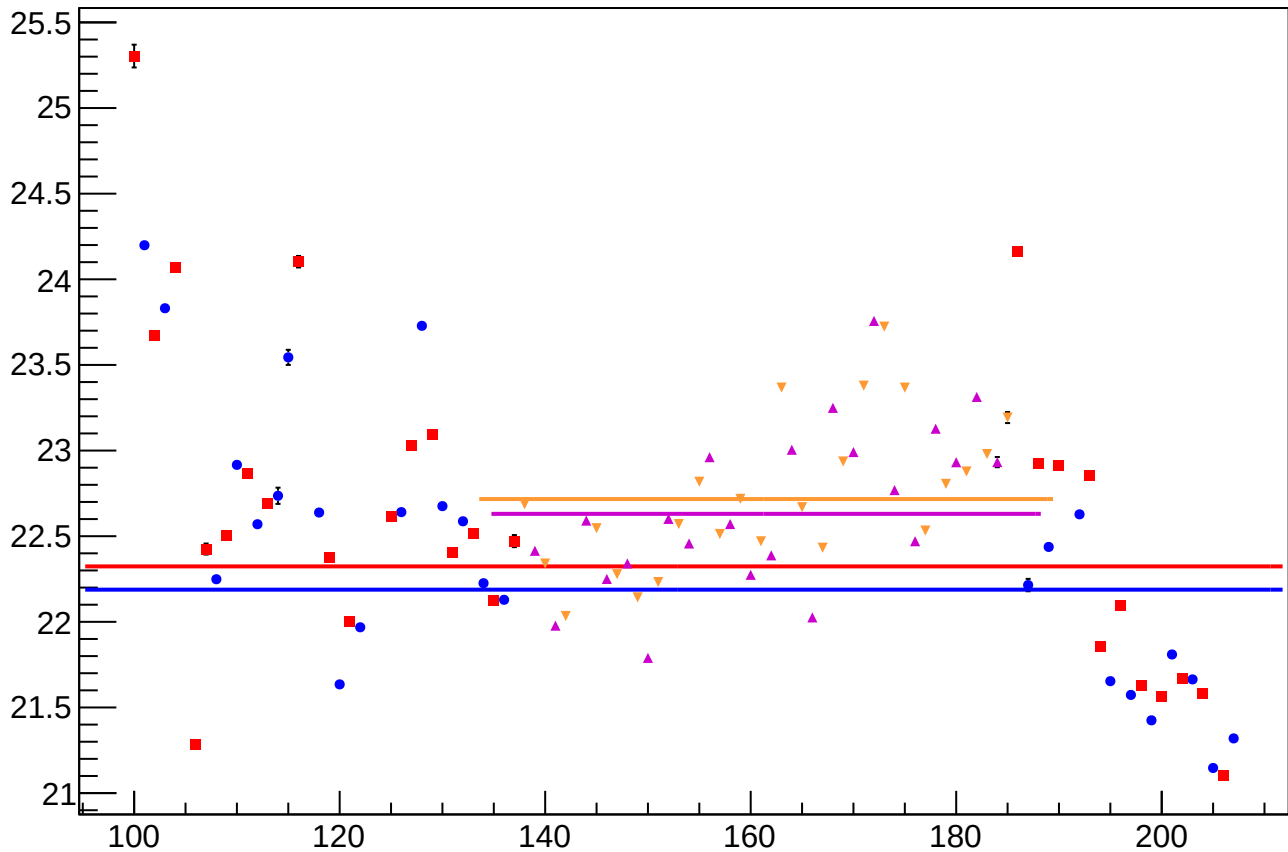
Left In:  $-5.668 \pm 5.286$   $\chi^2/\text{NDF}$ : 20.8/22

+ sign  $1.993 \pm 3.882$   $\chi^2/\text{NDF}$ : 64.1/49

All:  $-3.187 \pm 2.728$   $\chi^2/\text{NDF}$ : 115.6/101

- sign  $-8.240 \pm 3.835$   $\chi^2/\text{NDF}$ : 48.0/51

# asym\_bcm\_dg\_us\_an\_ds\_dd\_rms vs Slug



Right In: 22.188 $\pm$ 0.004  $\chi^2$ /NDF: 37613.5/25

Left Out: 22.717 $\pm$ 0.004  $\chi^2$ /NDF:12177.5/23

Right Out: 22.324 $\pm$ 0.004  $\chi^2$ /NDF: 41898.1/28

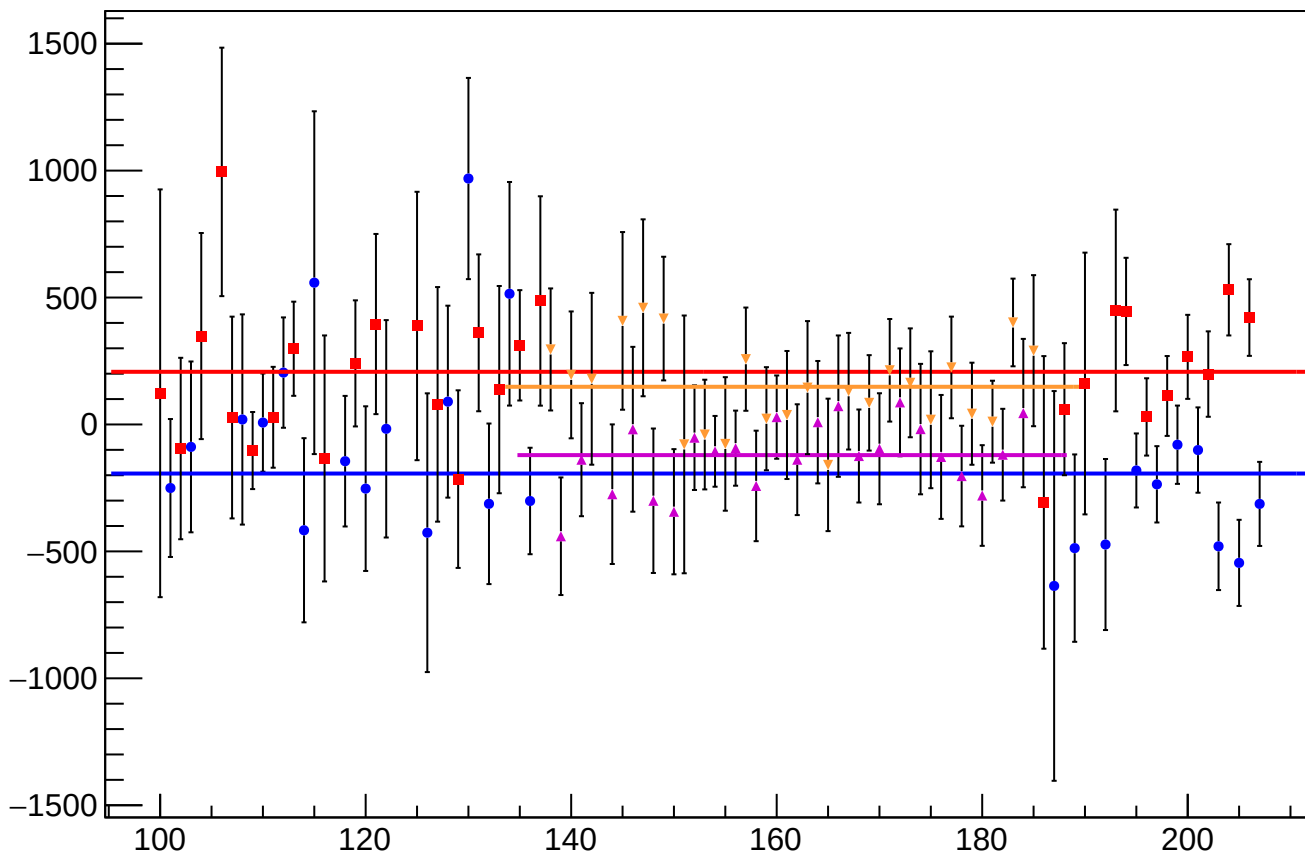
Left In: 22.631 $\pm$ 0.004  $\chi^2$ /NDF:15391.4/22

+ sign 22.474 $\pm$ 0.003  $\chi^2$ /NDF: 59011.8/49

All: 22.480 $\pm$ 0.002  $\chi^2$ /NDF: 119500.8/101

- sign 22.485 $\pm$ 0.003  $\chi^2$ /NDF: 60481.4/51

asym\_bcm\_dg\_ds\_an\_ds\_avg\_mean vs Slug



Right In:  $-193.318 \pm 46.525$   $\chi^2/\text{NDF}$ : 29.2/25

Left Out:  $148.424 \pm 47.213$   $\chi^2/\text{NDF}$ : 10.9/23

Right Out:  $207.441 \pm 45.056$   $\chi^2/\text{NDF}$ : 22.1/28

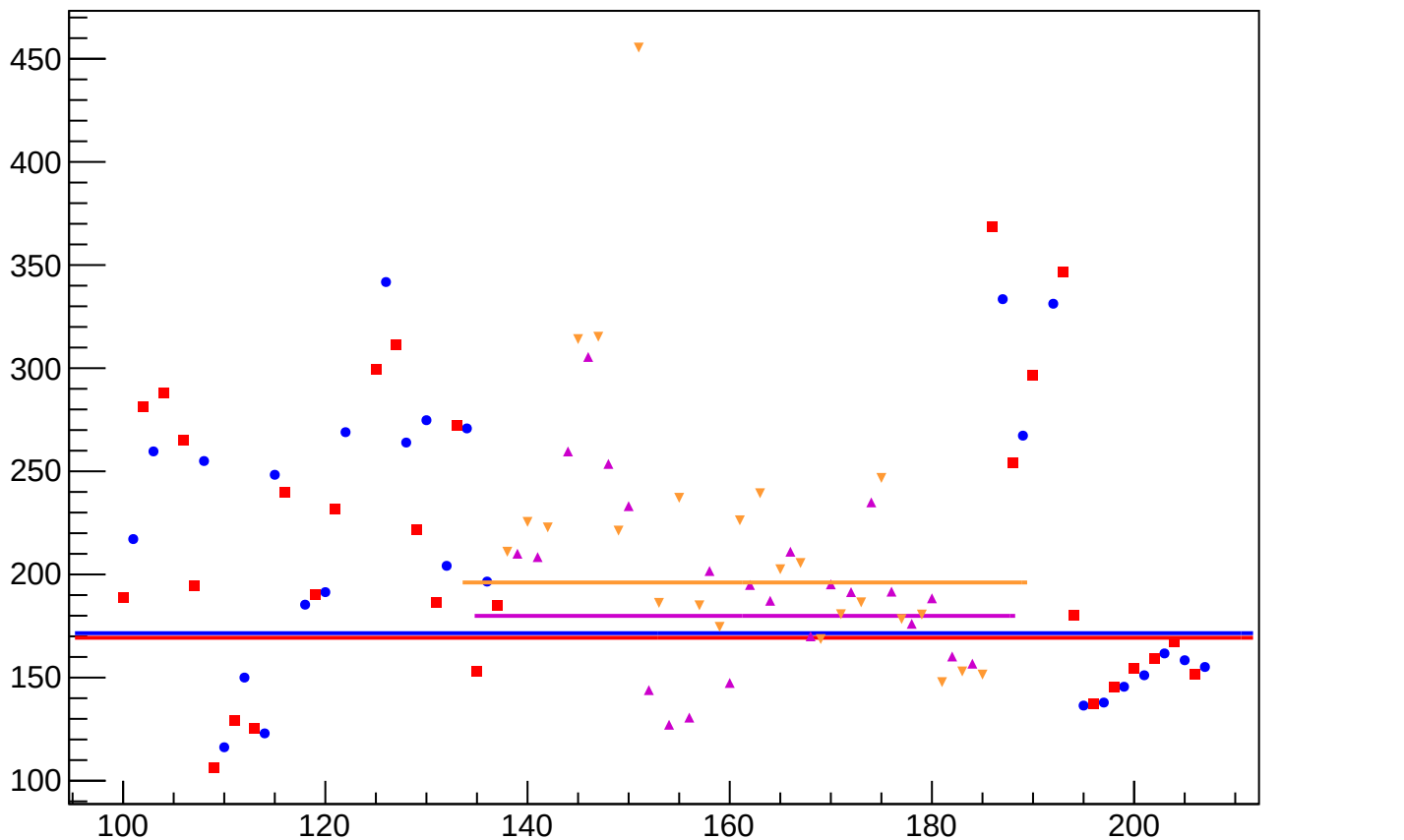
Left In:  $-120.760 \pm 43.920$   $\chi^2/\text{NDF}$ : 7.9/22

+ sign  $-24.954 \pm 33.139$   $\chi^2/\text{NDF}$ : 66.7/49

All:  $8.774 \pm 22.812$   $\chi^2/\text{NDF}$ : 125.9/101

- sign  $39.152 \pm 31.450$   $\chi^2/\text{NDF}$ : 57.2/51

# asym\_bcm\_dg\_ds\_an\_ds\_avg\_rms vs Slug



Right In: 171.534 $\pm$ 0.033  $\chi^2$ /NDF: 2248947.9/25

Left Out: 196.112 $\pm$ 0.033  $\chi^2$ /NDF:1726285.1/23

Right Out: 169.320 $\pm$ 0.032  $\chi^2$ /NDF: 2776962.4/28

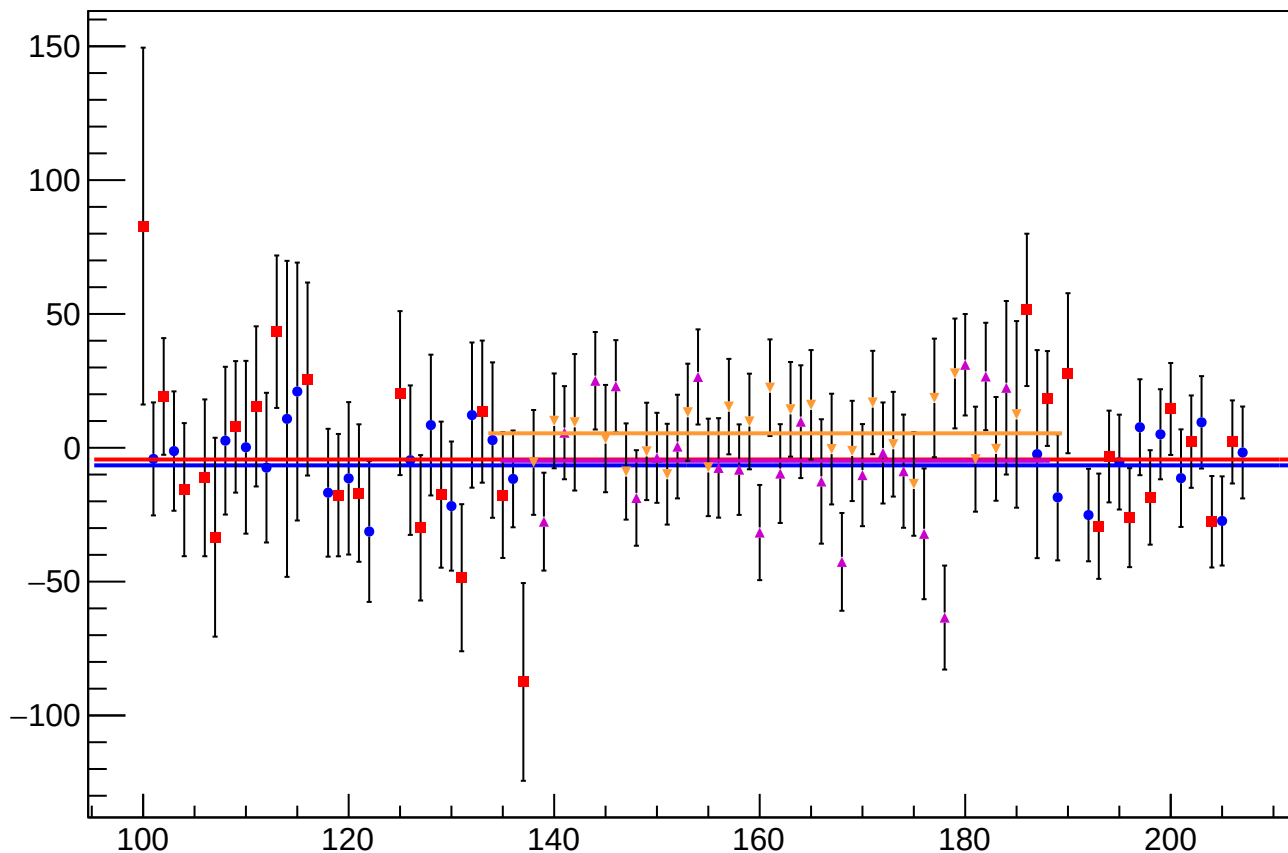
Left In: 179.923 $\pm$ 0.031  $\chi^2$ /NDF:1624144.3/22

+ sign 183.643 $\pm$ 0.023  $\chi^2$ /NDF: 4250215.8/49

All: 178.968 $\pm$ 0.016  $\chi^2$ /NDF: 8783774.2/100

- sign 174.757 $\pm$ 0.022  $\chi^2$ /NDF: 4457904.9/51

# asym\_bcm\_dg\_ds\_an\_ds\_dd\_mean vs Slug



Right In:  $-6.568 \pm 4.385$   $\chi^2/\text{NDF}: 8.2/25$

Left Out:  $5.406 \pm 3.972$   $\chi^2/\text{NDF}: 7.8/23$

Right Out:  $-4.377 \pm 4.261$   $\chi^2/\text{NDF}: 32.4/28$

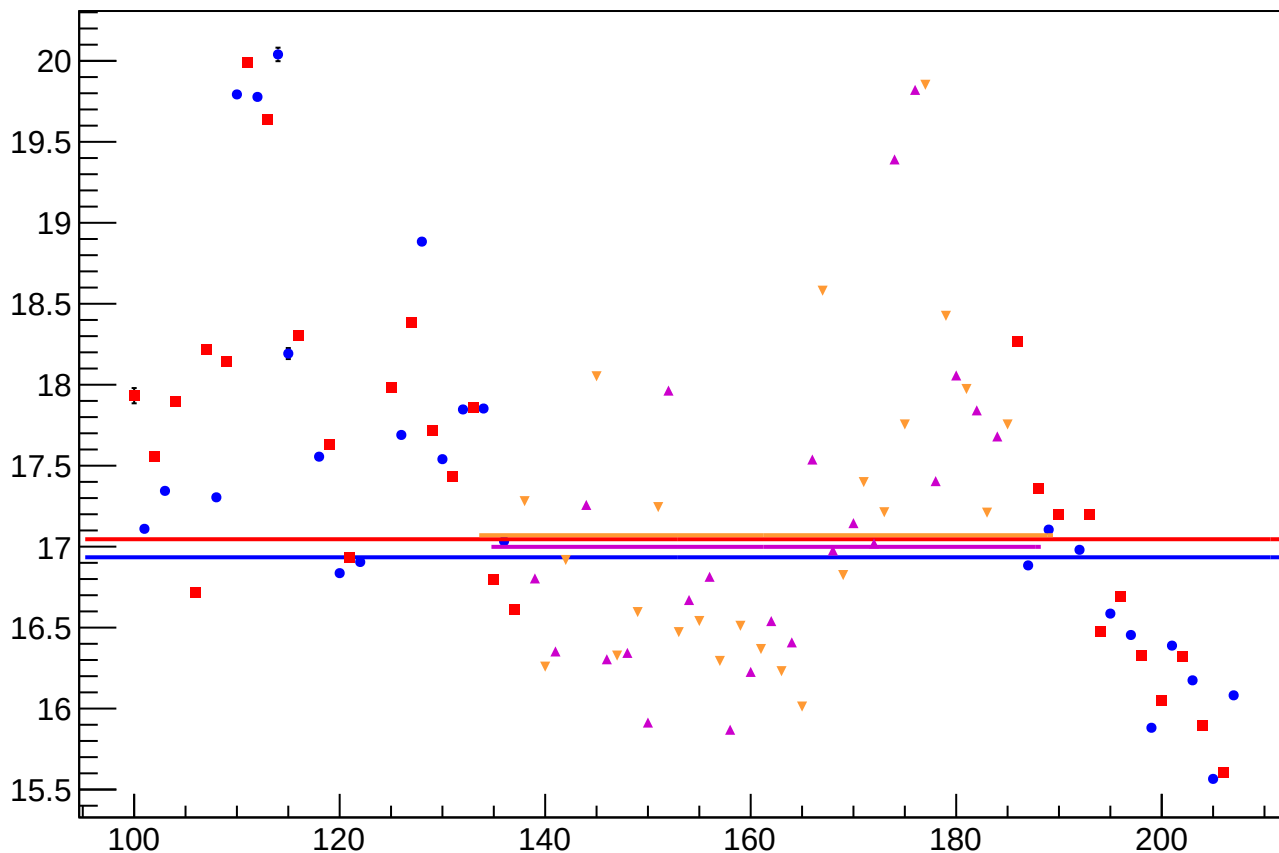
Left In:  $-4.858 \pm 3.980$   $\chi^2/\text{NDF}: 35.5/22$

+ sign  $0.009 \pm 2.944$   $\chi^2/\text{NDF}: 20.1/49$

All:  $-2.340 \pm 2.069$   $\chi^2/\text{NDF}: 89.3/101$

- sign  $-4.634 \pm 2.909$   $\chi^2/\text{NDF}: 67.9/51$

# asym\_bcm\_dg\_ds\_an\_ds\_dd\_rms vs Slug



Right In:  $16.934 \pm 0.003$   $\chi^2/\text{NDF}: 98124.5/25$

Left Out:  $17.071 \pm 0.003$   $\chi^2/\text{NDF}: 96312.6/23$

Right Out:  $17.046 \pm 0.003$   $\chi^2/\text{NDF}: 107764.9/28$

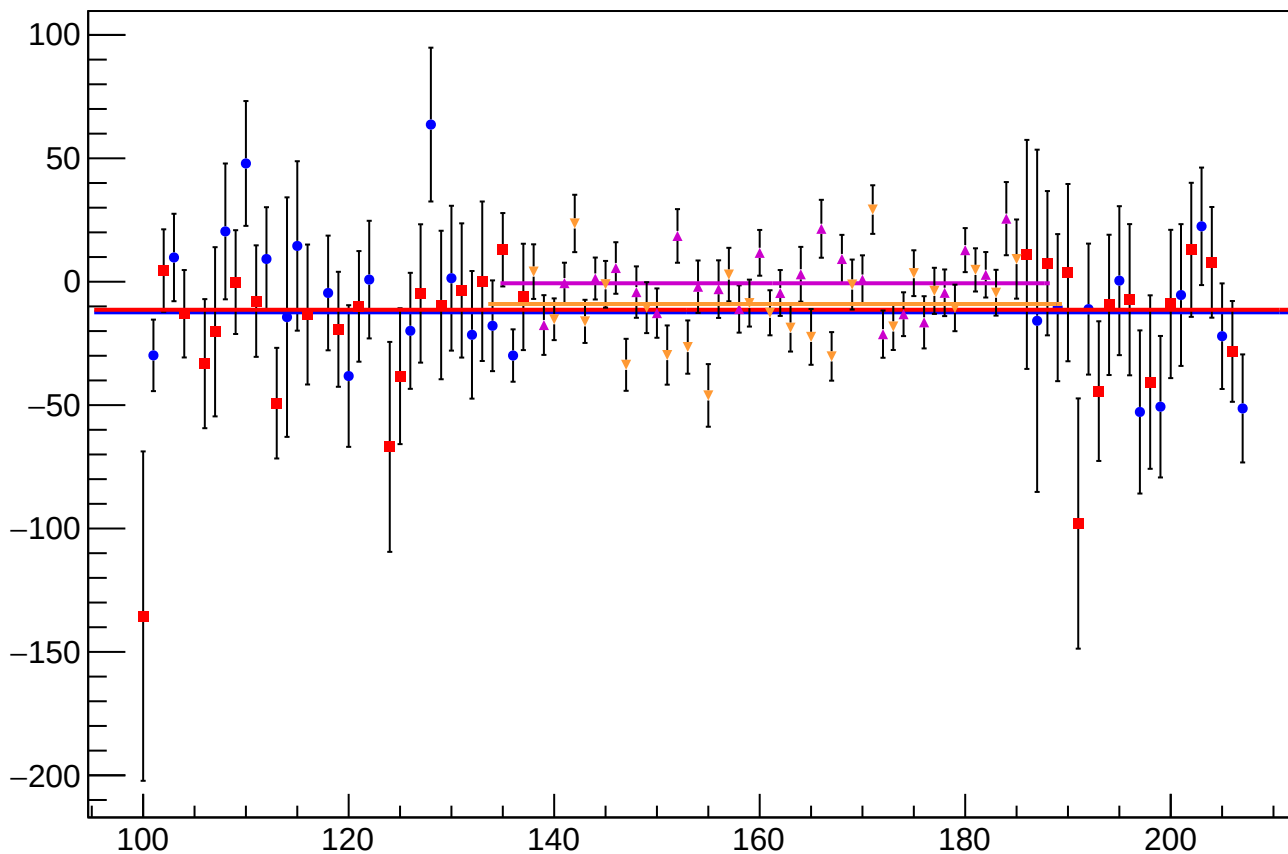
Left In:  $16.999 \pm 0.003$   $\chi^2/\text{NDF}: 104021.0/22$

+ sign  $17.009 \pm 0.002$   $\chi^2/\text{NDF}: 195500.4/49$

All:  $17.015 \pm 0.001$   $\chi^2/\text{NDF}: 407432.0/101$

- sign  $17.021 \pm 0.002$   $\chi^2/\text{NDF}: 211916.3/51$

# diff\_bpm\_4aX\_4acX\_avg\_mean vs Slug



Right In:  $-12.398 \pm 4.482$   $\chi^2/\text{NDF}$ : 31.3/25

Left Out:  $-9.027 \pm 2.006$   $\chi^2/\text{NDF}$ : 62.0/24

Right Out:  $-11.362 \pm 4.572$   $\chi^2/\text{NDF}$ : 22.1/30

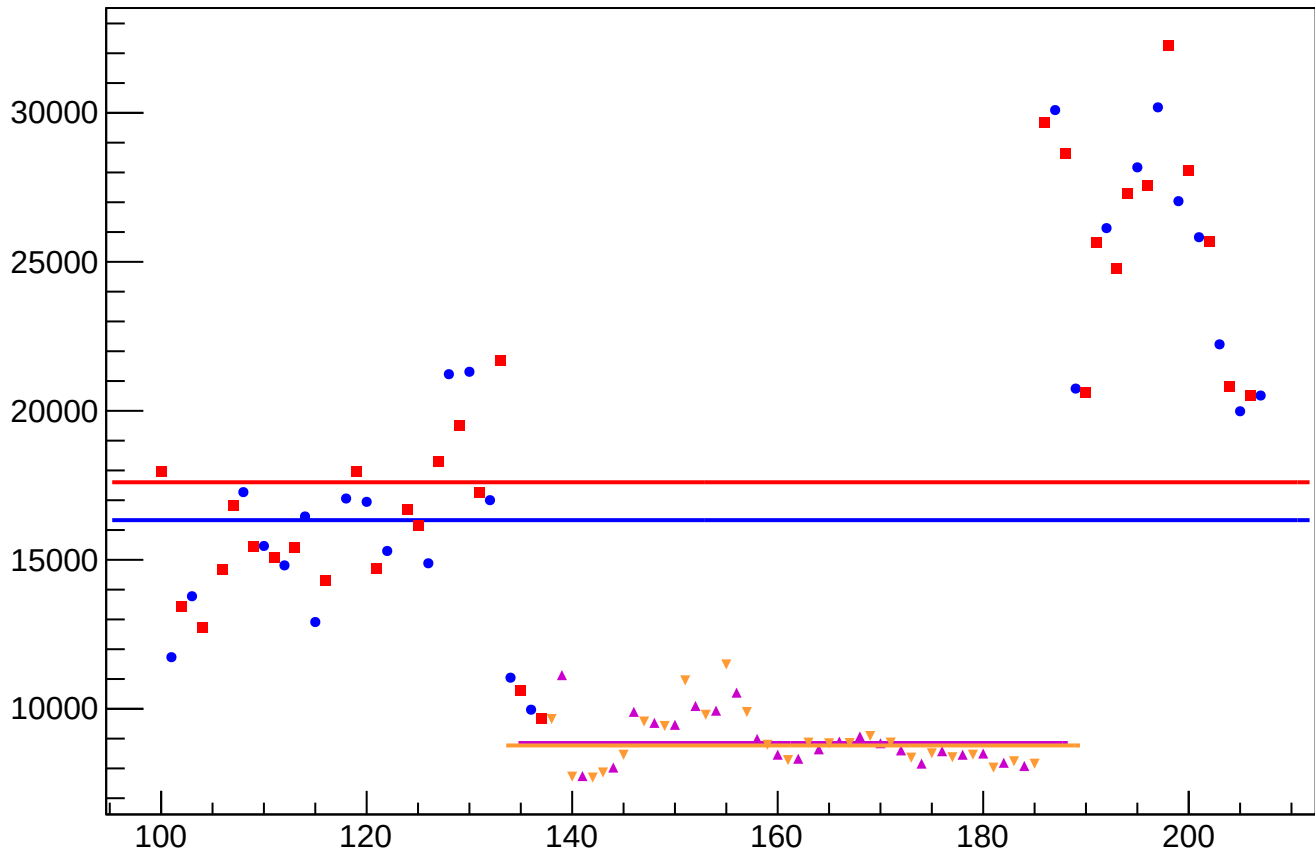
Left In:  $-0.628 \pm 2.079$   $\chi^2/\text{NDF}$ : 29.5/22

+ sign  $-9.590 \pm 1.831$   $\chi^2/\text{NDF}$ : 93.8/50

All:  $-6.146 \pm 1.316$   $\chi^2/\text{NDF}$ : 157.3/104

- sign  $-2.468 \pm 1.893$   $\chi^2/\text{NDF}$ : 56.2/53

diff\_bpm\_4aX\_4acX\_avg\_rms vs Slug



Right In: 16331.439 $\pm$ 3.170  $\chi^2/\text{NDF}$ : 3090423.5/25

Left Out: 8770.330 $\pm$ 1.419  $\chi^2/\text{NDF}$ : 345180.6/24

Right Out: 17602.985 $\pm$ 3.233  $\chi^2/\text{NDF}$ : 3092772.7/30

Left In: 8852.820 $\pm$ 1.470  $\chi^2/\text{NDF}$ : 299860.4/22

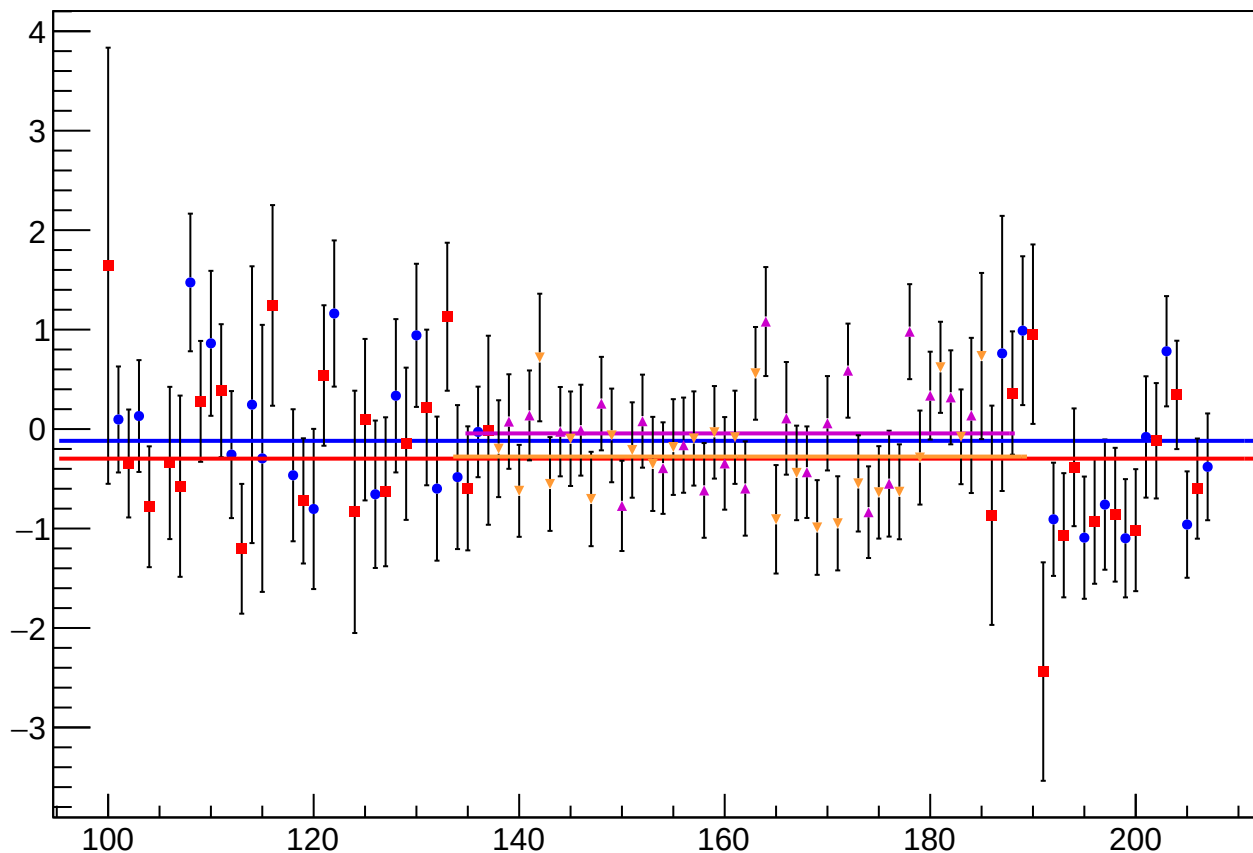
+ sign 10032.448 $\pm$ 1.295  $\chi^2/\text{NDF}$ : 8176538.2/50

All: 10187.274 $\pm$ 0.931  $\chi^2/\text{NDF}$ : 17669830.2/53

- sign 10352.650 $\pm$ 1.338  $\chi^2/\text{NDF}$ : 9463728.0/53



# diff\_bpm\_4aX\_4acX\_dd\_mean vs Slug



Right In:  $-0.118 \pm 0.129$   $\chi^2/\text{NDF}$ : 31.5/25

Left Out:  $-0.277 \pm 0.097$   $\chi^2/\text{NDF}$ : 21.0/24

Right Out:  $-0.297 \pm 0.126$   $\chi^2/\text{NDF}$ : 28.3/30

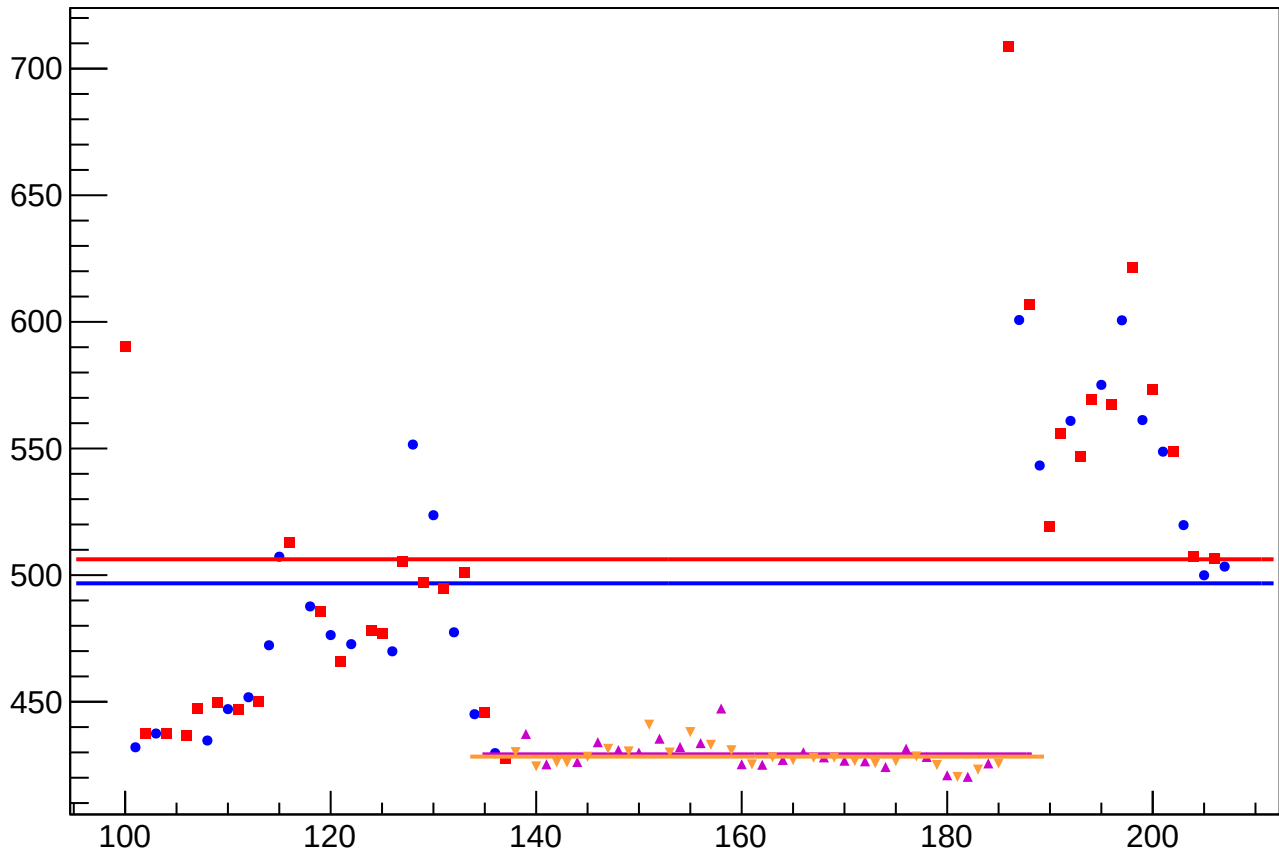
Left In:  $-0.044 \pm 0.100$   $\chi^2/\text{NDF}$ : 23.8/22

+ sign  $-0.219 \pm 0.078$   $\chi^2/\text{NDF}$ : 53.5/50

All:  $-0.181 \pm 0.055$   $\chi^2/\text{NDF}$ : 108.5/104

- sign  $-0.142 \pm 0.078$   $\chi^2/\text{NDF}$ : 54.6/53

# diff\_bpm\_4aX\_4acX\_dd\_rms vs Slug



Right In: 496.761 $\pm$ 0.091  $\chi^2$ /NDF: 331258.5/25

Left Out: 428.343 $\pm$ 0.069  $\chi^2$ /NDF: 4016.5/24

Right Out: 506.256 $\pm$ 0.089  $\chi^2$ /NDF: 447025.0/30

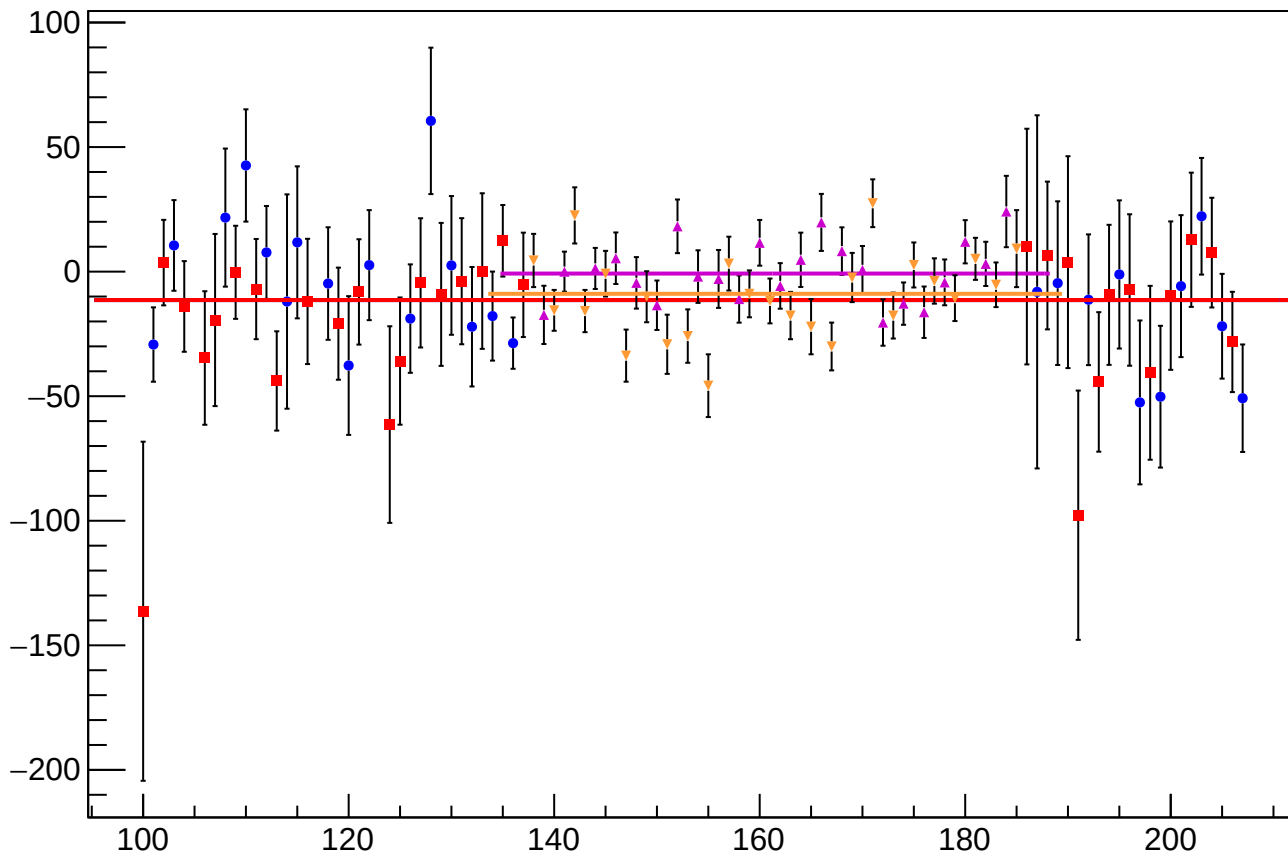
Left In: 429.228 $\pm$ 0.071  $\chi^2$ /NDF: 6749.9/22

+ sign 453.137 $\pm$ 0.055  $\chi^2$ /NDF: 693603.0/50

All: 456.146 $\pm$ 0.039  $\chi^2$ /NDF: 1613088.3/104

- sign 459.204 $\pm$ 0.055  $\chi^2$ /NDF: 913438.1/53

diff\_bpm\_4aX\_4eX\_avg\_mean vs Slug



Right In:  $-11.424 \pm 4.353$   $\chi^2/\text{NDF}$ : 31.8/25

Left Out:  $-8.904 \pm 1.961$   $\chi^2/\text{NDF}$ : 61.6/24

Right Out:  $-11.401 \pm 4.423$   $\chi^2/\text{NDF}$ : 21.9/30

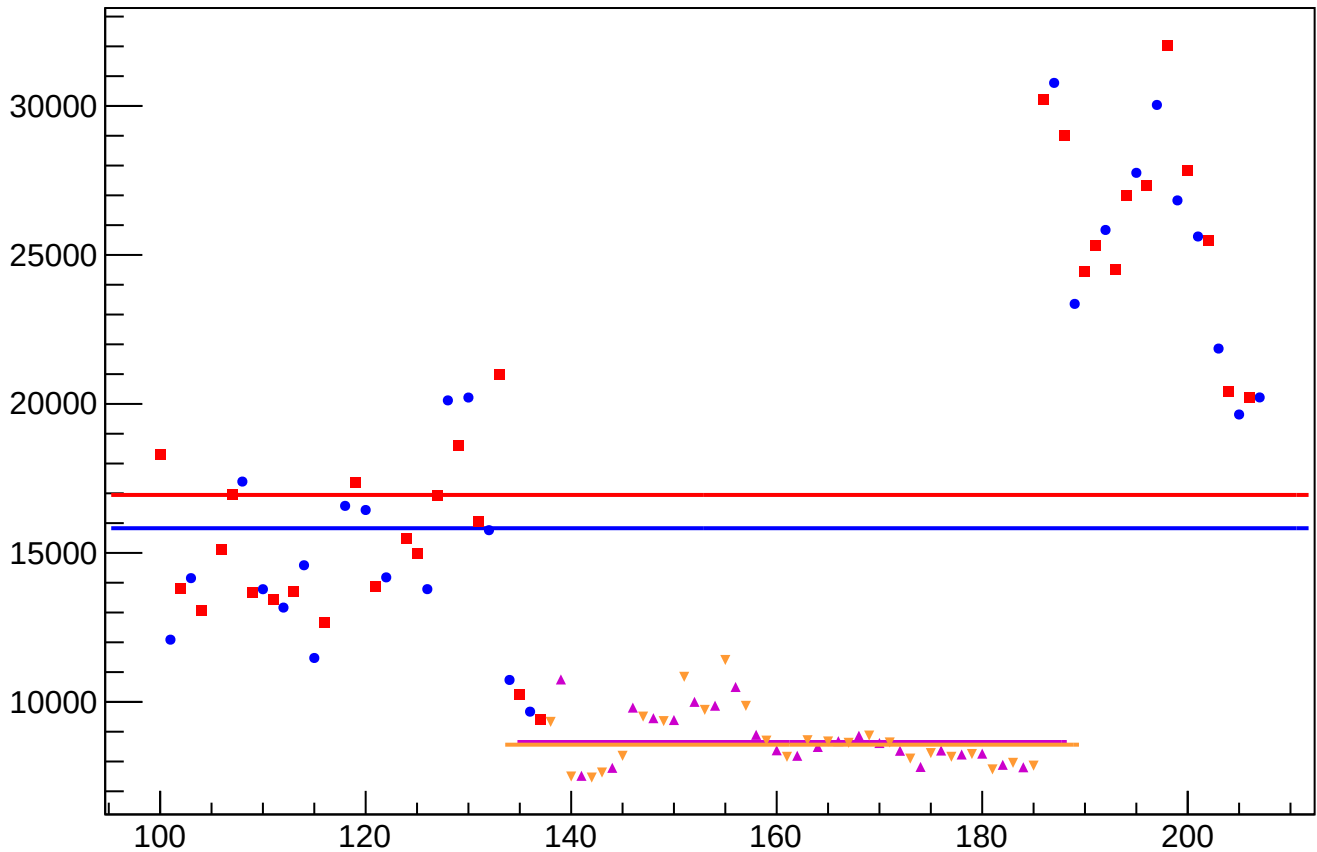
Left In:  $-0.773 \pm 2.034$   $\chi^2/\text{NDF}$ : 29.3/22

+ sign  $-9.329 \pm 1.788$   $\chi^2/\text{NDF}$ : 93.7/50

All:  $-6.089 \pm 1.285$   $\chi^2/\text{NDF}$ : 156.4/104

- sign  $-2.628 \pm 1.848$   $\chi^2/\text{NDF}$ : 56.0/53

diff\_bpm\_4aX\_4eX\_avg\_rms vs Slug



Right In: 15828.986 $\pm$ 3.078  $\chi^2$ /NDF: 3246459.1/25

Left Out: 8564.413 $\pm$ 1.387  $\chi^2$ /NDF:400646.9/24

+ sign 9789.710 $\pm$ 1.264  $\chi^2$ /NDF: 8277220.6/50

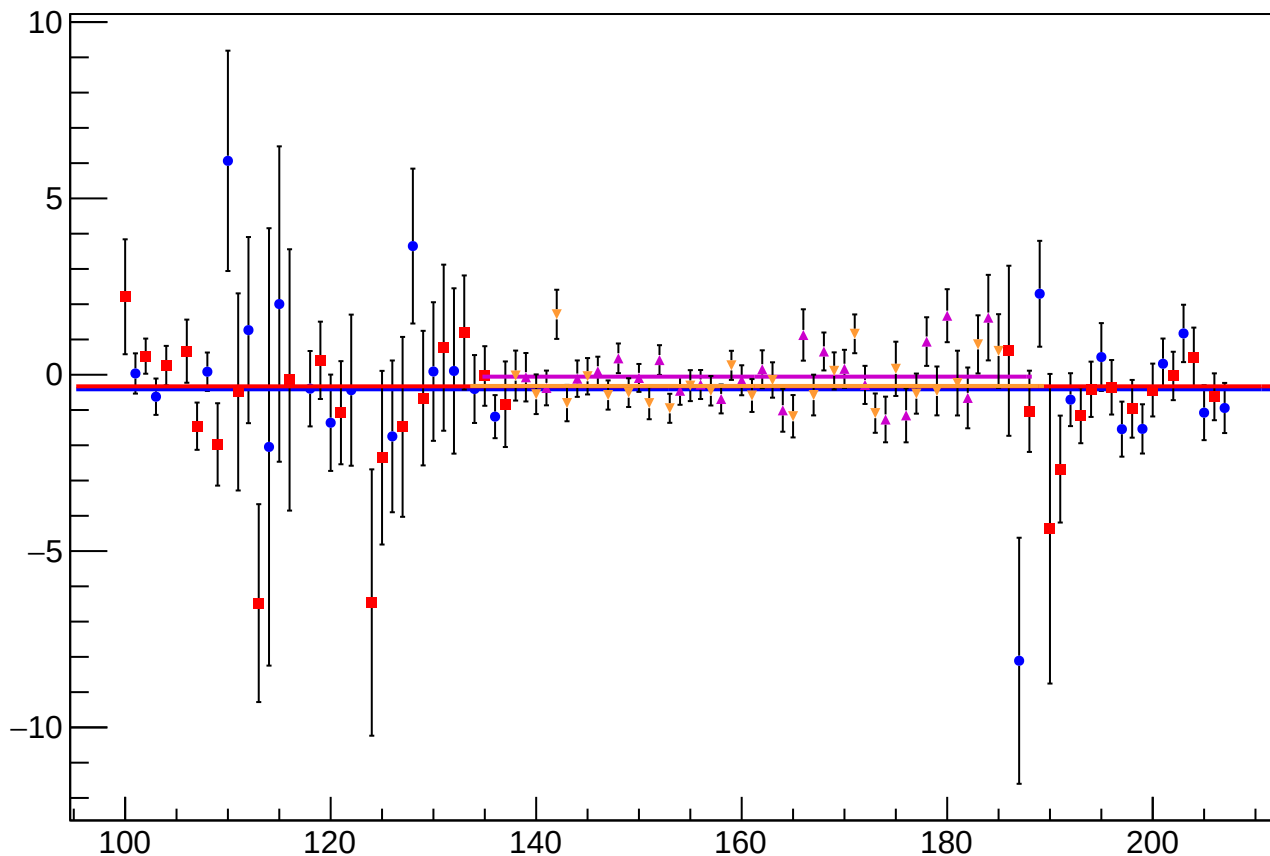
Right Out: 16945.713 $\pm$ 3.127  $\chi^2$ /NDF: 3379863.9/30

All: 9940.517 $\pm$ 0.909  $\chi^2$ /NDF: 17833827.9/1

Left In: 8654.310 $\pm$ 1.438  $\chi^2$ /NDF:345603.4/22

- sign 10101.622 $\pm$ 1.307  $\chi^2$ /NDF: 9527175.4/53

# diff\_bpm\_4aX\_4eX\_dd\_mean vs Slug



Right In:  $-0.413 \pm 0.180$   $\chi^2/\text{NDF}$ : 32.7/25

Left Out:  $-0.318 \pm 0.106$   $\chi^2/\text{NDF}$ : 32.3/24

Right Out:  $-0.328 \pm 0.176$   $\chi^2/\text{NDF}$ : 29.9/30

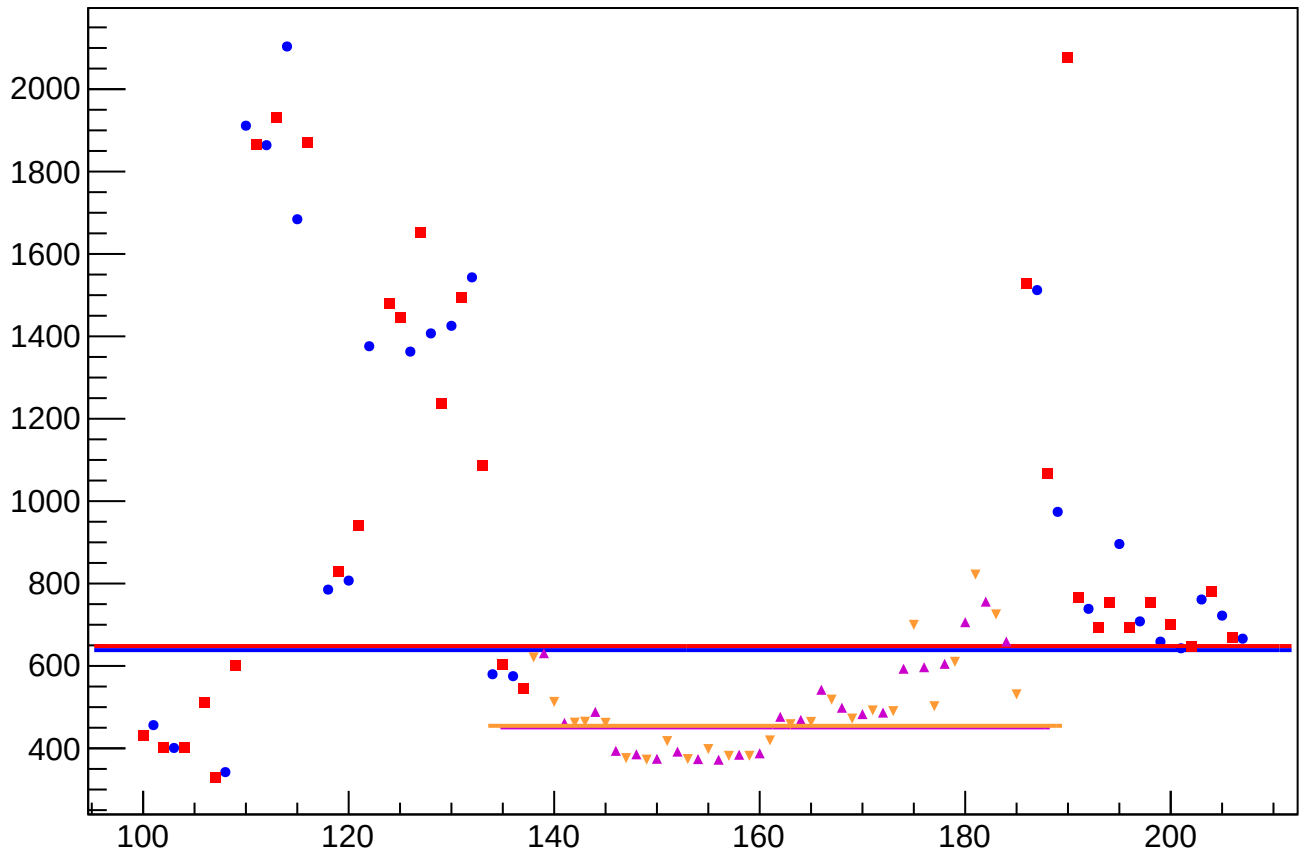
Left In:  $-0.054 \pm 0.108$   $\chi^2/\text{NDF}$ : 29.8/22

+ sign  $-0.342 \pm 0.091$   $\chi^2/\text{NDF}$ : 65.2/50

All:  $-0.237 \pm 0.065$   $\chi^2/\text{NDF}$ : 129.3/104

- sign  $-0.129 \pm 0.092$   $\chi^2/\text{NDF}$ : 61.4/53

# diff\_bpm\_4aX\_4eX\_dd\_rms vs Slug



Right In: 638.358+/-0.127     $\chi^2/\text{NDF}$ : 4122784.1/25

Left Out: 454.697+/-0.075     $\chi^2/\text{NDF}$ : 1451363.0/24

Right Out: 648.277+/-0.125     $\chi^2/\text{NDF}$ : 4700062.7/30

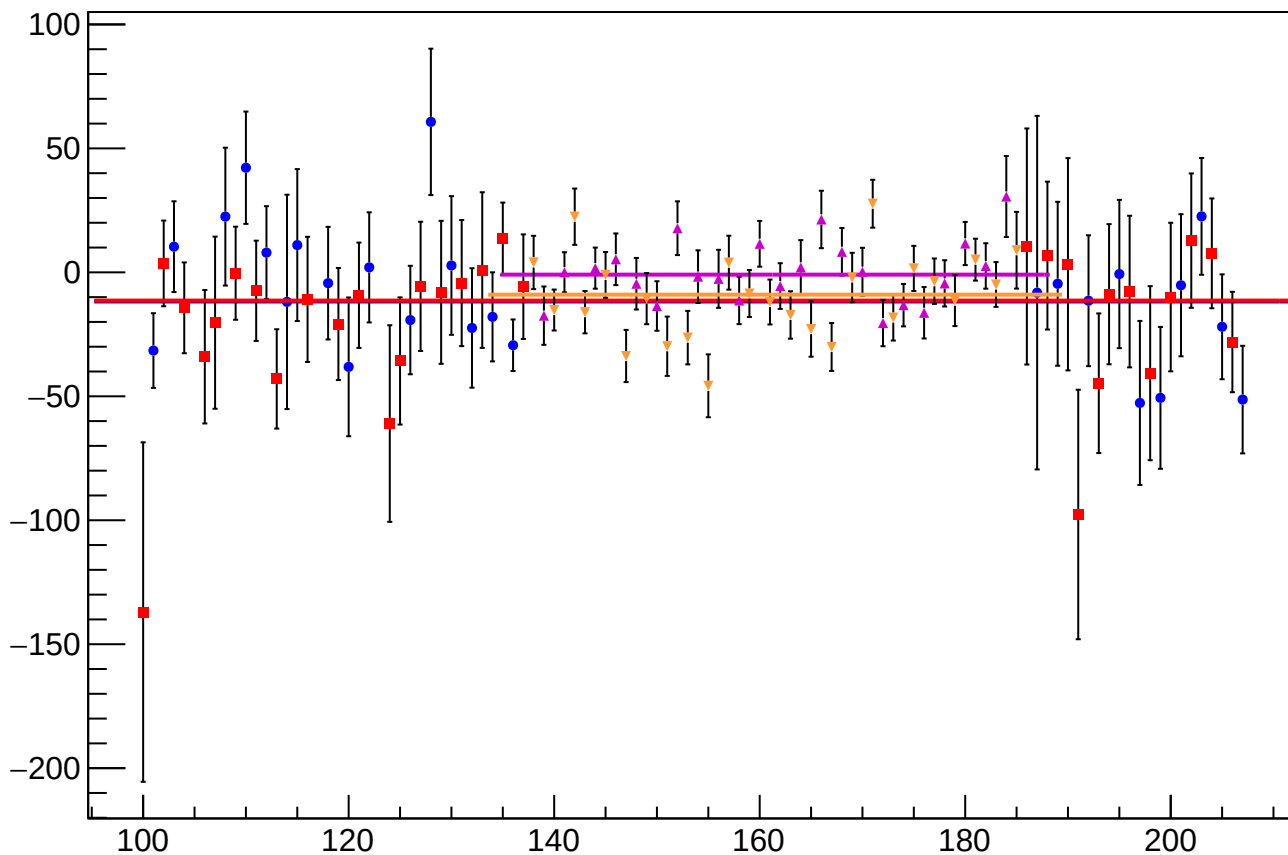
Left In: 450.767+/-0.076     $\chi^2/\text{NDF}$ : 1471497.9/22

+ sign 502.071+/-0.065     $\chi^2/\text{NDF}$ : 7123582.8/50

All: 503.378+/-0.046     $\chi^2/\text{NDF}$ : 15118201.0/100

- sign 504.710+/-0.065     $\chi^2/\text{NDF}$ : 7993791.0/53

# diff\_bpm\_4aX\_4ecX\_avg\_mean vs Slug



Right In:  $-11.747 \pm 4.381$   $\chi^2/\text{NDF}$ : 32.3/25

Left Out:  $-9.001 \pm 1.982$   $\chi^2/\text{NDF}$ : 61.3/24

Right Out:  $-11.392 \pm 4.452$   $\chi^2/\text{NDF}$ : 21.7/30

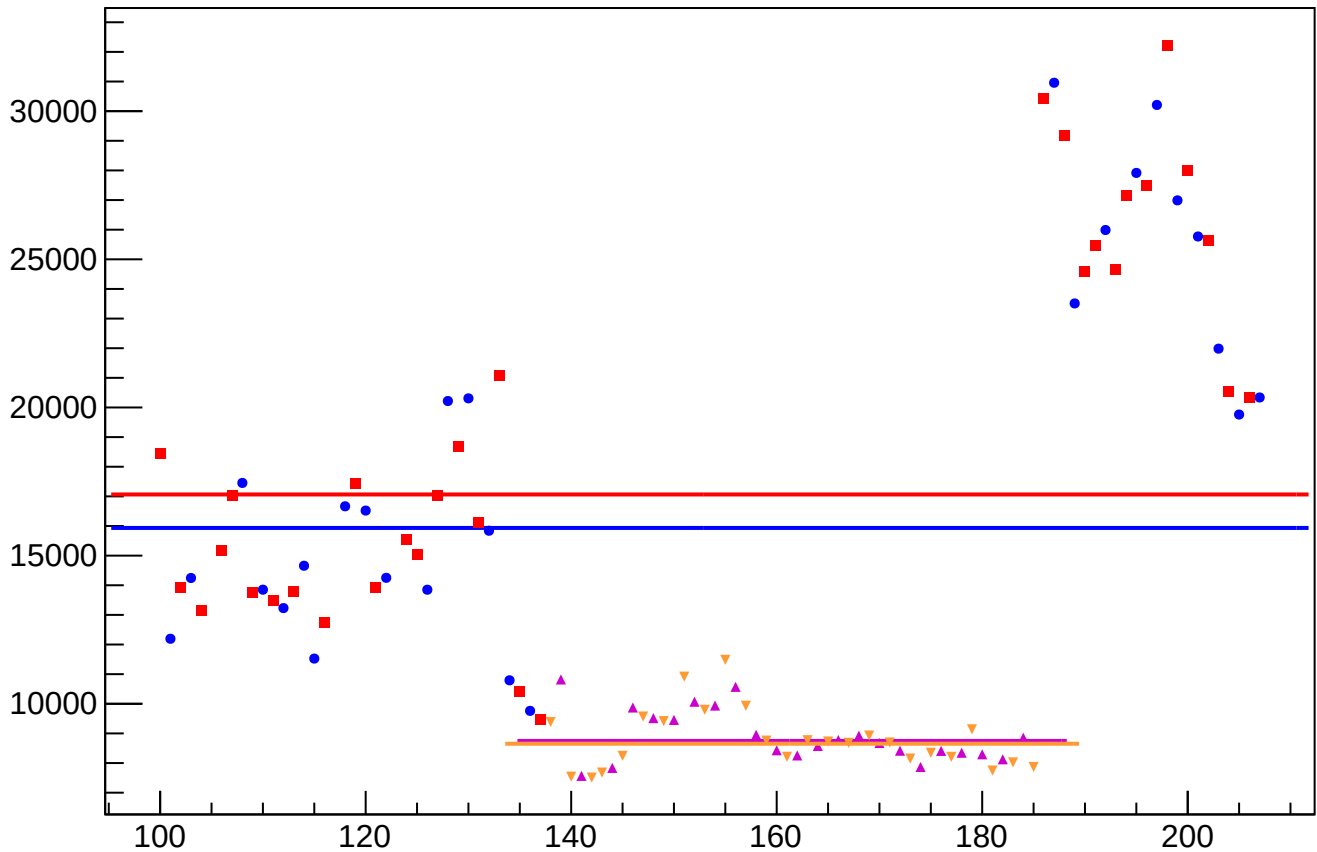
Left In:  $-0.925 \pm 2.056$   $\chi^2/\text{NDF}$ : 29.9/22

+ sign  $-9.467 \pm 1.806$   $\chi^2/\text{NDF}$ : 93.9/50

All:  $-6.226 \pm 1.298$   $\chi^2/\text{NDF}$ : 156.7/104

- sign  $-2.764 \pm 1.866$   $\chi^2/\text{NDF}$ : 56.1/53

diff\_bpm\_4aX\_4ecX\_avg\_rms vs Slug



Right In: 15934.765 $\pm$ 3.098  $\chi^2$ /NDF: 3231764.2/25

Left Out: 8651.872 $\pm$ 1.401  $\chi^2$ /NDF:405419.4/24

Right Out: 17064.062 $\pm$ 3.148  $\chi^2$ /NDF: 3357817.4/30

Left In: 8746.106 $\pm$ 1.454  $\chi^2$ /NDF:331167.0/22

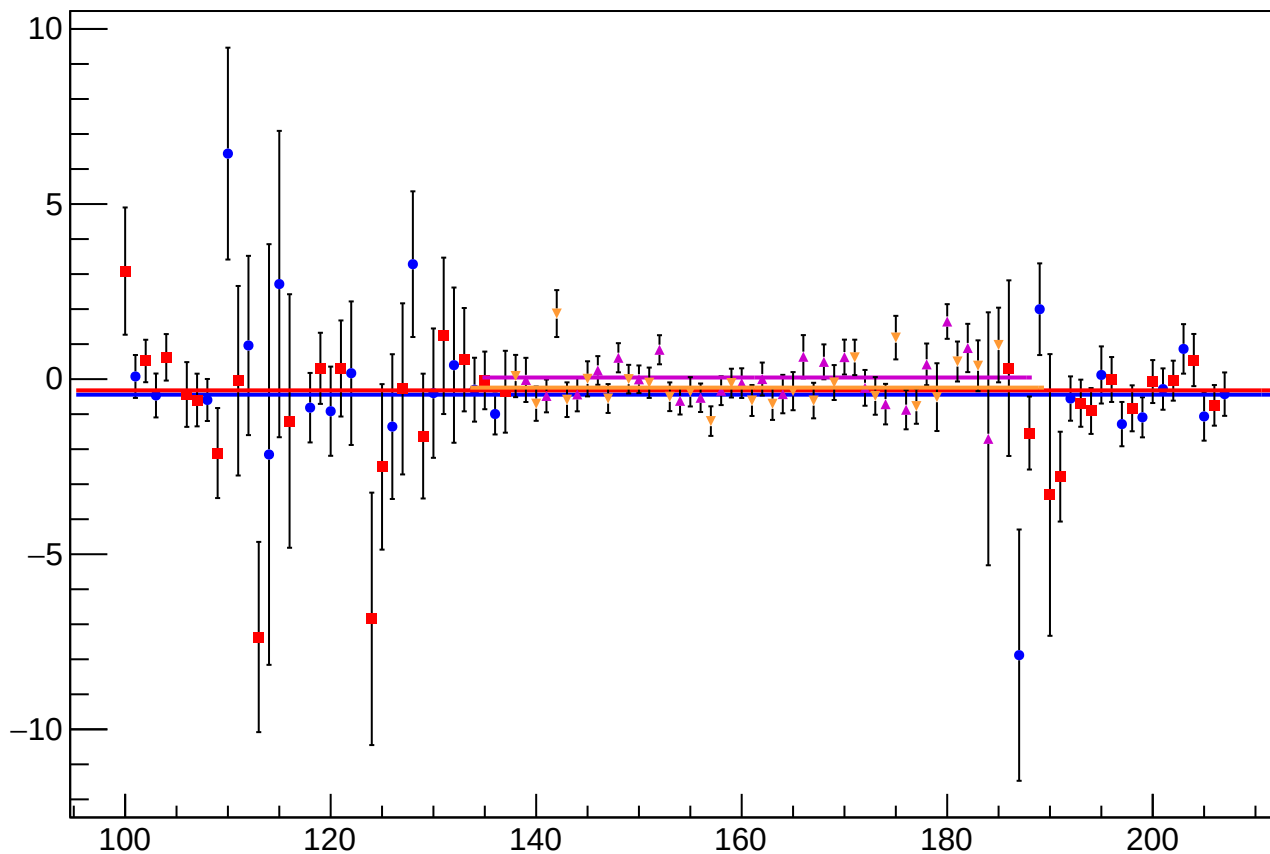
+ sign 9888.795 $\pm$ 1.277  $\chi^2$ /NDF: 8224598.7/50

All: 10042.965 $\pm$ 0.918  $\chi^2$ /NDF: 17697843.1

- sign 10207.666 $\pm$ 1.320  $\chi^2$ /NDF: 9443088.2/53



# diff\_bpm\_4aX\_4ecX\_dd\_mean vs Slug



Right In:  $-0.443 \pm 0.169$   $\chi^2/\text{NDF}$ : 27.3/25

Left Out:  $-0.242 \pm 0.100$   $\chi^2/\text{NDF}$ : 34.3/24

Right Out:  $-0.321 \pm 0.167$   $\chi^2/\text{NDF}$ : 32.5/30

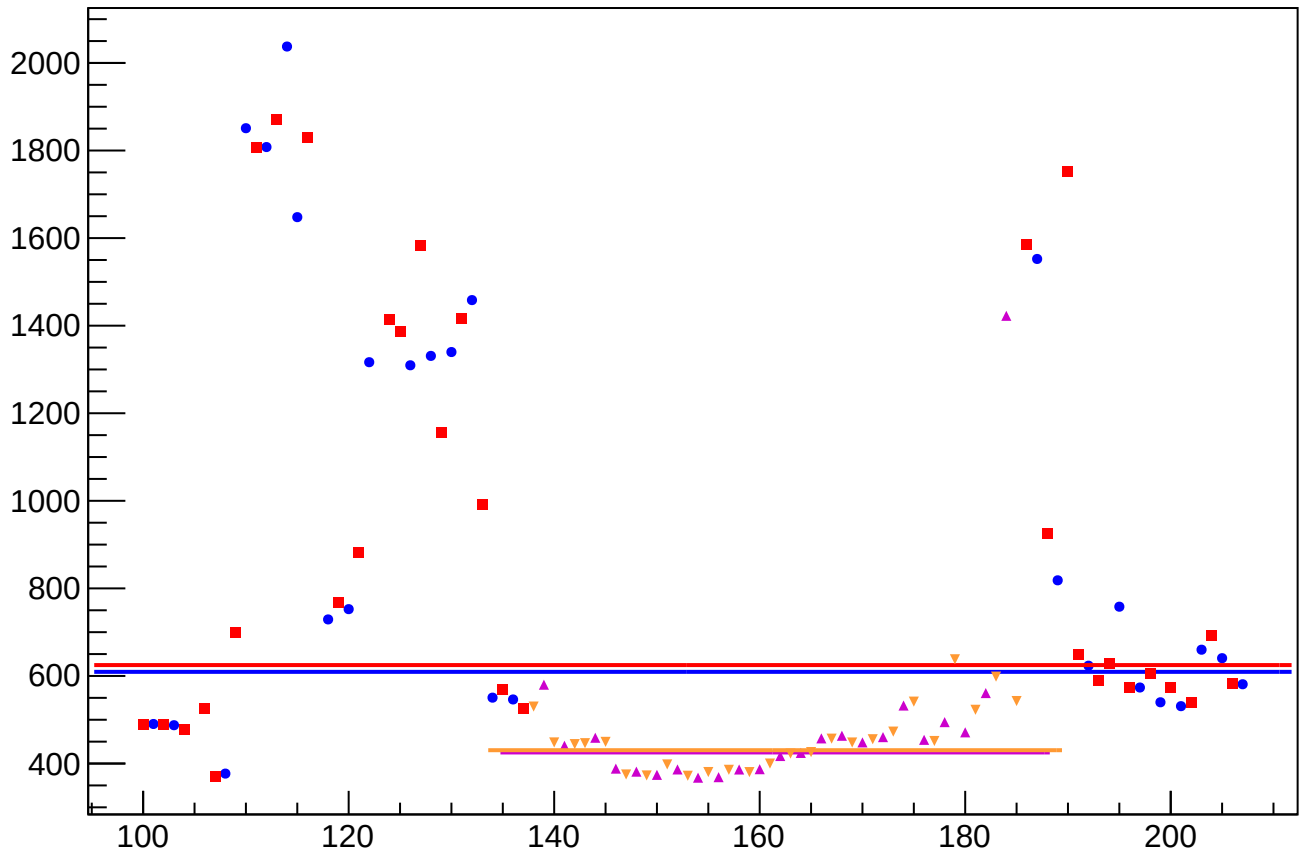
Left In:  $0.047 \pm 0.102$   $\chi^2/\text{NDF}$ : 35.1/22

+ sign  $-0.295 \pm 0.086$   $\chi^2/\text{NDF}$ : 62.7/50

All:  $-0.174 \pm 0.061$   $\chi^2/\text{NDF}$ : 137.6/104

- sign  $-0.052 \pm 0.087$   $\chi^2/\text{NDF}$ : 71.1/53

# diff\_bpm\_4aX\_4ecX\_dd\_rms vs Slug



Right In: 609.395 $\pm$ 0.119  $\chi^2$ /NDF: 3198993.3/25

Left Out: 430.437 $\pm$ 0.071  $\chi^2$ /NDF: 648114.1/24

+ sign 477.042 $\pm$ 0.061  $\chi^2$ /NDF: 5508191.2/50

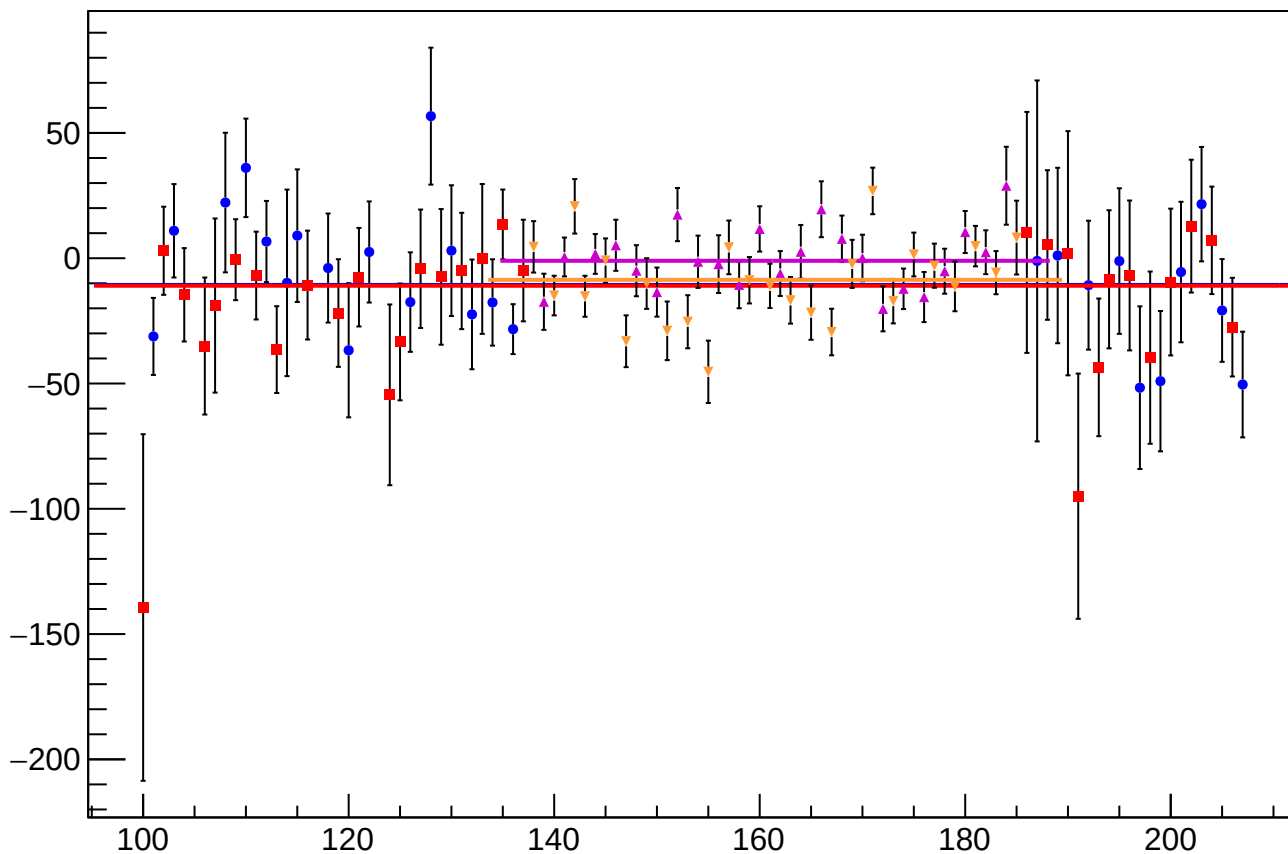
Right Out: 624.864 $\pm$ 0.118  $\chi^2$ /NDF: 3515173.3/30

All: 478.108 $\pm$ 0.043  $\chi^2$ /NDF: 11824687.3/10

- sign 479.190 $\pm$ 0.061  $\chi^2$ /NDF: 6315879.0/53

Left In: 425.312 $\pm$ 0.072  $\chi^2$ /NDF: 716953.2/22

# diff\_bpm\_4eX\_4ecX\_avg\_mean vs Slug



Right In:  $-10.658 \pm 4.169$   $\chi^2/\text{NDF}$ : 32.9/25

Left Out:  $-8.623 \pm 1.913$   $\chi^2/\text{NDF}$ : 61.6/24

Right Out:  $-10.984 \pm 4.209$   $\chi^2/\text{NDF}$ : 21.6/30

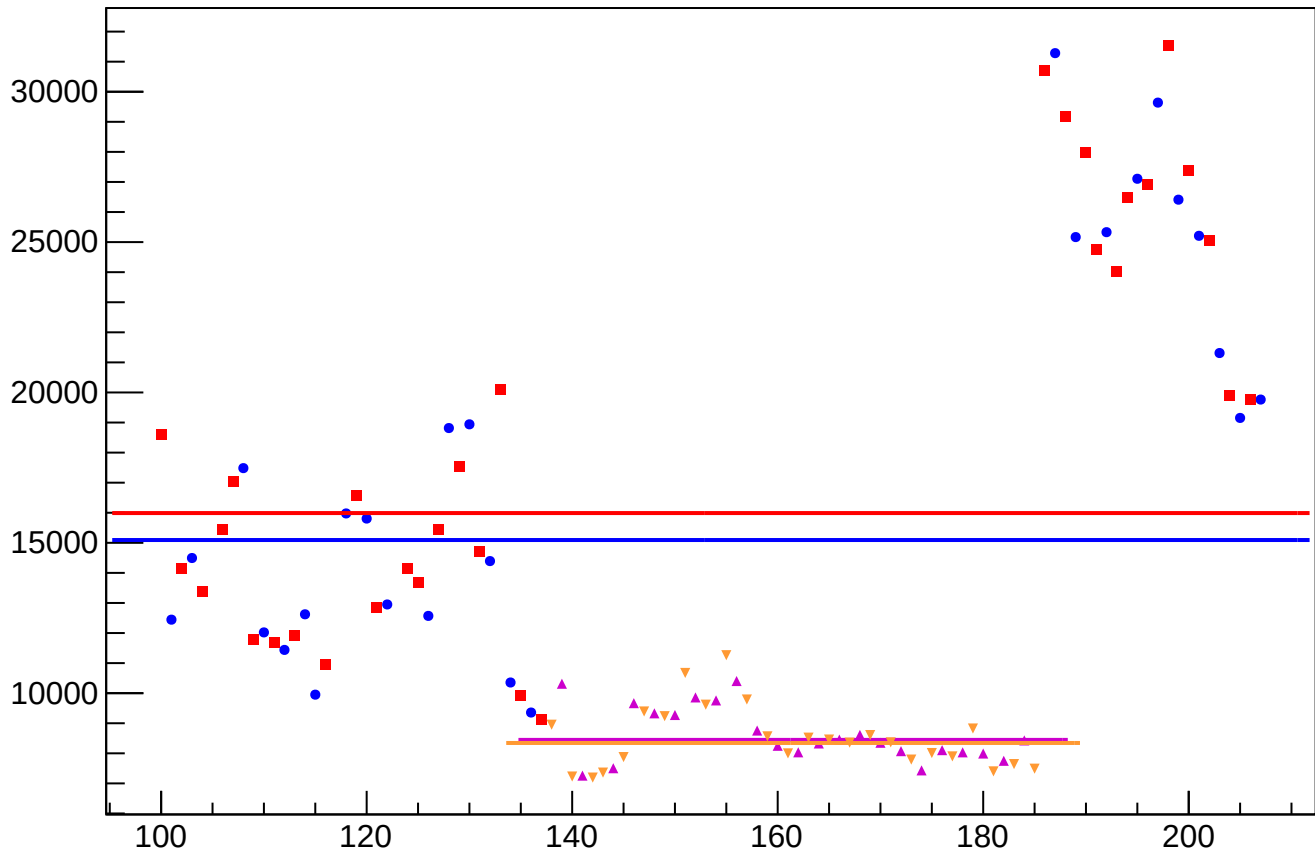
Left In:  $-1.027 \pm 1.987$   $\chi^2/\text{NDF}$ : 29.8/22

+ sign  $-8.977 \pm 1.739$   $\chi^2/\text{NDF}$ : 94.7/50

All:  $-6.009 \pm 1.249$   $\chi^2/\text{NDF}$ : 156.7/104

- sign  $-2.841 \pm 1.797$   $\chi^2/\text{NDF}$ : 55.9/53

# diff\_bpm\_4eX\_4ecX\_avg\_rms vs Slug



Right In: 15092.944+/-2.948  $\chi^2/\text{NDF}$ : 3506429.8/25

Left Out: 8344.309+/-1.353  $\chi^2/\text{NDF}$ : 469243.6/24

Right Out: 15989.601+/-2.976  $\chi^2/\text{NDF}$ : 3852565.4/30

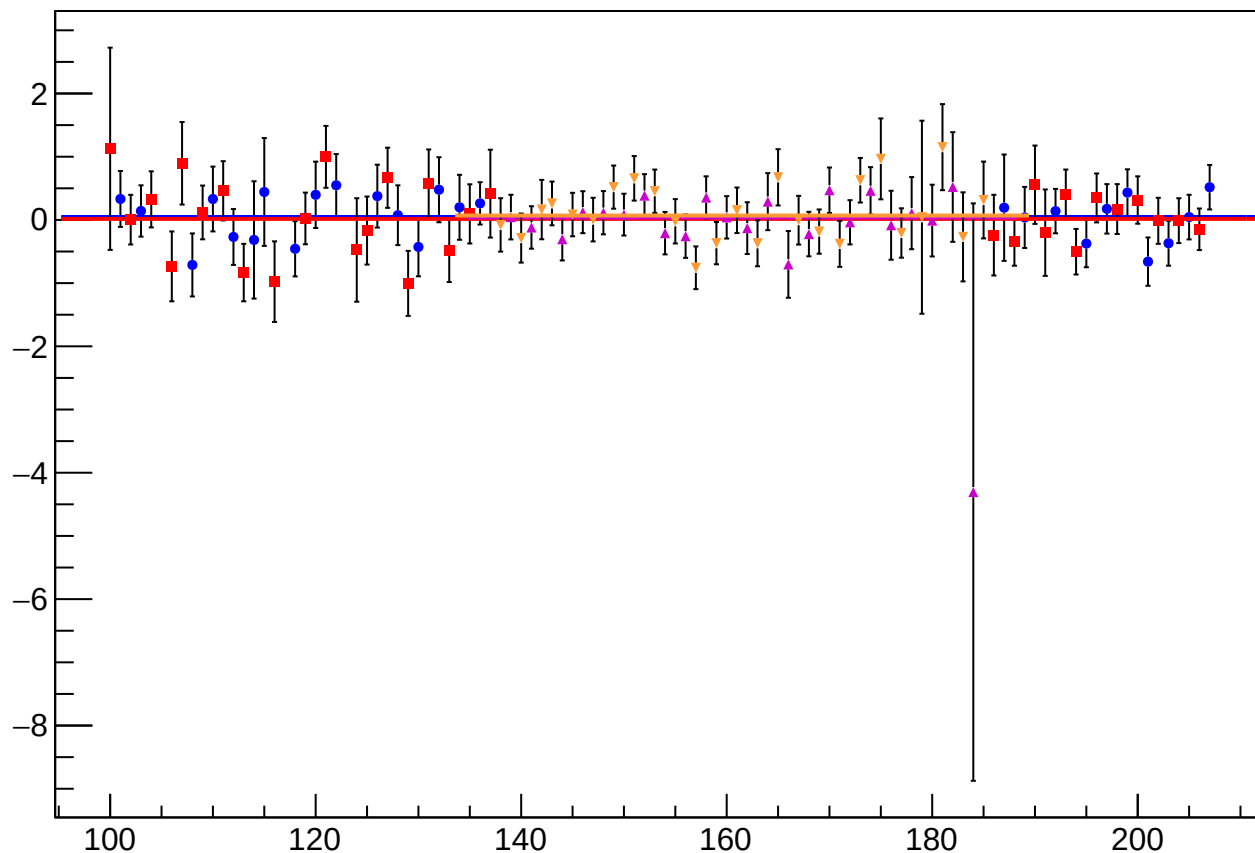
Left In: 8446.686+/-1.405  $\chi^2/\text{NDF}$ : 381901.7/22

+ sign 9518.041+/-1.229  $\chi^2/\text{NDF}$ : 8304478.8/50

All: 9664.588+/-0.883  $\chi^2/\text{NDF}$ : 17821615.7/171

- sign 9821.043+/-1.270  $\chi^2/\text{NDF}$ : 9487761.5/53

# diff\_bpm\_4eX\_4ecX\_dd\_mean vs Slug



Right In:  $0.046 \pm 0.086$   $\chi^2/\text{NDF}$ : 18.6/25

Left Out:  $0.069 \pm 0.079$   $\chi^2/\text{NDF}$ : 28.2/24

Right Out:  $0.016 \pm 0.083$   $\chi^2/\text{NDF}$ : 31.1/30

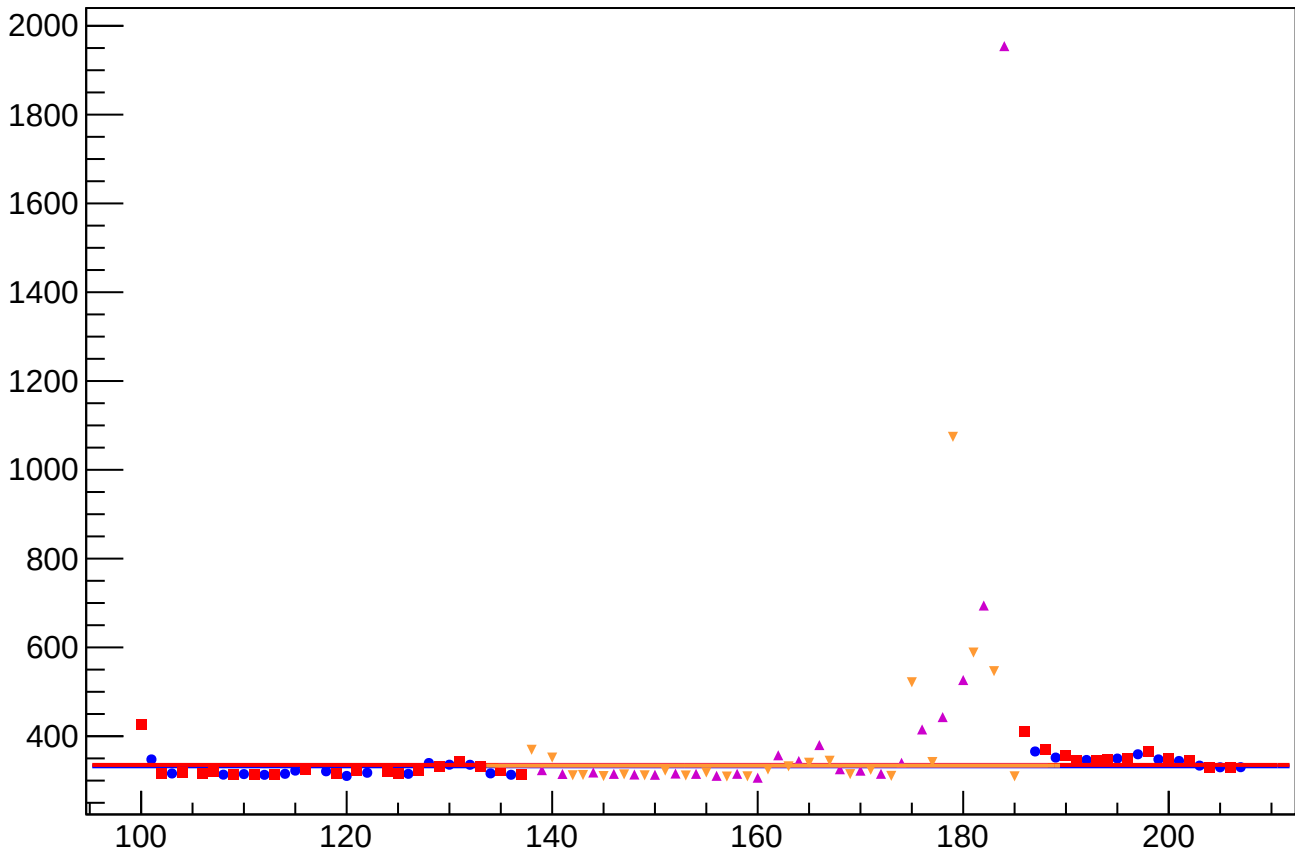
Left In:  $0.037 \pm 0.081$   $\chi^2/\text{NDF}$ : 11.7/22

+ sign  $0.059 \pm 0.058$   $\chi^2/\text{NDF}$ : 46.9/50

All:  $0.043 \pm 0.041$   $\chi^2/\text{NDF}$ : 89.8/104

- sign  $0.027 \pm 0.058$   $\chi^2/\text{NDF}$ : 42.8/53

# diff\_bpm\_4eX\_4ecX\_dd\_rms vs Slug



Right In: 332.196 $\pm$ 0.061  $\chi^2$ /NDF: 62857.4/25

Left Out: 333.783 $\pm$ 0.056  $\chi^2$ /NDF:1217257.0/24

Right Out: 335.349 $\pm$ 0.059  $\chi^2$ /NDF: 116206.8/30

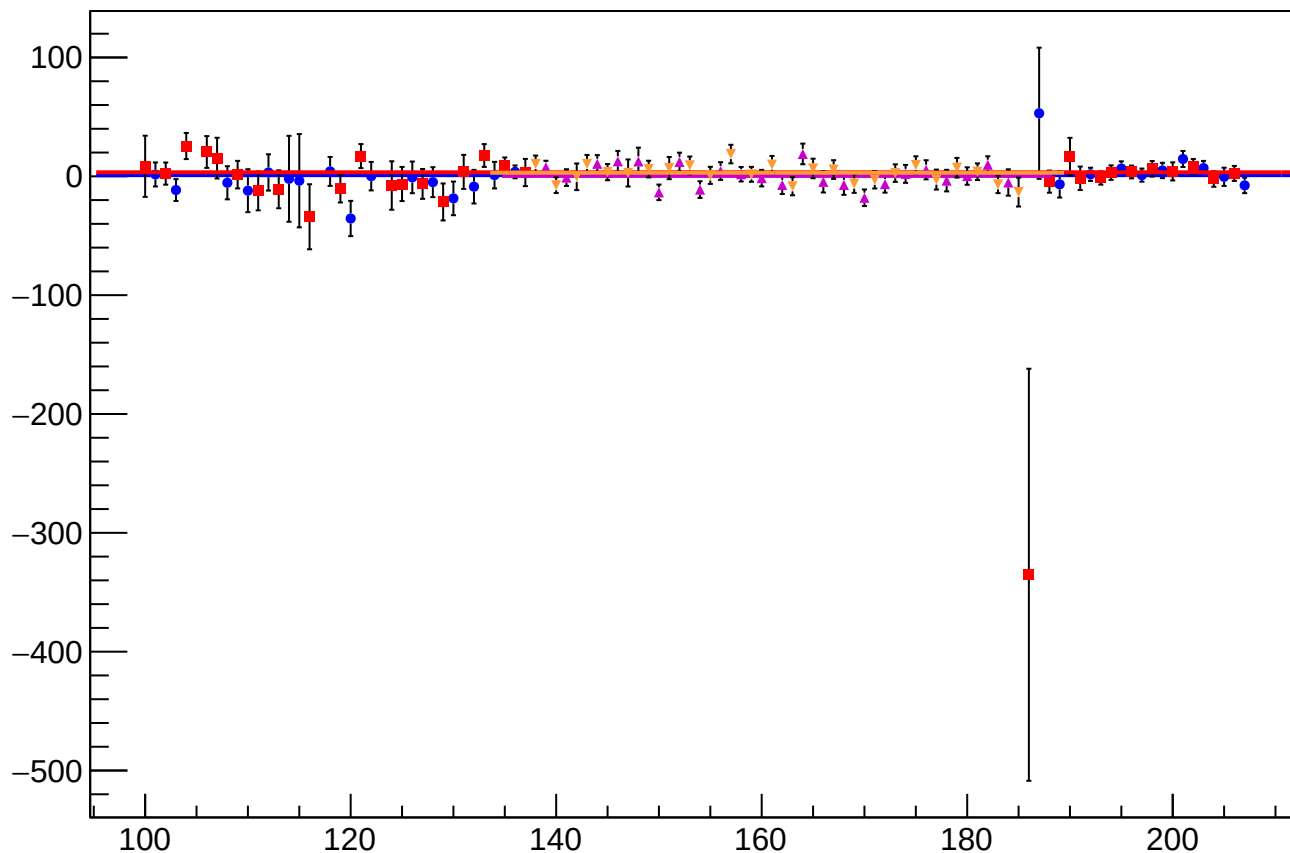
Left In: 333.979 $\pm$ 0.057  $\chi^2$ /NDF:1050984.2/22

+ sign 333.057 $\pm$ 0.041  $\chi^2$ /NDF: 1280483.4/50

All: 333.857 $\pm$ 0.029  $\chi^2$ /NDF: 2448705.5/104

- sign 334.648 $\pm$ 0.041  $\chi^2$ /NDF: 1167471.1/53

# diff\_bpm\_4aY\_4acY\_avg\_mean vs Slug



Right In:  $0.971 \pm 1.735$   $\chi^2/\text{NDF}$ : 21.0/25

Left Out:  $3.023 \pm 1.542$   $\chi^2/\text{NDF}$ : 20.3/24

Right Out:  $3.390 \pm 1.670$   $\chi^2/\text{NDF}$ : 27.5/30

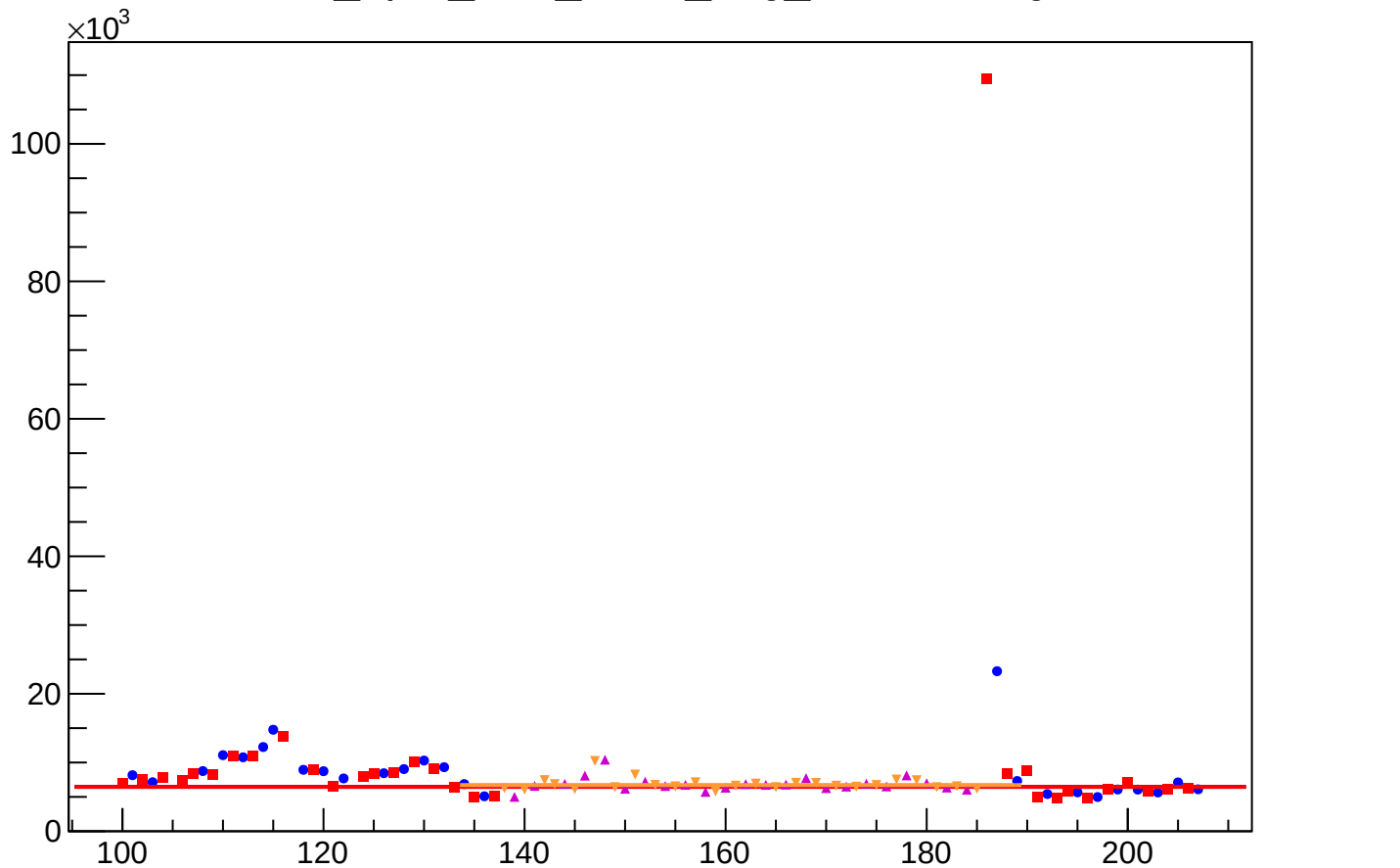
Left In:  $0.351 \pm 1.568$   $\chi^2/\text{NDF}$ : 33.8/22

+ sign  $2.118 \pm 1.152$   $\chi^2/\text{NDF}$ : 42.1/50

All:  $1.945 \pm 0.812$   $\chi^2/\text{NDF}$ : 105.2/104

- sign  $1.775 \pm 1.143$   $\chi^2/\text{NDF}$ : 63.1/53

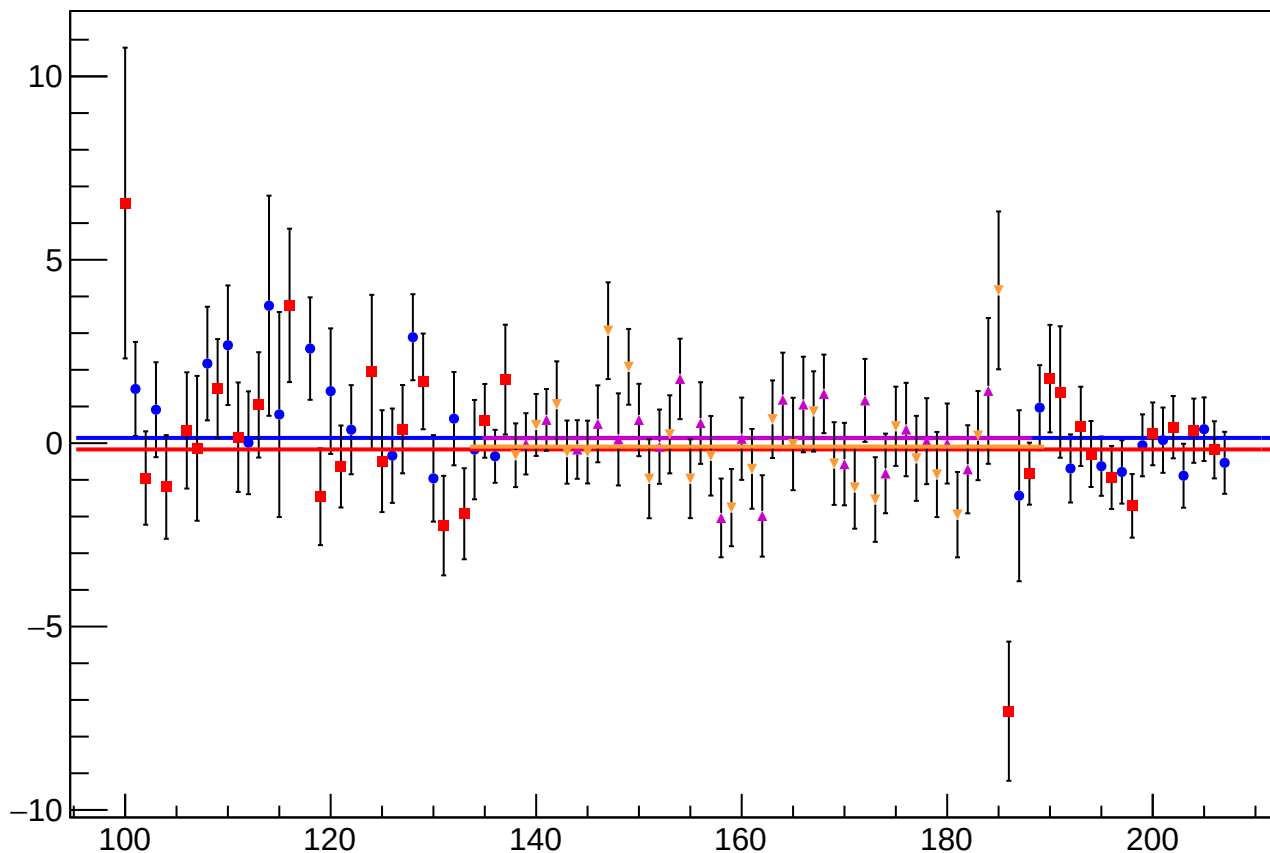
diff\_bpm\_4aY\_4acY\_avg\_rms vs Slug



|                             |                                    |                         |                                    |
|-----------------------------|------------------------------------|-------------------------|------------------------------------|
| Right In: 6466.424+/-1.227  | $\chi^2/\text{NDF}$ : 1707096.4/25 | + sign 6609.803+/-0.815 | $\chi^2/\text{NDF}$ : 2134850.0/50 |
| Left Out: 6722.984+/-1.090  | $\chi^2/\text{NDF}$ : 403317.7/24  | All: 6578.963+/-0.574   | $\chi^2/\text{NDF}$ : 5151085.7/10 |
| Right Out: 6453.257+/-1.181 | $\chi^2/\text{NDF}$ : 2371629.8/30 | - sign 6548.616+/-0.808 | $\chi^2/\text{NDF}$ : 3013394.3/53 |
| Left In: 6632.723+/-1.109   | $\chi^2/\text{NDF}$ : 629490.9/22  |                         |                                    |



# diff\_bpm\_4aY\_4acY\_dd\_mean vs Slug



Right In:  $0.143 \pm 0.218$   $\chi^2/\text{NDF}$ : 23.9/25

Left Out:  $-0.095 \pm 0.215$   $\chi^2/\text{NDF}$ : 27.3/24

Right Out:  $-0.170 \pm 0.211$   $\chi^2/\text{NDF}$ : 42.9/30

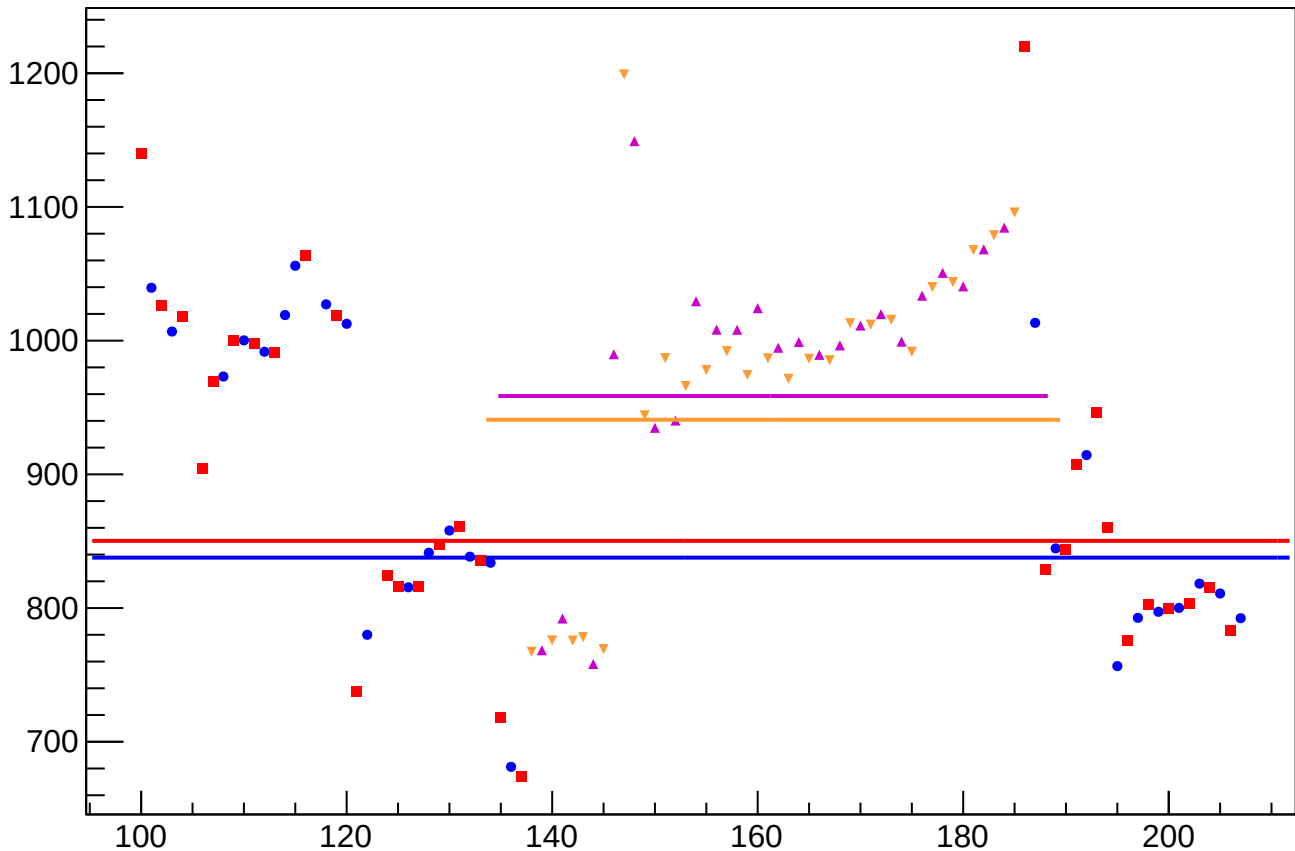
Left In:  $0.138 \pm 0.225$   $\chi^2/\text{NDF}$ : 16.5/22

+ sign  $0.023 \pm 0.153$   $\chi^2/\text{NDF}$ : 51.9/50

All:  $-0.001 \pm 0.109$   $\chi^2/\text{NDF}$ : 112.3/104

- sign  $-0.026 \pm 0.154$   $\chi^2/\text{NDF}$ : 60.4/53

# diff\_bpm\_4aY\_4acY\_dd\_rms vs Slug



Right In: 837.724 $\pm$ 0.154  $\chi^2$ /NDF: 387497.7/25

Left Out: 940.844 $\pm$ 0.152  $\chi^2$ /NDF:568776.0/24

Right Out: 850.281 $\pm$ 0.149  $\chi^2$ /NDF: 435360.4/30

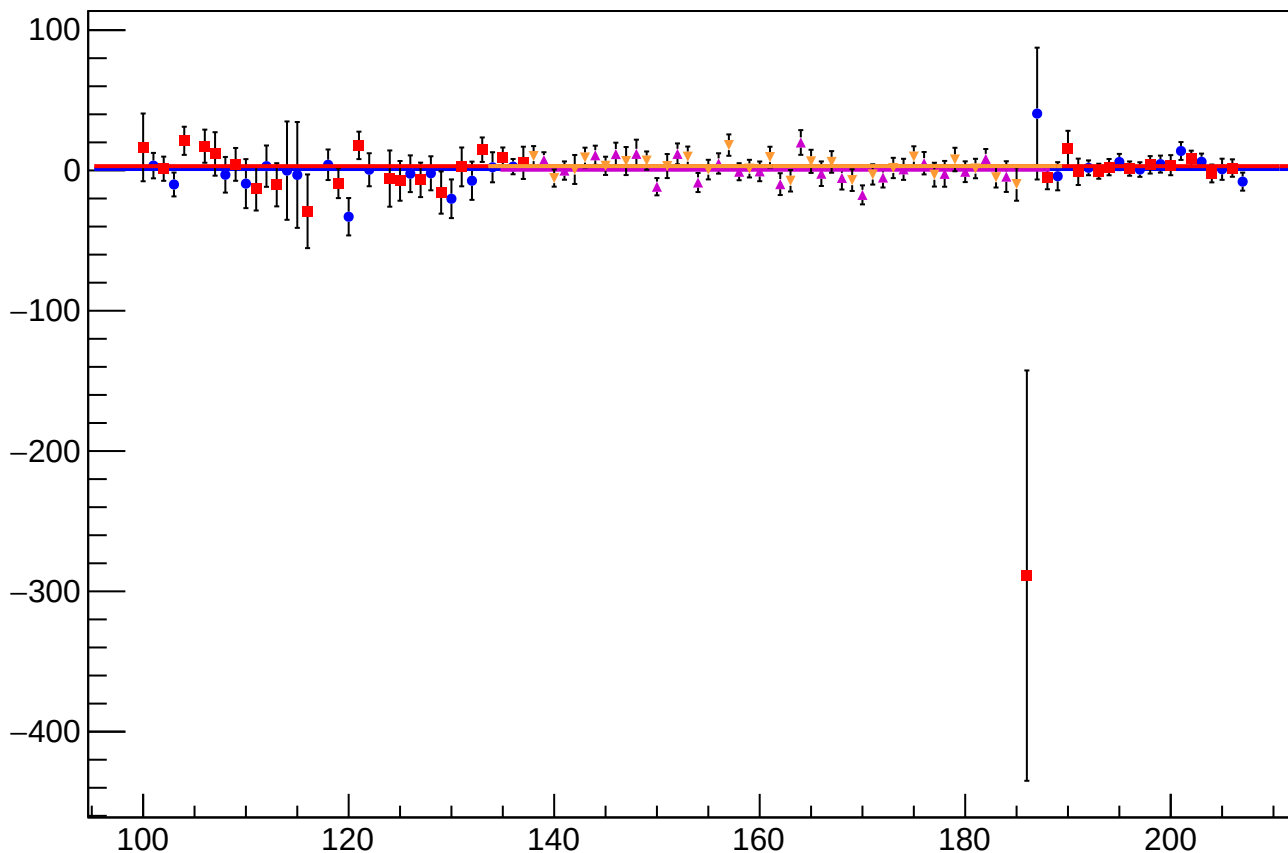
Left In: 958.578 $\pm$ 0.159  $\chi^2$ /NDF:456824.8/22

+ sign 889.852 $\pm$ 0.108  $\chi^2$ /NDF: 1182990.1/50

All: 895.310 $\pm$ 0.077  $\chi^2$ /NDF: 2326619.5/104

- sign 900.827 $\pm$ 0.109  $\chi^2$ /NDF: 1138520.0/53

# diff\_bpm\_4aY\_4eY\_avg\_mean vs Slug



Right In: 1.018 $\pm$ 1.656     $\chi^2$ /NDF: 20.7/25

Left Out: 3.099 $\pm$ 1.500     $\chi^2$ /NDF:18.6/24

Right Out: 3.061 $\pm$ 1.585     $\chi^2$ /NDF: 26.0/30

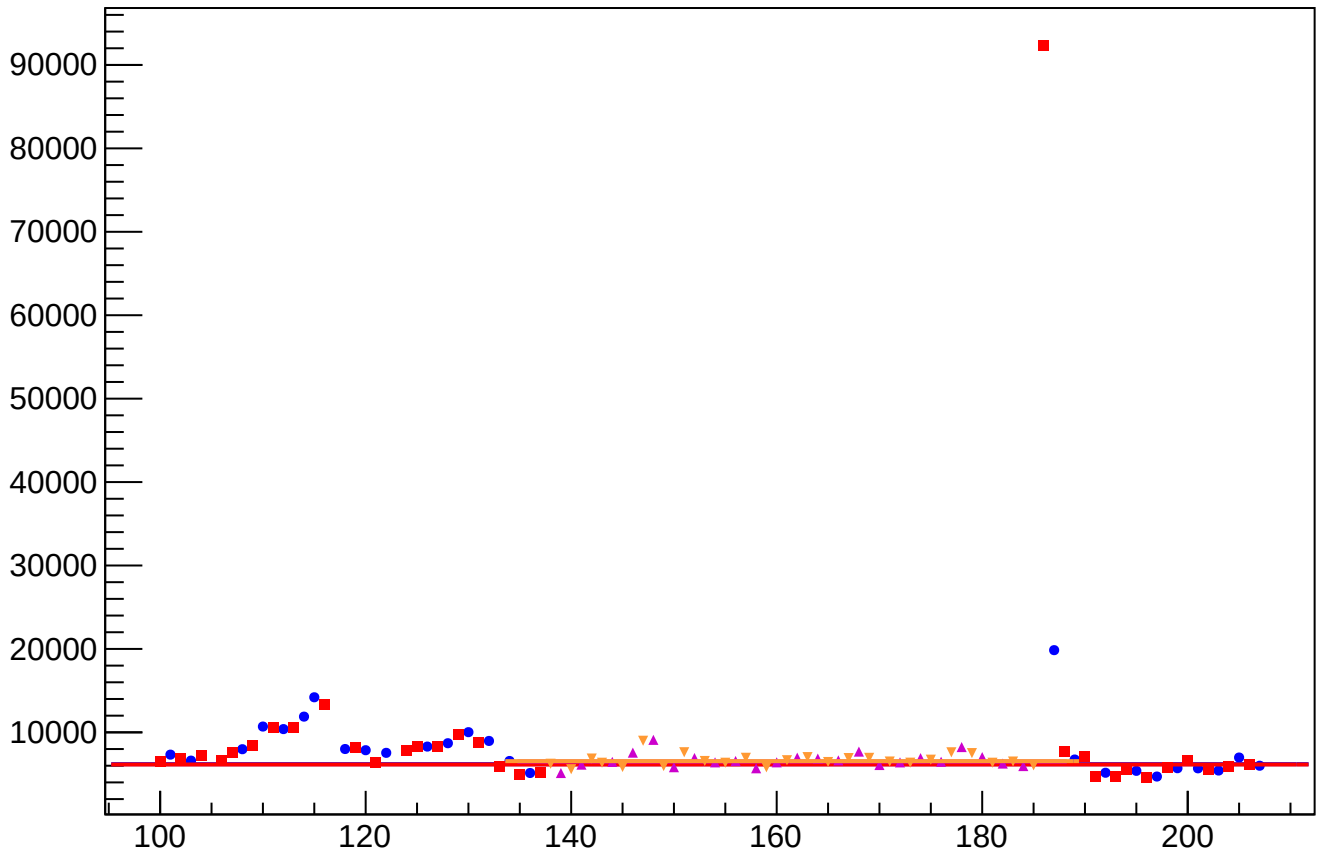
Left In: 0.519 $\pm$ 1.535     $\chi^2$ /NDF:32.0/22

+ sign 2.161 $\pm$ 1.112     $\chi^2$ /NDF: 40.2/50

All: 1.953 $\pm$ 0.783     $\chi^2$ /NDF: 99.7/104

- sign 1.749 $\pm$ 1.103     $\chi^2$ /NDF: 59.4/53

# diff\_bpm\_4aY\_4eY\_avg\_rms vs Slug



Right In: 6185.549 $\pm$ 1.171  $\chi^2$ /NDF: 1619411.9/25

Left Out: 6548.897 $\pm$ 1.061  $\chi^2$ /NDF:366072.4/24

Right Out: 6145.414 $\pm$ 1.121  $\chi^2$ /NDF: 2297245.9/30

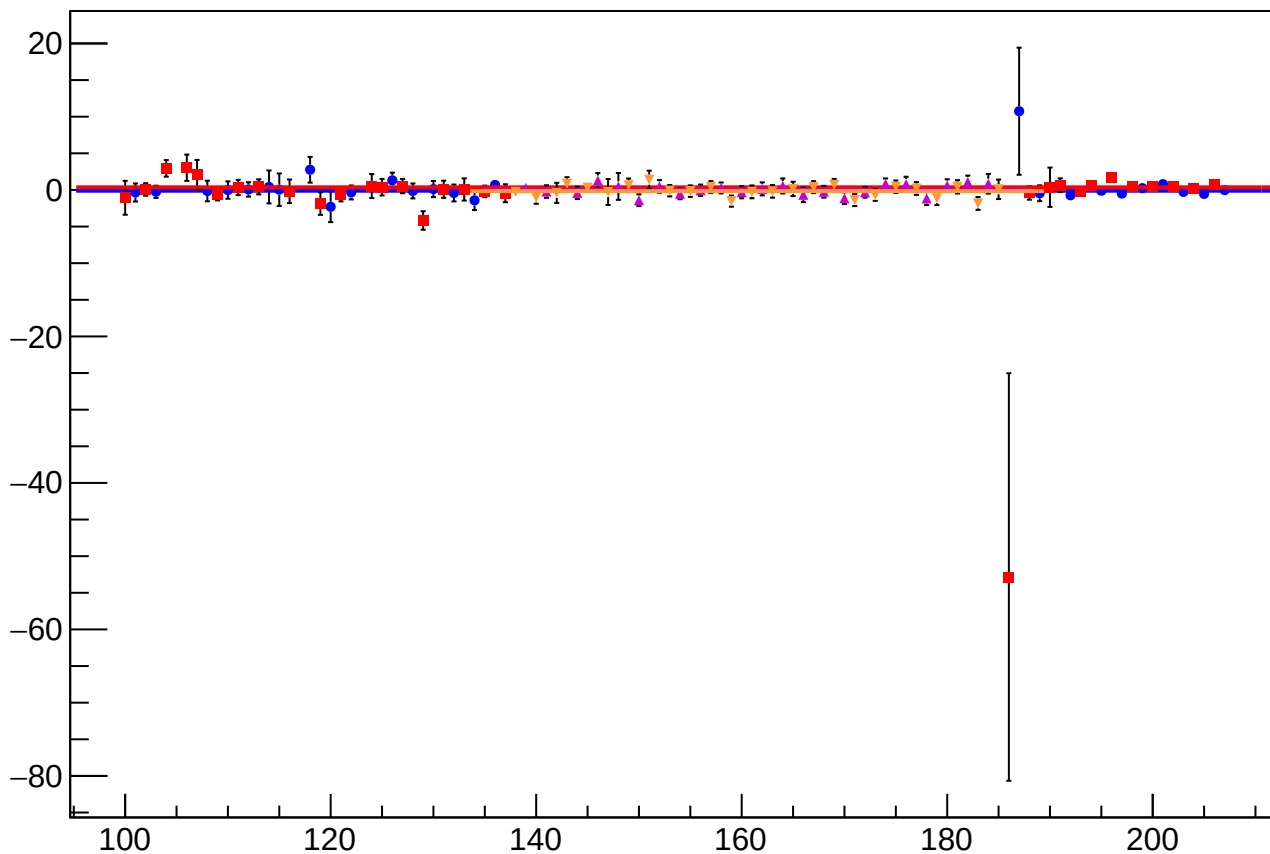
Left In: 6505.057 $\pm$ 1.085  $\chi^2$ /NDF:515496.8/22

+ sign 6385.076 $\pm$ 0.786  $\chi^2$ /NDF: 2038378.7/50

All: 6357.845 $\pm$ 0.554  $\chi^2$ /NDF: 4906630.8/10

- sign 6331.053 $\pm$ 0.780  $\chi^2$ /NDF: 2865871.5/53

# diff\_bpm\_4aY\_4eY\_dd\_mean vs Slug



Right In:  $-0.103 \pm 0.151$   $\chi^2/\text{NDF}$ : 15.8/25

Left Out:  $-0.162 \pm 0.172$   $\chi^2/\text{NDF}$ : 19.0/24

Right Out:  $0.358 \pm 0.149$   $\chi^2/\text{NDF}$ : 39.1/30

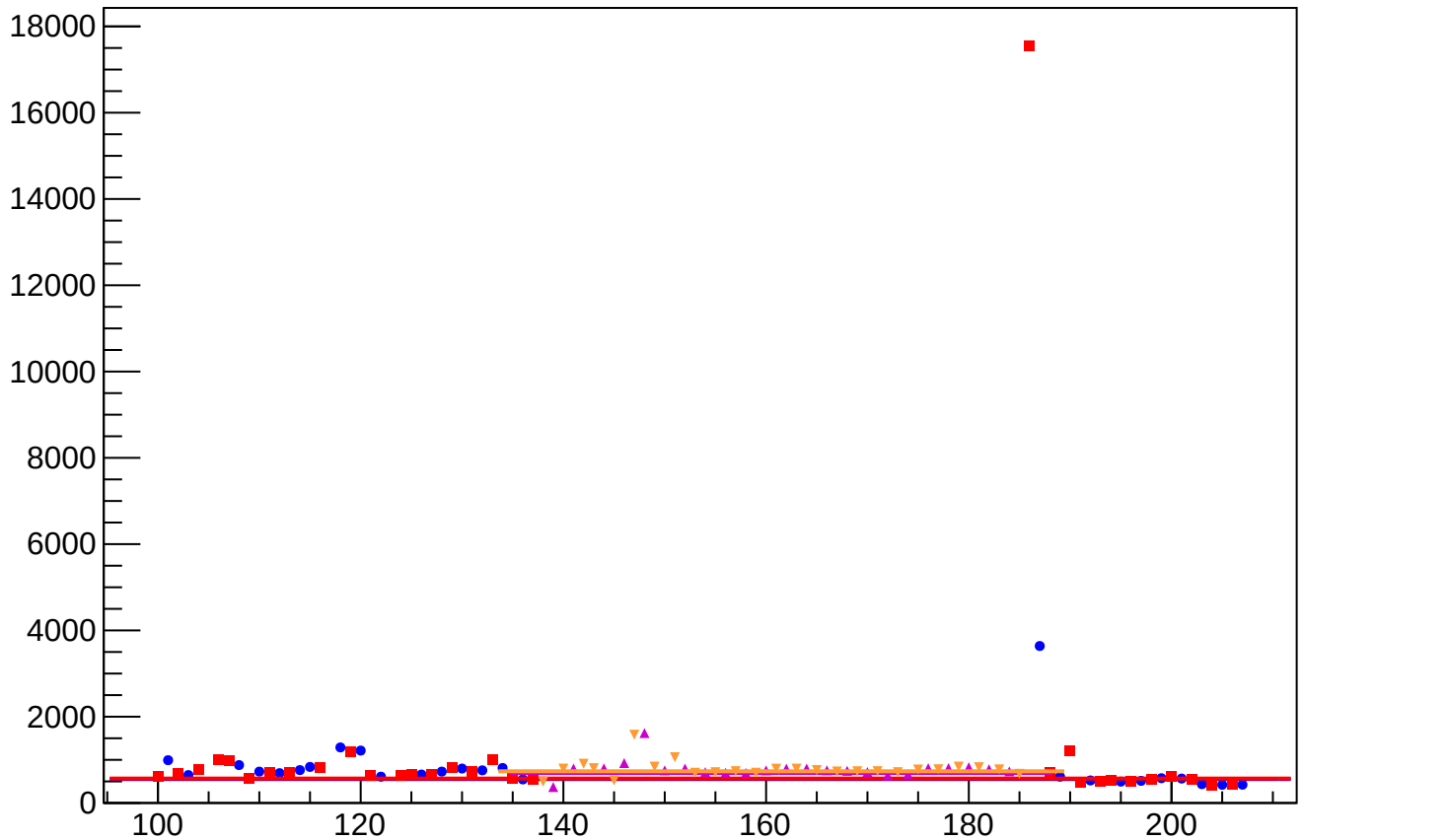
Left In:  $0.017 \pm 0.169$   $\chi^2/\text{NDF}$ : 15.2/22

+ sign  $-0.128 \pm 0.113$   $\chi^2/\text{NDF}$ : 34.8/50

All:  $0.043 \pm 0.080$   $\chi^2/\text{NDF}$ : 95.9/104

- sign  $0.210 \pm 0.112$   $\chi^2/\text{NDF}$ : 56.6/53

# diff\_bpm\_4aY\_4eY\_dd\_rms vs Slug



Right In:  $555.081 \pm 0.107$   $\chi^2/\text{NDF}$ : 2147592.0/25

Left Out:  $734.984 \pm 0.122$   $\chi^2/\text{NDF}$ : 1339748.9/24

Right Out:  $566.134 \pm 0.105$   $\chi^2/\text{NDF}$ : 2534529.5/30

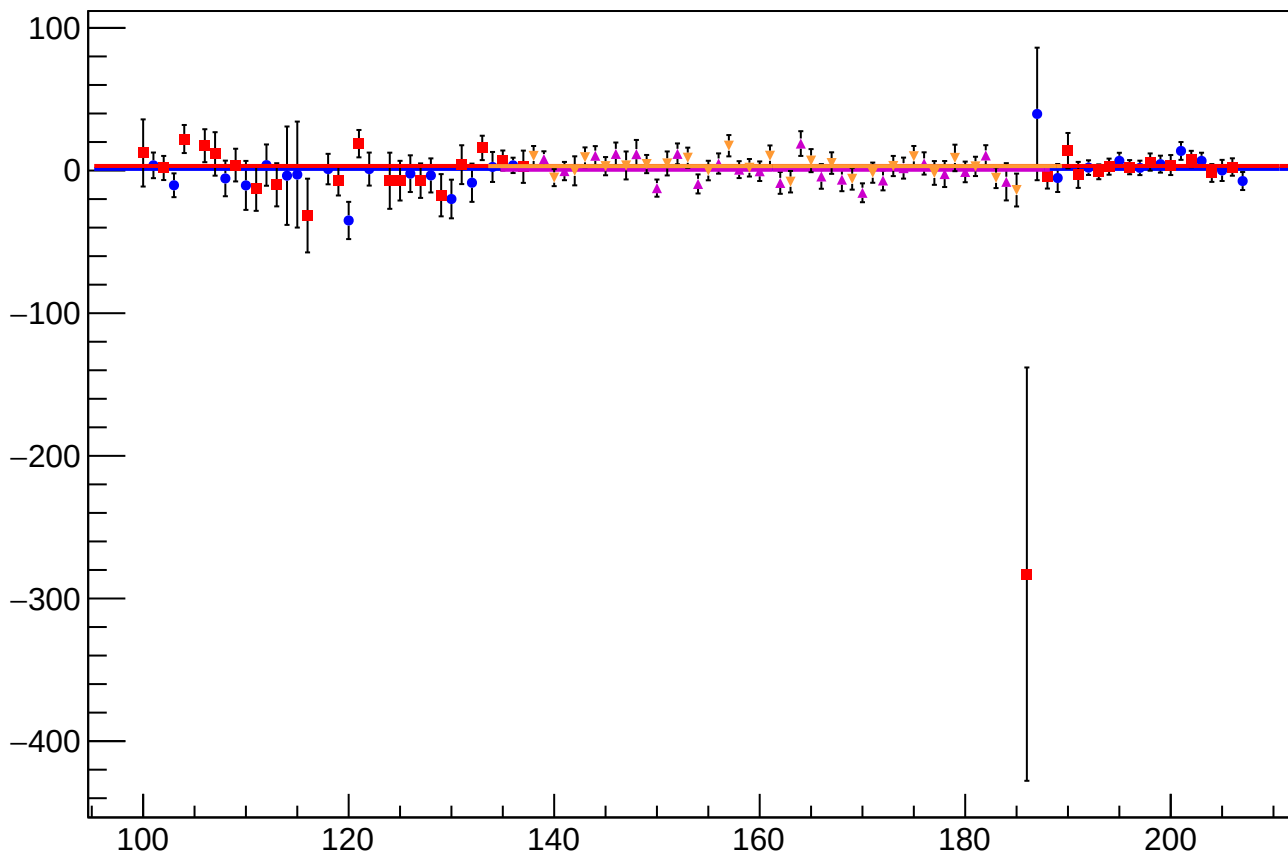
Left In:  $694.150 \pm 0.120$   $\chi^2/\text{NDF}$ : 2225094.5/22

+ sign  $633.180 \pm 0.080$   $\chi^2/\text{NDF}$ : 4723803.9/50

All:  $627.457 \pm 0.056$   $\chi^2/\text{NDF}$ : 10140458.9/10

- sign  $621.915 \pm 0.079$   $\chi^2/\text{NDF}$ : 5406630.8/53

# diff\_bpm\_4aY\_4ecY\_avg\_mean vs Slug



Right In:  $1.155 \pm 1.623$   $\chi^2/\text{NDF}$ : 23.2/25

Left Out:  $3.111 \pm 1.476$   $\chi^2/\text{NDF}$ : 18.7/24

Right Out:  $3.226 \pm 1.553$   $\chi^2/\text{NDF}$ : 27.1/30

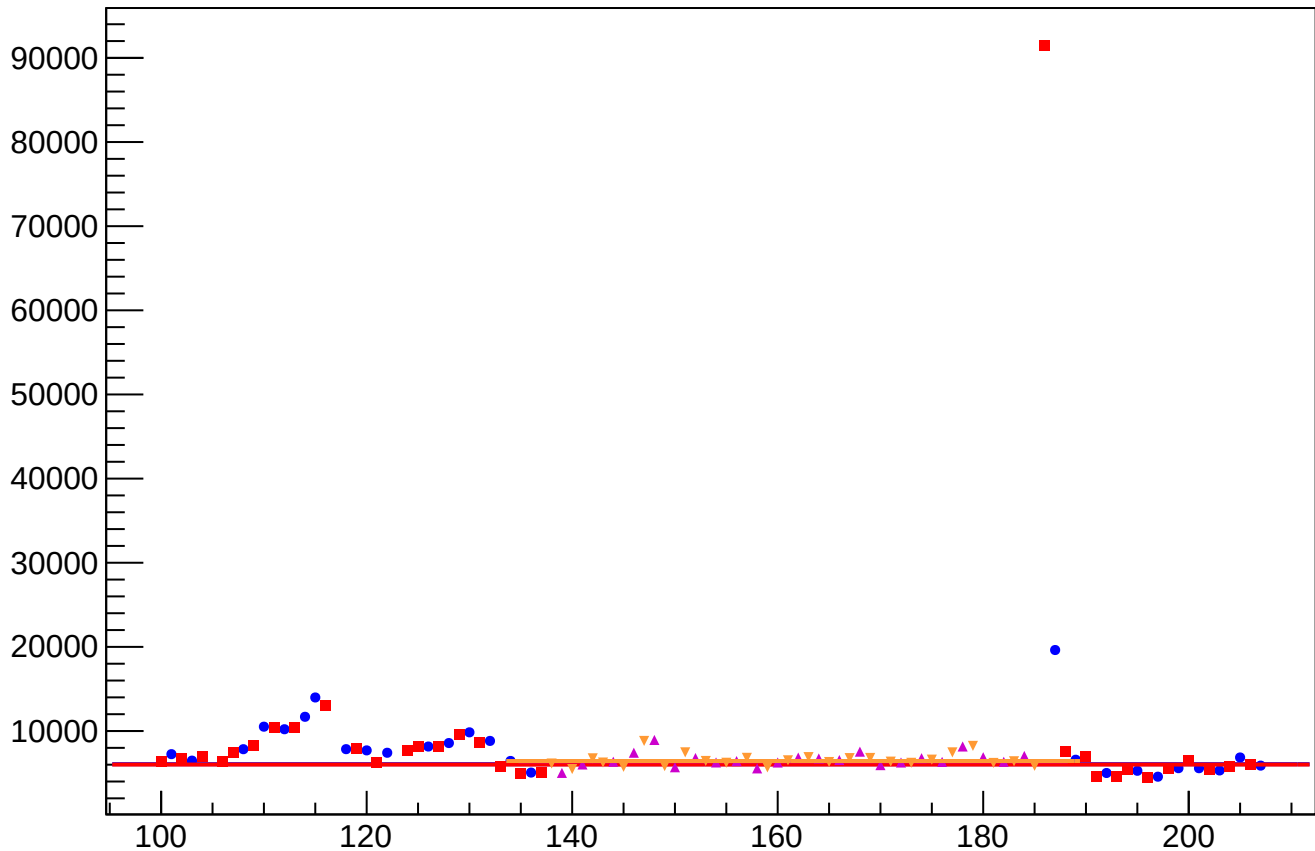
Left In:  $0.550 \pm 1.512$   $\chi^2/\text{NDF}$ : 33.6/22

+ sign  $2.226 \pm 1.092$   $\chi^2/\text{NDF}$ : 42.7/50

All:  $2.038 \pm 0.769$   $\chi^2/\text{NDF}$ : 104.9/104

- sign  $1.852 \pm 1.084$   $\chi^2/\text{NDF}$ : 62.2/53

# diff\_bpm\_4aY\_4ecY\_avg\_rms vs Slug



Right In: 6059.401 $\pm$ 1.148  $\chi^2$ /NDF: 1647393.0/25

Left Out: 6435.363 $\pm$ 1.044  $\chi^2$ /NDF: 417318.3/24

Right Out: 6015.544 $\pm$ 1.098  $\chi^2$ /NDF: 2318506.1/30

Left In: 6405.229 $\pm$ 1.069  $\chi^2$ /NDF: 525079.4/22

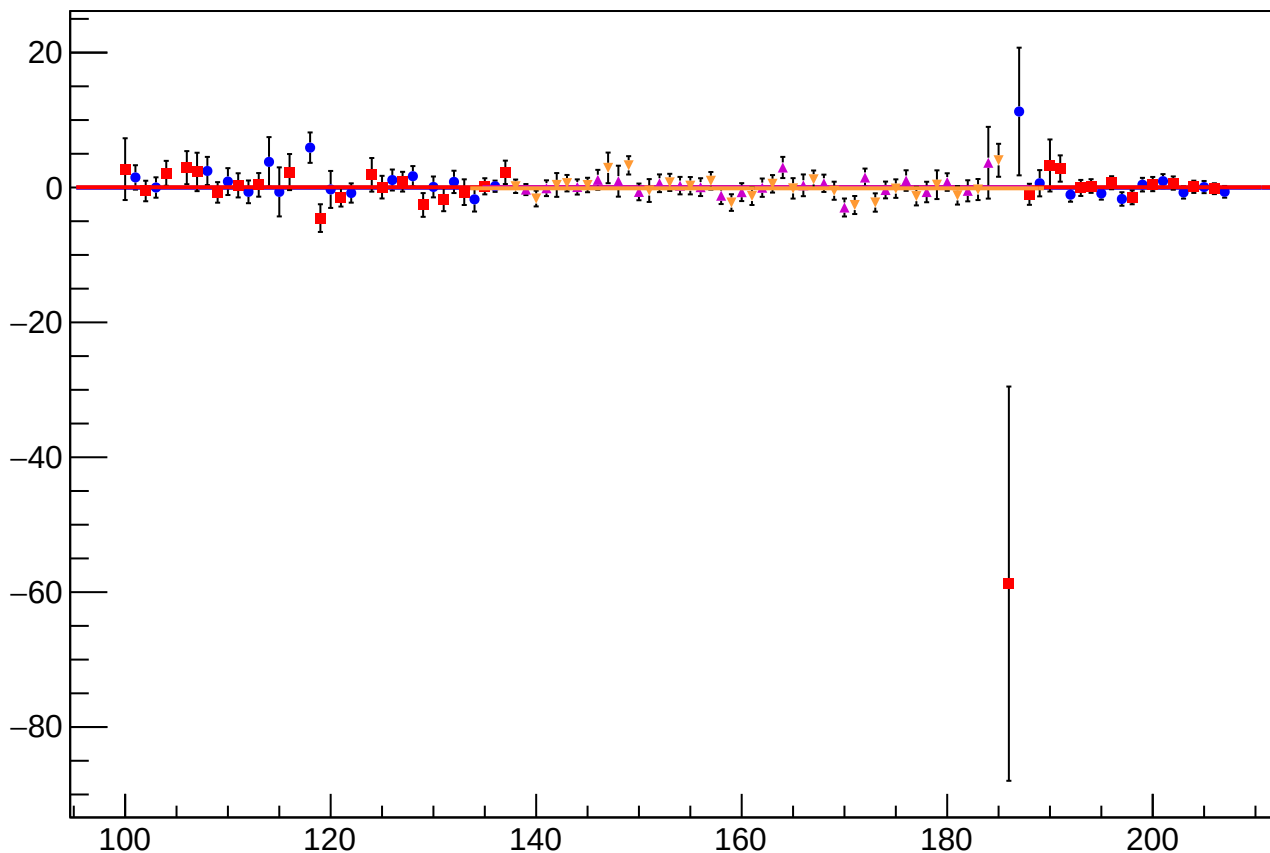
+ sign 6265.182 $\pm$ 0.772  $\chi^2$ /NDF: 2123430.9/50

All: 6240.177 $\pm$ 0.544  $\chi^2$ /NDF: 5033718.5/10

- sign 6215.563 $\pm$ 0.766  $\chi^2$ /NDF: 2908207.3/53



# diff\_bpm\_4aY\_4ecY\_dd\_mean vs Slug



Right In:  $-0.036 \pm 0.259$   $\chi^2/\text{NDF}$ : 22.2/25

Left Out:  $-0.122 \pm 0.273$   $\chi^2/\text{NDF}$ : 27.0/24

Right Out:  $0.041 \pm 0.257$   $\chi^2/\text{NDF}$ : 27.5/30

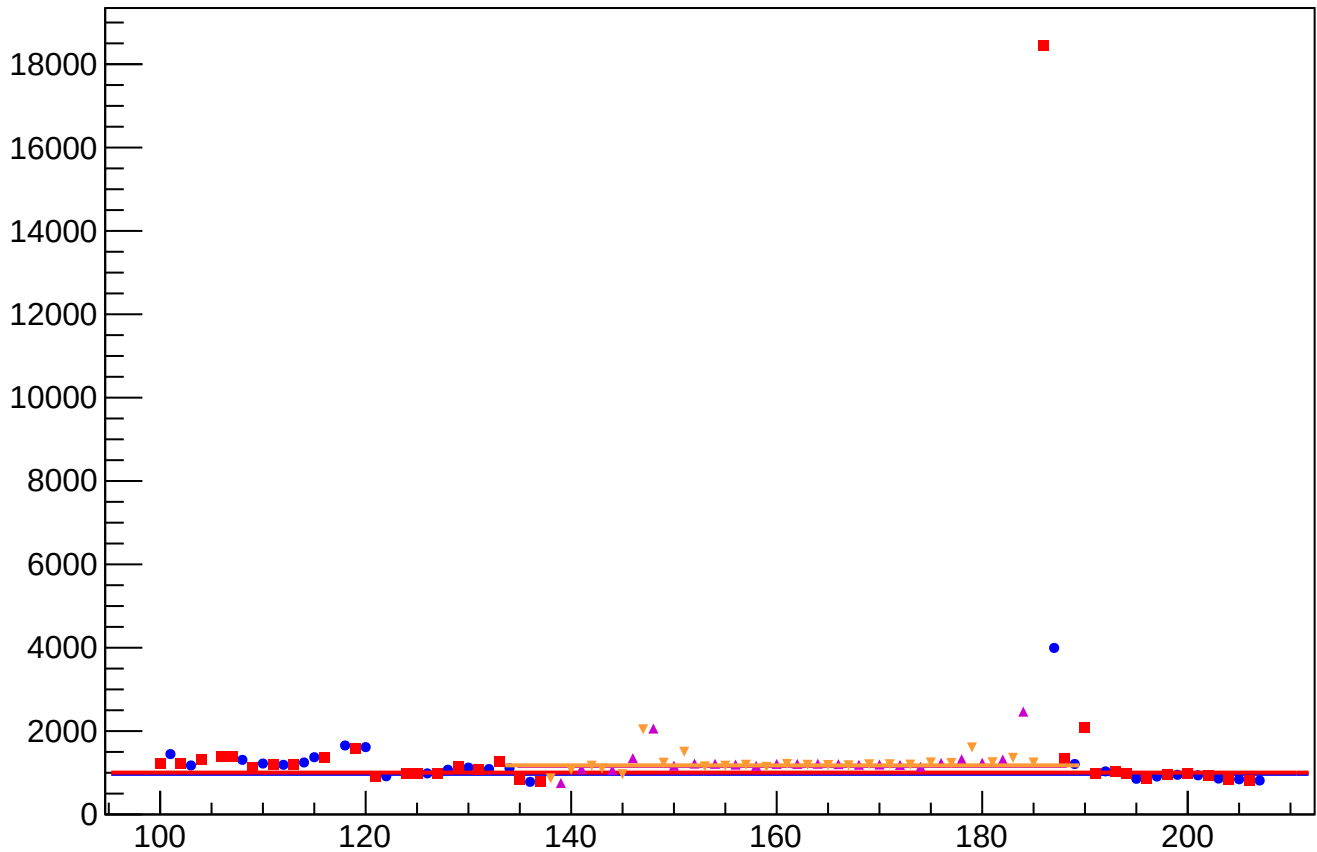
Left In:  $0.029 \pm 0.279$   $\chi^2/\text{NDF}$ : 14.4/22

+ sign  $-0.077 \pm 0.188$   $\chi^2/\text{NDF}$ : 49.3/50

All:  $-0.021 \pm 0.133$   $\chi^2/\text{NDF}$ : 91.3/104

- sign  $0.035 \pm 0.189$   $\chi^2/\text{NDF}$ : 41.9/53

# diff\_bpm\_4aY\_4ecY\_dd\_rms vs Slug



Right In: 973.833 $\pm$ 0.183  $\chi^2$ /NDF: 1196776.8/25

Left Out: 1177.742 $\pm$ 0.193  $\chi^2$ /NDF: 800899.0/24

+ sign 1070.199 $\pm$ 0.133  $\chi^2$ /NDF: 2584532.0/50

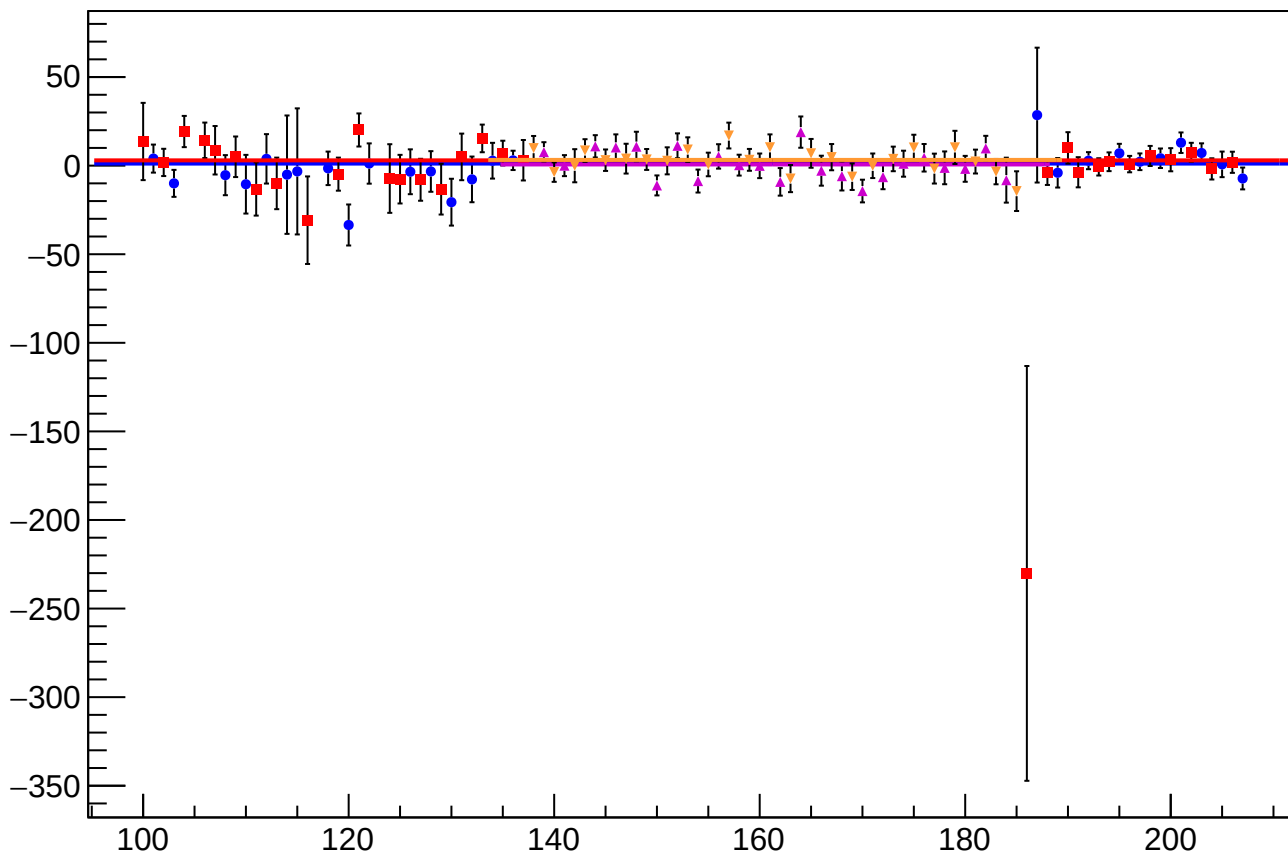
Right Out: 1004.084 $\pm$ 0.182  $\chi^2$ /NDF: 1792594.5/30

All: 1073.877 $\pm$ 0.094  $\chi^2$ /NDF: 5785866.7/10

Left In: 1163.827 $\pm$ 0.197  $\chi^2$ /NDF: 1052206.0/22

- sign 1077.597 $\pm$ 0.134  $\chi^2$ /NDF: 3199793.6/53

# diff\_bpm\_4eY\_4ecY\_avg\_mean vs Slug



Right In: 1.165 $\pm$ 1.529  $\chi^2$ /NDF: 25.6/25

Left Out: 3.234 $\pm$ 1.430  $\chi^2$ /NDF:17.9/24

Right Out: 2.980 $\pm$ 1.451  $\chi^2$ /NDF: 27.4/30

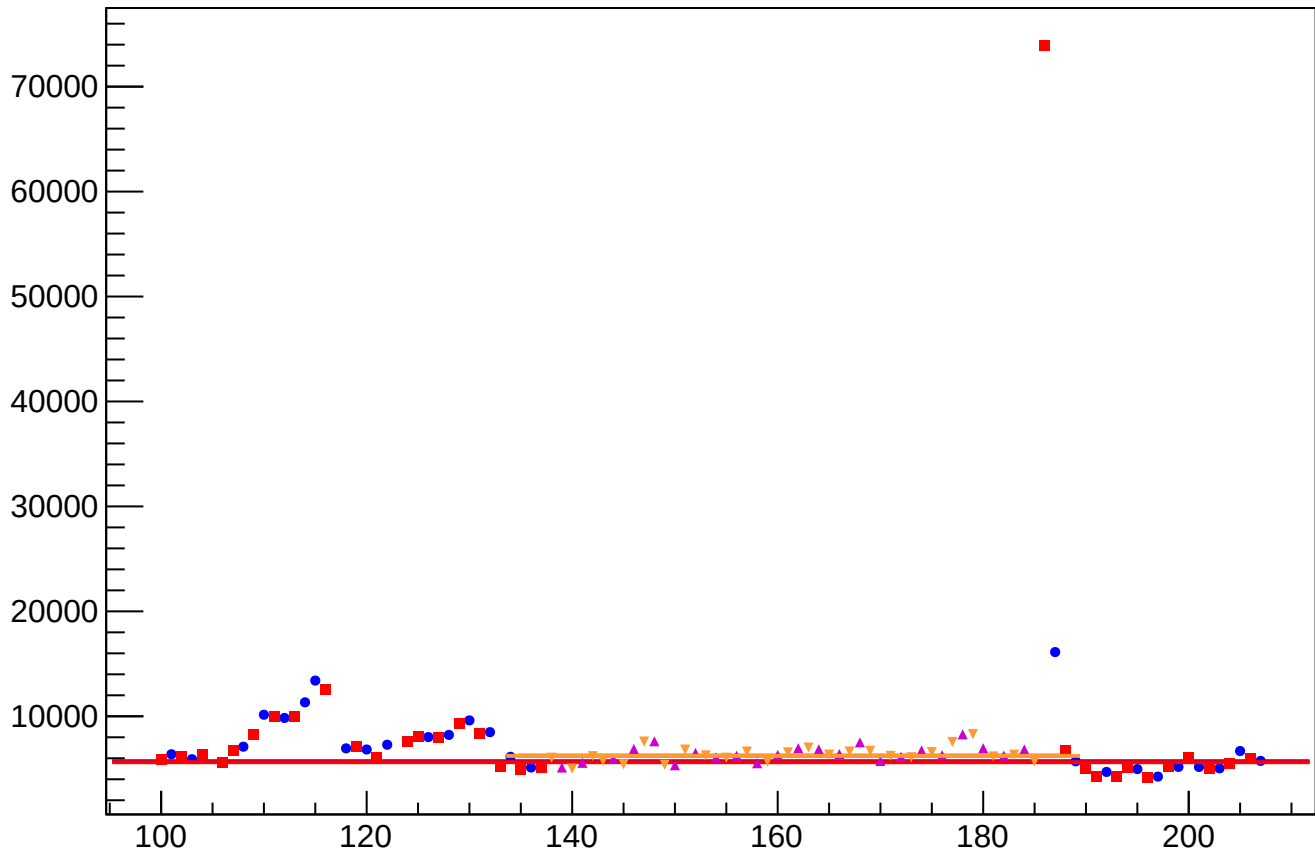
Left In: 0.667 $\pm$ 1.474  $\chi^2$ /NDF:32.4/22

+ sign 2.269 $\pm$ 1.044  $\chi^2$ /NDF: 44.5/50

All: 2.053 $\pm$ 0.735  $\chi^2$ /NDF: 105.7/104

- sign 1.841 $\pm$ 1.034  $\chi^2$ /NDF: 61.1/53

# diff\_bpm\_4eY\_4ecY\_avg\_rms vs Slug



Right In:  $5711.790 \pm 1.081$   $\chi^2/\text{NDF}: 1635058.6/25$

Left Out:  $6228.654 \pm 1.011$   $\chi^2/\text{NDF}: 470851.7/24$

Right Out:  $5627.979 \pm 1.026$   $\chi^2/\text{NDF}: 2339253.9/30$

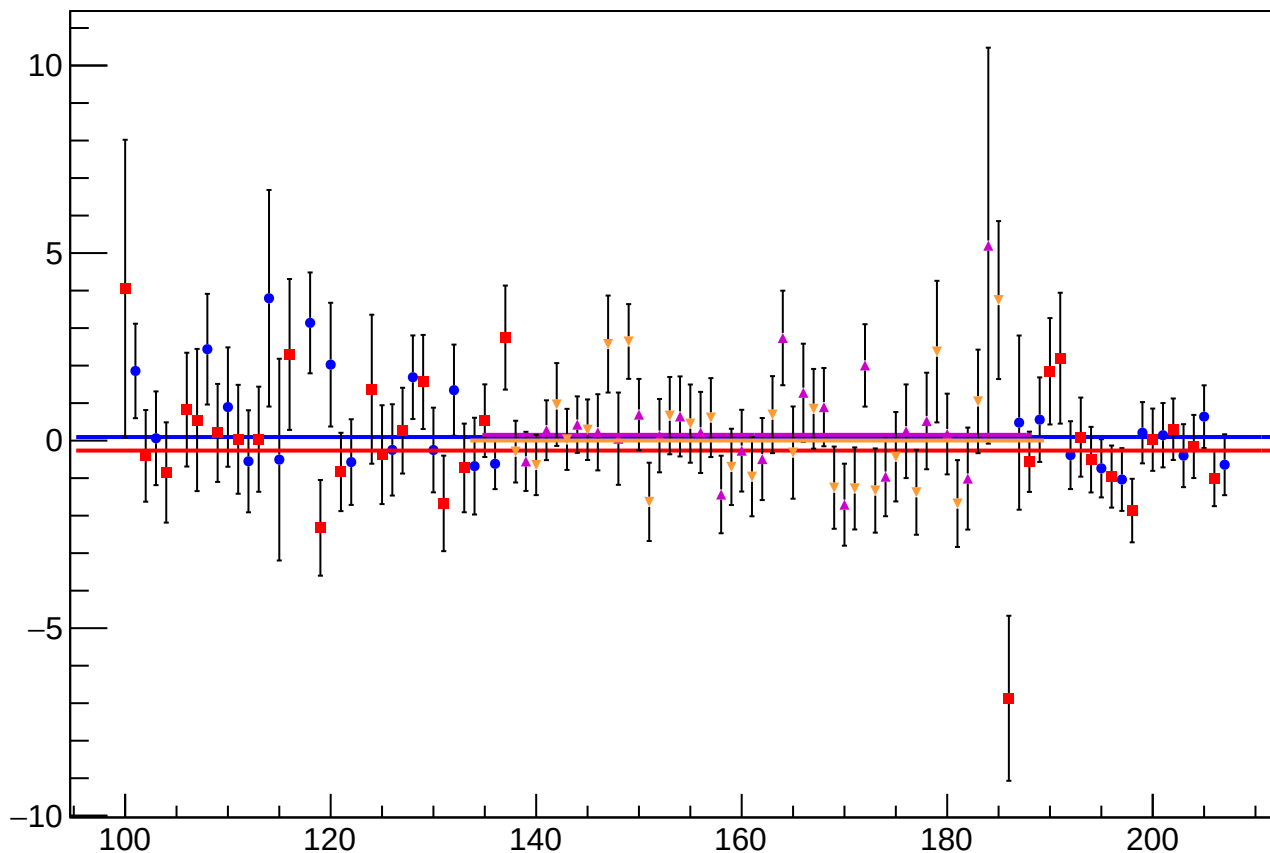
Left In:  $6246.800 \pm 1.042$   $\chi^2/\text{NDF}: 484982.9/22$

+ sign  $5987.552 \pm 0.738$   $\chi^2/\text{NDF}: 2227861.3/50$

All:  $5959.830 \pm 0.520$   $\chi^2/\text{NDF}: 5233920.1/10$

- sign  $5932.646 \pm 0.731$   $\chi^2/\text{NDF}: 3003267.1/53$

diff\_bpm\_4eY\_4ecY\_dd\_mean vs Slug



Right In:  $0.096 \pm 0.209$   $\chi^2/\text{NDF}$ : 23.3/25

Left Out:  $0.003 \pm 0.212$   $\chi^2/\text{NDF}$ : 31.6/24

Right Out:  $-0.265 \pm 0.203$   $\chi^2/\text{NDF}$ : 36.0/30

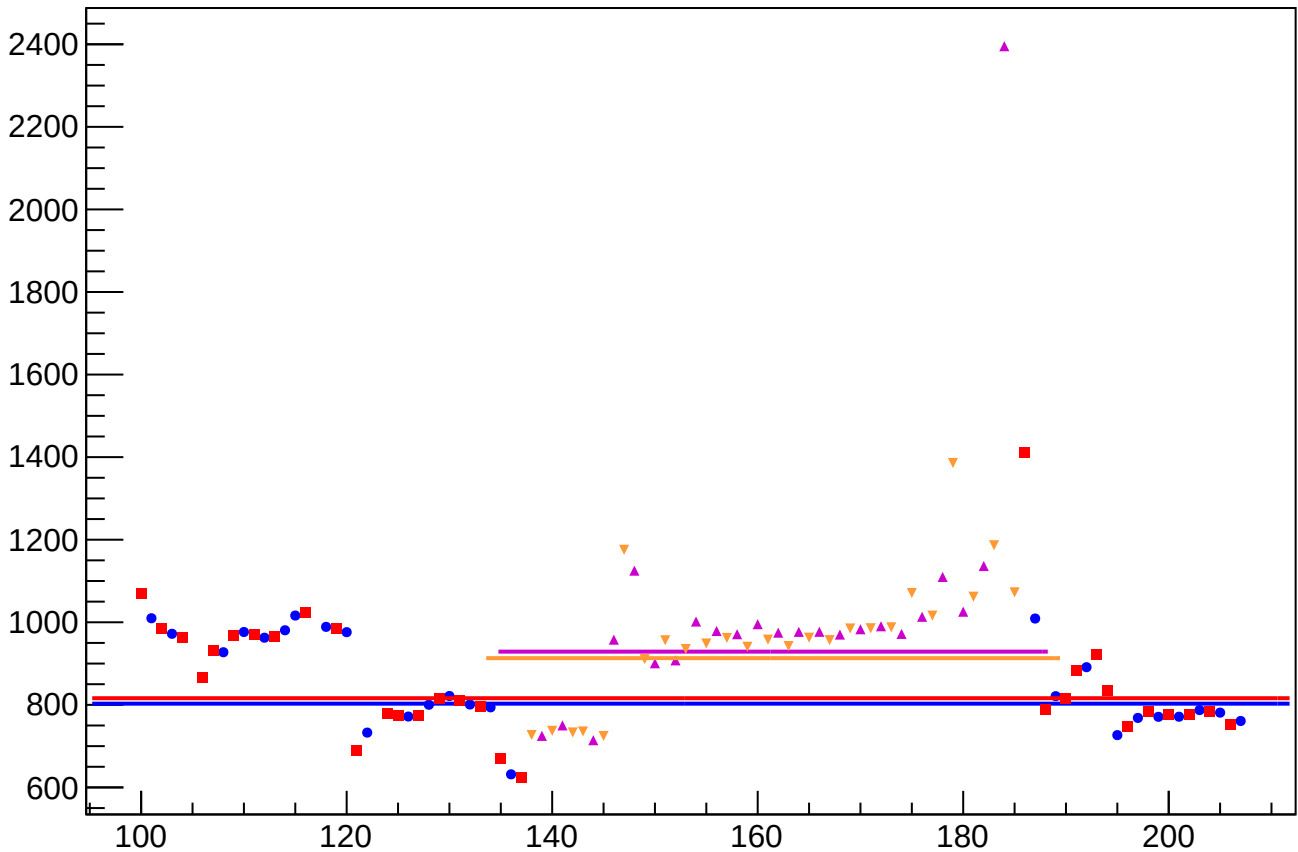
Left In:  $0.154 \pm 0.221$   $\chi^2/\text{NDF}$ : 18.4/22

+ sign  $0.050 \pm 0.149$   $\chi^2/\text{NDF}$ : 55.1/50

All:  $-0.011 \pm 0.105$   $\chi^2/\text{NDF}$ : 111.8/104

- sign  $-0.073 \pm 0.149$   $\chi^2/\text{NDF}$ : 56.4/53

# diff\_bpm\_4eY\_4ecY\_dd\_rms vs Slug



Right In: 802.873+/-0.148  $\chi^2/\text{NDF}$ : 446322.7/25

Left Out: 913.070+/-0.150  $\chi^2/\text{NDF}$ : 889200.0/24

Right Out: 816.061+/-0.143  $\chi^2/\text{NDF}$ : 545187.7/30

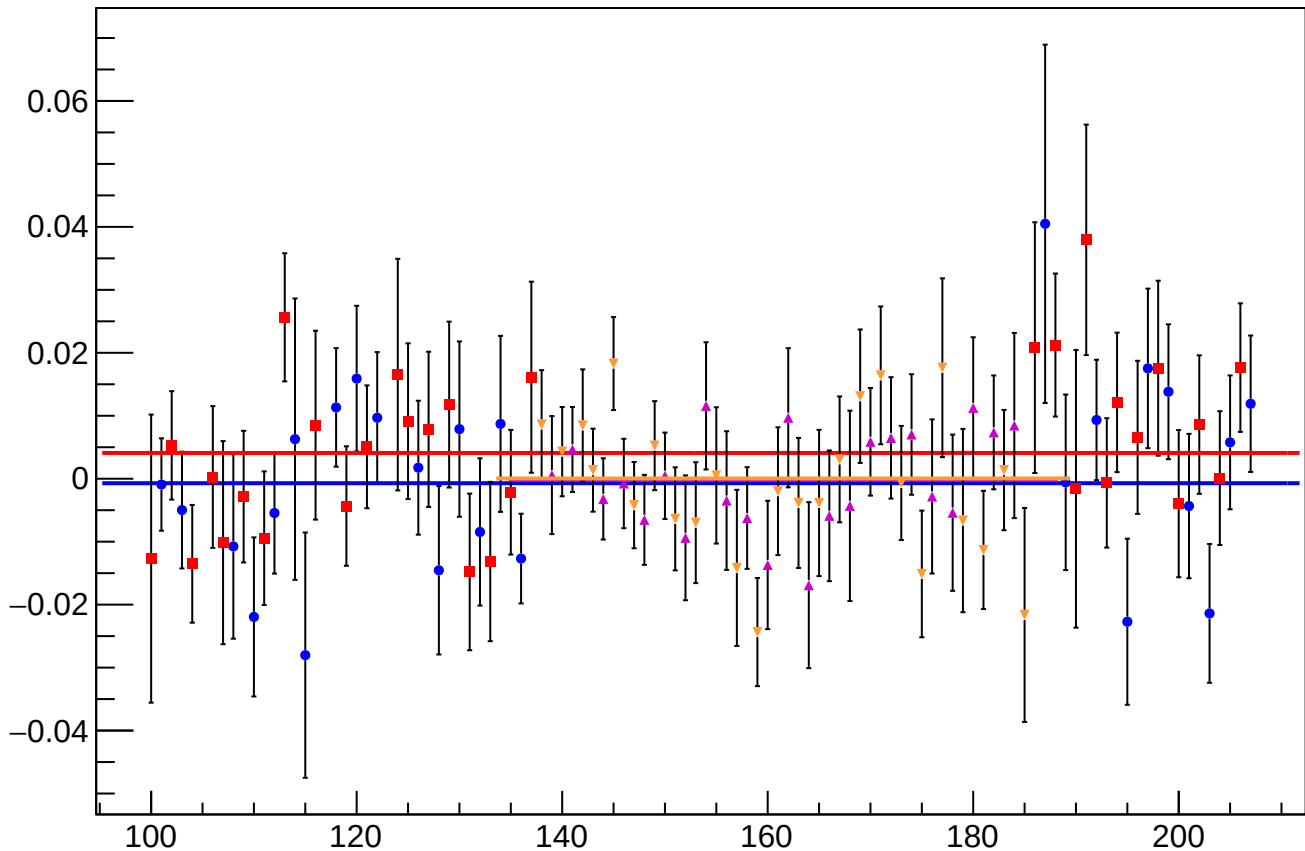
Left In: 928.913+/-0.156  $\chi^2/\text{NDF}$ : 769065.0/22

+ sign 857.237+/-0.105  $\chi^2/\text{NDF}$ : 1609517.2/50

All: 862.425+/-0.075  $\chi^2/\text{NDF}$ : 3211551.5/104

- sign 867.656+/-0.106  $\chi^2/\text{NDF}$ : 1597155.1/53

# diff\_dispE\_bpm12X\_mean vs Slug



Right In:  $-0.001 \pm 0.002$   $\chi^2/\text{NDF}$ : 31.0/25

Left Out:  $0.000 \pm 0.002$   $\chi^2/\text{NDF}$ : 31.1/24

Right Out:  $0.004 \pm 0.002$   $\chi^2/\text{NDF}$ : 29.4/30

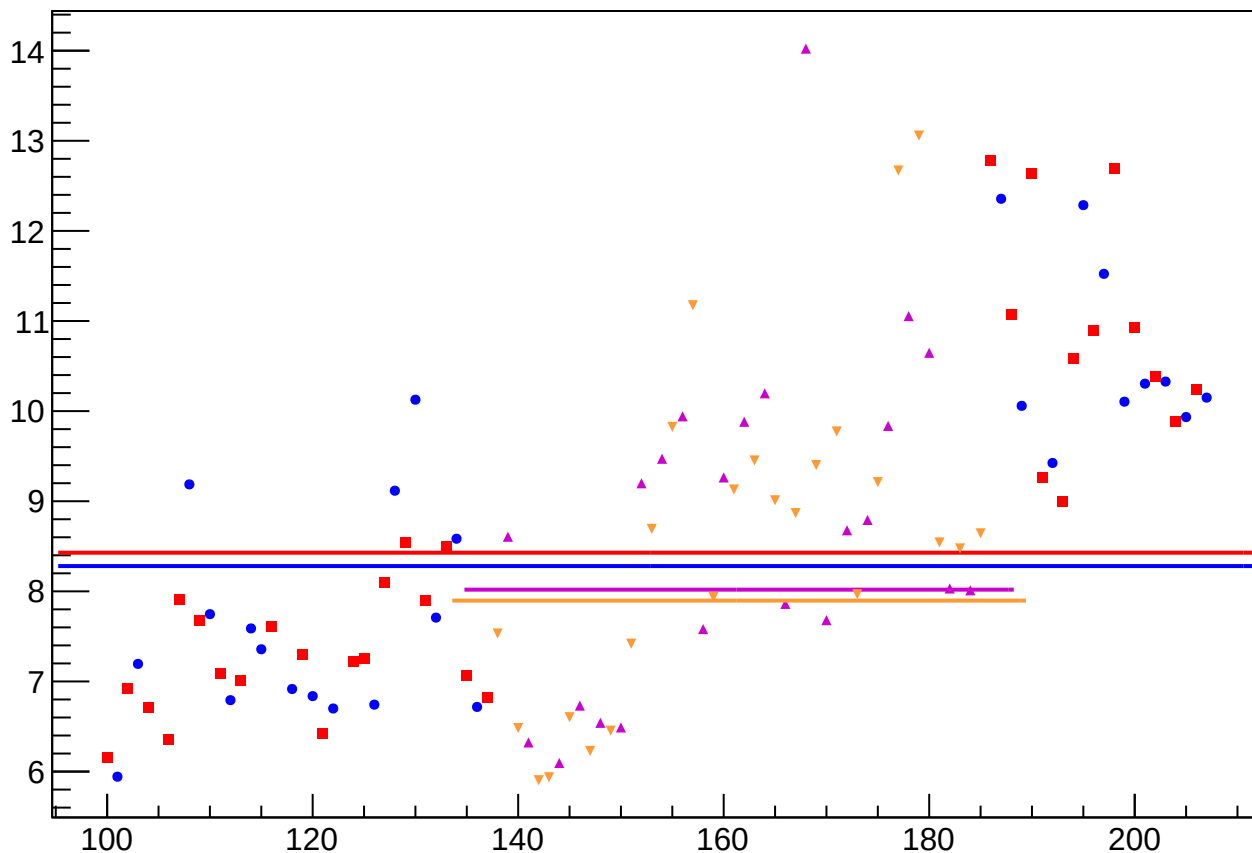
Left In:  $-0.000 \pm 0.002$   $\chi^2/\text{NDF}$ : 12.8/22

+ sign  $-0.000 \pm 0.001$   $\chi^2/\text{NDF}$ : 62.2/50

All:  $0.001 \pm 0.001$   $\chi^2/\text{NDF}$ : 107.6/104

- sign  $0.002 \pm 0.001$   $\chi^2/\text{NDF}$ : 44.4/53

# diff\_dispE\_bpm12X\_rms vs Slug



Right In:  $8.280 \pm 0.002$   $\chi^2/\text{NDF}$ : 1316748.9/25

Left Out:  $7.897 \pm 0.001$   $\chi^2/\text{NDF}$ : 1590867.7/24

Right Out:  $8.429 \pm 0.002$   $\chi^2/\text{NDF}$ : 1397161.5/30

Left In:  $8.019 \pm 0.001$   $\chi^2/\text{NDF}$ : 1455714.6/22

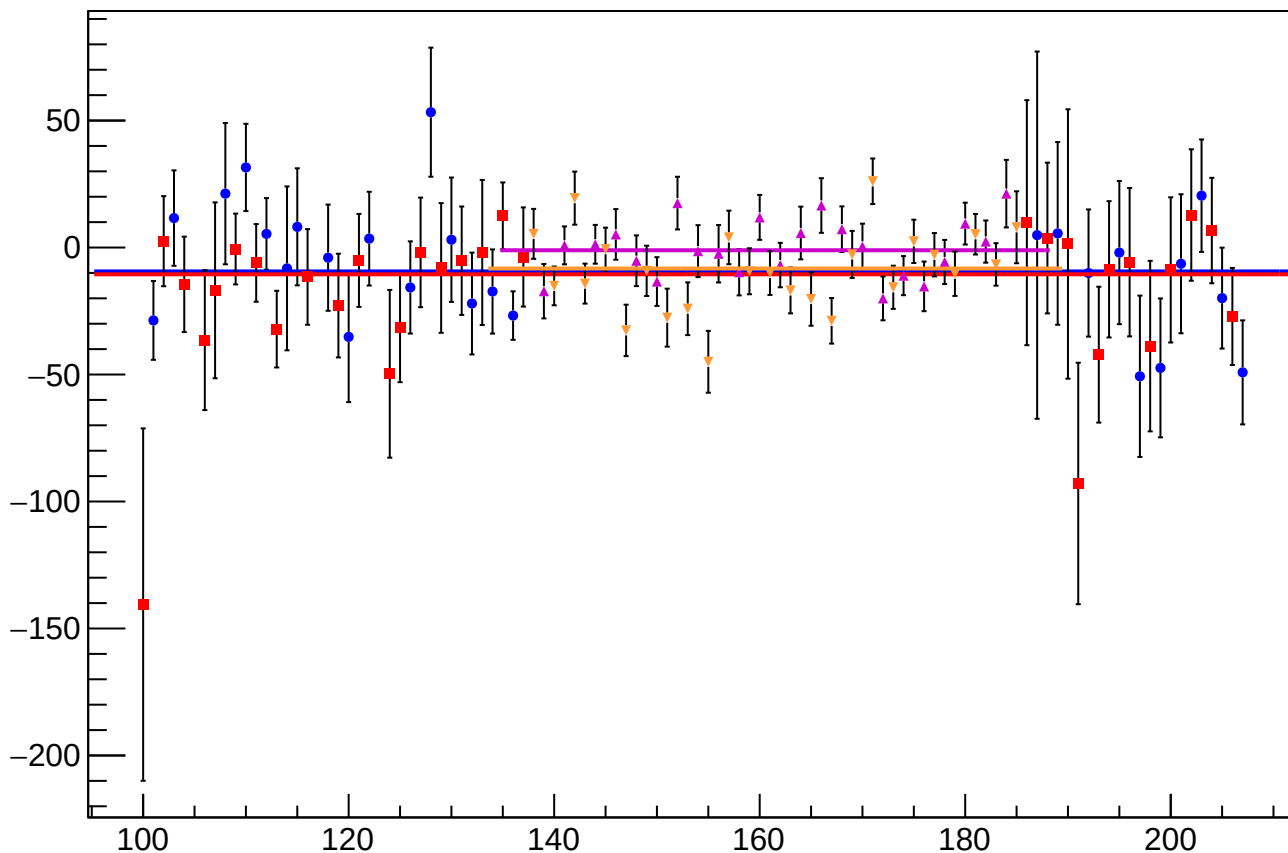
+ sign  $8.056 \pm 0.001$   $\chi^2/\text{NDF}$ : 2943303.6/50

All:  $8.128 \pm 0.001$   $\chi^2/\text{NDF}$ : 5847795.5/104

- sign  $8.202 \pm 0.001$   $\chi^2/\text{NDF}$ : 2893838.6/53



# diff\_targ\_positionX\_mean vs Slug



Right In:  $-9.417 \pm 3.950$   $\chi^2/\text{NDF}$ : 33.1/25

Left Out:  $-8.256 \pm 1.849$   $\chi^2/\text{NDF}$ : 62.2/24

Right Out:  $-10.539 \pm 3.953$   $\chi^2/\text{NDF}$ : 21.9/30

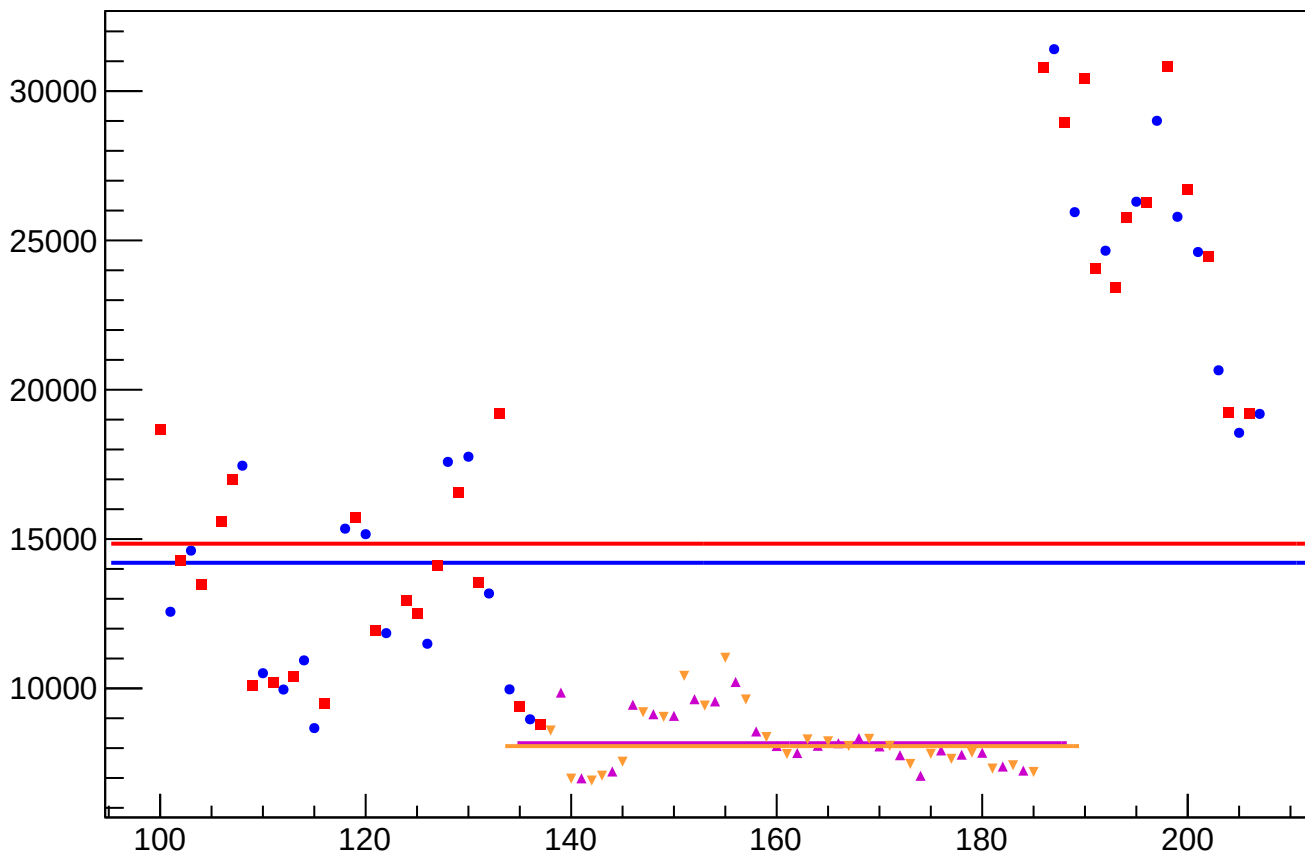
Left In:  $-1.072 \pm 1.921$   $\chi^2/\text{NDF}$ : 28.8/22

+ sign  $-8.465 \pm 1.675$   $\chi^2/\text{NDF}$ : 95.4/50

All:  $-5.759 \pm 1.203$   $\chi^2/\text{NDF}$ : 156.1/104

- sign  $-2.880 \pm 1.728$   $\chi^2/\text{NDF}$ : 55.4/53

diff\_targ\_positionX\_rms vs Slug



Right In: 14205.848 $\pm$ 2.793  $\chi^2$ /NDF: 3871903.2/25

Left Out: 8066.710 $\pm$ 1.308  $\chi^2$ /NDF:498146.1/24

+ sign 9170.354 $\pm$ 1.184  $\chi^2$ /NDF: 8331852.4/50

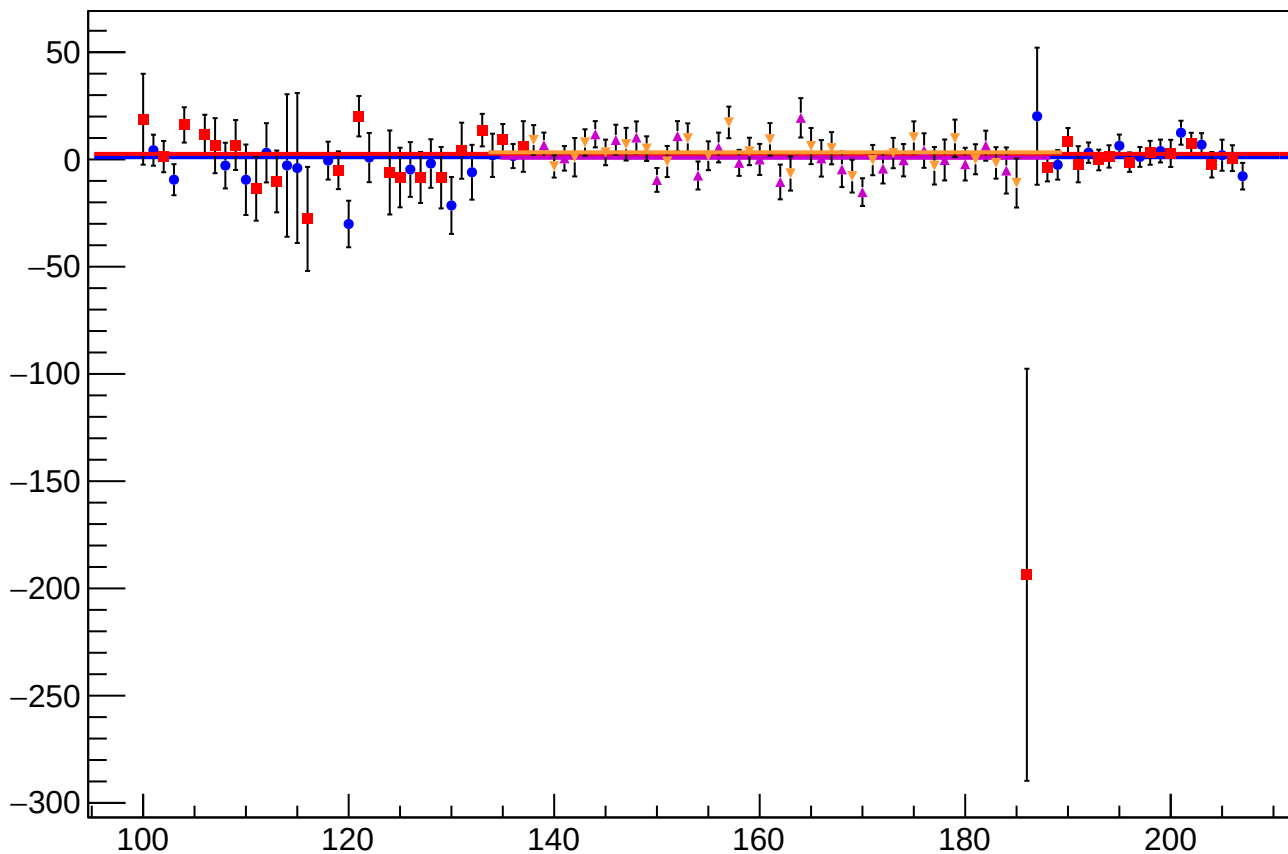
Right Out: 14845.217 $\pm$ 2.795  $\chi^2$ /NDF: 4493367.1/30

All: 9300.849 $\pm$ 0.850  $\chi^2$ /NDF: 17905017.4/1

Left In: 8163.472 $\pm$ 1.358  $\chi^2$ /NDF:432350.3/22

- sign 9439.688 $\pm$ 1.222  $\chi^2$ /NDF: 9548109.4/53

# diff\_targ\_positionY\_mean vs Slug



Right In:  $1.043 \pm 1.490$   $\chi^2/\text{NDF}$ : 24.2/25

Left Out:  $3.330 \pm 1.431$   $\chi^2/\text{NDF}$ : 16.9/24

Right Out:  $2.597 \pm 1.401$   $\chi^2/\text{NDF}$ : 26.9/30

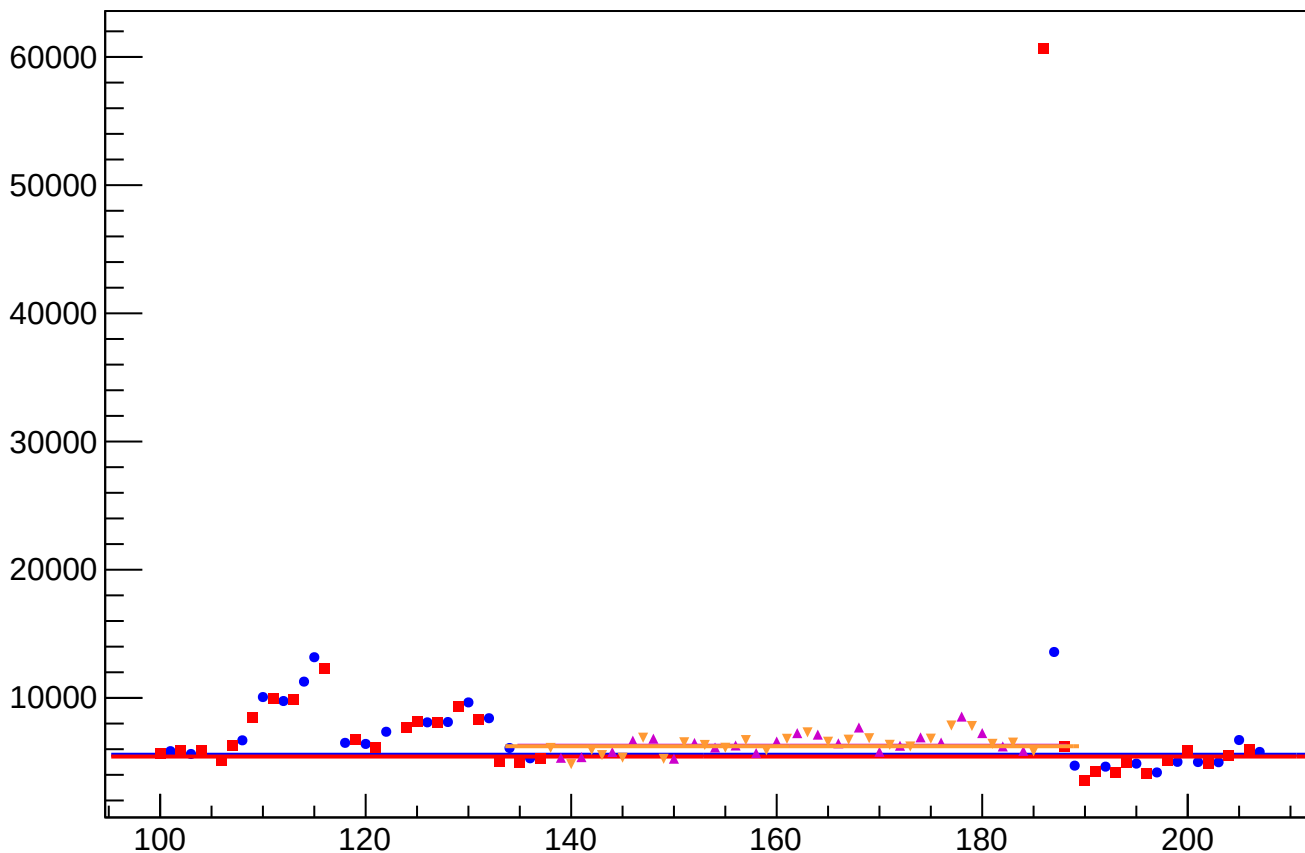
Left In:  $0.797 \pm 1.479$   $\chi^2/\text{NDF}$ : 29.4/22

+ sign  $2.233 \pm 1.032$   $\chi^2/\text{NDF}$ : 42.4/50

All:  $1.986 \pm 0.724$   $\chi^2/\text{NDF}$ : 99.6/104

- sign  $1.745 \pm 1.017$   $\chi^2/\text{NDF}$ : 57.1/53

# diff\_targ\_positionY\_rms vs Slug



Right In: 5567.654+/-1.054  $\chi^2/\text{NDF}$ : 1639779.5/25

Left Out: 6230.934+/-1.012  $\chi^2/\text{NDF}$ : 532579.4/24

Right Out: 5425.758+/-0.990  $\chi^2/\text{NDF}$ : 2496250.2/30

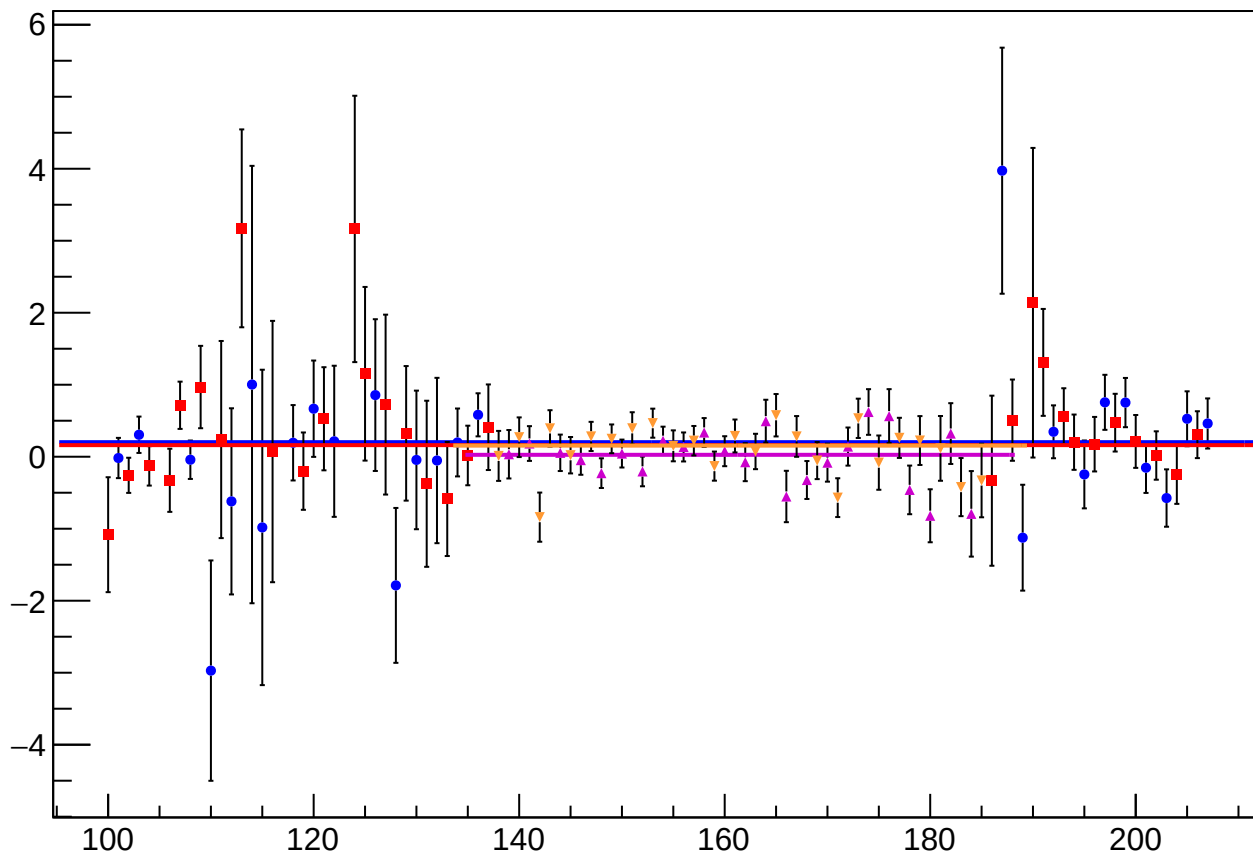
Left In: 6270.834+/-1.046  $\chi^2/\text{NDF}$ : 504723.6/22

+ sign 5912.786+/-0.730  $\chi^2/\text{NDF}$ : 2378590.0/50

All: 5868.450+/-0.512  $\chi^2/\text{NDF}$ : 5731178.3/10

- sign 5825.401+/-0.719  $\chi^2/\text{NDF}$ : 3345311.4/53

# diff\_targ\_thetaX\_mean vs Slug



Right In:  $0.202 \pm 0.088$   $\chi^2/\text{NDF}$ : 32.7/25

Left Out:  $0.156 \pm 0.052$   $\chi^2/\text{NDF}$ : 32.3/24

Right Out:  $0.161 \pm 0.086$   $\chi^2/\text{NDF}$ : 29.9/30

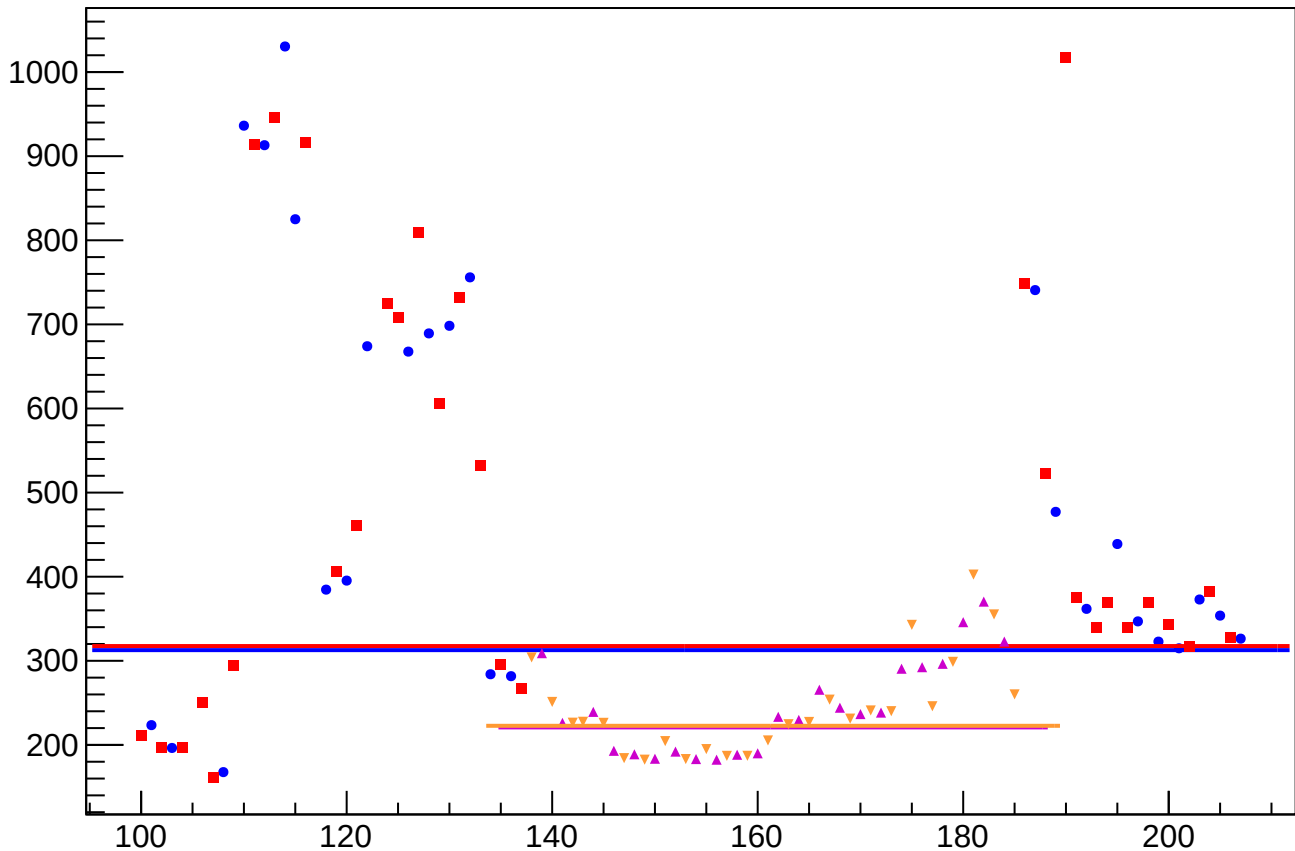
Left In:  $0.026 \pm 0.053$   $\chi^2/\text{NDF}$ : 29.8/22

+ sign  $0.168 \pm 0.045$   $\chi^2/\text{NDF}$ : 65.2/50

All:  $0.116 \pm 0.032$   $\chi^2/\text{NDF}$ : 129.3/104

- sign  $0.063 \pm 0.045$   $\chi^2/\text{NDF}$ : 61.4/53

# diff\_targ\_thetaX\_rms vs Slug



Right In: 312.690 $\pm$ 0.062  $\chi^2$ /NDF: 4122784.1/25

Left Out: 222.727 $\pm$ 0.037  $\chi^2$ /NDF:1451363.0/24

Right Out: 317.549 $\pm$ 0.061  $\chi^2$ /NDF: 4700062.7/30

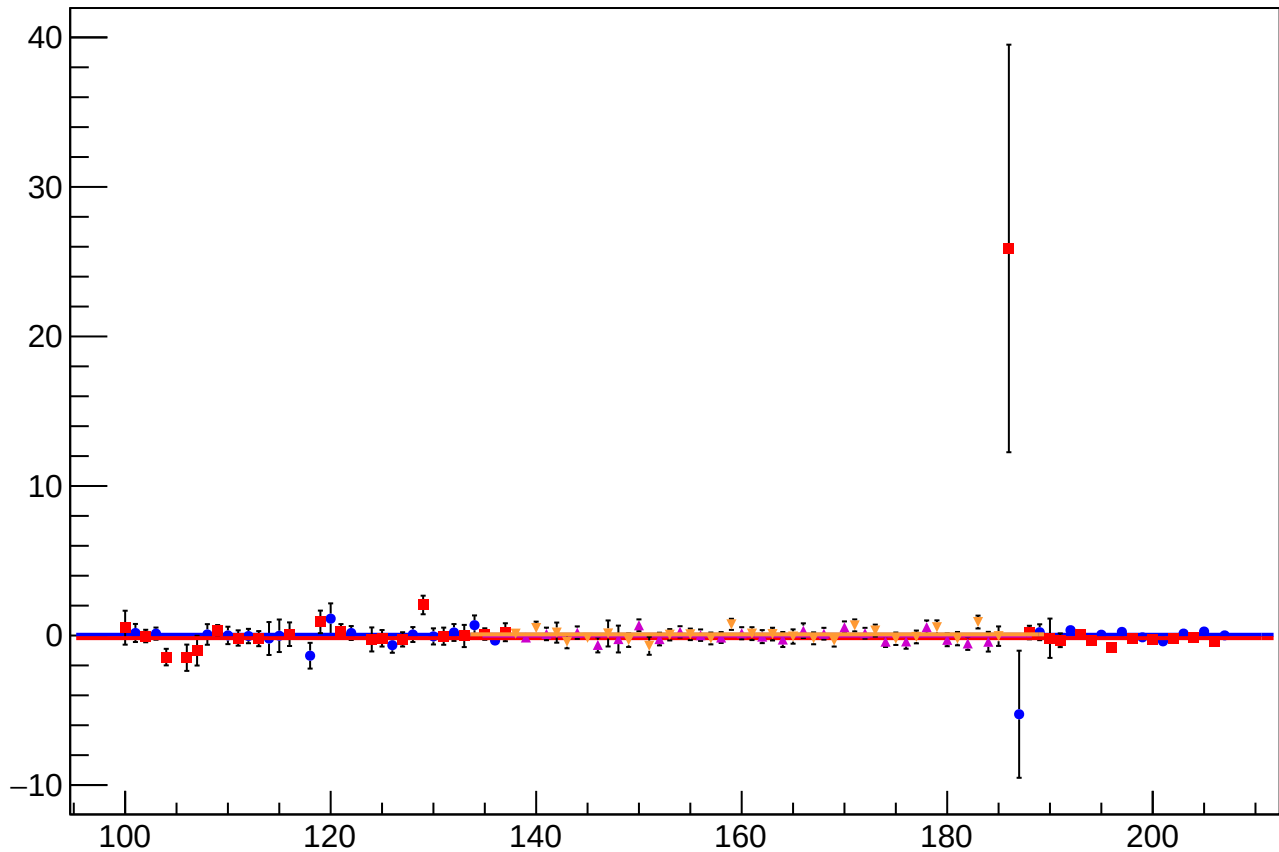
Left In: 220.802 $\pm$ 0.037  $\chi^2$ /NDF:1471497.9/22

+ sign 245.933 $\pm$ 0.032  $\chi^2$ /NDF: 7123582.8/50

All: 246.572 $\pm$ 0.022  $\chi^2$ /NDF: 15118201.0/10

- sign 247.225 $\pm$ 0.032  $\chi^2$ /NDF: 7993791.0/53

# diff\_targ\_thetaY\_mean vs Slug



Right In:  $0.050 \pm 0.074$   $\chi^2/\text{NDF}$ : 15.8/25

Left Out:  $0.079 \pm 0.084$   $\chi^2/\text{NDF}$ : 19.0/24

Right Out:  $-0.175 \pm 0.073$   $\chi^2/\text{NDF}$ : 39.1/30

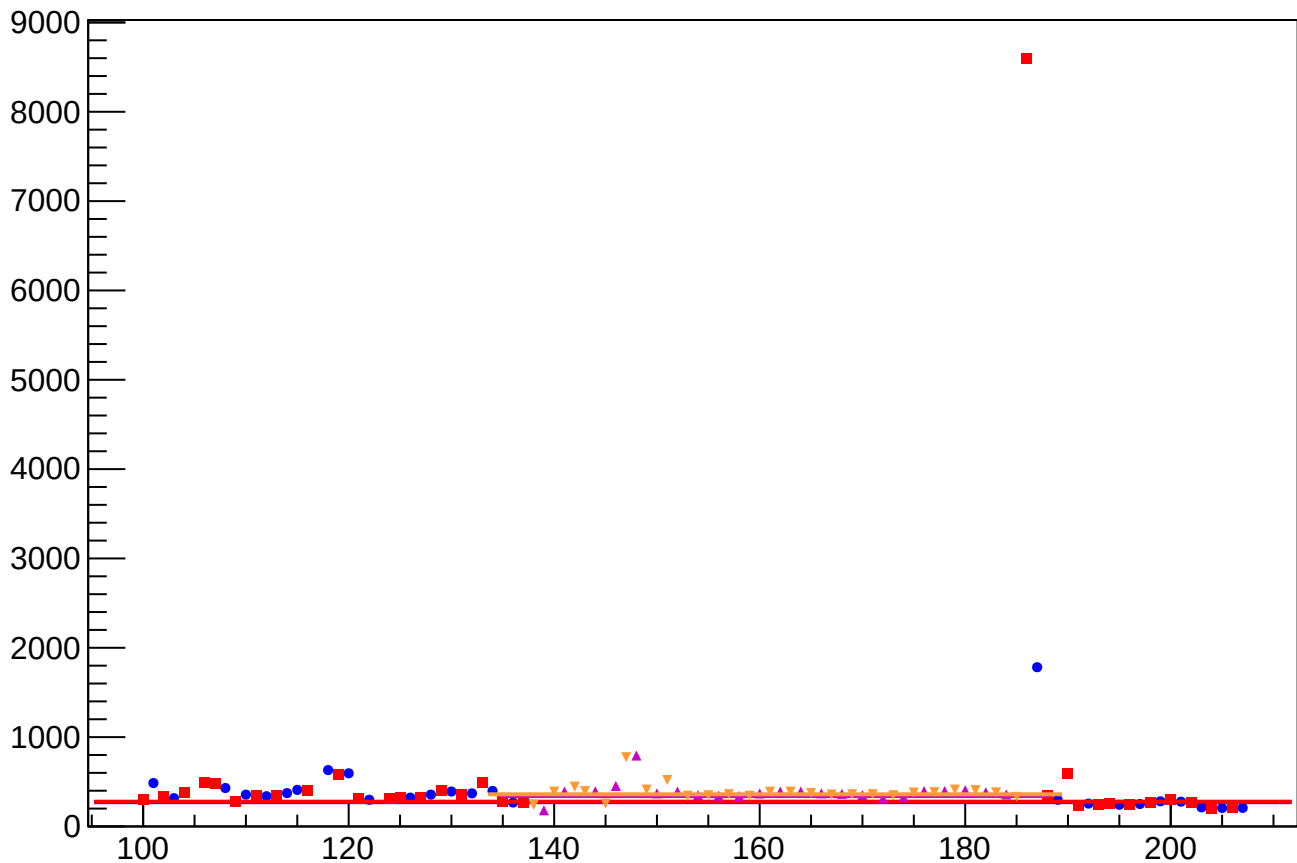
Left In:  $-0.009 \pm 0.083$   $\chi^2/\text{NDF}$ : 15.2/22

+ sign  $0.063 \pm 0.056$   $\chi^2/\text{NDF}$ : 34.8/50

All:  $-0.021 \pm 0.039$   $\chi^2/\text{NDF}$ : 95.9/104

- sign  $-0.103 \pm 0.055$   $\chi^2/\text{NDF}$ : 56.6/53

# diff\_targ\_thetaY\_rms vs Slug



Right In: 271.899+/-0.052     $\chi^2/\text{NDF}$ : 2147592.0/25

Left Out: 360.021+/-0.060     $\chi^2/\text{NDF}$ :1339748.9/24

Right Out: 277.313+/-0.051     $\chi^2/\text{NDF}$ : 2534529.5/30

Left In: 340.020+/-0.059     $\chi^2/\text{NDF}$ :2225094.5/22

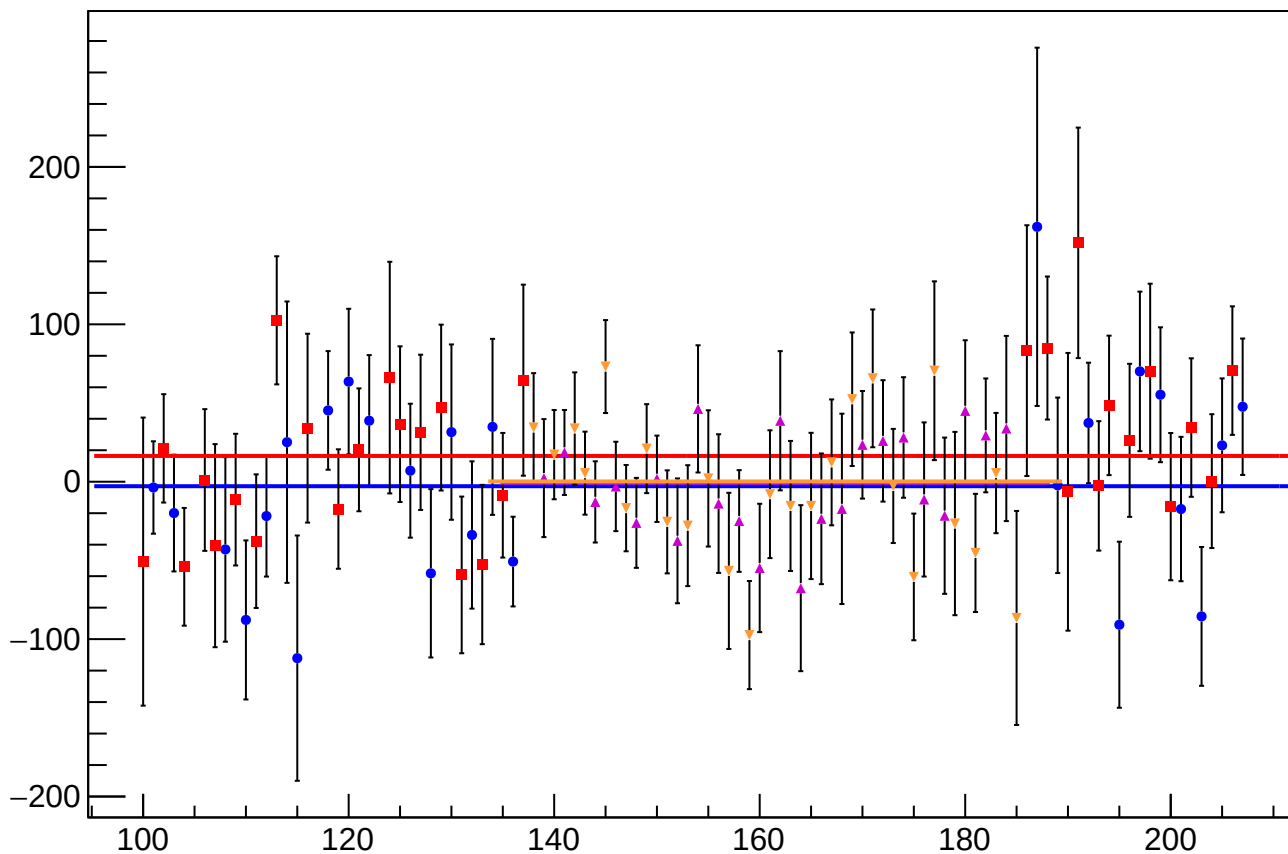
+ sign 310.154+/-0.039     $\chi^2/\text{NDF}$ : 4723803.9/50

All: 307.351+/-0.028     $\chi^2/\text{NDF}$ : 10140458.9/10

- sign 304.636+/-0.039     $\chi^2/\text{NDF}$ : 5406630.8/53



# diff\_bpmE\_mean vs Slug



Right In:  $-2.854 \pm 8.782$   $\chi^2/\text{NDF}$ : 31.0/25

Left Out:  $0.168 \pm 7.375$   $\chi^2/\text{NDF}$ : 31.1/24

Right Out:  $16.378 \pm 8.522$   $\chi^2/\text{NDF}$ : 29.4/30

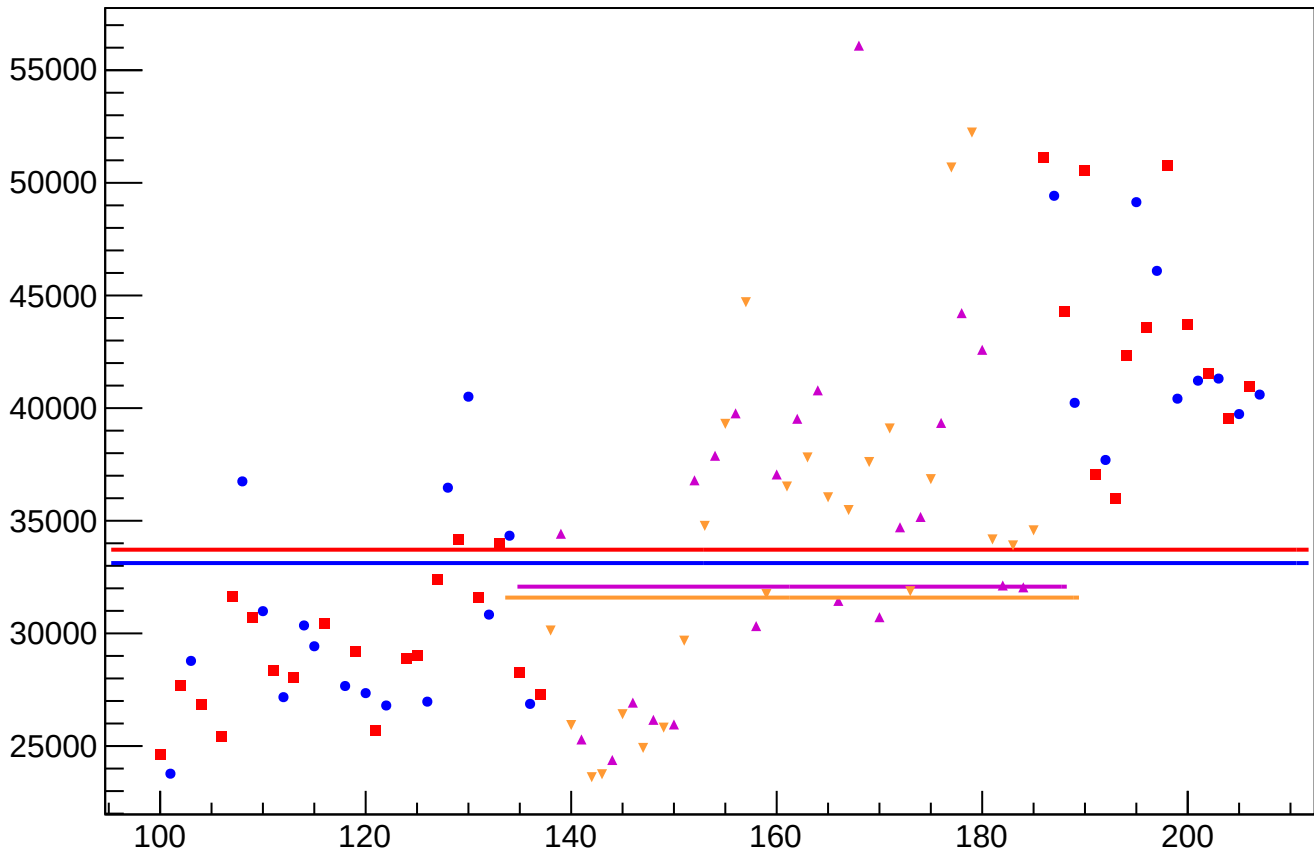
Left In:  $-0.586 \pm 7.667$   $\chi^2/\text{NDF}$ : 12.8/22

+ sign  $-1.082 \pm 5.648$   $\chi^2/\text{NDF}$ : 62.2/50

All:  $2.923 \pm 4.012$   $\chi^2/\text{NDF}$ : 107.6/104

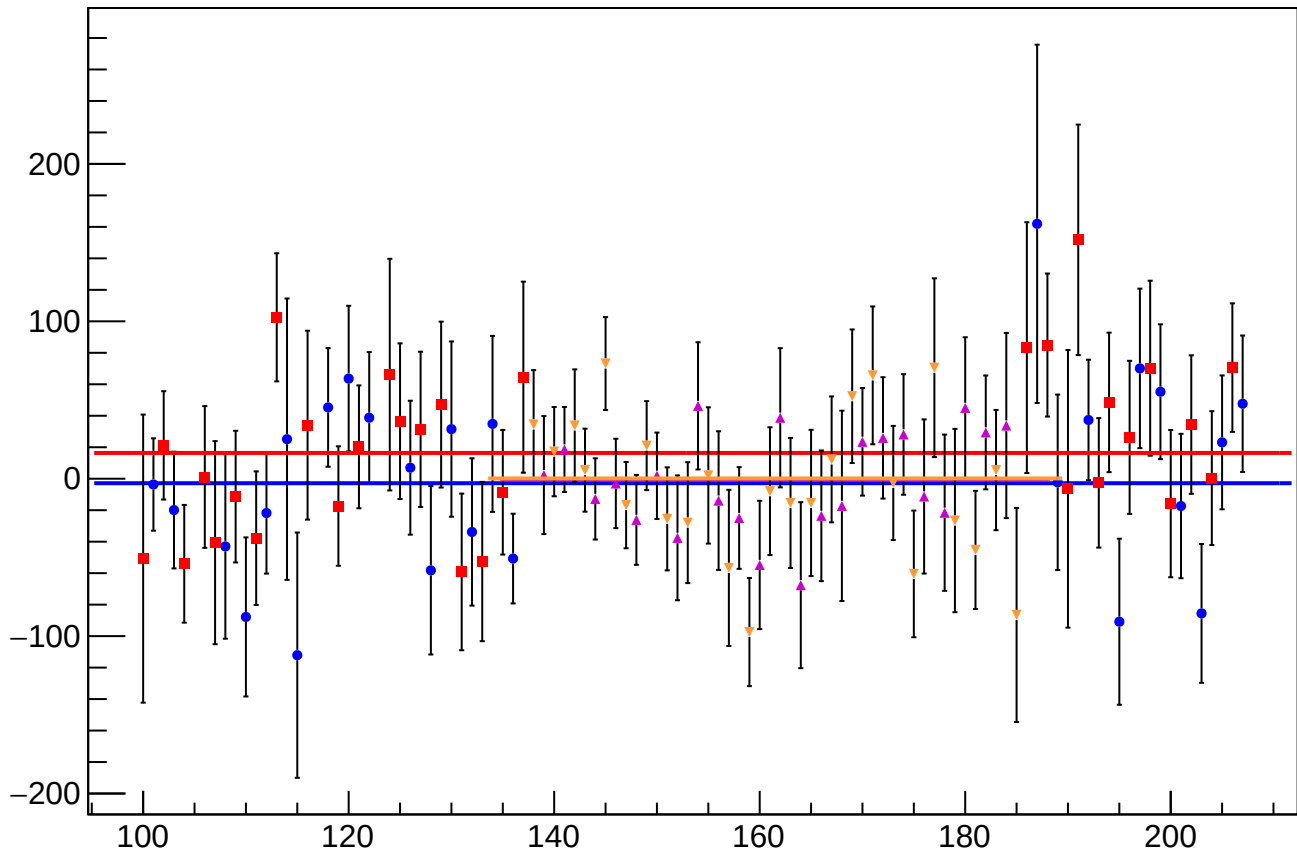
- sign  $7.003 \pm 5.700$   $\chi^2/\text{NDF}$ : 44.4/53

# diff\_bpmE\_rms vs Slug



|                              |                                    |                          |                                    |
|------------------------------|------------------------------------|--------------------------|------------------------------------|
| Right In: 33121.721+/-6.210  | $\chi^2/\text{NDF}$ : 1316748.9/25 | + sign 32223.351+/-3.993 | $\chi^2/\text{NDF}$ : 2943303.6/50 |
| Left Out: 31589.841+/-5.215  | $\chi^2/\text{NDF}$ : 1590867.7/24 | All: 32513.471+/-2.837   | $\chi^2/\text{NDF}$ : 5847795.5/53 |
| Right Out: 33715.572+/-6.026 | $\chi^2/\text{NDF}$ : 1397161.5/30 | - sign 32808.959+/-4.030 | $\chi^2/\text{NDF}$ : 2893838.6/53 |
| Left In: 32075.078+/-5.421   | $\chi^2/\text{NDF}$ : 1455714.6/22 |                          |                                    |

# diff\_bpmEX\_mean vs Slug



Right In:  $-2.854 \pm 8.782$   $\chi^2/\text{NDF}$ : 31.0/25

Left Out:  $0.168 \pm 7.375$   $\chi^2/\text{NDF}$ : 31.1/24

Right Out:  $16.378 \pm 8.522$   $\chi^2/\text{NDF}$ : 29.4/30

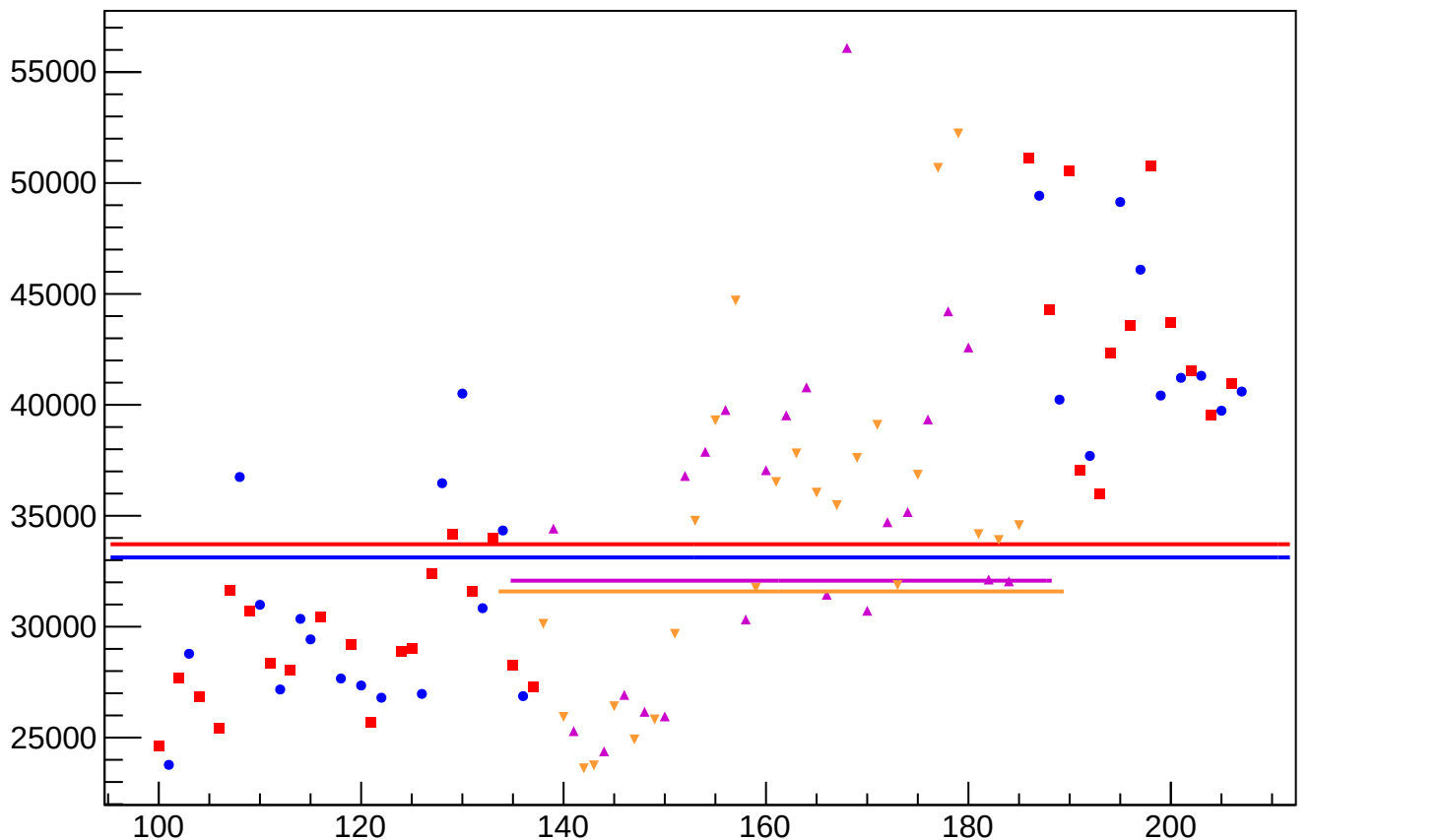
Left In:  $-0.586 \pm 7.667$   $\chi^2/\text{NDF}$ : 12.8/22

+ sign  $-1.082 \pm 5.648$   $\chi^2/\text{NDF}$ : 62.2/50

All:  $2.923 \pm 4.012$   $\chi^2/\text{NDF}$ : 107.6/104

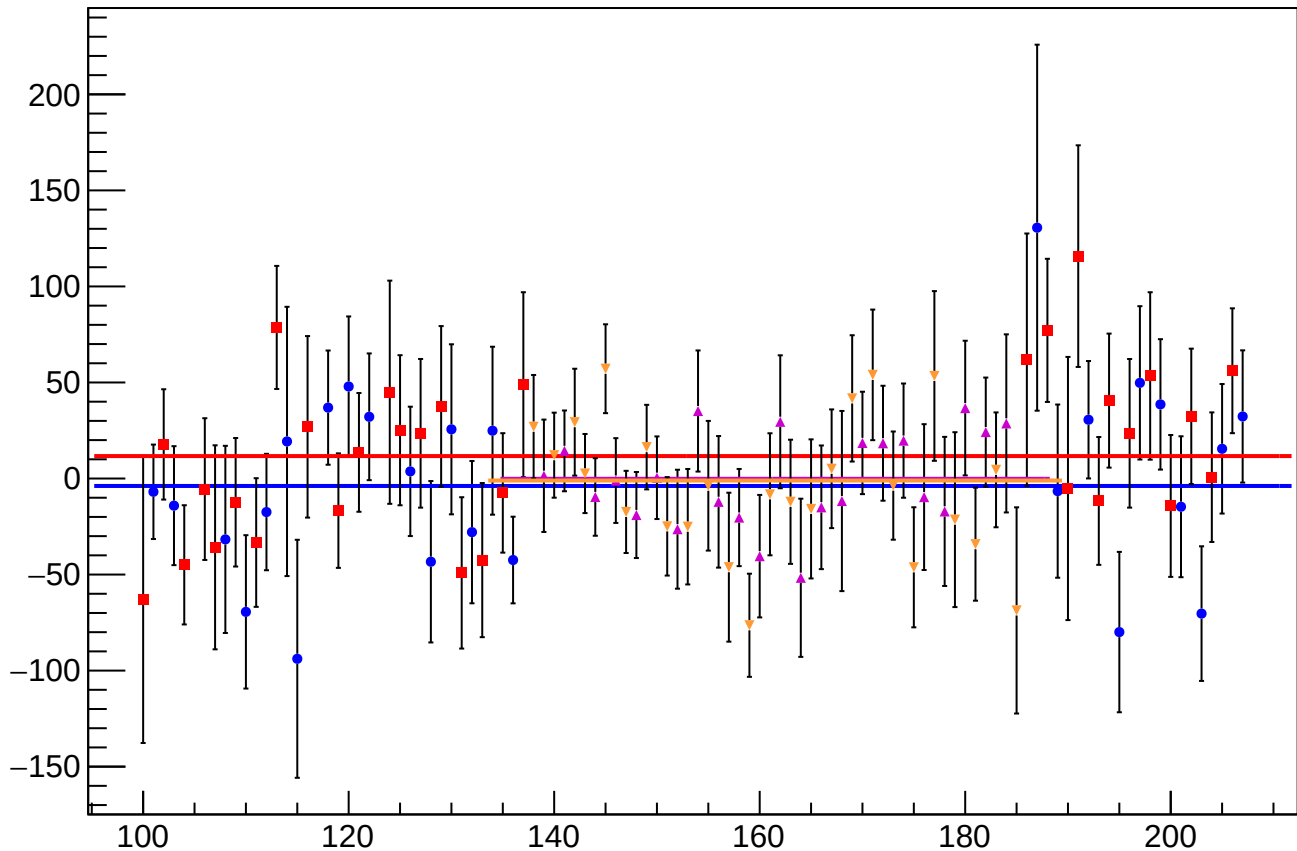
- sign  $7.003 \pm 5.700$   $\chi^2/\text{NDF}$ : 44.4/53

# diff\_bpmEX\_rms vs Slug



|                              |                                    |                          |                                    |
|------------------------------|------------------------------------|--------------------------|------------------------------------|
| Right In: 33121.721+/-6.210  | $\chi^2/\text{NDF}$ : 1316748.9/25 | + sign 32223.351+/-3.993 | $\chi^2/\text{NDF}$ : 2943303.6/50 |
| Left Out: 31589.841+/-5.215  | $\chi^2/\text{NDF}$ : 1590867.7/24 | All: 32513.471+/-2.837   | $\chi^2/\text{NDF}$ : 5847795.5/53 |
| Right Out: 33715.572+/-6.026 | $\chi^2/\text{NDF}$ : 1397161.5/30 | - sign 32808.959+/-4.030 | $\chi^2/\text{NDF}$ : 2893838.6/53 |
| Left In: 32075.078+/-5.421   | $\chi^2/\text{NDF}$ : 1455714.6/22 |                          |                                    |

# diff\_bpmE\_11X12X\_mean vs Slug



Right In:  $-3.878 \pm 7.019$   $\chi^2/\text{NDF}$ : 30.9/25

Left Out:  $-1.042 \pm 5.755$   $\chi^2/\text{NDF}$ : 32.3/24

Right Out:  $11.681 \pm 6.809$   $\chi^2/\text{NDF}$ : 31.2/30

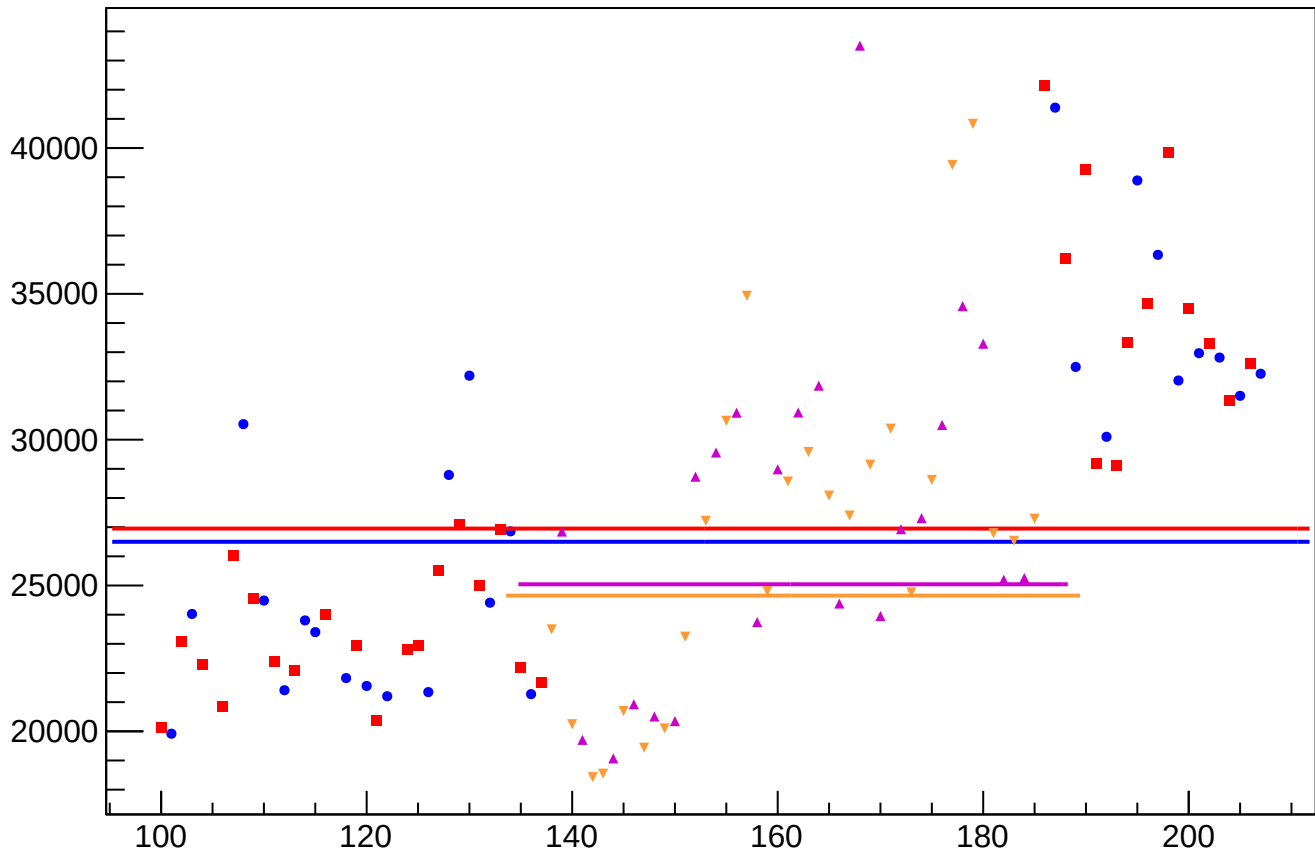
Left In:  $-0.147 \pm 5.985$   $\chi^2/\text{NDF}$ : 12.1/22

+ sign  $-2.182 \pm 4.450$   $\chi^2/\text{NDF}$ : 63.3/50

All:  $1.377 \pm 3.162$   $\chi^2/\text{NDF}$ : 109.6/104

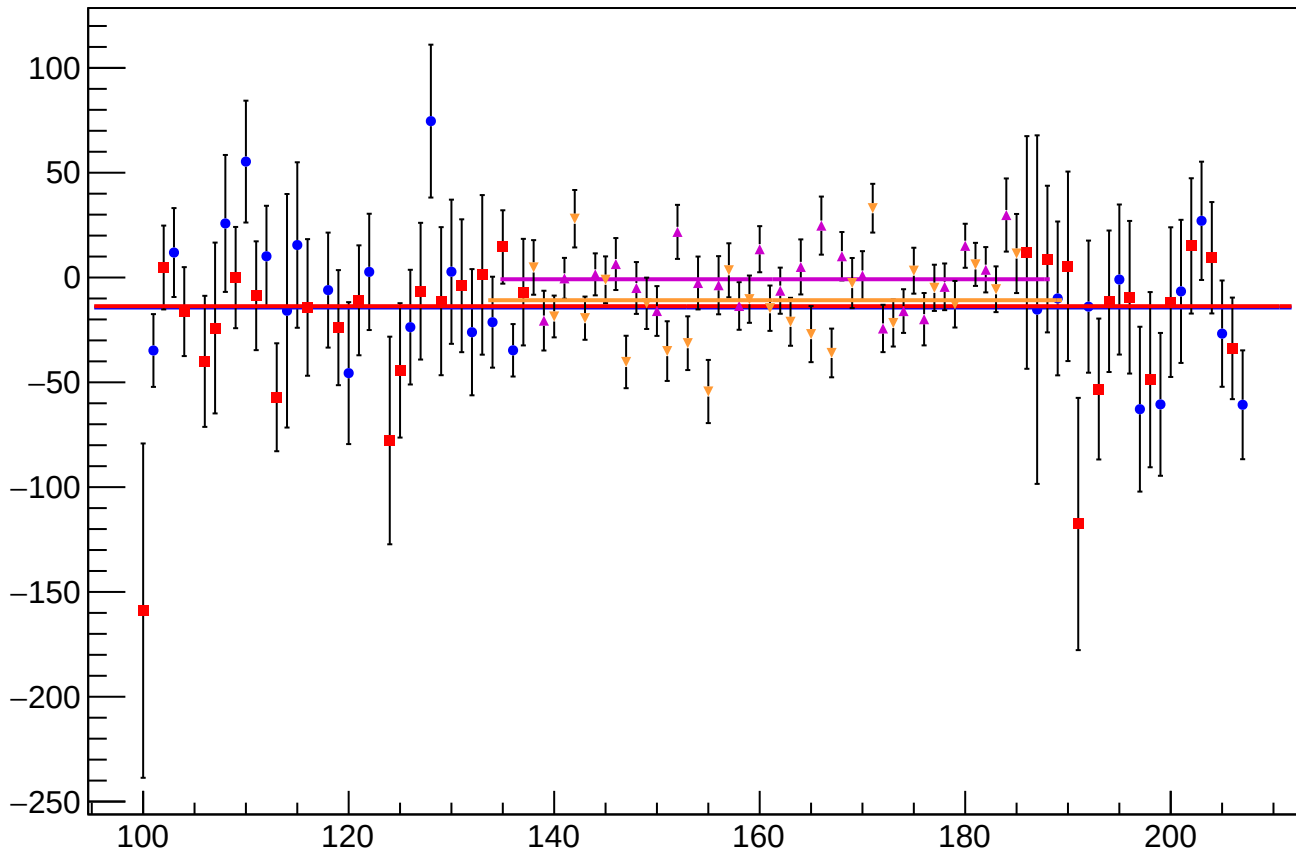
- sign  $5.009 \pm 4.495$   $\chi^2/\text{NDF}$ : 45.0/53

# diff\_bpmE\_11X12X\_rms vs Slug



|                              |                                    |                          |                                    |
|------------------------------|------------------------------------|--------------------------|------------------------------------|
| Right In: 26498.883+/-4.963  | $\chi^2/\text{NDF}$ : 1266538.2/25 | + sign 25395.638+/-3.147 | $\chi^2/\text{NDF}$ : 2931884.2/50 |
| Left Out: 24654.001+/-4.069  | $\chi^2/\text{NDF}$ : 1582710.2/24 | All: 25632.595+/-2.236   | $\chi^2/\text{NDF}$ : 5836514.7/1  |
| Right Out: 26951.755+/-4.814 | $\chi^2/\text{NDF}$ : 1362765.9/30 | - sign 25874.373+/-3.178 | $\chi^2/\text{NDF}$ : 2893173.5/53 |
| Left In: 25041.993+/-4.232   | $\chi^2/\text{NDF}$ : 1441641.5/22 |                          |                                    |

# diff\_bpm4aesumX\_mean vs Slug



Right In:  $-14.299 \pm 5.290$   $\chi^2/\text{NDF}$ : 31.5/25

Left Out:  $-10.822 \pm 2.370$   $\chi^2/\text{NDF}$ : 61.3/24

Right Out:  $-13.677 \pm 5.390$   $\chi^2/\text{NDF}$ : 22.0/30

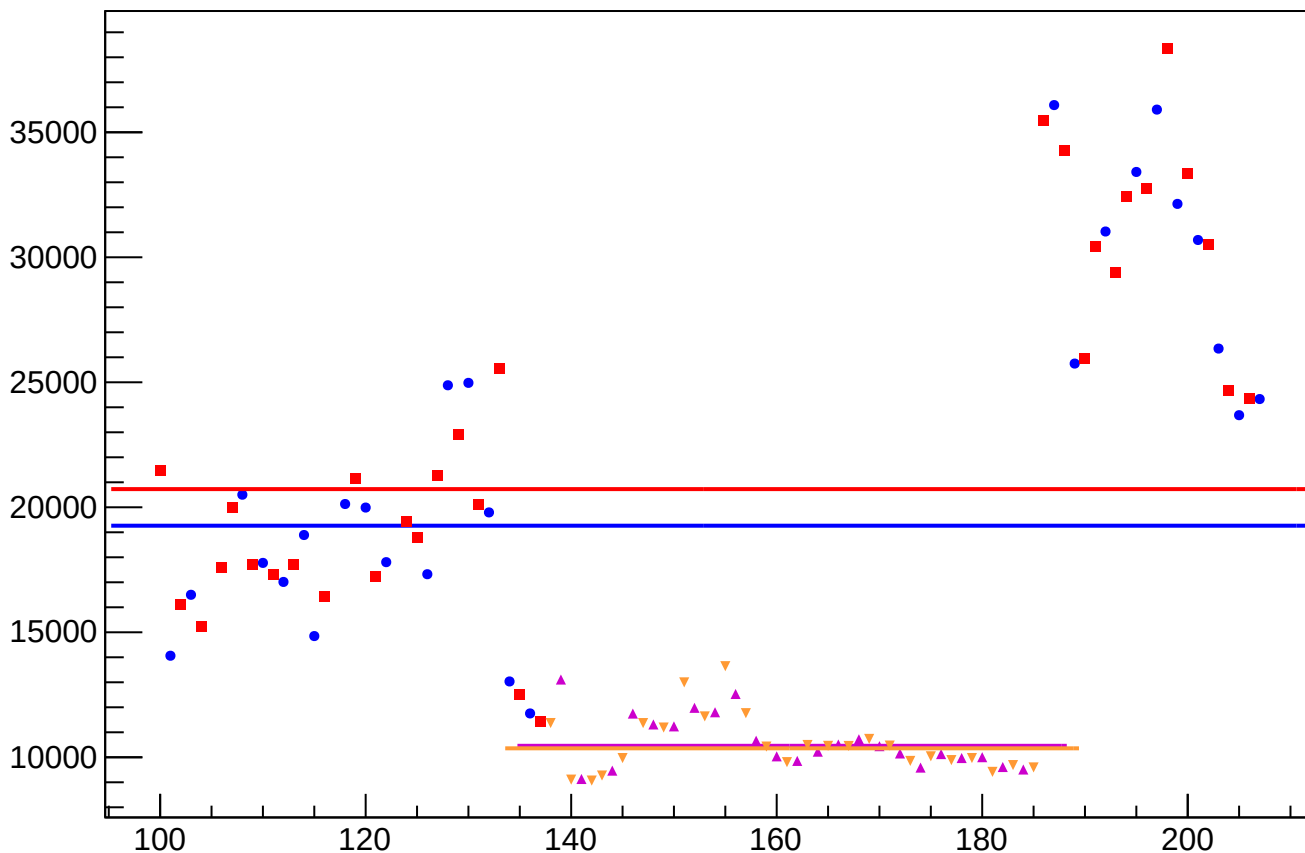
Left In:  $-0.826 \pm 2.457$   $\chi^2/\text{NDF}$ : 29.4/22

+ sign  $-11.404 \pm 2.163$   $\chi^2/\text{NDF}$ : 93.1/50

All:  $-7.358 \pm 1.555$   $\chi^2/\text{NDF}$ : 156.4/104

- sign  $-3.037 \pm 2.236$   $\chi^2/\text{NDF}$ : 56.1/53

# diff\_bpm4aesumX\_rms vs Slug



Right In: 19263.424 $\pm$ 3.741  $\chi^2$ /NDF: 3137845.9/25

Left Out: 10358.363 $\pm$ 1.676  $\chi^2$ /NDF: 363077.1/24

Right Out: 20727.132 $\pm$ 3.812  $\chi^2$ /NDF: 3173726.2/30

Left In: 10459.060 $\pm$ 1.737  $\chi^2$ /NDF: 314636.9/22

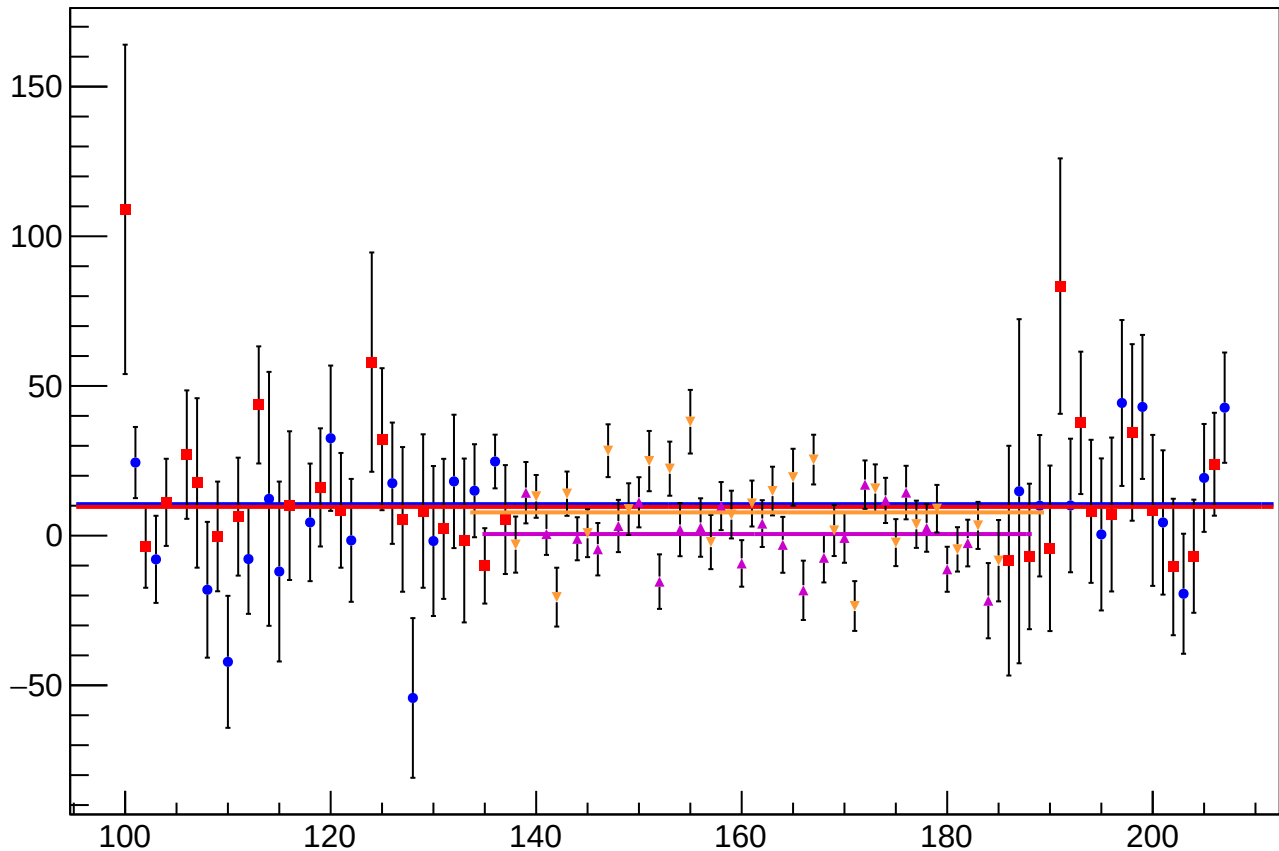
+ sign 11847.268 $\pm$ 1.530  $\chi^2$ /NDF: 8220575.1/50

All: 12030.107 $\pm$ 1.099  $\chi^2$ /NDF: 17747154.4

- sign 12225.424 $\pm$ 1.581  $\chi^2$ /NDF: 9497026.3/53



# diff\_bpm4aediX\_mean vs Slug



Right In:  $10.517 \pm 3.779$   $\chi^2/\text{NDF}: 31.1/25$

Left Out:  $7.763 \pm 1.691$   $\chi^2/\text{NDF}: 60.9/24$

Right Out:  $9.602 \pm 3.857$   $\chi^2/\text{NDF}: 22.1/30$

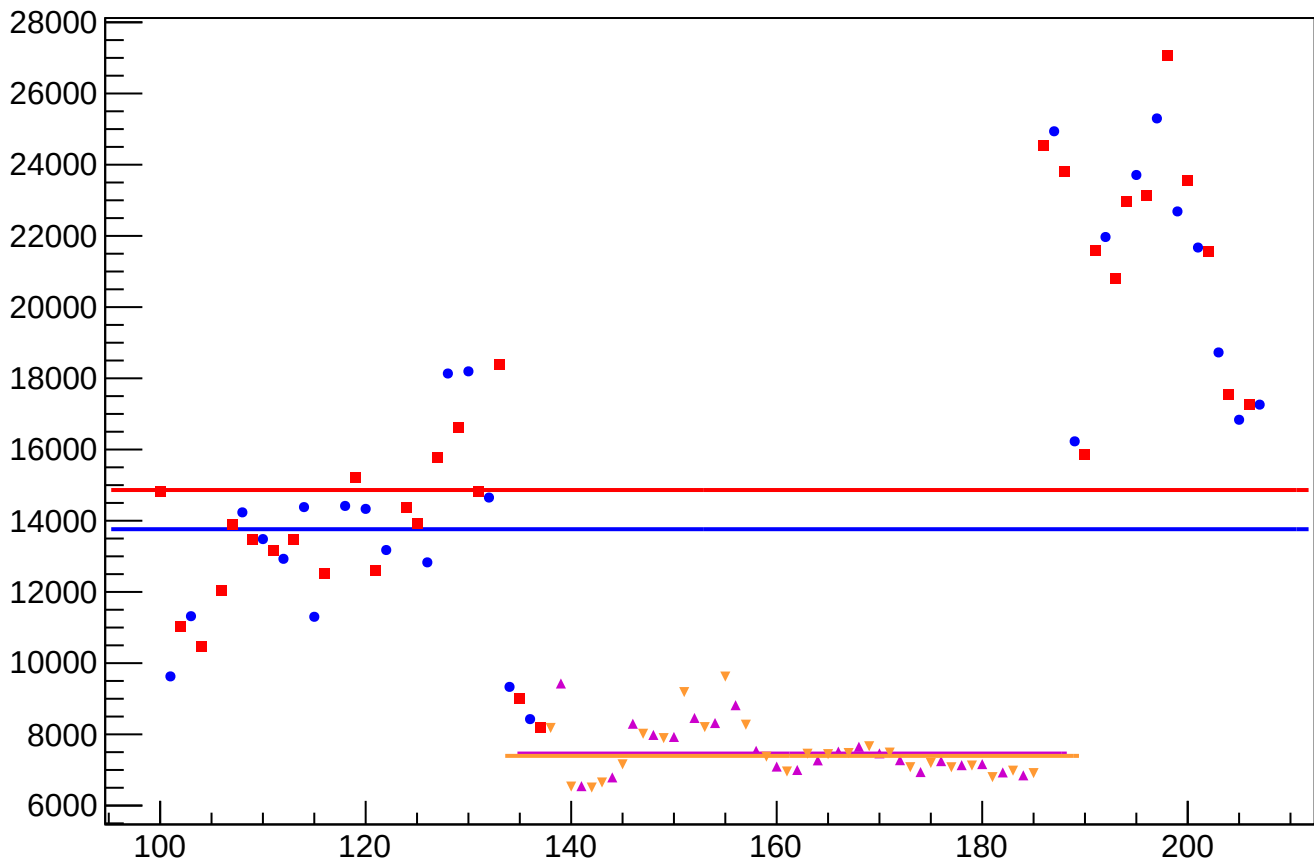
Left In:  $0.532 \pm 1.752$   $\chi^2/\text{NDF}: 29.4/22$

+ sign  $8.223 \pm 1.544$   $\chi^2/\text{NDF}: 92.5/50$

All:  $5.253 \pm 1.109$   $\chi^2/\text{NDF}: 156.3/104$

- sign  $2.083 \pm 1.595$   $\chi^2/\text{NDF}: 56.2/53$

# diff\_bpm4aediiffX\_rms vs Slug



Right In: 13762.140+/-2.672  $\chi^2/\text{NDF}$ : 3080863.8/25

Left Out: 7395.667+/-1.196  $\chi^2/\text{NDF}$ :324459.4/24

+ sign 8458.448+/-1.092  $\chi^2/\text{NDF}$ : 8135157.5/50

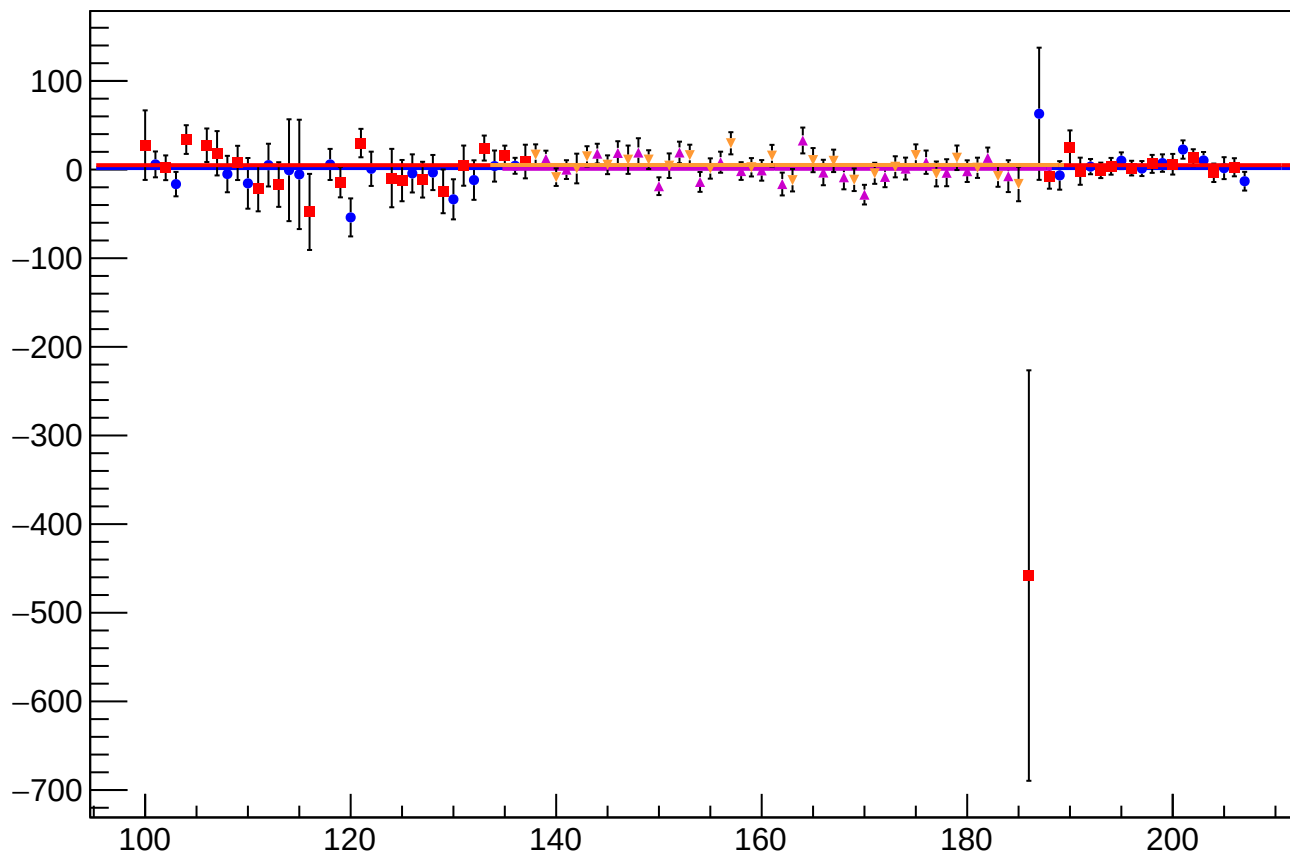
Right Out: 14862.632+/-2.728  $\chi^2/\text{NDF}$ : 3055509.7/30

All: 8588.117+/-0.784  $\chi^2/\text{NDF}$ : 17608493.9/1

Left In: 7460.824+/-1.239  $\chi^2/\text{NDF}$ :284034.9/22

- sign 8726.547+/-1.128  $\chi^2/\text{NDF}$ : 9444165.0/53

# diff\_bpm4aesumY\_mean vs Slug



Right In: 1.695 $\pm$ 2.700  $\chi^2$ /NDF: 21.1/25

Left Out: 5.178 $\pm$ 2.459  $\chi^2$ /NDF:18.4/24

Right Out: 4.964 $\pm$ 2.582  $\chi^2$ /NDF: 26.1/30

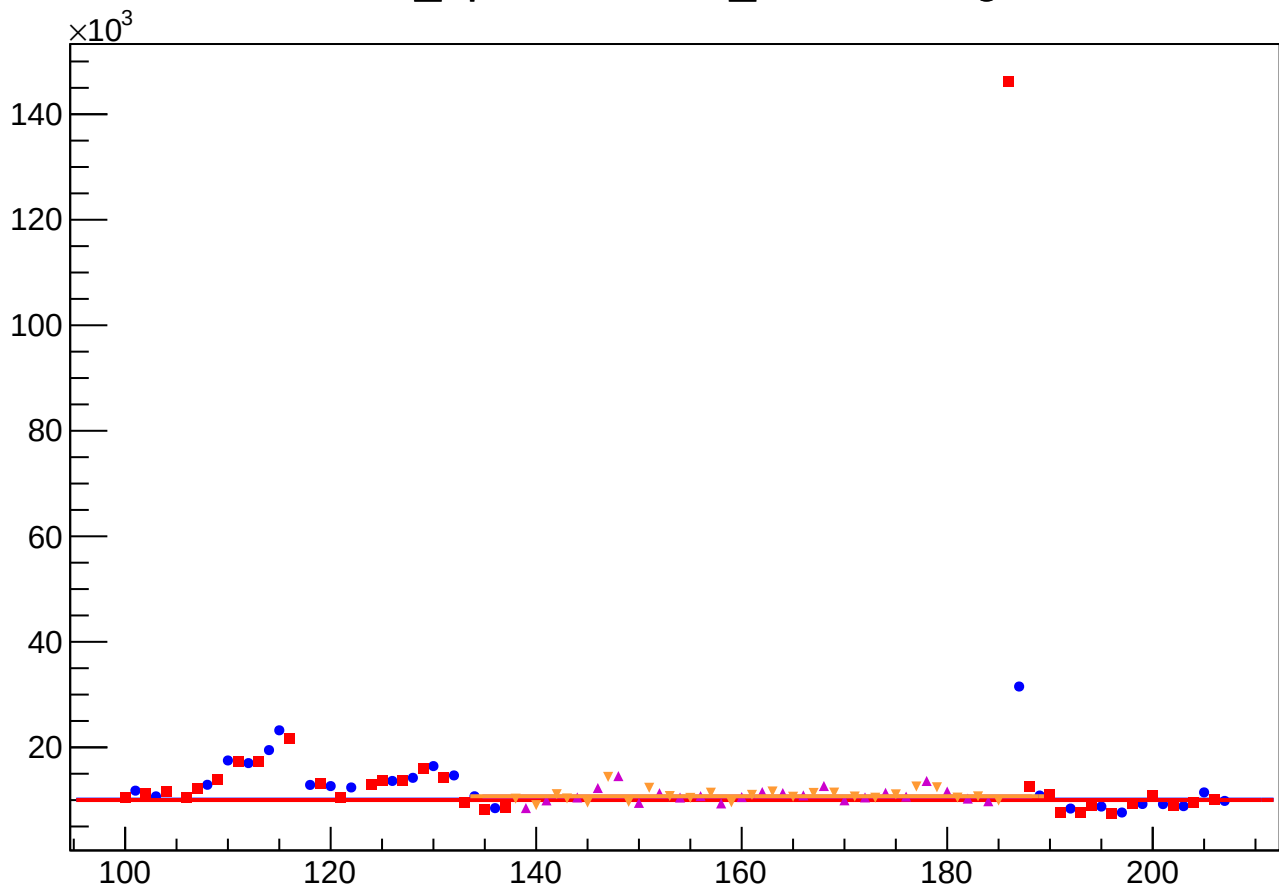
Left In: 0.891 $\pm$ 2.519  $\chi^2$ /NDF:31.8/22

+ sign 3.599 $\pm$ 1.818  $\chi^2$ /NDF: 40.4/50

All: 3.235 $\pm$ 1.280  $\chi^2$ /NDF: 99.7/104

- sign 2.877 $\pm$ 1.803  $\chi^2$ /NDF: 59.2/53

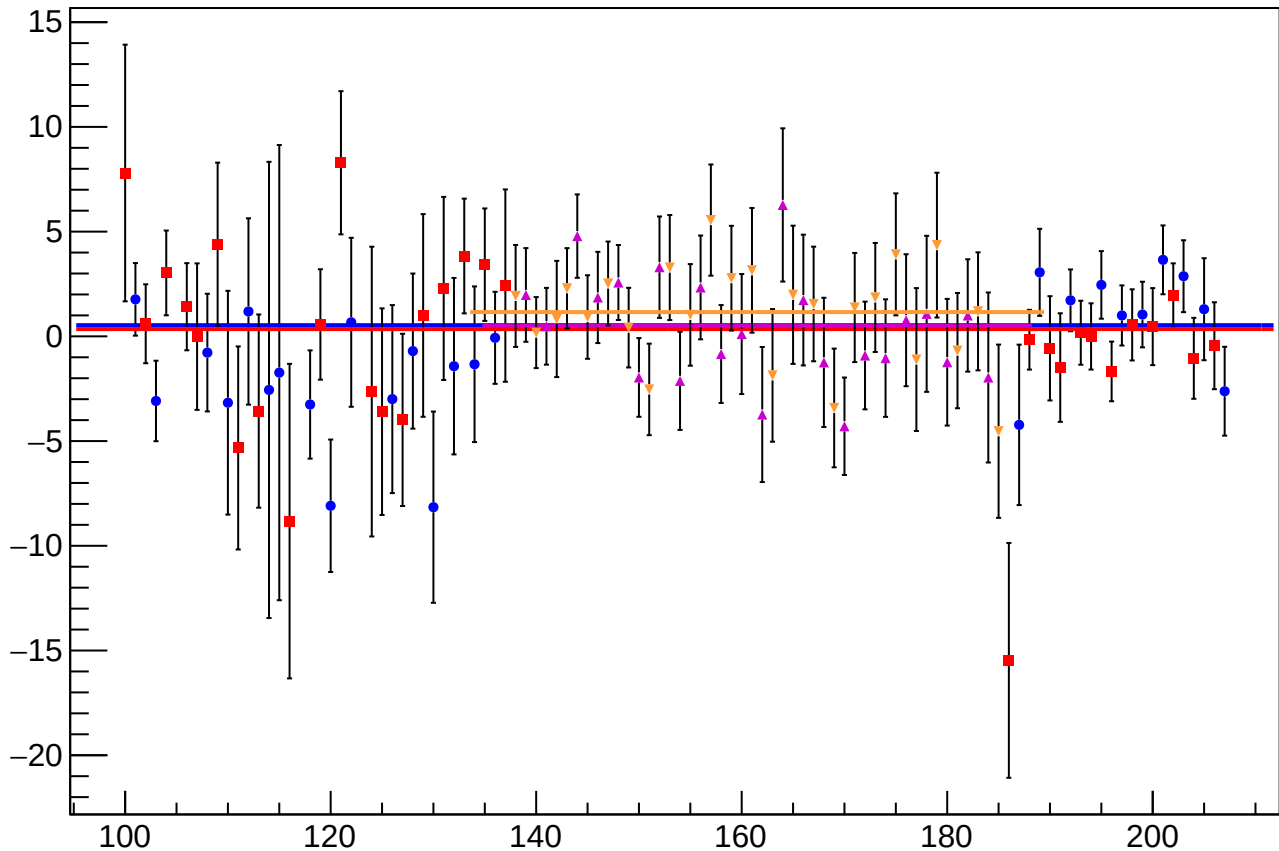
# diff\_bpm4aesumY\_rms vs Slug



Right In:  $10089.979 \pm 1.909$   $\chi^2/\text{NDF}: 1610505.4/25$   
 Left Out:  $10733.733 \pm 1.739$   $\chi^2/\text{NDF}: 368279.7/24$   
 Right Out:  $10012.048 \pm 1.826$   $\chi^2/\text{NDF}: 2291425.0/30$   
 Left In:  $10677.154 \pm 1.781$   $\chi^2/\text{NDF}: 500574.4/22$

+ sign  $10441.869 \pm 1.285$   $\chi^2/\text{NDF}: 2040939.3/50$   
 All:  $10396.979 \pm 0.905$   $\chi^2/\text{NDF}: 4903372.8/1$   
 - sign  $10352.834 \pm 1.275$   $\chi^2/\text{NDF}: 2860014.7/53$

# diff\_bpm4aeddifY\_mean vs Slug



Right In:  $0.534 \pm 0.457$   $\chi^2/\text{NDF}$ : 32.4/25

Left Out:  $1.158 \pm 0.500$   $\chi^2/\text{NDF}$ : 16.8/24

Right Out:  $0.347 \pm 0.426$   $\chi^2/\text{NDF}$ : 31.4/30

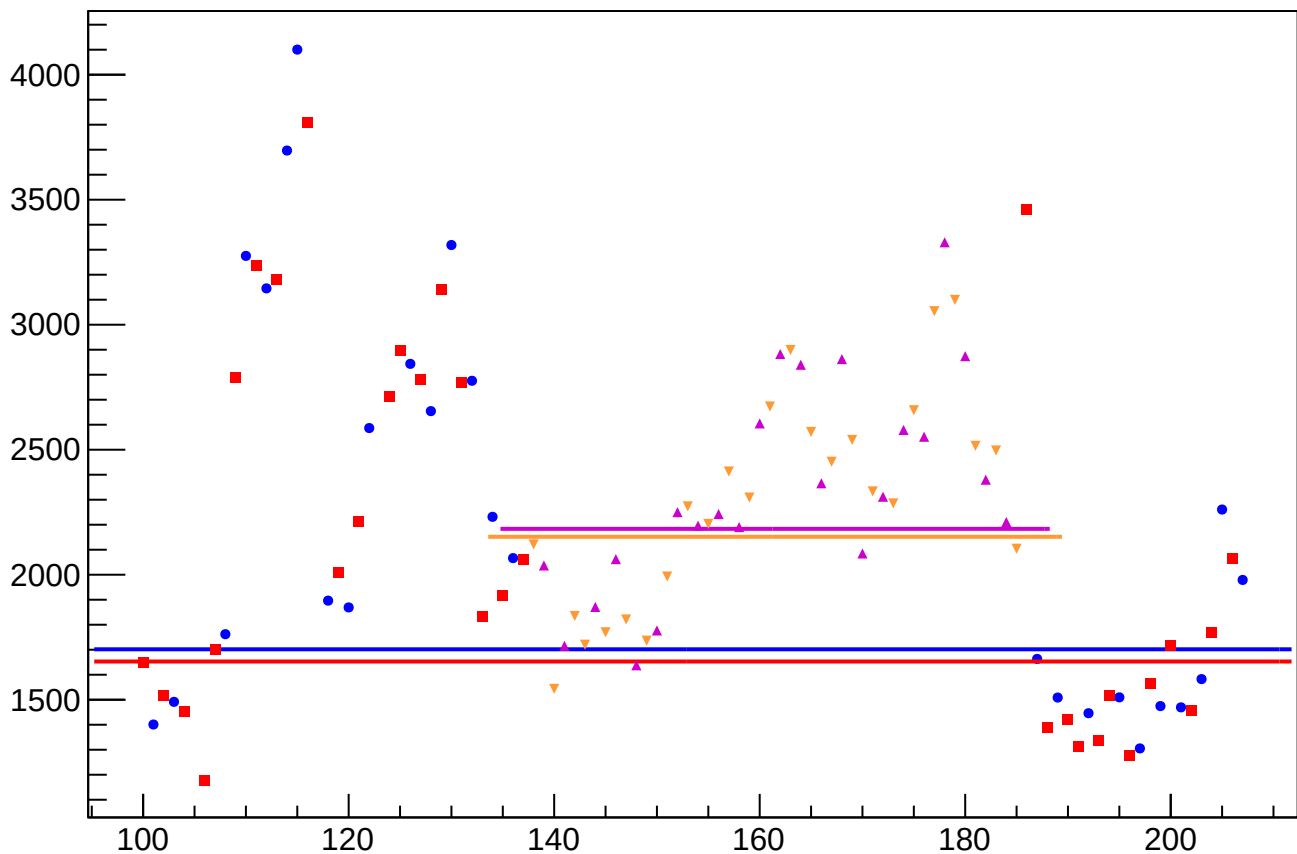
Left In:  $0.522 \pm 0.520$   $\chi^2/\text{NDF}$ : 22.3/22

+ sign  $0.818 \pm 0.337$   $\chi^2/\text{NDF}$ : 50.1/50

All:  $0.612 \pm 0.236$   $\chi^2/\text{NDF}$ : 104.7/104

- sign  $0.417 \pm 0.329$   $\chi^2/\text{NDF}$ : 53.8/53

# diff\_bpm4aediY\_rms vs Slug



Right In: 1701.695 $\pm$ 0.323  $\chi^2$ /NDF: 1975382.3/25

Left Out: 2151.757 $\pm$ 0.354  $\chi^2$ /NDF:1349537.9/24

Right Out: 1652.885 $\pm$ 0.301  $\chi^2$ /NDF: 2374507.6/30

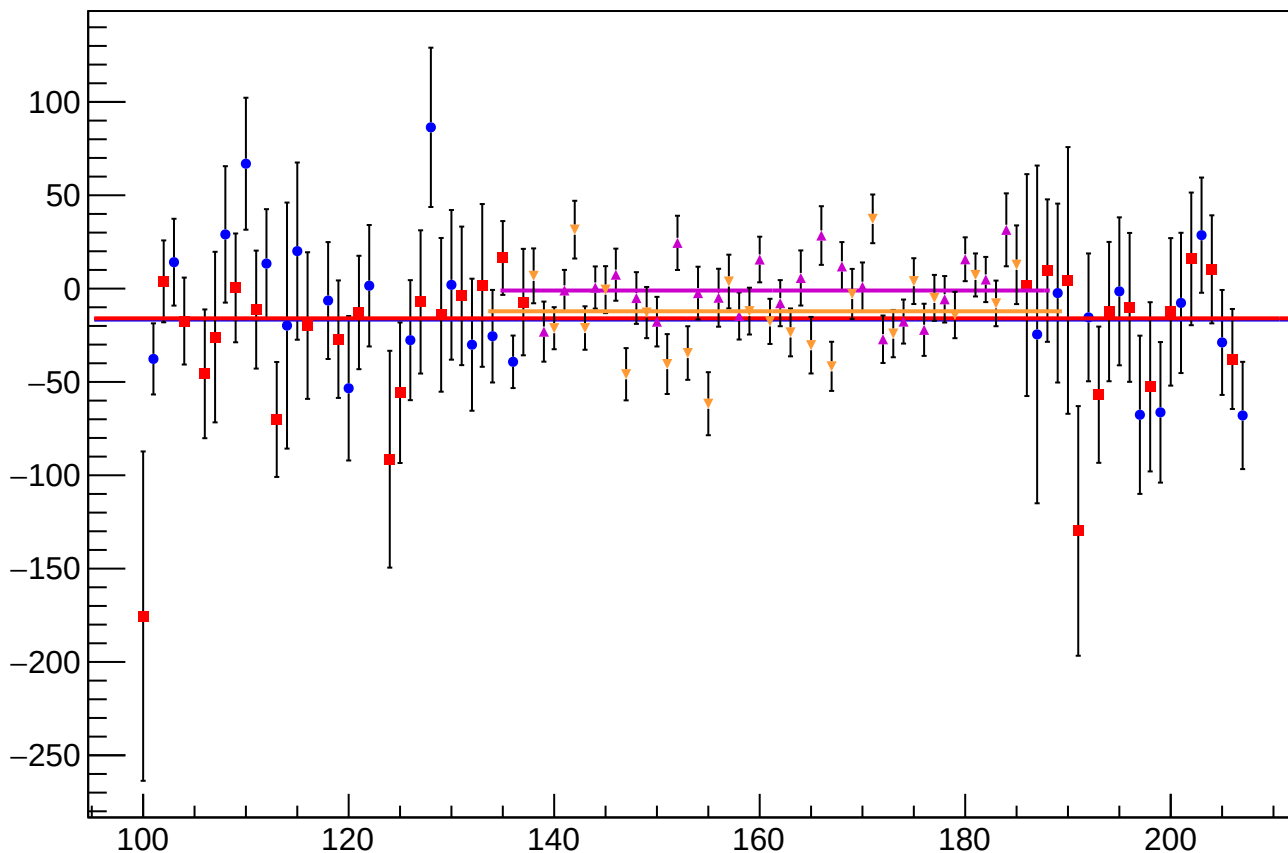
Left In: 2183.482 $\pm$ 0.368  $\chi^2$ /NDF:1162266.2/22

+ sign 1906.483 $\pm$ 0.239  $\chi^2$ /NDF: 4207550.8/50

All: 1885.649 $\pm$ 0.167  $\chi^2$ /NDF: 9006627.7/10

- sign 1865.799 $\pm$ 0.233  $\chi^2$ /NDF: 4784182.7/53

# diff\_bpmtargetsumX\_mean vs Slug



Right In:  $-16.595 \pm 5.998$   $\chi^2/\text{NDF}$ : 31.1/25

Left Out:  $-12.135 \pm 2.661$   $\chi^2/\text{NDF}$ : 62.6/24

Right Out:  $-15.933 \pm 6.125$   $\chi^2/\text{NDF}$ : 22.1/30

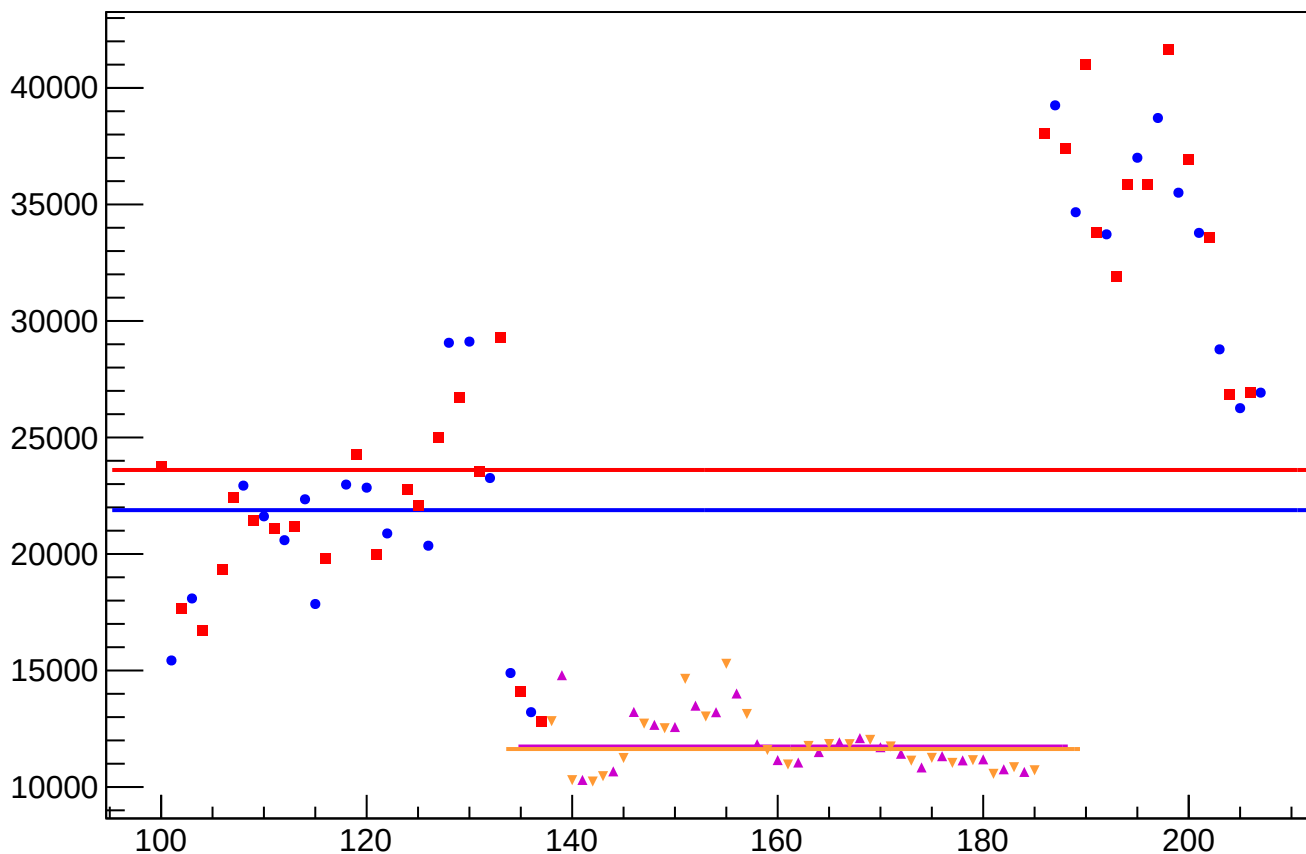
Left In:  $-1.024 \pm 2.758$   $\chi^2/\text{NDF}$ : 28.8/22

+ sign  $-12.868 \pm 2.432$   $\chi^2/\text{NDF}$ : 94.2/50

All:  $-8.357 \pm 1.748$   $\chi^2/\text{NDF}$ : 157.2/104

- sign  $-3.536 \pm 2.514$   $\chi^2/\text{NDF}$ : 55.8/53

# diff\_bpmtargetsumX\_rms vs Slug



Right In: 21882.187 $\pm$ 4.241  $\chi^2$ /NDF: 3090123.3/25

Left Out: 11630.201 $\pm$ 1.882  $\chi^2$ /NDF: 356022.1/24

Right Out: 23605.449 $\pm$ 4.331  $\chi^2$ /NDF: 3046229.3/30

Left In: 11738.371 $\pm$ 1.950  $\chi^2$ /NDF: 313542.0/22

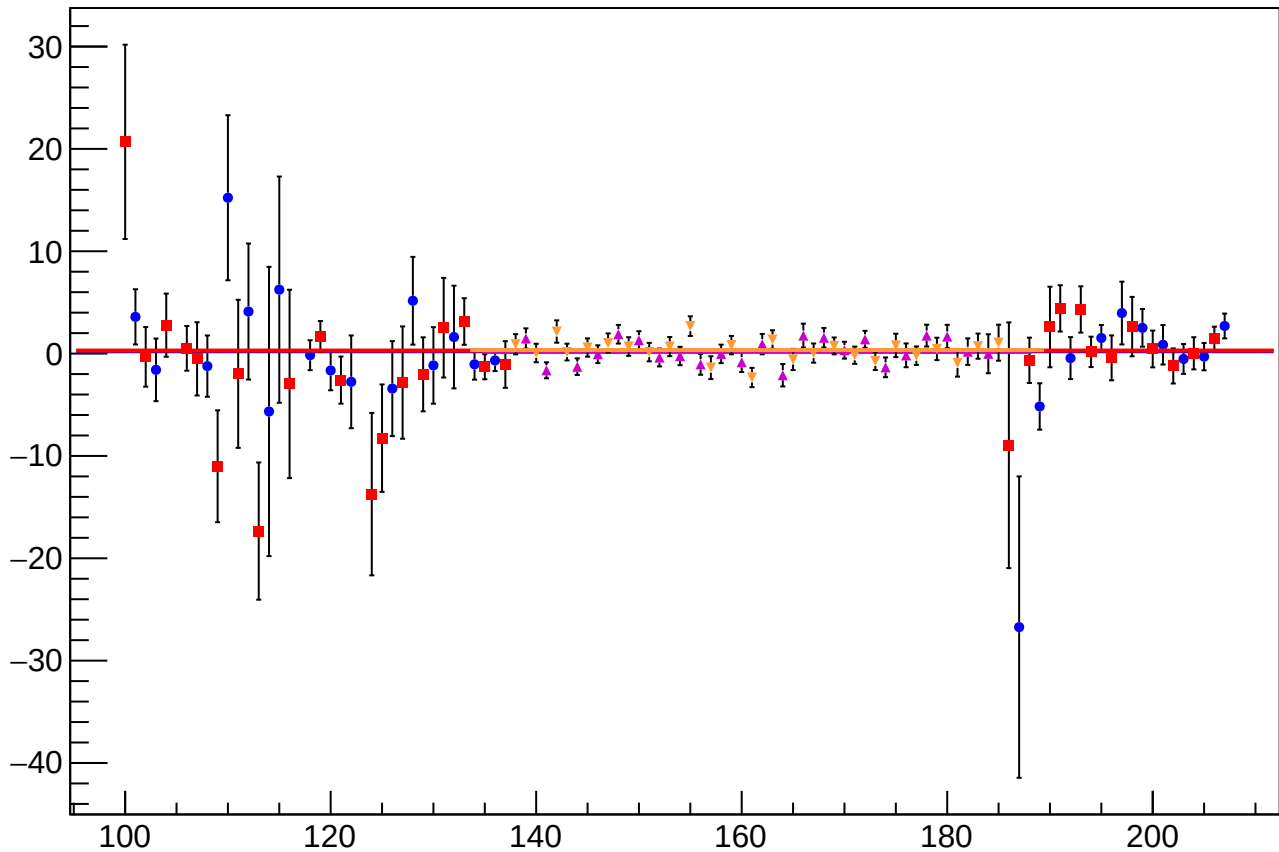
+ sign 13316.435 $\pm$ 1.720  $\chi^2$ /NDF: 8328587.7/50

All: 13520.312 $\pm$ 1.236  $\chi^2$ /NDF: 17959262.6

- sign 13738.181 $\pm$ 1.778  $\chi^2$ /NDF: 9601609.8/53



# diff\_bpmtargetdiffX\_mean vs Slug



Right In:  $0.230 \pm 0.401$   $\chi^2/\text{NDF}$ : 29.3/25

Left Out:  $0.343 \pm 0.194$   $\chi^2/\text{NDF}$ : 26.8/24

Right Out:  $0.298 \pm 0.417$   $\chi^2/\text{NDF}$ : 39.7/30

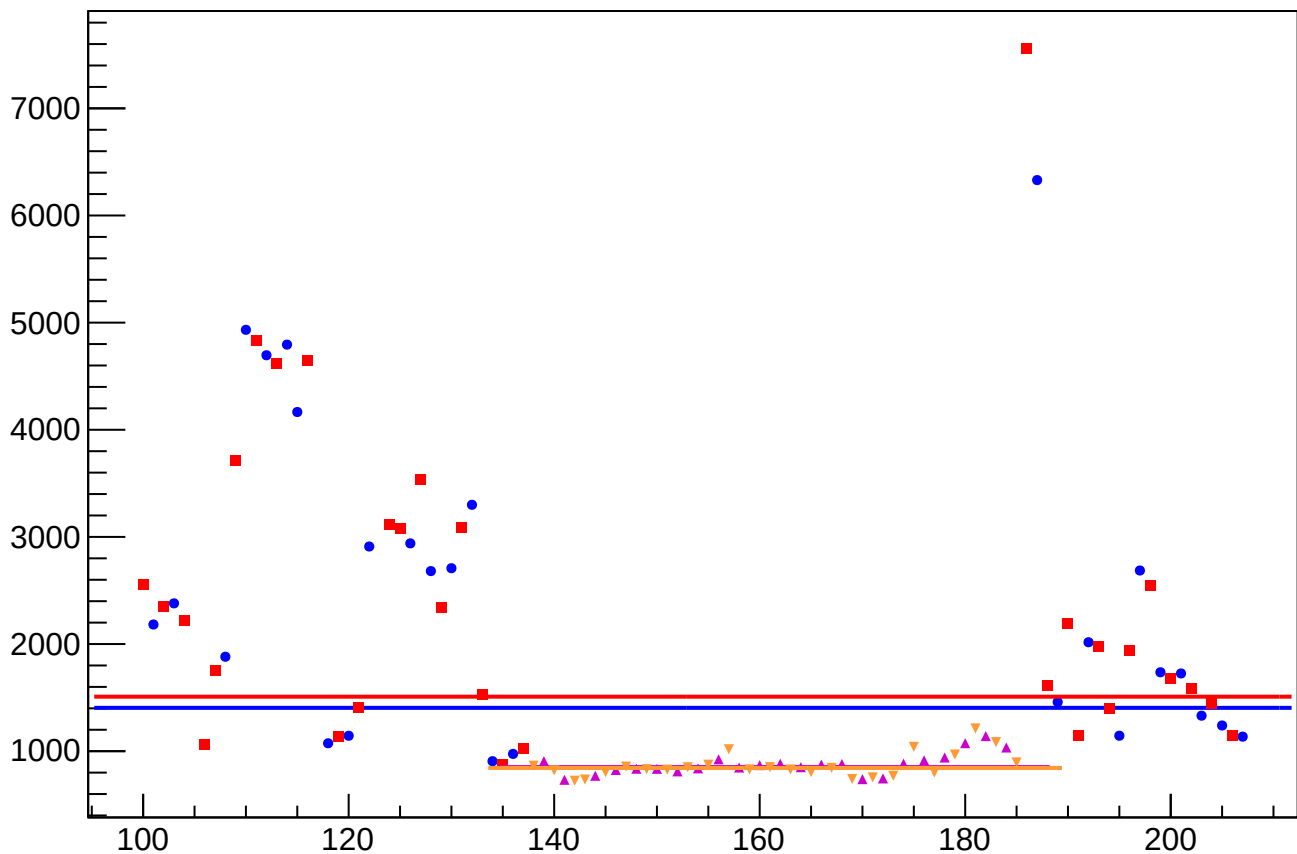
Left In:  $0.165 \pm 0.201$   $\chi^2/\text{NDF}$ : 36.3/22

+ sign  $0.321 \pm 0.174$   $\chi^2/\text{NDF}$ : 56.2/50

All:  $0.258 \pm 0.126$   $\chi^2/\text{NDF}$ : 132.6/104

- sign  $0.190 \pm 0.181$   $\chi^2/\text{NDF}$ : 76.2/53

# diff\_bpmtargetdiffX\_rms vs Slug



Right In:  $1404.650 \pm 0.284$   $\chi^2/\text{NDF}: 4471877.0/25$

Left Out:  $843.266 \pm 0.137$   $\chi^2/\text{NDF}: 505106.4/24$

Right Out:  $1508.807 \pm 0.295$   $\chi^2/\text{NDF}: 4689051.9/30$

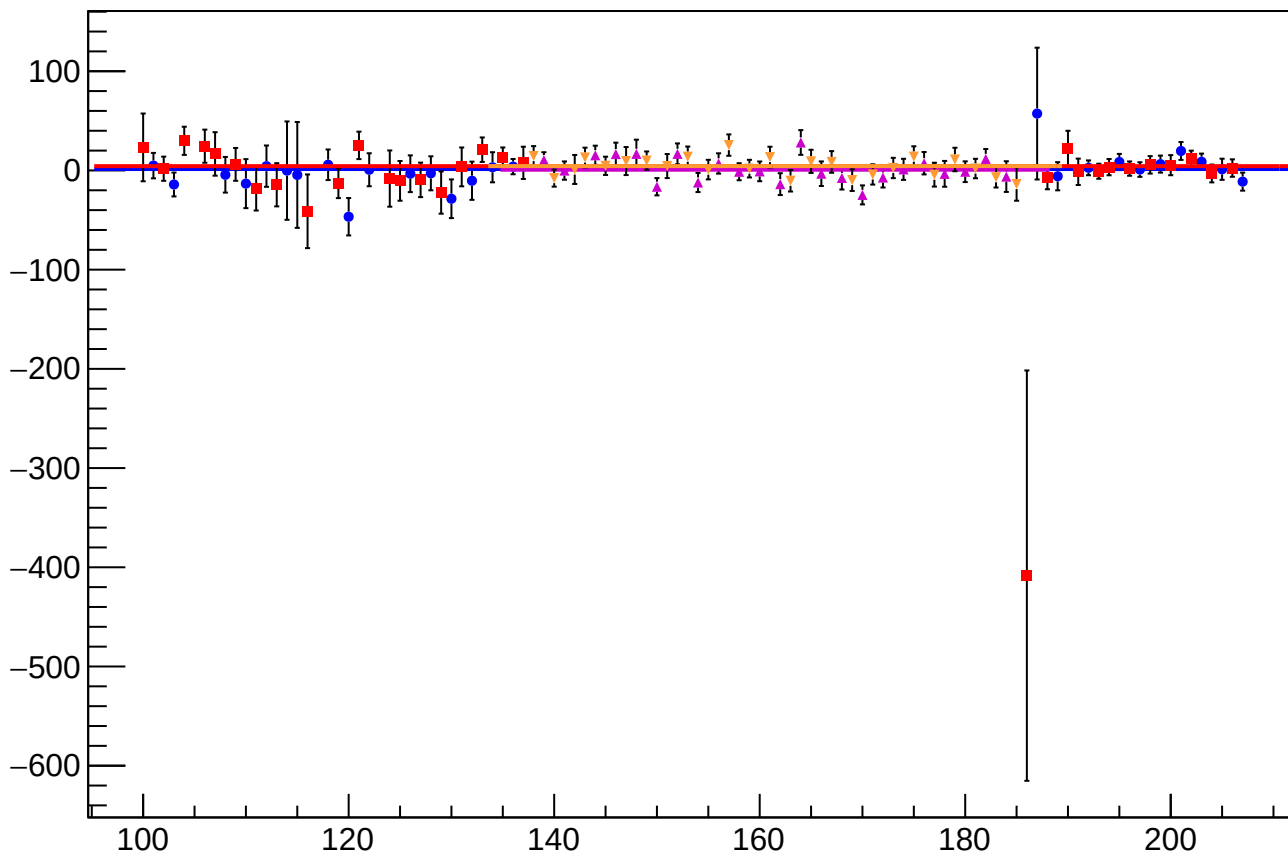
Left In:  $851.618 \pm 0.142$   $\chi^2/\text{NDF}: 382555.6/22$

+ sign  $949.377 \pm 0.123$   $\chi^2/\text{NDF}: 8150416.3/50$

All:  $962.007 \pm 0.089$   $\chi^2/\text{NDF}: 17282185.7/10$

- sign  $975.587 \pm 0.128$   $\chi^2/\text{NDF}: 9110023.6/53$

# diff\_bpmtargetsumY\_mean vs Slug



Right In: 1.440 $\pm$ 2.341  $\chi^2$ /NDF: 20.7/25

Left Out: 4.383 $\pm$ 2.122  $\chi^2$ /NDF:18.6/24

Right Out: 4.329 $\pm$ 2.242  $\chi^2$ /NDF: 26.0/30

Left In: 0.734 $\pm$ 2.171  $\chi^2$ /NDF:32.0/22

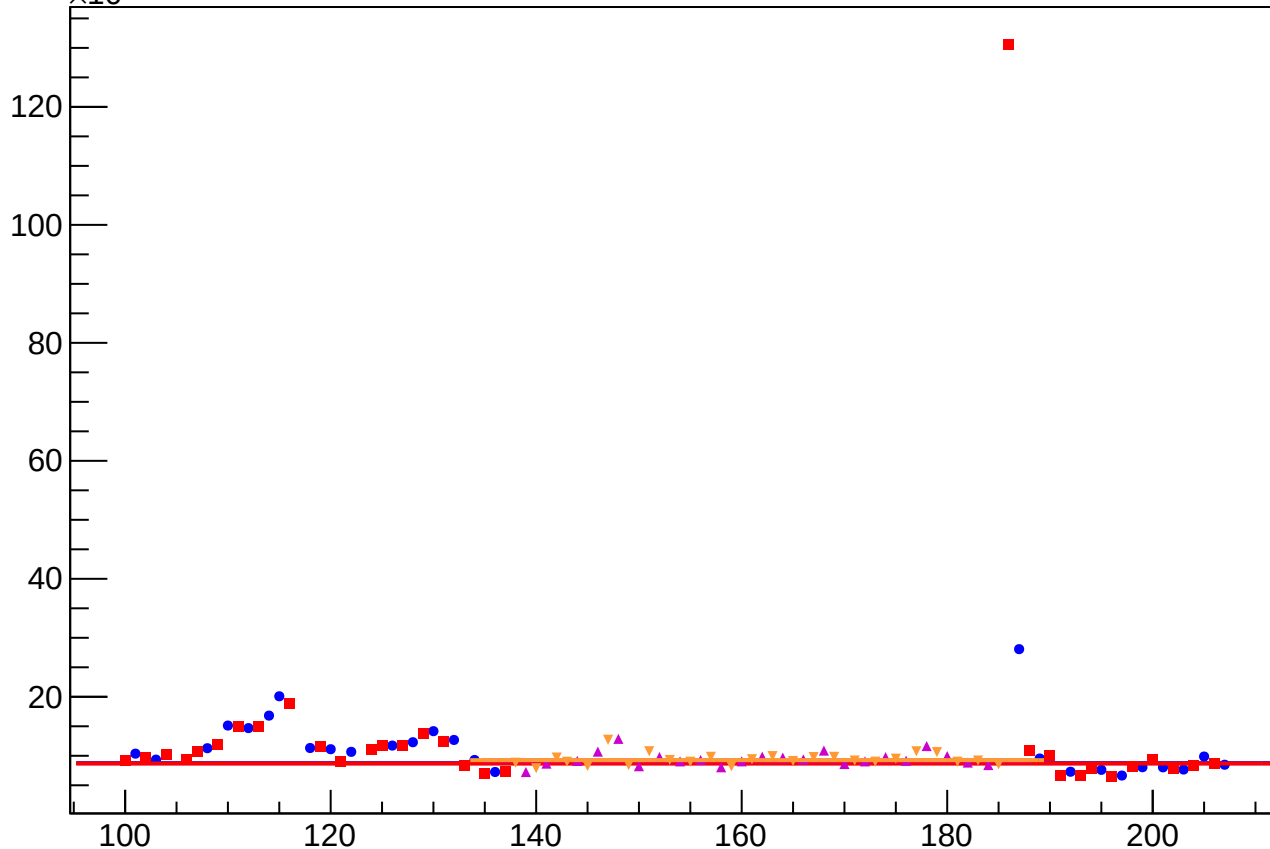
+ sign 3.056 $\pm$ 1.572  $\chi^2$ /NDF: 40.2/50

All: 2.762 $\pm$ 1.107  $\chi^2$ /NDF: 99.7/104

- sign 2.473 $\pm$ 1.559  $\chi^2$ /NDF: 59.4/53

# diff\_bpmtargetsumY\_rms vs Slug

$\times 10^3$



Right In: 8747.691 $\pm$ 1.656  $\chi^2$ /NDF: 1619411.9/25

Left Out: 9261.542 $\pm$ 1.500  $\chi^2$ /NDF:366072.4/24

Right Out: 8690.931 $\pm$ 1.585  $\chi^2$ /NDF: 2297245.9/30

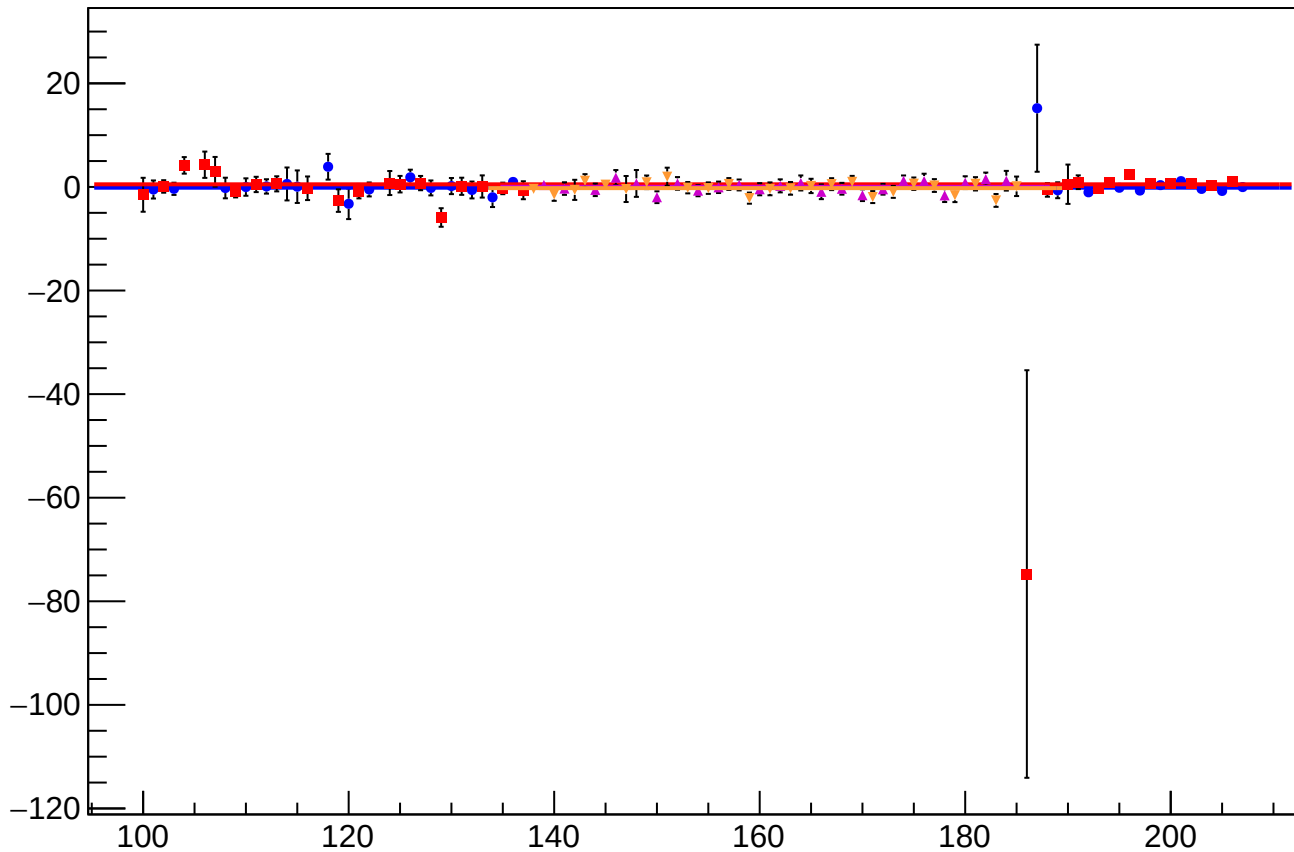
Left In: 9199.542 $\pm$ 1.535  $\chi^2$ /NDF:515496.8/22

+ sign 9029.864 $\pm$ 1.112  $\chi^2$ /NDF: 2038378.7/50

All: 8991.353 $\pm$ 0.783  $\chi^2$ /NDF: 4906630.8/10

- sign 8953.463 $\pm$ 1.103  $\chi^2$ /NDF: 2865871.5/53

# diff\_bpmtargetdiffY\_mean vs Slug



Right In:  $-0.145 \pm 0.213$   $\chi^2/\text{NDF}$ : 15.8/25

Left Out:  $-0.229 \pm 0.243$   $\chi^2/\text{NDF}$ : 19.0/24

Right Out:  $0.506 \pm 0.210$   $\chi^2/\text{NDF}$ : 39.1/30

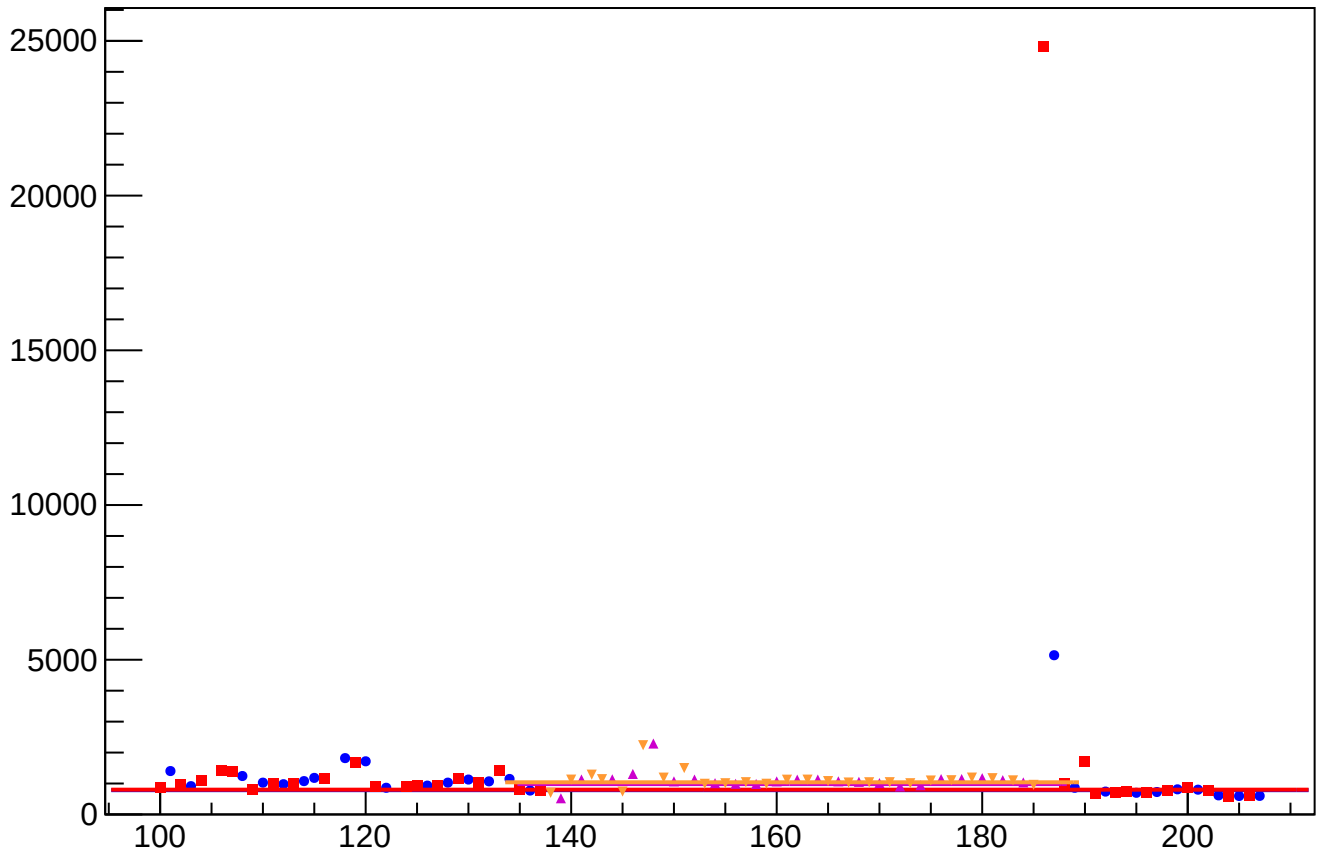
Left In:  $0.025 \pm 0.239$   $\chi^2/\text{NDF}$ : 15.2/22

+ sign  $-0.182 \pm 0.160$   $\chi^2/\text{NDF}$ : 34.8/50

All:  $0.061 \pm 0.112$   $\chi^2/\text{NDF}$ : 95.9/104

- sign  $0.296 \pm 0.158$   $\chi^2/\text{NDF}$ : 56.6/53

# diff\_bpmtargetdiffY\_rms vs Slug



Right In: 785.004 $\pm$ 0.151  $\chi^2$ /NDF: 2147592.0/25

Left Out: 1039.424 $\pm$ 0.172  $\chi^2$ /NDF:1339748.9/24

Right Out: 800.635 $\pm$ 0.149  $\chi^2$ /NDF: 2534529.5/30

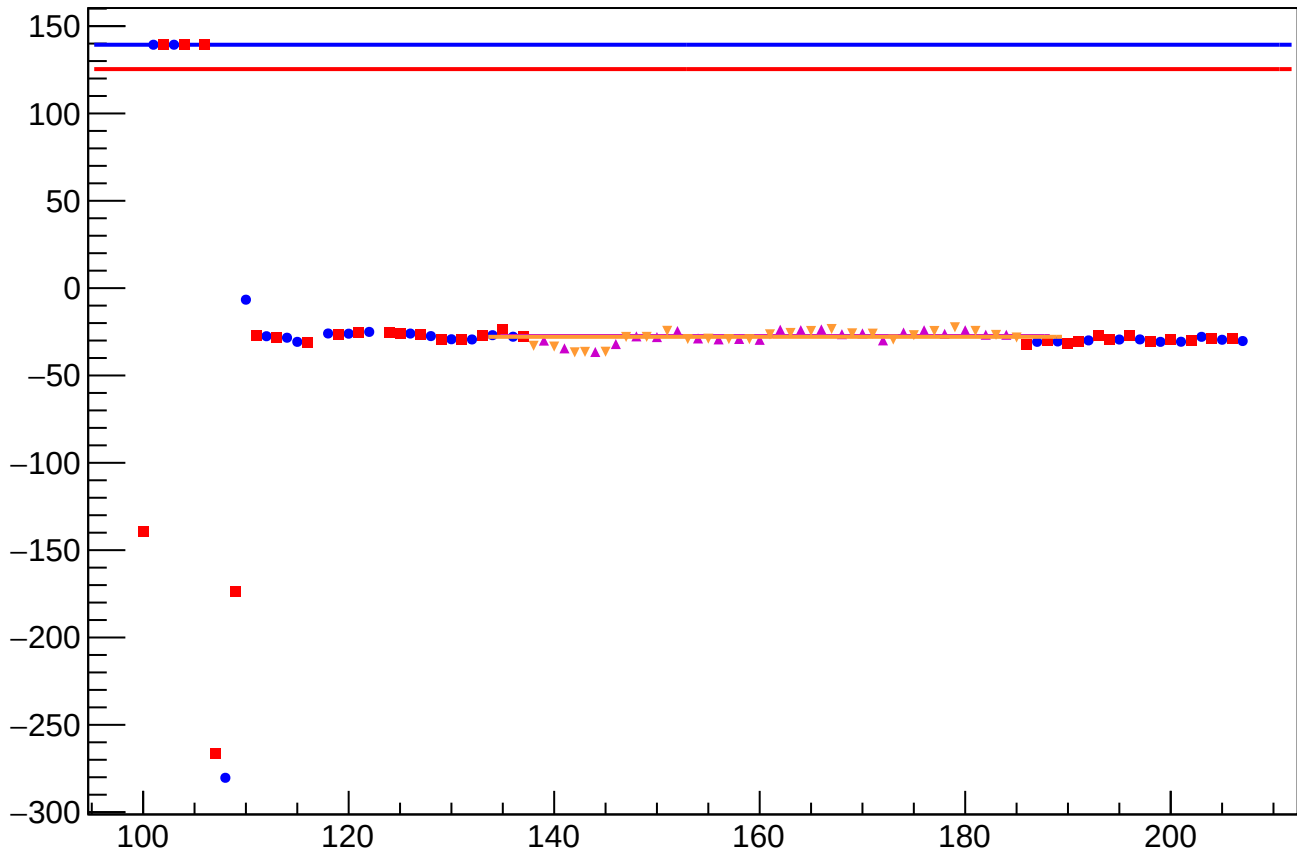
Left In: 981.677 $\pm$ 0.169  $\chi^2$ /NDF:2225094.5/22

+ sign 895.452 $\pm$ 0.113  $\chi^2$ /NDF: 4723803.9/50

All: 887.359 $\pm$ 0.080  $\chi^2$ /NDF: 10140458.9/10

- sign 879.521 $\pm$ 0.112  $\chi^2$ /NDF: 5406630.8/53

# yield\_cav4bX\_mean vs Slug



Right In: 139.336 $\pm$ 0.000  $\chi^2$ /NDF: 58547203222.6/25

Left Out: -27.865 $\pm$ 0.000  $\chi^2$ /NDF: 181586557.6/24

Right Out: 125.391 $\pm$ 0.000  $\chi^2$ /NDF: 774184567703669.1/30

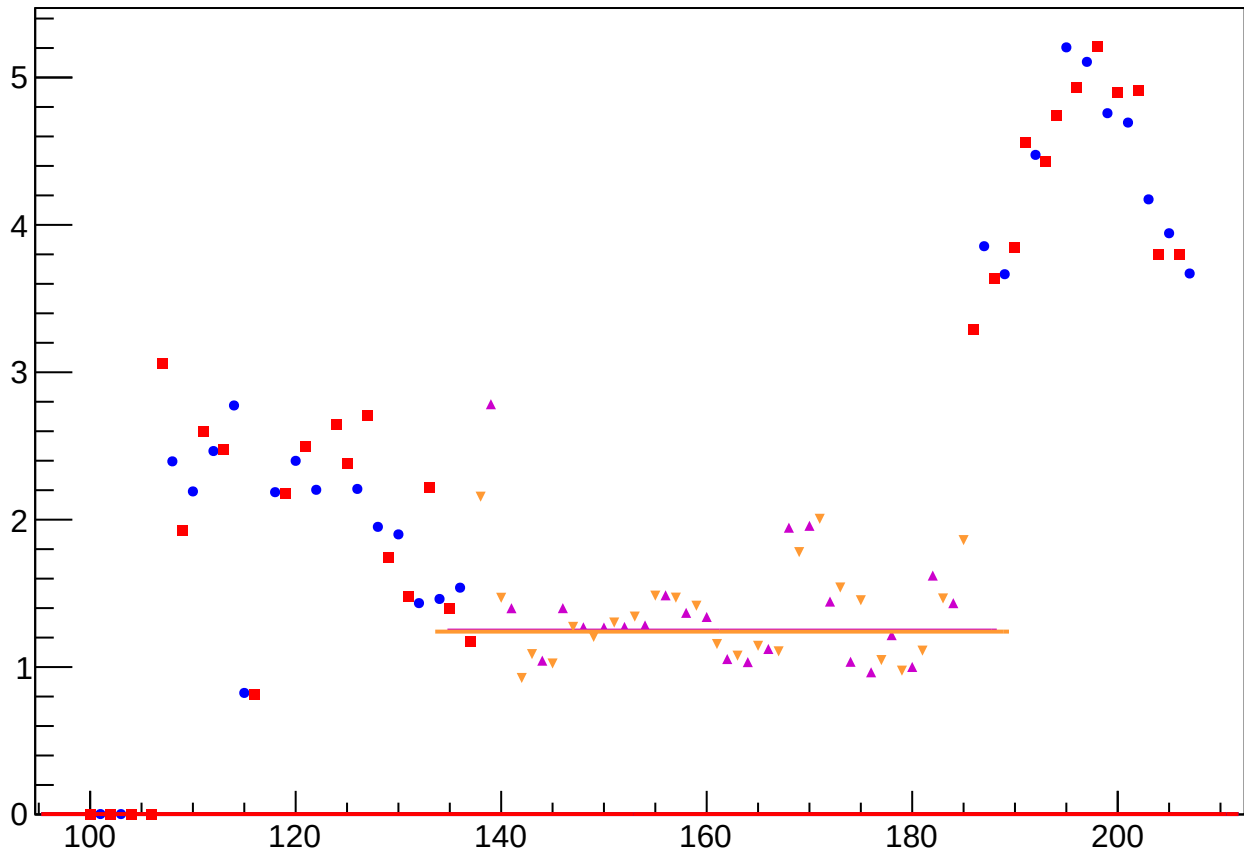
Left In: -27.427 $\pm$ 0.000  $\chi^2$ /NDF: 123181562.3/22

+ sign 139.327 $\pm$ 0.000  $\chi^2$ /NDF: 333089803011.9/5

All: 131.810 $\pm$ 0.000  $\chi^2$ /NDF: 79351029216.3

- sign 125.385 $\pm$ 0.000  $\chi^2$ /NDF: 774398220380279

# yield\_cav4bX\_rms vs Slug



Right In: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 24570439.1/25

Left Out: 1.241+/-0.000  $\chi^2/\text{NDF}$ :1221248.2/24

Right Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 27096719.6/30

Left In: 1.247+/-0.000  $\chi^2/\text{NDF}$ :1436411.6/22

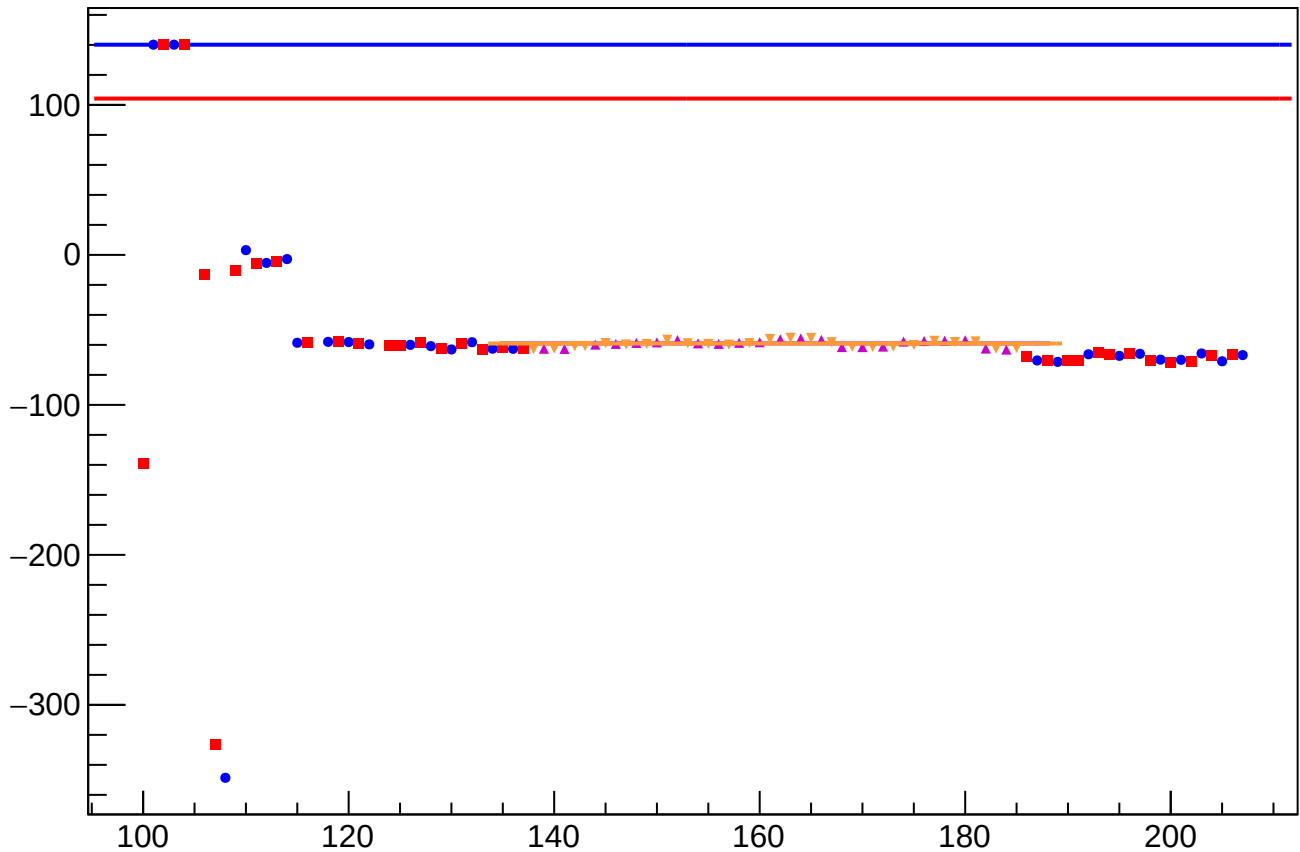
+ sign 0.003+/-0.000  $\chi^2/\text{NDF}$ : 55868628.0/50

All: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 112732667.3/104

- sign 0.003+/-0.000  $\chi^2/\text{NDF}$ : 56863659.7/53



# yield\_cav4bY\_mean vs Slug



Right In: 140.137 $\pm$ 0.000  $\chi^2$ /NDF: 435048619763.7/25

Left Out: -59.066 $\pm$ 0.000  $\chi^2$ /NDF:177511074.0/24

Right Out: 104.219 $\pm$ 0.000  $\chi^2$ /NDF: 1257599525487578.0/30

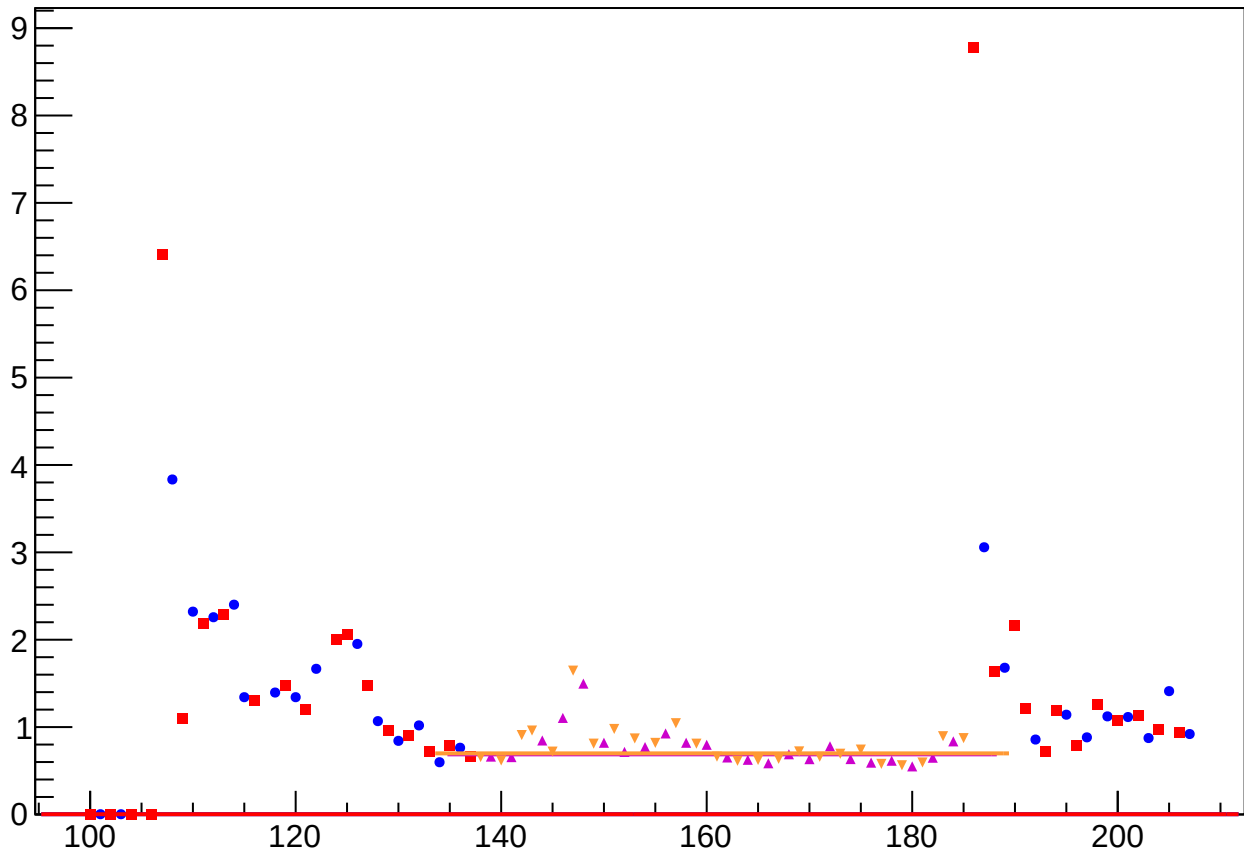
Left In: -59.020 $\pm$ 0.000  $\chi^2$ /NDF:179236820.4/22

+ sign 140.100 $\pm$ 0.000  $\chi^2$ /NDF: 1732152523592.5

All: 120.795 $\pm$ 0.000  $\chi^2$ /NDF: 138343511770

- sign 104.193 $\pm$ 0.000  $\chi^2$ /NDF: 125845653205905

# yield\_cav4bY\_rms vs Slug



Right In: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 22938117.3/25

Left Out: 0.699+/-0.000  $\chi^2/\text{NDF}$ :1357196.3/24

Right Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 25155234.9/30

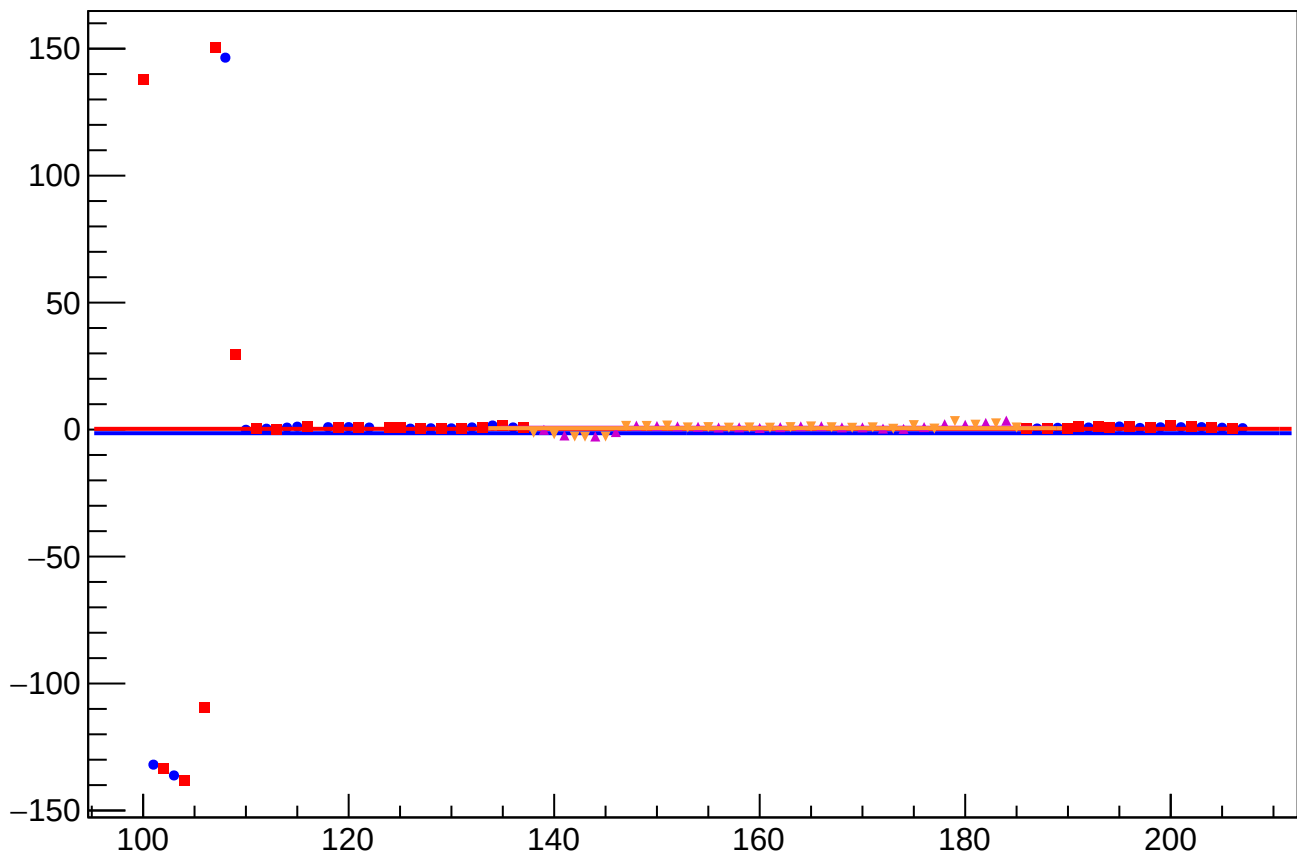
Left In: 0.688+/-0.000  $\chi^2/\text{NDF}$ :1107767.8/22

+ sign 0.003+/-0.000  $\chi^2/\text{NDF}$ : 55989514.4/50

All: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 112453027.8/104

- sign 0.003+/-0.000  $\chi^2/\text{NDF}$ : 56462943.2/53

# yield\_cav4cX\_mean vs Slug



Right In:  $-1.428 \pm 0.000$   $\chi^2/\text{NDF}$ : 9903655738.0/25

Left Out:  $0.575 \pm 0.000$   $\chi^2/\text{NDF}$ : 154364809.1/24

+ sign  $0.099 \pm 0.000$   $\chi^2/\text{NDF}$ : 10116043428.0/50

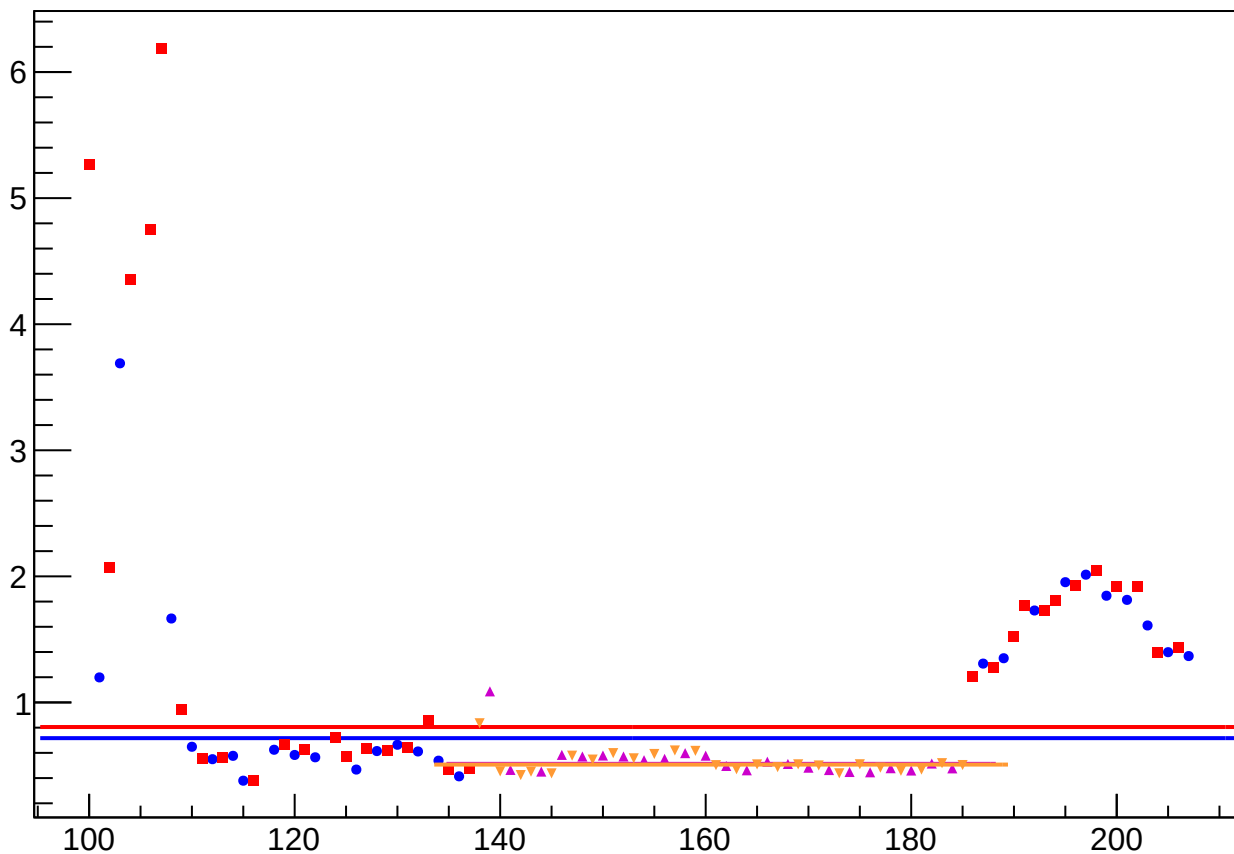
Right Out:  $0.296 \pm 0.000$   $\chi^2/\text{NDF}$ : 3612922074.3/30

All:  $0.353 \pm 0.000$   $\chi^2/\text{NDF}$ : 13847366905.5/100

Left In:  $0.732 \pm 0.000$   $\chi^2/\text{NDF}$ : 105135095.8/22

- sign  $0.632 \pm 0.000$   $\chi^2/\text{NDF}$ : 3720505158.1/53

# yield\_cav4cX\_rms vs Slug



Right In: 0.717 $\pm$ 0.000  $\chi^2$ /NDF: 7241373.4/25

Left Out: 0.507 $\pm$ 0.000  $\chi^2$ /NDF:554639.8/24

Right Out: 0.805 $\pm$ 0.000  $\chi^2$ /NDF: 8115743.0/30

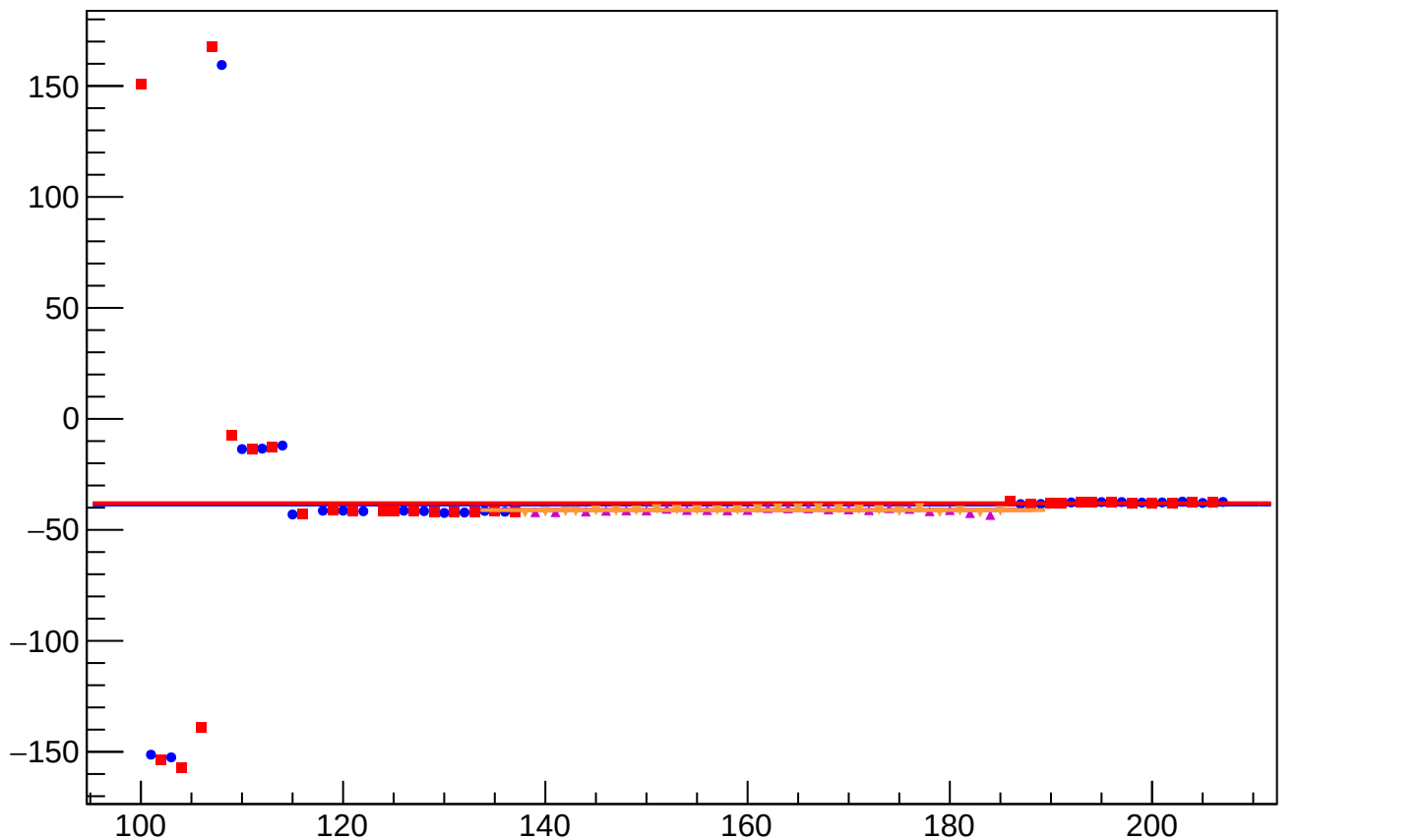
Left In: 0.513 $\pm$ 0.000  $\chi^2$ /NDF:753419.6/22

+ sign 0.557 $\pm$ 0.000  $\chi^2$ /NDF: 9067798.8/50

All: 0.568 $\pm$ 0.000  $\chi^2$ /NDF: 20177189.2/104

- sign 0.580 $\pm$ 0.000  $\chi^2$ /NDF: 11068632.6/53

# yield\_cav4cY\_mean vs Slug



Right In: -38.552 $\pm$ 0.000  $\chi^2$ /NDF: 3605151906.5/25

Left Out: -41.092 $\pm$ 0.000  $\chi^2$ /NDF: 60251030.2/24

+ sign -40.353 $\pm$ 0.000  $\chi^2$ /NDF: 3961163998.1/50

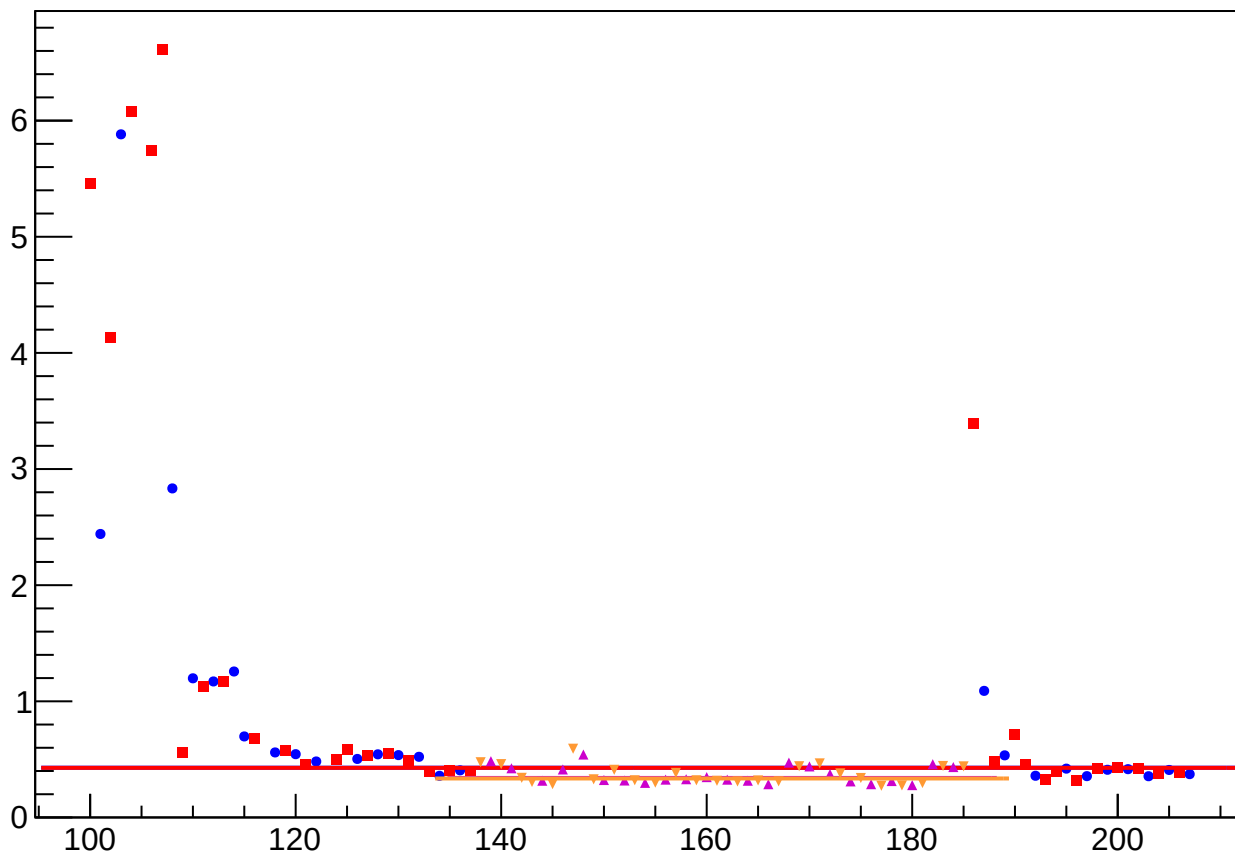
Right Out: -38.005 $\pm$ 0.000  $\chi^2$ /NDF: 2512954585.2/30

All: -40.205 $\pm$ 0.000  $\chi^2$ /NDF: 6964549896.4/100

Left In: -41.029 $\pm$ 0.000  $\chi^2$ /NDF: 51382147.2/22

- sign -40.051 $\pm$ 0.000  $\chi^2$ /NDF: 2993472079.3/53

# yield\_cav4cY\_rms vs Slug



Right In: 0.428 $\pm$ 0.000  $\chi^2$ /NDF: 3688500.7/25

Left Out: 0.336 $\pm$ 0.000  $\chi^2$ /NDF:1238006.0/24

Right Out: 0.427 $\pm$ 0.000  $\chi^2$ /NDF: 4676899.2/30

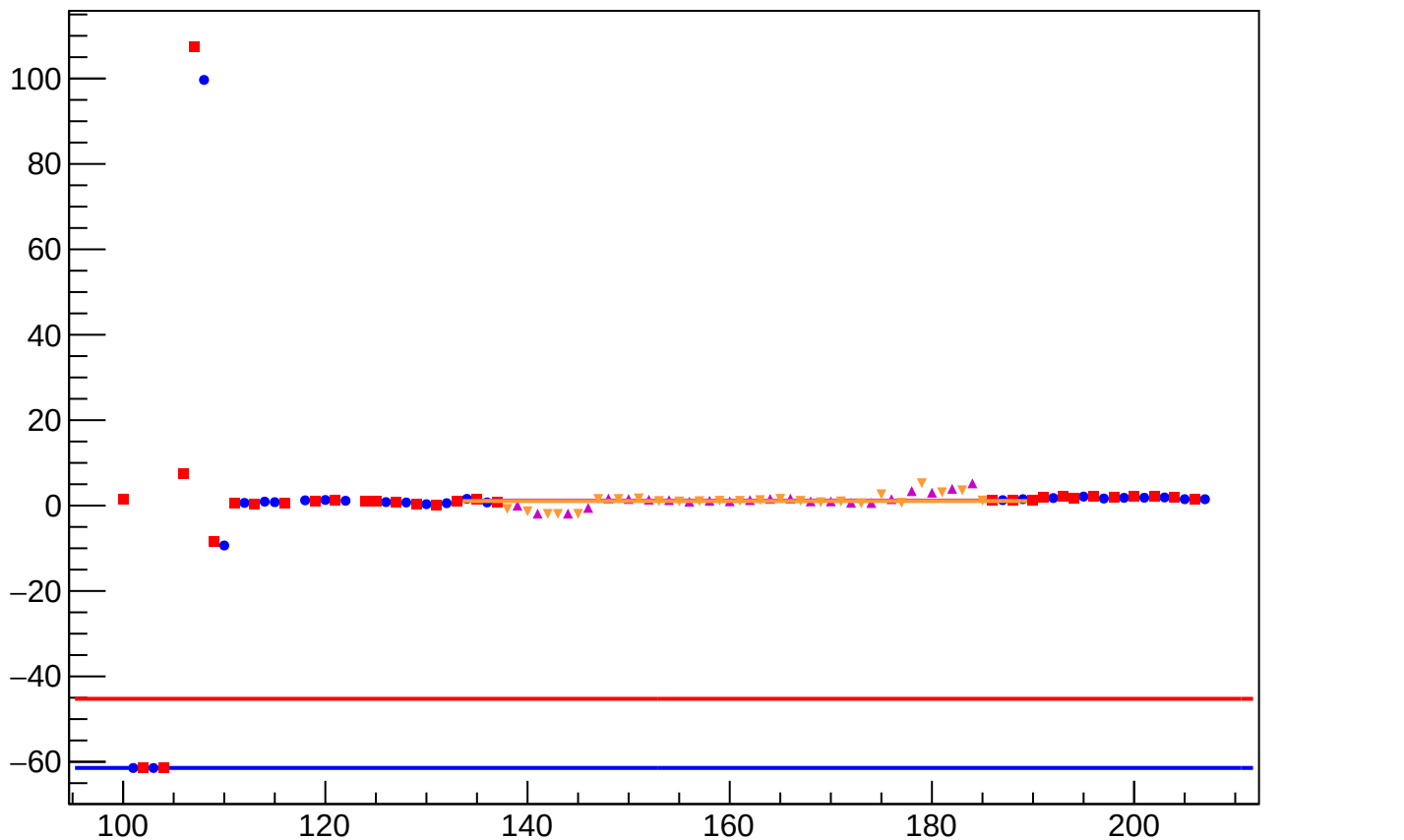
Left In: 0.340 $\pm$ 0.000  $\chi^2$ /NDF:1065343.8/22

+ sign 0.363 $\pm$ 0.000  $\chi^2$ /NDF: 5714757.5/50

All: 0.365 $\pm$ 0.000  $\chi^2$ /NDF: 12174789.3/104

- sign 0.368 $\pm$ 0.000  $\chi^2$ /NDF: 6452844.2/53

# yield\_cav4dX\_mean vs Slug



Right In:  $-61.435 \pm 0.000$   $\chi^2/\text{NDF}$ : 288572669865.8/25

Left Out:  $1.059 \pm 0.000$   $\chi^2/\text{NDF}$ : 253133917.4/24

Right Out:  $-45.245 \pm 0.000$   $\chi^2/\text{NDF}$ : 357880106303536.5/30

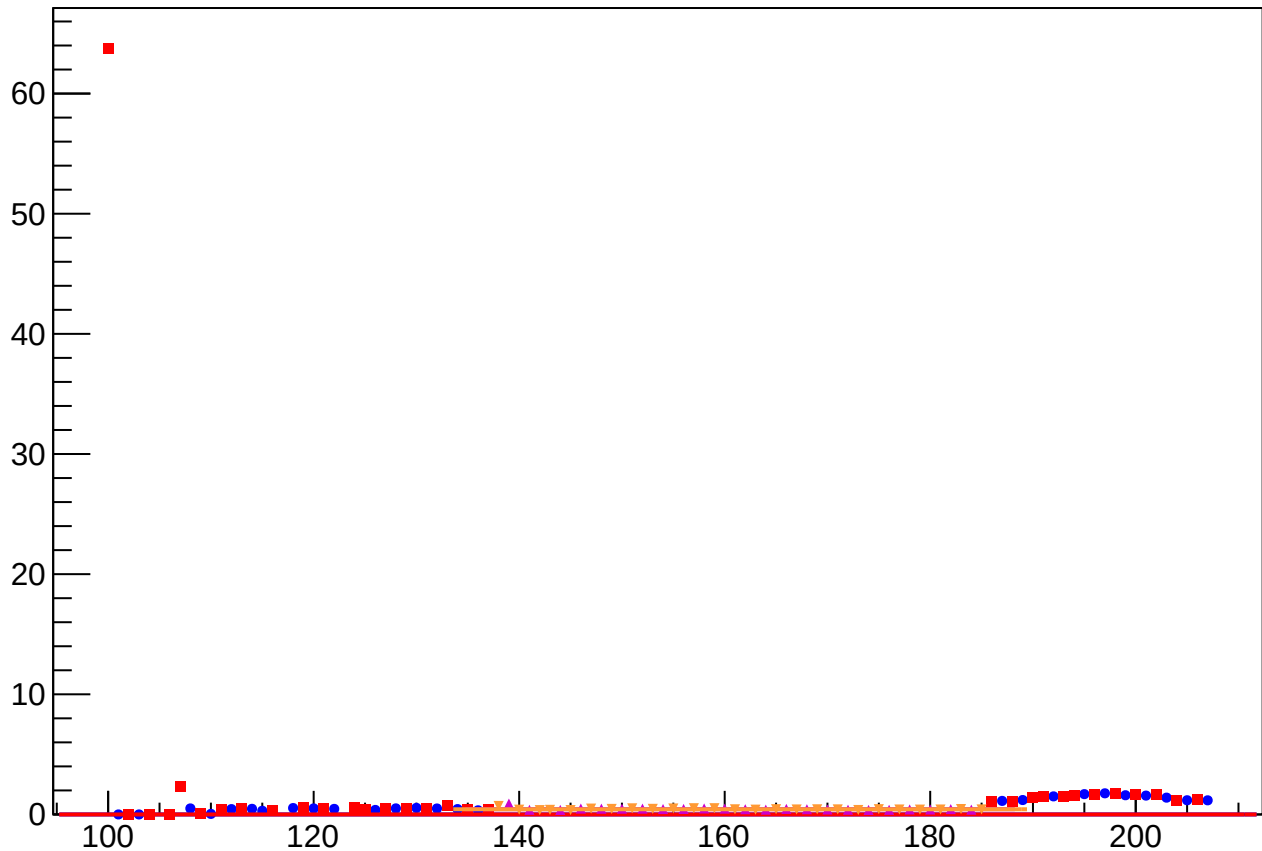
Left In:  $1.175 \pm 0.000$   $\chi^2/\text{NDF}$ : 182397676.2/22

+ sign  $-61.421 \pm 0.000$   $\chi^2/\text{NDF}$ : 618574366092.6/5

All:  $-52.737 \pm 0.000$   $\chi^2/\text{NDF}$ : 409615690092

- sign  $-45.236 \pm 0.000$   $\chi^2/\text{NDF}$ : 358046669667231.

# yield\_cav4dX\_rms vs Slug



Right In: 0.001 $\pm$ 0.000  $\chi^2$ /NDF: 24141371.9/25

Left Out: 0.432 $\pm$ 0.000  $\chi^2$ /NDF:527546.3/24

Right Out: 0.001 $\pm$ 0.000  $\chi^2$ /NDF: 26698431.4/30

Left In: 0.438 $\pm$ 0.000  $\chi^2$ /NDF:698702.2/22

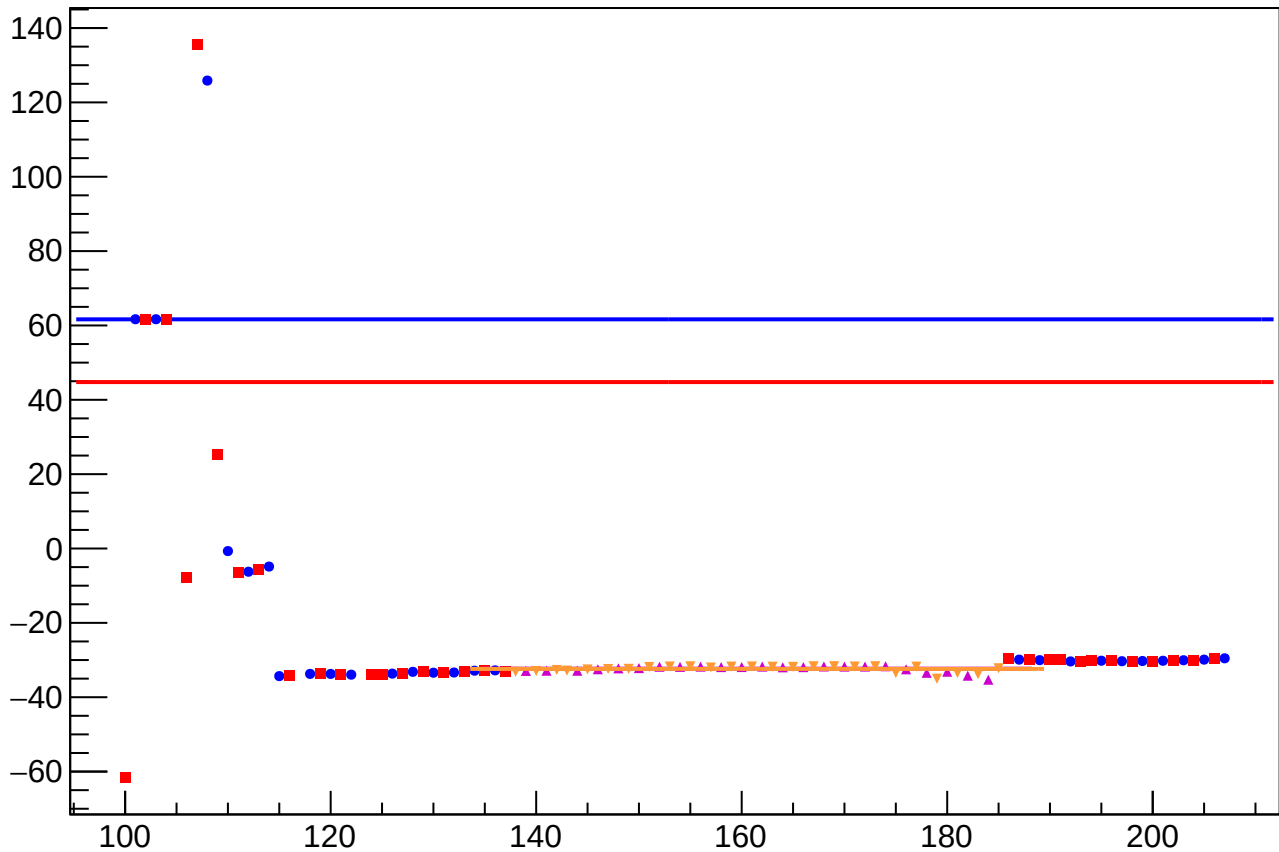
+ sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 55905021.8/50

All: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 112745018.6/104

- sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 56839805.4/53



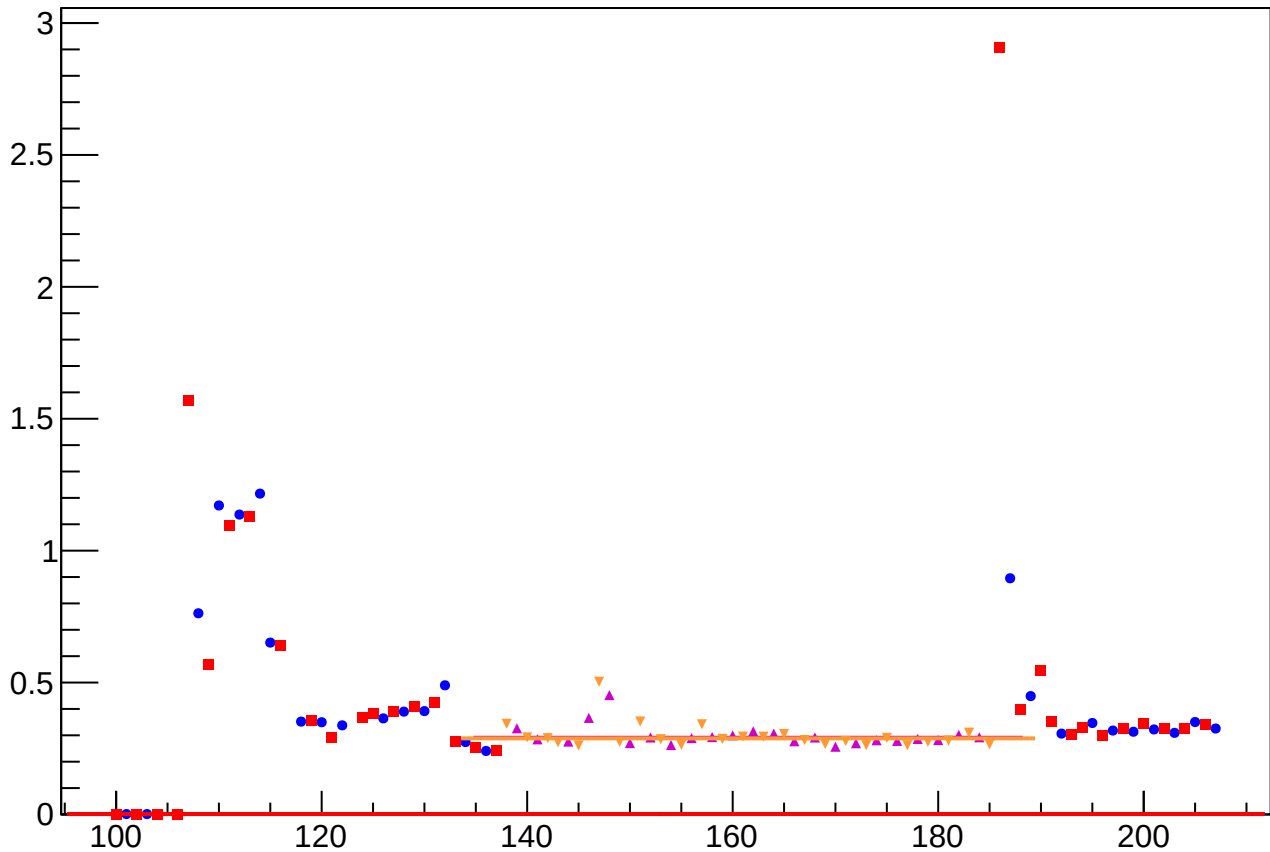
# yield\_cav4dY\_mean vs Slug



Right In: 61.644 $\pm$ 0.000  $\chi^2$ /NDF: 936607646552.2/25  
 Left Out: -32.386 $\pm$ 0.000  $\chi^2$ /NDF: 172024234.9/24  
 Right Out: 44.771 $\pm$ 0.000  $\chi^2$ /NDF: 366505425775610.6/30  
 Left In: -32.325 $\pm$ 0.000  $\chi^2$ /NDF: 118654391.5/22

+ sign 61.582 $\pm$ 0.000  $\chi^2$ /NDF: 2893978645998.5/5  
 All: 52.622 $\pm$ 0.000  $\chi^2$ /NDF: 4216251720999.5/10  
 - sign 44.730 $\pm$ 0.000  $\chi^2$ /NDF: 367732786533675.1/10

# yield\_cav4dY\_rms vs Slug



Right In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 25704663.2/25

Left Out: 0.288 $\pm$ 0.000  $\chi^2$ /NDF:522979.2/24

Right Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 27627494.7/30

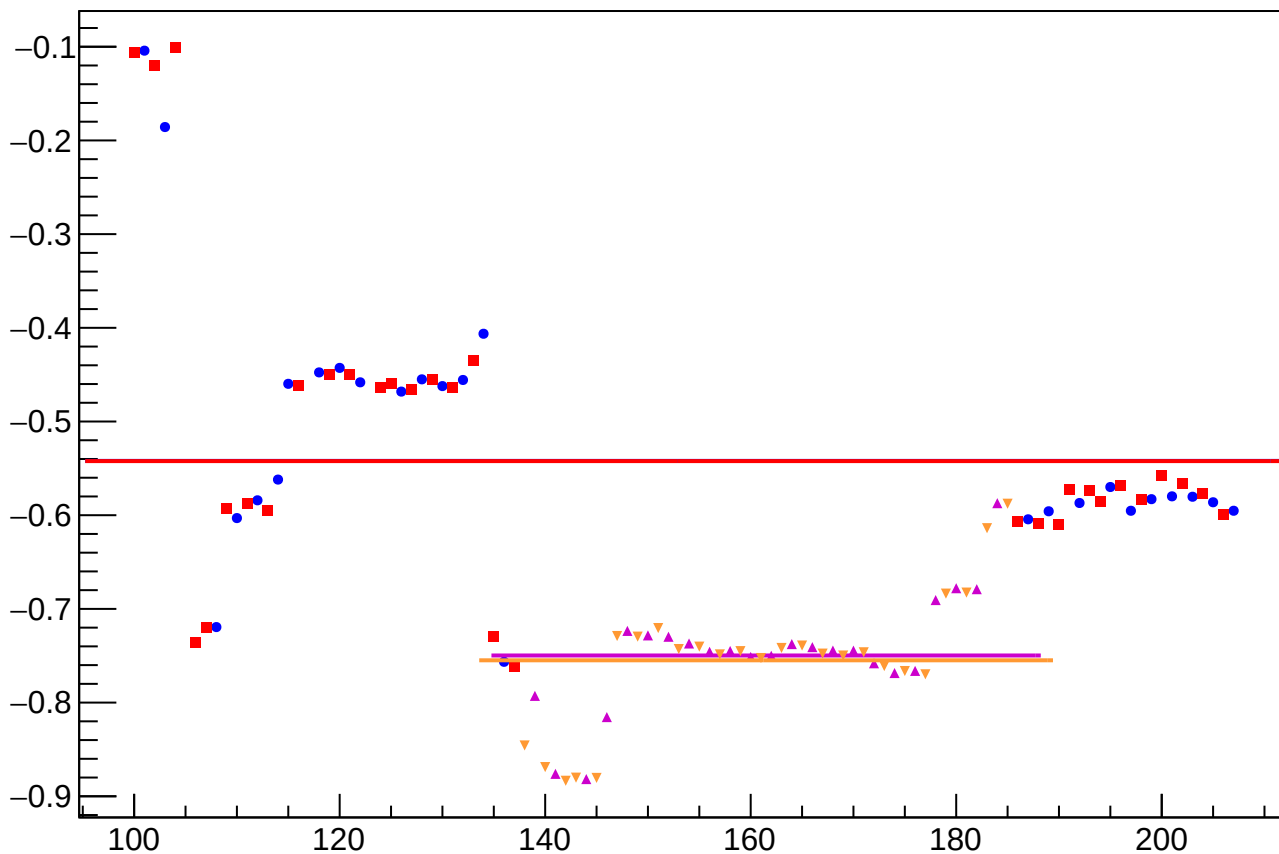
Left In: 0.291 $\pm$ 0.000  $\chi^2$ /NDF:387524.5/22

+ sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 62651431.0/50

All: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 125172178.3/104

- sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 62520665.6/53

# yield\_bpm4aX\_mean vs Slug



Right In:  $-0.542 \pm 0.000$   $\chi^2/\text{NDF}$ : 305262711.3/25

Left Out:  $-0.755 \pm 0.000$   $\chi^2/\text{NDF}$ : 212643091.8/24

Right Out:  $-0.542 \pm 0.000$   $\chi^2/\text{NDF}$ : 220280502.6/30

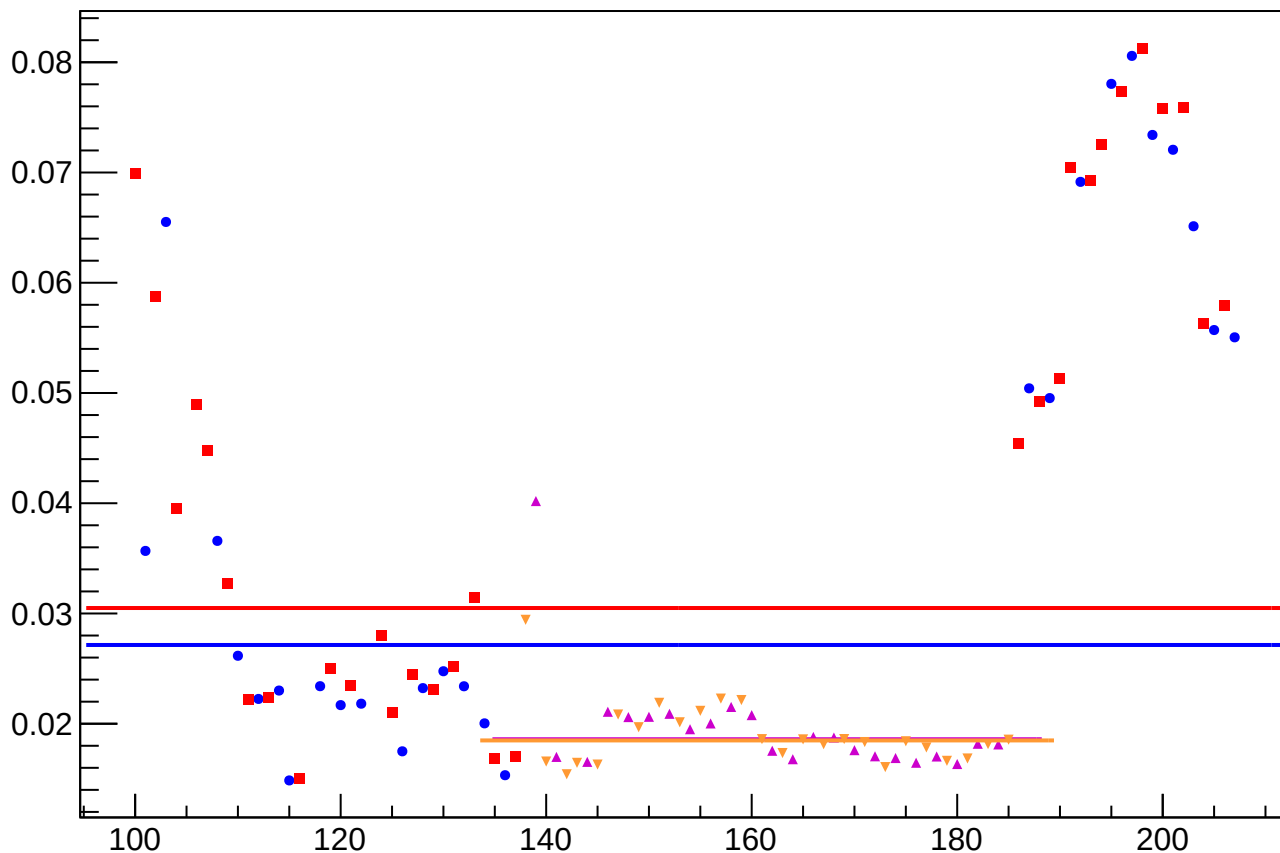
Left In:  $-0.750 \pm 0.000$   $\chi^2/\text{NDF}$ : 140839352.1/22

+ sign  $-0.707 \pm 0.000$   $\chi^2/\text{NDF}$ : 988178168.0/50

All:  $-0.705 \pm 0.000$   $\chi^2/\text{NDF}$ : 1756605528.4/1

- sign  $-0.704 \pm 0.000$   $\chi^2/\text{NDF}$ : 768168522.9/53

# yield\_bpm4aX\_rms vs Slug



Right In: 0.027+/-0.000  $\chi^2/\text{NDF}$ : 7095471.5/25

Left Out: 0.018+/-0.000  $\chi^2/\text{NDF}$ : 491665.0/24

Right Out: 0.030+/-0.000  $\chi^2/\text{NDF}$ : 7180267.3/30

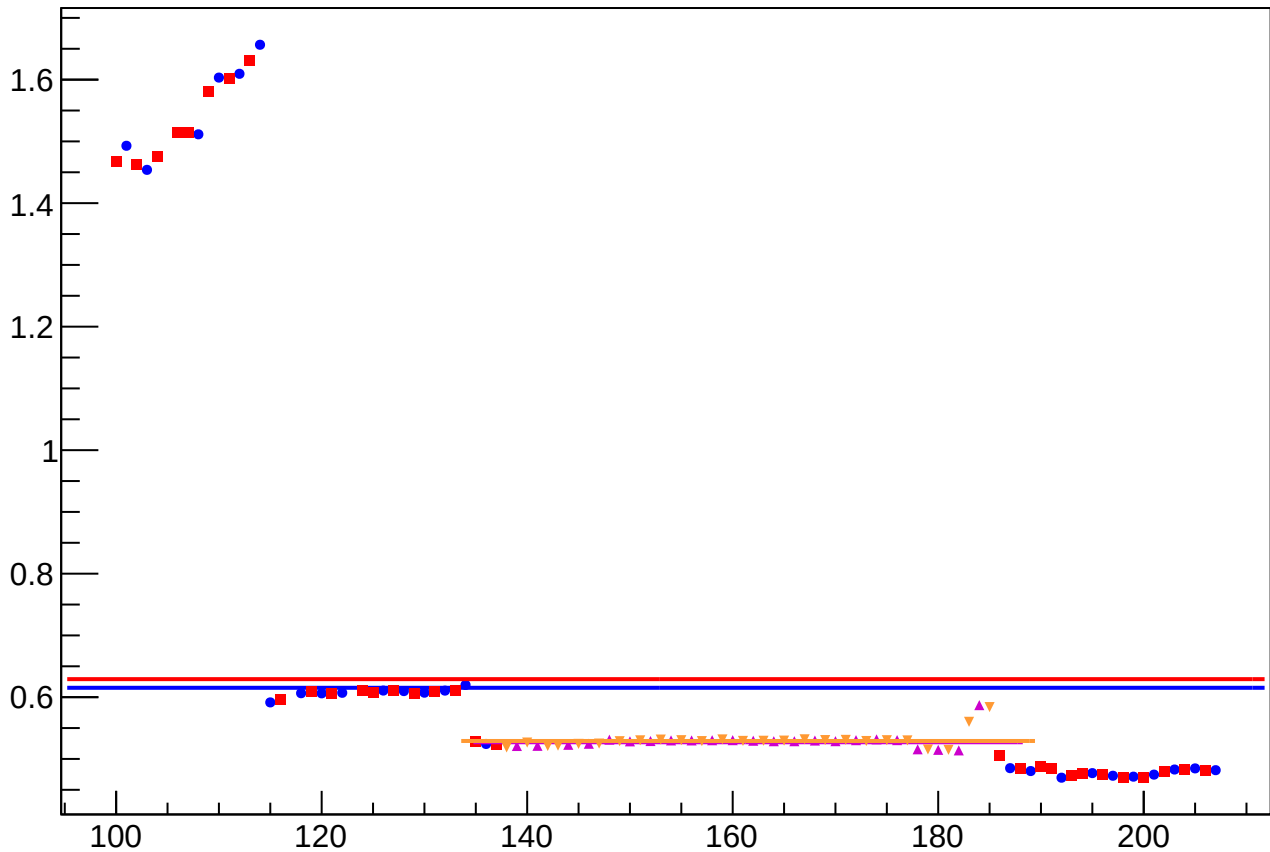
Left In: 0.019+/-0.000  $\chi^2/\text{NDF}$ : 739183.3/22

+ sign 0.020+/-0.000  $\chi^2/\text{NDF}$ : 9143772.6/50

All: 0.021+/-0.000  $\chi^2/\text{NDF}$ : 19777918.8/104

- sign 0.021+/-0.000  $\chi^2/\text{NDF}$ : 10598408.0/53

# yield\_bpm4aY\_mean vs Slug



Right In: 0.615 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 5580736015.0/25

Left Out: 0.529 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 16236836.5/24

Right Out: 0.629 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 6545597247.8/30

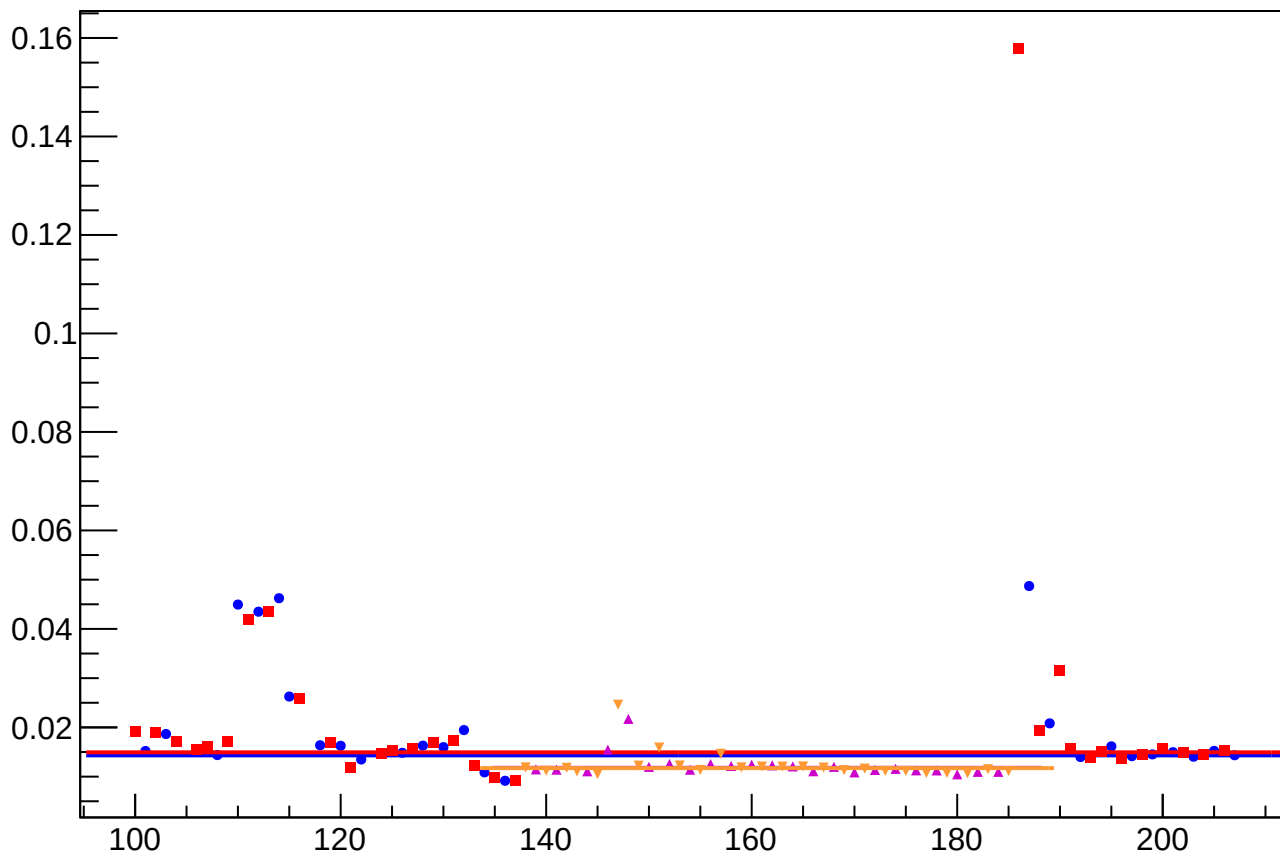
Left In: 0.527 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 13035326.4/22

+ sign 0.557 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 5919454227.0/50

All: 0.559 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 12925763862.2/100

- sign 0.561 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7004259444.6/53

# yield\_bpm4aY\_rms vs Slug



Right In: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 1969588.3/25

Left Out: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 699878.1/24

Right Out: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 2385029.7/30

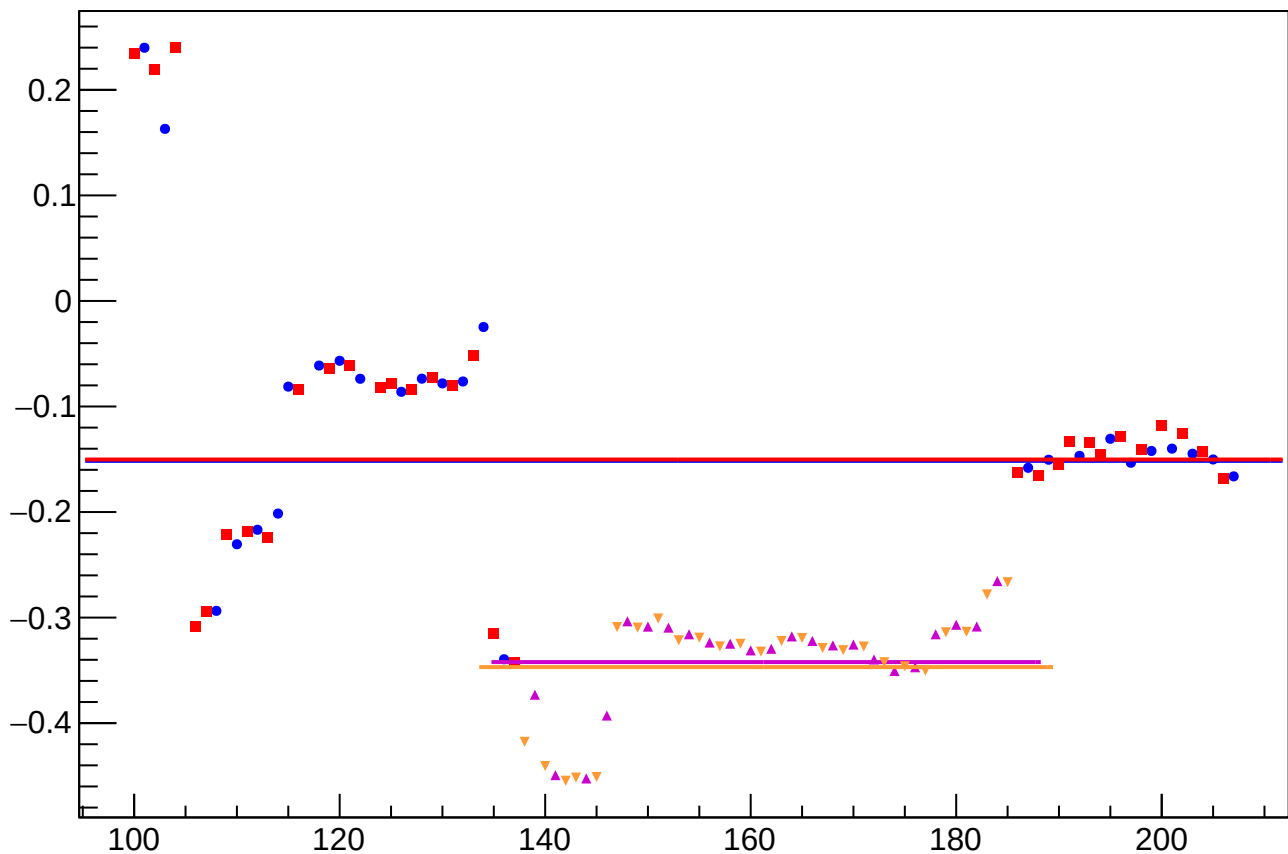
Left In: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 519826.8/22

+ sign 0.013+/-0.000  $\chi^2/\text{NDF}$ : 3251556.4/50

All: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 7017494.1/104

- sign 0.013+/-0.000  $\chi^2/\text{NDF}$ : 3750361.2/53

# yield\_bpm4eX\_mean vs Slug



Right In:  $-0.151 \pm 0.000$   $\chi^2/\text{NDF}: 276983407.7/25$

Left Out:  $-0.347 \pm 0.000$   $\chi^2/\text{NDF}: 125890246.2/24$

Right Out:  $-0.150 \pm 0.000$   $\chi^2/\text{NDF}: 200054316.2/30$

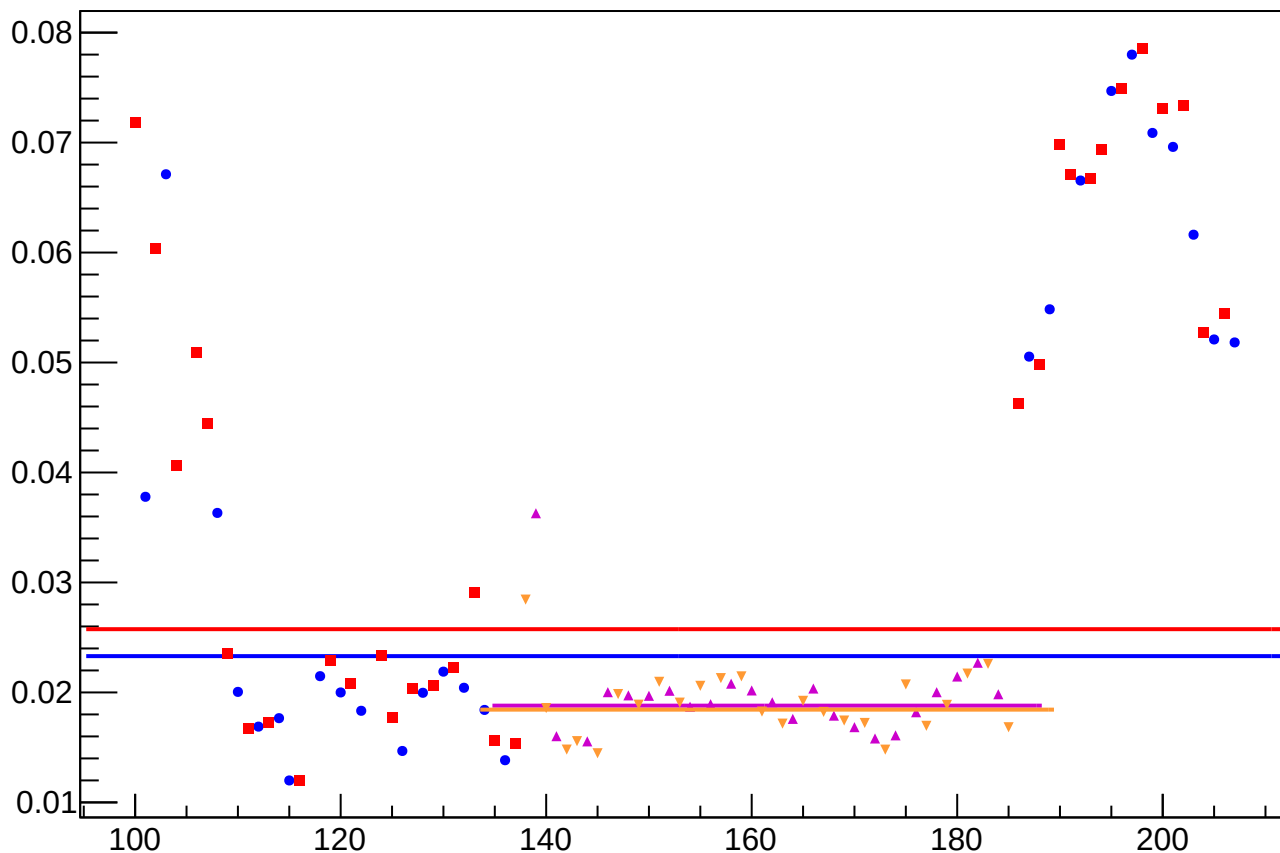
Left In:  $-0.342 \pm 0.000$   $\chi^2/\text{NDF}: 88220744.3/22$

+ sign  $-0.294 \pm 0.000$   $\chi^2/\text{NDF}: 885551134.2/50$

All:  $-0.292 \pm 0.000$   $\chi^2/\text{NDF}: 1601716909.2/1$

- sign  $-0.290 \pm 0.000$   $\chi^2/\text{NDF}: 715619289.0/53$

# yield\_bpm4eX\_rms vs Slug



Right In: 0.023+/-0.000  $\chi^2/\text{NDF}$ : 8104392.4/25

Left Out: 0.018+/-0.000  $\chi^2/\text{NDF}$ : 640029.5/24

Right Out: 0.026+/-0.000  $\chi^2/\text{NDF}$ : 8663632.7/30

Left In: 0.019+/-0.000  $\chi^2/\text{NDF}$ : 718726.0/22

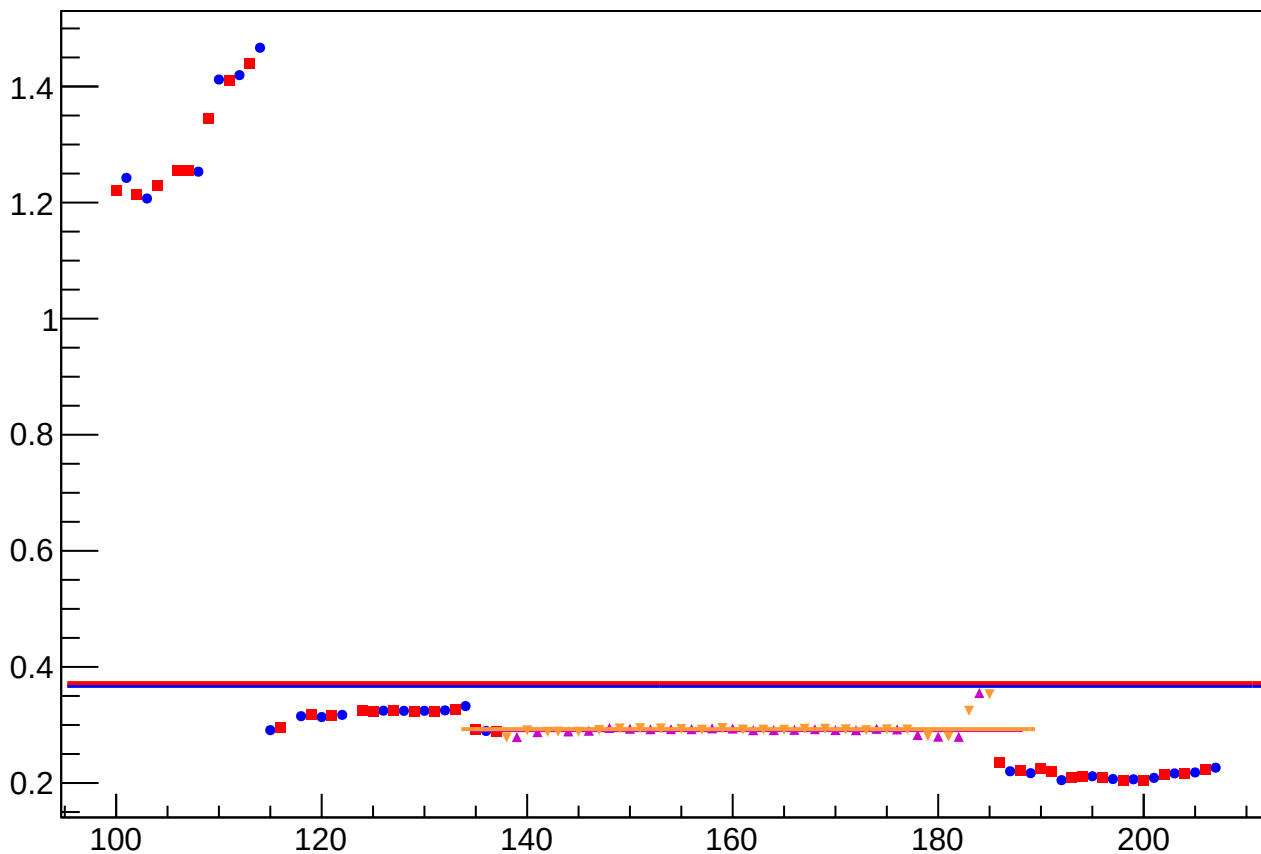
+ sign 0.020+/-0.000  $\chi^2/\text{NDF}$ : 9342969.4/50

All: 0.020+/-0.000  $\chi^2/\text{NDF}$ : 19901734.7/104

- sign 0.021+/-0.000  $\chi^2/\text{NDF}$ : 10504381.8/53



# yield\_bpm4eY\_mean vs Slug



Right In: 0.367+/-0.000  $\chi^2/\text{NDF}$ : 8254635682.4/25

Left Out: 0.293+/-0.000  $\chi^2/\text{NDF}$ :17281571.0/24

Right Out: 0.372+/-0.000  $\chi^2/\text{NDF}$ : 9237645200.8/30

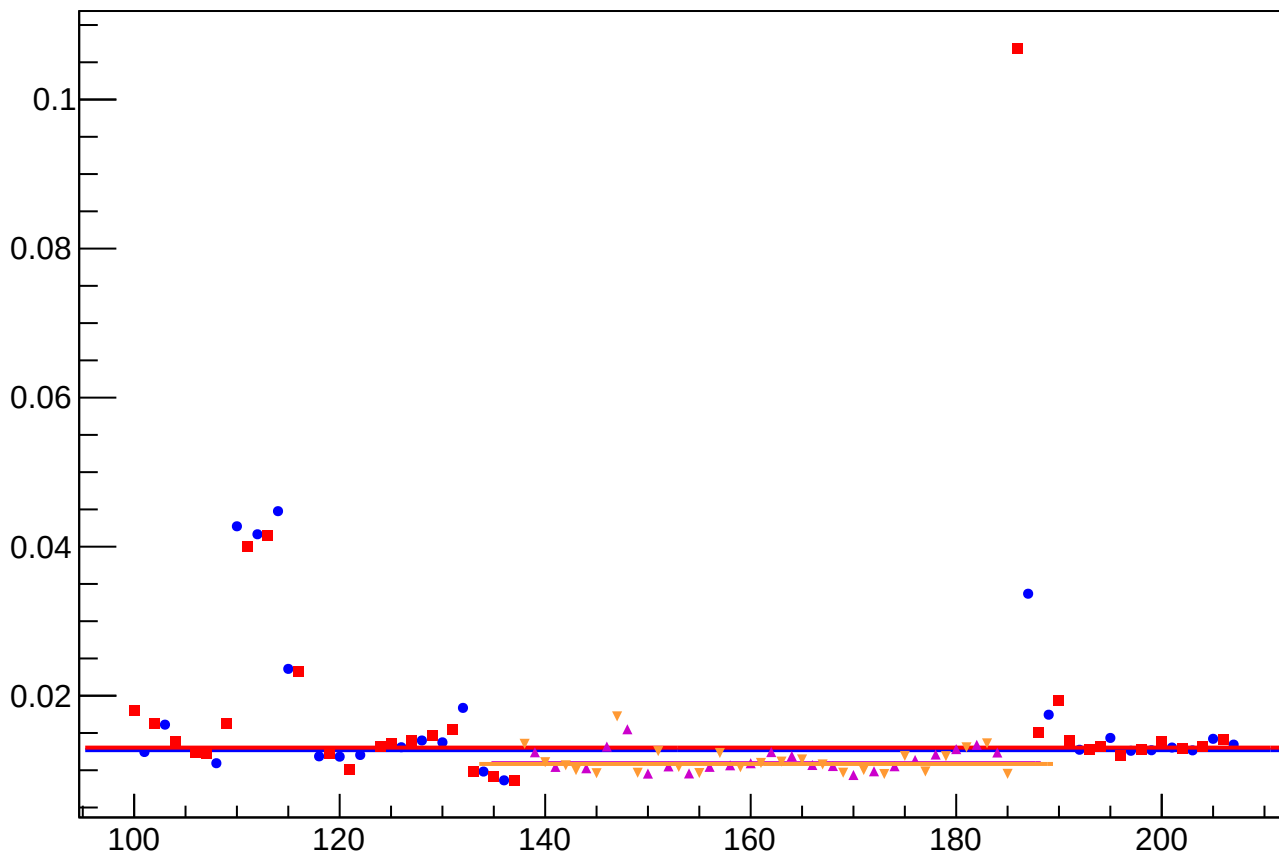
Left In: 0.291+/-0.000  $\chi^2/\text{NDF}$ :10282762.1/22

+ sign 0.319+/-0.000  $\chi^2/\text{NDF}$ : 8570312827.1/50

All: 0.320+/-0.000  $\chi^2/\text{NDF}$ : 18168354561.3/100

- sign 0.321+/-0.000  $\chi^2/\text{NDF}$ : 9597336055.4/53

# yield\_bpm4eY\_rms vs Slug



Right In:  $0.013 \pm 0.000$   $\chi^2/\text{NDF}$ : 1792951.9/25

Left Out:  $0.011 \pm 0.000$   $\chi^2/\text{NDF}$ : 654475.7/24

Right Out:  $0.013 \pm 0.000$   $\chi^2/\text{NDF}$ : 2177408.5/30

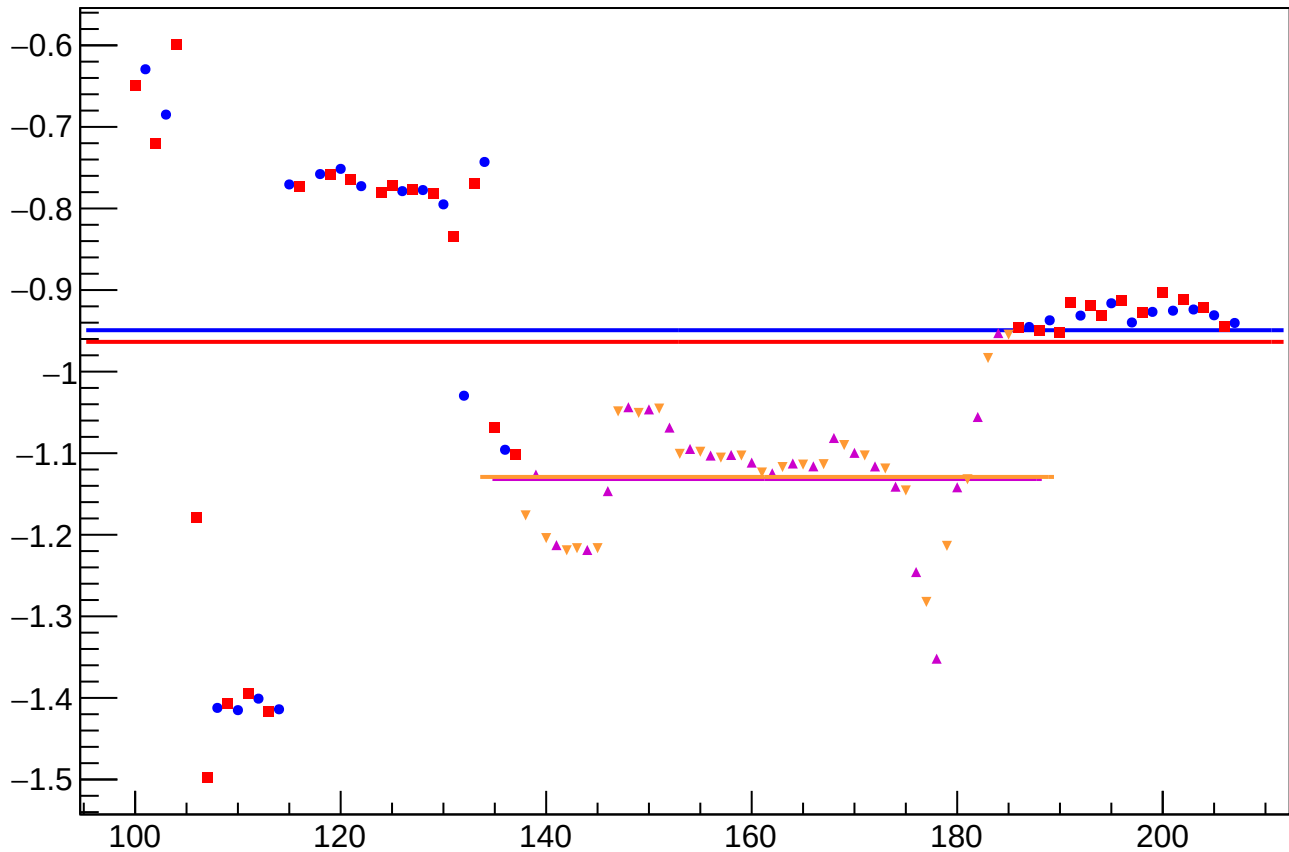
Left In:  $0.011 \pm 0.000$   $\chi^2/\text{NDF}$ : 512130.1/22

+ sign  $0.011 \pm 0.000$   $\chi^2/\text{NDF}$ : 2816150.0/50

All:  $0.012 \pm 0.000$   $\chi^2/\text{NDF}$ : 5981395.7/104

- sign  $0.012 \pm 0.000$   $\chi^2/\text{NDF}$ : 3151823.1/53

# yield\_bpm4acX\_mean vs Slug



Right In: -0.949+/-0.000  $\chi^2/\text{NDF}$ : 700263000.1/25

Left Out: -1.129+/-0.000  $\chi^2/\text{NDF}$ : 238152679.4/24

Right Out: -0.964+/-0.000  $\chi^2/\text{NDF}$ : 717967953.8/30

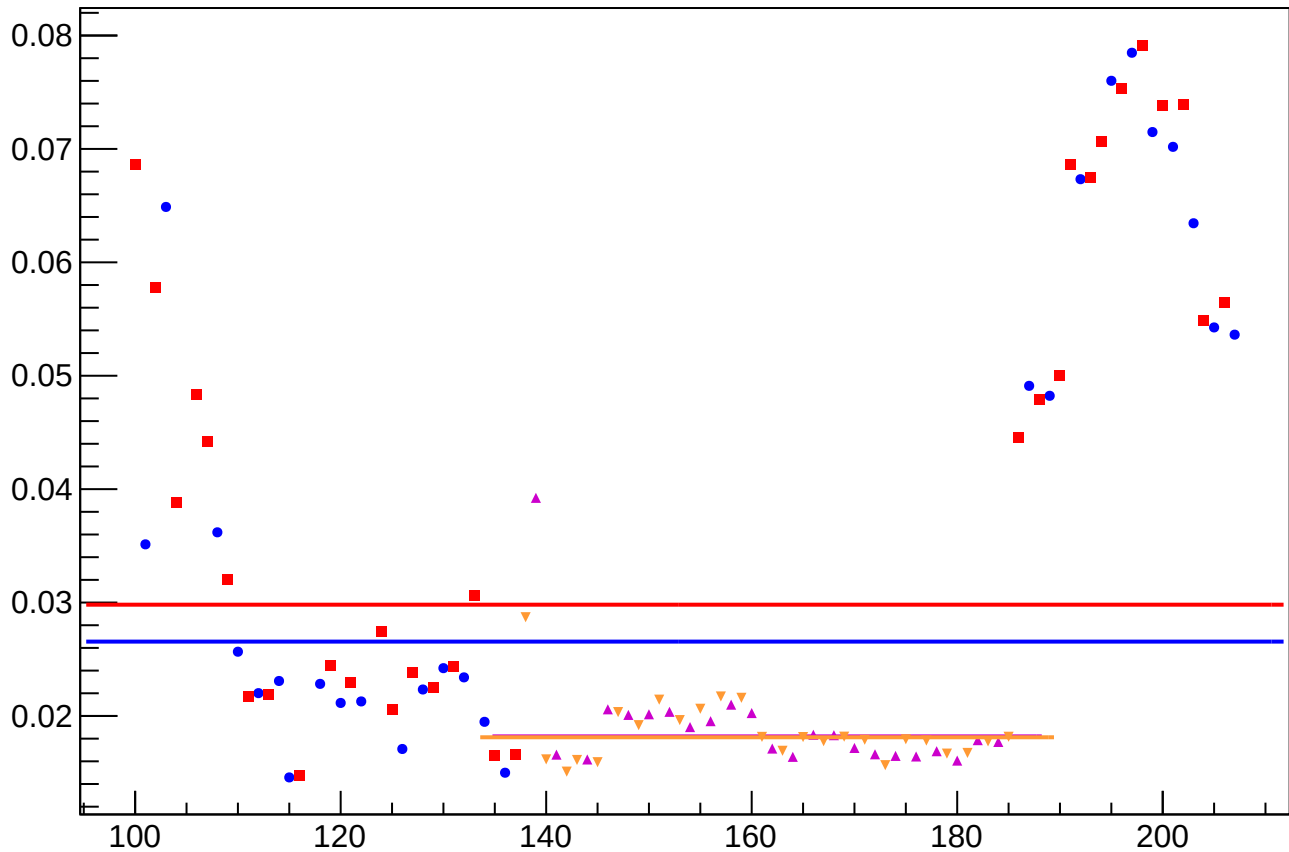
Left In: -1.132+/-0.000  $\chi^2/\text{NDF}$ : 260075820.5/22

+ sign -1.088+/-0.000  $\chi^2/\text{NDF}$ : 1289162704.9/50

All: -1.091+/-0.000  $\chi^2/\text{NDF}$ : 2547796494.0/1

- sign -1.094+/-0.000  $\chi^2/\text{NDF}$ : 1257540318.1/53

# yield\_bpm4acX\_rms vs Slug



Right In: 0.027+/-0.000  $\chi^2/\text{NDF}$ : 7077700.2/25

Left Out: 0.018+/-0.000  $\chi^2/\text{NDF}$ : 474004.4/24

Right Out: 0.030+/-0.000  $\chi^2/\text{NDF}$ : 7157763.7/30

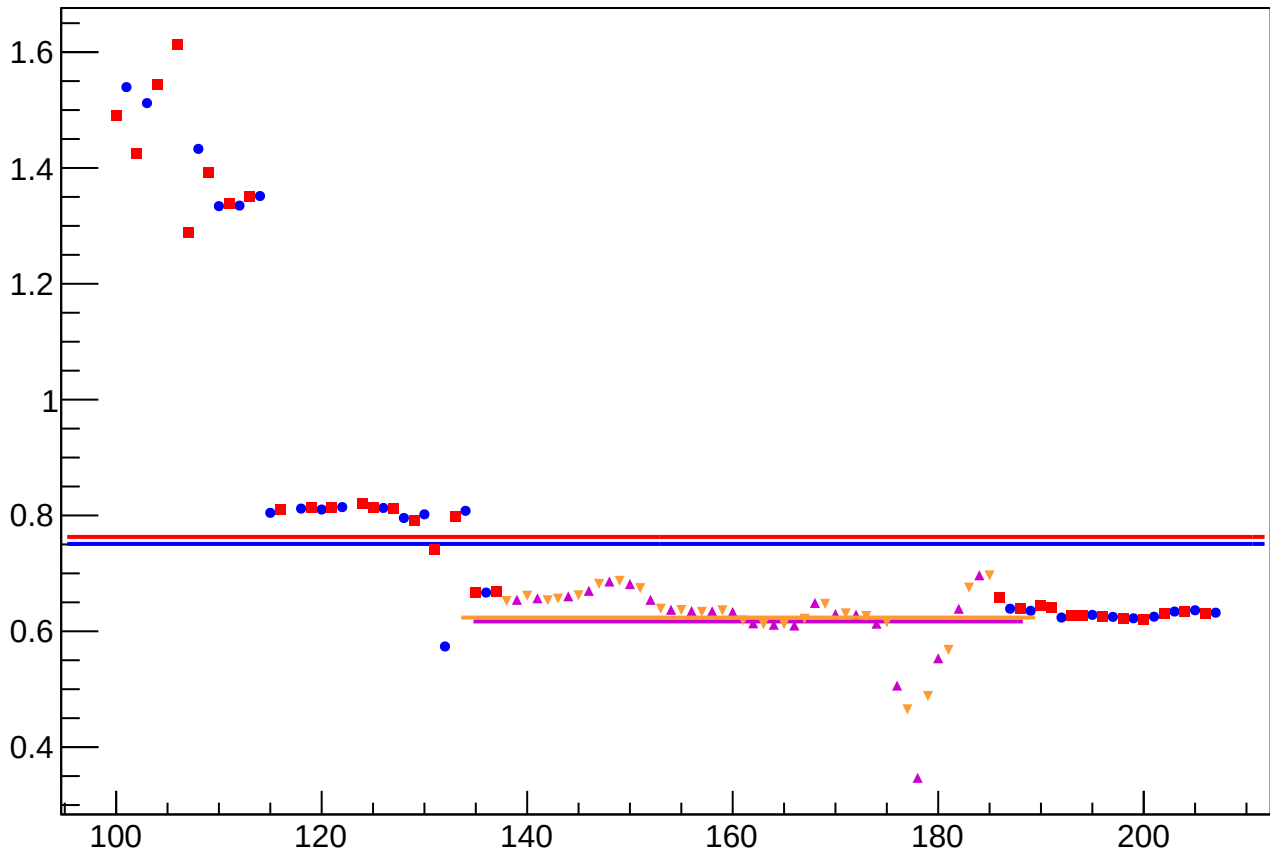
Left In: 0.018+/-0.000  $\chi^2/\text{NDF}$ : 723957.3/22

+ sign 0.020+/-0.000  $\chi^2/\text{NDF}$ : 9095149.0/50

All: 0.020+/-0.000  $\chi^2/\text{NDF}$ : 19675756.5/104

- sign 0.021+/-0.000  $\chi^2/\text{NDF}$ : 10547629.9/53

# yield\_bpm4acY\_mean vs Slug



Right In: 0.751 $\pm$ 0.000  $\chi^2$ /NDF: 3811648205.4/25

Left Out: 0.624 $\pm$ 0.000  $\chi^2$ /NDF: 400613435.2/24

Right Out: 0.763 $\pm$ 0.000  $\chi^2$ /NDF: 4177730294.9/30

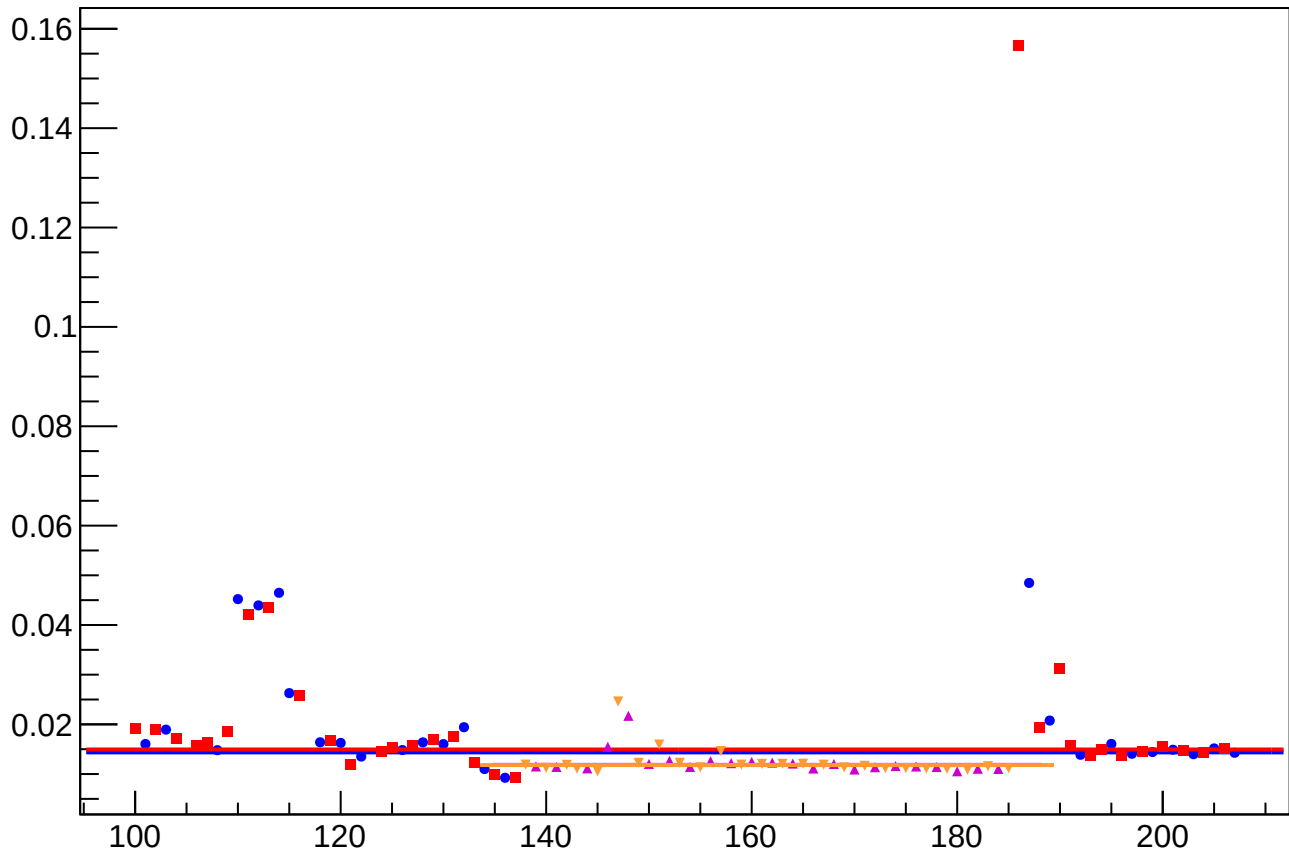
Left In: 0.617 $\pm$ 0.000  $\chi^2$ /NDF: 646297442.3/22

+ sign 0.665 $\pm$ 0.000  $\chi^2$ /NDF: 4907922984.6/50

All: 0.666 $\pm$ 0.000  $\chi^2$ /NDF: 10635711201.1/100

- sign 0.667 $\pm$ 0.000  $\chi^2$ /NDF: 5727555801.9/53

# yield\_bpm4acY\_rms vs Slug



Right In: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 1952662.6/25

Left Out: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 673680.7/24

Right Out: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 2389671.9/30

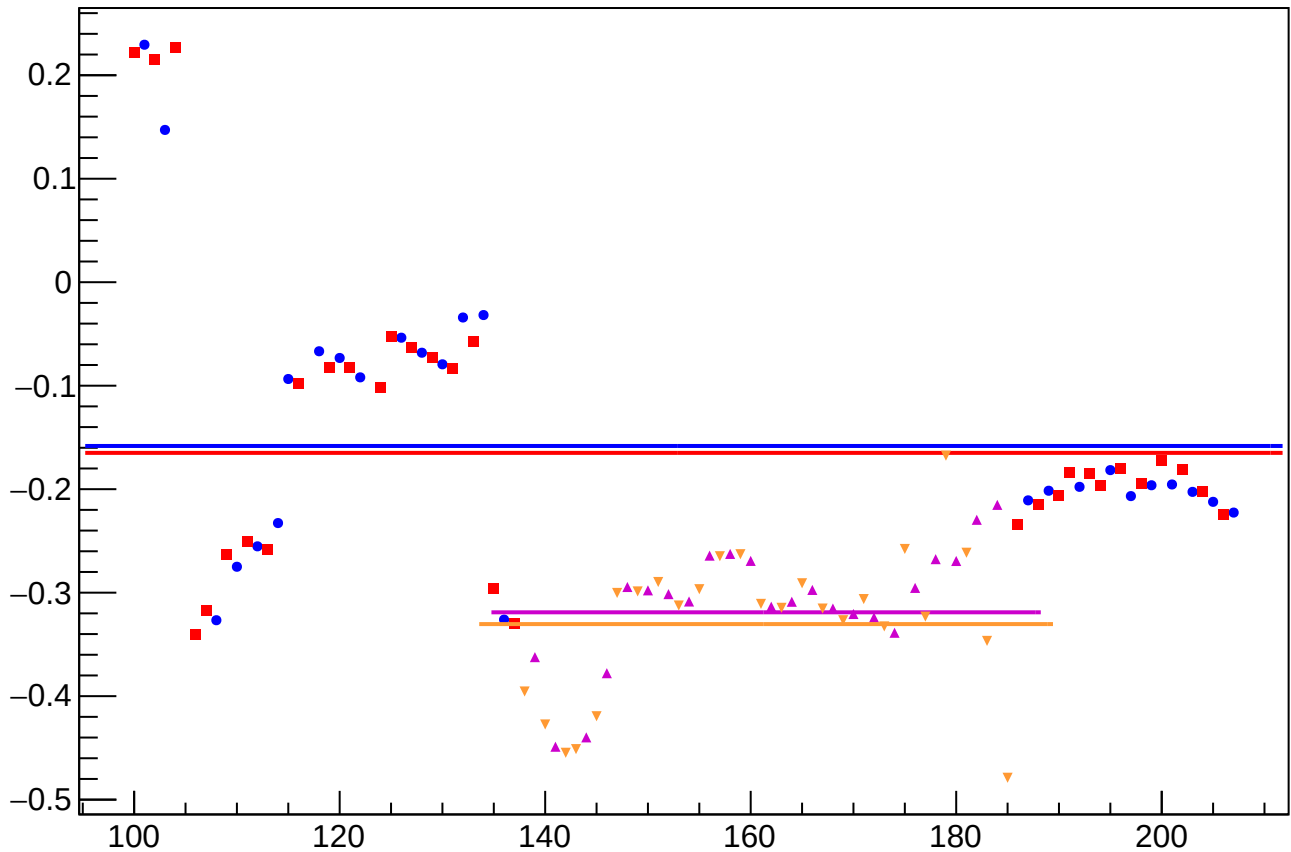
Left In: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 508762.0/22

+ sign 0.013+/-0.000  $\chi^2/\text{NDF}$ : 3188350.4/50

All: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 6913030.1/104

- sign 0.013+/-0.000  $\chi^2/\text{NDF}$ : 3711764.3/53

# yield\_bpm4ecX\_mean vs Slug



Right In: -0.158+/-0.000  $\chi^2/\text{NDF}$ : 279053094.5/25

Left Out: -0.330+/-0.000  $\chi^2/\text{NDF}$ : 182729419.2/24

Right Out: -0.165+/-0.000  $\chi^2/\text{NDF}$ : 199948252.4/30

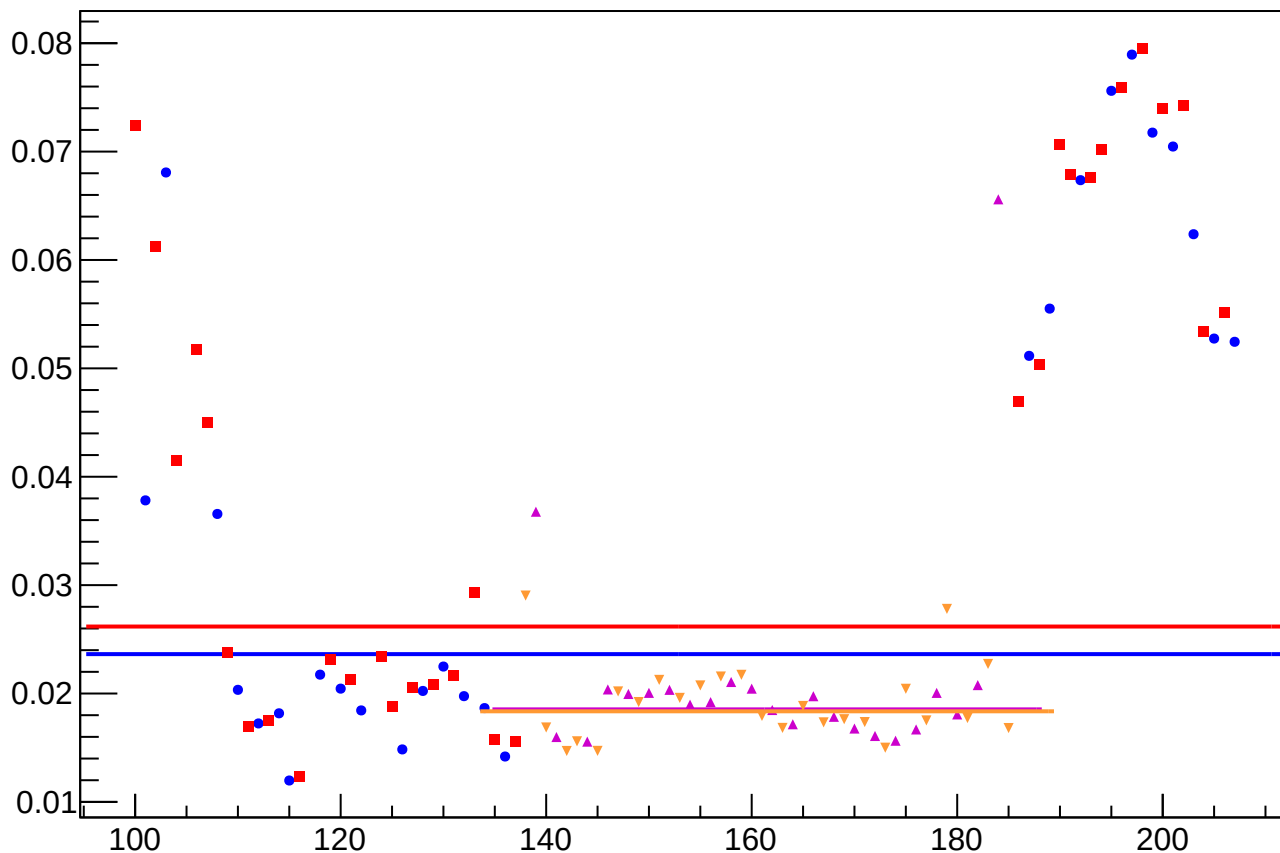
Left In: -0.319+/-0.000  $\chi^2/\text{NDF}$ : 130589173.8/22

+ sign -0.284+/-0.000  $\chi^2/\text{NDF}$ : 826780669.8/50

All: -0.281+/-0.000  $\chi^2/\text{NDF}$ : 1427335211.7/1

- sign -0.278+/-0.000  $\chi^2/\text{NDF}$ : 599432156.5/53

# yield\_bpm4ecX\_rms vs Slug



Right In: 0.024 $\pm$ 0.000  $\chi^2$ /NDF: 8067772.6/25

Left Out: 0.018 $\pm$ 0.000  $\chi^2$ /NDF: 737503.8/24

Right Out: 0.026 $\pm$ 0.000  $\chi^2$ /NDF: 8613011.4/30

Left In: 0.019 $\pm$ 0.000  $\chi^2$ /NDF: 933807.9/22

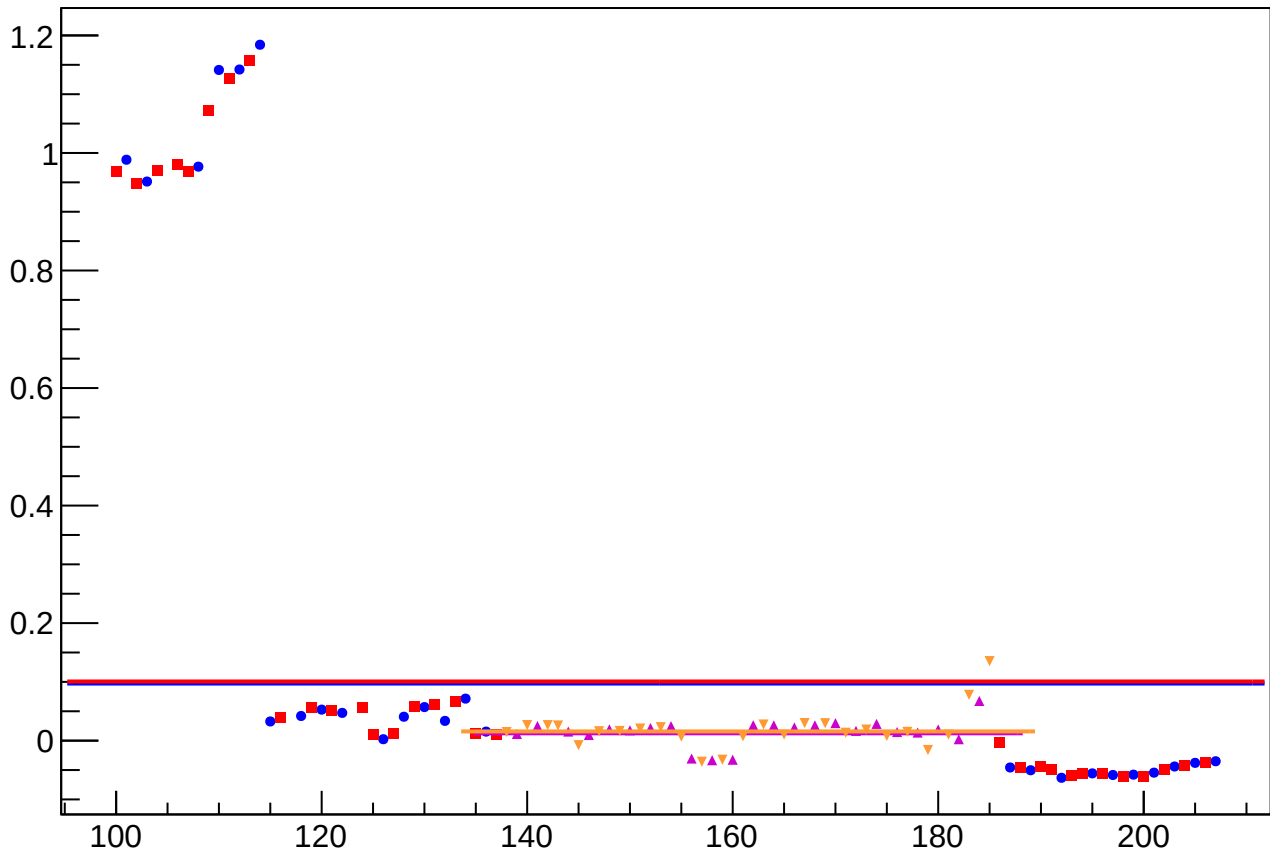
+ sign 0.020 $\pm$ 0.000  $\chi^2$ /NDF: 9491049.7/50

All: 0.020 $\pm$ 0.000  $\chi^2$ /NDF: 20399709.5/104

- sign 0.021 $\pm$ 0.000  $\chi^2$ /NDF: 10870455.1/53



# yield\_bpm4ecY\_mean vs Slug



Right In: 0.097 $\pm$ 0.000  $\chi^2$ /NDF: 8303806870.3/25

Left Out: 0.016 $\pm$ 0.000  $\chi^2$ /NDF:104485335.8/24

Right Out: 0.101 $\pm$ 0.000  $\chi^2$ /NDF: 9107017066.7/30

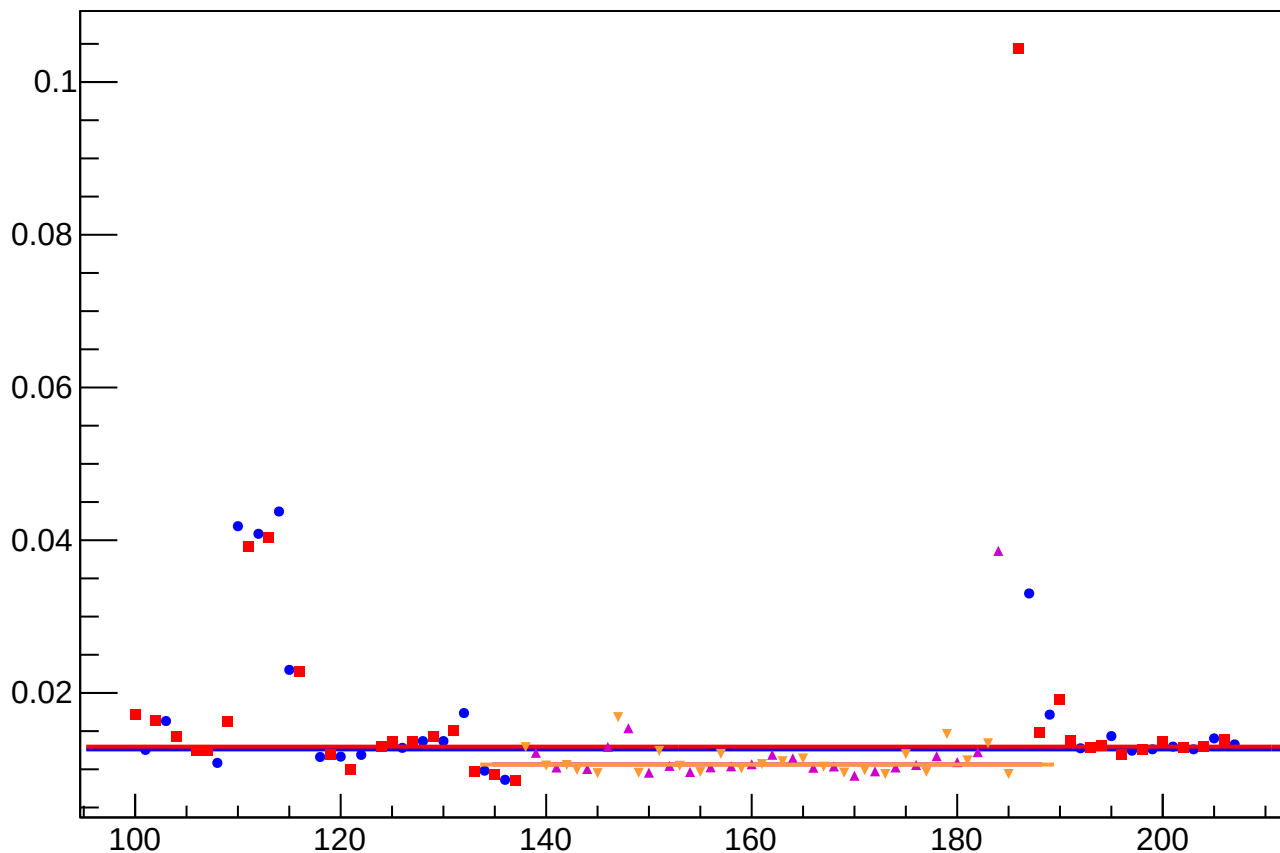
Left In: 0.012 $\pm$ 0.000  $\chi^2$ /NDF:58674739.1/22

+ sign 0.044 $\pm$ 0.000  $\chi^2$ /NDF: 8770155219.7/50

All: 0.044 $\pm$ 0.000  $\chi^2$ /NDF: 18359576773.1/100

- sign 0.044 $\pm$ 0.000  $\chi^2$ /NDF: 9589371050.5/53

# yield\_bpm4ecY\_rms vs Slug



Right In: 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 1755811.3/25

Left Out: 0.011 $\pm$ 0.000  $\chi^2$ /NDF:622208.3/24

Right Out: 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 2120044.5/30

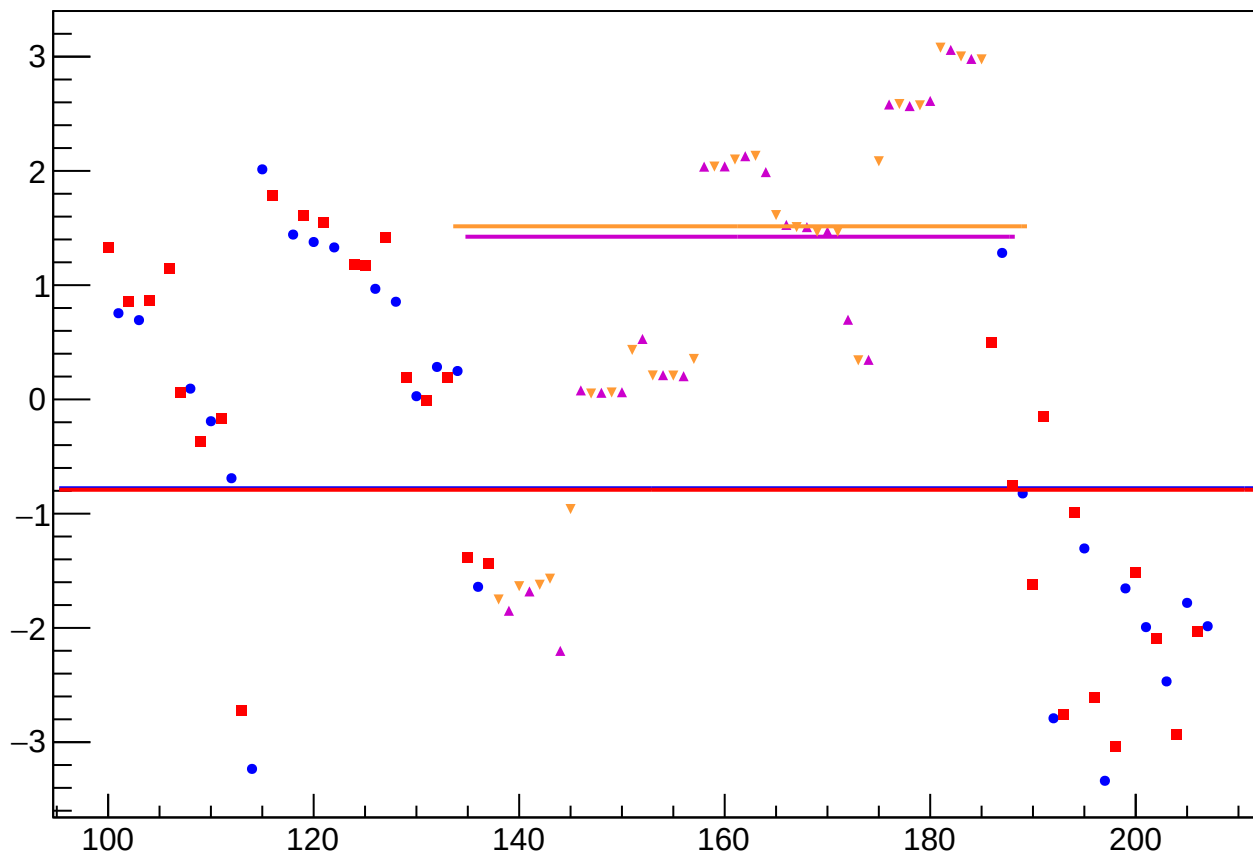
Left In: 0.011 $\pm$ 0.000  $\chi^2$ /NDF:571950.9/22

+ sign 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 2807798.6/50

All: 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 6097013.5/104

- sign 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 3281593.7/53

# yield\_bpm1X\_mean vs Slug



Right In:  $-0.778 \pm 0.000$   $\chi^2/\text{NDF}$ : 8059320541.8/25

Left Out:  $1.515 \pm 0.000$   $\chi^2/\text{NDF}$ : 67789388512.2/24

Right Out:  $-0.791 \pm 0.000$   $\chi^2/\text{NDF}$ : 8918862604.4/30

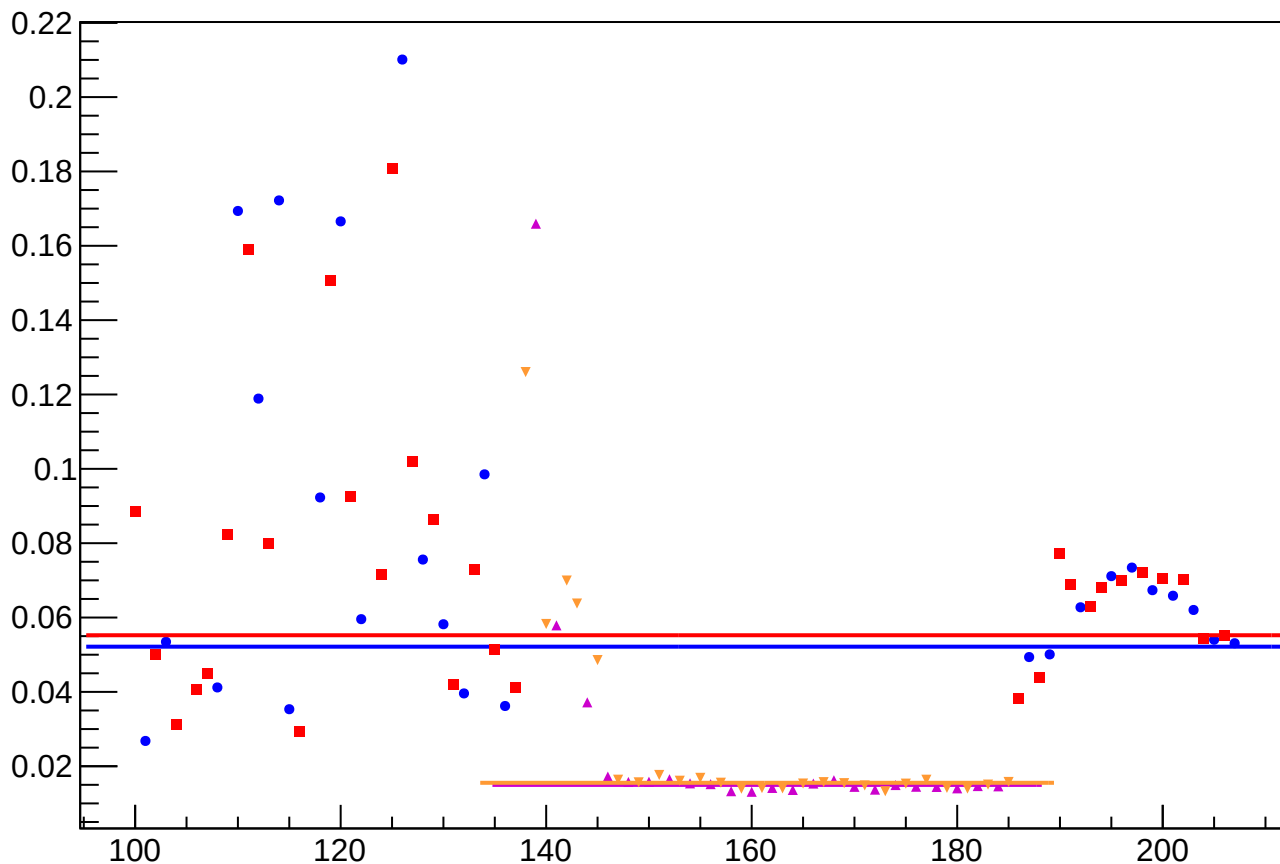
Left In:  $1.424 \pm 0.000$   $\chi^2/\text{NDF}$ : 68046262594.0/22

+ sign  $1.375 \pm 0.000$   $\chi^2/\text{NDF}$ : 95263297947.7/50

All:  $1.331 \pm 0.000$   $\chi^2/\text{NDF}$ : 191232797491.2

- sign  $1.288 \pm 0.000$   $\chi^2/\text{NDF}$ : 95718216737.2/53

# yield\_bpm1X\_rms vs Slug



Right In: 0.052+/-0.000  $\chi^2/\text{NDF}$ : 3553652.5/25

Left Out: 0.016+/-0.000  $\chi^2/\text{NDF}$ :2984313.0/24

Right Out: 0.055+/-0.000  $\chi^2/\text{NDF}$ : 3141385.1/30

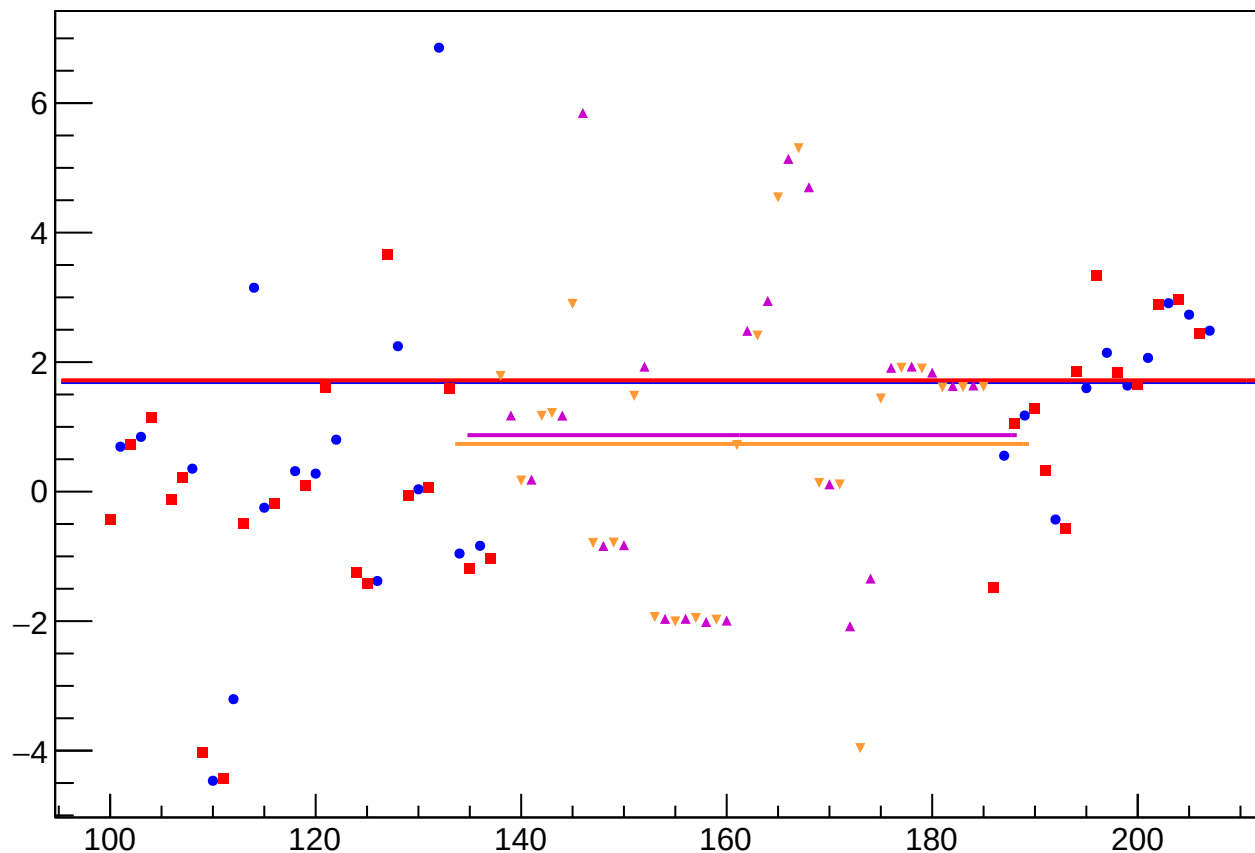
Left In: 0.015+/-0.000  $\chi^2/\text{NDF}$ :2182916.7/22

+ sign 0.018+/-0.000  $\chi^2/\text{NDF}$ : 16442768.1/50

All: 0.018+/-0.000  $\chi^2/\text{NDF}$ : 34167927.2/104

- sign 0.017+/-0.000  $\chi^2/\text{NDF}$ : 17718327.0/53

# yield\_bpm1Y\_mean vs Slug



Right In: 1.692 $\pm$ 0.000  $\chi^2$ /NDF: 34392297302.0/25

Left Out: 0.737 $\pm$ 0.000  $\chi^2$ /NDF: 535962480112.3/24

Right Out: 1.719 $\pm$ 0.000  $\chi^2$ /NDF: 37533112033.2/30

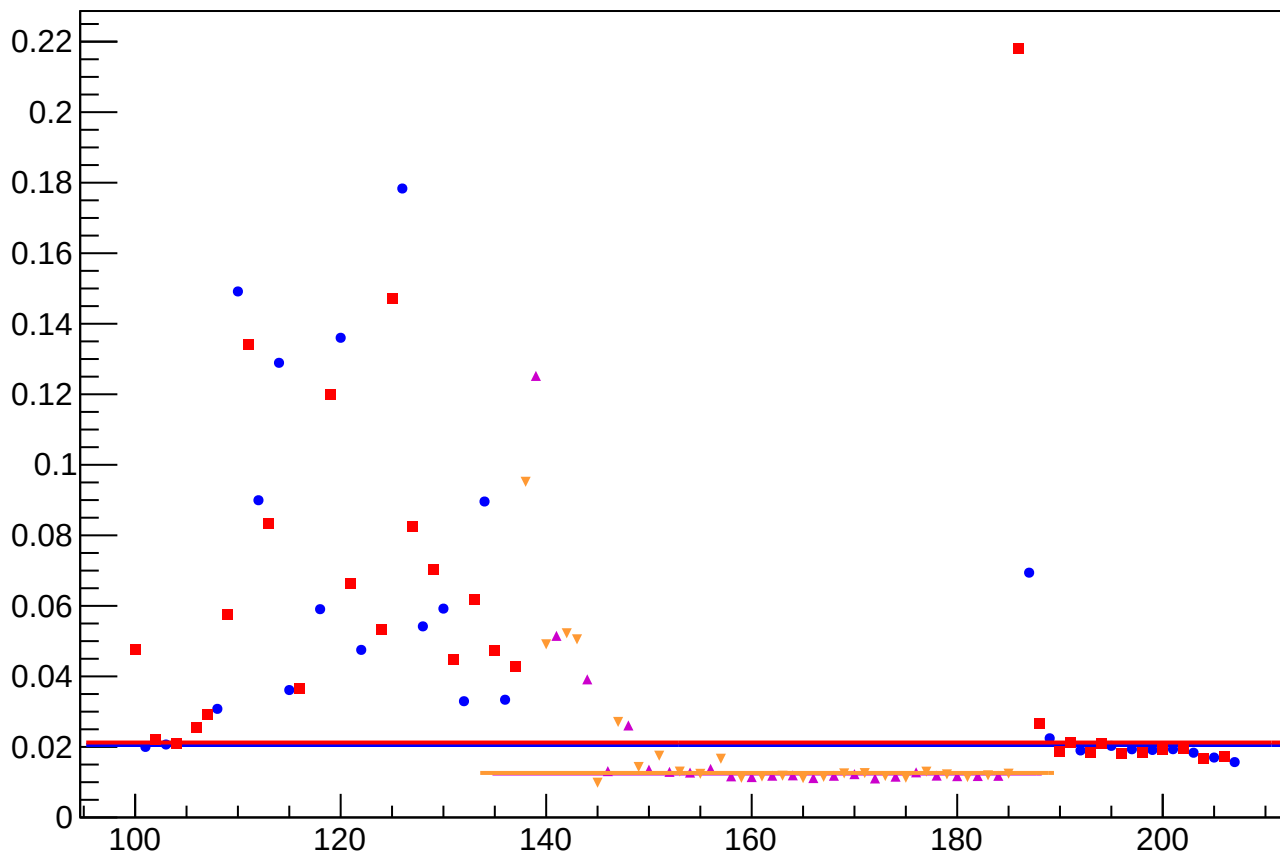
Left In: 0.872 $\pm$ 0.000  $\chi^2$ /NDF: 620161319368.2/22

+ sign 0.918 $\pm$ 0.000  $\chi^2$ /NDF: 587537958379.1/50

All: 0.978 $\pm$ 0.000  $\chi^2$ /NDF: 1260069375462.

- sign 1.039 $\pm$ 0.000  $\chi^2$ /NDF: 671632539759.0/53

# yield\_bpm1Y\_rms vs Slug



Right In: 0.021+/-0.000  $\chi^2/\text{NDF}$ : 4310304.6/25

Left Out: 0.013+/-0.000  $\chi^2/\text{NDF}$ :3191407.4/24

Right Out: 0.021+/-0.000  $\chi^2/\text{NDF}$ : 5324260.9/30

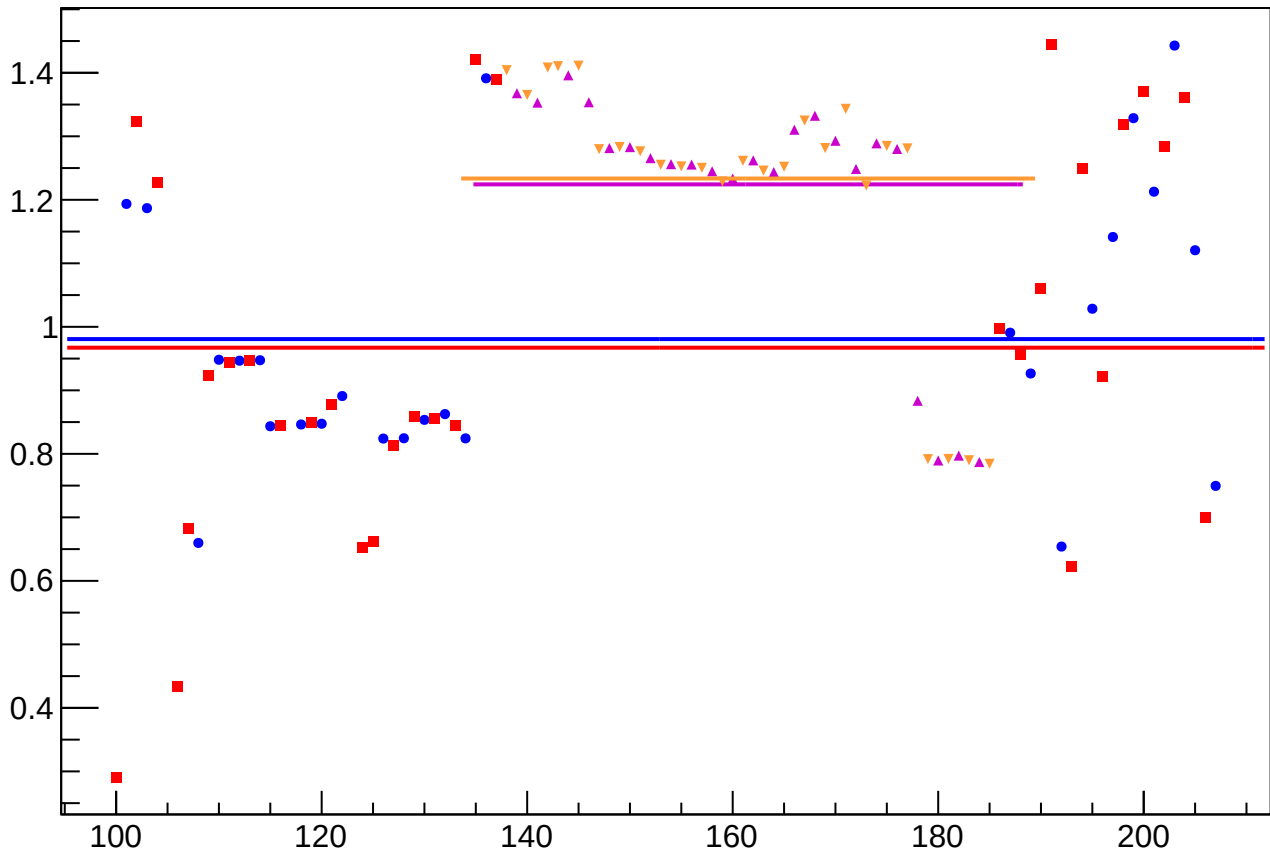
Left In: 0.012+/-0.000  $\chi^2/\text{NDF}$ :2756702.2/22

+ sign 0.014+/-0.000  $\chi^2/\text{NDF}$ : 9862885.3/50

All: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 20952205.5/104

- sign 0.014+/-0.000  $\chi^2/\text{NDF}$ : 11088890.6/53

# yield\_bpm11X\_mean vs Slug



Right In: 0.981 $\pm$ 0.000  $\chi^2$ /NDF: 1905305462.9/25

Left Out: 1.234 $\pm$ 0.000  $\chi^2$ /NDF:3043934887.1/24

Right Out: 0.967 $\pm$ 0.000  $\chi^2$ /NDF: 2325606278.0/30

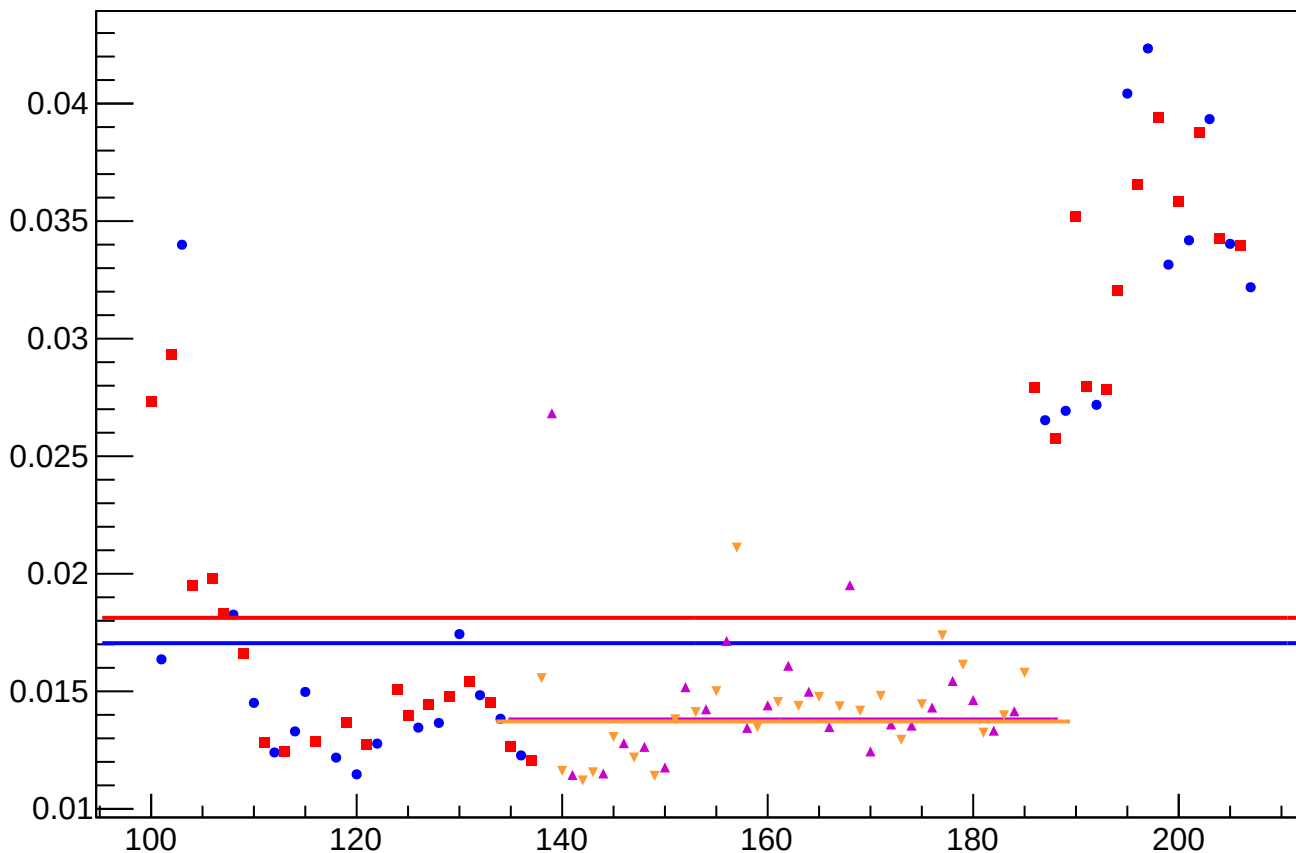
Left In: 1.224 $\pm$ 0.000  $\chi^2$ /NDF:2653773297.1/22

+ sign 1.157 $\pm$ 0.000  $\chi^2$ /NDF: 6687305521.3/50

All: 1.151 $\pm$ 0.000  $\chi^2$ /NDF: 13430825478.6/100

- sign 1.144 $\pm$ 0.000  $\chi^2$ /NDF: 6732856694.5/53

# yield\_bpm11X\_rms vs Slug



Right In:  $0.017 \pm 0.000$   $\chi^2/\text{NDF}$ : 4831530.8/25

Left Out:  $0.014 \pm 0.000$   $\chi^2/\text{NDF}$ : 550789.3/24

Right Out:  $0.018 \pm 0.000$   $\chi^2/\text{NDF}$ : 4767913.3/30

Left In:  $0.014 \pm 0.000$   $\chi^2/\text{NDF}$ : 870104.2/22

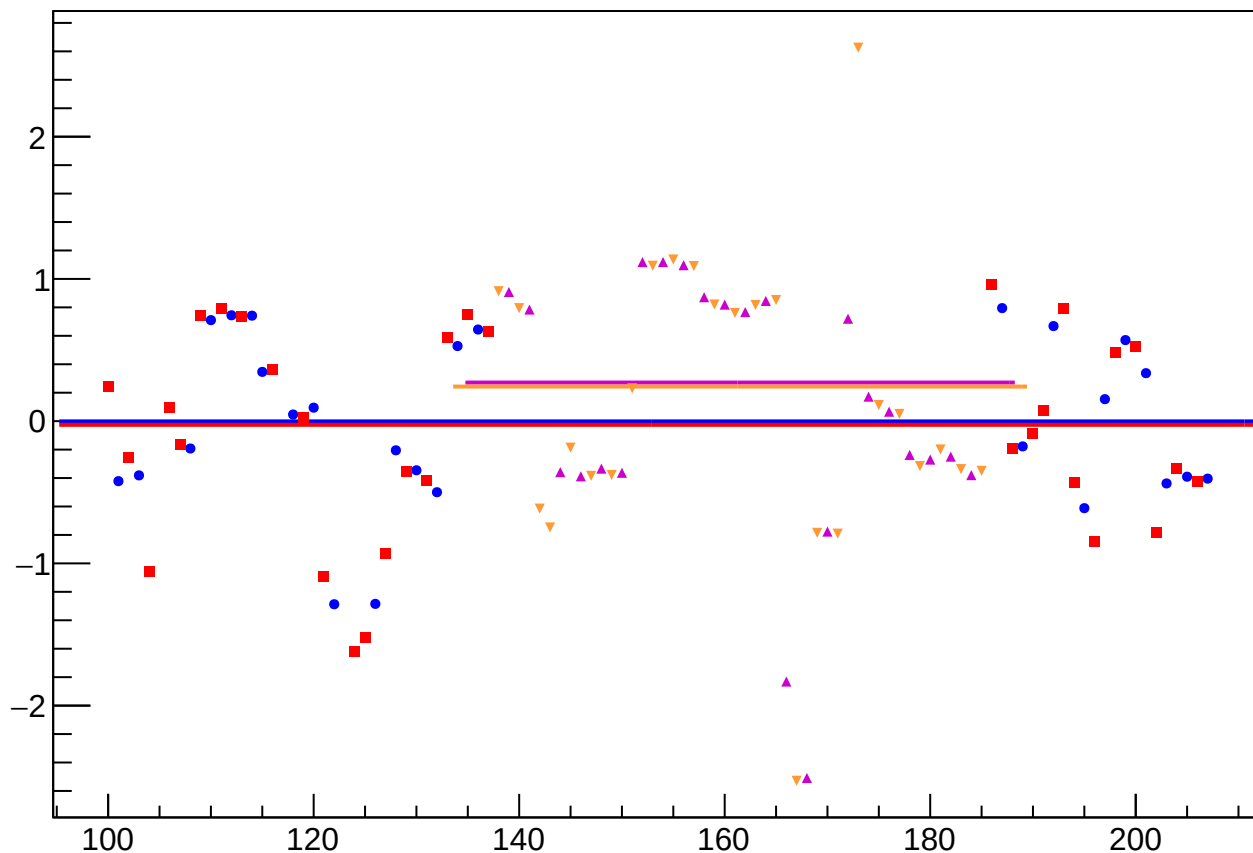
+ sign  $0.015 \pm 0.000$   $\chi^2/\text{NDF}$ : 5985391.5/50

All:  $0.015 \pm 0.000$   $\chi^2/\text{NDF}$ : 12637200.3/104

- sign  $0.015 \pm 0.000$   $\chi^2/\text{NDF}$ : 6628731.9/53



# yield\_bpm11Y\_mean vs Slug



Right In:  $-0.002 \pm 0.000$   $\chi^2/\text{NDF}$ : 24211995216.0/25

Left Out:  $0.243 \pm 0.000$   $\chi^2/\text{NDF}$ : 105591710525.9/24

Right Out:  $-0.026 \pm 0.000$   $\chi^2/\text{NDF}$ : 35258774585.4/30

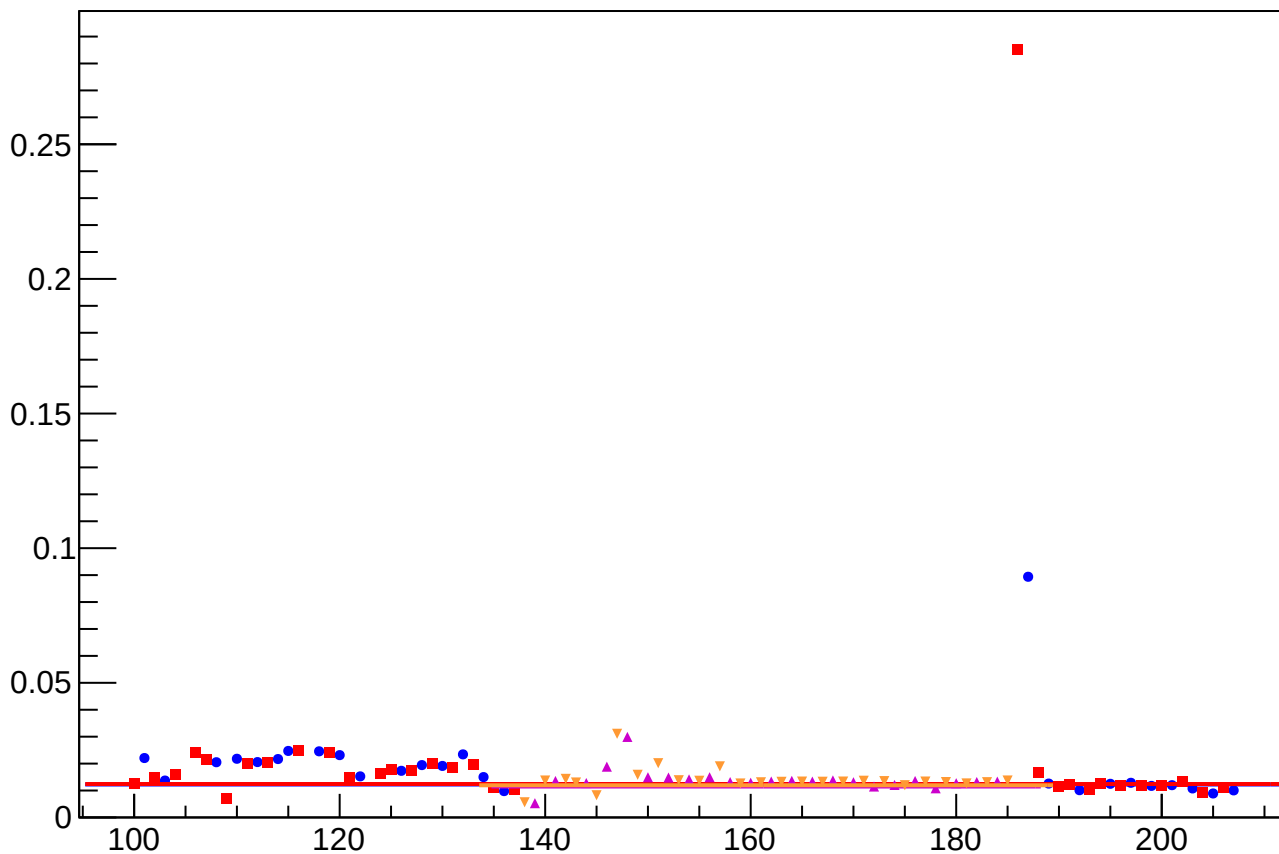
Left In:  $0.271 \pm 0.000$   $\chi^2/\text{NDF}$ : 90500933388.6/22

+ sign  $0.142 \pm 0.000$   $\chi^2/\text{NDF}$ : 132714602558.0/50

All:  $0.144 \pm 0.000$   $\chi^2/\text{NDF}$ : 262870612137.9

- sign  $0.146 \pm 0.000$   $\chi^2/\text{NDF}$ : 130154653721.1/53

# yield\_bpm11Y\_rms vs Slug



Right In: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 2508878.8/25

Left Out: 0.012 $\pm$ 0.000  $\chi^2$ /NDF:3266034.8/24

Right Out: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 2884640.0/30

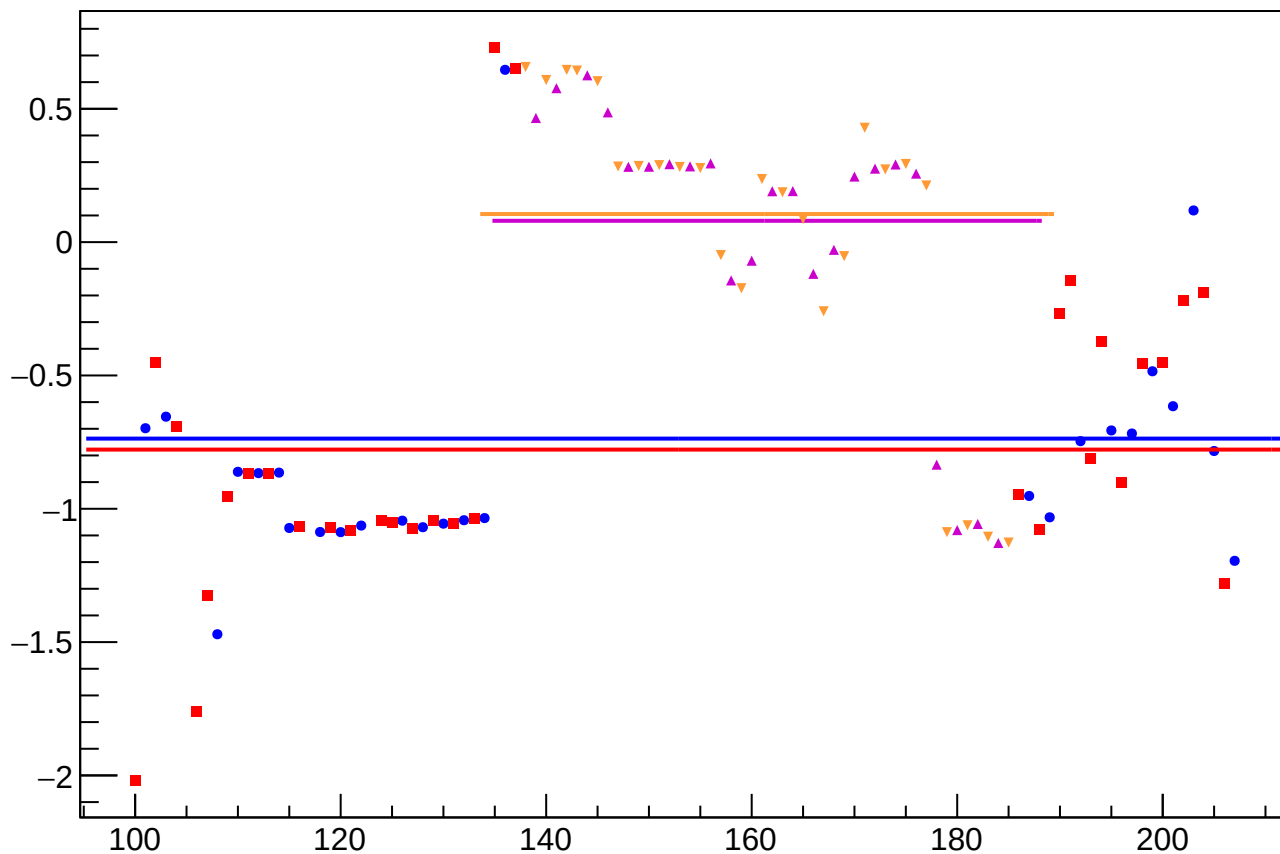
Left In: 0.011 $\pm$ 0.000  $\chi^2$ /NDF:3671096.5/22

+ sign 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 5783372.1/50

All: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 12432202.6/104

- sign 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 6641447.0/53

# yield\_bpm12X\_mean vs Slug



Right In:  $-0.737 \pm 0.000$   $\chi^2/\text{NDF}: 2191317283.6/25$

Left Out:  $0.105 \pm 0.000$   $\chi^2/\text{NDF}: 3787188881.7/24$

Right Out:  $-0.778 \pm 0.000$   $\chi^2/\text{NDF}: 2104951806.6/30$

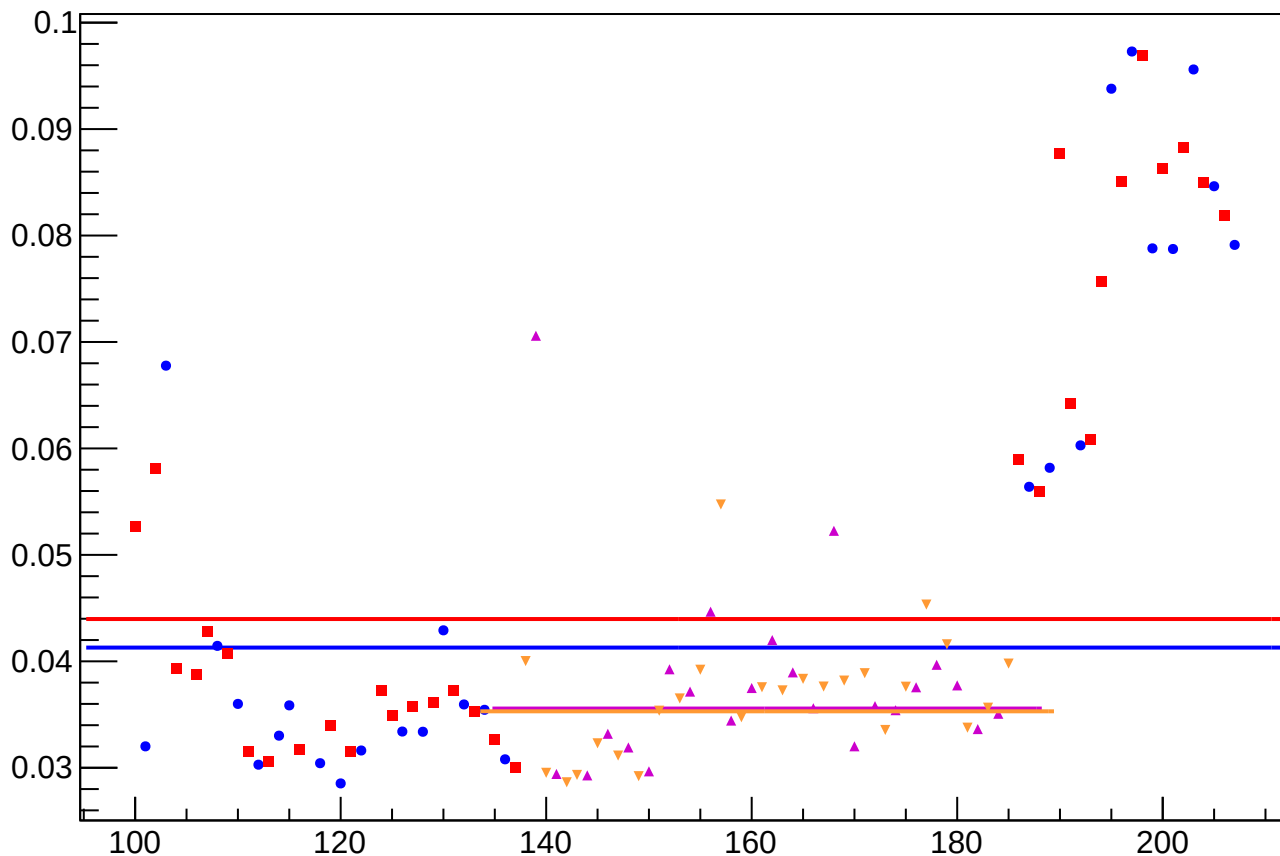
Left In:  $0.080 \pm 0.000$   $\chi^2/\text{NDF}: 3269598614.0/22$

+ sign  $-0.177 \pm 0.000$   $\chi^2/\text{NDF}: 9181851647.5/50$

All:  $-0.196 \pm 0.000$   $\chi^2/\text{NDF}: 17799739215.4/100$

- sign  $-0.216 \pm 0.000$   $\chi^2/\text{NDF}: 8602645920.4/53$

# yield\_bpm12X\_rms vs Slug



Right In:  $0.041 \pm 0.000$   $\chi^2/\text{NDF}$ : 4442258.2/25

Left Out:  $0.035 \pm 0.000$   $\chi^2/\text{NDF}$ : 612627.1/24

Right Out:  $0.044 \pm 0.000$   $\chi^2/\text{NDF}$ : 4248330.1/30

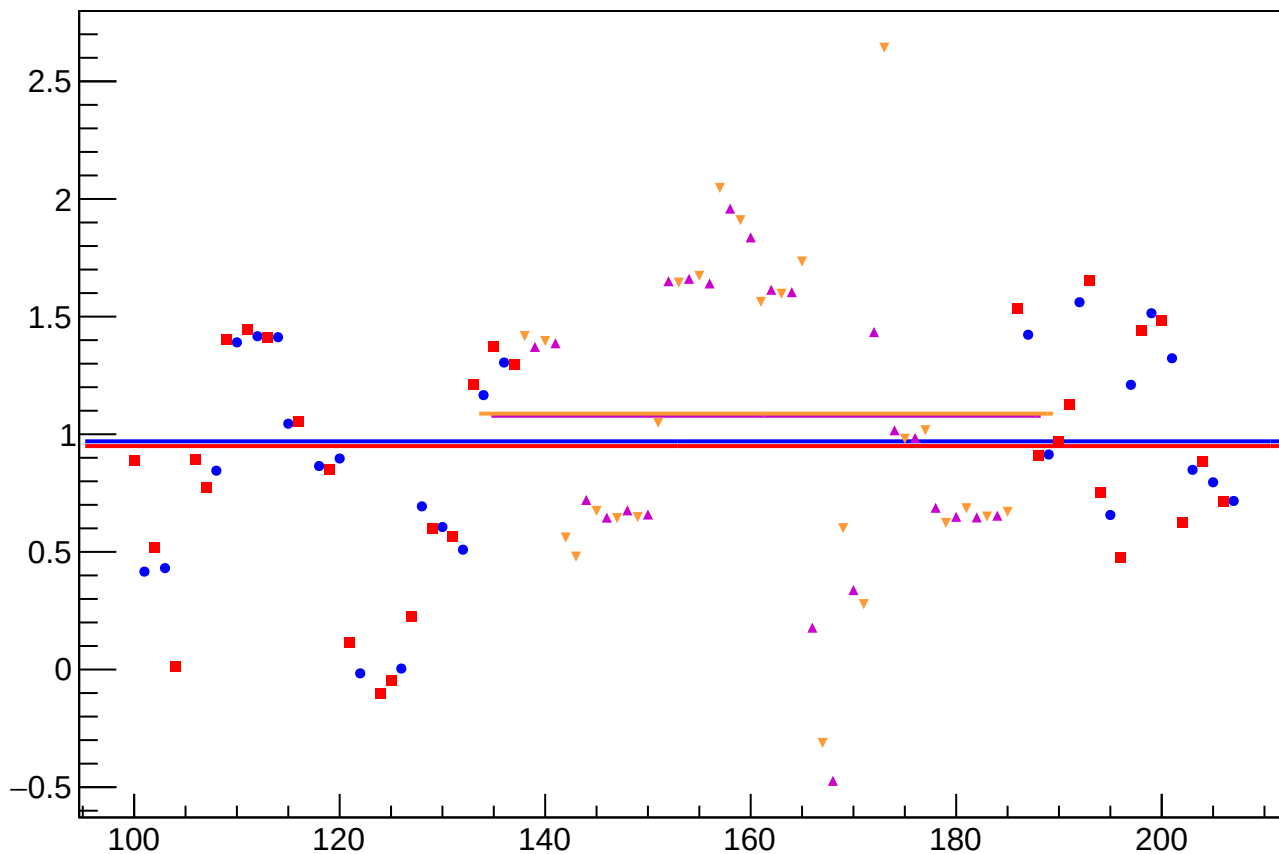
Left In:  $0.036 \pm 0.000$   $\chi^2/\text{NDF}$ : 960383.5/22

+ sign  $0.037 \pm 0.000$   $\chi^2/\text{NDF}$ : 5378693.4/50

All:  $0.038 \pm 0.000$   $\chi^2/\text{NDF}$ : 11234088.1/104

- sign  $0.038 \pm 0.000$   $\chi^2/\text{NDF}$ : 5828975.8/53

# yield\_bpm12Y\_mean vs Slug



Right In: 0.970 $\pm$ 0.000  $\chi^2$ /NDF: 29088508174.8/25

Left Out: 1.088 $\pm$ 0.000  $\chi^2$ /NDF: 93851056436.3/24

Right Out: 0.950 $\pm$ 0.000  $\chi^2$ /NDF: 36658696227.4/30

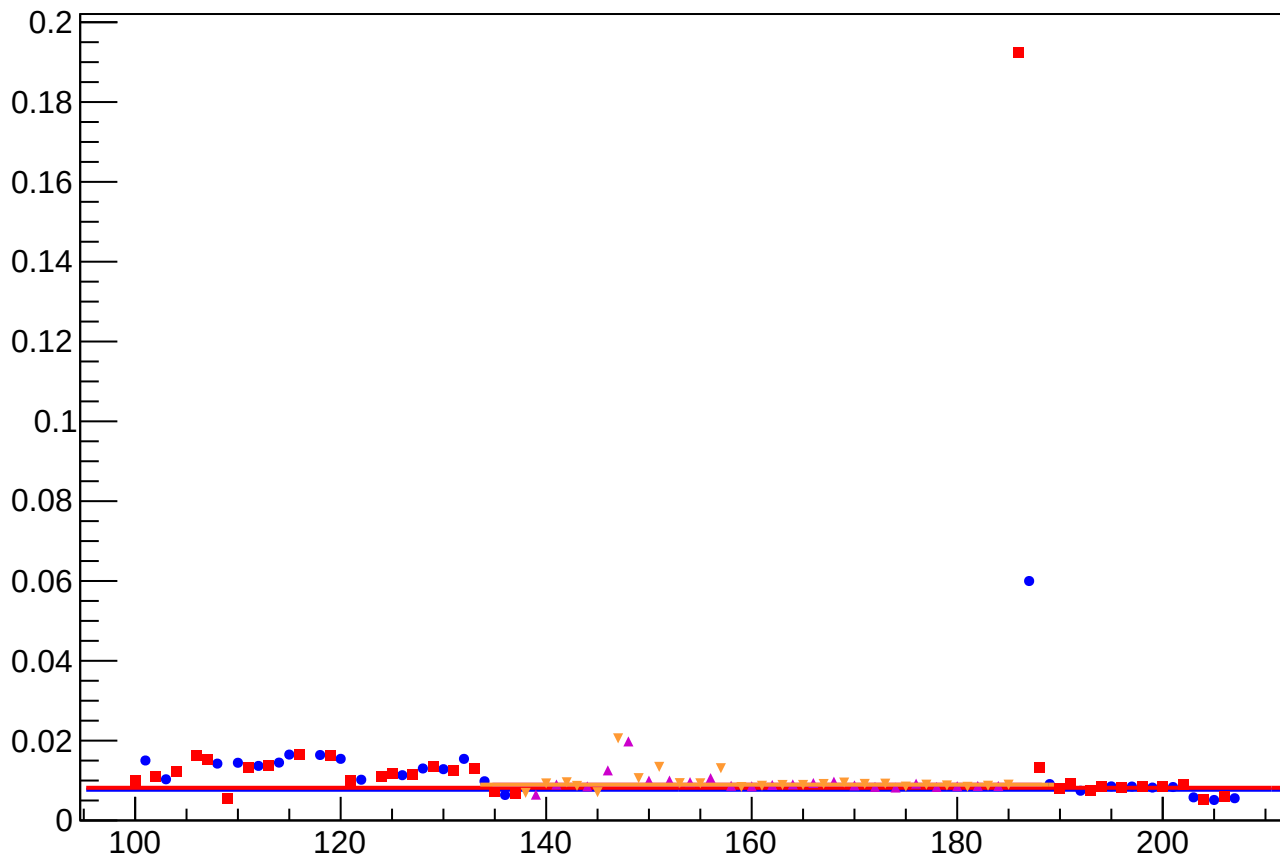
Left In: 1.079 $\pm$ 0.000  $\chi^2$ /NDF: 74081002727.0/22

+ sign 1.031 $\pm$ 0.000  $\chi^2$ /NDF: 124429665503.1/50

All: 1.024 $\pm$ 0.000  $\chi^2$ /NDF: 236921644222.7

- sign 1.016 $\pm$ 0.000  $\chi^2$ /NDF: 112444875291.7/53

# yield\_bpm12Y\_rms vs Slug



Right In: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 3313820.6/25

Left Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ :1146497.6/24

Right Out: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 3465877.0/30

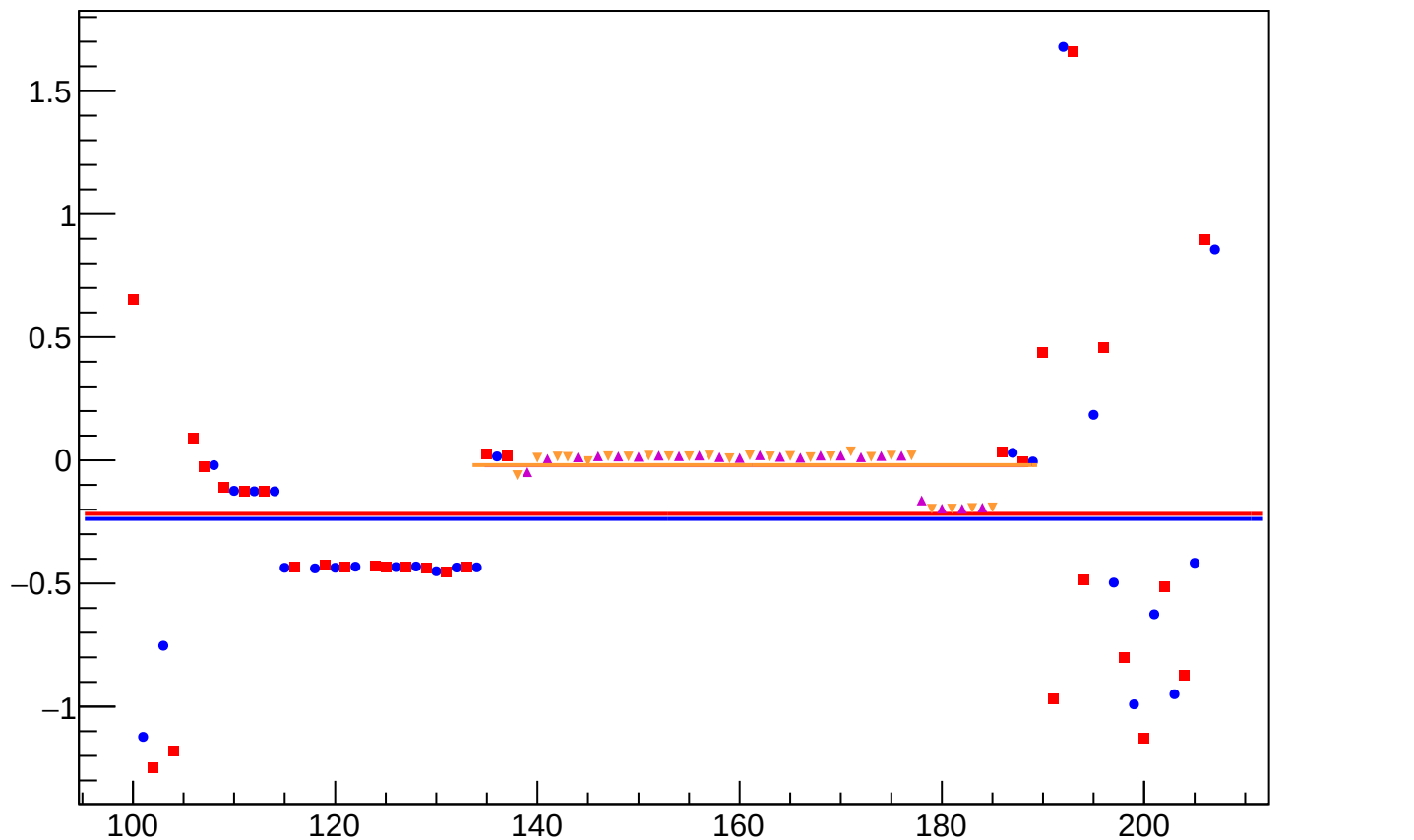
Left In: 0.009+/-0.000  $\chi^2/\text{NDF}$ :966765.2/22

+ sign 0.008+/-0.000  $\chi^2/\text{NDF}$ : 4814066.1/50

All: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 9385699.0/104

- sign 0.009+/-0.000  $\chi^2/\text{NDF}$ : 4550942.6/53

# yield\_bpm16X\_mean vs Slug



Right In:  $-0.238 \pm 0.000$   $\chi^2/\text{NDF}$ : 3774063783.1/25

Left Out:  $-0.019 \pm 0.000$   $\chi^2/\text{NDF}$ : 1058597672.8/24

Right Out:  $-0.217 \pm 0.000$   $\chi^2/\text{NDF}$ : 3539059659.1/30

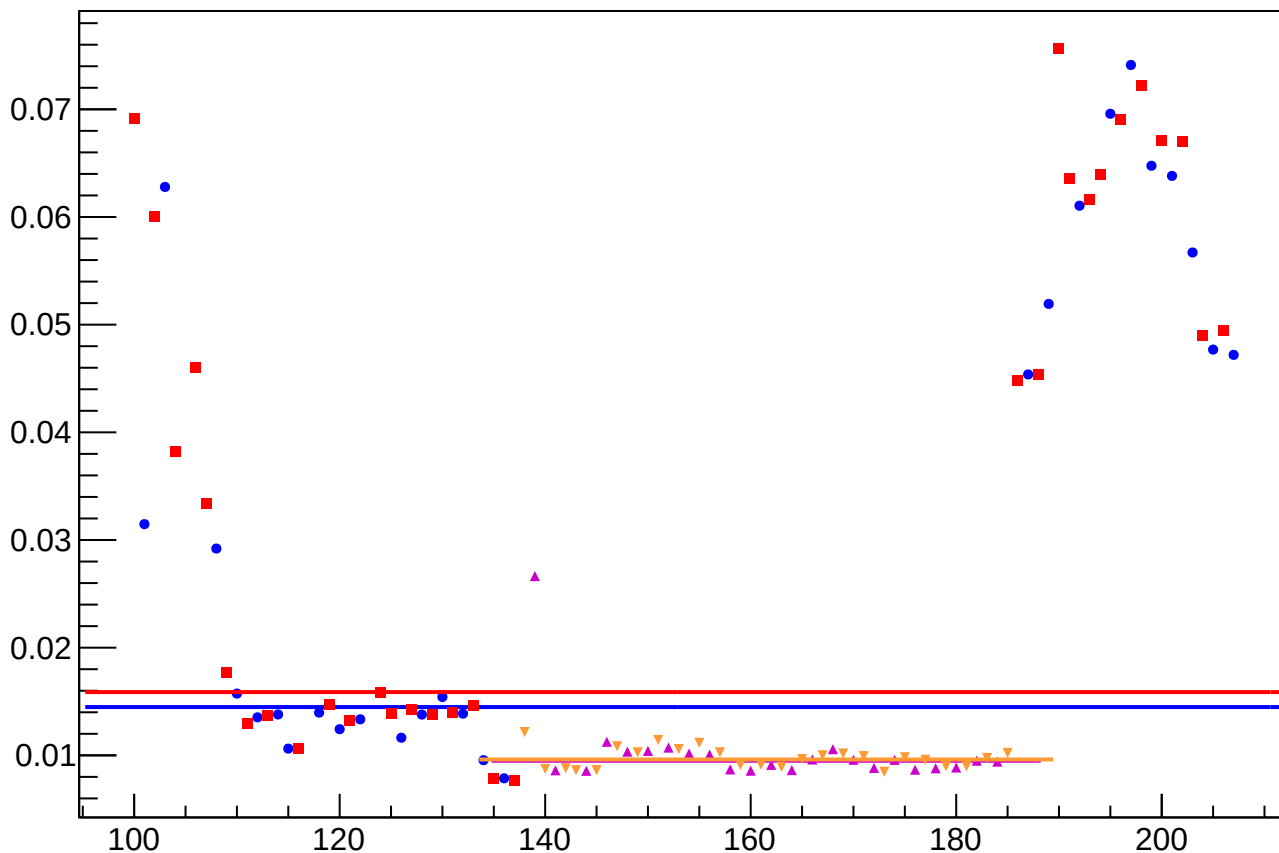
Left In:  $-0.020 \pm 0.000$   $\chi^2/\text{NDF}$ : 984483299.5/22

+ sign  $-0.058 \pm 0.000$   $\chi^2/\text{NDF}$ : 6317650461.0/50

All:  $-0.056 \pm 0.000$   $\chi^2/\text{NDF}$ : 11952162662.5/100

- sign  $-0.053 \pm 0.000$   $\chi^2/\text{NDF}$ : 5632639341.1/53

# yield\_bpm16X\_rms vs Slug



Right In: 0.014 $\pm$ 0.000  $\chi^2$ /NDF: 10755464.0/25

Left Out: 0.010 $\pm$ 0.000  $\chi^2$ /NDF:271912.7/24

Right Out: 0.016 $\pm$ 0.000  $\chi^2$ /NDF: 12023745.3/30

Left In: 0.009 $\pm$ 0.000  $\chi^2$ /NDF:900469.0/22

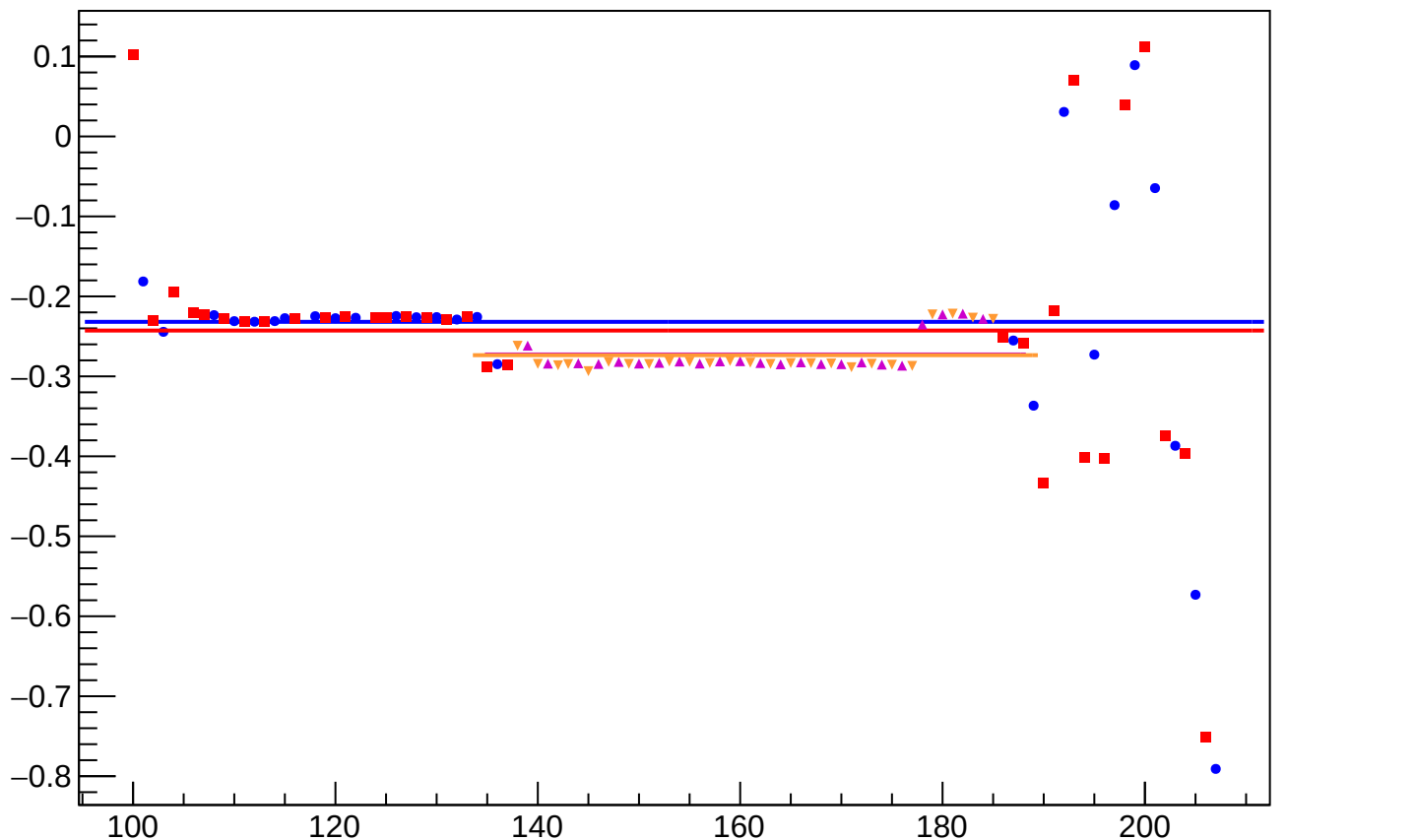
+ sign 0.010 $\pm$ 0.000  $\chi^2$ /NDF: 12502849.1/50

All: 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 27750912.2/104

- sign 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 15245716.7/53



# yield\_bpm16Y\_mean vs Slug



Right In:  $-0.232 \pm 0.000$   $\chi^2/\text{NDF}$ : 14495304412.9/25

Left Out:  $-0.274 \pm 0.000$   $\chi^2/\text{NDF}$ : 395563277.1/24

Right Out:  $-0.243 \pm 0.000$   $\chi^2/\text{NDF}$ : 14371152570.9/30

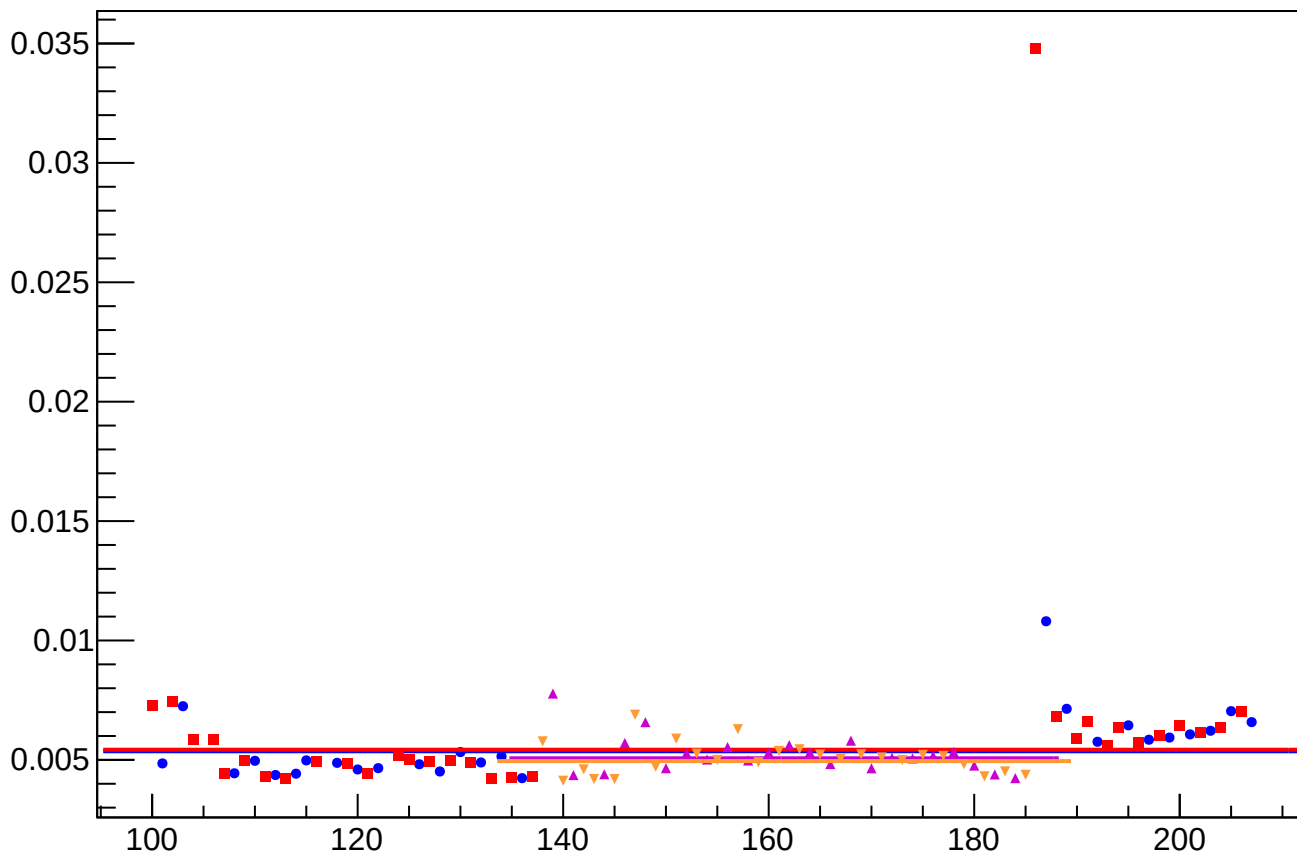
Left In:  $-0.273 \pm 0.000$   $\chi^2/\text{NDF}$ : 335149425.2/22

+ sign  $-0.257 \pm 0.000$   $\chi^2/\text{NDF}$ : 15388796062.9/50

All:  $-0.259 \pm 0.000$   $\chi^2/\text{NDF}$ : 30353770050.9/100

- sign  $-0.260 \pm 0.000$   $\chi^2/\text{NDF}$ : 14961195311.6/53

# yield\_bpm16Y\_rms vs Slug



Right In: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 830755.6/25

Left Out: 0.005+/-0.000  $\chi^2/\text{NDF}$ :528766.8/24

Right Out: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 1416933.3/30

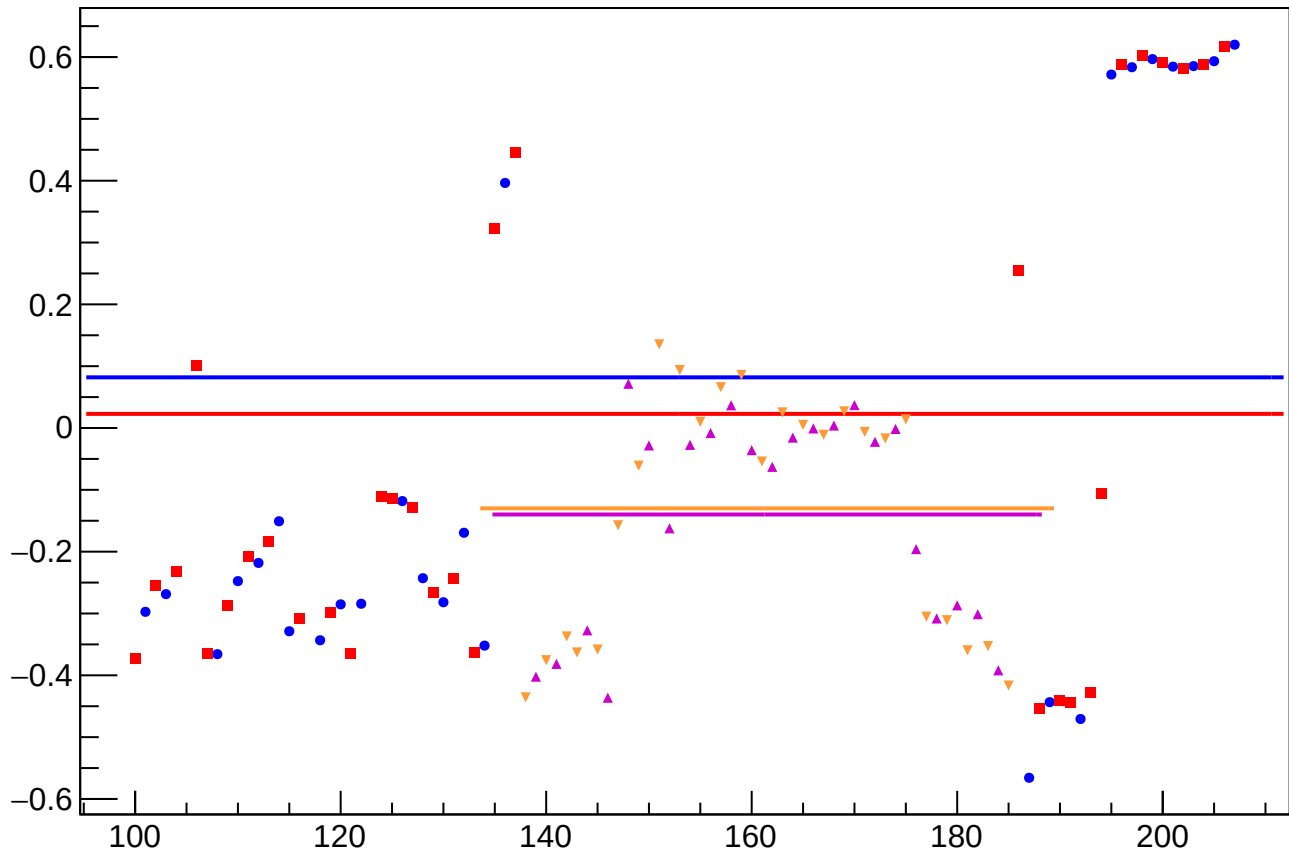
Left In: 0.005+/-0.000  $\chi^2/\text{NDF}$ :539392.8/22

+ sign 0.005+/-0.000  $\chi^2/\text{NDF}$ : 1456230.7/50

All: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 3500456.1/104

- sign 0.005+/-0.000  $\chi^2/\text{NDF}$ : 2029826.8/53

# yield\_bpm0i02X\_mean vs Slug



Right In: 0.082+/-0.000  $\chi^2/\text{NDF}$ : 61083711967.9/25

Left Out: -0.130+/-0.000  $\chi^2/\text{NDF}$ : 21496239338.5/24

Right Out: 0.023+/-0.000  $\chi^2/\text{NDF}$ : 59249688177.1/30

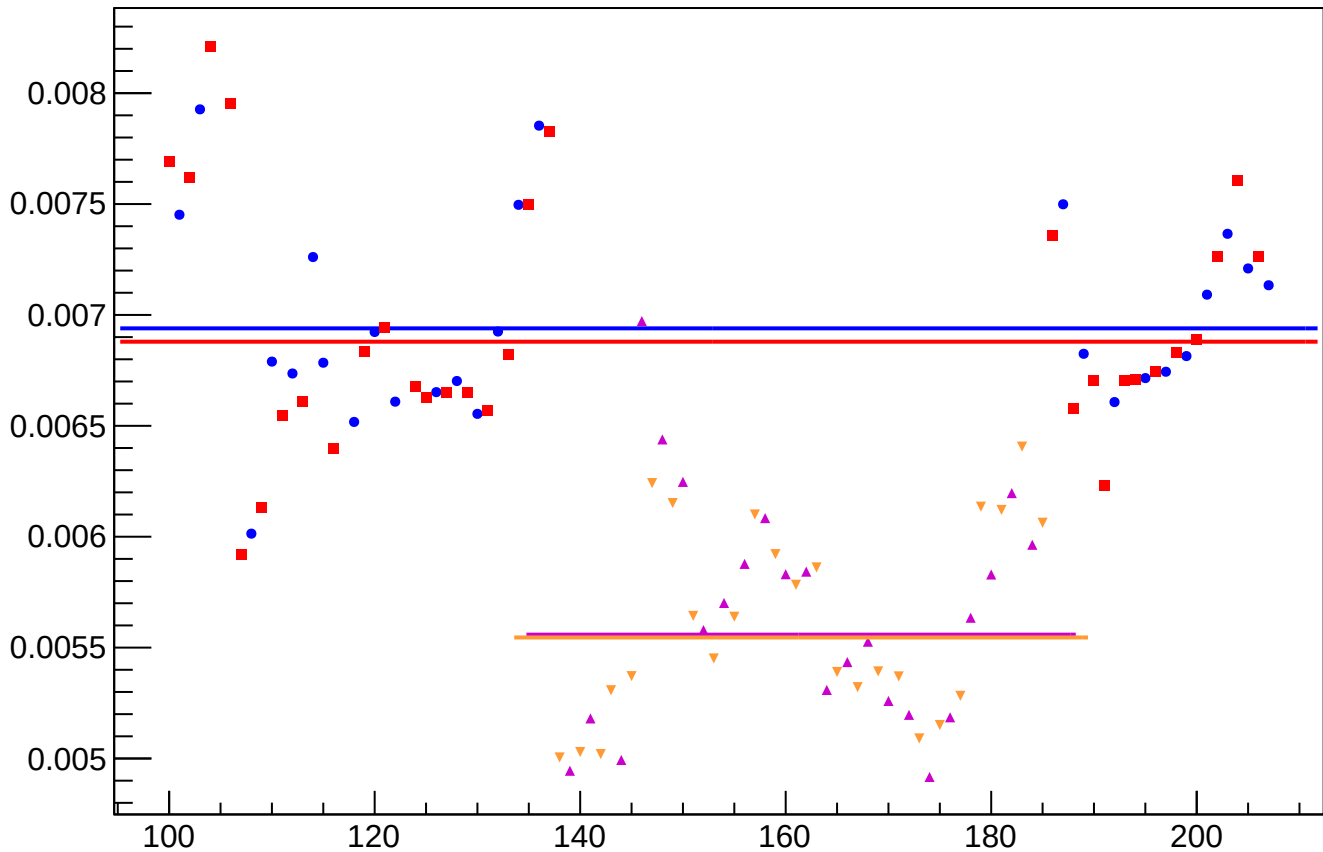
Left In: -0.140+/-0.000  $\chi^2/\text{NDF}$ : 15148699439.4/22

+ sign -0.058+/-0.000  $\chi^2/\text{NDF}$ : 91638381332.6/50

All: -0.068+/-0.000  $\chi^2/\text{NDF}$ : 171807439760.5

- sign -0.078+/-0.000  $\chi^2/\text{NDF}$ : 79985589425.6/53

# yield\_bpm0i02X\_rms vs Slug



Right In: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 106523.0/25

Left Out: 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 201874.8/24

Right Out: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 142044.3/30

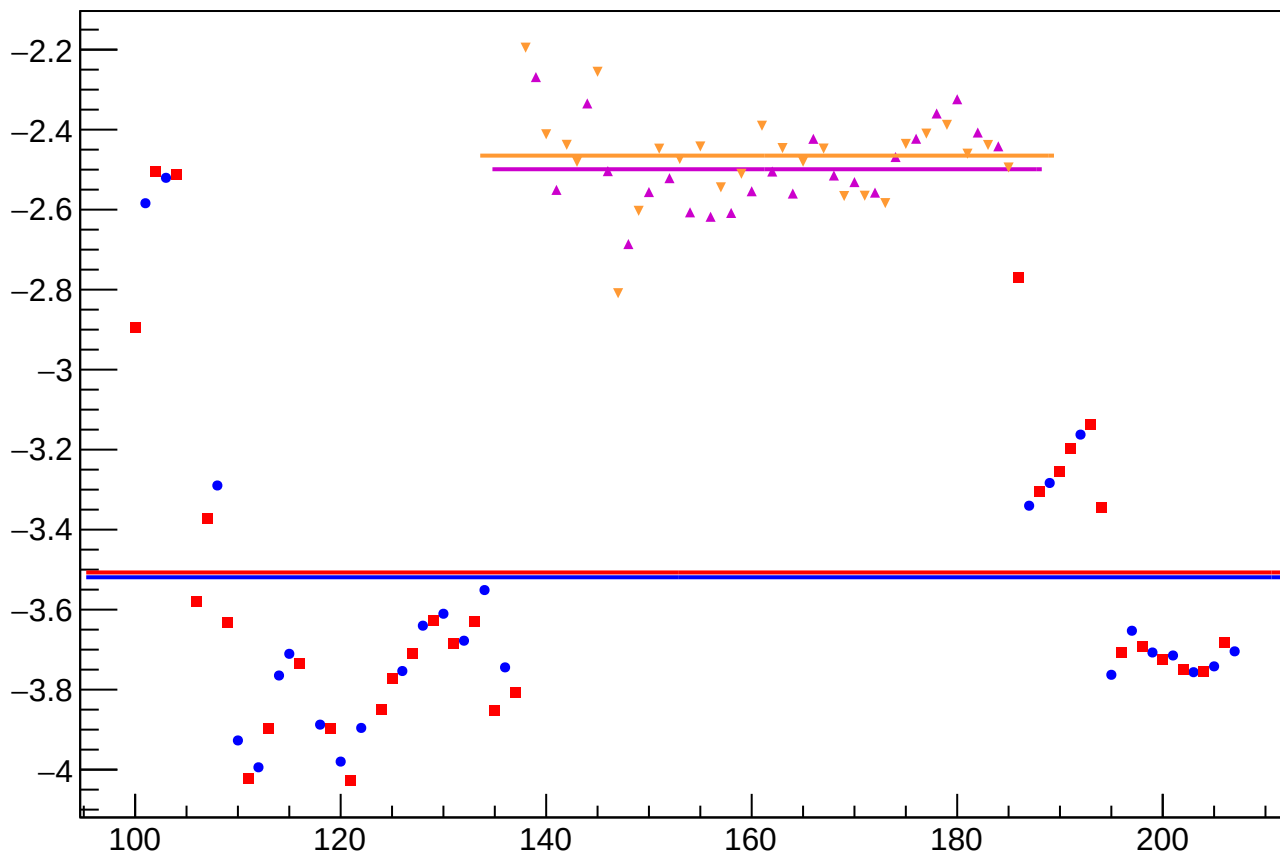
Left In: 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 260994.3/22

+ sign 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 1092371.0/50

All: 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 2233031.7/104

- sign 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 1139235.6/53

# yield\_bpm0i02Y\_mean vs Slug



Right In:  $-3.519 \pm 0.000$   $\chi^2/\text{NDF}$ : 32681030447.6/25

Left Out:  $-2.465 \pm 0.000$   $\chi^2/\text{NDF}$ : 2167098053.0/24

Right Out:  $-3.507 \pm 0.000$   $\chi^2/\text{NDF}$ : 34578968177.0/30

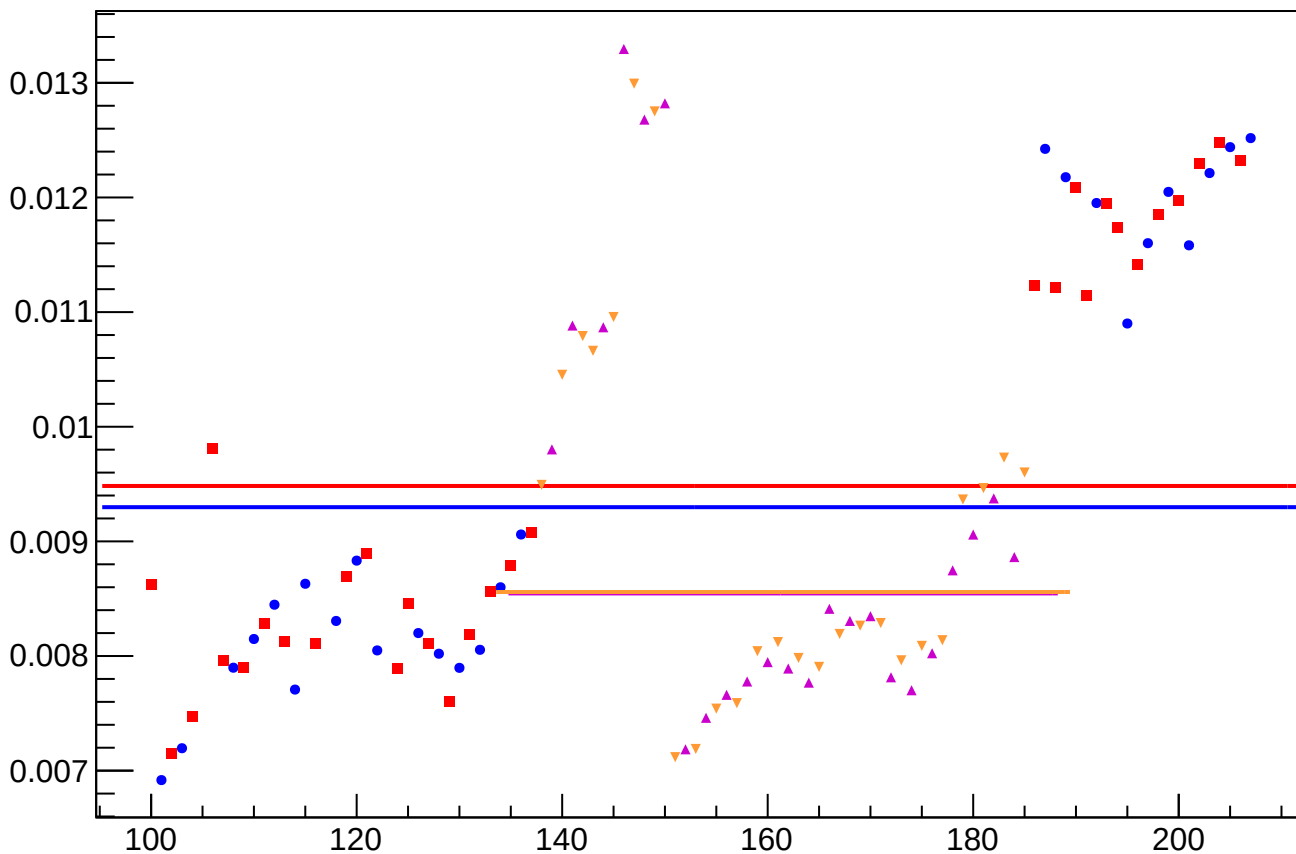
Left In:  $-2.499 \pm 0.000$   $\chi^2/\text{NDF}$ : 2273256162.3/22

+ sign  $-2.883 \pm 0.000$   $\chi^2/\text{NDF}$ : 143650342117.8/50

All:  $-2.904 \pm 0.000$   $\chi^2/\text{NDF}$ : 281172111967.7

- sign  $-2.924 \pm 0.000$   $\chi^2/\text{NDF}$ : 137175254105.8/53

# yield\_bpm0i02Y\_rms vs Slug



Right In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 1196800.1/25

Left Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 824029.0/24

Right Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 1195892.9/30

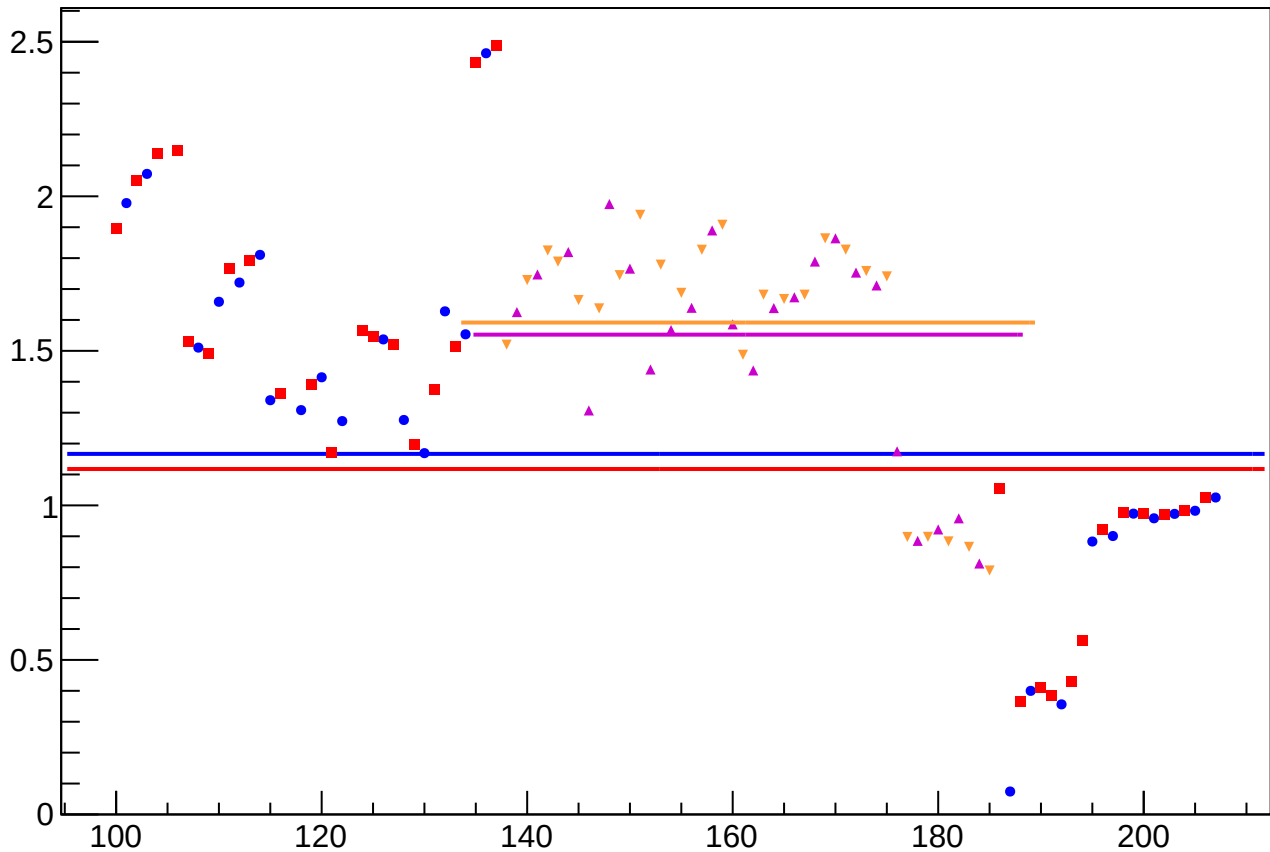
Left In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 910760.2/22

+ sign 0.009+/-0.000  $\chi^2/\text{NDF}$ : 2128073.0/50

All: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 4411516.6/104

- sign 0.009+/-0.000  $\chi^2/\text{NDF}$ : 2280178.0/53

# yield\_bpm0i02aX\_mean vs Slug



Right In: 1.167 $\pm$ 0.000  $\chi^2$ /NDF: 29269895108.0/25

Left Out: 1.592 $\pm$ 0.000  $\chi^2$ /NDF: 17078853061.6/24

Right Out: 1.118 $\pm$ 0.000  $\chi^2$ /NDF: 34367529504.6/30

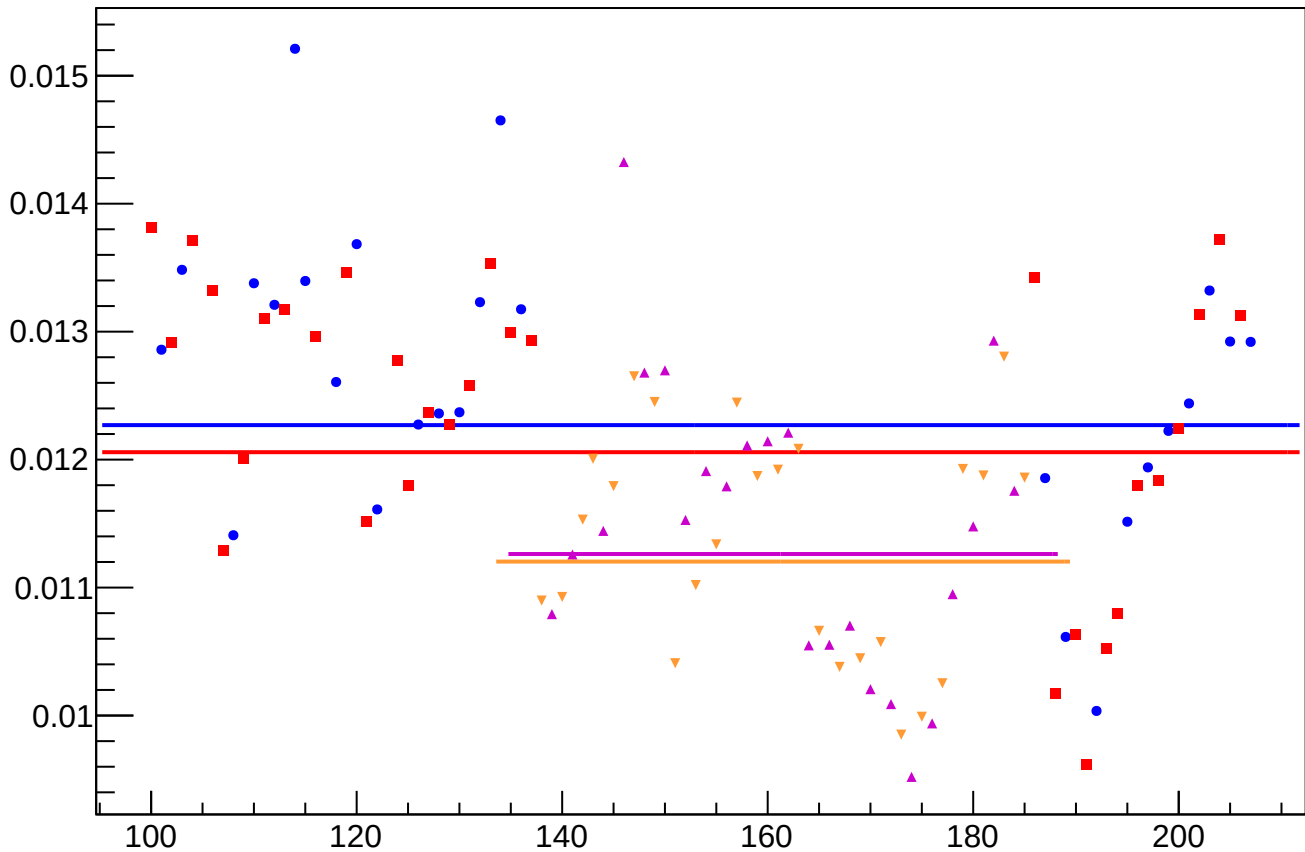
Left In: 1.552 $\pm$ 0.000  $\chi^2$ /NDF: 14055987405.9/22

+ sign 1.423 $\pm$ 0.000  $\chi^2$ /NDF: 56879272073.0/50

All: 1.391 $\pm$ 0.000  $\chi^2$ /NDF: 117268968004.5

- sign 1.359 $\pm$ 0.000  $\chi^2$ /NDF: 59892424980.1/53

# yield\_bpm0i02aX\_rms vs Slug



Right In: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 228969.9/25

Left Out: 0.011+/-0.000  $\chi^2/\text{NDF}$ :223594.3/24

Right Out: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 303733.3/30

Left In: 0.011+/-0.000  $\chi^2/\text{NDF}$ :311660.7/22

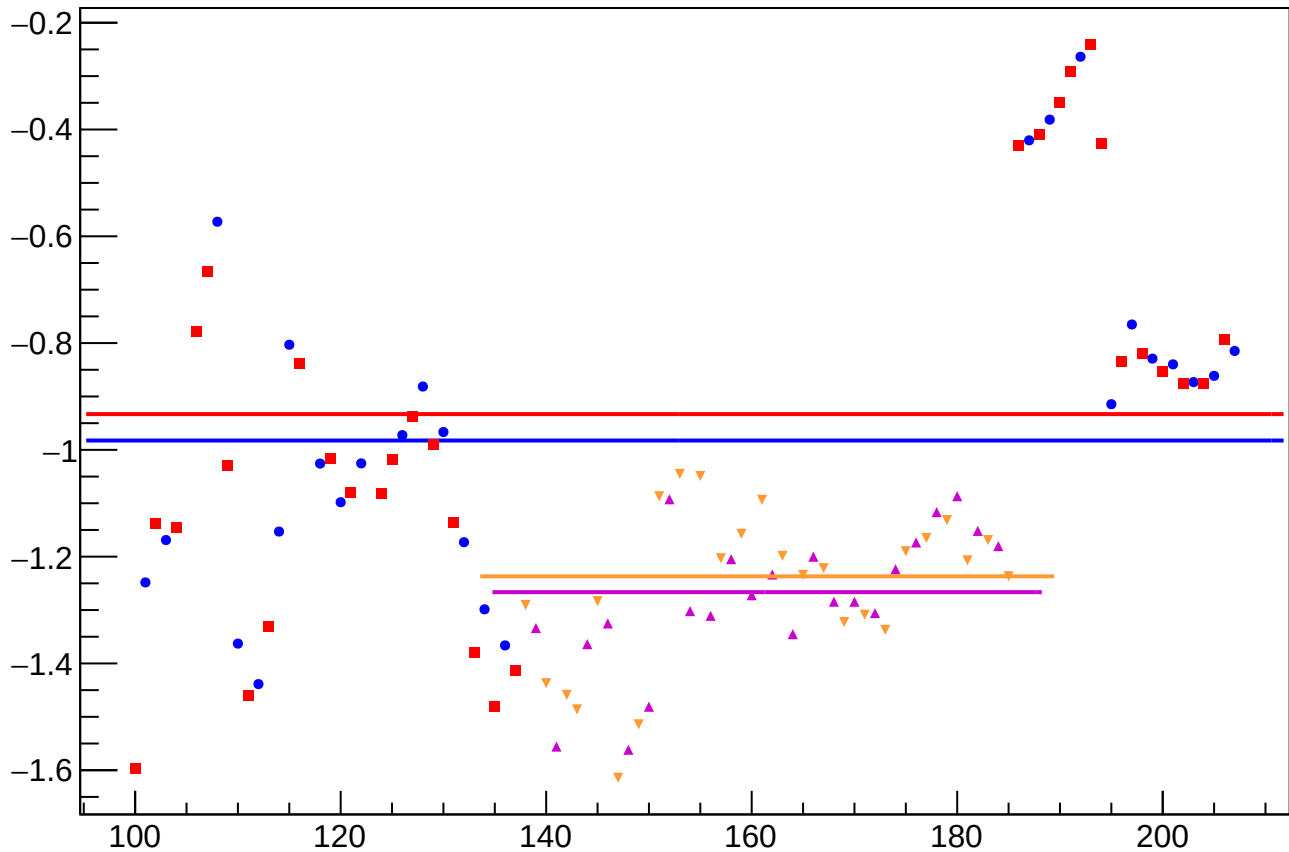
+ sign 0.012+/-0.000  $\chi^2/\text{NDF}$ : 585192.1/50

All: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 1277457.0/104

- sign 0.012+/-0.000  $\chi^2/\text{NDF}$ : 692239.2/53



# yield\_bpm0i02aY\_mean vs Slug



Right In:  $-0.982 \pm 0.000$   $\chi^2/\text{NDF}: 11928272665.9/25$

Left Out:  $-1.237 \pm 0.000$   $\chi^2/\text{NDF}: 4972272024.7/24$

Right Out:  $-0.933 \pm 0.000$   $\chi^2/\text{NDF}: 16714966452.4/30$

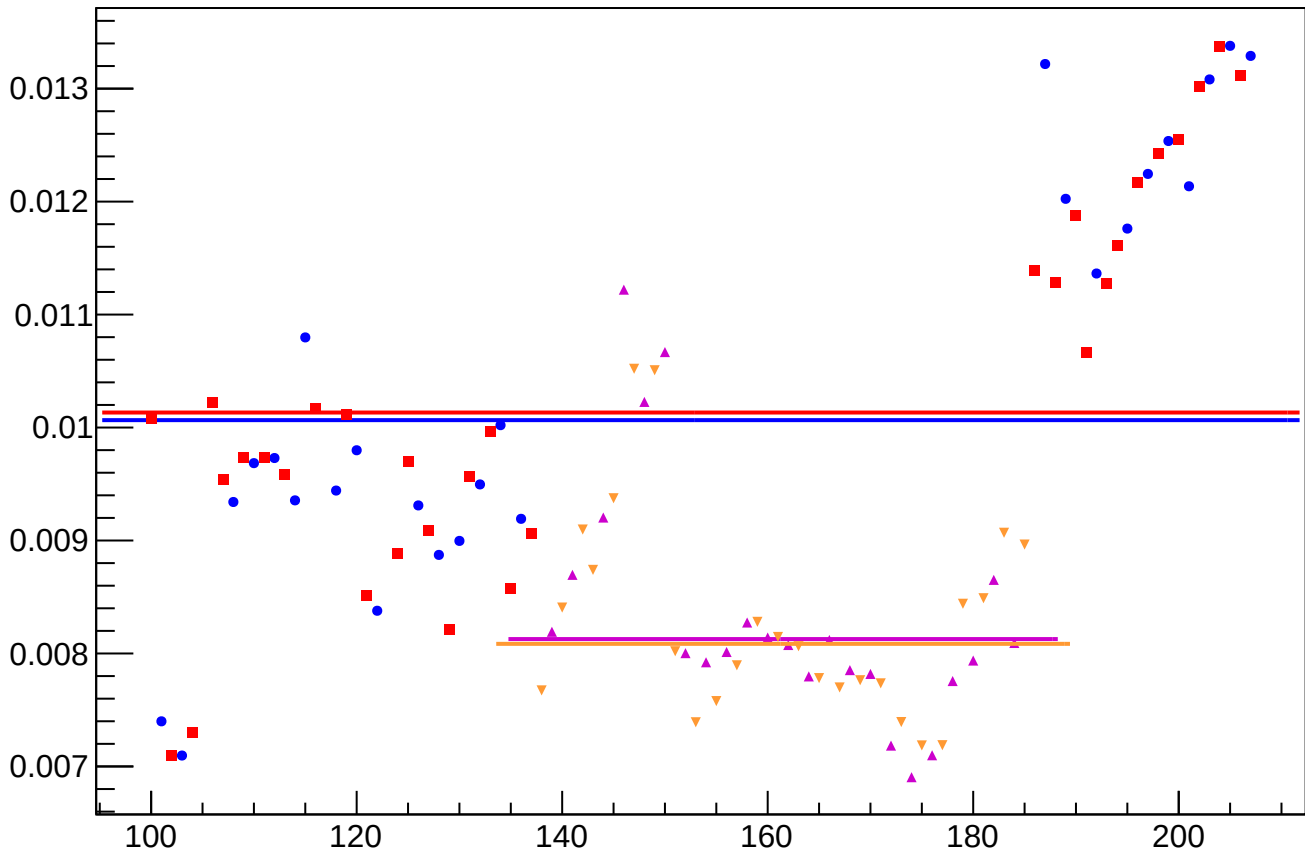
Left In:  $-1.267 \pm 0.000$   $\chi^2/\text{NDF}: 3674801511.3/22$

+ sign  $-1.152 \pm 0.000$   $\chi^2/\text{NDF}: 22852311110.3/50$

All:  $-1.149 \pm 0.000$   $\chi^2/\text{NDF}: 53762694753.8$

- sign  $-1.145 \pm 0.000$   $\chi^2/\text{NDF}: 30899402441.4/53$

# yield\_bpm0i02aY\_rms vs Slug



Right In: 0.010 $\pm$ 0.000  $\chi^2$ /NDF: 1034685.4/25

Left Out: 0.008 $\pm$ 0.000  $\chi^2$ /NDF:326825.0/24

Right Out: 0.010 $\pm$ 0.000  $\chi^2$ /NDF: 1056555.5/30

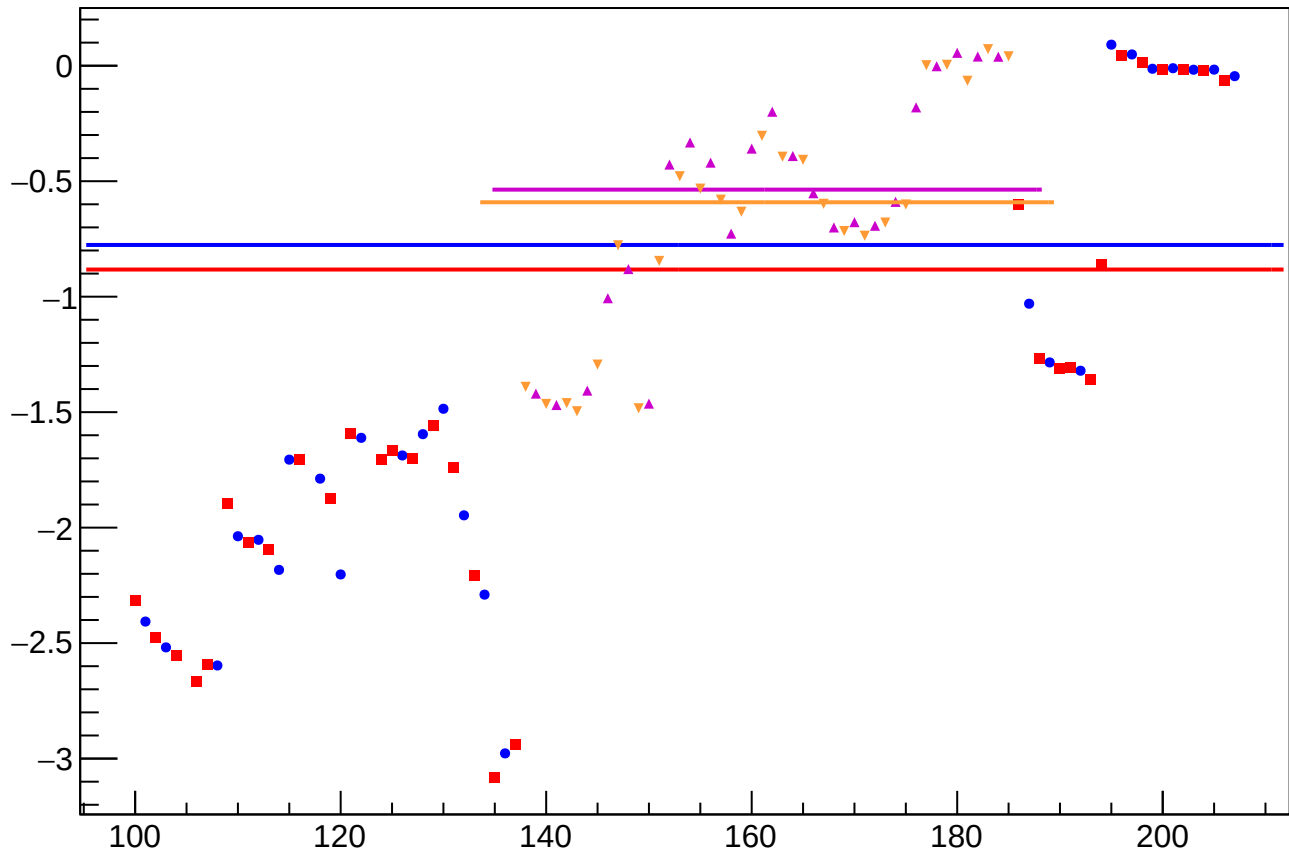
Left In: 0.008 $\pm$ 0.000  $\chi^2$ /NDF:409030.0/22

+ sign 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 2082750.6/50

All: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 4313767.3/104

- sign 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 2225611.4/53

# yield\_bpm0i05X\_mean vs Slug



Right In:  $-0.776 \pm 0.000$   $\chi^2/\text{NDF}$ : 354823512252.1/25

Left Out:  $-0.591 \pm 0.000$   $\chi^2/\text{NDF}$ : 72678844667.5/24

Right Out:  $-0.882 \pm 0.000$   $\chi^2/\text{NDF}$ : 362525090753.0/30

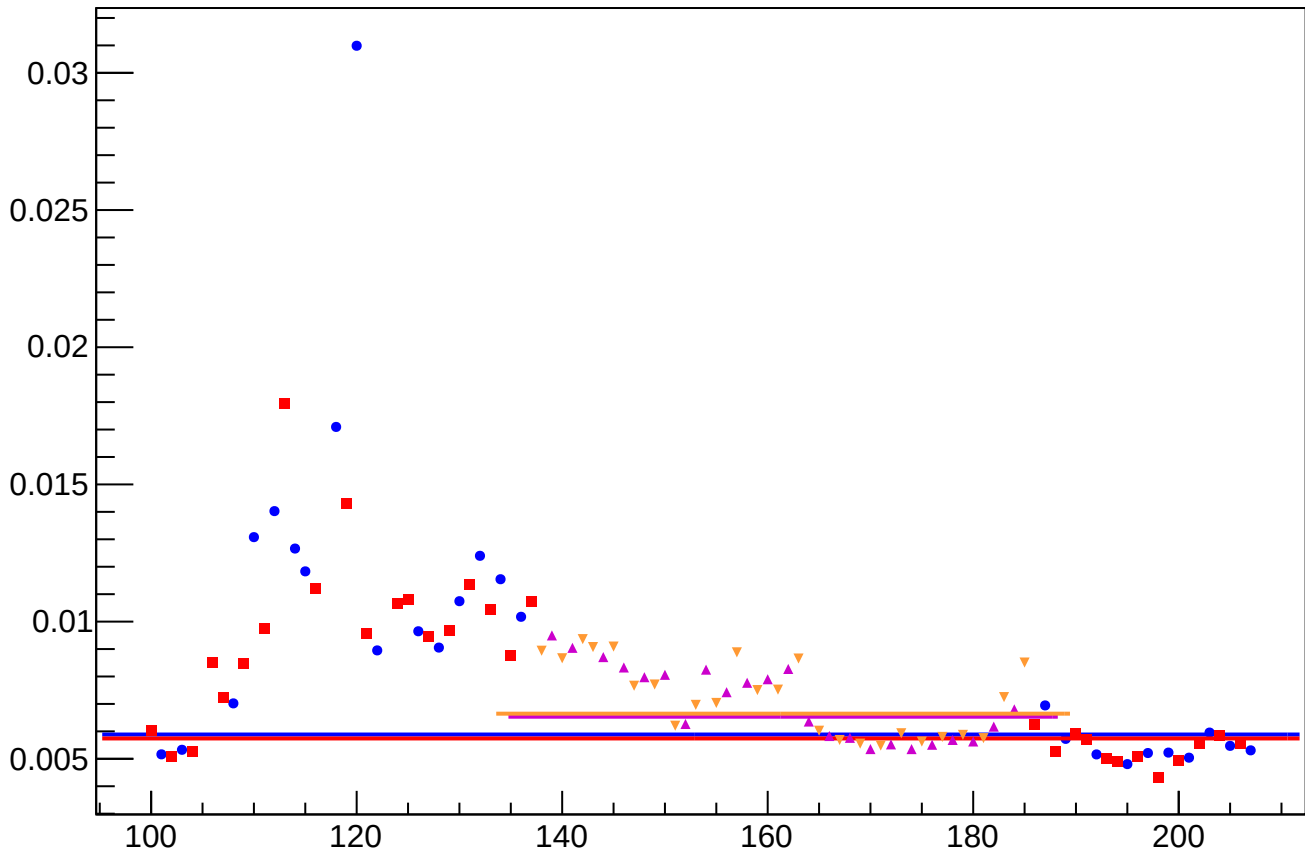
Left In:  $-0.536 \pm 0.000$   $\chi^2/\text{NDF}$ : 70168781562.6/22

+ sign  $-0.679 \pm 0.000$   $\chi^2/\text{NDF}$ : 433654355320.5/50

All:  $-0.699 \pm 0.000$   $\chi^2/\text{NDF}$ : 890099260438.2

- sign  $-0.717 \pm 0.000$   $\chi^2/\text{NDF}$ : 455900249469.3/53

# yield\_bpm0i05X\_rms vs Slug



Right In: 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 2493444.9/25

Left Out: 0.007 $\pm$ 0.000  $\chi^2$ /NDF:1091920.0/24

Right Out: 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 2349297.5/30

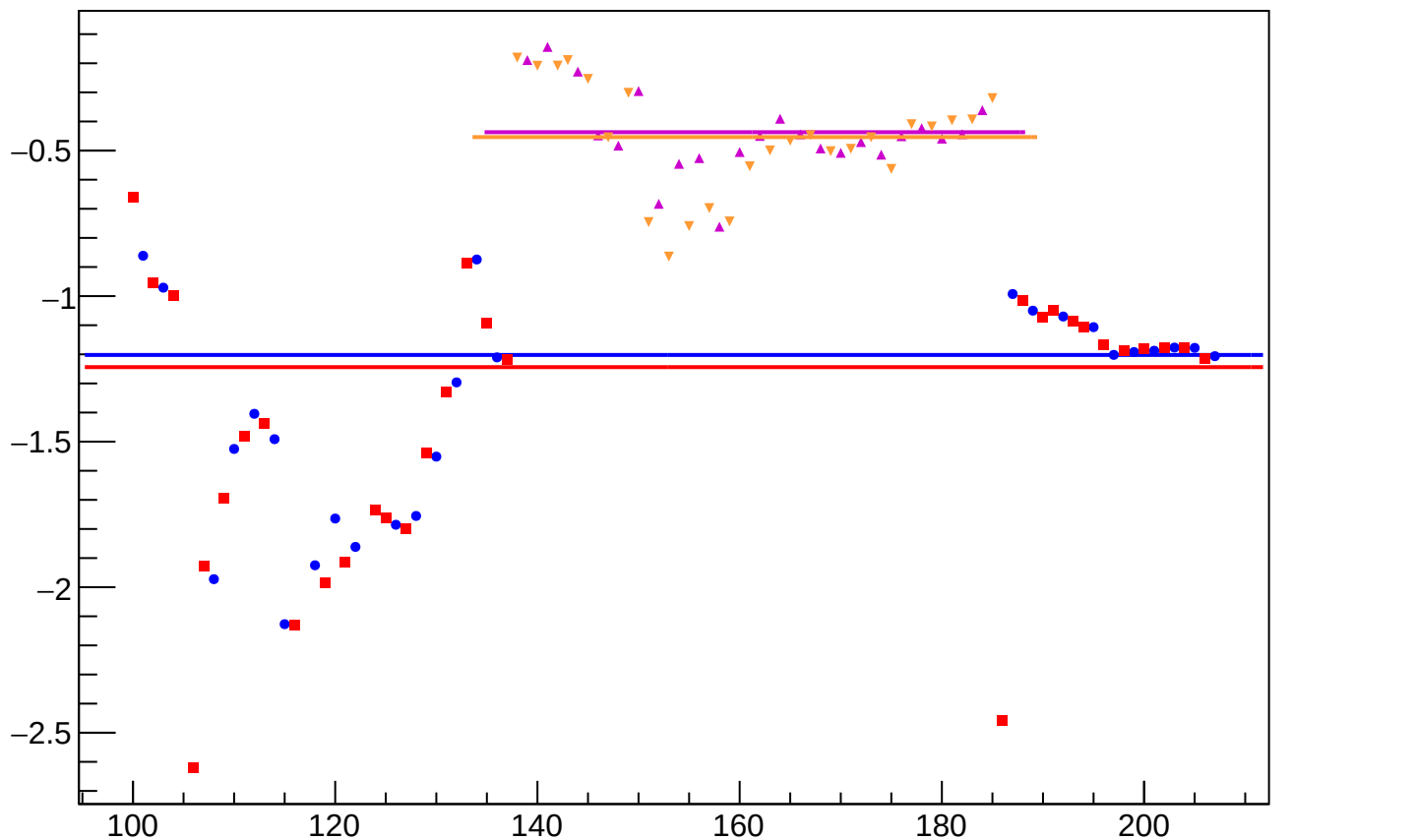
Left In: 0.007 $\pm$ 0.000  $\chi^2$ /NDF:1151126.7/22

+ sign 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 3793393.7/50

All: 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 7557785.5/104

- sign 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 3744347.0/53

# yield\_bpm0i05Y\_mean vs Slug



Right In:  $-1.202 \pm 0.000$   $\chi^2/\text{NDF}$ : 27125953086.1/25

Left Out:  $-0.454 \pm 0.000$   $\chi^2/\text{NDF}$ : 29096412438.0/24

Right Out:  $-1.244 \pm 0.000$   $\chi^2/\text{NDF}$ : 72207875260.1/30

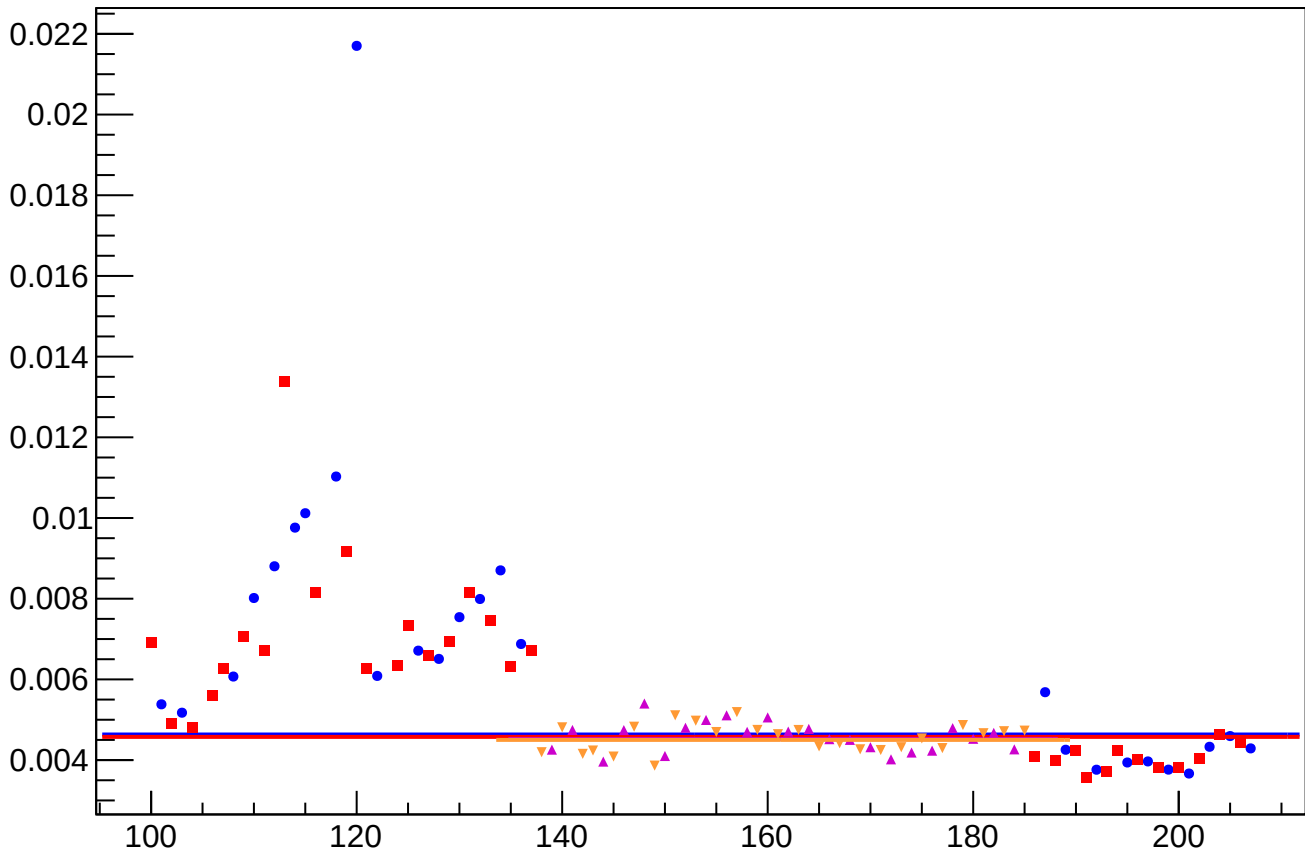
Left In:  $-0.437 \pm 0.000$   $\chi^2/\text{NDF}$ : 16544160360.6/22

+ sign  $-0.748 \pm 0.000$   $\chi^2/\text{NDF}$ : 247612625730.4/50

All:  $-0.772 \pm 0.000$   $\chi^2/\text{NDF}$ : 573622666909.2

- sign  $-0.795 \pm 0.000$   $\chi^2/\text{NDF}$ : 324380784888.3/53

# yield\_bpm0i05Y\_rms vs Slug



Right In: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 2155244.8/25

Left Out: 0.005+/-0.000  $\chi^2/\text{NDF}$ :189230.5/24

Right Out: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 1846516.4/30

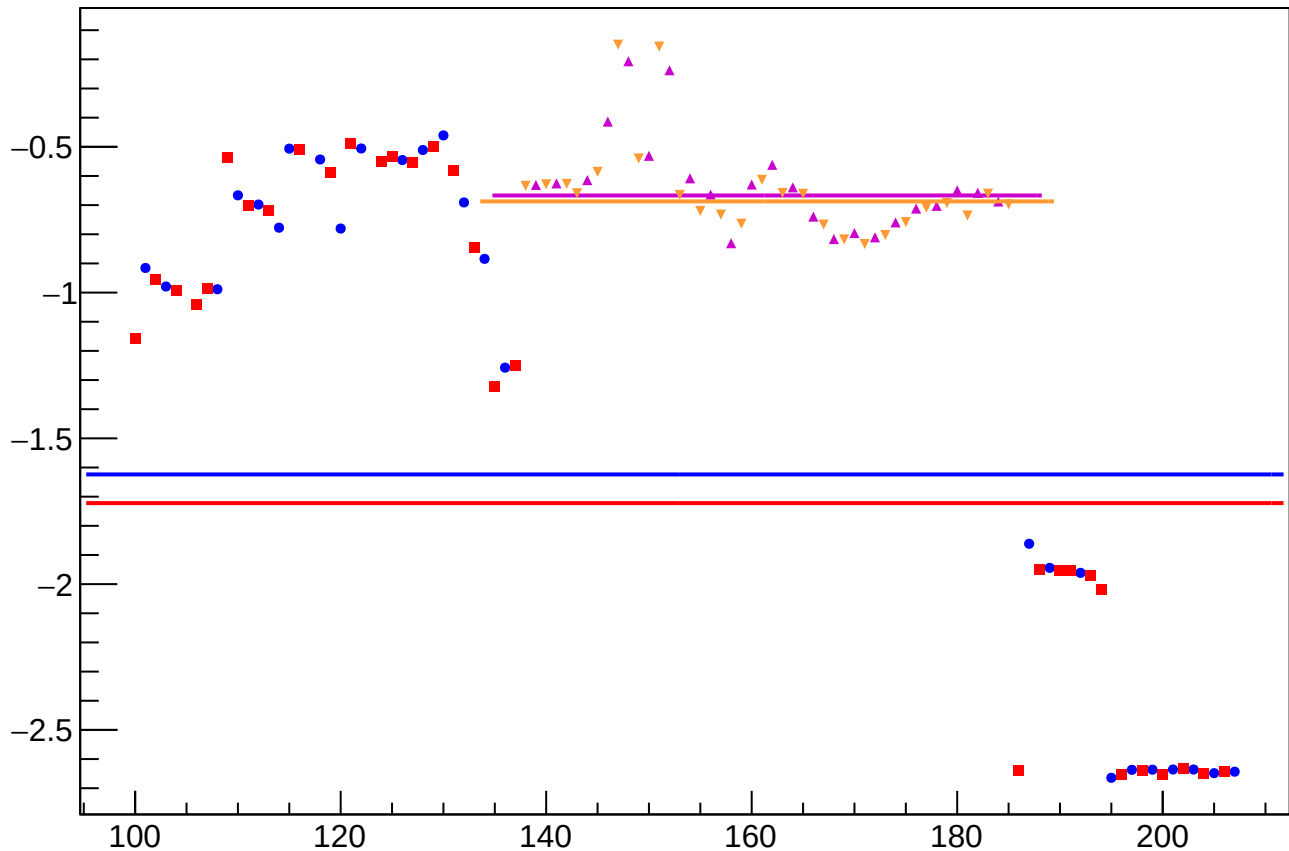
Left In: 0.005+/-0.000  $\chi^2/\text{NDF}$ :212056.7/22

+ sign 0.005+/-0.000  $\chi^2/\text{NDF}$ : 2356543.5/50

All: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 4417385.7/104

- sign 0.005+/-0.000  $\chi^2/\text{NDF}$ : 2060740.6/53

# yield\_bpm0i07X\_mean vs Slug



Right In: -1.624+/-0.000  $\chi^2$ /NDF: 242922005998.7/25

Left Out: -0.687+/-0.000  $\chi^2$ /NDF: 22462821855.7/24

Right Out: -1.722+/-0.000  $\chi^2$ /NDF: 298397167355.8/30

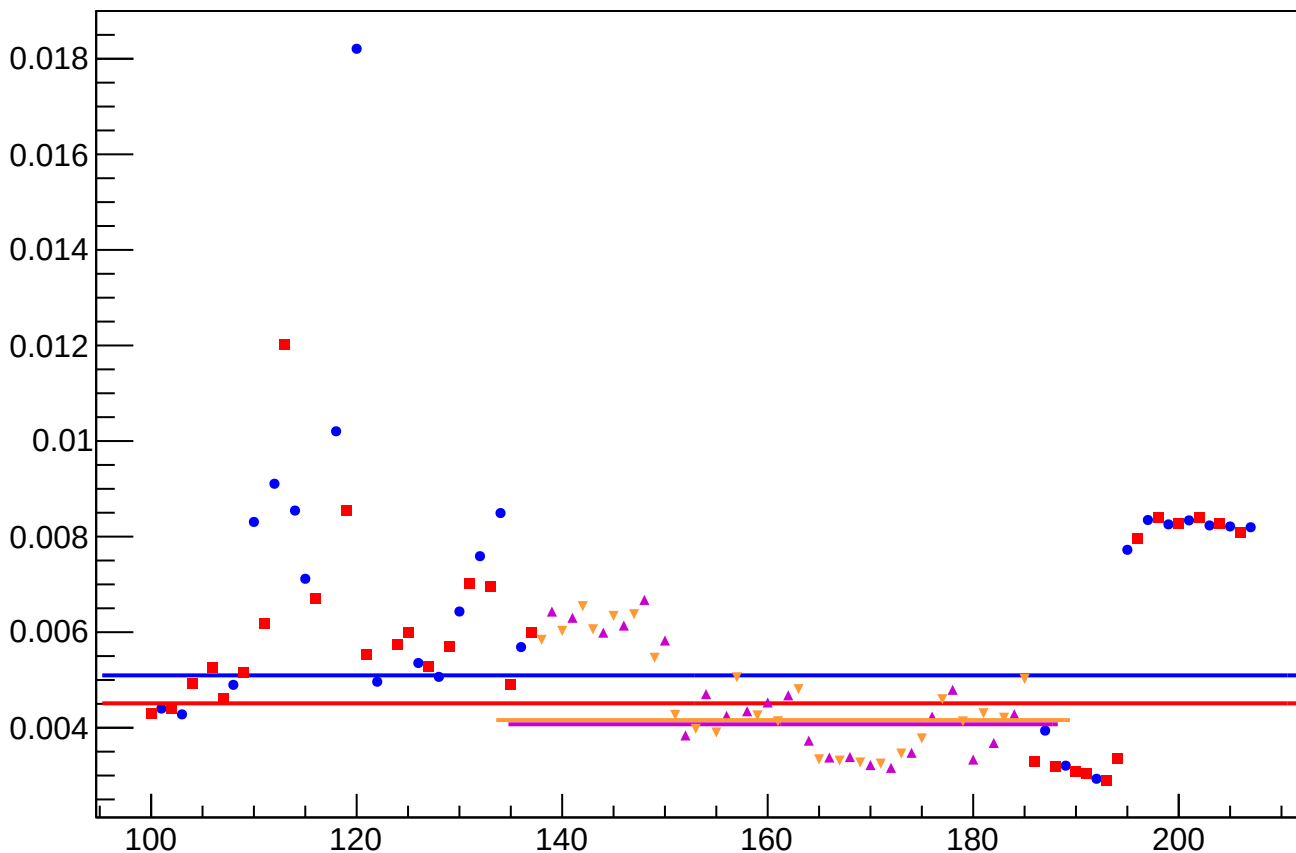
Left In: -0.667+/-0.000  $\chi^2$ /NDF: 22531477329.1/22

+ sign -0.983+/-0.000  $\chi^2$ /NDF: 532957775739.4/50

All: -1.038+/-0.000  $\chi^2$ /NDF: 1284157762424

- sign -1.087+/-0.000  $\chi^2$ /NDF: 743157278970.5/53

# yield\_bpm0i07X\_rms vs Slug



Right In: 0.005 $\pm$ 0.000  $\chi^2$ /NDF: 4147622.3/25

Left Out: 0.004 $\pm$ 0.000  $\chi^2$ /NDF:1520055.0/24

Right Out: 0.005 $\pm$ 0.000  $\chi^2$ /NDF: 4376577.2/30

Left In: 0.004 $\pm$ 0.000  $\chi^2$ /NDF:1750303.9/22

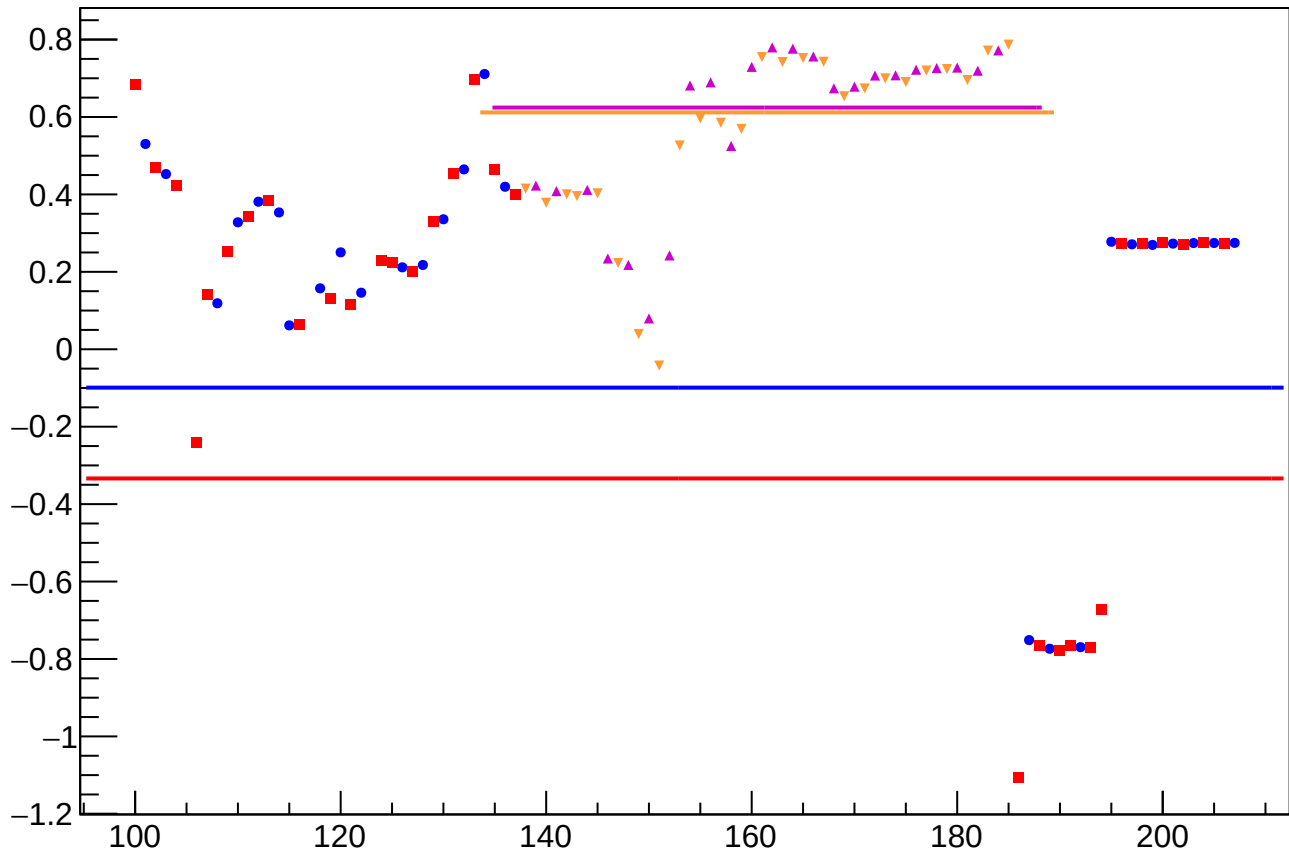
+ sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 6202141.3/50

All: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 12539925.4/104

- sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 6272598.1/53



# yield\_bpm0i07Y\_mean vs Slug



Right In:  $-0.099 \pm 0.000$   $\chi^2/\text{NDF}$ : 308691590580.9/25

Left Out:  $0.612 \pm 0.000$   $\chi^2/\text{NDF}$ : 45742599949.2/24

Right Out:  $-0.334 \pm 0.000$   $\chi^2/\text{NDF}$ : 488138852760.6/30

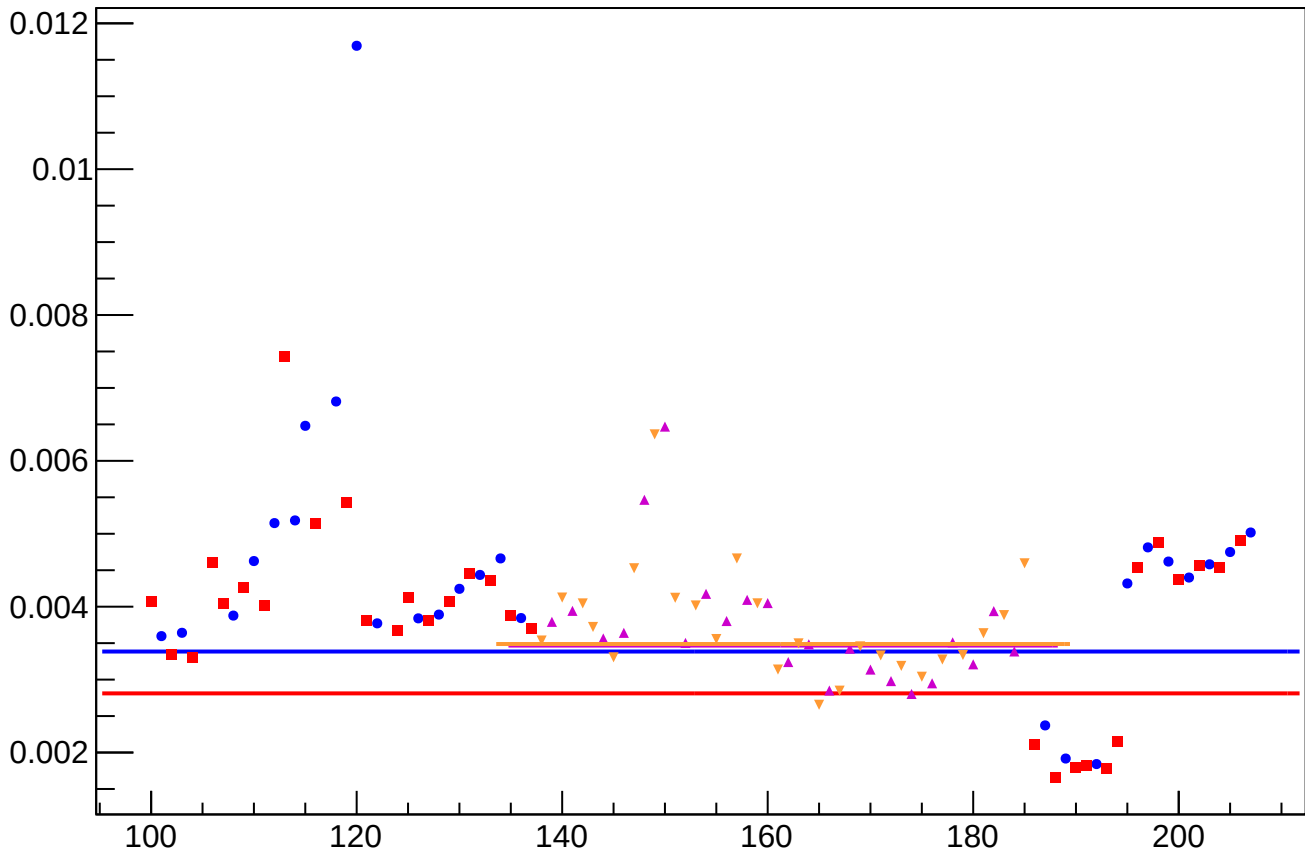
Left In:  $0.624 \pm 0.000$   $\chi^2/\text{NDF}$ : 40353141115.4/22

+ sign  $0.296 \pm 0.000$   $\chi^2/\text{NDF}$ : 650507270817.6/50

All:  $0.183 \pm 0.000$   $\chi^2/\text{NDF}$ : 1883445570773.

- sign  $0.090 \pm 0.000$   $\chi^2/\text{NDF}$ : 1177603471985.2/53

# yield\_bpm0i07Y\_rms vs Slug



Right In: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 3563462.3/25

Left Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ :850746.8/24

Right Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 4900448.6/30

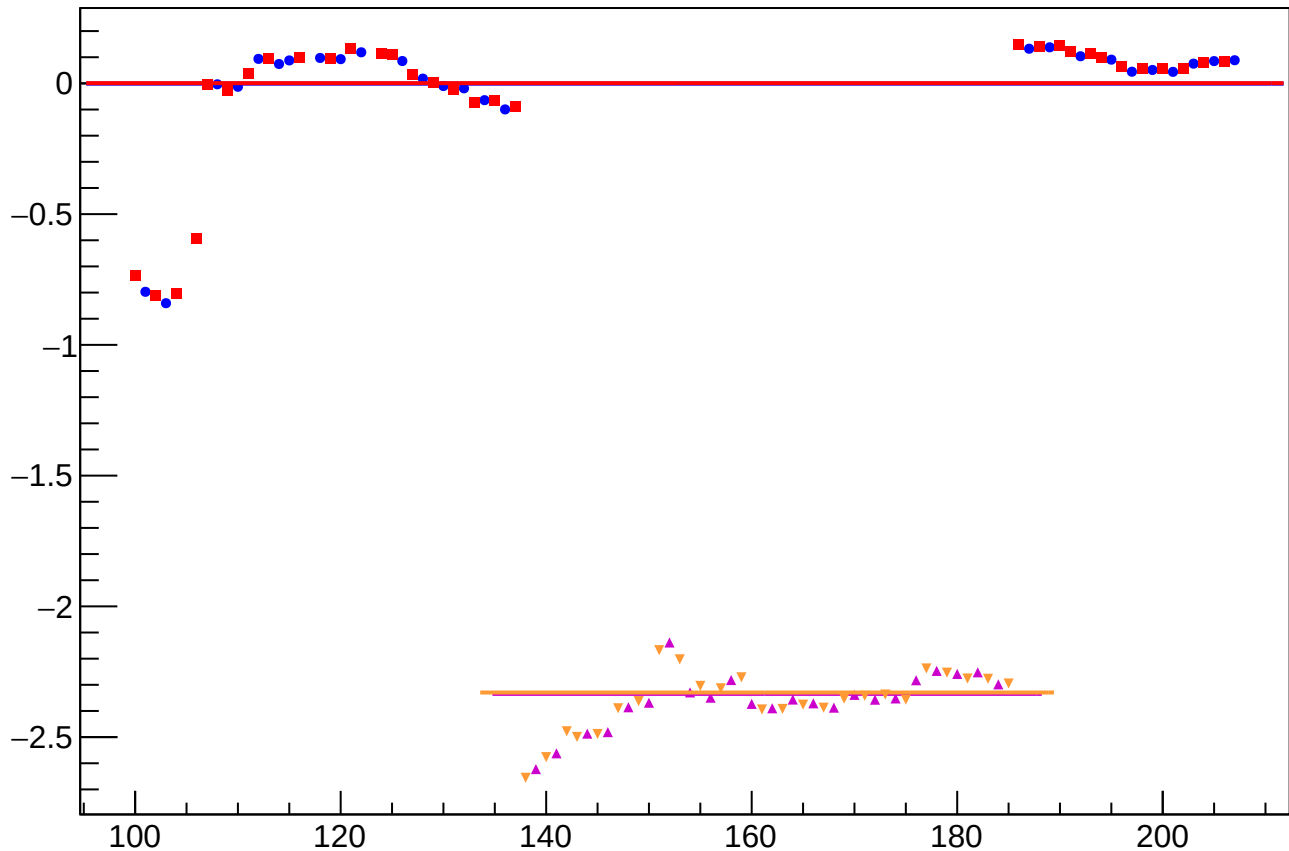
Left In: 0.003+/-0.000  $\chi^2/\text{NDF}$ :894124.0/22

+ sign 0.003+/-0.000  $\chi^2/\text{NDF}$ : 4426647.6/50

All: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 11132498.2/104

- sign 0.003+/-0.000  $\chi^2/\text{NDF}$ : 6402974.0/53

# yield\_bpm1i02X\_mean vs Slug



Right In: -0.001+/-0.000  $\chi^2$ /NDF: 6523952873.2/25

Left Out: -2.329+/-0.000  $\chi^2$ /NDF:1982733526.8/24

Right Out: 0.001+/-0.000  $\chi^2$ /NDF: 7797409054.9/30

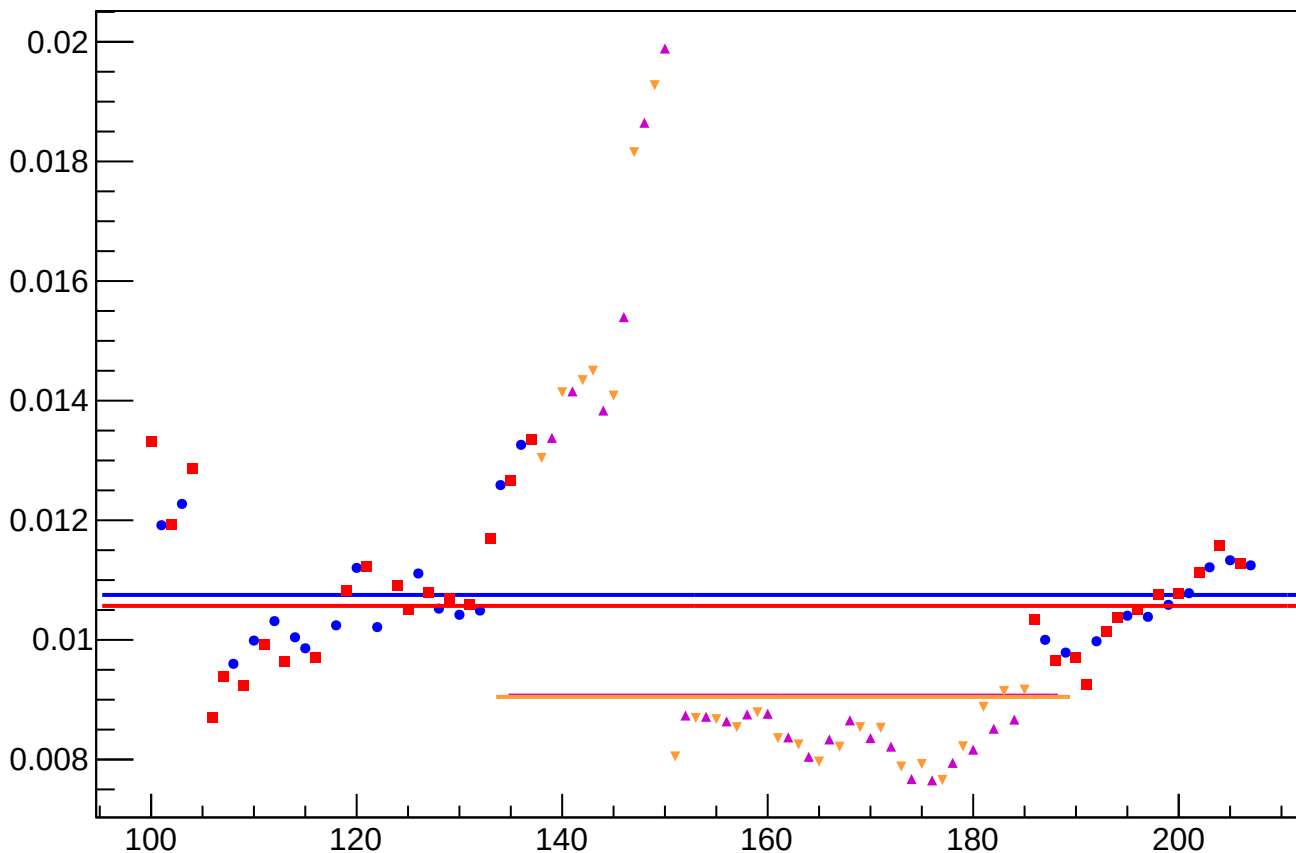
Left In: -2.335+/-0.000  $\chi^2$ /NDF:1676703216.8/22

+ sign -1.479+/-0.000  $\chi^2$ /NDF: 448588305264.5/50

All: -1.427+/-0.000  $\chi^2$ /NDF: 927399111603.5

- sign -1.375+/-0.000  $\chi^2$ /NDF: 476933484081.4/53

# yield\_bpm1i02X\_rms vs Slug



Right In: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 179521.7/25

Left Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 2048729.6/24

Right Out: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 254194.2/30

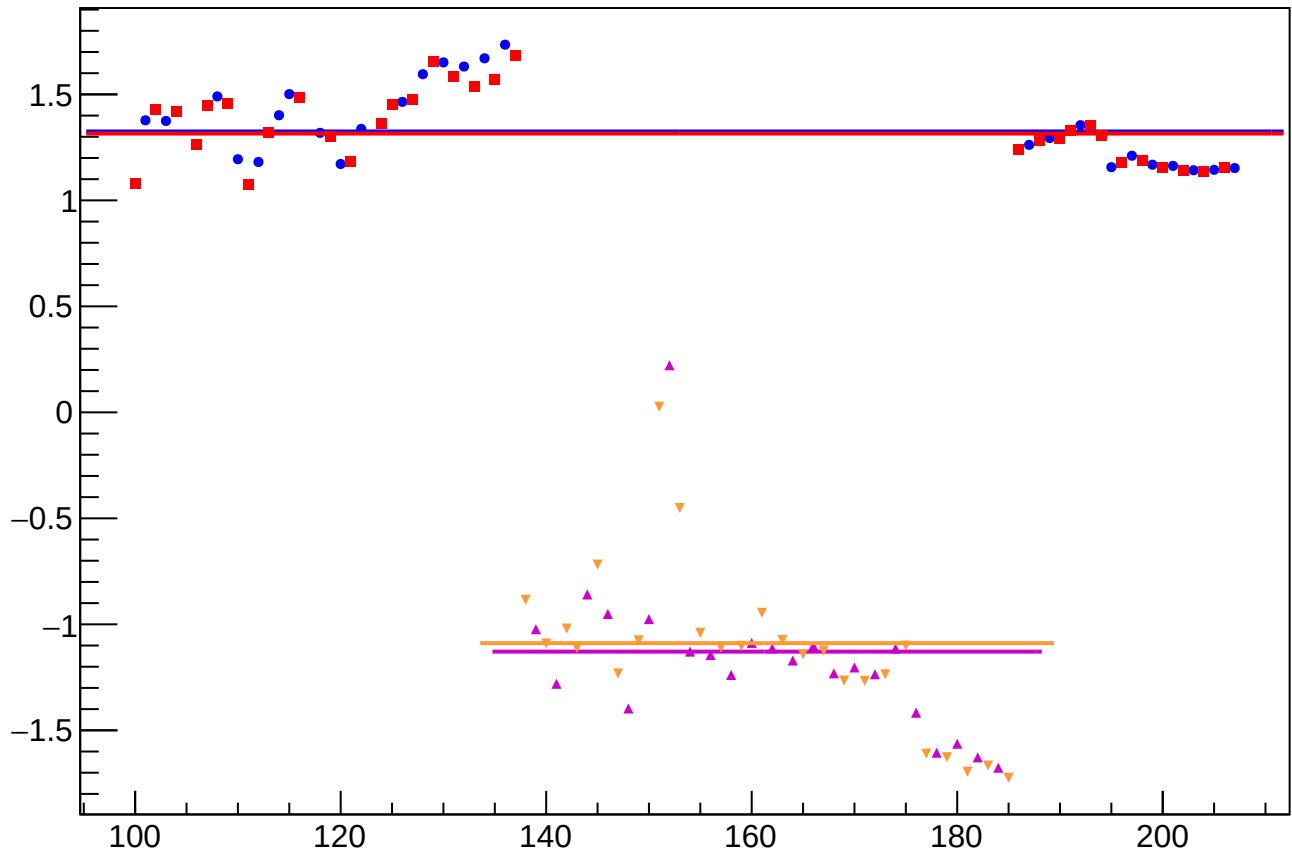
Left In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 2134207.9/22

+ sign 0.010+/-0.000  $\chi^2/\text{NDF}$ : 2700107.7/50

All: 0.010+/-0.000  $\chi^2/\text{NDF}$ : 5474385.1/104

- sign 0.010+/-0.000  $\chi^2/\text{NDF}$ : 2774203.7/53

# yield\_bpm1i02Y\_mean vs Slug



Right In: 1.325+/-0.000  $\chi^2/\text{NDF}$ : 8133339625.0/25

Left Out: -1.089+/-0.000  $\chi^2/\text{NDF}$ : 61255304912.3/24

Right Out: 1.315+/-0.000  $\chi^2/\text{NDF}$ : 6313435710.5/30

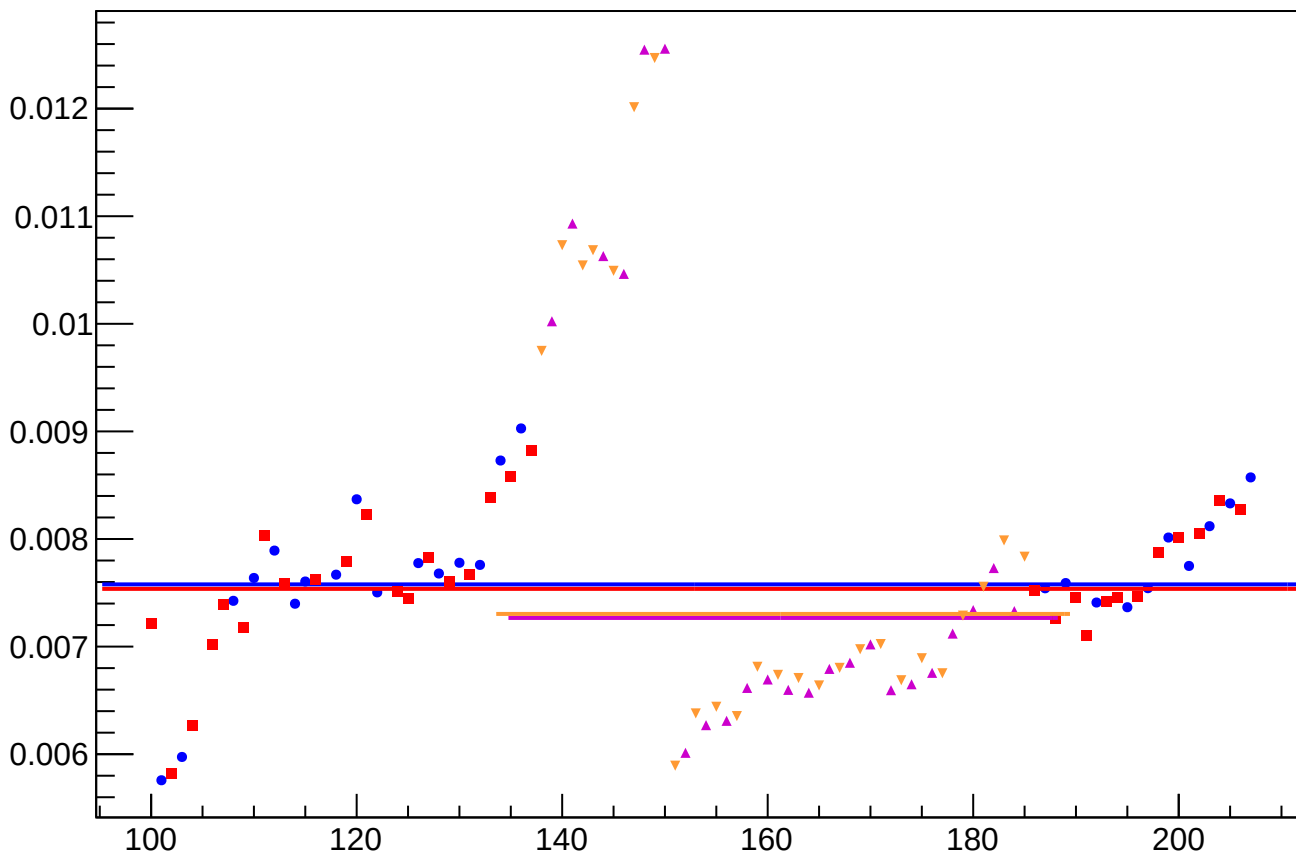
Left In: -1.129+/-0.000  $\chi^2/\text{NDF}$ : 58876825364.1/22

+ sign -0.063+/-0.000  $\chi^2/\text{NDF}$ : 927262967853.7/50

All: -0.029+/-0.000  $\chi^2/\text{NDF}$ : 1910198196925

- sign 0.004+/-0.000  $\chi^2/\text{NDF}$ : 981559269536.9/53

# yield\_bpm1i02Y\_rms vs Slug



Right In: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 338556.3/25

Left Out: 0.007+/-0.000  $\chi^2/\text{NDF}$ :1504103.4/24

Right Out: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 260743.8/30

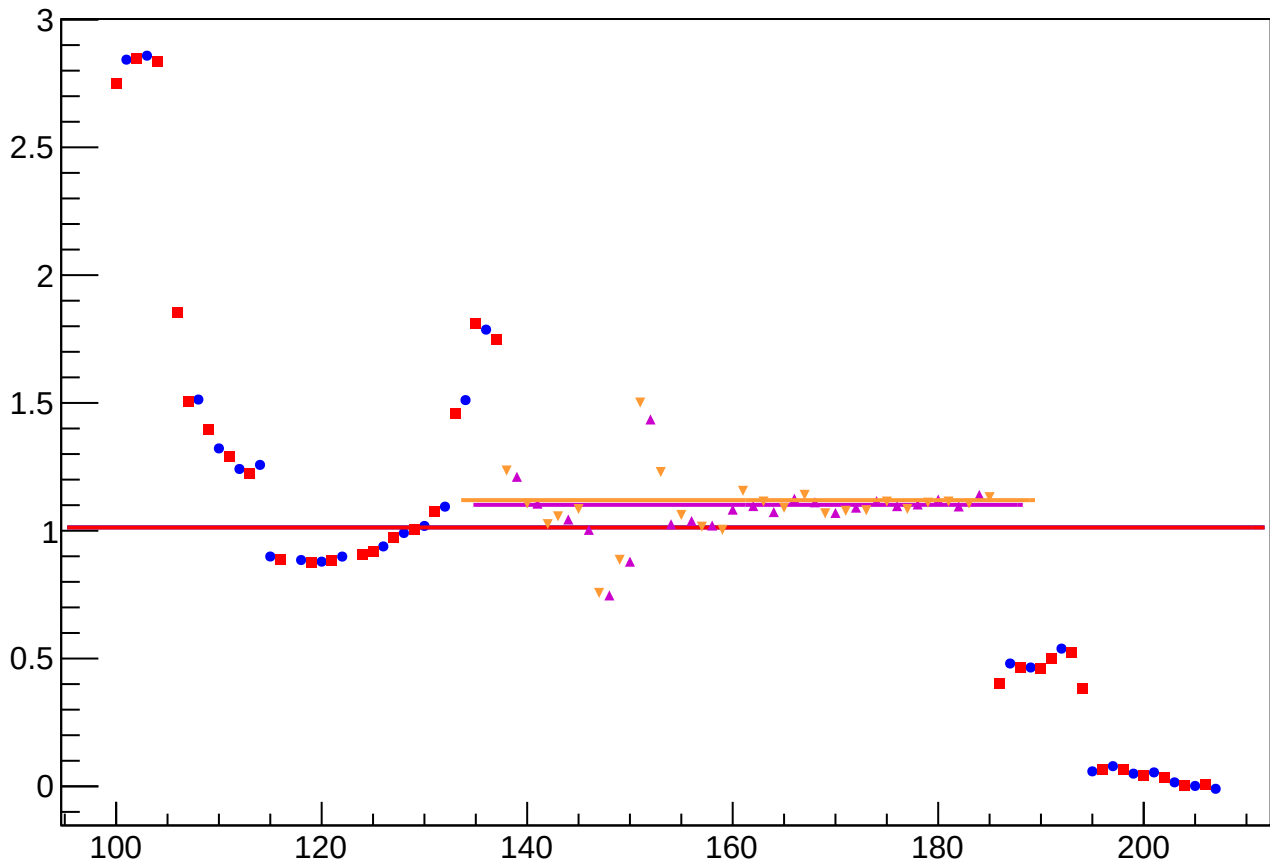
Left In: 0.007+/-0.000  $\chi^2/\text{NDF}$ :1560089.8/22

+ sign 0.007+/-0.000  $\chi^2/\text{NDF}$ : 1864862.6/50

All: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 3708602.9/104

- sign 0.007+/-0.000  $\chi^2/\text{NDF}$ : 1843238.4/53

# yield\_bpm1i04X\_mean vs Slug



Right In: 1.013 $\pm$ 0.000  $\chi^2$ /NDF: 132485299828.5/25

Left Out: 1.120 $\pm$ 0.000  $\chi^2$ /NDF: 5515079117.9/24

Right Out: 1.013 $\pm$ 0.000  $\chi^2$ /NDF: 130642982854.0/30

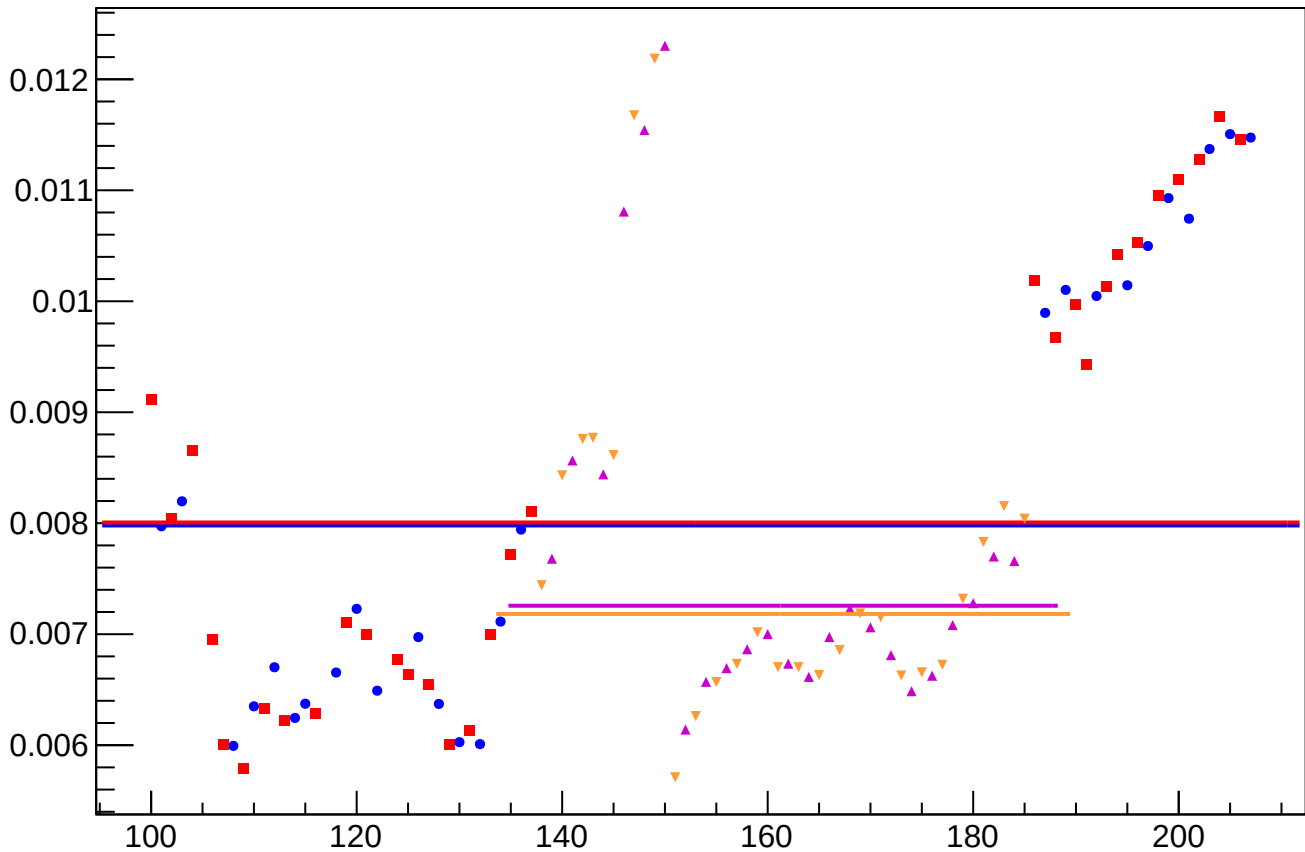
Left In: 1.101 $\pm$ 0.000  $\chi^2$ /NDF: 4201972548.8/22

+ sign 1.079 $\pm$ 0.000  $\chi^2$ /NDF: 139549884537.6/50

All: 1.072 $\pm$ 0.000  $\chi^2$ /NDF: 275557187603.1

- sign 1.064 $\pm$ 0.000  $\chi^2$ /NDF: 135943436241.1/53

# yield\_bpm1i04X\_rms vs Slug



Right In: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 1631775.6/25

Left Out: 0.007 $\pm$ 0.000  $\chi^2$ /NDF:893807.0/24

Right Out: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 1871893.8/30

Left In: 0.007 $\pm$ 0.000  $\chi^2$ /NDF:916696.6/22

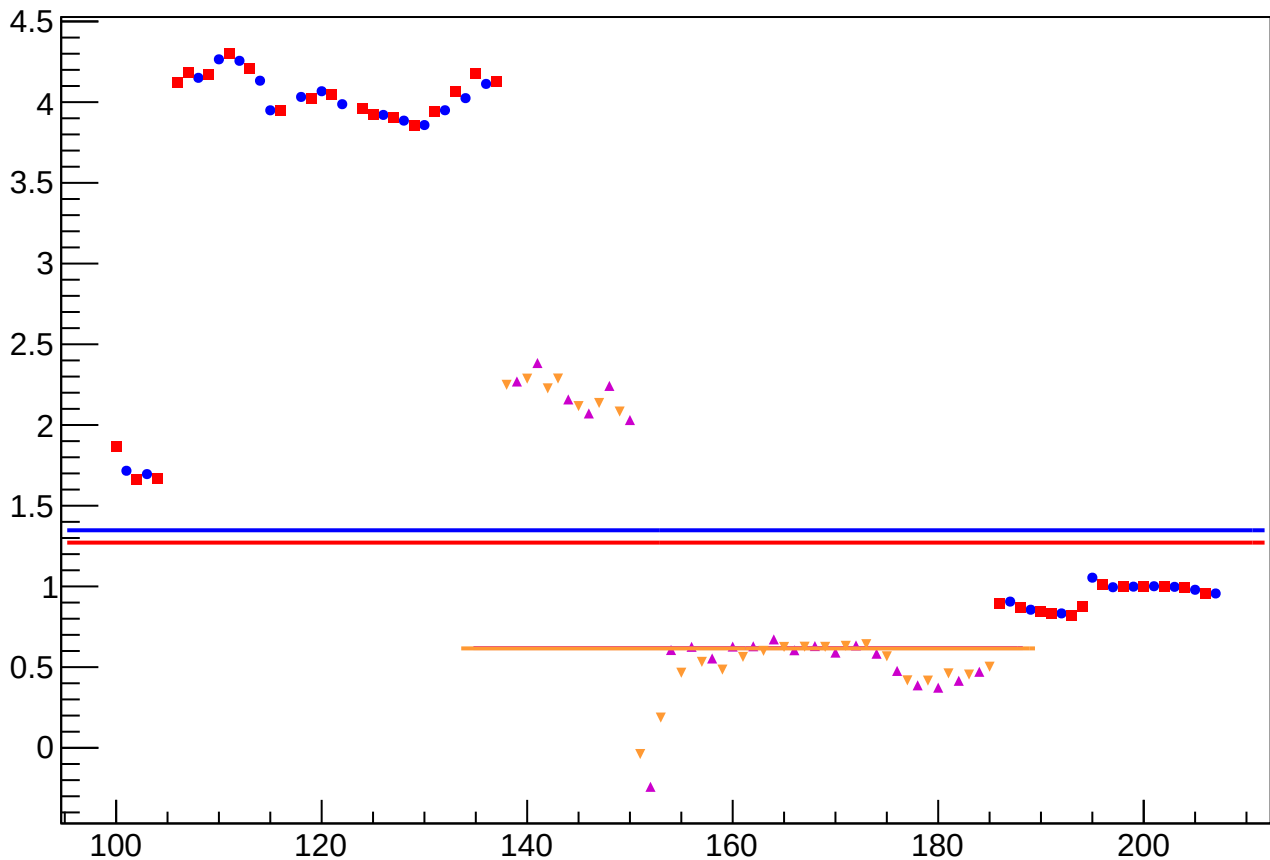
+ sign 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 2699274.4/50

All: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 5649174.6/104

- sign 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 2945760.5/53



# yield\_bpm1i04Y\_mean vs Slug



Right In: 1.348 $\pm$ 0.000  $\chi^2$ /NDF: 1569504523944.3/25

Left Out: 0.616 $\pm$ 0.000  $\chi^2$ /NDF: 251940630795.3/24

Right Out: 1.271 $\pm$ 0.000  $\chi^2$ /NDF: 1755616410419.6/30

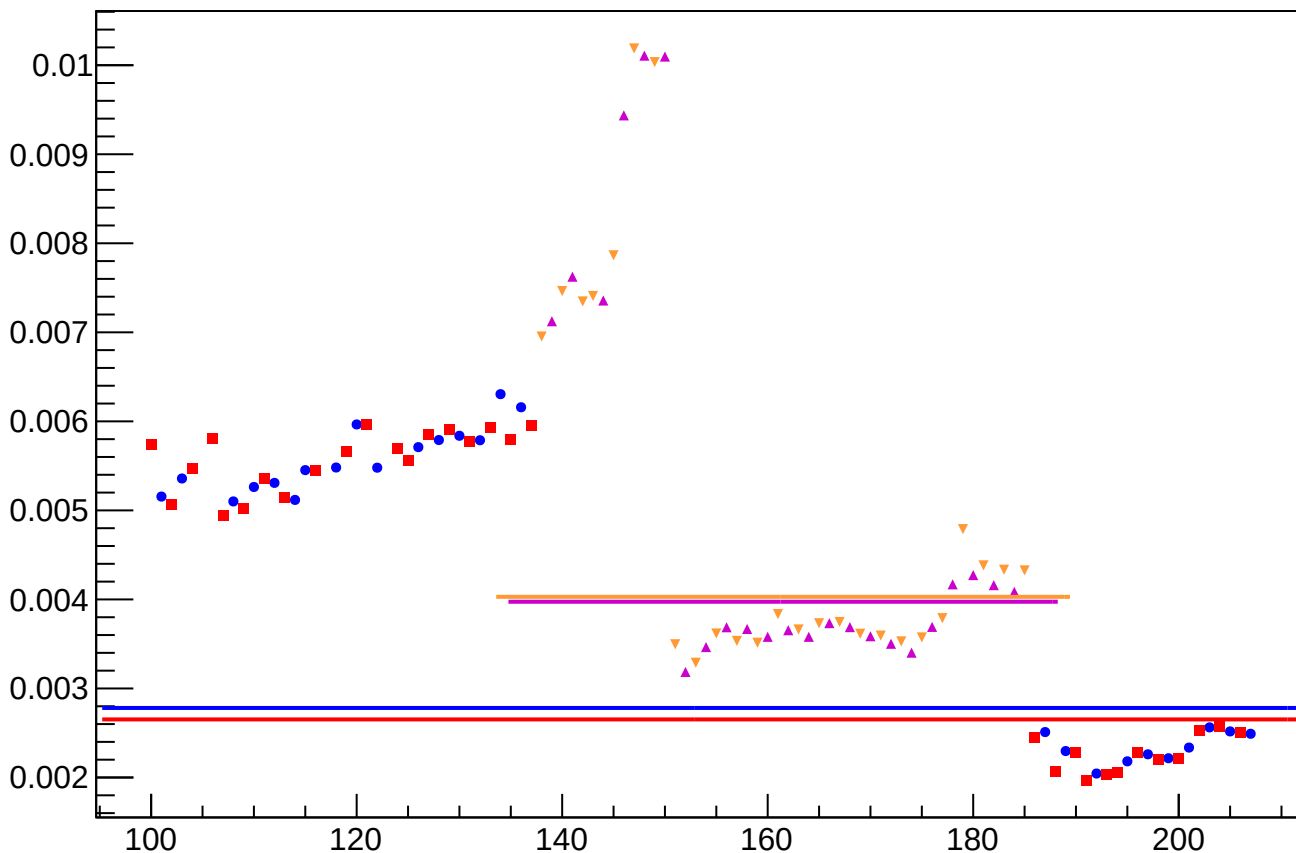
Left In: 0.618 $\pm$ 0.000  $\chi^2$ /NDF: 254248143278.9/22

+ sign 1.054 $\pm$ 0.000  $\chi^2$ /NDF: 2159679617083.0/50

All: 1.047 $\pm$ 0.000  $\chi^2$ /NDF: 4454000583996.0/100

- sign 1.042 $\pm$ 0.000  $\chi^2$ /NDF: 2294136463038.6/53

# yield\_bpm1i04Y\_rms vs Slug



Right In: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 4353731.4/25

Left Out: 0.004+/-0.000  $\chi^2/\text{NDF}$ :2965028.8/24

Right Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 4678236.8/30

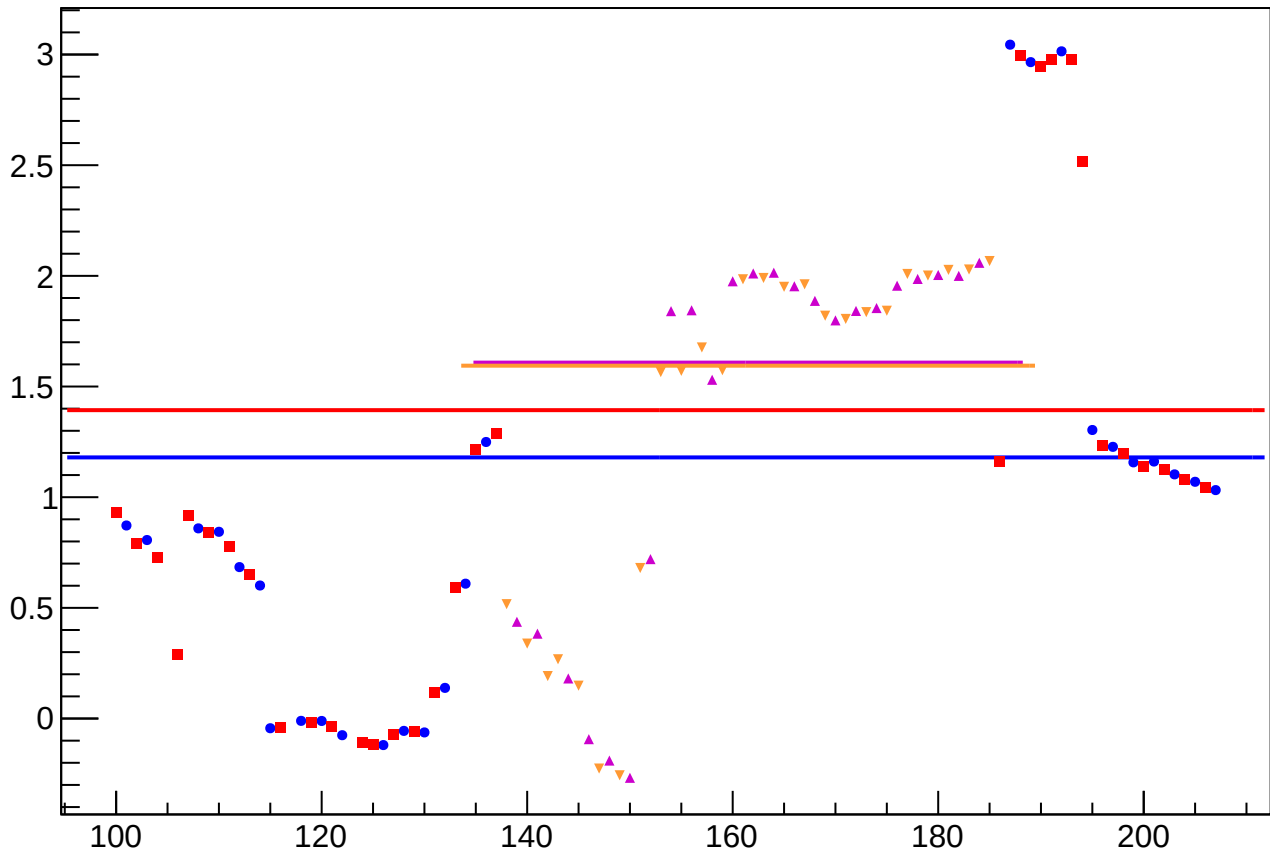
Left In: 0.004+/-0.000  $\chi^2/\text{NDF}$ :3121901.5/22

+ sign 0.003+/-0.000  $\chi^2/\text{NDF}$ : 9286842.6/50

All: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 19491306.4/104

- sign 0.003+/-0.000  $\chi^2/\text{NDF}$ : 10127739.5/53

# yield\_bpm1i06X\_mean vs Slug



Right In: 1.180 $\pm$ 0.000  $\chi^2$ /NDF: 77709994393.5/25

Left Out: 1.594 $\pm$ 0.000  $\chi^2$ /NDF: 62632055963.2/24

Right Out: 1.393 $\pm$ 0.000  $\chi^2$ /NDF: 105628416409.1/30

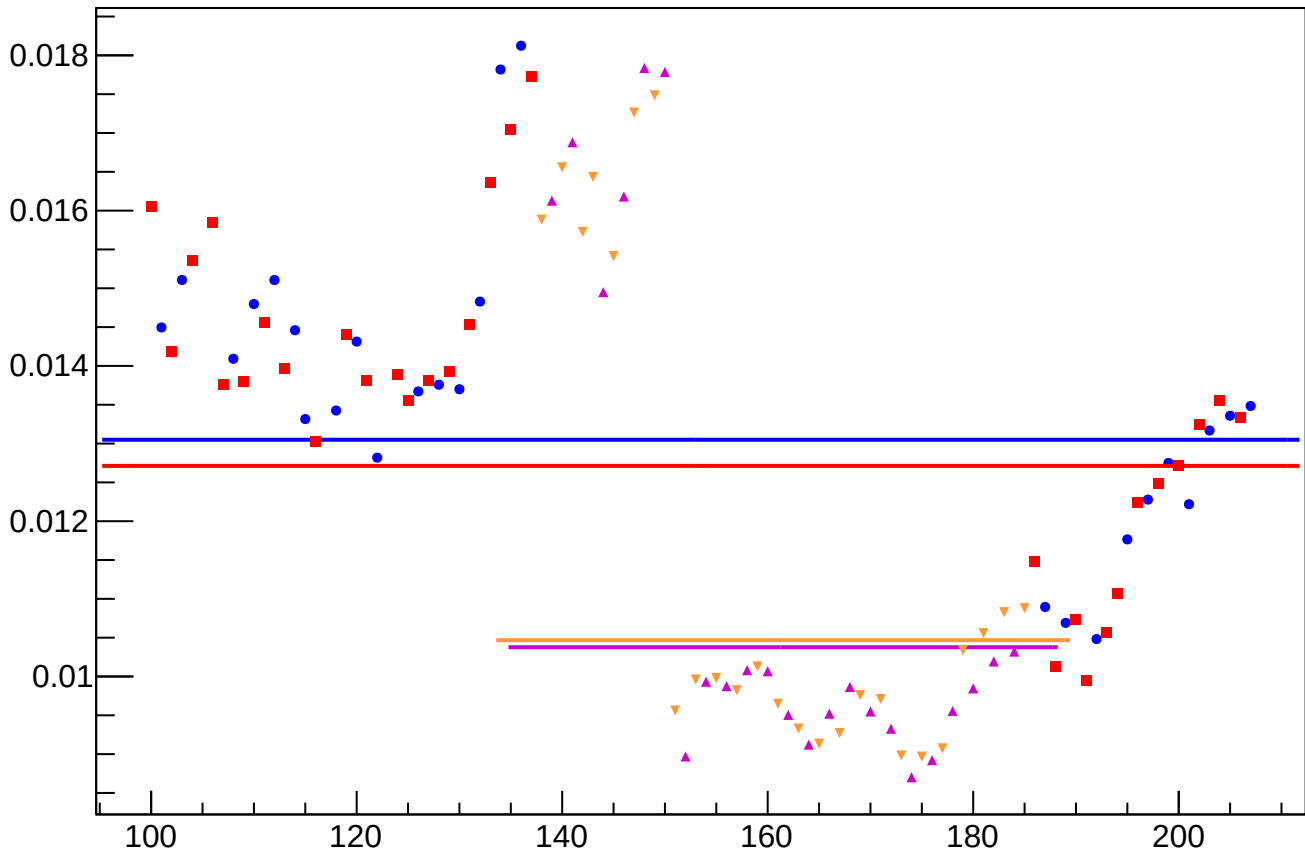
Left In: 1.608 $\pm$ 0.000  $\chi^2$ /NDF: 66403809503.4/22

+ sign 1.454 $\pm$ 0.000  $\chi^2$ /NDF: 150044019753.5/50

All: 1.491 $\pm$ 0.000  $\chi^2$ /NDF: 325561020533.5

- sign 1.527 $\pm$ 0.000  $\chi^2$ /NDF: 174842916545.9/53

# yield\_bpm1i06X\_rms vs Slug



Right In: 0.013 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 505001.4/25

Left Out: 0.010 $\pm$ 0.000  $\chi^2/\text{NDF}$ :1661211.8/24

Right Out: 0.013 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 605632.4/30

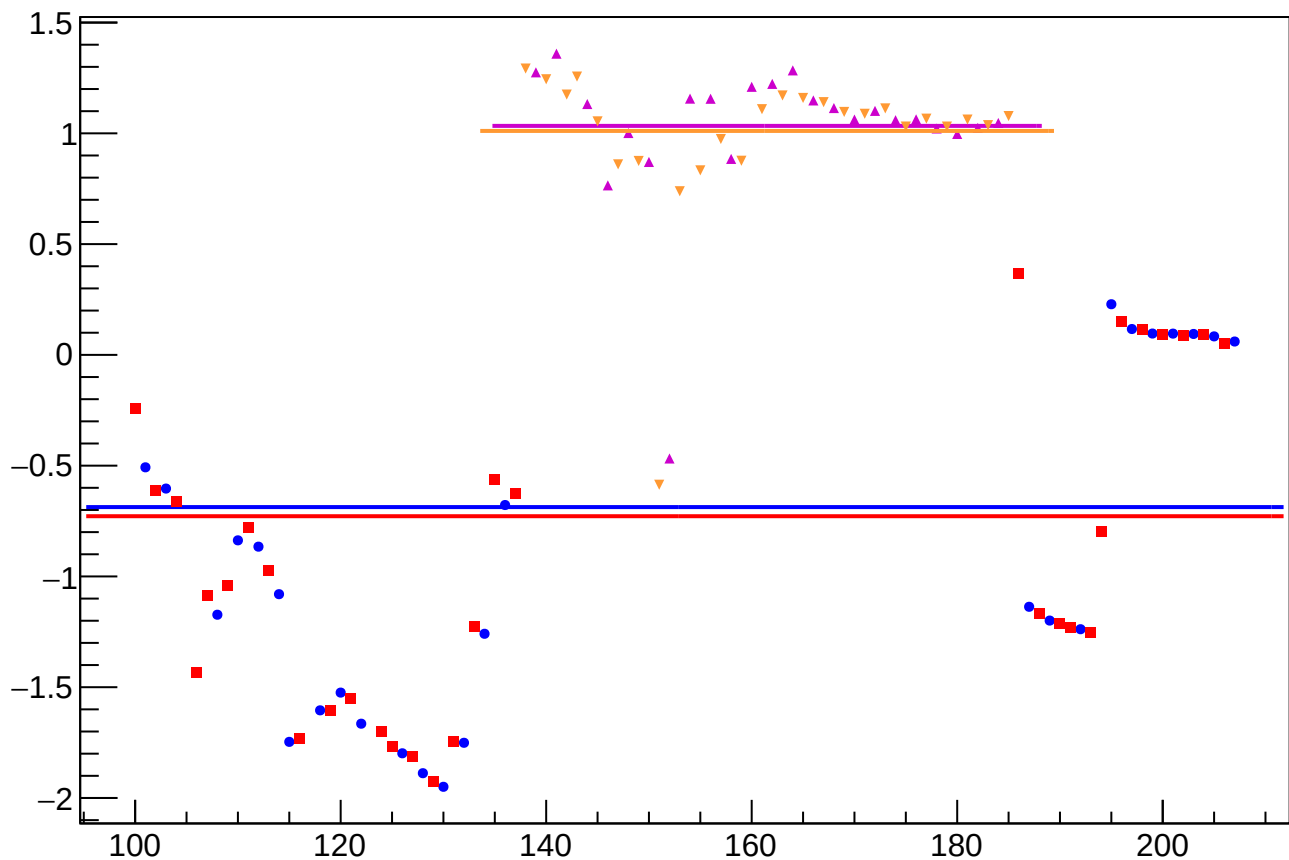
Left In: 0.010 $\pm$ 0.000  $\chi^2/\text{NDF}$ :1710541.0/22

+ sign 0.011 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2919287.1/50

All: 0.011 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 5901847.5/104

- sign 0.011 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2980983.7/53

# yield\_bpm1i06Y\_mean vs Slug



Right In:  $-0.687 \pm 0.000$   $\chi^2/\text{NDF}$ : 181479502789.6/25

Left Out:  $1.011 \pm 0.000$   $\chi^2/\text{NDF}$ : 111188616245.0/24

Right Out:  $-0.728 \pm 0.000$   $\chi^2/\text{NDF}$ : 169163024599.5/30

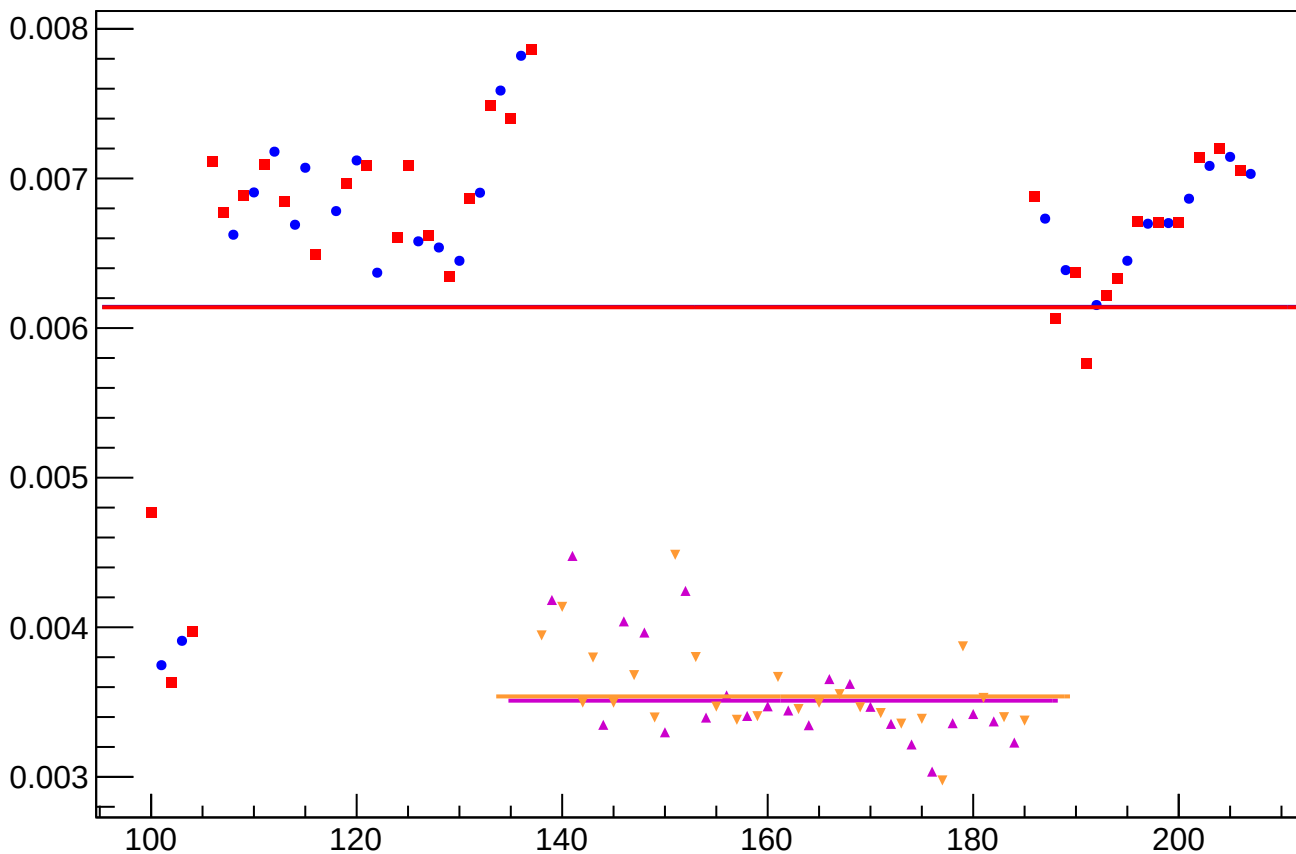
Left In:  $1.034 \pm 0.000$   $\chi^2/\text{NDF}$ : 125385050389.9/22

+ sign  $0.663 \pm 0.000$   $\chi^2/\text{NDF}$ : 1123229448372.2/50

All:  $0.647 \pm 0.000$   $\chi^2/\text{NDF}$ : 2371025013136.0

- sign  $0.632 \pm 0.000$   $\chi^2/\text{NDF}$ : 1246958451840.9/53

# yield\_bpm1i06Y\_rms vs Slug



Right In: 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 1168970.6/25

Left Out: 0.004 $\pm$ 0.000  $\chi^2$ /NDF:215725.1/24

Right Out: 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 1216398.6/30

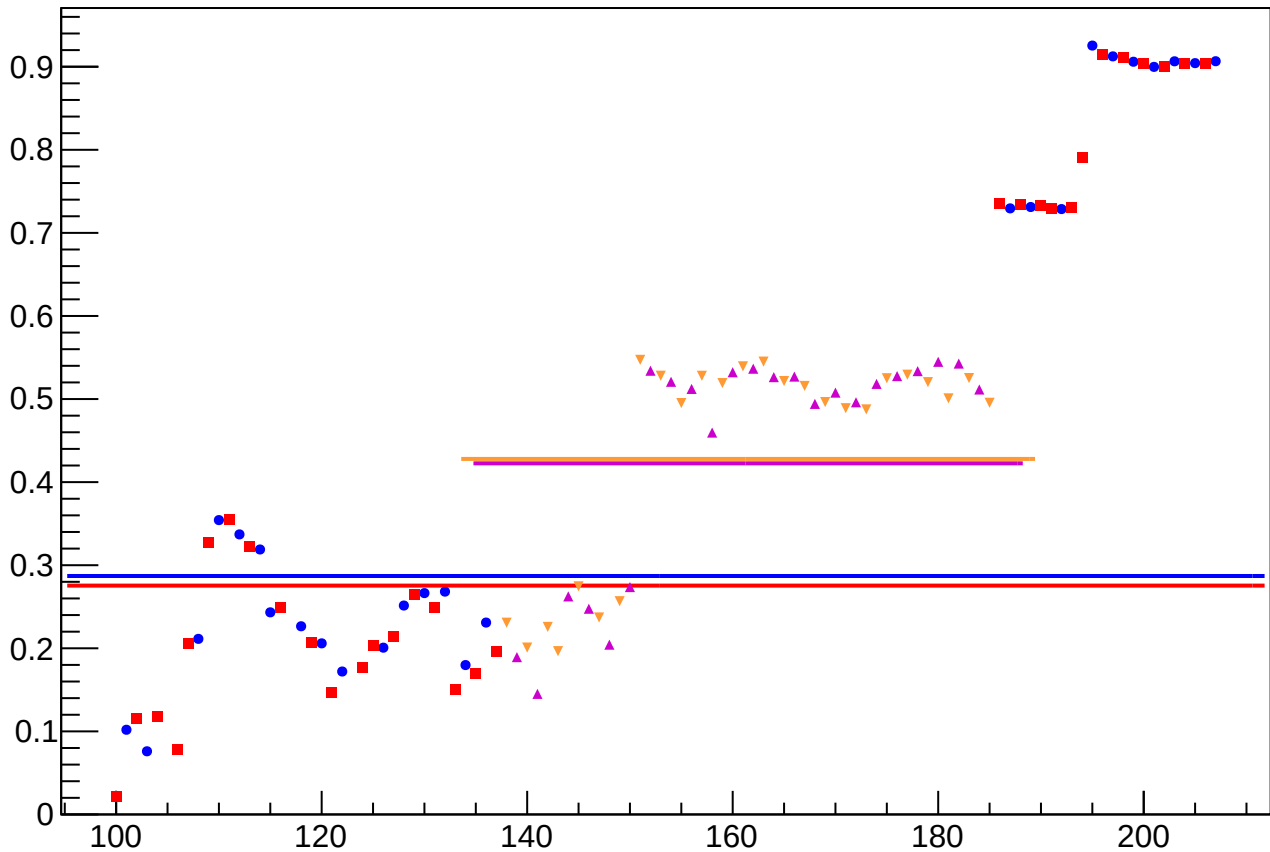
Left In: 0.004 $\pm$ 0.000  $\chi^2$ /NDF:284960.7/22

+ sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 5291284.7/50

All: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 11037873.3/104

- sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 5744129.7/53

# yield\_bpm2i01X\_mean vs Slug



Right In: 0.287 $\pm$ 0.000  $\chi^2$ /NDF: 171978077716.2/25

Left Out: 0.428 $\pm$ 0.000  $\chi^2$ /NDF:153820853539.2/24

Right Out: 0.275 $\pm$ 0.000  $\chi^2$ /NDF: 194653985214.7/30

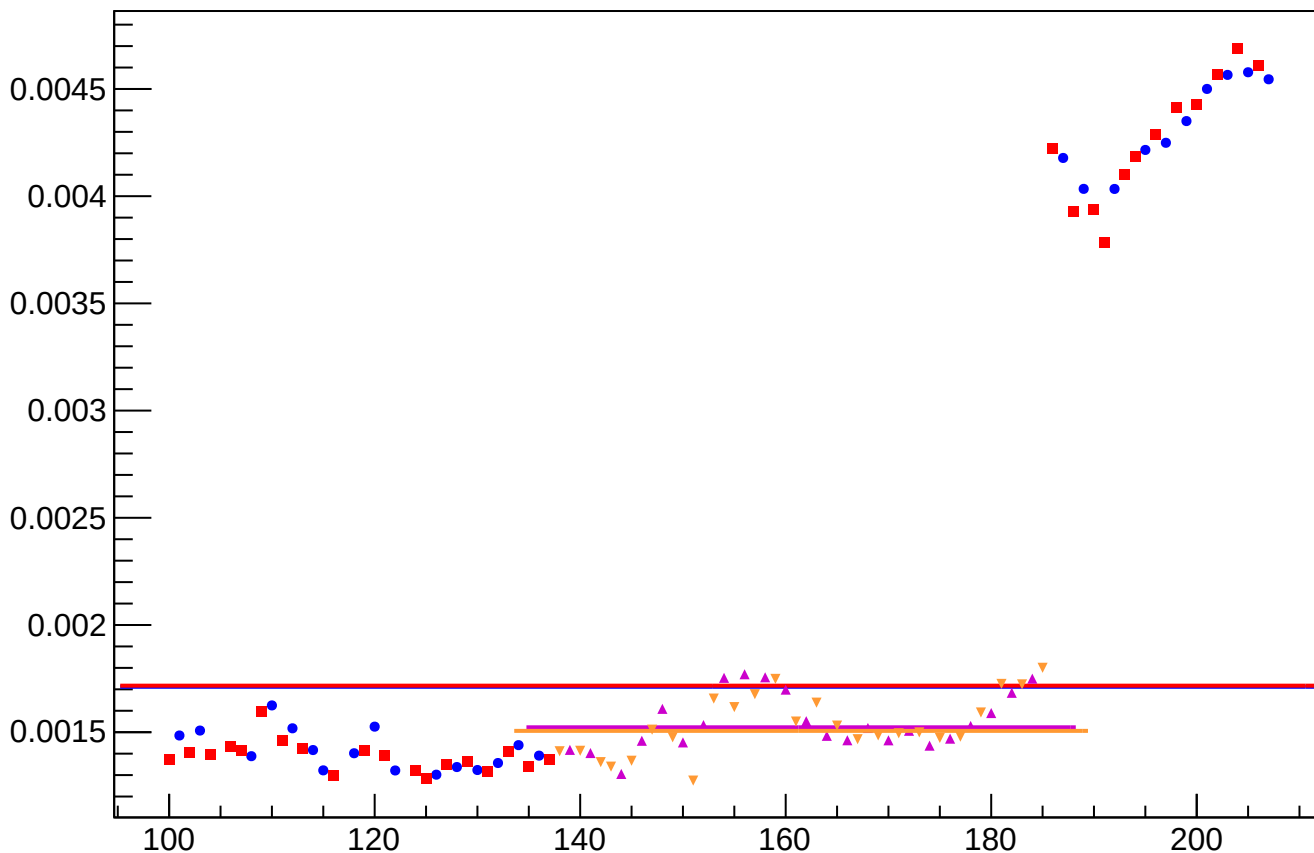
Left In: 0.423 $\pm$ 0.000  $\chi^2$ /NDF:158122093061.2/22

+ sign 0.383 $\pm$ 0.000  $\chi^2$ /NDF: 378856576128.9/50

All: 0.377 $\pm$ 0.000  $\chi^2$ /NDF: 792329785497.2

- sign 0.370 $\pm$ 0.000  $\chi^2$ /NDF: 412476131380.7/53

# yield\_bpm2i01X\_rms vs Slug



Right In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 6349797.5/25

Left Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF:278895.8/24

Right Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 7295767.8/30

Left In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF:234679.9/22

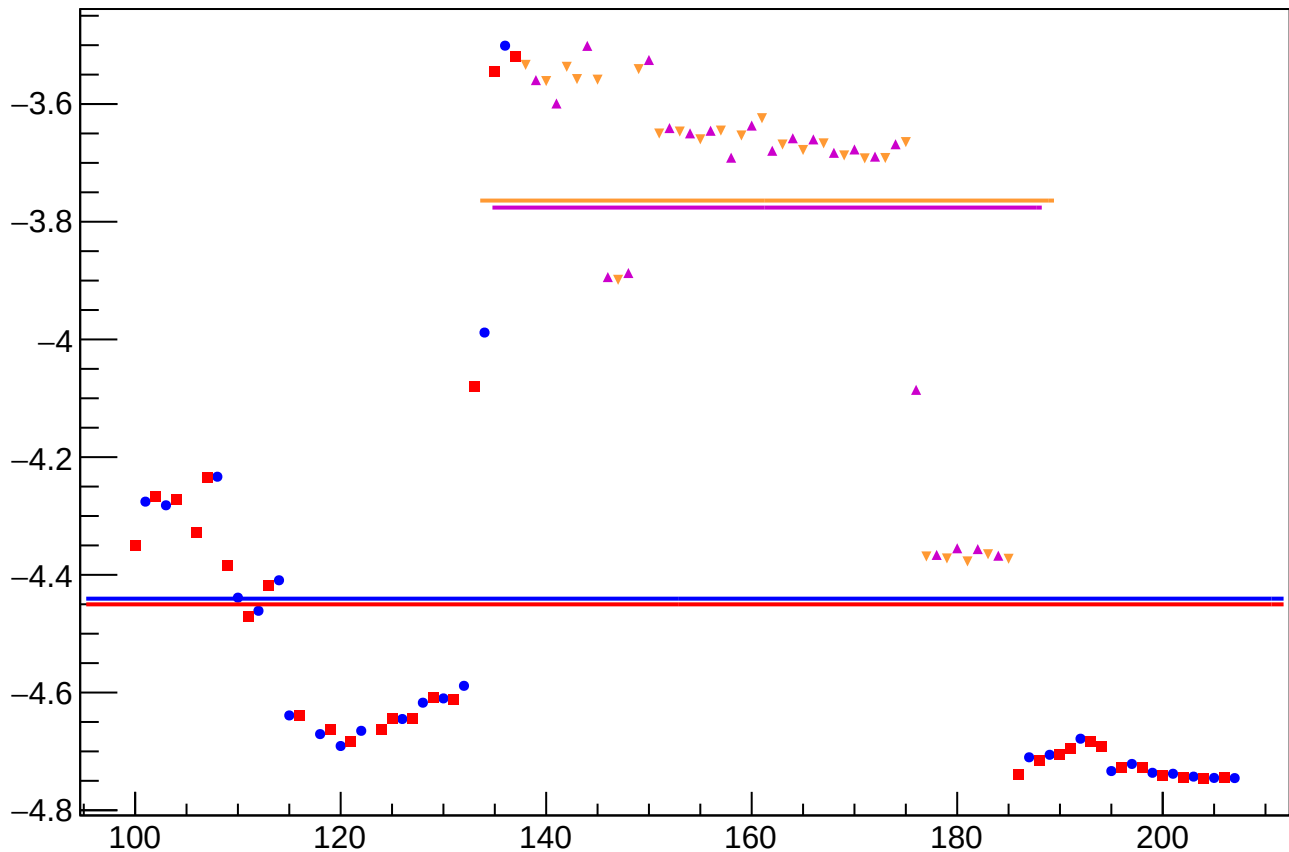
+ sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 6854815.1/50

All: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 14598060.0/104

- sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 7738251.3/53



# yield\_bpm2i01Y\_mean vs Slug



Right In: -4.440+/-0.000  $\chi^2/\text{NDF}$ : 423128911024.3/25

Left Out: -3.764+/-0.000  $\chi^2/\text{NDF}$ : 483461311370.8/24

Right Out: -4.450+/-0.000  $\chi^2/\text{NDF}$ : 374303617358.3/30

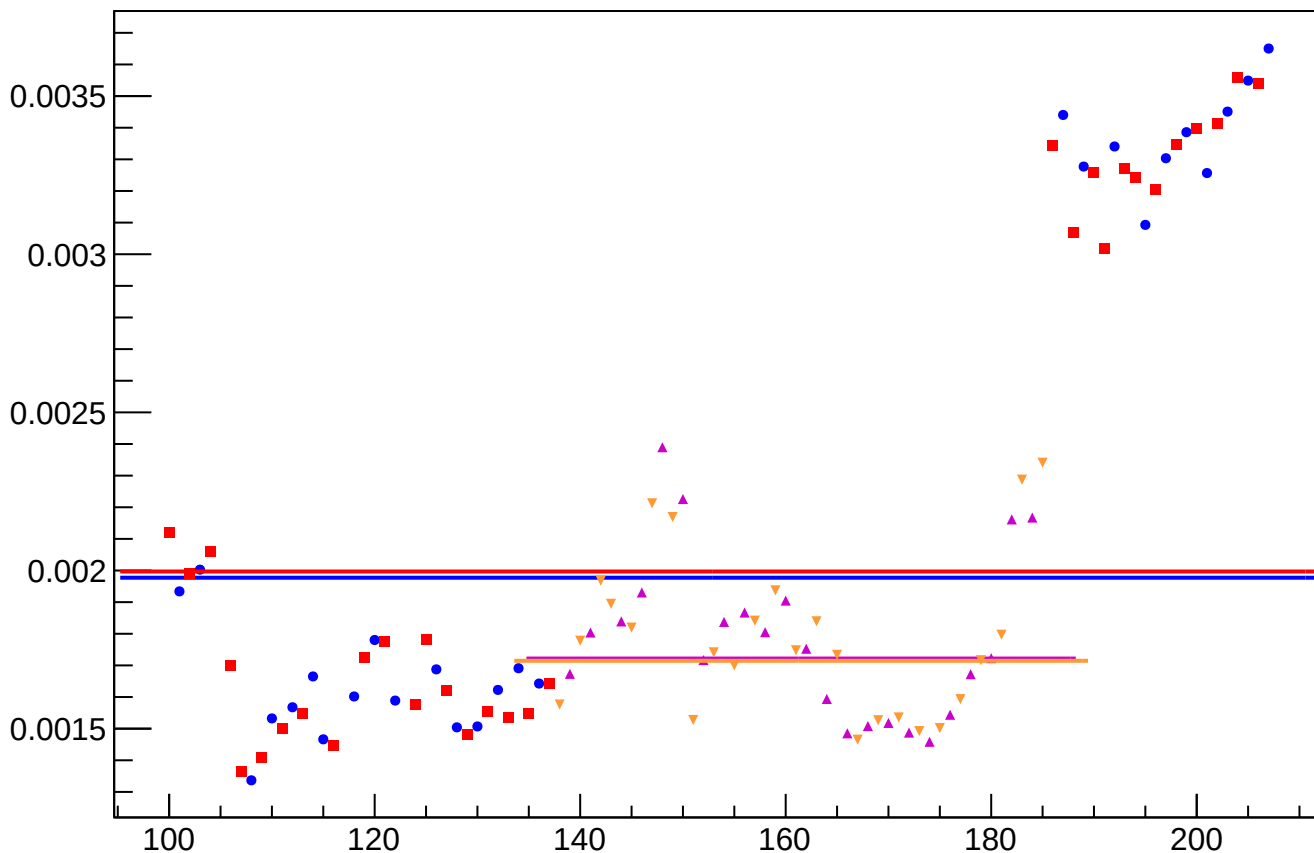
Left In: -3.776+/-0.000  $\chi^2/\text{NDF}$ : 402659987166.3/22

+ sign -3.996+/-0.000  $\chi^2/\text{NDF}$ : 1896887676561.2/5

All: -4.012+/-0.000  $\chi^2/\text{NDF}$ : 3689166893943

- sign -4.029+/-0.000  $\chi^2/\text{NDF}$ : 1787199008816.2/5

# yield\_bpm2i01Y\_rms vs Slug



Right In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 3426185.6/25

Left Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ :562338.1/24

Right Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 3852153.9/30

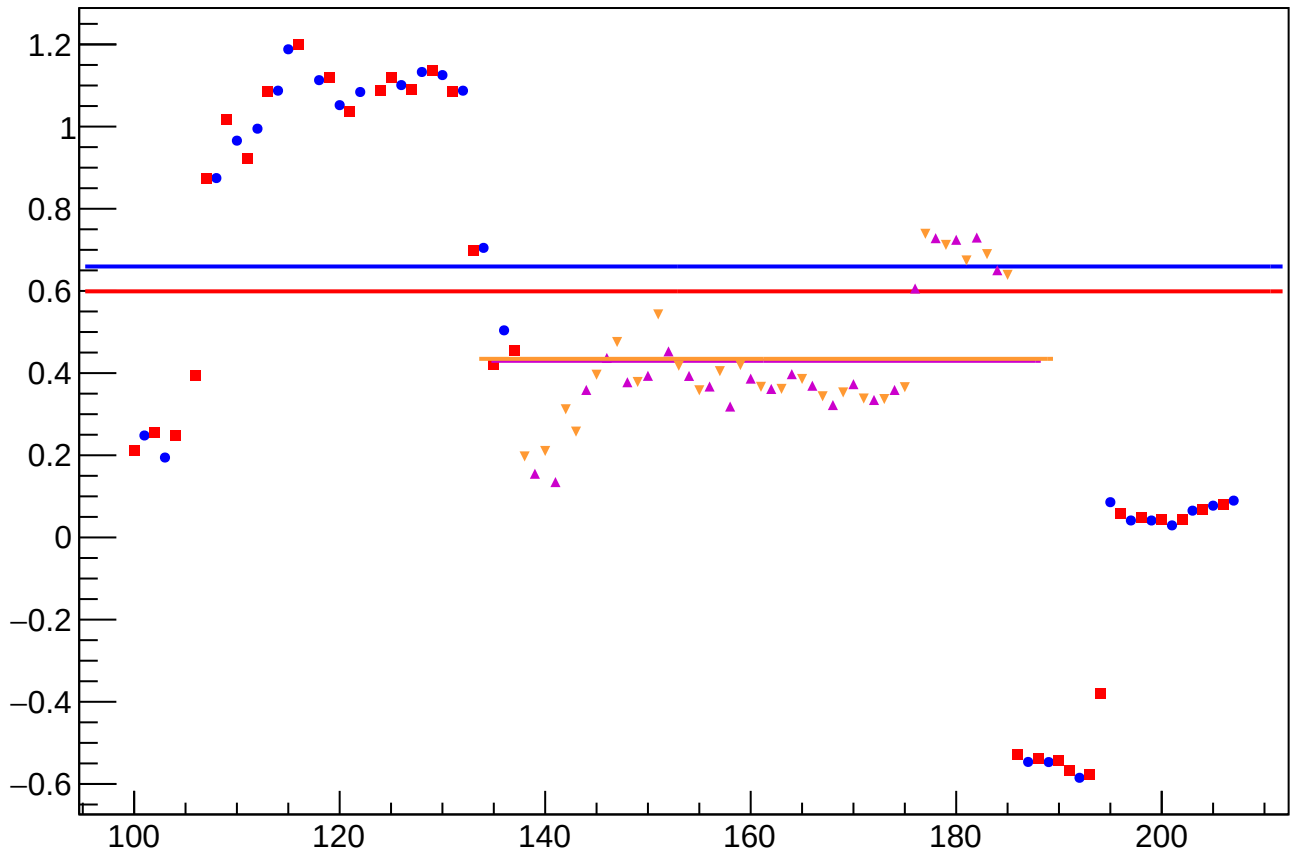
Left In: 0.002+/-0.000  $\chi^2/\text{NDF}$ :581878.6/22

+ sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 4287164.5/50

All: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 9061966.4/104

- sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 4770929.2/53

# yield\_bpm2i02X\_mean vs Slug



Right In: 0.659 $\pm$ 0.000  $\chi^2$ /NDF: 65951197848.1/25

Left Out: 0.435 $\pm$ 0.000  $\chi^2$ /NDF: 8515333254.7/24

Right Out: 0.599 $\pm$ 0.000  $\chi^2$ /NDF: 86843714019.7/30

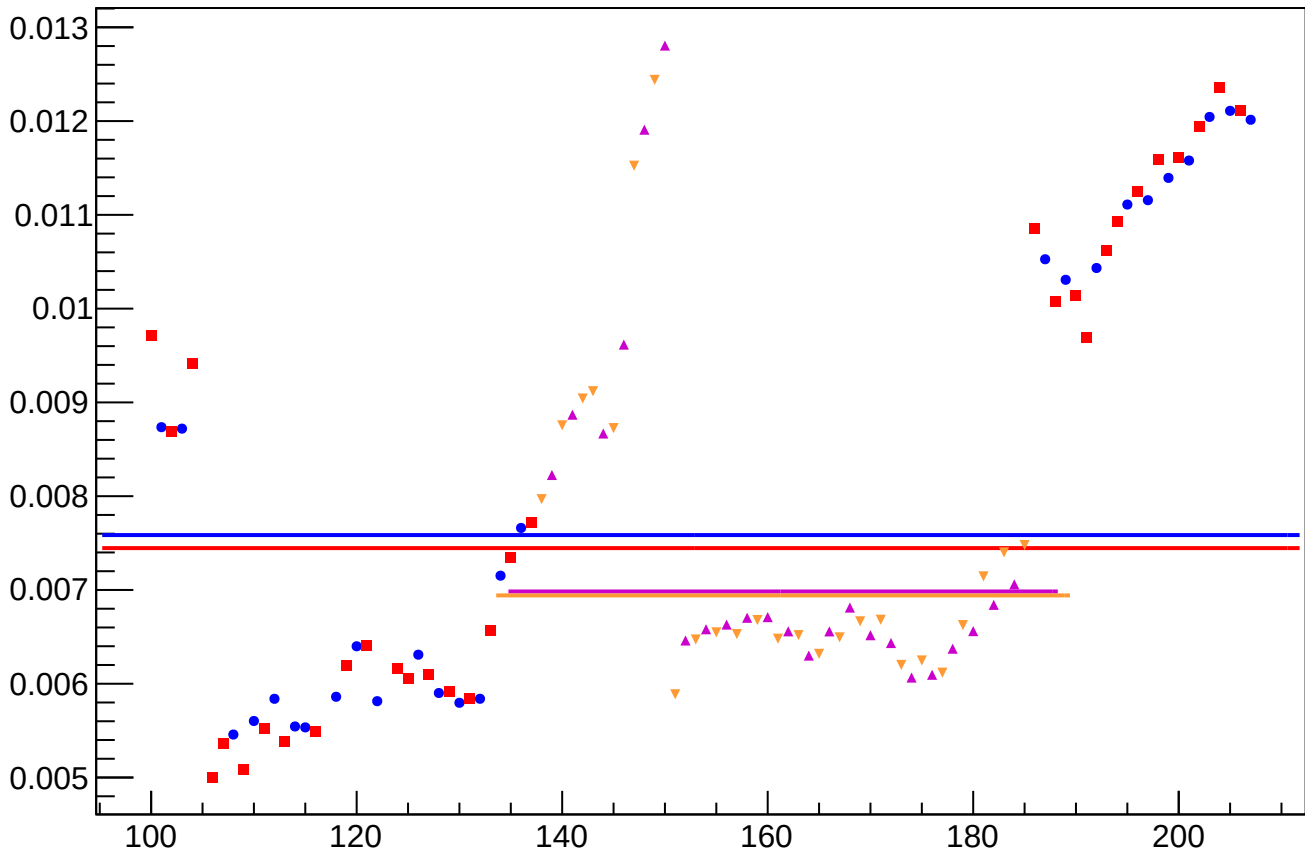
Left In: 0.430 $\pm$ 0.000  $\chi^2$ /NDF: 9041195997.1/22

+ sign 0.520 $\pm$ 0.000  $\chi^2$ /NDF: 81877259469.0/50

All: 0.511 $\pm$ 0.000  $\chi^2$ /NDF: 182255363187.8

- sign 0.502 $\pm$ 0.000  $\chi^2$ /NDF: 100274645910.2/53

# yield\_bpm2i02X\_rms vs Slug



Right In: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 2604181.6/25

Left Out: 0.007 $\pm$ 0.000  $\chi^2$ /NDF:1090916.4/24

Right Out: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 3204735.7/30

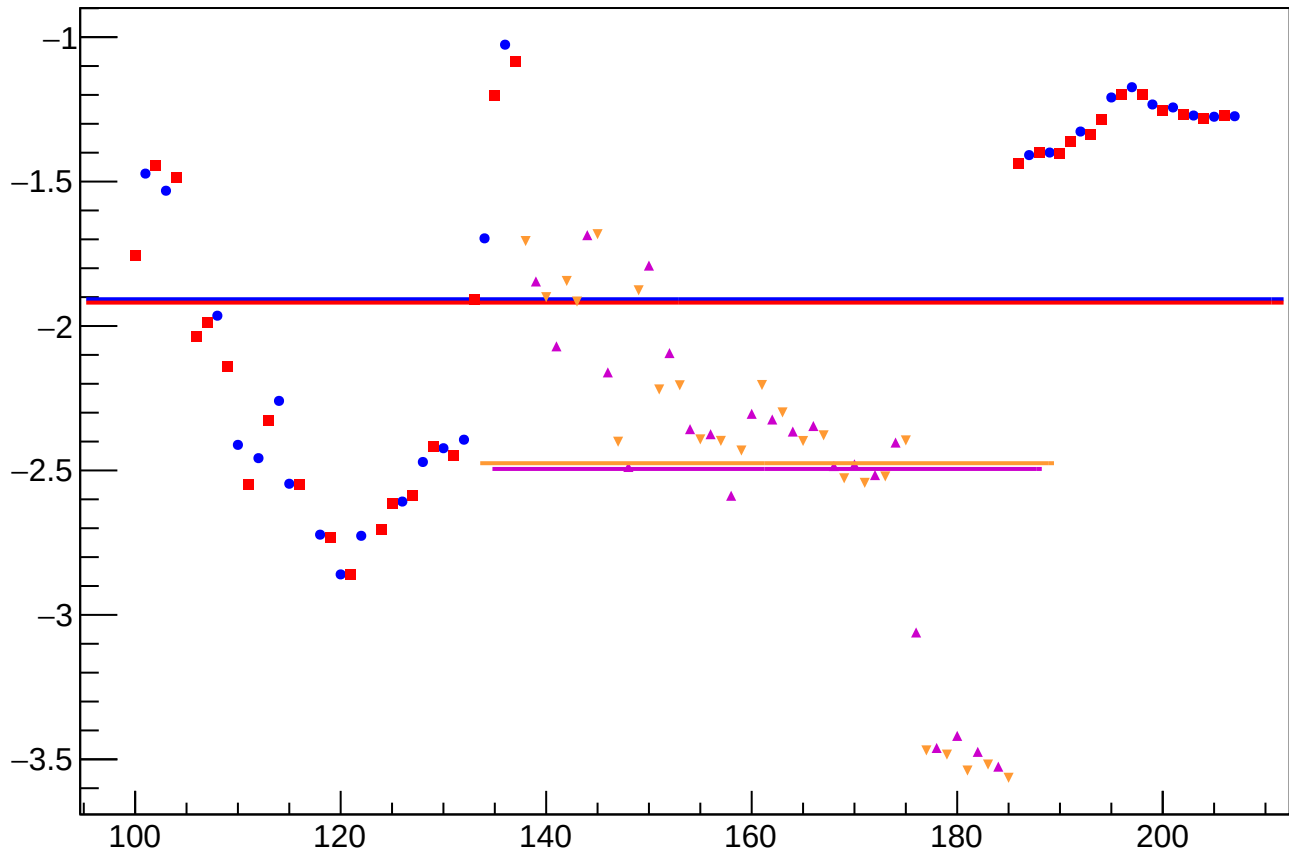
Left In: 0.007 $\pm$ 0.000  $\chi^2$ /NDF:1136529.0/22

+ sign 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 3816622.7/50

All: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 8223604.9/104

- sign 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 4406964.4/53

# yield\_bpm2i02Y\_mean vs Slug



Right In: -1.907+/-0.000  $\chi^2/\text{NDF}$ : 108109088680.0/25

Left Out: -2.475+/-0.000  $\chi^2/\text{NDF}$ : 122955897541.5/24

Right Out: -1.919+/-0.000  $\chi^2/\text{NDF}$ : 106379527329.4/30

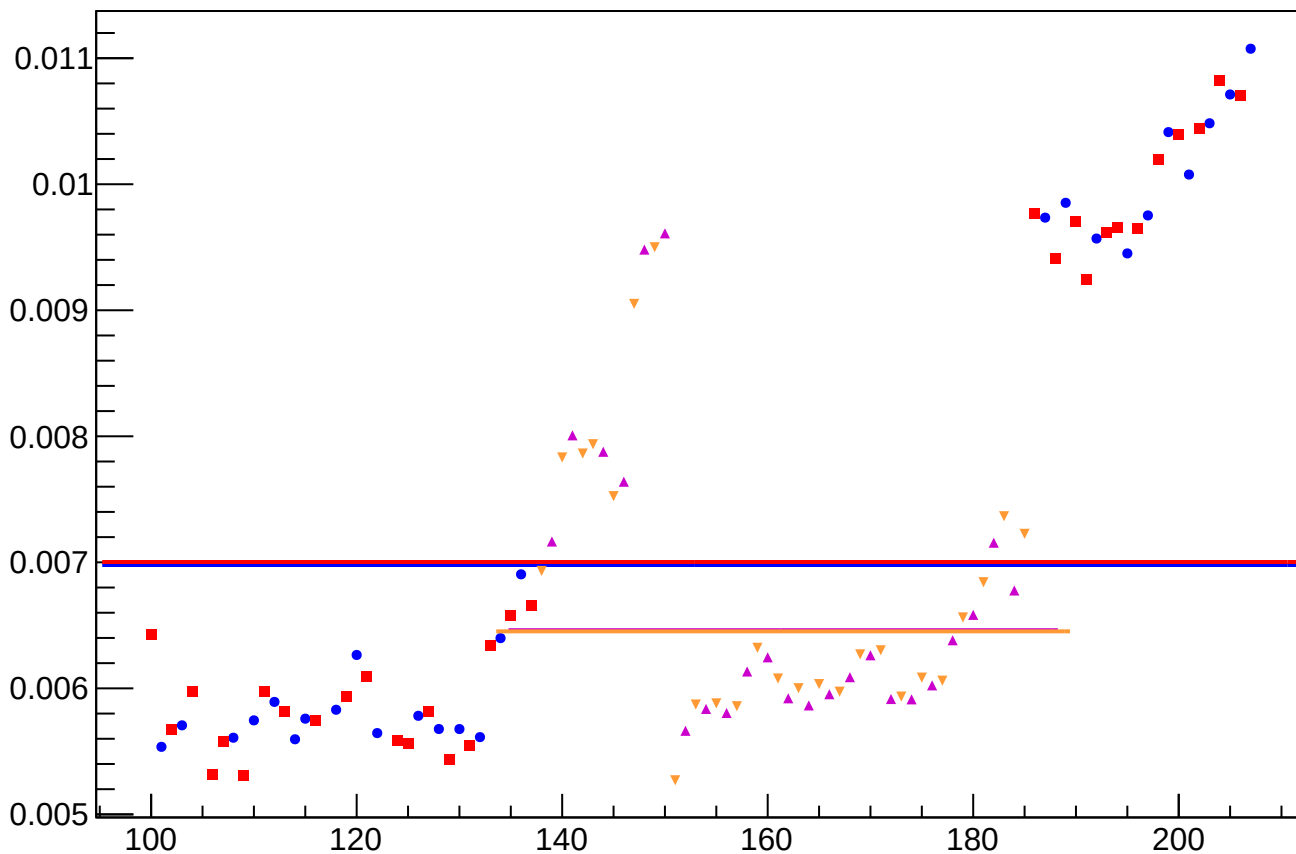
Left In: -2.495+/-0.000  $\chi^2/\text{NDF}$ : 96774638297.6/22

+ sign -2.256+/-0.000  $\chi^2/\text{NDF}$ : 287495233416.8/50

All: -2.255+/-0.000  $\chi^2/\text{NDF}$ : 550438148799.9

- sign -2.253+/-0.000  $\chi^2/\text{NDF}$ : 262938791623.0/53

# yield\_bpm2i02Y\_rms vs Slug



Right In: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 2097816.8/25

Left Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 713238.0/24

Right Out: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 2350379.2/30

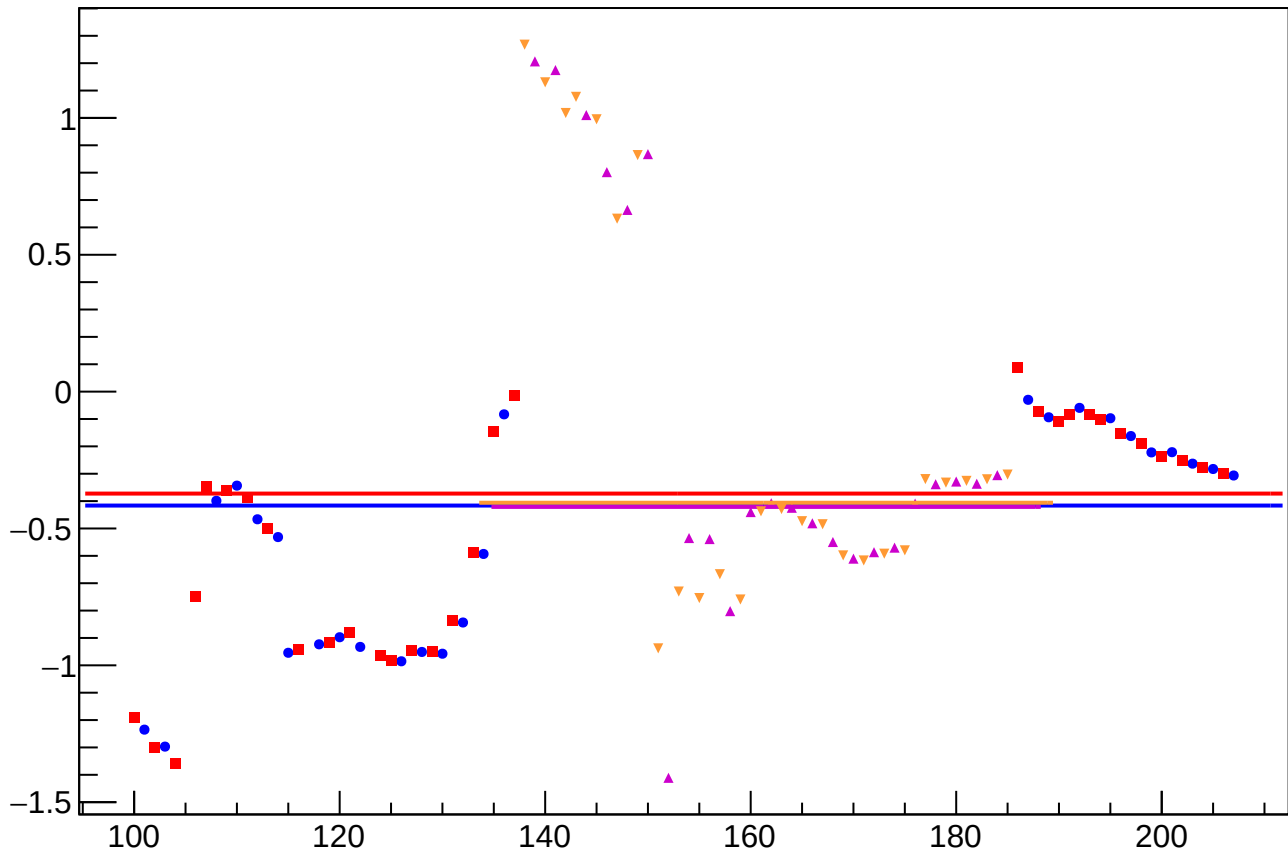
Left In: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 720640.7/22

+ sign 0.007+/-0.000  $\chi^2/\text{NDF}$ : 2908131.4/50

All: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 6085626.3/104

- sign 0.007+/-0.000  $\chi^2/\text{NDF}$ : 3176661.6/53

# yield\_bpm0i01X\_mean vs Slug



Right In: -0.416+/-0.000  $\chi^2$ /NDF: 24030681436.5/25

Left Out: -0.406+/-0.000  $\chi^2$ /NDF: 81633647828.2/24

Right Out: -0.373+/-0.000  $\chi^2$ /NDF: 27041378658.4/30

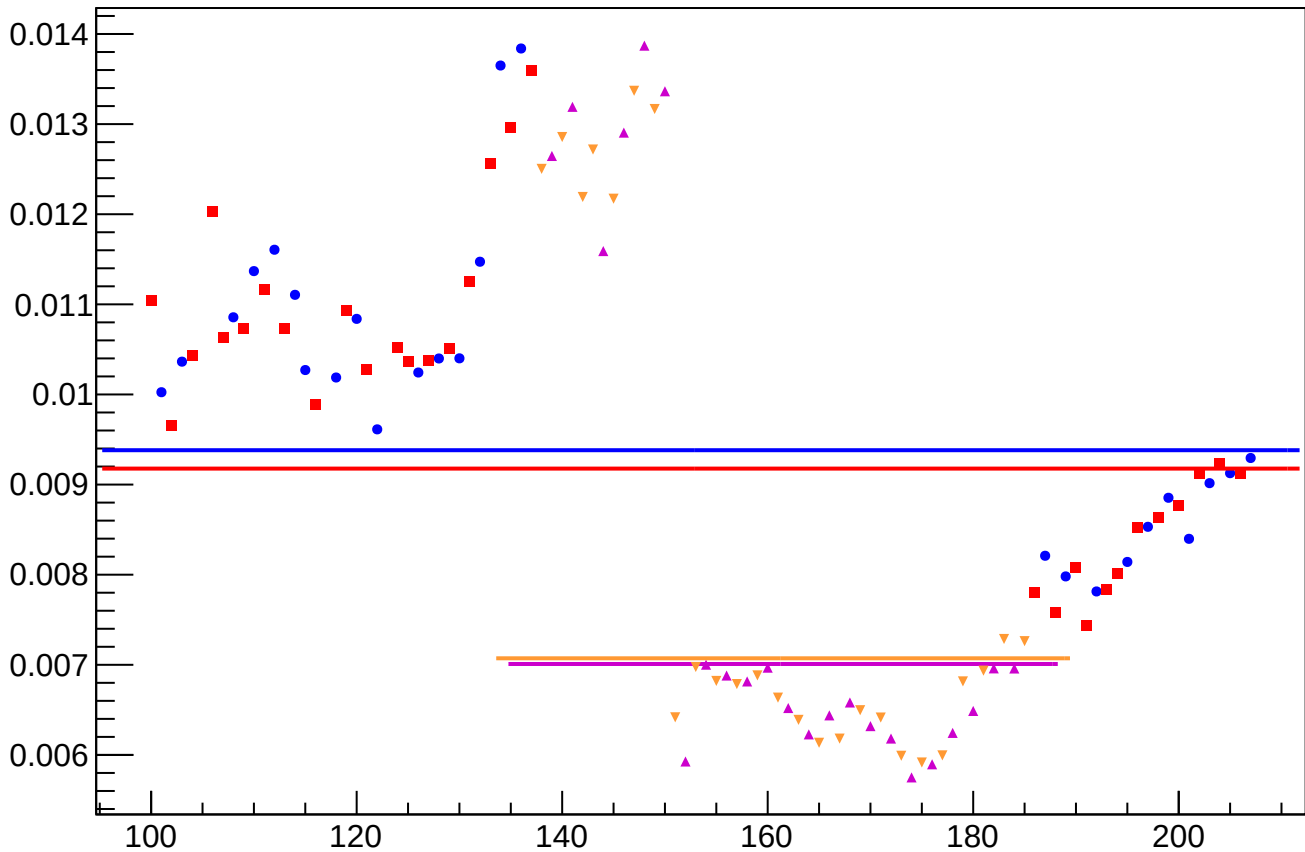
Left In: -0.421+/-0.000  $\chi^2$ /NDF: 90241717621.7/22

+ sign -0.409+/-0.000  $\chi^2$ /NDF: 105676215022.7/50

All: -0.407+/-0.000  $\chi^2$ /NDF: 223252862931.7

- sign -0.404+/-0.000  $\chi^2$ /NDF: 117569378634.0/53

# yield\_bpm0i01X\_rms vs Slug



Right In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 626897.2/25

Left Out: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 2384159.5/24

Right Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 675348.2/30

Left In: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 2456348.6/22

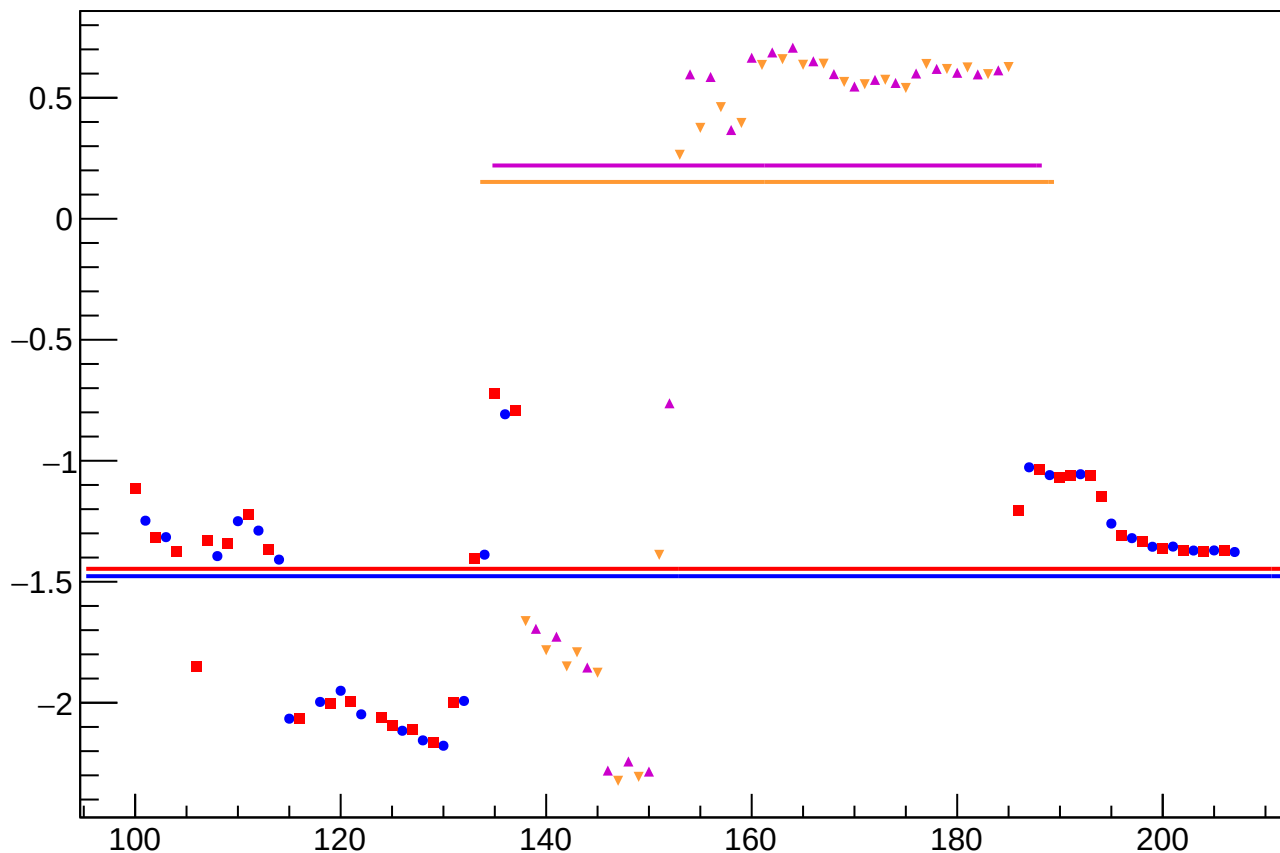
+ sign 0.008+/-0.000  $\chi^2/\text{NDF}$ : 4205260.4/50

All: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 8473849.1/104

- sign 0.008+/-0.000  $\chi^2/\text{NDF}$ : 4268312.6/53



# yield\_bpm0i01Y\_mean vs Slug



Right In: -1.477+/-0.000  $\chi^2$ /NDF: 183006412787.2/25

Left Out: 0.152+/-0.000  $\chi^2$ /NDF: 2398778835341.2/24

Right Out: -1.447+/-0.000  $\chi^2$ /NDF: 172229976073.0/30

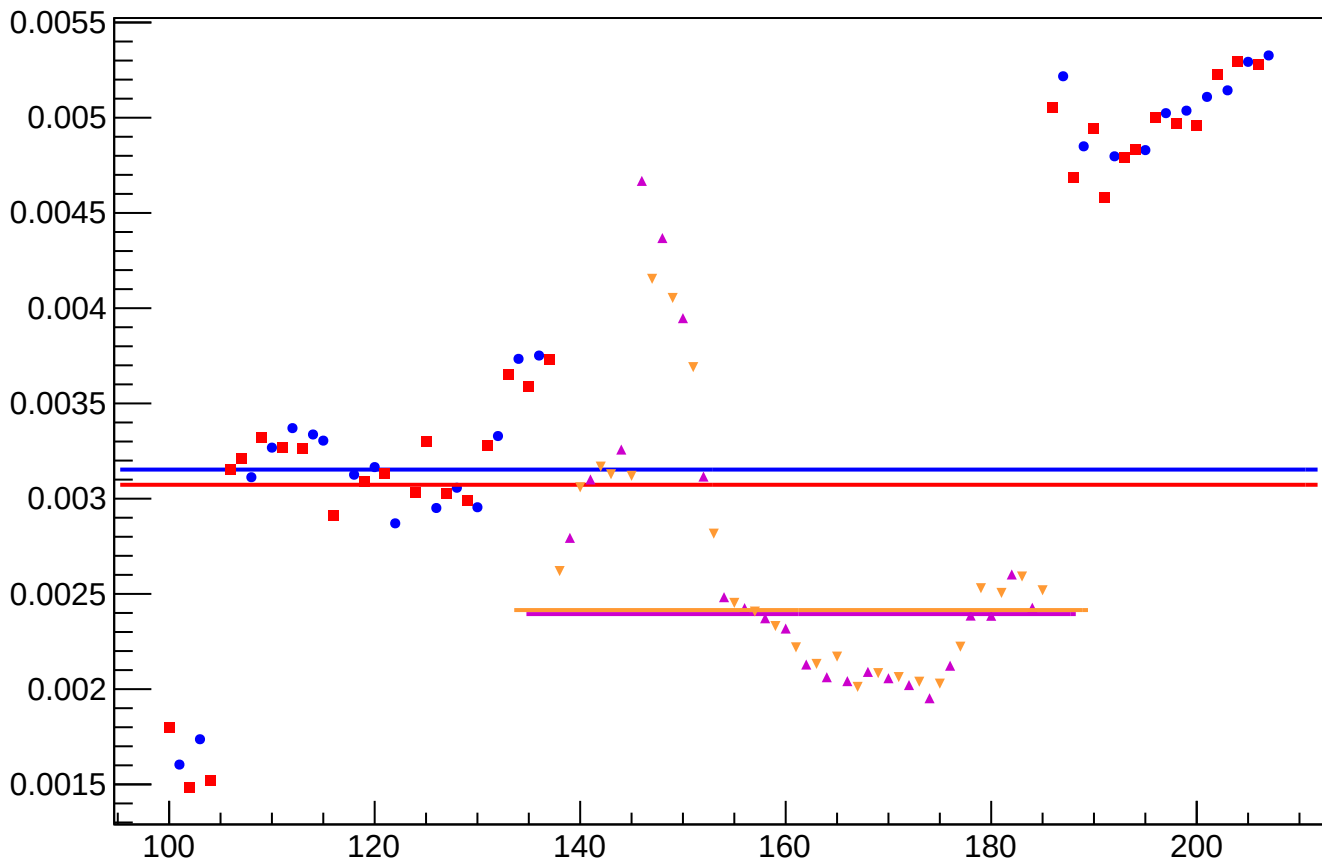
Left In: 0.220+/-0.000  $\chi^2$ /NDF: 2121977245985.6/22

+ sign -0.328+/-0.000  $\chi^2$ /NDF: 4870841573686.2/5

All: -0.328+/-0.000  $\chi^2$ /NDF: 9716034171086

- sign -0.329+/-0.000  $\chi^2$ /NDF: 4845191047212.0/5

# yield\_bpm0i01Y\_rms vs Slug



Right In: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 3958527.1/25

Left Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF:1220406.4/24

Right Out: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 5015078.2/30

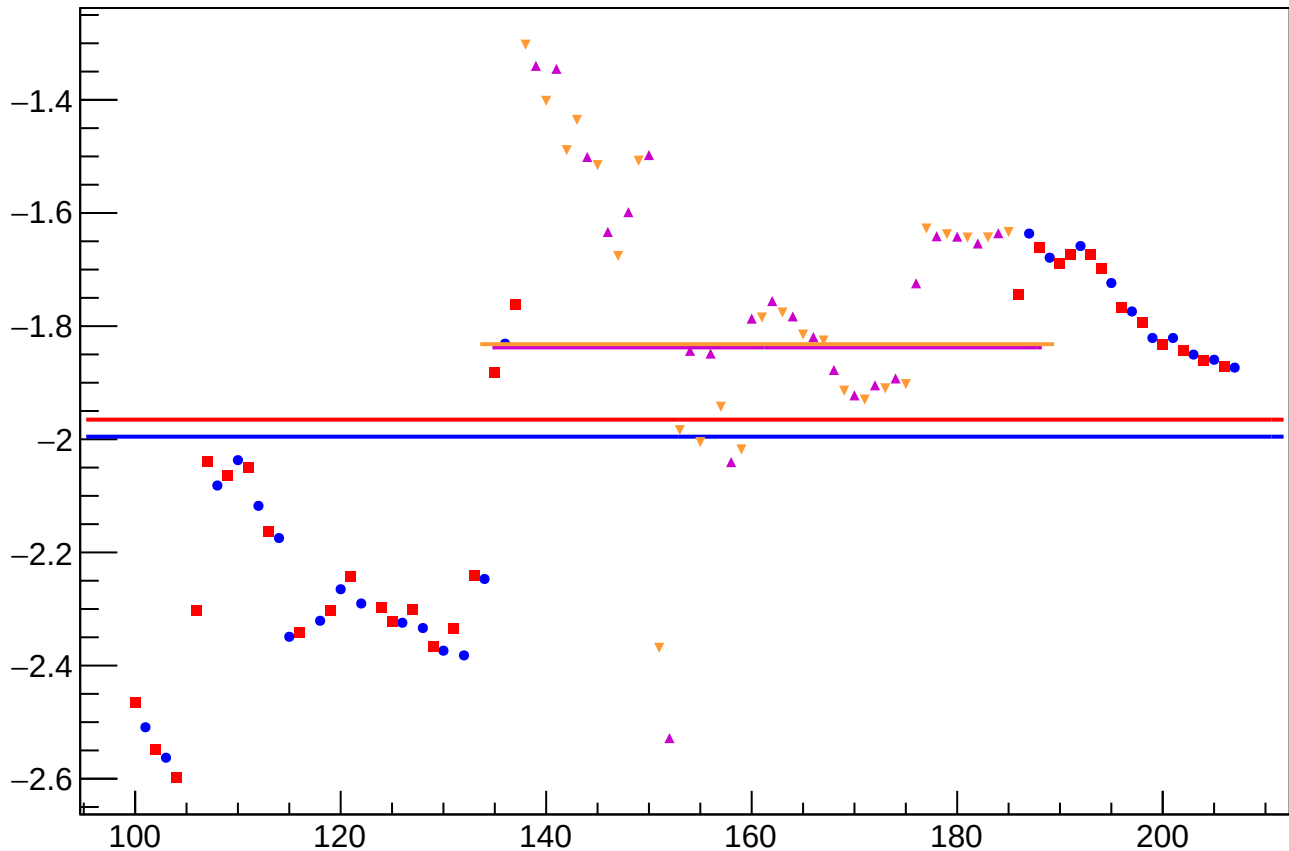
Left In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF:1409595.4/22

+ sign 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 6117193.8/50

All: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 13389153.4/104

- sign 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 7271042.8/53

# yield\_bpm0i01aX\_mean vs Slug



Right In:  $-1.995 \pm 0.000$   $\chi^2/\text{NDF}$ : 32955635373.6/25

Left Out:  $-1.832 \pm 0.000$   $\chi^2/\text{NDF}$ : 38365576589.1/24

Right Out:  $-1.965 \pm 0.000$   $\chi^2/\text{NDF}$ : 37356303029.5/30

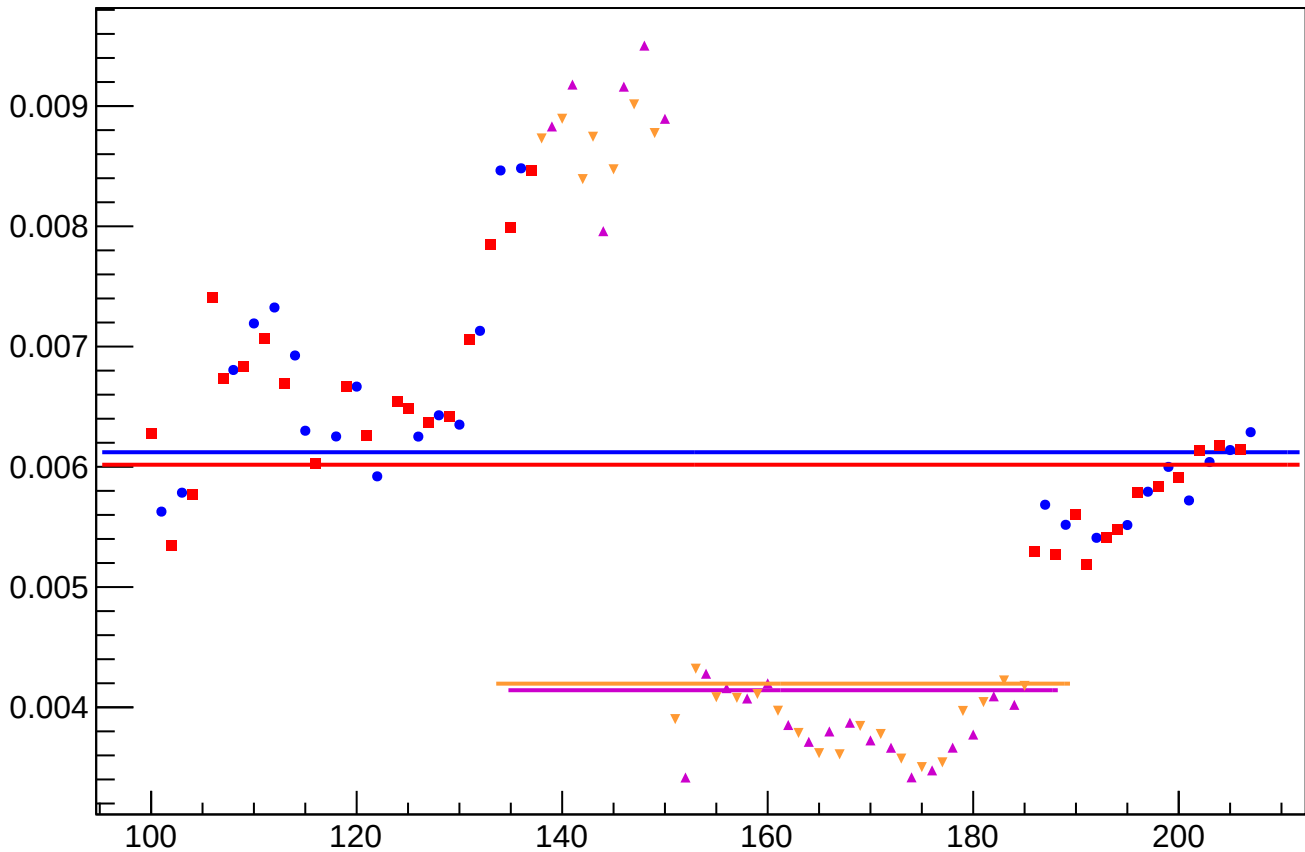
Left In:  $-1.838 \pm 0.000$   $\chi^2/\text{NDF}$ : 53437434367.2/22

+ sign  $-1.878 \pm 0.000$   $\chi^2/\text{NDF}$ : 78689479608.1/50

All:  $-1.878 \pm 0.000$   $\chi^2/\text{NDF}$ : 174339741735.9

- sign  $-1.878 \pm 0.000$   $\chi^2/\text{NDF}$ : 95650261824.5/53

# yield\_bpm0i01aX\_rms vs Slug



Right In: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 366944.6/25

Left Out: 0.004+/-0.000  $\chi^2/\text{NDF}$ :3091489.2/24

Right Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 380318.7/30

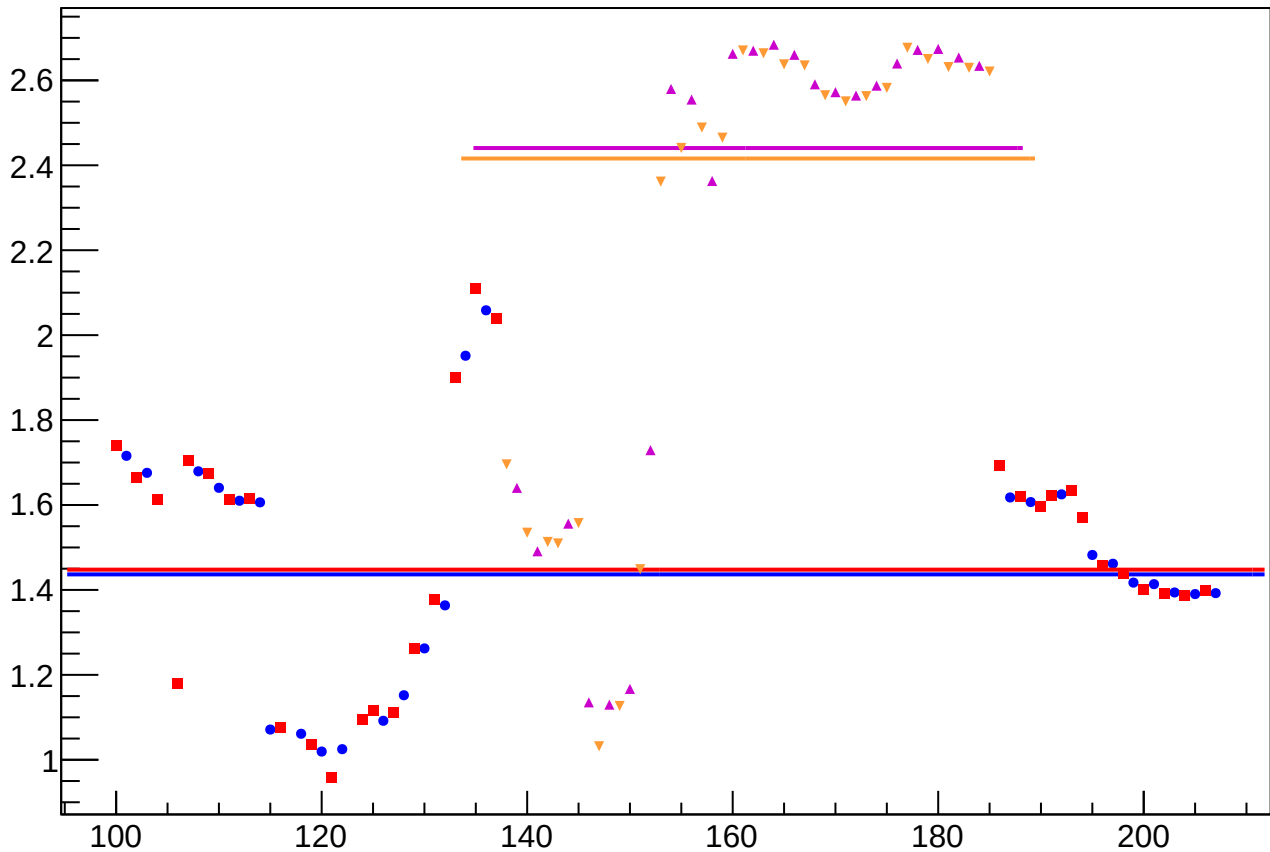
Left In: 0.004+/-0.000  $\chi^2/\text{NDF}$ :3193924.3/22

+ sign 0.005+/-0.000  $\chi^2/\text{NDF}$ : 5500095.6/50

All: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 11170460.3/104

- sign 0.005+/-0.000  $\chi^2/\text{NDF}$ : 5670340.5/53

# yield\_bpm0i01aY\_mean vs Slug



Right In: 1.437 $\pm$ 0.000  $\chi^2$ /NDF: 191470445589.2/25

Left Out: 2.416 $\pm$ 0.000  $\chi^2$ /NDF: 242949391498.0/24

Right Out: 1.448 $\pm$ 0.000  $\chi^2$ /NDF: 186627292583.6/30

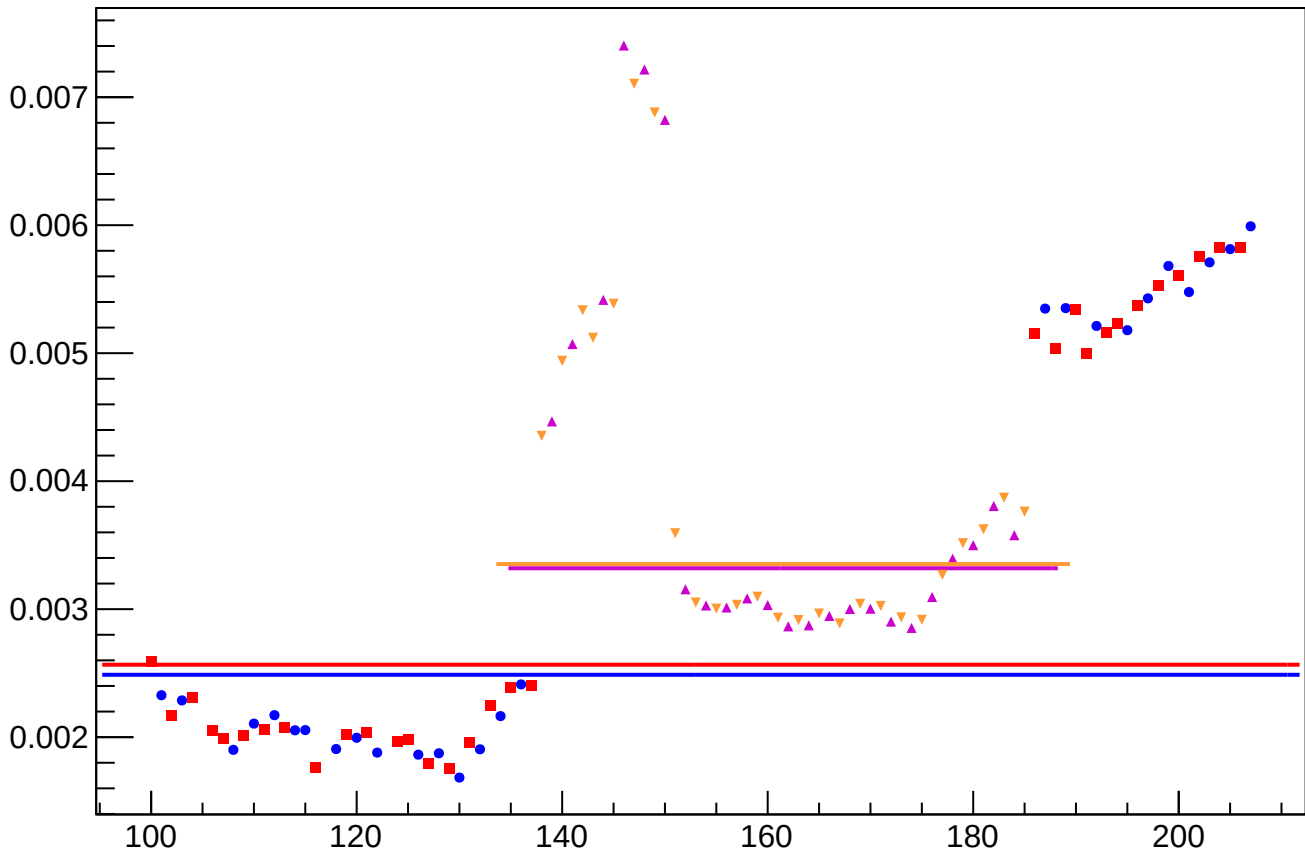
Left In: 2.441 $\pm$ 0.000  $\chi^2$ /NDF: 231724954471.8/22

+ sign 1.880 $\pm$ 0.000  $\chi^2$ /NDF: 1249352172988.3/50

All: 1.879 $\pm$ 0.000  $\chi^2$ /NDF: 2494673637198.0

- sign 1.879 $\pm$ 0.000  $\chi^2$ /NDF: 1245318070967.1/53

# yield\_bpm0i01aY\_rms vs Slug



Right In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 5493178.9/25

Left Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ :1819921.4/24

Right Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 6002320.7/30

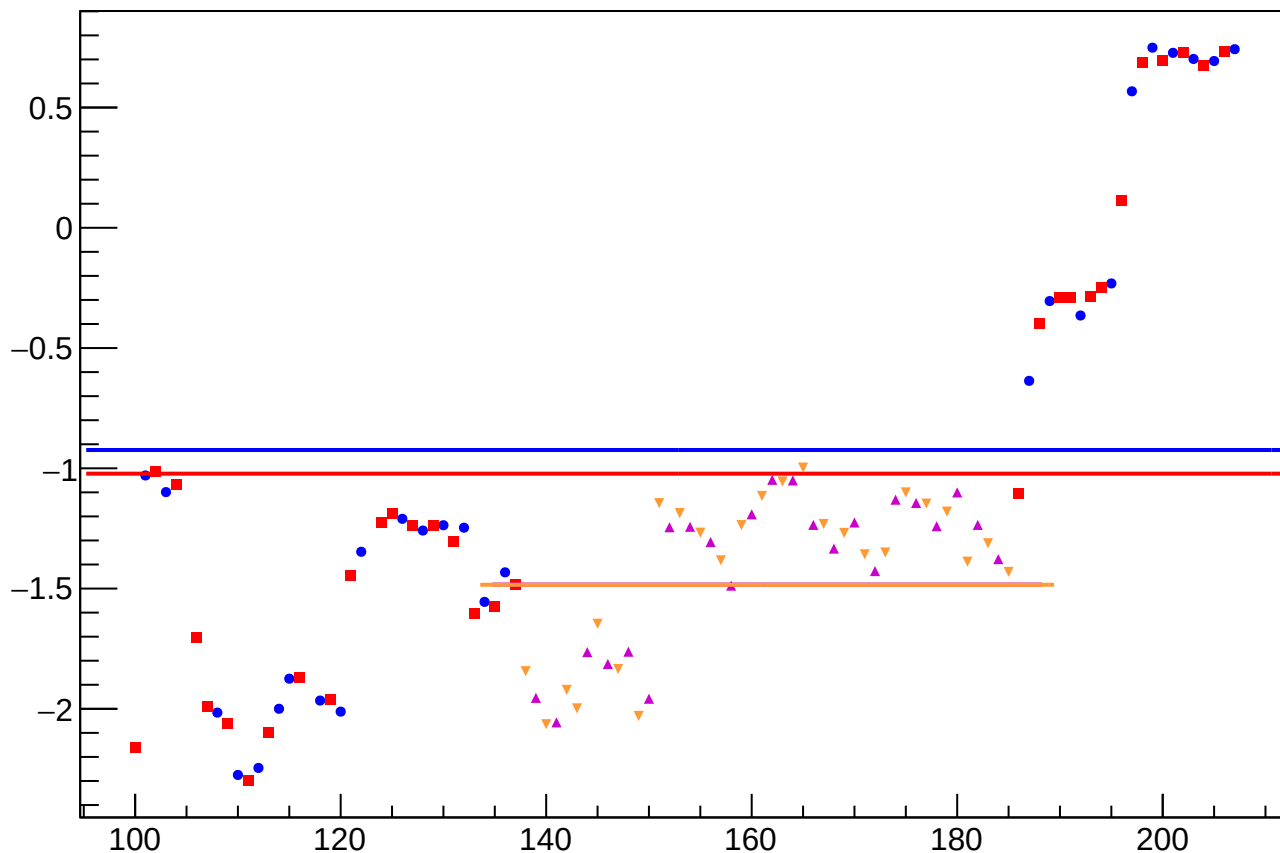
Left In: 0.003+/-0.000  $\chi^2/\text{NDF}$ :2055631.9/22

+ sign 0.003+/-0.000  $\chi^2/\text{NDF}$ : 8584477.3/50

All: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 17595861.0/104

- sign 0.003+/-0.000  $\chi^2/\text{NDF}$ : 9010707.6/53

# yield\_bpm0l01X\_mean vs Slug



Right In:  $-0.924 \pm 0.000$   $\chi^2/\text{NDF}: 187477296279.4/25$

Left Out:  $-1.484 \pm 0.000$   $\chi^2/\text{NDF}: 48438764764.6/24$

Right Out:  $-1.022 \pm 0.000$   $\chi^2/\text{NDF}: 216538090268.0/30$

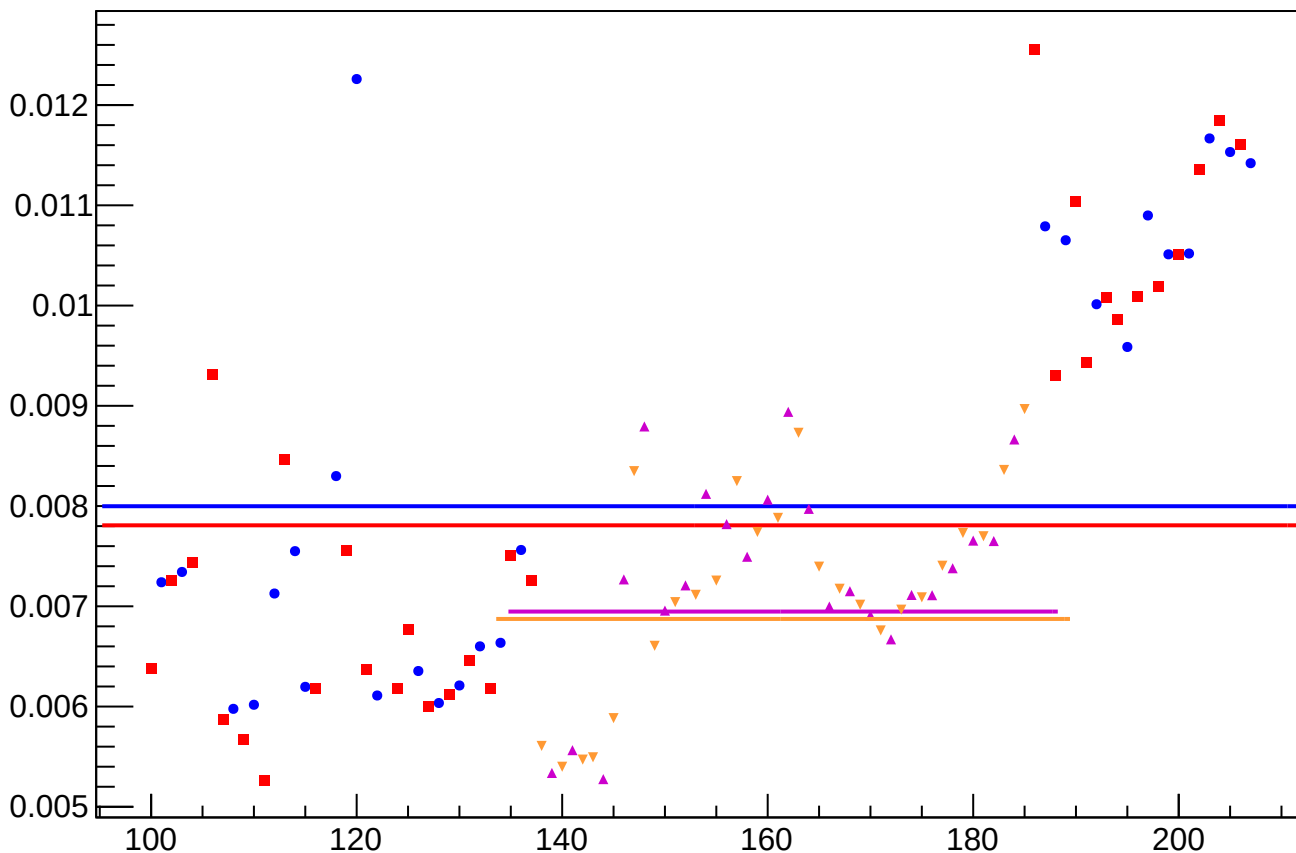
Left In:  $-1.483 \pm 0.000$   $\chi^2/\text{NDF}: 40353431150.9/22$

+ sign  $-1.287 \pm 0.000$   $\chi^2/\text{NDF}: 278155944497.3/50$

All:  $-1.292 \pm 0.000$   $\chi^2/\text{NDF}: 565500686315.4$

- sign  $-1.296 \pm 0.000$   $\chi^2/\text{NDF}: 287322284045.1/53$

# yield\_bpm0l01X\_rms vs Slug



Right In: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 1663391.5/25

Left Out: 0.007 $\pm$ 0.000  $\chi^2$ /NDF:745531.3/24

Right Out: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 2015033.7/30

Left In: 0.007 $\pm$ 0.000  $\chi^2$ /NDF:746731.6/22

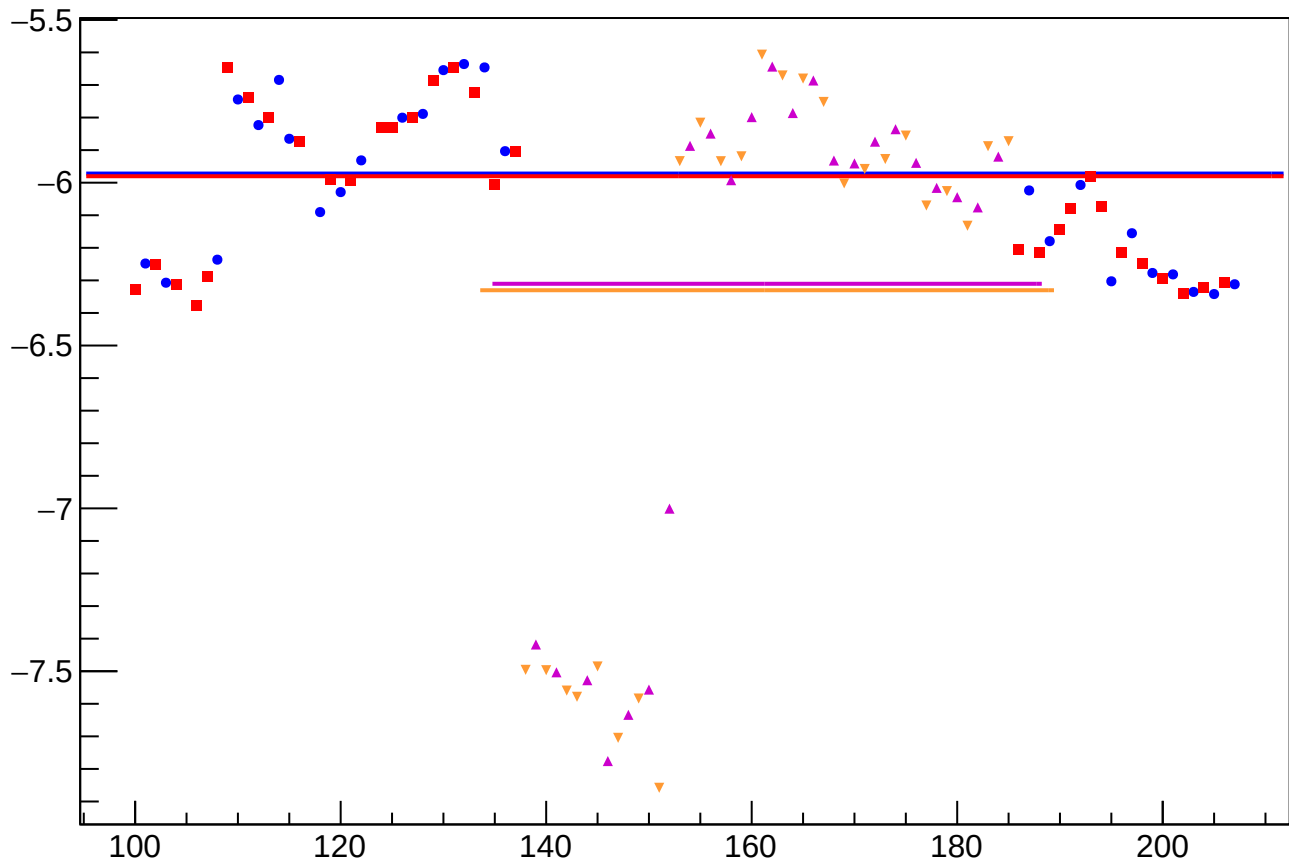
+ sign 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 2749137.0/50

All: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 5723230.7/104

- sign 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 2973627.5/53



# yield\_bpm0l01Y\_mean vs Slug



Right In: -5.972+/-0.000  $\chi^2/\text{NDF}$ : 15514429455.3/25

Left Out: -6.330+/-0.000  $\chi^2/\text{NDF}$ : 110328634370.4/24

Right Out: -5.980+/-0.000  $\chi^2/\text{NDF}$ : 16281463852.9/30

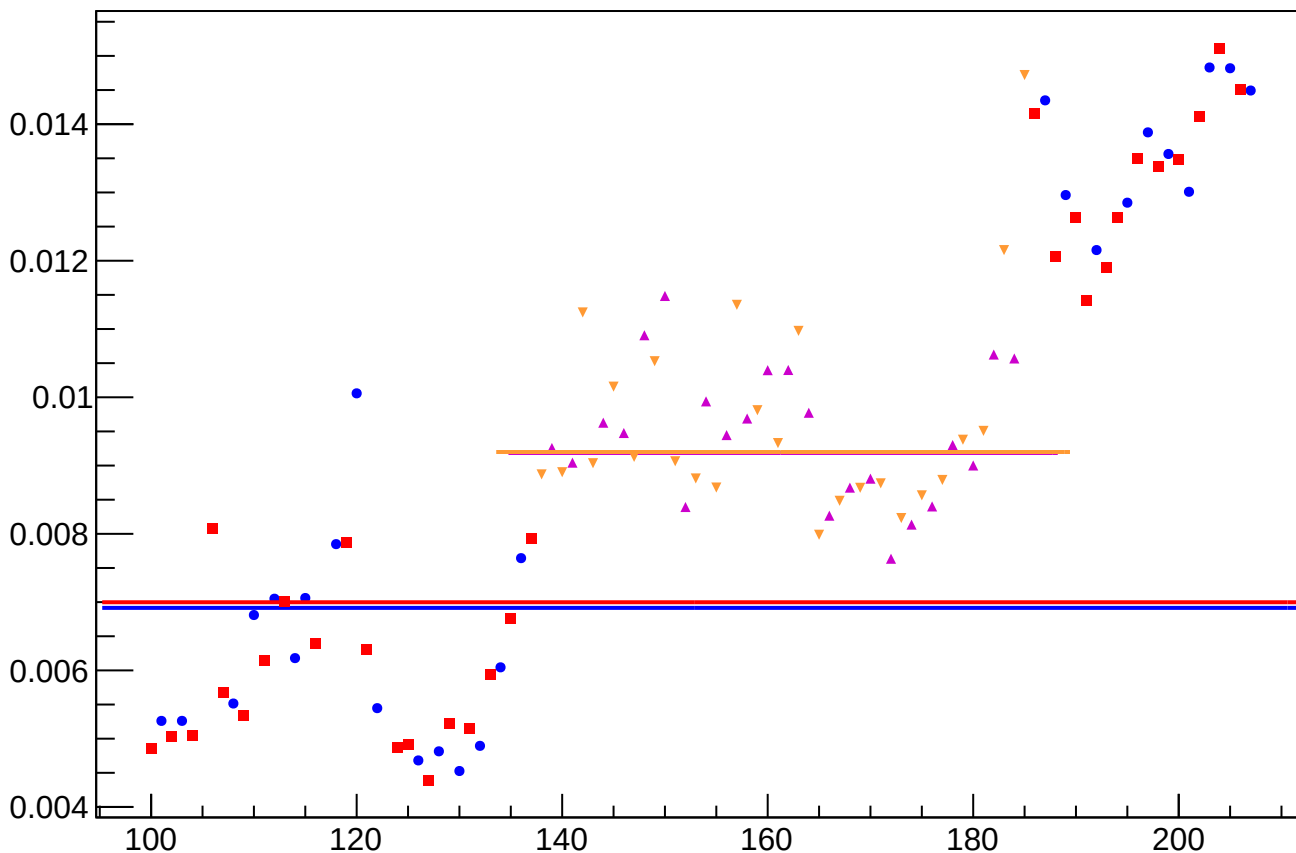
Left In: -6.310+/-0.000  $\chi^2/\text{NDF}$ : 91689184100.9/22

+ sign -6.131+/-0.000  $\chi^2/\text{NDF}$ : 139450230349.0/50

All: -6.124+/-0.000  $\chi^2/\text{NDF}$ : 259159642038.0

- sign -6.117+/-0.000  $\chi^2/\text{NDF}$ : 119663272138.6/53

# yield\_bpm0l01Y\_rms vs Slug



Right In: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 4827004.5/25

Left Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 367040.4/24

Right Out: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 5130236.1/30

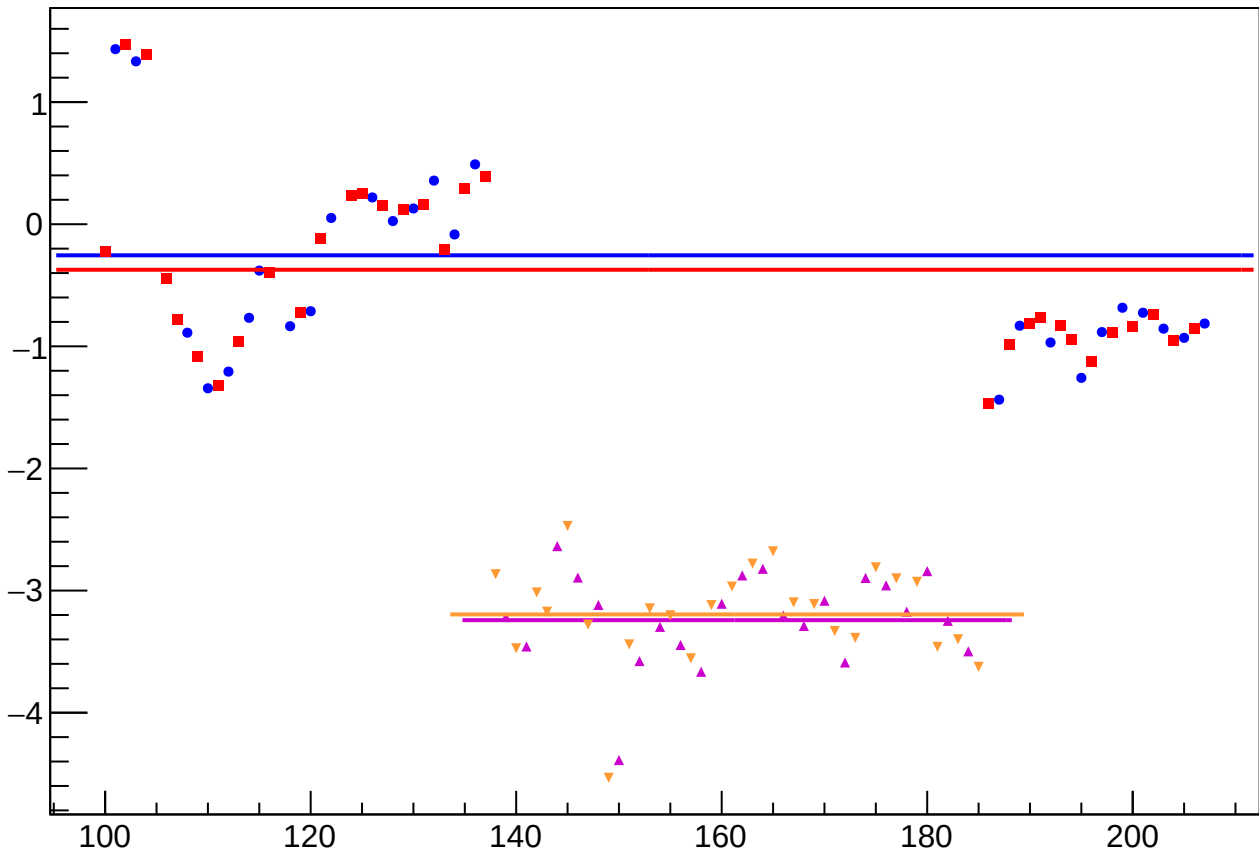
Left In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 319063.5/22

+ sign 0.008+/-0.000  $\chi^2/\text{NDF}$ : 6299077.6/50

All: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 12773762.2/104

- sign 0.008+/-0.000  $\chi^2/\text{NDF}$ : 6474318.7/53

# yield\_bpm0l02X\_mean vs Slug



Right In: -0.255 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 33099360722.0/25

Left Out: -3.195 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 9538006171.4/24

Right Out: -0.373 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 35196206932.4/30

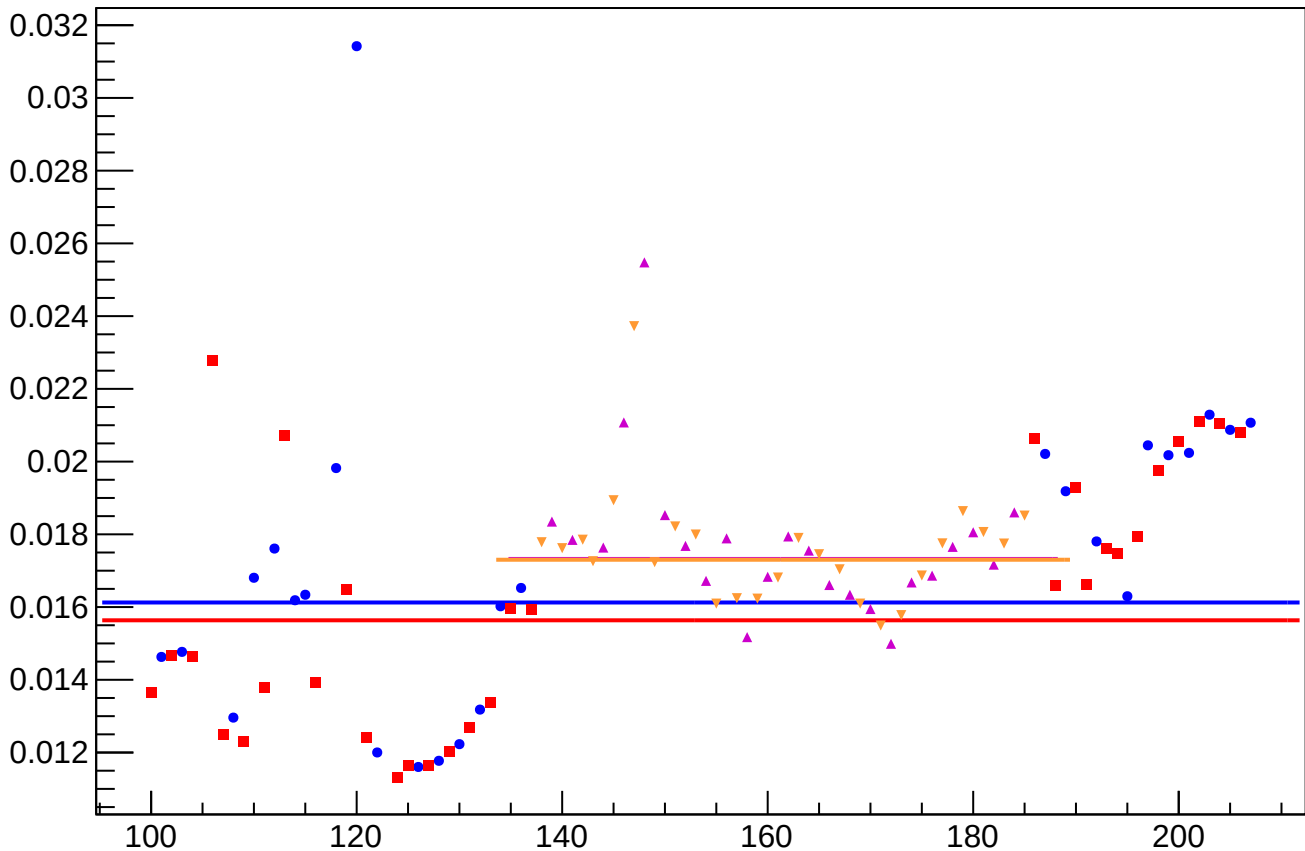
Left In: -3.242 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7955956403.6/22

+ sign -1.859 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 286551007100.7/50

All: -1.814 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 576685889200.2

- sign -1.771 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 289686195786.2/53

# yield\_bpm0l02X\_rms vs Slug



Right In: 0.016+/-0.000  $\chi^2/\text{NDF}$ : 1284025.2/25

Left Out: 0.017+/-0.000  $\chi^2/\text{NDF}$ : 218030.0/24

Right Out: 0.016+/-0.000  $\chi^2/\text{NDF}$ : 1318468.8/30

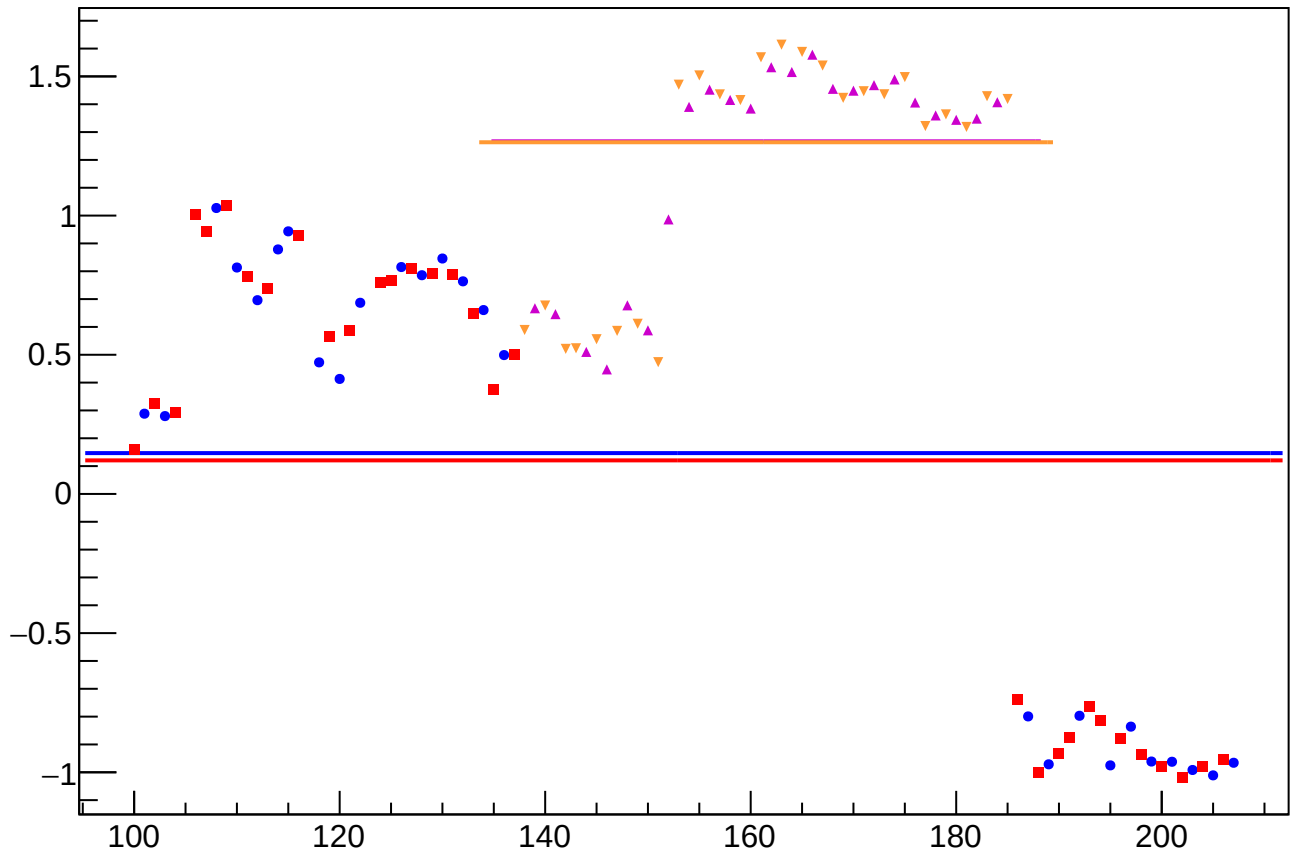
Left In: 0.017+/-0.000  $\chi^2/\text{NDF}$ : 329879.6/22

+ sign 0.017+/-0.000  $\chi^2/\text{NDF}$ : 1580015.4/50

All: 0.017+/-0.000  $\chi^2/\text{NDF}$ : 3409912.7/104

- sign 0.016+/-0.000  $\chi^2/\text{NDF}$ : 1818754.4/53

# yield\_bpm0l02Y\_mean vs Slug



Right In: 0.147+/-0.000  $\chi^2/\text{NDF}$ : 73537421071.4/25

Left Out: 1.263+/-0.000  $\chi^2/\text{NDF}$ : 45594559273.0/24

Right Out: 0.121+/-0.000  $\chi^2/\text{NDF}$ : 86391438227.4/30

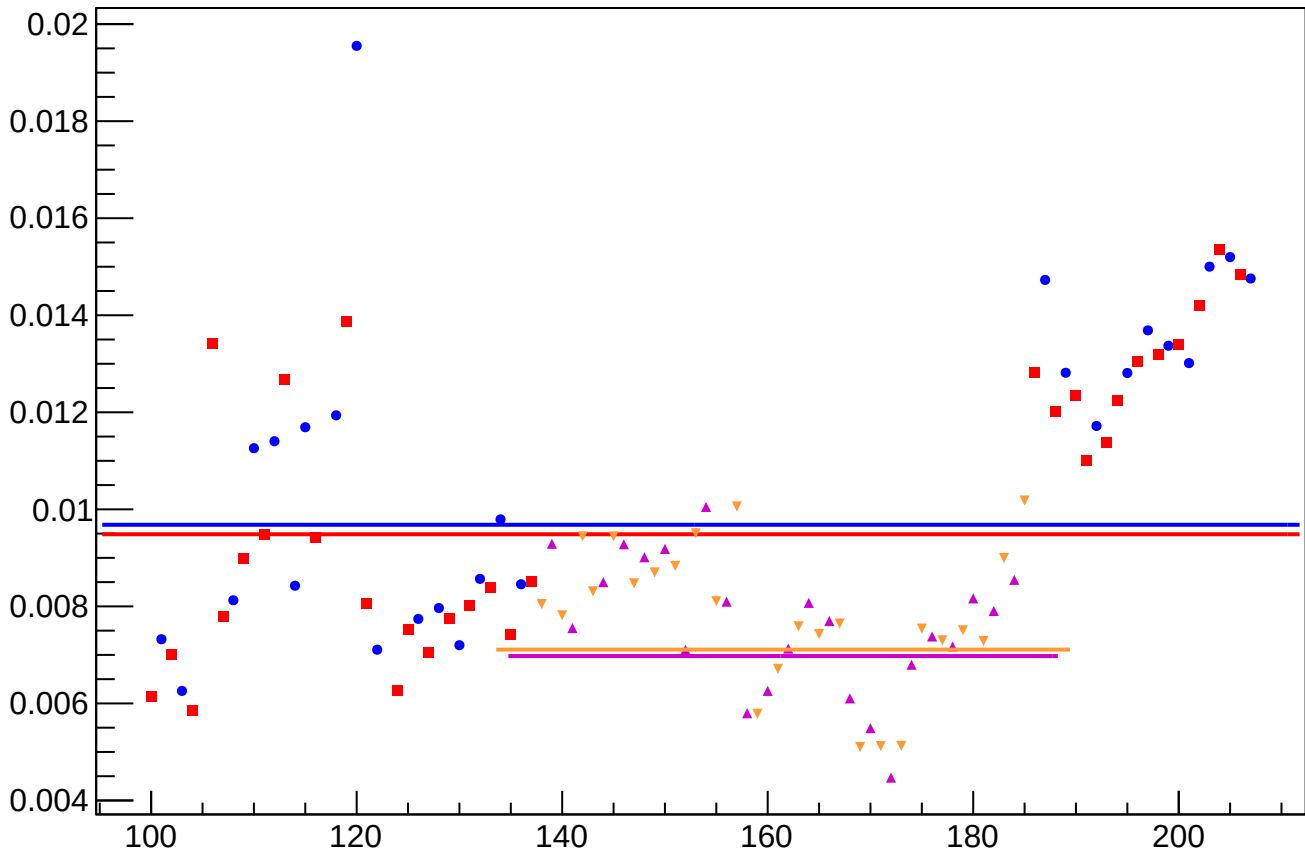
Left In: 1.267+/-0.000  $\chi^2/\text{NDF}$ : 37614918579.9/22

+ sign 0.943+/-0.000  $\chi^2/\text{NDF}$ : 239509728915.5/50

All: 0.922+/-0.000  $\chi^2/\text{NDF}$ : 503533680211.4

- sign 0.902+/-0.000  $\chi^2/\text{NDF}$ : 263617446239.0/53

# yield\_bpm0l02Y\_rms vs Slug



Right In: 0.010 $\pm$ 0.000  $\chi^2$ /NDF: 2363882.5/25

Left Out: 0.007 $\pm$ 0.000  $\chi^2$ /NDF:1519295.8/24

Right Out: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 2562131.7/30

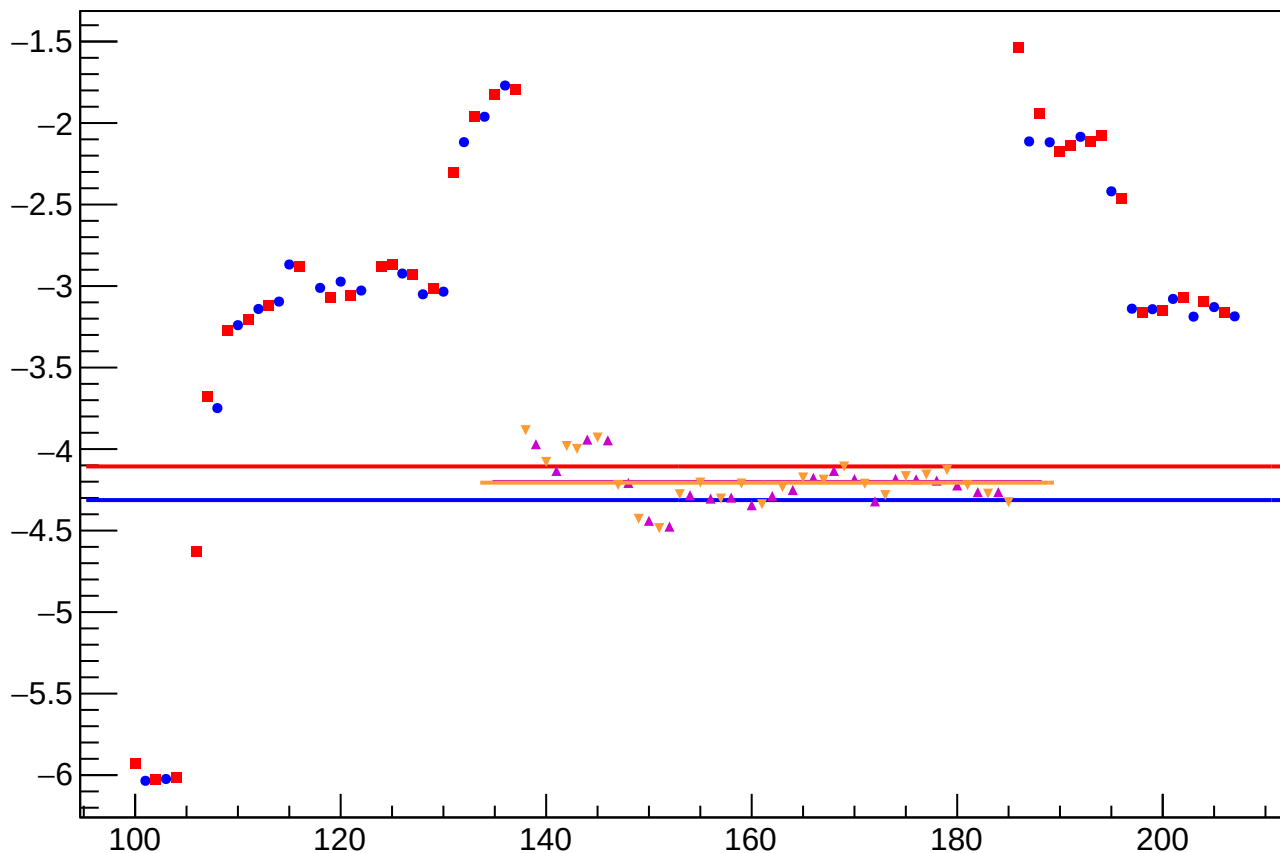
Left In: 0.007 $\pm$ 0.000  $\chi^2$ /NDF:1457031.8/22

+ sign 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 5160682.1/50

All: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 10521404.3/104

- sign 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 5358238.3/53

# yield\_bpm0l03X\_mean vs Slug



Right In:  $-4.313 \pm 0.000$   $\chi^2/\text{NDF}: 286931184992.3/25$

Left Out:  $-4.206 \pm 0.000$   $\chi^2/\text{NDF}: 61558336.8/24$

Right Out:  $-4.106 \pm 0.000$   $\chi^2/\text{NDF}: 298308397627.2/30$

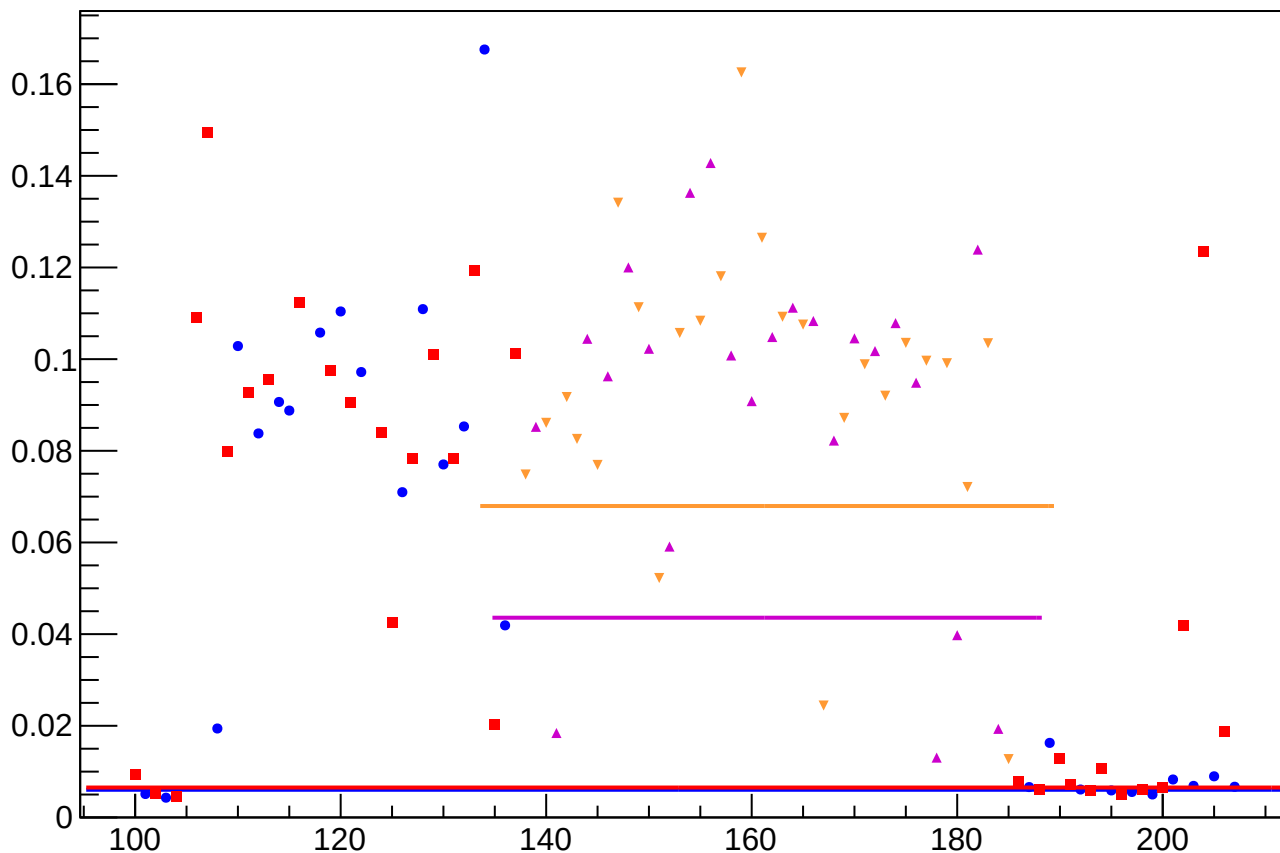
Left In:  $-4.202 \pm 0.000$   $\chi^2/\text{NDF}: 42747893.4/22$

+ sign  $-4.310 \pm 0.000$   $\chi^2/\text{NDF}: 287022374964.4/50$

All:  $-4.221 \pm 0.000$   $\chi^2/\text{NDF}: 587406296921.7$

- sign  $-4.111 \pm 0.000$   $\chi^2/\text{NDF}: 298386583097.1/53$

# yield\_bpm0l03X\_rms vs Slug



Right In: 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 8912391.9/25

Left Out: 0.068 $\pm$ 0.000  $\chi^2$ /NDF: 7631751.0/24

Right Out: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 10674979.7/30

Left In: 0.044 $\pm$ 0.000  $\chi^2$ /NDF: 12761920.2/22

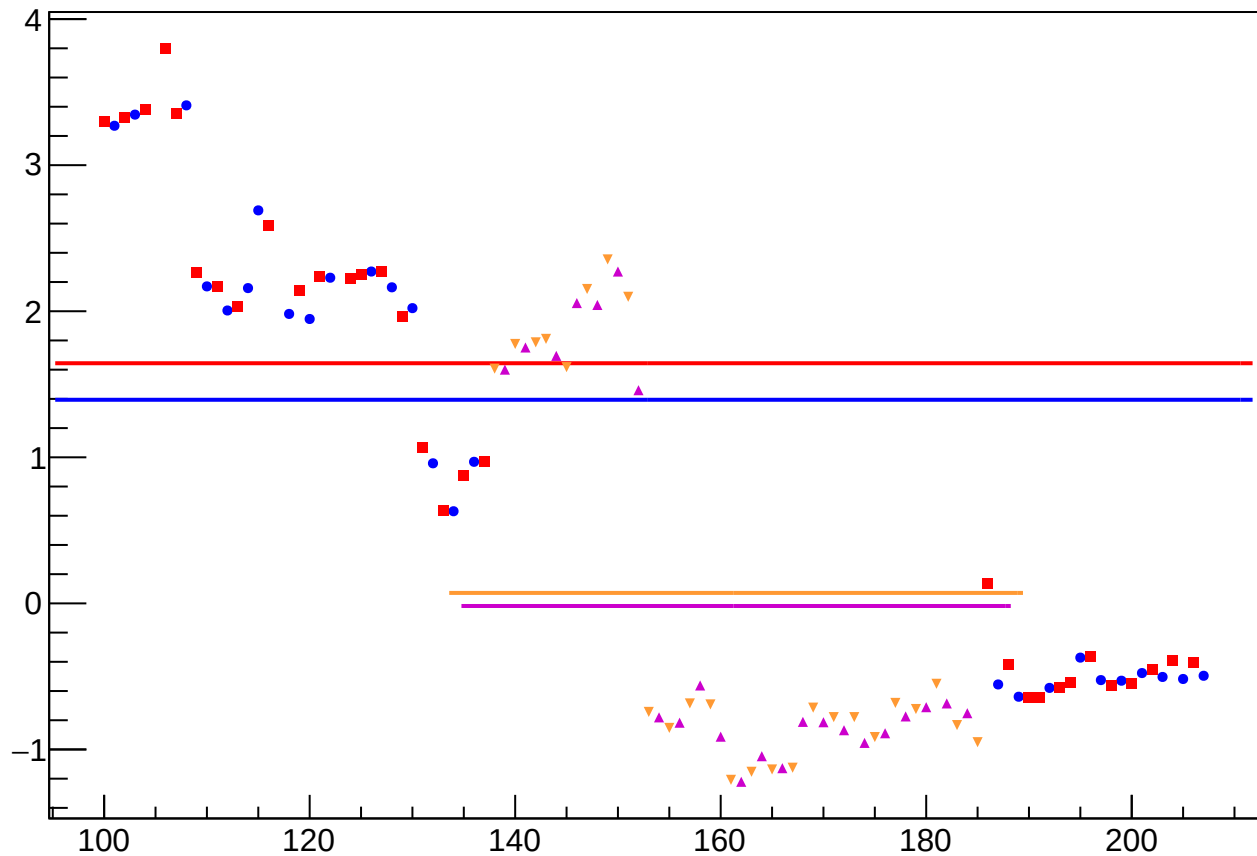
+ sign 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 36459707.5/50

All: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 70671895.8/104

- sign 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 34163779.6/53



# yield\_bpm0l03Y\_mean vs Slug



Right In: 1.394 $\pm$ 0.000  $\chi^2$ /NDF: 221104849109.0/25

Left Out: 0.072 $\pm$ 0.000  $\chi^2$ /NDF: 3635027099.6/24

Right Out: 1.644 $\pm$ 0.000  $\chi^2$ /NDF: 184953142304.2/30

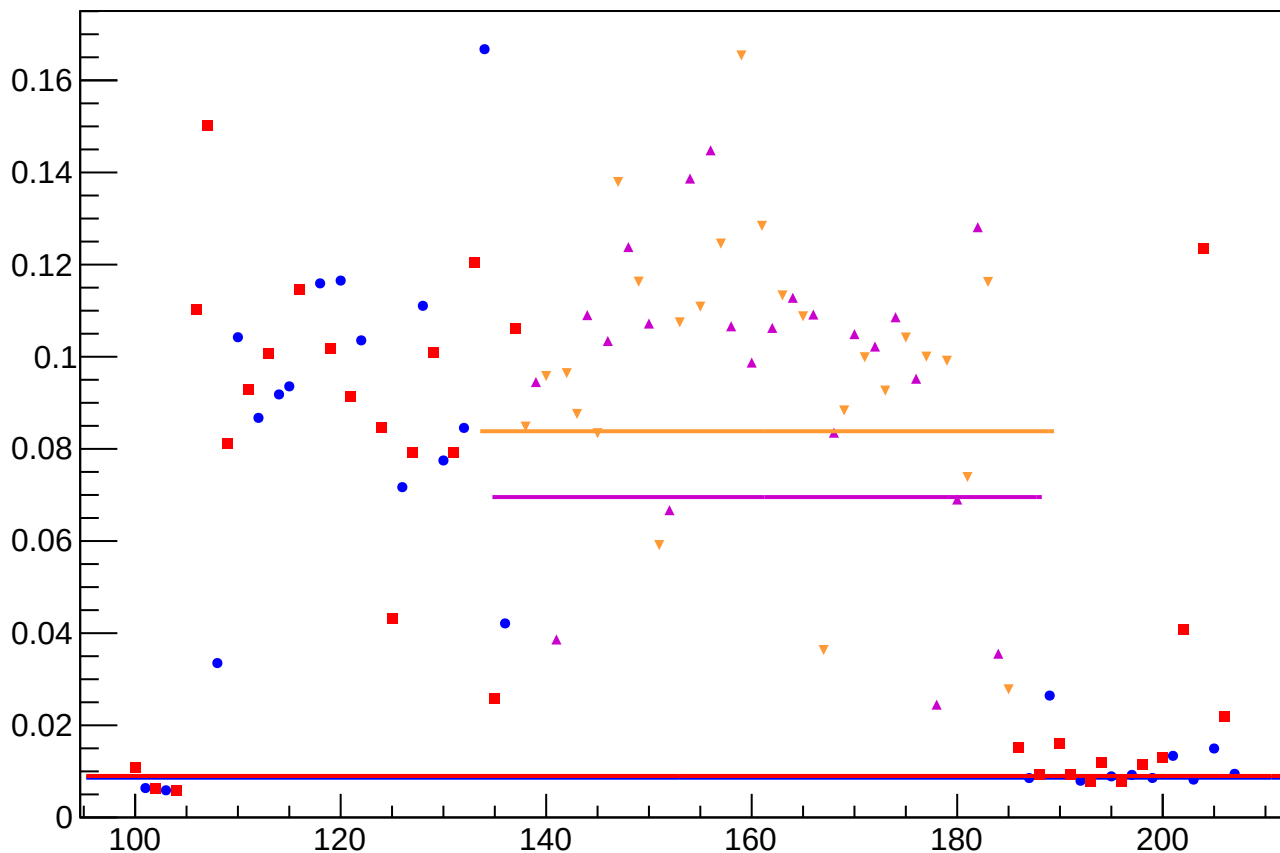
Left In: -0.018 $\pm$ 0.000  $\chi^2$ /NDF: 3455714643.1/22

+ sign 1.351 $\pm$ 0.000  $\chi^2$ /NDF: 228220505305.0/50

All: 1.453 $\pm$ 0.000  $\chi^2$ /NDF: 424336195992.5

- sign 1.572 $\pm$ 0.000  $\chi^2$ /NDF: 194689891546.6/53

# yield\_bpm0l03Y\_rms vs Slug



Right In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 8761172.3/25

Left Out: 0.084+/-0.000  $\chi^2/\text{NDF}$ : 3830160.2/24

Right Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 10423240.6/30

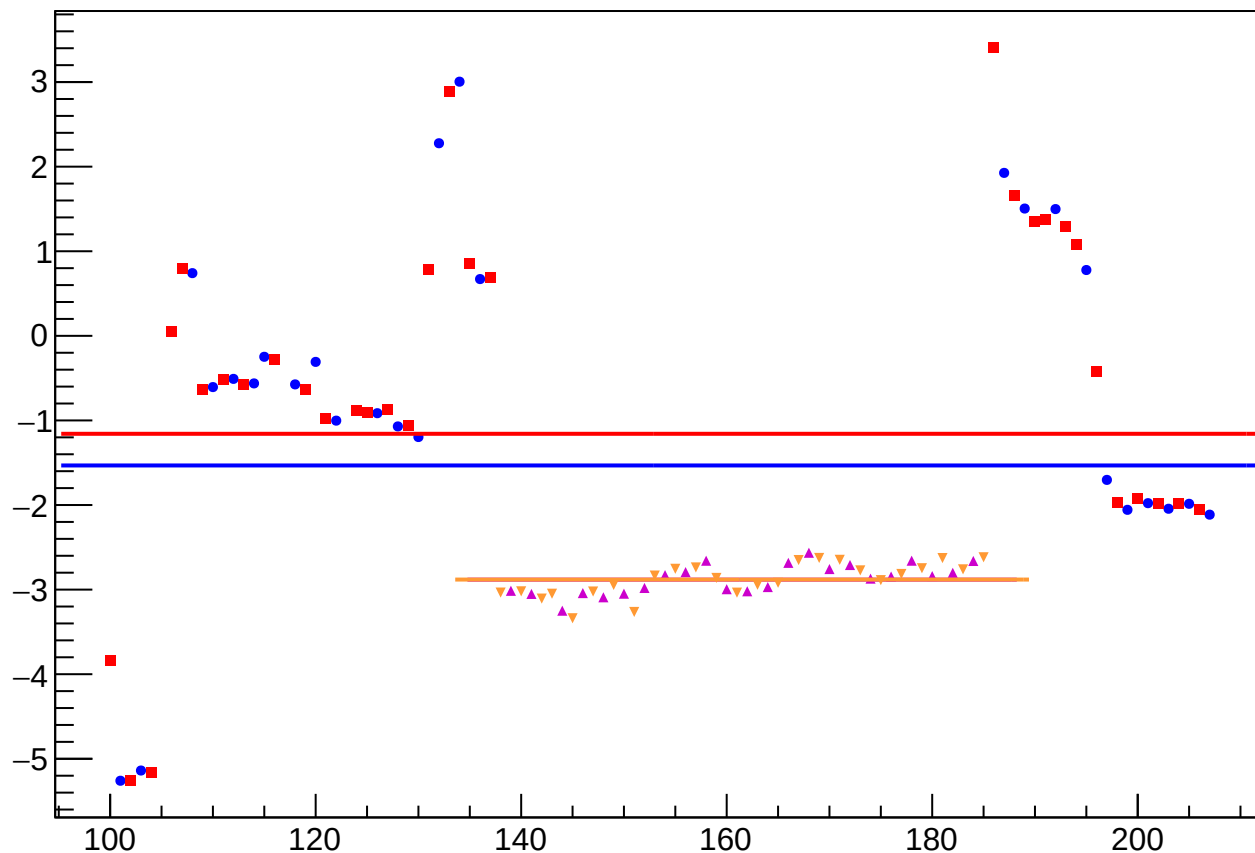
Left In: 0.070+/-0.000  $\chi^2/\text{NDF}$ : 6697383.9/22

+ sign 0.011+/-0.000  $\chi^2/\text{NDF}$ : 35108248.2/50

All: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 68916326.3/104

- sign 0.012+/-0.000  $\chi^2/\text{NDF}$ : 33788096.1/53

# yield\_bpm0l04X\_mean vs Slug



Right In:  $-1.532 \pm 0.000$   $\chi^2/\text{NDF}$ : 208509389500.5/25

Left Out:  $-2.881 \pm 0.000$   $\chi^2/\text{NDF}$ : 10553050715.1/24

Right Out:  $-1.158 \pm 0.000$   $\chi^2/\text{NDF}$ : 236200505109.8/30

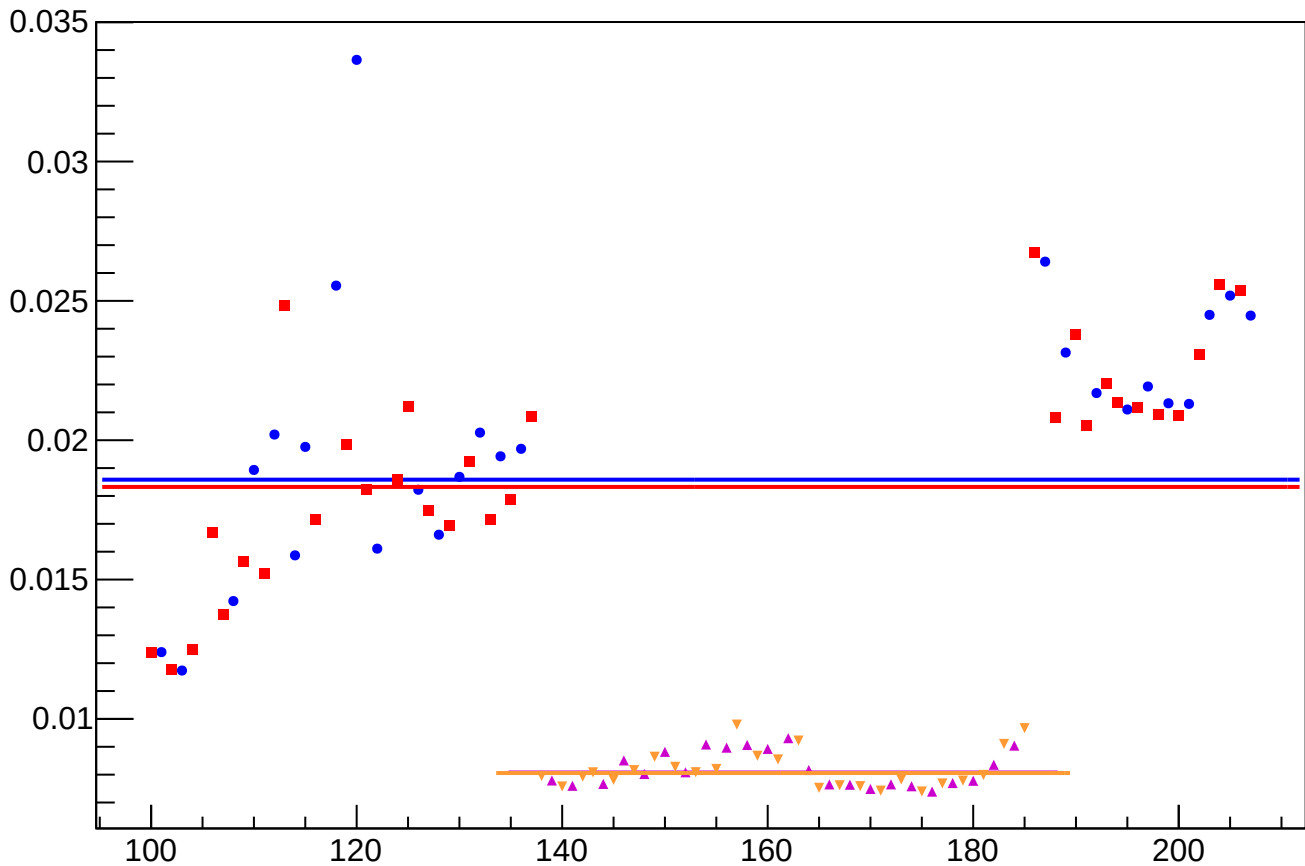
Left In:  $-2.882 \pm 0.000$   $\chi^2/\text{NDF}$ : 8300047325.0/22

+ sign  $-2.725 \pm 0.000$   $\chi^2/\text{NDF}$ : 278916960186.2/50

All:  $-2.685 \pm 0.000$   $\chi^2/\text{NDF}$ : 635025712423.2

- sign  $-2.643 \pm 0.000$   $\chi^2/\text{NDF}$ : 355043727546.5/53

# yield\_bpm0l04X\_rms vs Slug



Right In: 0.019 $\pm$ 0.000  $\chi^2$ /NDF: 1561284.1/25

Left Out: 0.008 $\pm$ 0.000  $\chi^2$ /NDF:185446.1/24

Right Out: 0.018 $\pm$ 0.000  $\chi^2$ /NDF: 1503884.5/30

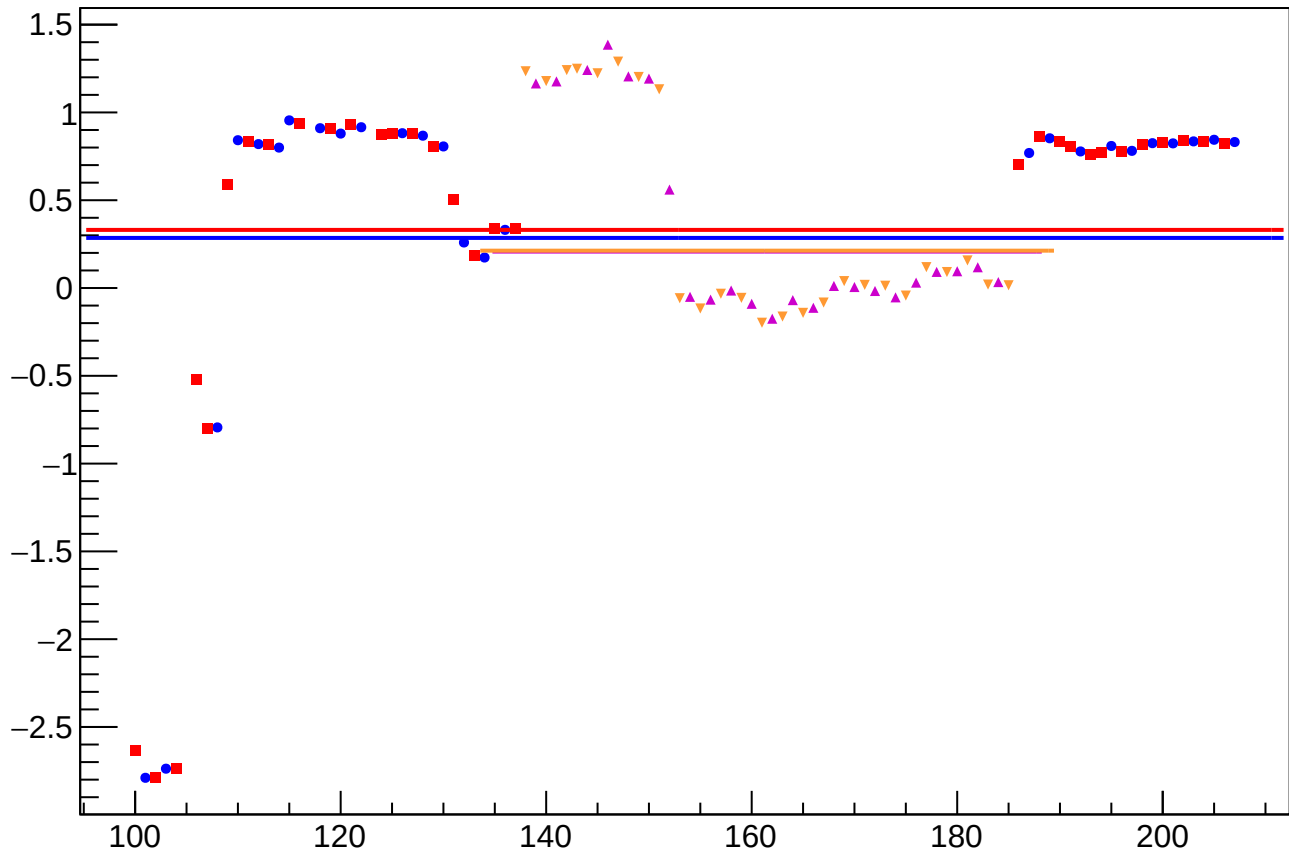
Left In: 0.008 $\pm$ 0.000  $\chi^2$ /NDF:181843.4/22

+ sign 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 9035498.8/50

All: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 18541816.8/104

- sign 0.010 $\pm$ 0.000  $\chi^2$ /NDF: 9490509.1/53

# yield\_bpm0l04Y\_mean vs Slug



Right In: 0.285 $\pm$ 0.000  $\chi^2$ /NDF: 955996127560.3/25

Left Out: 0.213 $\pm$ 0.000  $\chi^2$ /NDF: 102819241186.2/24

Right Out: 0.331 $\pm$ 0.000  $\chi^2$ /NDF: 1046108667072.0/30

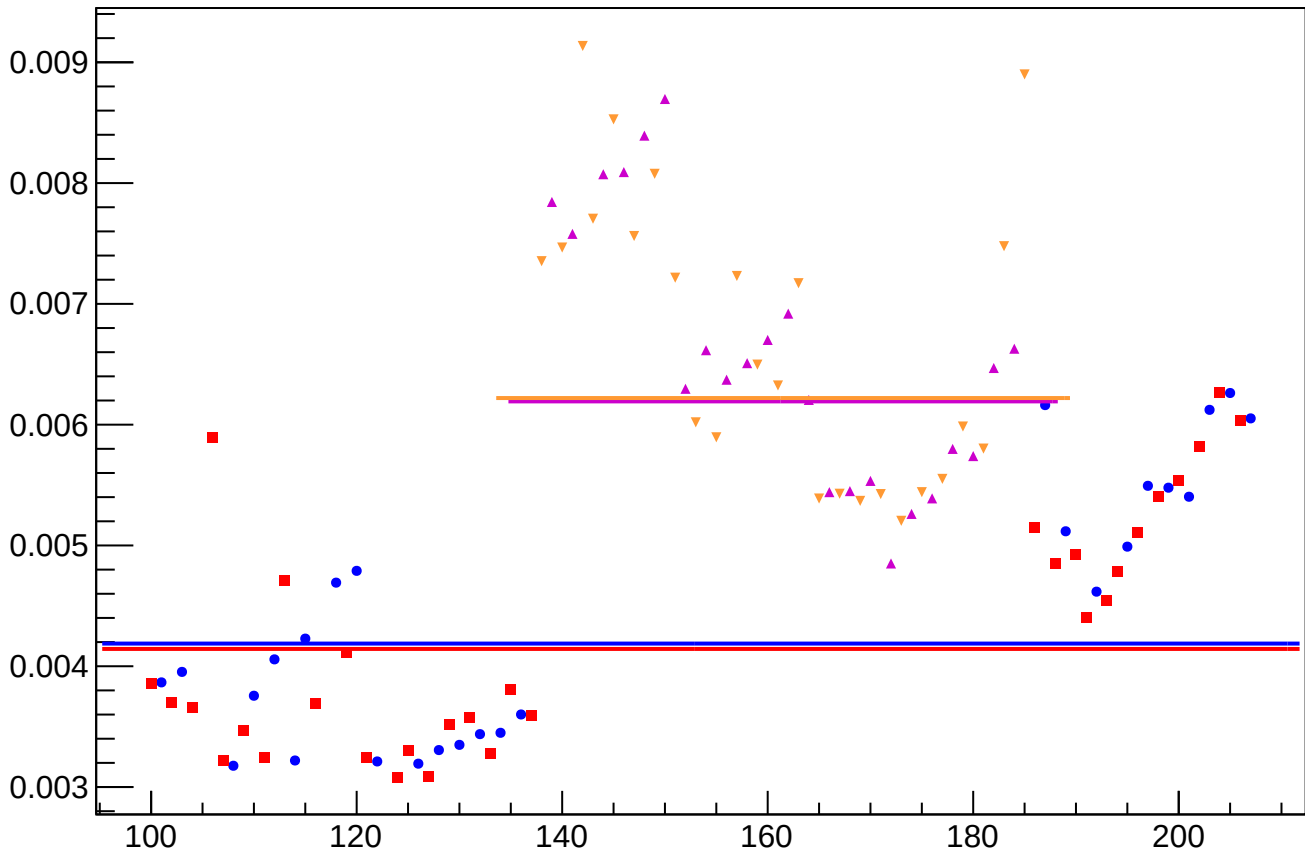
Left In: 0.207 $\pm$ 0.000  $\chi^2$ /NDF: 87109076861.7/22

+ sign 0.259 $\pm$ 0.000  $\chi^2$ /NDF: 1060272433313.6/50

All: 0.276 $\pm$ 0.000  $\chi^2$ /NDF: 2198401363274.0

- sign 0.291 $\pm$ 0.000  $\chi^2$ /NDF: 1137496783948.5/53

# yield\_bpm0l04Y\_rms vs Slug



Right In: 0.004+/-0.000  $\chi^2/\text{NDF}$ : 1457193.1/25

Left Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ :813678.9/24

Right Out: 0.004+/-0.000  $\chi^2/\text{NDF}$ : 1532707.1/30

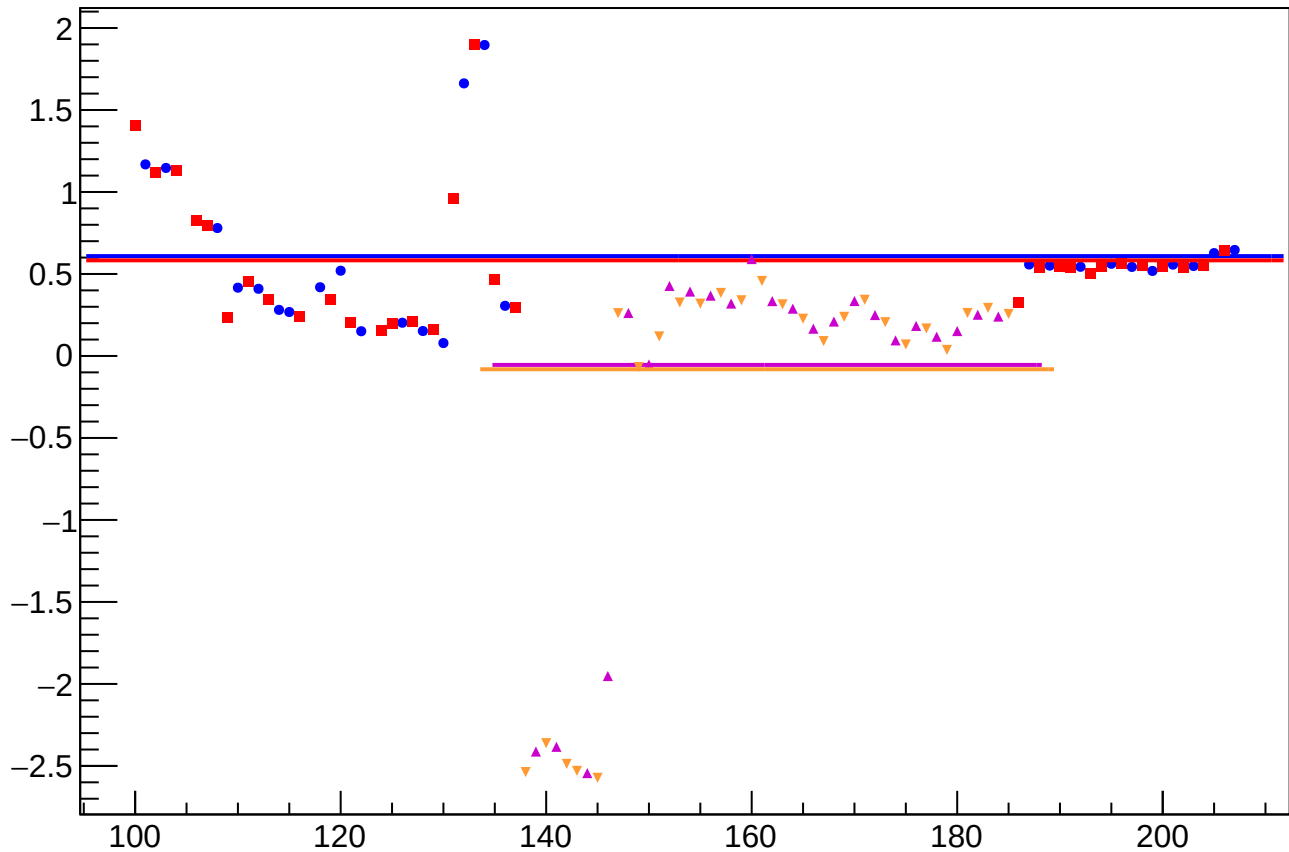
Left In: 0.006+/-0.000  $\chi^2/\text{NDF}$ :816234.4/22

+ sign 0.005+/-0.000  $\chi^2/\text{NDF}$ : 4554661.1/50

All: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 9274393.3/104

- sign 0.005+/-0.000  $\chi^2/\text{NDF}$ : 4703872.5/53

# yield\_bpm0l05X\_mean vs Slug



Right In: 0.609 $\pm$ 0.000  $\chi^2$ /NDF: 43815965947.2/25

Left Out: -0.081 $\pm$ 0.000  $\chi^2$ /NDF: 388332231902.9/24

Right Out: 0.583 $\pm$ 0.000  $\chi^2$ /NDF: 44043059785.7/30

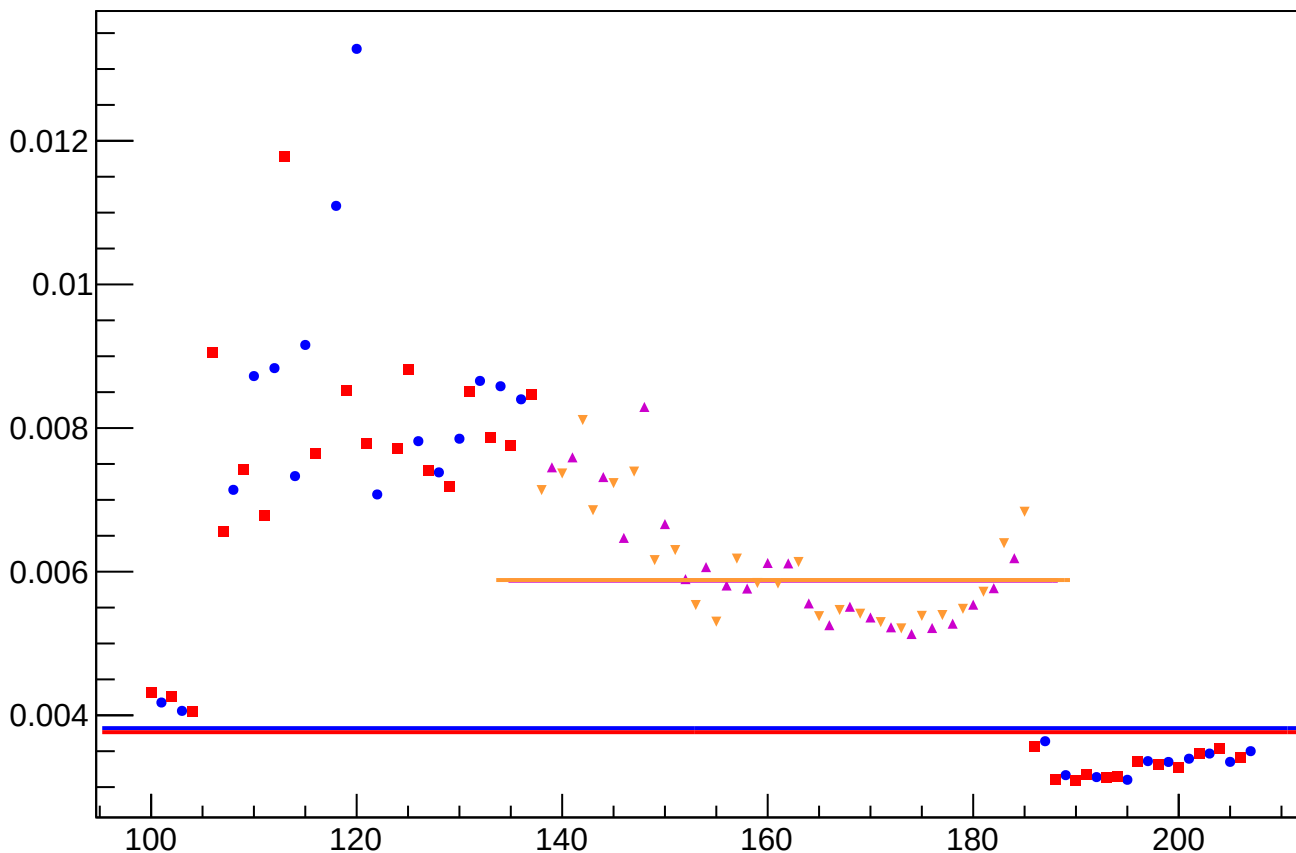
Left In: -0.055 $\pm$ 0.000  $\chi^2$ /NDF: 347072248163.0/22

+ sign 0.346 $\pm$ 0.000  $\chi^2$ /NDF: 581446167369.2/50

All: 0.358 $\pm$ 0.000  $\chi^2$ /NDF: 1103942149309.2/100

- sign 0.369 $\pm$ 0.000  $\chi^2$ /NDF: 522119313888.8/53

# yield\_bpm0l05X\_rms vs Slug



Right In: 0.004+/-0.000  $\chi^2/\text{NDF}$ : 3443463.0/25

Left Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 457789.1/24

Right Out: 0.004+/-0.000  $\chi^2/\text{NDF}$ : 3428715.6/30

Left In: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 521878.3/22

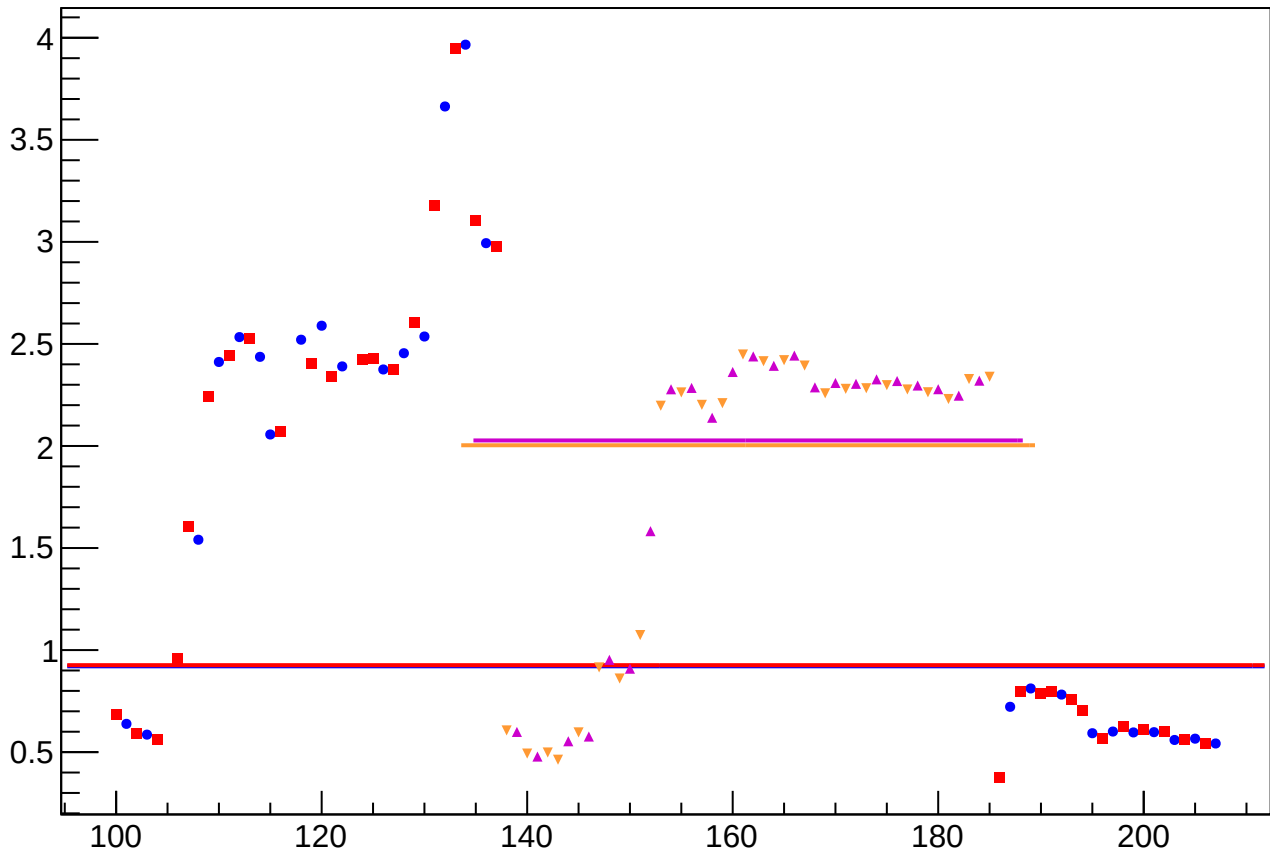
+ sign 0.005+/-0.000  $\chi^2/\text{NDF}$ : 6568399.5/50

All: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 13411264.2/104

- sign 0.004+/-0.000  $\chi^2/\text{NDF}$ : 6817870.4/53



# yield\_bpm0l05Y\_mean vs Slug



Right In:  $0.920 \pm 0.000$   $\chi^2/\text{NDF}$ : 237143260978.0/25

Left Out:  $2.004 \pm 0.000$   $\chi^2/\text{NDF}$ : 219172813454.7/24

Right Out:  $0.926 \pm 0.000$   $\chi^2/\text{NDF}$ : 267592257887.6/30

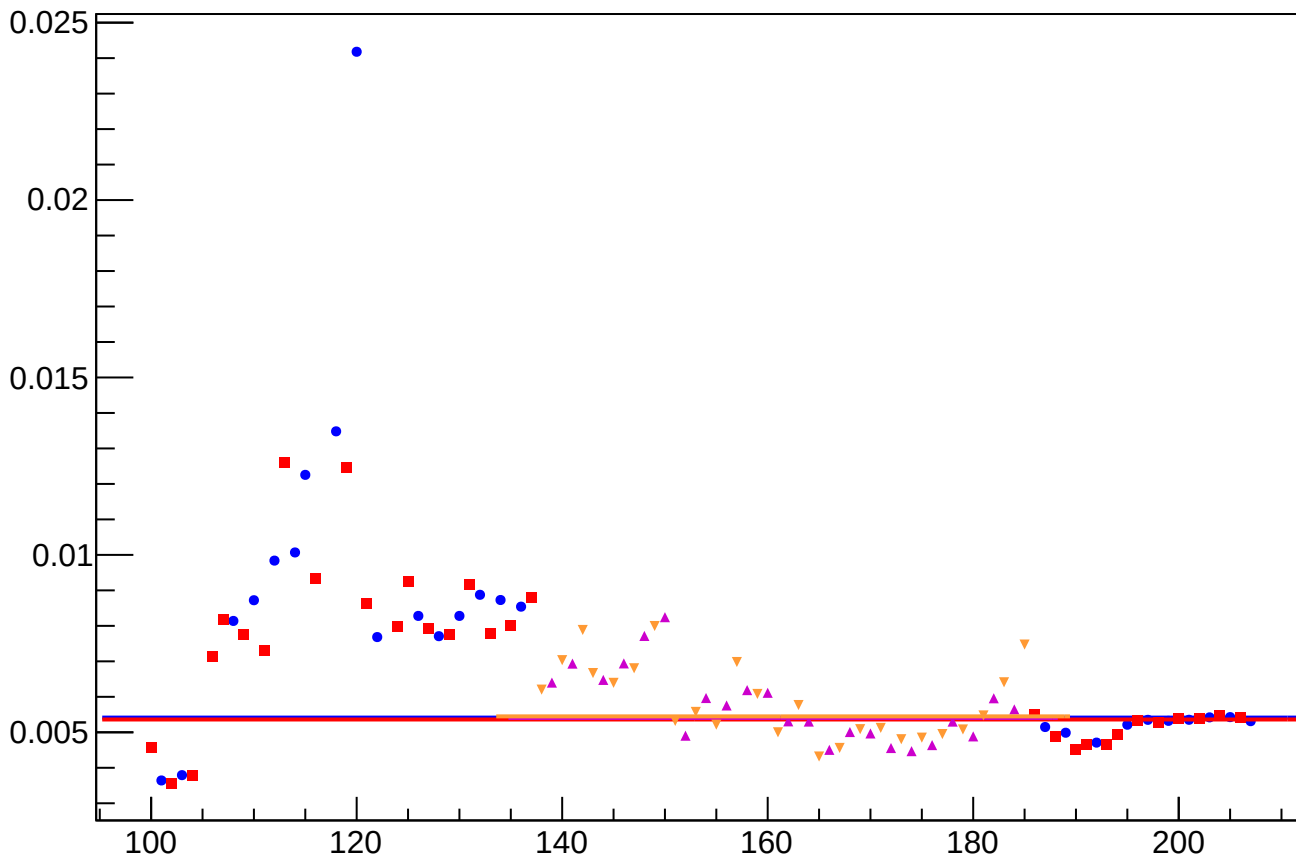
Left In:  $2.027 \pm 0.000$   $\chi^2/\text{NDF}$ : 194461333084.6/22

+ sign  $1.533 \pm 0.000$   $\chi^2/\text{NDF}$ : 737548157238.1/50

All:  $1.516 \pm 0.000$   $\chi^2/\text{NDF}$ : 1509063884844.

- sign  $1.499 \pm 0.000$   $\chi^2/\text{NDF}$ : 770955328240.0/53

# yield\_bpm0l05Y\_rms vs Slug



Right In: 0.005 $\pm$ 0.000  $\chi^2$ /NDF: 2307874.5/25

Left Out: 0.005 $\pm$ 0.000  $\chi^2$ /NDF:771417.6/24

Right Out: 0.005 $\pm$ 0.000  $\chi^2$ /NDF: 2125711.9/30

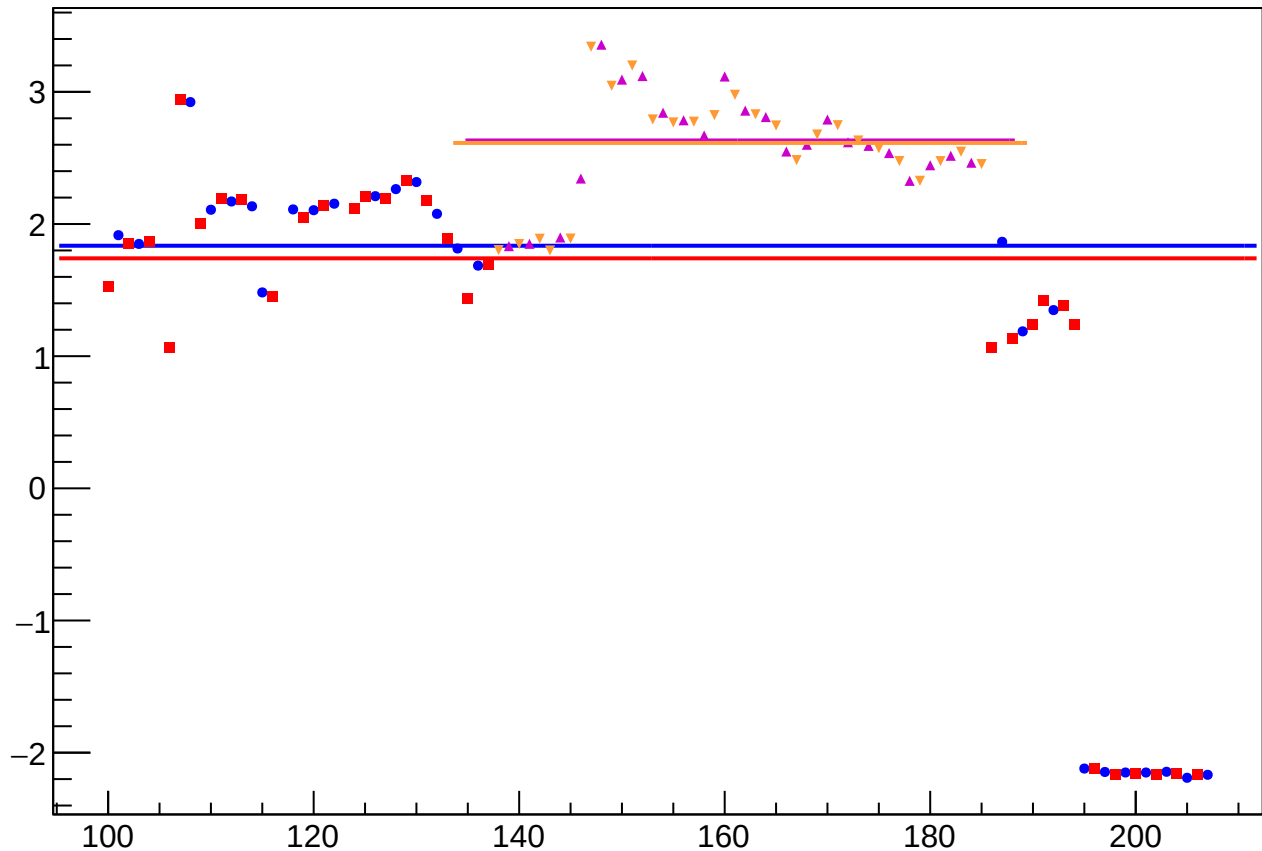
Left In: 0.005 $\pm$ 0.000  $\chi^2$ /NDF:815136.5/22

+ sign 0.005 $\pm$ 0.000  $\chi^2$ /NDF: 3079862.5/50

All: 0.005 $\pm$ 0.000  $\chi^2$ /NDF: 6024182.1/104

- sign 0.005 $\pm$ 0.000  $\chi^2$ /NDF: 2941821.8/53

# yield\_bpm0l06X\_mean vs Slug



Right In: 1.836 $\pm$ 0.000  $\chi^2$ /NDF: 151460829037.7/25

Left Out: 2.614 $\pm$ 0.000  $\chi^2$ /NDF: 46402554271.4/24

Right Out: 1.740 $\pm$ 0.000  $\chi^2$ /NDF: 143139406181.5/30

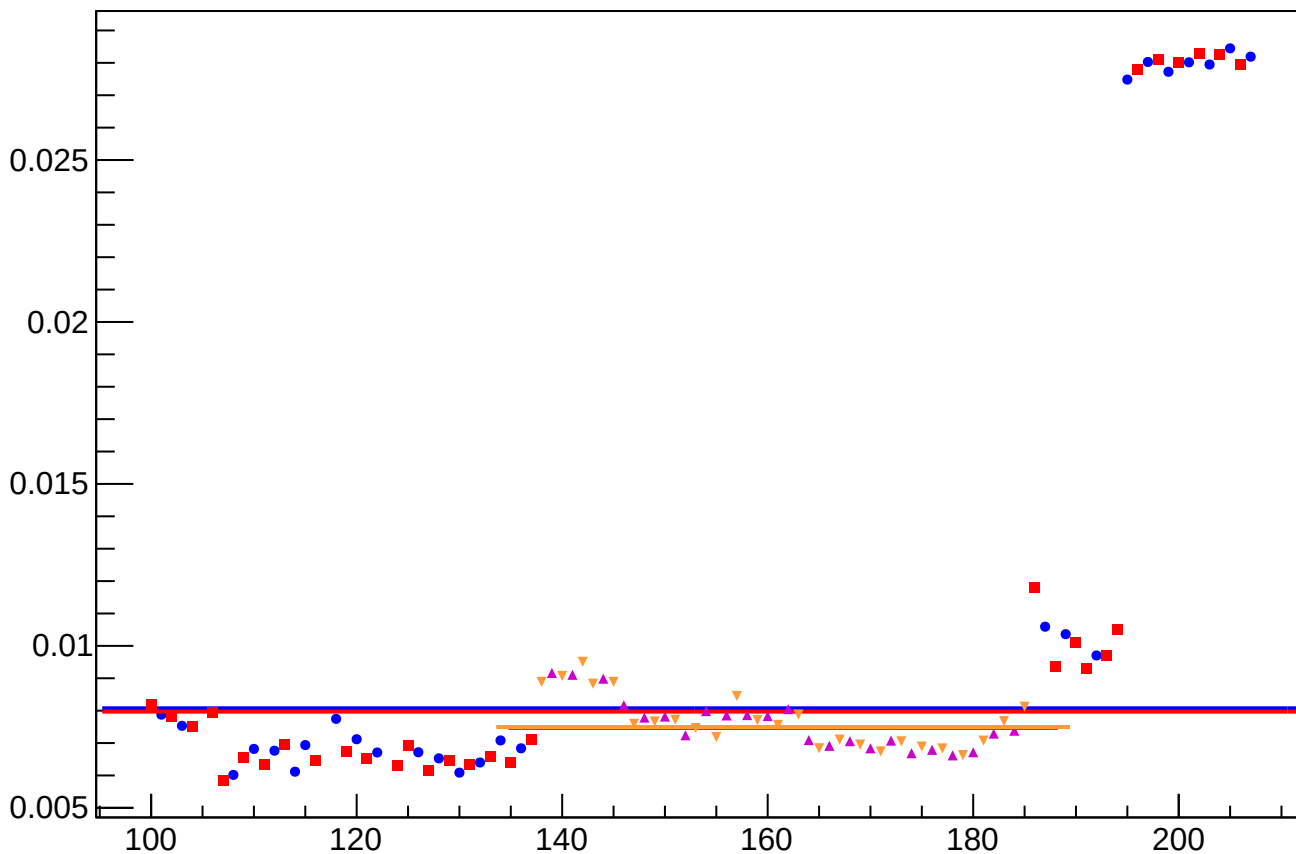
Left In: 2.632 $\pm$ 0.000  $\chi^2$ /NDF: 40551967819.7/22

+ sign 2.344 $\pm$ 0.000  $\chi^2$ /NDF: 265518090879.2/50

All: 2.312 $\pm$ 0.000  $\chi^2$ /NDF: 547203313376.6

- sign 2.282 $\pm$ 0.000  $\chi^2$ /NDF: 280702180925.8/53

# yield\_bpm0l06X\_rms vs Slug



Right In: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 6794883.2/25

Left Out: 0.007 $\pm$ 0.000  $\chi^2$ /NDF:332673.2/24

Right Out: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 6359080.1/30

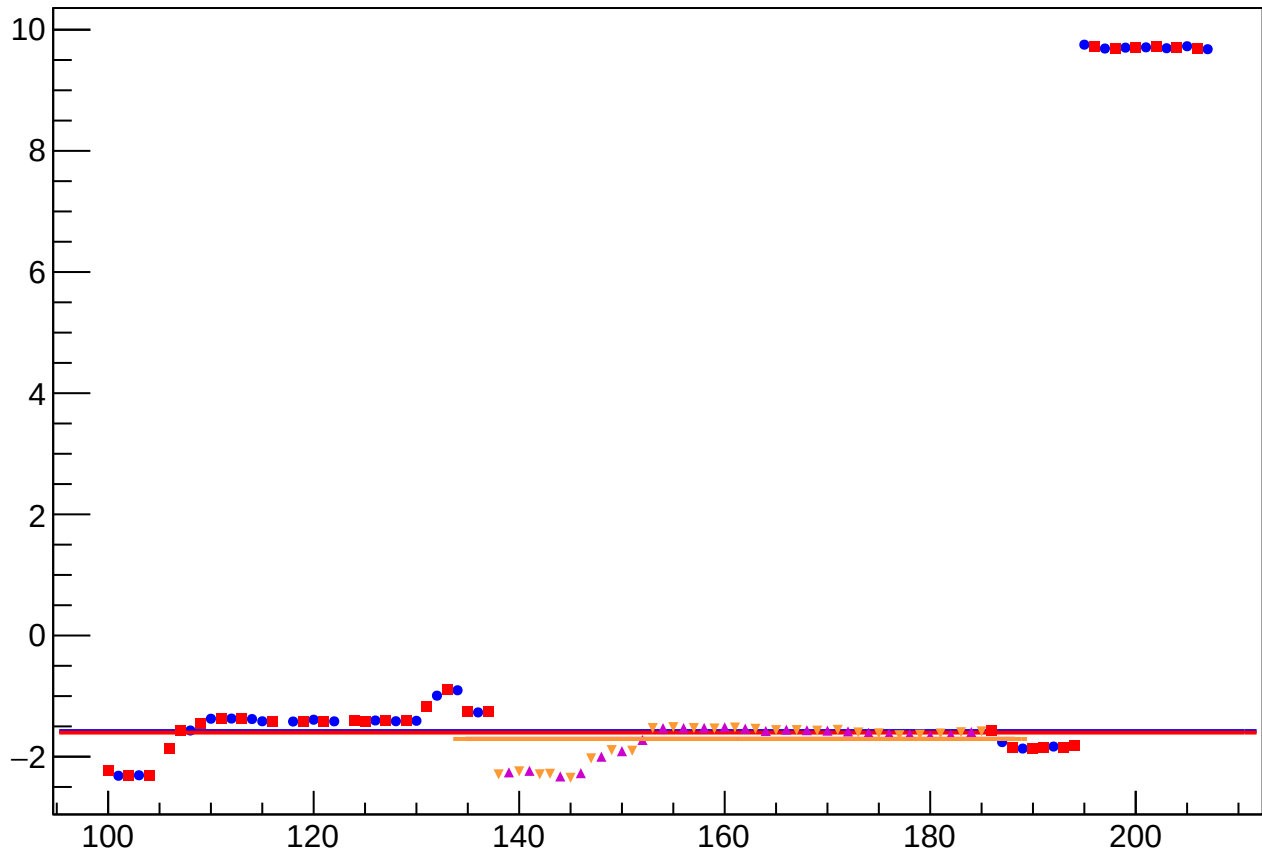
Left In: 0.007 $\pm$ 0.000  $\chi^2$ /NDF:321914.4/22

+ sign 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 7202216.6/50

All: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 13945437.9/104

- sign 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 6742777.9/53

# yield\_bpm0l06Y\_mean vs Slug



Right In: -1.578+/-0.000  $\chi^2/\text{NDF}$ : 390694063382.6/25

Left Out: -1.708+/-0.000  $\chi^2/\text{NDF}$ : 151845502556.2/24

Right Out: -1.602+/-0.000  $\chi^2/\text{NDF}$ : 375494251419.7/30

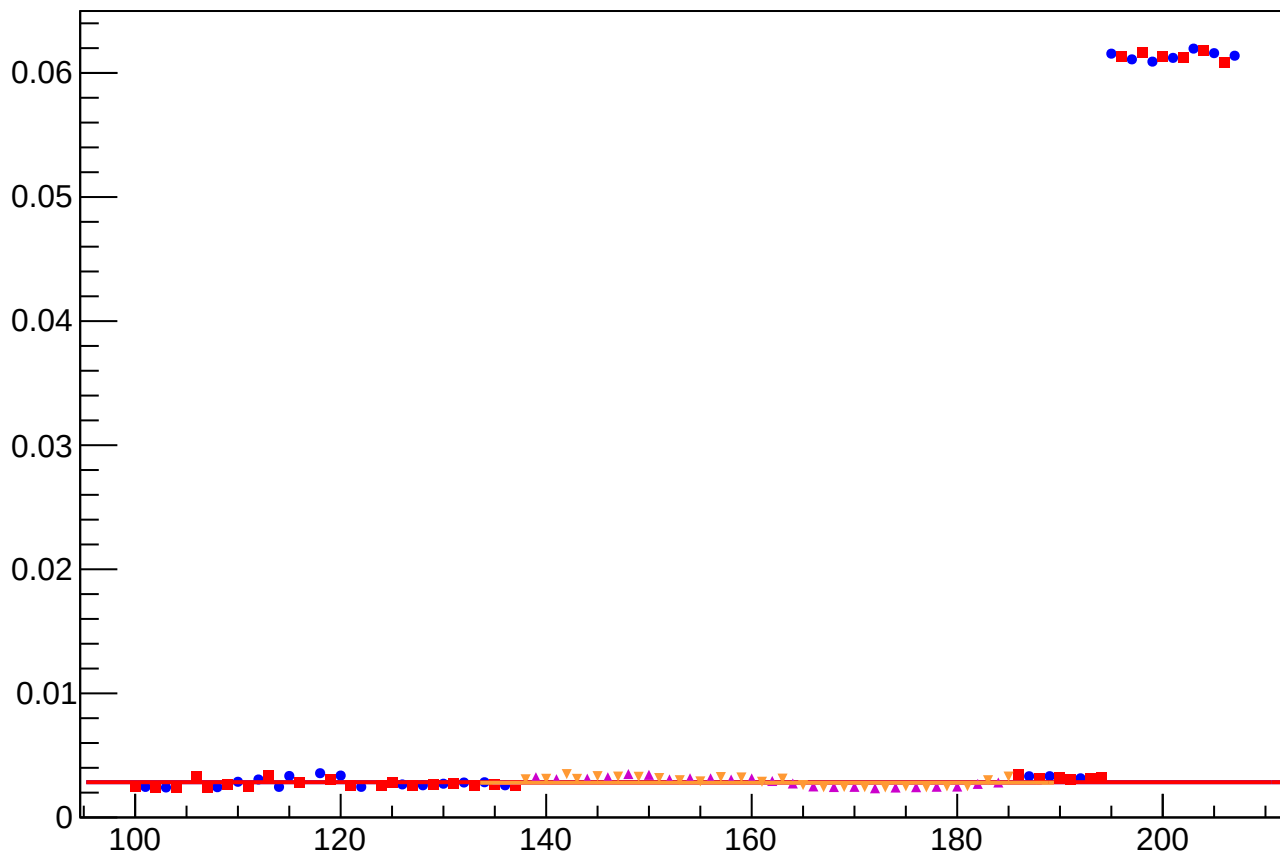
Left In: -1.705+/-0.000  $\chi^2/\text{NDF}$ : 136540618081.0/22

+ sign -1.666+/-0.000  $\chi^2/\text{NDF}$ : 555062252978.6/50

All: -1.666+/-0.000  $\chi^2/\text{NDF}$ : 1075995165074

- sign -1.666+/-0.000  $\chi^2/\text{NDF}$ : 520931654361.1/53

# yield\_bpm0l06Y\_rms vs Slug



Right In: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 11258102.9/25

Left Out: 0.003 $\pm$ 0.000  $\chi^2$ /NDF:547758.3/24

Right Out: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 9943013.2/30

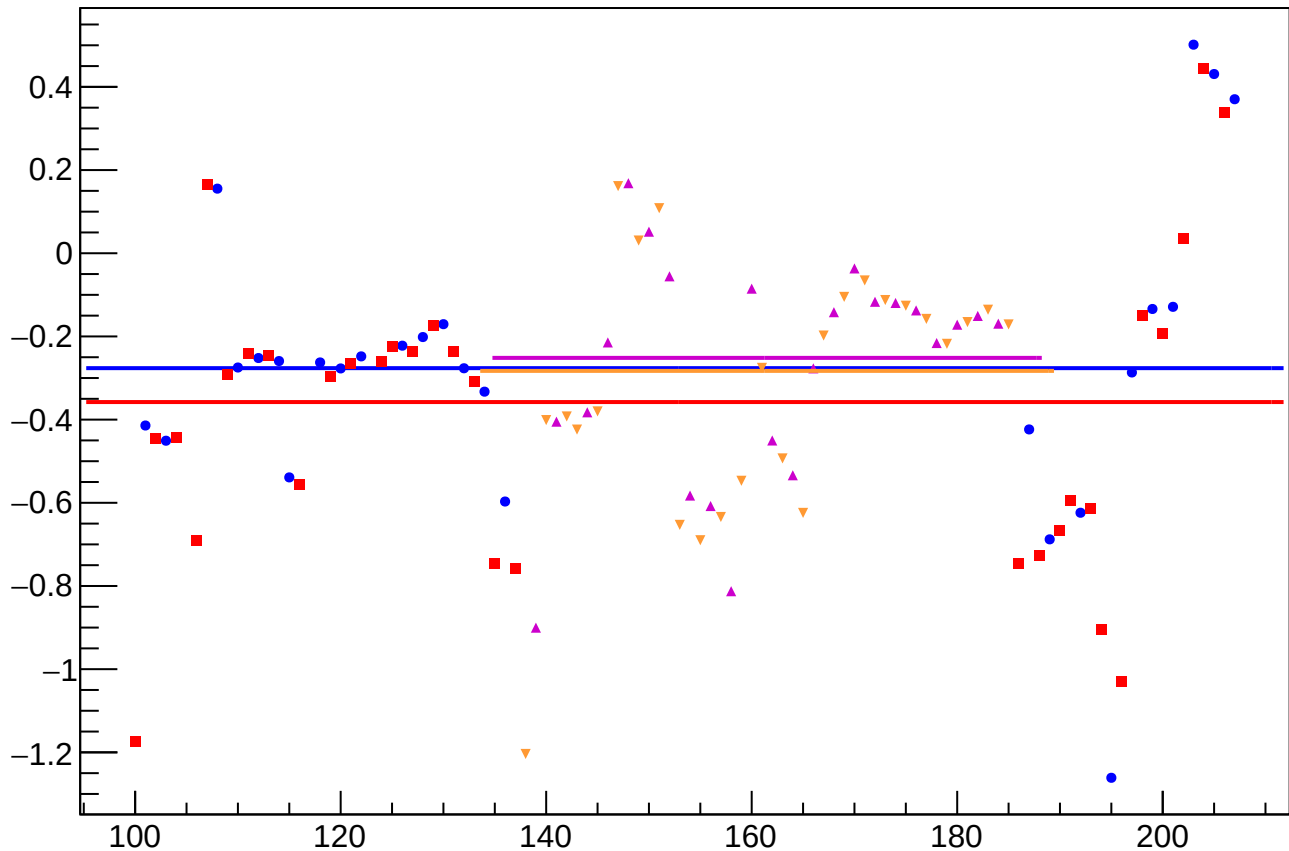
Left In: 0.003 $\pm$ 0.000  $\chi^2$ /NDF:557113.5/22

+ sign 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 11808961.6/50

All: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 22314625.2/104

- sign 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 10505556.1/53

# yield\_bpm0l07X\_mean vs Slug



Right In: -0.276+/-0.000  $\chi^2/\text{NDF}$ : 8432397742.3/25

Left Out: -0.283+/-0.000  $\chi^2/\text{NDF}$ : 9343511244.8/24

Right Out: -0.358+/-0.000  $\chi^2/\text{NDF}$ : 8753352939.0/30

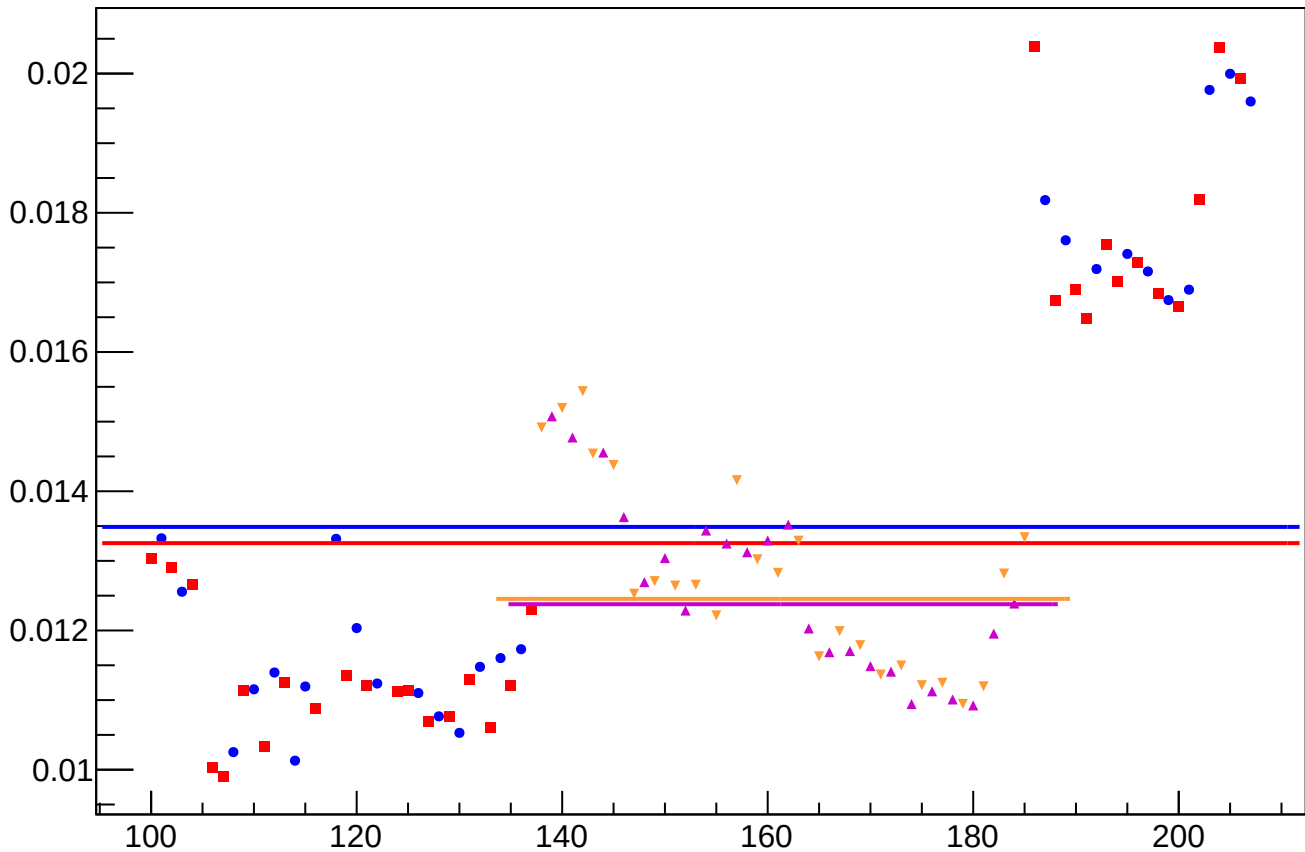
Left In: -0.252+/-0.000  $\chi^2/\text{NDF}$ : 7167367678.6/22

+ sign -0.280+/-0.000  $\chi^2/\text{NDF}$ : 17777893594.1/50

All: -0.289+/-0.000  $\chi^2/\text{NDF}$ : 34279041416.3/100

- sign -0.297+/-0.000  $\chi^2/\text{NDF}$ : 16471976185.4/53

# yield\_bpm0l07X\_rms vs Slug



Right In: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 1458878.5/25

Left Out: 0.012+/-0.000  $\chi^2/\text{NDF}$ :341430.5/24

Right Out: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 1765241.0/30

Left In: 0.012+/-0.000  $\chi^2/\text{NDF}$ :326925.9/22

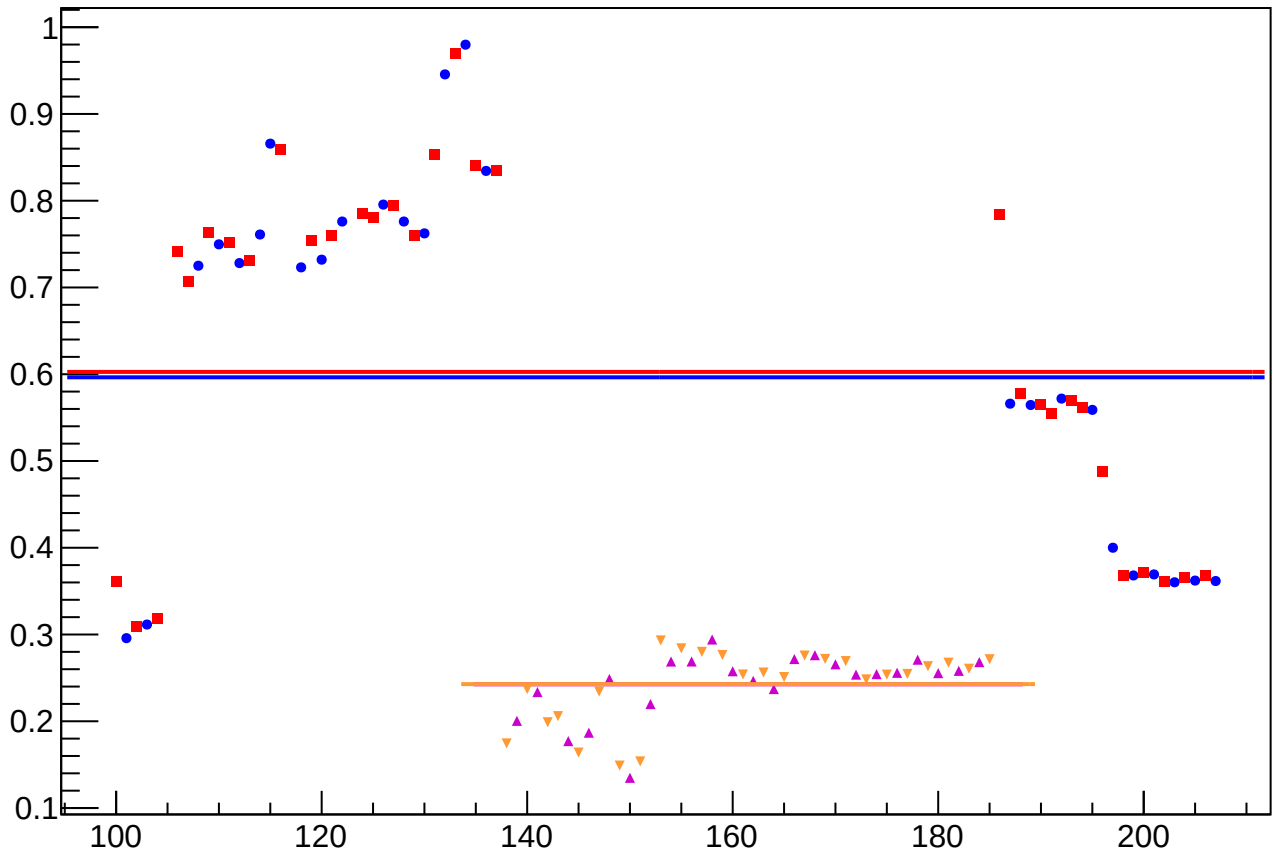
+ sign 0.013+/-0.000  $\chi^2/\text{NDF}$ : 1898582.1/50

All: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 4067980.6/104

- sign 0.013+/-0.000  $\chi^2/\text{NDF}$ : 2167384.2/53



# yield\_bpm0l07Y\_mean vs Slug



Right In: 0.596 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 89921629363.1/25

Left Out: 0.243 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7290530687.7/24

Right Out: 0.603 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 85499510757.2/30

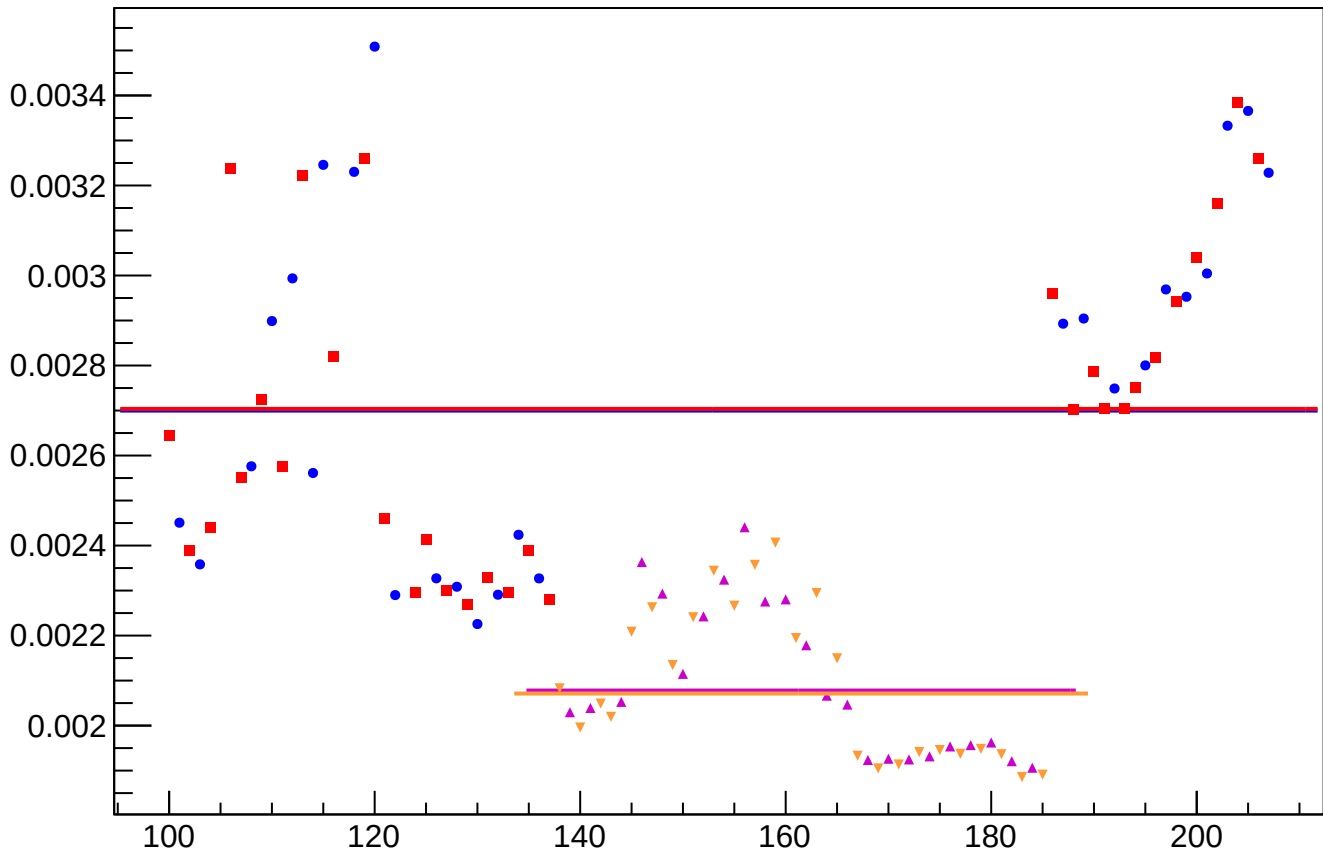
Left In: 0.243 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 5781231269.1/22

+ sign 0.350 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 266576990758.8/50

All: 0.357 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 542126551521.0

- sign 0.364 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 274936364983.3/53

# yield\_bpm0l07Y\_rms vs Slug



Right In: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 548385.8/25

Left Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF:233799.0/24

Right Out: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 471848.6/30

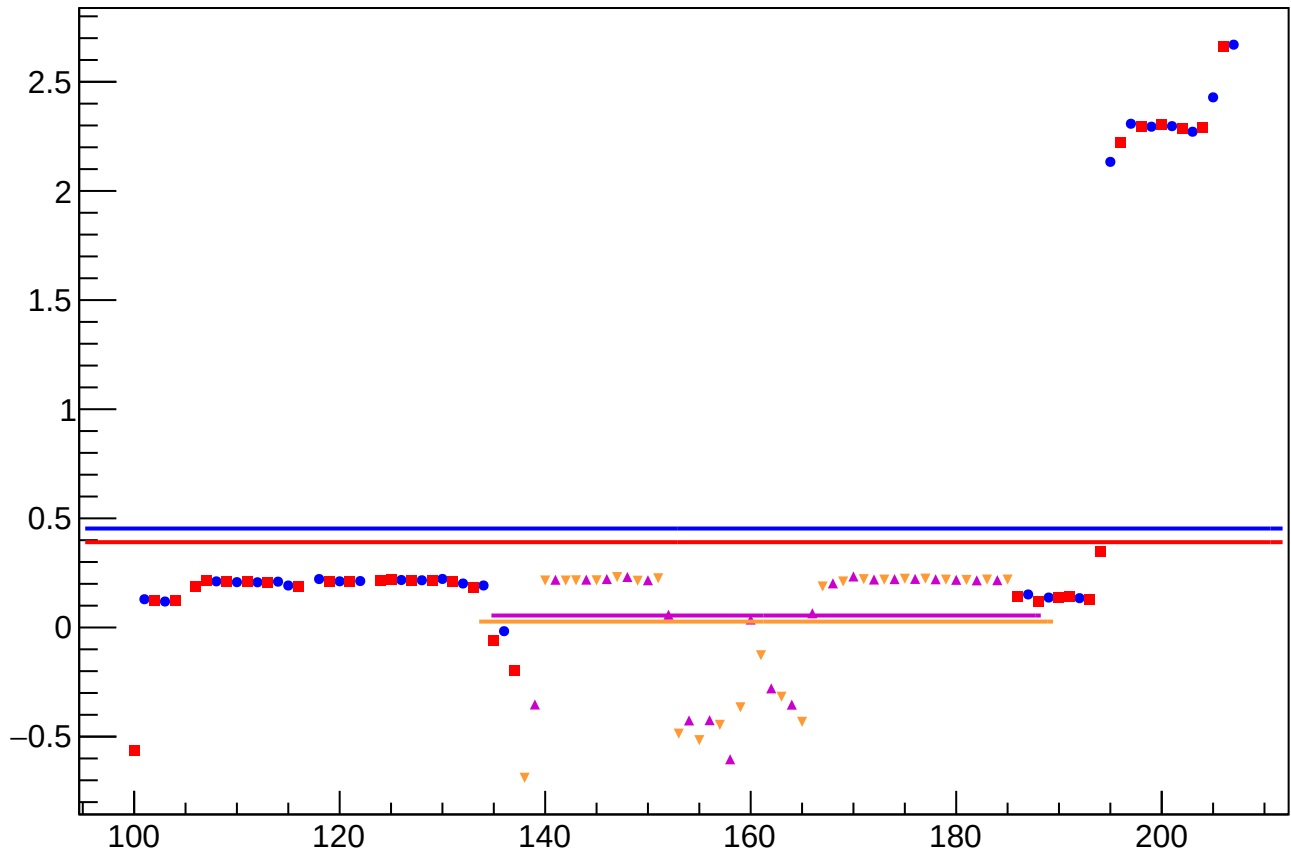
Left In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF:211544.0/22

+ sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 1852611.4/50

All: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 3649836.4/104

- sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 1792631.1/53

# yield\_bpm0l08X\_mean vs Slug



Right In: 0.453+/-0.000  $\chi^2/\text{NDF}$ : 48017513248.8/25

Left Out: 0.027+/-0.000  $\chi^2/\text{NDF}$ : 12975171876.0/24

Right Out: 0.391+/-0.000  $\chi^2/\text{NDF}$ : 46202043865.5/30

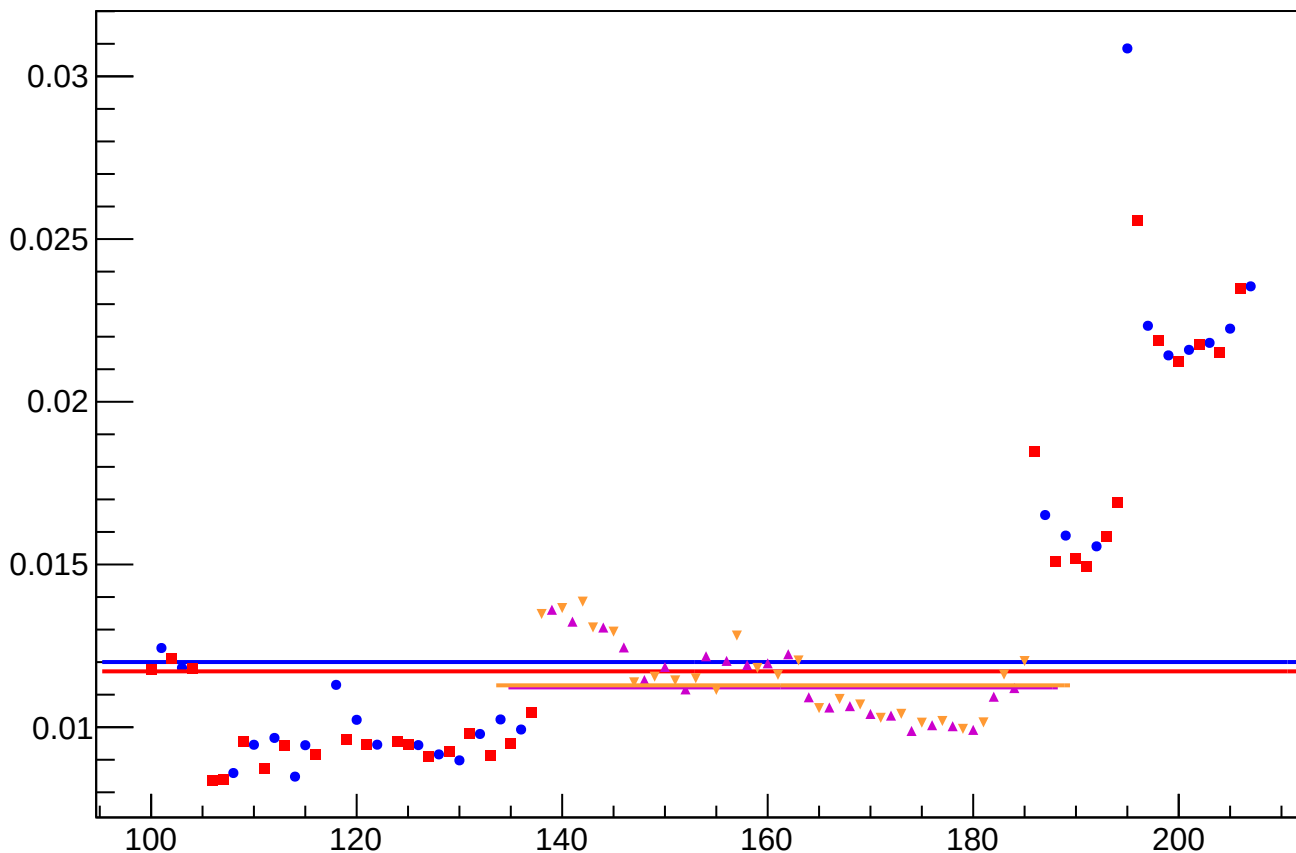
Left In: 0.055+/-0.000  $\chi^2/\text{NDF}$ : 9704180322.0/22

+ sign 0.189+/-0.000  $\chi^2/\text{NDF}$ : 70930057280.0/50

All: 0.194+/-0.000  $\chi^2/\text{NDF}$ : 133502259577.7

- sign 0.199+/-0.000  $\chi^2/\text{NDF}$ : 62561701012.4/53

# yield\_bpm0l08X\_rms vs Slug



Right In: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 3781686.5/25

Left Out: 0.011 $\pm$ 0.000  $\chi^2$ /NDF:328248.0/24

Right Out: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 3813418.0/30

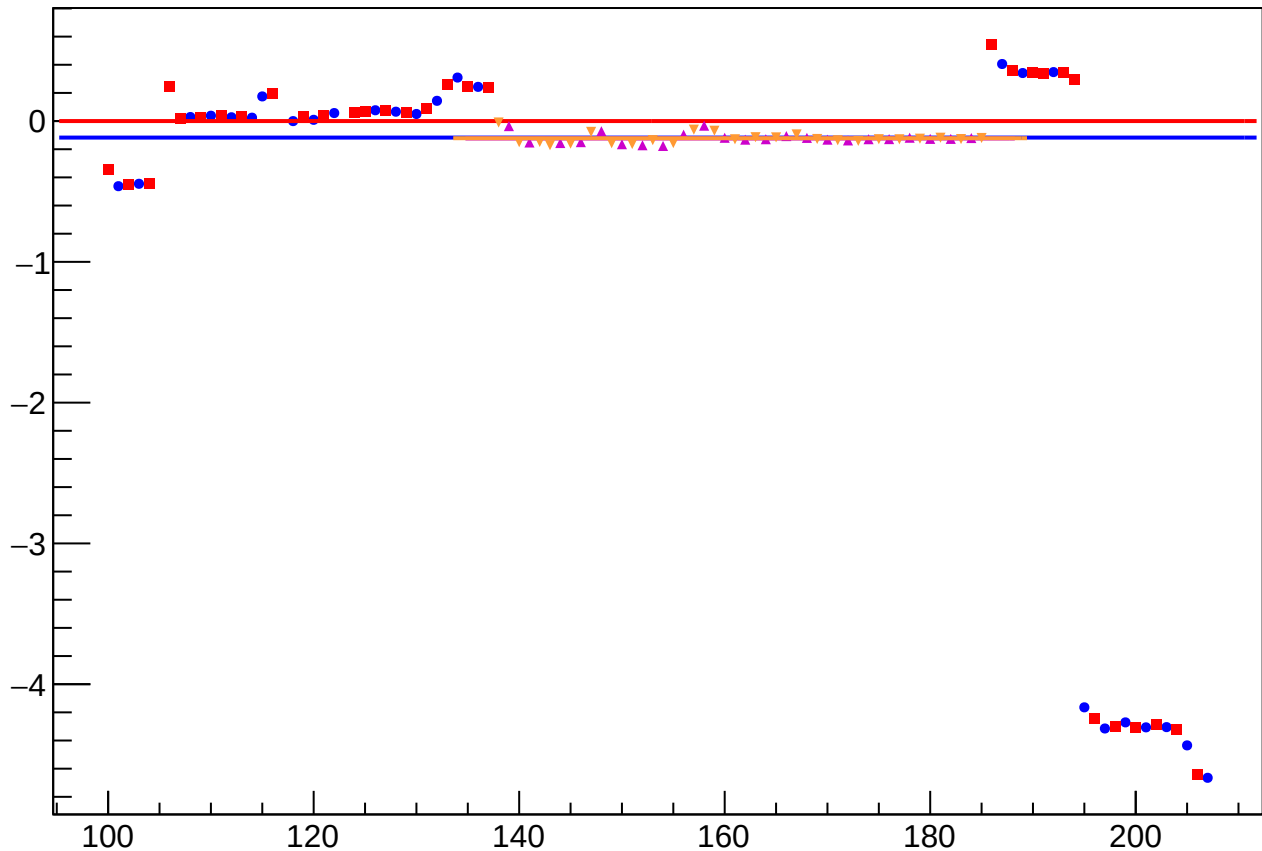
Left In: 0.011 $\pm$ 0.000  $\chi^2$ /NDF:315246.6/22

+ sign 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 4165976.6/50

All: 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 8327040.3/104

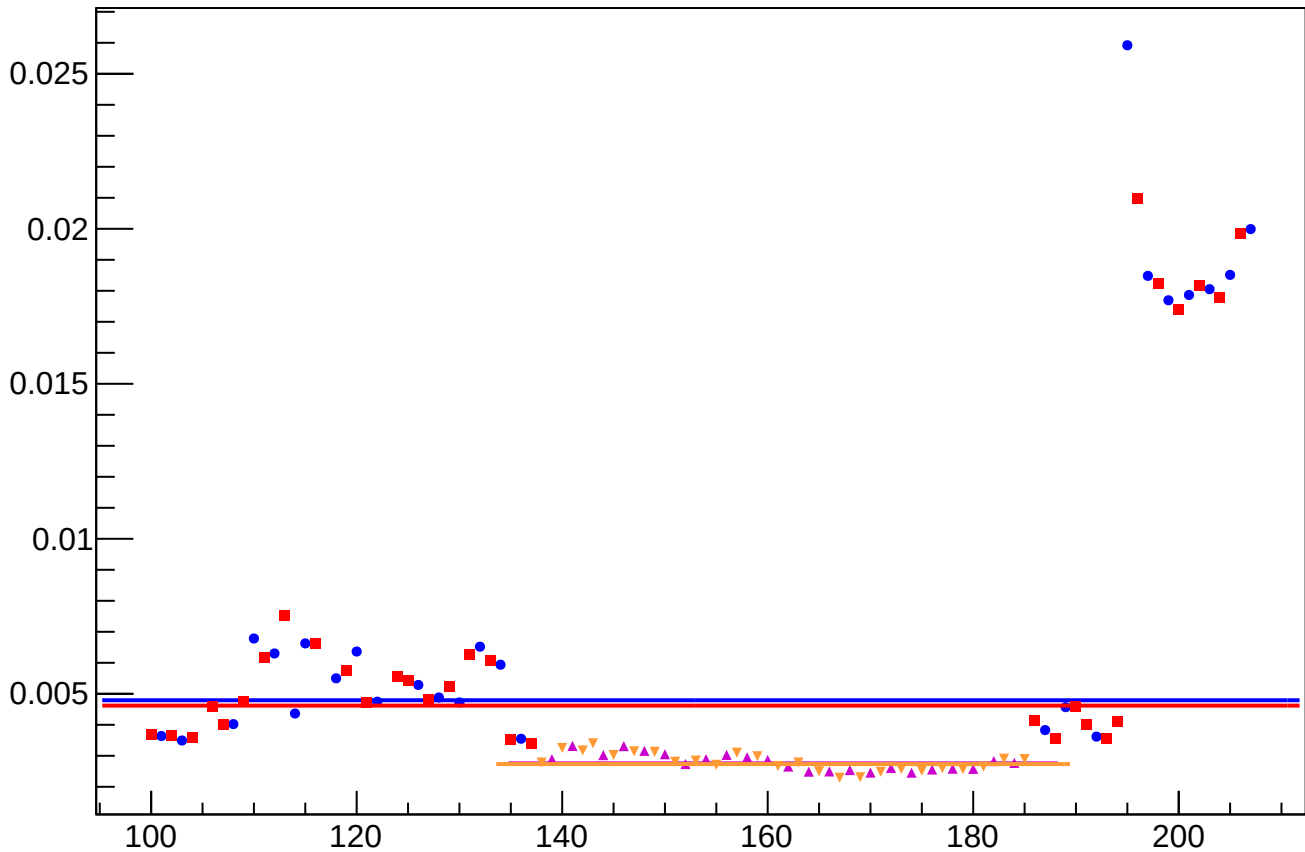
- sign 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 4157362.8/53

# yield\_bpm0l08Y\_mean vs Slug



|                              |                                  |                           |                                  |
|------------------------------|----------------------------------|---------------------------|----------------------------------|
| Right In: -0.117 $\pm$ 0.000 | $\chi^2$ /NDF: 345892766385.8/25 | + sign -0.121 $\pm$ 0.000 | $\chi^2$ /NDF: 348822947628.6/50 |
| Left Out: -0.122 $\pm$ 0.000 | $\chi^2$ /NDF: 2922583819.6/24   | All: -0.110 $\pm$ 0.000   | $\chi^2$ /NDF: 700804027142.1    |
| Right Out: 0.000 $\pm$ 0.000 | $\chi^2$ /NDF: 341680073955.0/30 | - sign -0.100 $\pm$ 0.000 | $\chi^2$ /NDF: 351316346412.8/53 |
| Left In: -0.124 $\pm$ 0.000  | $\chi^2$ /NDF: 2809457047.2/22   |                           |                                  |

# yield\_bpm0l08Y\_rms vs Slug



Right In:  $0.005 \pm 0.000$   $\chi^2/\text{NDF}$ : 7785088.4/25

Left Out:  $0.003 \pm 0.000$   $\chi^2/\text{NDF}$ : 391885.5/24

Right Out:  $0.005 \pm 0.000$   $\chi^2/\text{NDF}$ : 7015888.1/30

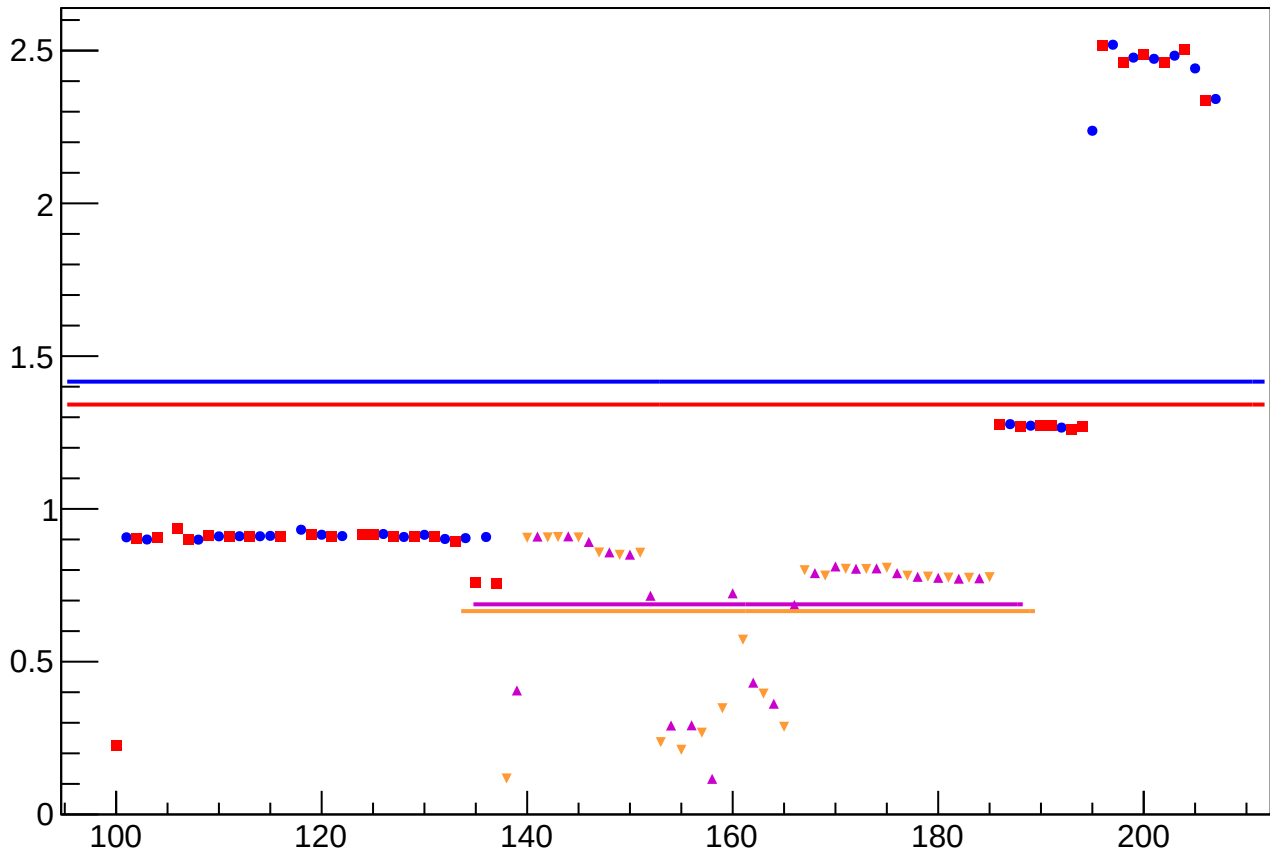
Left In:  $0.003 \pm 0.000$   $\chi^2/\text{NDF}$ : 293113.7/22

+ sign  $0.003 \pm 0.000$   $\chi^2/\text{NDF}$ : 11357047.3/50

All:  $0.003 \pm 0.000$   $\chi^2/\text{NDF}$ : 21774869.0/104

- sign  $0.003 \pm 0.000$   $\chi^2/\text{NDF}$ : 10402853.4/53

# yield\_bpm0l09X\_mean vs Slug



Right In: 1.417 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 45456198126.7/25

Left Out: 0.666 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 9213839939.9/24

Right Out: 1.342 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 46378264196.3/30

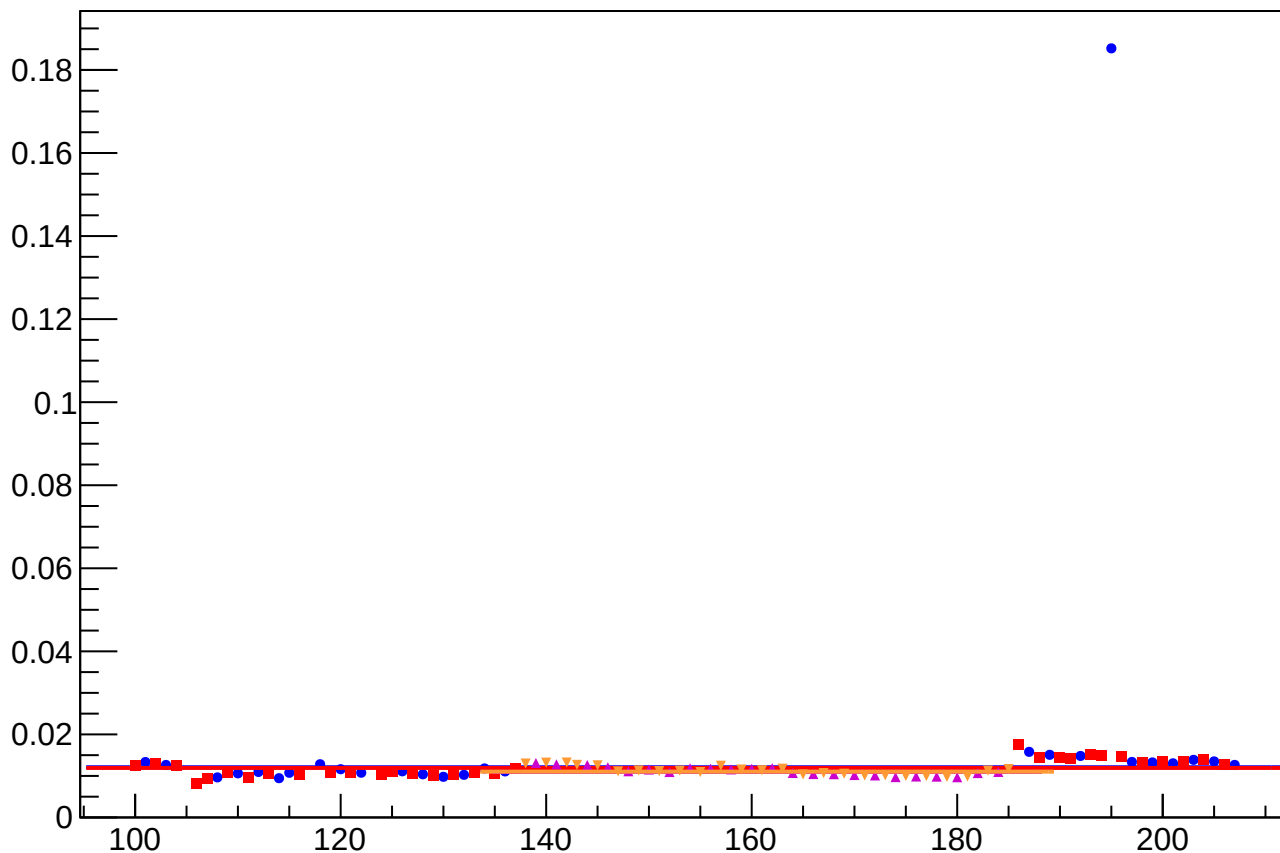
Left In: 0.688 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 6999062215.3/22

+ sign 0.950 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 87028960108.4/50

All: 0.957 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 166602644411.0

- sign 0.964 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 79551489441.9/53

# yield\_bpm0l09X\_rms vs Slug



Right In: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 1999686.0/25

Left Out: 0.011 $\pm$ 0.000  $\chi^2$ /NDF:299445.0/24

Right Out: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 786967.3/30

Left In: 0.011 $\pm$ 0.000  $\chi^2$ /NDF:287650.0/22

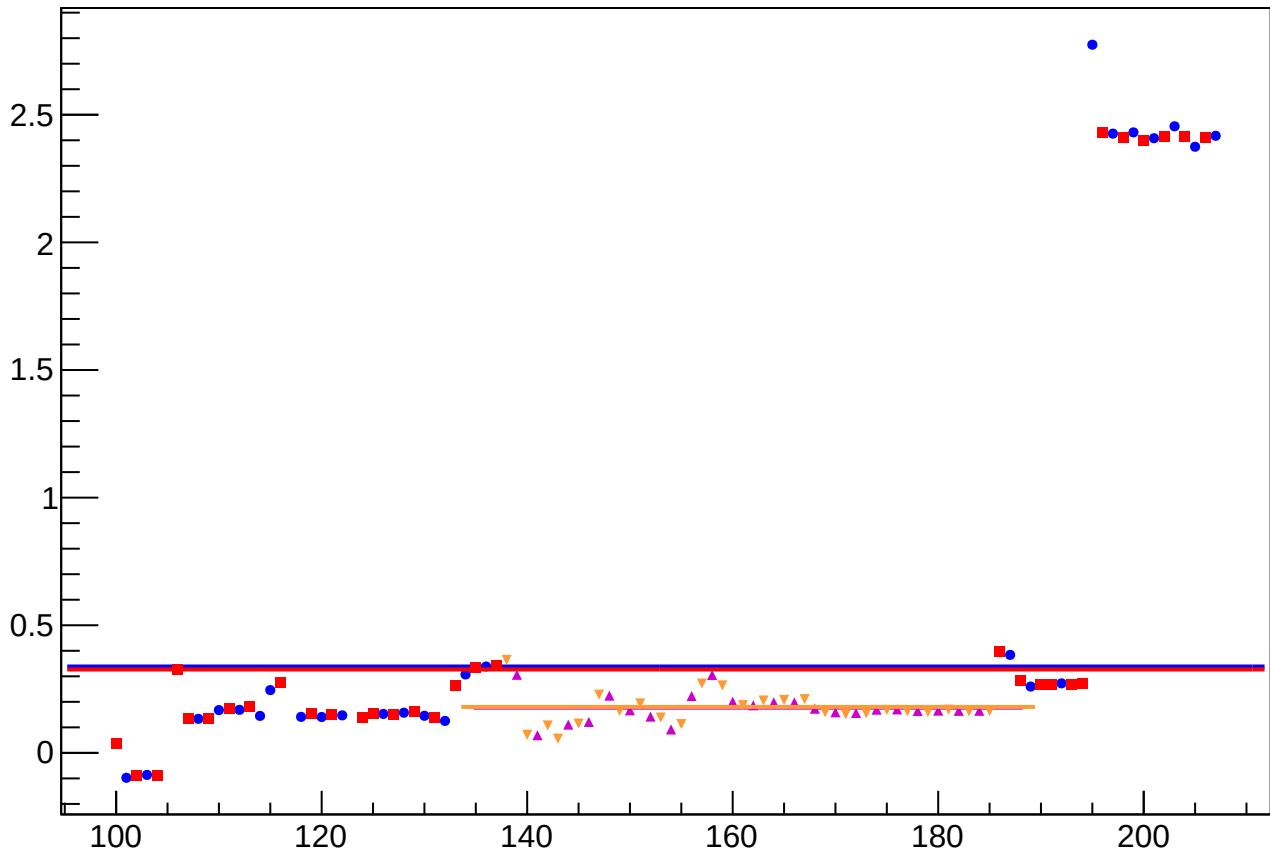
+ sign 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 2427164.5/50

All: 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 3616135.3/104

- sign 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 1188140.5/53



# yield\_bpm0l09Y\_mean vs Slug



Right In: 0.338 $\pm$ 0.000  $\chi^2$ /NDF: 152722098819.3/25

Left Out: 0.180 $\pm$ 0.000  $\chi^2$ /NDF: 6448853953.3/24

Right Out: 0.327 $\pm$ 0.000  $\chi^2$ /NDF: 140811633874.6/30

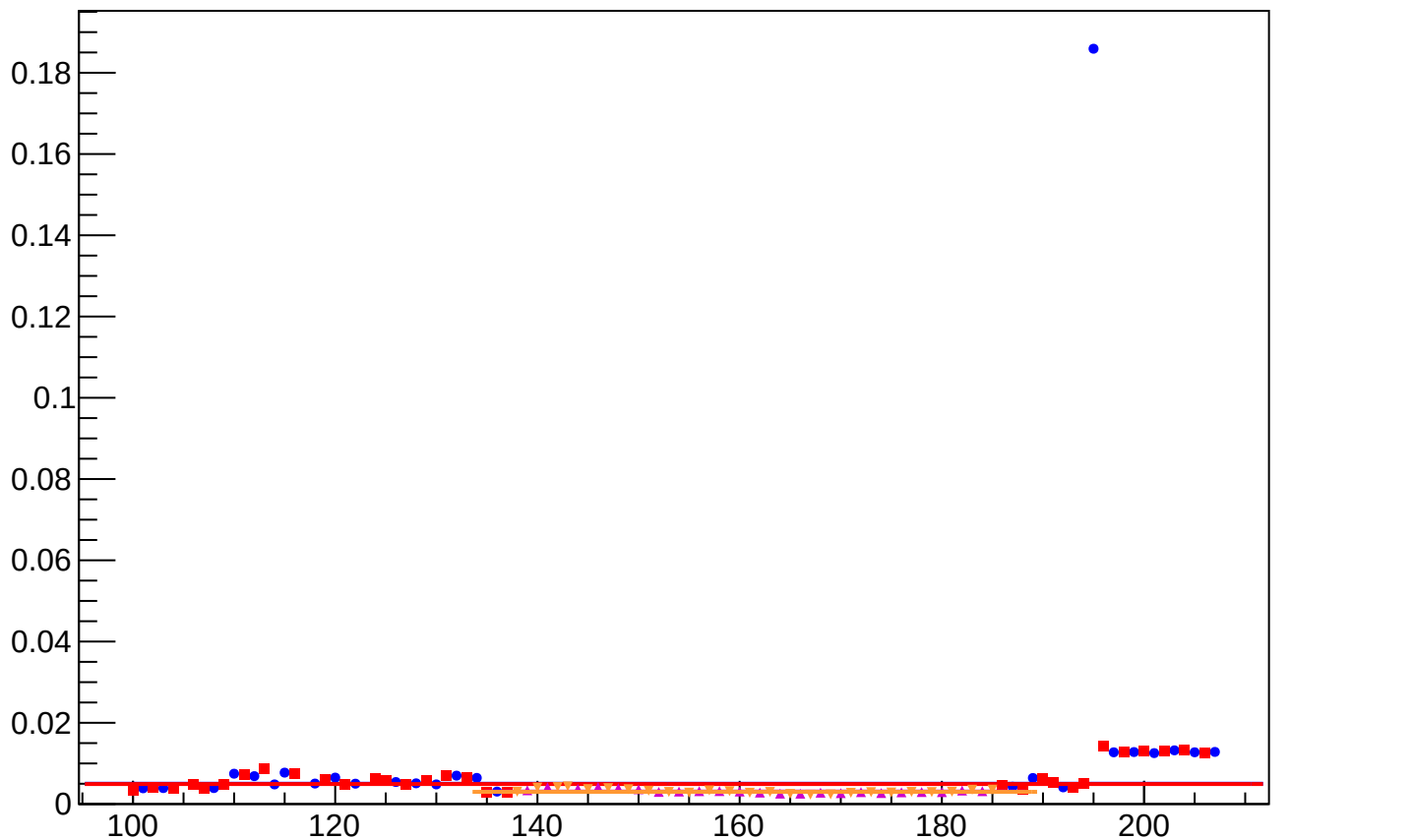
Left In: 0.177 $\pm$ 0.000  $\chi^2$ /NDF: 4620854117.7/22

+ sign 0.208 $\pm$ 0.000  $\chi^2$ /NDF: 167709064270.9/50

All: 0.208 $\pm$ 0.000  $\chi^2$ /NDF: 321697649502.5

- sign 0.209 $\pm$ 0.000  $\chi^2$ /NDF: 153984773442.2/53

# yield\_bpm0l09Y\_rms vs Slug



Right In: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 6713895.8/25

Left Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ :888350.2/24

Right Out: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 5254901.4/30

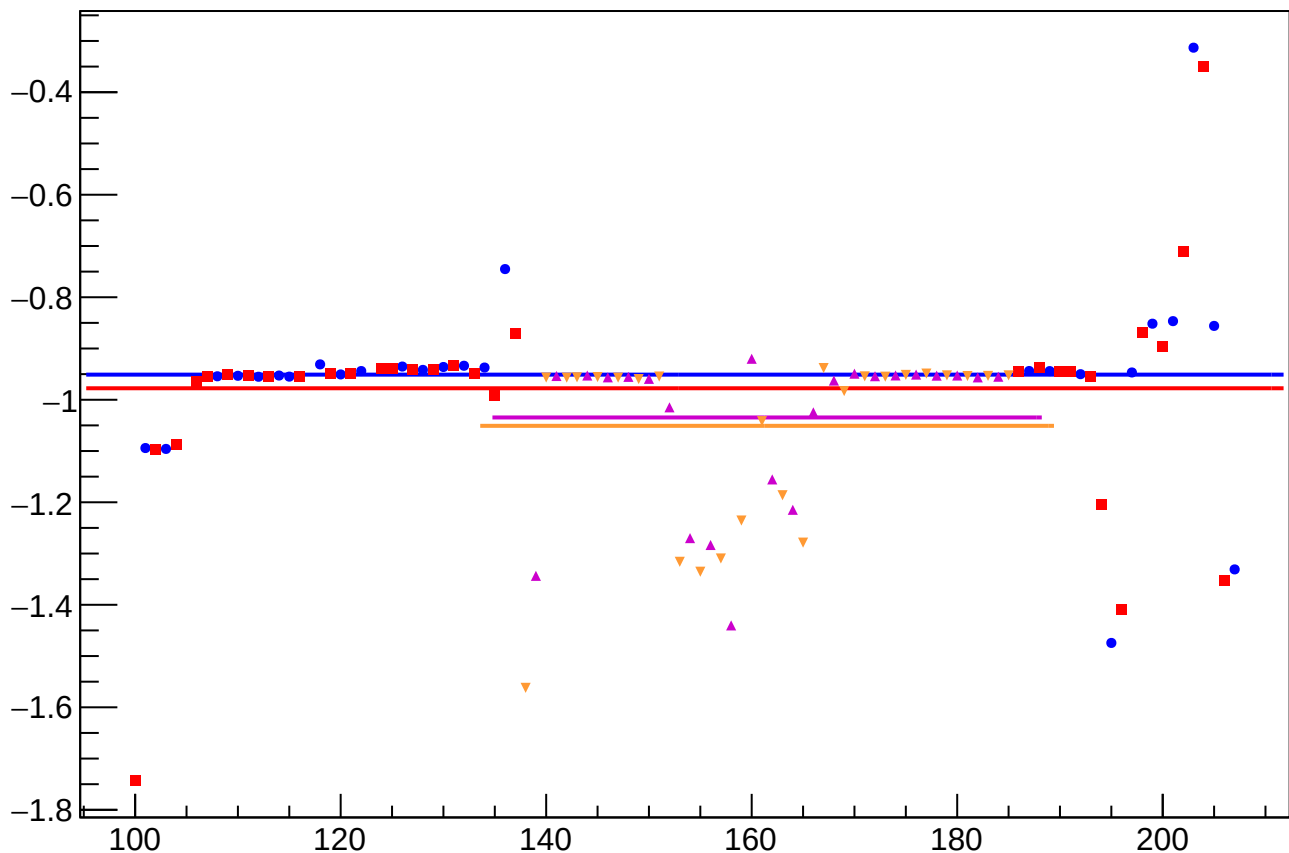
Left In: 0.003+/-0.000  $\chi^2/\text{NDF}$ :587459.6/22

+ sign 0.003+/-0.000  $\chi^2/\text{NDF}$ : 10317998.2/50

All: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 18824680.7/104

- sign 0.003+/-0.000  $\chi^2/\text{NDF}$ : 8471140.1/53

# yield\_bpm0l10X\_mean vs Slug



Right In:  $-0.951 \pm 0.000$   $\chi^2/\text{NDF}: 4078807093.2/25$

Left Out:  $-1.051 \pm 0.000$   $\chi^2/\text{NDF}: 5082084184.4/24$

Right Out:  $-0.978 \pm 0.000$   $\chi^2/\text{NDF}: 4082143119.4/30$

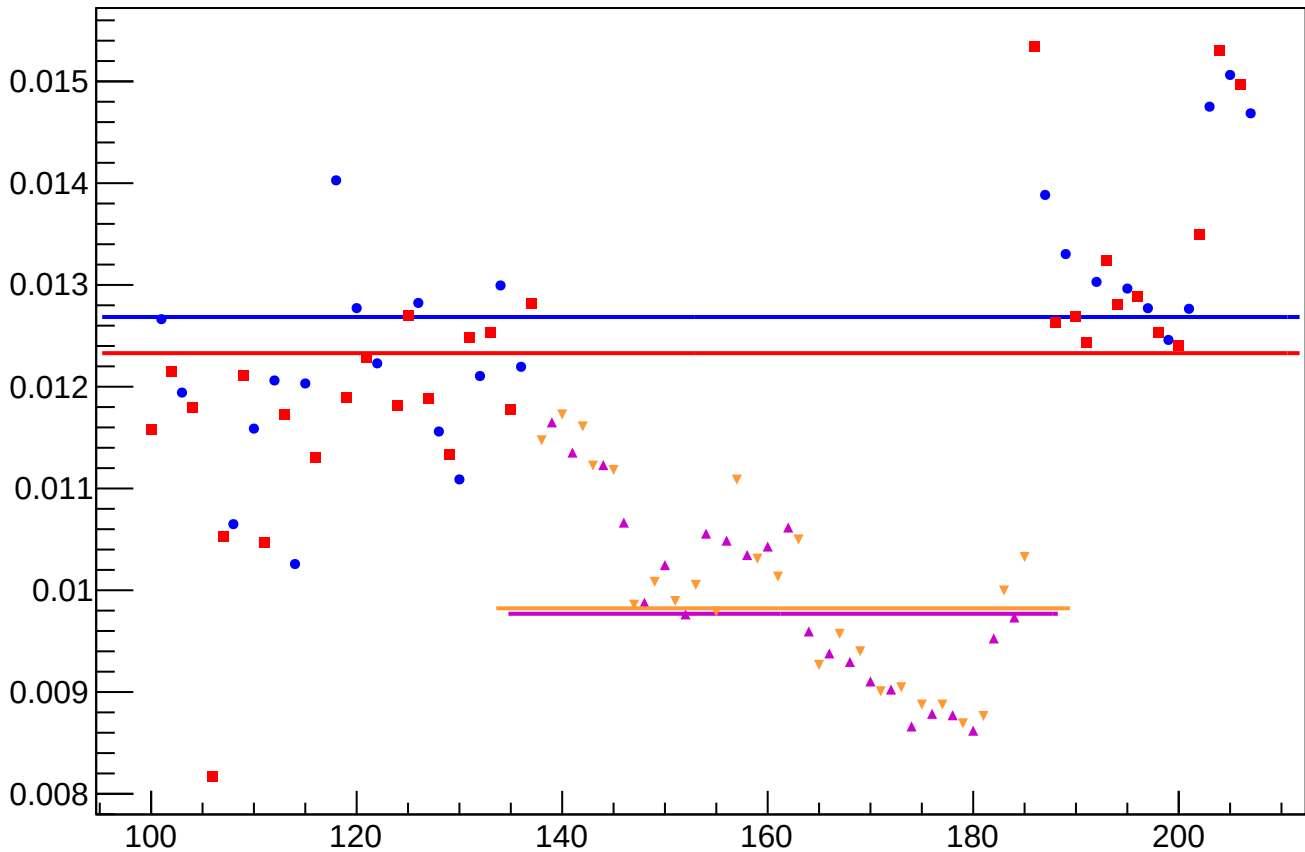
Left In:  $-1.035 \pm 0.000$   $\chi^2/\text{NDF}: 3925761523.9/22$

+ sign  $-1.019 \pm 0.000$   $\chi^2/\text{NDF}: 9767056660.9/50$

All:  $-1.017 \pm 0.000$   $\chi^2/\text{NDF}: 17993932368.6/100$

- sign  $-1.014 \pm 0.000$   $\chi^2/\text{NDF}: 8223016655.7/53$

# yield\_bpm0l10X\_rms vs Slug



Right In: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 213838.3/25

Left Out: 0.010+/-0.000  $\chi^2/\text{NDF}$ : 293862.1/24

Right Out: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 404517.4/30

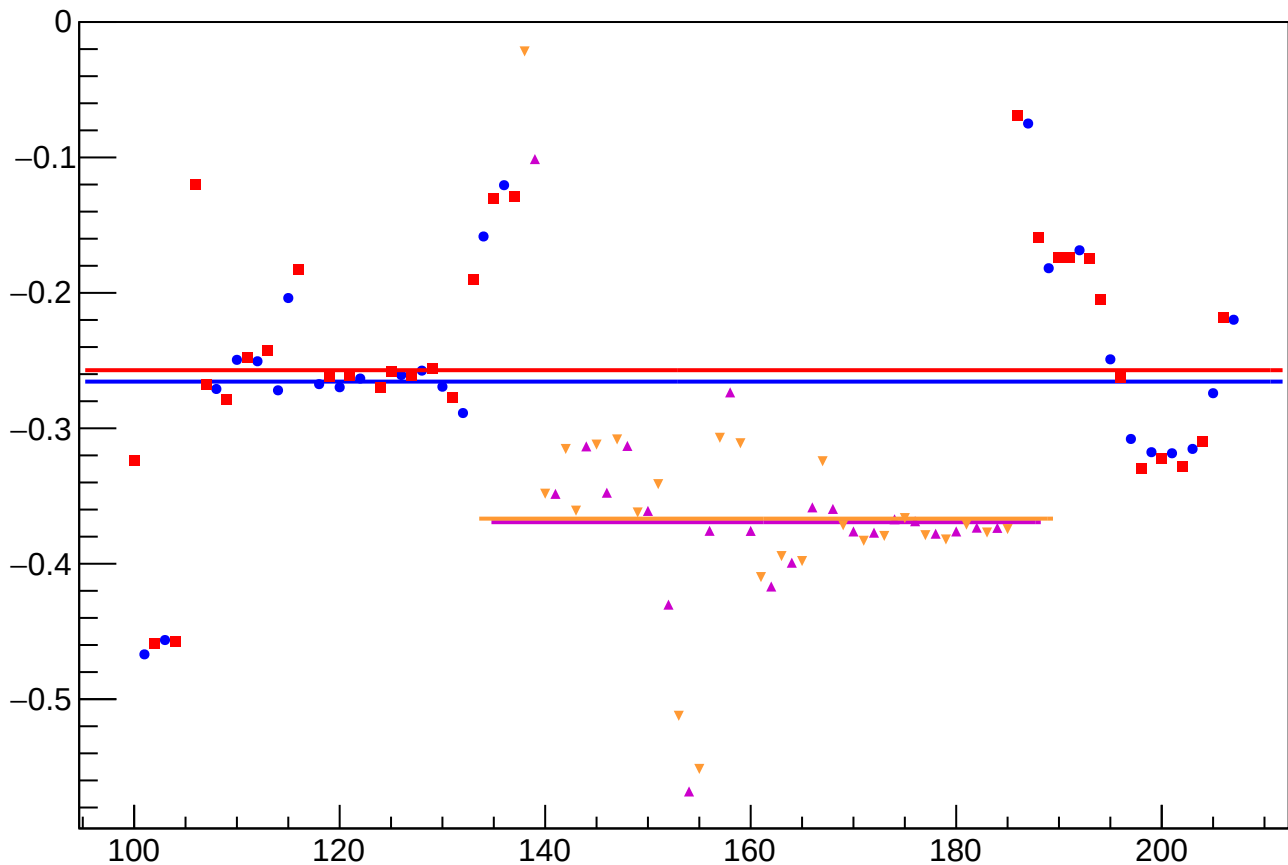
Left In: 0.010+/-0.000  $\chi^2/\text{NDF}$ : 281817.4/22

+ sign 0.011+/-0.000  $\chi^2/\text{NDF}$ : 1502983.3/50

All: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 3059316.6/104

- sign 0.011+/-0.000  $\chi^2/\text{NDF}$ : 1555935.7/53

# yield\_bpm0l10Y\_mean vs Slug



Right In:  $-0.266 \pm 0.000$   $\chi^2/\text{NDF}$ : 7869555224.7/25

Left Out:  $-0.367 \pm 0.000$   $\chi^2/\text{NDF}$ : 11945266102.2/24

Right Out:  $-0.257 \pm 0.000$   $\chi^2/\text{NDF}$ : 8313883953.4/30

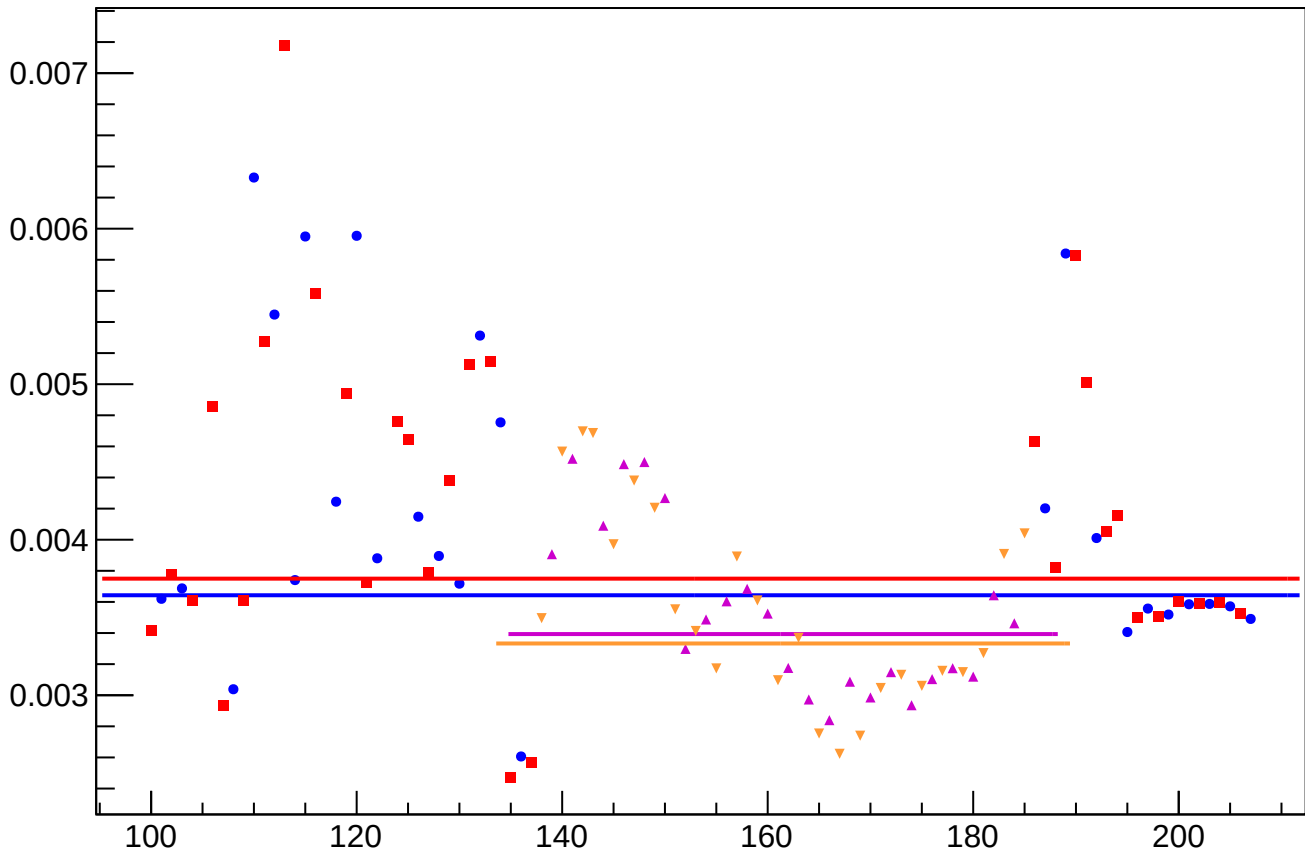
Left In:  $-0.369 \pm 0.000$   $\chi^2/\text{NDF}$ : 7581323027.3/22

+ sign  $-0.328 \pm 0.000$   $\chi^2/\text{NDF}$ : 26054722611.5/50

All:  $-0.325 \pm 0.000$   $\chi^2/\text{NDF}$ : 49572758172.9/100

- sign  $-0.322 \pm 0.000$   $\chi^2/\text{NDF}$ : 23483142487.5/53

# yield\_bpm0l10Y\_rms vs Slug



Right In: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 907378.0/25

Left Out: 0.003 $\pm$ 0.000  $\chi^2$ /NDF:857705.2/24

Right Out: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 1091204.0/30

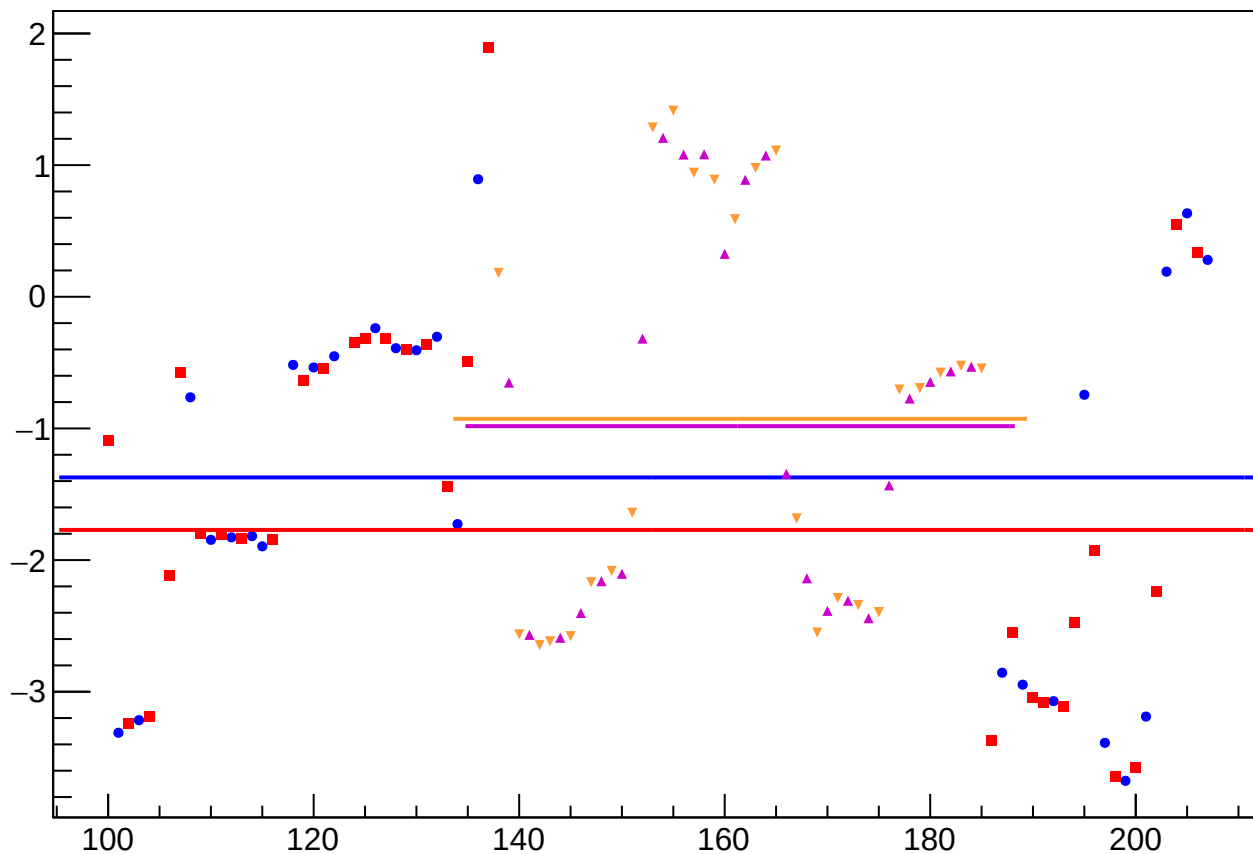
Left In: 0.003 $\pm$ 0.000  $\chi^2$ /NDF:633604.8/22

+ sign 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 1882319.9/50

All: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 3780501.9/104

- sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 1877792.6/53

# yield\_bpm0r03X\_mean vs Slug



Right In: -1.372+/-0.000  $\chi^2/\text{NDF}$ : 6280749533.1/25

Left Out: -0.927+/-0.000  $\chi^2/\text{NDF}$ : 7248712470.7/24

Right Out: -1.771+/-0.000  $\chi^2/\text{NDF}$ : 5376845991.2/30

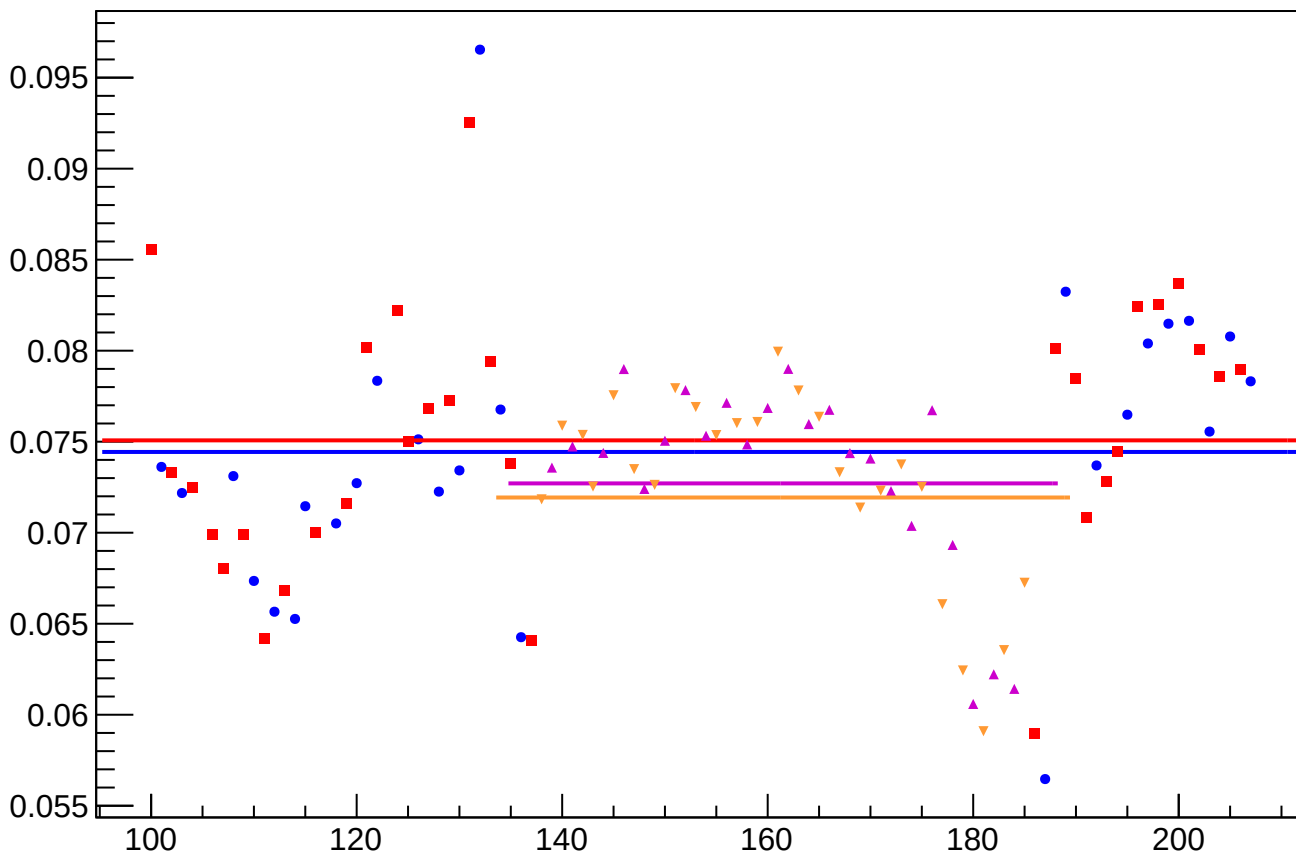
Left In: -0.983+/-0.000  $\chi^2/\text{NDF}$ : 5918975536.0/22

+ sign -1.113+/-0.000  $\chi^2/\text{NDF}$ : 13833142778.2/50

All: -1.228+/-0.000  $\chi^2/\text{NDF}$ : 26258506341.6

- sign -1.343+/-0.000  $\chi^2/\text{NDF}$ : 12258959287.9/53

# yield\_bpm0r03X\_rms vs Slug



Right In: 0.074 $\pm$ 0.000  $\chi^2$ /NDF: 222174.2/25

Left Out: 0.072 $\pm$ 0.000  $\chi^2$ /NDF:235534.6/24

Right Out: 0.075 $\pm$ 0.000  $\chi^2$ /NDF: 243910.3/30

Left In: 0.073 $\pm$ 0.000  $\chi^2$ /NDF:197009.2/22

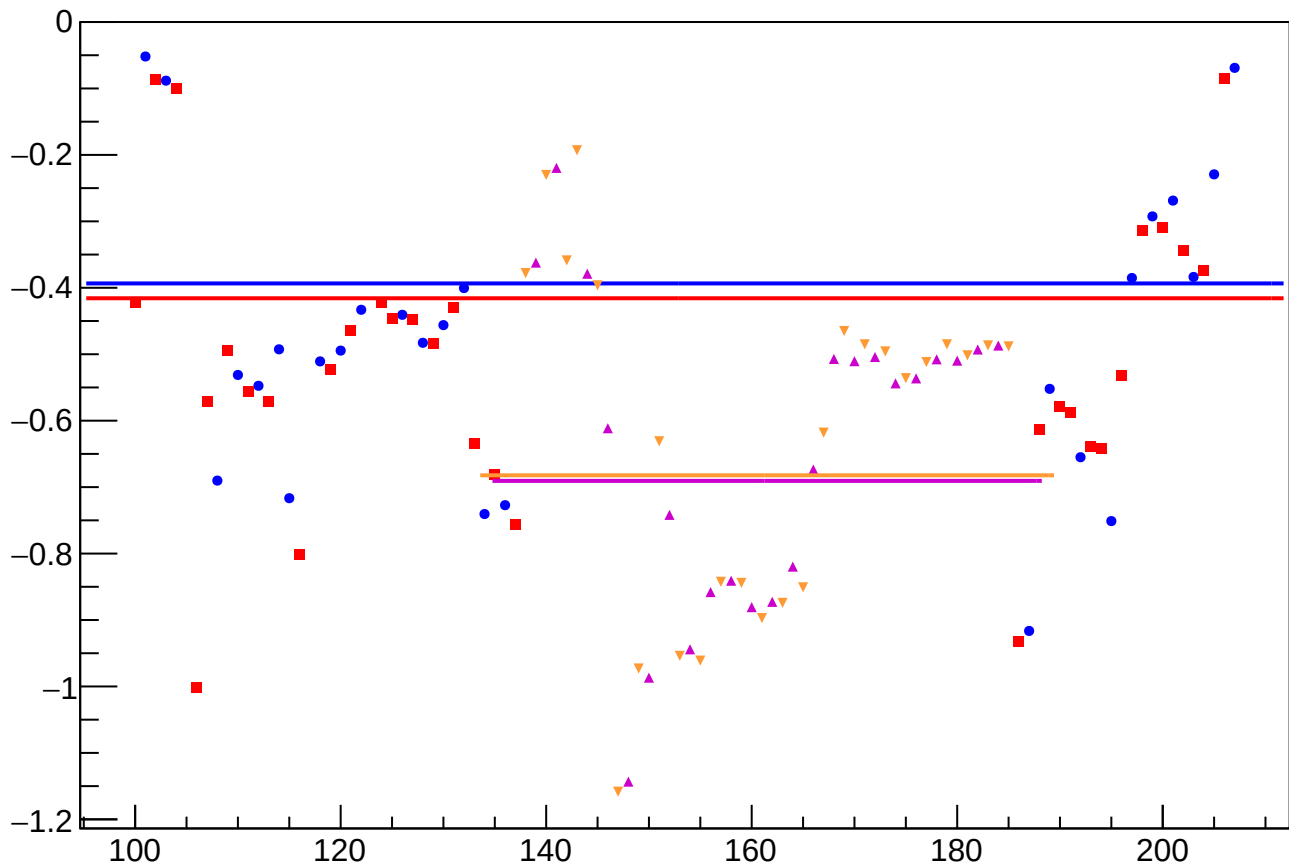
+ sign 0.073 $\pm$ 0.000  $\chi^2$ /NDF: 476894.7/50

All: 0.073 $\pm$ 0.000  $\chi^2$ /NDF: 939261.5/104

- sign 0.074 $\pm$ 0.000  $\chi^2$ /NDF: 458245.0/53



# yield\_bpm0r03Y\_mean vs Slug



Right In: -0.393+/-0.000  $\chi^2/\text{NDF}$ : 10446079459.2/25

Left Out: -0.682+/-0.000  $\chi^2/\text{NDF}$ : 21823342960.4/24

Right Out: -0.416+/-0.000  $\chi^2/\text{NDF}$ : 8965842411.4/30

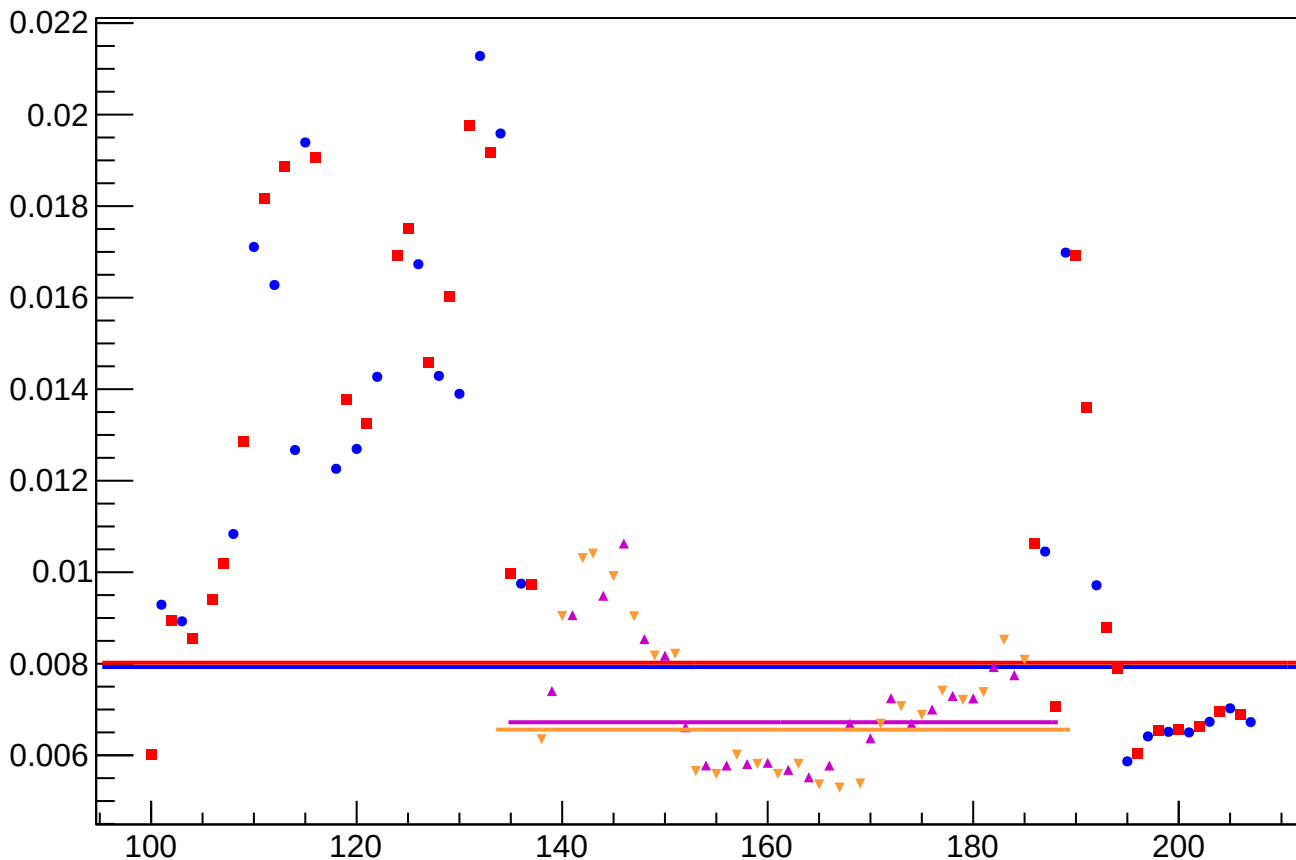
Left In: -0.691+/-0.000  $\chi^2/\text{NDF}$ : 16867819938.3/22

+ sign -0.588+/-0.000  $\chi^2/\text{NDF}$ : 43363222091.4/50

All: -0.590+/-0.000  $\chi^2/\text{NDF}$ : 79273341657.8

- sign -0.591+/-0.000  $\chi^2/\text{NDF}$ : 35906951866.6/53

# yield\_bpm0r03Y\_rms vs Slug



Right In: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 2944913.9/25

Left Out: 0.007+/-0.000  $\chi^2/\text{NDF}$ :1404221.4/24

Right Out: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 3116125.2/30

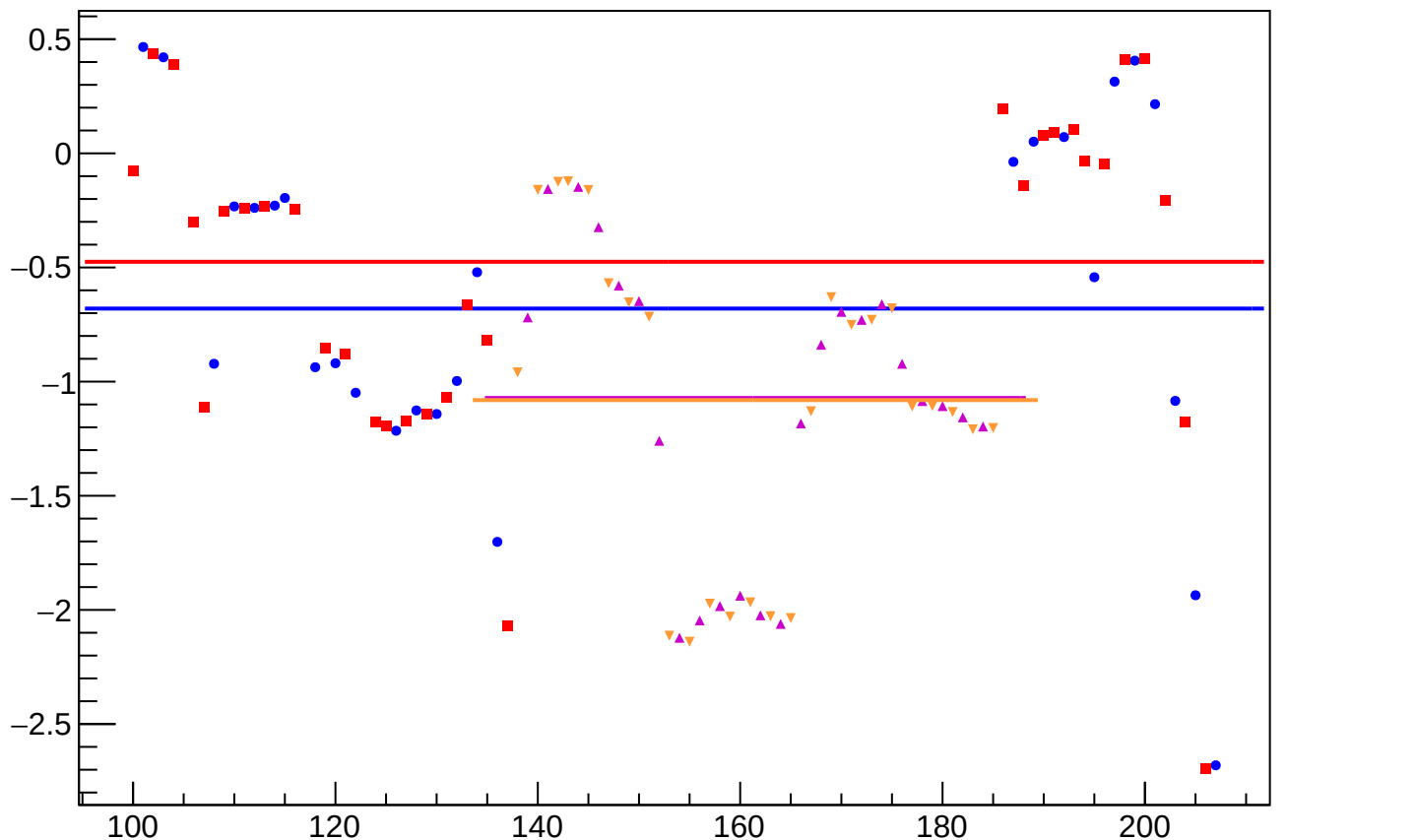
Left In: 0.007+/-0.000  $\chi^2/\text{NDF}$ :960755.3/22

+ sign 0.007+/-0.000  $\chi^2/\text{NDF}$ : 4847346.3/50

All: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 9395957.9/104

- sign 0.007+/-0.000  $\chi^2/\text{NDF}$ : 4528305.9/53

# yield\_bpm0r05X\_mean vs Slug



Right In:  $-0.680 \pm 0.000$   $\chi^2/\text{NDF}: 1341325576.3/25$

Left Out:  $-1.081 \pm 0.000$   $\chi^2/\text{NDF}: 1152285460.9/24$

Right Out:  $-0.475 \pm 0.000$   $\chi^2/\text{NDF}: 1232528582.4/30$

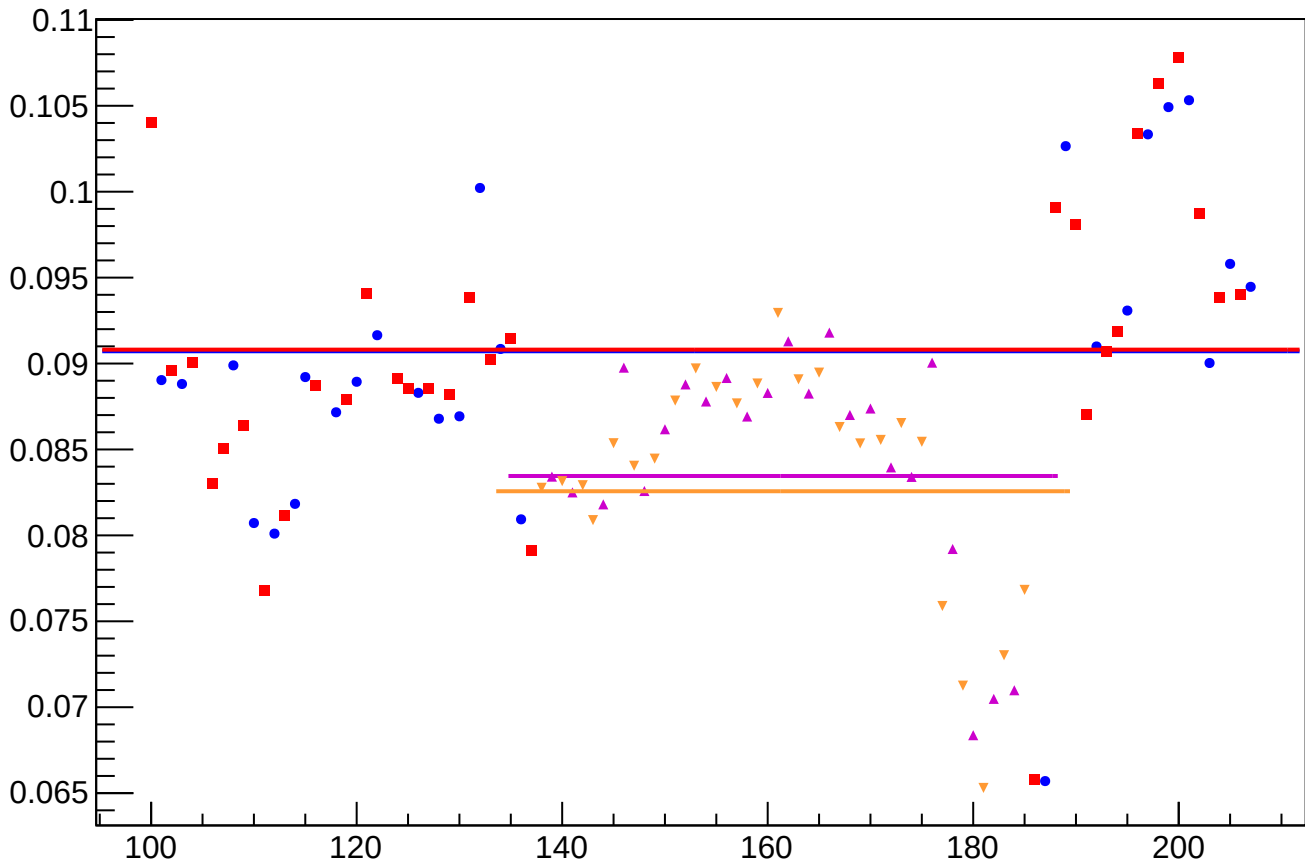
Left In:  $-1.072 \pm 0.000$   $\chi^2/\text{NDF}: 975623531.2/22$

+ sign  $-0.924 \pm 0.000$   $\chi^2/\text{NDF}: 2669478994.7/50$

All:  $-0.870 \pm 0.000$   $\chi^2/\text{NDF}: 5304101233.7/1$

- sign  $-0.814 \pm 0.000$   $\chi^2/\text{NDF}: 2606813024.6/53$

# yield\_bpm0r05X\_rms vs Slug



Right In: 0.091 $\pm$ 0.000  $\chi^2$ /NDF: 237693.3/25

Left Out: 0.083 $\pm$ 0.000  $\chi^2$ /NDF:291134.3/24

Right Out: 0.091 $\pm$ 0.000  $\chi^2$ /NDF: 327542.9/30

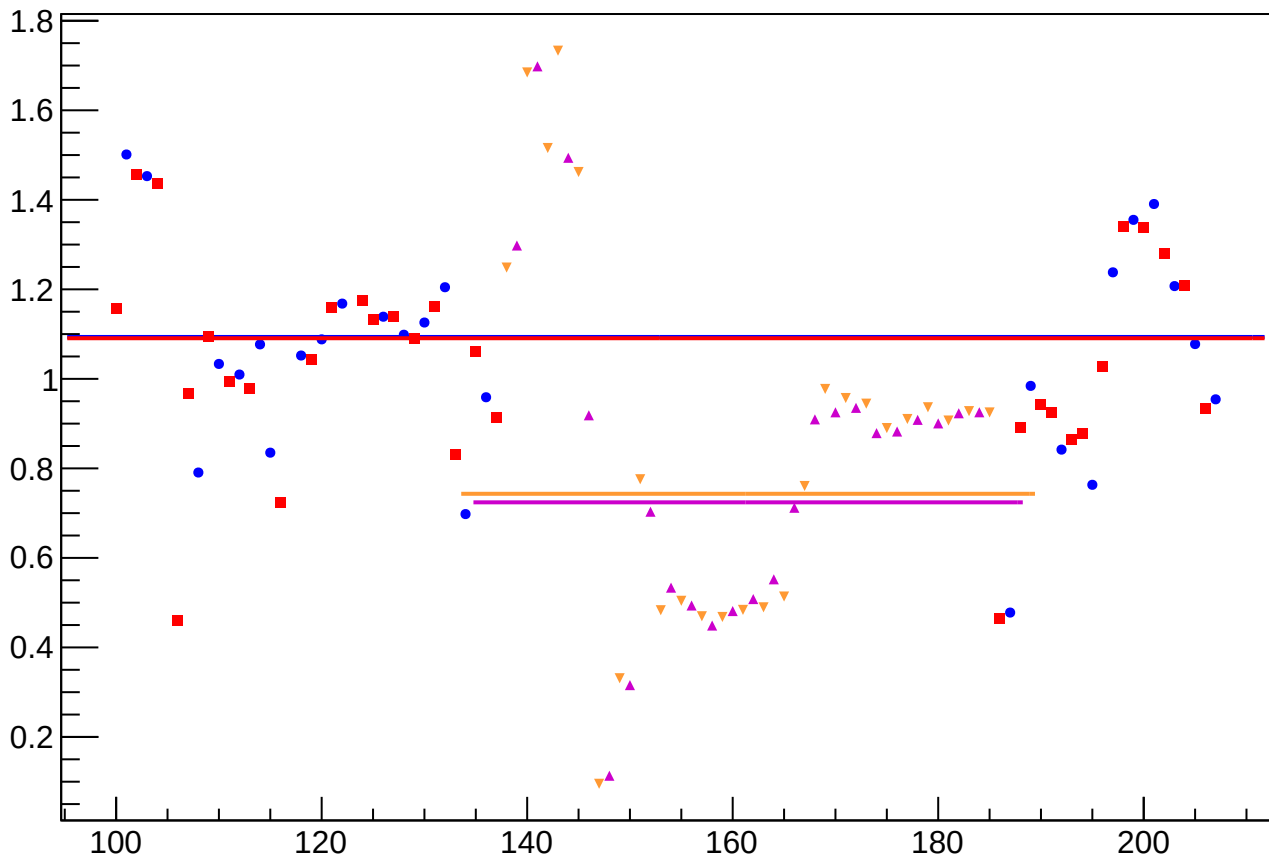
Left In: 0.083 $\pm$ 0.000  $\chi^2$ /NDF:238412.3/22

+ sign 0.086 $\pm$ 0.000  $\chi^2$ /NDF: 674029.5/50

All: 0.086 $\pm$ 0.000  $\chi^2$ /NDF: 1364656.9/104

- sign 0.087 $\pm$ 0.000  $\chi^2$ /NDF: 687079.0/53

# yield\_bpm0r05Y\_mean vs Slug



Right In: 1.094 $\pm$ 0.000  $\chi^2$ /NDF: 5234868565.0/25

Left Out: 0.743 $\pm$ 0.000  $\chi^2$ /NDF: 32581746516.6/24

Right Out: 1.091 $\pm$ 0.000  $\chi^2$ /NDF: 4960508288.2/30

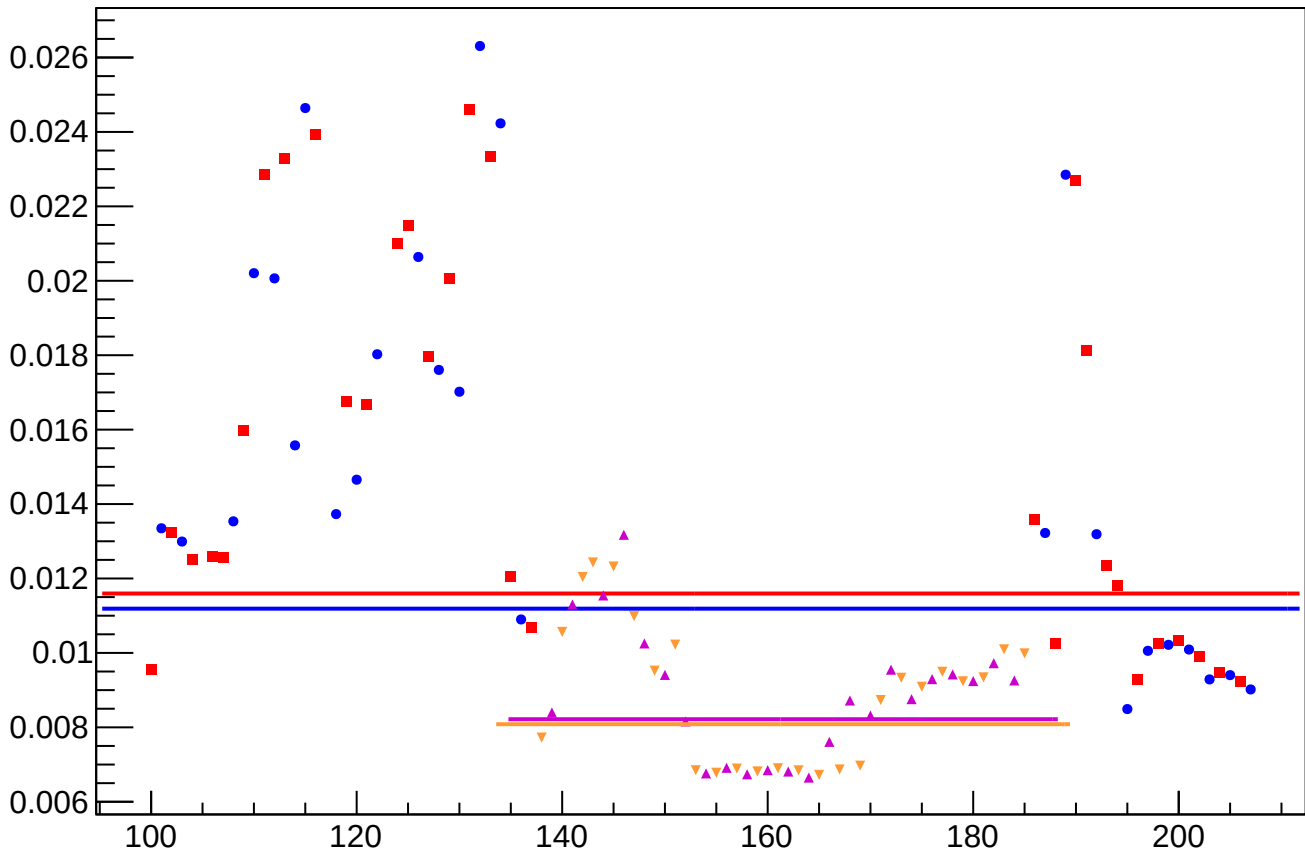
Left In: 0.724 $\pm$ 0.000  $\chi^2$ /NDF: 25654534031.9/22

+ sign 0.839 $\pm$ 0.000  $\chi^2$ /NDF: 46929610164.6/50

All: 0.836 $\pm$ 0.000  $\chi^2$ /NDF: 87363691904.9/100

- sign 0.832 $\pm$ 0.000  $\chi^2$ /NDF: 40425467319.3/53

# yield\_bpm0r05Y\_rms vs Slug



Right In: 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 2109209.4/25

Left Out: 0.008 $\pm$ 0.000  $\chi^2$ /NDF:1406307.1/24

Right Out: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 222365.1/30

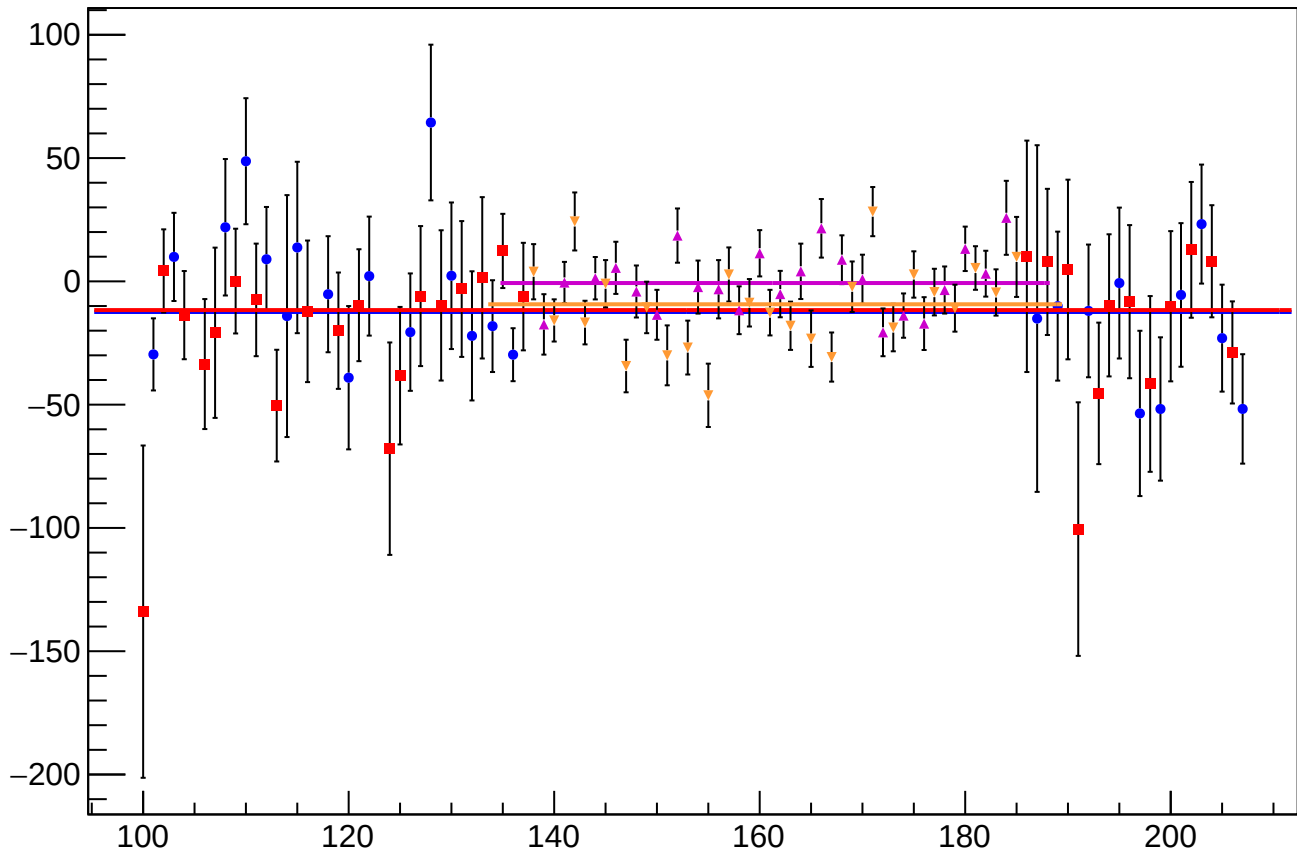
Left In: 0.008 $\pm$ 0.000  $\chi^2$ /NDF:1127833.6/22

+ sign 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 4947182.8/50

All: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 9991578.9/104

- sign 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 5015988.7/53

# diff\_bpm4aX\_mean vs Slug



Right In:  $-12.412 \pm 4.536$   $\chi^2/\text{NDF}$ : 31.3/25

Left Out:  $-9.292 \pm 2.031$   $\chi^2/\text{NDF}$ : 61.1/24

Right Out:  $-11.650 \pm 4.626$   $\chi^2/\text{NDF}$ : 22.1/30

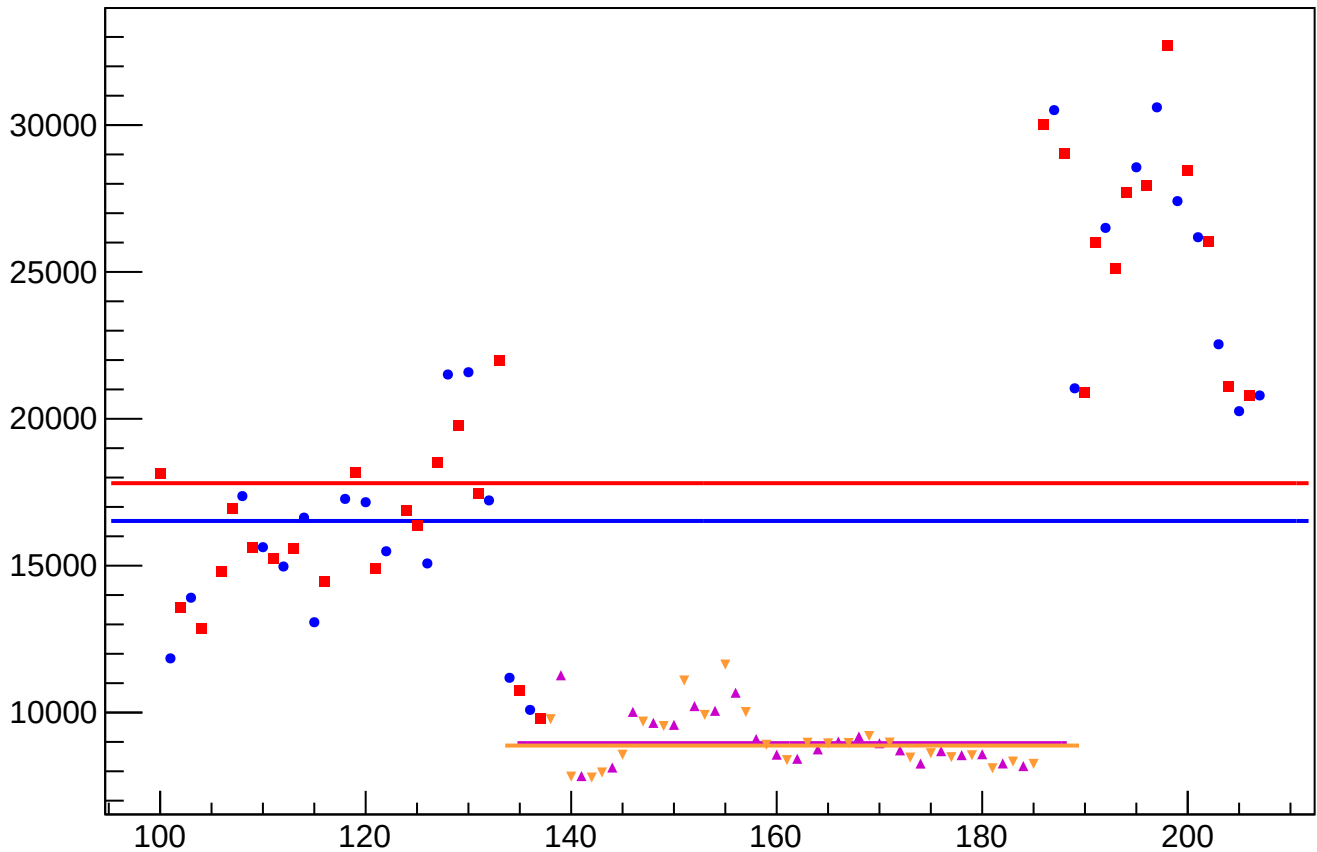
Left In:  $-0.676 \pm 2.104$   $\chi^2/\text{NDF}$ : 29.4/22

+ sign  $-9.812 \pm 1.853$   $\chi^2/\text{NDF}$ : 92.9/50

All:  $-6.304 \pm 1.332$   $\chi^2/\text{NDF}$ : 156.4/104

- sign  $-2.557 \pm 1.915$   $\chi^2/\text{NDF}$ : 56.1/53

# diff\_bpm4aX\_rms vs Slug



Right In: 16522.057+/-3.208  $\chi^2/\text{NDF}$ : 3107294.8/25

Left Out: 8875.623+/-1.436  $\chi^2/\text{NDF}$ :346964.6/24

Right Out: 17807.844+/-3.271  $\chi^2/\text{NDF}$ : 3112979.4/30

Left In: 8958.661+/-1.488  $\chi^2/\text{NDF}$ :301724.6/22

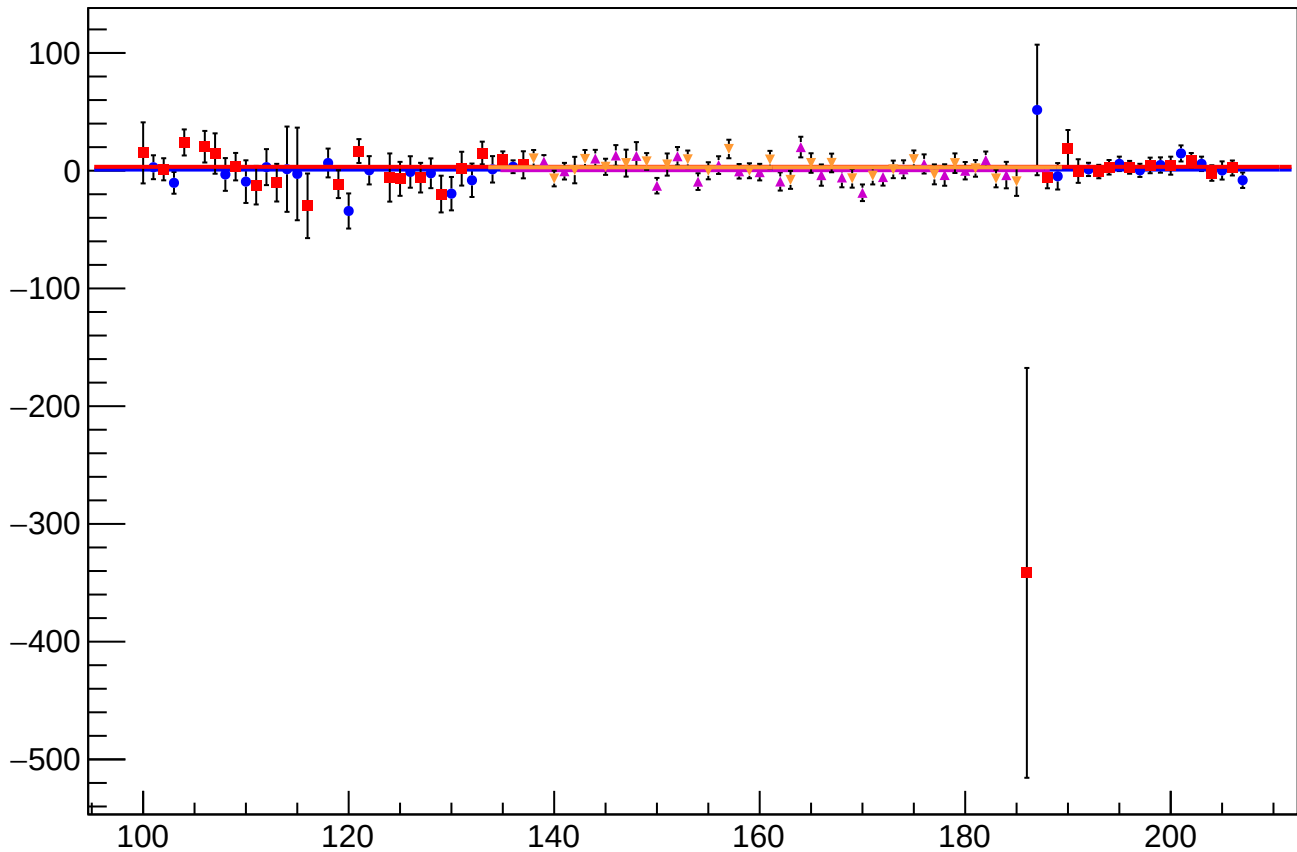
+ sign 10152.071+/-1.311  $\chi^2/\text{NDF}$ : 8188474.5/50

All: 10308.454+/-0.942  $\chi^2/\text{NDF}$ : 17695750.4

- sign 10475.478+/-1.354  $\chi^2/\text{NDF}$ : 9477828.5/53



# diff\_bpm4aY\_mean vs Slug



Right In:  $0.962 \pm 1.749$   $\chi^2/\text{NDF}$ : 19.2/25

Left Out:  $2.879 \pm 1.554$   $\chi^2/\text{NDF}$ : 19.5/24

Right Out:  $3.299 \pm 1.684$   $\chi^2/\text{NDF}$ : 25.7/30

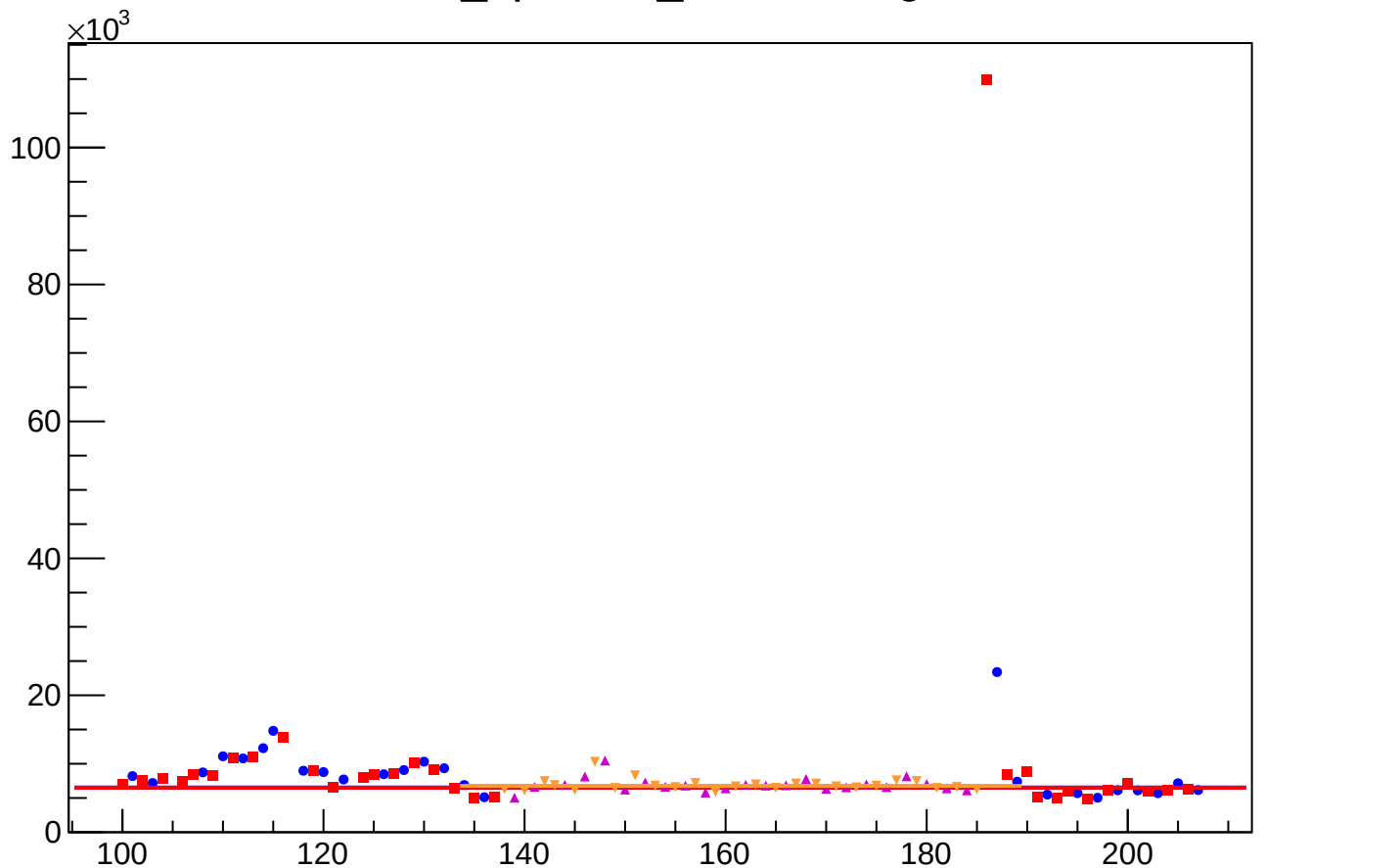
Left In:  $0.456 \pm 1.581$   $\chi^2/\text{NDF}$ : 32.8/22

+ sign  $2.033 \pm 1.162$   $\chi^2/\text{NDF}$ : 39.3/50

All:  $1.910 \pm 0.818$   $\chi^2/\text{NDF}$ : 99.4/104

- sign  $1.788 \pm 1.153$   $\chi^2/\text{NDF}$ : 60.0/53

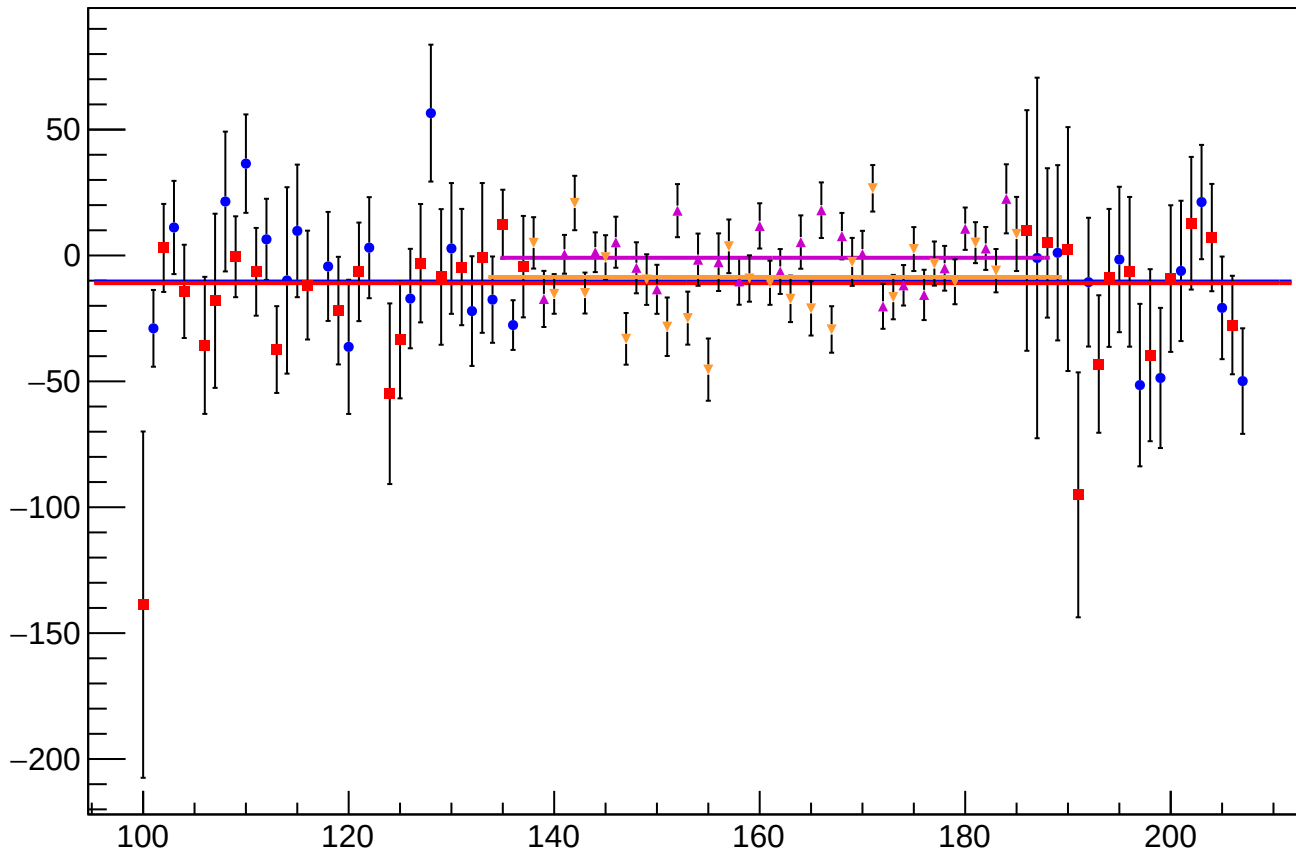
# diff\_bpm4aY\_rms vs Slug



Right In:  $6521.628 \pm 1.237$   $\chi^2/\text{NDF}$ : 1676521.6/25  
 Left Out:  $6776.739 \pm 1.099$   $\chi^2/\text{NDF}$ : 400166.7/24  
 Right Out:  $6511.951 \pm 1.191$   $\chi^2/\text{NDF}$ : 2334100.4/30  
 Left In:  $6689.550 \pm 1.118$   $\chi^2/\text{NDF}$ : 620276.8/22

+ sign  $6664.193 \pm 0.821$   $\chi^2/\text{NDF}$ : 2100474.4/50  
 All:  $6635.031 \pm 0.579$   $\chi^2/\text{NDF}$ : 5069176.5/100  
 - sign  $6606.309 \pm 0.815$   $\chi^2/\text{NDF}$ : 2966199.7/53

# diff\_bpm4eX\_mean vs Slug



Right In:  $-10.355 \pm 4.143$   $\chi^2/\text{NDF}$ : 32.5/25

Left Out:  $-8.536 \pm 1.897$   $\chi^2/\text{NDF}$ : 61.9/24

Right Out:  $-10.995 \pm 4.181$   $\chi^2/\text{NDF}$ : 21.9/30

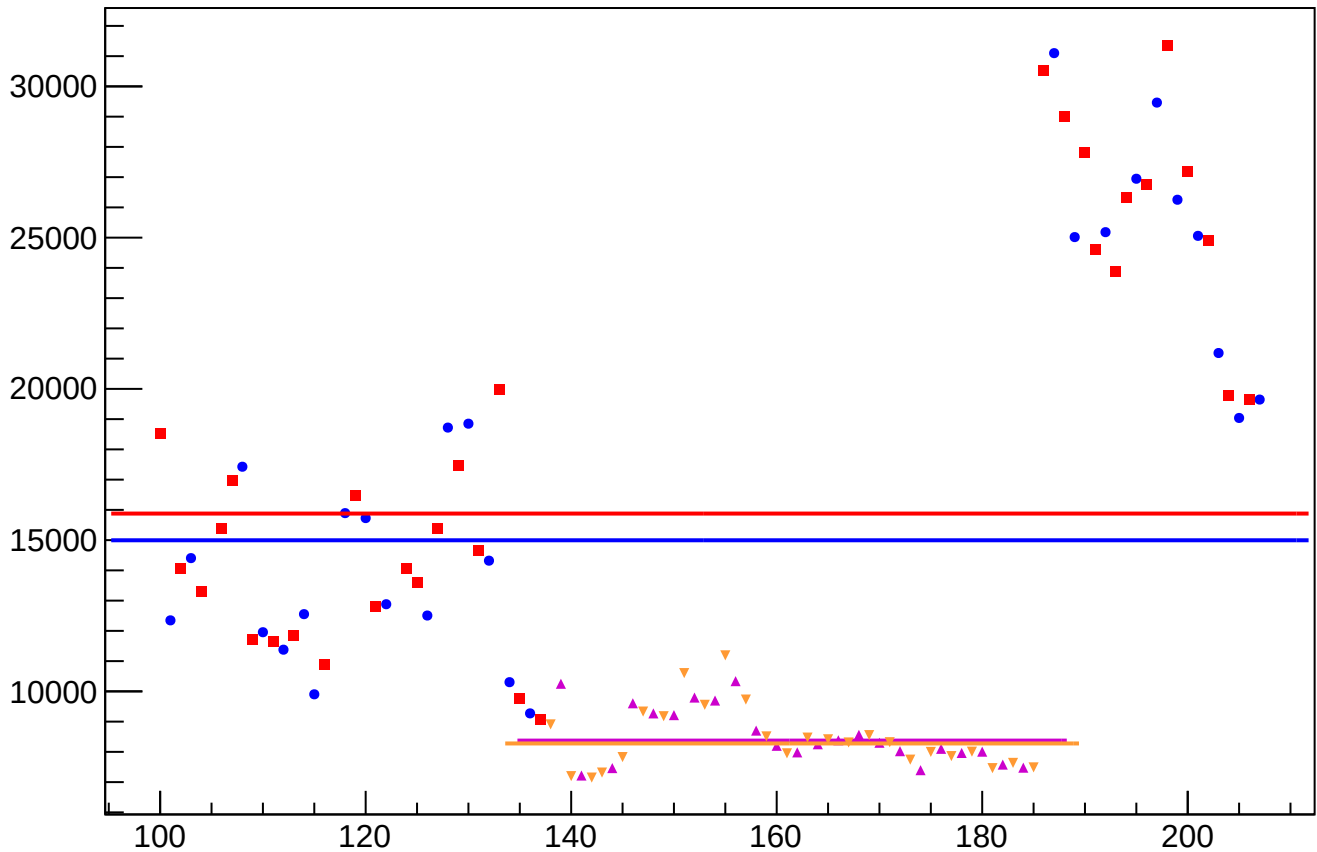
Left In:  $-0.919 \pm 1.969$   $\chi^2/\text{NDF}$ : 29.1/22

+ sign  $-8.851 \pm 1.725$   $\chi^2/\text{NDF}$ : 94.6/50

All:  $-5.899 \pm 1.239$   $\chi^2/\text{NDF}$ : 156.3/104

- sign  $-2.748 \pm 1.781$   $\chi^2/\text{NDF}$ : 55.7/53

# diff\_bpm4eX\_rms vs Slug



Right In: 14995.093+/-2.929  $\chi^2/\text{NDF}$ : 3517729.9/25

Left Out: 8277.768+/-1.341  $\chi^2/\text{NDF}$ : 455108.5/24

Right Out: 15878.094+/-2.956  $\chi^2/\text{NDF}$ : 3873117.8/30

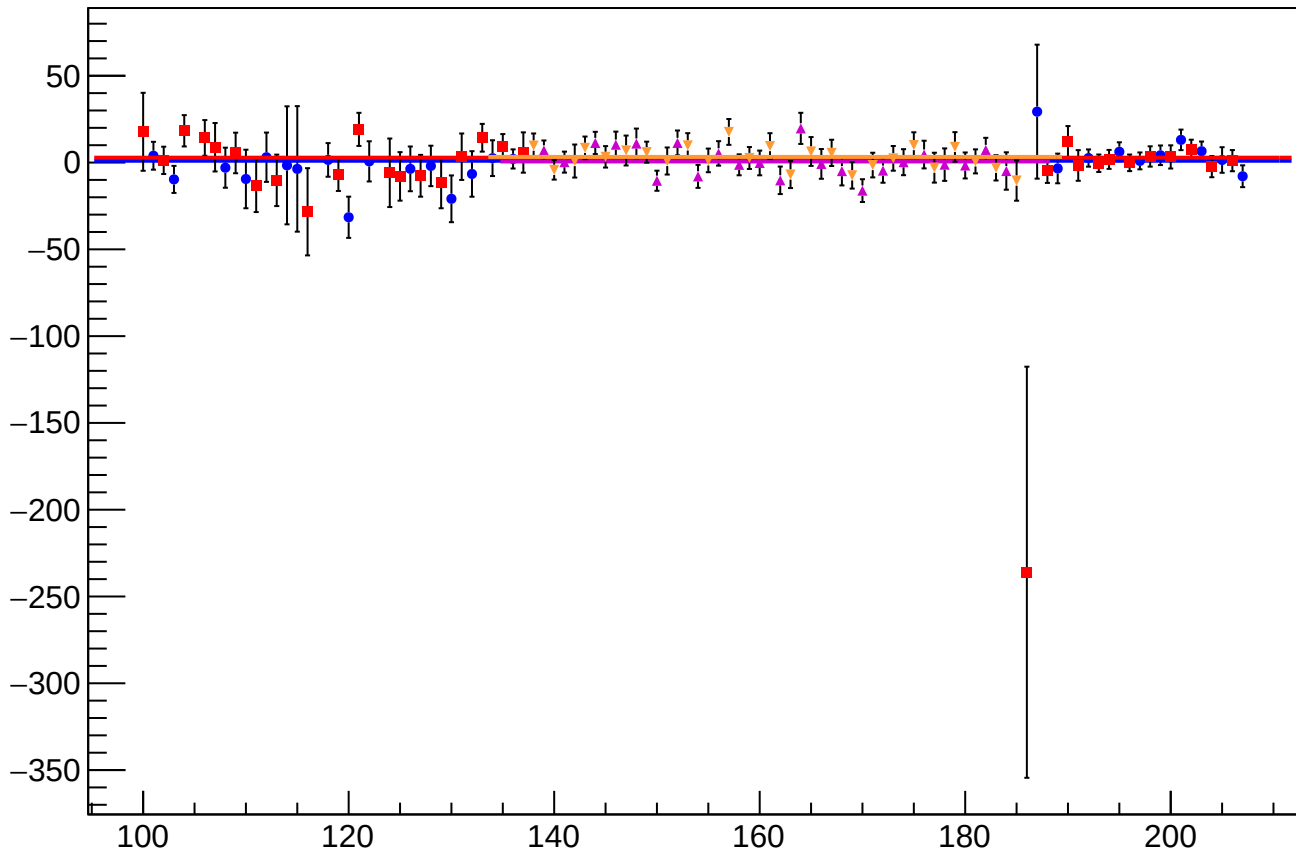
Left In: 8372.363+/-1.392  $\chi^2/\text{NDF}$ : 392872.1/22

+ sign 9441.735+/-1.219  $\chi^2/\text{NDF}$ : 8319839.0/50

All: 9583.545+/-0.876  $\chi^2/\text{NDF}$ : 17889751.3/100

- sign 9734.841+/-1.260  $\chi^2/\text{NDF}$ : 9541959.4/53

# diff\_bpm4eY\_mean vs Slug



Right In: 1.049 $\pm$ 1.565  $\chi^2$ /NDF: 22.6/25

Left Out: 3.255 $\pm$ 1.457  $\chi^2$ /NDF:17.6/24

Right Out: 2.807 $\pm$ 1.487  $\chi^2$ /NDF: 26.5/30

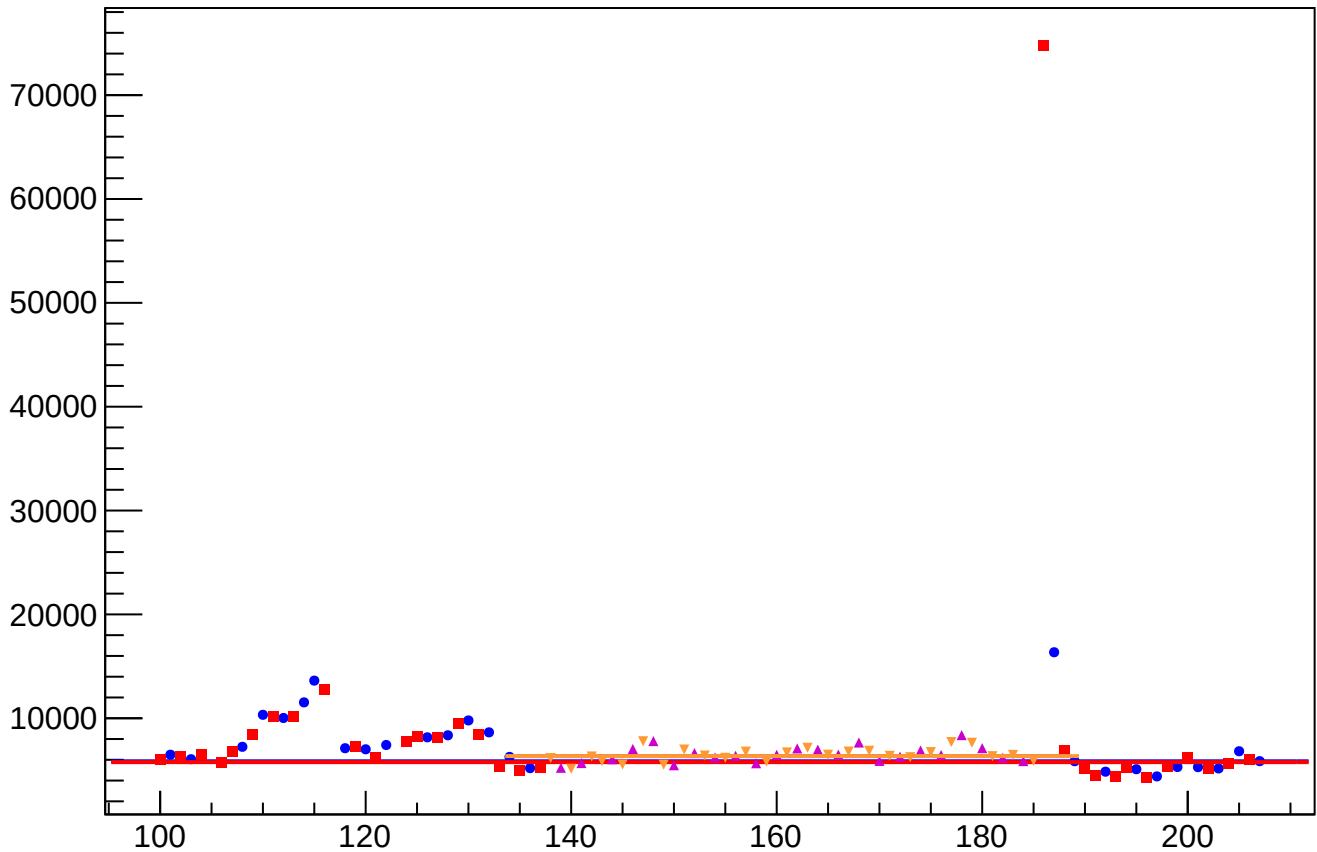
Left In: 0.645 $\pm$ 1.499  $\chi^2$ /NDF:30.8/22

+ sign 2.231 $\pm$ 1.066  $\chi^2$ /NDF: 41.3/50

All: 1.980 $\pm$ 0.750  $\chi^2$ /NDF: 99.7/104

- sign 1.735 $\pm$ 1.056  $\chi^2$ /NDF: 58.3/53

# diff\_bpm4eY\_rms vs Slug



Right In: 5853.122+/-1.107  $\chi^2/\text{NDF}$ : 1592907.8/25

Left Out: 6357.608+/-1.030  $\chi^2/\text{NDF}$ : 414119.5/24

Right Out: 5773.598+/-1.052  $\chi^2/\text{NDF}$ : 2297622.5/30

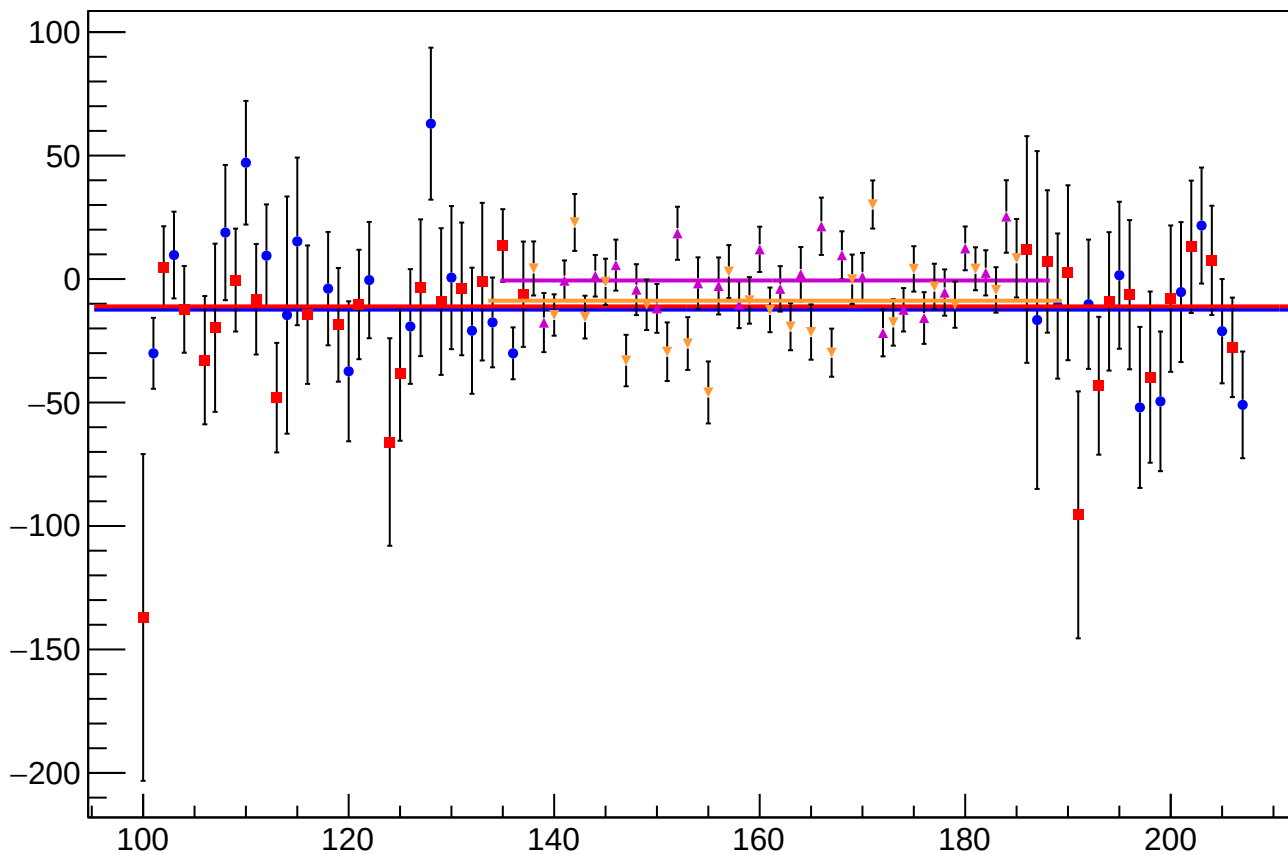
Left In: 6359.907+/-1.060  $\chi^2/\text{NDF}$ : 473875.4/22

+ sign 6123.327+/-0.754  $\chi^2/\text{NDF}$ : 2118353.5/50

All: 6093.548+/-0.531  $\chi^2/\text{NDF}$ : 5047124.1/10

- sign 6064.359+/-0.747  $\chi^2/\text{NDF}$ : 2925682.4/53

# diff\_bpm4acX\_mean vs Slug



Right In:  $-12.378 \pm 4.433$   $\chi^2/\text{NDF}$ : 31.2/25

Left Out:  $-8.767 \pm 1.987$   $\chi^2/\text{NDF}$ : 62.7/24

Right Out:  $-11.077 \pm 4.520$   $\chi^2/\text{NDF}$ : 22.2/30

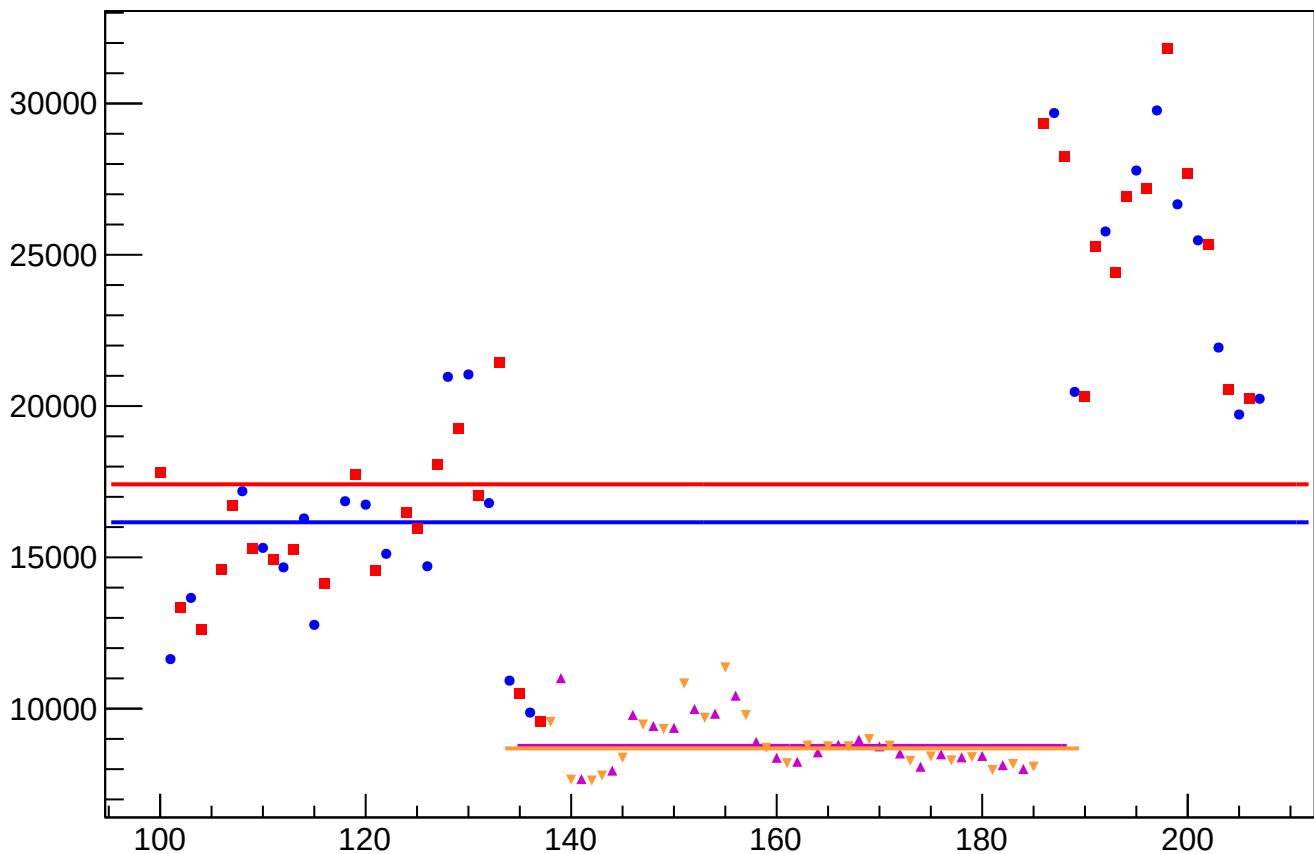
Left In:  $-0.579 \pm 2.059$   $\chi^2/\text{NDF}$ : 29.6/22

+ sign  $-9.371 \pm 1.813$   $\chi^2/\text{NDF}$ : 94.5/50

All:  $-5.992 \pm 1.303$   $\chi^2/\text{NDF}$ : 157.9/104

- sign  $-2.383 \pm 1.874$   $\chi^2/\text{NDF}$ : 56.2/53

# diff\_bpm4acX\_rms vs Slug



Right In:  $16158.770 \pm 3.134$   $\chi^2/\text{NDF}: 3064495.6/25$

Left Out:  $8686.048 \pm 1.405$   $\chi^2/\text{NDF}: 340655.6/24$

Right Out:  $17414.322 \pm 3.196$   $\chi^2/\text{NDF}: 3064452.4/30$

Left In:  $8767.705 \pm 1.456$   $\chi^2/\text{NDF}: 295552.8/22$

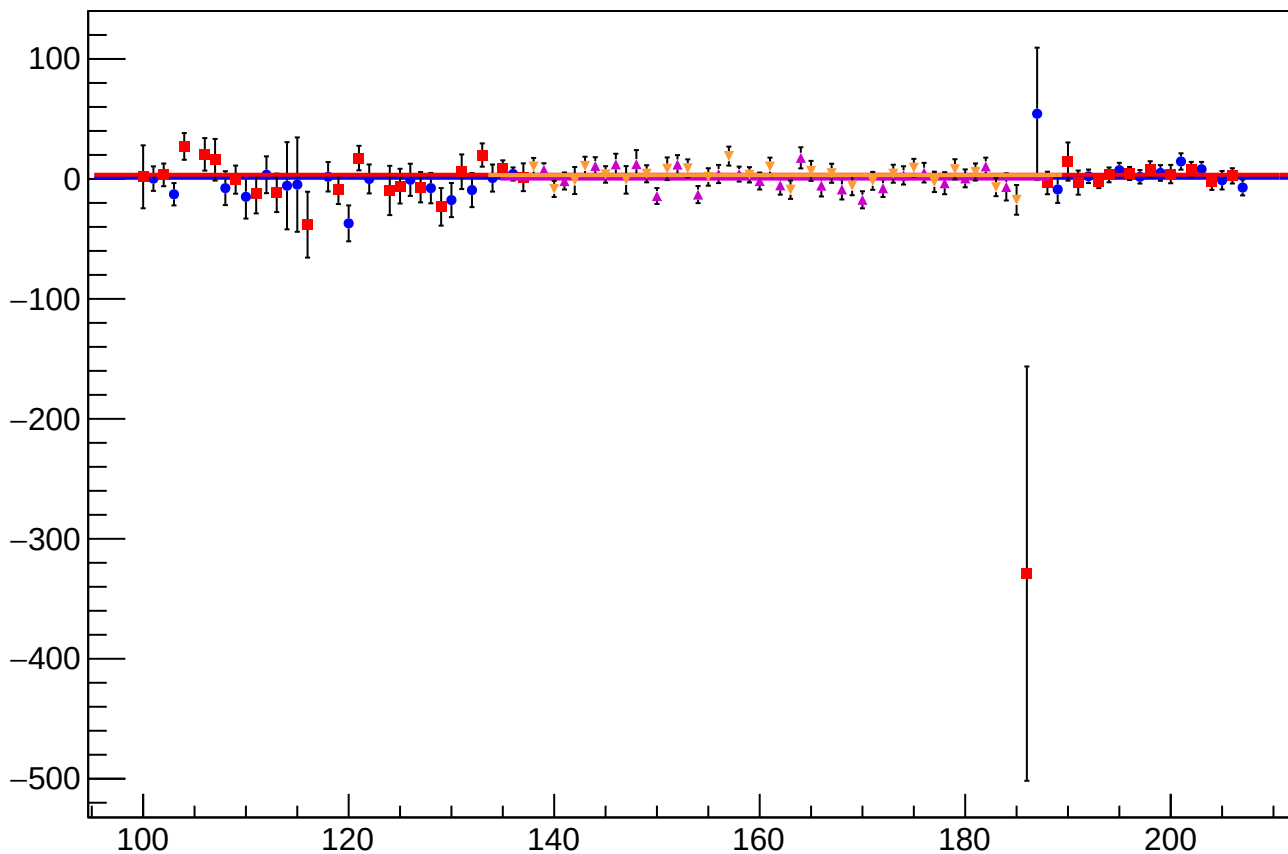
+ sign  $9936.298 \pm 1.282$   $\chi^2/\text{NDF}: 8137969.6/50$

All:  $10089.685 \pm 0.921$   $\chi^2/\text{NDF}: 17587665.8/100$

- sign  $10253.517 \pm 1.325$   $\chi^2/\text{NDF}: 9420095.0/53$



diff\_bpm4acY\_mean vs Slug



Right In:  $0.959 \pm 1.754$   $\chi^2/\text{NDF}$ : 23.0/25

Left Out:  $3.171 \pm 1.562$   $\chi^2/\text{NDF}$ : 21.7/24

Right Out:  $3.490 \pm 1.690$   $\chi^2/\text{NDF}$ : 29.5/30

Left In:  $0.269 \pm 1.590$   $\chi^2/\text{NDF}$ : 34.2/22

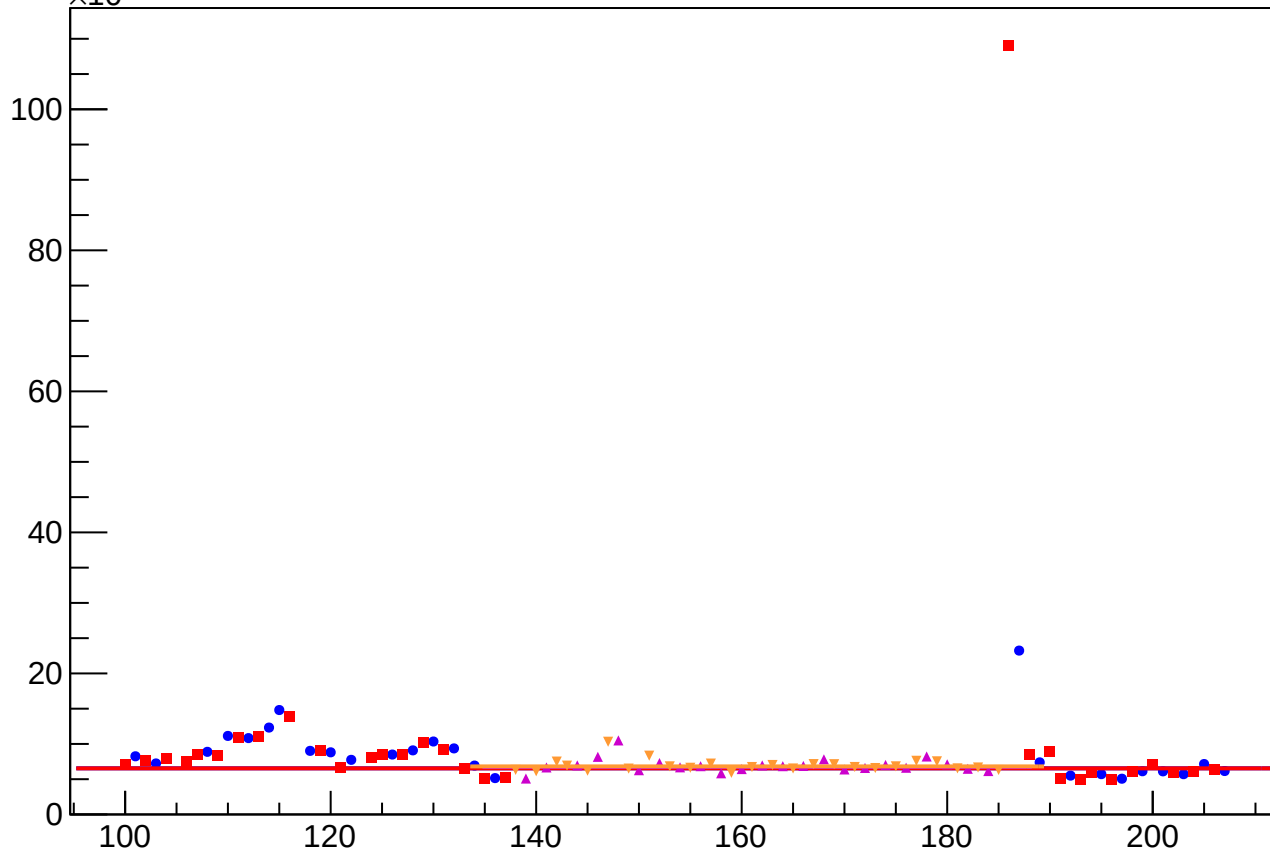
+ sign  $2.193 \pm 1.166$   $\chi^2/\text{NDF}$ : 45.5/50

All:  $1.986 \pm 0.822$   $\chi^2/\text{NDF}$ : 111.3/104

- sign  $1.782 \pm 1.158$   $\chi^2/\text{NDF}$ : 65.7/53

# diff\_bpm4acY\_rms vs Slug

$\times 10^3$



Right In: 6542.840 $\pm$ 1.240  $\chi^2/\text{NDF}$ : 1675042.5/25

Left Out: 6812.964 $\pm$ 1.104  $\chi^2/\text{NDF}$ : 394620.8/24

Right Out: 6537.025 $\pm$ 1.195  $\chi^2/\text{NDF}$ : 2329053.2/30

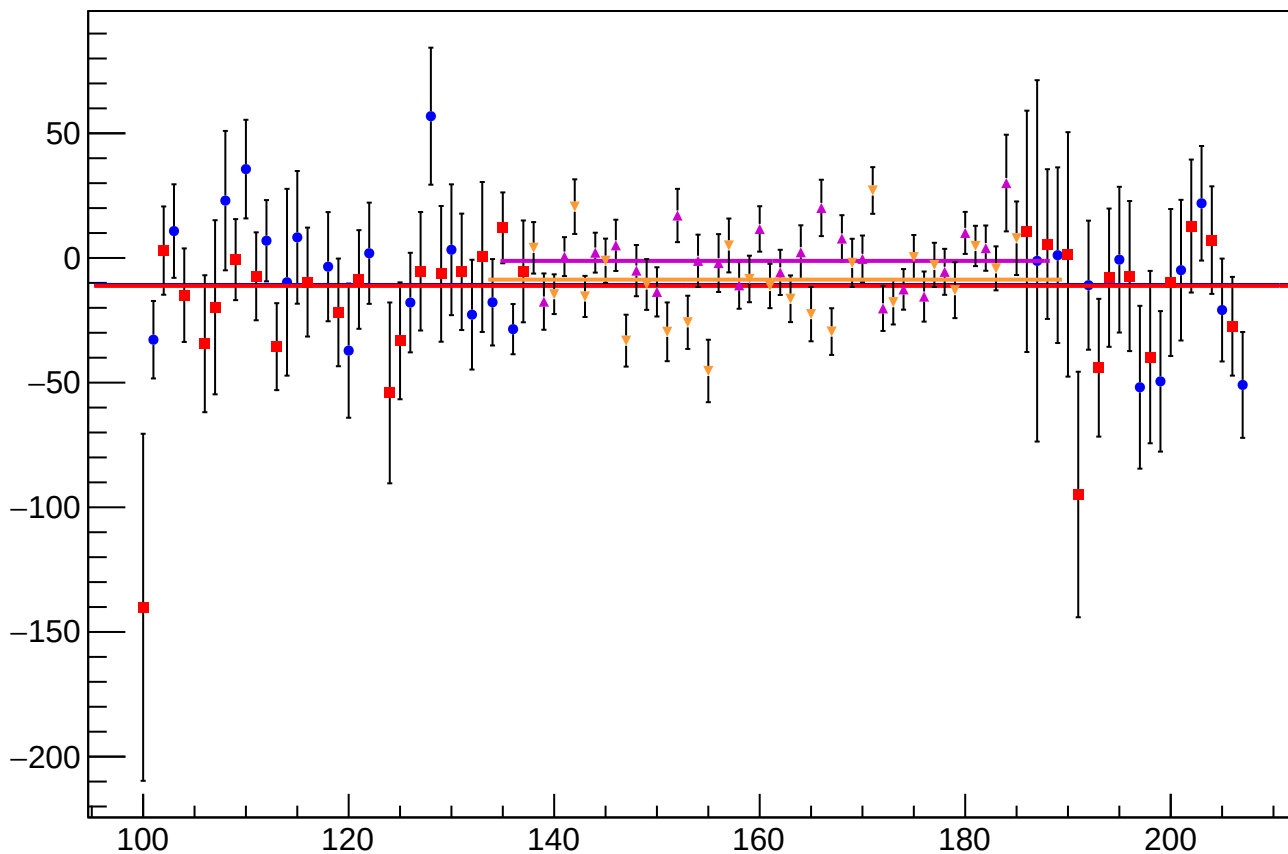
Left In: 6727.864 $\pm$ 1.124  $\chi^2/\text{NDF}$ : 610037.3/22

+ sign 6693.515 $\pm$ 0.825  $\chi^2/\text{NDF}$ : 2096118.2/50

All: 6665.674 $\pm$ 0.581  $\chi^2/\text{NDF}$ : 5050999.8/10

- sign 6638.233 $\pm$ 0.819  $\chi^2/\text{NDF}$ : 2952619.2/53

# diff\_bpm4ecX\_mean vs Slug



Right In:  $-10.832 \pm 4.198$   $\chi^2/\text{NDF}$ : 33.1/25

Left Out:  $-8.692 \pm 1.936$   $\chi^2/\text{NDF}$ : 61.4/24

Right Out:  $-11.201 \pm 4.239$   $\chi^2/\text{NDF}$ : 20.7/30

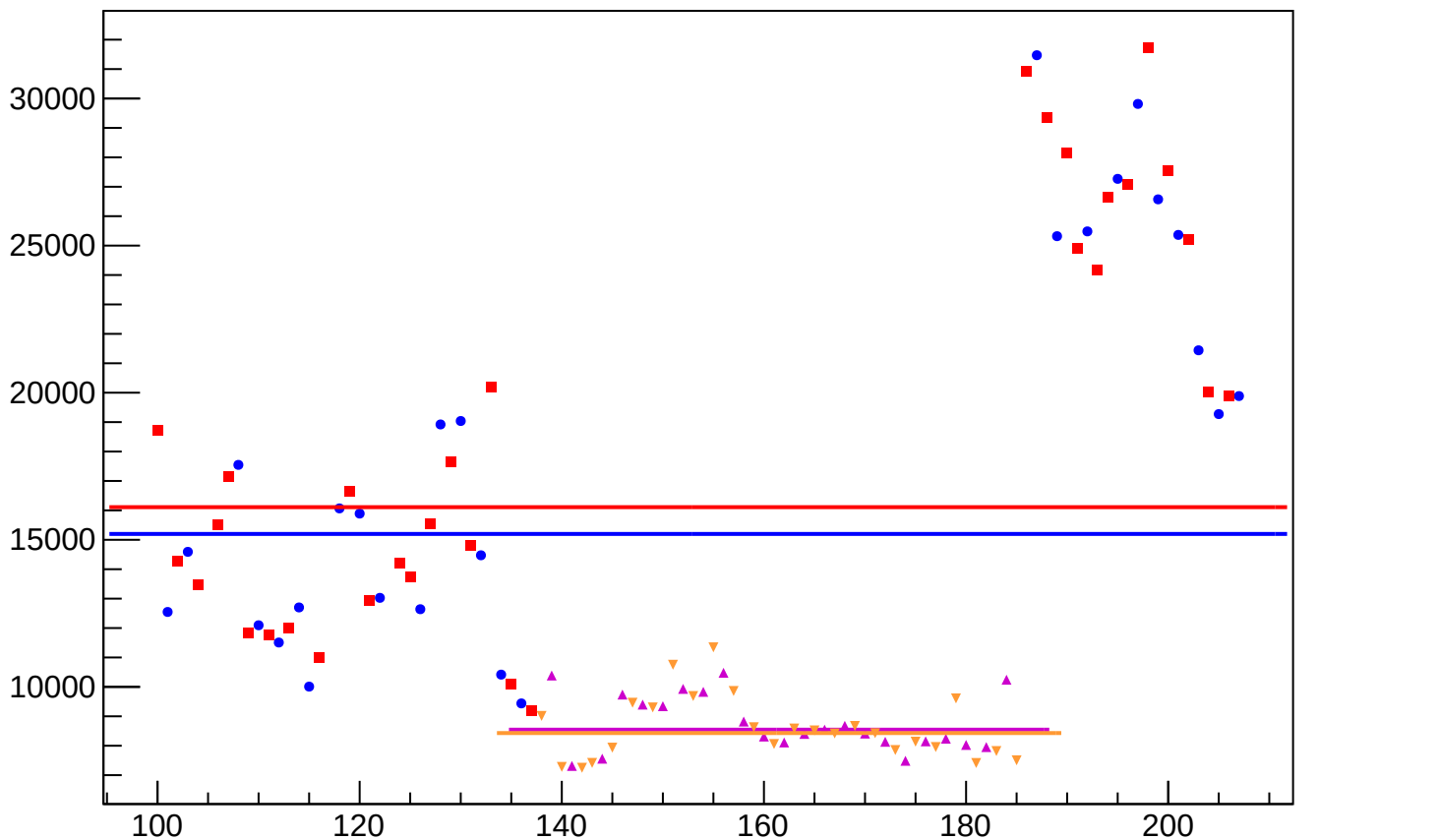
Left In:  $-1.174 \pm 2.012$   $\chi^2/\text{NDF}$ : 28.6/22

+ sign  $-9.068 \pm 1.758$   $\chi^2/\text{NDF}$ : 94.7/50

All:  $-6.144 \pm 1.264$   $\chi^2/\text{NDF}$ : 154.3/104

- sign  $-3.018 \pm 1.818$   $\chi^2/\text{NDF}$ : 53.8/53

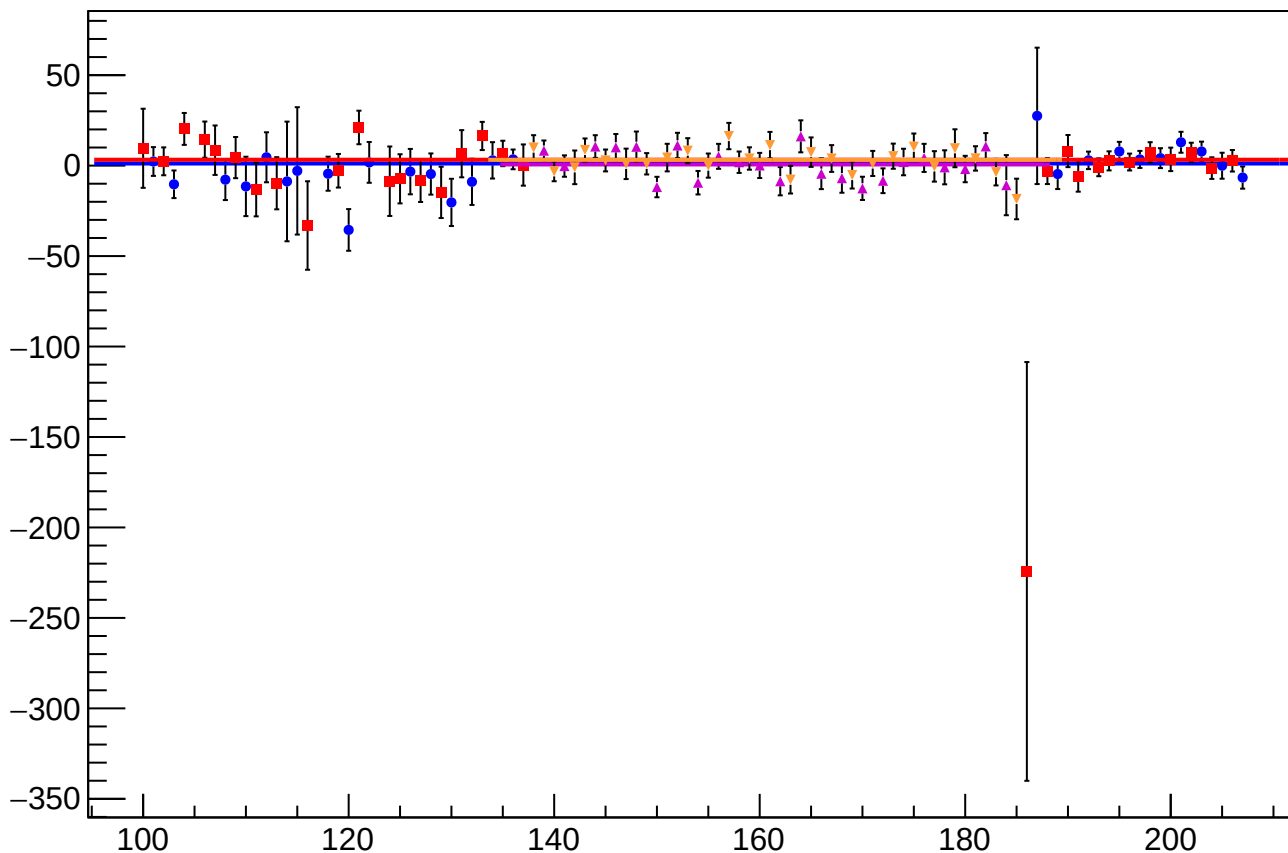
# diff\_bpm4ecX\_rms vs Slug



Right In: 15199.155 $\pm$ 2.969  $\chi^2$ /NDF: 3492726.6/25  
 Left Out: 8430.683 $\pm$ 1.369  $\chi^2$ /NDF:484653.2/24  
 Right Out: 16109.381 $\pm$ 2.998  $\chi^2$ /NDF: 3830227.2/30  
 Left In: 8545.534 $\pm$ 1.423  $\chi^2$ /NDF:389747.0/22

+ sign 9617.736 $\pm$ 1.243  $\chi^2$ /NDF: 8263958.2/50  
 All: 9771.745 $\pm$ 0.894  $\chi^2$ /NDF: 17711363.4/1  
 - sign 9936.403 $\pm$ 1.285  $\chi^2$ /NDF: 9415652.4/53

# diff\_bpm4ecY\_mean vs Slug



Right In:  $1.154 \pm 1.527$   $\chi^2/\text{NDF}$ : 28.6/25

Left Out:  $3.185 \pm 1.435$   $\chi^2/\text{NDF}$ : 18.7/24

Right Out:  $3.257 \pm 1.450$   $\chi^2/\text{NDF}$ : 29.0/30

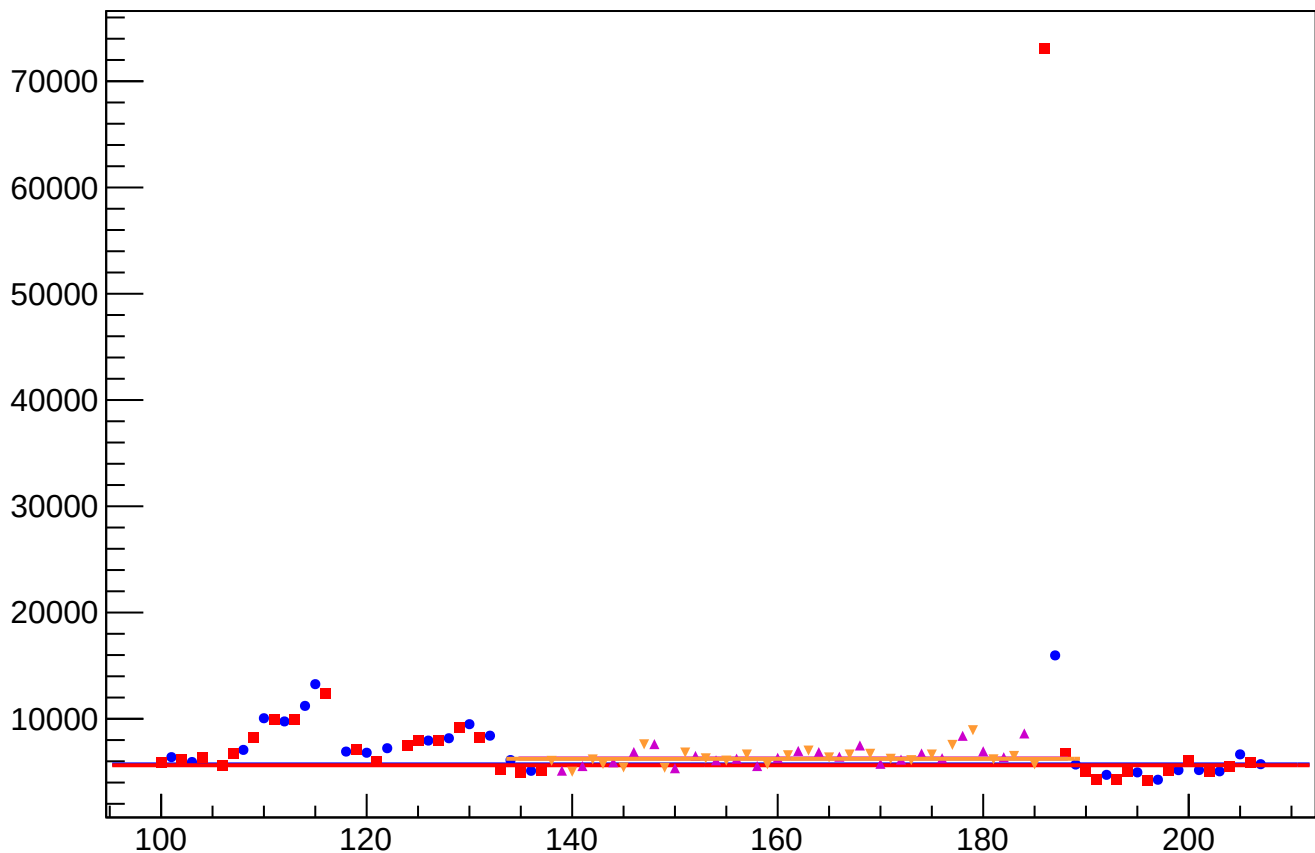
Left In:  $0.633 \pm 1.482$   $\chi^2/\text{NDF}$ : 31.8/22

+ sign  $2.233 \pm 1.046$   $\chi^2/\text{NDF}$ : 48.2/50

All:  $2.102 \pm 0.736$   $\chi^2/\text{NDF}$ : 110.6/104

- sign  $1.974 \pm 1.036$   $\chi^2/\text{NDF}$ : 62.4/53

# diff\_bpm4ecY\_rms vs Slug



Right In: 5708.888+/-1.080  $\chi^2/\text{NDF}$ : 1593408.5/25

Left Out: 6237.931+/-1.015  $\chi^2/\text{NDF}$ : 507726.8/24

Right Out: 5628.548+/-1.025  $\chi^2/\text{NDF}$ : 2279268.8/30

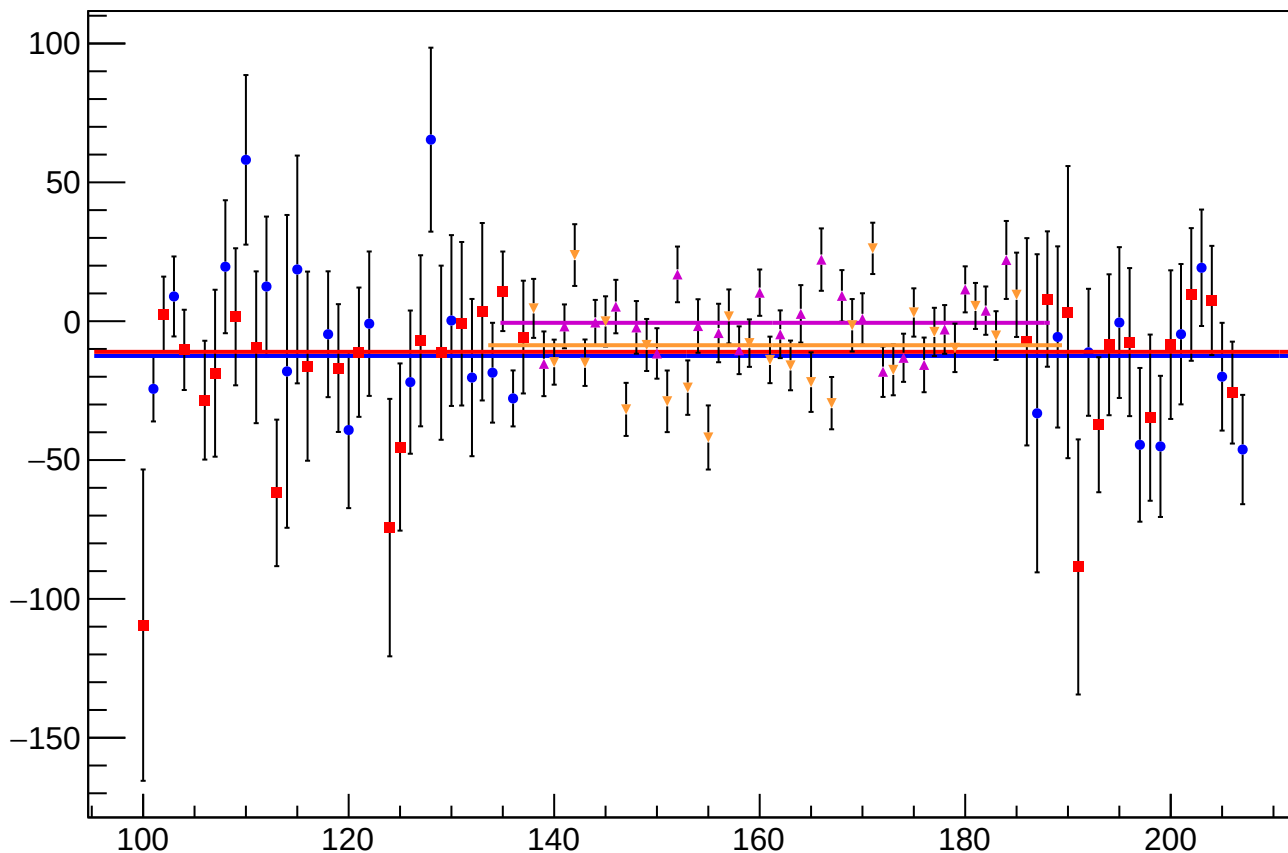
Left In: 6268.263+/-1.048  $\chi^2/\text{NDF}$ : 524326.6/22

+ sign 5989.864+/-0.739  $\chi^2/\text{NDF}$ : 2228636.0/50

All: 5965.461+/-0.520  $\chi^2/\text{NDF}$ : 5224815.1/10

- sign 5941.488+/-0.733  $\chi^2/\text{NDF}$ : 2994019.6/53

# diff\_bpm1X\_mean vs Slug



Right In:  $-12.517 \pm 4.219$   $\chi^2/\text{NDF}$ : 30.3/25

Left Out:  $-8.650 \pm 1.875$   $\chi^2/\text{NDF}$ : 63.0/24

Right Out:  $-11.035 \pm 4.318$   $\chi^2/\text{NDF}$ : 22.4/30

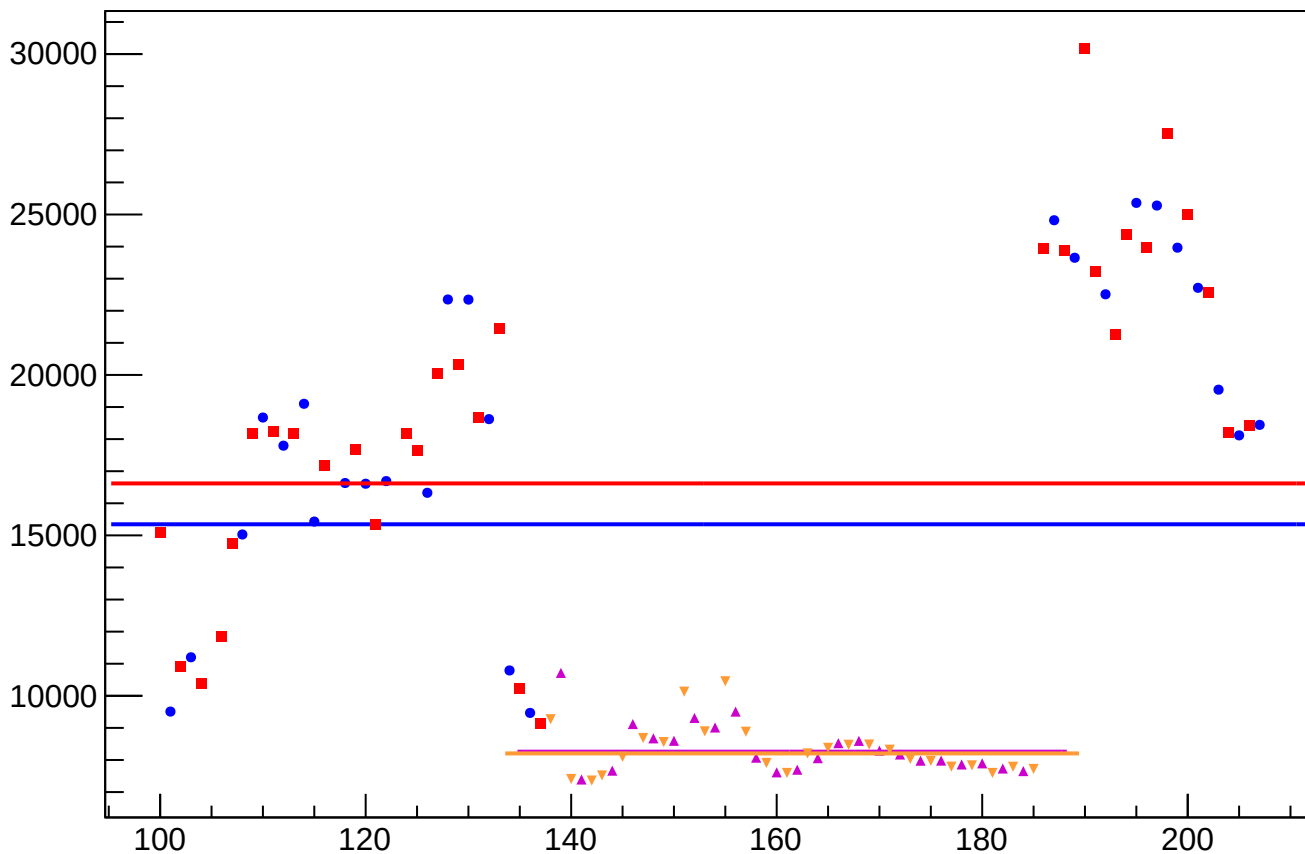
Left In:  $-0.583 \pm 1.939$   $\chi^2/\text{NDF}$ : 28.5/22

+ sign  $-9.288 \pm 1.713$   $\chi^2/\text{NDF}$ : 94.1/50

All:  $-5.923 \pm 1.231$   $\chi^2/\text{NDF}$ : 157.8/104

- sign  $-2.337 \pm 1.769$   $\chi^2/\text{NDF}$ : 55.8/53

# diff\_bpm1X\_rms vs Slug



Right In: 15345.700 $\pm$ 2.984  $\chi^2$ /NDF: 3240291.1/25

Left Out: 8204.502 $\pm$ 1.326  $\chi^2$ /NDF: 272958.7/24

Right Out: 16619.239 $\pm$ 3.053  $\chi^2$ /NDF: 3109183.1/30

Left In: 8259.162 $\pm$ 1.371  $\chi^2$ /NDF: 257333.8/22

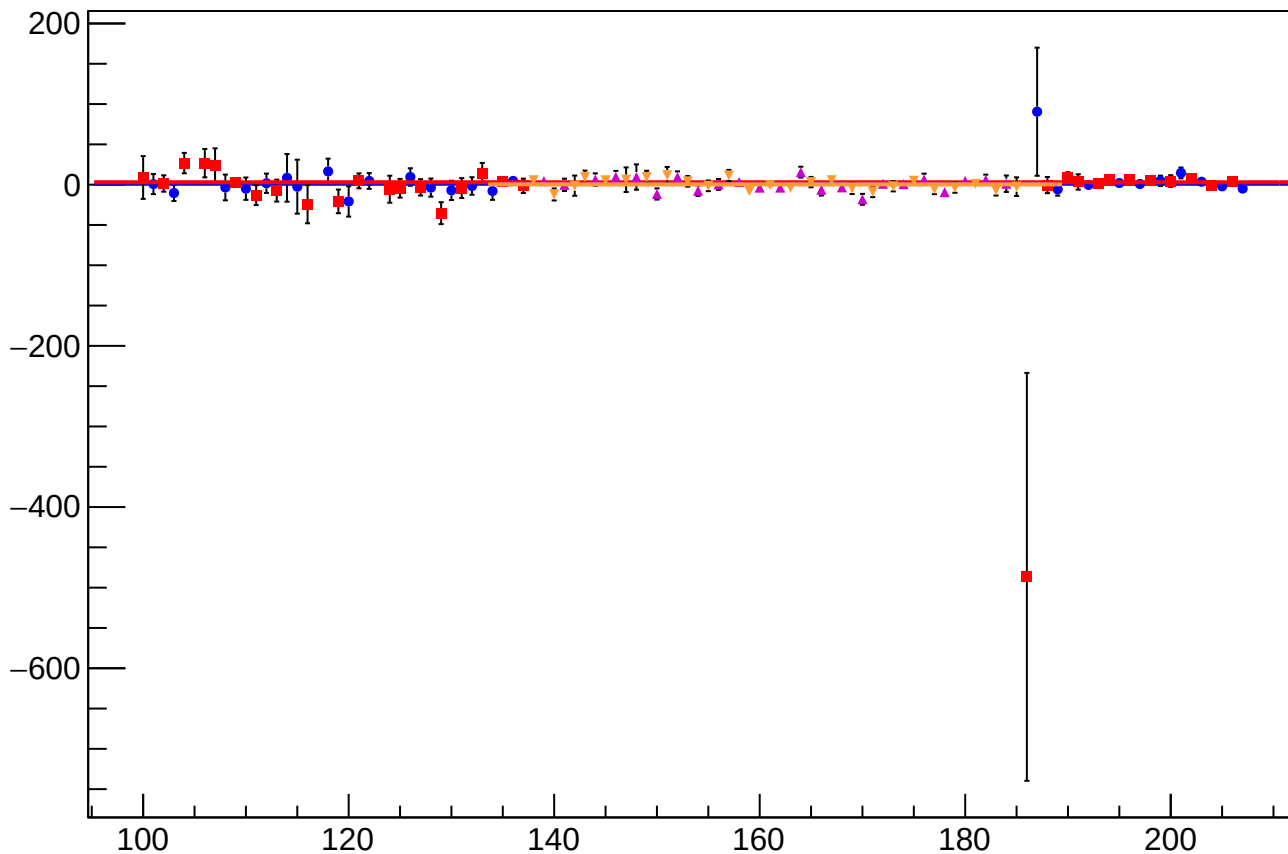
+ sign 9382.218 $\pm$ 1.212  $\chi^2$ /NDF: 8297381.4/50

All: 9517.527 $\pm$ 0.870  $\chi^2$ /NDF: 17928147.5/1

- sign 9661.698 $\pm$ 1.251  $\chi^2$ /NDF: 9605006.4/53



# diff\_bpm1Y\_mean vs Slug



Right In: 1.105 $\pm$ 1.550  $\chi^2$ /NDF: 15.2/25

Left Out: 0.353 $\pm$ 1.322  $\chi^2$ /NDF:21.5/24

Right Out: 2.995 $\pm$ 1.442  $\chi^2$ /NDF: 29.8/30

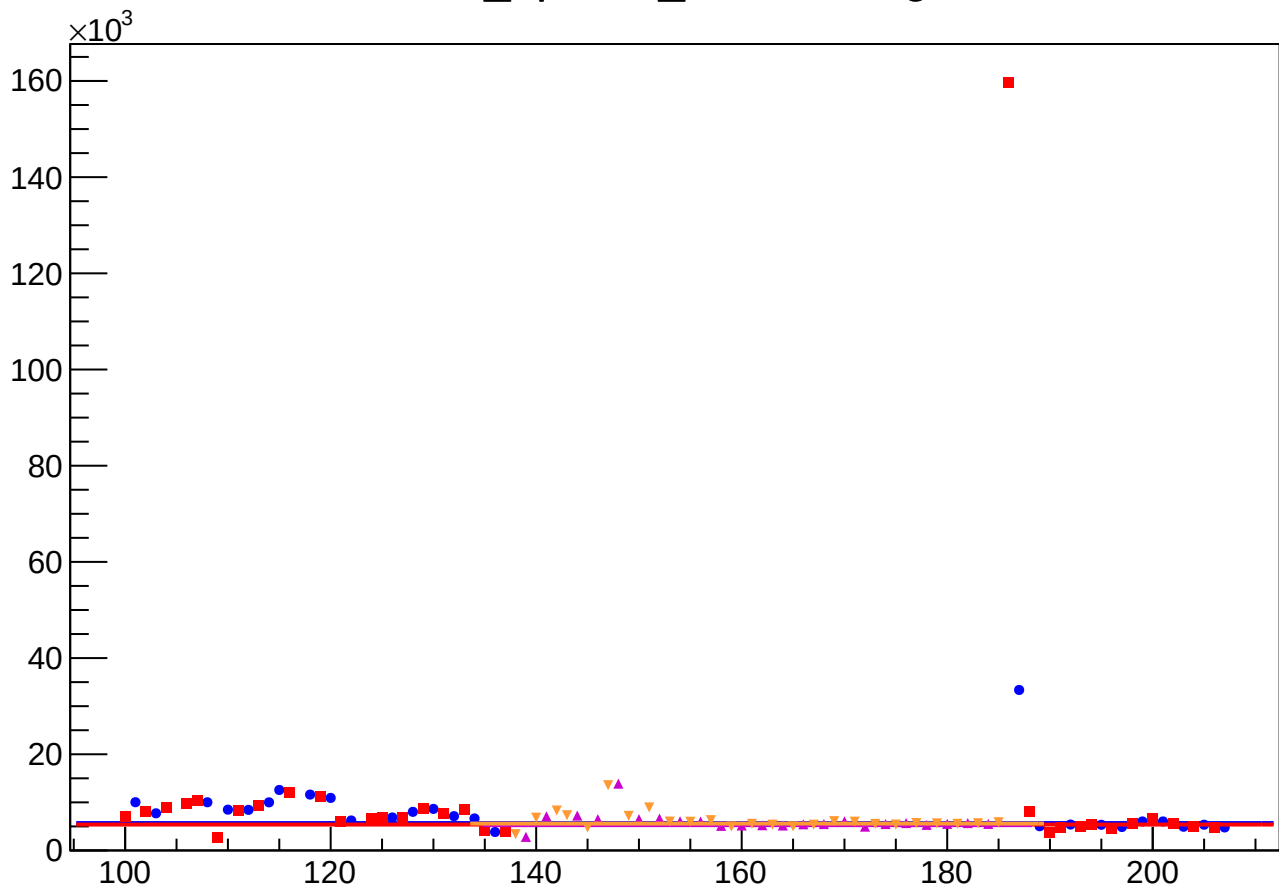
Left In: 0.709 $\pm$ 1.291  $\chi^2$ /NDF:29.9/22

+ sign 0.670 $\pm$ 1.006  $\chi^2$ /NDF: 36.8/50

All: 1.221 $\pm$ 0.695  $\chi^2$ /NDF: 98.5/104

- sign 1.726 $\pm$ 0.962  $\chi^2$ /NDF: 61.1/53

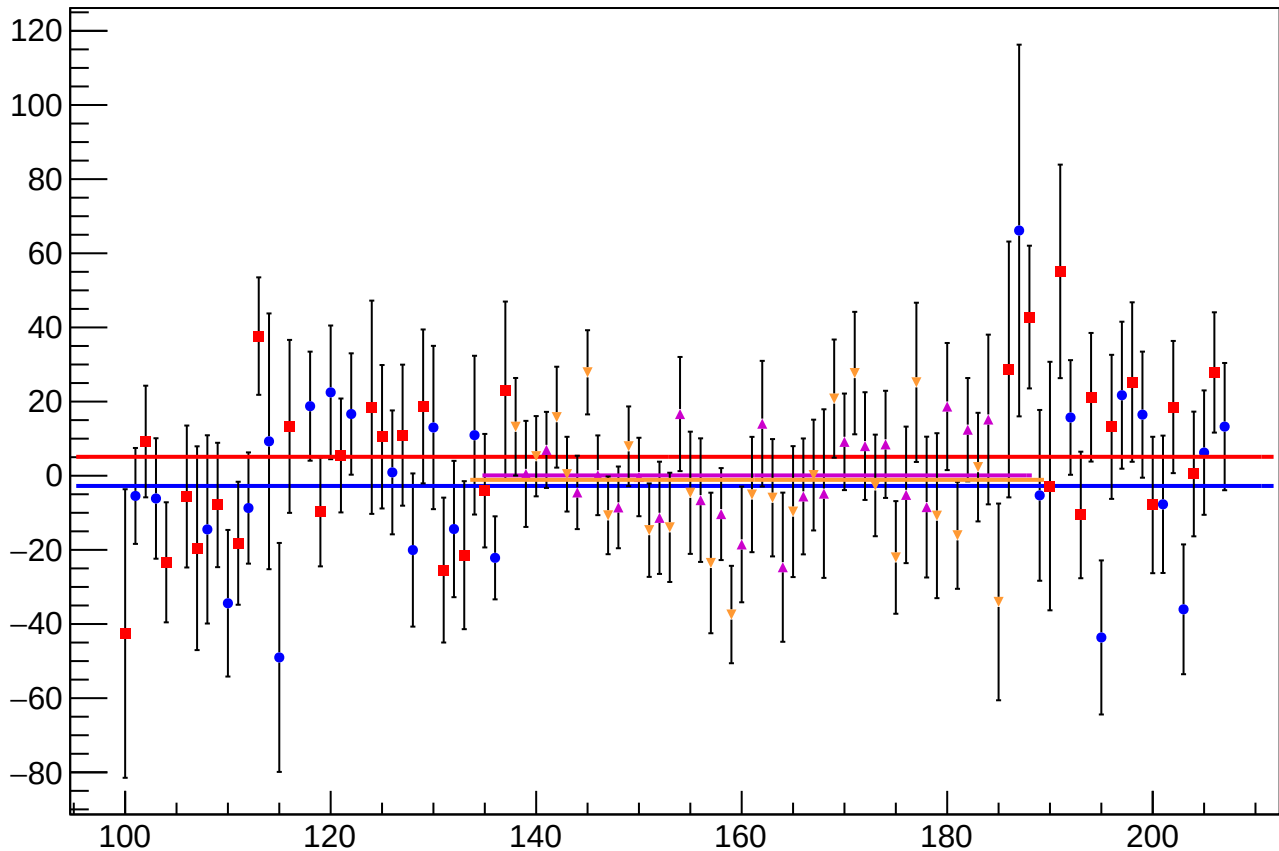
# diff\_bpm1Y\_rms vs Slug



Right In:  $5695.085 \pm 1.096$   $\chi^2/\text{NDF}$ : 2356266.2/25  
 Left Out:  $5594.503 \pm 0.935$   $\chi^2/\text{NDF}$ : 1784259.1/24  
 Right Out:  $5385.062 \pm 1.020$   $\chi^2/\text{NDF}$ : 3782814.6/30  
 Left In:  $5262.754 \pm 0.913$   $\chi^2/\text{NDF}$ : 2425604.2/22

+ sign  $5636.850 \pm 0.711$   $\chi^2/\text{NDF}$ : 4145402.4/50  
 All:  $5469.929 \pm 0.492$   $\chi^2/\text{NDF}$ : 10467336.6/100  
 - sign  $5317.159 \pm 0.680$   $\chi^2/\text{NDF}$ : 6216401.3/53

# diff\_bpm11X\_mean vs Slug



Right In:  $-2.756 \pm 3.521$   $\chi^2/\text{NDF}$ : 30.8/25

Left Out:  $-1.111 \pm 2.813$   $\chi^2/\text{NDF}$ : 33.8/24

Right Out:  $5.103 \pm 3.418$   $\chi^2/\text{NDF}$ : 32.9/30

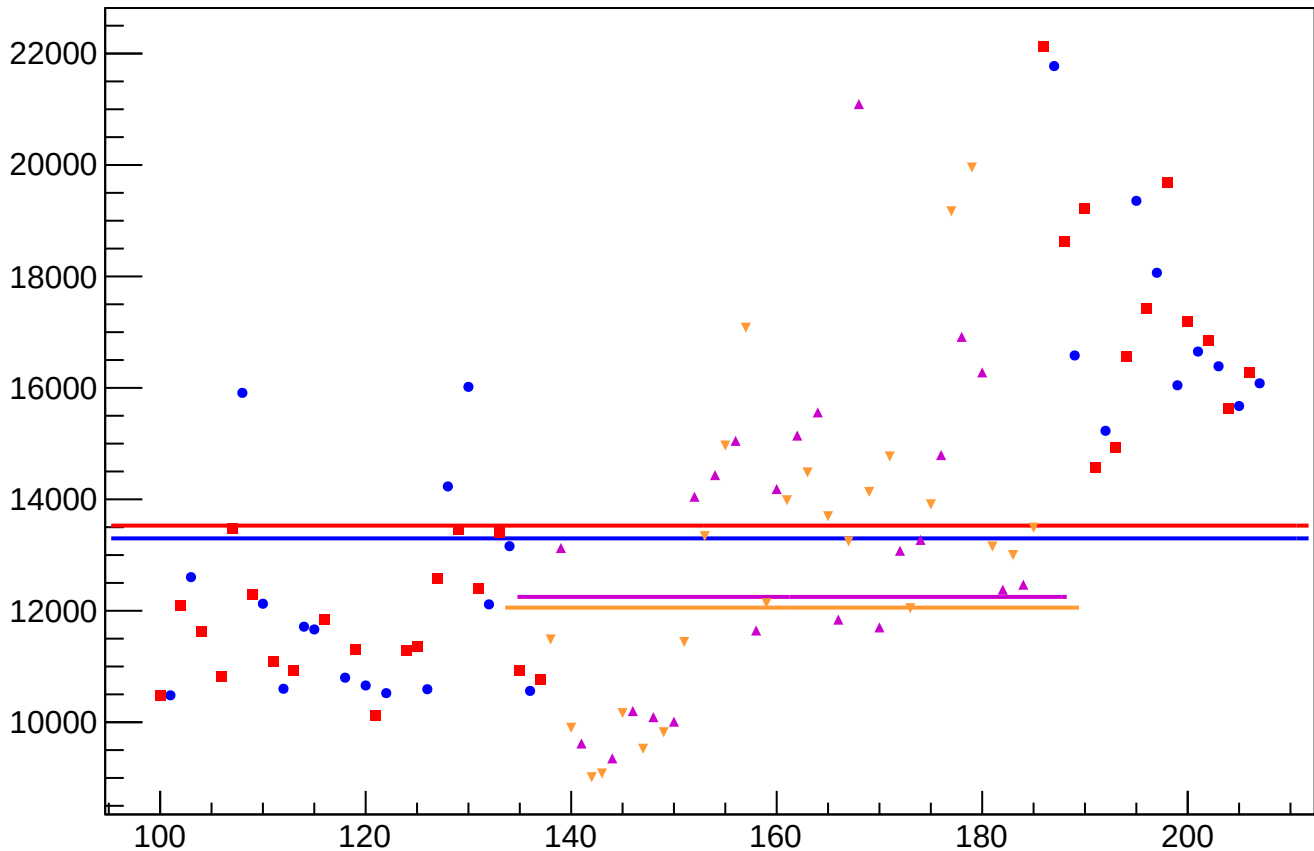
Left In:  $0.084 \pm 2.926$   $\chi^2/\text{NDF}$ : 11.5/22

+ sign  $-1.752 \pm 2.198$   $\chi^2/\text{NDF}$ : 64.7/50

All:  $0.205 \pm 1.563$   $\chi^2/\text{NDF}$ : 111.9/104

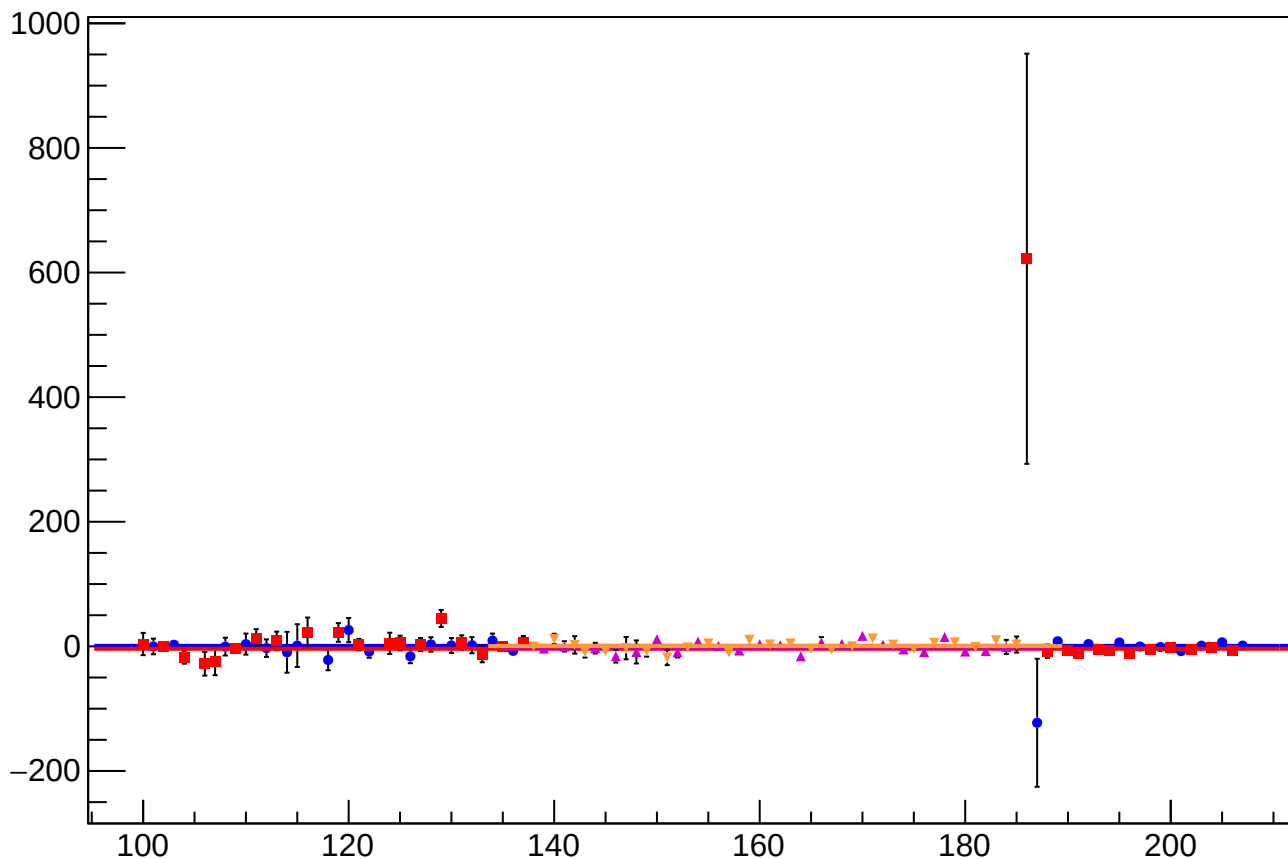
- sign  $2.207 \pm 2.223$   $\chi^2/\text{NDF}$ : 45.6/53

# diff\_bpm11X\_rms vs Slug



|                                  |                             |                              |                             |
|----------------------------------|-----------------------------|------------------------------|-----------------------------|
| Right In: 13299.243 $\pm$ 2.490  | $\chi^2$ /NDF: 1261521.3/25 | + sign 12540.743 $\pm$ 1.554 | $\chi^2$ /NDF: 2975261.2/50 |
| Left Out: 12056.714 $\pm$ 1.989  | $\chi^2$ /NDF: 1561738.9/24 | All: 12664.020 $\pm$ 1.105   | $\chi^2$ /NDF: 5942251.2/1  |
| Right Out: 13528.446 $\pm$ 2.417 | $\chi^2$ /NDF: 1376575.1/30 | - sign 12790.136 $\pm$ 1.572 | $\chi^2$ /NDF: 2954261.3/53 |
| Left In: 12249.109 $\pm$ 2.069   | $\chi^2$ /NDF: 1416030.4/22 |                              |                             |

# diff\_bpm11Y\_mean vs Slug



Right In:  $0.802 \pm 1.347$   $\chi^2/\text{NDF}$ : 19.7/25

Left Out:  $0.526 \pm 1.369$   $\chi^2/\text{NDF}$ : 21.4/24

Right Out:  $-3.855 \pm 1.282$   $\chi^2/\text{NDF}$ : 37.1/30

Left In:  $-0.946 \pm 1.294$   $\chi^2/\text{NDF}$ : 32.2/22

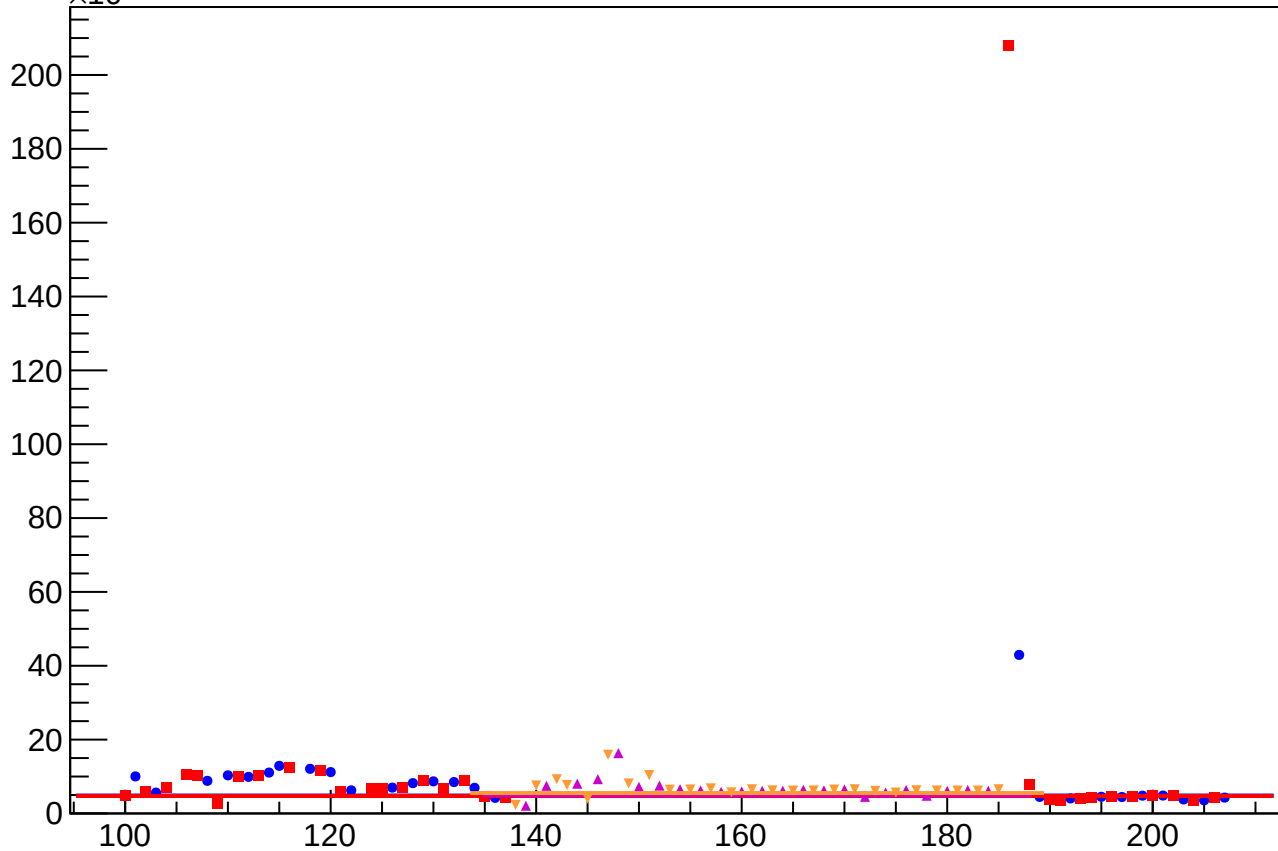
+ sign  $0.666 \pm 0.960$   $\chi^2/\text{NDF}$ : 41.2/50

All:  $-0.955 \pm 0.661$   $\chi^2/\text{NDF}$ : 118.5/104

- sign  $-2.415 \pm 0.911$   $\chi^2/\text{NDF}$ : 71.9/53

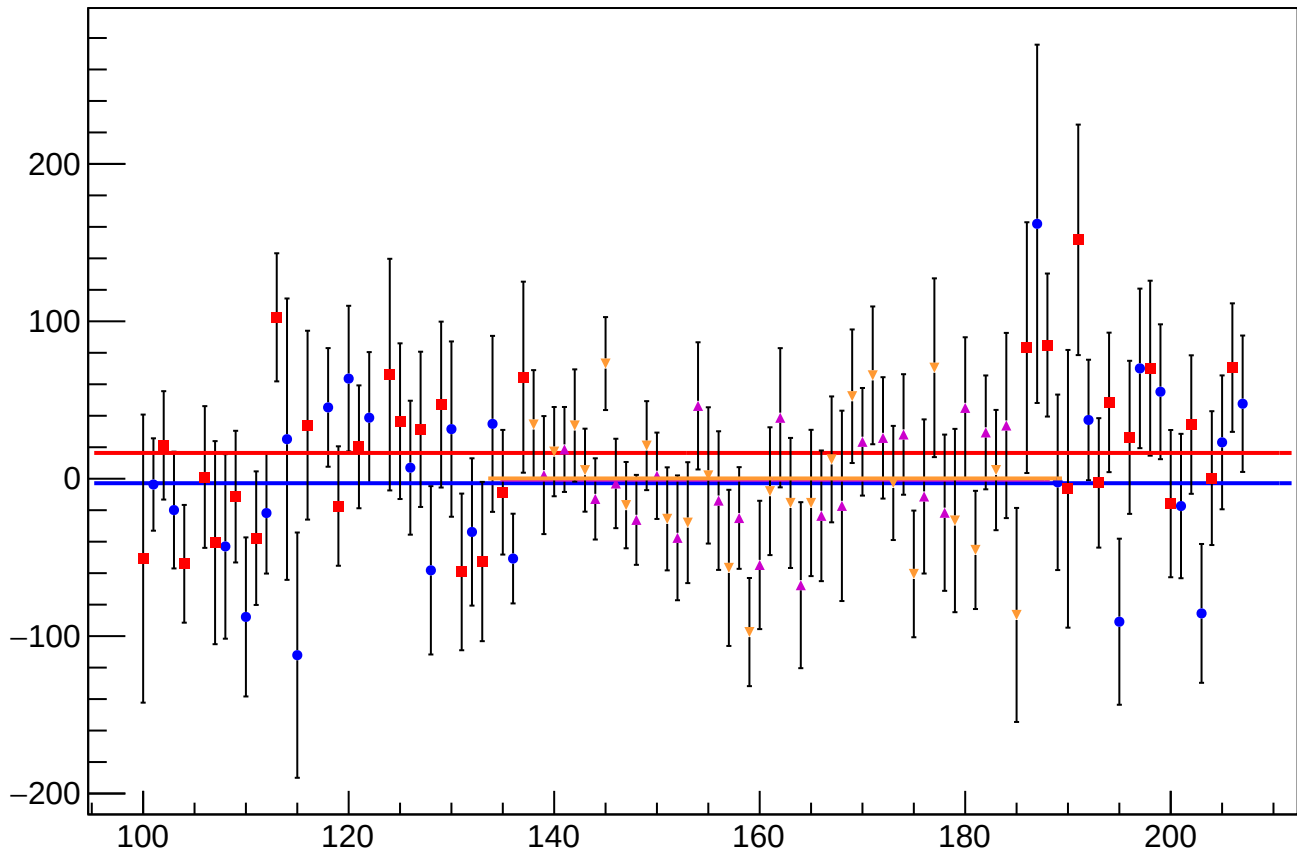
# diff\_bpm11Y\_rms vs Slug

$\times 10^3$



Right In:  $4850.994 \pm 0.952$   $\chi^2/\text{NDF}: 3283967.4/25$  + sign  $5183.955 \pm 0.679$   $\chi^2/\text{NDF}: 7908317.8/50$   
 Left Out:  $5527.971 \pm 0.968$   $\chi^2/\text{NDF}: 4375722.1/24$  All:  $4998.127 \pm 0.467$   $\chi^2/\text{NDF}: 17984899.3/1$   
 Right Out:  $4721.888 \pm 0.906$   $\chi^2/\text{NDF}: 3968846.2/30$  - sign  $4830.859 \pm 0.644$   $\chi^2/\text{NDF}: 9934157.8/53$   
 Left In:  $4941.993 \pm 0.915$   $\chi^2/\text{NDF}: 5936108.3/22$

# diff\_bpm12X\_mean vs Slug



Right In: -2.854 $\pm$ 8.782  $\chi^2/\text{NDF}$ : 31.0/25

Left Out: 0.168 $\pm$ 7.375  $\chi^2/\text{NDF}$ : 31.1/24

Right Out: 16.378 $\pm$ 8.522  $\chi^2/\text{NDF}$ : 29.4/30

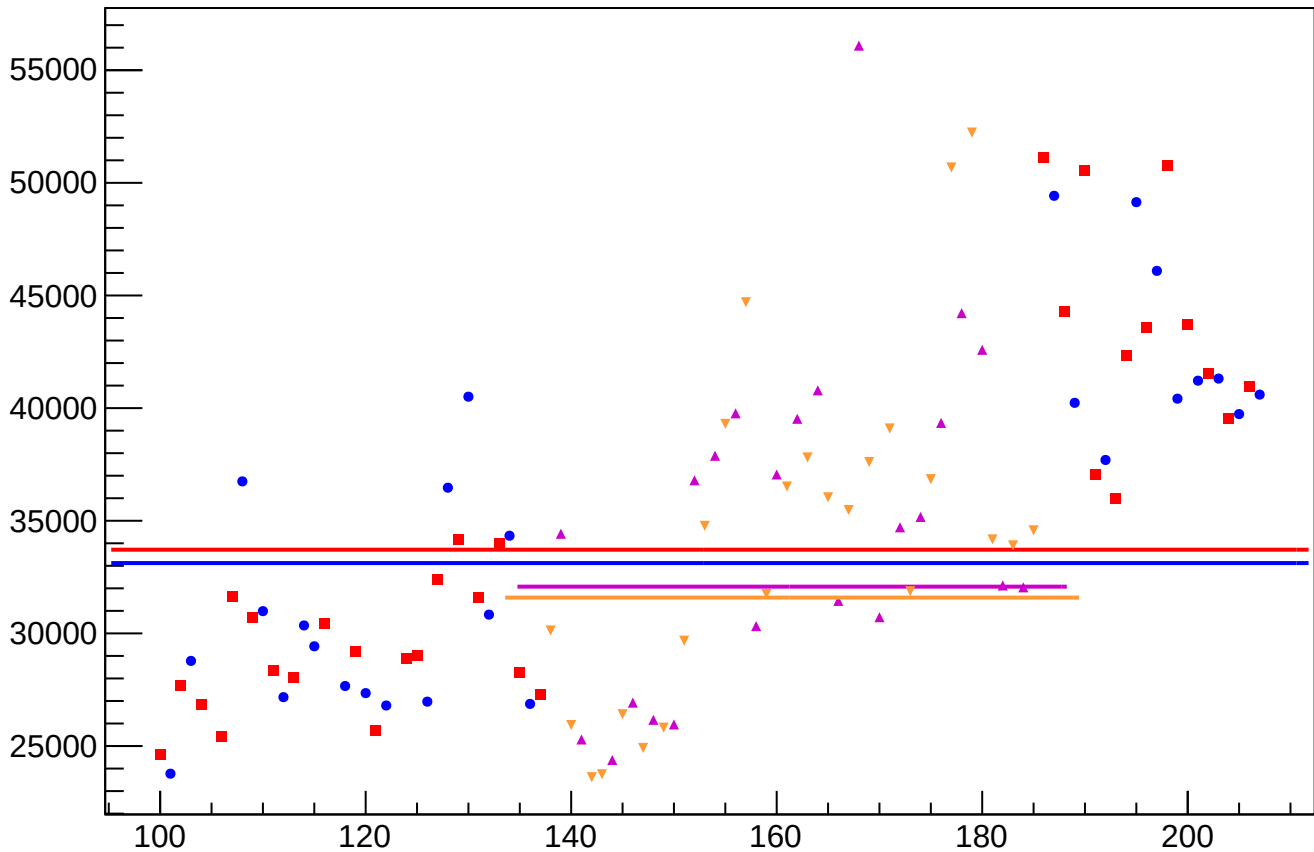
Left In: -0.586 $\pm$ 7.667  $\chi^2/\text{NDF}$ : 12.8/22

+ sign -1.082 $\pm$ 5.648  $\chi^2/\text{NDF}$ : 62.2/50

All: 2.923 $\pm$ 4.012  $\chi^2/\text{NDF}$ : 107.6/104

- sign 7.003 $\pm$ 5.700  $\chi^2/\text{NDF}$ : 44.4/53

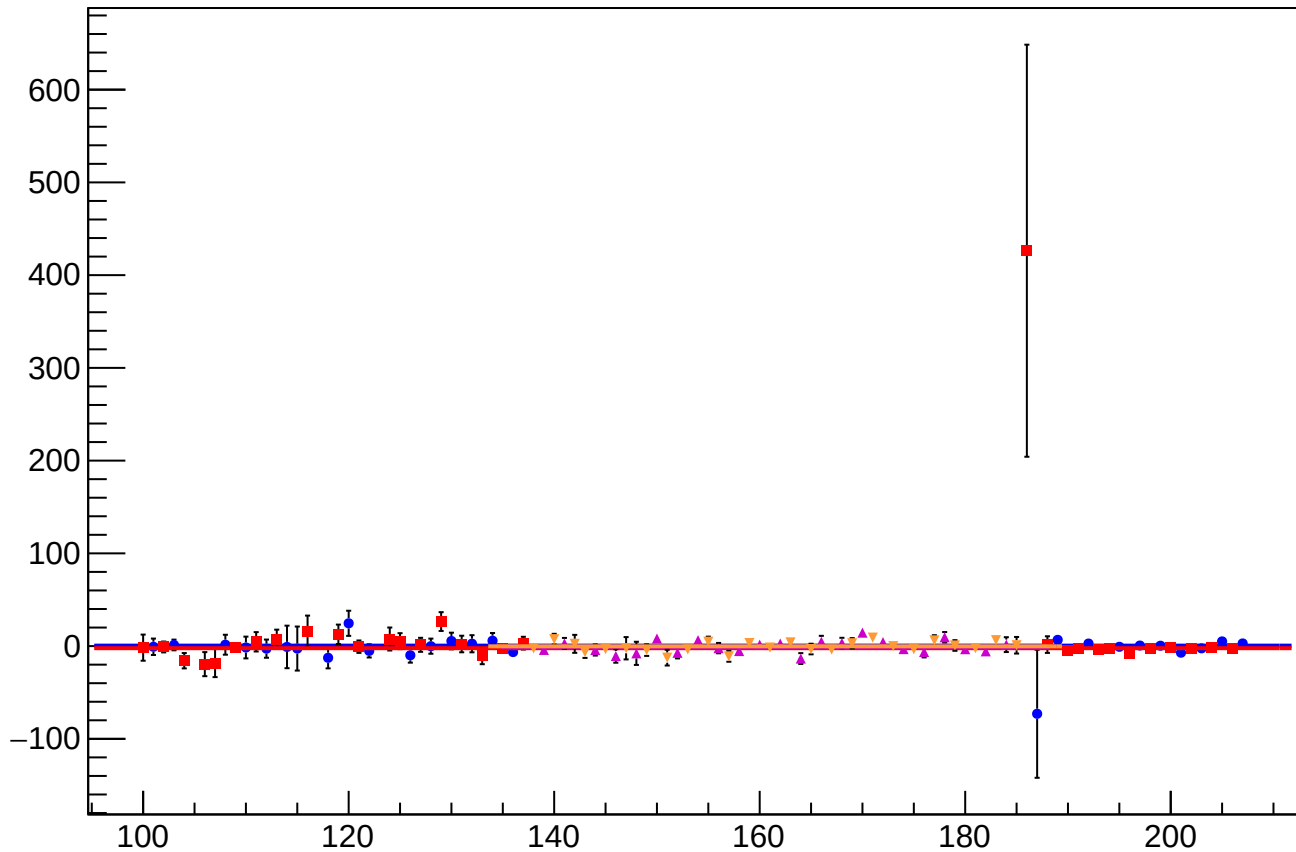
# diff\_bpm12X\_rms vs Slug



|                              |                                    |                          |                                     |
|------------------------------|------------------------------------|--------------------------|-------------------------------------|
| Right In: 33121.721+/-6.210  | $\chi^2/\text{NDF}$ : 1316748.9/25 | + sign 32223.351+/-3.993 | $\chi^2/\text{NDF}$ : 2943303.6/50  |
| Left Out: 31589.841+/-5.215  | $\chi^2/\text{NDF}$ : 1590867.7/24 | All: 32513.471+/-2.837   | $\chi^2/\text{NDF}$ : 5847795.5/100 |
| Right Out: 33715.572+/-6.026 | $\chi^2/\text{NDF}$ : 1397161.5/30 | - sign 32808.959+/-4.030 | $\chi^2/\text{NDF}$ : 2893838.6/53  |
| Left In: 32075.078+/-5.421   | $\chi^2/\text{NDF}$ : 1455714.6/22 |                          |                                     |



diff\_bpm12Y\_mean vs Slug



Right In:  $0.507 \pm 0.839$   $\chi^2/\text{NDF}$ : 28.0/25

Left Out:  $-0.226 \pm 1.094$   $\chi^2/\text{NDF}$ : 19.9/24

Right Out:  $-2.253 \pm 0.840$   $\chi^2/\text{NDF}$ : 29.1/30

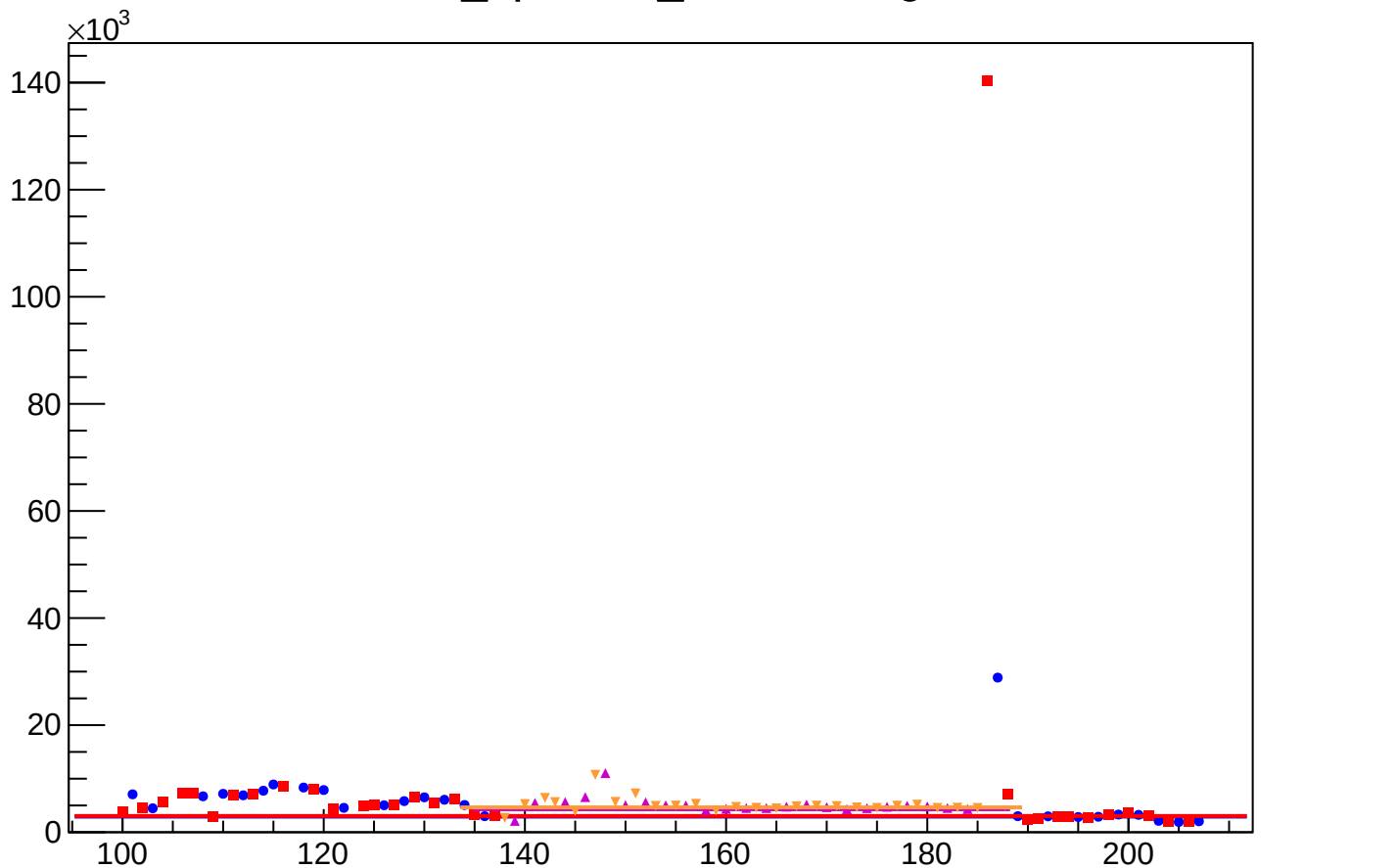
Left In:  $-0.788 \pm 1.061$   $\chi^2/\text{NDF}$ : 33.8/22

+ sign  $0.236 \pm 0.666$   $\chi^2/\text{NDF}$ : 48.2/50

All:  $-0.737 \pm 0.468$   $\chi^2/\text{NDF}$ : 116.4/104

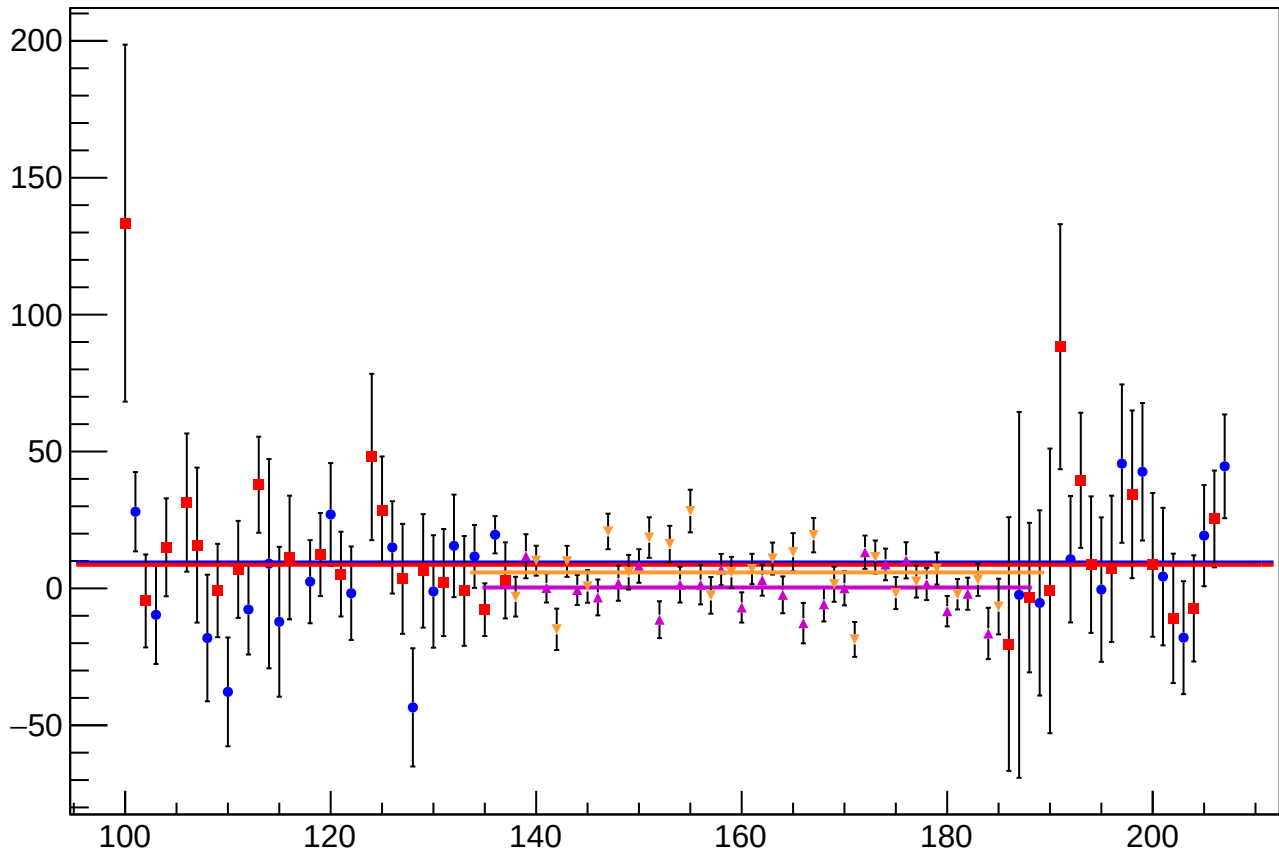
- sign  $-1.689 \pm 0.659$   $\chi^2/\text{NDF}$ : 64.0/53

# diff\_bpm12Y\_rms vs Slug



|                                 |                                   |                             |                                    |
|---------------------------------|-----------------------------------|-----------------------------|------------------------------------|
| Right In: $2926.547 \pm 0.593$  | $\chi^2/\text{NDF}: 4917420.6/25$ | + sign $3560.337 \pm 0.471$ | $\chi^2/\text{NDF}: 9760209.5/50$  |
| Left Out: $4637.399 \pm 0.774$  | $\chi^2/\text{NDF}: 1763103.2/24$ | All: $3541.282 \pm 0.331$   | $\chi^2/\text{NDF}: 19940401.6/1$  |
| Right Out: $3038.130 \pm 0.594$ | $\chi^2/\text{NDF}: 5355182.3/30$ | - sign $3522.643 \pm 0.466$ | $\chi^2/\text{NDF}: 10176951.6/53$ |
| Left In: $4295.074 \pm 0.750$   | $\chi^2/\text{NDF}: 3095610.0/22$ |                             |                                    |

# diff\_bpm16X\_mean vs Slug



Right In:  $9.477 \pm 3.422$   $\chi^2/\text{NDF}: 31.0/25$

Left Out:  $5.849 \pm 1.257$   $\chi^2/\text{NDF}: 60.0/24$

Right Out:  $8.638 \pm 3.604$   $\chi^2/\text{NDF}: 23.0/30$

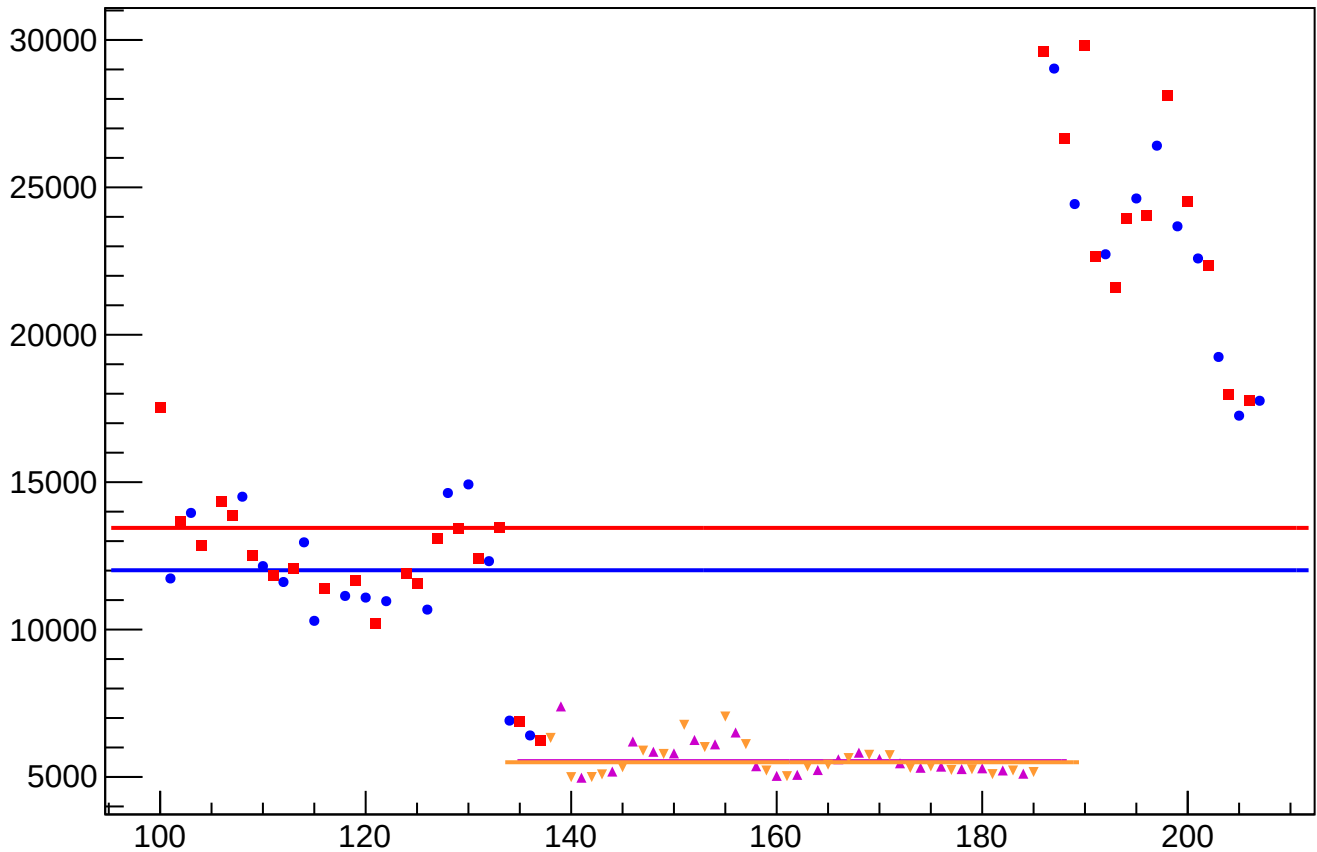
Left In:  $0.337 \pm 1.301$   $\chi^2/\text{NDF}: 29.4/22$

+ sign  $6.280 \pm 1.180$   $\chi^2/\text{NDF}: 92.1/50$

All:  $3.877 \pm 0.849$   $\chi^2/\text{NDF}: 157.7/104$

- sign  $1.294 \pm 1.224$   $\chi^2/\text{NDF}: 57.0/53$

# diff\_bpm16X\_rms vs Slug



Right In: 12012.112 $\pm$ 2.420  $\chi^2$ /NDF: 5064399.3/25

Left Out: 5499.215 $\pm$ 0.889  $\chi^2$ /NDF:297719.4/24

Right Out: 13448.677 $\pm$ 2.548  $\chi^2$ /NDF: 4883284.0/30

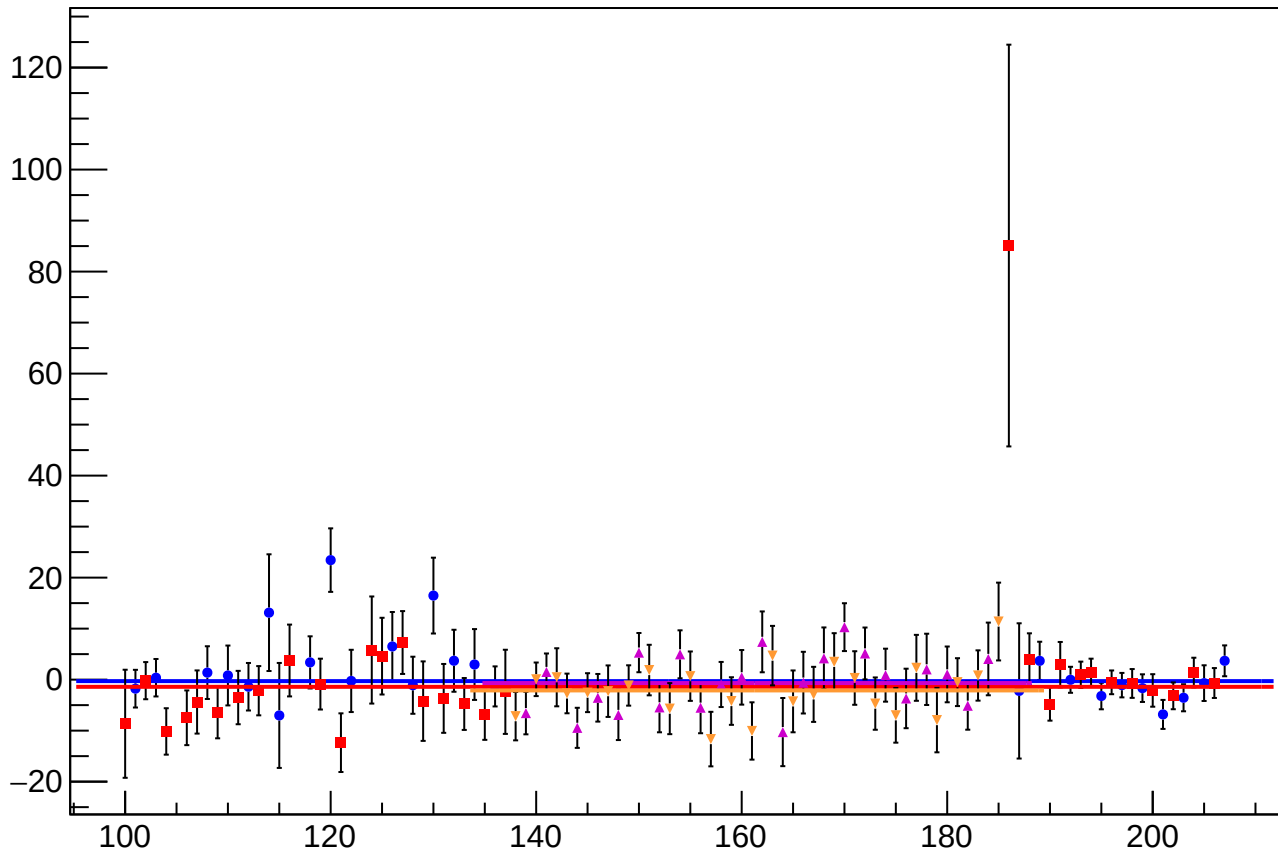
Left In: 5537.777 $\pm$ 0.920  $\chi^2$ /NDF:304062.1/22

+ sign 6273.825 $\pm$ 0.835  $\chi^2$ /NDF: 11743837.9/50

All: 6358.605 $\pm$ 0.601  $\chi^2$ /NDF: 25479862.5/1

- sign 6449.712 $\pm$ 0.865  $\chi^2$ /NDF: 13714615.6/53

# diff\_bpm16Y\_mean vs Slug



Right In:  $-0.293 \pm 0.767$   $\chi^2/\text{NDF}$ : 35.4/25

Left Out:  $-2.116 \pm 0.987$   $\chi^2/\text{NDF}$ : 17.5/24

Right Out:  $-1.409 \pm 0.735$   $\chi^2/\text{NDF}$ : 27.8/30

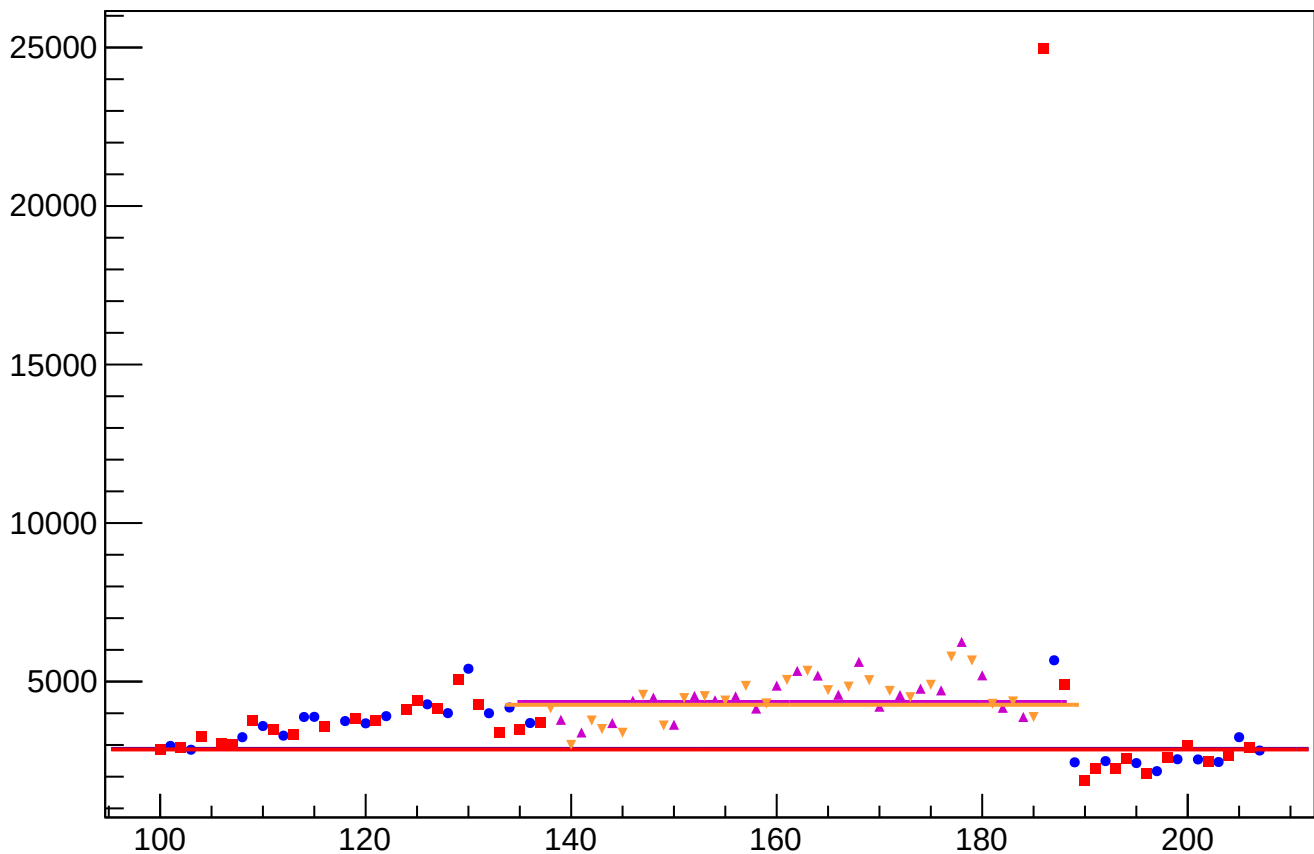
Left In:  $-0.670 \pm 1.031$   $\chi^2/\text{NDF}$ : 28.4/22

+ sign  $-0.979 \pm 0.606$   $\chi^2/\text{NDF}$ : 55.0/50

All:  $-1.071 \pm 0.426$   $\chi^2/\text{NDF}$ : 111.5/104

- sign  $-1.160 \pm 0.599$   $\chi^2/\text{NDF}$ : 56.5/53

# diff\_bpm16Y\_rms vs Slug



Right In: 2876.071 $\pm$ 0.543  $\chi^2$ /NDF: 1385408.5/25

Left Out: 4267.631 $\pm$ 0.698  $\chi^2$ /NDF: 1034722.2/24

Right Out: 2859.080 $\pm$ 0.520  $\chi^2$ /NDF: 2415925.5/30

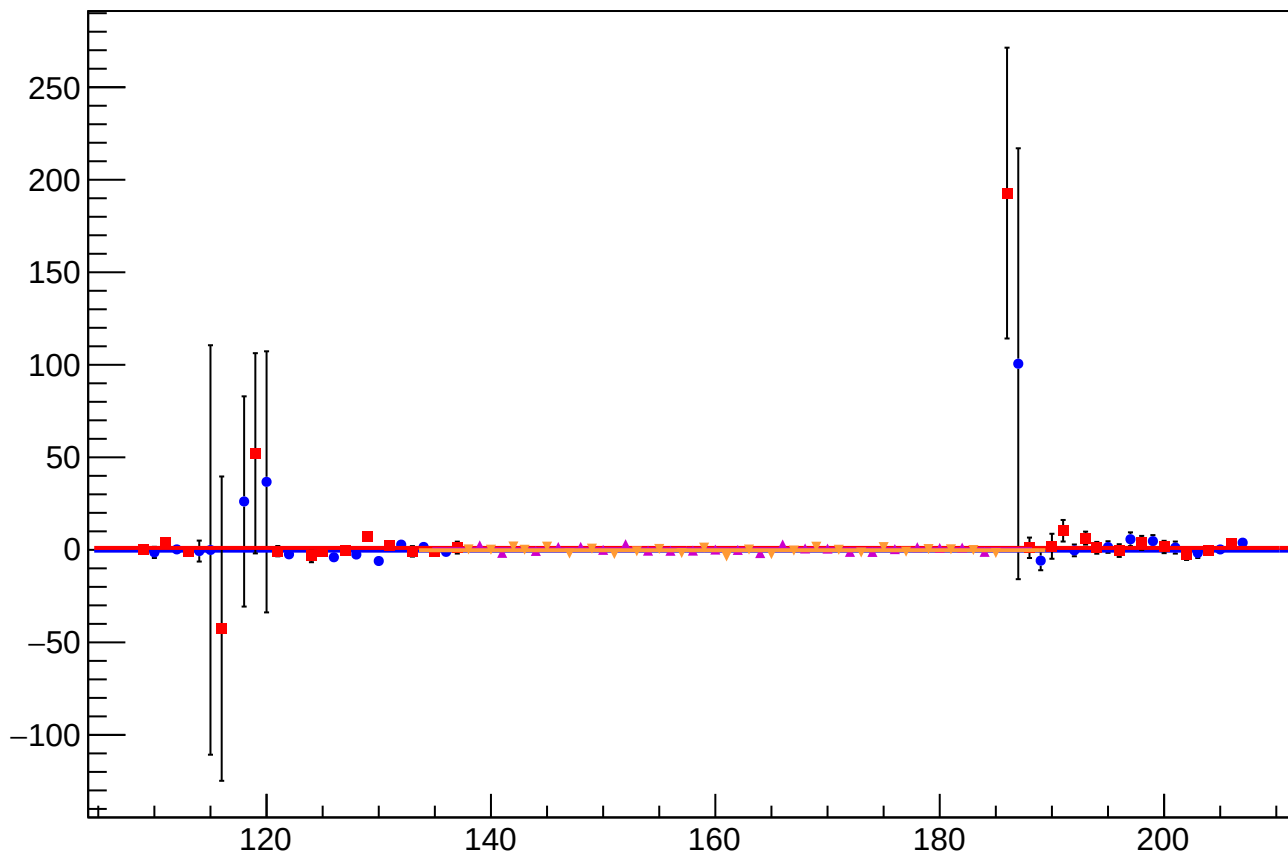
Left In: 4355.855 $\pm$ 0.729  $\chi^2$ /NDF: 743046.1/22

+ sign 3400.238 $\pm$ 0.428  $\chi^2$ /NDF: 4896773.9/50

All: 3381.703 $\pm$ 0.301  $\chi^2$ /NDF: 10854521.0/1

- sign 3363.620 $\pm$ 0.423  $\chi^2$ /NDF: 5954050.2/53

# diff\_bpm1p02bX\_mean vs Slug



Right In:  $-0.430 \pm 0.586$   $\chi^2/\text{NDF}$ : 25.7/22

Left Out:  $-0.201 \pm 0.236$   $\chi^2/\text{NDF}$ : 33.9/24

Right Out:  $1.046 \pm 0.580$   $\chi^2/\text{NDF}$ : 27.6/25

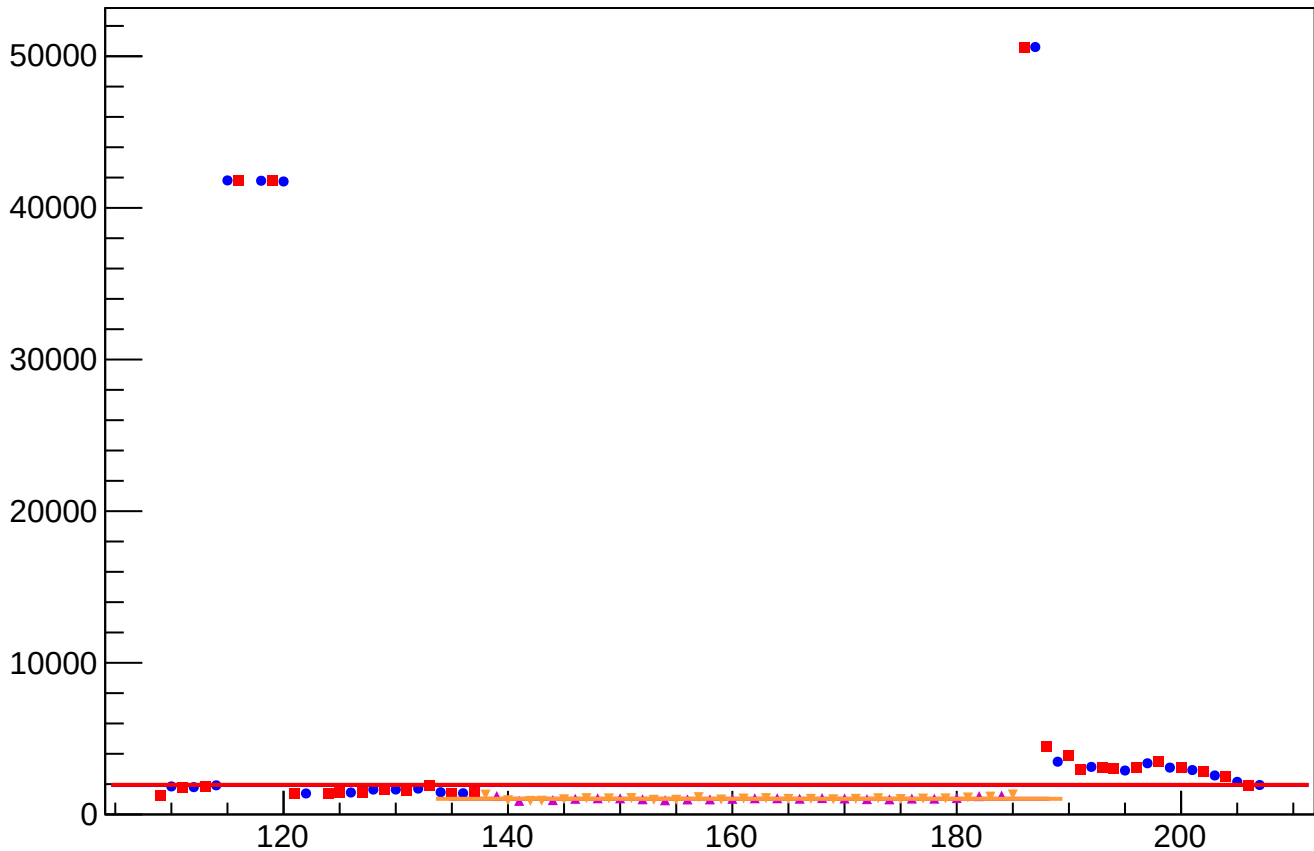
Left In:  $0.333 \pm 0.242$   $\chi^2/\text{NDF}$ : 29.4/22

+ sign  $-0.233 \pm 0.219$   $\chi^2/\text{NDF}$ : 59.7/47

All:  $0.096 \pm 0.156$   $\chi^2/\text{NDF}$ : 122.6/96

- sign  $0.439 \pm 0.223$   $\chi^2/\text{NDF}$ : 58.3/48

# diff\_bpm1p02bX\_rms vs Slug



Right In: 1941.132 $\pm$ 0.415  $\chi^2$ /NDF: 4386489.0/22

Left Out: 1031.473 $\pm$ 0.167  $\chi^2$ /NDF: 244095.3/24

Right Out: 1953.640 $\pm$ 0.410  $\chi^2$ /NDF: 5347150.1/25

Left In: 1032.715 $\pm$ 0.171  $\chi^2$ /NDF: 187148.3/22

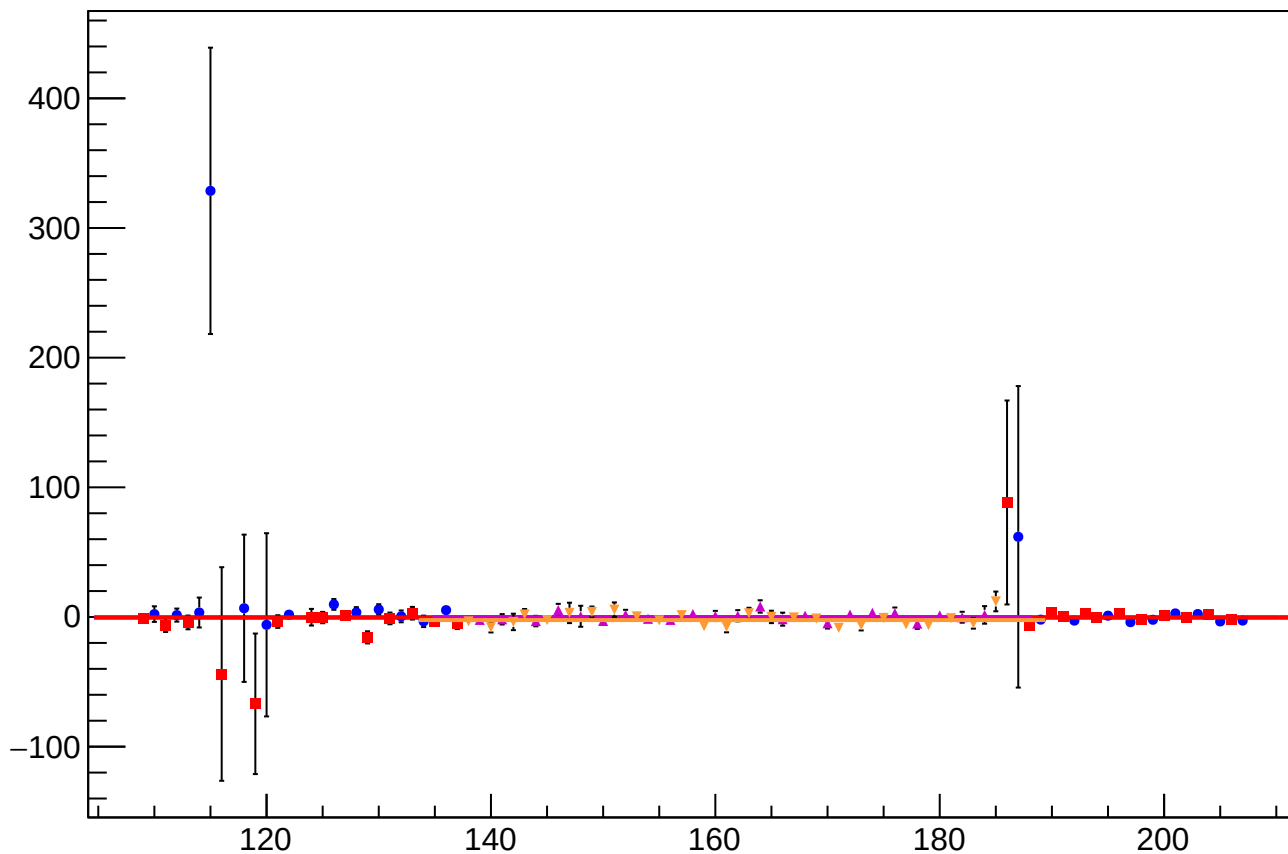
+ sign 1157.872 $\pm$ 0.155  $\chi^2$ /NDF: 8776939.2/47

All: 1163.484 $\pm$ 0.110  $\chi^2$ /NDF: 18605551.8/9

- sign 1169.353 $\pm$ 0.158  $\chi^2$ /NDF: 9825914.3/48



# diff\_bpm1p02bY\_mean vs Slug



Right In:  $-0.358 \pm 0.559$   $\chi^2/\text{NDF}$ : 43.9/22

Left Out:  $-2.380 \pm 0.782$   $\chi^2/\text{NDF}$ : 24.3/24

Right Out:  $-0.363 \pm 0.564$   $\chi^2/\text{NDF}$ : 31.3/25

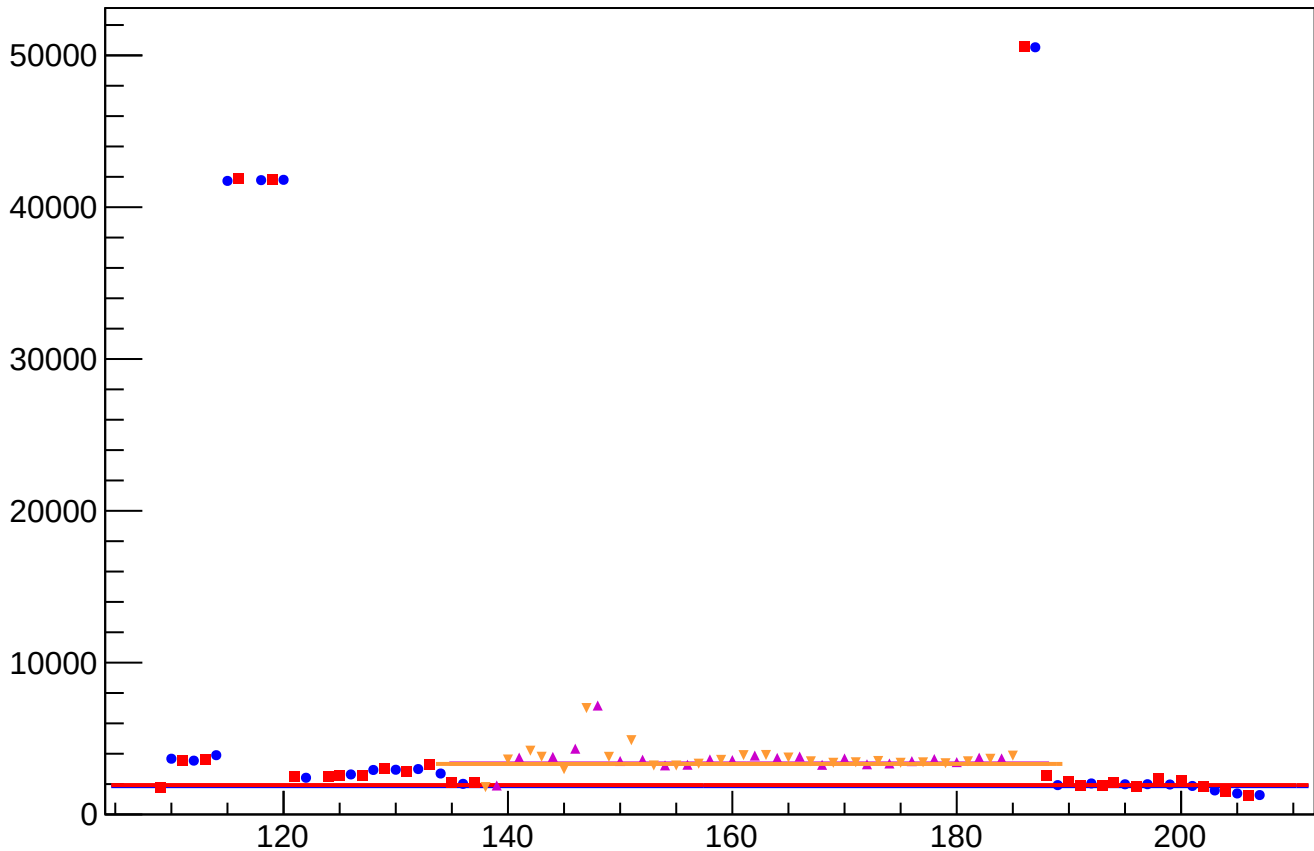
Left In:  $-0.171 \pm 0.810$   $\chi^2/\text{NDF}$ : 12.6/22

+ sign  $-1.043 \pm 0.455$   $\chi^2/\text{NDF}$ : 72.6/47

All:  $-0.678 \pm 0.324$   $\chi^2/\text{NDF}$ : 117.9/96

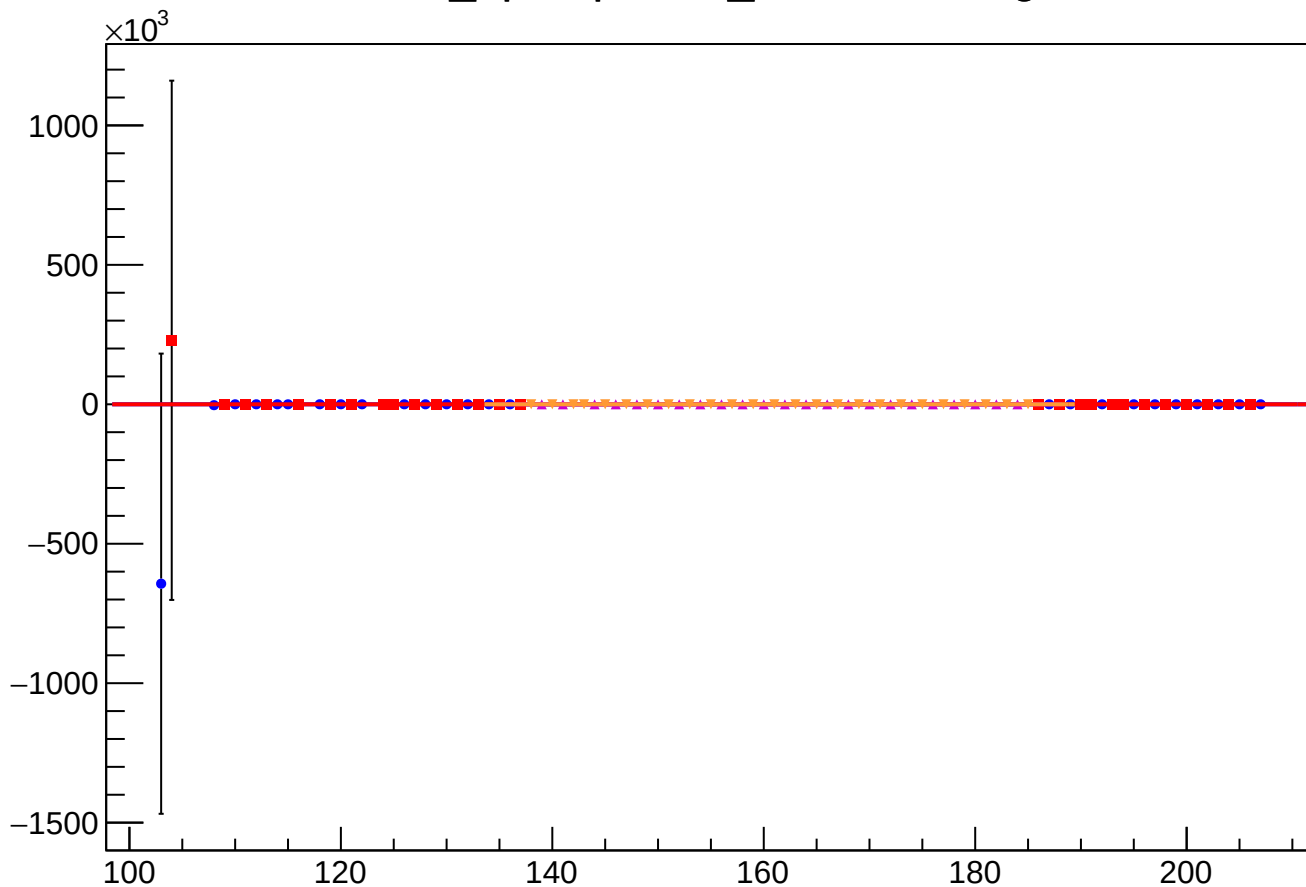
- sign  $-0.300 \pm 0.463$   $\chi^2/\text{NDF}$ : 43.9/48

# diff\_bpm1p02bY\_rms vs Slug



Right In:  $1863.484 \pm 0.396$   $\chi^2/\text{NDF}: 3966231.6/22$  + sign  $2359.345 \pm 0.322$   $\chi^2/\text{NDF}: 10522295.2/47$   
 Left Out:  $3328.251 \pm 0.553$   $\chi^2/\text{NDF}: 1915576.2/24$  All:  $2380.199 \pm 0.229$   $\chi^2/\text{NDF}: 20429165.0/9$   
 Right Out:  $1936.238 \pm 0.399$   $\chi^2/\text{NDF}: 4080337.5/25$  - sign  $2401.771 \pm 0.327$   $\chi^2/\text{NDF}: 9898324.7/48$   
 Left In:  $3360.799 \pm 0.572$   $\chi^2/\text{NDF}: 1649390.5/22$

# diff\_bpm1p03aX\_mean vs Slug



Right In:  $-1.302 \pm 0.620$   $\chi^2/\text{NDF}$ : 28.7/24

Left Out:  $-1.573 \pm 0.363$   $\chi^2/\text{NDF}$ : 50.3/24

Right Out:  $-1.649 \pm 0.617$   $\chi^2/\text{NDF}$ : 24.5/26

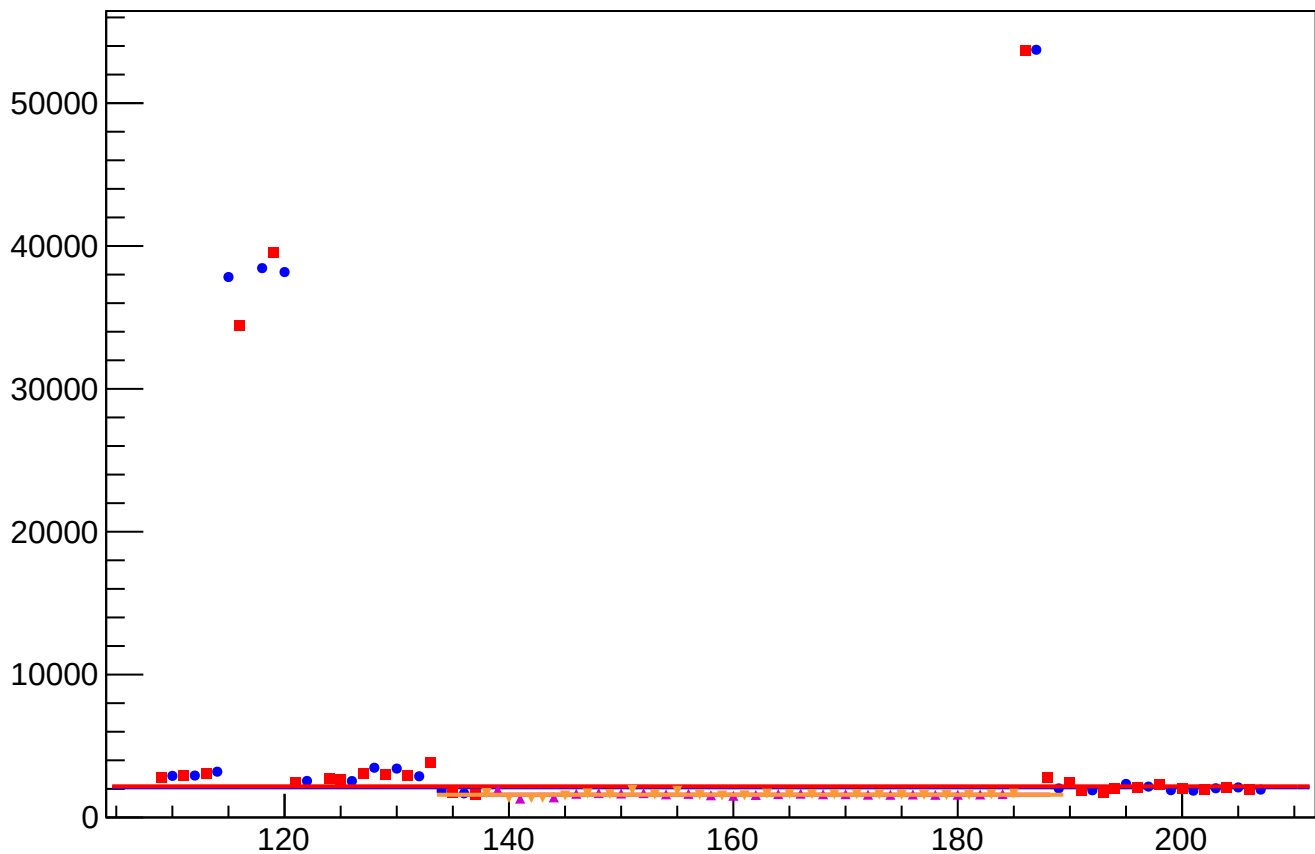
Left In:  $0.018 \pm 0.374$   $\chi^2/\text{NDF}$ : 27.3/22

+ sign  $-1.504 \pm 0.313$   $\chi^2/\text{NDF}$ : 79.1/49

All:  $-0.979 \pm 0.224$   $\chi^2/\text{NDF}$ : 142.0/99

- sign  $-0.431 \pm 0.320$   $\chi^2/\text{NDF}$ : 57.1/49

# diff\_bpm1p03aX\_rms vs Slug



Right In: 2108.933+/-0.438  $\chi^2/\text{NDF}$ : 2981157.6/22

Left Out: 1589.488+/-0.257  $\chi^2/\text{NDF}$ : 232518.0/24

Right Out: 2179.670+/-0.437  $\chi^2/\text{NDF}$ : 3246315.2/25

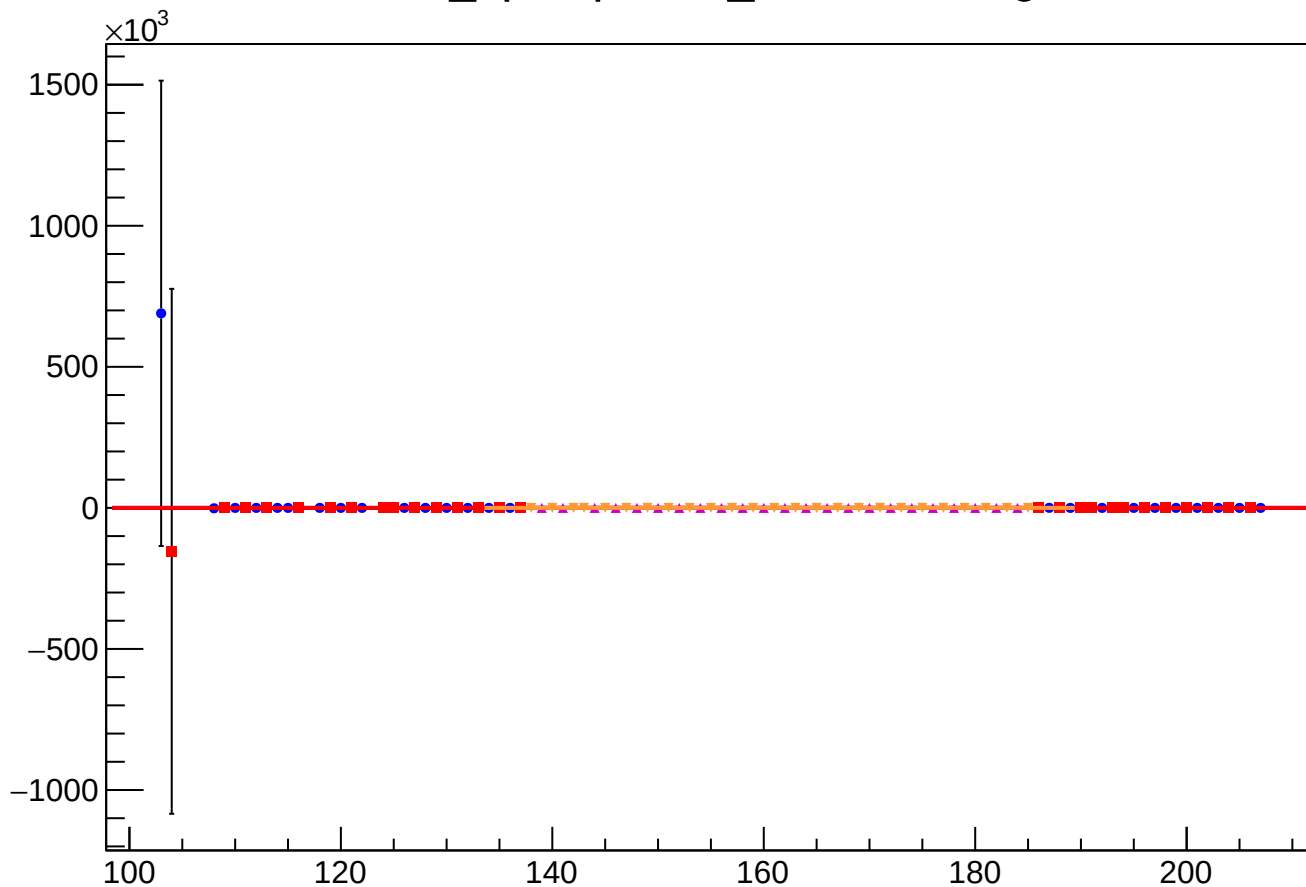
Left In: 1596.179+/-0.265  $\chi^2/\text{NDF}$ : 196833.1/22

+ sign 1722.134+/-0.221  $\chi^2/\text{NDF}$ : 4260033.3/47

All: 1737.256+/-0.158  $\chi^2/\text{NDF}$ : 9018484.9/96

- sign 1753.064+/-0.226  $\chi^2/\text{NDF}$ : 4748912.4/48

# diff\_bpm1p03aY\_mean vs Slug



Right In:  $-0.019 \pm 0.476$   $\chi^2/\text{NDF}$ : 23.3/24

Left Out:  $-1.179 \pm 0.502$   $\chi^2/\text{NDF}$ : 24.4/24

Right Out:  $0.144 \pm 0.475$   $\chi^2/\text{NDF}$ : 26.5/26

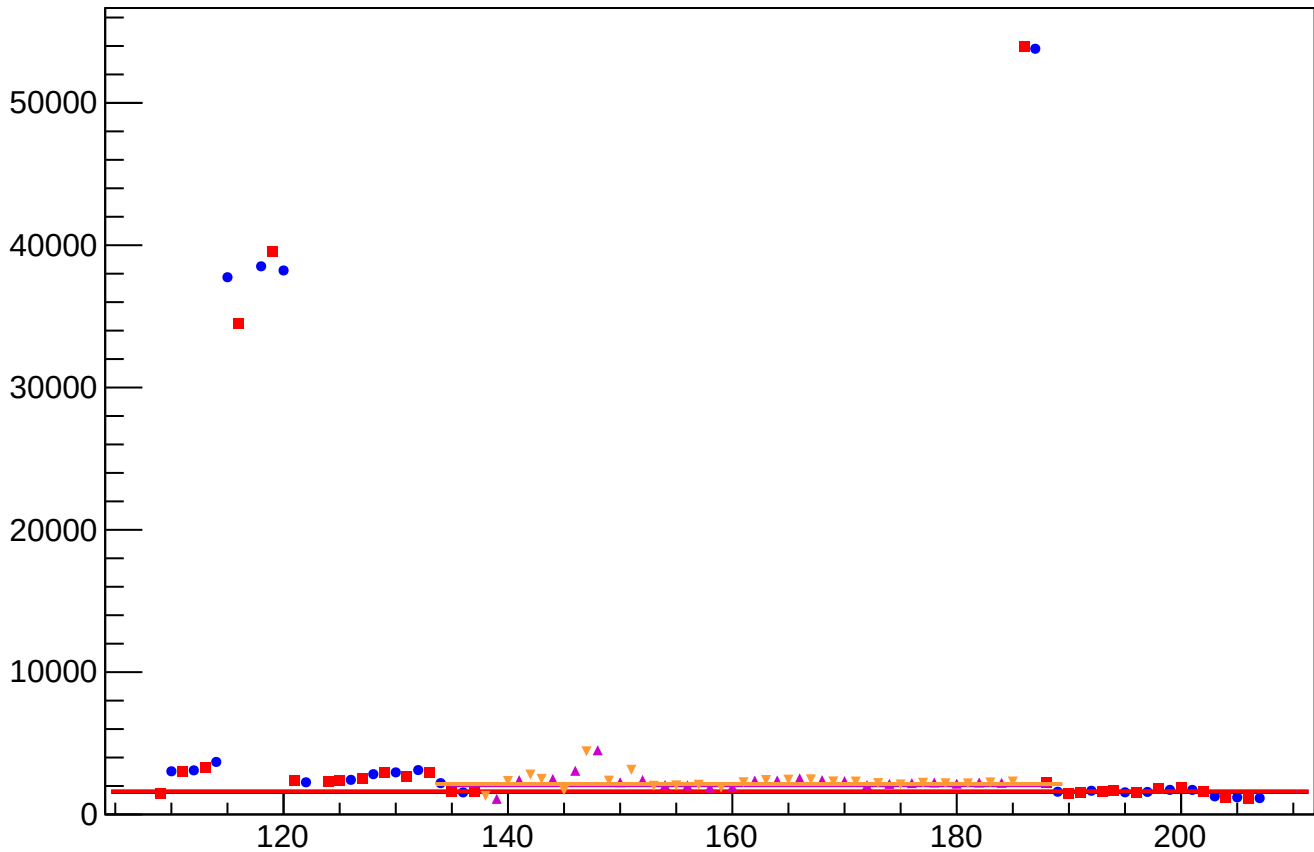
Left In:  $0.125 \pm 0.501$   $\chi^2/\text{NDF}$ : 16.9/22

+ sign  $-0.567 \pm 0.345$   $\chi^2/\text{NDF}$ : 50.5/49

All:  $-0.216 \pm 0.244$   $\chi^2/\text{NDF}$ : 96.0/99

- sign  $0.135 \pm 0.345$   $\chi^2/\text{NDF}$ : 43.4/49

# diff\_bpm1p03aY\_rms vs Slug



Right In: 1578.104 $\pm$ 0.336  $\chi^2$ /NDF: 4151501.2/22

Left Out: 2139.248 $\pm$ 0.355  $\chi^2$ /NDF:1480000.5/24

Right Out: 1625.576 $\pm$ 0.336  $\chi^2$ /NDF: 4242649.3/25

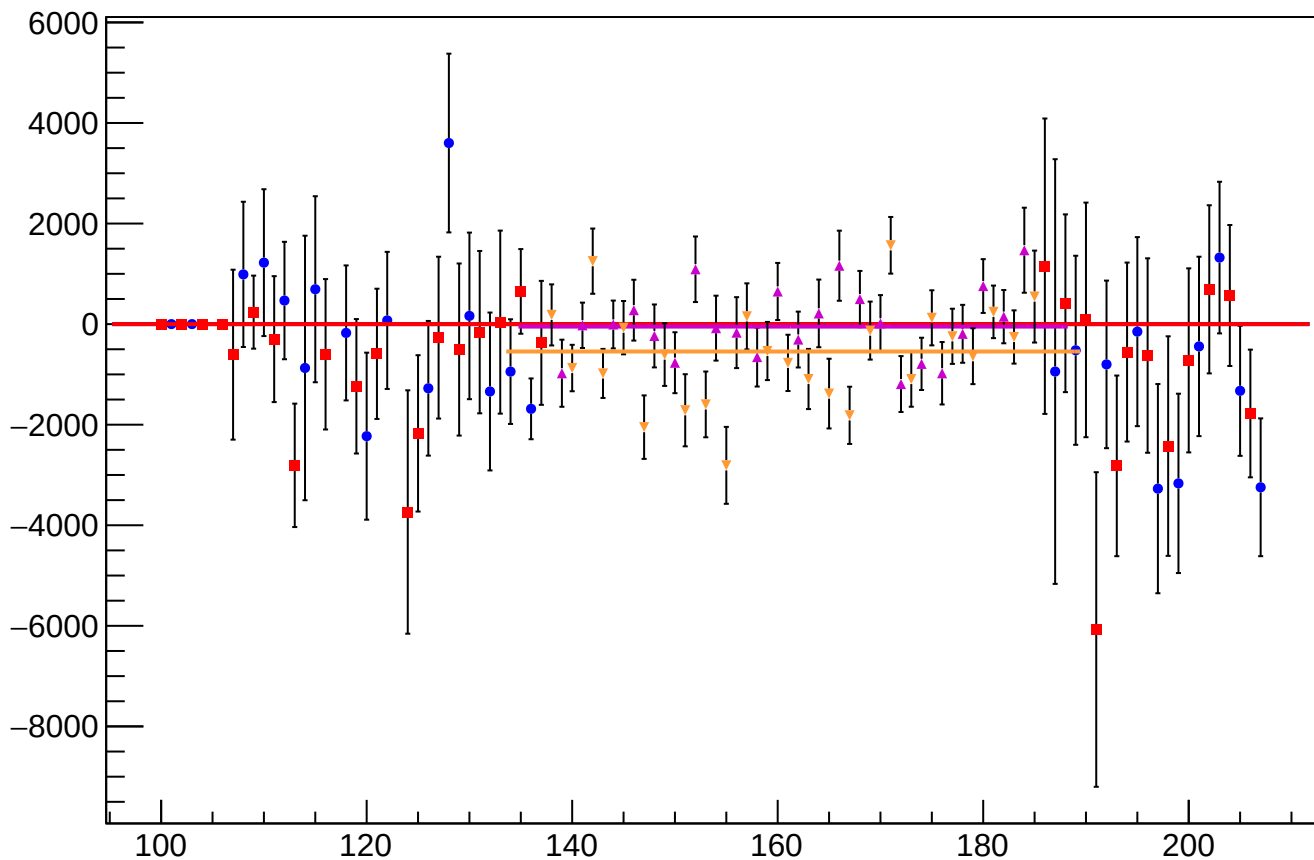
Left In: 2058.216 $\pm$ 0.354  $\chi^2$ /NDF:2293601.6/22

+ sign 1843.388 $\pm$ 0.244  $\chi^2$ /NDF: 6946647.0/47

All: 1836.814 $\pm$ 0.173  $\chi^2$ /NDF: 14269382.2/9

- sign 1830.266 $\pm$ 0.244  $\chi^2$ /NDF: 7321289.7/48

# diff\_cav4bX\_mean vs Slug



Right In:  $0.255 \pm 0.356$   $\chi^2/\text{NDF}$ : 31.2/25

Left Out:  $-544.414 \pm 117.154$   $\chi^2/\text{NDF}$ : 60.9/24

Right Out:  $0.096 \pm 0.328$   $\chi^2/\text{NDF}$ : 25.7/30

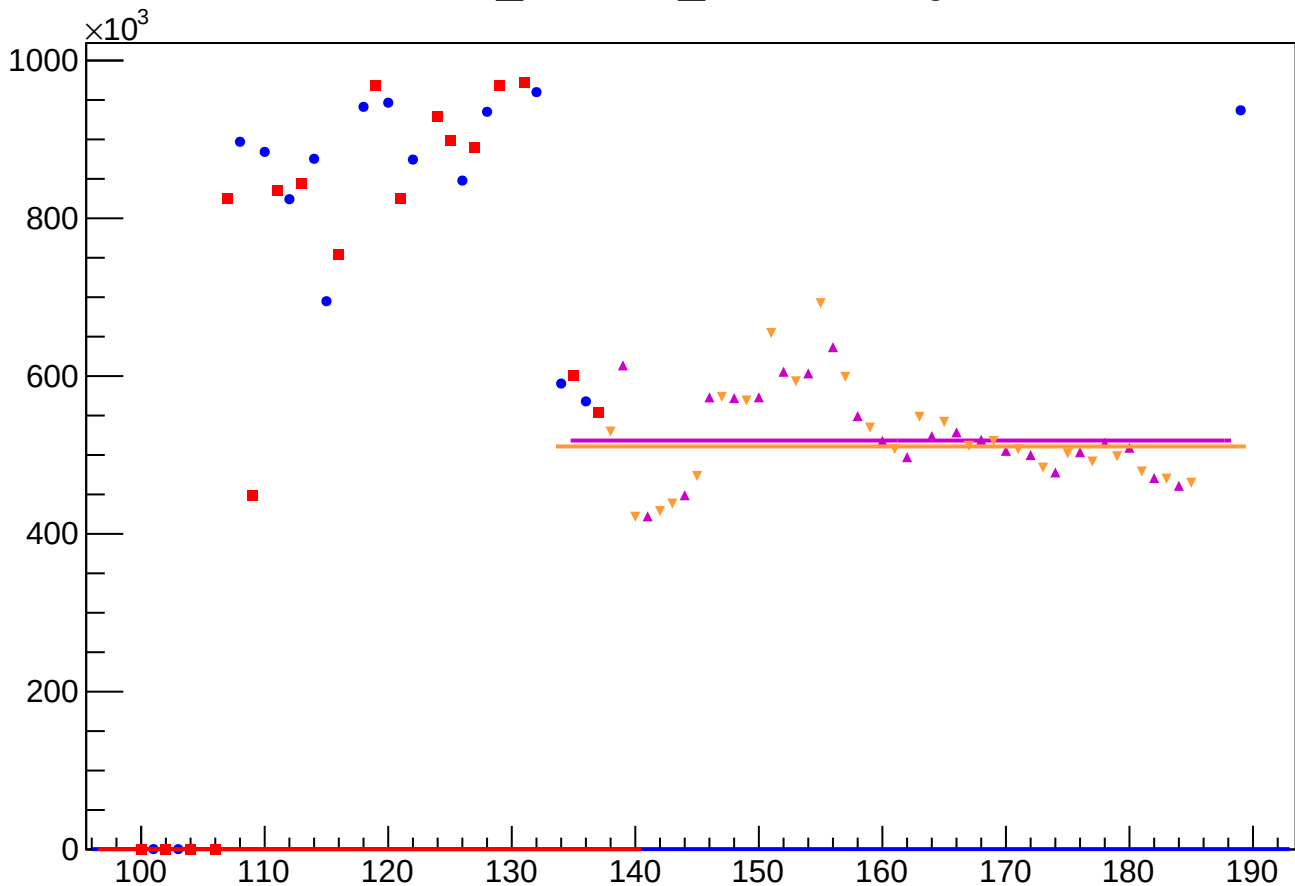
Left In:  $-49.119 \pm 121.932$   $\chi^2/\text{NDF}$ : 28.0/22

+ sign  $0.250 \pm 0.356$   $\chi^2/\text{NDF}$ : 113.7/50

All:  $0.166 \pm 0.241$   $\chi^2/\text{NDF}$ : 167.7/104

- sign  $0.095 \pm 0.328$   $\chi^2/\text{NDF}$ : 53.9/53

# diff\_cav4bX\_rms vs Slug



Right In: 398.894 $\pm$ 0.251  $\chi^2$ /NDF: 8685185.3/15

Left Out: 510811.545 $\pm$ 82.841  $\chi^2$ /NDF: 509606.7/24

+ sign 403.598 $\pm$ 0.251  $\chi^2$ /NDF: 47157011.5/40

Right Out: 393.240 $\pm$ 0.232  $\chi^2$ /NDF: 7648578.2/17

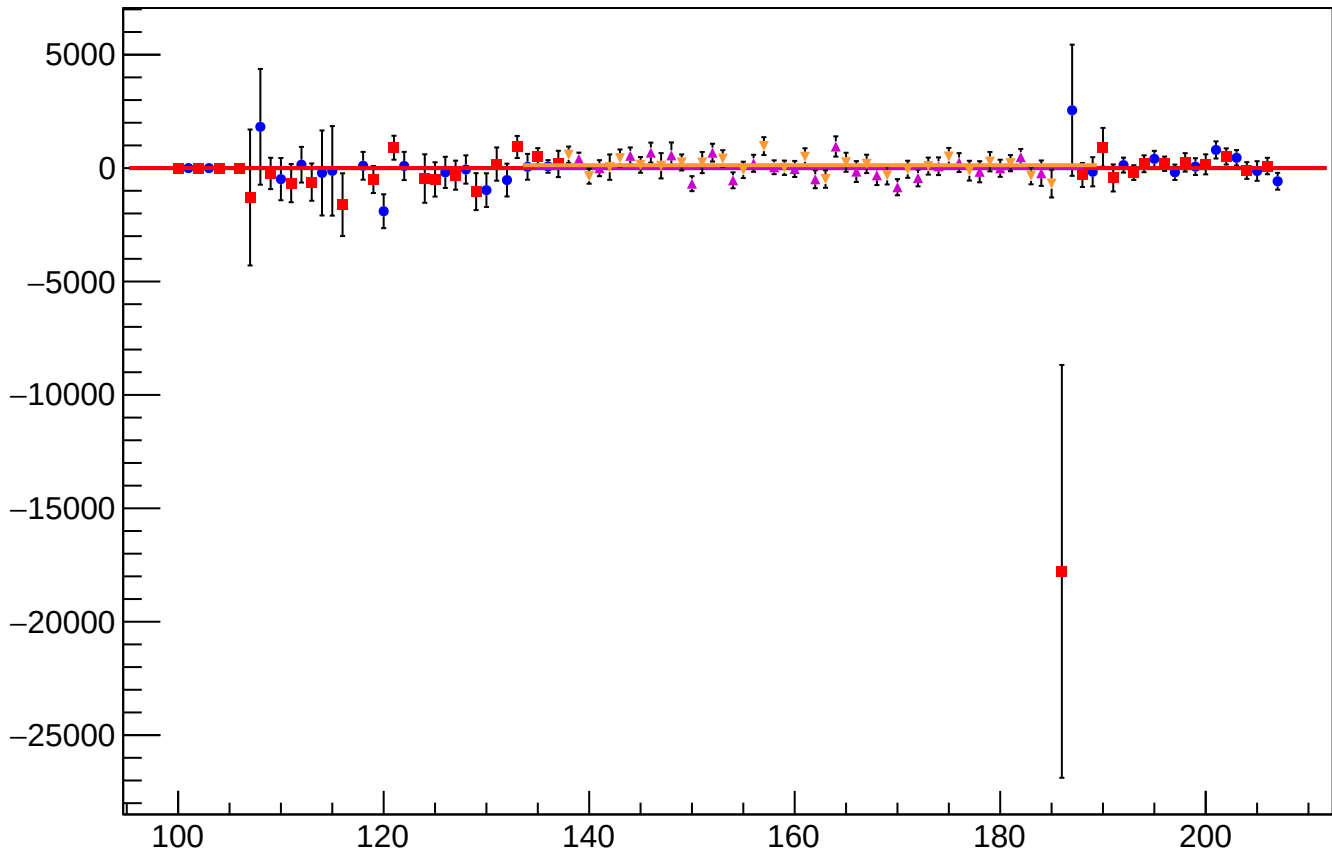
All: 400.021 $\pm$ 0.170  $\chi^2$ /NDF: 91289762.7/83

- sign 396.983 $\pm$ 0.232  $\chi^2$ /NDF: 44132377.0/40

Left In: 518313.411 $\pm$ 86.219  $\chi^2$ /NDF: 399884.6/22



# diff\_cav4bY\_mean vs Slug



Right In:  $-0.020 \pm 0.347$   $\chi^2/\text{NDF}$ : 21.9/25

Left Out:  $128.971 \pm 78.249$   $\chi^2/\text{NDF}$ : 20.1/24

Right Out:  $0.599 \pm 0.324$   $\chi^2/\text{NDF}$ : 24.6/30

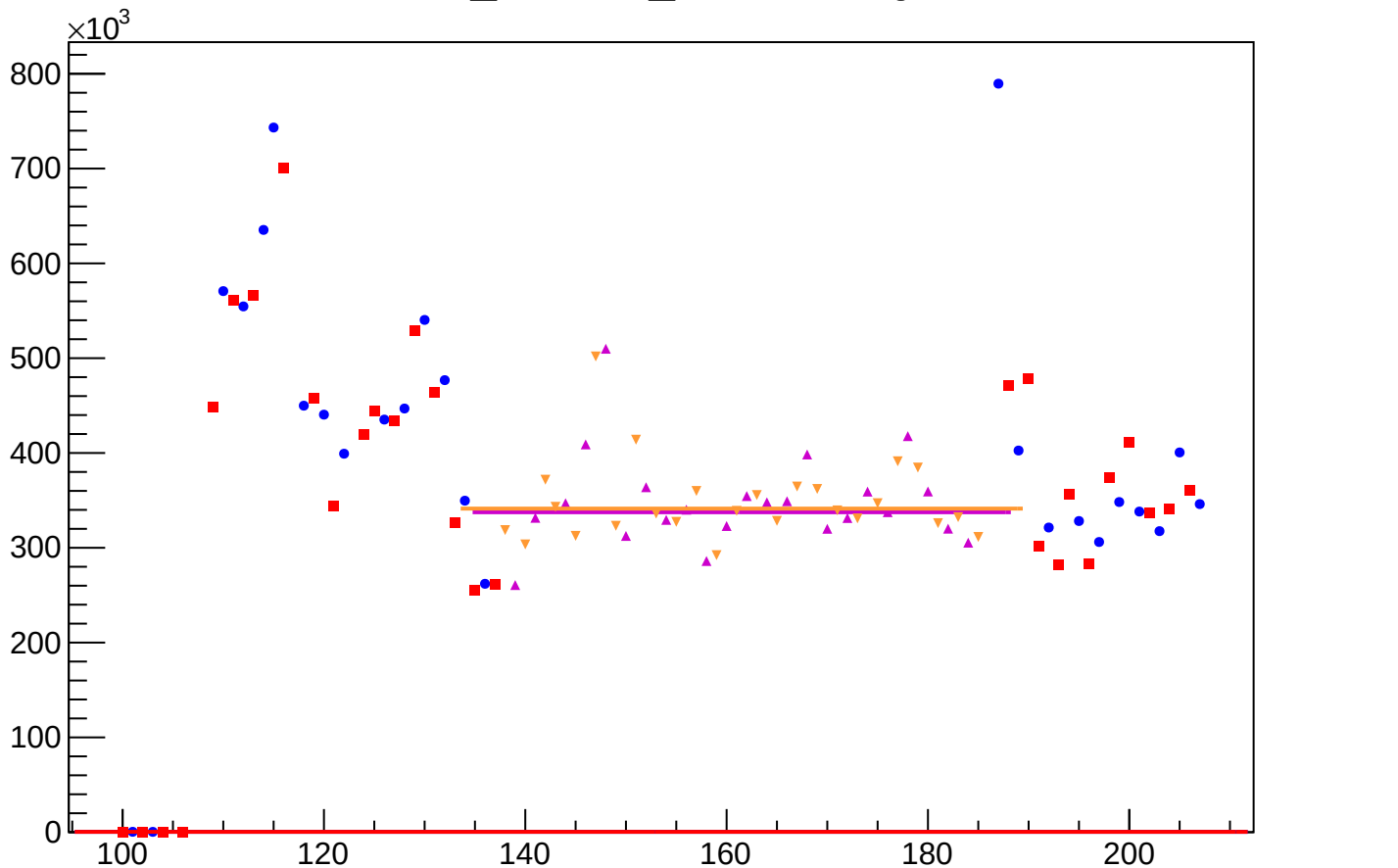
Left In:  $19.324 \pm 79.767$   $\chi^2/\text{NDF}$ : 33.7/22

+ sign  $-0.017 \pm 0.347$   $\chi^2/\text{NDF}$ : 44.7/50

All:  $0.313 \pm 0.237$   $\chi^2/\text{NDF}$ : 104.7/104

- sign  $0.600 \pm 0.324$   $\chi^2/\text{NDF}$ : 58.3/53

# diff\_cav4bY\_rms vs Slug



Right In:  $392.862 \pm 0.245$   $\chi^2/\text{NDF}$ : 25698923.0/24

Left Out:  $341327.149 \pm 55.330$   $\chi^2/\text{NDF}$ : 403173.8/24

Right Out:  $390.446 \pm 0.229$   $\chi^2/\text{NDF}$ : 27565880.7/28

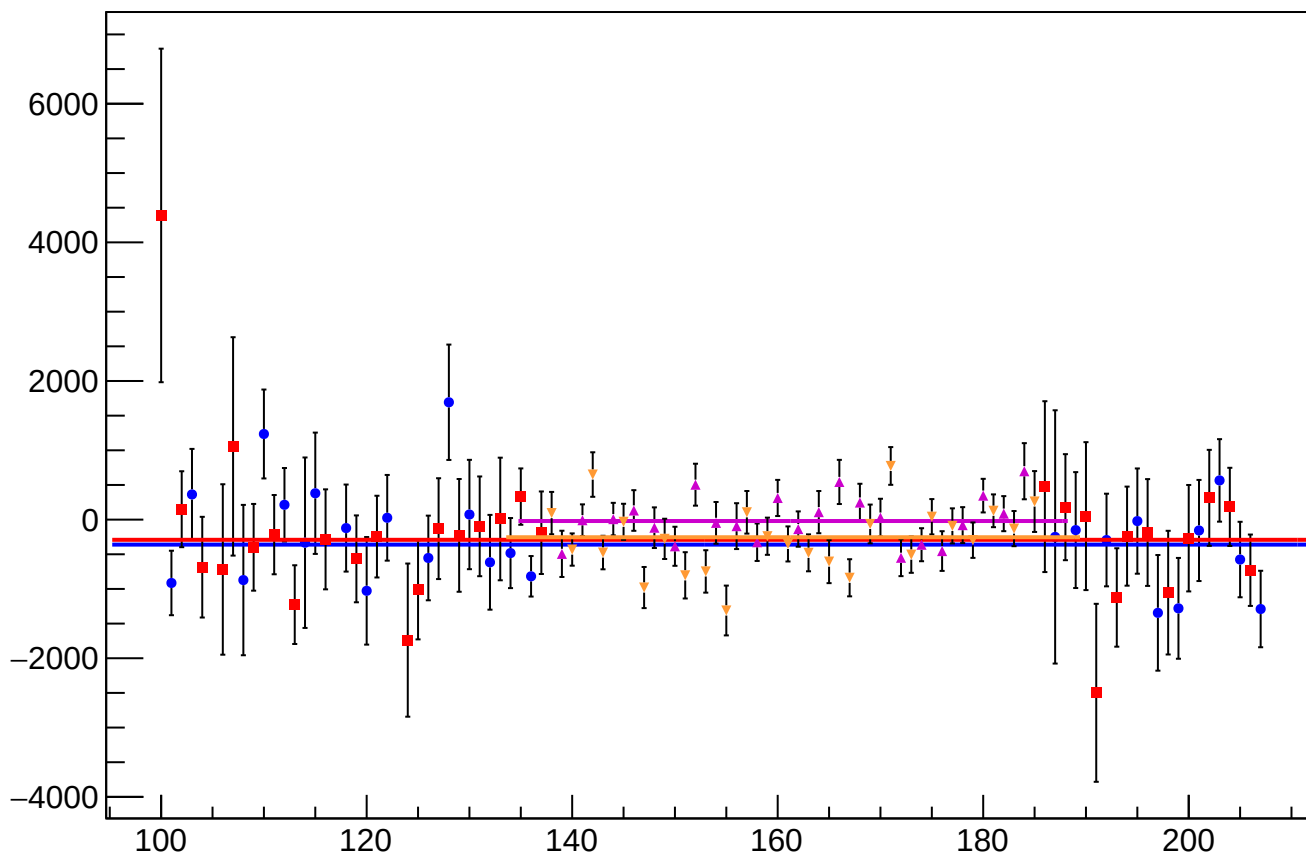
Left In:  $337505.654 \pm 56.407$   $\chi^2/\text{NDF}$ : 600776.4/22

+ sign  $399.571 \pm 0.245$   $\chi^2/\text{NDF}$ : 64069257.5/49

All:  $397.661 \pm 0.167$   $\chi^2/\text{NDF}$ : 127953923.7/101

- sign  $396.000 \pm 0.229$   $\chi^2/\text{NDF}$ : 63884553.0/51

# diff\_cav4cX\_mean vs Slug



Right In:  $-360.491 \pm 122.683$   $\chi^2/\text{NDF}$ : 30.1/25

Left Out:  $-254.371 \pm 55.417$   $\chi^2/\text{NDF}$ : 61.3/24

Right Out:  $-291.278 \pm 126.771$   $\chi^2/\text{NDF}$ : 22.1/30

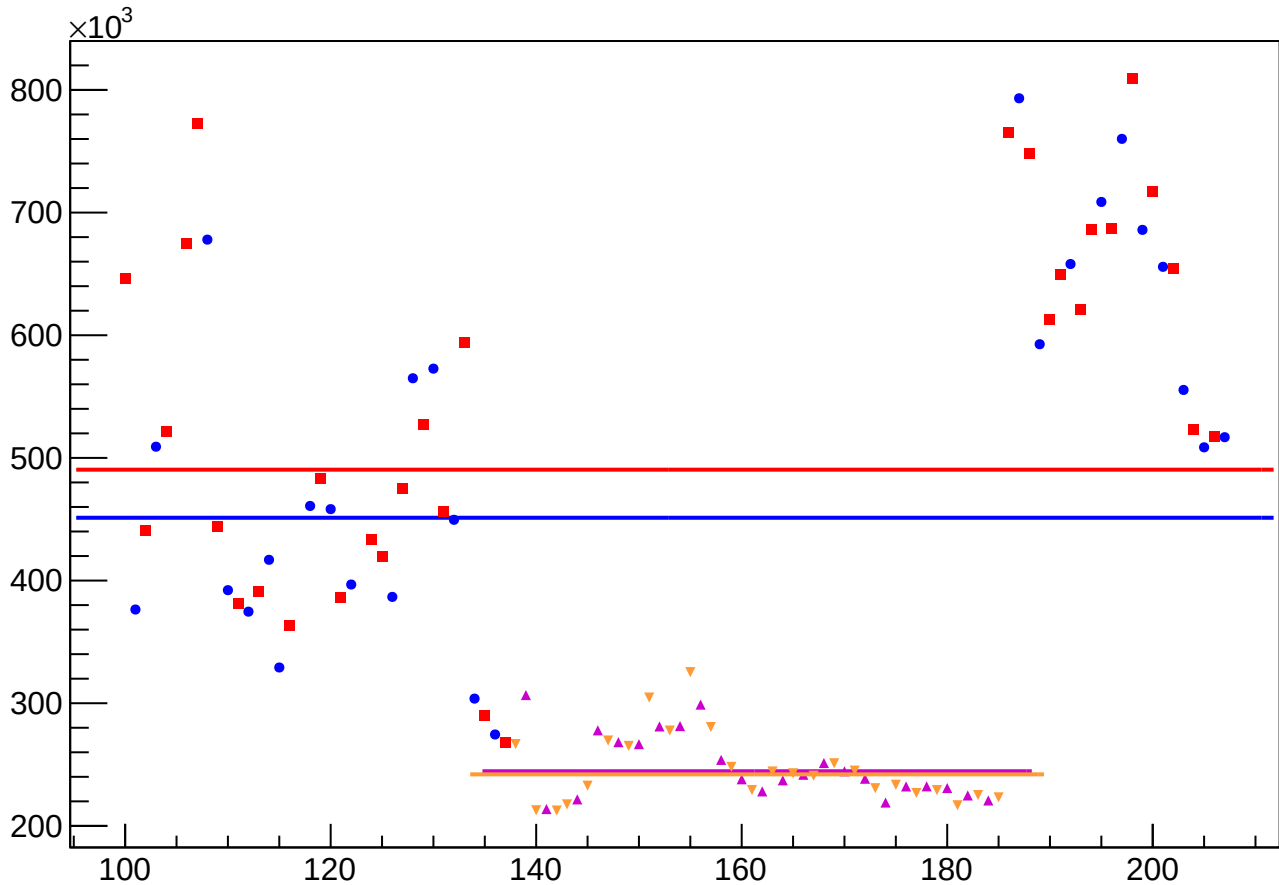
Left In:  $-20.176 \pm 57.484$   $\chi^2/\text{NDF}$ : 28.6/22

+ sign  $-272.355 \pm 50.504$   $\chi^2/\text{NDF}$ : 92.0/50

All:  $-173.084 \pm 36.348$   $\chi^2/\text{NDF}$ : 154.5/104

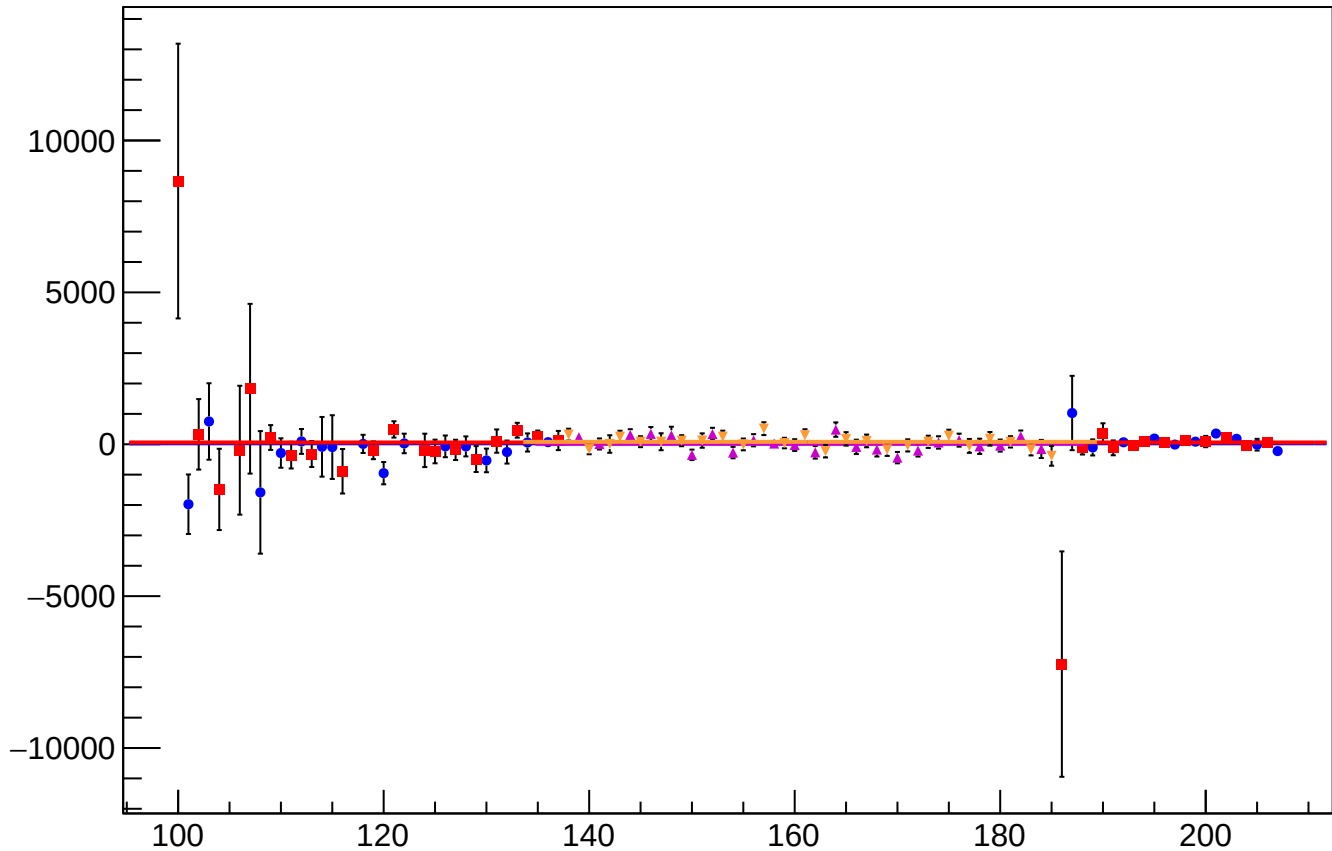
- sign  $-66.412 \pm 52.353$   $\chi^2/\text{NDF}$ : 54.4/53

# diff\_cav4cX\_rms vs Slug



|                                |                                    |                            |                                    |
|--------------------------------|------------------------------------|----------------------------|------------------------------------|
| Right In: 451211.160+/-86.766  | $\chi^2/\text{NDF}$ : 2576854.9/25 | + sign 277450.269+/-35.713 | $\chi^2/\text{NDF}$ : 7818627.4/50 |
| Left Out: 242008.749+/-39.186  | $\chi^2/\text{NDF}$ : 413236.1/24  | All: 281760.284+/-25.705   | $\chi^2/\text{NDF}$ : 16938512     |
| Right Out: 490408.323+/-89.745 | $\chi^2/\text{NDF}$ : 2500299.1/30 | - sign 286393.217+/-37.027 | $\chi^2/\text{NDF}$ : 9089663.8/53 |
| Left In: 244542.686+/-40.647   | $\chi^2/\text{NDF}$ : 361527.4/22  |                            |                                    |

# diff\_cav4cY\_mean vs Slug



Right In:  $31.368 \pm 44.918$   $\chi^2/\text{NDF}$ : 25.8/25

Left Out:  $79.495 \pm 41.301$   $\chi^2/\text{NDF}$ : 19.7/24

Right Out:  $58.926 \pm 43.394$   $\chi^2/\text{NDF}$ : 27.4/30

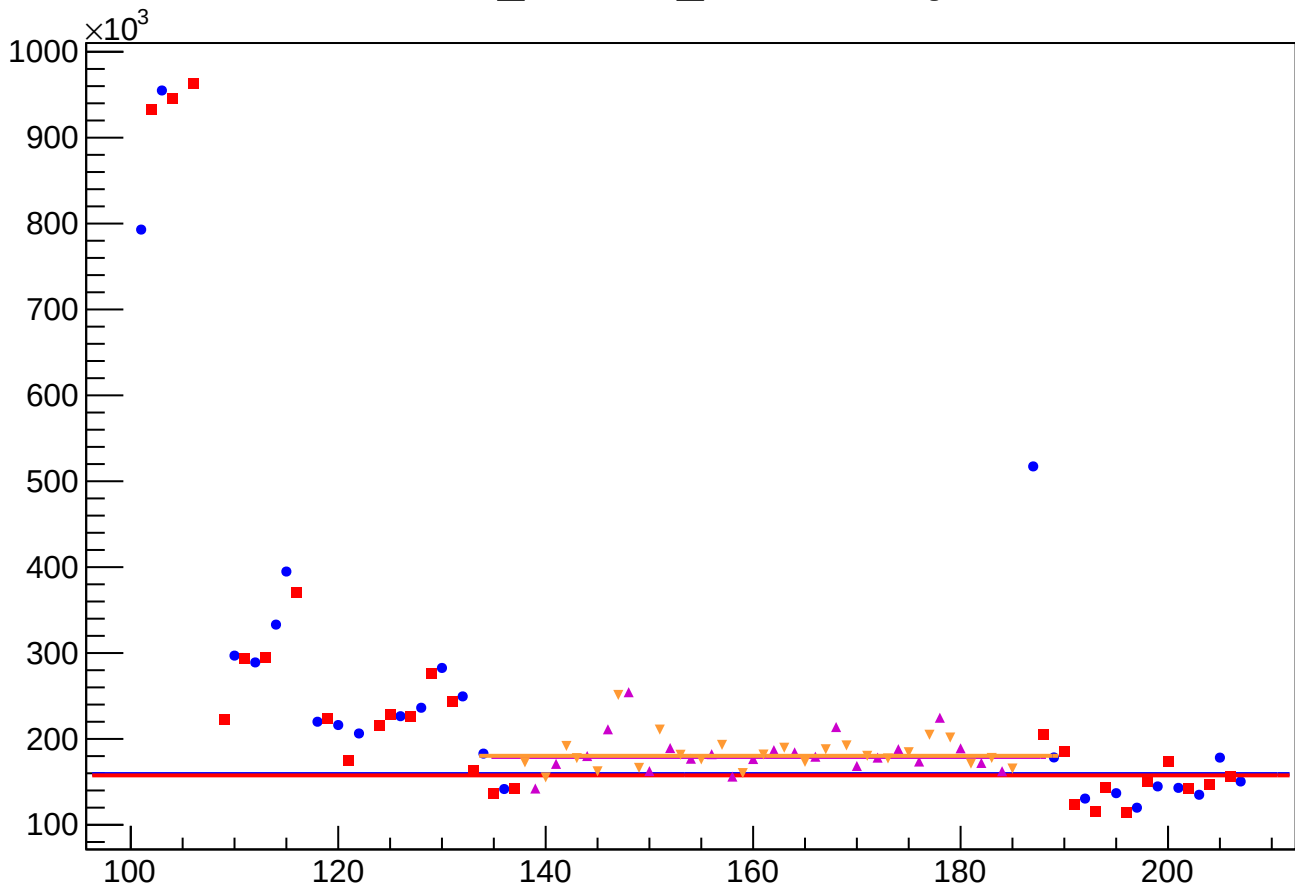
Left In:  $14.032 \pm 42.233$   $\chi^2/\text{NDF}$ : 33.2/22

+ sign  $57.447 \pm 30.403$   $\chi^2/\text{NDF}$ : 46.1/50

All:  $46.610 \pm 21.449$   $\chi^2/\text{NDF}$ : 107.5/104

- sign  $35.870 \pm 30.265$   $\chi^2/\text{NDF}$ : 61.1/53

# diff\_cav4cY\_rms vs Slug



Right In:  $159094.411 \pm 31.776$   $\chi^2/\text{NDF}: 3230613.1/24$

Left Out:  $180342.867 \pm 29.204$   $\chi^2/\text{NDF}: 346596.9/24$

Right Out:  $157584.672 \pm 30.705$   $\chi^2/\text{NDF}: 3271755.5/27$

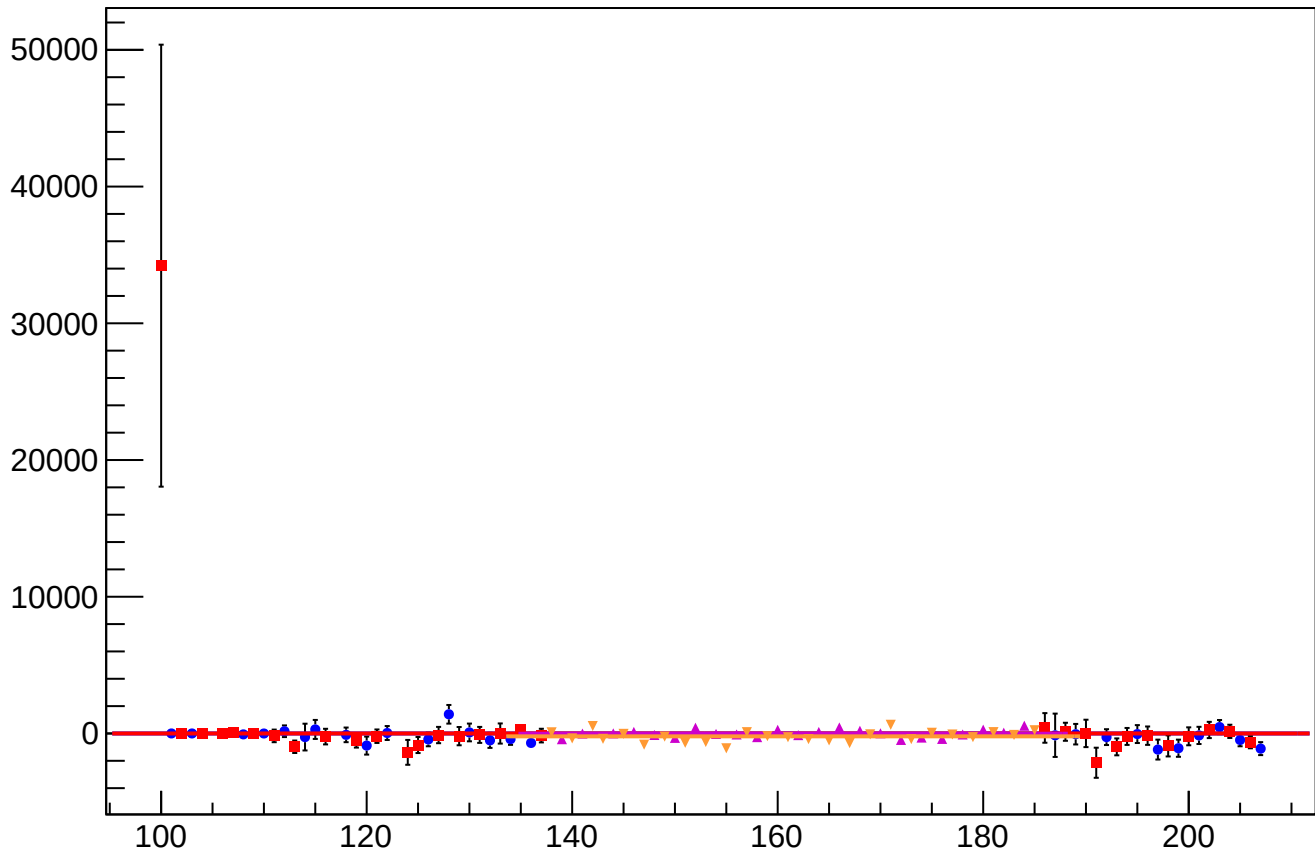
Left In:  $179024.195 \pm 29.863$   $\chi^2/\text{NDF}: 501400.7/22$

+ sign  $170613.357 \pm 21.502$   $\chi^2/\text{NDF}: 3819610.9/49$

All:  $169603.402 \pm 15.171$   $\chi^2/\text{NDF}: 7847703.8/100$

- sign  $168602.287 \pm 21.408$   $\chi^2/\text{NDF}: 4023699.9/50$

# diff\_cav4dX\_mean vs Slug



Right In:  $-0.035 \pm 0.172$   $\chi^2/\text{NDF}$ : 31.4/25

Left Out:  $-210.198 \pm 46.290$   $\chi^2/\text{NDF}$ : 61.2/24

Right Out:  $-0.355 \pm 0.160$   $\chi^2/\text{NDF}$ : 27.0/30

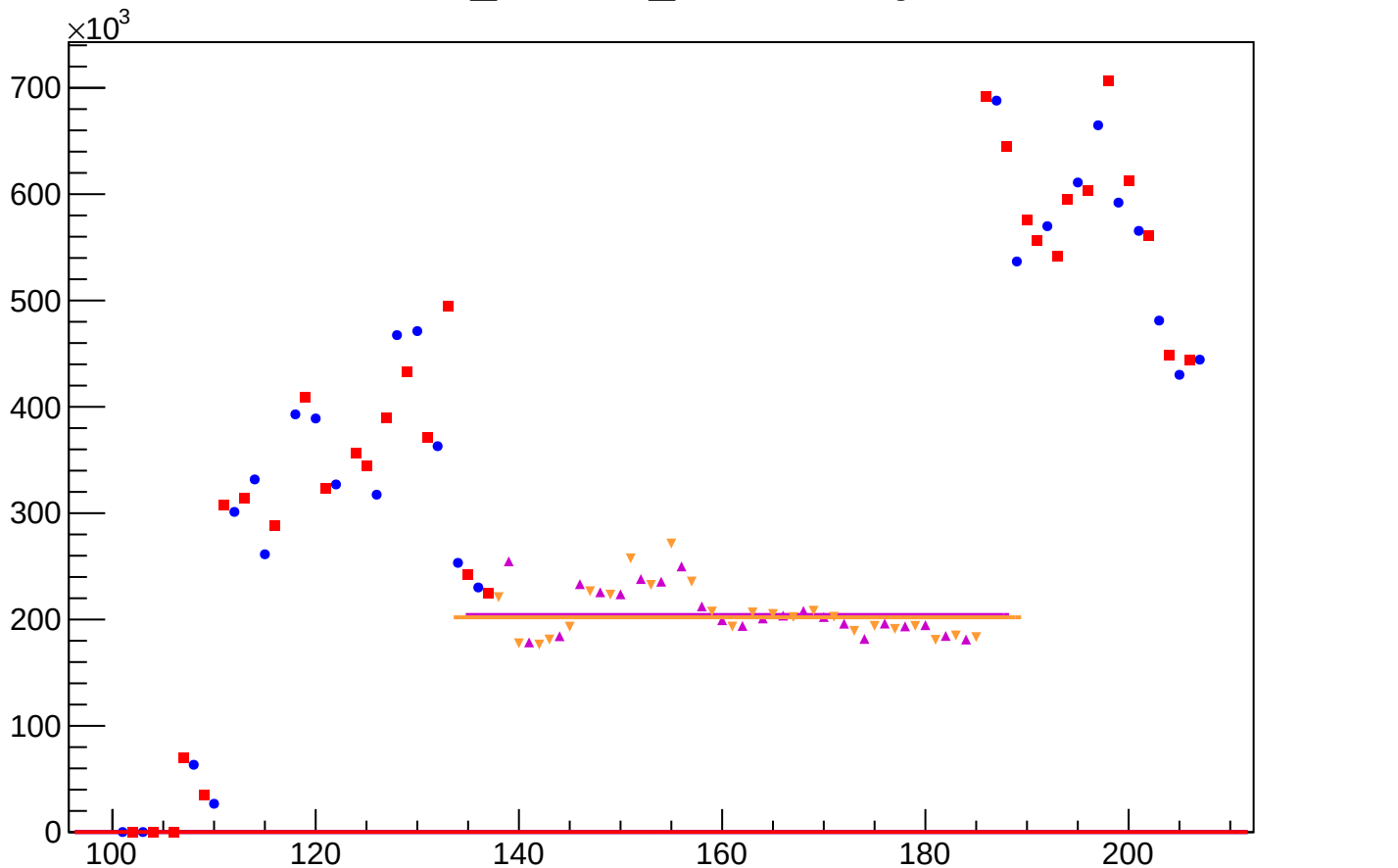
Left In:  $-21.095 \pm 48.037$   $\chi^2/\text{NDF}$ : 28.6/22

+ sign  $-0.038 \pm 0.172$   $\chi^2/\text{NDF}$ : 113.2/50

All:  $-0.208 \pm 0.117$   $\chi^2/\text{NDF}$ : 170.8/104

- sign  $-0.356 \pm 0.160$   $\chi^2/\text{NDF}$ : 55.8/53

# diff\_cav4dX\_rms vs Slug

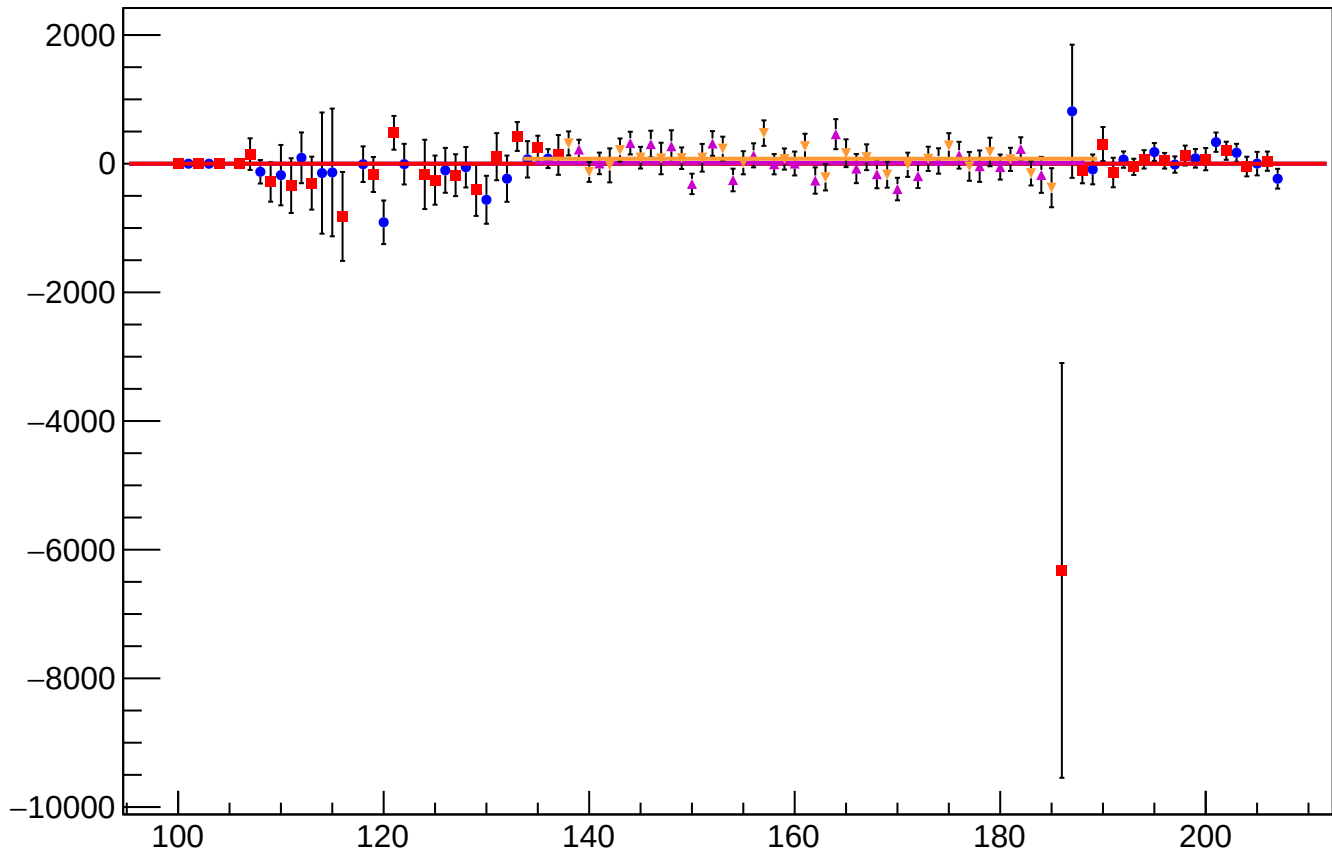


Right In:  $149.518 \pm 0.122$   $\chi^2/\text{NDF}: 26681348.5/25$   
 Left Out:  $202085.802 \pm 32.732$   $\chi^2/\text{NDF}: 434069.3/24$   
 Right Out:  $149.784 \pm 0.113$   $\chi^2/\text{NDF}: 29120585.8/29$   
 Left In:  $204310.238 \pm 33.967$   $\chi^2/\text{NDF}: 377332.3/22$

+ sign  $152.314 \pm 0.122$   $\chi^2/\text{NDF}: 65177061.6/50$   
 All:  $152.174 \pm 0.083$   $\chi^2/\text{NDF}: 130800288.2/52$   
 - sign  $152.052 \pm 0.113$   $\chi^2/\text{NDF}: 65623224.1/52$



# diff\_cav4dY\_mean vs Slug



Right In:  $-0.067 \pm 0.177$   $\chi^2/\text{NDF}$ : 23.0/25

Left Out:  $77.572 \pm 38.921$   $\chi^2/\text{NDF}$ : 19.1/24

Right Out:  $0.127 \pm 0.166$   $\chi^2/\text{NDF}$ : 24.6/30

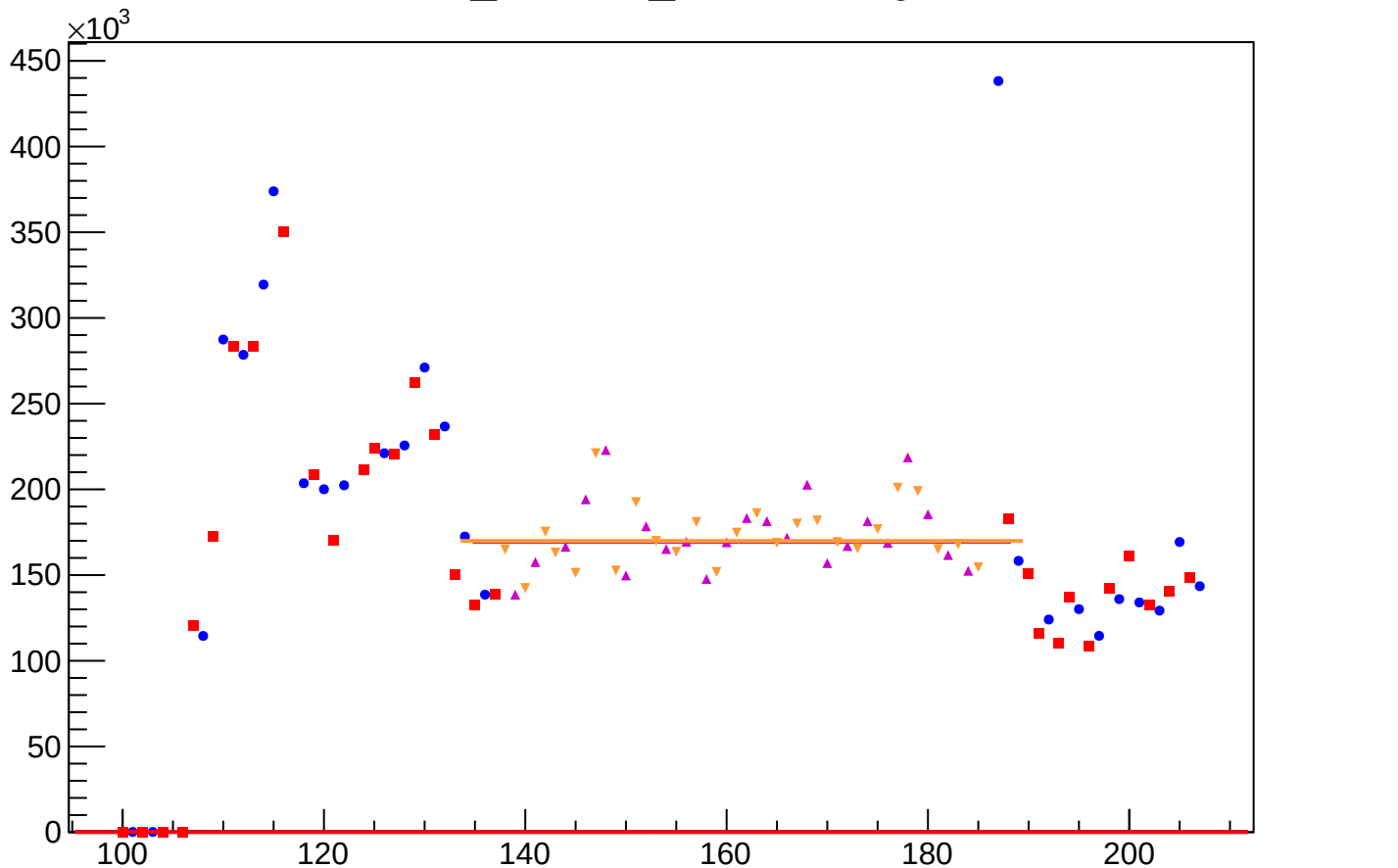
Left In:  $13.457 \pm 39.929$   $\chi^2/\text{NDF}$ : 32.7/22

+ sign  $-0.066 \pm 0.177$   $\chi^2/\text{NDF}$ : 46.1/50

All:  $0.037 \pm 0.121$   $\chi^2/\text{NDF}$ : 104.1/104

- sign  $0.127 \pm 0.166$   $\chi^2/\text{NDF}$ : 57.4/53

# diff\_cav4dY\_rms vs Slug



Right In: 155.186 $\pm$ 0.125  $\chi^2$ /NDF: 26964239.4/25

Left Out: 169916.225 $\pm$ 27.521  $\chi^2$ /NDF:363966.0/24

Right Out: 157.841 $\pm$ 0.118  $\chi^2$ /NDF: 28041645.2/29

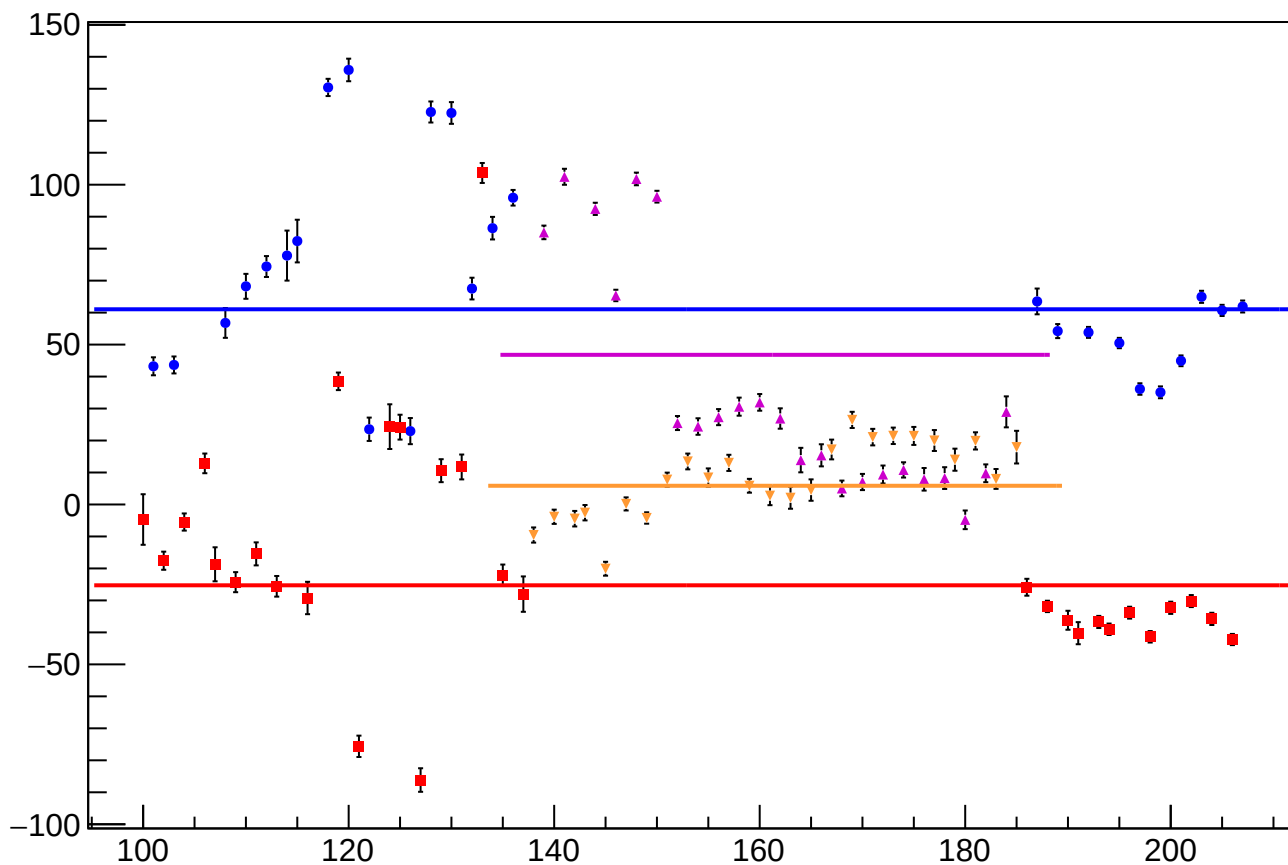
Left In: 169352.083 $\pm$ 28.234  $\chi^2$ /NDF:474852.1/22

+ sign 158.706 $\pm$ 0.125  $\chi^2$ /NDF: 65375594.4/50

All: 159.809 $\pm$ 0.086  $\chi^2$ /NDF: 129801684.8/100

- sign 160.783 $\pm$ 0.118  $\chi^2$ /NDF: 64425944.6/52

# diff\_bpm0i01X\_mean vs Slug



Right In:  $61.041 \pm 0.487$   $\chi^2/\text{NDF}$ : 2915.5/25

Left Out:  $5.852 \pm 0.514$   $\chi^2/\text{NDF}$ : 535.3/24

Right Out:  $-25.274 \pm 0.472$   $\chi^2/\text{NDF}$ : 3768.9/30

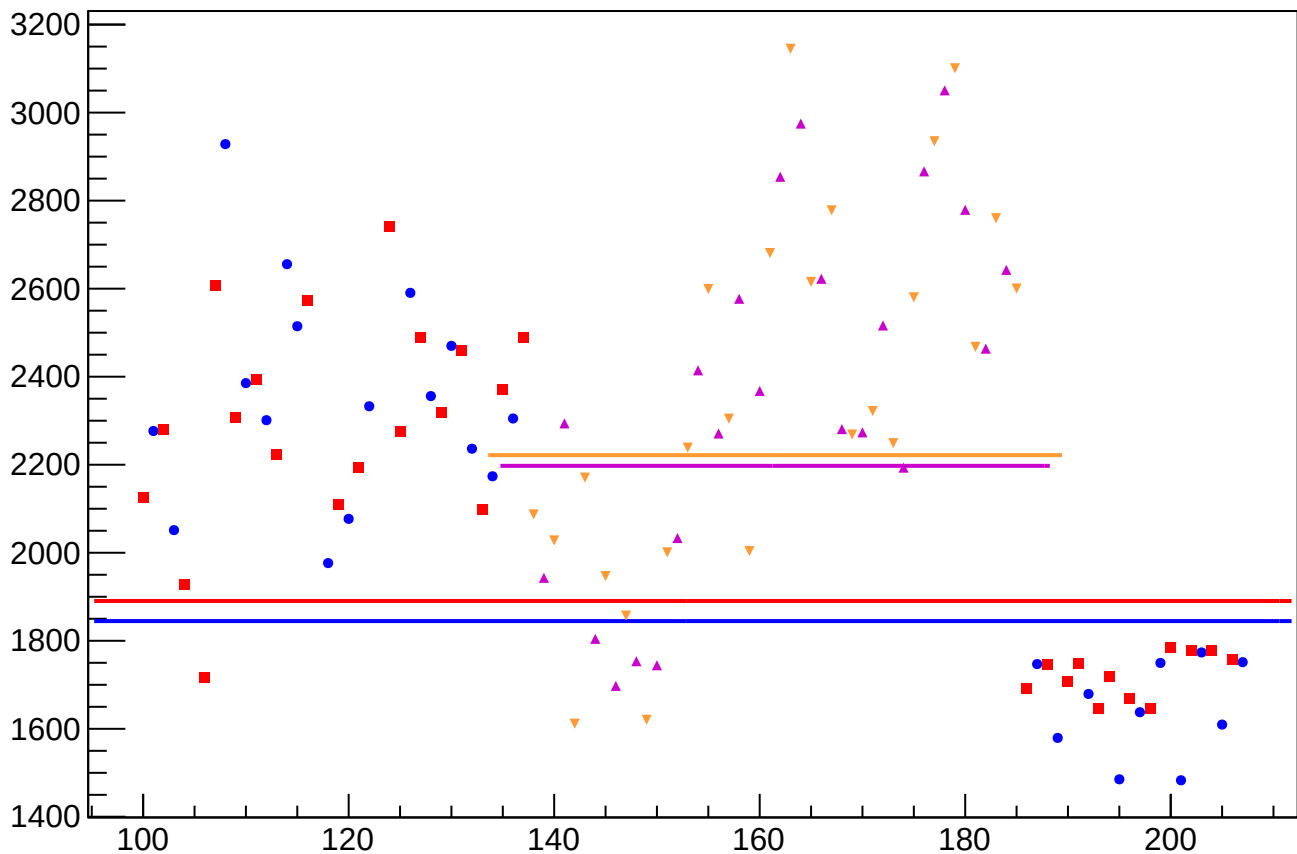
Left In:  $46.796 \pm 0.524$   $\chi^2/\text{NDF}$ : 5175.4/22

+ sign  $34.936 \pm 0.353$   $\chi^2/\text{NDF}$ : 9526.7/50

All:  $20.842 \pm 0.249$   $\chi^2/\text{NDF}$ : 32061.7/104

- sign  $6.964 \pm 0.351$   $\chi^2/\text{NDF}$ : 19380.1/53

# diff\_bpm0i01X\_rms vs Slug



Right In: 1844.743+/-0.344  $\chi^2/\text{NDF}$ : 948946.6/25

Left Out: 2221.771+/-0.363  $\chi^2/\text{NDF}$ : 1184043.2/24

Right Out: 1890.391+/-0.334  $\chi^2/\text{NDF}$ : 675338.4/30

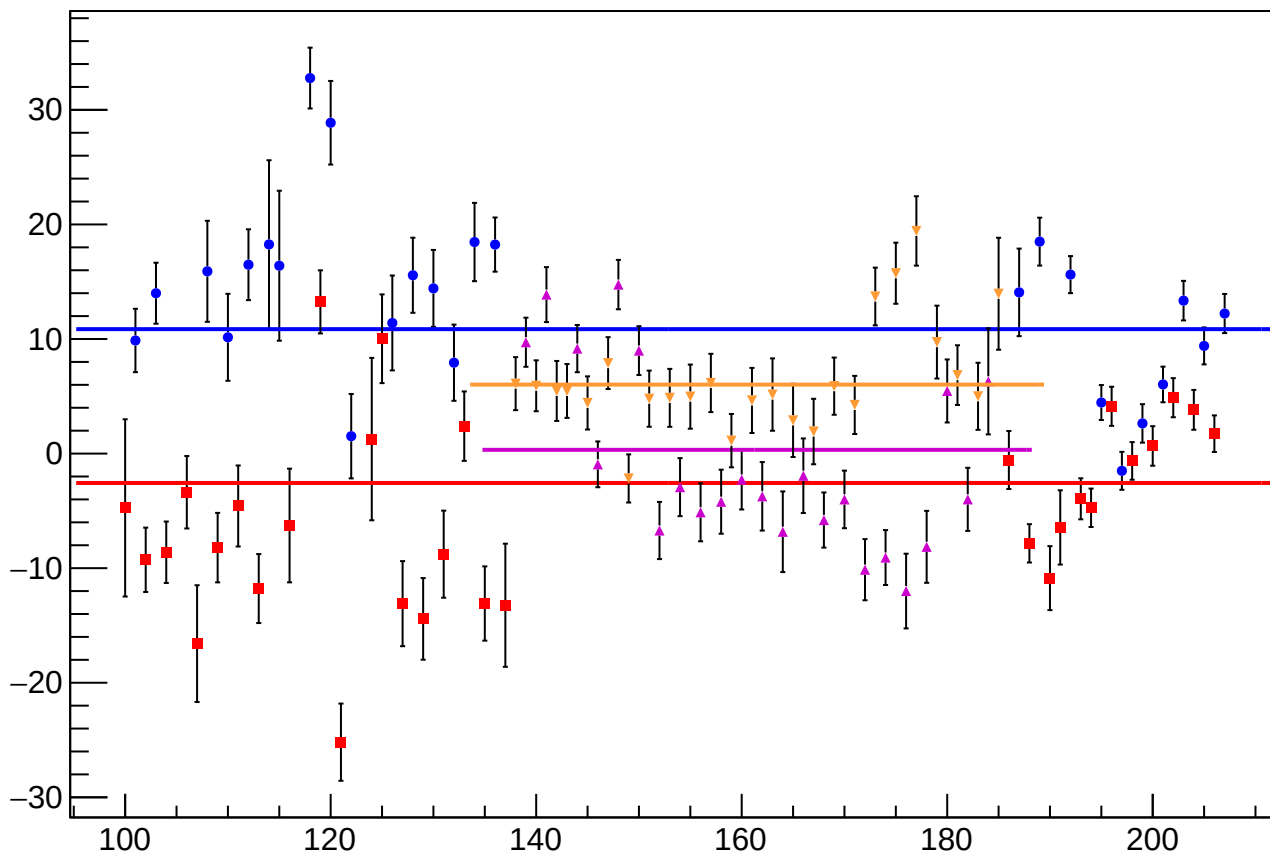
Left In: 2197.471+/-0.371  $\chi^2/\text{NDF}$ : 1104663.4/22

+ sign 2023.081+/-0.250  $\chi^2/\text{NDF}$ : 2700122.7/50

All: 2025.433+/-0.176  $\chi^2/\text{NDF}$ : 4859228.3/100

- sign 2027.750+/-0.248  $\chi^2/\text{NDF}$ : 2158929.8/53

# diff\_bpm0i01Y\_mean vs Slug



Right In:  $10.860 \pm 0.460$   $\chi^2/\text{NDF}$ : 258.9/25

Left Out:  $6.022 \pm 0.521$   $\chi^2/\text{NDF}$ : 71.8/24

Right Out:  $-2.563 \pm 0.445$   $\chi^2/\text{NDF}$ : 243.2/30

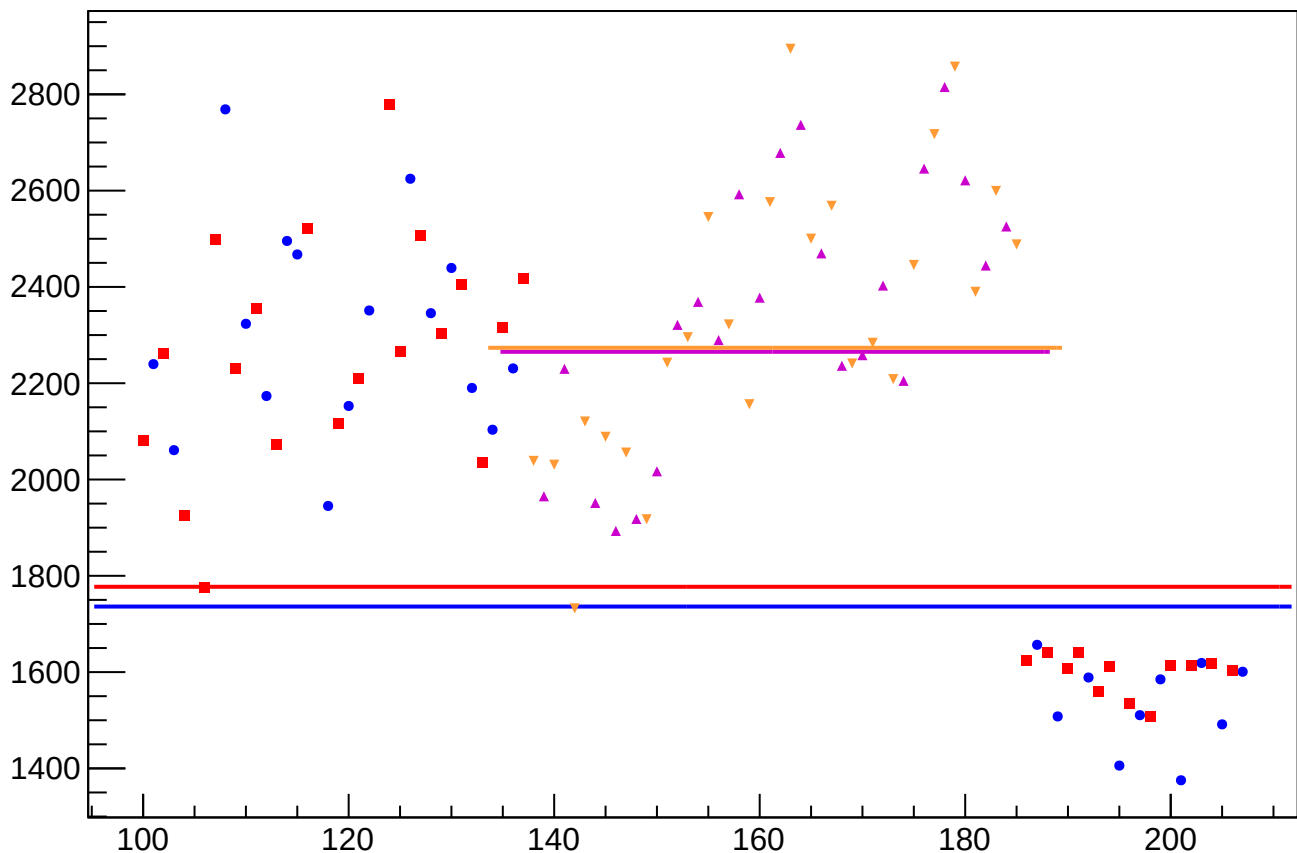
Left In:  $0.329 \pm 0.535$   $\chi^2/\text{NDF}$ : 224.9/22

+ sign  $8.741 \pm 0.345$   $\chi^2/\text{NDF}$ : 379.1/50

All:  $3.643 \pm 0.243$   $\chi^2/\text{NDF}$ : 1298.8/104

- sign  $-1.379 \pm 0.342$   $\chi^2/\text{NDF}$ : 485.3/53

# diff\_bpm0i01Y\_rms vs Slug



Right In: 1736.142 $\pm$ 0.325  $\chi^2$ /NDF: 1195191.0/25

Left Out: 2273.612 $\pm$ 0.368  $\chi^2$ /NDF: 536838.6/24

Right Out: 1777.209 $\pm$ 0.315  $\chi^2$ /NDF: 930982.3/30

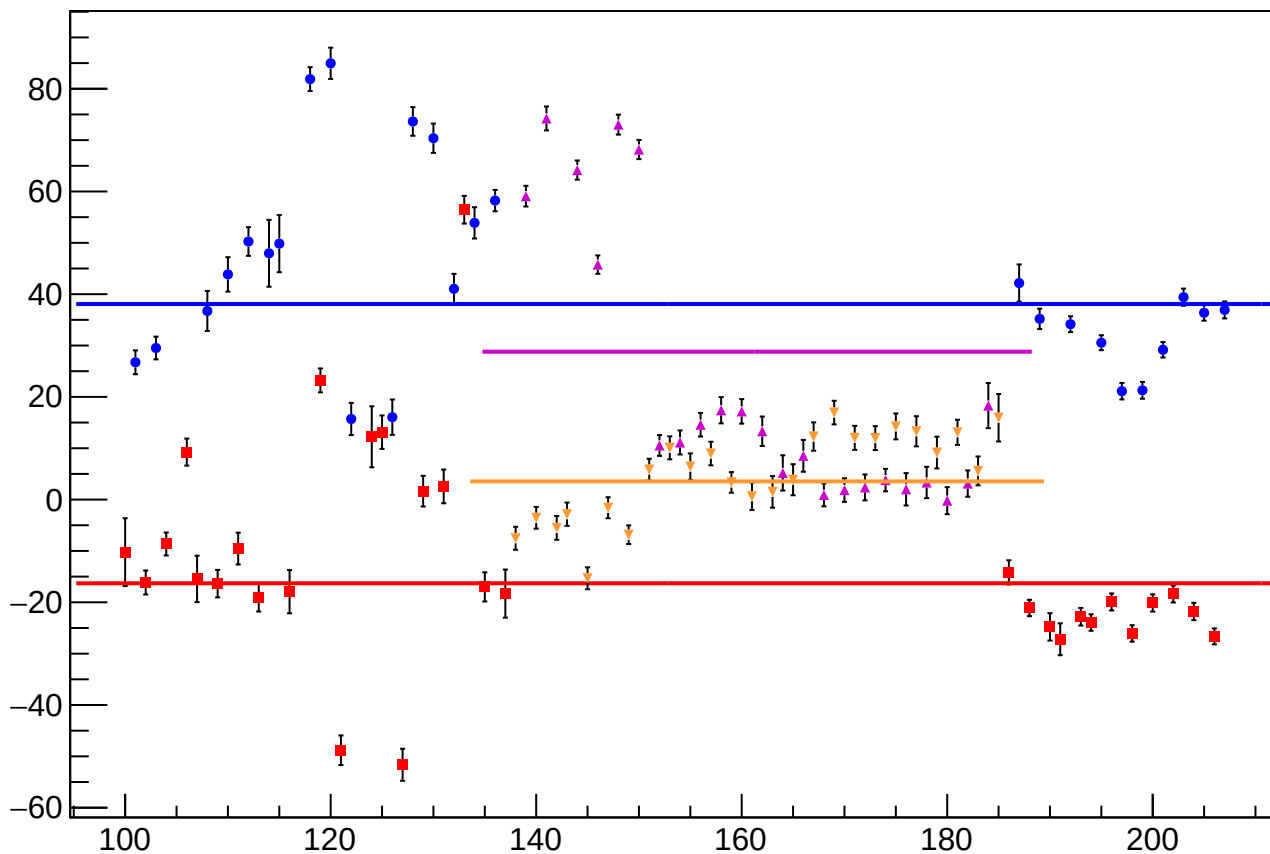
Left In: 2265.257 $\pm$ 0.378  $\chi^2$ /NDF: 495816.5/22

+ sign 1971.547 $\pm$ 0.244  $\chi^2$ /NDF: 2929054.1/50

All: 1974.311 $\pm$ 0.172  $\chi^2$ /NDF: 5340576.8/10

- sign 1977.034 $\pm$ 0.242  $\chi^2$ /NDF: 2411267.4/53

# diff\_bpm0i01aX\_mean vs Slug



Right In:  $38.081 \pm 0.427$   $\chi^2/\text{NDF}$ : 1456.6/25

Left Out:  $3.544 \pm 0.480$   $\chi^2/\text{NDF}$ : 319.8/24

Right Out:  $-16.298 \pm 0.413$   $\chi^2/\text{NDF}$ : 1729.7/30

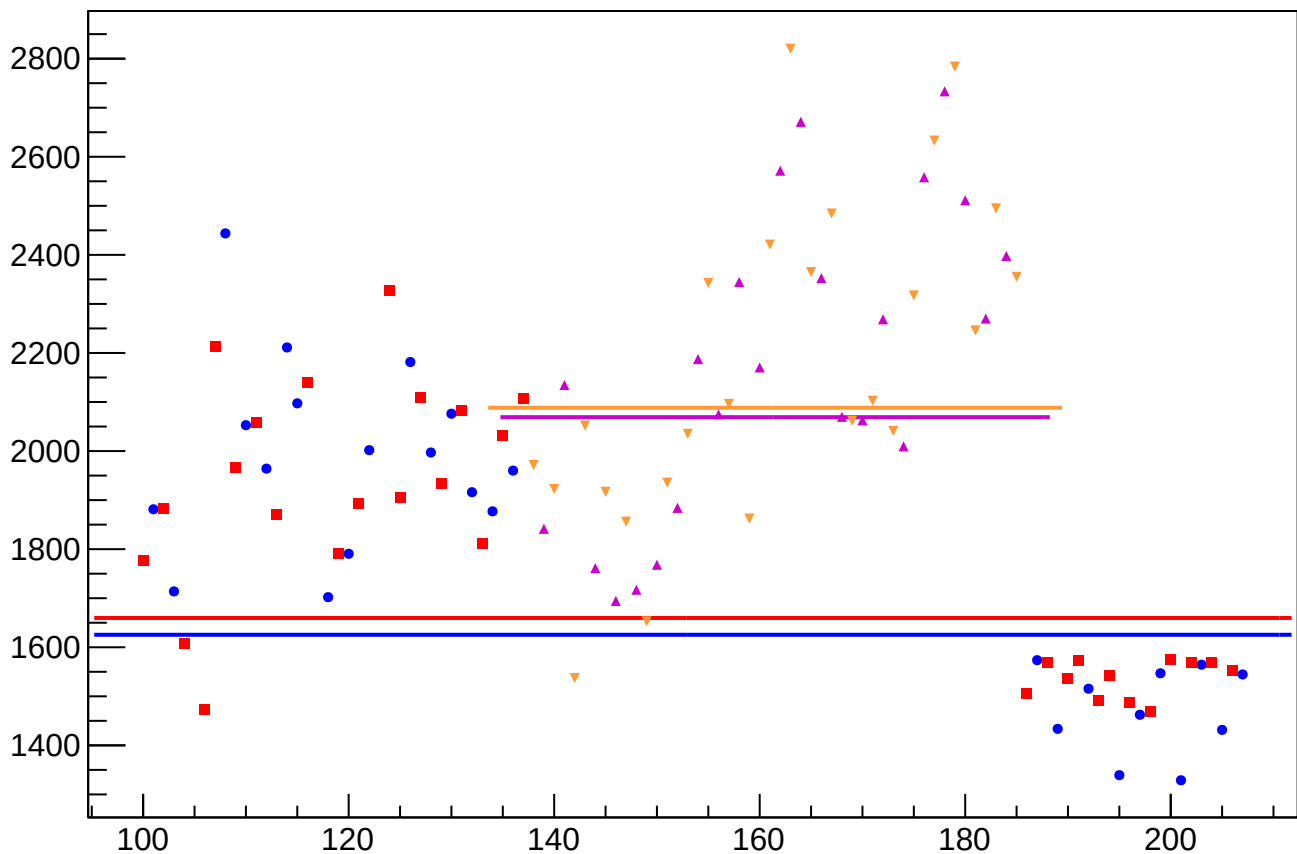
Left In:  $28.804 \pm 0.491$   $\chi^2/\text{NDF}$ : 3262.5/22

+ sign  $22.832 \pm 0.319$   $\chi^2/\text{NDF}$ : 4664.4/50

All:  $12.514 \pm 0.225$   $\chi^2/\text{NDF}$ : 16670.7/104

- sign  $2.396 \pm 0.316$   $\chi^2/\text{NDF}$ : 9935.7/53

# diff\_bpm0i01aX\_rms vs Slug



Right In: 1625.485 $\pm$ 0.302  $\chi^2$ /NDF: 716620.0/25

Left Out: 2088.353 $\pm$ 0.340  $\chi^2$ /NDF: 787429.8/24

Right Out: 1659.755 $\pm$ 0.292  $\chi^2$ /NDF: 492263.0/30

Left In: 2069.116 $\pm$ 0.347  $\chi^2$ /NDF: 711501.5/22

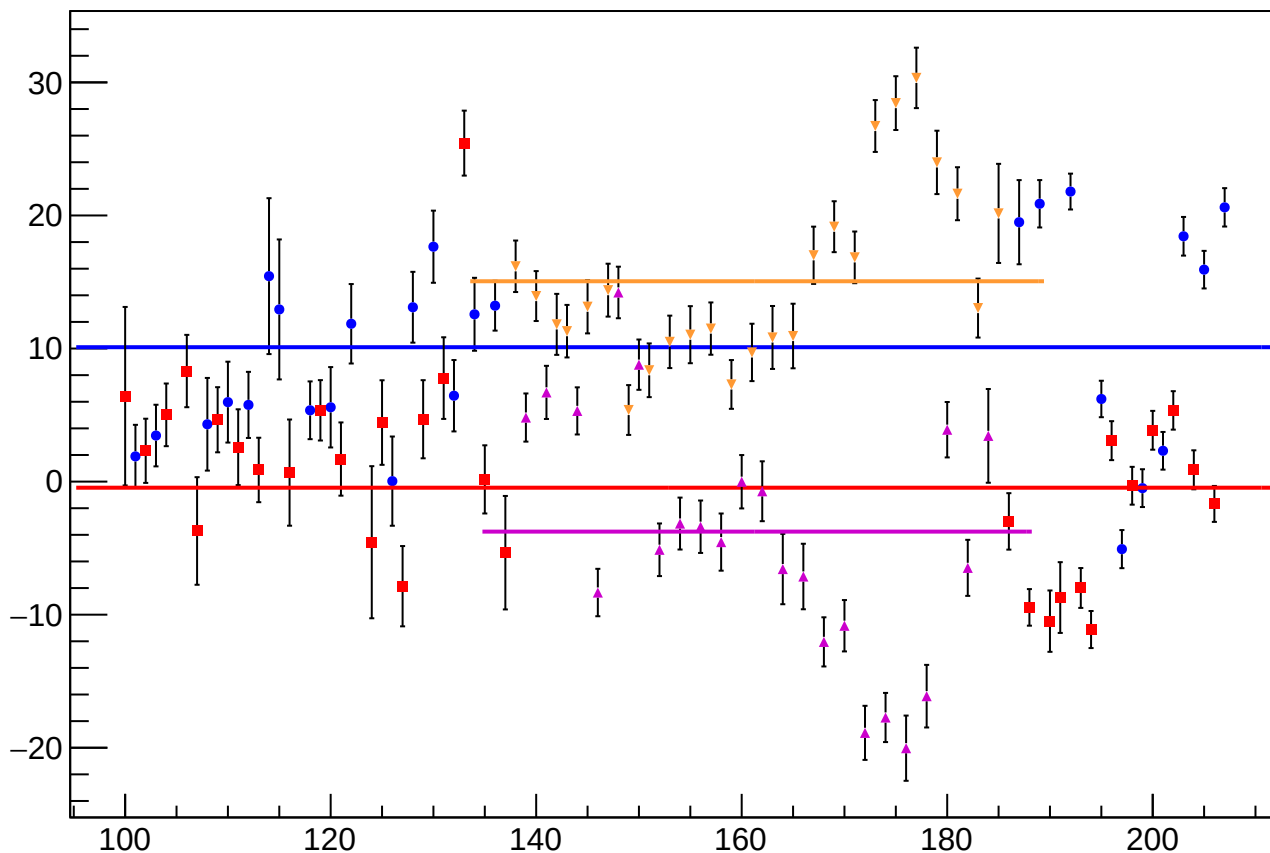
+ sign 1829.852 $\pm$ 0.226  $\chi^2$ /NDF: 2541506.5/50

All: 1829.636 $\pm$ 0.159  $\chi^2$ /NDF: 4559750.8/10

- sign 1829.423 $\pm$ 0.223  $\chi^2$ /NDF: 2018242.5/53



# diff\_bpm0i01aY\_mean vs Slug



Right In:  $10.100 \pm 0.390$   $\chi^2/\text{NDF}: 489.9/25$

Left Out:  $15.056 \pm 0.416$   $\chi^2/\text{NDF}: 246.2/24$

Right Out:  $-0.458 \pm 0.372$   $\chi^2/\text{NDF}: 354.1/30$

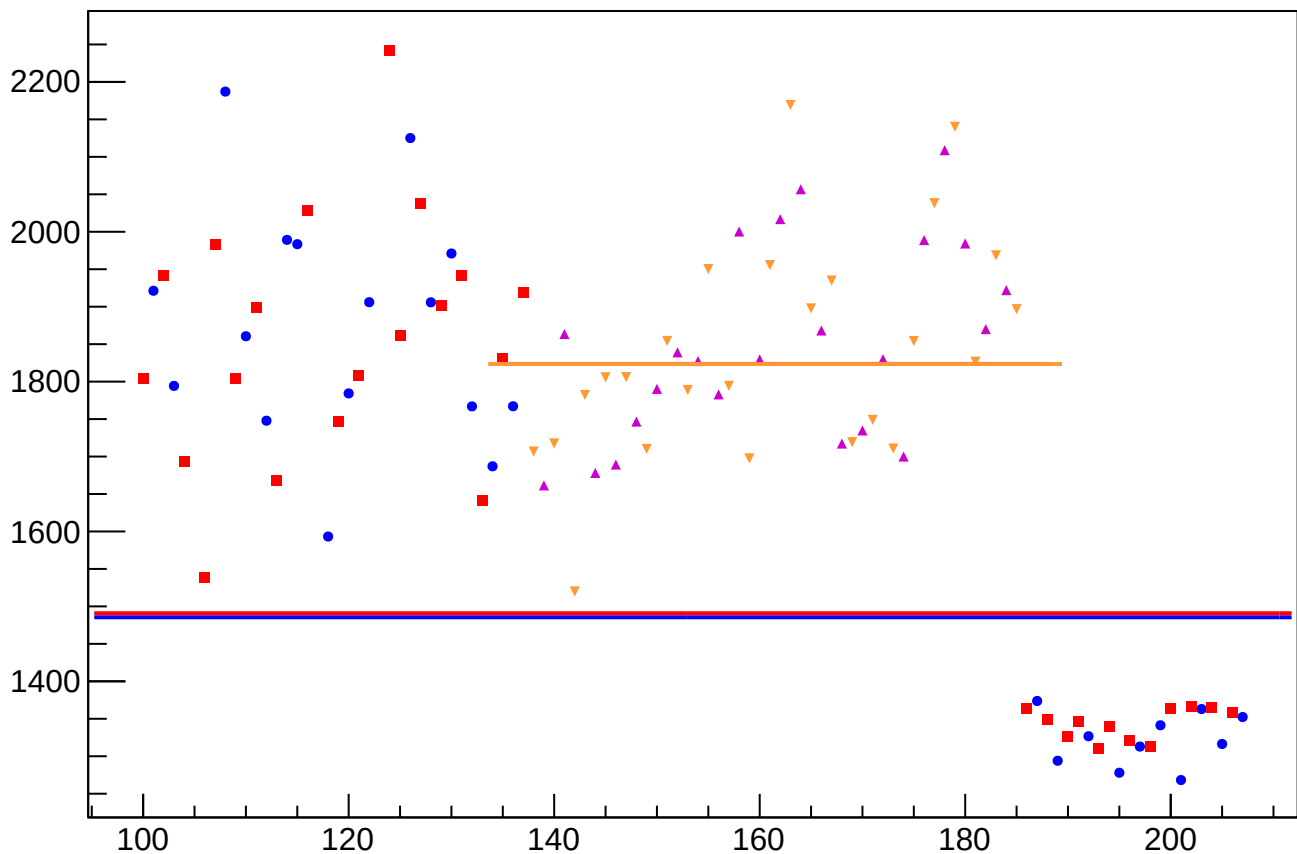
Left In:  $-3.758 \pm 0.428$   $\chi^2/\text{NDF}: 459.1/22$

+ sign  $12.420 \pm 0.284$   $\chi^2/\text{NDF}: 811.7/50$

All:  $5.178 \pm 0.200$   $\chi^2/\text{NDF}: 2939.1/104$

- sign  $-1.879 \pm 0.281$   $\chi^2/\text{NDF}: 847.0/53$

# diff\_bpm0i01aY\_rms vs Slug



Right In: 1485.465 $\pm$ 0.276  $\chi^2$ /NDF: 854903.4/25

Left Out: 1823.452 $\pm$ 0.294  $\chi^2$ /NDF: 211274.0/24

Right Out: 1490.877 $\pm$ 0.263  $\chi^2$ /NDF: 784193.5/30

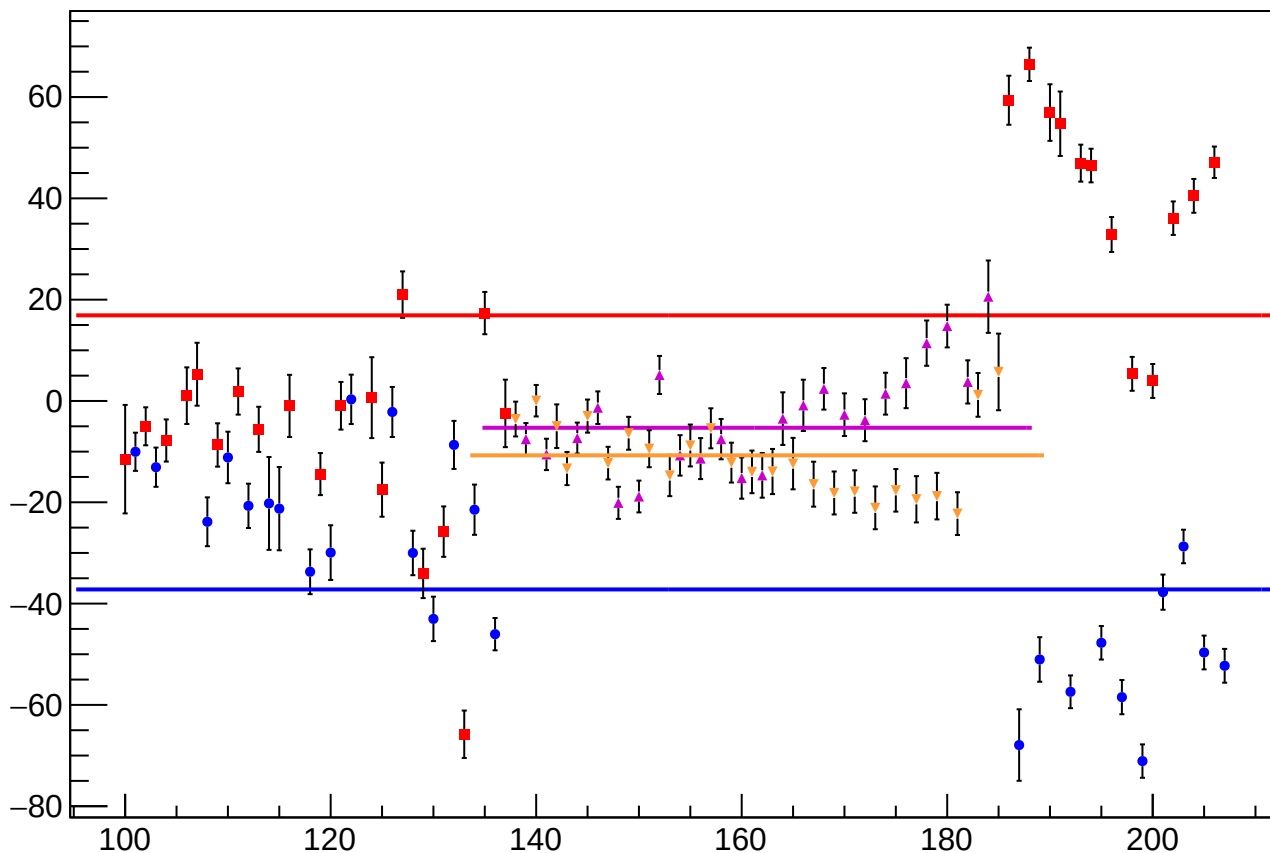
Left In: 1823.627 $\pm$ 0.303  $\chi^2$ /NDF: 163768.2/22

+ sign 1643.664 $\pm$ 0.201  $\chi^2$ /NDF: 1769501.3/50

All: 1638.847 $\pm$ 0.141  $\chi^2$ /NDF: 3407523.2/10

- sign 1634.154 $\pm$ 0.199  $\chi^2$ /NDF: 1636889.2/53

# diff\_bpm0l01X\_mean vs Slug



Right In:  $-37.204 \pm 0.804$   $\chi^2/\text{NDF}$ : 580.9/25

Left Out:  $-10.732 \pm 0.794$   $\chi^2/\text{NDF}$ : 73.8/24

Right Out:  $16.906 \pm 0.769$   $\chi^2/\text{NDF}$ : 1555.2/30

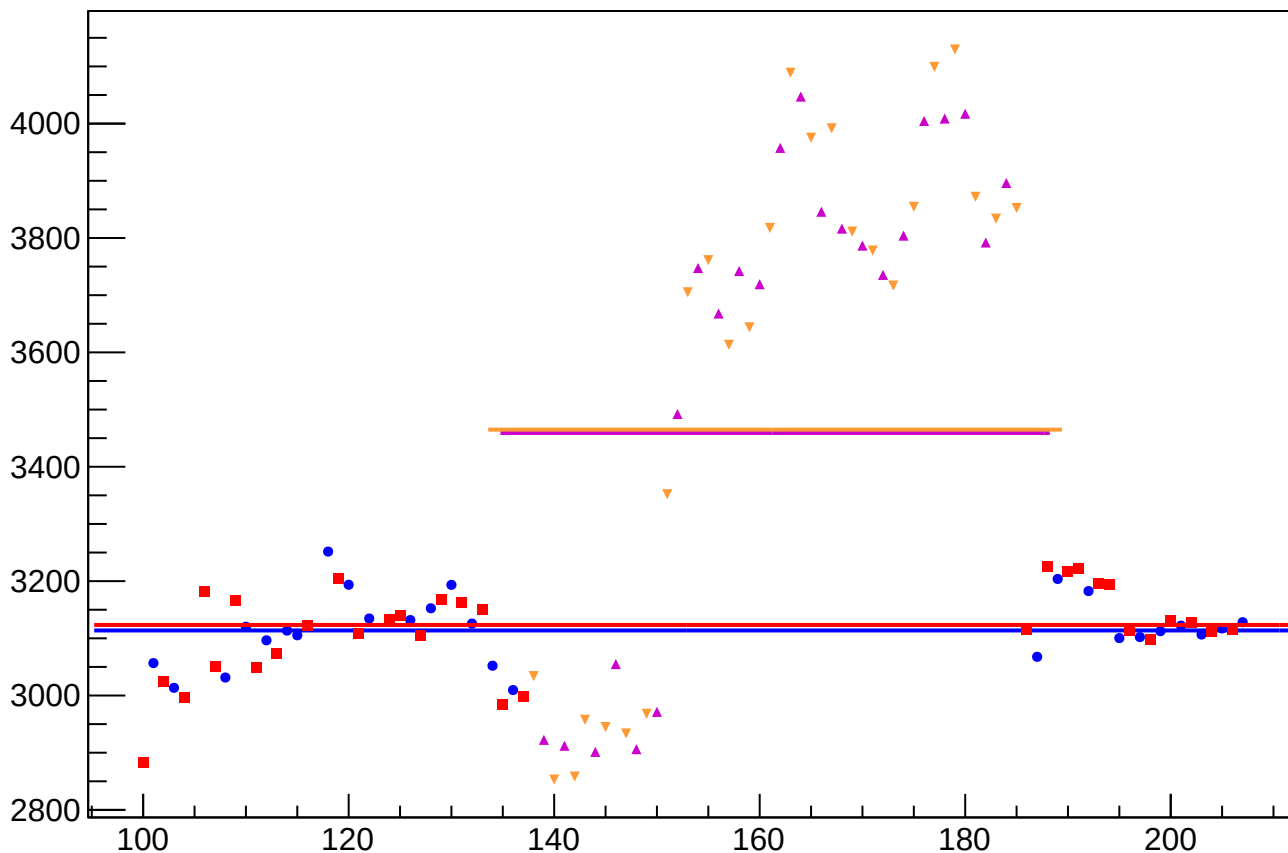
Left In:  $-5.291 \pm 0.814$   $\chi^2/\text{NDF}$ : 133.6/22

+ sign  $-23.796 \pm 0.565$   $\chi^2/\text{NDF}$ : 1203.5/50

All:  $-8.522 \pm 0.397$   $\chi^2/\text{NDF}$ : 4732.0/104

- sign  $6.440 \pm 0.559$   $\chi^2/\text{NDF}$ : 2081.5/53

# diff\_bpm0l01X\_rms vs Slug



Right In: 3113.758 $\pm$ 0.569  $\chi^2$ /NDF: 10091.7/25

Left Out: 3464.906 $\pm$ 0.561  $\chi^2$ /NDF:644023.5/24

Right Out: 3123.399 $\pm$ 0.544  $\chi^2$ /NDF: 14693.6/30

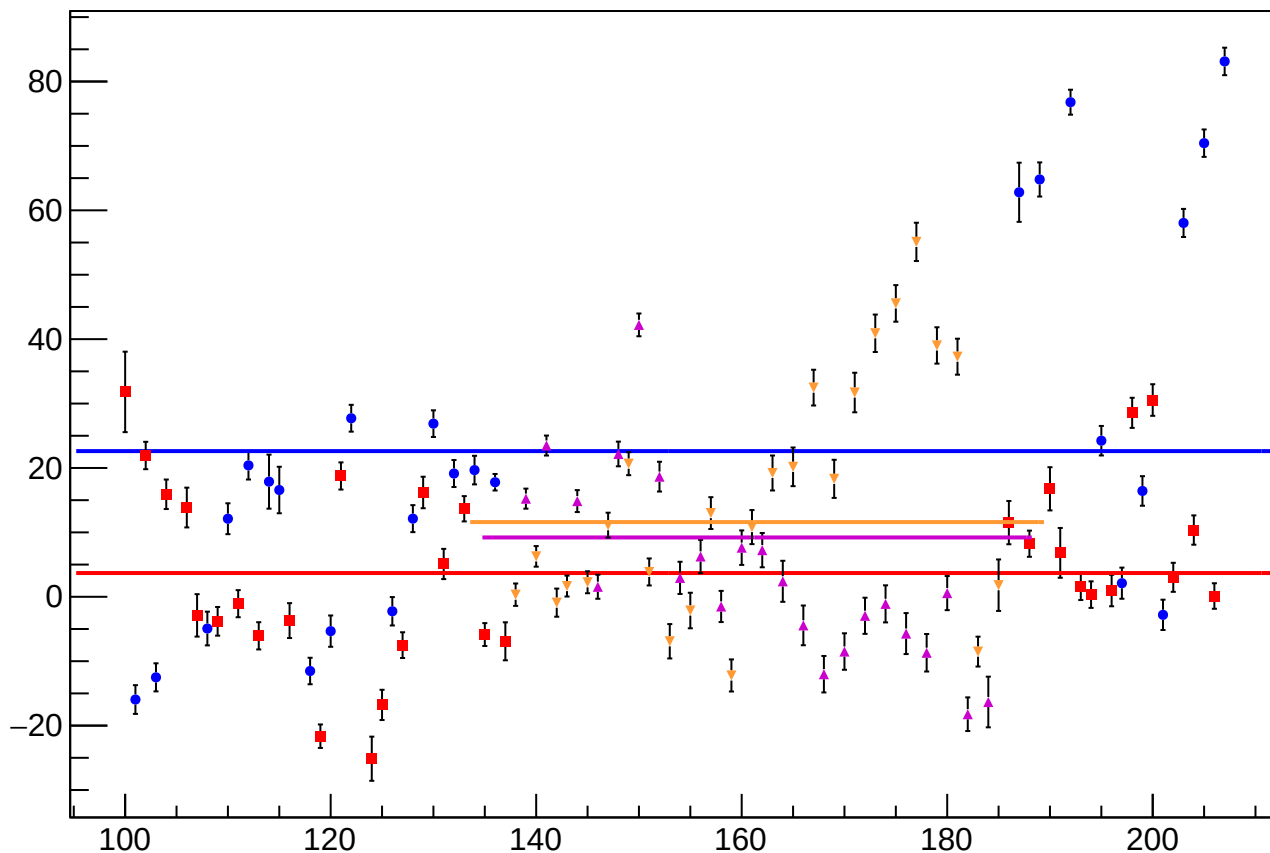
Left In: 3459.050 $\pm$ 0.576  $\chi^2$ /NDF:583309.1/22

+ sign 3291.612 $\pm$ 0.399  $\chi^2$ /NDF: 847251.6/50

All: 3286.583 $\pm$ 0.281  $\chi^2$ /NDF: 1625156.8/10

- sign 3281.656 $\pm$ 0.395  $\chi^2$ /NDF: 777591.4/53

# diff\_bpm0l01Y\_mean vs Slug



Right In: 22.618+/-0.436  $\chi^2/\text{NDF}$ : 4161.5/25

Left Out: 11.599+/-0.463  $\chi^2/\text{NDF}$ :1196.9/24

Right Out: 3.688+/-0.422  $\chi^2/\text{NDF}$ : 975.0/30

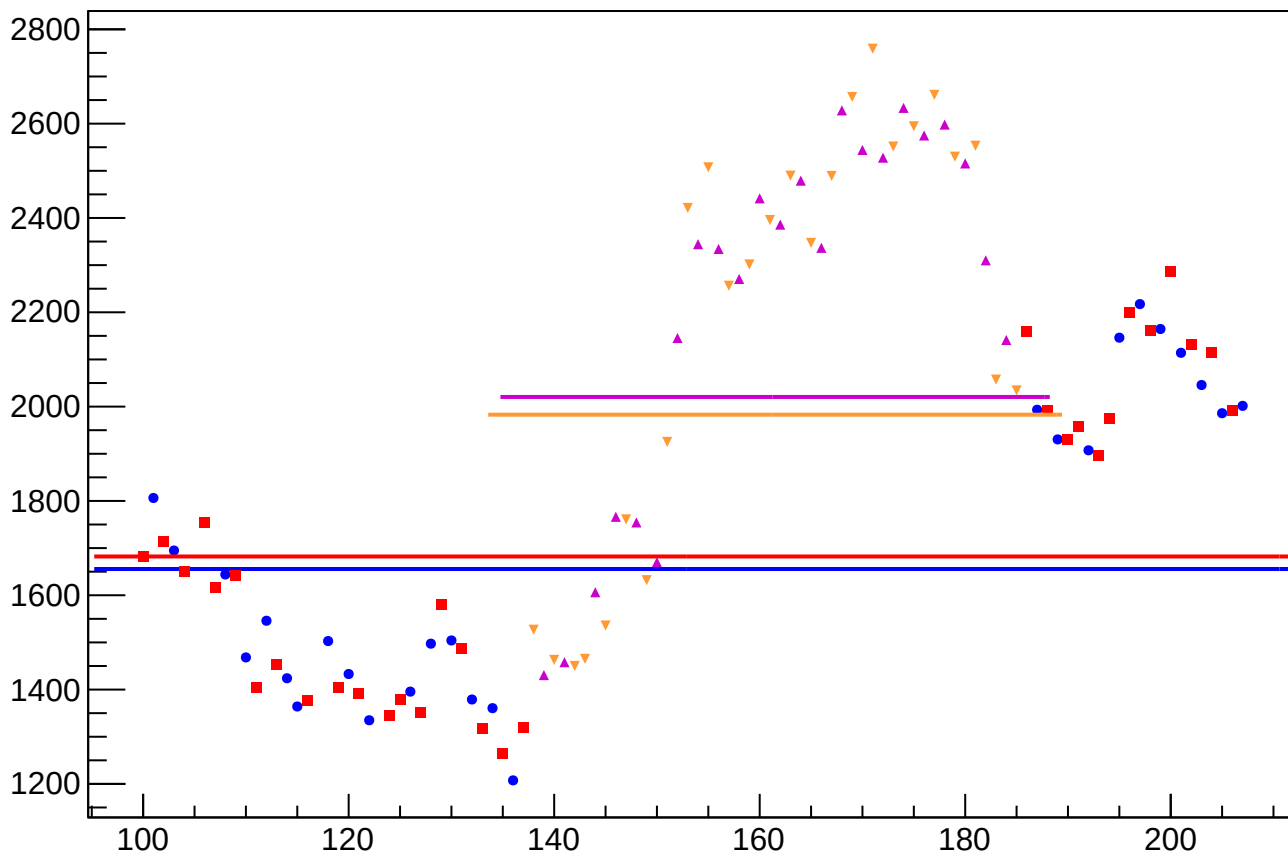
Left In: 9.213+/-0.484  $\chi^2/\text{NDF}$ :940.6/22

+ sign 17.439+/-0.318  $\chi^2/\text{NDF}$ : 5658.1/50

All: 11.768+/-0.225  $\chi^2/\text{NDF}$ : 8286.1/104

- sign 6.078+/-0.318  $\chi^2/\text{NDF}$ : 1989.6/53

# diff\_bpm0l01Y\_rms vs Slug



Right In:  $1655.678 \pm 0.309$   $\chi^2/\text{NDF}$ : 1089896.0/25

Left Out:  $1982.871 \pm 0.328$   $\chi^2/\text{NDF}$ : 1977669.4/24

Right Out:  $1682.234 \pm 0.299$   $\chi^2/\text{NDF}$ : 1170579.5/30

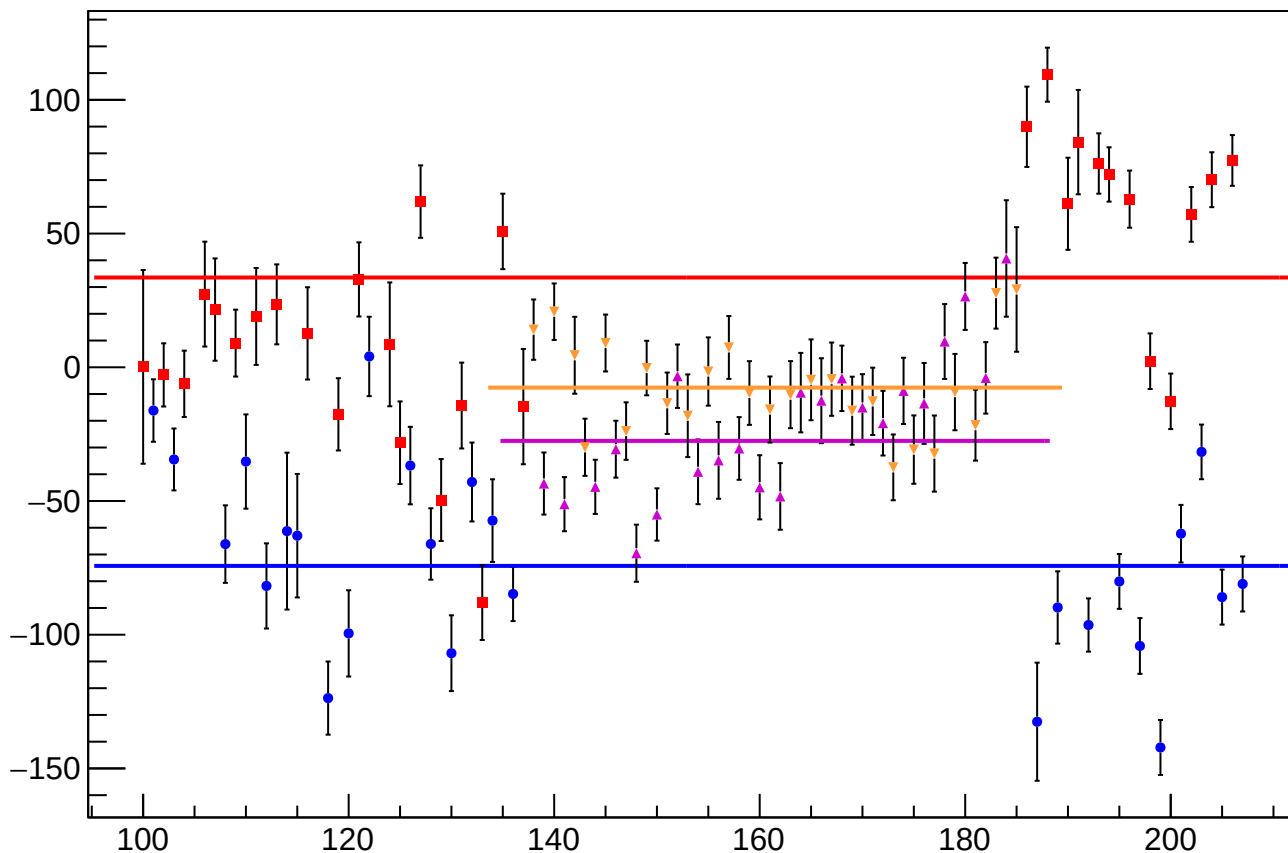
Left In:  $2020.468 \pm 0.342$   $\chi^2/\text{NDF}$ : 1614691.2/22

+ sign  $1809.455 \pm 0.225$   $\chi^2/\text{NDF}$ : 3595986.7/50

All:  $1818.993 \pm 0.159$   $\chi^2/\text{NDF}$ : 6939475.0/10

- sign  $1828.562 \pm 0.225$   $\chi^2/\text{NDF}$ : 3339877.1/53

# diff\_bpm0l02X\_mean vs Slug



Right In:  $-74.264 \pm 2.498$   $\chi^2/\text{NDF}$ : 190.7/25

Left Out:  $-7.594 \pm 2.495$   $\chi^2/\text{NDF}$ : 47.9/24

Right Out:  $33.570 \pm 2.391$   $\chi^2/\text{NDF}$ : 368.0/30

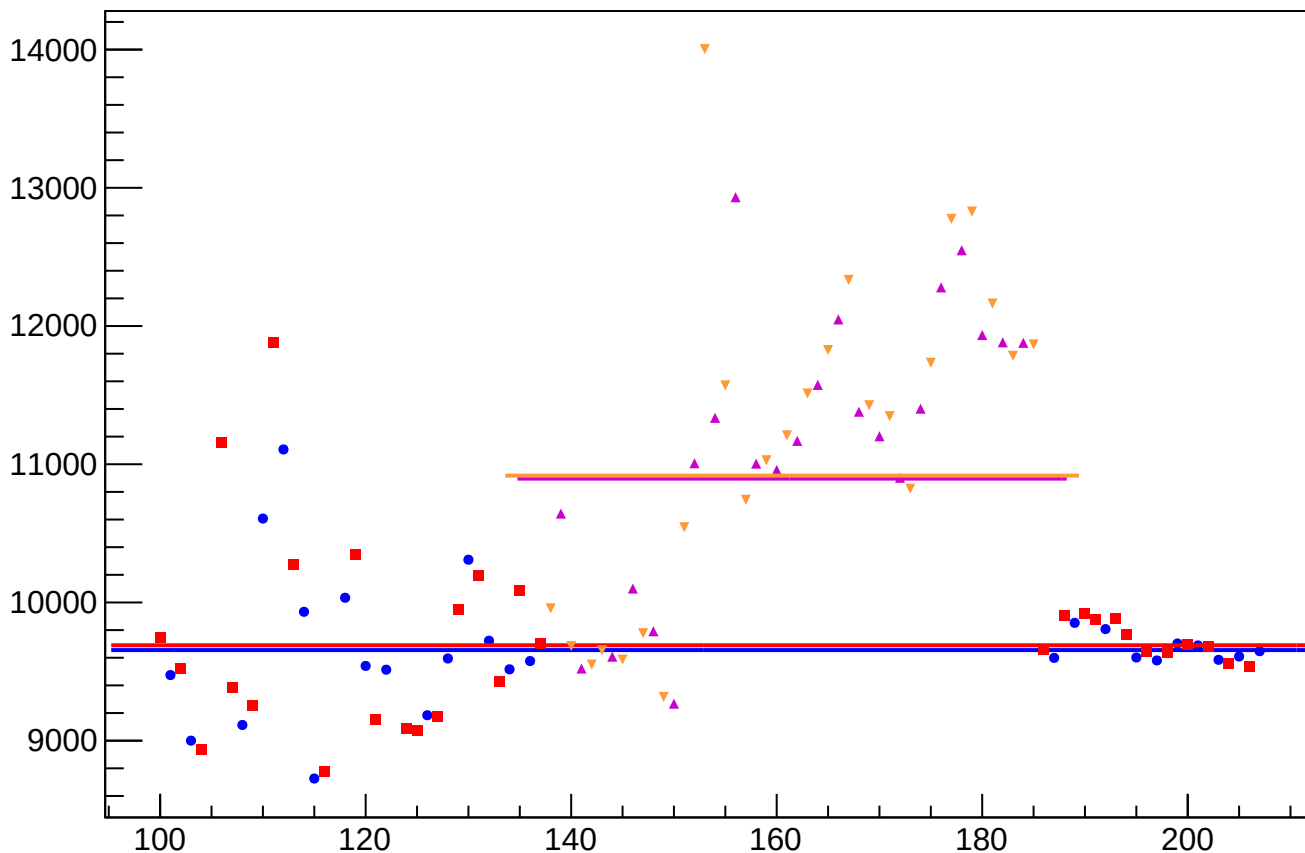
Left In:  $-27.528 \pm 2.556$   $\chi^2/\text{NDF}$ : 93.0/22

+ sign  $-40.885 \pm 1.765$   $\chi^2/\text{NDF}$ : 595.2/50

All:  $-17.663 \pm 1.242$   $\chi^2/\text{NDF}$ : 1703.1/104

- sign  $5.059 \pm 1.746$   $\chi^2/\text{NDF}$ : 765.6/53

# diff\_bpm0l02X\_rms vs Slug



Right In: 9655.426+/-1.767  $\chi^2/\text{NDF}$ : 45382.6/25

Left Out: 10917.711+/-1.764  $\chi^2/\text{NDF}$ : 425841.1/24

Right Out: 9690.390+/-1.691  $\chi^2/\text{NDF}$ : 83036.2/30

Left In: 10895.992+/-1.808  $\chi^2/\text{NDF}$ : 298059.2/22

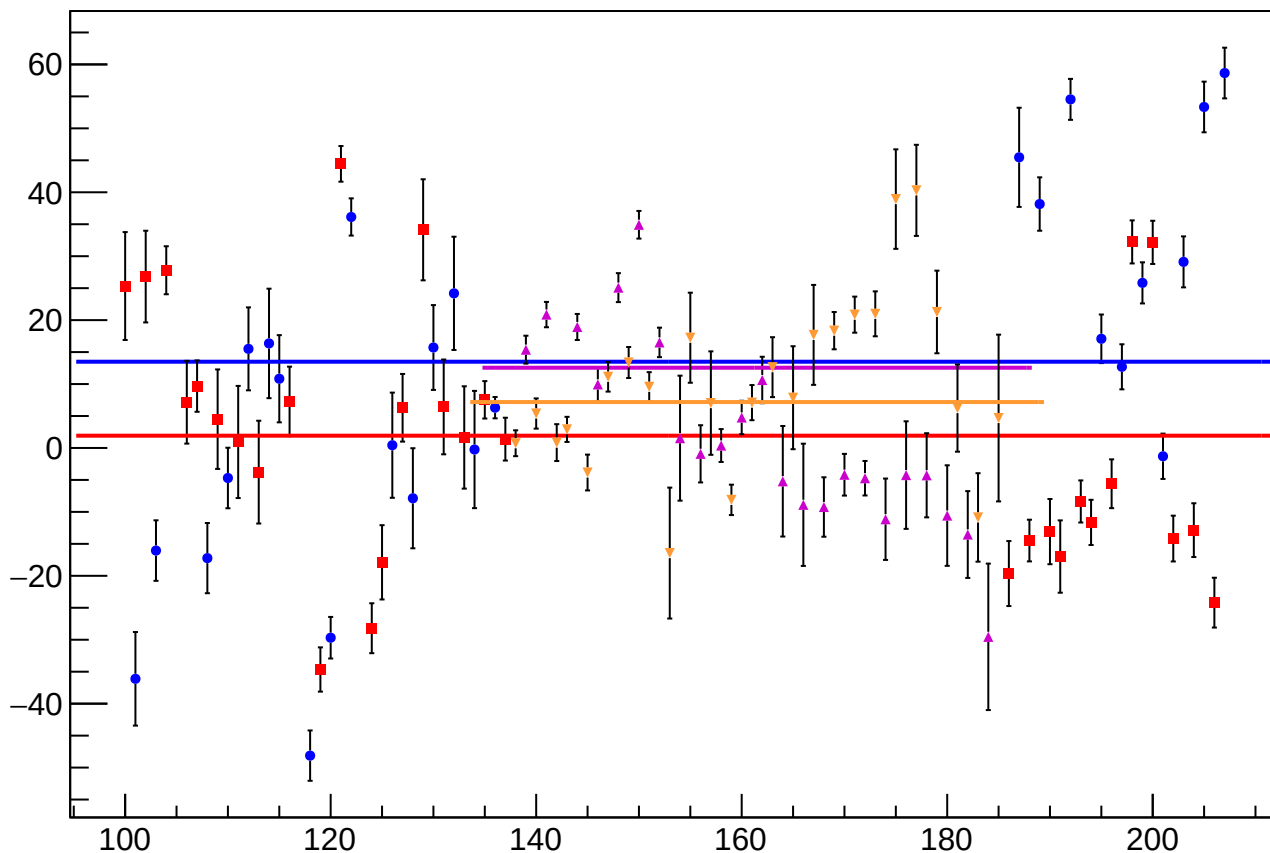
+ sign 10287.415+/-1.248  $\chi^2/\text{NDF}$ : 726832.4/50

All: 10270.005+/-0.878  $\chi^2/\text{NDF}$ : 1345547.2/100

- sign 10252.968+/-1.235  $\chi^2/\text{NDF}$ : 618329.9/53



# diff\_bpm0l02Y\_mean vs Slug



Right In:  $13.494 \pm 0.790$   $\chi^2/\text{NDF}: 1140.7/25$

Left Out:  $7.185 \pm 0.654$   $\chi^2/\text{NDF}: 201.7/24$

Right Out:  $1.921 \pm 0.770$   $\chi^2/\text{NDF}: 840.0/30$

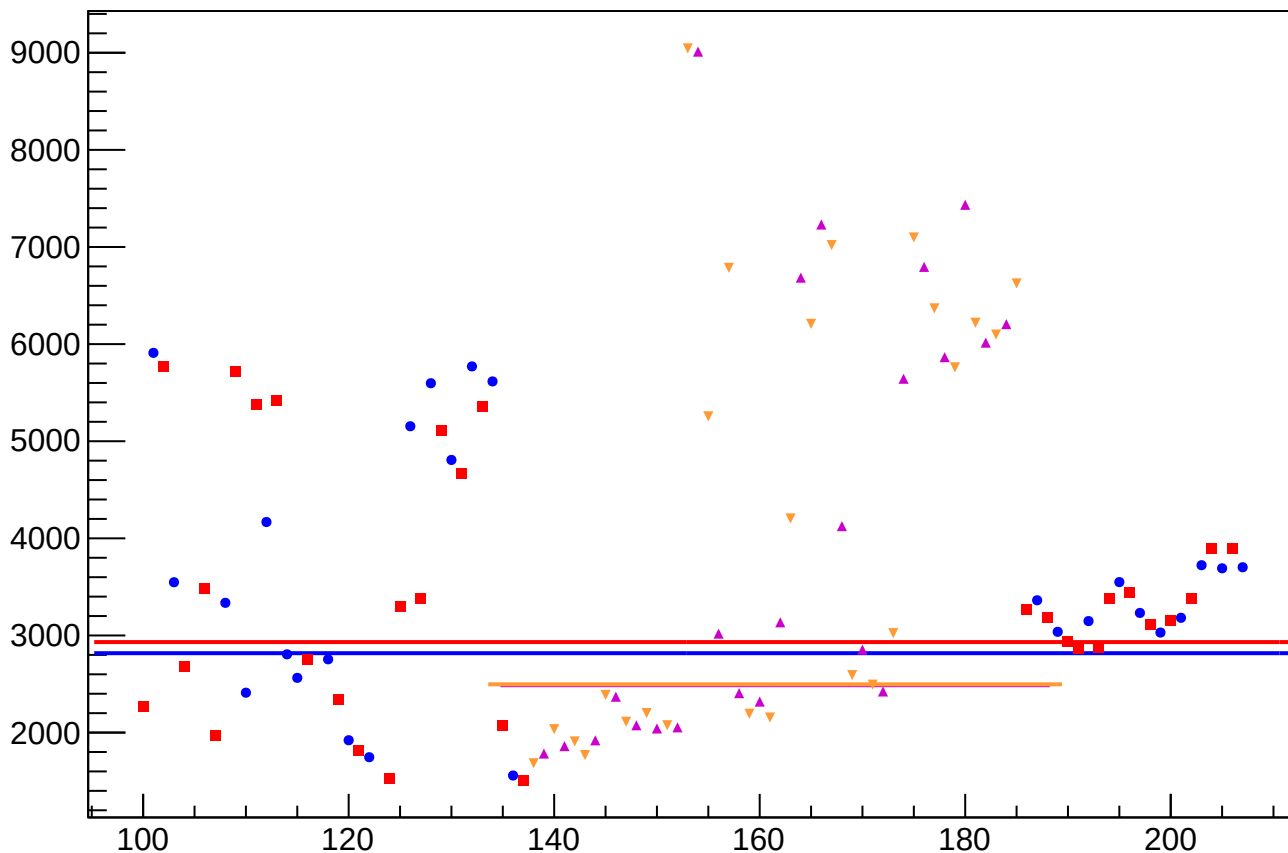
Left In:  $12.553 \pm 0.661$   $\chi^2/\text{NDF}: 372.1/22$

+ sign  $9.749 \pm 0.504$   $\chi^2/\text{NDF}: 1380.3/50$

All:  $8.893 \pm 0.355$   $\chi^2/\text{NDF}: 2707.9/104$

- sign  $8.045 \pm 0.501$   $\chi^2/\text{NDF}: 1321.9/53$

# diff\_bpm0l02Y\_rms vs Slug



Right In: 2817.535 $\pm$ 0.559  $\chi^2$ /NDF: 3561445.4/25

Left Out: 2496.801 $\pm$ 0.462  $\chi^2$ /NDF: 7205827.8/24

Right Out: 2931.864 $\pm$ 0.544  $\chi^2$ /NDF: 3072418.8/30

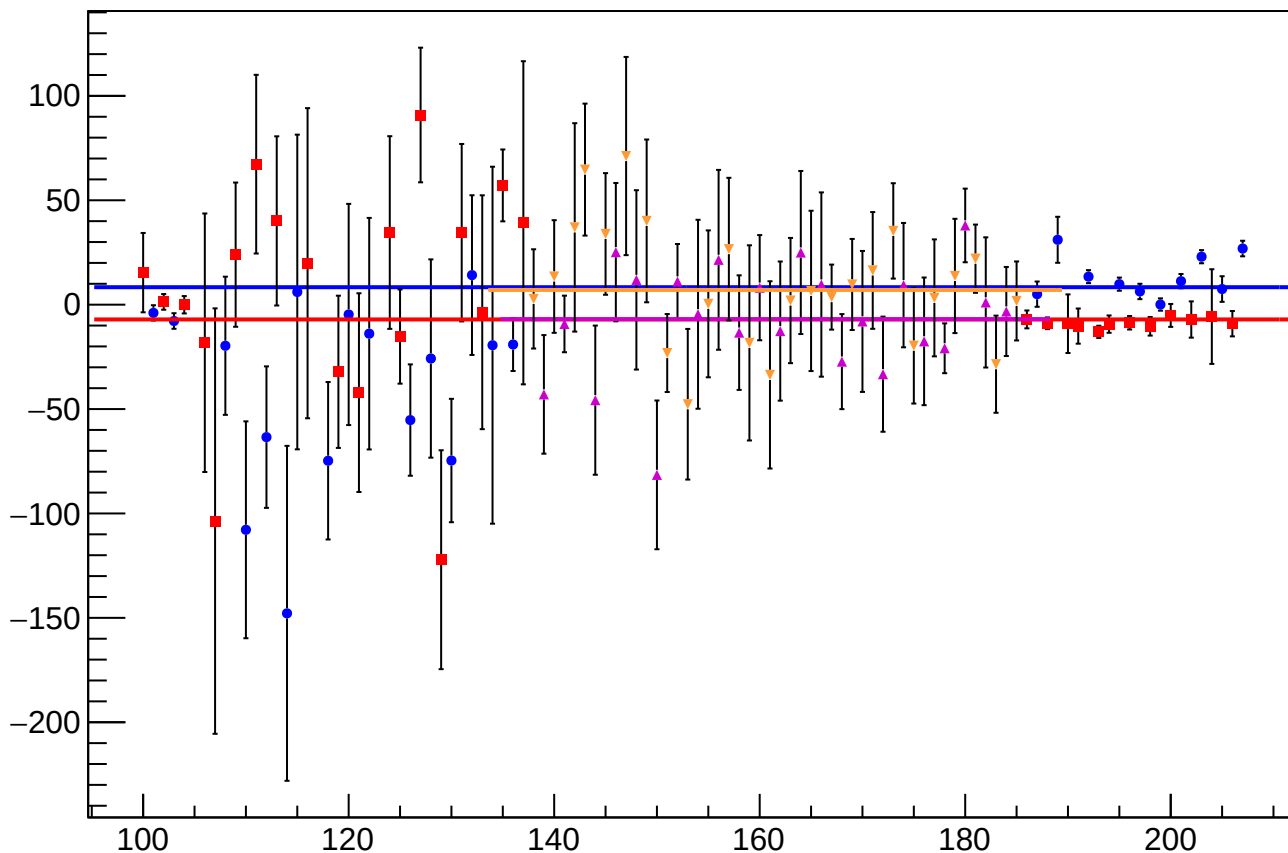
Left In: 2487.721 $\pm$ 0.467  $\chi^2$ /NDF: 6103466.5/22

+ sign 2627.162 $\pm$ 0.356  $\chi^2$ /NDF: 10963007.1/50

All: 2651.706 $\pm$ 0.251  $\chi^2$ /NDF: 20531742.6/1

- sign 2676.031 $\pm$ 0.354  $\chi^2$ /NDF: 9559275.5/53

# diff\_bpm0l03X\_mean vs Slug



Right In:  $8.365 \pm 1.071$   $\chi^2/\text{NDF}$ : 130.5/25

Left Out:  $7.059 \pm 5.227$   $\chi^2/\text{NDF}$ : 19.6/24

Right Out:  $-7.071 \pm 1.161$   $\chi^2/\text{NDF}$ : 52.8/30

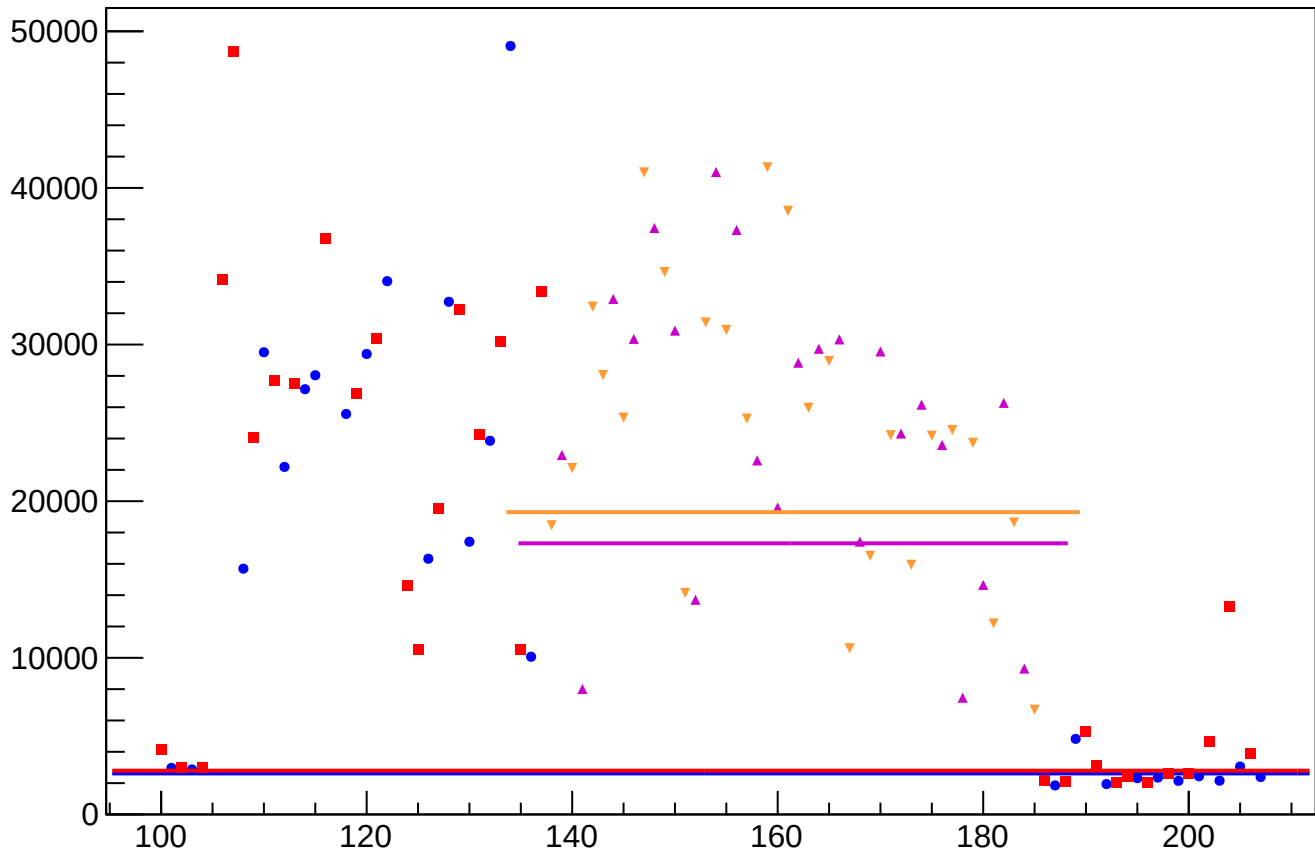
Left In:  $-6.944 \pm 5.090$   $\chi^2/\text{NDF}$ : 21.1/22

+ sign  $8.312 \pm 1.050$   $\chi^2/\text{NDF}$ : 150.1/50

All:  $1.205 \pm 0.770$   $\chi^2/\text{NDF}$ : 323.2/104

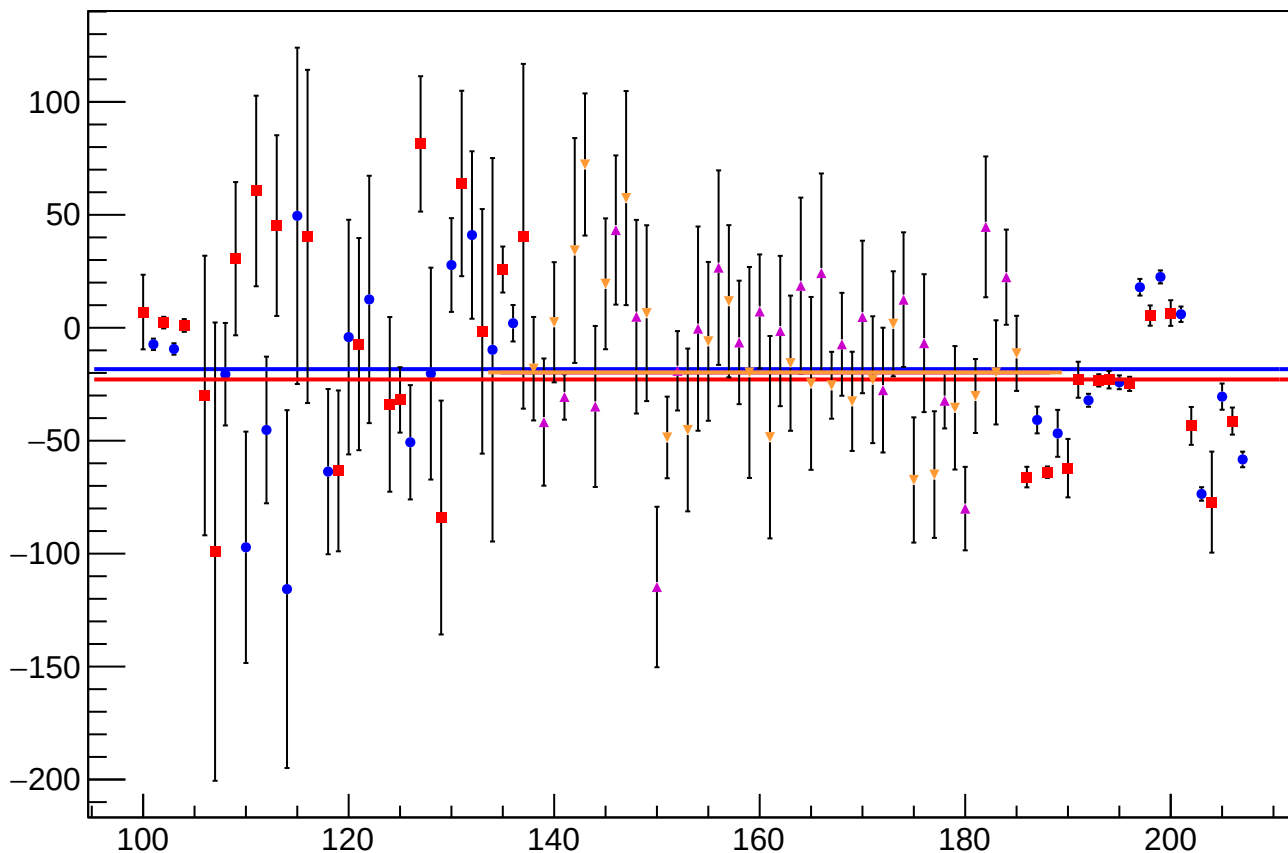
- sign  $-7.064 \pm 1.132$   $\chi^2/\text{NDF}$ : 73.9/53

# diff\_bpm0l03X\_rms vs Slug



|                             |                                    |                         |                                     |
|-----------------------------|------------------------------------|-------------------------|-------------------------------------|
| Right In: 2620.169+/-0.758  | $\chi^2/\text{NDF}$ : 7936842.5/25 | + sign 3292.511+/-0.742 | $\chi^2/\text{NDF}$ : 32513801.0/50 |
| Left Out: 19299.351+/-3.696 | $\chi^2/\text{NDF}$ : 5037014.9/24 | All: 3394.387+/-0.544   | $\chi^2/\text{NDF}$ : 64131183.1/1  |
| Right Out: 2795.082+/-0.821 | $\chi^2/\text{NDF}$ : 9402062.9/30 | - sign 3512.918+/-0.801 | $\chi^2/\text{NDF}$ : 31576613.2/53 |
| Left In: 17309.081+/-3.600  | $\chi^2/\text{NDF}$ : 6719993.9/22 |                         |                                     |

# diff\_bpm0l03Y\_mean vs Slug



Right In:  $-18.317 \pm 0.950$   $\chi^2/\text{NDF}$ : 931.7/25

Left Out:  $-19.769 \pm 5.117$   $\chi^2/\text{NDF}$ : 27.8/24

Right Out:  $-22.885 \pm 1.022$   $\chi^2/\text{NDF}$ : 675.6/30

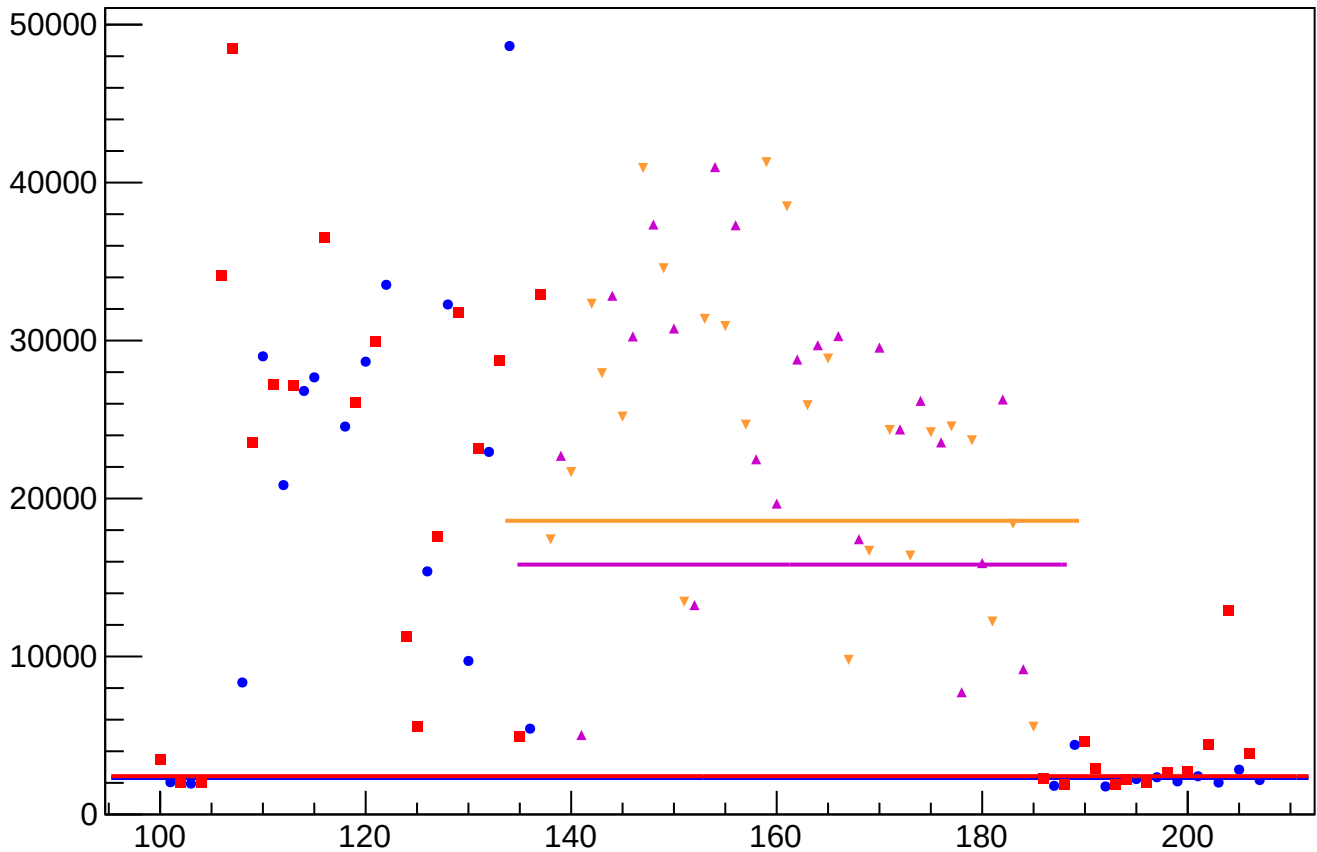
Left In:  $-19.822 \pm 4.846$   $\chi^2/\text{NDF}$ : 40.3/22

+ sign  $-18.365 \pm 0.934$   $\chi^2/\text{NDF}$ : 959.6/50

All:  $-20.411 \pm 0.682$   $\chi^2/\text{NDF}$ : 1686.2/104

- sign  $-22.755 \pm 1.000$   $\chi^2/\text{NDF}$ : 716.3/53

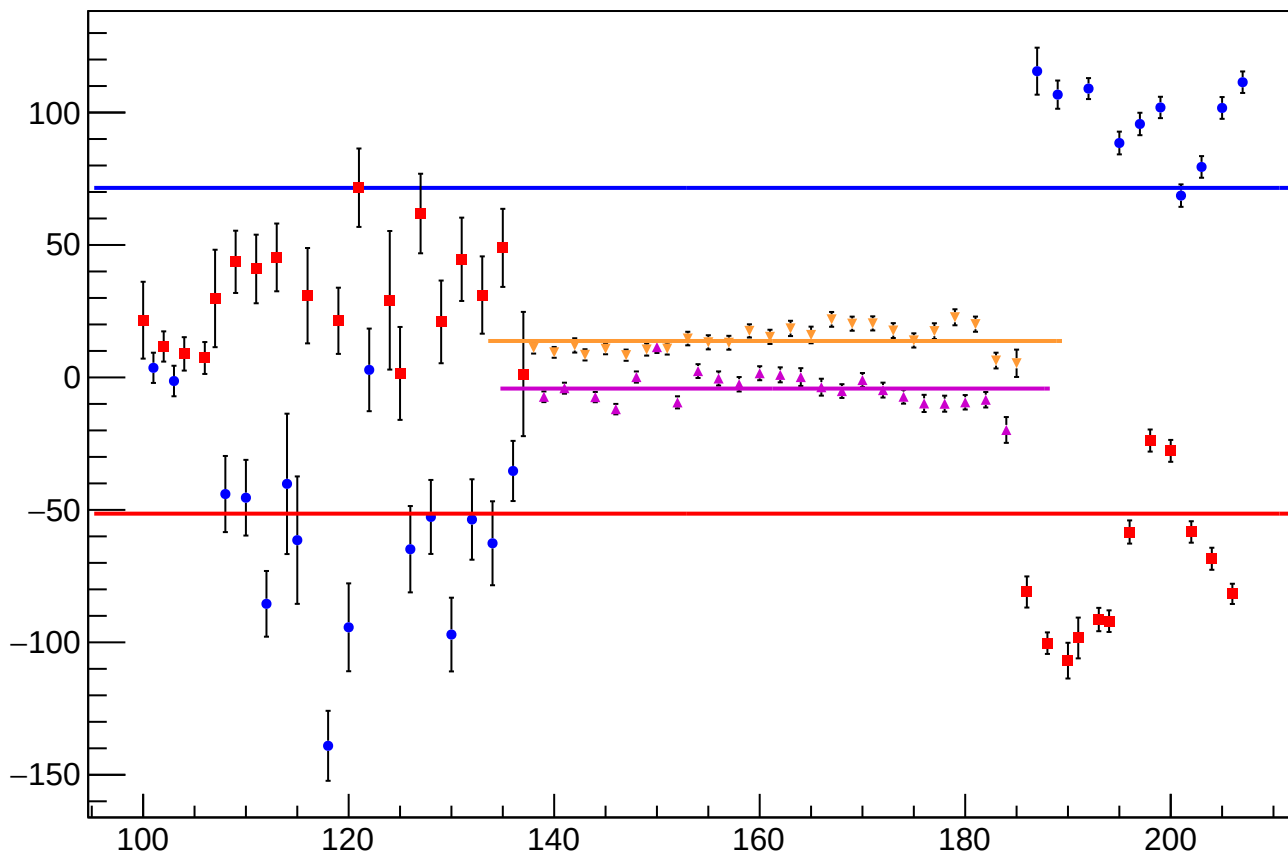
# diff\_bpm0l03Y\_rms vs Slug



Right In:  $2308.450 \pm 0.672$   $\chi^2/\text{NDF}: 7066574.7/25$   
 Left Out:  $18589.195 \pm 3.618$   $\chi^2/\text{NDF}: 5698567.3/24$   
 Right Out:  $2423.345 \pm 0.723$   $\chi^2/\text{NDF}: 9010577.4/30$   
 Left In:  $15817.655 \pm 3.426$   $\chi^2/\text{NDF}: 8406830.8/22$

+ sign  $2850.769 \pm 0.660$   $\chi^2/\text{NDF}: 32339266.3/50$   
 All:  $2917.332 \pm 0.483$   $\chi^2/\text{NDF}: 64409797.1/100$   
 - sign  $2993.633 \pm 0.707$   $\chi^2/\text{NDF}: 32048722.5/53$

# diff\_bpm0l04X\_mean vs Slug



Right In:  $71.548 \pm 1.248$   $\chi^2/\text{NDF}: 1957.3/25$

Left Out:  $13.761 \pm 0.514$   $\chi^2/\text{NDF}: 77.2/24$

Right Out:  $-51.419 \pm 1.156$   $\chi^2/\text{NDF}: 1486.8/30$

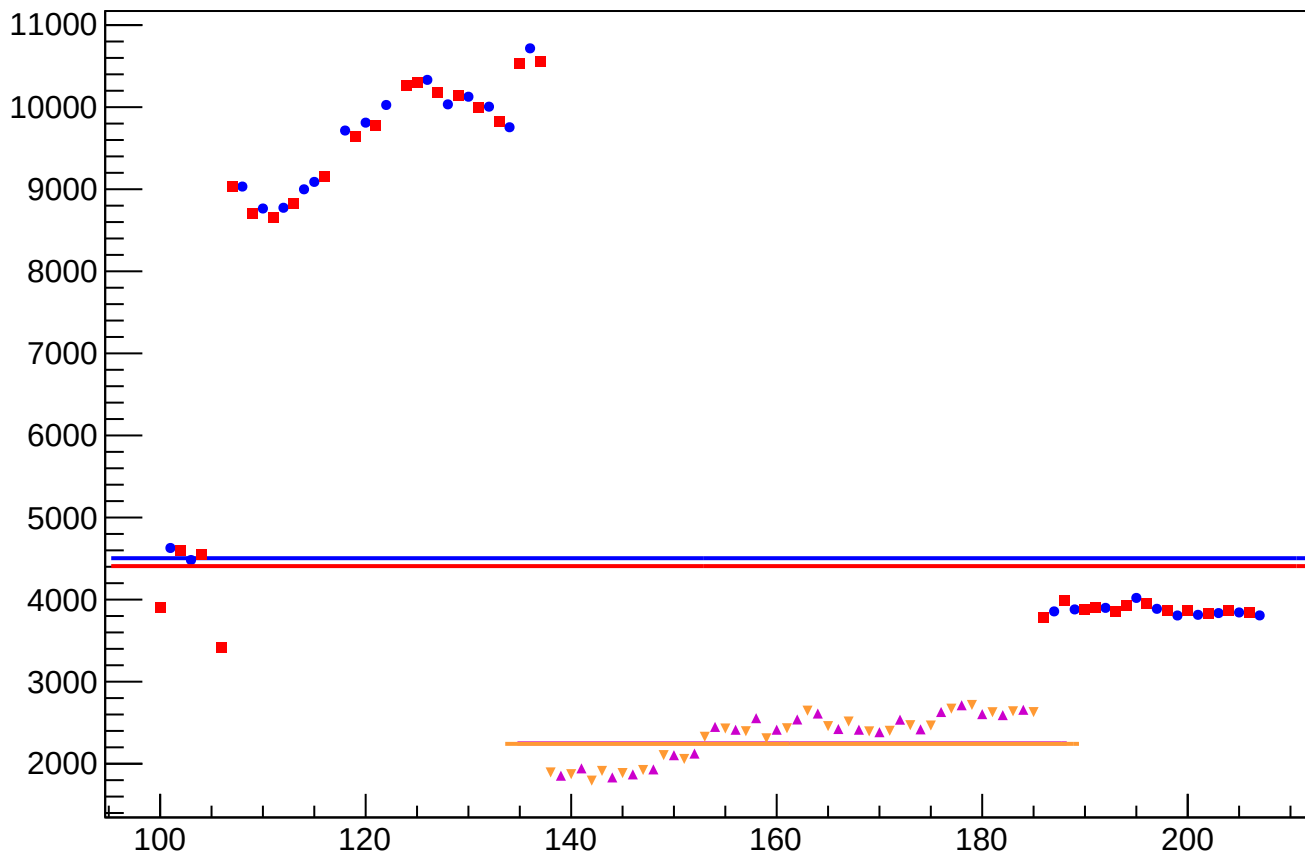
Left In:  $-4.202 \pm 0.530$   $\chi^2/\text{NDF}: 123.9/22$

+ sign  $22.146 \pm 0.475$   $\chi^2/\text{NDF}: 3868.6/50$

All:  $5.106 \pm 0.338$   $\chi^2/\text{NDF}: 9465.2/104$

- sign  $-12.408 \pm 0.482$   $\chi^2/\text{NDF}: 2989.7/53$

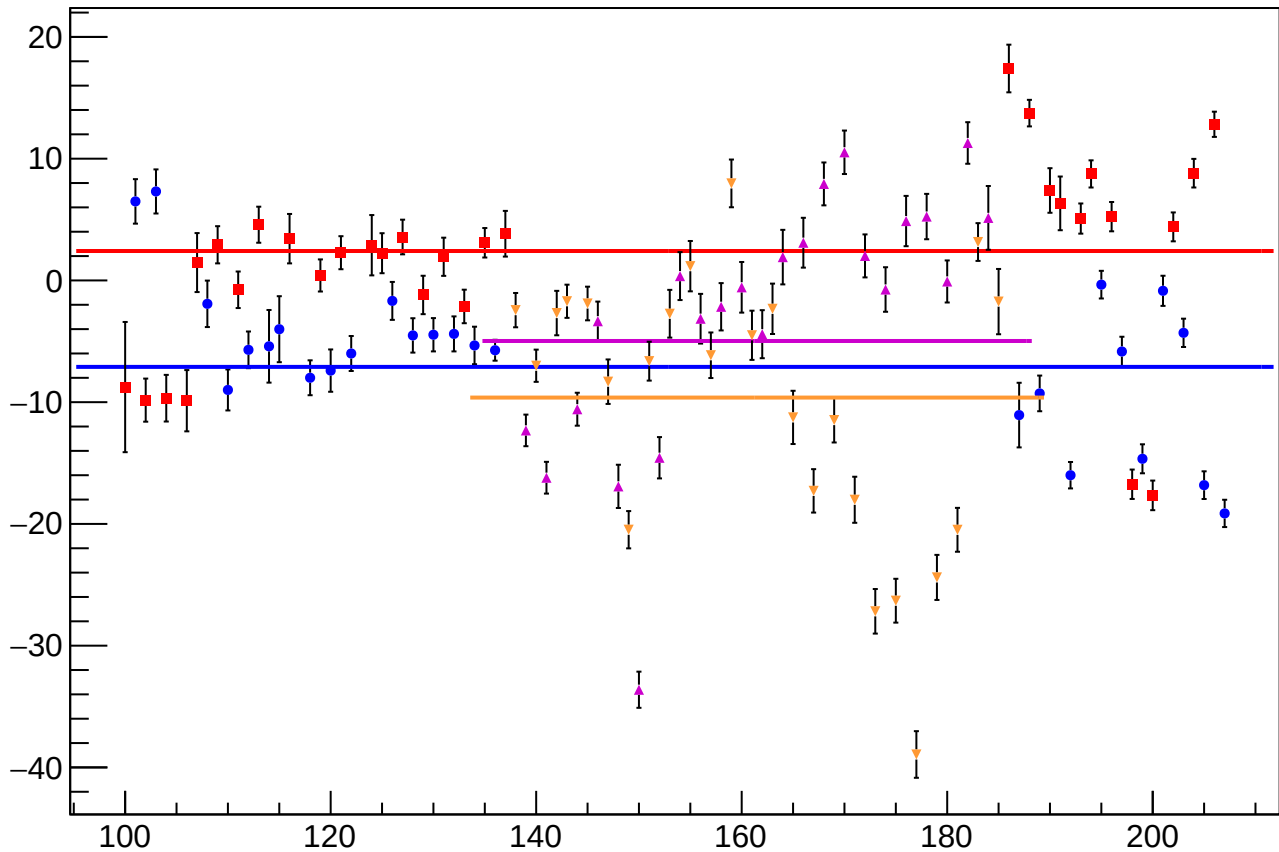
# diff\_bpm0l04X\_rms vs Slug



Right In:  $4504.434 \pm 0.882$   $\chi^2/\text{NDF}: 3918478.1/25$  + sign  $2570.583 \pm 0.336$   $\chi^2/\text{NDF}: 10197298.9/50$   
 Left Out:  $2242.334 \pm 0.363$   $\chi^2/\text{NDF}: 657865.5/24$  All:  $2596.864 \pm 0.239$   $\chi^2/\text{NDF}: 20517671.5/100$   
 Right Out:  $4408.090 \pm 0.817$   $\chi^2/\text{NDF}: 3896774.3/30$  - sign  $2623.876 \pm 0.341$   $\chi^2/\text{NDF}: 10307970.3/53$   
 Left In:  $2248.582 \pm 0.375$   $\chi^2/\text{NDF}: 642255.3/22$



# diff\_bpm0l04Y\_mean vs Slug



Right In:  $-7.102 \pm 0.272$   $\chi^2/\text{NDF}$ : 525.1/25

Left Out:  $-9.622 \pm 0.349$   $\chi^2/\text{NDF}$ : 934.3/24

Right Out:  $2.417 \pm 0.263$   $\chi^2/\text{NDF}$ : 1020.5/30

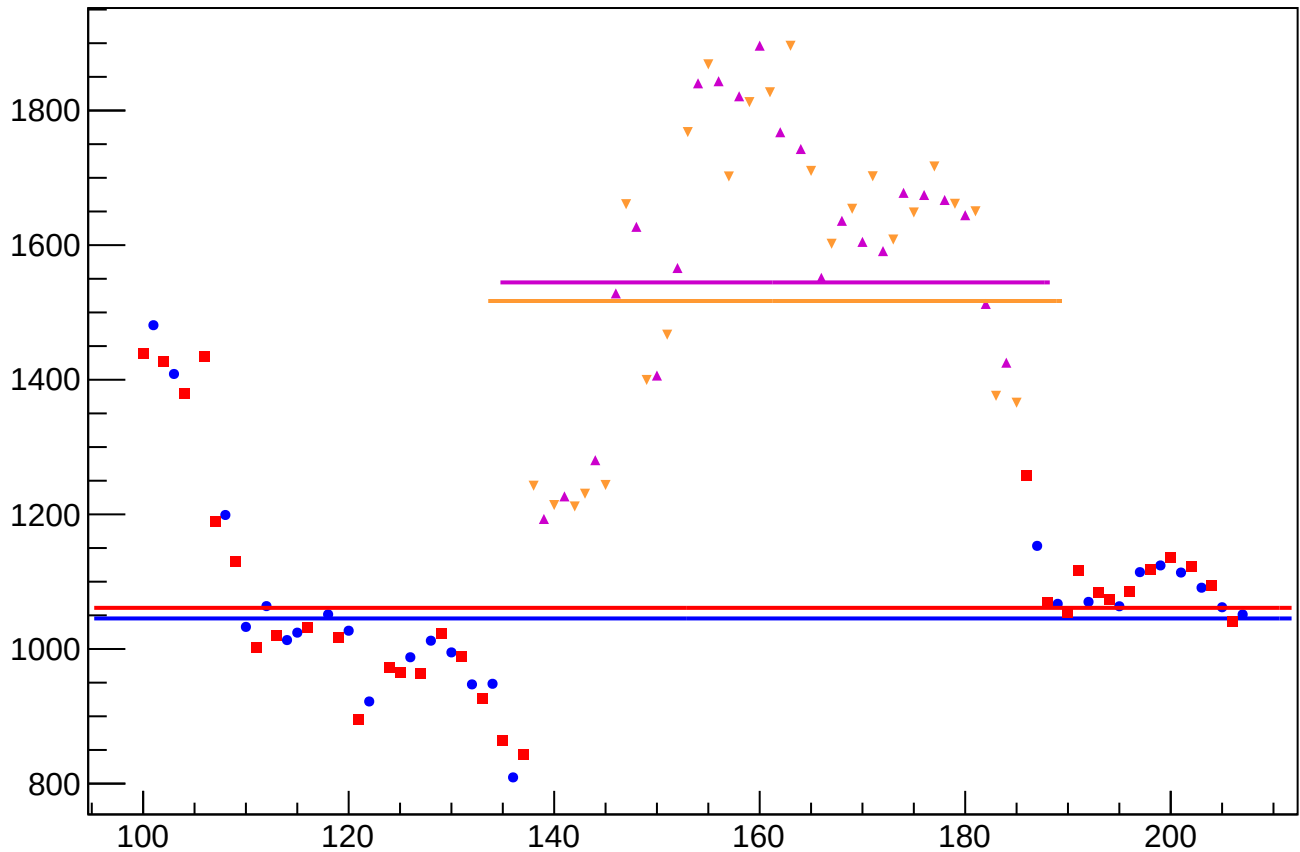
Left In:  $-4.974 \pm 0.365$   $\chi^2/\text{NDF}$ : 929.8/22

+ sign  $-8.054 \pm 0.215$   $\chi^2/\text{NDF}$ : 1491.8/50

All:  $-4.060 \pm 0.151$   $\chi^2/\text{NDF}$ : 4401.0/104

- sign  $-0.113 \pm 0.213$   $\chi^2/\text{NDF}$ : 2220.5/53

# diff\_bpm0l04Y\_rms vs Slug



Right In: 1045.383 $\pm$ 0.192  $\chi^2$ /NDF: 428192.4/25

Left Out: 1517.008 $\pm$ 0.247  $\chi^2$ /NDF: 832983.9/24

Right Out: 1061.119 $\pm$ 0.186  $\chi^2$ /NDF: 406886.9/30

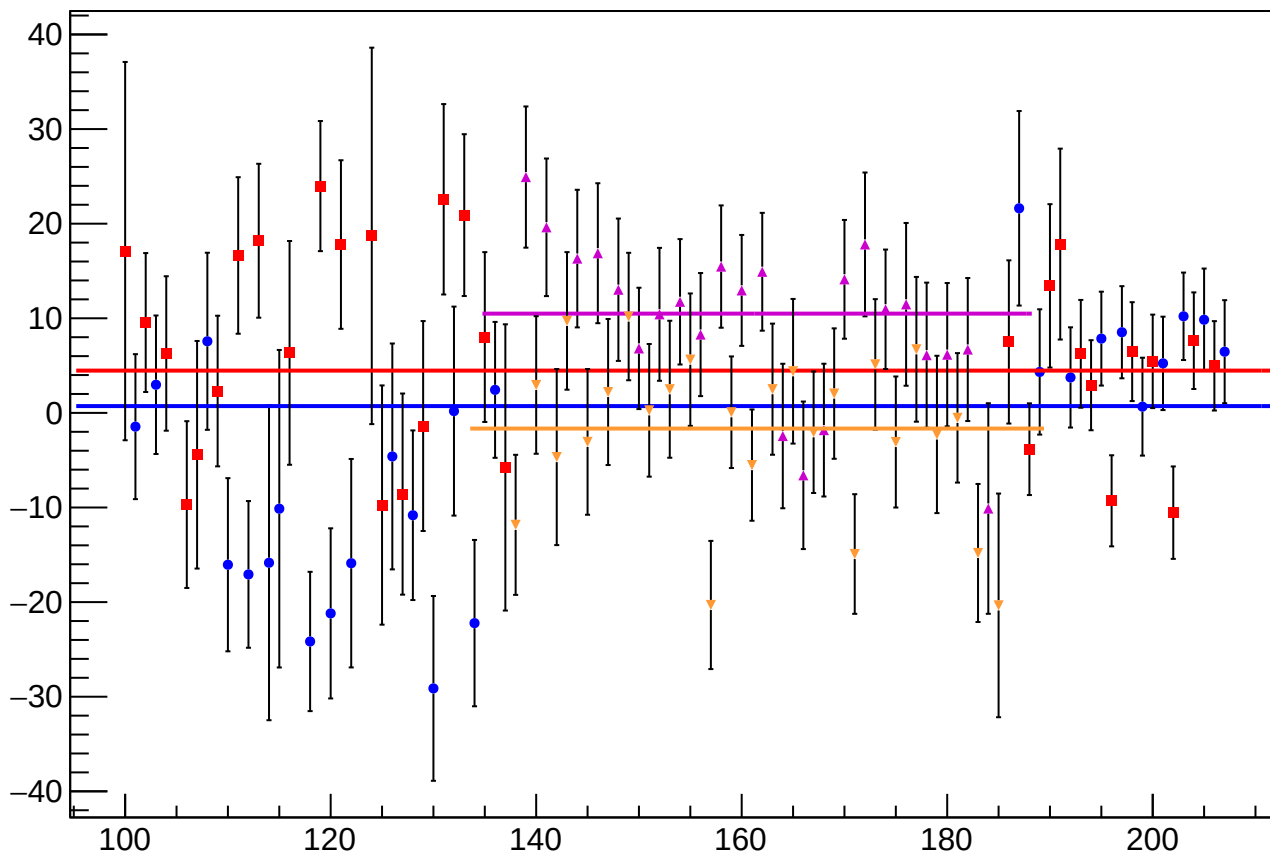
Left In: 1544.620 $\pm$ 0.258  $\chi^2$ /NDF: 638659.4/22

+ sign 1223.576 $\pm$ 0.152  $\chi^2$ /NDF: 3532220.8/50

All: 1225.100 $\pm$ 0.107  $\chi^2$ /NDF: 6891130.7/10

- sign 1226.606 $\pm$ 0.151  $\chi^2$ /NDF: 3358709.4/53

# diff\_bpm0l05X\_mean vs Slug



Right In:  $0.719 \pm 1.366$   $\chi^2/\text{NDF}$ : 66.8/25

Left Out:  $-1.655 \pm 1.426$   $\chi^2/\text{NDF}$ : 31.5/24

Right Out:  $4.470 \pm 1.282$   $\chi^2/\text{NDF}$ : 54.9/30

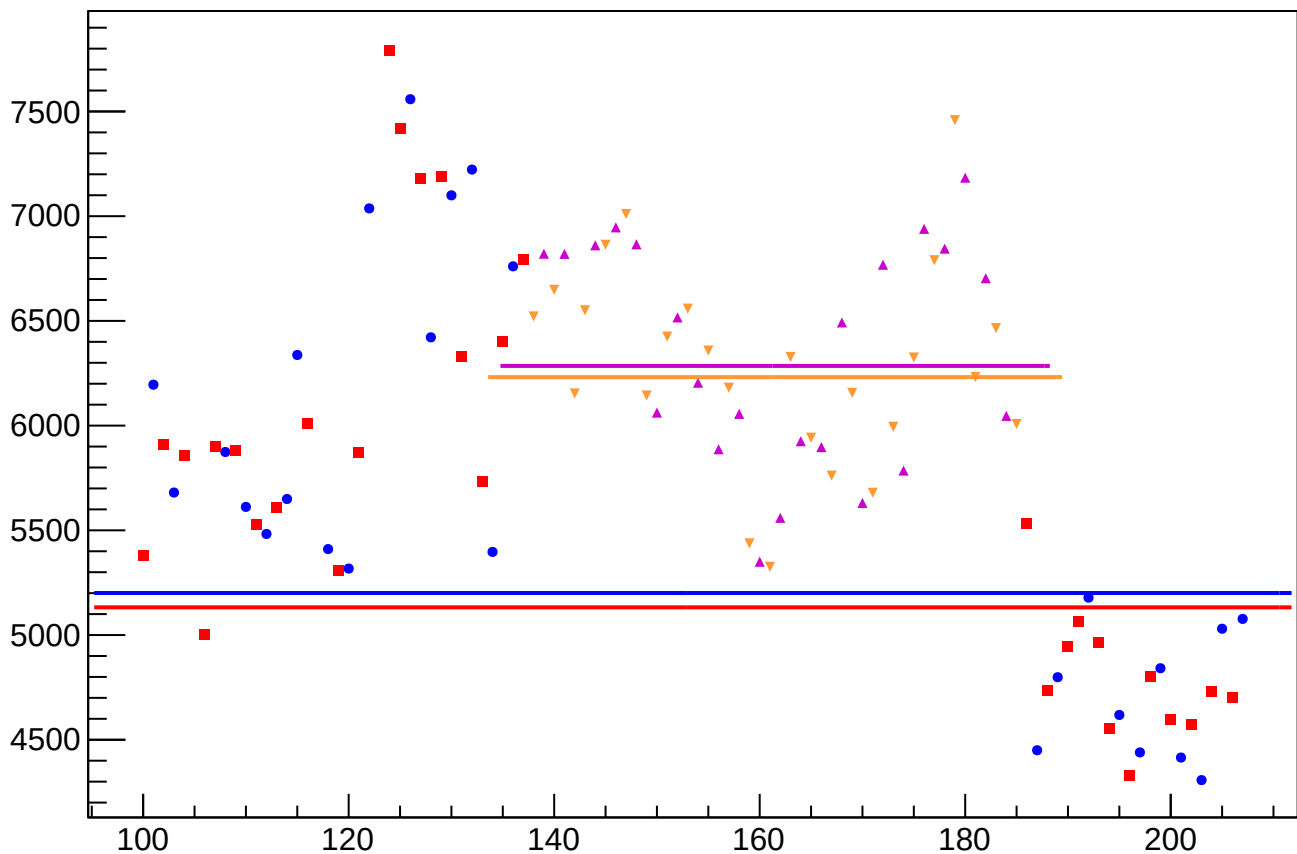
Left In:  $10.492 \pm 1.480$   $\chi^2/\text{NDF}$ : 24.9/22

+ sign  $-0.417 \pm 0.986$   $\chi^2/\text{NDF}$ : 99.8/50

All:  $3.385 \pm 0.691$   $\chi^2/\text{NDF}$ : 218.2/104

- sign  $7.053 \pm 0.969$   $\chi^2/\text{NDF}$ : 89.2/53

# diff\_bpm0l05X\_rms vs Slug



Right In: 5200.690 $\pm$ 0.966  $\chi^2$ /NDF: 713083.7/25

Left Out: 6231.572 $\pm$ 1.009  $\chi^2$ /NDF: 226959.2/24

Right Out: 5132.241 $\pm$ 0.907  $\chi^2$ /NDF: 641546.1/30

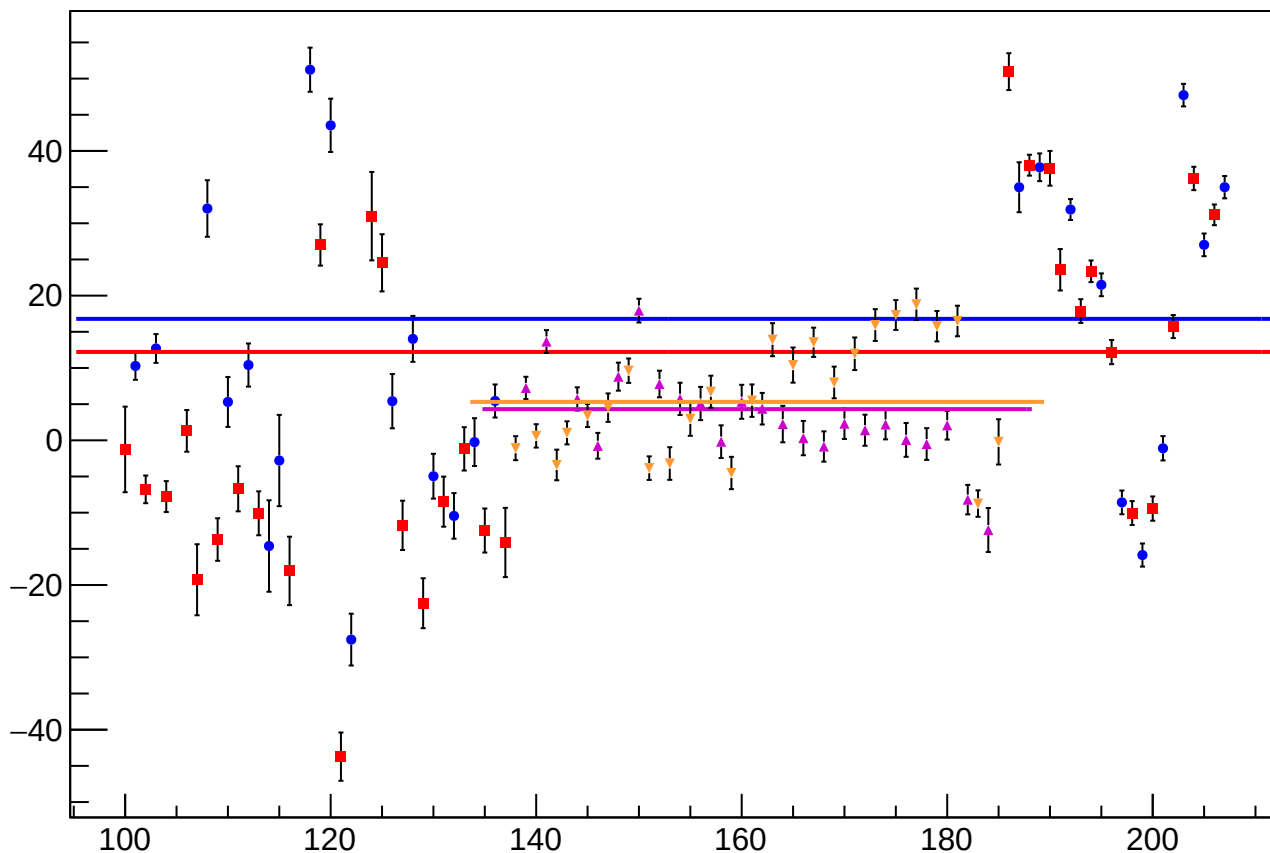
Left In: 6285.058 $\pm$ 1.046  $\chi^2$ /NDF: 265370.2/22

+ sign 5693.784 $\pm$ 0.698  $\chi^2$ /NDF: 1485088.5/50

All: 5659.588 $\pm$ 0.489  $\chi^2$ /NDF: 3090092.5/10

- sign 5626.592 $\pm$ 0.685  $\chi^2$ /NDF: 1600281.4/53

# diff\_bpm0l05Y\_mean vs Slug



Right In:  $16.789 \pm 0.432$   $\chi^2/\text{NDF}: 2212.9/25$

Left Out:  $5.313 \pm 0.400$   $\chi^2/\text{NDF}: 378.1/24$

Right Out:  $12.217 \pm 0.409$   $\chi^2/\text{NDF}: 2583.5/30$

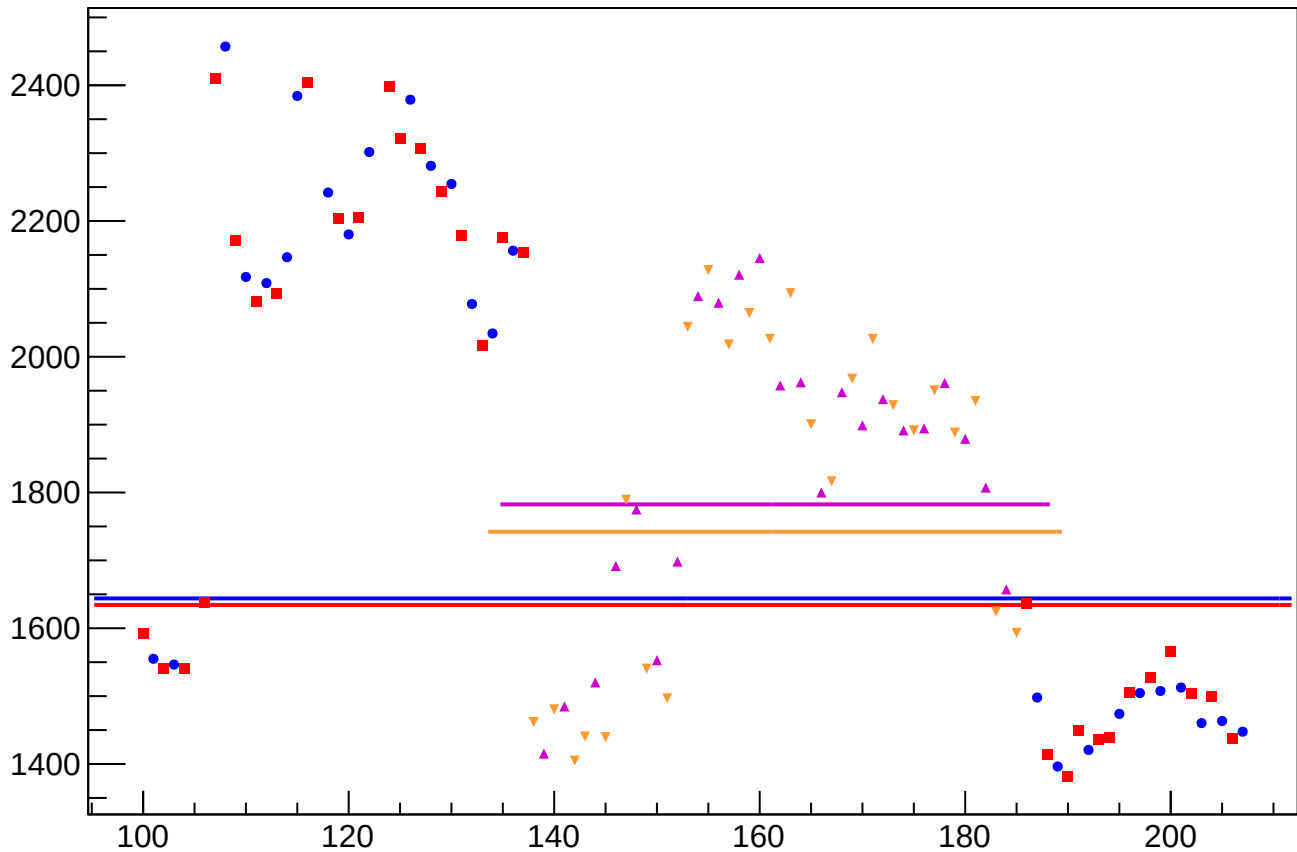
Left In:  $4.310 \pm 0.420$   $\chi^2/\text{NDF}: 220.4/22$

+ sign  $10.612 \pm 0.294$   $\chi^2/\text{NDF}: 2970.5/50$

All:  $9.488 \pm 0.207$   $\chi^2/\text{NDF}: 5985.5/104$

- sign  $8.368 \pm 0.293$   $\chi^2/\text{NDF}: 2985.8/53$

# diff\_bpm0l05Y\_rms vs Slug



Right In: 1643.953+/-0.306  $\chi^2/\text{NDF}$ : 1046508.5/25

Left Out: 1742.217+/-0.283  $\chi^2/\text{NDF}$ : 767663.9/24

Right Out: 1634.366+/-0.289  $\chi^2/\text{NDF}$ : 1033694.3/30

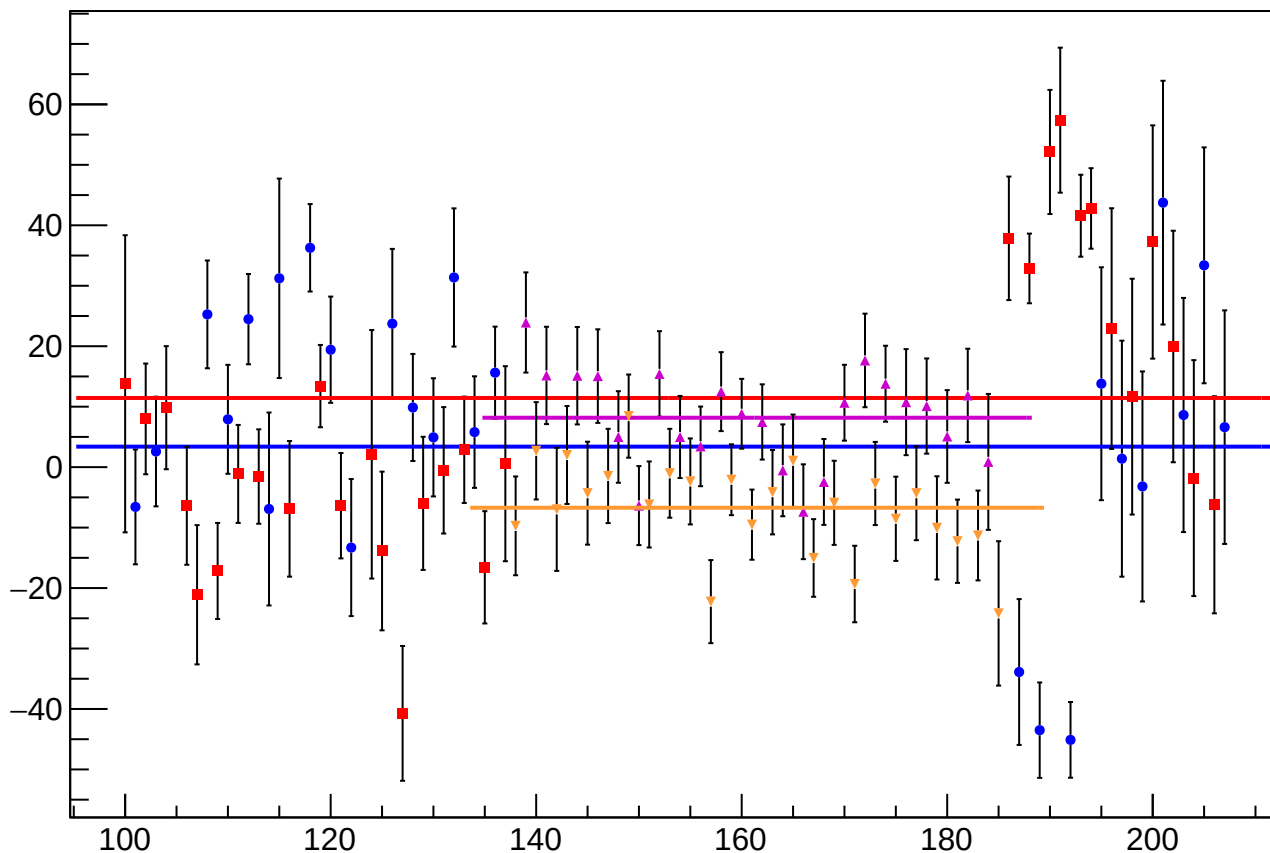
Left In: 1782.502+/-0.297  $\chi^2/\text{NDF}$ : 534374.9/22

+ sign 1696.838+/-0.208  $\chi^2/\text{NDF}$ : 1869814.0/50

All: 1701.665+/-0.147  $\chi^2/\text{NDF}$ : 3566607.9/10

- sign 1706.472+/-0.207  $\chi^2/\text{NDF}$ : 1695715.7/53

# diff\_bpm0l06X\_mean vs Slug



Right In:  $3.392 \pm 2.013$   $\chi^2/\text{NDF}$ : 168.5/25

Left Out:  $-6.713 \pm 1.458$   $\chi^2/\text{NDF}$ : 25.7/24

Right Out:  $11.441 \pm 1.795$   $\chi^2/\text{NDF}$ : 173.3/30

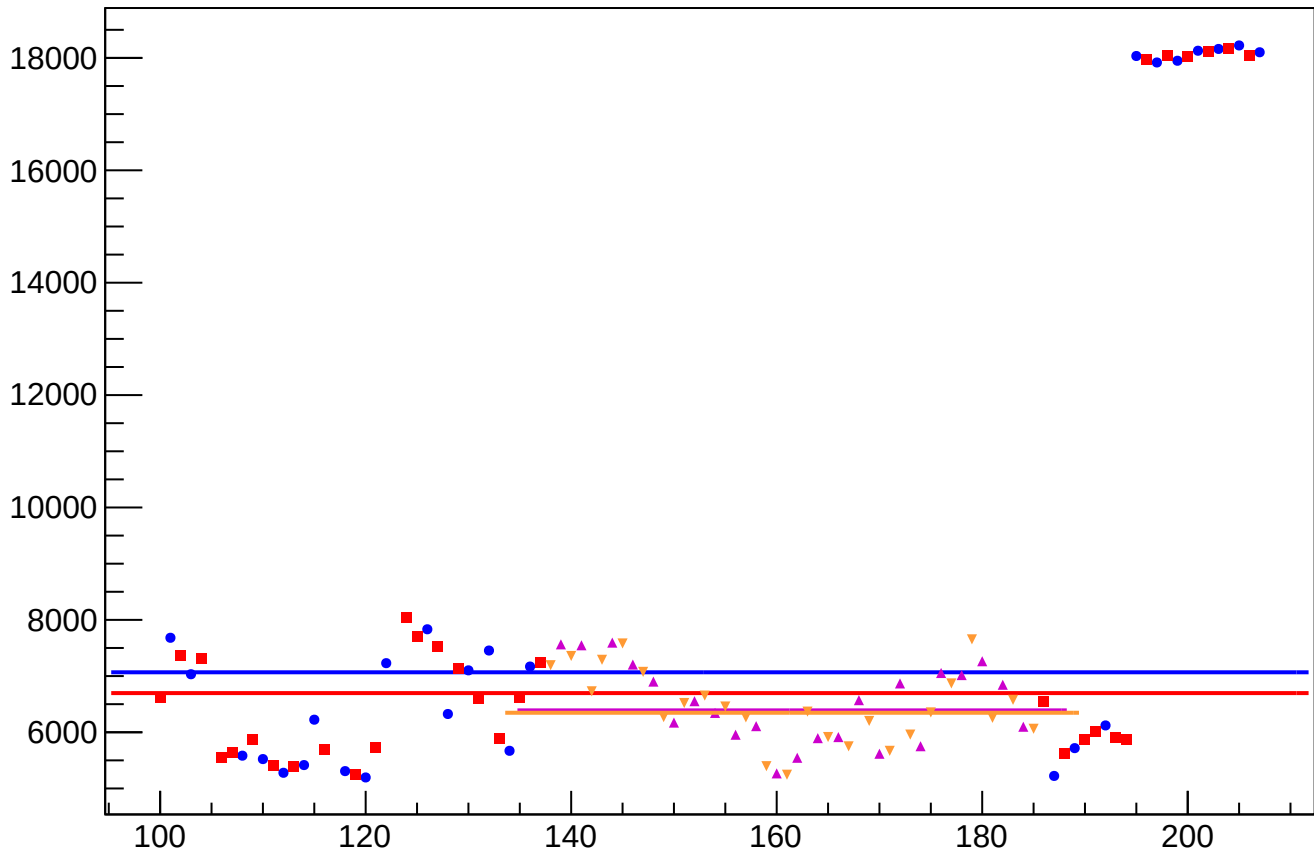
Left In:  $8.171 \pm 1.510$   $\chi^2/\text{NDF}$ : 24.2/22

+ sign  $-3.236 \pm 1.181$   $\chi^2/\text{NDF}$ : 210.7/50

All:  $3.282 \pm 0.826$   $\chi^2/\text{NDF}$ : 469.8/104

- sign  $9.526 \pm 1.156$   $\chi^2/\text{NDF}$ : 199.4/53

# diff\_bpm0l06X\_rms vs Slug



Right In: 7067.226+/-1.423  $\chi^2/\text{NDF}$ : 5180343.5/25

Left Out: 6347.287+/-1.031  $\chi^2/\text{NDF}$ : 386025.6/24

Right Out: 6697.116+/-1.270  $\chi^2/\text{NDF}$ : 4731219.5/30

Left In: 6389.425+/-1.068  $\chi^2/\text{NDF}$ : 419756.4/22

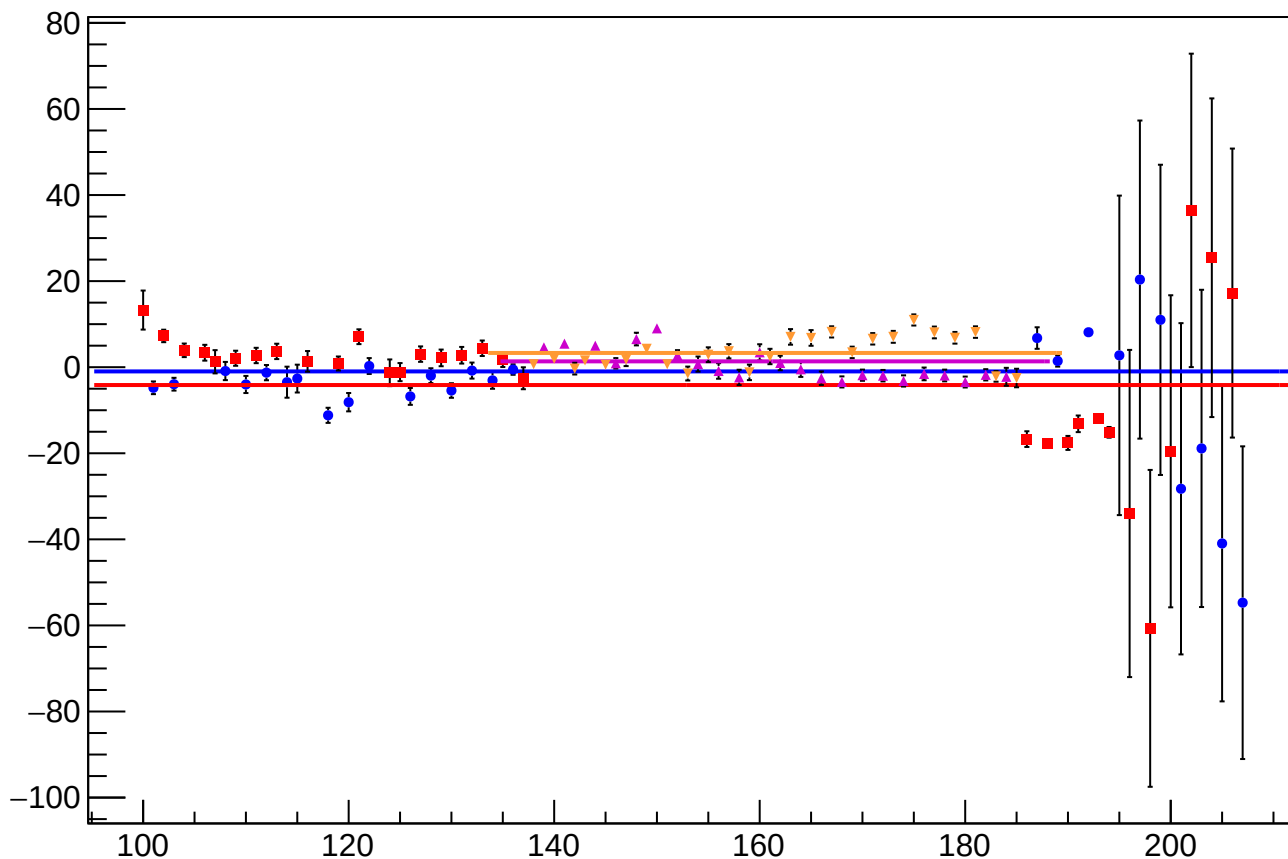
+ sign 6595.017+/-0.835  $\chi^2/\text{NDF}$ : 5734223.9/50

All: 6555.121+/-0.584  $\chi^2/\text{NDF}$ : 10924077.2/100

- sign 6516.897+/-0.817  $\chi^2/\text{NDF}$ : 5185381.2/53



# diff\_bpm0l06Y\_mean vs Slug



Right In:  $-0.981 \pm 0.386$   $\chi^2/\text{NDF}$ : 183.5/25

Left Out:  $3.311 \pm 0.264$   $\chi^2/\text{NDF}$ : 177.9/24

Right Out:  $-4.146 \pm 0.342$   $\chi^2/\text{NDF}$ : 749.8/30

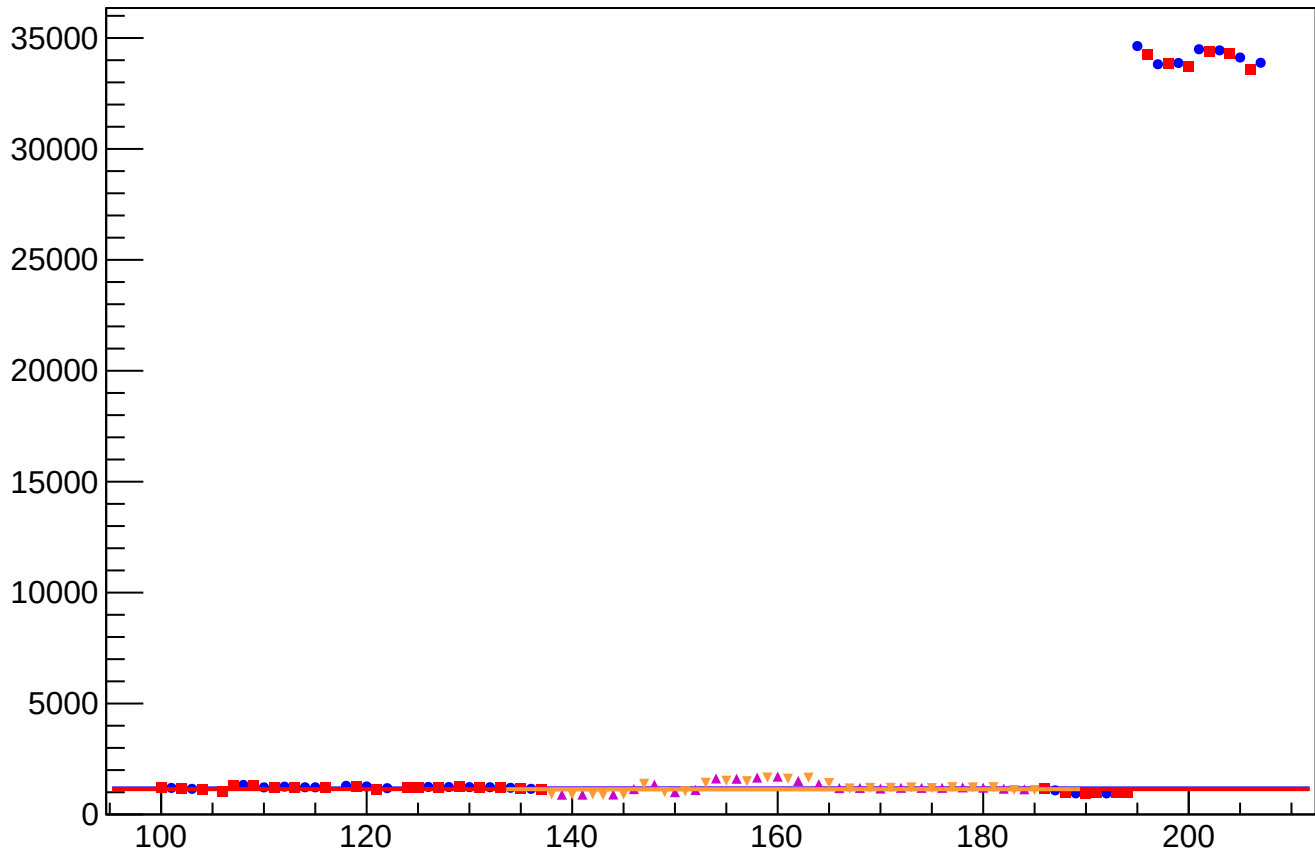
Left In:  $1.355 \pm 0.277$   $\chi^2/\text{NDF}$ : 196.3/22

+ sign  $1.940 \pm 0.218$   $\chi^2/\text{NDF}$ : 445.5/50

All:  $0.540 \pm 0.153$   $\chi^2/\text{NDF}$ : 1629.2/104

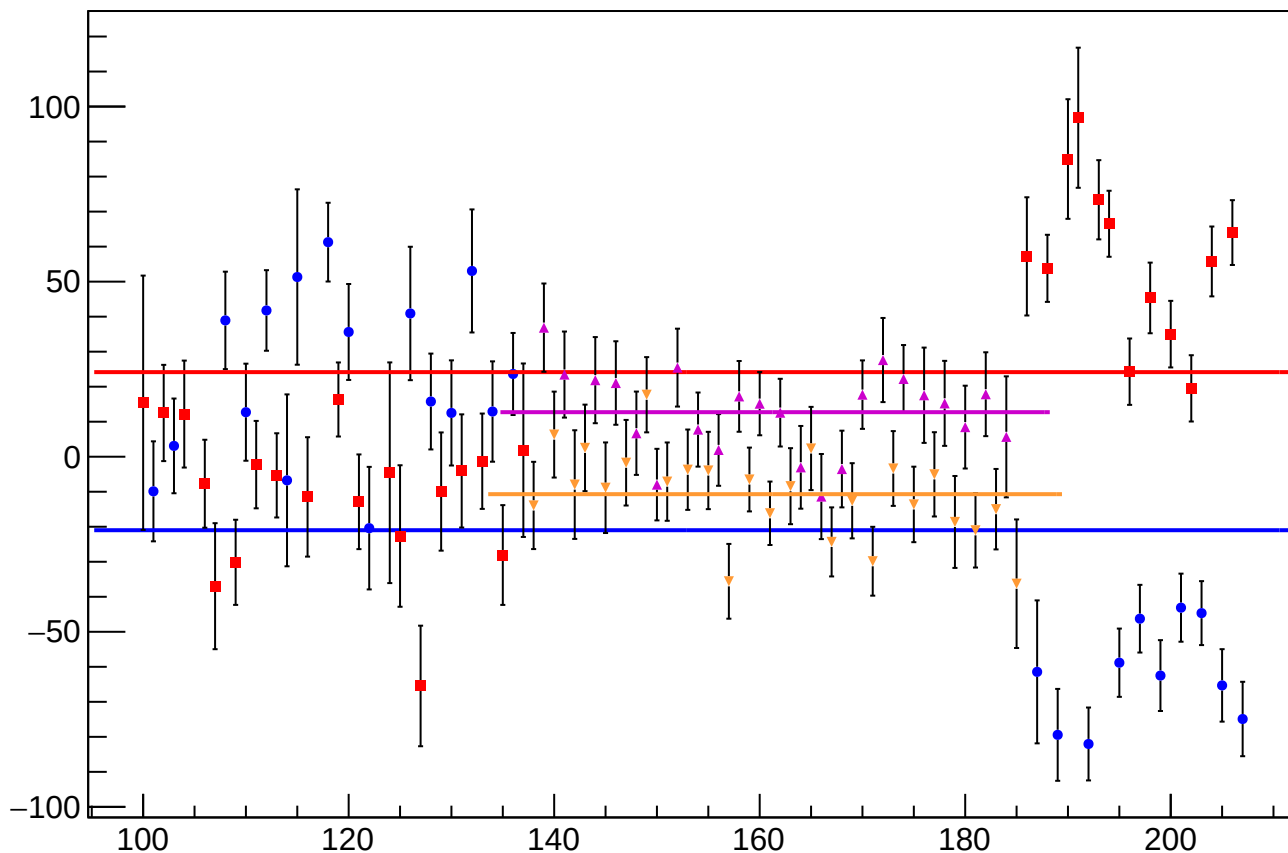
- sign  $-0.821 \pm 0.215$   $\chi^2/\text{NDF}$ : 1102.5/53

# diff\_bpm0l06Y\_rms vs Slug



Right In: 1173.007 $\pm$ 0.273     $\chi^2$ /NDF: 11404420.5/25    + sign 1148.607 $\pm$ 0.154     $\chi^2$ /NDF: 12885855.5/50  
 Left Out: 1137.150 $\pm$ 0.187     $\chi^2$ /NDF: 1469686.1/24    All: 1150.355 $\pm$ 0.108     $\chi^2$ /NDF: 24226080.1/1  
 Right Out: 1140.782 $\pm$ 0.242     $\chi^2$ /NDF: 10076582.9/30    - sign 1152.055 $\pm$ 0.152     $\chi^2$ /NDF: 11339971.2/53  
 Left In: 1159.432 $\pm$ 0.196     $\chi^2$ /NDF: 1259793.6/22

# diff\_bpm0l07X\_mean vs Slug



Right In:  $-20.990 \pm 2.461$   $\chi^2/\text{NDF}$ : 350.7/25

Left Out:  $-10.696 \pm 2.257$   $\chi^2/\text{NDF}$ : 28.7/24

Right Out:  $24.158 \pm 2.305$   $\chi^2/\text{NDF}$ : 233.4/30

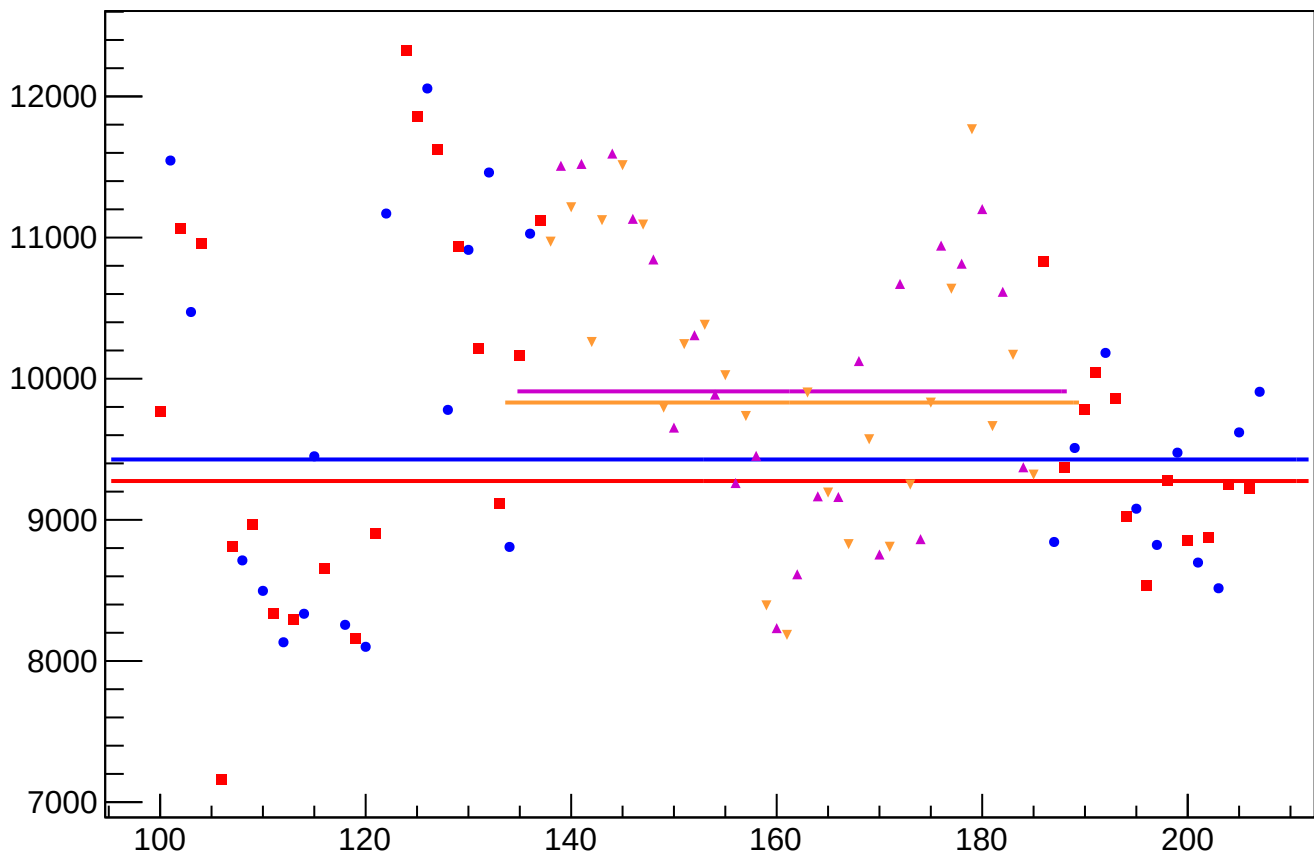
Left In:  $12.719 \pm 2.341$   $\chi^2/\text{NDF}$ : 24.0/22

+ sign  $-15.401 \pm 1.663$   $\chi^2/\text{NDF}$ : 389.0/50

All:  $1.776 \pm 1.169$   $\chi^2/\text{NDF}$ : 869.1/104

- sign  $18.526 \pm 1.643$   $\chi^2/\text{NDF}$ : 269.5/53

# diff\_bpm0l07X\_rms vs Slug



Right In: 9427.843+/-1.740  $\chi^2/\text{NDF}$ : 345347.4/25

Left Out: 9831.301+/-1.596  $\chi^2/\text{NDF}$ : 356125.1/24

Right Out: 9275.165+/-1.630  $\chi^2/\text{NDF}$ : 351286.8/30

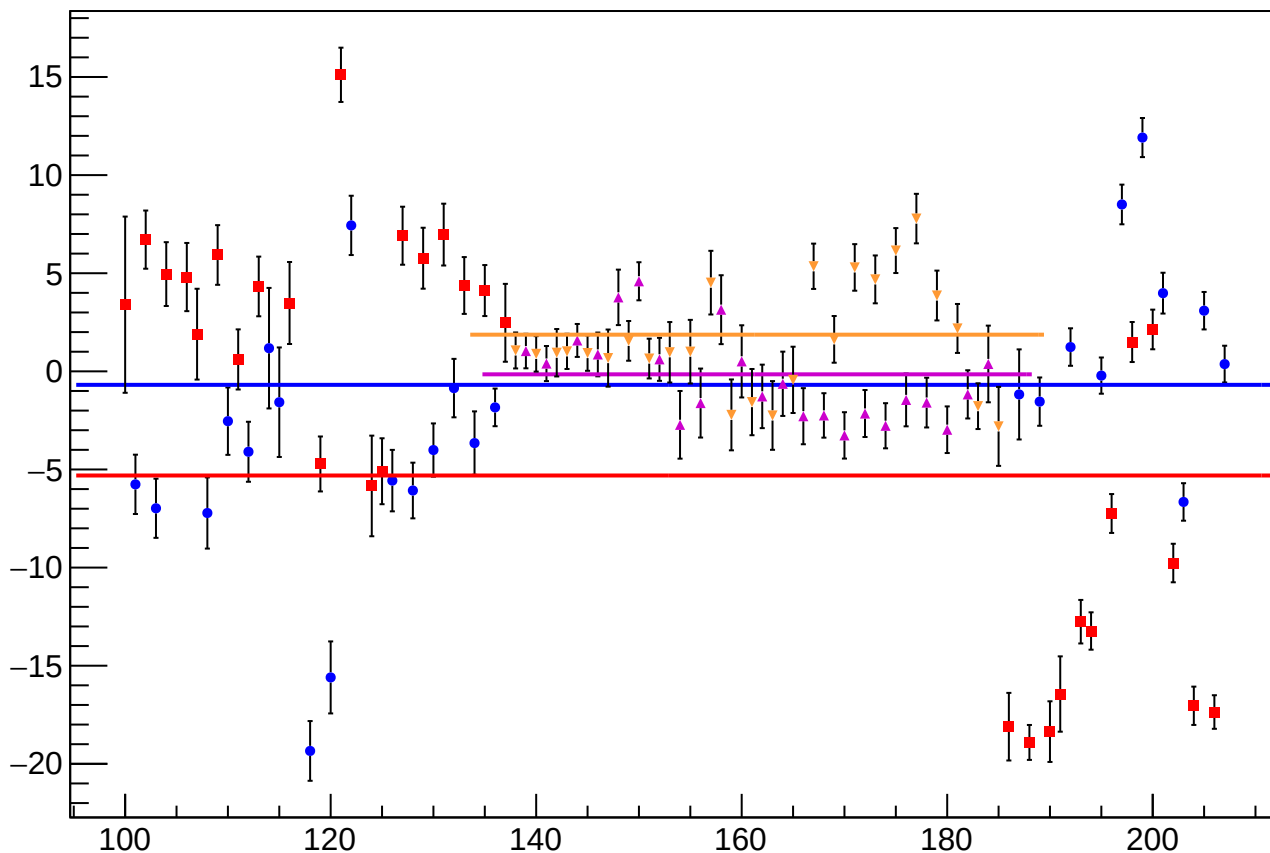
Left In: 9910.300+/-1.655  $\chi^2/\text{NDF}$ : 389368.1/22

+ sign 9646.923+/-1.176  $\chi^2/\text{NDF}$ : 730672.5/50

All: 9617.035+/-0.826  $\chi^2/\text{NDF}$ : 1547342.5/10

- sign 9587.889+/-1.161  $\chi^2/\text{NDF}$ : 815394.6/53

# diff\_bpm0l07Y\_mean vs Slug



Right In:  $-0.688 \pm 0.249$   $\chi^2/\text{NDF}$ : 651.9/25

Left Out:  $1.869 \pm 0.243$   $\chi^2/\text{NDF}$ : 103.2/24

Right Out:  $-5.307 \pm 0.238$   $\chi^2/\text{NDF}$ : 1765.2/30

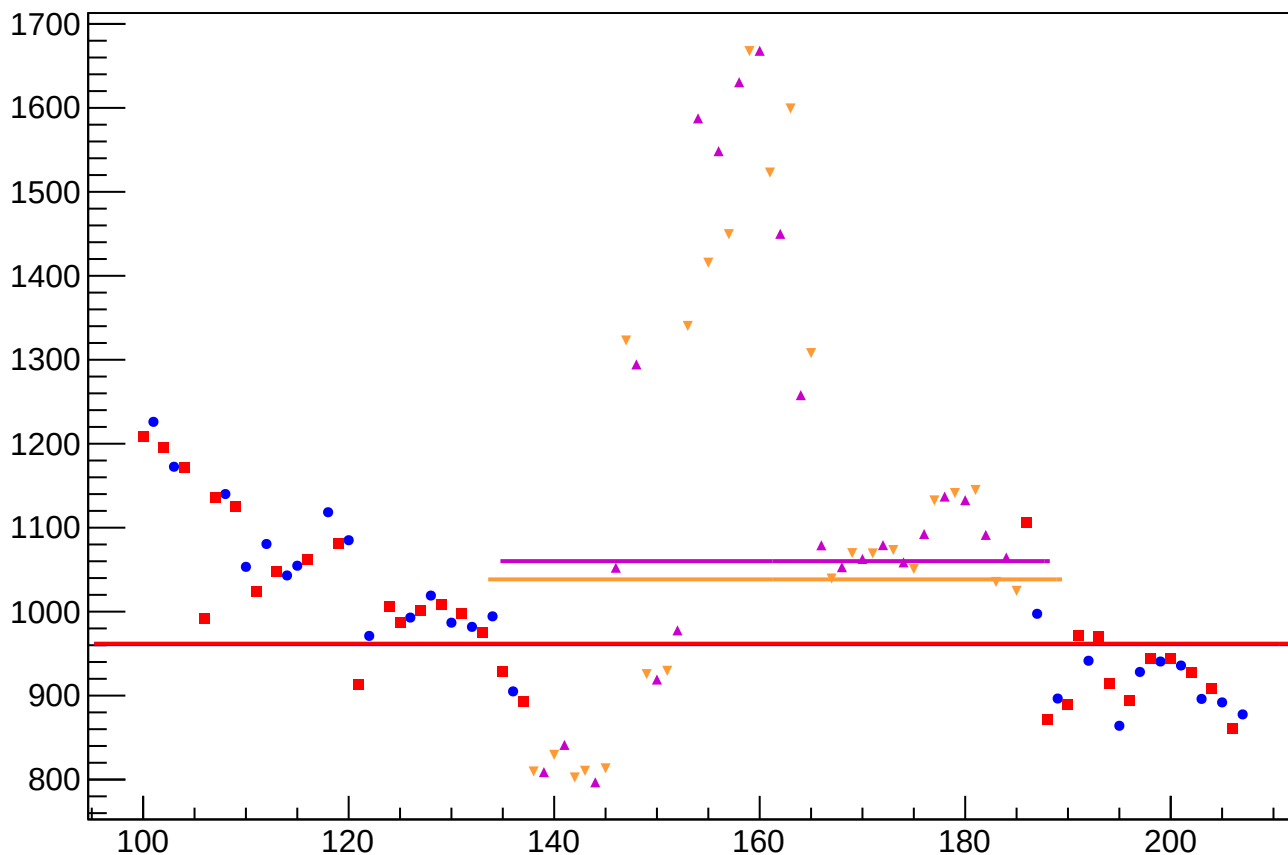
Left In:  $-0.152 \pm 0.254$   $\chi^2/\text{NDF}$ : 75.7/22

+ sign  $0.625 \pm 0.174$   $\chi^2/\text{NDF}$ : 809.1/50

All:  $-1.141 \pm 0.123$   $\chi^2/\text{NDF}$ : 3075.1/104

- sign  $-2.904 \pm 0.174$   $\chi^2/\text{NDF}$ : 2059.9/53

# diff\_bpm0l07Y\_rms vs Slug



Right In: 961.267 $\pm$ 0.176  $\chi^2$ /NDF: 254291.7/25

Left Out: 1038.406 $\pm$ 0.172  $\chi^2$ /NDF:1706682.8/24

Right Out: 961.830 $\pm$ 0.168  $\chi^2$ /NDF: 255651.2/30

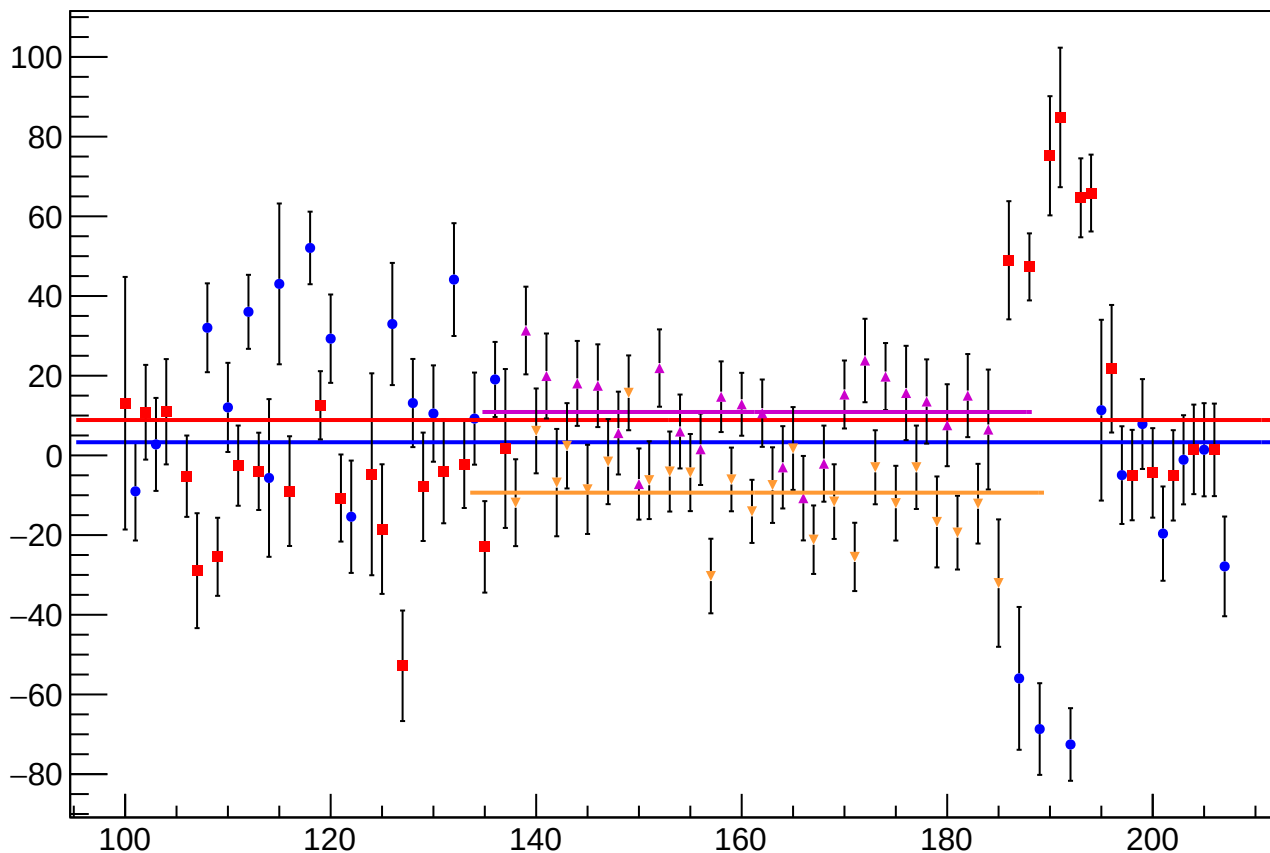
Left In: 1060.162 $\pm$ 0.180  $\chi^2$ /NDF:1523219.9/22

+ sign 1000.888 $\pm$ 0.123  $\chi^2$ /NDF: 2059281.2/50

All: 1004.285 $\pm$ 0.087  $\chi^2$ /NDF: 3999063.8/10

- sign 1007.676 $\pm$ 0.123  $\chi^2$ /NDF: 1938257.8/53

# diff\_bpm0l08X\_mean vs Slug



Right In:  $3.303 \pm 2.339$   $\chi^2/\text{NDF}$ : 207.2/25

Left Out:  $-9.355 \pm 1.969$   $\chi^2/\text{NDF}$ : 28.5/24

Right Out:  $8.877 \pm 2.148$   $\chi^2/\text{NDF}$ : 202.6/30

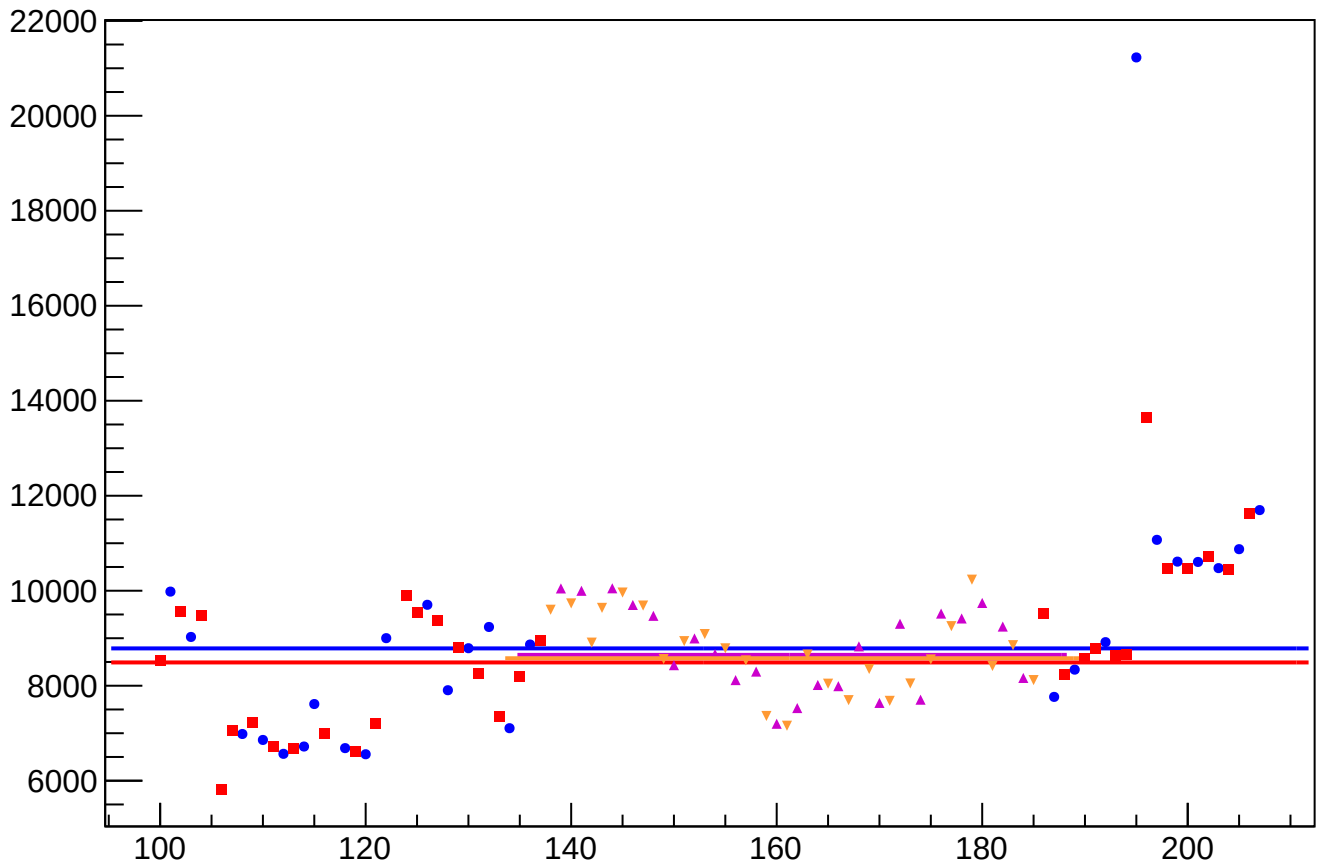
Left In:  $10.892 \pm 2.043$   $\chi^2/\text{NDF}$ : 23.6/22

+ sign  $-4.105 \pm 1.506$   $\chi^2/\text{NDF}$ : 252.8/50

All:  $3.038 \pm 1.056$   $\chi^2/\text{NDF}$ : 523.6/104

- sign  $9.935 \pm 1.480$   $\chi^2/\text{NDF}$ : 226.6/53

# diff\_bpm0l08X\_rms vs Slug



Right In: 8785.787 $\pm$ 1.654  $\chi^2$ /NDF: 1524438.8/25

Left Out: 8578.396 $\pm$ 1.392  $\chi^2$ /NDF: 343721.1/24

Right Out: 8490.170 $\pm$ 1.519  $\chi^2$ /NDF: 1171531.9/30

Left In: 8649.232 $\pm$ 1.444  $\chi^2$ /NDF: 377932.0/22

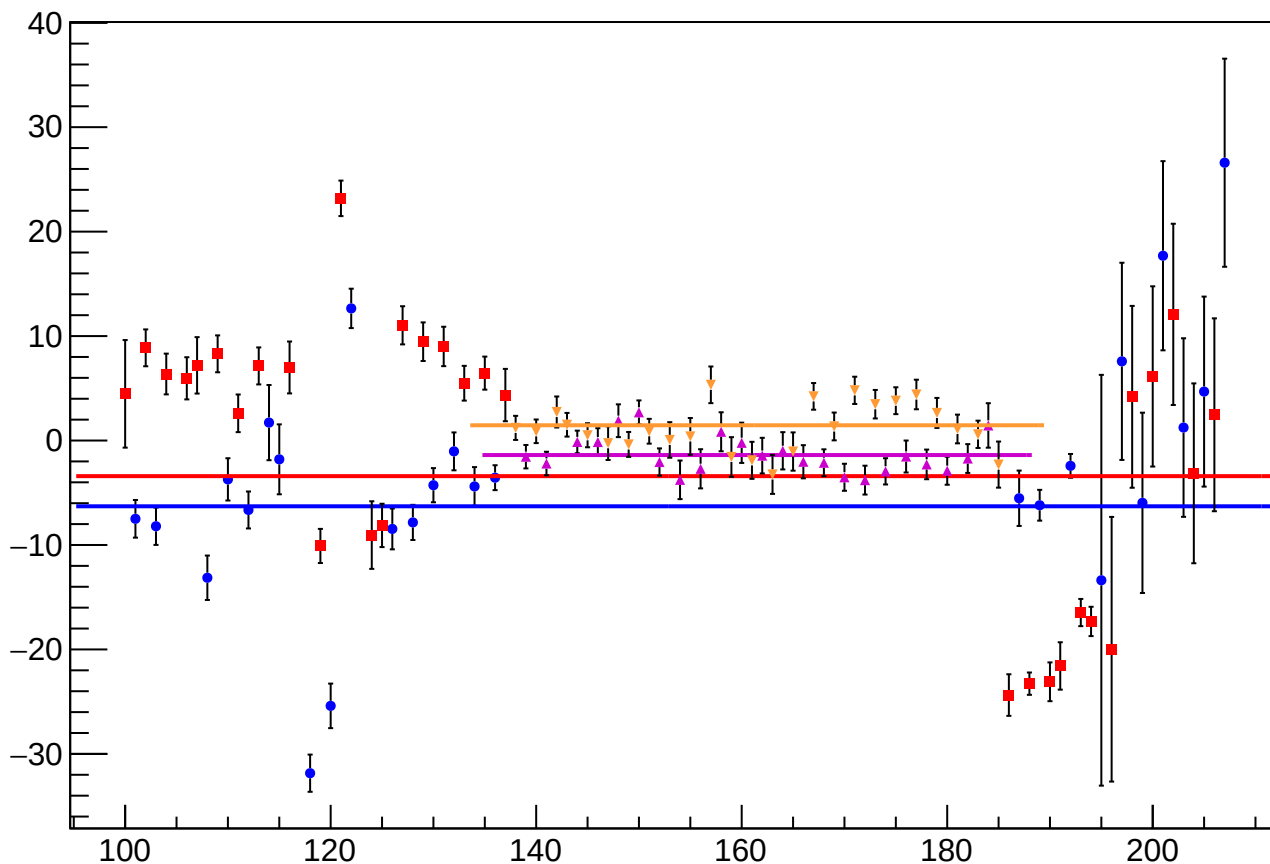
+ sign 8664.414 $\pm$ 1.065  $\chi^2$ /NDF: 1877360.9/50

All: 8618.270 $\pm$ 0.747  $\chi^2$ /NDF: 3436271.8/10

- sign 8573.715 $\pm$ 1.047  $\chi^2$ /NDF: 1555222.4/53



# diff\_bpm0l08Y\_mean vs Slug



Right In:  $-6.296 \pm 0.404$   $\chi^2/\text{NDF}: 460.0/25$

Left Out:  $1.461 \pm 0.281$   $\chi^2/\text{NDF}: 51.0/24$

Right Out:  $-3.410 \pm 0.359$   $\chi^2/\text{NDF}: 1561.5/30$

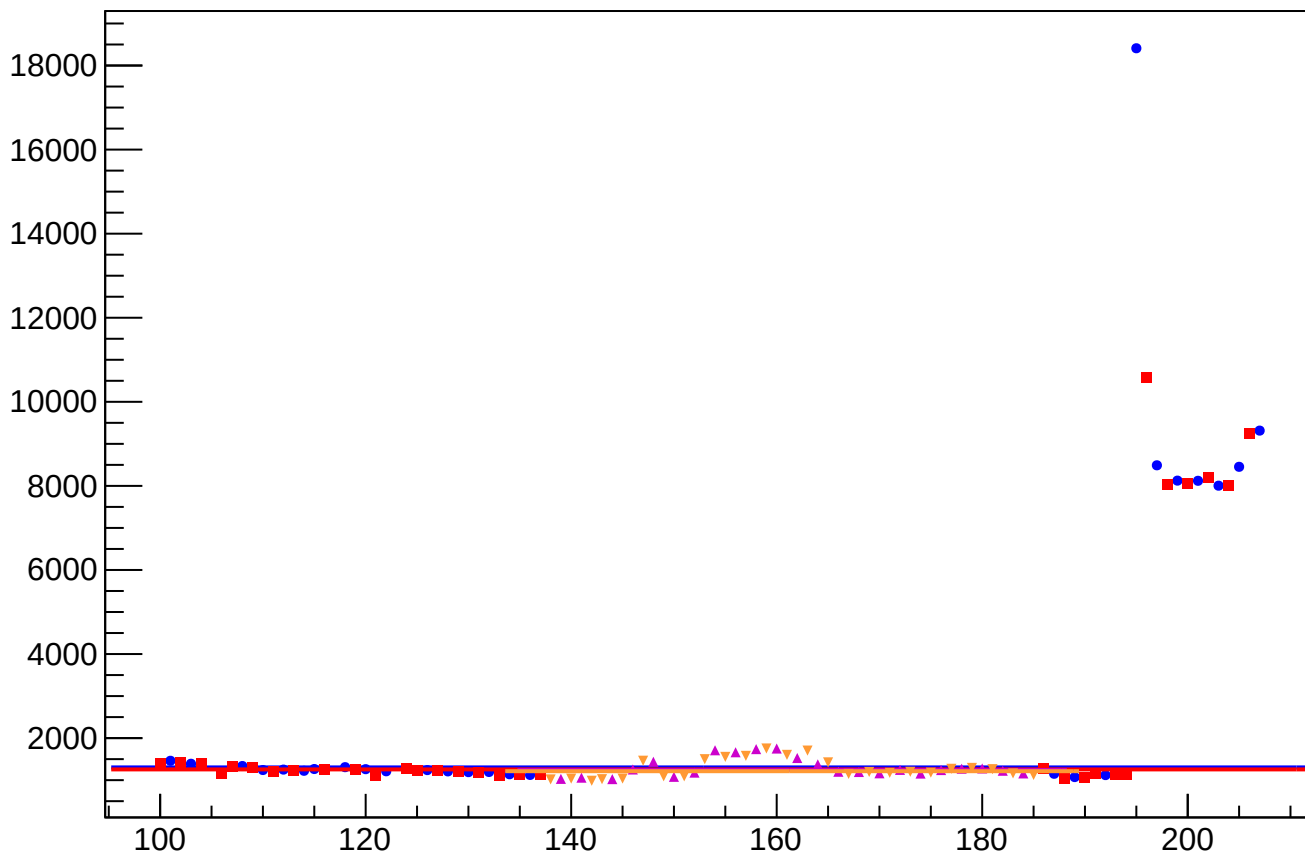
Left In:  $-1.390 \pm 0.294$   $\chi^2/\text{NDF}: 35.5/22$

+ sign  $-1.063 \pm 0.230$   $\chi^2/\text{NDF}: 759.9/50$

All:  $-1.638 \pm 0.162$   $\chi^2/\text{NDF}: 2388.2/104$

- sign  $-2.200 \pm 0.228$   $\chi^2/\text{NDF}: 1616.0/53$

# diff\_bpm0l08Y\_rms vs Slug



Right In: 1303.039+/-0.286  $\chi^2/\text{NDF}$ : 9040370.9/25

Left Out: 1213.262+/-0.198  $\chi^2/\text{NDF}$ : 1012762.9/24

Right Out: 1255.639+/-0.254  $\chi^2/\text{NDF}$ : 7765716.1/30

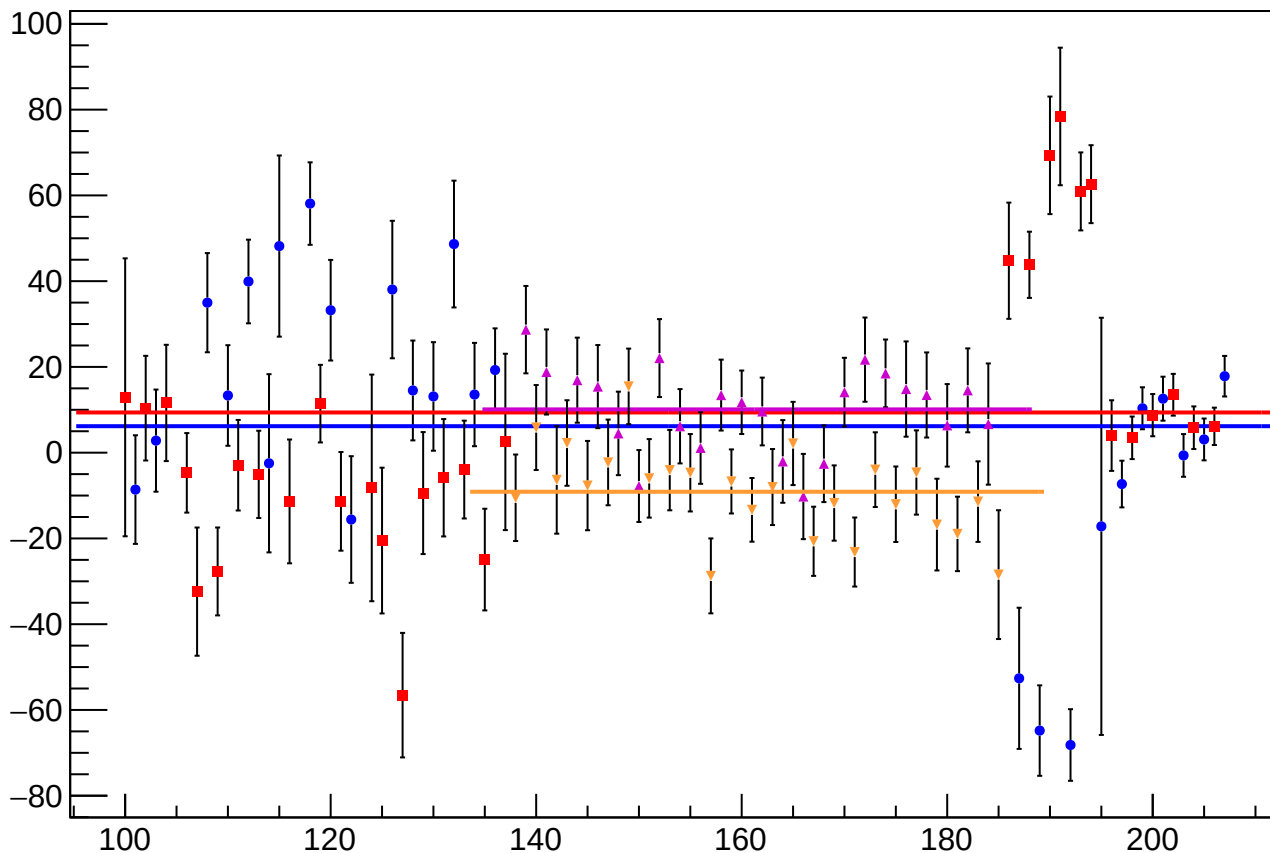
Left In: 1239.174+/-0.208  $\chi^2/\text{NDF}$ : 885596.7/22

+ sign 1242.474+/-0.163  $\chi^2/\text{NDF}$ : 10119784.4/50

All: 1244.147+/-0.115  $\chi^2/\text{NDF}$ : 18773817.4/100

- sign 1245.780+/-0.161  $\chi^2/\text{NDF}$ : 8653824.7/53

# diff\_bpm0l09X\_mean vs Slug



Right In:  $6.176 \pm 1.636$   $\chi^2/\text{NDF}: 230.3/25$

Left Out:  $-9.114 \pm 1.842$   $\chi^2/\text{NDF}: 28.8/24$

Right Out:  $9.377 \pm 1.569$   $\chi^2/\text{NDF}: 203.4/30$

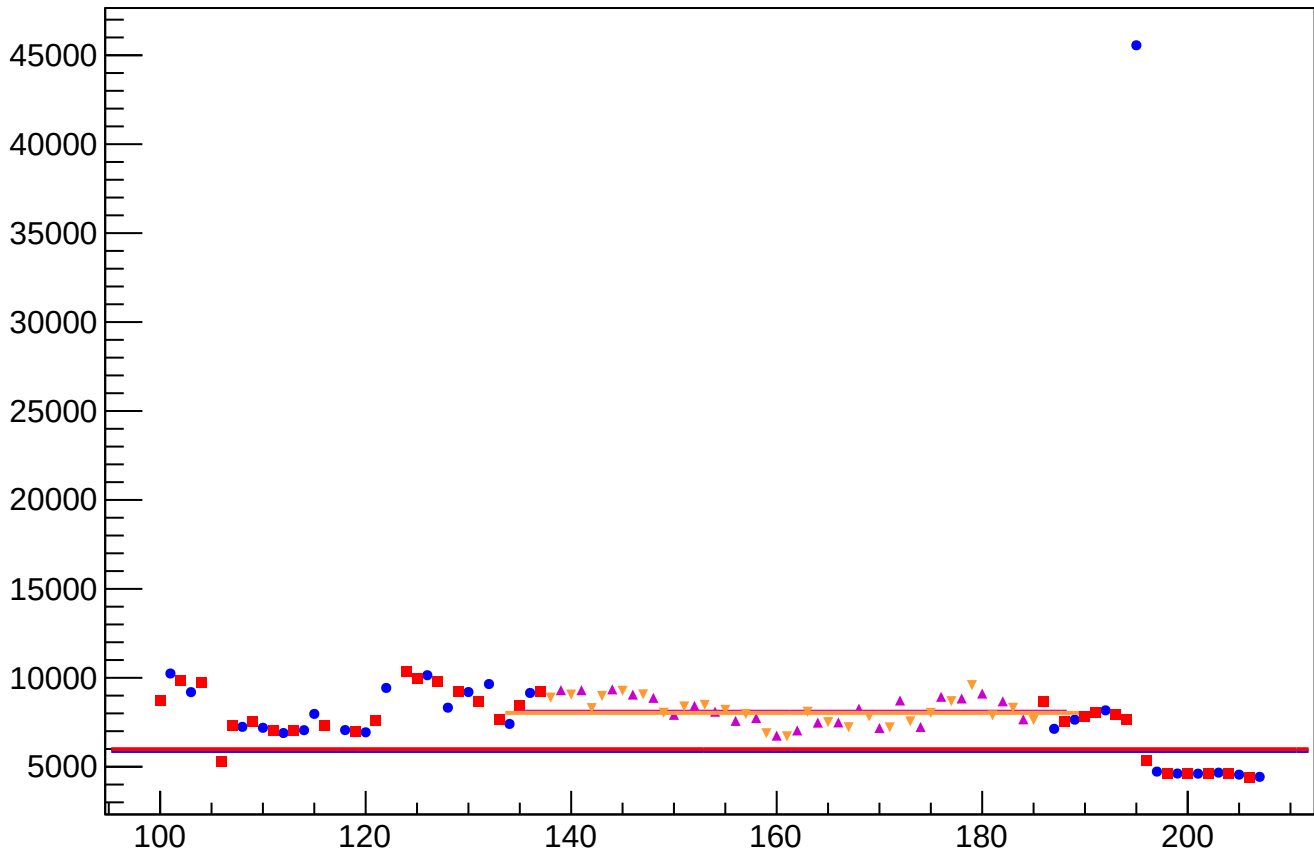
Left In:  $10.095 \pm 1.911$   $\chi^2/\text{NDF}: 24.3/22$

+ sign  $-0.567 \pm 1.224$   $\chi^2/\text{NDF}: 297.5/50$

All:  $4.596 \pm 0.861$   $\chi^2/\text{NDF}: 560.6/104$

- sign  $9.666 \pm 1.213$   $\chi^2/\text{NDF}: 227.8/53$

# diff\_bpm0l09X\_rms vs Slug



Right In: 5890.939+/-1.157  $\chi^2/\text{NDF}$ : 3757358.3/25

Left Out: 8028.056+/-1.303  $\chi^2/\text{NDF}$ : 332457.9/24

Right Out: 5987.285+/-1.109  $\chi^2/\text{NDF}$ : 2519722.4/30

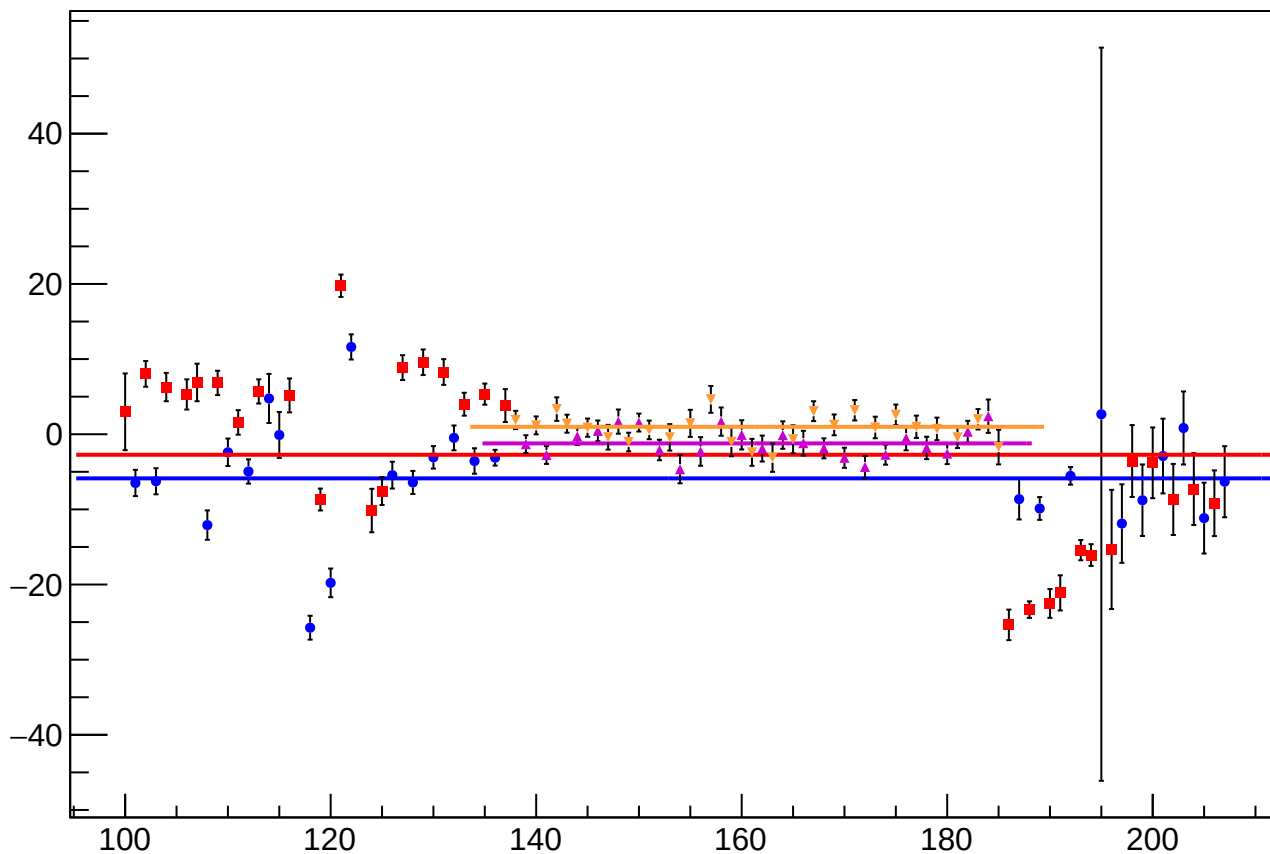
Left In: 8095.368+/-1.351  $\chi^2/\text{NDF}$ : 367451.5/22

+ sign 6833.375+/-0.865  $\chi^2/\text{NDF}$ : 5594048.6/50

All: 6834.547+/-0.609  $\chi^2/\text{NDF}$ : 9935112.4/10

- sign 6835.697+/-0.857  $\chi^2/\text{NDF}$ : 4341060.1/53

# diff\_bpm0l09Y\_mean vs Slug



Right In:  $-5.874 \pm 0.373$   $\chi^2/\text{NDF}$ : 383.9/25

Left Out:  $0.988 \pm 0.292$   $\chi^2/\text{NDF}$ : 31.0/24

Right Out:  $-2.732 \pm 0.338$   $\chi^2/\text{NDF}$ : 1463.5/30

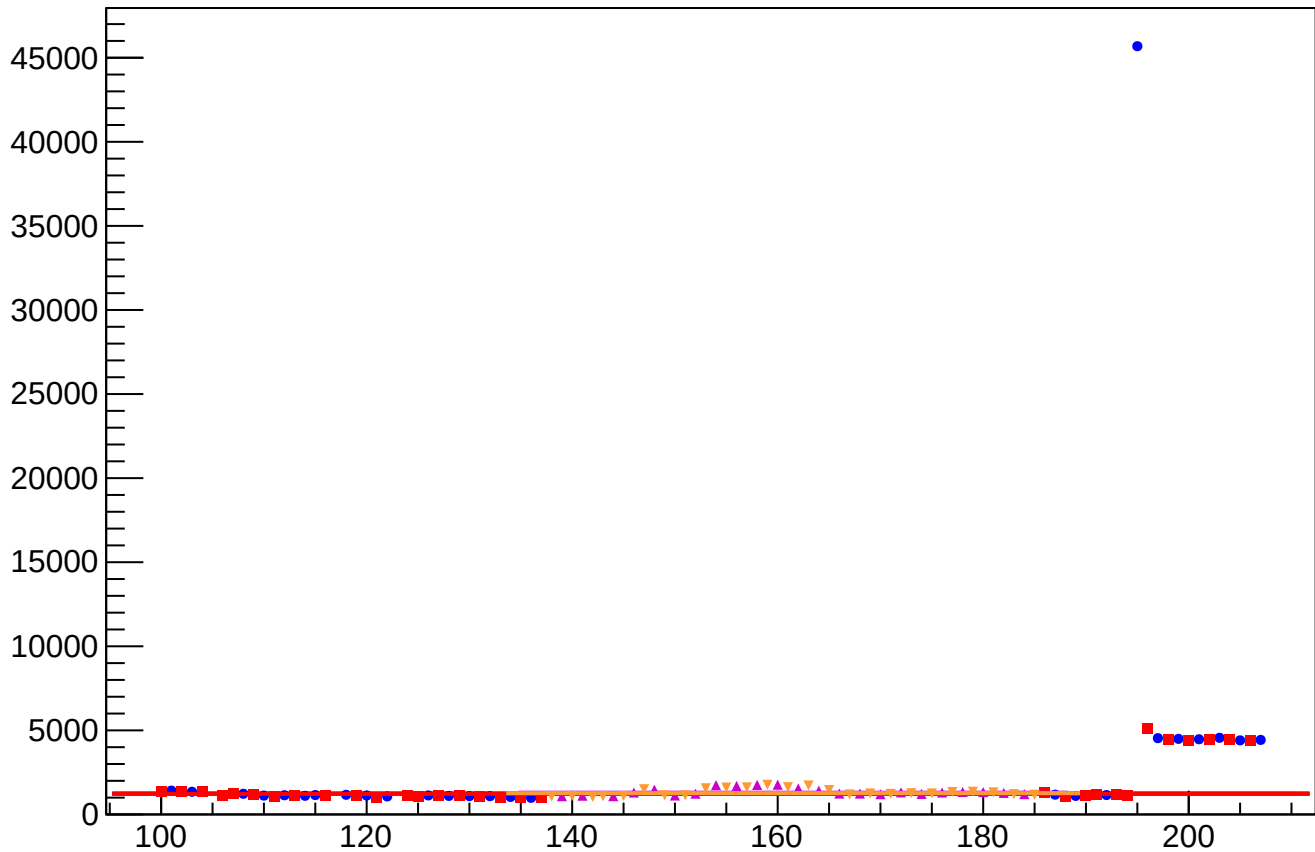
Left In:  $-1.219 \pm 0.307$   $\chi^2/\text{NDF}$ : 33.1/22

+ sign  $-1.626 \pm 0.230$   $\chi^2/\text{NDF}$ : 624.8/50

All:  $-1.765 \pm 0.162$   $\chi^2/\text{NDF}$ : 2133.1/104

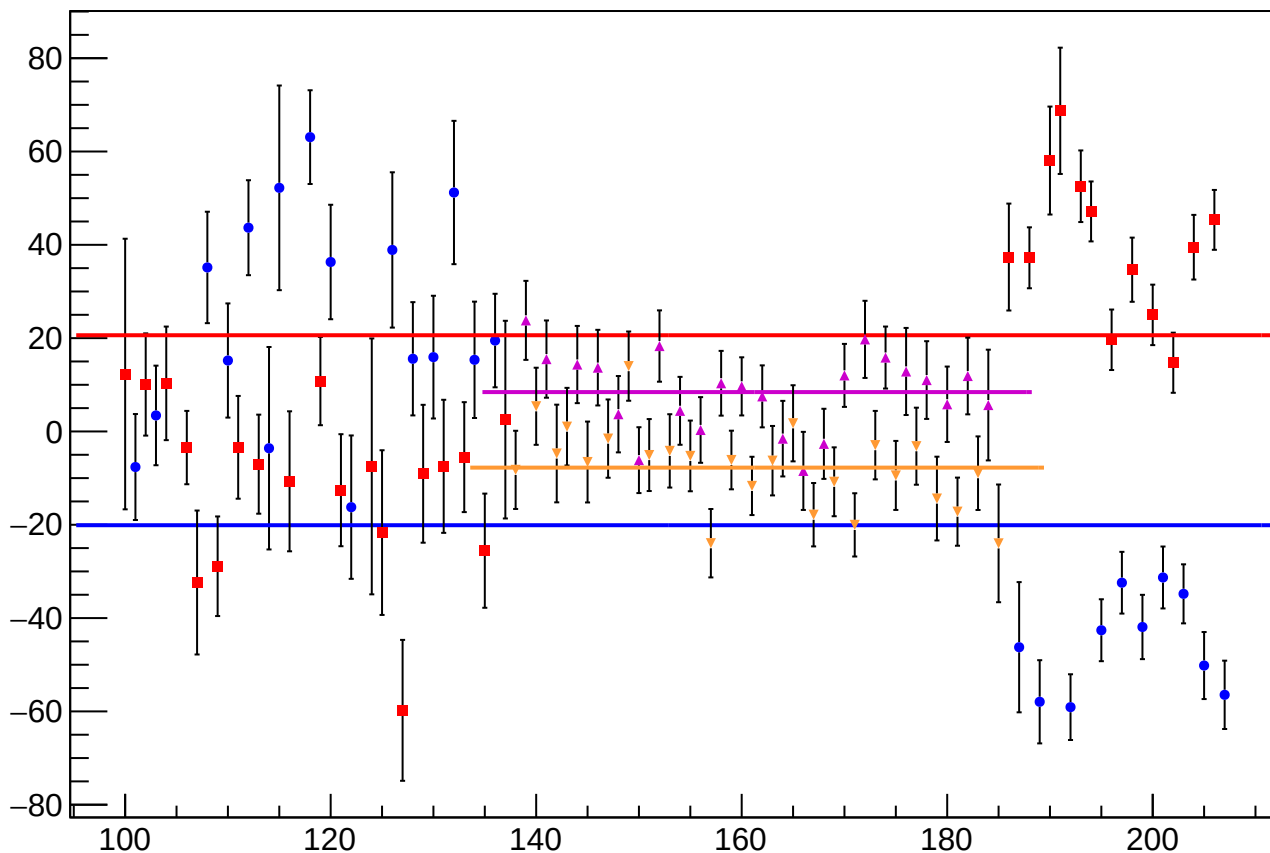
- sign  $-1.901 \pm 0.227$   $\chi^2/\text{NDF}$ : 1507.6/53

# diff\_bpm0l09Y\_rms vs Slug



Right In:  $1250.113 \pm 0.264$   $\chi^2/\text{NDF}: 7294035.8/25$  + sign  $1260.818 \pm 0.163$   $\chi^2/\text{NDF}: 8175133.0/50$   
 Left Out:  $1267.405 \pm 0.207$   $\chi^2/\text{NDF}: 878431.8/24$  All:  $1261.094 \pm 0.114$   $\chi^2/\text{NDF}: 14513257.9/1$   
 Right Out:  $1221.534 \pm 0.239$   $\chi^2/\text{NDF}: 5529426.7/30$  - sign  $1261.363 \pm 0.161$   $\chi^2/\text{NDF}: 6338119.3/53$   
 Left In:  $1294.076 \pm 0.217$   $\chi^2/\text{NDF}: 758193.5/22$

# diff\_bpm0l10X\_mean vs Slug



Right In:  $-20.096 \pm 1.851$   $\chi^2/\text{NDF}$ : 377.8/25

Left Out:  $-7.752 \pm 1.547$   $\chi^2/\text{NDF}$ : 30.4/24

Right Out:  $20.621 \pm 1.708$   $\chi^2/\text{NDF}$ : 225.8/30

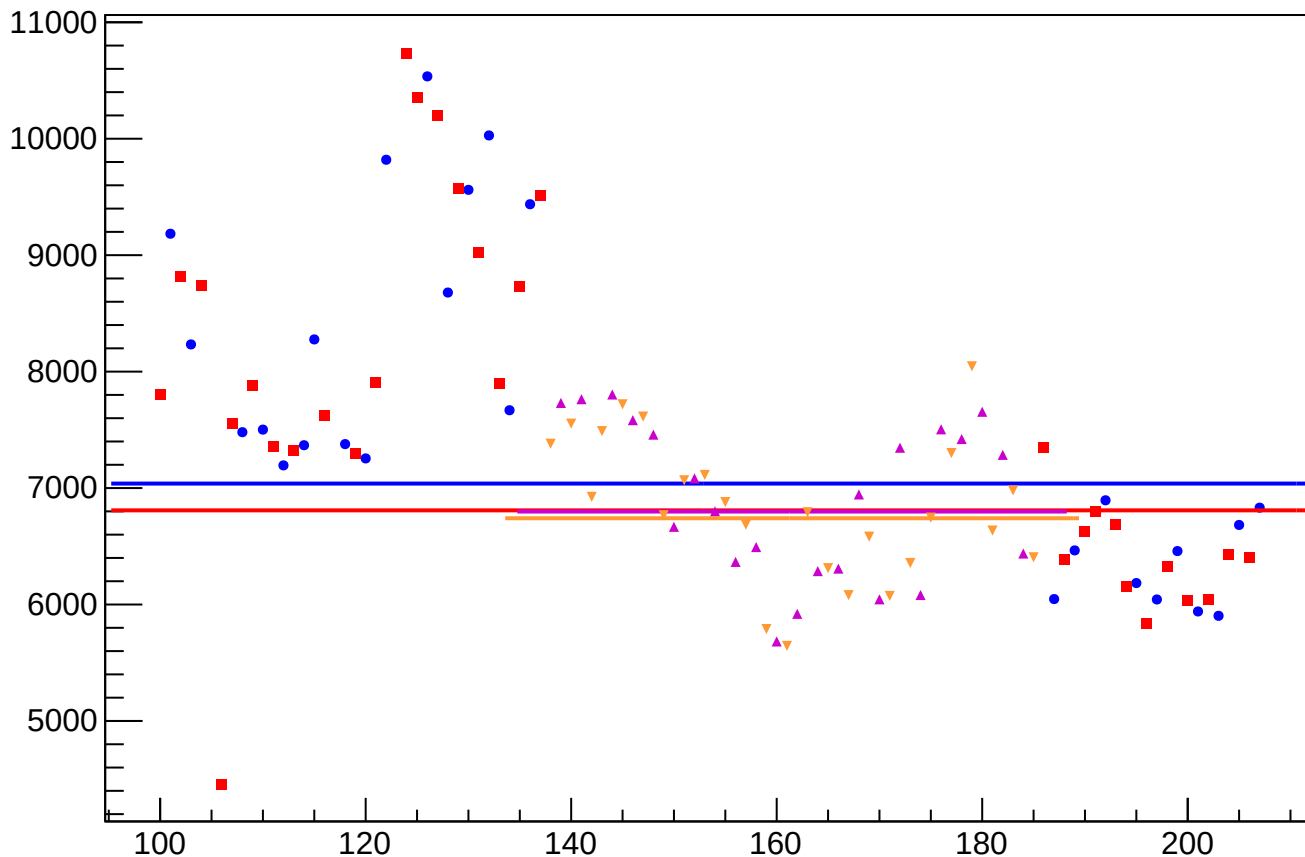
Left In:  $8.438 \pm 1.605$   $\chi^2/\text{NDF}$ : 24.8/22

+ sign  $-12.827 \pm 1.187$   $\chi^2/\text{NDF}$ : 434.4/50

All:  $0.861 \pm 0.833$   $\chi^2/\text{NDF}$ : 974.2/104

- sign  $14.150 \pm 1.169$   $\chi^2/\text{NDF}$ : 277.7/53

# diff\_bpm0l10X\_rms vs Slug



Right In: 7038.676+/-1.309  $\chi^2/\text{NDF}$ : 809053.8/25

Left Out: 6740.835+/-1.094  $\chi^2/\text{NDF}$ : 316707.6/24

Right Out: 6808.615+/-1.208  $\chi^2/\text{NDF}$ : 961209.9/30

Left In: 6798.524+/-1.135  $\chi^2/\text{NDF}$ : 353277.6/22

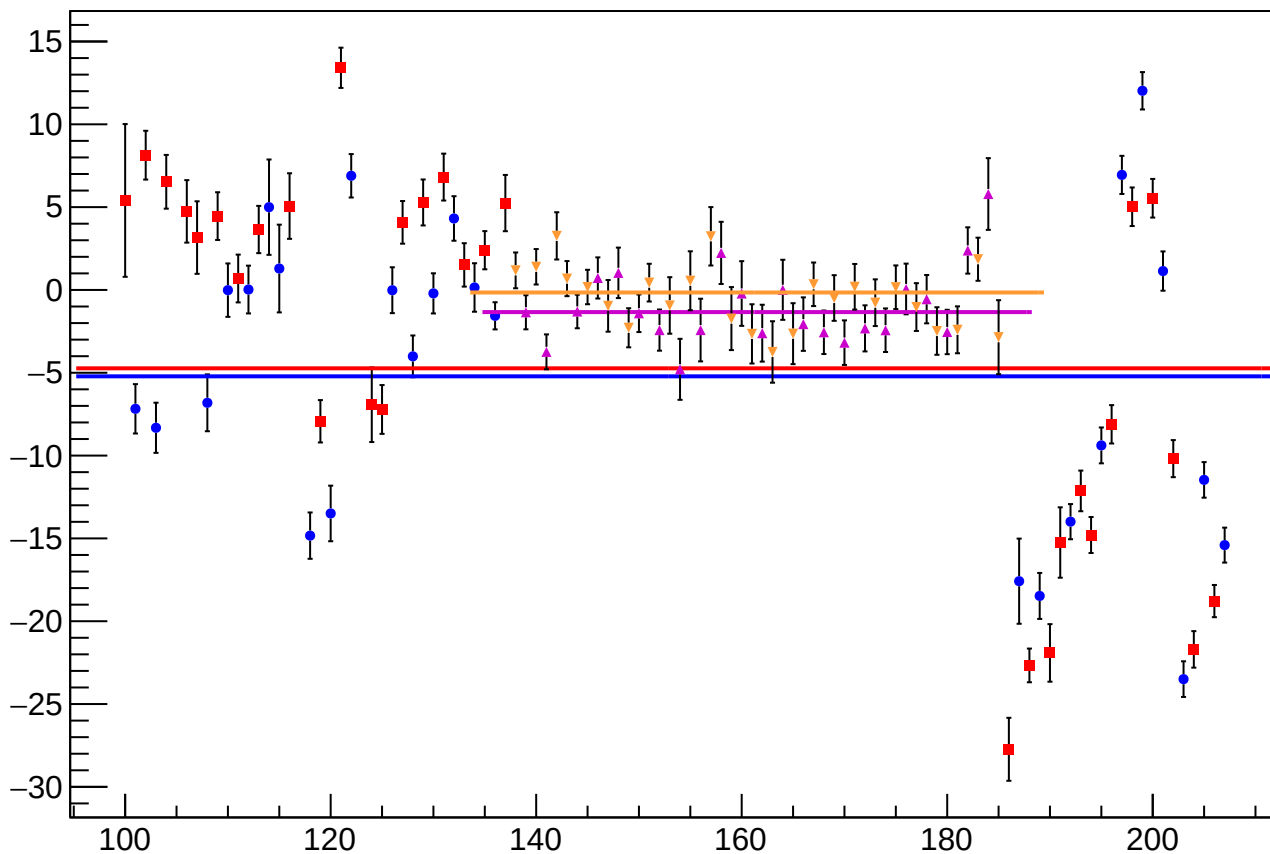
+ sign 6863.284+/-0.839  $\chi^2/\text{NDF}$ : 1156255.0/50

All: 6832.826+/-0.589  $\chi^2/\text{NDF}$ : 2473375.6/100

- sign 6803.255+/-0.827  $\chi^2/\text{NDF}$ : 1314524.6/53



# diff\_bpm0l10Y\_mean vs Slug



Right In:  $-5.216 \pm 0.255$   $\chi^2/\text{NDF}$ : 1308.7/25

Left Out:  $-0.152 \pm 0.277$   $\chi^2/\text{NDF}$ : 36.1/24

Right Out:  $-4.732 \pm 0.246$   $\chi^2/\text{NDF}$ : 2102.8/30

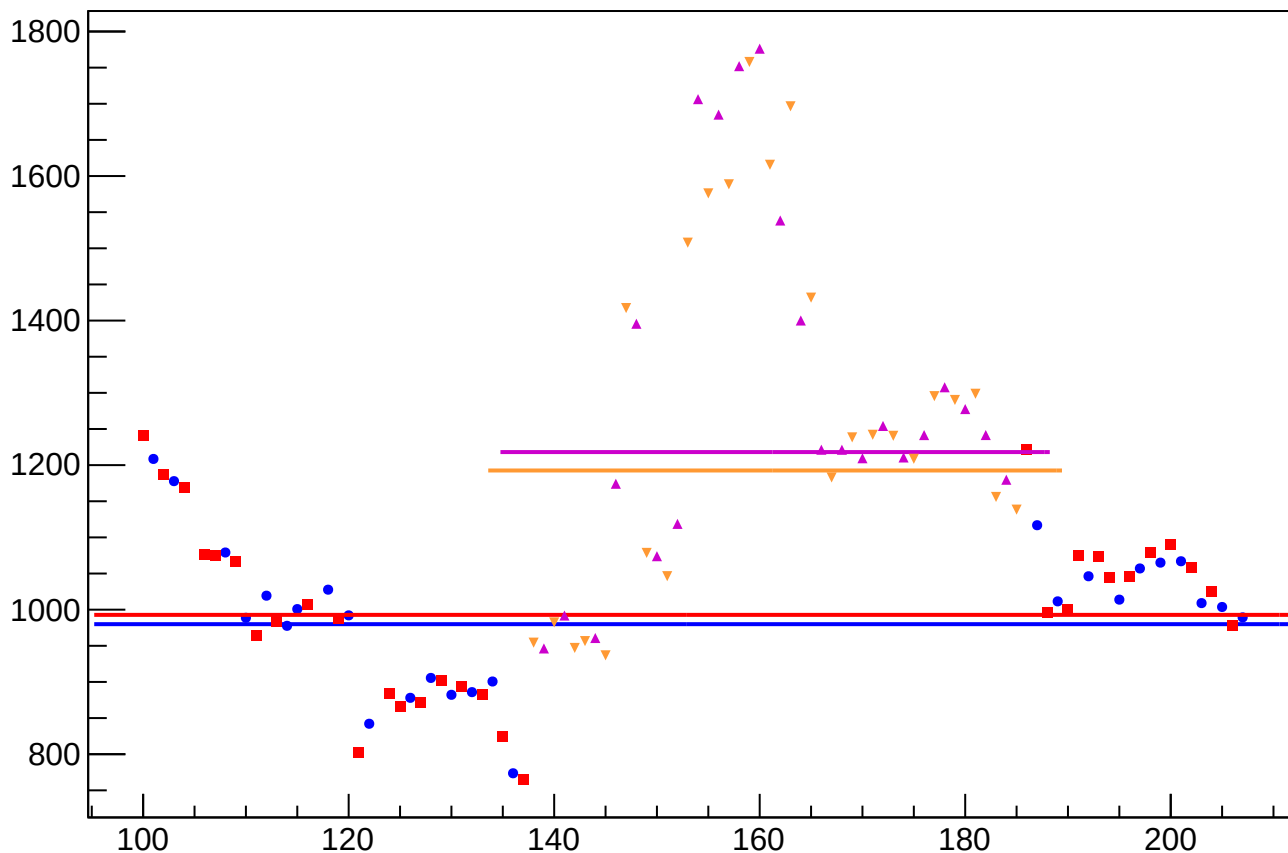
Left In:  $-1.337 \pm 0.290$   $\chi^2/\text{NDF}$ : 44.0/22

+ sign  $-2.895 \pm 0.187$   $\chi^2/\text{NDF}$ : 1526.1/50

All:  $-3.104 \pm 0.133$   $\chi^2/\text{NDF}$ : 3755.1/104

- sign  $-3.313 \pm 0.188$   $\chi^2/\text{NDF}$ : 2226.5/53

# diff\_bpm0l10Y\_rms vs Slug



Right In: 979.934 $\pm$ 0.180  $\chi^2$ /NDF: 337498.1/25

Left Out: 1192.579 $\pm$ 0.196  $\chi^2$ /NDF:1320181.3/24

Right Out: 992.801 $\pm$ 0.174  $\chi^2$ /NDF: 358783.7/30

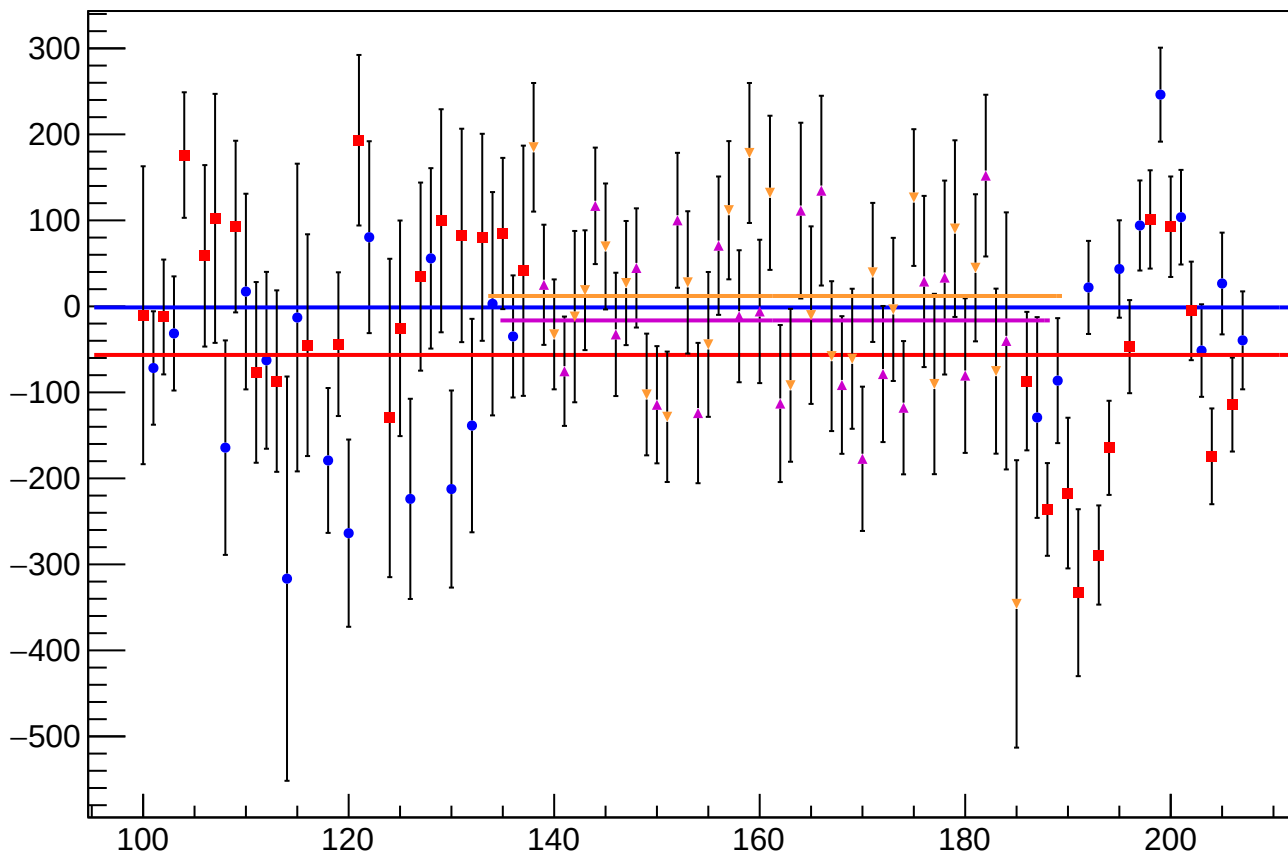
Left In: 1218.058 $\pm$ 0.205  $\chi^2$ /NDF:1127896.8/22

+ sign 1077.407 $\pm$ 0.132  $\chi^2$ /NDF: 2297409.6/50

All: 1082.173 $\pm$ 0.094  $\chi^2$ /NDF: 4488247.8/10

- sign 1086.952 $\pm$ 0.133  $\chi^2$ /NDF: 2188246.0/53

# diff\_bpm0r03X\_mean vs Slug



Right In:  $-1.205 \pm 14.911$   $\chi^2/\text{NDF}$ : 57.2/25

Left Out:  $12.081 \pm 16.608$   $\chi^2/\text{NDF}$ : 32.8/24

Right Out:  $-56.462 \pm 14.160$   $\chi^2/\text{NDF}$ : 93.1/30

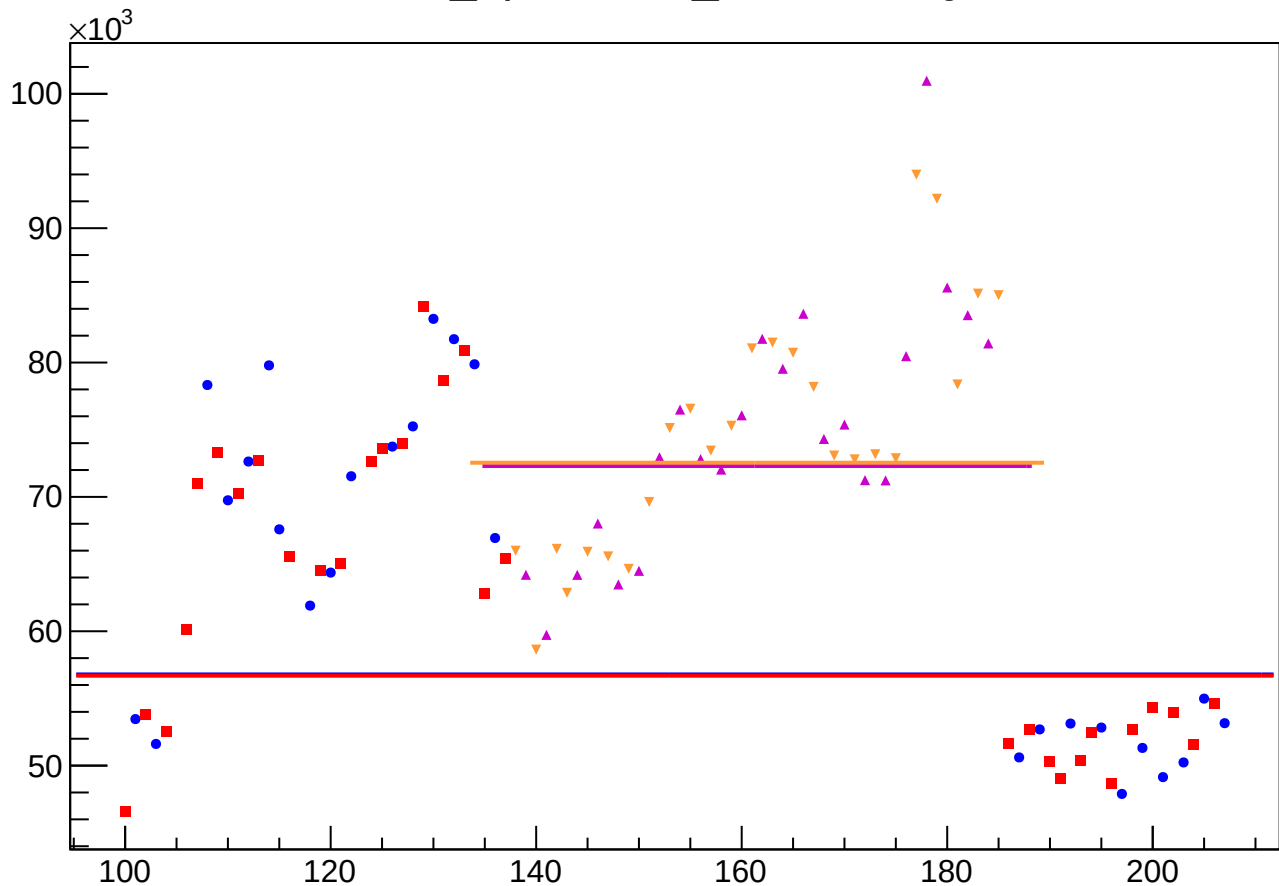
Left In:  $-16.339 \pm 17.018$   $\chi^2/\text{NDF}$ : 28.7/22

+ sign  $4.725 \pm 11.095$   $\chi^2/\text{NDF}$ : 90.4/50

All:  $-18.090 \pm 7.770$   $\chi^2/\text{NDF}$ : 223.8/104

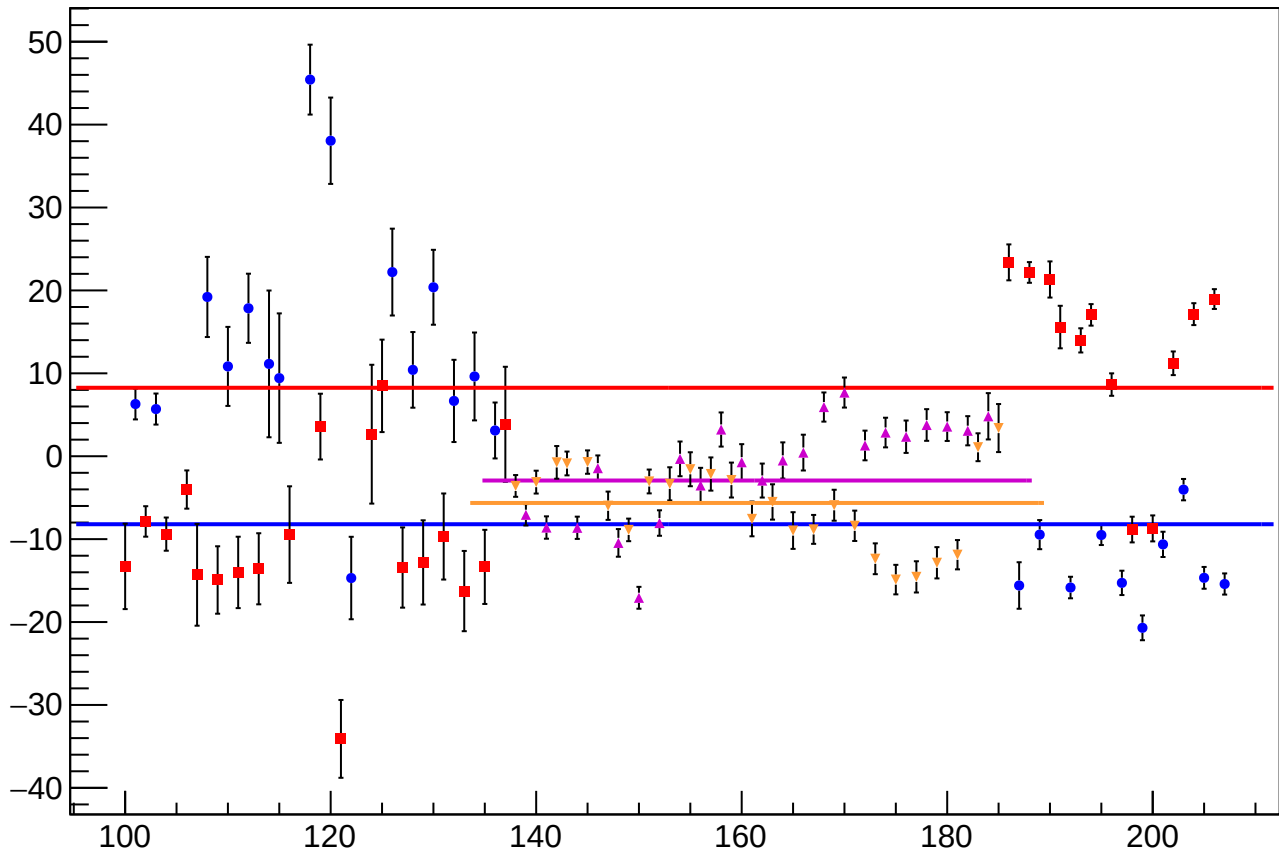
- sign  $-40.048 \pm 10.885$   $\chi^2/\text{NDF}$ : 125.1/53

# diff\_bpm0r03X\_rms vs Slug



Right In:  $56784.522 \pm 10.544$   $\chi^2/\text{NDF}: 811764.4/25$  + sign  $63818.510 \pm 7.846$   $\chi^2/\text{NDF}: 2308970.8/50$   
 Left Out:  $72544.327 \pm 11.744$   $\chi^2/\text{NDF}: 500066.2/24$  All:  $63441.336 \pm 5.494$   $\chi^2/\text{NDF}: 4521555.7/53$   
 Right Out:  $56693.615 \pm 10.012$   $\chi^2/\text{NDF}: 725283.4/30$  - sign  $63078.351 \pm 7.697$   $\chi^2/\text{NDF}: 2208049.5/53$   
 Left In:  $72300.590 \pm 12.033$   $\chi^2/\text{NDF}: 488780.3/22$

# diff\_bpm0r03Y\_mean vs Slug



Right In:  $-8.202 \pm 0.407$   $\chi^2/\text{NDF}$ : 782.6/25

Left Out:  $-5.636 \pm 0.349$   $\chi^2/\text{NDF}$ : 178.2/24

Right Out:  $8.257 \pm 0.384$   $\chi^2/\text{NDF}$ : 1137.3/30

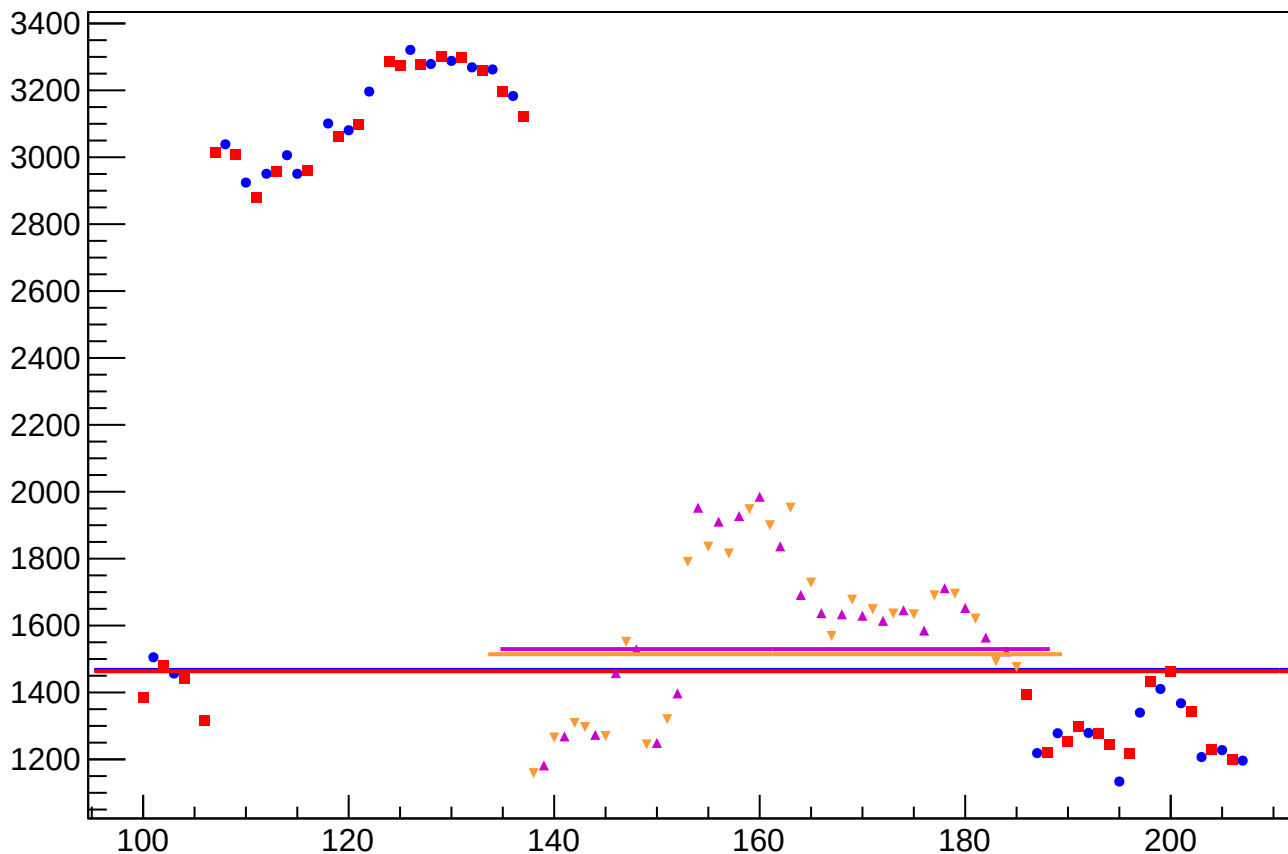
Left In:  $-2.929 \pm 0.362$   $\chi^2/\text{NDF}$ : 337.4/22

+ sign  $-6.724 \pm 0.265$   $\chi^2/\text{NDF}$ : 983.7/50

All:  $-2.162 \pm 0.187$   $\chi^2/\text{NDF}$ : 3497.4/104

- sign  $2.346 \pm 0.263$   $\chi^2/\text{NDF}$ : 1924.3/53

# diff\_bpm0r03Y\_rms vs Slug



Right In: 1467.415+/-0.288  $\chi^2/\text{NDF}$ : 3917527.6/25

Left Out: 1514.334+/-0.247  $\chi^2/\text{NDF}$ : 933332.1/24

Right Out: 1463.371+/-0.271  $\chi^2/\text{NDF}$ : 3807383.9/30

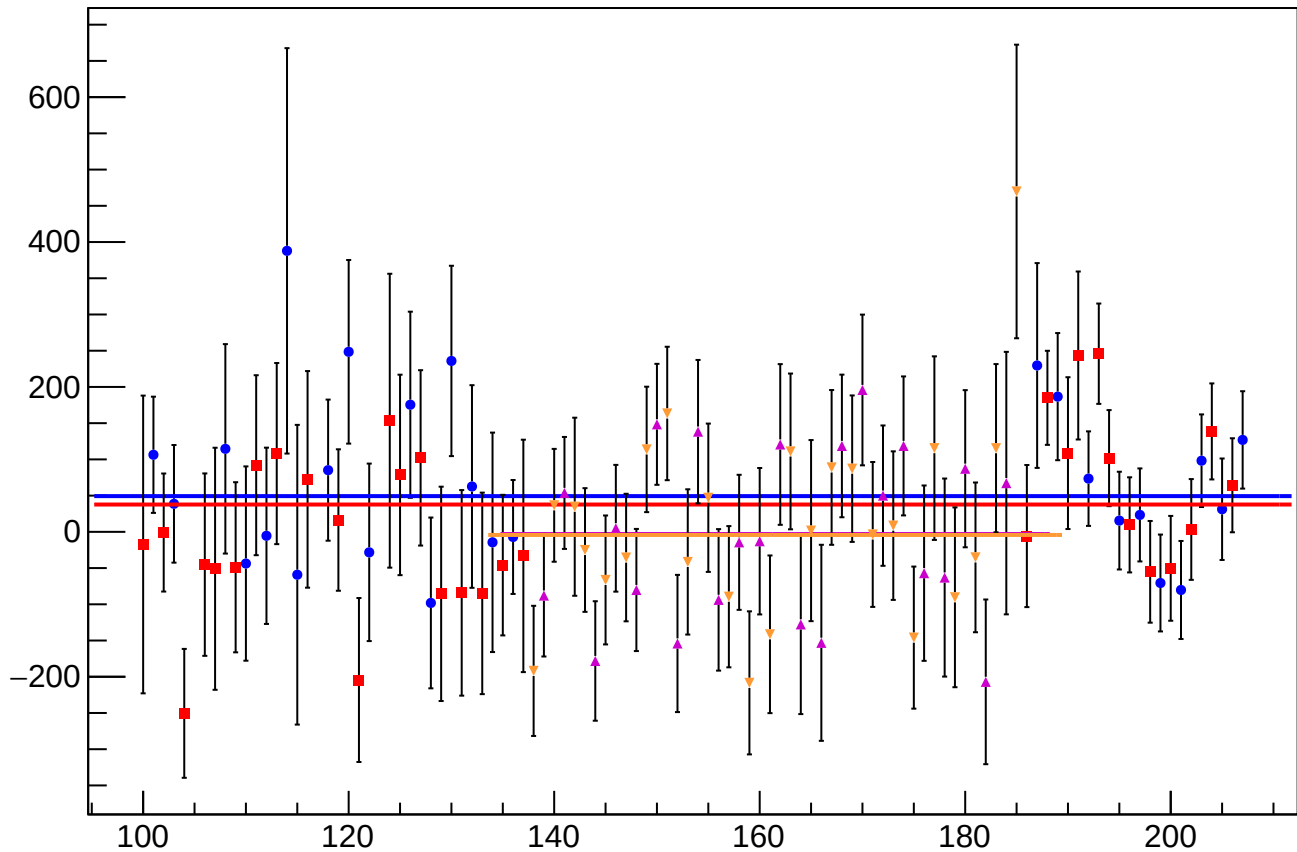
Left In: 1529.635+/-0.256  $\chi^2/\text{NDF}$ : 828481.7/22

+ sign 1494.444+/-0.187  $\chi^2/\text{NDF}$ : 4866180.4/50

All: 1496.429+/-0.132  $\chi^2/\text{NDF}$ : 9533819.1/10

- sign 1498.391+/-0.186  $\chi^2/\text{NDF}$ : 4667415.5/53

# diff\_bpm0r05X\_mean vs Slug



Right In: 49.322+/-17.717     $\chi^2/\text{NDF}$ : 24.9/25

Left Out: -4.274+/-20.240     $\chi^2/\text{NDF}$ :30.4/24

Right Out: 37.703+/-16.886     $\chi^2/\text{NDF}$ : 46.2/30

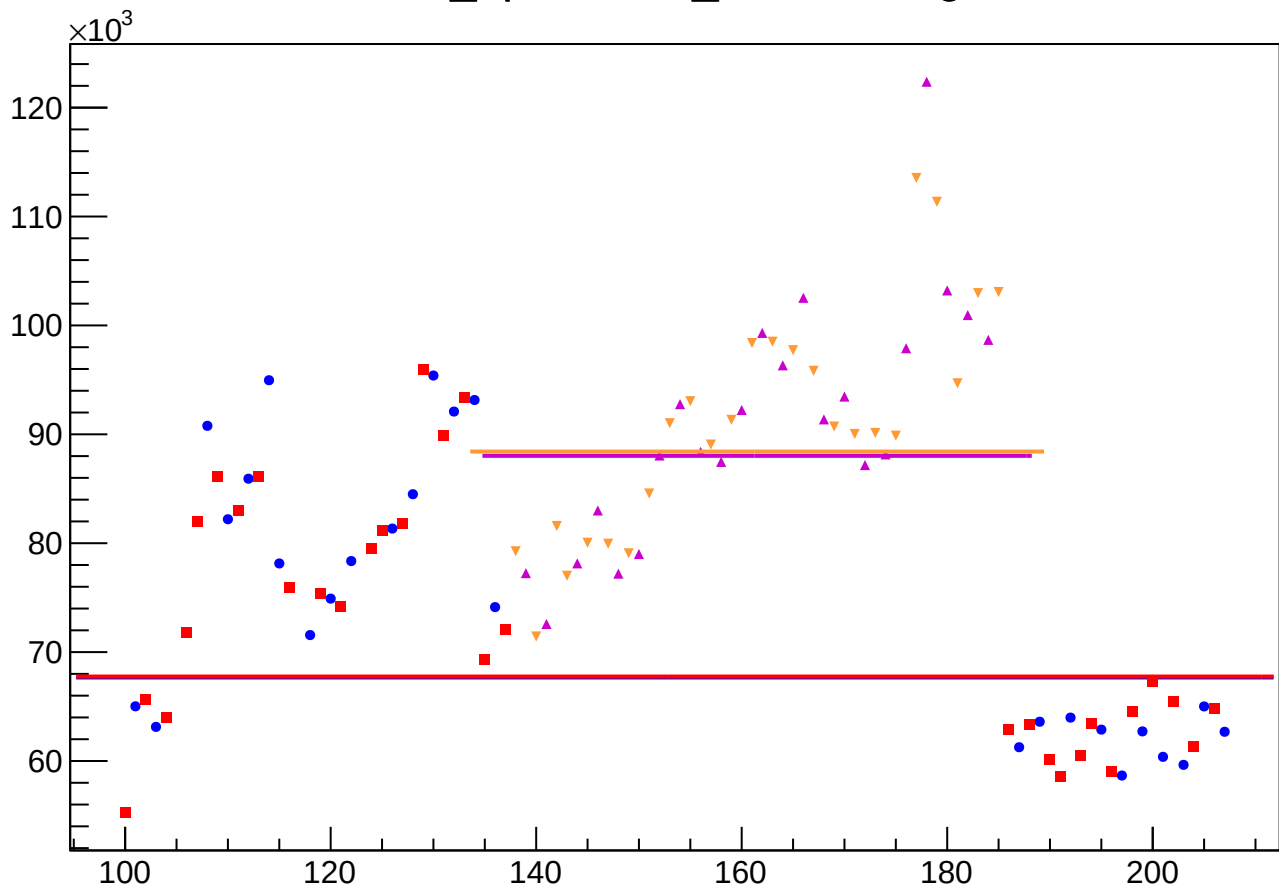
Left In: -3.017+/-20.720     $\chi^2/\text{NDF}$ :30.7/22

+ sign 26.071+/-13.331     $\chi^2/\text{NDF}$ : 59.3/50

All: 23.719+/-9.340     $\chi^2/\text{NDF}$ : 138.6/104

- sign 21.452+/-13.090     $\chi^2/\text{NDF}$ : 79.2/53

# diff\_bpm0r05X\_rms vs Slug

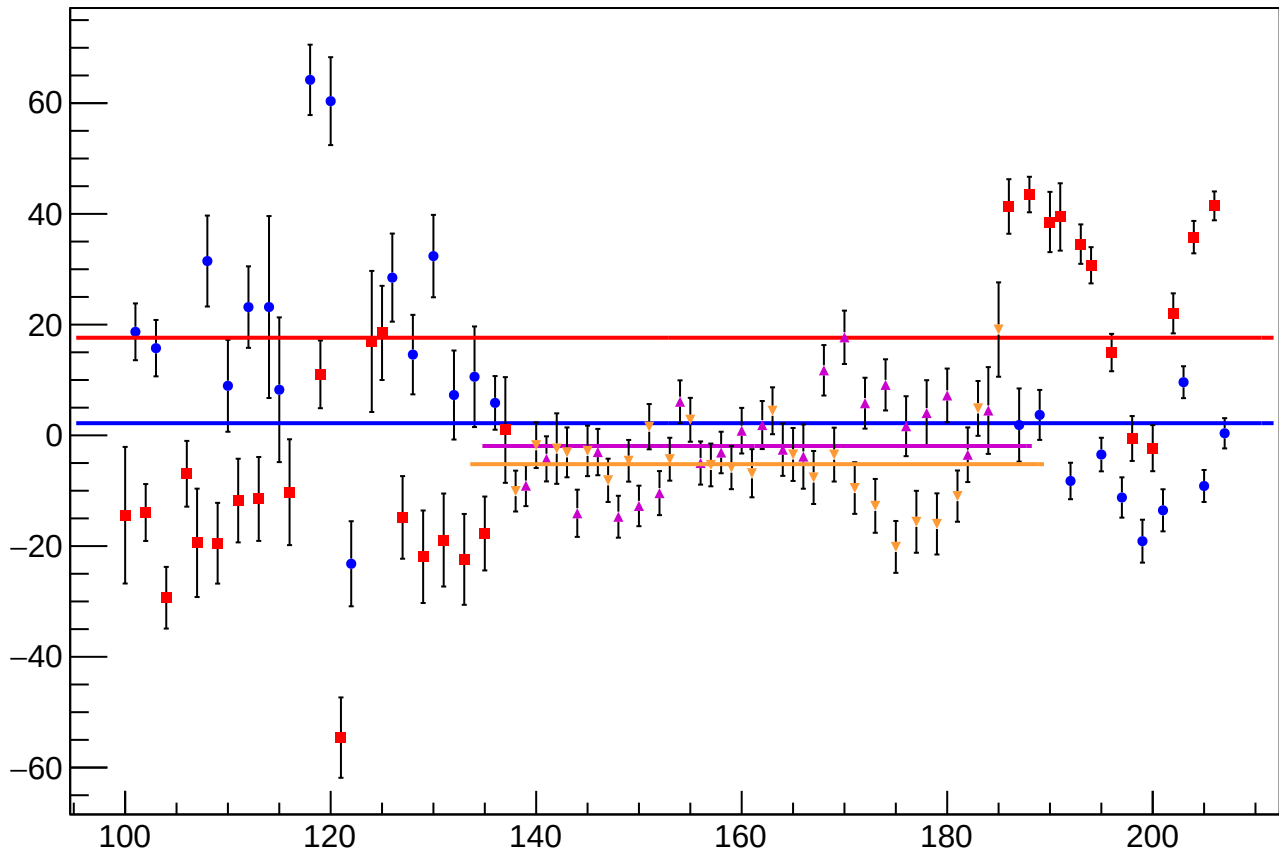


Right In: 67671.905 $\pm$ 12.528  $\chi^2$ /NDF: 604708.8/25  
 Left Out: 88417.953 $\pm$ 14.312  $\chi^2$ /NDF:481954.0/24  
 Right Out: 67757.138 $\pm$ 11.940  $\chi^2$ /NDF: 552025.6/30  
 Left In: 88023.592 $\pm$ 14.651  $\chi^2$ /NDF:484812.2/22

+ sign 76672.117 $\pm$ 9.427  $\chi^2$ /NDF: 2276338.7/50  
 All: 76251.276 $\pm$ 6.604  $\chi^2$ /NDF: 4466871.2/50  
 - sign 75845.547 $\pm$ 9.256  $\chi^2$ /NDF: 2186617.9/53



# diff\_bpm0r05Y\_mean vs Slug



Right In:  $2.199 \pm 0.923$   $\chi^2/\text{NDF}$ : 329.7/25

Left Out:  $-5.206 \pm 0.894$   $\chi^2/\text{NDF}$ : 51.0/24

Right Out:  $17.631 \pm 0.891$   $\chi^2/\text{NDF}$ : 748.1/30

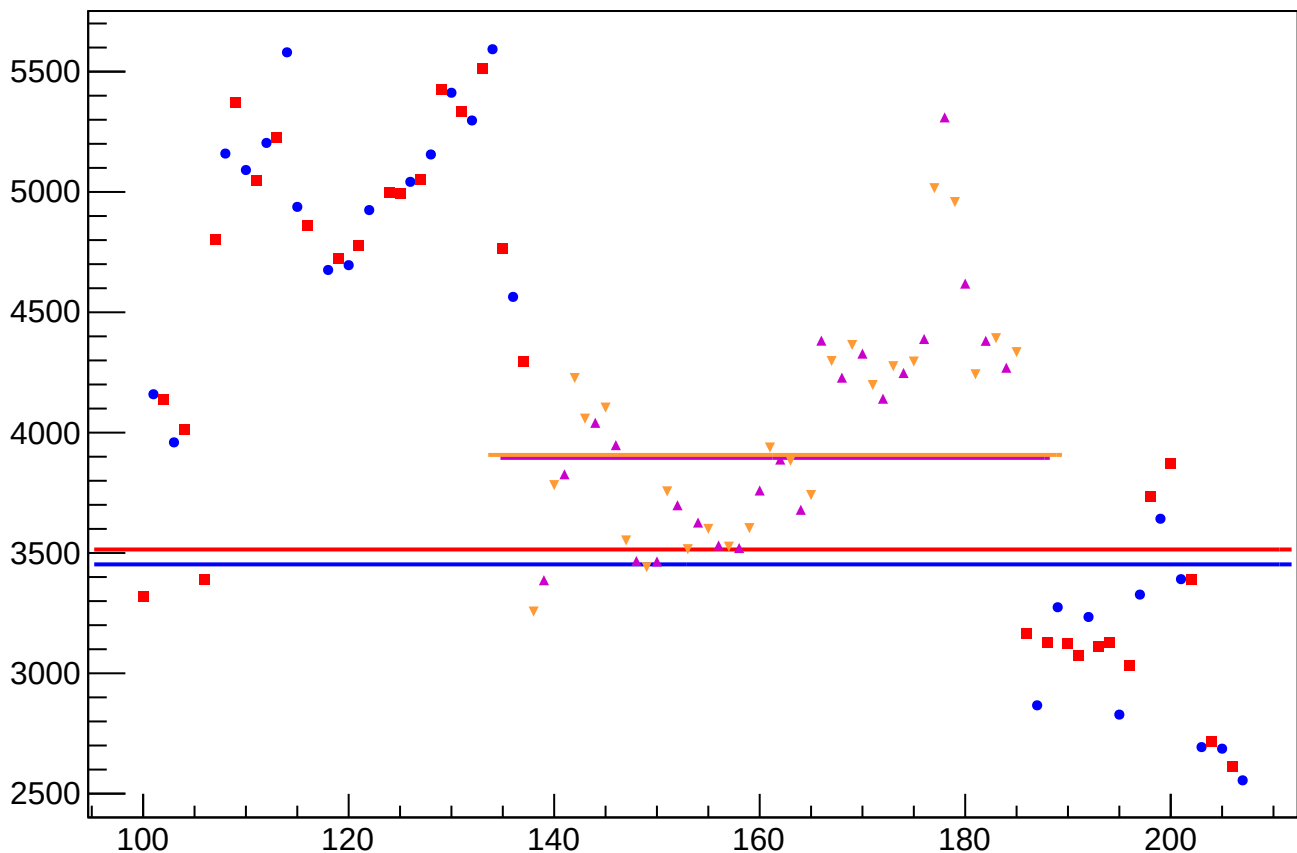
Left In:  $-1.924 \pm 0.916$   $\chi^2/\text{NDF}$ : 83.2/22

+ sign  $-1.623 \pm 0.642$   $\chi^2/\text{NDF}$ : 413.9/50

All:  $3.275 \pm 0.453$   $\chi^2/\text{NDF}$ : 1595.1/104

- sign  $8.123 \pm 0.639$   $\chi^2/\text{NDF}$ : 1065.4/53

# diff\_bpm0r05Y\_rms vs Slug



Right In: 3452.567 $\pm$ 0.653  $\chi^2$ /NDF: 1858872.9/25

Left Out: 3907.465 $\pm$ 0.632  $\chi^2$ /NDF: 441202.5/24

Right Out: 3514.463 $\pm$ 0.630  $\chi^2$ /NDF: 1711089.5/30

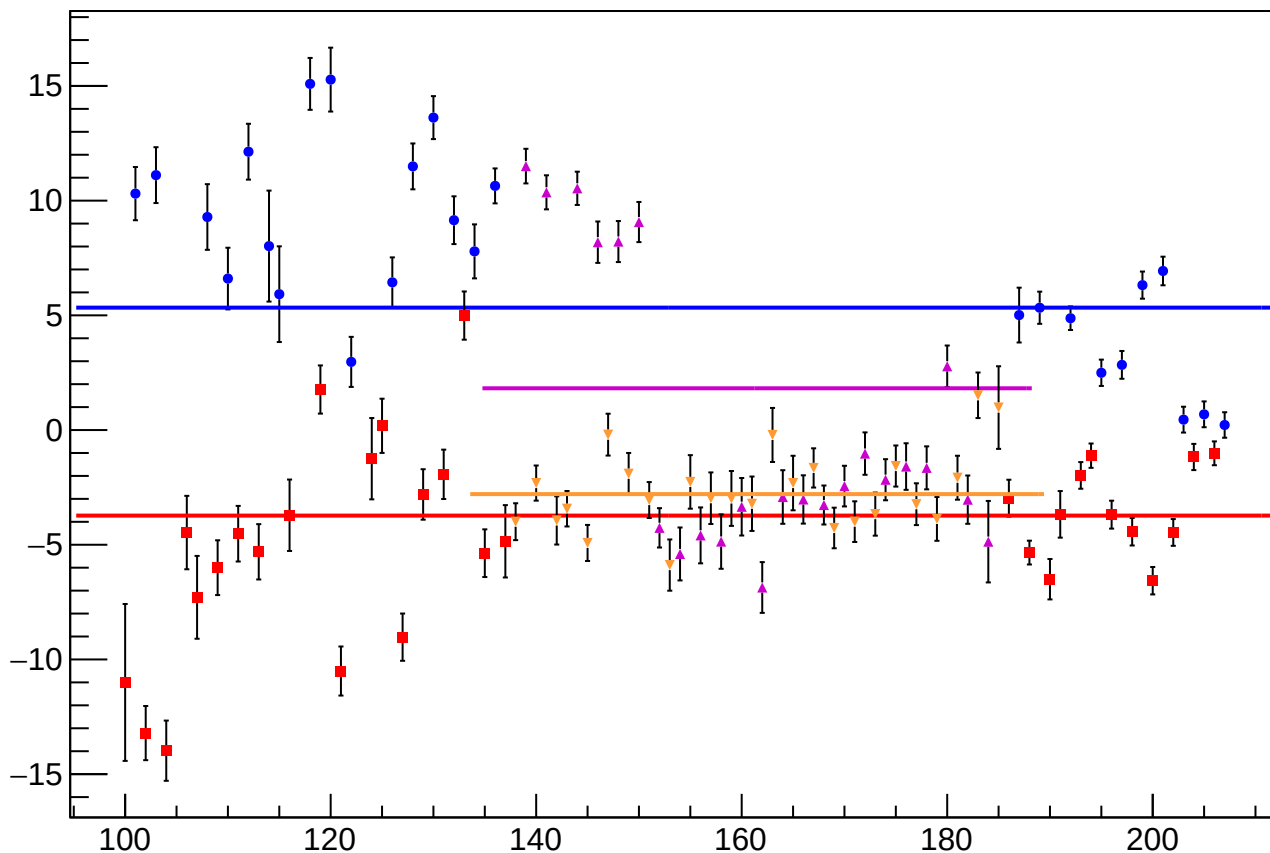
Left In: 3895.108 $\pm$ 0.648  $\chi^2$ /NDF: 409913.9/22

+ sign 3687.347 $\pm$ 0.454  $\chi^2$ /NDF: 2550730.1/50

All: 3693.475 $\pm$ 0.320  $\chi^2$ /NDF: 4849430.7/10

- sign 3699.541 $\pm$ 0.452  $\chi^2$ /NDF: 2298338.1/53

# diff\_bpm2i01X\_mean vs Slug



Right In:  $5.336 \pm 0.160$   $\chi^2/\text{NDF}$ : 675.0/25

Left Out:  $-2.792 \pm 0.190$   $\chi^2/\text{NDF}$ : 68.4/24

Right Out:  $-3.729 \pm 0.150$   $\chi^2/\text{NDF}$ : 448.8/30

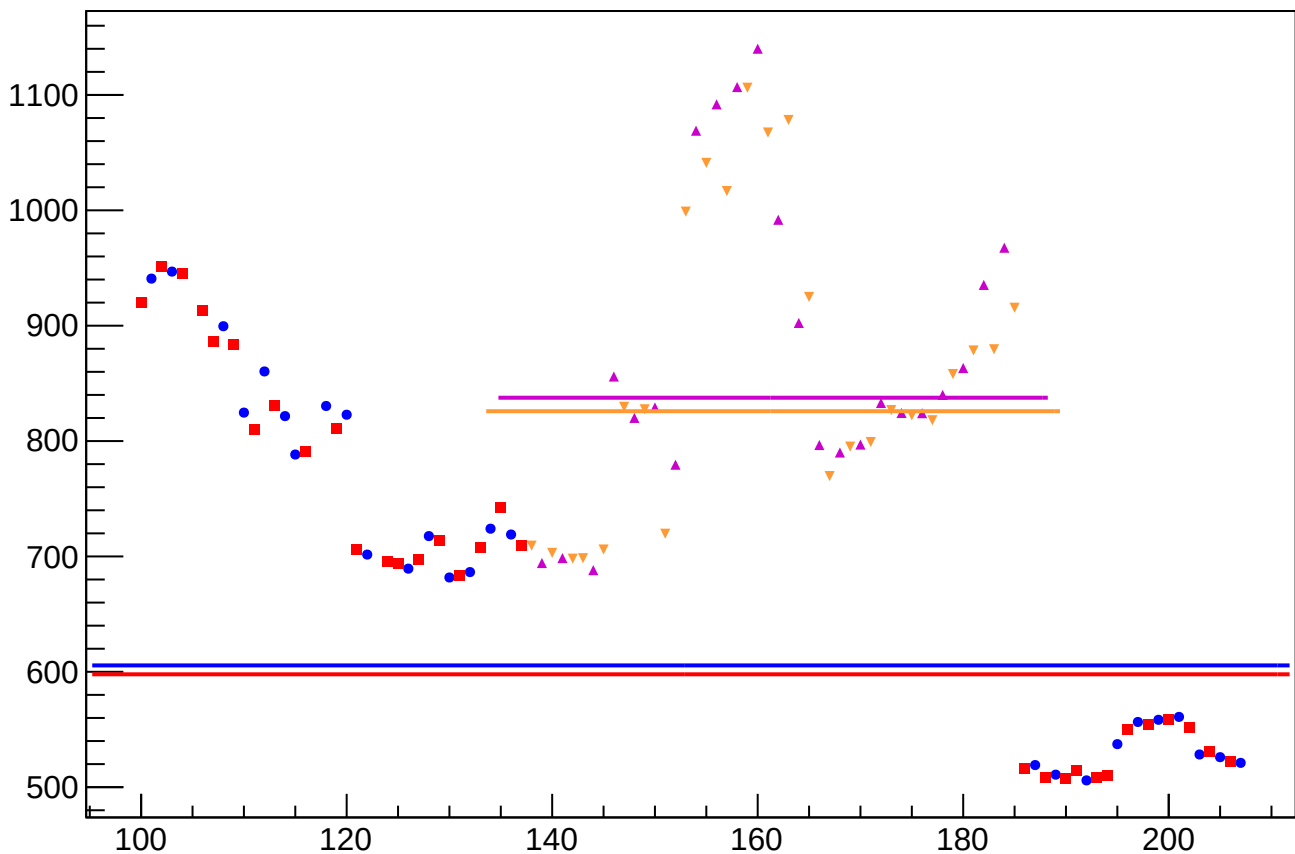
Left In:  $1.820 \pm 0.198$   $\chi^2/\text{NDF}$ : 1026.0/22

+ sign  $1.977 \pm 0.122$   $\chi^2/\text{NDF}$ : 1816.5/50

All:  $0.099 \pm 0.086$   $\chi^2/\text{NDF}$ : 4251.8/104

- sign  $-1.703 \pm 0.120$   $\chi^2/\text{NDF}$ : 1972.7/53

# diff\_bpm2i01X\_rms vs Slug



Right In:  $605.544 \pm 0.113$   $\chi^2/\text{NDF}$ : 1161383.3/25

Left Out:  $825.883 \pm 0.134$   $\chi^2/\text{NDF}$ : 765050.9/24

Right Out:  $597.838 \pm 0.106$   $\chi^2/\text{NDF}$ : 1324602.3/30

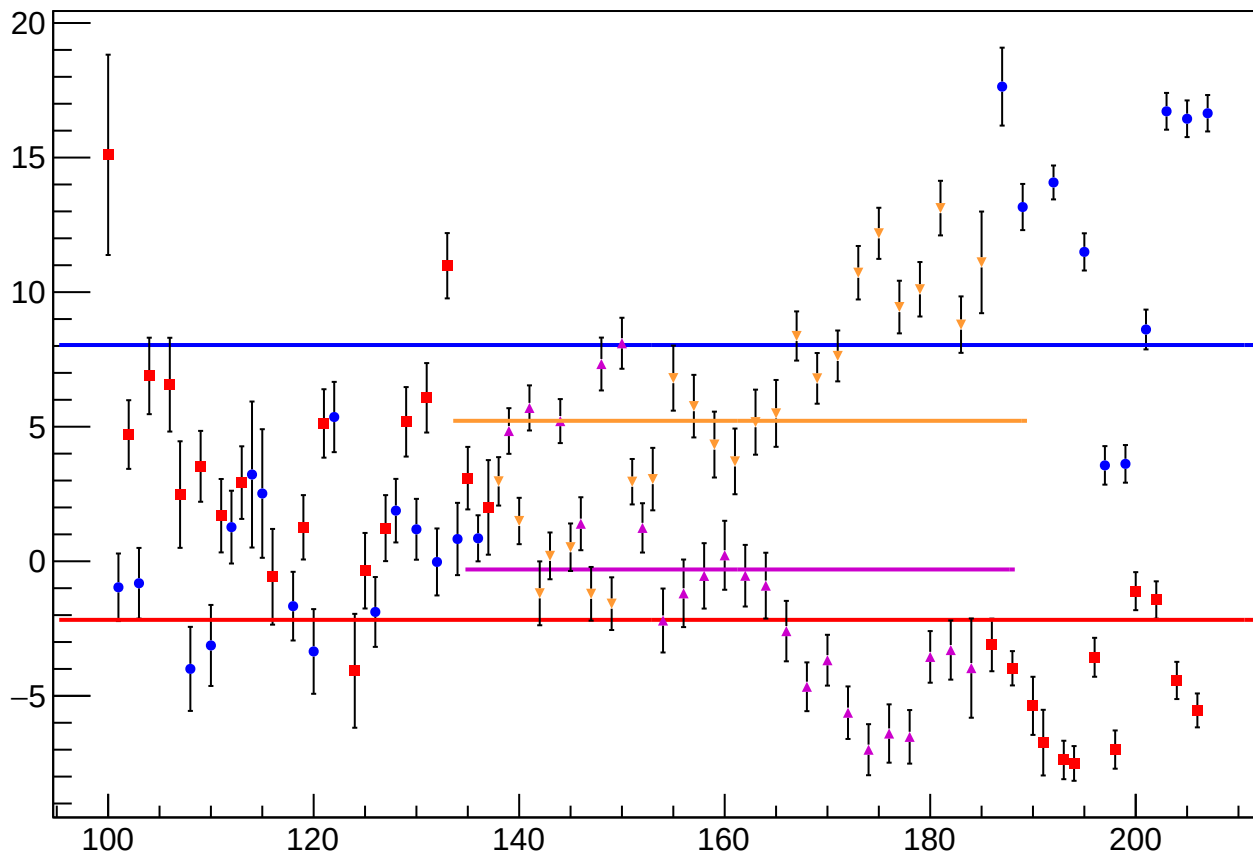
Left In:  $837.569 \pm 0.140$   $\chi^2/\text{NDF}$ : 714157.0/22

+ sign  $696.613 \pm 0.086$   $\chi^2/\text{NDF}$ : 3503275.9/50

All:  $690.869 \pm 0.060$   $\chi^2/\text{NDF}$ : 7409131.5/104

- sign  $685.354 \pm 0.085$   $\chi^2/\text{NDF}$ : 3897193.3/53

# diff\_bpm2i01Y\_mean vs Slug



Right In:  $8.035 \pm 0.189$   $\chi^2/\text{NDF}: 1374.7/25$

Left Out:  $5.219 \pm 0.204$   $\chi^2/\text{NDF}: 449.9/24$

Right Out:  $-2.177 \pm 0.178$   $\chi^2/\text{NDF}: 678.0/30$

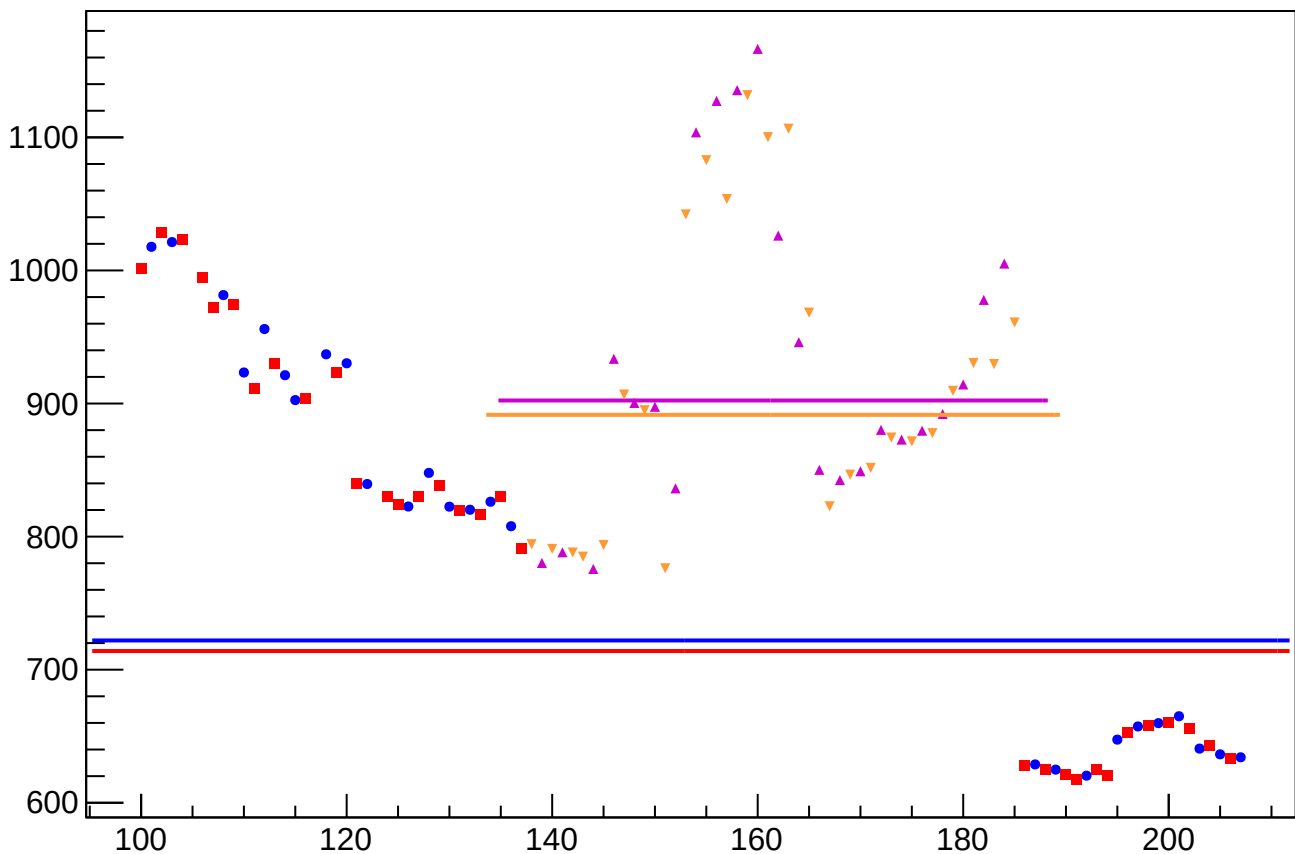
Left In:  $-0.304 \pm 0.213$   $\chi^2/\text{NDF}: 495.2/22$

+ sign  $6.736 \pm 0.139$   $\chi^2/\text{NDF}: 1926.9/50$

All:  $2.604 \pm 0.097$   $\chi^2/\text{NDF}: 4890.5/104$

- sign  $-1.403 \pm 0.137$   $\chi^2/\text{NDF}: 1218.7/53$

# diff\_bpm2i01Y\_rms vs Slug



Right In: 721.963 $\pm$ 0.134  $\chi^2$ /NDF: 838235.7/25

Left Out: 891.492 $\pm$ 0.145  $\chi^2$ /NDF: 517791.6/24

Right Out: 714.035 $\pm$ 0.126  $\chi^2$ /NDF: 957342.3/30

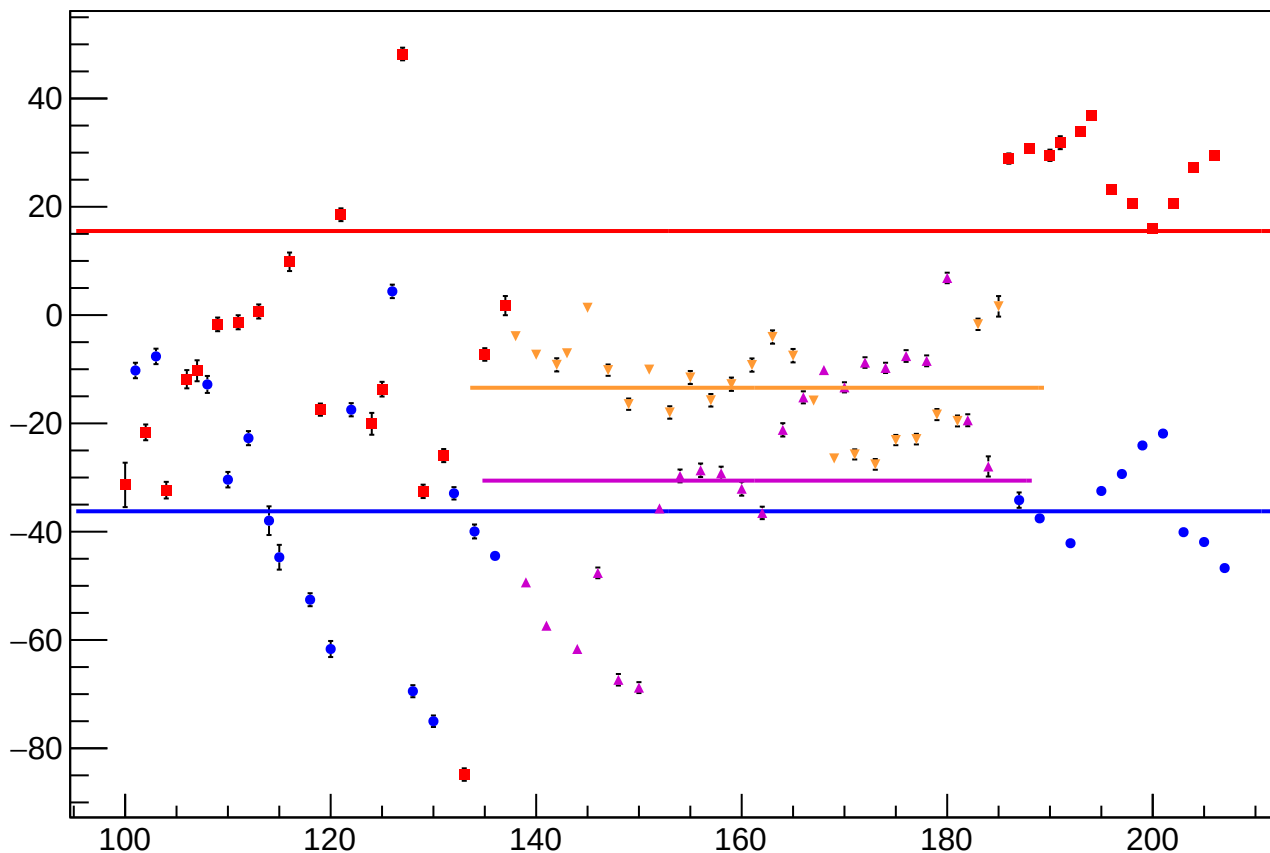
Left In: 902.292 $\pm$ 0.150  $\chi^2$ /NDF: 484924.8/22

+ sign 800.190 $\pm$ 0.098  $\chi^2$ /NDF: 2097196.8/50

All: 795.945 $\pm$ 0.069  $\chi^2$ /NDF: 4462828.0/104

- sign 791.828 $\pm$ 0.097  $\chi^2$ /NDF: 2361947.5/53

# diff\_bpm2i02X\_mean vs Slug



Right In:  $-36.234 \pm 0.186$   $\chi^2/\text{NDF}$ : 6451.5/25

Left Out:  $-13.420 \pm 0.206$   $\chi^2/\text{NDF}$ : 1663.3/24

Right Out:  $15.525 \pm 0.175$   $\chi^2/\text{NDF}$ : 19843.4/30

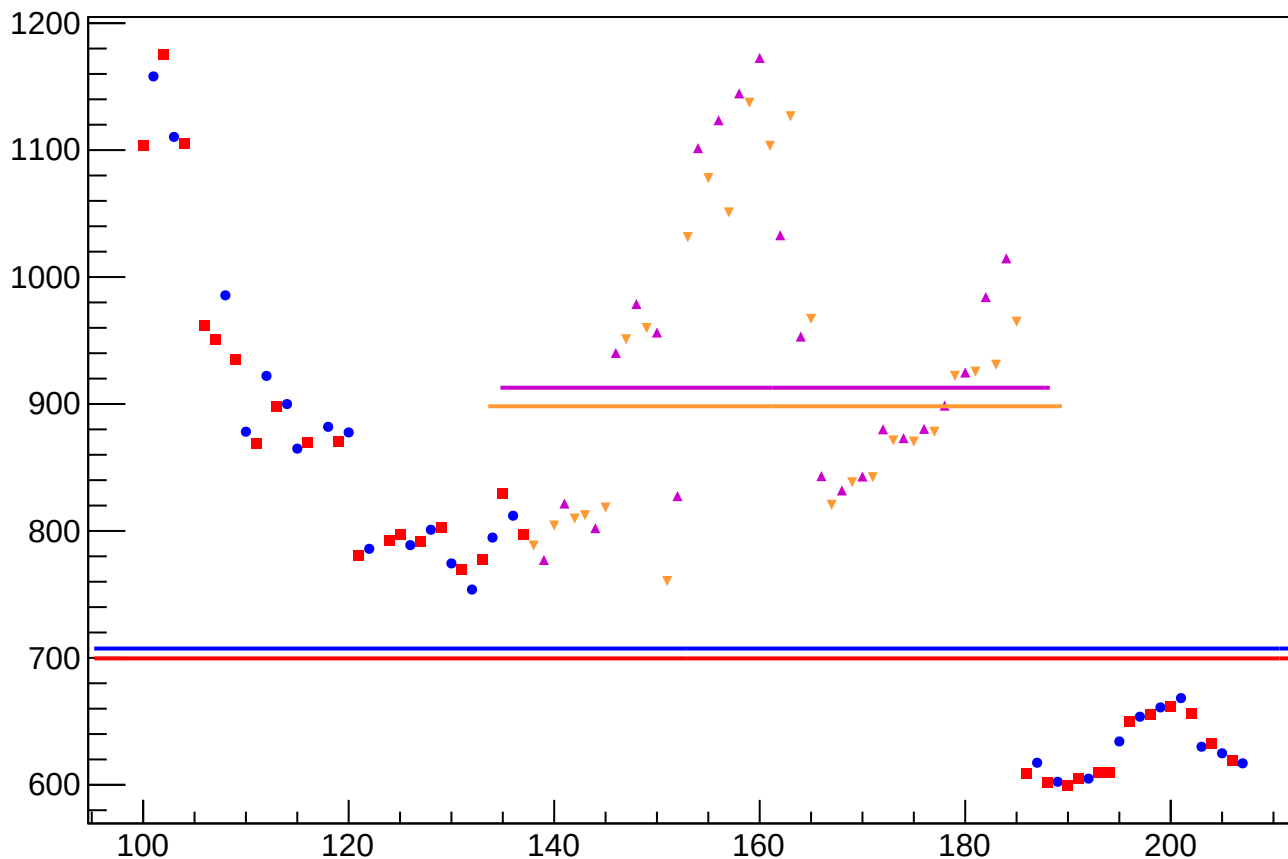
Left In:  $-30.571 \pm 0.215$   $\chi^2/\text{NDF}$ : 10386.5/22

+ sign  $-26.013 \pm 0.138$   $\chi^2/\text{NDF}$ : 14887.6/50

All:  $-14.243 \pm 0.097$   $\chi^2/\text{NDF}$ : 87099.8/104

- sign  $-2.827 \pm 0.136$   $\chi^2/\text{NDF}$ : 57852.6/53

# diff\_bpm2i02X\_rms vs Slug



Right In: 707.372 $\pm$ 0.131  $\chi^2$ /NDF: 913493.0/25

Left Out: 898.227 $\pm$ 0.146  $\chi^2$ /NDF: 518370.6/24

Right Out: 699.592 $\pm$ 0.124  $\chi^2$ /NDF: 1025394.6/30

Left In: 912.817 $\pm$ 0.152  $\chi^2$ /NDF: 480021.0/22

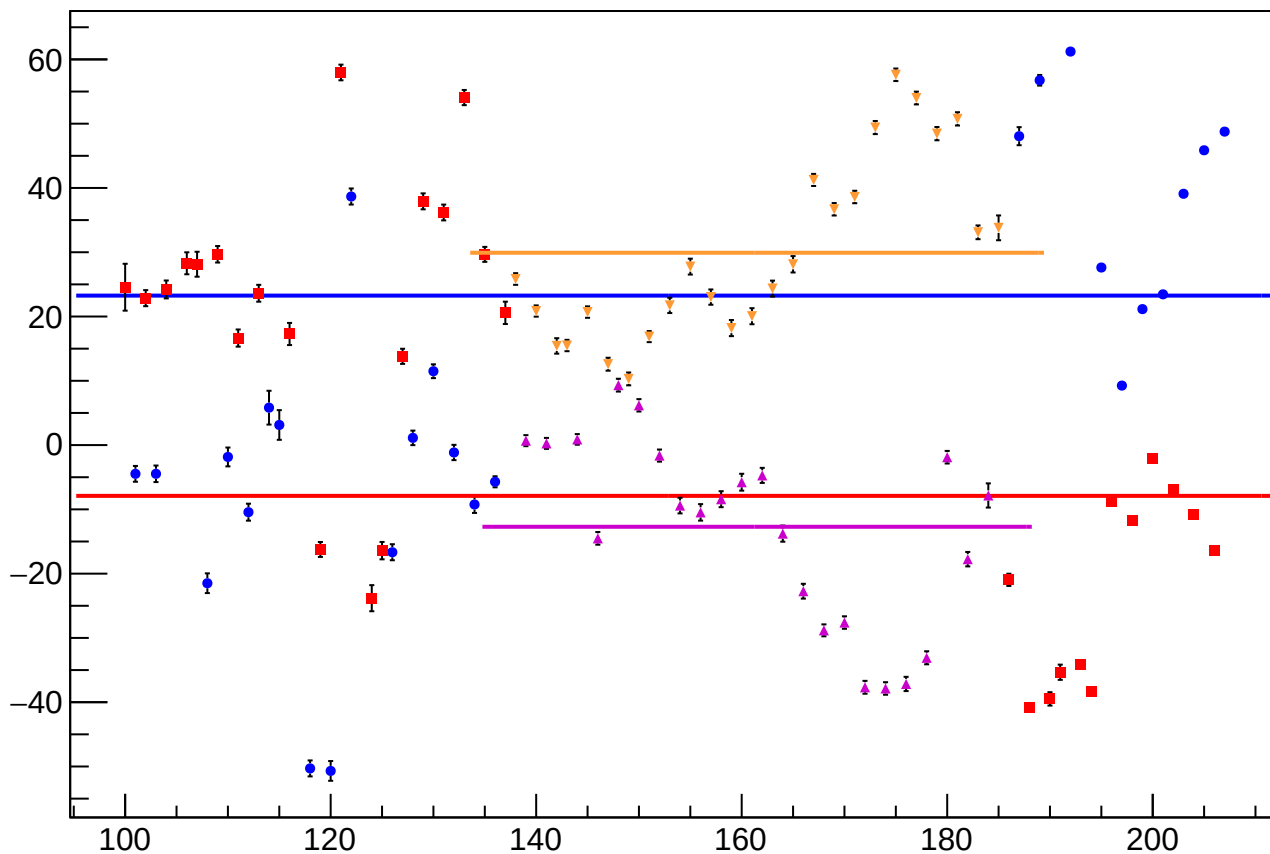
+ sign 792.882 $\pm$ 0.097  $\chi^2$ /NDF: 2379868.3/50

All: 788.617 $\pm$ 0.068  $\chi^2$ /NDF: 5071103.1/104

- sign 784.481 $\pm$ 0.096  $\chi^2$ /NDF: 2687463.7/53



# diff\_bpm2i02Y\_mean vs Slug



Right In:  $23.254 \pm 0.184$   $\chi^2/\text{NDF}: 22125.0/25$

Left Out:  $29.922 \pm 0.209$   $\chi^2/\text{NDF}: 4580.4/24$

Right Out:  $-7.901 \pm 0.173$   $\chi^2/\text{NDF}: 22845.3/30$

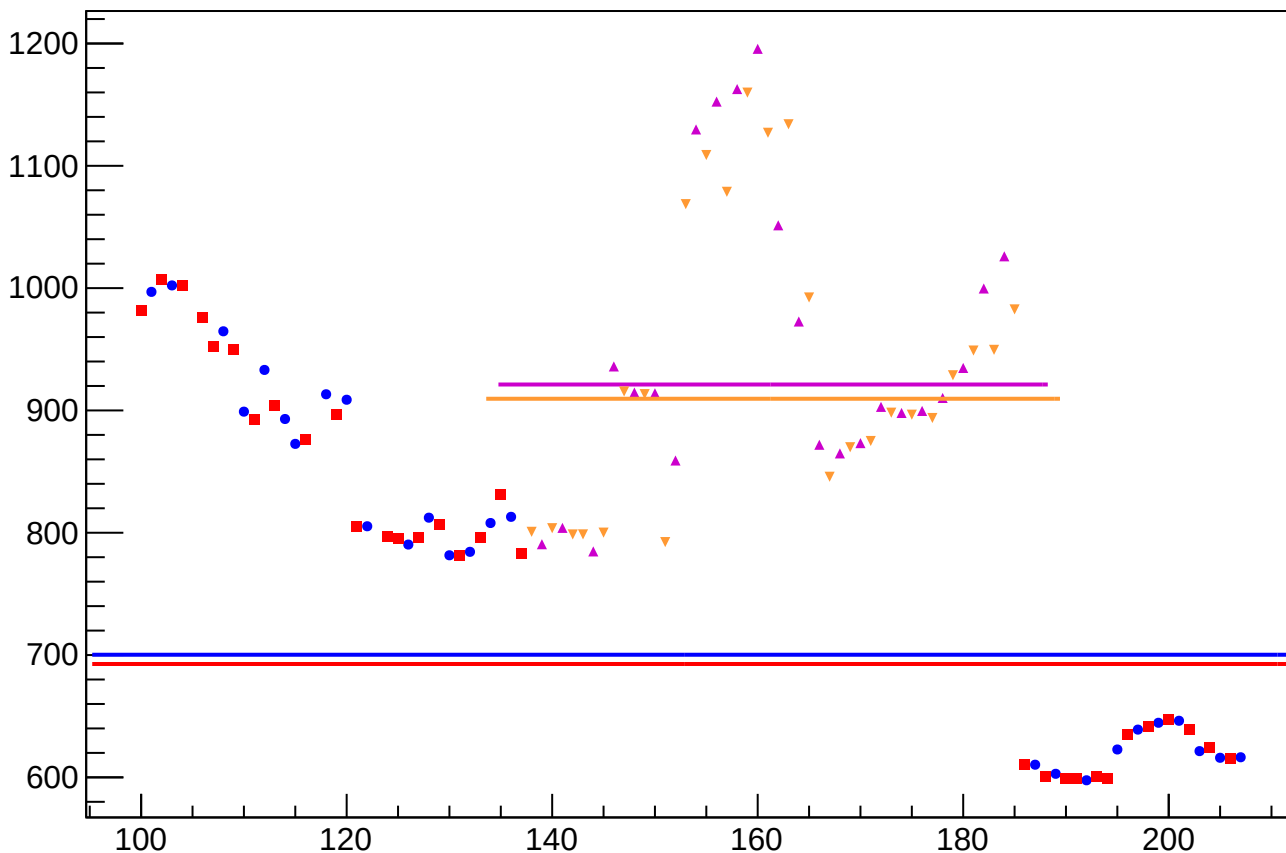
Left In:  $-12.708 \pm 0.217$   $\chi^2/\text{NDF}: 4791.2/22$

+ sign  $26.164 \pm 0.138$   $\chi^2/\text{NDF}: 27281.4/50$

All:  $7.881 \pm 0.097$   $\chi^2/\text{NDF}: 89824.8/104$

- sign  $-9.770 \pm 0.135$   $\chi^2/\text{NDF}: 27936.1/53$

# diff\_bpm2i02Y\_rms vs Slug



Right In: 700.254+/-0.130  $\chi^2/\text{NDF}$ : 869358.5/25

Left Out: 909.552+/-0.147  $\chi^2/\text{NDF}$ : 541710.0/24

Right Out: 692.687+/-0.122  $\chi^2/\text{NDF}$ : 984520.3/30

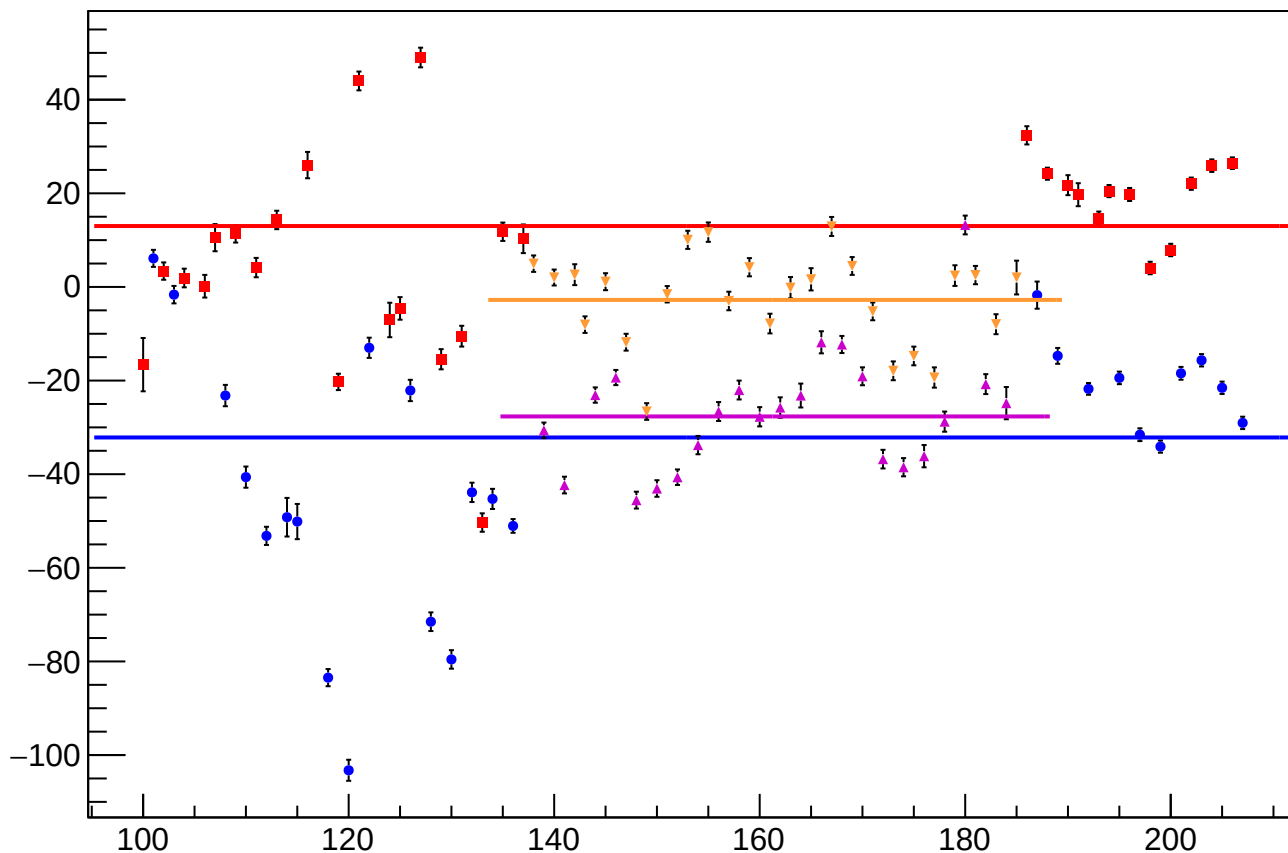
Left In: 921.198+/-0.154  $\chi^2/\text{NDF}$ : 497337.0/22

+ sign 791.604+/-0.097  $\chi^2/\text{NDF}$ : 2546161.5/50

All: 786.473+/-0.068  $\chi^2/\text{NDF}$ : 5387532.9/104

- sign 781.520+/-0.096  $\chi^2/\text{NDF}$ : 2835919.9/53

# diff\_bpm0i02X\_mean vs Slug



Right In:  $-32.157 \pm 0.338$   $\chi^2/\text{NDF}$ : 4681.9/25

Left Out:  $-2.767 \pm 0.397$   $\chi^2/\text{NDF}$ : 616.1/24

Right Out:  $13.010 \pm 0.322$   $\chi^2/\text{NDF}$ : 3032.7/30

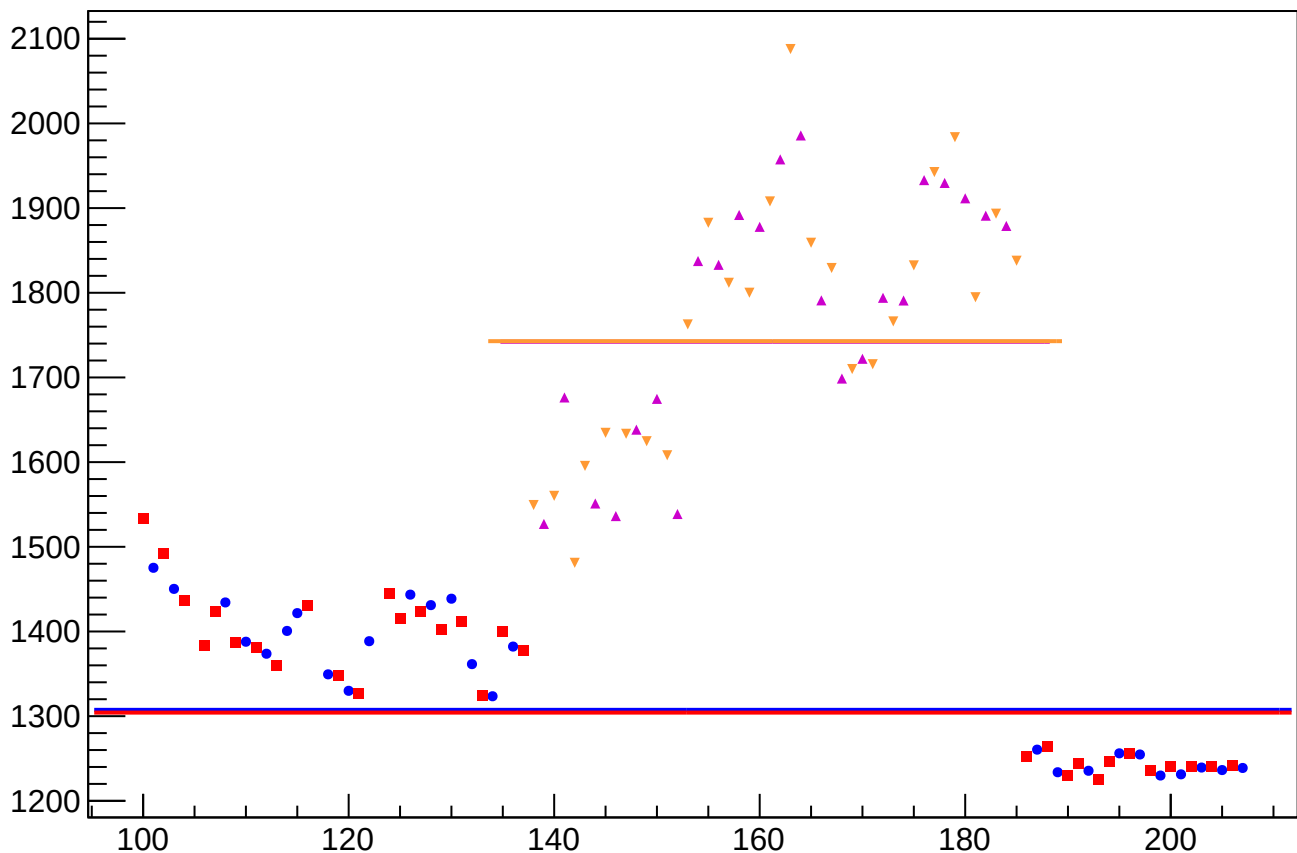
Left In:  $-27.663 \pm 0.409$   $\chi^2/\text{NDF}$ : 989.9/22

+ sign  $-19.807 \pm 0.258$   $\chi^2/\text{NDF}$ : 8468.8/50

All:  $-11.019 \pm 0.180$   $\chi^2/\text{NDF}$ : 20889.5/104

- sign  $-2.554 \pm 0.253$   $\chi^2/\text{NDF}$ : 10135.8/53

# diff\_bpm0i02X\_rms vs Slug



Right In: 1307.466+/-0.239  $\chi^2/\text{NDF}$ : 123673.3/25

Left Out: 1742.842+/-0.281  $\chi^2/\text{NDF}$ : 263118.4/24

Right Out: 1304.205+/-0.228  $\chi^2/\text{NDF}$ : 124691.2/30

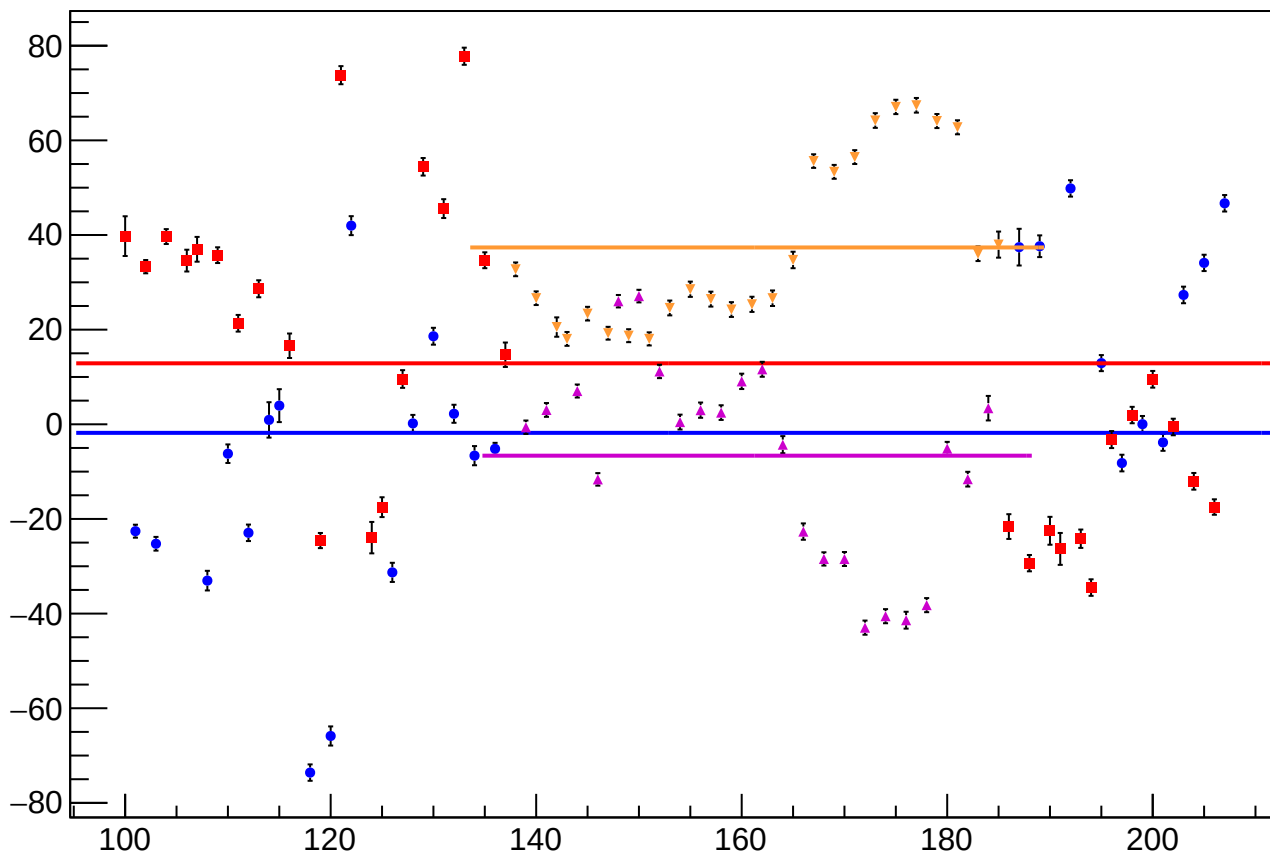
Left In: 1742.153+/-0.289  $\chi^2/\text{NDF}$ : 261606.6/22

+ sign 1490.413+/-0.182  $\chi^2/\text{NDF}$ : 1778524.8/50

All: 1480.924+/-0.128  $\chi^2/\text{NDF}$ : 3587715.5/10

- sign 1471.785+/-0.179  $\chi^2/\text{NDF}$ : 1803864.1/53

# diff\_bpm0i02Y\_mean vs Slug



Right In:  $-1.807 \pm 0.360$   $\chi^2/\text{NDF}$ : 7297.5/25

Left Out:  $37.369 \pm 0.308$   $\chi^2/\text{NDF}$ : 3395.8/24

Right Out:  $12.886 \pm 0.346$   $\chi^2/\text{NDF}$ : 8012.9/30

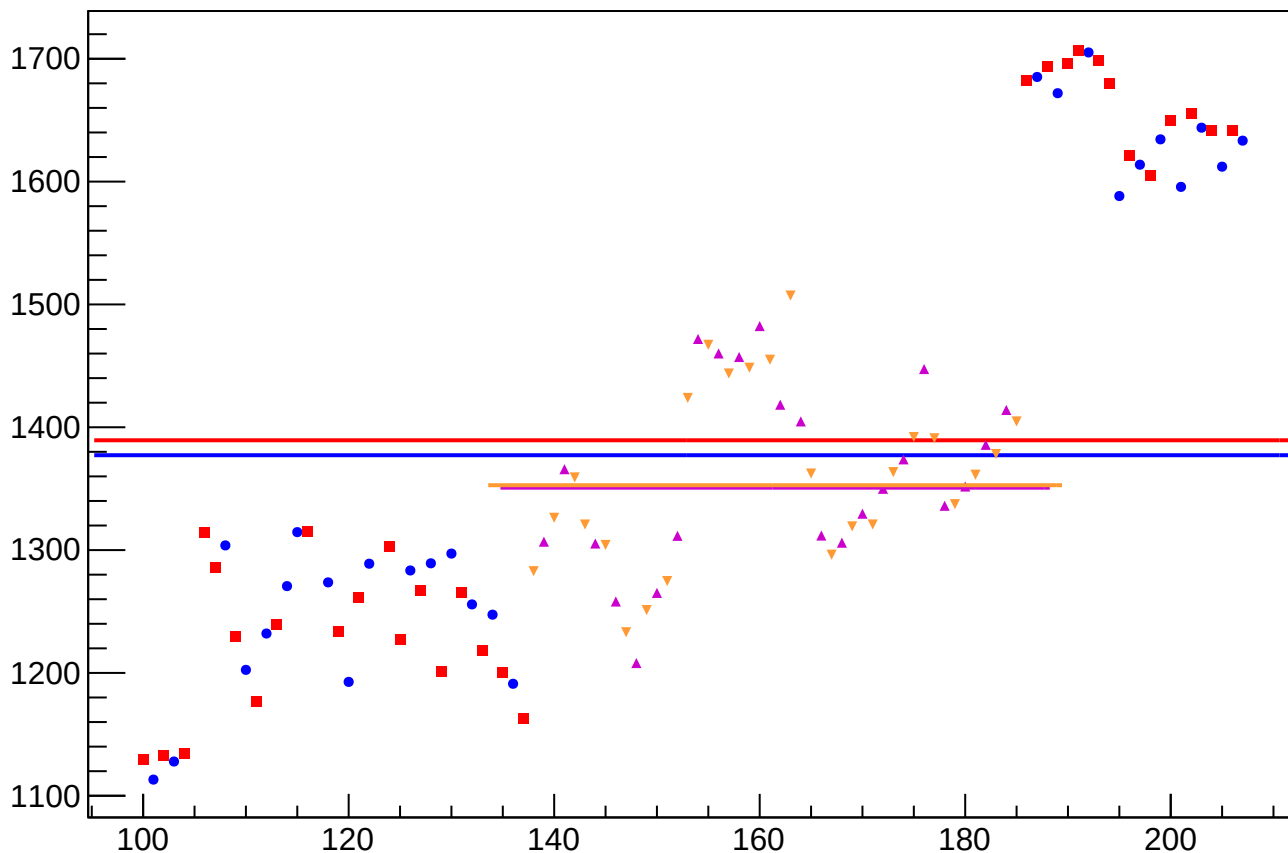
Left In:  $-6.631 \pm 0.316$   $\chi^2/\text{NDF}$ : 4410.3/22

+ sign  $20.806 \pm 0.234$   $\chi^2/\text{NDF}$ : 17539.4/50

All:  $11.504 \pm 0.165$   $\chi^2/\text{NDF}$ : 34852.1/104

- sign  $2.234 \pm 0.234$   $\chi^2/\text{NDF}$ : 14155.1/53

# diff\_bpm0i02Y\_rms vs Slug



Right In: 1377.245 $\pm$ 0.254  $\chi^2$ /NDF: 653889.4/25

Left Out: 1352.820 $\pm$ 0.218  $\chi^2$ /NDF:104845.3/24

Right Out: 1389.399 $\pm$ 0.245  $\chi^2$ /NDF: 807410.1/30

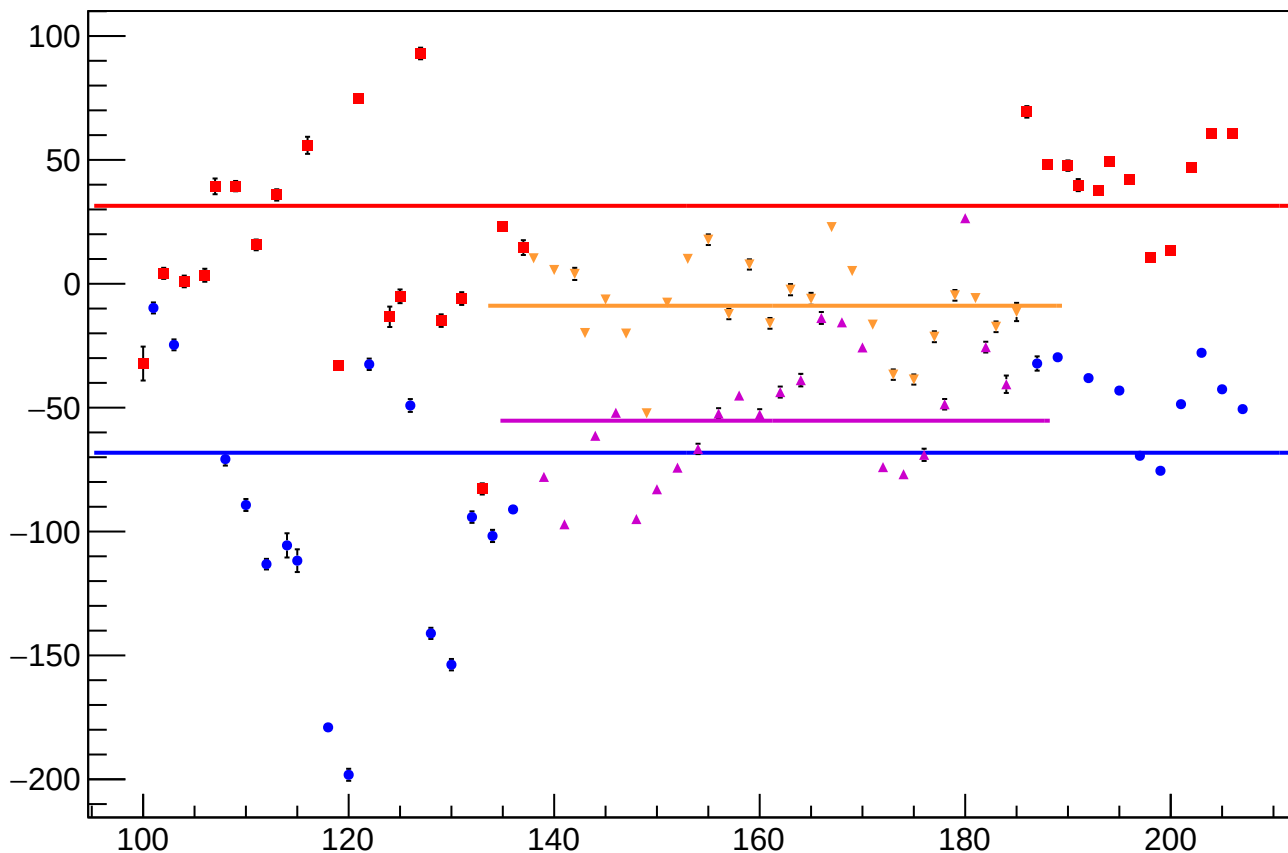
Left In: 1350.830 $\pm$ 0.223  $\chi^2$ /NDF:108618.5/22

+ sign 1363.146 $\pm$ 0.165  $\chi^2$ /NDF: 764056.8/50

All: 1365.752 $\pm$ 0.117  $\chi^2$ /NDF: 1694108.5/10

- sign 1368.349 $\pm$ 0.165  $\chi^2$ /NDF: 929556.0/53

# diff\_bpm0i02aX\_mean vs Slug



Right In:  $-68.195 \pm 0.377$   $\chi^2/\text{NDF}$ : 13653.4/25

Left Out:  $-8.859 \pm 0.407$   $\chi^2/\text{NDF}$ : 1953.2/24

Right Out:  $31.468 \pm 0.355$   $\chi^2/\text{NDF}$ : 8256.6/30

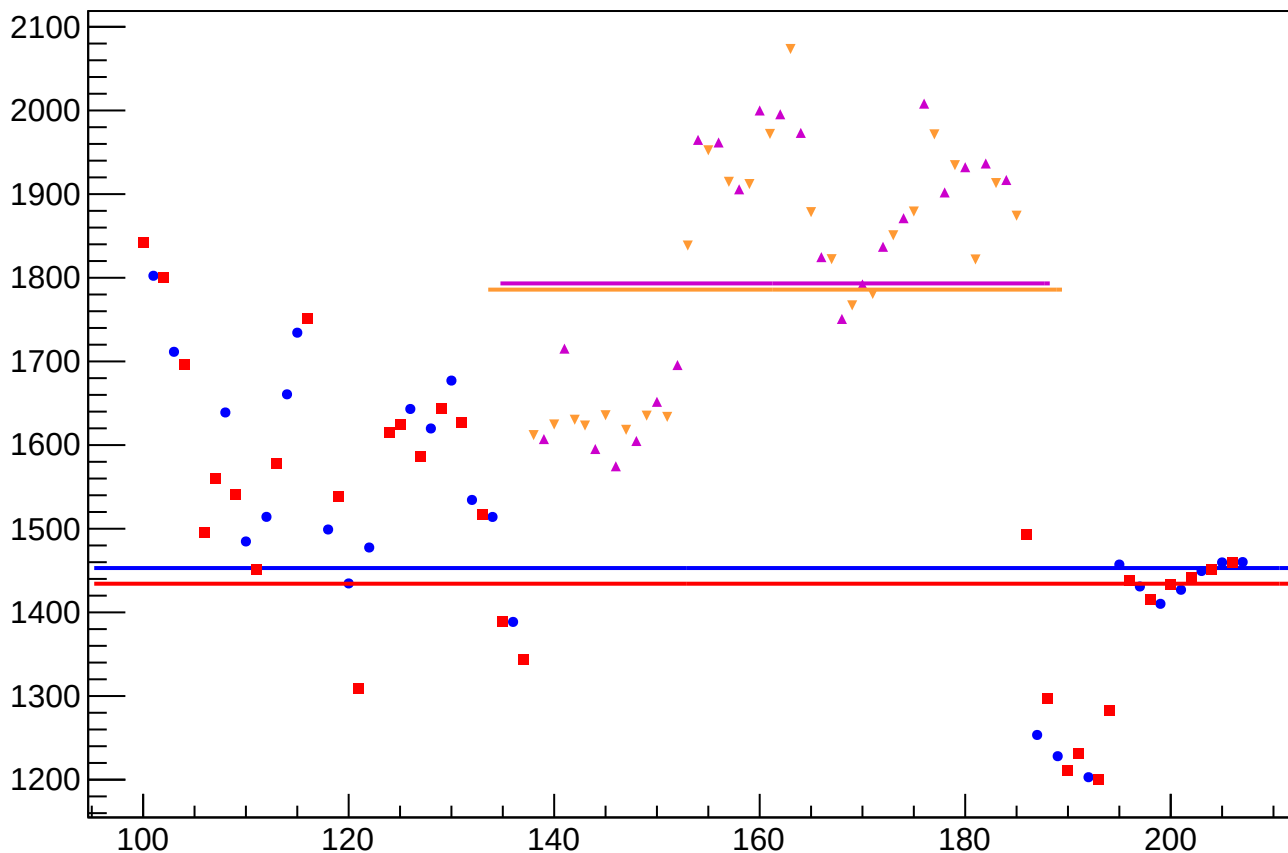
Left In:  $-55.266 \pm 0.420$   $\chi^2/\text{NDF}$ : 4736.1/22

+ sign  $-40.804 \pm 0.277$   $\chi^2/\text{NDF}$ : 27039.0/50

All:  $-22.361 \pm 0.194$   $\chi^2/\text{NDF}$ : 73589.7/104

- sign  $-4.629 \pm 0.271$   $\chi^2/\text{NDF}$ : 37833.8/53

# diff\_bpm0i02aX\_rms vs Slug



Right In: 1452.999 $\pm$ 0.267  $\chi^2$ /NDF: 281549.0/25

Left Out: 1785.836 $\pm$ 0.288  $\chi^2$ /NDF: 237239.4/24

Right Out: 1434.265 $\pm$ 0.251  $\chi^2$ /NDF: 330881.6/30

Left In: 1793.249 $\pm$ 0.297  $\chi^2$ /NDF: 252788.2/22

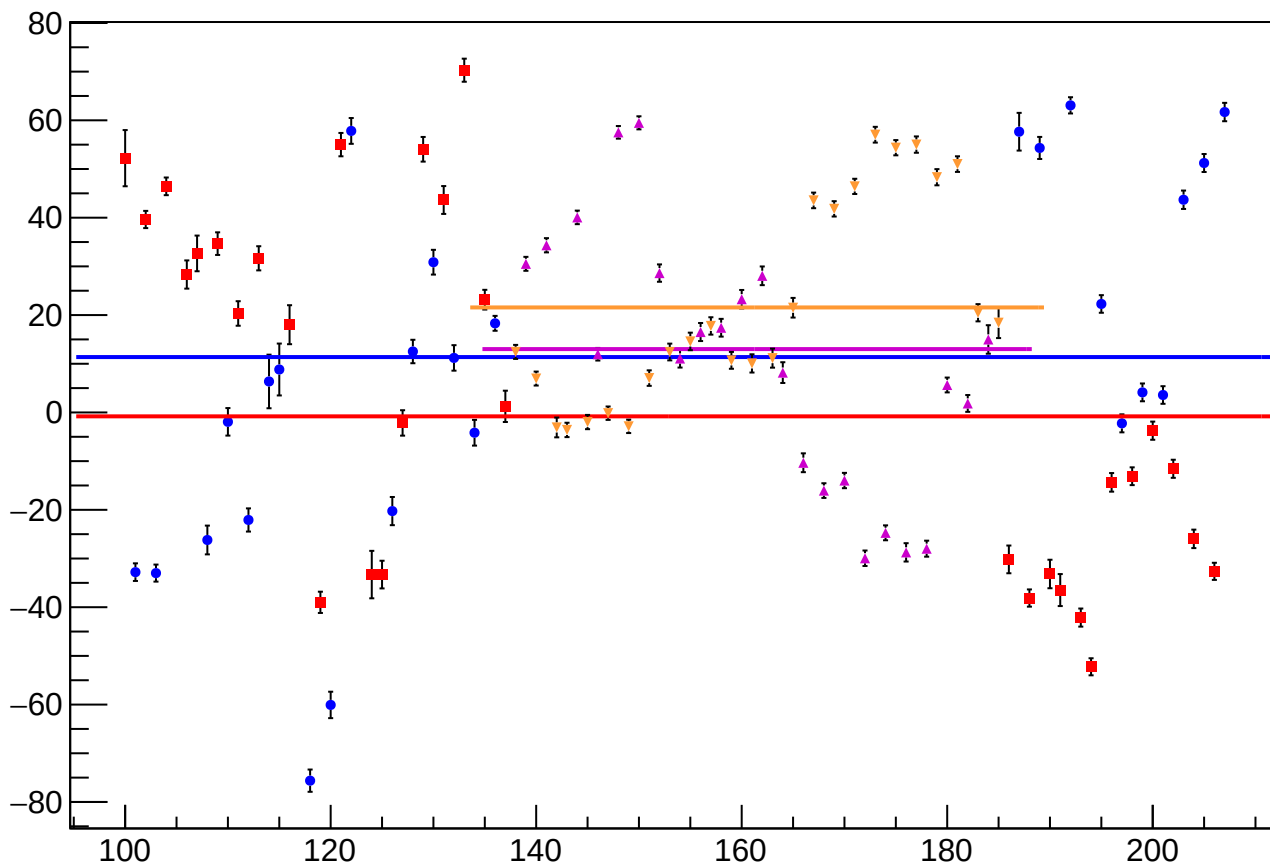
+ sign 1606.648 $\pm$ 0.196  $\chi^2$ /NDF: 1238241.4/50

All: 1594.933 $\pm$ 0.137  $\chi^2$ /NDF: 2680015.4/10

- sign 1583.670 $\pm$ 0.192  $\chi^2$ /NDF: 1434739.6/53



# diff\_bpm0i02aY\_mean vs Slug



Right In: 11.375 $\pm$ 0.429  $\chi^2$ /NDF: 7361.5/25

Left Out: 21.567 $\pm$ 0.330  $\chi^2$ /NDF:4160.8/24

Right Out: -0.802 $\pm$ 0.411  $\chi^2$ /NDF: 7525.2/30

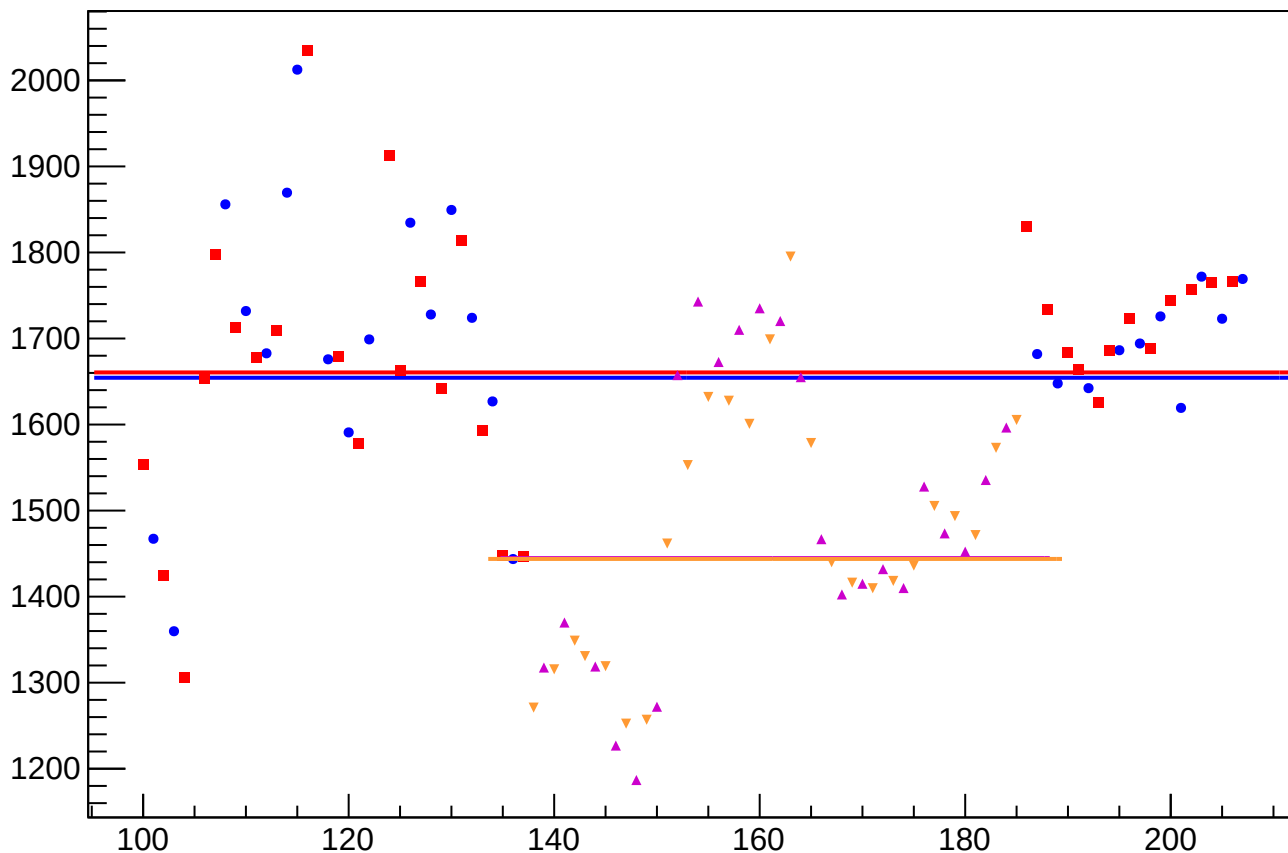
Left In: 13.014 $\pm$ 0.340  $\chi^2$ /NDF:6627.2/22

+ sign 17.781 $\pm$ 0.262  $\chi^2$ /NDF: 11876.7/50

All: 12.595 $\pm$ 0.185  $\chi^2$ /NDF: 27487.9/104

- sign 7.395 $\pm$ 0.262  $\chi^2$ /NDF: 14823.8/53

# diff\_bpm0i02aY\_rms vs Slug



Right In: 1654.396 $\pm$ 0.303  $\chi^2$ /NDF: 187559.6/25

Left Out: 1443.826 $\pm$ 0.233  $\chi^2$ /NDF: 352397.9/24

Right Out: 1660.576 $\pm$ 0.290  $\chi^2$ /NDF: 221903.2/30

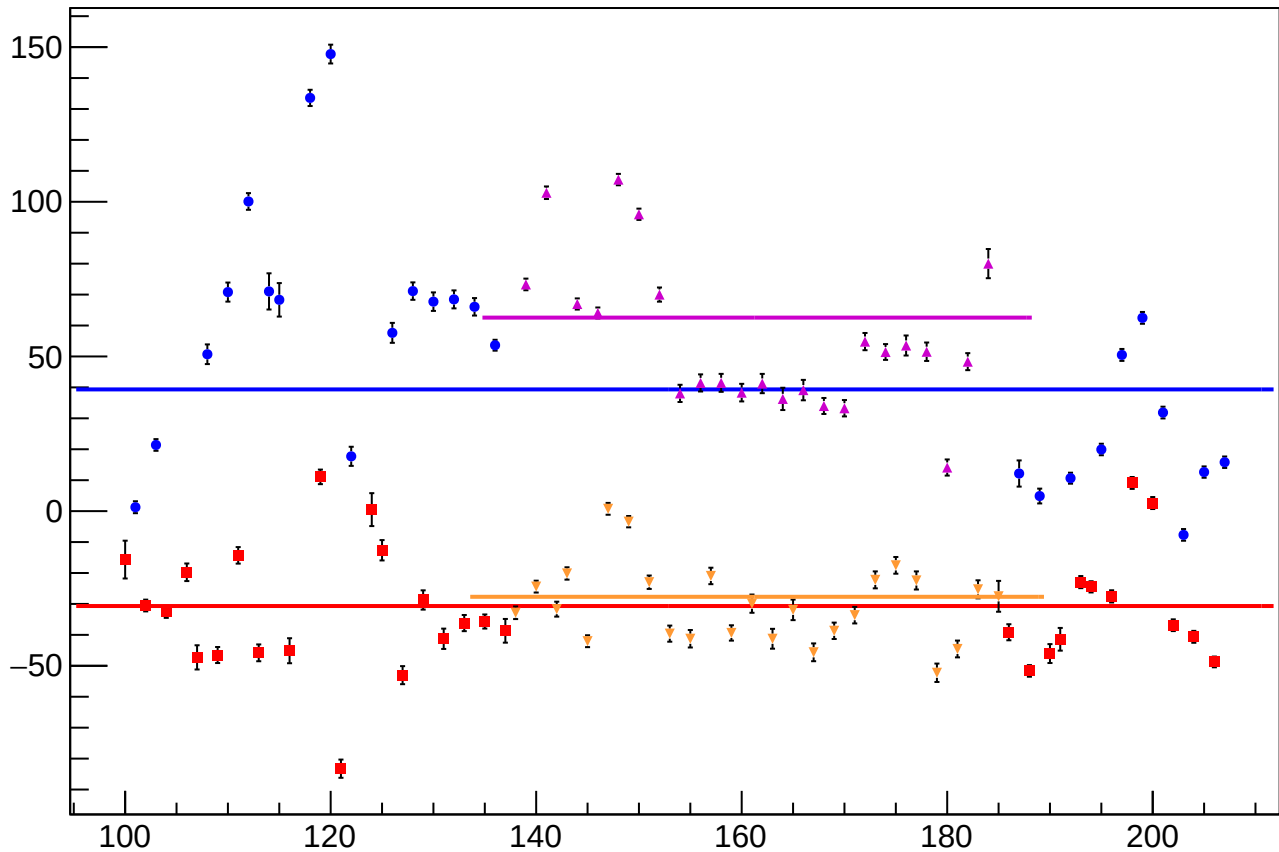
Left In: 1444.817 $\pm$ 0.240  $\chi^2$ /NDF: 485230.7/22

+ sign 1522.033 $\pm$ 0.185  $\chi^2$ /NDF: 842550.3/50

All: 1527.294 $\pm$ 0.131  $\chi^2$ /NDF: 1878803.2/10

- sign 1532.568 $\pm$ 0.185  $\chi^2$ /NDF: 1034633.0/53

# diff\_bpm0i05X\_mean vs Slug



Right In:  $39.346 \pm 0.459$   $\chi^2/\text{NDF}$ : 6083.8/25

Left Out:  $-27.692 \pm 0.496$   $\chi^2/\text{NDF}$ : 766.1/24

Right Out:  $-30.677 \pm 0.437$   $\chi^2/\text{NDF}$ : 2005.8/30

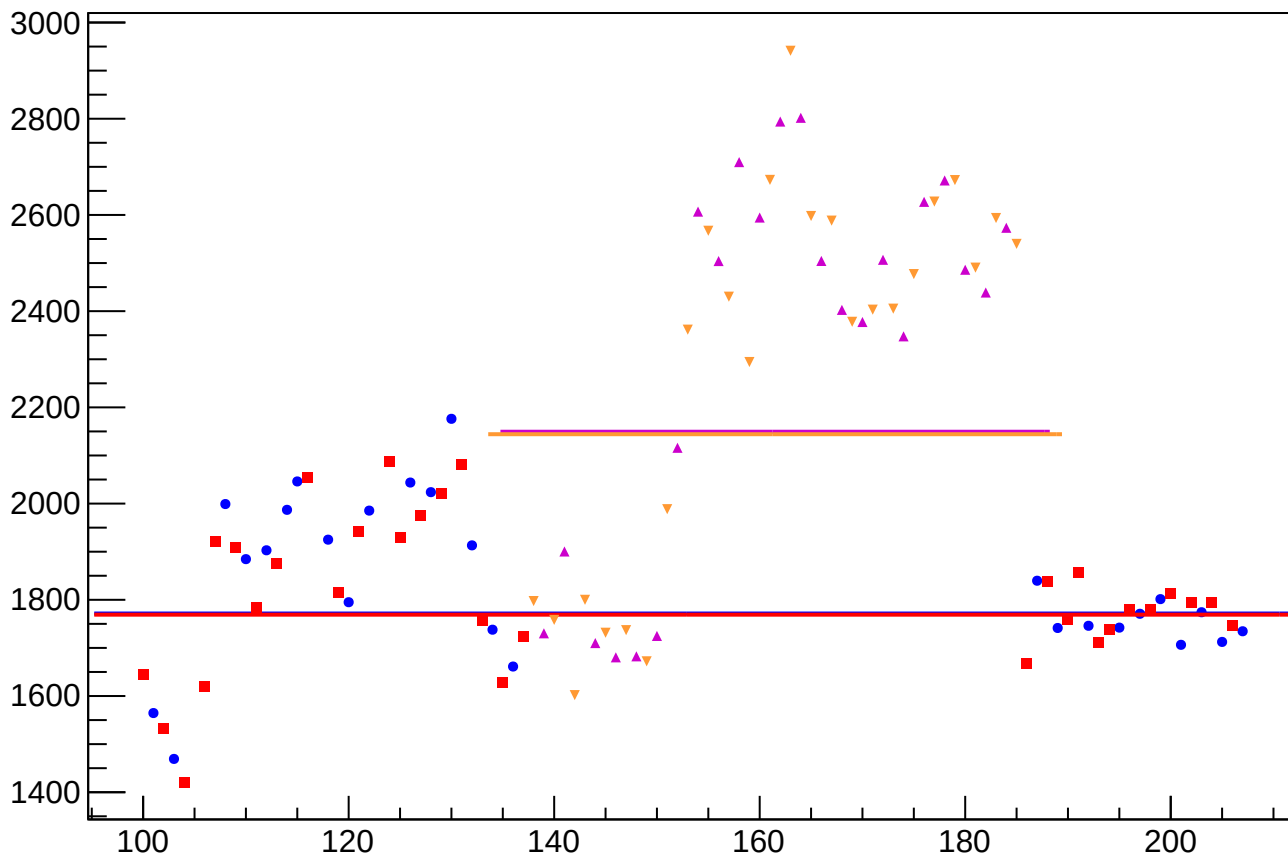
Left In:  $62.558 \pm 0.512$   $\chi^2/\text{NDF}$ : 2458.2/22

+ sign  $8.386 \pm 0.337$   $\chi^2/\text{NDF}$ : 16679.9/50

All:  $8.526 \pm 0.237$   $\chi^2/\text{NDF}$ : 40331.0/104

- sign  $8.663 \pm 0.332$   $\chi^2/\text{NDF}$ : 23650.8/53

# diff\_bpm0i05X\_rms vs Slug



Right In: 1771.478 $\pm$ 0.325  $\chi^2$ /NDF: 203396.5/25

Left Out: 2144.219 $\pm$ 0.351  $\chi^2$ /NDF:1279852.9/24

Right Out: 1769.123 $\pm$ 0.309  $\chi^2$ /NDF: 201387.9/30

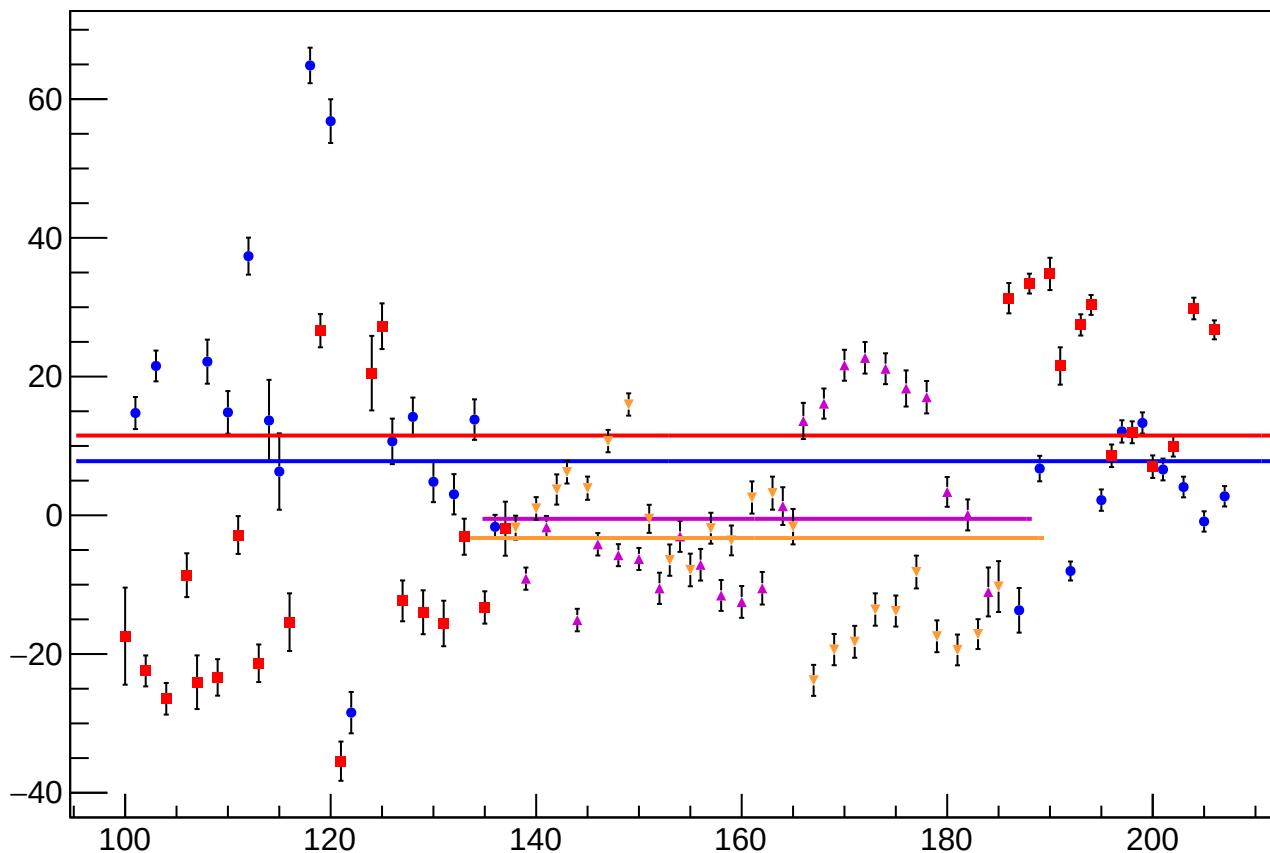
Left In: 2149.354 $\pm$ 0.362  $\chi^2$ /NDF:1265722.5/22

+ sign 1943.619 $\pm$ 0.238  $\chi^2$ /NDF: 2091041.9/50

All: 1936.492 $\pm$ 0.167  $\chi^2$ /NDF: 4198150.3/10

- sign 1929.560 $\pm$ 0.235  $\chi^2$ /NDF: 2105344.6/53

# diff\_bpm0i05Y\_mean vs Slug



Right In: 7.805 $\pm$ 0.408  $\chi^2$ /NDF: 1392.5/25

Left Out: -3.275 $\pm$ 0.415  $\chi^2$ /NDF: 671.1/24

Right Out: 11.502 $\pm$ 0.387  $\chi^2$ /NDF: 2725.8/30

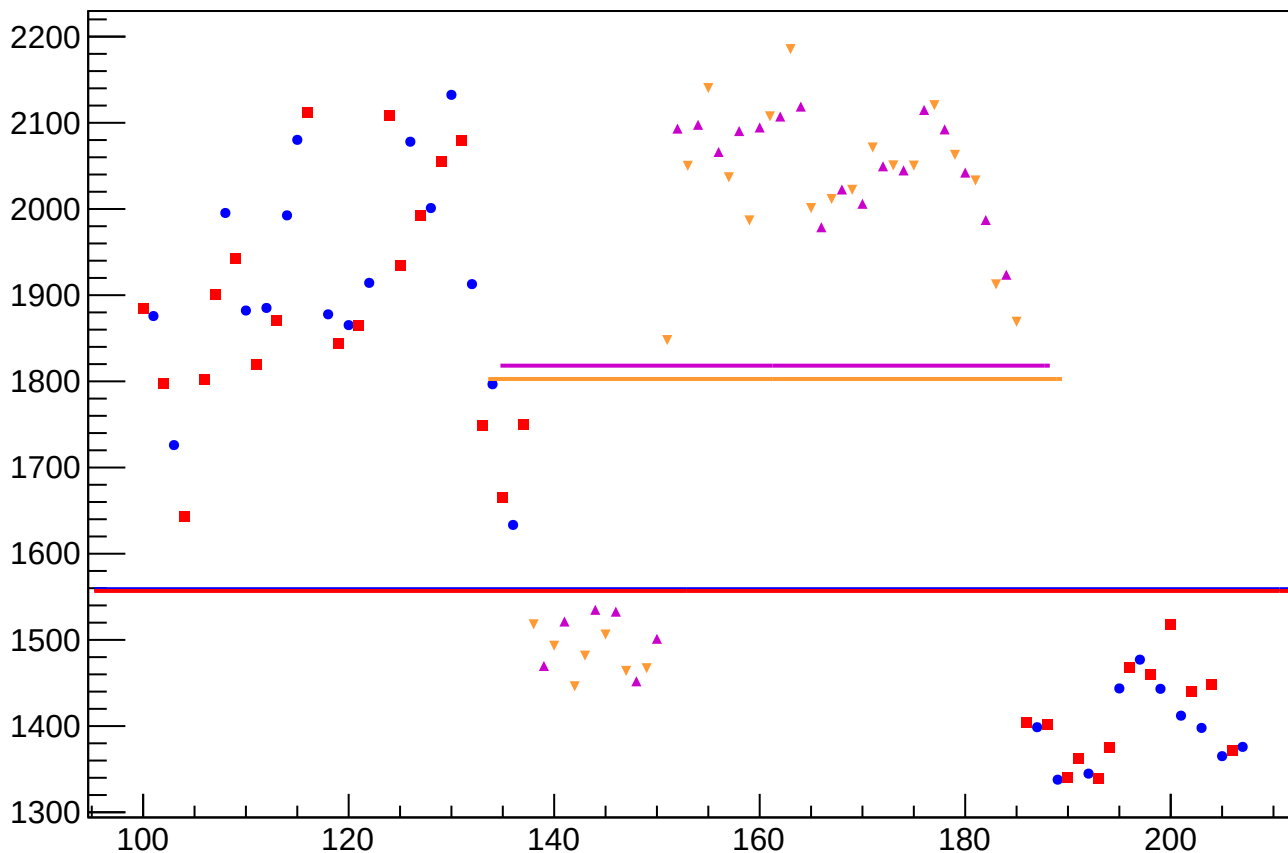
Left In: -0.511 $\pm$ 0.430  $\chi^2$ /NDF: 745.8/22

+ sign 2.360 $\pm$ 0.291  $\chi^2$ /NDF: 2426.8/50

All: 4.257 $\pm$ 0.204  $\chi^2$ /NDF: 6413.6/104

- sign 6.116 $\pm$ 0.288  $\chi^2$ /NDF: 3902.5/53

# diff\_bpm0i05Y\_rms vs Slug



Right In: 1558.839 $\pm$ 0.288  $\chi^2$ /NDF: 687461.5/25

Left Out: 1802.748 $\pm$ 0.293  $\chi^2$ /NDF: 897375.1/24

Right Out: 1556.812 $\pm$ 0.274  $\chi^2$ /NDF: 652724.7/30

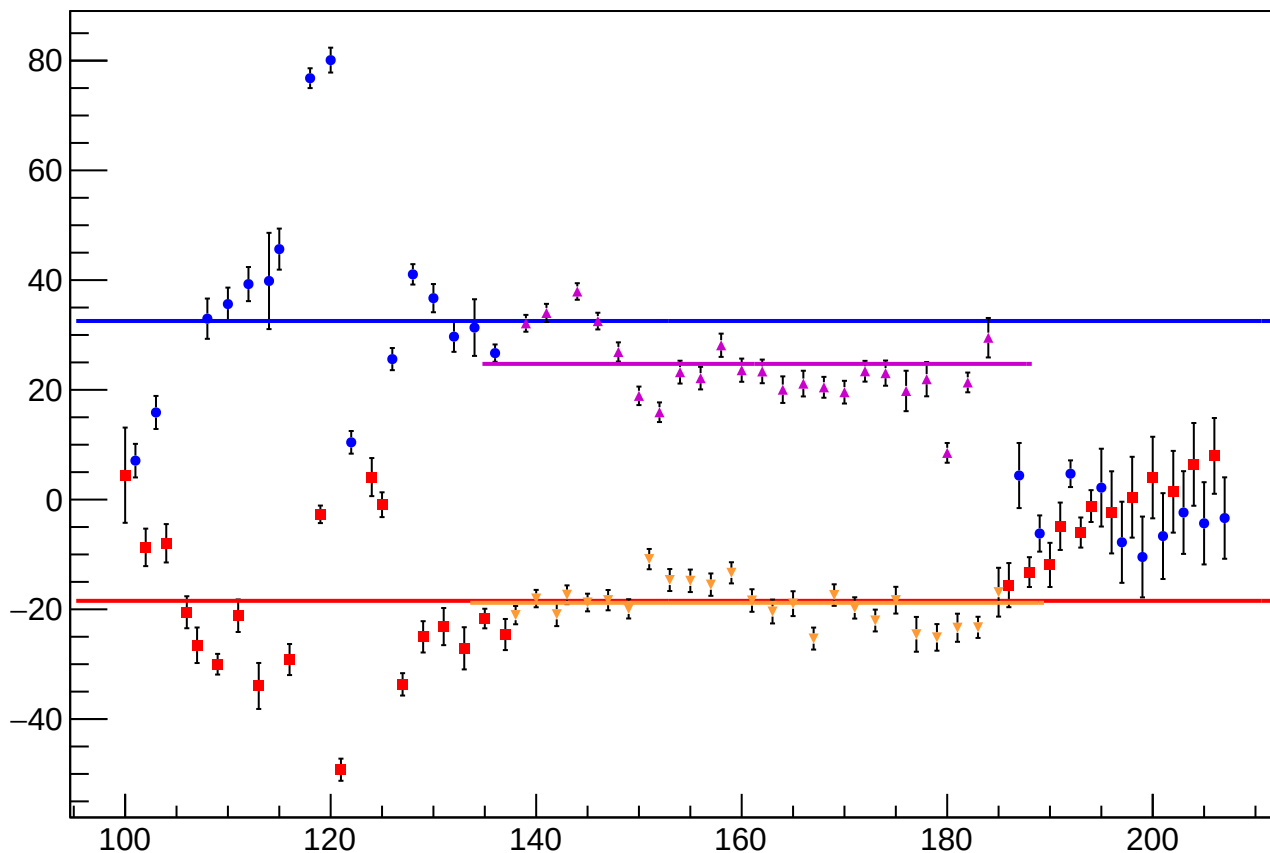
Left In: 1818.225 $\pm$ 0.304  $\chi^2$ /NDF: 840353.0/22

+ sign 1678.689 $\pm$ 0.206  $\chi^2$ /NDF: 1936840.3/50

All: 1676.331 $\pm$ 0.145  $\chi^2$ /NDF: 3838350.8/10

- sign 1674.020 $\pm$ 0.203  $\chi^2$ /NDF: 1901249.9/53

# diff\_bpm0i07X\_mean vs Slug



Right In:  $32.551 \pm 0.578$   $\chi^2/\text{NDF}: 1790.7/25$

Left Out:  $-18.816 \pm 0.402$   $\chi^2/\text{NDF}: 74.9/24$

Right Out:  $-18.453 \pm 0.533$   $\chi^2/\text{NDF}: 731.5/30$

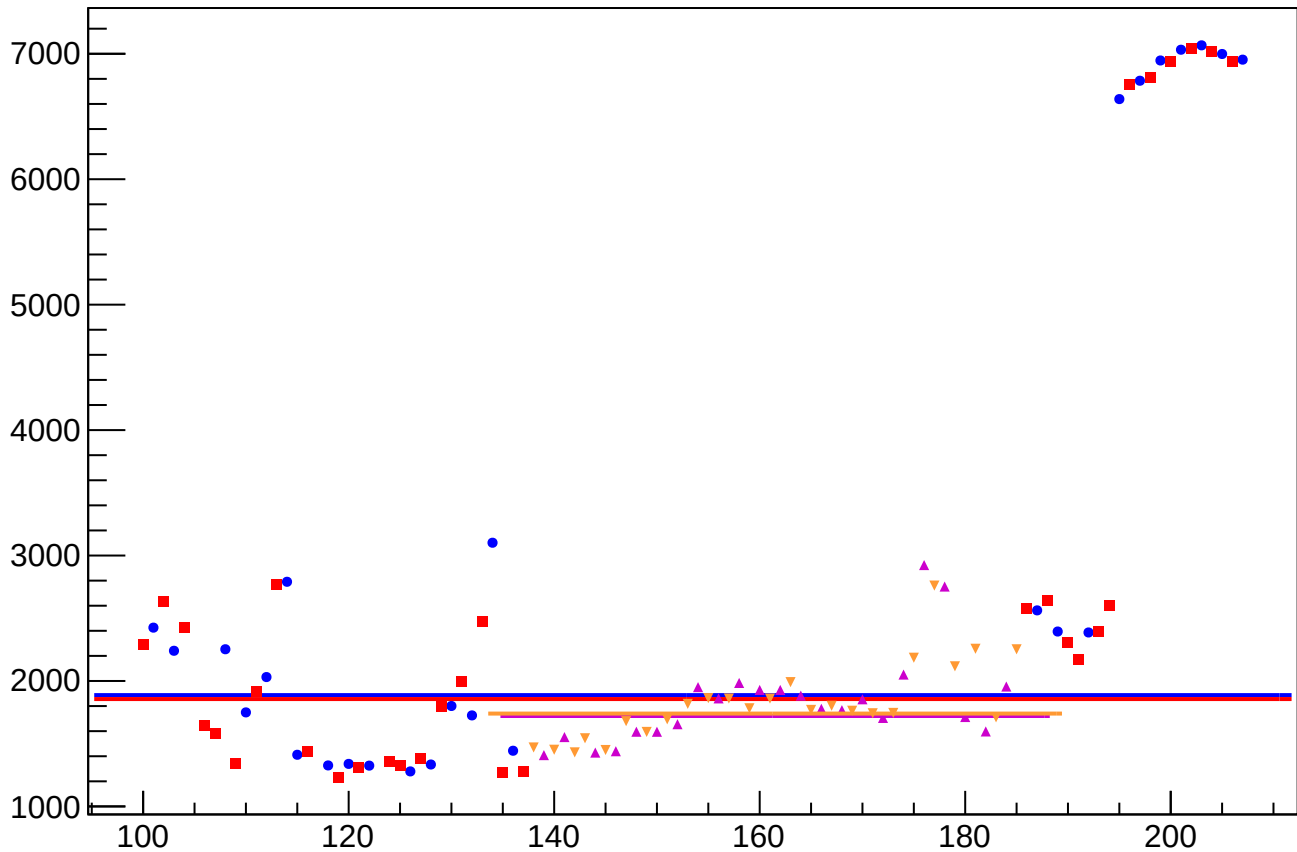
Left In:  $24.731 \pm 0.409$   $\chi^2/\text{NDF}: 308.0/22$

+ sign  $-2.058 \pm 0.330$   $\chi^2/\text{NDF}: 7194.3/50$

All:  $3.432 \pm 0.231$   $\chi^2/\text{NDF}: 12911.3/104$

- sign  $8.740 \pm 0.324$   $\chi^2/\text{NDF}: 5172.4/53$

# diff\_bpm0i07X\_rms vs Slug



Right In: 1887.353+/-0.408  $\chi^2/\text{NDF}$ : 7813778.2/25

Left Out: 1740.089+/-0.284  $\chi^2/\text{NDF}$ : 753377.5/24

Right Out: 1855.889+/-0.377  $\chi^2/\text{NDF}$ : 7708820.2/30

Left In: 1720.864+/-0.289  $\chi^2/\text{NDF}$ : 883990.4/22

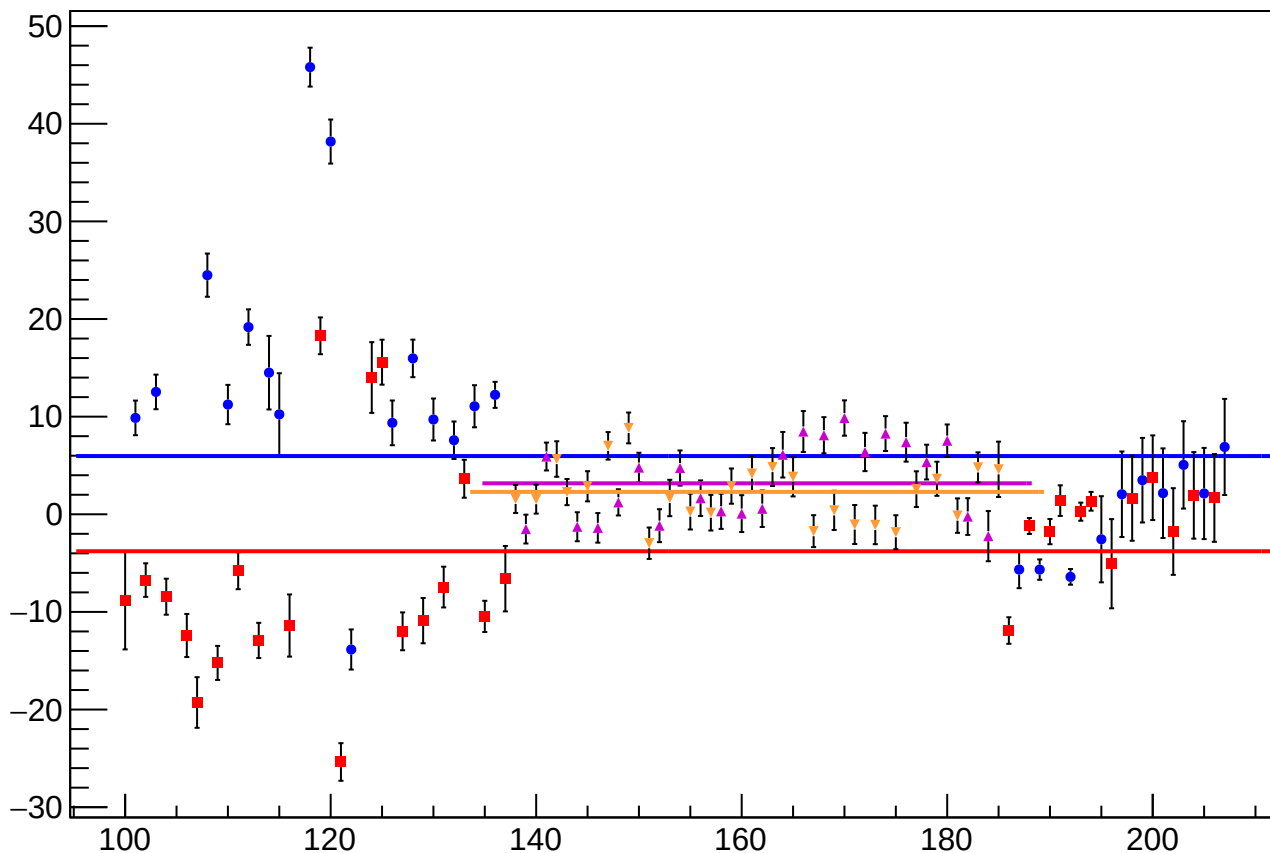
+ sign 1788.133+/-0.233  $\chi^2/\text{NDF}$ : 8654750.3/50

All: 1779.352+/-0.164  $\chi^2/\text{NDF}$ : 17331153.5/173

- sign 1770.864+/-0.229  $\chi^2/\text{NDF}$ : 8673617.1/53



# diff\_bpm0i07Y\_mean vs Slug



Right In:  $5.963 \pm 0.378$   $\chi^2/\text{NDF}: 1316.4/25$

Left Out:  $2.293 \pm 0.343$   $\chi^2/\text{NDF}: 73.5/24$

Right Out:  $-3.787 \pm 0.318$   $\chi^2/\text{NDF}: 671.9/30$

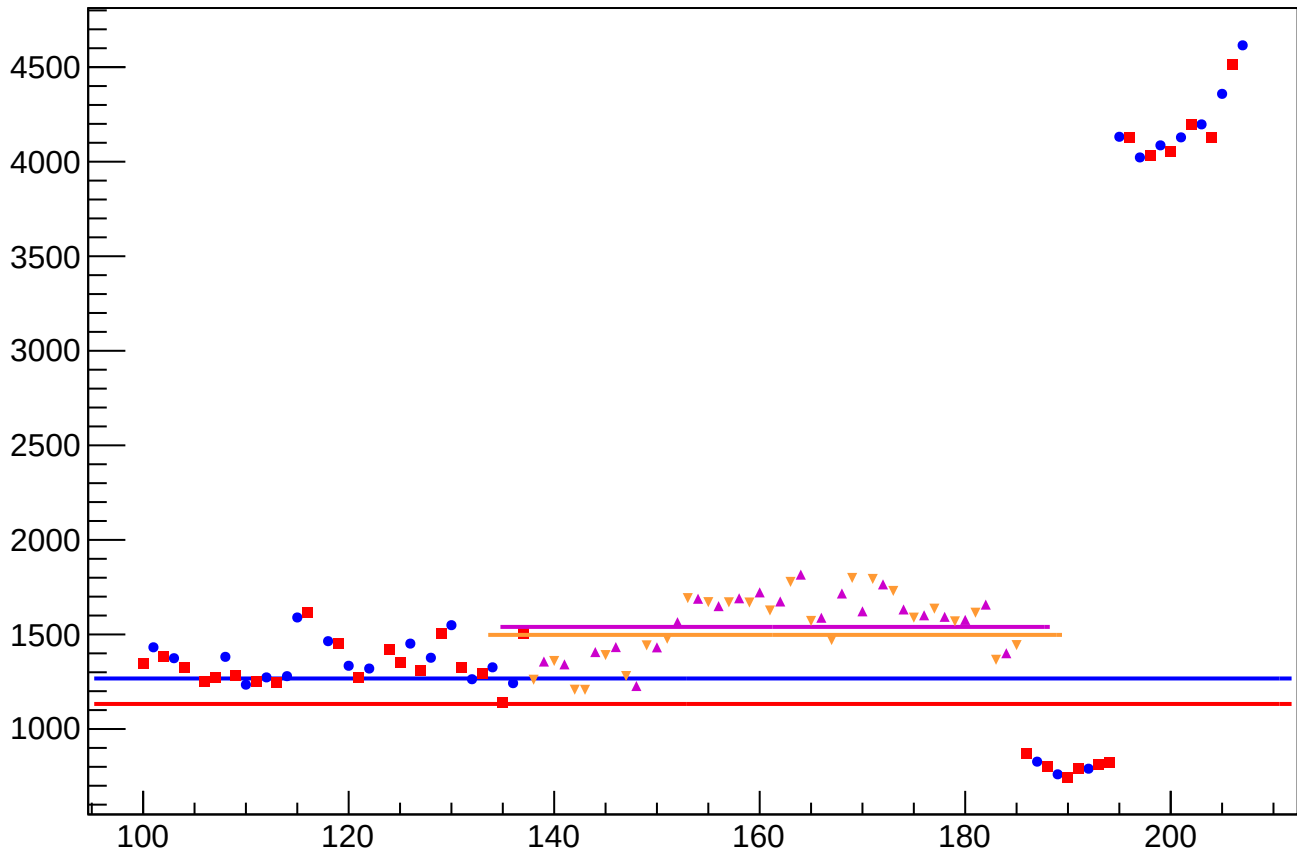
Left In:  $3.173 \pm 0.362$   $\chi^2/\text{NDF}: 110.4/22$

+ sign  $3.954 \pm 0.254$   $\chi^2/\text{NDF}: 1441.6/50$

All:  $1.456 \pm 0.174$   $\chi^2/\text{NDF}: 2614.5/104$

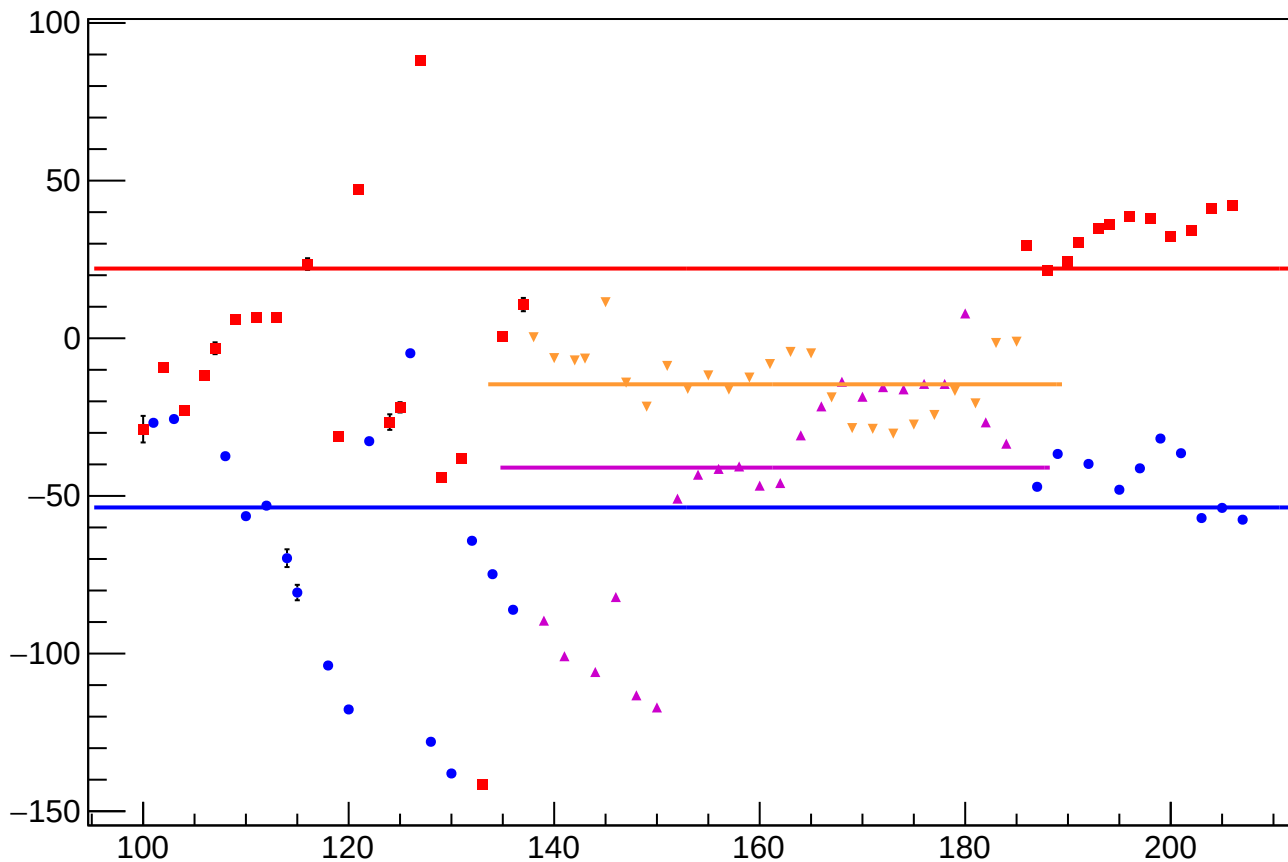
- sign  $-0.757 \pm 0.239$   $\chi^2/\text{NDF}: 990.5/53$

# diff\_bpm0i07Y\_rms vs Slug



|                             |                                    |                         |                                    |
|-----------------------------|------------------------------------|-------------------------|------------------------------------|
| Right In: 1267.182+/-0.267  | $\chi^2/\text{NDF}$ : 7322708.6/25 | + sign 1393.349+/-0.180 | $\chi^2/\text{NDF}$ : 8299210.7/50 |
| Left Out: 1497.713+/-0.243  | $\chi^2/\text{NDF}$ : 568629.4/24  | All: 1349.053+/-0.123   | $\chi^2/\text{NDF}$ : 17379320.9/1 |
| Right Out: 1132.450+/-0.225 | $\chi^2/\text{NDF}$ : 7158010.1/30 | - sign 1309.820+/-0.169 | $\chi^2/\text{NDF}$ : 8965496.5/53 |
| Left In: 1539.884+/-0.256   | $\chi^2/\text{NDF}$ : 380330.7/22  |                         |                                    |

# diff\_bpm1i02X\_mean vs Slug



Right In:  $-53.654 \pm 0.192$   $\chi^2/\text{NDF}: 17796.3/25$

Left Out:  $-14.597 \pm 0.183$   $\chi^2/\text{NDF}: 3159.3/24$

Right Out:  $22.114 \pm 0.182$   $\chi^2/\text{NDF}: 32087.2/30$

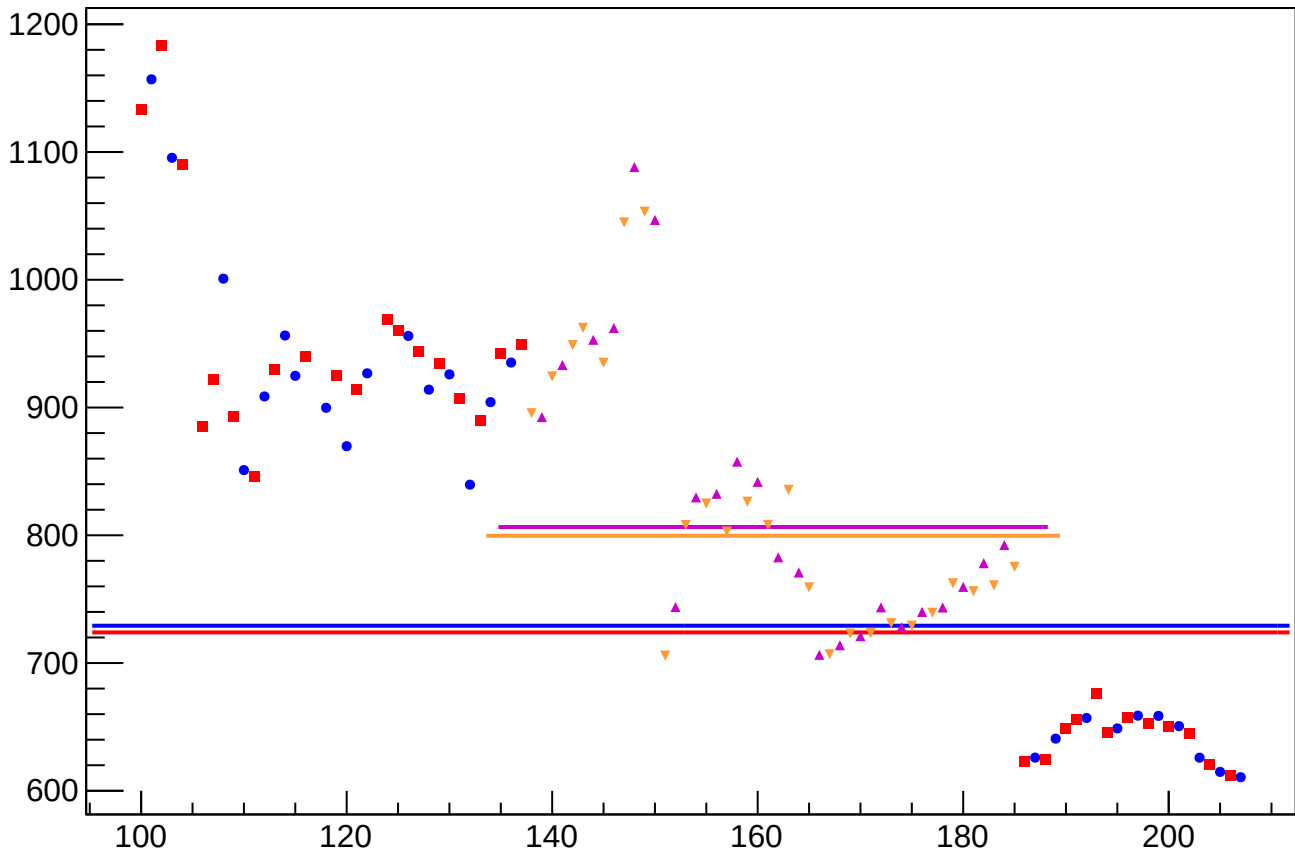
Left In:  $-41.021 \pm 0.190$   $\chi^2/\text{NDF}: 31066.6/22$

+ sign  $-33.182 \pm 0.132$   $\chi^2/\text{NDF}: 42643.1/50$

All:  $-20.511 \pm 0.093$   $\chi^2/\text{NDF}: 181688.9/104$

- sign  $-8.073 \pm 0.131$   $\chi^2/\text{NDF}: 120910.2/53$

# diff\_bpm1i02X\_rms vs Slug



Right In: 729.212 $\pm$ 0.136  $\chi^2$ /NDF: 1131446.0/25

Left Out: 799.639 $\pm$ 0.129  $\chi^2$ /NDF: 497430.7/24

Right Out: 723.970 $\pm$ 0.128  $\chi^2$ /NDF: 1218470.3/30

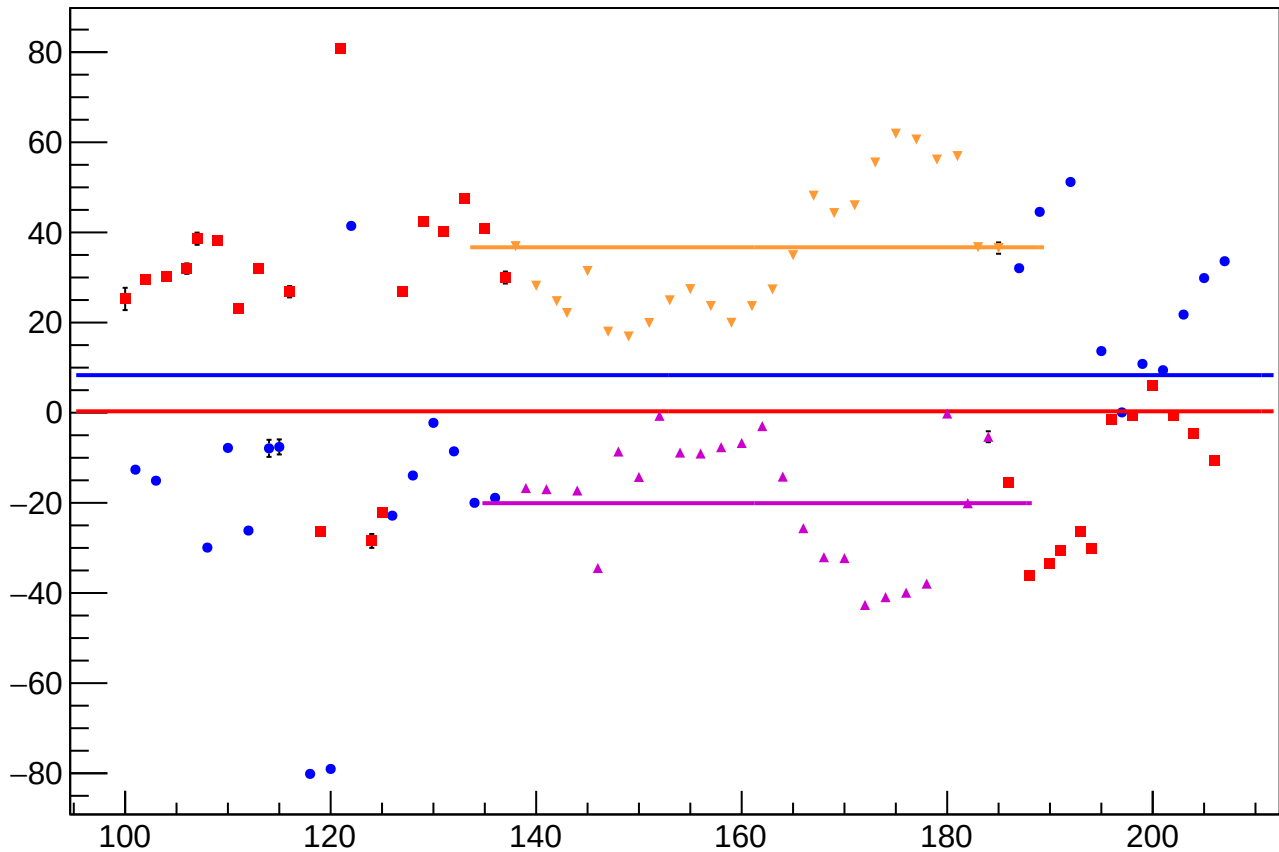
Left In: 806.478 $\pm$ 0.134  $\chi^2$ /NDF: 511294.8/22

+ sign 766.127 $\pm$ 0.094  $\chi^2$ /NDF: 1769915.5/50

All: 764.761 $\pm$ 0.066  $\chi^2$ /NDF: 3697379.3/104

- sign 763.420 $\pm$ 0.093  $\chi^2$ /NDF: 1927042.3/53

diff\_bpm1i02Y\_mean vs Slug



Right In:  $8.334 \pm 0.140$   $\chi^2/\text{NDF}$ : 43829.6/25

Left Out:  $36.705 \pm 0.145$   $\chi^2/\text{NDF}$ : 10231.1/24

Right Out:  $0.310 \pm 0.133$   $\chi^2/\text{NDF}$ : 43630.8/30

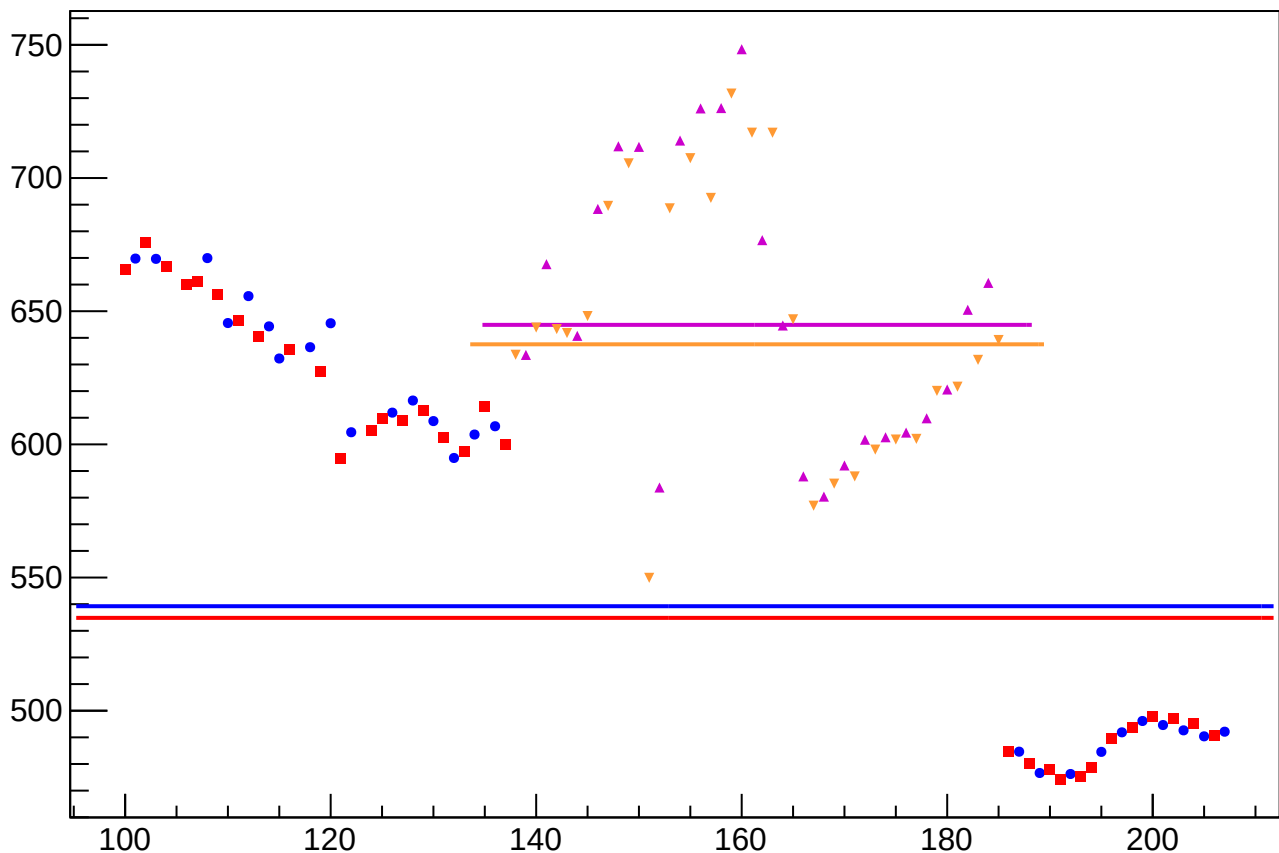
Left In:  $-20.069 \pm 0.151$   $\chi^2/\text{NDF}$ : 8560.6/22

+ sign  $22.021 \pm 0.101$   $\chi^2/\text{NDF}$ : 73757.5/50

All:  $6.542 \pm 0.071$   $\chi^2/\text{NDF}$ : 182597.8/104

- sign  $-8.560 \pm 0.100$   $\chi^2/\text{NDF}$ : 62446.6/53

# diff\_bpm1i02Y\_rms vs Slug



Right In: 539.236+/-0.099  $\chi^2/\text{NDF}$ : 494754.4/25

Left Out: 637.569+/-0.103  $\chi^2/\text{NDF}$ : 236539.6/24

Right Out: 534.860+/-0.094  $\chi^2/\text{NDF}$ : 540263.4/30

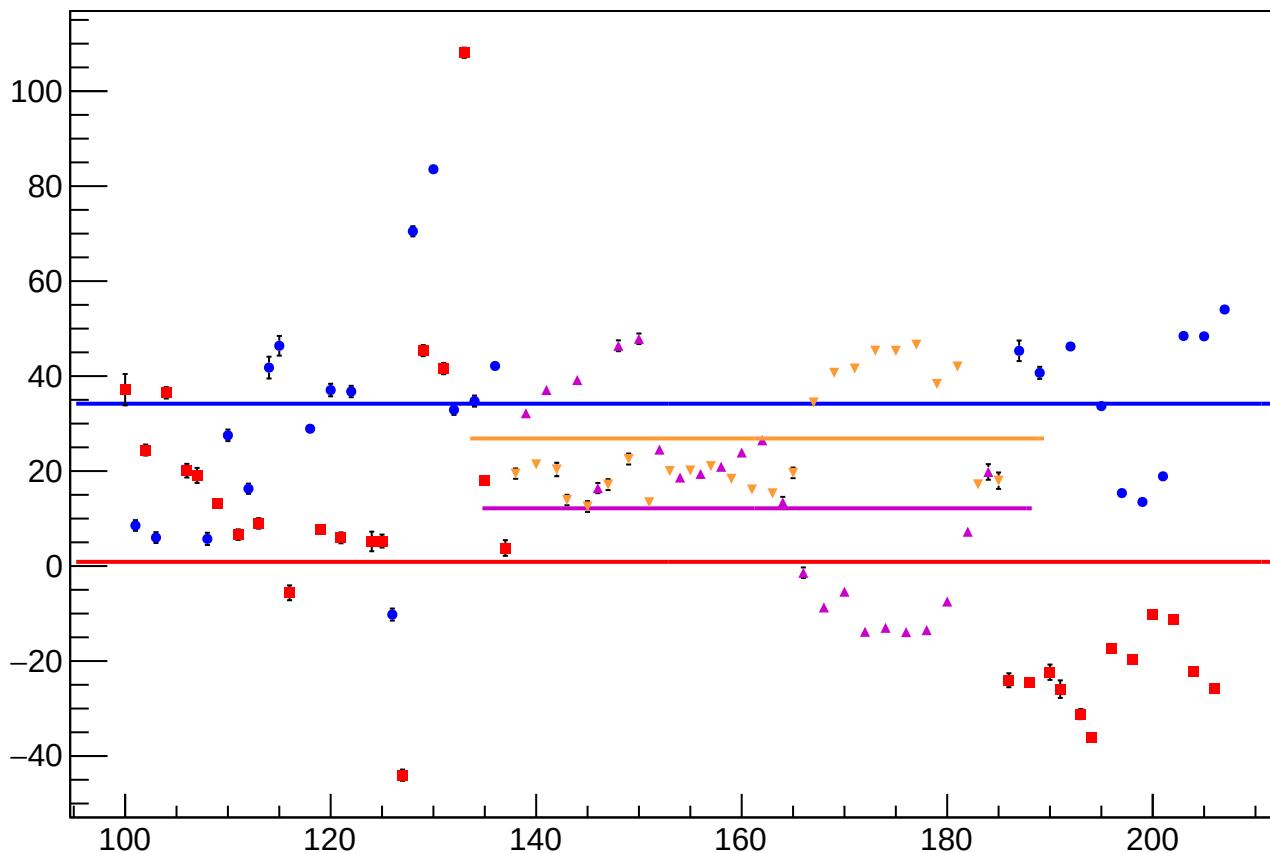
Left In: 644.873+/-0.107  $\chi^2/\text{NDF}$ : 229560.3/22

+ sign 586.678+/-0.071  $\chi^2/\text{NDF}$ : 1204543.8/50

All: 584.685+/-0.050  $\chi^2/\text{NDF}$ : 2573604.5/104

- sign 582.741+/-0.071  $\chi^2/\text{NDF}$ : 1367523.0/53

# diff\_bpm1i04X\_mean vs Slug



Right In: 34.189+/-0.219  $\chi^2/\text{NDF}$ : 8705.8/25

Left Out: 26.866+/-0.207  $\chi^2/\text{NDF}$ : 3390.4/24

Right Out: 0.887+/-0.211  $\chi^2/\text{NDF}$ : 22527.1/30

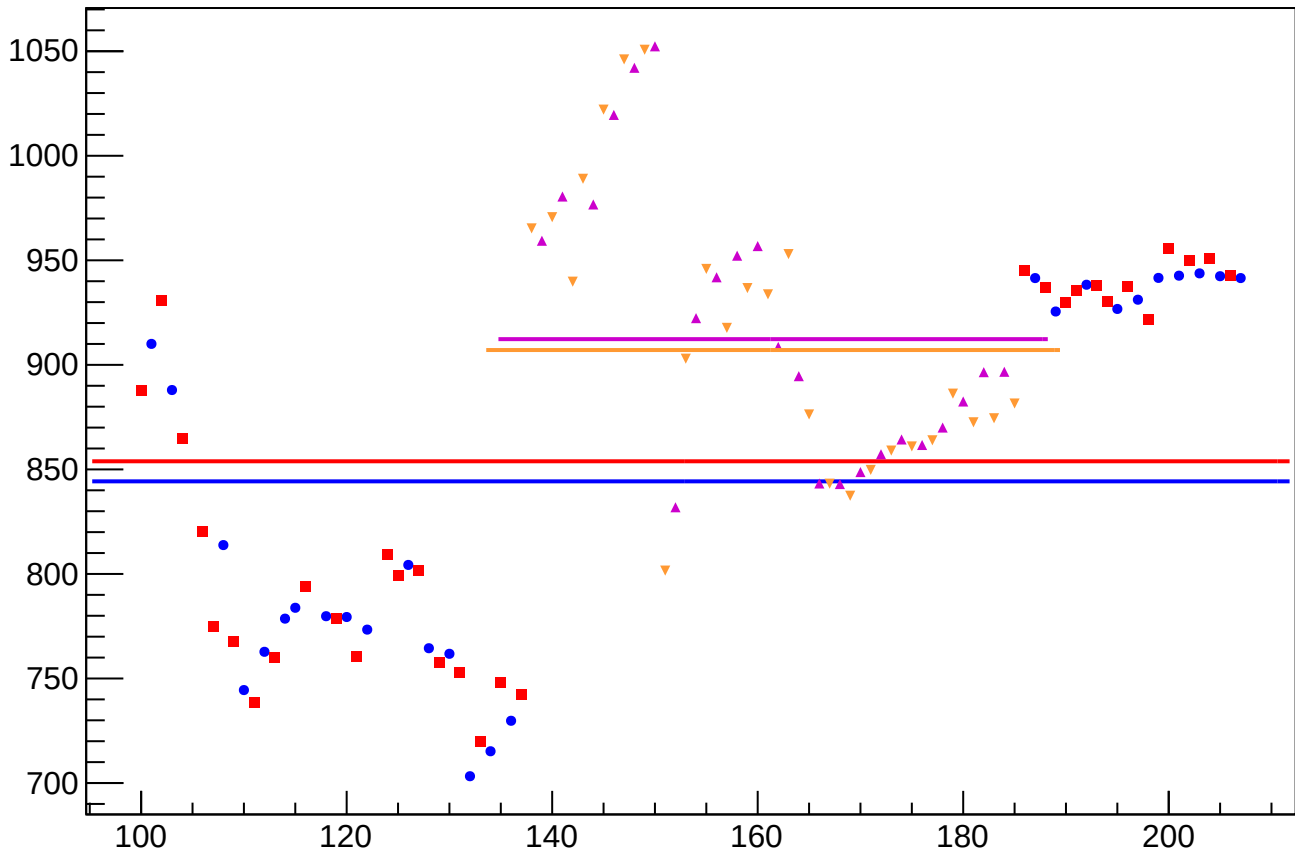
Left In: 12.159+/-0.214  $\chi^2/\text{NDF}$ : 8547.0/22

+ sign 30.311+/-0.150  $\chi^2/\text{NDF}$ : 12686.6/50

All: 18.374+/-0.106  $\chi^2/\text{NDF}$ : 57751.0/104

- sign 6.461+/-0.150  $\chi^2/\text{NDF}$ : 32480.6/53

# diff\_bpm1i04X\_rms vs Slug



Right In: 844.286 $\pm$ 0.155  $\chi^2$ /NDF: 341684.0/25

Left Out: 907.089 $\pm$ 0.146  $\chi^2$ /NDF:194606.8/24

Right Out: 853.882 $\pm$ 0.149  $\chi^2$ /NDF: 342212.1/30

Left In: 912.301 $\pm$ 0.151  $\chi^2$ /NDF:174715.2/22

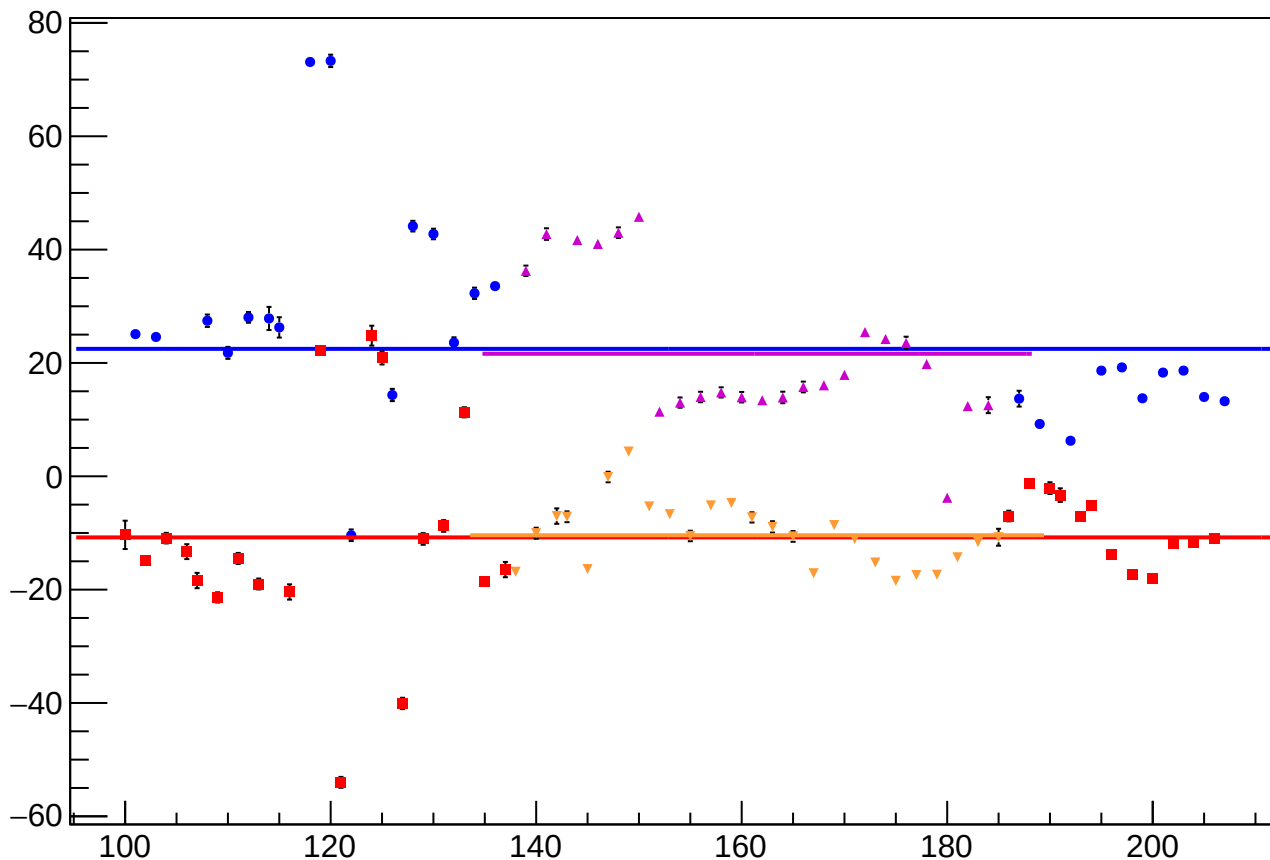
+ sign 877.550 $\pm$ 0.106  $\chi^2$ /NDF: 623155.2/50

All: 880.162 $\pm$ 0.075  $\chi^2$ /NDF: 1216853.0/104

- sign 882.769 $\pm$ 0.106  $\chi^2$ /NDF: 592492.6/53



# diff\_bpm1i04Y\_mean vs Slug



Right In:  $22.487 \pm 0.160$   $\chi^2/\text{NDF}: 9823.9/25$

Left Out:  $-10.406 \pm 0.176$   $\chi^2/\text{NDF}: 1041.8/24$

Right Out:  $-10.782 \pm 0.155$   $\chi^2/\text{NDF}: 7303.3/30$

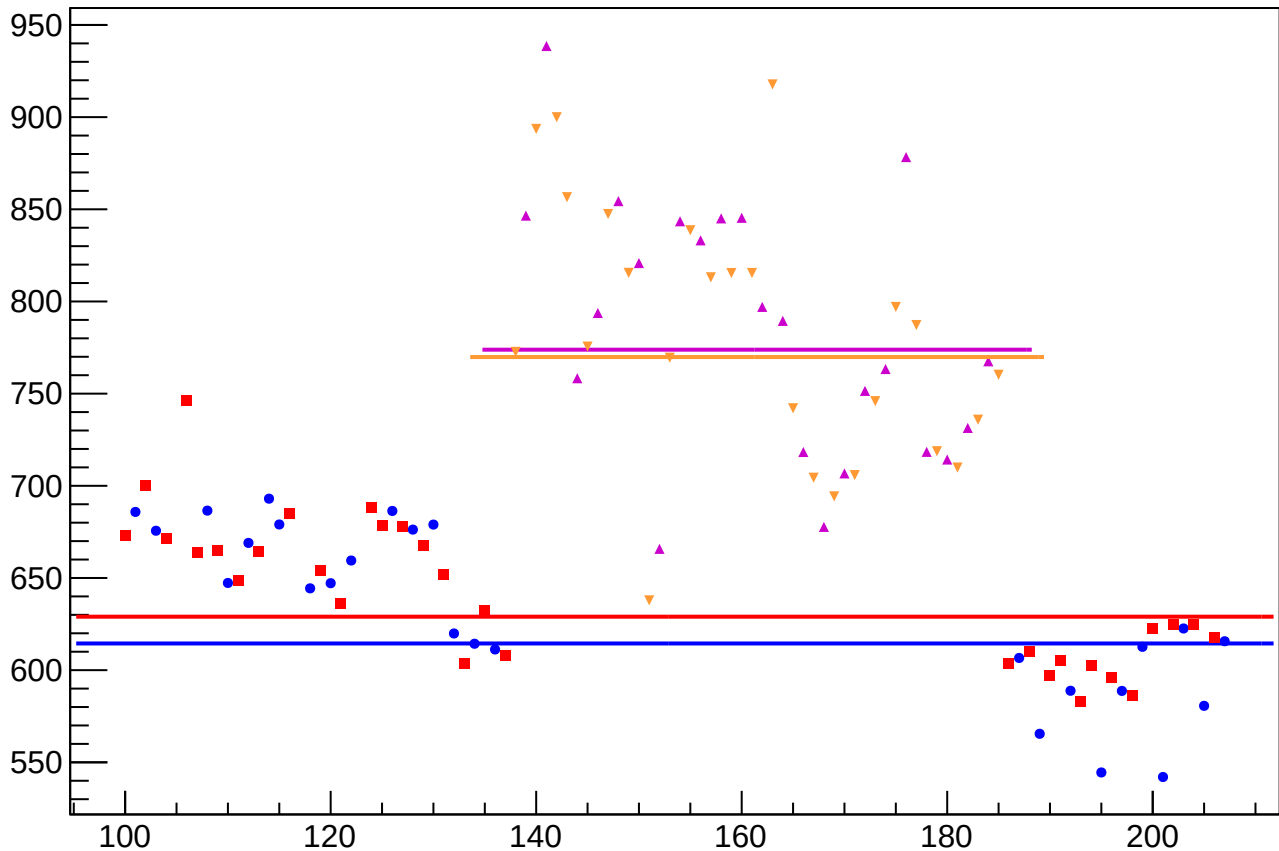
Left In:  $21.621 \pm 0.182$   $\chi^2/\text{NDF}: 5241.8/22$

+ sign  $7.648 \pm 0.118$   $\chi^2/\text{NDF}: 30037.2/50$

All:  $5.257 \pm 0.084$   $\chi^2/\text{NDF}: 61755.6/104$

- sign  $2.870 \pm 0.118$   $\chi^2/\text{NDF}: 30900.9/53$

# diff\_bpm1i04Y\_rms vs Slug



Right In: 614.478+/-0.113  $\chi^2/\text{NDF}$ : 159345.7/25

Left Out: 769.850+/-0.124  $\chi^2/\text{NDF}$ : 304526.6/24

Right Out: 629.001+/-0.110  $\chi^2/\text{NDF}$ : 98215.8/30

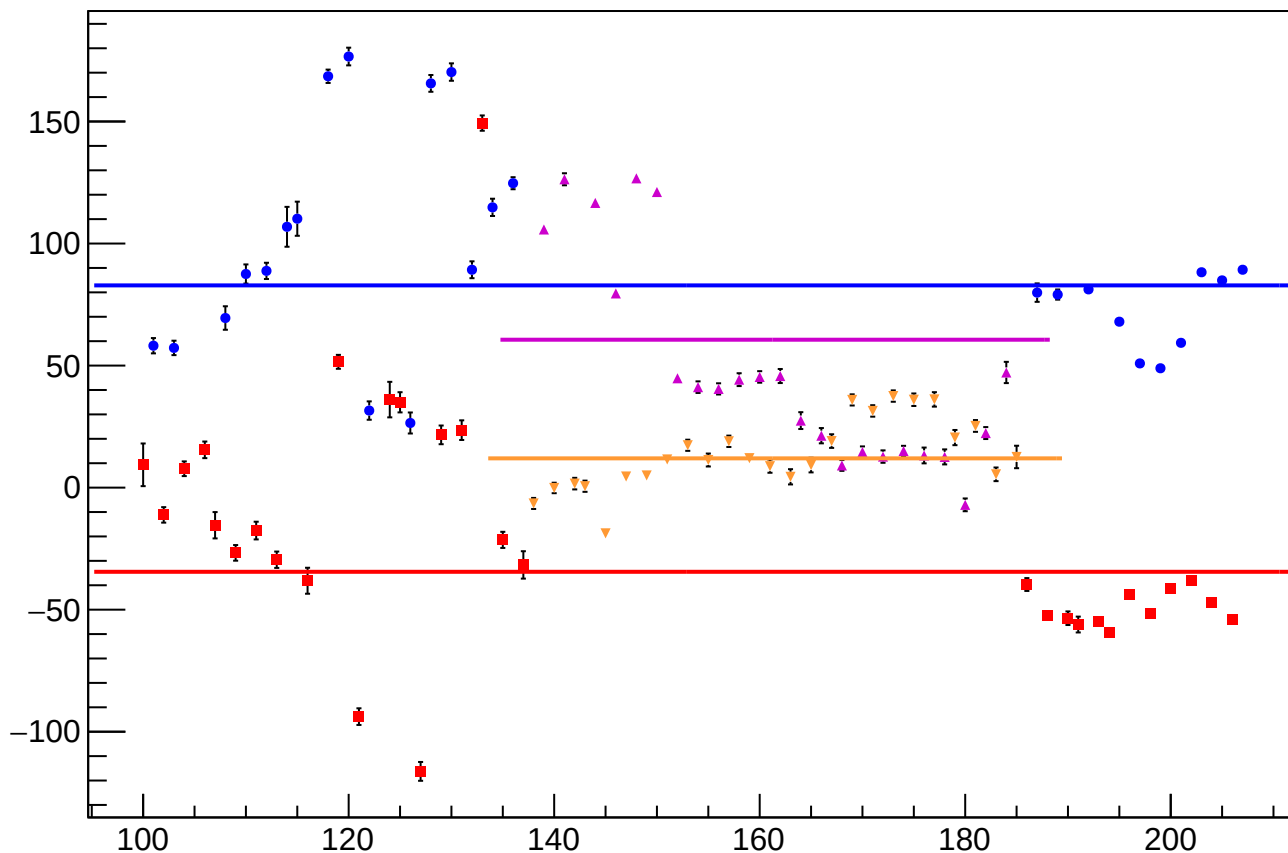
Left In: 773.845+/-0.129  $\chi^2/\text{NDF}$ : 282843.1/22

+ sign 684.572+/-0.084  $\chi^2/\text{NDF}$ : 1319349.7/50

All: 687.303+/-0.059  $\chi^2/\text{NDF}$ : 2436081.8/104

- sign 690.028+/-0.084  $\chi^2/\text{NDF}$ : 1114600.0/53

# diff\_bpm1i06X\_mean vs Slug



Right In:  $82.854 \pm 0.489$   $\chi^2/\text{NDF}$ : 4696.6/25

Left Out:  $11.989 \pm 0.472$   $\chi^2/\text{NDF}$ : 947.1/24

Right Out:  $-34.483 \pm 0.471$   $\chi^2/\text{NDF}$ : 7298.9/30

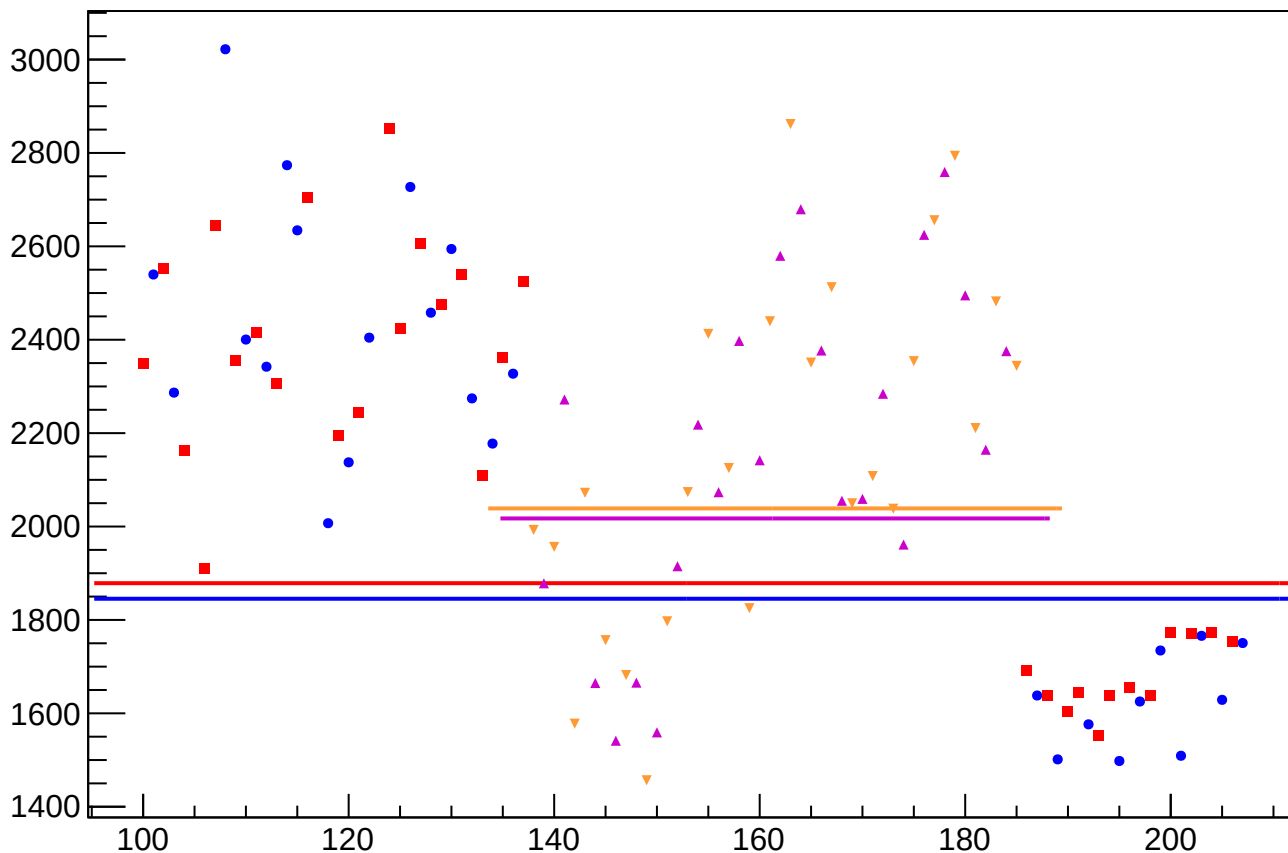
Left In:  $60.598 \pm 0.481$   $\chi^2/\text{NDF}$ : 8638.1/22

+ sign  $46.157 \pm 0.339$   $\chi^2/\text{NDF}$ : 16533.5/50

All:  $28.962 \pm 0.239$   $\chi^2/\text{NDF}$ : 57519.8/104

- sign  $12.056 \pm 0.336$   $\chi^2/\text{NDF}$ : 35893.5/53

# diff\_bpm1i06X\_rms vs Slug



Right In: 1845.371 $\pm$ 0.346  $\chi^2$ /NDF: 1184950.1/25

Left Out: 2038.784 $\pm$ 0.333  $\chi^2$ /NDF:1123518.3/24

Right Out: 1878.699 $\pm$ 0.333  $\chi^2$ /NDF: 978753.3/30

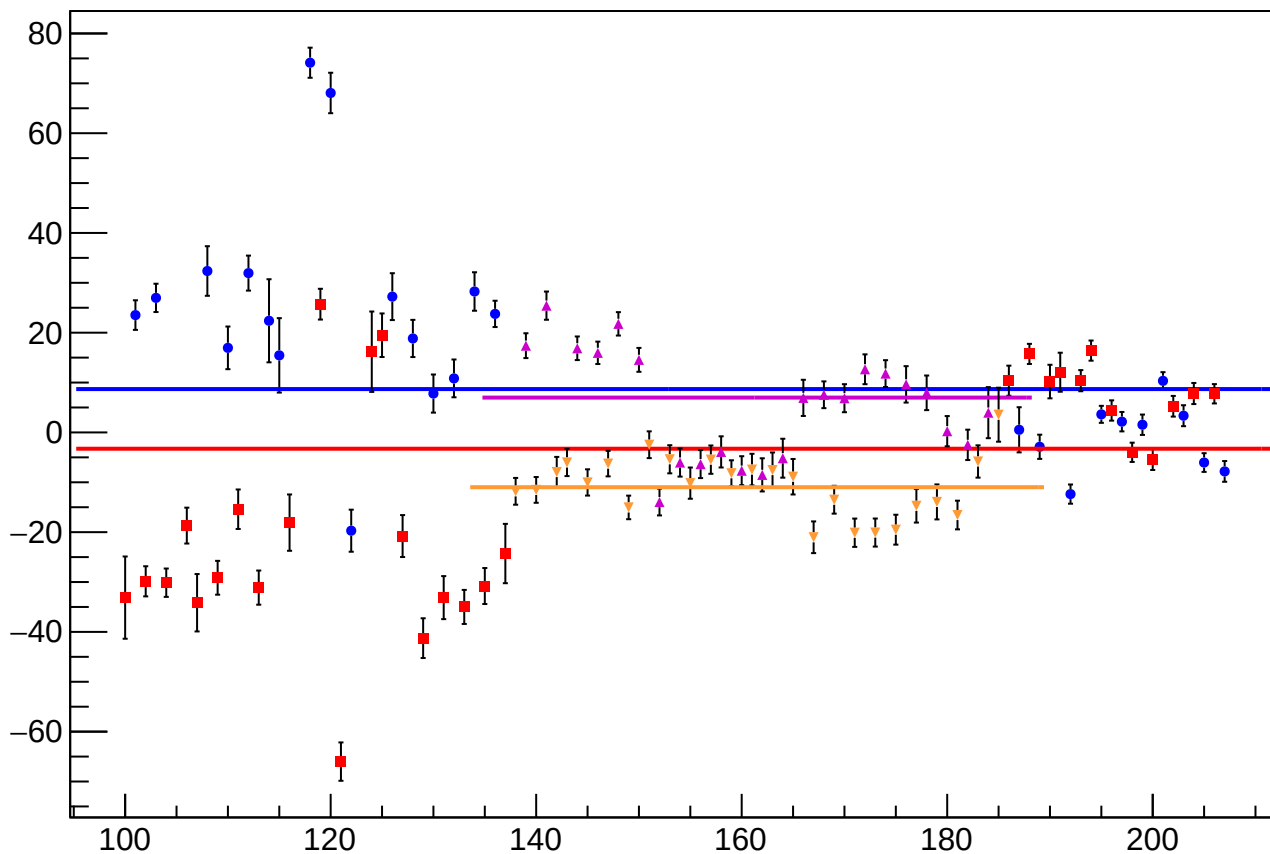
Left In: 2017.328 $\pm$ 0.340  $\chi^2$ /NDF:1050043.3/22

+ sign 1945.527 $\pm$ 0.240  $\chi^2$ /NDF: 2470706.7/50

All: 1946.045 $\pm$ 0.169  $\chi^2$ /NDF: 4584359.6/10

- sign 1946.554 $\pm$ 0.238  $\chi^2$ /NDF: 2113643.6/53

# diff\_bpm1i06Y\_mean vs Slug



Right In:  $8.692 \pm 0.531$   $\chi^2/\text{NDF}$ : 1262.1/25

Left Out:  $-10.985 \pm 0.586$   $\chi^2/\text{NDF}$ : 87.6/24

Right Out:  $-3.268 \pm 0.522$   $\chi^2/\text{NDF}$ : 1437.2/30

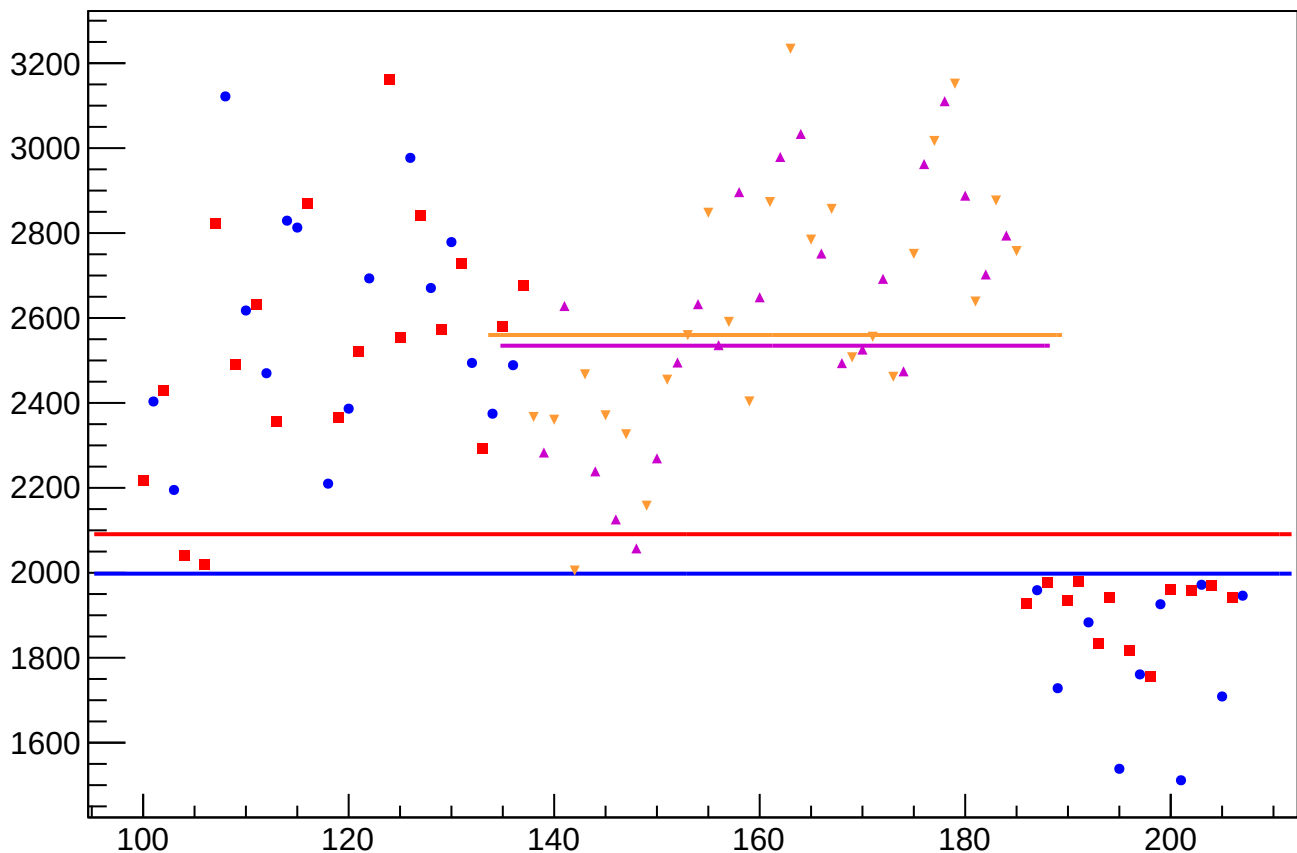
Left In:  $6.985 \pm 0.598$   $\chi^2/\text{NDF}$ : 339.5/22

+ sign  $-0.180 \pm 0.393$   $\chi^2/\text{NDF}$ : 1969.1/50

All:  $0.493 \pm 0.278$   $\chi^2/\text{NDF}$ : 3918.2/104

- sign  $1.166 \pm 0.394$   $\chi^2/\text{NDF}$ : 1943.3/53

# diff\_bpm1i06Y\_rms vs Slug



Right In: 1998.009 $\pm$ 0.375  $\chi^2$ /NDF: 1126465.9/25

Left Out: 2559.931 $\pm$ 0.414  $\chi^2$ /NDF: 450188.5/24

Right Out: 2090.885 $\pm$ 0.369  $\chi^2$ /NDF: 661779.0/30

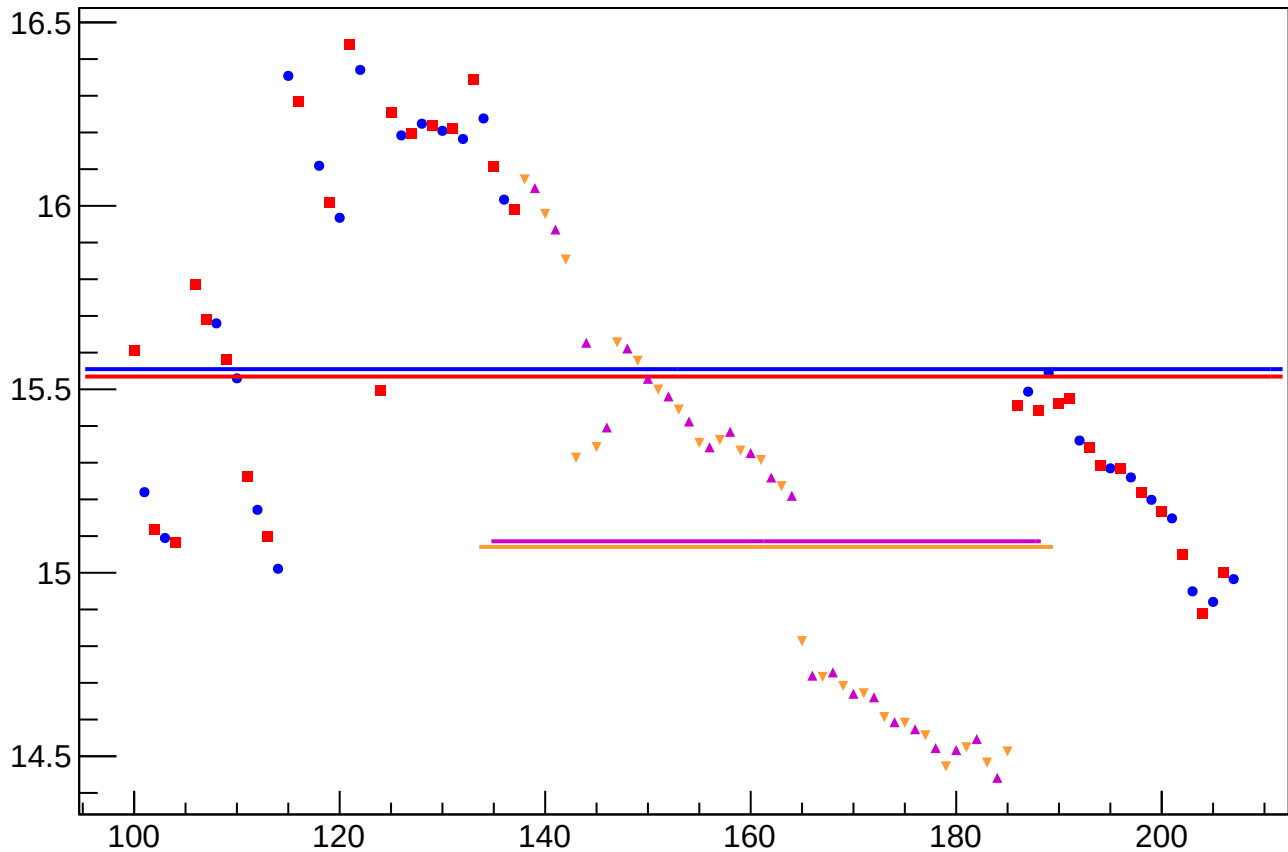
Left In: 2534.780 $\pm$ 0.423  $\chi^2$ /NDF: 463621.9/22

+ sign 2251.360 $\pm$ 0.278  $\chi^2$ /NDF: 2586900.8/50

All: 2267.102 $\pm$ 0.197  $\chi^2$ /NDF: 4343171.0/10

- sign 2282.856 $\pm$ 0.278  $\chi^2$ /NDF: 1749863.2/53

# yield\_sam1\_mean vs Slug



Right In: 15.555 $\pm$ 0.000  $\chi^2$ /NDF: 19619628665.8/25

Left Out: 15.070 $\pm$ 0.000  $\chi^2$ /NDF: 43718295237.2/24

Right Out: 15.535 $\pm$ 0.000  $\chi^2$ /NDF: 18141443816.0/30

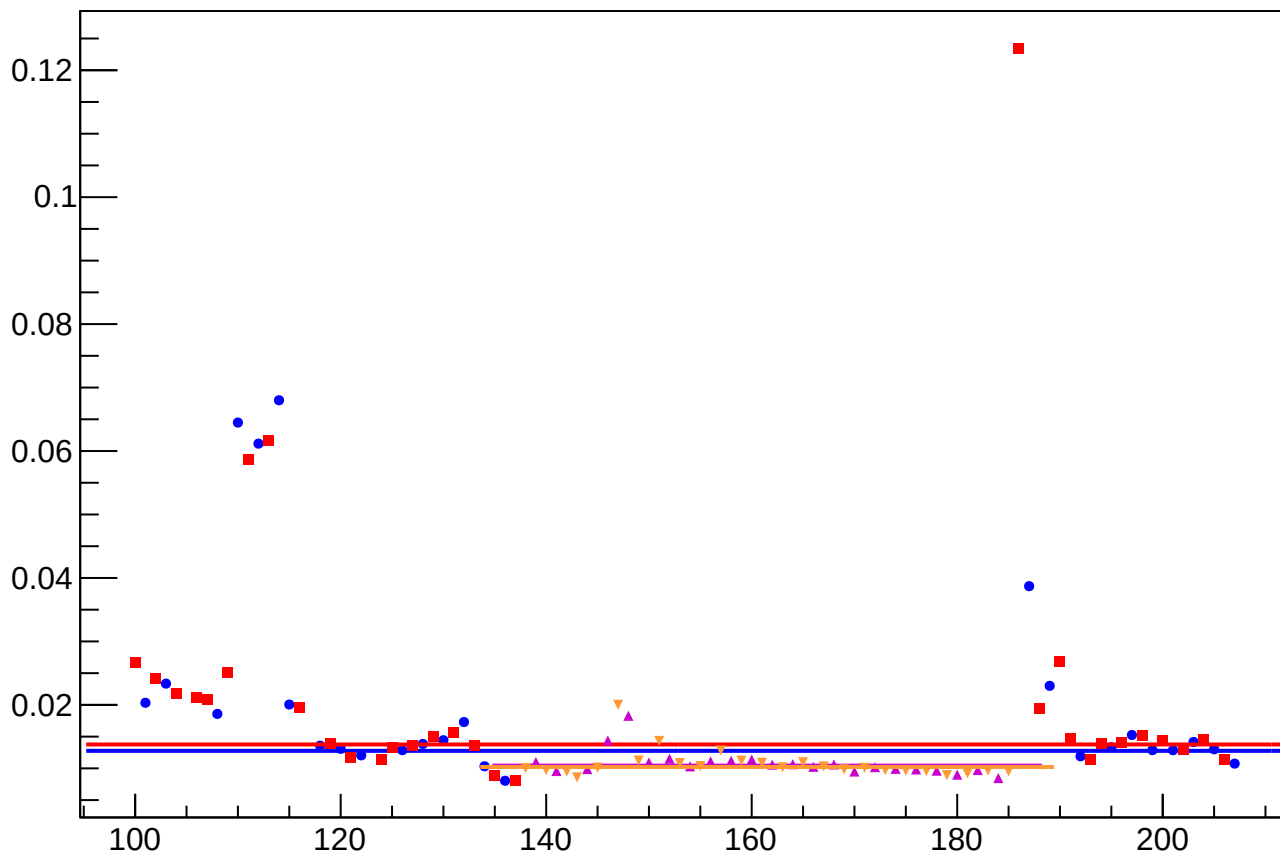
Left In: 15.086 $\pm$ 0.000  $\chi^2$ /NDF: 39504896066.7/22

+ sign 15.221 $\pm$ 0.000  $\chi^2$ /NDF: 76003812794.7/50

All: 15.224 $\pm$ 0.000  $\chi^2$ /NDF: 143732317288.

- sign 15.228 $\pm$ 0.000  $\chi^2$ /NDF: 67722544713.1/53

# yield\_sam1\_rms vs Slug



Right In:  $0.013 \pm 0.000$   $\chi^2/\text{NDF}$ : 2816662.8/25

Left Out:  $0.010 \pm 0.000$   $\chi^2/\text{NDF}$ : 760322.0/24

Right Out:  $0.014 \pm 0.000$   $\chi^2/\text{NDF}$ : 3340044.5/30

Left In:  $0.010 \pm 0.000$   $\chi^2/\text{NDF}$ : 597752.6/22

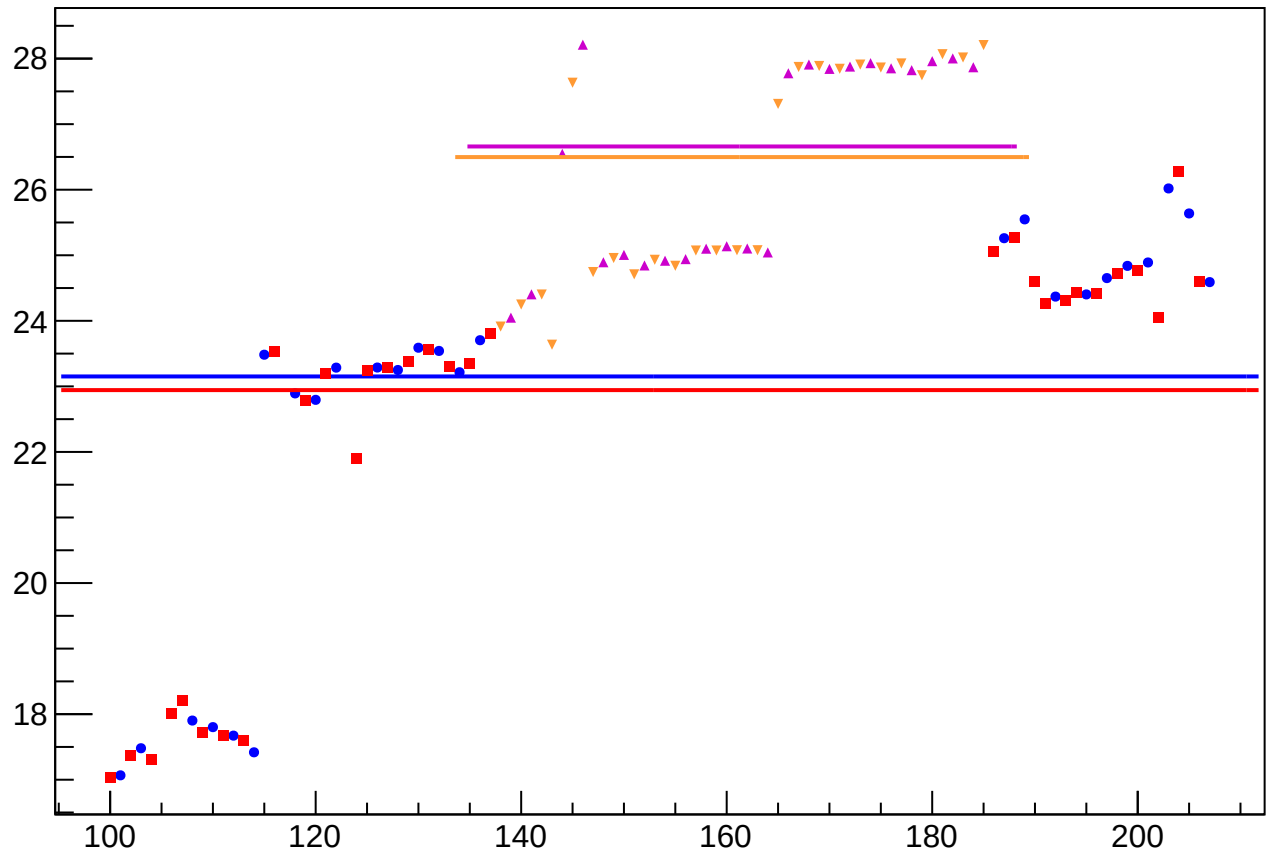
+ sign  $0.011 \pm 0.000$   $\chi^2/\text{NDF}$ : 4274180.9/50

All:  $0.011 \pm 0.000$   $\chi^2/\text{NDF}$ : 9378705.1/104

- sign  $0.011 \pm 0.000$   $\chi^2/\text{NDF}$ : 5049537.5/53



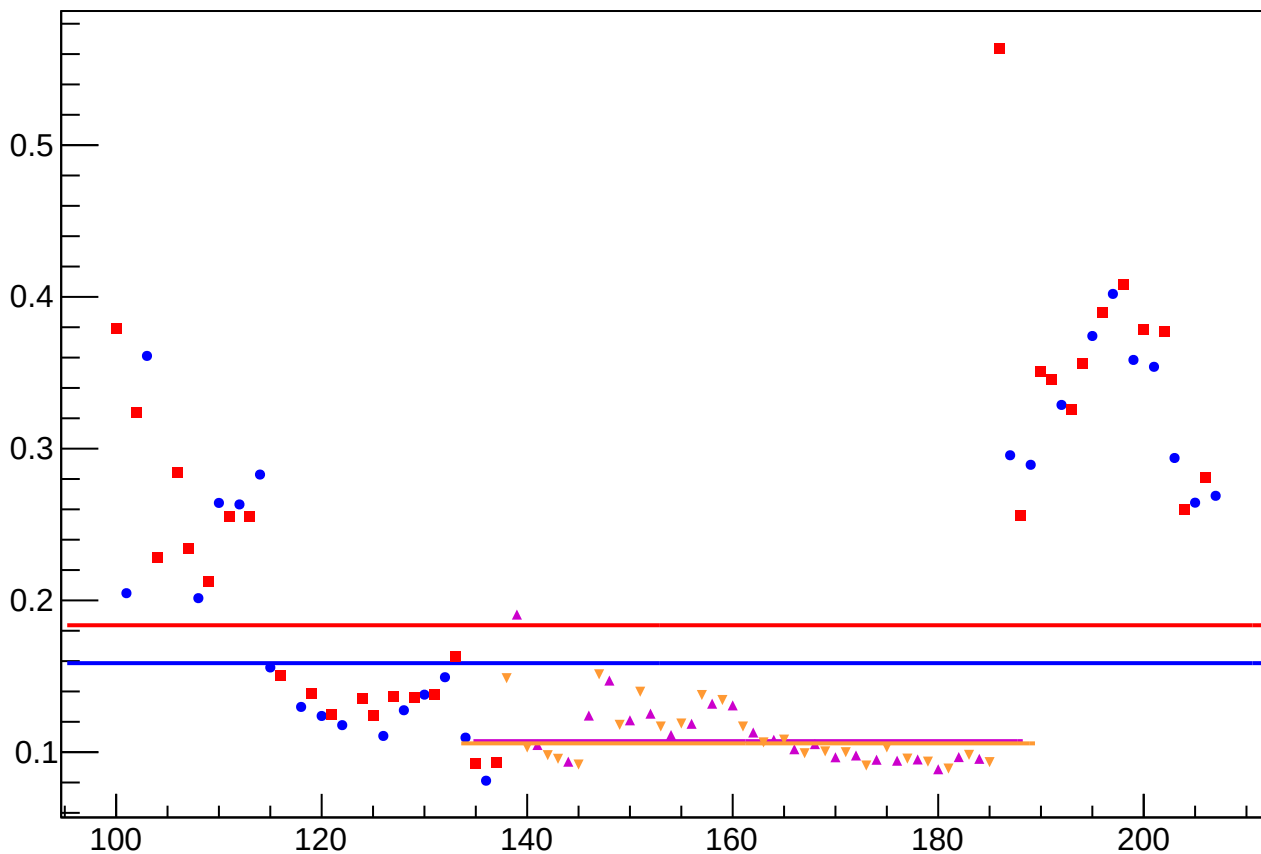
# yield\_sam2\_mean vs Slug



Right In: 23.151+/-0.000     $\chi^2/\text{NDF}$ : 1576599721.6/25  
 Left Out: 26.498+/-0.000     $\chi^2/\text{NDF}$ : 3909357236.5/24  
 Right Out: 22.943+/-0.000     $\chi^2/\text{NDF}$ : 1653544160.0/30  
 Left In: 26.660+/-0.000     $\chi^2/\text{NDF}$ : 2886823196.4/22

+ sign 25.761+/-0.000     $\chi^2/\text{NDF}$ : 9141692295.8/50  
 All: 25.818+/-0.000     $\chi^2/\text{NDF}$ : 17635065182.2  
 - sign 25.880+/-0.000     $\chi^2/\text{NDF}$ : 8480543161.8/53

# yield\_sam2\_rms vs Slug



Right In: 0.159+/-0.000  $\chi^2/\text{NDF}$ : 6448226.2/25

Left Out: 0.106+/-0.000  $\chi^2/\text{NDF}$ : 756185.0/24

Right Out: 0.184+/-0.000  $\chi^2/\text{NDF}$ : 6211032.9/30

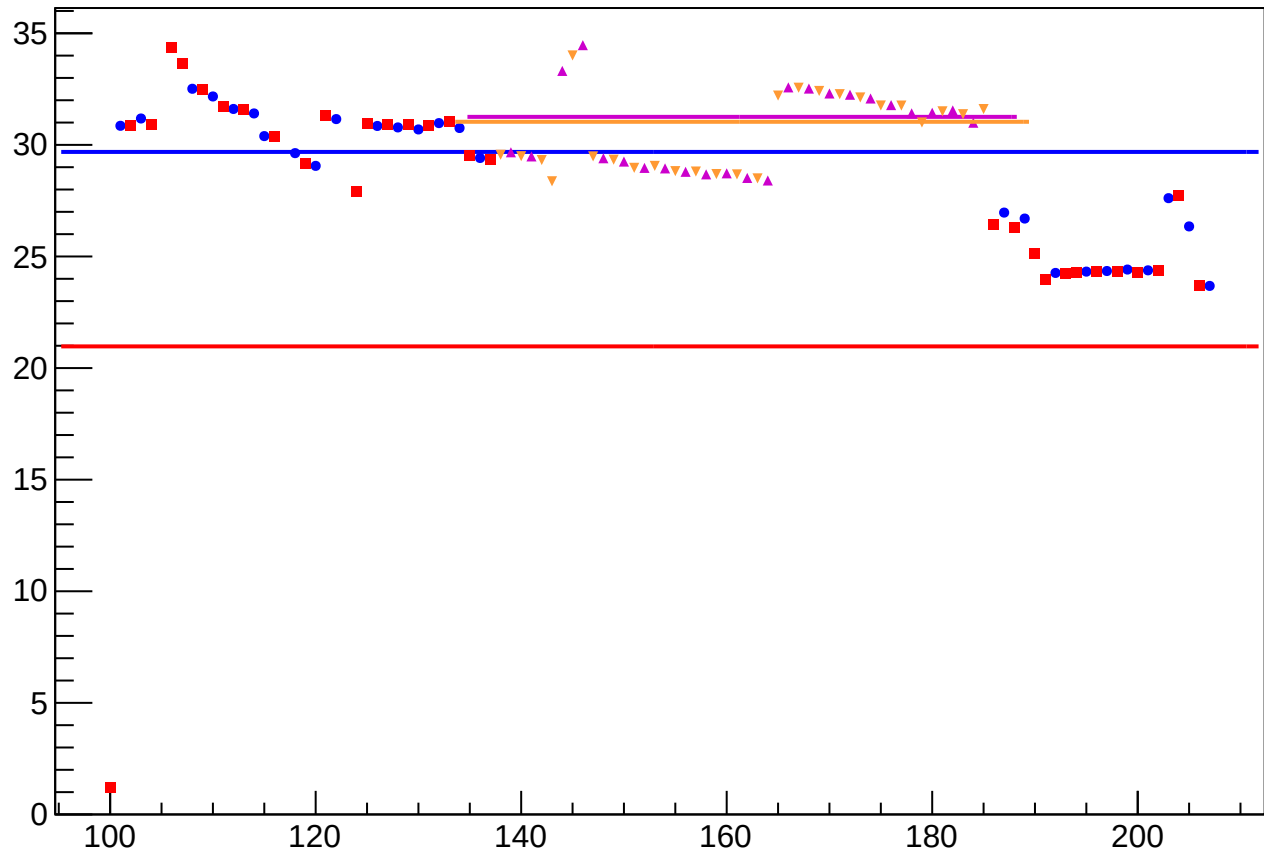
Left In: 0.107+/-0.000  $\chi^2/\text{NDF}$ : 859458.3/22

+ sign 0.117+/-0.000  $\chi^2/\text{NDF}$ : 9029553.3/50

All: 0.120+/-0.000  $\chi^2/\text{NDF}$ : 19488771.7/104

- sign 0.123+/-0.000  $\chi^2/\text{NDF}$ : 10397329.9/53

# yield\_sam3\_mean vs Slug



Right In: 29.685 $\pm$ 0.000  $\chi^2$ /NDF: 4587699944.8/25

Left Out: 31.035 $\pm$ 0.000  $\chi^2$ /NDF: 11897463221.2/24

Right Out: 20.971 $\pm$ 0.000  $\chi^2$ /NDF: 225810659227.2/30

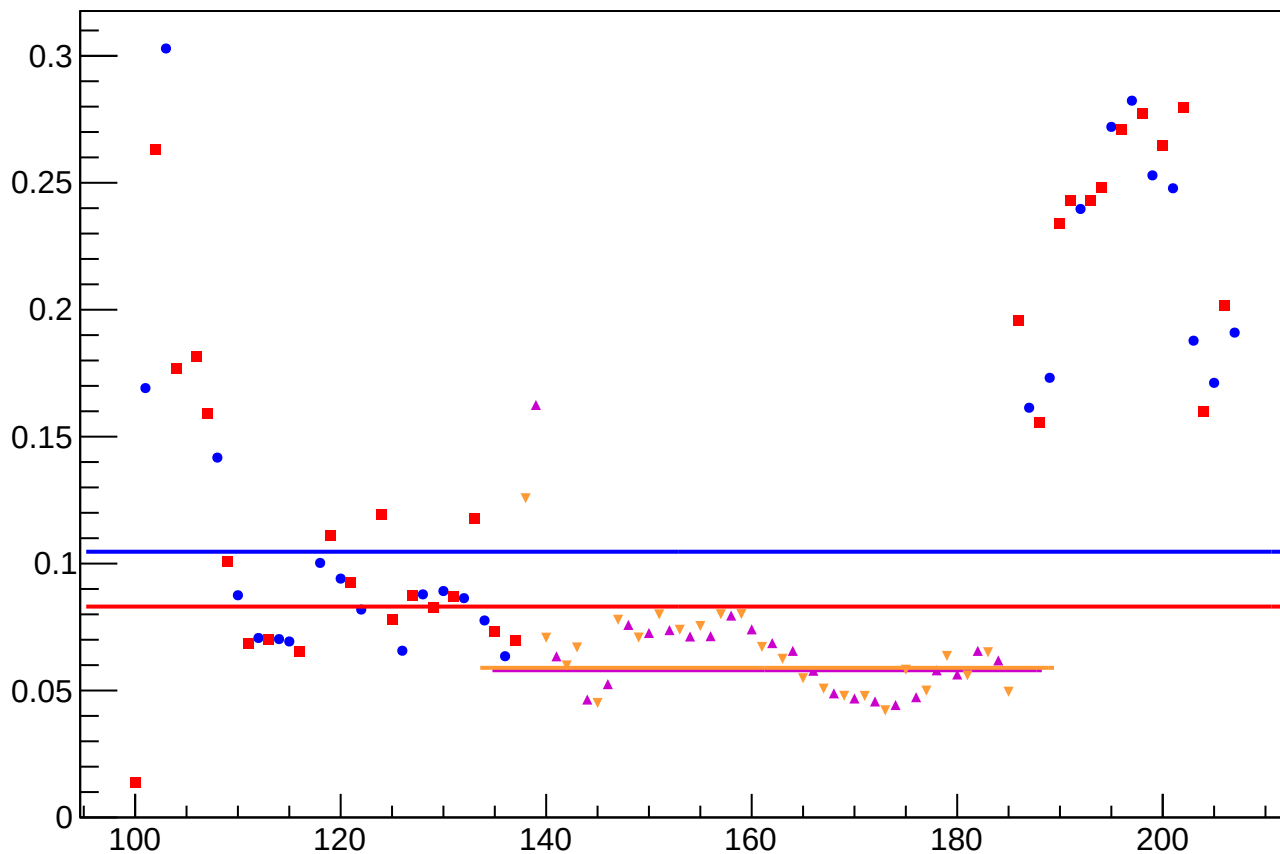
Left In: 31.256 $\pm$ 0.000  $\chi^2$ /NDF: 12589744083.0/22

+ sign 30.793 $\pm$ 0.000  $\chi^2$ /NDF: 17886280002.0/50

All: 29.794 $\pm$ 0.000  $\chi^2$ /NDF: 369461754477.

- sign 28.830 $\pm$ 0.000  $\chi^2$ /NDF: 341349750494.5/53

# yield\_sam3\_rms vs Slug



Right In: 0.105 $\pm$ 0.000  $\chi^2$ /NDF: 6157401.3/25

Left Out: 0.059 $\pm$ 0.000  $\chi^2$ /NDF:1536601.0/24

Right Out: 0.083 $\pm$ 0.000  $\chi^2$ /NDF: 11943009.7/30

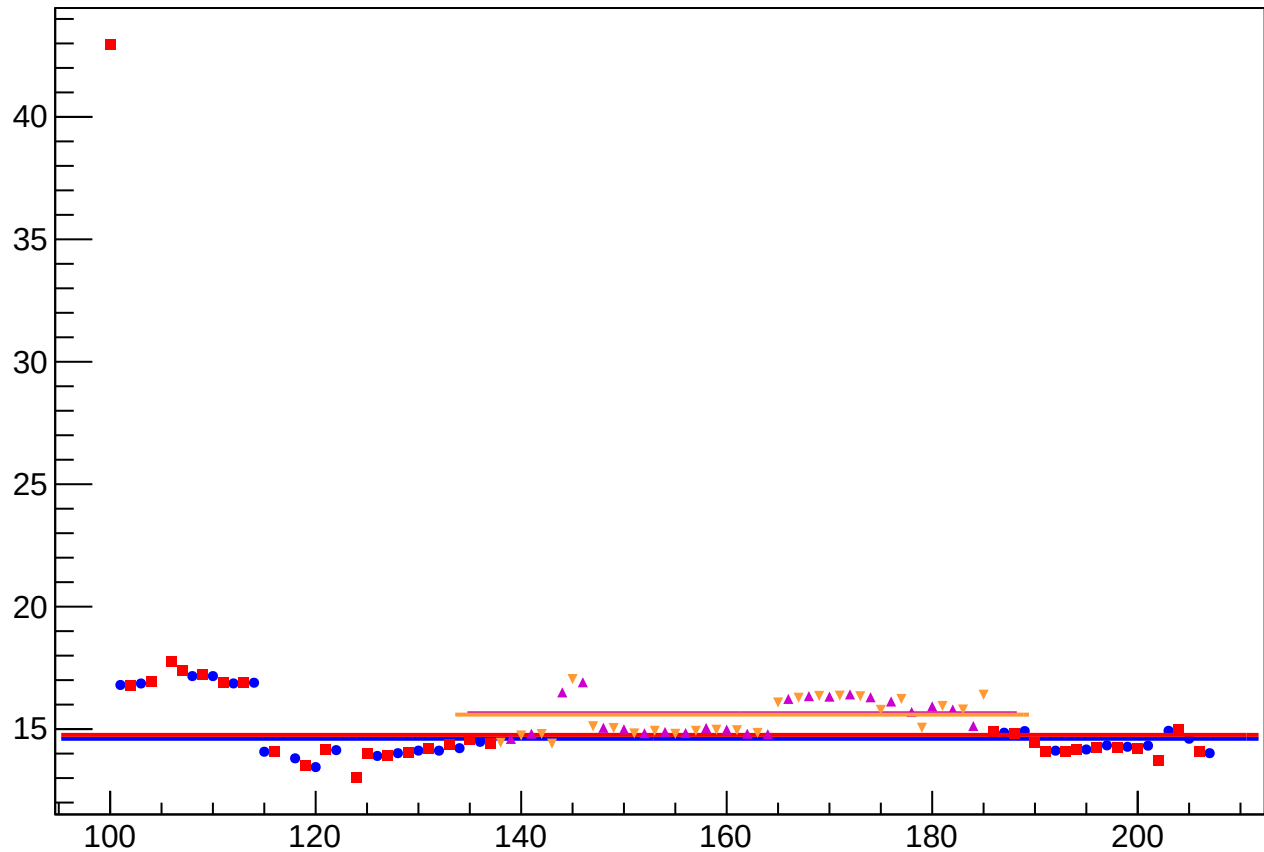
Left In: 0.058 $\pm$ 0.000  $\chi^2$ /NDF:1716553.7/22

+ sign 0.067 $\pm$ 0.000  $\chi^2$ /NDF: 10907584.1/50

All: 0.065 $\pm$ 0.000  $\chi^2$ /NDF: 25847574.6/104

- sign 0.064 $\pm$ 0.000  $\chi^2$ /NDF: 14884035.2/53

# yield\_sam4\_mean vs Slug



Right In: 14.605+/-0.000  $\chi^2/\text{NDF}$ : 1223207534.4/25

Left Out: 15.591+/-0.000  $\chi^2/\text{NDF}$ : 2257437225.0/24

Right Out: 14.765+/-0.000  $\chi^2/\text{NDF}$ : 1805734463.6/30

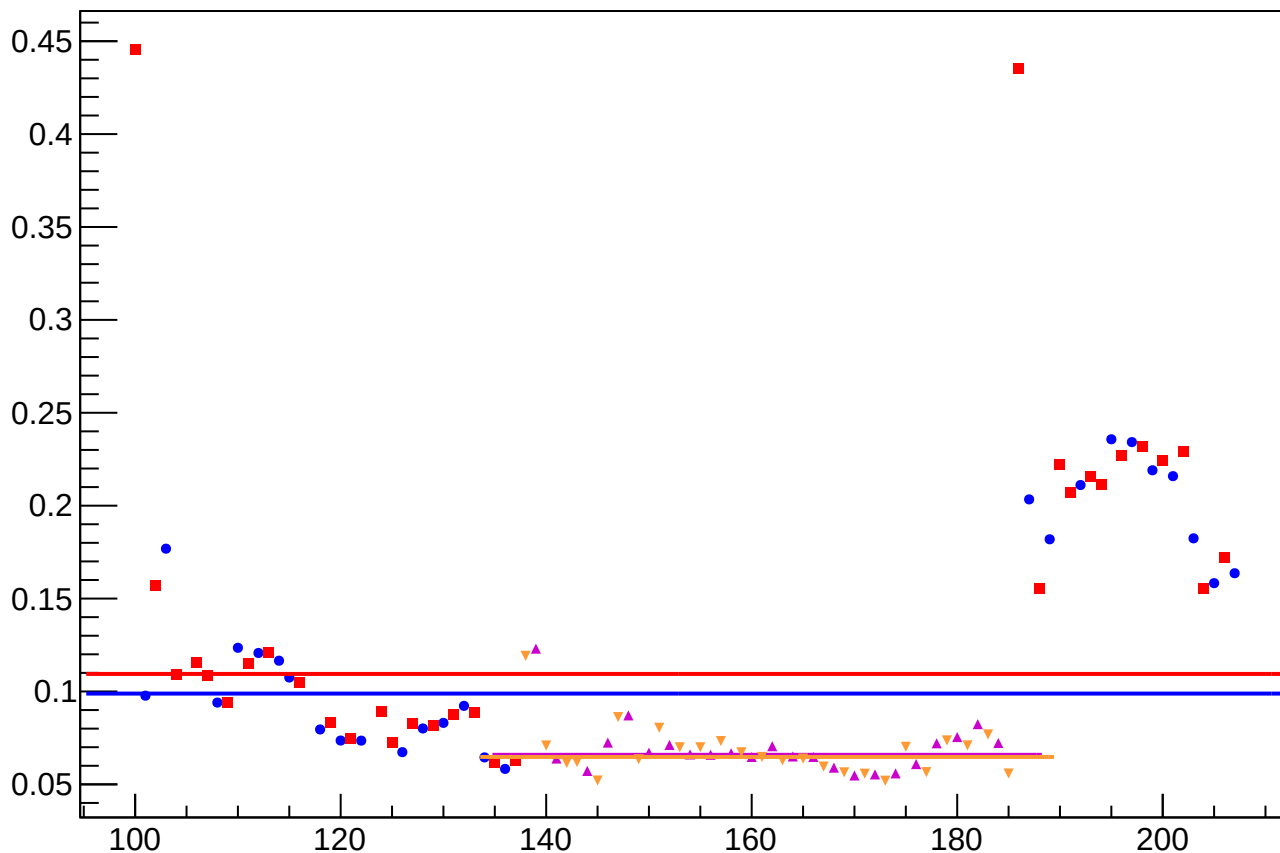
Left In: 15.645+/-0.000  $\chi^2/\text{NDF}$ : 1858454747.6/22

+ sign 15.369+/-0.000  $\chi^2/\text{NDF}$ : 4335611457.8/50

All: 15.406+/-0.000  $\chi^2/\text{NDF}$ : 8638469972.6/100

- sign 15.446+/-0.000  $\chi^2/\text{NDF}$ : 4288479620.2/53

# yield\_sam4\_rms vs Slug



Right In: 0.099 $\pm$ 0.000  $\chi^2$ /NDF: 5447184.9/25

Left Out: 0.065 $\pm$ 0.000  $\chi^2$ /NDF:855753.3/24

Right Out: 0.109 $\pm$ 0.000  $\chi^2$ /NDF: 5535201.4/30

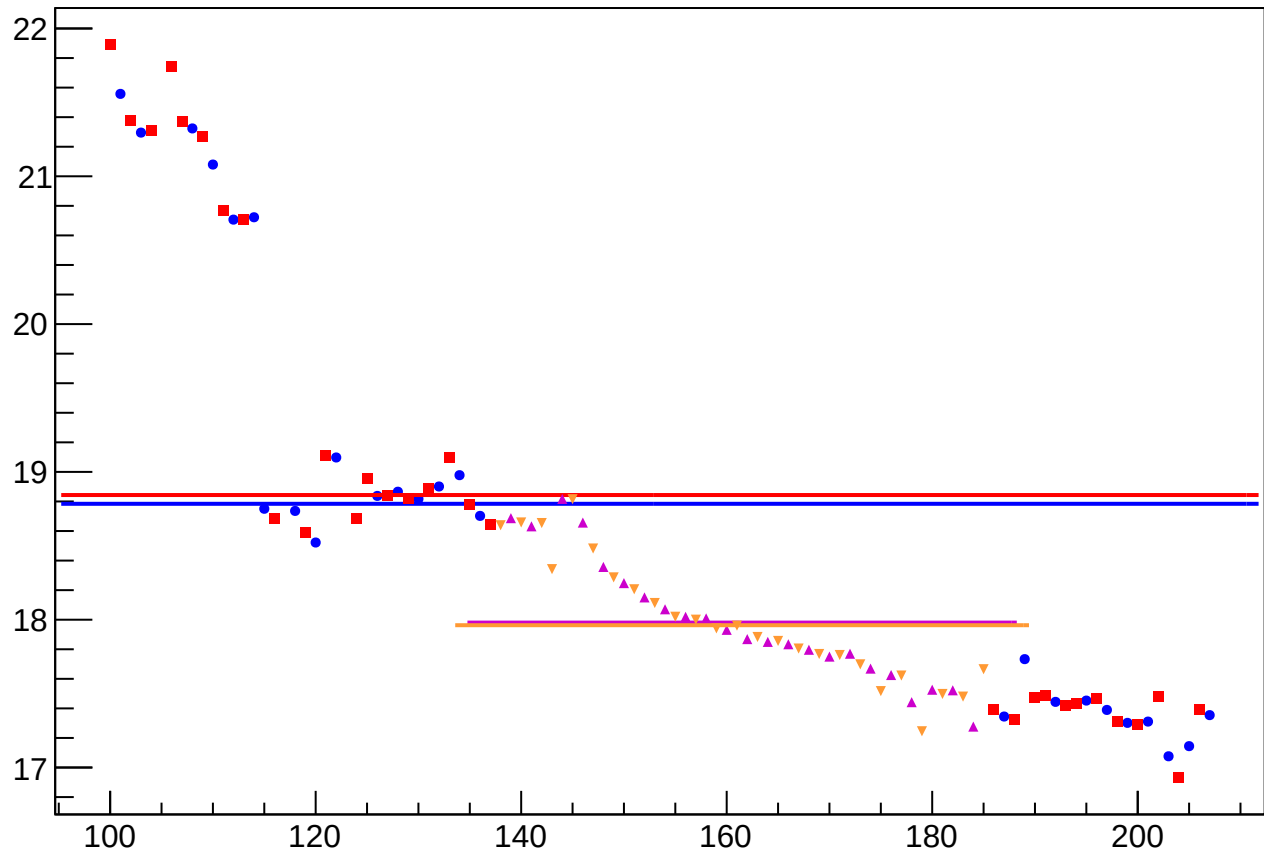
Left In: 0.066 $\pm$ 0.000  $\chi^2$ /NDF:788235.2/22

+ sign 0.072 $\pm$ 0.000  $\chi^2$ /NDF: 8349848.6/50

All: 0.074 $\pm$ 0.000  $\chi^2$ /NDF: 17782387.0/104

- sign 0.076 $\pm$ 0.000  $\chi^2$ /NDF: 9380958.3/53

# yield\_sam5\_mean vs Slug



Right In: 18.784 $\pm$ 0.000  $\chi^2$ /NDF: 32175200906.0/25

Left Out: 17.963 $\pm$ 0.000  $\chi^2$ /NDF: 3041551307.2/24

Right Out: 18.844 $\pm$ 0.000  $\chi^2$ /NDF: 35153857714.3/30

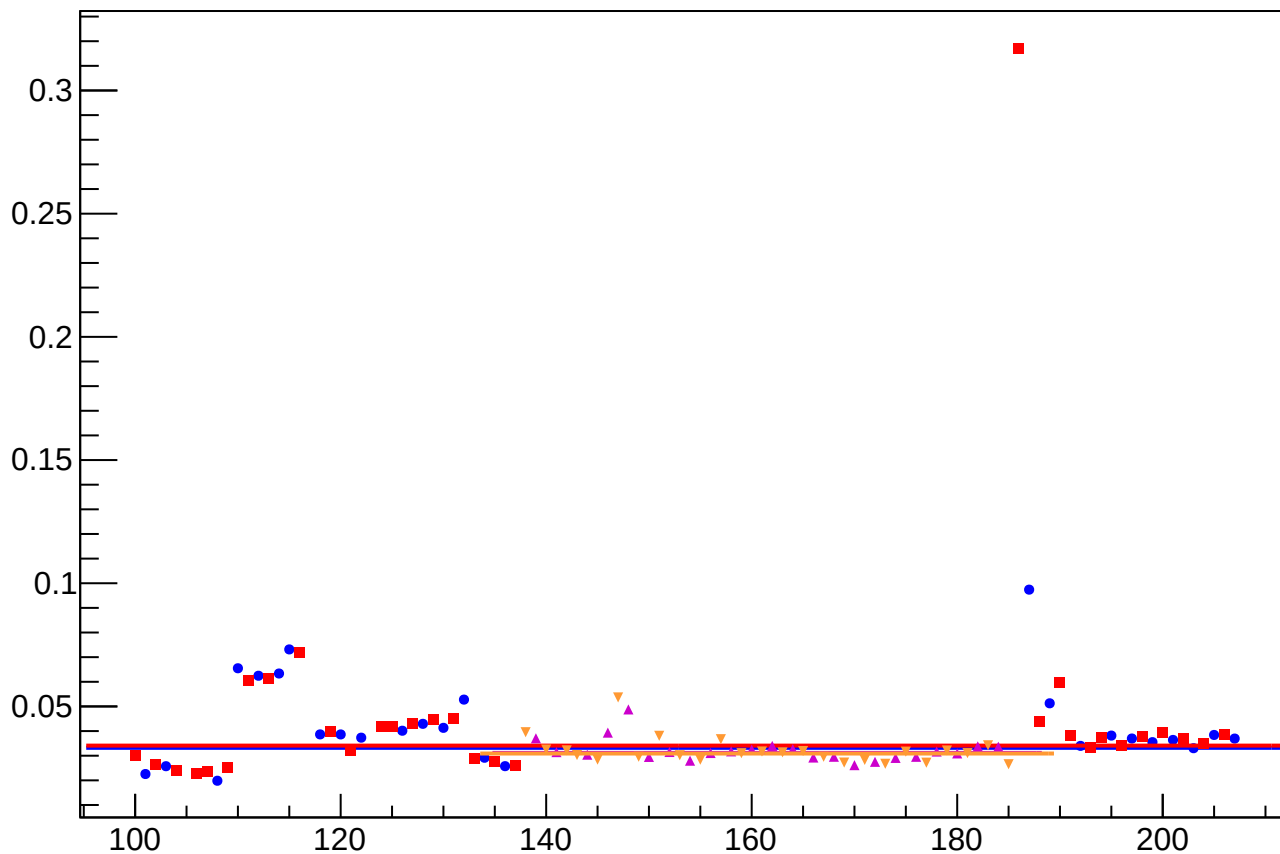
Left In: 17.980 $\pm$ 0.000  $\chi^2$ /NDF: 2720441956.8/22

+ sign 18.277 $\pm$ 0.000  $\chi^2$ /NDF: 40173776098.4/50

All: 18.304 $\pm$ 0.000  $\chi^2$ /NDF: 83520369224.8

- sign 18.332 $\pm$ 0.000  $\chi^2$ /NDF: 43300308842.8/53

# yield\_sam5\_rms vs Slug



Right In: 0.033 $\pm$ 0.000  $\chi^2$ /NDF: 1949370.9/25

Left Out: 0.031 $\pm$ 0.000  $\chi^2$ /NDF:633519.6/24

Right Out: 0.034 $\pm$ 0.000  $\chi^2$ /NDF: 2265603.4/30

Left In: 0.031 $\pm$ 0.000  $\chi^2$ /NDF:482919.2/22

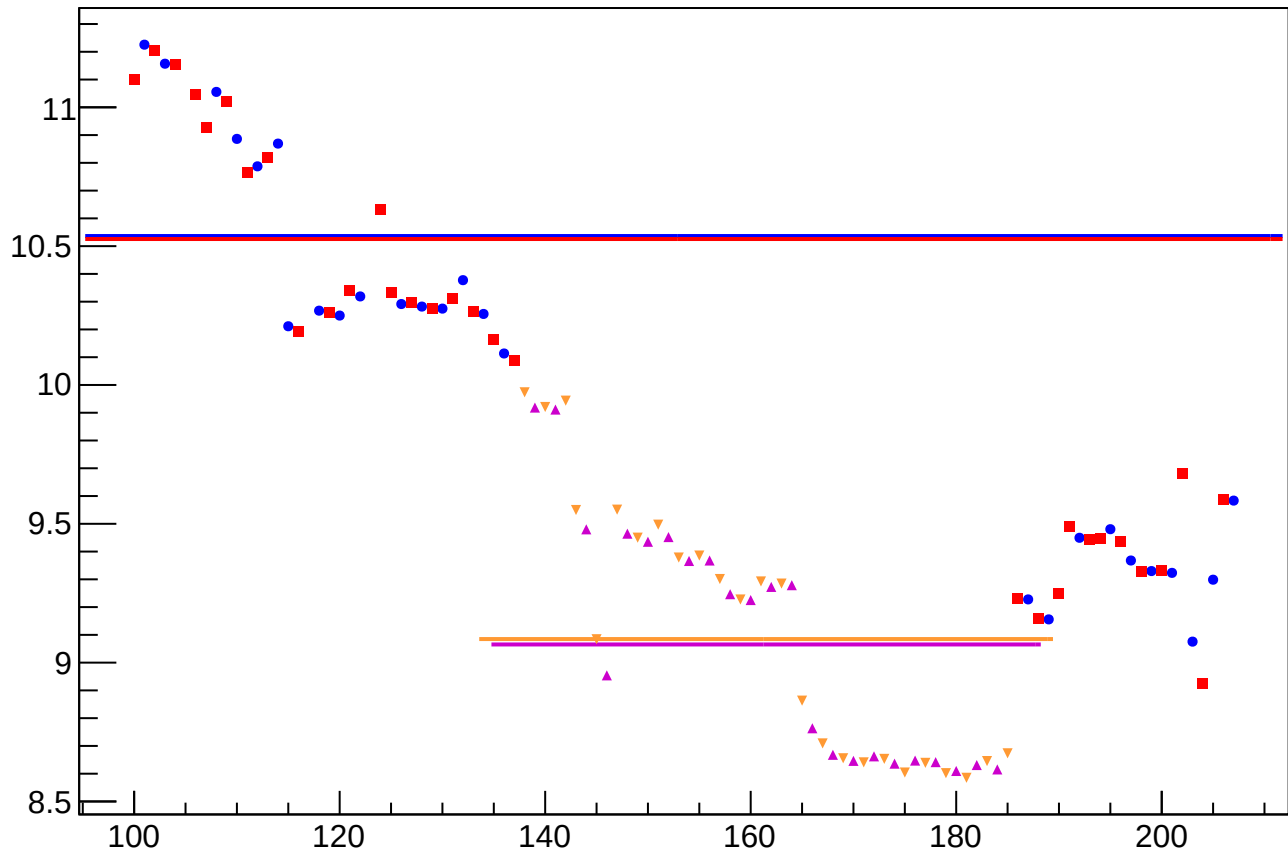
+ sign 0.032 $\pm$ 0.000  $\chi^2$ /NDF: 2661506.7/50

All: 0.032 $\pm$ 0.000  $\chi^2$ /NDF: 5547853.0/104

- sign 0.032 $\pm$ 0.000  $\chi^2$ /NDF: 2876435.6/53



# yield\_sam6\_mean vs Slug



Right In: 10.536 $\pm$ 0.000  $\chi^2$ /NDF: 13486826876.7/25

Left Out: 9.085 $\pm$ 0.000  $\chi^2$ /NDF: 10203625727.4/24

Right Out: 10.526 $\pm$ 0.000  $\chi^2$ /NDF: 12590691685.6/30

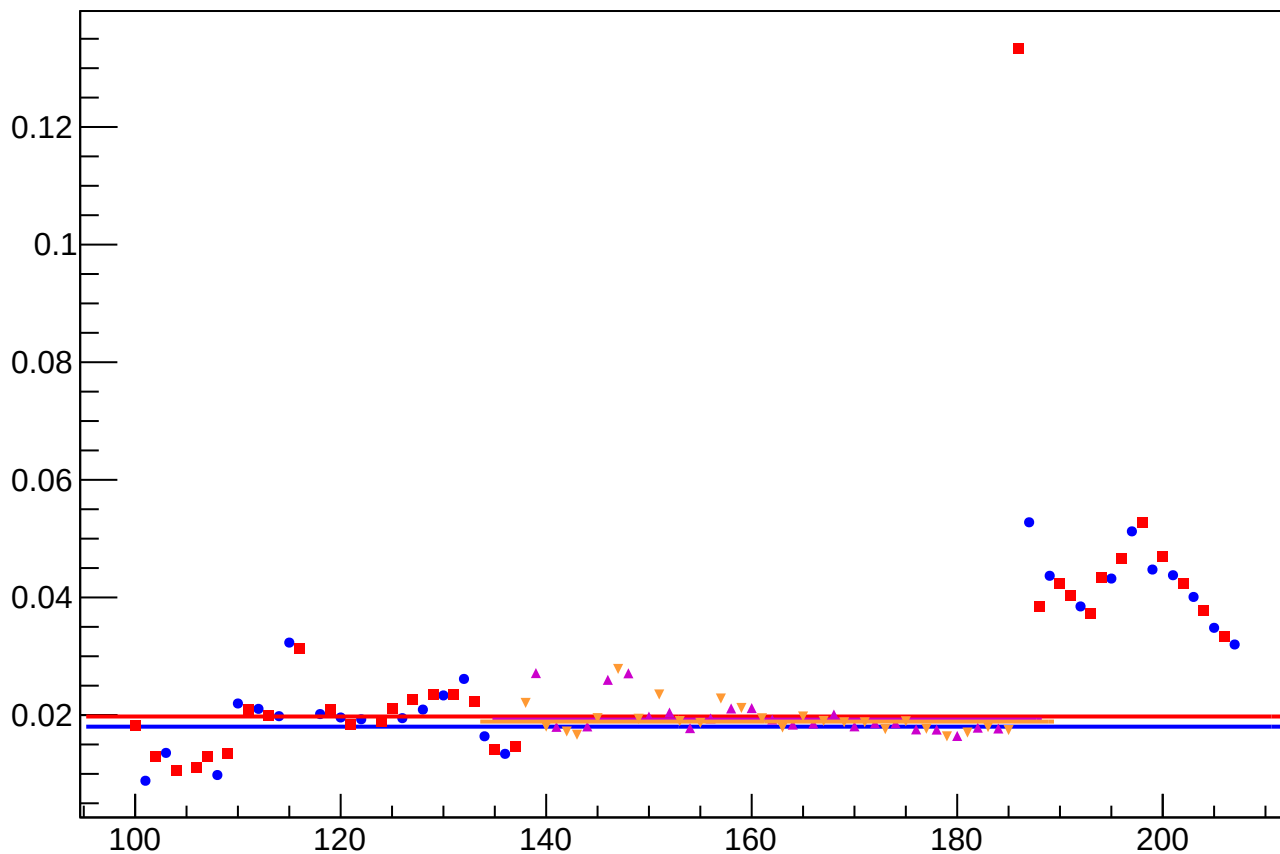
Left In: 9.065 $\pm$ 0.000  $\chi^2$ /NDF: 8070708662.0/22

+ sign 9.659 $\pm$ 0.000  $\chi^2$ /NDF: 64780559036.4/50

All: 9.658 $\pm$ 0.000  $\chi^2$ /NDF: 124151605957.1

- sign 9.657 $\pm$ 0.000  $\chi^2$ /NDF: 59370907963.0/53

# yield\_sam6\_rms vs Slug



Right In: 0.018 $\pm$ 0.000  $\chi^2$ /NDF: 6953403.3/25

Left Out: 0.019 $\pm$ 0.000  $\chi^2$ /NDF:441360.7/24

Right Out: 0.020 $\pm$ 0.000  $\chi^2$ /NDF: 7139267.1/30

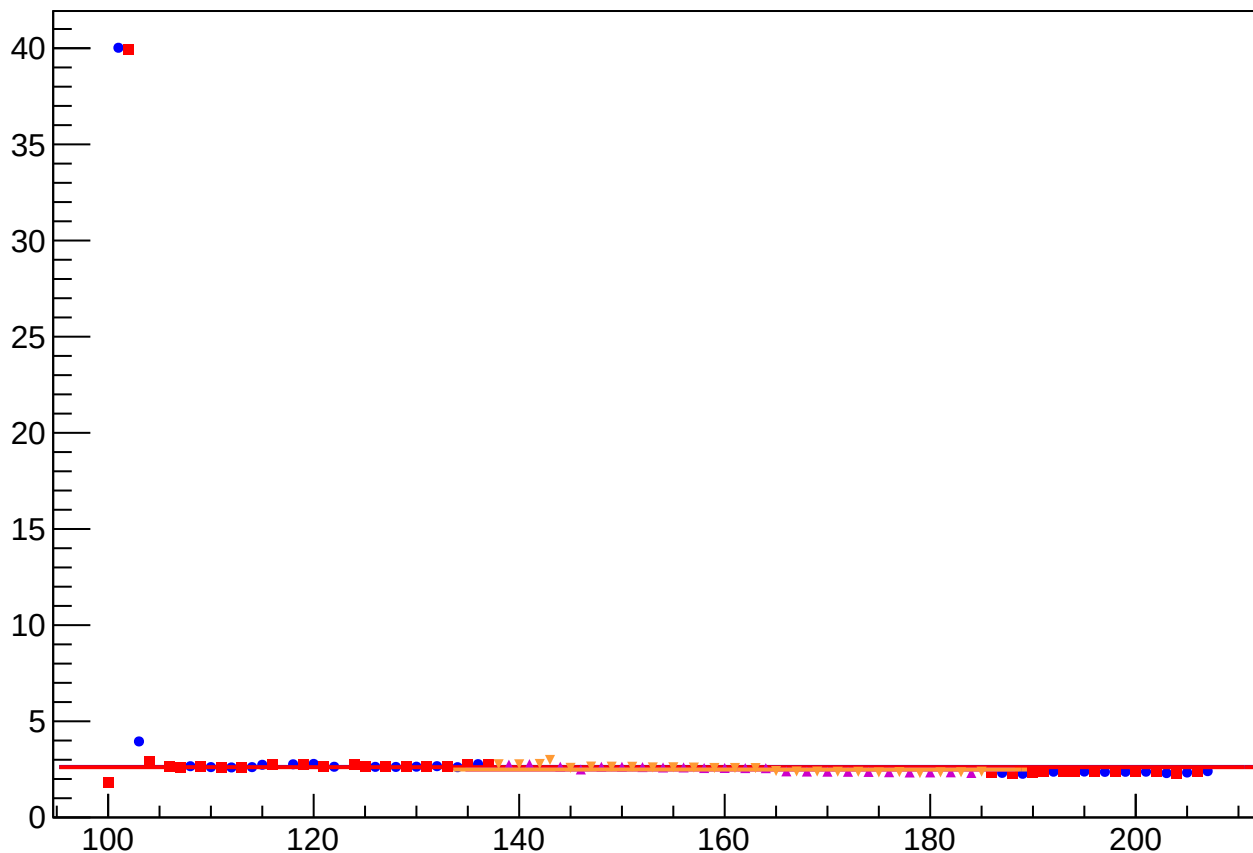
Left In: 0.019 $\pm$ 0.000  $\chi^2$ /NDF:540886.4/22

+ sign 0.019 $\pm$ 0.000  $\chi^2$ /NDF: 7424005.6/50

All: 0.019 $\pm$ 0.000  $\chi^2$ /NDF: 15176519.6/104

- sign 0.019 $\pm$ 0.000  $\chi^2$ /NDF: 7690151.5/53

# yield\_sam7\_mean vs Slug



Right In: 2.627 $\pm$ 0.000  $\chi^2$ /NDF: 84520302507.7/25

Left Out: 2.491 $\pm$ 0.000  $\chi^2$ /NDF: 92364283353.6/24

Right Out: 2.615 $\pm$ 0.000  $\chi^2$ /NDF: 83298227683.5/30

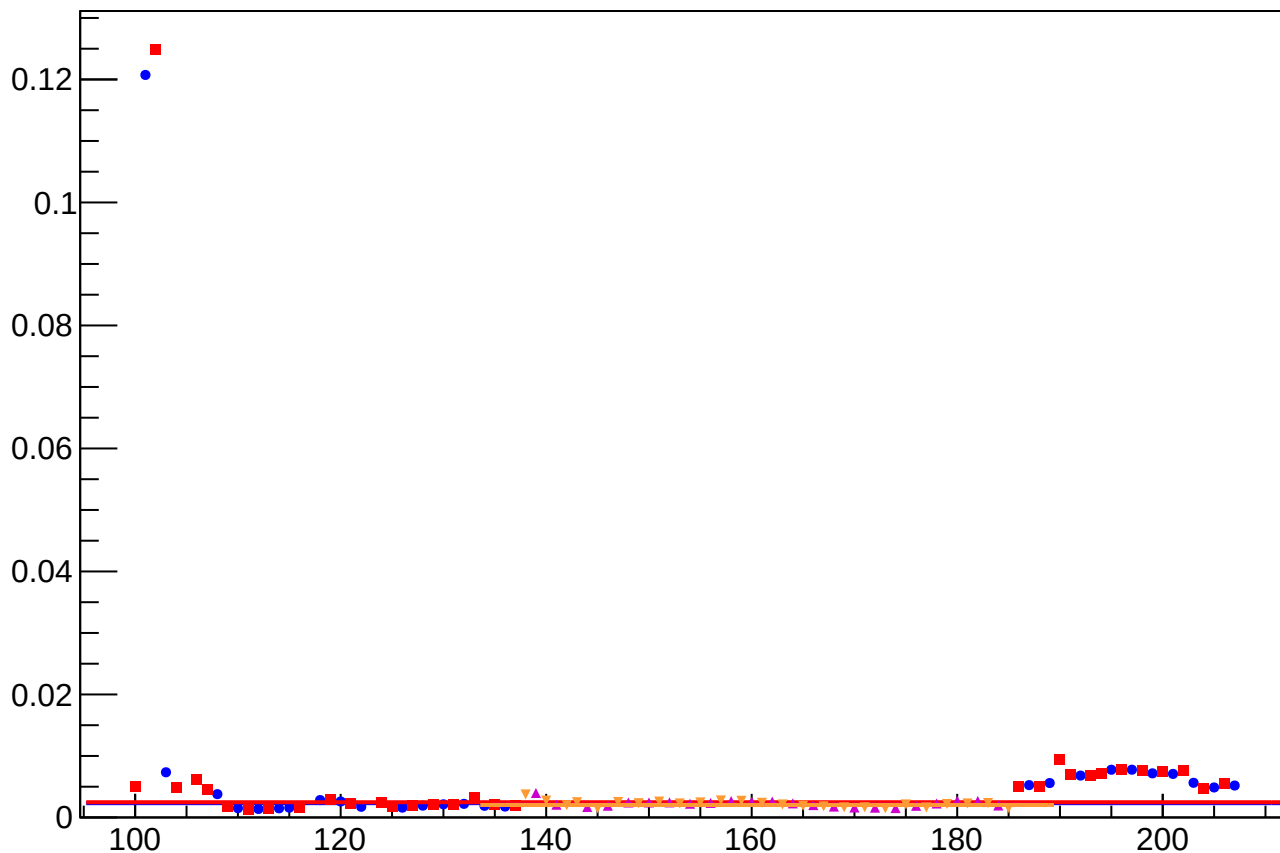
Left In: 2.489 $\pm$ 0.000  $\chi^2$ /NDF: 61212546319.1/22

+ sign 2.532 $\pm$ 0.000  $\chi^2$ /NDF: 197913082403.9/50

All: 2.531 $\pm$ 0.000  $\chi^2$ /NDF: 360036253693.7

- sign 2.529 $\pm$ 0.000  $\chi^2$ /NDF: 162095062544.1/53

# yield\_sam7\_rms vs Slug



Right In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 8541554.5/25

Left Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF:1556481.5/24

Right Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 10071095.1/30

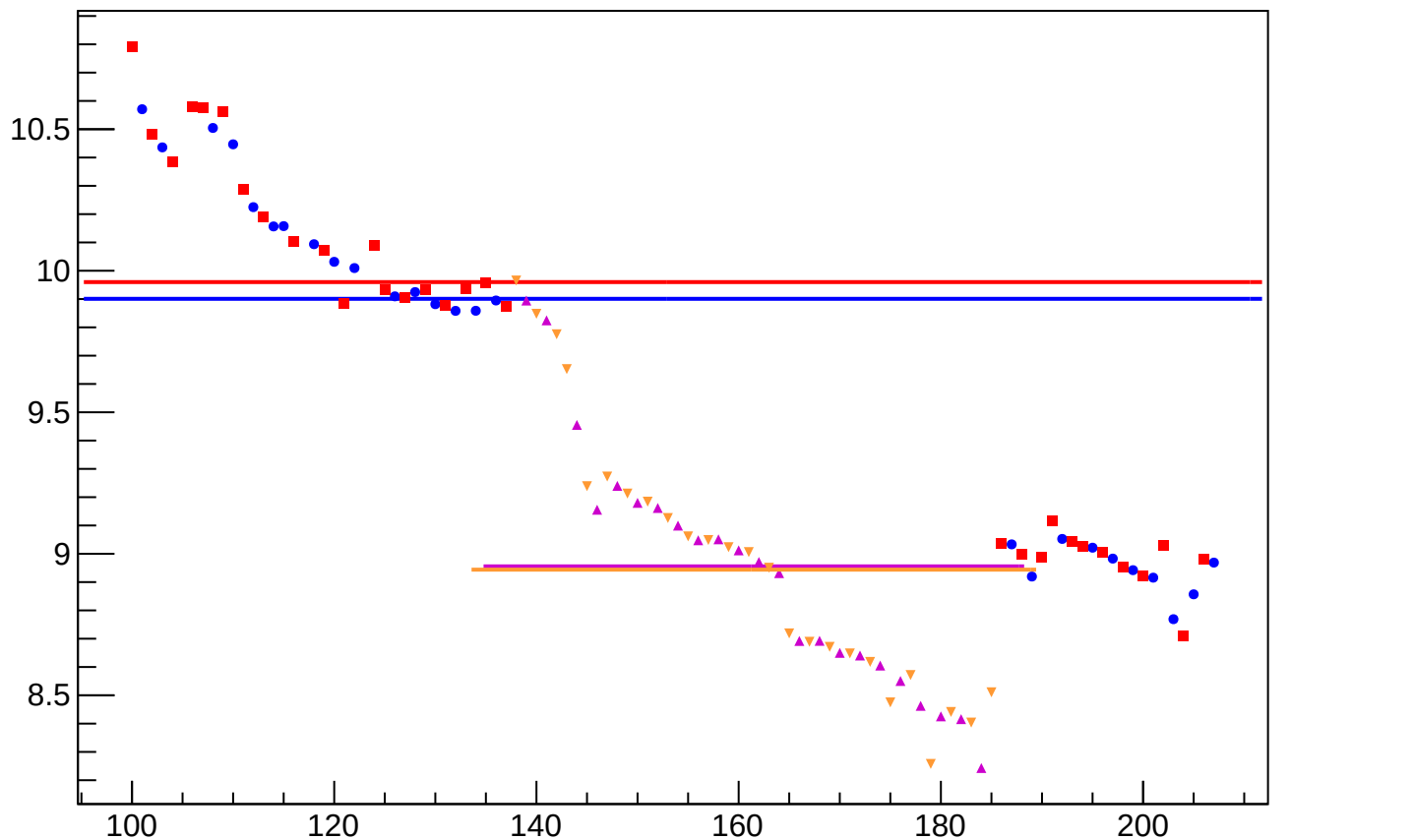
Left In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF:1402331.9/22

+ sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 10303913.4/50

All: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 22184832.5/104

- sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 11845251.3/53

# yield\_sam8\_mean vs Slug



Right In: 9.901+/-0.000  $\chi^2/\text{NDF}$ : 55655963988.5/25

Left Out: 8.944+/-0.000  $\chi^2/\text{NDF}$ : 65887712966.5/24

Right Out: 9.960+/-0.000  $\chi^2/\text{NDF}$ : 59489456427.9/30

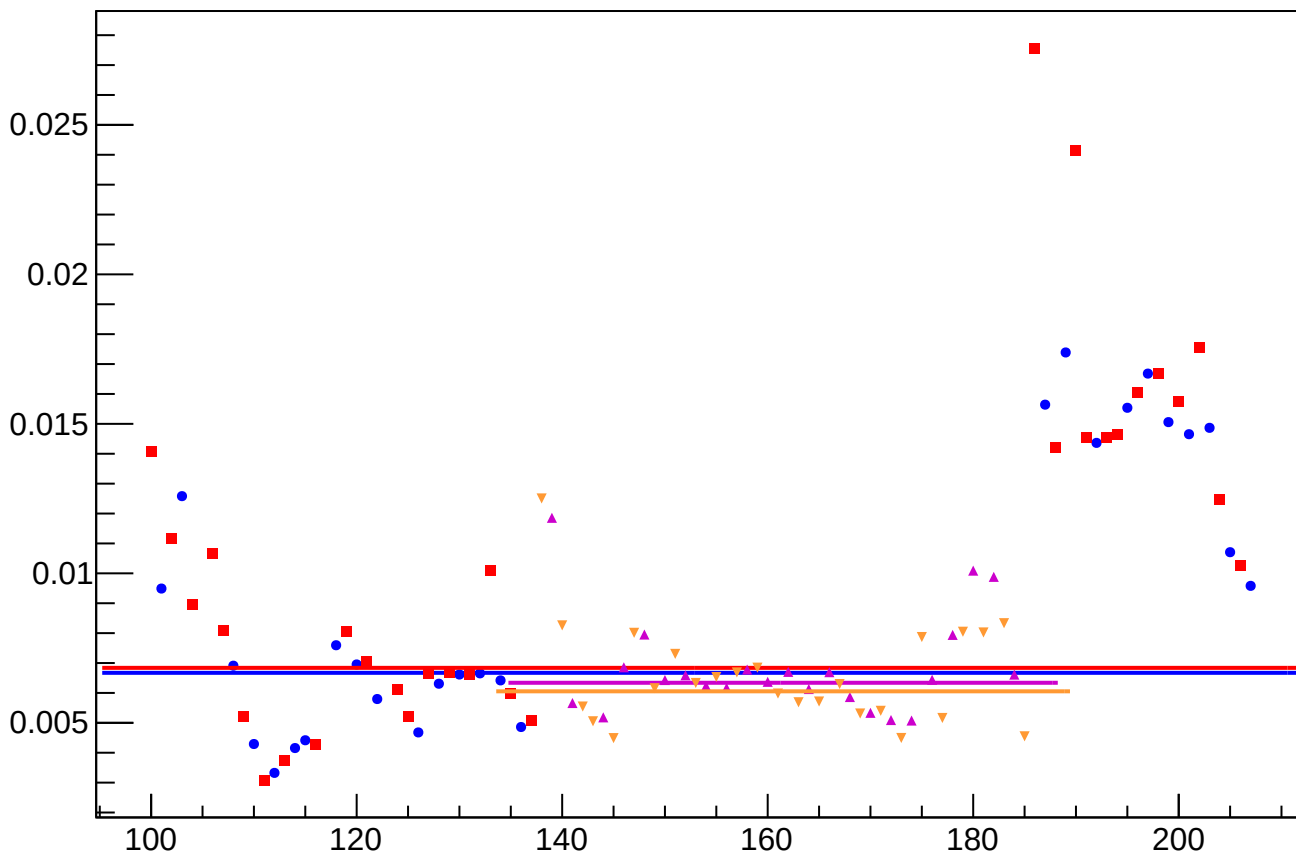
Left In: 8.956+/-0.000  $\chi^2/\text{NDF}$ : 51572164470.4/22

+ sign 9.289+/-0.000  $\chi^2/\text{NDF}$ : 258960636360.3/50

All: 9.320+/-0.000  $\chi^2/\text{NDF}$ : 516315393091.2

- sign 9.354+/-0.000  $\chi^2/\text{NDF}$ : 256019512803.5/53

# yield\_sam8\_rms vs Slug



Right In: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 6104619.6/25

Left Out: 0.006 $\pm$ 0.000  $\chi^2$ /NDF:1461022.8/24

Right Out: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 7955913.7/30

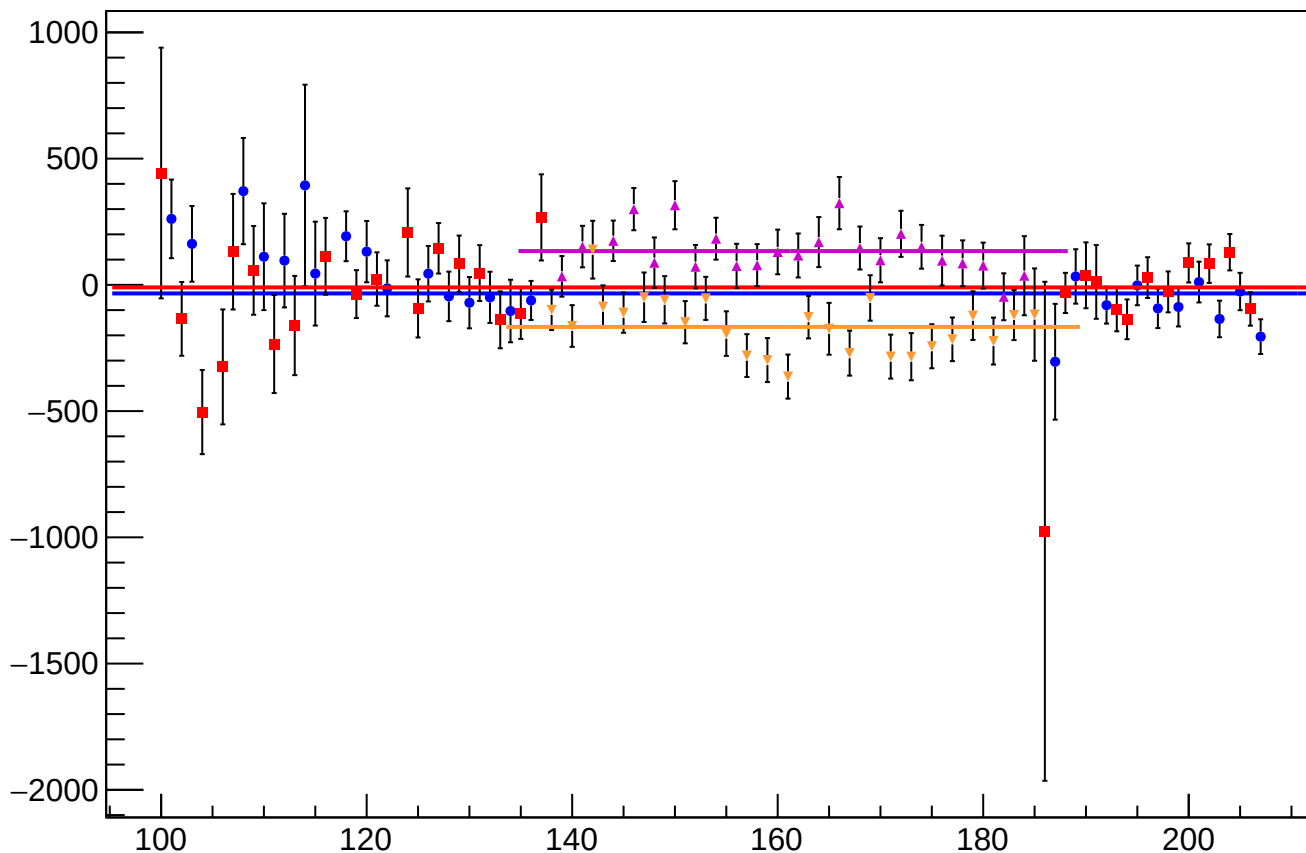
Left In: 0.006 $\pm$ 0.000  $\chi^2$ /NDF:1175260.9/22

+ sign 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 7680541.2/50

All: 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 16925896.4/104

- sign 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 9202799.9/53

# reg\_asym\_sam1\_mean vs Slug



Right In:  $-33.985 \pm 19.682$   $\chi^2/\text{NDF}: 31.4/25$

Left Out:  $-166.676 \pm 18.079$   $\chi^2/\text{NDF}: 31.6/24$

Right Out:  $-10.076 \pm 19.369$   $\chi^2/\text{NDF}: 39.6/30$

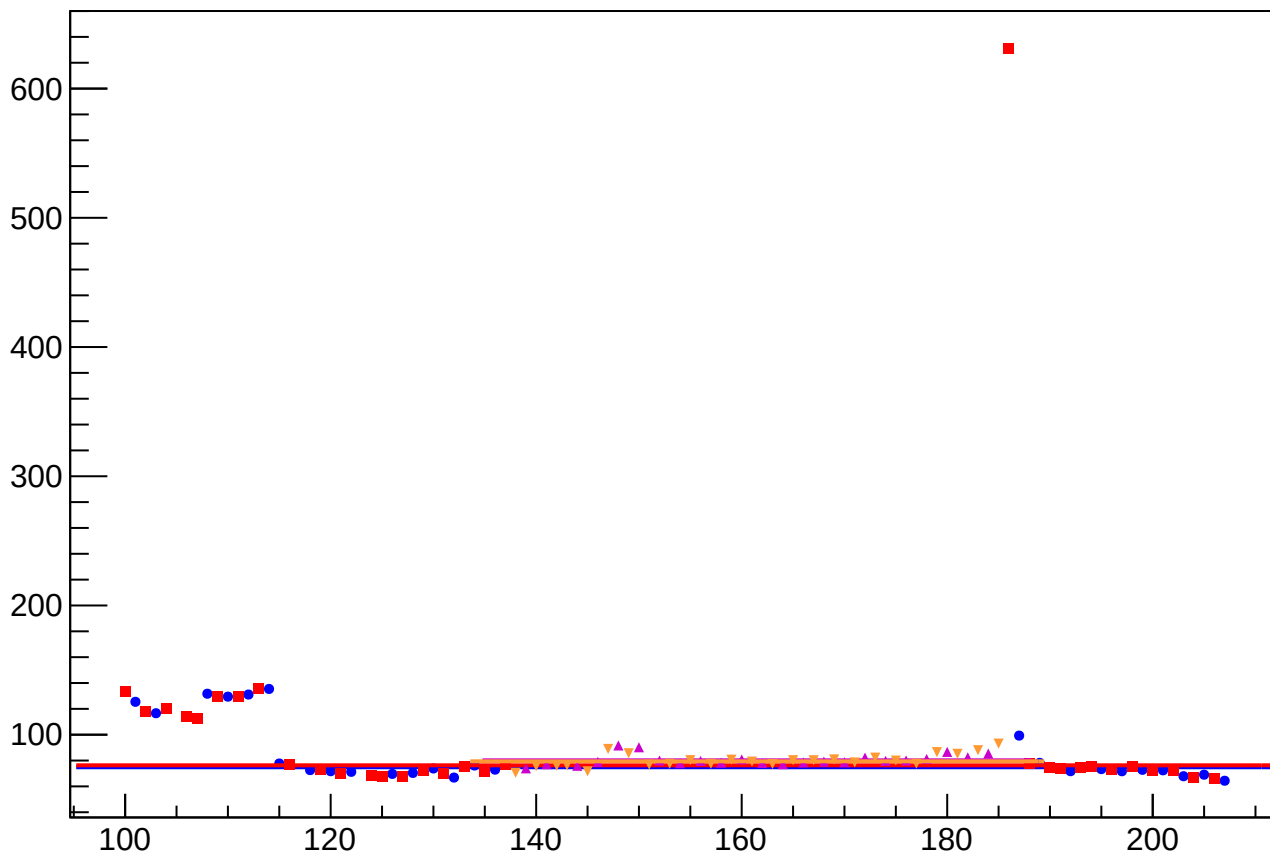
Left In:  $133.843 \pm 18.756$   $\chi^2/\text{NDF}: 20.7/22$

+ sign  $-105.954 \pm 13.314$   $\chi^2/\text{NDF}: 87.7/50$

All:  $-21.891 \pm 9.471$   $\chi^2/\text{NDF}: 257.3/104$

- sign  $64.198 \pm 13.474$   $\chi^2/\text{NDF}: 88.9/53$

# reg\_asym\_sam1\_rms vs Slug



Right In: 74.816+/-0.014  $\chi^2/\text{NDF}$ : 1016587.0/25

Left Out: 79.410+/-0.013  $\chi^2/\text{NDF}$ : 134796.0/24

Right Out: 76.315+/-0.014  $\chi^2/\text{NDF}$ : 1726554.2/30

Left In: 80.160+/-0.013  $\chi^2/\text{NDF}$ : 91469.5/22

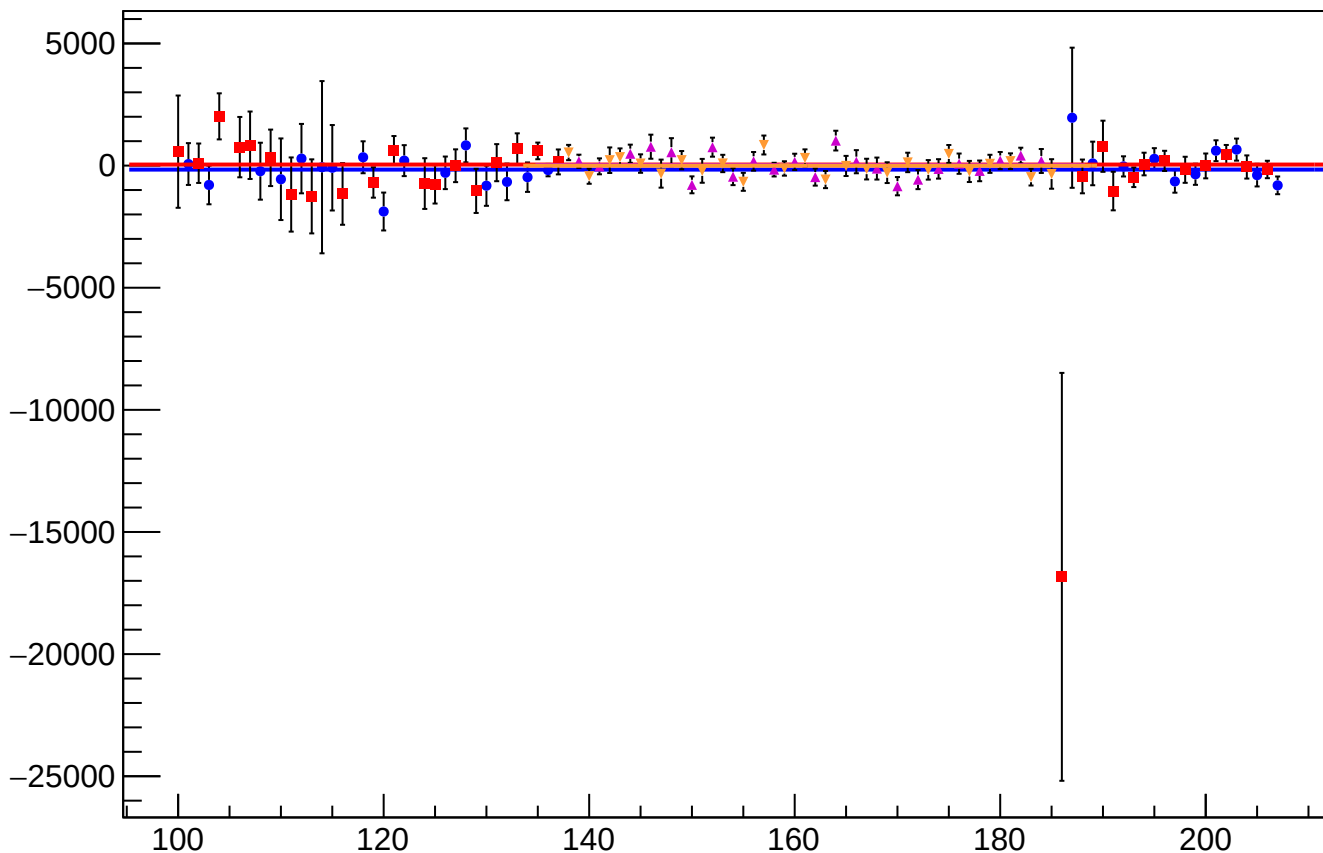
+ sign 77.308+/-0.009  $\chi^2/\text{NDF}$ : 1210489.7/50

All: 77.798+/-0.007  $\chi^2/\text{NDF}$ : 3074669.2/104

- sign 78.299+/-0.010  $\chi^2/\text{NDF}$ : 1858699.9/53



# asym\_sam1\_reg\_correction\_mean vs Slug



Right In:  $-163.870 \pm 110.115$   $\chi^2/\text{NDF}$ : 23.2/25

Left Out:  $-3.474 \pm 75.863$   $\chi^2/\text{NDF}$ : 24.0/24

Right Out:  $42.216 \pm 110.611$   $\chi^2/\text{NDF}$ : 27.0/30

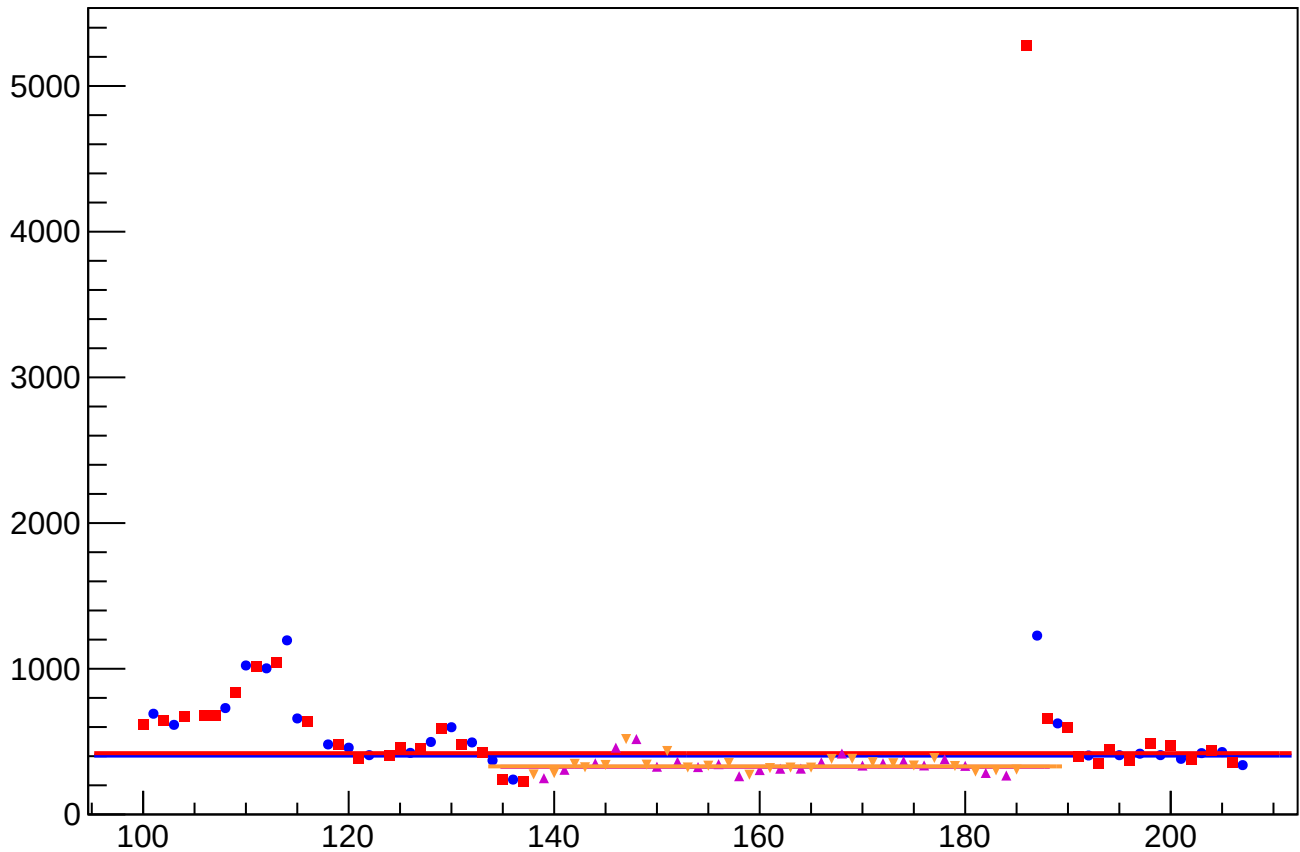
Left In:  $19.298 \pm 77.541$   $\chi^2/\text{NDF}$ : 35.0/22

+ sign  $-55.100 \pm 62.472$   $\chi^2/\text{NDF}$ : 48.6/50

All:  $-14.790 \pm 44.531$   $\chi^2/\text{NDF}$ : 111.5/104

- sign  $26.850 \pm 63.493$   $\chi^2/\text{NDF}$ : 62.1/53

# asym\_sam1\_reg\_correction\_rms vs Slug



Right In: 404.000 $\pm$ 0.078  $\chi^2$ /NDF: 2728162.4/25

Left Out: 329.968 $\pm$ 0.054  $\chi^2$ /NDF: 659241.4/24

Right Out: 420.709 $\pm$ 0.078  $\chi^2$ /NDF: 3592640.0/30

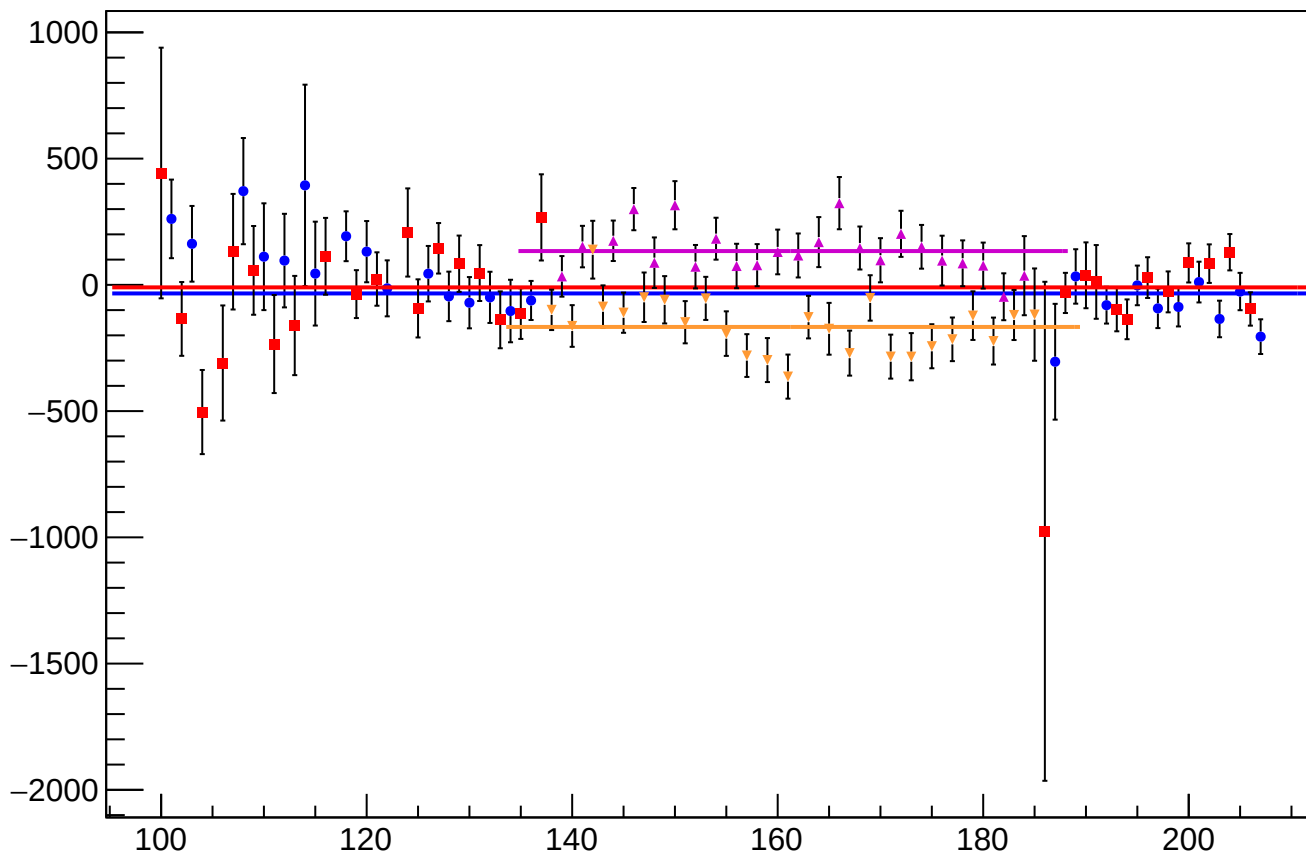
Left In: 326.963 $\pm$ 0.055  $\chi^2$ /NDF: 899326.3/22

+ sign 353.796 $\pm$ 0.044  $\chi^2$ /NDF: 4000444.0/50

All: 355.792 $\pm$ 0.031  $\chi^2$ /NDF: 9459802.8/104

- sign 357.853 $\pm$ 0.045  $\chi^2$ /NDF: 5455210.8/53

# cor\_asym\_sam1\_mean vs Slug



Right In:  $-33.984 \pm 19.682$   $\chi^2/\text{NDF}$ : 31.5/25

Left Out:  $-166.675 \pm 18.079$   $\chi^2/\text{NDF}$ : 31.6/24

Right Out:  $-9.959 \pm 19.369$   $\chi^2/\text{NDF}$ : 39.4/30

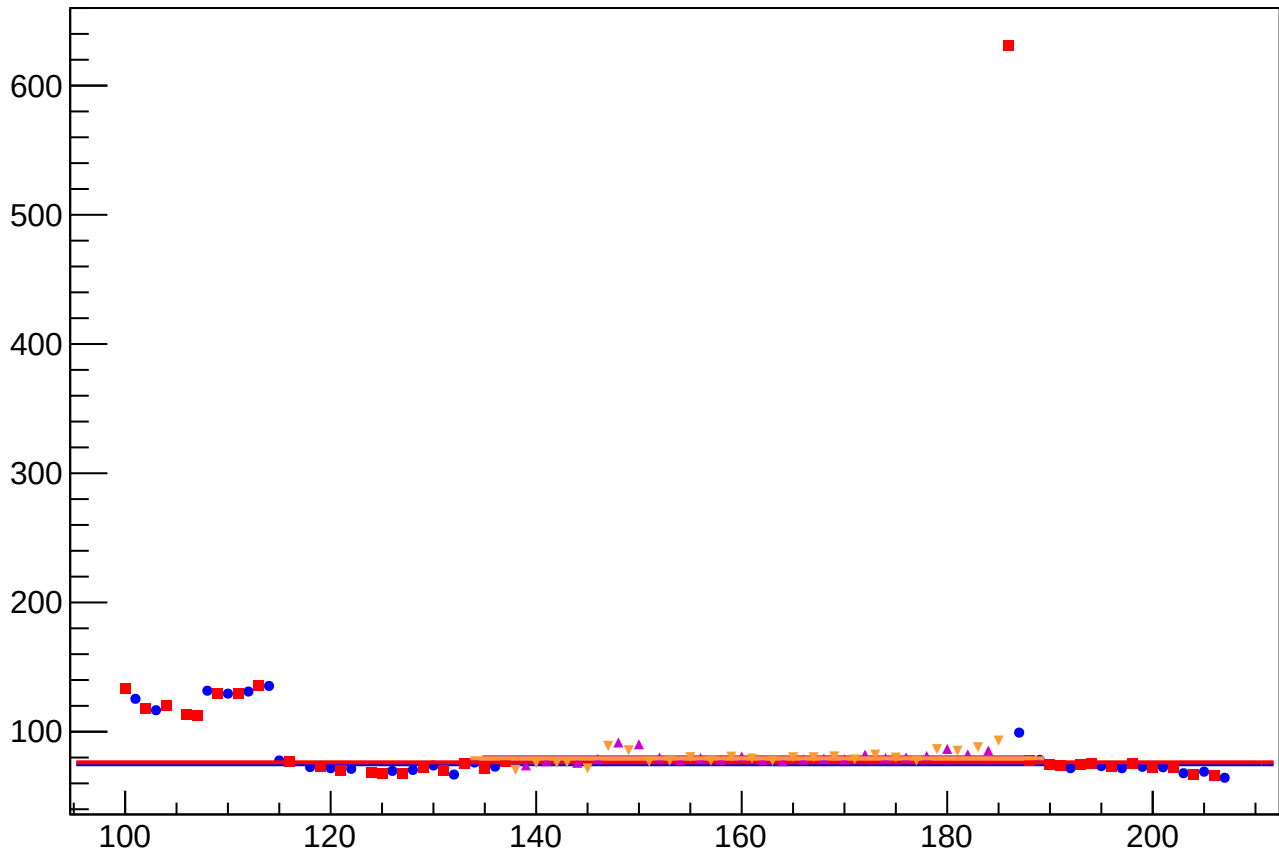
Left In:  $133.850 \pm 18.756$   $\chi^2/\text{NDF}$ : 20.7/22

+ sign  $-105.953 \pm 13.314$   $\chi^2/\text{NDF}$ : 87.7/50

All:  $-21.861 \pm 9.471$   $\chi^2/\text{NDF}$ : 257.1/104

- sign  $64.259 \pm 13.474$   $\chi^2/\text{NDF}$ : 88.6/53

# cor\_asym\_sam1\_rms vs Slug



Right In: 74.816+/-0.014  $\chi^2/\text{NDF}$ : 1016587.2/25

Left Out: 79.410+/-0.013  $\chi^2/\text{NDF}$ : 134796.1/24

Right Out: 76.309+/-0.014  $\chi^2/\text{NDF}$ : 1724325.3/30

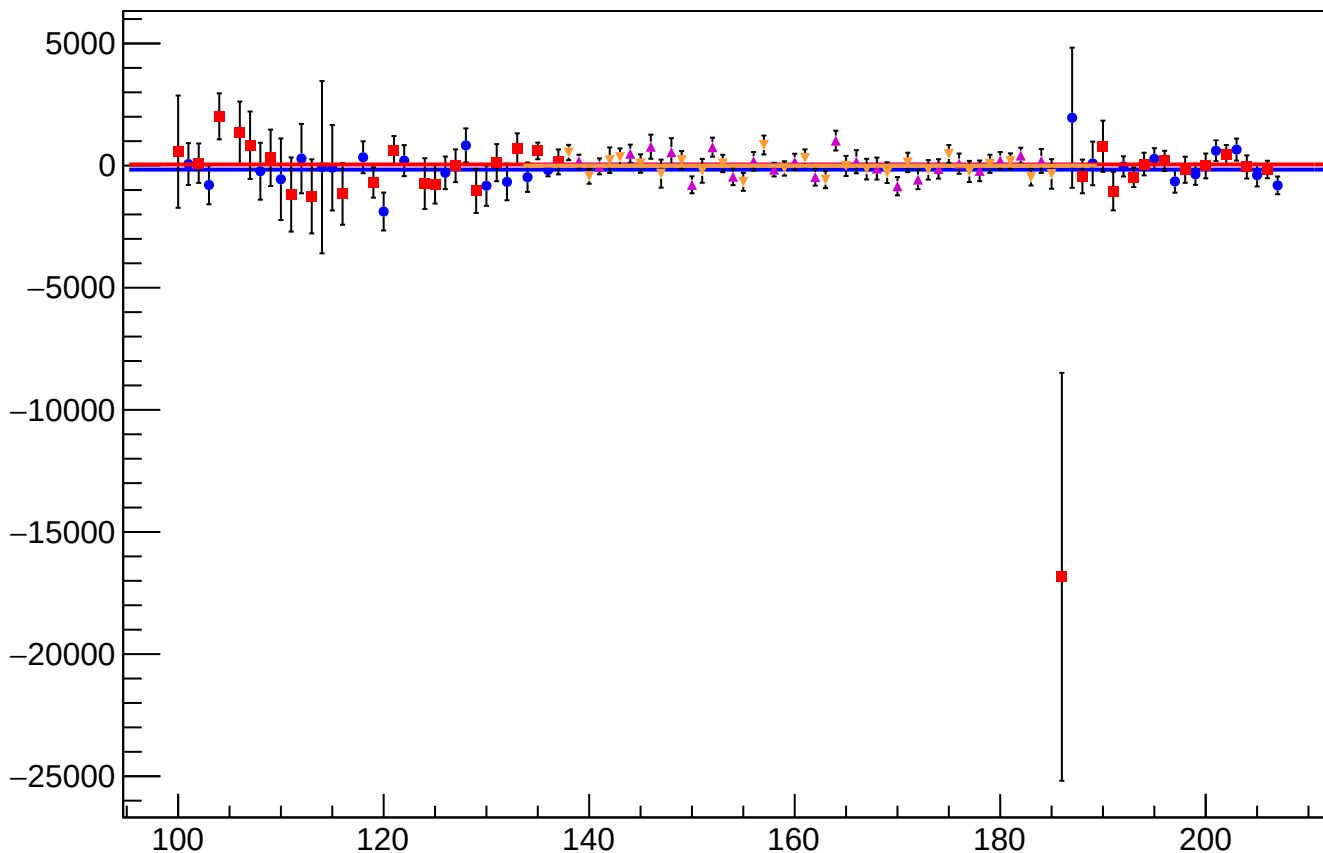
Left In: 80.160+/-0.013  $\chi^2/\text{NDF}$ : 91469.5/22

+ sign 77.308+/-0.009  $\chi^2/\text{NDF}$ : 1210489.9/50

All: 77.796+/-0.007  $\chi^2/\text{NDF}$ : 3072534.9/104

- sign 78.297+/-0.010  $\chi^2/\text{NDF}$ : 1856597.1/53

# asym\_sam1\_cor\_correction\_mean vs Slug



Right In:  $-163.872 \pm 110.115$   $\chi^2/\text{NDF}$ : 23.2/25

Left Out:  $-3.474 \pm 75.863$   $\chi^2/\text{NDF}$ : 24.0/24

Right Out:  $46.338 \pm 110.638$   $\chi^2/\text{NDF}$ : 27.7/30

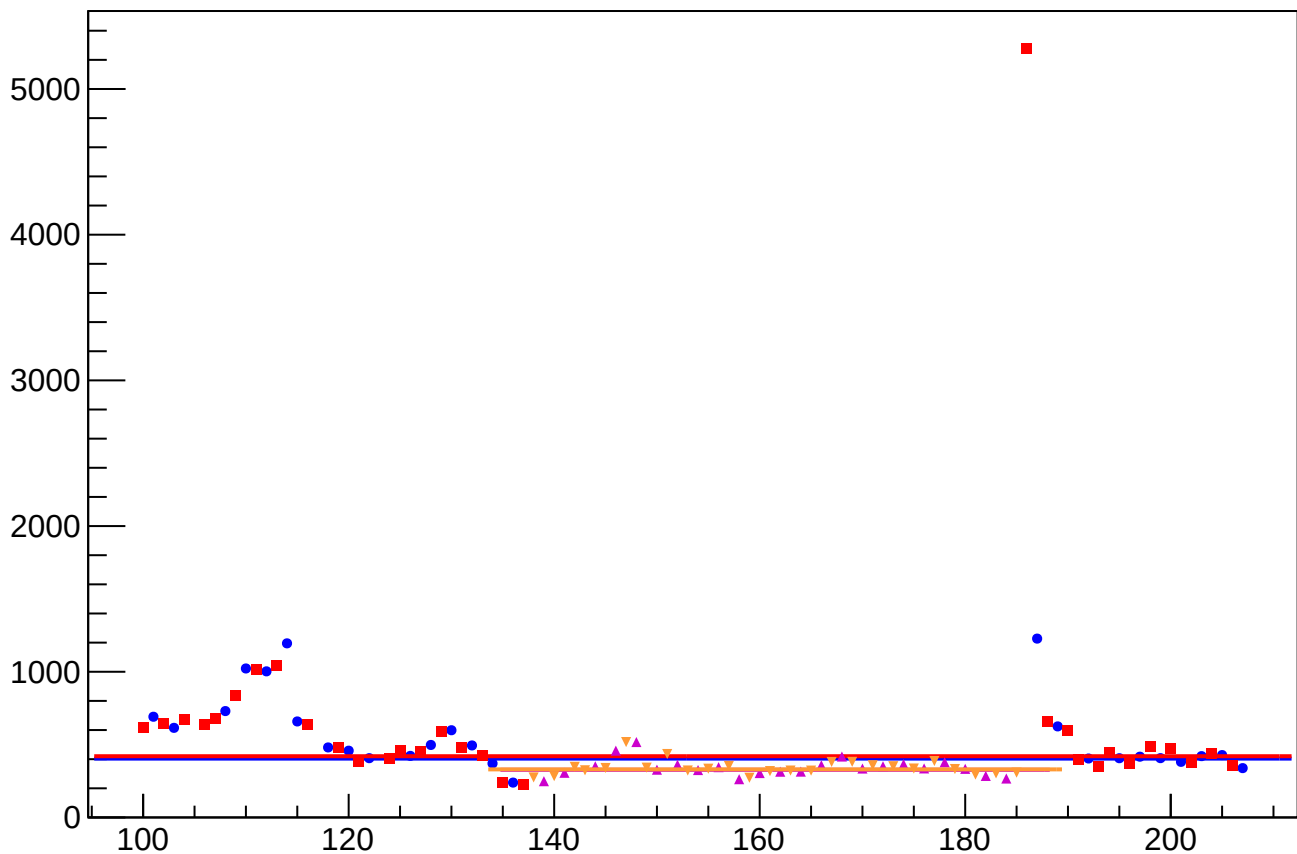
Left In:  $19.305 \pm 77.541$   $\chi^2/\text{NDF}$ : 35.0/22

+ sign  $-55.101 \pm 62.472$   $\chi^2/\text{NDF}$ : 48.6/50

All:  $-14.124 \pm 44.533$   $\chi^2/\text{NDF}$ : 112.3/104

- sign  $28.210 \pm 63.498$   $\chi^2/\text{NDF}$ : 62.8/53

# asym\_sam1\_cor\_correction\_rms vs Slug



Right In: 404.000 $\pm$ 0.078  $\chi^2$ /NDF: 2728157.6/25

Left Out: 329.968 $\pm$ 0.054  $\chi^2$ /NDF: 659249.8/24

Right Out: 420.289 $\pm$ 0.078  $\chi^2$ /NDF: 3564193.5/30

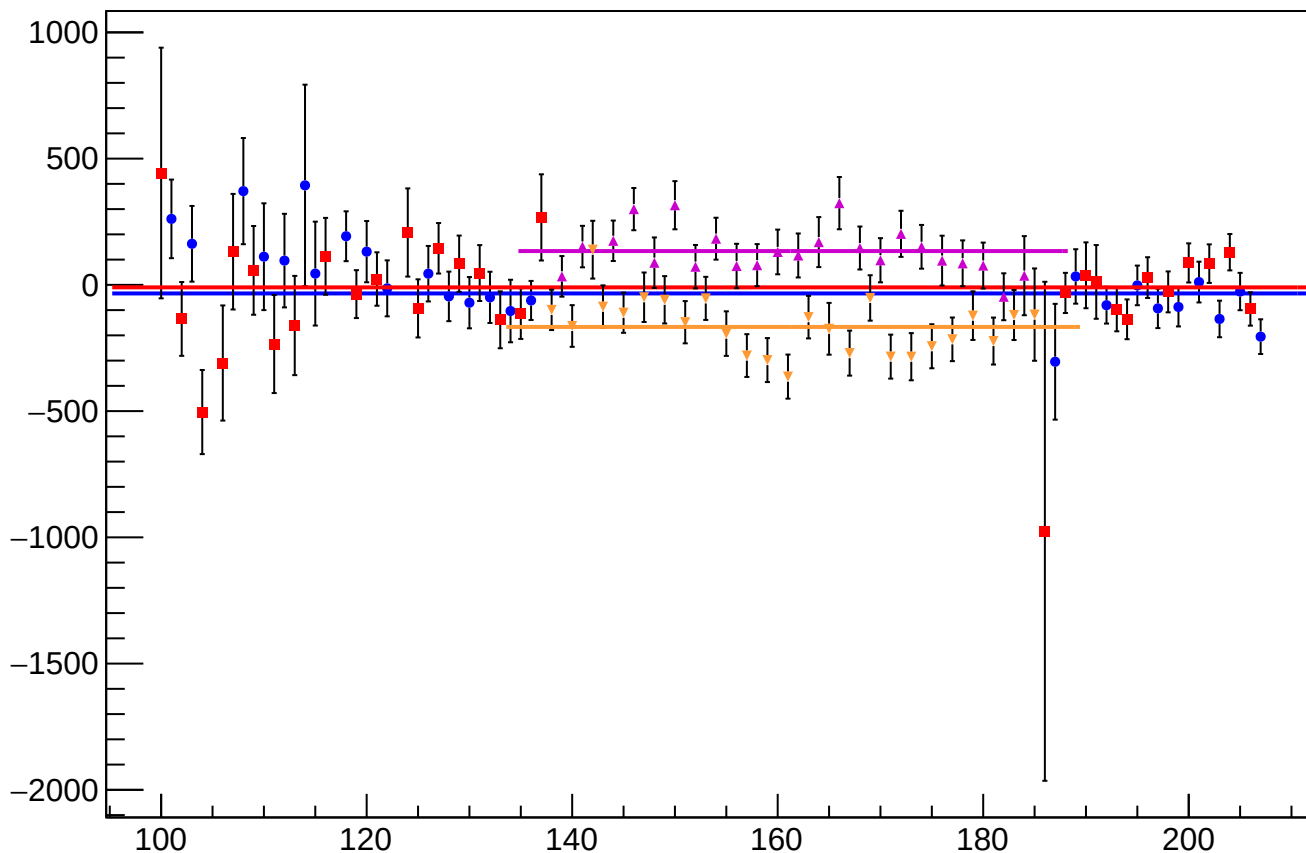
Left In: 326.963 $\pm$ 0.055  $\chi^2$ /NDF: 899329.3/22

+ sign 353.796 $\pm$ 0.044  $\chi^2$ /NDF: 4000451.8/50

All: 355.718 $\pm$ 0.031  $\chi^2$ /NDF: 9422141.0/104

- sign 357.704 $\pm$ 0.045  $\chi^2$ /NDF: 5417839.6/53

# eigen\_cor\_asym\_sam1\_mean vs Slug



Right In: -33.984 $\pm$ 19.682  $\chi^2/\text{NDF}$ : 31.5/25

Left Out: -166.675 $\pm$ 18.079  $\chi^2/\text{NDF}$ : 31.6/24

Right Out: -9.959 $\pm$ 19.369  $\chi^2/\text{NDF}$ : 39.4/30

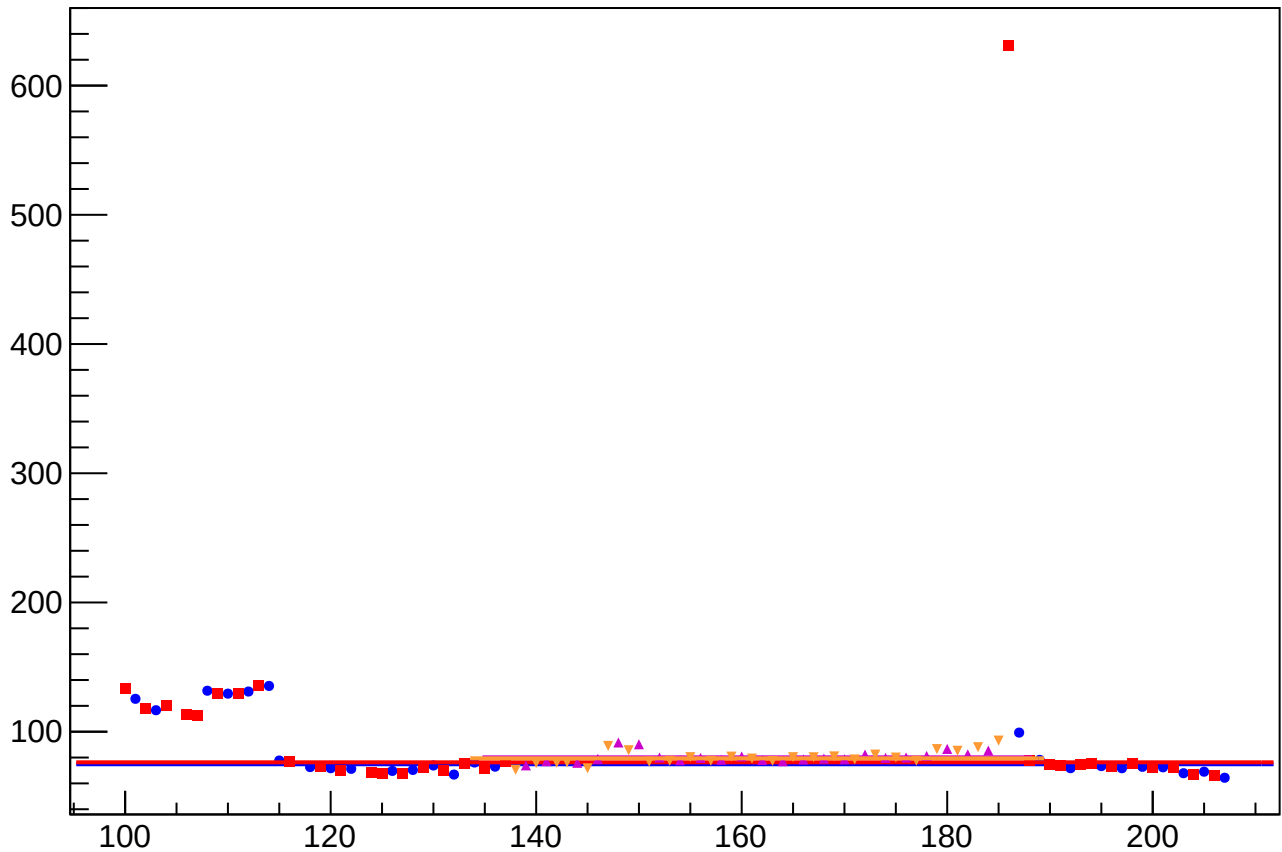
Left In: 133.850 $\pm$ 18.756  $\chi^2/\text{NDF}$ : 20.7/22

+ sign -105.953 $\pm$ 13.314  $\chi^2/\text{NDF}$ : 87.7/50

All: -21.861 $\pm$ 9.471  $\chi^2/\text{NDF}$ : 257.1/104

- sign 64.259 $\pm$ 13.474  $\chi^2/\text{NDF}$ : 88.6/53

# eigen\_cor\_asym\_sam1\_rms vs Slug



Right In: 74.816+/-0.014     $\chi^2/\text{NDF}$ : 1016587.2/25

Left Out: 79.410+/-0.013     $\chi^2/\text{NDF}$ :134796.1/24

Right Out: 76.309+/-0.014     $\chi^2/\text{NDF}$ : 1724325.3/30

Left In: 80.160+/-0.013     $\chi^2/\text{NDF}$ :91469.5/22

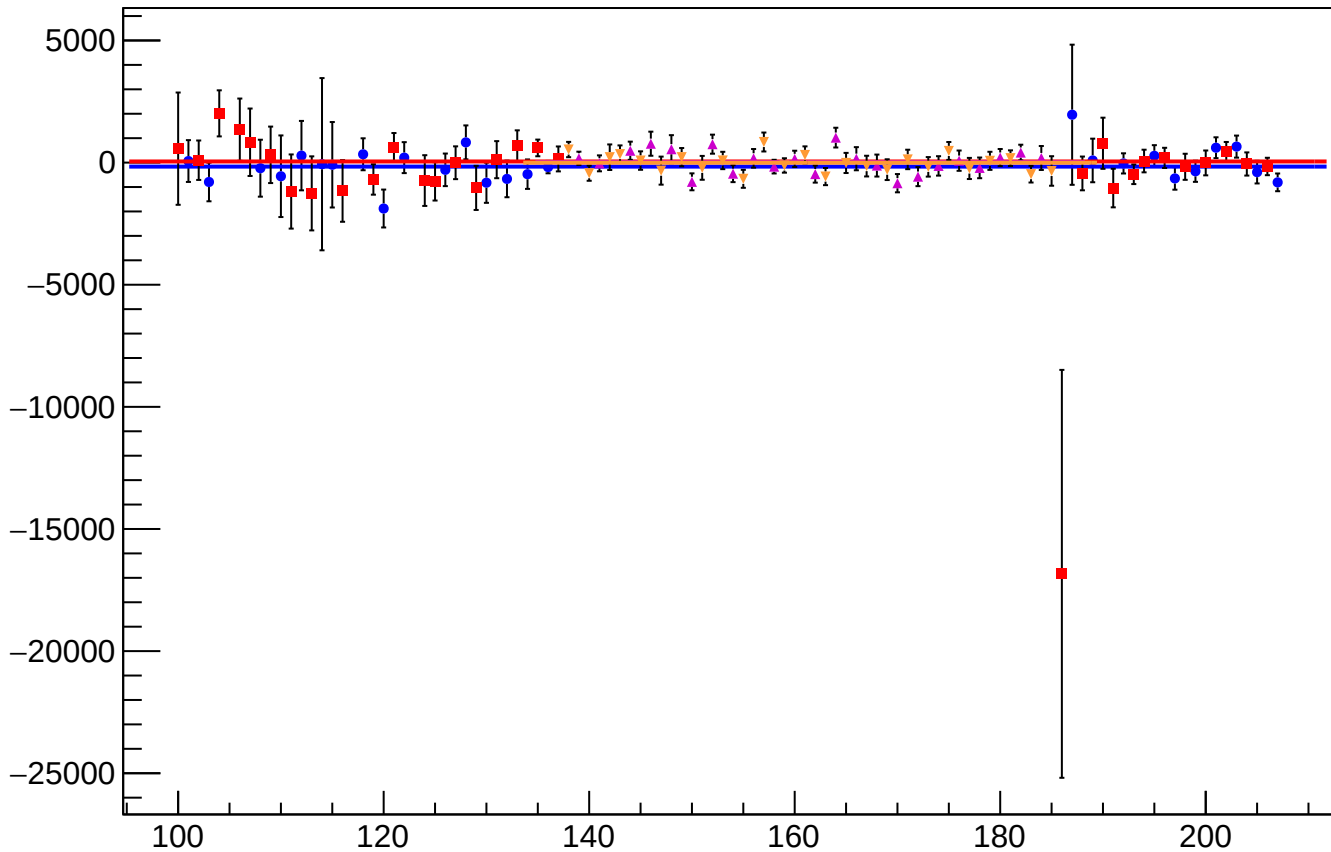
+ sign 77.308+/-0.009     $\chi^2/\text{NDF}$ : 1210489.9/50

All: 77.796+/-0.007     $\chi^2/\text{NDF}$ : 3072534.9/104

- sign 78.297+/-0.010     $\chi^2/\text{NDF}$ : 1856597.1/53



# asym\_sam1\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-163.872 \pm 110.115$   $\chi^2/\text{NDF}$ : 23.2/25

Left Out:  $-3.474 \pm 75.863$   $\chi^2/\text{NDF}$ : 24.0/24

Right Out:  $46.338 \pm 110.638$   $\chi^2/\text{NDF}$ : 27.7/30

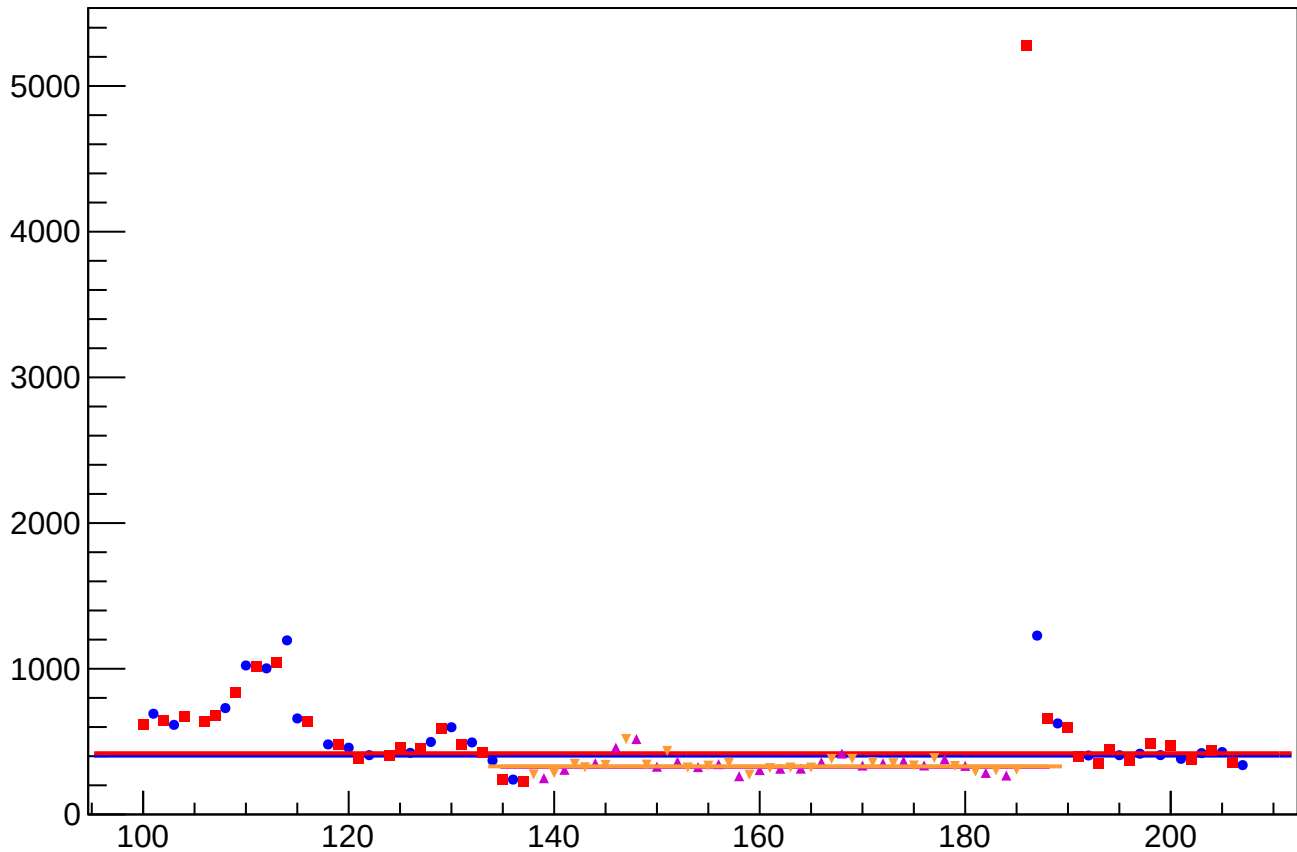
Left In:  $19.305 \pm 77.541$   $\chi^2/\text{NDF}$ : 35.0/22

+ sign  $-55.101 \pm 62.472$   $\chi^2/\text{NDF}$ : 48.6/50

All:  $-14.124 \pm 44.533$   $\chi^2/\text{NDF}$ : 112.3/104

- sign  $28.210 \pm 63.498$   $\chi^2/\text{NDF}$ : 62.8/53

# asym\_sam1\_eigen\_cor\_correction\_rms vs Slug



Right In: 404.000 $\pm$ 0.078  $\chi^2$ /NDF: 2728157.6/25

Left Out: 329.968 $\pm$ 0.054  $\chi^2$ /NDF: 659249.8/24

Right Out: 420.289 $\pm$ 0.078  $\chi^2$ /NDF: 3564193.5/30

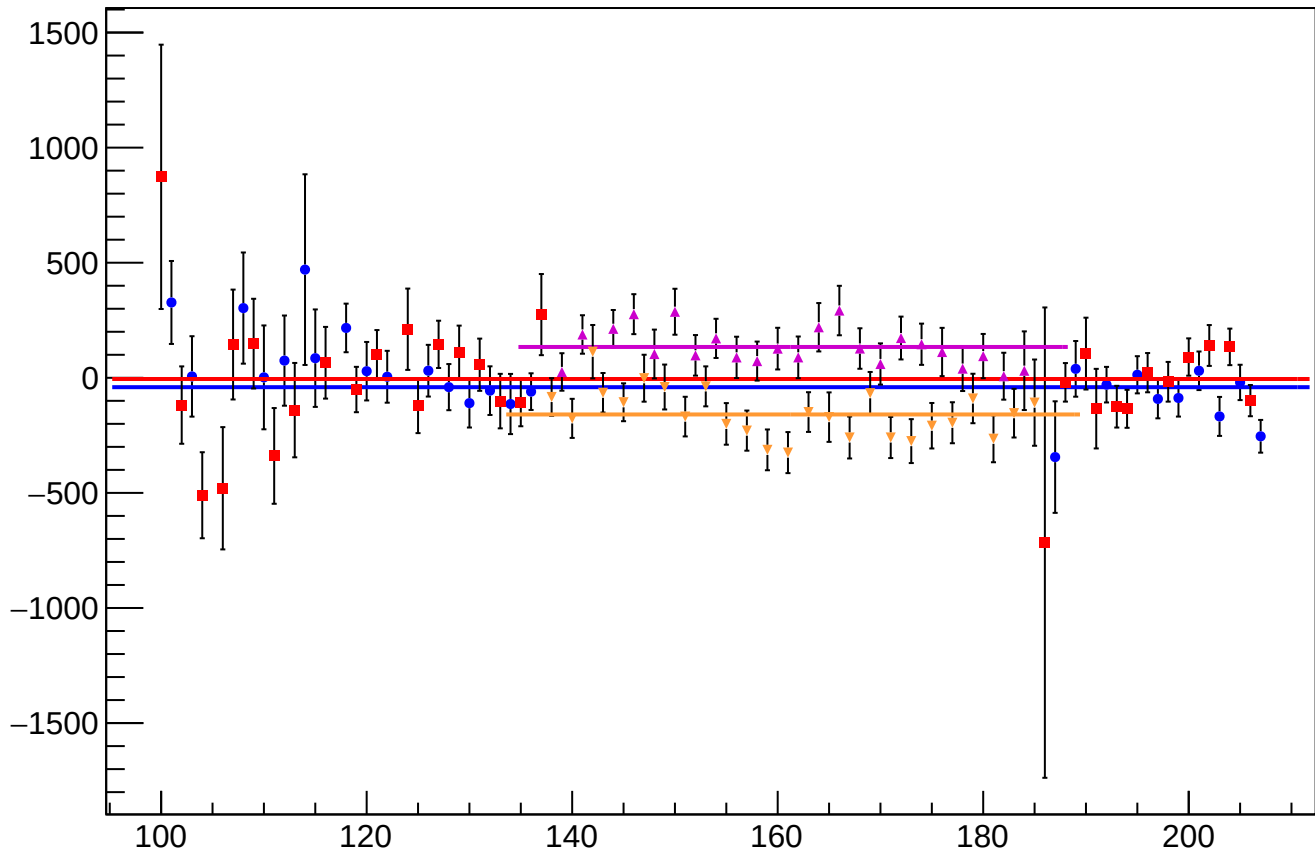
Left In: 326.963 $\pm$ 0.055  $\chi^2$ /NDF: 899329.3/22

+ sign 353.796 $\pm$ 0.044  $\chi^2$ /NDF: 4000451.8/50

All: 355.718 $\pm$ 0.031  $\chi^2$ /NDF: 9422141.0/104

- sign 357.704 $\pm$ 0.045  $\chi^2$ /NDF: 5417839.6/53

# dit\_asym\_sam1\_mean vs Slug



Right In:  $-40.742 \pm 20.815$   $\chi^2/\text{NDF}$ : 31.4/25

Left Out:  $-159.223 \pm 18.749$   $\chi^2/\text{NDF}$ : 28.2/24

Right Out:  $-5.137 \pm 20.568$   $\chi^2/\text{NDF}$ : 43.8/30

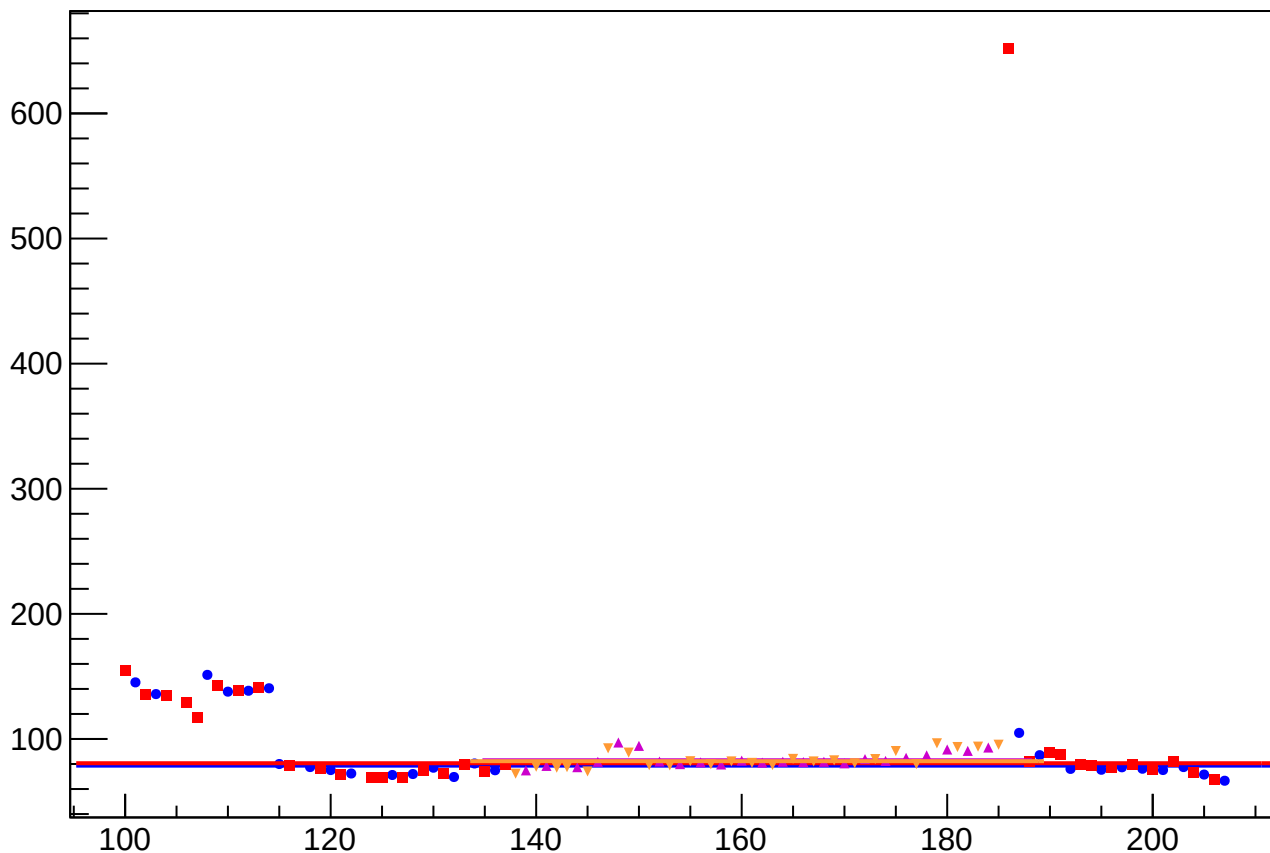
Left In:  $134.010 \pm 19.441$   $\chi^2/\text{NDF}$ : 16.4/22

+ sign  $-106.151 \pm 13.931$   $\chi^2/\text{NDF}$ : 77.4/50

All:  $-20.127 \pm 9.920$   $\chi^2/\text{NDF}$ : 239.2/104

- sign  $68.353 \pm 14.128$   $\chi^2/\text{NDF}$ : 84.4/53

# dit\_asym\_sam1\_rms vs Slug



Right In: 78.699+/-0.015     $\chi^2/\text{NDF}$ : 1201695.2/25

Left Out: 82.247+/-0.013     $\chi^2/\text{NDF}$ : 216548.3/24

Right Out: 80.620+/-0.015     $\chi^2/\text{NDF}$ : 1891071.7/30

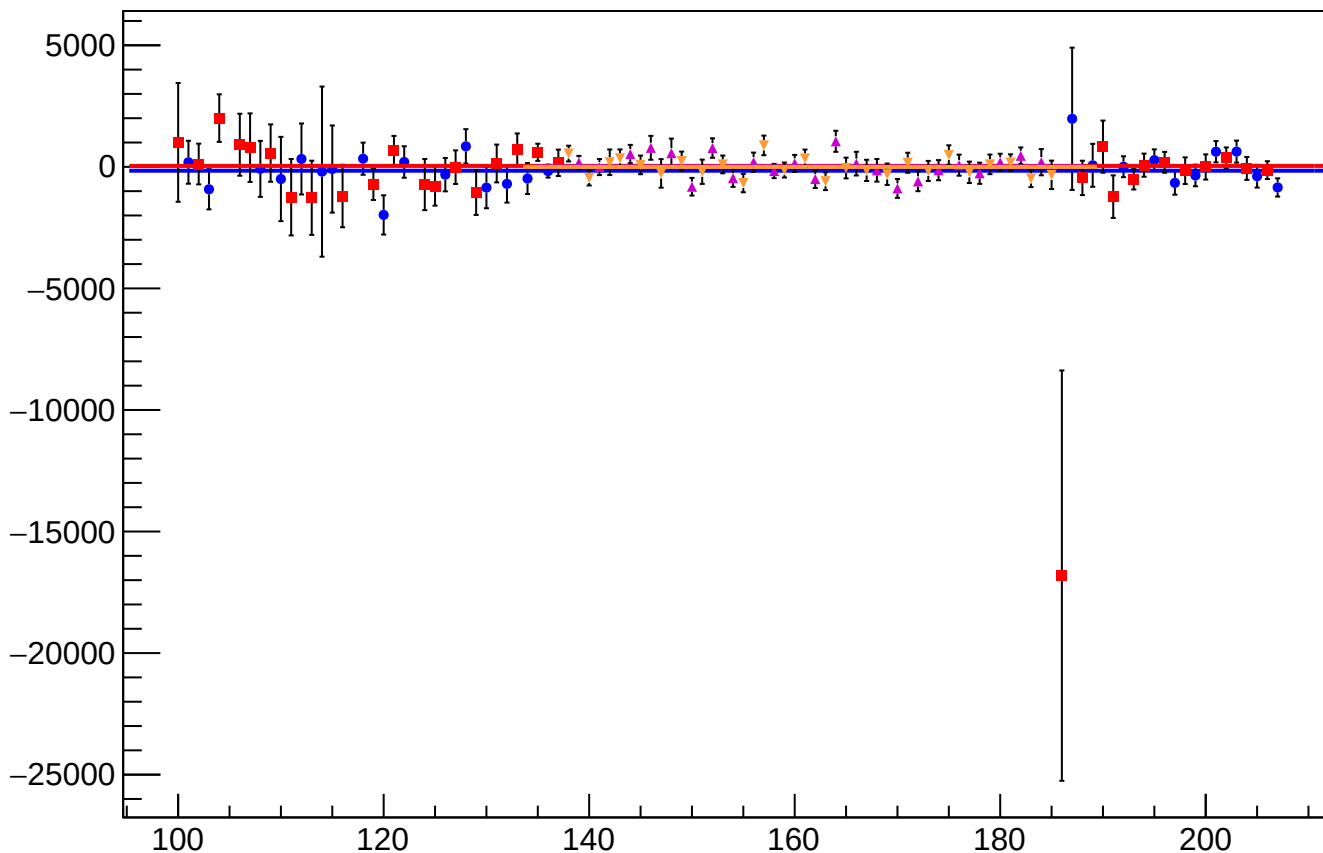
Left In: 82.993+/-0.014     $\chi^2/\text{NDF}$ : 145608.6/22

+ sign 80.658+/-0.010     $\chi^2/\text{NDF}$ : 1450329.8/50

All: 81.257+/-0.007     $\chi^2/\text{NDF}$ : 3508578.1/104

- sign 81.873+/-0.010     $\chi^2/\text{NDF}$ : 2050743.8/53

# asym\_sam1\_dit\_correction\_mean vs Slug



Right In:  $-158.857 \pm 113.596$   $\chi^2/\text{NDF}$ : 23.3/25

Left Out:  $-3.095 \pm 78.582$   $\chi^2/\text{NDF}$ : 23.5/24

Right Out:  $37.939 \pm 114.396$   $\chi^2/\text{NDF}$ : 26.7/30

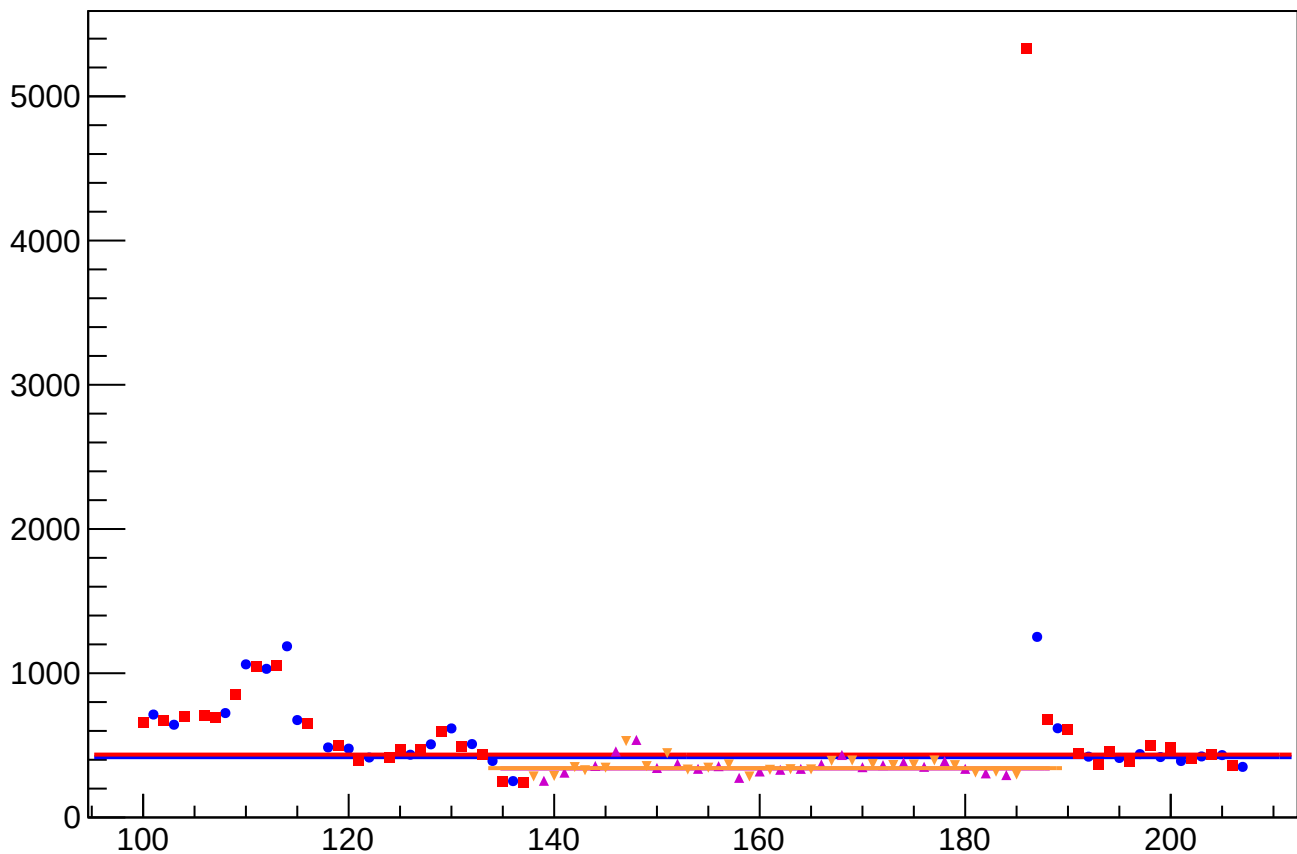
Left In:  $16.519 \pm 80.410$   $\chi^2/\text{NDF}$ : 34.9/22

+ sign  $-53.508 \pm 64.626$   $\chi^2/\text{NDF}$ : 48.1/50

All:  $-15.638 \pm 46.101$   $\chi^2/\text{NDF}$ : 110.4/104

- sign  $23.602 \pm 65.784$   $\chi^2/\text{NDF}$ : 61.6/53

# asym\_sam1\_dit\_correction\_rms vs Slug



Right In: 417.905 $\pm$ 0.080  $\chi^2$ /NDF: 2598612.7/25

Left Out: 341.918 $\pm$ 0.056  $\chi^2$ /NDF: 653930.4/24

Right Out: 435.924 $\pm$ 0.081  $\chi^2$ /NDF: 3488292.5/30

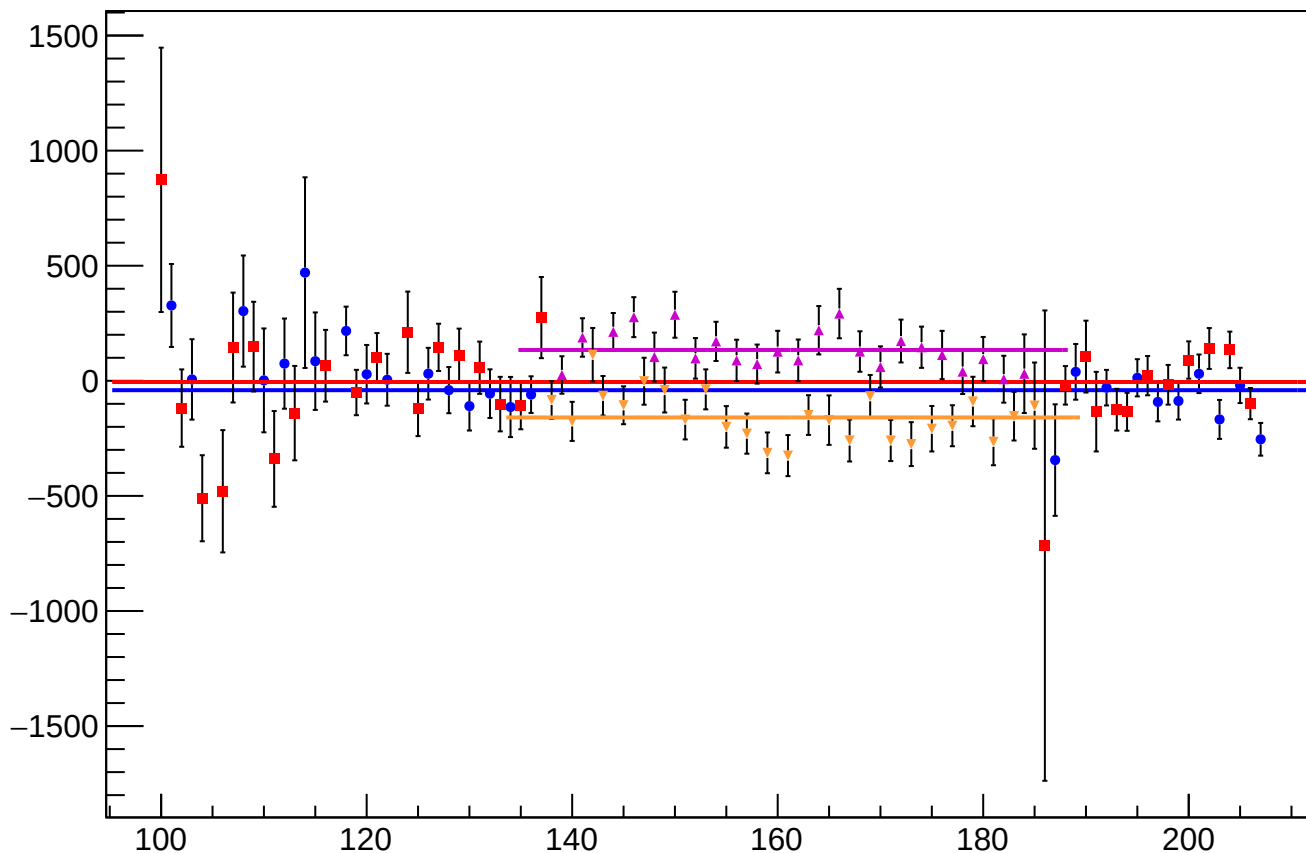
Left In: 339.430 $\pm$ 0.057  $\chi^2$ /NDF: 846706.0/22

+ sign 366.512 $\pm$ 0.046  $\chi^2$ /NDF: 3857821.4/50

All: 368.883 $\pm$ 0.033  $\chi^2$ /NDF: 9150749.1/104

- sign 371.339 $\pm$ 0.047  $\chi^2$ /NDF: 5287445.9/53

# eigen\_dit\_asym\_sam1\_mean vs Slug



Right In:  $-40.741 \pm 20.815$   $\chi^2/\text{NDF}$ : 31.4/25

Left Out:  $-159.223 \pm 18.749$   $\chi^2/\text{NDF}$ : 28.2/24

Right Out:  $-5.136 \pm 20.568$   $\chi^2/\text{NDF}$ : 43.8/30

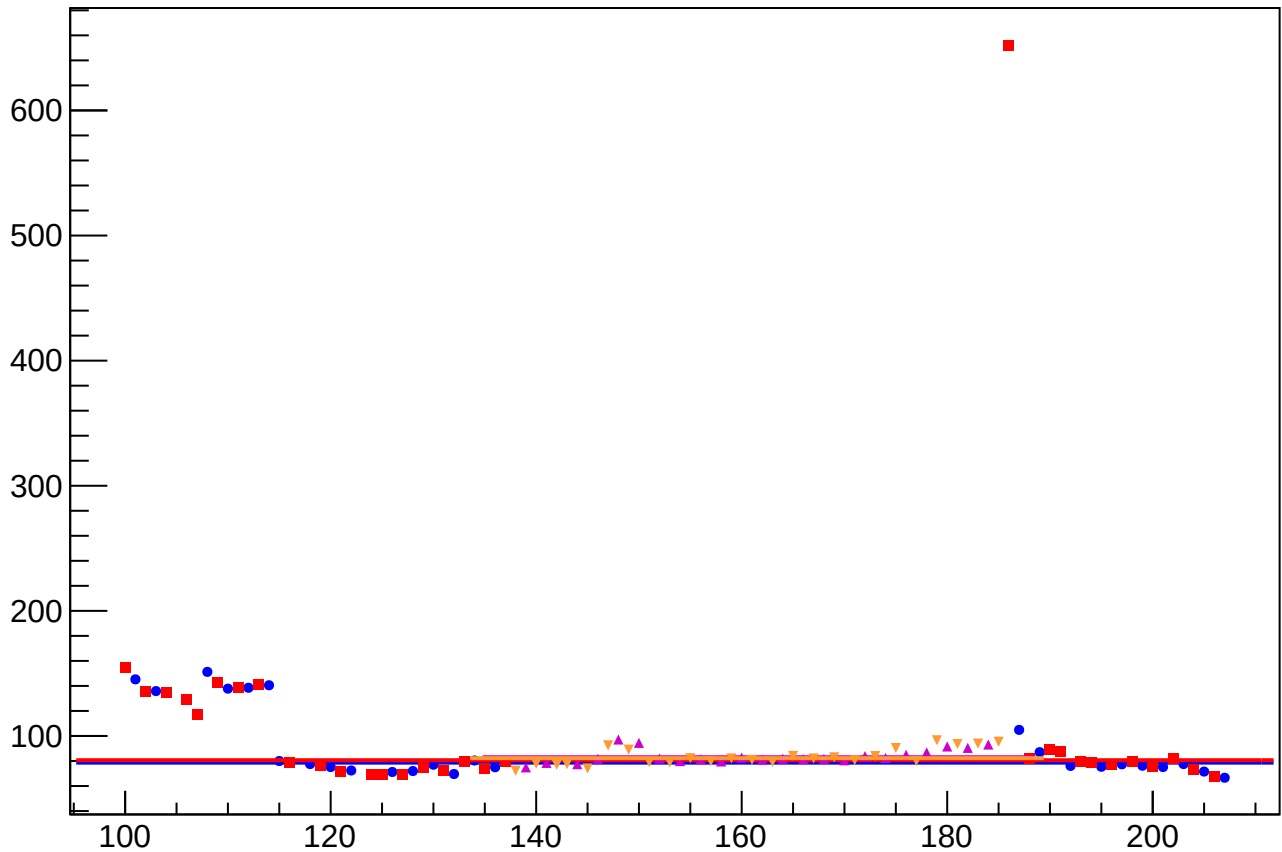
Left In:  $134.010 \pm 19.441$   $\chi^2/\text{NDF}$ : 16.4/22

+ sign  $-106.150 \pm 13.931$   $\chi^2/\text{NDF}$ : 77.4/50

All:  $-20.127 \pm 9.920$   $\chi^2/\text{NDF}$ : 239.2/104

- sign  $68.353 \pm 14.128$   $\chi^2/\text{NDF}$ : 84.4/53

# eigen\_dit\_asym\_sam1\_rms vs Slug



Right In: 78.699+/-0.015     $\chi^2/\text{NDF}$ : 1201696.9/25

Left Out: 82.247+/-0.013     $\chi^2/\text{NDF}$ : 216548.5/24

Right Out: 80.620+/-0.015     $\chi^2/\text{NDF}$ : 1891071.3/30

Left In: 82.993+/-0.014     $\chi^2/\text{NDF}$ : 145607.1/22

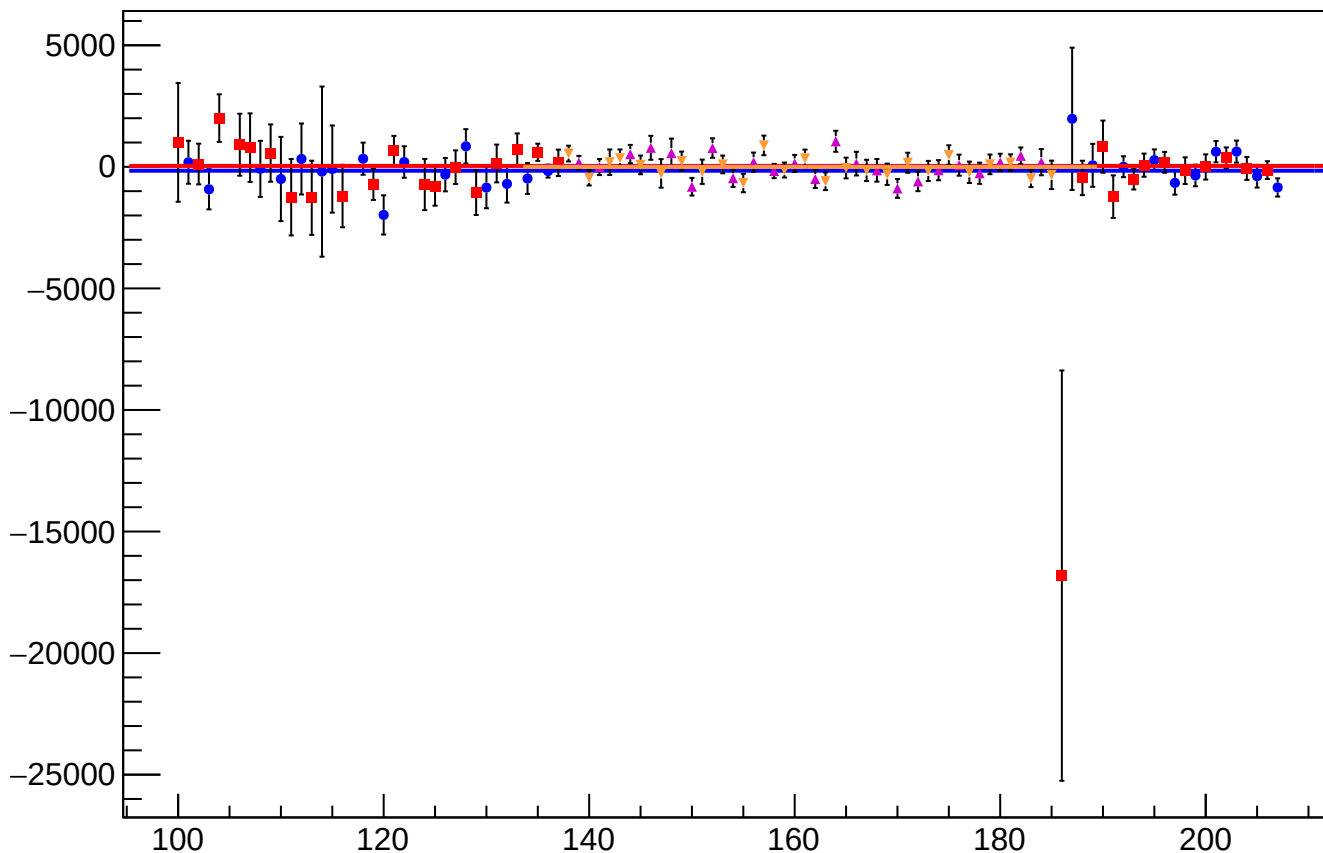
+ sign 80.658+/-0.010     $\chi^2/\text{NDF}$ : 1450333.9/50

All: 81.257+/-0.007     $\chi^2/\text{NDF}$ : 3508581.6/104

- sign 81.873+/-0.010     $\chi^2/\text{NDF}$ : 2050743.3/53



# asym\_sam1\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-158.855 \pm 113.596$   $\chi^2/\text{NDF}$ : 23.3/25

Left Out:  $-3.094 \pm 78.582$   $\chi^2/\text{NDF}$ : 23.5/24

Right Out:  $37.939 \pm 114.396$   $\chi^2/\text{NDF}$ : 26.7/30

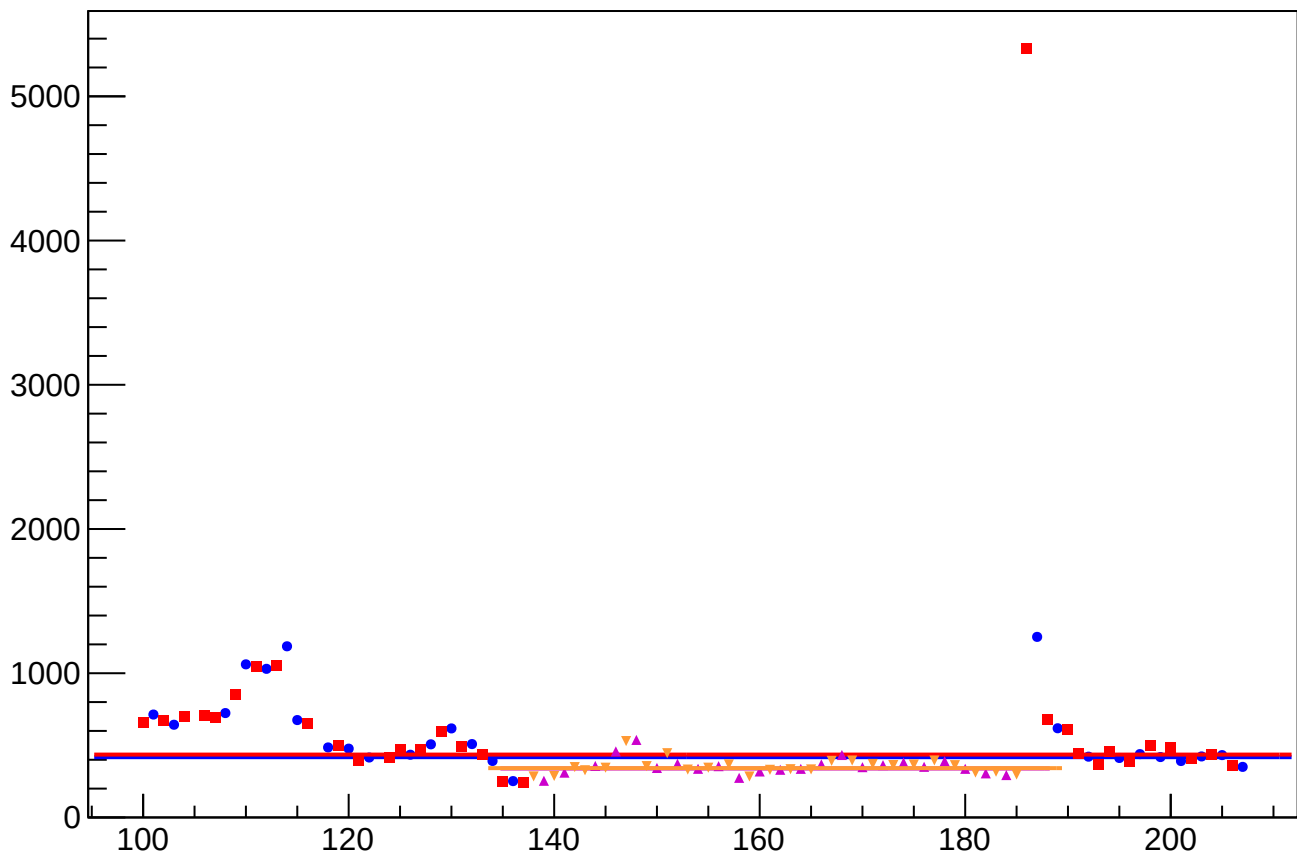
Left In:  $16.519 \pm 80.410$   $\chi^2/\text{NDF}$ : 34.9/22

+ sign  $-53.507 \pm 64.626$   $\chi^2/\text{NDF}$ : 48.1/50

All:  $-15.638 \pm 46.101$   $\chi^2/\text{NDF}$ : 110.4/104

- sign  $23.602 \pm 65.784$   $\chi^2/\text{NDF}$ : 61.6/53

# asym\_sam1\_eigen\_dit\_correction\_rms vs Slug



Right In: 417.904 $\pm$ 0.080  $\chi^2$ /NDF: 2598618.4/25

Left Out: 341.918 $\pm$ 0.056  $\chi^2$ /NDF: 653932.3/24

Right Out: 435.923 $\pm$ 0.081  $\chi^2$ /NDF: 3488300.3/30

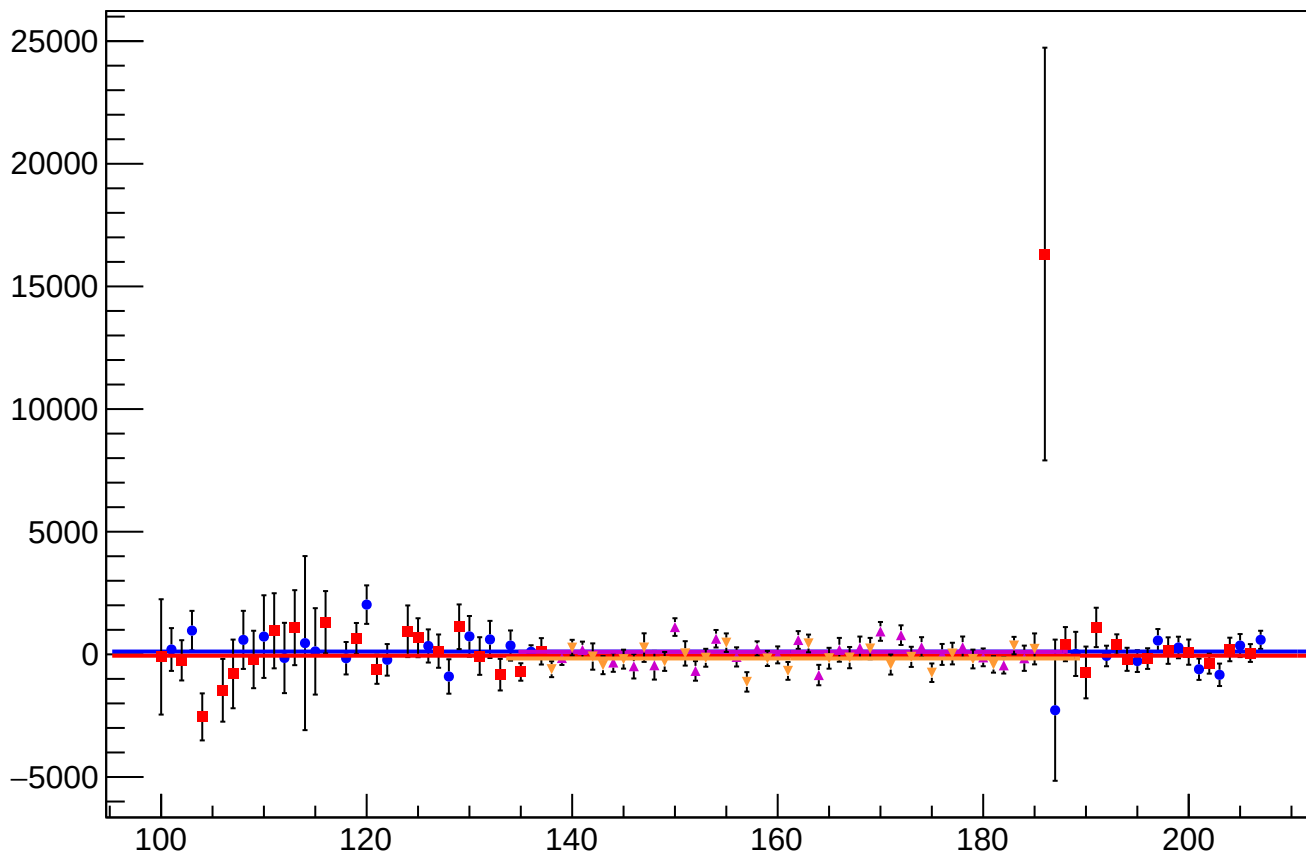
Left In: 339.430 $\pm$ 0.057  $\chi^2$ /NDF: 846709.1/22

+ sign 366.511 $\pm$ 0.046  $\chi^2$ /NDF: 3857817.5/50

All: 368.882 $\pm$ 0.033  $\chi^2$ /NDF: 9150740.2/104

- sign 371.339 $\pm$ 0.047  $\chi^2$ /NDF: 5287441.0/53

# asym\_sam1\_mean vs Slug



Right In: 114.719+/-112.429  $\chi^2/\text{NDF}$ : 22.9/25

Left Out: -167.380+/-78.179  $\chi^2/\text{NDF}$ : 25.6/24

Right Out: -55.208+/-112.852  $\chi^2/\text{NDF}$ : 30.5/30

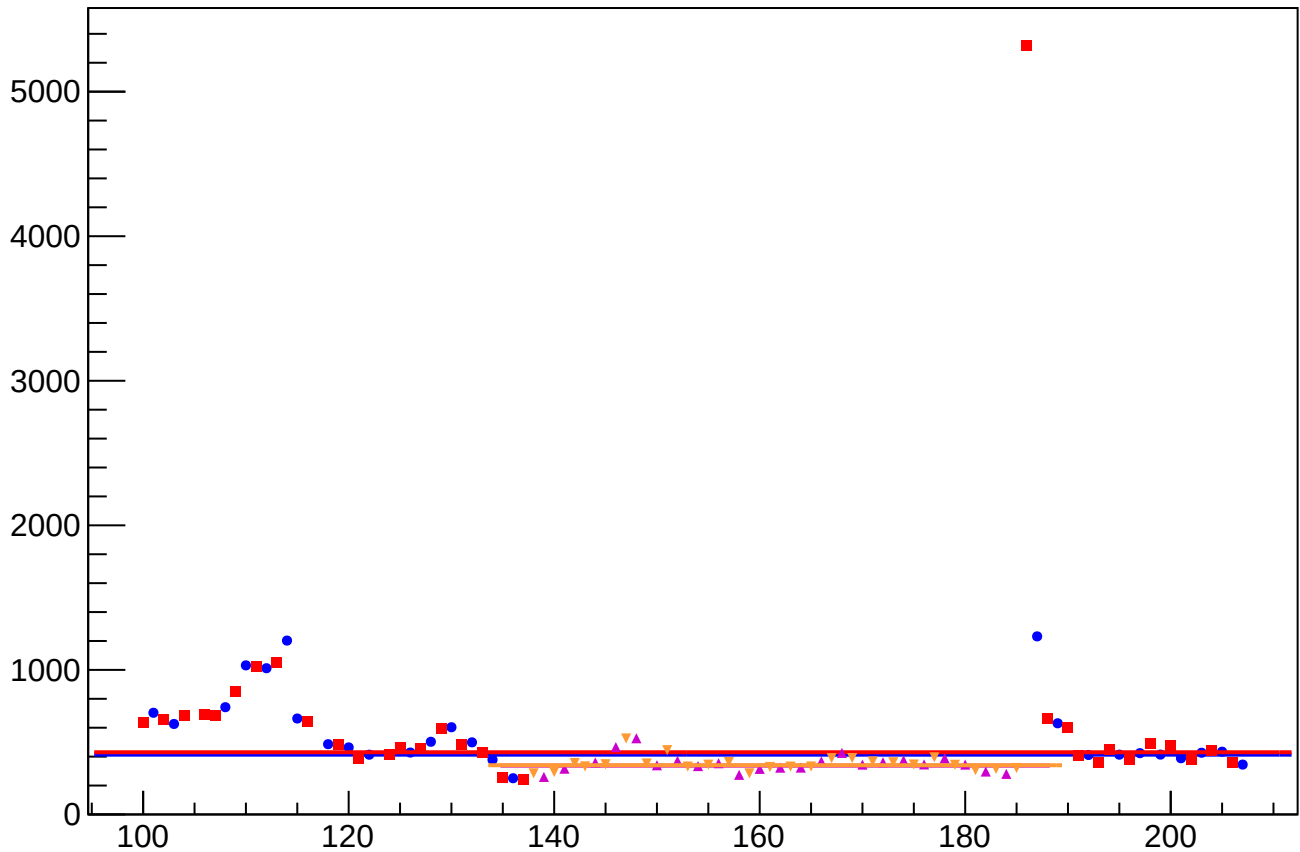
Left In: 104.016+/-79.995  $\chi^2/\text{NDF}$ : 37.5/22

+ sign -75.435+/-64.186  $\chi^2/\text{NDF}$ : 52.7/50

All: -13.383+/-45.762  $\chi^2/\text{NDF}$ : 124.0/104

- sign 50.767+/-65.262  $\chi^2/\text{NDF}$ : 69.3/53

# asym\_sam1\_rms vs Slug



Right In: 413.660 $\pm$ 0.079  $\chi^2$ /NDF: 2584257.0/25

Left Out: 340.391 $\pm$ 0.055  $\chi^2$ /NDF:604155.3/24

Right Out: 430.299 $\pm$ 0.080  $\chi^2$ /NDF: 3440489.1/30

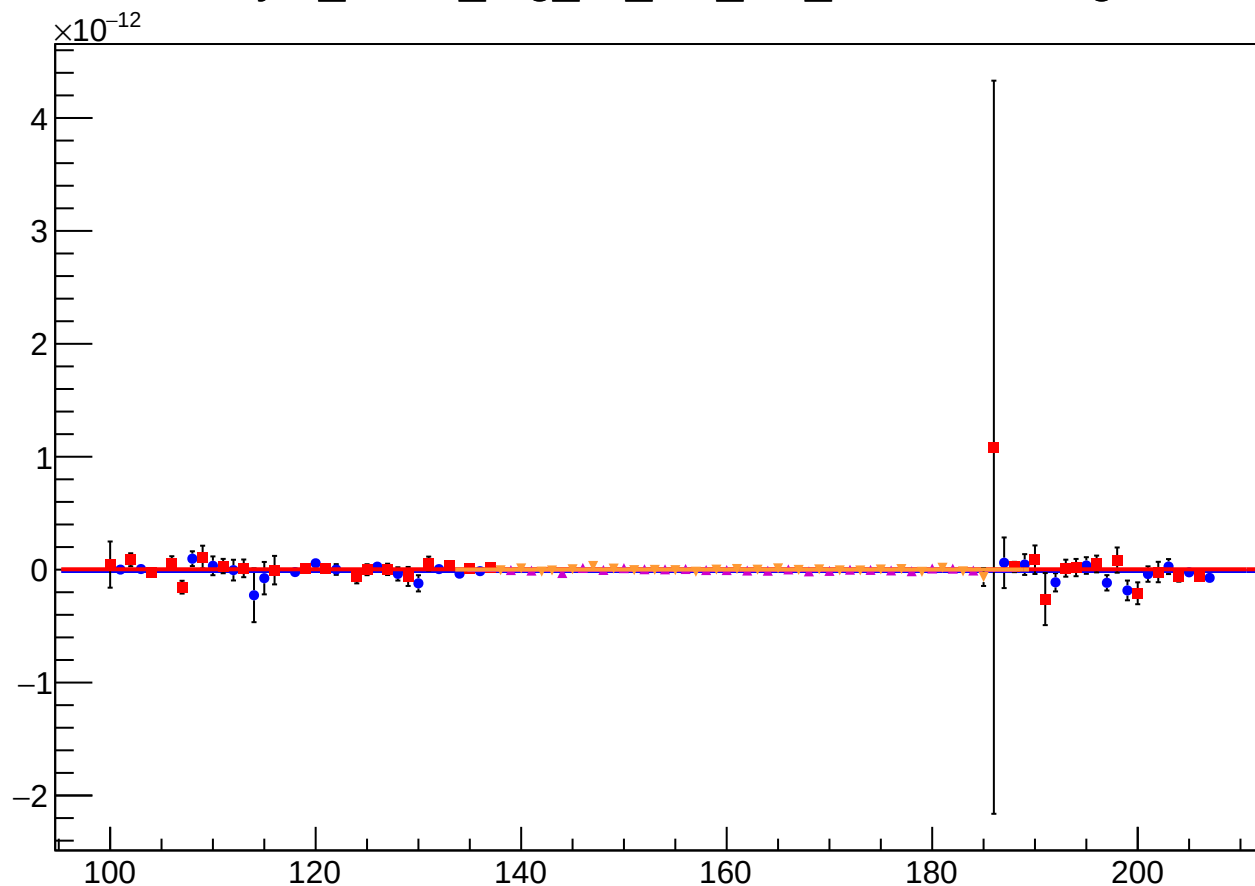
Left In: 337.759 $\pm$ 0.057  $\chi^2$ /NDF:820674.4/22

+ sign 364.272 $\pm$ 0.045  $\chi^2$ /NDF: 3760958.5/50

All: 366.453 $\pm$ 0.032  $\chi^2$ /NDF: 8921917.9/104

- sign 368.707 $\pm$ 0.046  $\chi^2$ /NDF: 5156263.5/53

# asym\_sam1\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 28.6/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 16.2/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 31.0/30

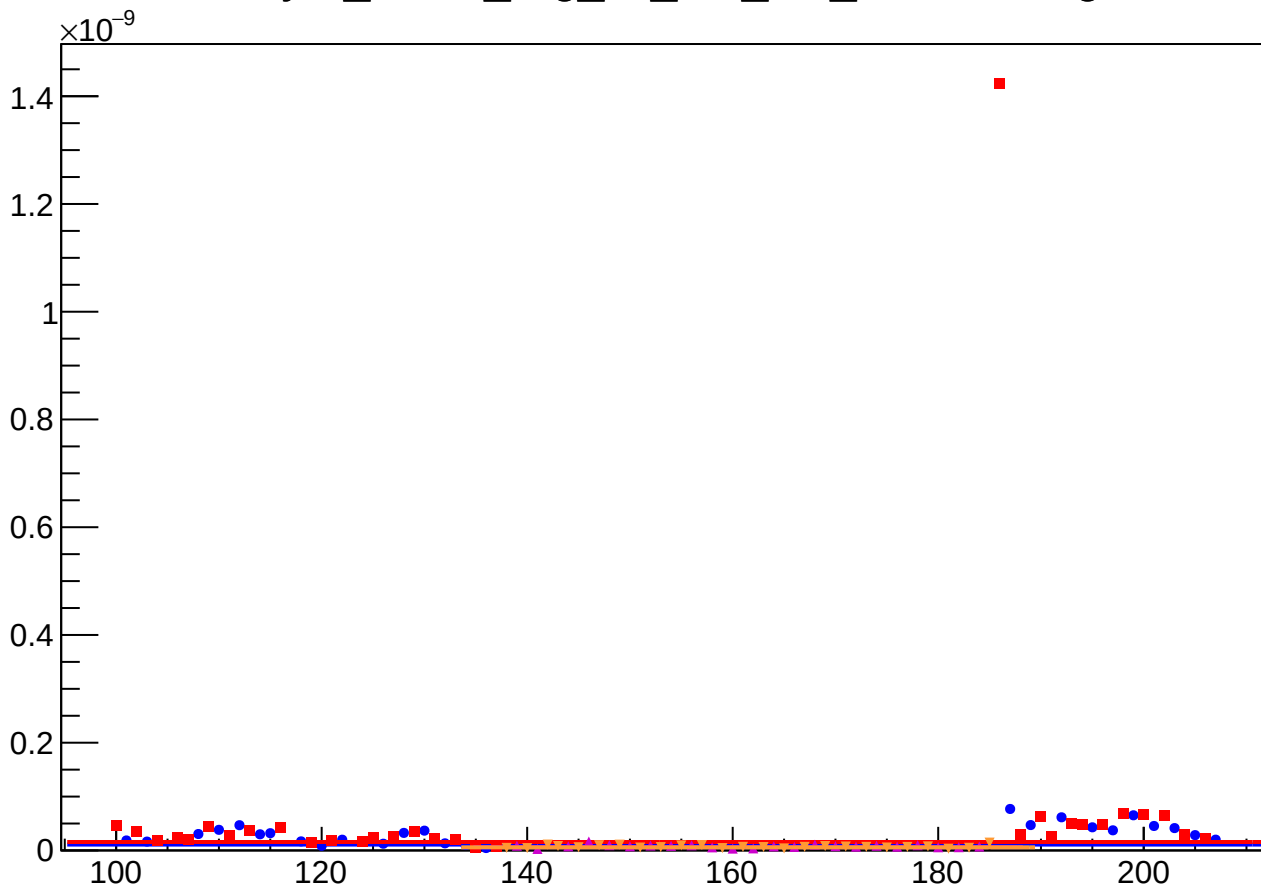
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 11.9/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 49.1/50

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 93.3/104

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 43.7/53

# asym\_sam1\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7227251.8/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1155947.4/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7063282.6/30

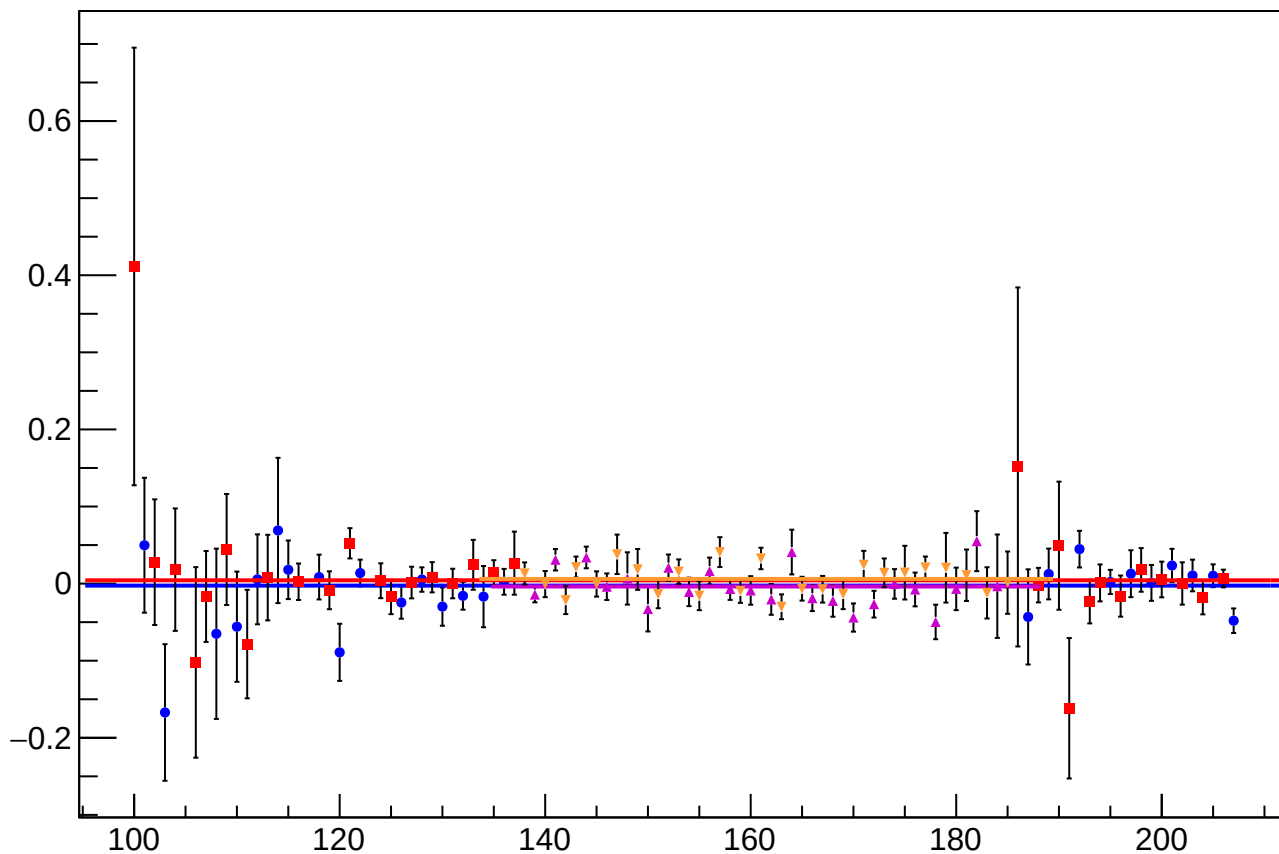
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1970663.5/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9702550.4/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 21698454.2/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11891039.6/53

# asym\_sam1\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.003 \pm 0.005$   $\chi^2/\text{NDF}$ : 31.1/25

Left Out:  $0.006 \pm 0.004$   $\chi^2/\text{NDF}$ : 26.7/24

Right Out:  $0.004 \pm 0.005$   $\chi^2/\text{NDF}$ : 20.1/30

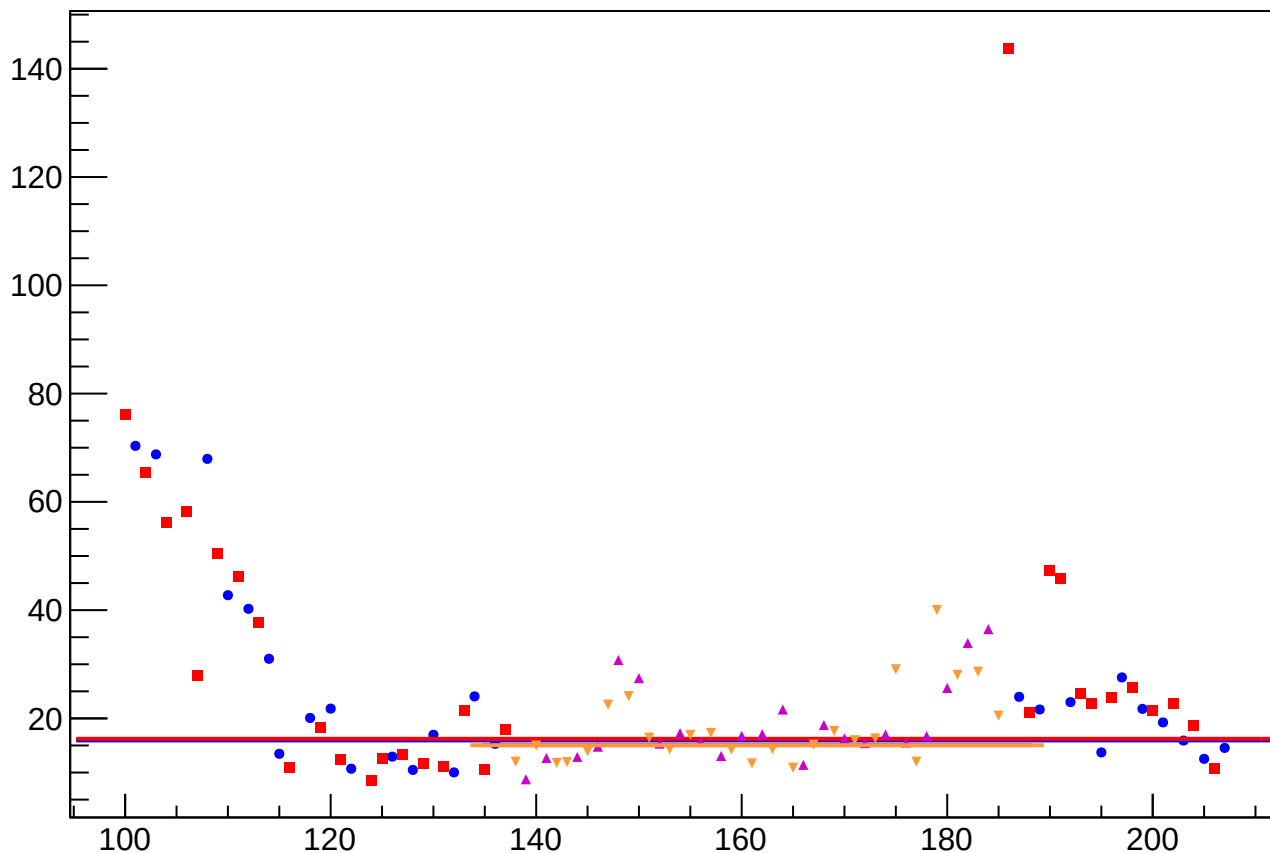
Left In:  $-0.004 \pm 0.004$   $\chi^2/\text{NDF}$ : 37.1/22

+ sign  $0.003 \pm 0.003$   $\chi^2/\text{NDF}$ : 59.9/50

All:  $0.001 \pm 0.002$   $\chi^2/\text{NDF}$ : 119.5/104

- sign  $-0.001 \pm 0.003$   $\chi^2/\text{NDF}$ : 59.0/53

# asym\_sam1\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 15.940 $\pm$ 0.003  $\chi^2$ /NDF: 4371940.7/25

Left Out: 15.046 $\pm$ 0.003  $\chi^2$ /NDF: 2758075.6/24

Right Out: 16.227 $\pm$ 0.003  $\chi^2$ /NDF: 6416310.7/30

Left In: 15.068 $\pm$ 0.003  $\chi^2$ /NDF: 3066591.4/22

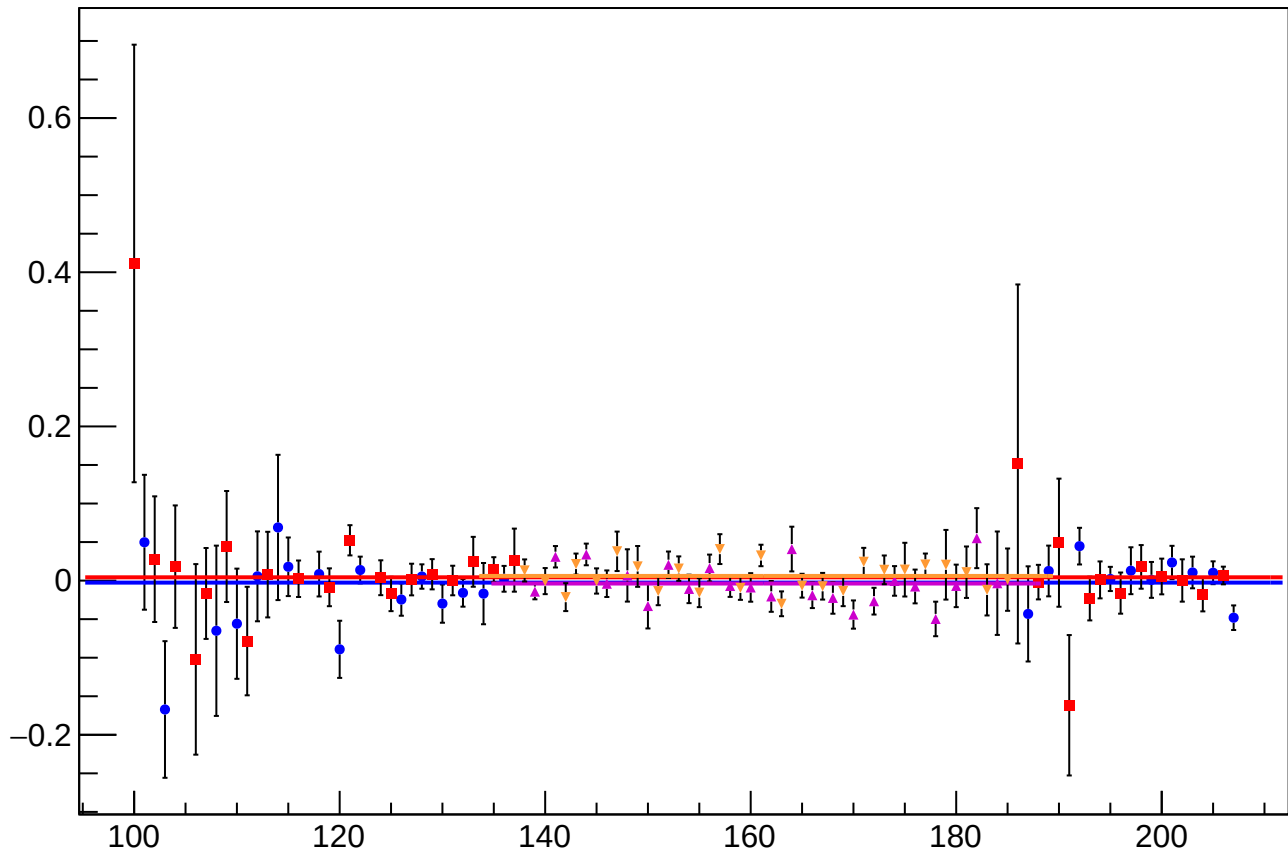
+ sign 15.385 $\pm$ 0.002  $\chi^2$ /NDF: 7174675.6/50

All: 15.456 $\pm$ 0.001  $\chi^2$ /NDF: 16733260.2/104

- sign 15.531 $\pm$ 0.002  $\chi^2$ /NDF: 9556087.6/53



# asym\_sam1\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.003 \pm 0.005$   $\chi^2/\text{NDF}$ : 31.1/25

Left Out:  $0.006 \pm 0.004$   $\chi^2/\text{NDF}$ : 26.7/24

Right Out:  $0.004 \pm 0.005$   $\chi^2/\text{NDF}$ : 20.1/30

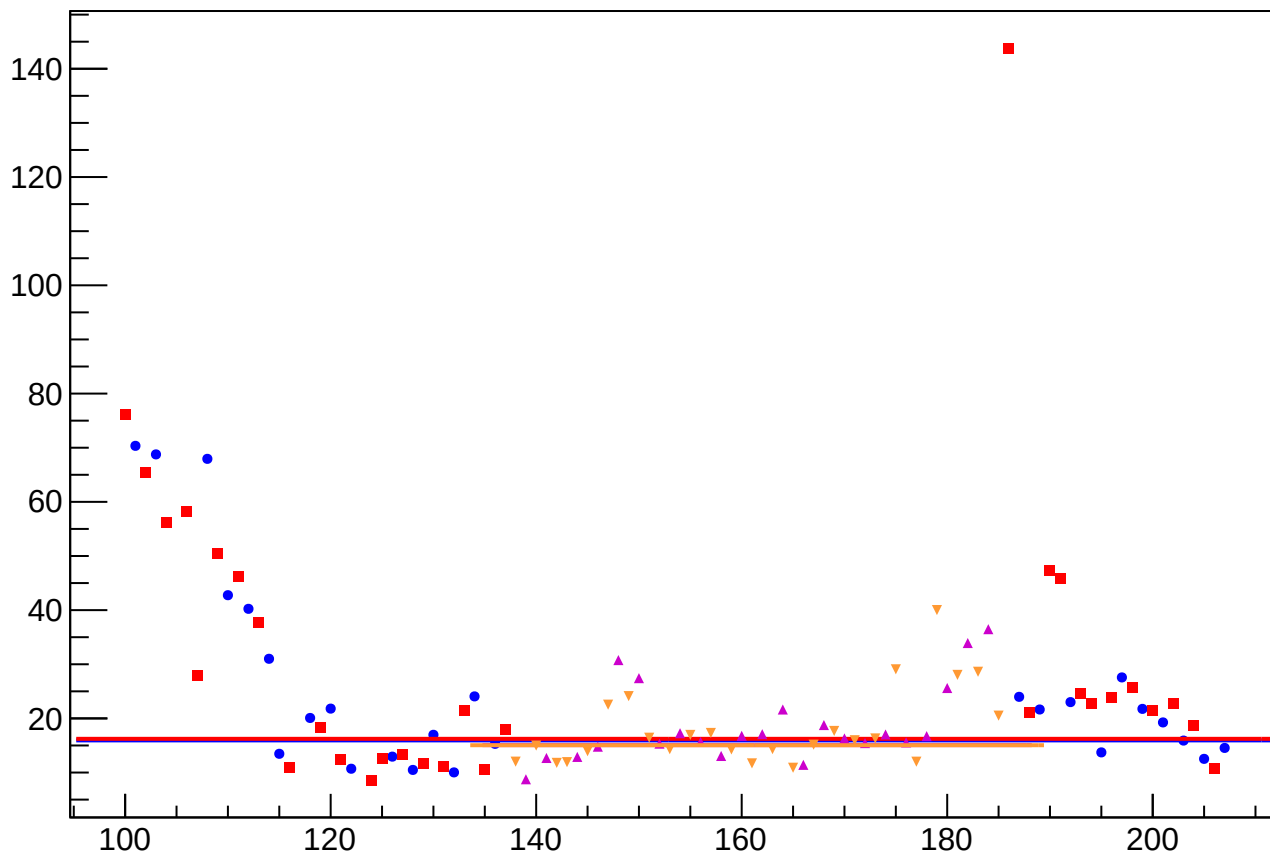
Left In:  $-0.004 \pm 0.004$   $\chi^2/\text{NDF}$ : 37.1/22

+ sign  $0.003 \pm 0.003$   $\chi^2/\text{NDF}$ : 59.9/50

All:  $0.001 \pm 0.002$   $\chi^2/\text{NDF}$ : 119.5/104

- sign  $-0.001 \pm 0.003$   $\chi^2/\text{NDF}$ : 59.0/53

# asym\_sam1\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In:  $15.940 \pm 0.003$   $\chi^2/\text{NDF}: 4371940.7/25$

Left Out:  $15.046 \pm 0.003$   $\chi^2/\text{NDF}: 2758075.6/24$

Right Out:  $16.227 \pm 0.003$   $\chi^2/\text{NDF}: 6416310.7/30$

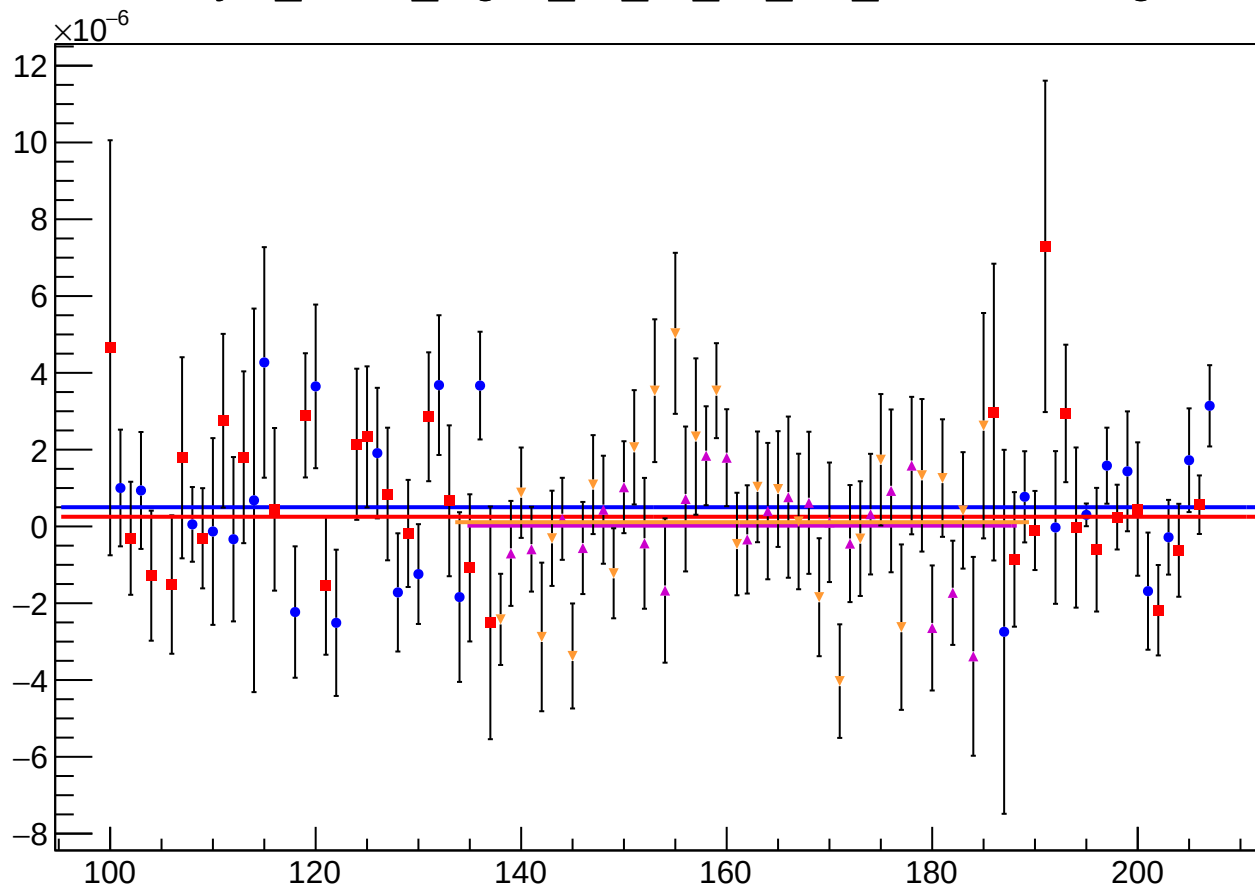
Left In:  $15.068 \pm 0.003$   $\chi^2/\text{NDF}: 3066591.4/22$

+ sign  $15.385 \pm 0.002$   $\chi^2/\text{NDF}: 7174675.6/50$

All:  $15.456 \pm 0.001$   $\chi^2/\text{NDF}: 16733260.2/104$

- sign  $15.531 \pm 0.002$   $\chi^2/\text{NDF}: 9556087.6/53$

# asym\_sam1\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 35.6/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:50.0/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 25.9/30

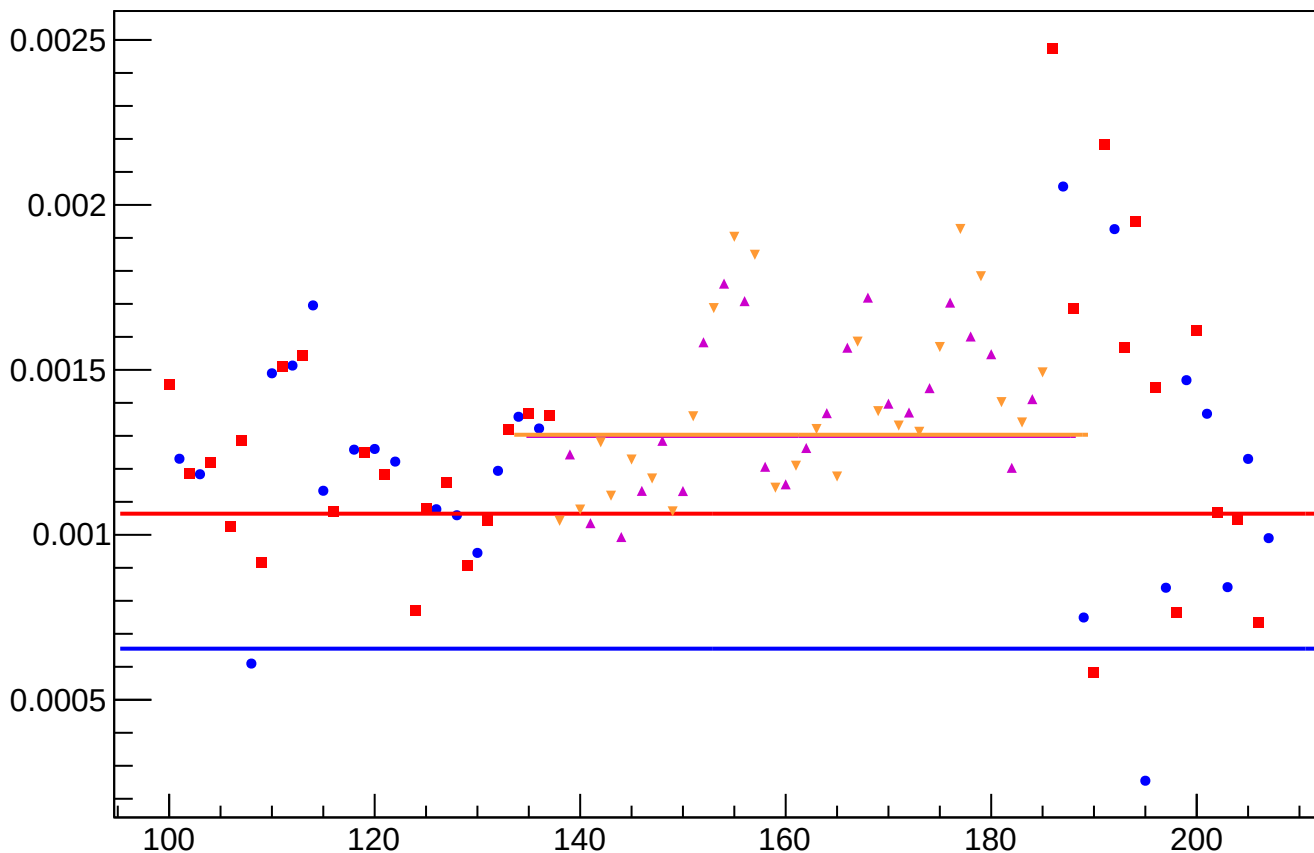
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:14.1/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 86.7/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 127.7/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 40.3/53

# asym\_sam1\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 9357665.8/25

Left Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 1181536.6/24

Right Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 3012978.7/30

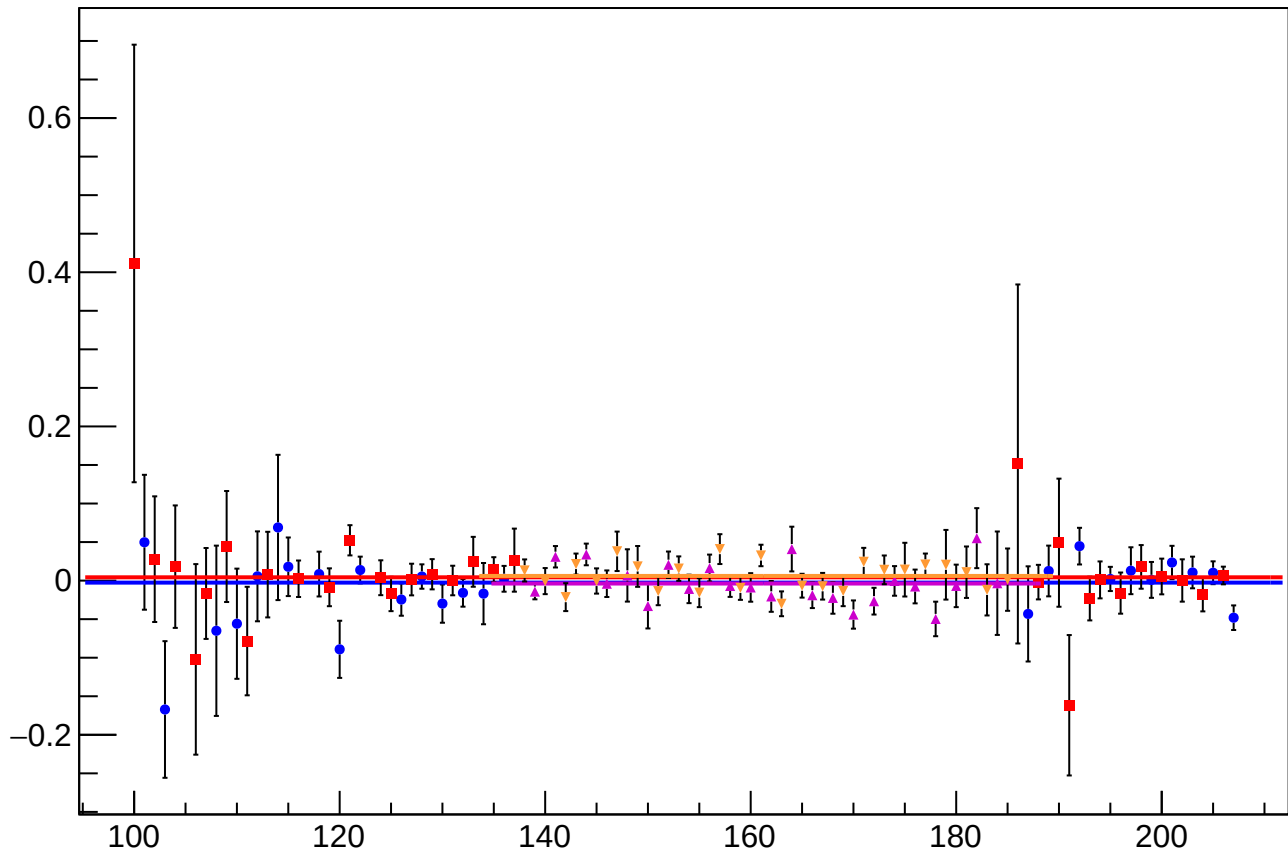
Left In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 1026052.2/22

+ sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 16745816.1/50

All: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 23924319.5/104

- sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 4676843.4/53

# asym\_sam1\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.003 \pm 0.005$   $\chi^2/\text{NDF}$ : 31.1/25

Left Out:  $0.006 \pm 0.004$   $\chi^2/\text{NDF}$ : 26.7/24

Right Out:  $0.004 \pm 0.005$   $\chi^2/\text{NDF}$ : 20.1/30

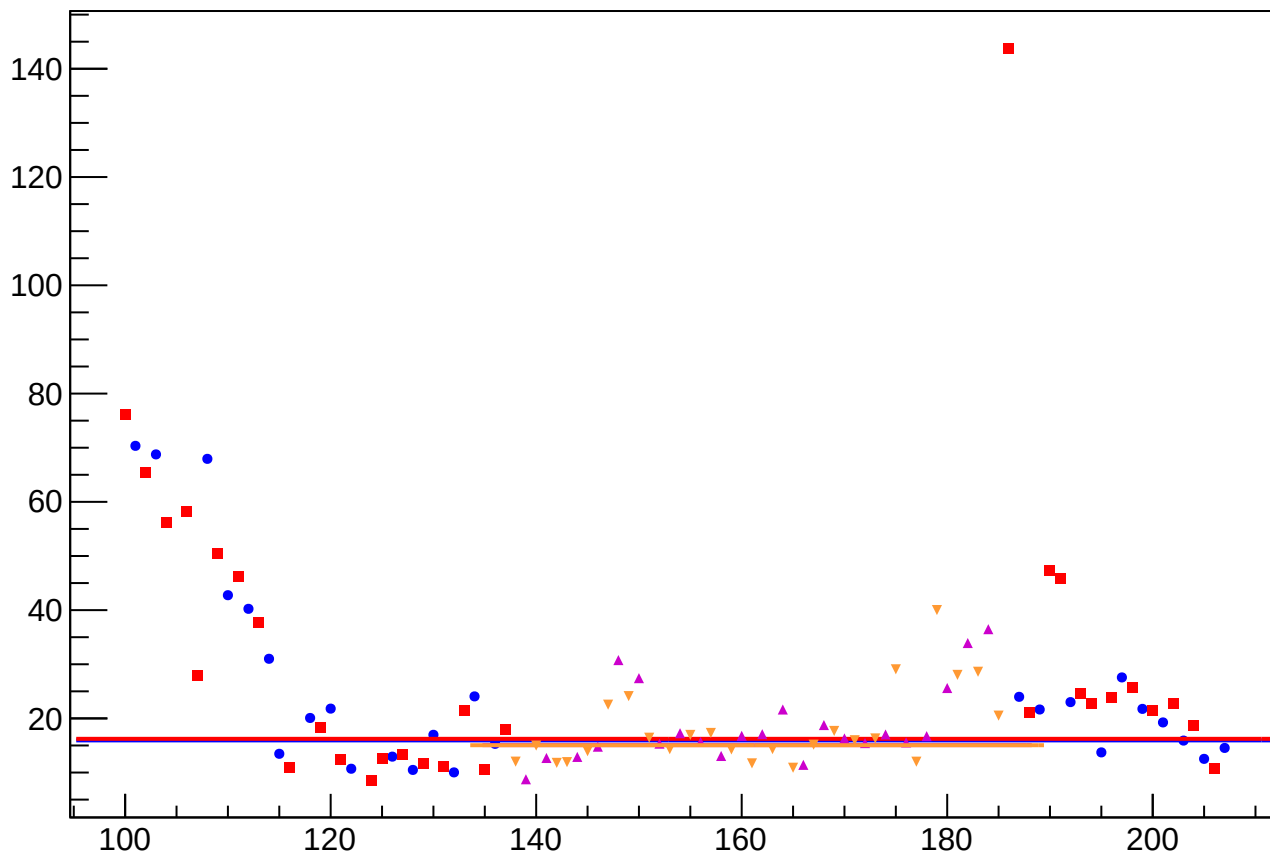
Left In:  $-0.004 \pm 0.004$   $\chi^2/\text{NDF}$ : 37.1/22

+ sign  $0.003 \pm 0.003$   $\chi^2/\text{NDF}$ : 59.9/50

All:  $0.001 \pm 0.002$   $\chi^2/\text{NDF}$ : 119.5/104

- sign  $-0.001 \pm 0.003$   $\chi^2/\text{NDF}$ : 59.0/53

# asym\_sam1\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 15.940 $\pm$ 0.003  $\chi^2$ /NDF: 4371955.2/25

Left Out: 15.046 $\pm$ 0.003  $\chi^2$ /NDF: 2758285.3/24

Right Out: 16.227 $\pm$ 0.003  $\chi^2$ /NDF: 6416277.2/30

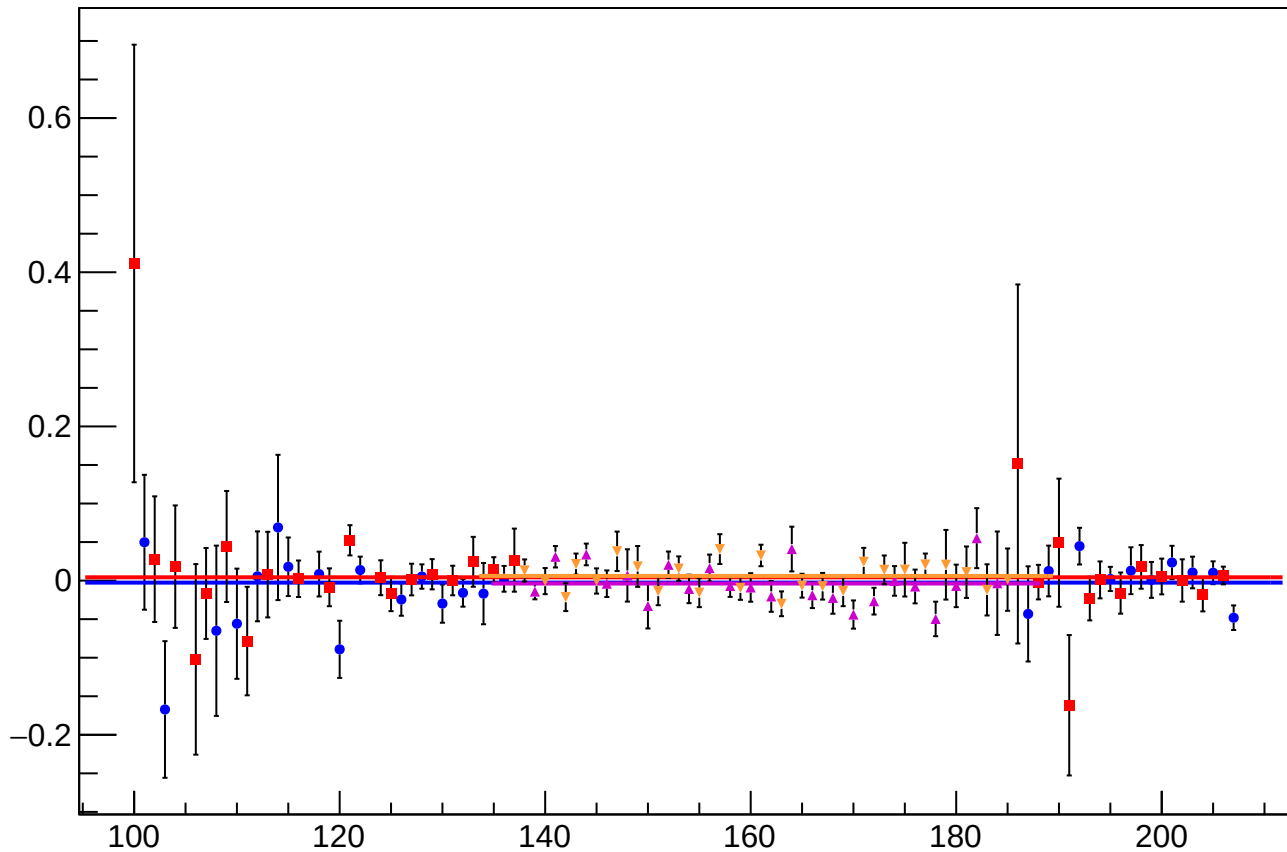
Left In: 15.067 $\pm$ 0.003  $\chi^2$ /NDF: 3066635.3/22

+ sign 15.384 $\pm$ 0.002  $\chi^2$ /NDF: 7174892.5/50

All: 15.456 $\pm$ 0.001  $\chi^2$ /NDF: 16733485.1/104

- sign 15.531 $\pm$ 0.002  $\chi^2$ /NDF: 9556092.8/53

asym\_sam1\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.003 \pm 0.005$   $\chi^2/\text{NDF}$ : 31.1/25

Left Out:  $0.006 \pm 0.004$   $\chi^2/\text{NDF}$ : 26.7/24

Right Out:  $0.004 \pm 0.005$   $\chi^2/\text{NDF}$ : 20.1/30

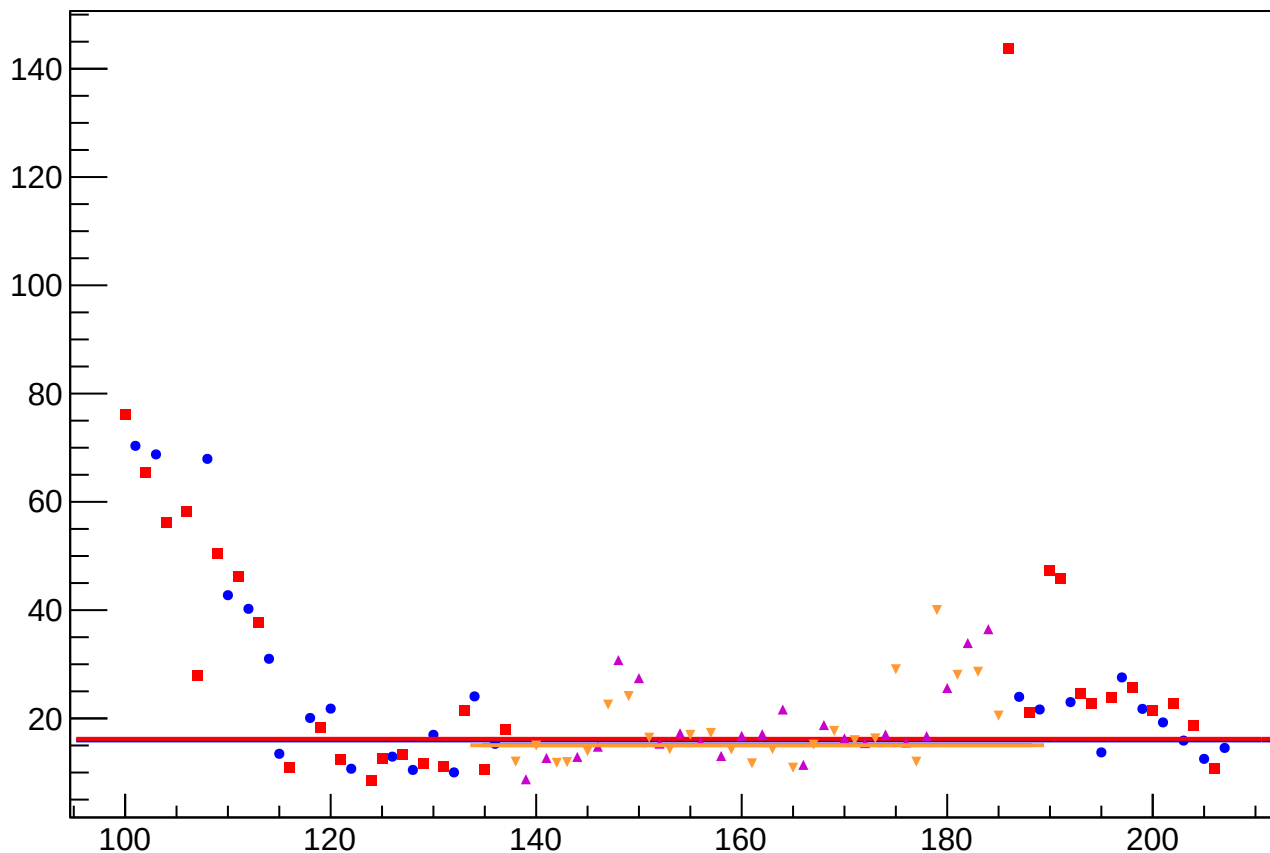
Left In:  $-0.004 \pm 0.004$   $\chi^2/\text{NDF}$ : 37.1/22

+ sign  $0.003 \pm 0.003$   $\chi^2/\text{NDF}$ : 59.9/50

All:  $0.001 \pm 0.002$   $\chi^2/\text{NDF}$ : 119.5/104

- sign  $-0.001 \pm 0.003$   $\chi^2/\text{NDF}$ : 59.0/53

asym\_sam1\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 15.940 $\pm$ 0.003  $\chi^2$ /NDF: 4371955.2/25

Left Out: 15.046 $\pm$ 0.003  $\chi^2$ /NDF: 2758285.3/24

Right Out: 16.227 $\pm$ 0.003  $\chi^2$ /NDF: 6416277.2/30

Left In: 15.067 $\pm$ 0.003  $\chi^2$ /NDF: 3066635.3/22

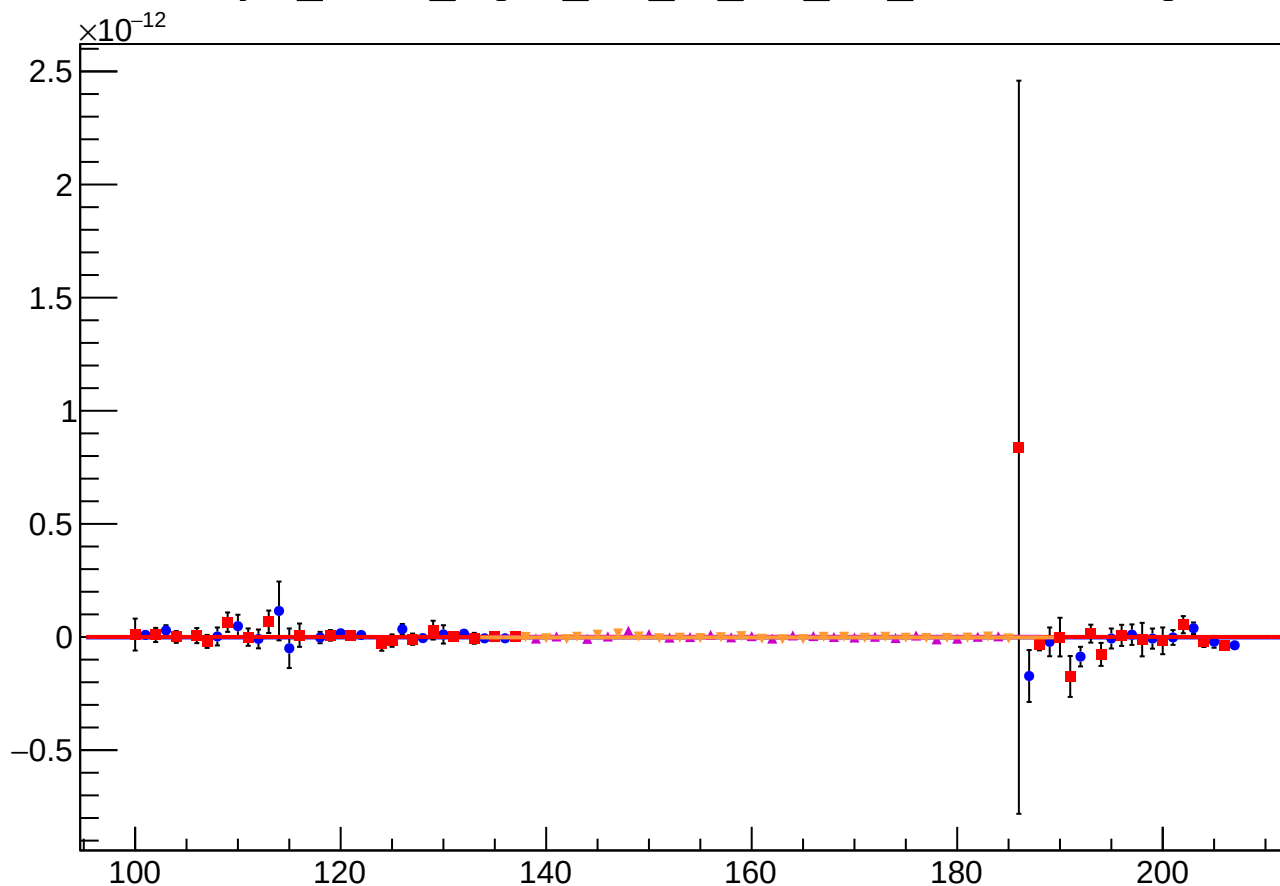
+ sign 15.384 $\pm$ 0.002  $\chi^2$ /NDF: 7174892.5/50

All: 15.456 $\pm$ 0.001  $\chi^2$ /NDF: 16733485.1/104

- sign 15.531 $\pm$ 0.002  $\chi^2$ /NDF: 9556092.8/53



# asym\_sam1\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 22.6/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 15.2/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 22.3/30

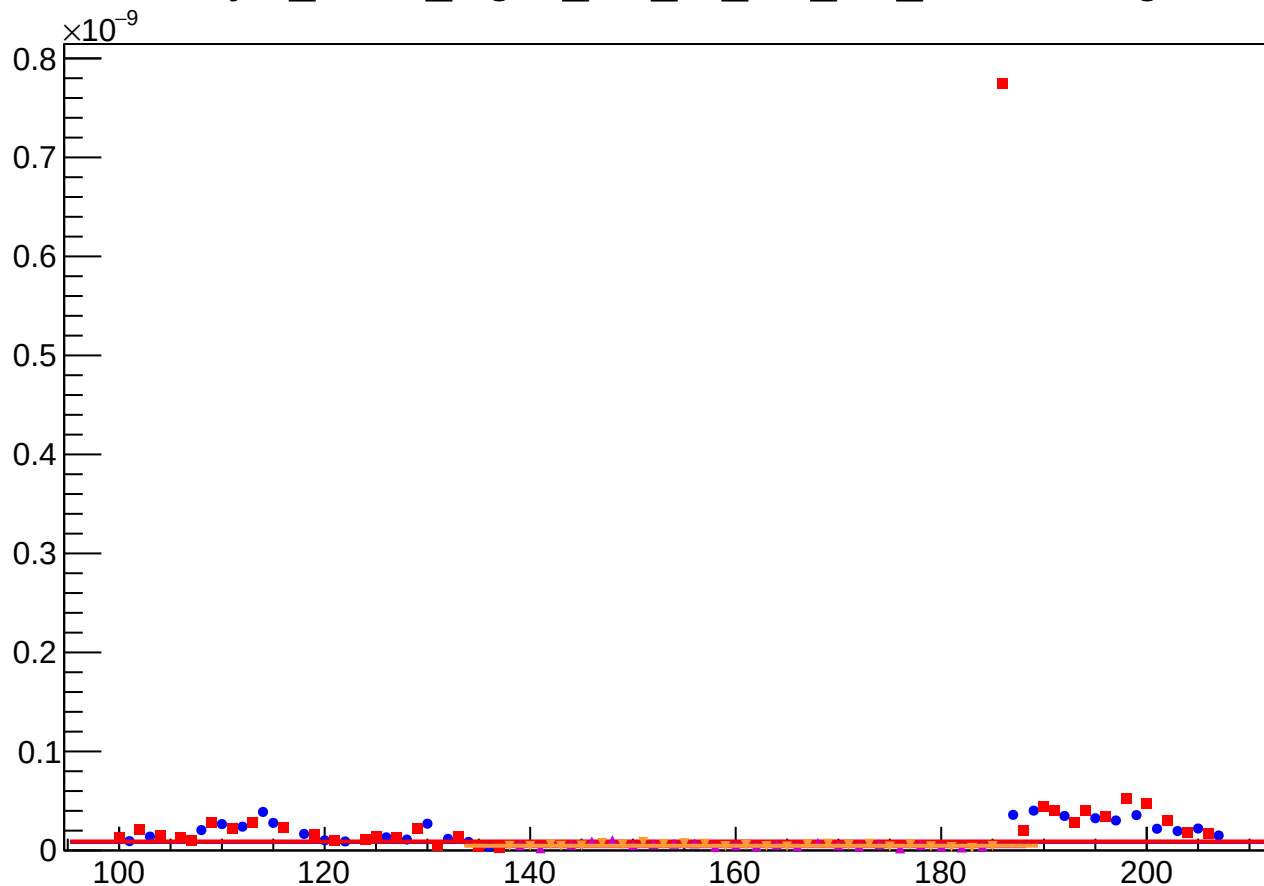
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 21.3/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 37.7/50

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 83.3/104

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 43.6/53

# asym\_sam1\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8586731.8/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2098495.0/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10898086.7/30

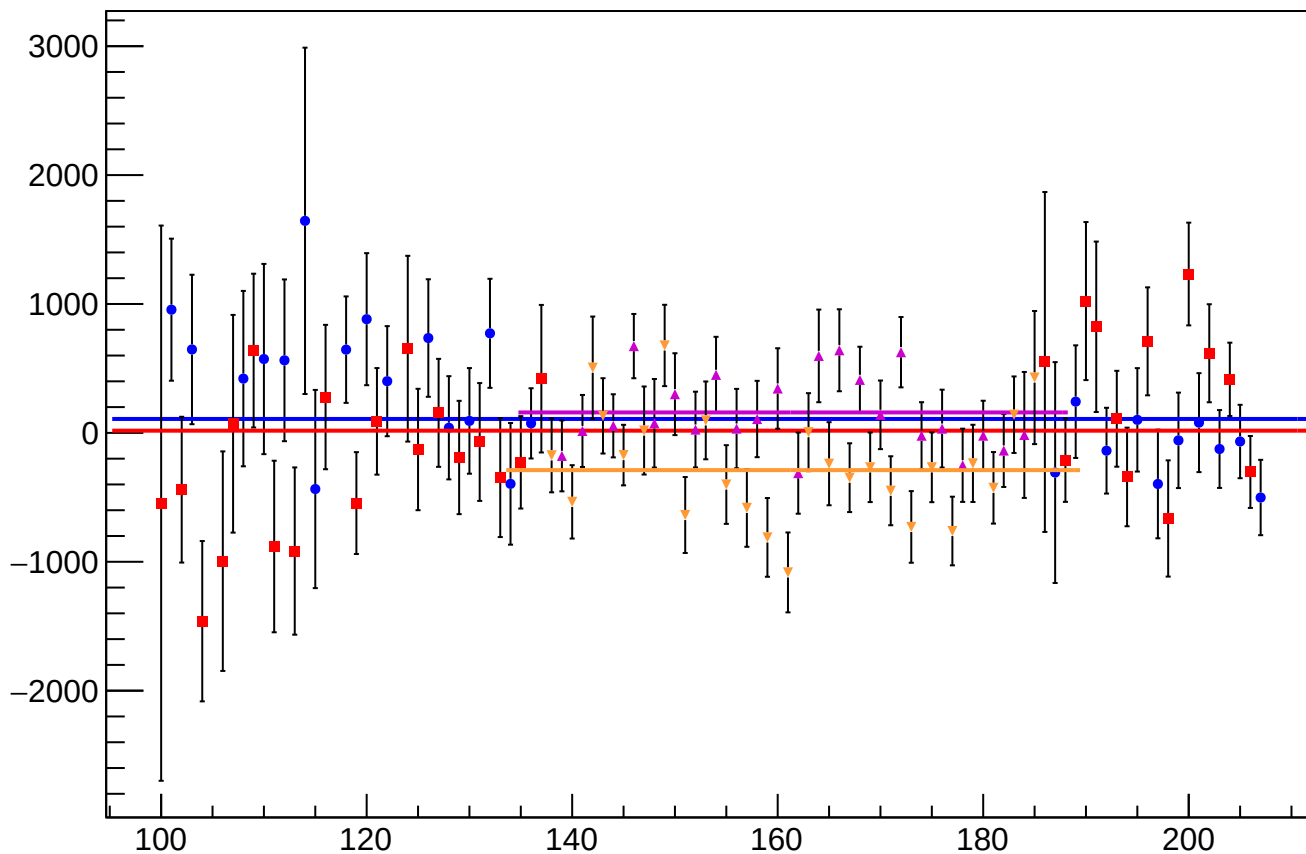
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3526134.8/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12785301.3/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 30196984.3/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 17280069.2/53

# reg\_asym\_sam2\_mean vs Slug



Right In: 108.072 $\pm$ 82.386  $\chi^2$ /NDF: 24.0/25

Left Out: -288.924 $\pm$ 59.035  $\chi^2$ /NDF:42.4/24

Right Out: 17.168 $\pm$ 82.376  $\chi^2$ /NDF: 43.7/30

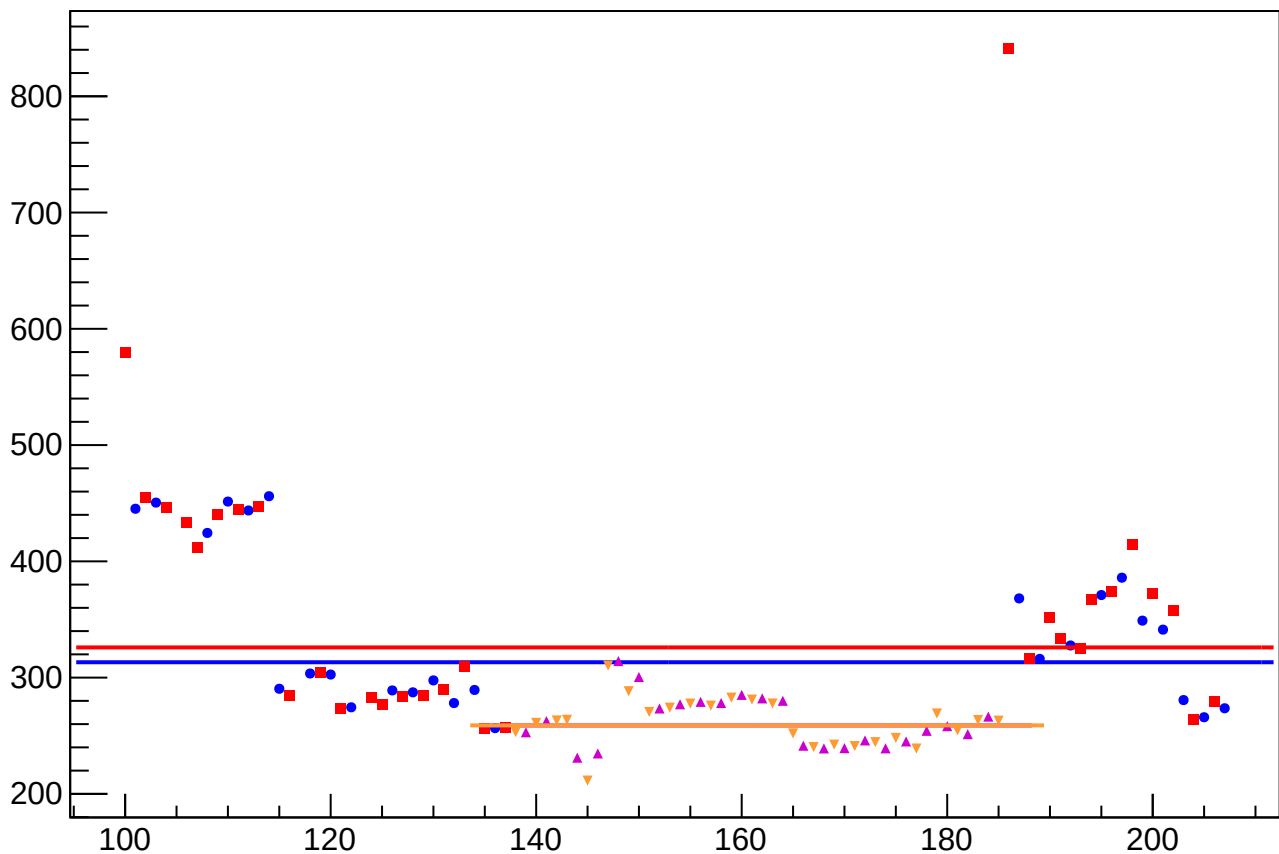
Left In: 158.601 $\pm$ 60.708  $\chi^2$ /NDF:22.5/22

+ sign -154.237 $\pm$ 47.987  $\chi^2$ /NDF: 81.8/50

All: -25.106 $\pm$ 34.240  $\chi^2$ /NDF: 164.7/104

- sign 108.822 $\pm$ 48.870  $\chi^2$ /NDF: 68.2/53

# reg\_asym\_sam2\_rms vs Slug



Right In: 313.209 $\pm$ 0.058  $\chi^2$ /NDF: 859848.8/25

Left Out: 258.912 $\pm$ 0.042  $\chi^2$ /NDF: 248740.9/24

Right Out: 325.970 $\pm$ 0.058  $\chi^2$ /NDF: 1331757.1/30

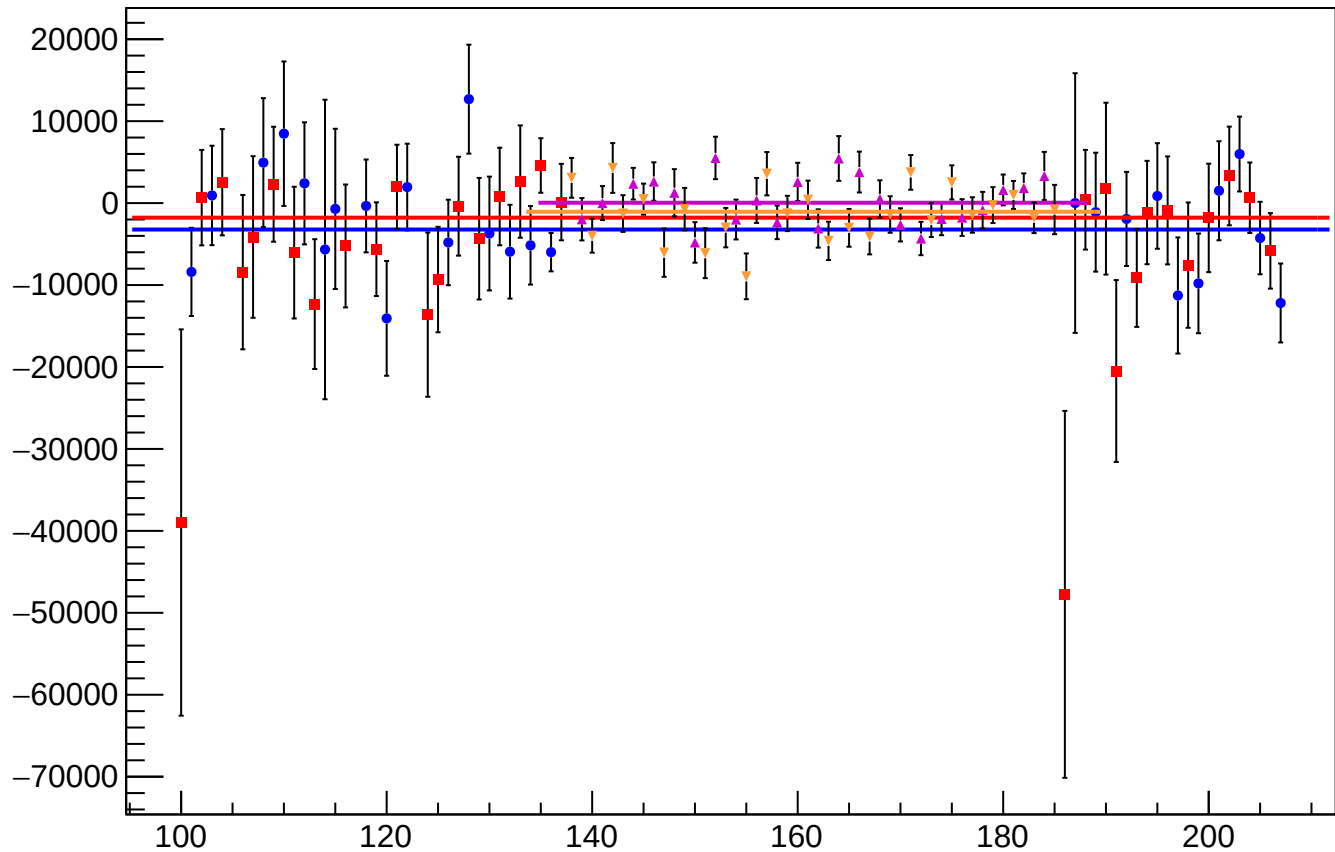
Left In: 258.843 $\pm$ 0.043  $\chi^2$ /NDF: 244953.3/22

+ sign 277.333 $\pm$ 0.034  $\chi^2$ /NDF: 1682569.4/50

All: 279.854 $\pm$ 0.024  $\chi^2$ /NDF: 4131182.3/104

- sign 282.469 $\pm$ 0.035  $\chi^2$ /NDF: 2437366.8/53

# asym\_sam2\_reg\_correction\_mean vs Slug



Right In:  $-3225.923 \pm 1091.445$   $\chi^2/\text{NDF}$ : 27.3/25

Left Out:  $-1059.229 \pm 454.653$   $\chi^2/\text{NDF}$ : 41.5/24

Right Out:  $-1778.165 \pm 1138.625$   $\chi^2/\text{NDF}$ : 25.9/30

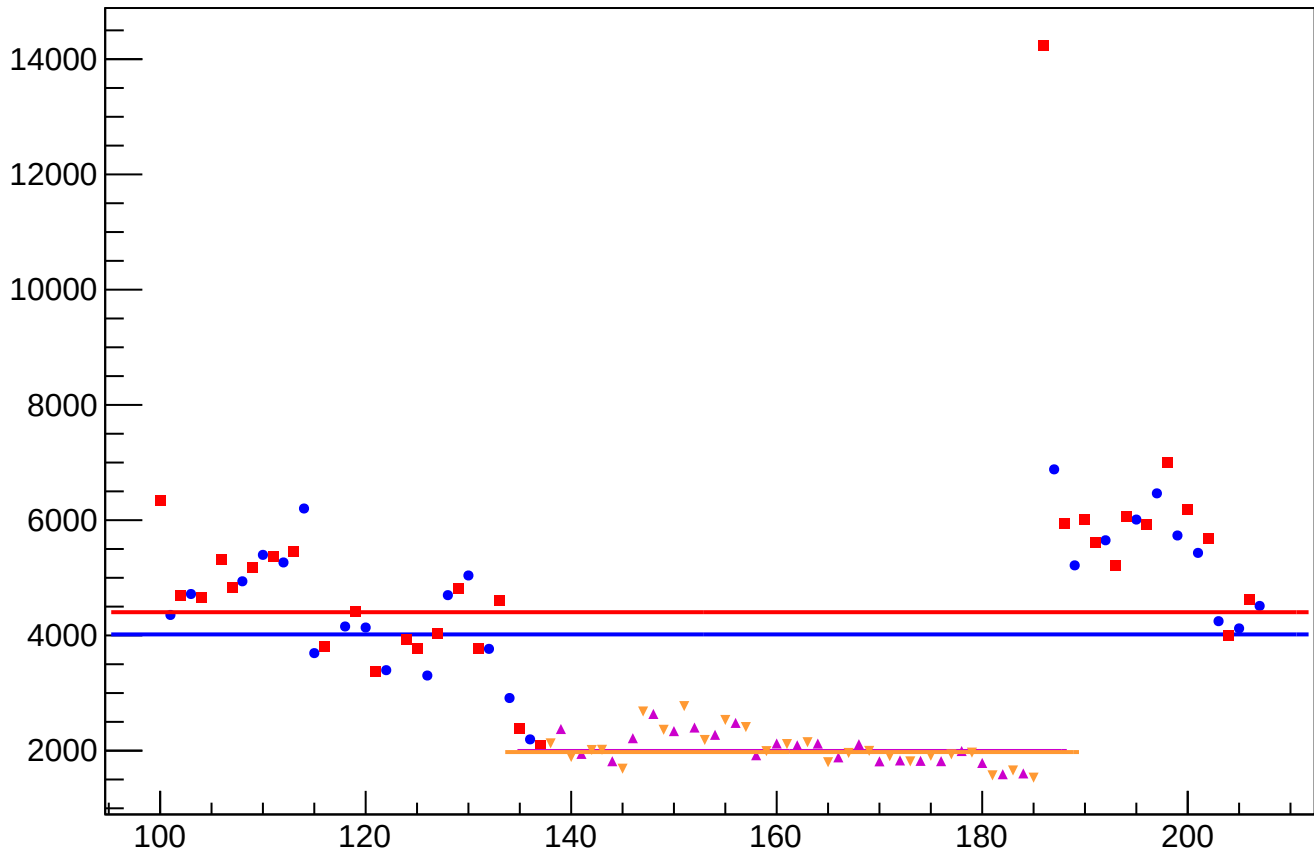
Left In:  $44.352 \pm 470.700$   $\chi^2/\text{NDF}$ : 34.2/22

+ sign  $-1379.606 \pm 419.695$   $\chi^2/\text{NDF}$ : 72.2/50

All:  $-821.351 \pm 302.034$   $\chi^2/\text{NDF}$ : 138.1/104

- sign  $-221.648 \pm 434.996$   $\chi^2/\text{NDF}$ : 62.2/53

# asym\_sam2\_reg\_correction\_rms vs Slug



Right In: 4017.657+/-0.772  $\chi^2/\text{NDF}$ : 2654371.7/25

Left Out: 1975.967+/-0.321  $\chi^2/\text{NDF}$ : 763327.6/24

+ sign 2277.861+/-0.297  $\chi^2/\text{NDF}$ : 9381382.9/50

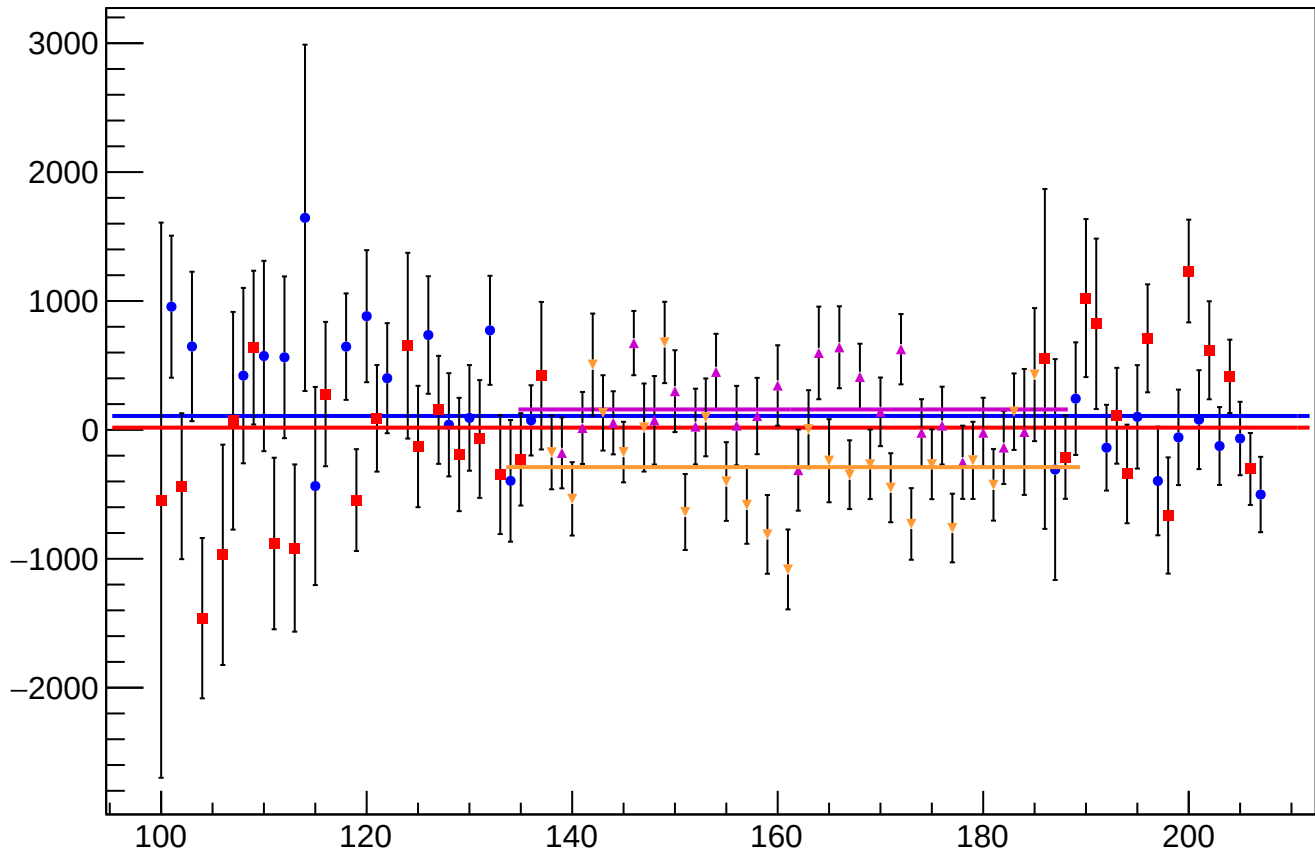
Right Out: 4403.154+/-0.805  $\chi^2/\text{NDF}$ : 2871642.6/30

All: 2310.841+/-0.214  $\chi^2/\text{NDF}$ : 20520621.1/100

- sign 2346.270+/-0.308  $\chi^2/\text{NDF}$ : 11113621.4/53

Left In: 1994.760+/-0.333  $\chi^2/\text{NDF}$ : 599994.9/22

# cor\_asym\_sam2\_mean vs Slug



Right In:  $108.048 \pm 82.386$   $\chi^2/\text{NDF}$ : 24.0/25

Left Out:  $-288.928 \pm 59.035$   $\chi^2/\text{NDF}$ : 42.4/24

Right Out:  $17.566 \pm 82.379$   $\chi^2/\text{NDF}$ : 43.6/30

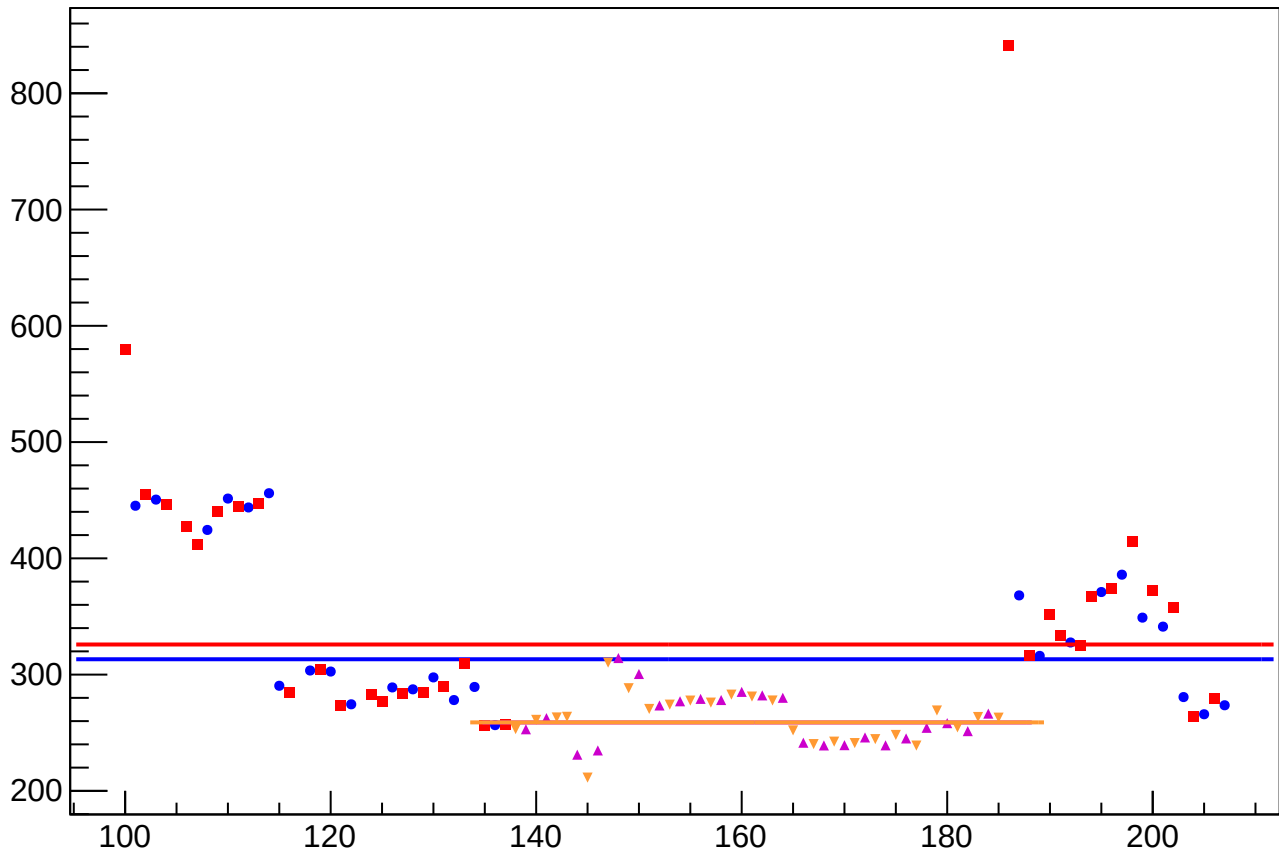
Left In:  $158.612 \pm 60.708$   $\chi^2/\text{NDF}$ : 22.5/22

+ sign  $-154.248 \pm 47.987$   $\chi^2/\text{NDF}$ : 81.8/50

All:  $-25.040 \pm 34.240$   $\chi^2/\text{NDF}$ : 164.6/104

- sign  $108.973 \pm 48.871$   $\chi^2/\text{NDF}$ : 68.1/53

# cor\_asym\_sam2\_rms vs Slug



Right In:  $313.209 \pm 0.058$   $\chi^2/\text{NDF}$ : 859850.3/25

Left Out:  $258.912 \pm 0.042$   $\chi^2/\text{NDF}$ : 248740.9/24

Right Out:  $325.901 \pm 0.058$   $\chi^2/\text{NDF}$ : 1327845.1/30

Left In:  $258.843 \pm 0.043$   $\chi^2/\text{NDF}$ : 244953.3/22

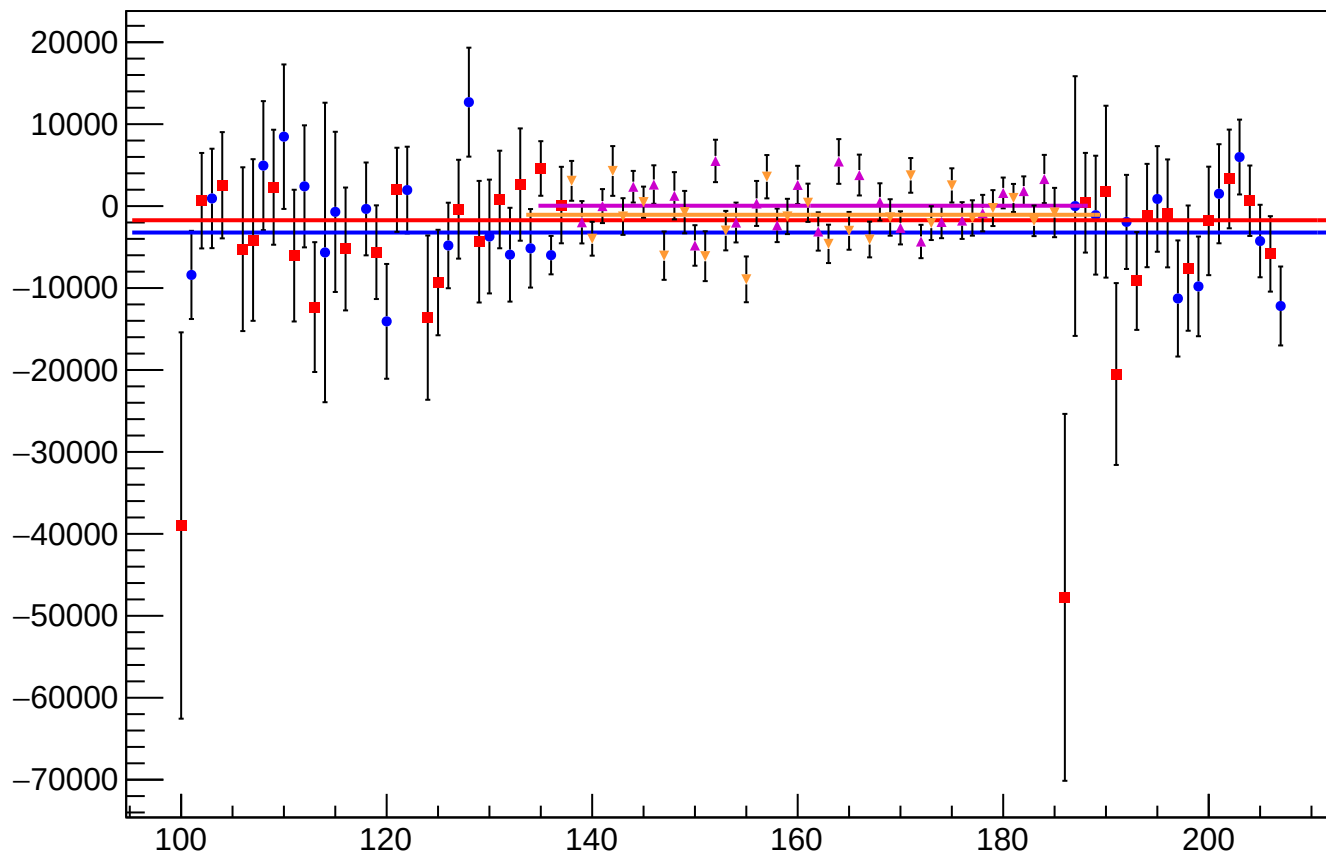
+ sign  $277.333 \pm 0.034$   $\chi^2/\text{NDF}$ : 1682570.9/50

All:  $279.841 \pm 0.024$   $\chi^2/\text{NDF}$ : 4125341.7/104

- sign  $282.443 \pm 0.035$   $\chi^2/\text{NDF}$ : 2431636.8/53



# asym\_sam2\_cor\_correction\_mean vs Slug



Right In:  $-3225.888 \pm 1091.446$   $\chi^2/\text{NDF}$ : 27.3/25

Left Out:  $-1059.232 \pm 454.653$   $\chi^2/\text{NDF}$ : 41.5/24

Right Out:  $-1726.522 \pm 1139.576$   $\chi^2/\text{NDF}$ : 25.5/30

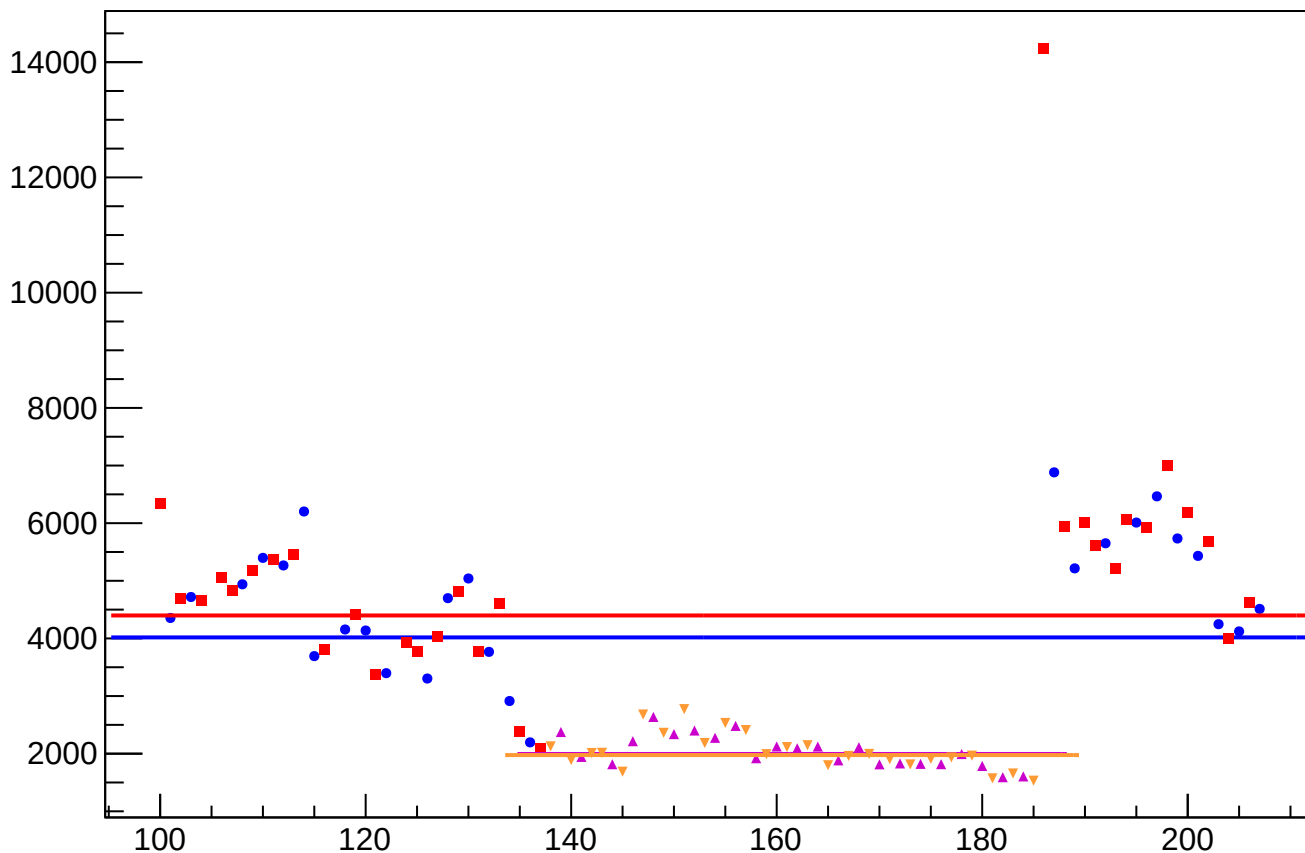
Left In:  $44.348 \pm 470.700$   $\chi^2/\text{NDF}$ : 34.2/22

+ sign  $-1379.604 \pm 419.695$   $\chi^2/\text{NDF}$ : 72.2/50

All:  $-817.611 \pm 302.052$   $\chi^2/\text{NDF}$ : 137.6/104

- sign  $-213.746 \pm 435.049$   $\chi^2/\text{NDF}$ : 61.7/53

# asym\_sam2\_cor\_correction\_rms vs Slug



Right In: 4017.662+/-0.772  $\chi^2/\text{NDF}$ : 2654381.4/25

Left Out: 1975.967+/-0.321  $\chi^2/\text{NDF}$ : 763328.1/24

Right Out: 4398.563+/-0.806  $\chi^2/\text{NDF}$ : 2861894.6/30

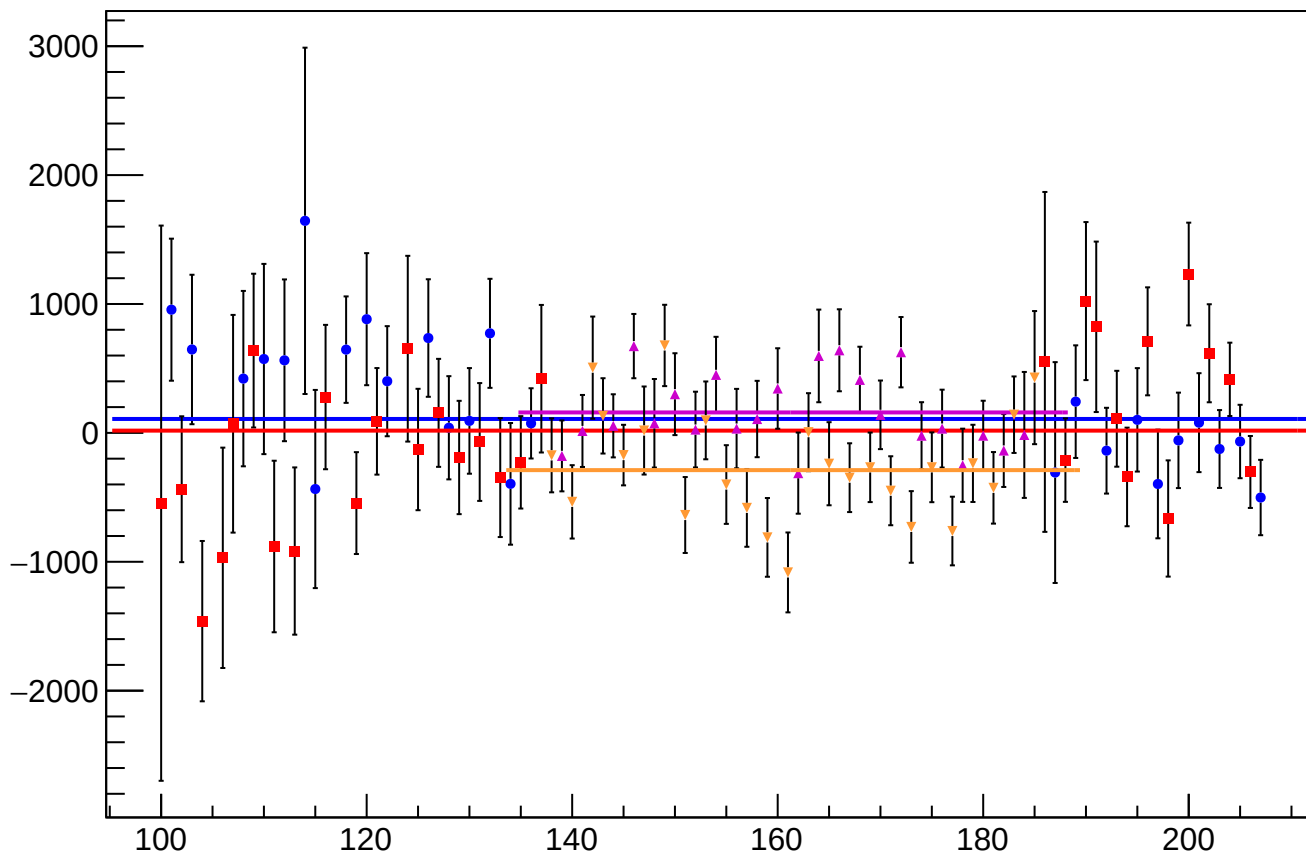
Left In: 1994.760+/-0.333  $\chi^2/\text{NDF}$ : 599996.2/22

+ sign 2277.861+/-0.297  $\chi^2/\text{NDF}$ : 9381404.0/50

All: 2310.273+/-0.214  $\chi^2/\text{NDF}$ : 20470057.9/100

- sign 2345.100+/-0.308  $\chi^2/\text{NDF}$ : 11063909.1/53

# eigen\_cor\_asym\_sam2\_mean vs Slug



Right In:  $108.048 \pm 82.386$   $\chi^2/\text{NDF}$ : 24.0/25

Left Out:  $-288.928 \pm 59.035$   $\chi^2/\text{NDF}$ : 42.4/24

Right Out:  $17.566 \pm 82.379$   $\chi^2/\text{NDF}$ : 43.6/30

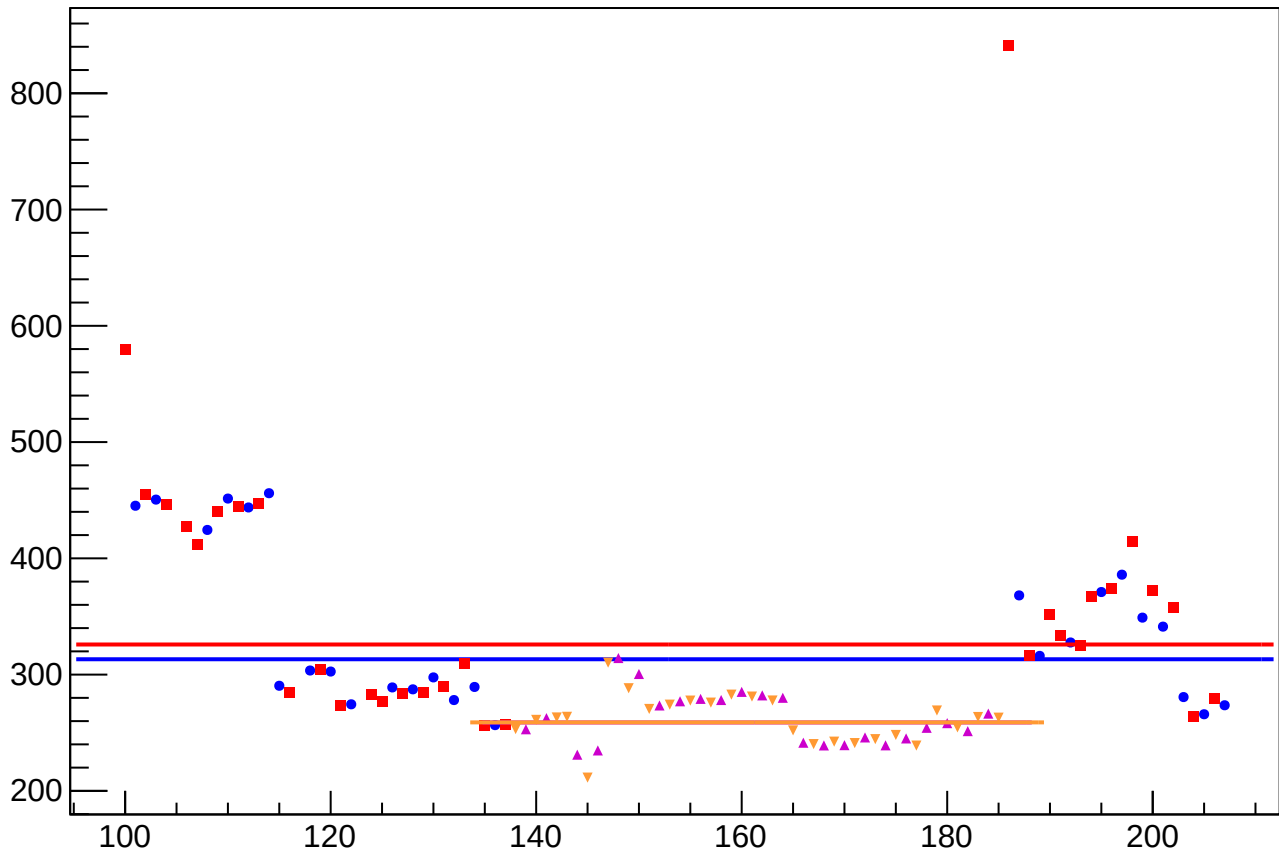
Left In:  $158.612 \pm 60.708$   $\chi^2/\text{NDF}$ : 22.5/22

+ sign  $-154.248 \pm 47.987$   $\chi^2/\text{NDF}$ : 81.8/50

All:  $-25.040 \pm 34.240$   $\chi^2/\text{NDF}$ : 164.6/104

- sign  $108.973 \pm 48.871$   $\chi^2/\text{NDF}$ : 68.1/53

# eigen\_cor\_asym\_sam2\_rms vs Slug



Right In: 313.209 $\pm$ 0.058  $\chi^2$ /NDF: 859850.3/25

Left Out: 258.912 $\pm$ 0.042  $\chi^2$ /NDF: 248740.9/24

Right Out: 325.901 $\pm$ 0.058  $\chi^2$ /NDF: 1327845.1/30

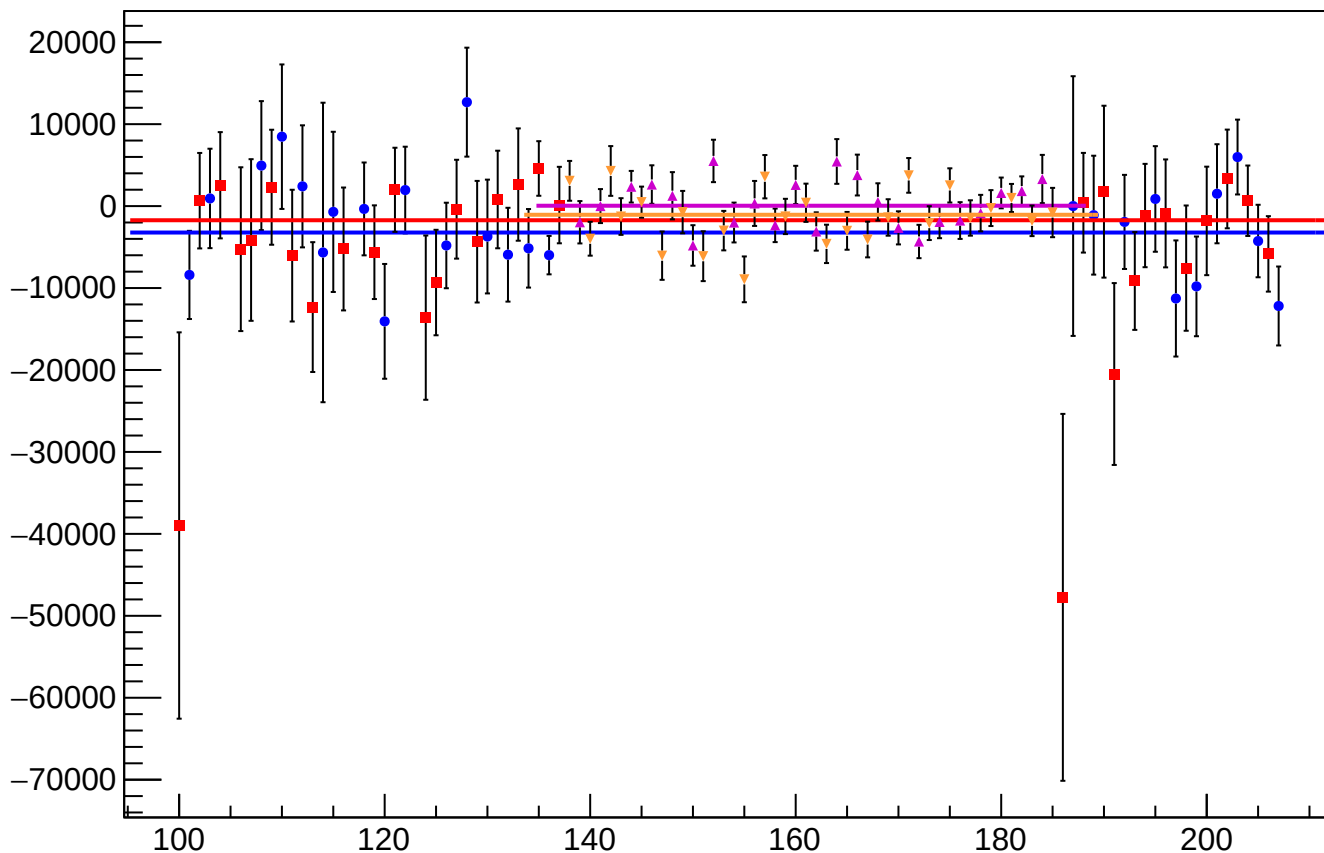
Left In: 258.843 $\pm$ 0.043  $\chi^2$ /NDF: 244953.3/22

+ sign 277.333 $\pm$ 0.034  $\chi^2$ /NDF: 1682570.9/50

All: 279.841 $\pm$ 0.024  $\chi^2$ /NDF: 4125341.7/104

- sign 282.443 $\pm$ 0.035  $\chi^2$ /NDF: 2431636.8/53

# asym\_sam2\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-3225.888 \pm 1091.446$   $\chi^2/\text{NDF}$ : 27.3/25

Left Out:  $-1059.232 \pm 454.653$   $\chi^2/\text{NDF}$ : 41.5/24

Right Out:  $-1726.522 \pm 1139.576$   $\chi^2/\text{NDF}$ : 25.5/30

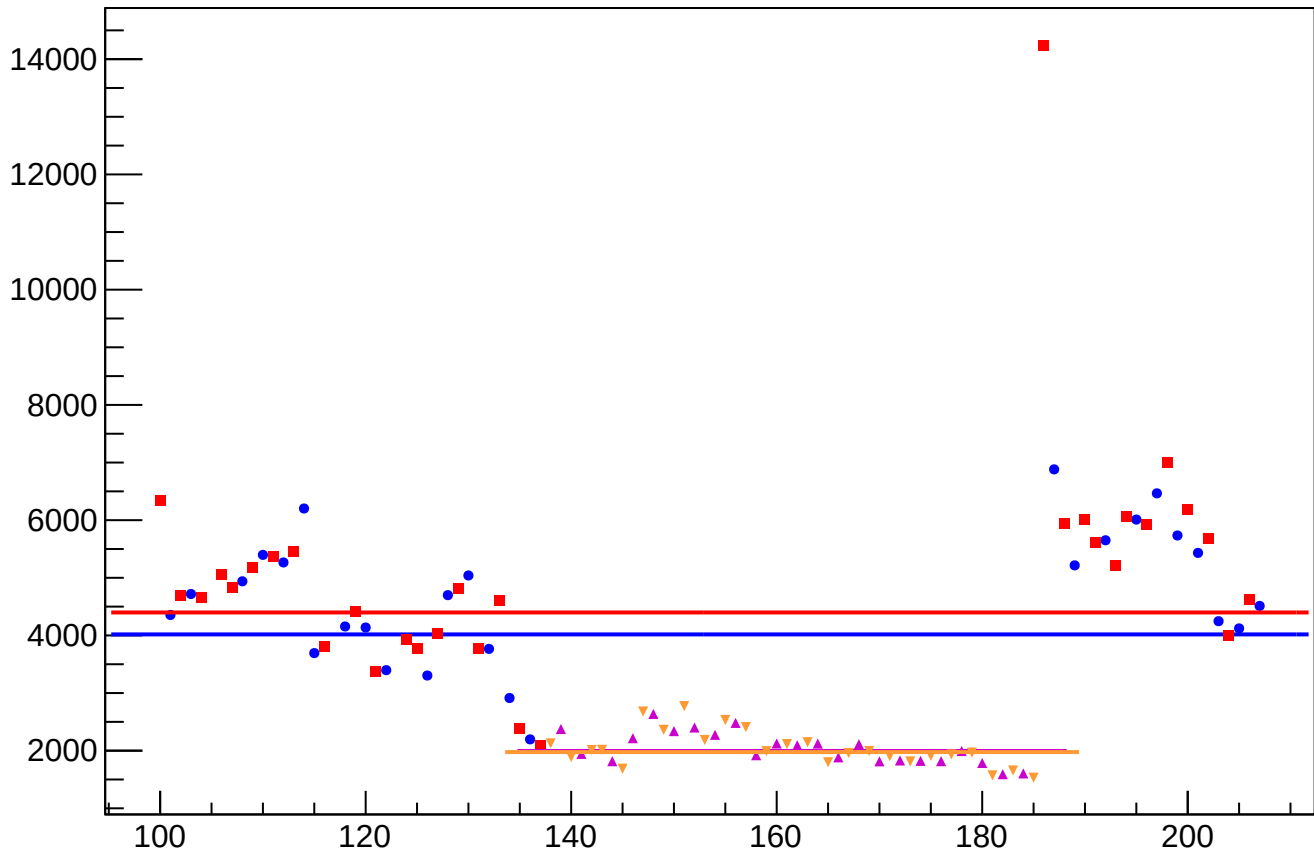
Left In:  $44.348 \pm 470.700$   $\chi^2/\text{NDF}$ : 34.2/22

+ sign  $-1379.604 \pm 419.695$   $\chi^2/\text{NDF}$ : 72.2/50

All:  $-817.611 \pm 302.052$   $\chi^2/\text{NDF}$ : 137.6/104

- sign  $-213.746 \pm 435.049$   $\chi^2/\text{NDF}$ : 61.7/53

# asym\_sam2\_eigen\_cor\_correction\_rms vs Slug



Right In: 4017.662+/-0.772  $\chi^2/\text{NDF}$ : 2654381.4/25

Left Out: 1975.967+/-0.321  $\chi^2/\text{NDF}$ : 763328.1/24

Right Out: 4398.563+/-0.806  $\chi^2/\text{NDF}$ : 2861894.6/30

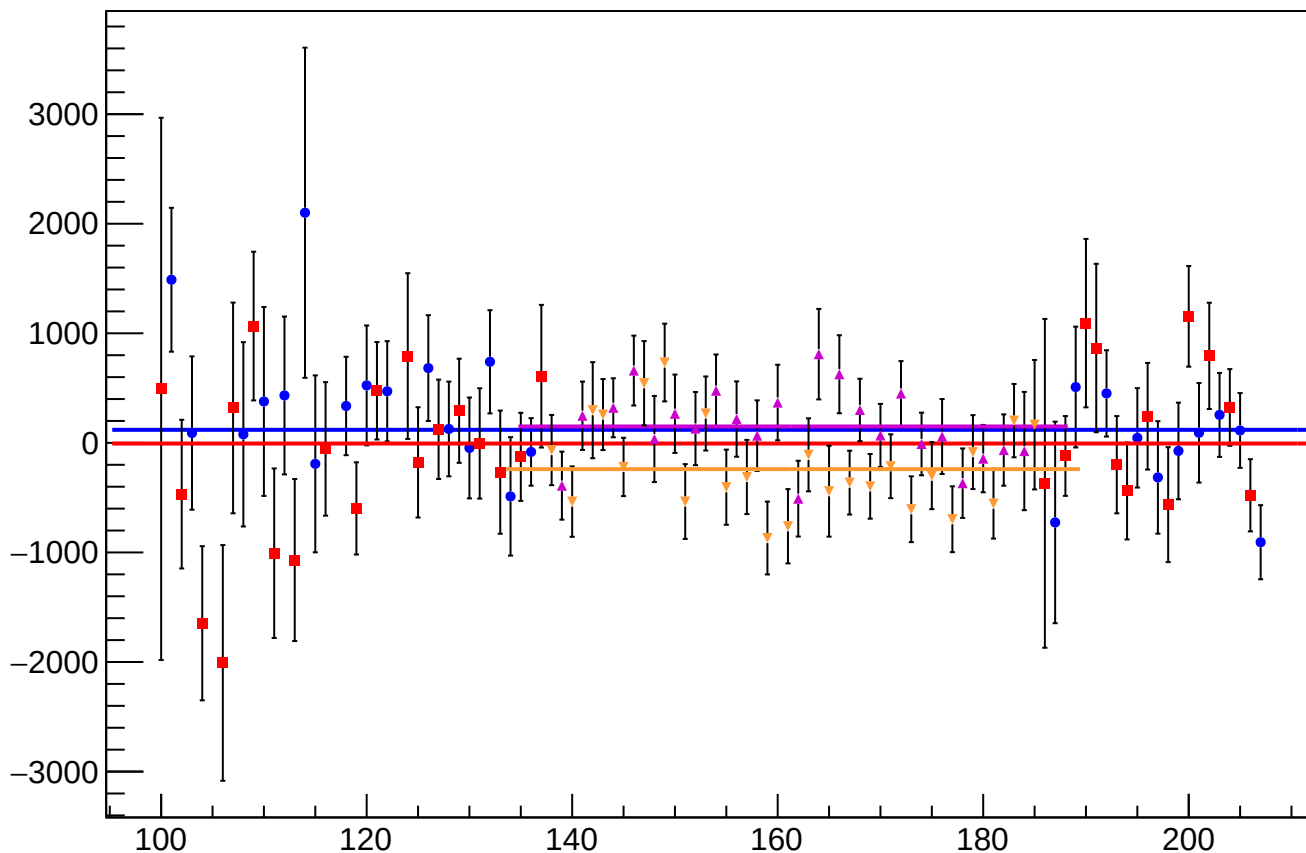
Left In: 1994.760+/-0.333  $\chi^2/\text{NDF}$ : 599996.2/22

+ sign 2277.861+/-0.297  $\chi^2/\text{NDF}$ : 9381404.0/50

All: 2310.273+/-0.214  $\chi^2/\text{NDF}$ : 20470057.9/100

- sign 2345.100+/-0.308  $\chi^2/\text{NDF}$ : 11063909.1/53

# dit\_asym\_sam2\_mean vs Slug



Right In:  $119.182 \pm 95.072$   $\chi^2/\text{NDF}$ : 25.1/25

Left Out:  $-239.549 \pm 66.167$   $\chi^2/\text{NDF}$ : 34.0/24

Right Out:  $-6.098 \pm 94.577$   $\chi^2/\text{NDF}$ : 39.9/30

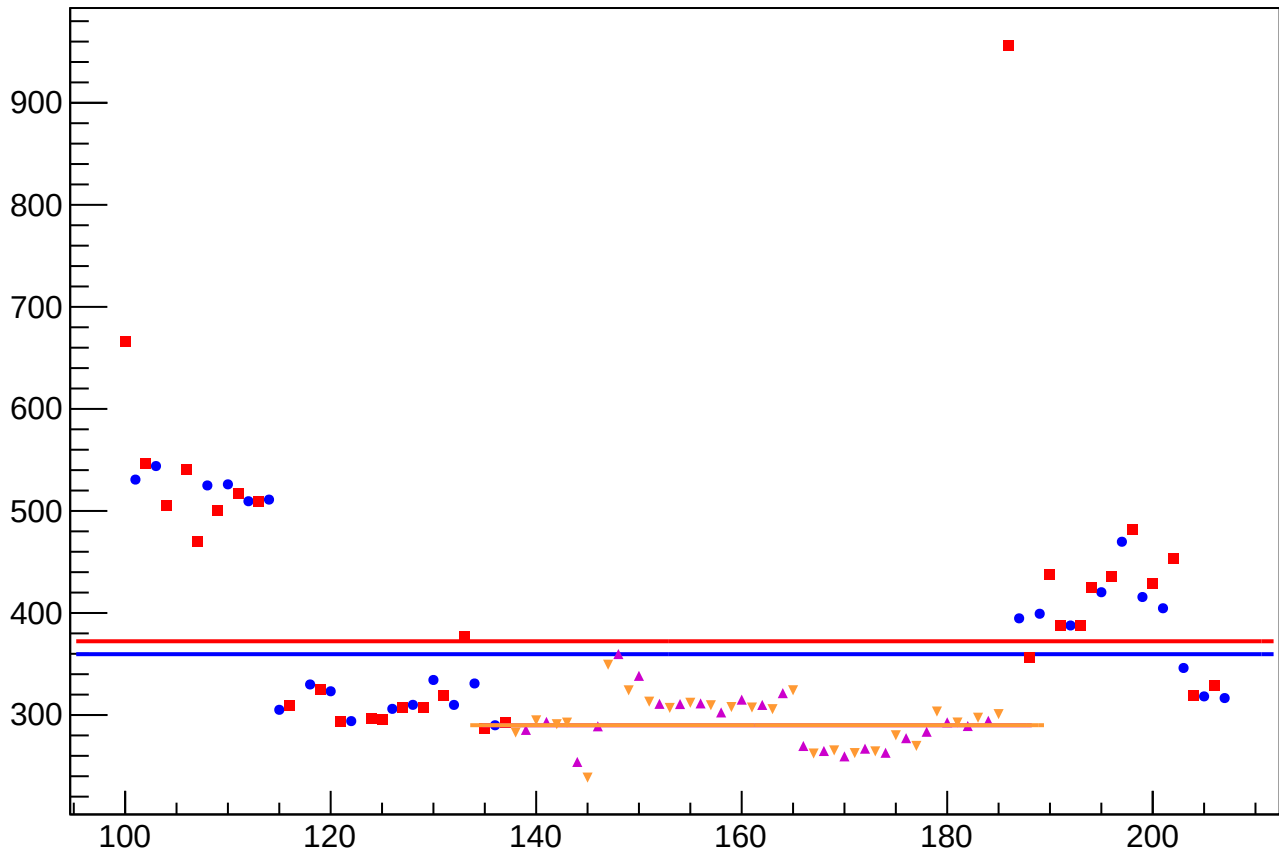
Left In:  $149.516 \pm 68.160$   $\chi^2/\text{NDF}$ : 21.7/22

+ sign  $-122.490 \pm 54.309$   $\chi^2/\text{NDF}$ : 68.7/50

All:  $-15.054 \pm 38.746$   $\chi^2/\text{NDF}$ : 140.1/104

- sign  $96.322 \pm 55.296$   $\chi^2/\text{NDF}$ : 63.4/53

# dit\_asym\_sam2\_rms vs Slug



Right In: 359.623+/-0.067  $\chi^2/\text{NDF}$ : 1056090.4/25

Left Out: 290.023+/-0.047  $\chi^2/\text{NDF}$ : 280647.1/24

Right Out: 372.283+/-0.067  $\chi^2/\text{NDF}$ : 1547817.0/30

Left In: 289.941+/-0.048  $\chi^2/\text{NDF}$ : 269669.5/22

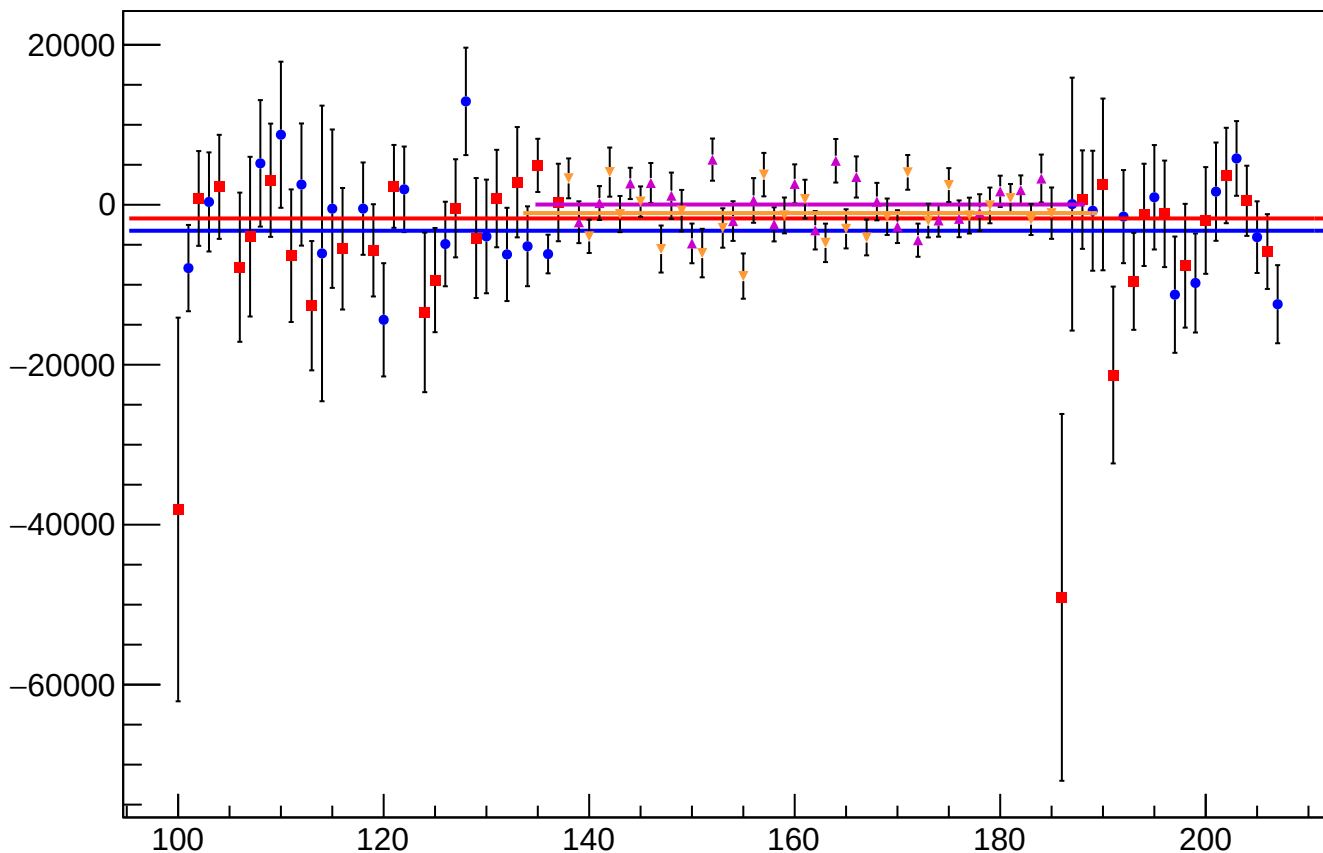
+ sign 312.734+/-0.038  $\chi^2/\text{NDF}$ : 2058836.4/50

All: 315.363+/-0.027  $\chi^2/\text{NDF}$ : 4883643.3/104

- sign 318.089+/-0.039  $\chi^2/\text{NDF}$ : 2815262.0/53



# asym\_sam2\_dit\_correction\_mean vs Slug



Right In:  $-3247.945 \pm 1113.929$   $\chi^2/\text{NDF}$ : 27.0/25

Left Out:  $-1036.592 \pm 465.324$   $\chi^2/\text{NDF}$ : 40.3/24

Right Out:  $-1709.764 \pm 1152.359$   $\chi^2/\text{NDF}$ : 26.8/30

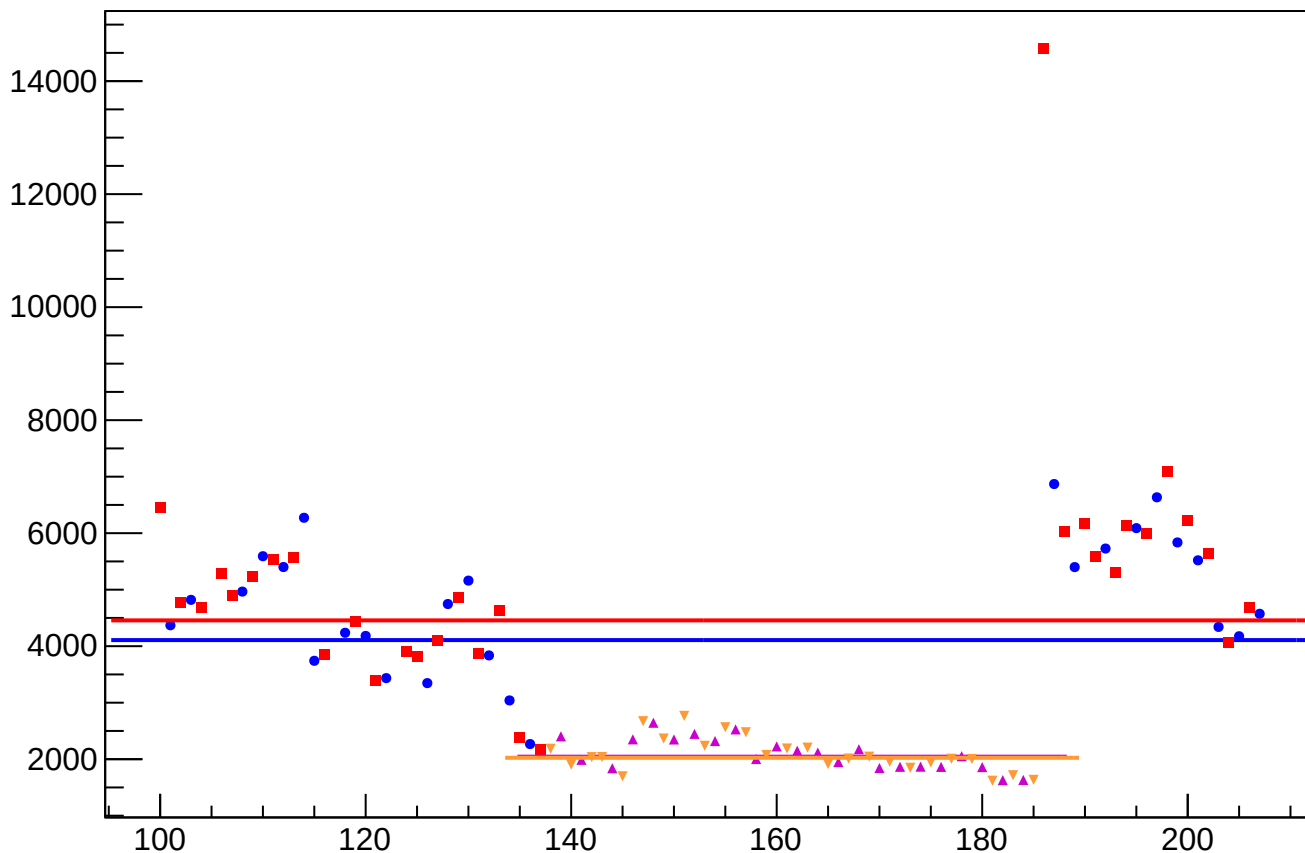
Left In:  $30.393 \pm 482.280$   $\chi^2/\text{NDF}$ : 34.1/22

+ sign  $-1365.141 \pm 429.367$   $\chi^2/\text{NDF}$ : 70.6/50

All:  $-817.224 \pm 308.950$   $\chi^2/\text{NDF}$ : 136.8/104

- sign  $-228.975 \pm 444.889$   $\chi^2/\text{NDF}$ : 62.8/53

# asym\_sam2\_dit\_correction\_rms vs Slug



Right In: 4107.851+/-0.788  $\chi^2/\text{NDF}$ : 2571973.1/25

Left Out: 2025.085+/-0.329  $\chi^2/\text{NDF}$ : 700821.6/24

Right Out: 4456.729+/-0.815  $\chi^2/\text{NDF}$ : 2859529.1/30

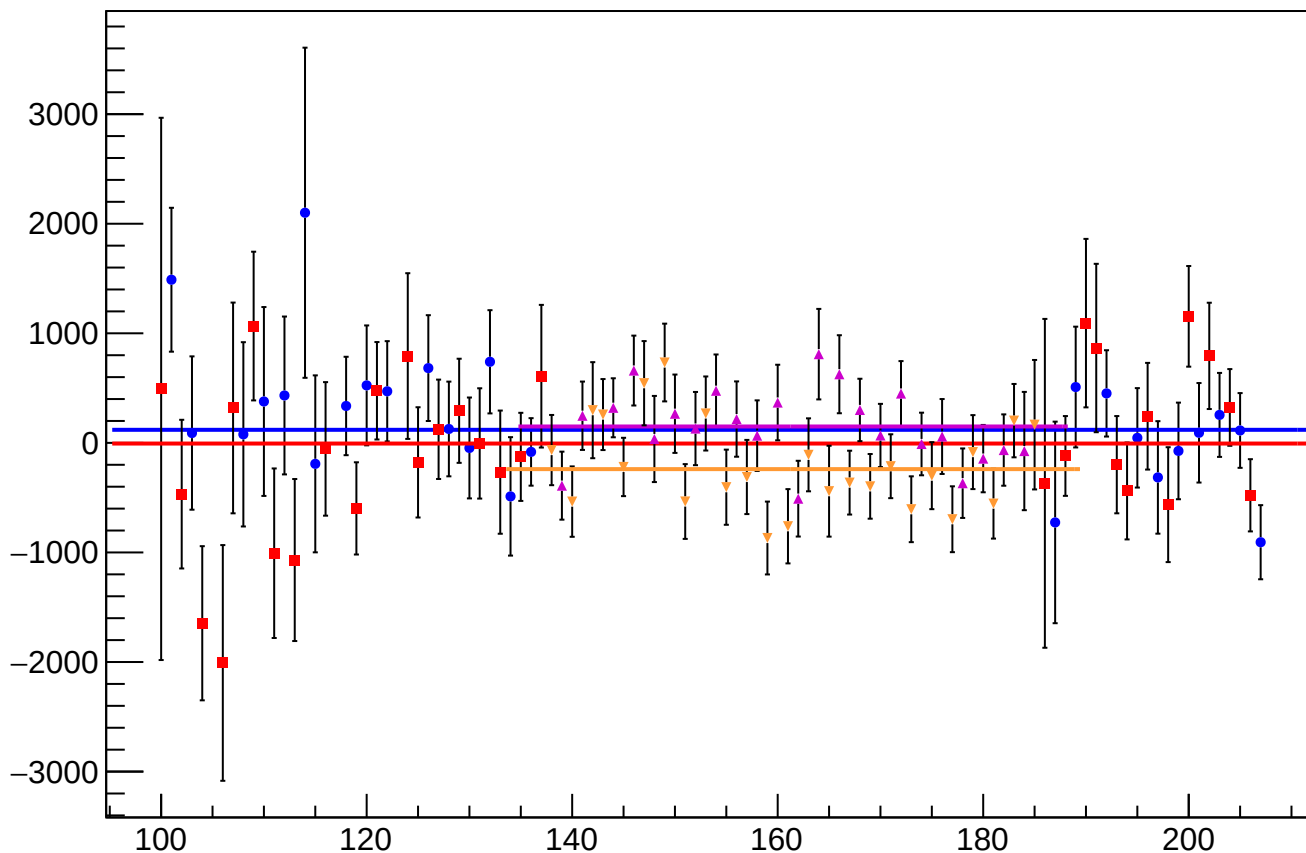
Left In: 2044.523+/-0.341  $\chi^2/\text{NDF}$ : 584918.7/22

+ sign 2334.529+/-0.304  $\chi^2/\text{NDF}$ : 9225885.5/50

All: 2368.060+/-0.218  $\chi^2/\text{NDF}$ : 20153041.1/100

- sign 2404.059+/-0.315  $\chi^2/\text{NDF}$ : 10901863.4/53

# eigen\_dit\_asym\_sam2\_mean vs Slug



Right In: 119.188 $\pm$ 95.072  $\chi^2$ /NDF: 25.1/25

Left Out: -239.552 $\pm$ 66.167  $\chi^2$ /NDF:34.0/24

Right Out: -6.099 $\pm$ 94.577  $\chi^2$ /NDF: 39.9/30

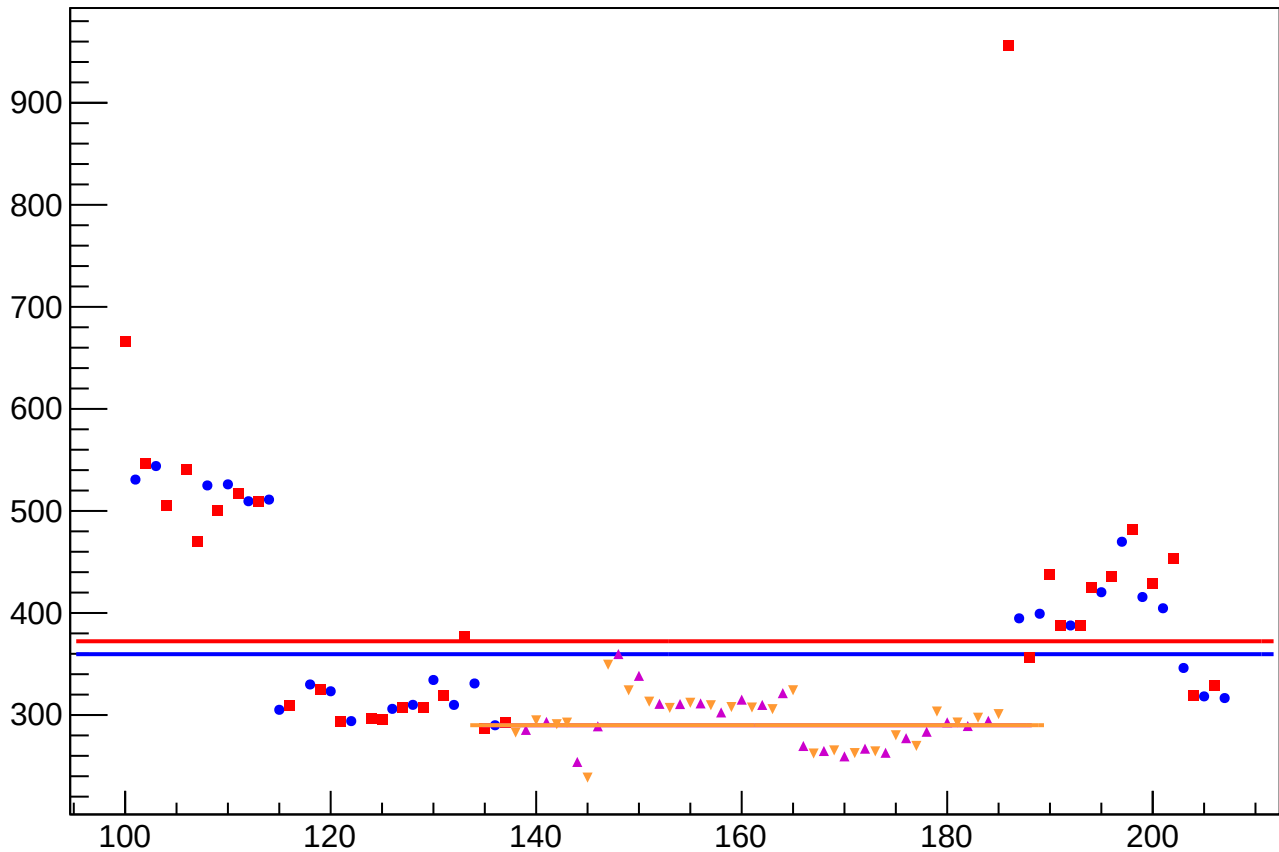
Left In: 149.517 $\pm$ 68.160  $\chi^2$ /NDF:21.7/22

+ sign -122.490 $\pm$ 54.309  $\chi^2$ /NDF: 68.7/50

All: -15.055 $\pm$ 38.746  $\chi^2$ /NDF: 140.1/104

- sign 96.322 $\pm$ 55.296  $\chi^2$ /NDF: 63.4/53

# eigen\_dit\_asym\_sam2\_rms vs Slug



Right In:  $359.622 \pm 0.067$   $\chi^2/\text{NDF}$ : 1056088.4/25

Left Out:  $290.023 \pm 0.047$   $\chi^2/\text{NDF}$ : 280652.8/24

Right Out:  $372.282 \pm 0.067$   $\chi^2/\text{NDF}$ : 1547808.8/30

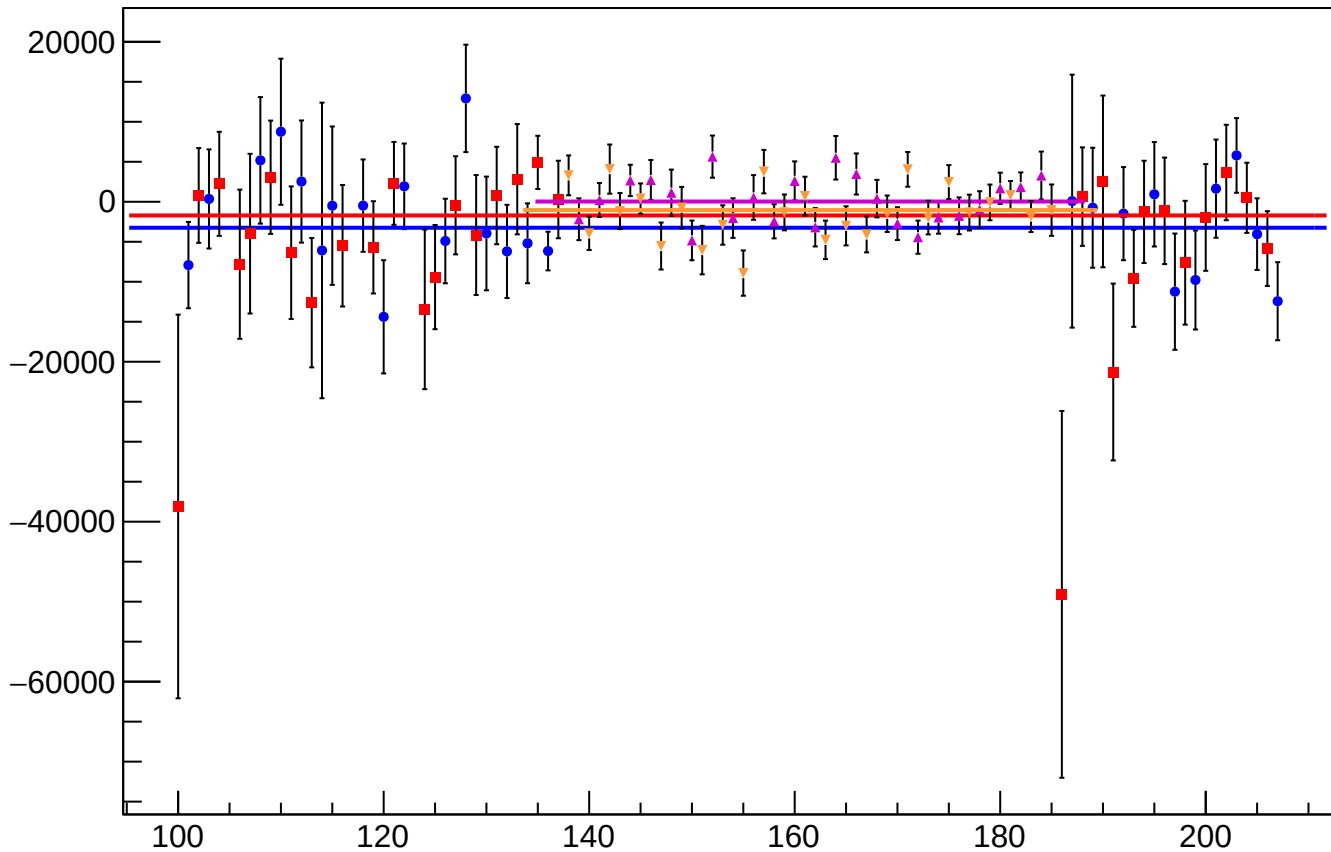
Left In:  $289.941 \pm 0.048$   $\chi^2/\text{NDF}$ : 269671.9/22

+ sign  $312.734 \pm 0.038$   $\chi^2/\text{NDF}$ : 2058819.0/50

All:  $315.363 \pm 0.027$   $\chi^2/\text{NDF}$ : 4883611.1/104

- sign  $318.088 \pm 0.039$   $\chi^2/\text{NDF}$ : 2815246.9/53

# asym\_sam2\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-3247.939 \pm 1113.929$   $\chi^2/\text{NDF}$ : 27.0/25

Left Out:  $-1036.591 \pm 465.324$   $\chi^2/\text{NDF}$ : 40.3/24

Right Out:  $-1709.768 \pm 1152.358$   $\chi^2/\text{NDF}$ : 26.8/30

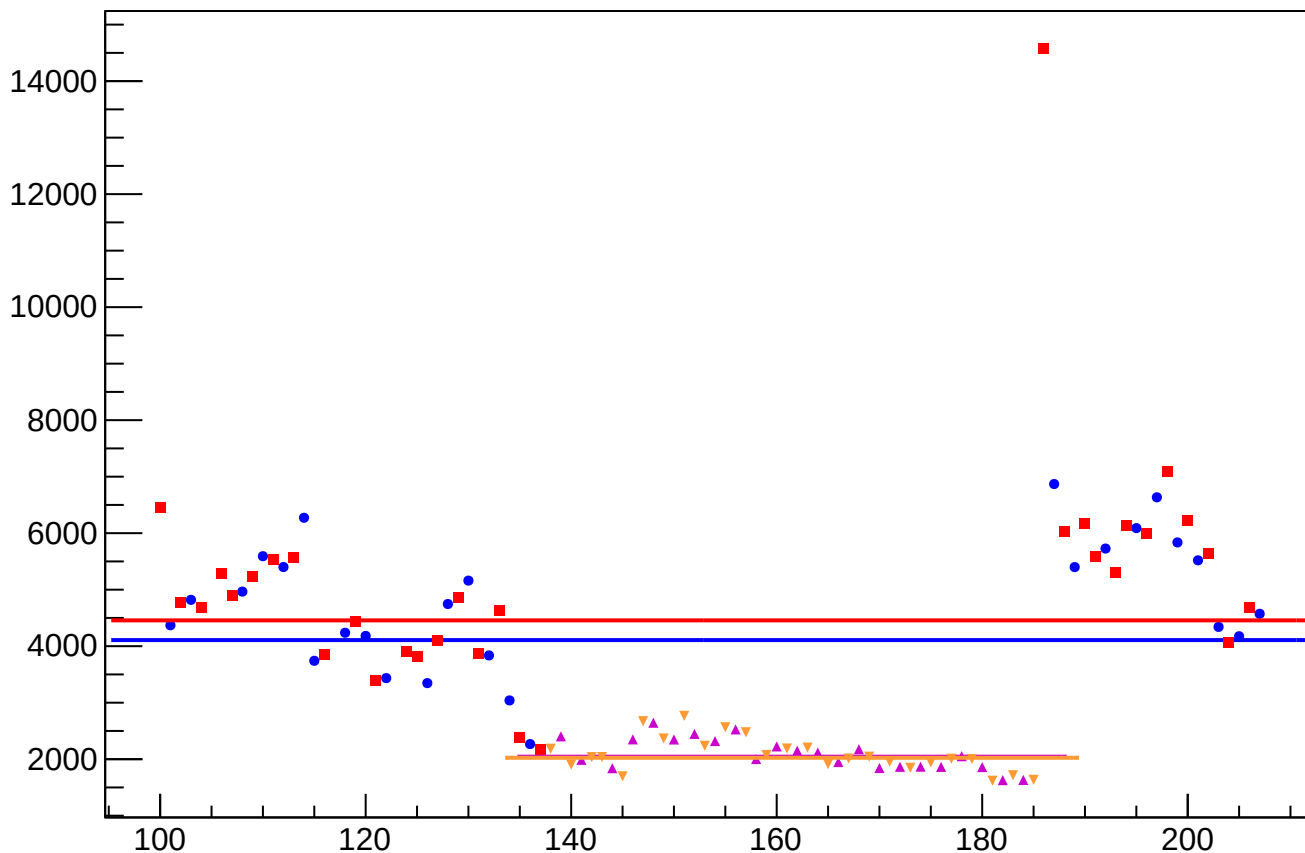
Left In:  $30.392 \pm 482.280$   $\chi^2/\text{NDF}$ : 34.1/22

+ sign  $-1365.140 \pm 429.367$   $\chi^2/\text{NDF}$ : 70.6/50

All:  $-817.224 \pm 308.950$   $\chi^2/\text{NDF}$ : 136.8/104

- sign  $-228.977 \pm 444.889$   $\chi^2/\text{NDF}$ : 62.8/53

# asym\_sam2\_eigen\_dit\_correction\_rms vs Slug



Right In:  $4107.848 \pm 0.788$   $\chi^2/\text{NDF}: 2571964.0/25$

Left Out:  $2025.085 \pm 0.329$   $\chi^2/\text{NDF}: 700825.4/24$

Right Out:  $4456.726 \pm 0.815$   $\chi^2/\text{NDF}: 2859525.1/30$

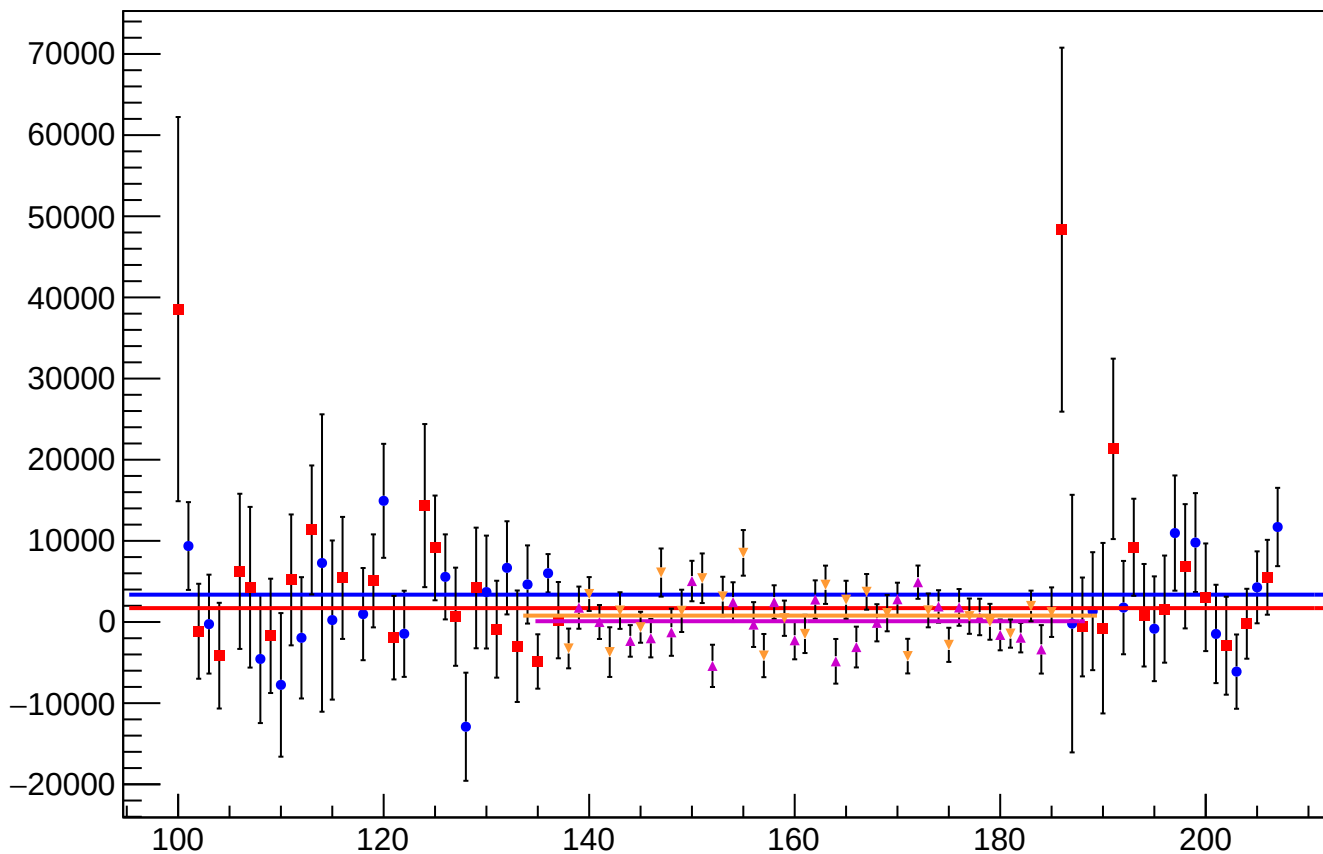
Left In:  $2044.522 \pm 0.341$   $\chi^2/\text{NDF}: 584922.7/22$

+ sign  $2334.530 \pm 0.304$   $\chi^2/\text{NDF}: 9225871.9/50$

All:  $2368.060 \pm 0.218$   $\chi^2/\text{NDF}: 20153019.8/...$

- sign  $2404.059 \pm 0.315$   $\chi^2/\text{NDF}: 10901856.0/53$

# asym\_sam2\_mean vs Slug



Right In: 3369.685 $\pm$ 1095.642  $\chi^2$ /NDF: 27.2/25

Left Out: 788.321 $\pm$ 458.726  $\chi^2$ /NDF:41.3/24

Right Out: 1710.537 $\pm$ 1142.565  $\chi^2$ /NDF: 25.6/30

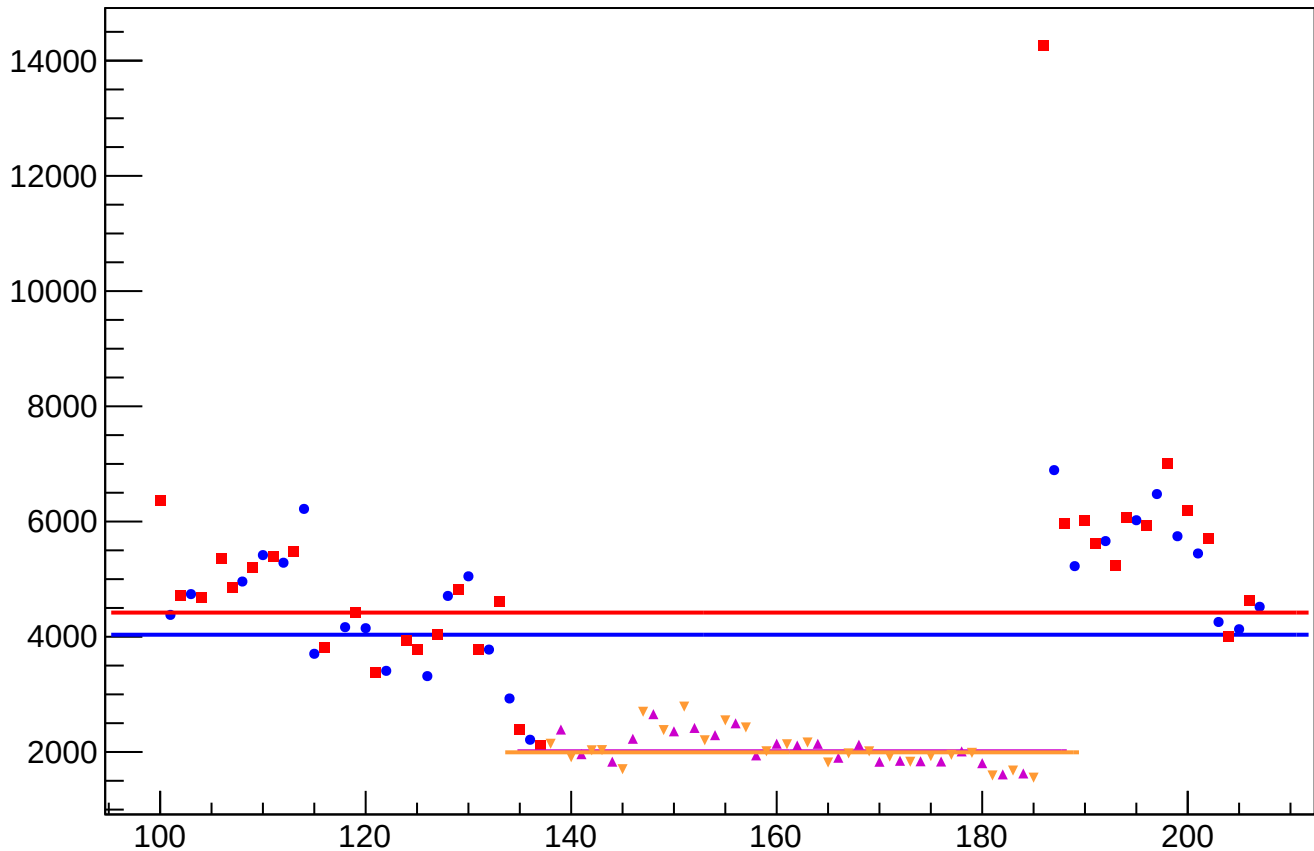
Left In: 96.730 $\pm$ 474.825  $\chi^2$ /NDF:32.8/22

+ sign 1173.330 $\pm$ 423.136  $\chi^2$ /NDF: 73.2/50

All: 768.789 $\pm$ 304.479  $\chi^2$ /NDF: 135.2/104

- sign 334.397 $\pm$ 438.469  $\chi^2$ /NDF: 60.1/53

# asym\_sam2\_rms vs Slug



Right In: 4035.395 $\pm$ 0.775  $\chi^2$ /NDF: 2625221.0/25

Left Out: 1994.246 $\pm$ 0.324  $\chi^2$ /NDF: 746498.4/24

Right Out: 4419.578 $\pm$ 0.808  $\chi^2$ /NDF: 2849982.3/30

Left In: 2012.692 $\pm$ 0.336  $\chi^2$ /NDF: 587260.9/22

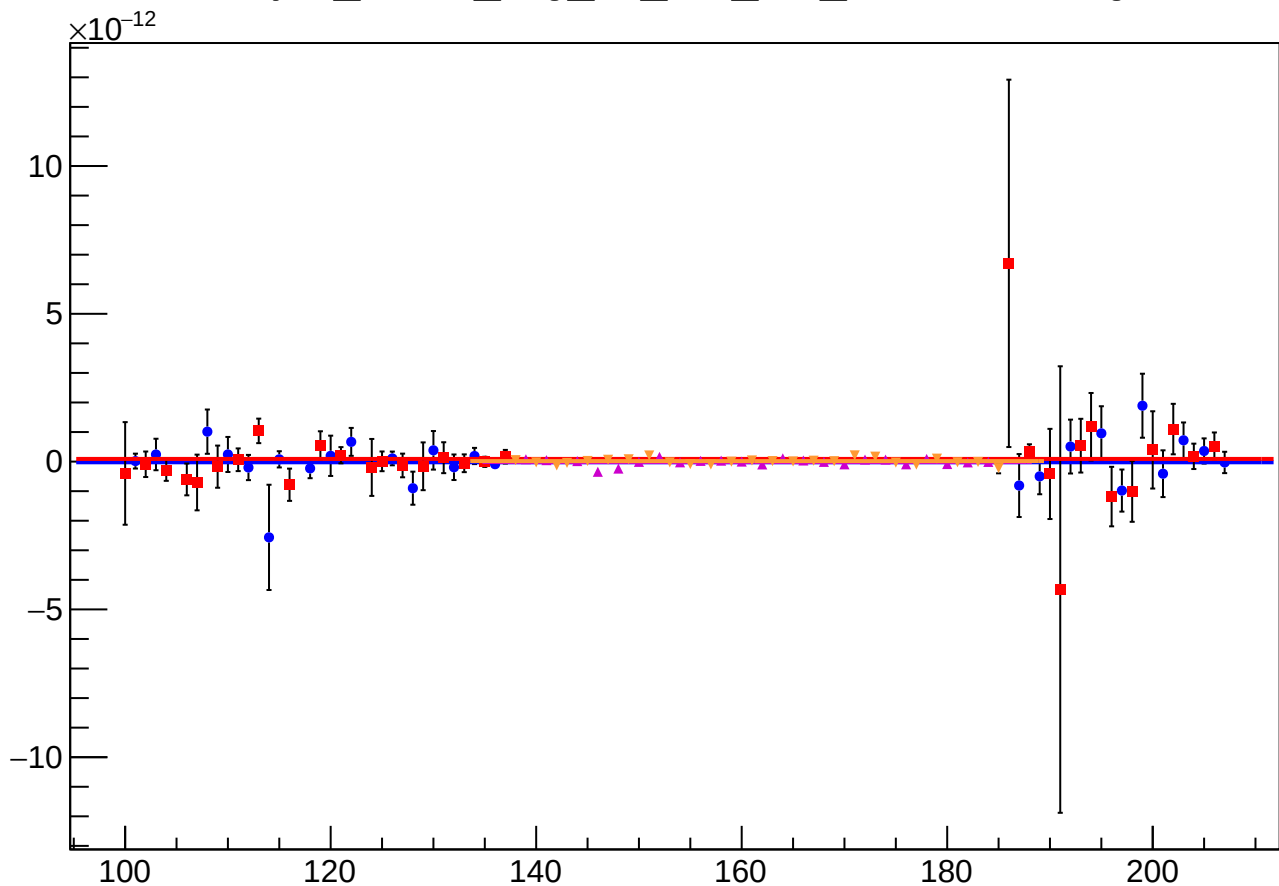
+ sign 2298.682 $\pm$ 0.299  $\chi^2$ /NDF: 9277743.7/50

All: 2331.701 $\pm$ 0.215  $\chi^2$ /NDF: 20308409.4/100

- sign 2367.156 $\pm$ 0.310  $\chi^2$ /NDF: 11005410.2/53



# asym\_sam2\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 22.1/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 21.2/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 23.1/30

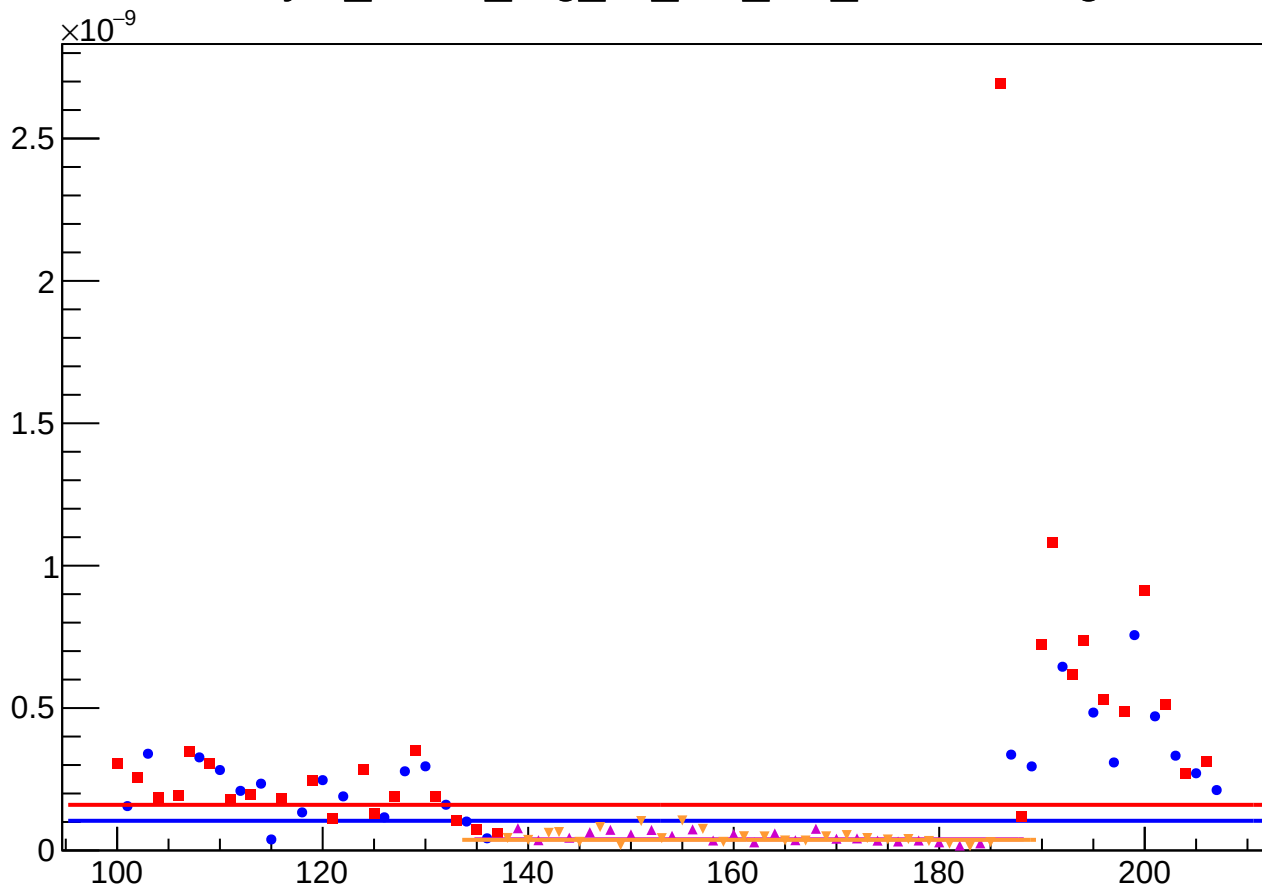
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 30.6/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 43.8/50

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 100.8/104

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 55.6/53

# asym\_sam2\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6380875.1/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2323330.9/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5118565.7/30

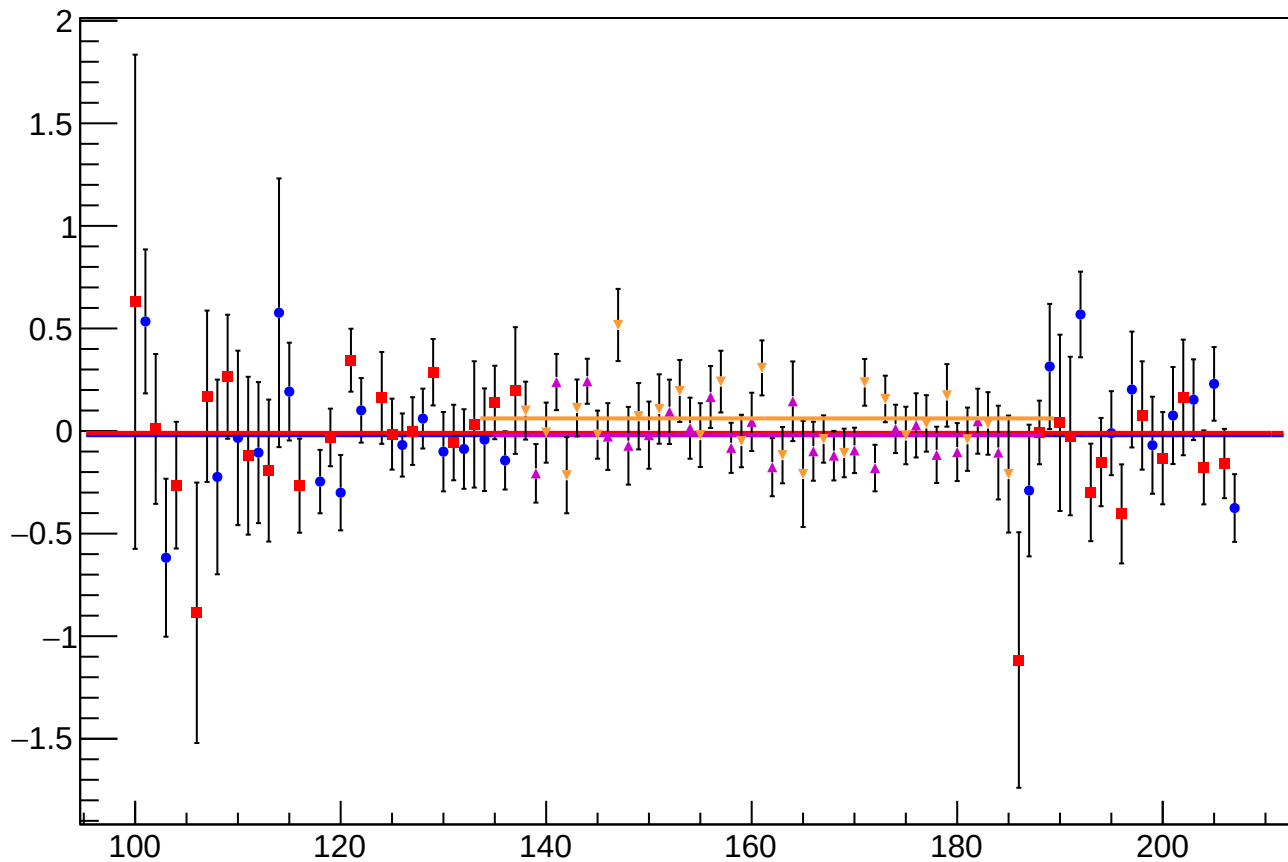
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1921481.4/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11198844.0/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 23142084.9/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11908983.3/53

# asym\_sam2\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.020 \pm 0.041$   $\chi^2/\text{NDF}: 31.3/25$

Left Out:  $0.062 \pm 0.029$   $\chi^2/\text{NDF}: 27.4/24$

Right Out:  $-0.009 \pm 0.041$   $\chi^2/\text{NDF}: 26.2/30$

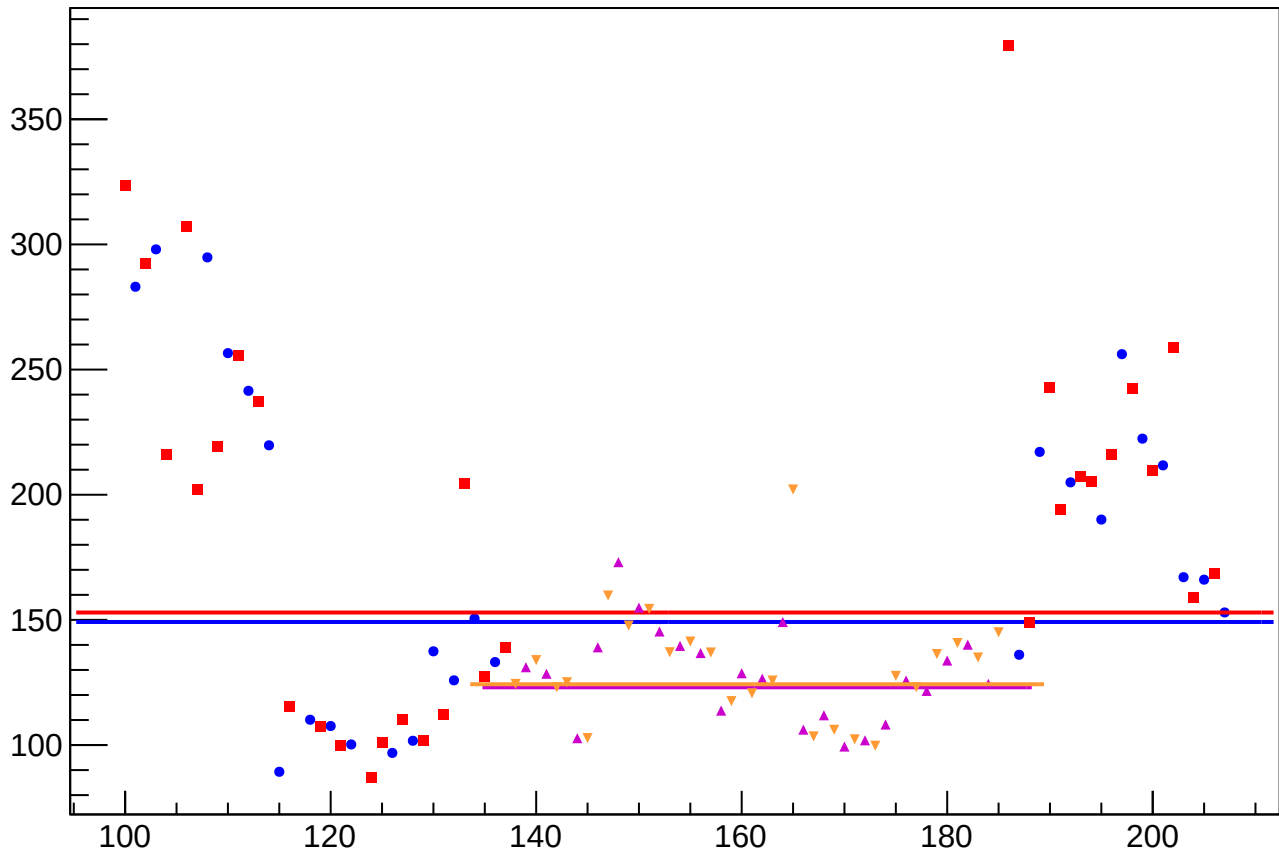
Left In:  $-0.019 \pm 0.029$   $\chi^2/\text{NDF}: 20.3/22$

+ sign  $0.035 \pm 0.024$   $\chi^2/\text{NDF}: 61.4/50$

All:  $0.010 \pm 0.017$   $\chi^2/\text{NDF}: 110.2/104$

- sign  $-0.015 \pm 0.024$   $\chi^2/\text{NDF}: 46.6/53$

# asym\_sam2\_dit\_vs\_cor\_diff\_rms vs Slug



Right In:  $149.168 \pm 0.029$   $\chi^2/\text{NDF}$ : 3107173.5/25

Left Out:  $124.292 \pm 0.020$   $\chi^2/\text{NDF}$ : 840983.3/24

Right Out:  $152.951 \pm 0.029$   $\chi^2/\text{NDF}$ : 3700115.3/30

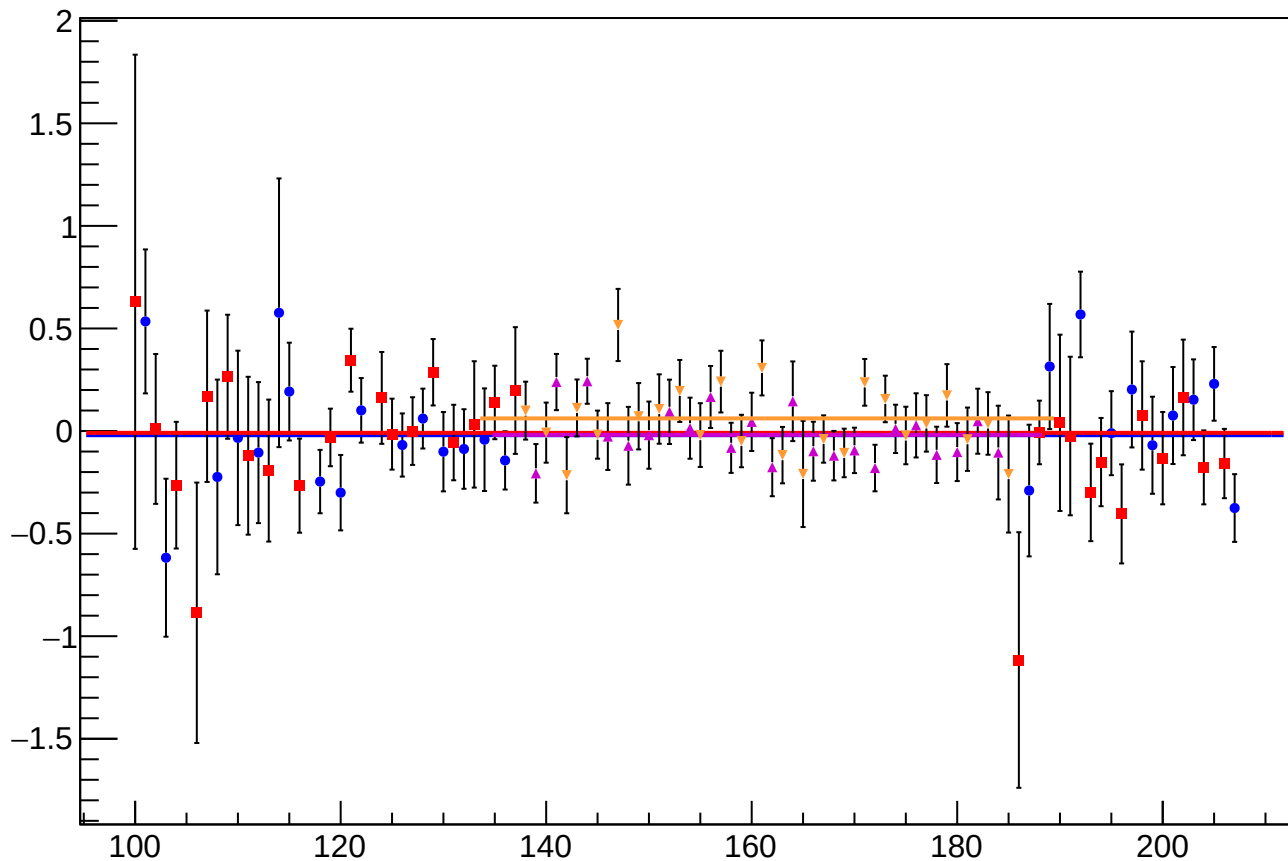
Left In:  $123.062 \pm 0.021$   $\chi^2/\text{NDF}$ : 718821.1/22

+ sign  $132.348 \pm 0.017$   $\chi^2/\text{NDF}$ : 4435425.5/50

All:  $132.791 \pm 0.012$   $\chi^2/\text{NDF}$ : 9563286.0/104

- sign  $133.243 \pm 0.017$   $\chi^2/\text{NDF}$ : 5126435.1/53

asym\_sam2\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.020 \pm 0.041$   $\chi^2/\text{NDF}: 31.3/25$

Left Out:  $0.062 \pm 0.029$   $\chi^2/\text{NDF}: 27.4/24$

Right Out:  $-0.009 \pm 0.041$   $\chi^2/\text{NDF}: 26.2/30$

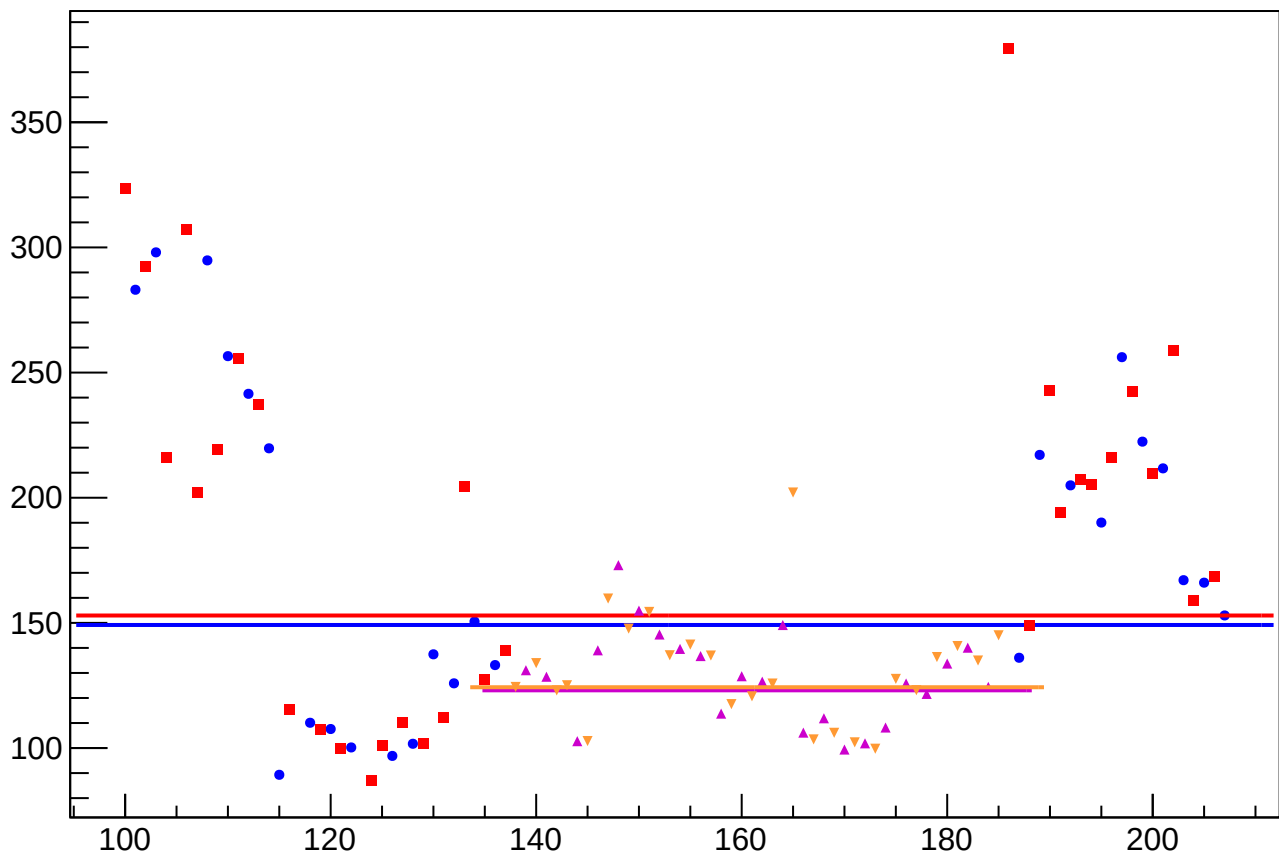
Left In:  $-0.019 \pm 0.029$   $\chi^2/\text{NDF}: 20.3/22$

+ sign  $0.035 \pm 0.024$   $\chi^2/\text{NDF}: 61.4/50$

All:  $0.010 \pm 0.017$   $\chi^2/\text{NDF}: 110.2/104$

- sign  $-0.015 \pm 0.024$   $\chi^2/\text{NDF}: 46.6/53$

asym\_sam2\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 149.168 $\pm$ 0.029  $\chi^2$ /NDF: 3107173.5/25

Left Out: 124.292 $\pm$ 0.020  $\chi^2$ /NDF: 840983.3/24

Right Out: 152.951 $\pm$ 0.029  $\chi^2$ /NDF: 3700115.3/30

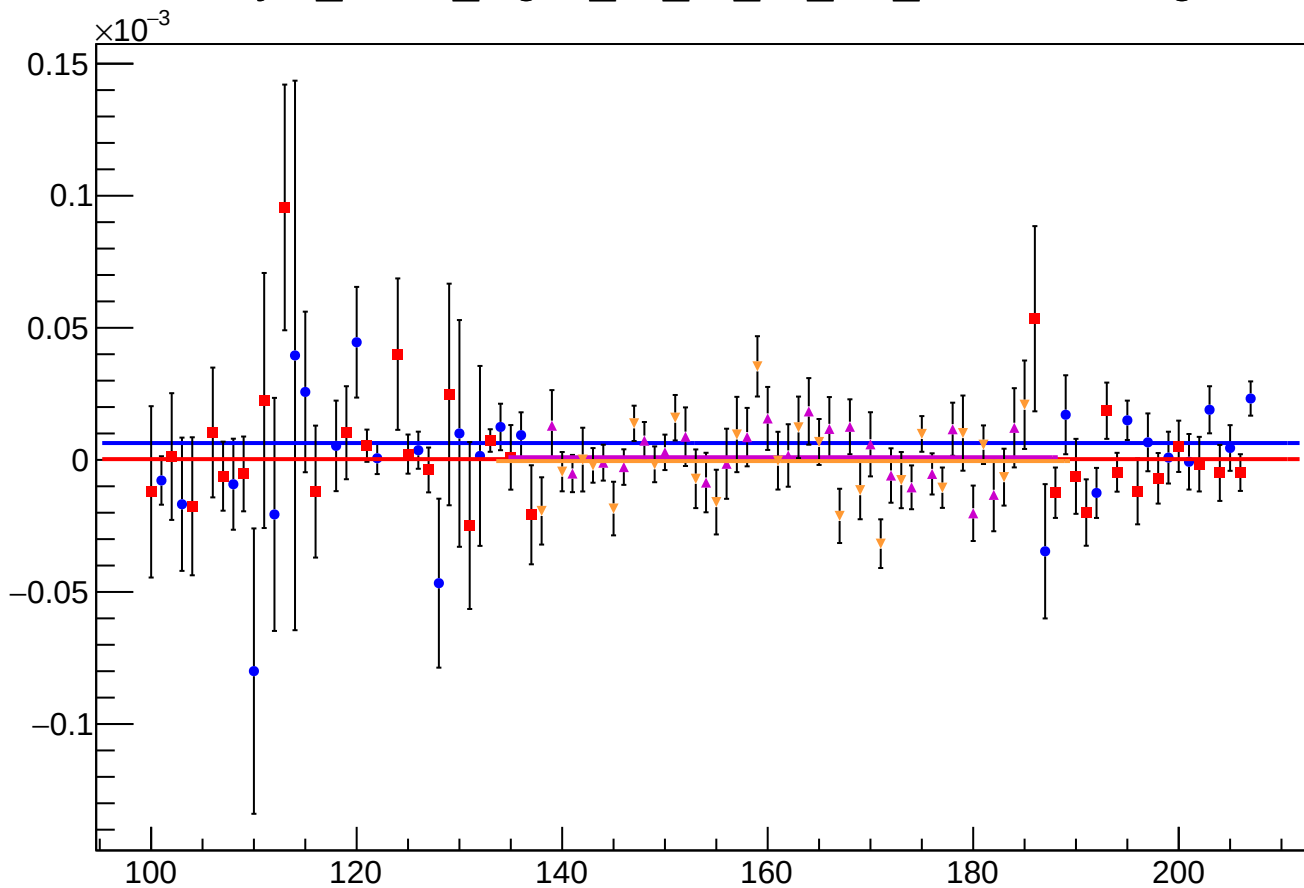
Left In: 123.062 $\pm$ 0.021  $\chi^2$ /NDF: 718821.1/22

+ sign 132.348 $\pm$ 0.017  $\chi^2$ /NDF: 4435425.5/50

All: 132.791 $\pm$ 0.012  $\chi^2$ /NDF: 9563286.0/104

- sign 133.243 $\pm$ 0.017  $\chi^2$ /NDF: 5126435.1/53

asym\_sam2\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 33.2/25

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:52.5/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 26.9/30

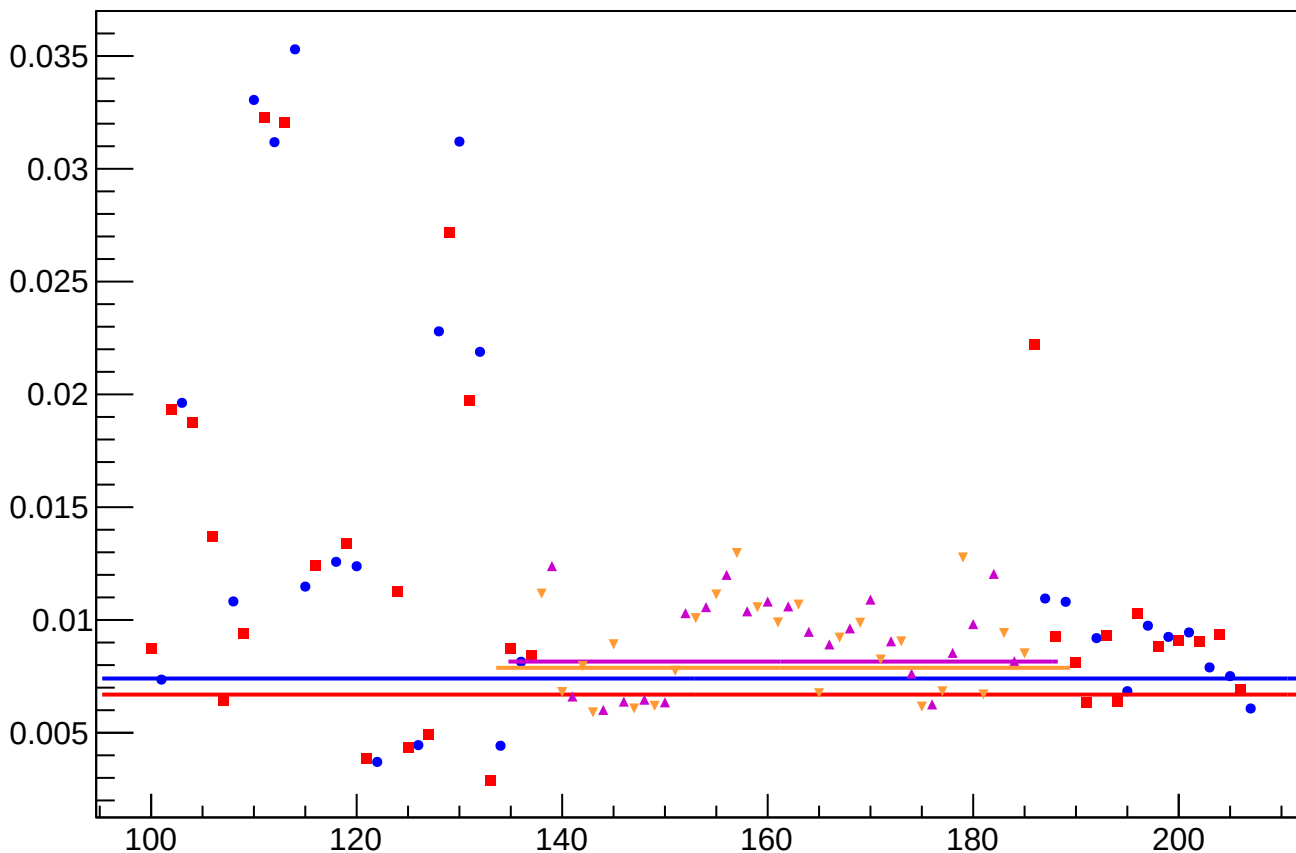
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:20.0/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 91.5/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 139.2/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 46.9/53

# asym\_sam2\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 5405745.1/25

Left Out: 0.008 $\pm$ 0.000  $\chi^2$ /NDF:2076596.0/24

Right Out: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 7341589.1/30

Left In: 0.008 $\pm$ 0.000  $\chi^2$ /NDF:2017677.5/22

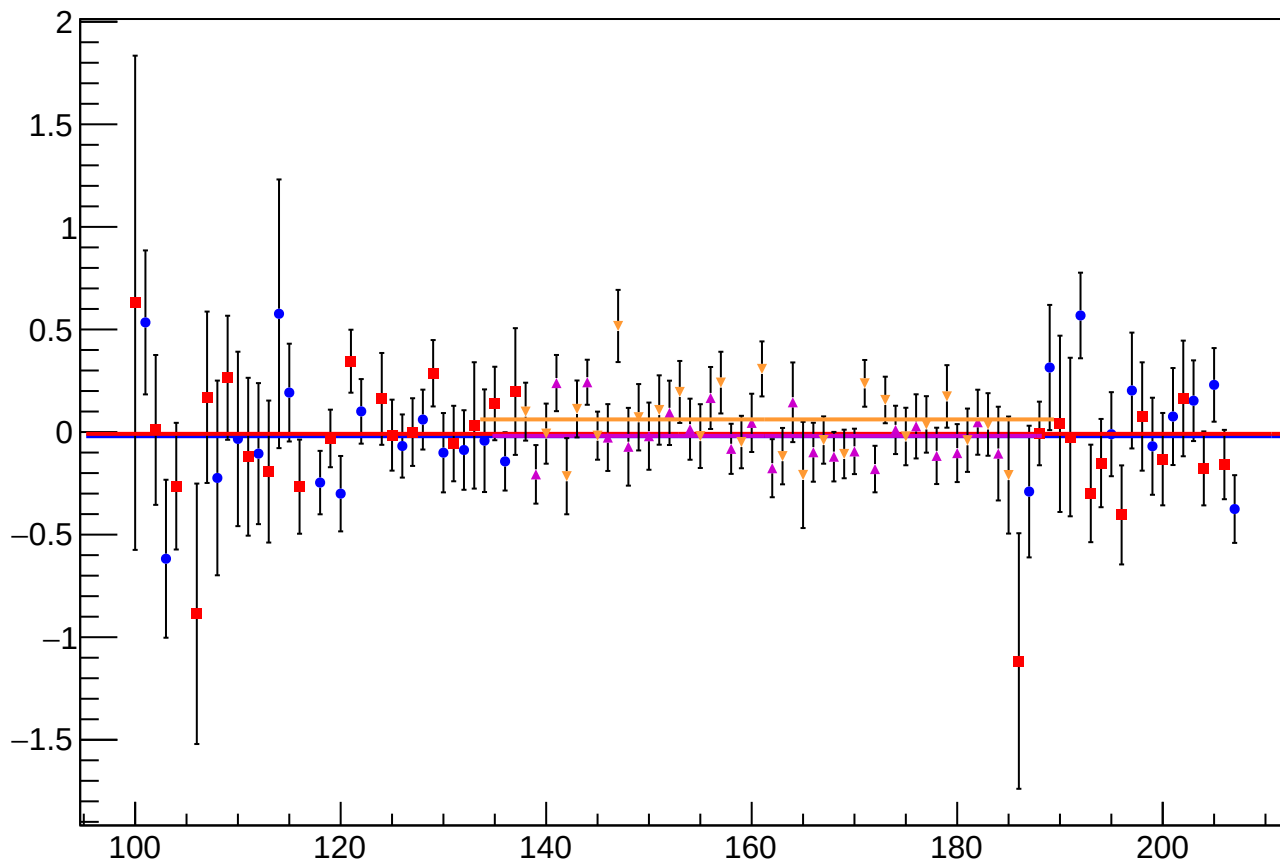
+ sign 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 7538101.2/50

All: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 17491182.0/104

- sign 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 9915412.6/53



asym\_sam2\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.020 \pm 0.041$   $\chi^2/\text{NDF}: 31.3/25$

Left Out:  $0.062 \pm 0.029$   $\chi^2/\text{NDF}: 27.4/24$

Right Out:  $-0.009 \pm 0.041$   $\chi^2/\text{NDF}: 26.2/30$

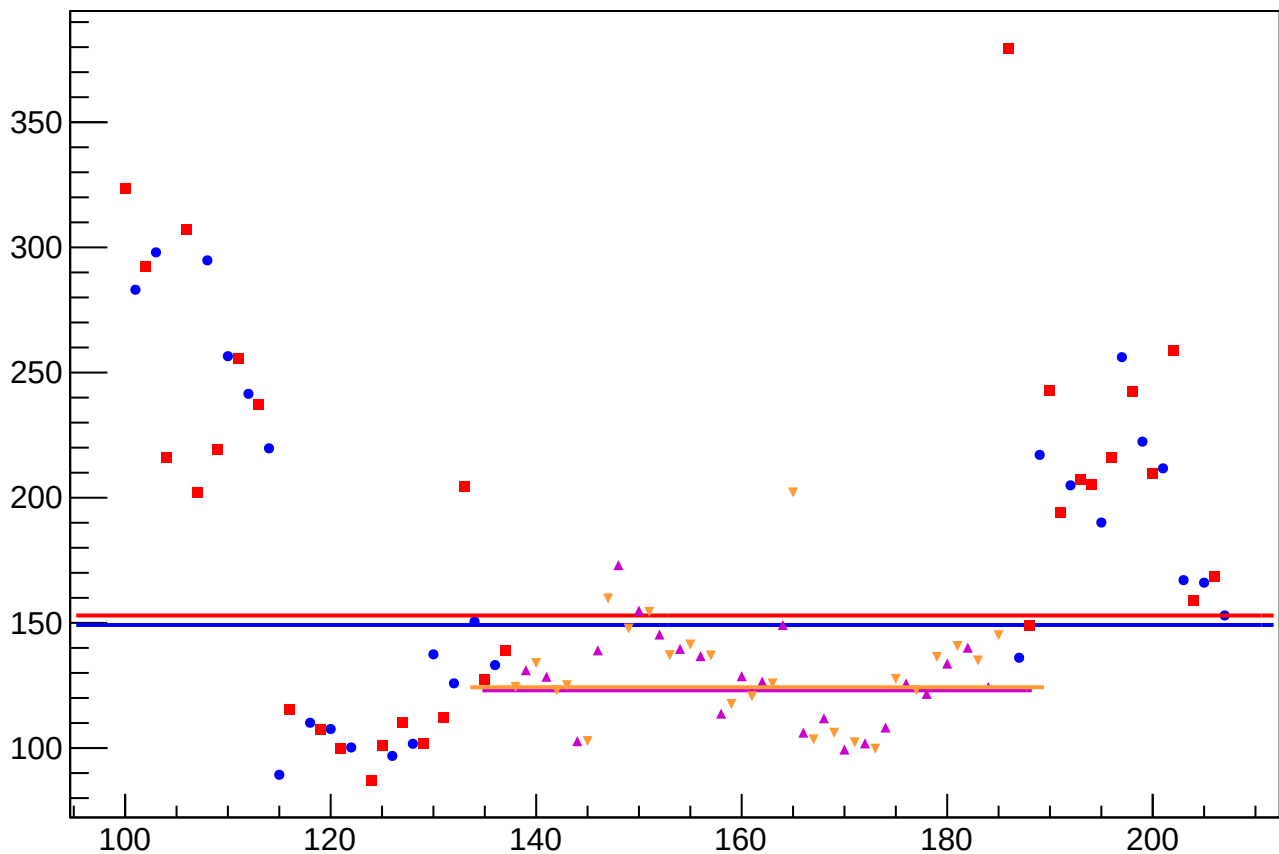
Left In:  $-0.019 \pm 0.029$   $\chi^2/\text{NDF}: 20.3/22$

+ sign  $0.035 \pm 0.024$   $\chi^2/\text{NDF}: 61.4/50$

All:  $0.010 \pm 0.017$   $\chi^2/\text{NDF}: 110.2/104$

- sign  $-0.015 \pm 0.024$   $\chi^2/\text{NDF}: 46.6/53$

asym\_sam2\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 149.166 $\pm$ 0.029  $\chi^2$ /NDF: 3107233.4/25

Left Out: 124.292 $\pm$ 0.020  $\chi^2$ /NDF:841035.9/24

Right Out: 152.949 $\pm$ 0.029  $\chi^2$ /NDF: 3700240.7/30

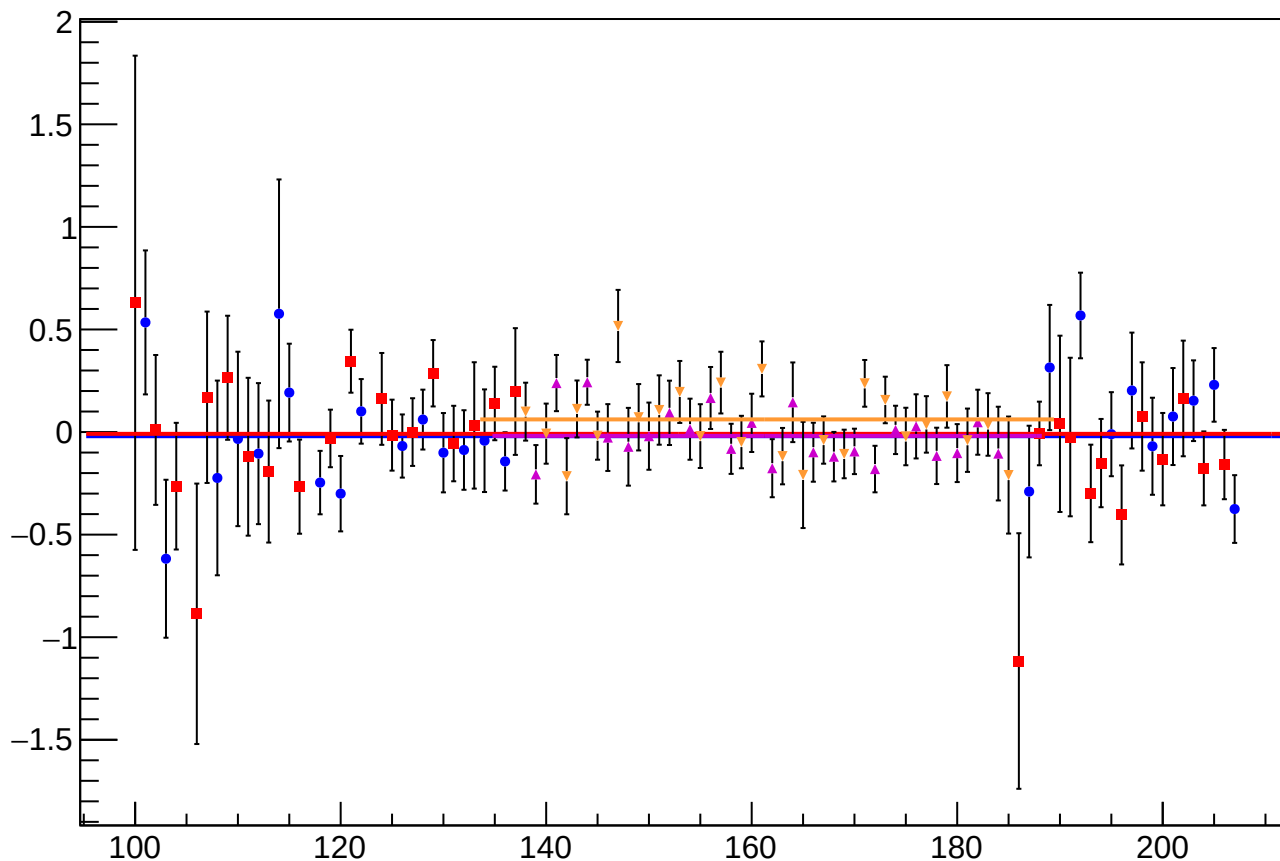
Left In: 123.062 $\pm$ 0.021  $\chi^2$ /NDF:718844.3/22

+ sign 132.348 $\pm$ 0.017  $\chi^2$ /NDF: 4435452.2/50

All: 132.791 $\pm$ 0.012  $\chi^2$ /NDF: 9563369.6/104

- sign 133.243 $\pm$ 0.017  $\chi^2$ /NDF: 5126492.2/53

asym\_sam2\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.020 \pm 0.041$   $\chi^2/\text{NDF}: 31.3/25$

Left Out:  $0.062 \pm 0.029$   $\chi^2/\text{NDF}: 27.4/24$

Right Out:  $-0.009 \pm 0.041$   $\chi^2/\text{NDF}: 26.2/30$

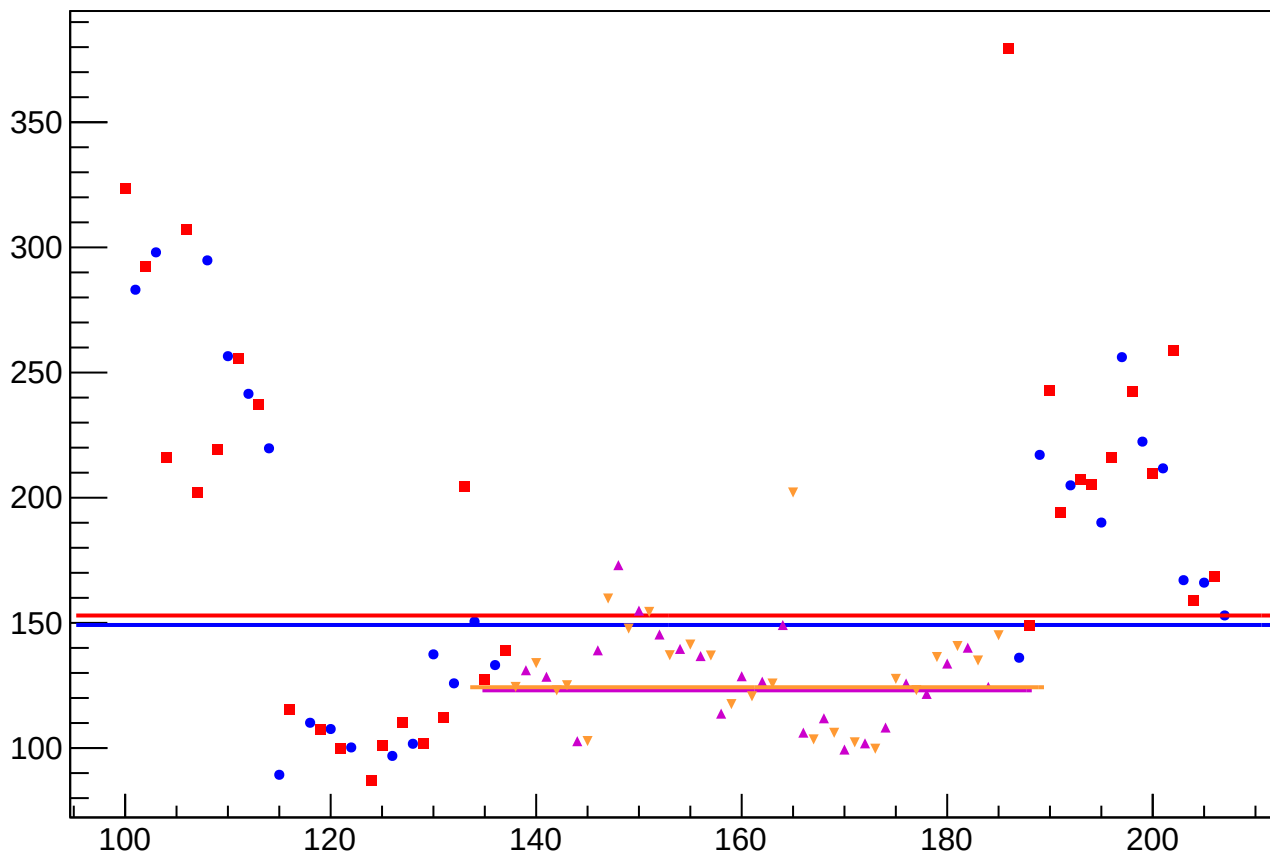
Left In:  $-0.019 \pm 0.029$   $\chi^2/\text{NDF}: 20.3/22$

+ sign  $0.035 \pm 0.024$   $\chi^2/\text{NDF}: 61.4/50$

All:  $0.010 \pm 0.017$   $\chi^2/\text{NDF}: 110.2/104$

- sign  $-0.015 \pm 0.024$   $\chi^2/\text{NDF}: 46.6/53$

asym\_sam2\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 149.166 $\pm$ 0.029  $\chi^2/\text{NDF}$ : 3107233.4/25

Left Out: 124.292 $\pm$ 0.020  $\chi^2/\text{NDF}$ : 841035.9/24

Right Out: 152.949 $\pm$ 0.029  $\chi^2/\text{NDF}$ : 3700240.7/30

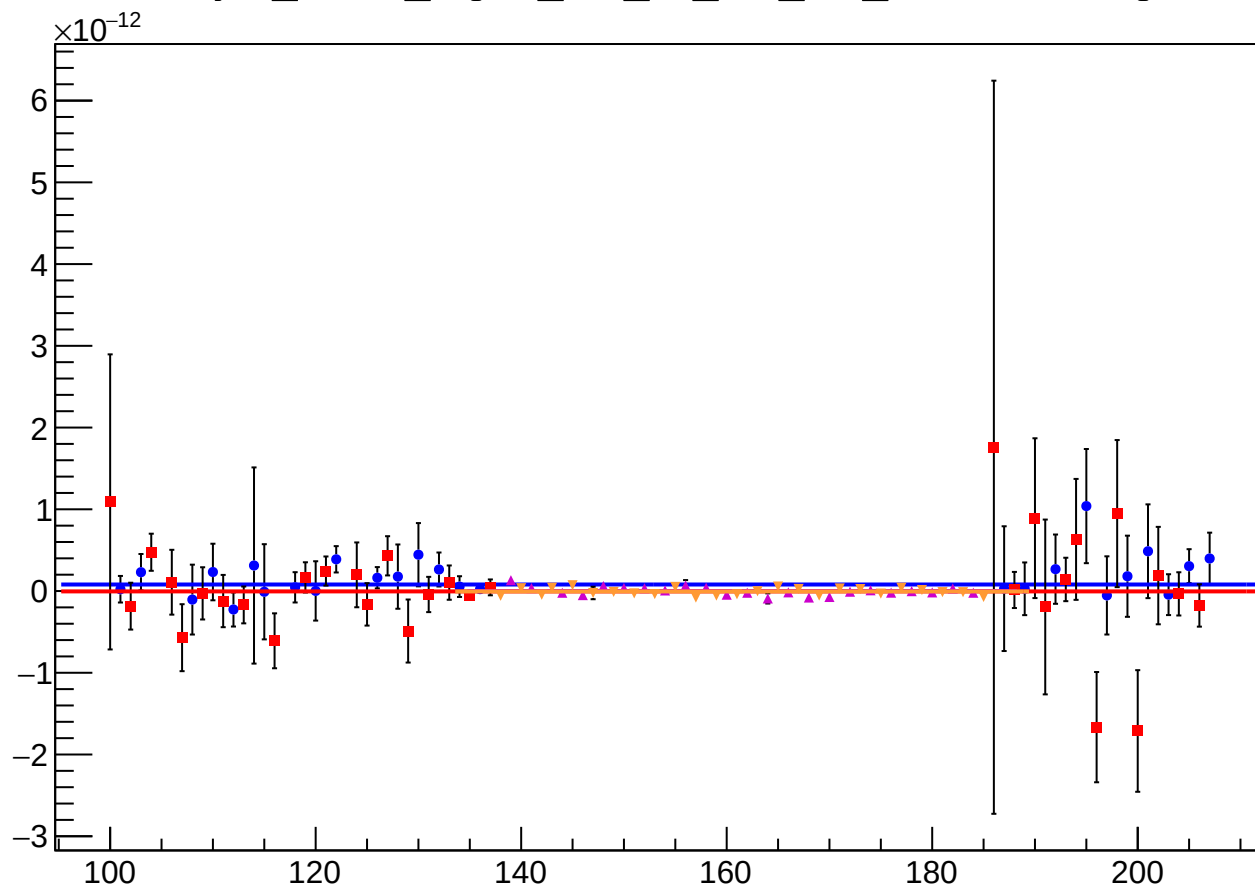
Left In: 123.062 $\pm$ 0.021  $\chi^2/\text{NDF}$ : 718844.3/22

+ sign 132.348 $\pm$ 0.017  $\chi^2/\text{NDF}$ : 4435452.2/50

All: 132.791 $\pm$ 0.012  $\chi^2/\text{NDF}$ : 9563369.6/104

- sign 133.243 $\pm$ 0.017  $\chi^2/\text{NDF}$ : 5126492.2/53

# asym\_sam2\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 15.7/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 24.5/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 35.8/30

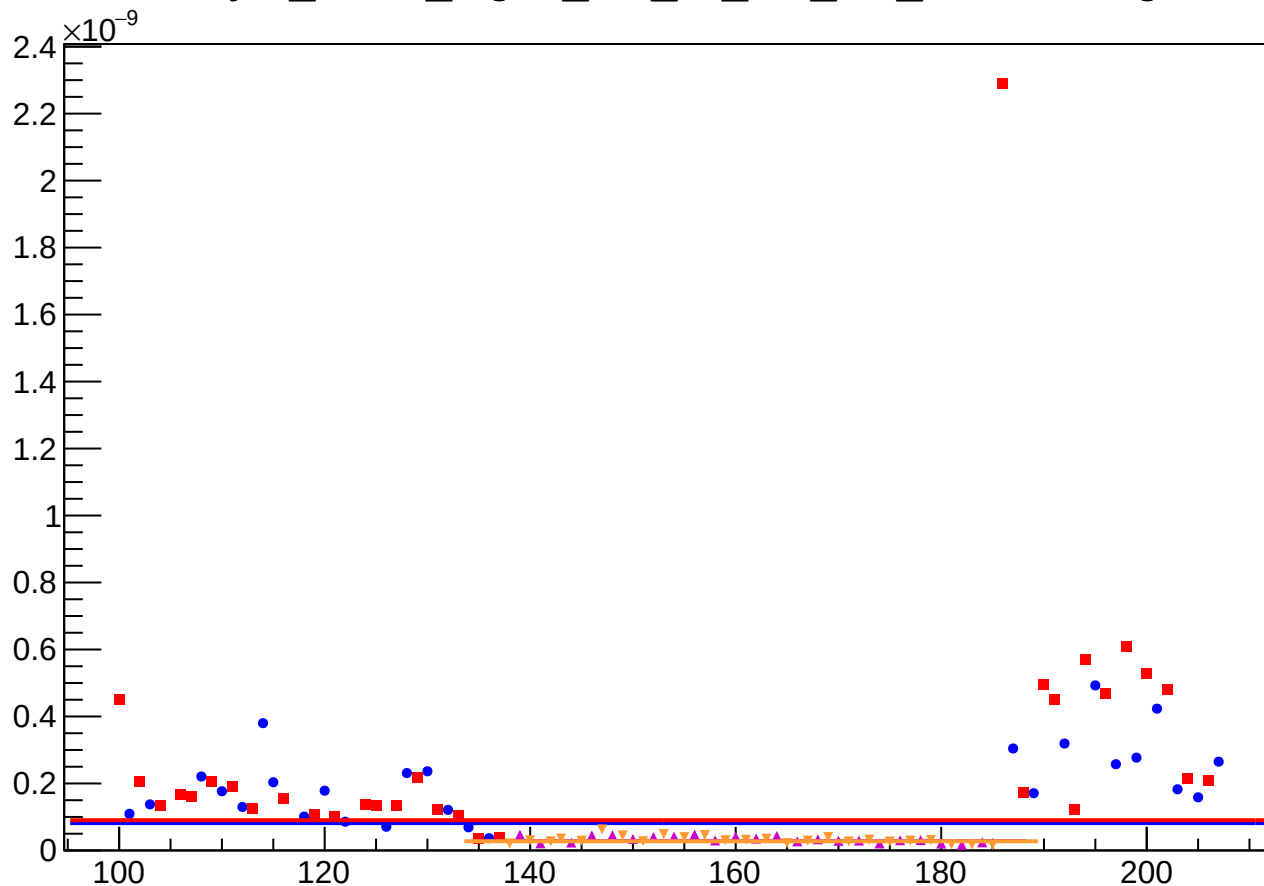
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 24.6/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 45.9/50

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 106.4/104

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 60.4/53

asym\_sam2\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 7723343.6/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:2403081.2/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 9902038.1/30

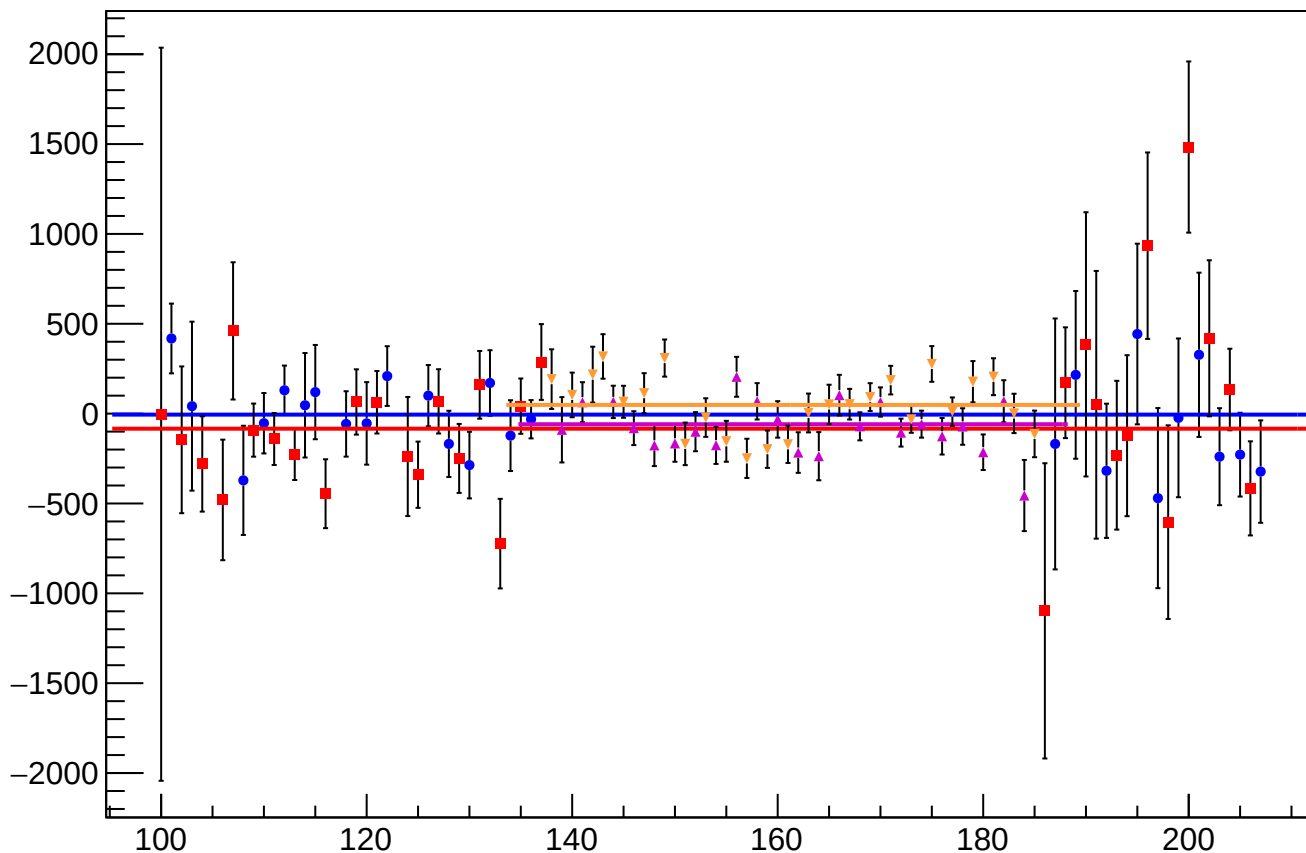
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:2191521.5/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 14839634.1/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 32231538.9/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 17377770.6/53

# reg\_asym\_sam3\_mean vs Slug



Right In:  $-5.509 \pm 42.454$   $\chi^2/\text{NDF}$ : 20.2/25

Left Out:  $48.392 \pm 20.423$   $\chi^2/\text{NDF}$ : 53.6/24

Right Out:  $-83.821 \pm 42.503$   $\chi^2/\text{NDF}$ : 48.1/30

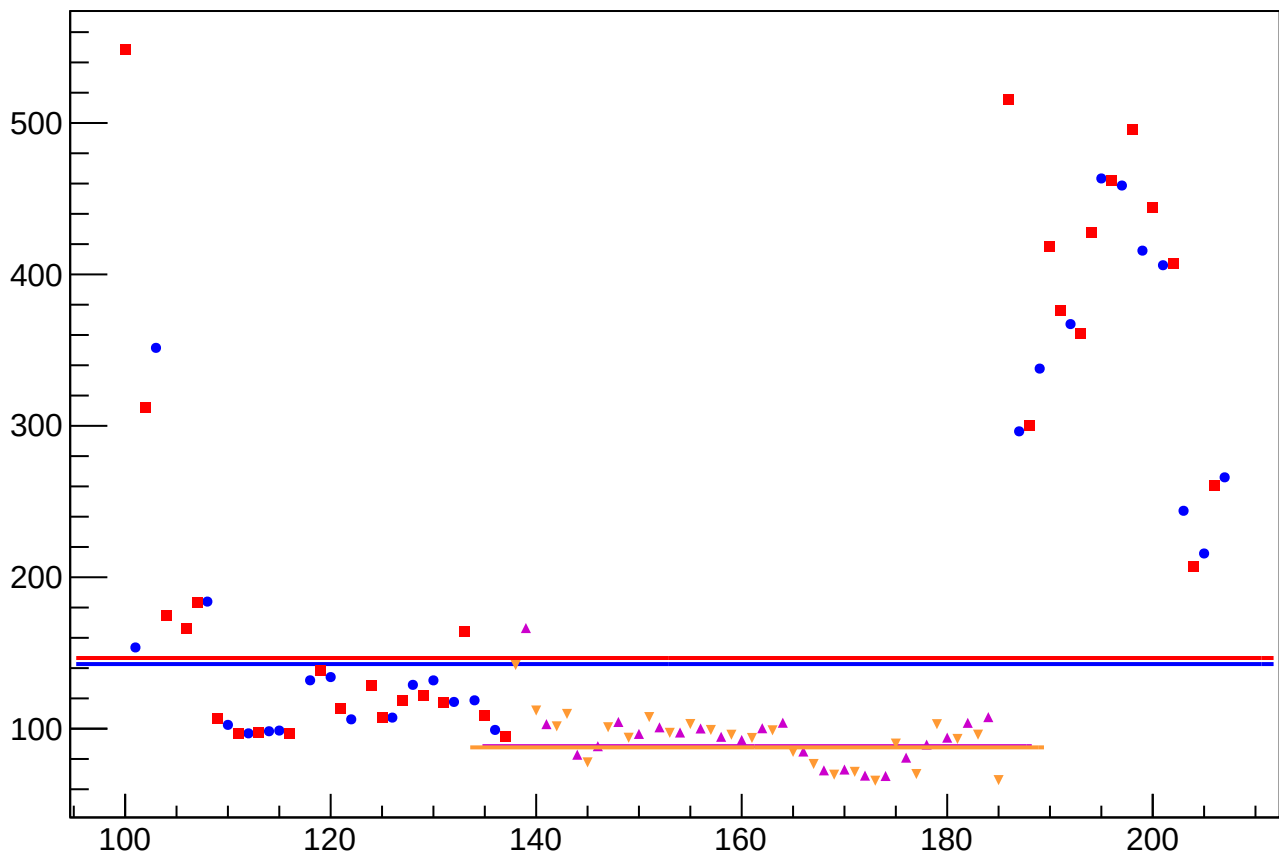
Left In:  $-59.014 \pm 21.156$   $\chi^2/\text{NDF}$ : 30.6/22

+ sign  $38.263 \pm 18.404$   $\chi^2/\text{NDF}$ : 75.1/50

All:  $-11.373 \pm 13.199$   $\chi^2/\text{NDF}$ : 169.0/104

- sign  $-63.940 \pm 18.940$   $\chi^2/\text{NDF}$ : 78.9/53

# reg\_asym\_sam3\_rms vs Slug



Right In: 142.672 $\pm$ 0.030  $\chi^2$ /NDF: 6545441.2/25

Left Out: 87.656 $\pm$ 0.014  $\chi^2$ /NDF:1213284.3/24

Right Out: 146.675 $\pm$ 0.030  $\chi^2$ /NDF: 8052765.8/30

Left In: 88.482 $\pm$ 0.015  $\chi^2$ /NDF:1075689.1/22

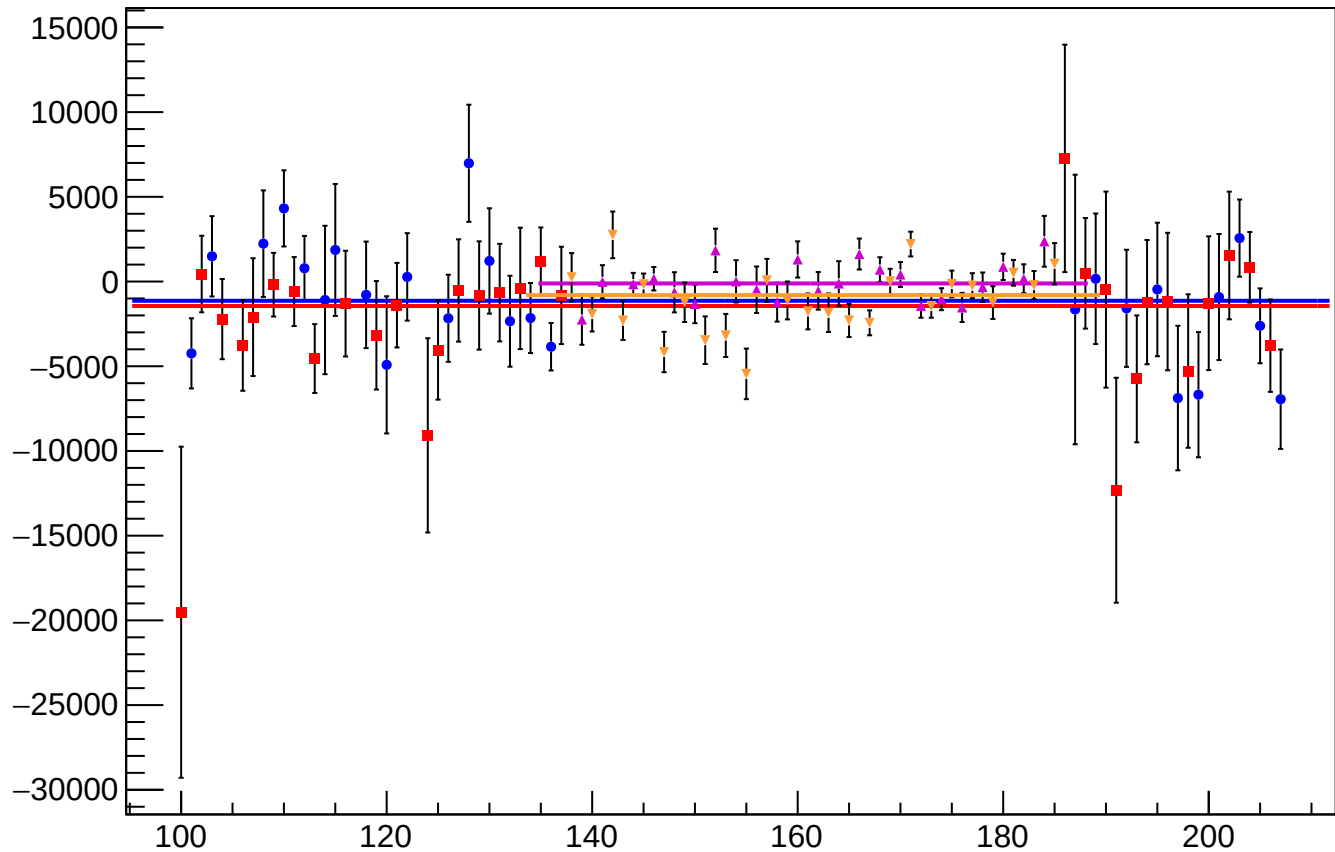
+ sign 97.995 $\pm$ 0.013  $\chi^2$ /NDF: 10486298.1/50

All: 98.987 $\pm$ 0.009  $\chi^2$ /NDF: 22631378.4/104

- sign 100.037 $\pm$ 0.013  $\chi^2$ /NDF: 12133119.3/53



# asym\_sam3\_reg\_correction\_mean vs Slug



Right In:  $-1135.156 \pm 528.463$   $\chi^2/\text{NDF}$ : 35.0/25

Left Out:  $-801.506 \pm 187.755$   $\chi^2/\text{NDF}$ : 71.9/24

Right Out:  $-1445.544 \pm 528.283$   $\chi^2/\text{NDF}$ : 22.3/30

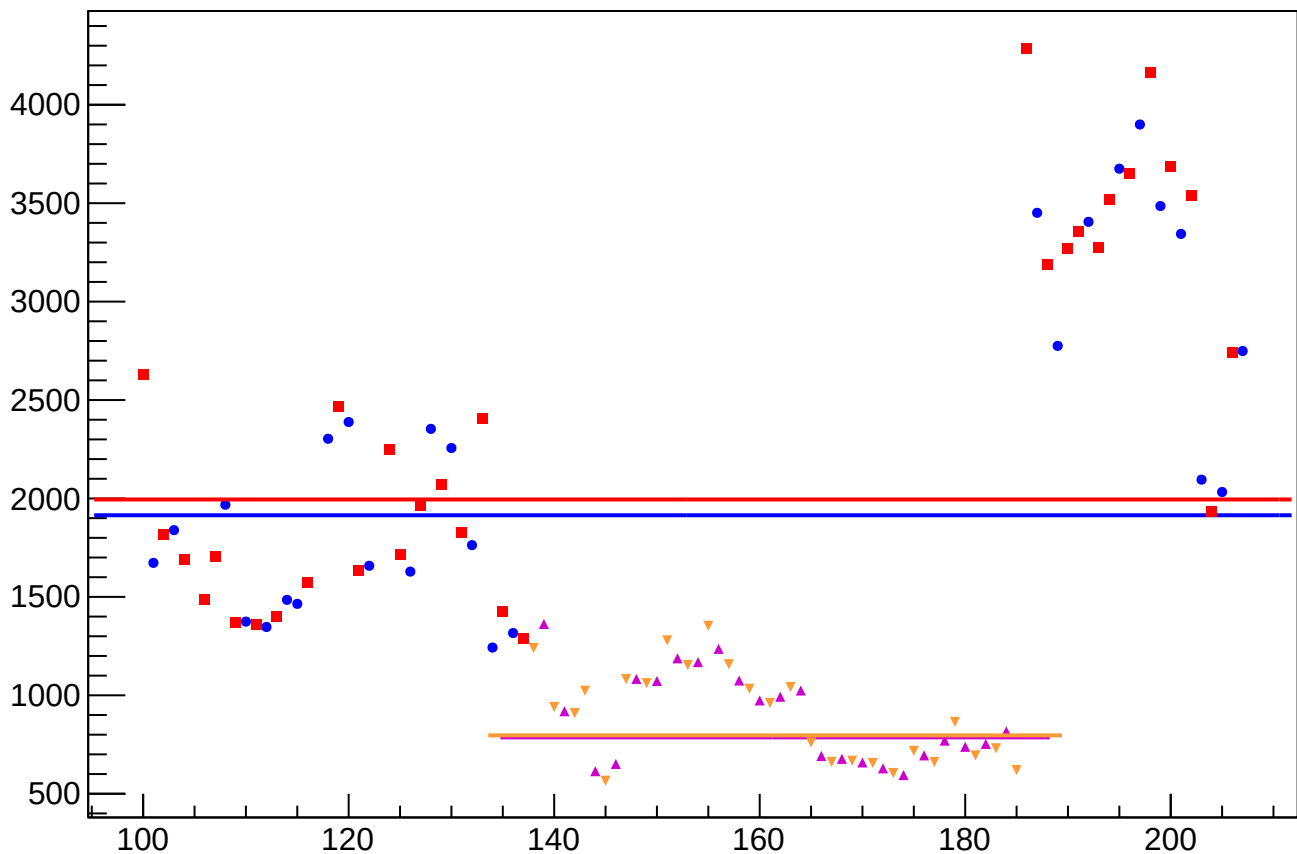
Left In:  $-112.483 \pm 190.269$   $\chi^2/\text{NDF}$ : 27.1/22

+ sign  $-838.902 \pm 176.921$   $\chi^2/\text{NDF}$ : 107.2/50

All:  $-555.596 \pm 125.835$   $\chi^2/\text{NDF}$ : 167.4/104

- sign  $-265.551 \pm 179.013$   $\chi^2/\text{NDF}$ : 55.0/53

# asym\_sam3\_reg\_correction\_rms vs Slug



Right In: 1914.726 $\pm$ 0.374  $\chi^2$ /NDF: 3324023.2/25

Left Out: 796.524 $\pm$ 0.133  $\chi^2$ /NDF: 2417872.0/24

Right Out: 1994.886 $\pm$ 0.374  $\chi^2$ /NDF: 4099868.6/30

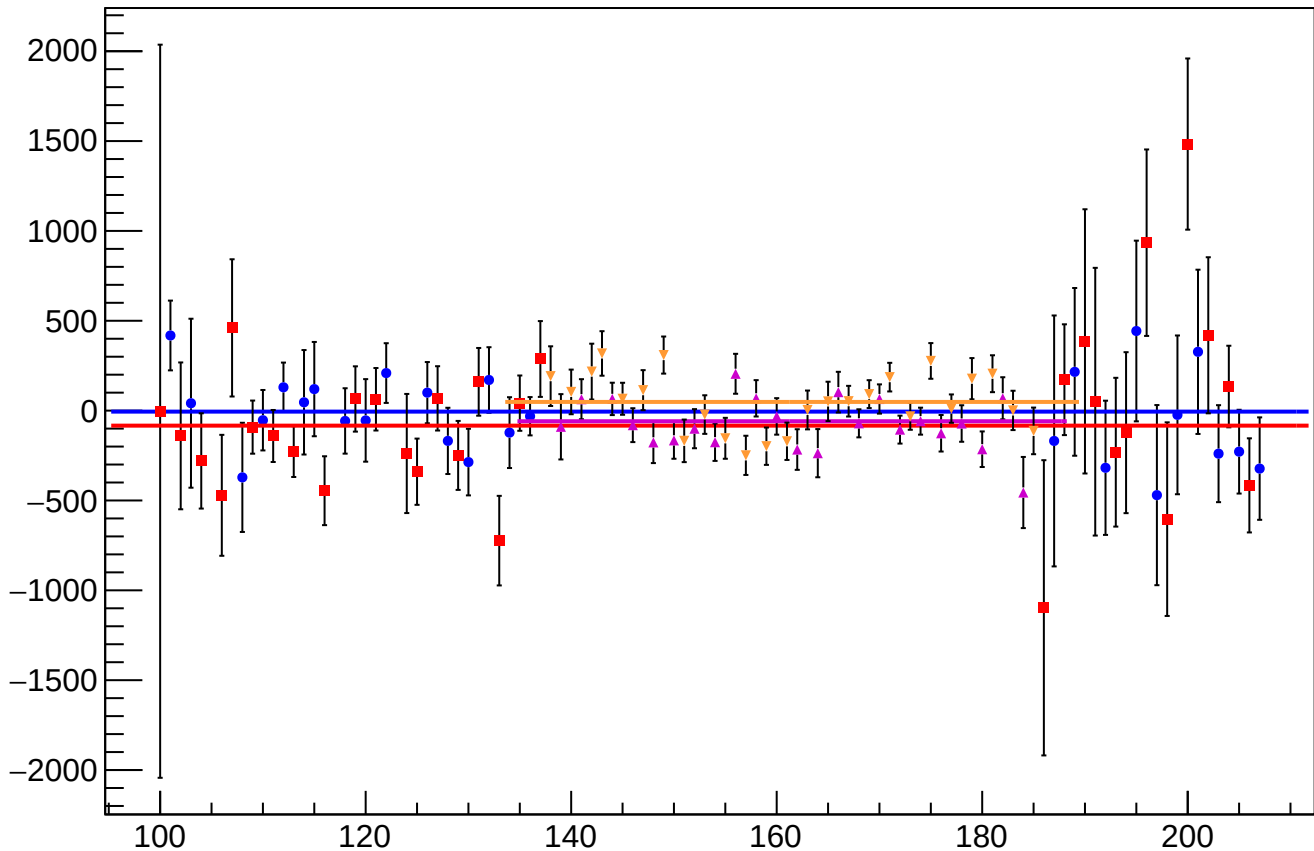
Left In: 786.336 $\pm$ 0.135  $\chi^2$ /NDF: 2156583.9/22

+ sign 921.852 $\pm$ 0.125  $\chi^2$ /NDF: 13692784.0/50

All: 923.460 $\pm$ 0.089  $\chi^2$ /NDF: 29214809.6/10

- sign 925.107 $\pm$ 0.127  $\chi^2$ /NDF: 15521691.1/53

# cor\_asym\_sam3\_mean vs Slug



Right In:  $-5.524 \pm 42.454$   $\chi^2/\text{NDF}$ : 20.2/25

Left Out:  $48.399 \pm 20.423$   $\chi^2/\text{NDF}$ : 53.6/24

Right Out:  $-83.576 \pm 42.505$   $\chi^2/\text{NDF}$ : 48.0/30

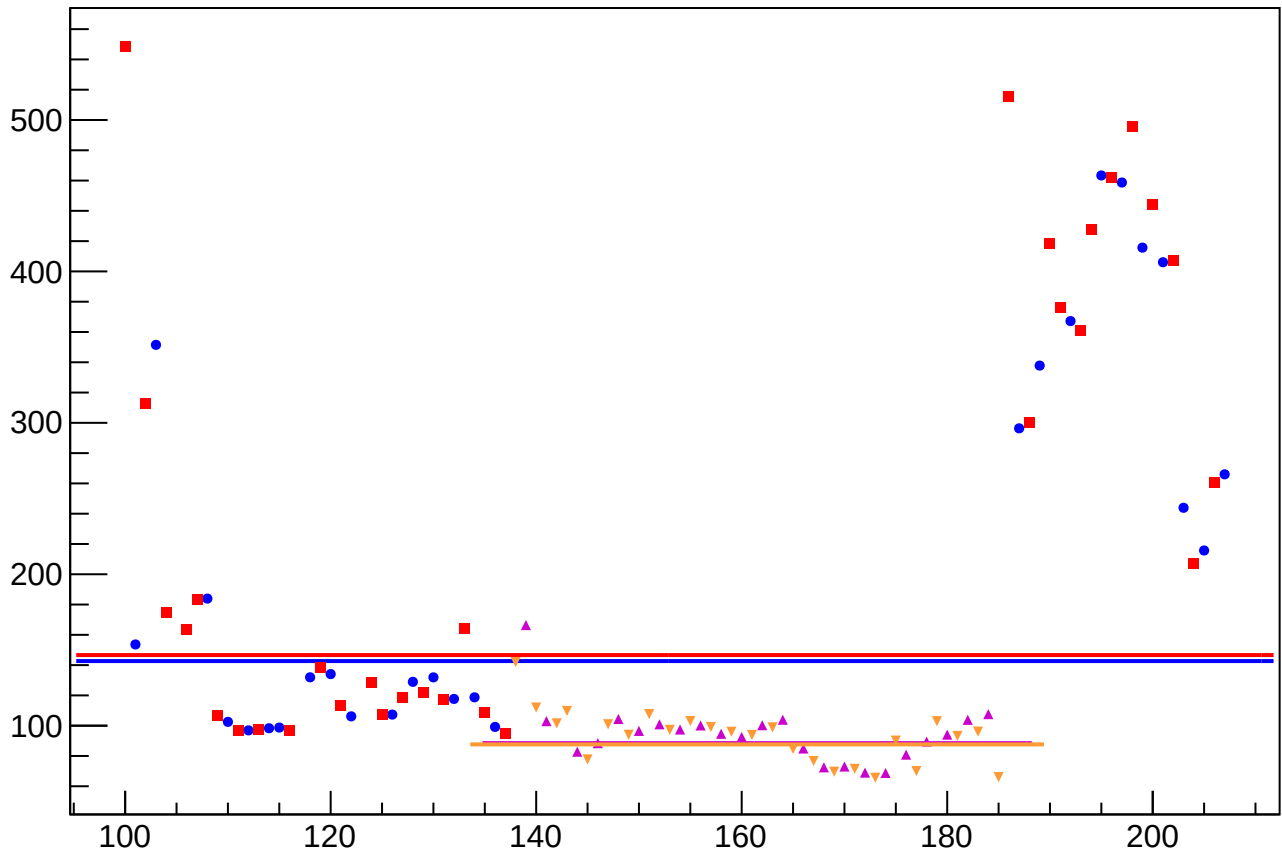
Left In:  $-59.016 \pm 21.156$   $\chi^2/\text{NDF}$ : 30.6/22

+ sign  $38.265 \pm 18.404$   $\chi^2/\text{NDF}$ : 75.1/50

All:  $-11.349 \pm 13.199$   $\chi^2/\text{NDF}$ : 168.9/104

- sign  $-63.893 \pm 18.940$   $\chi^2/\text{NDF}$ : 78.8/53

# cor\_asym\_sam3\_rms vs Slug



Right In: 142.672 $\pm$ 0.030  $\chi^2$ /NDF: 6545443.6/25

Left Out: 87.656 $\pm$ 0.014  $\chi^2$ /NDF:1213284.3/24

Right Out: 146.634 $\pm$ 0.030  $\chi^2$ /NDF: 8051292.9/30

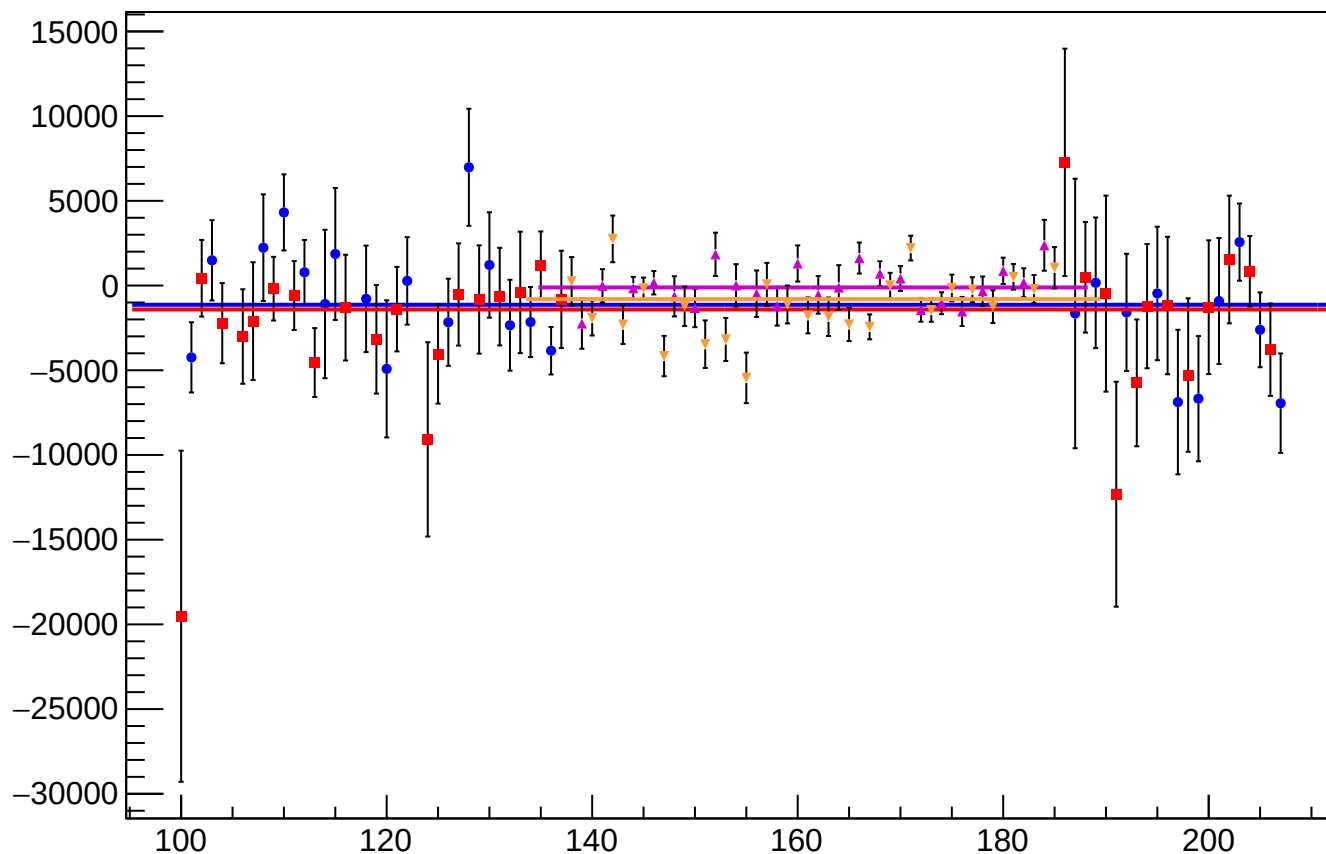
Left In: 88.482 $\pm$ 0.015  $\chi^2$ /NDF:1075689.1/22

+ sign 97.995 $\pm$ 0.013  $\chi^2$ /NDF: 10486299.7/50

All: 98.983 $\pm$ 0.009  $\chi^2$ /NDF: 22625261.7/104

- sign 100.028 $\pm$ 0.013  $\chi^2$ /NDF: 12127109.2/53

# asym\_sam3\_cor\_correction\_mean vs Slug



Right In:  $-1135.146 \pm 528.465$   $\chi^2/\text{NDF}$ : 35.0/25

Left Out:  $-801.499 \pm 187.755$   $\chi^2/\text{NDF}$ : 71.9/24

Right Out:  $-1411.678 \pm 529.143$   $\chi^2/\text{NDF}$ : 21.8/30

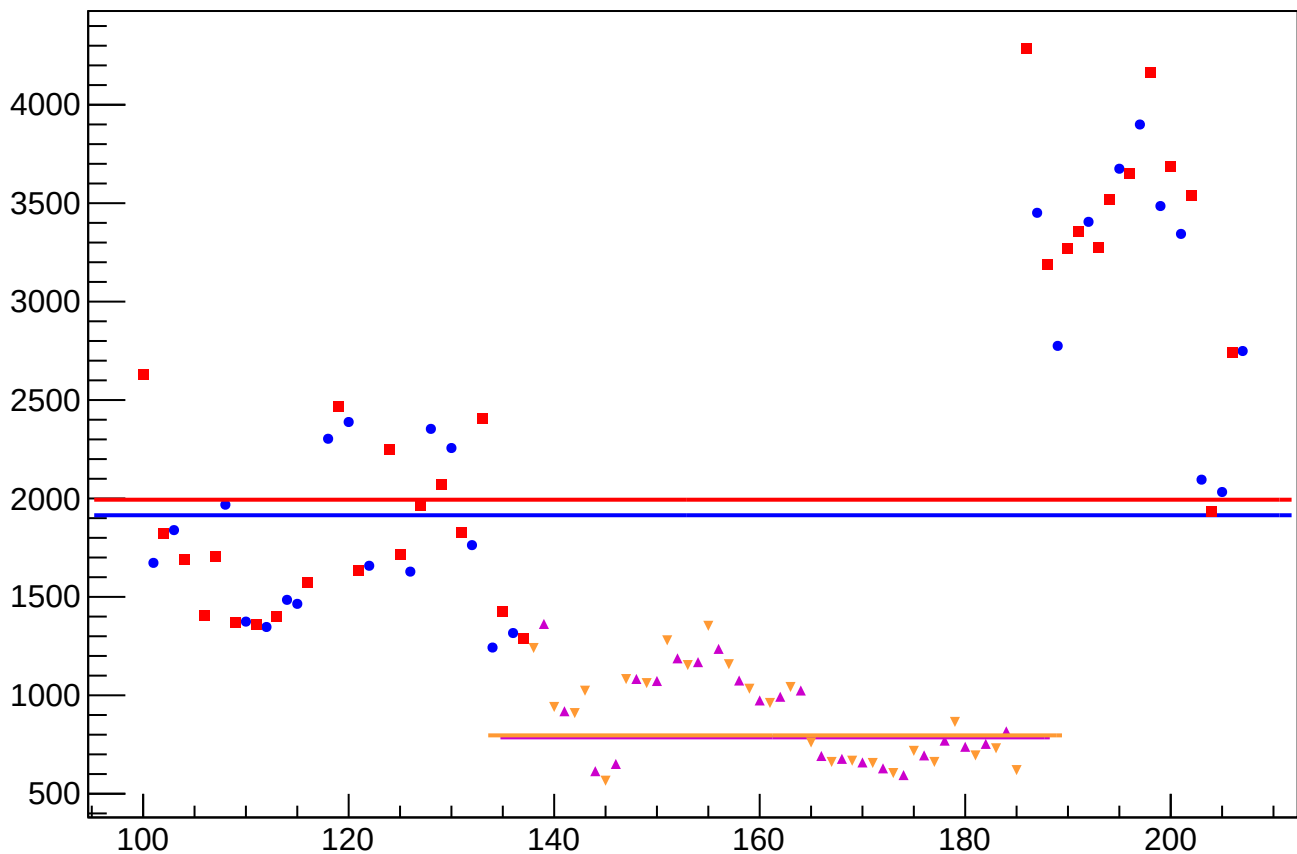
Left In:  $-112.485 \pm 190.269$   $\chi^2/\text{NDF}$ : 27.1/22

+ sign  $-838.894 \pm 176.921$   $\chi^2/\text{NDF}$ : 107.2/50

All:  $-553.513 \pm 125.847$   $\chi^2/\text{NDF}$ : 166.7/104

- sign  $-261.235 \pm 179.046$   $\chi^2/\text{NDF}$ : 54.2/53

# asym\_sam3\_cor\_correction\_rms vs Slug



Right In: 1914.736 $\pm$ 0.374  $\chi^2$ /NDF: 3324016.3/25

Left Out: 796.523 $\pm$ 0.133  $\chi^2$ /NDF: 2417869.7/24

Right Out: 1993.676 $\pm$ 0.374  $\chi^2$ /NDF: 4116633.5/30

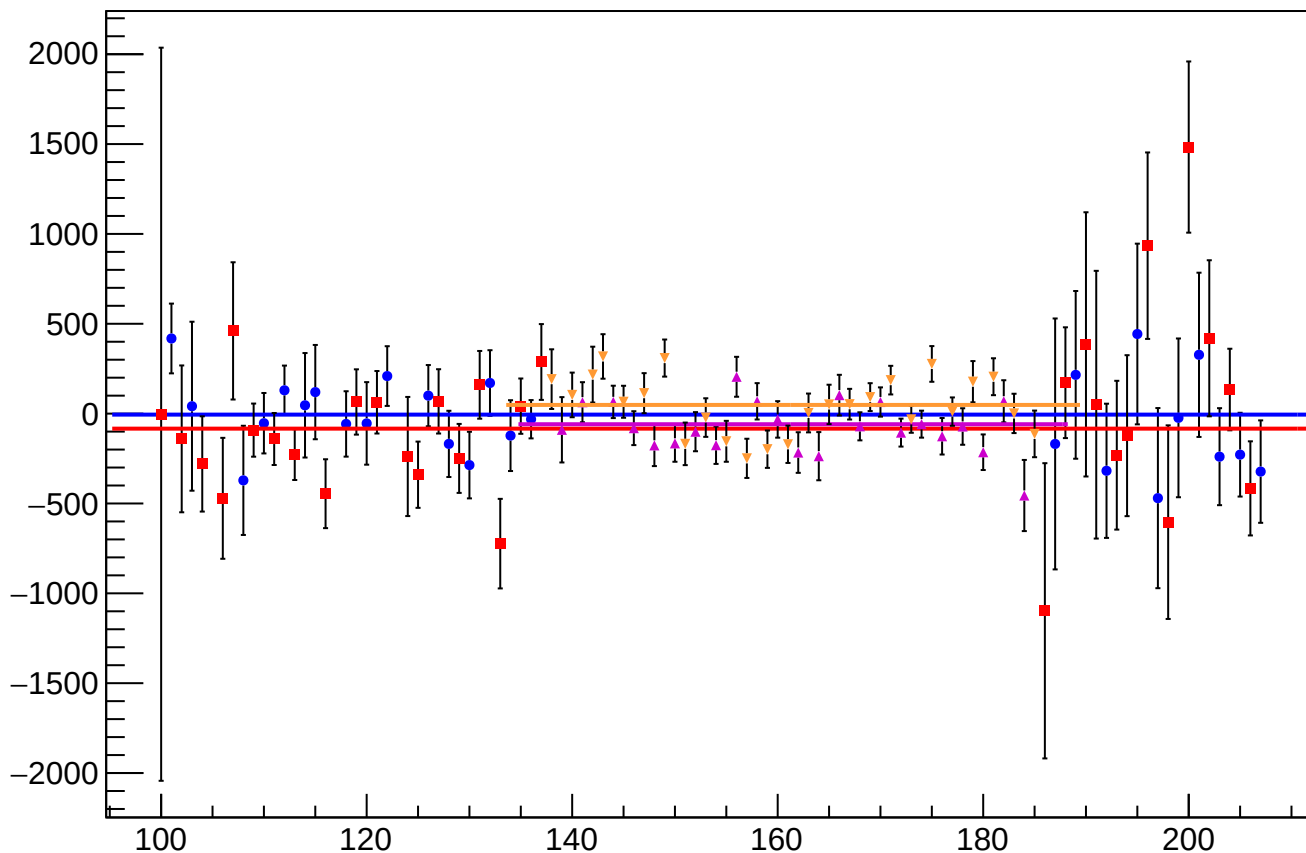
Left In: 786.336 $\pm$ 0.135  $\chi^2$ /NDF: 2156582.1/22

+ sign 921.852 $\pm$ 0.125  $\chi^2$ /NDF: 13692844.4/50

All: 923.194 $\pm$ 0.089  $\chi^2$ /NDF: 29186379.2/10

- sign 924.569 $\pm$ 0.127  $\chi^2$ /NDF: 15493301.7/53

# eigen\_cor\_asym\_sam3\_mean vs Slug



Right In:  $-5.524 \pm 42.454$   $\chi^2/\text{NDF}$ : 20.2/25

Left Out:  $48.399 \pm 20.423$   $\chi^2/\text{NDF}$ : 53.6/24

Right Out:  $-83.576 \pm 42.505$   $\chi^2/\text{NDF}$ : 48.0/30

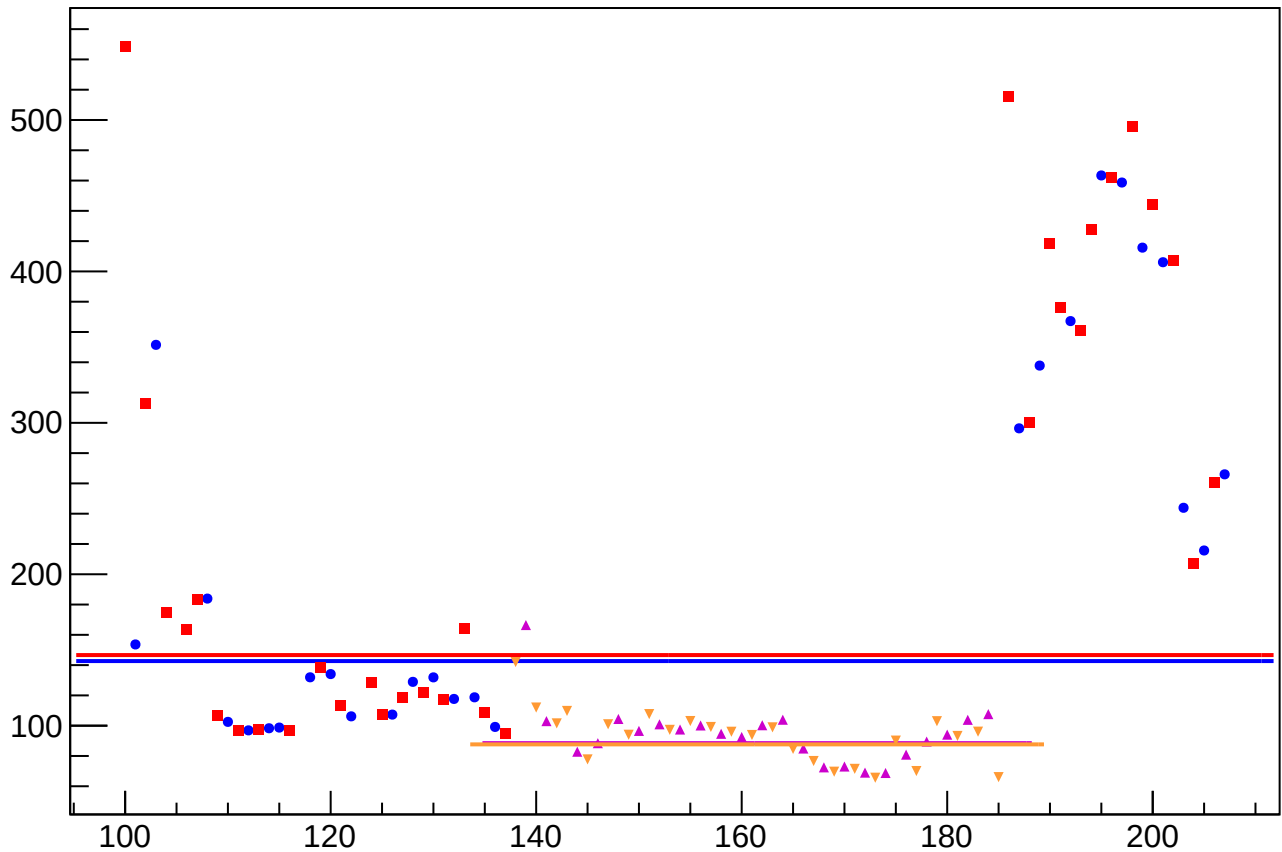
Left In:  $-59.016 \pm 21.156$   $\chi^2/\text{NDF}$ : 30.6/22

+ sign  $38.265 \pm 18.404$   $\chi^2/\text{NDF}$ : 75.1/50

All:  $-11.349 \pm 13.199$   $\chi^2/\text{NDF}$ : 168.9/104

- sign  $-63.893 \pm 18.940$   $\chi^2/\text{NDF}$ : 78.8/53

# eigen\_cor\_asym\_sam3\_rms vs Slug



Right In: 142.672 $\pm$ 0.030  $\chi^2$ /NDF: 6545443.6/25

Left Out: 87.656 $\pm$ 0.014  $\chi^2$ /NDF:1213284.3/24

Right Out: 146.634 $\pm$ 0.030  $\chi^2$ /NDF: 8051292.9/30

Left In: 88.482 $\pm$ 0.015  $\chi^2$ /NDF:1075689.1/22

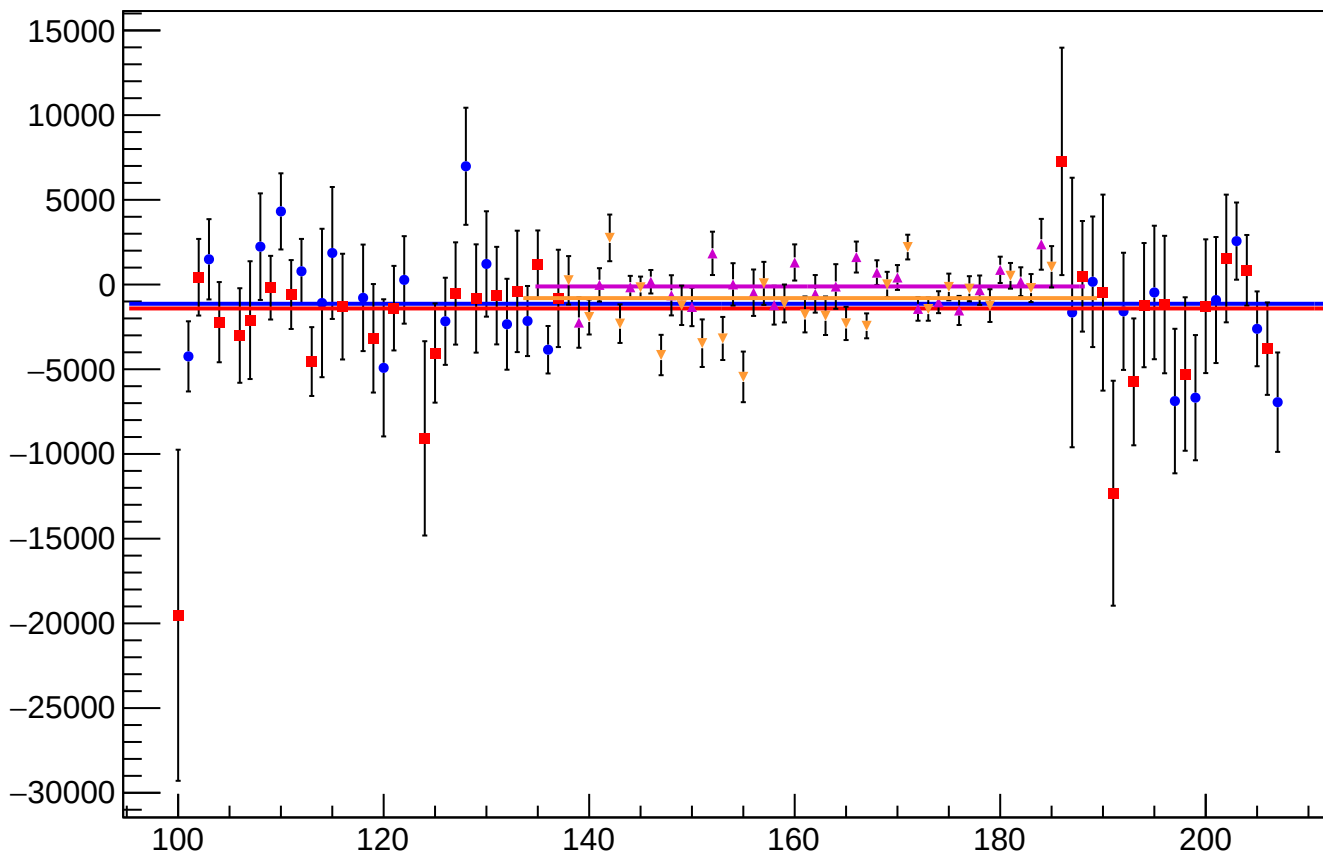
+ sign 97.995 $\pm$ 0.013  $\chi^2$ /NDF: 10486299.7/50

All: 98.983 $\pm$ 0.009  $\chi^2$ /NDF: 22625261.7/104

- sign 100.028 $\pm$ 0.013  $\chi^2$ /NDF: 12127109.2/53



# asym\_sam3\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-1135.146 \pm 528.465$   $\chi^2/\text{NDF}$ : 35.0/25

Left Out:  $-801.499 \pm 187.755$   $\chi^2/\text{NDF}$ : 71.9/24

Right Out:  $-1411.678 \pm 529.143$   $\chi^2/\text{NDF}$ : 21.8/30

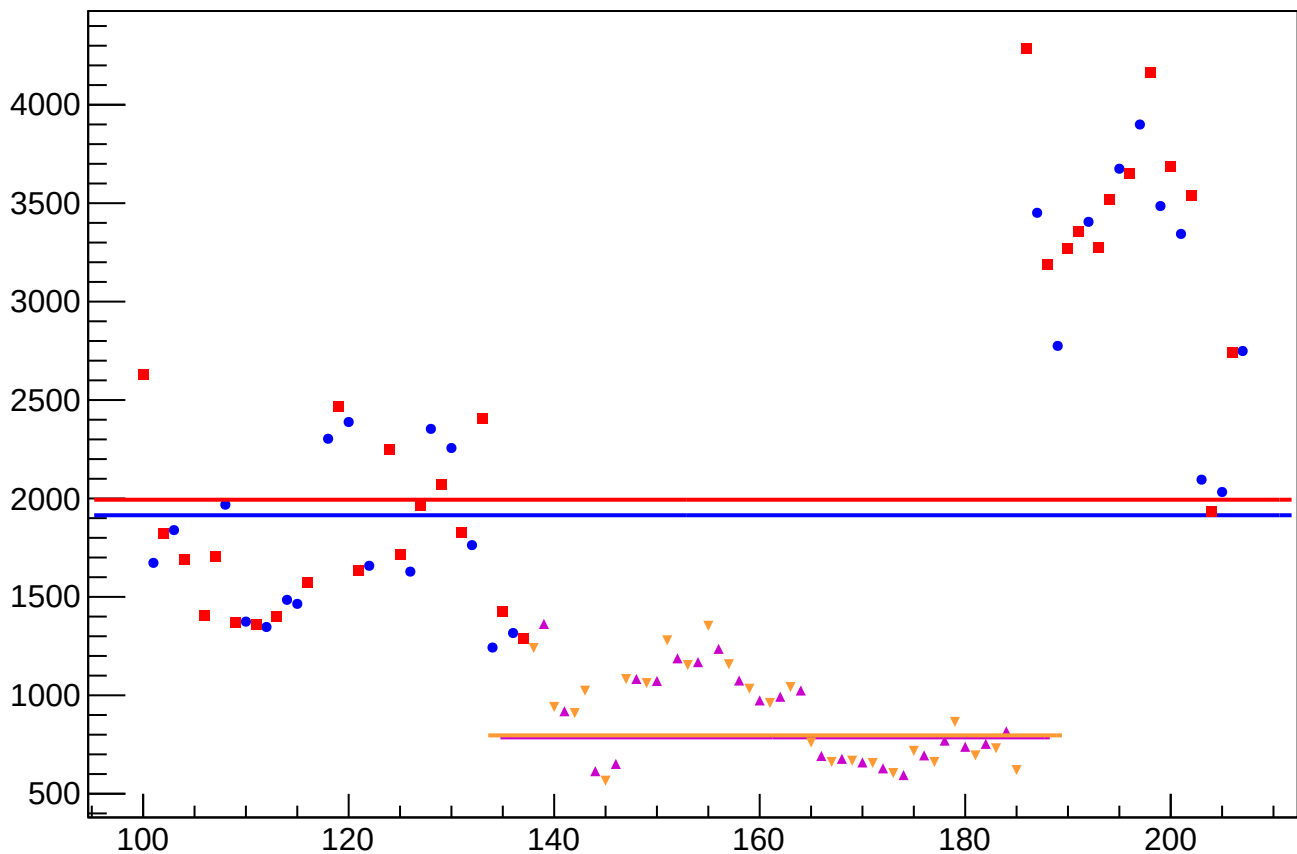
Left In:  $-112.485 \pm 190.269$   $\chi^2/\text{NDF}$ : 27.1/22

+ sign  $-838.894 \pm 176.921$   $\chi^2/\text{NDF}$ : 107.2/50

All:  $-553.513 \pm 125.847$   $\chi^2/\text{NDF}$ : 166.7/104

- sign  $-261.235 \pm 179.046$   $\chi^2/\text{NDF}$ : 54.2/53

# asym\_sam3\_eigen\_cor\_correction\_rms vs Slug



Right In: 1914.736 $\pm$ 0.374  $\chi^2$ /NDF: 3324016.3/25

Left Out: 796.523 $\pm$ 0.133  $\chi^2$ /NDF: 2417869.7/24

Right Out: 1993.676 $\pm$ 0.374  $\chi^2$ /NDF: 4116633.5/30

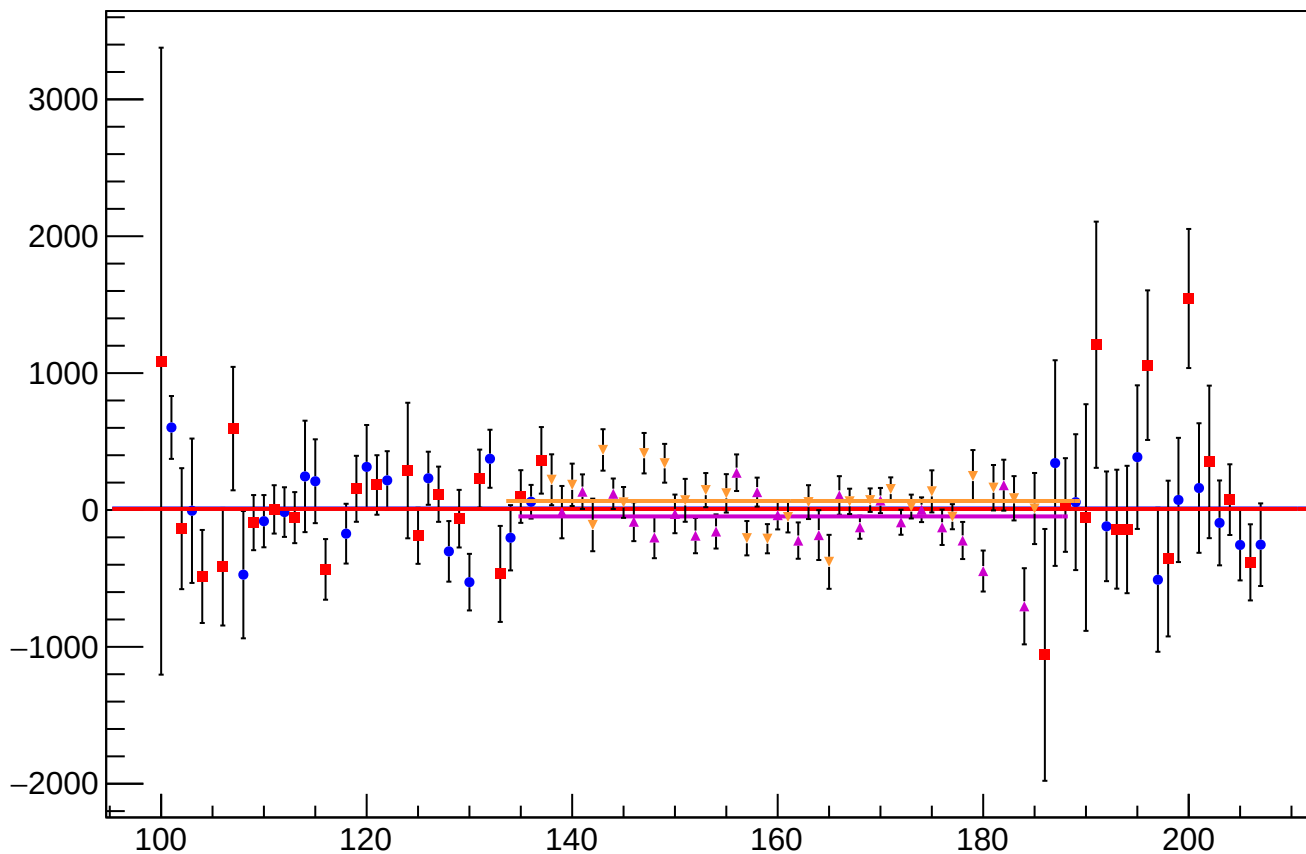
Left In: 786.336 $\pm$ 0.135  $\chi^2$ /NDF: 2156582.1/22

+ sign 921.852 $\pm$ 0.125  $\chi^2$ /NDF: 13692844.4/50

All: 923.194 $\pm$ 0.089  $\chi^2$ /NDF: 29186379.2/10

- sign 924.569 $\pm$ 0.127  $\chi^2$ /NDF: 15493301.7/53

# dit\_asym\_sam3\_mean vs Slug



Right In:  $10.726 \pm 50.213$   $\chi^2/\text{NDF}$ : 29.2/25

Left Out:  $65.702 \pm 25.059$   $\chi^2/\text{NDF}$ : 40.0/24

Right Out:  $7.539 \pm 51.189$   $\chi^2/\text{NDF}$ : 36.4/30

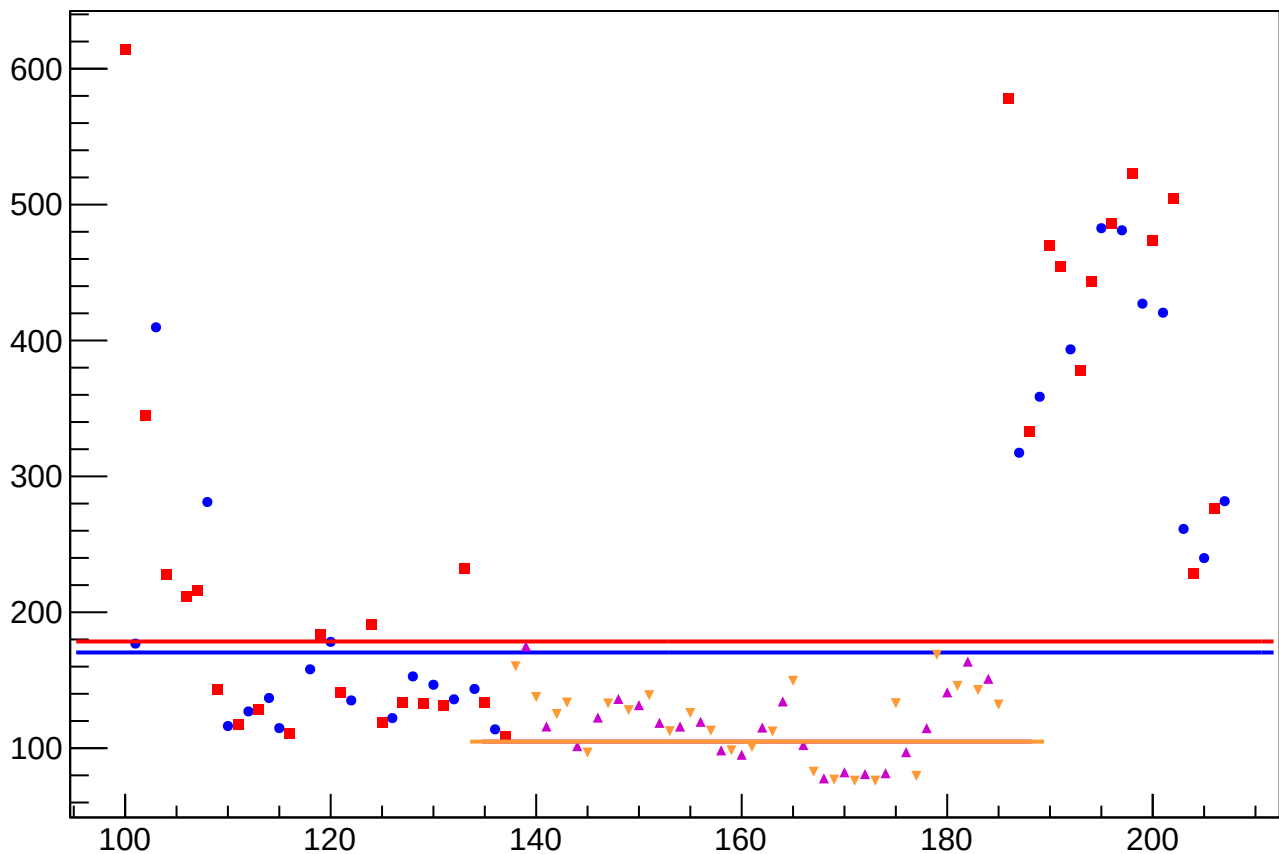
Left In:  $-47.039 \pm 25.696$   $\chi^2/\text{NDF}$ : 38.6/22

+ sign  $54.740 \pm 22.422$   $\chi^2/\text{NDF}$ : 70.2/50

All:  $10.429 \pm 16.043$   $\chi^2/\text{NDF}$ : 154.1/104

- sign  $-36.054 \pm 22.965$   $\chi^2/\text{NDF}$ : 75.9/53

# dit\_asym\_sam3\_rms vs Slug



Right In: 170.426+/-0.036  $\chi^2/\text{NDF}$ : 5783794.4/25

Left Out: 104.810+/-0.018  $\chi^2/\text{NDF}$ : 2242795.3/24

Right Out: 178.508+/-0.036  $\chi^2/\text{NDF}$ : 7234549.9/30

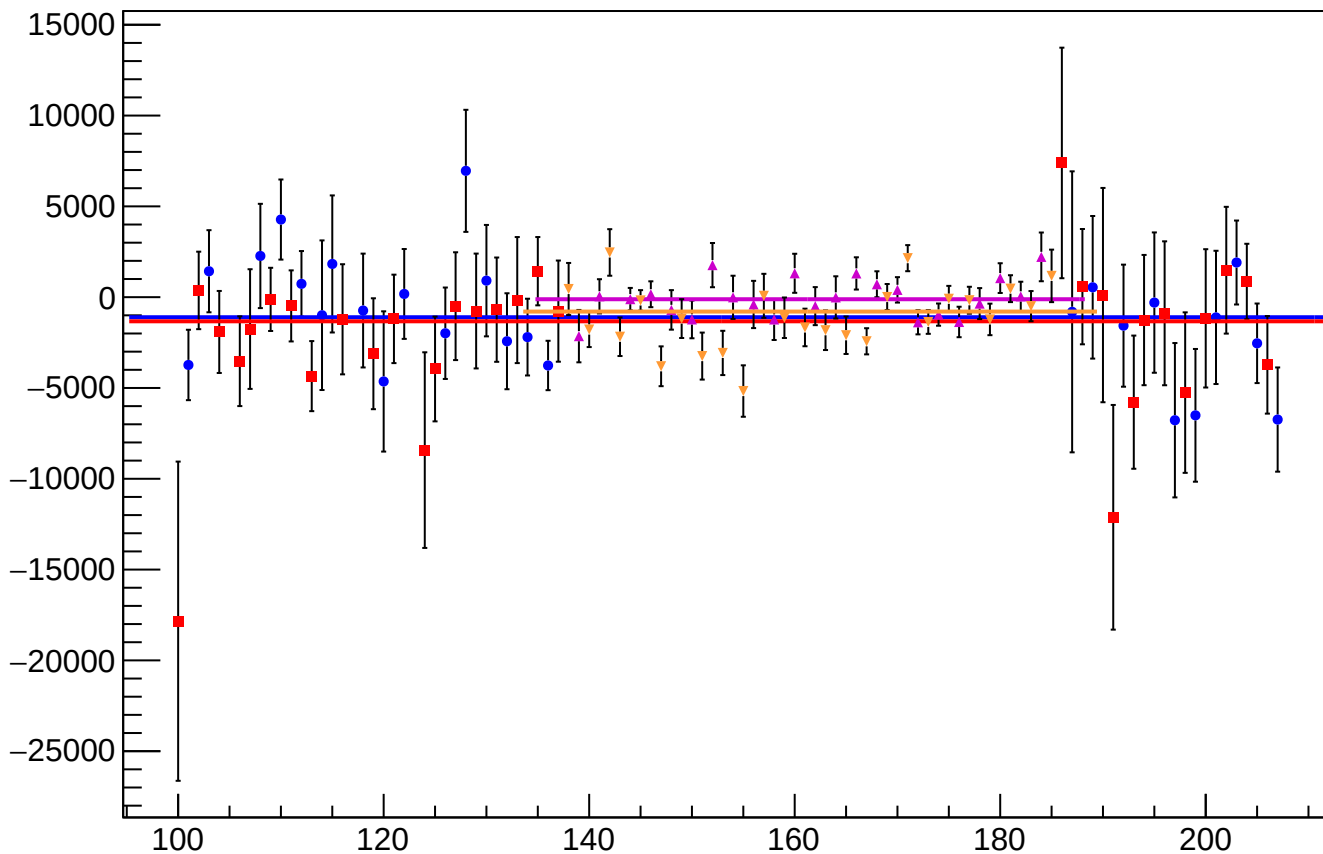
Left In: 104.835+/-0.018  $\chi^2/\text{NDF}$ : 1614476.5/22

+ sign 117.894+/-0.016  $\chi^2/\text{NDF}$ : 10760786.6/50

All: 118.757+/-0.011  $\chi^2/\text{NDF}$ : 22924842.9/10

- sign 119.663+/-0.016  $\chi^2/\text{NDF}$ : 12157979.2/53

# asym\_sam3\_dit\_correction\_mean vs Slug



Right In:  $-1104.665 \pm 514.642$   $\chi^2/\text{NDF}$ : 34.0/25

Left Out:  $-793.070 \pm 179.897$   $\chi^2/\text{NDF}$ : 70.0/24

Right Out:  $-1328.929 \pm 507.587$   $\chi^2/\text{NDF}$ : 23.7/30

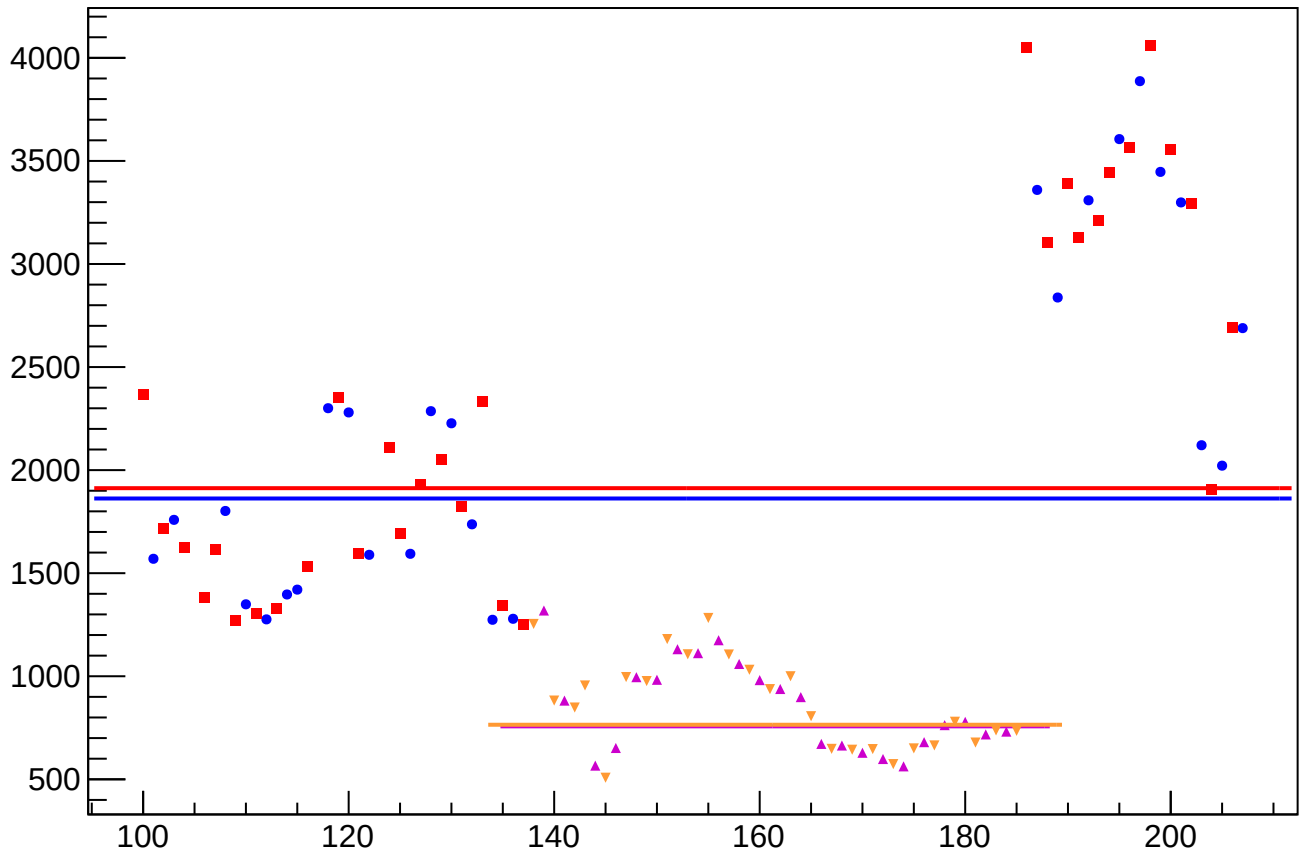
Left In:  $-113.680 \pm 183.126$   $\chi^2/\text{NDF}$ : 26.3/22

+ sign  $-826.998 \pm 169.820$   $\chi^2/\text{NDF}$ : 104.4/50

All:  $-544.404 \pm 120.934$   $\chi^2/\text{NDF}$ : 165.1/104

- sign  $-253.639 \pm 172.258$   $\chi^2/\text{NDF}$ : 55.1/53

# asym\_sam3\_dit\_correction\_rms vs Slug



Right In: 1862.369 $\pm$ 0.364  $\chi^2$ /NDF: 3434217.7/25

Left Out: 764.734 $\pm$ 0.127  $\chi^2$ /NDF: 2425556.5/24

Right Out: 1912.413 $\pm$ 0.359  $\chi^2$ /NDF: 4265911.7/30

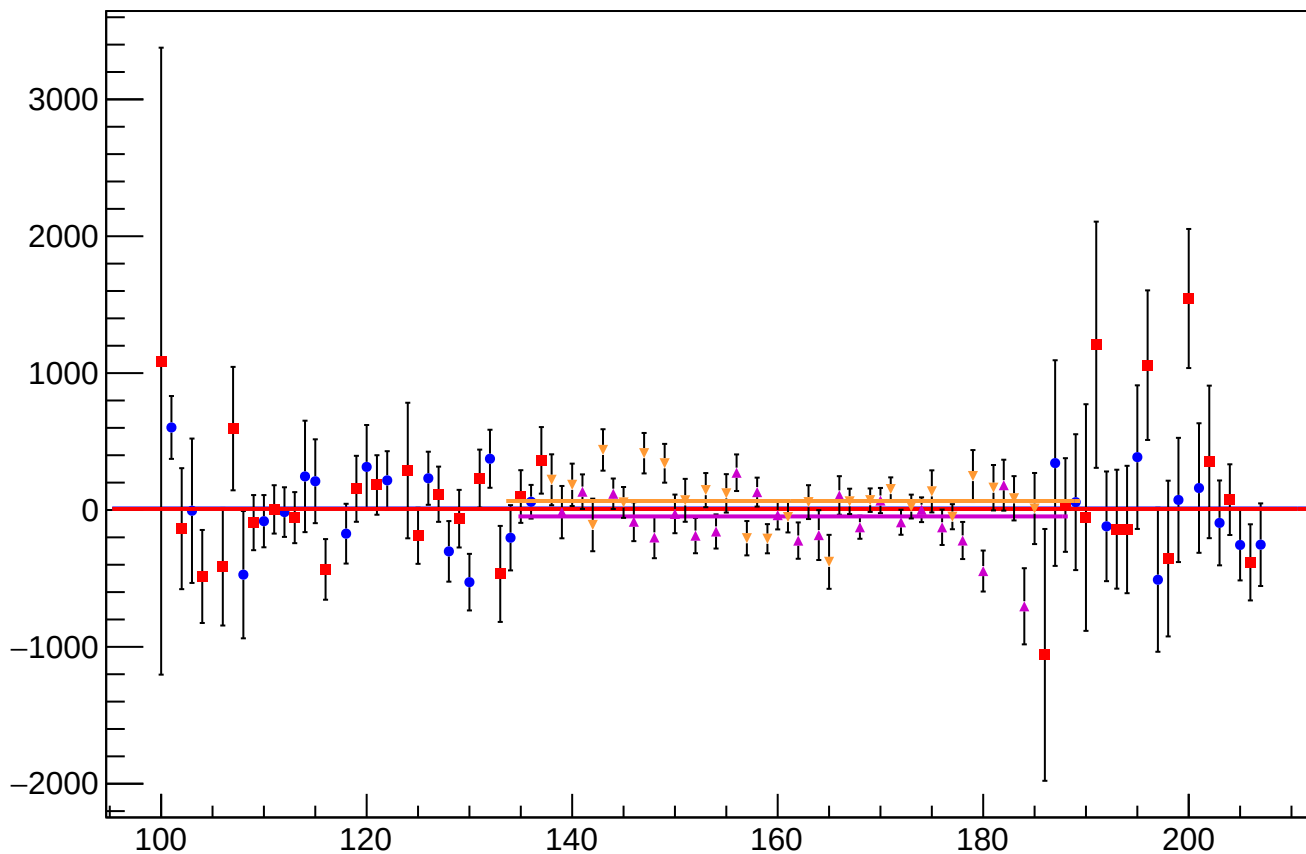
Left In: 756.927 $\pm$ 0.129  $\chi^2$ /NDF: 2115280.1/22

+ sign 884.250 $\pm$ 0.120  $\chi^2$ /NDF: 13966927.2/50

All: 887.086 $\pm$ 0.086  $\chi^2$ /NDF: 29519855.7/10

- sign 890.003 $\pm$ 0.122  $\chi^2$ /NDF: 15551797.2/53

# eigen\_dit\_asym\_sam3\_mean vs Slug



Right In:  $10.726 \pm 50.214$   $\chi^2/\text{NDF}$ : 29.2/25

Left Out:  $65.703 \pm 25.059$   $\chi^2/\text{NDF}$ : 40.0/24

Right Out:  $7.542 \pm 51.189$   $\chi^2/\text{NDF}$ : 36.4/30

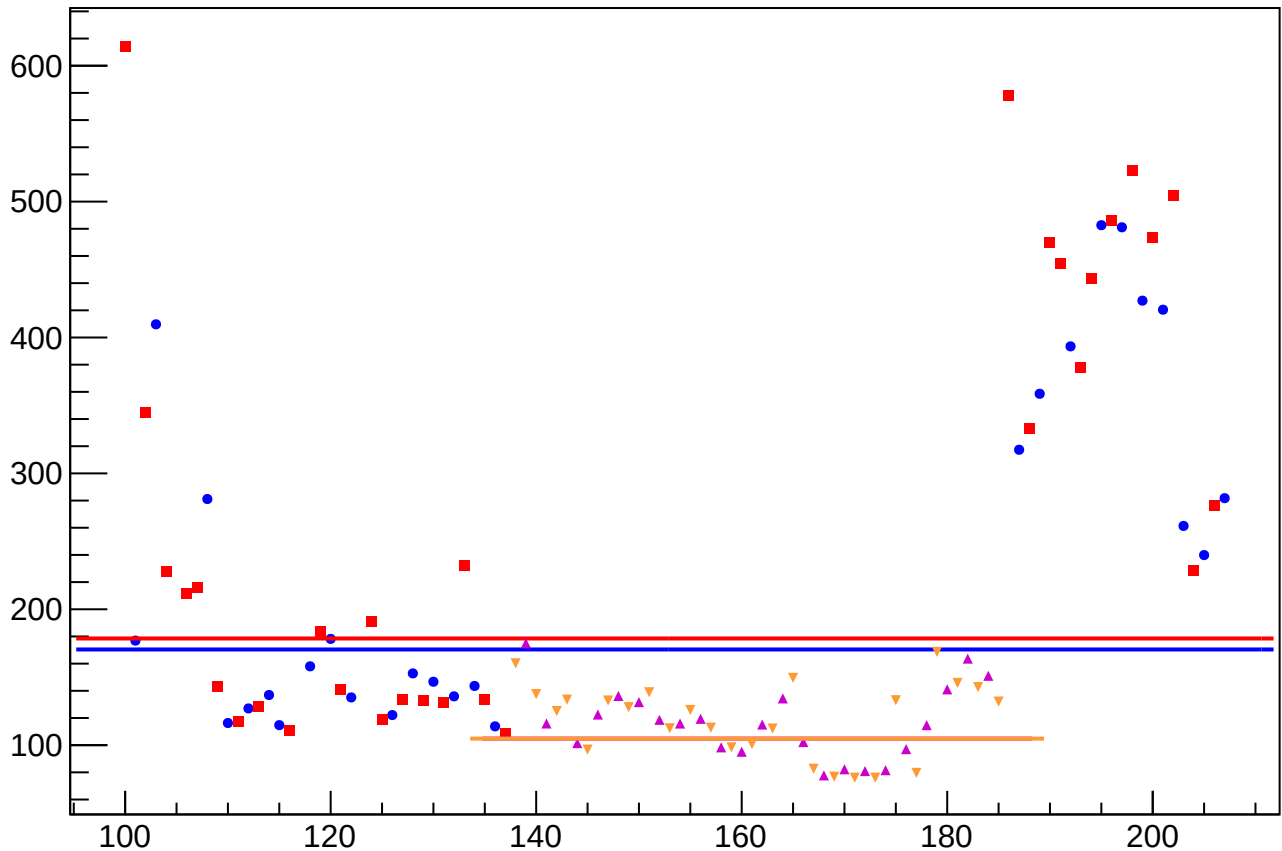
Left In:  $-47.038 \pm 25.696$   $\chi^2/\text{NDF}$ : 38.6/22

+ sign  $54.741 \pm 22.422$   $\chi^2/\text{NDF}$ : 70.2/50

All:  $10.430 \pm 16.043$   $\chi^2/\text{NDF}$ : 154.1/104

- sign  $-36.052 \pm 22.965$   $\chi^2/\text{NDF}$ : 75.9/53

# eigen\_dit\_asym\_sam3\_rms vs Slug



Right In: 170.427+/-0.036  $\chi^2/\text{NDF}$ : 5783787.0/25

Left Out: 104.810+/-0.018  $\chi^2/\text{NDF}$ : 2242815.0/24

Right Out: 178.508+/-0.036  $\chi^2/\text{NDF}$ : 7234537.3/30

Left In: 104.835+/-0.018  $\chi^2/\text{NDF}$ : 1614484.2/22

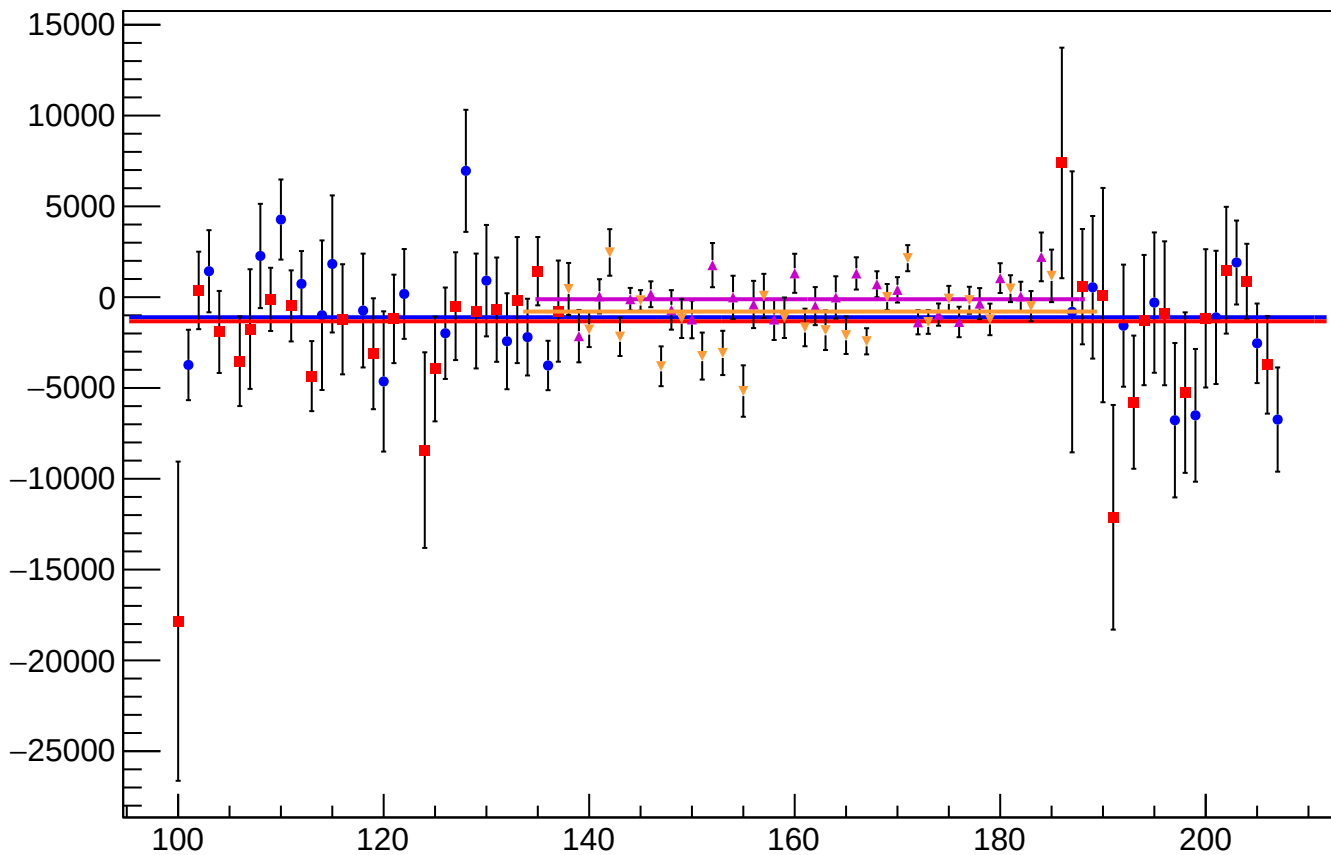
+ sign 117.894+/-0.016  $\chi^2/\text{NDF}$ : 10760788.6/50

All: 118.757+/-0.011  $\chi^2/\text{NDF}$ : 22924846.9/10

- sign 119.663+/-0.016  $\chi^2/\text{NDF}$ : 12157981.3/53



# asym\_sam3\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-1104.662 \pm 514.642$   $\chi^2/\text{NDF}$ : 34.0/25

Left Out:  $-793.071 \pm 179.896$   $\chi^2/\text{NDF}$ : 70.0/24

Right Out:  $-1328.929 \pm 507.587$   $\chi^2/\text{NDF}$ : 23.7/30

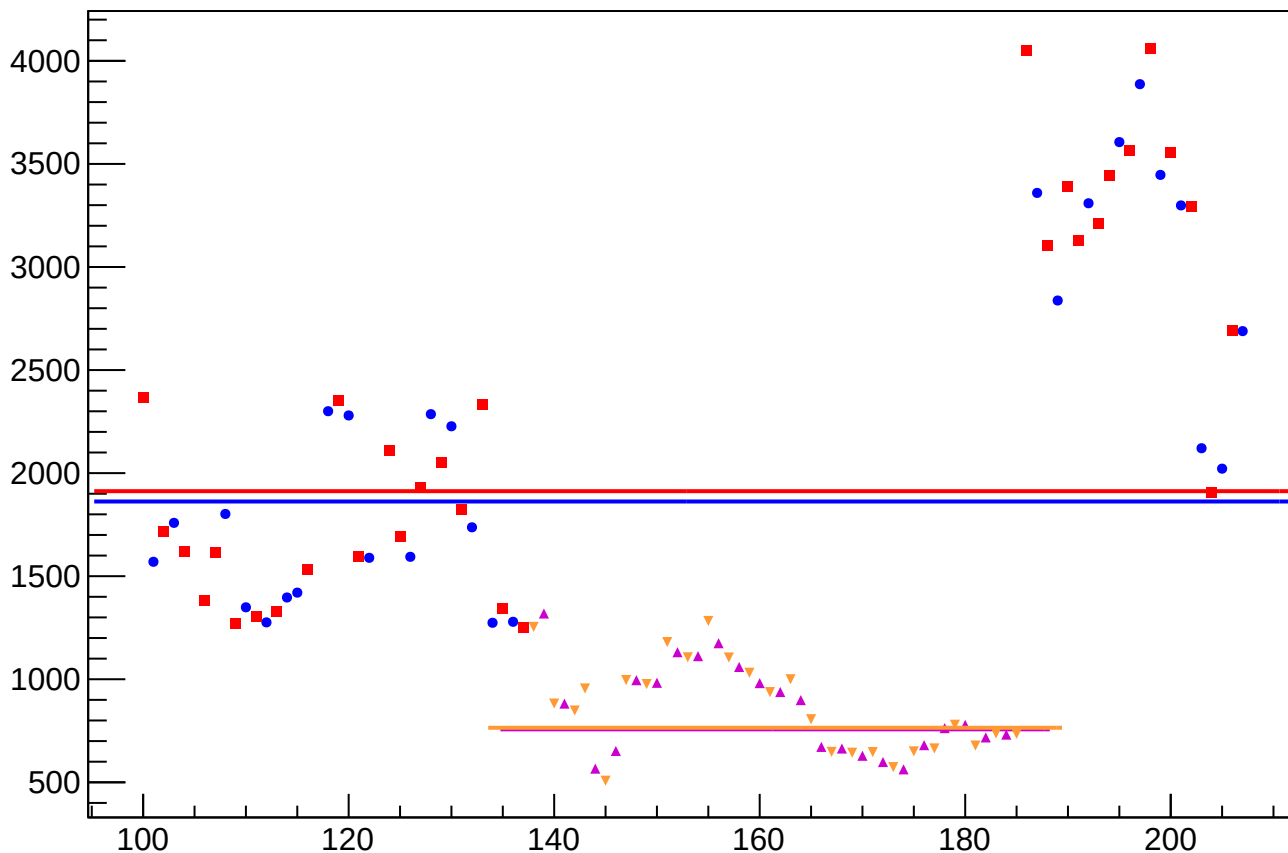
Left In:  $-113.680 \pm 183.125$   $\chi^2/\text{NDF}$ : 26.3/22

+ sign  $-826.999 \pm 169.820$   $\chi^2/\text{NDF}$ : 104.4/50

All:  $-544.404 \pm 120.934$   $\chi^2/\text{NDF}$ : 165.1/104

- sign  $-253.639 \pm 172.258$   $\chi^2/\text{NDF}$ : 55.1/53

# asym\_sam3\_eigen\_dit\_correction\_rms vs Slug



Right In: 1862.367 $\pm$ 0.364  $\chi^2$ /NDF: 3434217.0/25

Left Out: 764.734 $\pm$ 0.127  $\chi^2$ /NDF:2425549.9/24

+ sign 884.250 $\pm$ 0.120  $\chi^2$ /NDF: 13966918.6/50

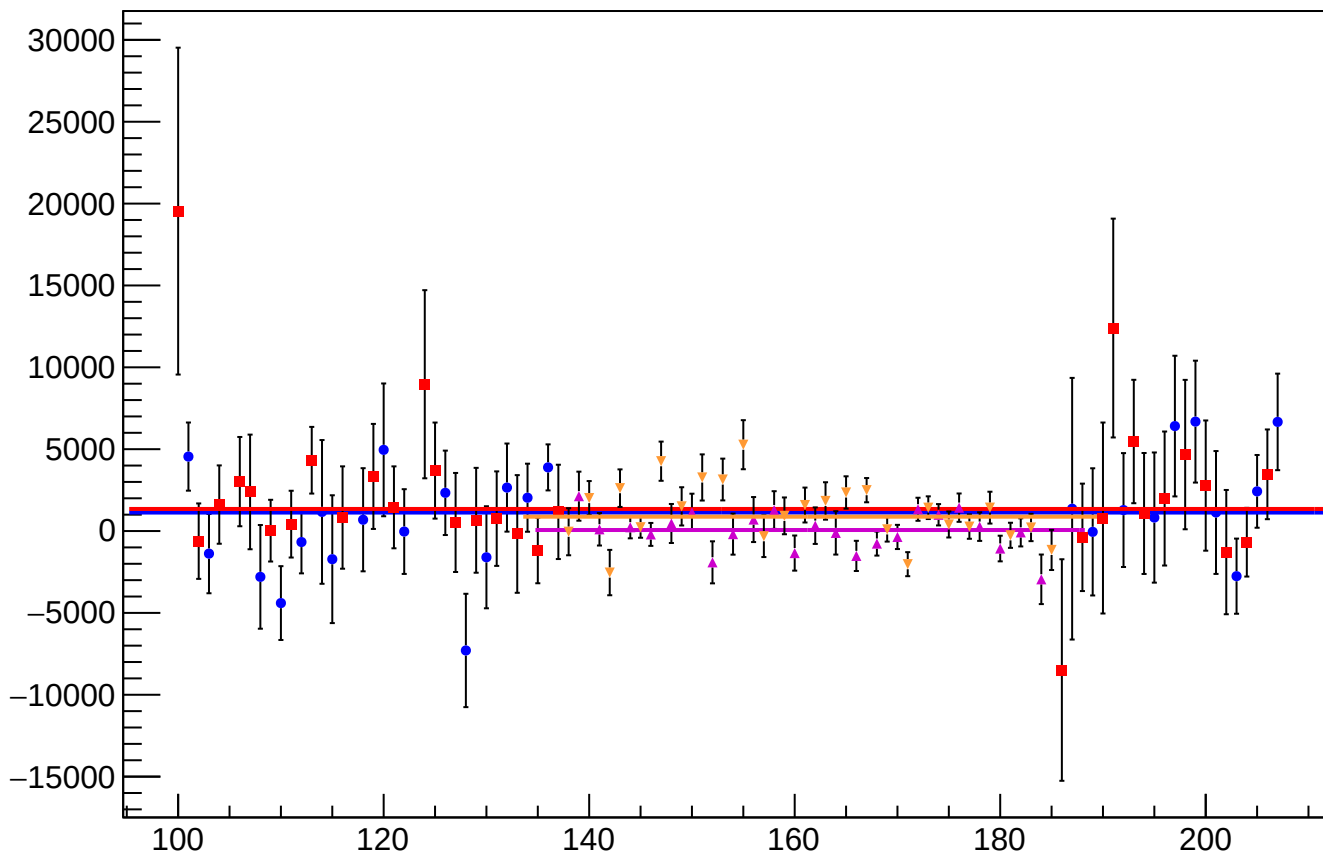
Right Out: 1912.410 $\pm$ 0.359  $\chi^2$ /NDF: 4265911.3/30

All: 887.085 $\pm$ 0.086  $\chi^2$ /NDF: 29519835.7/10

Left In: 756.926 $\pm$ 0.129  $\chi^2$ /NDF:2115275.0/22

- sign 890.002 $\pm$ 0.122  $\chi^2$ /NDF: 15551785.8/53

# asym\_sam3\_mean vs Slug



Right In: 1129.372 $\pm$ 531.165  $\chi^2$ /NDF: 35.7/25

Left Out: 876.482 $\pm$ 188.998  $\chi^2$ /NDF: 67.3/24

Right Out: 1348.751 $\pm$ 531.306  $\chi^2$ /NDF: 21.2/30

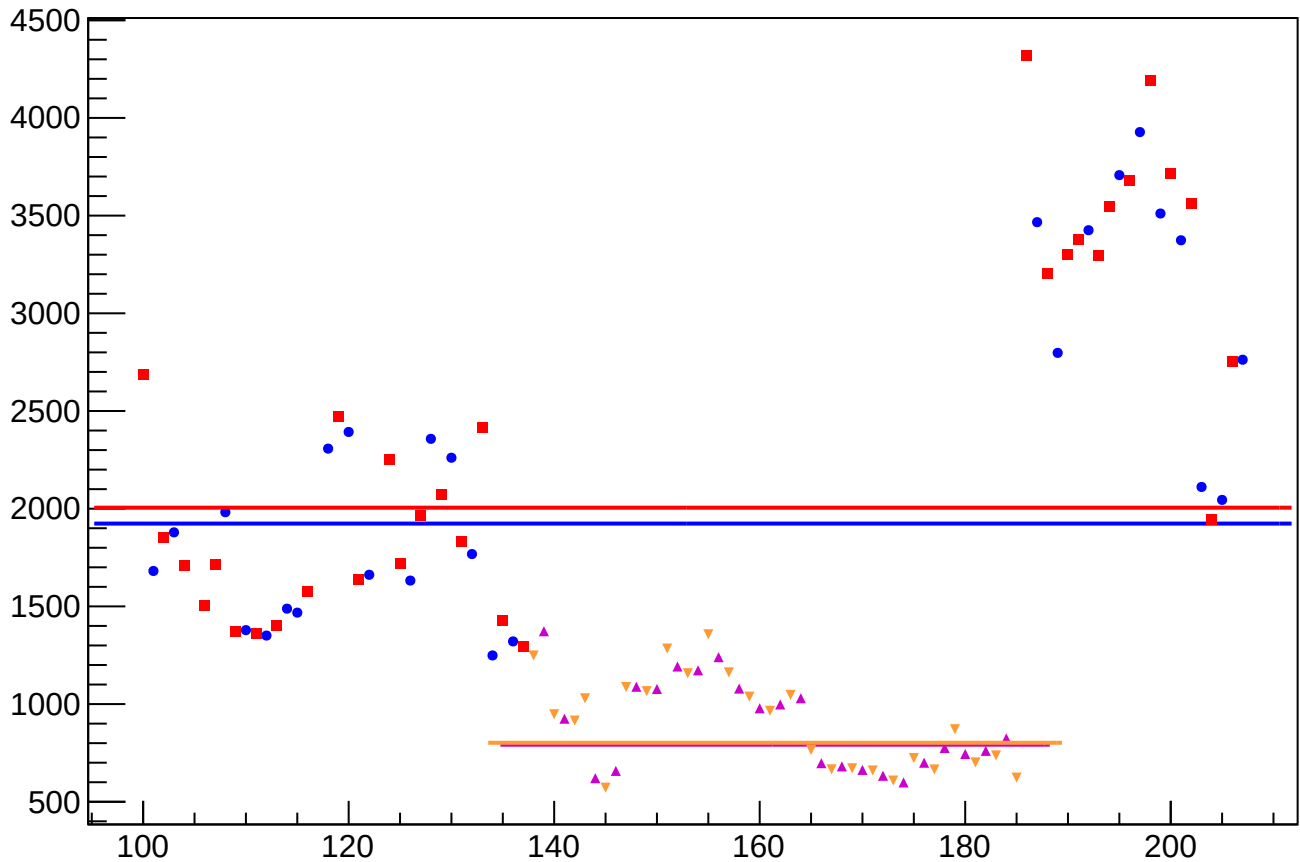
Left In: 62.754 $\pm$ 191.596  $\chi^2$ /NDF: 27.1/22

+ sign 904.902 $\pm$ 178.062  $\chi^2$ /NDF: 103.2/50

All: 562.032 $\pm$ 126.670  $\chi^2$ /NDF: 164.1/104

- sign 210.743 $\pm$ 180.235  $\chi^2$ /NDF: 53.5/53

# asym\_sam3\_rms vs Slug



Right In: 1923.781 $\pm$ 0.376  $\chi^2$ /NDF: 3343944.9/25

Left Out: 802.014 $\pm$ 0.134  $\chi^2$ /NDF: 2396024.4/24

Right Out: 2005.217 $\pm$ 0.376  $\chi^2$ /NDF: 4118469.0/30

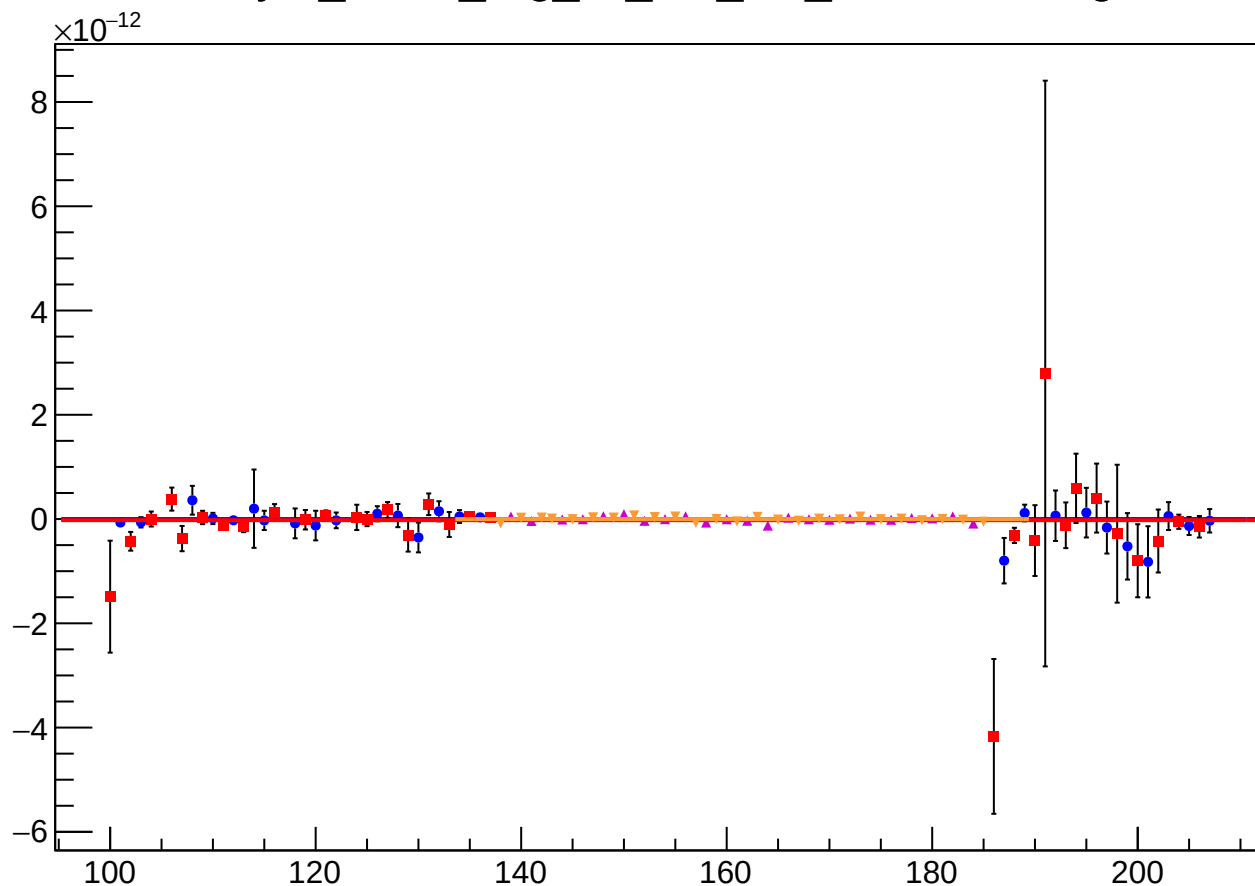
Left In: 792.060 $\pm$ 0.135  $\chi^2$ /NDF: 2135575.6/22

+ sign 928.077 $\pm$ 0.126  $\chi^2$ /NDF: 13657754.6/50

All: 929.850 $\pm$ 0.090  $\chi^2$ /NDF: 29139596.7/10

- sign 931.667 $\pm$ 0.127  $\chi^2$ /NDF: 15481440.5/53

# asym\_sam3\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 13.7/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 24.0/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 39.7/30

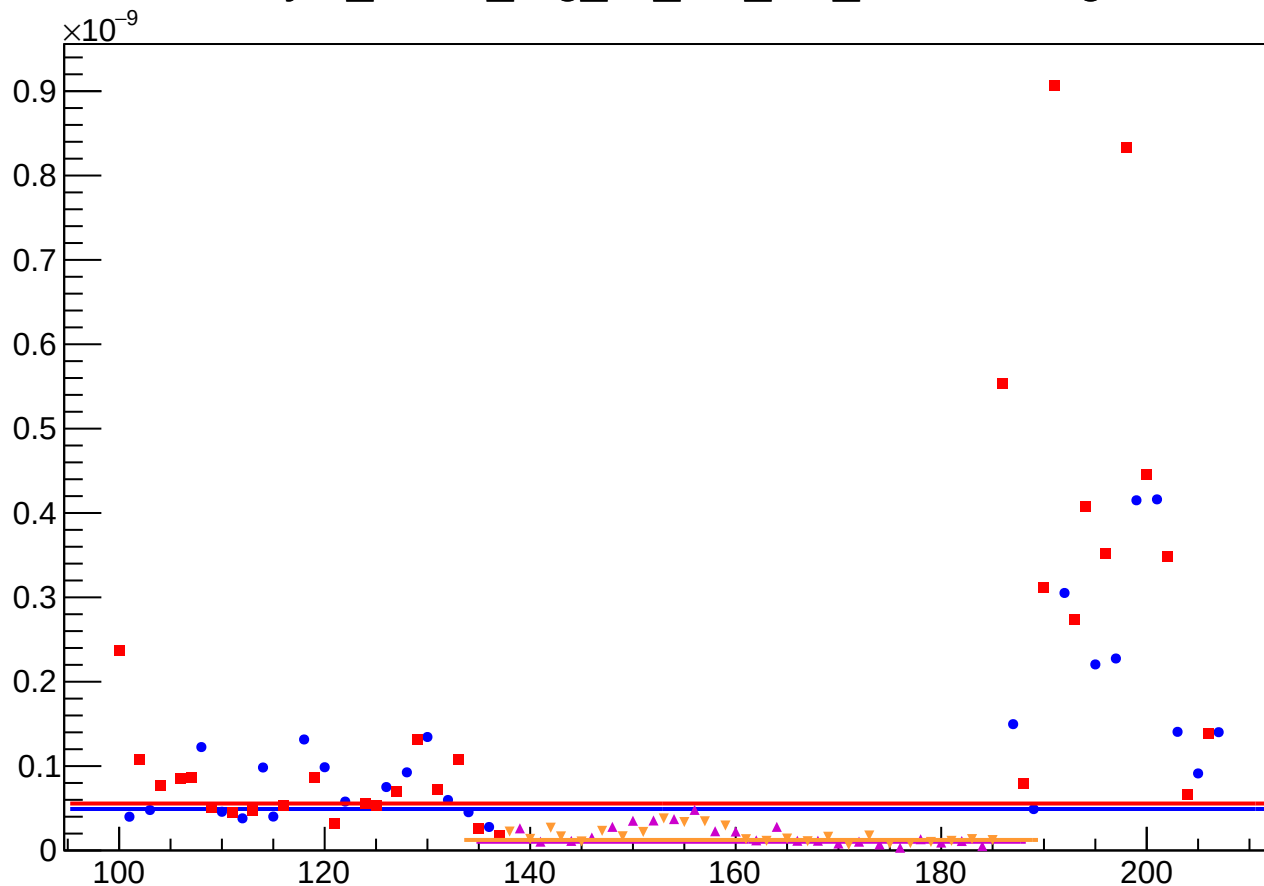
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 31.5/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 37.7/50

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 109.8/104

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 71.5/53

# asym\_sam3\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 +/- 0.000  $\chi^2/\text{NDF}$ : 4374816.8/25

Left Out: 0.000 +/- 0.000  $\chi^2/\text{NDF}$ : 2214354.7/24

Right Out: 0.000 +/- 0.000  $\chi^2/\text{NDF}$ : 5749181.8/30

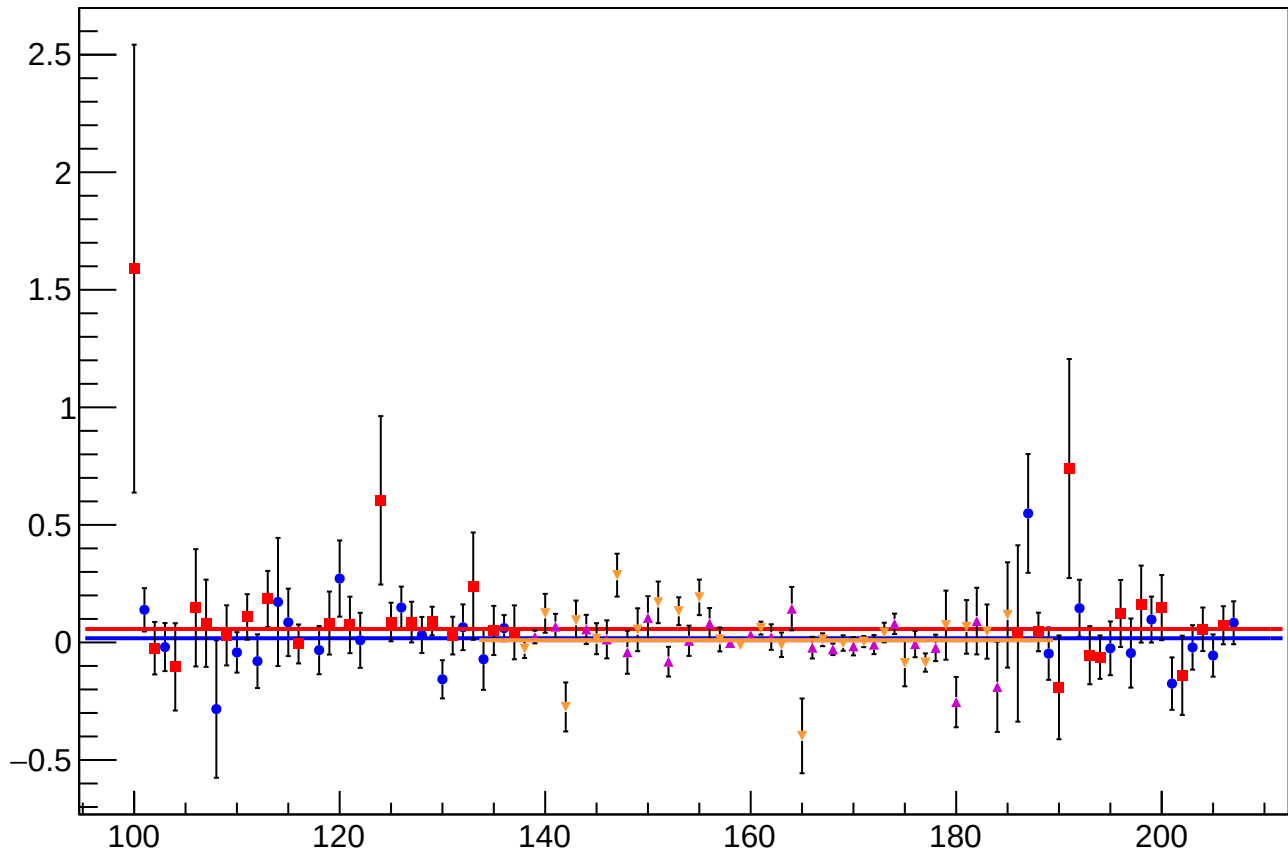
Left In: 0.000 +/- 0.000  $\chi^2/\text{NDF}$ : 3679061.1/22

+ sign 0.000 +/- 0.000  $\chi^2/\text{NDF}$ : 10391324.8/50

All: 0.000 +/- 0.000  $\chi^2/\text{NDF}$ : 24938229.3/104

- sign 0.000 +/- 0.000  $\chi^2/\text{NDF}$ : 14336270.5/53

# asym\_sam3\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.018 \pm 0.020$   $\chi^2/\text{NDF}$ : 26.7/25

Left Out:  $0.010 \pm 0.008$   $\chi^2/\text{NDF}$ : 54.6/24

Right Out:  $0.057 \pm 0.021$   $\chi^2/\text{NDF}$ : 18.2/30

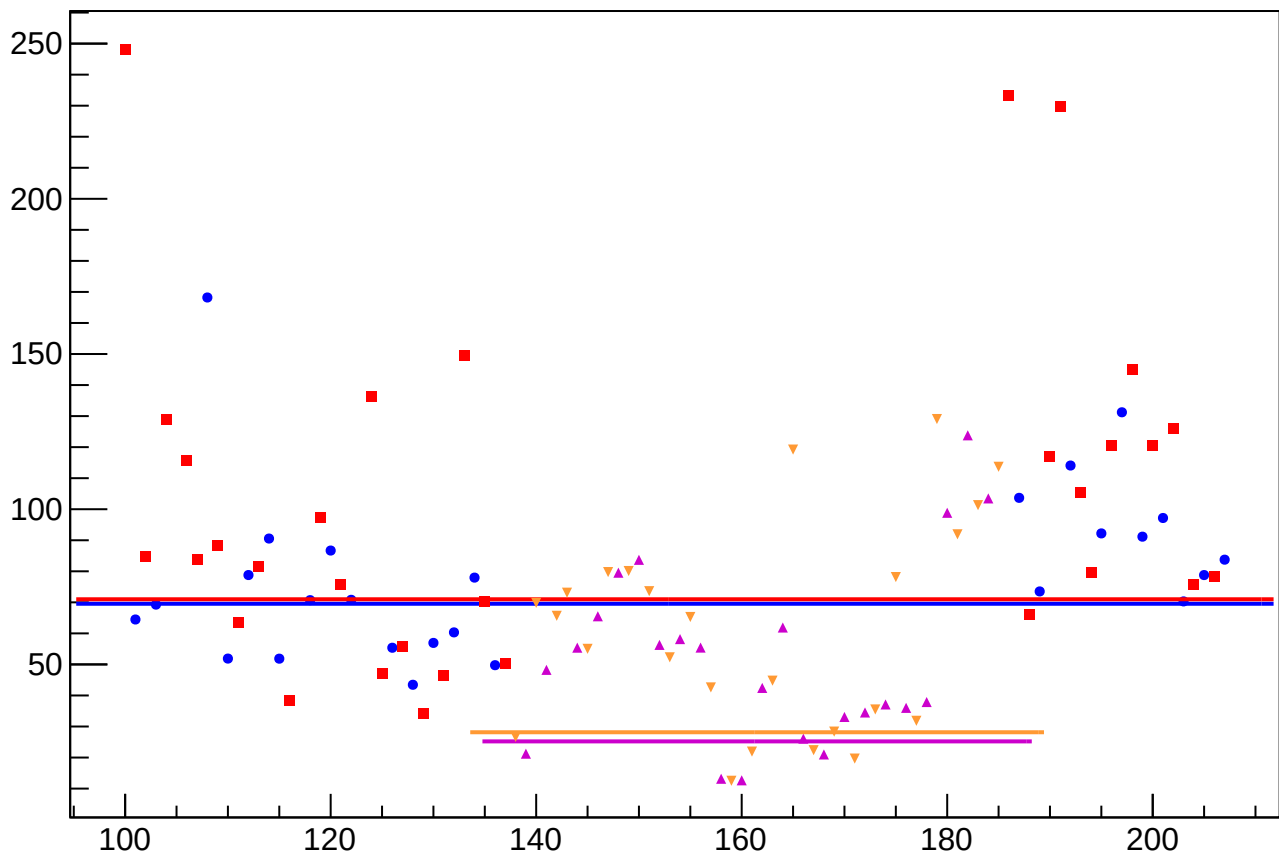
Left In:  $0.009 \pm 0.008$   $\chi^2/\text{NDF}$ : 25.2/22

+ sign  $0.011 \pm 0.008$   $\chi^2/\text{NDF}$ : 81.5/50

All:  $0.013 \pm 0.005$   $\chi^2/\text{NDF}$ : 129.8/104

- sign  $0.016 \pm 0.007$   $\chi^2/\text{NDF}$ : 48.1/53

# asym\_sam3\_dit\_vs\_cor\_diff\_rms vs Slug



Right In:  $69.546 \pm 0.014$   $\chi^2/\text{NDF}: 2037143.0/25$

Left Out:  $28.151 \pm 0.006$   $\chi^2/\text{NDF}: 11070747.0/24$

Right Out:  $70.990 \pm 0.015$   $\chi^2/\text{NDF}: 4350214.7/30$

Left In:  $25.206 \pm 0.006$   $\chi^2/\text{NDF}: 9964049.2/22$

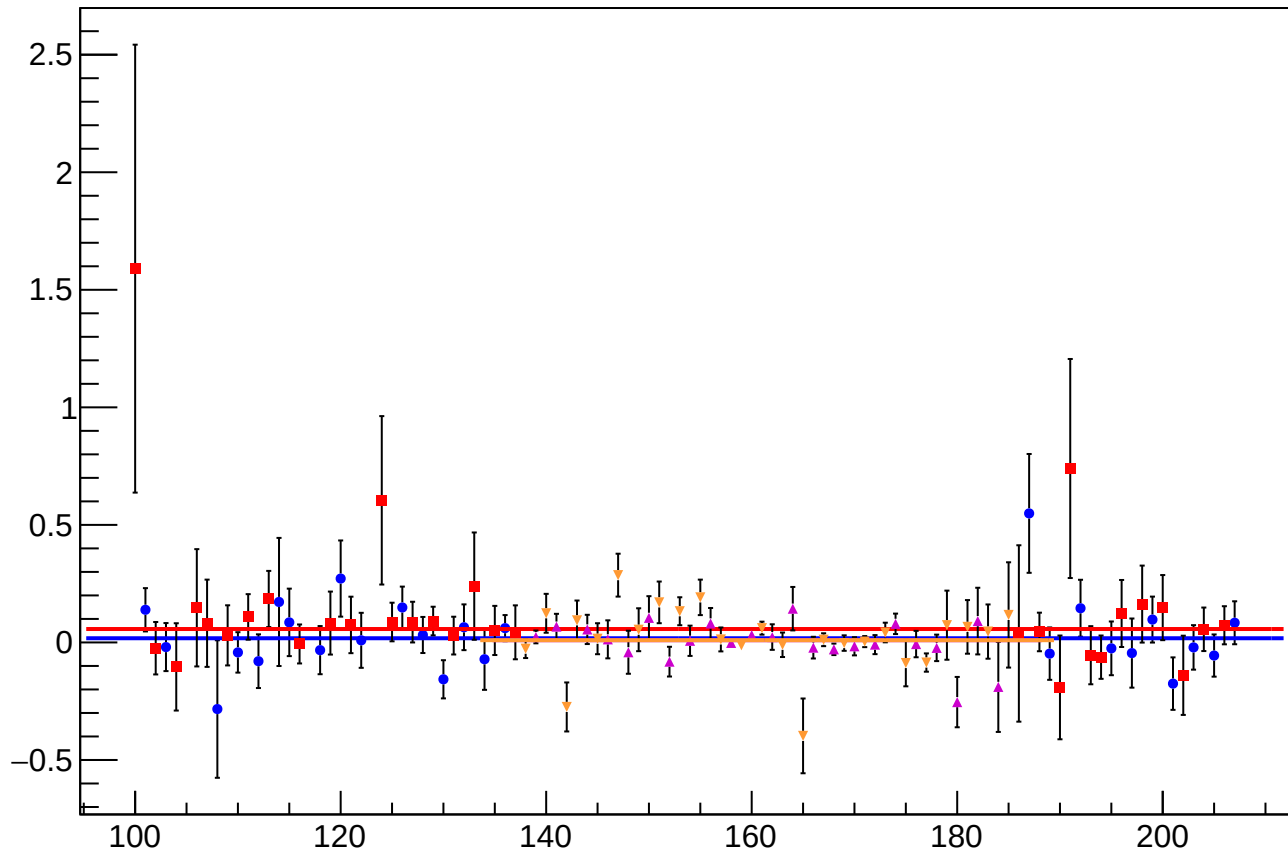
+ sign  $34.368 \pm 0.006$   $\chi^2/\text{NDF}: 20303164.1/50$

All:  $32.669 \pm 0.004$   $\chi^2/\text{NDF}: 43453281.3/104$

- sign  $31.141 \pm 0.005$   $\chi^2/\text{NDF}: 22969672.6/53$



# asym\_sam3\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.018 \pm 0.020$   $\chi^2/\text{NDF}$ : 26.7/25

Left Out:  $0.010 \pm 0.008$   $\chi^2/\text{NDF}$ : 54.6/24

Right Out:  $0.057 \pm 0.021$   $\chi^2/\text{NDF}$ : 18.2/30

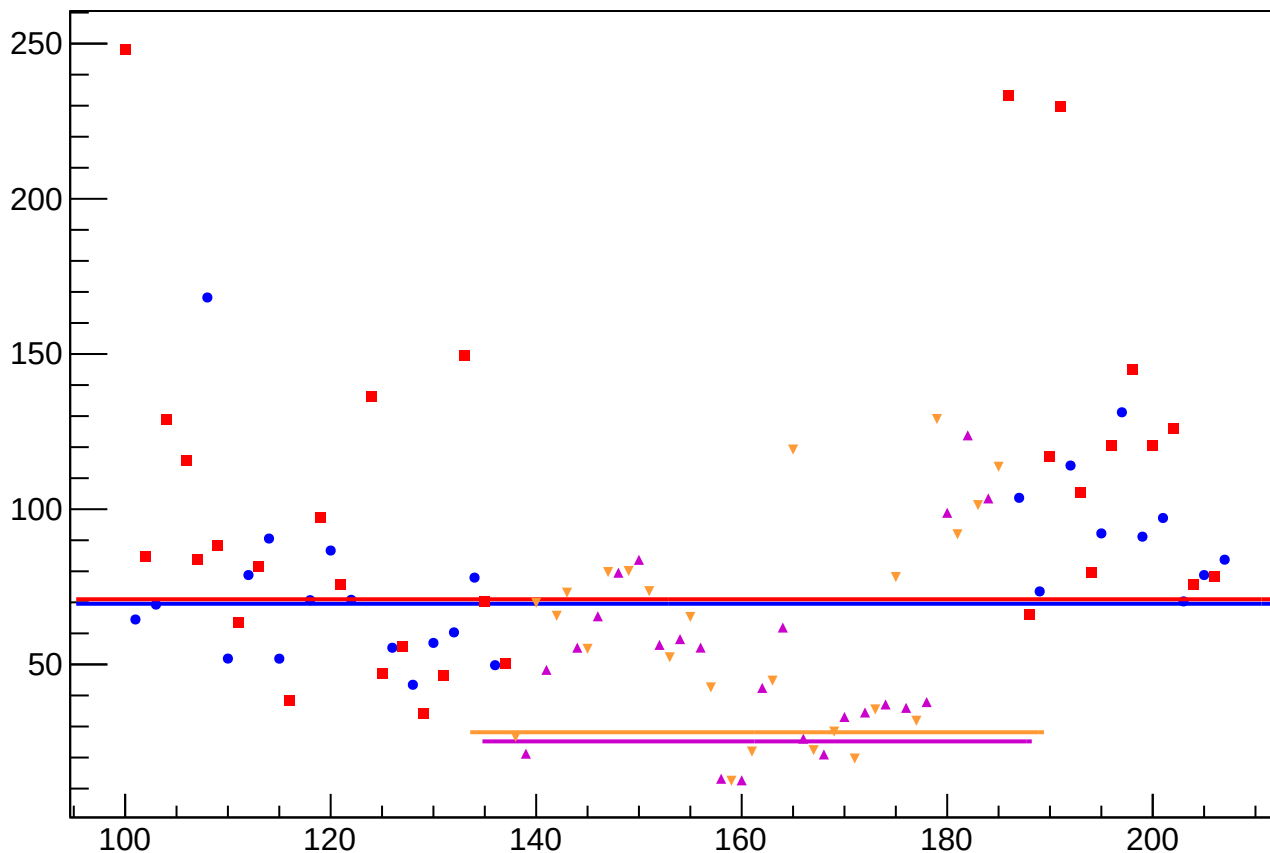
Left In:  $0.009 \pm 0.008$   $\chi^2/\text{NDF}$ : 25.2/22

+ sign  $0.011 \pm 0.008$   $\chi^2/\text{NDF}$ : 81.5/50

All:  $0.013 \pm 0.005$   $\chi^2/\text{NDF}$ : 129.8/104

- sign  $0.016 \pm 0.007$   $\chi^2/\text{NDF}$ : 48.1/53

# asym\_sam3\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In:  $69.546 \pm 0.014$   $\chi^2/\text{NDF}: 2037143.0/25$

Left Out:  $28.151 \pm 0.006$   $\chi^2/\text{NDF}: 11070747.0/24$

Right Out:  $70.990 \pm 0.015$   $\chi^2/\text{NDF}: 4350214.7/30$

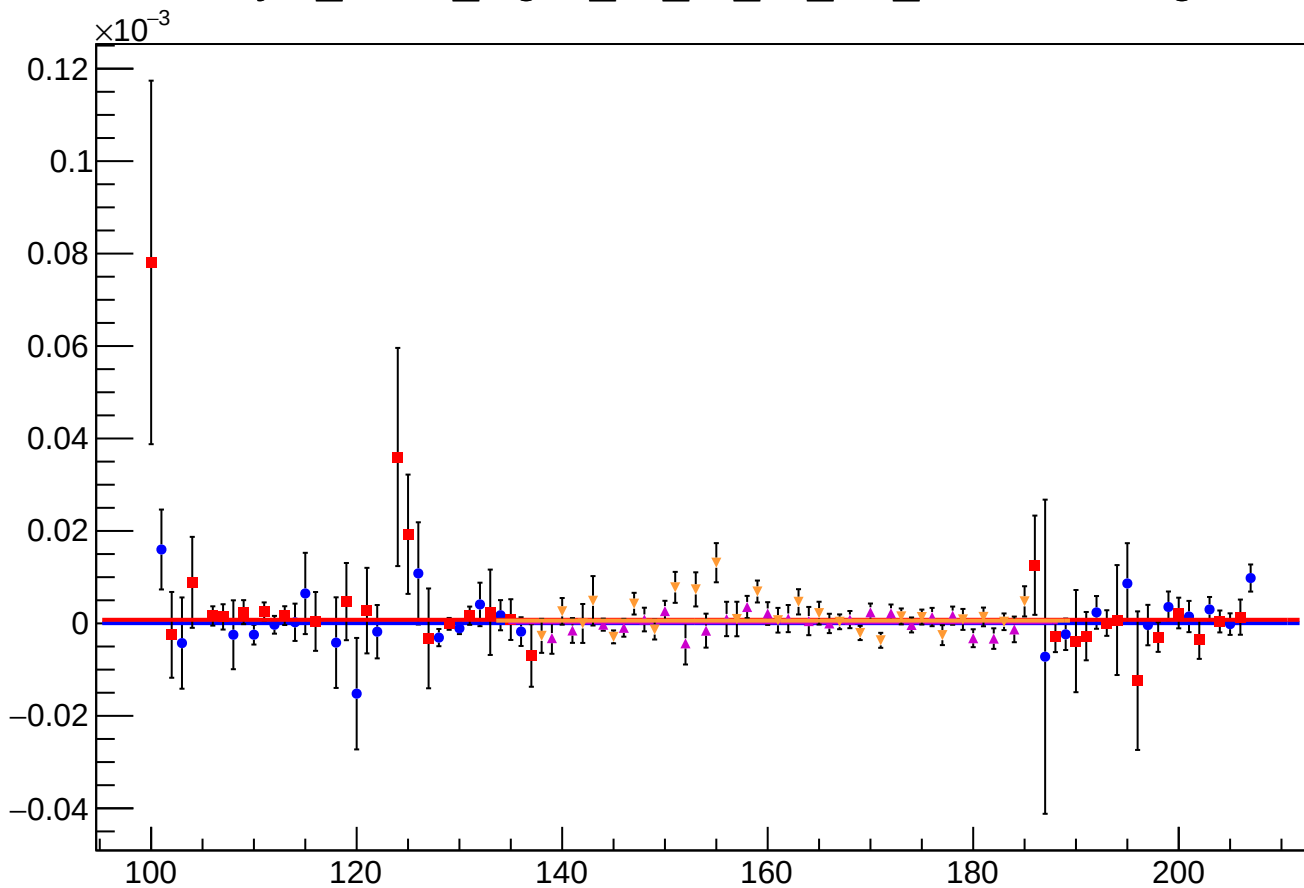
Left In:  $25.206 \pm 0.006$   $\chi^2/\text{NDF}: 9964049.2/22$

+ sign  $34.368 \pm 0.006$   $\chi^2/\text{NDF}: 20303164.1/50$

All:  $32.669 \pm 0.004$   $\chi^2/\text{NDF}: 43453281.3/104$

- sign  $31.141 \pm 0.005$   $\chi^2/\text{NDF}: 22969672.6/53$

# asym\_sam3\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 29.0/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:52.3/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 19.5/30

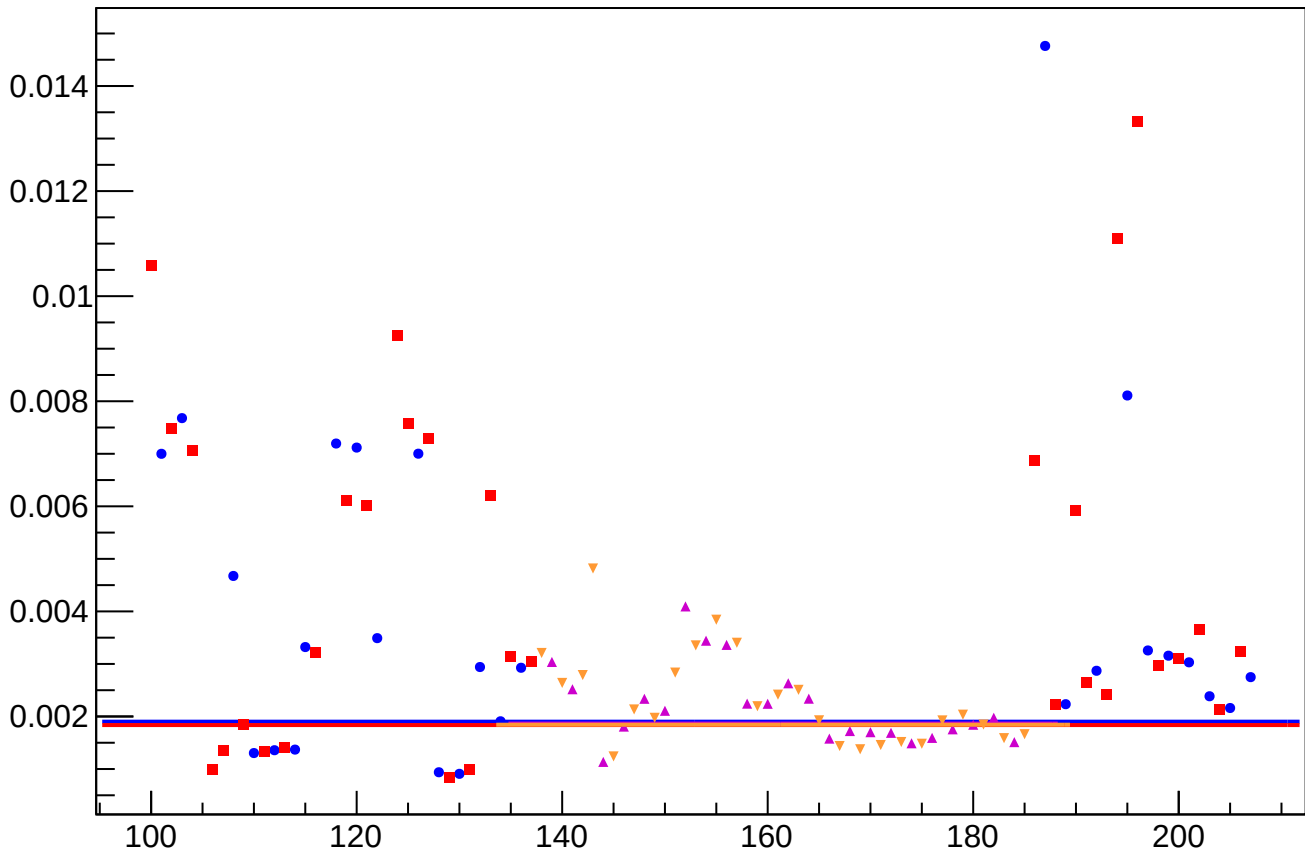
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:16.5/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 81.8/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 118.3/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 36.5/53

# asym\_sam3\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 8130515.4/25

Left Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 3783185.4/24

Right Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 10906803.4/30

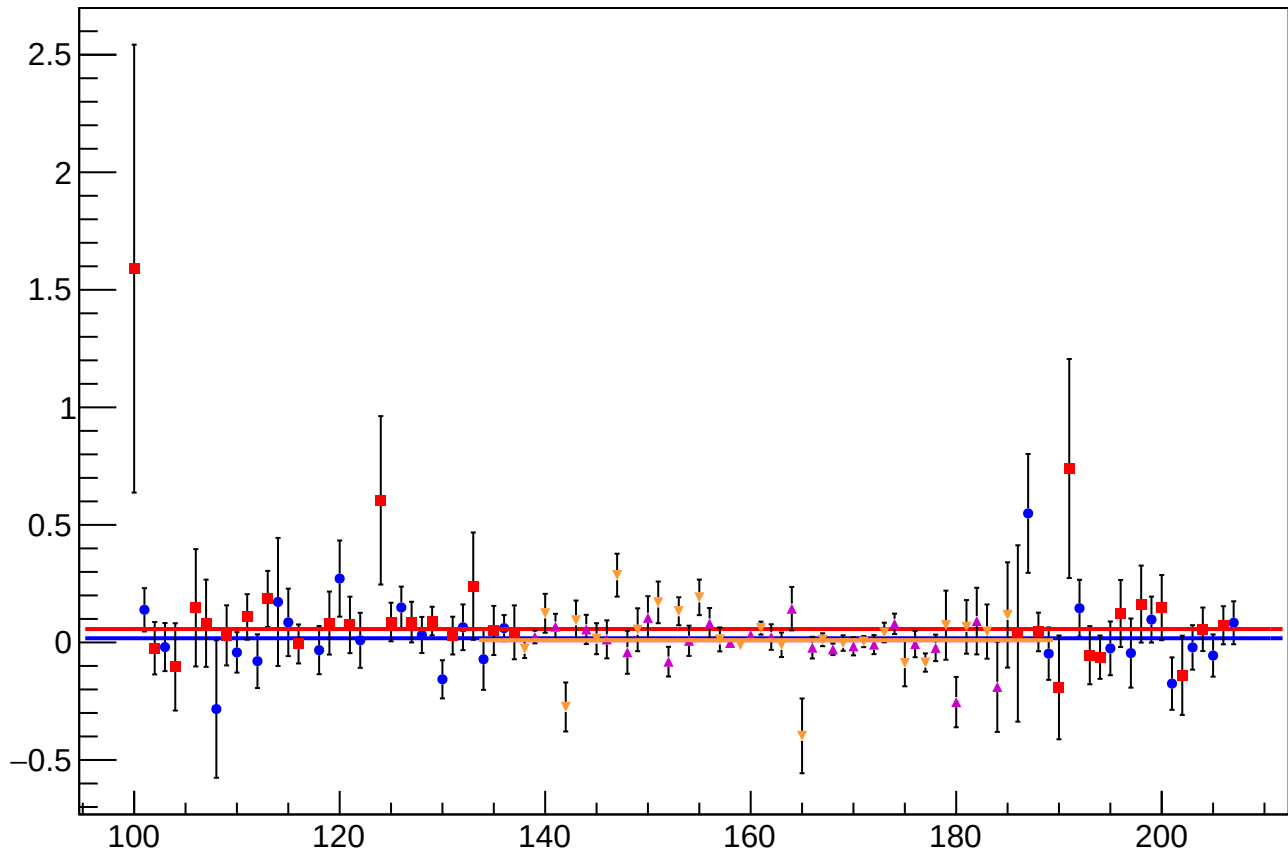
Left In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 2794135.0/22

+ sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 11925442.2/50

All: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 25629867.9/104

- sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 13703816.5/53

# asym\_sam3\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.018 \pm 0.020$   $\chi^2/\text{NDF}$ : 26.7/25

Left Out:  $0.010 \pm 0.008$   $\chi^2/\text{NDF}$ : 54.6/24

Right Out:  $0.057 \pm 0.021$   $\chi^2/\text{NDF}$ : 18.2/30

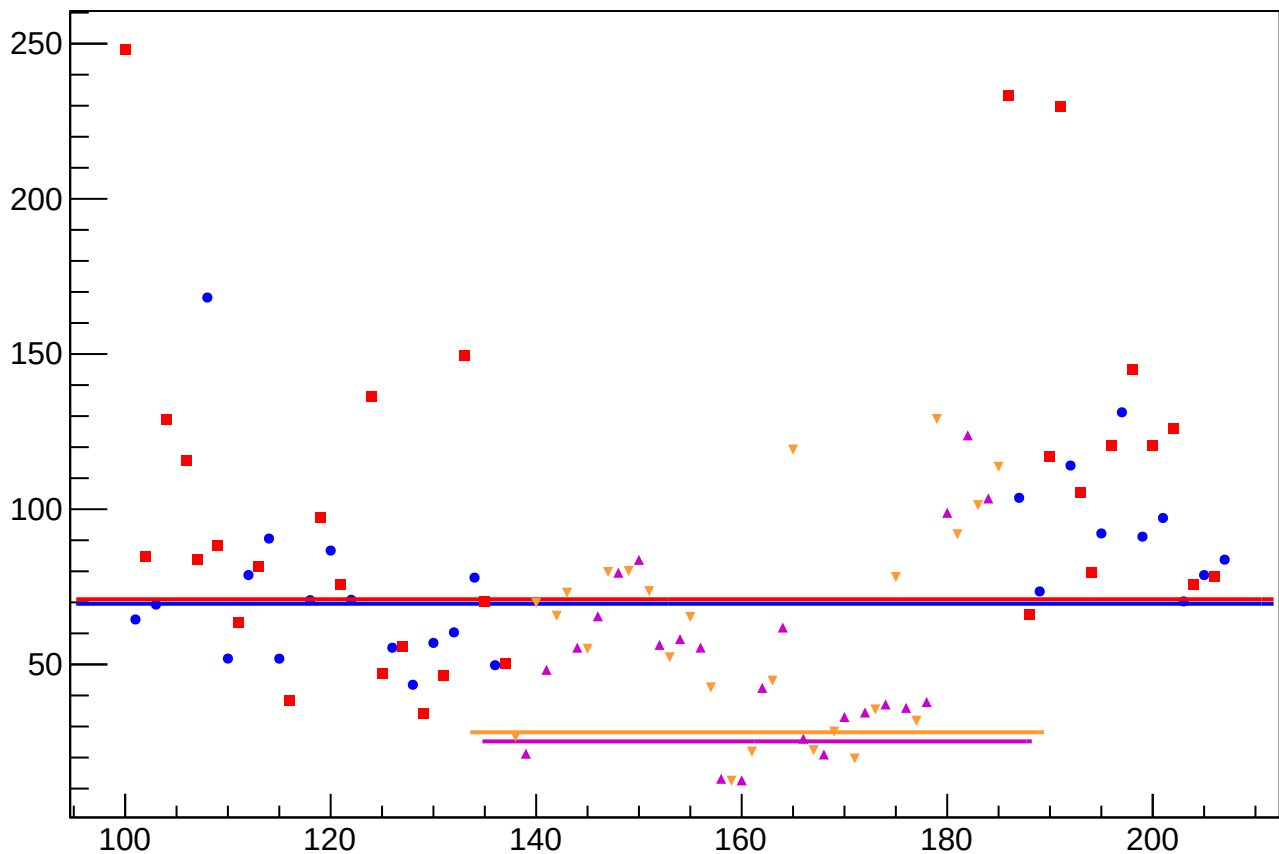
Left In:  $0.009 \pm 0.008$   $\chi^2/\text{NDF}$ : 25.2/22

+ sign  $0.011 \pm 0.008$   $\chi^2/\text{NDF}$ : 81.5/50

All:  $0.013 \pm 0.005$   $\chi^2/\text{NDF}$ : 129.8/104

- sign  $0.016 \pm 0.007$   $\chi^2/\text{NDF}$ : 48.1/53

# asym\_sam3\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In:  $69.547 \pm 0.014$   $\chi^2/\text{NDF}: 2037124.3/25$

Left Out:  $28.150 \pm 0.006$   $\chi^2/\text{NDF}: 11071818.3/24$

Right Out:  $70.992 \pm 0.015$   $\chi^2/\text{NDF}: 4350236.9/30$

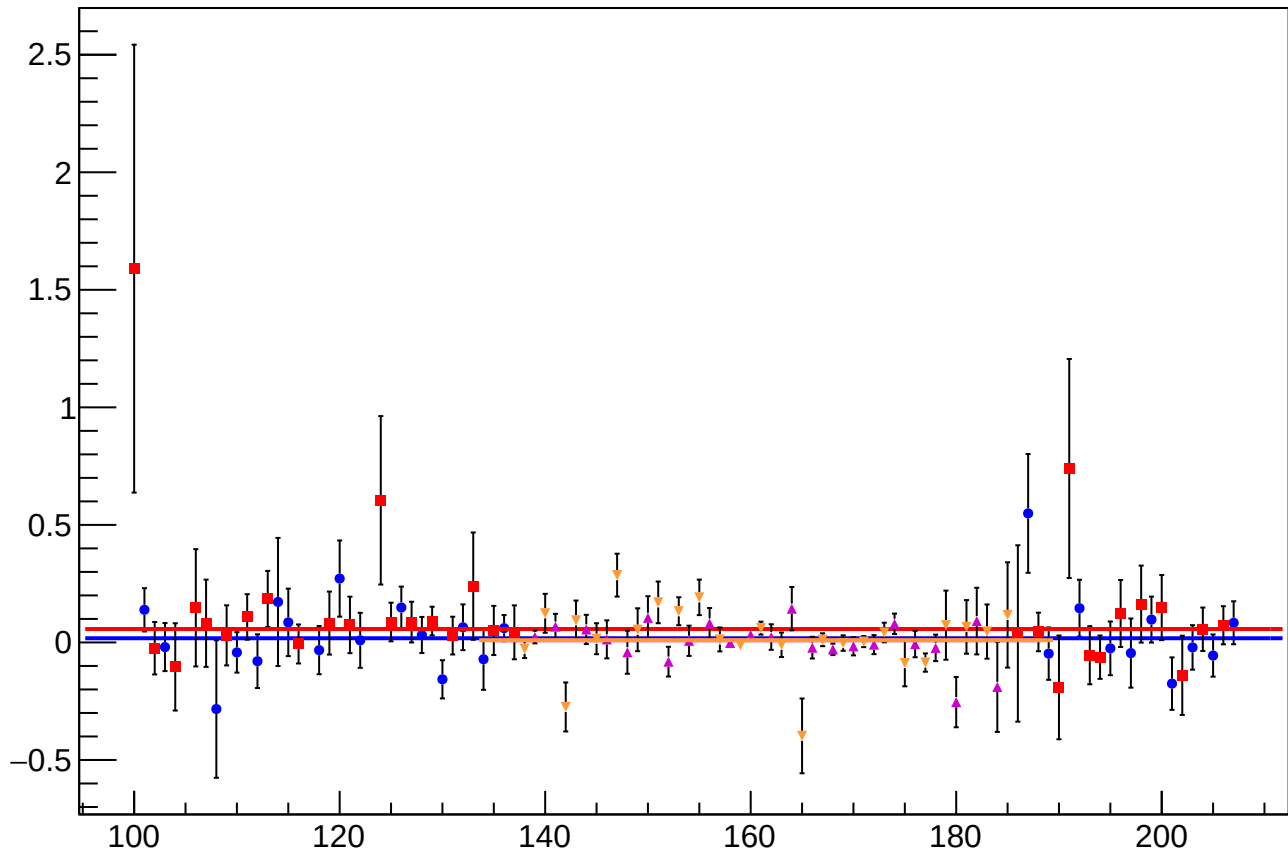
Left In:  $25.205 \pm 0.006$   $\chi^2/\text{NDF}: 9964548.1/22$

+ sign  $34.367 \pm 0.006$   $\chi^2/\text{NDF}: 20304754.3/50$

All:  $32.668 \pm 0.004$   $\chi^2/\text{NDF}: 43455669.1/104$

- sign  $31.140 \pm 0.005$   $\chi^2/\text{NDF}: 22970563.9/53$

asym\_sam3\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.018 $\pm$ 0.020  $\chi^2$ /NDF: 26.7/25

Left Out: 0.010 $\pm$ 0.008  $\chi^2$ /NDF: 54.6/24

Right Out: 0.057 $\pm$ 0.021  $\chi^2$ /NDF: 18.2/30

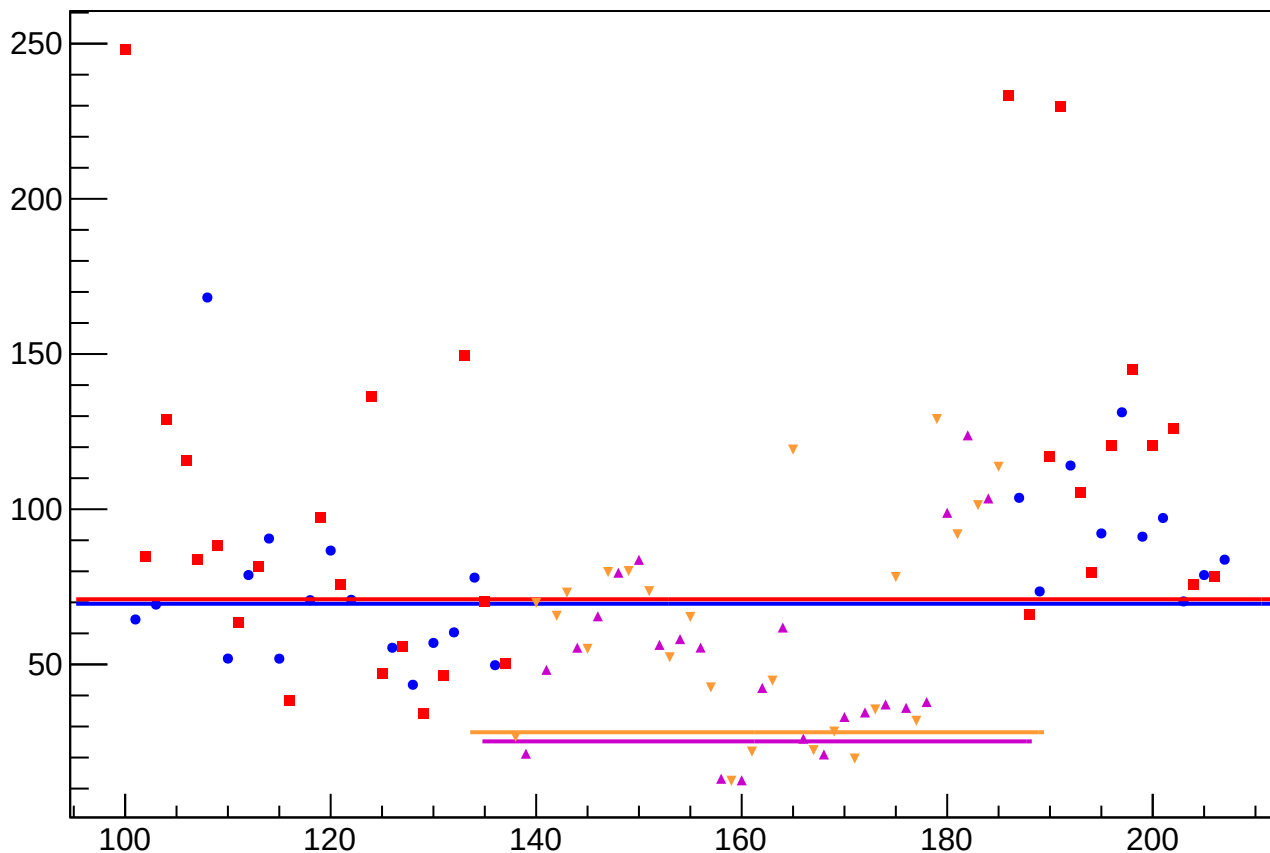
Left In: 0.009 $\pm$ 0.008  $\chi^2$ /NDF: 25.2/22

+ sign 0.011 $\pm$ 0.008  $\chi^2$ /NDF: 81.5/50

All: 0.013 $\pm$ 0.005  $\chi^2$ /NDF: 129.8/104

- sign 0.016 $\pm$ 0.007  $\chi^2$ /NDF: 48.1/53

asym\_sam3\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 69.547+/-0.014  $\chi^2/\text{NDF}$ : 2037124.3/25

Left Out: 28.150+/-0.006  $\chi^2/\text{NDF}$ : 11071818.3/24

Right Out: 70.992+/-0.015  $\chi^2/\text{NDF}$ : 4350236.9/30

Left In: 25.205+/-0.006  $\chi^2/\text{NDF}$ : 9964548.1/22

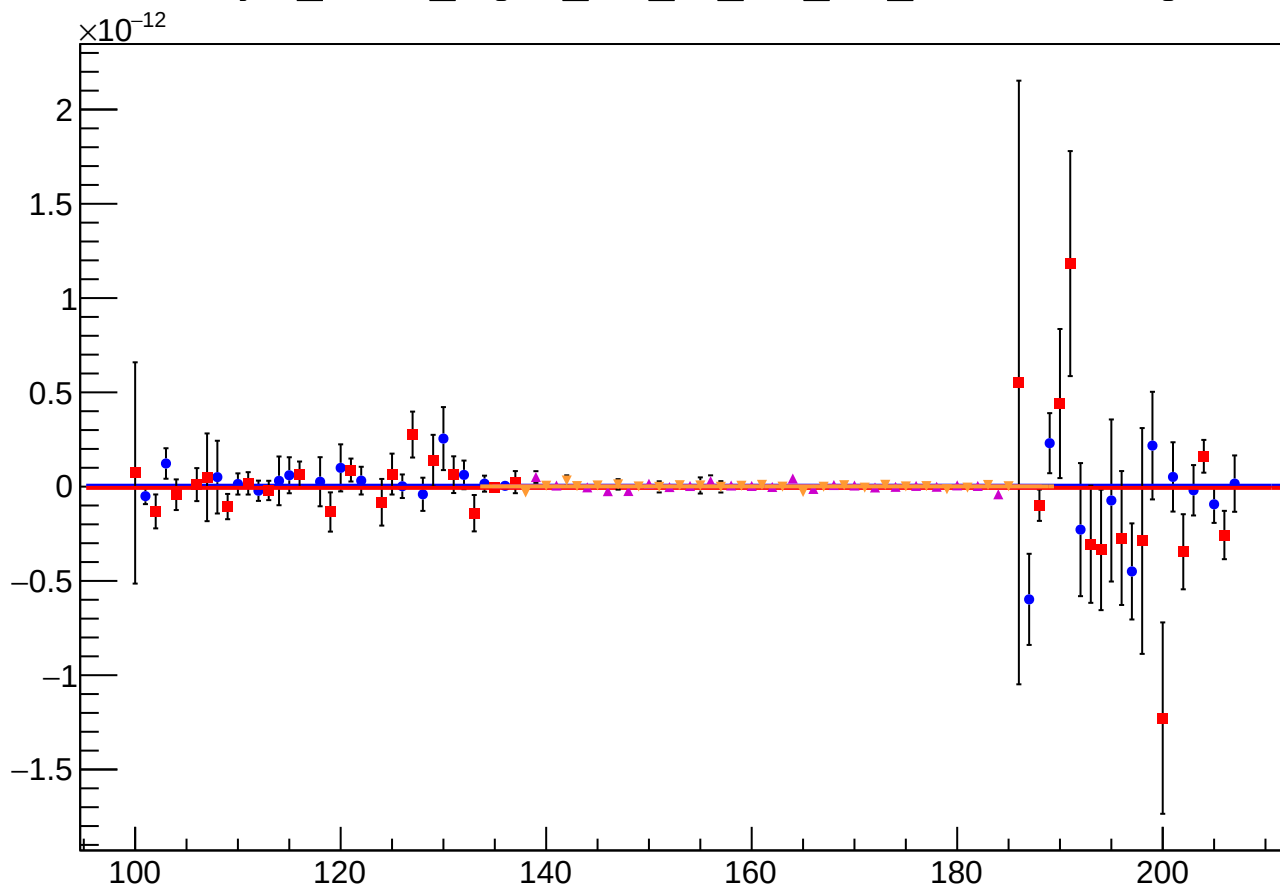
+ sign 34.367+/-0.006  $\chi^2/\text{NDF}$ : 20304754.3/50

All: 32.668+/-0.004  $\chi^2/\text{NDF}$ : 43455669.1/104

- sign 31.140+/-0.005  $\chi^2/\text{NDF}$ : 22970563.9/53



asym\_sam3\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 22.0/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:11.3/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 45.3/30

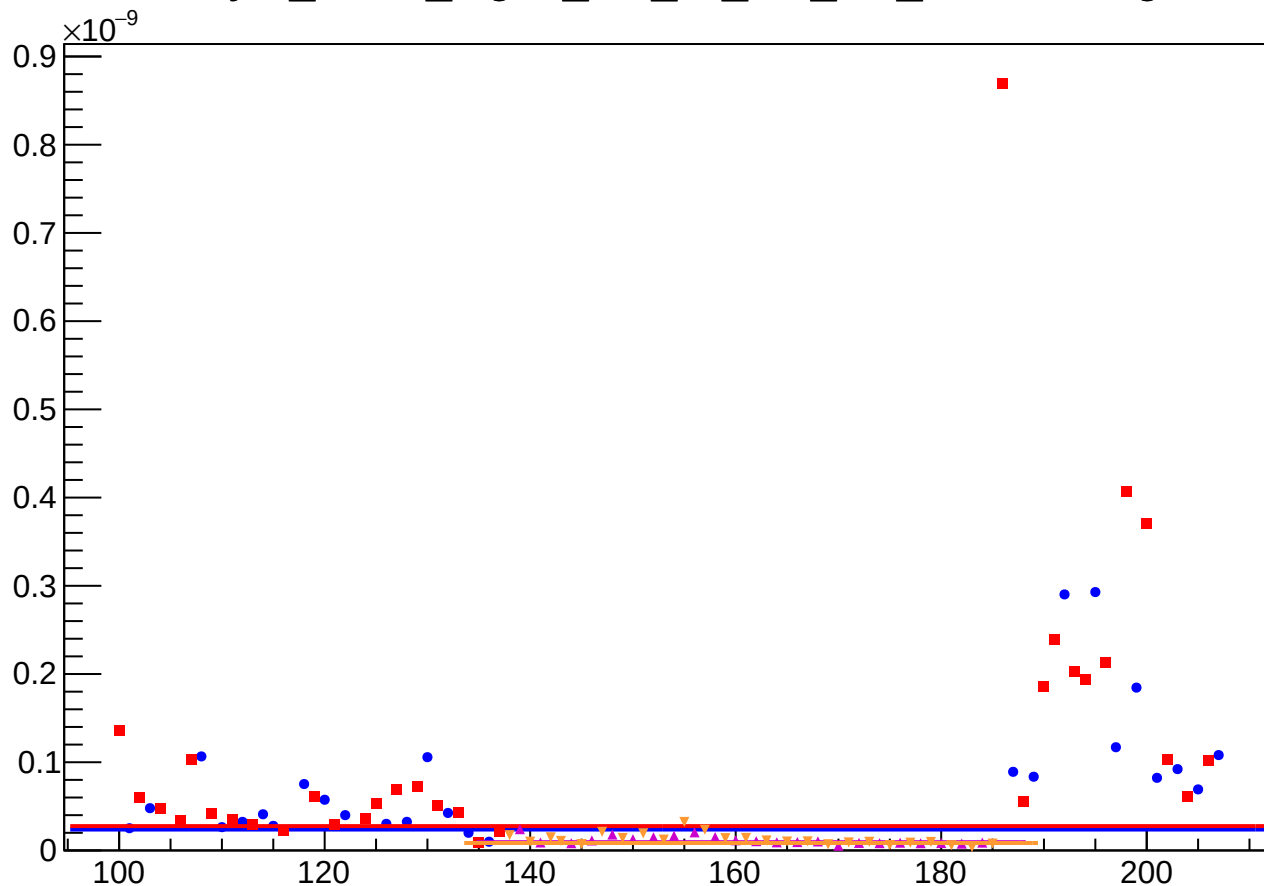
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:20.8/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 33.3/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 99.9/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 66.6/53

asym\_sam3\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8348623.9/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4343727.1/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9807482.0/30

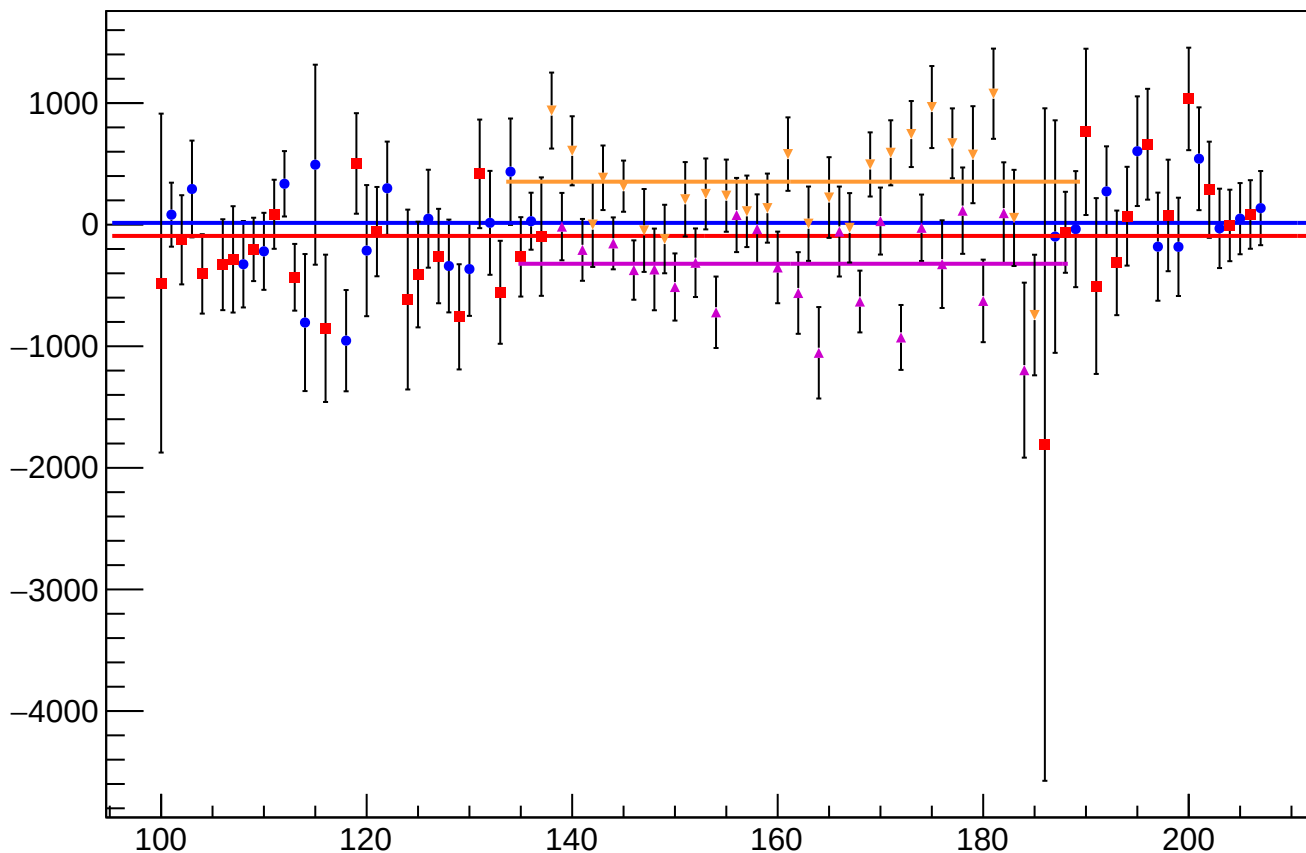
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2146041.0/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 15832787.5/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 31632081.6/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 15659078.3/53

# reg\_asym\_sam4\_mean vs Slug



Right In:  $14.718 \pm 72.924$   $\chi^2/\text{NDF}: 19.2/25$

Left Out:  $353.617 \pm 60.149$   $\chi^2/\text{NDF}: 32.3/24$

Right Out:  $-92.539 \pm 70.746$   $\chi^2/\text{NDF}: 27.9/30$

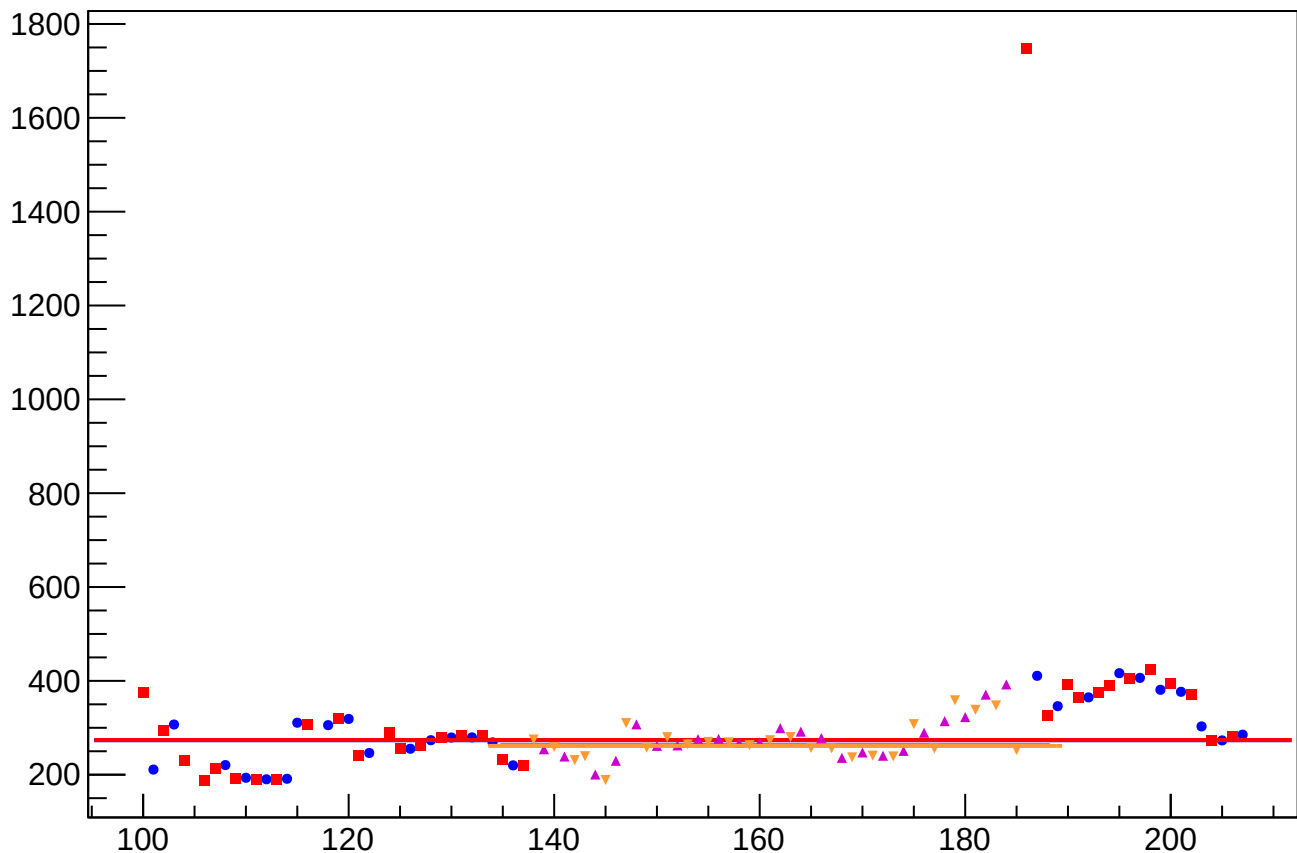
Left In:  $-321.510 \pm 62.113$   $\chi^2/\text{NDF}: 26.2/22$

+ sign  $216.406 \pm 46.401$   $\chi^2/\text{NDF}: 64.4/50$

All:  $-1.425 \pm 32.907$   $\chi^2/\text{NDF}: 168.7/104$

- sign  $-221.839 \pm 46.676$   $\chi^2/\text{NDF}: 60.0/53$

# reg\_asym\_sam4\_rms vs Slug



Right In: 273.479+/-0.052  $\chi^2/\text{NDF}$ : 1551505.5/25

Left Out: 261.470+/-0.043  $\chi^2/\text{NDF}$ : 715467.9/24

Right Out: 273.955+/-0.050  $\chi^2/\text{NDF}$ : 2521940.8/30

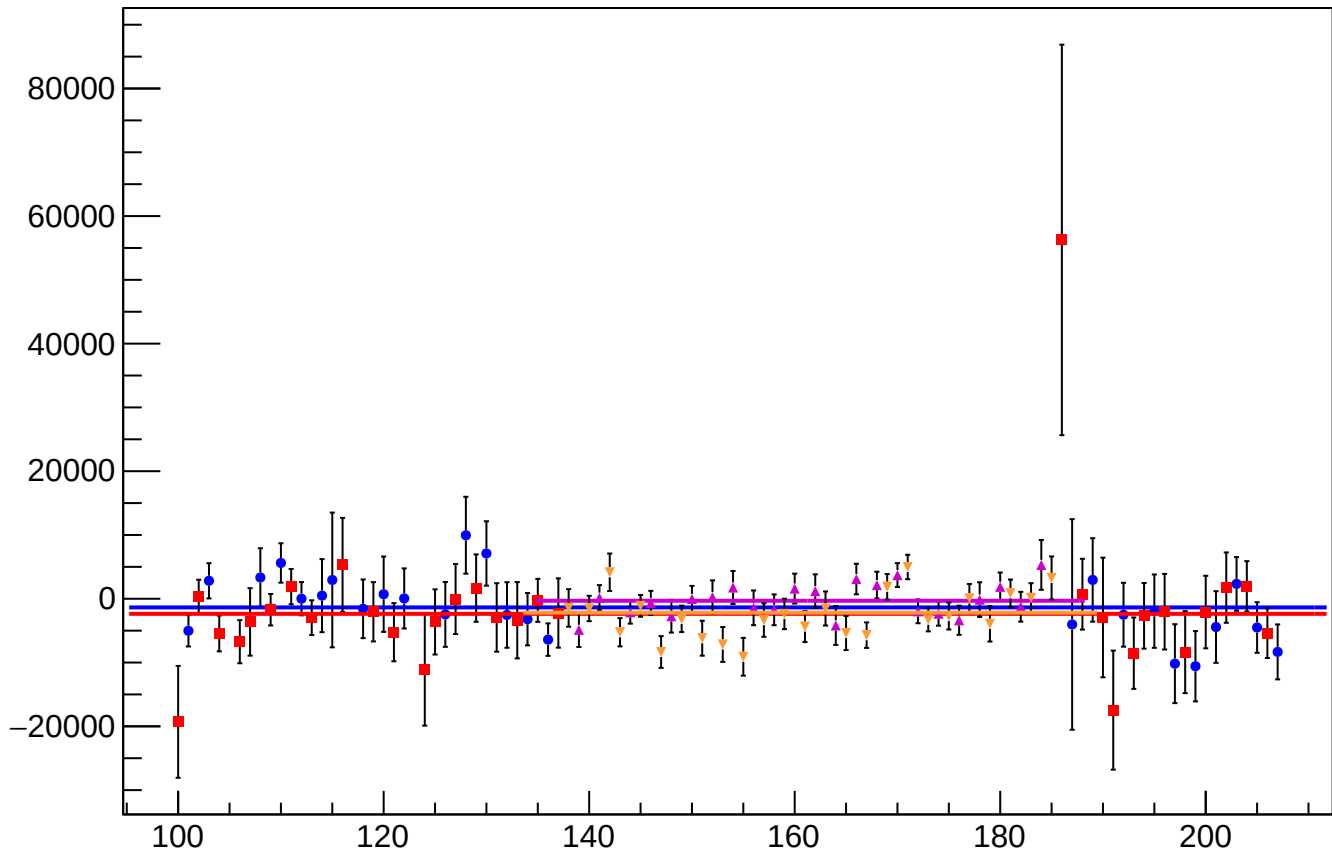
Left In: 262.616+/-0.044  $\chi^2/\text{NDF}$ : 670646.3/22

+ sign 266.332+/-0.033  $\chi^2/\text{NDF}$ : 2299251.5/50

All: 266.938+/-0.023  $\chi^2/\text{NDF}$ : 5521536.3/104

- sign 267.552+/-0.033  $\chi^2/\text{NDF}$ : 3221597.8/53

# asym\_sam4\_reg\_correction\_mean vs Slug



Right In:  $-1357.774 \pm 823.198$   $\chi^2/\text{NDF}$ : 31.6/25

Left Out:  $-2171.840 \pm 461.649$   $\chi^2/\text{NDF}$ : 55.5/24

Right Out:  $-2364.015 \pm 784.865$   $\chi^2/\text{NDF}$ : 24.9/30

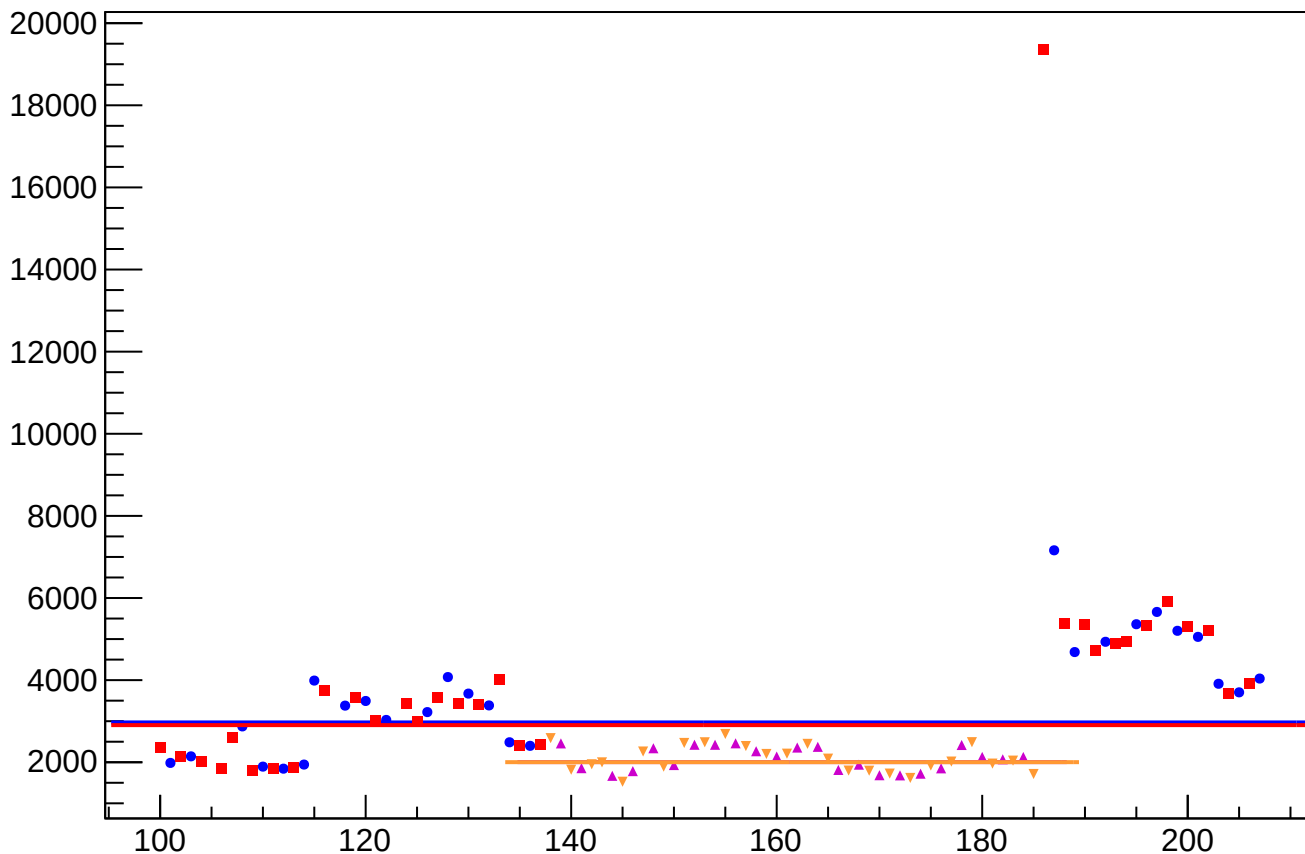
Left In:  $-313.739 \pm 474.086$   $\chi^2/\text{NDF}$ : 23.7/22

+ sign  $-1977.073 \pm 402.654$   $\chi^2/\text{NDF}$ : 87.9/50

All:  $-1423.790 \pm 285.826$   $\chi^2/\text{NDF}$ : 145.3/104

- sign  $-861.825 \pm 405.801$   $\chi^2/\text{NDF}$ : 53.6/53

# asym\_sam4\_reg\_correction\_rms vs Slug



Right In: 2969.580 $\pm$ 0.582  $\chi^2$ /NDF: 3676836.9/25

Left Out: 2002.229 $\pm$ 0.326  $\chi^2$ /NDF: 892707.2/24

Right Out: 2904.354 $\pm$ 0.555  $\chi^2$ /NDF: 5275297.5/30

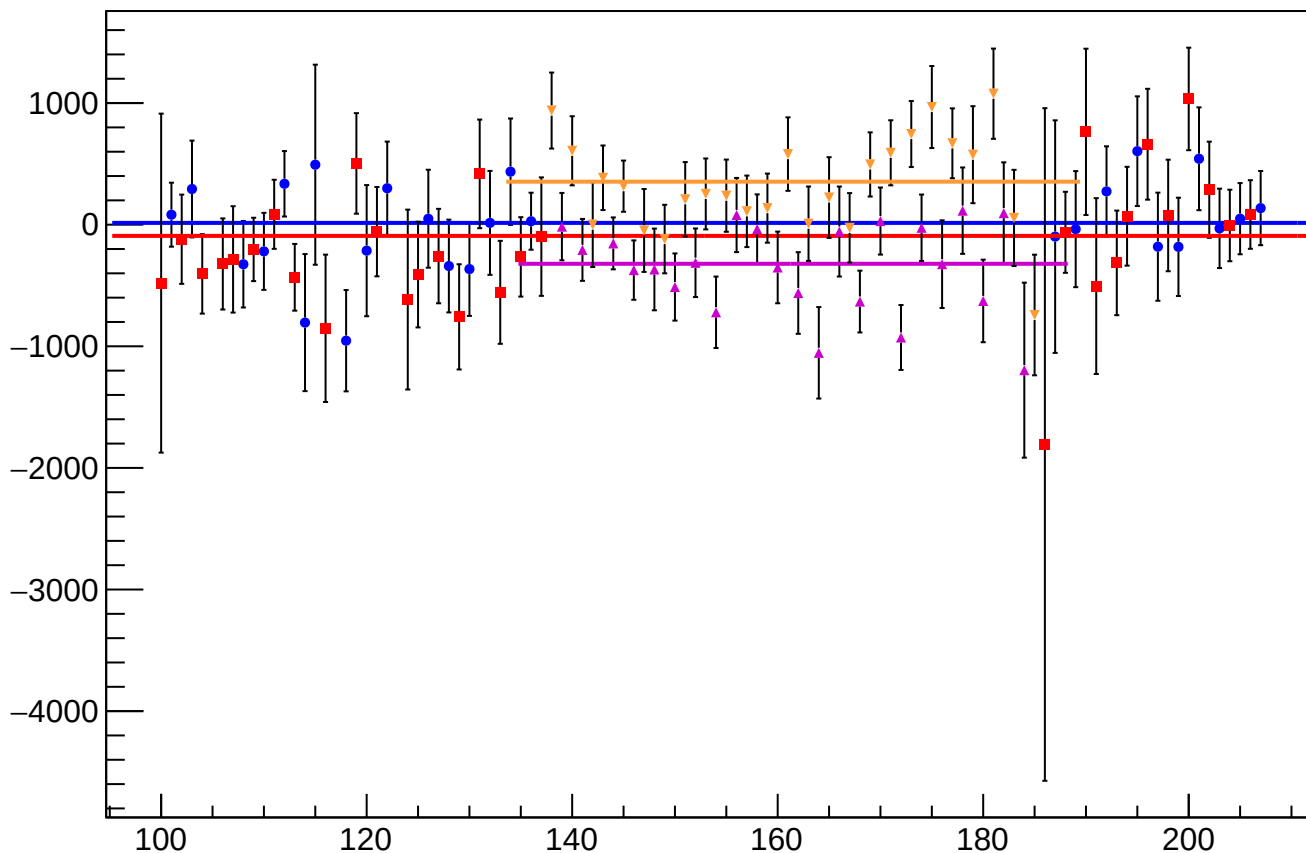
Left In: 2004.244 $\pm$ 0.335  $\chi^2$ /NDF: 704919.9/22

+ sign 2233.669 $\pm$ 0.285  $\chi^2$ /NDF: 6670561.7/50

All: 2239.223 $\pm$ 0.202  $\chi^2$ /NDF: 14578818.4/100

- sign 2244.864 $\pm$ 0.287  $\chi^2$ /NDF: 7907489.8/53

# cor\_asym\_sam4\_mean vs Slug



Right In:  $14.705 \pm 72.924$   $\chi^2/\text{NDF}: 19.2/25$

Left Out:  $353.640 \pm 60.149$   $\chi^2/\text{NDF}: 32.3/24$

Right Out:  $-92.102 \pm 70.753$   $\chi^2/\text{NDF}: 27.8/30$

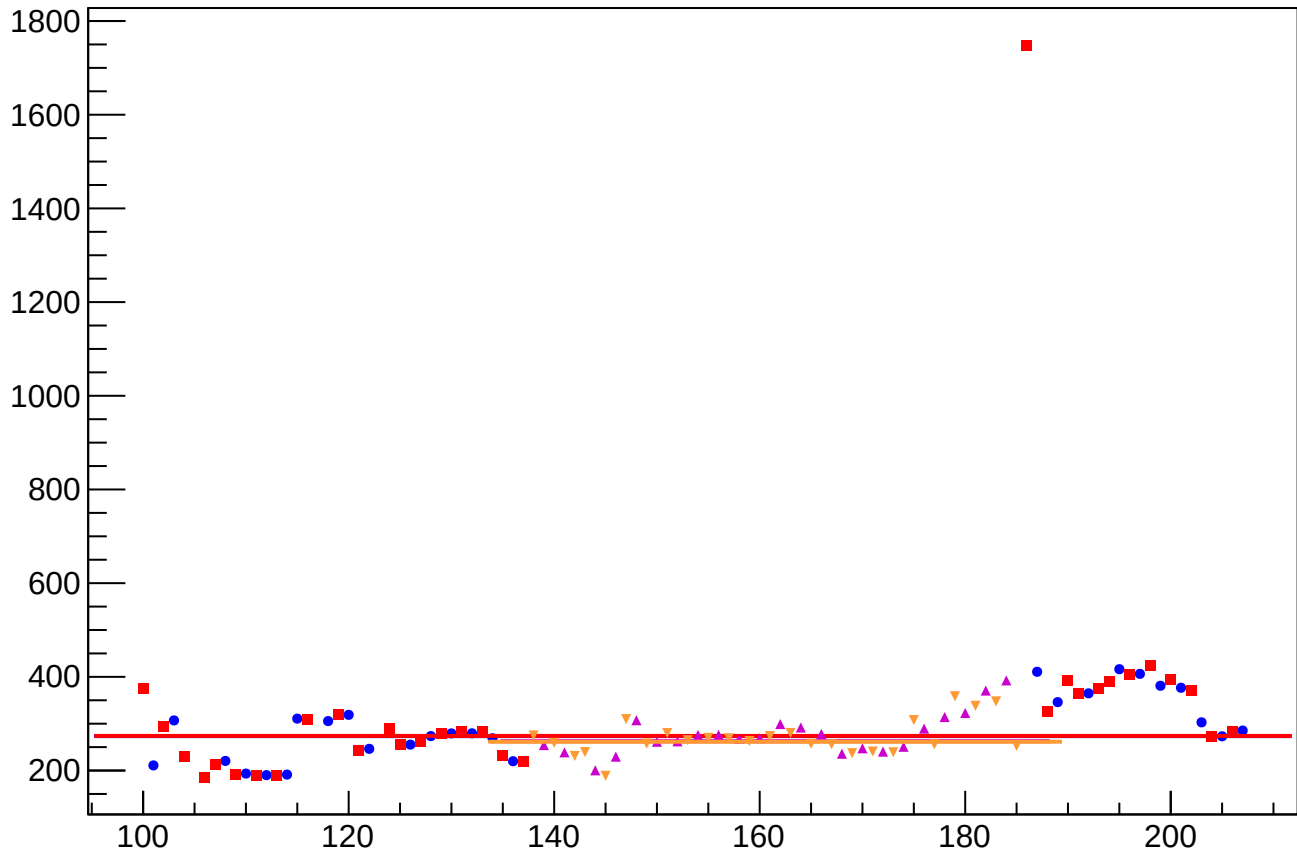
Left In:  $-321.514 \pm 62.113$   $\chi^2/\text{NDF}: 26.2/22$

+ sign  $216.414 \pm 46.401$   $\chi^2/\text{NDF}: 64.4/50$

All:  $-1.323 \pm 32.908$   $\chi^2/\text{NDF}: 168.7/104$

- sign  $-221.663 \pm 46.678$   $\chi^2/\text{NDF}: 60.0/53$

# cor\_asym\_sam4\_rms vs Slug



Right In: 273.479+/-0.052  $\chi^2/\text{NDF}$ : 1551506.9/25

Left Out: 261.470+/-0.043  $\chi^2/\text{NDF}$ : 715467.9/24

Right Out: 273.884+/-0.050  $\chi^2/\text{NDF}$ : 2527804.7/30

Left In: 262.616+/-0.044  $\chi^2/\text{NDF}$ : 670646.4/22

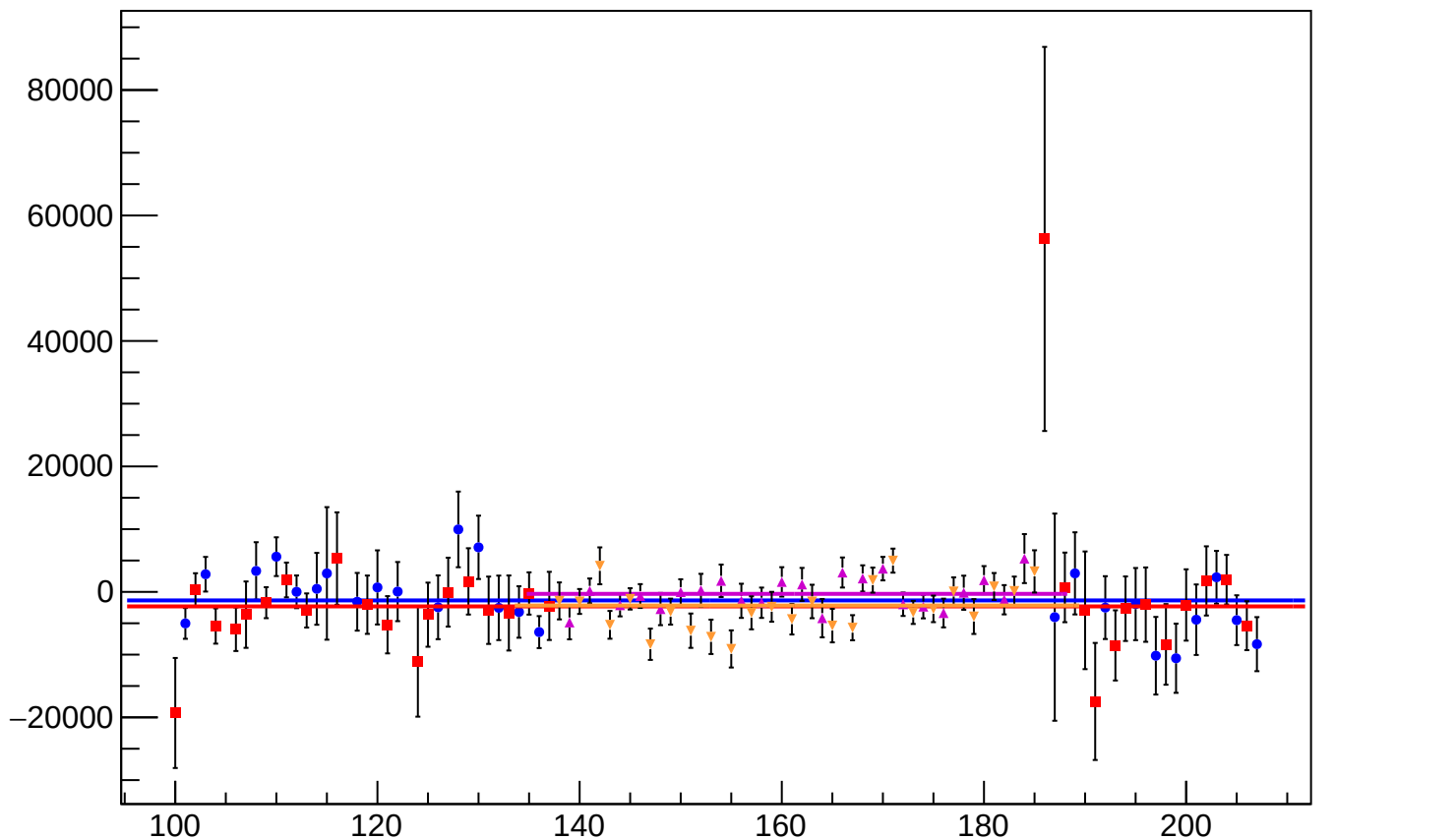
+ sign 266.332+/-0.033  $\chi^2/\text{NDF}$ : 2299253.1/50

All: 266.923+/-0.023  $\chi^2/\text{NDF}$ : 5527002.0/104

- sign 267.520+/-0.033  $\chi^2/\text{NDF}$ : 3227096.7/53



# asym\_sam4\_cor\_correction\_mean vs Slug



Right In:  $-1357.907 \pm 823.204$   $\chi^2/\text{NDF}$ : 31.6/25

Left Out:  $-2171.811 \pm 461.649$   $\chi^2/\text{NDF}$ : 55.5/24

Right Out:  $-2312.724 \pm 786.008$   $\chi^2/\text{NDF}$ : 24.3/30

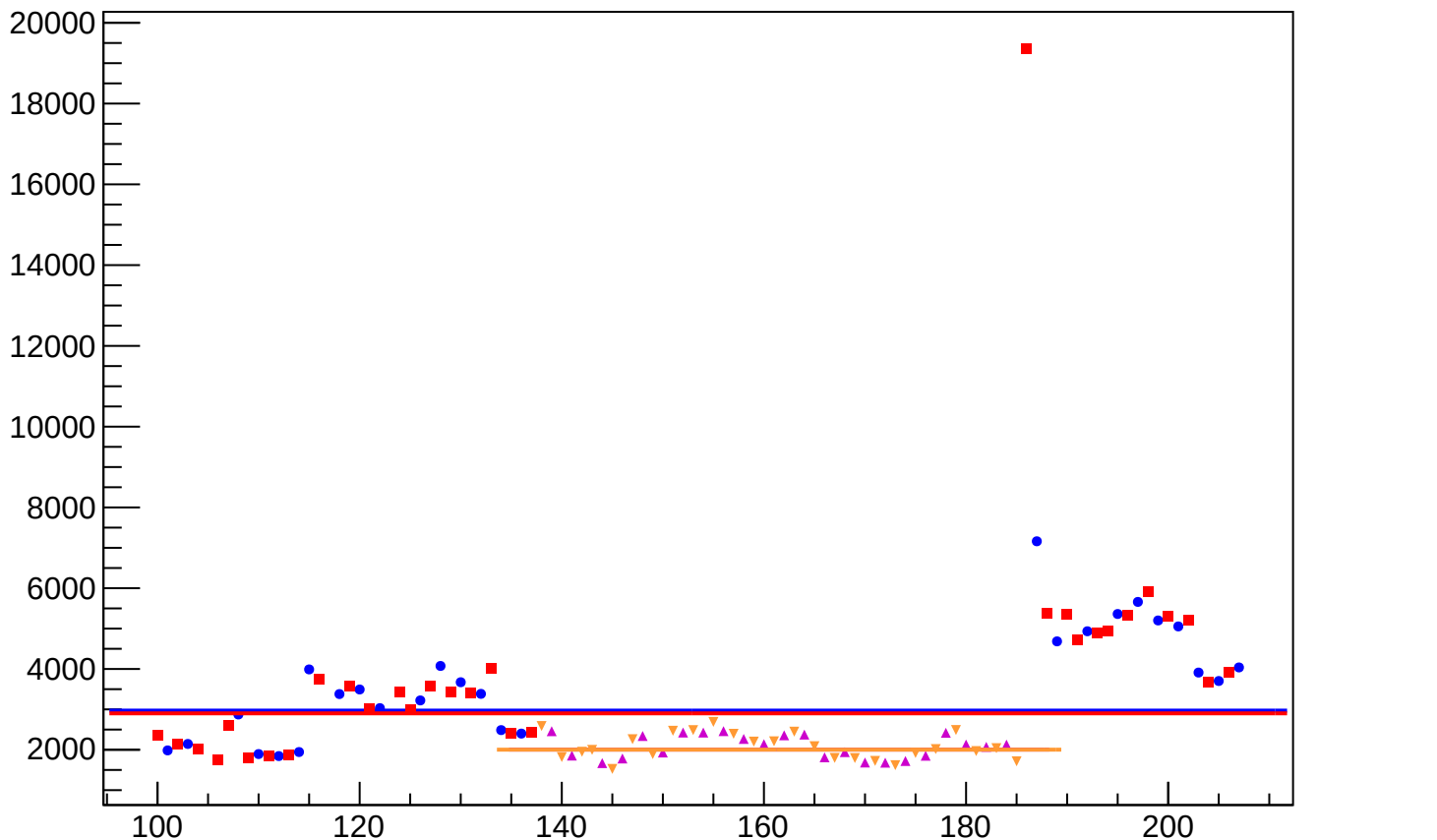
Left In:  $-313.745 \pm 474.086$   $\chi^2/\text{NDF}$ : 23.7/22

+ sign  $-1977.085 \pm 402.655$   $\chi^2/\text{NDF}$ : 87.9/50

All:  $-1416.650 \pm 285.881$   $\chi^2/\text{NDF}$ : 144.5/104

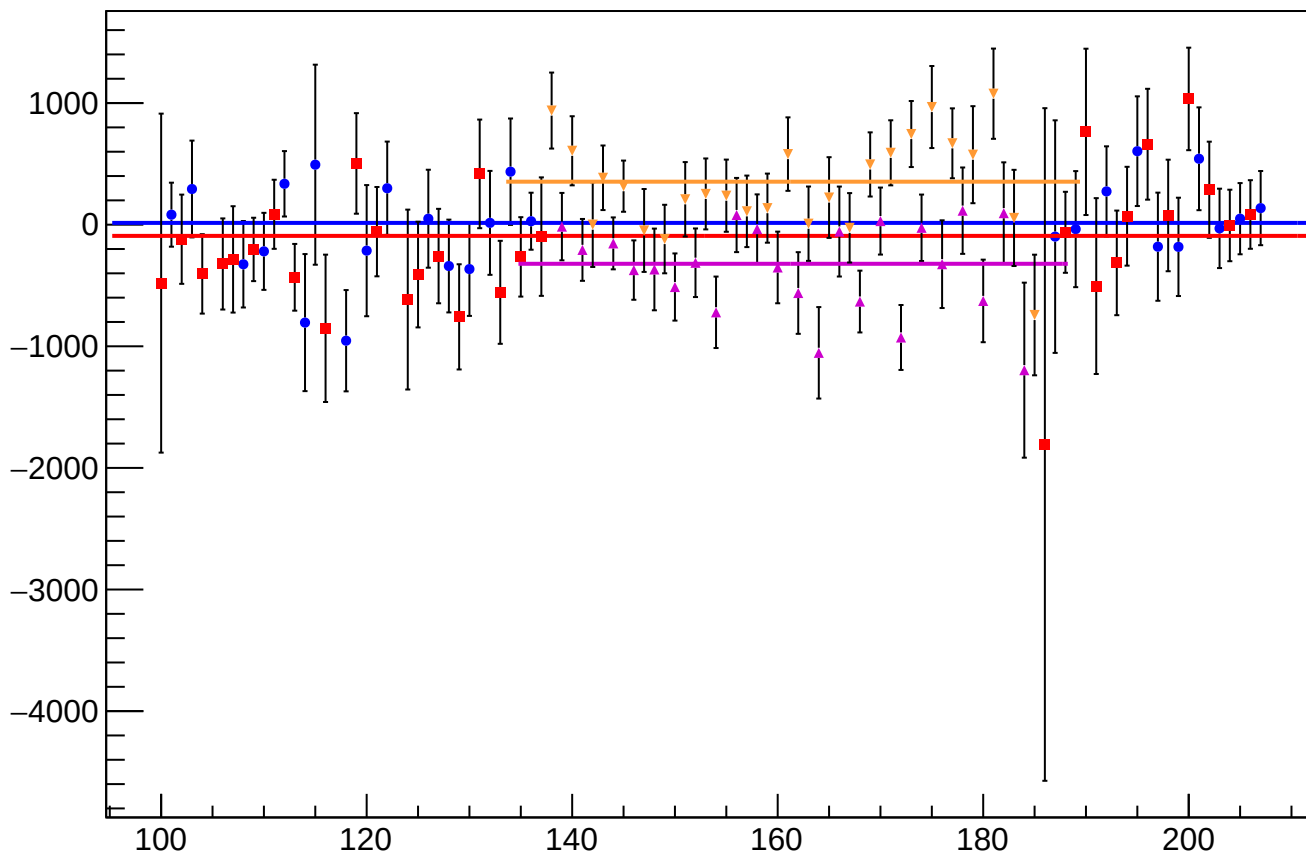
- sign  $-846.979 \pm 405.959$   $\chi^2/\text{NDF}$ : 52.7/53

# asym\_sam4\_cor\_correction\_rms vs Slug



|                             |                                    |                         |                                    |
|-----------------------------|------------------------------------|-------------------------|------------------------------------|
| Right In: 2969.605+/-0.582  | $\chi^2/\text{NDF}$ : 3676740.2/25 | + sign 2233.673+/-0.285 | $\chi^2/\text{NDF}$ : 6670553.4/50 |
| Left Out: 2002.229+/-0.326  | $\chi^2/\text{NDF}$ : 892706.8/24  | All: 2238.624+/-0.202   | $\chi^2/\text{NDF}$ : 14593738.5/1 |
| Right Out: 2901.747+/-0.556 | $\chi^2/\text{NDF}$ : 5305613.3/30 | - sign 2243.656+/-0.287 | $\chi^2/\text{NDF}$ : 7922575.4/53 |
| Left In: 2004.244+/-0.335   | $\chi^2/\text{NDF}$ : 704920.5/22  |                         |                                    |

# eigen\_cor\_asym\_sam4\_mean vs Slug



Right In:  $14.705 \pm 72.924$   $\chi^2/\text{NDF}: 19.2/25$

Left Out:  $353.640 \pm 60.149$   $\chi^2/\text{NDF}: 32.3/24$

Right Out:  $-92.102 \pm 70.753$   $\chi^2/\text{NDF}: 27.8/30$

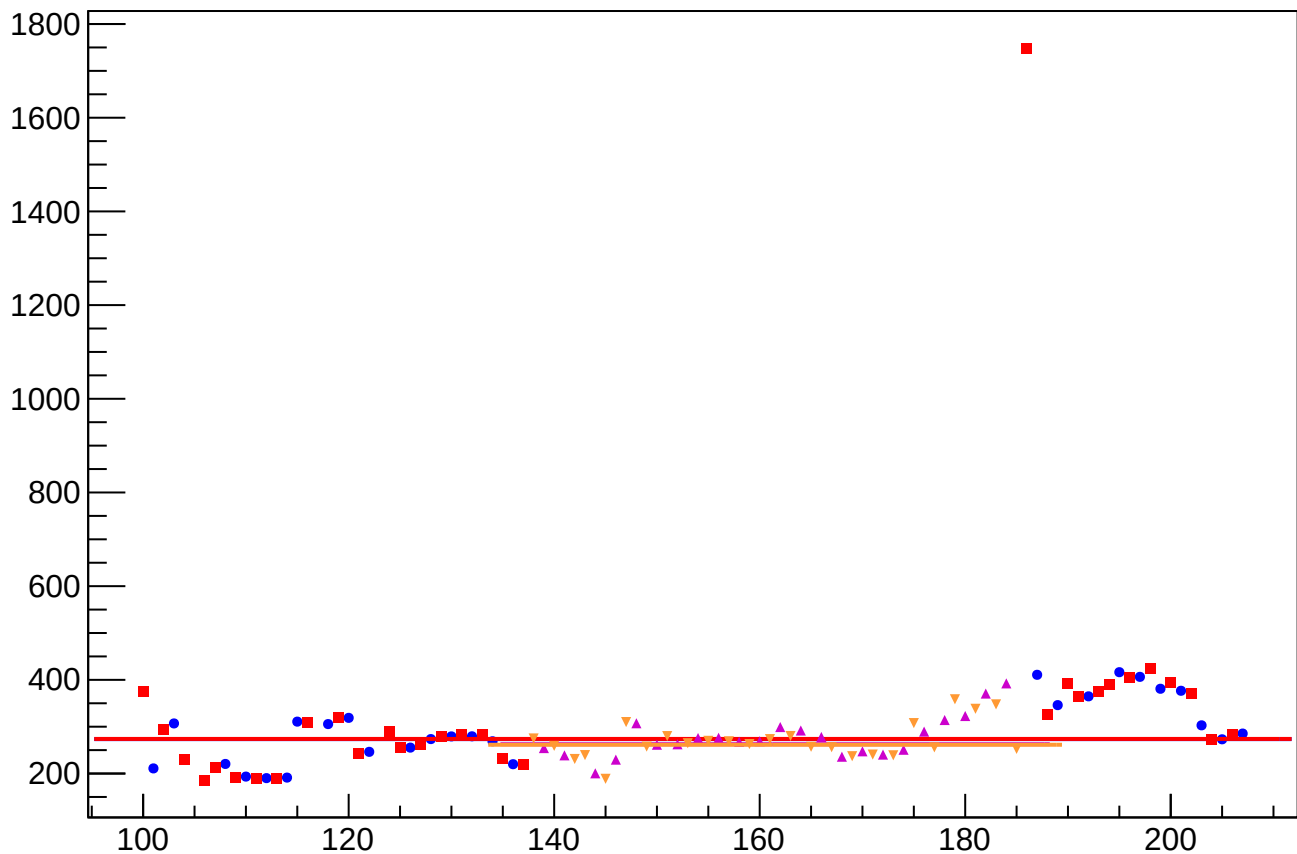
Left In:  $-321.514 \pm 62.113$   $\chi^2/\text{NDF}: 26.2/22$

+ sign  $216.414 \pm 46.401$   $\chi^2/\text{NDF}: 64.4/50$

All:  $-1.323 \pm 32.908$   $\chi^2/\text{NDF}: 168.7/104$

- sign  $-221.663 \pm 46.678$   $\chi^2/\text{NDF}: 60.0/53$

# eigen\_cor\_asym\_sam4\_rms vs Slug



Right In: 273.479+/-0.052     $\chi^2/\text{NDF}$ : 1551506.9/25

Left Out: 261.470+/-0.043     $\chi^2/\text{NDF}$ : 715467.9/24

Right Out: 273.884+/-0.050     $\chi^2/\text{NDF}$ : 2527804.7/30

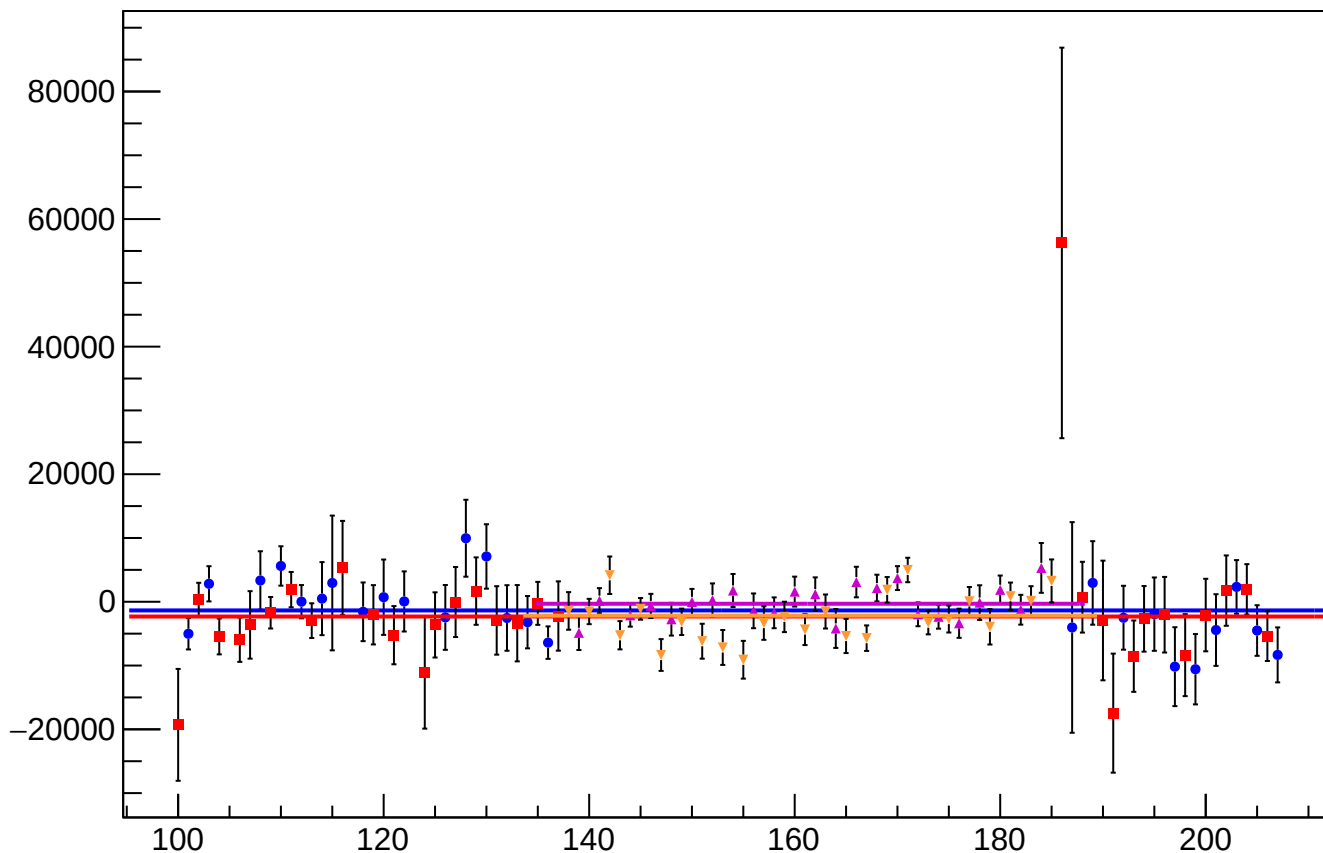
Left In: 262.616+/-0.044     $\chi^2/\text{NDF}$ : 670646.4/22

+ sign 266.332+/-0.033     $\chi^2/\text{NDF}$ : 2299253.1/50

All: 266.923+/-0.023     $\chi^2/\text{NDF}$ : 5527002.0/104

- sign 267.520+/-0.033     $\chi^2/\text{NDF}$ : 3227096.7/53

asym\_sam4\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-1357.907 \pm 823.204$   $\chi^2/\text{NDF}$ : 31.6/25

Left Out:  $-2171.811 \pm 461.649$   $\chi^2/\text{NDF}$ : 55.5/24

Right Out:  $-2312.724 \pm 786.008$   $\chi^2/\text{NDF}$ : 24.3/30

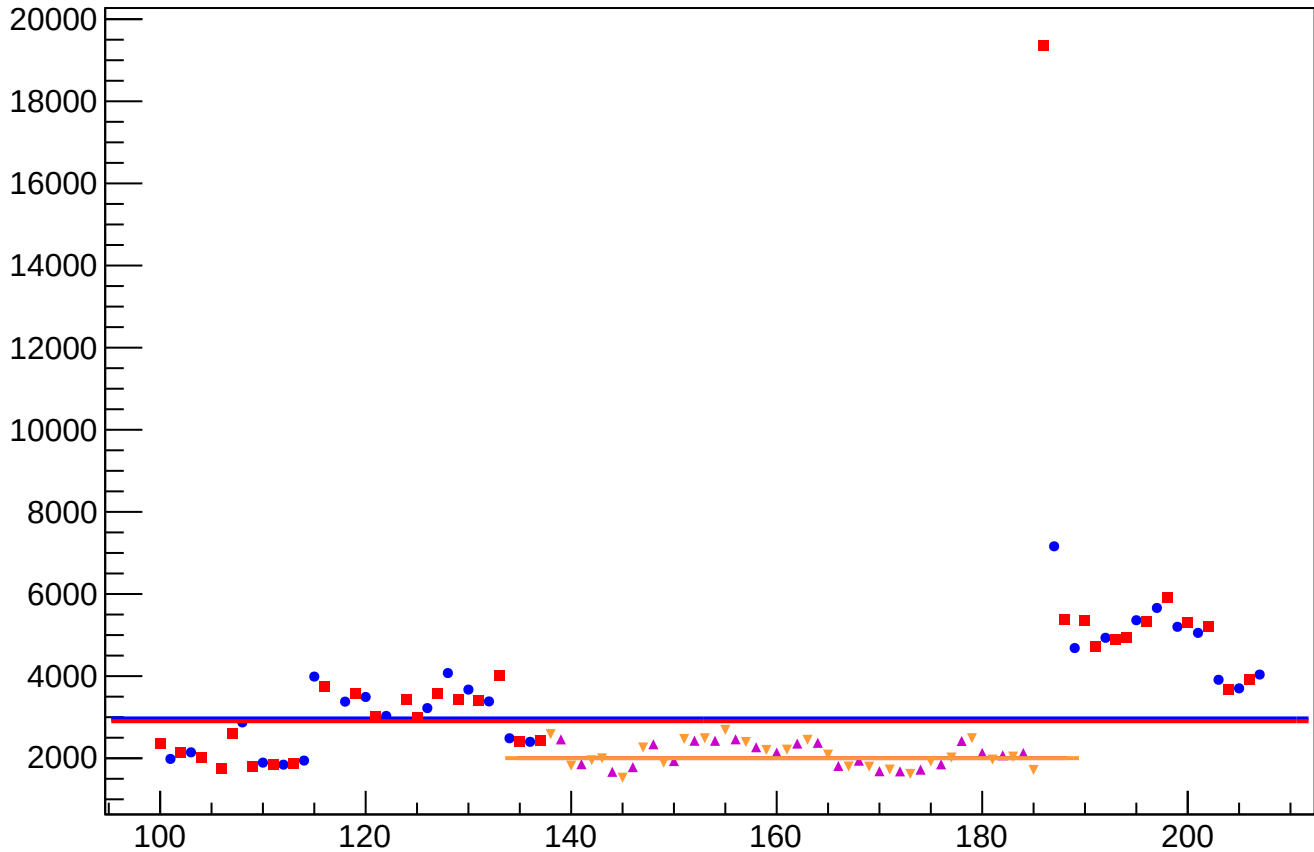
Left In:  $-313.745 \pm 474.086$   $\chi^2/\text{NDF}$ : 23.7/22

+ sign  $-1977.085 \pm 402.655$   $\chi^2/\text{NDF}$ : 87.9/50

All:  $-1416.650 \pm 285.881$   $\chi^2/\text{NDF}$ : 144.5/104

- sign  $-846.979 \pm 405.959$   $\chi^2/\text{NDF}$ : 52.7/53

# asym\_sam4\_eigen\_cor\_correction\_rms vs Slug



Right In: 2969.605 $\pm$ 0.582  $\chi^2$ /NDF: 3676740.2/25

Left Out: 2002.229 $\pm$ 0.326  $\chi^2$ /NDF: 892706.8/24

Right Out: 2901.747 $\pm$ 0.556  $\chi^2$ /NDF: 5305613.3/30

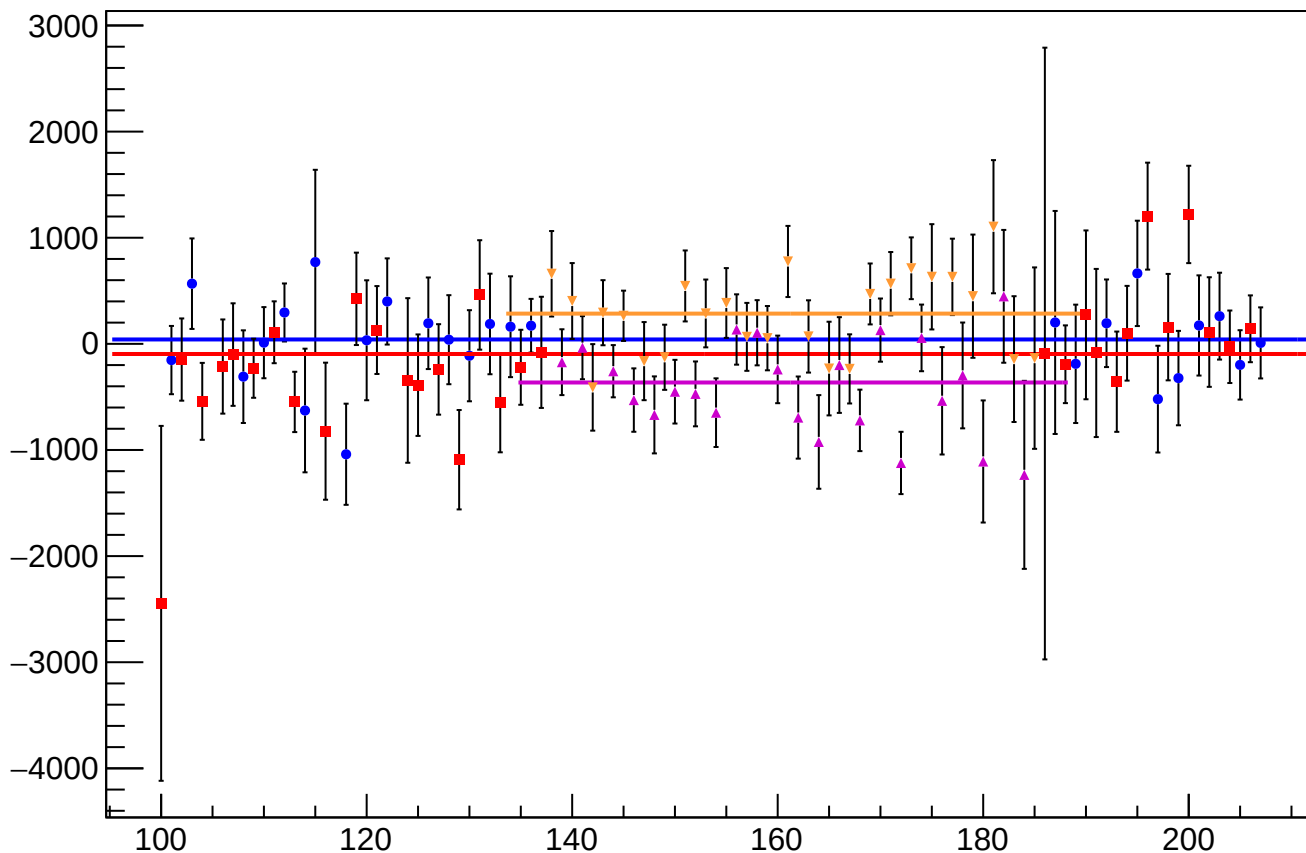
Left In: 2004.244 $\pm$ 0.335  $\chi^2$ /NDF: 704920.5/22

+ sign 2233.673 $\pm$ 0.285  $\chi^2$ /NDF: 6670553.4/50

All: 2238.624 $\pm$ 0.202  $\chi^2$ /NDF: 14593738.5/100

- sign 2243.656 $\pm$ 0.287  $\chi^2$ /NDF: 7922575.4/53

# dit\_asym\_sam4\_mean vs Slug



Right In:  $41.404 \pm 80.753$   $\chi^2/\text{NDF}$ : 16.8/25

Left Out:  $284.913 \pm 70.036$   $\chi^2/\text{NDF}$ : 22.8/24

Right Out:  $-95.575 \pm 77.619$   $\chi^2/\text{NDF}$ : 33.9/30

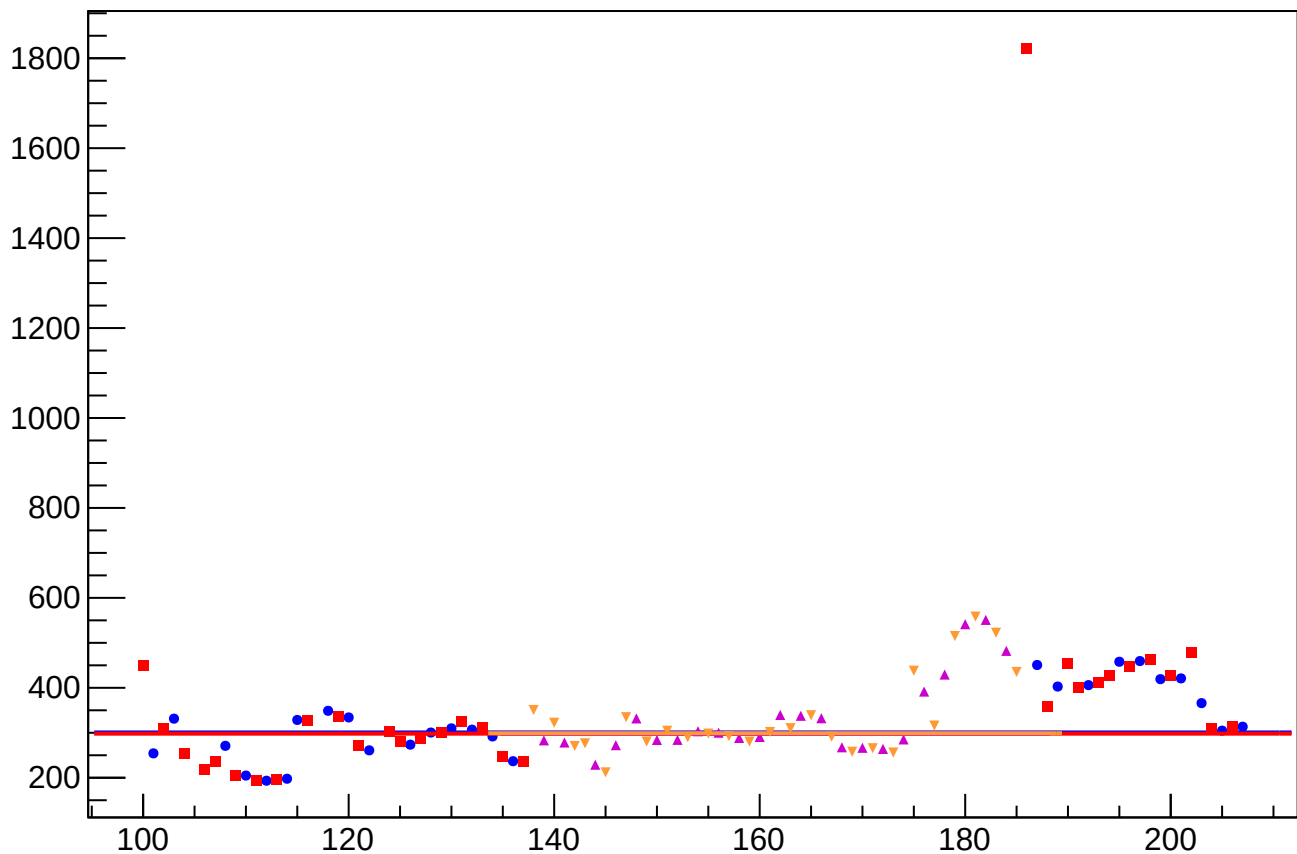
Left In:  $-364.163 \pm 71.714$   $\chi^2/\text{NDF}$ : 28.2/22

+ sign  $180.378 \pm 52.909$   $\chi^2/\text{NDF}$ : 44.8/50

All:  $-30.989 \pm 37.329$   $\chi^2/\text{NDF}$ : 145.1/104

- sign  $-240.473 \pm 52.673$   $\chi^2/\text{NDF}$ : 68.5/53

# dit\_asym\_sam4\_rms vs Slug



Right In: 300.732 $\pm$ 0.057  $\chi^2$ /NDF: 1745203.6/25

Left Out: 298.938 $\pm$ 0.050  $\chi^2$ /NDF:1613077.3/24

Right Out: 298.022 $\pm$ 0.055  $\chi^2$ /NDF: 2806693.2/30

Left In: 297.885 $\pm$ 0.051  $\chi^2$ /NDF:1319062.0/22

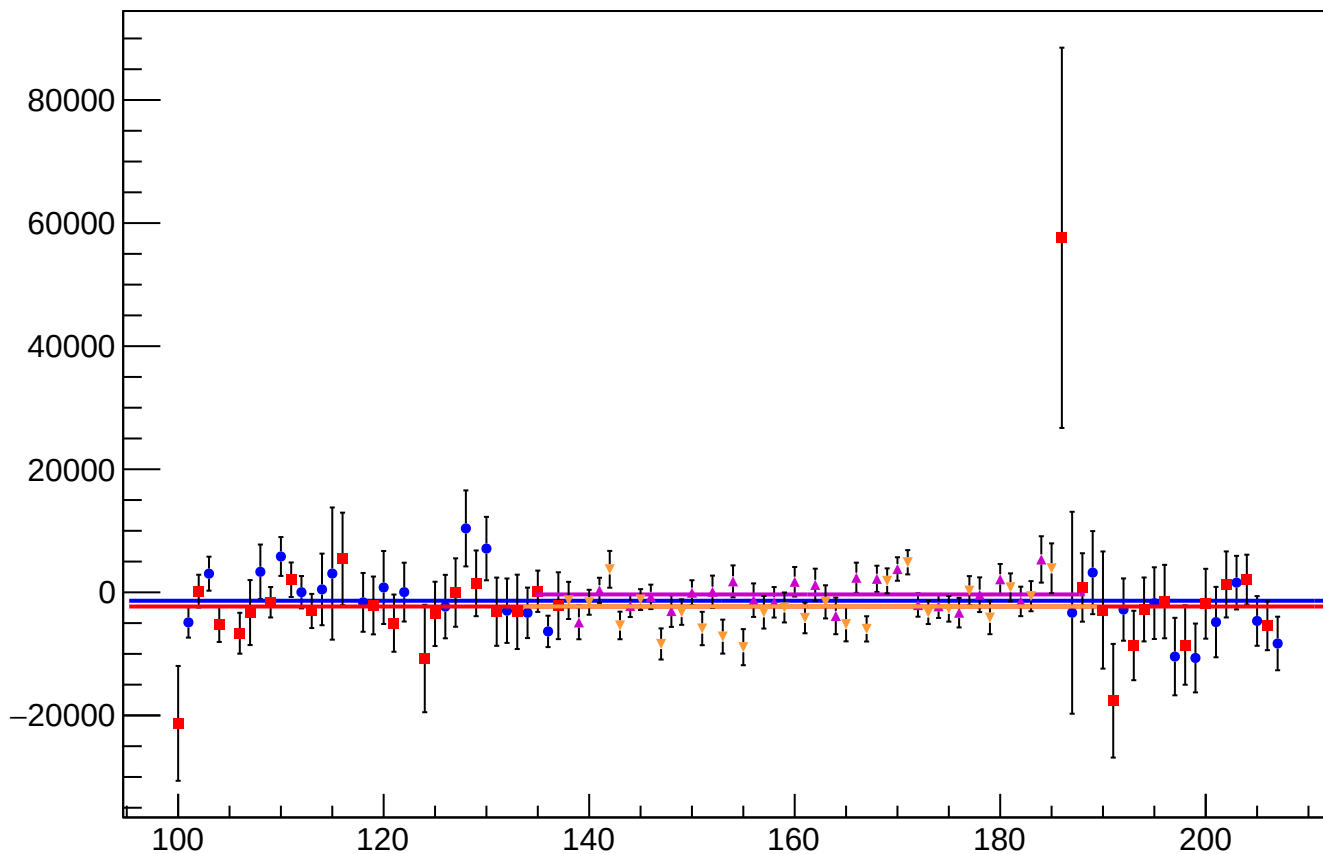
+ sign 299.708 $\pm$ 0.037  $\chi^2$ /NDF: 3358844.5/50

All: 298.824 $\pm$ 0.026  $\chi^2$ /NDF: 7485714.3/104

- sign 297.948 $\pm$ 0.037  $\chi^2$ /NDF: 4125758.5/53



# asym\_sam4\_dit\_correction\_mean vs Slug



Right In:  $-1366.425 \pm 831.877$   $\chi^2/\text{NDF}$ : 31.6/25

Left Out:  $-2290.992 \pm 470.518$   $\chi^2/\text{NDF}$ : 51.7/24

Right Out:  $-2301.626 \pm 790.926$   $\chi^2/\text{NDF}$ : 25.3/30

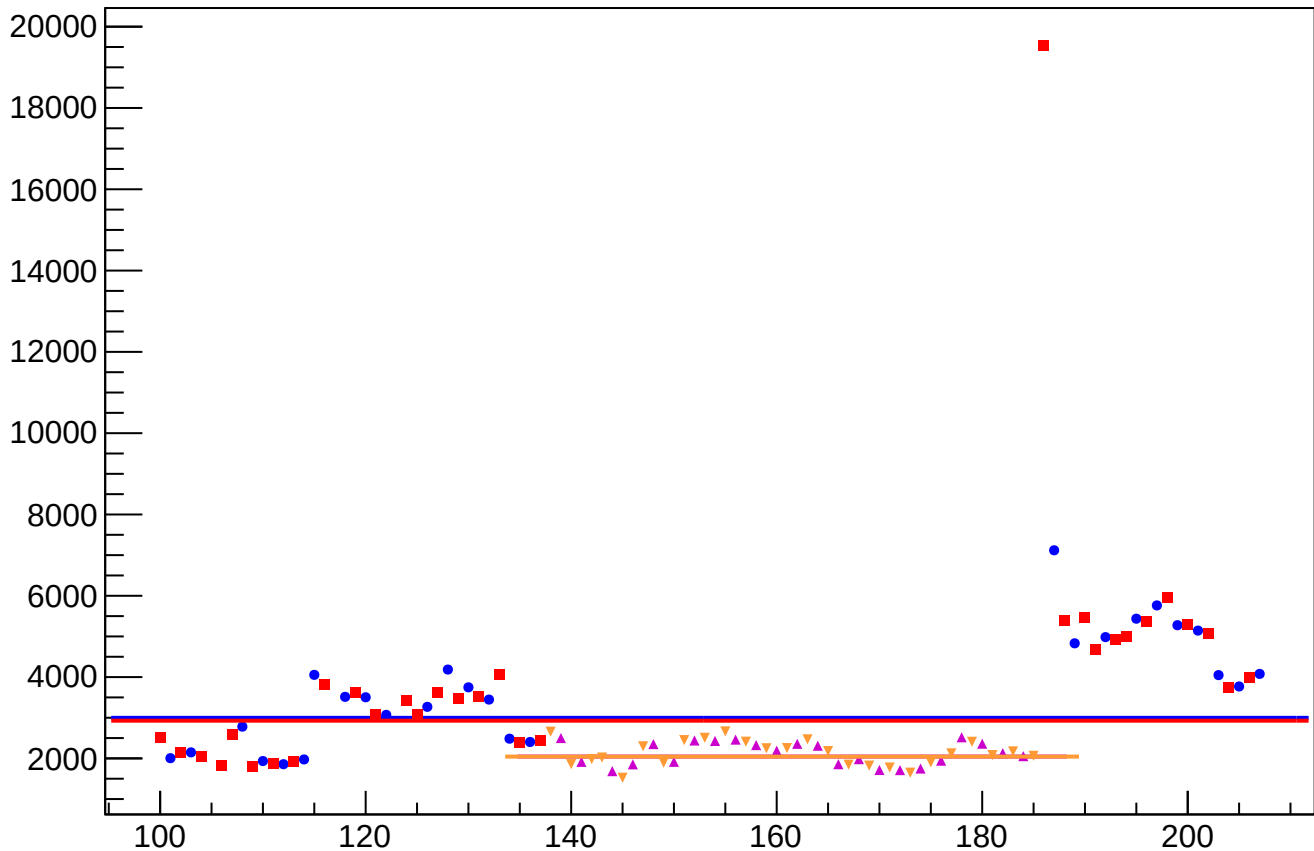
Left In:  $-342.609 \pm 483.605$   $\chi^2/\text{NDF}$ : 22.8/22

+ sign  $-2066.900 \pm 409.546$   $\chi^2/\text{NDF}$ : 84.2/50

All:  $-1475.713 \pm 290.663$   $\chi^2/\text{NDF}$ : 141.0/104

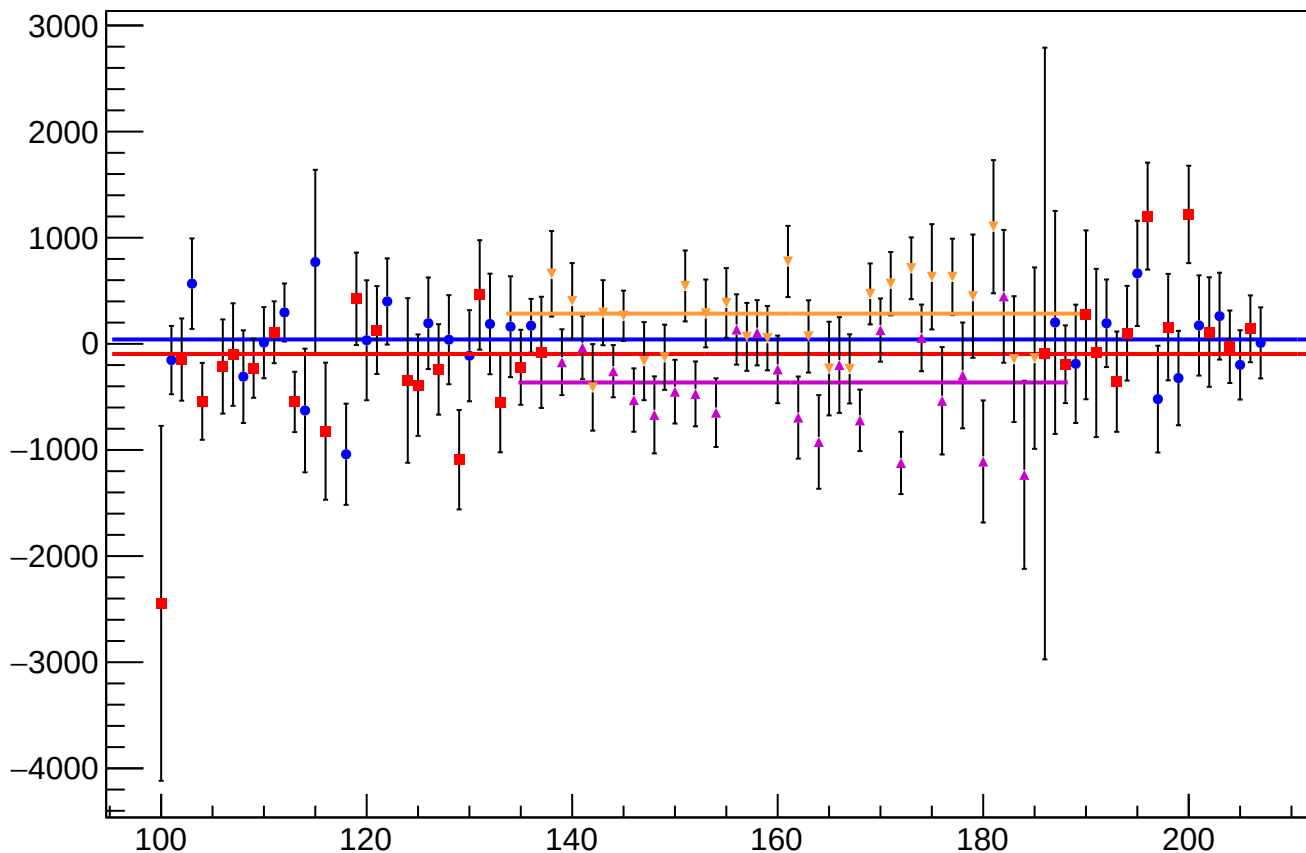
- sign  $-875.704 \pm 412.591$   $\chi^2/\text{NDF}$ : 52.6/53

# asym\_sam4\_dit\_correction\_rms vs Slug



|                             |                                    |                         |                                    |
|-----------------------------|------------------------------------|-------------------------|------------------------------------|
| Right In: 2997.487+/-0.588  | $\chi^2/\text{NDF}$ : 3760738.2/25 | + sign 2274.909+/-0.290 | $\chi^2/\text{NDF}$ : 6605845.4/50 |
| Left Out: 2043.746+/-0.333  | $\chi^2/\text{NDF}$ : 853391.4/24  | All: 2280.070+/-0.206   | $\chi^2/\text{NDF}$ : 14382203.7/1 |
| Right Out: 2927.608+/-0.559 | $\chi^2/\text{NDF}$ : 5273423.5/30 | - sign 2285.309+/-0.292 | $\chi^2/\text{NDF}$ : 7775718.2/53 |
| Left In: 2045.178+/-0.342   | $\chi^2/\text{NDF}$ : 690219.7/22  |                         |                                    |

# eigen\_dit\_asym\_sam4\_mean vs Slug



Right In:  $41.408 \pm 80.753$   $\chi^2/\text{NDF}$ : 16.8/25

Left Out:  $284.918 \pm 70.036$   $\chi^2/\text{NDF}$ : 22.8/24

Right Out:  $-95.575 \pm 77.619$   $\chi^2/\text{NDF}$ : 33.9/30

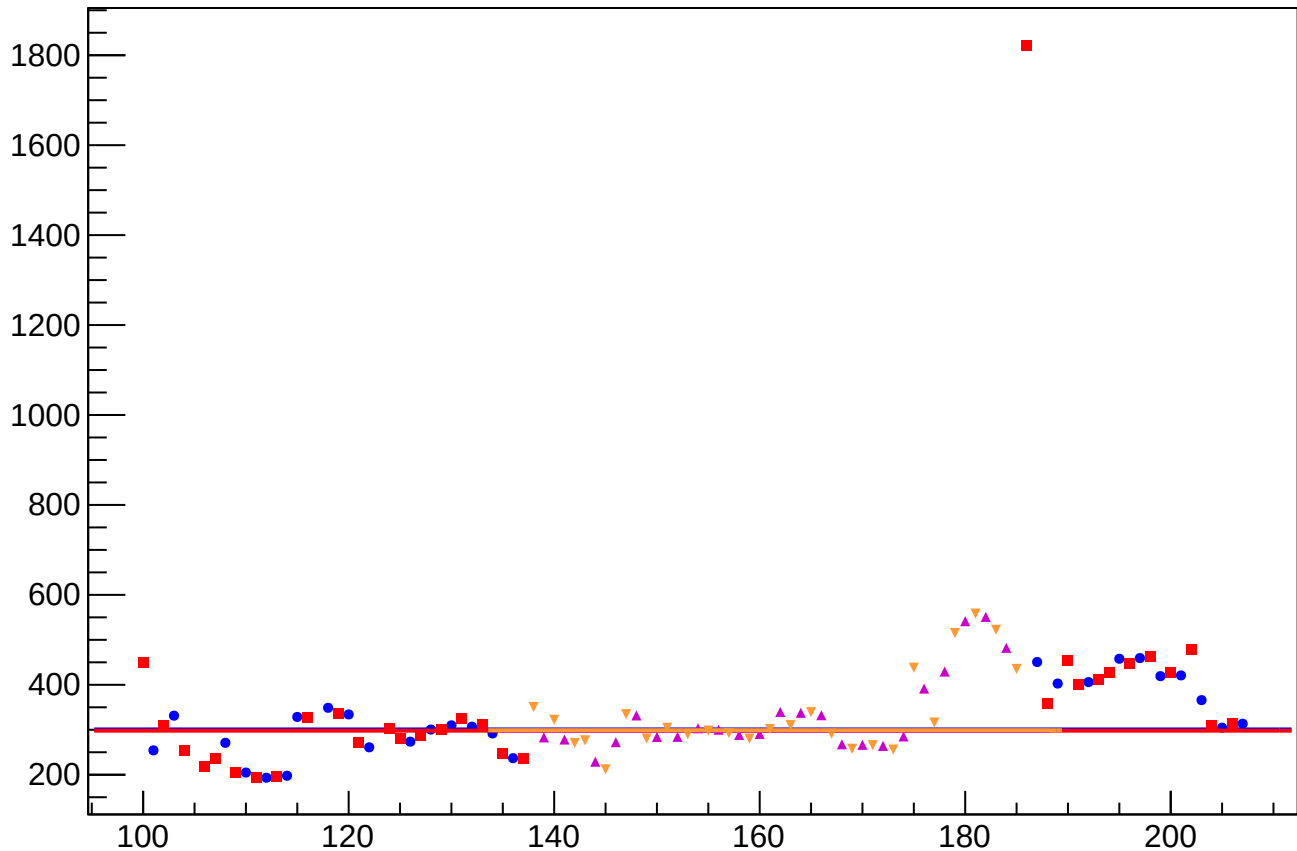
Left In:  $-364.164 \pm 71.714$   $\chi^2/\text{NDF}$ : 28.2/22

+ sign  $180.383 \pm 52.909$   $\chi^2/\text{NDF}$ : 44.8/50

All:  $-30.987 \pm 37.329$   $\chi^2/\text{NDF}$ : 145.1/104

- sign  $-240.474 \pm 52.673$   $\chi^2/\text{NDF}$ : 68.5/53

# eigen\_dit\_asym\_sam4\_rms vs Slug



Right In:  $300.732 \pm 0.057$   $\chi^2/\text{NDF}$ : 1745190.8/25

Left Out:  $298.938 \pm 0.050$   $\chi^2/\text{NDF}$ : 1613074.5/24

Right Out:  $298.022 \pm 0.055$   $\chi^2/\text{NDF}$ : 2806699.5/30

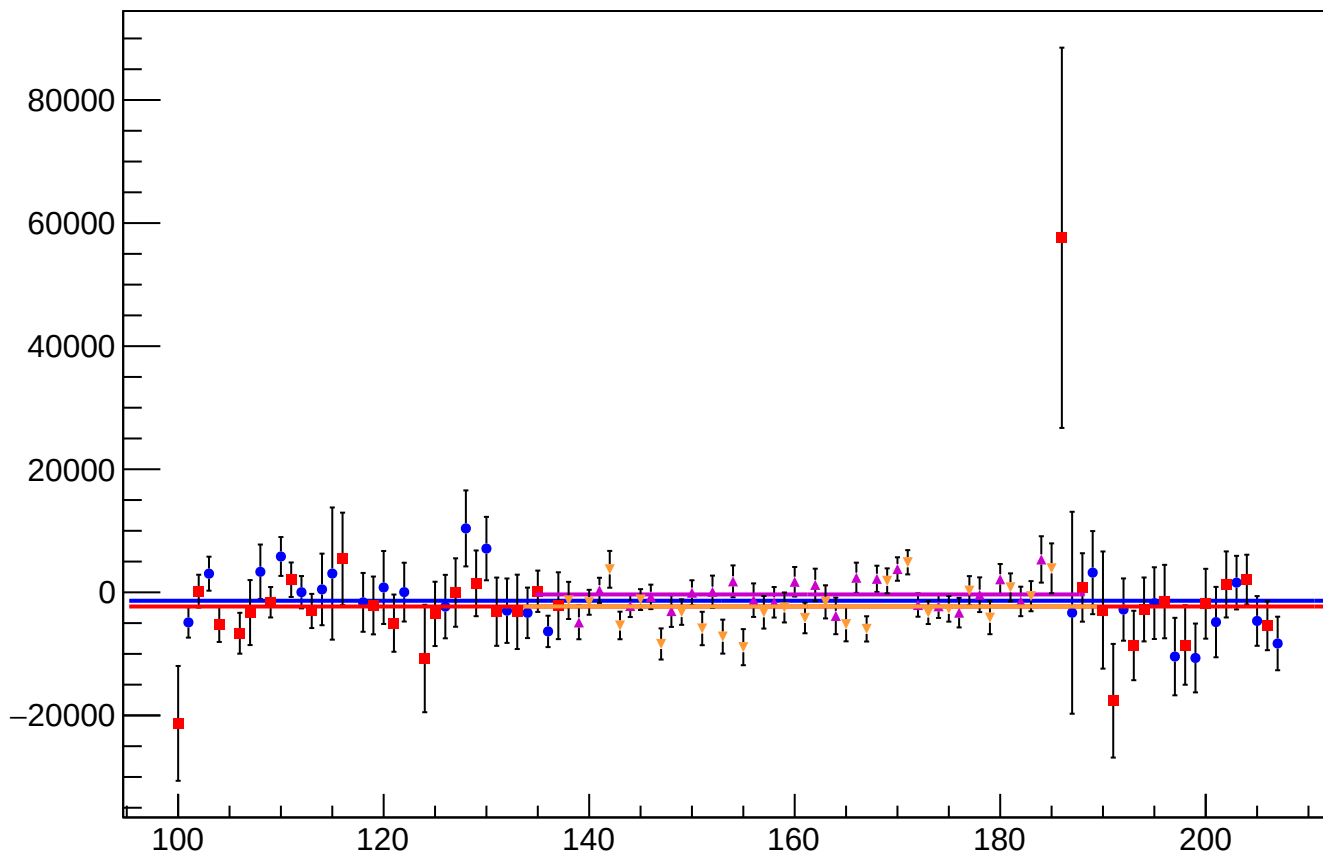
Left In:  $297.885 \pm 0.051$   $\chi^2/\text{NDF}$ : 1319043.7/22

+ sign  $299.708 \pm 0.037$   $\chi^2/\text{NDF}$ : 3358828.7/50

All:  $298.824 \pm 0.026$   $\chi^2/\text{NDF}$ : 7485686.5/104

- sign  $297.948 \pm 0.037$   $\chi^2/\text{NDF}$ : 4125746.6/53

# asym\_sam4\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-1366.423 \pm 831.876$   $\chi^2/\text{NDF}$ : 31.6/25

Left Out:  $-2290.986 \pm 470.517$   $\chi^2/\text{NDF}$ : 51.7/24

Right Out:  $-2301.624 \pm 790.926$   $\chi^2/\text{NDF}$ : 25.3/30

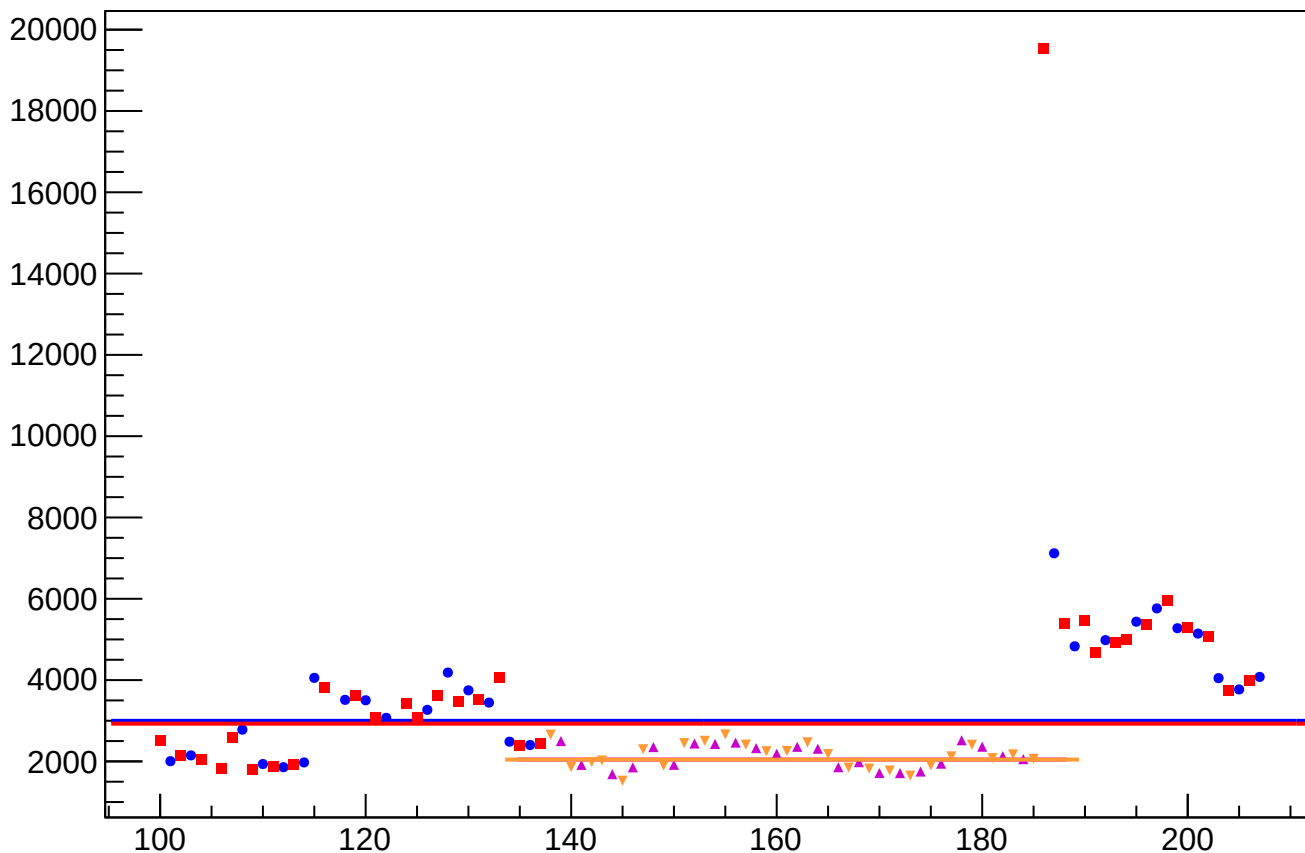
Left In:  $-342.606 \pm 483.604$   $\chi^2/\text{NDF}$ : 22.8/22

+ sign  $-2066.895 \pm 409.546$   $\chi^2/\text{NDF}$ : 84.2/50

All:  $-1475.710 \pm 290.663$   $\chi^2/\text{NDF}$ : 141.0/104

- sign  $-875.702 \pm 412.590$   $\chi^2/\text{NDF}$ : 52.6/53

# asym\_sam4\_eigen\_dit\_correction\_rms vs Slug



Right In: 2997.485+/-0.588  $\chi^2$ /NDF: 3760736.0/25

Left Out: 2043.742+/-0.333  $\chi^2$ /NDF:853393.7/24

Right Out: 2927.606+/-0.559  $\chi^2$ /NDF: 5273419.2/30

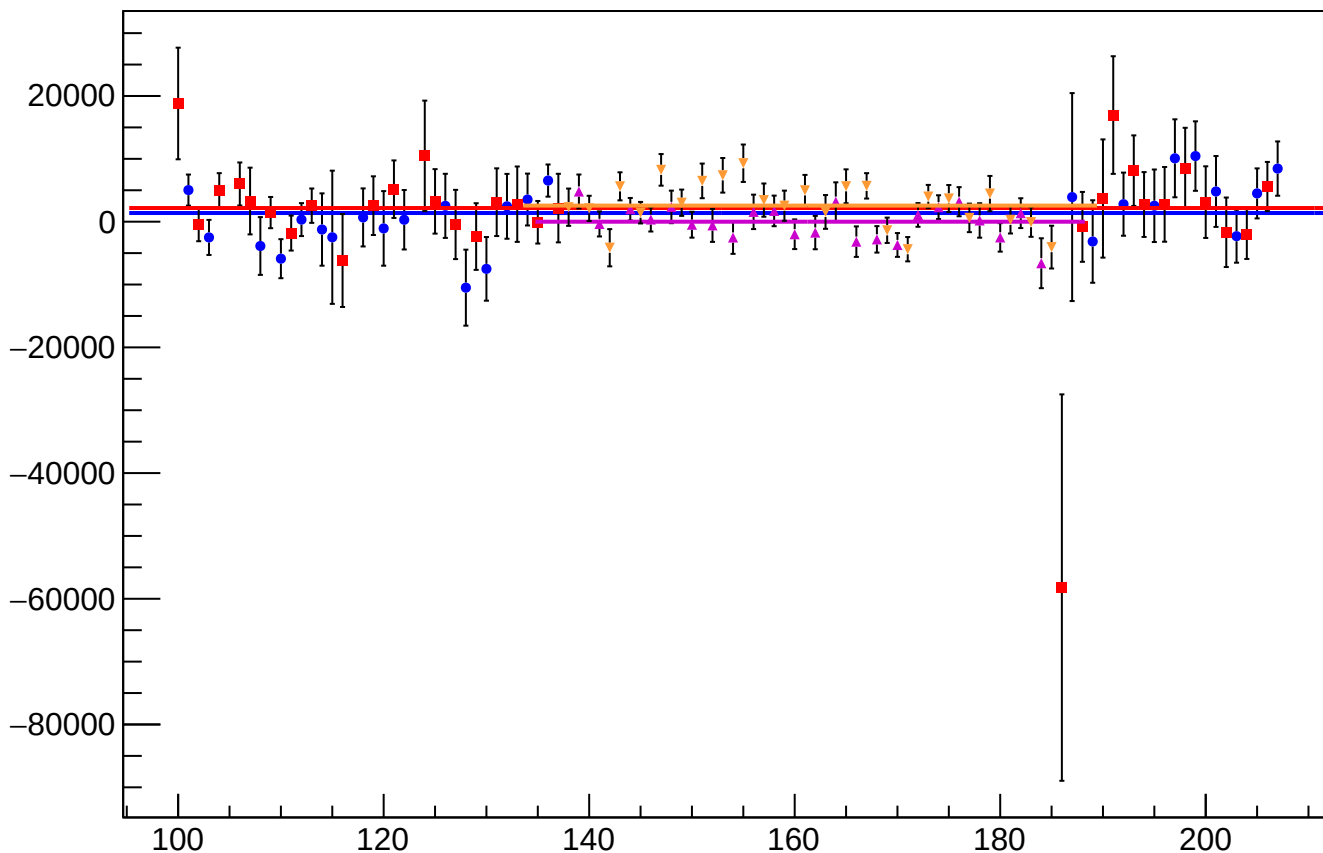
Left In: 2045.175+/-0.342  $\chi^2$ /NDF:690218.2/22

+ sign 2274.905+/-0.290  $\chi^2$ /NDF: 6605853.2/50

All: 2280.067+/-0.206  $\chi^2$ /NDF: 14382212.0/100

- sign 2285.306+/-0.292  $\chi^2$ /NDF: 7775718.7/53

# asym\_sam4\_mean vs Slug



Right In: 1379.731 $\pm$ 827.248  $\chi^2$ /NDF: 32.7/25

Left Out: 2559.048 $\pm$ 465.944  $\chi^2$ /NDF: 52.7/24

Right Out: 2174.384 $\pm$ 789.111  $\chi^2$ /NDF: 24.1/30

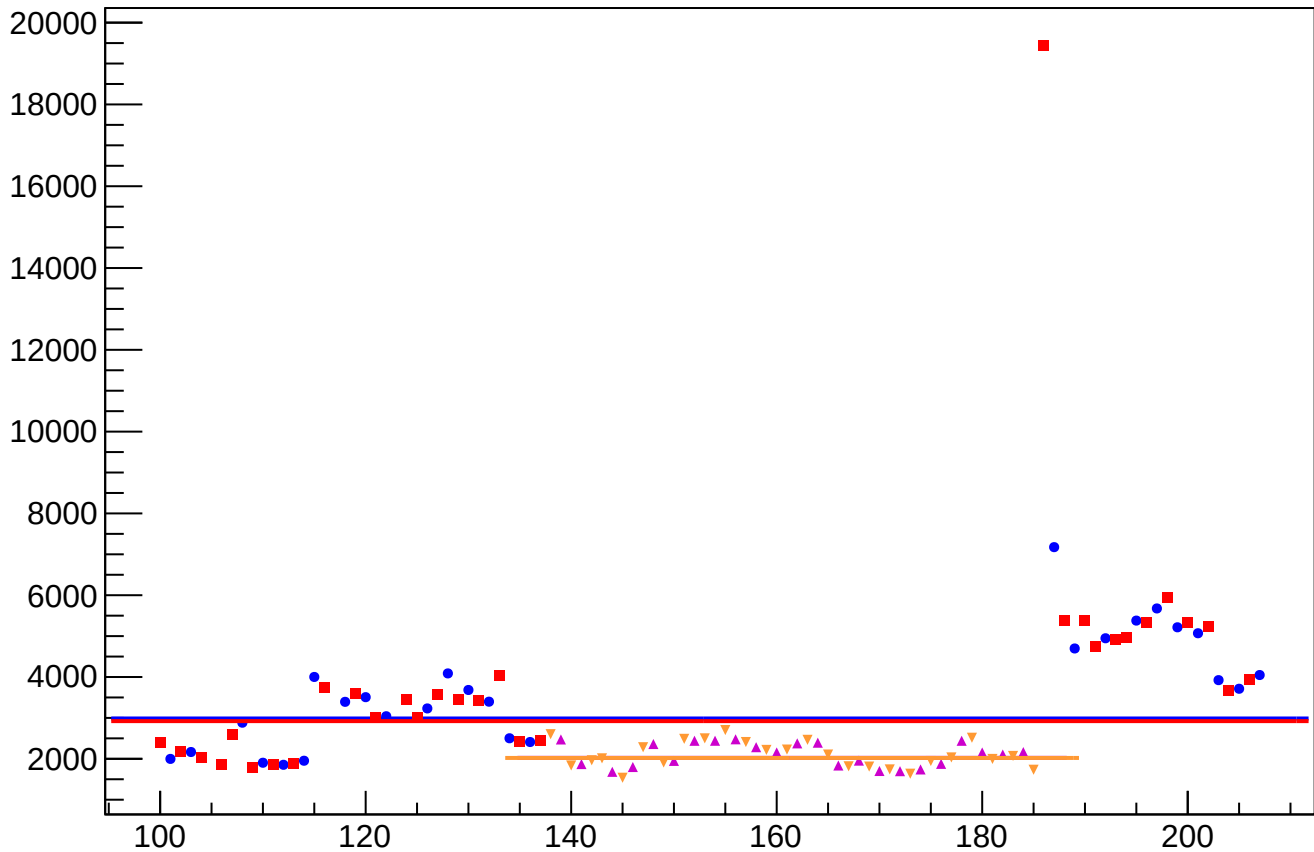
Left In: -3.474 $\pm$ 478.514  $\chi^2$ /NDF: 24.7/22

+ sign 2275.021 $\pm$ 405.976  $\chi^2$ /NDF: 86.9/50

All: 1435.156 $\pm$ 288.189  $\chi^2$ /NDF: 149.9/104

- sign 582.053 $\pm$ 409.163  $\chi^2$ /NDF: 54.3/53

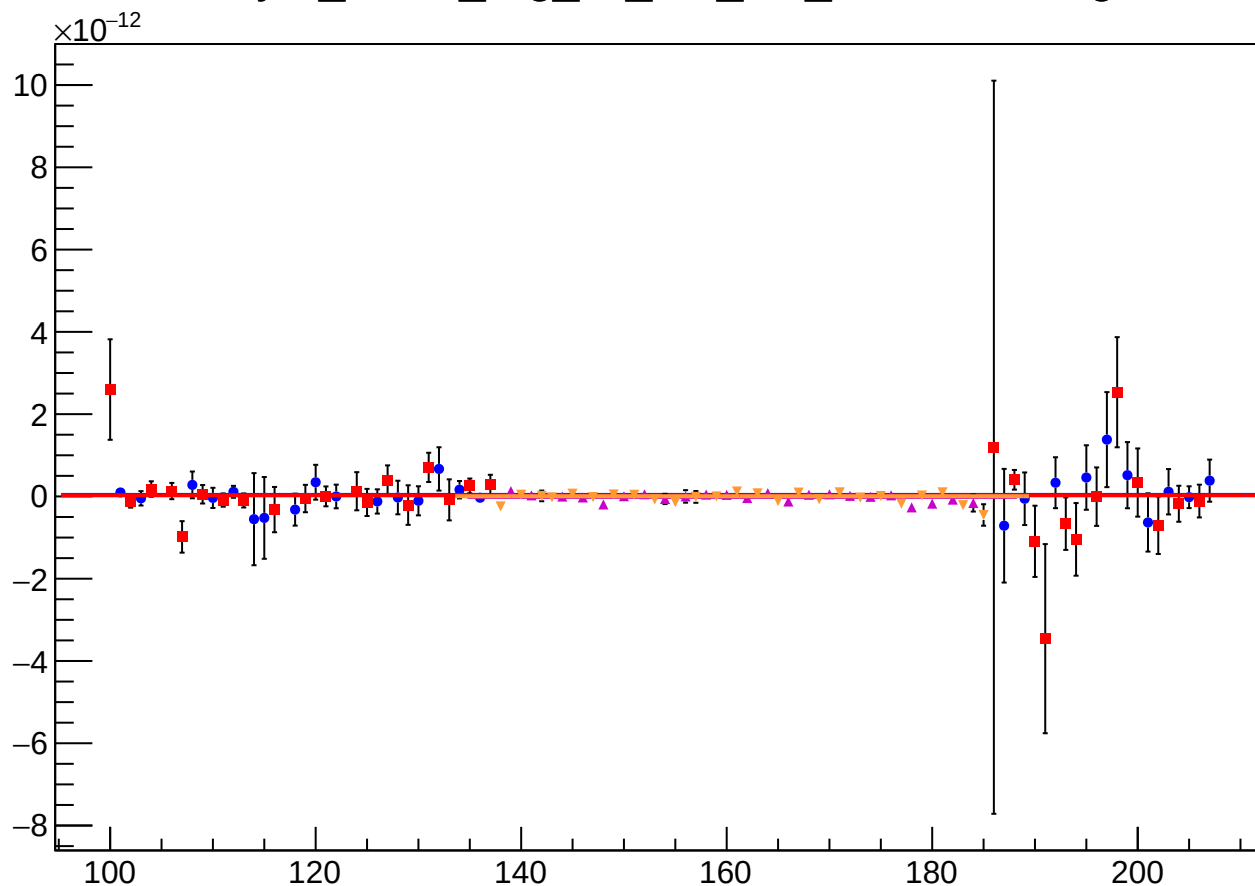
# asym\_sam4\_rms vs Slug



|                             |                                    |                         |                                      |
|-----------------------------|------------------------------------|-------------------------|--------------------------------------|
| Right In: 2985.867+/-0.585  | $\chi^2/\text{NDF}$ : 3648494.0/25 | + sign 2253.581+/-0.287 | $\chi^2/\text{NDF}$ : 6594234.8/50   |
| Left Out: 2021.266+/-0.329  | $\chi^2/\text{NDF}$ : 881370.9/24  | All: 2259.143+/-0.204   | $\chi^2/\text{NDF}$ : 14425223.2/100 |
| Right Out: 2921.572+/-0.558 | $\chi^2/\text{NDF}$ : 5239260.6/30 | - sign 2264.792+/-0.289 | $\chi^2/\text{NDF}$ : 7830231.8/53   |
| Left In: 2023.284+/-0.338   | $\chi^2/\text{NDF}$ : 696055.4/22  |                         |                                      |



# asym\_sam4\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 10.1/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 32.1/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 37.4/30

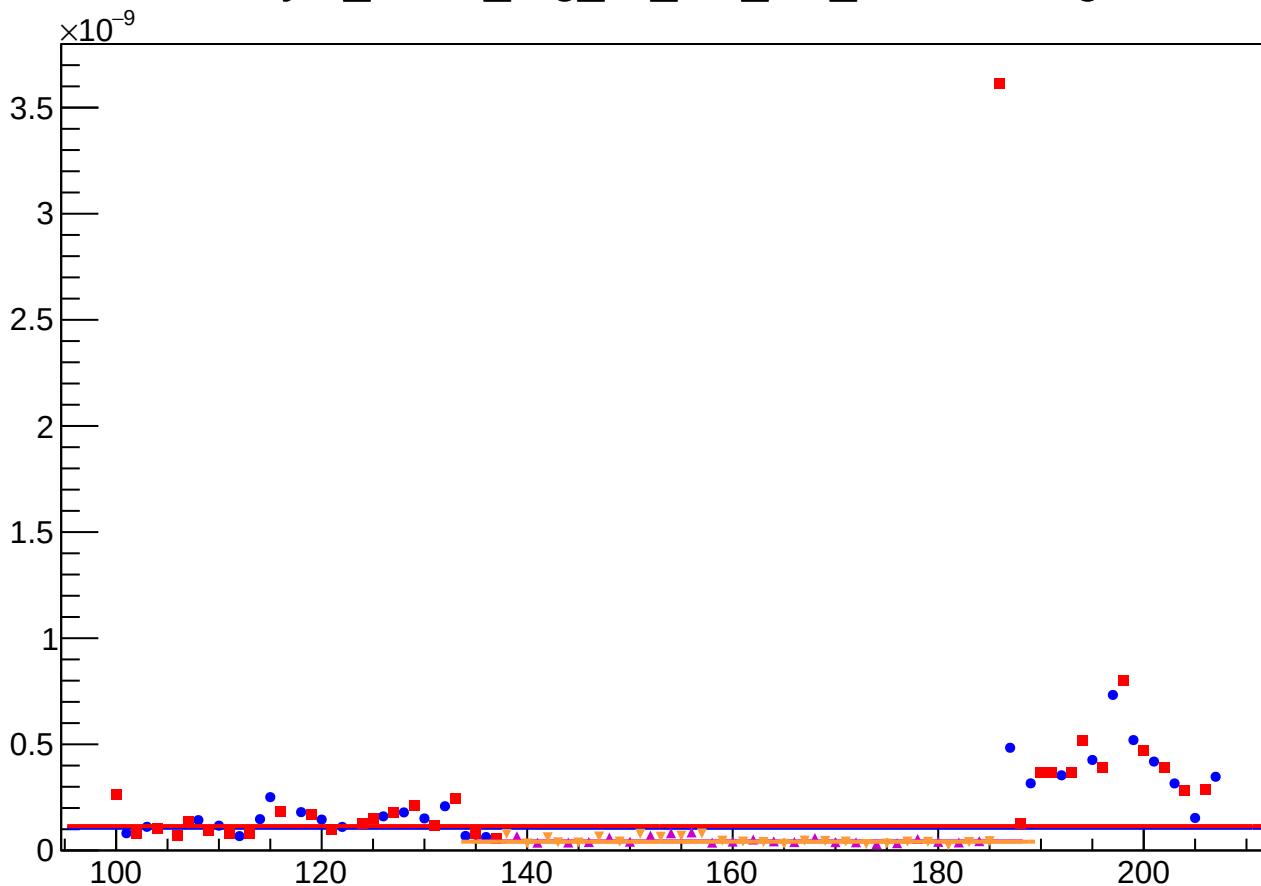
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 20.8/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 42.6/50

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 101.8/104

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 58.7/53

# asym\_sam4\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4428406.7/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1235677.0/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4476822.0/30

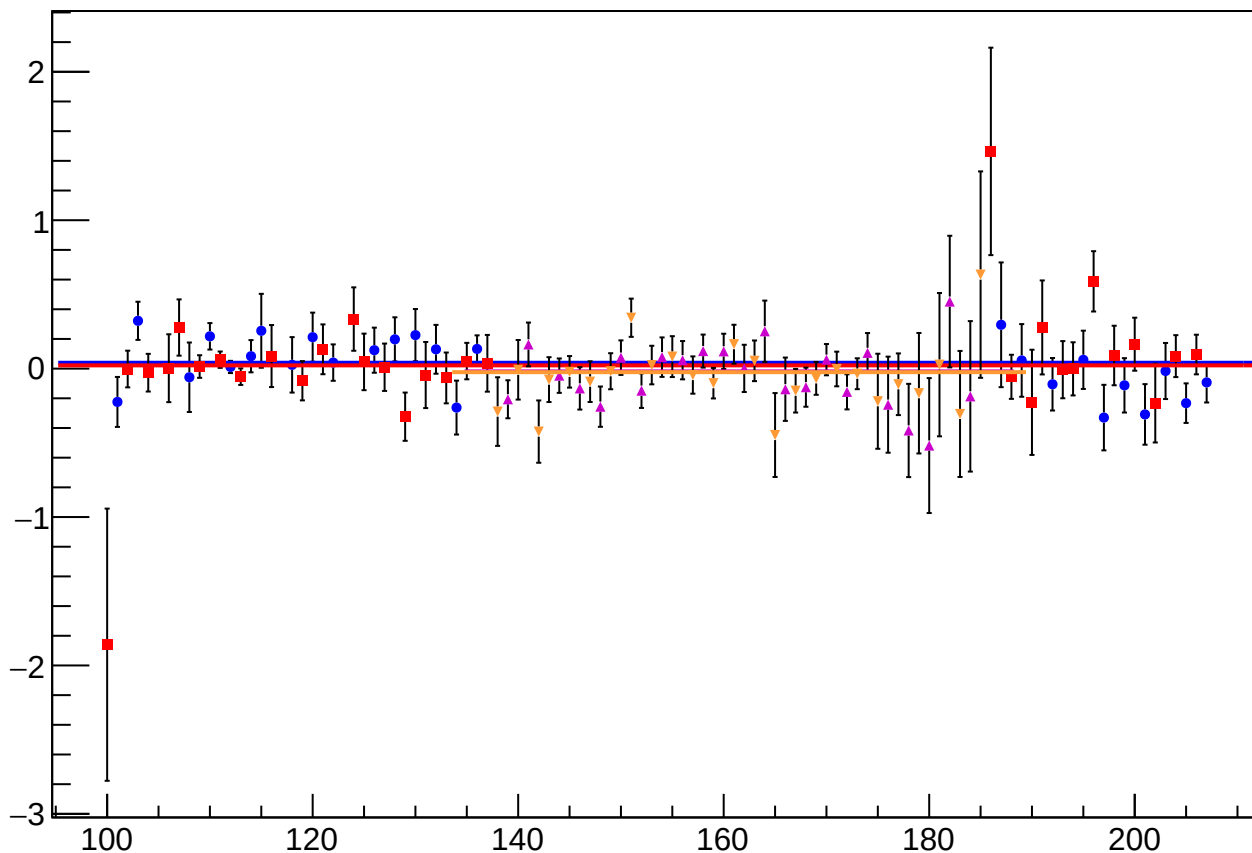
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 931395.8/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8733694.7/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 17547062.4/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8788067.8/53

# asym\_sam4\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.040 $\pm$ 0.025  $\chi^2$ /NDF: 33.3/25

Left Out: -0.024 $\pm$ 0.030  $\chi^2$ /NDF: 22.2/24

Right Out: 0.022 $\pm$ 0.024  $\chi^2$ /NDF: 32.4/30

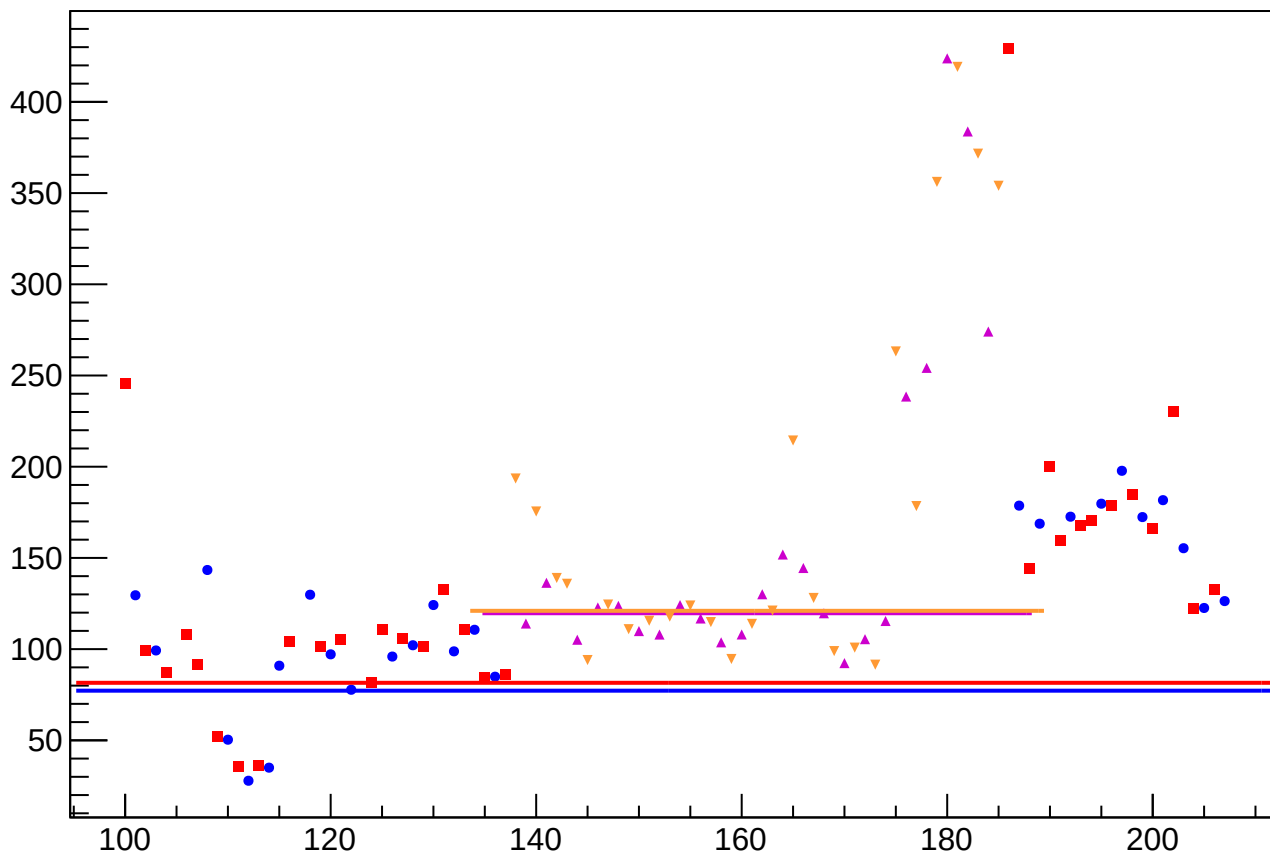
Left In: -0.019 $\pm$ 0.030  $\chi^2$ /NDF: 23.0/22

+ sign 0.014 $\pm$ 0.019  $\chi^2$ /NDF: 58.1/50

All: 0.010 $\pm$ 0.013  $\chi^2$ /NDF: 114.8/104

- sign 0.006 $\pm$ 0.019  $\chi^2$ /NDF: 56.5/53

# asym\_sam4\_dit\_vs\_cor\_diff\_rms vs Slug



Right In:  $77.222 \pm 0.017$   $\chi^2/\text{NDF}: 8333614.1/25$

Left Out:  $120.999 \pm 0.021$   $\chi^2/\text{NDF}: 4095266.9/24$

Right Out:  $81.538 \pm 0.017$   $\chi^2/\text{NDF}: 8169497.3/30$

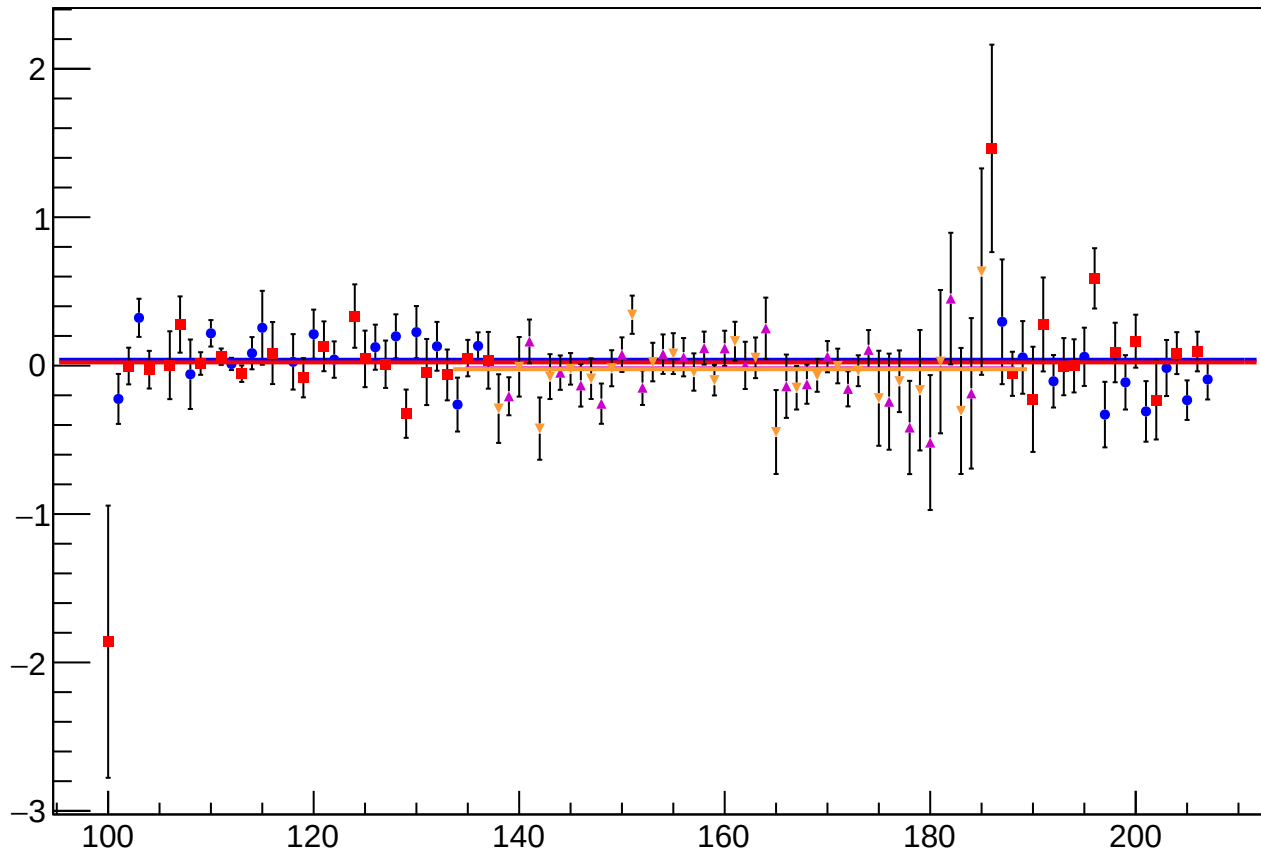
Left In:  $119.679 \pm 0.021$   $\chi^2/\text{NDF}: 2838257.9/22$

+ sign  $94.817 \pm 0.013$   $\chi^2/\text{NDF}: 14992496.3/50$

All:  $95.615 \pm 0.009$   $\chi^2/\text{NDF}: 27950607.9/104$

- sign  $96.406 \pm 0.013$   $\chi^2/\text{NDF}: 12951055.7/53$

# asym\_sam4\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.040 $\pm$ 0.025  $\chi^2$ /NDF: 33.3/25

Left Out: -0.024 $\pm$ 0.030  $\chi^2$ /NDF: 22.2/24

Right Out: 0.022 $\pm$ 0.024  $\chi^2$ /NDF: 32.4/30

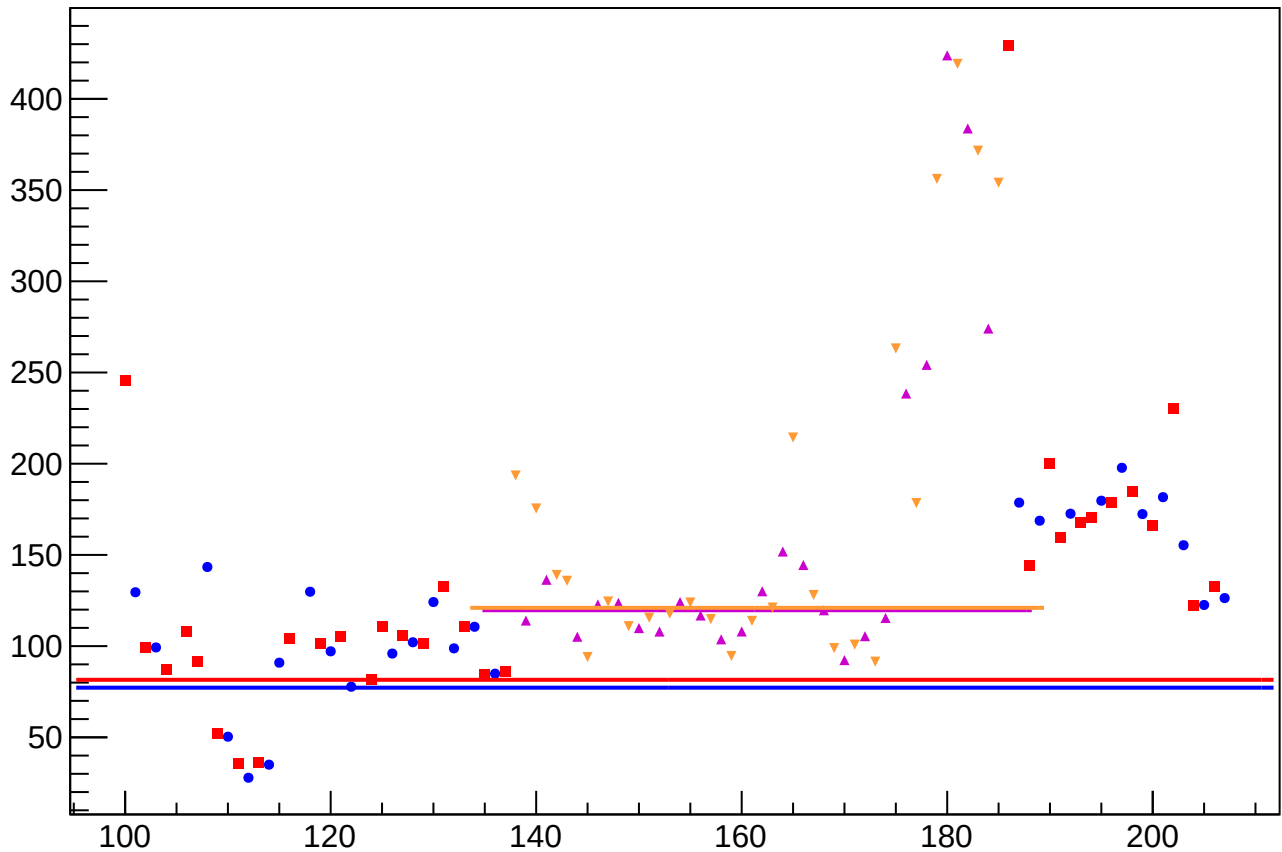
Left In: -0.019 $\pm$ 0.030  $\chi^2$ /NDF: 23.0/22

+ sign 0.014 $\pm$ 0.019  $\chi^2$ /NDF: 58.1/50

All: 0.010 $\pm$ 0.013  $\chi^2$ /NDF: 114.8/104

- sign 0.006 $\pm$ 0.019  $\chi^2$ /NDF: 56.5/53

# asym\_sam4\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 77.222 $\pm$ 0.017  $\chi^2$ /NDF: 8333614.1/25

Left Out: 120.999 $\pm$ 0.021  $\chi^2$ /NDF: 4095266.9/24

Right Out: 81.538 $\pm$ 0.017  $\chi^2$ /NDF: 8169497.3/30

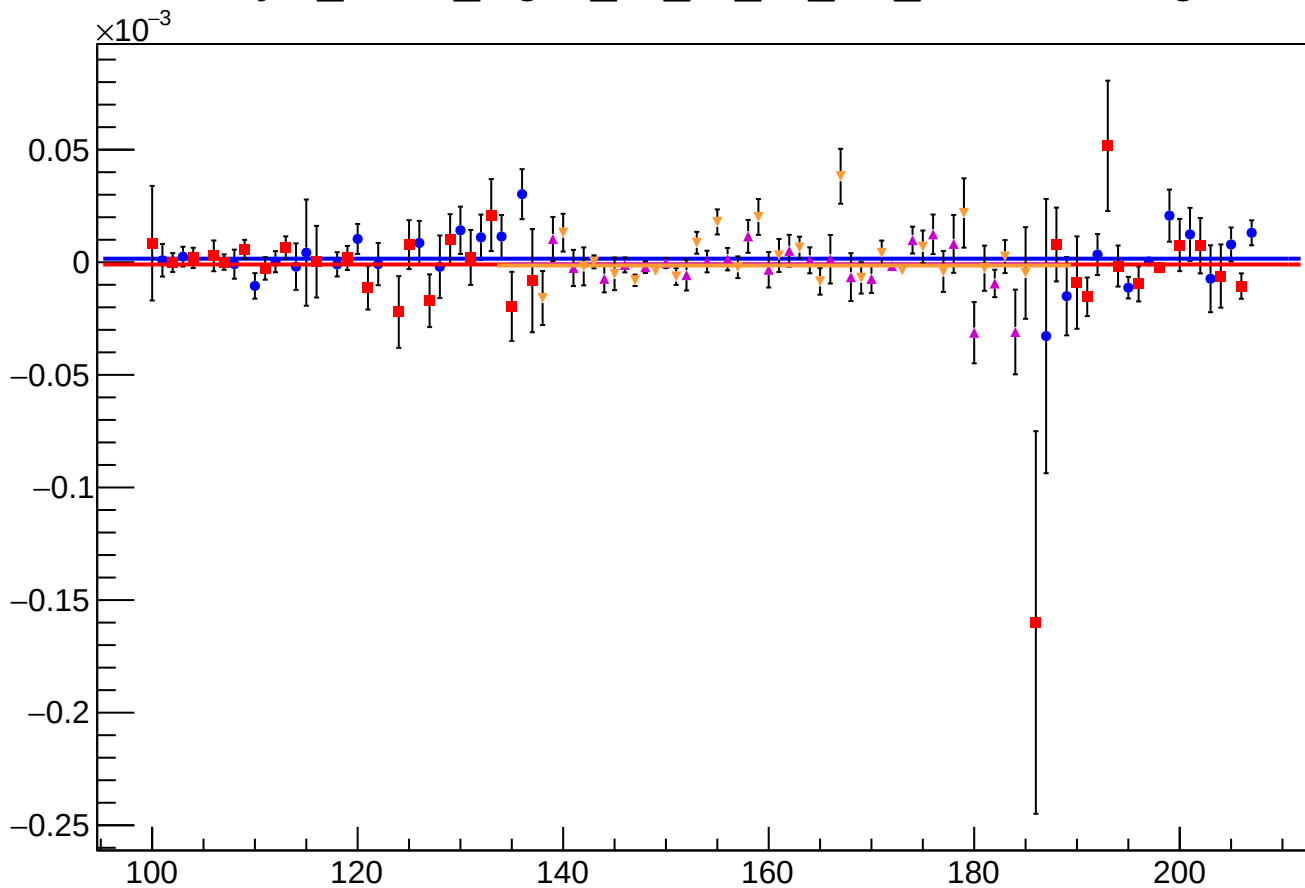
Left In: 119.679 $\pm$ 0.021  $\chi^2$ /NDF: 2838257.9/22

+ sign 94.817 $\pm$ 0.013  $\chi^2$ /NDF: 14992496.3/50

All: 95.615 $\pm$ 0.009  $\chi^2$ /NDF: 27950607.9/104

- sign 96.406 $\pm$ 0.013  $\chi^2$ /NDF: 12951055.7/53

# asym\_sam4\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 35.3/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 60.5/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 32.1/30

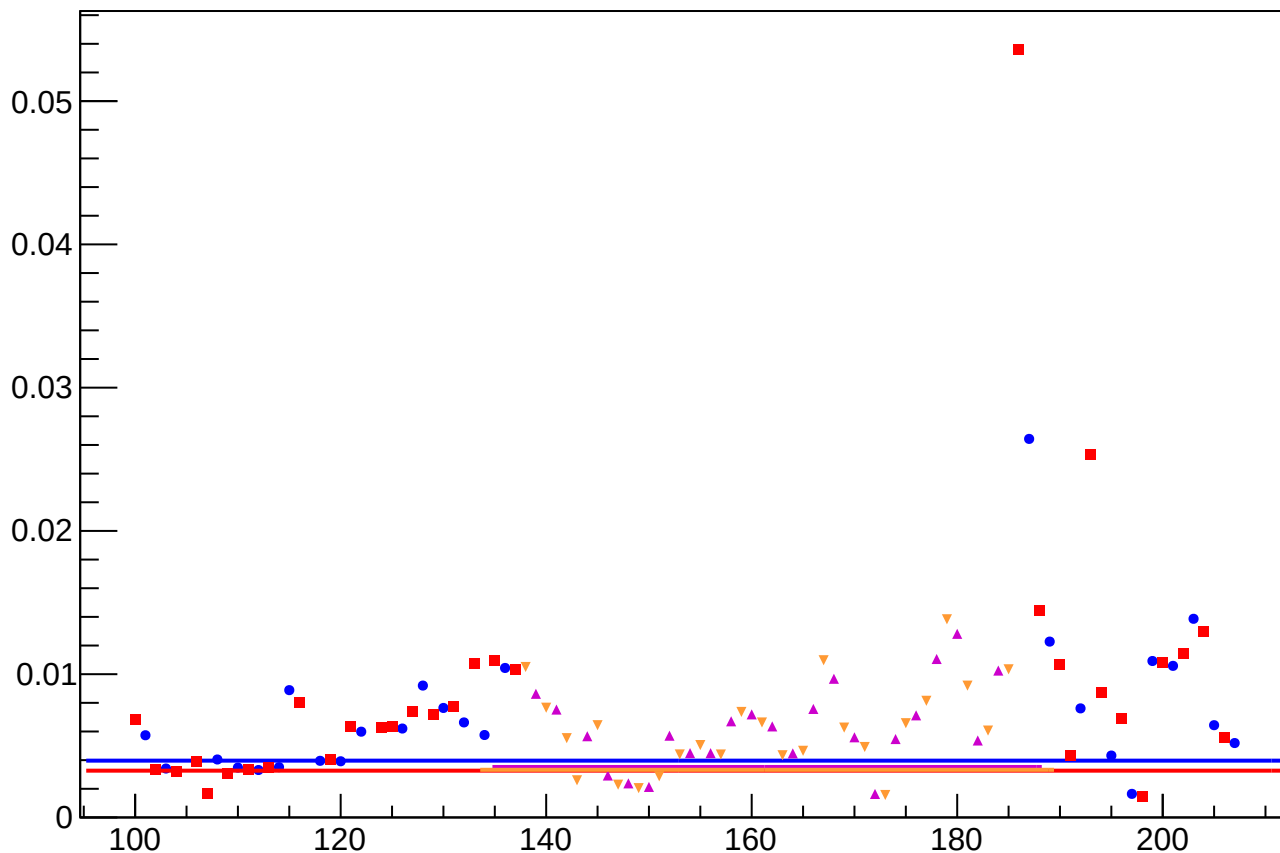
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 24.5/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 99.6/50

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 156.5/104

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 56.5/53

# asym\_sam4\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.004 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7806807.3/25

Left Out: 0.003 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 10486084.0/24

Right Out: 0.003 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 12681272.4/30

Left In: 0.004 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 9426441.5/22

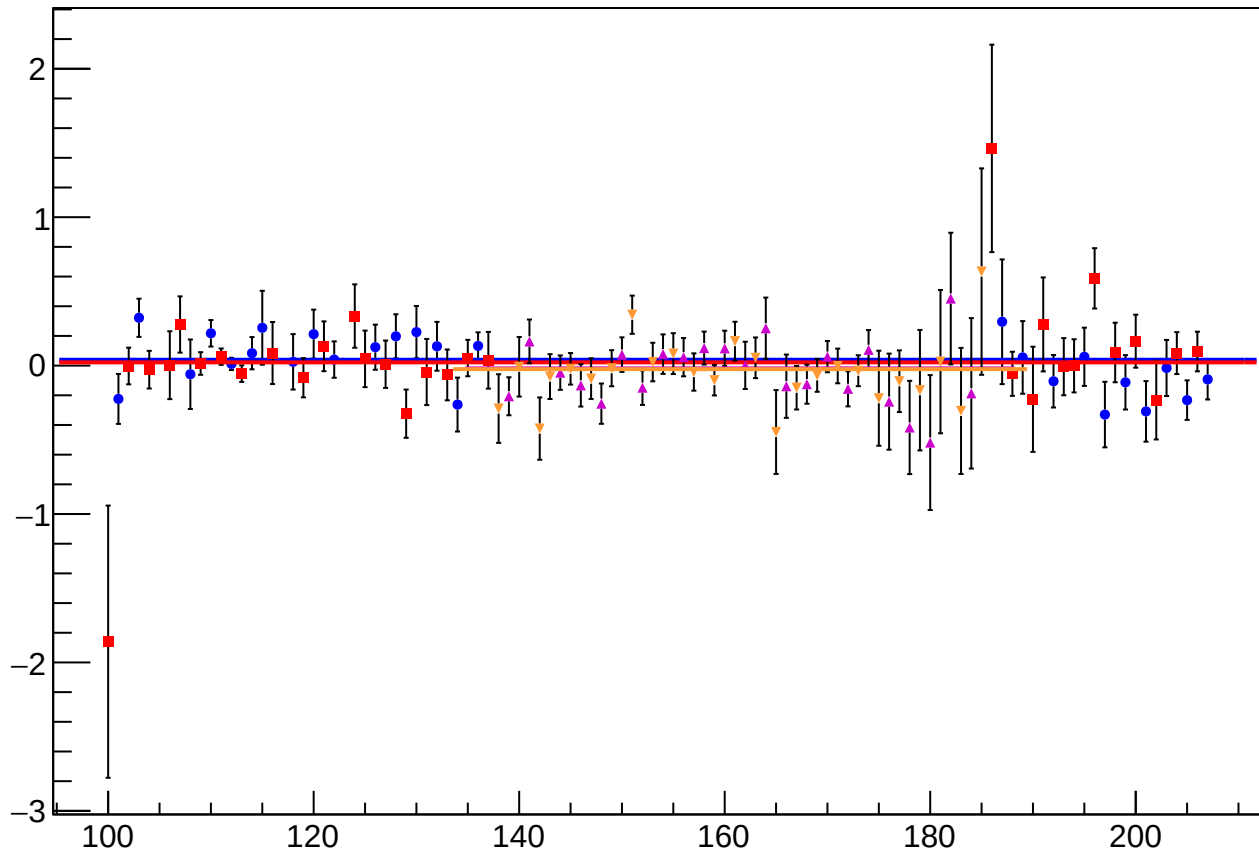
+ sign 0.004 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 18637746.0/50

All: 0.003 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 40847788.3/104

- sign 0.003 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 22170841.3/53



# asym\_sam4\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.040 $\pm$ 0.025  $\chi^2$ /NDF: 33.3/25

Left Out: -0.024 $\pm$ 0.030  $\chi^2$ /NDF: 22.2/24

Right Out: 0.022 $\pm$ 0.024  $\chi^2$ /NDF: 32.4/30

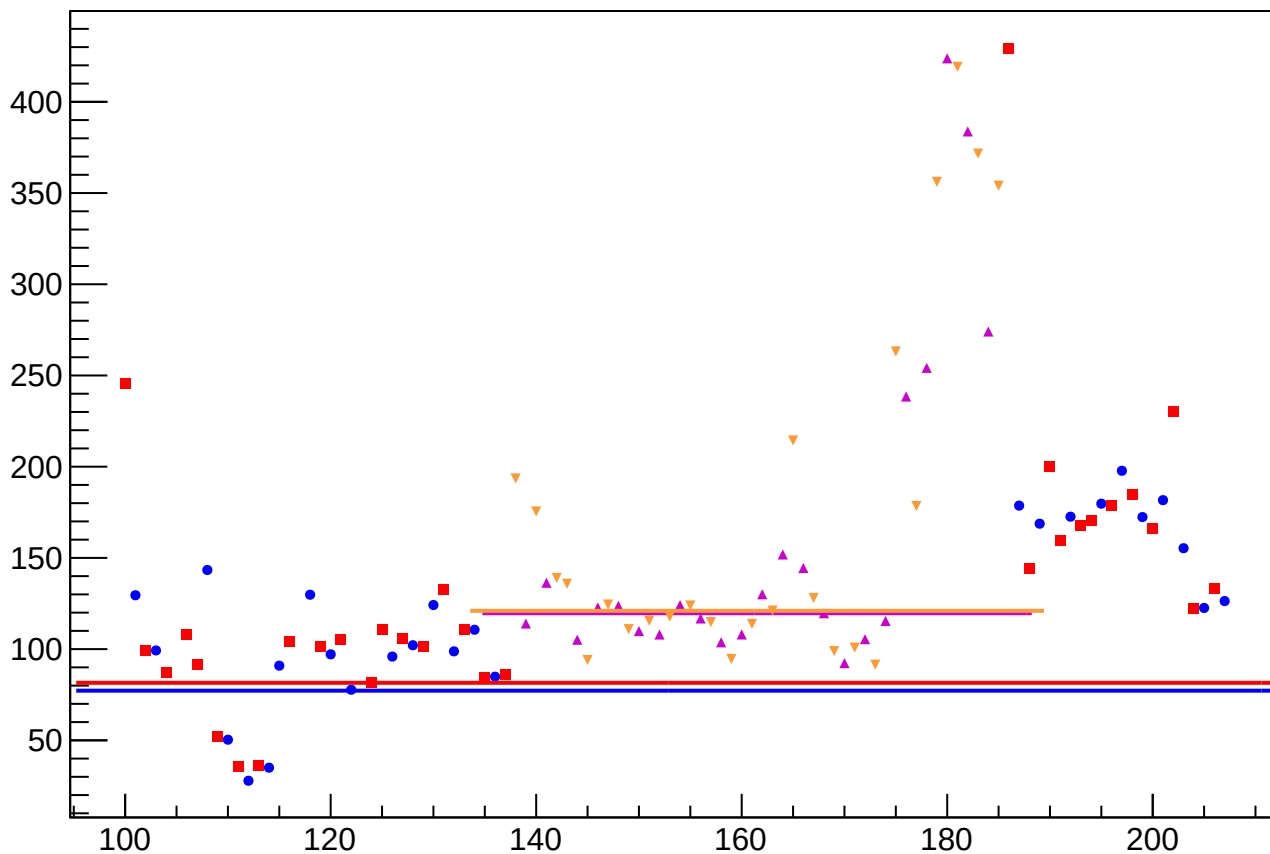
Left In: -0.019 $\pm$ 0.030  $\chi^2$ /NDF: 23.0/22

+ sign 0.014 $\pm$ 0.019  $\chi^2$ /NDF: 58.1/50

All: 0.010 $\pm$ 0.013  $\chi^2$ /NDF: 114.8/104

- sign 0.006 $\pm$ 0.019  $\chi^2$ /NDF: 56.5/53

# asym\_sam4\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 77.220 $\pm$ 0.017  $\chi^2$ /NDF: 8334041.7/25

Left Out: 121.000 $\pm$ 0.021  $\chi^2$ /NDF: 4095210.5/24

Right Out: 81.536 $\pm$ 0.017  $\chi^2$ /NDF: 8169979.7/30

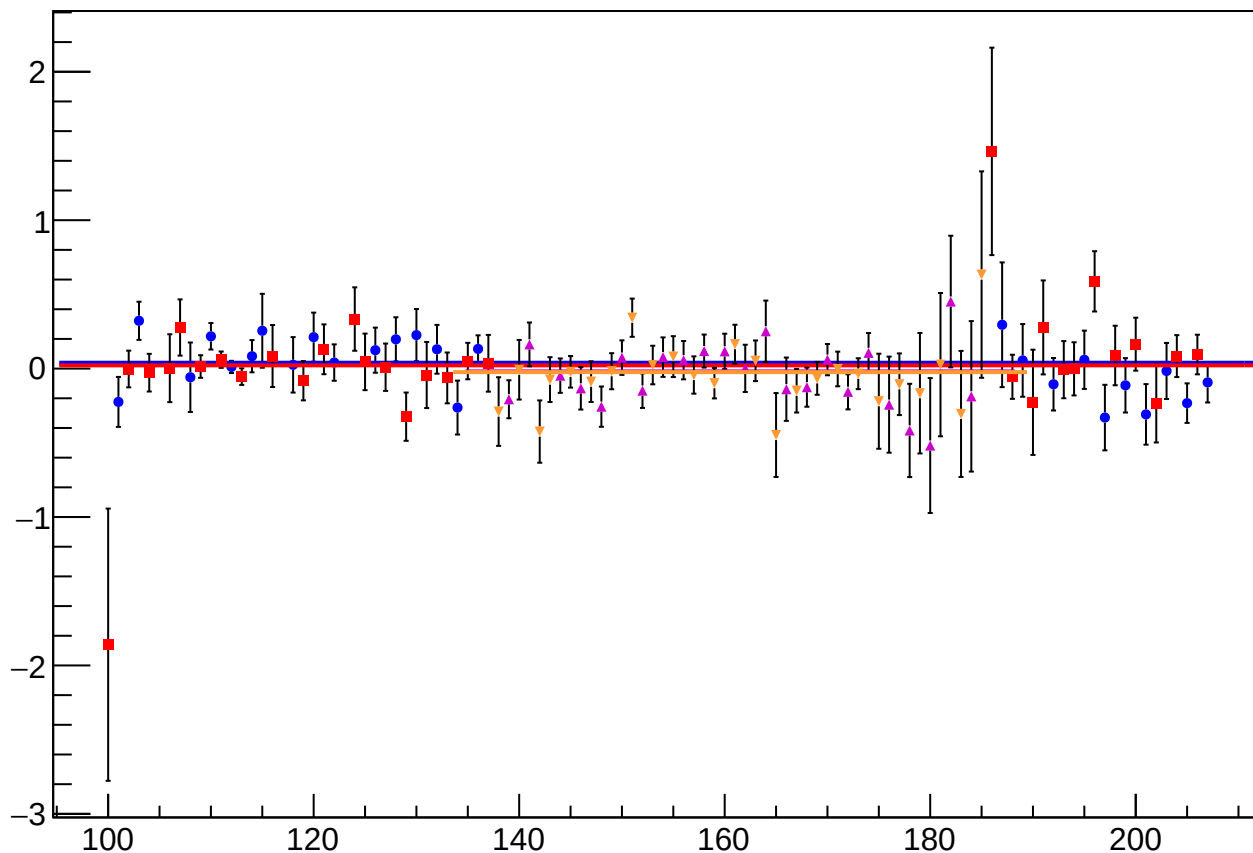
Left In: 119.680 $\pm$ 0.021  $\chi^2$ /NDF: 2838196.2/22

+ sign 94.816 $\pm$ 0.013  $\chi^2$ /NDF: 14993268.7/50

All: 95.614 $\pm$ 0.009  $\chi^2$ /NDF: 27952102.2/104

- sign 96.405 $\pm$ 0.013  $\chi^2$ /NDF: 12951774.4/53

asym\_sam4\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.040 $\pm$ 0.025  $\chi^2$ /NDF: 33.3/25

Left Out: -0.024 $\pm$ 0.030  $\chi^2$ /NDF: 22.2/24

Right Out: 0.022 $\pm$ 0.024  $\chi^2$ /NDF: 32.4/30

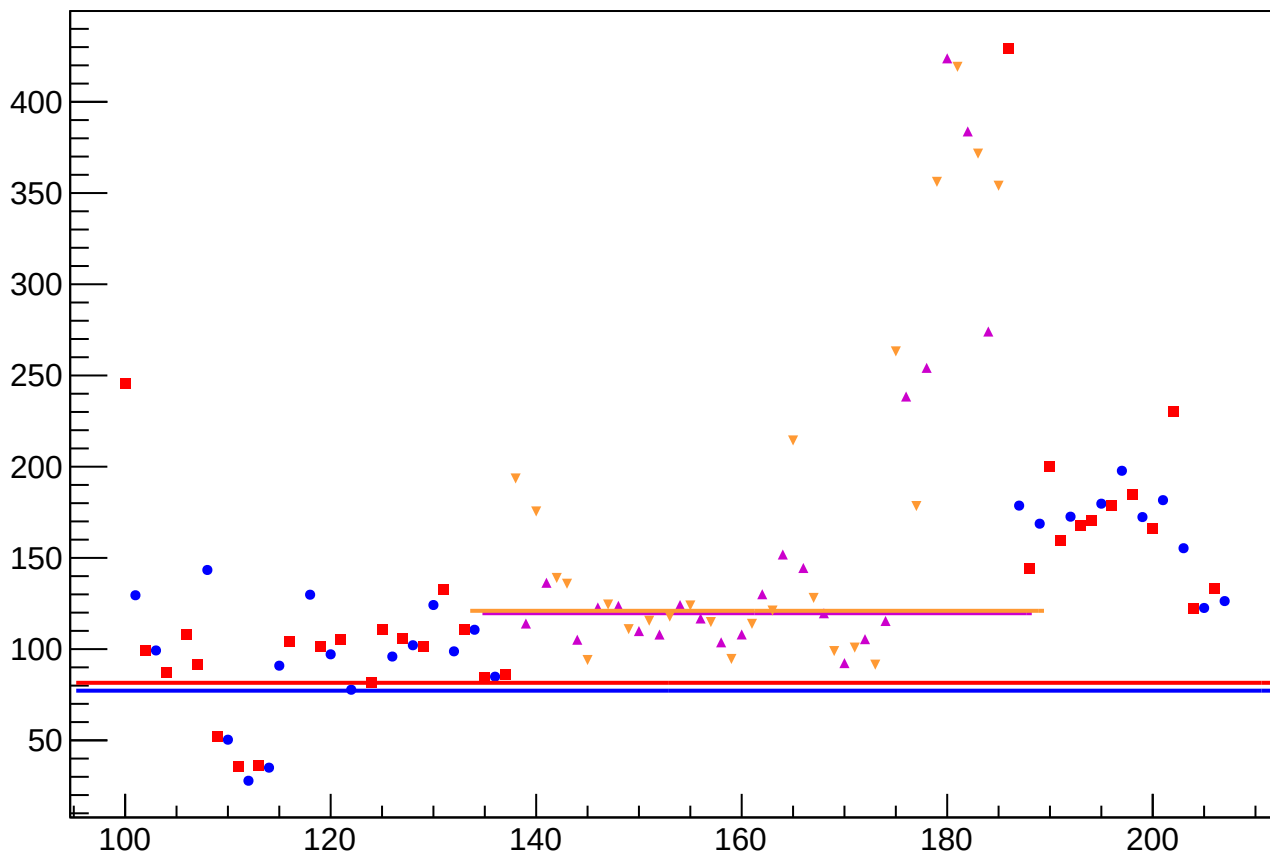
Left In: -0.019 $\pm$ 0.030  $\chi^2$ /NDF: 23.0/22

+ sign 0.014 $\pm$ 0.019  $\chi^2$ /NDF: 58.1/50

All: 0.010 $\pm$ 0.013  $\chi^2$ /NDF: 114.8/104

- sign 0.006 $\pm$ 0.019  $\chi^2$ /NDF: 56.5/53

asym\_sam4\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 77.220 $\pm$ 0.017  $\chi^2$ /NDF: 8334041.7/25

Left Out: 121.000 $\pm$ 0.021  $\chi^2$ /NDF: 4095210.5/24

Right Out: 81.536 $\pm$ 0.017  $\chi^2$ /NDF: 8169979.7/30

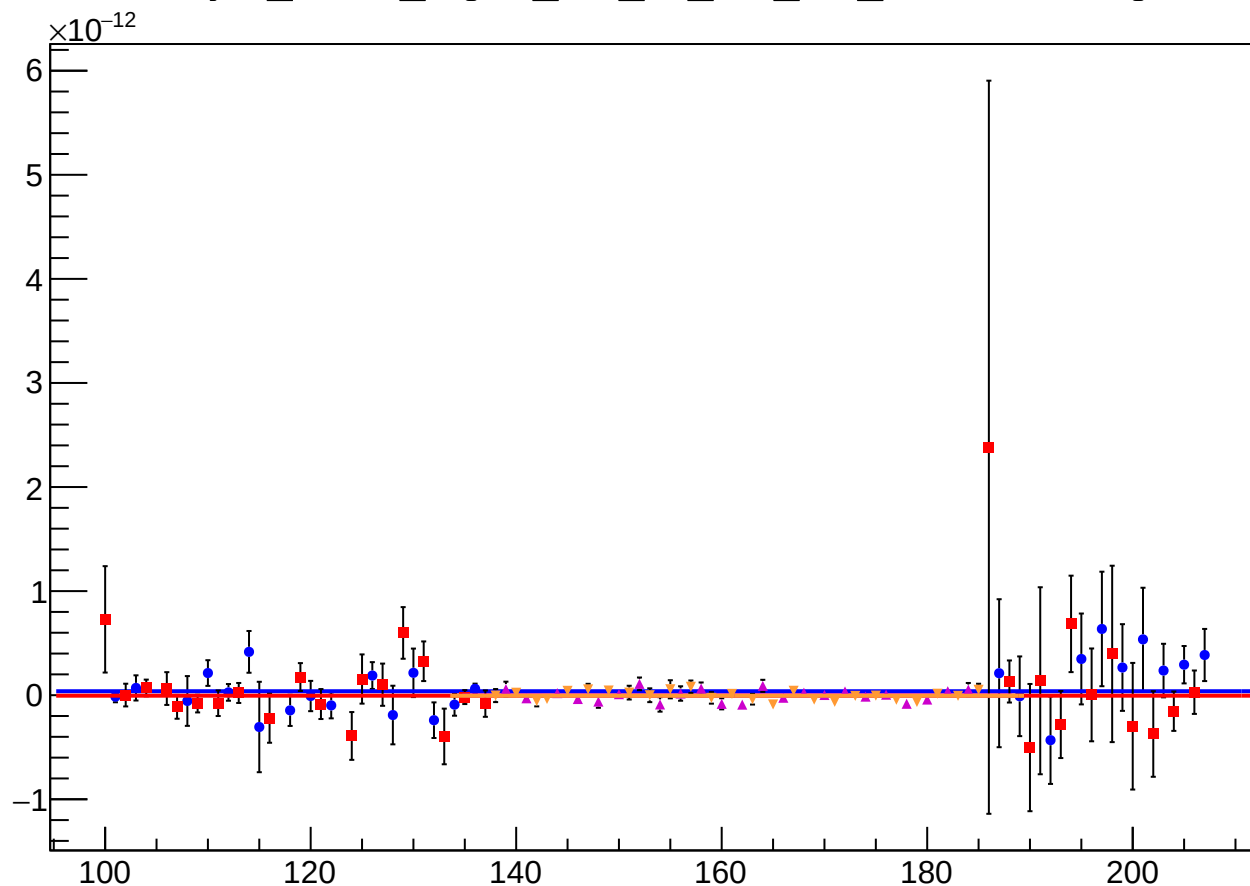
Left In: 119.680 $\pm$ 0.021  $\chi^2$ /NDF: 2838196.2/22

+ sign 94.816 $\pm$ 0.013  $\chi^2$ /NDF: 14993268.7/50

All: 95.614 $\pm$ 0.009  $\chi^2$ /NDF: 27952102.2/104

- sign 96.405 $\pm$ 0.013  $\chi^2$ /NDF: 12951774.4/53

asym\_sam4\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 25.9/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 22.2/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 29.7/30

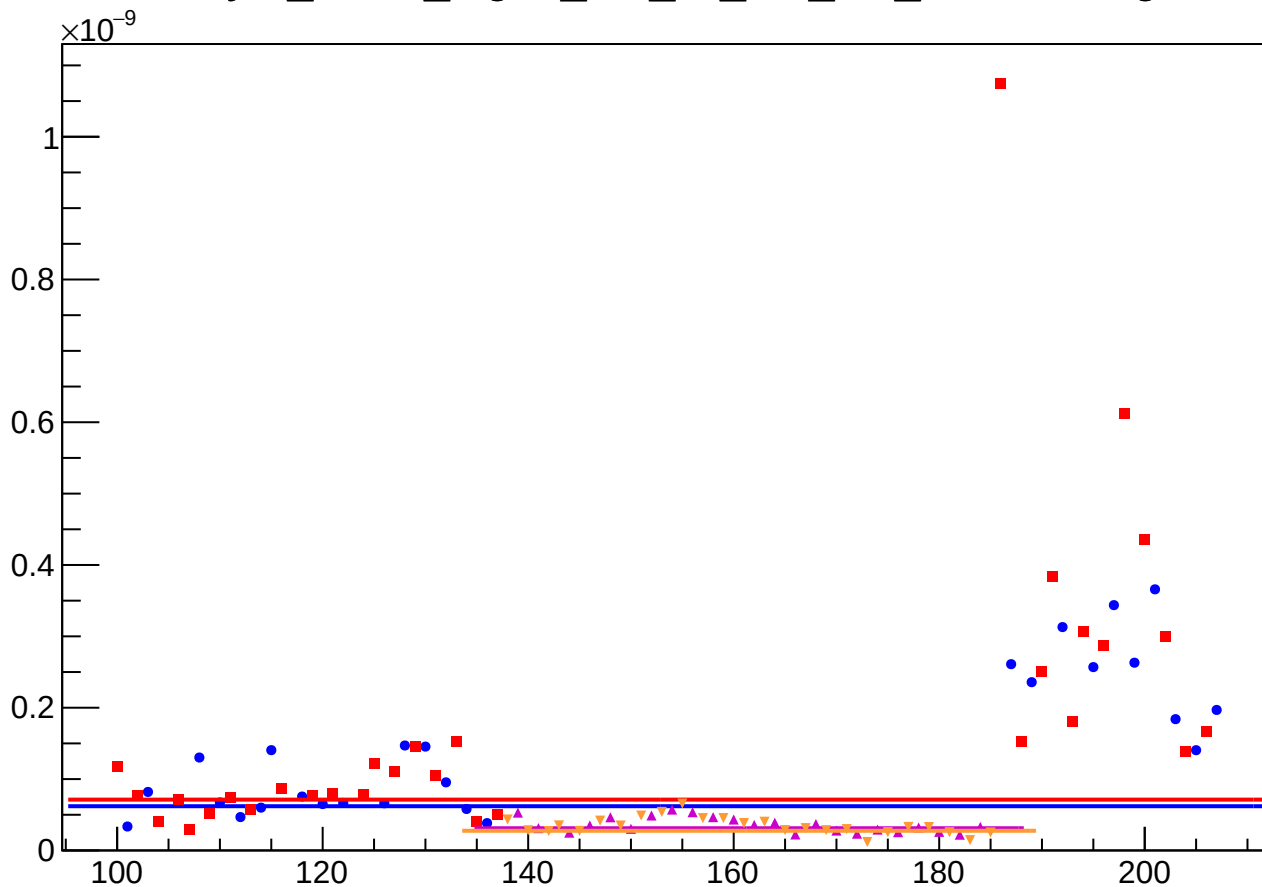
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 27.6/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 50.9/50

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 108.1/104

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 57.3/53

# asym\_sam4\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6741782.9/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3691738.1/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6778787.7/30

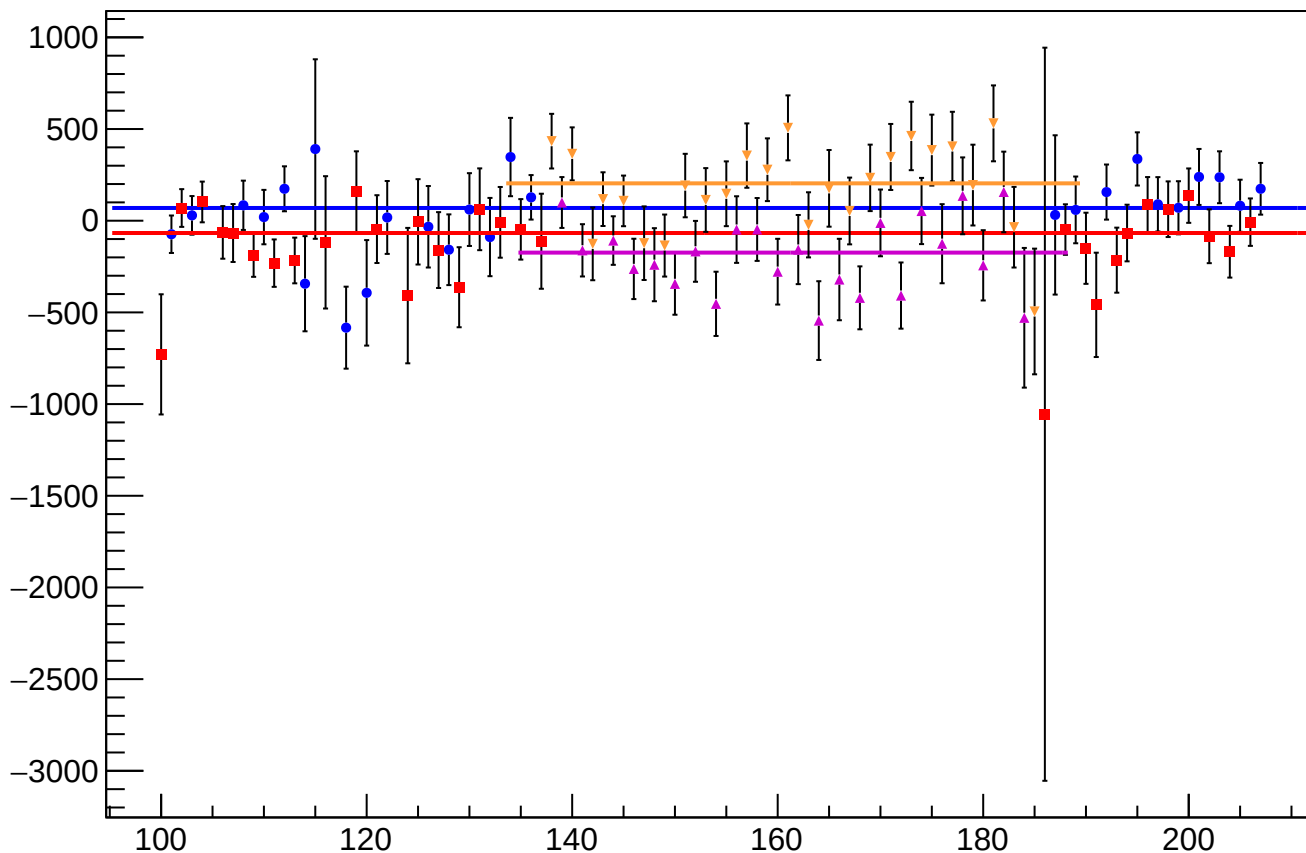
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1937733.7/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13774019.9/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 26572529.0/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12533859.4/53

# reg\_asym\_sam5\_mean vs Slug



Right In:  $69.477 \pm 31.198$   $\chi^2/\text{NDF}$ : 28.1/25

Left Out:  $203.760 \pm 35.878$   $\chi^2/\text{NDF}$ : 32.9/24

Right Out:  $-67.035 \pm 29.474$   $\chi^2/\text{NDF}$ : 24.2/30

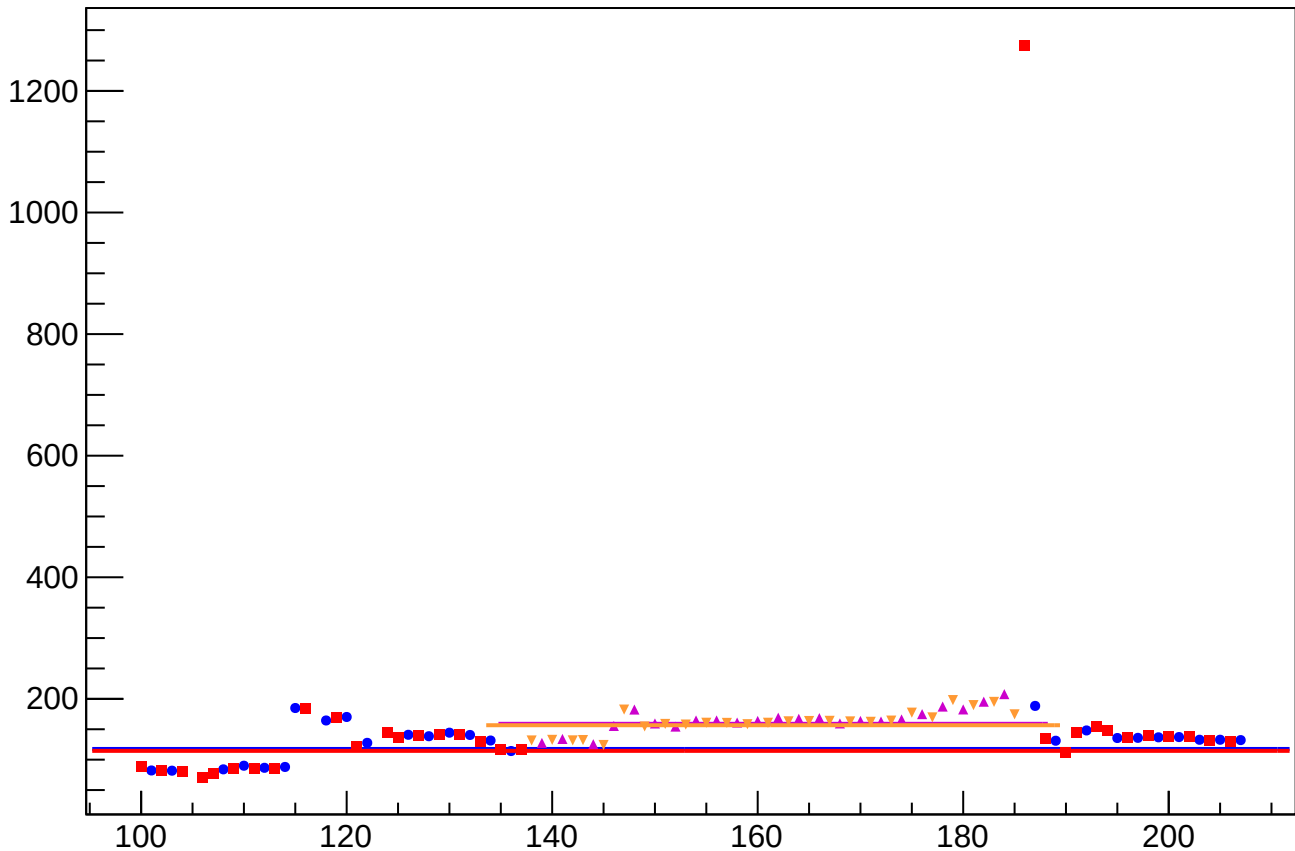
Left In:  $-173.974 \pm 37.405$   $\chi^2/\text{NDF}$ : 24.5/22

+ sign  $127.296 \pm 23.542$   $\chi^2/\text{NDF}$ : 69.0/50

All:  $7.675 \pm 16.507$   $\chi^2/\text{NDF}$ : 173.6/104

- sign  $-107.999 \pm 23.151$   $\chi^2/\text{NDF}$ : 53.8/53

# reg\_asym\_sam5\_rms vs Slug



Right In: 117.588 $\pm$ 0.022  $\chi^2$ /NDF: 1472894.3/25

Left Out: 156.638 $\pm$ 0.025  $\chi^2$ /NDF: 582414.4/24

Right Out: 114.478 $\pm$ 0.021  $\chi^2$ /NDF: 2554133.7/30

Left In: 158.952 $\pm$ 0.026  $\chi^2$ /NDF: 511321.2/22

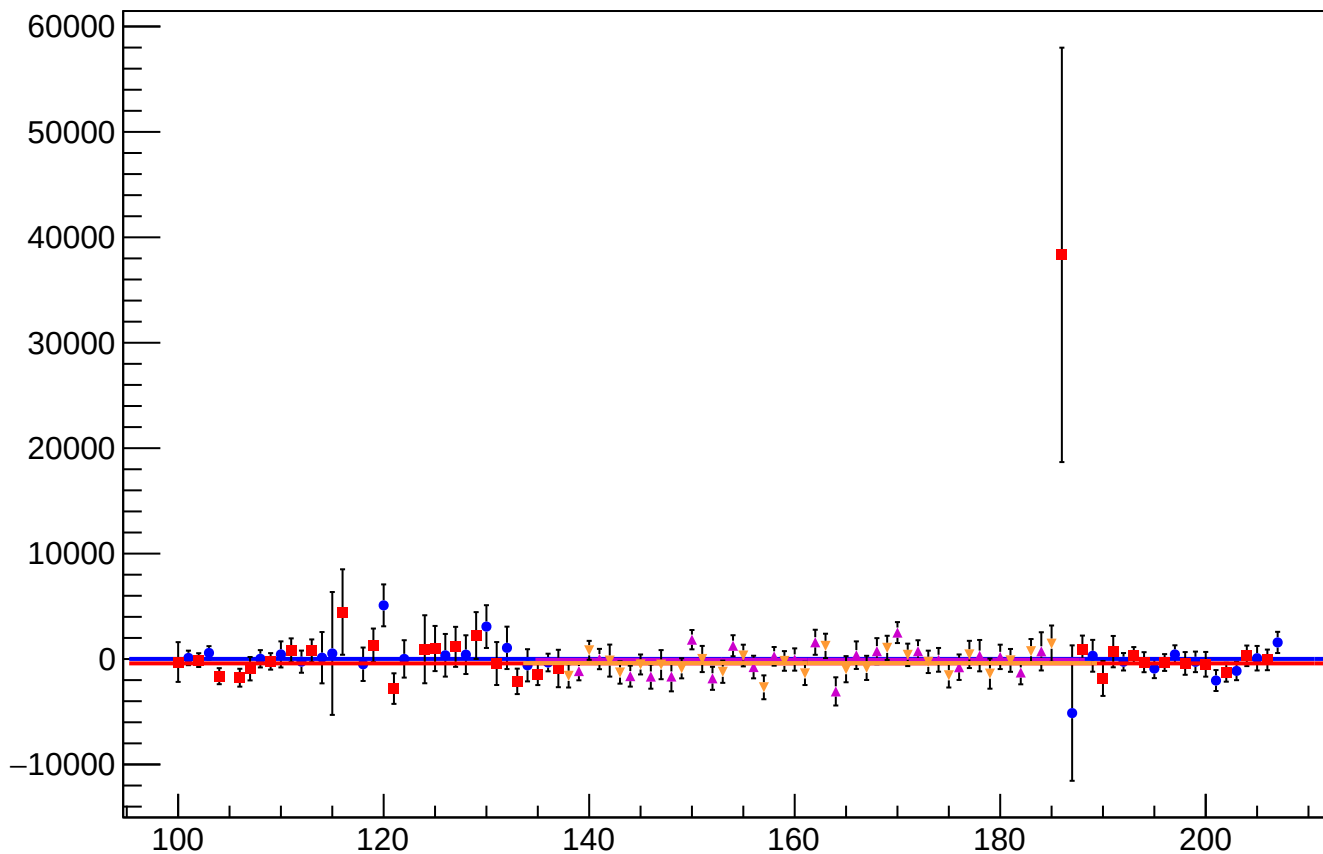
+ sign 134.402 $\pm$ 0.017  $\chi^2$ /NDF: 3404418.7/50

All: 132.934 $\pm$ 0.012  $\chi^2$ /NDF: 8229478.0/104

- sign 131.514 $\pm$ 0.016  $\chi^2$ /NDF: 4809754.8/53



# asym\_sam5\_reg\_correction\_mean vs Slug



Right In:  $11.895 \pm 217.340$   $\chi^2/\text{NDF}$ : 21.1/25

Left Out:  $-380.690 \pm 224.554$   $\chi^2/\text{NDF}$ : 18.7/24

Right Out:  $-412.916 \pm 202.754$   $\chi^2/\text{NDF}$ : 27.9/30

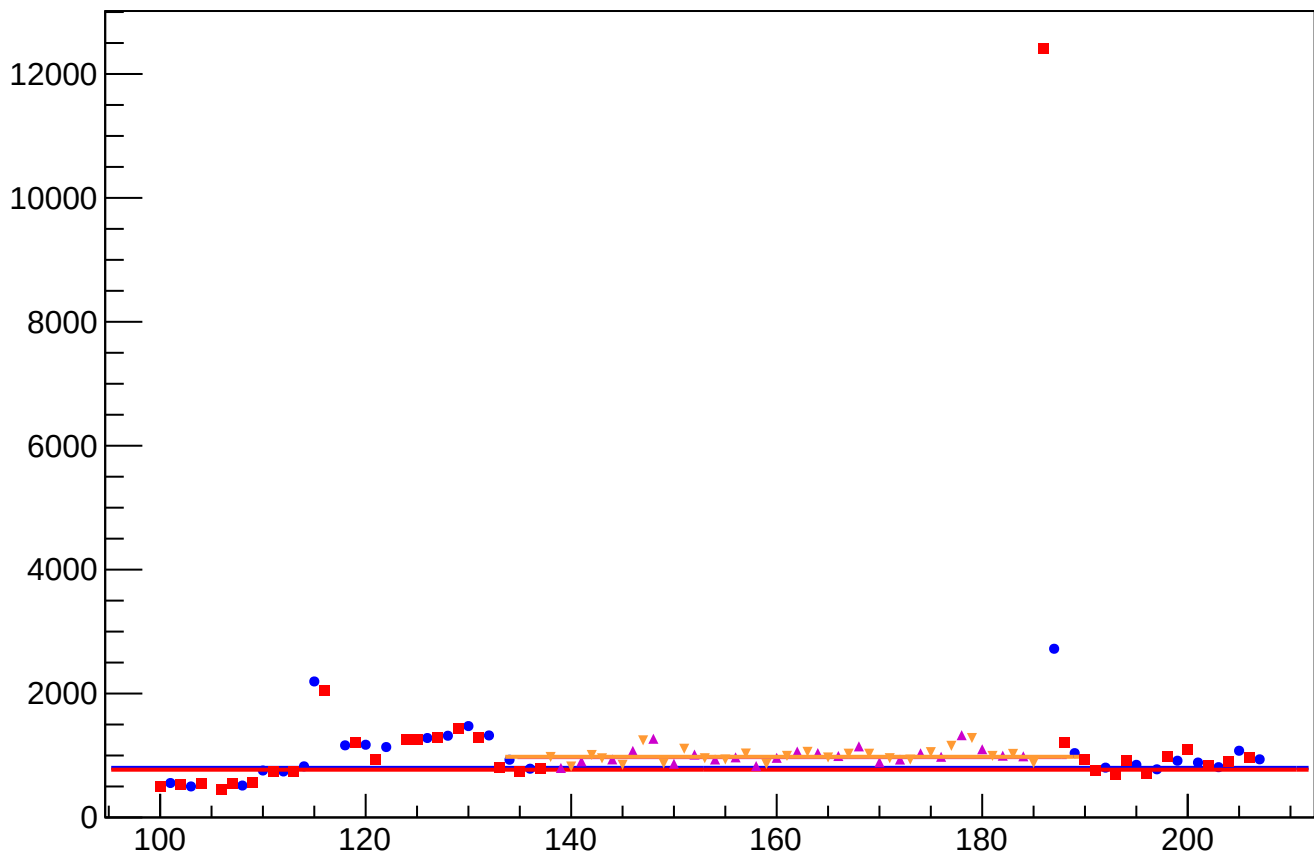
Left In:  $-74.440 \pm 229.788$   $\chi^2/\text{NDF}$ : 33.1/22

+ sign  $-177.990 \pm 156.171$   $\chi^2/\text{NDF}$ : 41.4/50

All:  $-222.535 \pm 108.937$   $\chi^2/\text{NDF}$ : 103.7/104

- sign  $-264.751 \pm 152.032$   $\chi^2/\text{NDF}$ : 62.1/53

# asym\_sam5\_reg\_correction\_rms vs Slug



Right In: 800.467 $\pm$ 0.154  $\chi^2$ /NDF: 2370571.4/25

Left Out: 979.111 $\pm$ 0.159  $\chi^2$ /NDF: 429795.3/24

Right Out: 770.690 $\pm$ 0.143  $\chi^2$ /NDF: 3413140.4/30

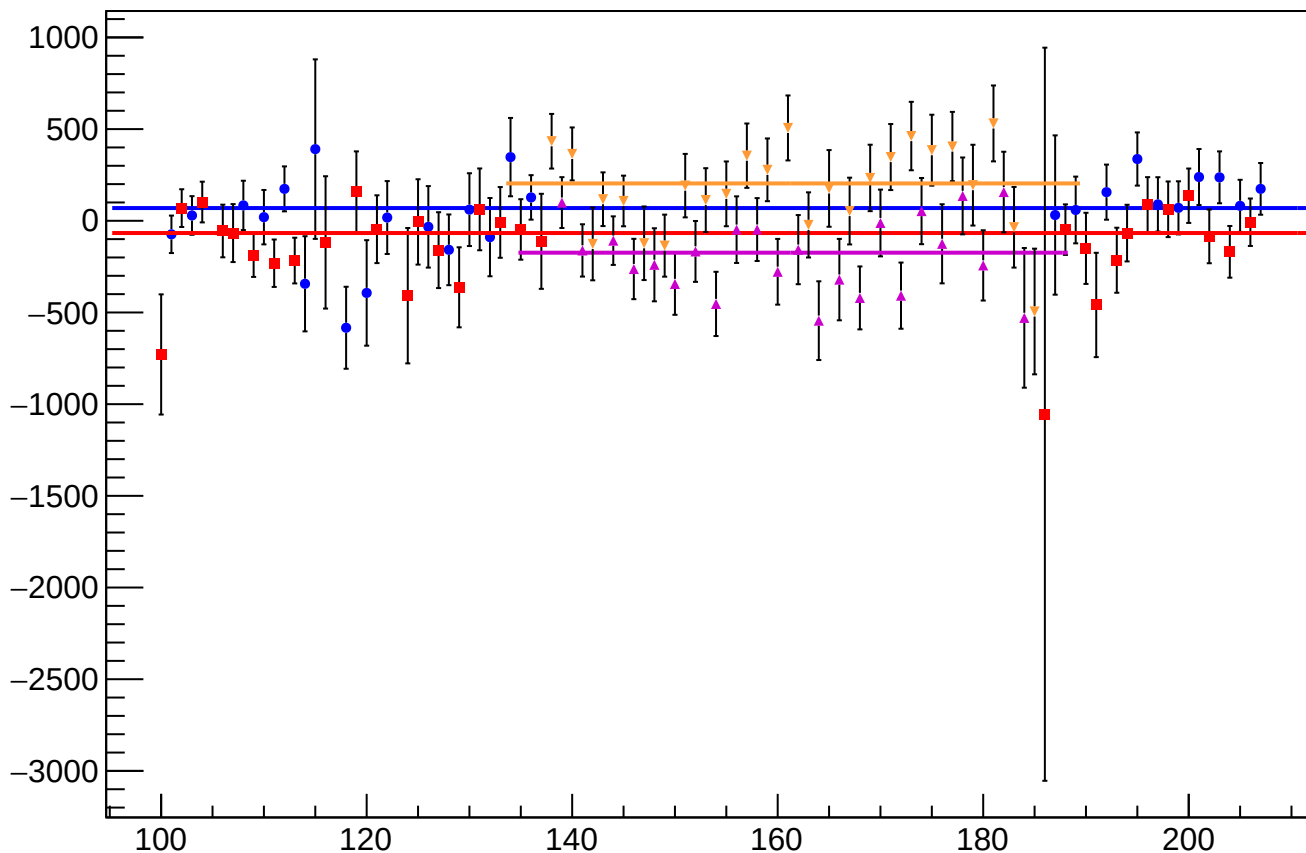
Left In: 973.818 $\pm$ 0.162  $\chi^2$ /NDF: 498612.7/22

+ sign 886.874 $\pm$ 0.110  $\chi^2$ /NDF: 3453928.9/50

All: 872.875 $\pm$ 0.077  $\chi^2$ /NDF: 8275700.2/104

- sign 859.608 $\pm$ 0.108  $\chi^2$ /NDF: 4790470.5/53

# cor\_asym\_sam5\_mean vs Slug



Right In:  $69.473 \pm 31.198$   $\chi^2/\text{NDF}$ : 28.1/25

Left Out:  $203.766 \pm 35.878$   $\chi^2/\text{NDF}$ : 32.9/24

Right Out:  $-66.716 \pm 29.476$   $\chi^2/\text{NDF}$ : 24.2/30

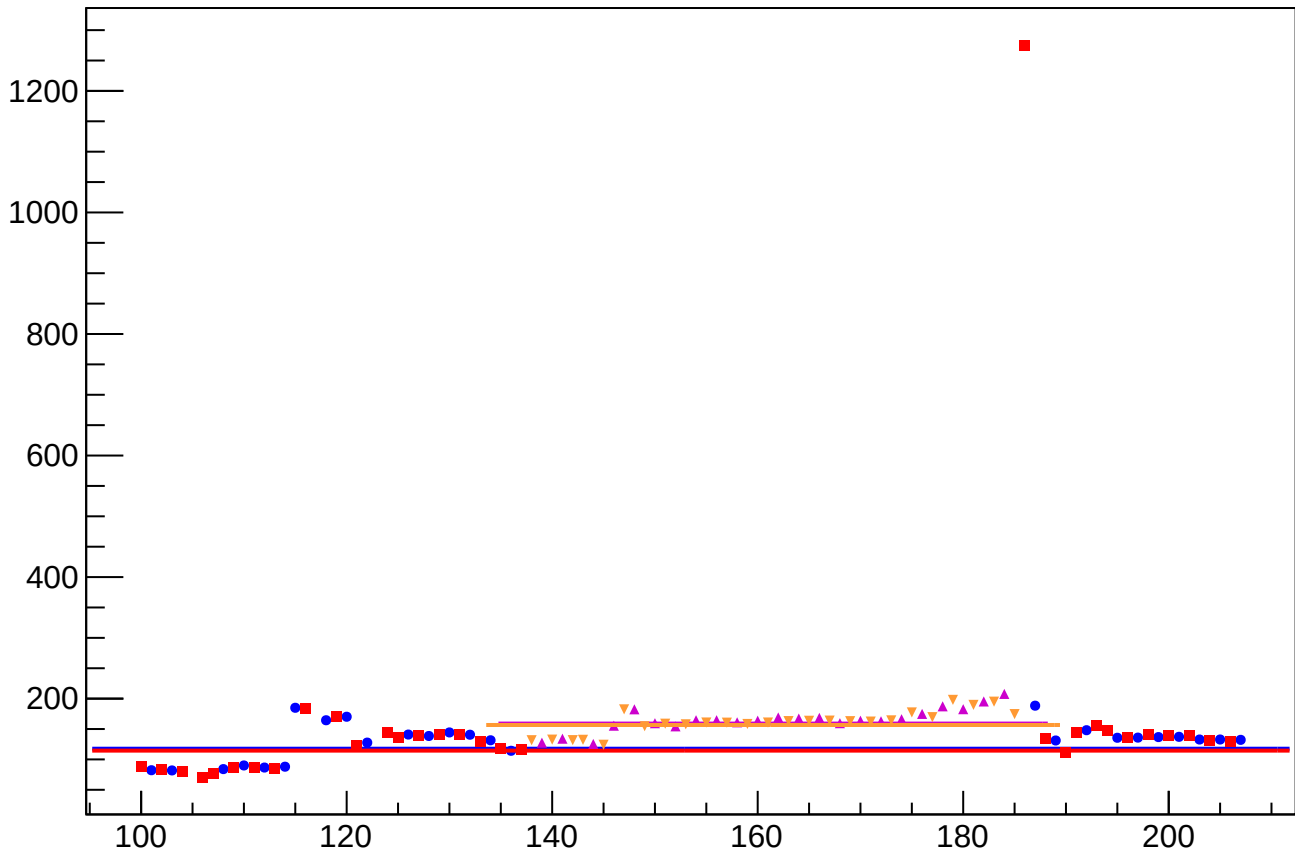
Left In:  $-173.978 \pm 37.405$   $\chi^2/\text{NDF}$ : 24.5/22

+ sign  $127.297 \pm 23.542$   $\chi^2/\text{NDF}$ : 69.0/50

All:  $7.777 \pm 16.507$   $\chi^2/\text{NDF}$ : 173.5/104

- sign  $-107.806 \pm 23.151$   $\chi^2/\text{NDF}$ : 53.8/53

# cor\_asym\_sam5\_rms vs Slug



Right In: 117.588 $\pm$ 0.022  $\chi^2$ /NDF: 1472893.0/25

Left Out: 156.638 $\pm$ 0.025  $\chi^2$ /NDF: 582414.5/24

Right Out: 114.464 $\pm$ 0.021  $\chi^2$ /NDF: 2557272.1/30

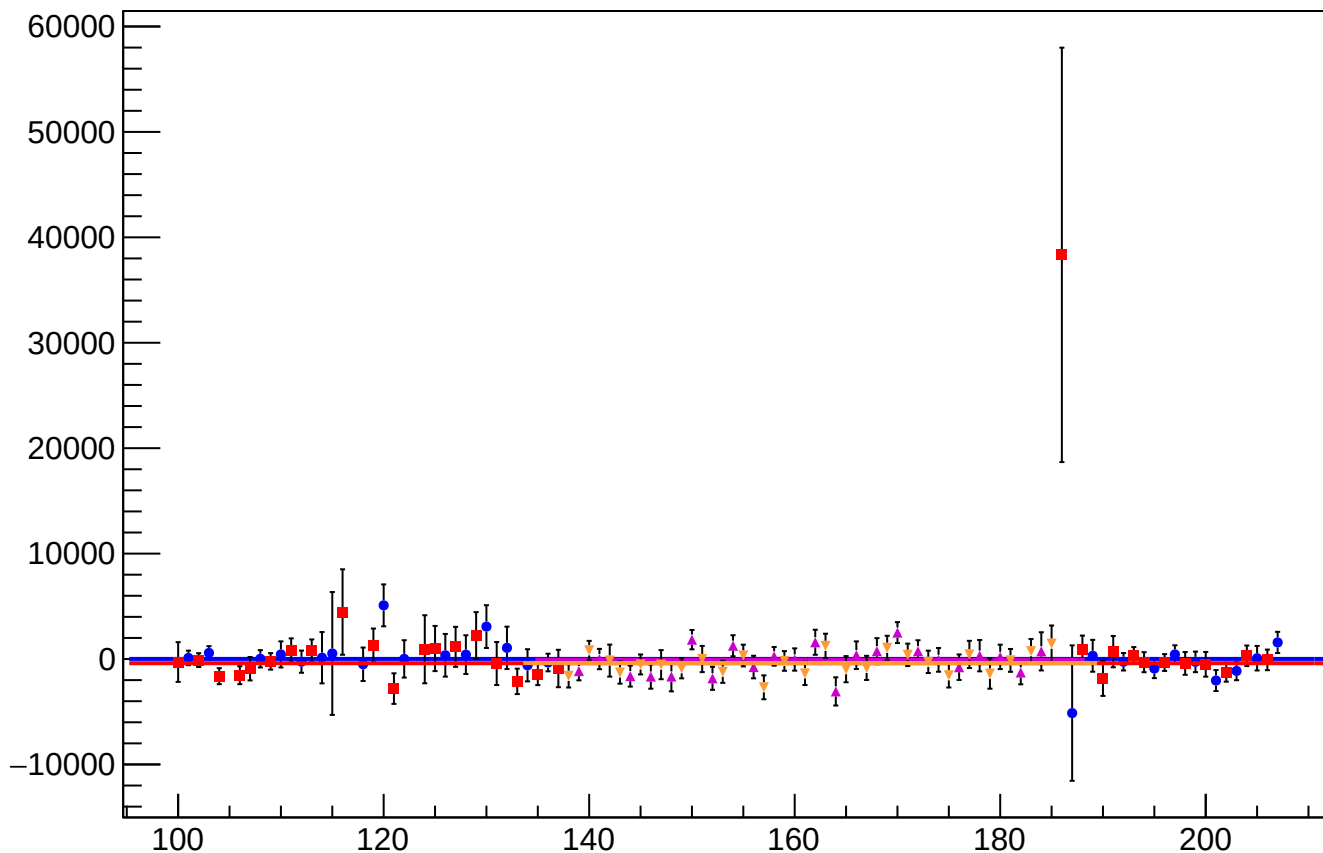
Left In: 158.952 $\pm$ 0.026  $\chi^2$ /NDF: 511321.3/22

+ sign 134.402 $\pm$ 0.017  $\chi^2$ /NDF: 3404416.7/50

All: 132.930 $\pm$ 0.012  $\chi^2$ /NDF: 8233666.3/104

- sign 131.507 $\pm$ 0.016  $\chi^2$ /NDF: 4813868.8/53

# asym\_sam5\_cor\_correction\_mean vs Slug



Right In:  $11.897 \pm 217.340$   $\chi^2/\text{NDF}$ : 21.1/25

Left Out:  $-380.678 \pm 224.554$   $\chi^2/\text{NDF}$ : 18.7/24

Right Out:  $-398.232 \pm 202.829$   $\chi^2/\text{NDF}$ : 27.0/30

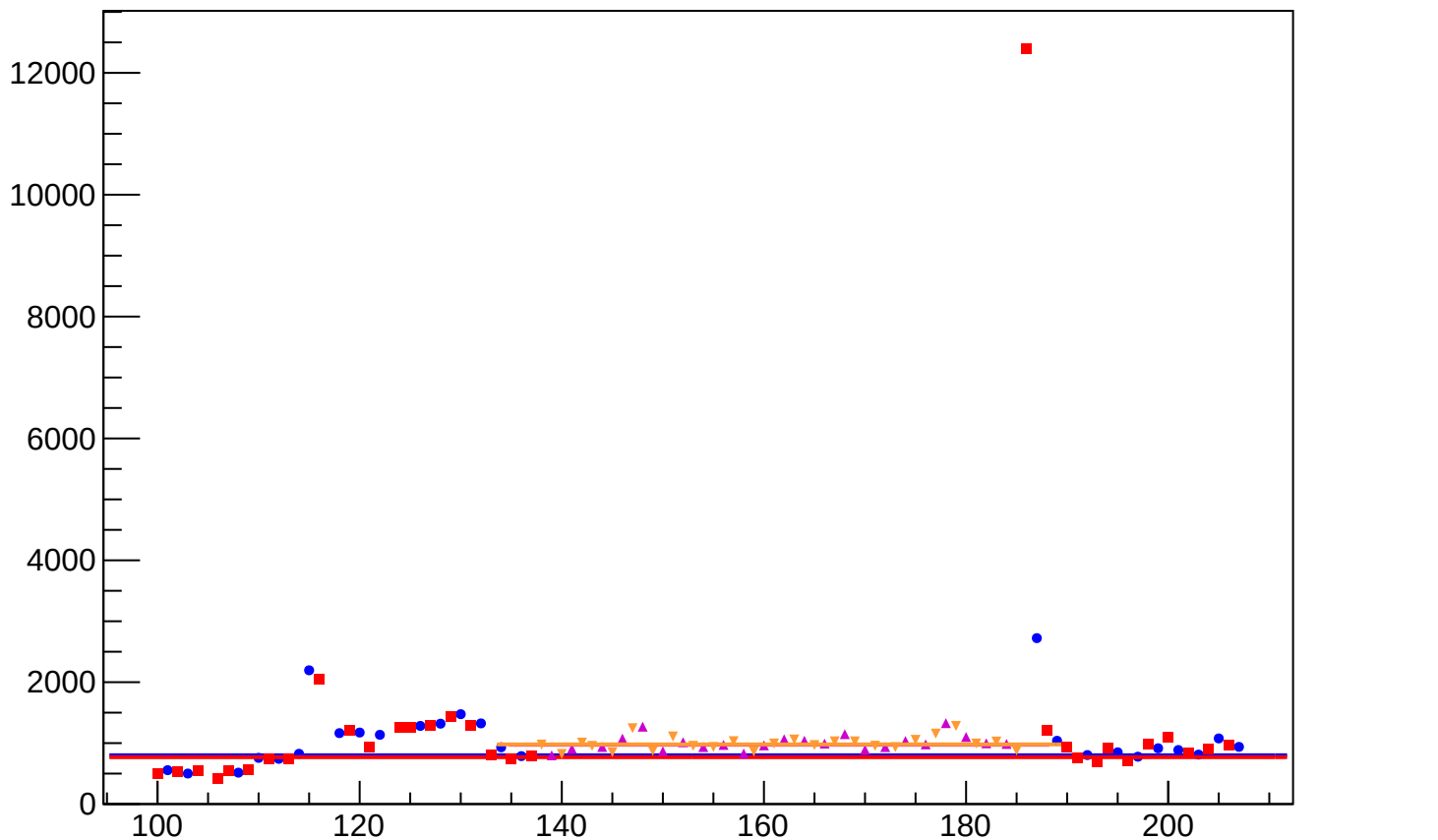
Left In:  $-74.438 \pm 229.788$   $\chi^2/\text{NDF}$ : 33.1/22

+ sign  $-177.983 \pm 156.171$   $\chi^2/\text{NDF}$ : 41.4/50

All:  $-218.254 \pm 108.949$   $\chi^2/\text{NDF}$ : 102.7/104

- sign  $-256.434 \pm 152.064$   $\chi^2/\text{NDF}$ : 61.2/53

# asym\_sam5\_cor\_correction\_rms vs Slug



Right In: 800.467+/-0.154  $\chi^2/\text{NDF}$ : 2370575.6/25

Left Out: 979.112+/-0.159  $\chi^2/\text{NDF}$ : 429793.5/24

Right Out: 769.552+/-0.143  $\chi^2/\text{NDF}$ : 3454042.6/30

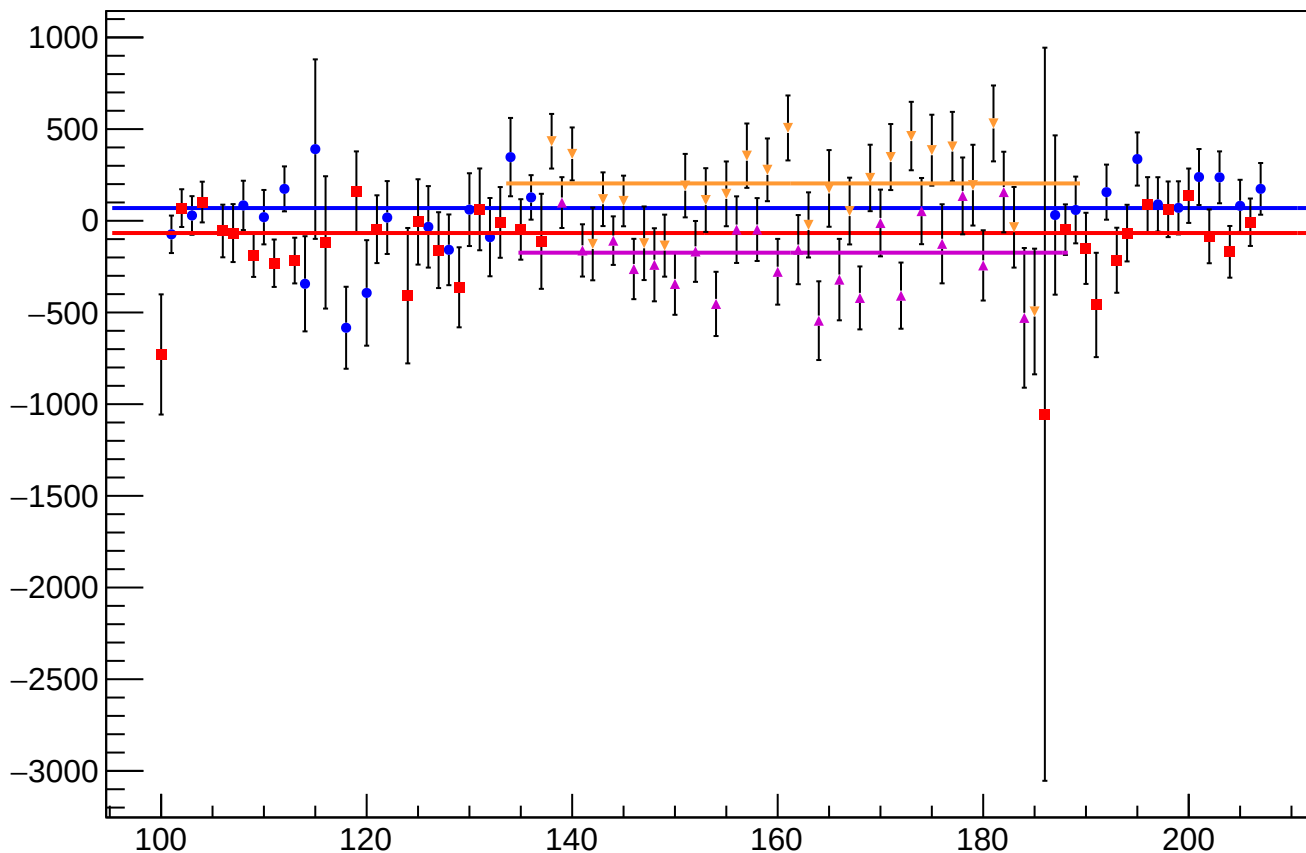
Left In: 973.818+/-0.162  $\chi^2/\text{NDF}$ : 498615.1/22

+ sign 886.874+/-0.110  $\chi^2/\text{NDF}$ : 3453934.7/50

All: 872.568+/-0.077  $\chi^2/\text{NDF}$ : 8327586.2/104

- sign 859.005+/-0.108  $\chi^2/\text{NDF}$ : 4840958.8/53

# eigen\_cor\_asym\_sam5\_mean vs Slug



Right In:  $69.473 \pm 31.198$   $\chi^2/\text{NDF}$ : 28.1/25

Left Out:  $203.766 \pm 35.878$   $\chi^2/\text{NDF}$ : 32.9/24

Right Out:  $-66.716 \pm 29.476$   $\chi^2/\text{NDF}$ : 24.2/30

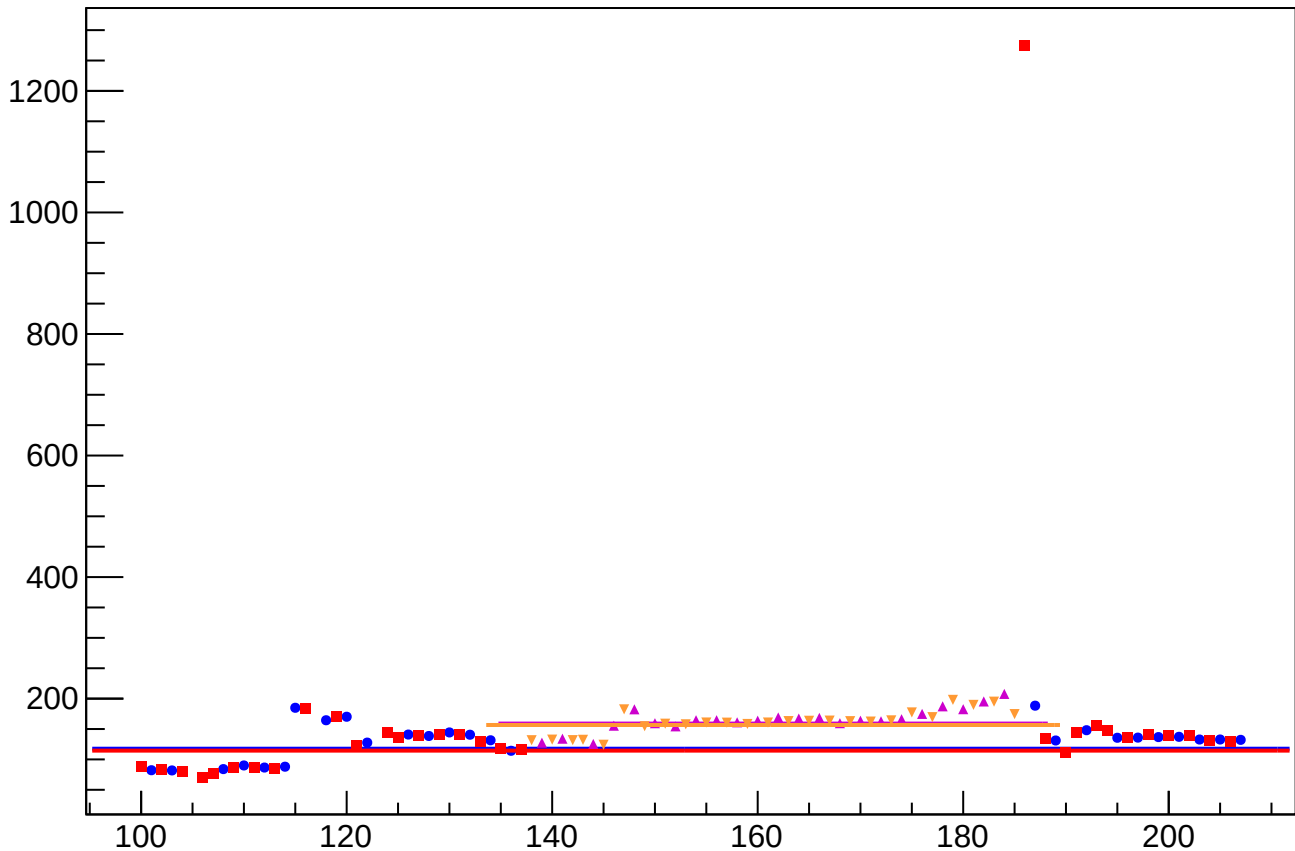
Left In:  $-173.978 \pm 37.405$   $\chi^2/\text{NDF}$ : 24.5/22

+ sign  $127.297 \pm 23.542$   $\chi^2/\text{NDF}$ : 69.0/50

All:  $7.777 \pm 16.507$   $\chi^2/\text{NDF}$ : 173.5/104

- sign  $-107.806 \pm 23.151$   $\chi^2/\text{NDF}$ : 53.8/53

# eigen\_cor\_asym\_sam5\_rms vs Slug



Right In: 117.588 $\pm$ 0.022  $\chi^2$ /NDF: 1472893.0/25

Left Out: 156.638 $\pm$ 0.025  $\chi^2$ /NDF: 582414.5/24

Right Out: 114.464 $\pm$ 0.021  $\chi^2$ /NDF: 2557272.1/30

Left In: 158.952 $\pm$ 0.026  $\chi^2$ /NDF: 511321.3/22

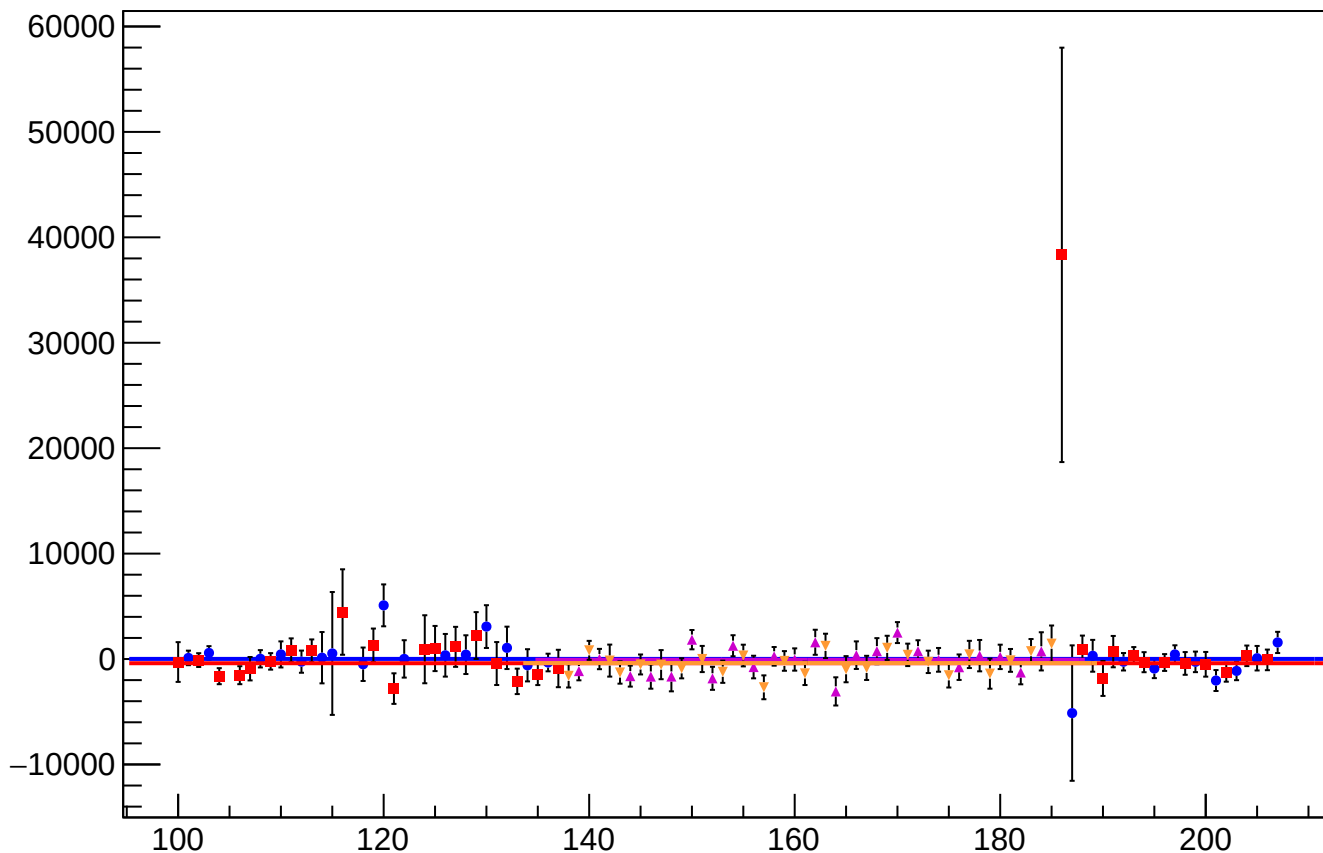
+ sign 134.402 $\pm$ 0.017  $\chi^2$ /NDF: 3404416.7/50

All: 132.930 $\pm$ 0.012  $\chi^2$ /NDF: 8233666.3/104

- sign 131.507 $\pm$ 0.016  $\chi^2$ /NDF: 4813868.8/53



asym\_sam5\_eigen\_cor\_correction\_mean vs Slug



Right In:  $11.897 \pm 217.340$   $\chi^2/\text{NDF}$ : 21.1/25

Left Out:  $-380.678 \pm 224.554$   $\chi^2/\text{NDF}$ : 18.7/24

Right Out:  $-398.232 \pm 202.829$   $\chi^2/\text{NDF}$ : 27.0/30

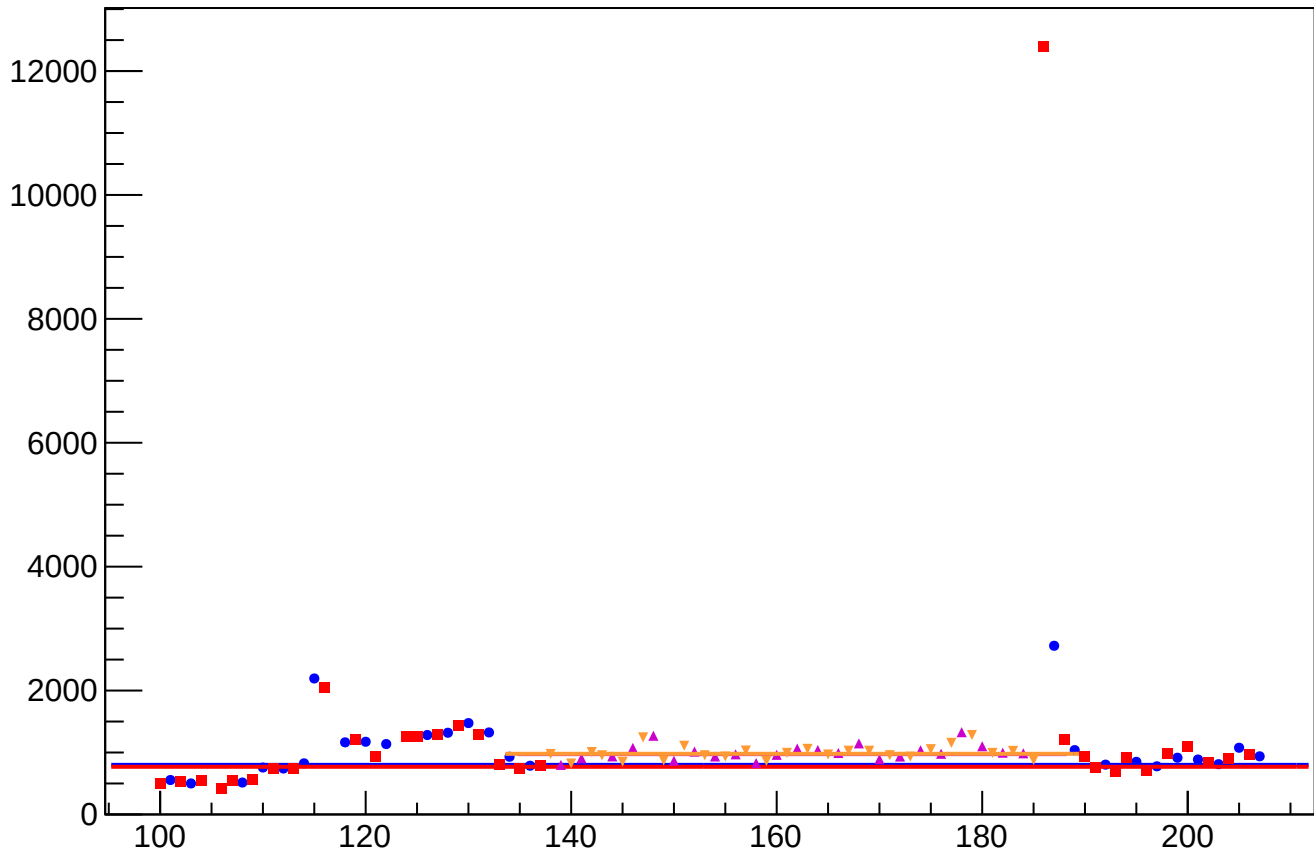
Left In:  $-74.438 \pm 229.788$   $\chi^2/\text{NDF}$ : 33.1/22

+ sign  $-177.983 \pm 156.171$   $\chi^2/\text{NDF}$ : 41.4/50

All:  $-218.254 \pm 108.949$   $\chi^2/\text{NDF}$ : 102.7/104

- sign  $-256.434 \pm 152.064$   $\chi^2/\text{NDF}$ : 61.2/53

# asym\_sam5\_eigen\_cor\_correction\_rms vs Slug



Right In: 800.467 $\pm$ 0.154  $\chi^2$ /NDF: 2370575.6/25

Left Out: 979.112 $\pm$ 0.159  $\chi^2$ /NDF: 429793.5/24

Right Out: 769.552 $\pm$ 0.143  $\chi^2$ /NDF: 3454042.6/30

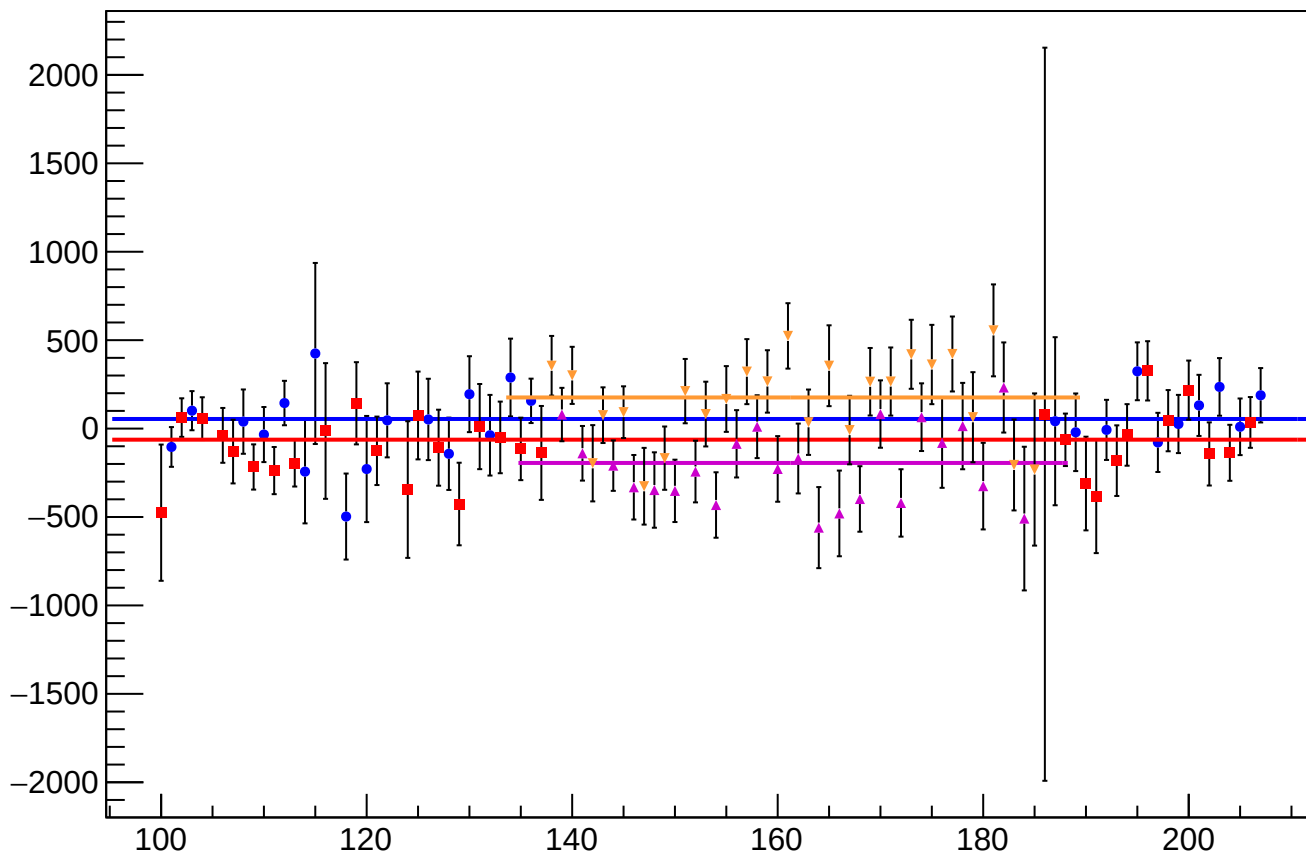
Left In: 973.818 $\pm$ 0.162  $\chi^2$ /NDF: 498615.1/22

+ sign 886.874 $\pm$ 0.110  $\chi^2$ /NDF: 3453934.7/50

All: 872.568 $\pm$ 0.077  $\chi^2$ /NDF: 8327586.2/104

- sign 859.005 $\pm$ 0.108  $\chi^2$ /NDF: 4840958.8/53

# dit\_asym\_sam5\_mean vs Slug



Right In:  $54.301 \pm 34.255$   $\chi^2/\text{NDF}$ : 19.8/25

Left Out:  $176.010 \pm 38.838$   $\chi^2/\text{NDF}$ : 30.8/24

Right Out:  $-62.729 \pm 32.261$   $\chi^2/\text{NDF}$ : 24.0/30

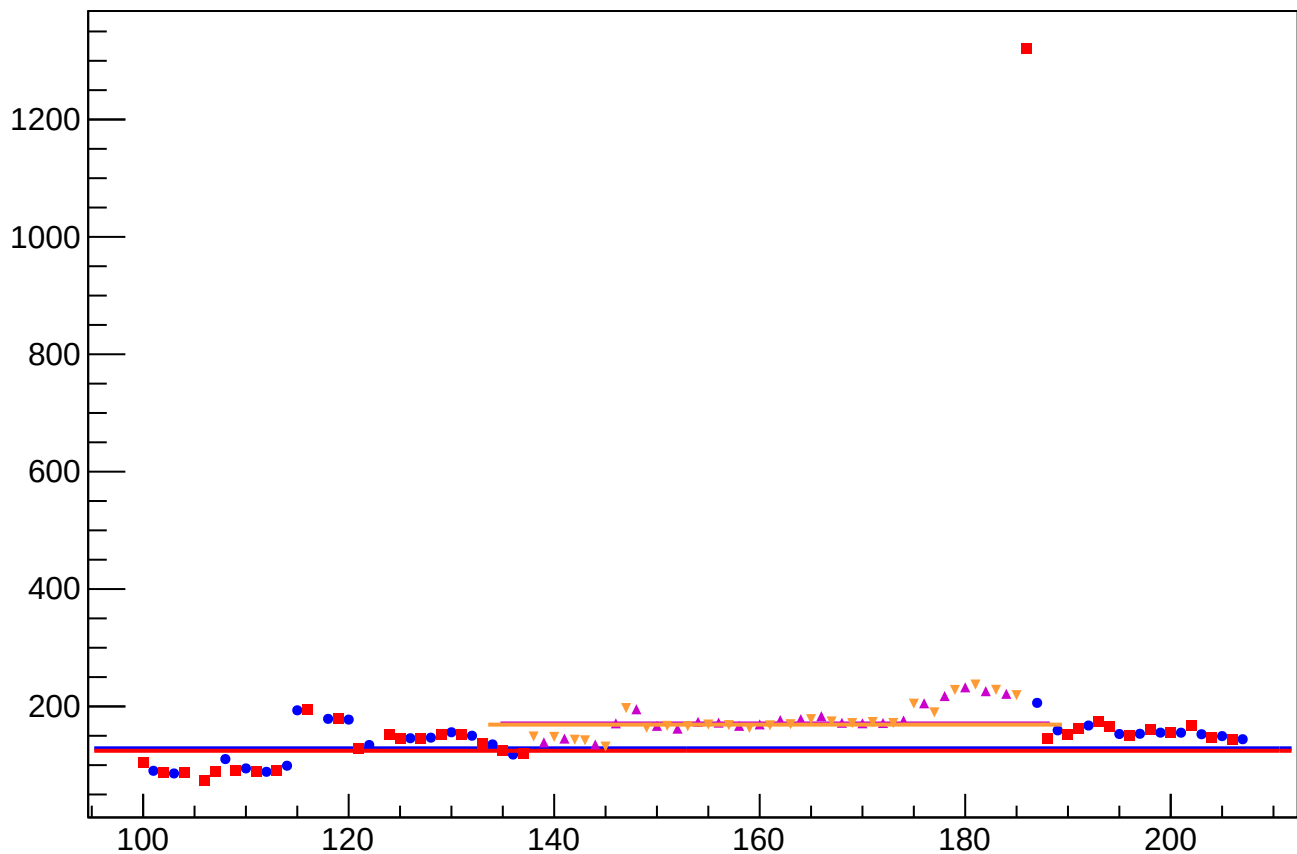
Left In:  $-194.324 \pm 40.384$   $\chi^2/\text{NDF}$ : 23.8/22

+ sign  $107.554 \pm 25.690$   $\chi^2/\text{NDF}$ : 56.1/50

All:  $-5.328 \pm 17.992$   $\chi^2/\text{NDF}$ : 148.3/104

- sign  $-113.995 \pm 25.206$   $\chi^2/\text{NDF}$ : 54.3/53

# dit\_asym\_sam5\_rms vs Slug



Right In: 128.638 $\pm$ 0.024  $\chi^2$ /NDF: 1619321.2/25

Left Out: 169.009 $\pm$ 0.027  $\chi^2$ /NDF: 773937.9/24

Right Out: 124.472 $\pm$ 0.023  $\chi^2$ /NDF: 2815232.0/30

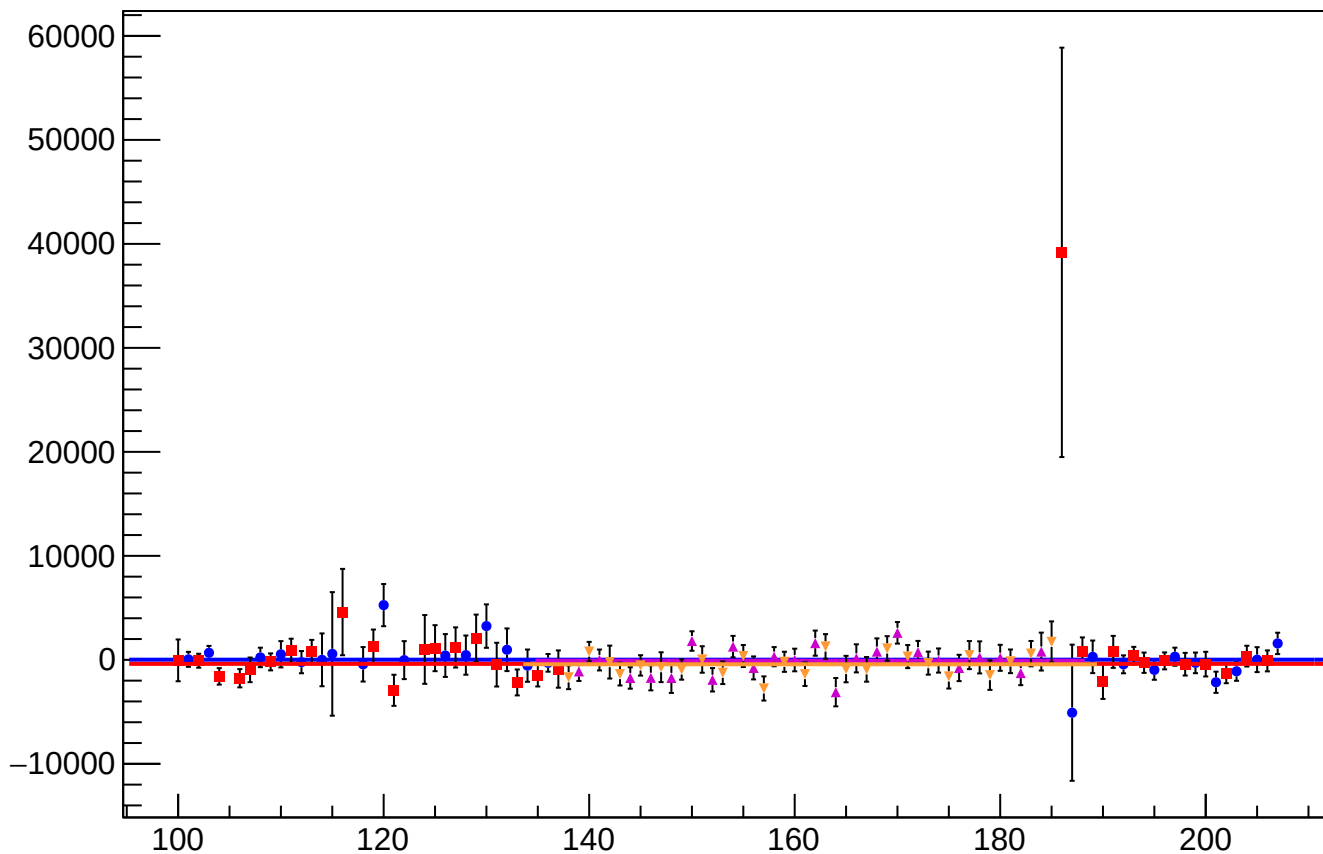
Left In: 171.021 $\pm$ 0.029  $\chi^2$ /NDF: 678106.1/22

+ sign 146.302 $\pm$ 0.018  $\chi^2$ /NDF: 3608753.0/50

All: 144.419 $\pm$ 0.013  $\chi^2$ /NDF: 8745272.1/104

- sign 142.606 $\pm$ 0.018  $\chi^2$ /NDF: 5115424.5/53

# asym\_sam5\_dit\_correction\_mean vs Slug



Right In:  $15.014 \pm 224.968$   $\chi^2/\text{NDF}$ : 21.6/25

Left Out:  $-425.819 \pm 232.561$   $\chi^2/\text{NDF}$ : 18.4/24

Right Out:  $-386.401 \pm 209.436$   $\chi^2/\text{NDF}$ : 27.7/30

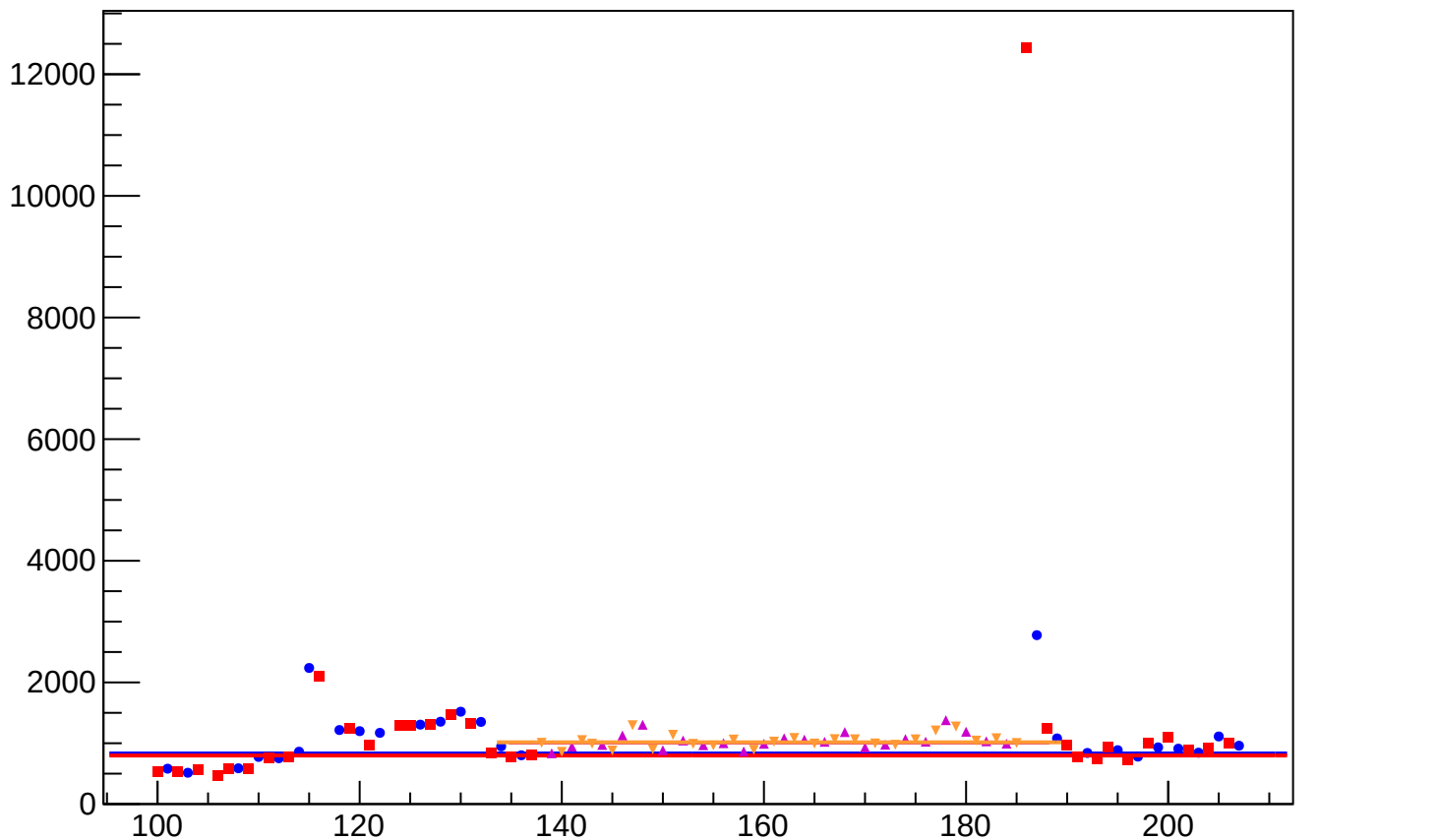
Left In:  $-86.486 \pm 238.155$   $\chi^2/\text{NDF}$ : 32.4/22

+ sign  $-198.089 \pm 161.694$   $\chi^2/\text{NDF}$ : 41.8/50

All:  $-227.646 \pm 112.739$   $\chi^2/\text{NDF}$ : 102.9/104

- sign  $-255.608 \pm 157.272$   $\chi^2/\text{NDF}$ : 61.1/53

# asym\_sam5\_dit\_correction\_rms vs Slug



Right In: 831.337 $\pm$ 0.159  $\chi^2$ /NDF: 2235842.2/25

Left Out: 1015.046 $\pm$ 0.164  $\chi^2$ /NDF: 397966.2/24

Right Out: 798.504 $\pm$ 0.148  $\chi^2$ /NDF: 3295363.4/30

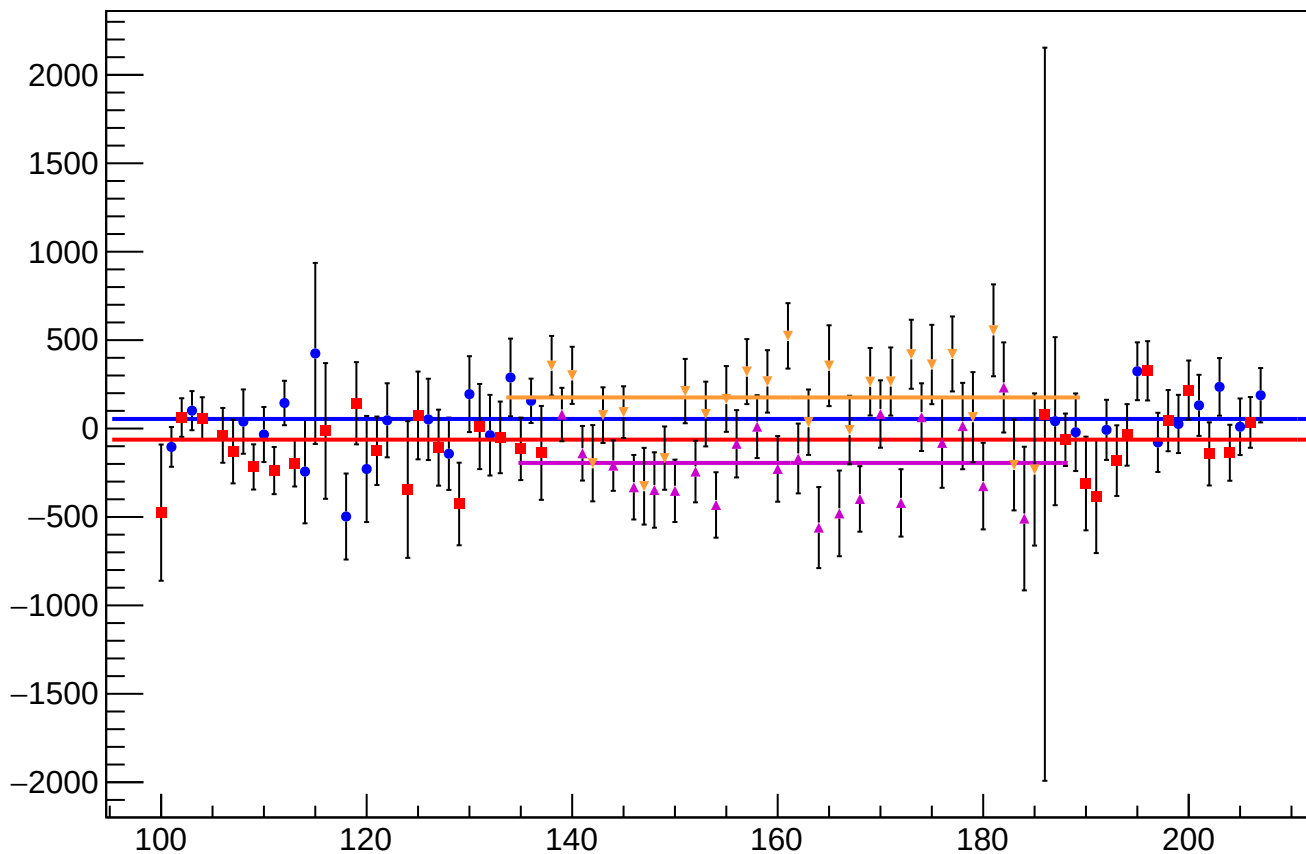
Left In: 1009.672 $\pm$ 0.168  $\chi^2$ /NDF: 498783.5/22

+ sign 920.144 $\pm$ 0.114  $\chi^2$ /NDF: 3278520.7/50

All: 904.960 $\pm$ 0.080  $\chi^2$ /NDF: 7993673.7/104

- sign 890.595 $\pm$ 0.111  $\chi^2$ /NDF: 4680830.8/53

# eigen\_dit\_asym\_sam5\_mean vs Slug



Right In:  $54.300 \pm 34.255$   $\chi^2/\text{NDF}$ : 19.8/25

Left Out:  $176.011 \pm 38.838$   $\chi^2/\text{NDF}$ : 30.8/24

Right Out:  $-62.730 \pm 32.261$   $\chi^2/\text{NDF}$ : 24.0/30

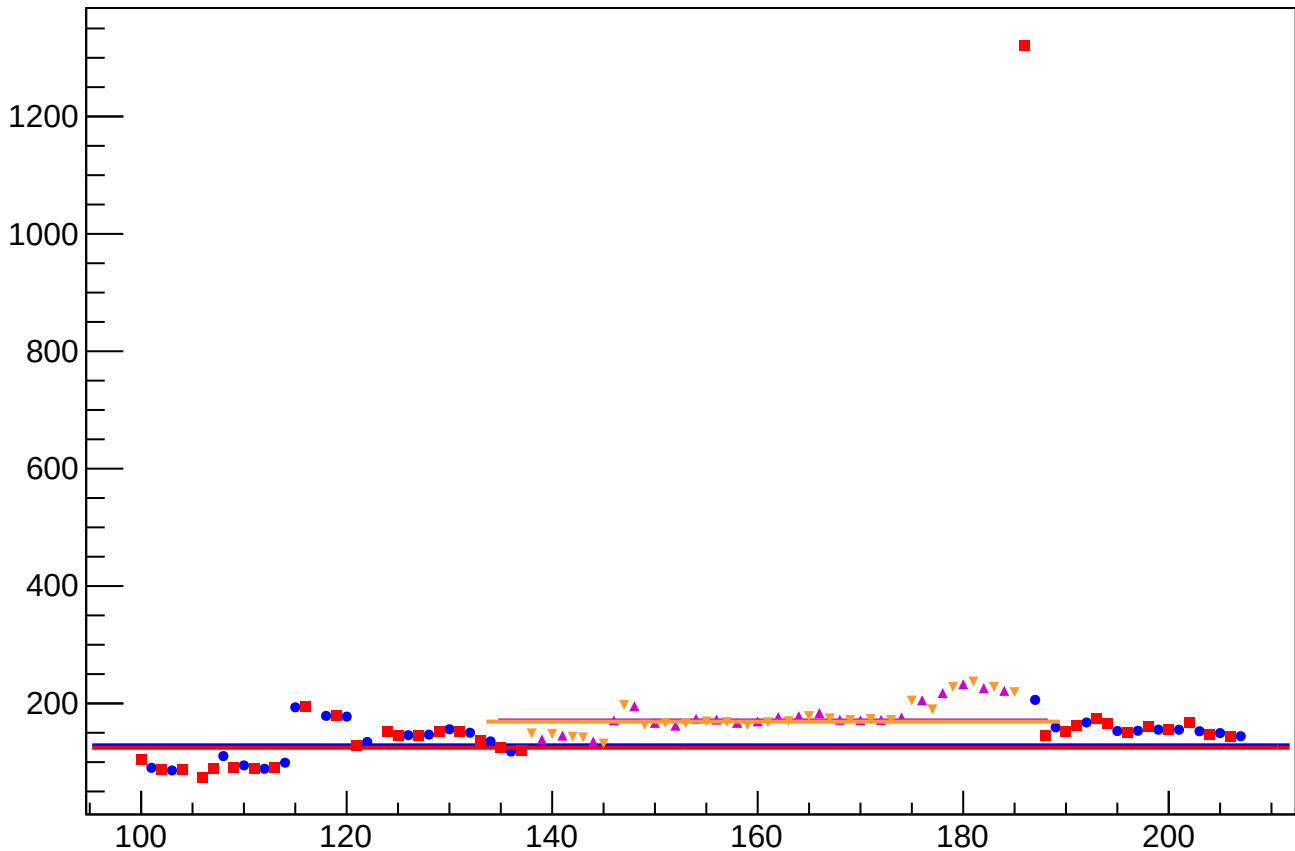
Left In:  $-194.324 \pm 40.384$   $\chi^2/\text{NDF}$ : 23.8/22

+ sign  $107.554 \pm 25.690$   $\chi^2/\text{NDF}$ : 56.1/50

All:  $-5.328 \pm 17.992$   $\chi^2/\text{NDF}$ : 148.3/104

- sign  $-113.995 \pm 25.206$   $\chi^2/\text{NDF}$ : 54.3/53

# eigen\_dit\_asym\_sam5\_rms vs Slug



Right In: 128.638 $\pm$ 0.024  $\chi^2$ /NDF: 1619327.1/25

Left Out: 169.009 $\pm$ 0.027  $\chi^2$ /NDF: 773925.9/24

Right Out: 124.472 $\pm$ 0.023  $\chi^2$ /NDF: 2815235.5/30

Left In: 171.021 $\pm$ 0.029  $\chi^2$ /NDF: 678096.1/22

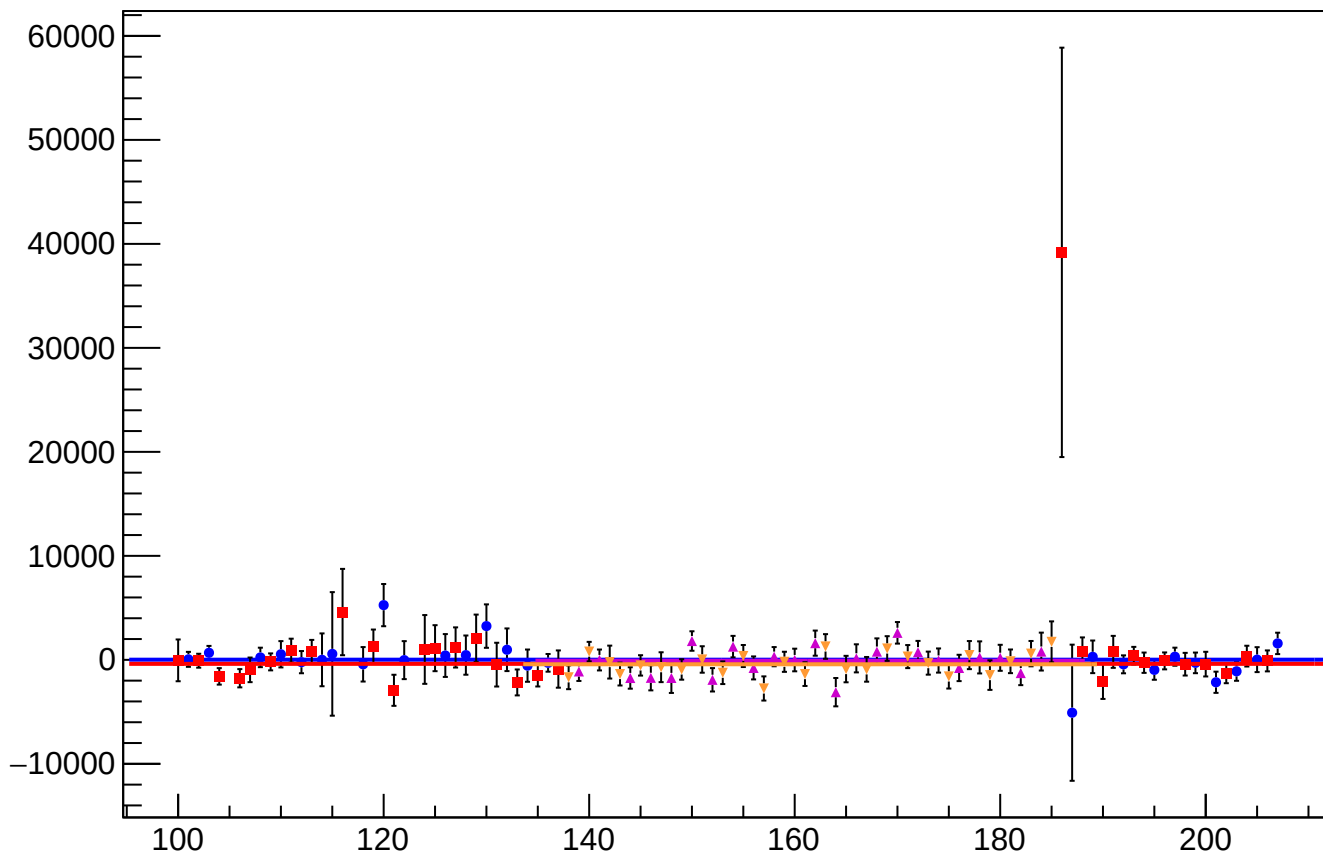
+ sign 146.302 $\pm$ 0.018  $\chi^2$ /NDF: 3608771.7/50

All: 144.419 $\pm$ 0.013  $\chi^2$ /NDF: 8745313.6/104

- sign 142.606 $\pm$ 0.018  $\chi^2$ /NDF: 5115448.2/53



# asym\_sam5\_eigen\_dit\_correction\_mean vs Slug



Right In:  $15.015 \pm 224.968$   $\chi^2/\text{NDF}$ : 21.6/25

Left Out:  $-425.818 \pm 232.561$   $\chi^2/\text{NDF}$ : 18.4/24

Right Out:  $-386.401 \pm 209.436$   $\chi^2/\text{NDF}$ : 27.7/30

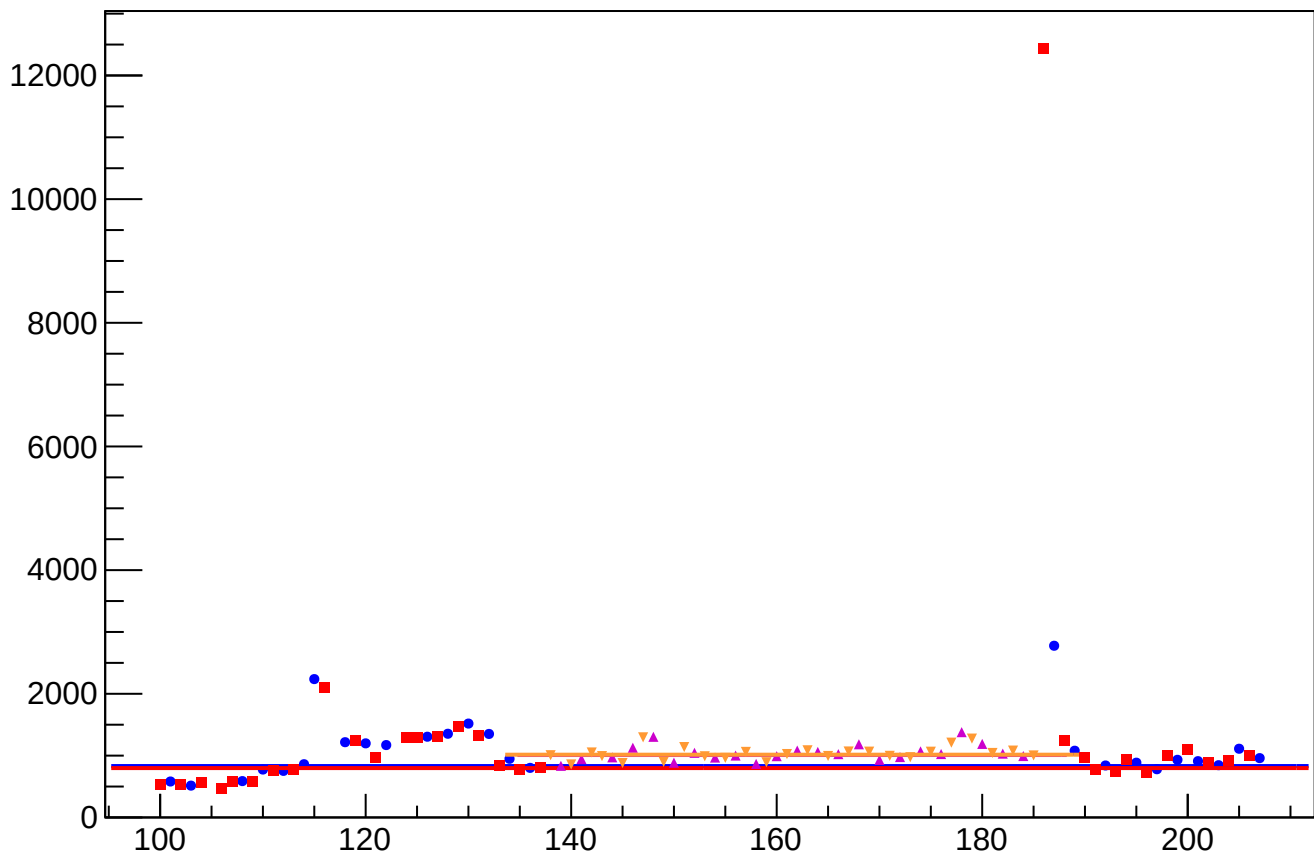
Left In:  $-86.487 \pm 238.155$   $\chi^2/\text{NDF}$ : 32.4/22

+ sign  $-198.088 \pm 161.694$   $\chi^2/\text{NDF}$ : 41.8/50

All:  $-227.645 \pm 112.739$   $\chi^2/\text{NDF}$ : 102.9/104

- sign  $-255.608 \pm 157.272$   $\chi^2/\text{NDF}$ : 61.1/53

# asym\_sam5\_eigen\_dit\_correction\_rms vs Slug



Right In: 831.336 $\pm$ 0.159  $\chi^2$ /NDF: 2235842.1/25

Left Out: 1015.047 $\pm$ 0.164  $\chi^2$ /NDF: 397964.6/24

Right Out: 798.504 $\pm$ 0.148  $\chi^2$ /NDF: 3295370.5/30

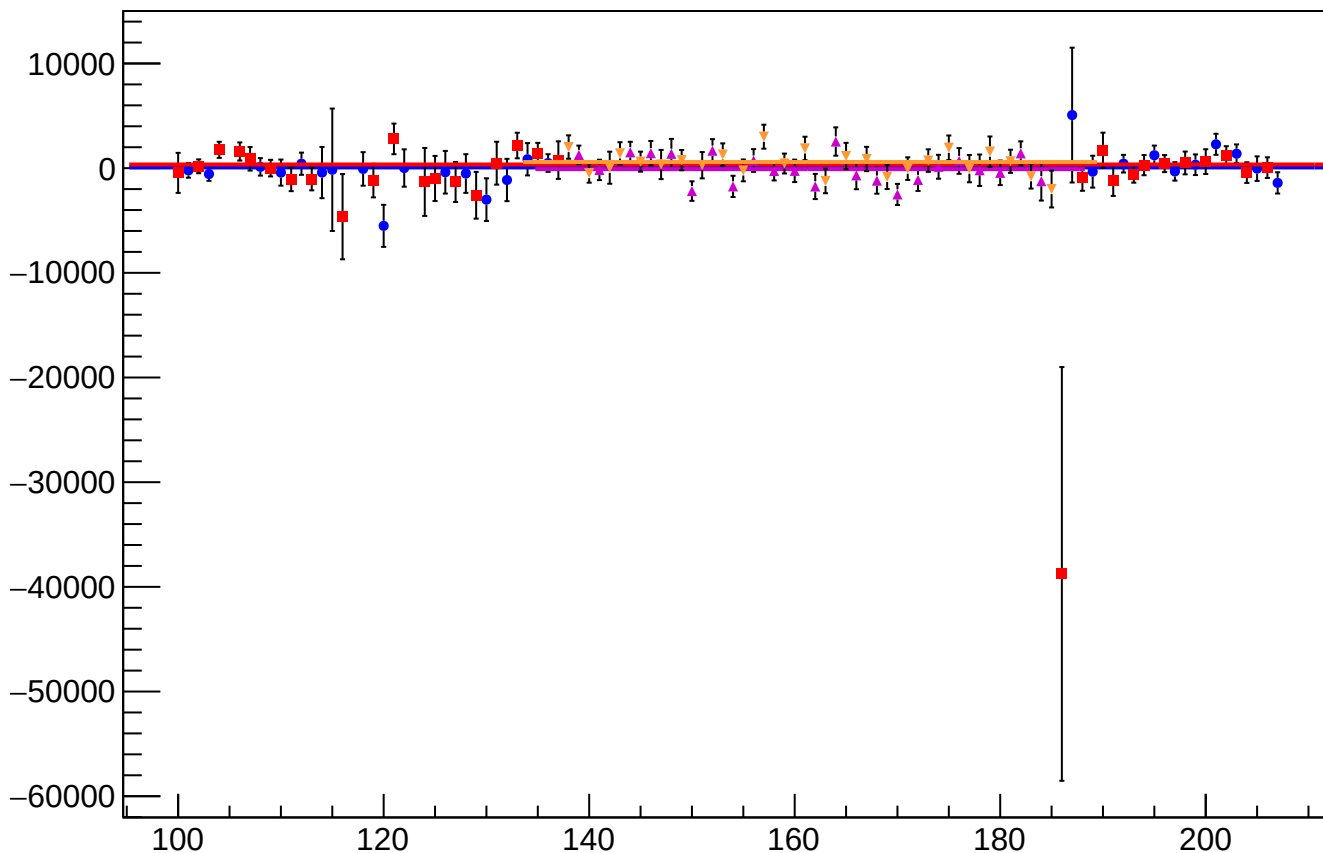
Left In: 1009.673 $\pm$ 0.168  $\chi^2$ /NDF: 498783.6/22

+ sign 920.144 $\pm$ 0.114  $\chi^2$ /NDF: 3278530.8/50

All: 904.960 $\pm$ 0.080  $\chi^2$ /NDF: 7993704.0/104

- sign 890.595 $\pm$ 0.111  $\chi^2$ /NDF: 4680851.2/53

# asym\_sam5\_mean vs Slug



Right In: 69.475+/-219.962  $\chi^2/\text{NDF}$ : 24.3/25

Left Out: 586.188+/-227.585  $\chi^2/\text{NDF}$ : 20.8/24

Right Out: 349.831+/-205.403  $\chi^2/\text{NDF}$ : 30.1/30

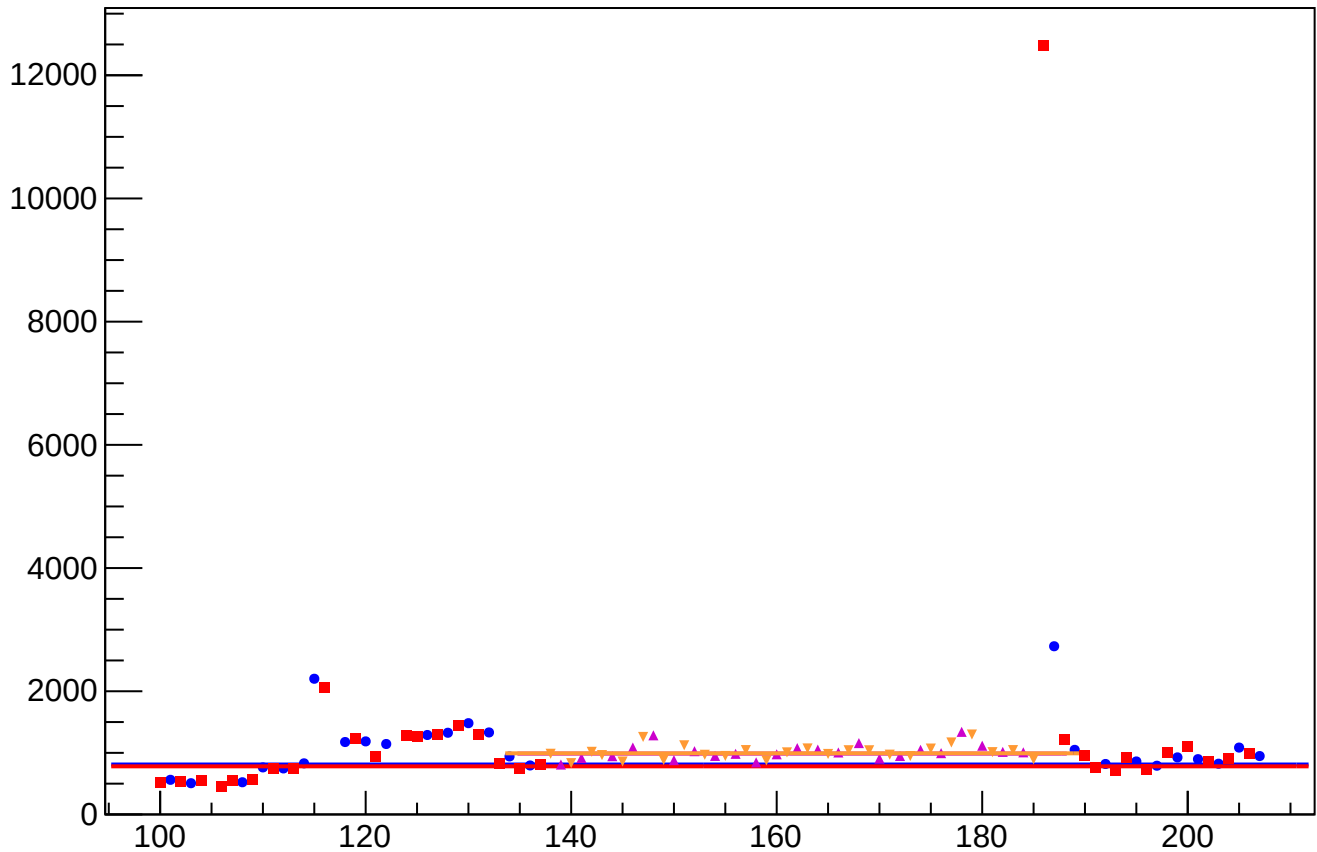
Left In: -92.688+/-233.019  $\chi^2/\text{NDF}$ : 34.6/22

+ sign 319.033+/-158.163  $\chi^2/\text{NDF}$ : 47.7/50

All: 235.560+/-110.368  $\chi^2/\text{NDF}$ : 114.9/104

- sign 156.336+/-154.085  $\chi^2/\text{NDF}$ : 66.7/53

# asym\_sam5\_rms vs Slug



Right In: 810.701 $\pm$ 0.156  $\chi^2$ /NDF: 2344310.7/25

Left Out: 992.549 $\pm$ 0.161  $\chi^2$ /NDF: 424899.6/24

Right Out: 781.158 $\pm$ 0.145  $\chi^2$ /NDF: 3384068.5/30

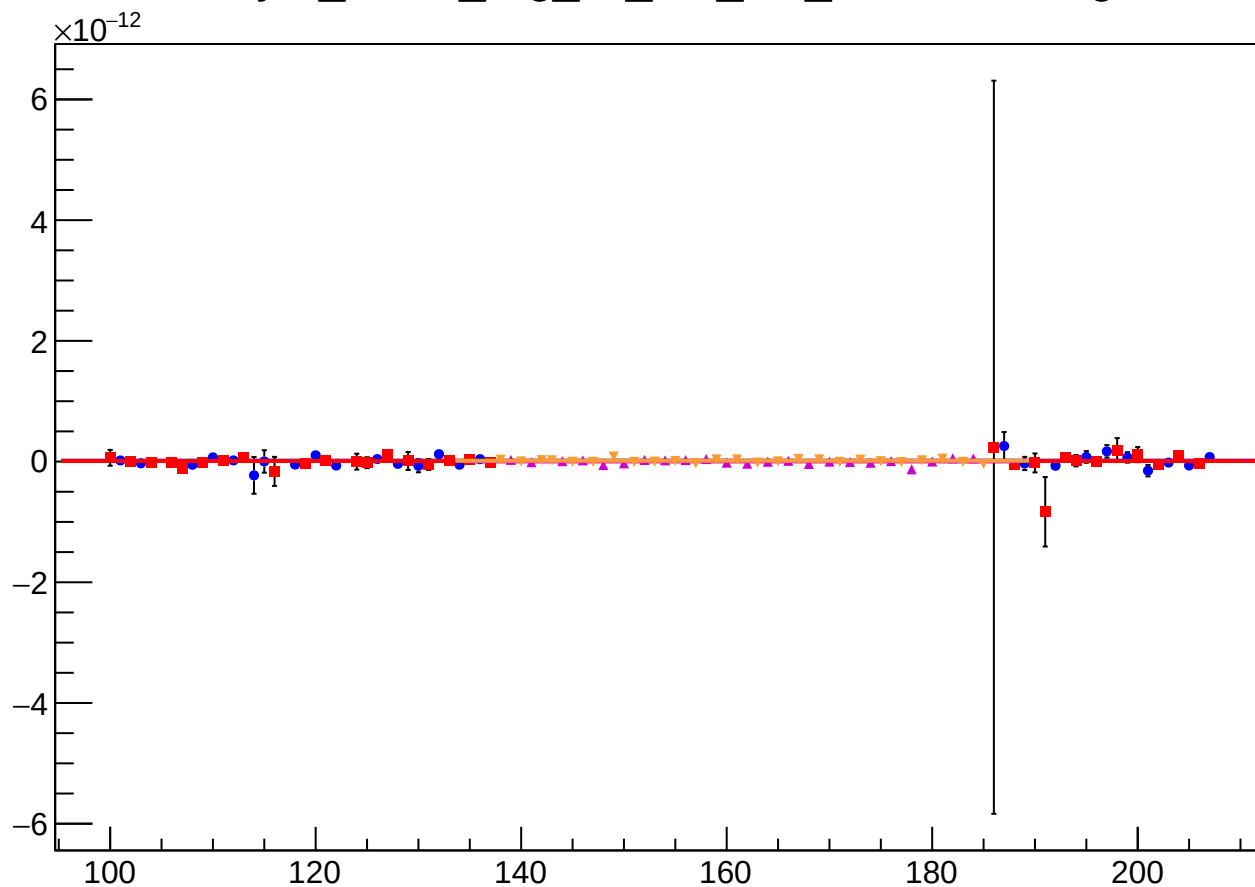
Left In: 987.784 $\pm$ 0.165  $\chi^2$ /NDF: 487733.2/22

+ sign 898.528 $\pm$ 0.112  $\chi^2$ /NDF: 3429410.3/50

All: 884.665 $\pm$ 0.078  $\chi^2$ /NDF: 8216123.8/104

- sign 871.507 $\pm$ 0.109  $\chi^2$ /NDF: 4756763.9/53

# asym\_sam5\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 +/- 0.000  $\chi^2/\text{NDF}$ : 29.8/25

Left Out: 0.000 +/- 0.000  $\chi^2/\text{NDF}$ : 23.1/24

Right Out: 0.000 +/- 0.000  $\chi^2/\text{NDF}$ : 22.3/30

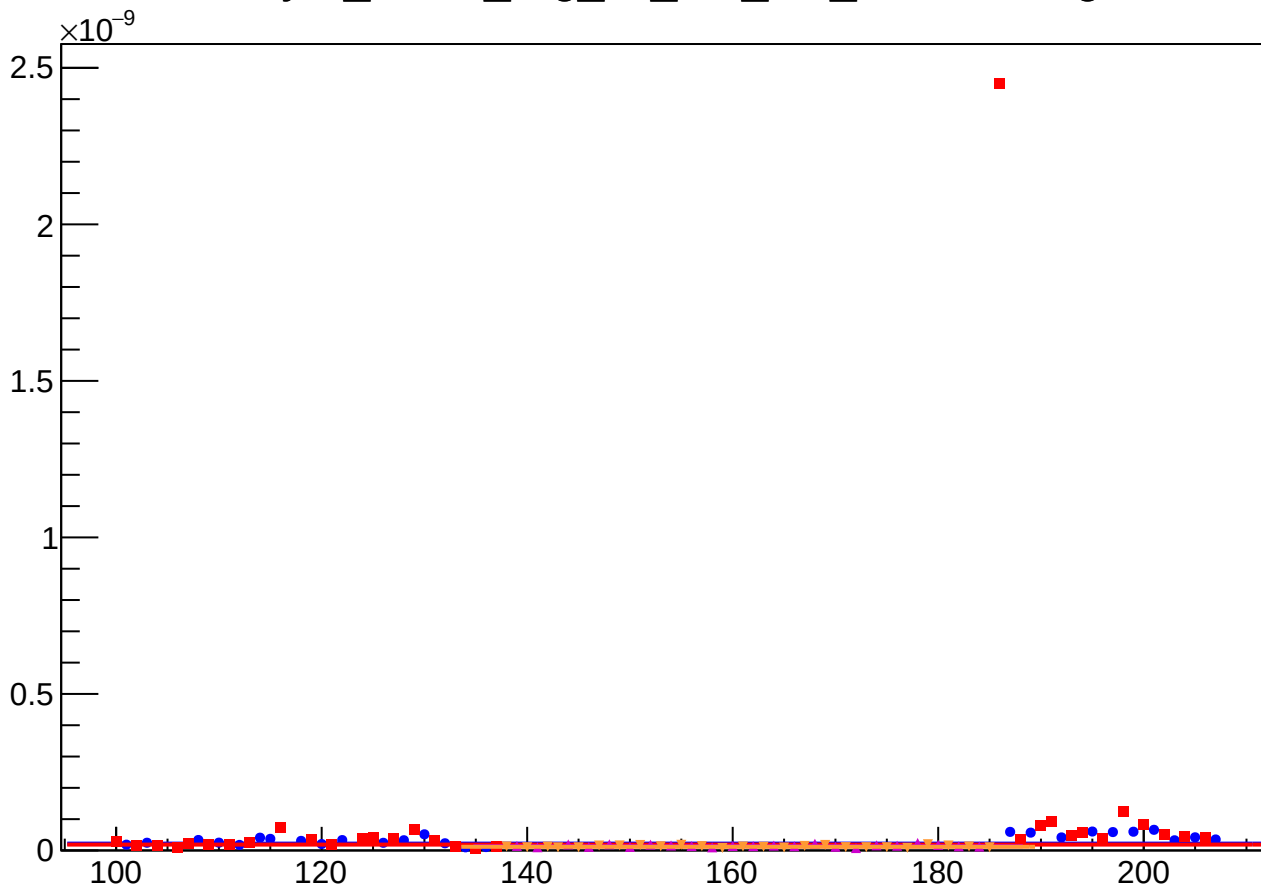
Left In: 0.000 +/- 0.000  $\chi^2/\text{NDF}$ : 28.1/22

+ sign 0.000 +/- 0.000  $\chi^2/\text{NDF}$ : 53.0/50

All: 0.000 +/- 0.000  $\chi^2/\text{NDF}$ : 106.1/104

- sign 0.000 +/- 0.000  $\chi^2/\text{NDF}$ : 50.8/53

# asym\_sam5\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 3665381.5/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 762184.0/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 5778481.0/30

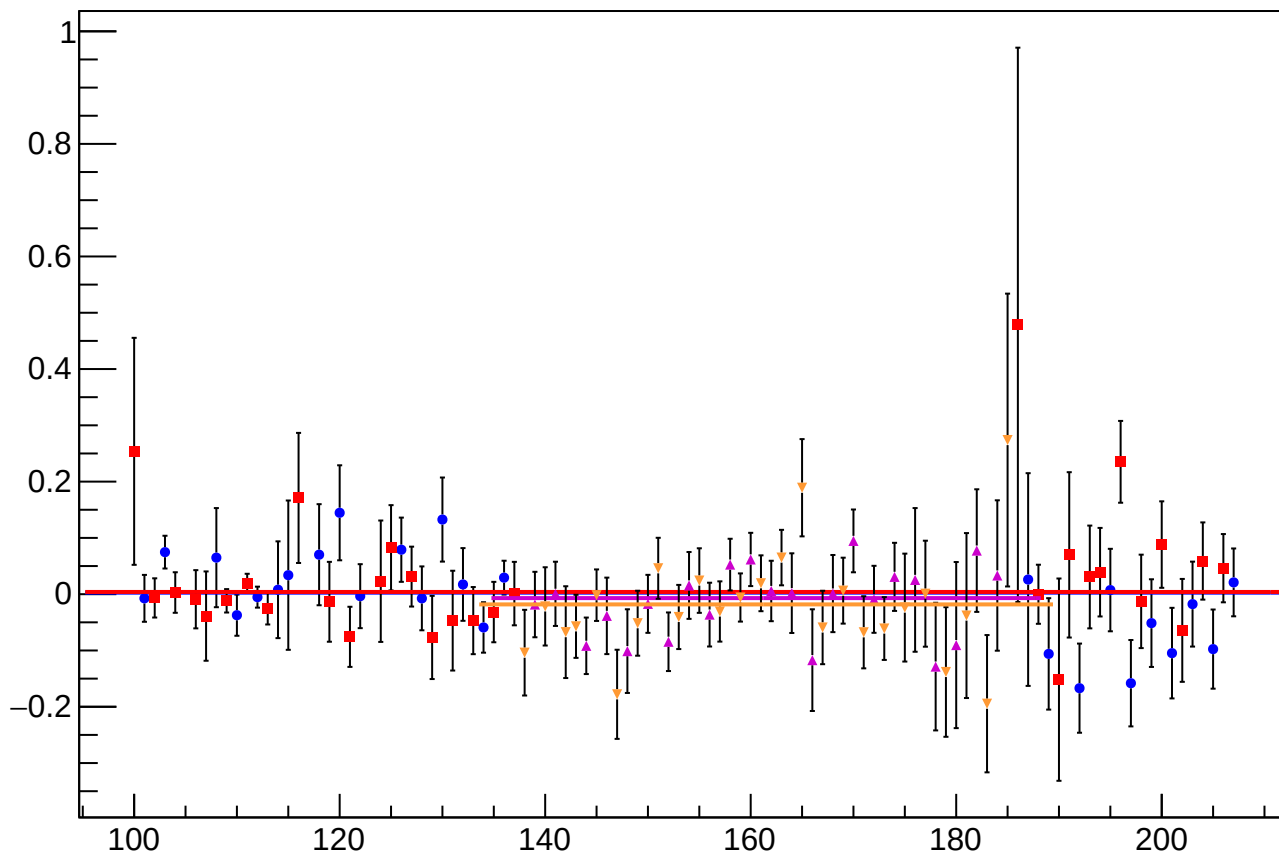
Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 853838.4/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 6196408.2/50

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 13454147.3/104

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7170459.4/53

# asym\_sam5\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.003 $\pm$ 0.010  $\chi^2$ /NDF: 33.8/25

Left Out: -0.018 $\pm$ 0.013  $\chi^2$ /NDF: 24.3/24

Right Out: 0.004 $\pm$ 0.009  $\chi^2$ /NDF: 28.2/30

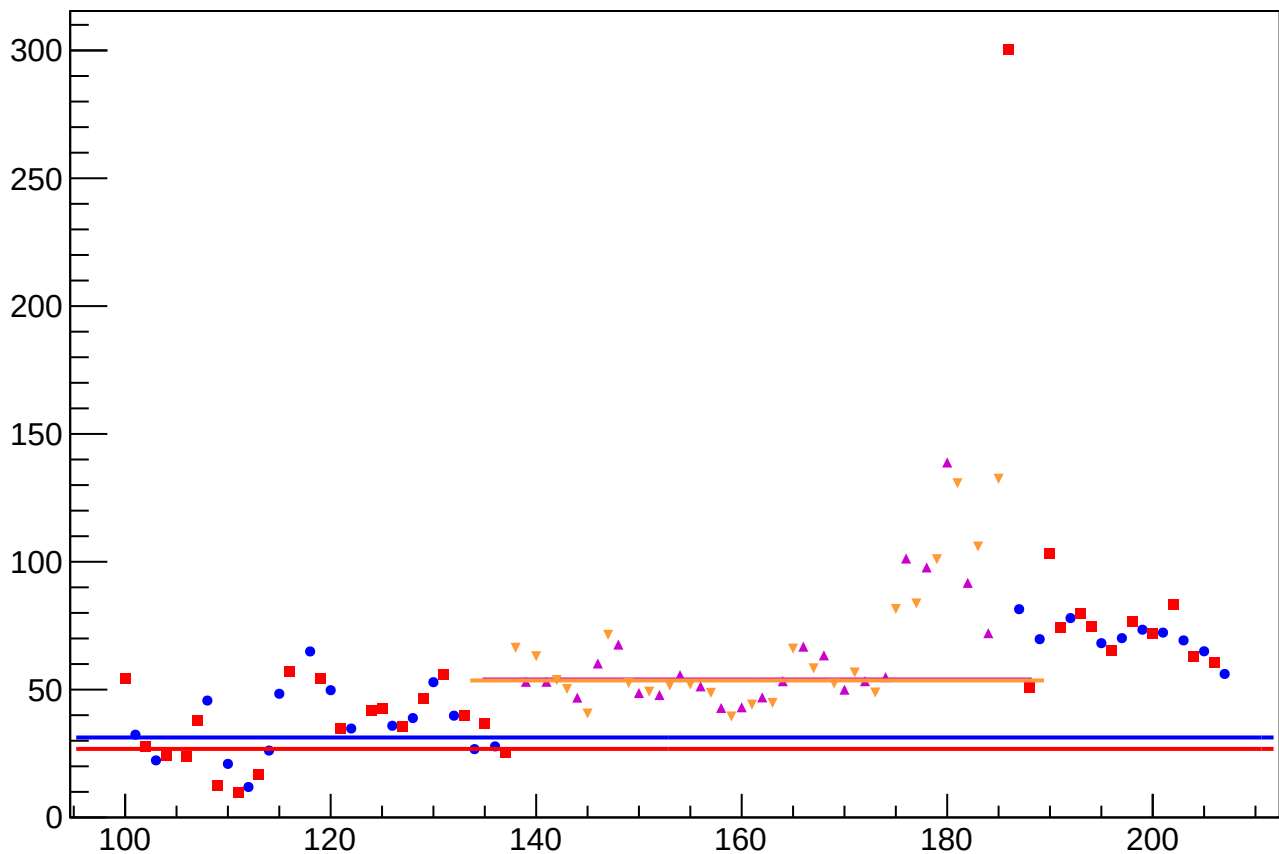
Left In: -0.007 $\pm$ 0.013  $\chi^2$ /NDF: 18.7/22

+ sign -0.005 $\pm$ 0.008  $\chi^2$ /NDF: 59.8/50

All: -0.002 $\pm$ 0.005  $\chi^2$ /NDF: 107.5/104

- sign 0.001 $\pm$ 0.007  $\chi^2$ /NDF: 47.4/53

# asym\_sam5\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 31.277 $\pm$ 0.007  $\chi^2$ /NDF: 7858792.8/25

Left Out: 53.582 $\pm$ 0.009  $\chi^2$ /NDF: 2642509.0/24

Right Out: 26.813 $\pm$ 0.006  $\chi^2$ /NDF: 11459383.6/30

Left In: 53.961 $\pm$ 0.009  $\chi^2$ /NDF: 2039530.1/22

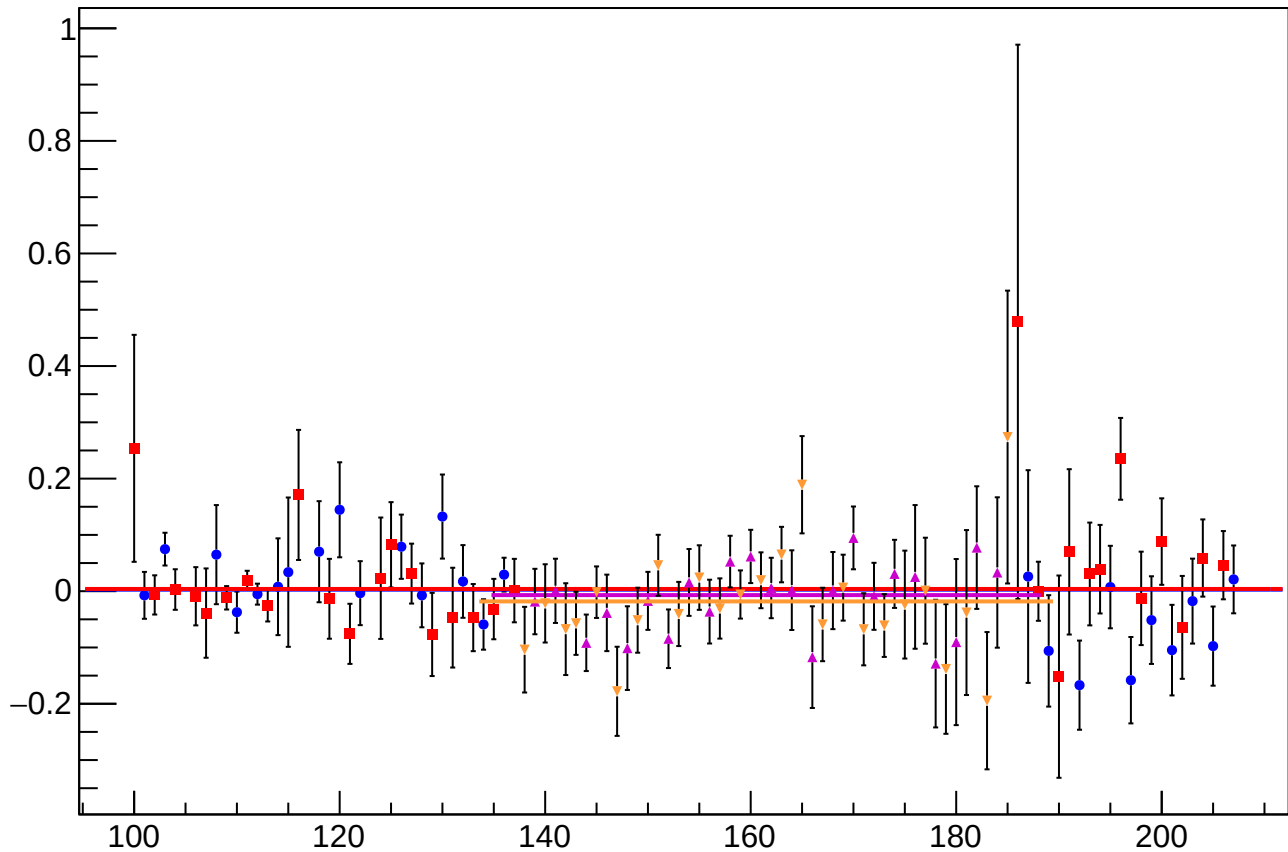
+ sign 39.456 $\pm$ 0.005  $\chi^2$ /NDF: 14347069.8/50

All: 36.999 $\pm$ 0.004  $\chi^2$ /NDF: 34171490.0/104

- sign 34.883 $\pm$ 0.005  $\chi^2$ /NDF: 19450339.9/53



asym\_sam5\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.003 \pm 0.010$   $\chi^2/\text{NDF}: 33.8/25$

Left Out:  $-0.018 \pm 0.013$   $\chi^2/\text{NDF}: 24.3/24$

Right Out:  $0.004 \pm 0.009$   $\chi^2/\text{NDF}: 28.2/30$

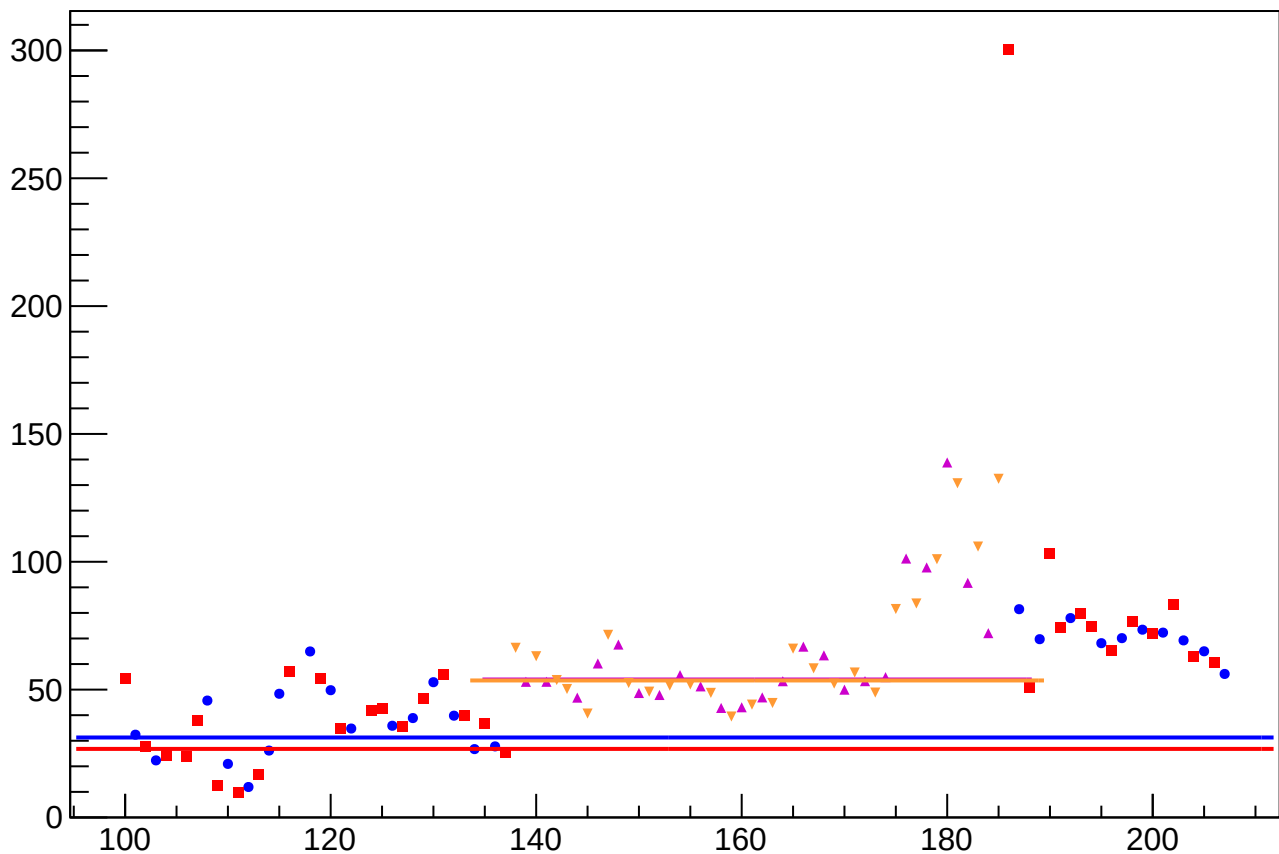
Left In:  $-0.007 \pm 0.013$   $\chi^2/\text{NDF}: 18.7/22$

+ sign  $-0.005 \pm 0.008$   $\chi^2/\text{NDF}: 59.8/50$

All:  $-0.002 \pm 0.005$   $\chi^2/\text{NDF}: 107.5/104$

- sign  $0.001 \pm 0.007$   $\chi^2/\text{NDF}: 47.4/53$

# asym\_sam5\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 31.277 $\pm$ 0.007  $\chi^2$ /NDF: 7858792.8/25

Left Out: 53.582 $\pm$ 0.009  $\chi^2$ /NDF: 2642509.0/24

Right Out: 26.813 $\pm$ 0.006  $\chi^2$ /NDF: 11459383.6/30

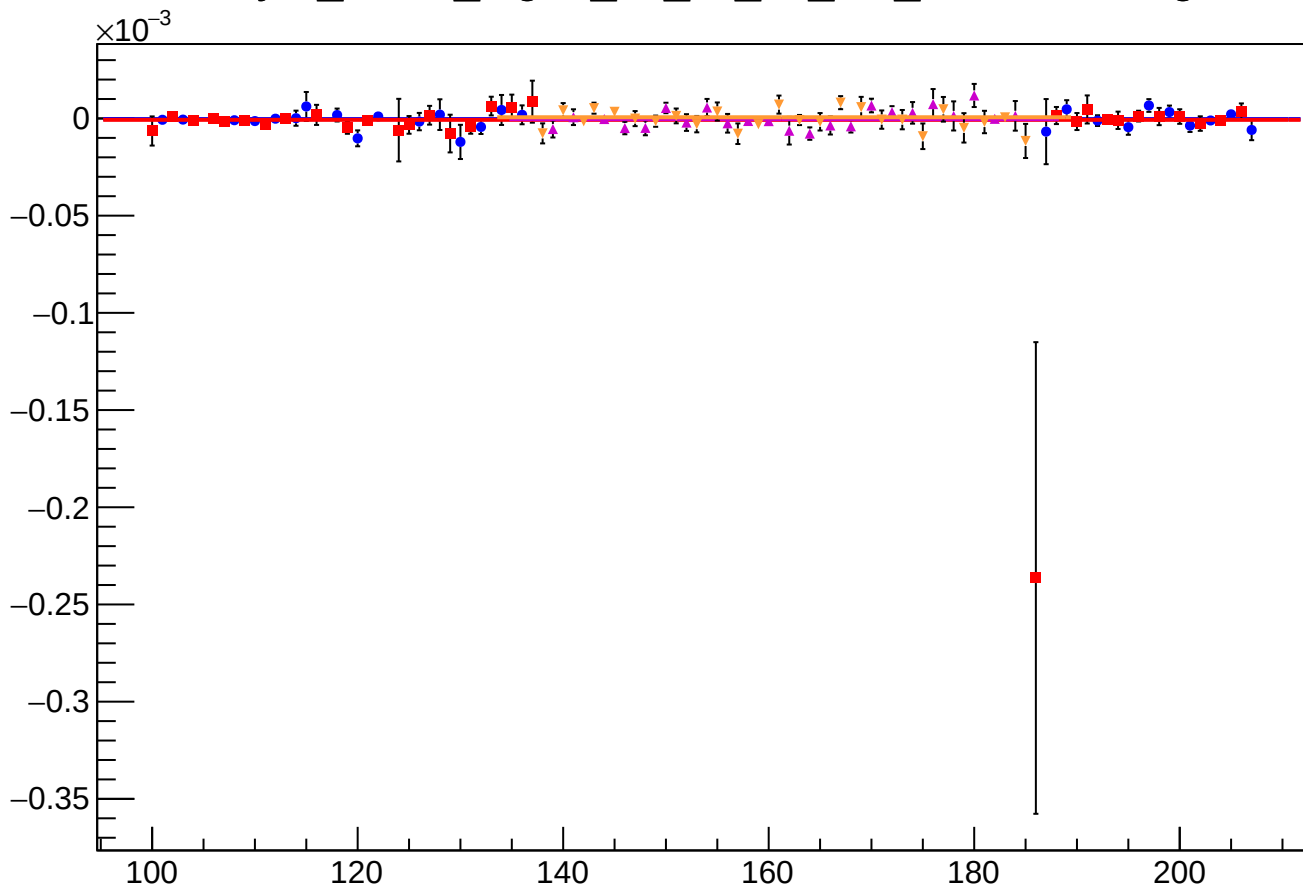
Left In: 53.961 $\pm$ 0.009  $\chi^2$ /NDF: 2039530.1/22

+ sign 39.456 $\pm$ 0.005  $\chi^2$ /NDF: 14347069.8/50

All: 36.999 $\pm$ 0.004  $\chi^2$ /NDF: 34171490.0/104

- sign 34.883 $\pm$ 0.005  $\chi^2$ /NDF: 19450339.9/53

# asym\_sam5\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 23.9/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:31.0/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 18.7/30

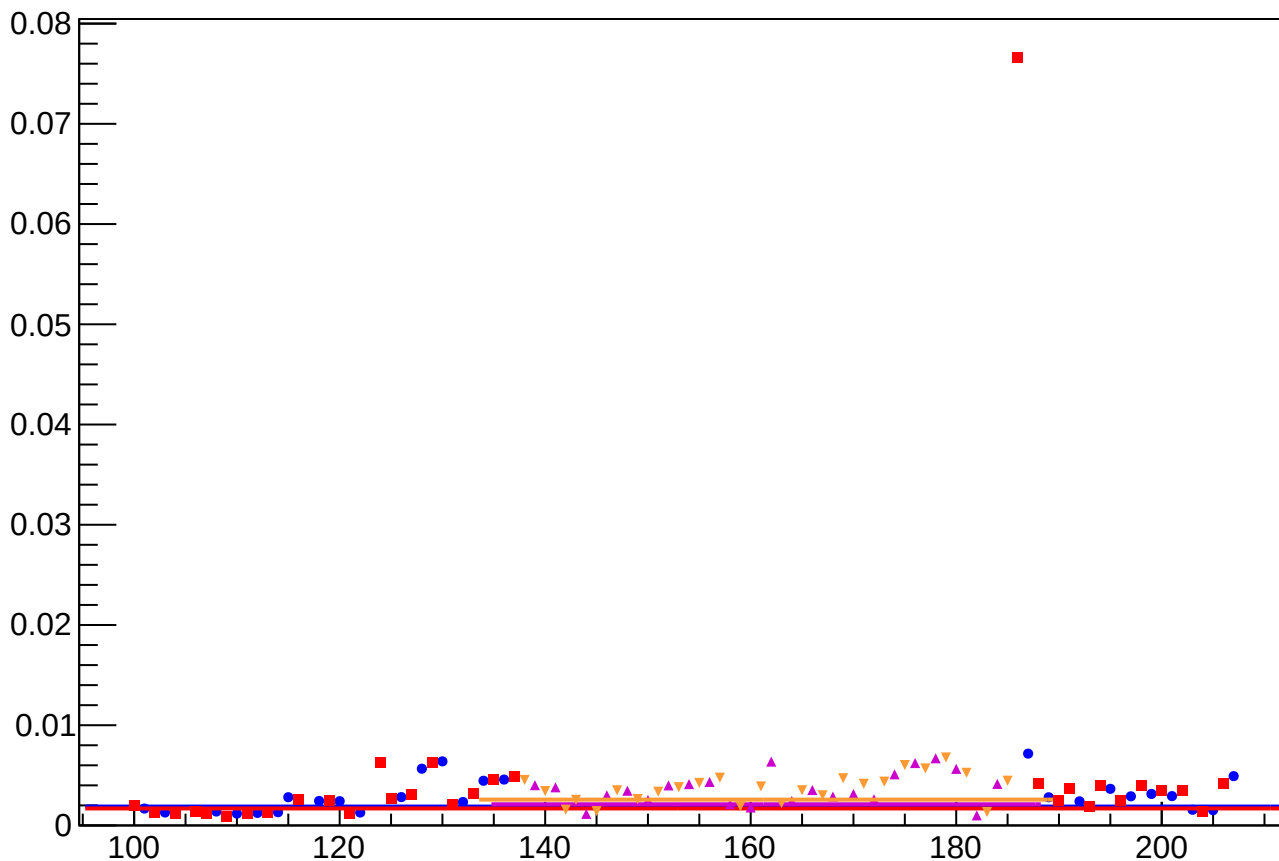
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:30.9/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 56.0/50

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 107.1/104

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 49.8/53

# asym\_sam5\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 5383007.2/25

Left Out: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 7112963.2/24

Right Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 7966625.6/30

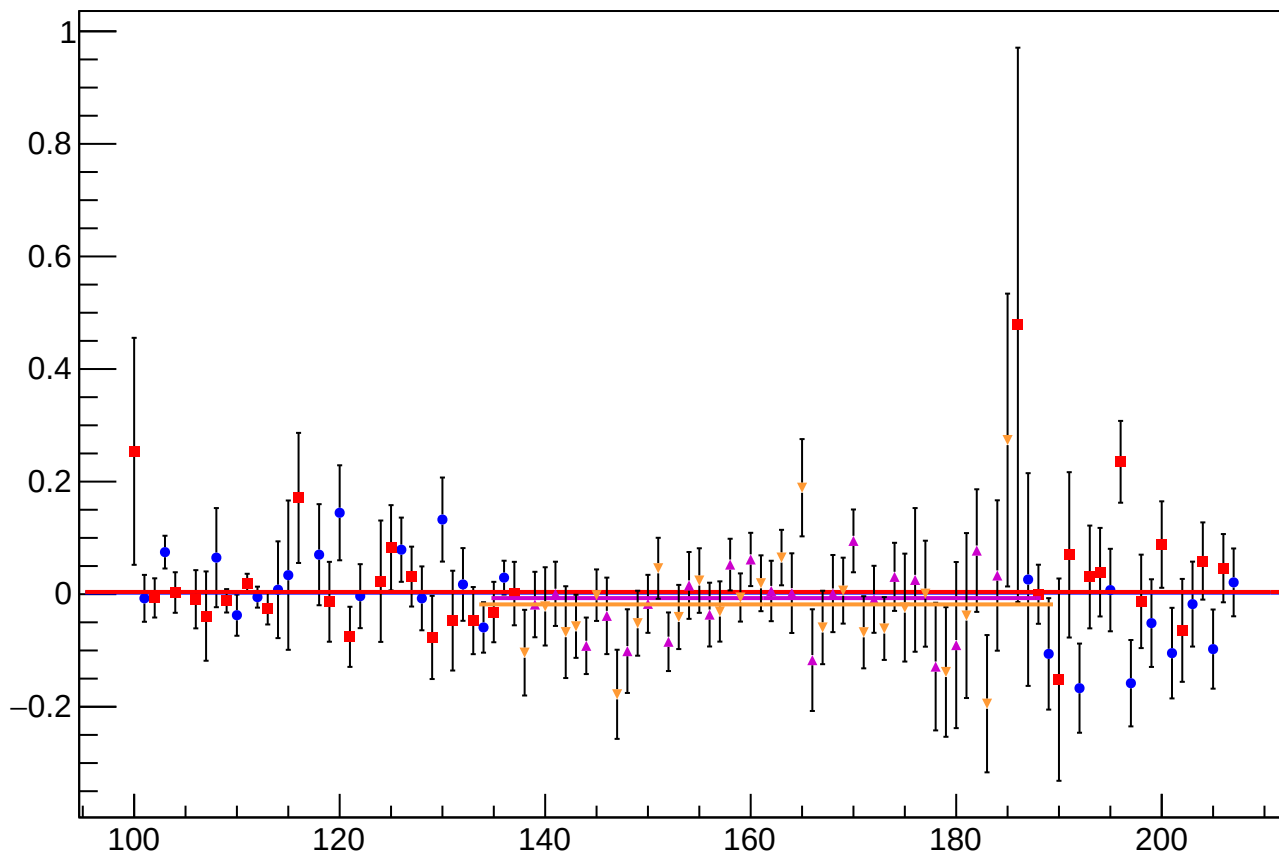
Left In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 9487138.7/22

+ sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 13765420.5/50

All: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 32377907.7/104

- sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 18050885.5/53

asym\_sam5\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.003 $\pm$ 0.010  $\chi^2$ /NDF: 33.8/25

Left Out: -0.018 $\pm$ 0.013  $\chi^2$ /NDF: 24.3/24

Right Out: 0.004 $\pm$ 0.009  $\chi^2$ /NDF: 28.2/30

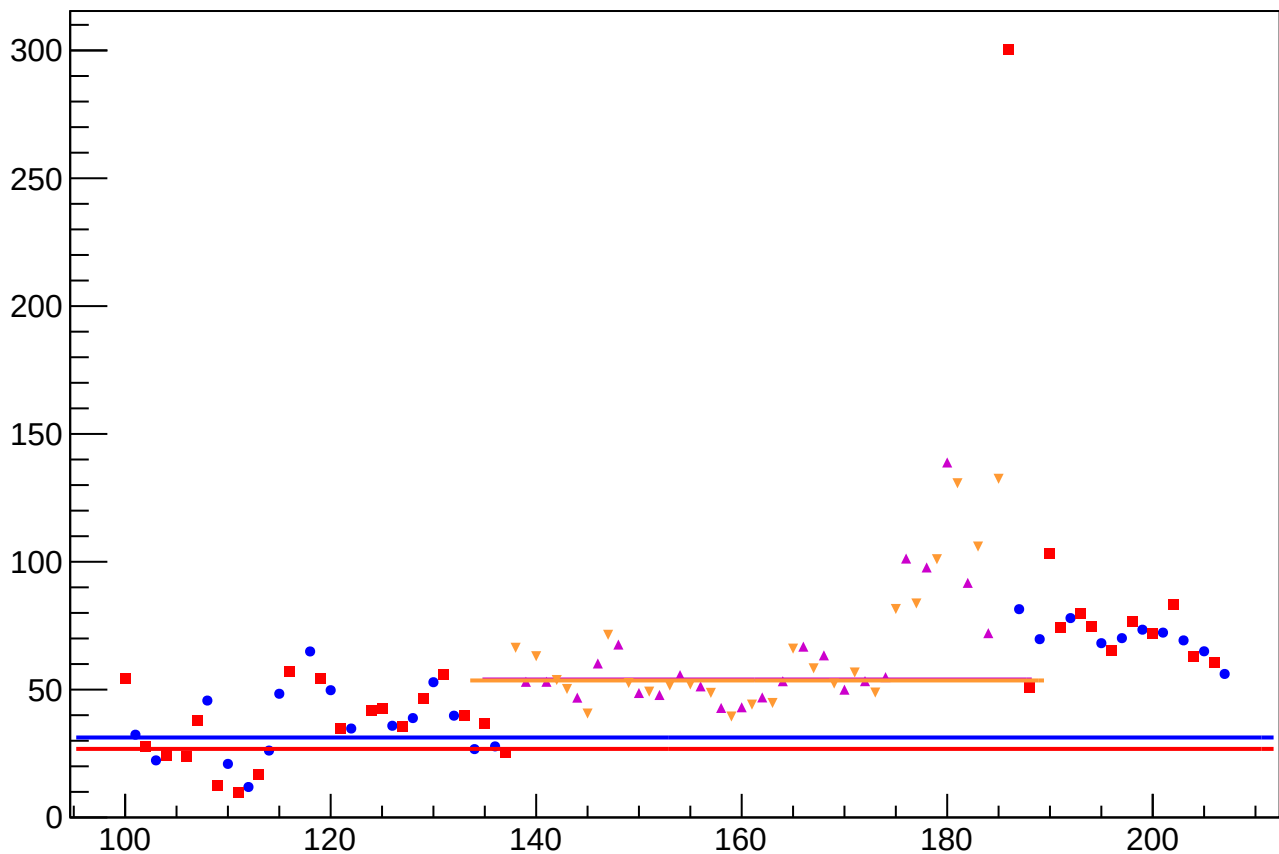
Left In: -0.007 $\pm$ 0.013  $\chi^2$ /NDF: 18.7/22

+ sign -0.005 $\pm$ 0.008  $\chi^2$ /NDF: 59.8/50

All: -0.002 $\pm$ 0.005  $\chi^2$ /NDF: 107.5/104

- sign 0.001 $\pm$ 0.007  $\chi^2$ /NDF: 47.4/53

# asym\_sam5\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 31.276 $\pm$ 0.007  $\chi^2$ /NDF: 7858864.0/25

Left Out: 53.582 $\pm$ 0.009  $\chi^2$ /NDF: 2642554.6/24

Right Out: 26.812 $\pm$ 0.006  $\chi^2$ /NDF: 11459561.2/30

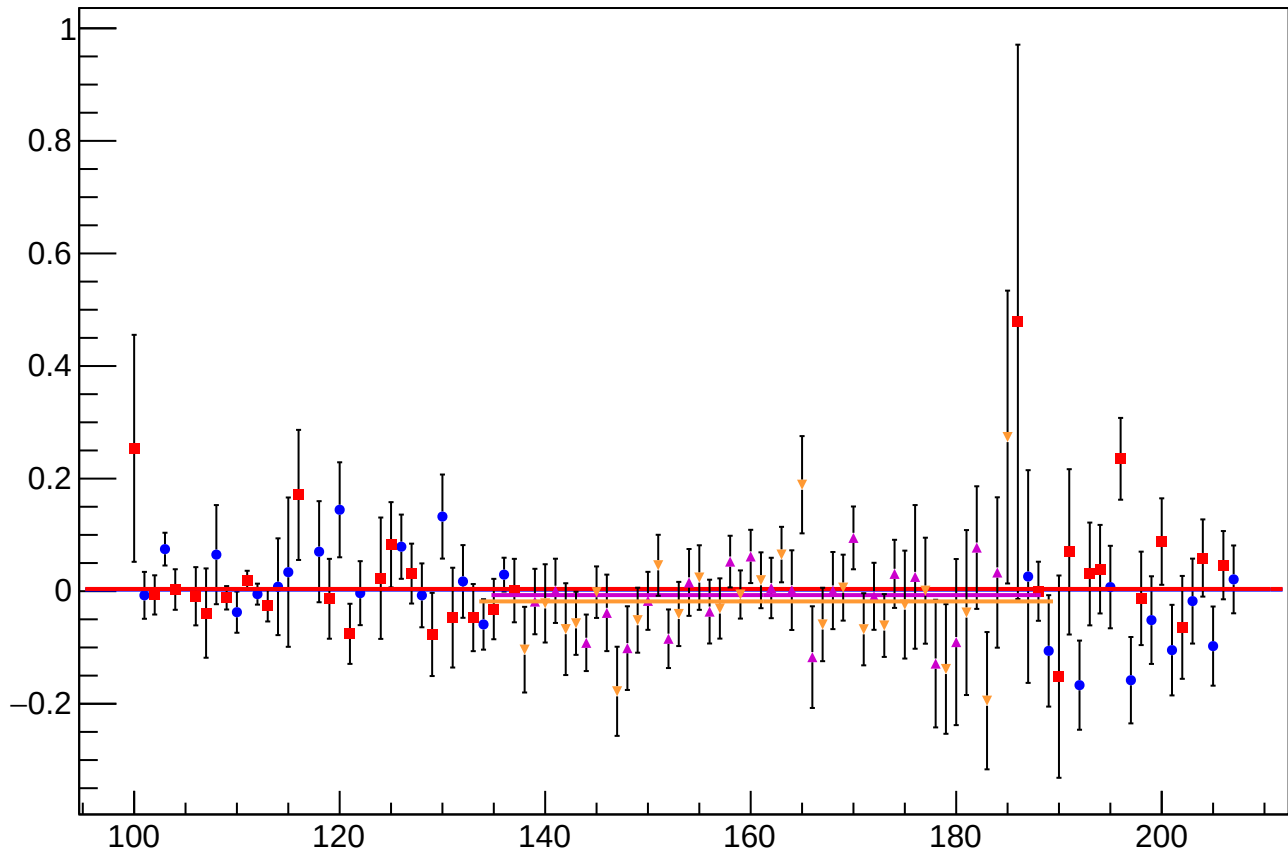
Left In: 53.961 $\pm$ 0.009  $\chi^2$ /NDF: 2039571.7/22

+ sign 39.455 $\pm$ 0.005  $\chi^2$ /NDF: 14347542.2/50

All: 36.998 $\pm$ 0.004  $\chi^2$ /NDF: 34172667.9/104

- sign 34.882 $\pm$ 0.005  $\chi^2$ /NDF: 19451016.0/53

asym\_sam5\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.003 \pm 0.010$   $\chi^2/\text{NDF}$ : 33.8/25

Left Out:  $-0.018 \pm 0.013$   $\chi^2/\text{NDF}$ : 24.3/24

Right Out:  $0.004 \pm 0.009$   $\chi^2/\text{NDF}$ : 28.2/30

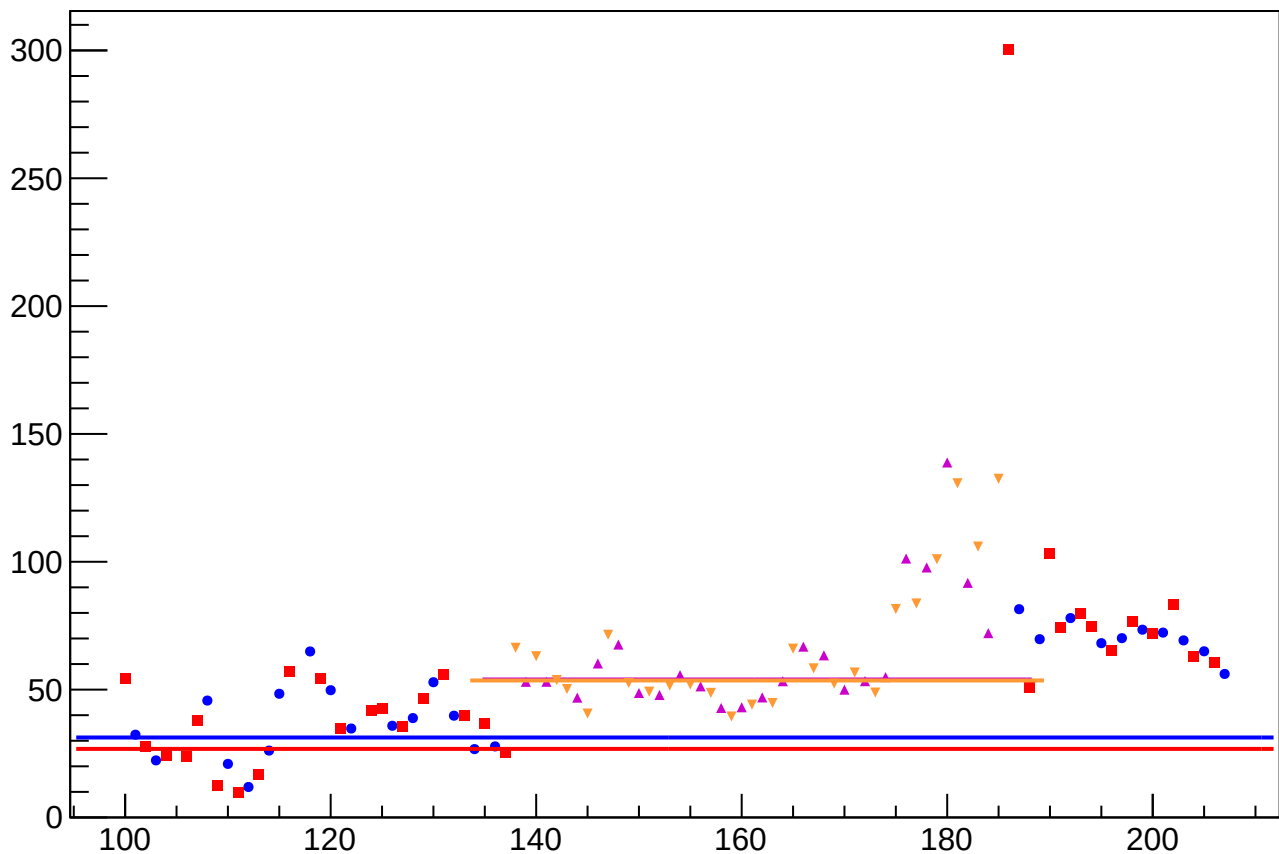
Left In:  $-0.007 \pm 0.013$   $\chi^2/\text{NDF}$ : 18.7/22

+ sign  $-0.005 \pm 0.008$   $\chi^2/\text{NDF}$ : 59.8/50

All:  $-0.002 \pm 0.005$   $\chi^2/\text{NDF}$ : 107.5/104

- sign  $0.001 \pm 0.007$   $\chi^2/\text{NDF}$ : 47.4/53

asym\_sam5\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 31.276 $\pm$ 0.007  $\chi^2$ /NDF: 7858864.0/25

Left Out: 53.582 $\pm$ 0.009  $\chi^2$ /NDF: 2642554.6/24

Right Out: 26.812 $\pm$ 0.006  $\chi^2$ /NDF: 11459561.2/30

Left In: 53.961 $\pm$ 0.009  $\chi^2$ /NDF: 2039571.7/22

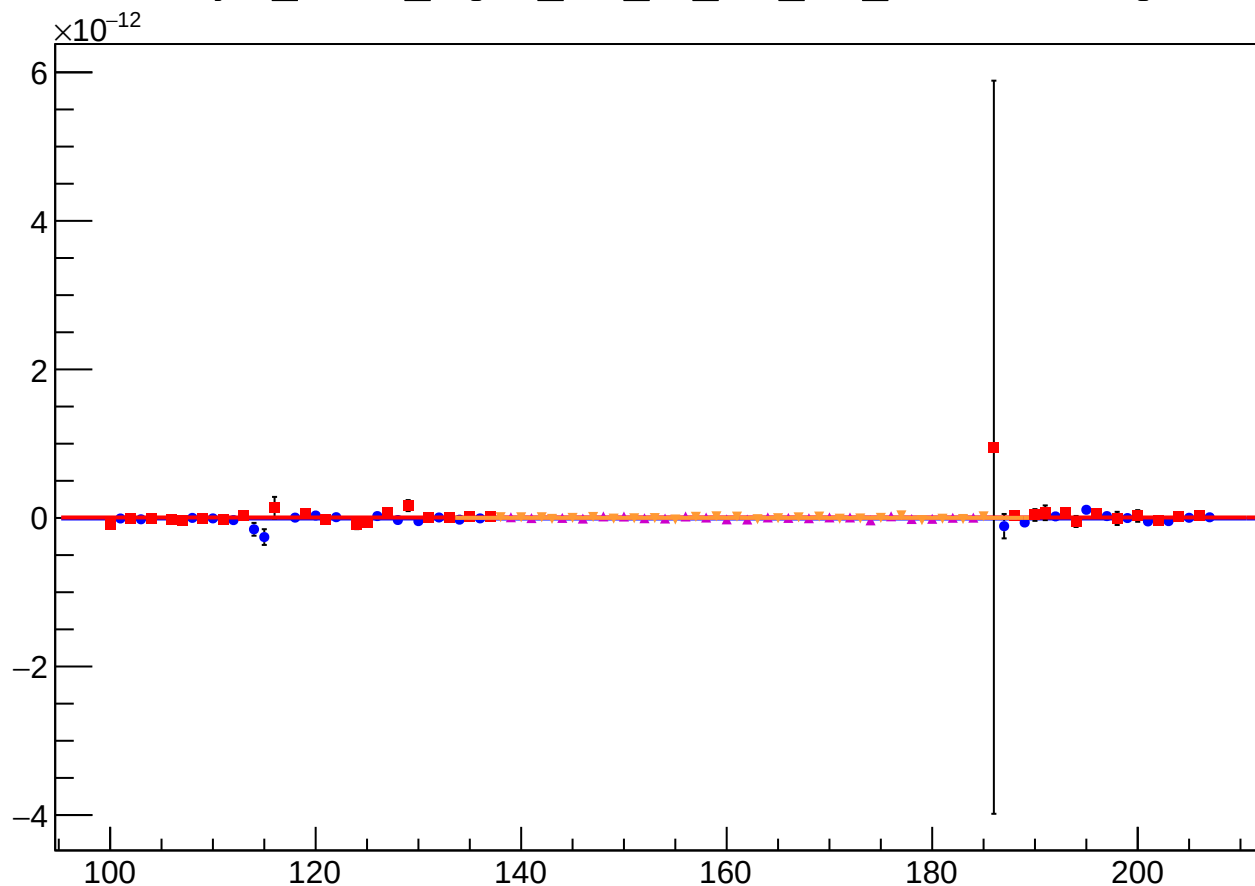
+ sign 39.455 $\pm$ 0.005  $\chi^2$ /NDF: 14347542.2/50

All: 36.998 $\pm$ 0.004  $\chi^2$ /NDF: 34172667.9/104

- sign 34.882 $\pm$ 0.005  $\chi^2$ /NDF: 19451016.0/53



# asym\_sam5\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 22.2/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 27.4/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 35.9/30

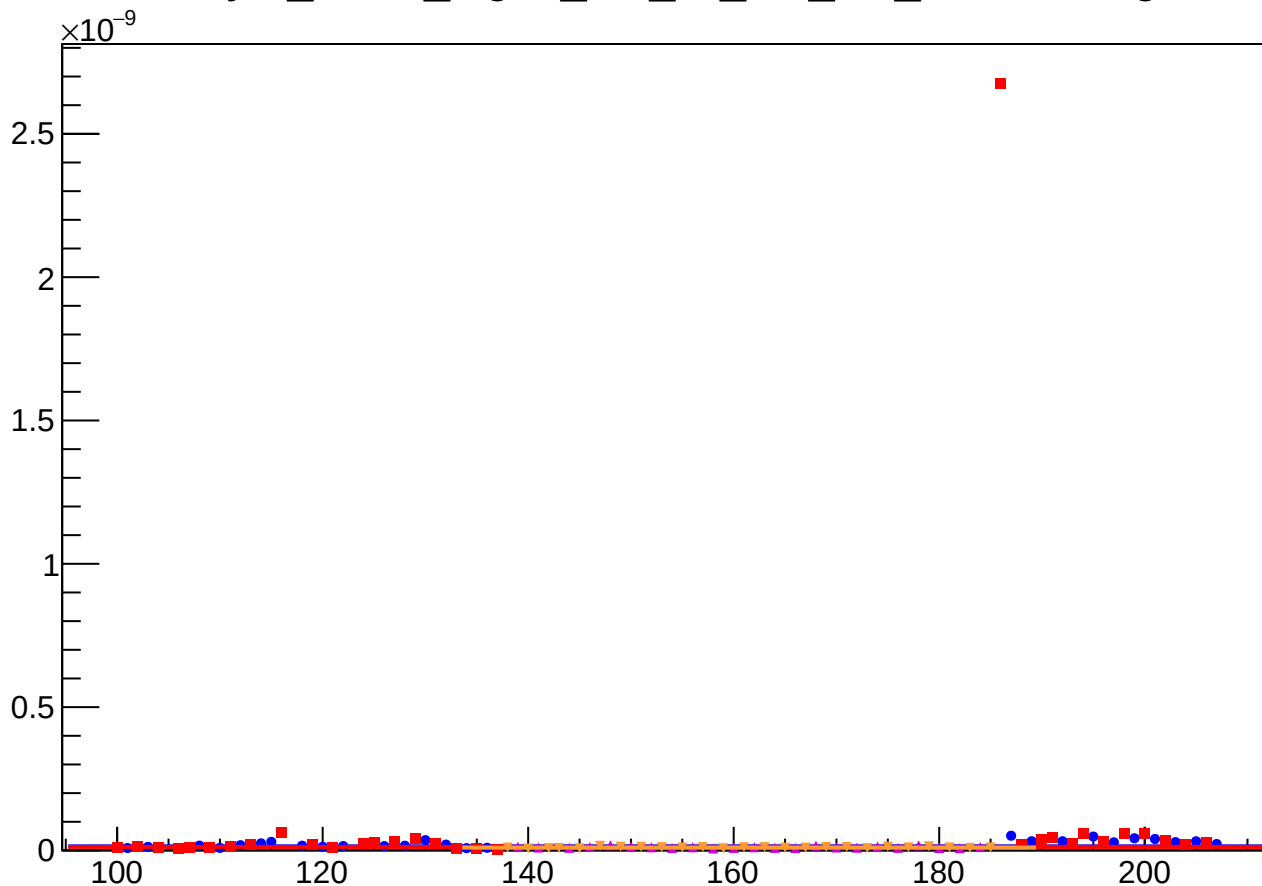
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 18.1/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 51.7/50

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 107.4/104

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 55.2/53

# asym\_sam5\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 5014621.0/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1196110.1/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7996078.9/30

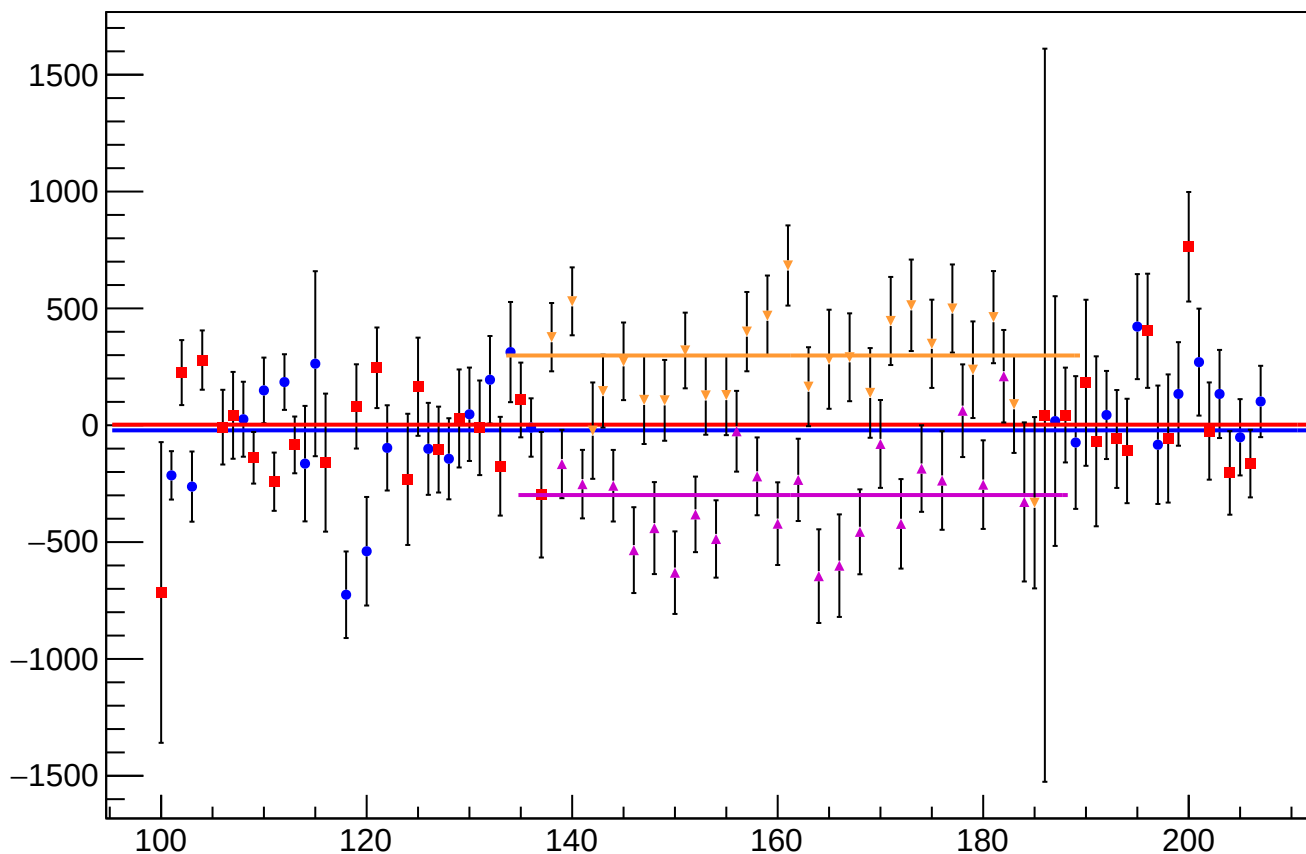
Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1313644.4/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7310709.4/50

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 16928081.3/104

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 9617359.0/53

# reg\_asym\_sam6\_mean vs Slug



Right In:  $-21.831 \pm 34.833$   $\chi^2/\text{NDF}: 43.2/25$

Left Out:  $298.517 \pm 36.051$   $\chi^2/\text{NDF}: 26.0/24$

Right Out:  $2.508 \pm 33.418$   $\chi^2/\text{NDF}: 37.8/30$

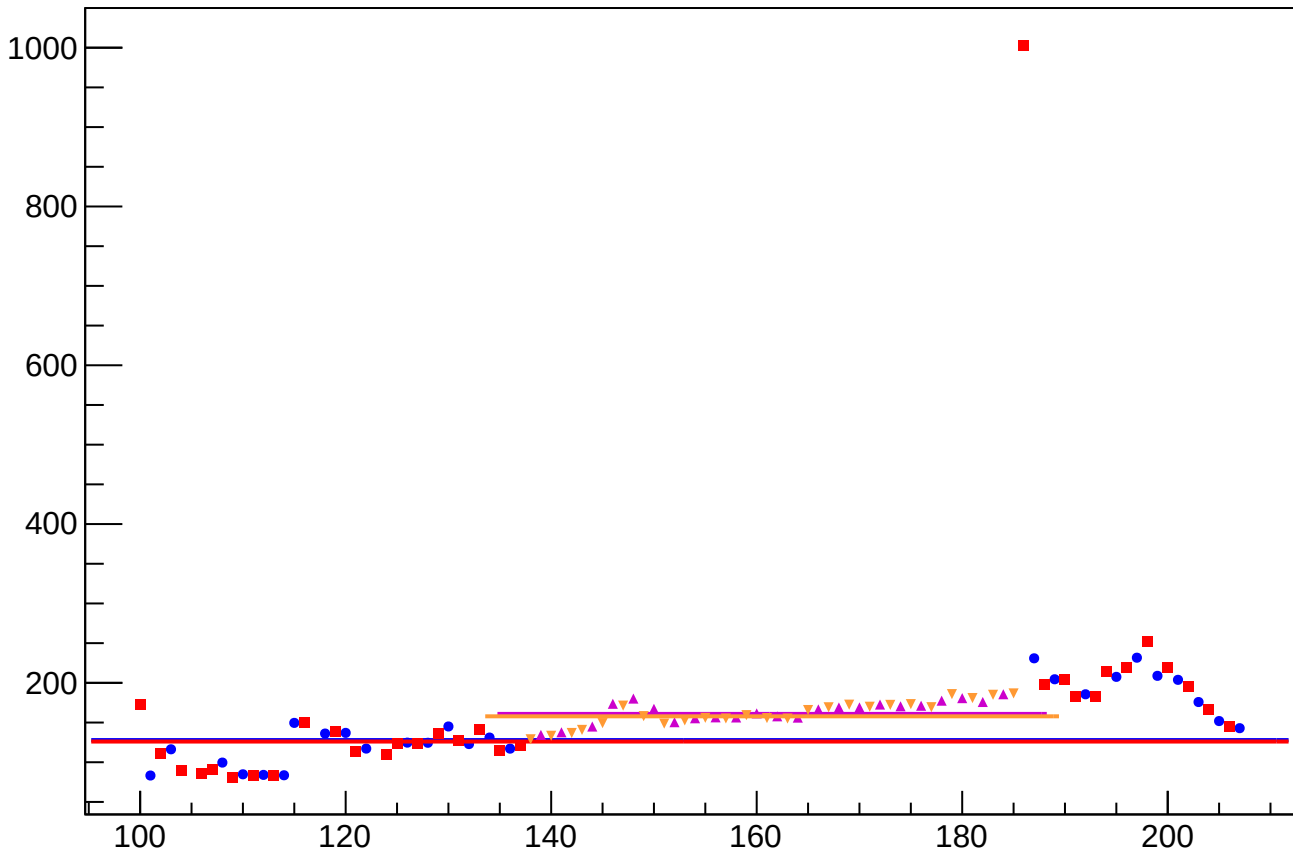
Left In:  $-298.675 \pm 37.727$   $\chi^2/\text{NDF}: 29.4/22$

+ sign  $132.841 \pm 25.050$   $\chi^2/\text{NDF}: 110.0/50$

All:  $1.284 \pm 17.701$   $\chi^2/\text{NDF}: 268.0/104$

- sign  $-129.908 \pm 25.015$   $\chi^2/\text{NDF}: 102.9/53$

# reg\_asym\_sam6\_rms vs Slug



Right In: 127.938+/-0.025     $\chi^2/\text{NDF}$ : 2695049.9/25

Left Out: 157.836+/-0.025     $\chi^2/\text{NDF}$ :377205.2/24

+ sign 142.373+/-0.018     $\chi^2/\text{NDF}$ : 3783702.9/50

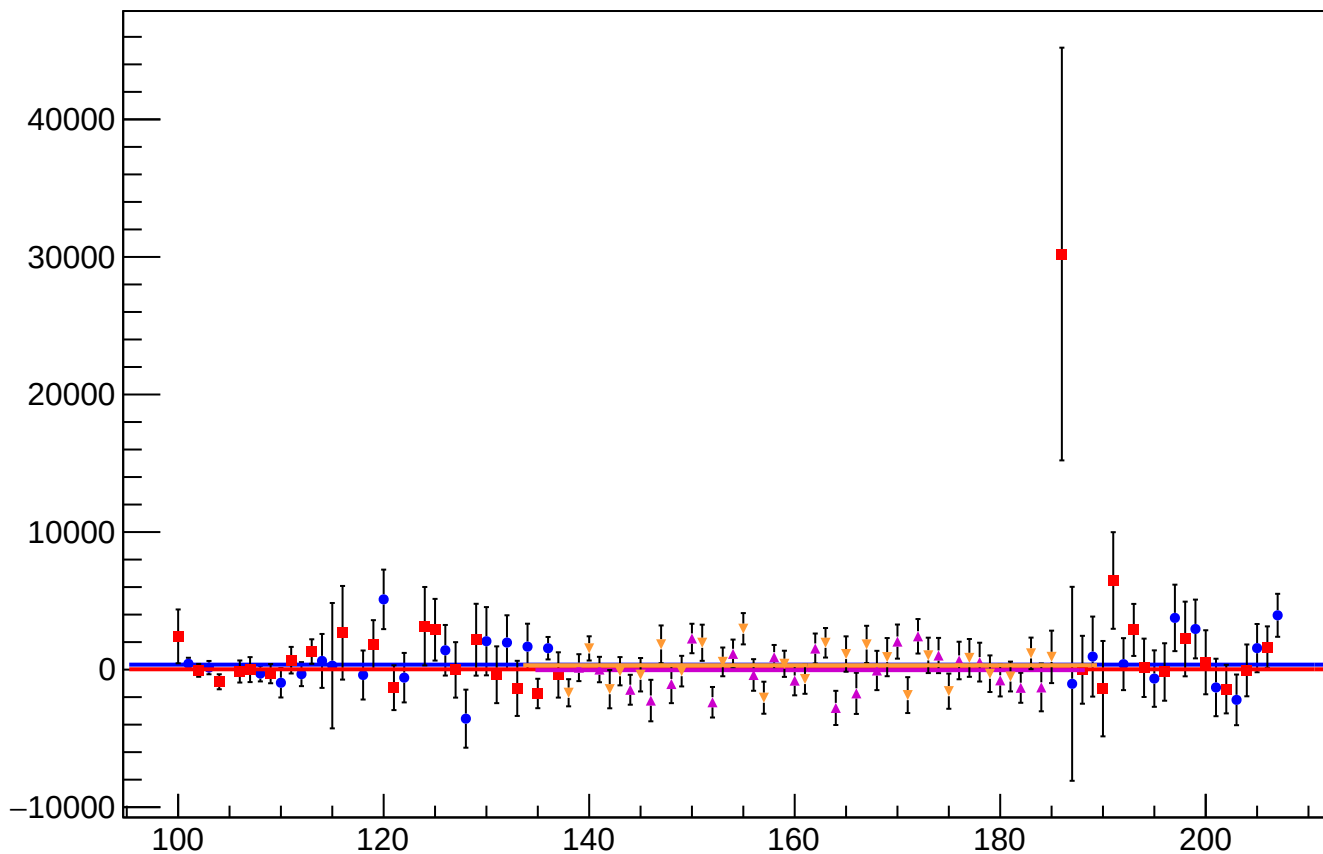
Right Out: 126.064+/-0.024     $\chi^2/\text{NDF}$ : 4156794.9/30

All:  $141.870 \pm 0.013$      $\chi^2/\text{NDF}: 9164533.7/10^4$

- sign 141.369+/-0.018     $\chi^2/\text{NDF}$ : 5379219.5/53

Left In: 160.874+/-0.027     $\chi^2$ /NDF:268330.7/22

# asym\_sam6\_reg\_correction\_mean vs Slug



Right In: 361.206+/-217.701  $\chi^2/\text{NDF}$ : 28.7/25

Left Out: 319.947+/-235.084  $\chi^2/\text{NDF}$ : 32.5/24

Right Out: 23.826+/-218.322  $\chi^2/\text{NDF}$ : 28.6/30

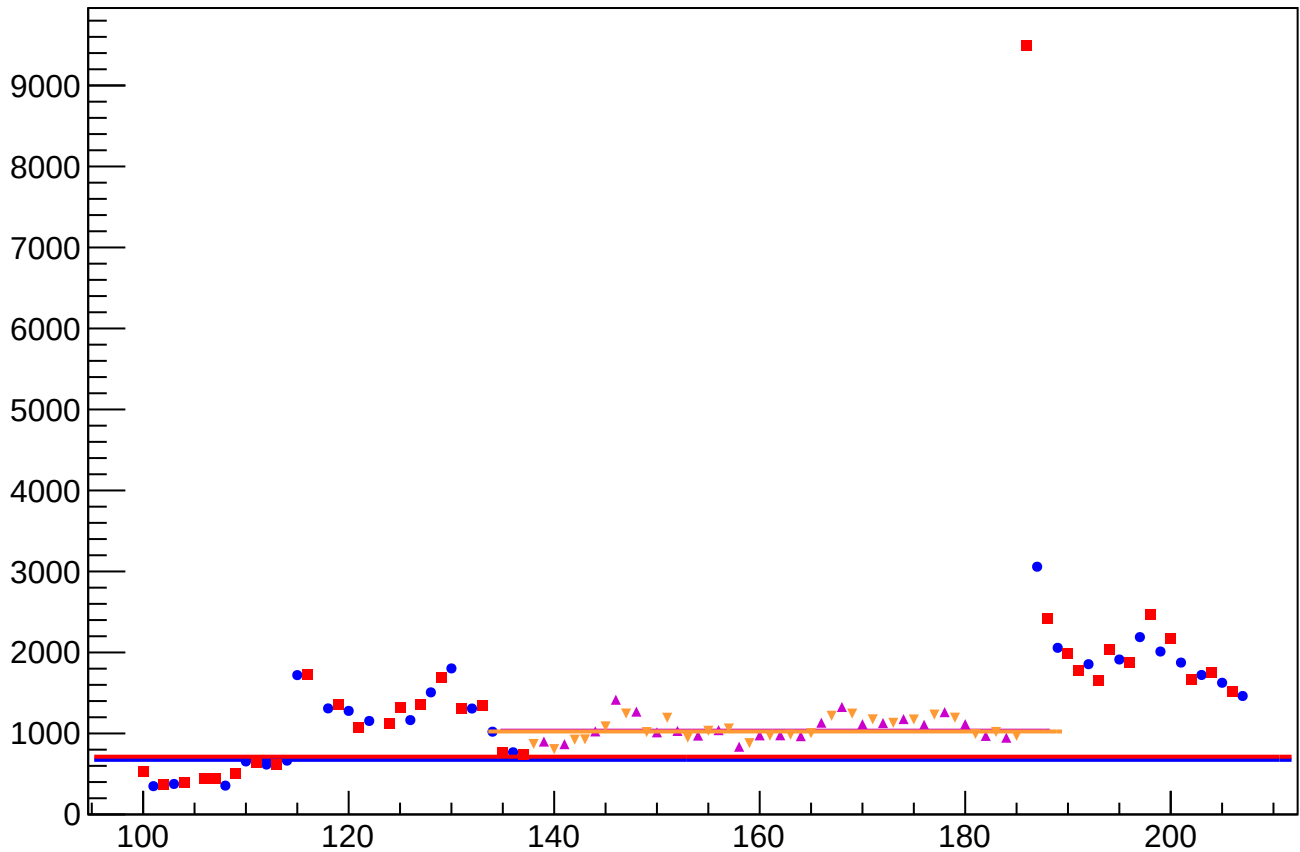
Left In: -39.197+/-244.156  $\chi^2/\text{NDF}$ : 34.8/22

+ sign 342.158+/-159.730  $\chi^2/\text{NDF}$ : 61.2/50

All: 172.231+/-113.998  $\chi^2/\text{NDF}$ : 127.0/104

- sign -4.176+/-162.747  $\chi^2/\text{NDF}$ : 63.4/53

# asym\_sam6\_reg\_correction\_rms vs Slug



Right In: 674.279+/-0.154  $\chi^2/\text{NDF}$ : 10520854.8/25

Left Out: 1024.493+/-0.166  $\chi^2/\text{NDF}$ : 597629.4/24

Right Out: 713.211+/-0.154  $\chi^2/\text{NDF}$ : 11302558.8/30

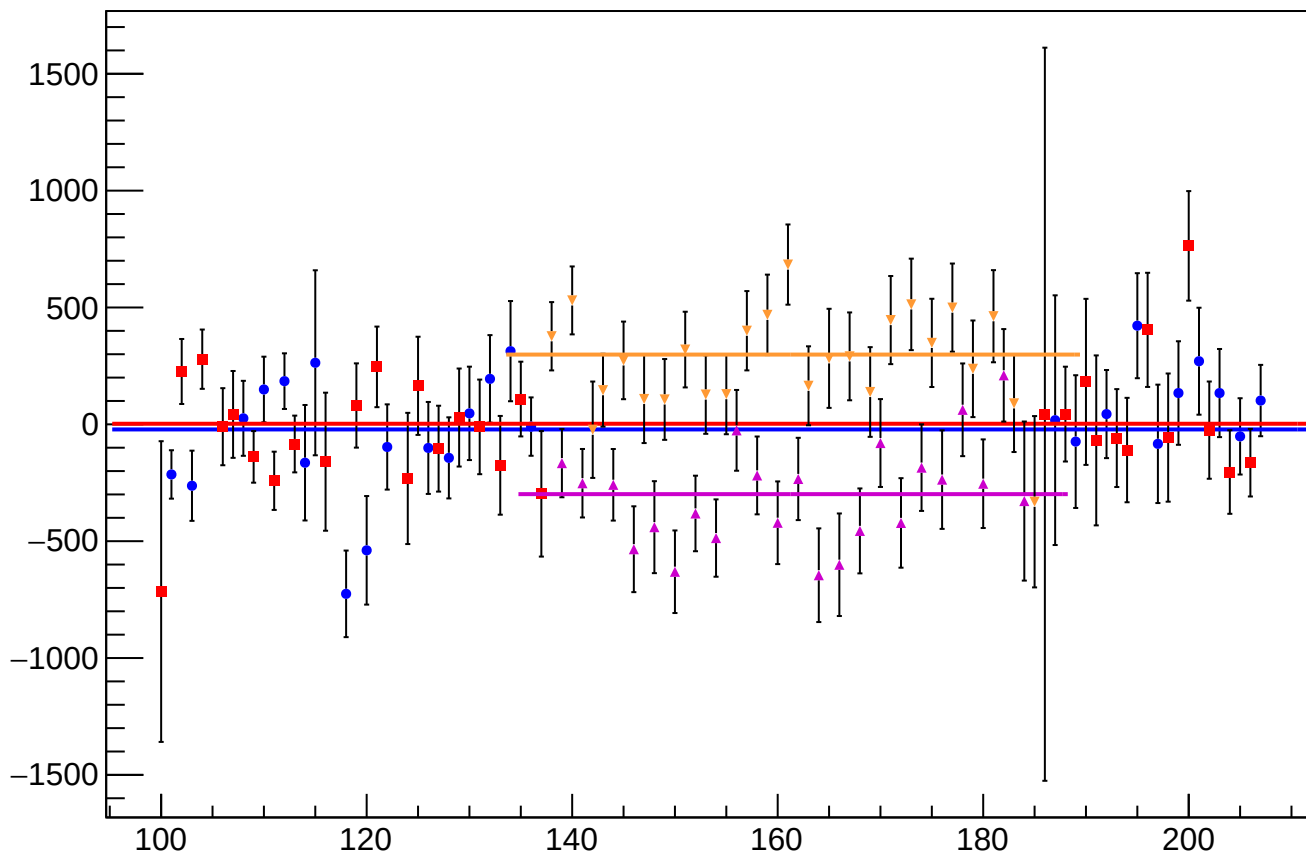
Left In: 1034.428+/-0.173  $\chi^2/\text{NDF}$ : 628477.2/22

+ sign 835.961+/-0.113  $\chi^2/\text{NDF}$ : 13507965.7/50

All: 845.760+/-0.081  $\chi^2/\text{NDF}$ : 27377969.2/10

- sign 855.932+/-0.115  $\chi^2/\text{NDF}$ : 13854663.5/53

# cor\_asym\_sam6\_mean vs Slug



Right In:  $-21.850 \pm 34.833$   $\chi^2/\text{NDF}: 43.2/25$

Left Out:  $298.518 \pm 36.051$   $\chi^2/\text{NDF}: 26.0/24$

Right Out:  $2.482 \pm 33.462$   $\chi^2/\text{NDF}: 37.8/30$

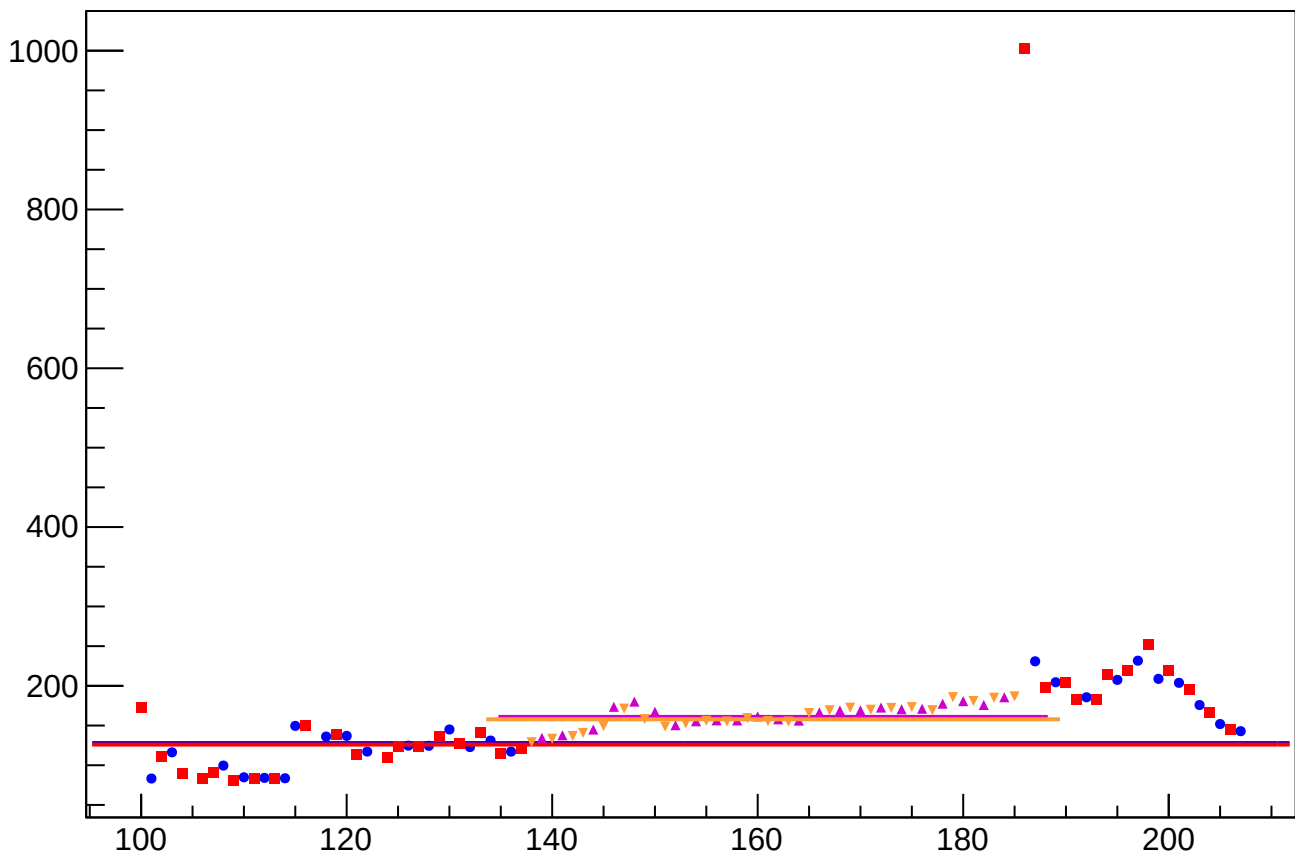
Left In:  $-298.682 \pm 37.727$   $\chi^2/\text{NDF}: 29.4/22$

+ sign  $132.832 \pm 25.050$   $\chi^2/\text{NDF}: 110.0/50$

All:  $1.269 \pm 17.707$   $\chi^2/\text{NDF}: 268.0/104$

- sign  $-130.124 \pm 25.034$   $\chi^2/\text{NDF}: 102.9/53$

# cor\_asym\_sam6\_rms vs Slug



Right In: 127.938 $\pm$ 0.025     $\chi^2$ /NDF: 2695048.2/25

Left Out: 157.836+/-0.025     $\chi^2/\text{NDF}$ :377205.2/24

+ sign 142.373+/-0.018     $\chi^2/\text{NDF}$ : 3783698.7/50

Right Out:  $126.042 \pm 0.024$      $\chi^2/\text{NDF}$ : 4168456.1/30

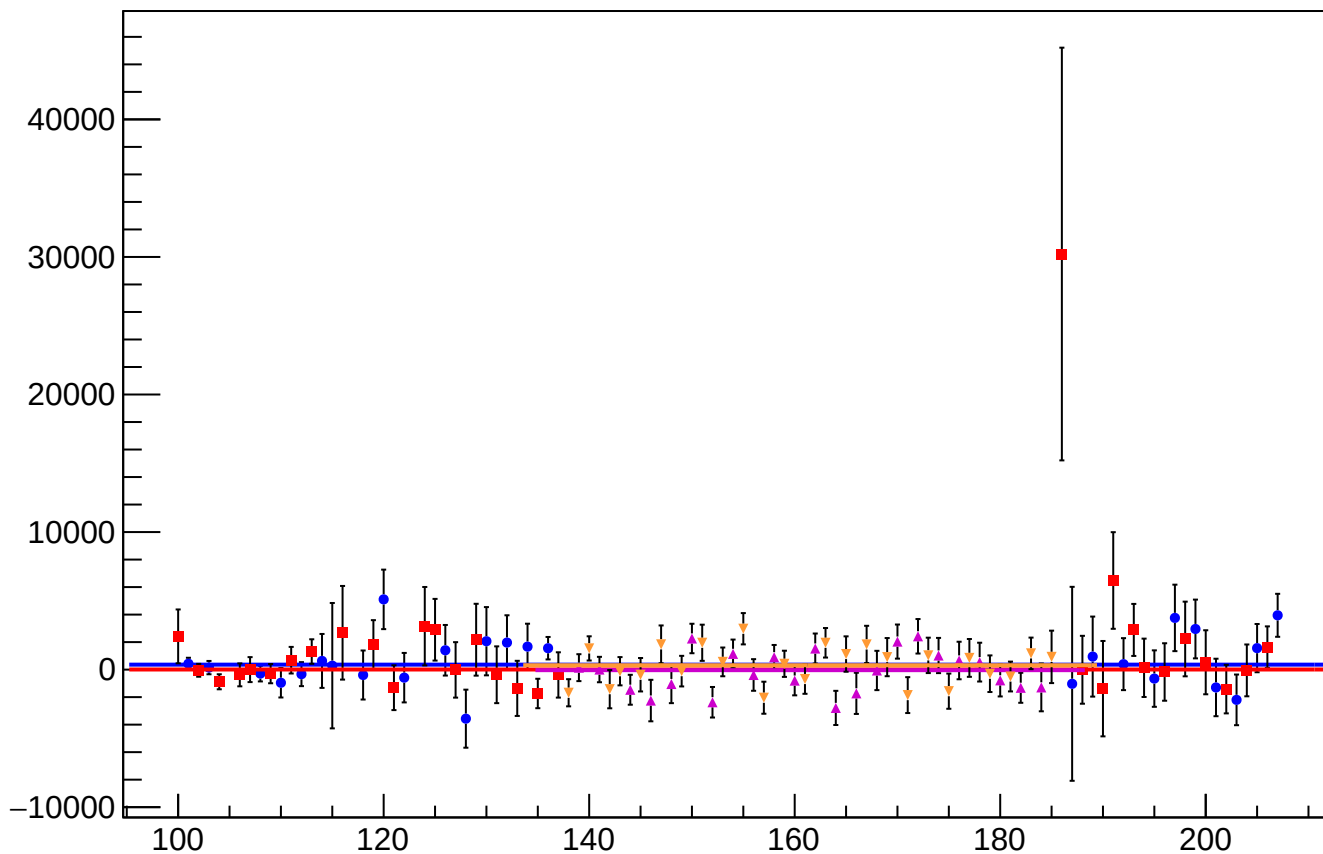
All:  $141.876 \pm 0.013$      $\chi^2/\text{NDF}: 9176281.9/104$

- sign 141.379+/-0.018  $\chi^2/\text{NDF}$ : 5391005.4/53

Left In: 160.874+/-0.027     $\chi^2/\text{NDF}$ :268330.7/22



# asym\_sam6\_cor\_correction\_mean vs Slug



Right In: 361.328+/-217.695  $\chi^2/\text{NDF}$ : 28.7/25

Left Out: 319.953+/-235.084  $\chi^2/\text{NDF}$ : 32.5/24

Right Out: 8.633+/-218.843  $\chi^2/\text{NDF}$ : 28.8/30

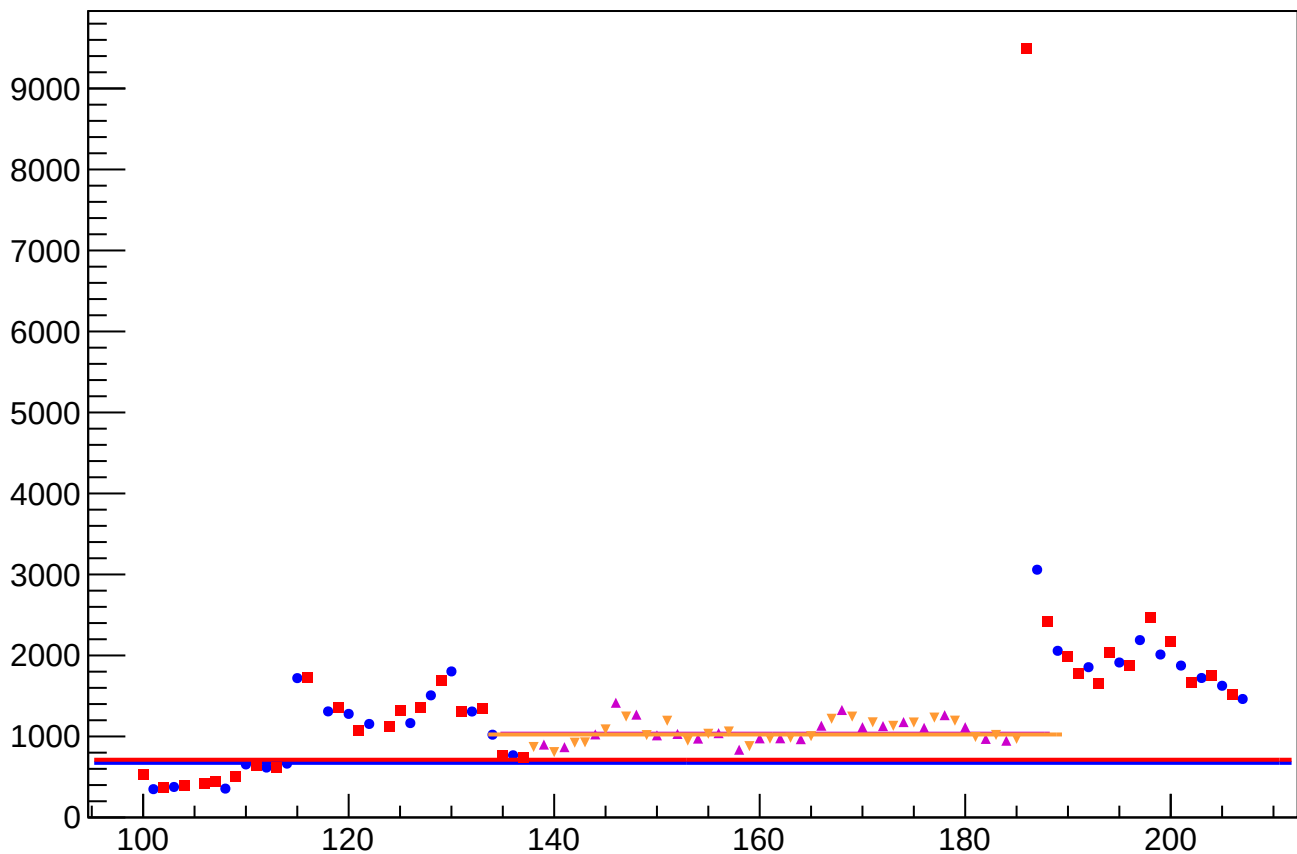
Left In: -39.198+/-244.156  $\chi^2/\text{NDF}$ : 34.8/22

+ sign 342.227+/-159.728  $\chi^2/\text{NDF}$ : 61.2/50

All: 168.333+/-114.071  $\chi^2/\text{NDF}$ : 127.3/104

- sign -12.675+/-162.962  $\chi^2/\text{NDF}$ : 63.6/53

# asym\_sam6\_cor\_correction\_rms vs Slug



Right In: 674.252 $\pm$ 0.154  $\chi^2$ /NDF: 10521326.2/25

Left Out: 1024.493 $\pm$ 0.166  $\chi^2$ /NDF: 597629.0/24

Right Out: 712.537 $\pm$ 0.155  $\chi^2$ /NDF: 11335332.3/30

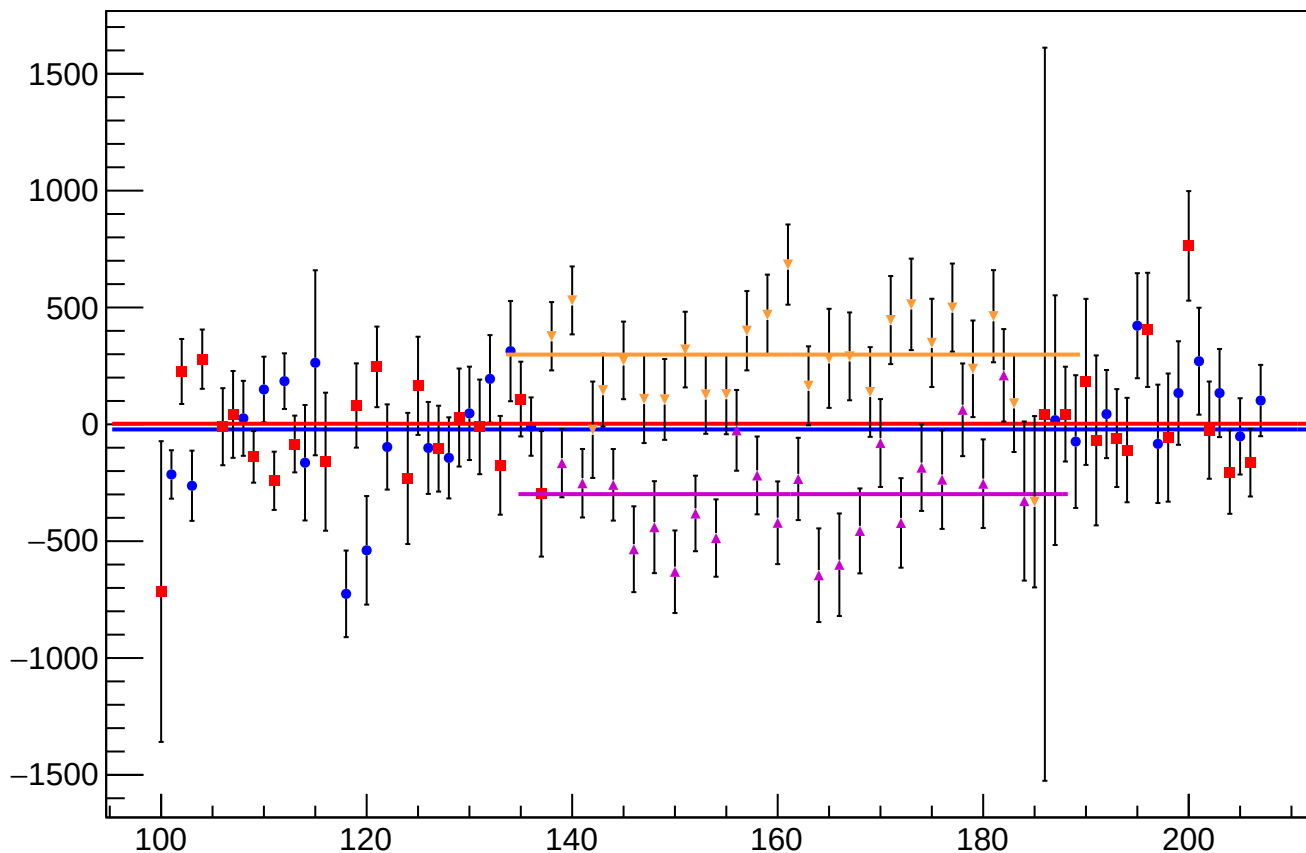
Left In: 1034.428 $\pm$ 0.173  $\chi^2$ /NDF: 628474.5/22

+ sign 835.942 $\pm$ 0.113  $\chi^2$ /NDF: 13508866.4/50

All: 845.739 $\pm$ 0.081  $\chi^2$ /NDF: 27415645.1/10

- sign 855.936 $\pm$ 0.115  $\chi^2$ /NDF: 13891422.7/53

# eigen\_cor\_asym\_sam6\_mean vs Slug



Right In:  $-21.850 \pm 34.833$   $\chi^2/\text{NDF}$ : 43.2/25

Left Out:  $298.518 \pm 36.051$   $\chi^2/\text{NDF}$ : 26.0/24

Right Out:  $2.482 \pm 33.462$   $\chi^2/\text{NDF}$ : 37.8/30

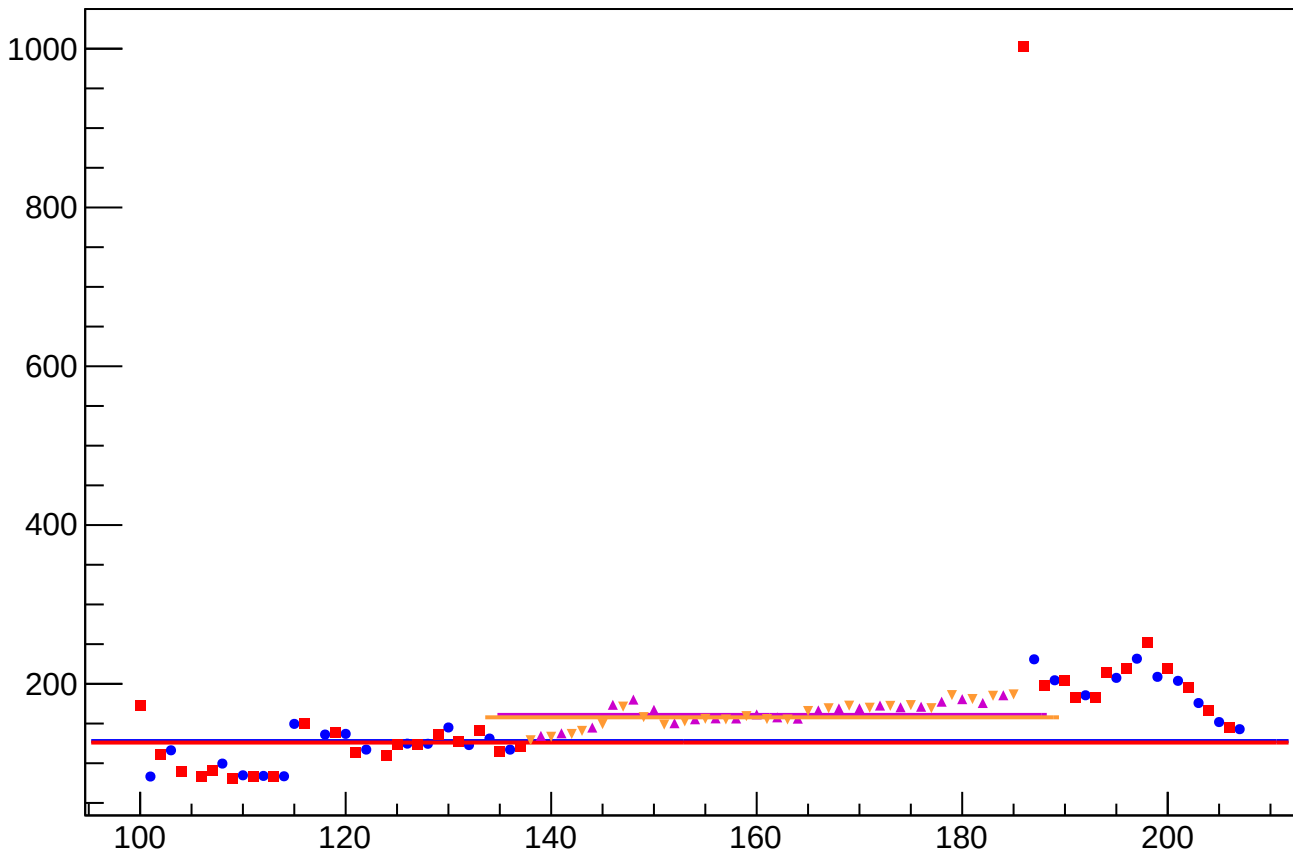
Left In:  $-298.682 \pm 37.727$   $\chi^2/\text{NDF}$ : 29.4/22

+ sign  $132.832 \pm 25.050$   $\chi^2/\text{NDF}$ : 110.0/50

All:  $1.269 \pm 17.707$   $\chi^2/\text{NDF}$ : 268.0/104

- sign  $-130.124 \pm 25.034$   $\chi^2/\text{NDF}$ : 102.9/53

# eigen\_cor\_asym\_sam6\_rms vs Slug



Right In: 127.938+/-0.025     $\chi^2/\text{NDF}$ : 2695048.2/25

Left Out: 157.836+/-0.025     $\chi^2/\text{NDF}$ :377205.2/24

+ sign 142.373+/-0.018     $\chi^2/\text{NDF}$ : 3783698.7/50

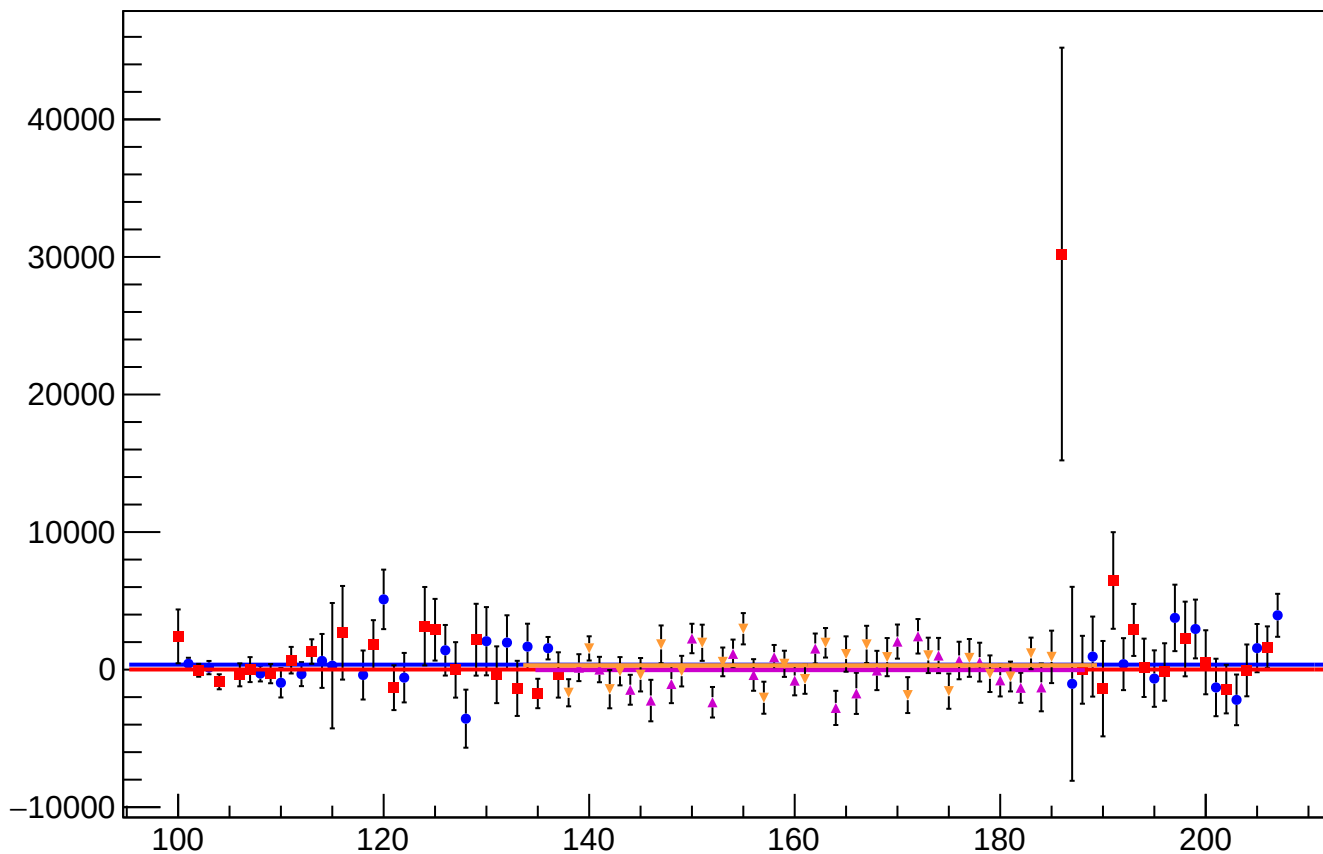
Right Out:  $126.042 \pm 0.024$      $\chi^2/\text{NDF}$ : 4168456.1/30

All:  $141.876 \pm 0.013$      $\chi^2/\text{NDF}: 9176281.9/10^4$

- sign 141.379+/-0.018     $\chi^2/\text{NDF}$ : 5391005.4/53

Left In: 160.874+/-0.027     $\chi^2$ /NDF:268330.7/22

# asym\_sam6\_eigen\_cor\_correction\_mean vs Slug



Right In:  $361.328 \pm 217.695$   $\chi^2/\text{NDF}: 28.7/25$

Left Out:  $319.953 \pm 235.084$   $\chi^2/\text{NDF}: 32.5/24$

Right Out:  $8.633 \pm 218.843$   $\chi^2/\text{NDF}: 28.8/30$

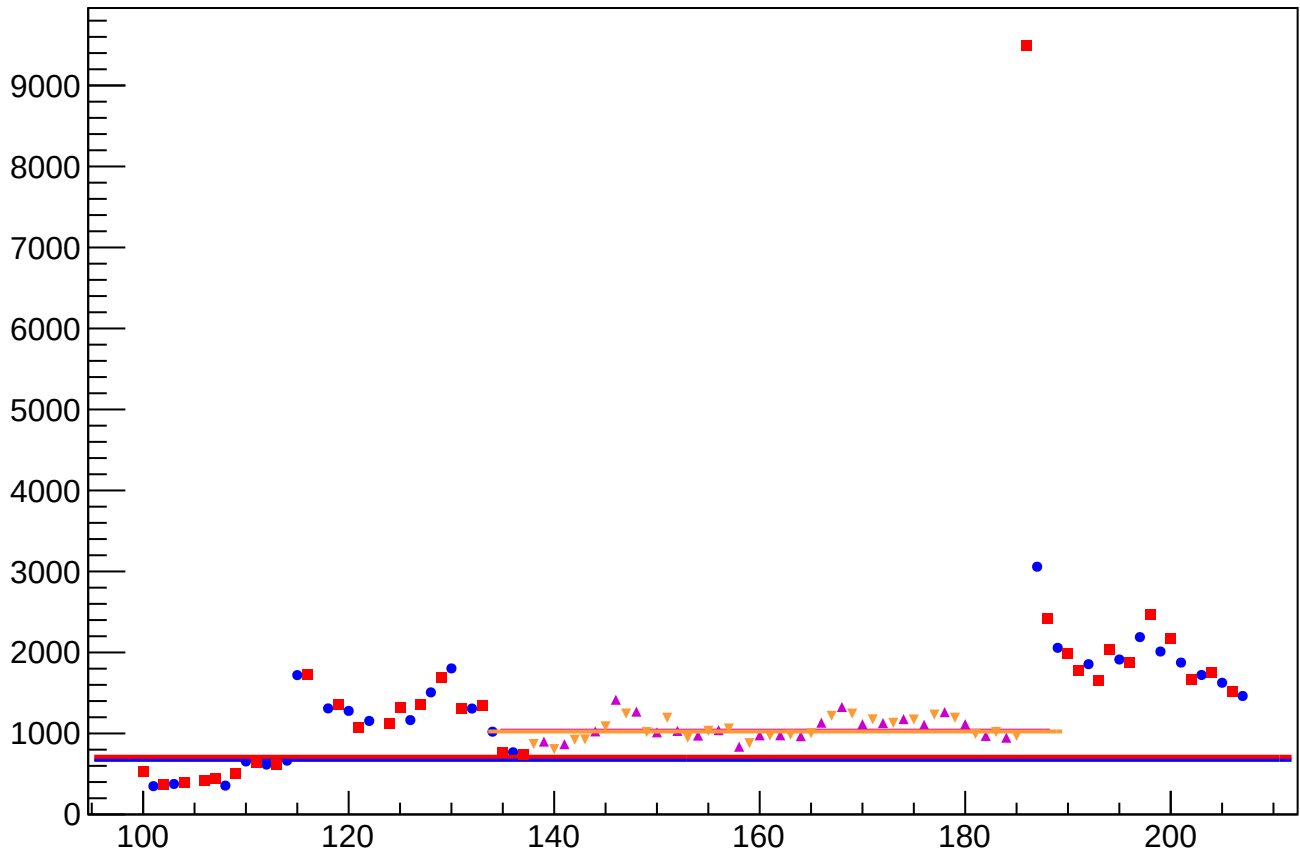
Left In:  $-39.198 \pm 244.156$   $\chi^2/\text{NDF}: 34.8/22$

+ sign  $342.227 \pm 159.728$   $\chi^2/\text{NDF}: 61.2/50$

All:  $168.333 \pm 114.071$   $\chi^2/\text{NDF}: 127.3/104$

- sign  $-12.675 \pm 162.962$   $\chi^2/\text{NDF}: 63.6/53$

# asym\_sam6\_eigen\_cor\_correction\_rms vs Slug



Right In: 674.252+/-0.154  $\chi^2/\text{NDF}$ : 10521326.2/25

Left Out: 1024.493+/-0.166  $\chi^2/\text{NDF}$ : 597629.0/24

Right Out: 712.537+/-0.155  $\chi^2/\text{NDF}$ : 11335332.3/30

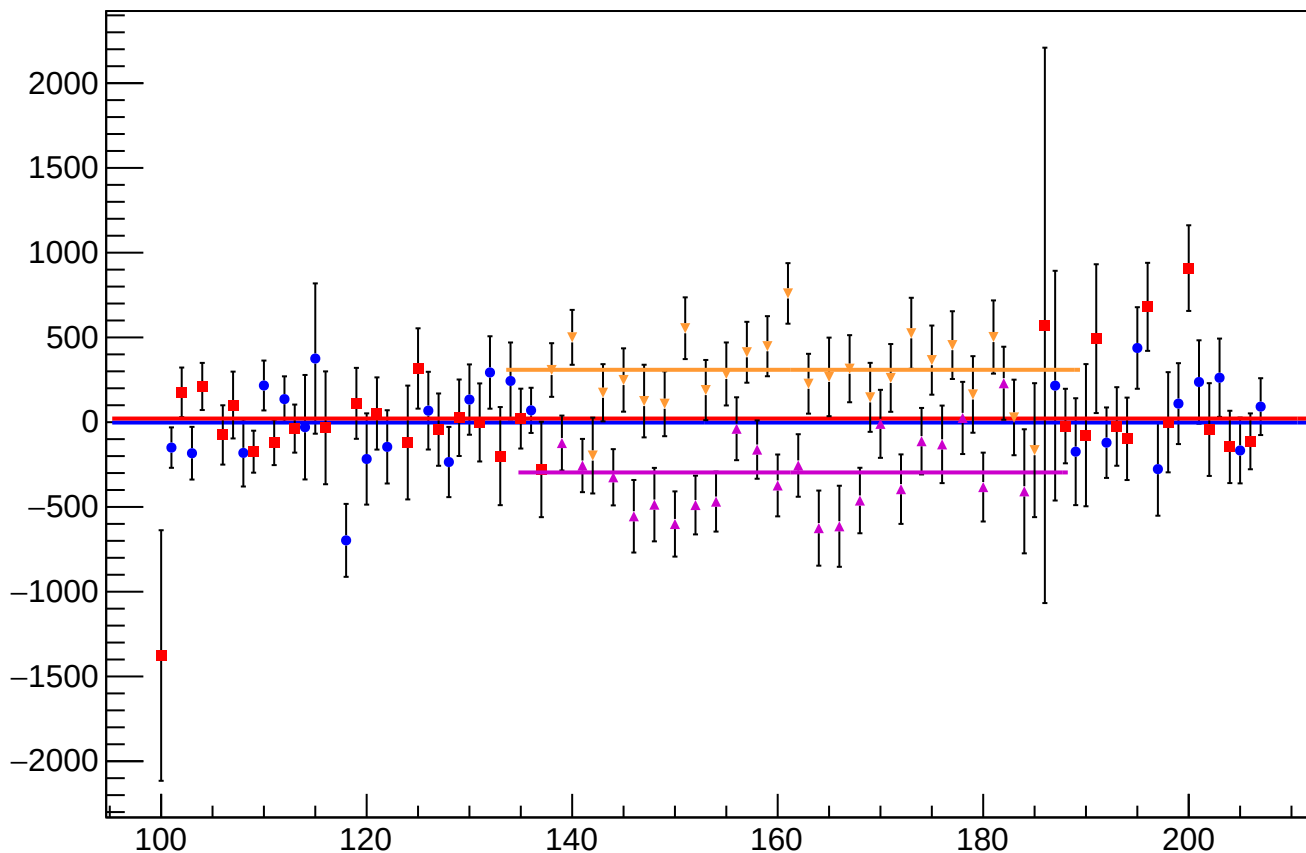
Left In: 1034.428+/-0.173  $\chi^2/\text{NDF}$ : 628474.5/22

+ sign 835.942+/-0.113  $\chi^2/\text{NDF}$ : 13508866.4/50

All: 845.739+/-0.081  $\chi^2/\text{NDF}$ : 27415645.1/10

- sign 855.936+/-0.115  $\chi^2/\text{NDF}$ : 13891422.7/53

# dit\_asym\_sam6\_mean vs Slug



Right In:  $-2.055 \pm 39.064$   $\chi^2/\text{NDF}$ : 33.0/25

Left Out:  $309.031 \pm 38.901$   $\chi^2/\text{NDF}$ : 25.6/24

Right Out:  $21.546 \pm 37.569$   $\chi^2/\text{NDF}$ : 36.3/30

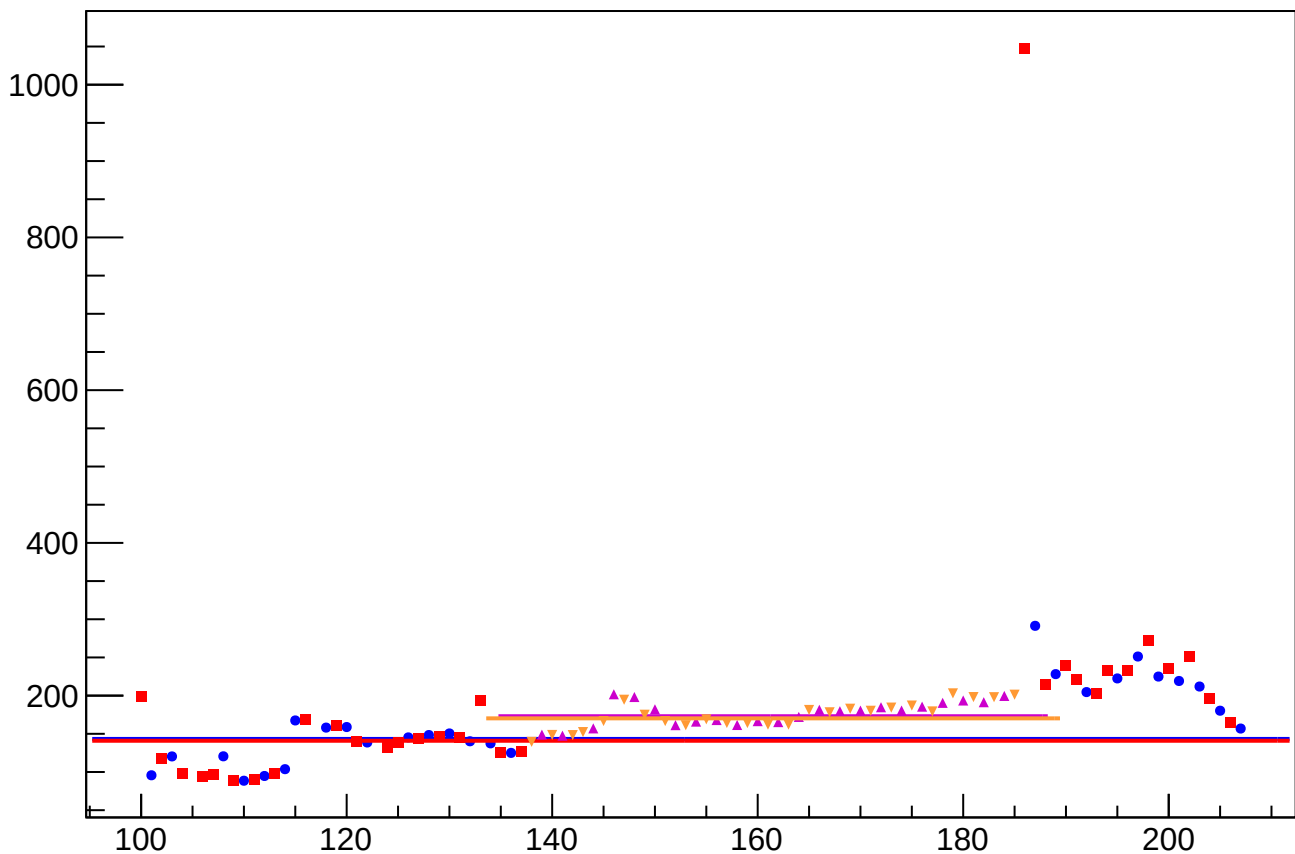
Left In:  $-296.497 \pm 40.607$   $\chi^2/\text{NDF}$ : 27.8/22

+ sign  $154.141 \pm 27.565$   $\chi^2/\text{NDF}$ : 90.4/50

All:  $14.564 \pm 19.495$   $\chi^2/\text{NDF}$ : 238.9/104

- sign  $-125.134 \pm 27.577$   $\chi^2/\text{NDF}$ : 97.2/53

# dit\_asym\_sam6\_rms vs Slug



Right In: 143.289 $\pm$ 0.028     $\chi^2$ /NDF: 2651606.2/25

Left Out: 170.240+/-0.028     $\chi^2/\text{NDF}$ :366302.5/24

+ sign 156.821+/-0.019     $\chi^2/\text{NDF}$ : 3495916.3/50

Right Out:  $140.924 \pm 0.027$      $\chi^2/\text{NDF}$ : 4330503.2/30

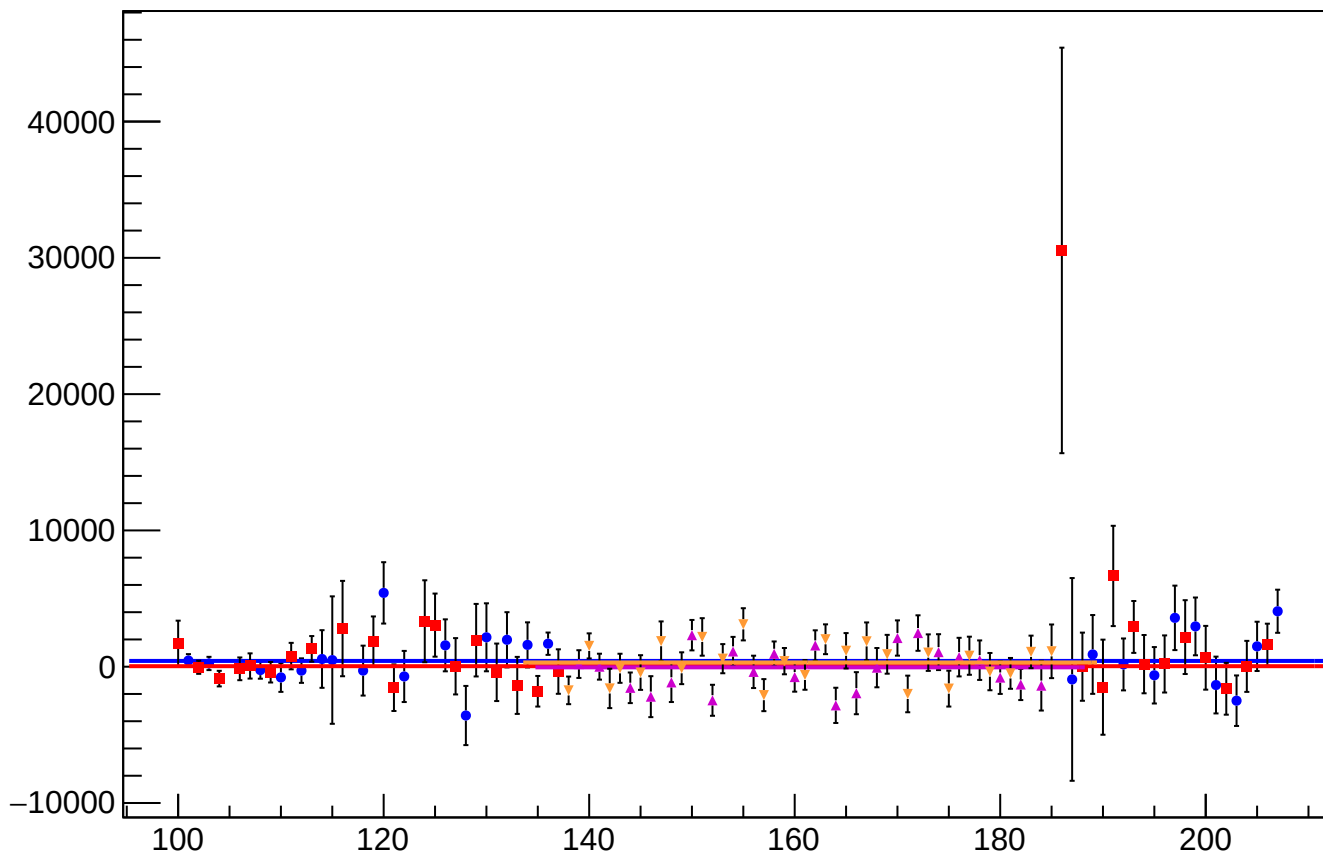
All: 156.275+/-0.014     $\chi^2/\text{NDF}$ : 8795083.0/104

- sign 155.728+/-0.019      $\chi^2/\text{NDF}$ : 5297595.7/53

Left In: 173.024+/-0.029     $\chi^2$ /NDF:293702.8/22



# asym\_sam6\_dit\_correction\_mean vs Slug



Right In: 424.338 $\pm$ 226.942  $\chi^2$ /NDF: 28.8/25

Left Out: 313.641 $\pm$ 242.402  $\chi^2$ /NDF:32.9/24

Right Out: 37.846 $\pm$ 225.676  $\chi^2$ /NDF: 27.9/30

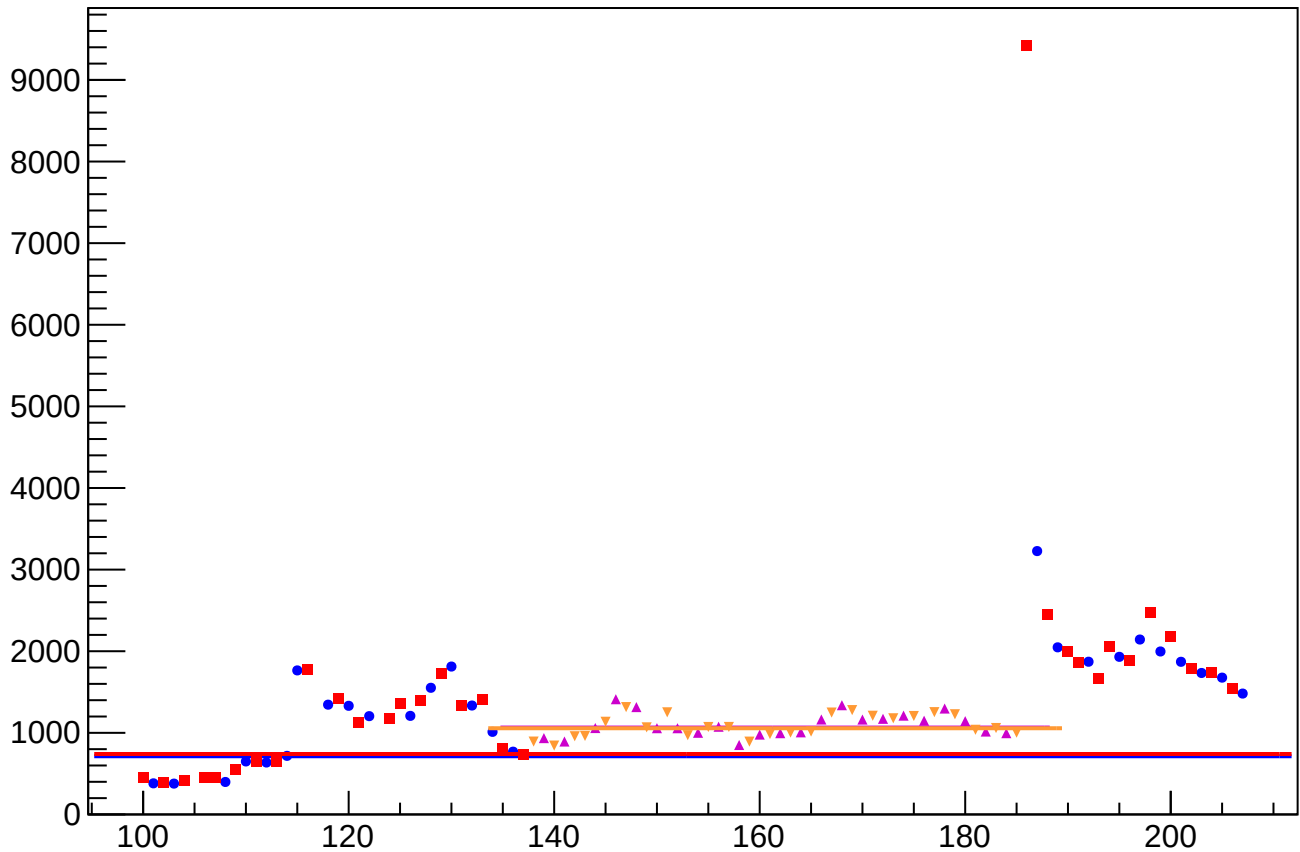
Left In: -47.231 $\pm$ 251.252  $\chi^2$ /NDF:34.4/22

+ sign 372.632 $\pm$ 165.668  $\chi^2$ /NDF: 61.8/50

All: 188.731 $\pm$ 117.924  $\chi^2$ /NDF: 126.6/104

- sign -0.143 $\pm$ 167.893  $\chi^2$ /NDF: 62.4/53

# asym\_sam6\_dit\_correction\_rms vs Slug



Right In: 713.308 $\pm$ 0.160  $\chi^2$ /NDF: 9982456.4/25

Left Out: 1056.328 $\pm$ 0.171  $\chi^2$ /NDF: 610710.4/24

Right Out: 740.705 $\pm$ 0.160  $\chi^2$ /NDF: 11137559.5/30

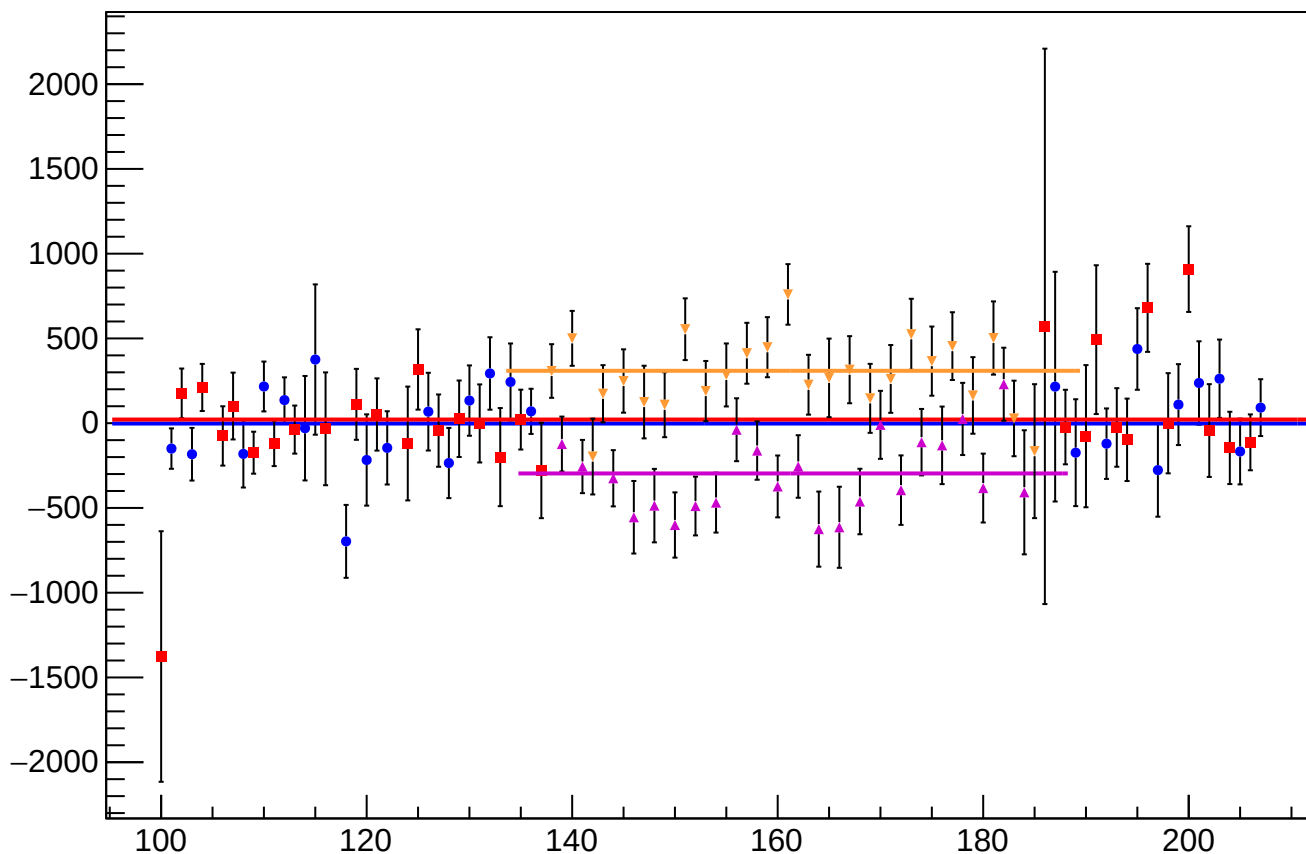
Left In: 1064.691 $\pm$ 0.178  $\chi^2$ /NDF: 611055.8/22

+ sign 873.531 $\pm$ 0.117  $\chi^2$ /NDF: 12727425.2/50

All: 879.373 $\pm$ 0.083  $\chi^2$ /NDF: 26321691.2/10

- sign 885.374 $\pm$ 0.119  $\chi^2$ /NDF: 13589224.1/53

# eigen\_dit\_asym\_sam6\_mean vs Slug



Right In:  $-2.057 \pm 39.064$   $\chi^2/\text{NDF}: 33.0/25$

Left Out:  $309.032 \pm 38.901$   $\chi^2/\text{NDF}: 25.6/24$

Right Out:  $21.545 \pm 37.569$   $\chi^2/\text{NDF}: 36.3/30$

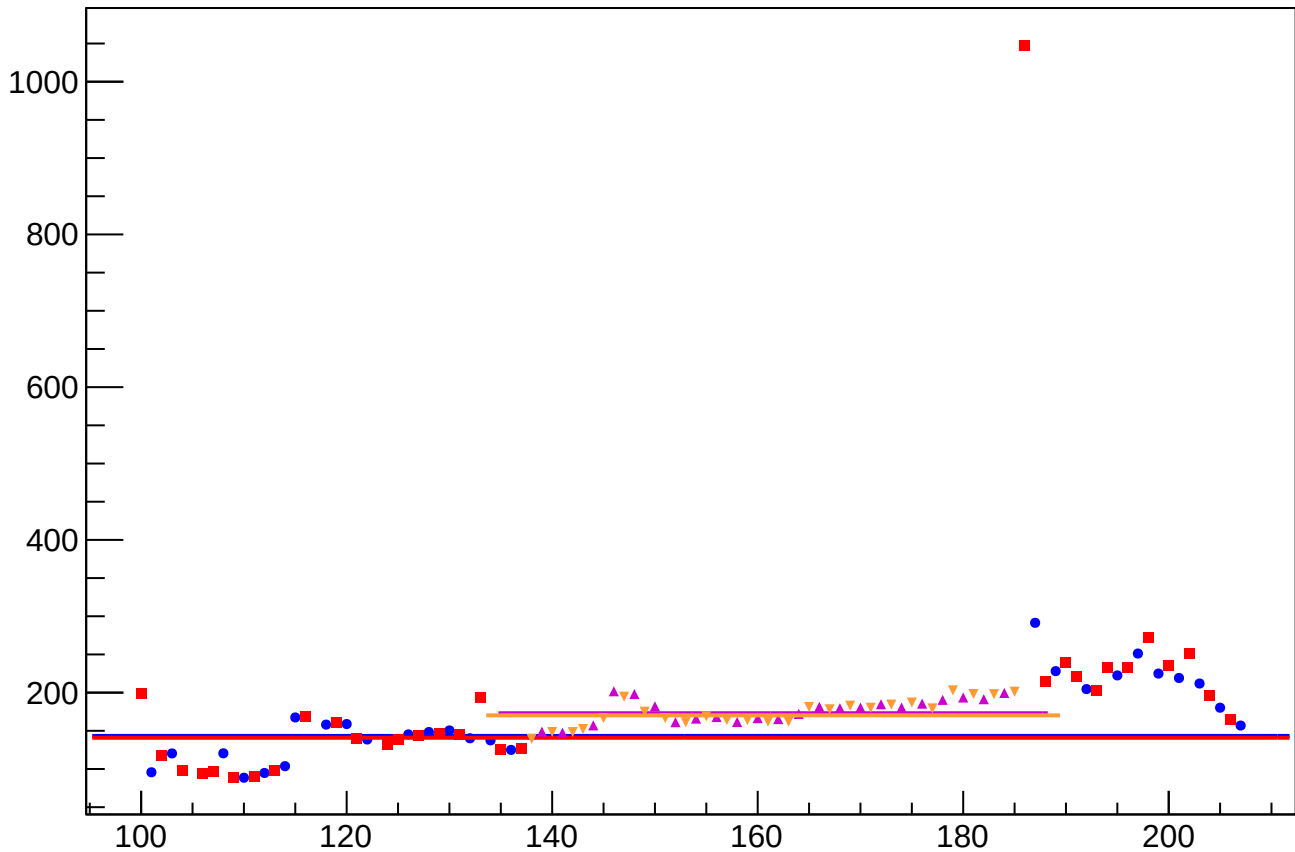
Left In:  $-296.497 \pm 40.607$   $\chi^2/\text{NDF}: 27.8/22$

+ sign  $154.141 \pm 27.565$   $\chi^2/\text{NDF}: 90.4/50$

All:  $14.564 \pm 19.495$   $\chi^2/\text{NDF}: 238.9/104$

- sign  $-125.135 \pm 27.577$   $\chi^2/\text{NDF}: 97.2/53$

# eigen\_dit\_asym\_sam6\_rms vs Slug



Right In: 143.288 $\pm$ 0.028  $\chi^2$ /NDF: 2651624.7/25

Left Out: 170.240 $\pm$ 0.028  $\chi^2$ /NDF: 366303.1/24

Right Out: 140.924 $\pm$ 0.027  $\chi^2$ /NDF: 4330509.4/30

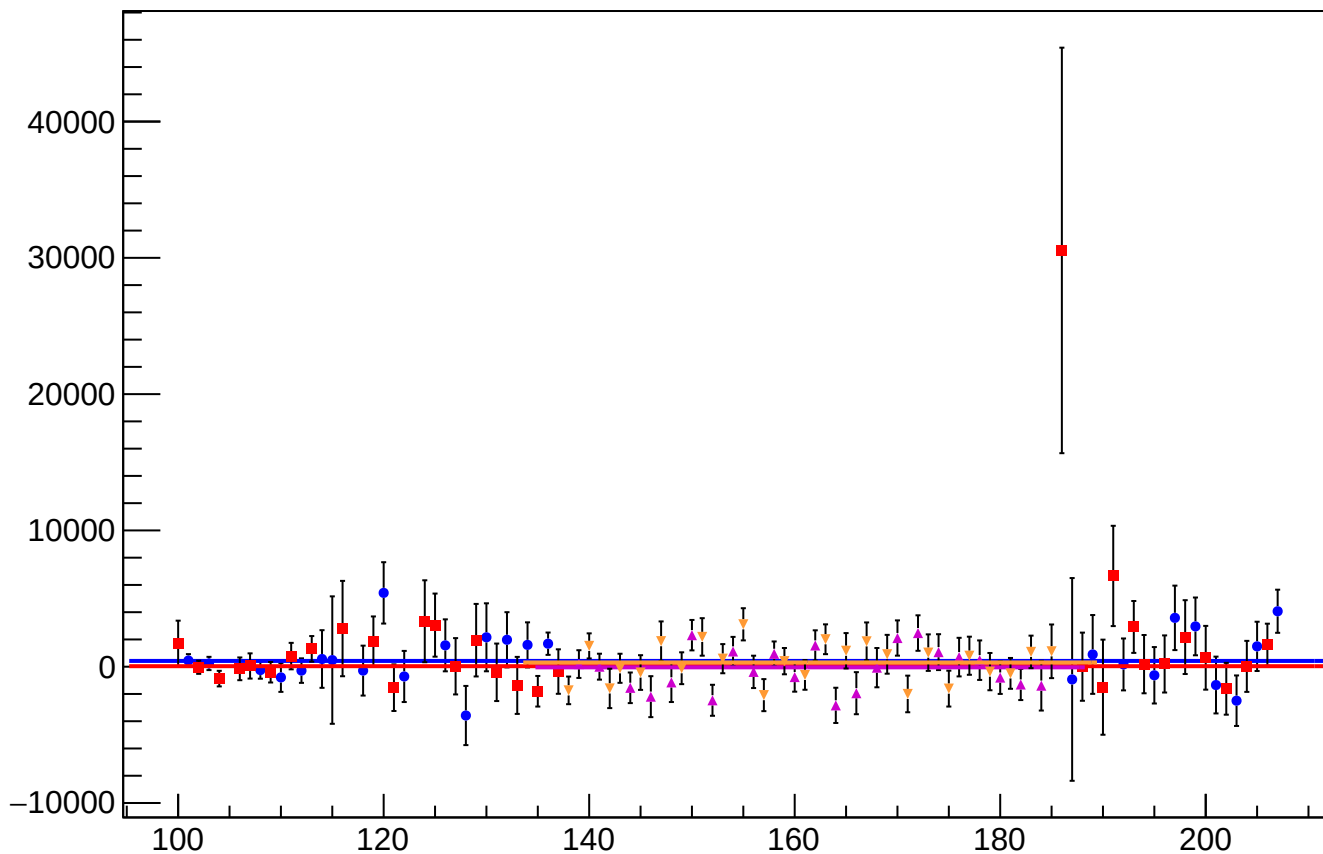
Left In: 173.023 $\pm$ 0.029  $\chi^2$ /NDF: 293703.4/22

+ sign 156.821 $\pm$ 0.019  $\chi^2$ /NDF: 3495938.5/50

All: 156.275 $\pm$ 0.014  $\chi^2$ /NDF: 8795115.3/104

- sign 155.728 $\pm$ 0.019  $\chi^2$ /NDF: 5297605.9/53

# asym\_sam6\_eigen\_dit\_correction\_mean vs Slug



Right In:  $424.337 \pm 226.942$   $\chi^2/\text{NDF}: 28.8/25$

Left Out:  $313.641 \pm 242.402$   $\chi^2/\text{NDF}: 32.9/24$

Right Out:  $37.845 \pm 225.676$   $\chi^2/\text{NDF}: 27.9/30$

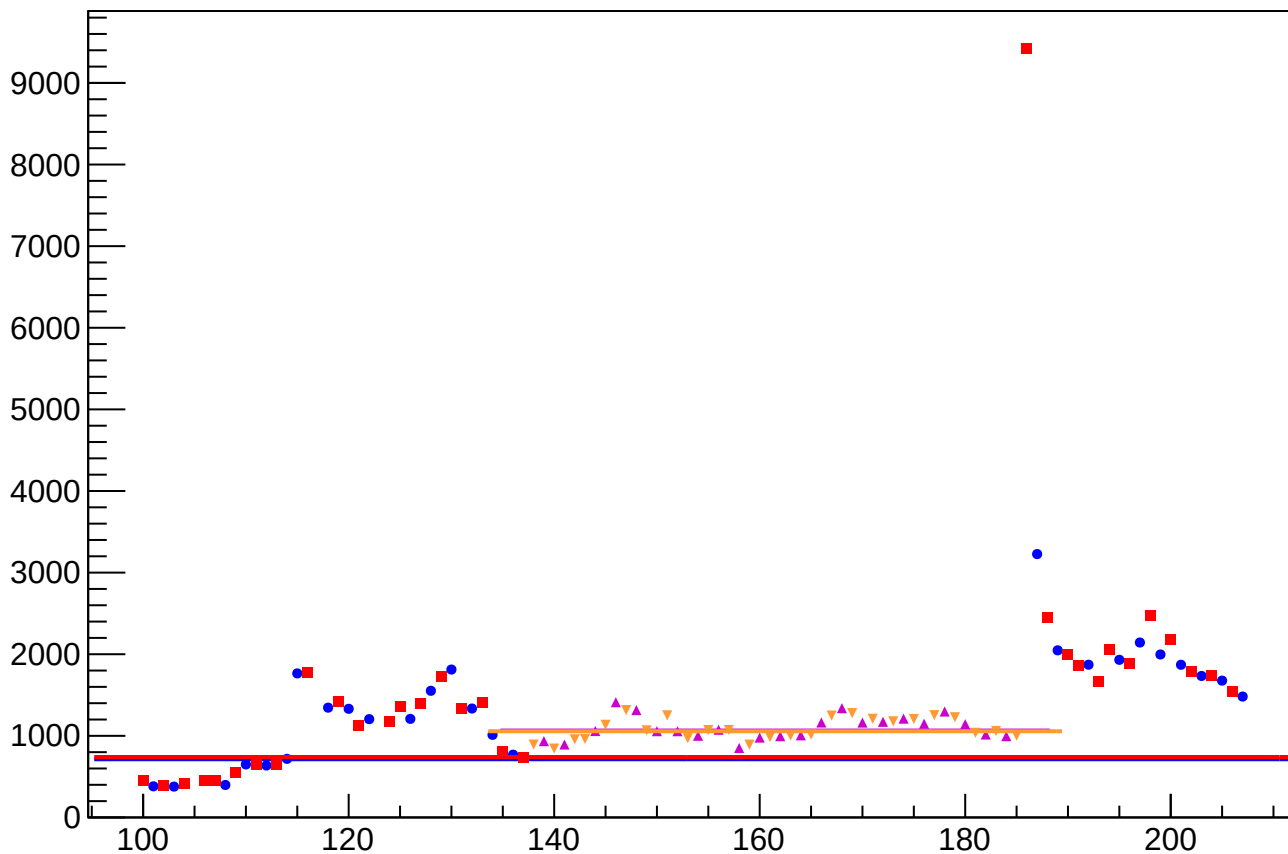
Left In:  $-47.231 \pm 251.252$   $\chi^2/\text{NDF}: 34.4/22$

+ sign  $372.632 \pm 165.668$   $\chi^2/\text{NDF}: 61.8/50$

All:  $188.731 \pm 117.924$   $\chi^2/\text{NDF}: 126.6/104$

- sign  $-0.144 \pm 167.893$   $\chi^2/\text{NDF}: 62.4/53$

## asym\_sam6\_eigen\_dit\_correction\_rms vs Slug



Right In: 713.307+/-0.160     $\chi^2/\text{NDF}$ : 9982467.9/25

Left Out: 1056.328+/-0.171     $\chi^2/\text{NDF}$ :610715.5/24

+ sign 873.530+/-0.117     $\chi^2/\text{NDF}$ : 12727457.3/50

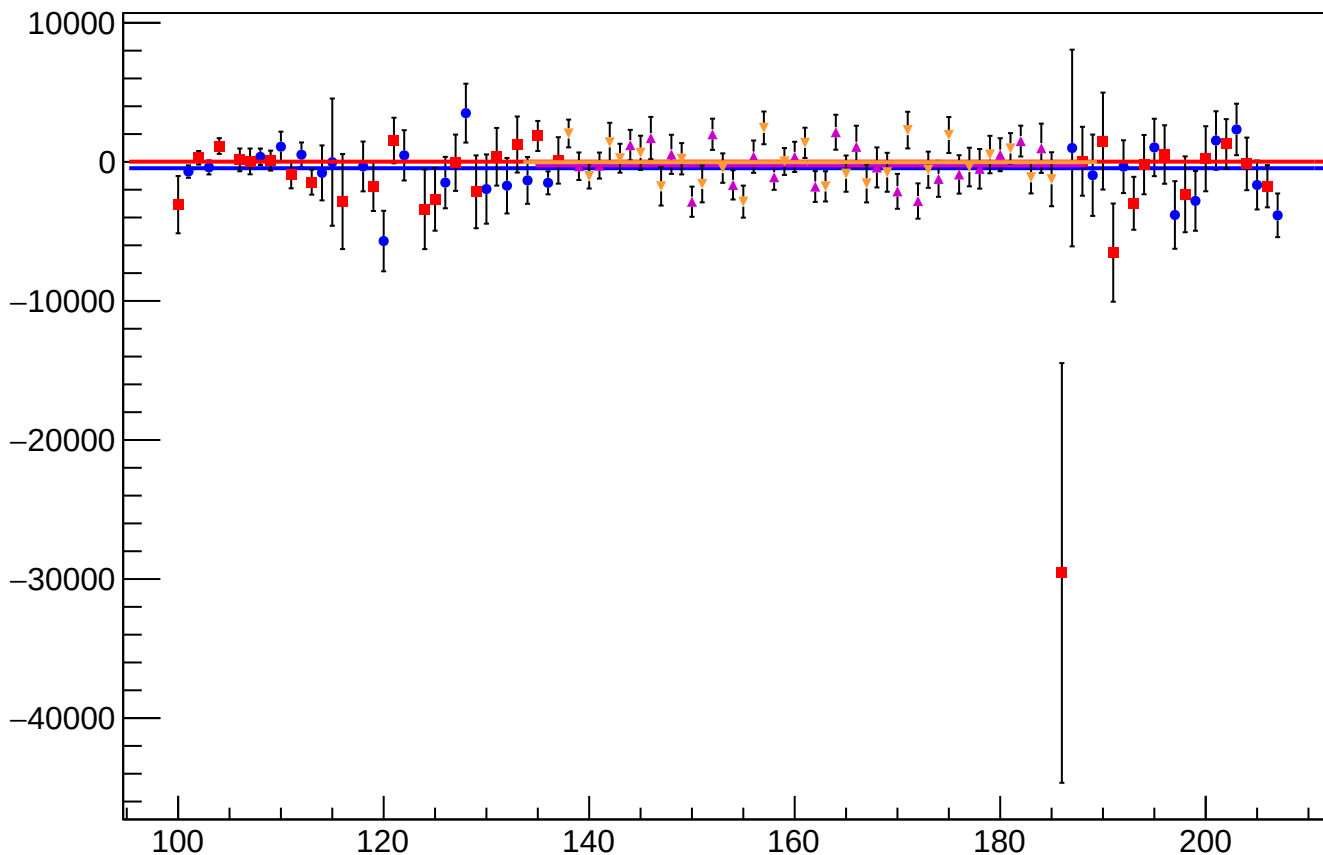
Right Out: 740.704+/-0.160     $\chi^2/\text{NDF}$ : 11137563.7/30

All:  $879.373 \pm 0.083$   $\chi^2/\text{NDF}$ : 26321739.5/10

- sign 885.373+/-0.119     $\chi^2/\text{NDF}$ : 13589240.1/53

Left In: 1064.691+/-0.178     $\chi^2/\text{NDF}$ :611059.3/22

# asym\_sam6\_mean vs Slug



Right In:  $-455.740 \pm 223.579$   $\chi^2/\text{NDF}$ : 30.0/25

Left Out:  $-21.861 \pm 237.972$   $\chi^2/\text{NDF}$ : 34.5/24

Right Out:  $16.661 \pm 223.512$   $\chi^2/\text{NDF}$ : 32.2/30

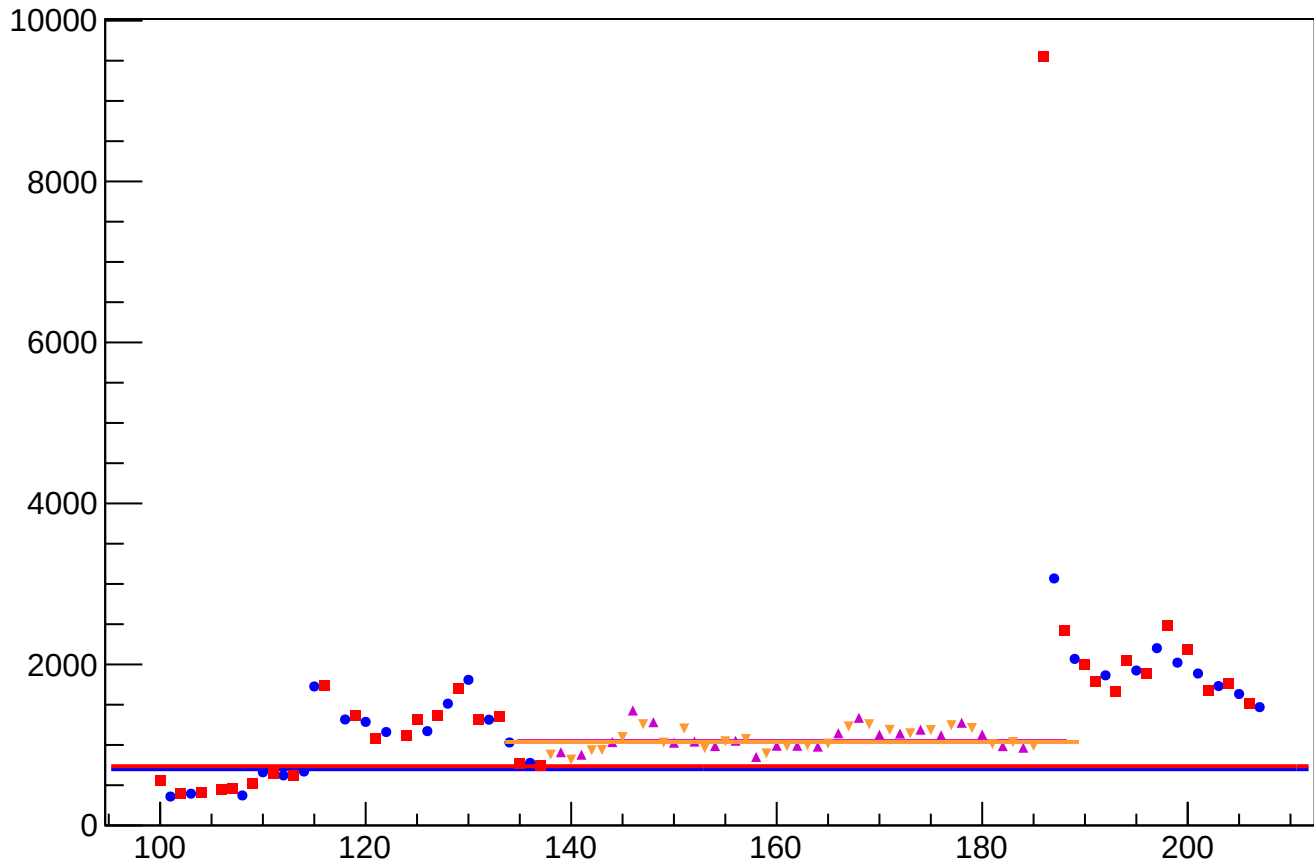
Left In:  $-255.399 \pm 247.203$   $\chi^2/\text{NDF}$ : 33.6/22

+ sign  $-252.317 \pm 162.945$   $\chi^2/\text{NDF}$ : 66.3/50

All:  $-180.283 \pm 116.213$   $\chi^2/\text{NDF}$ : 133.2/104

- sign  $-105.711 \pm 165.791$   $\chi^2/\text{NDF}$ : 66.5/53

# asym\_sam6\_rms vs Slug



Right In: 698.787+/-0.158  $\chi^2/\text{NDF}$ : 10165735.8/25

Left Out: 1037.324+/-0.168  $\chi^2/\text{NDF}$ : 585511.9/24

Right Out: 735.943+/-0.158  $\chi^2/\text{NDF}$ : 10976956.7/30

Left In: 1047.629+/-0.175  $\chi^2/\text{NDF}$ : 613357.0/22

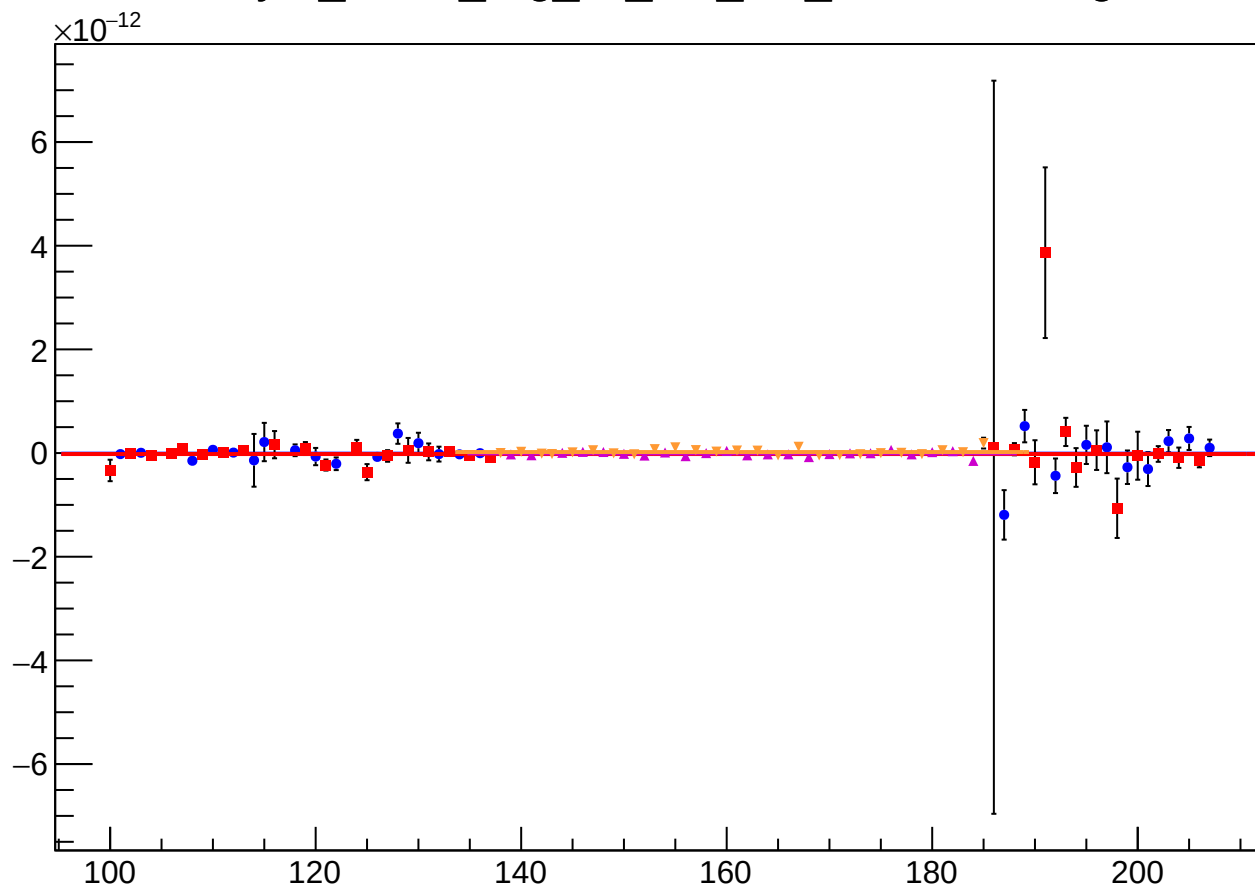
+ sign 857.509+/-0.115  $\chi^2/\text{NDF}$ : 12901115.9/50

All: 866.663+/-0.082  $\chi^2/\text{NDF}$ : 26253634.1/10

- sign 876.139+/-0.117  $\chi^2/\text{NDF}$ : 13339672.4/53



# asym\_sam6\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 31.8/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 30.0/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 33.4/30

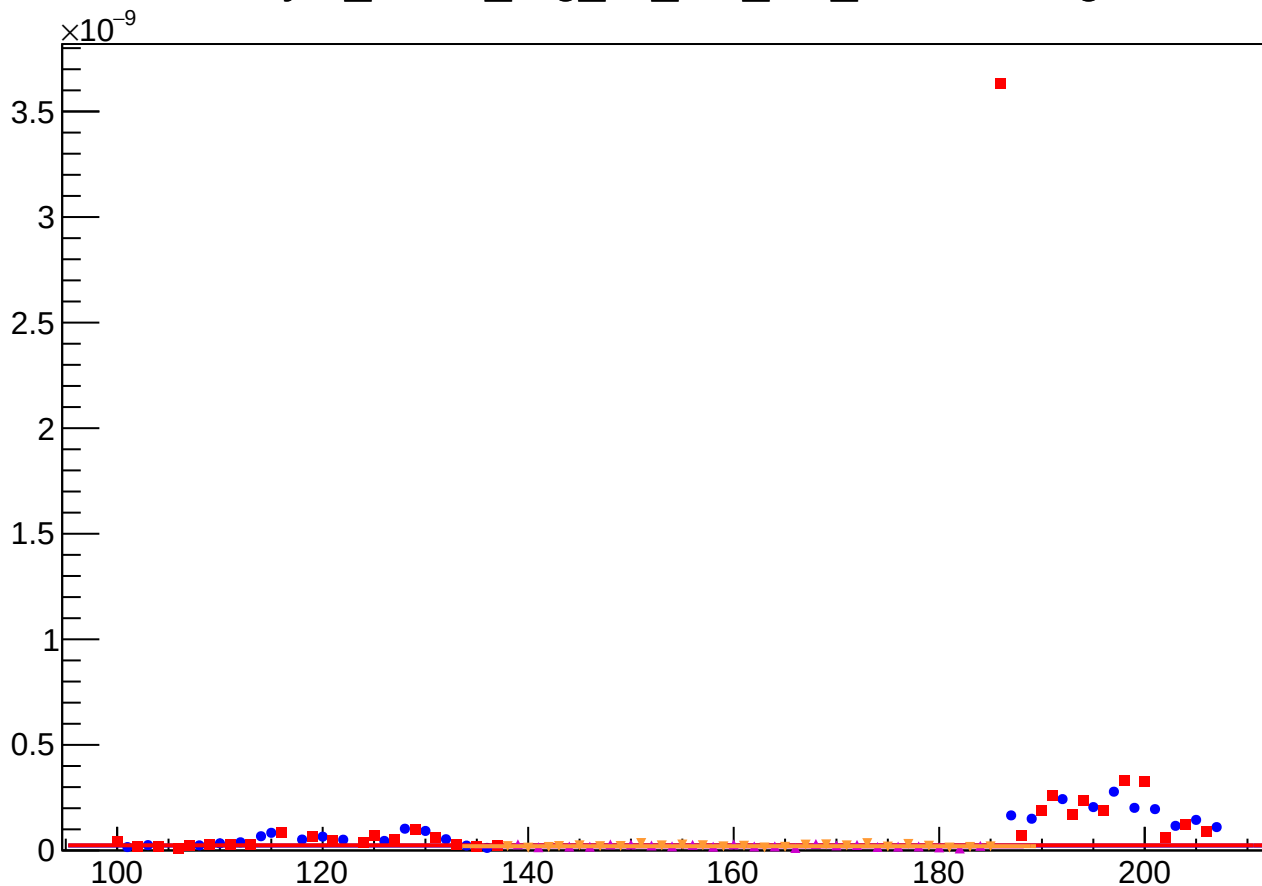
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 18.6/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 66.2/50

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 123.8/104

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 52.7/53

# asym\_sam6\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2$ /NDF: 7246116.7/25

Left Out: 0.000+/-0.000  $\chi^2$ /NDF:993542.0/24

Right Out: 0.000+/-0.000  $\chi^2$ /NDF: 7244967.5/30

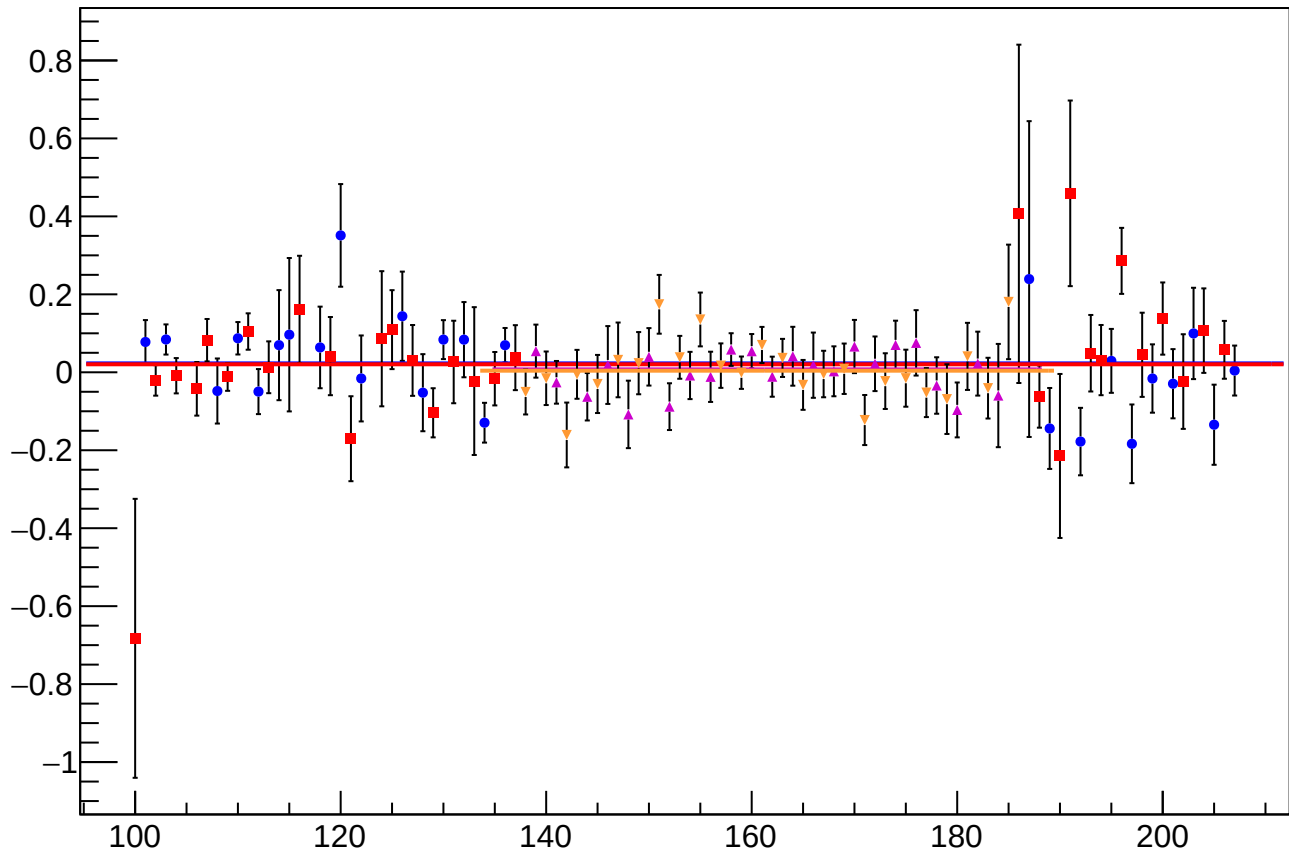
Left In: 0.000+/-0.000  $\chi^2$ /NDF:1048721.4/22

+ sign 0.000+/-0.000  $\chi^2$ /NDF: 8321203.6/50

All: 0.000+/-0.000  $\chi^2$ /NDF: 16842965.1/104

- sign 0.000+/-0.000  $\chi^2$ /NDF: 8516602.1/53

# asym\_sam6\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.023 $\pm$ 0.014  $\chi^2$ /NDF: 44.3/25

Left Out: 0.004 $\pm$ 0.013  $\chi^2$ /NDF:24.8/24

Right Out: 0.021 $\pm$ 0.014  $\chi^2$ /NDF: 40.1/30

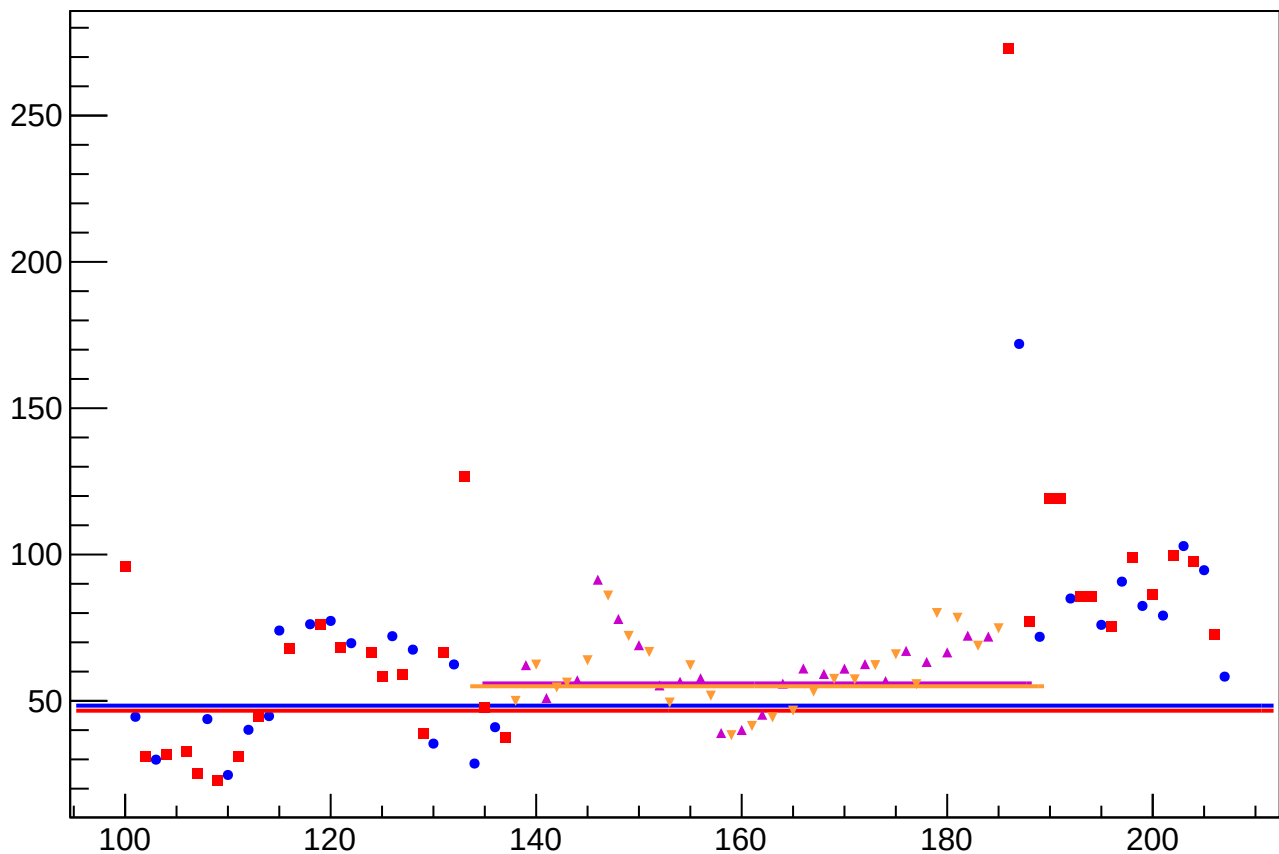
Left In: 0.007 $\pm$ 0.014  $\chi^2$ /NDF:15.1/22

+ sign 0.013 $\pm$ 0.010  $\chi^2$ /NDF: 70.1/50

All: 0.013 $\pm$ 0.007  $\chi^2$ /NDF: 125.7/104

- sign 0.014 $\pm$ 0.010  $\chi^2$ /NDF: 55.6/53

# asym\_sam6\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 48.369+/-0.010  $\chi^2/\text{NDF}$ : 4857215.0/25

Left Out: 54.986+/-0.009  $\chi^2/\text{NDF}$ : 1566844.0/24

Right Out: 46.643+/-0.010  $\chi^2/\text{NDF}$ : 7049176.0/30

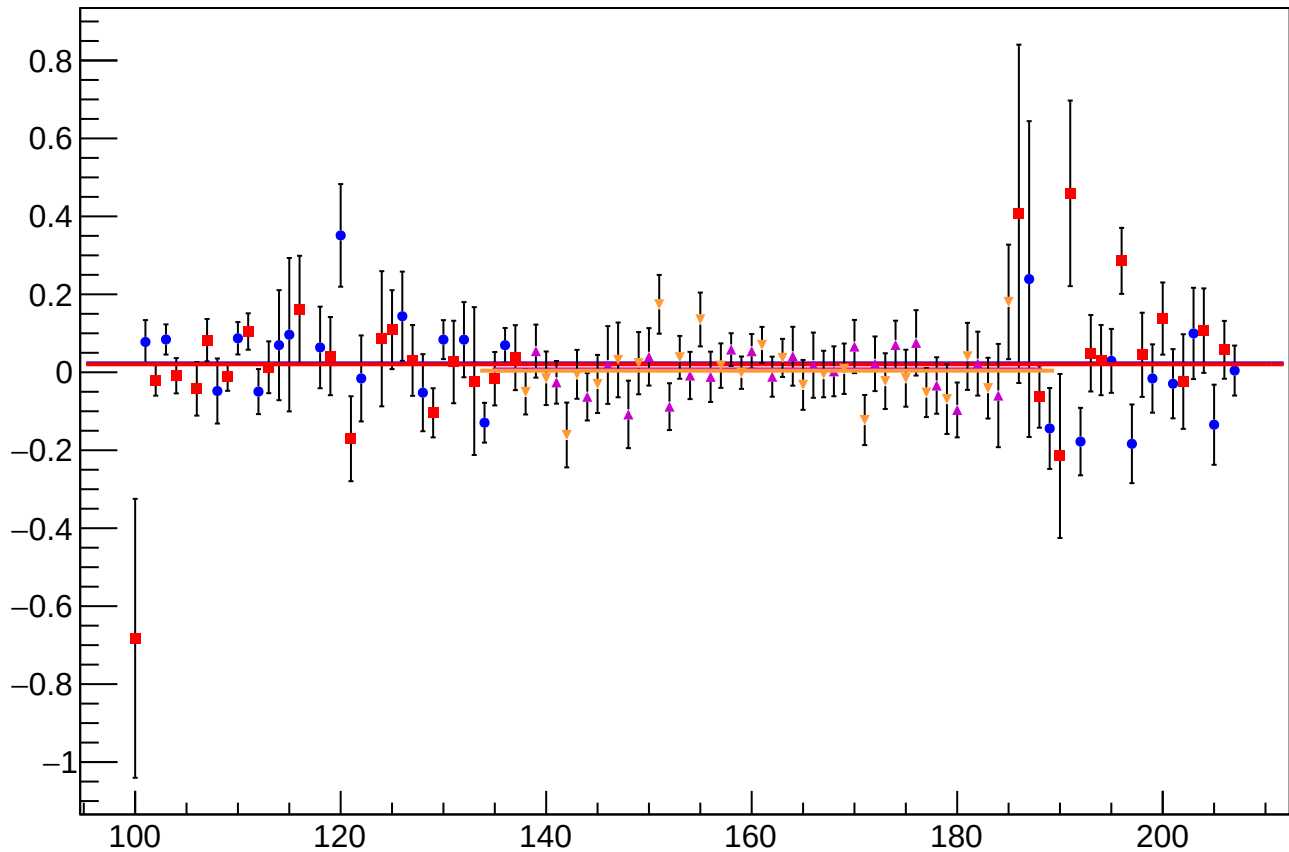
Left In: 55.956+/-0.010  $\chi^2/\text{NDF}$ : 1406142.1/22

+ sign 51.953+/-0.007  $\chi^2/\text{NDF}$ : 6663297.7/50

All: 51.624+/-0.005  $\chi^2/\text{NDF}$ : 15598596.2/104

- sign 51.294+/-0.007  $\chi^2/\text{NDF}$ : 8930529.2/53

# asym\_sam6\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.023 $\pm$ 0.014  $\chi^2$ /NDF: 44.3/25

Left Out: 0.004 $\pm$ 0.013  $\chi^2$ /NDF:24.8/24

Right Out: 0.021 $\pm$ 0.014  $\chi^2$ /NDF: 40.1/30

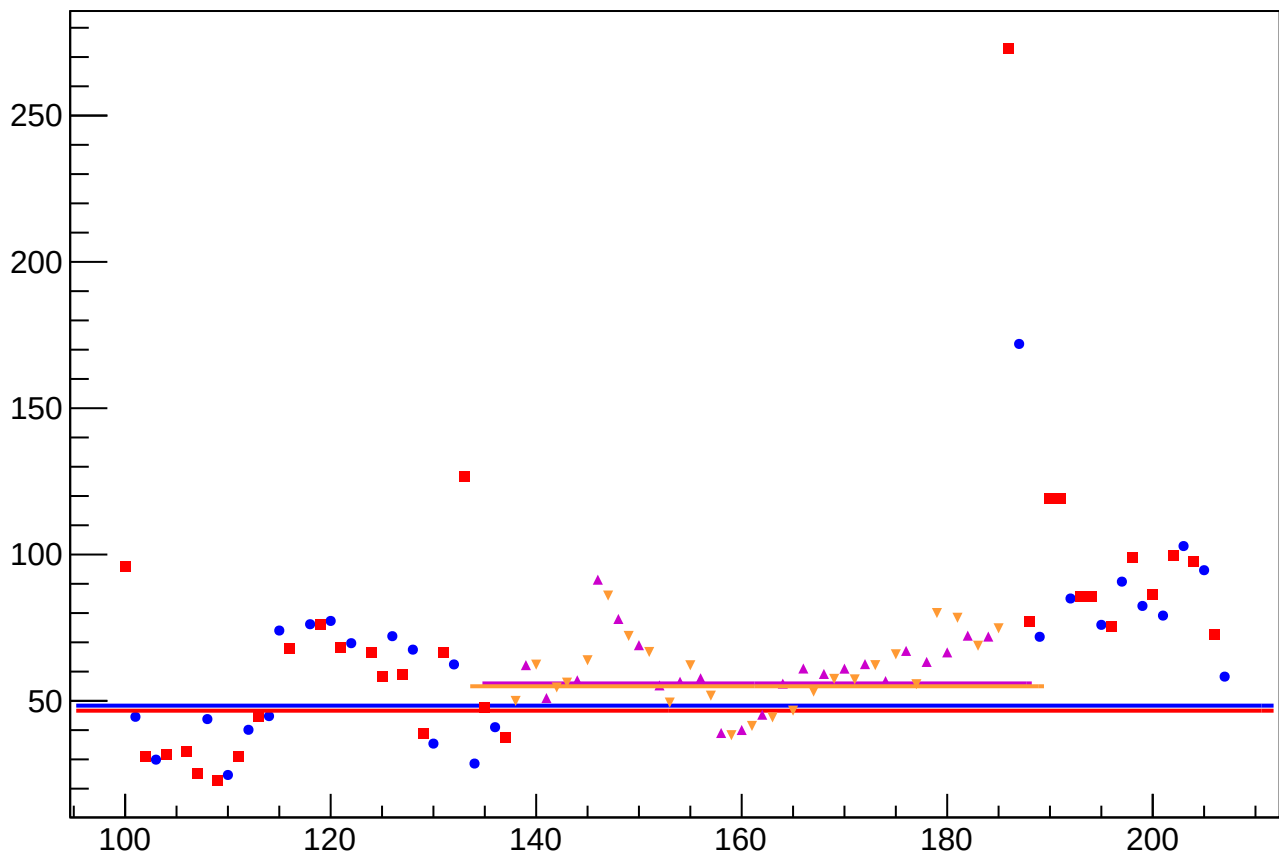
Left In: 0.007 $\pm$ 0.014  $\chi^2$ /NDF:15.1/22

+ sign 0.013 $\pm$ 0.010  $\chi^2$ /NDF: 70.1/50

All: 0.013 $\pm$ 0.007  $\chi^2$ /NDF: 125.7/104

- sign 0.014 $\pm$ 0.010  $\chi^2$ /NDF: 55.6/53

# asym\_sam6\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 48.369+/-0.010  $\chi^2/\text{NDF}$ : 4857215.0/25

Left Out: 54.986+/-0.009  $\chi^2/\text{NDF}$ : 1566844.0/24

Right Out: 46.643+/-0.010  $\chi^2/\text{NDF}$ : 7049176.0/30

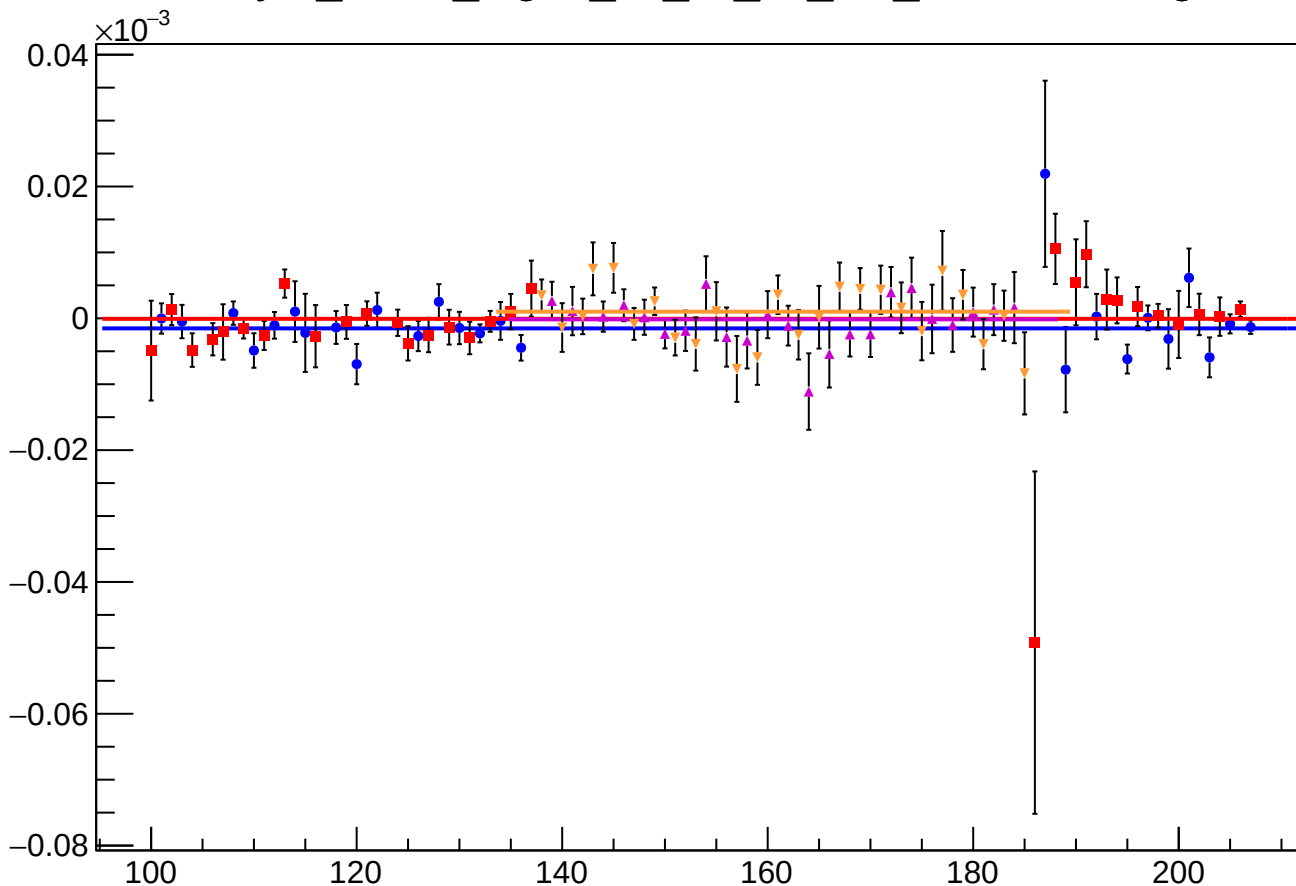
Left In: 55.956+/-0.010  $\chi^2/\text{NDF}$ : 1406142.1/22

+ sign 51.953+/-0.007  $\chi^2/\text{NDF}$ : 6663297.7/50

All: 51.624+/-0.005  $\chi^2/\text{NDF}$ : 15598596.2/104

- sign 51.294+/-0.007  $\chi^2/\text{NDF}$ : 8930529.2/53

asym\_sam6\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 28.6/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 28.5/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 36.4/30

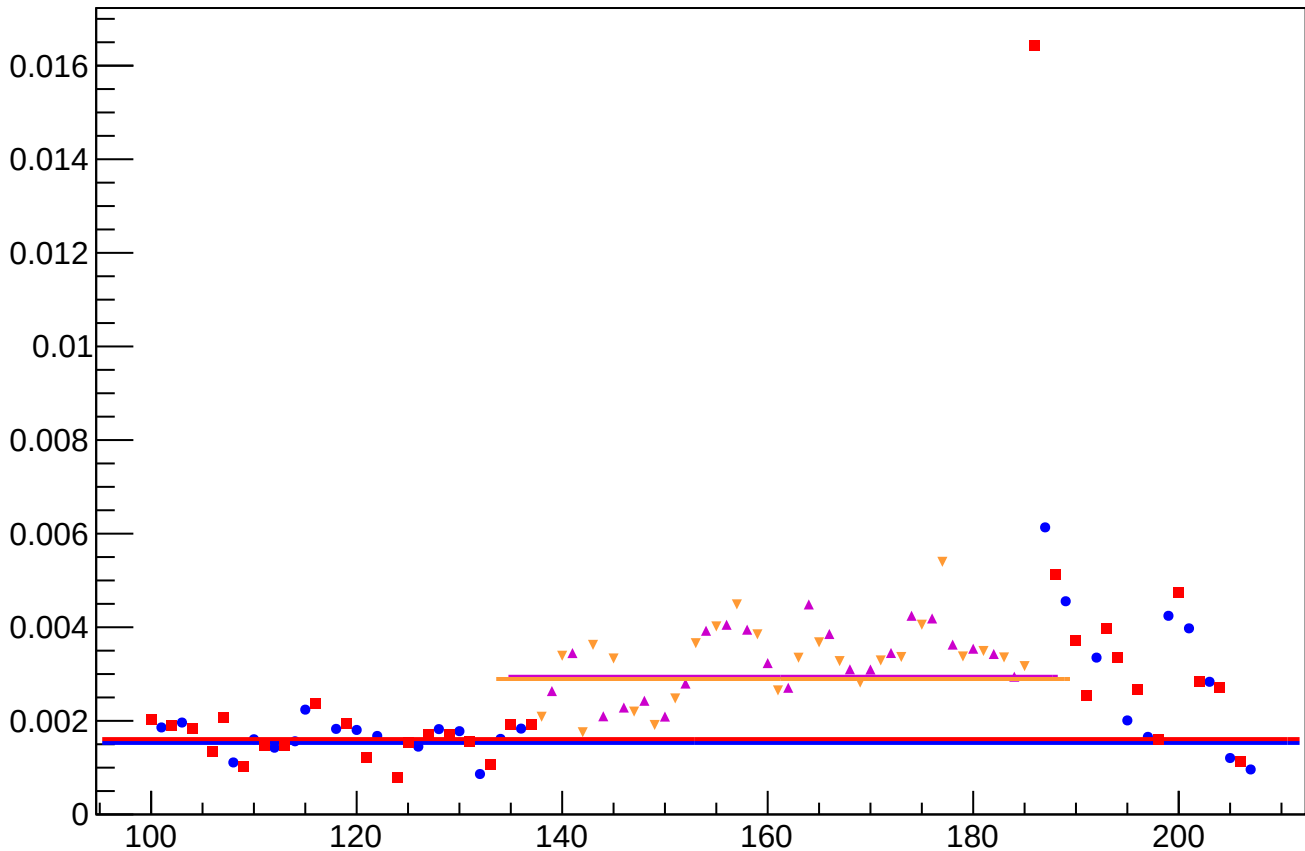
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 14.0/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 66.8/50

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 119.0/104

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 50.5/53

# asym\_sam6\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 4602972.2/25

Left Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ :2642911.8/24

Right Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 6002378.6/30

Left In: 0.003+/-0.000  $\chi^2/\text{NDF}$ :1890470.3/22

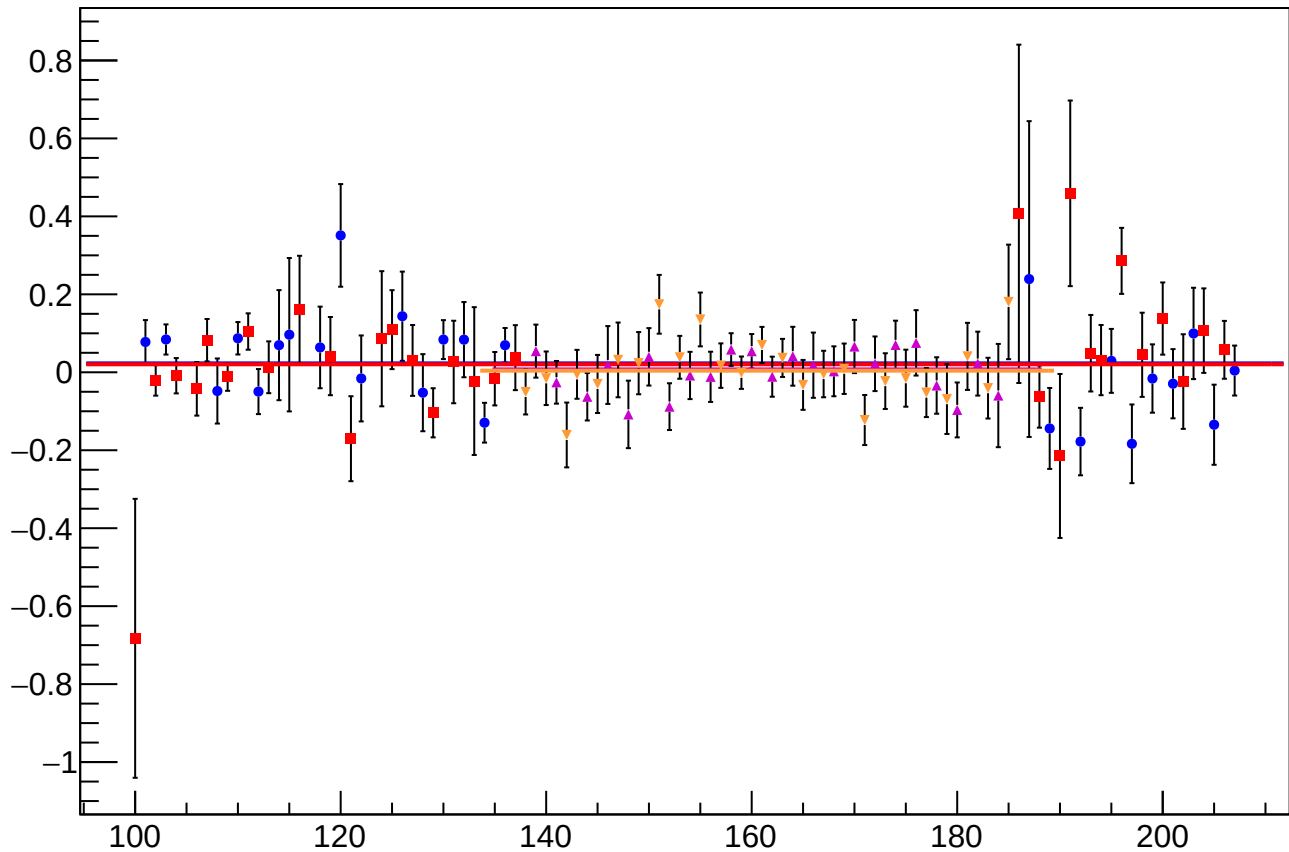
+ sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 12872584.5/50

All: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 25837050.0/104

- sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 12935941.2/53



# asym\_sam6\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.023 $\pm$ 0.014  $\chi^2$ /NDF: 44.3/25

Left Out: 0.004 $\pm$ 0.013  $\chi^2$ /NDF:24.8/24

Right Out: 0.021 $\pm$ 0.014  $\chi^2$ /NDF: 40.1/30

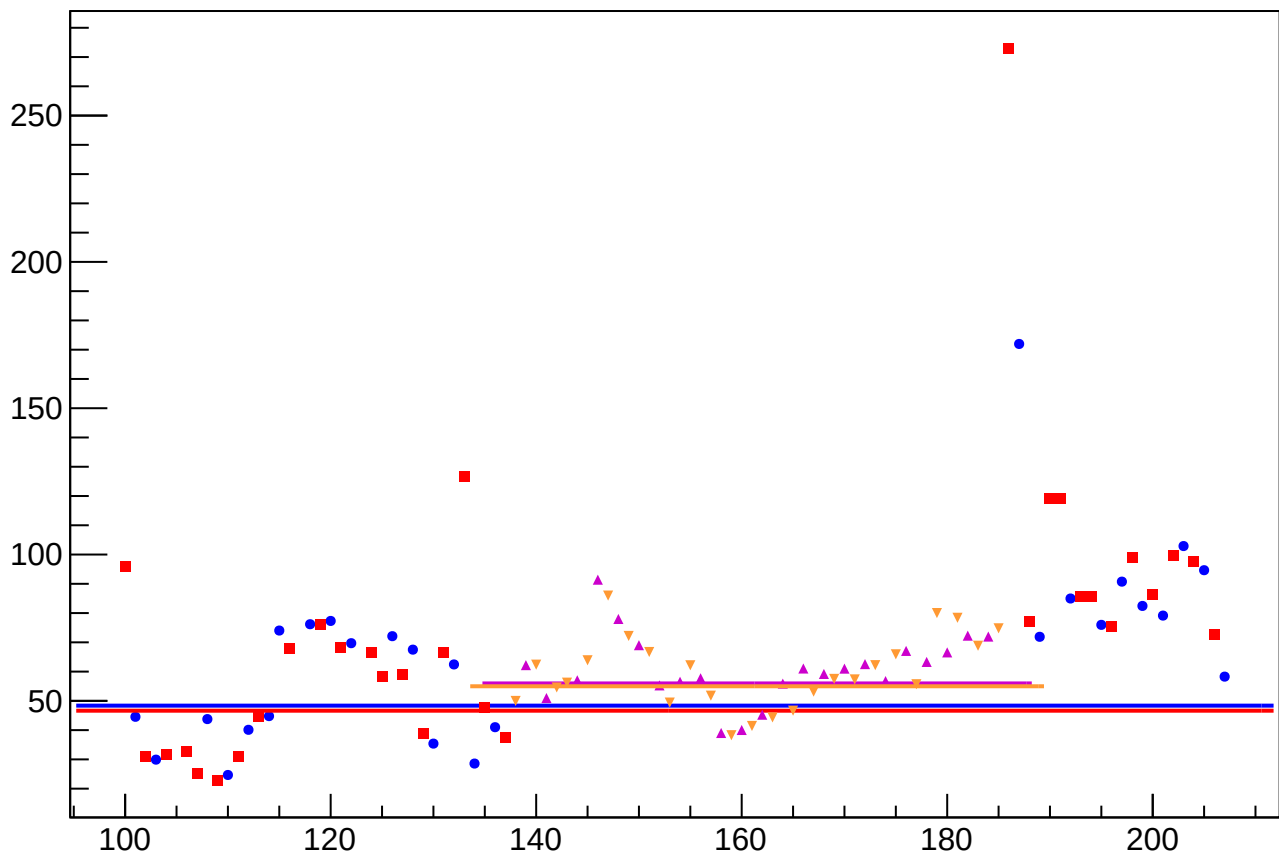
Left In: 0.007 $\pm$ 0.014  $\chi^2$ /NDF:15.1/22

+ sign 0.013 $\pm$ 0.010  $\chi^2$ /NDF: 70.1/50

All: 0.013 $\pm$ 0.007  $\chi^2$ /NDF: 125.7/104

- sign 0.014 $\pm$ 0.010  $\chi^2$ /NDF: 55.6/53

asym\_sam6\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 48.368 $\pm$ 0.010  $\chi^2$ /NDF: 4857335.7/25

Left Out: 54.985 $\pm$ 0.009  $\chi^2$ /NDF: 1566963.9/24

Right Out: 46.642 $\pm$ 0.010  $\chi^2$ /NDF: 7049186.4/30

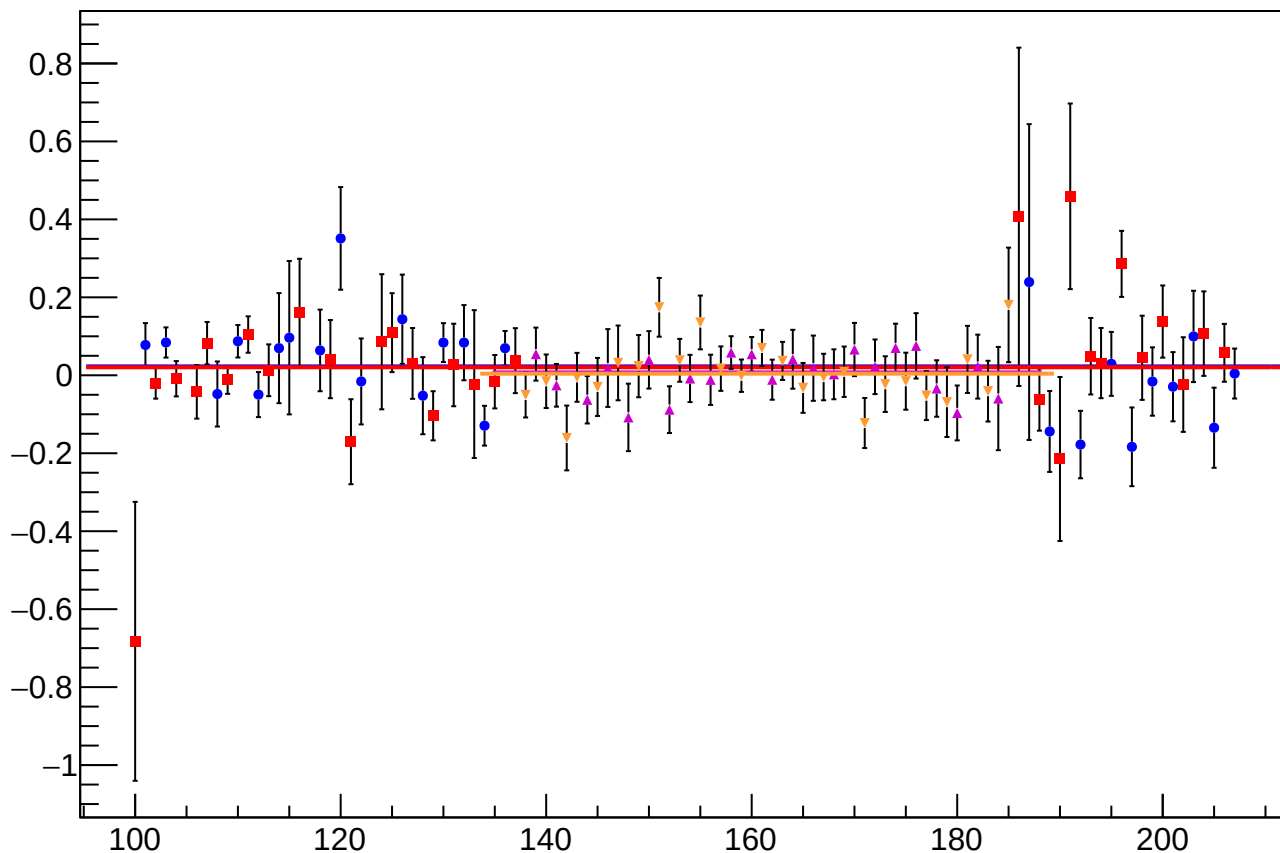
Left In: 55.955 $\pm$ 0.010  $\chi^2$ /NDF: 1406309.5/22

+ sign 51.952 $\pm$ 0.007  $\chi^2$ /NDF: 6663515.0/50

All: 51.623 $\pm$ 0.005  $\chi^2$ /NDF: 15598918.1/104

- sign 51.293 $\pm$ 0.007  $\chi^2$ /NDF: 8930634.9/53

asym\_sam6\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.023 $\pm$ 0.014  $\chi^2$ /NDF: 44.3/25

Left Out: 0.004 $\pm$ 0.013  $\chi^2$ /NDF:24.8/24

Right Out: 0.021 $\pm$ 0.014  $\chi^2$ /NDF: 40.1/30

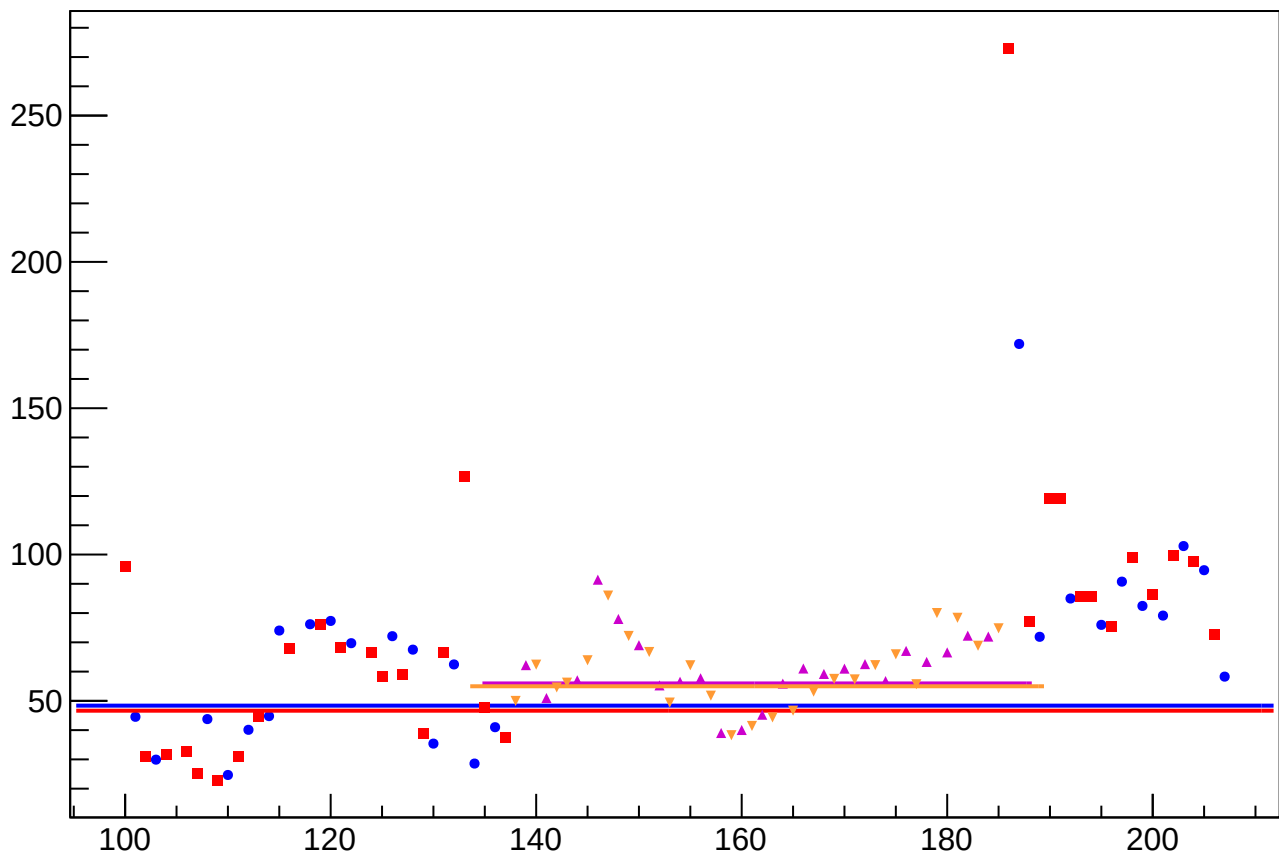
Left In: 0.007 $\pm$ 0.014  $\chi^2$ /NDF:15.1/22

+ sign 0.013 $\pm$ 0.010  $\chi^2$ /NDF: 70.1/50

All: 0.013 $\pm$ 0.007  $\chi^2$ /NDF: 125.7/104

- sign 0.014 $\pm$ 0.010  $\chi^2$ /NDF: 55.6/53

asym\_sam6\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 48.368 $\pm$ 0.010  $\chi^2$ /NDF: 4857335.7/25

Left Out: 54.985 $\pm$ 0.009  $\chi^2$ /NDF: 1566963.9/24

Right Out: 46.642 $\pm$ 0.010  $\chi^2$ /NDF: 7049186.4/30

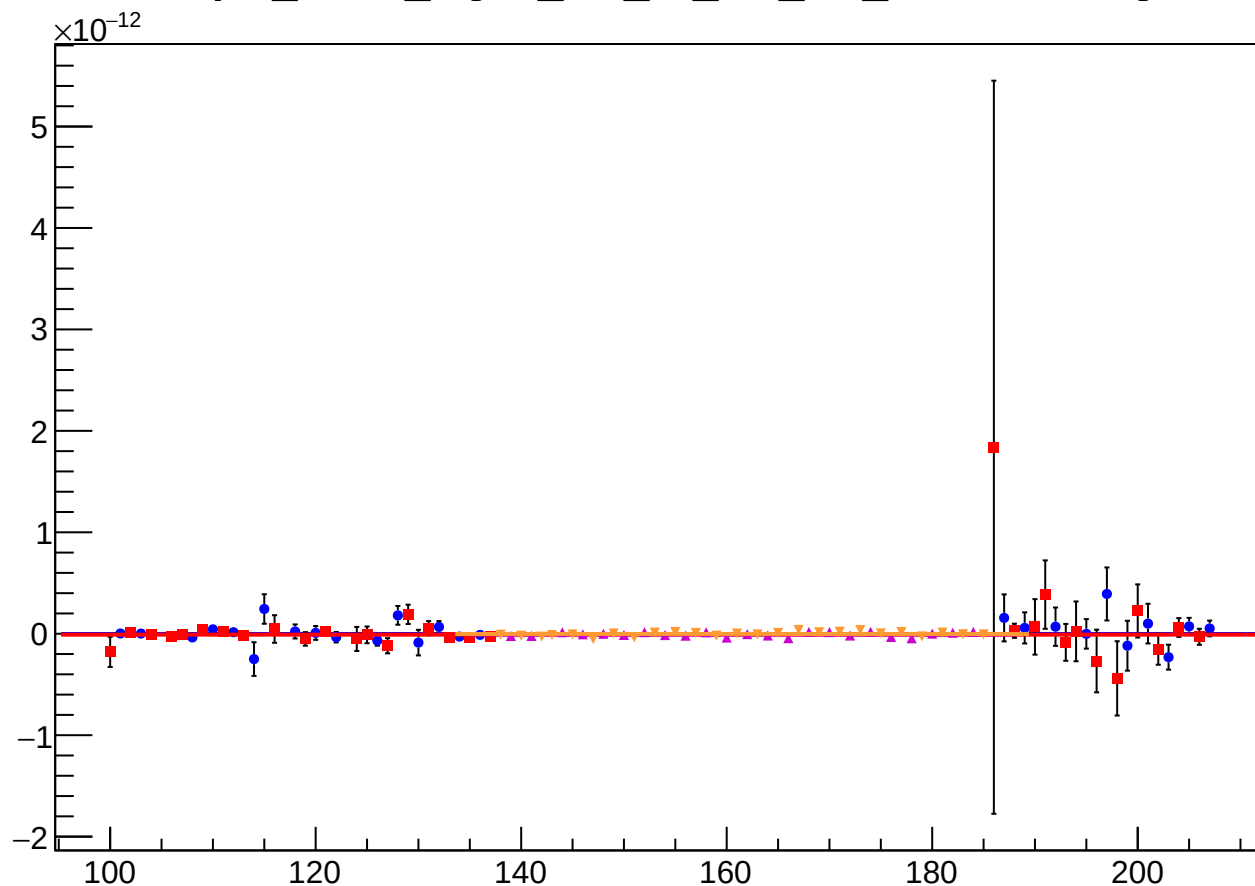
Left In: 55.955 $\pm$ 0.010  $\chi^2$ /NDF: 1406309.5/22

+ sign 51.952 $\pm$ 0.007  $\chi^2$ /NDF: 6663515.0/50

All: 51.623 $\pm$ 0.005  $\chi^2$ /NDF: 15598918.1/104

- sign 51.293 $\pm$ 0.007  $\chi^2$ /NDF: 8930634.9/53

# asym\_sam6\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 24.9/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 19.3/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 22.3/30

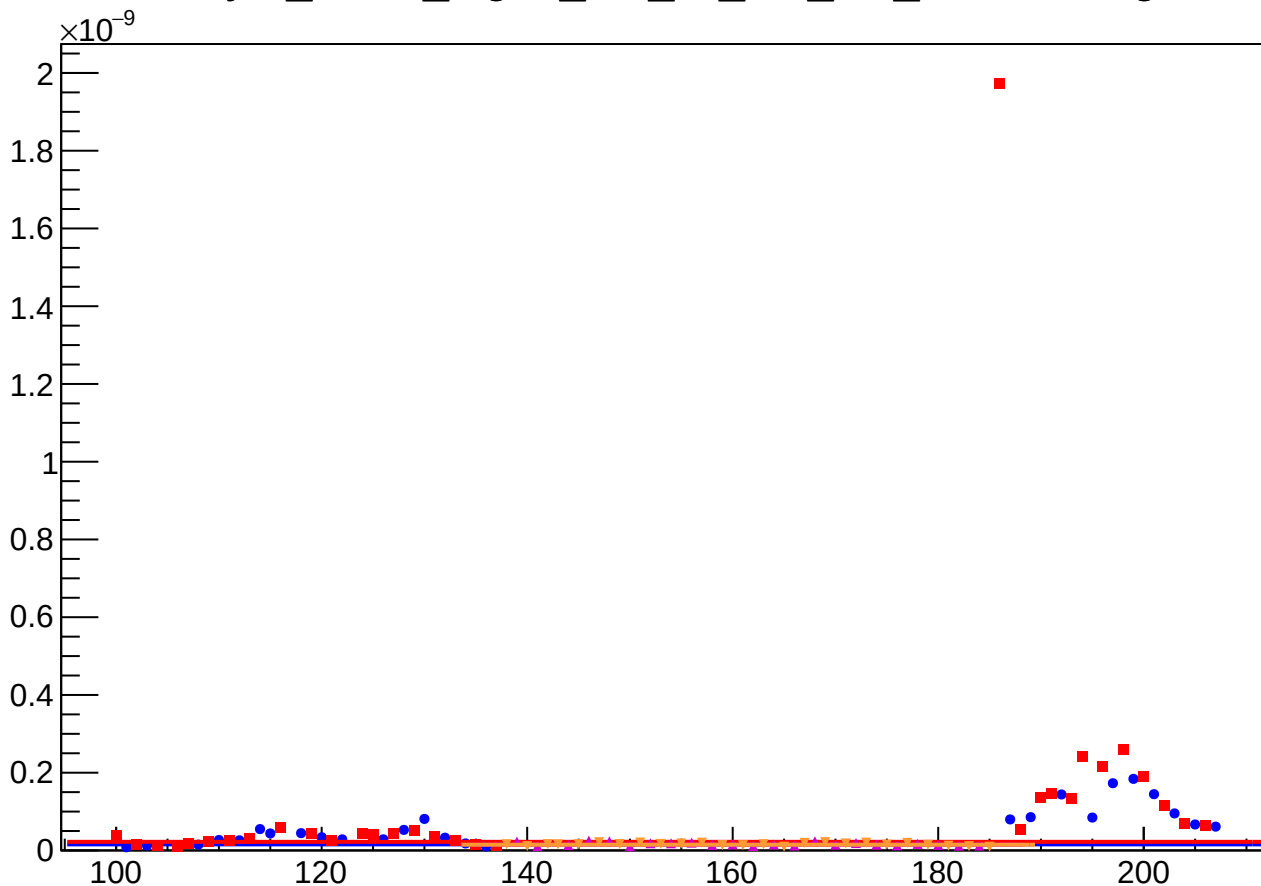
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 21.9/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 44.2/50

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 89.3/104

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 44.3/53

# asym\_sam6\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10104821.5/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :1401850.2/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10091213.5/30

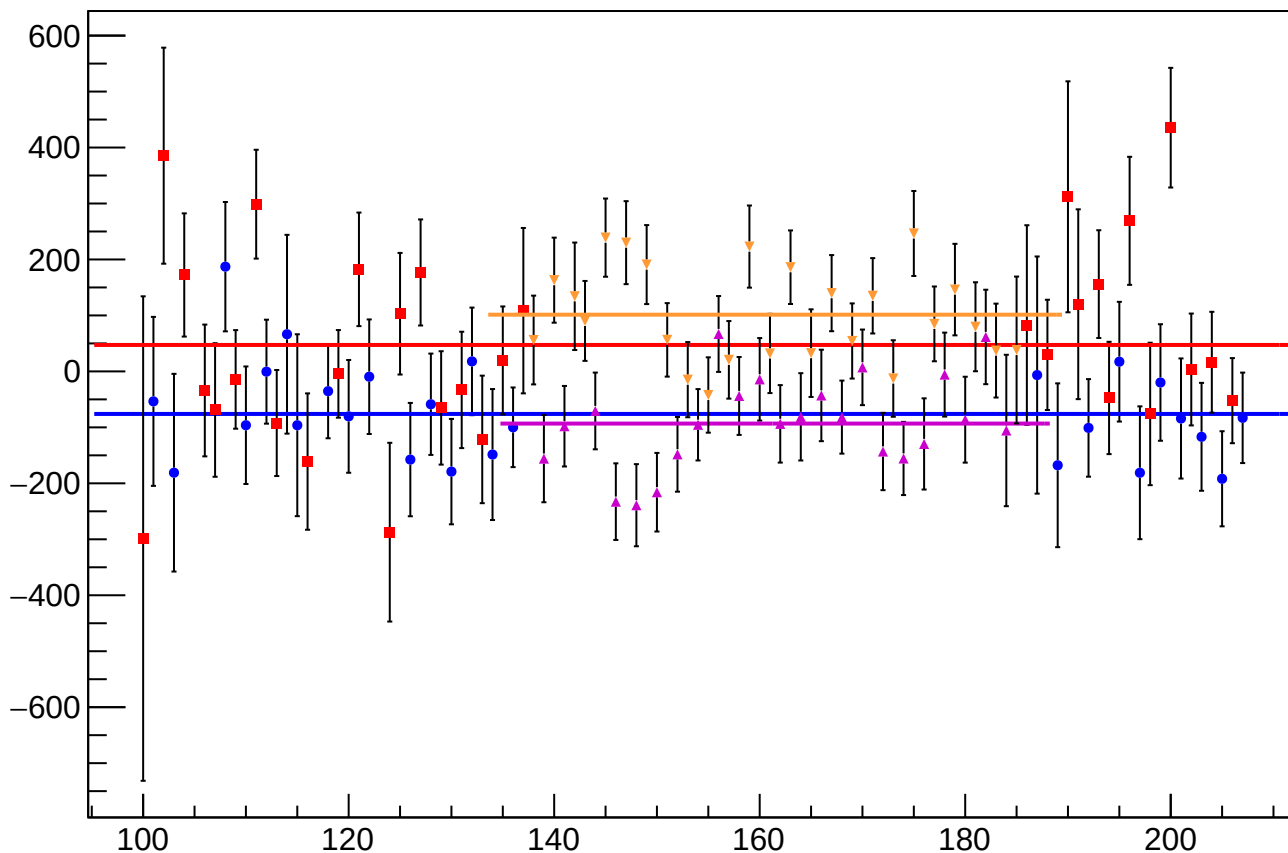
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :1427121.6/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11528891.2/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 24249142.6/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12598453.3/53

# reg\_asym\_sam7\_mean vs Slug



Right In:  $-76.022 \pm 20.368$   $\chi^2/\text{NDF}: 15.4/25$

Left Out:  $101.325 \pm 14.642$   $\chi^2/\text{NDF}: 33.9/24$

Right Out:  $47.253 \pm 19.580$   $\chi^2/\text{NDF}: 55.7/30$

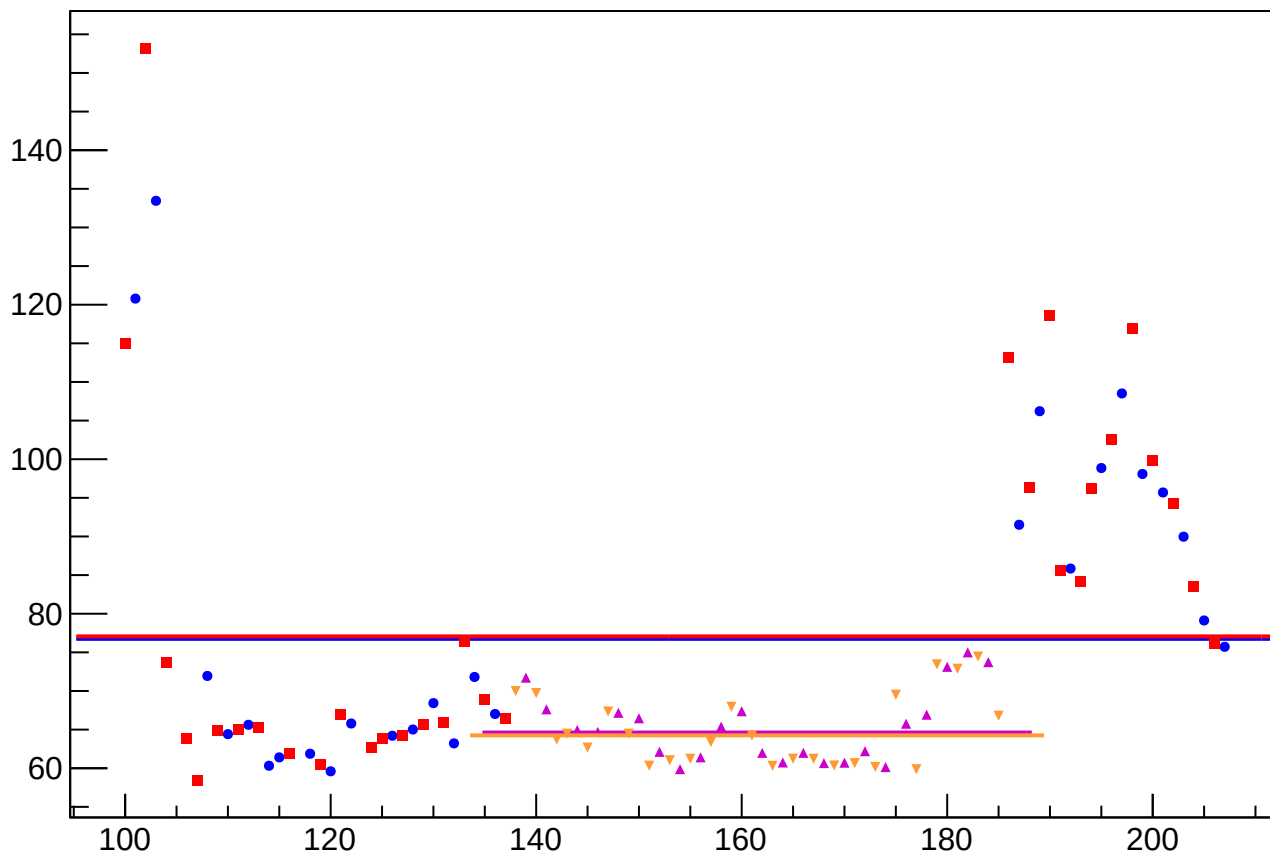
Left In:  $-93.236 \pm 15.137$   $\chi^2/\text{NDF}: 28.8/22$

+ sign  $40.902 \pm 11.889$   $\chi^2/\text{NDF}: 99.2/50$

All:  $0.406 \pm 8.437$   $\chi^2/\text{NDF}: 239.4/104$

- sign  $-40.682 \pm 11.975$   $\chi^2/\text{NDF}: 116.7/53$

# reg\_asym\_sam7\_rms vs Slug



Right In: 76.751 $\pm$ 0.014  $\chi^2$ /NDF: 1302007.1/25

Left Out: 64.256 $\pm$ 0.010  $\chi^2$ /NDF: 177697.9/24

Right Out: 77.064 $\pm$ 0.014  $\chi^2$ /NDF: 1582167.4/30

Left In: 64.621 $\pm$ 0.011  $\chi^2$ /NDF: 147201.3/22

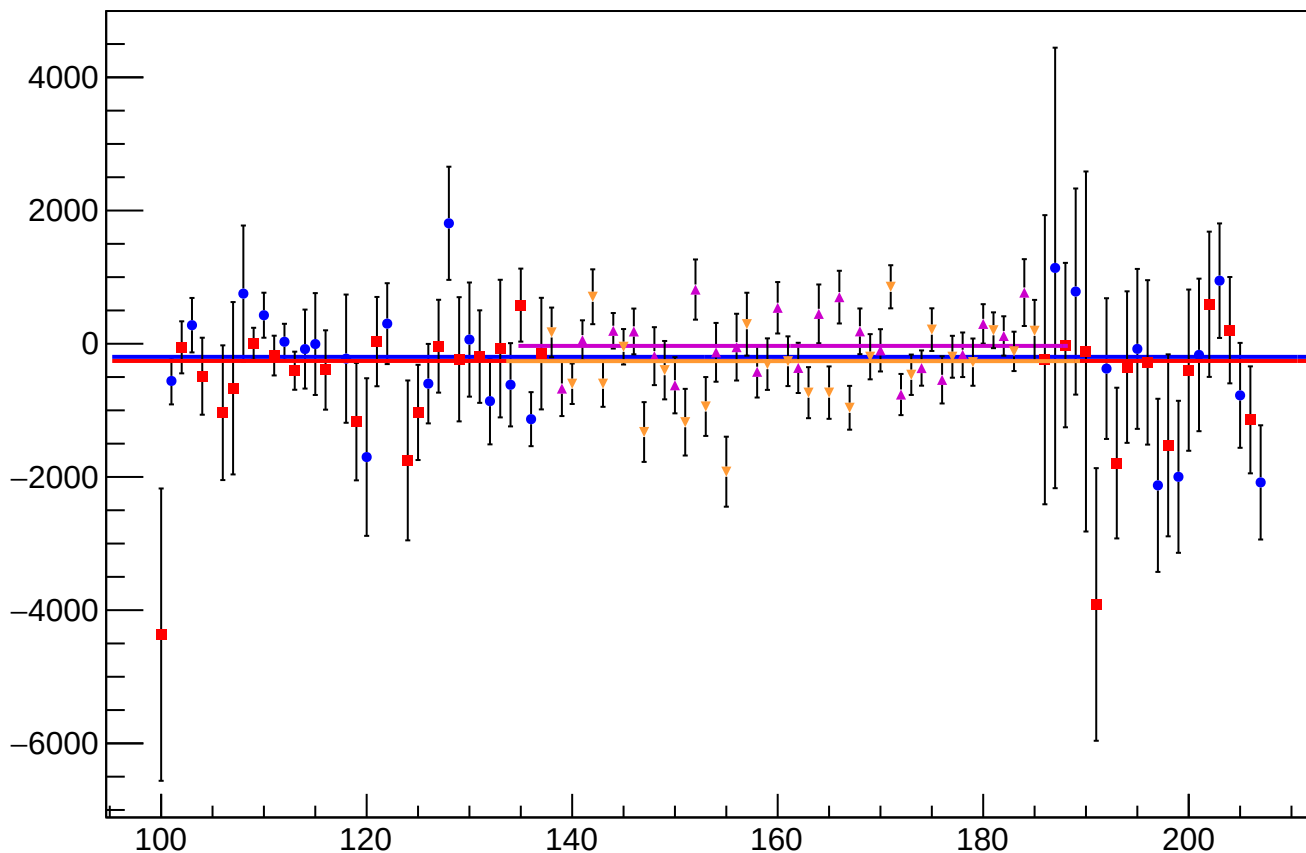
+ sign 68.513 $\pm$ 0.008  $\chi^2$ /NDF: 1975951.1/50

All: 68.891 $\pm$ 0.006  $\chi^2$ /NDF: 4214951.7/104

- sign 69.276 $\pm$ 0.008  $\chi^2$ /NDF: 2234911.5/53



# asym\_sam7\_reg\_correction\_mean vs Slug



Right In:  $-196.887 \pm 118.154$   $\chi^2/\text{NDF}$ : 35.2/25

Left Out:  $-261.124 \pm 71.268$   $\chi^2/\text{NDF}$ : 58.8/24

Right Out:  $-258.487 \pm 111.306$   $\chi^2/\text{NDF}$ : 20.7/30

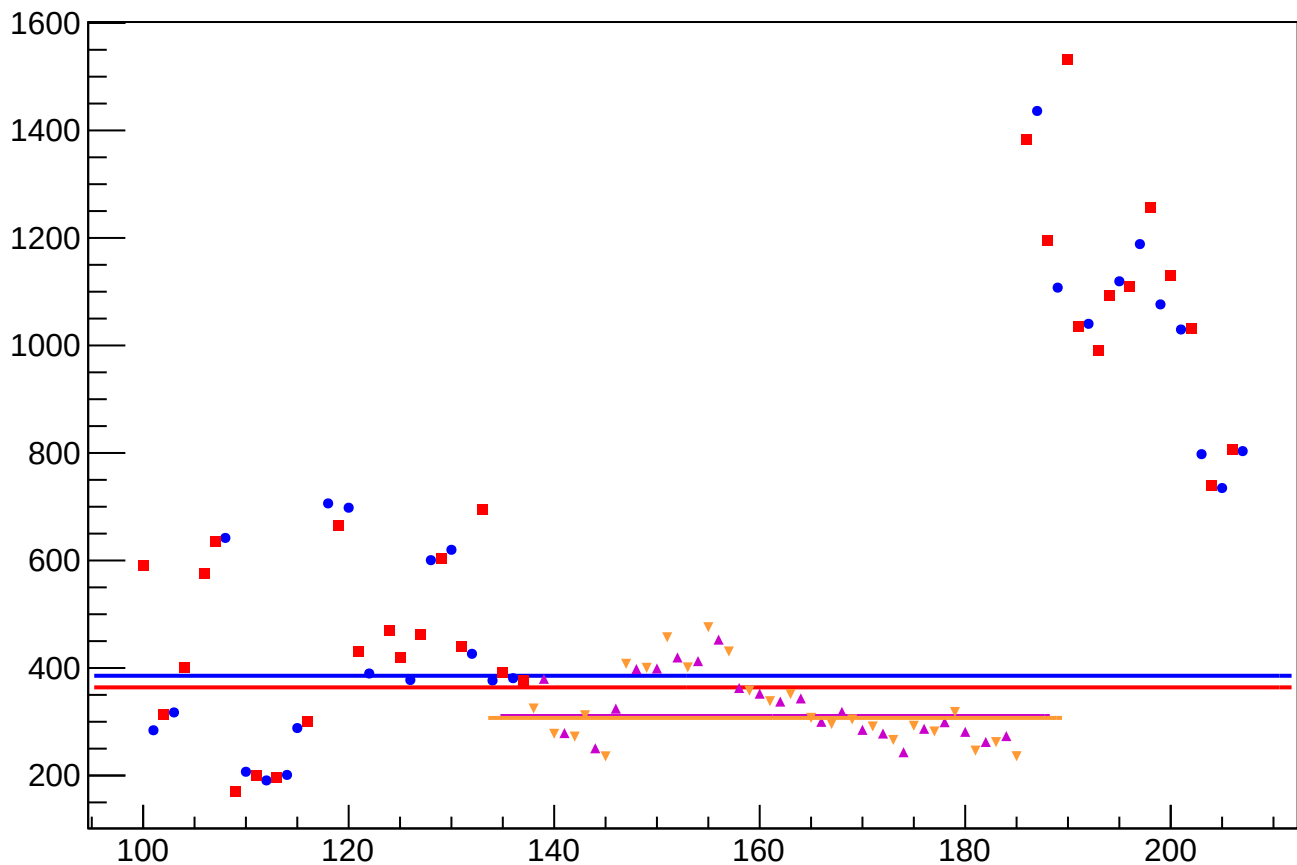
Left In:  $-32.423 \pm 73.837$   $\chi^2/\text{NDF}$ : 31.7/22

+ sign  $-243.987 \pm 61.026$   $\chi^2/\text{NDF}$ : 94.2/50

All:  $-173.331 \pm 43.329$   $\chi^2/\text{NDF}$ : 152.2/104

- sign  $-101.505 \pm 61.530$   $\chi^2/\text{NDF}$ : 55.3/53

# asym\_sam7\_reg\_correction\_rms vs Slug



Right In: 385.560 $\pm$ 0.084  $\chi^2$ /NDF: 8427358.5/25

Left Out: 307.143 $\pm$ 0.050  $\chi^2$ /NDF:1320151.2/24

Right Out: 363.968 $\pm$ 0.079  $\chi^2$ /NDF: 11096924.6/30

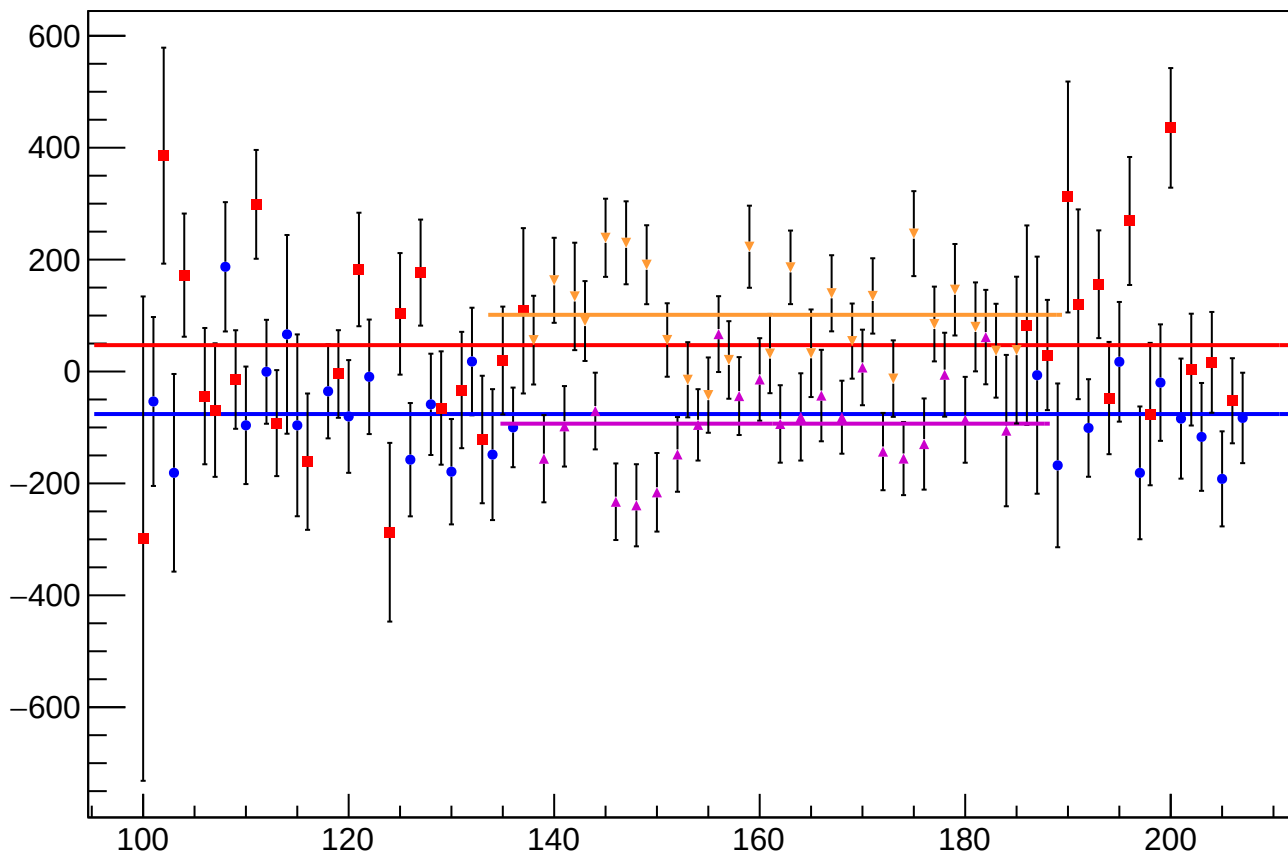
Left In: 310.697 $\pm$ 0.052  $\chi^2$ /NDF:1079476.2/22

+ sign 328.062 $\pm$ 0.043  $\chi^2$ /NDF: 10393442.6/50

All: 327.524 $\pm$ 0.031  $\chi^2$ /NDF: 22888278.4/10

- sign 326.976 $\pm$ 0.044  $\chi^2$ /NDF: 12494521.7/53

# cor\_asym\_sam7\_mean vs Slug



Right In: -76.024 $\pm$ 20.368  $\chi^2$ /NDF: 15.4/25

Left Out: 101.325 $\pm$ 14.642  $\chi^2$ /NDF:33.9/24

Right Out: 47.143 $\pm$ 19.597  $\chi^2$ /NDF: 55.8/30

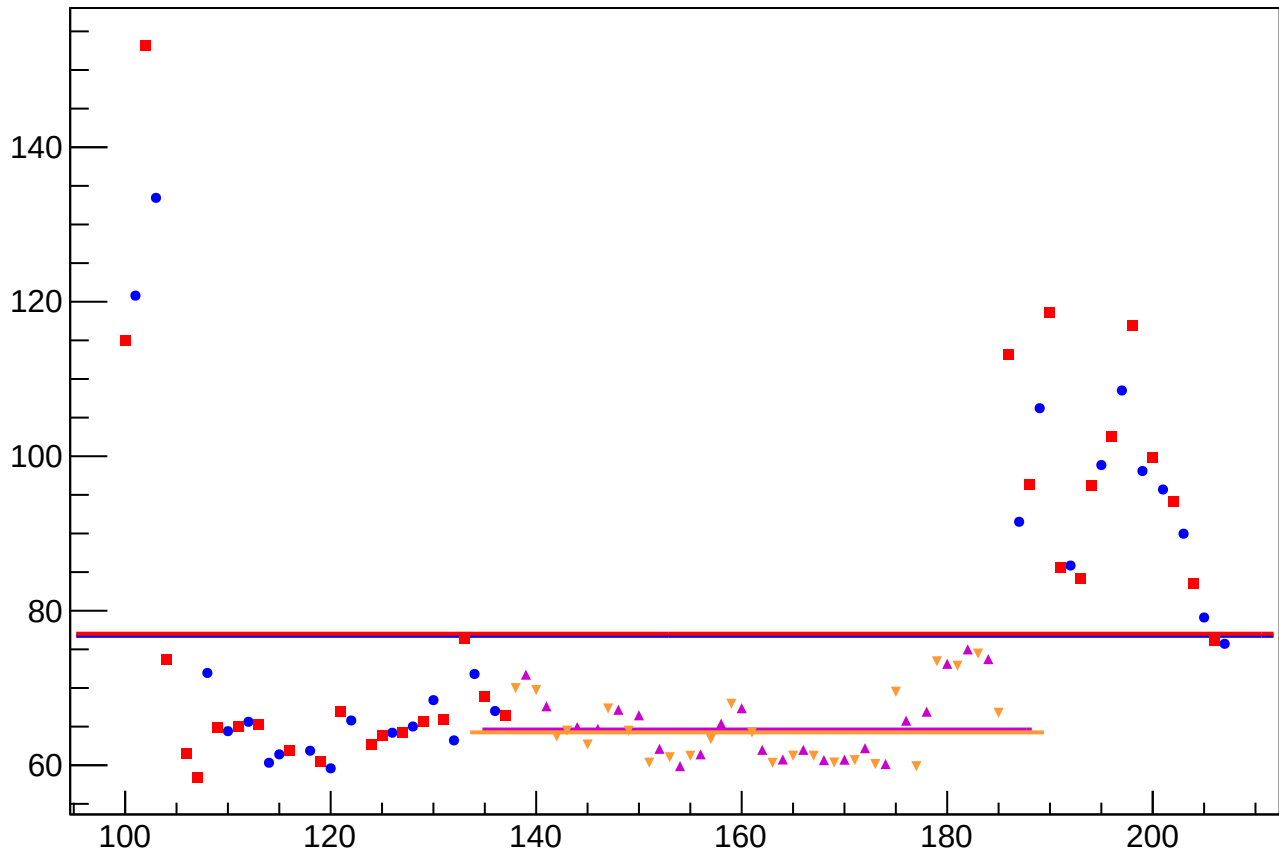
Left In: -93.235 $\pm$ 15.137  $\chi^2$ /NDF:28.8/22

+ sign 40.901 $\pm$ 11.889  $\chi^2$ /NDF: 99.2/50

All: 0.370 $\pm$ 8.438  $\chi^2$ /NDF: 239.4/104

- sign -40.782 $\pm$ 11.979  $\chi^2$ /NDF: 116.7/53

# cor\_asym\_sam7\_rms vs Slug



Right In: 76.751 $\pm$ 0.014  $\chi^2$ /NDF: 1302007.4/25

Left Out: 64.256 $\pm$ 0.010  $\chi^2$ /NDF: 177697.9/24

Right Out: 77.027 $\pm$ 0.014  $\chi^2$ /NDF: 1589666.7/30

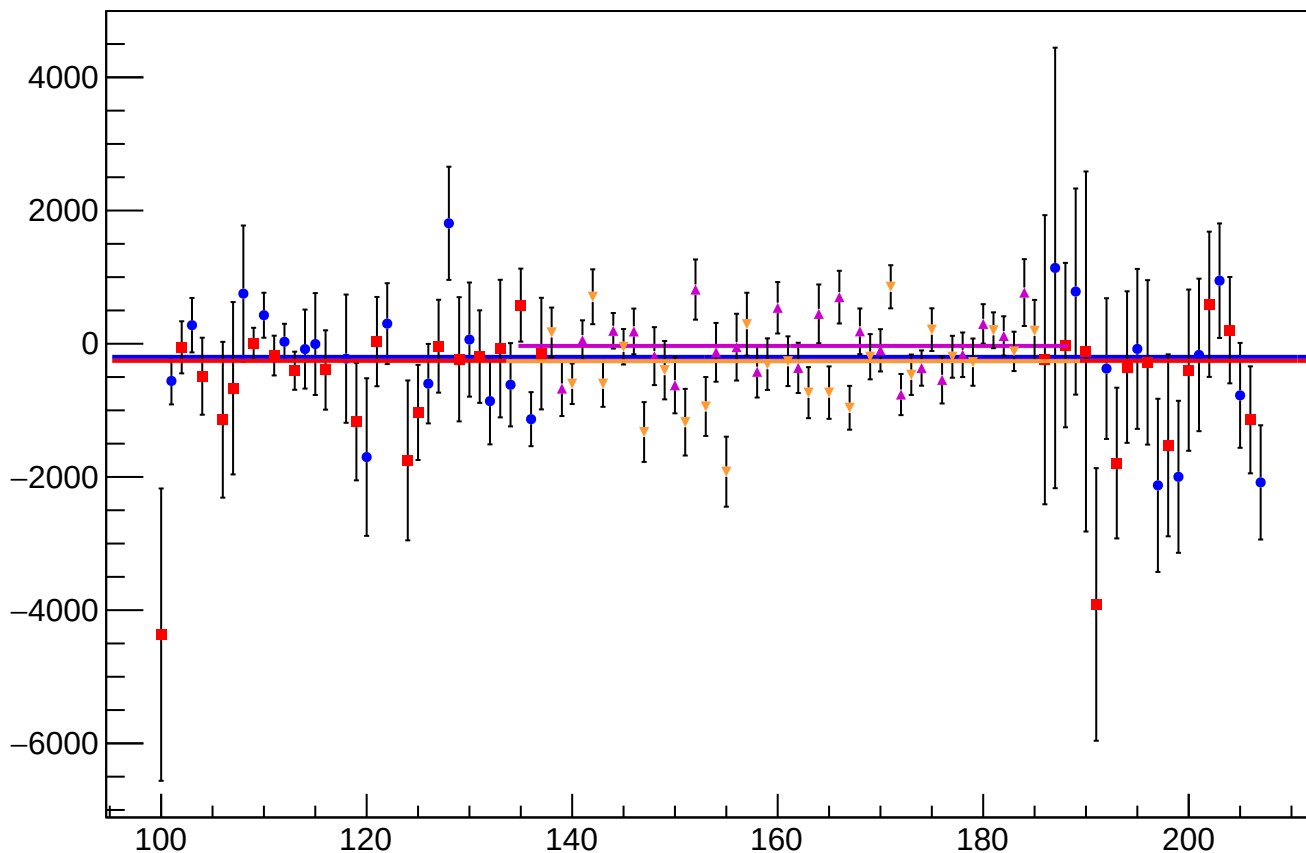
Left In: 64.621 $\pm$ 0.011  $\chi^2$ /NDF: 147201.3/22

+ sign 68.513 $\pm$ 0.008  $\chi^2$ /NDF: 1975951.5/50

All: 68.882 $\pm$ 0.006  $\chi^2$ /NDF: 4218658.4/104

- sign 69.257 $\pm$ 0.008  $\chi^2$ /NDF: 2238822.3/53

# asym\_sam7\_cor\_correction\_mean vs Slug



Right In:  $-196.884 \pm 118.155$   $\chi^2/\text{NDF}$ : 35.2/25

Left Out:  $-261.124 \pm 71.268$   $\chi^2/\text{NDF}$ : 58.8/24

Right Out:  $-257.079 \pm 111.480$   $\chi^2/\text{NDF}$ : 20.7/30

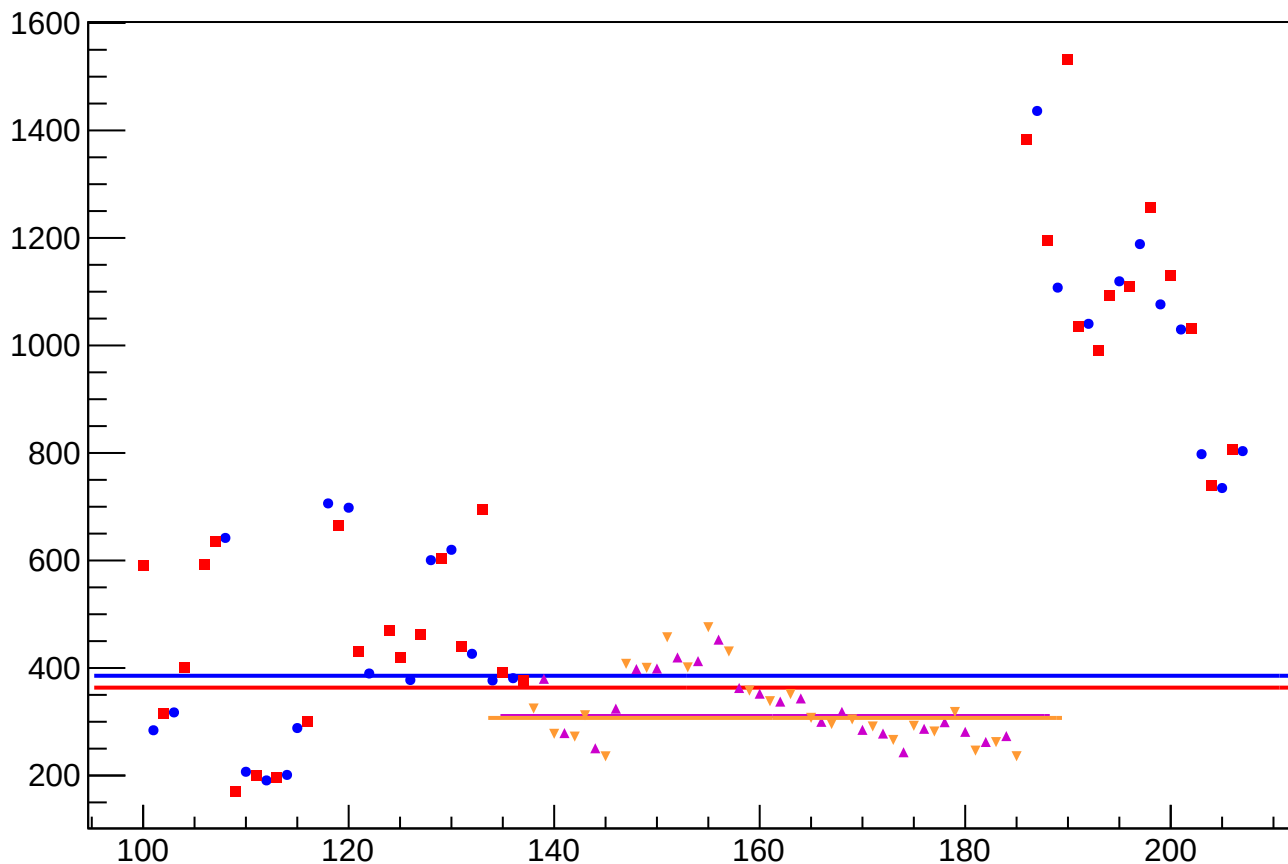
Left In:  $-32.420 \pm 73.837$   $\chi^2/\text{NDF}$ : 31.7/22

+ sign  $-243.987 \pm 61.026$   $\chi^2/\text{NDF}$ : 94.2/50

All:  $-173.077 \pm 43.339$   $\chi^2/\text{NDF}$ : 152.2/104

- sign  $-100.923 \pm 61.559$   $\chi^2/\text{NDF}$ : 55.3/53

# asym\_sam7\_cor\_correction\_rms vs Slug



Right In: 385.562 $\pm$ 0.084  $\chi^2$ /NDF: 8427316.2/25

Left Out: 307.143 $\pm$ 0.050  $\chi^2$ /NDF:1320147.4/24

Right Out: 363.499 $\pm$ 0.079  $\chi^2$ /NDF: 11086190.4/30

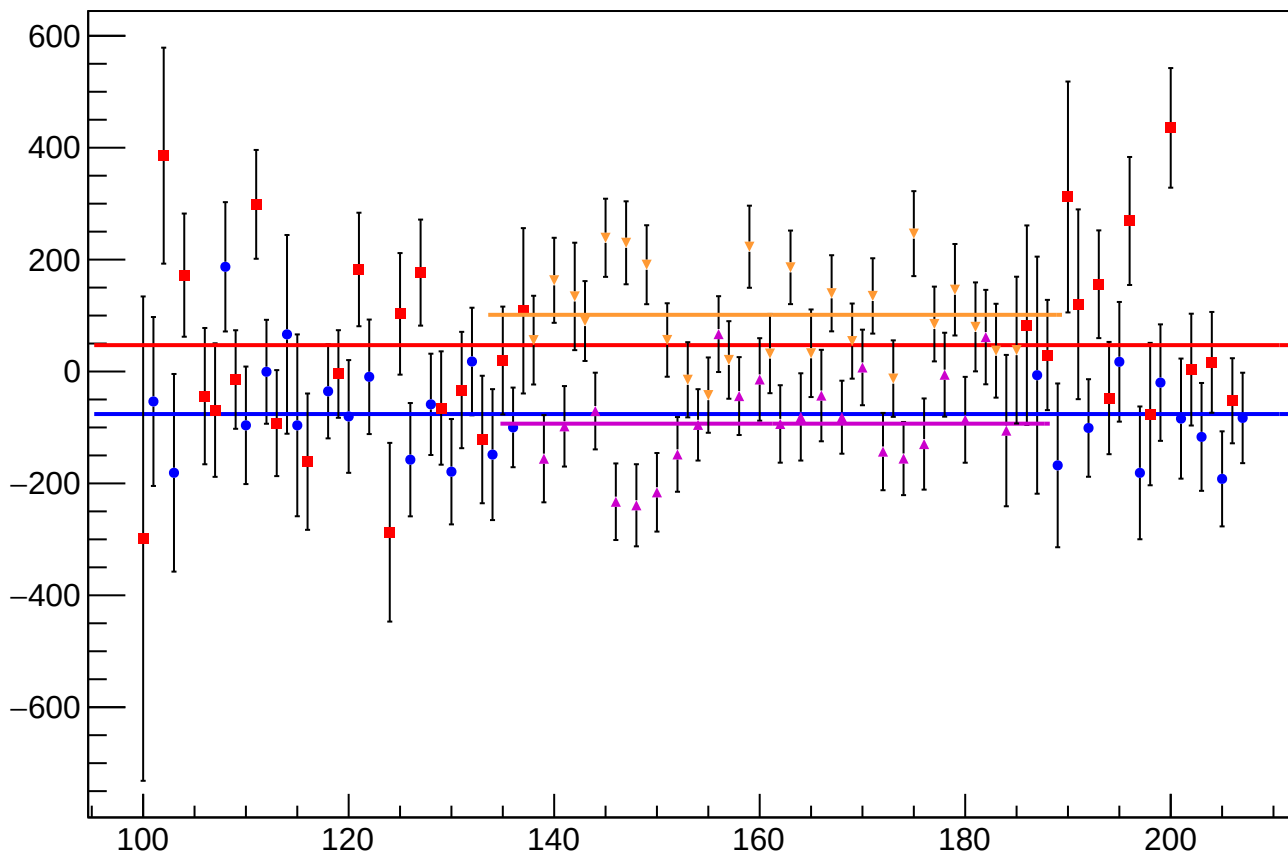
Left In: 310.698 $\pm$ 0.052  $\chi^2$ /NDF:1079479.8/22

+ sign 328.063 $\pm$ 0.043  $\chi^2$ /NDF: 10393434.6/50

All: 327.436 $\pm$ 0.031  $\chi^2$ /NDF: 22871394.1/10

- sign 326.798 $\pm$ 0.044  $\chi^2$ /NDF: 12477533.7/53

# eigen\_cor\_asym\_sam7\_mean vs Slug



Right In:  $-76.024 \pm 20.368$   $\chi^2/\text{NDF}$ : 15.4/25

Left Out:  $101.325 \pm 14.642$   $\chi^2/\text{NDF}$ : 33.9/24

Right Out:  $47.143 \pm 19.597$   $\chi^2/\text{NDF}$ : 55.8/30

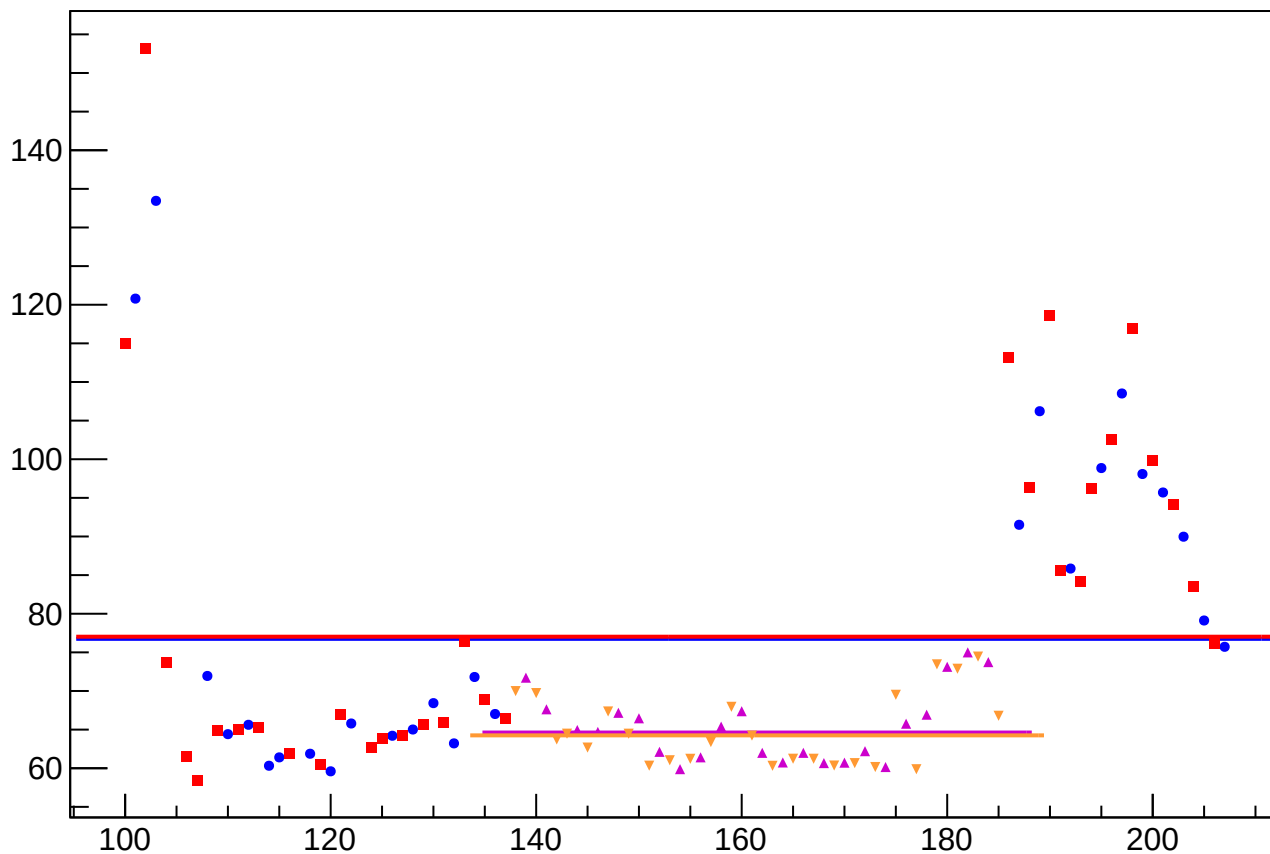
Left In:  $-93.235 \pm 15.137$   $\chi^2/\text{NDF}$ : 28.8/22

+ sign  $40.901 \pm 11.889$   $\chi^2/\text{NDF}$ : 99.2/50

All:  $0.370 \pm 8.438$   $\chi^2/\text{NDF}$ : 239.4/104

- sign  $-40.782 \pm 11.979$   $\chi^2/\text{NDF}$ : 116.7/53

# eigen\_cor\_asym\_sam7\_rms vs Slug



Right In: 76.751 $\pm$ 0.014  $\chi^2$ /NDF: 1302007.4/25

Left Out: 64.256 $\pm$ 0.010  $\chi^2$ /NDF: 177697.9/24

Right Out: 77.027 $\pm$ 0.014  $\chi^2$ /NDF: 1589666.7/30

Left In: 64.621 $\pm$ 0.011  $\chi^2$ /NDF: 147201.3/22

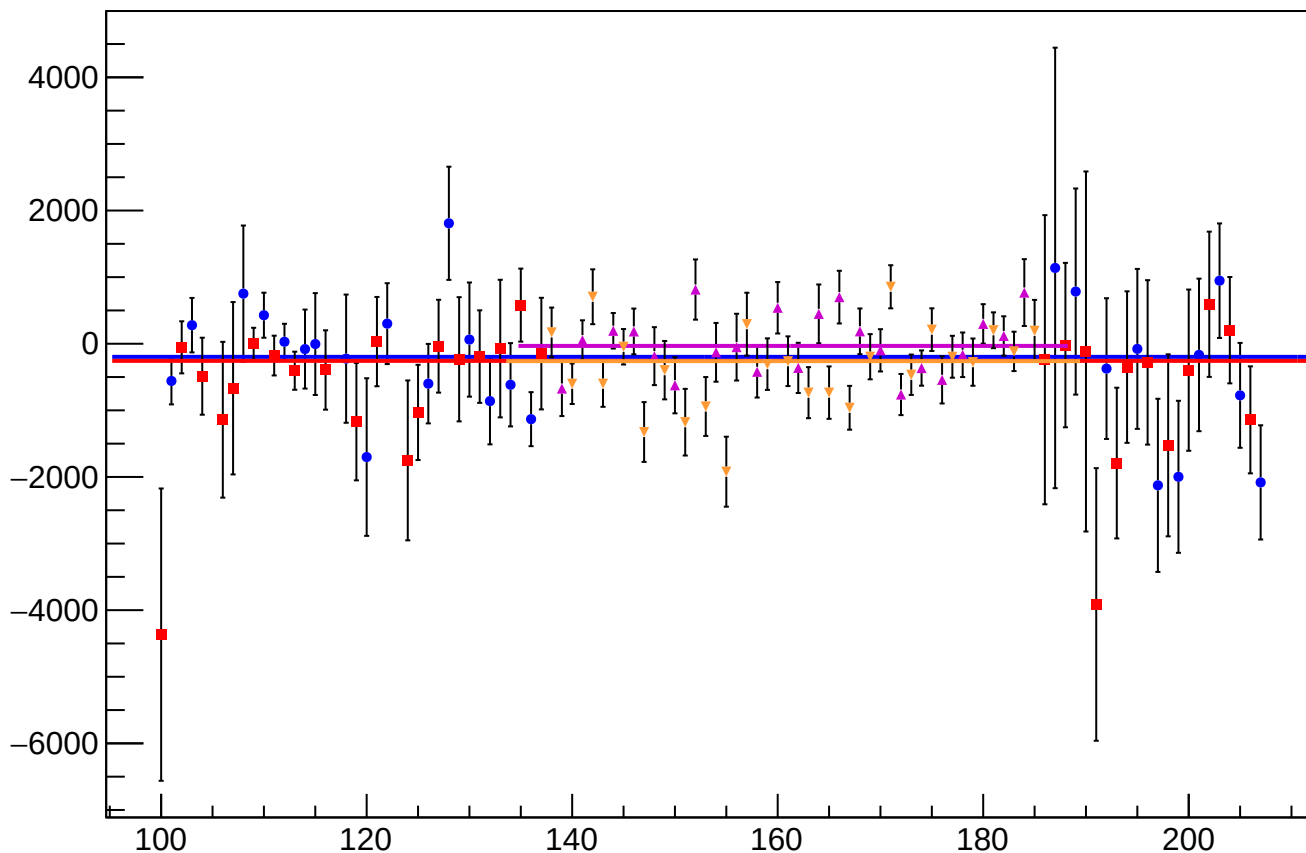
+ sign 68.513 $\pm$ 0.008  $\chi^2$ /NDF: 1975951.5/50

All: 68.882 $\pm$ 0.006  $\chi^2$ /NDF: 4218658.4/104

- sign 69.257 $\pm$ 0.008  $\chi^2$ /NDF: 2238822.3/53



# asym\_sam7\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-196.884 \pm 118.155$   $\chi^2/\text{NDF}$ : 35.2/25

Left Out:  $-261.124 \pm 71.268$   $\chi^2/\text{NDF}$ : 58.8/24

Right Out:  $-257.079 \pm 111.480$   $\chi^2/\text{NDF}$ : 20.7/30

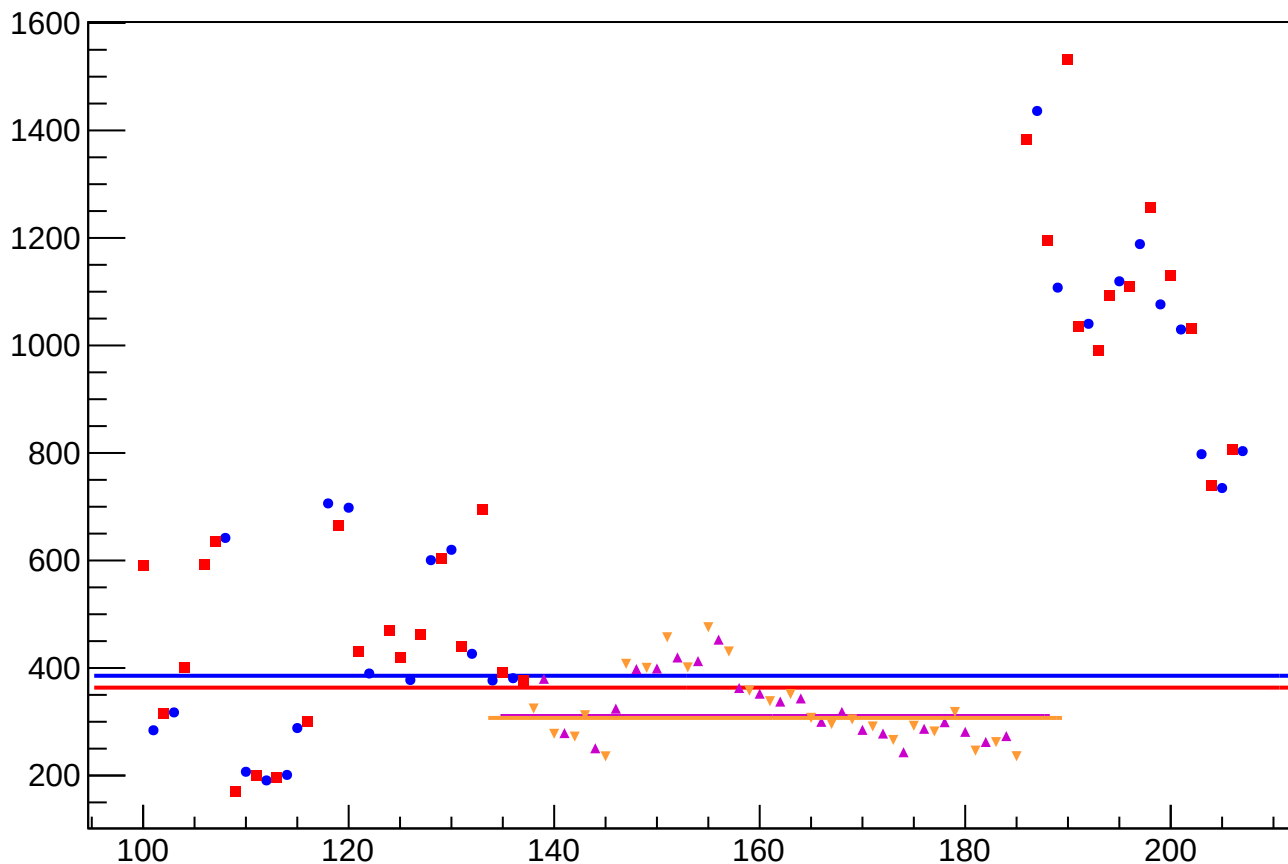
Left In:  $-32.420 \pm 73.837$   $\chi^2/\text{NDF}$ : 31.7/22

+ sign  $-243.987 \pm 61.026$   $\chi^2/\text{NDF}$ : 94.2/50

All:  $-173.077 \pm 43.339$   $\chi^2/\text{NDF}$ : 152.2/104

- sign  $-100.923 \pm 61.559$   $\chi^2/\text{NDF}$ : 55.3/53

# asym\_sam7\_eigen\_cor\_correction\_rms vs Slug



Right In: 385.562 $\pm$ 0.084  $\chi^2/\text{NDF}$ : 8427316.2/25

Left Out: 307.143 $\pm$ 0.050  $\chi^2/\text{NDF}$ : 1320147.4/24

Right Out: 363.499 $\pm$ 0.079  $\chi^2/\text{NDF}$ : 11086190.4/30

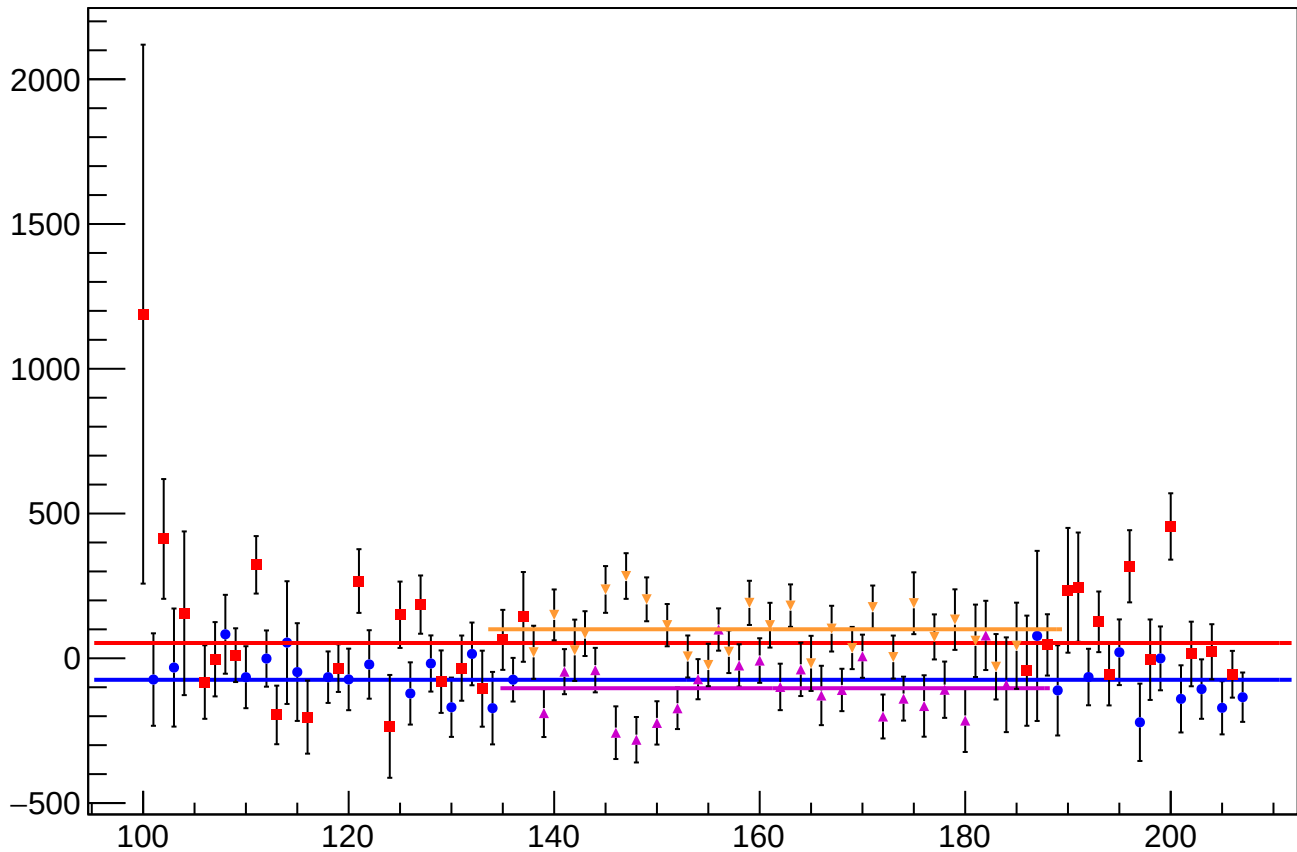
Left In: 310.698 $\pm$ 0.052  $\chi^2/\text{NDF}$ : 1079479.8/22

+ sign 328.063 $\pm$ 0.043  $\chi^2/\text{NDF}$ : 10393434.6/50

All: 327.436 $\pm$ 0.031  $\chi^2/\text{NDF}$ : 22871394.1/10

- sign 326.798 $\pm$ 0.044  $\chi^2/\text{NDF}$ : 12477533.7/53

# dit\_asym\_sam7\_mean vs Slug



Right In:  $-74.260 \pm 21.995$   $\chi^2/\text{NDF}$ : 10.0/25

Left Out:  $100.277 \pm 16.625$   $\chi^2/\text{NDF}$ : 27.7/24

Right Out:  $52.864 \pm 21.258$   $\chi^2/\text{NDF}$ : 60.2/30

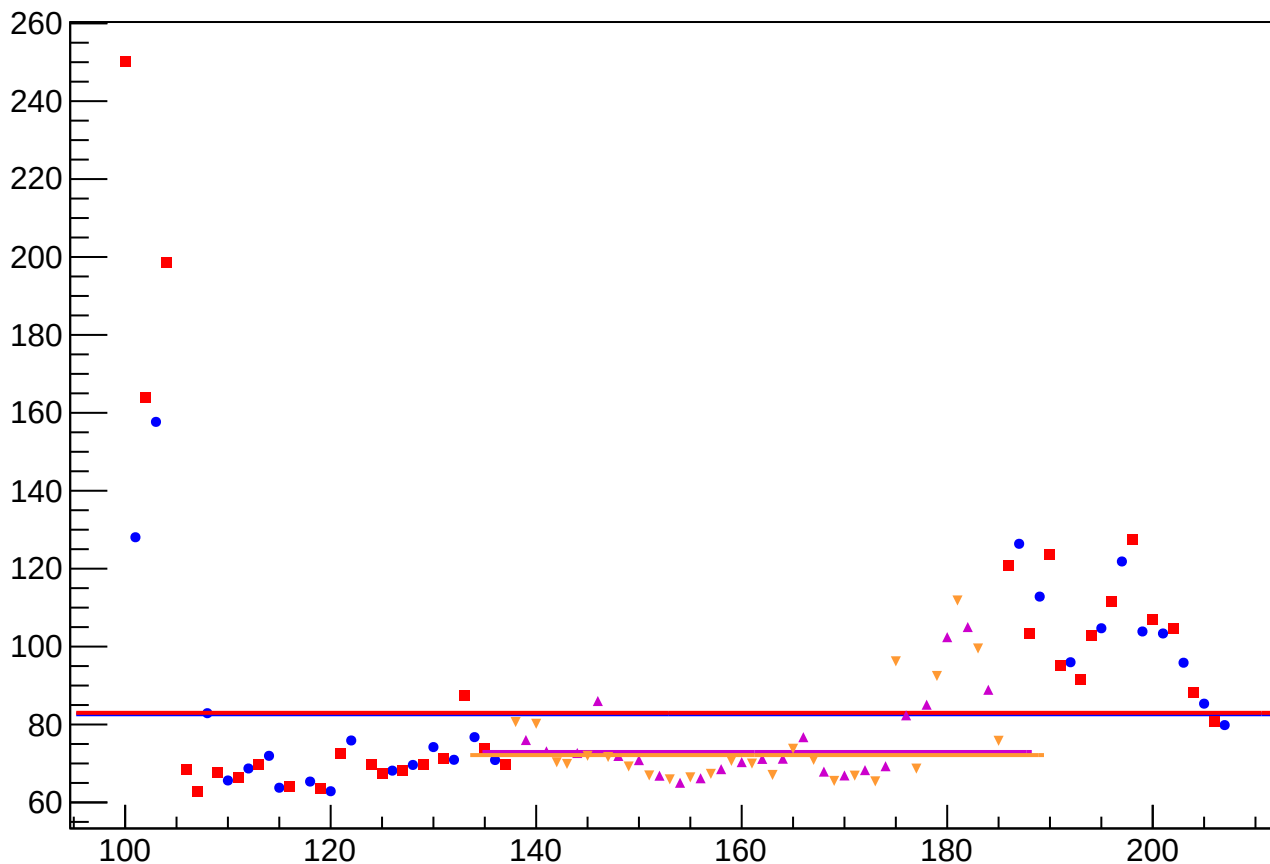
Left In:  $-103.363 \pm 17.260$   $\chi^2/\text{NDF}$ : 32.7/22

+ sign  $36.817 \pm 13.263$   $\chi^2/\text{NDF}$ : 77.7/50

All:  $-1.836 \pm 9.426$   $\chi^2/\text{NDF}$ : 220.3/104

- sign  $-41.291 \pm 13.400$   $\chi^2/\text{NDF}$ : 125.4/53

# dit\_asym\_sam7\_rms vs Slug



Right In: 82.631+/-0.016  $\chi^2$ /NDF: 1447719.3/25

Left Out: 72.150+/-0.012  $\chi^2$ /NDF: 641970.1/24

Right Out: 82.997+/-0.015  $\chi^2$ /NDF: 2072818.2/30

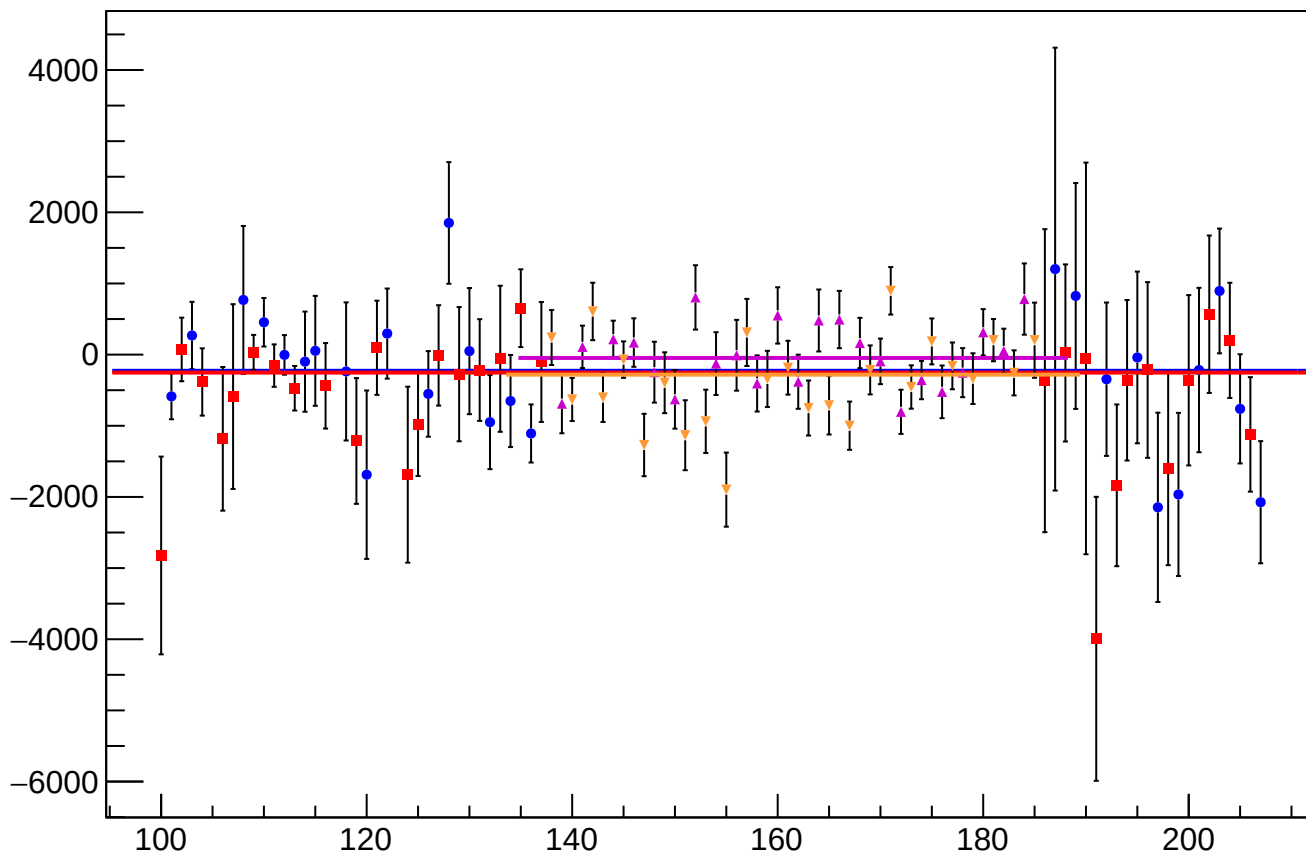
Left In: 72.948+/-0.012  $\chi^2$ /NDF: 509028.0/22

+ sign 75.961+/-0.009  $\chi^2$ /NDF: 2378722.8/50

All: 76.446+/-0.007  $\chi^2$ /NDF: 5235306.8/104

- sign 76.941+/-0.009  $\chi^2$ /NDF: 2851177.9/53

# asym\_sam7\_dit\_correction\_mean vs Slug



Right In:  $-227.512 \pm 120.299$   $\chi^2/\text{NDF}$ : 34.7/25

Left Out:  $-281.205 \pm 72.538$   $\chi^2/\text{NDF}$ : 56.8/24

Right Out:  $-252.187 \pm 113.304$   $\chi^2/\text{NDF}$ : 22.3/30

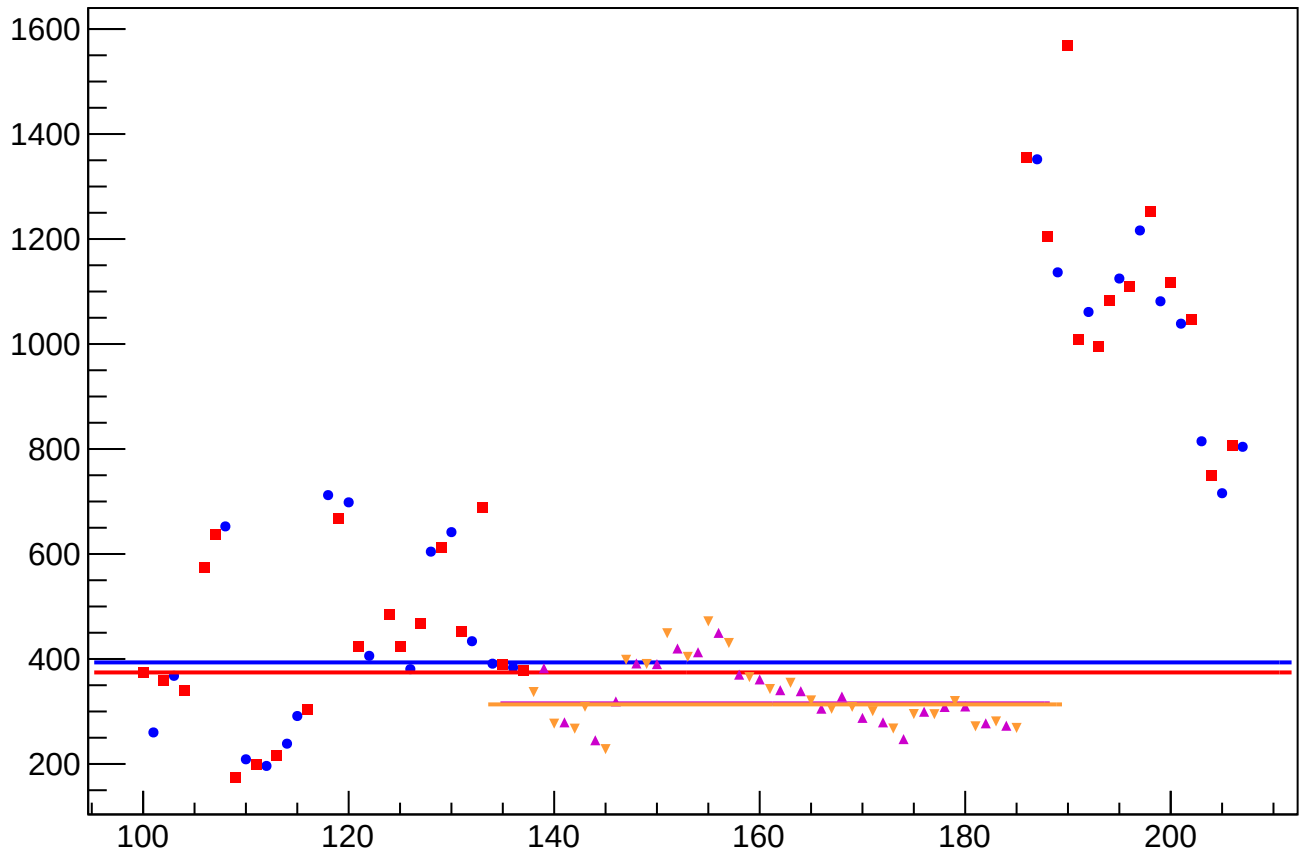
Left In:  $-46.569 \pm 74.897$   $\chi^2/\text{NDF}$ : 30.7/22

+ sign  $-266.888 \pm 62.119$   $\chi^2/\text{NDF}$ : 91.6/50

All:  $-188.449 \pm 44.052$   $\chi^2/\text{NDF}$ : 150.2/104

- sign  $-109.094 \pm 62.480$   $\chi^2/\text{NDF}$ : 55.3/53

# asym\_sam7\_dit\_correction\_rms vs Slug



Right In: 393.473+/-0.085  $\chi^2/\text{NDF}$ : 8344571.0/25

Left Out: 313.500+/-0.051  $\chi^2/\text{NDF}$ : 1175529.4/24

Right Out: 374.376+/-0.080  $\chi^2/\text{NDF}$ : 10708471.8/30

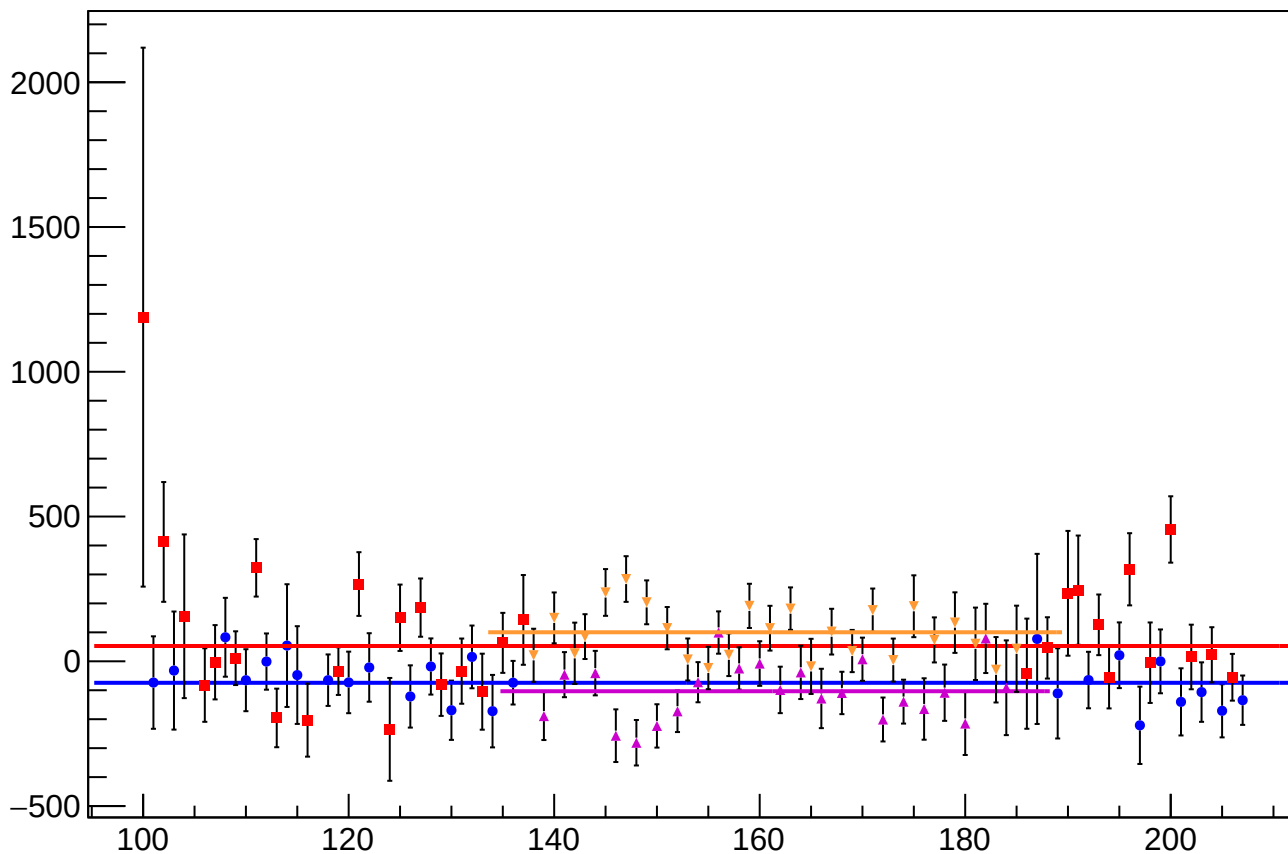
Left In: 315.455+/-0.053  $\chi^2/\text{NDF}$ : 1008523.1/22

+ sign 334.824+/-0.044  $\chi^2/\text{NDF}$ : 10168306.3/50

All: 334.102+/-0.031  $\chi^2/\text{NDF}$ : 22262223.2/10

- sign 333.372+/-0.044  $\chi^2/\text{NDF}$ : 12093373.8/53

# eigen\_dit\_asym\_sam7\_mean vs Slug



Right In:  $-74.259 \pm 21.995$   $\chi^2/\text{NDF}$ : 10.0/25

Left Out:  $100.276 \pm 16.625$   $\chi^2/\text{NDF}$ : 27.7/24

Right Out:  $52.864 \pm 21.258$   $\chi^2/\text{NDF}$ : 60.2/30

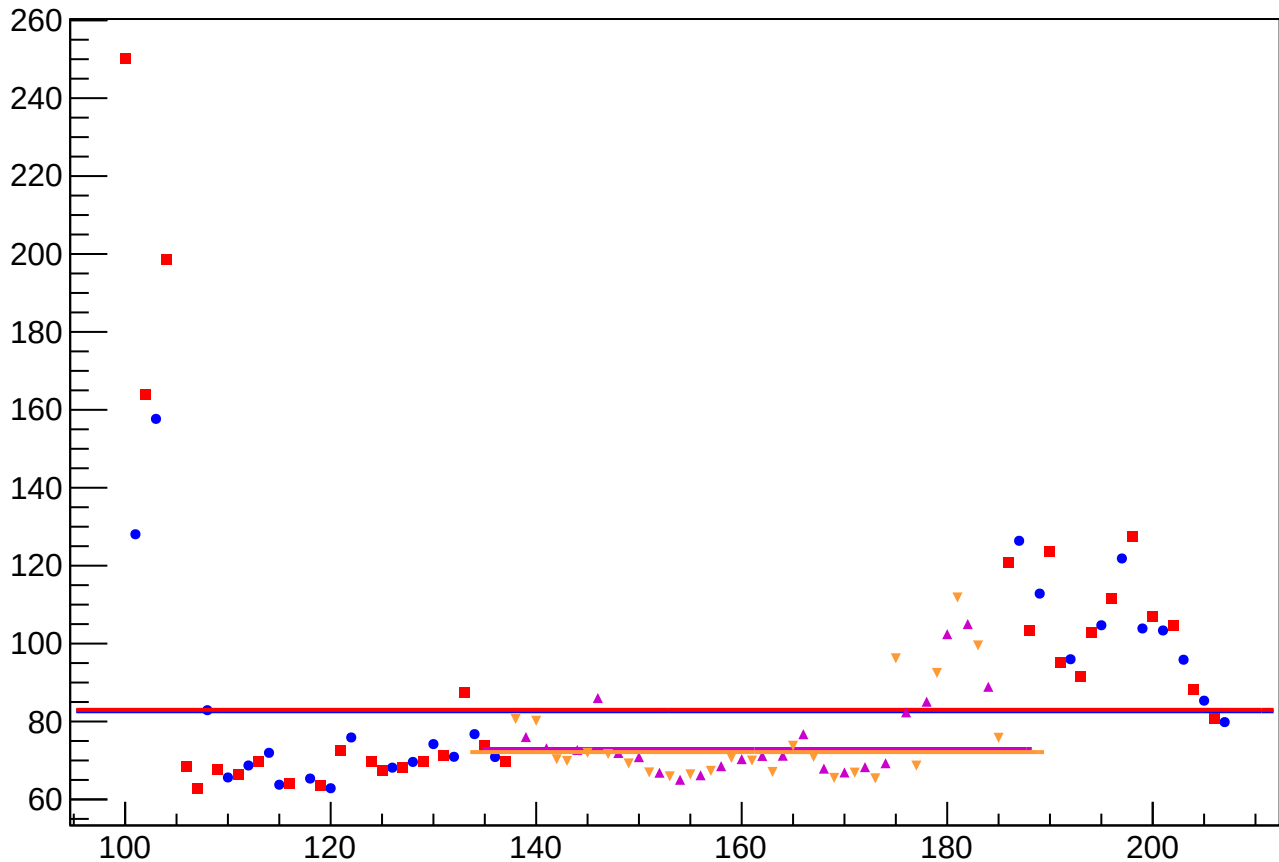
Left In:  $-103.363 \pm 17.260$   $\chi^2/\text{NDF}$ : 32.7/22

+ sign  $36.817 \pm 13.263$   $\chi^2/\text{NDF}$ : 77.7/50

All:  $-1.836 \pm 9.426$   $\chi^2/\text{NDF}$ : 220.3/104

- sign  $-41.290 \pm 13.400$   $\chi^2/\text{NDF}$ : 125.4/53

# eigen\_dit\_asym\_sam7\_rms vs Slug



Right In: 82.631+/-0.016  $\chi^2/\text{NDF}$ : 1447727.4/25

Left Out: 72.150+/-0.012  $\chi^2/\text{NDF}$ : 641967.4/24

Right Out: 82.997+/-0.015  $\chi^2/\text{NDF}$ : 2072819.9/30

Left In: 72.948+/-0.012  $\chi^2/\text{NDF}$ : 509028.7/22

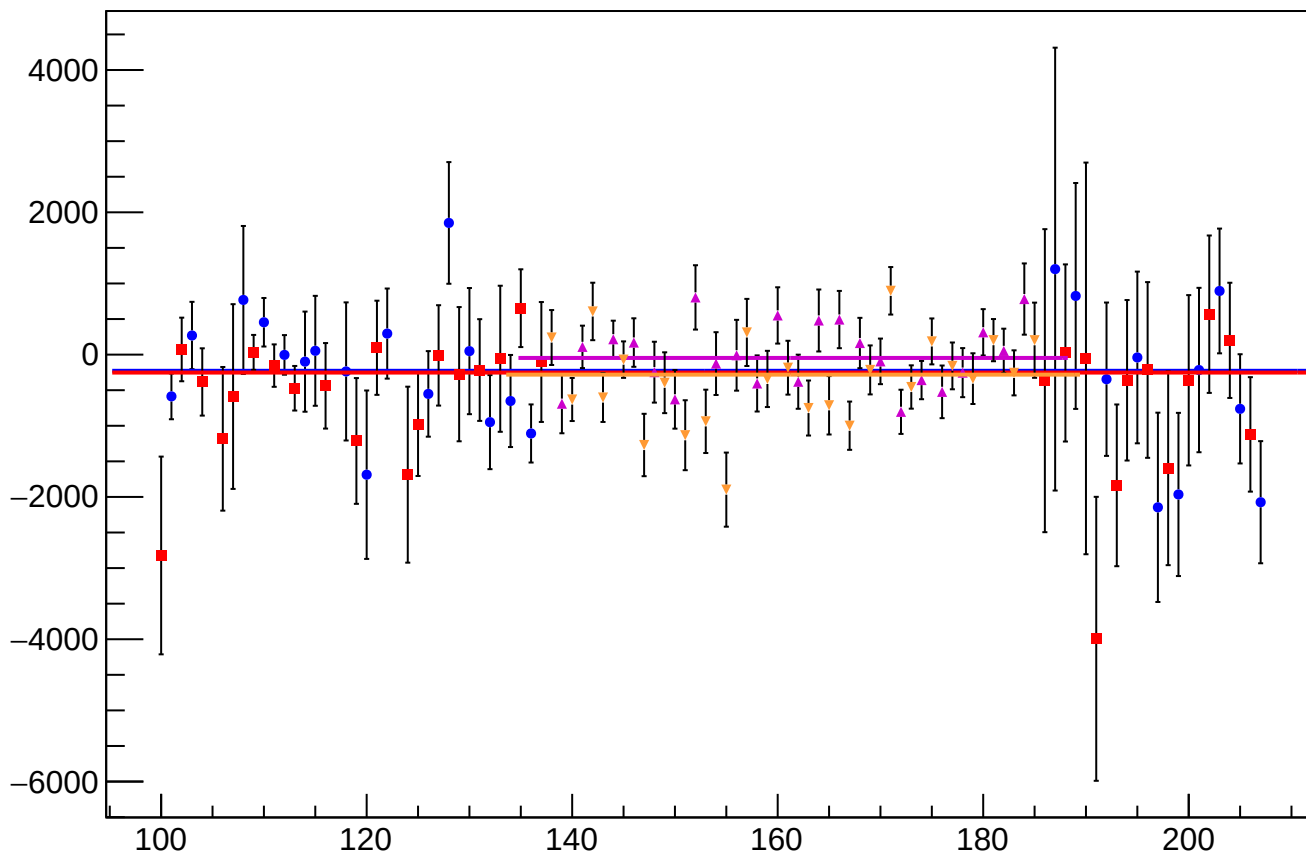
+ sign 75.961+/-0.009  $\chi^2/\text{NDF}$ : 2378722.1/50

All: 76.446+/-0.007  $\chi^2/\text{NDF}$ : 5235302.1/104

- sign 76.941+/-0.009  $\chi^2/\text{NDF}$ : 2851173.8/53



# asym\_sam7\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-227.509 \pm 120.298$   $\chi^2/\text{NDF}$ : 34.7/25

Left Out:  $-281.205 \pm 72.538$   $\chi^2/\text{NDF}$ : 56.8/24

Right Out:  $-252.186 \pm 113.304$   $\chi^2/\text{NDF}$ : 22.3/30

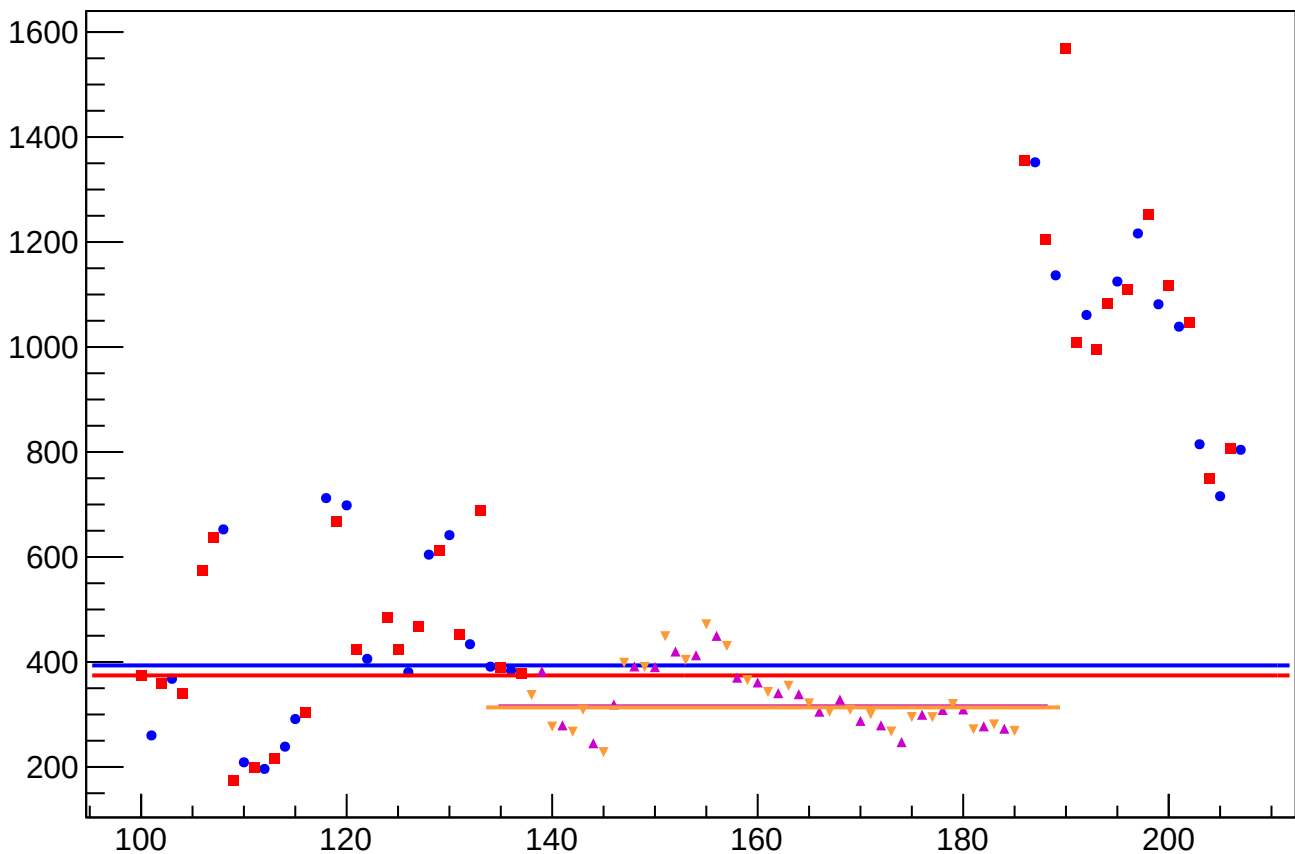
Left In:  $-46.569 \pm 74.897$   $\chi^2/\text{NDF}$ : 30.7/22

+ sign  $-266.887 \pm 62.119$   $\chi^2/\text{NDF}$ : 91.6/50

All:  $-188.449 \pm 44.052$   $\chi^2/\text{NDF}$ : 150.2/104

- sign  $-109.094 \pm 62.480$   $\chi^2/\text{NDF}$ : 55.3/53

# asym\_sam7\_eigen\_dit\_correction\_rms vs Slug



Right In: 393.470+/-0.085  $\chi^2/\text{NDF}$ : 8344653.2/25

Left Out: 313.500+/-0.051  $\chi^2/\text{NDF}$ : 1175534.8/24

+ sign 334.823+/-0.044  $\chi^2/\text{NDF}$ : 10168350.2/50

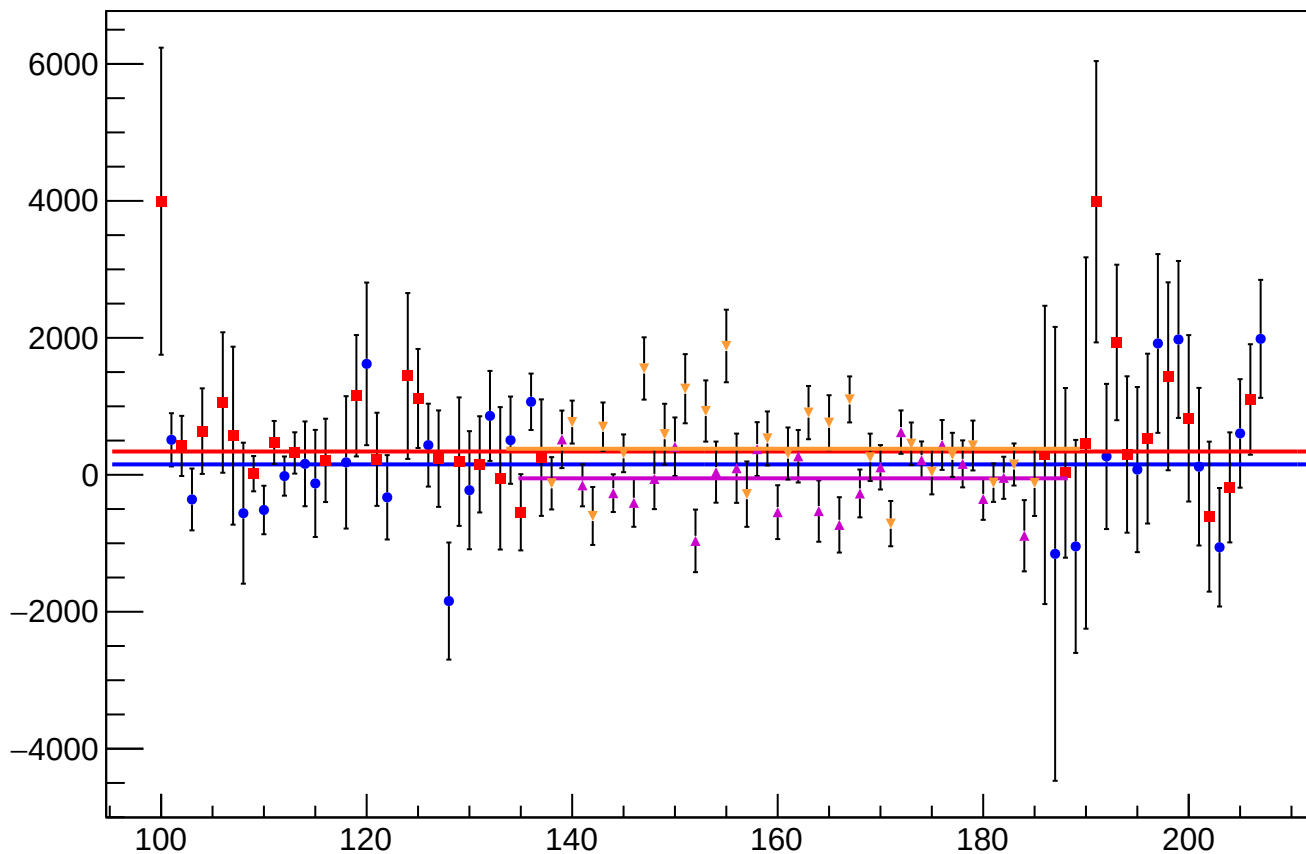
Right Out: 374.374+/-0.080  $\chi^2/\text{NDF}$ : 10708518.5/30

All: 334.102+/-0.031  $\chi^2/\text{NDF}$ : 22262286.5/10

- sign 333.372+/-0.044  $\chi^2/\text{NDF}$ : 12093393.3/53

Left In: 315.456+/-0.053  $\chi^2/\text{NDF}$ : 1008521.8/22

# asym\_sam7\_mean vs Slug



Right In: 152.179 $\pm$ 123.170  $\chi^2$ /NDF: 33.0/25

Left Out: 380.624 $\pm$ 73.057  $\chi^2$ /NDF: 55.4/24

Right Out: 340.150 $\pm$ 116.501  $\chi^2$ /NDF: 19.0/30

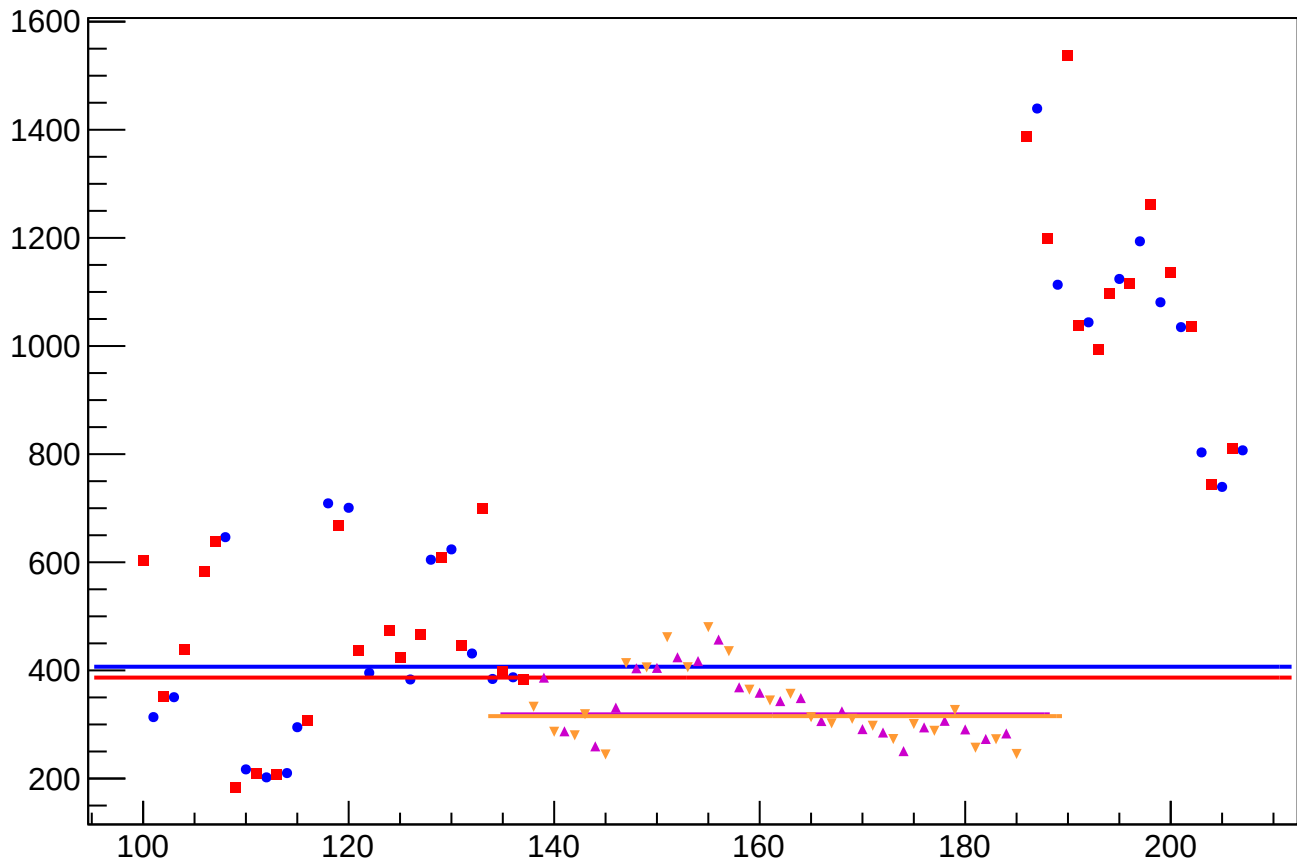
Left In: -51.474 $\pm$ 75.629  $\chi^2$ /NDF: 28.2/22

+ sign 321.170 $\pm$ 62.835  $\chi^2$ /NDF: 90.9/50

All: 194.121 $\pm$ 44.642  $\chi^2$ /NDF: 154.3/104

- sign 64.635 $\pm$ 63.435  $\chi^2$ /NDF: 55.1/53

# asym\_sam7\_rms vs Slug



Right In: 406.786 $\pm$ 0.087  $\chi^2$ /NDF: 7917291.7/25

Left Out: 315.396 $\pm$ 0.052  $\chi^2$ /NDF: 1210106.0/24

Right Out: 386.721 $\pm$ 0.082  $\chi^2$ /NDF: 10478594.2/30

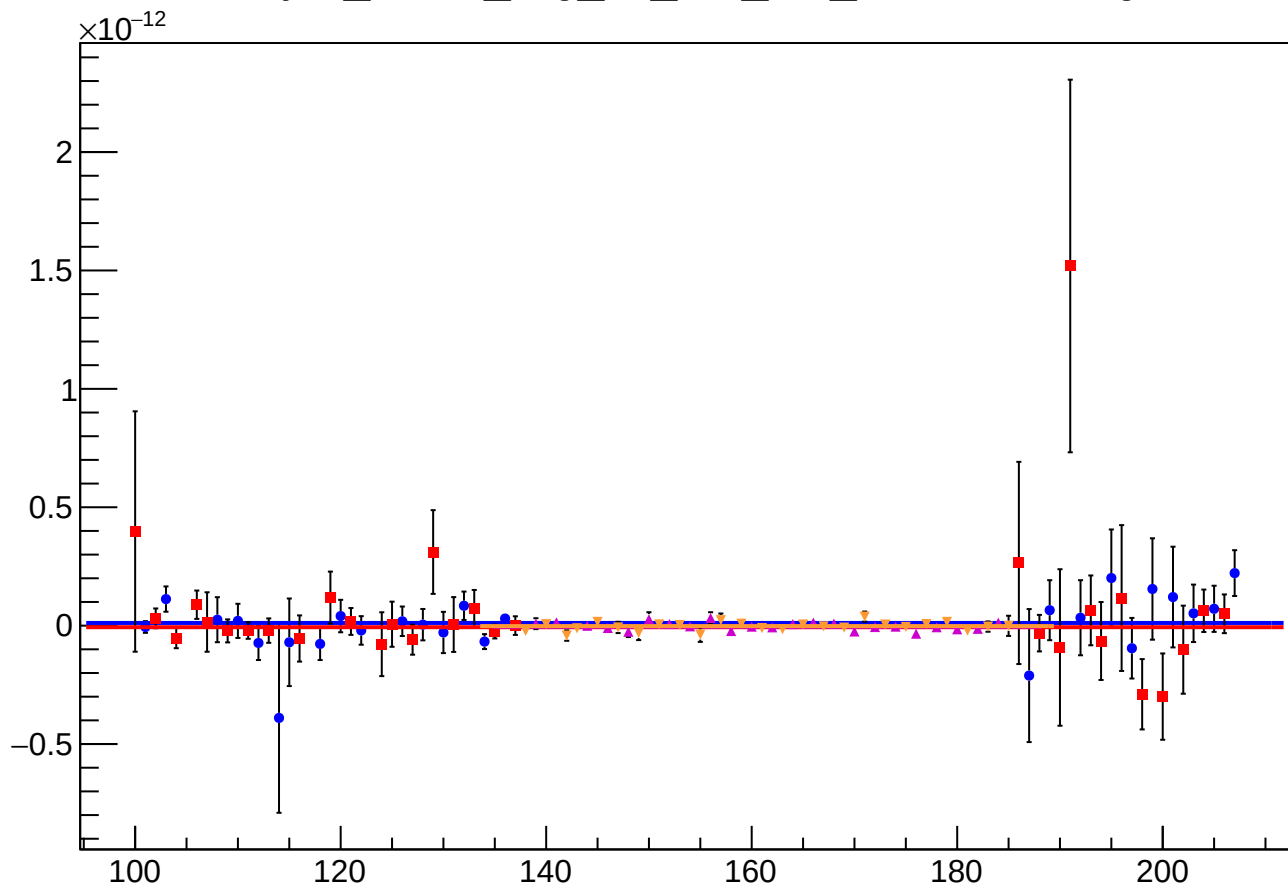
Left In: 318.688 $\pm$ 0.053  $\chi^2$ /NDF: 991604.7/22

+ sign 339.180 $\pm$ 0.044  $\chi^2$ /NDF: 9941934.8/50

All: 339.021 $\pm$ 0.032  $\chi^2$ /NDF: 21891978.4/10

- sign 338.859 $\pm$ 0.045  $\chi^2$ /NDF: 11950017.7/53

# asym\_sam7\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 26.2/25

Left Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 19.0/24

Right Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 25.2/30

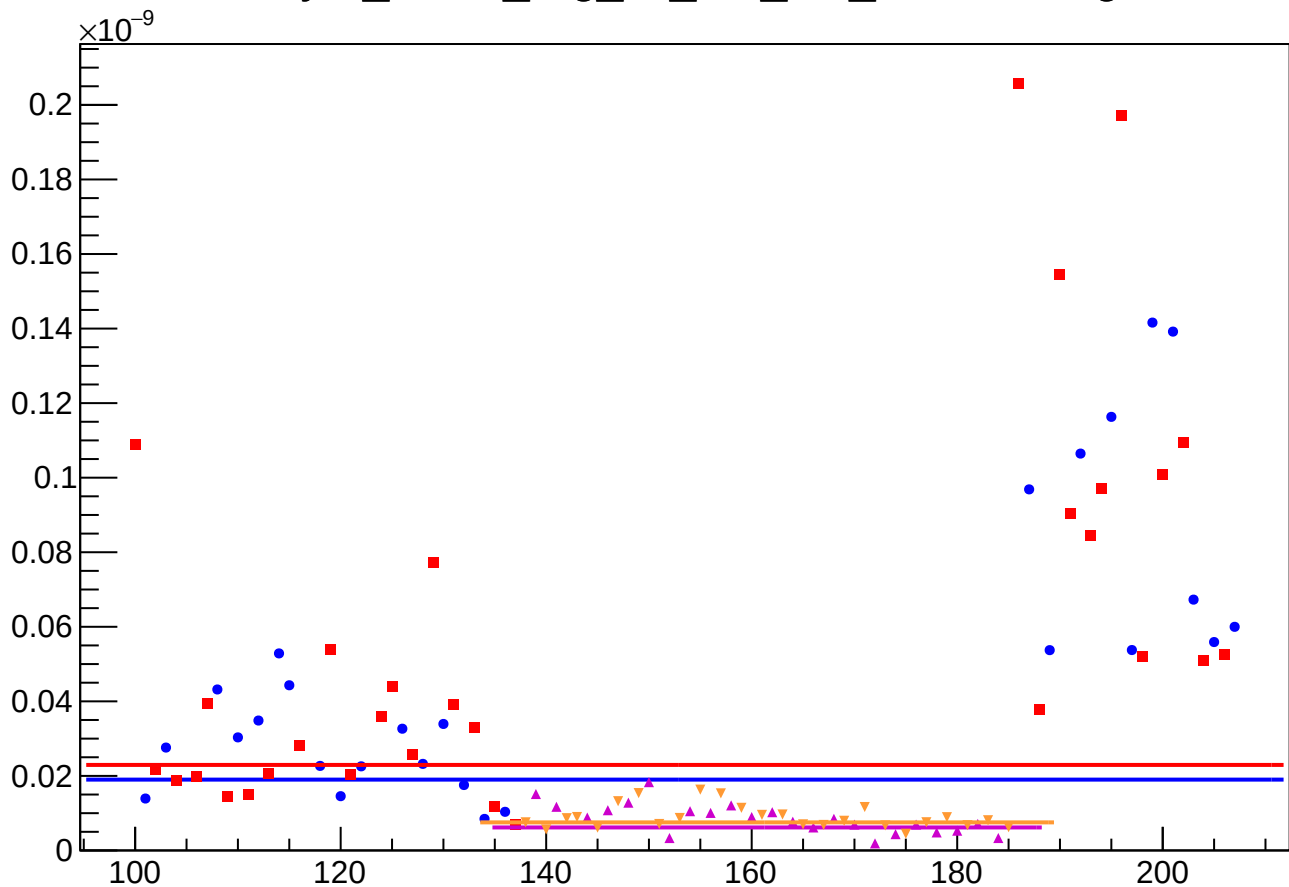
Left In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 17.7/22

+ sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 46.6/50

All: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 90.4/104

- sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 42.9/53

# asym\_sam7\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5120179.8/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :1208953.3/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4954900.6/30

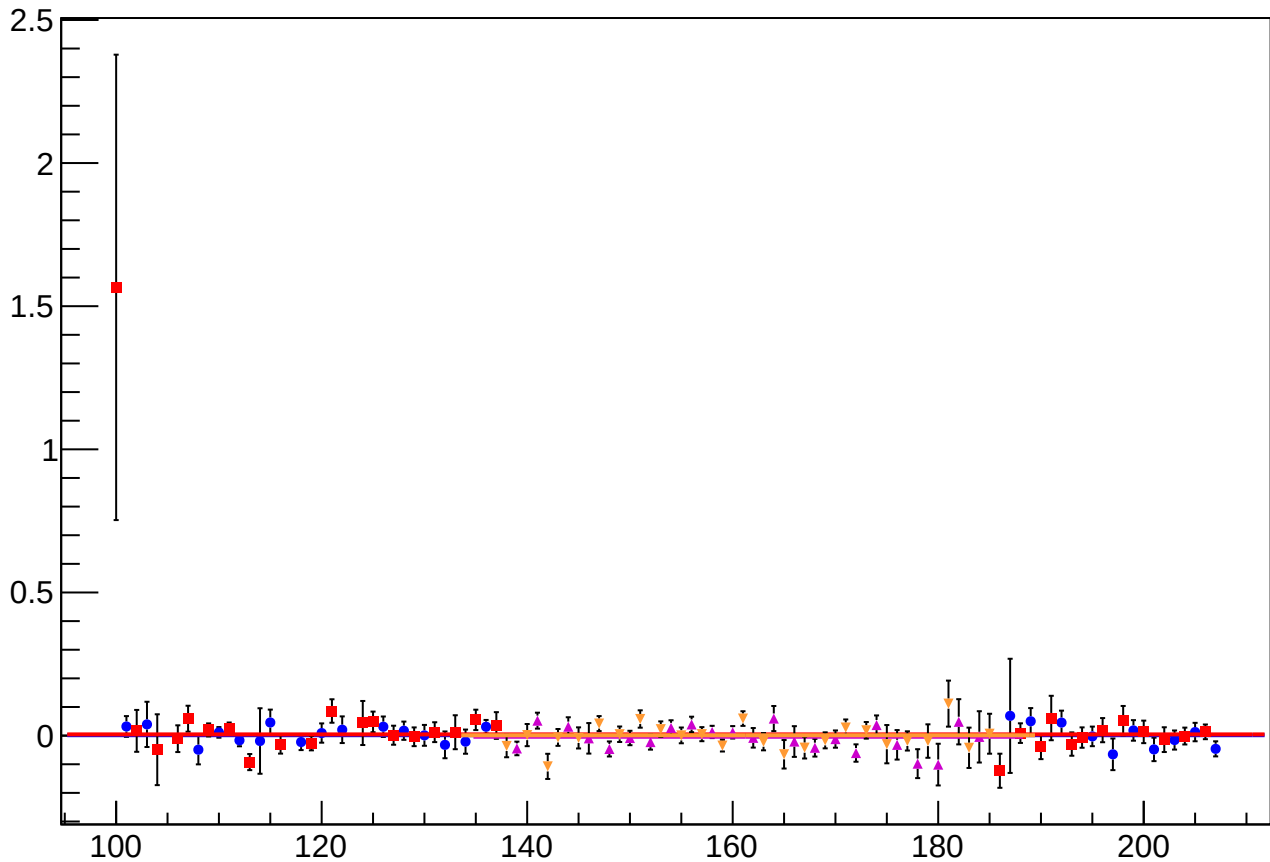
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :2784673.9/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8464133.8/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 19976076.7/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11306831.2/53

# asym\_sam7\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.001 \pm 0.007$   $\chi^2/\text{NDF}$ : 17.3/25

Left Out:  $0.001 \pm 0.006$   $\chi^2/\text{NDF}$ : 30.3/24

Right Out:  $0.004 \pm 0.007$   $\chi^2/\text{NDF}$ : 38.3/30

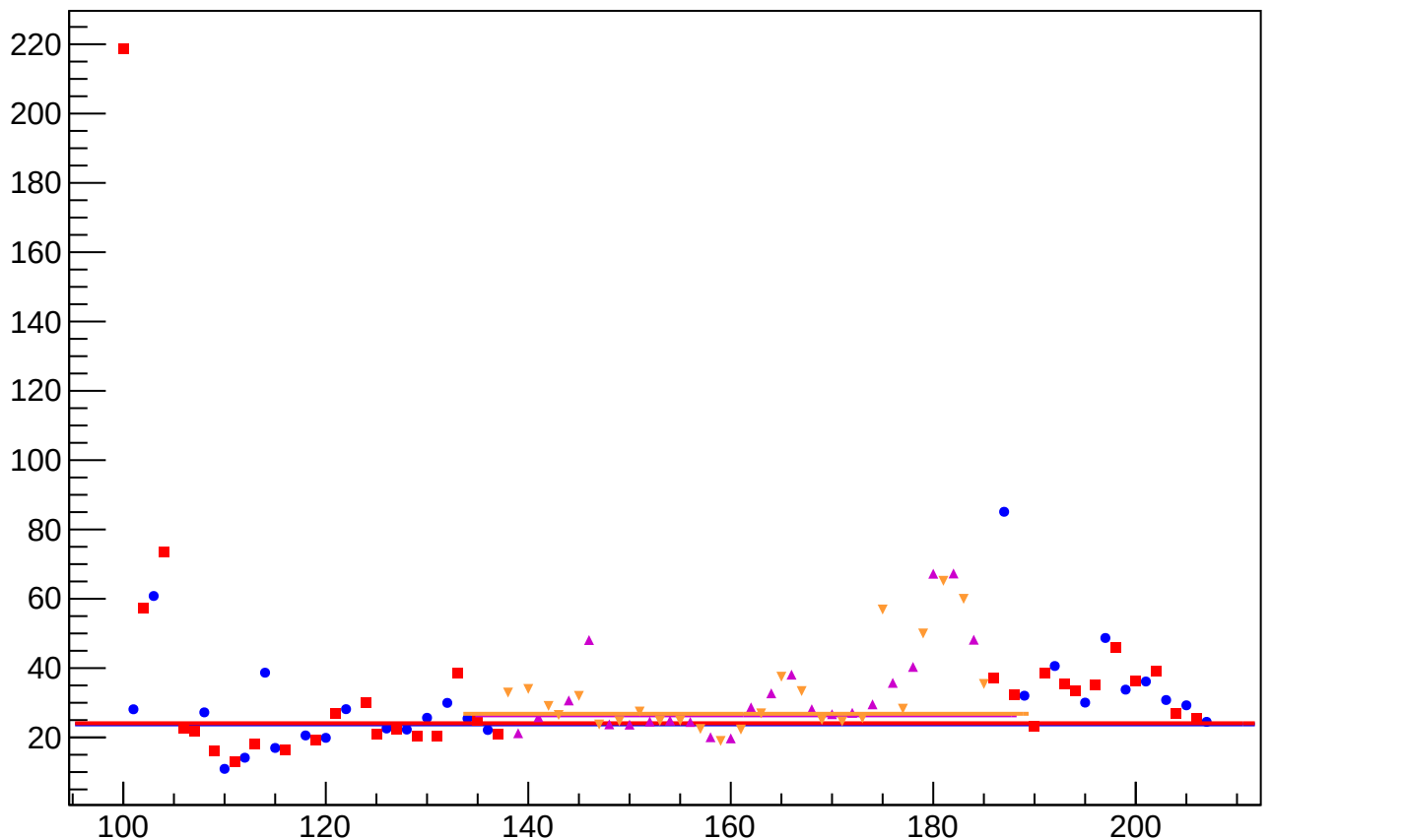
Left In:  $-0.004 \pm 0.007$   $\chi^2/\text{NDF}$ : 31.1/22

+ sign  $0.001 \pm 0.005$   $\chi^2/\text{NDF}$ : 47.6/50

All:  $0.001 \pm 0.003$   $\chi^2/\text{NDF}$ : 117.8/104

- sign  $0.000 \pm 0.005$   $\chi^2/\text{NDF}$ : 70.2/53

# asym\_sam7\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 23.767 $\pm$ 0.005  $\chi^2$ /NDF: 3606977.2/25

Left Out: 26.820 $\pm$ 0.005  $\chi^2$ /NDF: 2469807.6/24

Right Out: 24.087 $\pm$ 0.005  $\chi^2$ /NDF: 3777499.7/30

Left In: 26.376 $\pm$ 0.005  $\chi^2$ /NDF: 2566400.7/22

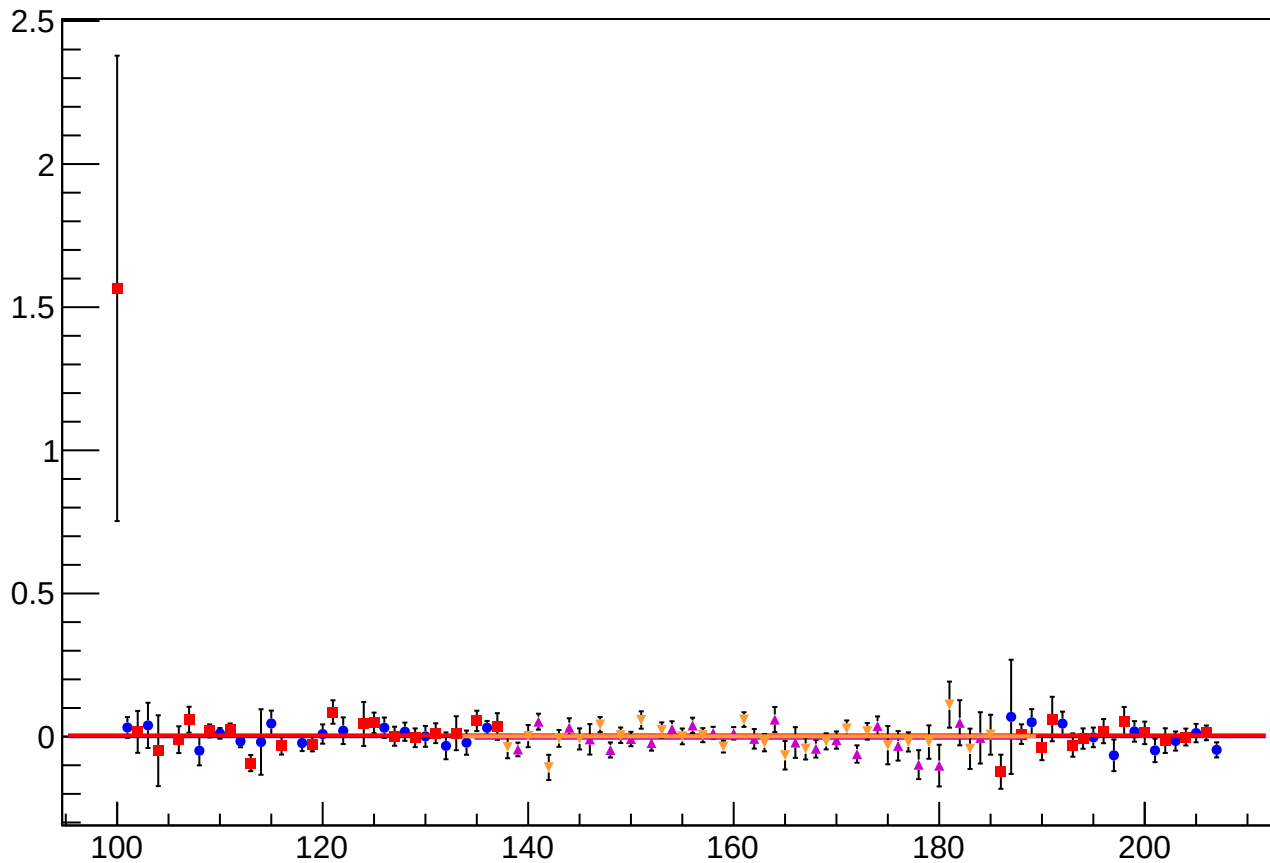
+ sign 25.354 $\pm$ 0.003  $\chi^2$ /NDF: 6289095.4/50

All: 25.288 $\pm$ 0.002  $\chi^2$ /NDF: 12754844.4/104

- sign 25.223 $\pm$ 0.003  $\chi^2$ /NDF: 6464966.1/53



# asym\_sam7\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.001 \pm 0.007$   $\chi^2/\text{NDF}$ : 17.3/25

Left Out:  $0.001 \pm 0.006$   $\chi^2/\text{NDF}$ : 30.3/24

Right Out:  $0.004 \pm 0.007$   $\chi^2/\text{NDF}$ : 38.3/30

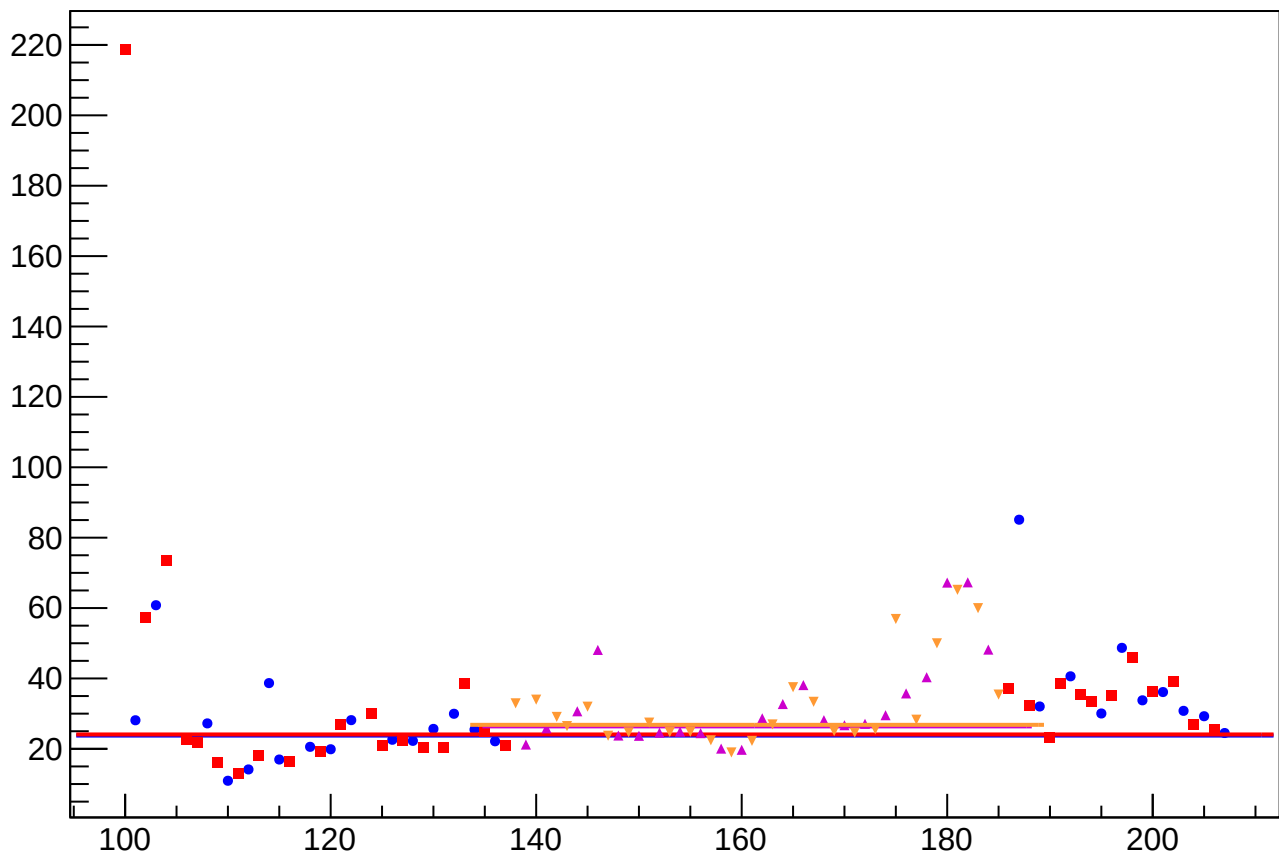
Left In:  $-0.004 \pm 0.007$   $\chi^2/\text{NDF}$ : 31.1/22

+ sign  $0.001 \pm 0.005$   $\chi^2/\text{NDF}$ : 47.6/50

All:  $0.001 \pm 0.003$   $\chi^2/\text{NDF}$ : 117.8/104

- sign  $0.000 \pm 0.005$   $\chi^2/\text{NDF}$ : 70.2/53

# asym\_sam7\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 23.767 $\pm$ 0.005  $\chi^2$ /NDF: 3606977.2/25

Left Out: 26.820 $\pm$ 0.005  $\chi^2$ /NDF: 2469807.6/24

Right Out: 24.087 $\pm$ 0.005  $\chi^2$ /NDF: 3777499.7/30

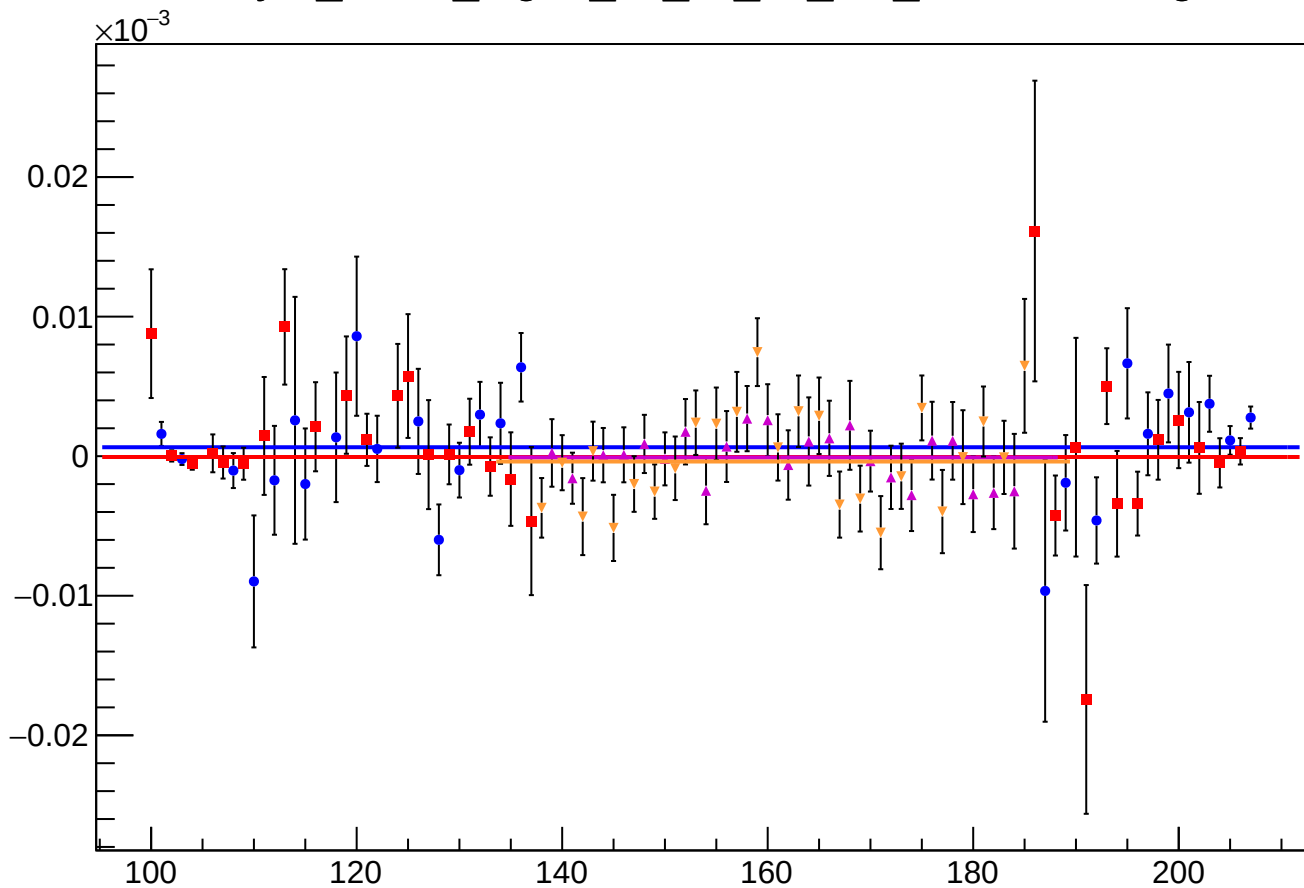
Left In: 26.376 $\pm$ 0.005  $\chi^2$ /NDF: 2566400.7/22

+ sign 25.354 $\pm$ 0.003  $\chi^2$ /NDF: 6289095.4/50

All: 25.288 $\pm$ 0.002  $\chi^2$ /NDF: 12754844.4/104

- sign 25.223 $\pm$ 0.003  $\chi^2$ /NDF: 6464966.1/53

# asym\_sam7\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 47.2/25

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:43.1/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 33.5/30

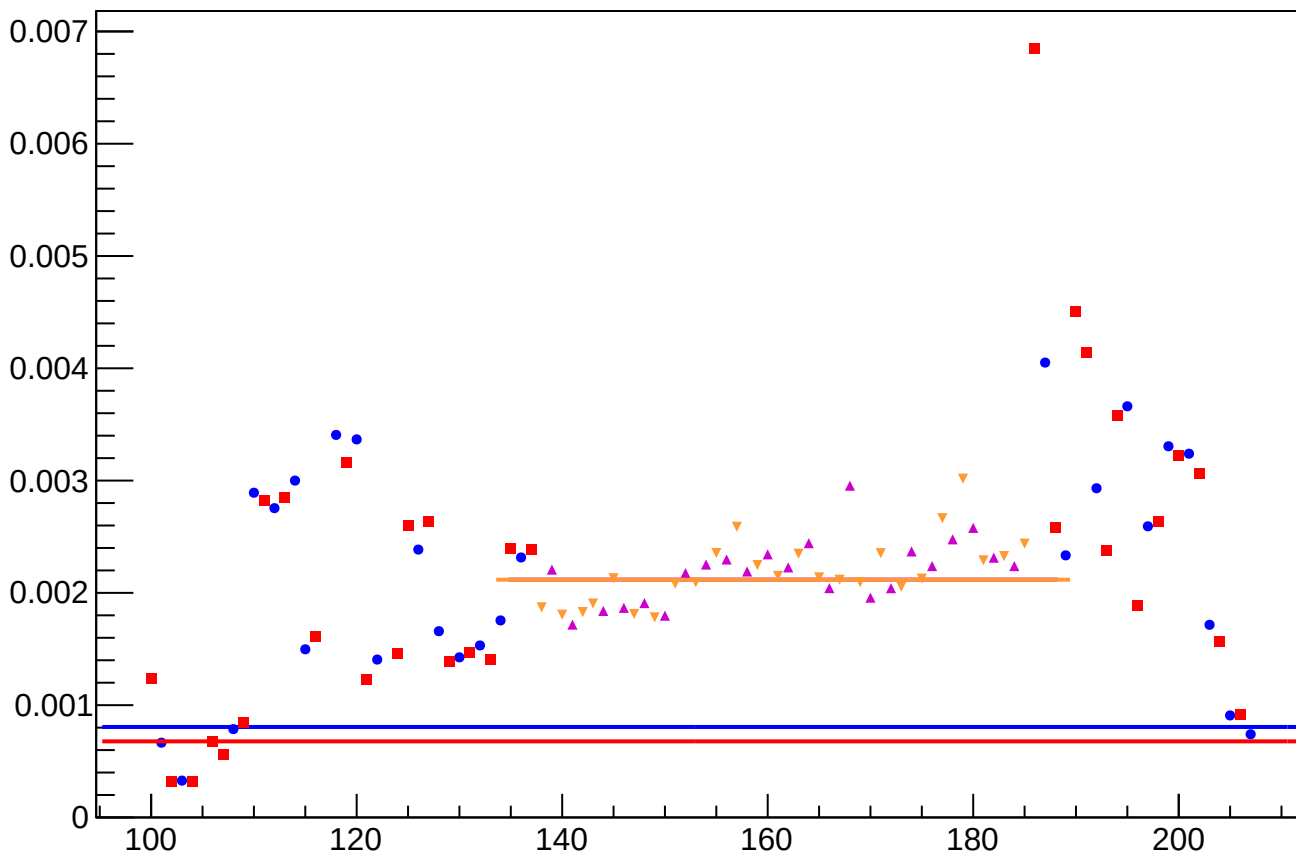
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:10.2/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 93.6/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 139.1/104

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 43.7/53

# asym\_sam7\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 12512571.9/25

Left Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 578720.8/24

Right Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 15999861.2/30

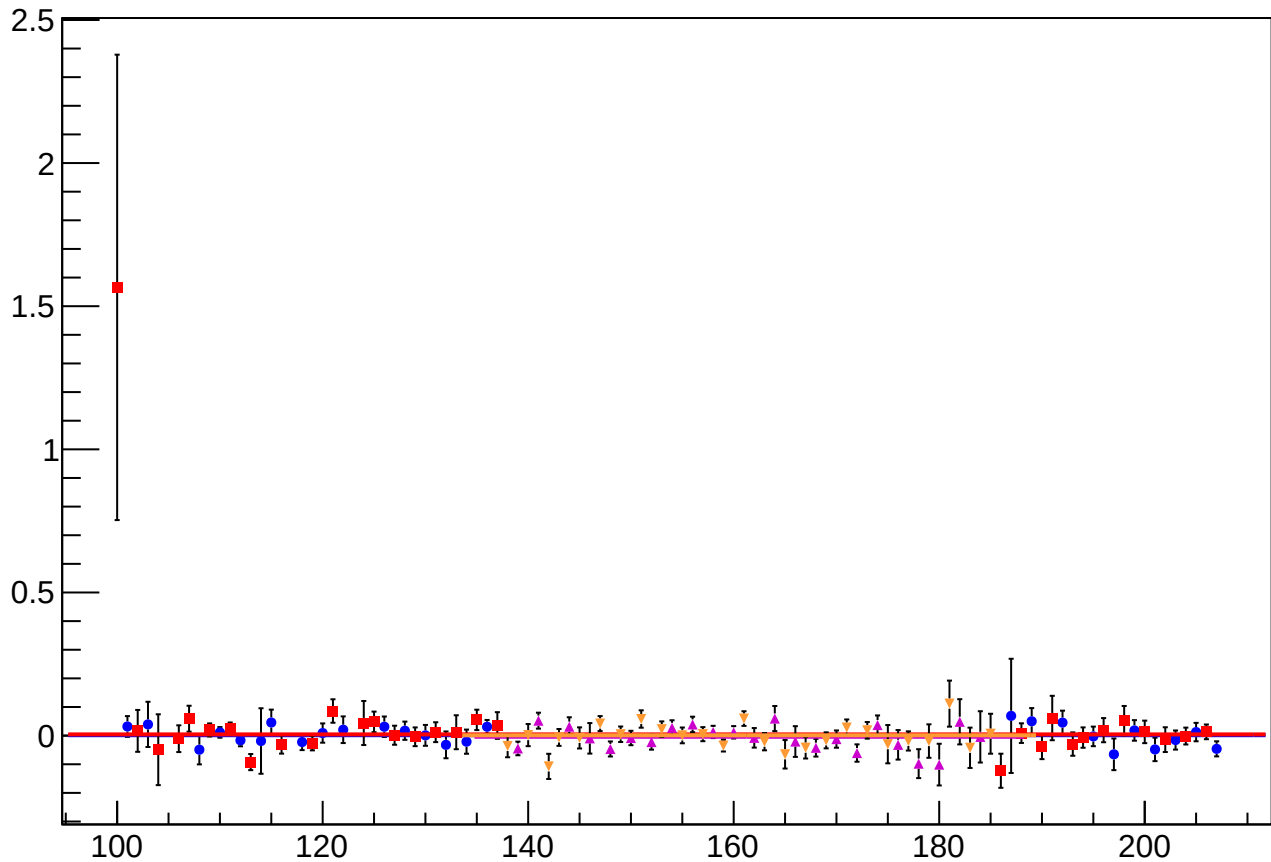
Left In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 588580.3/22

+ sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 23915792.6/50

All: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 54607659.5/104

- sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 30026160.1/53

# asym\_sam7\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.001 \pm 0.007$   $\chi^2/\text{NDF}$ : 17.3/25

Left Out:  $0.001 \pm 0.006$   $\chi^2/\text{NDF}$ : 30.3/24

Right Out:  $0.004 \pm 0.007$   $\chi^2/\text{NDF}$ : 38.2/30

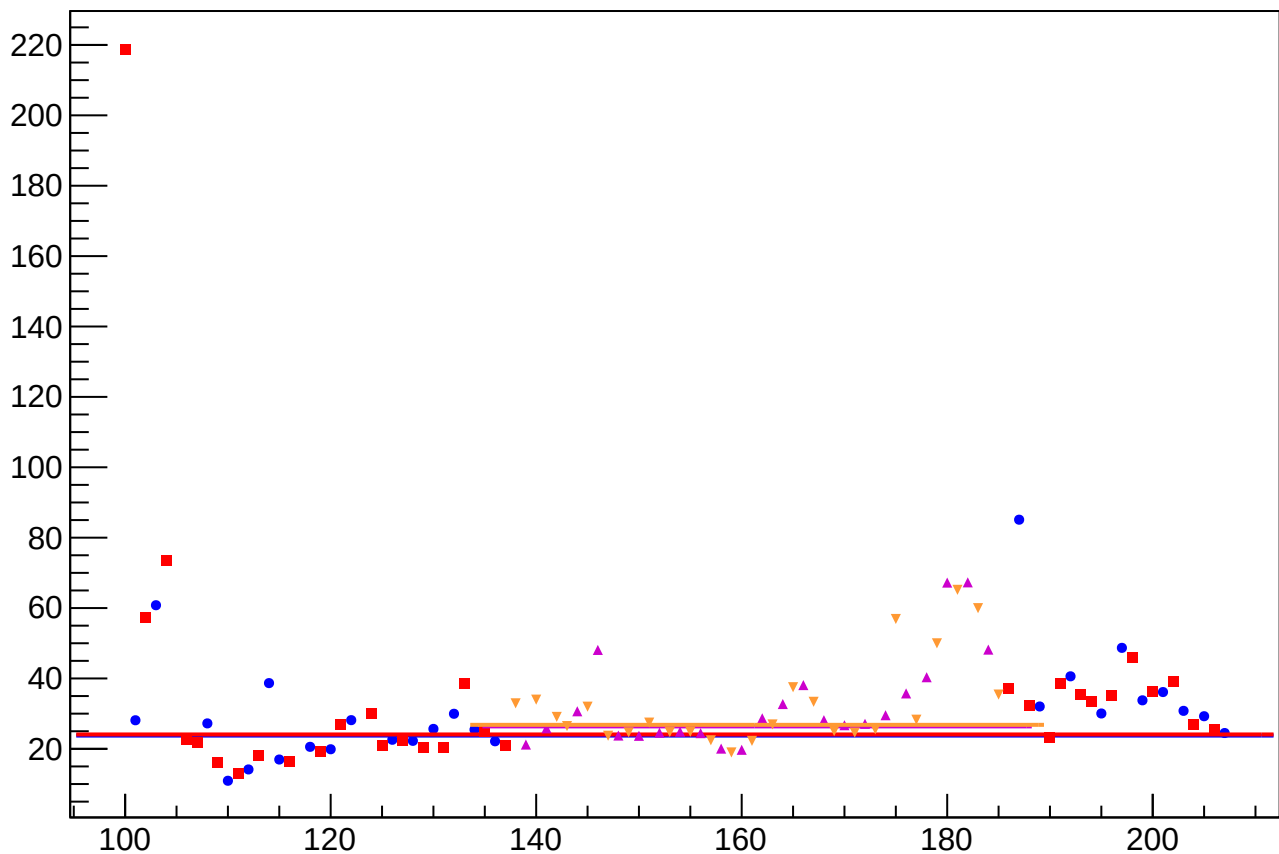
Left In:  $-0.004 \pm 0.007$   $\chi^2/\text{NDF}$ : 31.1/22

+ sign  $0.001 \pm 0.005$   $\chi^2/\text{NDF}$ : 47.6/50

All:  $0.001 \pm 0.003$   $\chi^2/\text{NDF}$ : 117.8/104

- sign  $0.000 \pm 0.005$   $\chi^2/\text{NDF}$ : 70.2/53

# asym\_sam7\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 23.768 $\pm$ 0.005  $\chi^2$ /NDF: 3606697.5/25

Left Out: 26.820 $\pm$ 0.005  $\chi^2$ /NDF: 2469855.0/24

Right Out: 24.087 $\pm$ 0.005  $\chi^2$ /NDF: 3777275.3/30

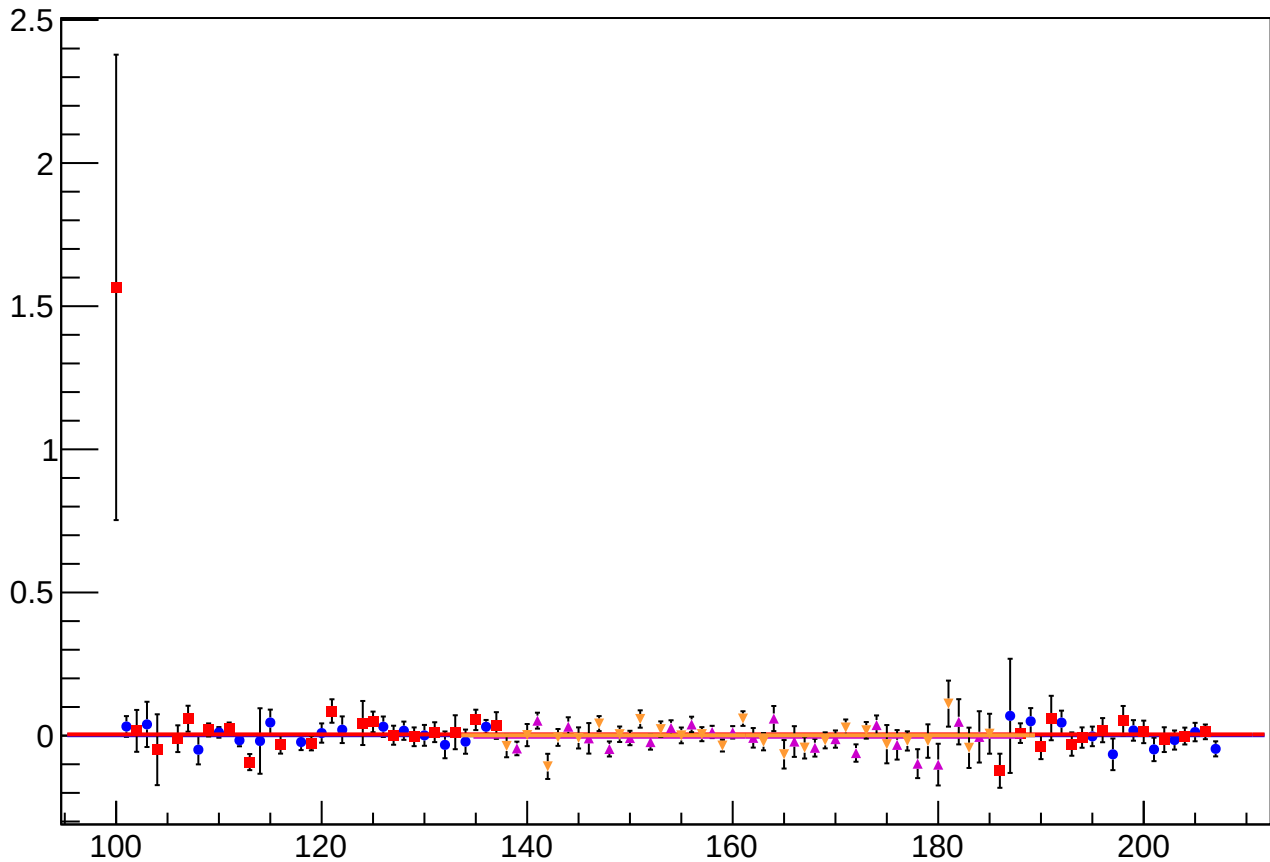
Left In: 26.376 $\pm$ 0.005  $\chi^2$ /NDF: 2566477.5/22

+ sign 25.354 $\pm$ 0.003  $\chi^2$ /NDF: 6288803.0/50

All: 25.288 $\pm$ 0.002  $\chi^2$ /NDF: 12754398.7/104

- sign 25.223 $\pm$ 0.003  $\chi^2$ /NDF: 6464810.3/53

asym\_sam7\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.001 $\pm$ 0.007  $\chi^2$ /NDF: 17.3/25

Left Out: 0.001 $\pm$ 0.006  $\chi^2$ /NDF:30.3/24

Right Out: 0.004 $\pm$ 0.007  $\chi^2$ /NDF: 38.2/30

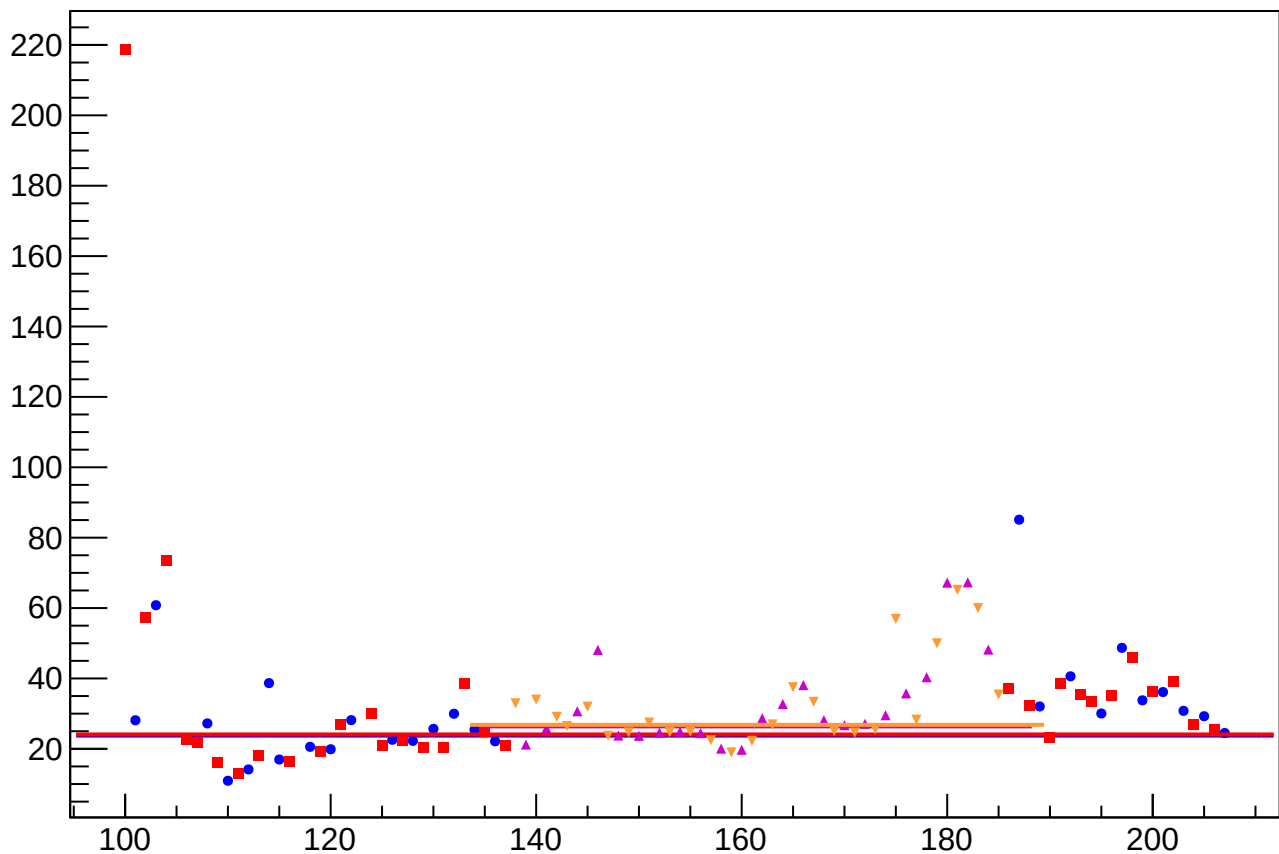
Left In: -0.004 $\pm$ 0.007  $\chi^2$ /NDF:31.1/22

+ sign 0.001 $\pm$ 0.005  $\chi^2$ /NDF: 47.6/50

All: 0.001 $\pm$ 0.003  $\chi^2$ /NDF: 117.8/104

- sign 0.000 $\pm$ 0.005  $\chi^2$ /NDF: 70.2/53

asym\_sam7\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 23.768 $\pm$ 0.005  $\chi^2$ /NDF: 3606697.5/25

Left Out: 26.820 $\pm$ 0.005  $\chi^2$ /NDF: 2469855.0/24

Right Out: 24.087 $\pm$ 0.005  $\chi^2$ /NDF: 3777275.3/30

Left In: 26.376 $\pm$ 0.005  $\chi^2$ /NDF: 2566477.5/22

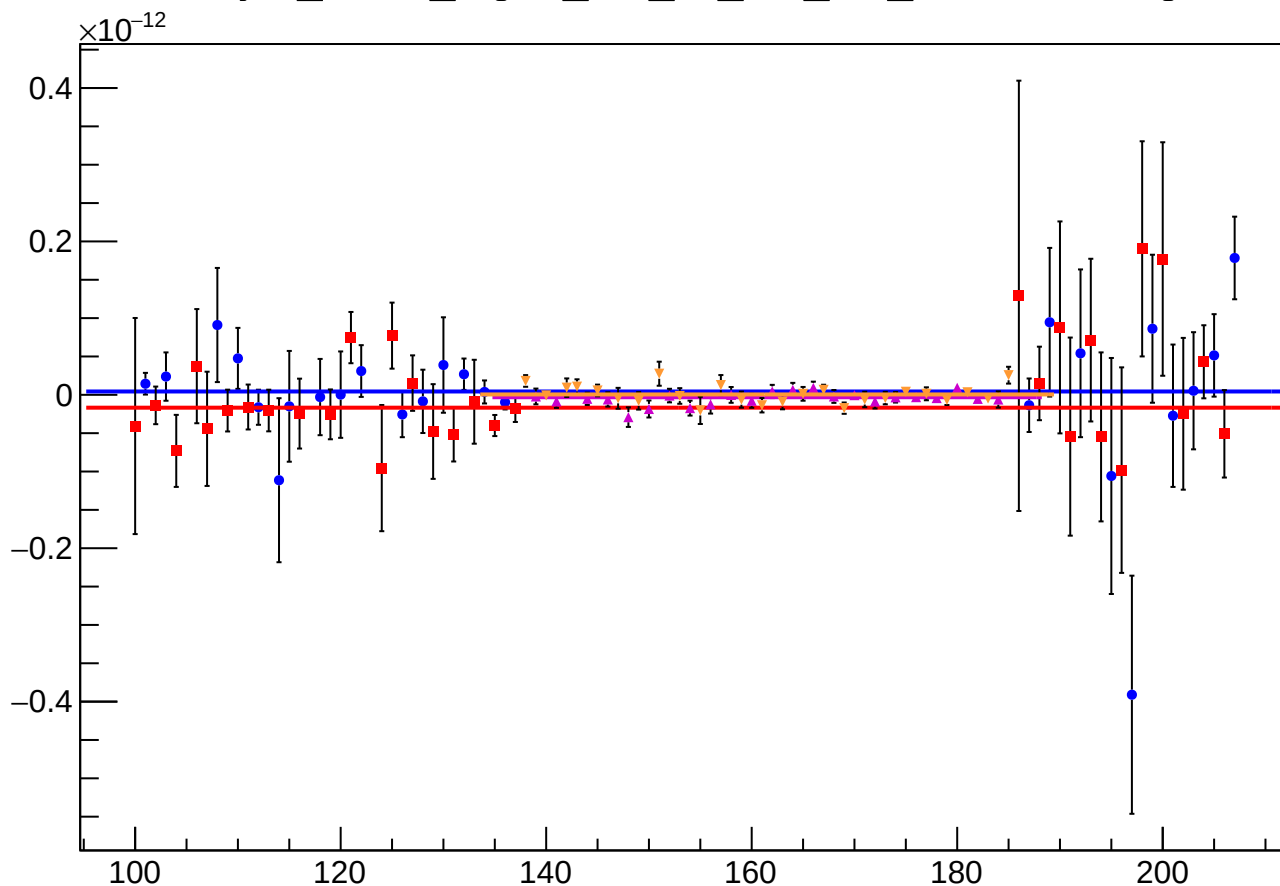
+ sign 25.354 $\pm$ 0.003  $\chi^2$ /NDF: 6288803.0/50

All: 25.288 $\pm$ 0.002  $\chi^2$ /NDF: 12754398.7/104

- sign 25.223 $\pm$ 0.003  $\chi^2$ /NDF: 6464810.3/53



# asym\_sam7\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 31.4/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :32.6/24

Right Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 28.7/30

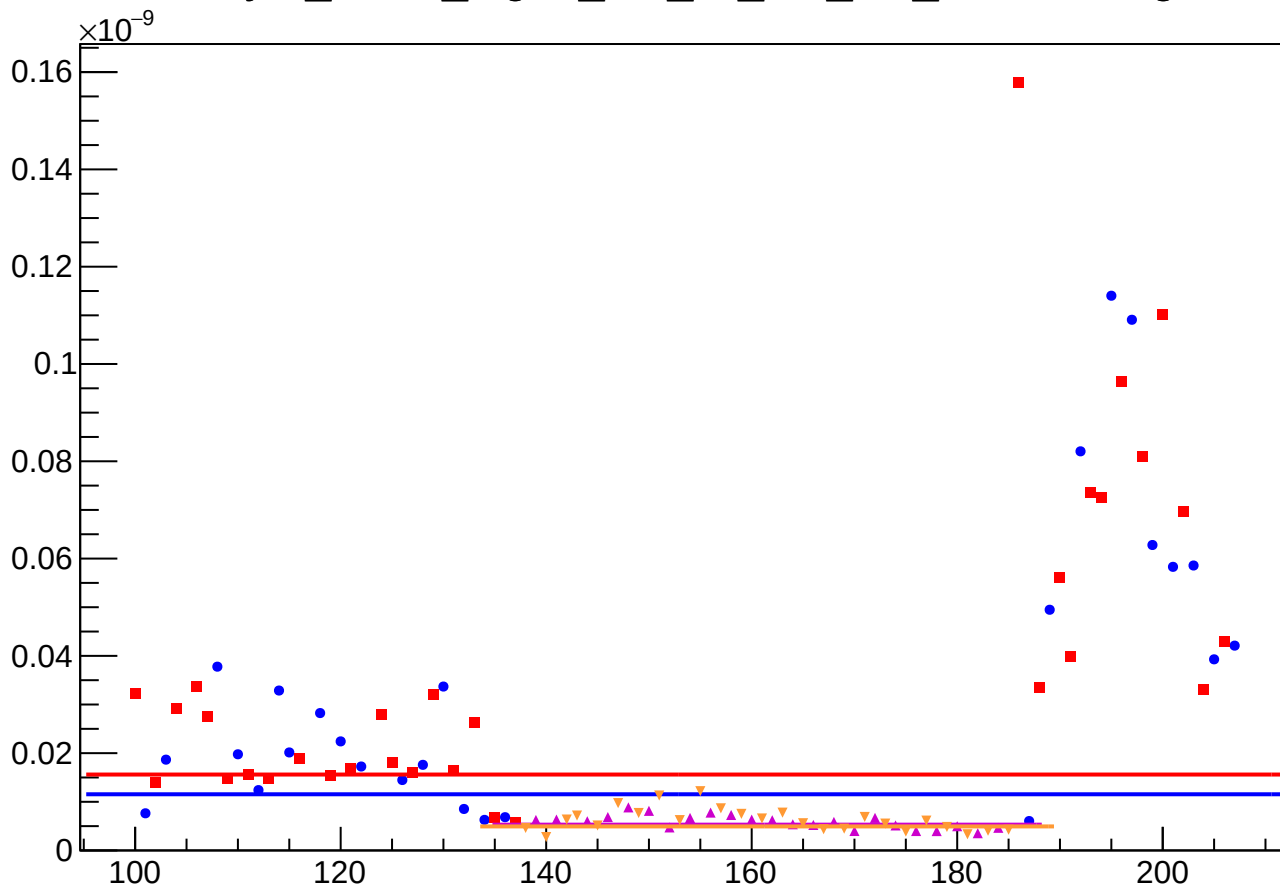
Left In: -0.000+/-0.000  $\chi^2/\text{NDF}$ :19.1/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 64.4/50

All: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 120.5/104

- sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 51.6/53

asym\_sam7\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8030437.3/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2747591.8/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7549274.7/30

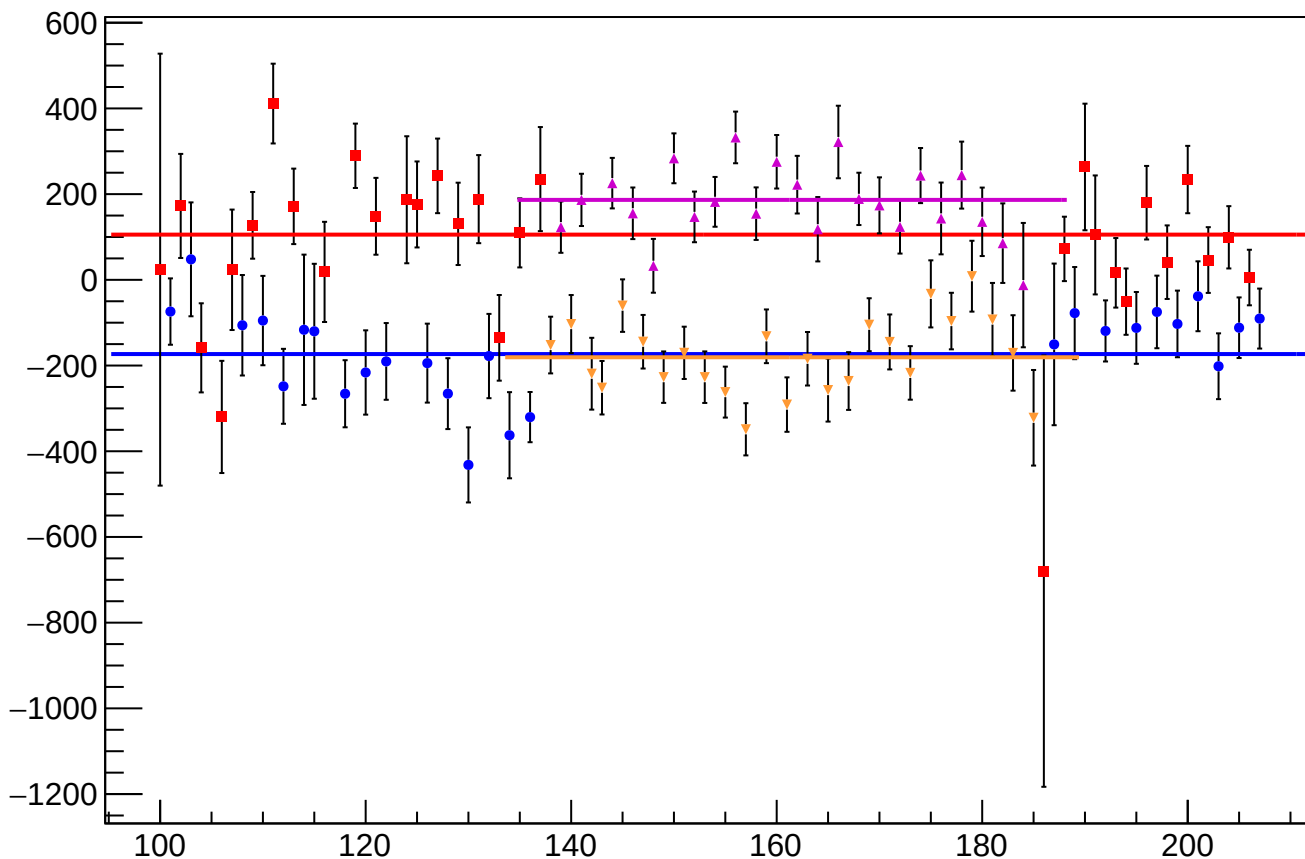
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1247237.9/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13431021.8/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 26678256.9/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13161201.8/53

# reg\_asym\_sam8\_mean vs Slug



Right In: -173.211 $\pm$ 17.268  $\chi^2$ /NDF: 36.9/25

Left Out: -180.685 $\pm$ 13.419  $\chi^2$ /NDF:38.6/24

Right Out: 105.511 $\pm$ 16.933  $\chi^2$ /NDF: 62.9/30

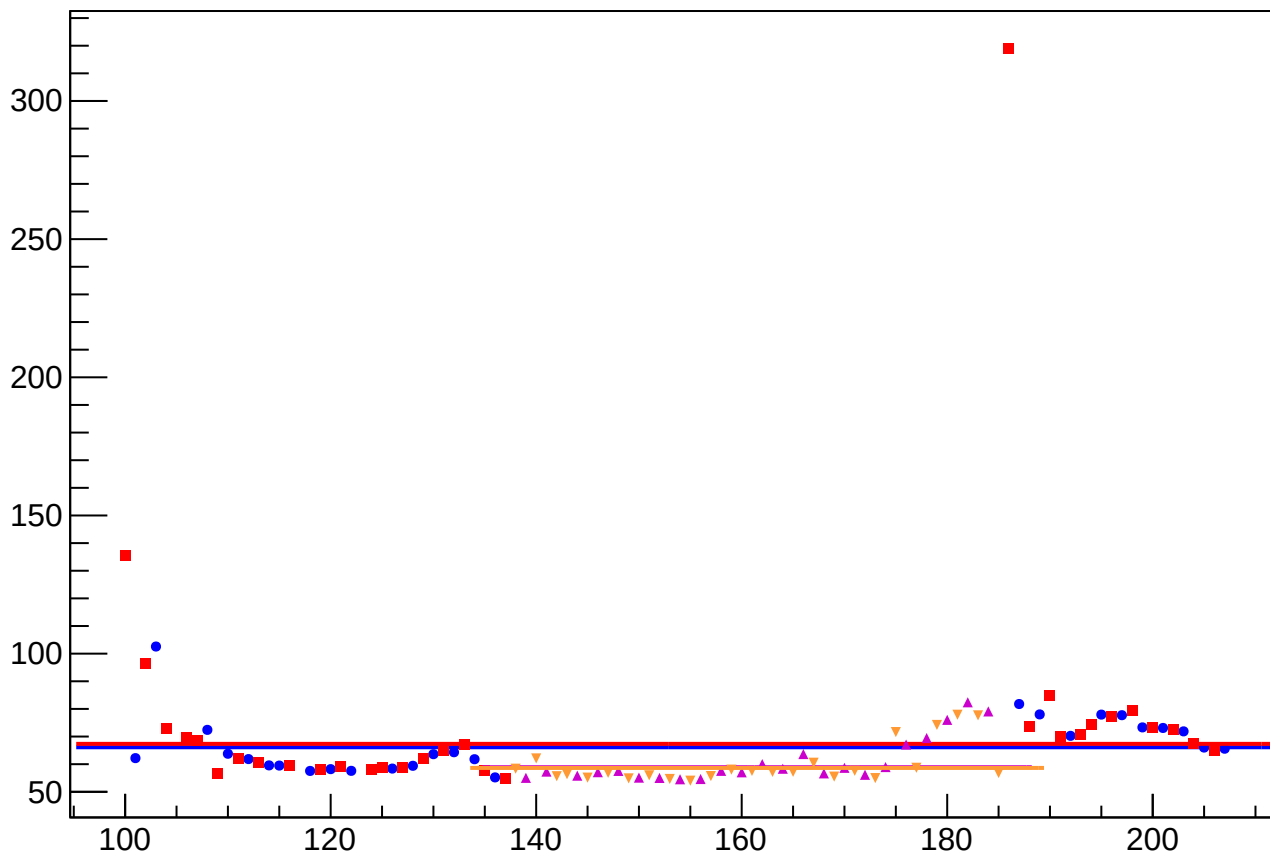
Left In: 186.567 $\pm$ 13.860  $\chi^2$ /NDF:29.0/22

+ sign -177.871 $\pm$ 10.596  $\chi^2$ /NDF: 75.6/50

All: -13.929 $\pm$ 7.538  $\chi^2$ /NDF: 665.9/104

- sign 154.049 $\pm$ 10.725  $\chi^2$ /NDF: 105.6/53

# reg\_asym\_sam8\_rms vs Slug



Right In: 66.121 $\pm$ 0.012  $\chi^2$ /NDF: 496471.7/25

Left Out: 58.644 $\pm$ 0.009  $\chi^2$ /NDF: 393880.8/24

Right Out: 67.351 $\pm$ 0.012  $\chi^2$ /NDF: 1020995.5/30

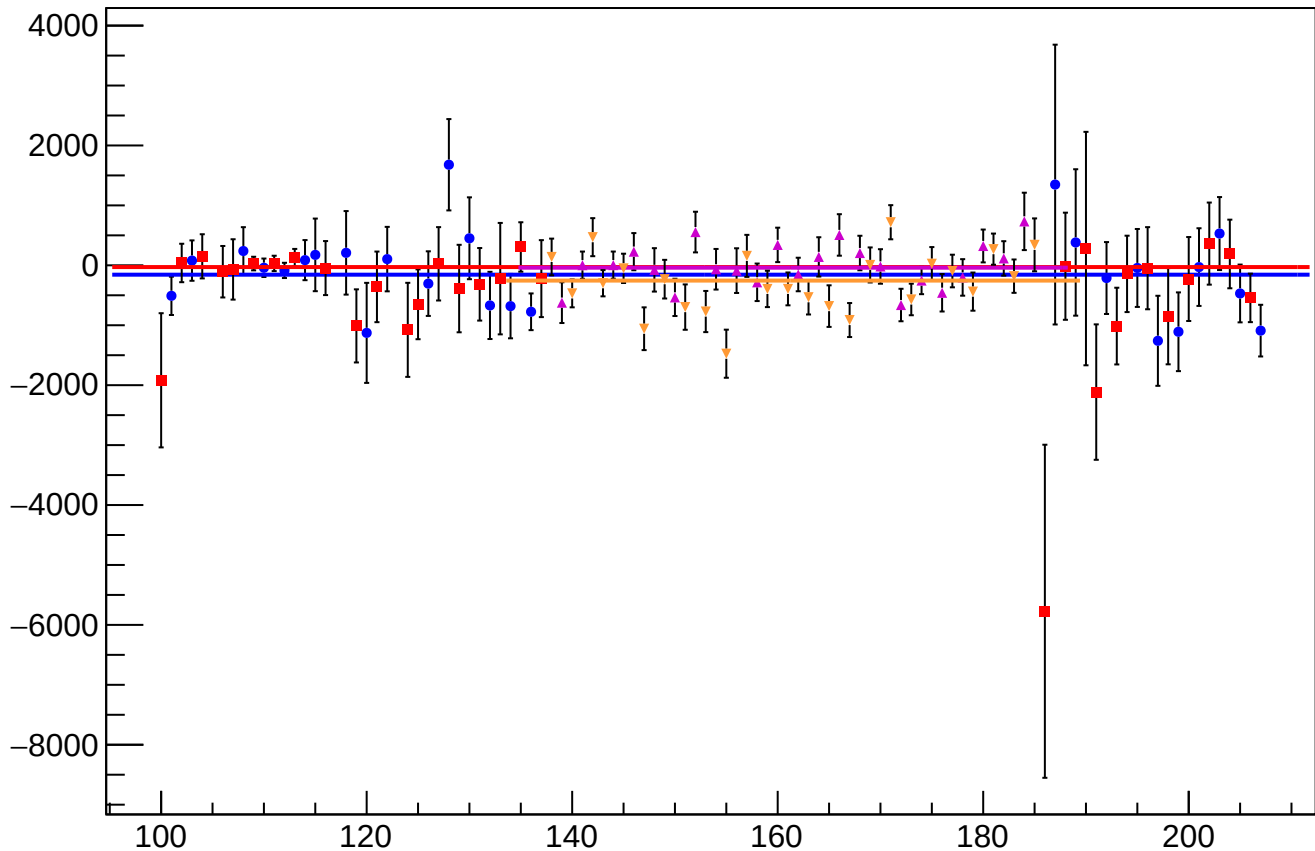
Left In: 58.906 $\pm$ 0.010  $\chi^2$ /NDF: 386820.4/22

+ sign 61.459 $\pm$ 0.007  $\chi^2$ /NDF: 1124130.8/50

All: 61.871 $\pm$ 0.005  $\chi^2$ /NDF: 2835945.0/104

- sign 62.294 $\pm$ 0.008  $\chi^2$ /NDF: 1705678.0/53

# asym\_sam8\_reg\_correction\_mean vs Slug



Right In:  $-156.211 \pm 71.245$   $\chi^2/\text{NDF}$ : 30.1/25

Left Out:  $-254.628 \pm 58.877$   $\chi^2/\text{NDF}$ : 57.6/24

Right Out:  $-29.118 \pm 60.972$   $\chi^2/\text{NDF}$ : 25.2/30

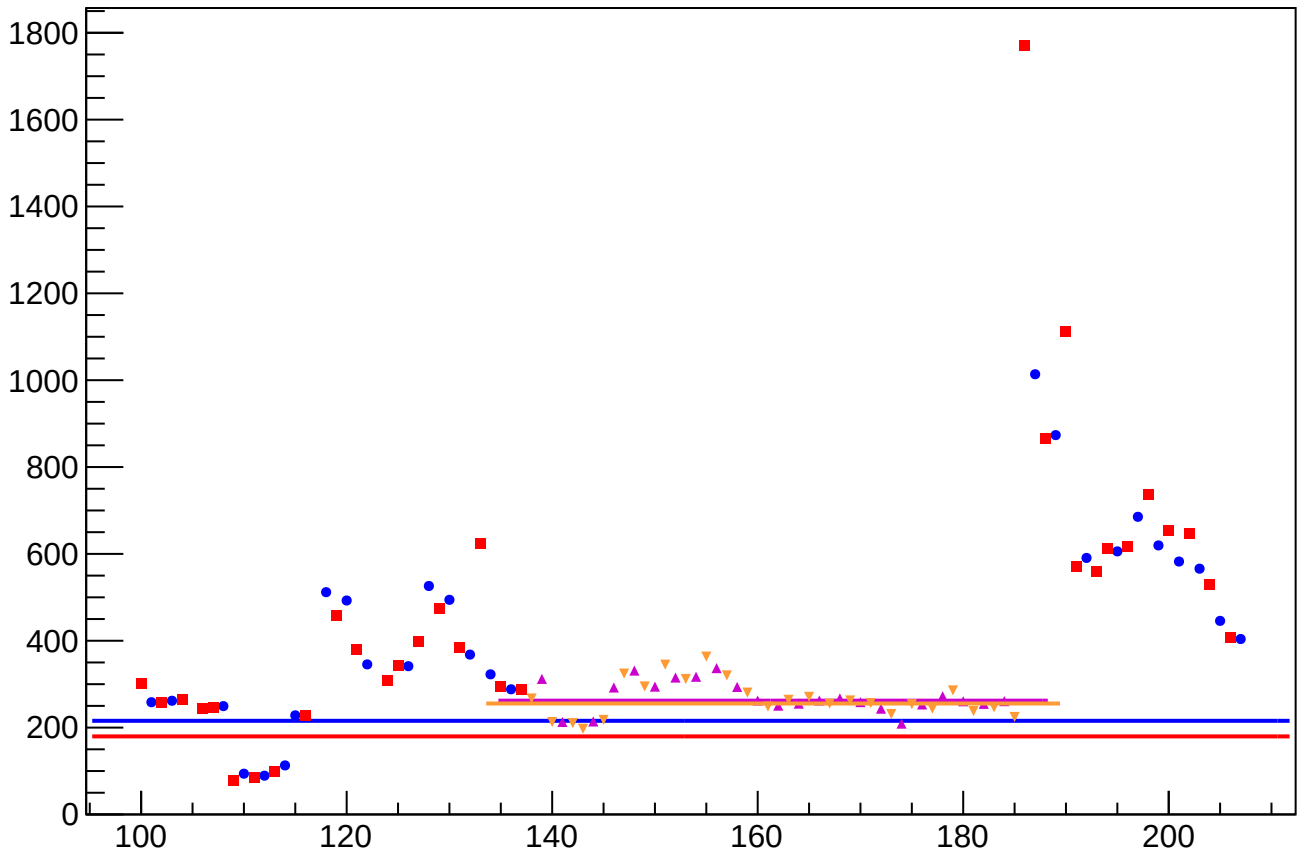
Left In:  $-39.147 \pm 61.883$   $\chi^2/\text{NDF}$ : 28.3/22

+ sign  $-214.691 \pm 45.385$   $\chi^2/\text{NDF}$ : 88.9/50

All:  $-120.405 \pm 31.379$   $\chi^2/\text{NDF}$ : 150.8/104

- sign  $-34.058 \pm 43.432$   $\chi^2/\text{NDF}$ : 53.6/53

# asym\_sam8\_reg\_correction\_rms vs Slug



Right In: 215.619 $\pm$ 0.050  $\chi^2$ /NDF: 11307726.6/25

Left Out: 255.469 $\pm$ 0.042  $\chi^2$ /NDF: 863866.8/24

Right Out: 179.732 $\pm$ 0.043  $\chi^2$ /NDF: 15102730.5/30

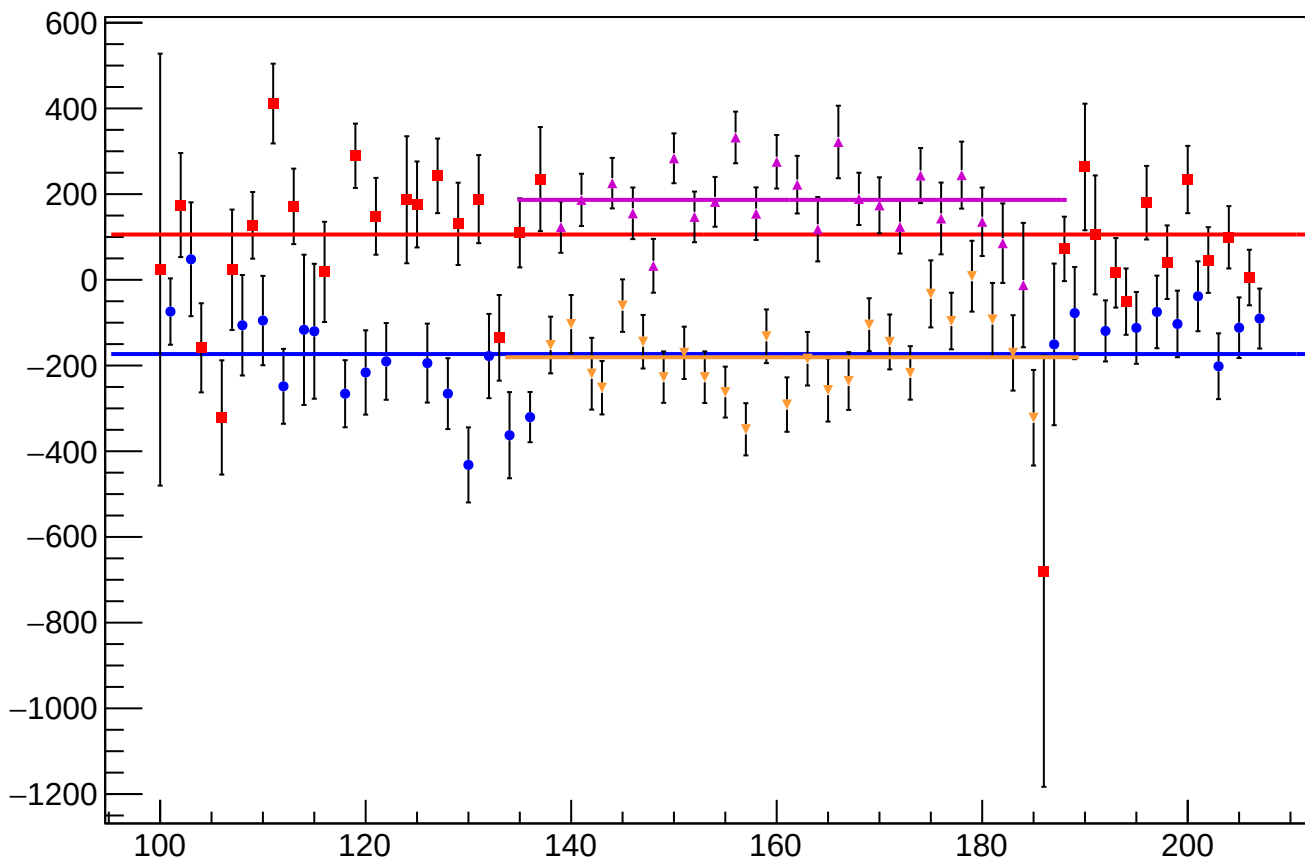
Left In: 262.007 $\pm$ 0.044  $\chi^2$ /NDF: 670576.2/22

+ sign 239.298 $\pm$ 0.032  $\chi^2$ /NDF: 12543410.3/50

All: 229.360 $\pm$ 0.022  $\chi^2$ /NDF: 30294321.9/10

- sign 220.259 $\pm$ 0.031  $\chi^2$ /NDF: 17567195.8/53

# cor\_asym\_sam8\_mean vs Slug



Right In:  $-173.210 \pm 17.268$   $\chi^2/\text{NDF}$ : 36.9/25

Left Out:  $-180.680 \pm 13.419$   $\chi^2/\text{NDF}$ : 38.6/24

Right Out:  $105.786 \pm 16.938$   $\chi^2/\text{NDF}$ : 62.6/30

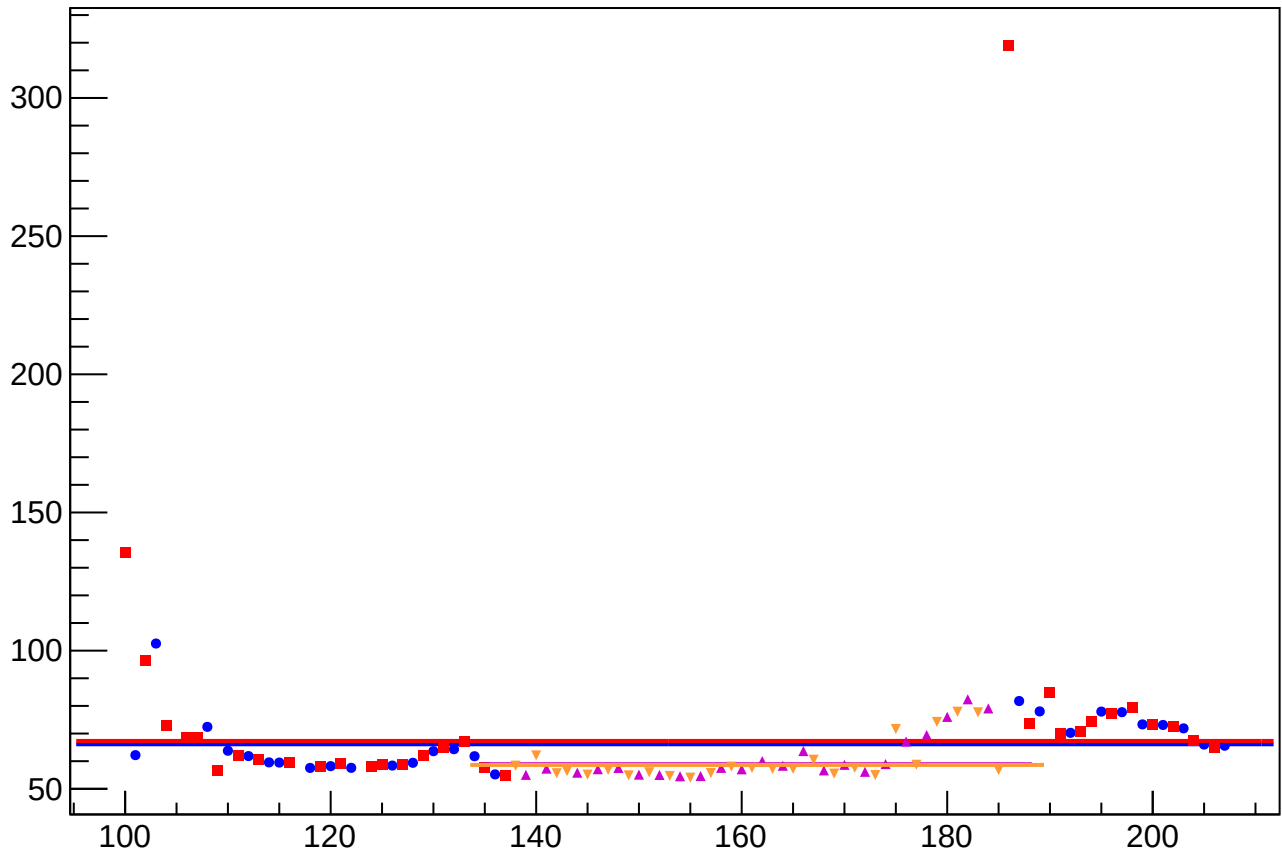
Left In:  $186.567 \pm 13.860$   $\chi^2/\text{NDF}$ : 29.0/22

+ sign  $-177.868 \pm 10.596$   $\chi^2/\text{NDF}$ : 75.6/50

All:  $-13.887 \pm 7.538$   $\chi^2/\text{NDF}$ : 665.8/104

- sign  $154.172 \pm 10.727$   $\chi^2/\text{NDF}$ : 105.2/53

# cor\_asym\_sam8\_rms vs Slug



Right In:  $66.121 \pm 0.012$   $\chi^2/\text{NDF}$ : 496474.1/25

Left Out:  $58.644 \pm 0.009$   $\chi^2/\text{NDF}$ : 393880.8/24

Right Out:  $67.331 \pm 0.012$   $\chi^2/\text{NDF}$ : 1020717.8/30

Left In:  $58.906 \pm 0.010$   $\chi^2/\text{NDF}$ : 386820.4/22

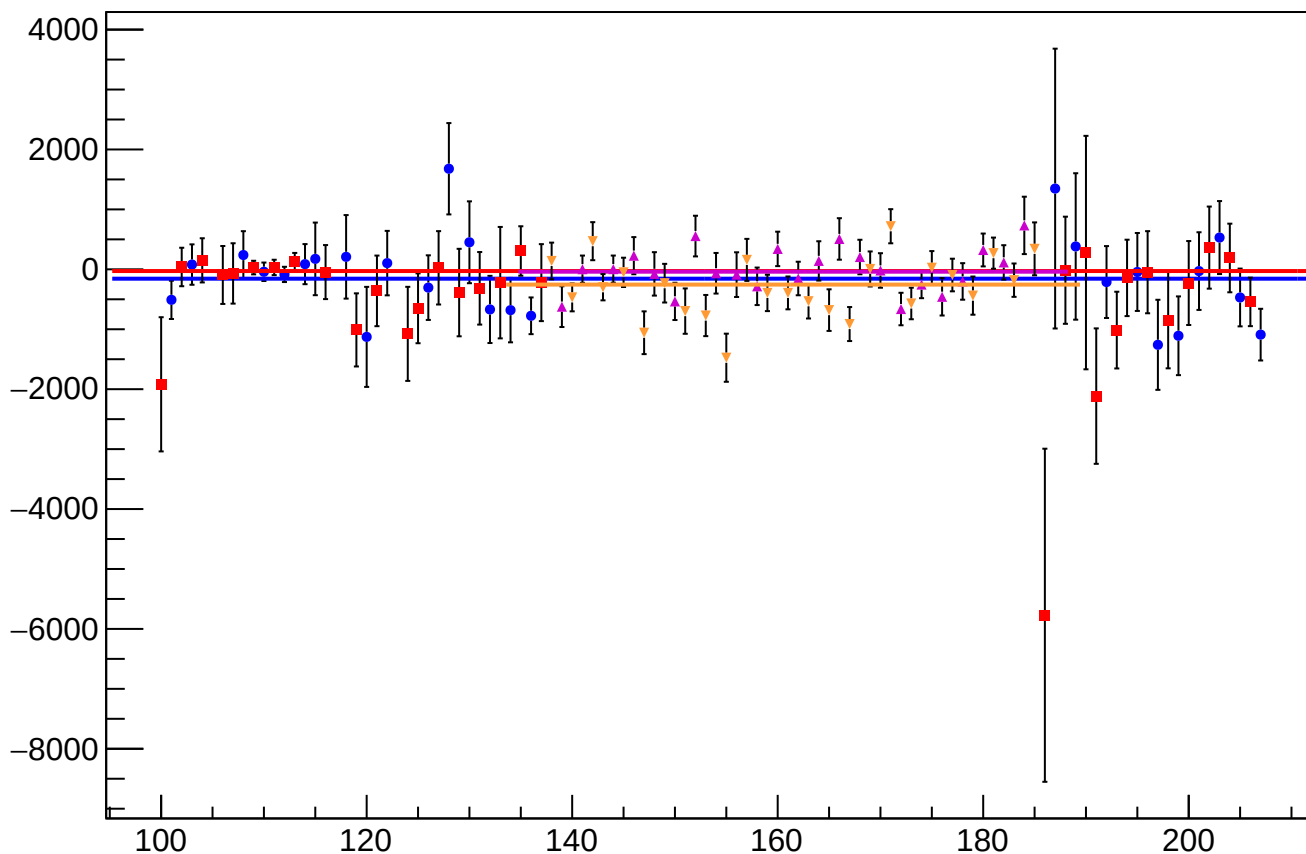
+ sign  $61.459 \pm 0.007$   $\chi^2/\text{NDF}$ : 1124133.4/50

All:  $61.867 \pm 0.005$   $\chi^2/\text{NDF}$ : 2834019.2/104

- sign  $62.285 \pm 0.008$   $\chi^2/\text{NDF}$ : 1703885.6/53



# asym\_sam8\_cor\_correction\_mean vs Slug



Right In:  $-156.195 \pm 71.246$   $\chi^2/\text{NDF}$ : 30.1/25

Left Out:  $-254.625 \pm 58.877$   $\chi^2/\text{NDF}$ : 57.6/24

Right Out:  $-28.609 \pm 61.104$   $\chi^2/\text{NDF}$ : 25.2/30

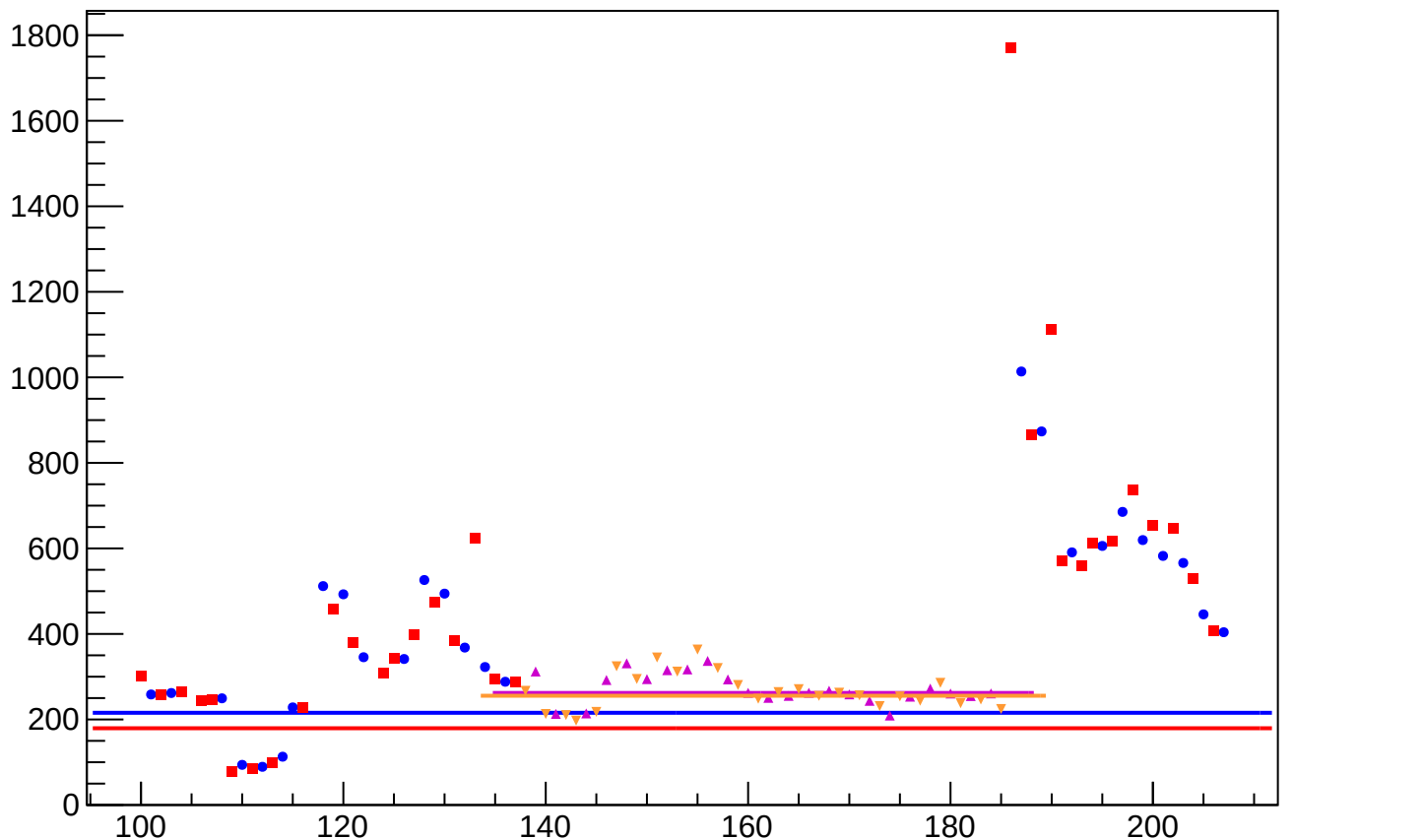
Left In:  $-39.144 \pm 61.883$   $\chi^2/\text{NDF}$ : 28.3/22

+ sign  $-214.683 \pm 45.385$   $\chi^2/\text{NDF}$ : 88.9/50

All:  $-120.370 \pm 31.397$   $\chi^2/\text{NDF}$ : 150.8/104

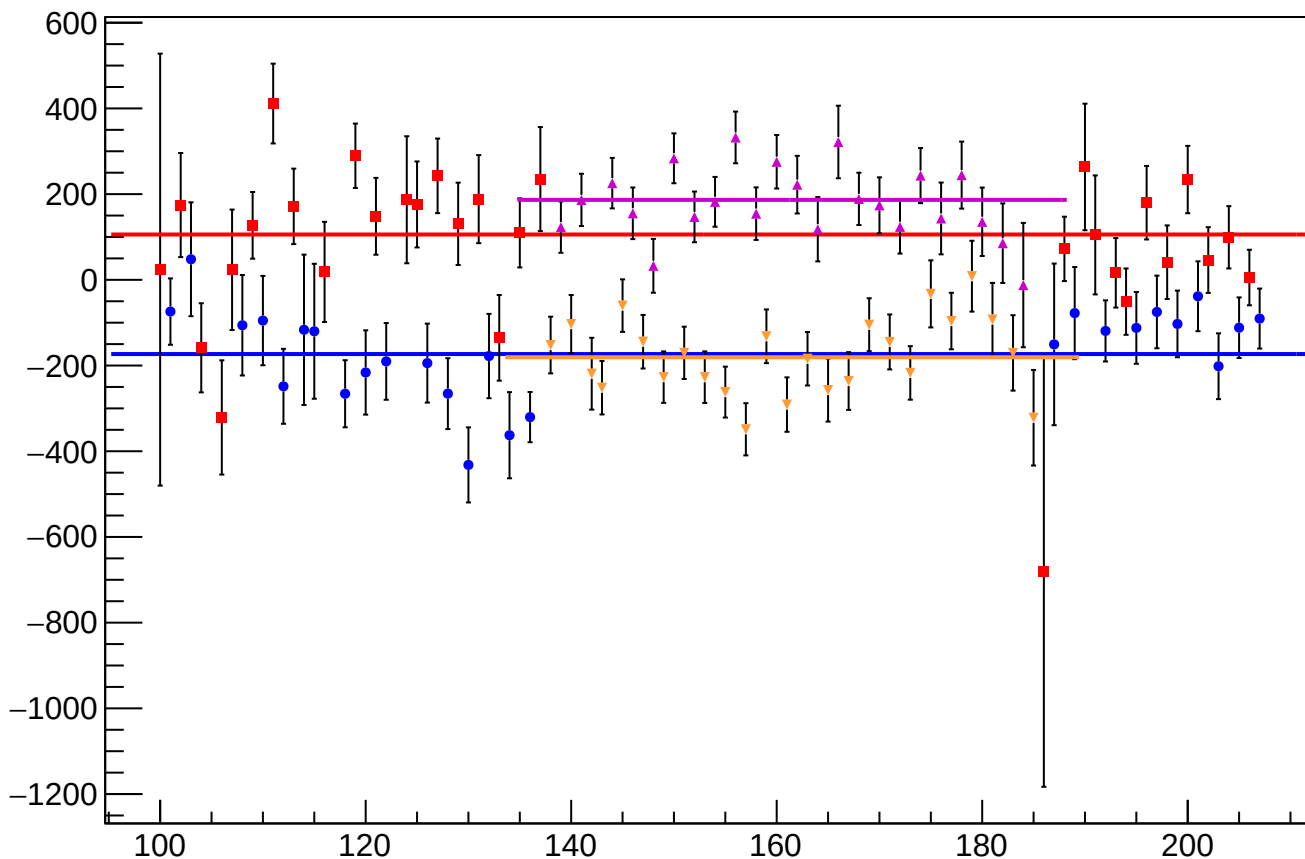
- sign  $-33.810 \pm 43.480$   $\chi^2/\text{NDF}$ : 53.6/53

# asym\_sam8\_cor\_correction\_rms vs Slug



Right In: 215.619+/-0.050     $\chi^2/\text{NDF}$ : 11307764.4/25    + sign 239.298+/-0.032     $\chi^2/\text{NDF}$ : 12543431.3/50  
 Left Out: 255.469+/-0.042     $\chi^2/\text{NDF}$ : 863867.3/24    All: 229.346+/-0.022     $\chi^2/\text{NDF}$ : 30294357.0/10  
 Right Out: 179.461+/-0.043     $\chi^2/\text{NDF}$ : 15094037.1/30    - sign 220.211+/-0.031     $\chi^2/\text{NDF}$ : 17566470.0/53  
 Left In: 262.007+/-0.044     $\chi^2/\text{NDF}$ : 670574.8/22

# eigen\_cor\_asym\_sam8\_mean vs Slug



Right In: -173.210 $\pm$ 17.268  $\chi^2$ /NDF: 36.9/25

Left Out: -180.680 $\pm$ 13.419  $\chi^2$ /NDF:38.6/24

Right Out: 105.786 $\pm$ 16.938  $\chi^2$ /NDF: 62.6/30

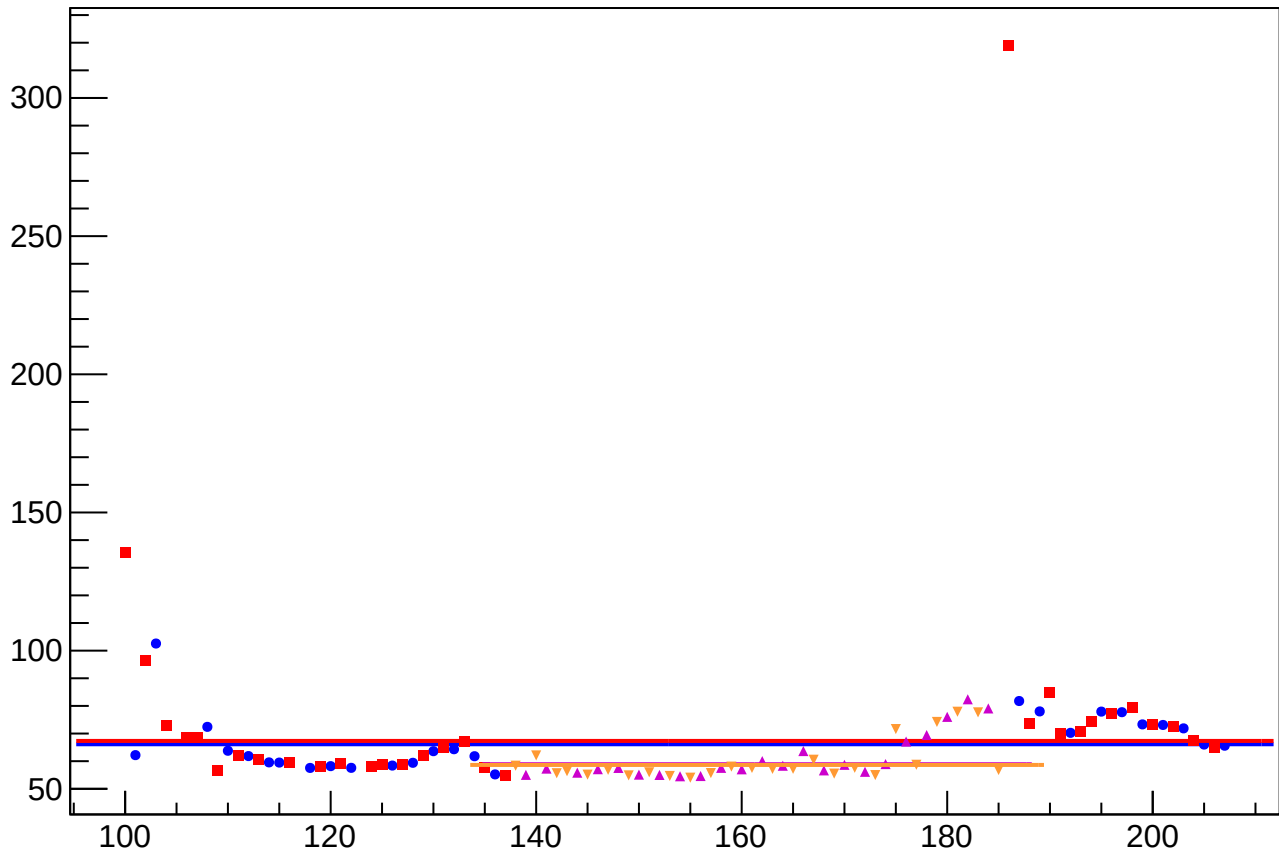
Left In: 186.567 $\pm$ 13.860  $\chi^2$ /NDF:29.0/22

+ sign -177.868 $\pm$ 10.596  $\chi^2$ /NDF: 75.6/50

All: -13.887 $\pm$ 7.538  $\chi^2$ /NDF: 665.8/104

- sign 154.172 $\pm$ 10.727  $\chi^2$ /NDF: 105.2/53

# eigen\_cor\_asym\_sam8\_rms vs Slug



Right In: 66.121+/-0.012  $\chi^2/\text{NDF}$ : 496474.1/25

Left Out: 58.644+/-0.009  $\chi^2/\text{NDF}$ : 393880.8/24

Right Out: 67.331+/-0.012  $\chi^2/\text{NDF}$ : 1020717.8/30

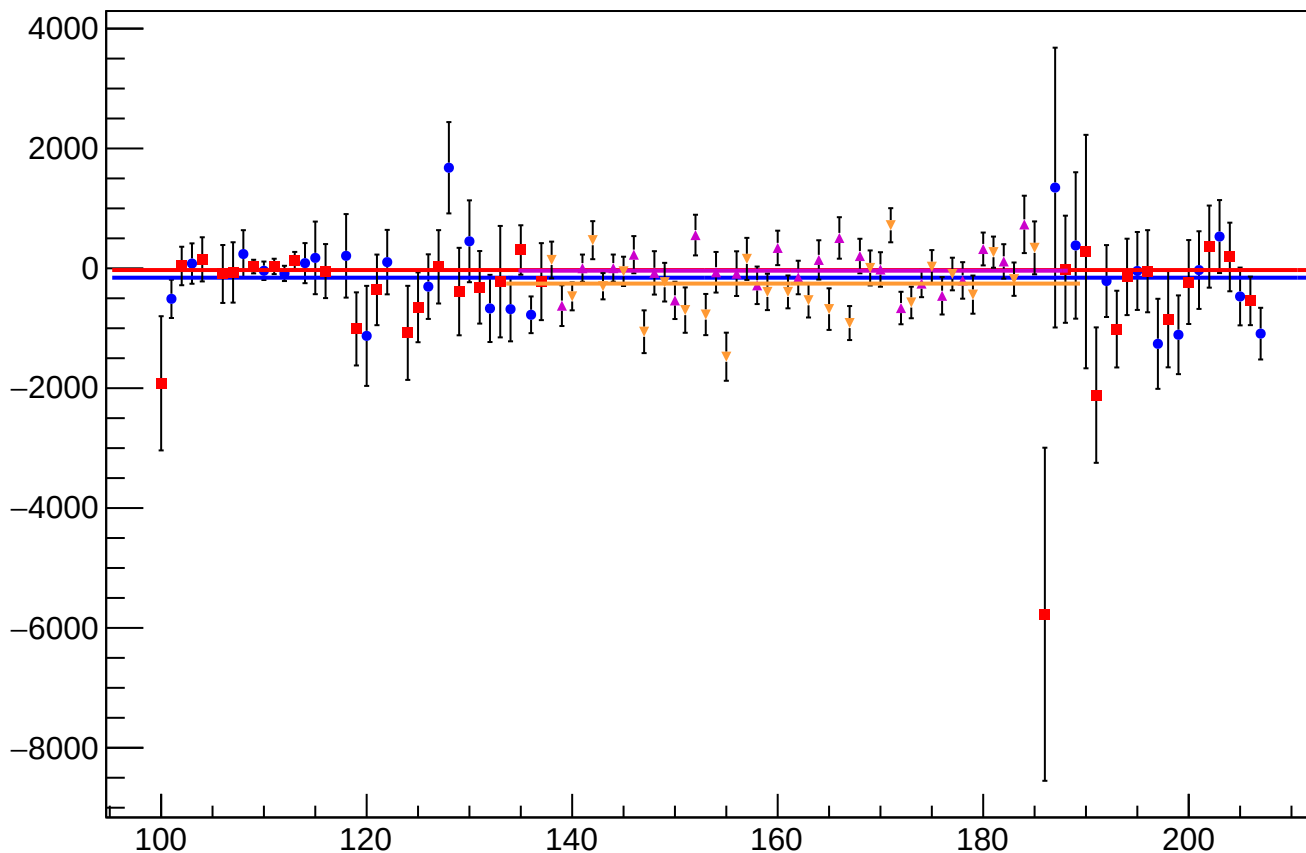
Left In: 58.906+/-0.010  $\chi^2/\text{NDF}$ : 386820.4/22

+ sign 61.459+/-0.007  $\chi^2/\text{NDF}$ : 1124133.4/50

All: 61.867+/-0.005  $\chi^2/\text{NDF}$ : 2834019.2/104

- sign 62.285+/-0.008  $\chi^2/\text{NDF}$ : 1703885.6/53

asym\_sam8\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-156.195 \pm 71.246$   $\chi^2/\text{NDF}$ : 30.1/25

Left Out:  $-254.625 \pm 58.877$   $\chi^2/\text{NDF}$ : 57.6/24

Right Out:  $-28.609 \pm 61.104$   $\chi^2/\text{NDF}$ : 25.2/30

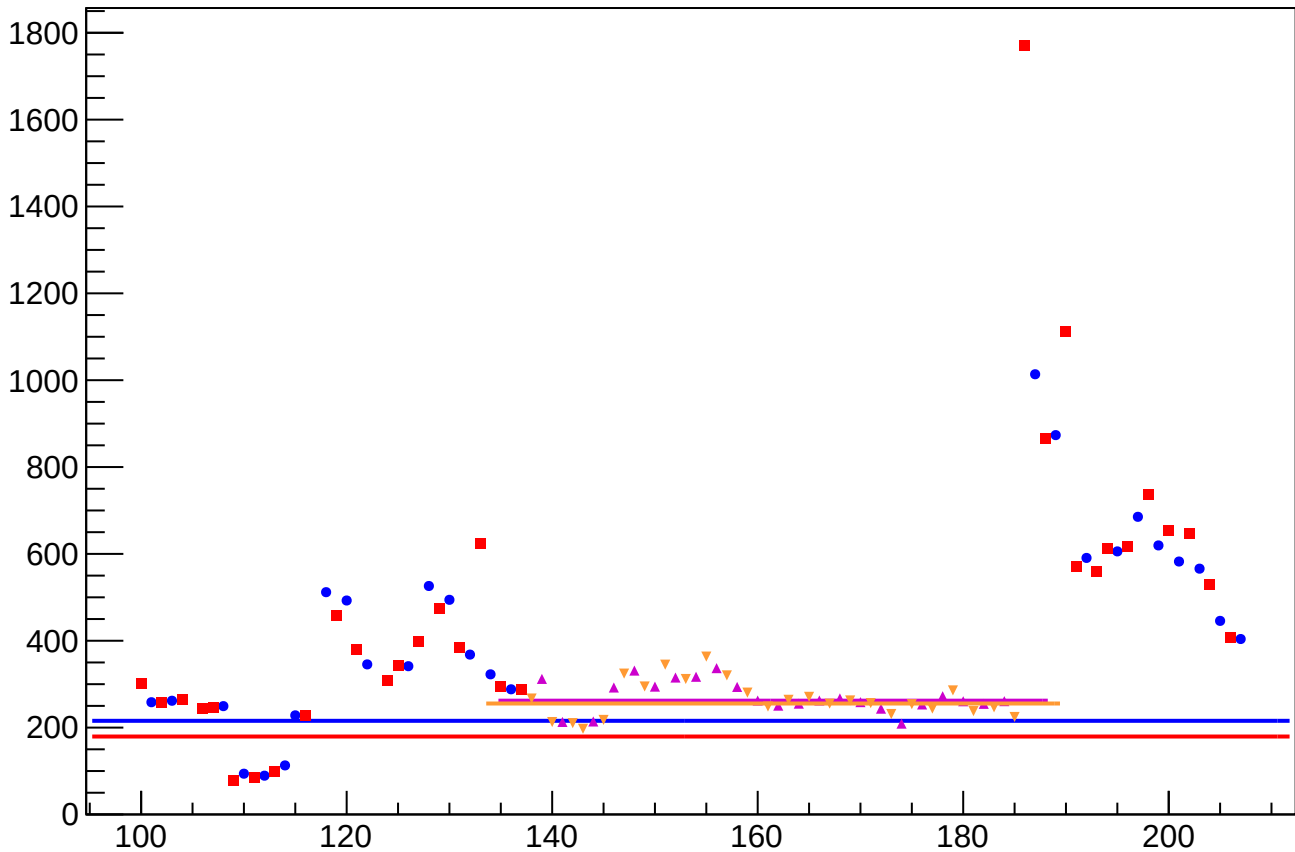
Left In:  $-39.144 \pm 61.883$   $\chi^2/\text{NDF}$ : 28.3/22

+ sign  $-214.683 \pm 45.385$   $\chi^2/\text{NDF}$ : 88.9/50

All:  $-120.370 \pm 31.397$   $\chi^2/\text{NDF}$ : 150.8/104

- sign  $-33.810 \pm 43.480$   $\chi^2/\text{NDF}$ : 53.6/53

# asym\_sam8\_eigen\_cor\_correction\_rms vs Slug



Right In: 215.619+/-0.050  $\chi^2/\text{NDF}$ : 11307764.4/25

Left Out: 255.469+/-0.042  $\chi^2/\text{NDF}$ : 863867.3/24

Right Out: 179.461+/-0.043  $\chi^2/\text{NDF}$ : 15094037.1/30

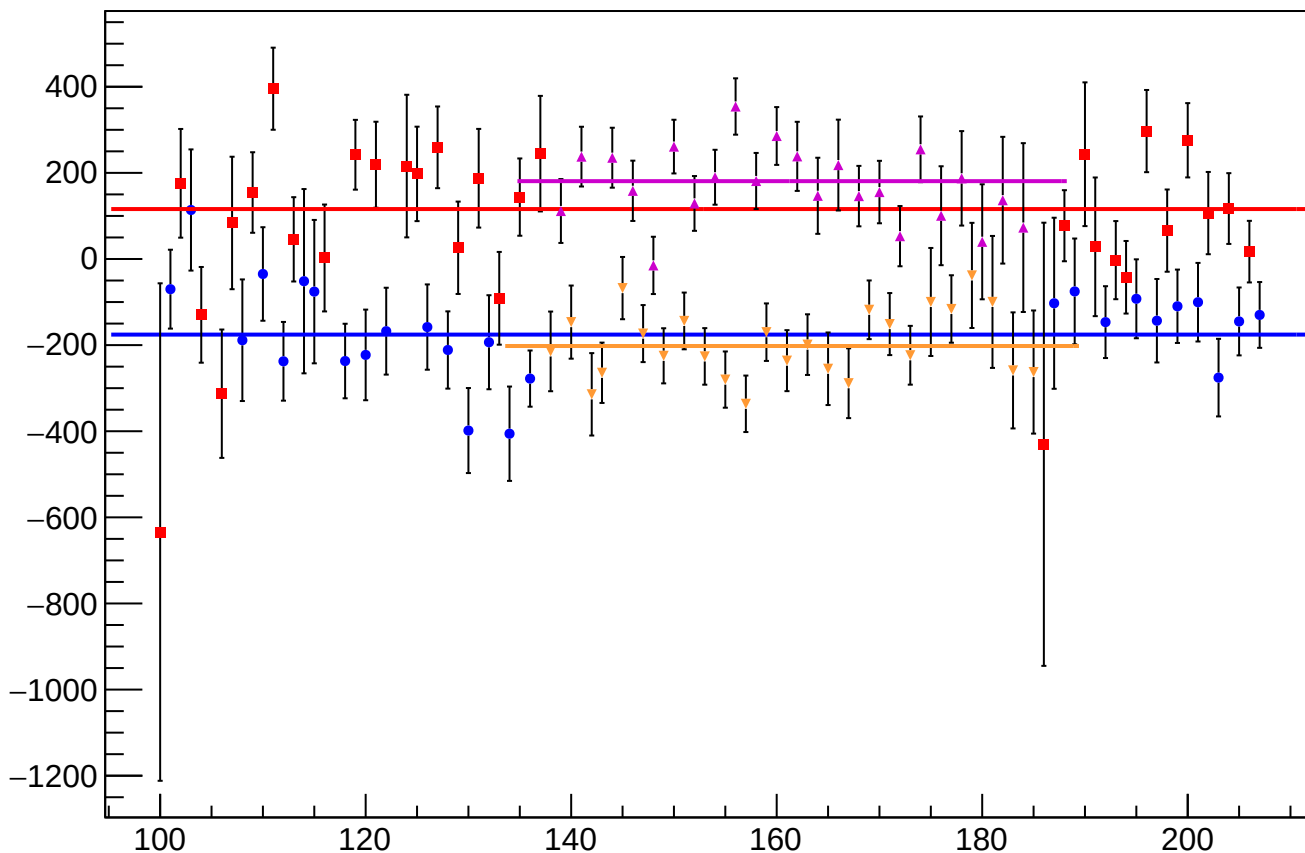
Left In: 262.007+/-0.044  $\chi^2/\text{NDF}$ : 670574.8/22

+ sign 239.298+/-0.032  $\chi^2/\text{NDF}$ : 12543431.3/50

All: 229.346+/-0.022  $\chi^2/\text{NDF}$ : 30294357.0/100

- sign 220.211+/-0.031  $\chi^2/\text{NDF}$ : 17566470.0/53

# dit\_asym\_sam8\_mean vs Slug



Right In:  $-175.589 \pm 19.213$   $\chi^2/\text{NDF}$ : 26.2/25

Left Out:  $-202.090 \pm 15.538$   $\chi^2/\text{NDF}$ : 21.5/24

Right Out:  $115.982 \pm 18.784$   $\chi^2/\text{NDF}$ : 54.4/30

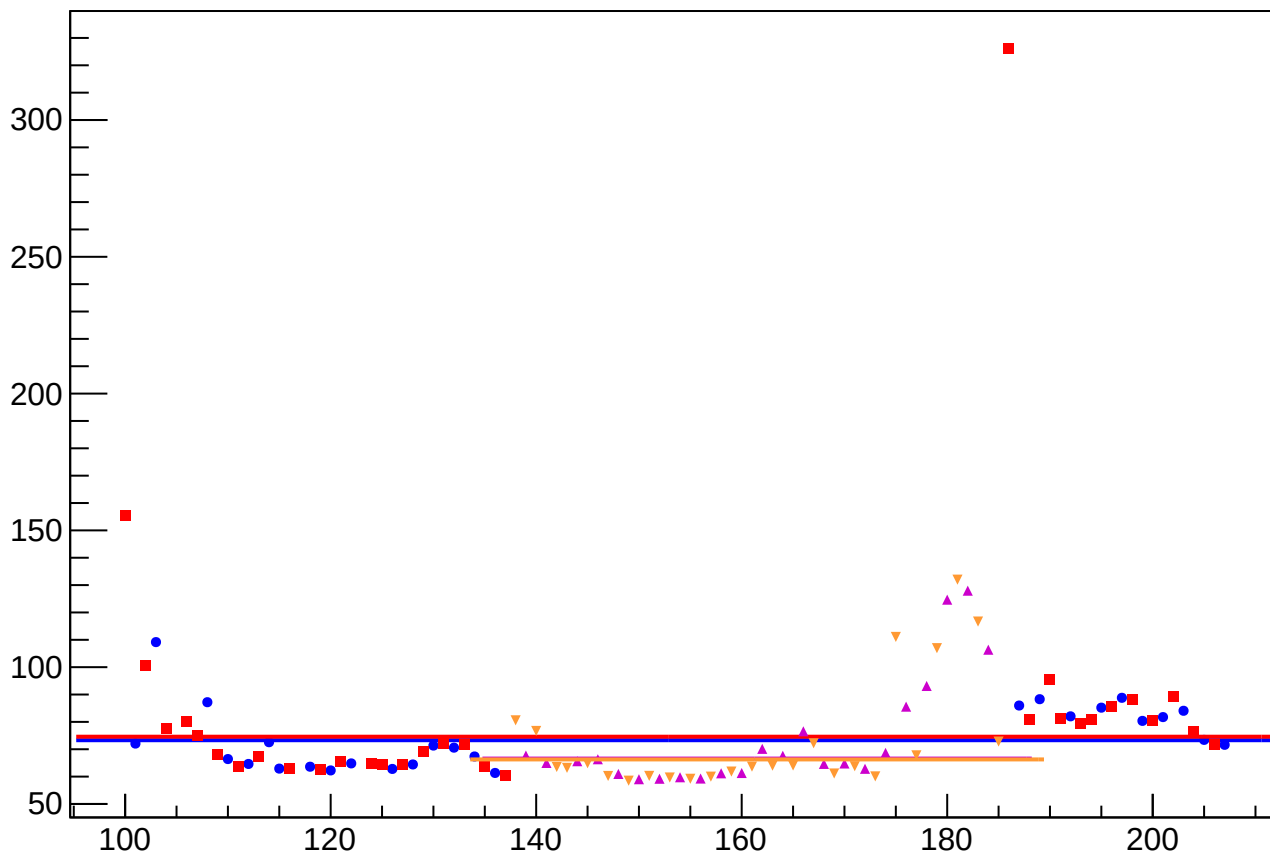
Left In:  $180.784 \pm 16.019$   $\chi^2/\text{NDF}$ : 30.1/22

+ sign  $-191.612 \pm 12.082$   $\chi^2/\text{NDF}$ : 48.8/50

All:  $-20.579 \pm 8.581$   $\chi^2/\text{NDF}$ : 544.6/104

- sign  $153.499 \pm 12.189$   $\chi^2/\text{NDF}$ : 91.5/53

# dit\_asym\_sam8\_rms vs Slug



Right In: 73.302 $\pm$ 0.014     $\chi^2$ /NDF: 566919.9/25

Left Out: 66.279 $\pm$ 0.011     $\chi^2$ /NDF: 1393879.2/24

Right Out: 74.584 $\pm$ 0.013     $\chi^2$ /NDF: 1028014.9/30

Left In: 66.585 $\pm$ 0.011     $\chi^2$ /NDF: 1158238.0/22

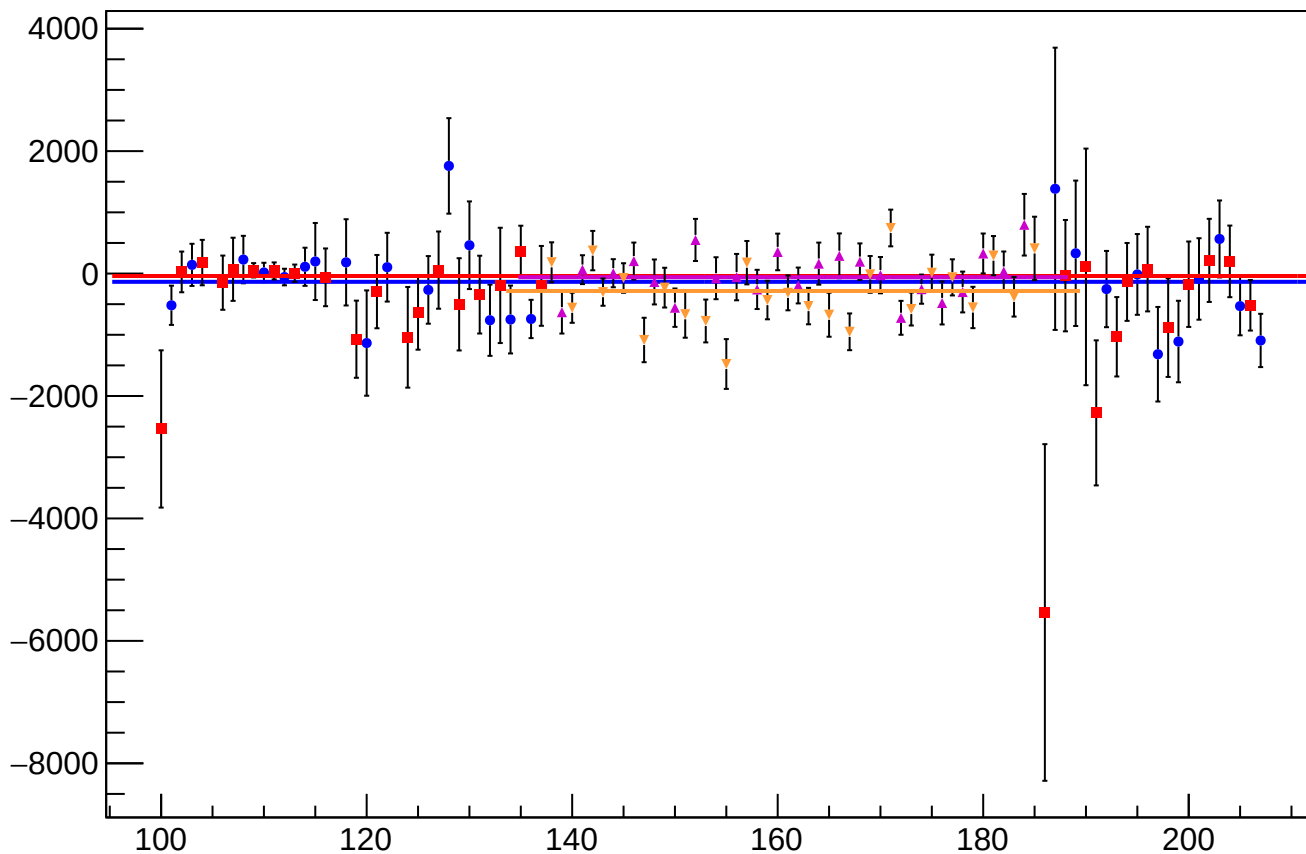
+ sign 69.056 $\pm$ 0.009     $\chi^2$ /NDF: 2122364.5/50

All: 69.501 $\pm$ 0.006     $\chi^2$ /NDF: 4524024.1/104

- sign 69.953 $\pm$ 0.009     $\chi^2$ /NDF: 2396195.0/53



# asym\_sam8\_dit\_correction\_mean vs Slug



Right In: -134.921 $\pm$ 73.379  $\chi^2$ /NDF: 31.6/25

Left Out: -284.450 $\pm$ 61.727  $\chi^2$ /NDF: 54.6/24

Right Out: -39.813 $\pm$ 62.744  $\chi^2$ /NDF: 25.0/30

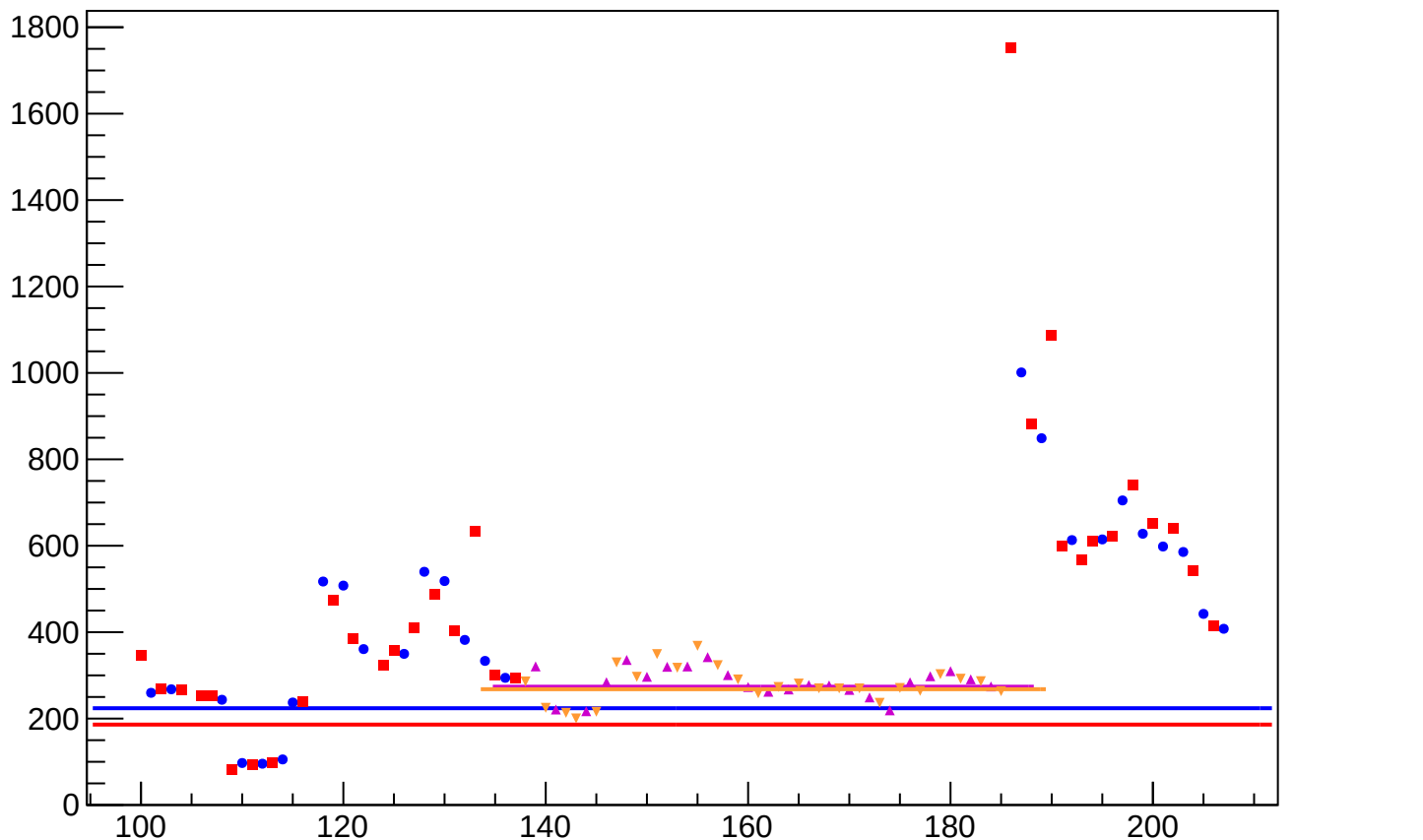
Left In: -59.160 $\pm$ 64.636  $\chi^2$ /NDF: 26.8/22

+ sign -222.486 $\pm$ 47.237  $\chi^2$ /NDF: 88.6/50

All: -131.683 $\pm$ 32.590  $\chi^2$ /NDF: 147.6/104

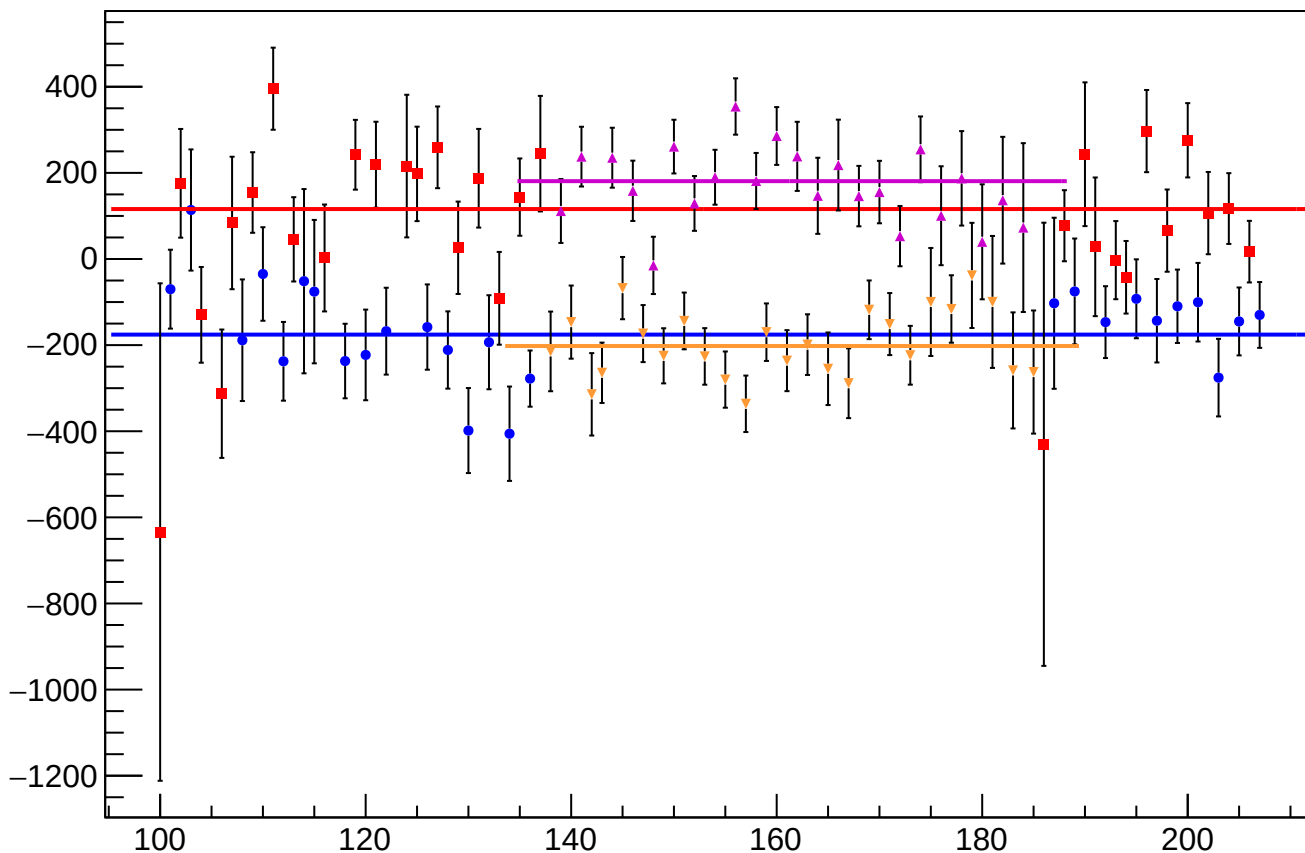
- sign -49.199 $\pm$ 45.021  $\chi^2$ /NDF: 51.9/53

# asym\_sam8\_dit\_correction\_rms vs Slug



Right In: 223.982 $\pm$ 0.052     $\chi^2/\text{NDF}$ : 11045276.1/25    + sign 249.751 $\pm$ 0.033     $\chi^2/\text{NDF}$ : 12329233.7/50  
 Left Out: 267.985 $\pm$ 0.044     $\chi^2/\text{NDF}$ : 862786.9/24    All: 238.676 $\pm$ 0.023     $\chi^2/\text{NDF}$ : 29977162.4/10  
 Right Out: 186.085 $\pm$ 0.044     $\chi^2/\text{NDF}$ : 14893647.5/30    - sign 228.616 $\pm$ 0.032     $\chi^2/\text{NDF}$ : 17438124.1/53  
 Left In: 273.751 $\pm$ 0.046     $\chi^2/\text{NDF}$ : 650295.5/22

# eigen\_dit\_asym\_sam8\_mean vs Slug



Right In:  $-175.589 \pm 19.213$   $\chi^2/\text{NDF}$ : 26.2/25

Left Out:  $-202.090 \pm 15.538$   $\chi^2/\text{NDF}$ : 21.5/24

Right Out:  $115.982 \pm 18.784$   $\chi^2/\text{NDF}$ : 54.4/30

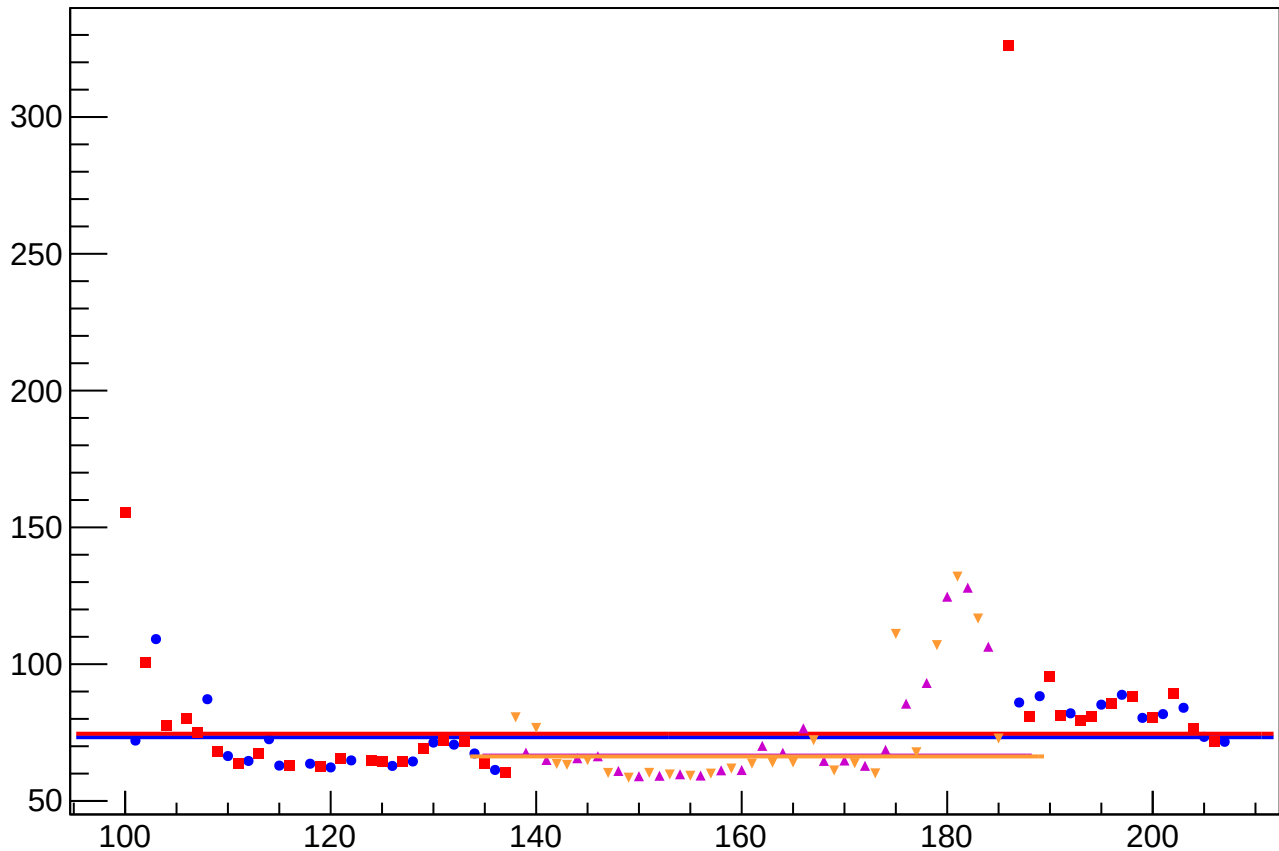
Left In:  $180.785 \pm 16.019$   $\chi^2/\text{NDF}$ : 30.1/22

+ sign  $-191.611 \pm 12.082$   $\chi^2/\text{NDF}$ : 48.8/50

All:  $-20.578 \pm 8.581$   $\chi^2/\text{NDF}$ : 544.6/104

- sign  $153.500 \pm 12.189$   $\chi^2/\text{NDF}$ : 91.5/53

# eigen\_dit\_asym\_sam8\_rms vs Slug



Right In: 73.302 $\pm$ 0.014  $\chi^2$ /NDF: 566924.1/25

Left Out: 66.279 $\pm$ 0.011  $\chi^2$ /NDF: 1393881.3/24

Right Out: 74.584 $\pm$ 0.013  $\chi^2$ /NDF: 1028020.0/30

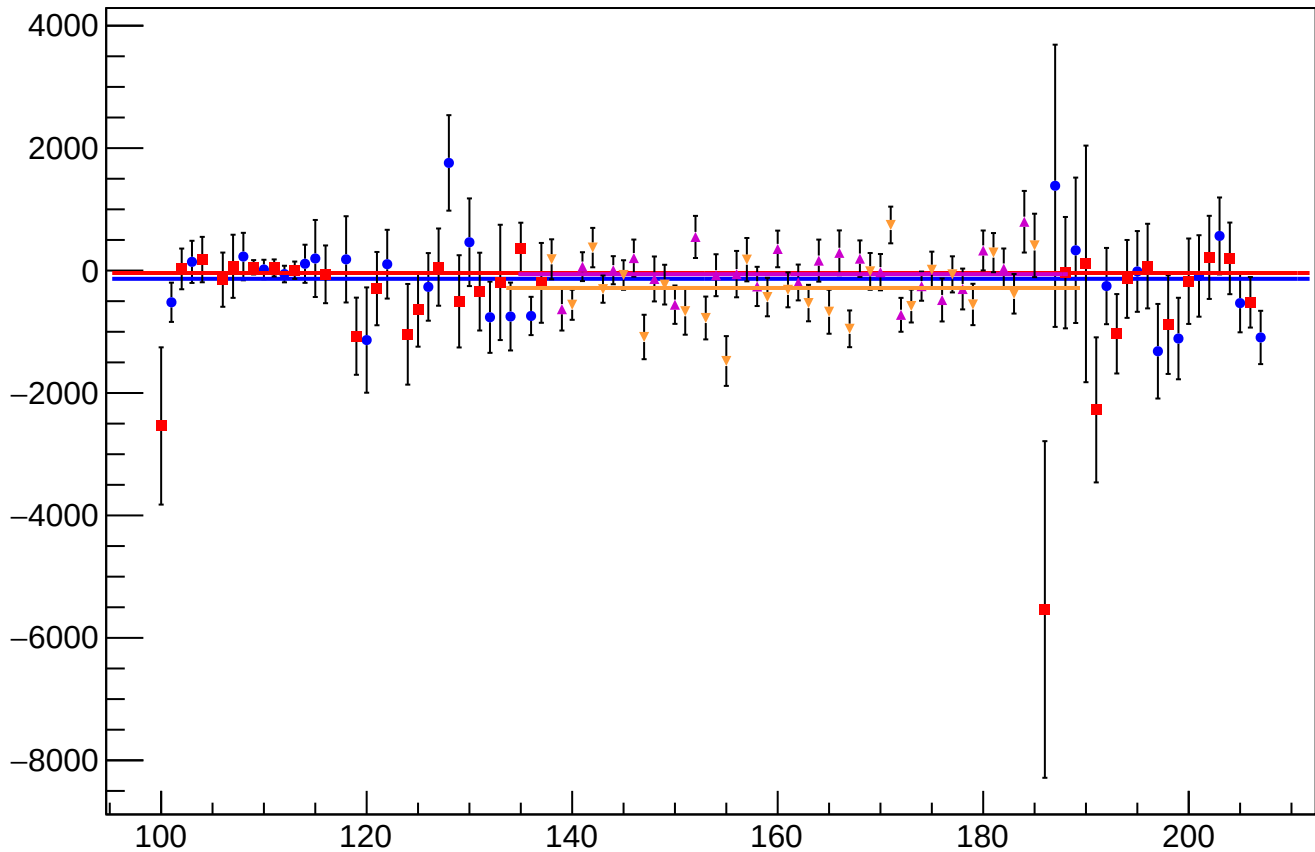
Left In: 66.585 $\pm$ 0.011  $\chi^2$ /NDF: 1158231.7/22

+ sign 69.056 $\pm$ 0.009  $\chi^2$ /NDF: 2122363.9/50

All: 69.500 $\pm$ 0.006  $\chi^2$ /NDF: 4524011.8/104

- sign 69.953 $\pm$ 0.009  $\chi^2$ /NDF: 2396183.3/53

# asym\_sam8\_eigen\_dit\_correction\_mean vs Slug



Right In: -134.919 $\pm$ 73.378  $\chi^2$ /NDF: 31.6/25

Left Out: -284.450 $\pm$ 61.727  $\chi^2$ /NDF: 54.6/24

Right Out: -39.811 $\pm$ 62.743  $\chi^2$ /NDF: 25.0/30

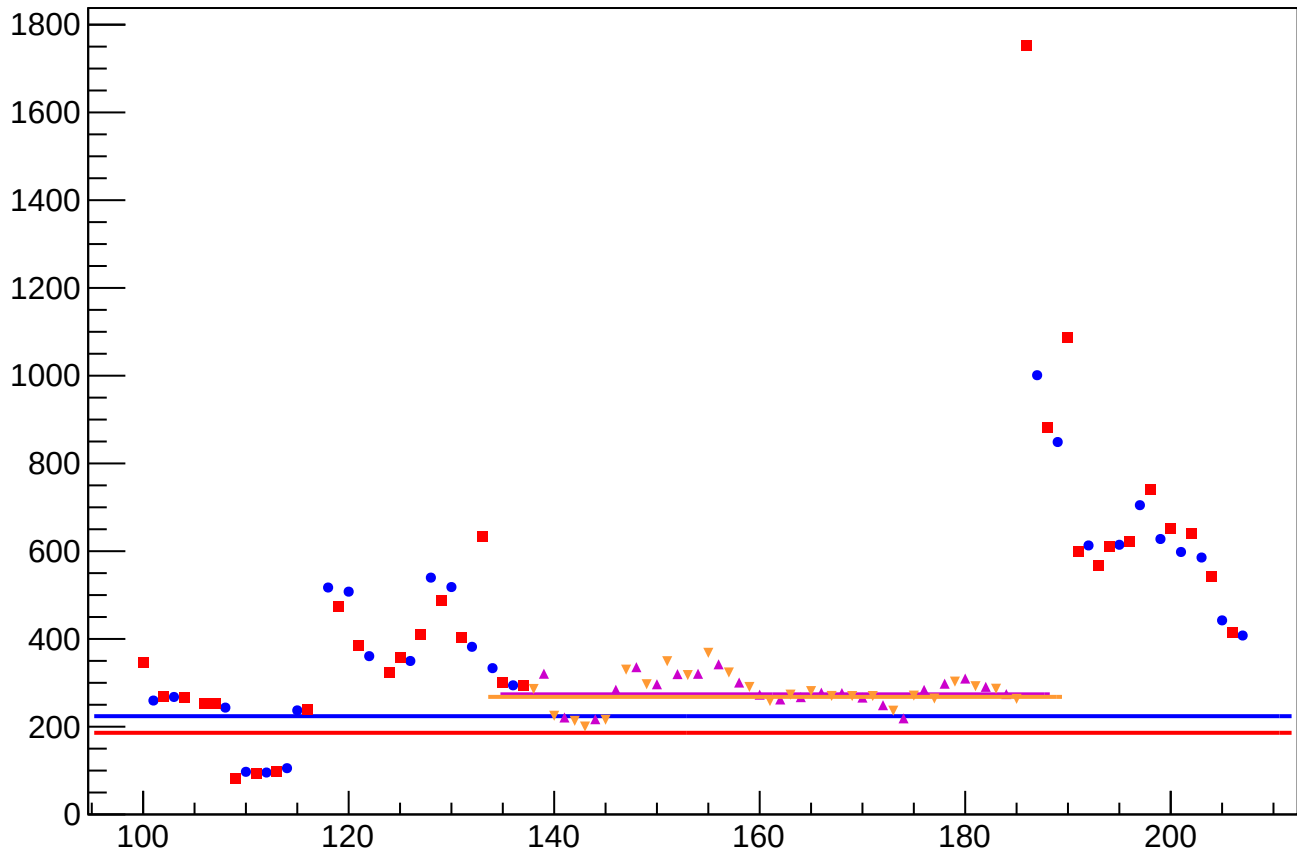
Left In: -59.160 $\pm$ 64.636  $\chi^2$ /NDF: 26.8/22

+ sign -222.484 $\pm$ 47.236  $\chi^2$ /NDF: 88.6/50

All: -131.682 $\pm$ 32.590  $\chi^2$ /NDF: 147.6/104

- sign -49.198 $\pm$ 45.021  $\chi^2$ /NDF: 51.9/53

# asym\_sam8\_eigen\_dit\_correction\_rms vs Slug



Right In: 223.981+/-0.052  $\chi^2/\text{NDF}$ : 11045341.5/25

Left Out: 267.985+/-0.044  $\chi^2/\text{NDF}$ : 862797.1/24

Right Out: 186.085+/-0.044  $\chi^2/\text{NDF}$ : 14893633.0/30

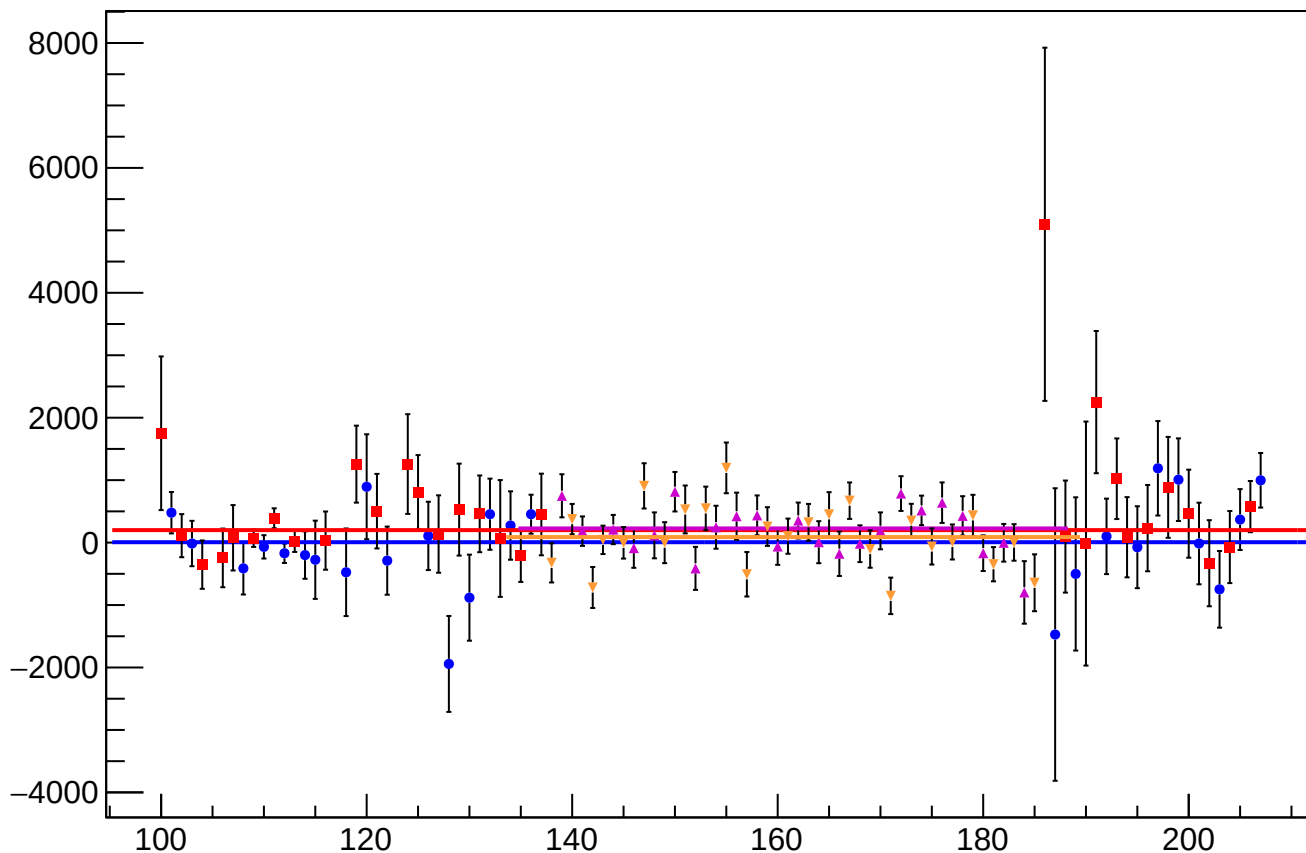
Left In: 273.750+/-0.046  $\chi^2/\text{NDF}$ : 650300.9/22

+ sign 249.749+/-0.033  $\chi^2/\text{NDF}$ : 12329327.7/50

All: 238.675+/-0.023  $\chi^2/\text{NDF}$ : 29977225.5/10

- sign 228.615+/-0.032  $\chi^2/\text{NDF}$ : 17438104.8/53

# asym\_sam8\_mean vs Slug



Right In:  $6.132 \pm 79.851$   $\chi^2/\text{NDF}$ : 30.5/25

Left Out:  $88.397 \pm 60.666$   $\chi^2/\text{NDF}$ : 52.2/24

Right Out:  $199.821 \pm 70.078$   $\chi^2/\text{NDF}$ : 26.1/30

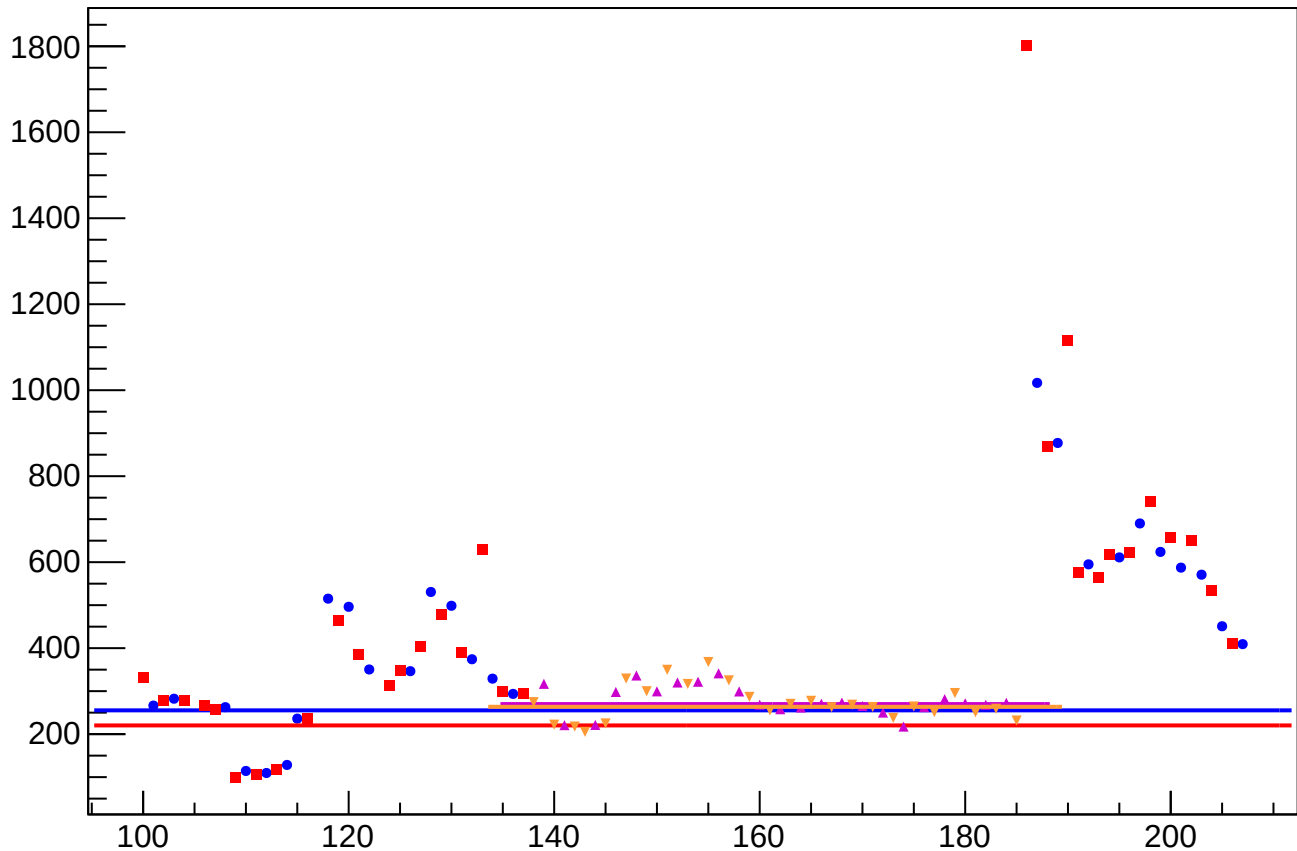
Left In:  $226.867 \pm 63.677$   $\chi^2/\text{NDF}$ : 28.8/22

+ sign  $58.291 \pm 48.306$   $\chi^2/\text{NDF}$ : 83.4/50

All:  $138.394 \pm 33.733$   $\chi^2/\text{NDF}$ : 143.8/104

- sign  $214.636 \pm 47.127$   $\chi^2/\text{NDF}$ : 55.0/53

# asym\_sam8\_rms vs Slug



Right In: 255.324 $\pm$ 0.056  $\chi^2$ /NDF: 9187478.8/25

Left Out: 263.593 $\pm$ 0.043  $\chi^2$ /NDF: 779853.4/24

Right Out: 220.282 $\pm$ 0.050  $\chi^2$ /NDF: 12766317.3/30

Left In: 269.898 $\pm$ 0.045  $\chi^2$ /NDF: 602244.3/22

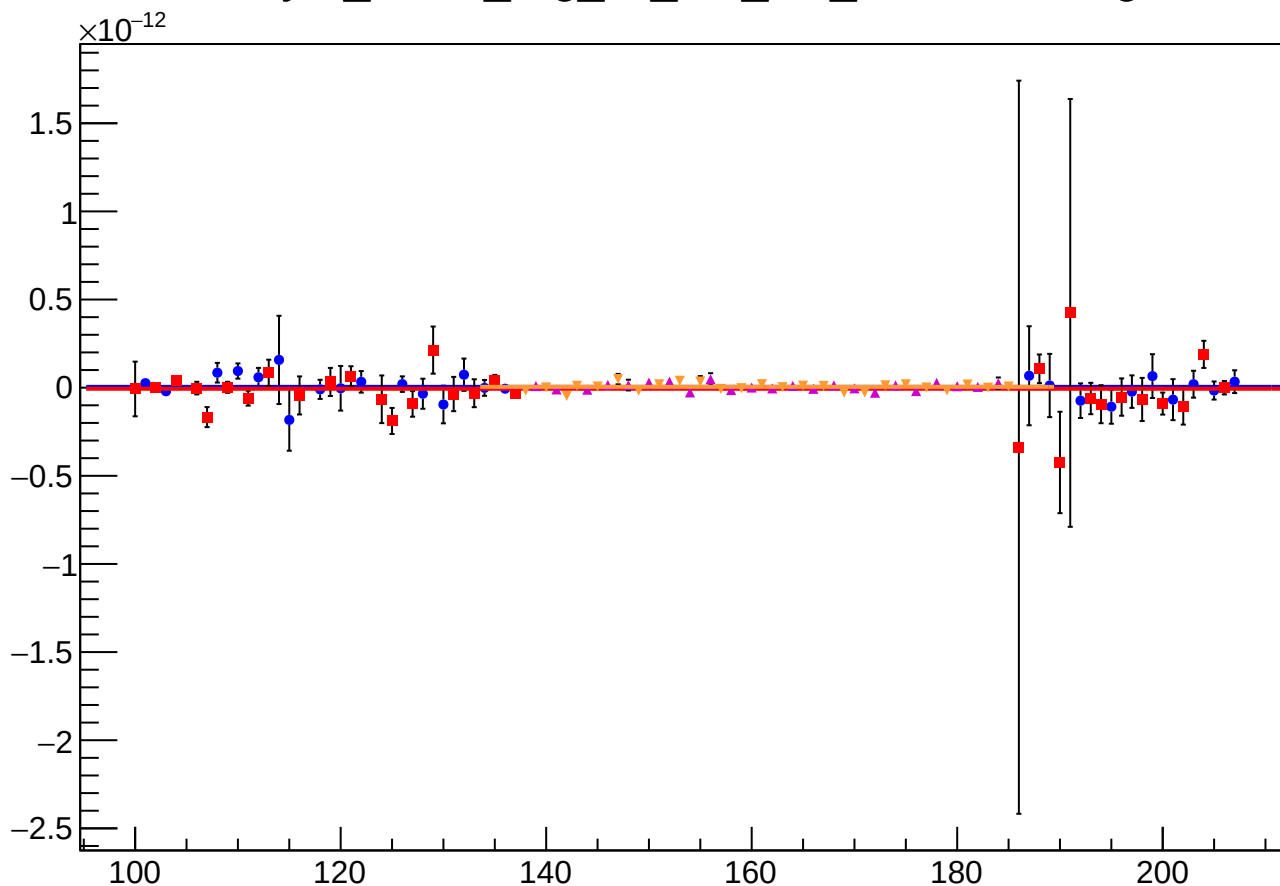
+ sign 260.567 $\pm$ 0.034  $\chi^2$ /NDF: 9980928.5/50

All: 253.851 $\pm$ 0.024  $\chi^2$ /NDF: 23974064.4/10

- sign 247.459 $\pm$ 0.033  $\chi^2$ /NDF: 13917689.7/53



# asym\_sam8\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 17.0/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 27.9/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 45.4/30

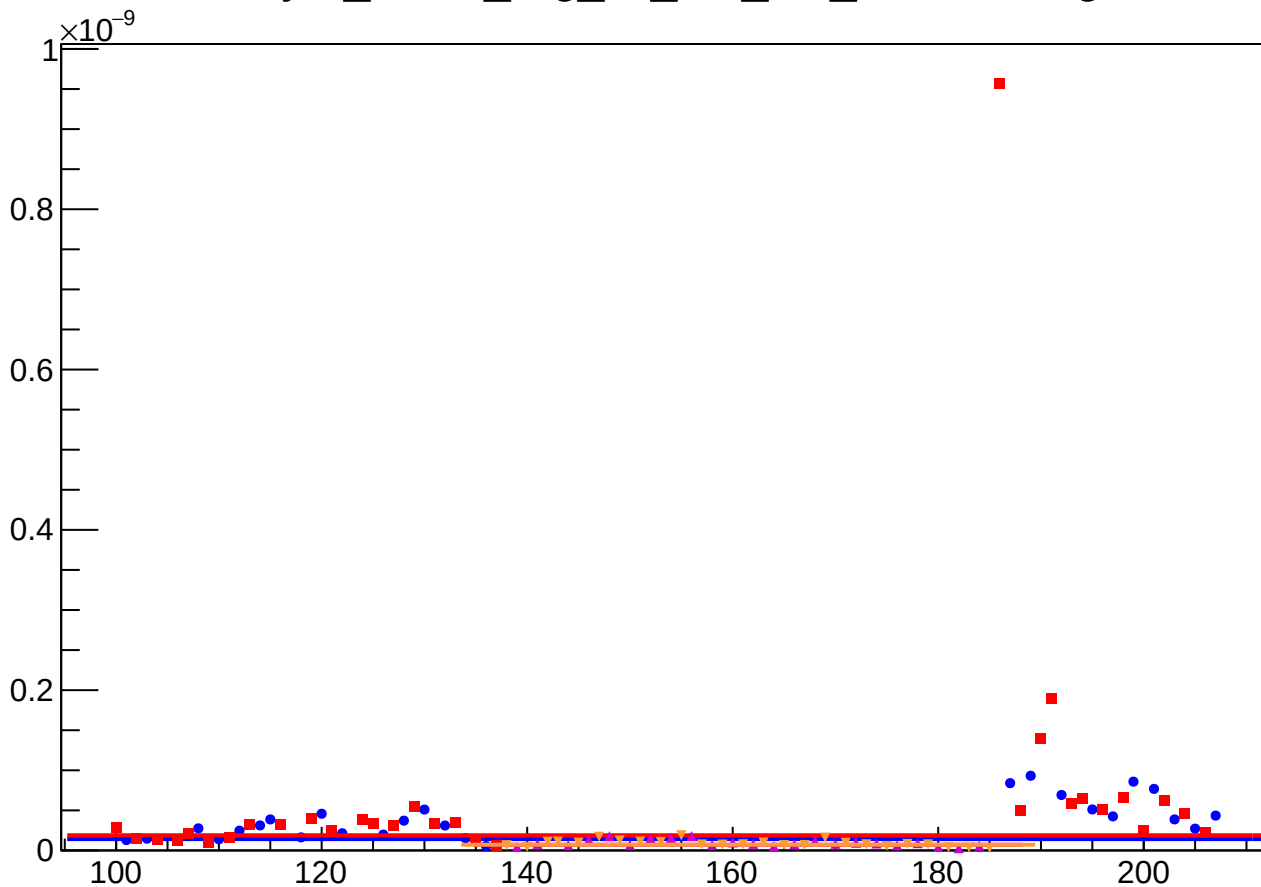
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 21.5/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 44.9/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 113.1/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 67.8/53

asym\_sam8\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5645672.0/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1952087.8/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4615592.3/30

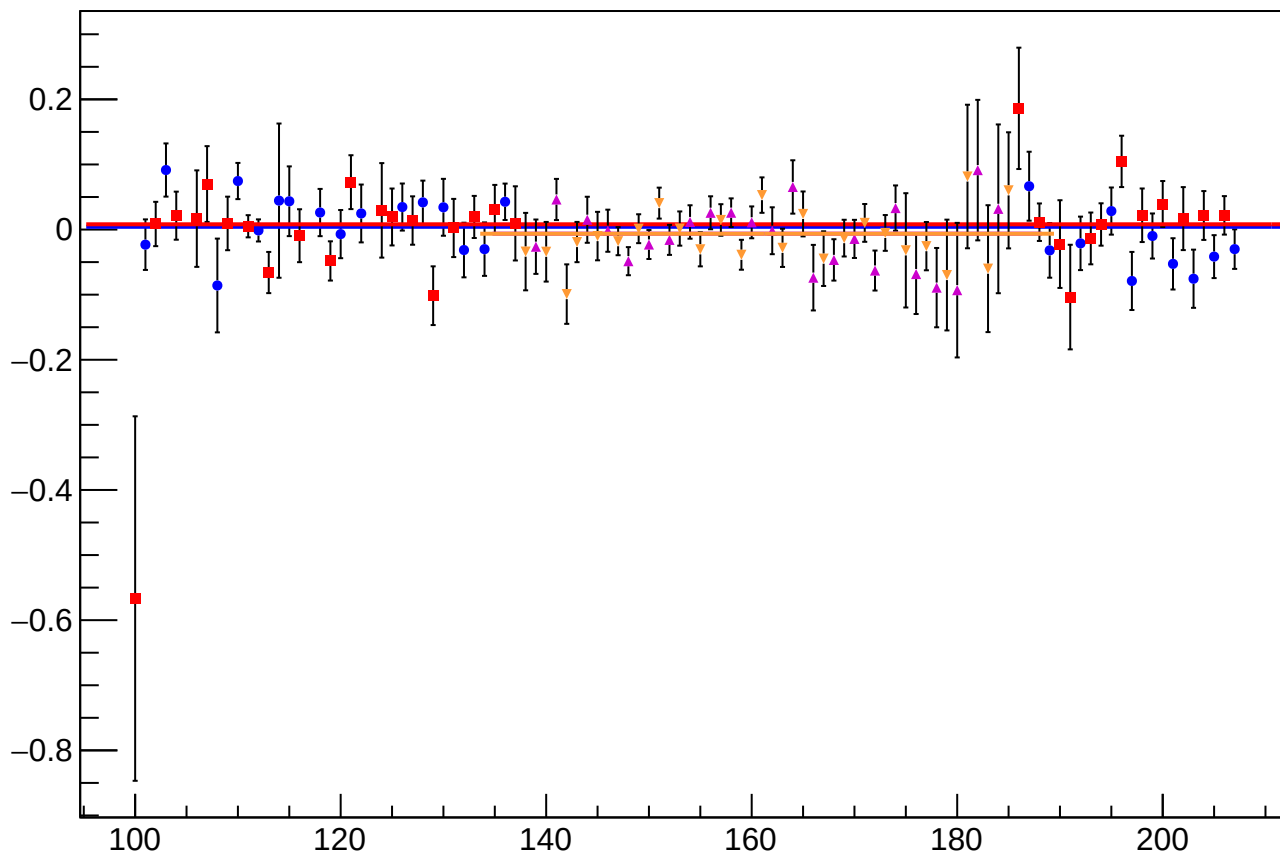
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2053049.9/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8968903.1/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 18537244.6/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9560563.1/53

# asym\_sam8\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.004 $\pm$ 0.007  $\chi^2$ /NDF: 35.3/25

Left Out: -0.006 $\pm$ 0.006  $\chi^2$ /NDF: 22.6/24

Right Out: 0.008 $\pm$ 0.007  $\chi^2$ /NDF: 37.1/30

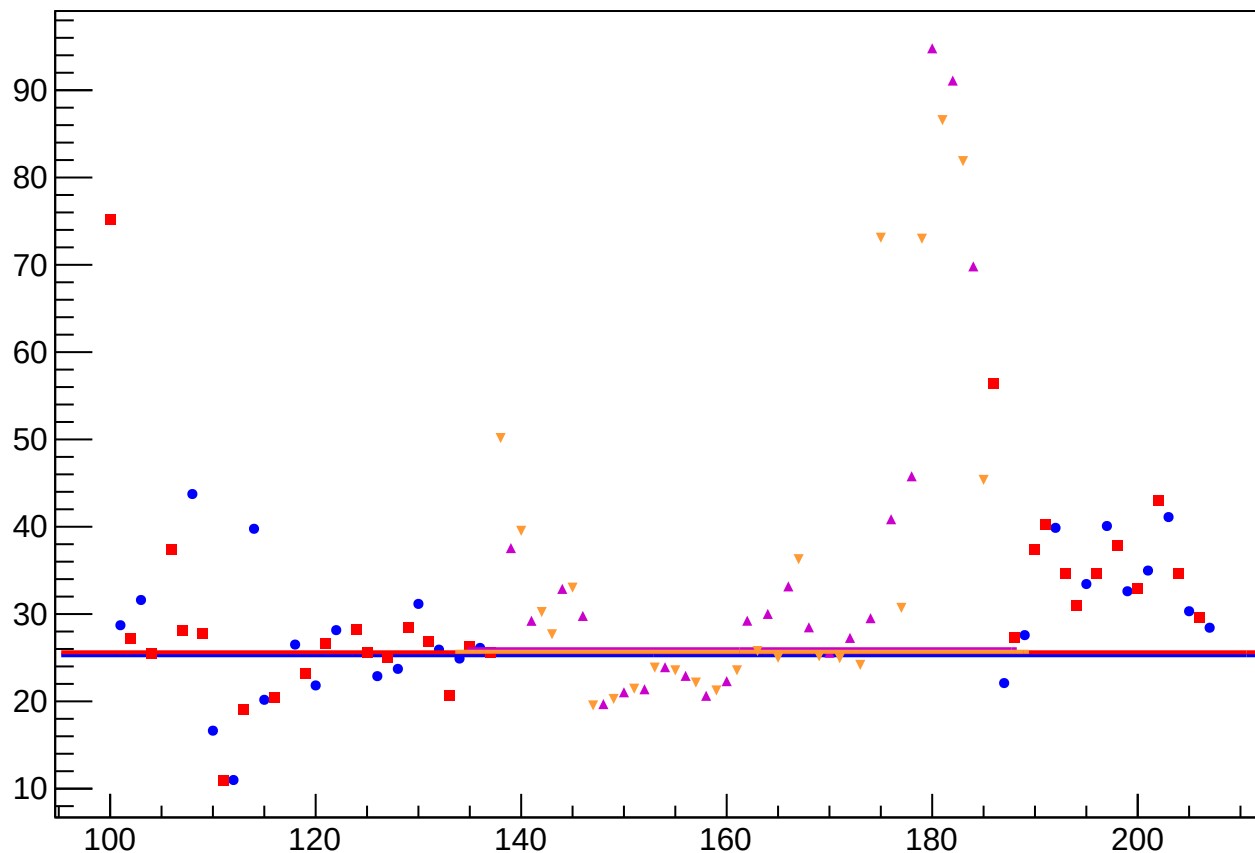
Left In: -0.006 $\pm$ 0.007  $\chi^2$ /NDF: 28.4/22

+ sign -0.002 $\pm$ 0.005  $\chi^2$ /NDF: 59.1/50

All: -0.000 $\pm$ 0.003  $\chi^2$ /NDF: 127.0/104

- sign 0.001 $\pm$ 0.005  $\chi^2$ /NDF: 67.8/53

# asym\_sam8\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 25.279 $\pm$ 0.005  $\chi^2$ /NDF: 3048898.8/25

Left Out: 25.685 $\pm$ 0.005  $\chi^2$ /NDF: 3871541.1/24

Right Out: 25.622 $\pm$ 0.005  $\chi^2$ /NDF: 3094610.1/30

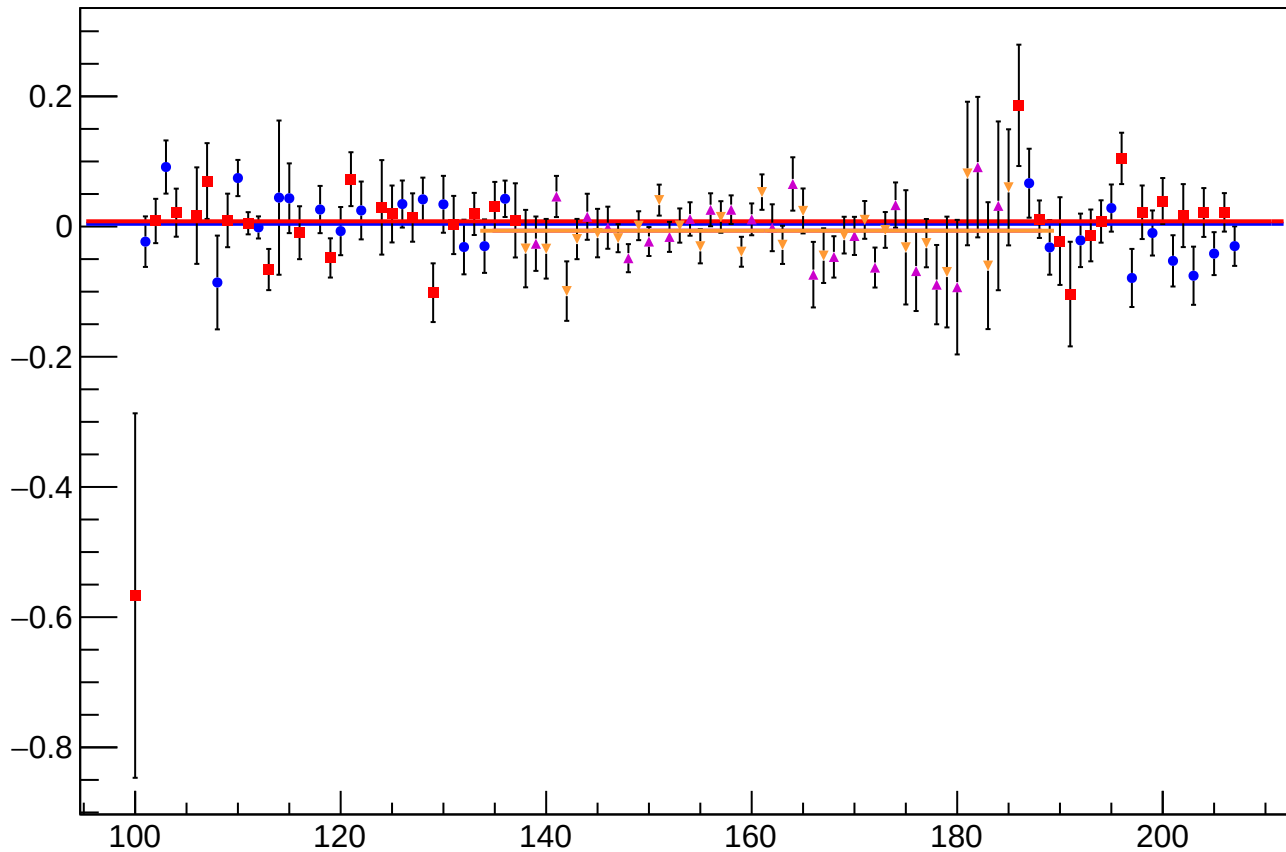
Left In: 25.972 $\pm$ 0.005  $\chi^2$ /NDF: 3118335.6/22

+ sign 25.502 $\pm$ 0.003  $\chi^2$ /NDF: 6924060.8/50

All: 25.652 $\pm$ 0.002  $\chi^2$ /NDF: 13143689.4/104

- sign 25.802 $\pm$ 0.003  $\chi^2$ /NDF: 6215642.5/53

# asym\_sam8\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.004 $\pm$ 0.007  $\chi^2$ /NDF: 35.3/25

Left Out: -0.006 $\pm$ 0.006  $\chi^2$ /NDF: 22.6/24

Right Out: 0.008 $\pm$ 0.007  $\chi^2$ /NDF: 37.1/30

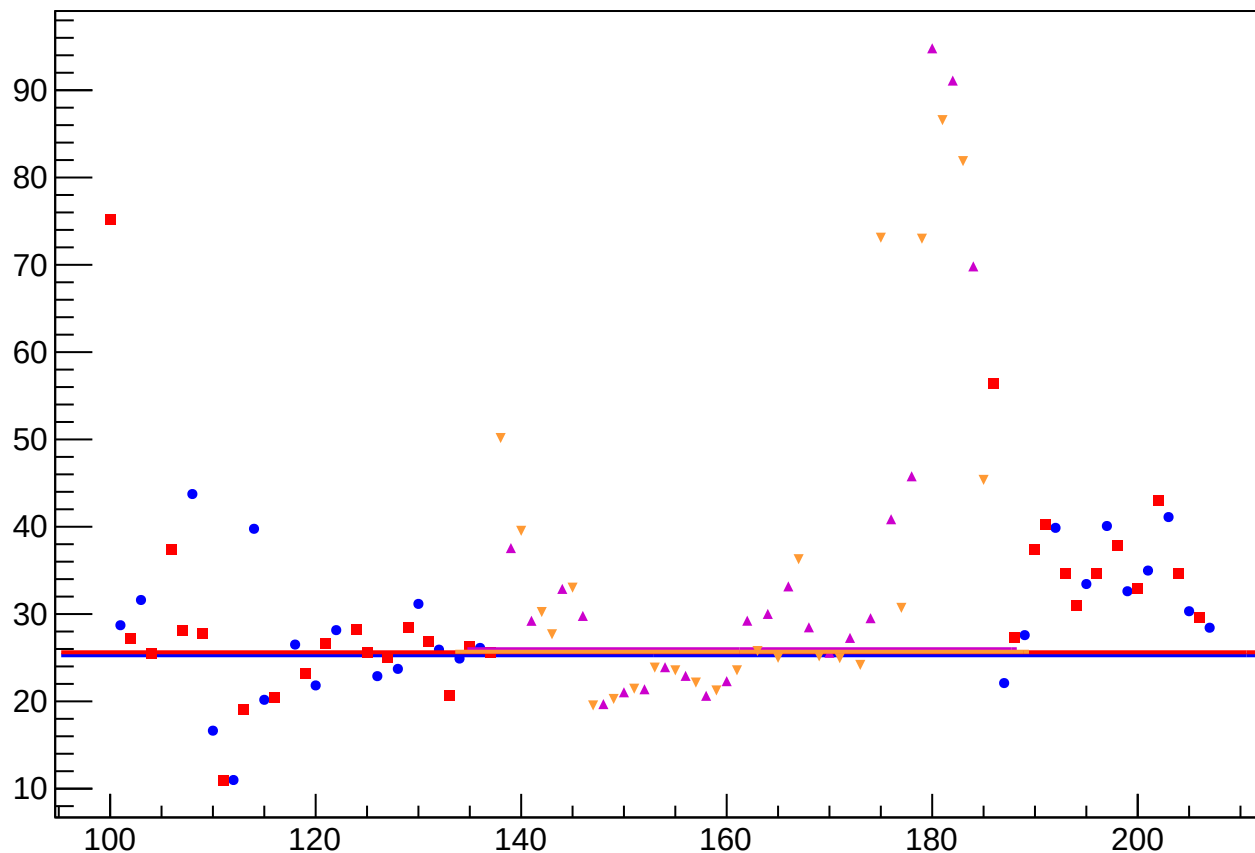
Left In: -0.006 $\pm$ 0.007  $\chi^2$ /NDF: 28.4/22

+ sign -0.002 $\pm$ 0.005  $\chi^2$ /NDF: 59.1/50

All: -0.000 $\pm$ 0.003  $\chi^2$ /NDF: 127.0/104

- sign 0.001 $\pm$ 0.005  $\chi^2$ /NDF: 67.8/53

# asym\_sam8\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 25.279 $\pm$ 0.005  $\chi^2$ /NDF: 3048898.8/25

Left Out: 25.685 $\pm$ 0.005  $\chi^2$ /NDF:3871541.1/24

Right Out: 25.622 $\pm$ 0.005  $\chi^2$ /NDF: 3094610.1/30

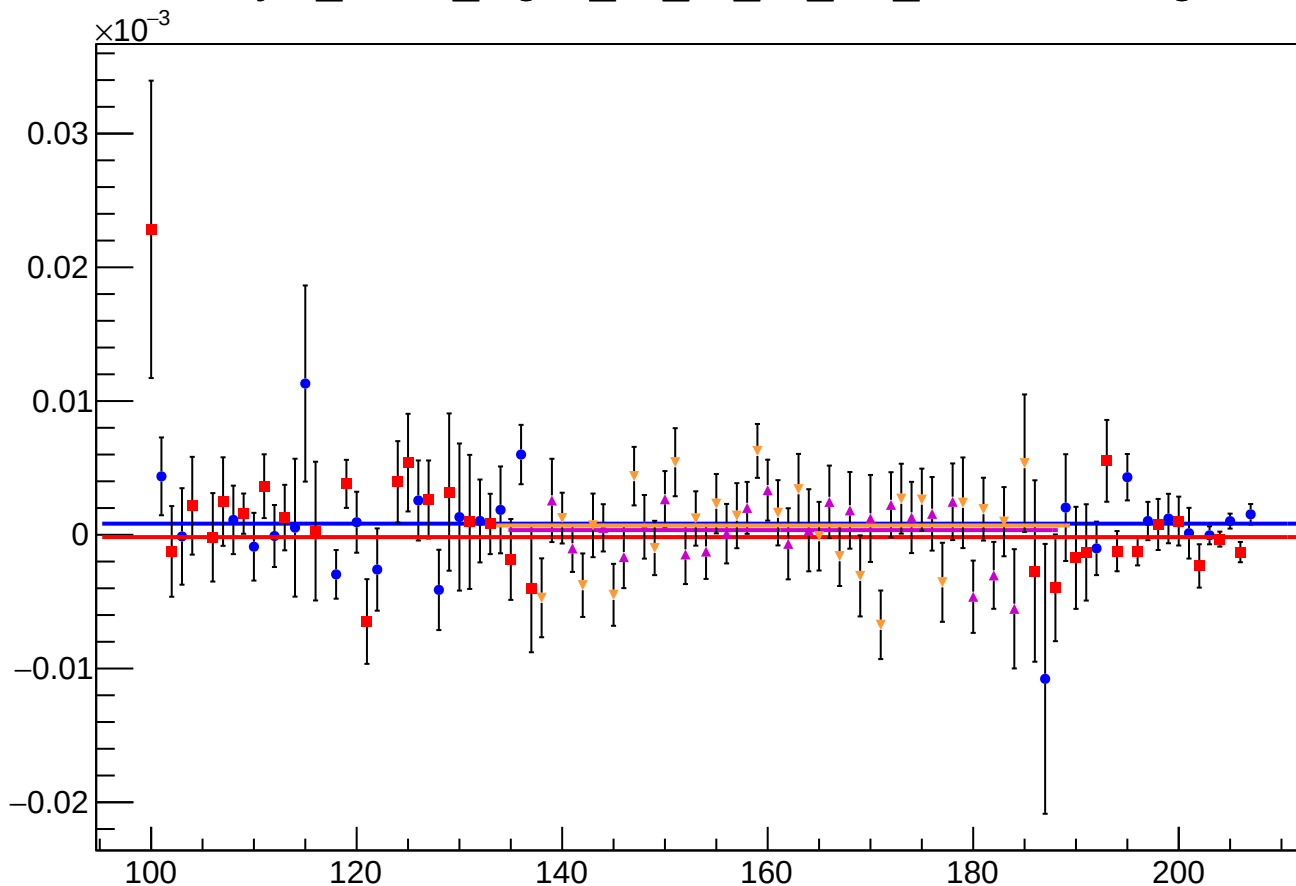
Left In: 25.972 $\pm$ 0.005  $\chi^2$ /NDF:3118335.6/22

+ sign 25.502 $\pm$ 0.003  $\chi^2$ /NDF: 6924060.8/50

All: 25.652 $\pm$ 0.002  $\chi^2$ /NDF: 13143689.4/104

- sign 25.802 $\pm$ 0.003  $\chi^2$ /NDF: 6215642.5/53

# asym\_sam8\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 27.5/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:44.3/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 36.3/30

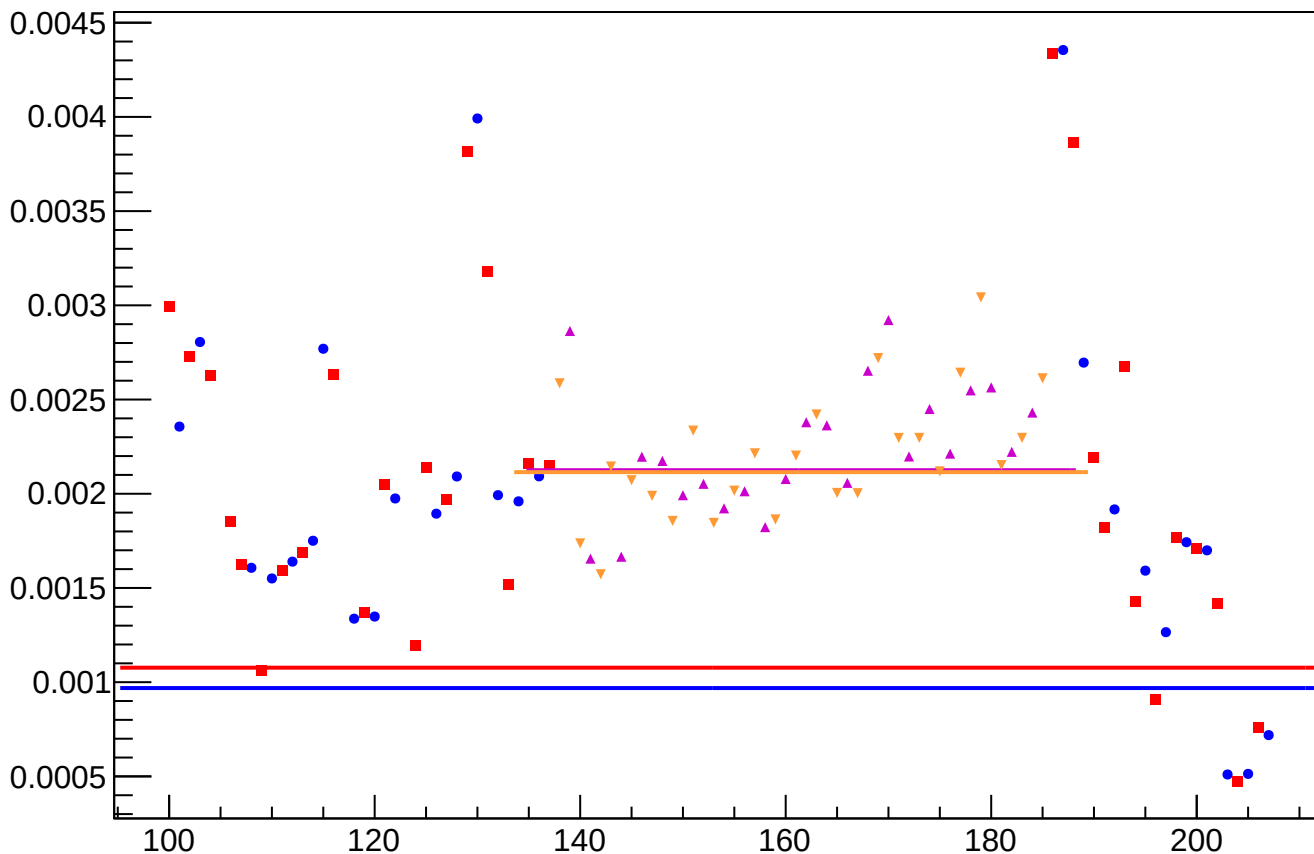
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:16.4/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 71.9/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 130.1/104

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 53.4/53

# asym\_sam8\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 8384743.5/25

Left Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 743658.4/24

Right Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 8974585.8/30

Left In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 837770.9/22

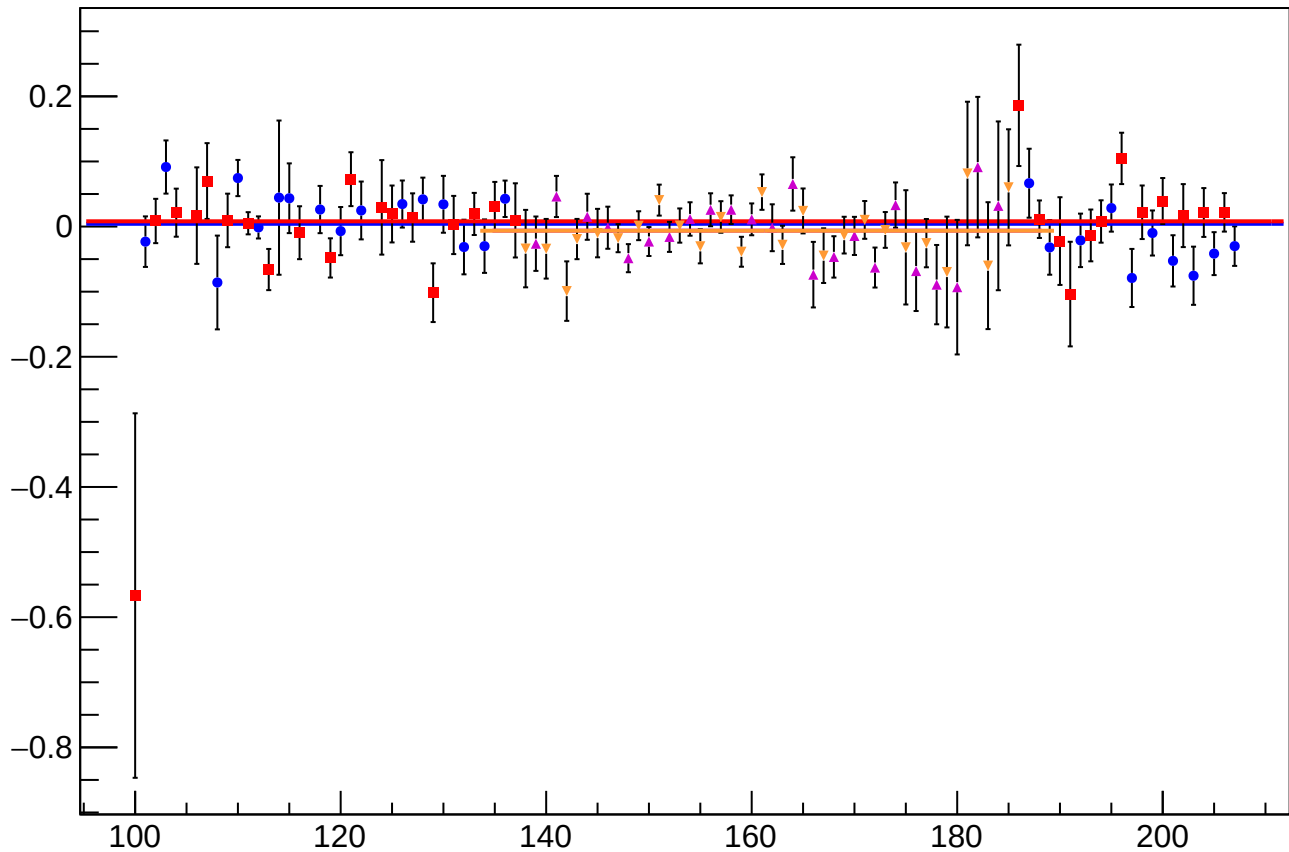
+ sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 17107264.7/50

All: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 33220559.5/104

- sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 16010850.0/53



# asym\_sam8\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.004 $\pm$ 0.007  $\chi^2$ /NDF: 35.3/25

Left Out: -0.006 $\pm$ 0.006  $\chi^2$ /NDF: 22.6/24

Right Out: 0.008 $\pm$ 0.007  $\chi^2$ /NDF: 37.1/30

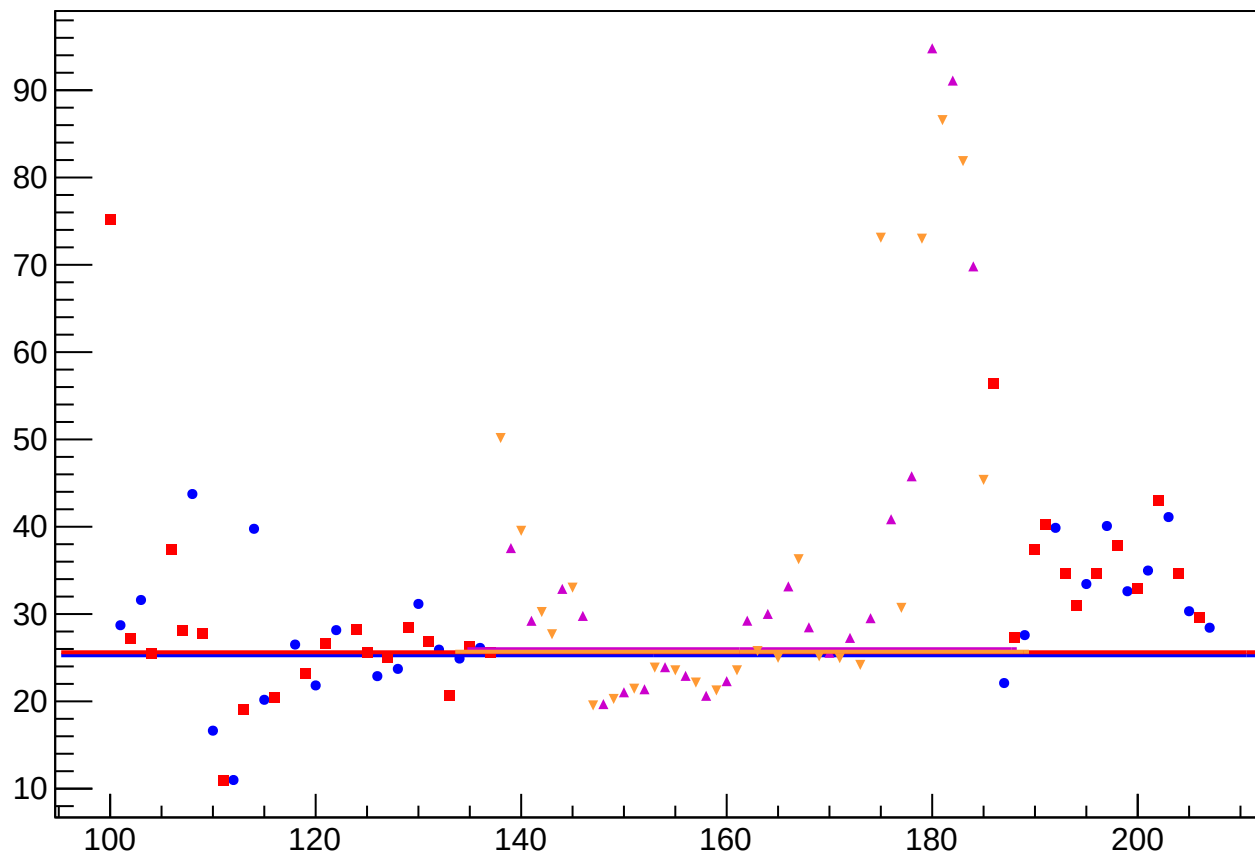
Left In: -0.006 $\pm$ 0.007  $\chi^2$ /NDF: 28.4/22

+ sign -0.002 $\pm$ 0.005  $\chi^2$ /NDF: 59.1/50

All: -0.000 $\pm$ 0.003  $\chi^2$ /NDF: 127.0/104

- sign 0.001 $\pm$ 0.005  $\chi^2$ /NDF: 67.8/53

# asym\_sam8\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 25.279 $\pm$ 0.005  $\chi^2$ /NDF: 3049175.8/25

Left Out: 25.685 $\pm$ 0.005  $\chi^2$ /NDF: 3871544.4/24

Right Out: 25.621 $\pm$ 0.005  $\chi^2$ /NDF: 3094896.6/30

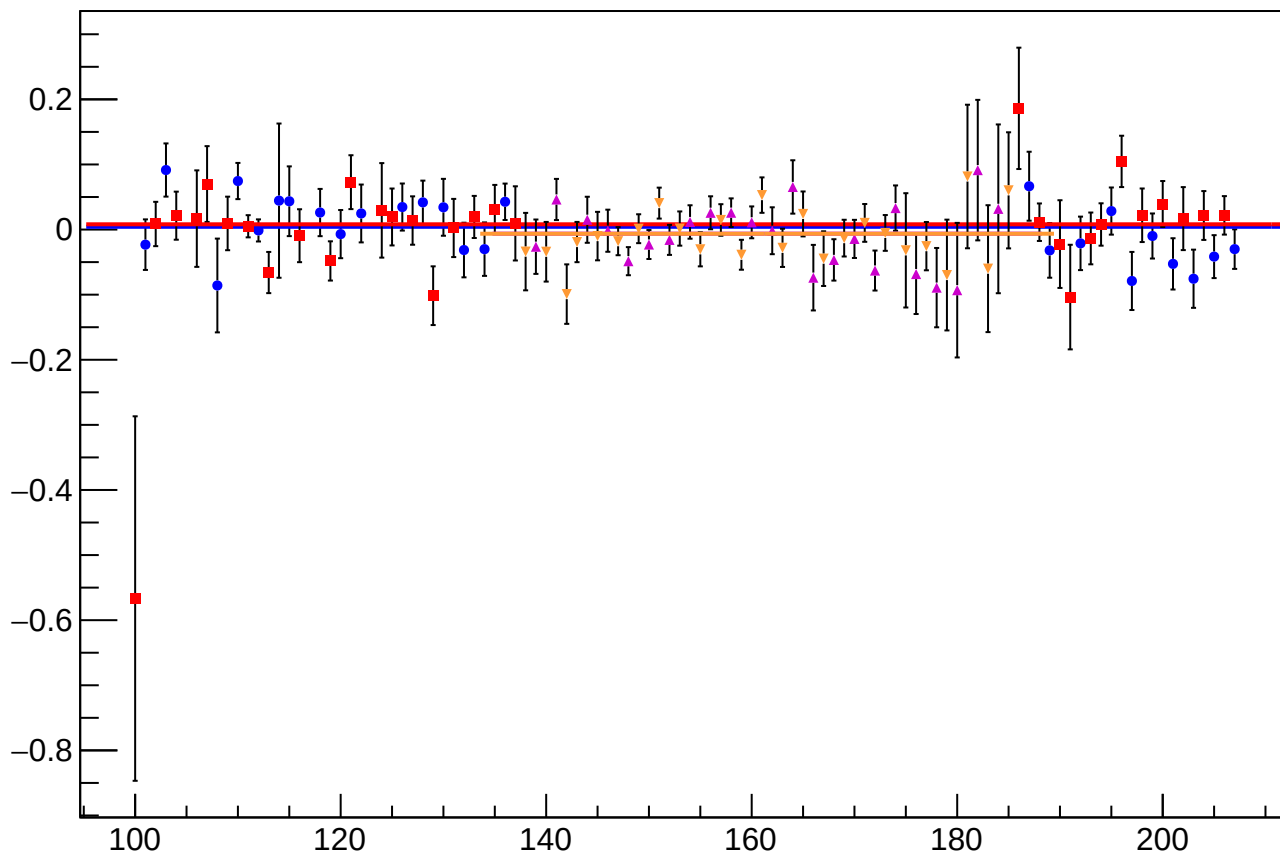
Left In: 25.972 $\pm$ 0.005  $\chi^2$ /NDF: 3118315.0/22

+ sign 25.502 $\pm$ 0.003  $\chi^2$ /NDF: 6924352.0/50

All: 25.652 $\pm$ 0.002  $\chi^2$ /NDF: 13144256.8/104

- sign 25.802 $\pm$ 0.003  $\chi^2$ /NDF: 6215919.8/53

asym\_sam8\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.004 $\pm$ 0.007  $\chi^2$ /NDF: 35.3/25

Left Out: -0.006 $\pm$ 0.006  $\chi^2$ /NDF: 22.6/24

Right Out: 0.008 $\pm$ 0.007  $\chi^2$ /NDF: 37.1/30

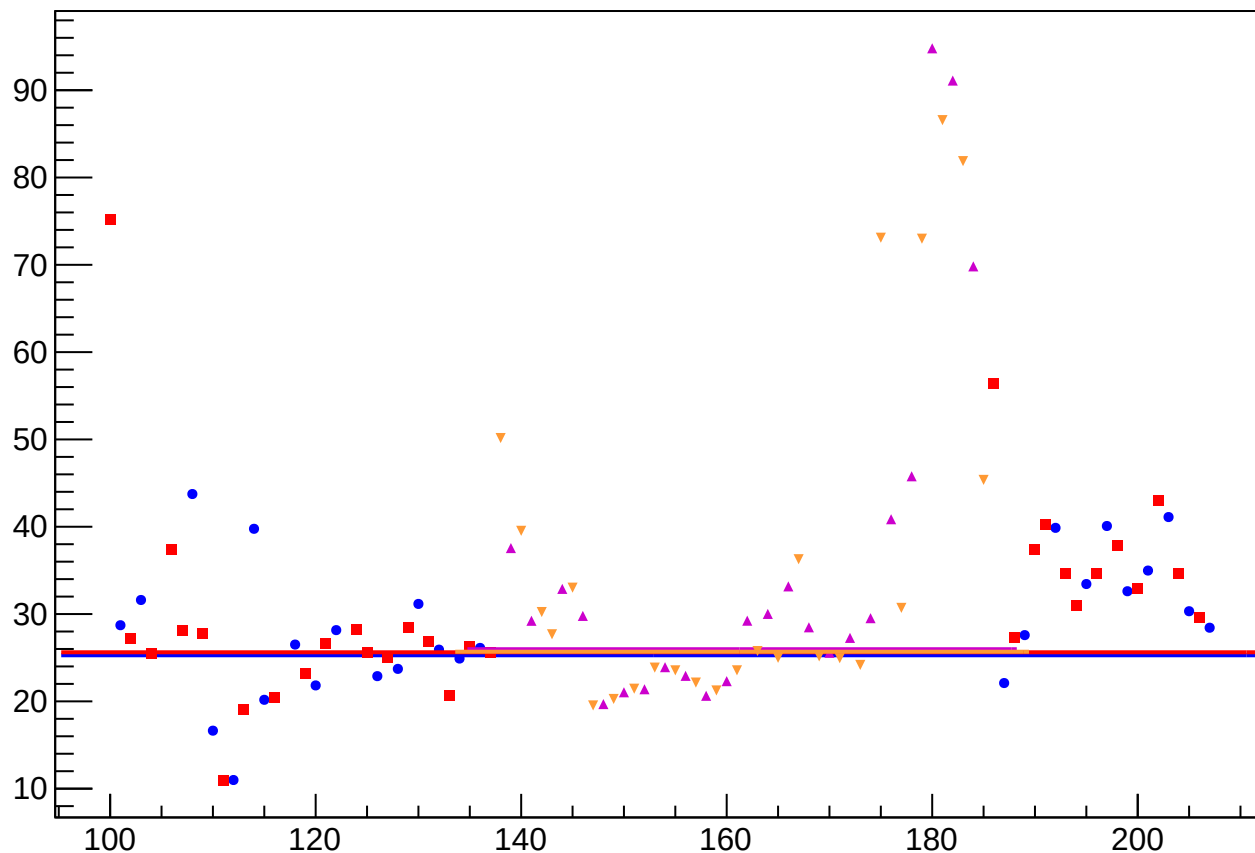
Left In: -0.006 $\pm$ 0.007  $\chi^2$ /NDF: 28.4/22

+ sign -0.002 $\pm$ 0.005  $\chi^2$ /NDF: 59.1/50

All: -0.000 $\pm$ 0.003  $\chi^2$ /NDF: 127.0/104

- sign 0.001 $\pm$ 0.005  $\chi^2$ /NDF: 67.8/53

asym\_sam8\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 25.279 $\pm$ 0.005  $\chi^2$ /NDF: 3049175.8/25

Left Out: 25.685 $\pm$ 0.005  $\chi^2$ /NDF: 3871544.4/24

Right Out: 25.621 $\pm$ 0.005  $\chi^2$ /NDF: 3094896.6/30

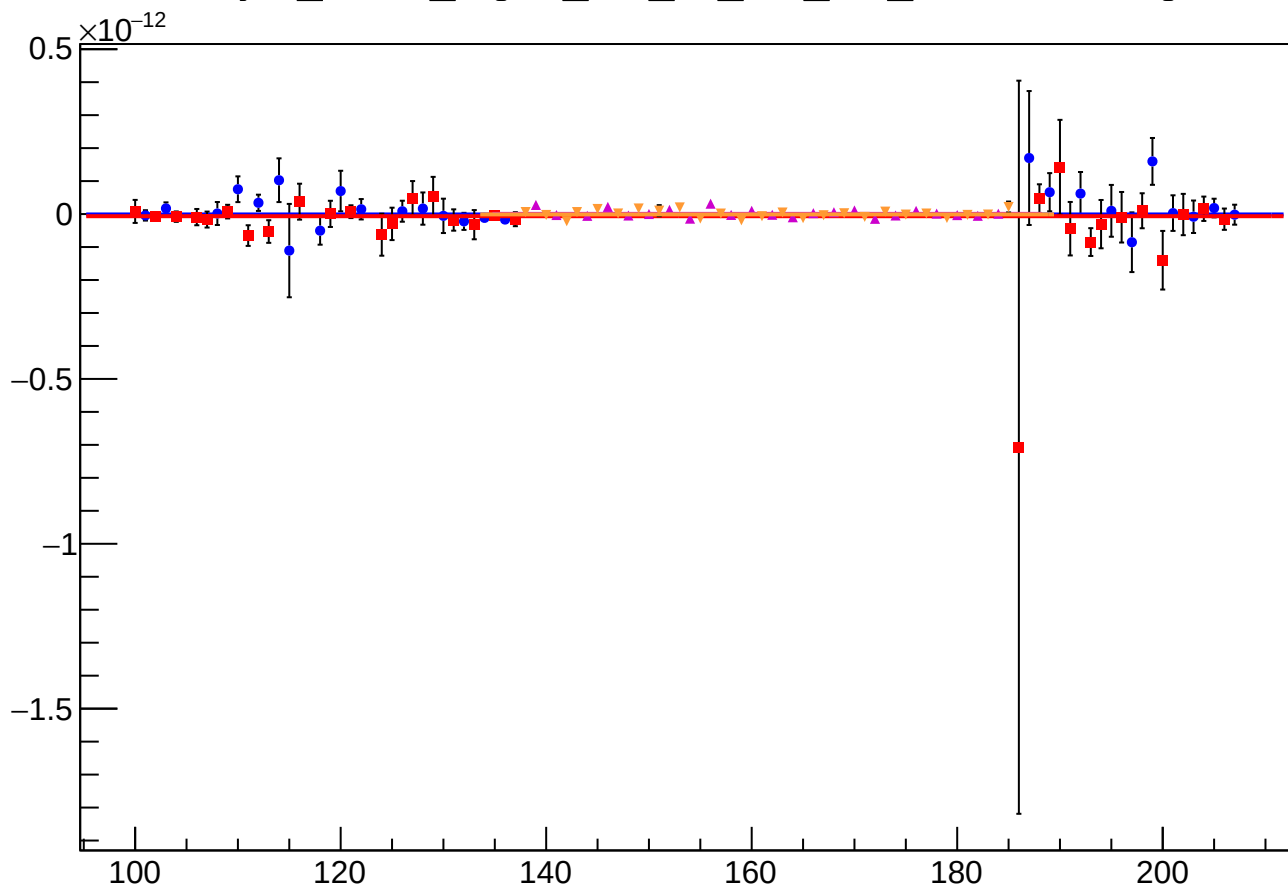
Left In: 25.972 $\pm$ 0.005  $\chi^2$ /NDF: 3118315.0/22

+ sign 25.502 $\pm$ 0.003  $\chi^2$ /NDF: 6924352.0/50

All: 25.652 $\pm$ 0.002  $\chi^2$ /NDF: 13144256.8/104

- sign 25.802 $\pm$ 0.003  $\chi^2$ /NDF: 6215919.8/53

# asym\_sam8\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 26.9/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 28.8/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 20.7/30

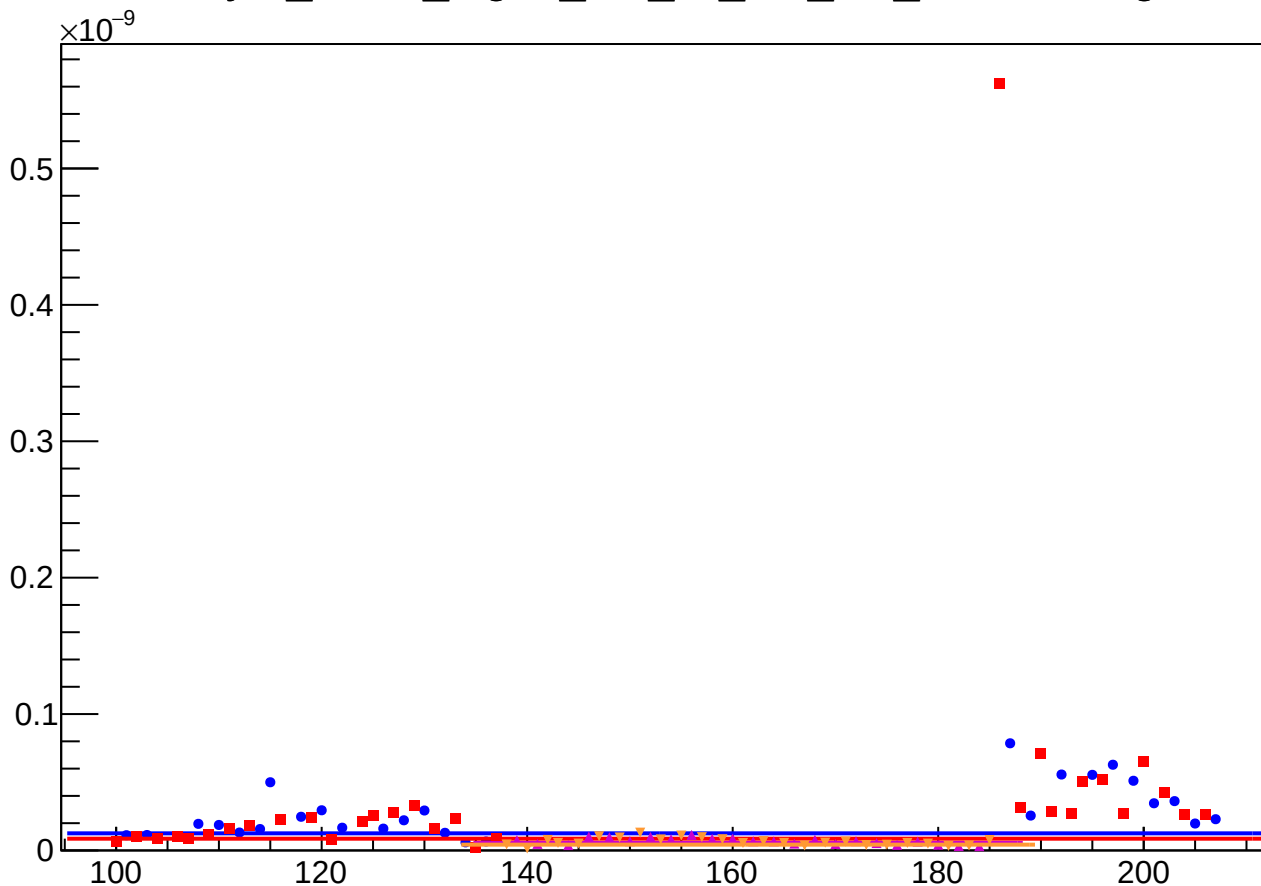
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 29.7/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 55.7/50

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 108.6/104

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 52.8/53

# asym\_sam8\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6417324.0/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5399109.9/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10291988.1/30

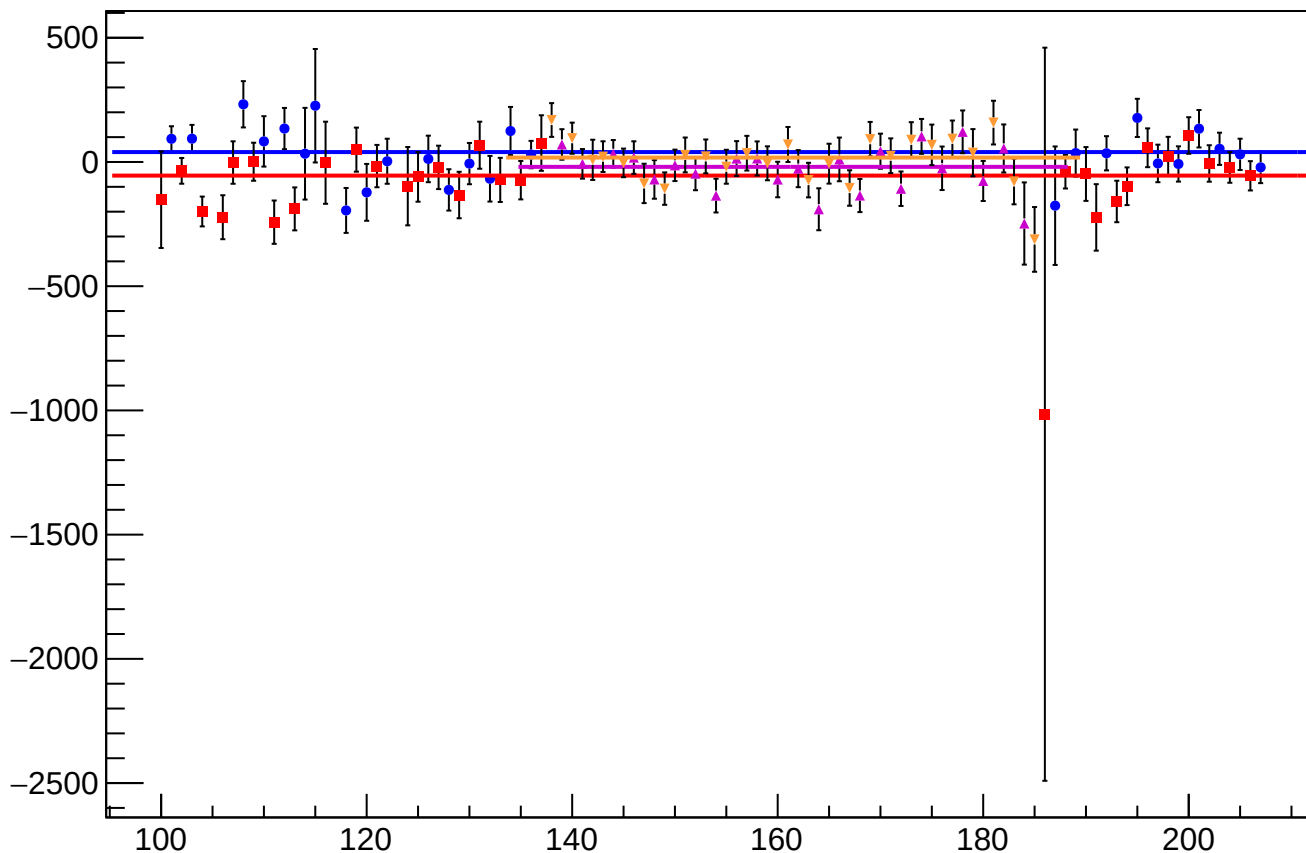
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2811616.7/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 16593471.3/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 31237131.9/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14094316.4/53

# reg\_asym\_sam\_15\_avg\_mean vs Slug



Right In: 39.899±15.439  $\chi^2/\text{NDF}$ : 30.7/25

Left Out: 17.800±14.495  $\chi^2/\text{NDF}$ : 31.6/24

Right Out: -54.779±14.938  $\chi^2/\text{NDF}$ : 36.0/30

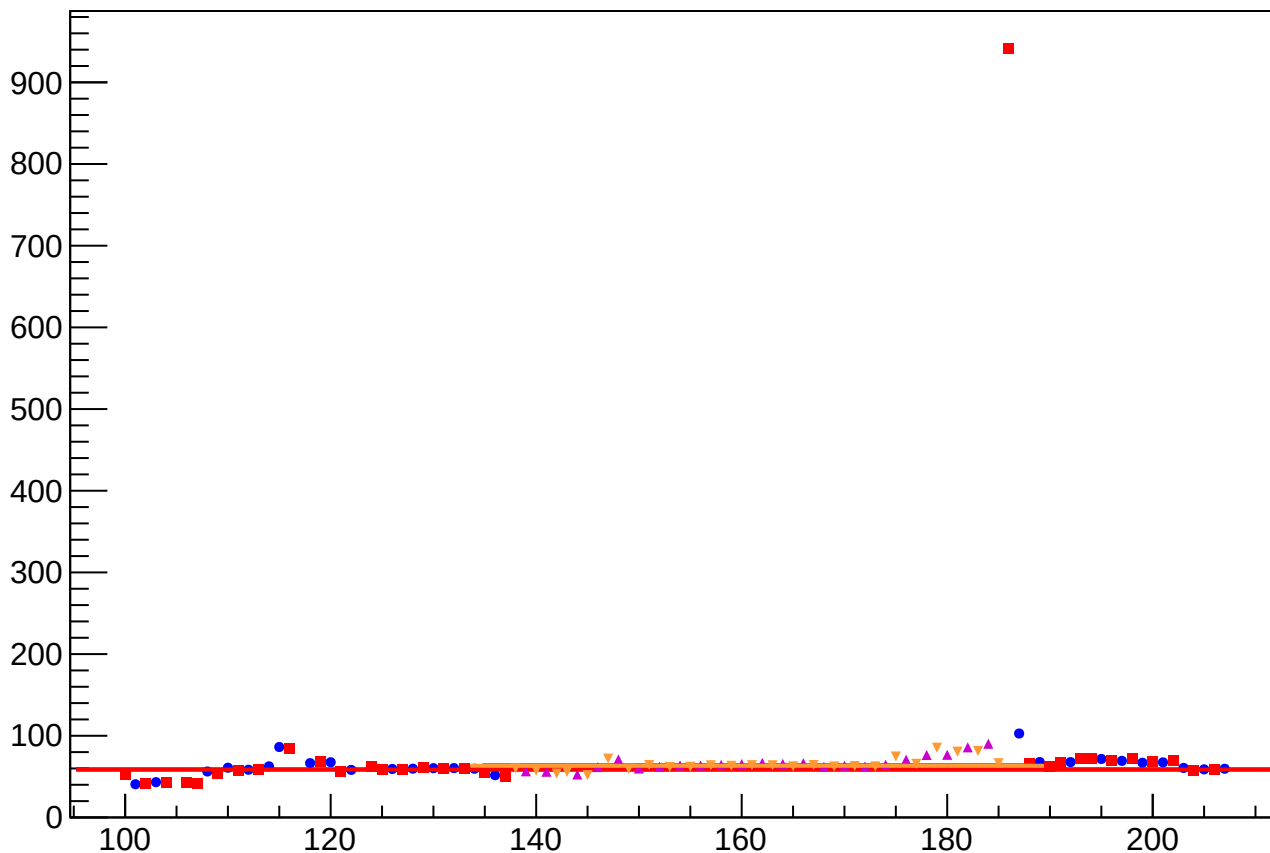
Left In: -19.642±15.040  $\chi^2/\text{NDF}$ : 26.2/22

+ sign 28.154±10.567  $\chi^2/\text{NDF}$ : 63.4/50

All: -4.492±7.483  $\chi^2/\text{NDF}$ : 147.5/104

- sign -37.330±10.599  $\chi^2/\text{NDF}$ : 65.0/53

# reg\_asym\_sam\_15\_avg\_rms vs Slug



Right In: 58.742 $\pm$ 0.011  $\chi^2$ /NDF: 776832.7/25

Left Out: 63.312 $\pm$ 0.010  $\chi^2$ /NDF: 497429.6/24

Right Out: 58.703 $\pm$ 0.011  $\chi^2$ /NDF: 1647781.2/30

Left In: 63.918 $\pm$ 0.011  $\chi^2$ /NDF: 445309.5/22

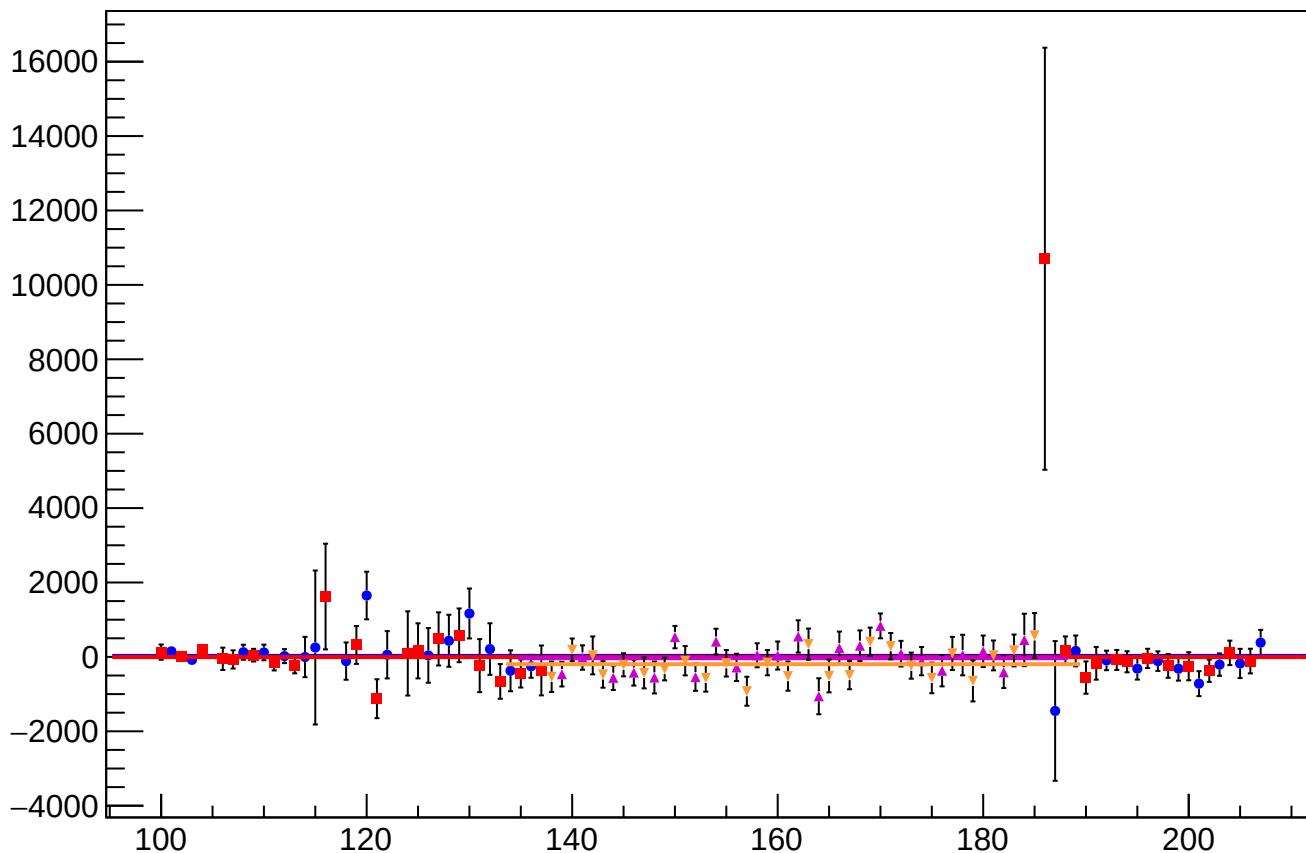
+ sign 61.171 $\pm$ 0.007  $\chi^2$ /NDF: 1367416.5/50

All: 61.232 $\pm$ 0.005  $\chi^2$ /NDF: 3581715.3/104

- sign 61.293 $\pm$ 0.007  $\chi^2$ /NDF: 2214167.1/53



asym\_sam\_15\_avg\_reg\_correction\_mean vs Slug



Right In: 26.353 $\pm$ 42.478  $\chi^2$ /NDF: 27.1/25

Left Out: -195.947 $\pm$ 77.088  $\chi^2$ /NDF:20.6/24

Right Out: -5.530 $\pm$ 44.696  $\chi^2$ /NDF: 27.0/30

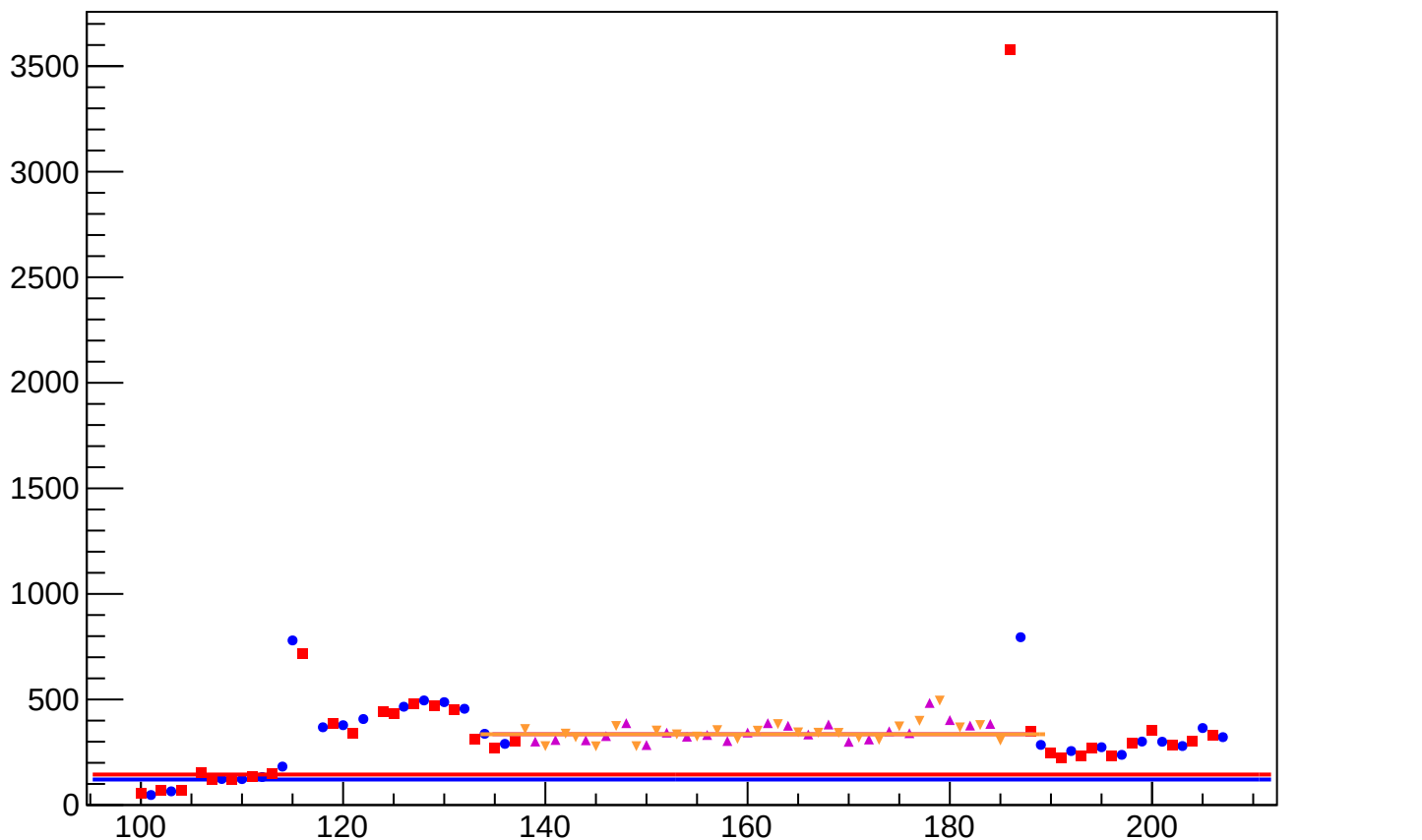
Left In: -36.417 $\pm$ 79.210  $\chi^2$ /NDF:31.1/22

+ sign -25.424 $\pm$ 37.203  $\chi^2$ /NDF: 54.0/50

All: -19.488 $\pm$ 26.895  $\chi^2$ /NDF: 112.3/104

- sign -12.990 $\pm$ 38.927  $\chi^2$ /NDF: 58.2/53

# asym\_sam\_15\_avg\_reg\_correction\_rms vs Slug



Right In: 120.921+/-0.030  $\chi^2/\text{NDF}$ : 12851254.0/25

Left Out: 335.271+/-0.055  $\chi^2/\text{NDF}$ : 563801.0/24

Right Out: 144.562+/-0.032  $\chi^2/\text{NDF}$ : 11336078.6/30

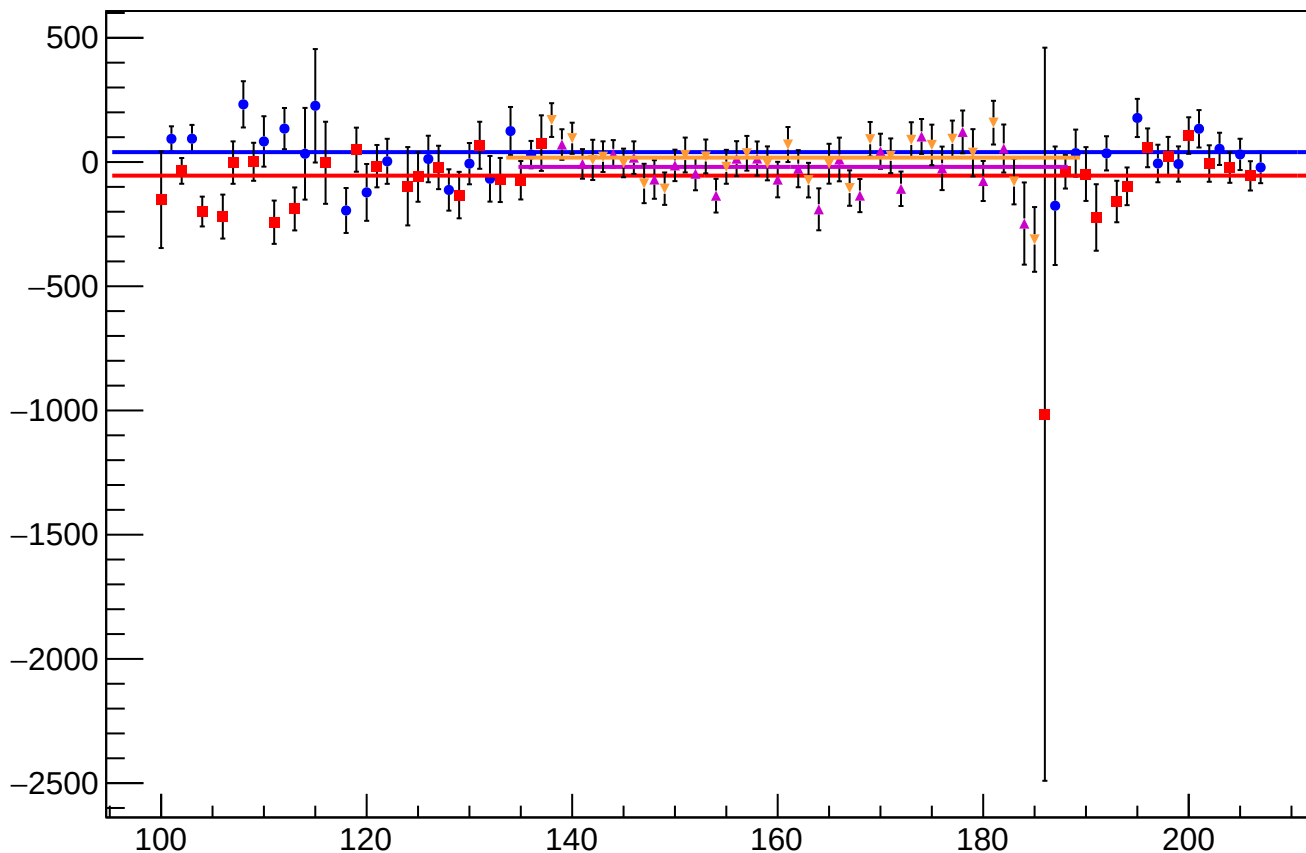
Left In: 335.526+/-0.056  $\chi^2/\text{NDF}$ : 495163.6/22

+ sign 170.846+/-0.026  $\chi^2/\text{NDF}$ : 25276748.6/50

All: 180.315+/-0.019  $\chi^2/\text{NDF}$ : 46196478.6/10

- sign 190.682+/-0.028  $\chi^2/\text{NDF}$ : 20648311.7/53

# cor\_asym\_sam\_15\_avg\_mean vs Slug



Right In:  $39.906 \pm 15.439$   $\chi^2/\text{NDF}: 30.7/25$

Left Out:  $17.804 \pm 14.495$   $\chi^2/\text{NDF}: 31.6/24$

Right Out:  $-54.702 \pm 14.939$   $\chi^2/\text{NDF}: 35.9/30$

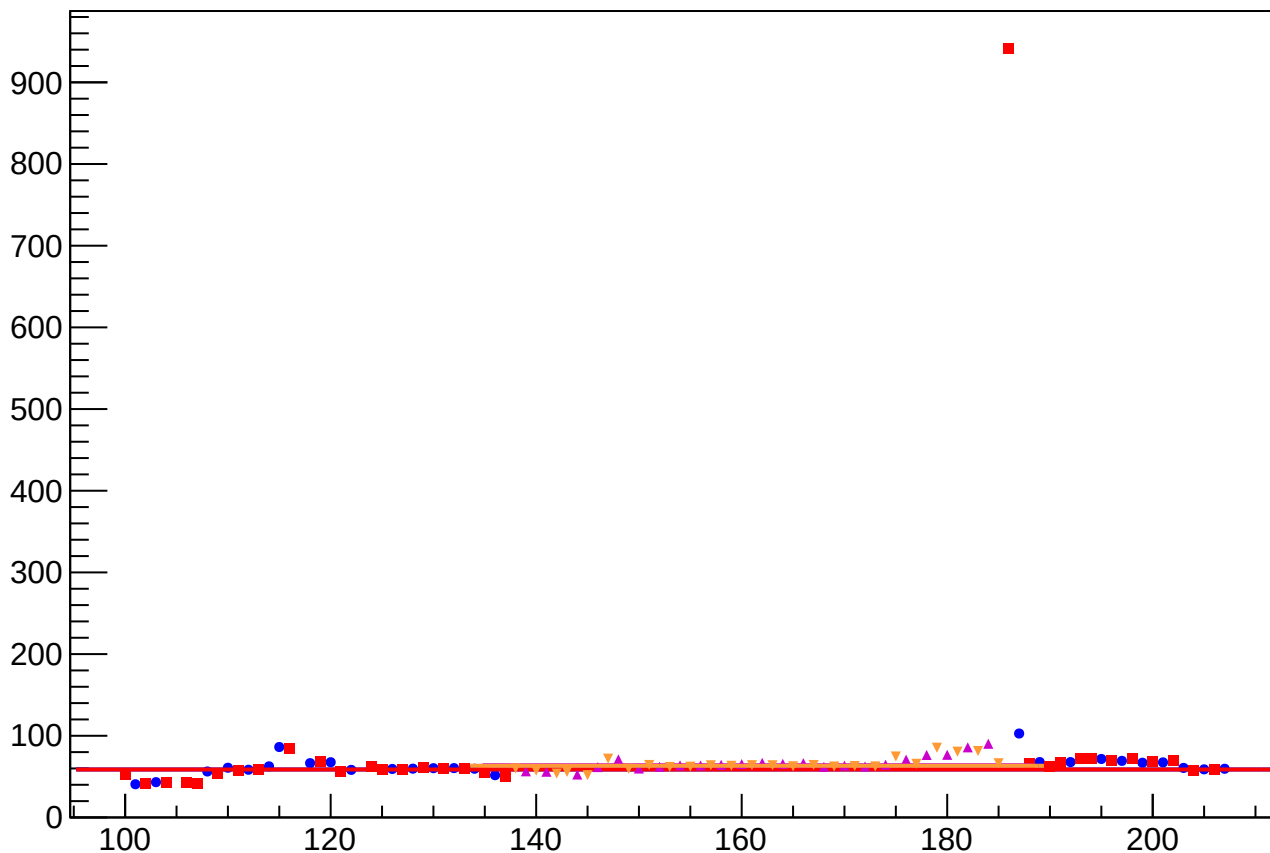
Left In:  $-19.642 \pm 15.040$   $\chi^2/\text{NDF}: 26.2/22$

+ sign  $28.159 \pm 10.567$   $\chi^2/\text{NDF}: 63.4/50$

All:  $-4.469 \pm 7.483$   $\chi^2/\text{NDF}: 147.3/104$

- sign  $-37.291 \pm 10.599$   $\chi^2/\text{NDF}: 64.9/53$

# cor\_asym\_sam\_15\_avg\_rms vs Slug



Right In: 58.742 $\pm$ 0.011  $\chi^2$ /NDF: 776831.7/25

Left Out: 63.312 $\pm$ 0.010  $\chi^2$ /NDF: 497429.6/24

Right Out: 58.702 $\pm$ 0.011  $\chi^2$ /NDF: 1648197.5/30

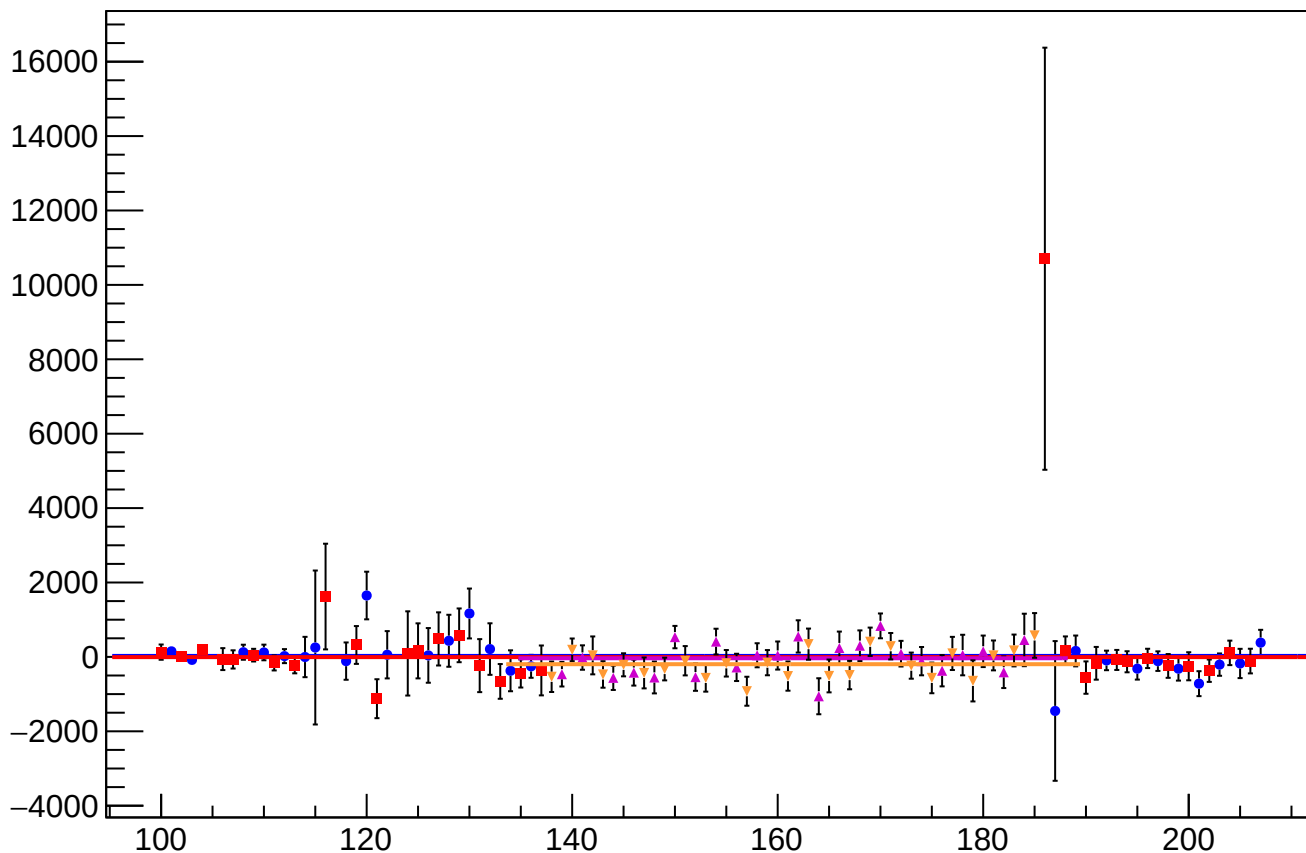
Left In: 63.918 $\pm$ 0.011  $\chi^2$ /NDF: 445309.5/22

+ sign 61.171 $\pm$ 0.007  $\chi^2$ /NDF: 1367415.4/50

All: 61.232 $\pm$ 0.005  $\chi^2$ /NDF: 3582162.8/104

- sign 61.292 $\pm$ 0.007  $\chi^2$ /NDF: 2214616.4/53

# asym\_sam\_15\_avg\_cor\_correction\_mean vs Slug



Right In: 26.357 $\pm$ 42.477  $\chi^2$ /NDF: 27.1/25

Left Out: -195.942 $\pm$ 77.088  $\chi^2$ /NDF:20.6/24

Right Out: -5.836 $\pm$ 44.666  $\chi^2$ /NDF: 27.0/30

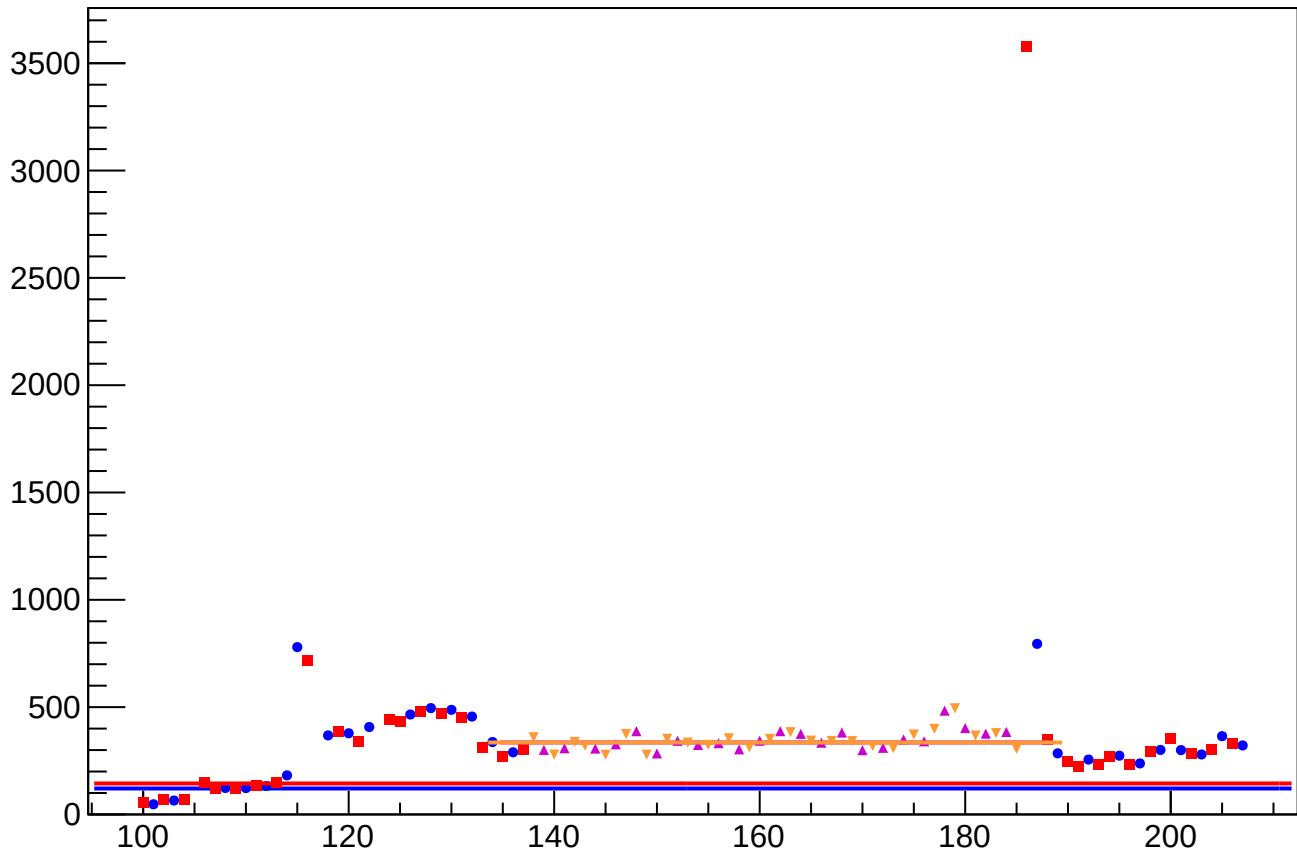
Left In: -36.414 $\pm$ 79.210  $\chi^2$ /NDF:31.1/22

+ sign -25.417 $\pm$ 37.203  $\chi^2$ /NDF: 54.0/50

All: -19.589 $\pm$ 26.889  $\chi^2$ /NDF: 112.3/104

- sign -13.214 $\pm$ 38.907  $\chi^2$ /NDF: 58.2/53

# asym\_sam\_15\_avg\_cor\_correction\_rms vs Slug



Right In: 120.918 $\pm$ 0.030  $\chi^2$ /NDF: 12851532.7/25

Left Out: 335.271 $\pm$ 0.055  $\chi^2$ /NDF: 563797.0/24

Right Out: 144.372 $\pm$ 0.032  $\chi^2$ /NDF: 11340075.4/30

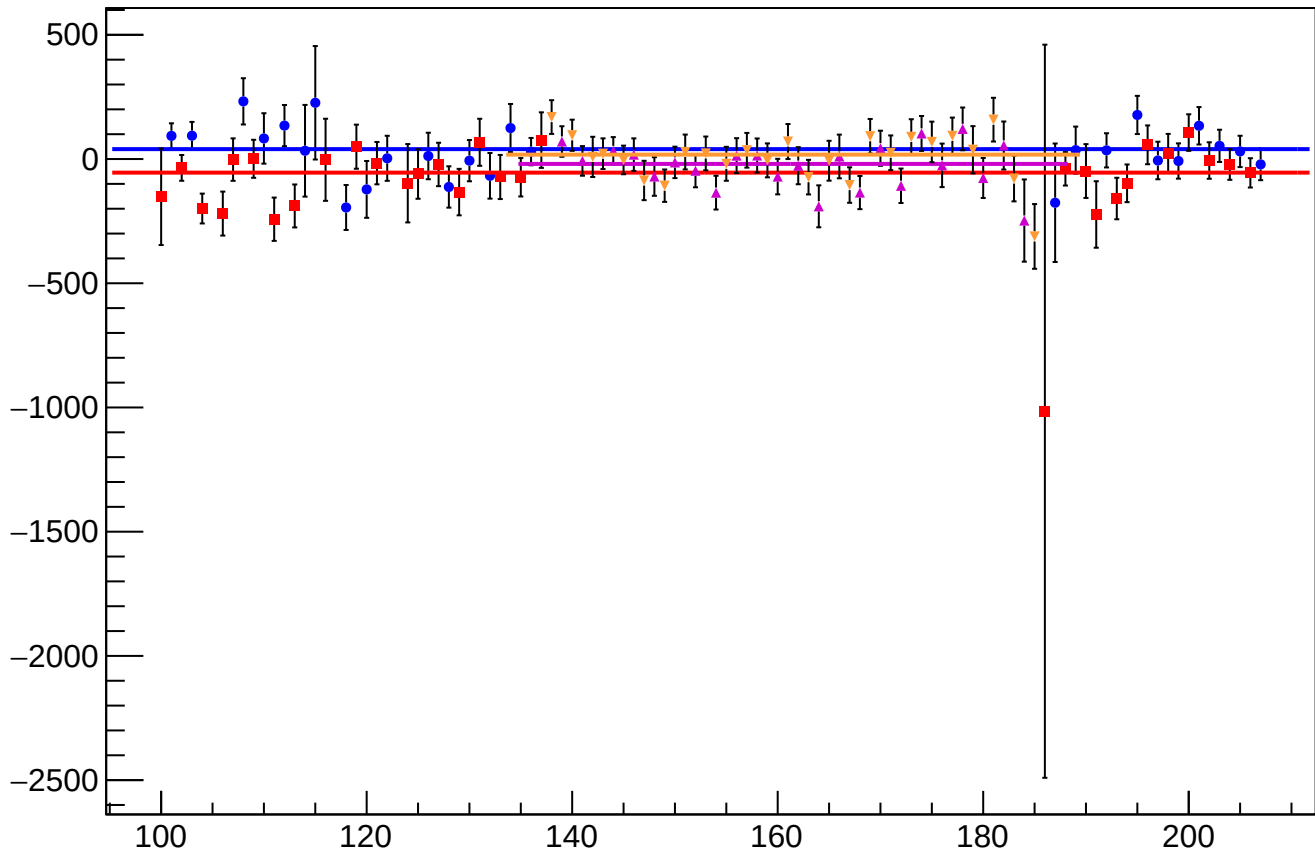
Left In: 335.526 $\pm$ 0.056  $\chi^2$ /NDF: 495170.0/22

+ sign 170.842 $\pm$ 0.026  $\chi^2$ /NDF: 25277499.1/50

All: 180.227 $\pm$ 0.019  $\chi^2$ /NDF: 46216668.7/10

- sign 190.491 $\pm$ 0.028  $\chi^2$ /NDF: 20672700.5/53

eigen\_cor\_asym\_sam\_15\_avg\_mean vs Slug



Right In:  $39.906 \pm 15.439$   $\chi^2/\text{NDF}$ : 30.7/25

Left Out:  $17.804 \pm 14.495$   $\chi^2/\text{NDF}$ : 31.6/24

Right Out:  $-54.702 \pm 14.939$   $\chi^2/\text{NDF}$ : 35.9/30

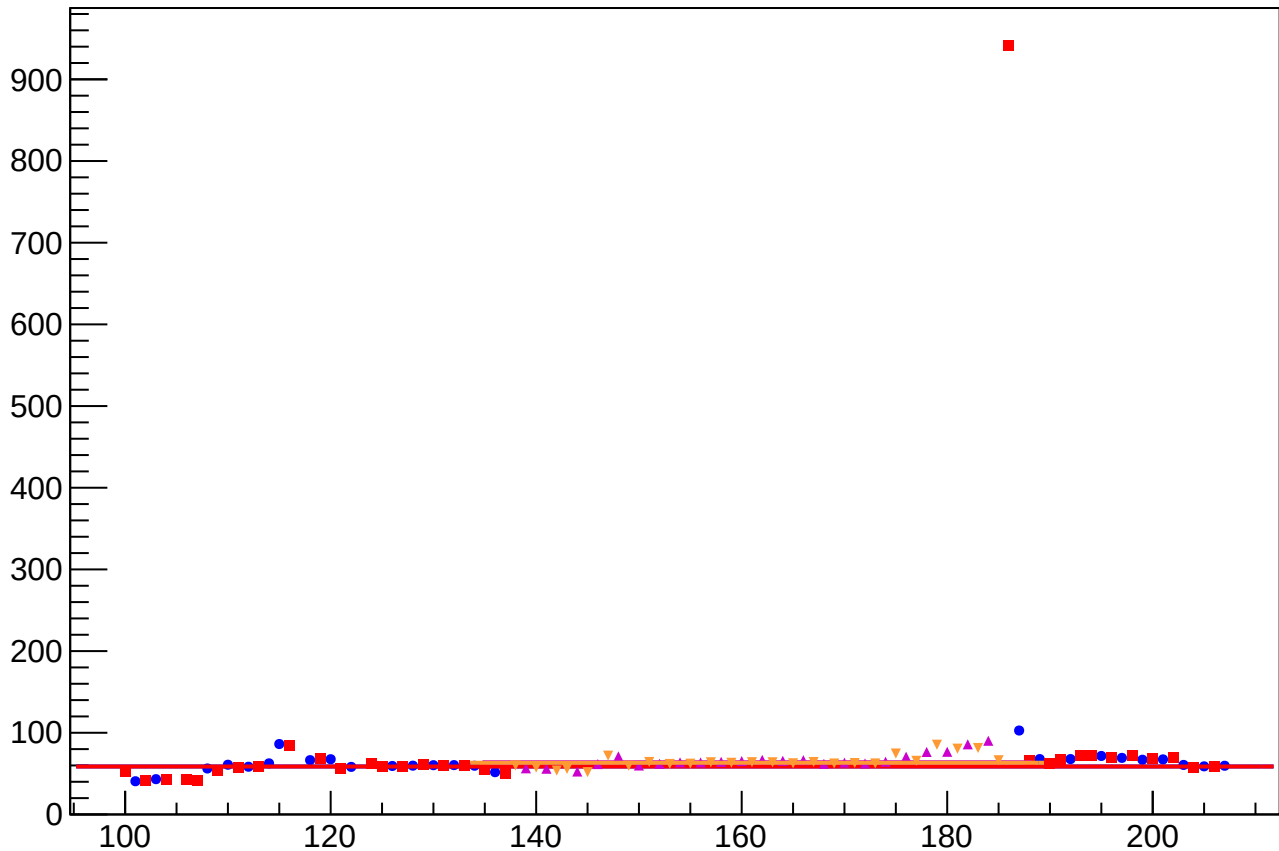
Left In:  $-19.642 \pm 15.040$   $\chi^2/\text{NDF}$ : 26.2/22

+ sign  $28.159 \pm 10.567$   $\chi^2/\text{NDF}$ : 63.4/50

All:  $-4.469 \pm 7.483$   $\chi^2/\text{NDF}$ : 147.3/104

- sign  $-37.291 \pm 10.599$   $\chi^2/\text{NDF}$ : 64.9/53

# eigen\_cor\_asym\_sam\_15\_avg\_rms vs Slug



Right In: 58.742 $\pm$ 0.011  $\chi^2$ /NDF: 776831.7/25

Left Out: 63.312 $\pm$ 0.010  $\chi^2$ /NDF: 497429.6/24

Right Out: 58.702 $\pm$ 0.011  $\chi^2$ /NDF: 1648197.5/30

Left In: 63.918 $\pm$ 0.011  $\chi^2$ /NDF: 445309.5/22

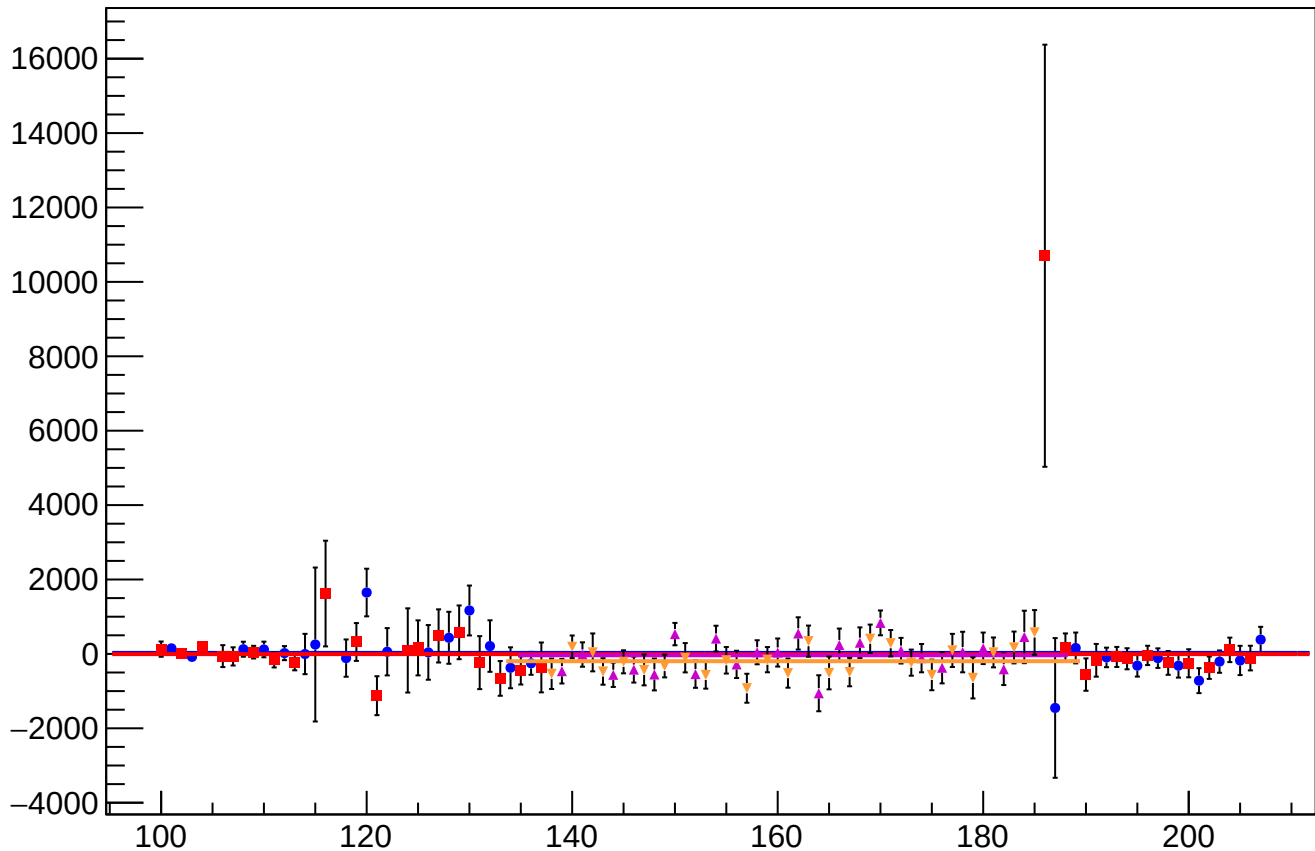
+ sign 61.171 $\pm$ 0.007  $\chi^2$ /NDF: 1367415.4/50

All: 61.232 $\pm$ 0.005  $\chi^2$ /NDF: 3582162.8/104

- sign 61.292 $\pm$ 0.007  $\chi^2$ /NDF: 2214616.4/53



asym\_sam\_15\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In: 26.357+/-42.477  $\chi^2/\text{NDF}$ : 27.1/25

Left Out: -195.942+/-77.088  $\chi^2/\text{NDF}$ : 20.6/24

Right Out: -5.836+/-44.666  $\chi^2/\text{NDF}$ : 27.0/30

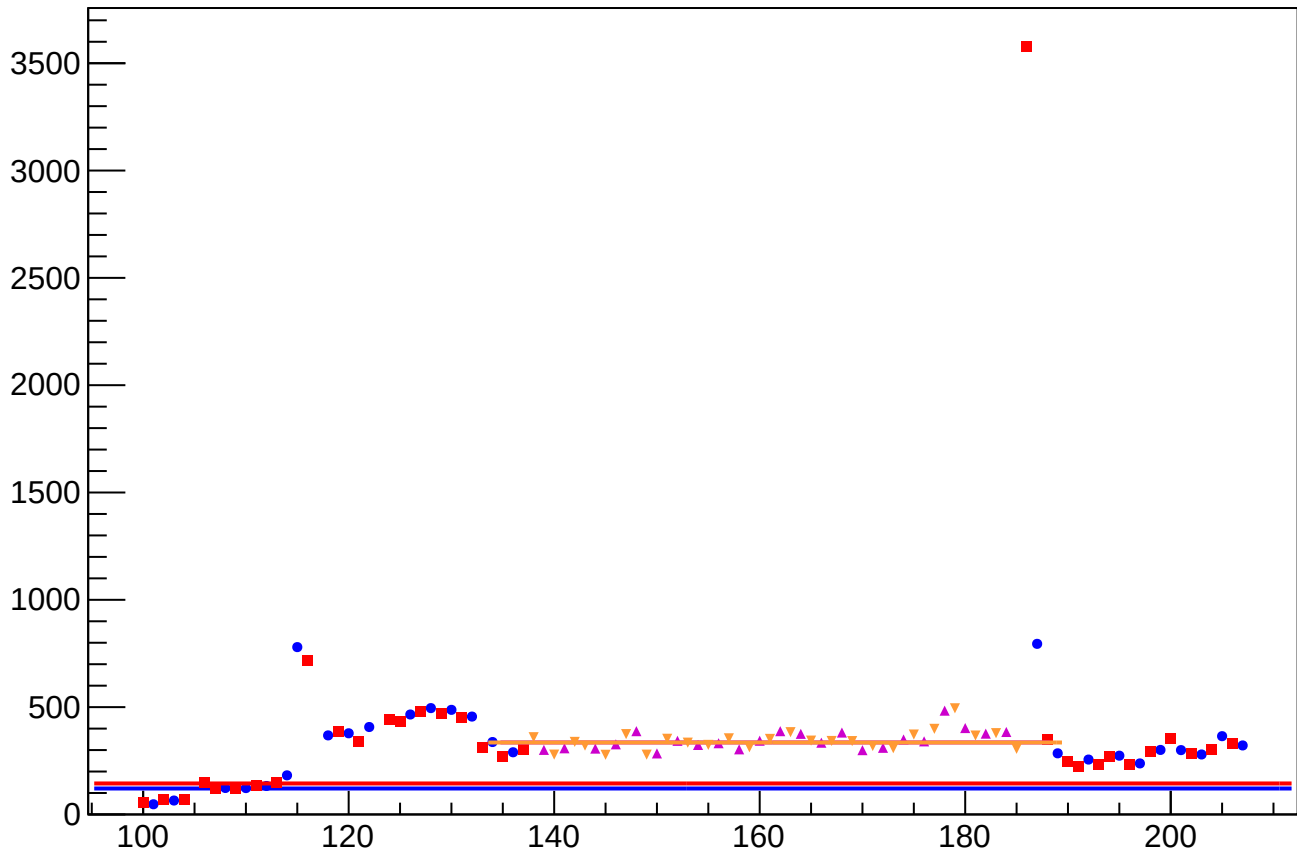
Left In: -36.414+/-79.210  $\chi^2/\text{NDF}$ : 31.1/22

+ sign -25.417+/-37.203  $\chi^2/\text{NDF}$ : 54.0/50

All: -19.589+/-26.889  $\chi^2/\text{NDF}$ : 112.3/104

- sign -13.214+/-38.907  $\chi^2/\text{NDF}$ : 58.2/53

asym\_sam\_15\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 120.918 $\pm$ 0.030  $\chi^2$ /NDF: 12851532.7/25

Left Out: 335.271 $\pm$ 0.055  $\chi^2$ /NDF: 563797.0/24

Right Out: 144.372 $\pm$ 0.032  $\chi^2$ /NDF: 11340075.4/30

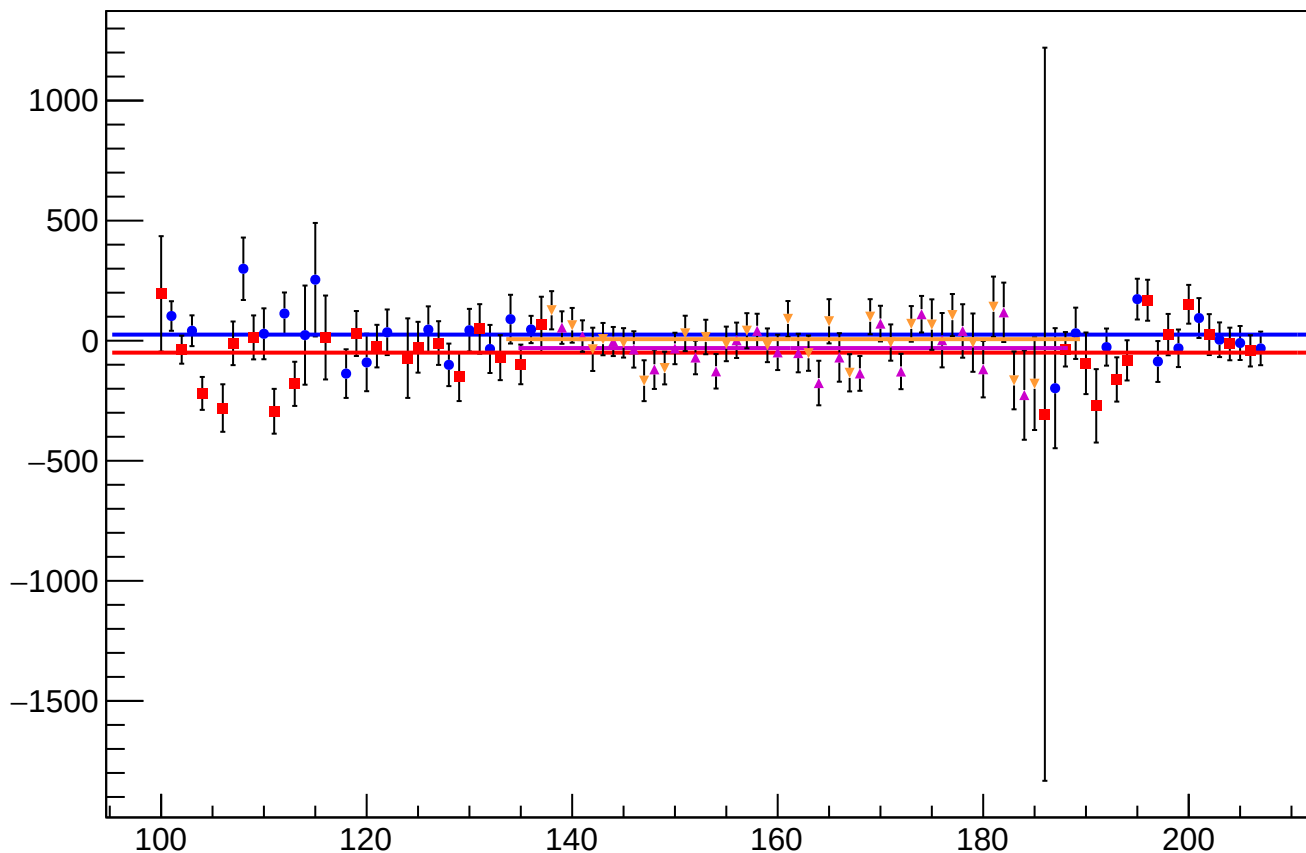
Left In: 335.526 $\pm$ 0.056  $\chi^2$ /NDF: 495170.0/22

+ sign 170.842 $\pm$ 0.026  $\chi^2$ /NDF: 25277499.1/50

All: 180.227 $\pm$ 0.019  $\chi^2$ /NDF: 46216668.7/10

- sign 190.491 $\pm$ 0.028  $\chi^2$ /NDF: 20672700.5/53

# dit\_asym\_sam\_15\_avg\_mean vs Slug



Right In:  $25.382 \pm 17.085$   $\chi^2/\text{NDF}$ : 22.8/25

Left Out:  $6.469 \pm 15.977$   $\chi^2/\text{NDF}$ : 25.1/24

Right Out:  $-49.711 \pm 16.388$   $\chi^2/\text{NDF}$ : 45.2/30

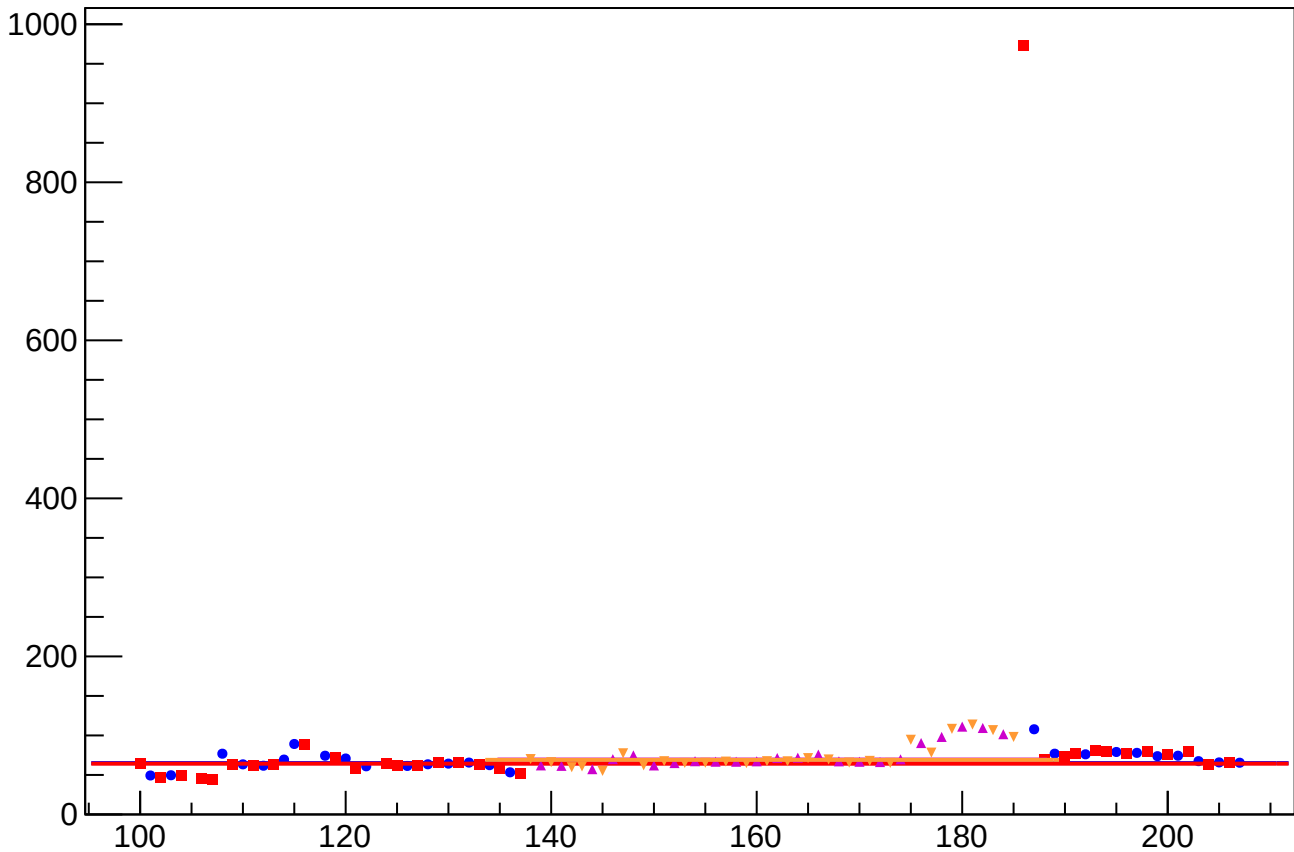
Left In:  $-30.662 \pm 16.503$   $\chi^2/\text{NDF}$ : 22.5/22

+ sign  $15.293 \pm 11.670$   $\chi^2/\text{NDF}$ : 48.5/50

All:  $-12.577 \pm 8.237$   $\chi^2/\text{NDF}$ : 128.2/104

- sign  $-40.253 \pm 11.629$   $\chi^2/\text{NDF}$ : 68.3/53

# dit\_asym\_sam\_15\_avg\_rms vs Slug



Right In: 65.006 $\pm$ 0.012  $\chi^2$ /NDF: 681308.1/25

Left Out: 69.078 $\pm$ 0.011  $\chi^2$ /NDF: 1074001.6/24

Right Out: 64.276 $\pm$ 0.012  $\chi^2$ /NDF: 1633912.9/30

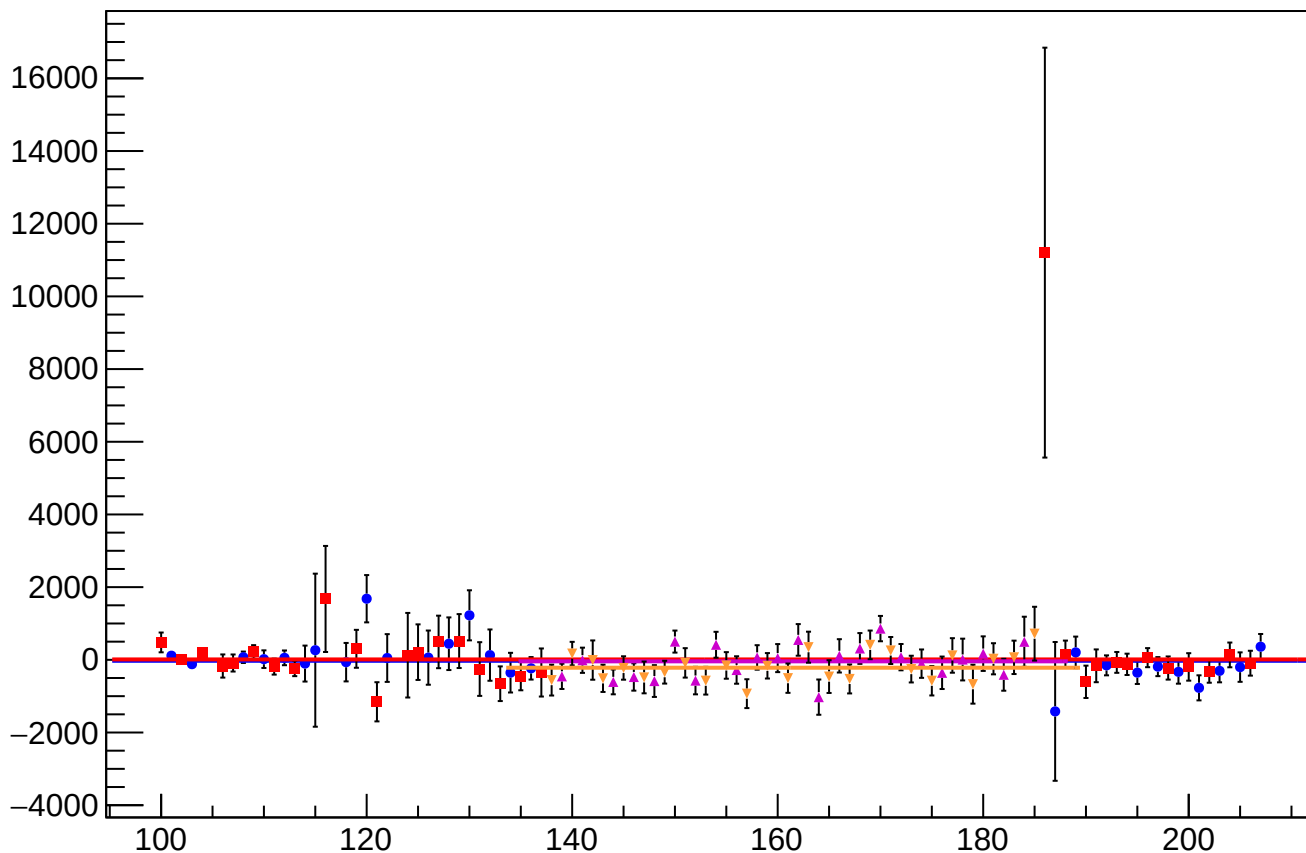
Left In: 69.436 $\pm$ 0.012  $\chi^2$ /NDF: 924607.6/22

+ sign 67.179 $\pm$ 0.008  $\chi^2$ /NDF: 1815918.9/50

All: 67.008 $\pm$ 0.006  $\chi^2$ /NDF: 4473746.0/104

- sign 66.838 $\pm$ 0.008  $\chi^2$ /NDF: 2656972.6/53

# asym\_sam\_15\_avg\_dit\_correction\_mean vs Slug



Right In:  $-26.209 \pm 47.992$   $\chi^2/\text{NDF}$ : 25.6/25

Left Out:  $-217.349 \pm 80.133$   $\chi^2/\text{NDF}$ : 19.3/24

Right Out:  $10.882 \pm 46.982$   $\chi^2/\text{NDF}$ : 30.6/30

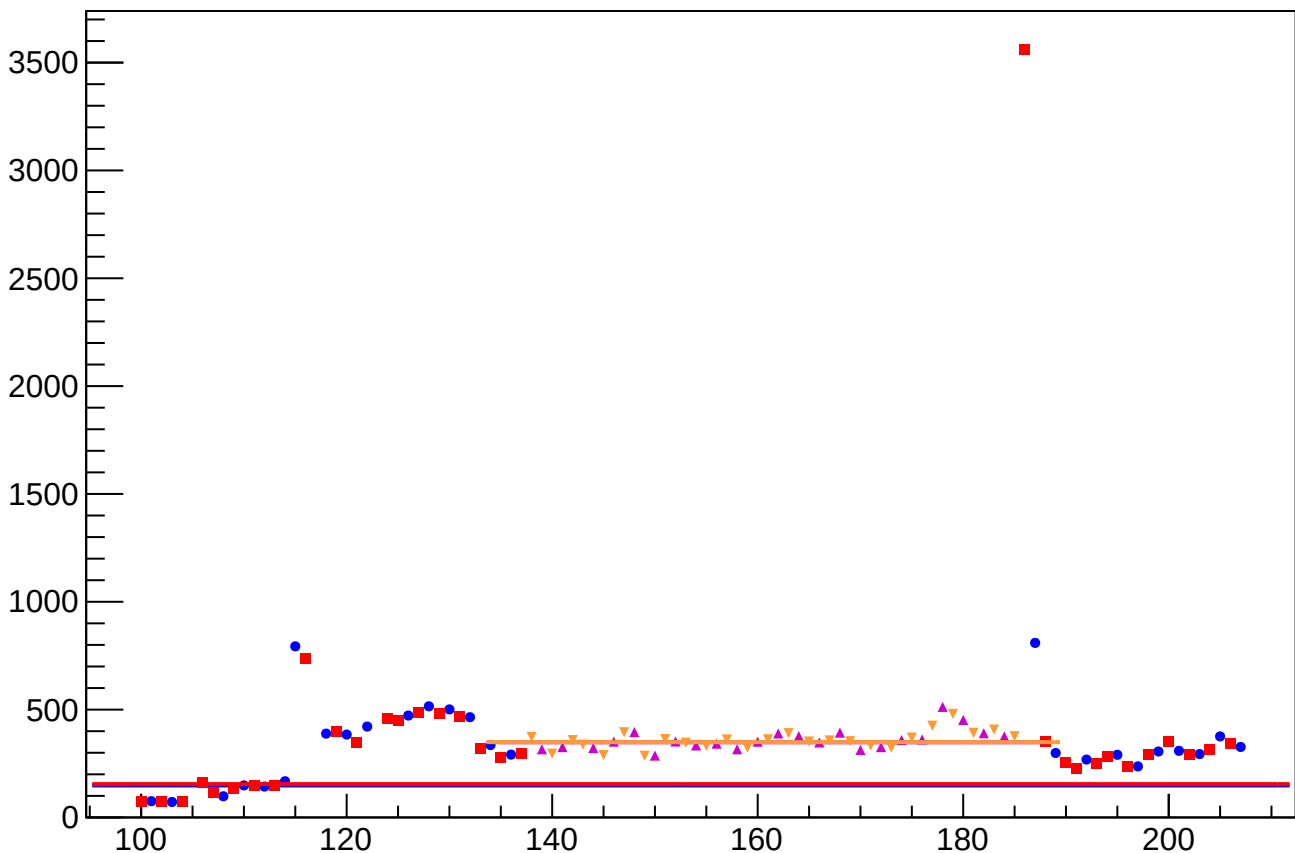
Left In:  $-41.512 \pm 82.256$   $\chi^2/\text{NDF}$ : 30.0/22

+ sign  $-76.670 \pm 41.173$   $\chi^2/\text{NDF}$ : 49.1/50

All:  $-38.995 \pm 28.979$   $\chi^2/\text{NDF}$ : 111.6/104

- sign  $-2.006 \pm 40.796$   $\chi^2/\text{NDF}$ : 60.9/53

# asym\_sam\_15\_avg\_dit\_correction\_rms vs Slug



Right In: 148.453+/-0.034  $\chi^2/\text{NDF}$ : 10472060.9/25

Left Out: 349.177+/-0.057  $\chi^2/\text{NDF}$ : 524075.5/24

Right Out: 154.582+/-0.033  $\chi^2/\text{NDF}$ : 10751373.4/30

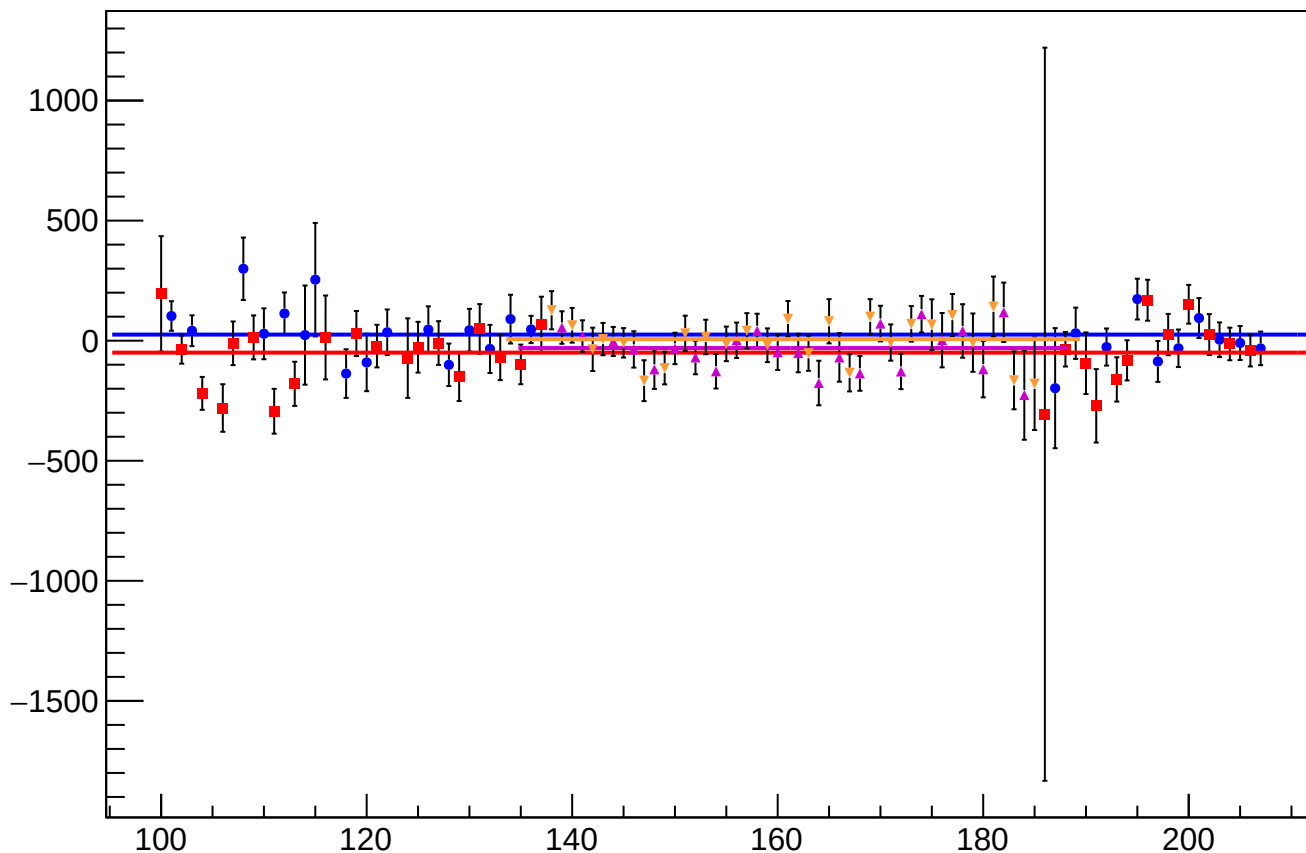
Left In: 348.560+/-0.058  $\chi^2/\text{NDF}$ : 525743.6/22

+ sign 201.443+/-0.029  $\chi^2/\text{NDF}$ : 20232098.7/50

All: 201.874+/-0.020  $\chi^2/\text{NDF}$ : 39896112.6/100

- sign 202.297+/-0.029  $\chi^2/\text{NDF}$ : 19663580.1/53

eigen\_dit\_asym\_sam\_15\_avg\_mean vs Slug



Right In: 25.382 $\pm$ 17.085  $\chi^2/\text{NDF}$ : 22.8/25

Left Out: 6.469 $\pm$ 15.977  $\chi^2/\text{NDF}$ : 25.1/24

Right Out: -49.711 $\pm$ 16.388  $\chi^2/\text{NDF}$ : 45.2/30

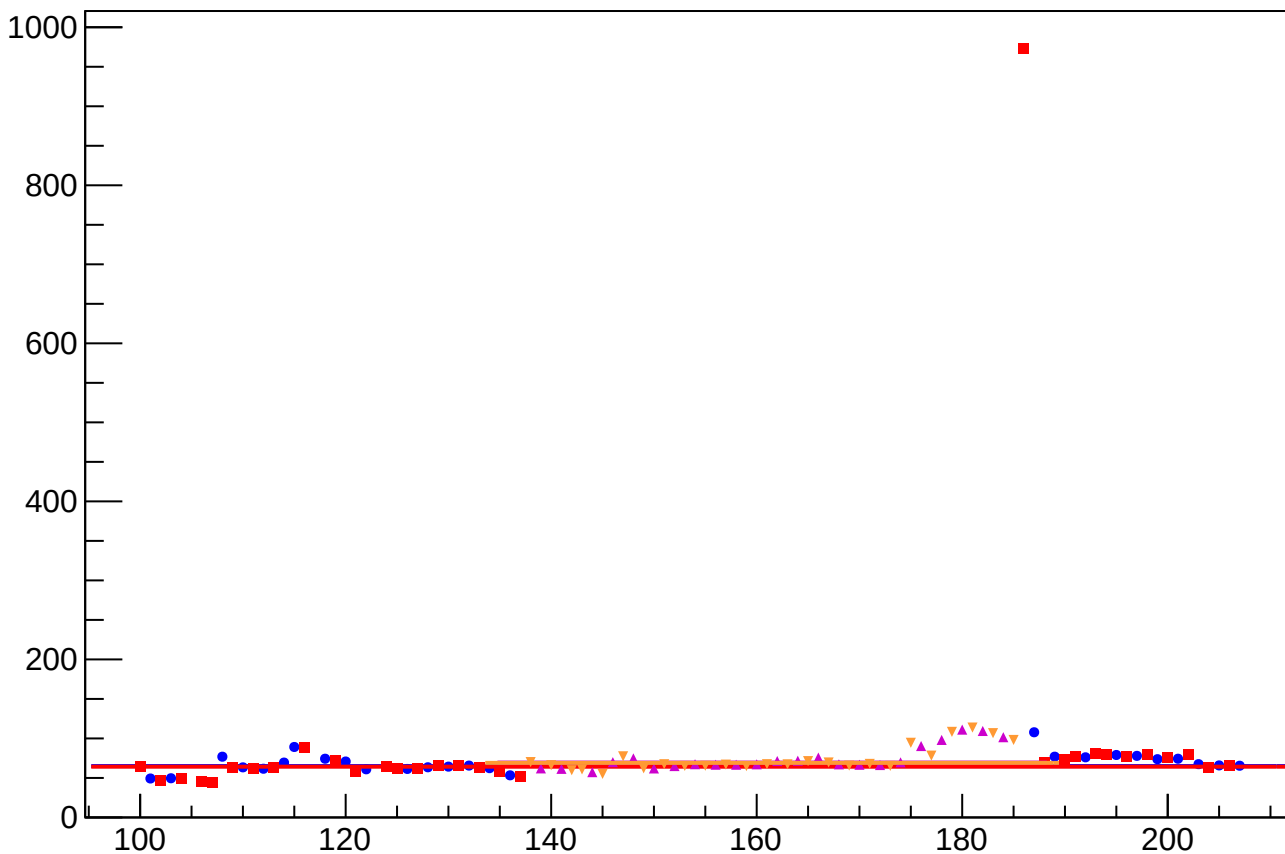
Left In: -30.662 $\pm$ 16.503  $\chi^2/\text{NDF}$ : 22.5/22

+ sign 15.293 $\pm$ 11.670  $\chi^2/\text{NDF}$ : 48.5/50

All: -12.577 $\pm$ 8.237  $\chi^2/\text{NDF}$ : 128.2/104

- sign -40.253 $\pm$ 11.629  $\chi^2/\text{NDF}$ : 68.3/53

# eigen\_dit\_asym\_sam\_15\_avg\_rms vs Slug



Right In: 65.006+/-0.012     $\chi^2/\text{NDF}$ : 681308.2/25

Left Out: 69.079+/-0.011     $\chi^2/\text{NDF}$ : 1073983.7/24

Right Out: 64.276+/-0.012     $\chi^2/\text{NDF}$ : 1633912.7/30

Left In: 69.436+/-0.012     $\chi^2/\text{NDF}$ : 924591.6/22

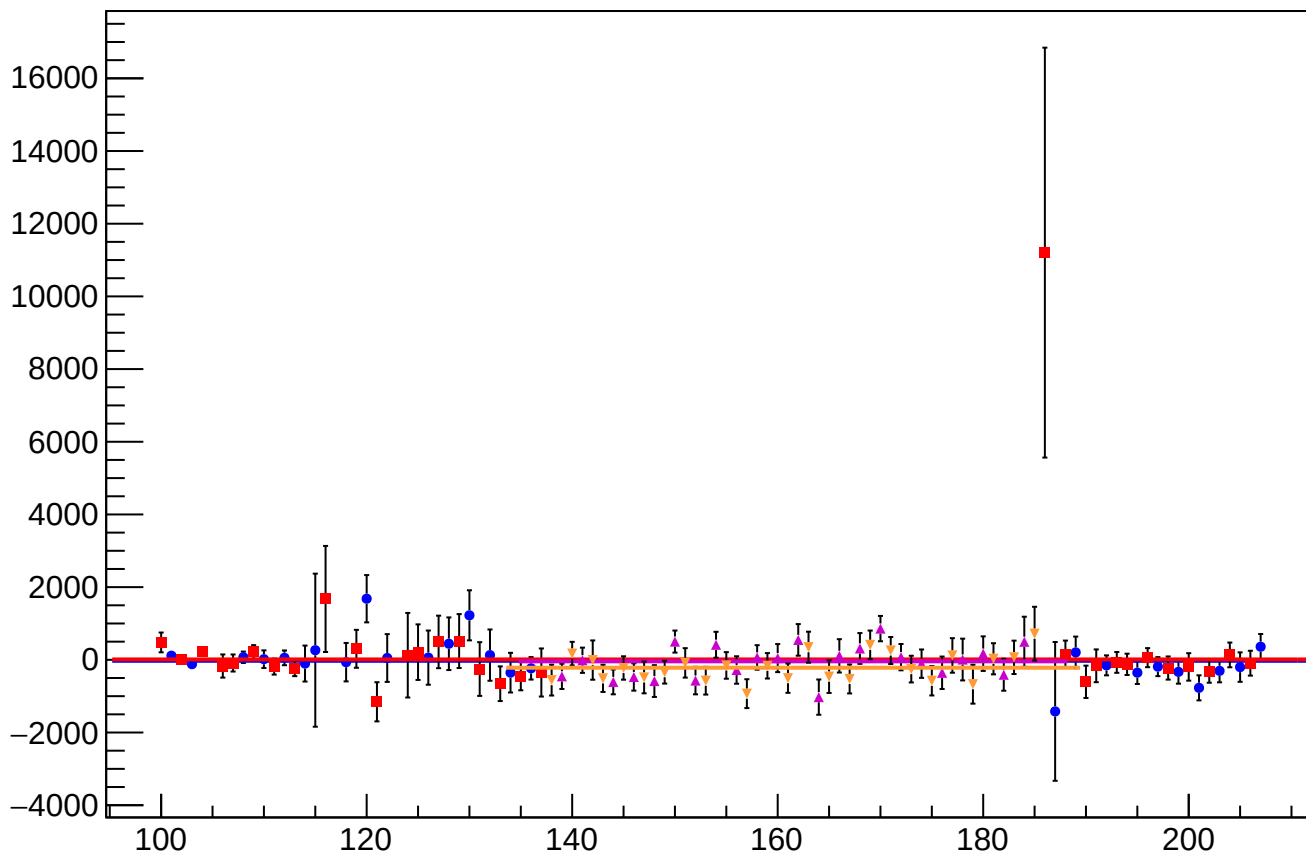
+ sign 67.179+/-0.008     $\chi^2/\text{NDF}$ : 1815906.2/50

All: 67.008+/-0.006     $\chi^2/\text{NDF}$ : 4473725.8/104

- sign 66.838+/-0.008     $\chi^2/\text{NDF}$ : 2656965.1/53



asym\_sam\_15\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-26.209 \pm 47.992$   $\chi^2/\text{NDF}$ : 25.6/25

Left Out:  $-217.348 \pm 80.133$   $\chi^2/\text{NDF}$ : 19.3/24

Right Out:  $10.882 \pm 46.981$   $\chi^2/\text{NDF}$ : 30.6/30

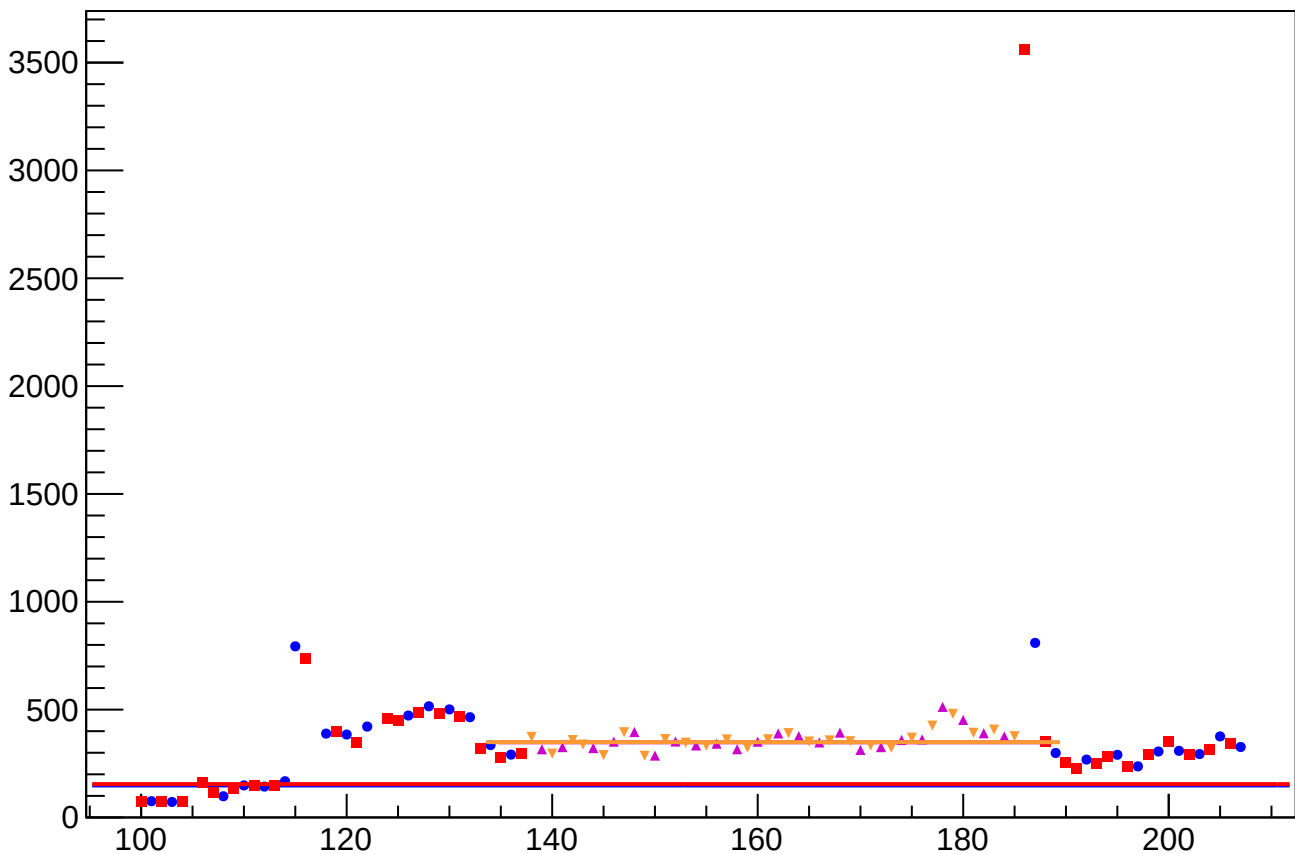
Left In:  $-41.512 \pm 82.256$   $\chi^2/\text{NDF}$ : 30.0/22

+ sign  $-76.669 \pm 41.173$   $\chi^2/\text{NDF}$ : 49.1/50

All:  $-38.994 \pm 28.979$   $\chi^2/\text{NDF}$ : 111.6/104

- sign  $-2.006 \pm 40.796$   $\chi^2/\text{NDF}$ : 60.9/53

asym\_sam\_15\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 148.453+/-0.034  $\chi^2/\text{NDF}$ : 10472072.7/25

Left Out: 349.177+/-0.057  $\chi^2/\text{NDF}$ : 524067.1/24

Right Out: 154.582+/-0.033  $\chi^2/\text{NDF}$ : 10751417.3/30

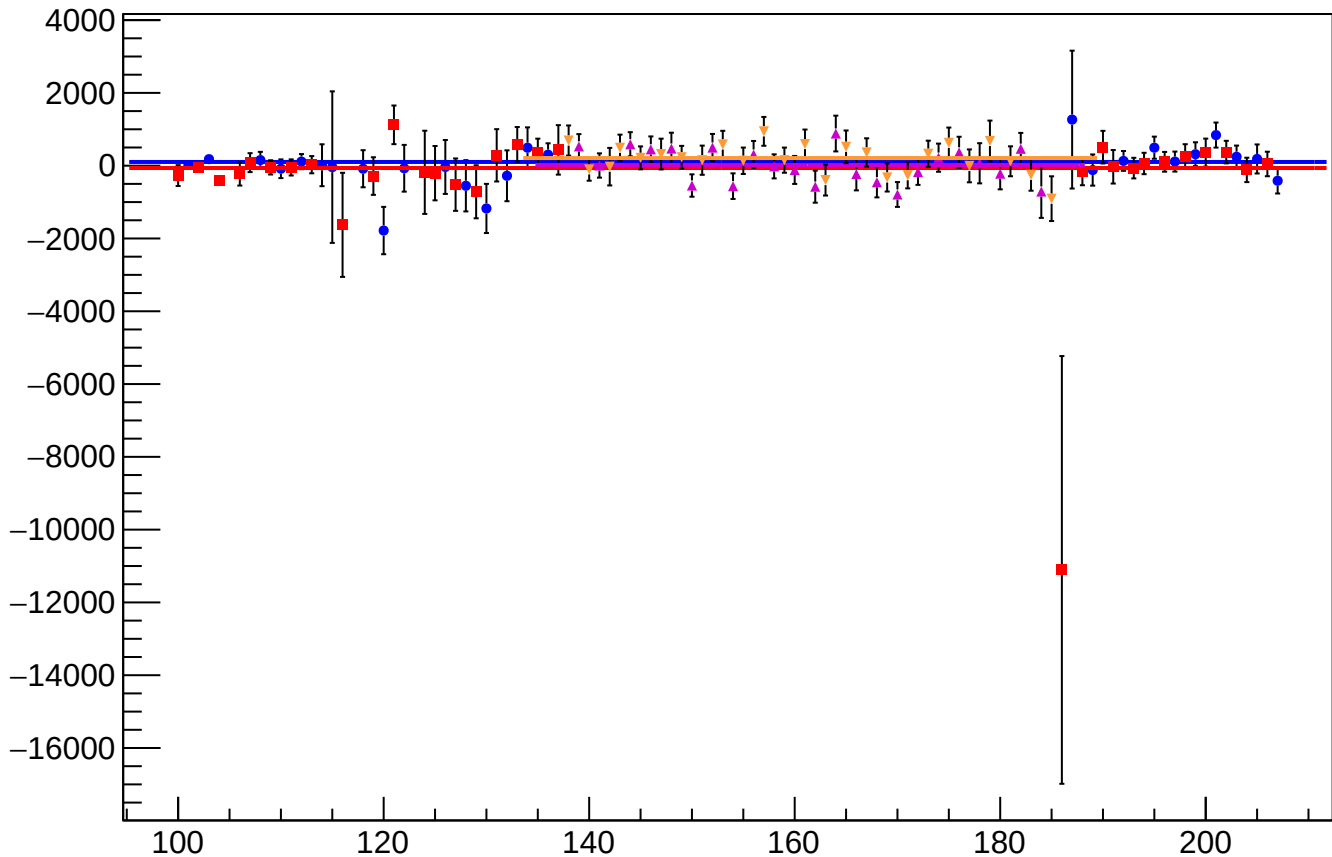
Left In: 348.560+/-0.058  $\chi^2/\text{NDF}$ : 525736.6/22

+ sign 201.443+/-0.029  $\chi^2/\text{NDF}$ : 20232166.5/50

All: 201.874+/-0.020  $\chi^2/\text{NDF}$ : 39896294.0/100

- sign 202.296+/-0.029  $\chi^2/\text{NDF}$ : 19663693.8/53

# asym\_sam\_15\_avg\_mean vs Slug



Right In: 102.379 $\pm$ 51.873  $\chi^2$ /NDF: 25.9/25

Left Out: 209.819 $\pm$ 78.511  $\chi^2$ /NDF:21.4/24

Right Out: -63.764 $\pm$ 50.229  $\chi^2$ /NDF: 32.2/30

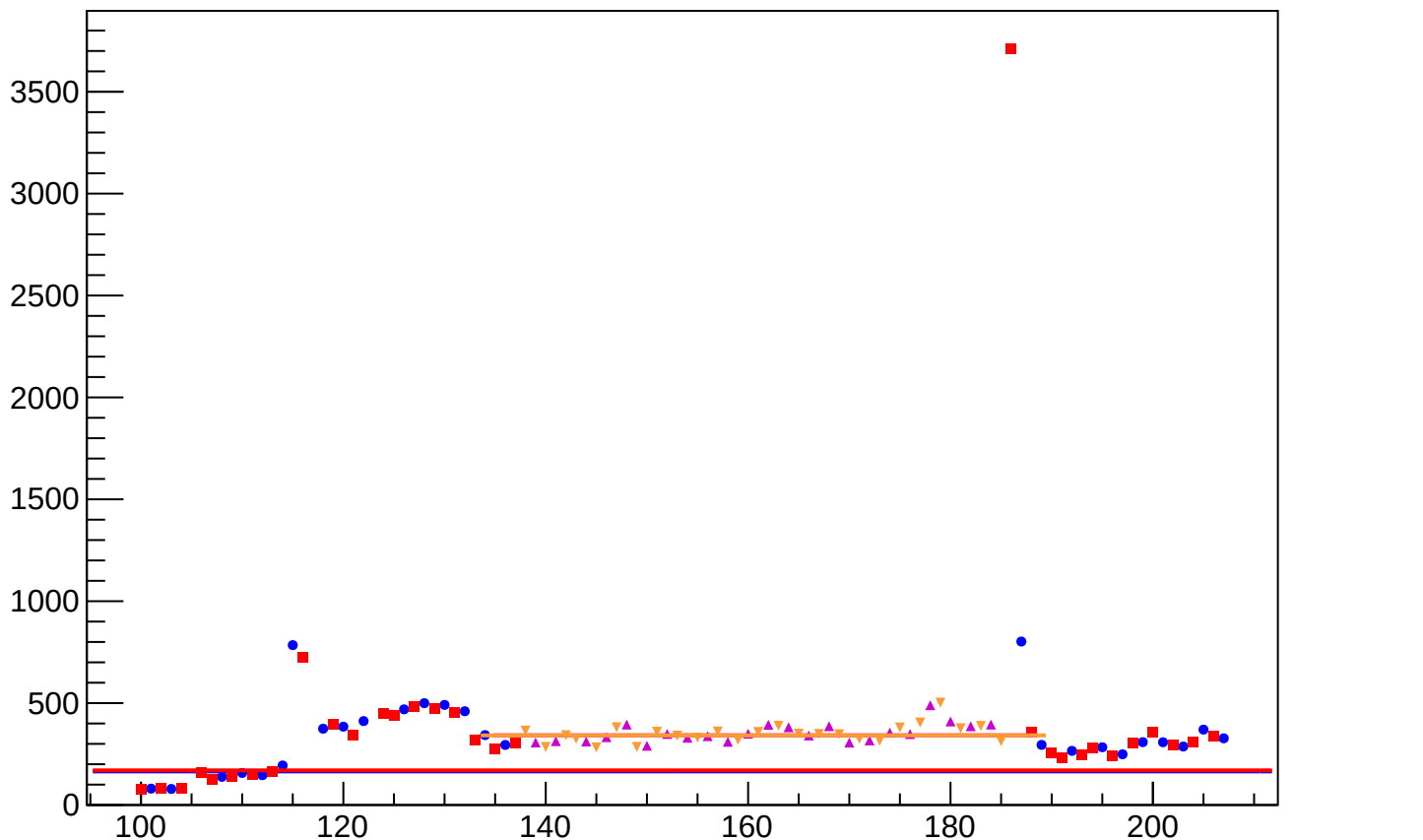
Left In: 18.738 $\pm$ 80.699  $\chi^2$ /NDF:32.0/22

+ sign 135.028 $\pm$ 43.280  $\chi^2$ /NDF: 48.6/50

All: 45.849 $\pm$ 30.376  $\chi^2$ /NDF: 121.9/104

- sign -40.727 $\pm$ 42.643  $\chi^2$ /NDF: 64.9/53

# asym\_sam\_15\_avg\_rms vs Slug



Right In: 164.928 $\pm$ 0.037  $\chi^2$ /NDF: 9252121.4/25

Left Out: 341.585 $\pm$ 0.056  $\chi^2$ /NDF: 554287.8/24

Right Out: 169.833 $\pm$ 0.036  $\chi^2$ /NDF: 9468328.9/30

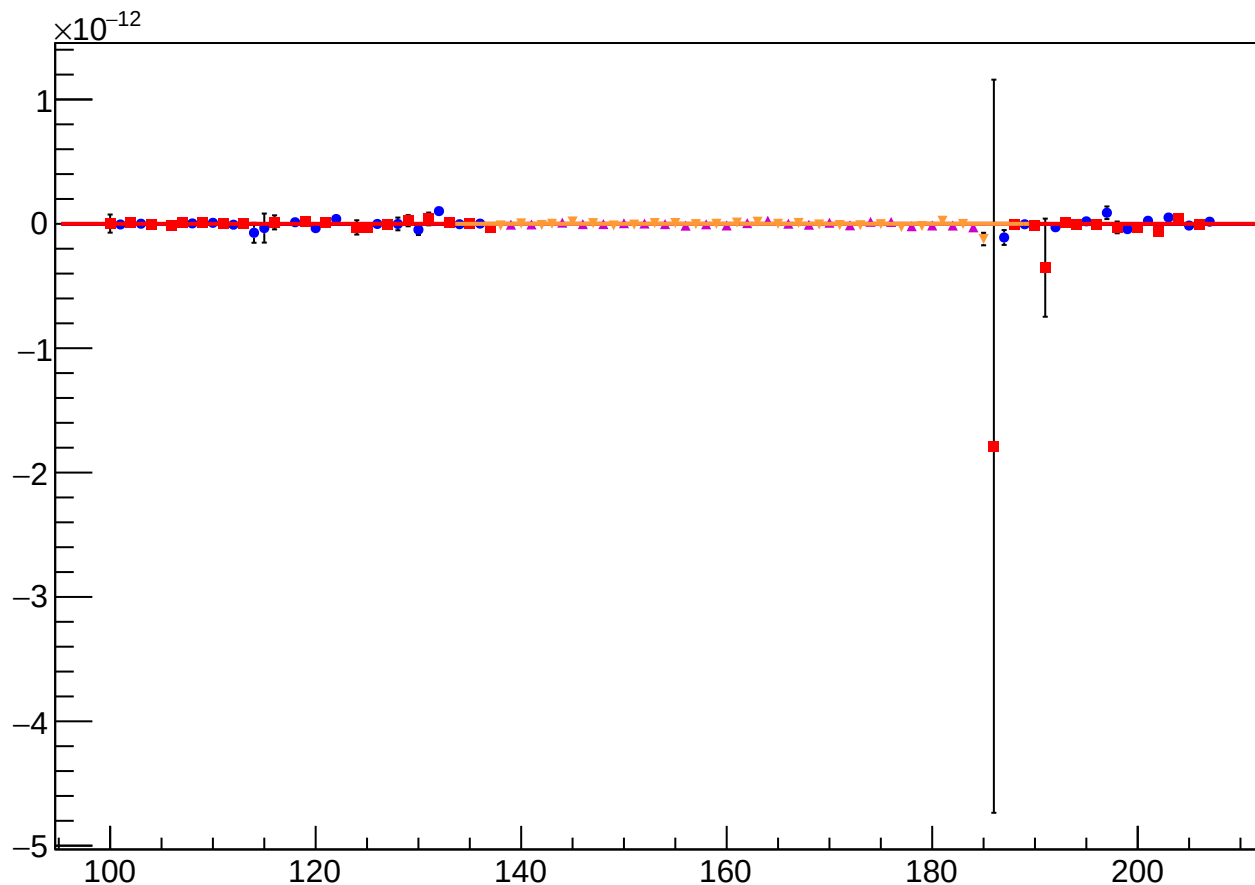
Left In: 341.943 $\pm$ 0.057  $\chi^2$ /NDF: 485509.1/22

+ sign 218.610 $\pm$ 0.031  $\chi^2$ /NDF: 16855133.6/50

All: 218.245 $\pm$ 0.021  $\chi^2$ /NDF: 33366162.4/10

- sign 217.891 $\pm$ 0.030  $\chi^2$ /NDF: 16510748.9/53

asym\_sam\_15\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 35.1/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 28.6/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 21.4/30

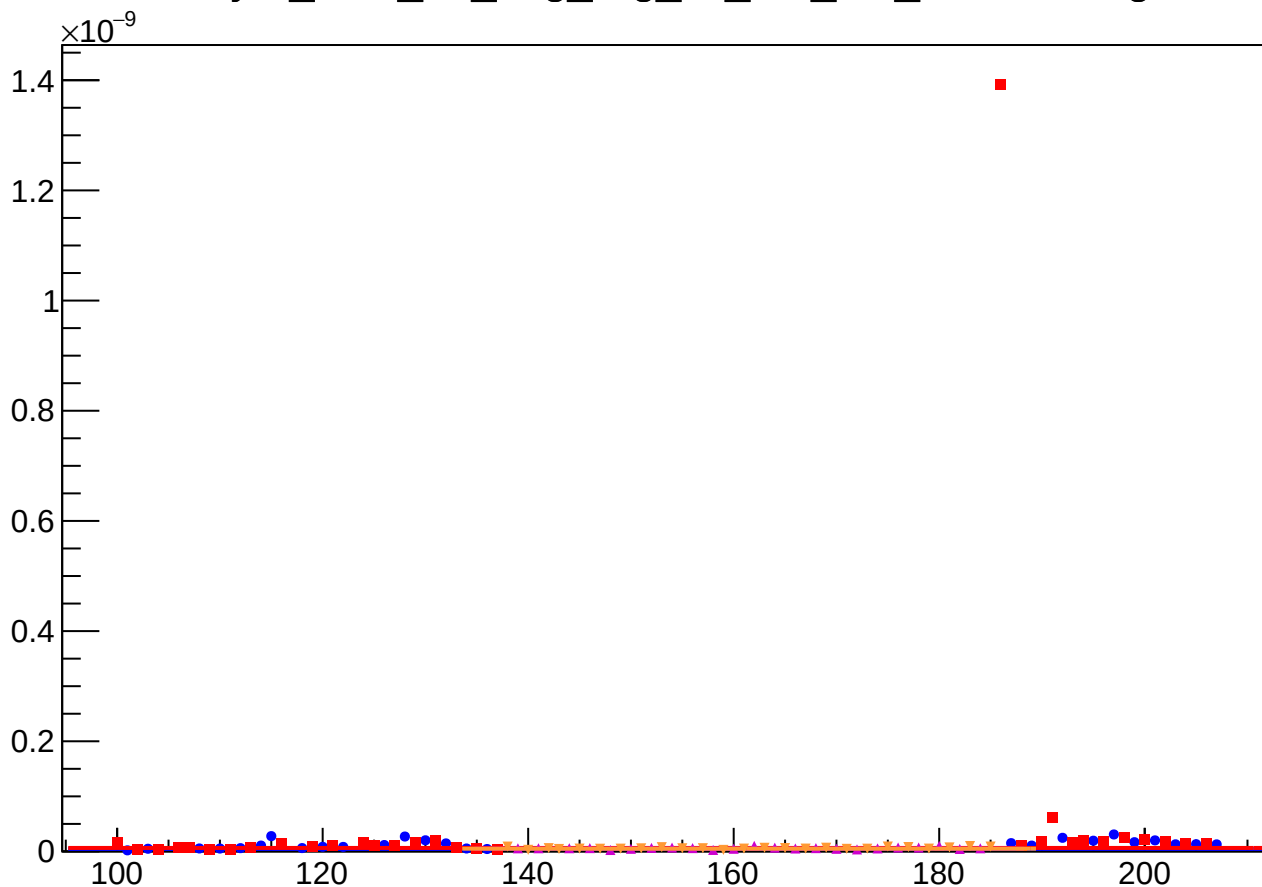
Left In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 20.5/22

+ sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 63.9/50

All: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 105.9/104

- sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 42.0/53

# asym\_sam\_15\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5999641.4/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1294137.8/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4963710.6/30

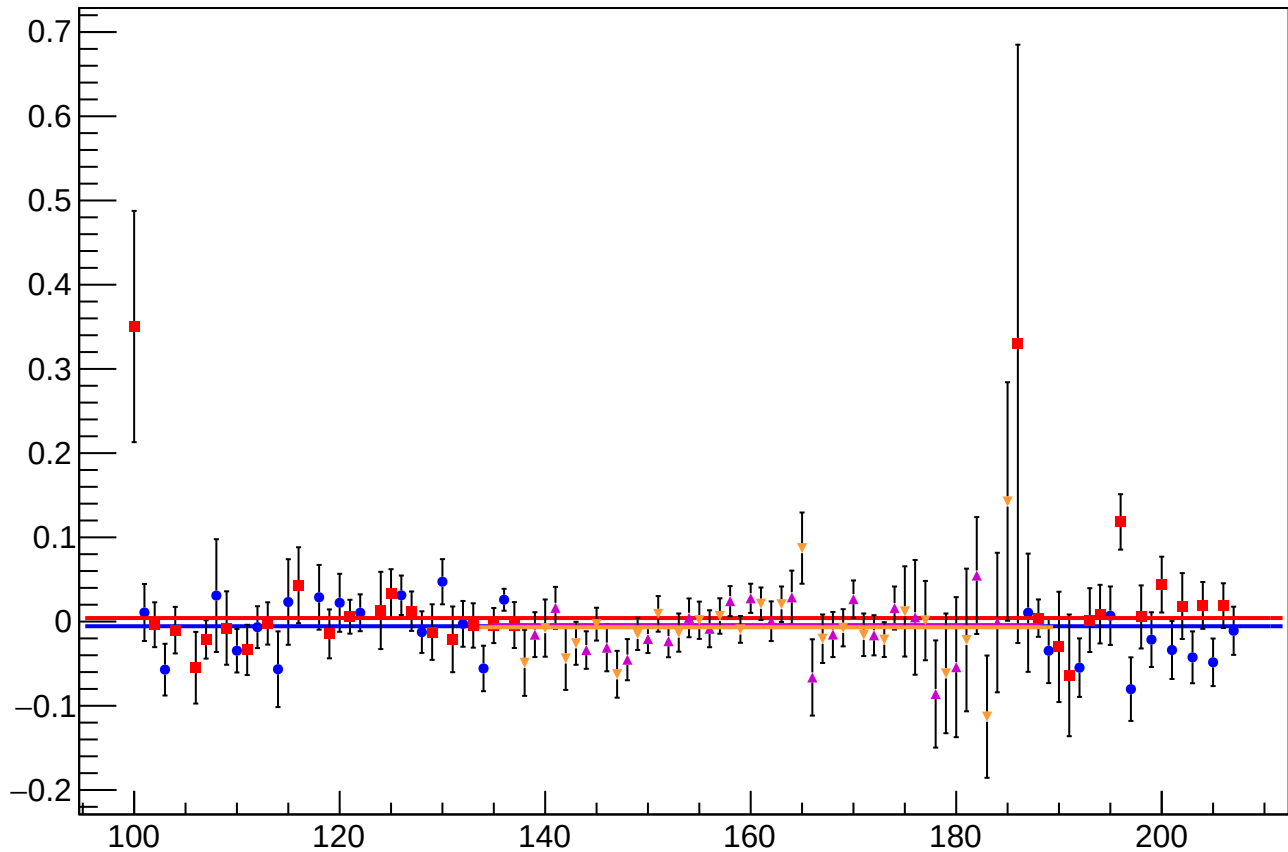
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1225248.2/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7330610.8/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13927547.7/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6474510.5/53

asym\_sam\_15\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.006 \pm 0.006$   $\chi^2/\text{NDF}$ : 35.2/25

Left Out:  $-0.007 \pm 0.005$   $\chi^2/\text{NDF}$ : 21.8/24

Right Out:  $0.004 \pm 0.006$   $\chi^2/\text{NDF}$ : 31.2/30

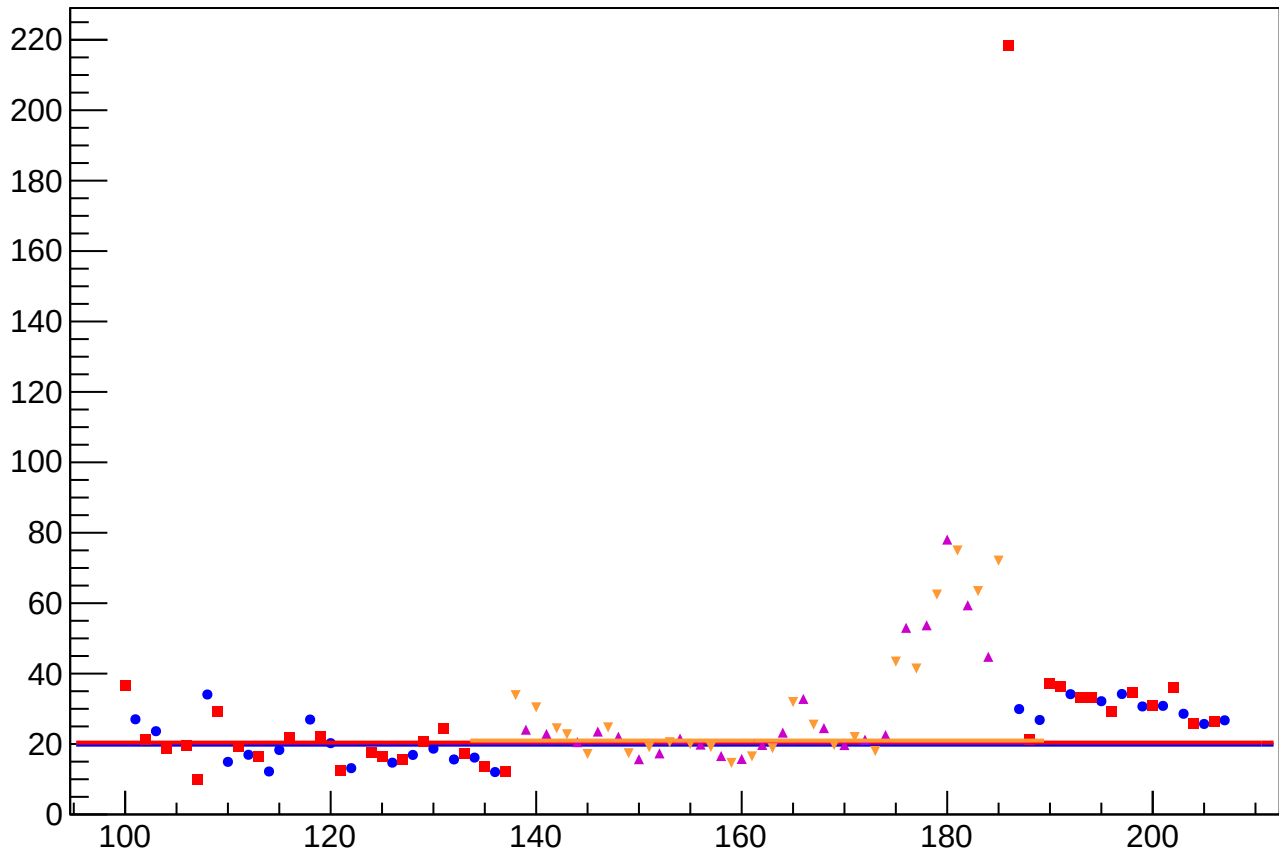
Left In:  $-0.004 \pm 0.005$   $\chi^2/\text{NDF}$ : 23.2/22

+ sign  $-0.006 \pm 0.004$   $\chi^2/\text{NDF}$ : 57.0/50

All:  $-0.003 \pm 0.003$   $\chi^2/\text{NDF}$ : 113.8/104

- sign  $-0.000 \pm 0.004$   $\chi^2/\text{NDF}$ : 55.6/53

asym\_sam\_15\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 19.822 $\pm$ 0.004  $\chi^2$ /NDF: 3332537.1/25

Left Out: 20.981 $\pm$ 0.004  $\chi^2$ /NDF: 4467011.5/24

Right Out: 20.411 $\pm$ 0.004  $\chi^2$ /NDF: 3946198.1/30

Left In: 20.868 $\pm$ 0.004  $\chi^2$ /NDF: 3534877.7/22

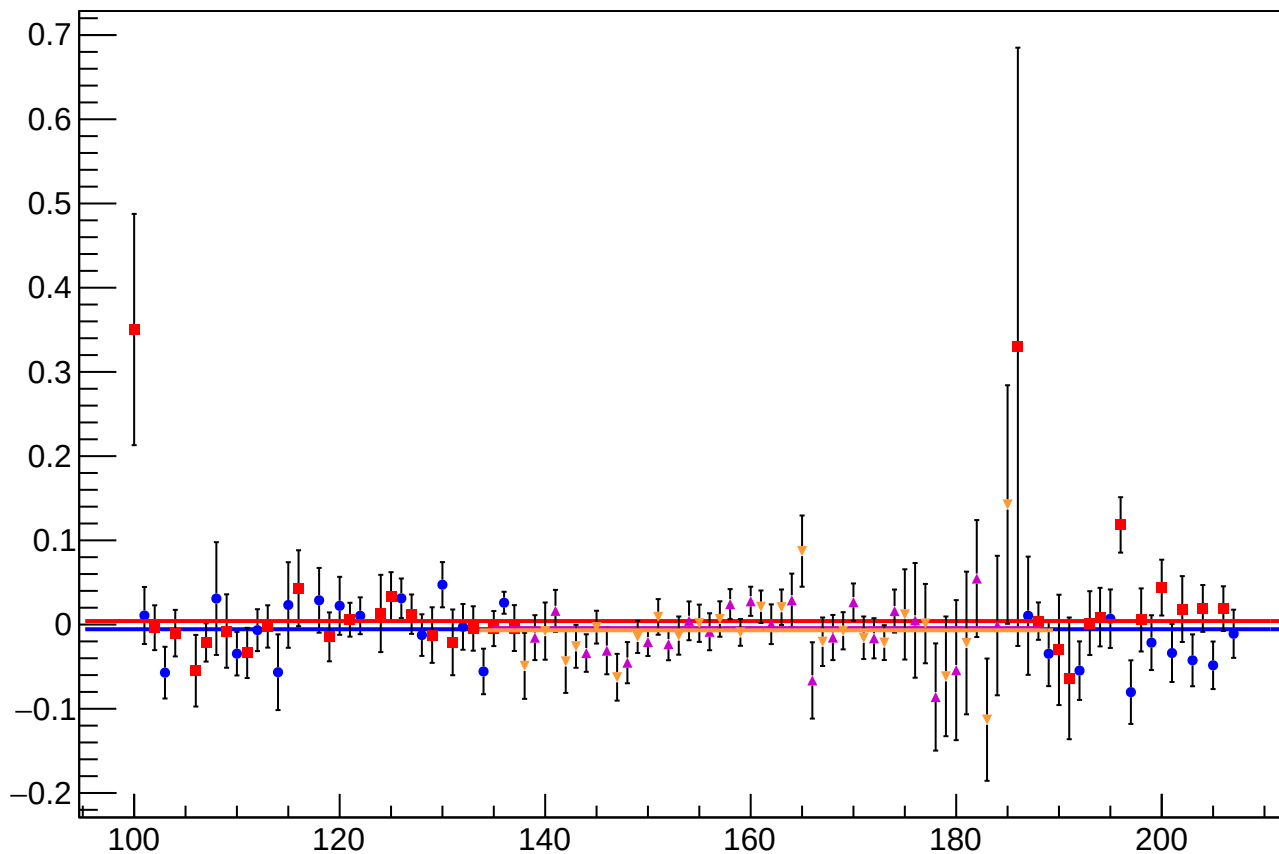
+ sign 20.445 $\pm$ 0.003  $\chi^2$ /NDF: 7845396.9/50

All: 20.547 $\pm$ 0.002  $\chi^2$ /NDF: 15336452.3/104

- sign 20.650 $\pm$ 0.003  $\chi^2$ /NDF: 7488191.9/53



asym\_sam\_15\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.006 \pm 0.006$   $\chi^2/\text{NDF}$ : 35.2/25

Left Out:  $-0.007 \pm 0.005$   $\chi^2/\text{NDF}$ : 21.8/24

Right Out:  $0.004 \pm 0.006$   $\chi^2/\text{NDF}$ : 31.2/30

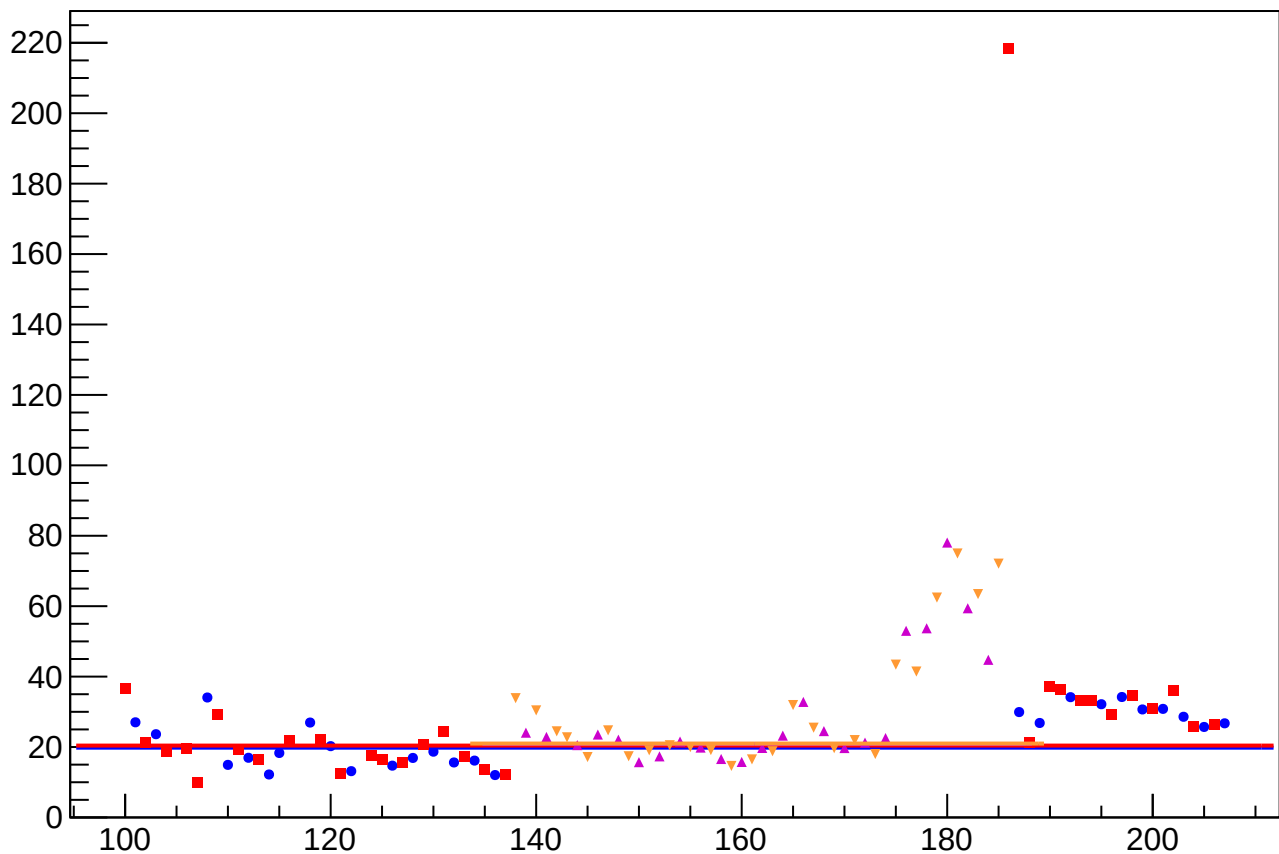
Left In:  $-0.004 \pm 0.005$   $\chi^2/\text{NDF}$ : 23.2/22

+ sign  $-0.006 \pm 0.004$   $\chi^2/\text{NDF}$ : 57.0/50

All:  $-0.003 \pm 0.003$   $\chi^2/\text{NDF}$ : 113.8/104

- sign  $-0.000 \pm 0.004$   $\chi^2/\text{NDF}$ : 55.6/53

asym\_sam\_15\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 19.822 $\pm$ 0.004  $\chi^2$ /NDF: 3332537.1/25

Left Out: 20.981 $\pm$ 0.004  $\chi^2$ /NDF: 4467011.5/24

Right Out: 20.411 $\pm$ 0.004  $\chi^2$ /NDF: 3946198.1/30

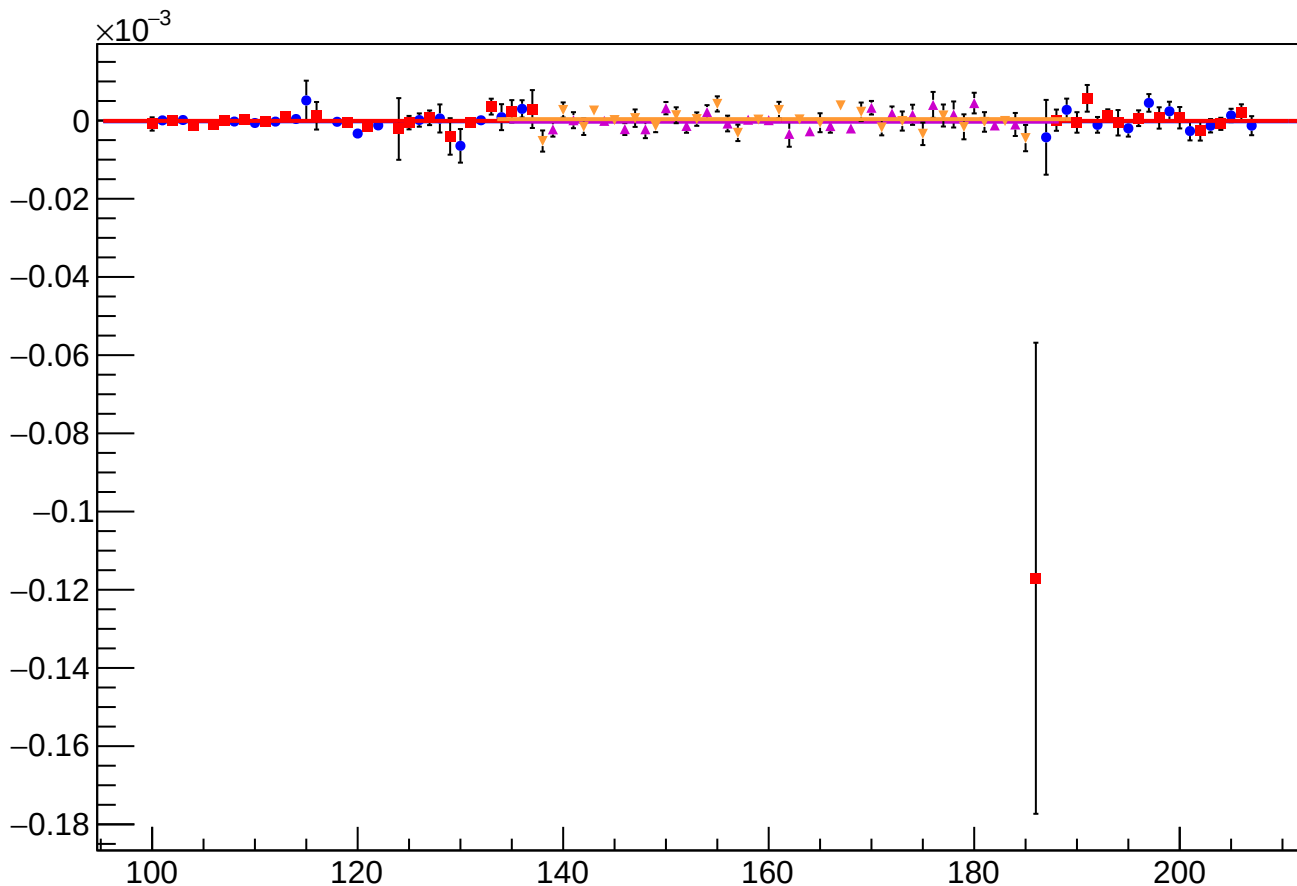
Left In: 20.868 $\pm$ 0.004  $\chi^2$ /NDF: 3534877.7/22

+ sign 20.445 $\pm$ 0.003  $\chi^2$ /NDF: 7845396.9/50

All: 20.547 $\pm$ 0.002  $\chi^2$ /NDF: 15336452.3/104

- sign 20.650 $\pm$ 0.003  $\chi^2$ /NDF: 7488191.9/53

asym\_sam\_15\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 24.6/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 34.2/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 30.3/30

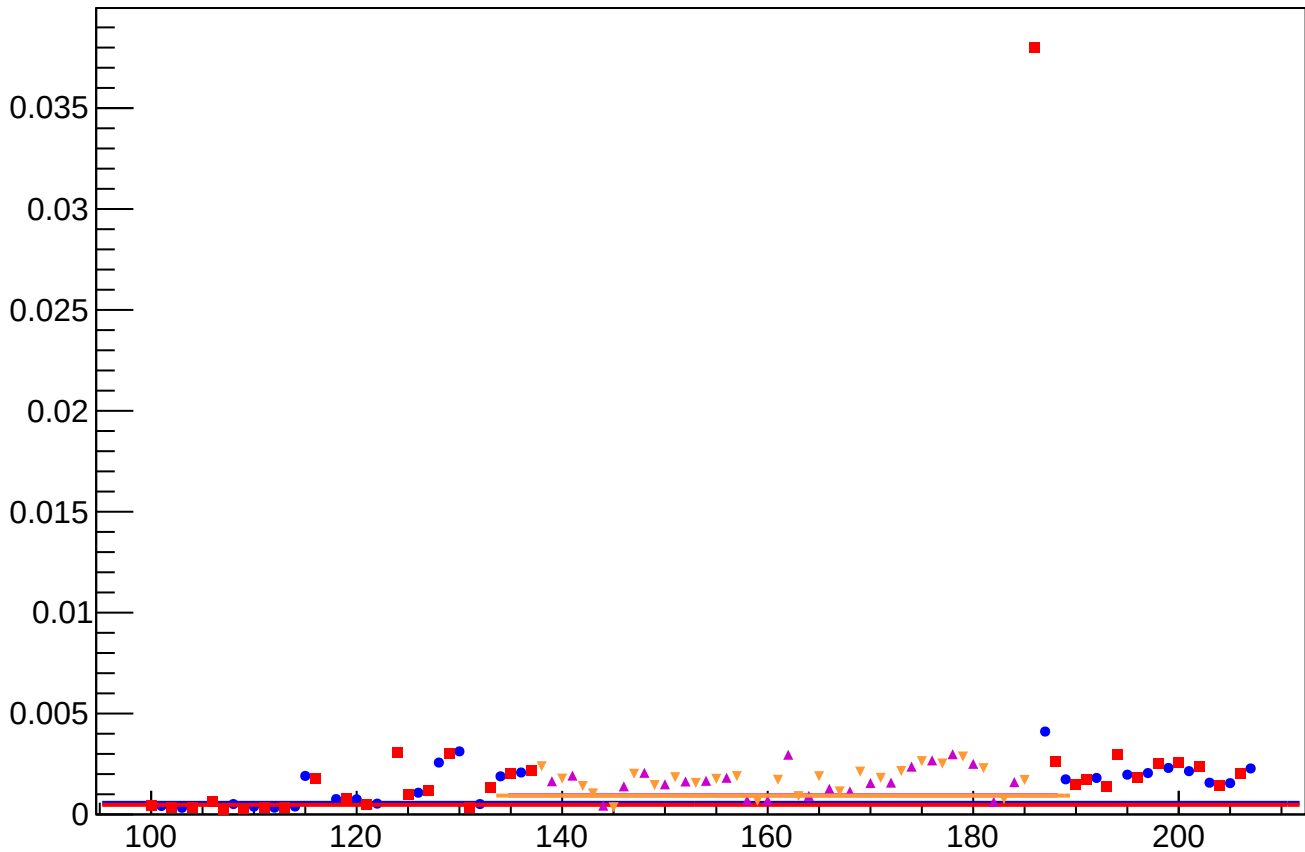
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 31.6/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 61.6/50

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 124.4/104

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 62.3/53

asym\_sam\_15\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 11838964.8/25

Left Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ :11996378.8/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 15204140.5/30

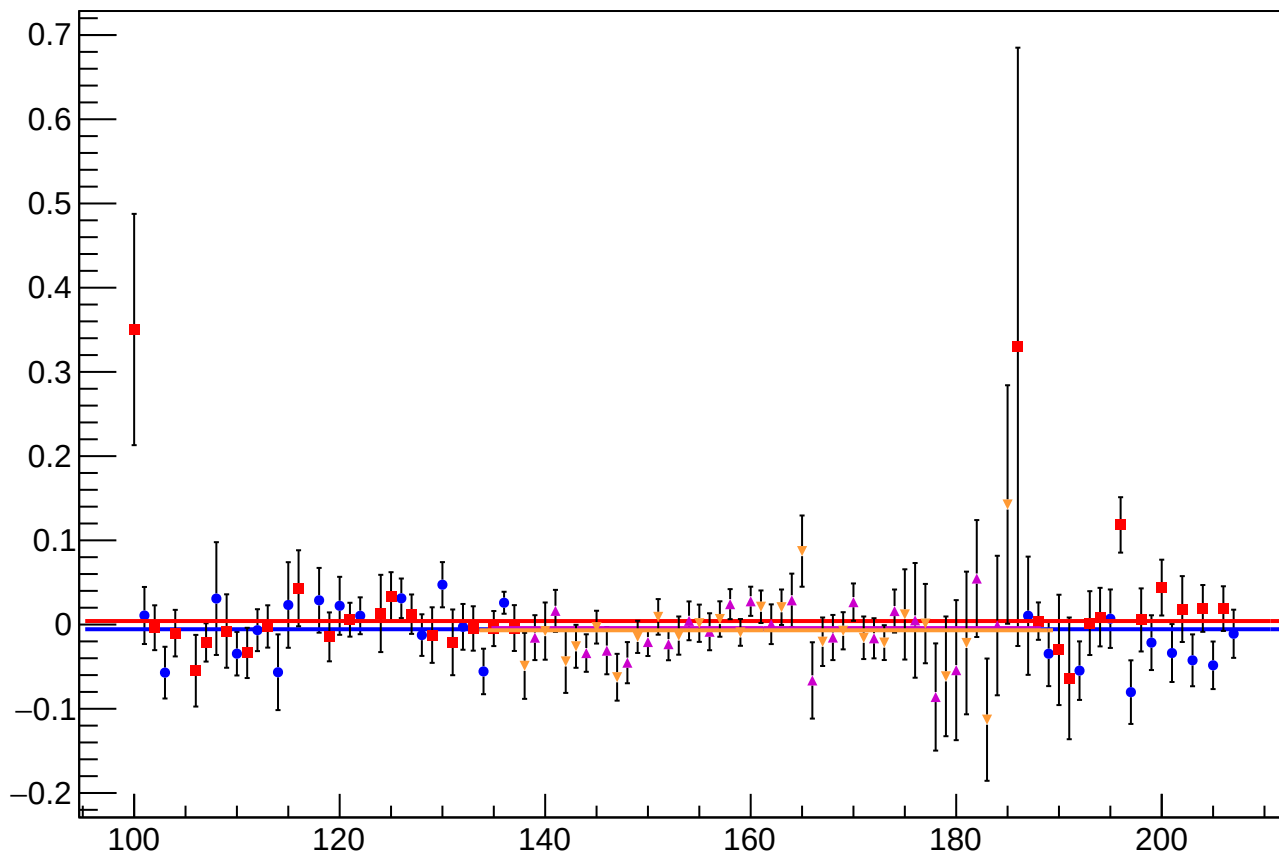
Left In: 0.001+/-0.000  $\chi^2/\text{NDF}$ :9470540.4/22

+ sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 26211406.3/50

All: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 55867968.7/104

- sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 29258448.0/53

asym\_sam\_15\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.006 \pm 0.006$   $\chi^2/\text{NDF}$ : 35.2/25

Left Out:  $-0.007 \pm 0.005$   $\chi^2/\text{NDF}$ : 21.8/24

Right Out:  $0.004 \pm 0.006$   $\chi^2/\text{NDF}$ : 31.2/30

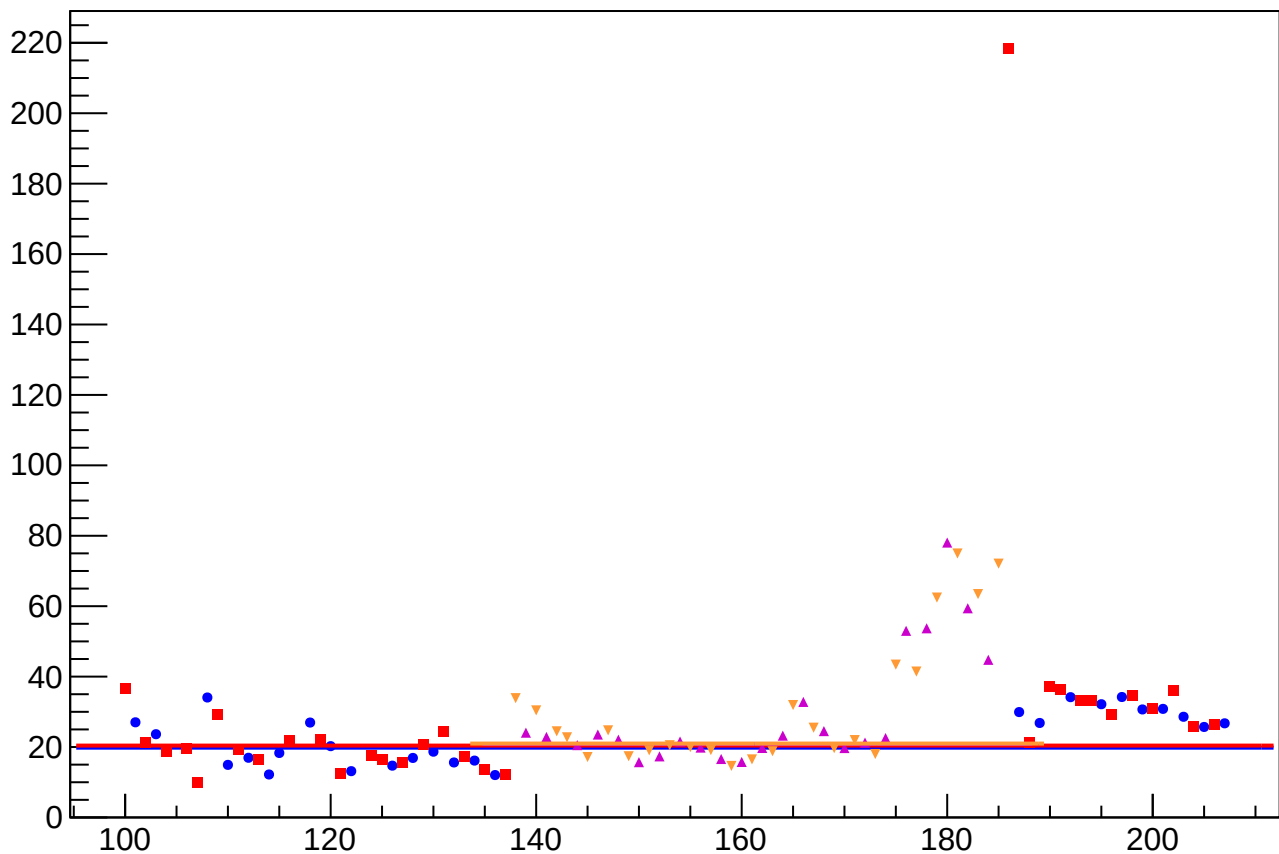
Left In:  $-0.004 \pm 0.005$   $\chi^2/\text{NDF}$ : 23.2/22

+ sign  $-0.006 \pm 0.004$   $\chi^2/\text{NDF}$ : 57.0/50

All:  $-0.003 \pm 0.003$   $\chi^2/\text{NDF}$ : 113.8/104

- sign  $-0.000 \pm 0.004$   $\chi^2/\text{NDF}$ : 55.6/53

asym\_sam\_15\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 19.822 $\pm$ 0.004  $\chi^2$ /NDF: 3332547.3/25

Left Out: 20.981 $\pm$ 0.004  $\chi^2$ /NDF: 4466984.6/24

Right Out: 20.411 $\pm$ 0.004  $\chi^2$ /NDF: 3946223.0/30

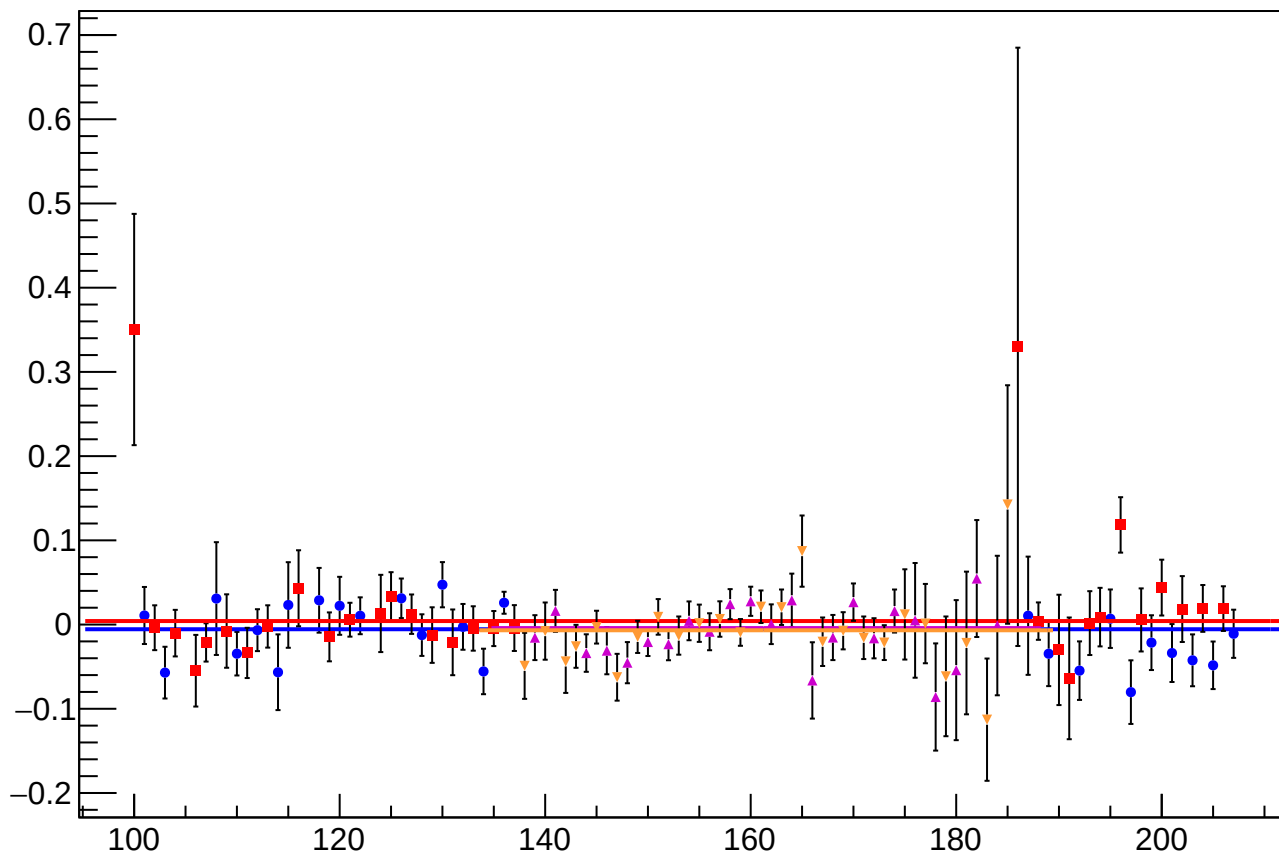
Left In: 20.868 $\pm$ 0.004  $\chi^2$ /NDF: 3534923.5/22

+ sign 20.445 $\pm$ 0.003  $\chi^2$ /NDF: 7845407.2/50

All: 20.547 $\pm$ 0.002  $\chi^2$ /NDF: 15336541.9/104

- sign 20.649 $\pm$ 0.003  $\chi^2$ /NDF: 7488273.0/53

asym\_sam\_15\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.006 \pm 0.006$   $\chi^2/\text{NDF}$ : 35.2/25

Left Out:  $-0.007 \pm 0.005$   $\chi^2/\text{NDF}$ : 21.8/24

Right Out:  $0.004 \pm 0.006$   $\chi^2/\text{NDF}$ : 31.2/30

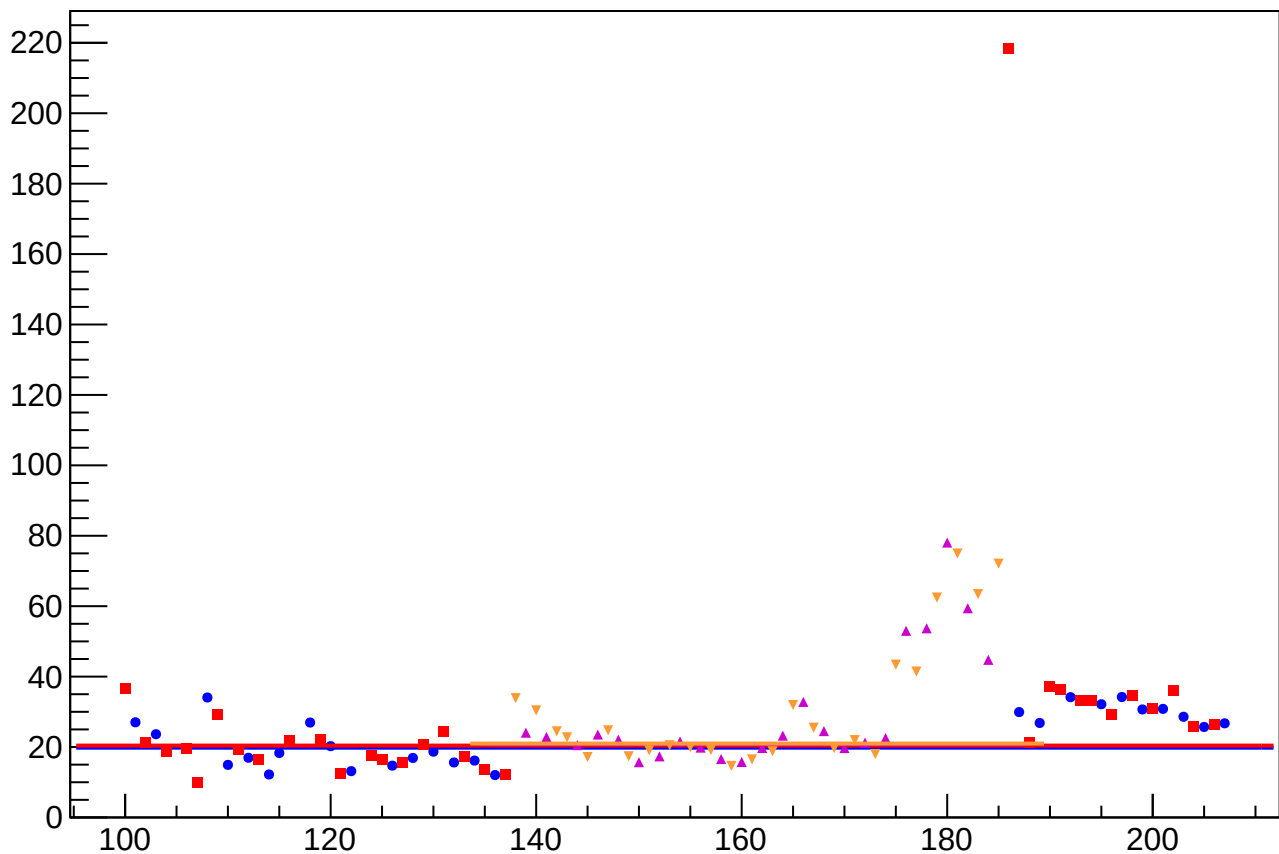
Left In:  $-0.004 \pm 0.005$   $\chi^2/\text{NDF}$ : 23.2/22

+ sign  $-0.006 \pm 0.004$   $\chi^2/\text{NDF}$ : 57.0/50

All:  $-0.003 \pm 0.003$   $\chi^2/\text{NDF}$ : 113.8/104

- sign  $-0.000 \pm 0.004$   $\chi^2/\text{NDF}$ : 55.6/53

asym\_sam\_15\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 19.822 $\pm$ 0.004  $\chi^2$ /NDF: 3332547.3/25

Left Out: 20.981 $\pm$ 0.004  $\chi^2$ /NDF: 4466984.6/24

Right Out: 20.411 $\pm$ 0.004  $\chi^2$ /NDF: 3946223.0/30

Left In: 20.868 $\pm$ 0.004  $\chi^2$ /NDF: 3534923.5/22

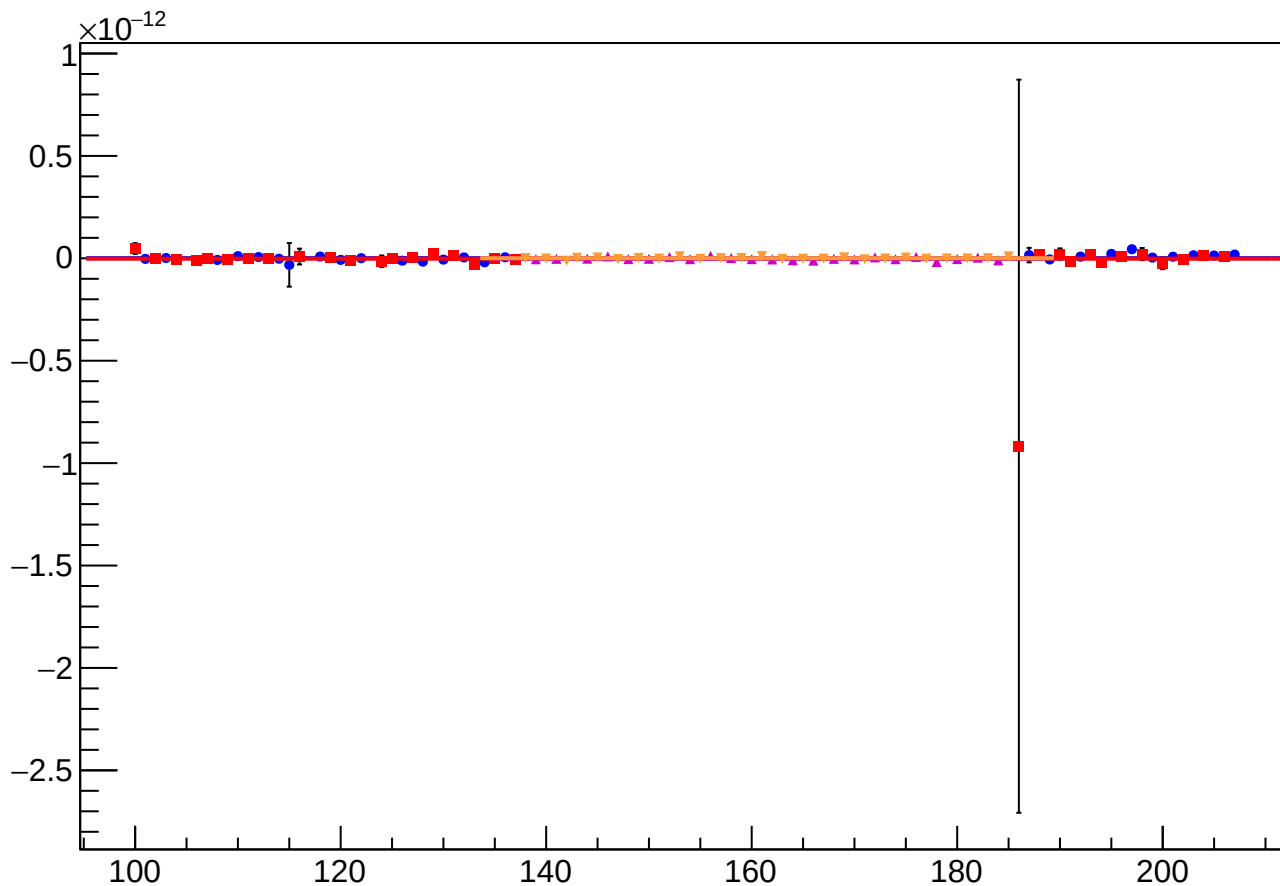
+ sign 20.445 $\pm$ 0.003  $\chi^2$ /NDF: 7845407.2/50

All: 20.547 $\pm$ 0.002  $\chi^2$ /NDF: 15336541.9/104

- sign 20.649 $\pm$ 0.003  $\chi^2$ /NDF: 7488273.0/53



asym\_sam\_15\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 24.9/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14.6/24

Right Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 26.0/30

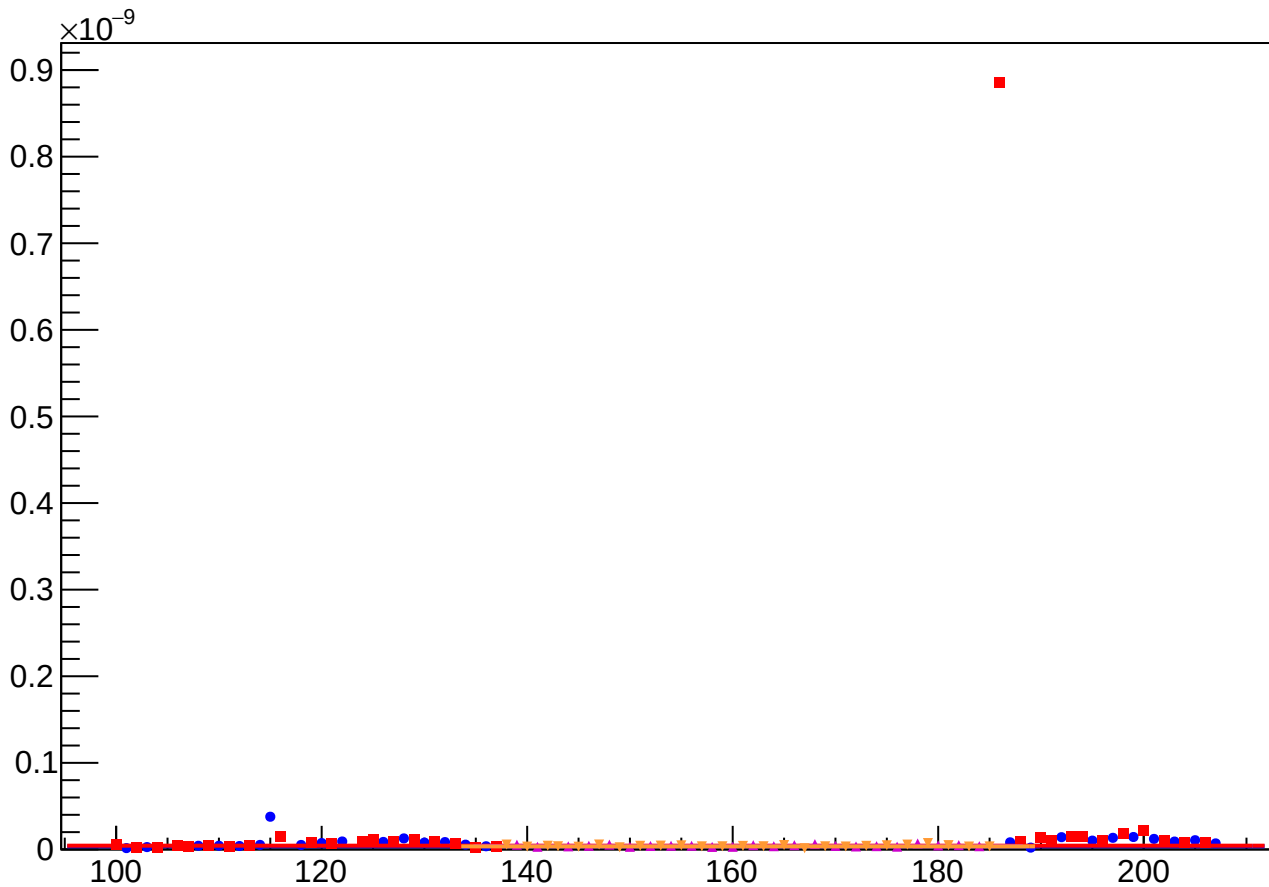
Left In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 26.5/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 39.5/50

All: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 93.8/104

- sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 52.7/53

asym\_sam\_15\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6931957.4/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2527443.7/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7482290.3/30

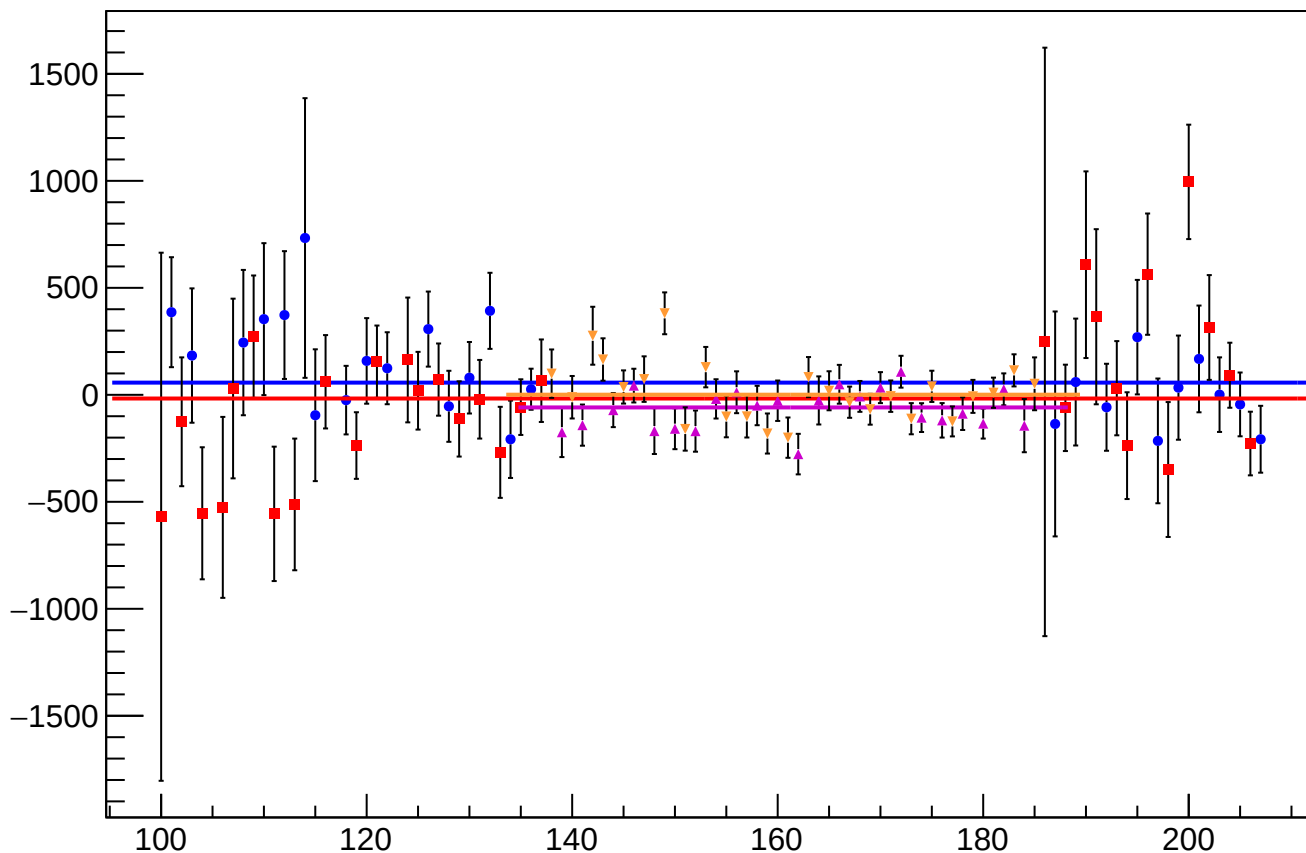
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1198286.8/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9464481.5/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 18526900.3/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8778243.9/53

# reg\_asym\_sam\_26\_avg\_mean vs Slug



Right In: 57.036 $\pm$ 38.997  $\chi^2$ /NDF: 19.8/25

Left Out: 0.598 $\pm$ 17.319  $\chi^2$ /NDF:48.6/24

Right Out: -17.257 $\pm$ 39.978  $\chi^2$ /NDF: 45.0/30

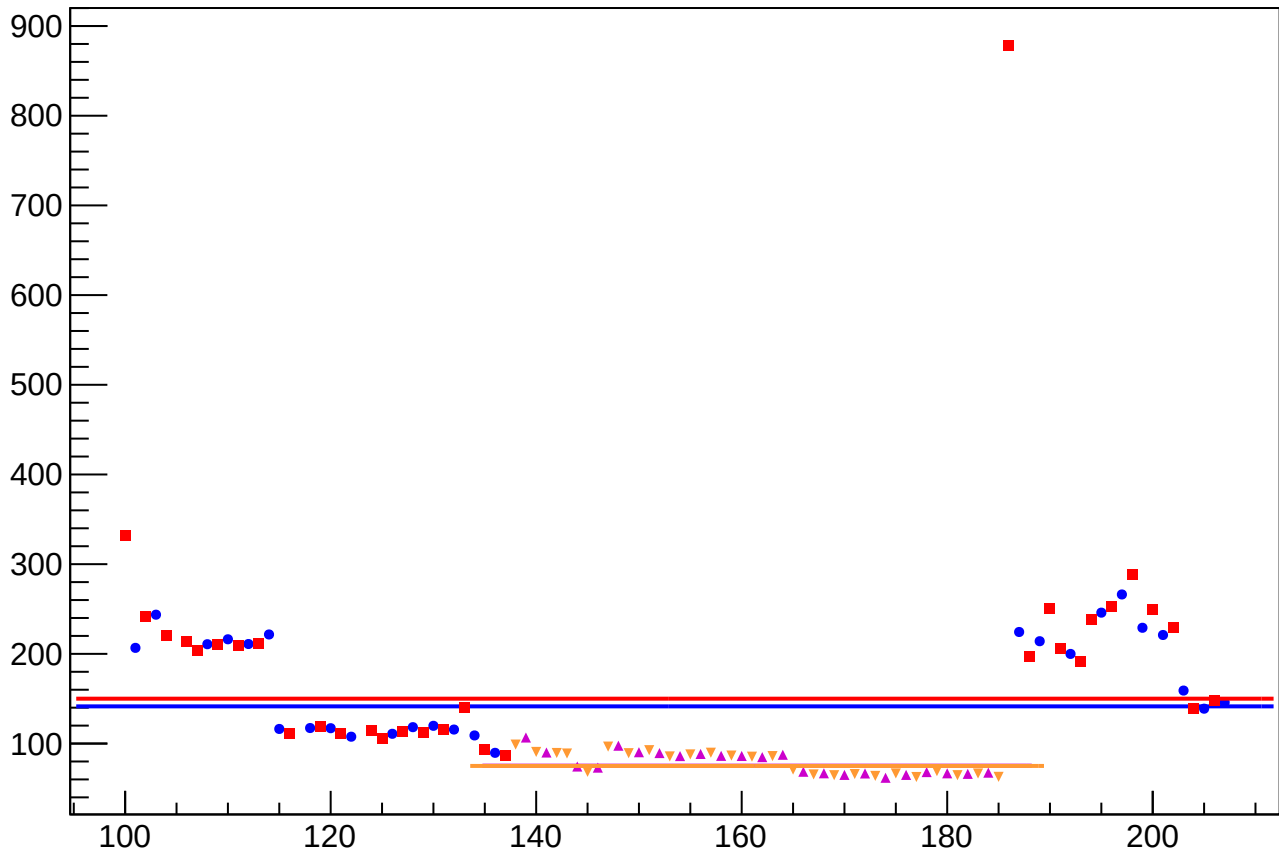
Left In: -58.907 $\pm$ 17.879  $\chi^2$ /NDF:25.8/22

+ sign 9.896 $\pm$ 15.829  $\chi^2$ /NDF: 70.2/50

All: -20.087 $\pm$ 11.363  $\chi^2$ /NDF: 149.3/104

- sign -51.965 $\pm$ 16.321  $\chi^2$ /NDF: 71.8/53

# reg\_asym\_sam\_26\_avg\_rms vs Slug



Right In: 141.458 $\pm$ 0.028  $\chi^2$ /NDF: 3136216.6/25

Left Out: 75.041 $\pm$ 0.012  $\chi^2$ /NDF: 928107.8/24

Right Out: 150.028 $\pm$ 0.028  $\chi^2$ /NDF: 4189572.7/30

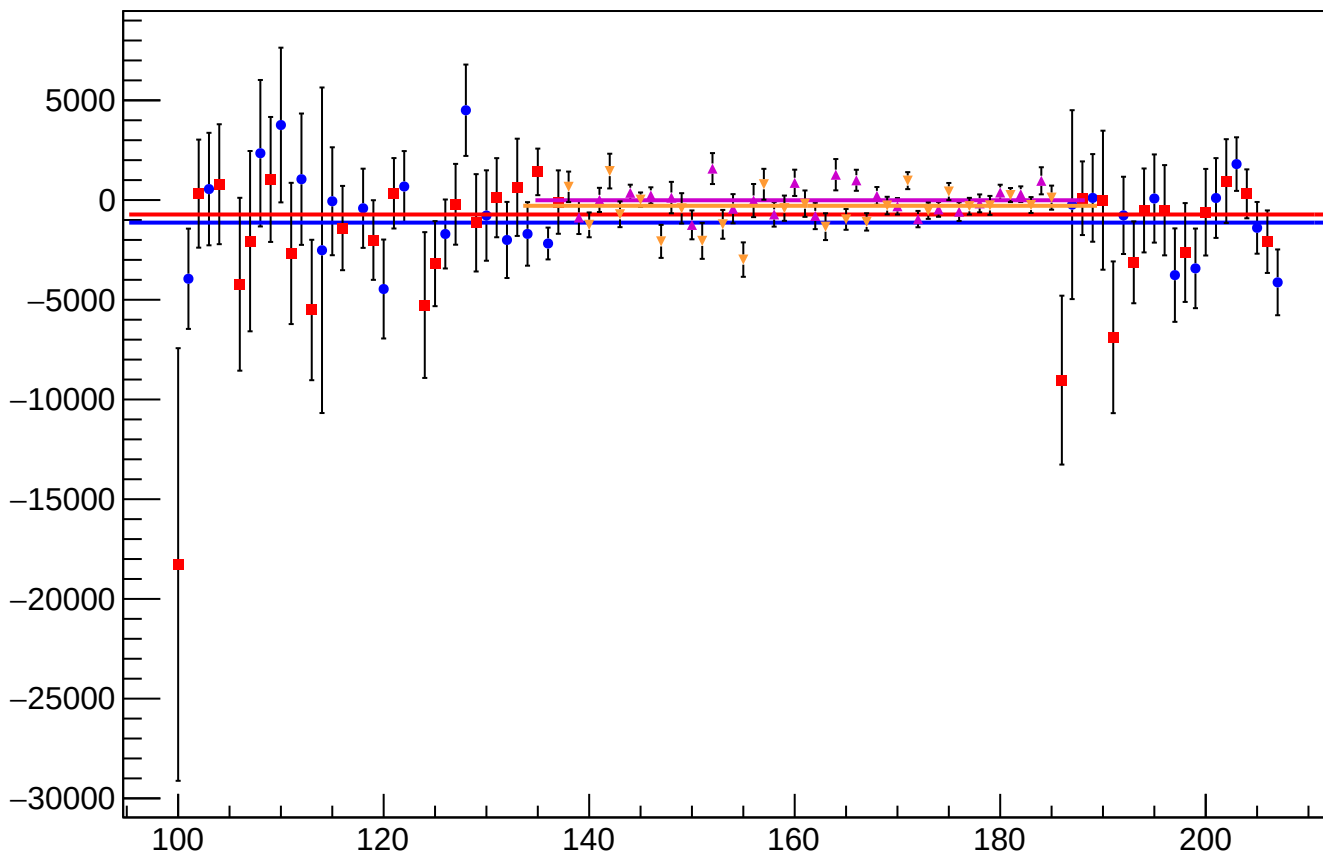
Left In: 75.352 $\pm$ 0.013  $\chi^2$ /NDF: 837634.2/22

+ sign 85.983 $\pm$ 0.011  $\chi^2$ /NDF: 8909784.4/50

All: 86.863 $\pm$ 0.008  $\chi^2$ /NDF: 19764899.4/104

- sign 87.798 $\pm$ 0.012  $\chi^2$ /NDF: 10842367.8/53

asym\_sam\_26\_avg\_reg\_correction\_mean vs Slug



Right In:  $-1131.898 \pm 370.584$   $\chi^2/\text{NDF}$ : 27.7/25

Left Out:  $-288.079 \pm 105.231$   $\chi^2/\text{NDF}$ : 53.3/24

Right Out:  $-724.633 \pm 392.056$   $\chi^2/\text{NDF}$ : 24.9/30

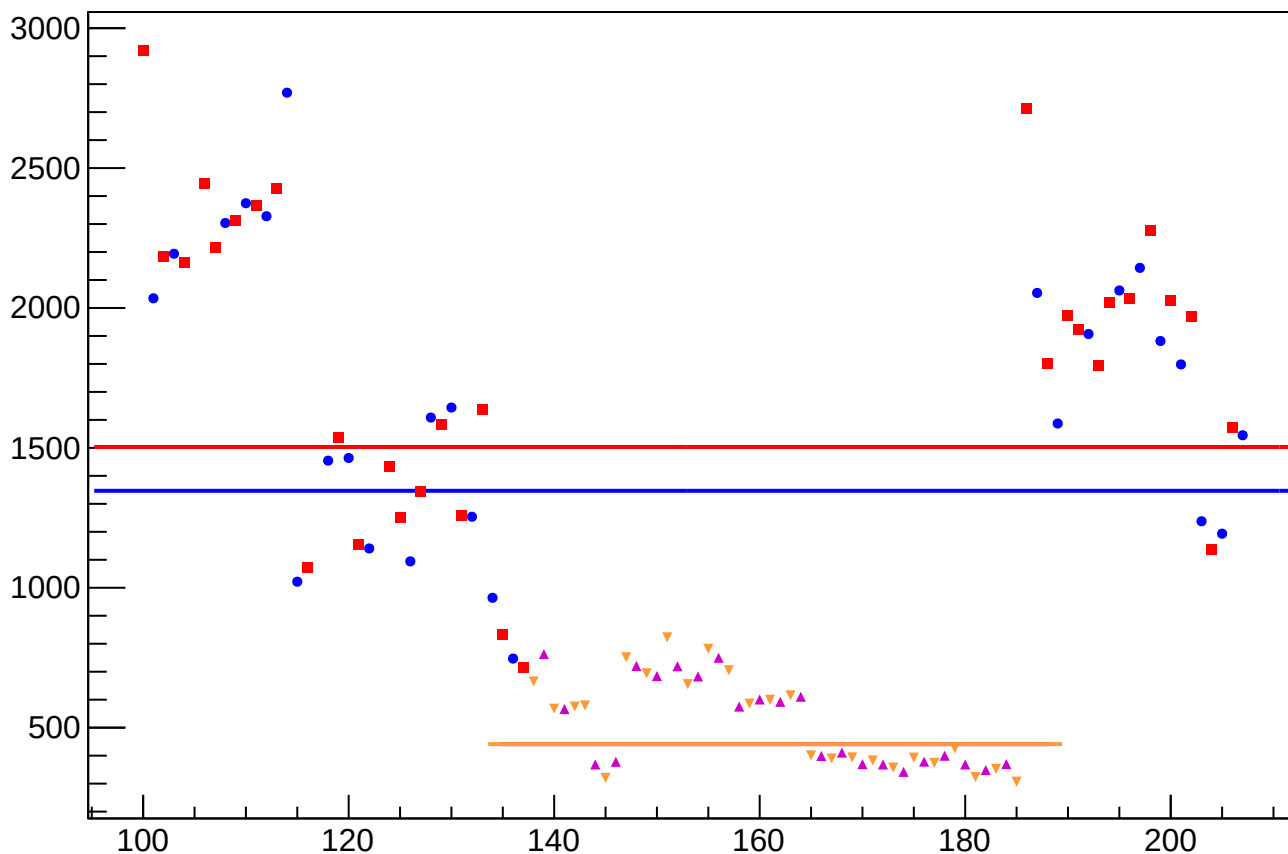
Left In:  $-10.643 \pm 107.669$   $\chi^2/\text{NDF}$ : 33.4/22

+ sign  $-351.042 \pm 101.229$   $\chi^2/\text{NDF}$ : 85.8/50

All:  $-209.554 \pm 72.480$   $\chi^2/\text{NDF}$ : 151.1/104

- sign  $-60.716 \pm 103.825$   $\chi^2/\text{NDF}$ : 61.4/53

# asym\_sam\_26\_avg\_reg\_correction\_rms vs Slug



Right In: 1346.574+/-0.262  $\chi^2/\text{NDF}$ : 3256482.5/25

Left Out: 441.128+/-0.074  $\chi^2/\text{NDF}$ : 3234629.2/24

Right Out: 1503.053+/-0.277  $\chi^2/\text{NDF}$ : 3320937.7/30

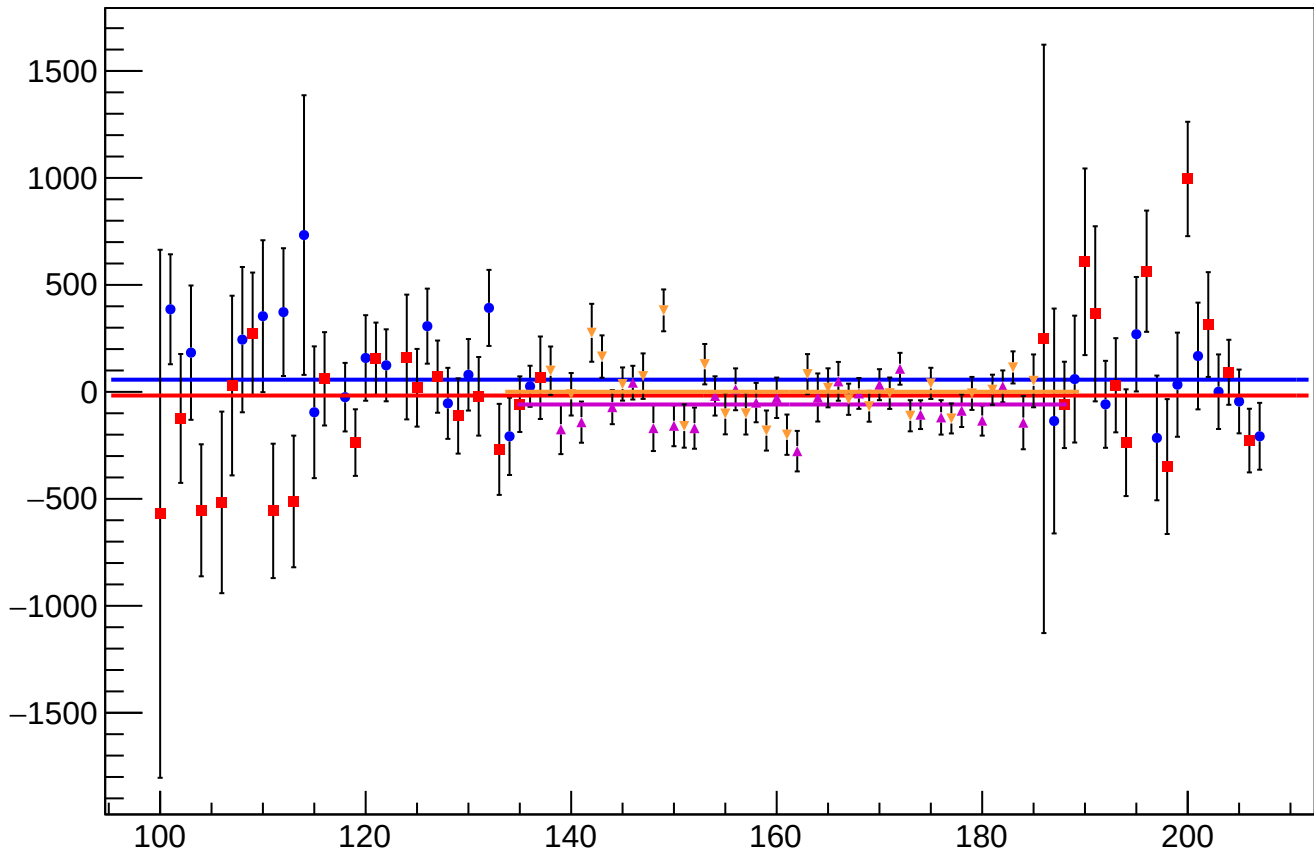
Left In: 441.196+/-0.076  $\chi^2/\text{NDF}$ : 2682075.8/22

+ sign 508.690+/-0.072  $\chi^2/\text{NDF}$ : 17539636.6/50

All: 512.089+/-0.051  $\chi^2/\text{NDF}$ : 37189550.5/10

- sign 515.665+/-0.073  $\chi^2/\text{NDF}$ : 19645286.7/53

# cor\_asym\_sam\_26\_avg\_mean vs Slug



Right In:  $57.022 \pm 38.997$   $\chi^2/\text{NDF}: 19.8/25$

Left Out:  $0.598 \pm 17.319$   $\chi^2/\text{NDF}: 48.6/24$

Right Out:  $-17.107 \pm 39.980$   $\chi^2/\text{NDF}: 45.0/30$

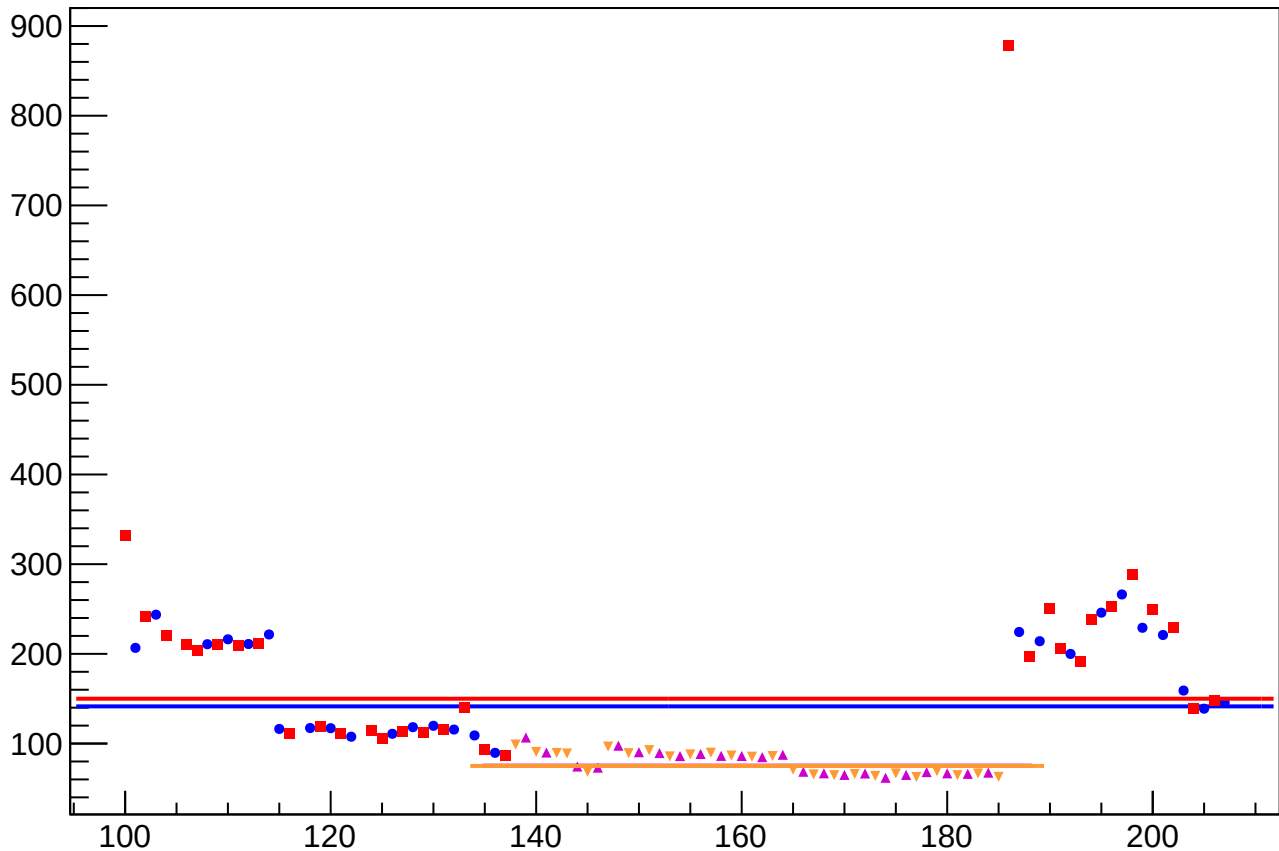
Left In:  $-58.904 \pm 17.879$   $\chi^2/\text{NDF}: 25.8/22$

+ sign  $9.893 \pm 15.829$   $\chi^2/\text{NDF}: 70.2/50$

All:  $-20.075 \pm 11.363$   $\chi^2/\text{NDF}: 149.3/104$

- sign  $-51.938 \pm 16.321$   $\chi^2/\text{NDF}: 71.7/53$

# cor\_asym\_sam\_26\_avg\_rms vs Slug



Right In: 141.458 $\pm$ 0.028  $\chi^2$ /NDF: 3136219.0/25

Left Out: 75.041 $\pm$ 0.012  $\chi^2$ /NDF: 928107.8/24

Right Out: 149.997 $\pm$ 0.028  $\chi^2$ /NDF: 4185302.7/30

Left In: 75.352 $\pm$ 0.013  $\chi^2$ /NDF: 837634.2/22

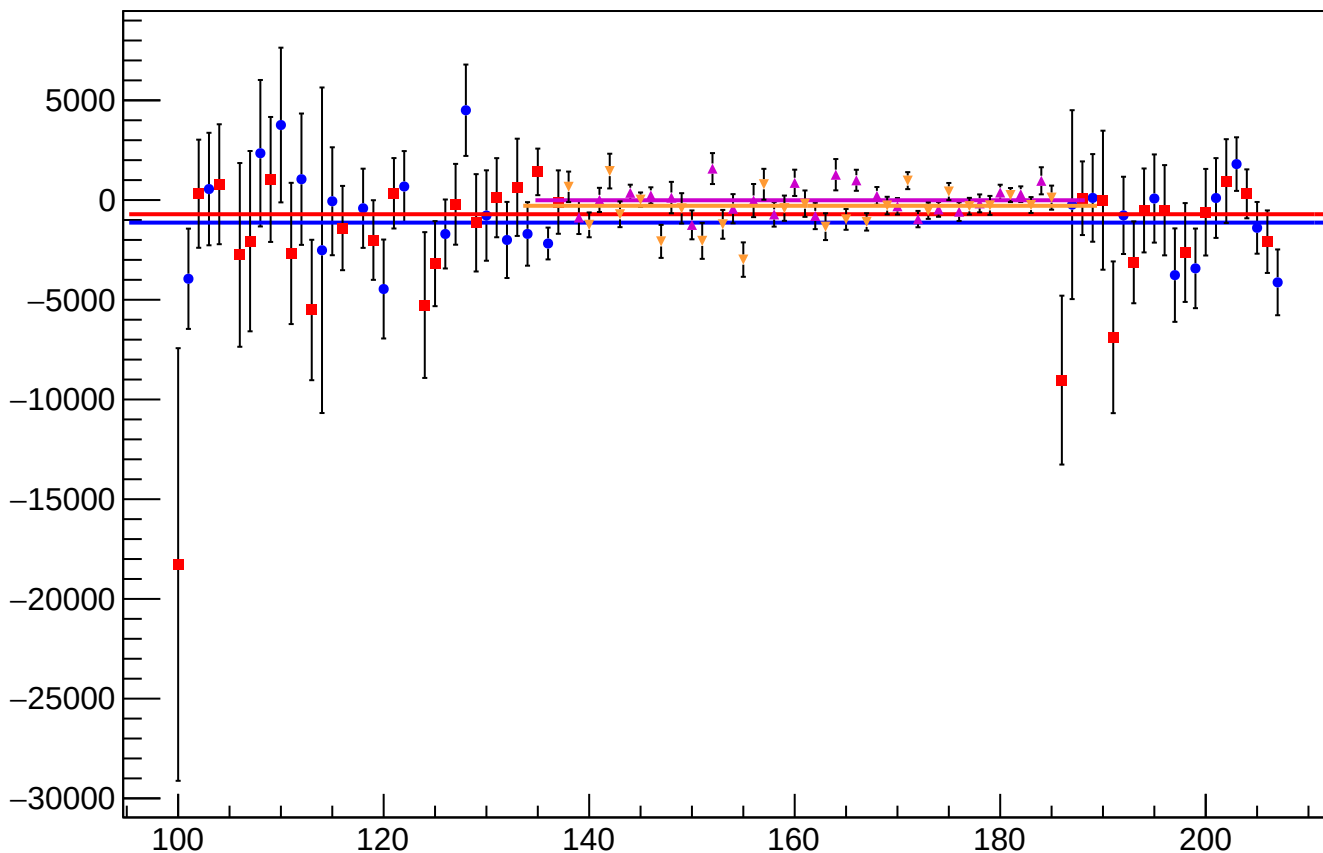
+ sign 85.983 $\pm$ 0.011  $\chi^2$ /NDF: 8909786.4/50

All: 86.860 $\pm$ 0.008  $\chi^2$ /NDF: 19755329.6/104

- sign 87.792 $\pm$ 0.012  $\chi^2$ /NDF: 10832880.3/53



asym\_sam\_26\_avg\_cor\_correction\_mean vs Slug



Right In:  $-1131.887 \pm 370.584$   $\chi^2/\text{NDF}$ : 27.7/25

Left Out:  $-288.079 \pm 105.231$   $\chi^2/\text{NDF}$ : 53.3/24

Right Out:  $-710.820 \pm 392.246$   $\chi^2/\text{NDF}$ : 24.4/30

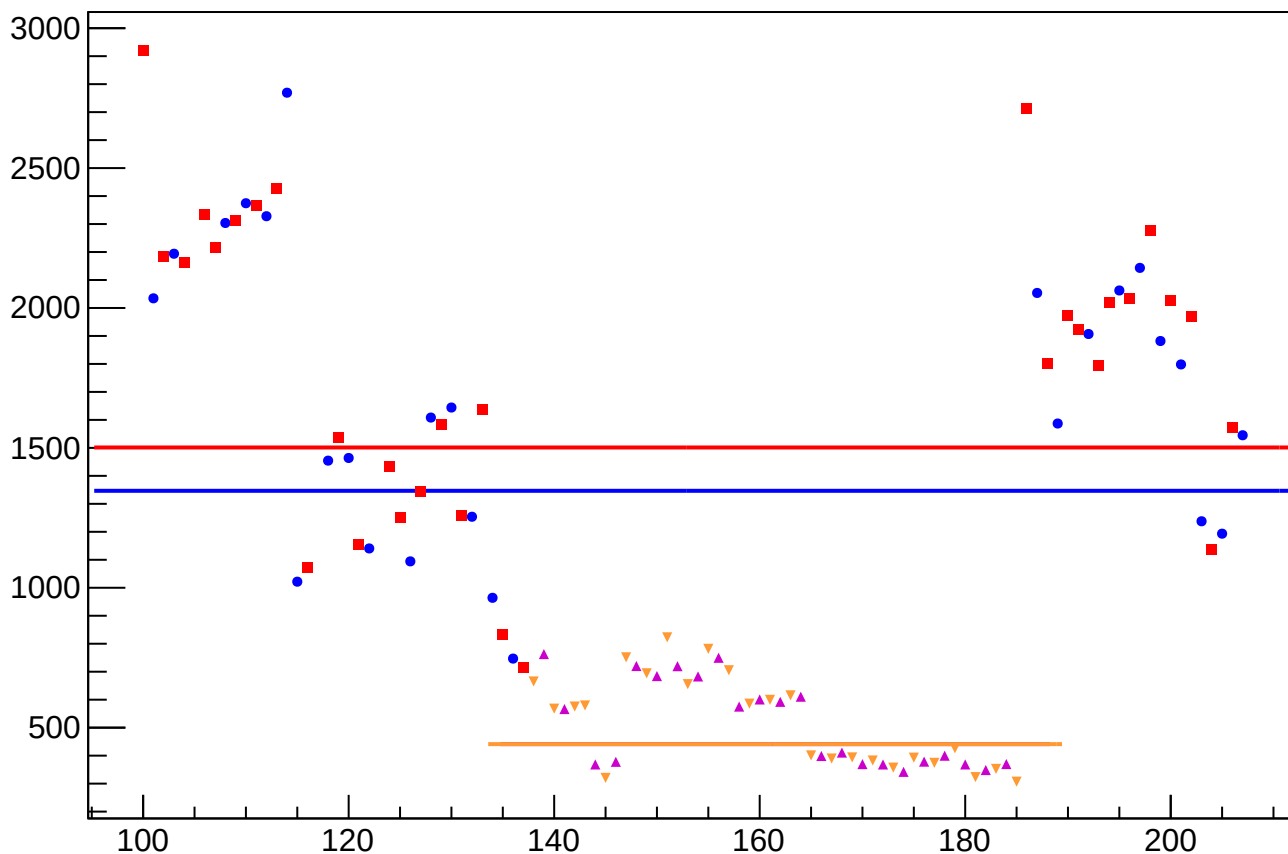
Left In:  $-10.644 \pm 107.670$   $\chi^2/\text{NDF}$ : 33.4/22

+ sign  $-351.041 \pm 101.229$   $\chi^2/\text{NDF}$ : 85.8/50

All:  $-209.066 \pm 72.481$   $\chi^2/\text{NDF}$ : 150.6/104

- sign  $-59.704 \pm 103.829$   $\chi^2/\text{NDF}$ : 60.8/53

# asym\_sam\_26\_avg\_cor\_correction\_rms vs Slug



Right In: 1346.575+/-0.262  $\chi^2/\text{NDF}$ : 3256513.0/25

Left Out: 441.128+/-0.074  $\chi^2/\text{NDF}$ : 3234622.5/24

Right Out: 1501.387+/-0.277  $\chi^2/\text{NDF}$ : 3292134.1/30

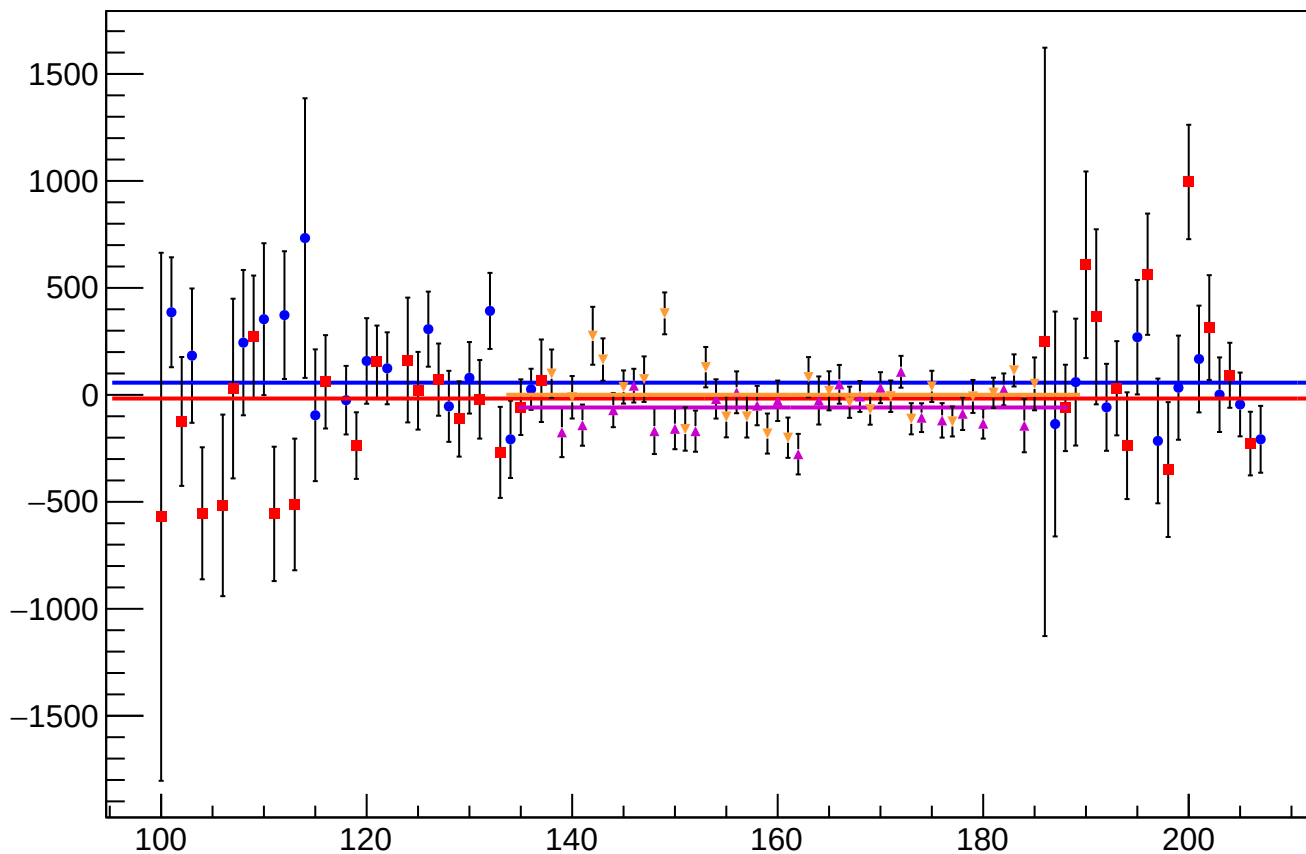
Left In: 441.196+/-0.076  $\chi^2/\text{NDF}$ : 2682073.9/22

+ sign 508.690+/-0.072  $\chi^2/\text{NDF}$ : 17539645.3/50

All: 512.000+/-0.051  $\chi^2/\text{NDF}$ : 37105496.6/10

- sign 515.482+/-0.073  $\chi^2/\text{NDF}$ : 19561464.5/53

# eigen\_cor\_asym\_sam\_26\_avg\_mean vs Slug



Right In:  $57.022 \pm 38.997$   $\chi^2/\text{NDF}$ : 19.8/25

Left Out:  $0.598 \pm 17.319$   $\chi^2/\text{NDF}$ : 48.6/24

Right Out:  $-17.107 \pm 39.980$   $\chi^2/\text{NDF}$ : 45.0/30

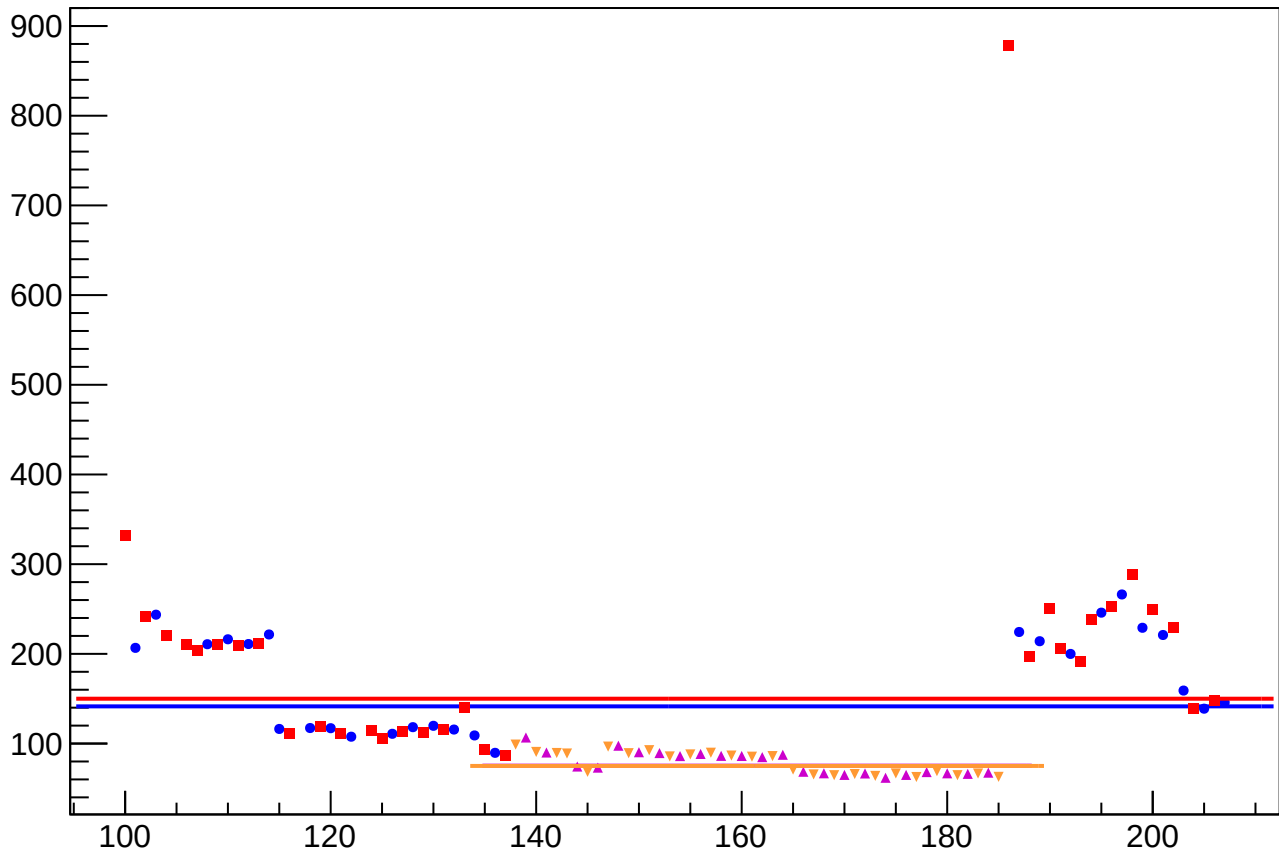
Left In:  $-58.904 \pm 17.879$   $\chi^2/\text{NDF}$ : 25.8/22

+ sign  $9.893 \pm 15.829$   $\chi^2/\text{NDF}$ : 70.2/50

All:  $-20.075 \pm 11.363$   $\chi^2/\text{NDF}$ : 149.3/104

- sign  $-51.938 \pm 16.321$   $\chi^2/\text{NDF}$ : 71.7/53

# eigen\_cor\_asym\_sam\_26\_avg\_rms vs Slug



Right In: 141.458 $\pm$ 0.028  $\chi^2$ /NDF: 3136219.0/25

Left Out: 75.041 $\pm$ 0.012  $\chi^2$ /NDF:928107.8/24

Right Out: 149.997 $\pm$ 0.028  $\chi^2$ /NDF: 4185302.7/30

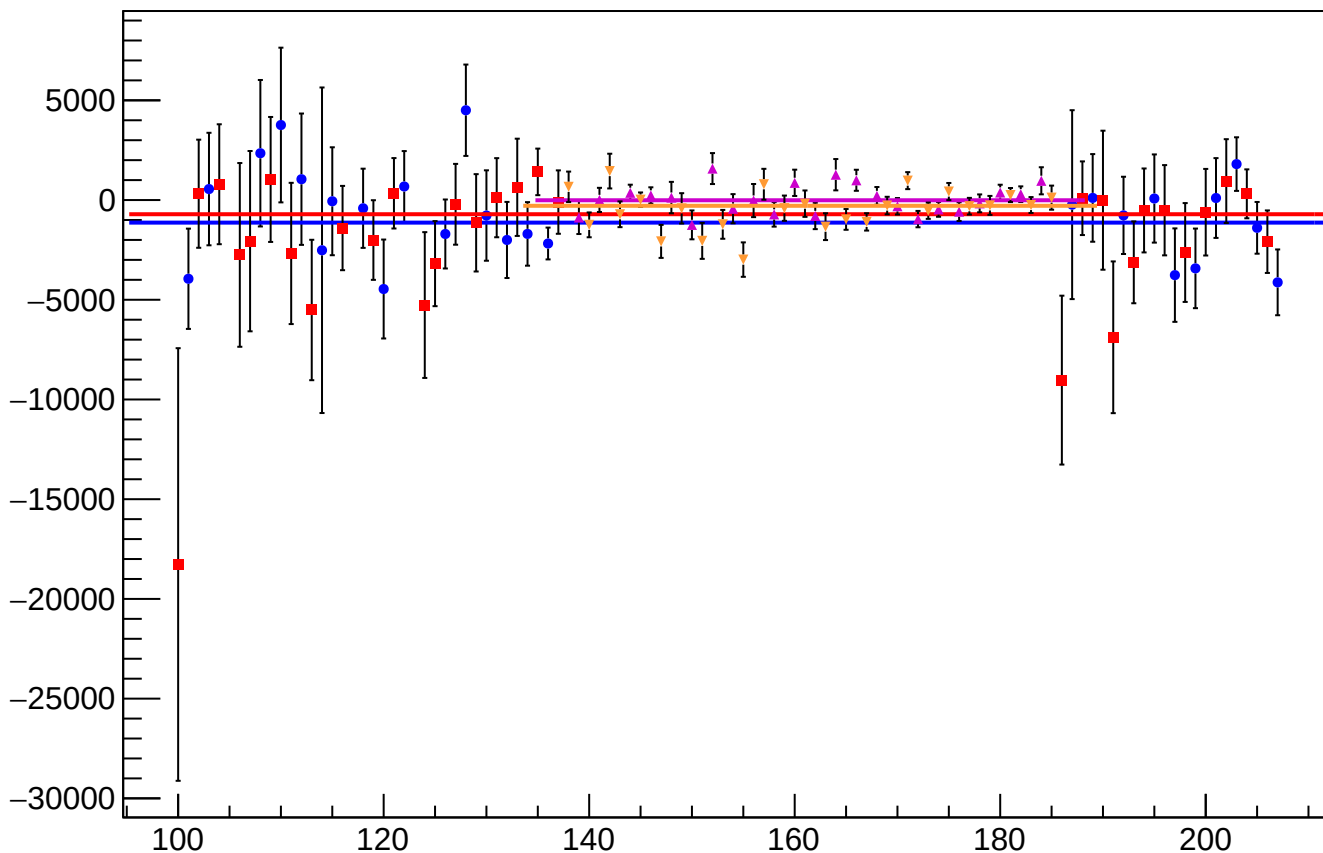
Left In: 75.352 $\pm$ 0.013  $\chi^2$ /NDF:837634.2/22

+ sign 85.983 $\pm$ 0.011  $\chi^2$ /NDF: 8909786.4/50

All: 86.860 $\pm$ 0.008  $\chi^2$ /NDF: 19755329.6/104

- sign 87.792 $\pm$ 0.012  $\chi^2$ /NDF: 10832880.3/53

asym\_sam\_26\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-1131.887 \pm 370.584$   $\chi^2/\text{NDF}$ : 27.7/25

Left Out:  $-288.079 \pm 105.231$   $\chi^2/\text{NDF}$ : 53.3/24

Right Out:  $-710.820 \pm 392.246$   $\chi^2/\text{NDF}$ : 24.4/30

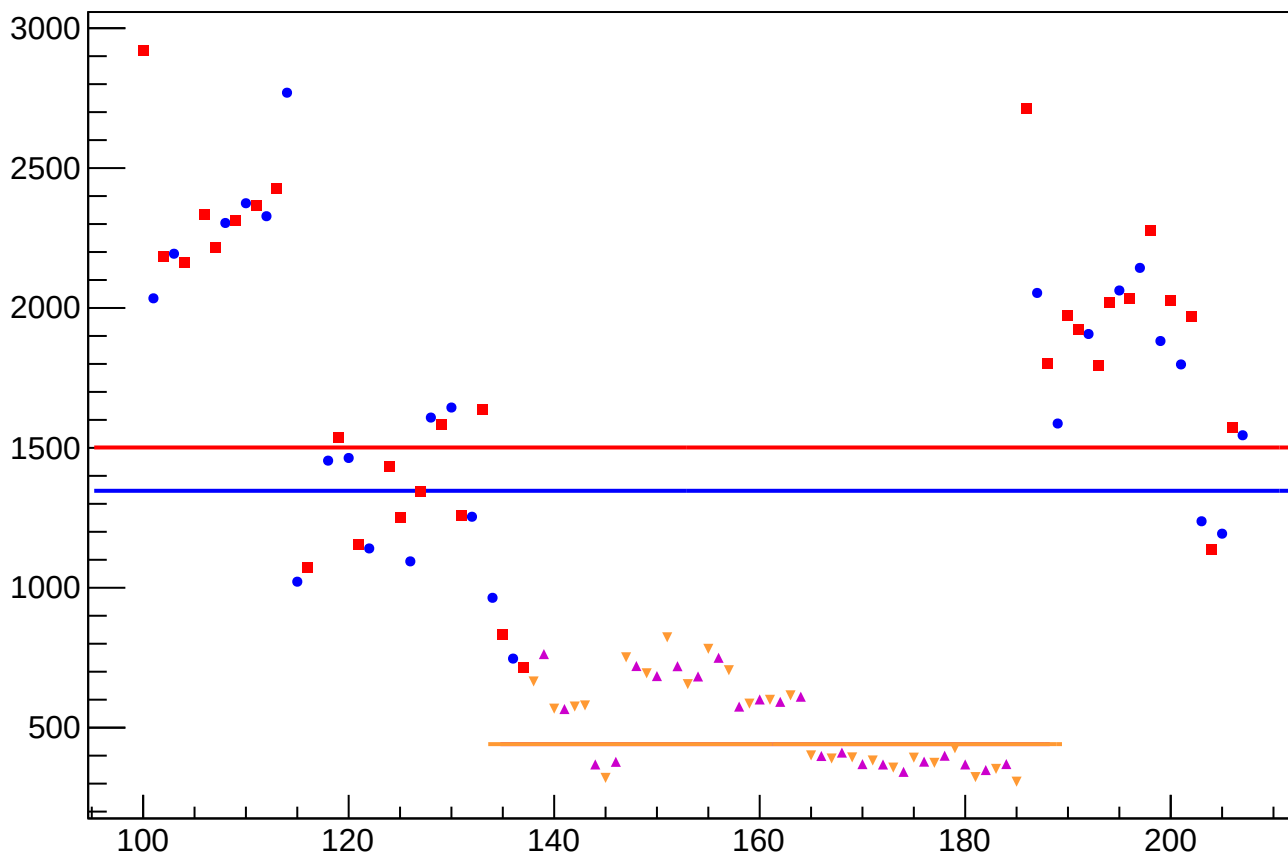
Left In:  $-10.644 \pm 107.670$   $\chi^2/\text{NDF}$ : 33.4/22

+ sign  $-351.041 \pm 101.229$   $\chi^2/\text{NDF}$ : 85.8/50

All:  $-209.066 \pm 72.481$   $\chi^2/\text{NDF}$ : 150.6/104

- sign  $-59.704 \pm 103.829$   $\chi^2/\text{NDF}$ : 60.8/53

asym\_sam\_26\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 1346.575+/-0.262  $\chi^2/\text{NDF}$ : 3256513.0/25

Left Out: 441.128+/-0.074  $\chi^2/\text{NDF}$ : 3234622.5/24

Right Out: 1501.387+/-0.277  $\chi^2/\text{NDF}$ : 3292134.1/30

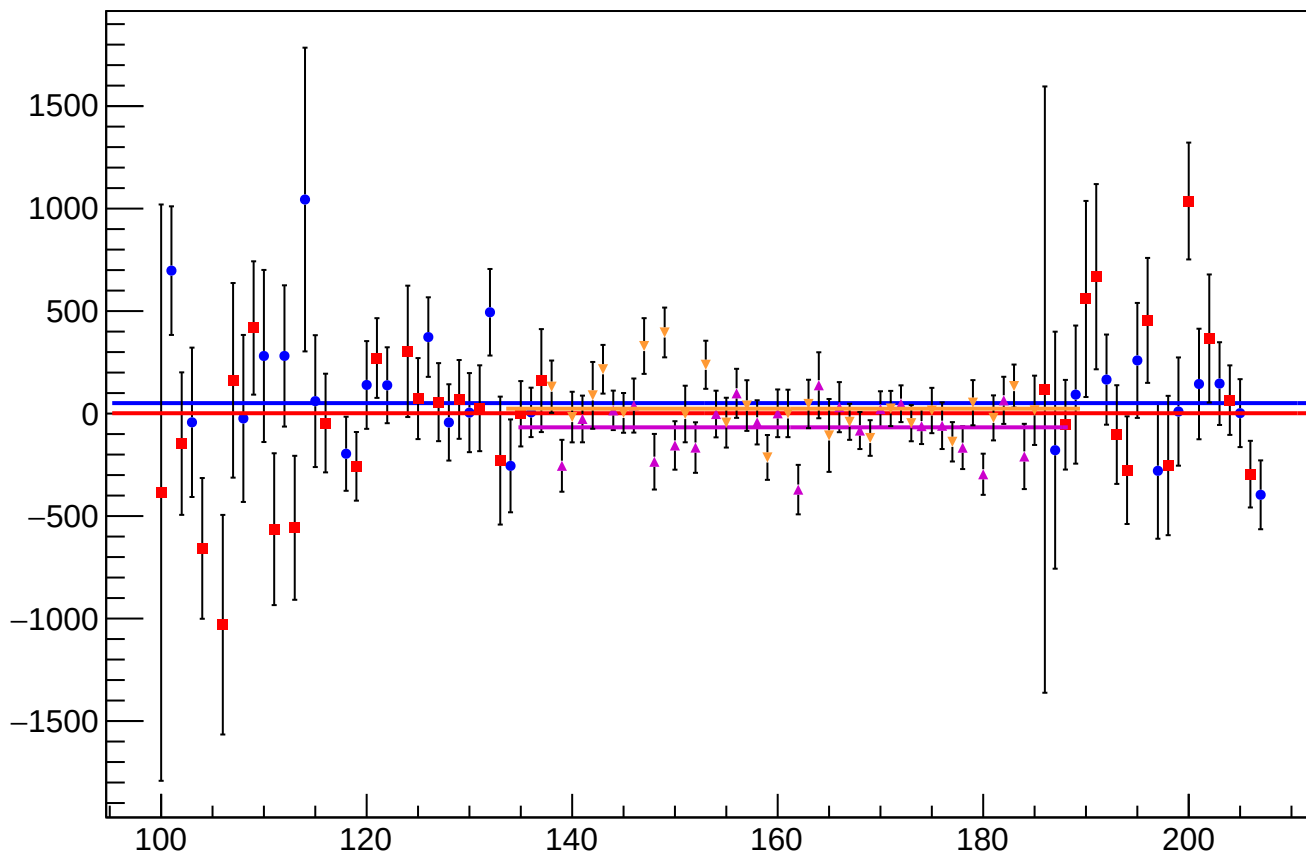
Left In: 441.196+/-0.076  $\chi^2/\text{NDF}$ : 2682073.9/22

+ sign 508.690+/-0.072  $\chi^2/\text{NDF}$ : 17539645.3/50

All: 512.000+/-0.051  $\chi^2/\text{NDF}$ : 37105496.6/10

- sign 515.482+/-0.073  $\chi^2/\text{NDF}$ : 19561464.5/53

# dit\_asym\_sam\_26\_avg\_mean vs Slug



Right In:  $51.020 \pm 44.601$   $\chi^2/\text{NDF}$ : 28.1/25

Left Out:  $23.873 \pm 22.414$   $\chi^2/\text{NDF}$ : 35.2/24

Right Out:  $1.687 \pm 45.428$   $\chi^2/\text{NDF}$ : 46.5/30

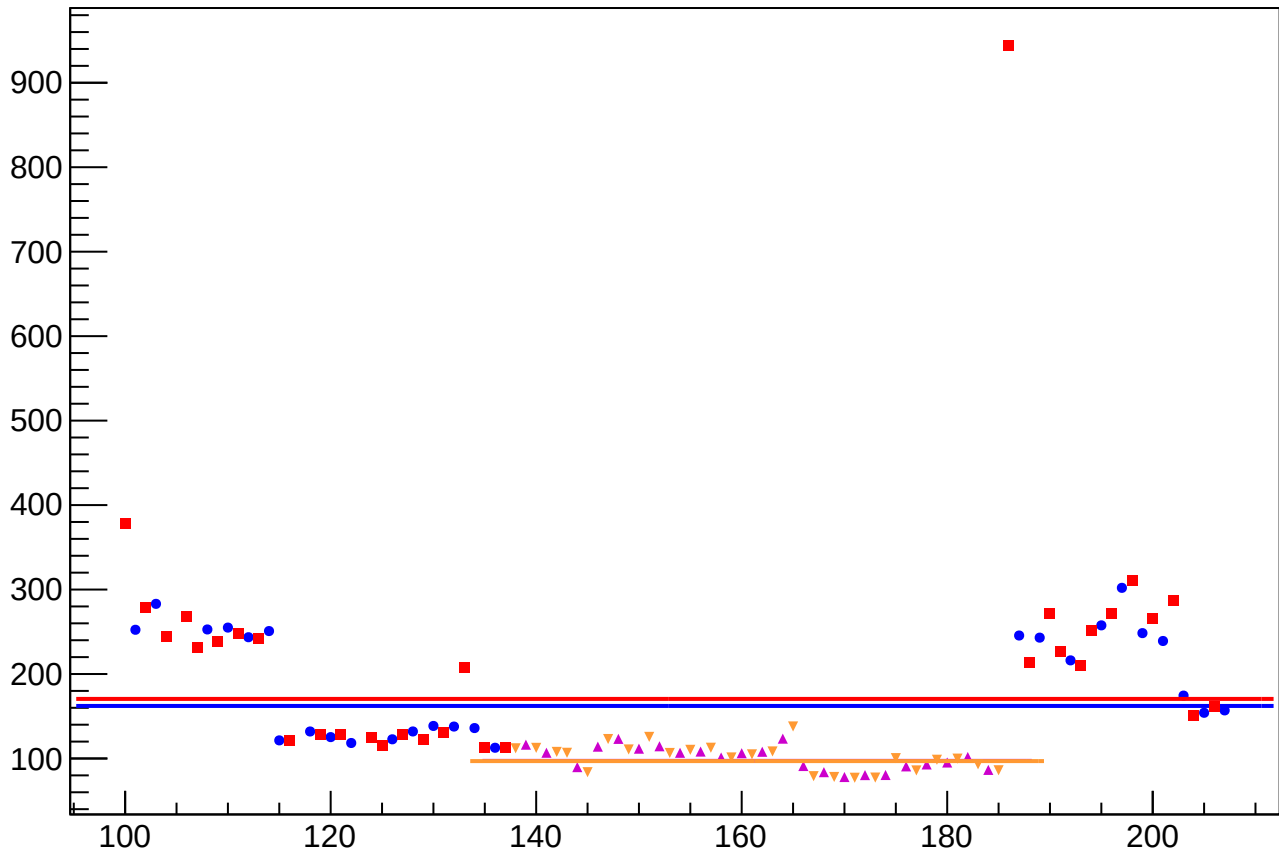
Left In:  $-67.086 \pm 23.121$   $\chi^2/\text{NDF}$ : 28.6/22

+ sign  $29.347 \pm 20.027$   $\chi^2/\text{NDF}$ : 63.6/50

All:  $-10.624 \pm 14.362$   $\chi^2/\text{NDF}$ : 148.8/104

- sign  $-52.936 \pm 20.606$   $\chi^2/\text{NDF}$ : 77.0/53

# dit\_asym\_sam\_26\_avg\_rms vs Slug



Right In: 162.203 $\pm$ 0.032  $\chi^2$ /NDF: 2792473.6/25

Left Out: 96.907 $\pm$ 0.016  $\chi^2$ /NDF:933980.7/24

Right Out: 170.535 $\pm$ 0.032  $\chi^2$ /NDF: 3952675.5/30

Left In: 97.167 $\pm$ 0.016  $\chi^2$ /NDF:674595.2/22

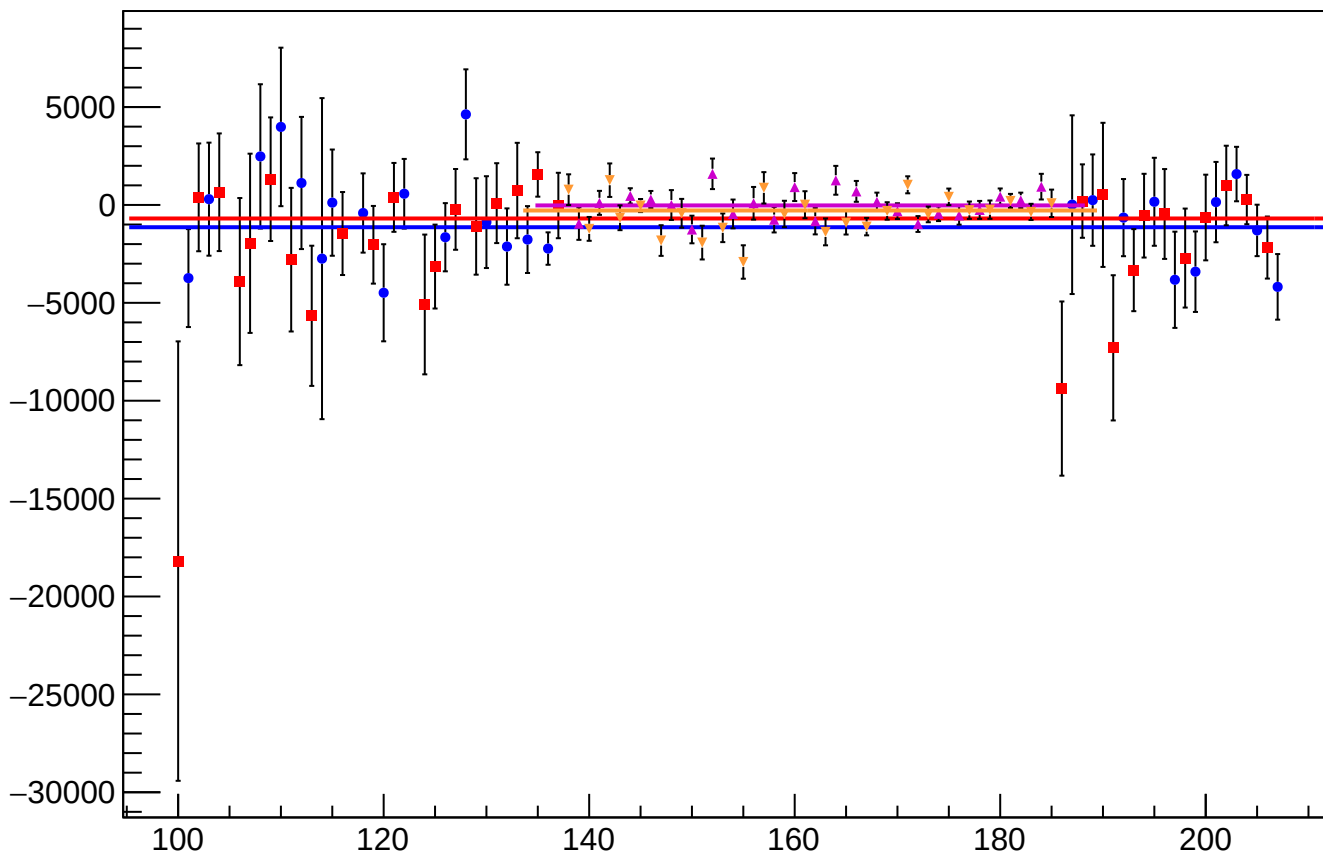
+ sign 110.073 $\pm$ 0.014  $\chi^2$ /NDF: 7148673.1/50

All: 111.136 $\pm$ 0.010  $\chi^2$ /NDF: 15930953.3/10

- sign 112.262 $\pm$ 0.015  $\chi^2$ /NDF: 8770665.5/53



# asym\_sam\_26\_avg\_dit\_correction\_mean vs Slug



Right In:  $-1138.394 \pm 380.122$   $\chi^2/\text{NDF}$ : 26.7/25

Left Out:  $-282.422 \pm 106.394$   $\chi^2/\text{NDF}$ : 50.4/24

Right Out:  $-691.696 \pm 395.365$   $\chi^2/\text{NDF}$ : 26.3/30

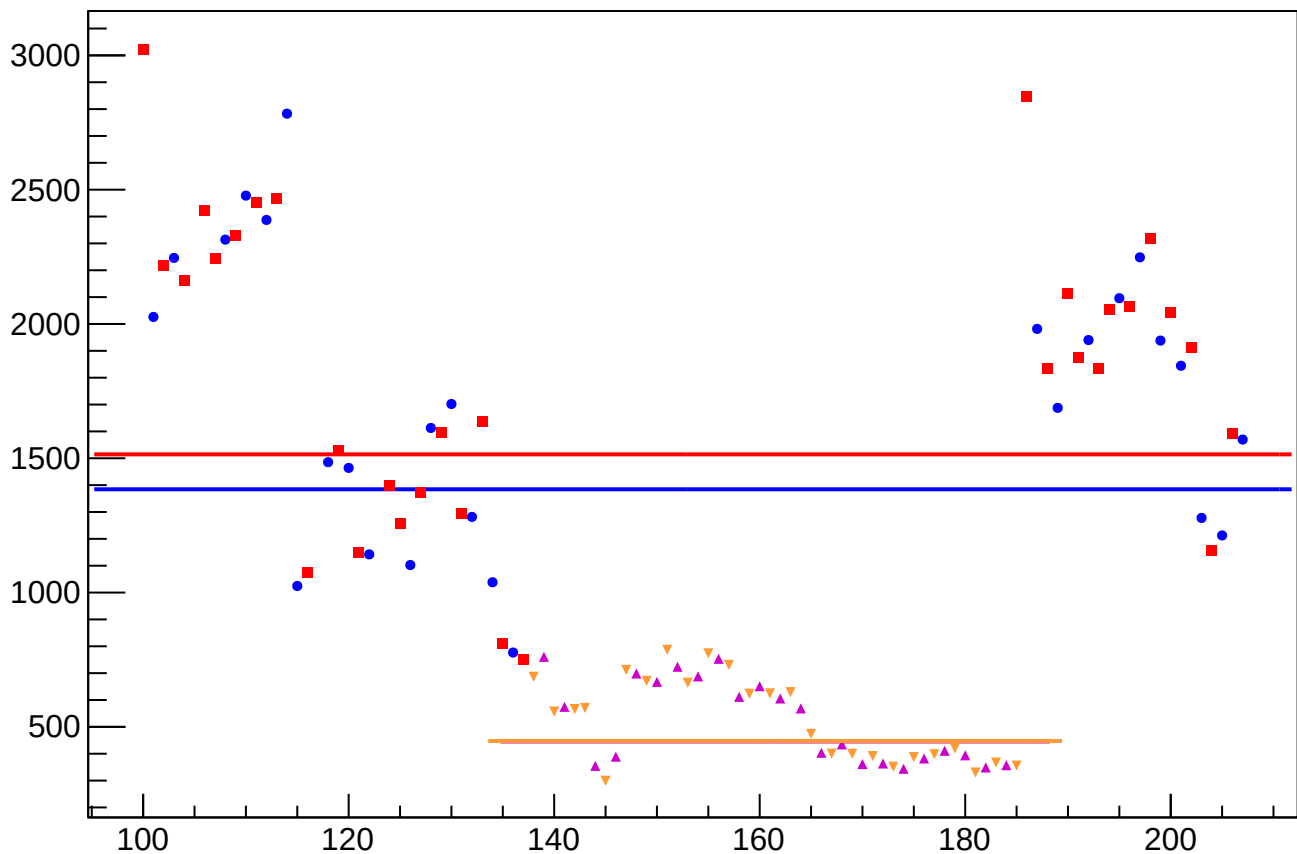
Left In:  $-24.625 \pm 108.884$   $\chi^2/\text{NDF}$ : 32.9/22

+ sign  $-344.608 \pm 102.457$   $\chi^2/\text{NDF}$ : 81.9/50

All:  $-211.445 \pm 73.322$   $\chi^2/\text{NDF}$ : 147.2/104

- sign  $-71.653 \pm 104.975$   $\chi^2/\text{NDF}$ : 61.8/53

# asym\_sam\_26\_avg\_dit\_correction\_rms vs Slug



Right In: 1384.507 $\pm$ 0.269  $\chi^2$ /NDF: 3161831.1/25

Left Out: 447.386 $\pm$ 0.075  $\chi^2$ /NDF: 3197771.9/24

+ sign 515.467 $\pm$ 0.072  $\chi^2$ /NDF: 17632081.8/50

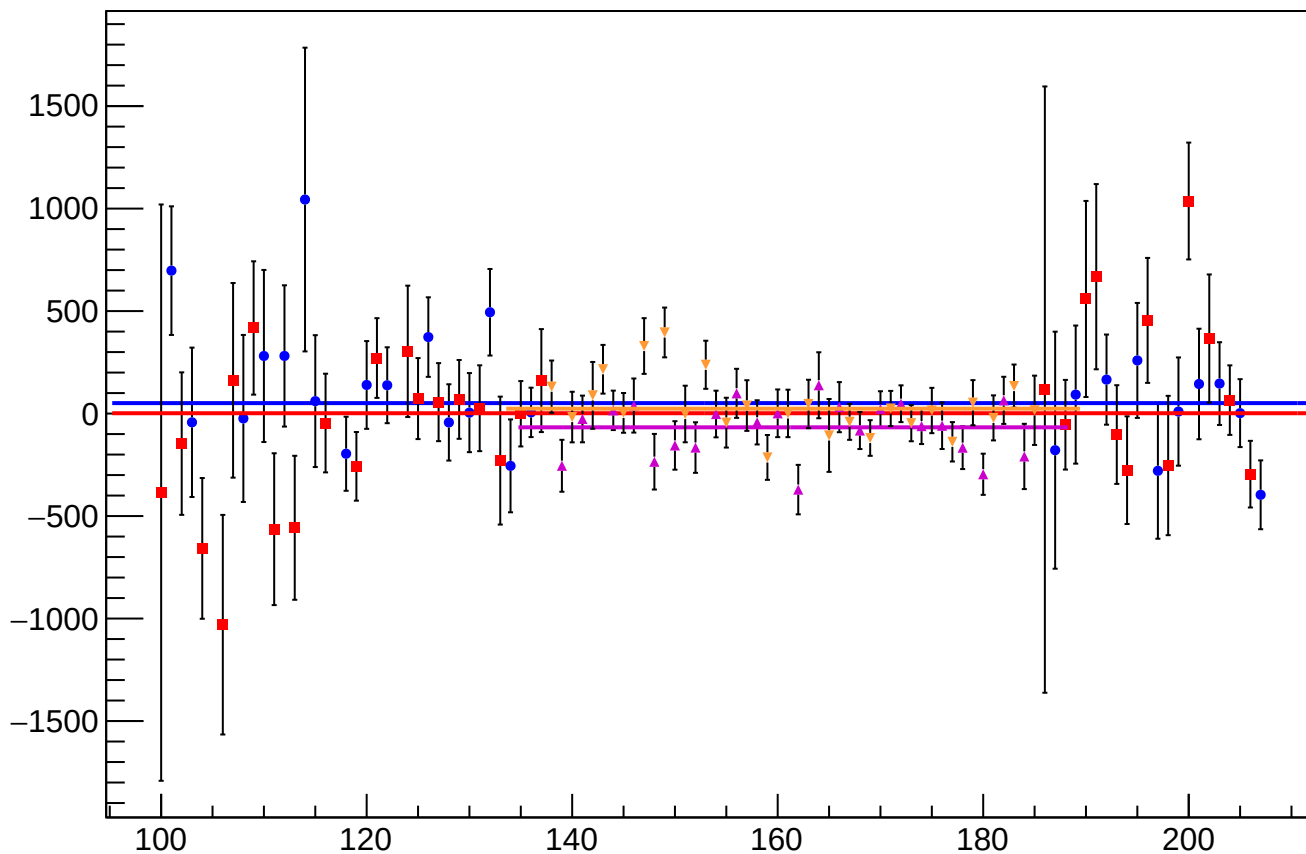
Right Out: 1514.517 $\pm$ 0.280  $\chi^2$ /NDF: 3393518.9/30

All: 518.096 $\pm$ 0.052  $\chi^2$ /NDF: 37332849.5/10

Left In: 445.491 $\pm$ 0.077  $\chi^2$ /NDF: 2713295.1/22

- sign 520.856 $\pm$ 0.074  $\chi^2$ /NDF: 19698068.9/53

eigen\_dit\_asym\_sam\_26\_avg\_mean vs Slug



Right In:  $51.023 \pm 44.601$   $\chi^2/\text{NDF}$ : 28.1/25

Left Out:  $23.872 \pm 22.414$   $\chi^2/\text{NDF}$ : 35.2/24

Right Out:  $1.686 \pm 45.428$   $\chi^2/\text{NDF}$ : 46.5/30

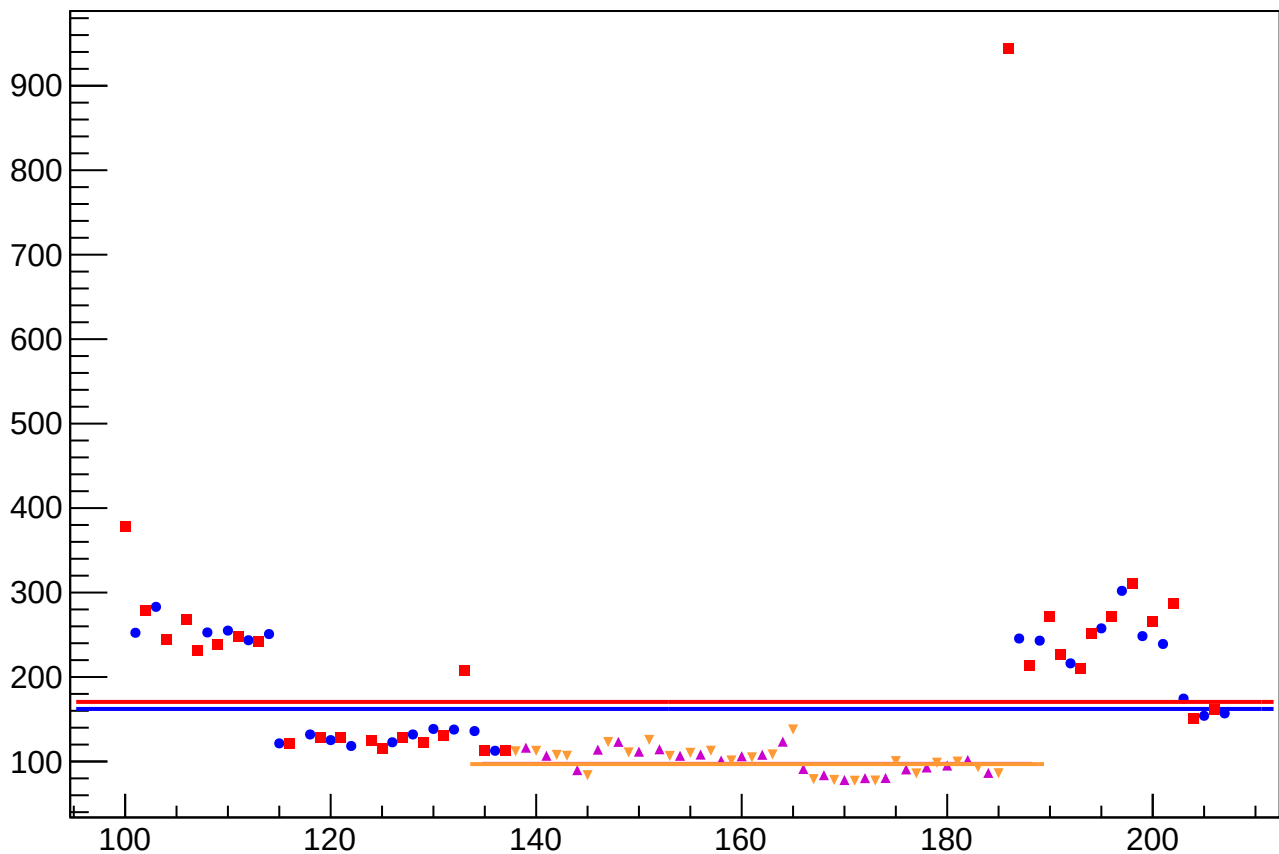
Left In:  $-67.085 \pm 23.121$   $\chi^2/\text{NDF}$ : 28.6/22

+ sign  $29.346 \pm 20.027$   $\chi^2/\text{NDF}$ : 63.6/50

All:  $-10.624 \pm 14.362$   $\chi^2/\text{NDF}$ : 148.8/104

- sign  $-52.936 \pm 20.606$   $\chi^2/\text{NDF}$ : 77.0/53

# eigen\_dit\_asym\_sam\_26\_avg\_rms vs Slug



Right In: 162.202 $\pm$ 0.032  $\chi^2$ /NDF: 2792484.0/25

Left Out: 96.907 $\pm$ 0.016  $\chi^2$ /NDF:933979.3/24

Right Out: 170.535 $\pm$ 0.032  $\chi^2$ /NDF: 3952679.9/30

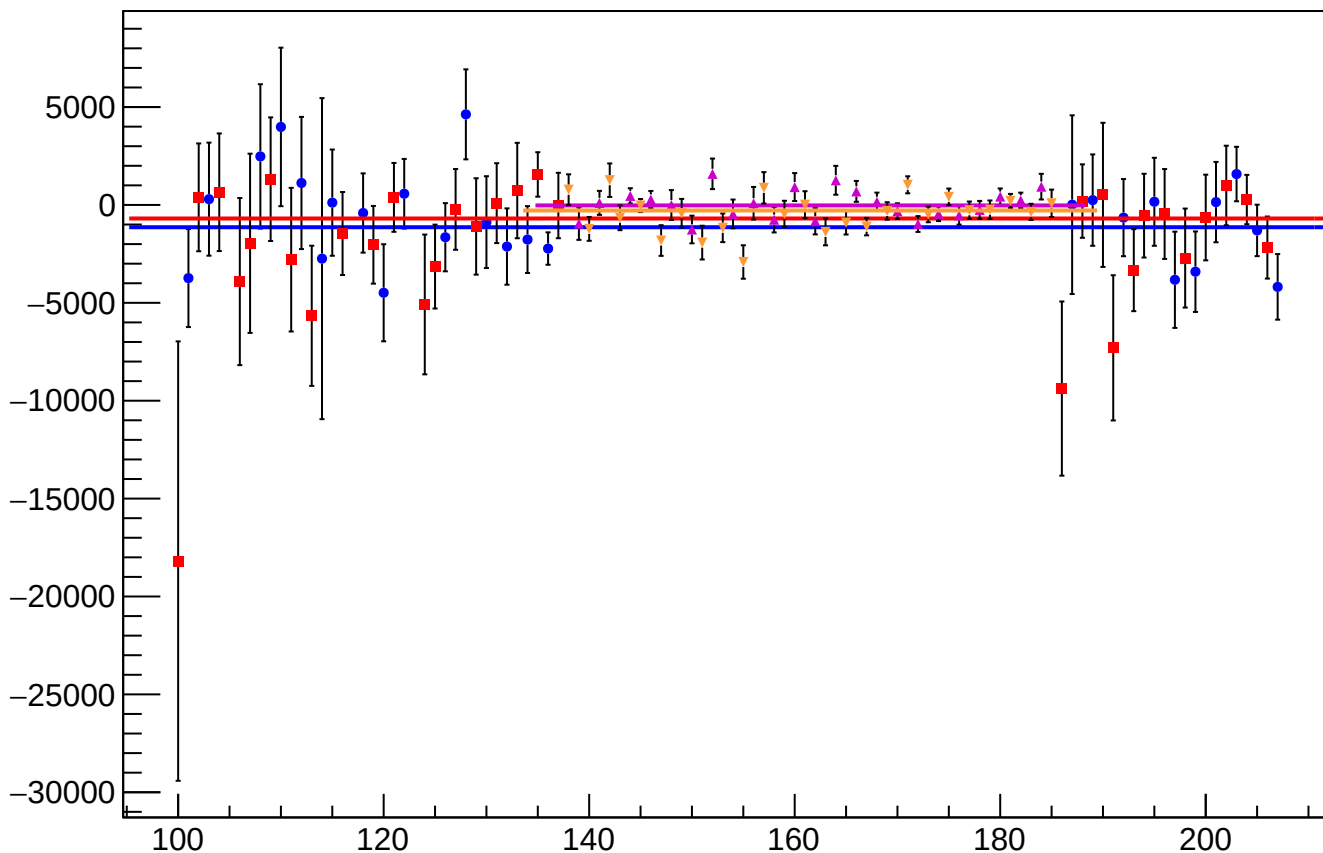
Left In: 97.168 $\pm$ 0.016  $\chi^2$ /NDF:674586.0/22

+ sign 110.073 $\pm$ 0.014  $\chi^2$ /NDF: 7148605.3/50

All: 111.137 $\pm$ 0.010  $\chi^2$ /NDF: 15930813.3/10

- sign 112.263 $\pm$ 0.015  $\chi^2$ /NDF: 8770592.0/53

asym\_sam\_26\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-1138.392 \pm 380.122$   $\chi^2/\text{NDF}$ : 26.7/25

Left Out:  $-282.421 \pm 106.394$   $\chi^2/\text{NDF}$ : 50.4/24

Right Out:  $-691.698 \pm 395.365$   $\chi^2/\text{NDF}$ : 26.3/30

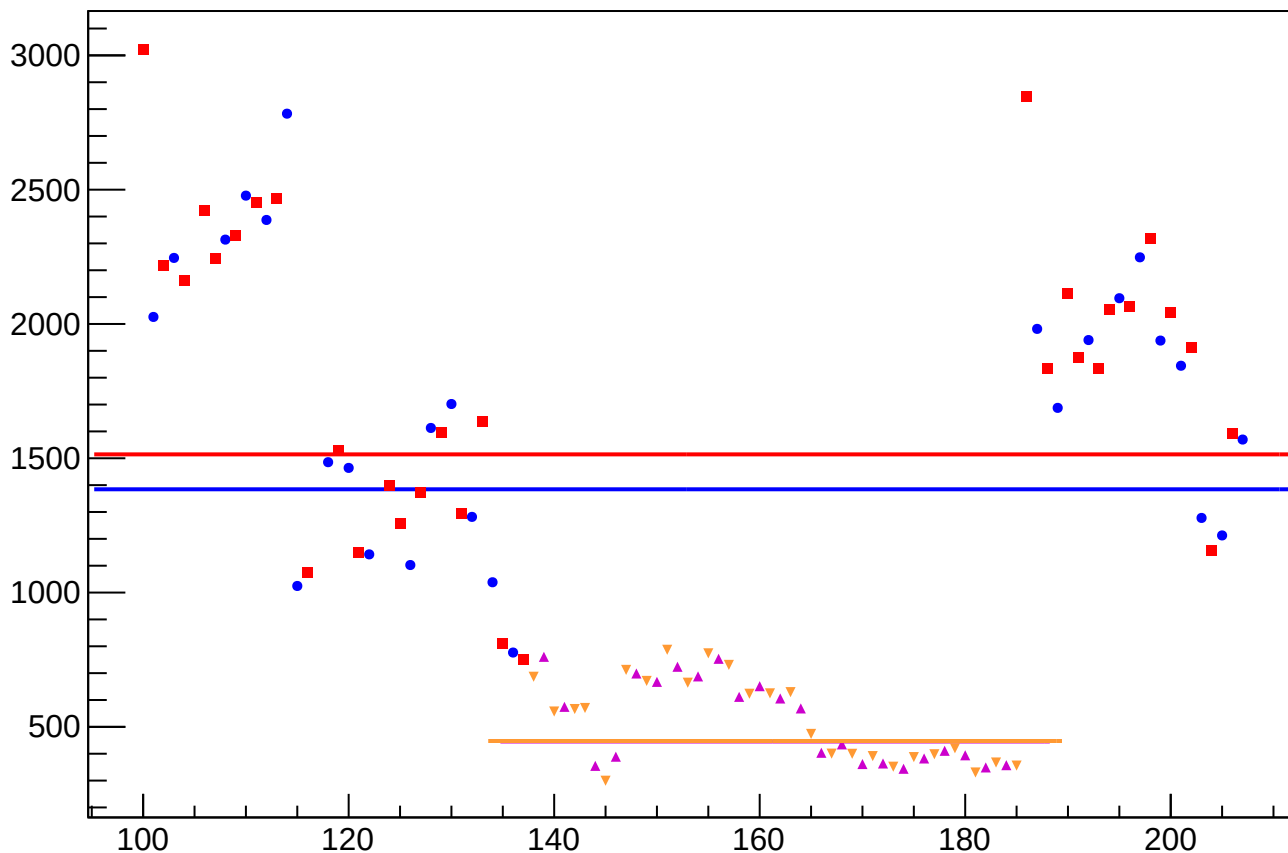
Left In:  $-24.626 \pm 108.884$   $\chi^2/\text{NDF}$ : 32.9/22

+ sign  $-344.607 \pm 102.456$   $\chi^2/\text{NDF}$ : 81.9/50

All:  $-211.444 \pm 73.322$   $\chi^2/\text{NDF}$ : 147.2/104

- sign  $-71.653 \pm 104.975$   $\chi^2/\text{NDF}$ : 61.8/53

asym\_sam\_26\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 1384.508 $\pm$ 0.269  $\chi^2$ /NDF: 3161810.3/25

Left Out: 447.385 $\pm$ 0.075  $\chi^2$ /NDF: 3197793.9/24

Right Out: 1514.517 $\pm$ 0.280  $\chi^2$ /NDF: 3393502.1/30

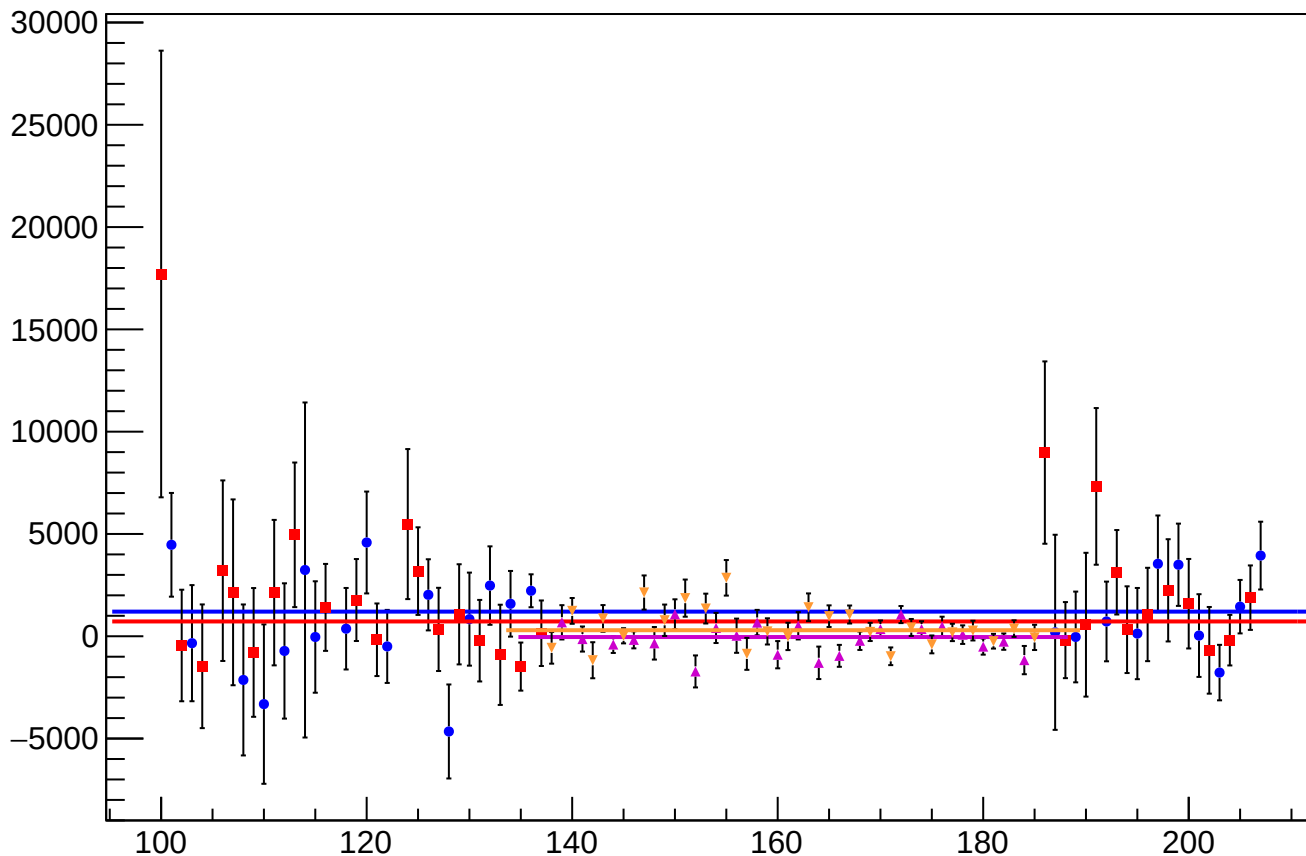
Left In: 445.491 $\pm$ 0.077  $\chi^2$ /NDF: 2713303.9/22

+ sign 515.467 $\pm$ 0.072  $\chi^2$ /NDF: 17632106.1/50

All: 518.096 $\pm$ 0.052  $\chi^2$ /NDF: 37332885.5/10

- sign 520.855 $\pm$ 0.074  $\chi^2$ /NDF: 19698080.5/53

# asym\_sam\_26\_avg\_mean vs Slug



Right In: 1203.917 $\pm$ 373.140  $\chi^2$ /NDF: 27.4/25

Left Out: 295.006 $\pm$ 106.810  $\chi^2$ /NDF: 50.5/24

Right Out: 723.589 $\pm$ 394.598  $\chi^2$ /NDF: 23.5/30

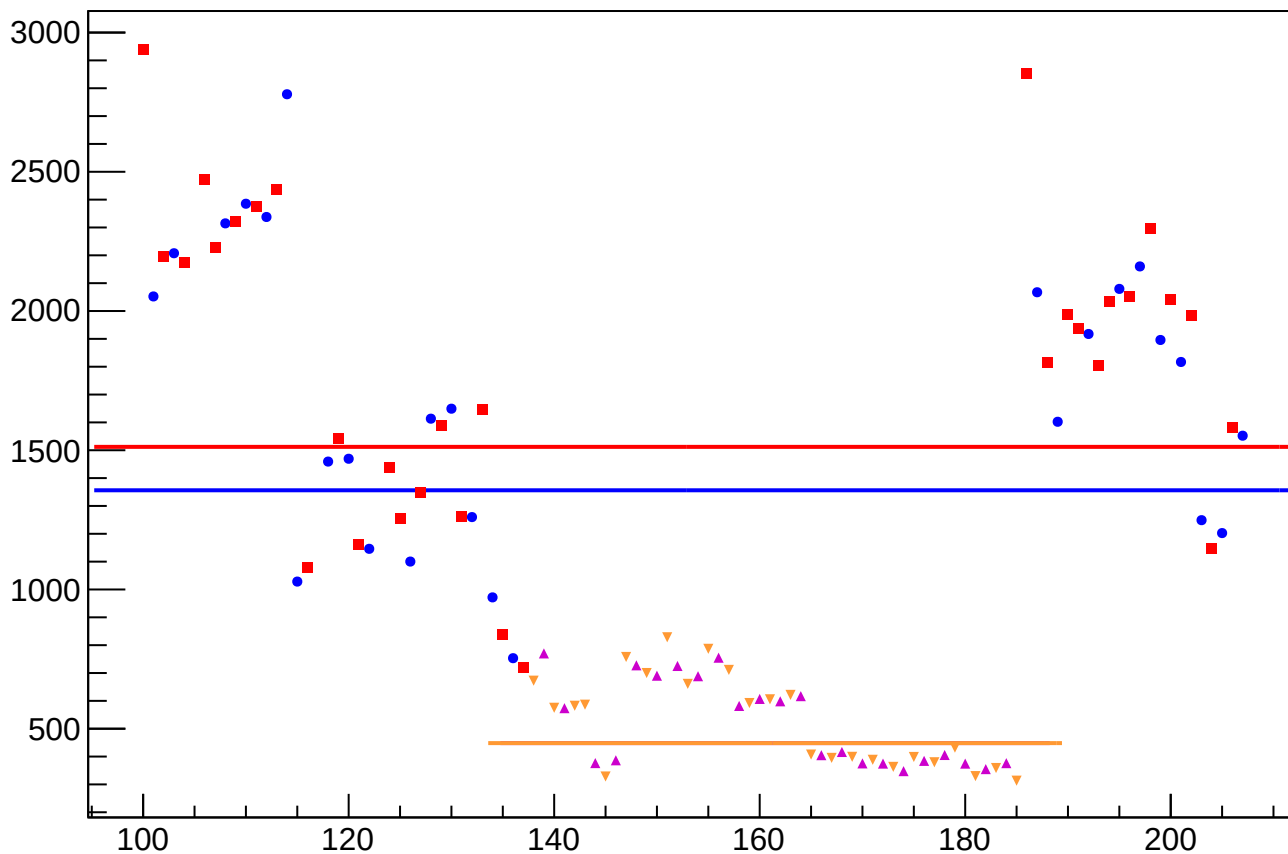
Left In: -38.107 $\pm$ 109.315  $\chi^2$ /NDF: 32.9/22

+ sign 363.840 $\pm$ 102.686  $\chi^2$ /NDF: 83.4/50

All: 194.459 $\pm$ 73.533  $\chi^2$ /NDF: 148.8/104

- sign 16.184 $\pm$ 105.348  $\chi^2$ /NDF: 59.9/53

# asym\_sam\_26\_avg\_rms vs Slug



Right In: 1356.215+/-0.264  $\chi^2/\text{NDF}$ : 3245447.4/25

Left Out: 448.278+/-0.076  $\chi^2/\text{NDF}$ : 3156909.8/24

Right Out: 1512.161+/-0.279  $\chi^2/\text{NDF}$ : 3340253.6/30

Left In: 448.397+/-0.077  $\chi^2/\text{NDF}$ : 2620759.6/22

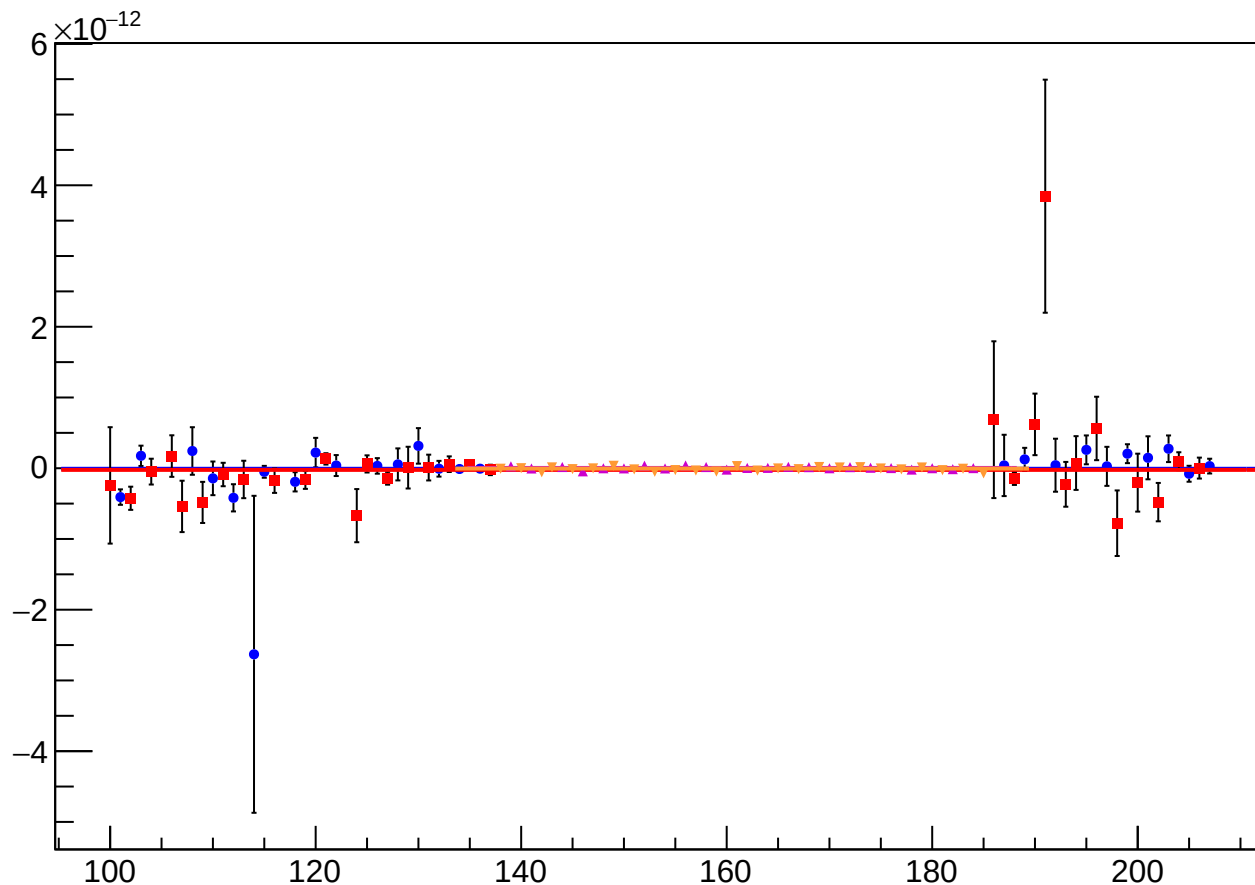
+ sign 517.038+/-0.073  $\chi^2/\text{NDF}$ : 17346842.9/50

All: 520.536+/-0.052  $\chi^2/\text{NDF}$ : 36811482.0/10

- sign 524.217+/-0.074  $\chi^2/\text{NDF}$ : 19459875.6/53



asym\_sam\_26\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 35.2/25

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 23.2/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 44.5/30

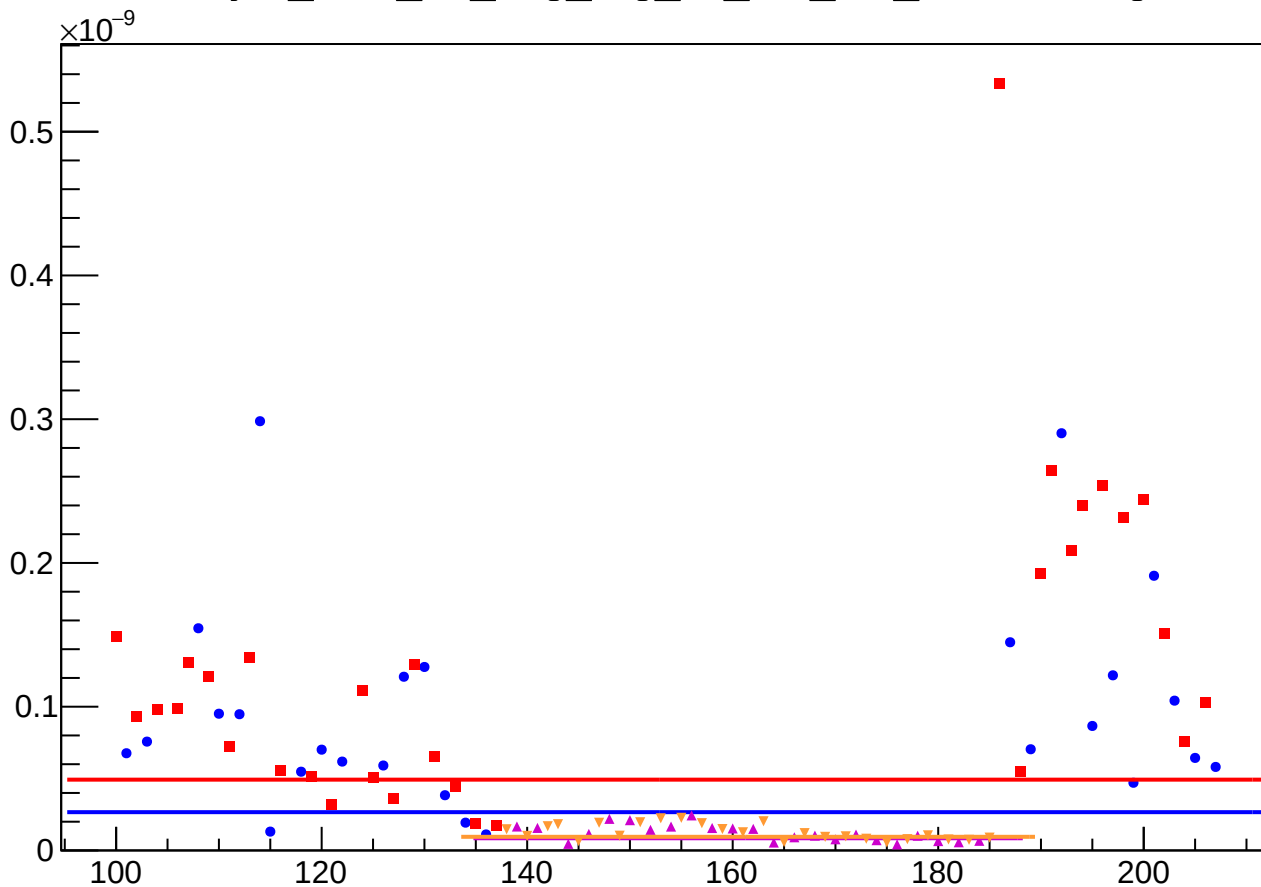
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 16.7/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 58.3/50

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 123.0/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 62.3/53

asym\_sam\_26\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6652896.3/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2422094.9/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5811931.0/30

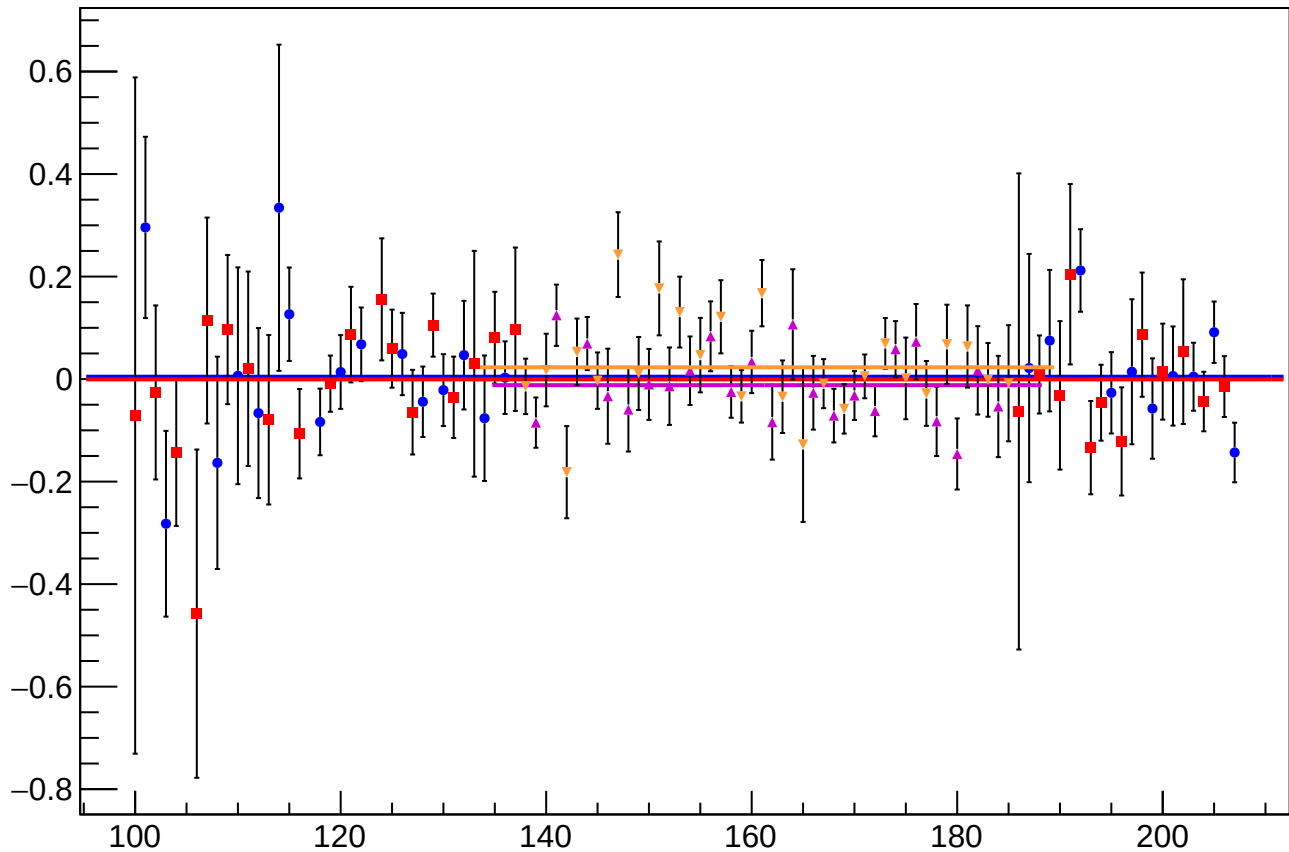
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2739291.5/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11030998.0/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 24844751.3/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13746744.3/53

# asym\_sam\_26\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.005 \pm 0.017$   $\chi^2/\text{NDF}$ : 29.1/25

Left Out:  $0.023 \pm 0.013$   $\chi^2/\text{NDF}$ : 34.2/24

Right Out:  $-0.001 \pm 0.017$   $\chi^2/\text{NDF}$ : 20.3/30

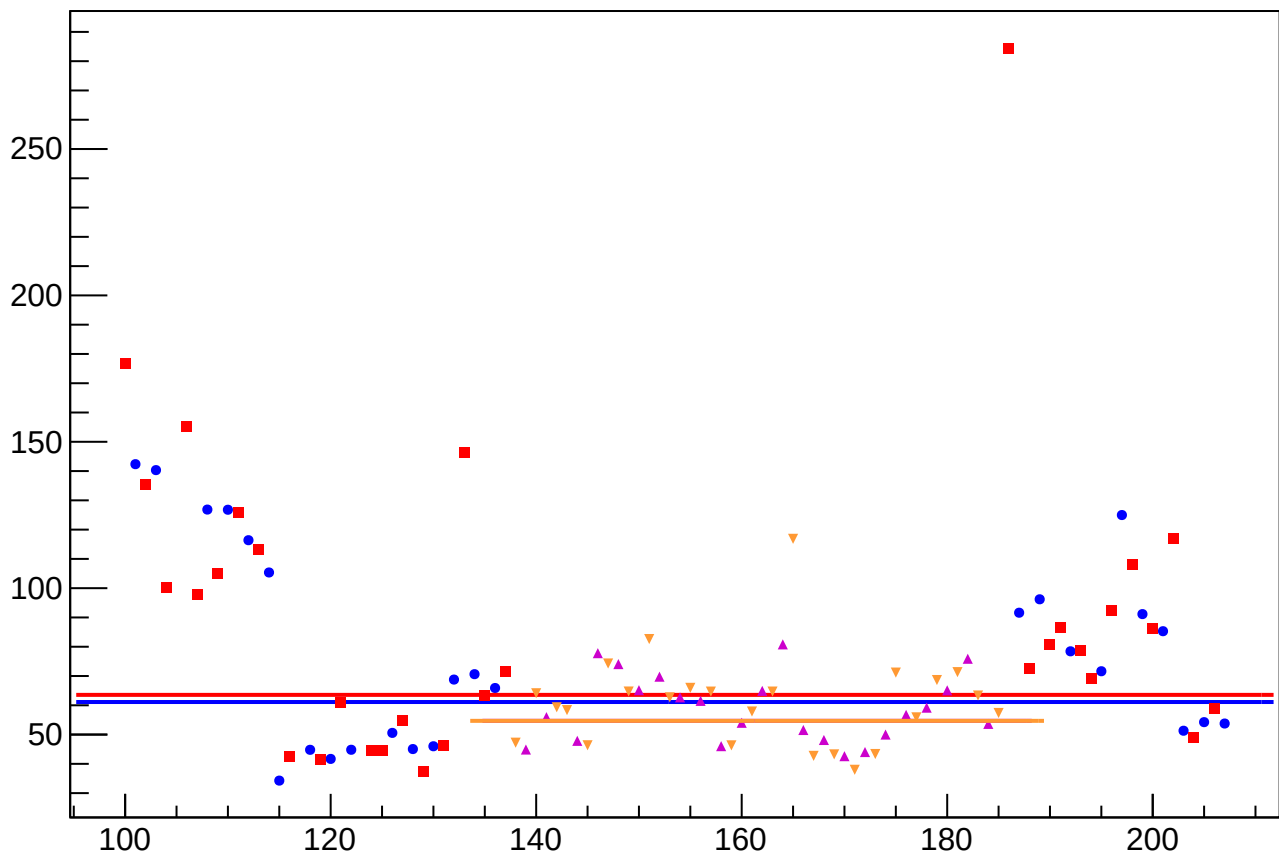
Left In:  $-0.012 \pm 0.013$   $\chi^2/\text{NDF}$ : 25.9/22

+ sign  $0.016 \pm 0.010$   $\chi^2/\text{NDF}$ : 64.0/50

All:  $0.005 \pm 0.007$   $\chi^2/\text{NDF}$ : 113.2/104

- sign  $-0.008 \pm 0.011$   $\chi^2/\text{NDF}$ : 46.5/53

asym\_sam\_26\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 61.118 $\pm$ 0.012  $\chi^2$ /NDF: 3393813.2/25

Left Out: 54.686 $\pm$ 0.009  $\chi^2$ /NDF:1936559.5/24

Right Out: 63.558 $\pm$ 0.012  $\chi^2$ /NDF: 4292303.5/30

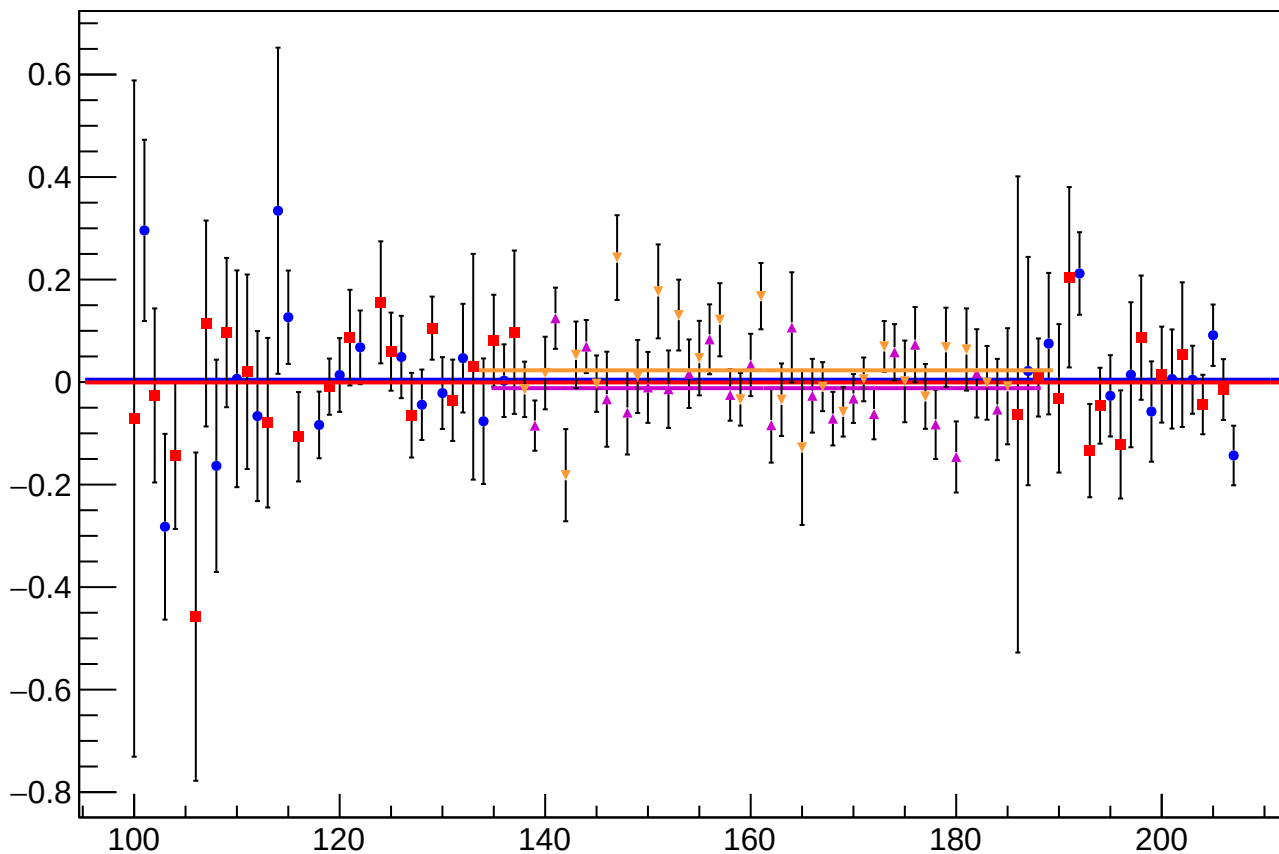
Left In: 54.688 $\pm$ 0.009  $\chi^2$ /NDF:1190787.0/22

+ sign 56.960 $\pm$ 0.007  $\chi^2$ /NDF: 5505372.9/50

All: 57.436 $\pm$ 0.005  $\chi^2$ /NDF: 11323721.1/104

- sign 57.926 $\pm$ 0.007  $\chi^2$ /NDF: 5809855.6/53

asym\_sam\_26\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.005 \pm 0.017$   $\chi^2/\text{NDF}$ : 29.1/25

Left Out:  $0.023 \pm 0.013$   $\chi^2/\text{NDF}$ : 34.2/24

Right Out:  $-0.001 \pm 0.017$   $\chi^2/\text{NDF}$ : 20.3/30

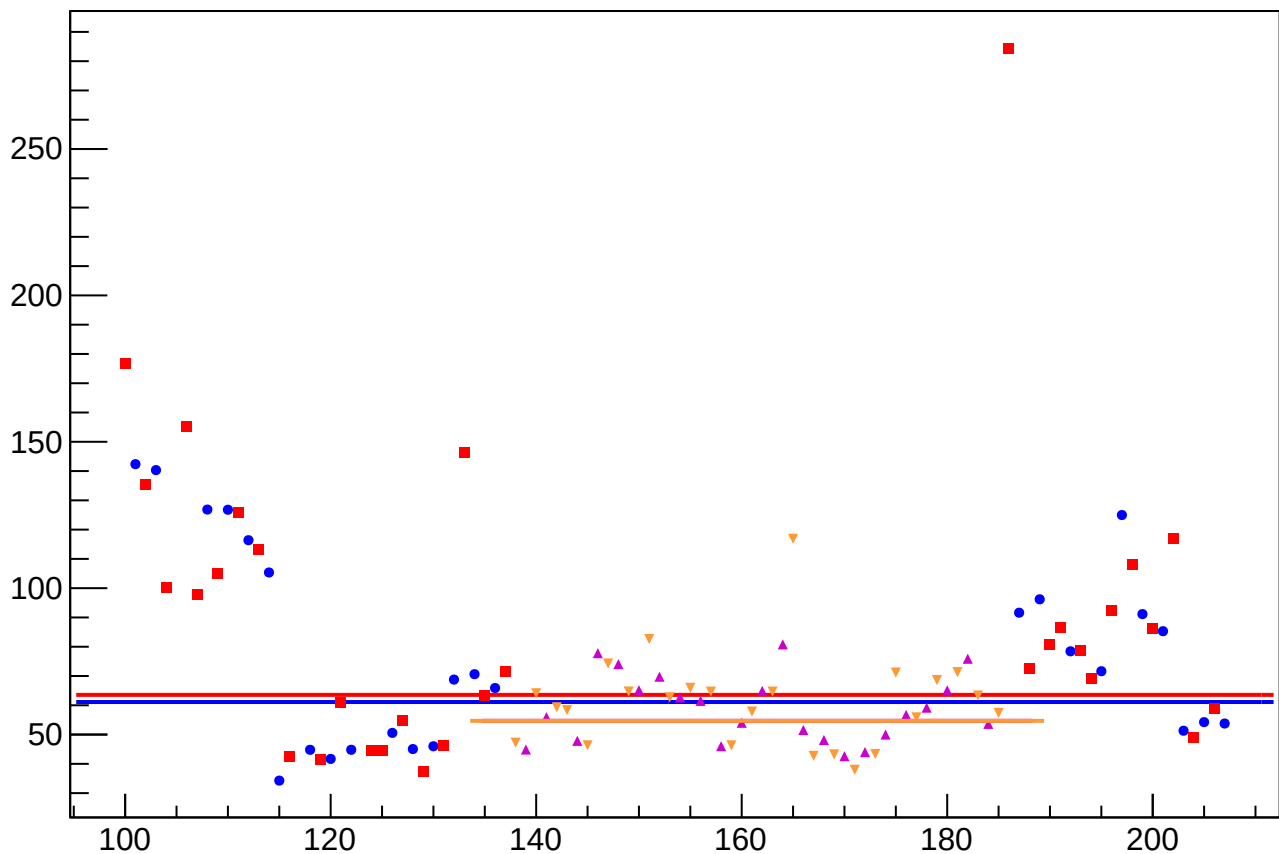
Left In:  $-0.012 \pm 0.013$   $\chi^2/\text{NDF}$ : 25.9/22

+ sign  $0.016 \pm 0.010$   $\chi^2/\text{NDF}$ : 64.0/50

All:  $0.005 \pm 0.007$   $\chi^2/\text{NDF}$ : 113.2/104

- sign  $-0.008 \pm 0.011$   $\chi^2/\text{NDF}$ : 46.5/53

asym\_sam\_26\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 61.118 $\pm$ 0.012  $\chi^2$ /NDF: 3393813.2/25

Left Out: 54.686 $\pm$ 0.009  $\chi^2$ /NDF:1936559.5/24

Right Out: 63.558 $\pm$ 0.012  $\chi^2$ /NDF: 4292303.5/30

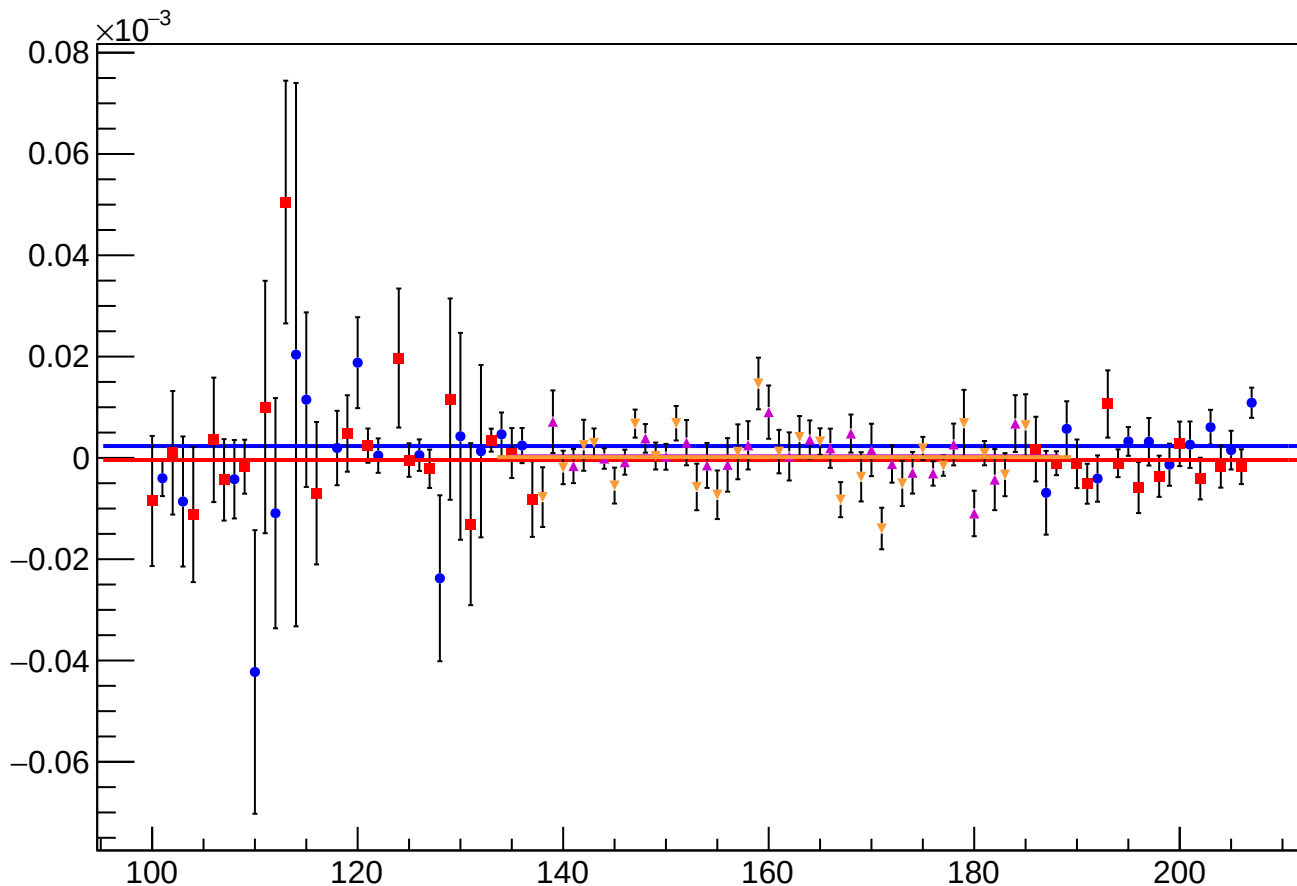
Left In: 54.688 $\pm$ 0.009  $\chi^2$ /NDF:1190787.0/22

+ sign 56.960 $\pm$ 0.007  $\chi^2$ /NDF: 5505372.9/50

All: 57.436 $\pm$ 0.005  $\chi^2$ /NDF: 11323721.1/104

- sign 57.926 $\pm$ 0.007  $\chi^2$ /NDF: 5809855.6/53

asym\_sam\_26\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 28.8/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:53.7/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 22.9/30

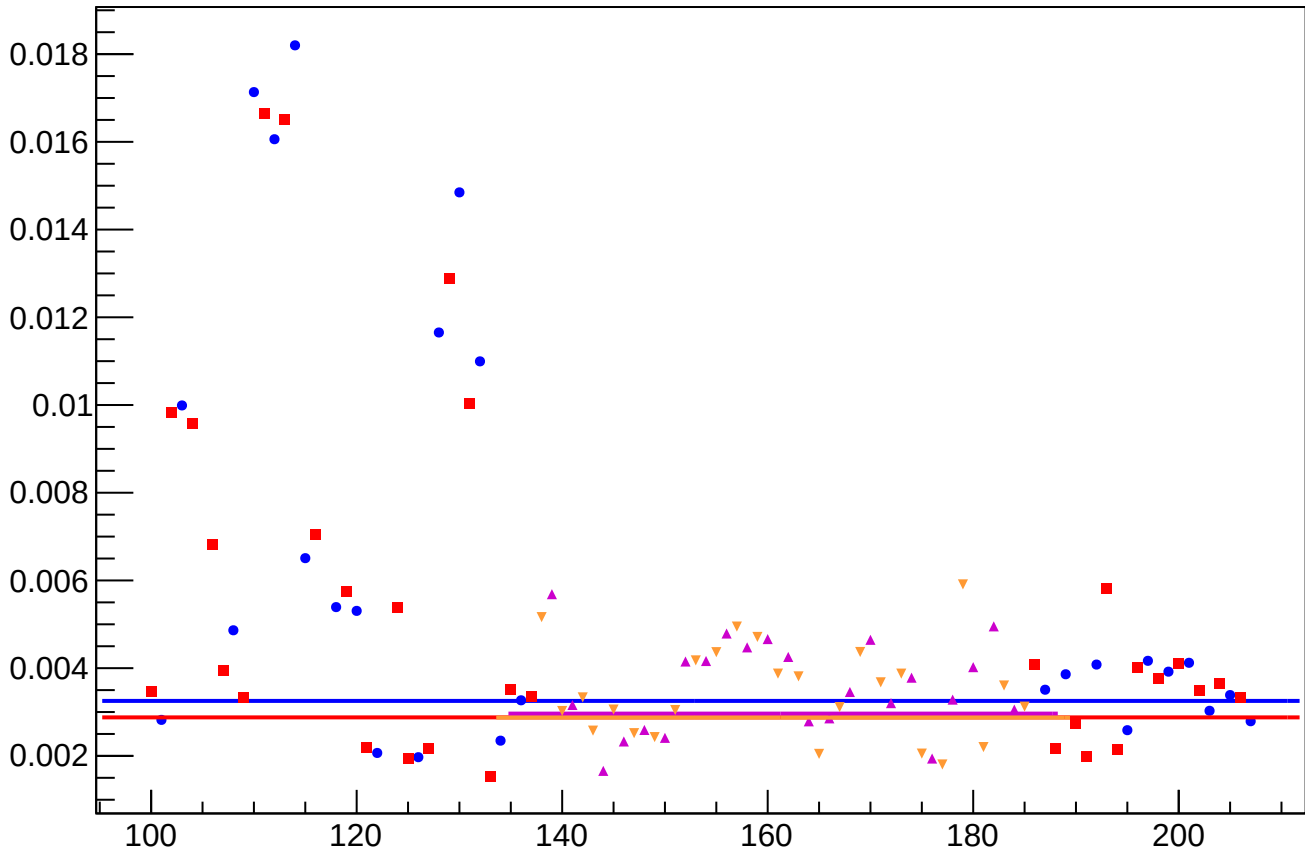
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:20.7/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 86.0/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 131.3/104

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 44.0/53

asym\_sam\_26\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 5014102.3/25

Left Out: 0.003 $\pm$ 0.000  $\chi^2$ /NDF:3602368.5/24

Right Out: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 6566004.1/30

Left In: 0.003 $\pm$ 0.000  $\chi^2$ /NDF:3619016.3/22

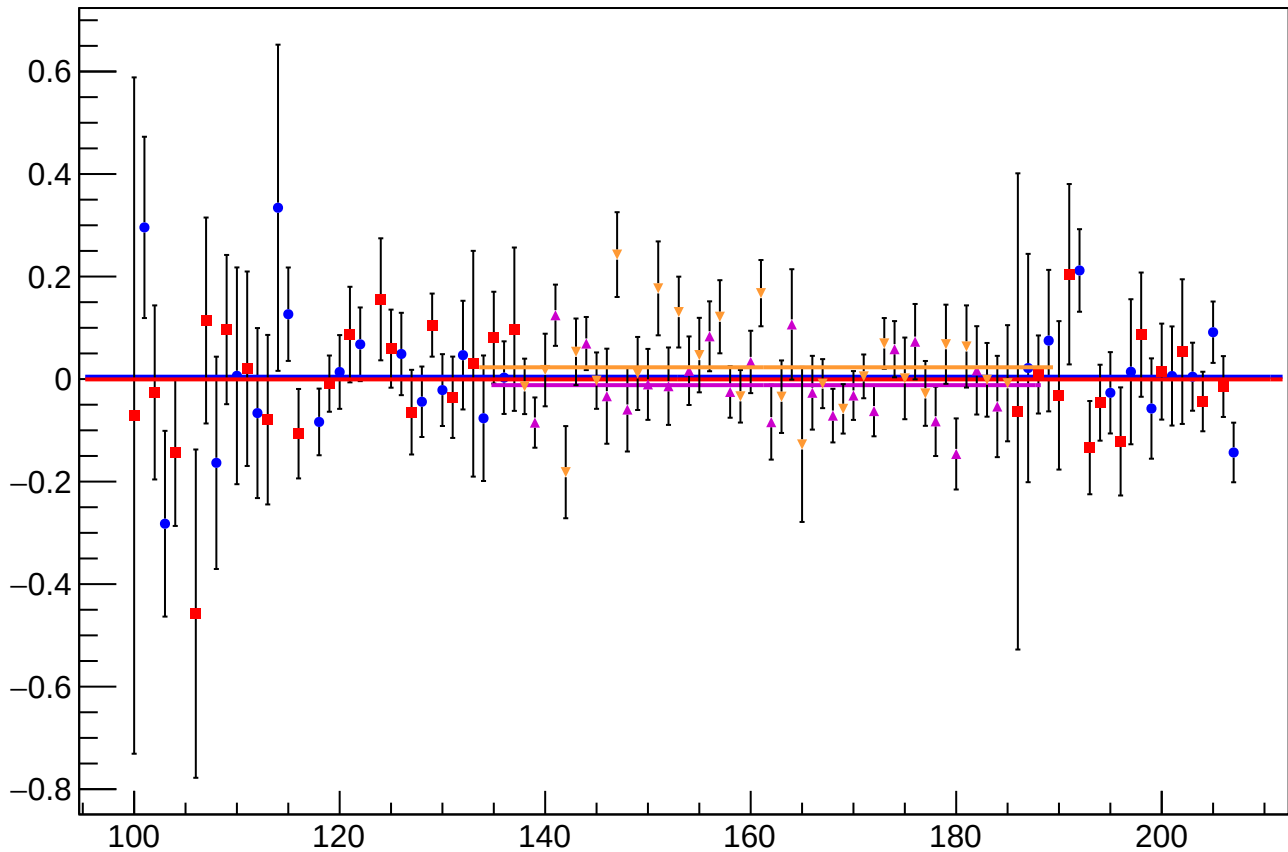
+ sign 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 8826916.3/50

All: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 19044138.6/104

- sign 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 10196801.1/53



asym\_sam\_26\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.005 \pm 0.017$   $\chi^2/\text{NDF}$ : 29.1/25

Left Out:  $0.023 \pm 0.013$   $\chi^2/\text{NDF}$ : 34.2/24

Right Out:  $-0.001 \pm 0.017$   $\chi^2/\text{NDF}$ : 20.4/30

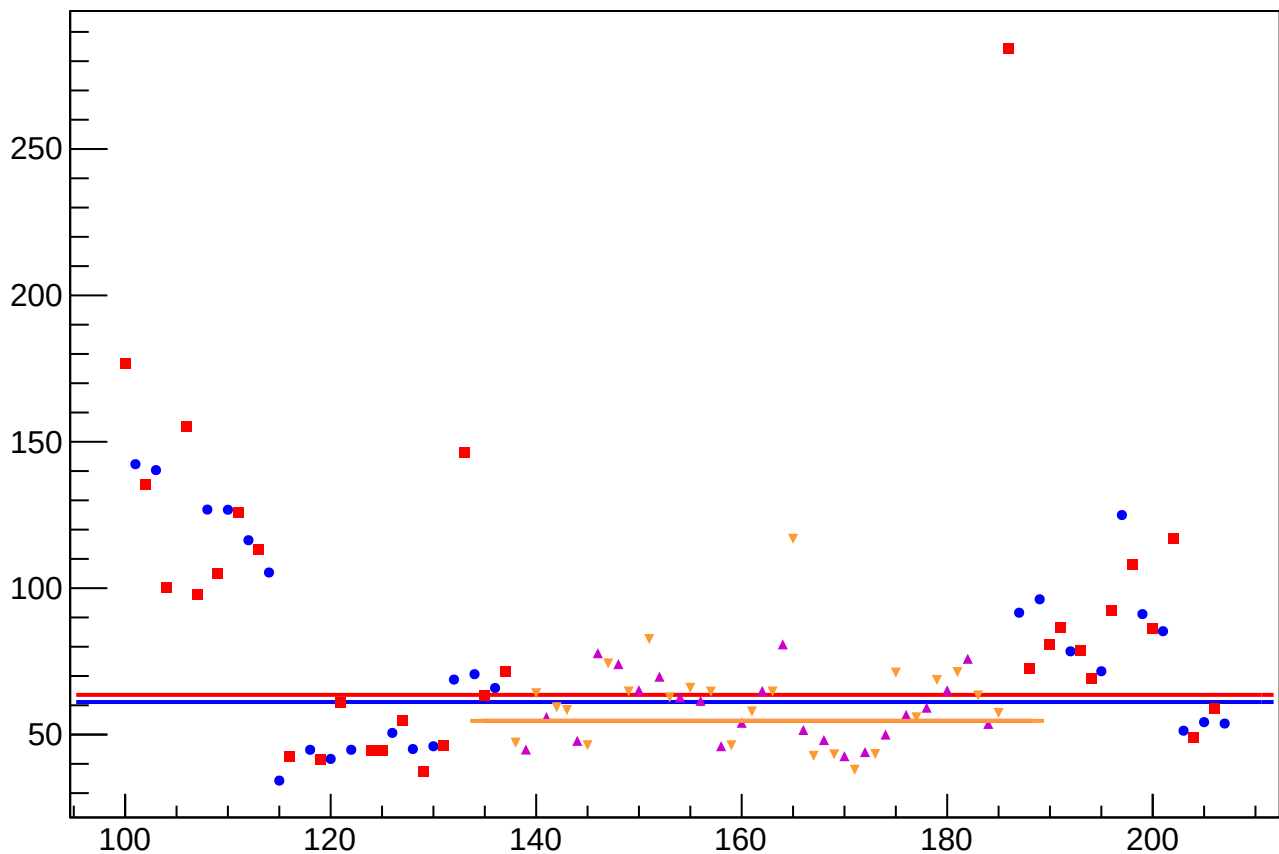
Left In:  $-0.012 \pm 0.013$   $\chi^2/\text{NDF}$ : 25.9/22

+ sign  $0.016 \pm 0.010$   $\chi^2/\text{NDF}$ : 64.0/50

All:  $0.005 \pm 0.007$   $\chi^2/\text{NDF}$ : 113.2/104

- sign  $-0.008 \pm 0.011$   $\chi^2/\text{NDF}$ : 46.5/53

asym\_sam\_26\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 61.117 $\pm$ 0.012  $\chi^2$ /NDF: 3393801.1/25

Left Out: 54.686 $\pm$ 0.009  $\chi^2$ /NDF:1936555.1/24

Right Out: 63.557 $\pm$ 0.012  $\chi^2$ /NDF: 4292305.6/30

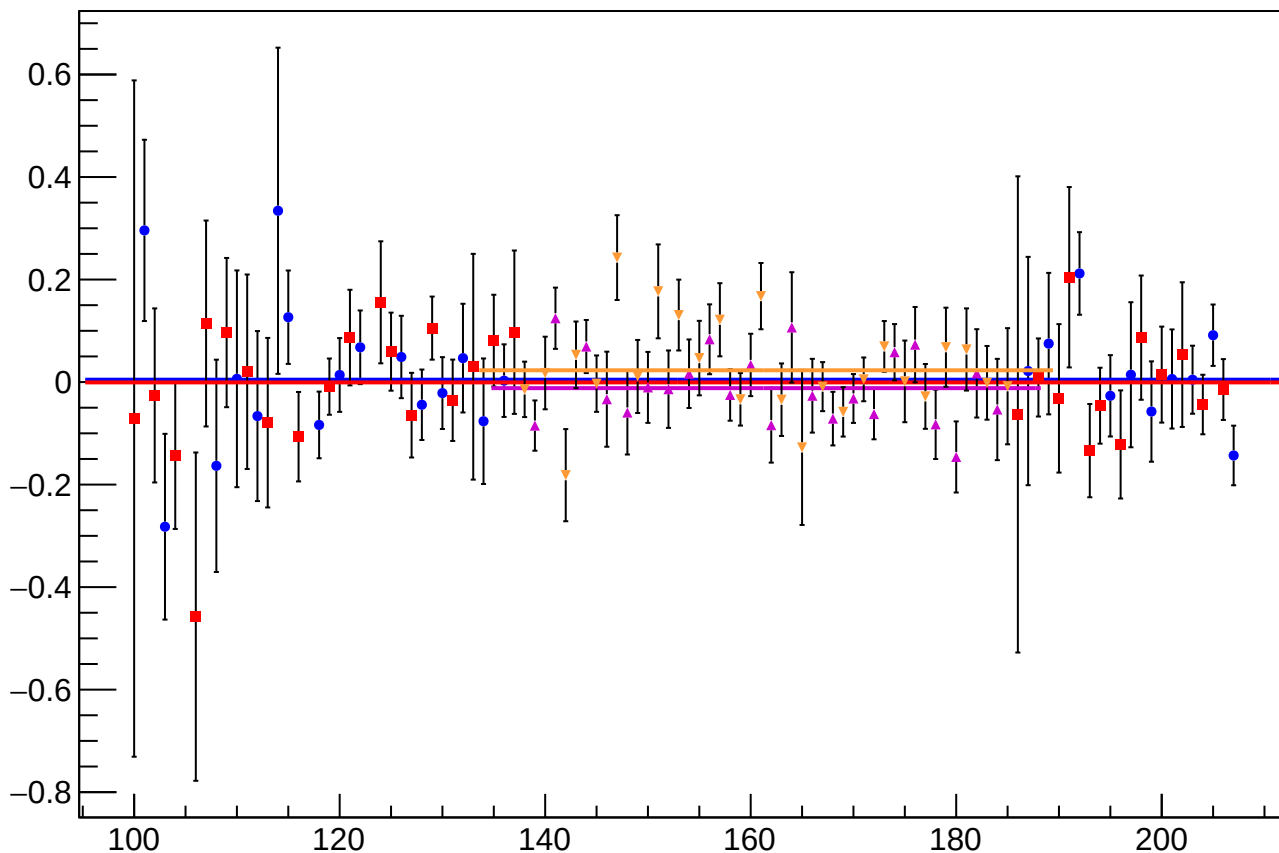
Left In: 54.689 $\pm$ 0.009  $\chi^2$ /NDF:1190755.4/22

+ sign 56.961 $\pm$ 0.007  $\chi^2$ /NDF: 5505315.7/50

All: 57.436 $\pm$ 0.005  $\chi^2$ /NDF: 11323576.0/104

- sign 57.927 $\pm$ 0.007  $\chi^2$ /NDF: 5809765.7/53

asym\_sam\_26\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.005 \pm 0.017$   $\chi^2/\text{NDF}: 29.1/25$

Left Out:  $0.023 \pm 0.013$   $\chi^2/\text{NDF}: 34.2/24$

Right Out:  $-0.001 \pm 0.017$   $\chi^2/\text{NDF}: 20.4/30$

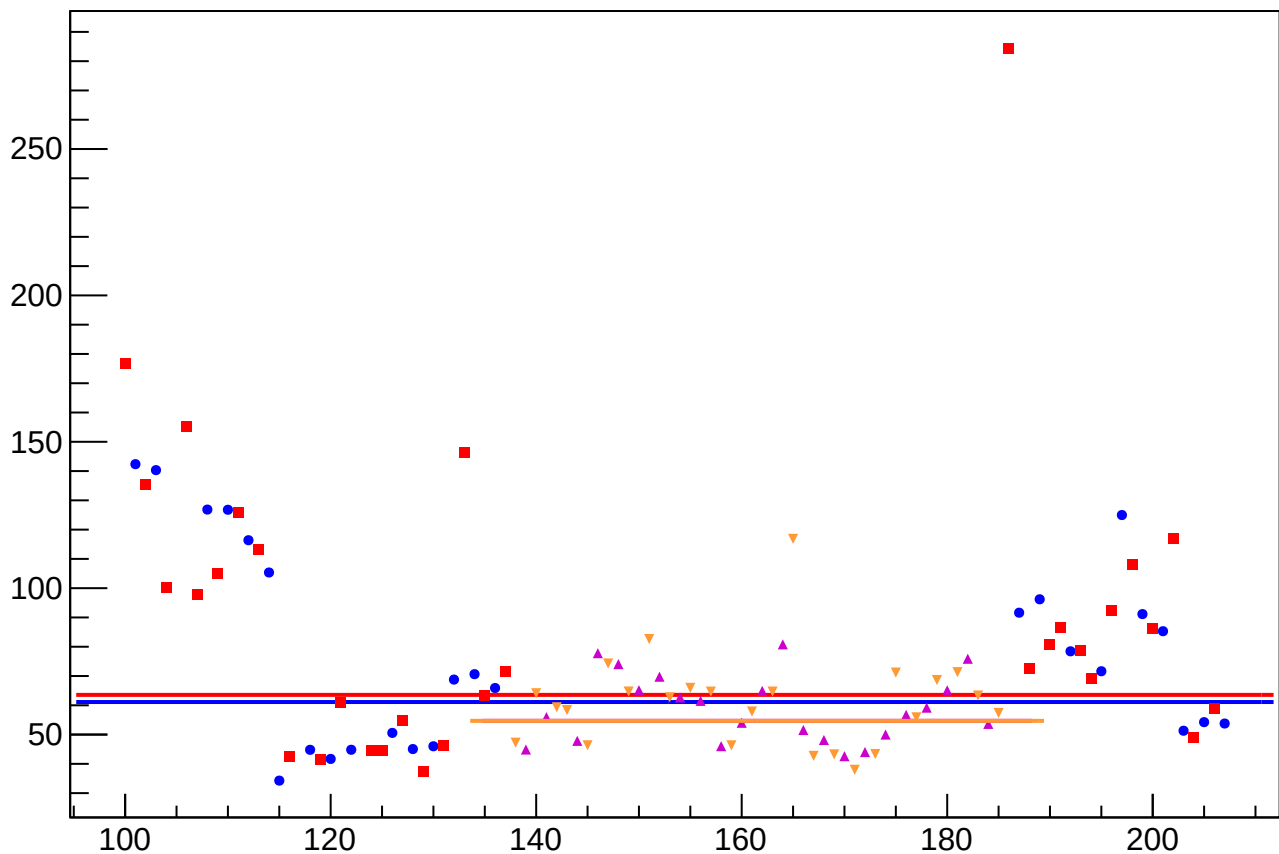
Left In:  $-0.012 \pm 0.013$   $\chi^2/\text{NDF}: 25.9/22$

+ sign  $0.016 \pm 0.010$   $\chi^2/\text{NDF}: 64.0/50$

All:  $0.005 \pm 0.007$   $\chi^2/\text{NDF}: 113.2/104$

- sign  $-0.008 \pm 0.011$   $\chi^2/\text{NDF}: 46.5/53$

asym\_sam\_26\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 61.117 $\pm$ 0.012  $\chi^2$ /NDF: 3393801.1/25

Left Out: 54.686 $\pm$ 0.009  $\chi^2$ /NDF:1936555.1/24

Right Out: 63.557 $\pm$ 0.012  $\chi^2$ /NDF: 4292305.6/30

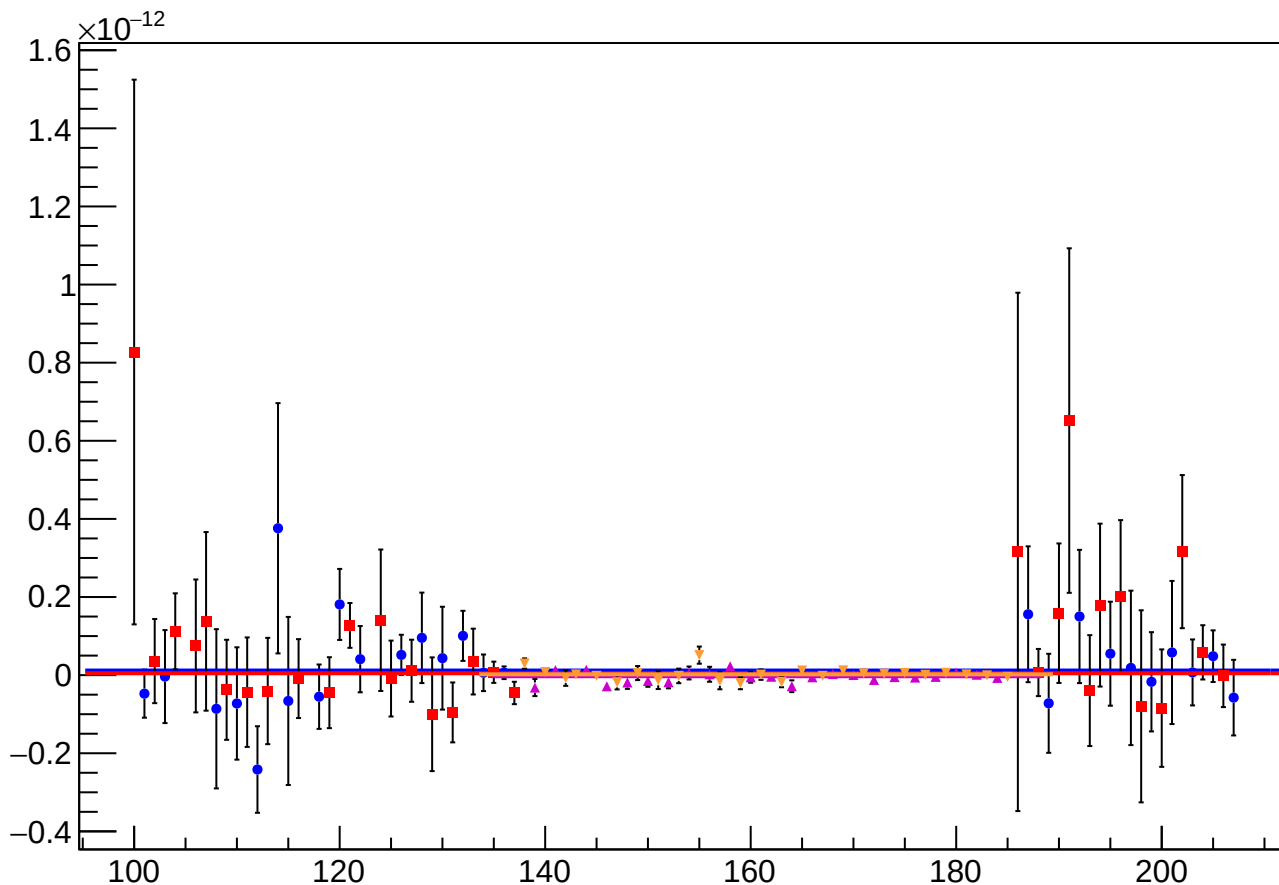
Left In: 54.689 $\pm$ 0.009  $\chi^2$ /NDF:1190755.4/22

+ sign 56.961 $\pm$ 0.007  $\chi^2$ /NDF: 5505315.7/50

All: 57.436 $\pm$ 0.005  $\chi^2$ /NDF: 11323576.0/104

- sign 57.927 $\pm$ 0.007  $\chi^2$ /NDF: 5809765.7/53

asym\_sam\_26\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 18.5/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:20.7/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 23.0/30

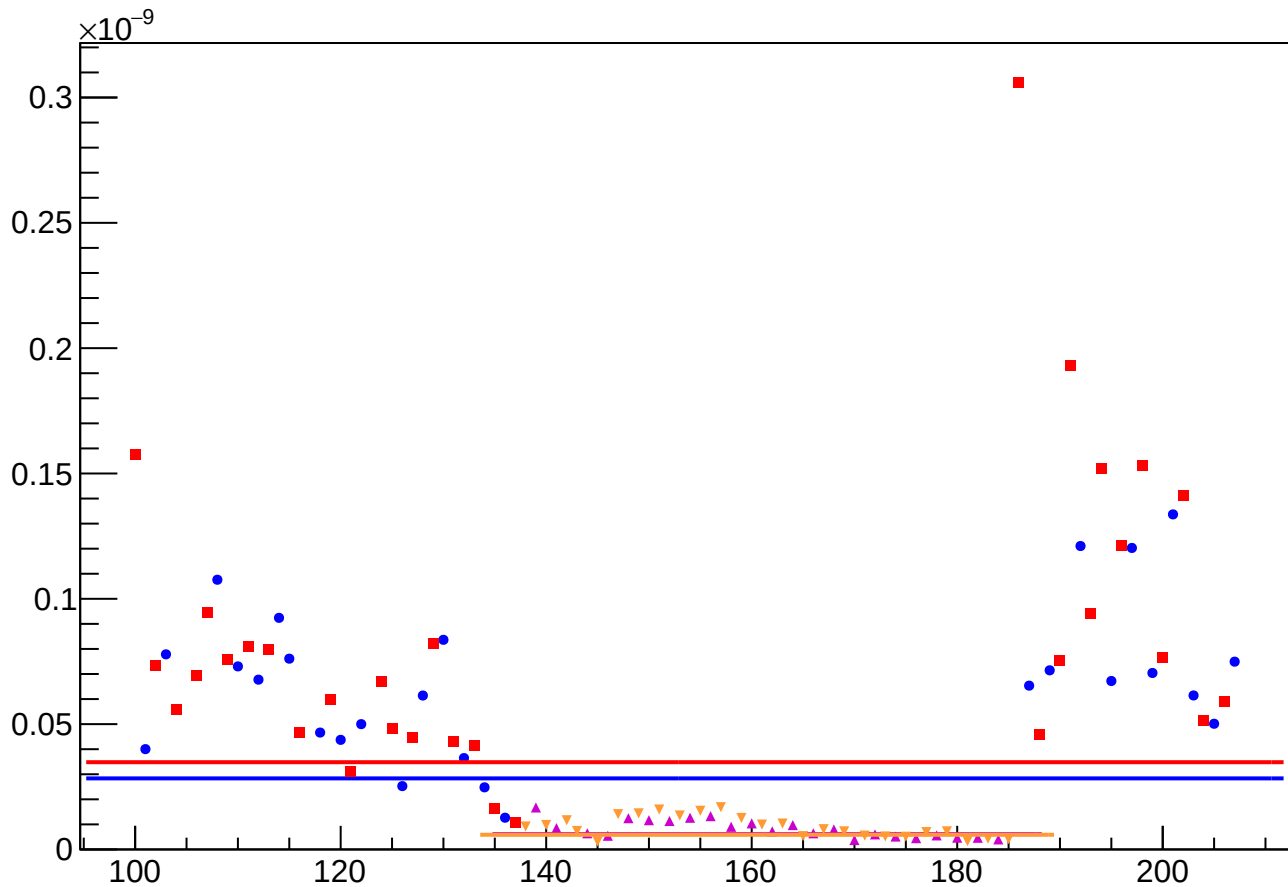
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:33.1/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 39.8/50

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 99.9/104

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 56.4/53

asym\_sam\_26\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7458417.7/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5538819.5/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7820001.5/30

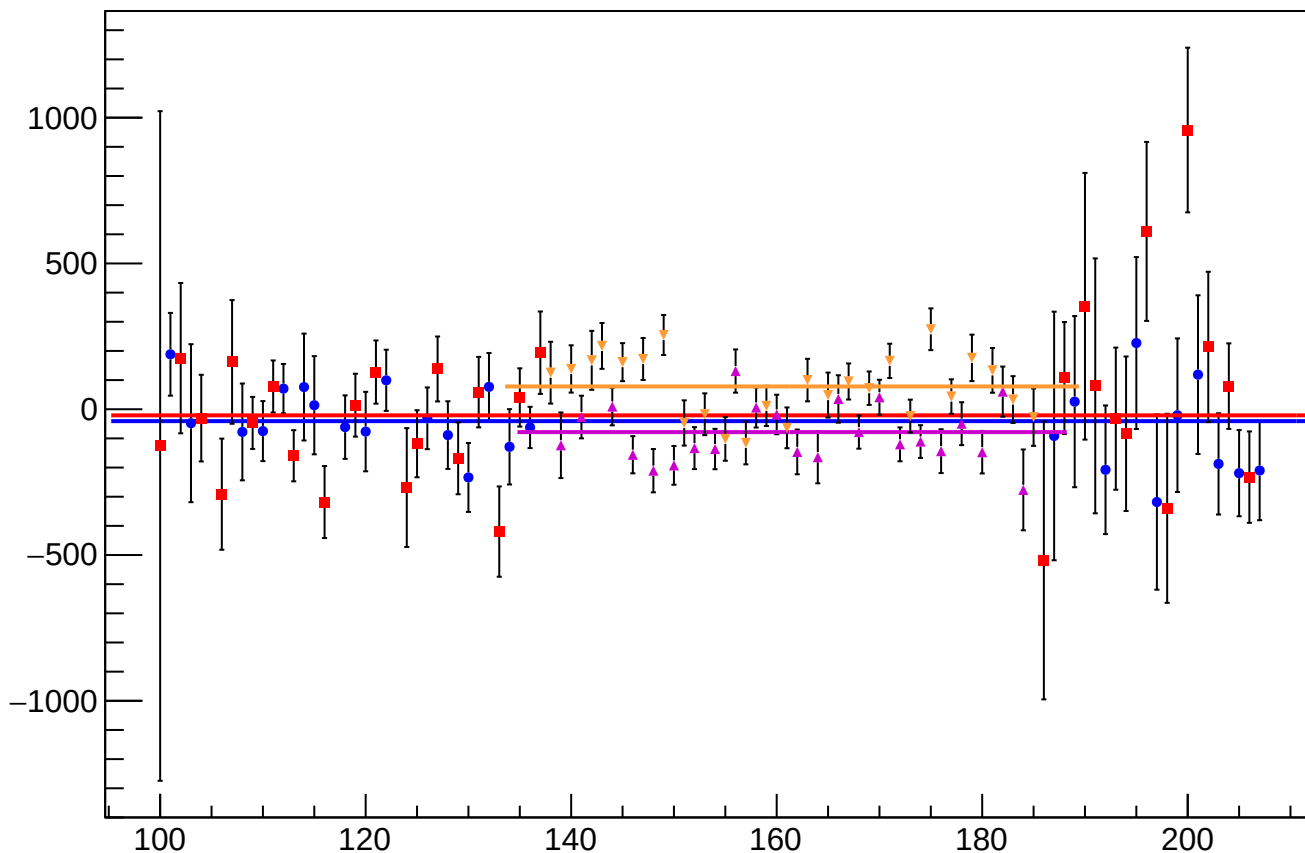
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3304370.7/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 19655790.4/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 38926266.5/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 19248345.9/53

# reg\_asym\_sam\_37\_avg\_mean vs Slug



Right In:  $-40.800 \pm 26.747$   $\chi^2/\text{NDF}: 17.2/25$

Left Out:  $78.159 \pm 14.326$   $\chi^2/\text{NDF}: 53.9/24$

Right Out:  $-20.987 \pm 26.328$   $\chi^2/\text{NDF}: 53.0/30$

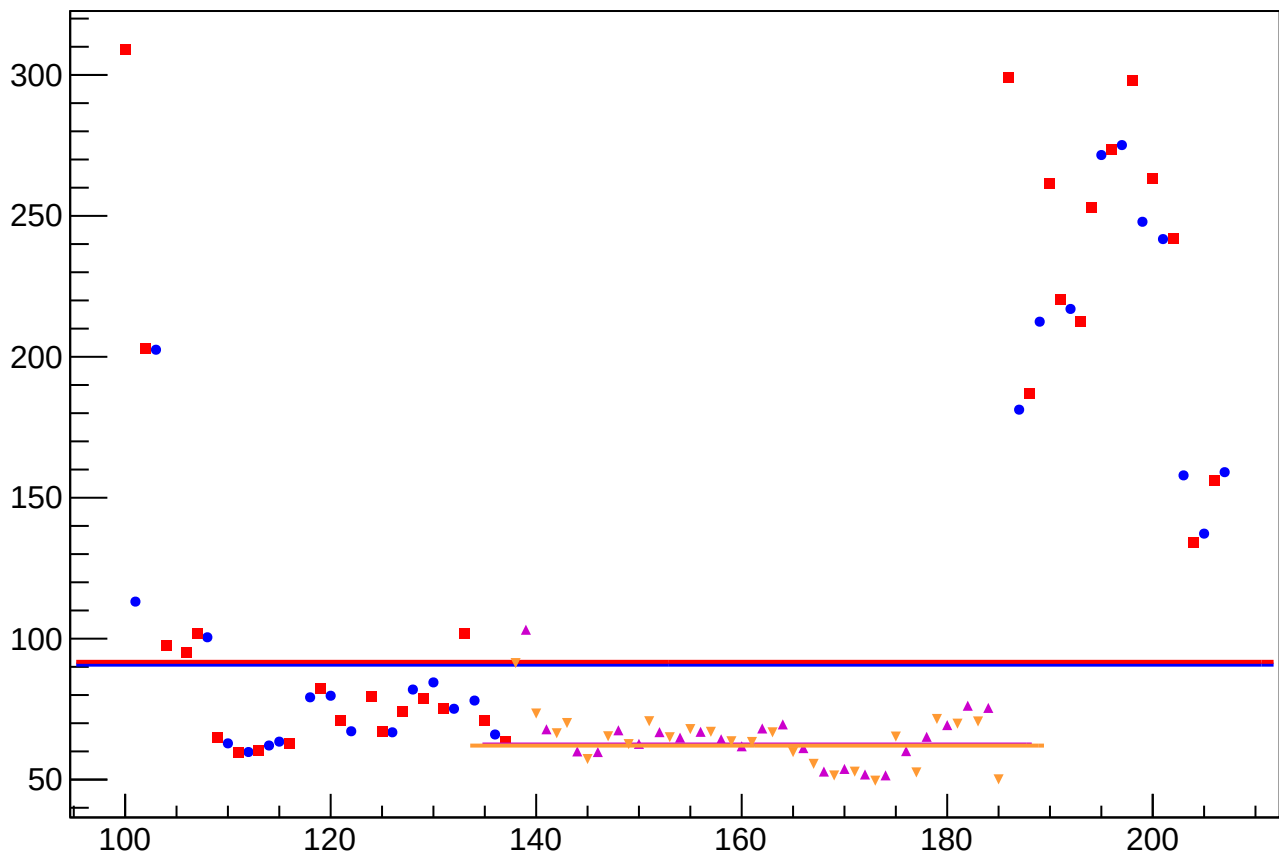
Left In:  $-78.506 \pm 14.811$   $\chi^2/\text{NDF}: 36.7/22$

+ sign  $51.641 \pm 12.628$   $\chi^2/\text{NDF}: 86.4/50$

All:  $-5.241 \pm 9.027$   $\chi^2/\text{NDF}: 221.2/104$

- sign  $-64.679 \pm 12.909$   $\chi^2/\text{NDF}: 93.3/53$

# reg\_asym\_sam\_37\_avg\_rms vs Slug



Right In: 90.781 $\pm$ 0.019  $\chi^2$ /NDF: 6209637.1/25

Left Out: 62.063 $\pm$ 0.010  $\chi^2$ /NDF: 686530.2/24

Right Out: 91.784 $\pm$ 0.019  $\chi^2$ /NDF: 7709215.2/30

Left In: 62.445 $\pm$ 0.010  $\chi^2$ /NDF: 664644.9/22

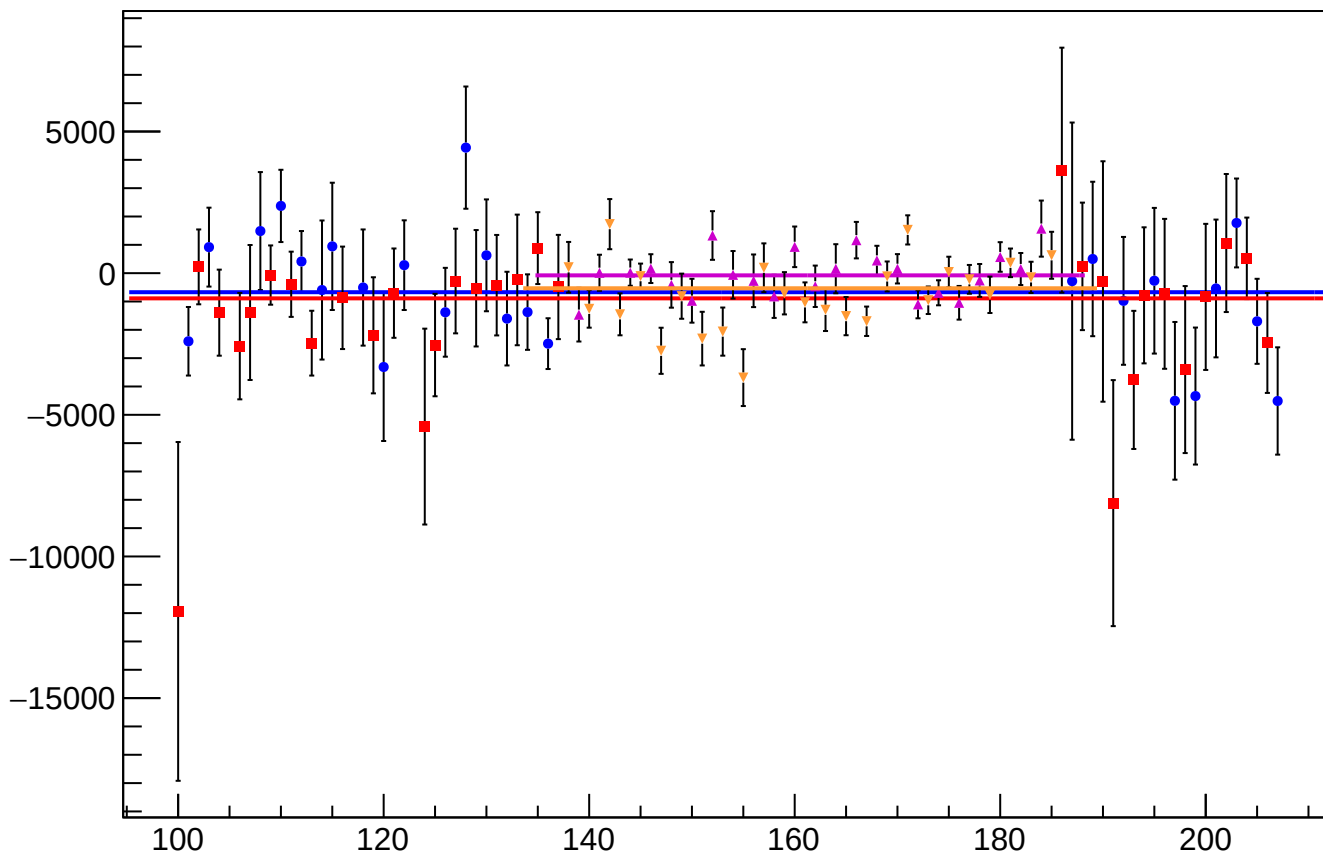
+ sign 68.464 $\pm$ 0.009  $\chi^2$ /NDF: 8687884.1/50

All: 68.970 $\pm$ 0.006  $\chi^2$ /NDF: 18954771.1/104

- sign 69.498 $\pm$ 0.009  $\chi^2$ /NDF: 10260333.6/53



asym\_sam\_37\_avg\_reg\_correction\_mean vs Slug



Right In:  $-672.083 \pm 329.287$   $\chi^2/\text{NDF}$ : 35.4/25

Left Out:  $-532.779 \pm 127.927$   $\chi^2/\text{NDF}$ : 69.1/24

Right Out:  $-889.673 \pm 327.911$   $\chi^2/\text{NDF}$ : 21.7/30

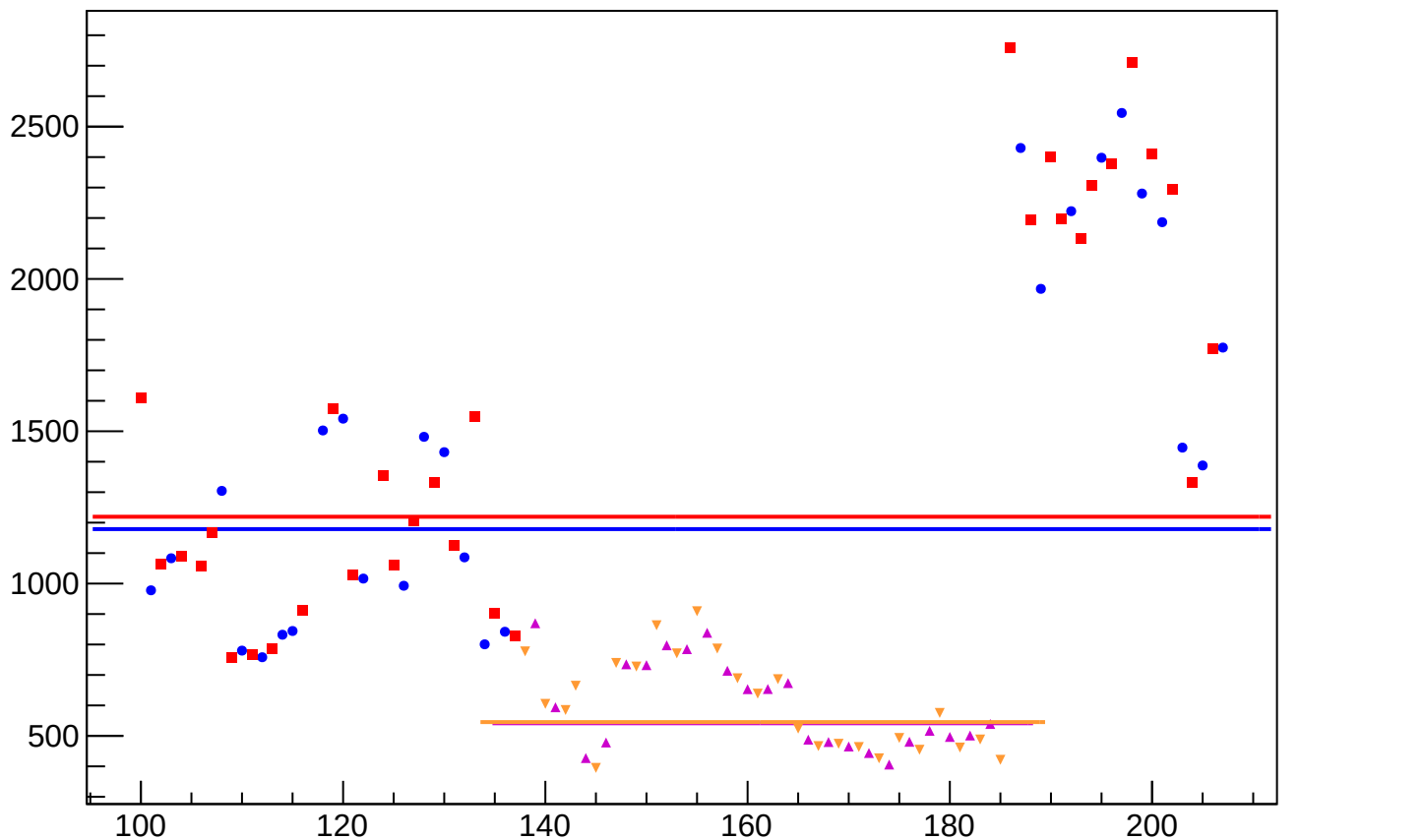
Left In:  $-77.393 \pm 130.317$   $\chi^2/\text{NDF}$ : 28.4/22

+ sign  $-551.047 \pm 119.244$   $\chi^2/\text{NDF}$ : 104.7/50

All:  $-372.424 \pm 84.968$   $\chi^2/\text{NDF}$ : 164.6/104

- sign  $-188.186 \pm 121.104$   $\chi^2/\text{NDF}$ : 55.4/53

# asym\_sam\_37\_avg\_reg\_correction\_rms vs Slug



Right In: 1178.838 $\pm$ 0.233  $\chi^2$ /NDF: 3997838.5/25

Left Out: 545.304 $\pm$ 0.090  $\chi^2$ /NDF:2083690.3/24

Right Out: 1219.378 $\pm$ 0.232  $\chi^2$ /NDF: 4978914.7/30

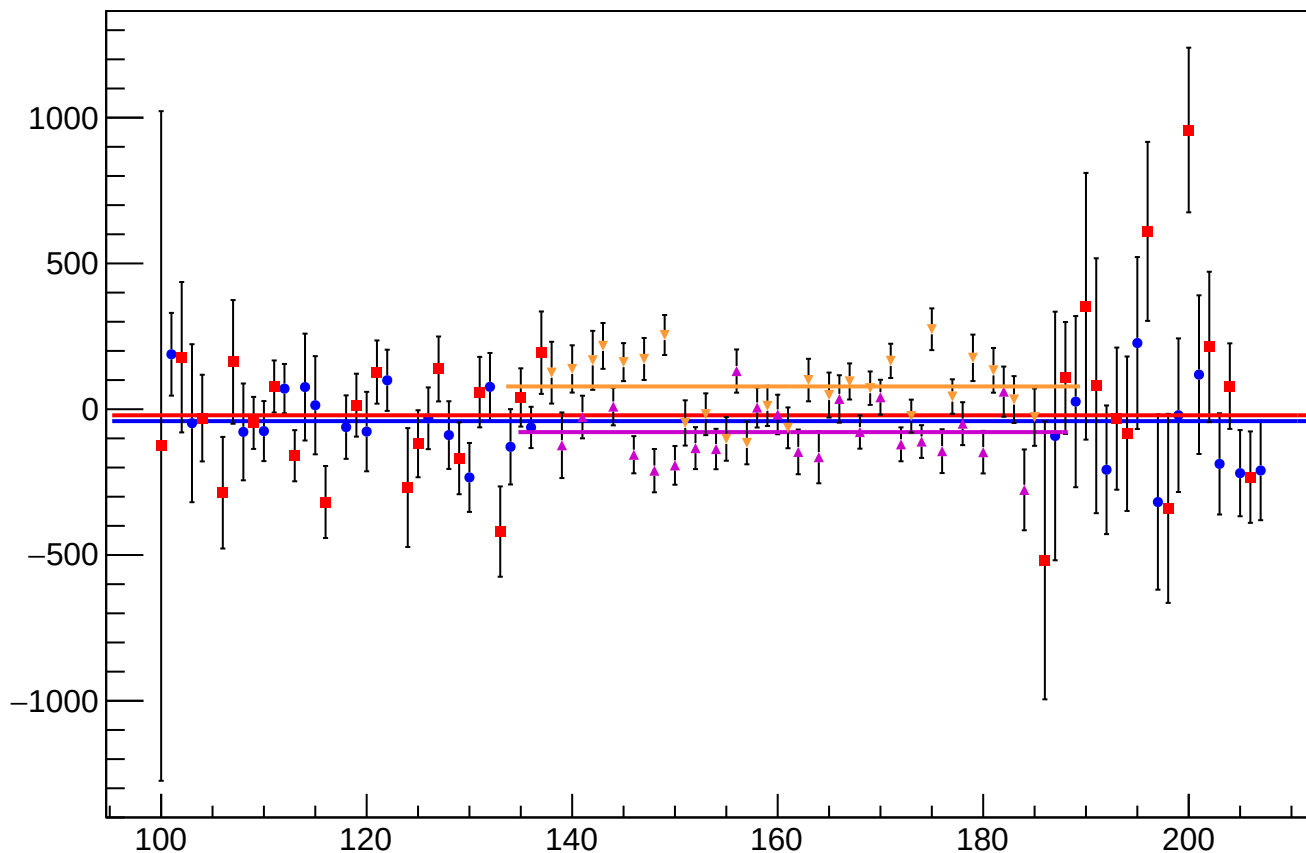
Left In: 541.458 $\pm$ 0.092  $\chi^2$ /NDF:1840342.7/22

+ sign 628.383 $\pm$ 0.084  $\chi^2$ /NDF: 12513893.6/50

All: 631.111 $\pm$ 0.060  $\chi^2$ /NDF: 26717507.6/10

- sign 633.924 $\pm$ 0.086  $\chi^2$ /NDF: 14201488.5/53

# cor\_asym\_sam\_37\_avg\_mean vs Slug



Right In:  $-40.808 \pm 26.747$   $\chi^2/\text{NDF}: 17.2/25$

Left Out:  $78.162 \pm 14.326$   $\chi^2/\text{NDF}: 53.9/24$

Right Out:  $-20.814 \pm 26.330$   $\chi^2/\text{NDF}: 52.9/30$

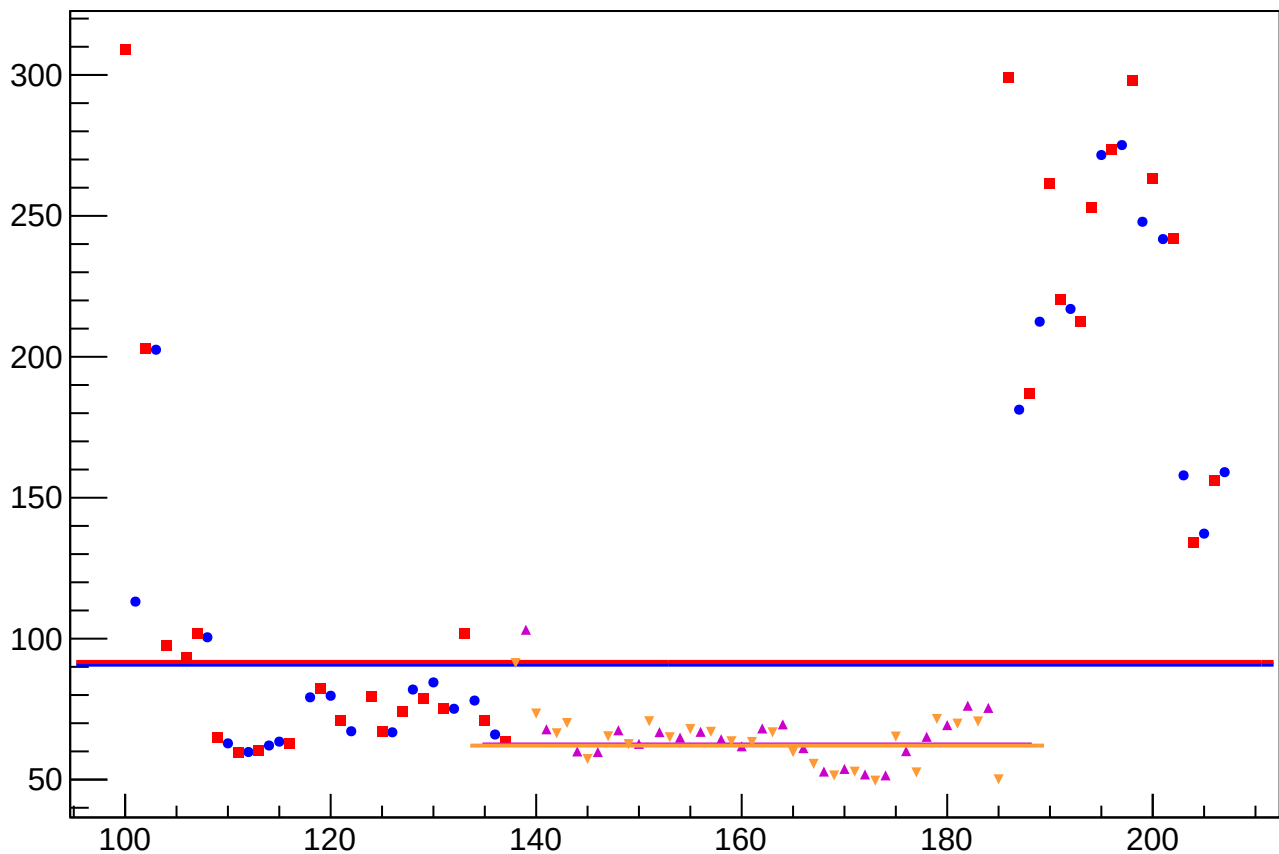
Left In:  $-78.506 \pm 14.811$   $\chi^2/\text{NDF}: 36.7/22$

+ sign  $51.642 \pm 12.628$   $\chi^2/\text{NDF}: 86.4/50$

All:  $-5.220 \pm 9.027$   $\chi^2/\text{NDF}: 221.1/104$

- sign  $-64.639 \pm 12.909$   $\chi^2/\text{NDF}: 93.2/53$

# cor\_asym\_sam\_37\_avg\_rms vs Slug



Right In: 90.781 $\pm$ 0.019  $\chi^2$ /NDF: 6209639.5/25

Left Out: 62.063 $\pm$ 0.010  $\chi^2$ /NDF: 686530.2/24

Right Out: 91.751 $\pm$ 0.019  $\chi^2$ /NDF: 7708985.9/30

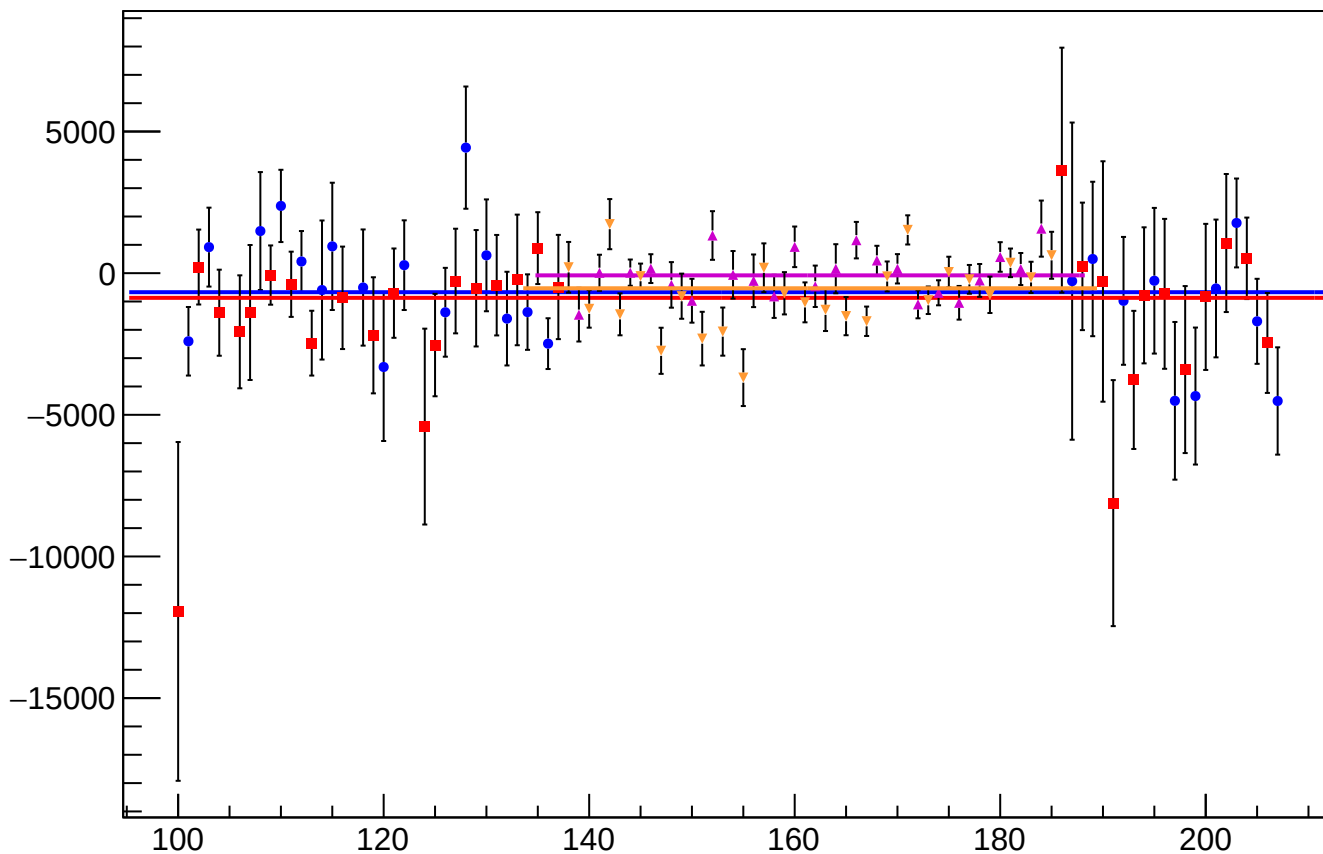
Left In: 62.445 $\pm$ 0.010  $\chi^2$ /NDF: 664644.9/22

+ sign 68.464 $\pm$ 0.009  $\chi^2$ /NDF: 8687886.0/50

All: 68.966 $\pm$ 0.006  $\chi^2$ /NDF: 18949978.2/104

- sign 69.489 $\pm$ 0.009  $\chi^2$ /NDF: 10255649.9/53

asym\_sam\_37\_avg\_cor\_correction\_mean vs Slug



Right In:  $-672.074 \pm 329.289$   $\chi^2/\text{NDF}$ : 35.4/25

Left Out:  $-532.776 \pm 127.927$   $\chi^2/\text{NDF}$ : 69.1/24

Right Out:  $-870.664 \pm 328.494$   $\chi^2/\text{NDF}$ : 21.3/30

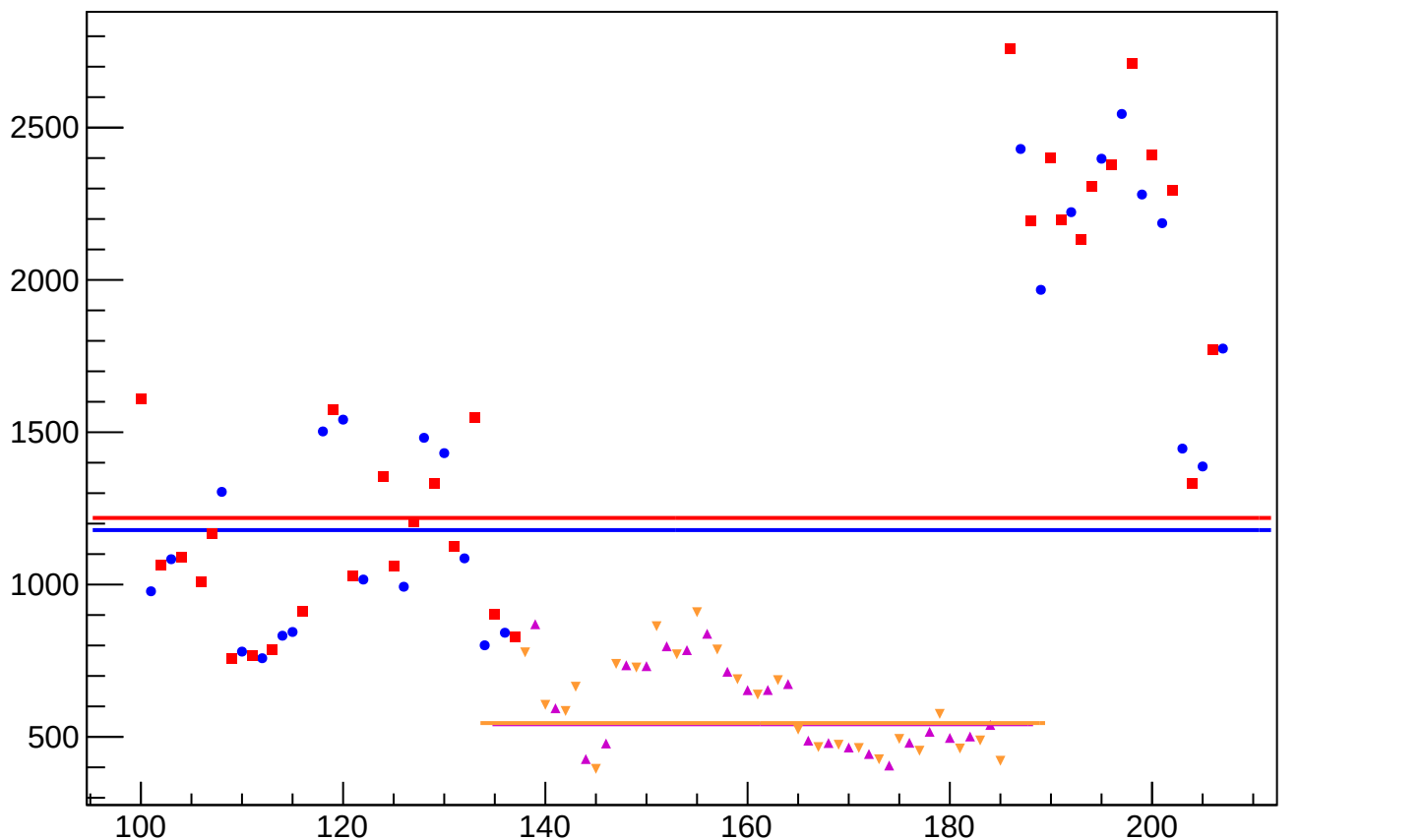
Left In:  $-77.392 \pm 130.317$   $\chi^2/\text{NDF}$ : 28.4/22

+ sign  $-551.043 \pm 119.244$   $\chi^2/\text{NDF}$ : 104.7/50

All:  $-371.027 \pm 84.978$   $\chi^2/\text{NDF}$ : 164.0/104

- sign  $-185.261 \pm 121.134$   $\chi^2/\text{NDF}$ : 54.7/53

asym\_sam\_37\_avg\_cor\_correction\_rms vs Slug



Right In:  $1178.845 \pm 0.233$   $\chi^2/\text{NDF}: 3997820.0/25$

Left Out:  $545.304 \pm 0.090$   $\chi^2/\text{NDF}: 2083686.2/24$

Right Out:  $1218.695 \pm 0.232$   $\chi^2/\text{NDF}: 4985919.0/30$

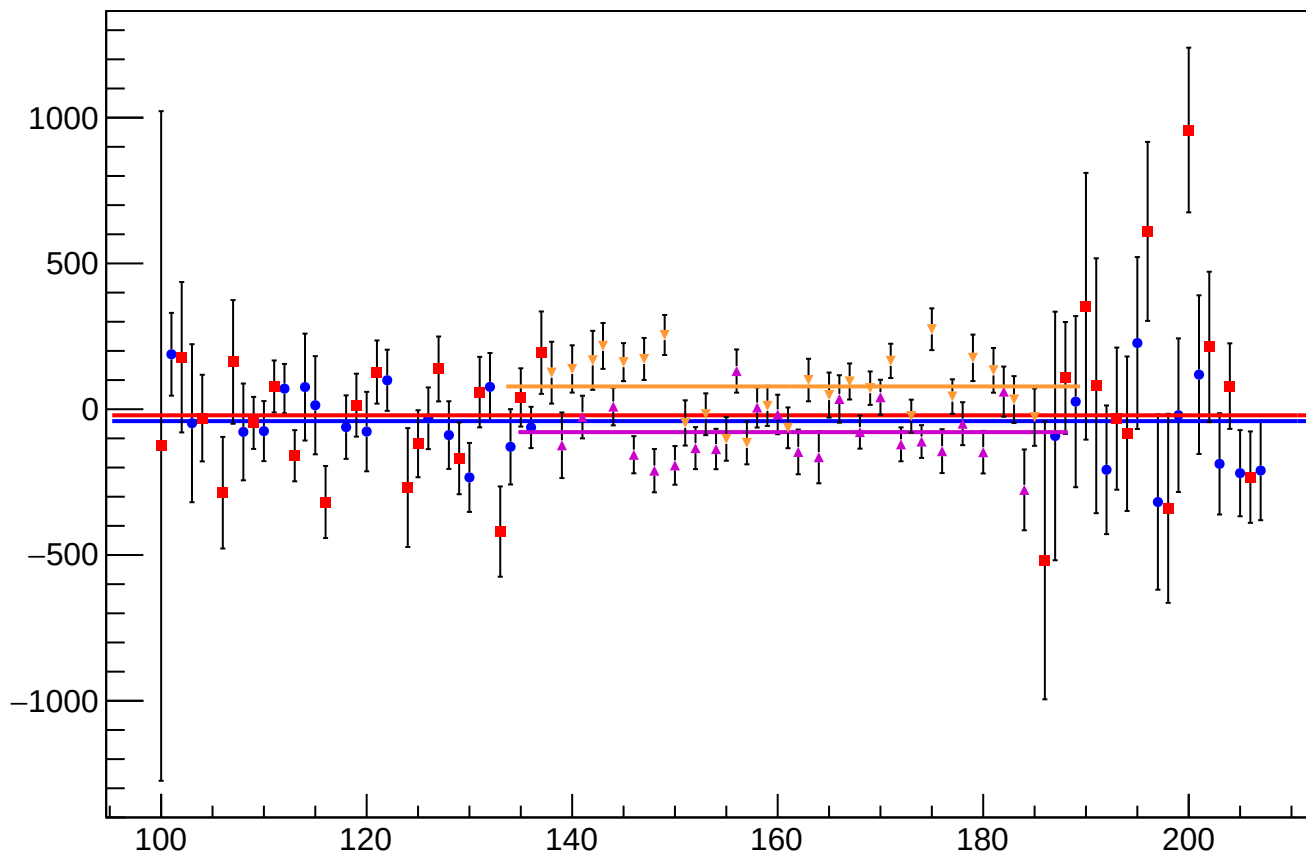
Left In:  $541.458 \pm 0.092$   $\chi^2/\text{NDF}: 1840342.7/22$

+ sign  $628.383 \pm 0.084$   $\chi^2/\text{NDF}: 12513949.4/50$

All:  $630.925 \pm 0.060$   $\chi^2/\text{NDF}: 26686845.8/100$

- sign  $633.548 \pm 0.086$   $\chi^2/\text{NDF}: 14171050.1/53$

eigen\_cor\_asym\_sam\_37\_avg\_mean vs Slug



Right In:  $-40.808 \pm 26.747$   $\chi^2/\text{NDF}$ : 17.2/25

Left Out:  $78.162 \pm 14.326$   $\chi^2/\text{NDF}$ : 53.9/24

Right Out:  $-20.814 \pm 26.330$   $\chi^2/\text{NDF}$ : 52.9/30

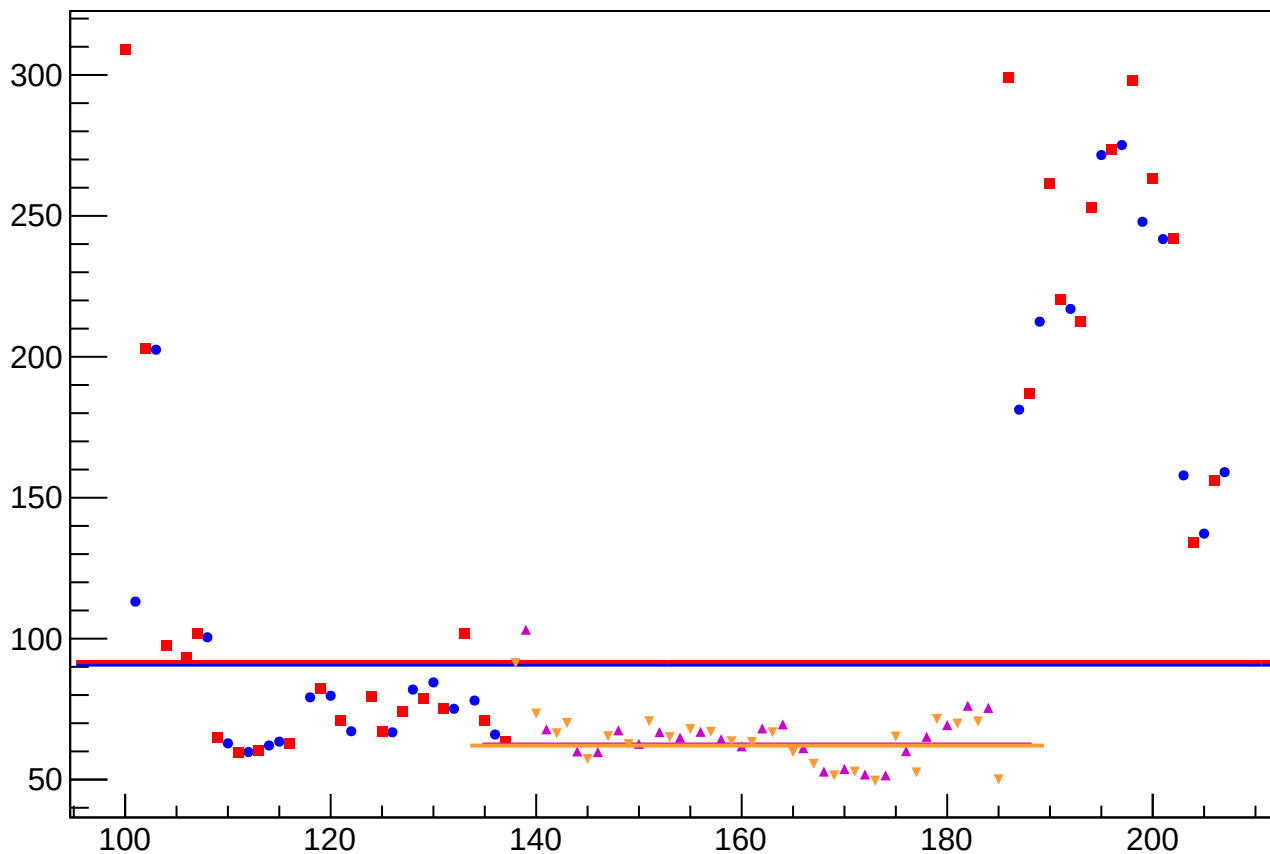
Left In:  $-78.506 \pm 14.811$   $\chi^2/\text{NDF}$ : 36.7/22

+ sign  $51.642 \pm 12.628$   $\chi^2/\text{NDF}$ : 86.4/50

All:  $-5.220 \pm 9.027$   $\chi^2/\text{NDF}$ : 221.1/104

- sign  $-64.639 \pm 12.909$   $\chi^2/\text{NDF}$ : 93.2/53

eigen cor asym sam 37 avg rms vs Slug



Right In: 90.781+/-0.019     $\chi^2/\text{NDF}$ : 6209639.5/25

Left Out: 62.063+/-0.010     $\chi^2/\text{NDF}$ :686530.2/24

Right Out: 91.751+/-0.019     $\chi^2/\text{NDF}$ : 7708985.9/30

Left In: 62.445+/-0.010      $\chi^2/\text{NDF}$ :664644.9/22

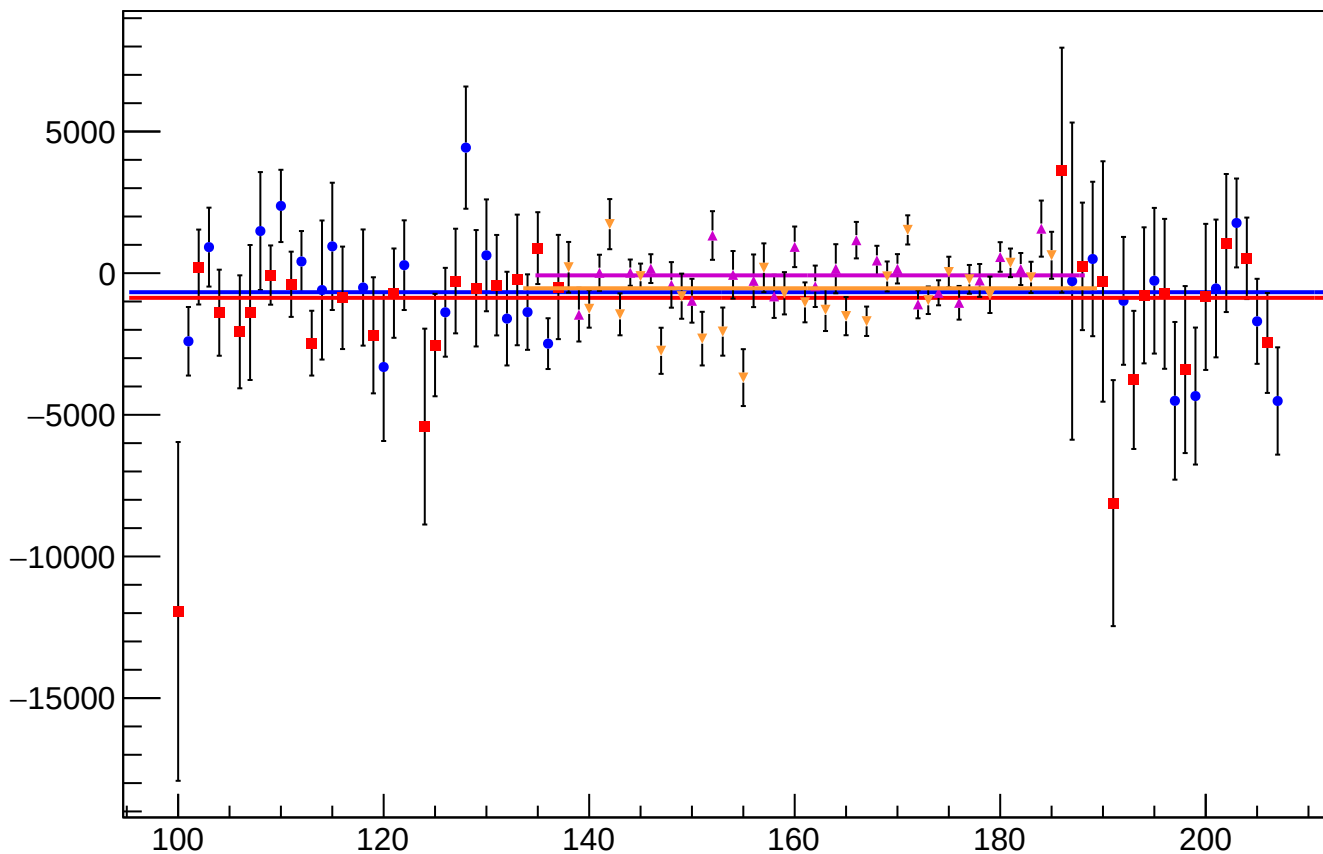
+ sign 68.464 $\pm$ 0.009     $\chi^2$ /NDF: 8687886.0/50

All:  $68.966 \pm 0.006$      $\chi^2/\text{NDF}: 18949978.2/104$

- sign 69.489+/-0.009     $\chi^2/\text{NDF}$ : 10255649.9/53



asym\_sam\_37\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-672.074 \pm 329.289$   $\chi^2/\text{NDF}$ : 35.4/25

Left Out:  $-532.776 \pm 127.927$   $\chi^2/\text{NDF}$ : 69.1/24

Right Out:  $-870.664 \pm 328.494$   $\chi^2/\text{NDF}$ : 21.3/30

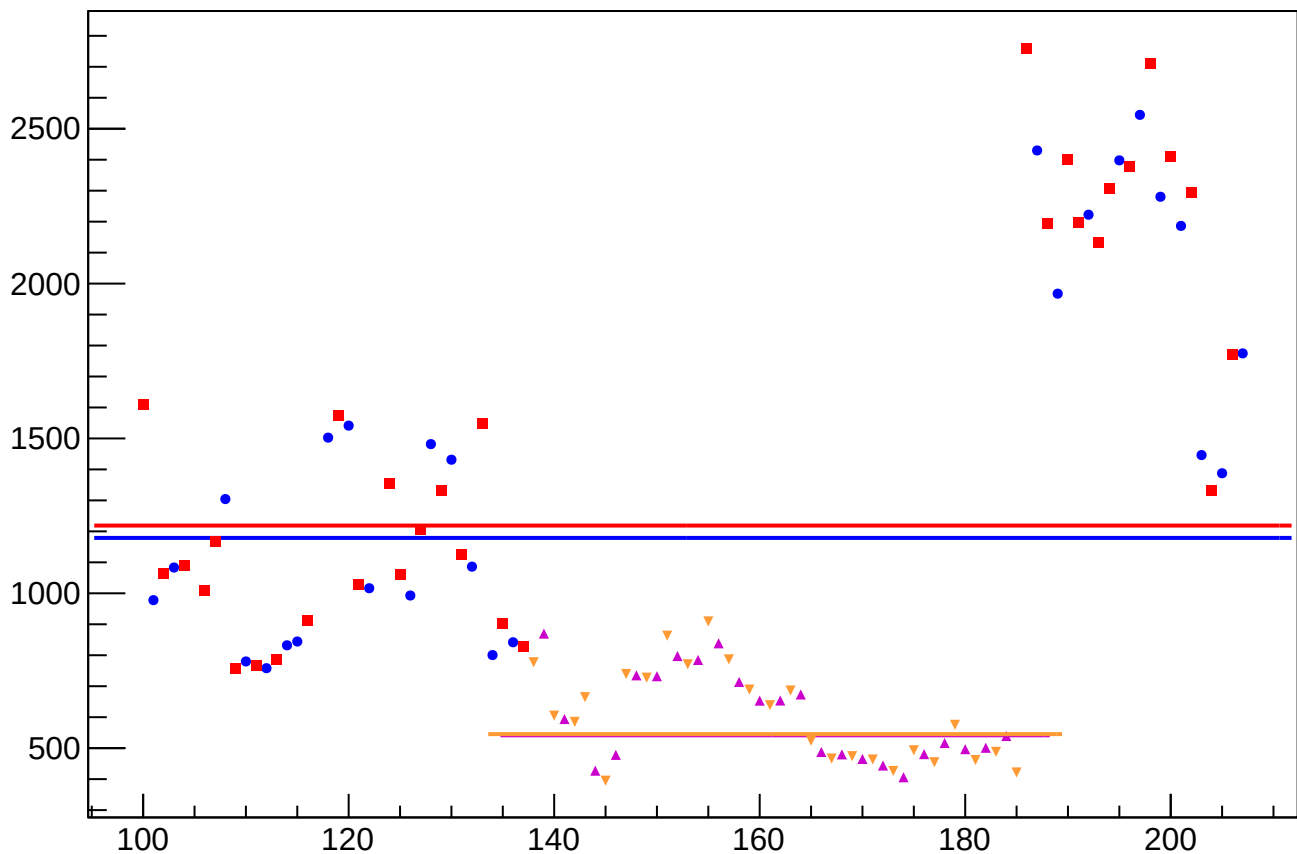
Left In:  $-77.392 \pm 130.317$   $\chi^2/\text{NDF}$ : 28.4/22

+ sign  $-551.043 \pm 119.244$   $\chi^2/\text{NDF}$ : 104.7/50

All:  $-371.027 \pm 84.978$   $\chi^2/\text{NDF}$ : 164.0/104

- sign  $-185.261 \pm 121.134$   $\chi^2/\text{NDF}$ : 54.7/53

asym\_sam\_37\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 1178.845 $\pm$ 0.233  $\chi^2$ /NDF: 3997820.0/25

Left Out: 545.304 $\pm$ 0.090  $\chi^2$ /NDF:2083686.2/24

Right Out: 1218.695 $\pm$ 0.232  $\chi^2$ /NDF: 4985919.0/30

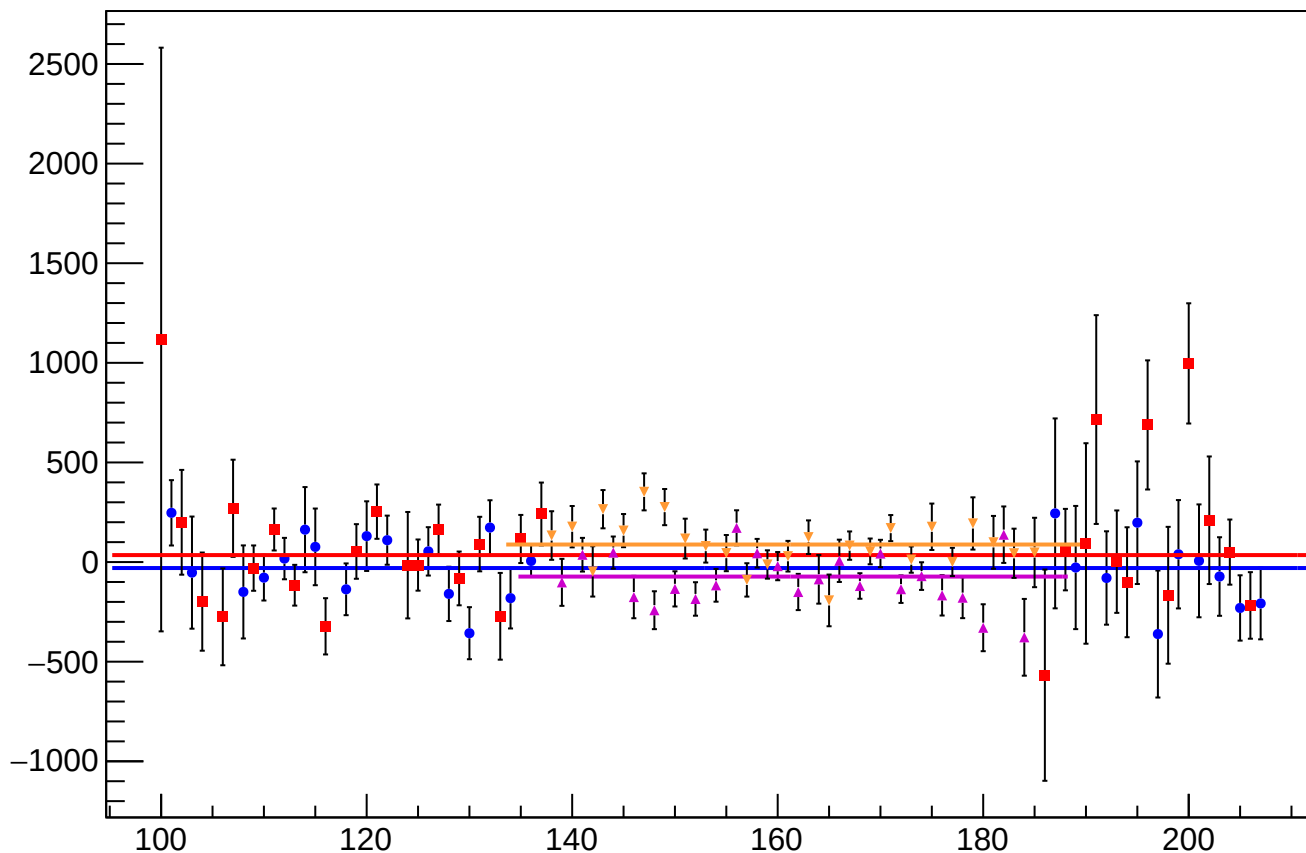
Left In: 541.458 $\pm$ 0.092  $\chi^2$ /NDF:1840342.7/22

+ sign 628.383 $\pm$ 0.084  $\chi^2$ /NDF: 12513949.4/50

All: 630.925 $\pm$ 0.060  $\chi^2$ /NDF: 26686845.8/10

- sign 633.548 $\pm$ 0.086  $\chi^2$ /NDF: 14171050.1/53

# dit\_asym\_sam\_37\_avg\_mean vs Slug



Right In:  $-29.969 \pm 30.853$   $\chi^2/\text{NDF}$ : 23.1/25

Left Out:  $88.040 \pm 17.745$   $\chi^2/\text{NDF}$ : 36.9/24

Right Out:  $35.034 \pm 31.058$   $\chi^2/\text{NDF}$ : 44.1/30

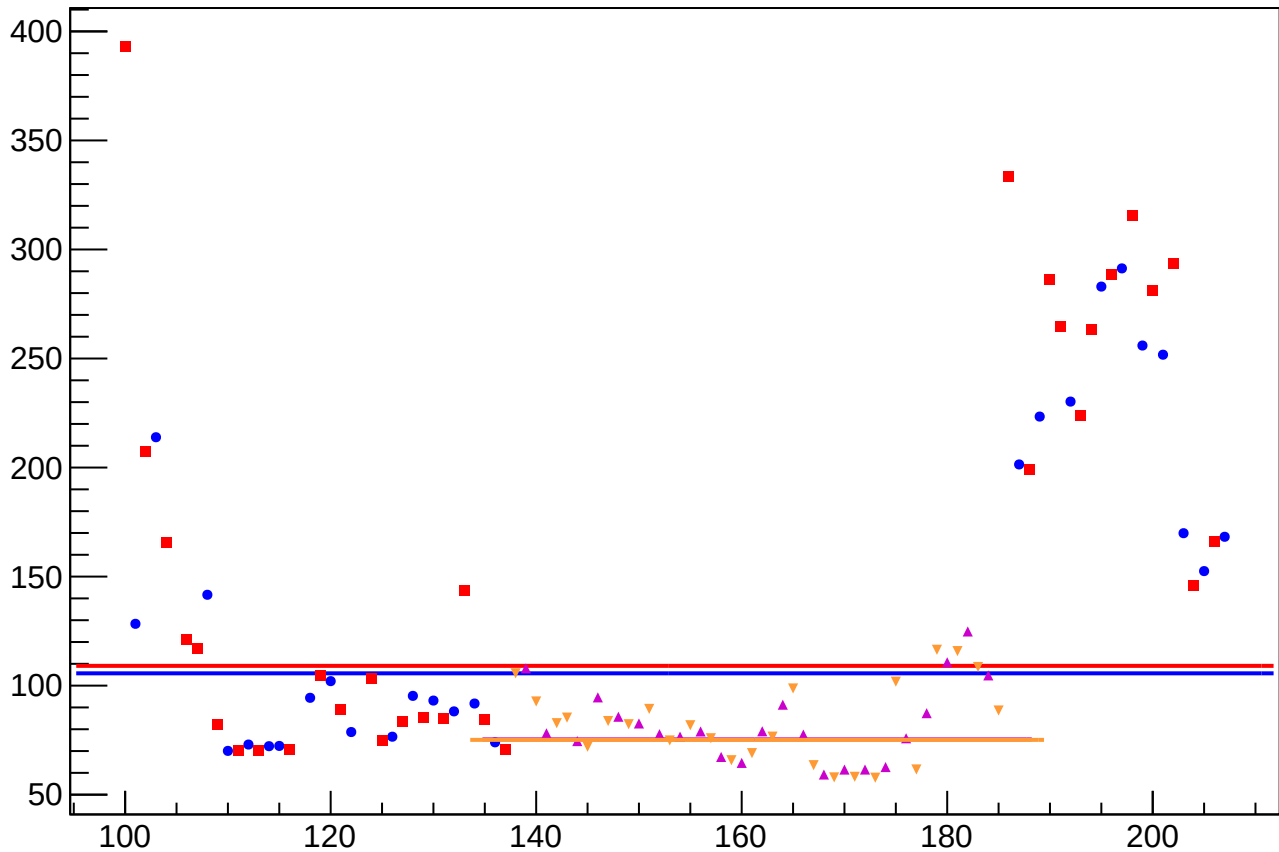
Left In:  $-72.849 \pm 18.276$   $\chi^2/\text{NDF}$ : 38.4/22

+ sign  $58.707 \pm 15.382$   $\chi^2/\text{NDF}$ : 71.0/50

All:  $8.034 \pm 11.005$   $\chi^2/\text{NDF}$ : 184.7/104

- sign  $-45.101 \pm 15.751$   $\chi^2/\text{NDF}$ : 91.5/53

dit\_asym\_sam\_37\_avg\_rms vs Slug



Right In: 105.640 $\pm$ 0.022  $\chi^2$ /NDF: 5540072.7/25

Left Out: 75.128 $\pm$ 0.013  $\chi^2$ /NDF:1601461.8/24

Right Out: 109.069 $\pm$ 0.022  $\chi^2$ /NDF: 7098992.9/30

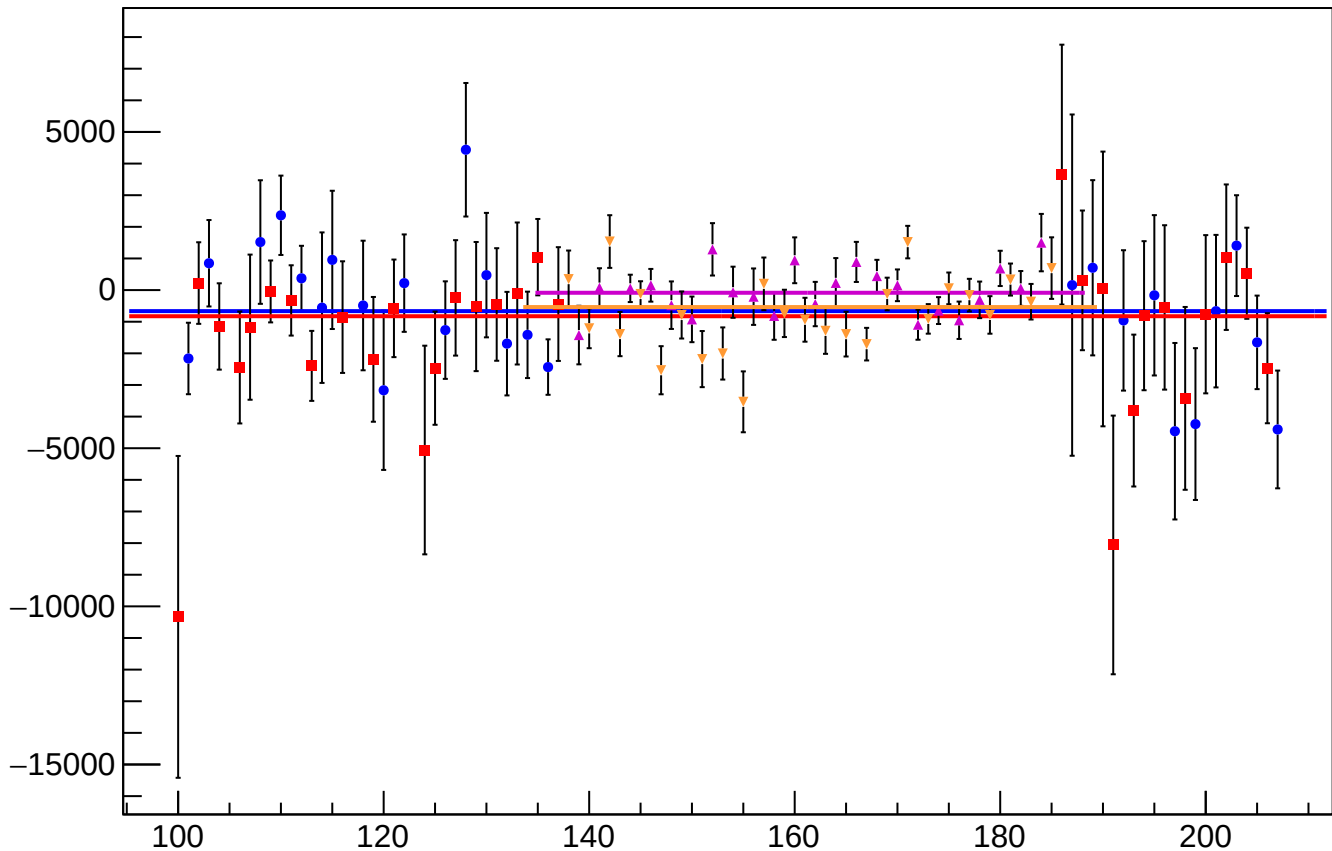
Left In: 75.363 $\pm$ 0.013  $\chi^2$ /NDF:1225318.4/22

+ sign 82.712 $\pm$ 0.011  $\chi^2$ /NDF: 8611440.1/50

All: 83.357 $\pm$ 0.008  $\chi^2$ /NDF: 18692693.3/104

- sign 84.032 $\pm$ 0.011  $\chi^2$ /NDF: 10074062.2/53

# asym\_sam\_37\_avg\_dit\_correction\_mean vs Slug



Right In: -665.096 $\pm$ 322.439  $\chi^2$ /NDF: 34.6/25

Left Out: -536.789 $\pm$ 124.471  $\chi^2$ /NDF:67.0/24

Right Out: -826.615 $\pm$ 316.734  $\chi^2$ /NDF: 23.0/30

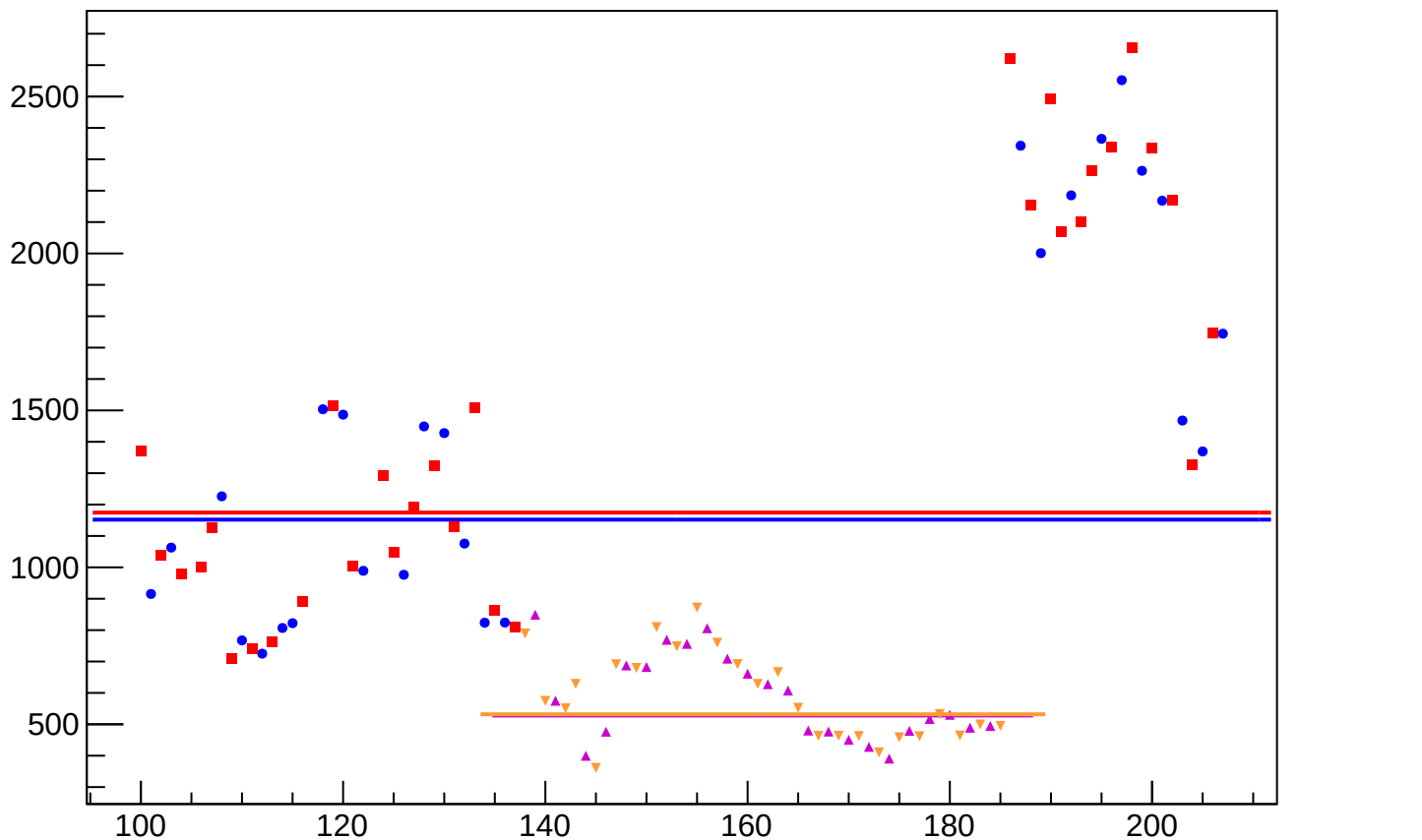
Left In: -84.668 $\pm$ 127.039  $\chi^2$ /NDF:27.5/22

+ sign -553.430 $\pm$ 116.120  $\chi^2$ /NDF: 101.8/50

All: -373.256 $\pm$ 82.734  $\chi^2$ /NDF: 161.9/104

- sign -187.488 $\pm$ 117.909  $\chi^2$ /NDF: 55.2/53

# asym\_sam\_37\_avg\_dit\_correction\_rms vs Slug



Right In: 1152.029 $\pm$ 0.228  $\chi^2$ /NDF: 4130440.9/25

Left Out: 531.872 $\pm$ 0.088  $\chi^2$ /NDF: 2037750.0/24

+ sign 612.302 $\pm$ 0.082  $\chi^2$ /NDF: 12607063.1/50

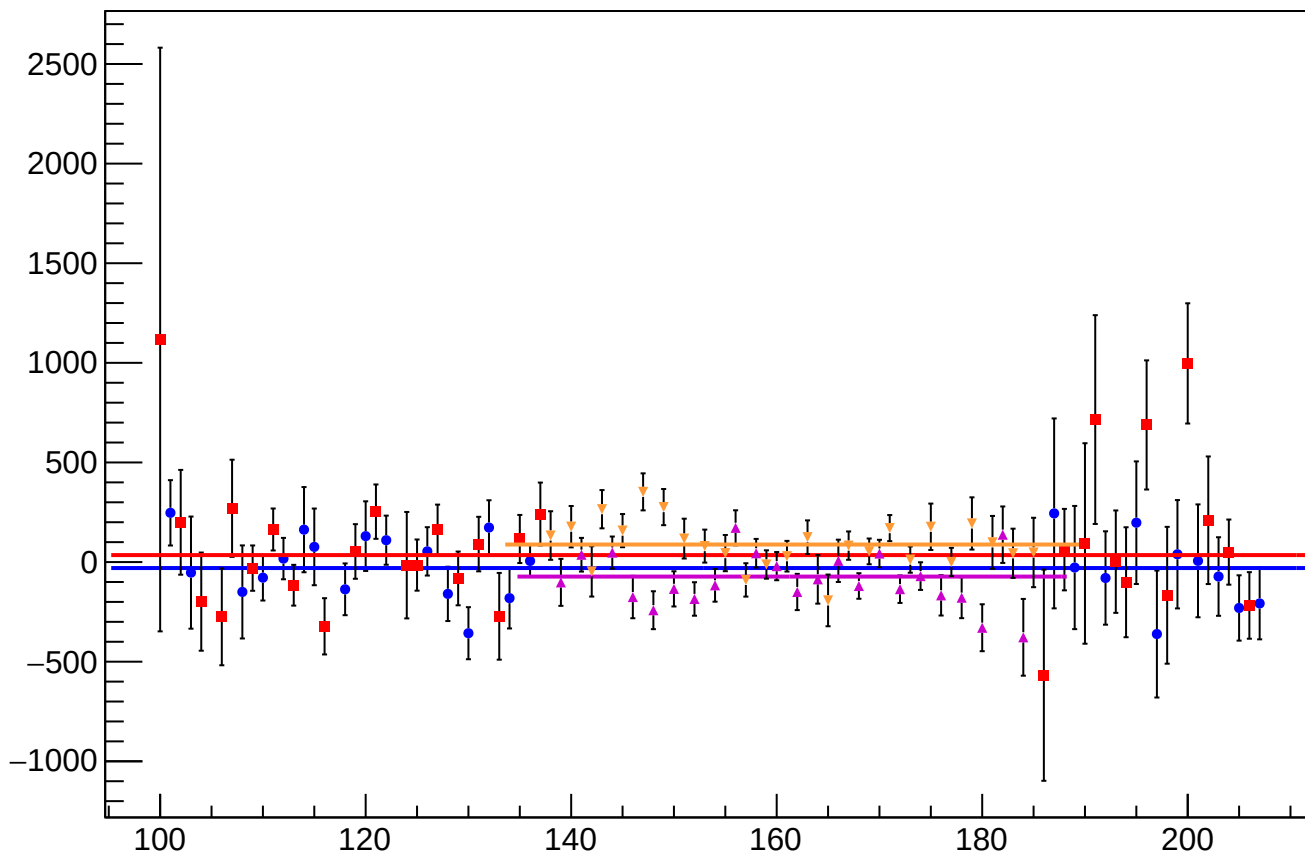
Right Out: 1174.422 $\pm$ 0.224  $\chi^2$ /NDF: 5159698.9/30

All: 614.895 $\pm$ 0.059  $\chi^2$ /NDF: 26745667.2/10

Left In: 527.986 $\pm$ 0.090  $\chi^2$ /NDF: 1800455.5/22

- sign 617.569 $\pm$ 0.083  $\chi^2$ /NDF: 14136578.0/53

eigen\_dit\_asym\_sam\_37\_avg\_mean vs Slug



Right In:  $-29.969 \pm 30.853$   $\chi^2/\text{NDF}$ : 23.1/25

Left Out:  $88.040 \pm 17.745$   $\chi^2/\text{NDF}$ : 36.9/24

Right Out:  $35.037 \pm 31.058$   $\chi^2/\text{NDF}$ : 44.1/30

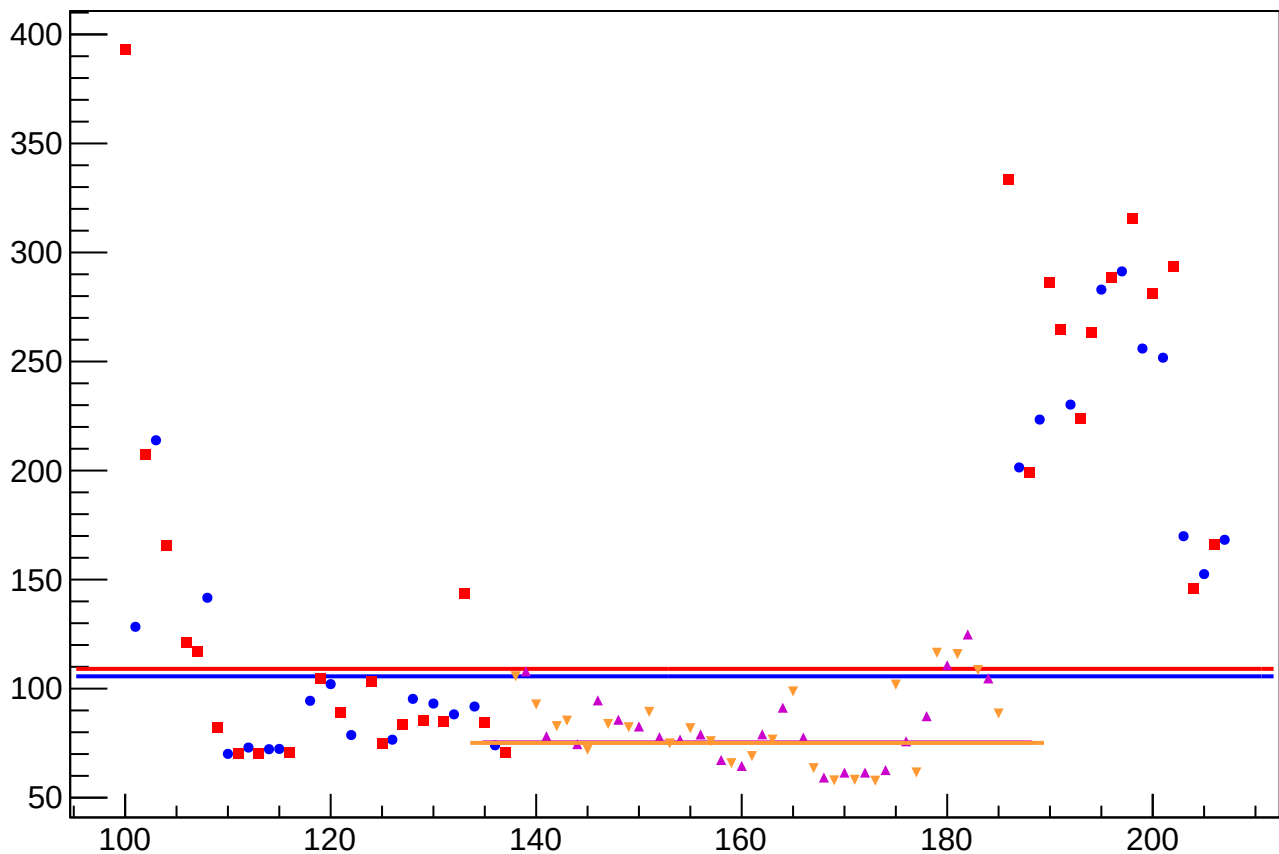
Left In:  $-72.848 \pm 18.276$   $\chi^2/\text{NDF}$ : 38.4/22

+ sign  $58.708 \pm 15.382$   $\chi^2/\text{NDF}$ : 71.0/50

All:  $8.034 \pm 11.005$   $\chi^2/\text{NDF}$ : 184.7/104

- sign  $-45.100 \pm 15.751$   $\chi^2/\text{NDF}$ : 91.5/53

# eigen\_dit\_asym\_sam\_37\_avg\_rms vs Slug



Right In:  $105.641 \pm 0.022$   $\chi^2/\text{NDF}$ : 5540039.0/25

Left Out:  $75.128 \pm 0.013$   $\chi^2/\text{NDF}$ : 1601462.6/24

Right Out:  $109.070 \pm 0.022$   $\chi^2/\text{NDF}$ : 7098960.3/30

Left In:  $75.363 \pm 0.013$   $\chi^2/\text{NDF}$ : 1225319.2/22

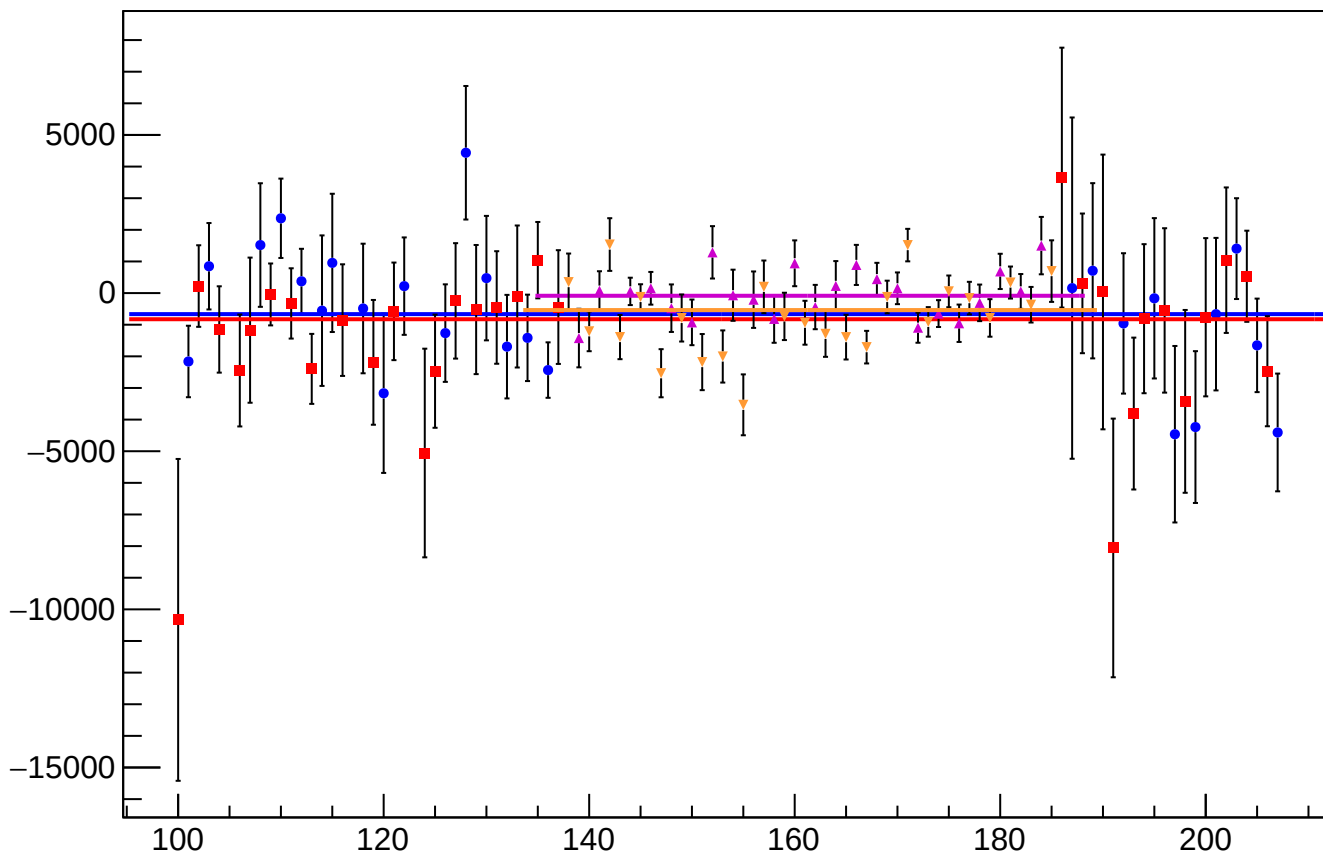
+ sign  $82.713 \pm 0.011$   $\chi^2/\text{NDF}$ : 8611415.6/50

All:  $83.357 \pm 0.008$   $\chi^2/\text{NDF}$ : 18692658.1/104

- sign  $84.033 \pm 0.011$   $\chi^2/\text{NDF}$ : 10074051.6/53



asym\_sam\_37\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In: -665.094 $\pm$ 322.439  $\chi^2$ /NDF: 34.6/25

Left Out: -536.790 $\pm$ 124.471  $\chi^2$ /NDF:67.0/24

Right Out: -826.614 $\pm$ 316.733  $\chi^2$ /NDF: 23.0/30

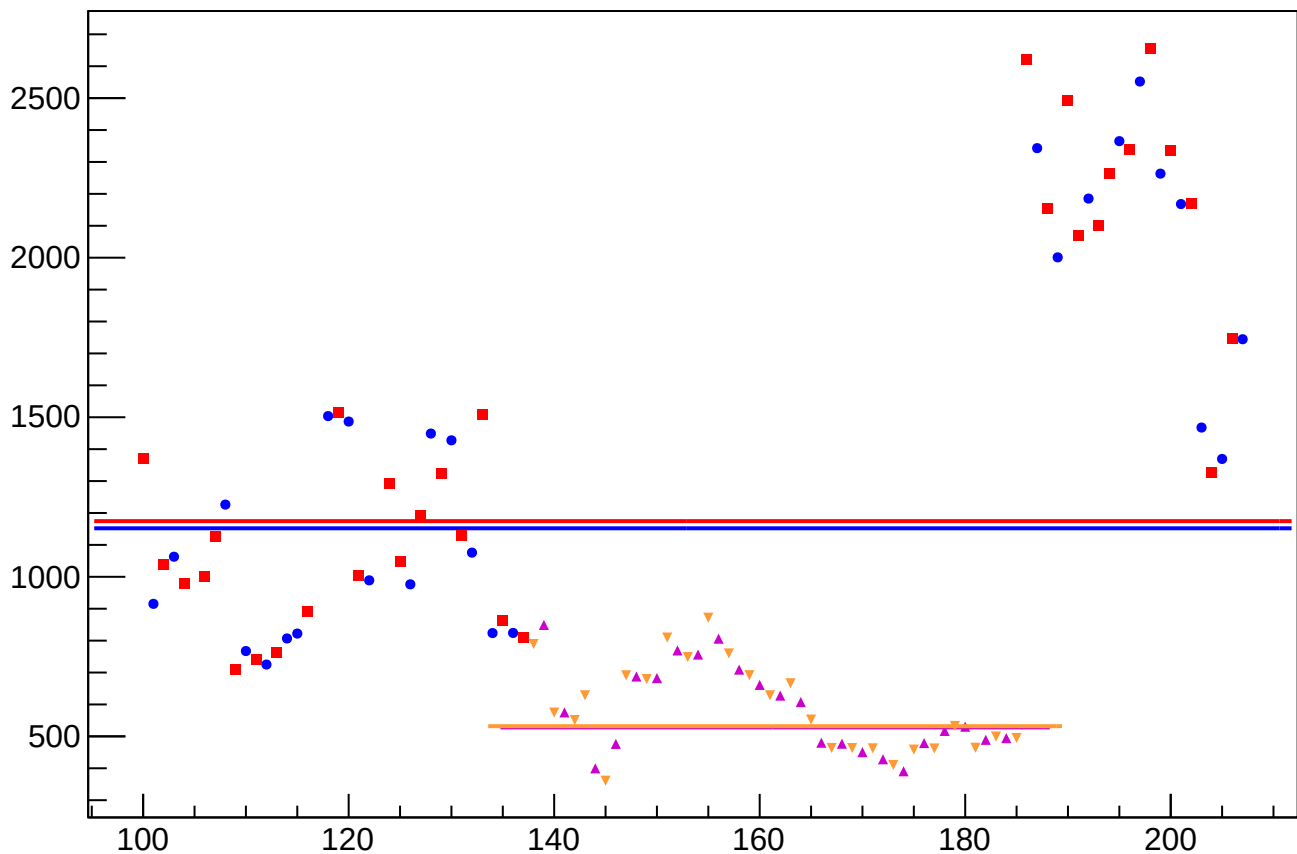
Left In: -84.668 $\pm$ 127.039  $\chi^2$ /NDF:27.5/22

+ sign -553.430 $\pm$ 116.120  $\chi^2$ /NDF: 101.8/50

All: -373.256 $\pm$ 82.734  $\chi^2$ /NDF: 161.9/104

- sign -187.488 $\pm$ 117.909  $\chi^2$ /NDF: 55.2/53

asym\_sam\_37\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 1152.027 $\pm$ 0.228  $\chi^2$ /NDF: 4130450.6/25

Left Out: 531.872 $\pm$ 0.088  $\chi^2$ /NDF:2037744.9/24

Right Out: 1174.420 $\pm$ 0.224  $\chi^2$ /NDF: 5159706.3/30

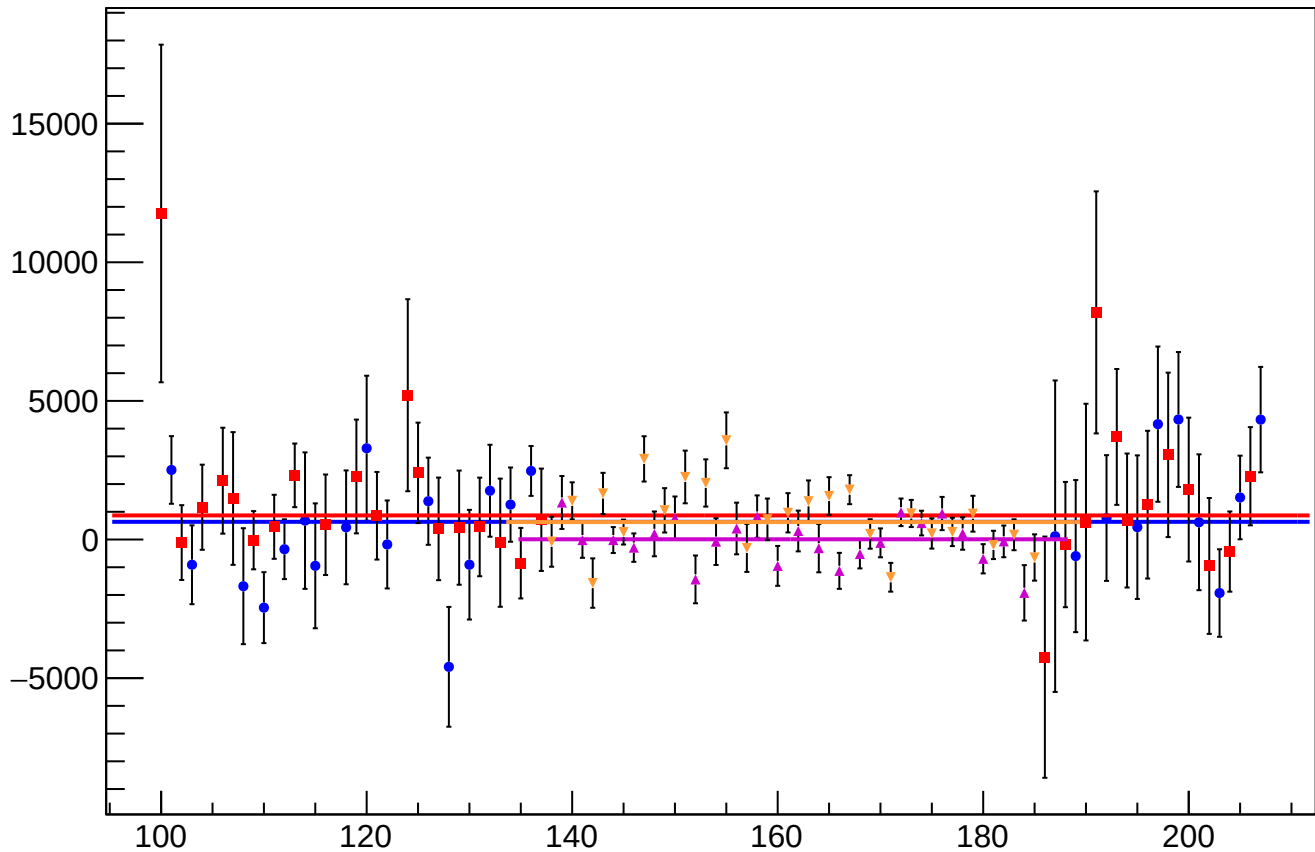
Left In: 527.986 $\pm$ 0.090  $\chi^2$ /NDF:1800449.7/22

+ sign 612.302 $\pm$ 0.082  $\chi^2$ /NDF: 12607051.0/50

All: 614.895 $\pm$ 0.059  $\chi^2$ /NDF: 26745636.3/10

- sign 617.569 $\pm$ 0.083  $\chi^2$ /NDF: 14136559.2/53

# asym\_sam\_37\_avg\_mean vs Slug



Right In:  $638.458 \pm 330.968$   $\chi^2/\text{NDF}$ : 35.6/25

Left Out:  $629.379 \pm 128.853$   $\chi^2/\text{NDF}$ : 64.9/24

Right Out:  $868.730 \pm 329.686$   $\chi^2/\text{NDF}$ : 20.1/30

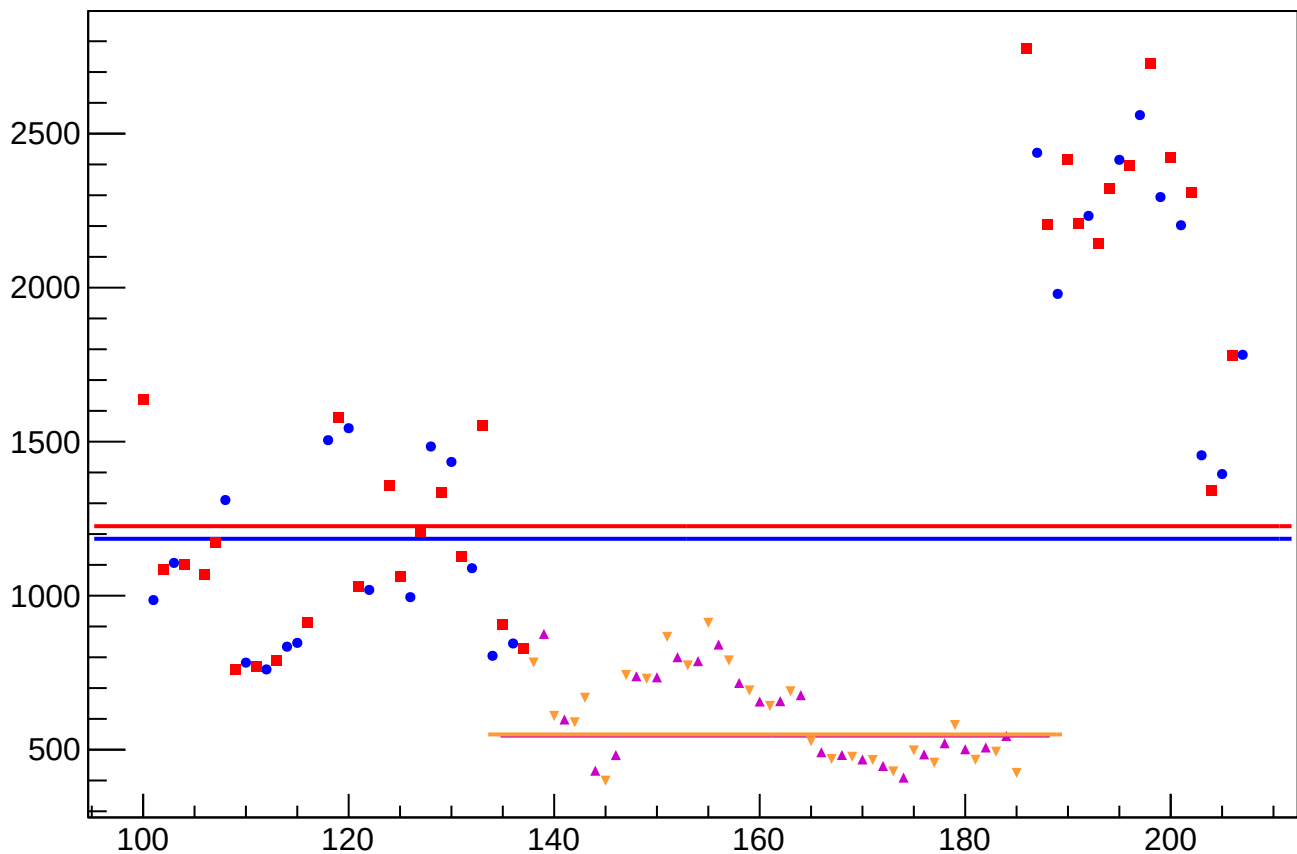
Left In:  $8.460 \pm 131.289$   $\chi^2/\text{NDF}$ : 27.3/22

+ sign  $630.574 \pm 120.074$   $\chi^2/\text{NDF}$ : 100.5/50

All:  $382.350 \pm 85.569$   $\chi^2/\text{NDF}$ : 162.6/104

- sign  $126.212 \pm 121.974$   $\chi^2/\text{NDF}$ : 53.3/53

# asym\_sam\_37\_avg\_rms vs Slug



Right In: 1184.685 $\pm$ 0.234  $\chi^2$ /NDF: 4005570.8/25

Left Out: 549.475 $\pm$ 0.091  $\chi^2$ /NDF: 2053905.8/24

Right Out: 1225.607 $\pm$ 0.233  $\chi^2$ /NDF: 4988317.4/30

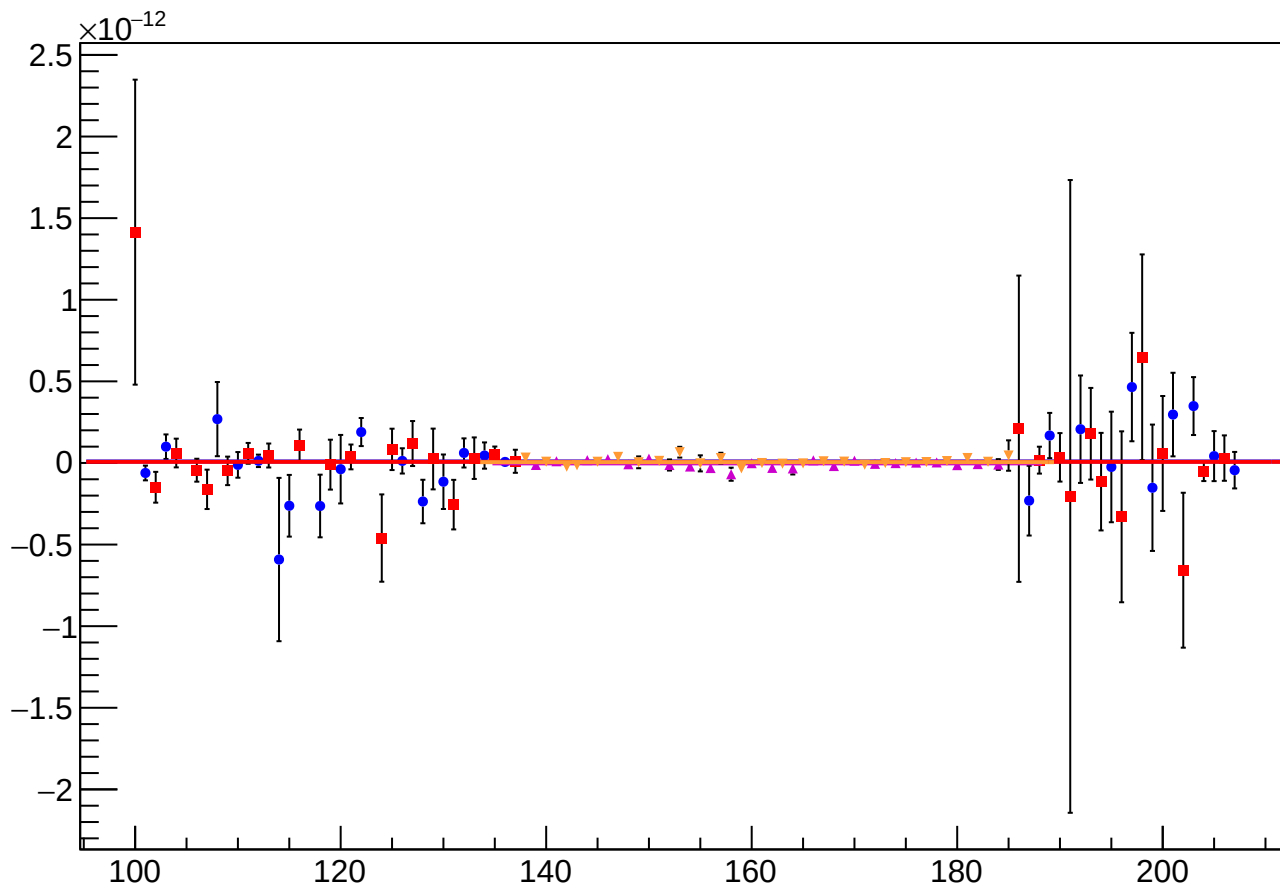
Left In: 545.708 $\pm$ 0.093  $\chi^2$ /NDF: 1814508.3/22

+ sign 633.082 $\pm$ 0.085  $\chi^2$ /NDF: 12456857.0/50

All: 635.882 $\pm$ 0.061  $\chi^2$ /NDF: 26603485.8/10

- sign 638.770 $\pm$ 0.086  $\chi^2$ /NDF: 14144419.8/53

asym\_sam\_37\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 29.9/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:15.6/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 23.6/30

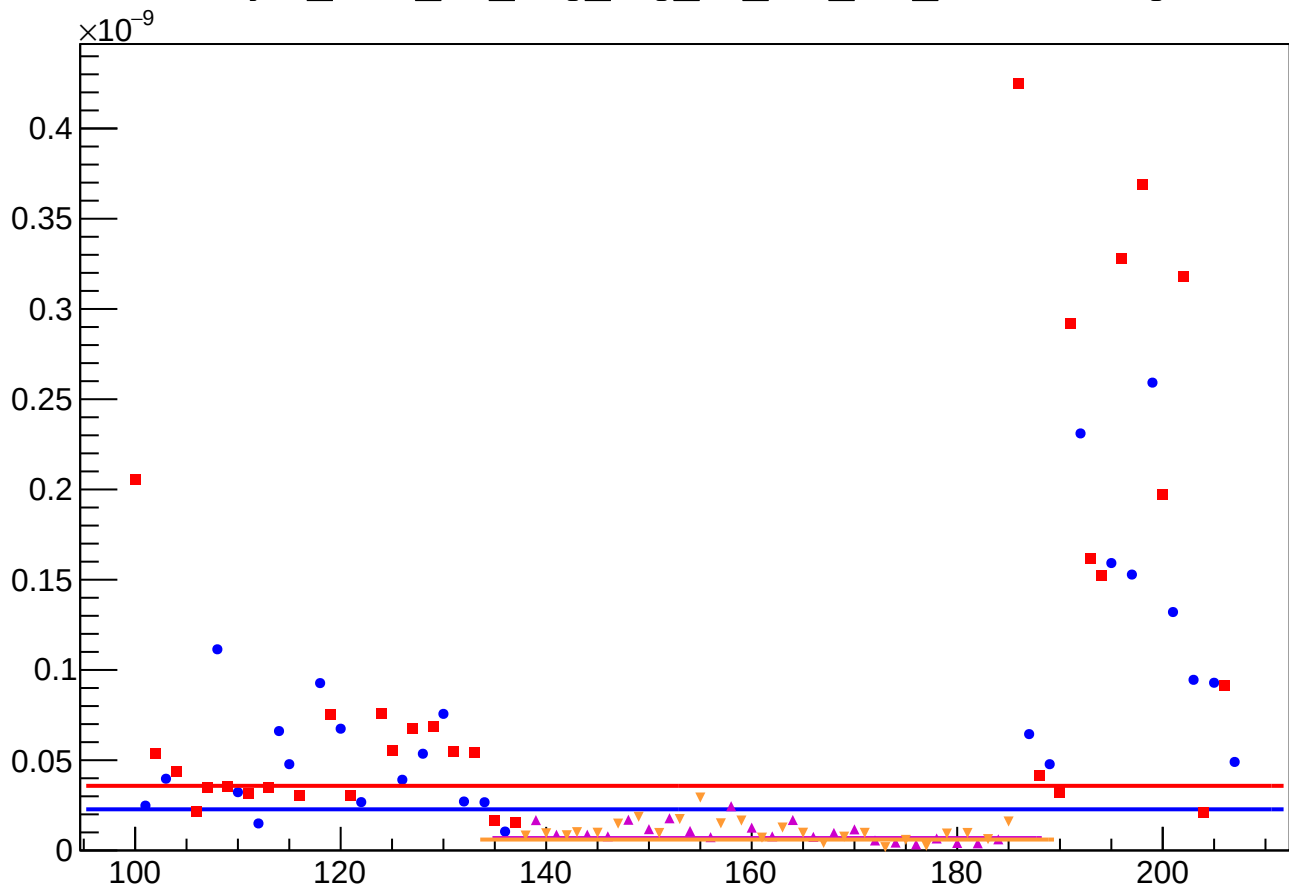
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:20.0/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 45.7/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 92.1/104

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 43.8/53

asym\_sam\_37\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5639312.0/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3623754.2/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5074475.5/30

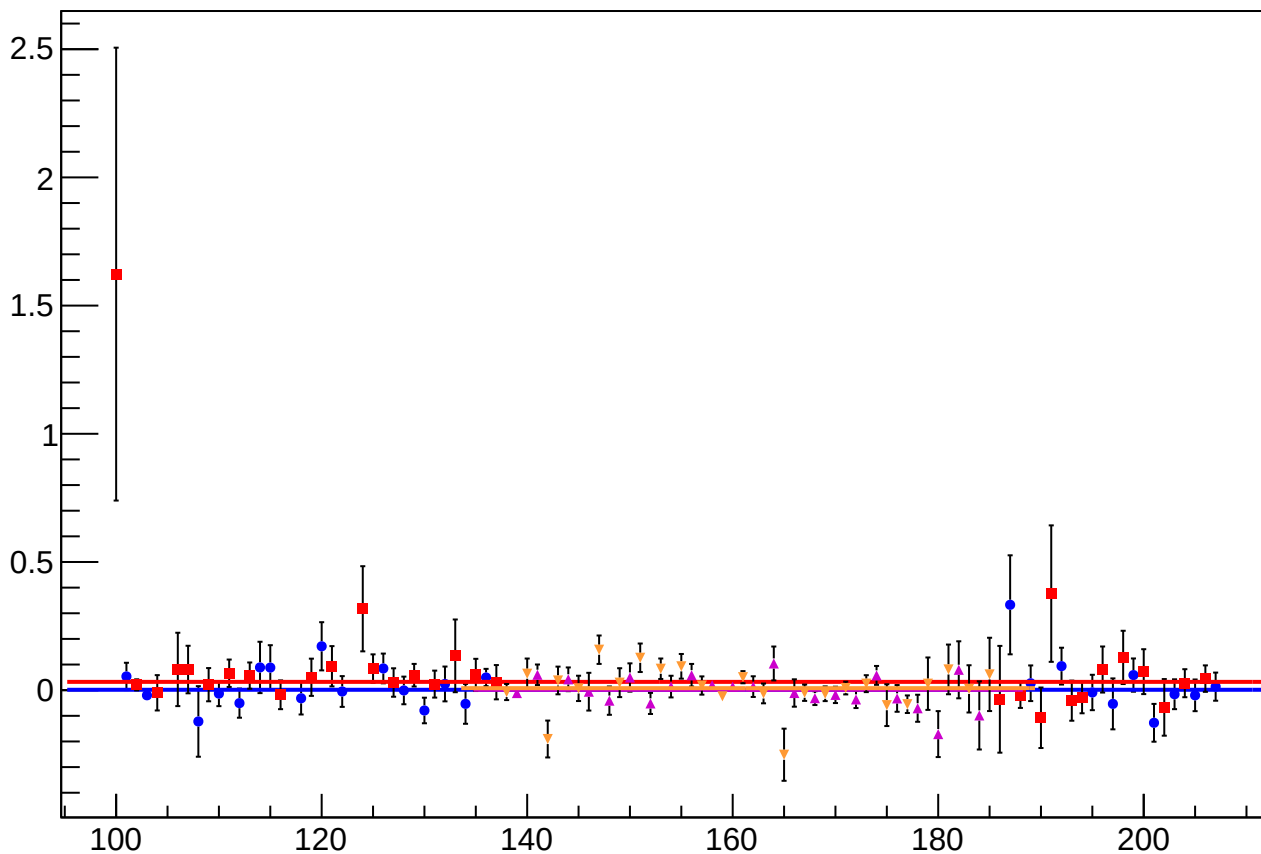
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2417942.7/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11980302.7/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 24264244.7/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12187594.1/53

asym\_sam\_37\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.002 \pm 0.011$   $\chi^2/\text{NDF}$ : 25.7/25

Left Out:  $0.008 \pm 0.008$   $\chi^2/\text{NDF}$ : 47.6/24

Right Out:  $0.032 \pm 0.011$   $\chi^2/\text{NDF}$ : 19.6/30

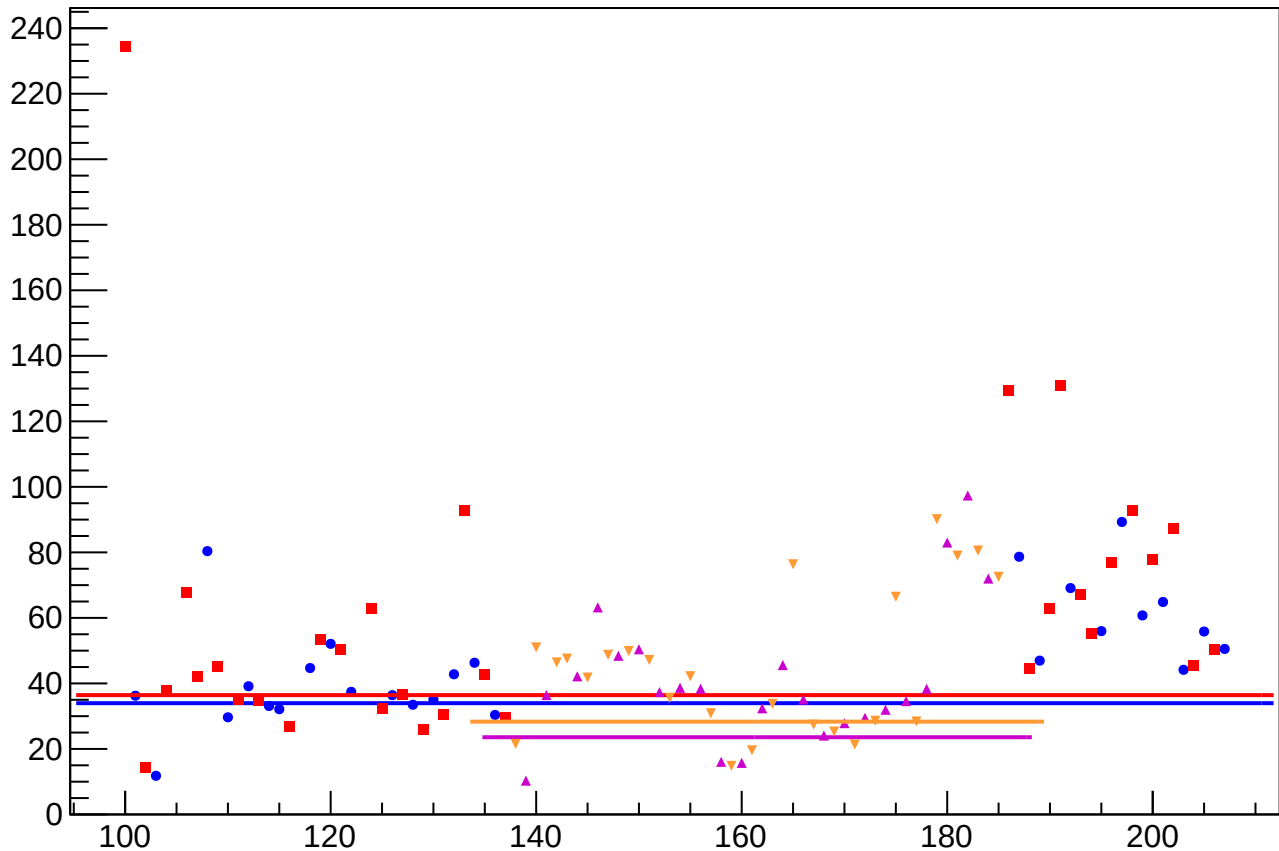
Left In:  $0.001 \pm 0.007$   $\chi^2/\text{NDF}$ : 25.1/22

+ sign  $0.006 \pm 0.006$   $\chi^2/\text{NDF}$ : 73.5/50

All:  $0.008 \pm 0.004$   $\chi^2/\text{NDF}$ : 124.3/104

- sign  $0.010 \pm 0.006$   $\chi^2/\text{NDF}$ : 50.5/53

# asym\_sam\_37\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 33.967+/-0.007  $\chi^2/\text{NDF}$ : 5727796.9/25

Left Out: 28.325+/-0.005  $\chi^2/\text{NDF}$ : 6788307.1/24

Right Out: 36.424+/-0.008  $\chi^2/\text{NDF}$ : 6511935.5/30

Left In: 23.572+/-0.005  $\chi^2/\text{NDF}$ : 8263833.7/22

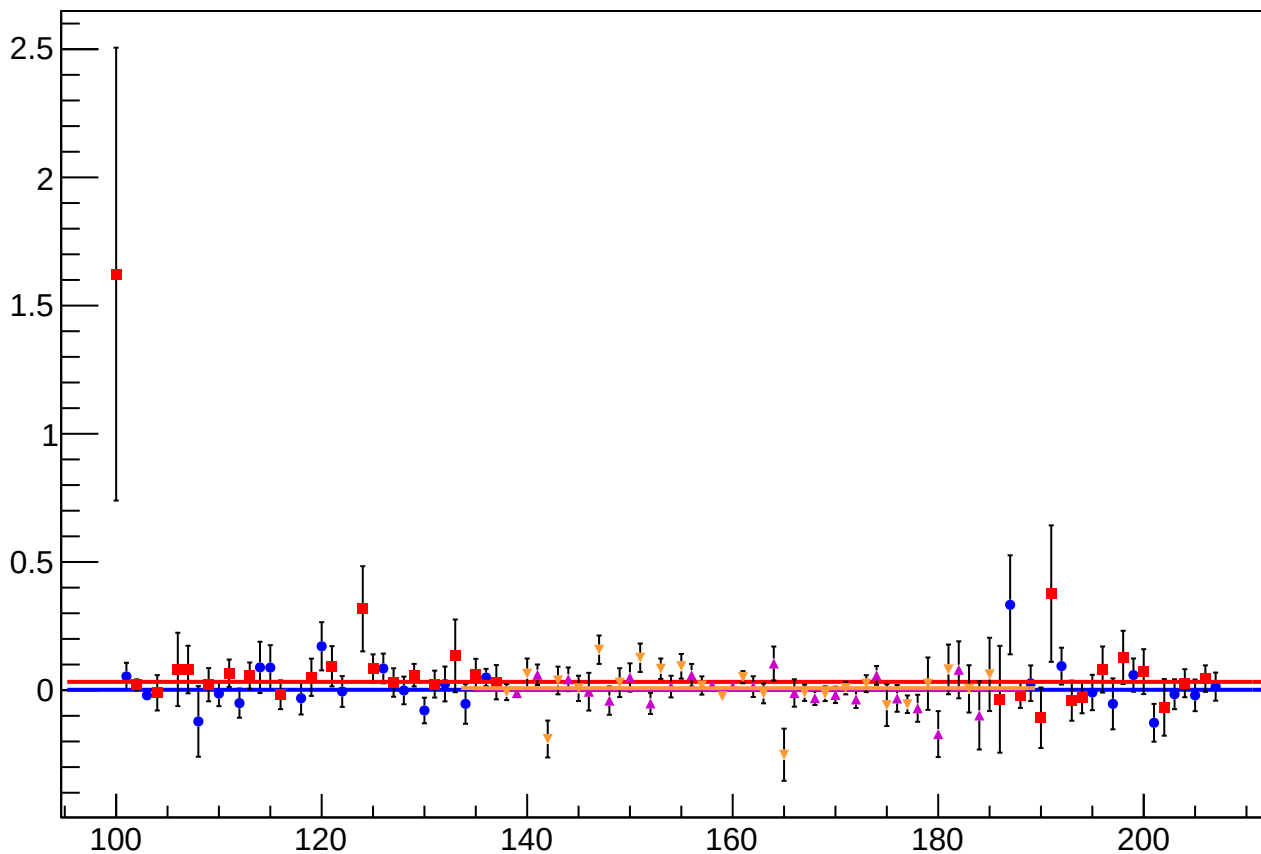
+ sign 30.241+/-0.004  $\chi^2/\text{NDF}$ : 12892699.5/50

All: 28.599+/-0.003  $\chi^2/\text{NDF}$ : 29921835.8/104

- sign 27.151+/-0.004  $\chi^2/\text{NDF}$ : 16761574.1/53



asym\_sam\_37\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.002 \pm 0.011$   $\chi^2/\text{NDF}$ : 25.7/25

Left Out:  $0.008 \pm 0.008$   $\chi^2/\text{NDF}$ : 47.6/24

Right Out:  $0.032 \pm 0.011$   $\chi^2/\text{NDF}$ : 19.6/30

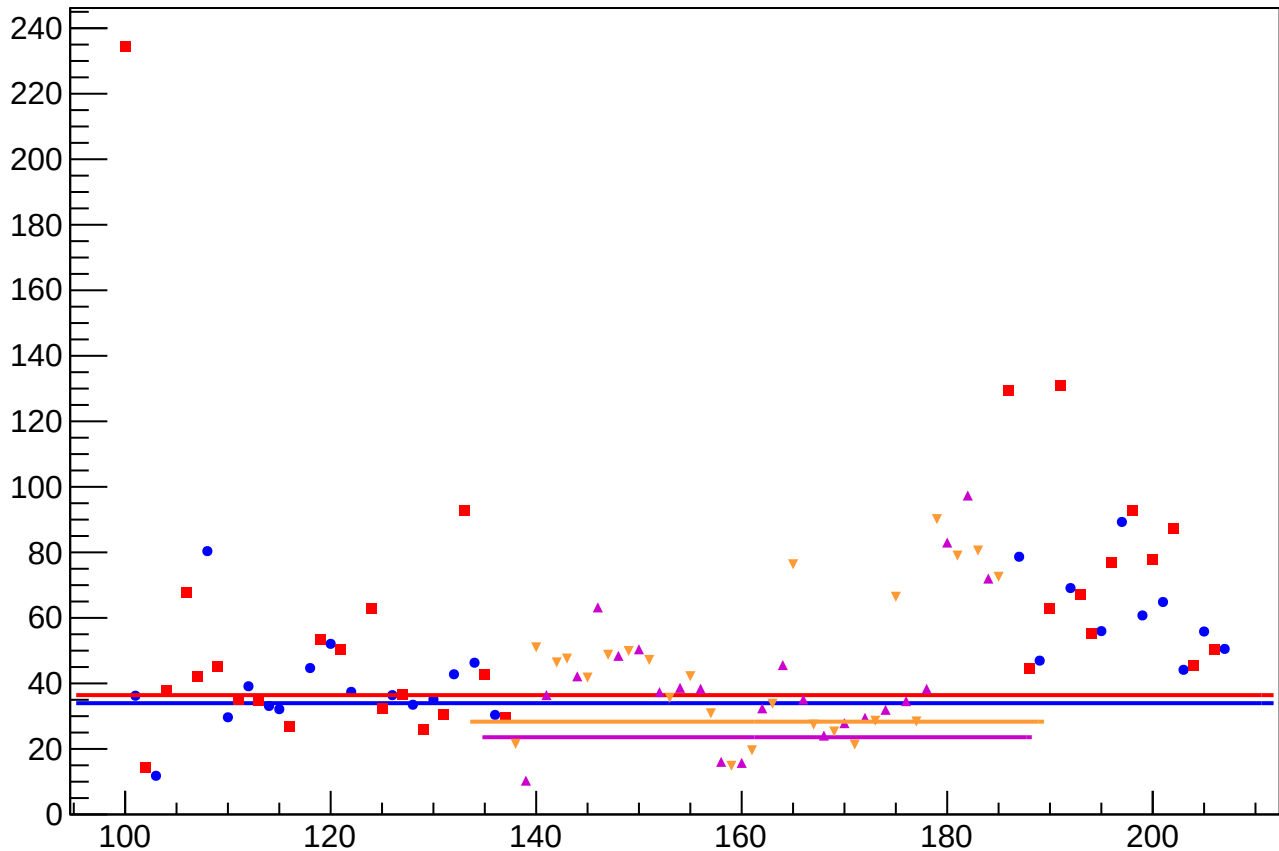
Left In:  $0.001 \pm 0.007$   $\chi^2/\text{NDF}$ : 25.1/22

+ sign  $0.006 \pm 0.006$   $\chi^2/\text{NDF}$ : 73.5/50

All:  $0.008 \pm 0.004$   $\chi^2/\text{NDF}$ : 124.3/104

- sign  $0.010 \pm 0.006$   $\chi^2/\text{NDF}$ : 50.5/53

asym\_sam\_37\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 33.967 $\pm$ 0.007  $\chi^2$ /NDF: 5727796.9/25

Left Out: 28.325 $\pm$ 0.005  $\chi^2$ /NDF: 6788307.1/24

Right Out: 36.424 $\pm$ 0.008  $\chi^2$ /NDF: 6511935.5/30

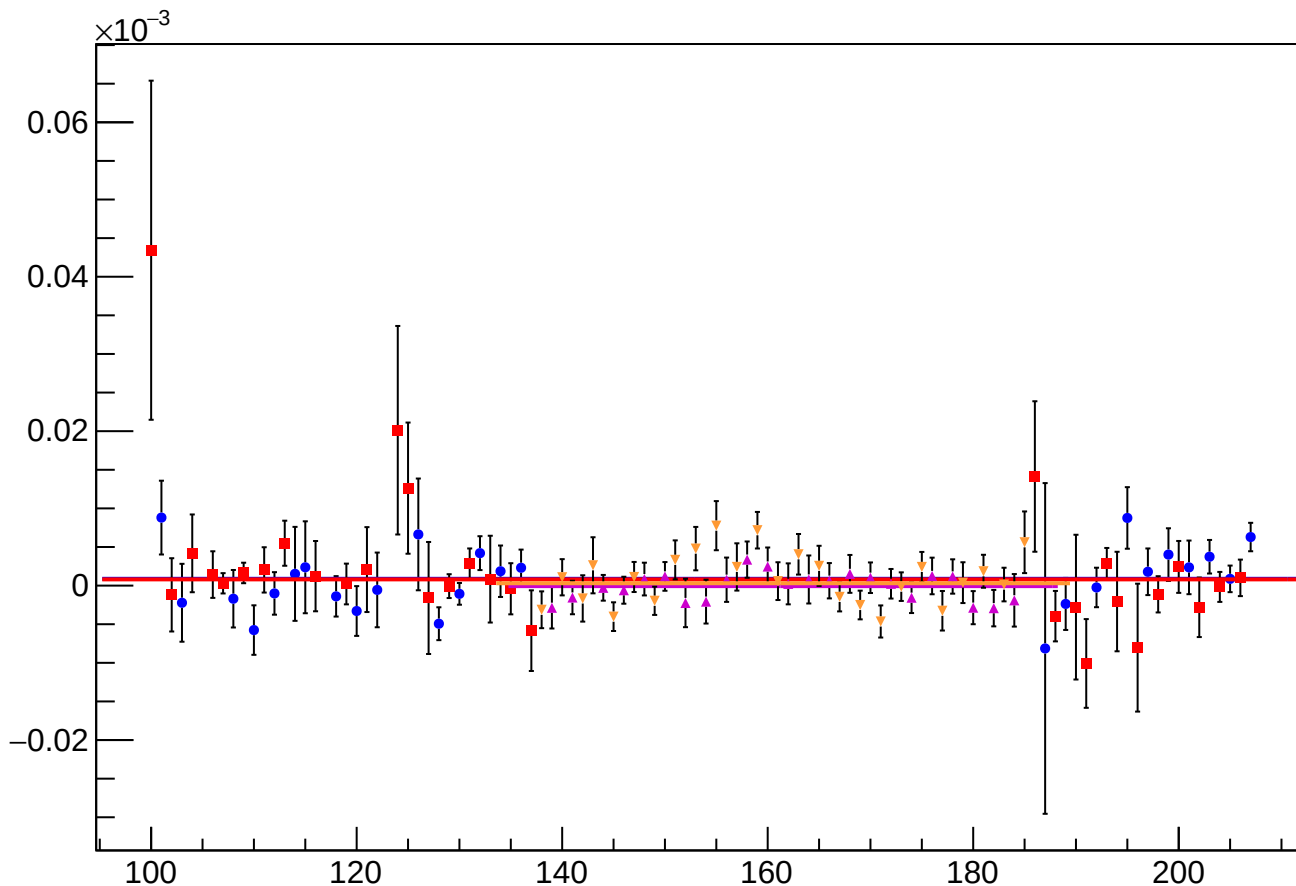
Left In: 23.572 $\pm$ 0.005  $\chi^2$ /NDF: 8263833.7/22

+ sign 30.241 $\pm$ 0.004  $\chi^2$ /NDF: 12892699.5/50

All: 28.599 $\pm$ 0.003  $\chi^2$ /NDF: 29921835.8/104

- sign 27.151 $\pm$ 0.004  $\chi^2$ /NDF: 16761574.1/53

asym\_sam\_37\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 40.4/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:45.7/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 27.1/30

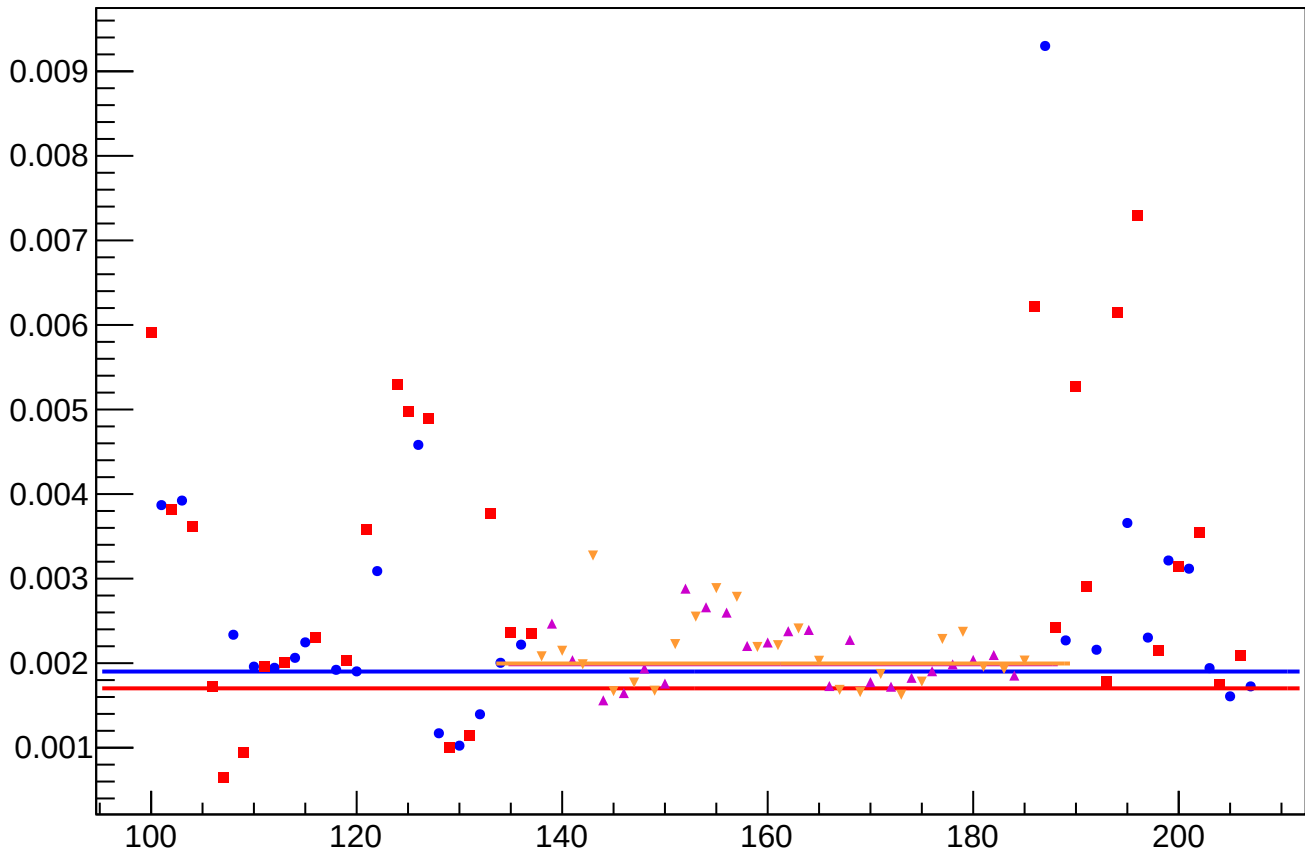
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:12.1/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 86.7/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 127.8/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 40.9/53

asym\_sam\_37\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 3574325.5/25

Left Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF:1173308.8/24

Right Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 8548563.6/30

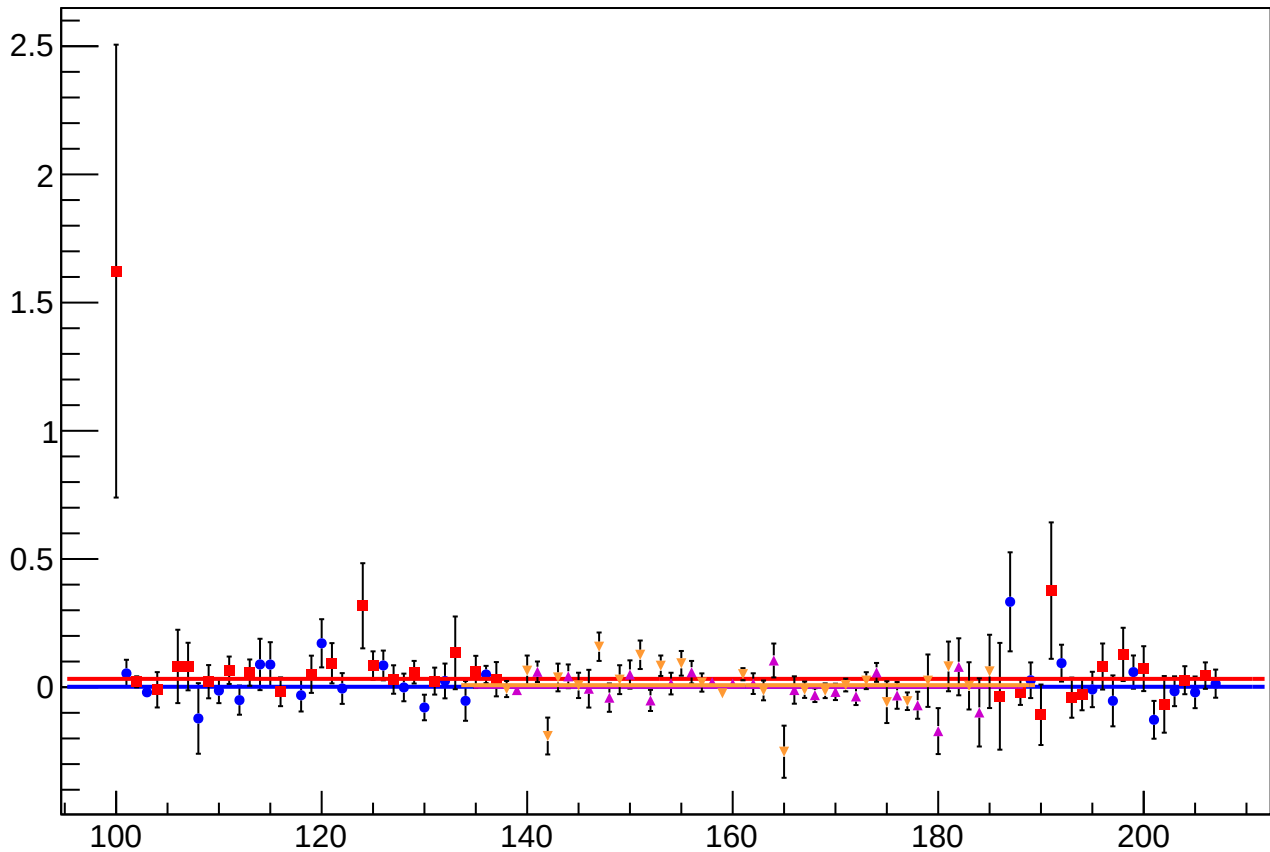
Left In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF:924009.7/22

+ sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 4782960.5/50

All: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 14677112.7/104

- sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 9810173.6/53

asym\_sam\_37\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.002 \pm 0.011$   $\chi^2/\text{NDF}$ : 25.7/25

Left Out:  $0.008 \pm 0.008$   $\chi^2/\text{NDF}$ : 47.6/24

Right Out:  $0.032 \pm 0.011$   $\chi^2/\text{NDF}$ : 19.6/30

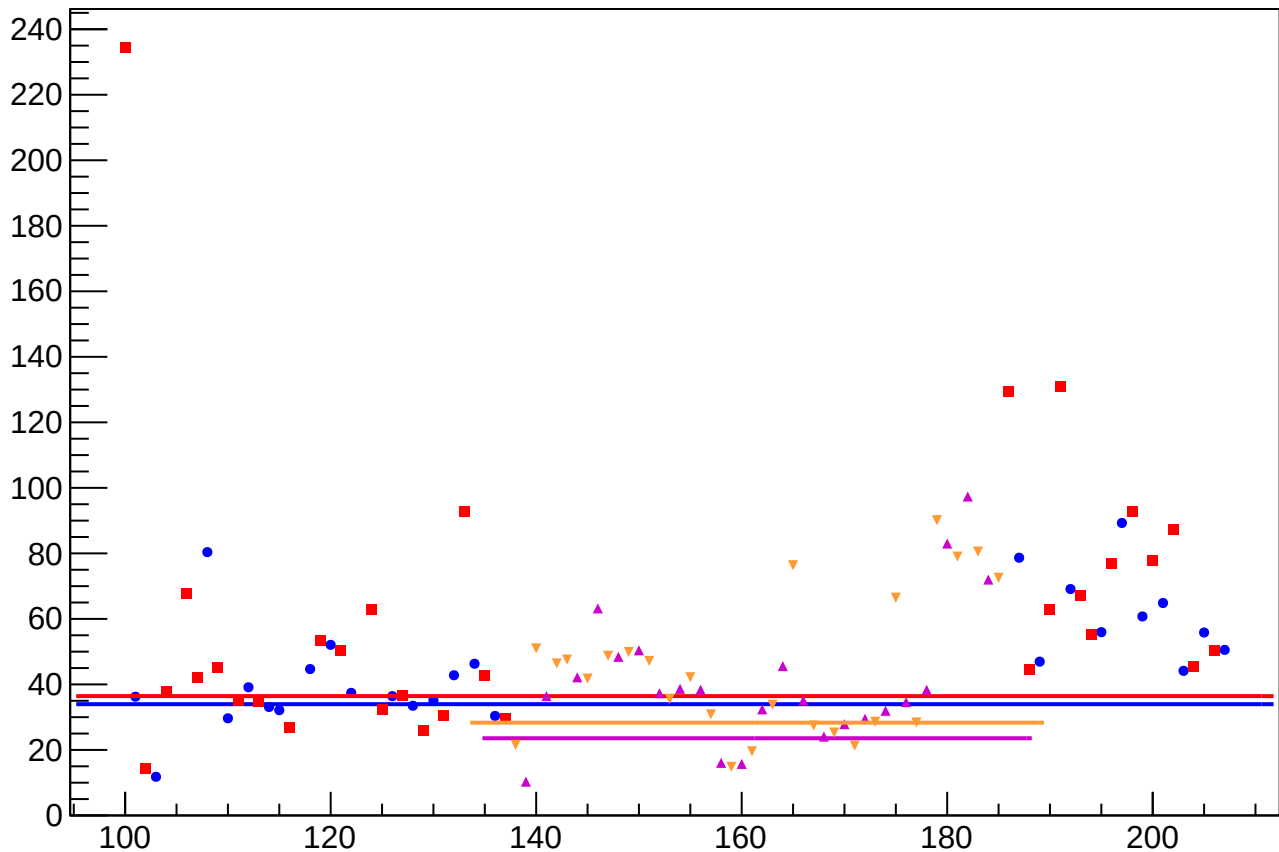
Left In:  $0.001 \pm 0.007$   $\chi^2/\text{NDF}$ : 25.1/22

+ sign  $0.006 \pm 0.006$   $\chi^2/\text{NDF}$ : 73.5/50

All:  $0.008 \pm 0.004$   $\chi^2/\text{NDF}$ : 124.3/104

- sign  $0.010 \pm 0.006$   $\chi^2/\text{NDF}$ : 50.5/53

asym\_sam\_37\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 33.966+/-0.007  $\chi^2/\text{NDF}$ : 5728198.2/25

Left Out: 28.324+/-0.005  $\chi^2/\text{NDF}$ : 6788766.1/24

Right Out: 36.426+/-0.008  $\chi^2/\text{NDF}$ : 6510772.4/30

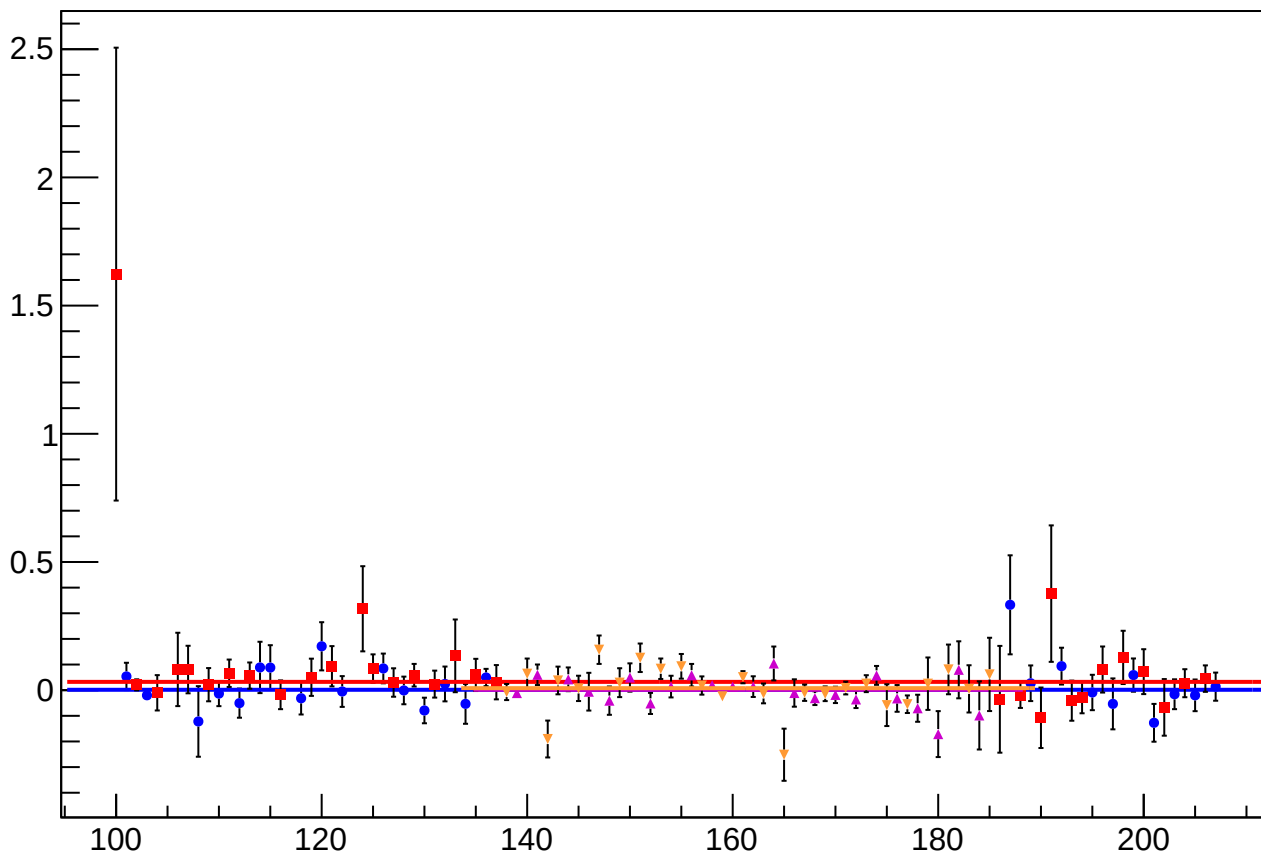
Left In: 23.571+/-0.005  $\chi^2/\text{NDF}$ : 8264891.4/22

+ sign 30.240+/-0.004  $\chi^2/\text{NDF}$ : 12893517.6/50

All: 28.599+/-0.003  $\chi^2/\text{NDF}$ : 29923641.5/104

- sign 27.151+/-0.004  $\chi^2/\text{NDF}$ : 16762564.1/53

asym\_sam\_37\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.002 \pm 0.011$   $\chi^2/\text{NDF}$ : 25.7/25

Left Out:  $0.008 \pm 0.008$   $\chi^2/\text{NDF}$ : 47.6/24

Right Out:  $0.032 \pm 0.011$   $\chi^2/\text{NDF}$ : 19.6/30

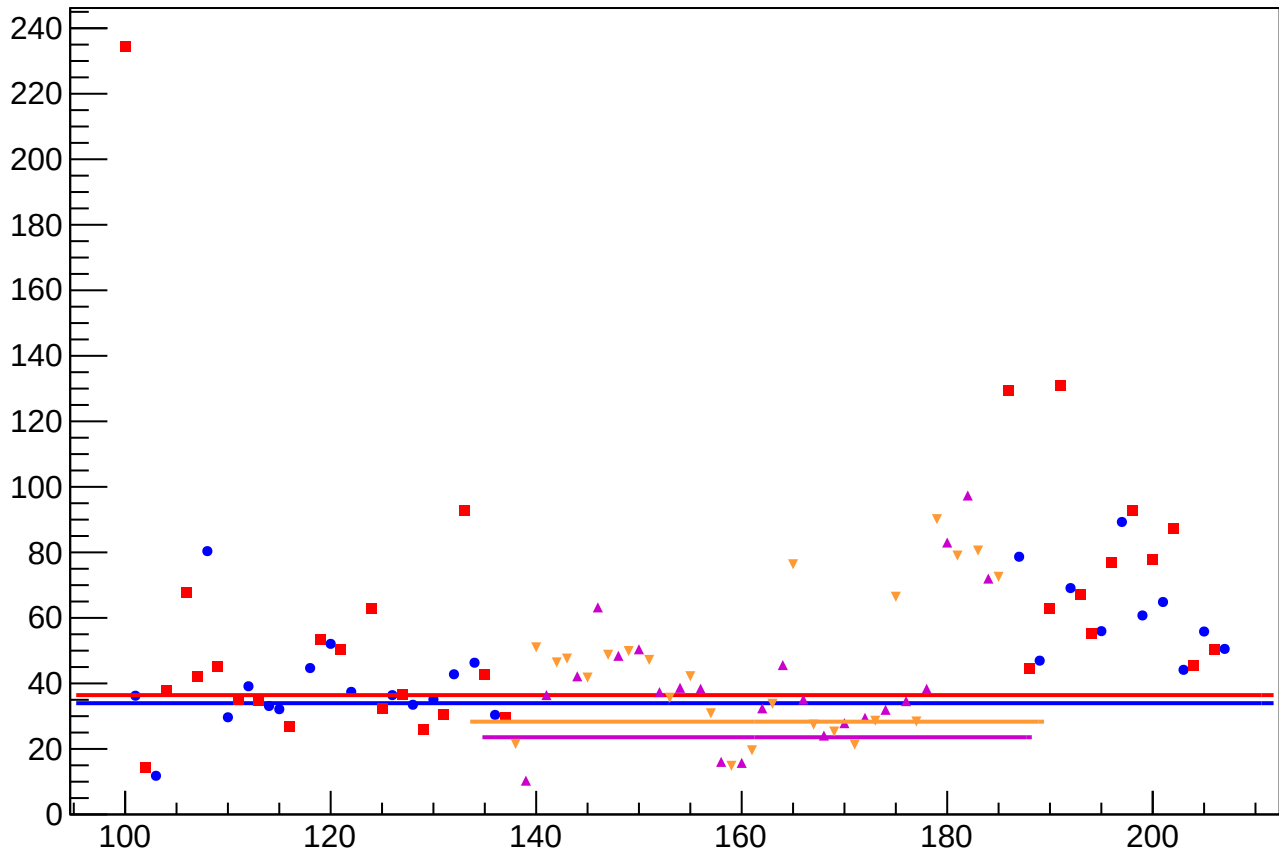
Left In:  $0.001 \pm 0.007$   $\chi^2/\text{NDF}$ : 25.1/22

+ sign  $0.006 \pm 0.006$   $\chi^2/\text{NDF}$ : 73.5/50

All:  $0.008 \pm 0.004$   $\chi^2/\text{NDF}$ : 124.3/104

- sign  $0.010 \pm 0.006$   $\chi^2/\text{NDF}$ : 50.5/53

asym\_sam\_37\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 33.966 $\pm$ 0.007  $\chi^2$ /NDF: 5728198.2/25

Left Out: 28.324 $\pm$ 0.005  $\chi^2$ /NDF: 6788766.1/24

Right Out: 36.426 $\pm$ 0.008  $\chi^2$ /NDF: 6510772.4/30

Left In: 23.571 $\pm$ 0.005  $\chi^2$ /NDF: 8264891.4/22

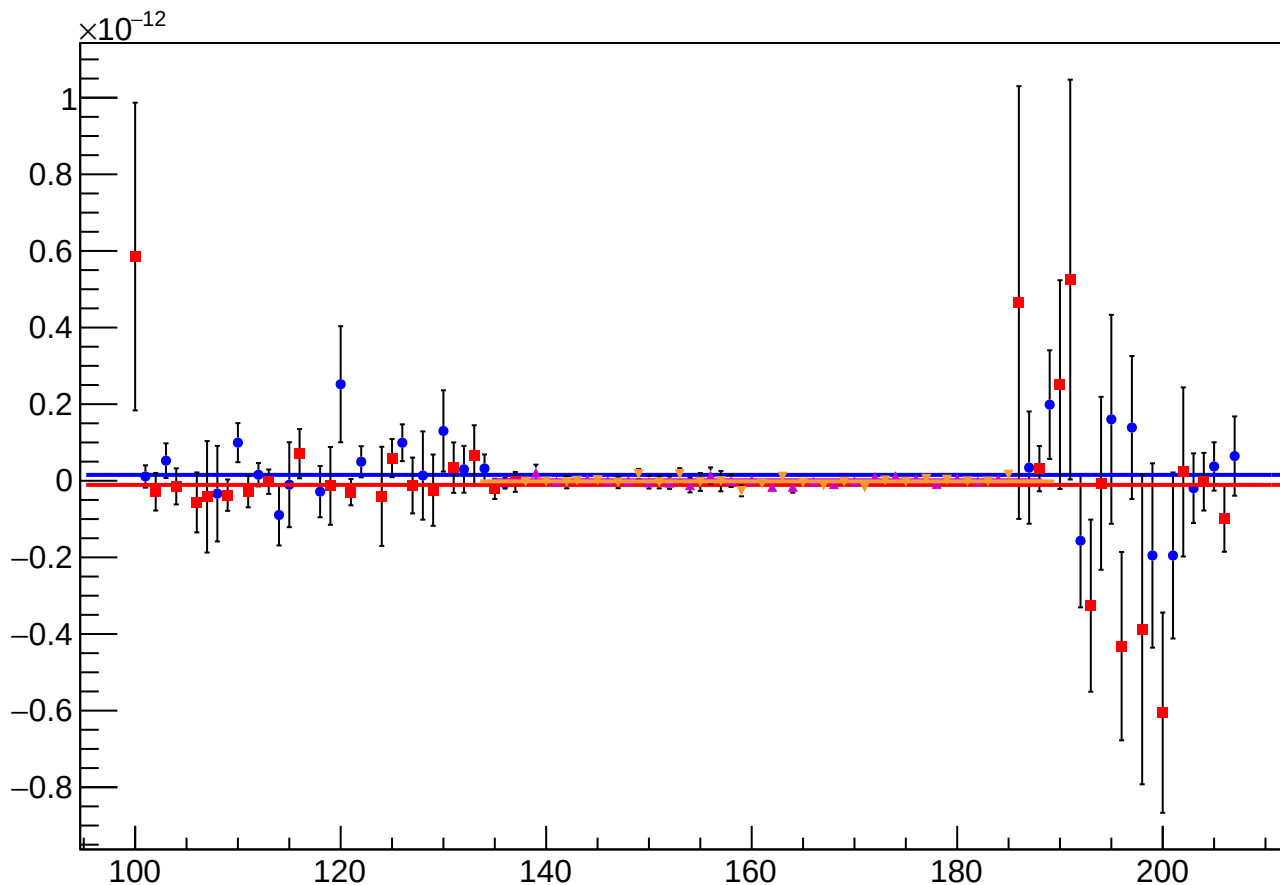
+ sign 30.240 $\pm$ 0.004  $\chi^2$ /NDF: 12893517.6/50

All: 28.599 $\pm$ 0.003  $\chi^2$ /NDF: 29923641.5/104

- sign 27.151 $\pm$ 0.004  $\chi^2$ /NDF: 16762564.1/53



asym\_sam\_37\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 21.5/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 17.6/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 24.3/30

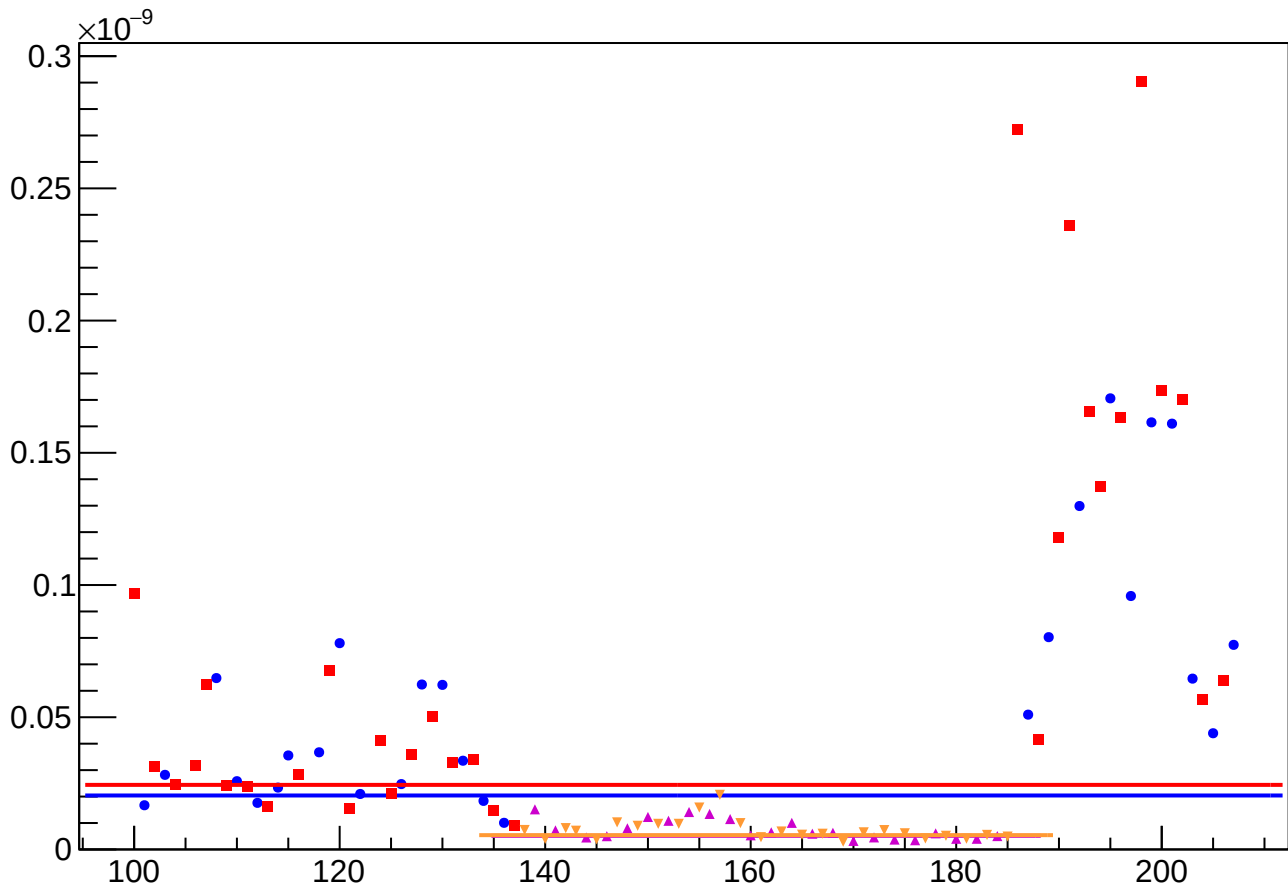
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 15.9/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 42.4/50

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 84.5/104

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 41.5/53

asym\_sam\_37\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7708088.6/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3068356.2/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8410515.5/30

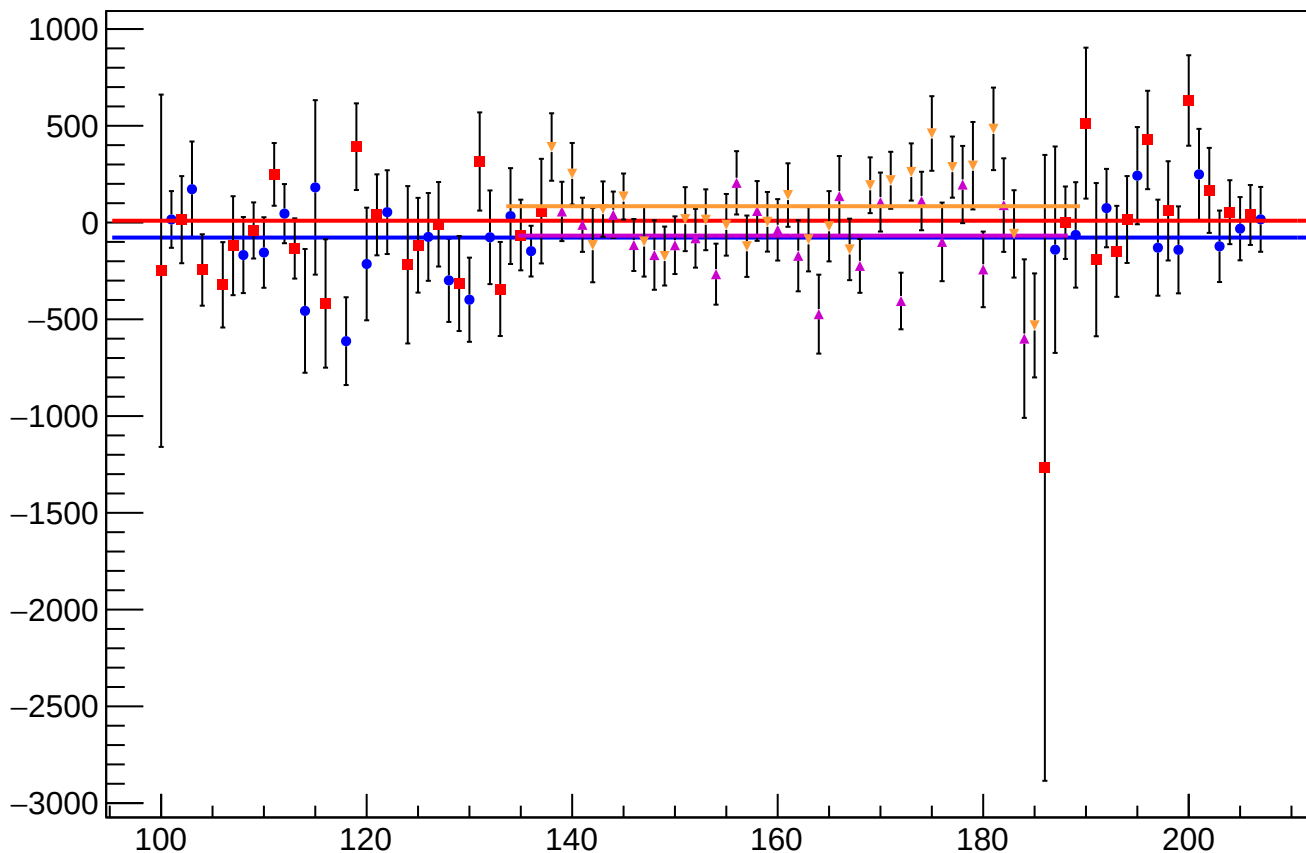
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3390855.0/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 15926625.1/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 34420142.8/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 18471554.8/53

# reg\_asym\_sam\_48\_avg\_mean vs Slug



Right In:  $-77.599 \pm 40.938$   $\chi^2/\text{NDF}: 18.8/25$

Left Out:  $84.324 \pm 33.036$   $\chi^2/\text{NDF}: 33.8/24$

Right Out:  $9.409 \pm 39.862$   $\chi^2/\text{NDF}: 31.8/30$

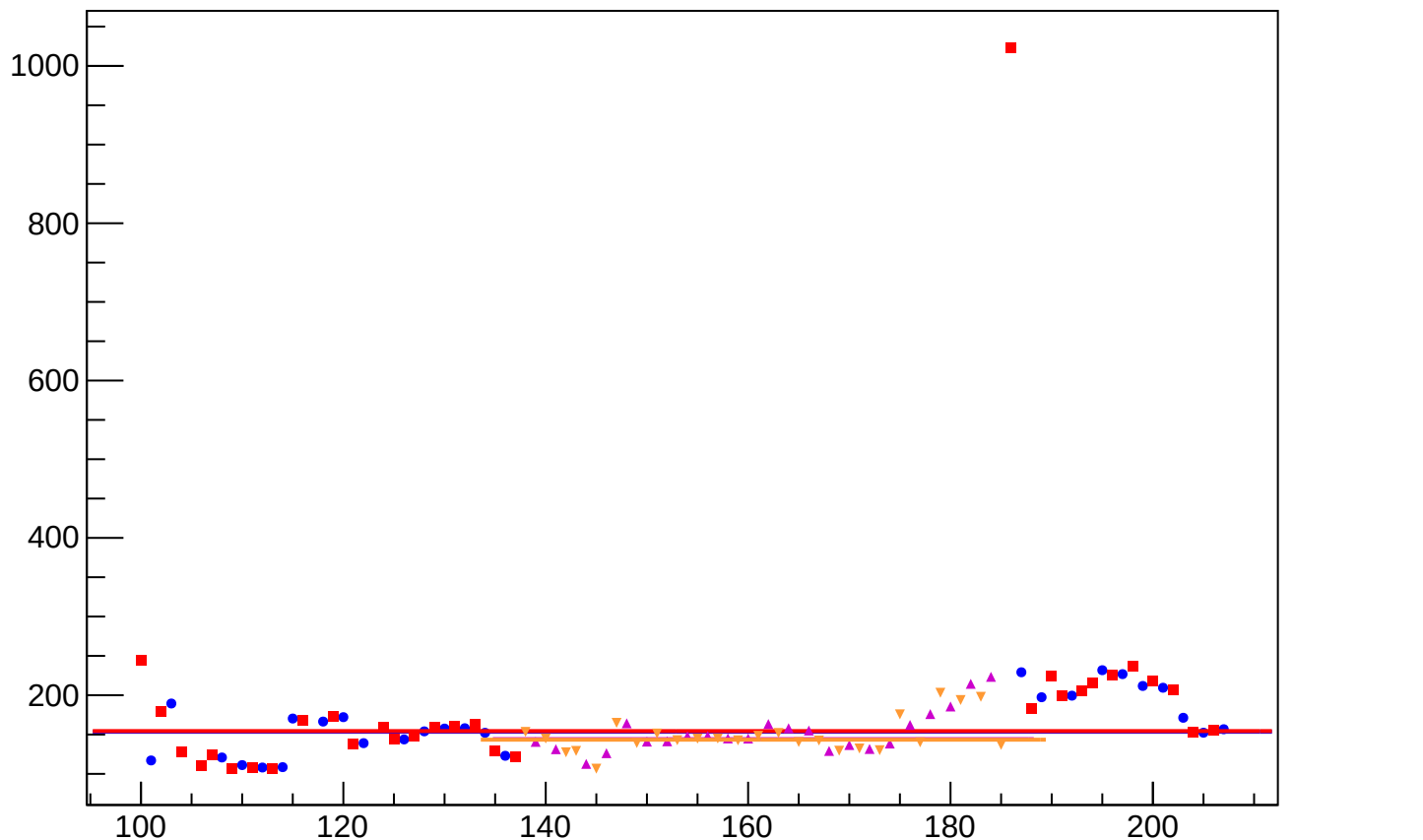
Left In:  $-67.646 \pm 34.137$   $\chi^2/\text{NDF}: 26.5/22$

+ sign  $20.465 \pm 25.709$   $\chi^2/\text{NDF}: 62.1/50$

All:  $-7.054 \pm 18.256$   $\chi^2/\text{NDF}: 124.9/104$

- sign  $-35.045 \pm 25.928$   $\chi^2/\text{NDF}: 60.5/53$

# reg\_asym\_sam\_48\_avg\_rms vs Slug



Right In: 153.499+/-0.029  $\chi^2/\text{NDF}$ : 1516694.5/25

Left Out: 143.444+/-0.023  $\chi^2/\text{NDF}$ : 747040.9/24

Right Out: 154.407+/-0.028  $\chi^2/\text{NDF}$ : 2442186.5/30

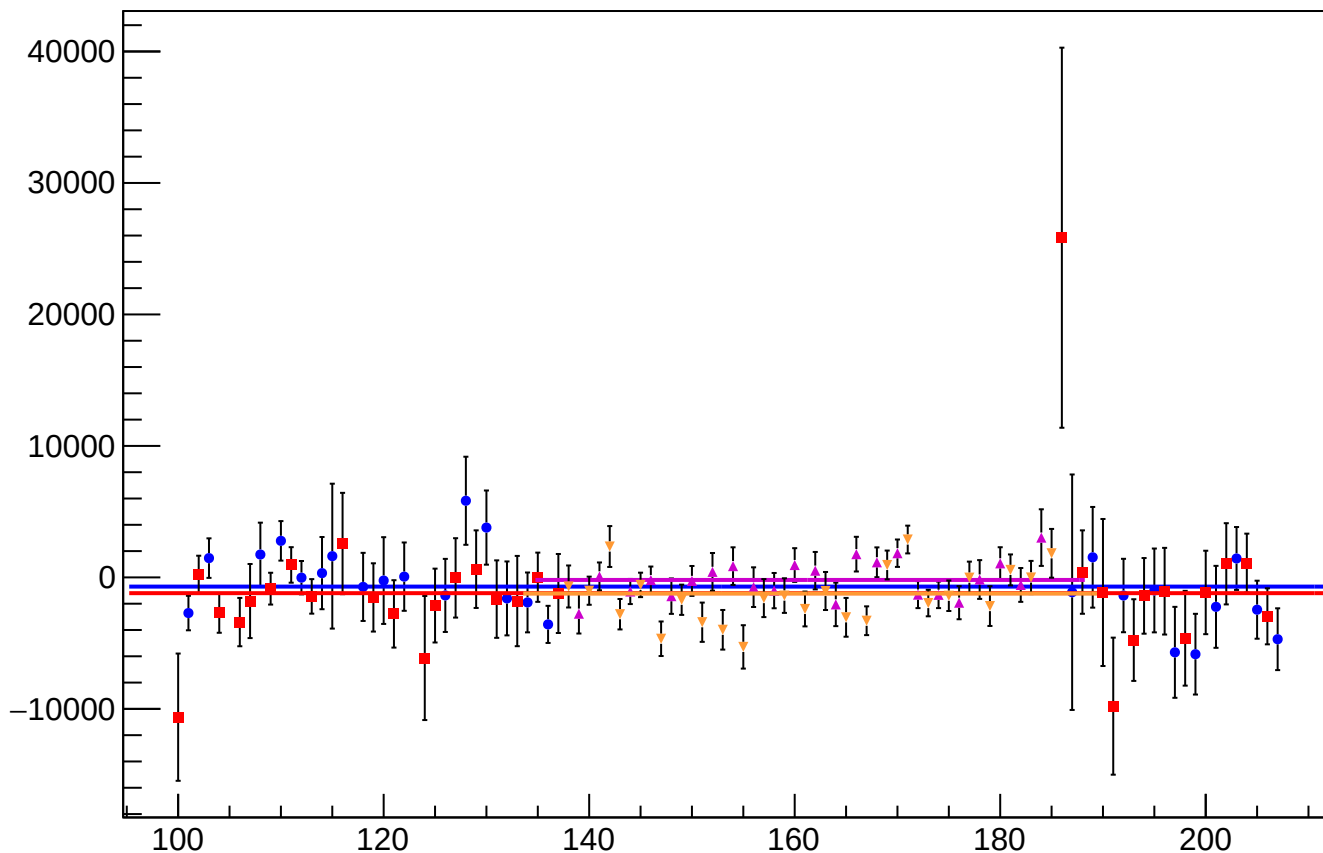
Left In: 144.170+/-0.024  $\chi^2/\text{NDF}$ : 702713.8/22

+ sign 147.409+/-0.018  $\chi^2/\text{NDF}$ : 2336813.5/50

All: 147.951+/-0.013  $\chi^2/\text{NDF}$ : 5559584.8/104

- sign 148.501+/-0.018  $\chi^2/\text{NDF}$ : 3220982.3/53

# asym\_sam\_48\_avg\_reg\_correction\_mean vs Slug



Right In:  $-699.586 \pm 441.137$   $\chi^2/\text{NDF}: 32.3/25$

Left Out:  $-1225.049 \pm 251.767$   $\chi^2/\text{NDF}: 59.3/24$

Right Out:  $-1199.042 \pm 417.088$   $\chi^2/\text{NDF}: 24.4/30$

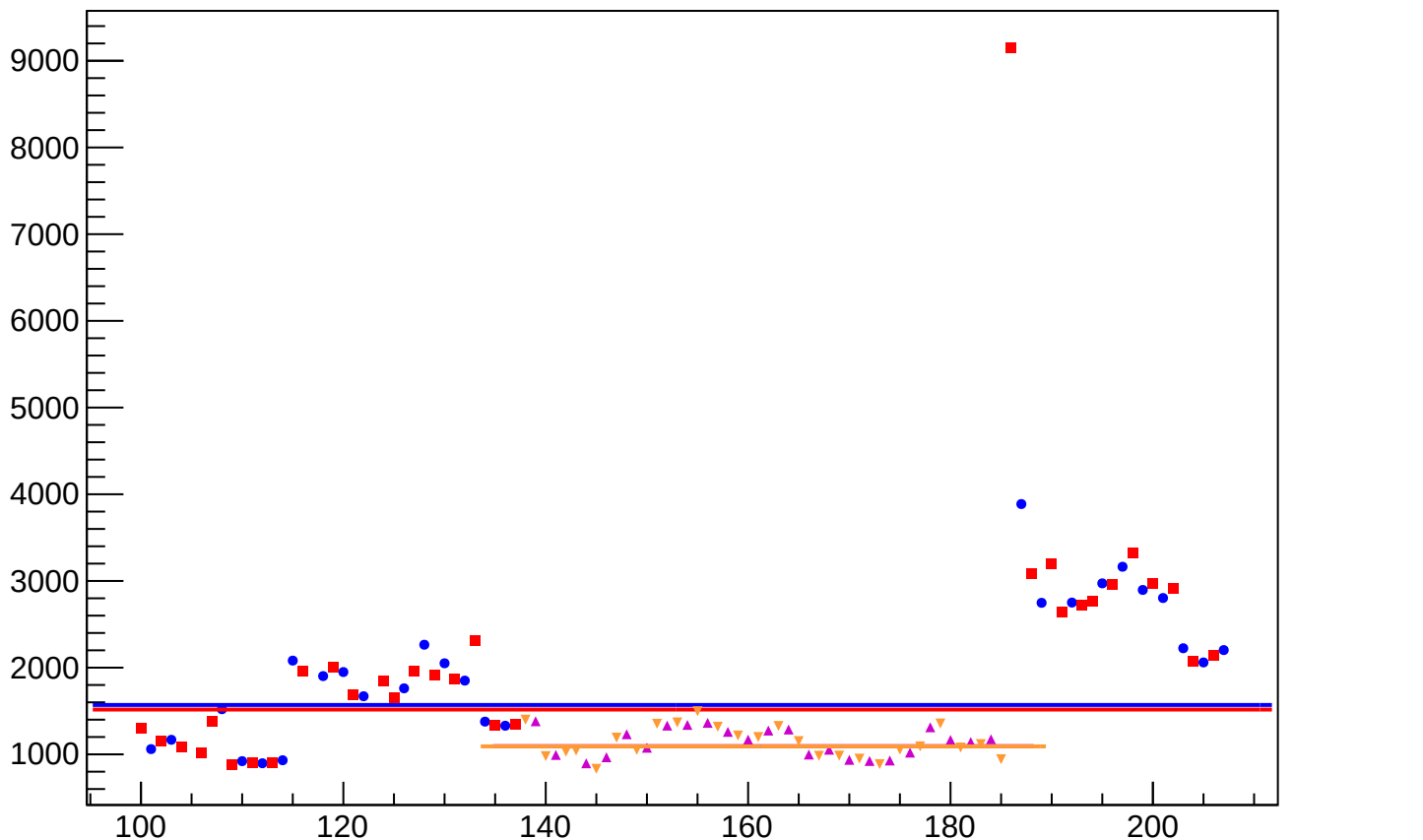
Left In:  $-193.805 \pm 258.922$   $\chi^2/\text{NDF}: 23.3/22$

+ sign  $-1095.945 \pm 218.662$   $\chi^2/\text{NDF}: 92.6/50$

All:  $-786.562 \pm 155.081$   $\chi^2/\text{NDF}: 148.5/104$

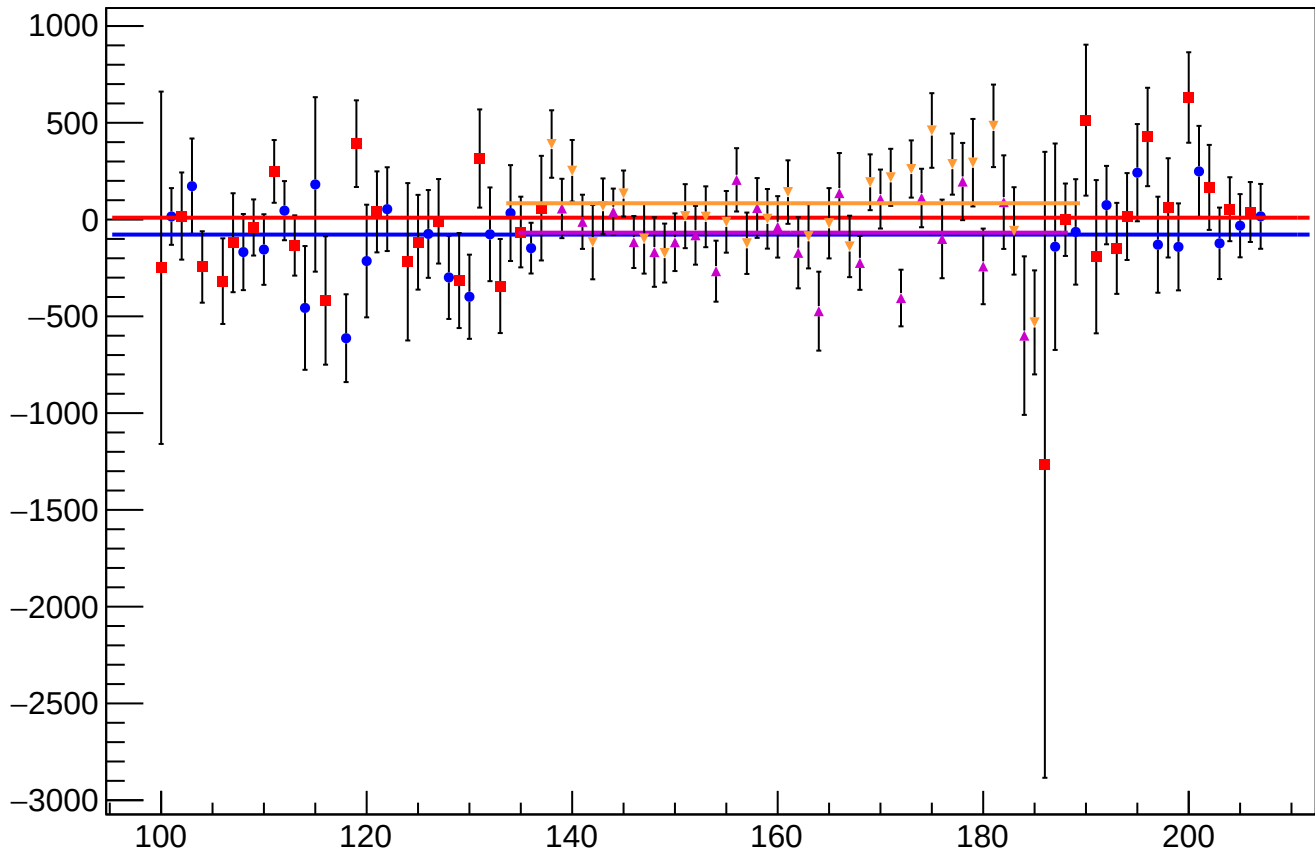
- sign  $-473.435 \pm 219.981$   $\chi^2/\text{NDF}: 51.9/53$

# asym\_sam\_48\_avg\_reg\_correction\_rms vs Slug



Right In: 1569.638 $\pm$ 0.312     $\chi^2/\text{NDF}$ : 4385502.7/25    + sign 1209.338 $\pm$ 0.155     $\chi^2/\text{NDF}$ : 7046681.7/50  
 Left Out: 1091.980 $\pm$ 0.178     $\chi^2/\text{NDF}$ : 892442.4/24    All: 1210.634 $\pm$ 0.110     $\chi^2/\text{NDF}$ : 15478649.8/50  
 Right Out: 1516.757 $\pm$ 0.295     $\chi^2/\text{NDF}$ : 6219038.6/30    - sign 1211.945 $\pm$ 0.156     $\chi^2/\text{NDF}$ : 8431826.8/53  
 Left In: 1094.478 $\pm$ 0.183     $\chi^2/\text{NDF}$ : 732975.2/22

# cor\_asym\_sam\_48\_avg\_mean vs Slug



Right In:  $-77.605 \pm 40.938$   $\chi^2/\text{NDF}$ : 18.8/25

Left Out:  $84.338 \pm 33.036$   $\chi^2/\text{NDF}$ : 33.8/24

Right Out:  $9.694 \pm 39.867$   $\chi^2/\text{NDF}$ : 31.7/30

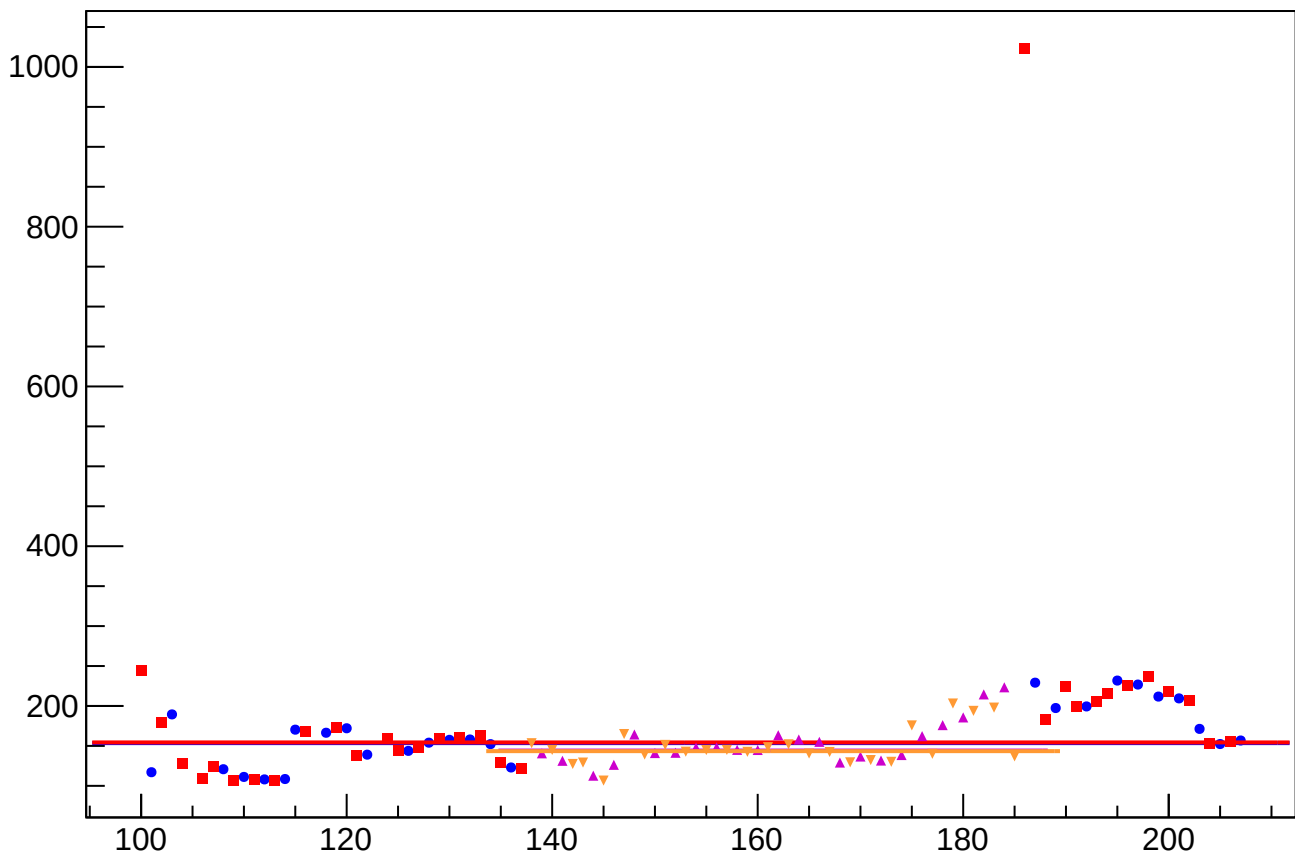
Left In:  $-67.648 \pm 34.137$   $\chi^2/\text{NDF}$ : 26.5/22

+ sign  $20.471 \pm 25.709$   $\chi^2/\text{NDF}$ : 62.1/50

All:  $-6.992 \pm 18.256$   $\chi^2/\text{NDF}$ : 124.8/104

- sign  $-34.929 \pm 25.930$   $\chi^2/\text{NDF}$ : 60.4/53

# cor\_asym\_sam\_48\_avg\_rms vs Slug



Right In: 153.499 $\pm$ 0.029  $\chi^2$ /NDF: 1516696.8/25

Left Out: 143.444 $\pm$ 0.023  $\chi^2$ /NDF: 747040.9/24

Right Out: 154.365 $\pm$ 0.028  $\chi^2$ /NDF: 2447672.6/30

Left In: 144.170 $\pm$ 0.024  $\chi^2$ /NDF: 702713.8/22

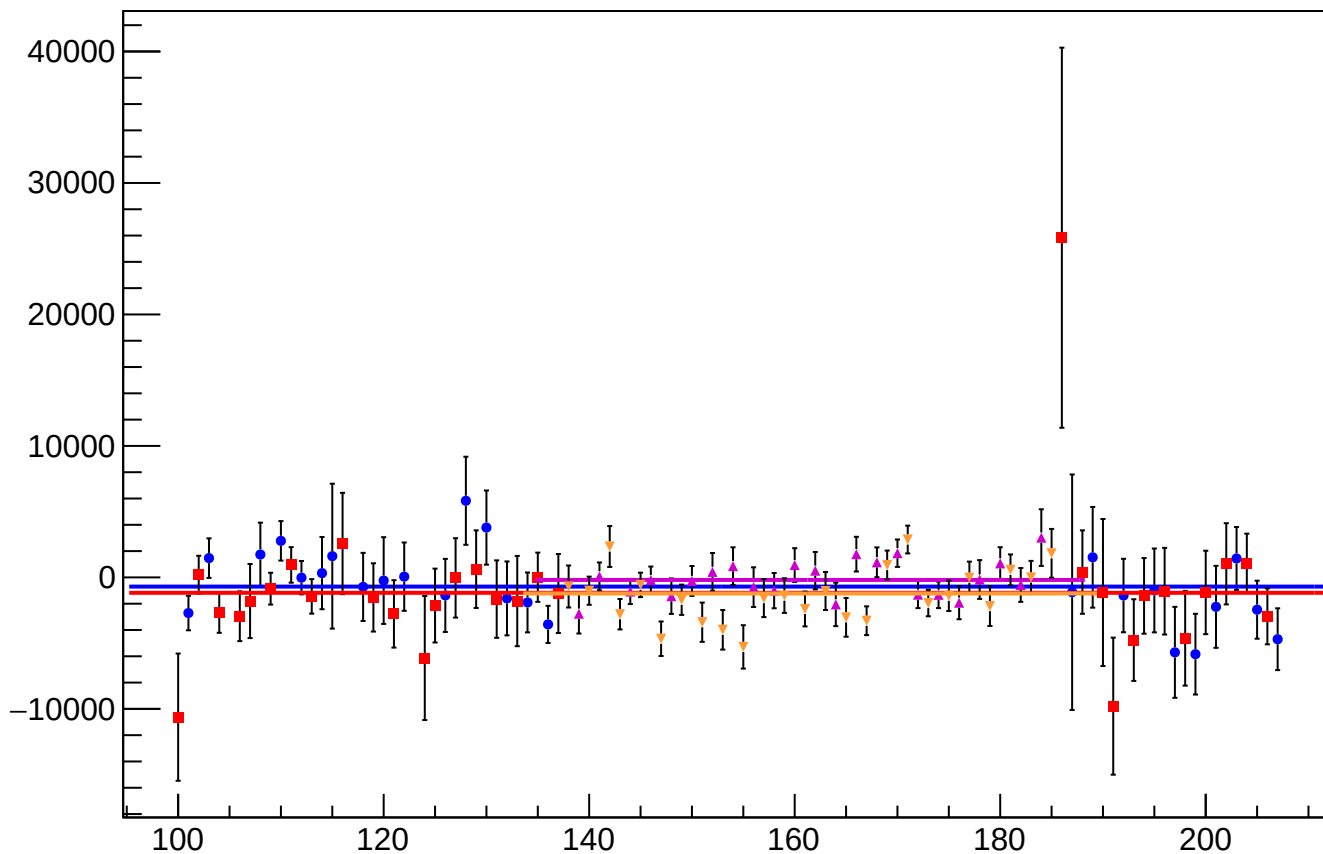
+ sign 147.409 $\pm$ 0.018  $\chi^2$ /NDF: 2336816.1/50

All: 147.942 $\pm$ 0.013  $\chi^2$ /NDF: 5564394.1/104

- sign 148.483 $\pm$ 0.018  $\chi^2$ /NDF: 3225847.5/53



asym\_sam\_48\_avg\_cor\_correction\_mean vs Slug



Right In: -699.643+/-441.141  $\chi^2/\text{NDF}$ : 32.3/25

Left Out: -1225.031+/-251.767  $\chi^2/\text{NDF}$ : 59.3/24

Right Out: -1171.307+/-417.740  $\chi^2/\text{NDF}$ : 23.8/30

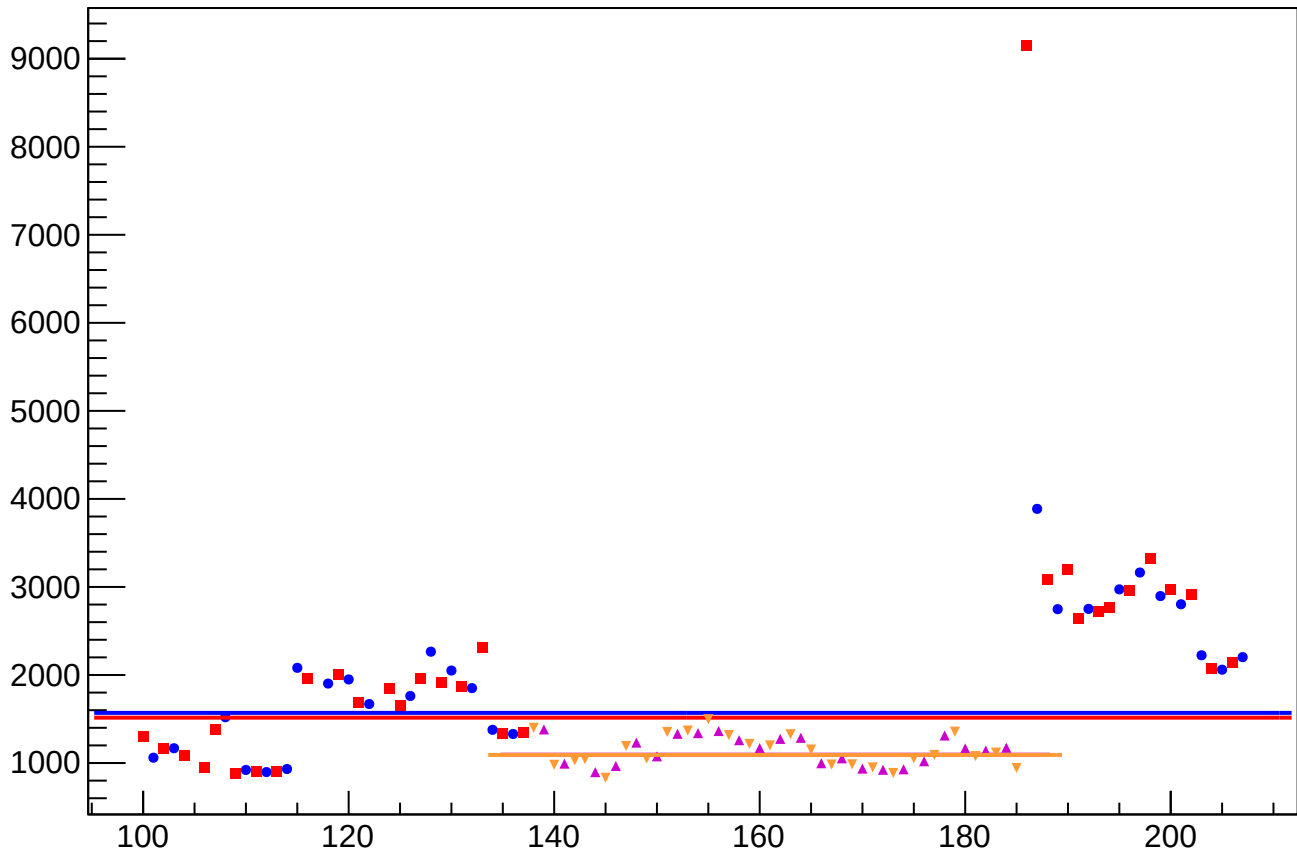
Left In: -193.808+/-258.922  $\chi^2/\text{NDF}$ : 23.3/22

+ sign -1095.947+/-218.662  $\chi^2/\text{NDF}$ : 92.6/50

All: -782.562+/-155.115  $\chi^2/\text{NDF}$ : 147.8/104

- sign -465.109+/-220.076  $\chi^2/\text{NDF}$ : 51.1/53

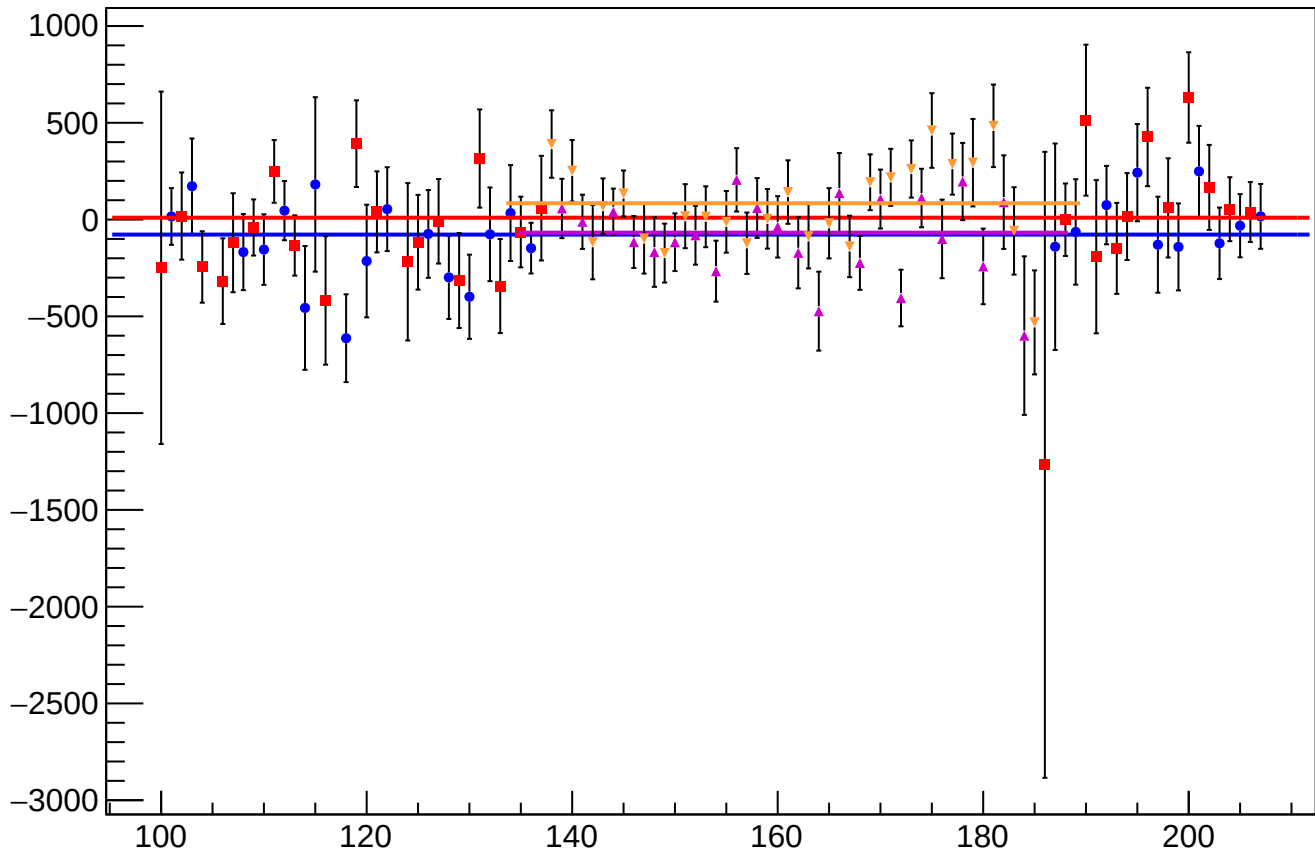
# asym\_sam\_48\_avg\_cor\_correction\_rms vs Slug



Right In: 1569.652 $\pm$ 0.312  $\chi^2$ /NDF: 4385404.7/25  
 Left Out: 1091.979 $\pm$ 0.178  $\chi^2$ /NDF: 892441.9/24  
 Right Out: 1515.354 $\pm$ 0.295  $\chi^2$ /NDF: 6246397.4/30  
 Left In: 1094.479 $\pm$ 0.183  $\chi^2$ /NDF: 732975.7/22

+ sign 1209.340 $\pm$ 0.155  $\chi^2$ /NDF: 7046673.5/50  
 All: 1210.309 $\pm$ 0.110  $\chi^2$ /NDF: 15492807.2/100  
 - sign 1211.291 $\pm$ 0.156  $\chi^2$ /NDF: 8446054.6/53

eigen\_cor\_asym\_sam\_48\_avg\_mean vs Slug



Right In:  $-77.605 \pm 40.938$   $\chi^2/\text{NDF}$ : 18.8/25

Left Out:  $84.338 \pm 33.036$   $\chi^2/\text{NDF}$ : 33.8/24

Right Out:  $9.694 \pm 39.867$   $\chi^2/\text{NDF}$ : 31.7/30

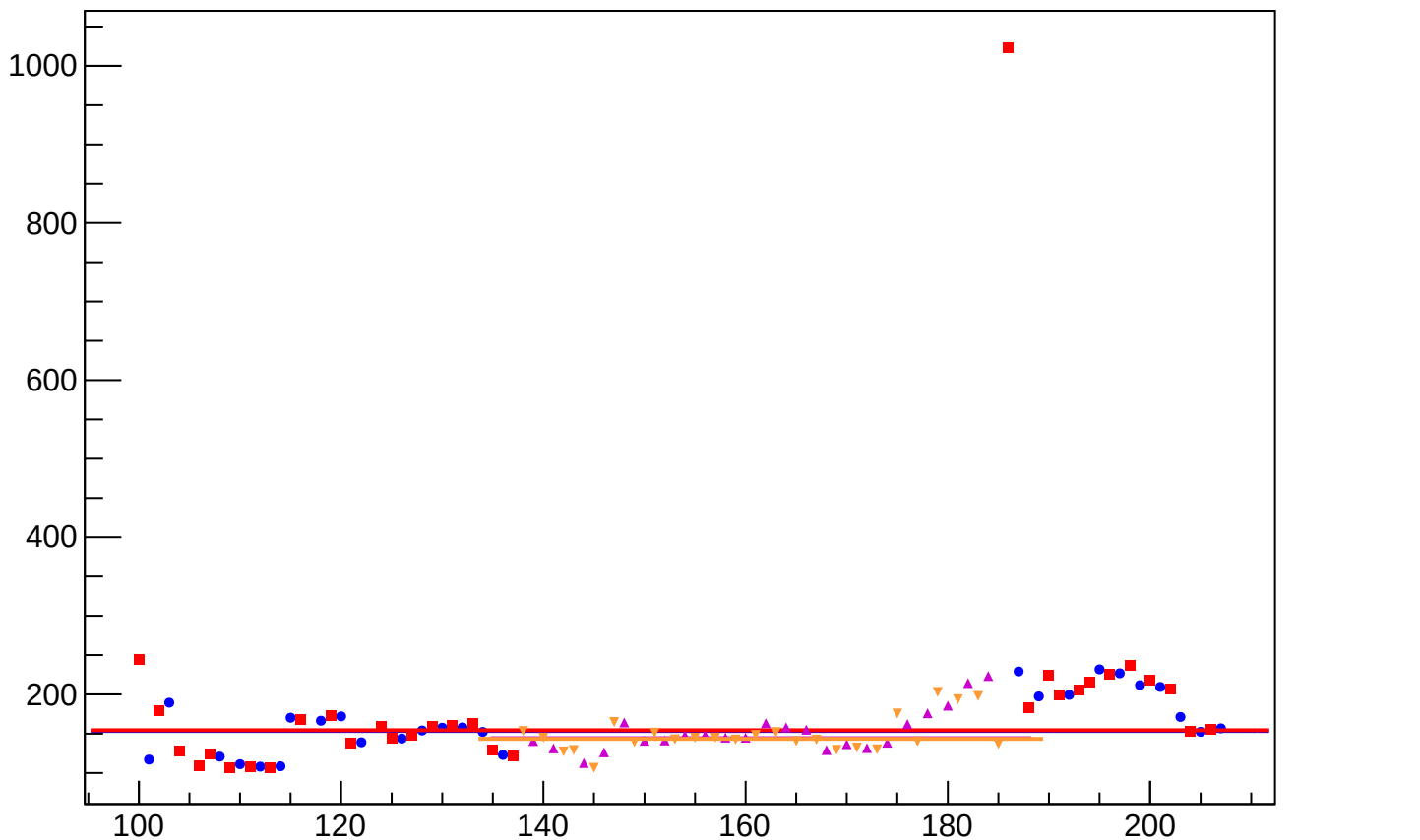
Left In:  $-67.648 \pm 34.137$   $\chi^2/\text{NDF}$ : 26.5/22

+ sign  $20.471 \pm 25.709$   $\chi^2/\text{NDF}$ : 62.1/50

All:  $-6.992 \pm 18.256$   $\chi^2/\text{NDF}$ : 124.8/104

- sign  $-34.929 \pm 25.930$   $\chi^2/\text{NDF}$ : 60.4/53

# eigen\_cor\_asym\_sam\_48\_avg\_rms vs Slug



Right In: 153.499+/-0.029  $\chi^2/\text{NDF}$ : 1516696.8/25

Left Out: 143.444+/-0.023  $\chi^2/\text{NDF}$ : 747040.9/24

Right Out: 154.365+/-0.028  $\chi^2/\text{NDF}$ : 2447672.6/30

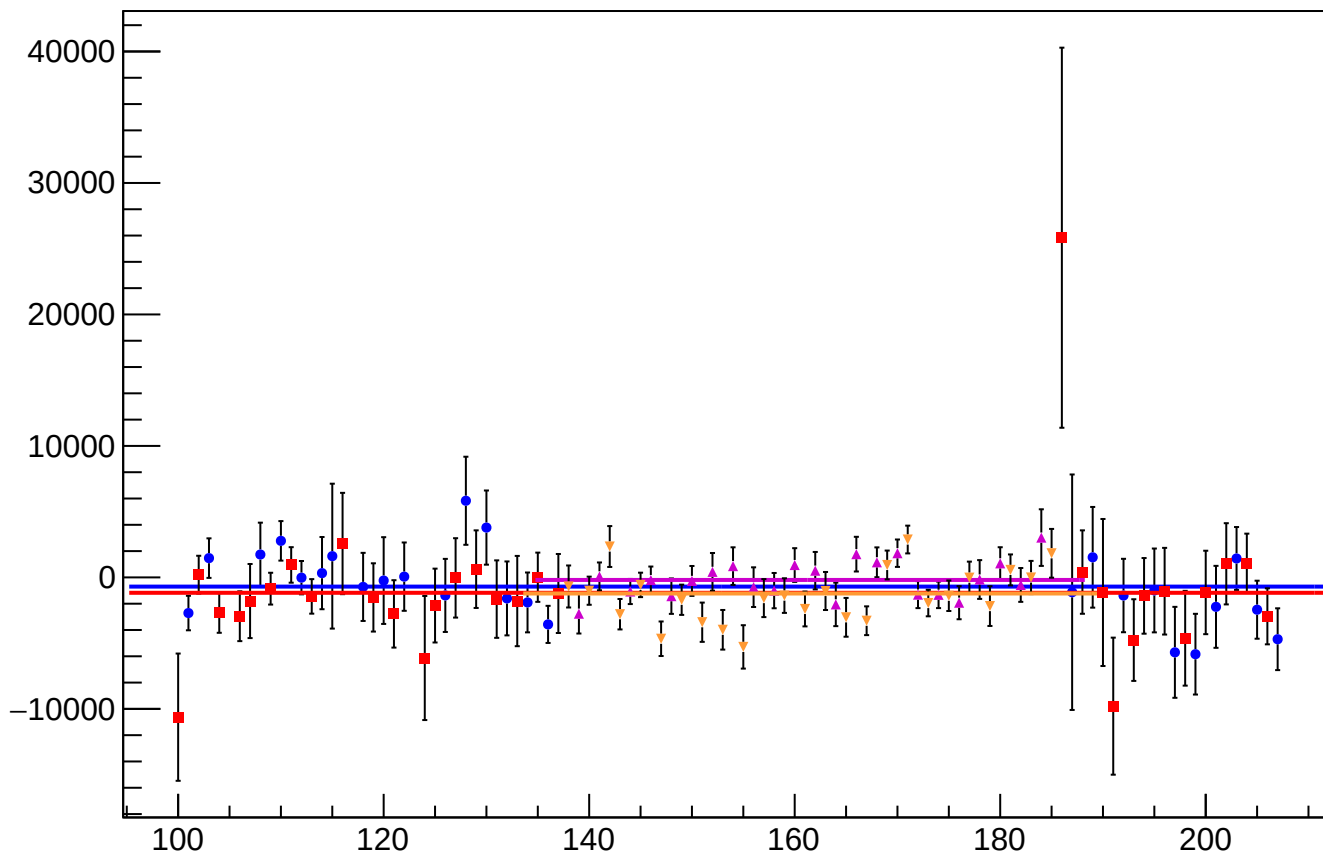
Left In: 144.170+/-0.024  $\chi^2/\text{NDF}$ : 702713.8/22

+ sign 147.409+/-0.018  $\chi^2/\text{NDF}$ : 2336816.1/50

All: 147.942+/-0.013  $\chi^2/\text{NDF}$ : 5564394.1/104

- sign 148.483+/-0.018  $\chi^2/\text{NDF}$ : 3225847.5/53

asym\_sam\_48\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-699.643 \pm 441.141$   $\chi^2/\text{NDF}$ : 32.3/25

Left Out:  $-1225.031 \pm 251.767$   $\chi^2/\text{NDF}$ : 59.3/24

Right Out:  $-1171.307 \pm 417.740$   $\chi^2/\text{NDF}$ : 23.8/30

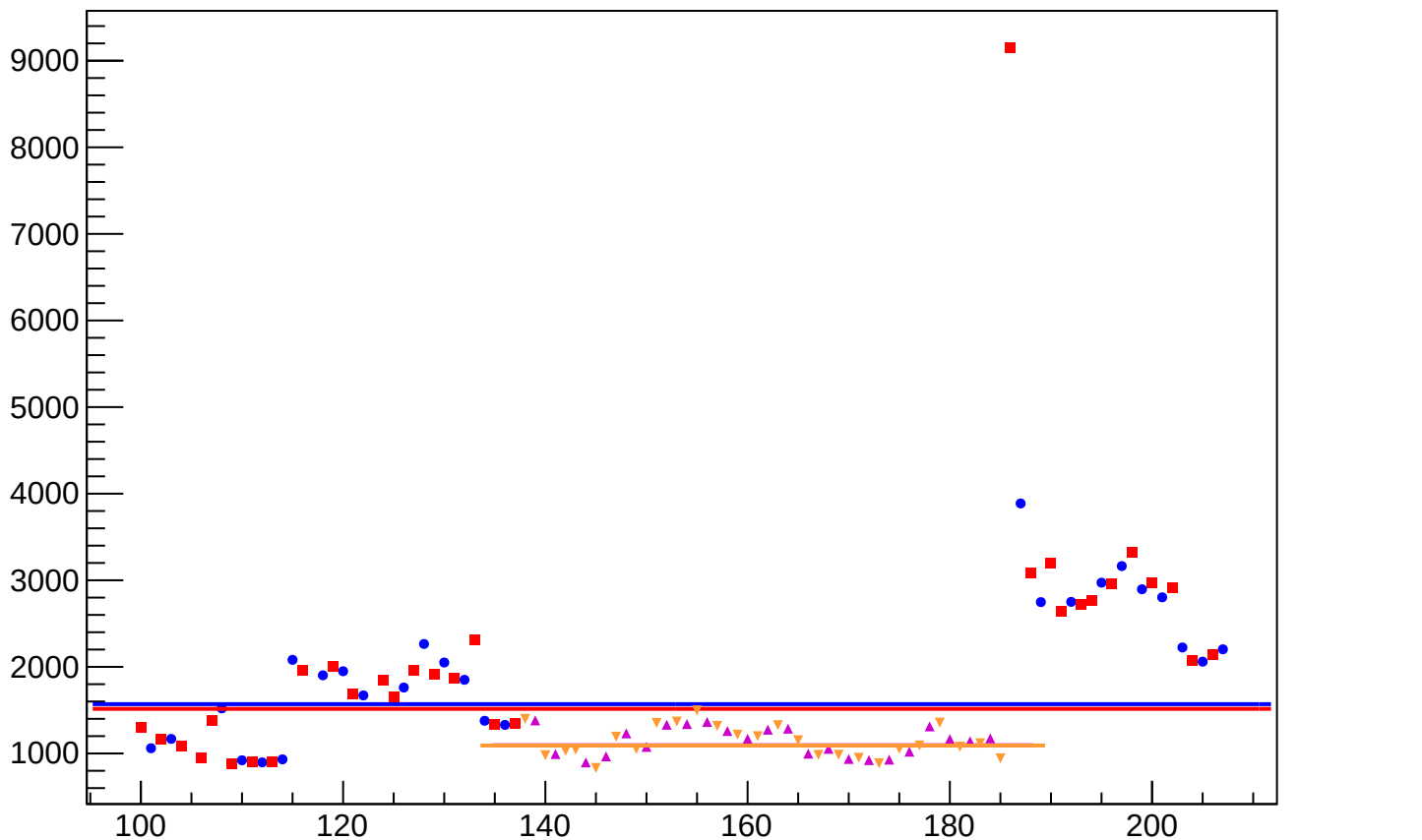
Left In:  $-193.808 \pm 258.922$   $\chi^2/\text{NDF}$ : 23.3/22

+ sign  $-1095.947 \pm 218.662$   $\chi^2/\text{NDF}$ : 92.6/50

All:  $-782.562 \pm 155.115$   $\chi^2/\text{NDF}$ : 147.8/104

- sign  $-465.109 \pm 220.076$   $\chi^2/\text{NDF}$ : 51.1/53

asym\_sam\_48\_avg\_eigen\_cor\_correction\_rms vs Slug



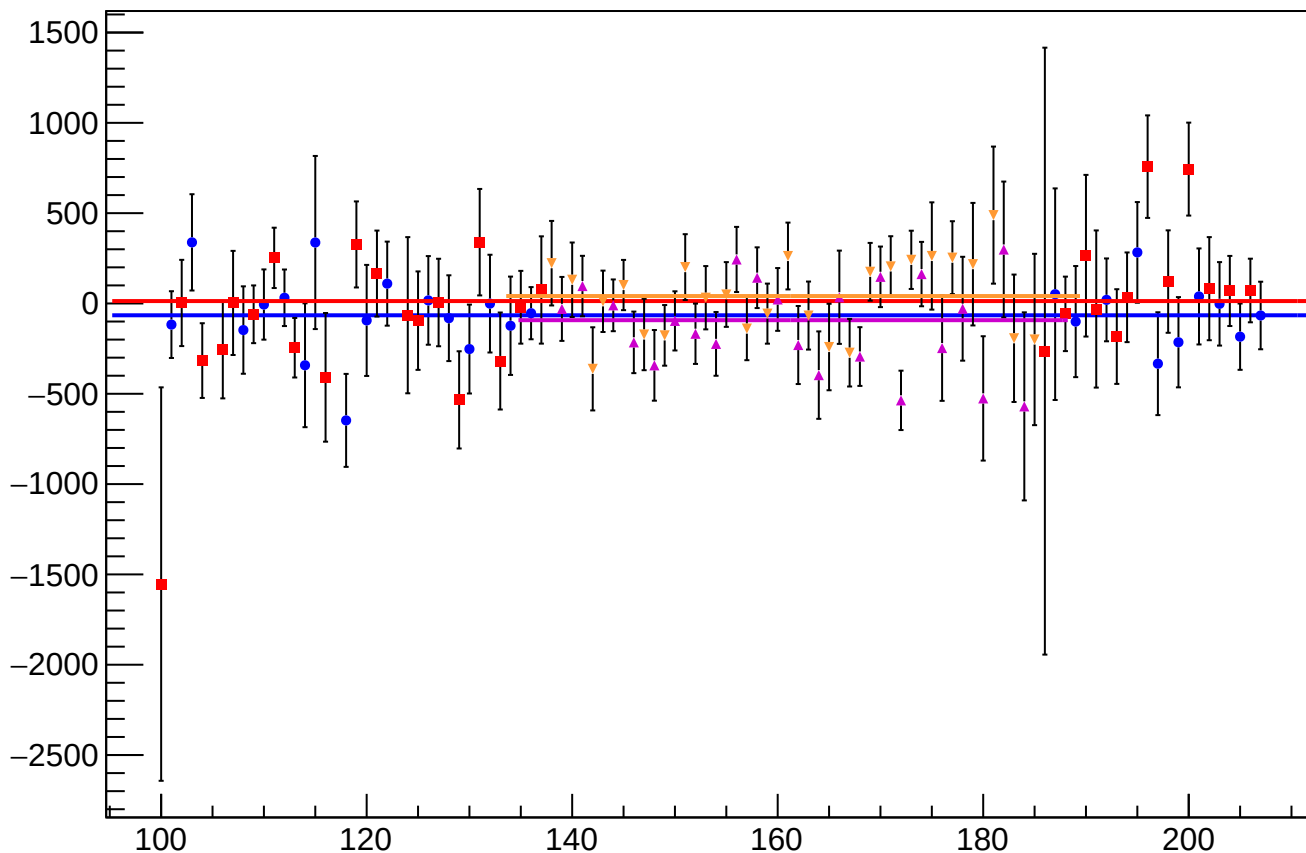
Right In: 1569.652 $\pm$ 0.312  $\chi^2$ /NDF: 4385404.7/25  
 Left Out: 1091.979 $\pm$ 0.178  $\chi^2$ /NDF: 892441.9/24  
 Right Out: 1515.354 $\pm$ 0.295  $\chi^2$ /NDF: 6246397.4/30  
 Left In: 1094.479 $\pm$ 0.183  $\chi^2$ /NDF: 732975.7/22

+ sign 1209.340 $\pm$ 0.155  $\chi^2$ /NDF: 7046673.5/50

All: 1210.309 $\pm$ 0.110  $\chi^2$ /NDF: 15492807.2/100

- sign 1211.291 $\pm$ 0.156  $\chi^2$ /NDF: 8446054.6/53

# dit\_asym\_sam\_48\_avg\_mean vs Slug



Right In:  $-65.407 \pm 45.855$   $\chi^2/\text{NDF}$ : 14.5/25

Left Out:  $41.086 \pm 39.177$   $\chi^2/\text{NDF}$ : 22.3/24

Right Out:  $13.300 \pm 44.296$   $\chi^2/\text{NDF}$ : 37.4/30

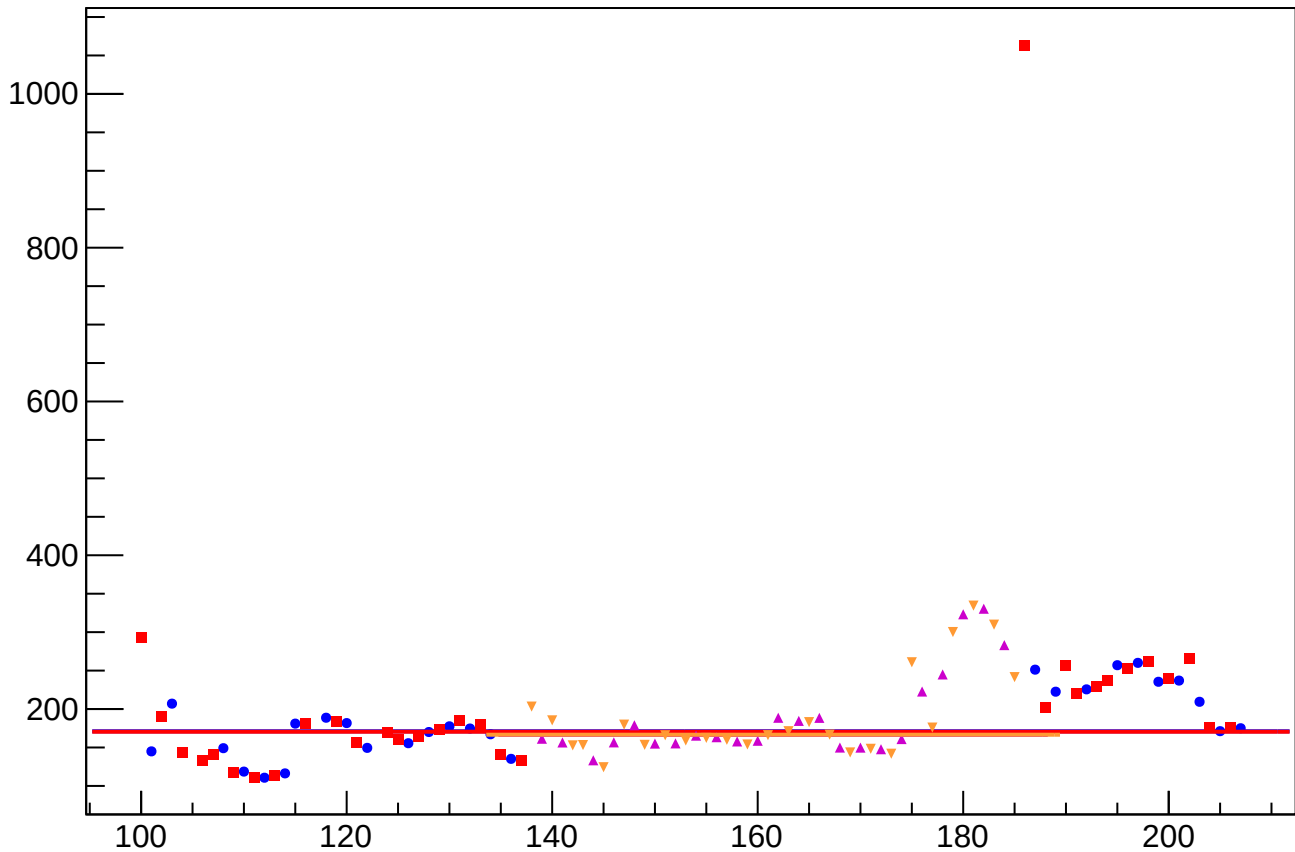
Left In:  $-92.556 \pm 40.165$   $\chi^2/\text{NDF}$ : 29.5/22

+ sign  $-3.848 \pm 29.786$   $\chi^2/\text{NDF}$ : 39.9/50

All:  $-24.342 \pm 21.051$   $\chi^2/\text{NDF}$ : 110.9/104

- sign  $-44.793 \pm 29.755$   $\chi^2/\text{NDF}$ : 70.0/53

dit\_asym\_sam\_48\_avg\_rms vs Slug



Right In: 171.080 $\pm$ 0.032  $\chi^2$ /NDF: 1654328.2/25

Left Out: 166.599 $\pm$ 0.028  $\chi^2$ /NDF: 1719835.6/24

Right Out: 170.505 $\pm$ 0.031  $\chi^2$ /NDF: 2646678.3/30

Left In: 166.308 $\pm$ 0.028  $\chi^2$ /NDF: 1392466.3/22

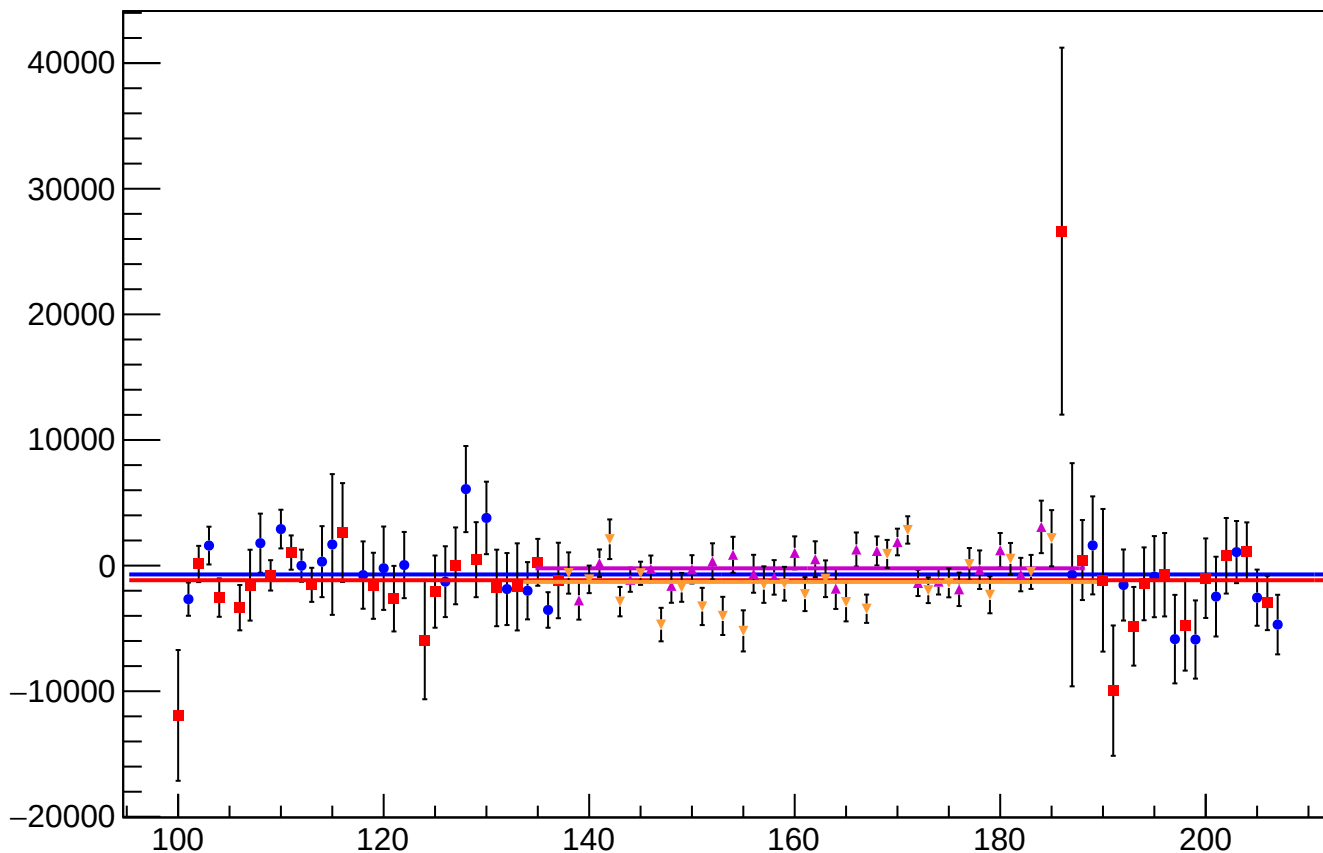
+ sign 168.489 $\pm$ 0.021  $\chi^2$ /NDF: 3385205.5/50

All: 168.346 $\pm$ 0.015  $\chi^2$ /NDF: 7434298.2/104

- sign 168.202 $\pm$ 0.021  $\chi^2$ /NDF: 4048999.4/53



asym\_sam\_48\_avg\_dit\_correction\_mean vs Slug



Right In:  $-703.701 \pm 446.047$   $\chi^2/\text{NDF}$ : 32.5/25

Left Out:  $-1298.333 \pm 256.961$   $\chi^2/\text{NDF}$ : 55.1/24

Right Out:  $-1162.567 \pm 420.839$   $\chi^2/\text{NDF}$ : 24.9/30

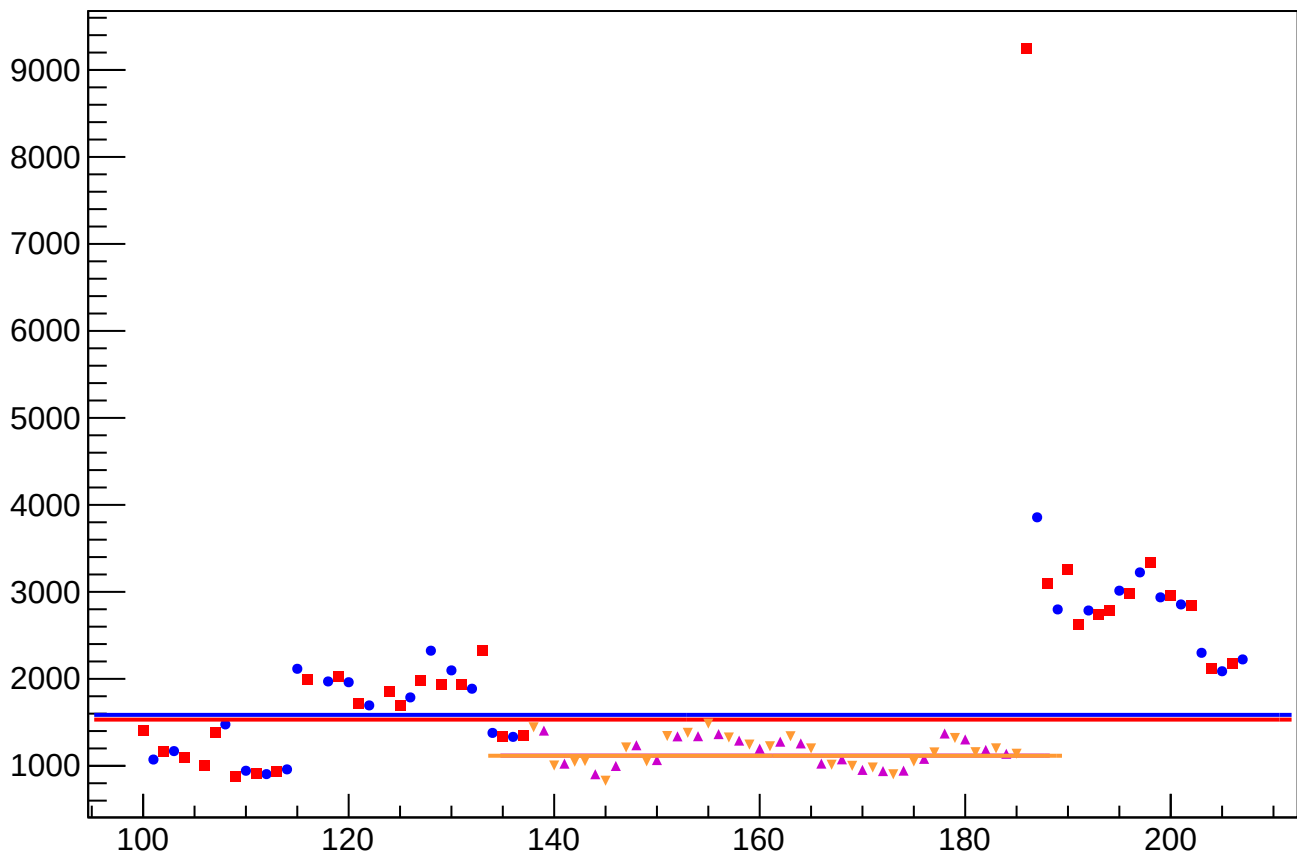
Left In:  $-217.285 \pm 264.388$   $\chi^2/\text{NDF}$ : 22.2/22

+ sign  $-1150.163 \pm 222.657$   $\chi^2/\text{NDF}$ : 88.9/50

All:  $-819.292 \pm 157.871$   $\chi^2/\text{NDF}$ : 144.1/104

- sign  $-484.793 \pm 223.874$   $\chi^2/\text{NDF}$ : 50.8/53

# asym\_sam\_48\_avg\_dit\_correction\_rms vs Slug



Right In: 1586.029+/-0.315  $\chi^2/\text{NDF}$ : 4443190.0/25

Left Out: 1116.034+/-0.182  $\chi^2/\text{NDF}$ : 867489.3/24

Right Out: 1531.583+/-0.298  $\chi^2/\text{NDF}$ : 6198825.0/30

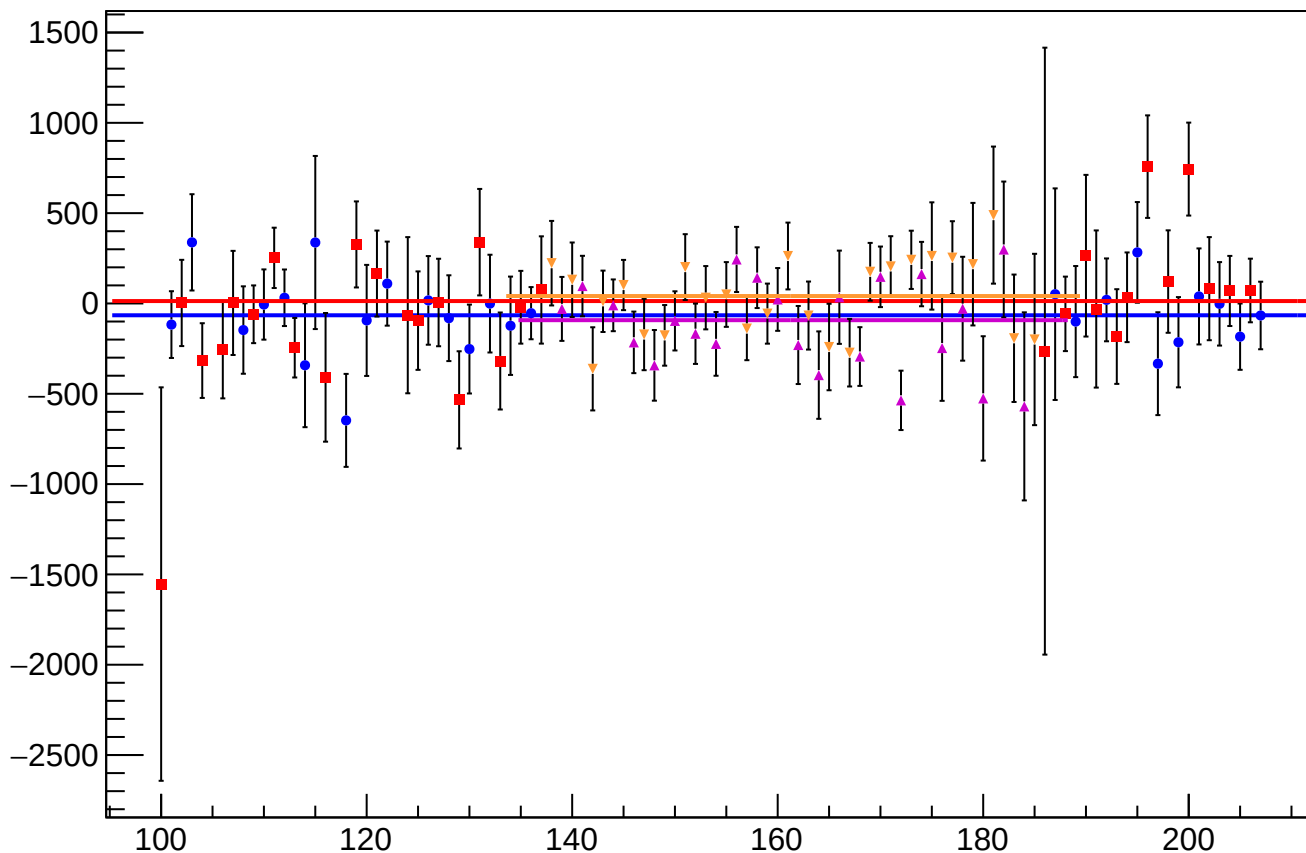
Left In: 1117.831+/-0.187  $\chi^2/\text{NDF}$ : 729387.1/22

+ sign 1233.147+/-0.157  $\chi^2/\text{NDF}$ : 6977903.4/50

All: 1234.029+/-0.112  $\chi^2/\text{NDF}$ : 15292302.6/100

- sign 1234.920+/-0.158  $\chi^2/\text{NDF}$ : 8314336.1/53

# eigen\_dit\_asym\_sam\_48\_avg\_mean vs Slug



Right In:  $-65.404 \pm 45.855$   $\chi^2/\text{NDF}$ : 14.5/25

Left Out:  $41.088 \pm 39.177$   $\chi^2/\text{NDF}$ : 22.3/24

Right Out:  $13.300 \pm 44.296$   $\chi^2/\text{NDF}$ : 37.4/30

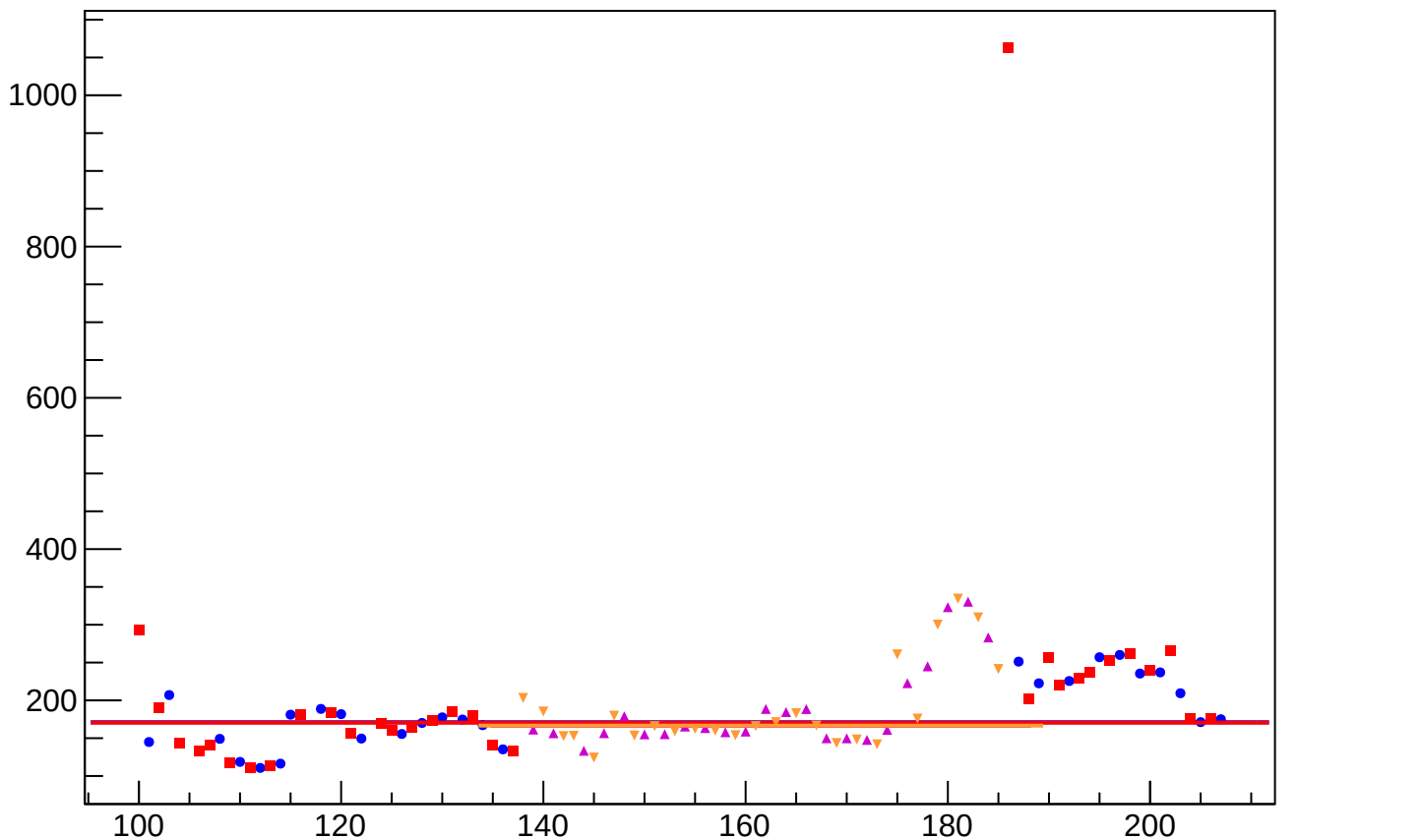
Left In:  $-92.556 \pm 40.165$   $\chi^2/\text{NDF}$ : 29.5/22

+ sign  $-3.846 \pm 29.786$   $\chi^2/\text{NDF}$ : 39.9/50

All:  $-24.341 \pm 21.051$   $\chi^2/\text{NDF}$ : 110.9/104

- sign  $-44.793 \pm 29.755$   $\chi^2/\text{NDF}$ : 70.0/53

# eigen\_dit\_asym\_sam\_48\_avg\_rms vs Slug



Right In: 171.080 $\pm$ 0.032  $\chi^2$ /NDF: 1654316.2/25

Left Out: 166.599 $\pm$ 0.028  $\chi^2$ /NDF: 1719829.4/24

Right Out: 170.505 $\pm$ 0.031  $\chi^2$ /NDF: 2646685.2/30

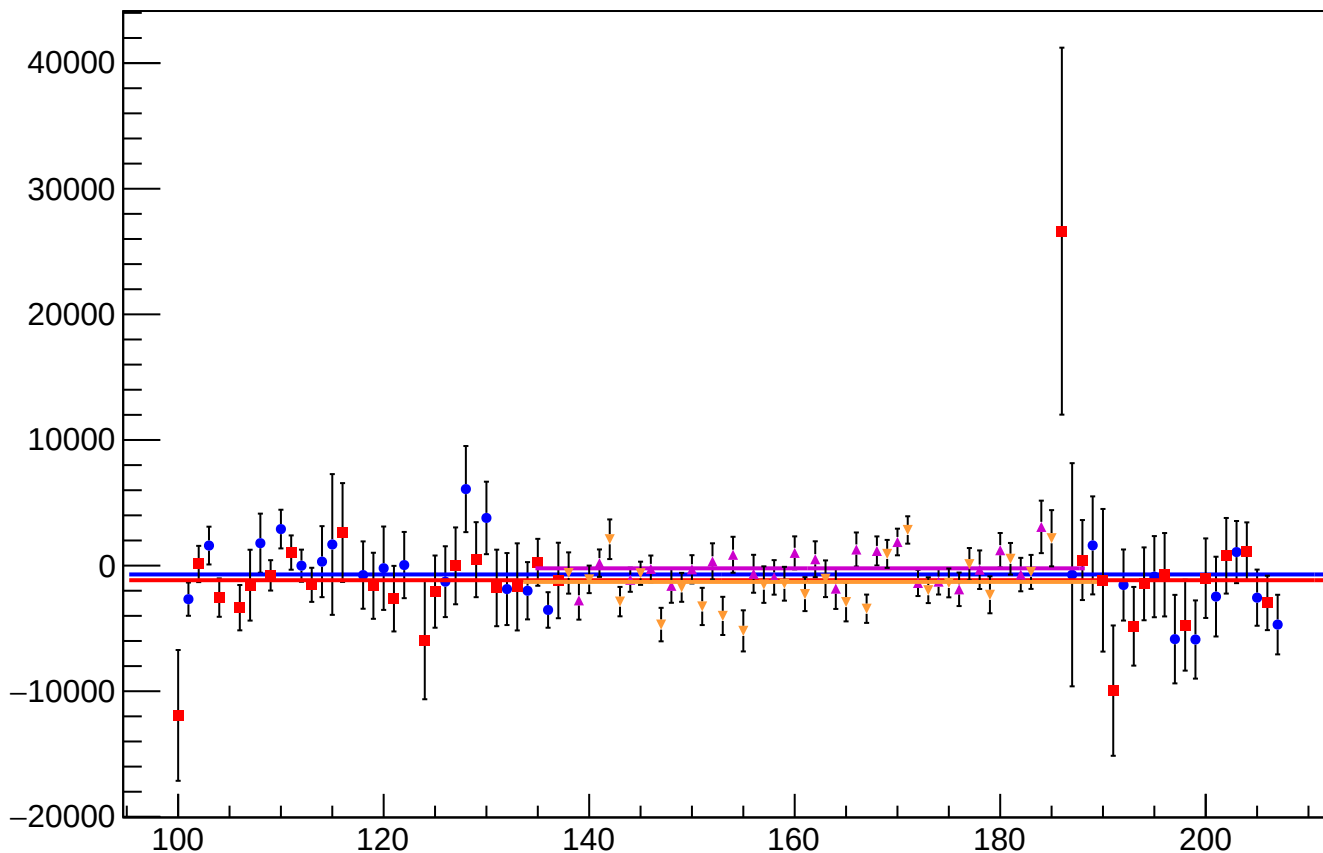
Left In: 166.308 $\pm$ 0.028  $\chi^2$ /NDF: 1392446.1/22

+ sign 168.490 $\pm$ 0.021  $\chi^2$ /NDF: 3385185.6/50

All: 168.346 $\pm$ 0.015  $\chi^2$ /NDF: 7434263.7/104

- sign 168.202 $\pm$ 0.021  $\chi^2$ /NDF: 4048984.8/53

asym\_sam\_48\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-703.700 \pm 446.046$   $\chi^2/\text{NDF}$ : 32.5/25

Left Out:  $-1298.330 \pm 256.961$   $\chi^2/\text{NDF}$ : 55.1/24

Right Out:  $-1162.566 \pm 420.839$   $\chi^2/\text{NDF}$ : 24.9/30

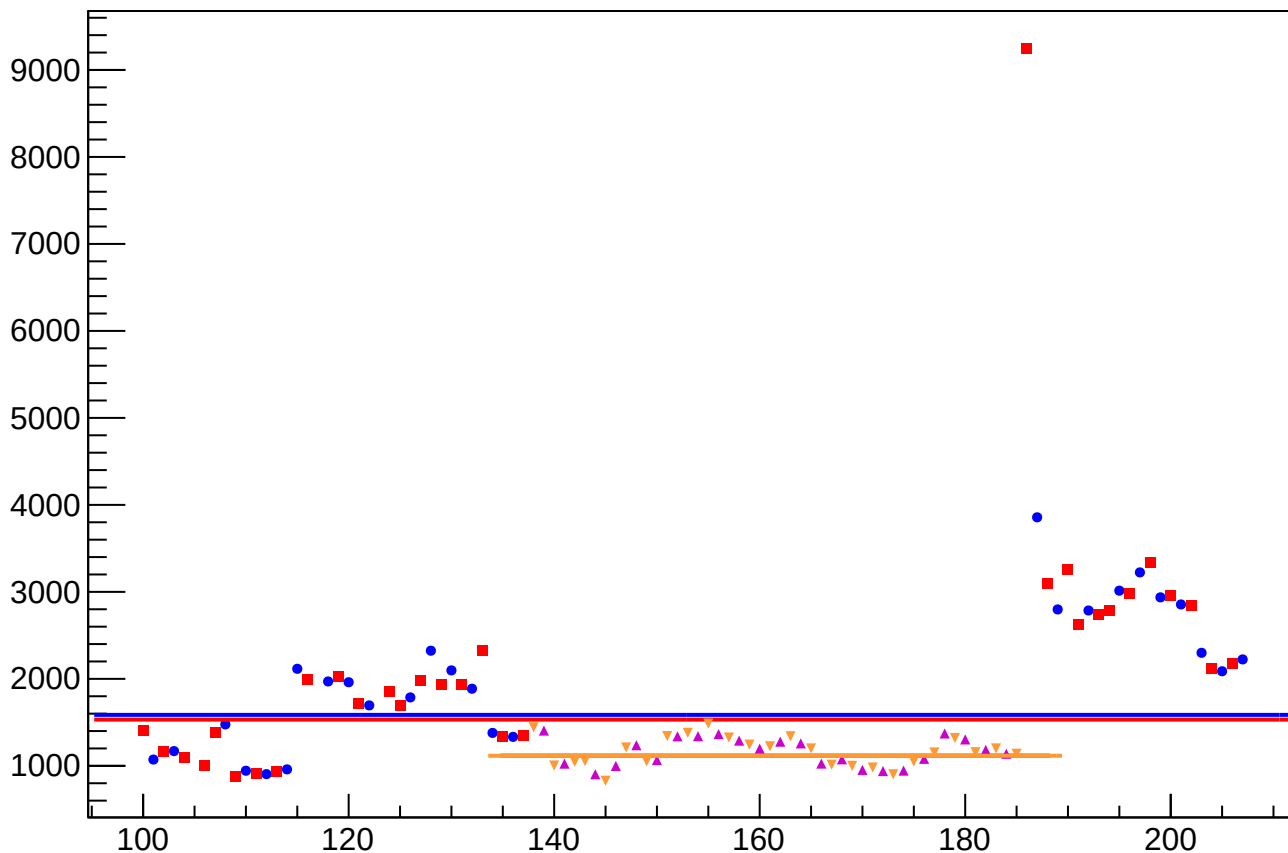
Left In:  $-217.283 \pm 264.388$   $\chi^2/\text{NDF}$ : 22.2/22

+ sign  $-1150.161 \pm 222.656$   $\chi^2/\text{NDF}$ : 88.9/50

All:  $-819.290 \pm 157.870$   $\chi^2/\text{NDF}$ : 144.1/104

- sign  $-484.791 \pm 223.874$   $\chi^2/\text{NDF}$ : 50.8/53

asym\_sam\_48\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 1586.028+/-0.315  $\chi^2/\text{NDF}$ : 4443191.5/25

Left Out: 1116.032+/-0.182  $\chi^2/\text{NDF}$ : 867491.2/24

Right Out: 1531.582+/-0.298  $\chi^2/\text{NDF}$ : 6198823.9/30

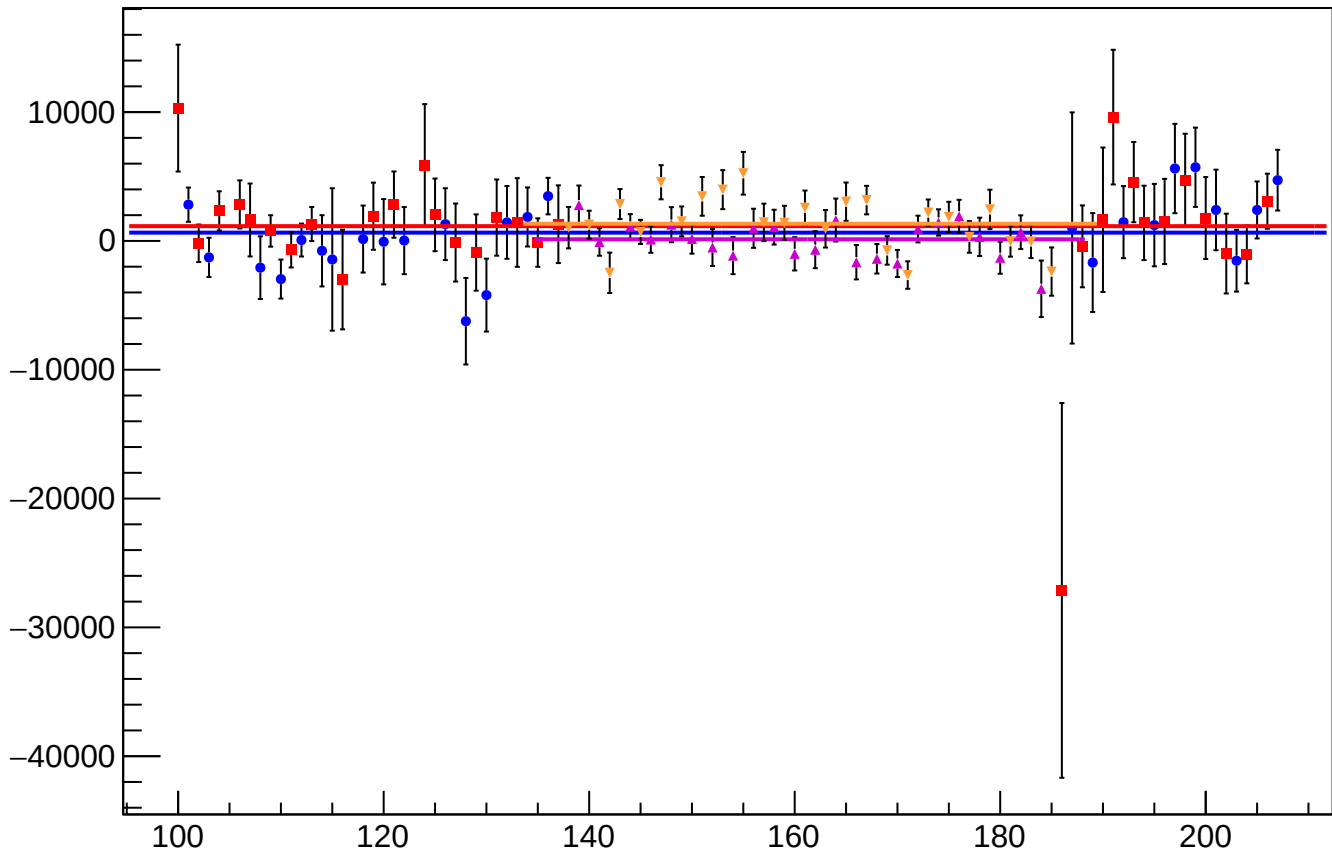
Left In: 1117.829+/-0.187  $\chi^2/\text{NDF}$ : 729386.0/22

+ sign 1233.145+/-0.157  $\chi^2/\text{NDF}$ : 6977912.7/50

All: 1234.027+/-0.112  $\chi^2/\text{NDF}$ : 15292315.0/100

- sign 1234.918+/-0.158  $\chi^2/\text{NDF}$ : 8314339.3/53

# asym\_sam\_48\_avg\_mean vs Slug



Right In:  $643.735 \pm 443.955$   $\chi^2/\text{NDF}$ : 33.5/25

Left Out:  $1334.704 \pm 254.187$   $\chi^2/\text{NDF}$ : 55.7/24

Right Out:  $1147.233 \pm 419.875$   $\chi^2/\text{NDF}$ : 22.8/30

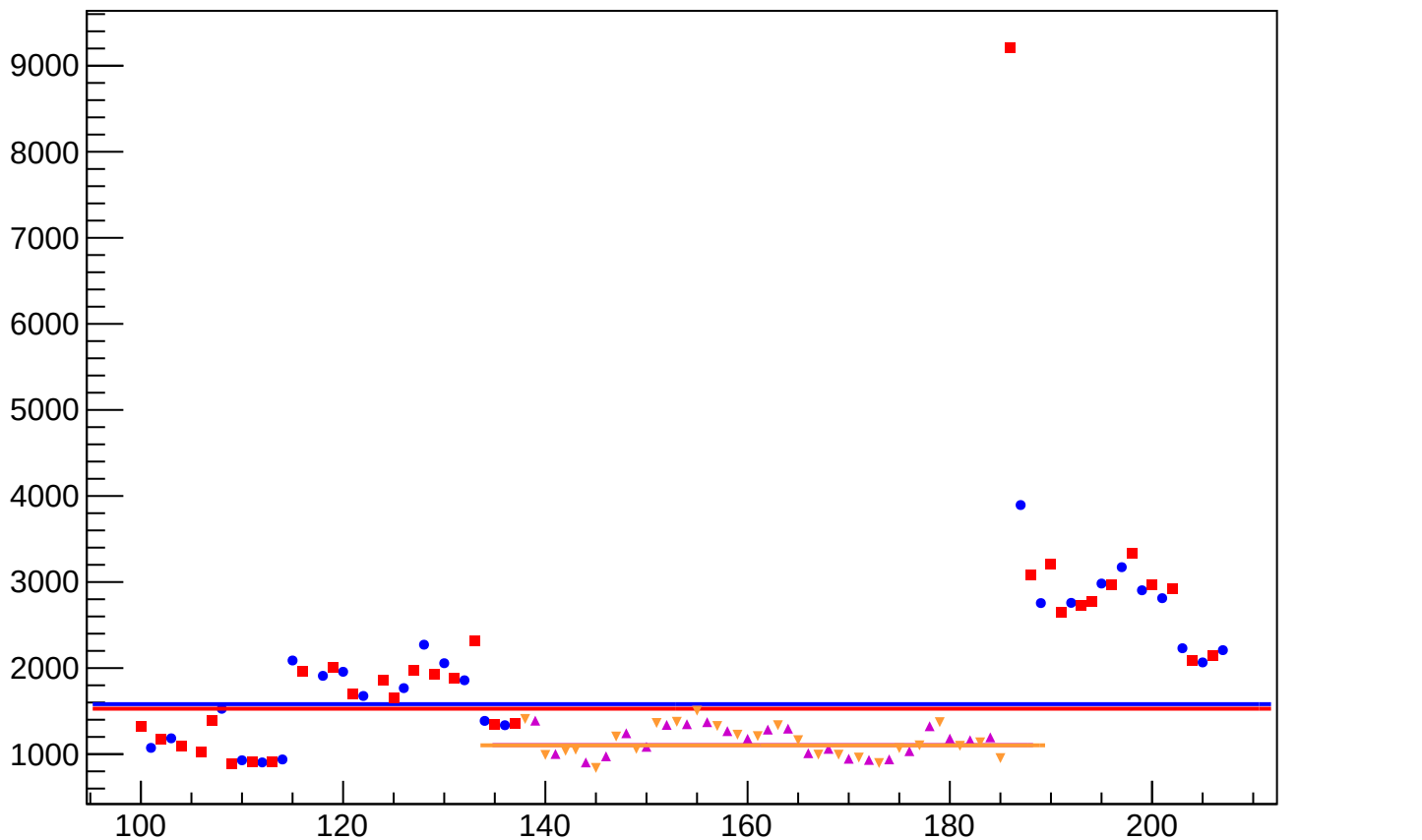
Left In:  $128.368 \pm 261.415$   $\chi^2/\text{NDF}$ : 24.0/22

+ sign  $1164.115 \pm 220.589$   $\chi^2/\text{NDF}$ : 91.0/50

All:  $790.807 \pm 156.448$   $\chi^2/\text{NDF}$ : 147.7/104

- sign  $412.987 \pm 221.918$   $\chi^2/\text{NDF}$ : 51.0/53

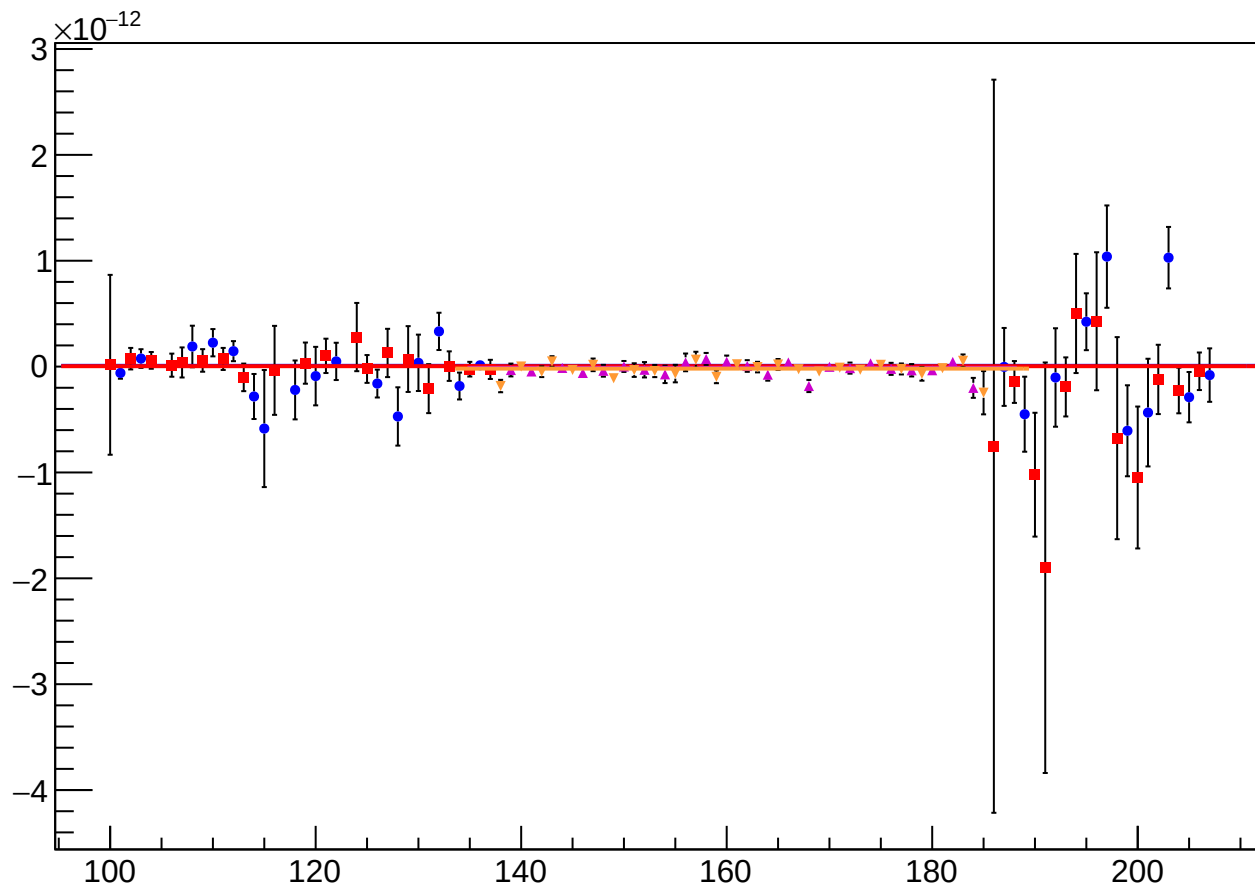
# asym\_sam\_48\_avg\_rms vs Slug



Right In:  $1581.267 \pm 0.314$   $\chi^2/\text{NDF}$ : 4333753.3/25  
 Left Out:  $1102.700 \pm 0.180$   $\chi^2/\text{NDF}$ : 880468.6/24  
 Right Out:  $1528.273 \pm 0.297$   $\chi^2/\text{NDF}$ : 6162516.9/30  
 Left In:  $1105.200 \pm 0.185$   $\chi^2/\text{NDF}$ : 723304.5/22  
 + sign  $1220.850 \pm 0.156$   $\chi^2/\text{NDF}$ : 6964472.7/50  
 - sign  $1223.385 \pm 0.157$   $\chi^2/\text{NDF}$ : 8349164.2/53  
 All:  $1222.110 \pm 0.111$   $\chi^2/\text{NDF}$ : 15313768.2/100



asym\_sam\_48\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 47.7/25

Left Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 26.5/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 15.7/30

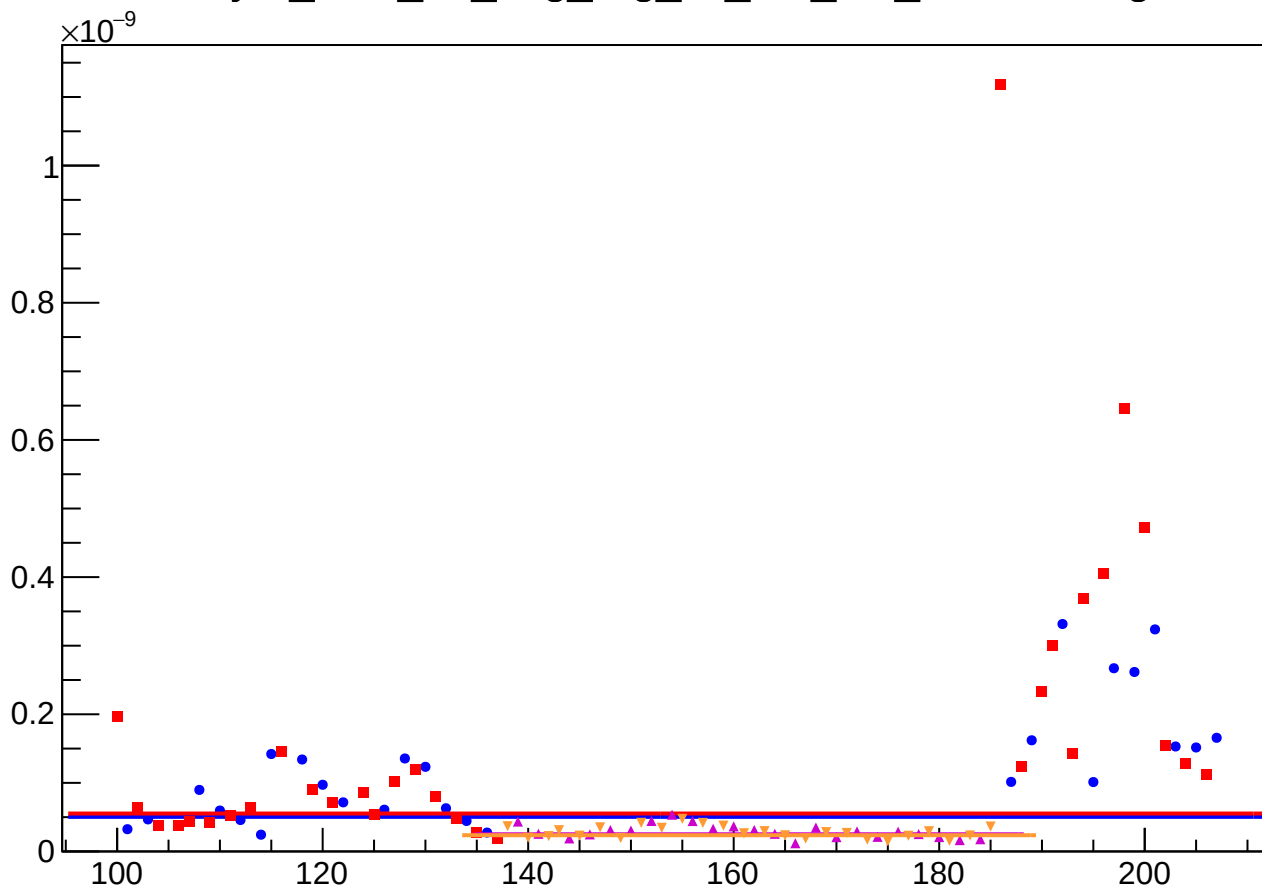
Left In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 27.1/22

+ sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 75.1/50

All: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 118.4/104

- sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 43.1/53

asym\_sam\_48\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5052471.9/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1433511.8/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5519064.8/30

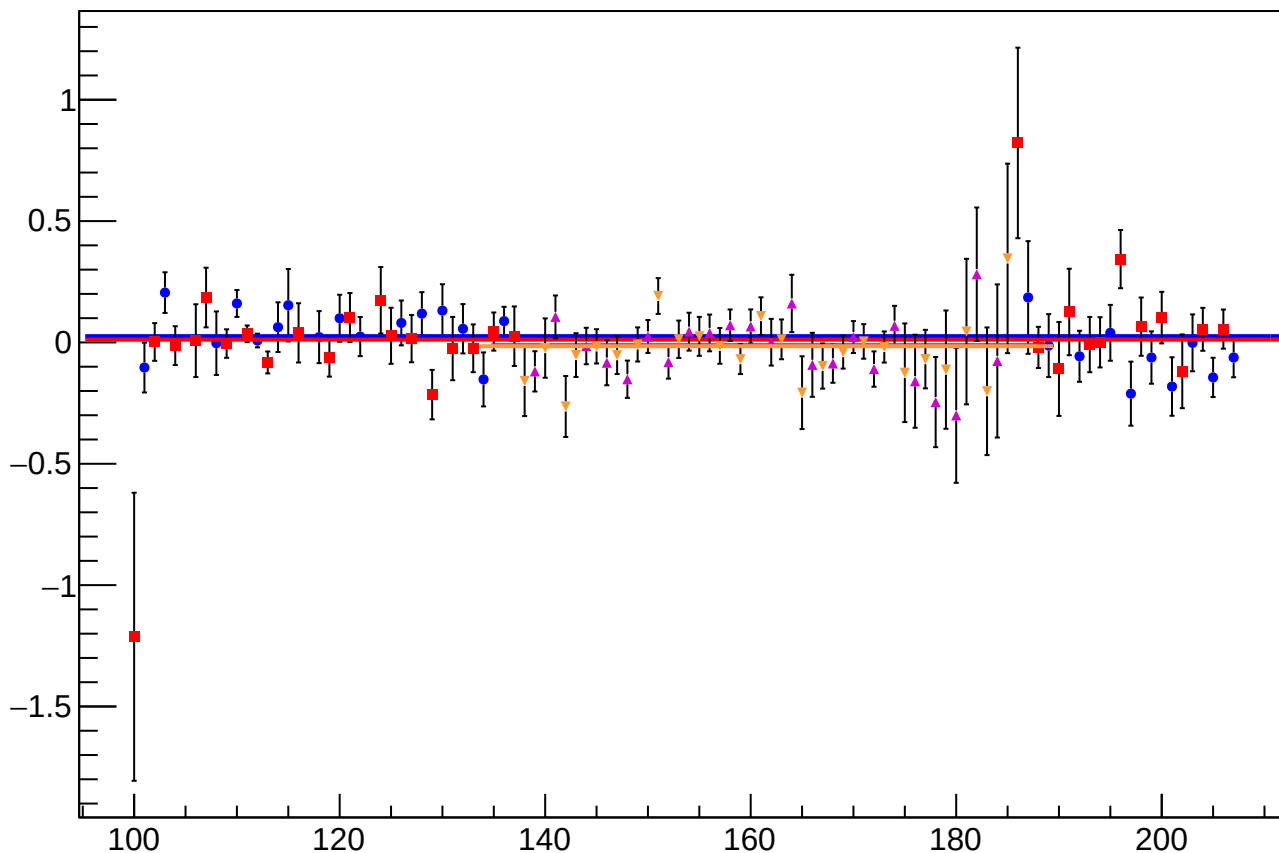
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1544727.7/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8377699.9/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 17610541.1/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9185605.1/53

asym\_sam\_48\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.026 \pm 0.016$   $\chi^2/\text{NDF}$ : 33.8/25

Left Out:  $-0.016 \pm 0.018$   $\chi^2/\text{NDF}$ : 21.6/24

Right Out:  $0.011 \pm 0.016$   $\chi^2/\text{NDF}$ : 34.8/30

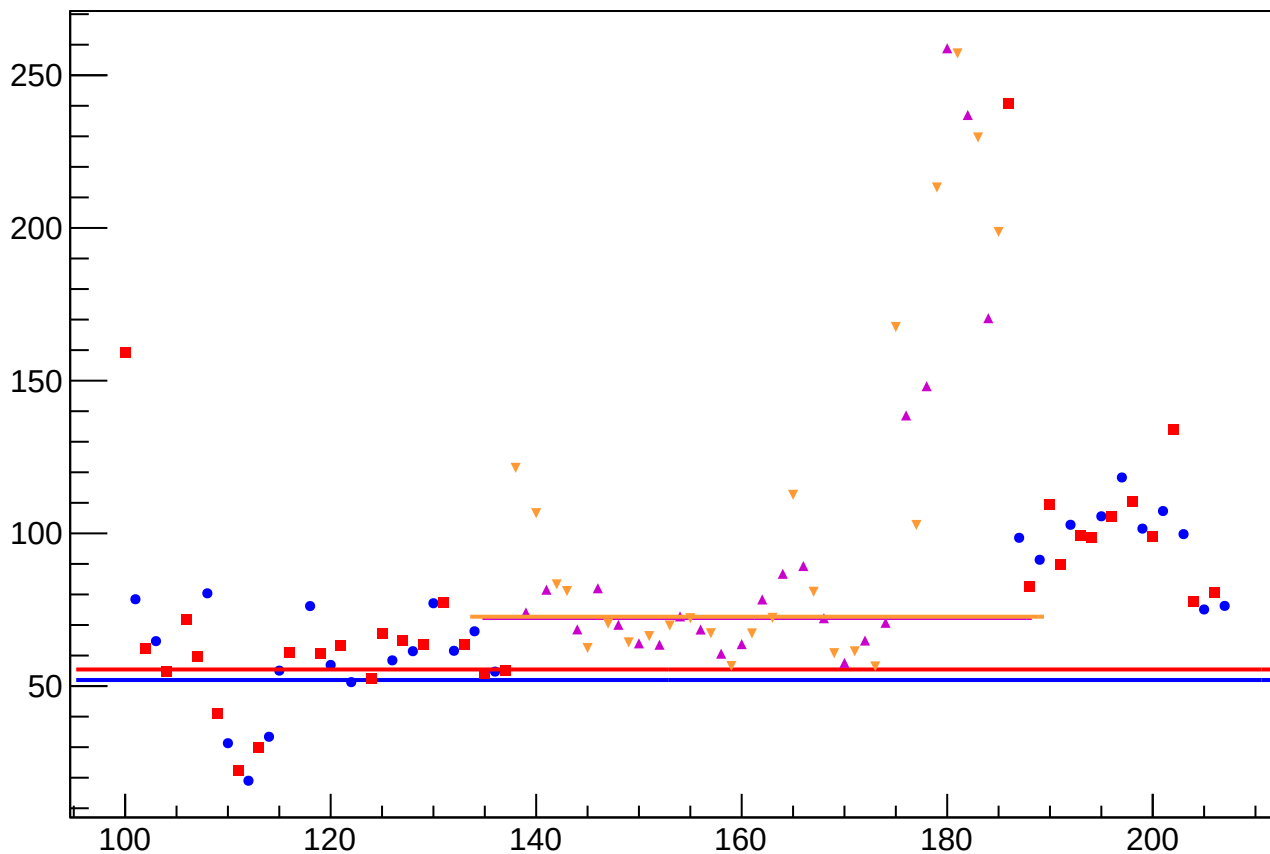
Left In:  $-0.011 \pm 0.018$   $\chi^2/\text{NDF}$ : 23.3/22

+ sign  $0.008 \pm 0.012$   $\chi^2/\text{NDF}$ : 58.4/50

All:  $0.005 \pm 0.008$   $\chi^2/\text{NDF}$ : 117.7/104

- sign  $0.002 \pm 0.012$   $\chi^2/\text{NDF}$ : 59.1/53

# asym\_sam\_48\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 51.981+/-0.011  $\chi^2/\text{NDF}$ : 6860816.6/25

Left Out: 72.715+/-0.013  $\chi^2/\text{NDF}$ : 3961158.6/24

Right Out: 55.440+/-0.011  $\chi^2/\text{NDF}$ : 6375729.3/30

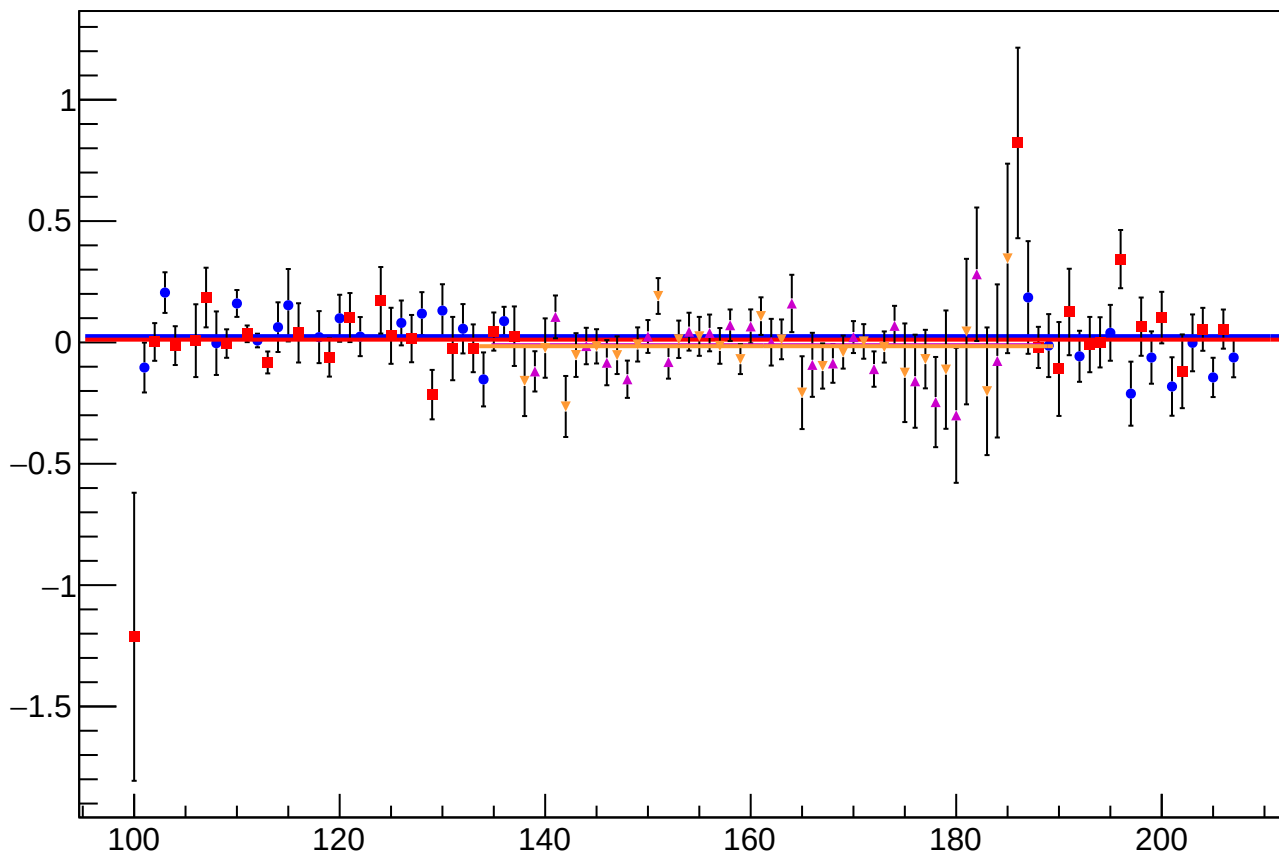
Left In: 72.298+/-0.013  $\chi^2/\text{NDF}$ : 2790214.3/22

+ sign 61.036+/-0.008  $\chi^2/\text{NDF}$ : 12323208.5/50

All: 61.828+/-0.006  $\chi^2/\text{NDF}$ : 22485467.6/104

- sign 62.627+/-0.008  $\chi^2/\text{NDF}$ : 10144369.6/53

asym\_sam\_48\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.026 \pm 0.016$   $\chi^2/\text{NDF}$ : 33.8/25

Left Out:  $-0.016 \pm 0.018$   $\chi^2/\text{NDF}$ : 21.6/24

Right Out:  $0.011 \pm 0.016$   $\chi^2/\text{NDF}$ : 34.8/30

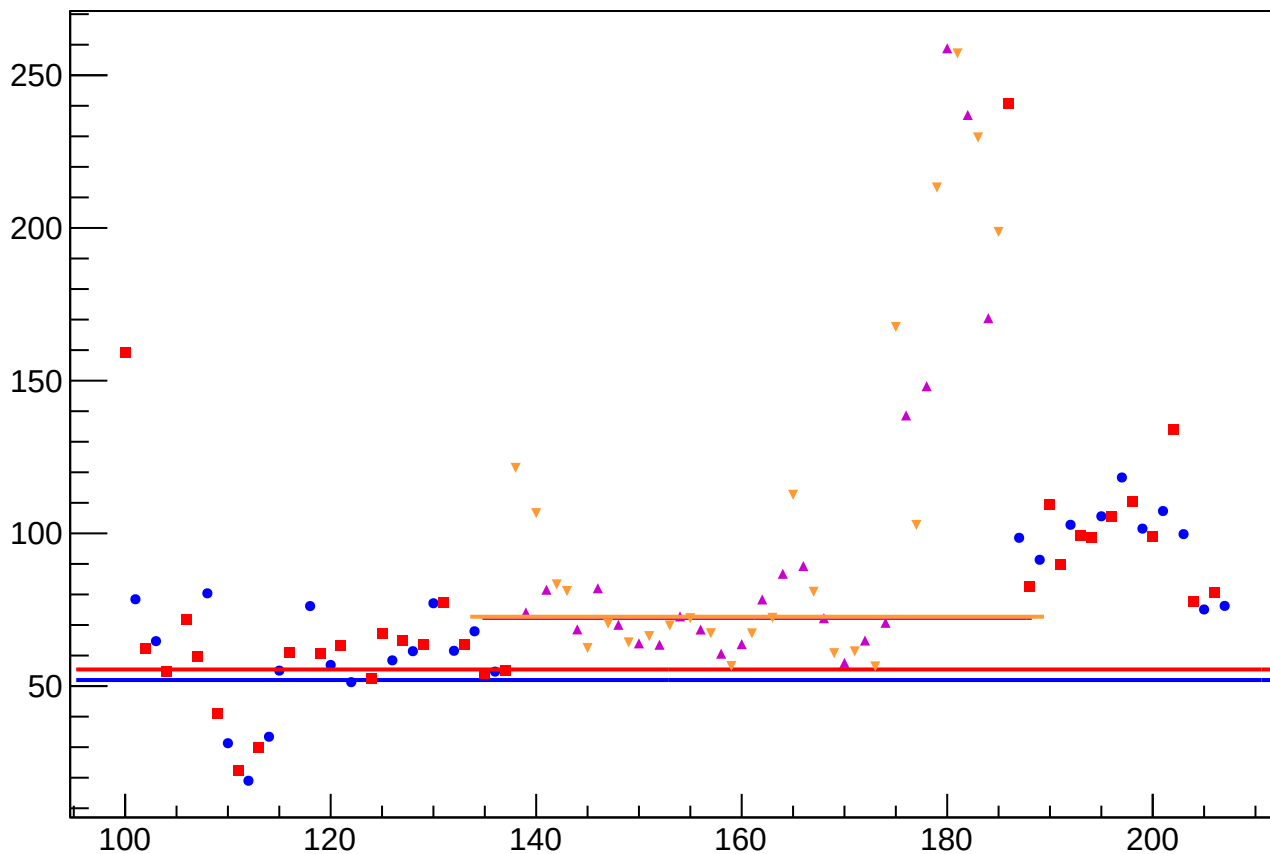
Left In:  $-0.011 \pm 0.018$   $\chi^2/\text{NDF}$ : 23.3/22

+ sign  $0.008 \pm 0.012$   $\chi^2/\text{NDF}$ : 58.4/50

All:  $0.005 \pm 0.008$   $\chi^2/\text{NDF}$ : 117.7/104

- sign  $0.002 \pm 0.012$   $\chi^2/\text{NDF}$ : 59.1/53

asym\_sam\_48\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 51.981+/-0.011  $\chi^2/\text{NDF}$ : 6860816.6/25

Left Out: 72.715+/-0.013  $\chi^2/\text{NDF}$ : 3961158.6/24

Right Out: 55.440+/-0.011  $\chi^2/\text{NDF}$ : 6375729.3/30

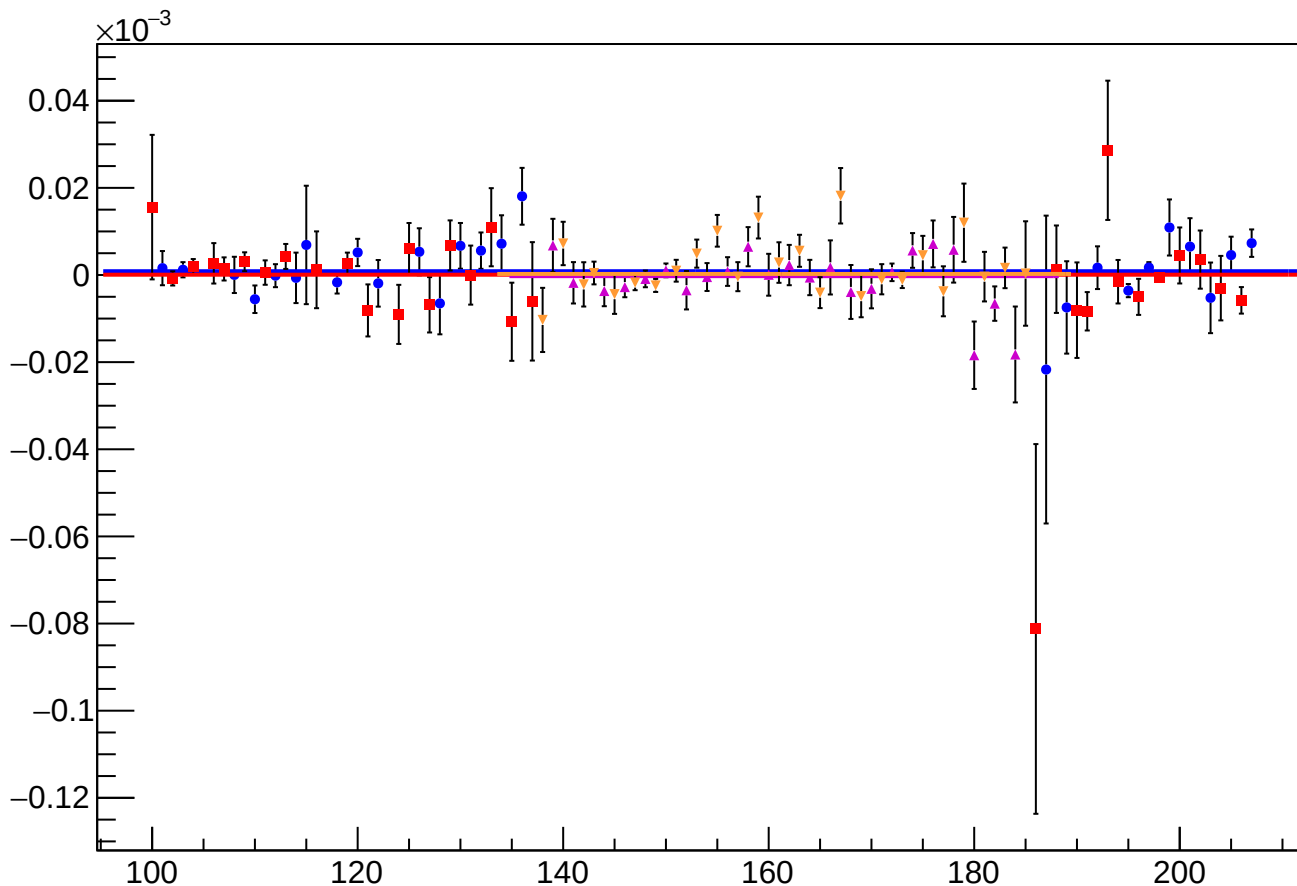
Left In: 72.298+/-0.013  $\chi^2/\text{NDF}$ : 2790214.3/22

+ sign 61.036+/-0.008  $\chi^2/\text{NDF}$ : 12323208.5/50

All: 61.828+/-0.006  $\chi^2/\text{NDF}$ : 22485467.6/104

- sign 62.627+/-0.008  $\chi^2/\text{NDF}$ : 10144369.6/53

asym\_sam\_48\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 38.9/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:43.4/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 36.1/30

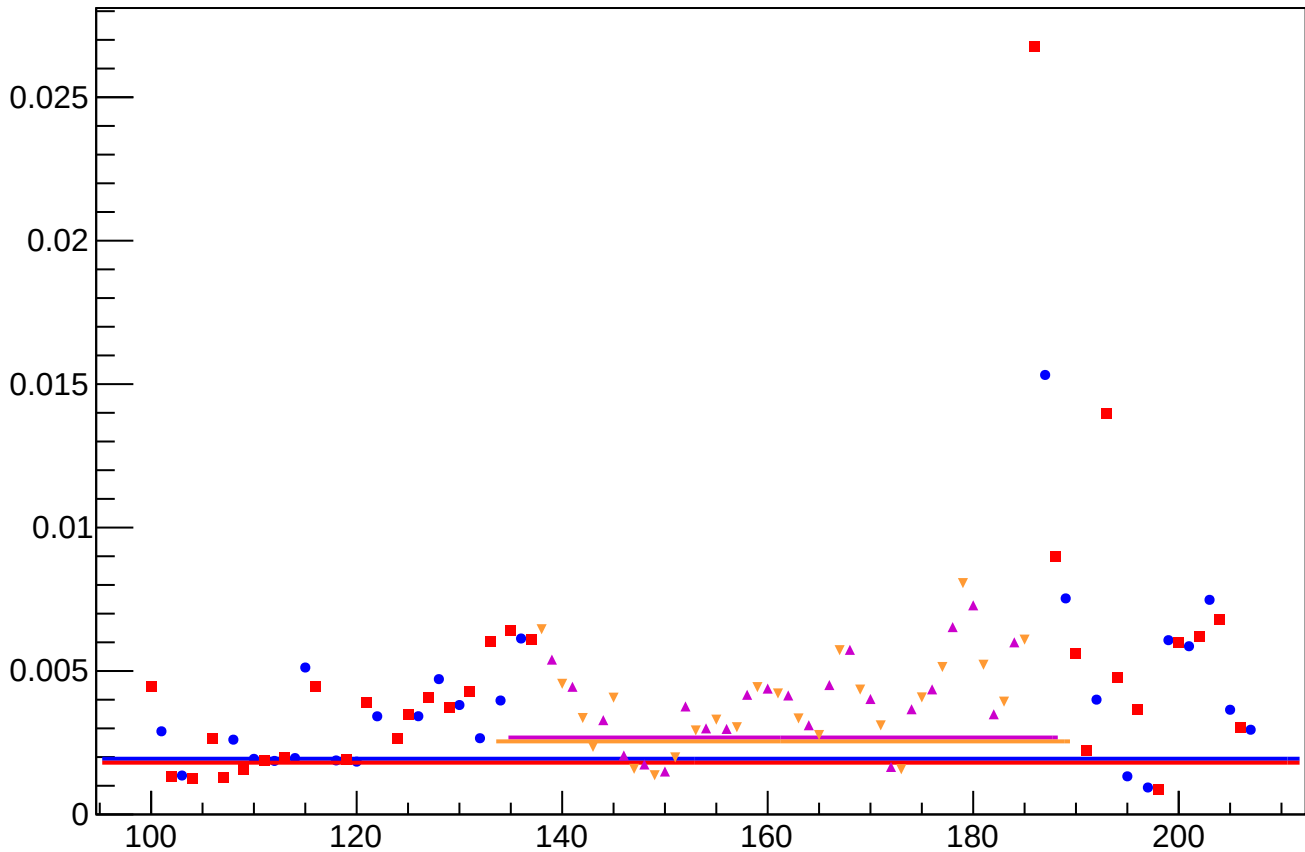
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:24.1/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 82.7/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 144.0/104

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 60.3/53

asym\_sam\_48\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 8314854.4/25

Left Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 7499900.9/24

Right Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 12059070.2/30

Left In: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 6504235.2/22

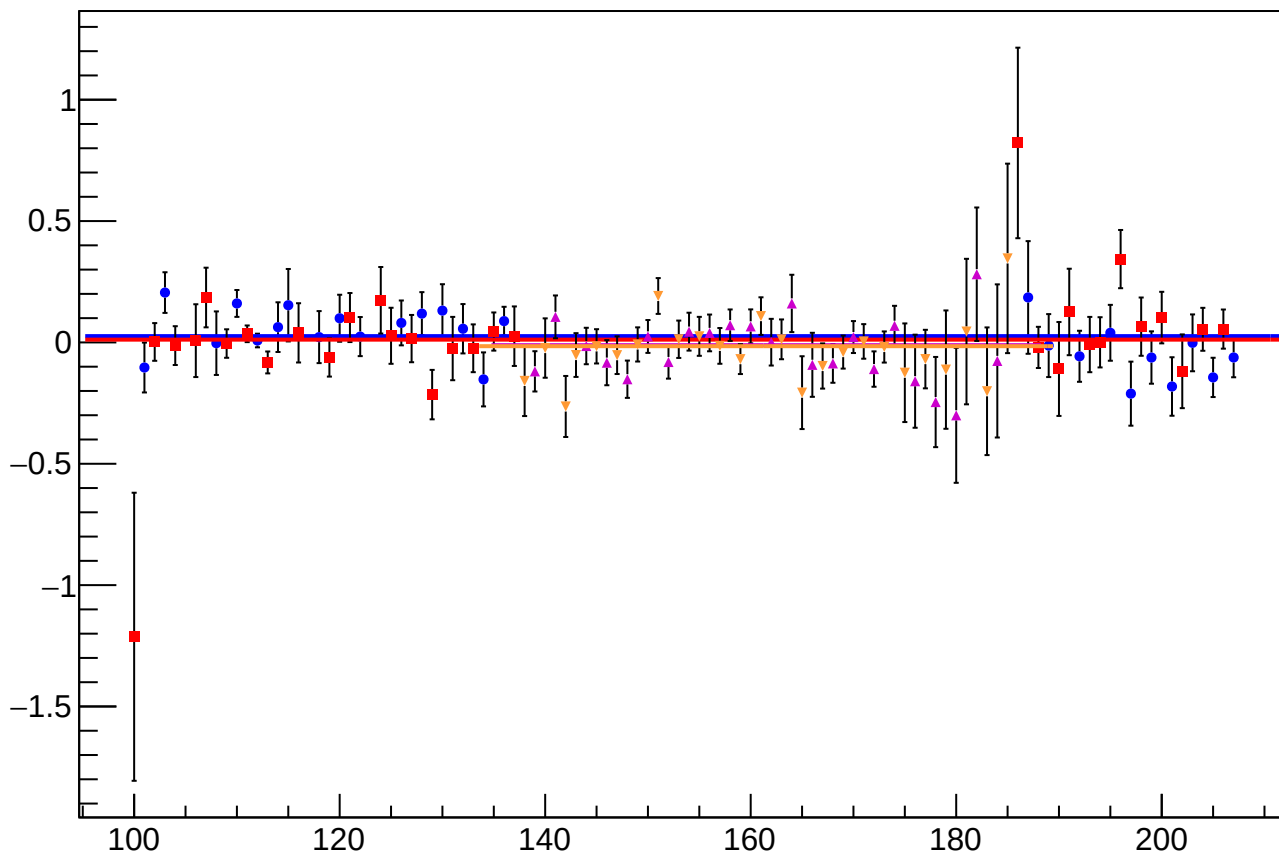
+ sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 16712694.0/50

All: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 37157940.6/104

- sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 20416307.6/53



asym\_sam\_48\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.026 $\pm$ 0.016  $\chi^2$ /NDF: 33.8/25

Left Out: -0.016 $\pm$ 0.018  $\chi^2$ /NDF:21.6/24

Right Out: 0.011 $\pm$ 0.016  $\chi^2$ /NDF: 34.8/30

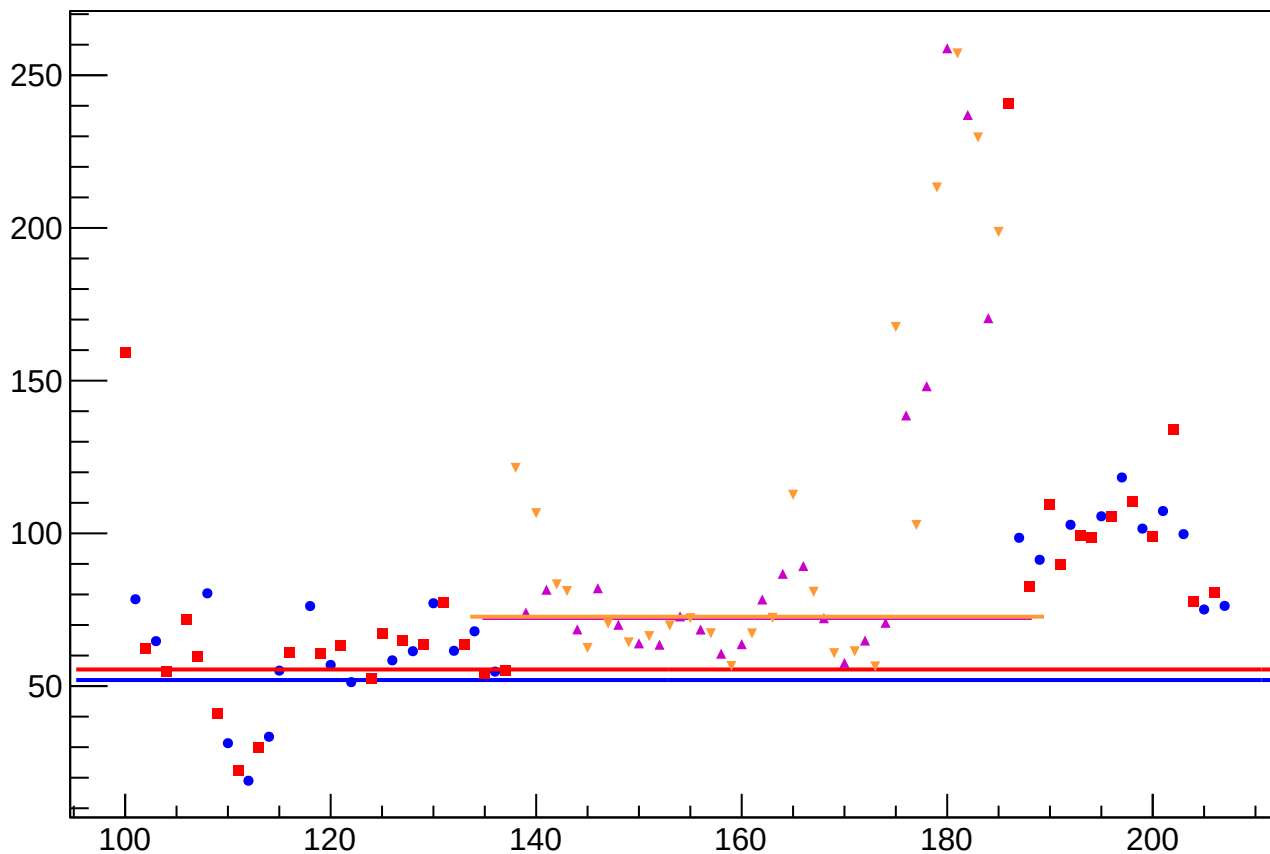
Left In: -0.011 $\pm$ 0.018  $\chi^2$ /NDF:23.3/22

+ sign 0.008 $\pm$ 0.012  $\chi^2$ /NDF: 58.4/50

All: 0.005 $\pm$ 0.008  $\chi^2$ /NDF: 117.7/104

- sign 0.002 $\pm$ 0.012  $\chi^2$ /NDF: 59.1/53

asym\_sam\_48\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 51.980+/-0.011  $\chi^2/\text{NDF}$ : 6861060.4/25

Left Out: 72.716+/-0.013  $\chi^2/\text{NDF}$ : 3961100.5/24

Right Out: 55.439+/-0.011  $\chi^2/\text{NDF}$ : 6376042.9/30

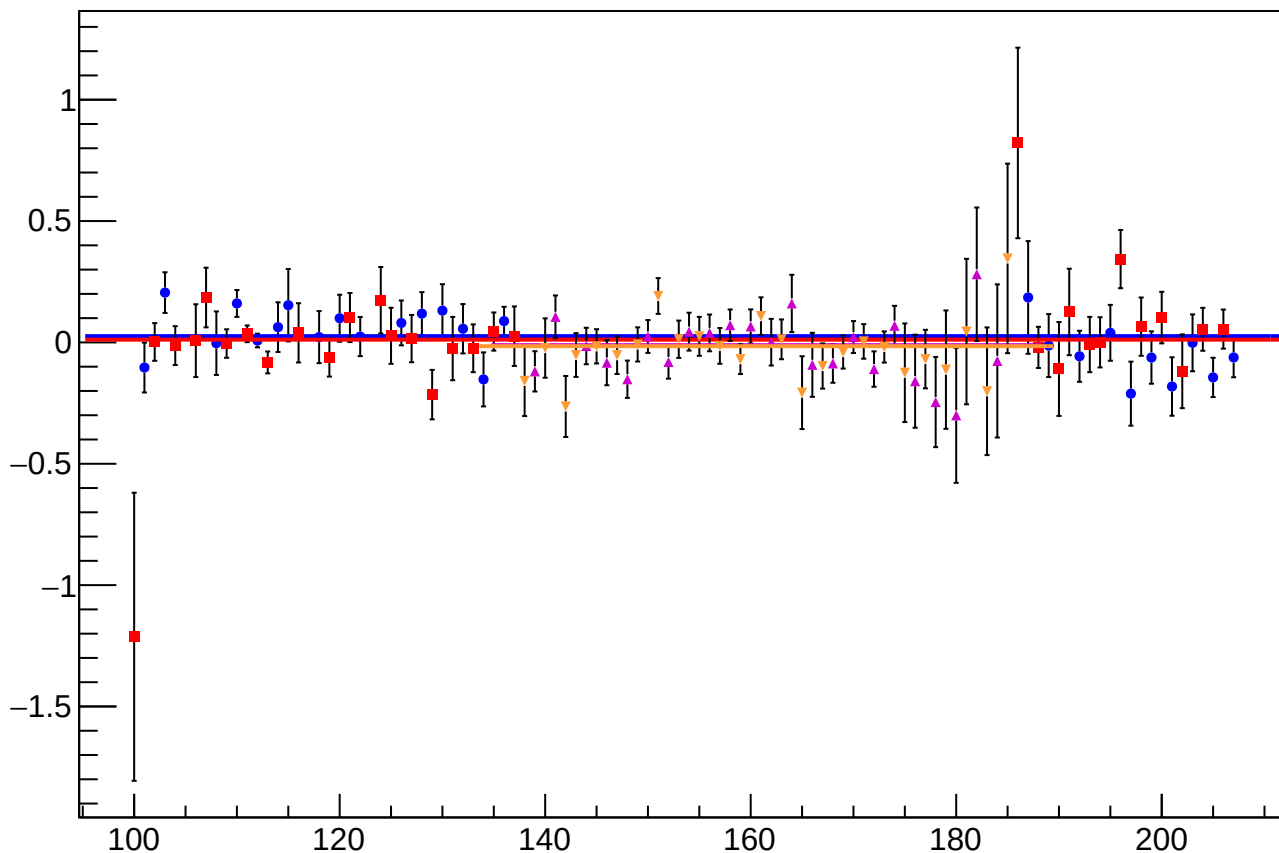
Left In: 72.298+/-0.013  $\chi^2/\text{NDF}$ : 2790146.5/22

+ sign 61.036+/-0.008  $\chi^2/\text{NDF}$ : 12323631.1/50

All: 61.828+/-0.006  $\chi^2/\text{NDF}$ : 22486315.4/104

- sign 62.627+/-0.008  $\chi^2/\text{NDF}$ : 10144793.0/53

asym\_sam\_48\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.026 \pm 0.016$   $\chi^2/\text{NDF}: 33.8/25$

Left Out:  $-0.016 \pm 0.018$   $\chi^2/\text{NDF}: 21.6/24$

Right Out:  $0.011 \pm 0.016$   $\chi^2/\text{NDF}: 34.8/30$

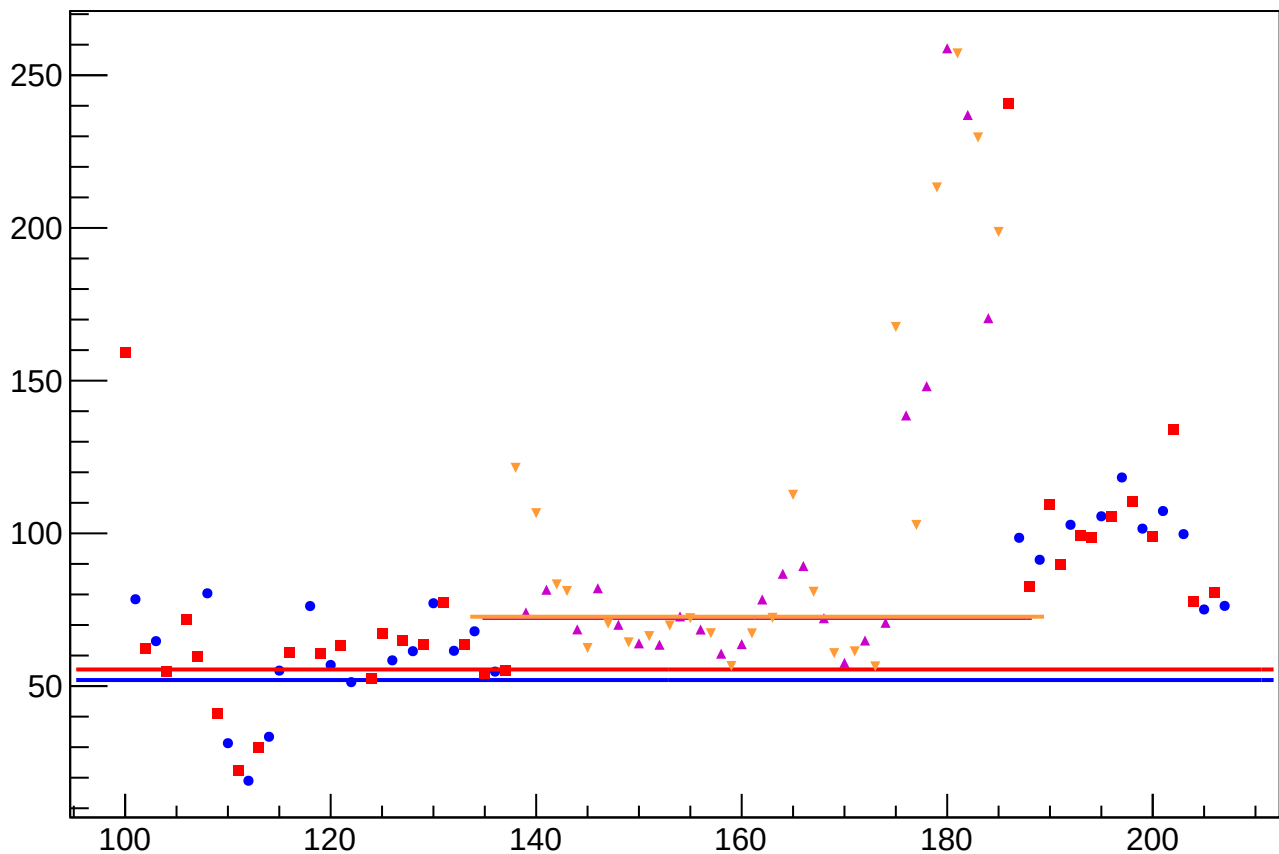
Left In:  $-0.011 \pm 0.018$   $\chi^2/\text{NDF}: 23.3/22$

+ sign  $0.008 \pm 0.012$   $\chi^2/\text{NDF}: 58.4/50$

All:  $0.005 \pm 0.008$   $\chi^2/\text{NDF}: 117.7/104$

- sign  $0.002 \pm 0.012$   $\chi^2/\text{NDF}: 59.1/53$

asym\_sam\_48\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 51.980+/-0.011  $\chi^2/\text{NDF}$ : 6861060.4/25

Left Out: 72.716+/-0.013  $\chi^2/\text{NDF}$ : 3961100.5/24

Right Out: 55.439+/-0.011  $\chi^2/\text{NDF}$ : 6376042.9/30

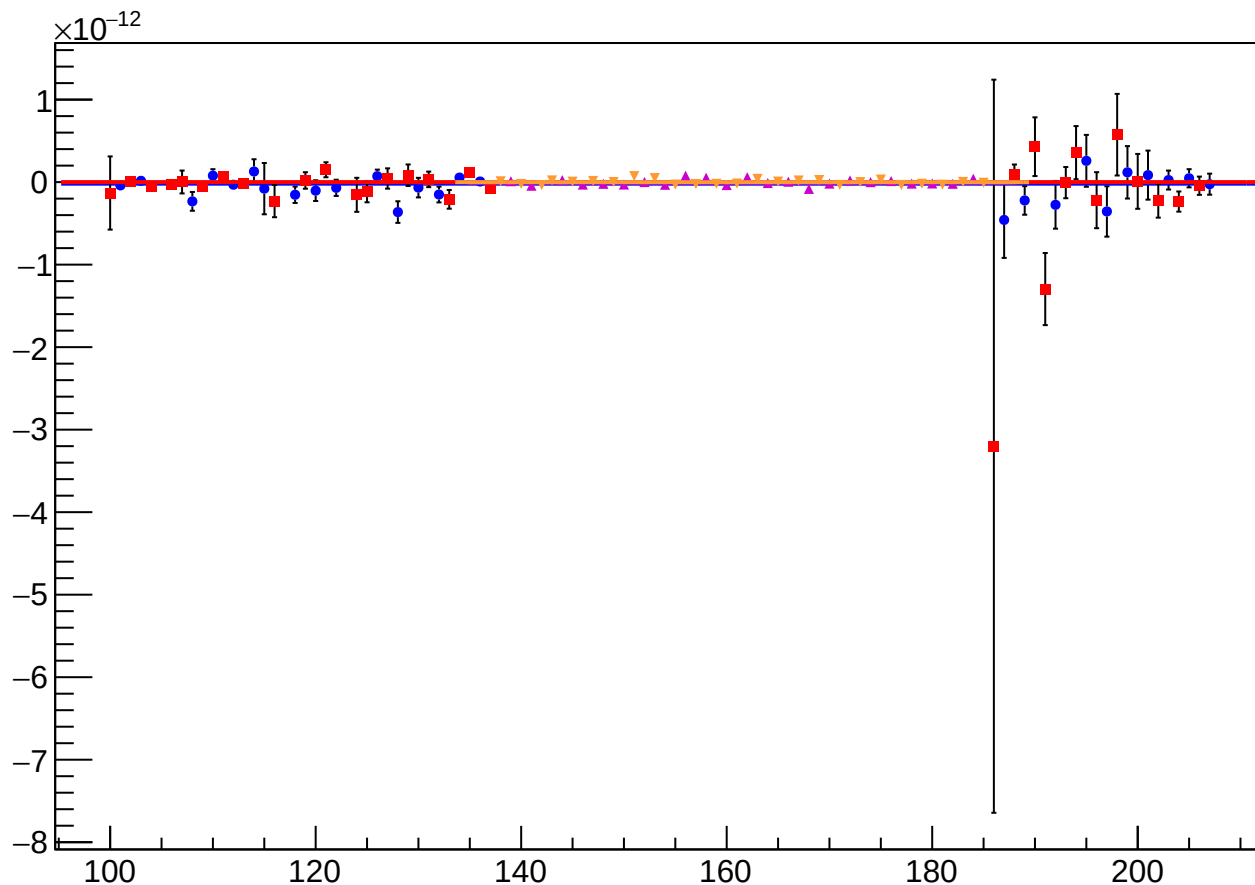
Left In: 72.298+/-0.013  $\chi^2/\text{NDF}$ : 2790146.5/22

+ sign 61.036+/-0.008  $\chi^2/\text{NDF}$ : 12323631.1/50

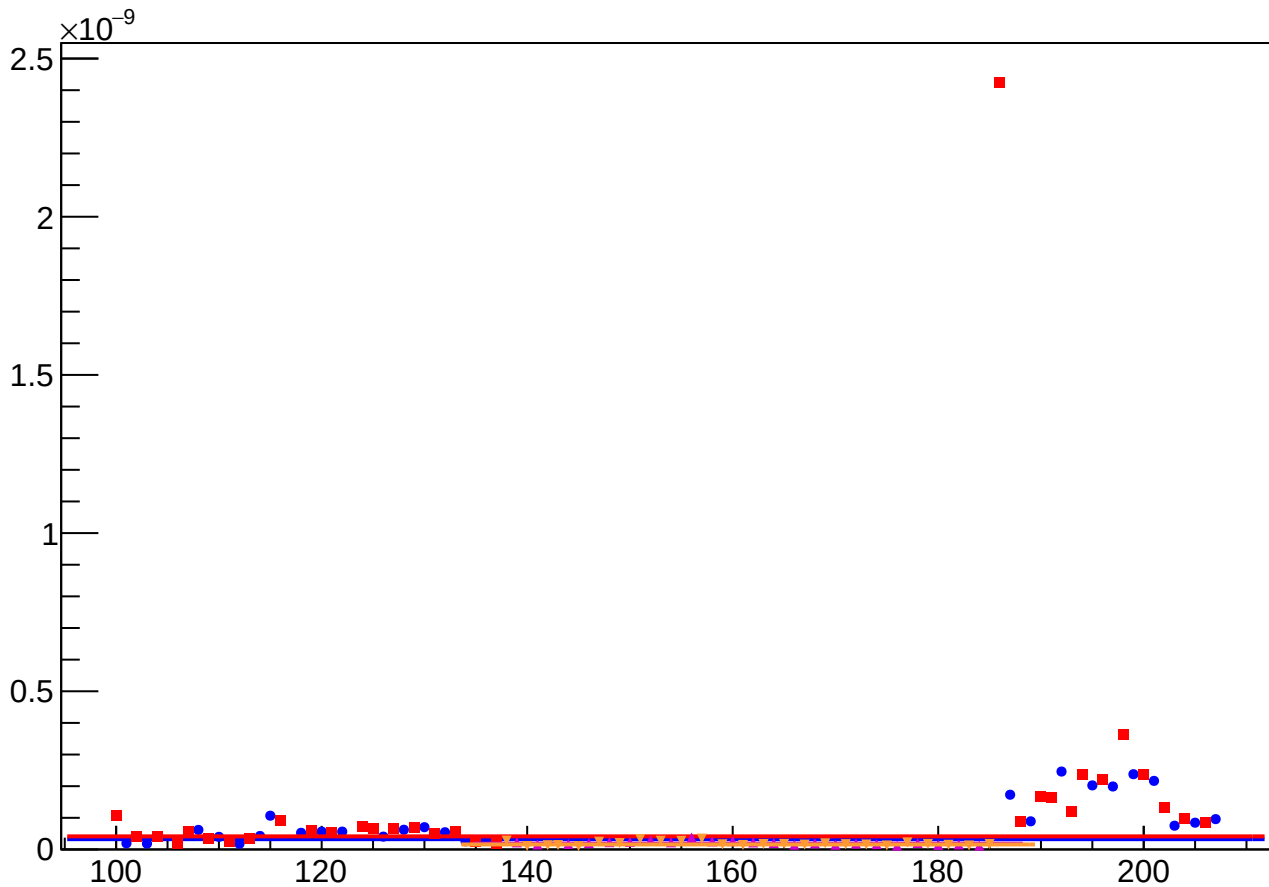
All: 61.828+/-0.006  $\chi^2/\text{NDF}$ : 22486315.4/104

- sign 62.627+/-0.008  $\chi^2/\text{NDF}$ : 10144793.0/53

asym\_sam\_48\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



asym\_sam\_48\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7529633.5/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2331257.8/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7603807.4/30

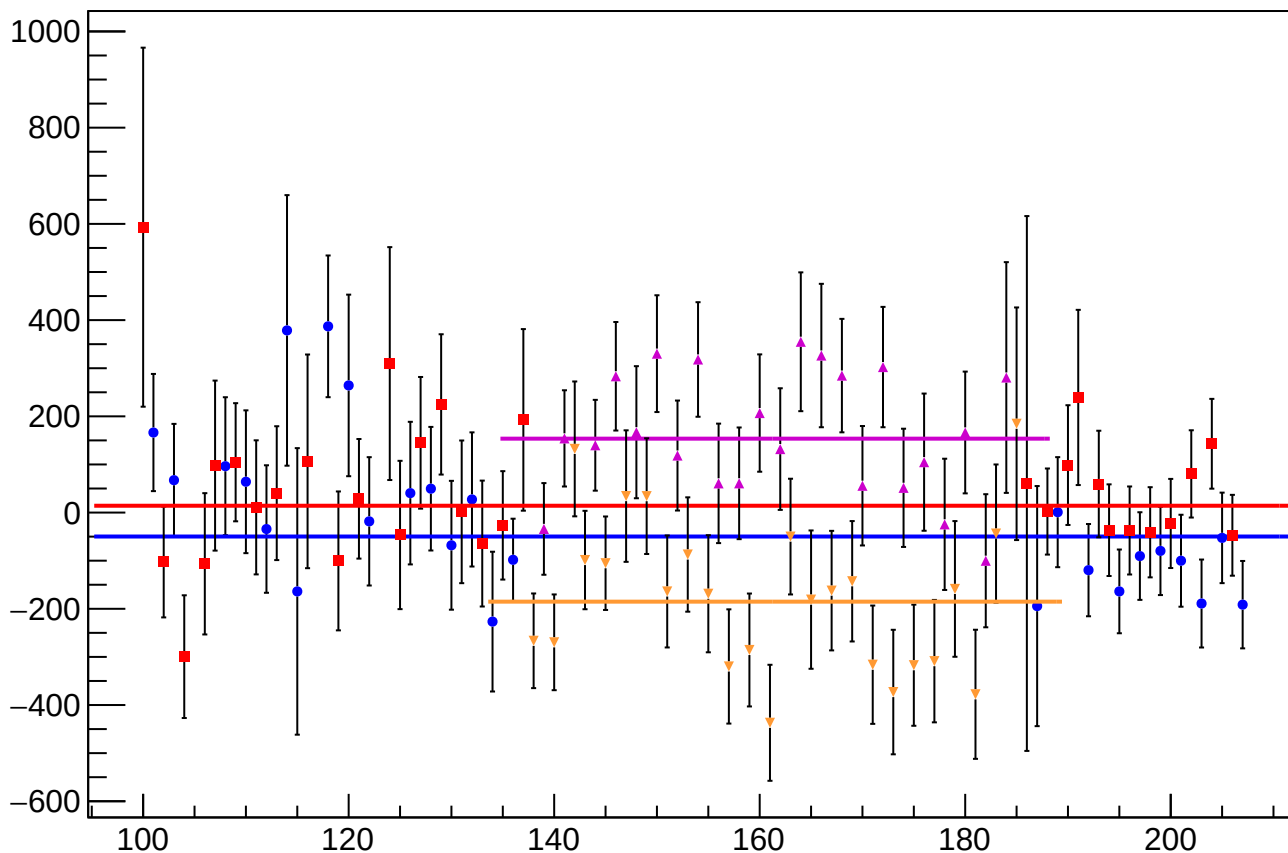
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1621439.8/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12436186.6/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 25849033.0/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13022672.3/53

# reg\_asym\_sam\_15\_dd\_mean vs Slug



Right In:  $-49.771 \pm 23.065$   $\chi^2/\text{NDF}$ : 31.1/25

Left Out:  $-185.146 \pm 24.452$   $\chi^2/\text{NDF}$ : 33.1/24

Right Out:  $14.201 \pm 22.151$   $\chi^2/\text{NDF}$ : 24.1/30

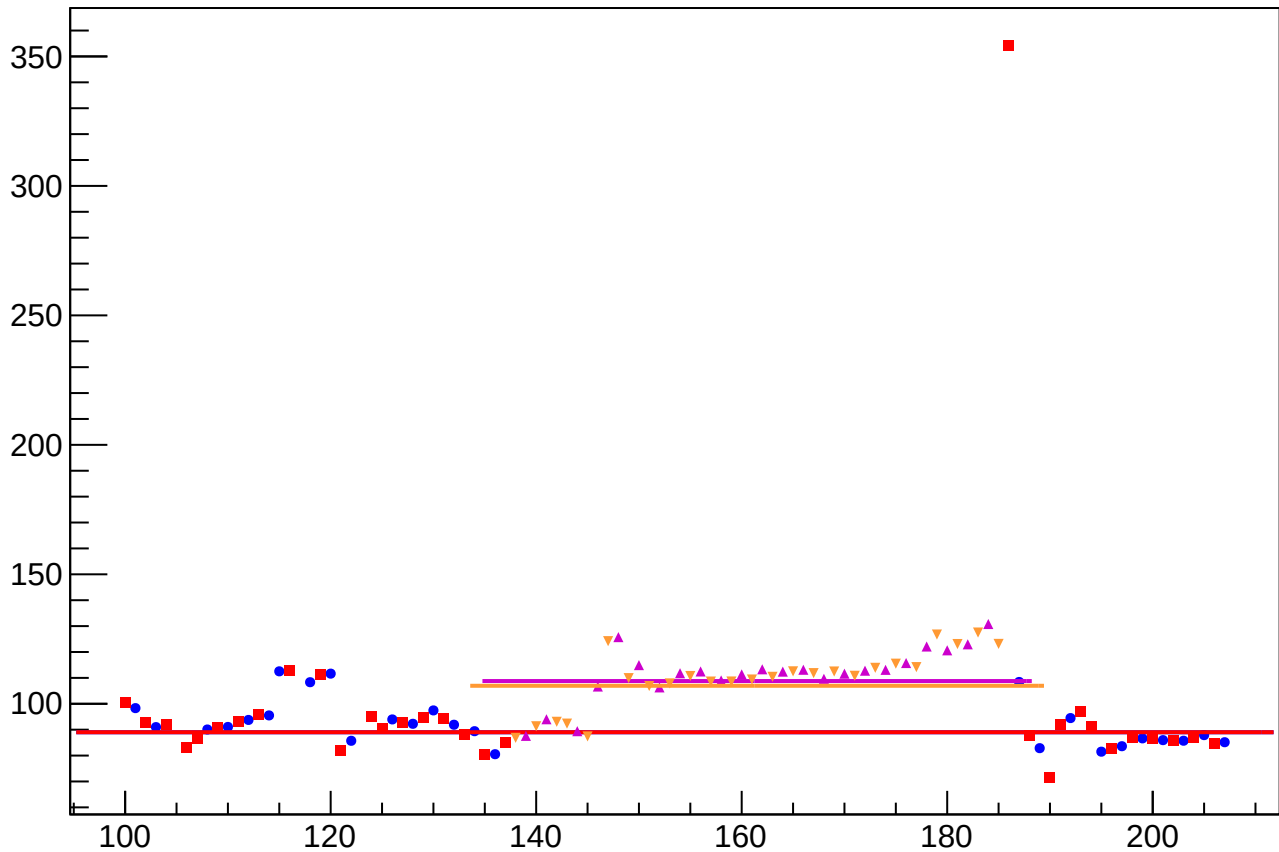
Left In:  $153.627 \pm 25.538$   $\chi^2/\text{NDF}$ : 23.5/22

+ sign  $-113.509 \pm 16.778$   $\chi^2/\text{NDF}$ : 80.4/50

All:  $-19.472 \pm 11.848$   $\chi^2/\text{NDF}$ : 207.6/104

- sign  $74.061 \pm 16.733$   $\chi^2/\text{NDF}$ : 64.6/53

# reg\_asym\_sam\_15\_dd\_rms vs Slug



Right In: 88.997 $\pm$ 0.016  $\chi^2$ /NDF: 181453.1/25

Left Out: 106.954 $\pm$ 0.017  $\chi^2$ /NDF: 464271.3/24

Right Out: 89.020 $\pm$ 0.016  $\chi^2$ /NDF: 643041.9/30

Left In: 108.781 $\pm$ 0.018  $\chi^2$ /NDF: 358436.3/22

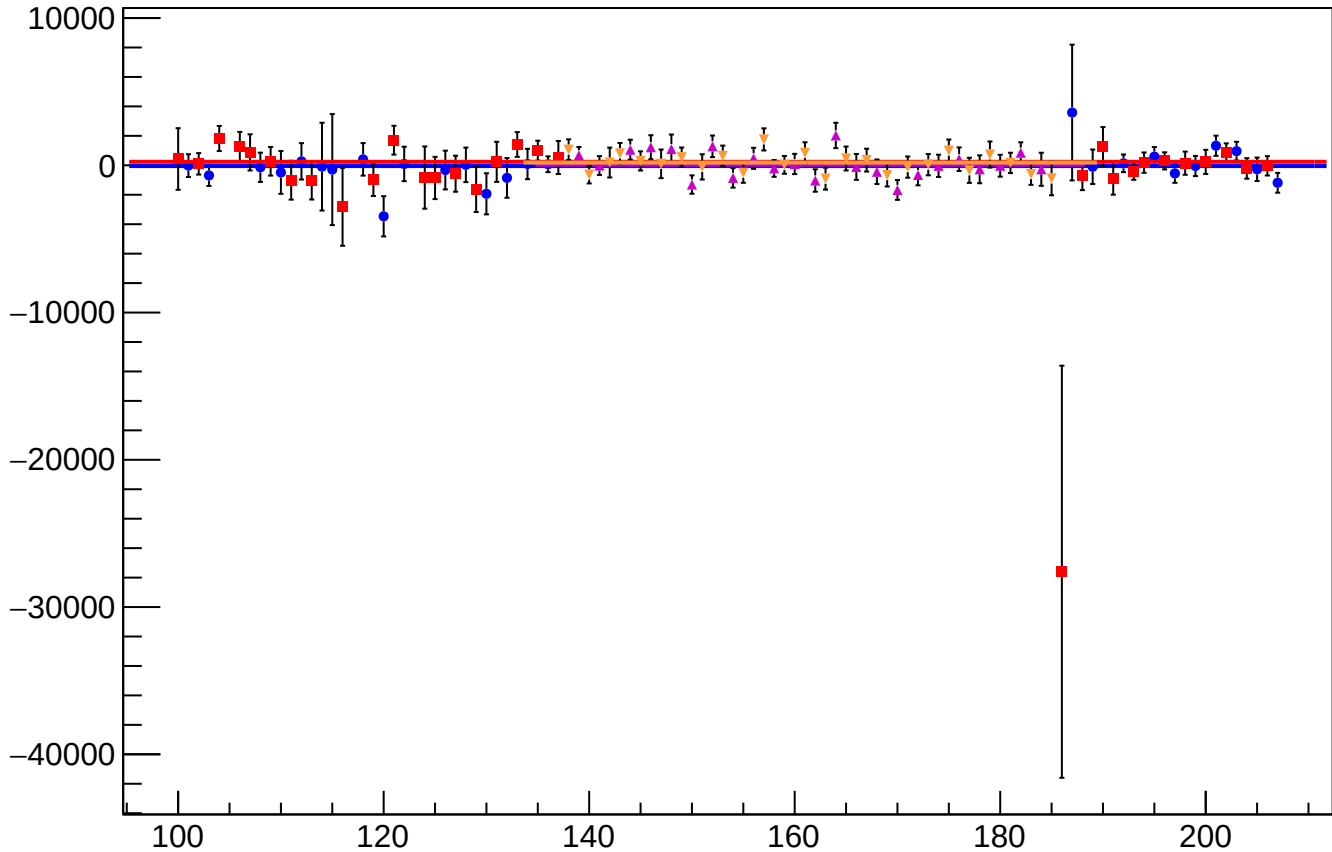
+ sign 97.451 $\pm$ 0.012  $\chi^2$ /NDF: 1216516.5/50

All: 97.478 $\pm$ 0.008  $\chi^2$ /NDF: 2901346.5/104

- sign 97.504 $\pm$ 0.012  $\chi^2$ /NDF: 1684820.2/53



# asym\_sam\_15\_dd\_reg\_correction\_mean vs Slug



Right In: -52.100 $\pm$ 172.248  $\chi^2$ /NDF: 21.5/25

Left Out: 186.456 $\pm$ 148.819  $\chi^2$ /NDF: 19.1/24

Right Out: 237.835 $\pm$ 164.978  $\chi^2$ /NDF: 27.1/30

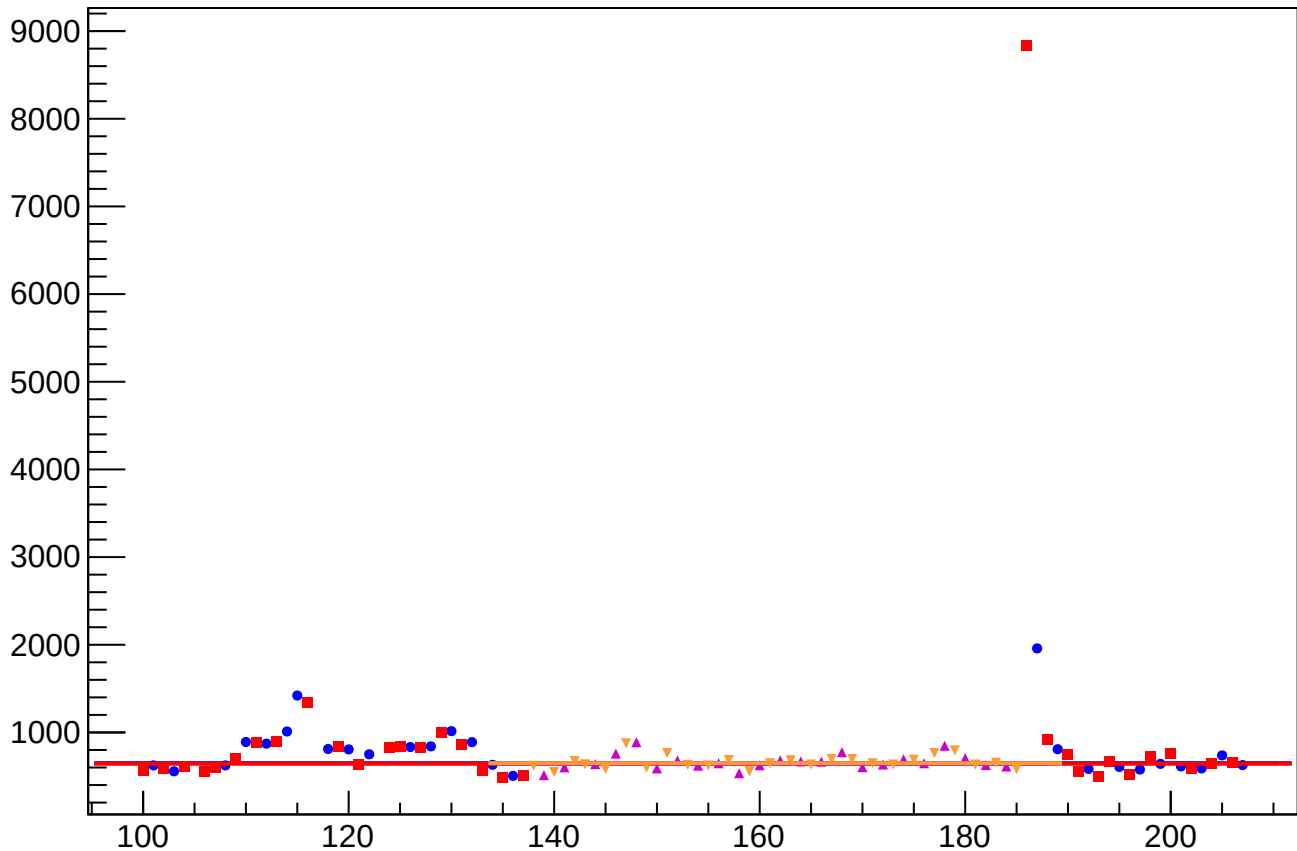
Left In: 43.249 $\pm$ 152.059  $\chi^2$ /NDF: 33.7/22

+ sign 84.494 $\pm$ 112.611  $\chi^2$ /NDF: 41.6/50

All: 108.731 $\pm$ 79.343  $\chi^2$ /NDF: 103.3/104

- sign 132.626 $\pm$ 111.811  $\chi^2$ /NDF: 61.6/53

# asym\_sam\_15\_dd\_reg\_correction\_rms vs Slug



Right In: 649.587+/-0.122  $\chi^2/\text{NDF}$ : 1101353.3/25

Left Out: 649.189+/-0.105  $\chi^2/\text{NDF}$ : 418364.7/24

Right Out: 643.779+/-0.117  $\chi^2/\text{NDF}$ : 1966867.6/30

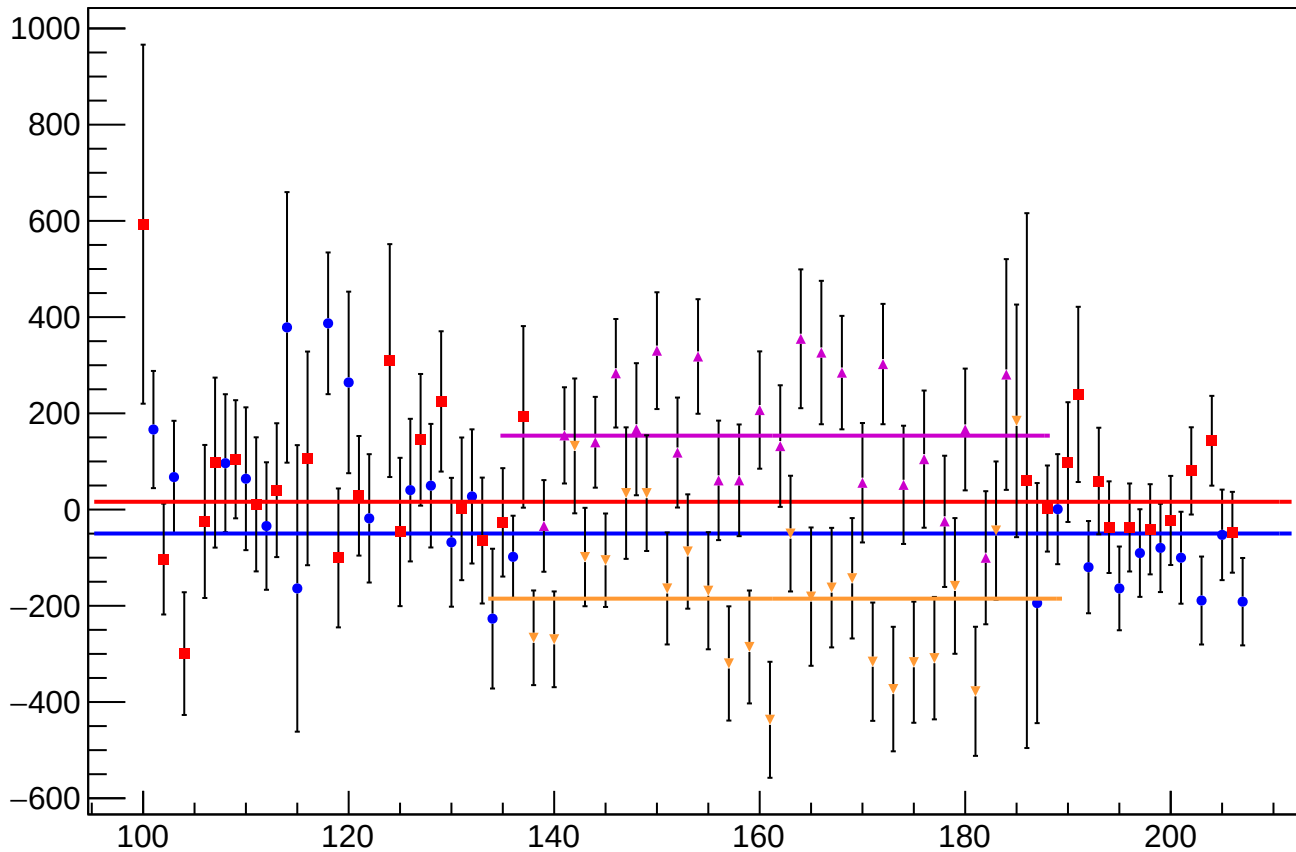
Left In: 644.072+/-0.108  $\chi^2/\text{NDF}$ : 559119.9/22

+ sign 649.359+/-0.080  $\chi^2/\text{NDF}$ : 1519724.1/50

All: 646.629+/-0.056  $\chi^2/\text{NDF}$ : 4048049.2/104

- sign 643.938+/-0.079  $\chi^2/\text{NDF}$ : 2525990.9/53

# cor\_asym\_sam\_15\_dd\_mean vs Slug



Right In:  $-49.767 \pm 23.065$   $\chi^2/\text{NDF}$ : 31.1/25

Left Out:  $-185.148 \pm 24.452$   $\chi^2/\text{NDF}$ : 33.0/24

Right Out:  $16.201 \pm 22.188$   $\chi^2/\text{NDF}$ : 23.5/30

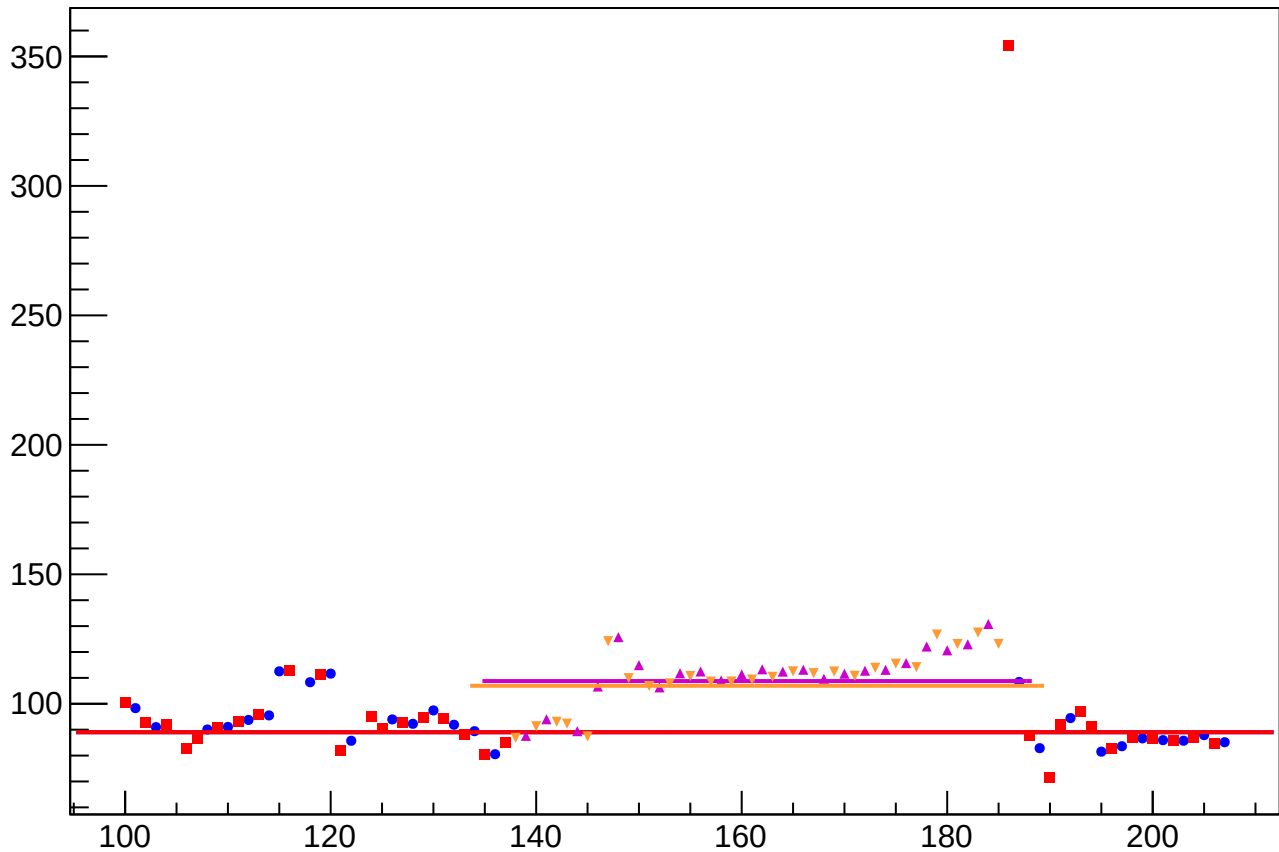
Left In:  $153.632 \pm 25.538$   $\chi^2/\text{NDF}$ : 23.5/22

+ sign  $-113.508 \pm 16.778$   $\chi^2/\text{NDF}$ : 80.4/50

All:  $-18.932 \pm 11.854$   $\chi^2/\text{NDF}$ : 207.3/104

- sign  $75.318 \pm 16.749$   $\chi^2/\text{NDF}$ : 63.5/53

# cor\_asym\_sam\_15\_dd\_rms vs Slug



Right In:  $88.997 \pm 0.016$   $\chi^2/\text{NDF}$ : 181453.2/25

Left Out:  $106.954 \pm 0.017$   $\chi^2/\text{NDF}$ : 464271.4/24

Right Out:  $89.029 \pm 0.016$   $\chi^2/\text{NDF}$ : 643104.7/30

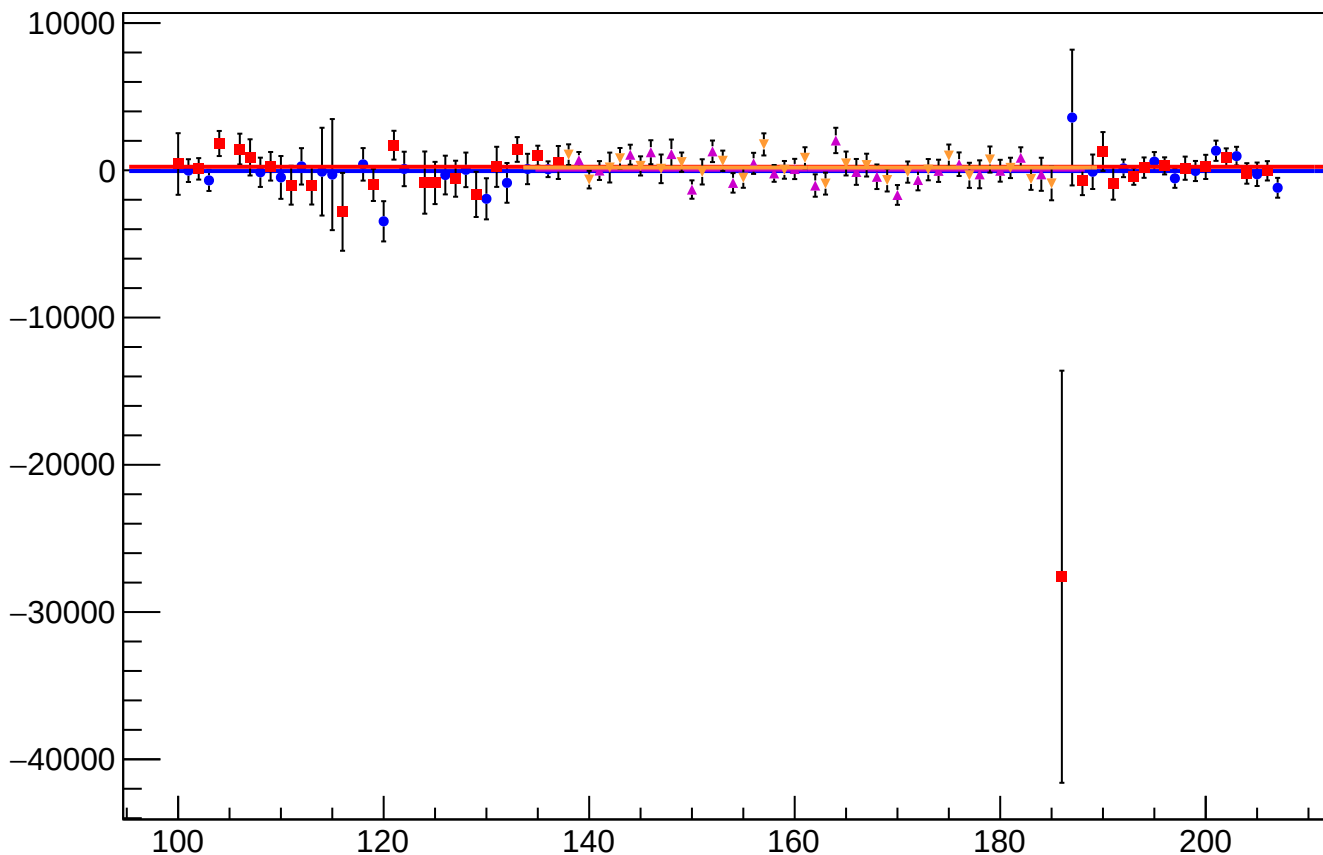
Left In:  $108.781 \pm 0.018$   $\chi^2/\text{NDF}$ : 358436.4/22

+ sign  $97.451 \pm 0.012$   $\chi^2/\text{NDF}$ : 1216516.5/50

All:  $97.488 \pm 0.008$   $\chi^2/\text{NDF}$ : 2899802.7/104

- sign  $97.525 \pm 0.012$   $\chi^2/\text{NDF}$ : 1683266.8/53

# asym\_sam\_15\_dd\_cor\_correction\_mean vs Slug



Right In:  $-52.101 \pm 172.248$   $\chi^2/\text{NDF}$ : 21.5/25

Left Out:  $186.450 \pm 148.819$   $\chi^2/\text{NDF}$ : 19.1/24

Right Out:  $238.846 \pm 165.219$   $\chi^2/\text{NDF}$ : 27.3/30

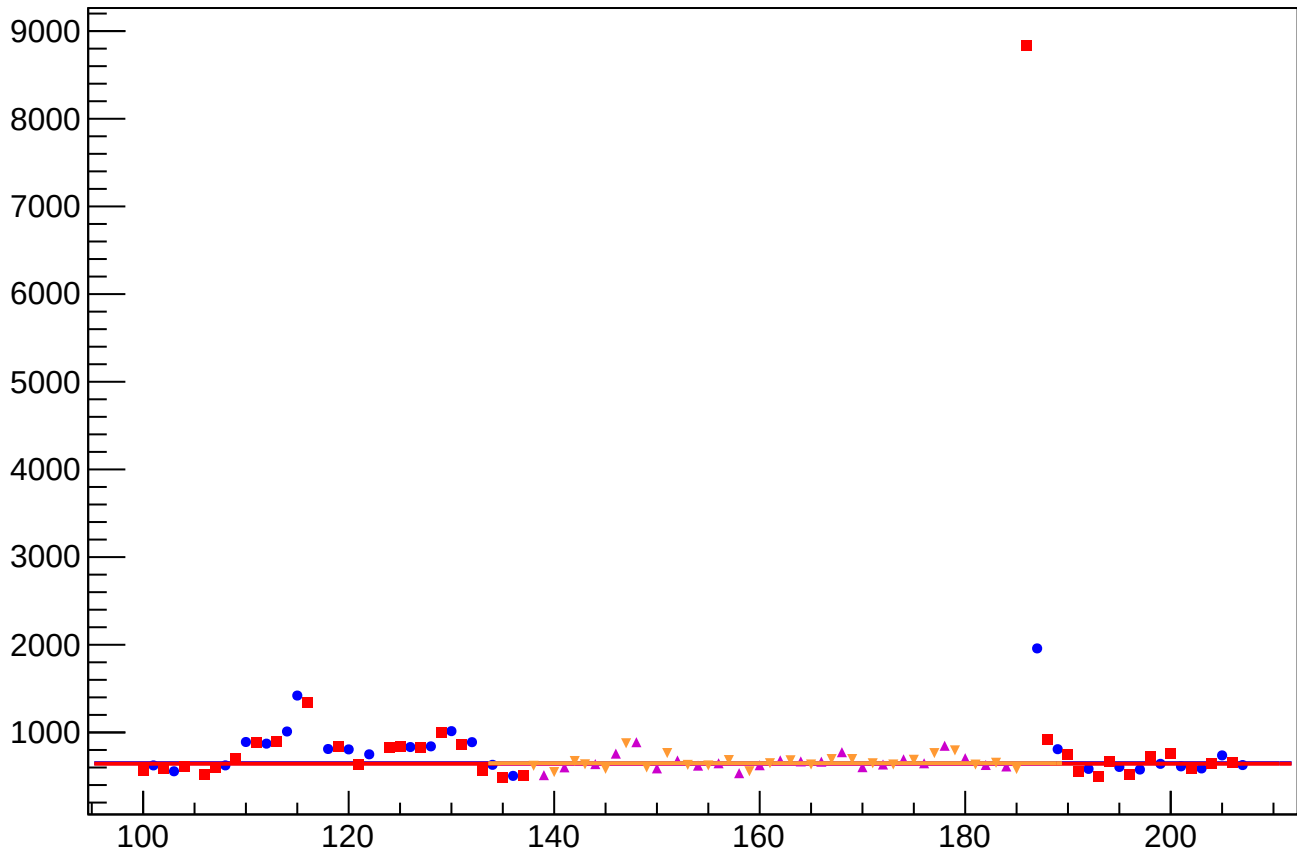
Left In:  $43.251 \pm 152.059$   $\chi^2/\text{NDF}$ : 33.7/22

+ sign  $84.490 \pm 112.611$   $\chi^2/\text{NDF}$ : 41.6/50

All:  $108.876 \pm 79.370$   $\chi^2/\text{NDF}$ : 103.5/104

- sign  $132.950 \pm 111.885$   $\chi^2/\text{NDF}$ : 61.8/53

# asym\_sam\_15\_dd\_cor\_correction\_rms vs Slug



Right In: 649.587 $\pm$ 0.122  $\chi^2$ /NDF: 1101353.9/25

Left Out: 649.189 $\pm$ 0.105  $\chi^2$ /NDF: 418365.4/24

Right Out: 643.352 $\pm$ 0.117  $\chi^2$ /NDF: 1975987.4/30

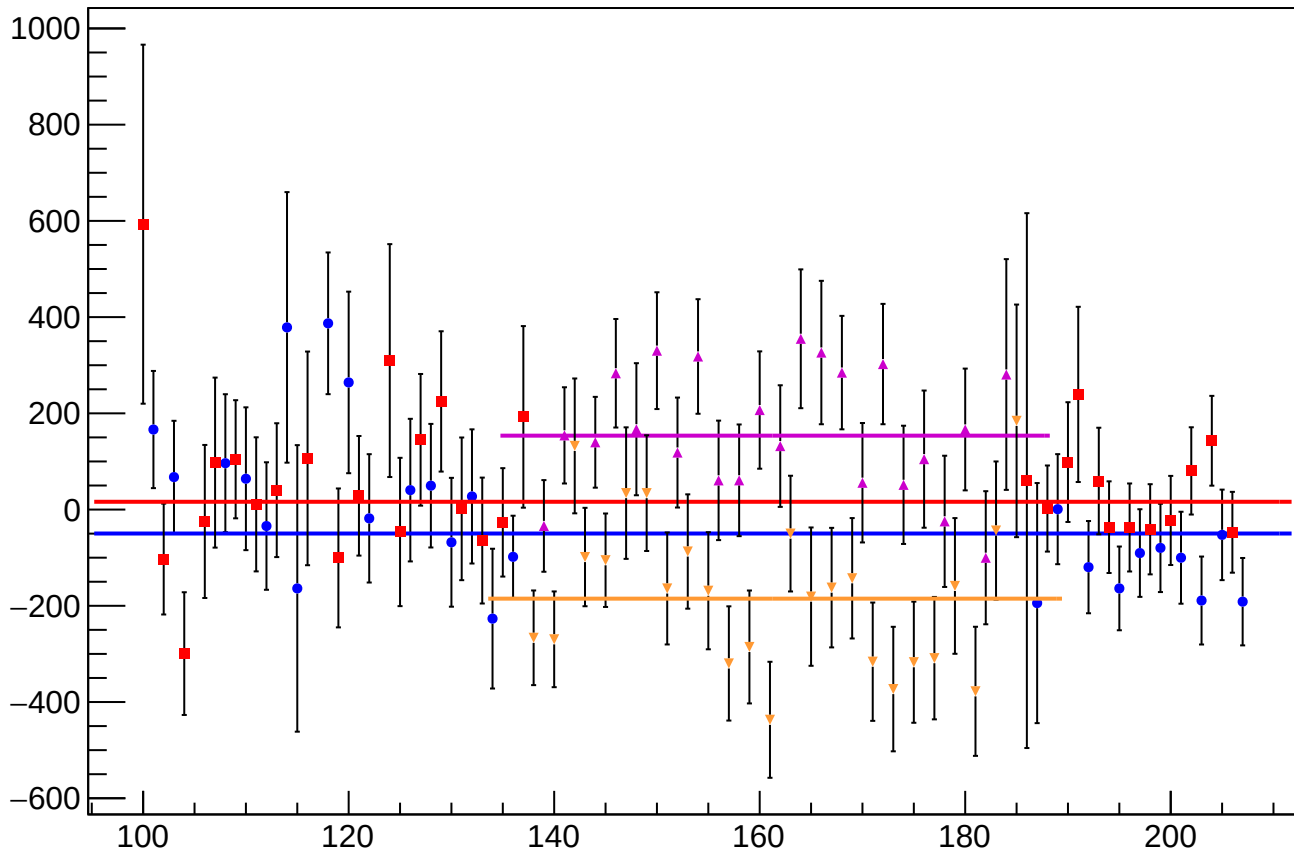
Left In: 644.072 $\pm$ 0.108  $\chi^2$ /NDF: 559121.0/22

+ sign 649.359 $\pm$ 0.080  $\chi^2$ /NDF: 1519725.4/50

All: 646.532 $\pm$ 0.056  $\chi^2$ /NDF: 4057358.3/104

- sign 643.742 $\pm$ 0.079  $\chi^2$ /NDF: 2535129.0/53

# eigen\_cor\_asym\_sam\_15\_dd\_mean vs Slug



Right In:  $-49.767 \pm 23.065$   $\chi^2/\text{NDF}$ : 31.1/25

Left Out:  $-185.148 \pm 24.452$   $\chi^2/\text{NDF}$ : 33.0/24

Right Out:  $16.201 \pm 22.188$   $\chi^2/\text{NDF}$ : 23.5/30

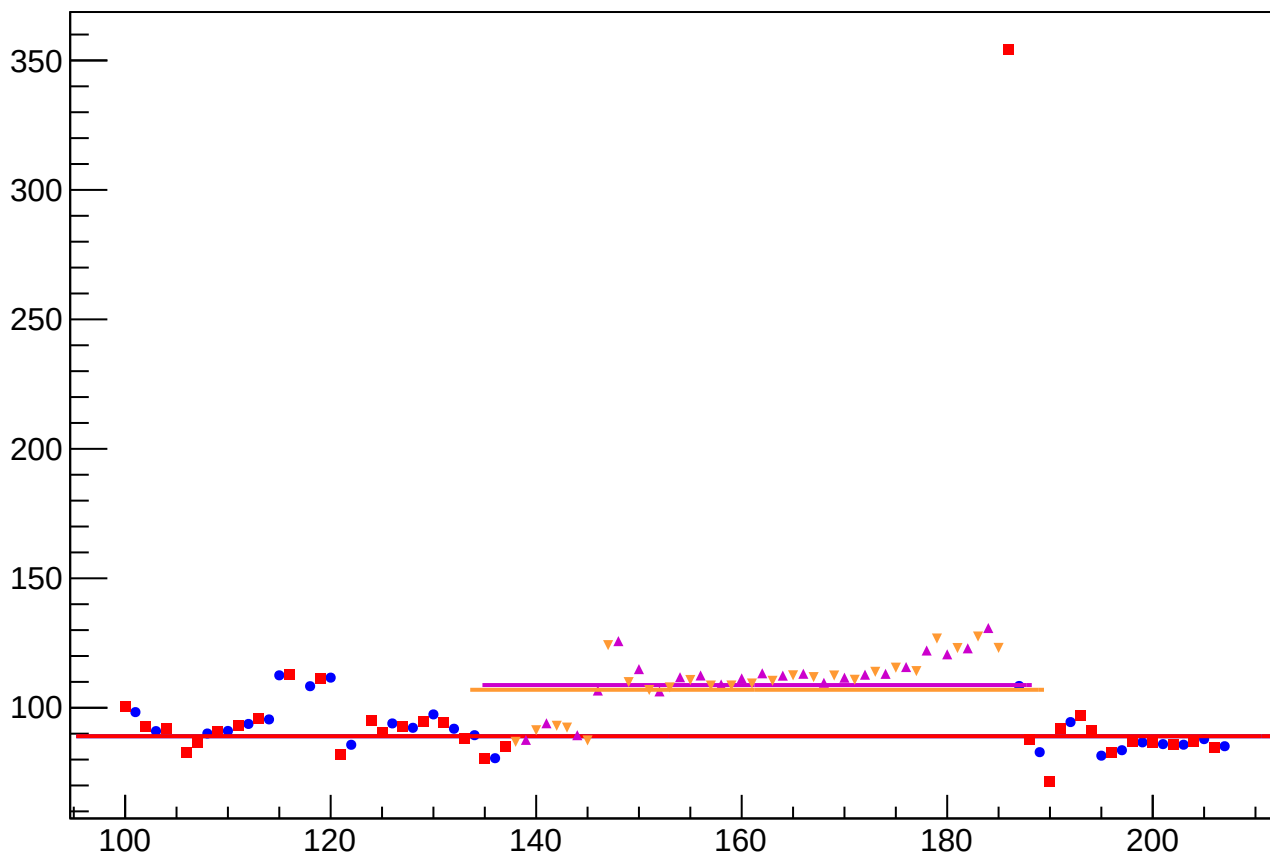
Left In:  $153.632 \pm 25.538$   $\chi^2/\text{NDF}$ : 23.5/22

+ sign  $-113.508 \pm 16.778$   $\chi^2/\text{NDF}$ : 80.4/50

All:  $-18.932 \pm 11.854$   $\chi^2/\text{NDF}$ : 207.3/104

- sign  $75.318 \pm 16.749$   $\chi^2/\text{NDF}$ : 63.5/53

# eigen\_cor\_asym\_sam\_15\_dd\_rms vs Slug



Right In: 88.997 $\pm$ 0.016  $\chi^2$ /NDF: 181453.2/25

Left Out: 106.954 $\pm$ 0.017  $\chi^2$ /NDF: 464271.4/24

Right Out: 89.029 $\pm$ 0.016  $\chi^2$ /NDF: 643104.7/30

Left In: 108.781 $\pm$ 0.018  $\chi^2$ /NDF: 358436.4/22

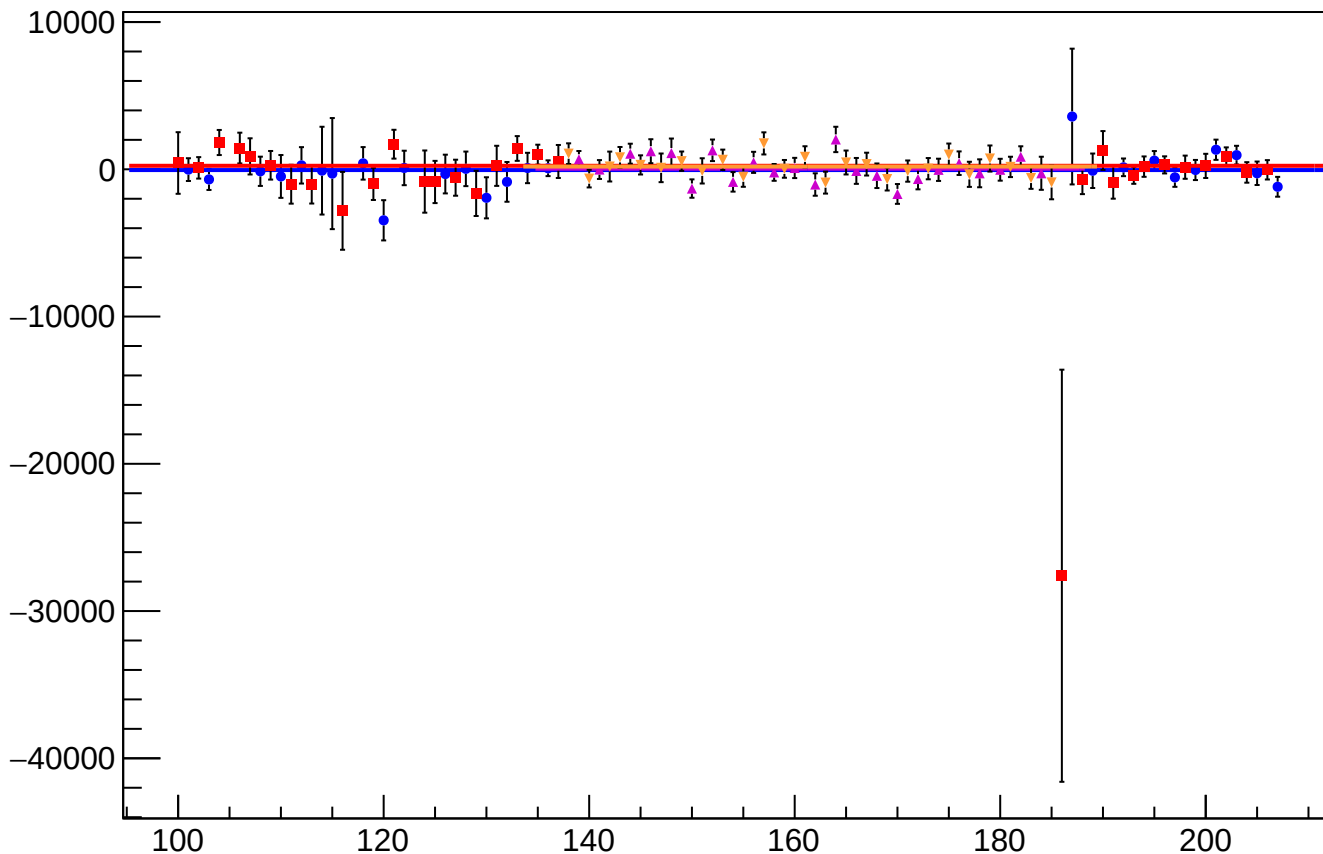
+ sign 97.451 $\pm$ 0.012  $\chi^2$ /NDF: 1216516.5/50

All: 97.488 $\pm$ 0.008  $\chi^2$ /NDF: 2899802.7/104

- sign 97.525 $\pm$ 0.012  $\chi^2$ /NDF: 1683266.8/53



asym\_sam\_15\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-52.101 \pm 172.248$   $\chi^2/\text{NDF}$ : 21.5/25

Left Out:  $186.450 \pm 148.819$   $\chi^2/\text{NDF}$ : 19.1/24

Right Out:  $238.846 \pm 165.219$   $\chi^2/\text{NDF}$ : 27.3/30

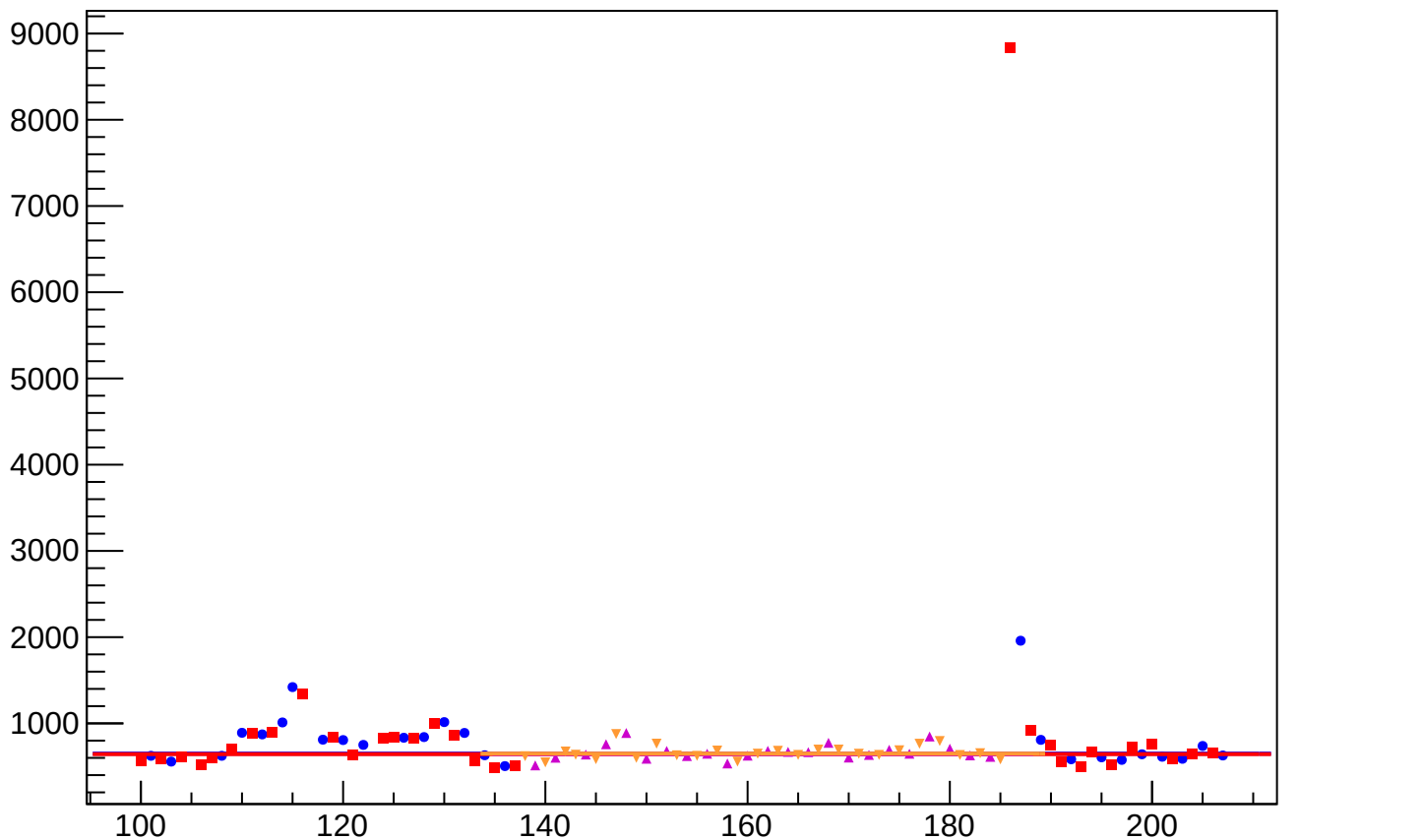
Left In:  $43.251 \pm 152.059$   $\chi^2/\text{NDF}$ : 33.7/22

+ sign  $84.490 \pm 112.611$   $\chi^2/\text{NDF}$ : 41.6/50

All:  $108.876 \pm 79.370$   $\chi^2/\text{NDF}$ : 103.5/104

- sign  $132.950 \pm 111.885$   $\chi^2/\text{NDF}$ : 61.8/53

asym\_sam\_15\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 649.587 $\pm$ 0.122  $\chi^2$ /NDF: 1101353.9/25

Left Out: 649.189 $\pm$ 0.105  $\chi^2$ /NDF: 418365.4/24

Right Out: 643.352 $\pm$ 0.117  $\chi^2$ /NDF: 1975987.4/30

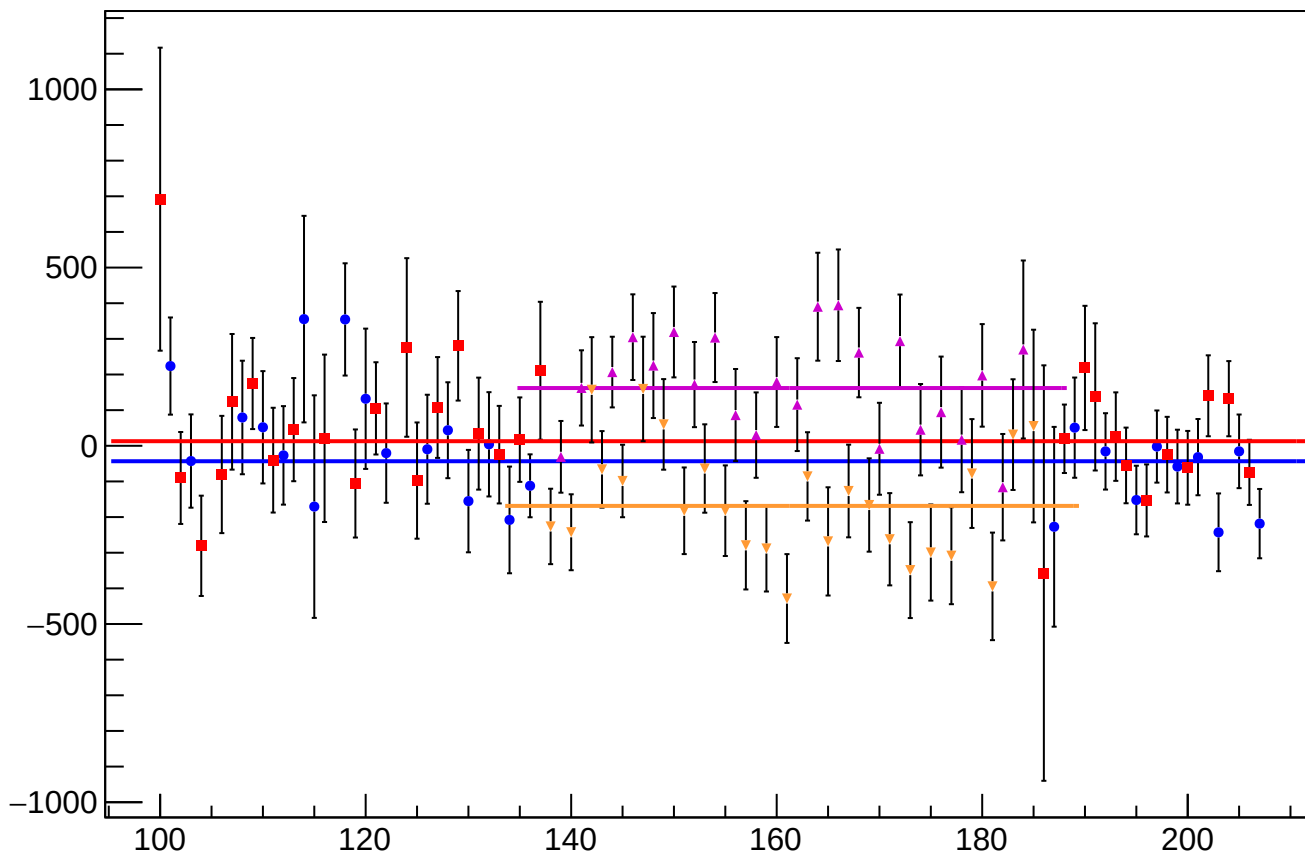
Left In: 644.072 $\pm$ 0.108  $\chi^2$ /NDF: 559121.0/22

+ sign 649.359 $\pm$ 0.080  $\chi^2$ /NDF: 1519725.4/50

All: 646.532 $\pm$ 0.056  $\chi^2$ /NDF: 4057358.3/104

- sign 643.742 $\pm$ 0.079  $\chi^2$ /NDF: 2535129.0/53

# dit\_asym\_sam\_15\_dd\_mean vs Slug



Right In:  $-43.319 \pm 25.231$   $\chi^2/\text{NDF}$ : 26.2/25

Left Out:  $-168.634 \pm 25.819$   $\chi^2/\text{NDF}$ : 32.4/24

Right Out:  $12.892 \pm 24.369$   $\chi^2/\text{NDF}$ : 26.7/30

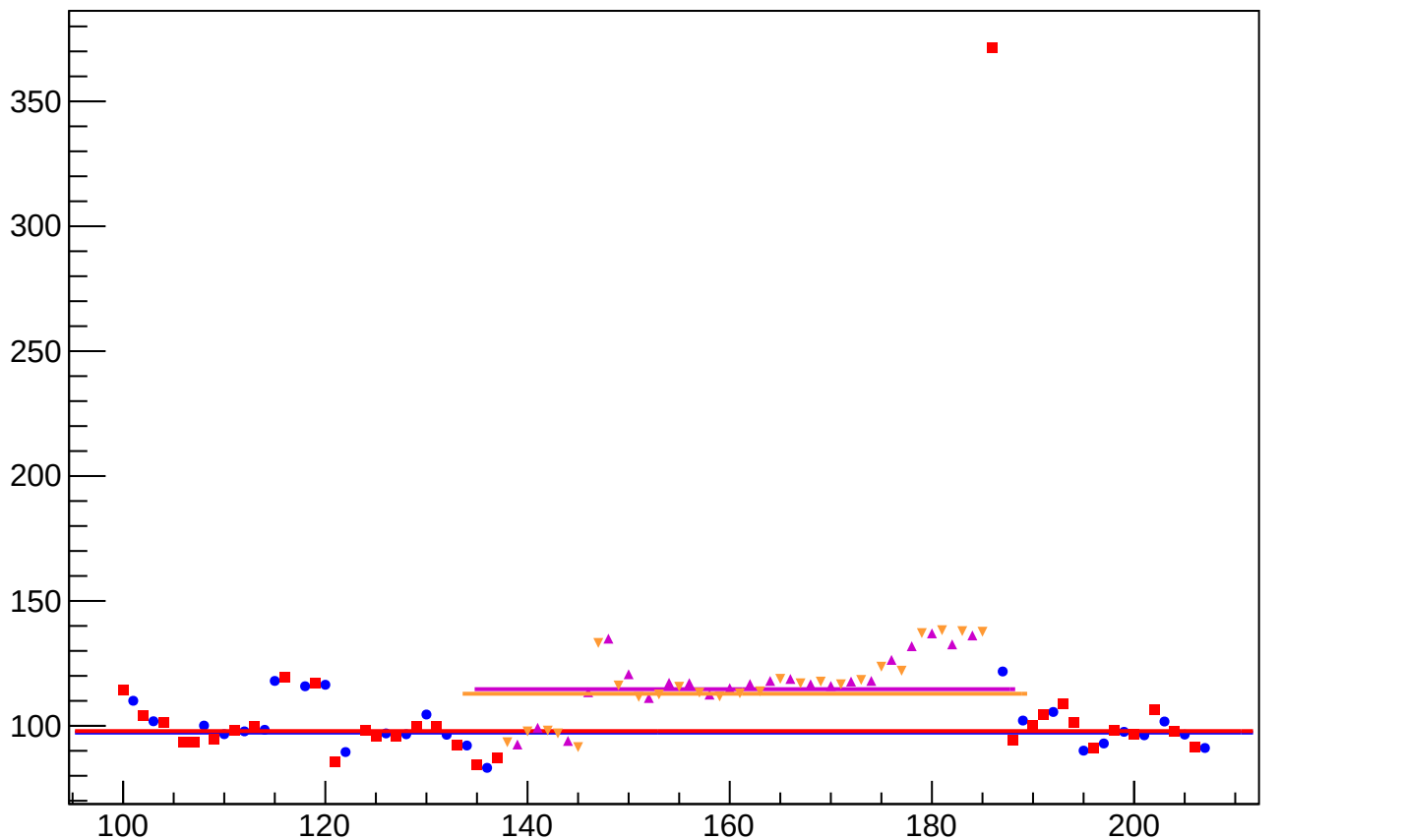
Left In:  $162.028 \pm 26.948$   $\chi^2/\text{NDF}$ : 23.6/22

+ sign  $-104.532 \pm 18.045$   $\chi^2/\text{NDF}$ : 70.6/50

All:  $-12.423 \pm 12.770$   $\chi^2/\text{NDF}$ : 189.9/104

- sign  $79.986 \pm 18.075$   $\chi^2/\text{NDF}$ : 67.1/53

dit\_asym\_sam\_15\_dd\_rms vs Slug



Right In: 97.293 $\pm$ 0.018  $\chi^2$ /NDF: 197087.5/25

Left Out: 112.850 $\pm$ 0.018  $\chi^2$ /NDF: 512260.6/24

Right Out: 97.897 $\pm$ 0.017  $\chi^2$ /NDF: 609583.3/30

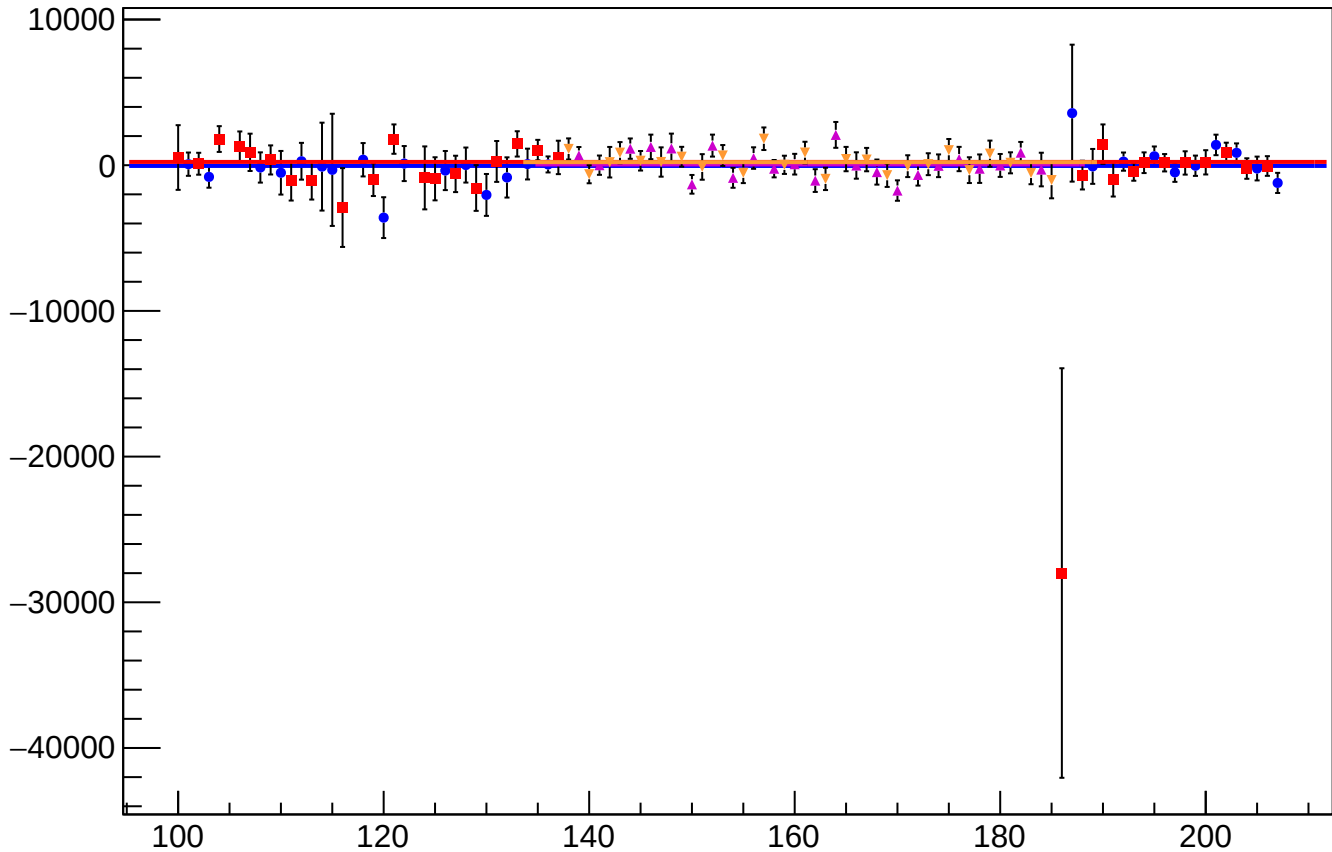
Left In: 114.677 $\pm$ 0.019  $\chi^2$ /NDF: 409932.2/22

+ sign 104.892 $\pm$ 0.013  $\chi^2$ /NDF: 1080760.0/50

All: 105.168 $\pm$ 0.009  $\chi^2$ /NDF: 2527842.4/104

- sign 105.446 $\pm$ 0.013  $\chi^2$ /NDF: 1446140.6/53

# asym\_sam\_15\_dd\_dit\_correction\_mean vs Slug



Right In:  $-50.128 \pm 177.082$   $\chi^2/\text{NDF}$ : 21.4/25

Left Out:  $209.377 \pm 153.925$   $\chi^2/\text{NDF}$ : 18.9/24

Right Out:  $226.370 \pm 170.203$   $\chi^2/\text{NDF}$ : 27.0/30

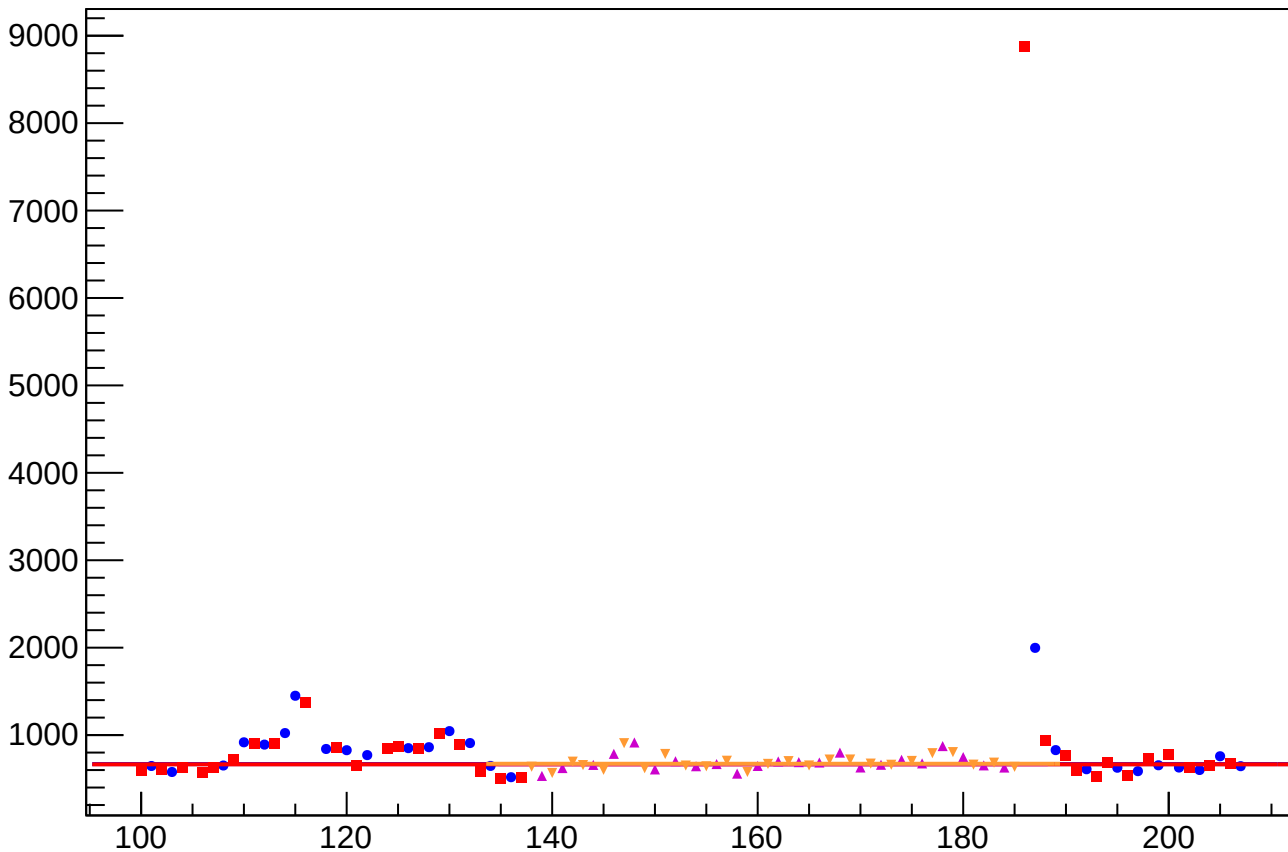
Left In:  $50.266 \pm 157.485$   $\chi^2/\text{NDF}$ : 33.3/22

+ sign  $97.690 \pm 116.172$   $\chi^2/\text{NDF}$ : 41.5/50

All:  $114.677 \pm 81.941$   $\chi^2/\text{NDF}$ : 102.5/104

- sign  $131.494 \pm 115.594$   $\chi^2/\text{NDF}$ : 60.9/53

## asym\_sam\_15\_dd\_dit\_correction\_rms vs Slug



Right In: 668.199+/-0.125     $\chi^2/\text{NDF}$ : 1088777.6/25

Left Out: 671.849+/-0.109     $\chi^2/\text{NDF}$ :399159.9/24

Right Out:  $665.262 \pm 0.120$      $\chi^2/\text{NDF}$ : 1888700.5/30

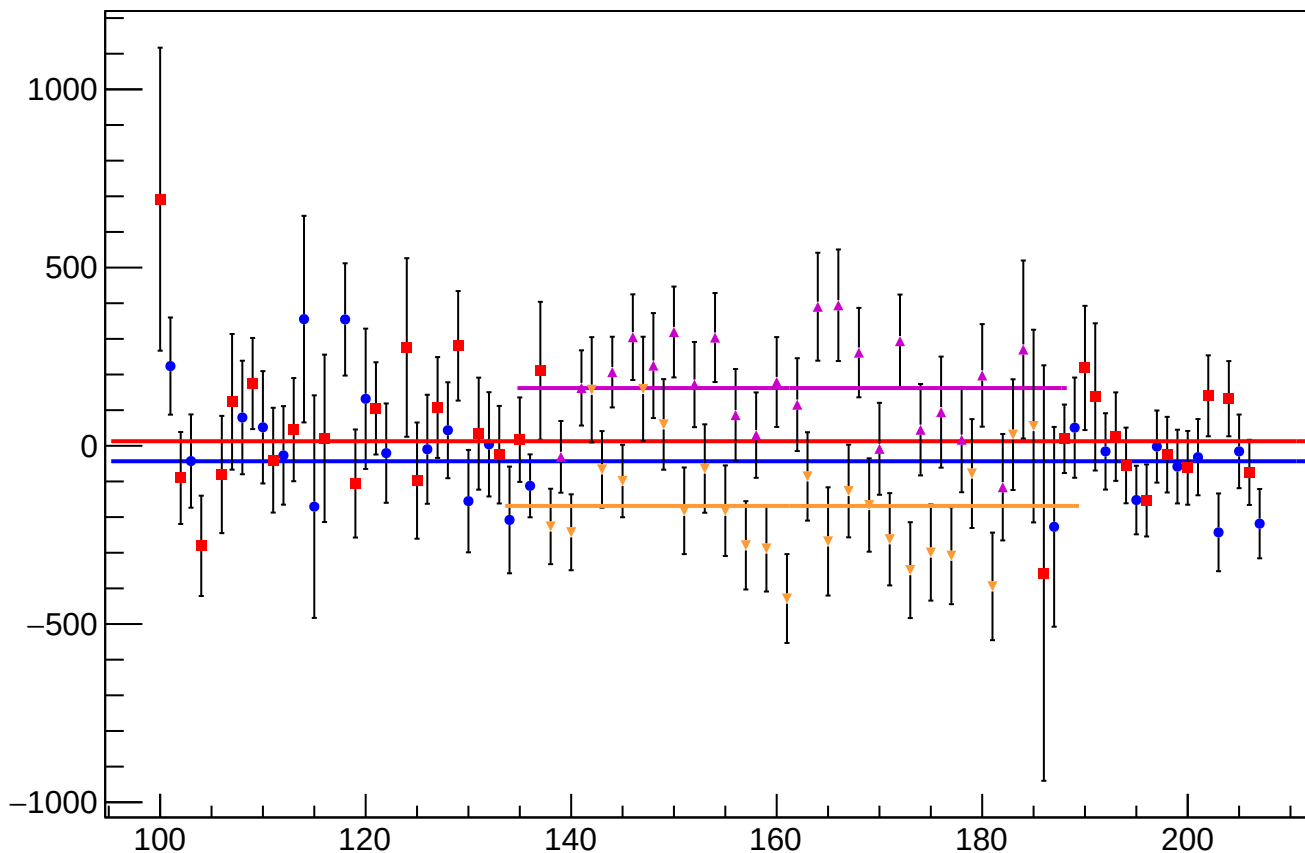
Left In: 667.341+/-0.111     $\chi^2/\text{NDF}$ :546903.6/22

+ sign 670.278+/-0.082     $\chi^2/\text{NDF}$ : 1488421.5/50

All: 668.320+/-0.058     $\chi^2/\text{NDF}$ : 3925316.5/104

- sign 666.382+/-0.082     $\chi^2/\text{NDF}$ : 2435765.0/53

# eigen\_dit\_asym\_sam\_15\_dd\_mean vs Slug



Right In:  $-43.319 \pm 25.231$   $\chi^2/\text{NDF}$ : 26.2/25

Left Out:  $-168.635 \pm 25.819$   $\chi^2/\text{NDF}$ : 32.4/24

Right Out:  $12.892 \pm 24.369$   $\chi^2/\text{NDF}$ : 26.7/30

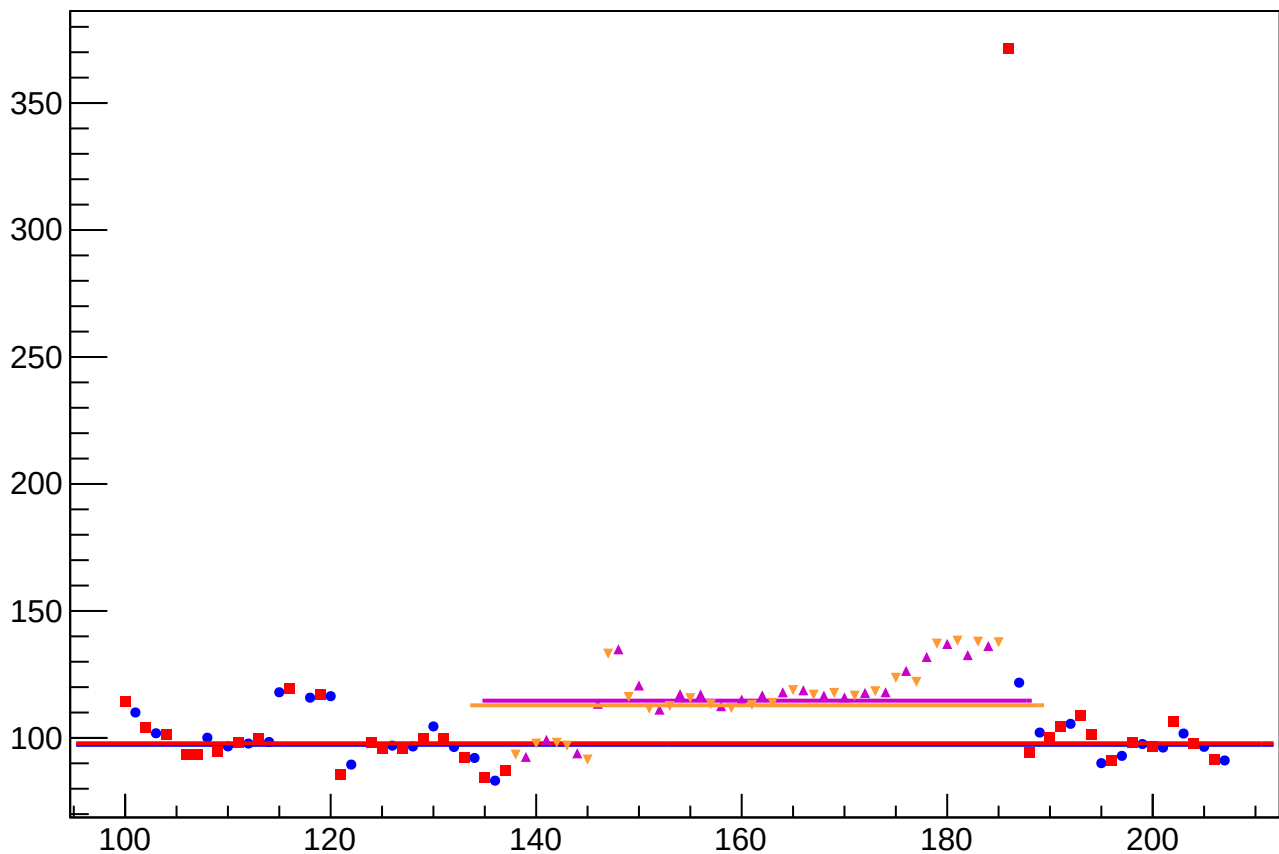
Left In:  $162.028 \pm 26.948$   $\chi^2/\text{NDF}$ : 23.6/22

+ sign  $-104.532 \pm 18.045$   $\chi^2/\text{NDF}$ : 70.6/50

All:  $-12.423 \pm 12.770$   $\chi^2/\text{NDF}$ : 189.9/104

- sign  $79.986 \pm 18.075$   $\chi^2/\text{NDF}$ : 67.1/53

# eigen\_dit\_asym\_sam\_15\_dd\_rms vs Slug



Right In: 97.292 $\pm$ 0.018     $\chi^2$ /NDF: 197092.0/25

Left Out: 112.850 $\pm$ 0.018     $\chi^2$ /NDF: 512254.2/24

Right Out: 97.897 $\pm$ 0.017     $\chi^2$ /NDF: 609584.4/30

Left In: 114.677 $\pm$ 0.019     $\chi^2$ /NDF: 409929.2/22

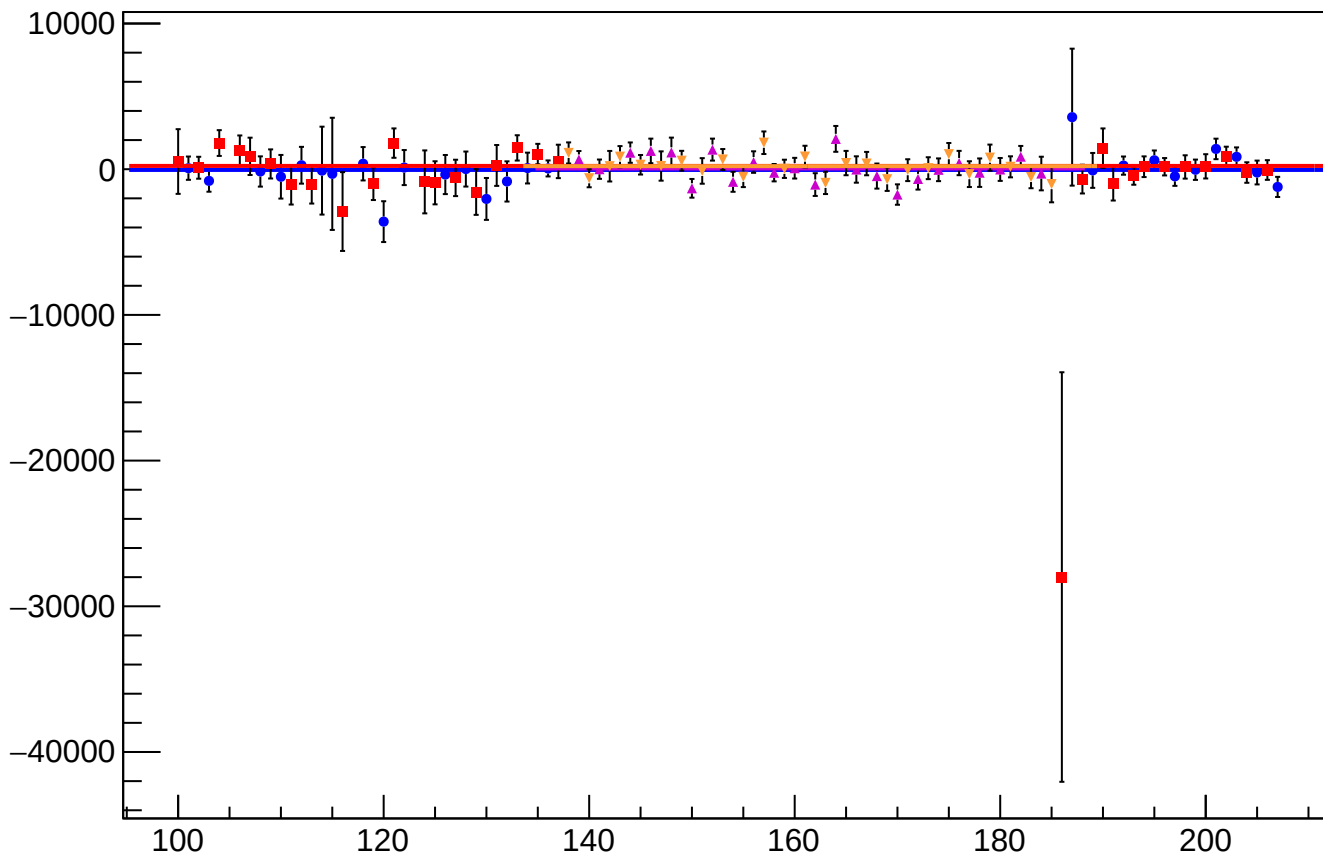
+ sign 104.892 $\pm$ 0.013     $\chi^2$ /NDF: 1080767.7/50

All: 105.168 $\pm$ 0.009     $\chi^2$ /NDF: 2527859.7/104

- sign 105.446 $\pm$ 0.013     $\chi^2$ /NDF: 1446150.1/53



asym\_sam\_15\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-50.128 \pm 177.082$   $\chi^2/\text{NDF}$ : 21.4/25

Left Out:  $209.377 \pm 153.926$   $\chi^2/\text{NDF}$ : 18.9/24

Right Out:  $226.370 \pm 170.203$   $\chi^2/\text{NDF}$ : 27.0/30

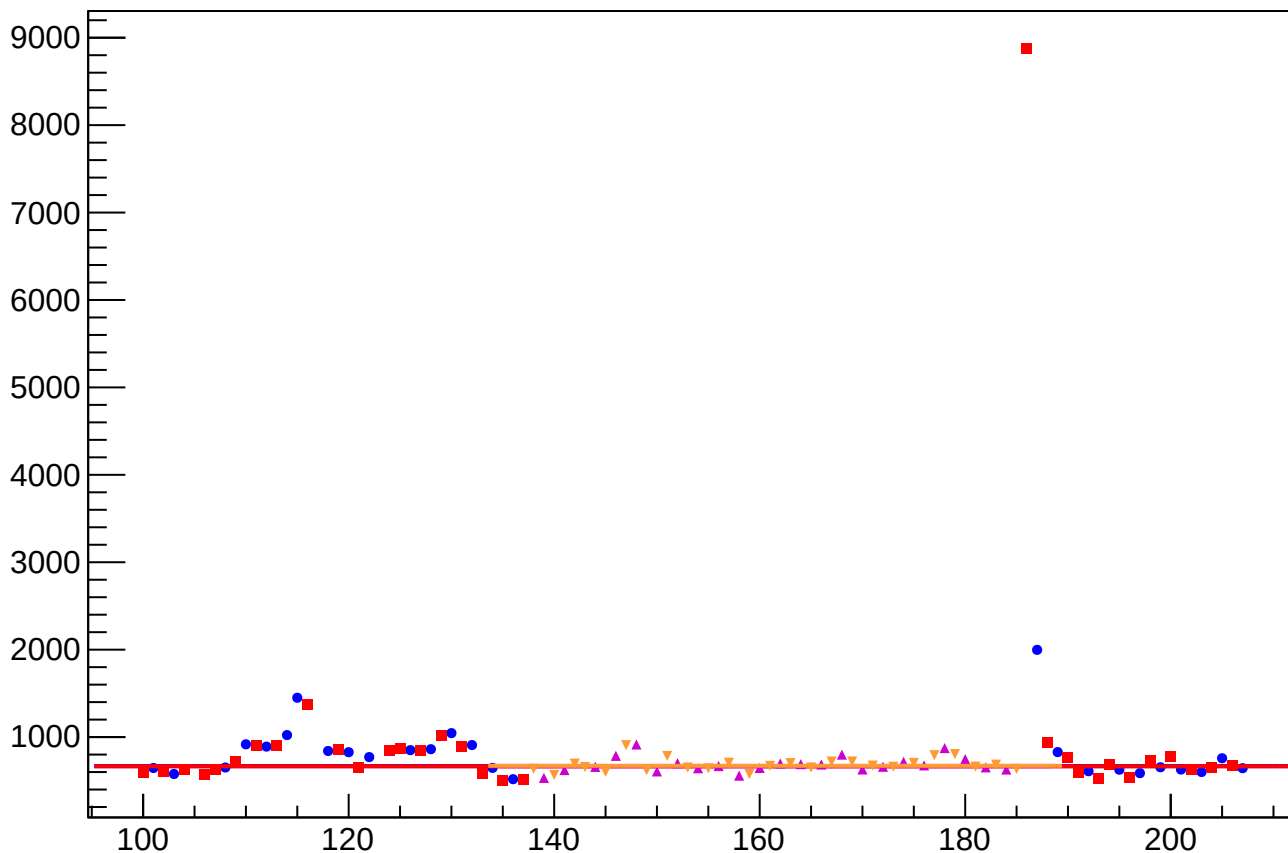
Left In:  $50.267 \pm 157.485$   $\chi^2/\text{NDF}$ : 33.3/22

+ sign  $97.690 \pm 116.172$   $\chi^2/\text{NDF}$ : 41.5/50

All:  $114.677 \pm 81.941$   $\chi^2/\text{NDF}$ : 102.5/104

- sign  $131.494 \pm 115.594$   $\chi^2/\text{NDF}$ : 60.9/53

## asym\_sam\_15\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 668.198+/-0.125     $\chi^2/\text{NDF}$ : 1088778.1/25

Left Out: 671.849+/-0.109     $\chi^2/\text{NDF}$ :399160.3/24

Right Out: 665.261+/-0.120     $\chi^2/\text{NDF}$ : 1888705.1/30

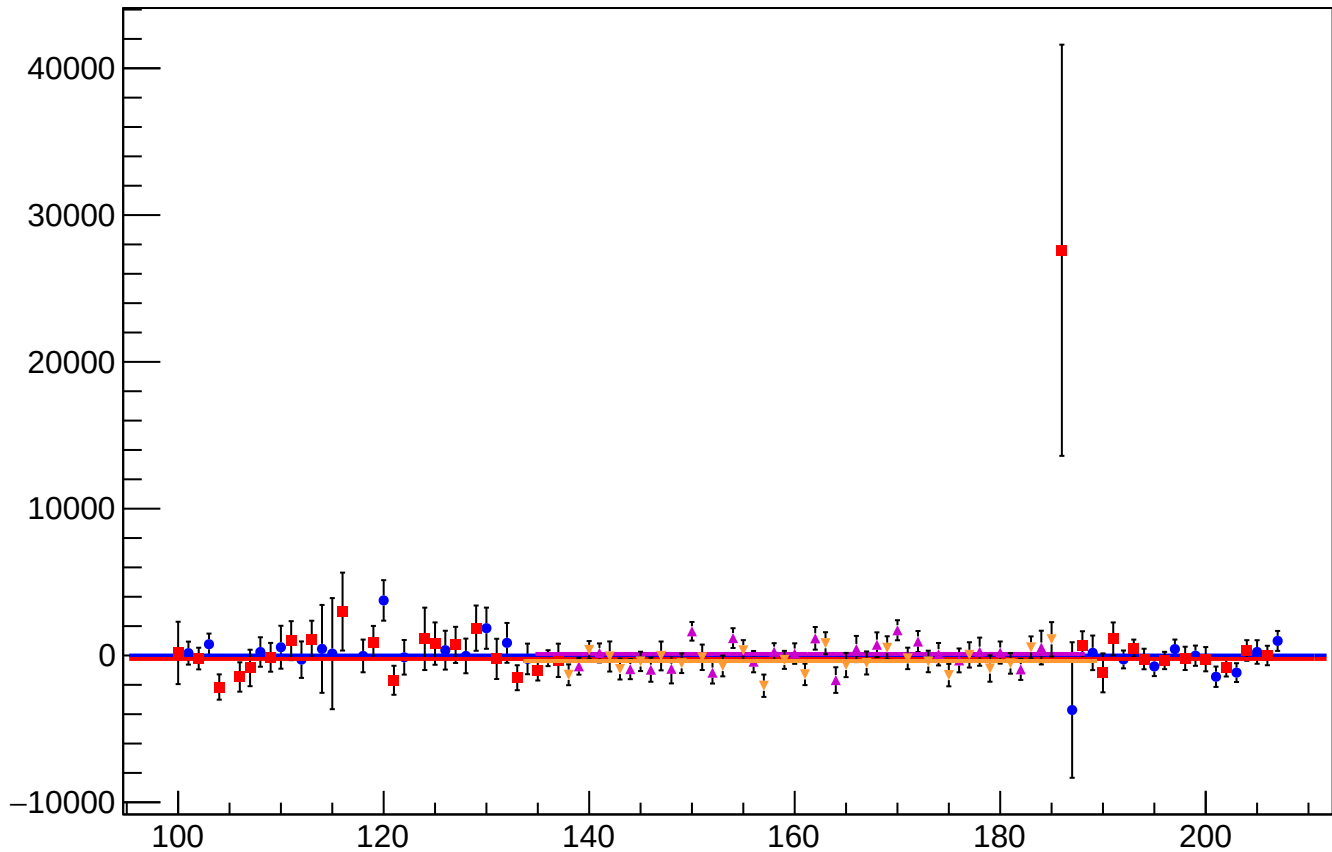
Left In: 667.342+/-0.111     $\chi^2/\text{NDF}$ :546905.8/22

+ sign 670.278+/-0.082     $\chi^2/\text{NDF}$ : 1488422.7/50

All: 668.320+/-0.058     $\chi^2/\text{NDF}$ : 3925324.5/104

- sign 666.382+/-0.082     $\chi^2/\text{NDF}$ : 2435771.9/53

# asym\_sam\_15\_dd\_mean vs Slug



Right In:  $-4.294 \pm 174.011$   $\chi^2/\text{NDF}$ : 23.7/25

Left Out:  $-377.221 \pm 150.952$   $\chi^2/\text{NDF}$ : 21.4/24

Right Out:  $-234.745 \pm 166.762$   $\chi^2/\text{NDF}$ : 30.3/30

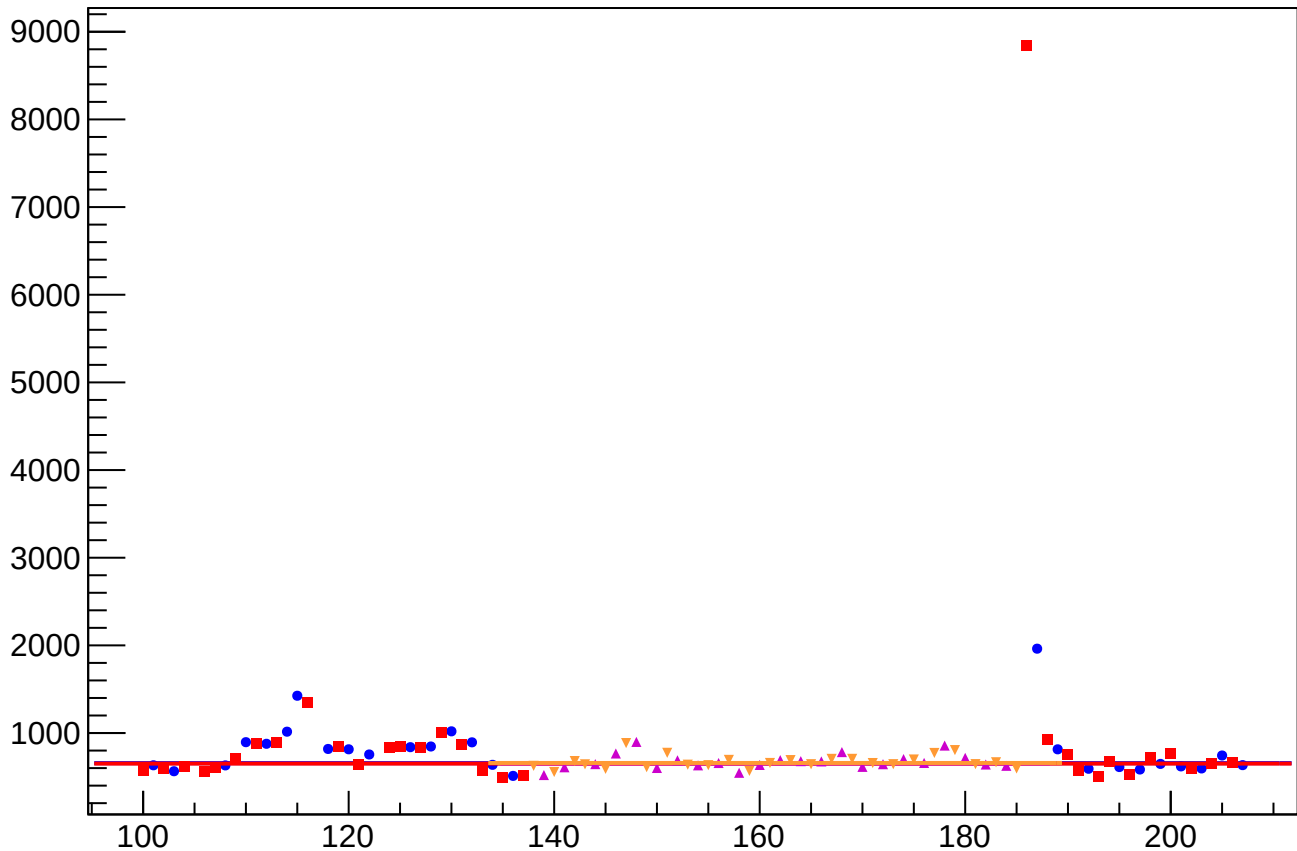
Left In:  $103.321 \pm 154.335$   $\chi^2/\text{NDF}$ : 35.5/22

+ sign  $-217.088 \pm 114.026$   $\chi^2/\text{NDF}$ : 47.8/50

All:  $-134.321 \pm 80.360$   $\chi^2/\text{NDF}$ : 116.9/104

- sign  $-52.648 \pm 113.270$   $\chi^2/\text{NDF}$ : 68.1/53

# asym\_sam\_15\_dd\_rms vs Slug



Right In: 656.644 $\pm$ 0.123  $\chi^2$ /NDF: 1077346.6/25

Left Out: 658.672 $\pm$ 0.107  $\chi^2$ /NDF: 409684.4/24

Right Out: 651.322 $\pm$ 0.118  $\chi^2$ /NDF: 1927542.9/30

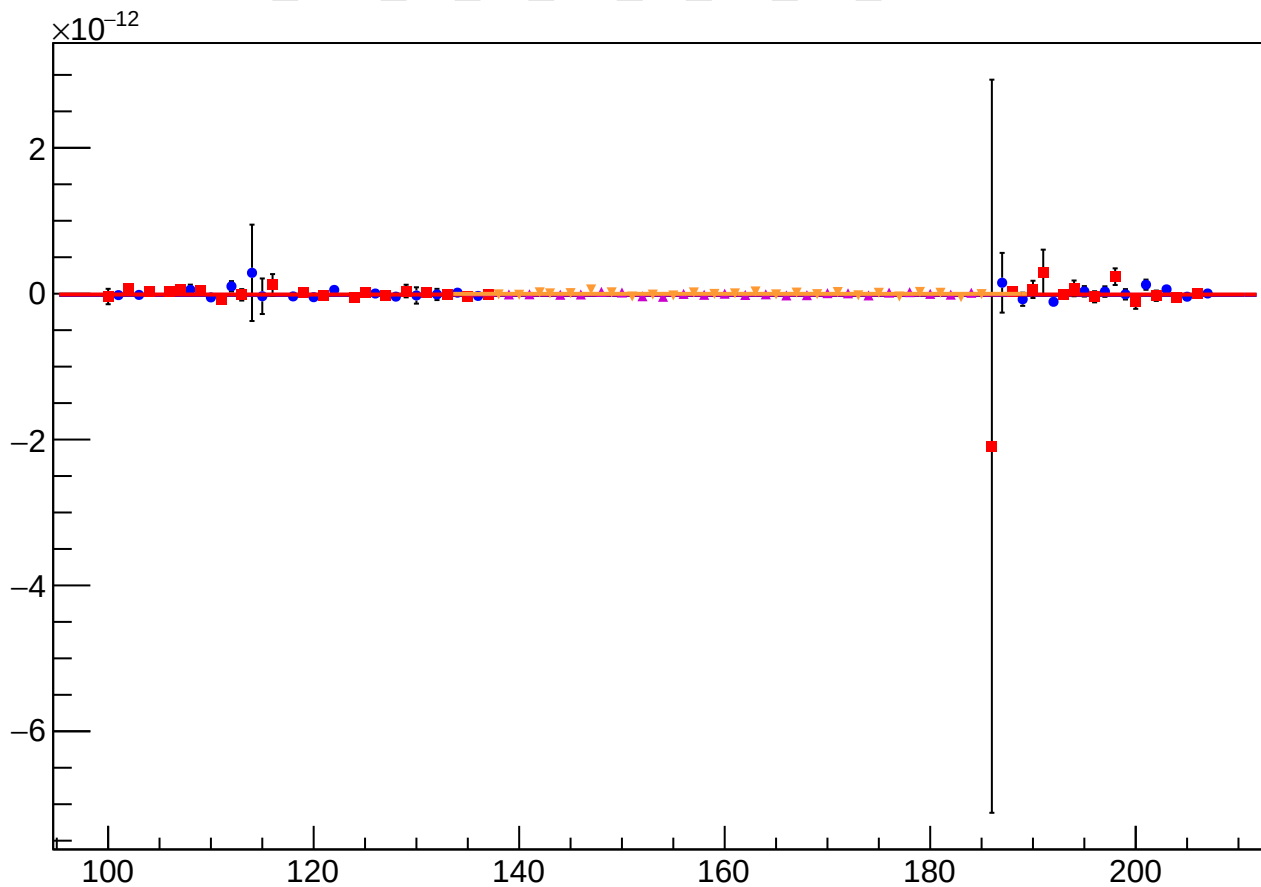
Left In: 653.950 $\pm$ 0.109  $\chi^2$ /NDF: 542078.1/22

+ sign 657.801 $\pm$ 0.081  $\chi^2$ /NDF: 1487186.0/50

All: 655.253 $\pm$ 0.057  $\chi^2$ /NDF: 3959059.9/104

- sign 652.738 $\pm$ 0.080  $\chi^2$ /NDF: 2469888.6/53

# asym\_sam\_15\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2$ /NDF: 19.9/25

Left Out: -0.000+/-0.000  $\chi^2$ /NDF: 31.8/24

Right Out: -0.000+/-0.000  $\chi^2$ /NDF: 26.3/30

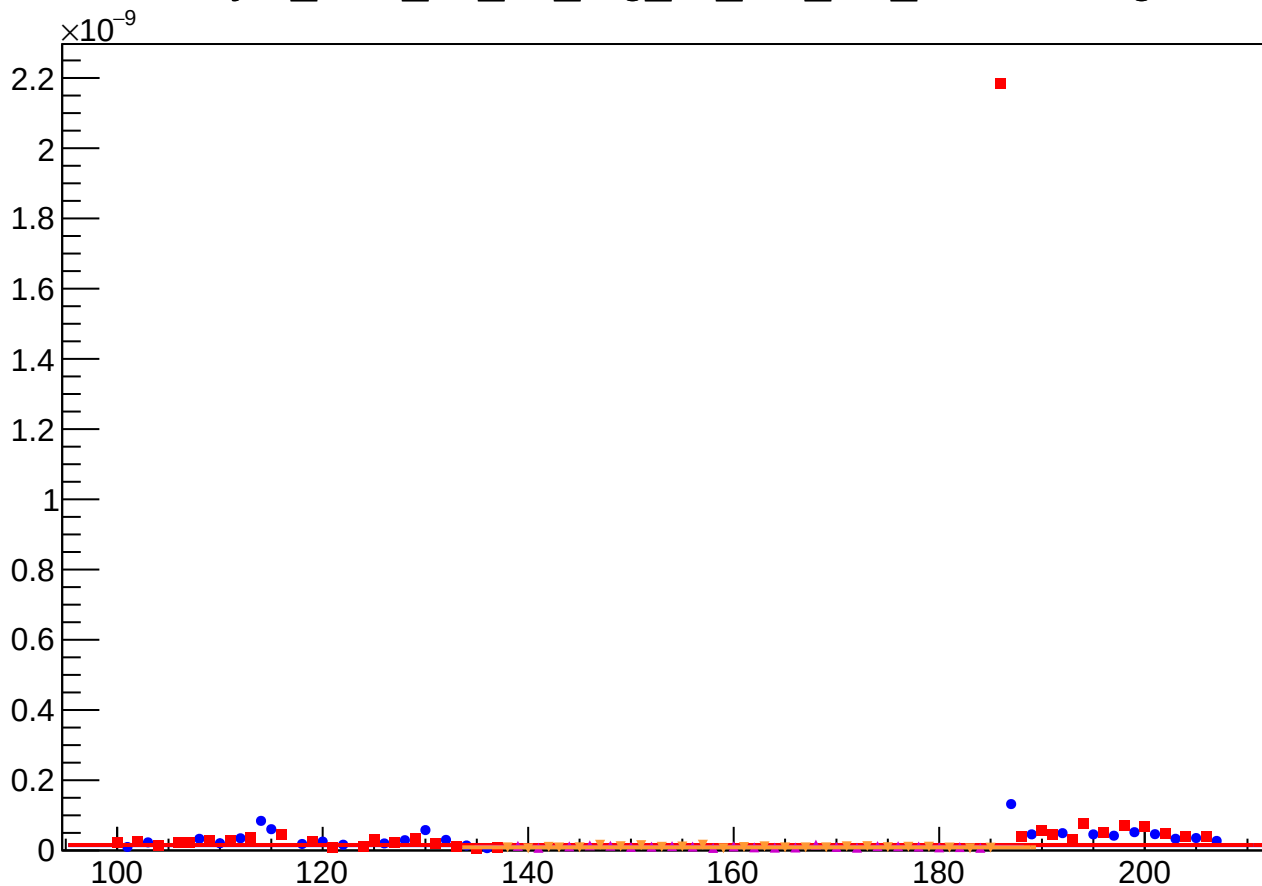
Left In: -0.000+/-0.000  $\chi^2$ /NDF: 15.6/22

+ sign -0.000+/-0.000  $\chi^2$ /NDF: 55.4/50

All: -0.000+/-0.000  $\chi^2$ /NDF: 98.2/104

- sign -0.000+/-0.000  $\chi^2$ /NDF: 42.1/53

# asym\_sam\_15\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 5632300.1/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:1037287.1/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 7075250.6/30

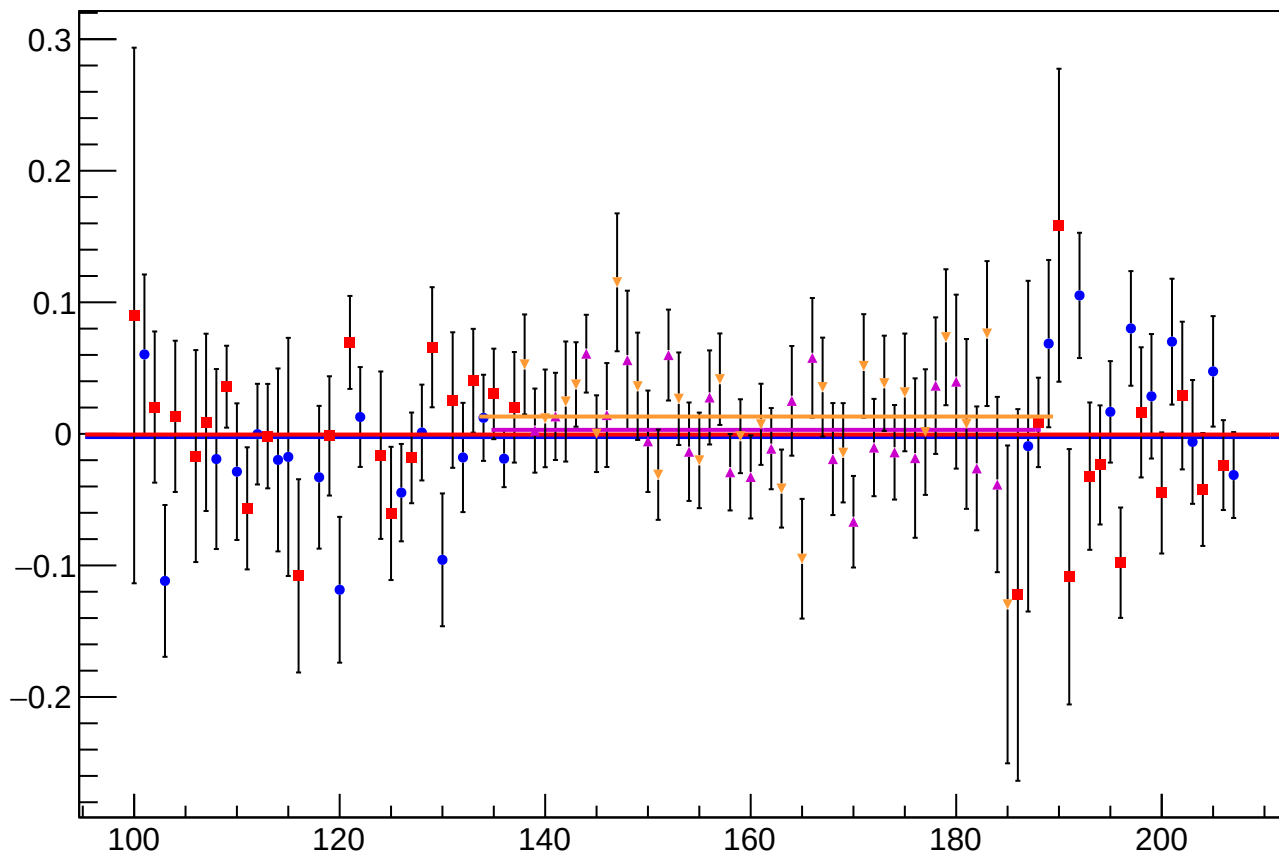
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:659247.6/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 7843024.4/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 16564978.4/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 8566765.6/53

# asym\_sam\_15\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.002 \pm 0.008$   $\chi^2/\text{NDF}$ : 30.7/25

Left Out:  $0.013 \pm 0.008$   $\chi^2/\text{NDF}$ : 25.4/24

Right Out:  $-0.001 \pm 0.008$   $\chi^2/\text{NDF}$ : 28.1/30

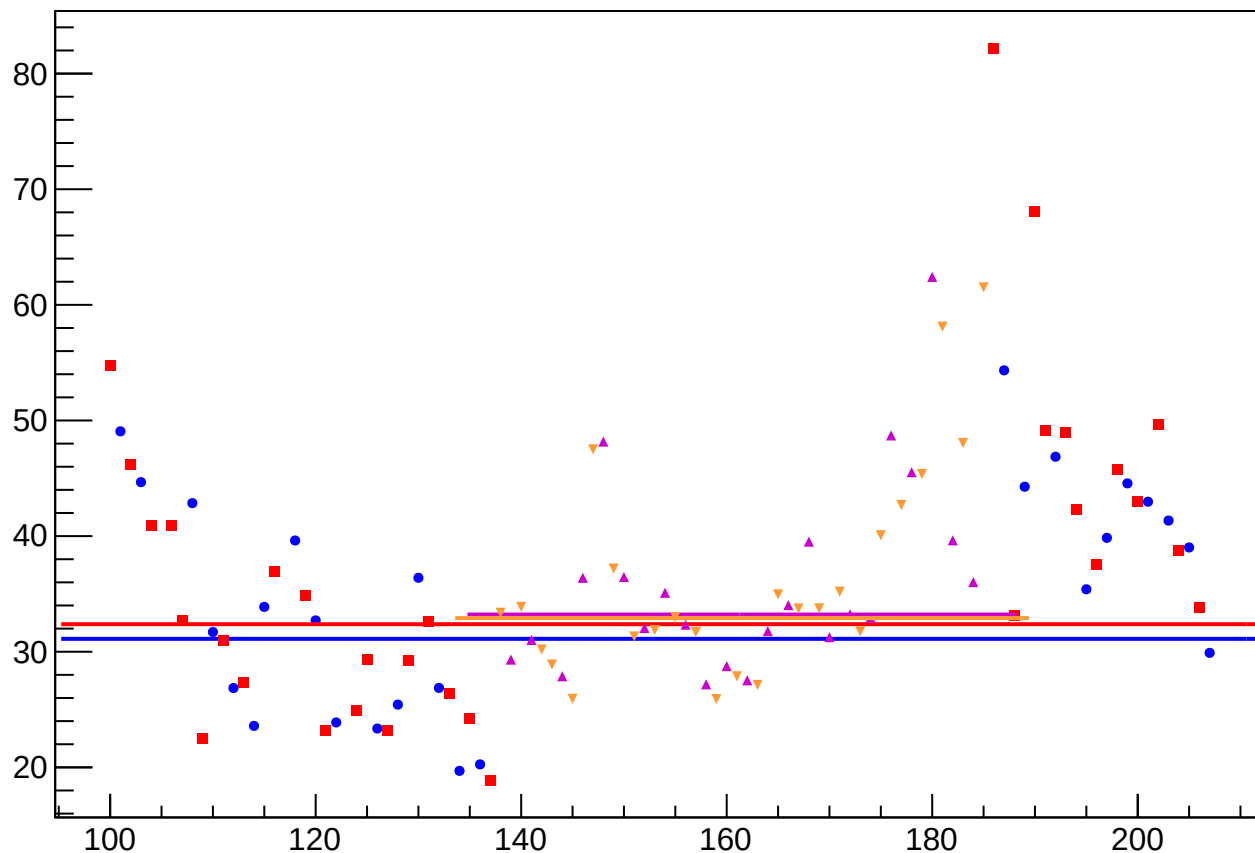
Left In:  $0.003 \pm 0.008$   $\chi^2/\text{NDF}$ : 19.2/22

+ sign  $0.006 \pm 0.006$   $\chi^2/\text{NDF}$ : 57.9/50

All:  $0.004 \pm 0.004$   $\chi^2/\text{NDF}$ : 105.7/104

- sign  $0.001 \pm 0.006$   $\chi^2/\text{NDF}$ : 47.4/53

# asym\_sam\_15\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 31.116 $\pm$ 0.006  $\chi^2$ /NDF: 2374734.5/25

Left Out: 32.907 $\pm$ 0.005  $\chi^2$ /NDF: 1427924.1/24

Right Out: 32.379 $\pm$ 0.006  $\chi^2$ /NDF: 2420104.2/30

Left In: 33.217 $\pm$ 0.006  $\chi^2$ /NDF: 1221447.0/22

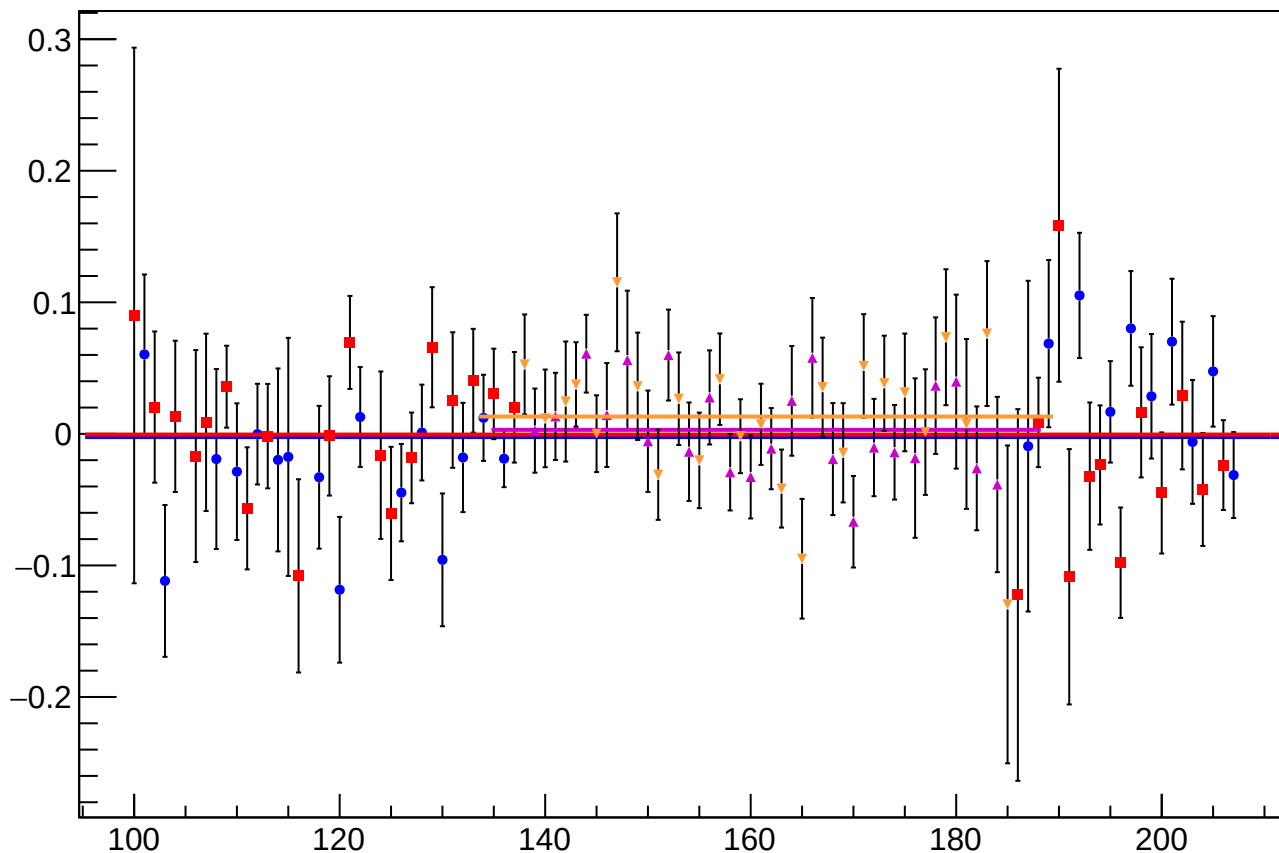
+ sign 32.102 $\pm$ 0.004  $\chi^2$ /NDF: 3851592.5/50

All: 32.456 $\pm$ 0.003  $\chi^2$ /NDF: 7519287.6/104

- sign 32.822 $\pm$ 0.004  $\chi^2$ /NDF: 3651988.5/53



asym\_sam\_15\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.002 \pm 0.008$   $\chi^2/\text{NDF}$ : 30.7/25

Left Out:  $0.013 \pm 0.008$   $\chi^2/\text{NDF}$ : 25.4/24

Right Out:  $-0.001 \pm 0.008$   $\chi^2/\text{NDF}$ : 28.1/30

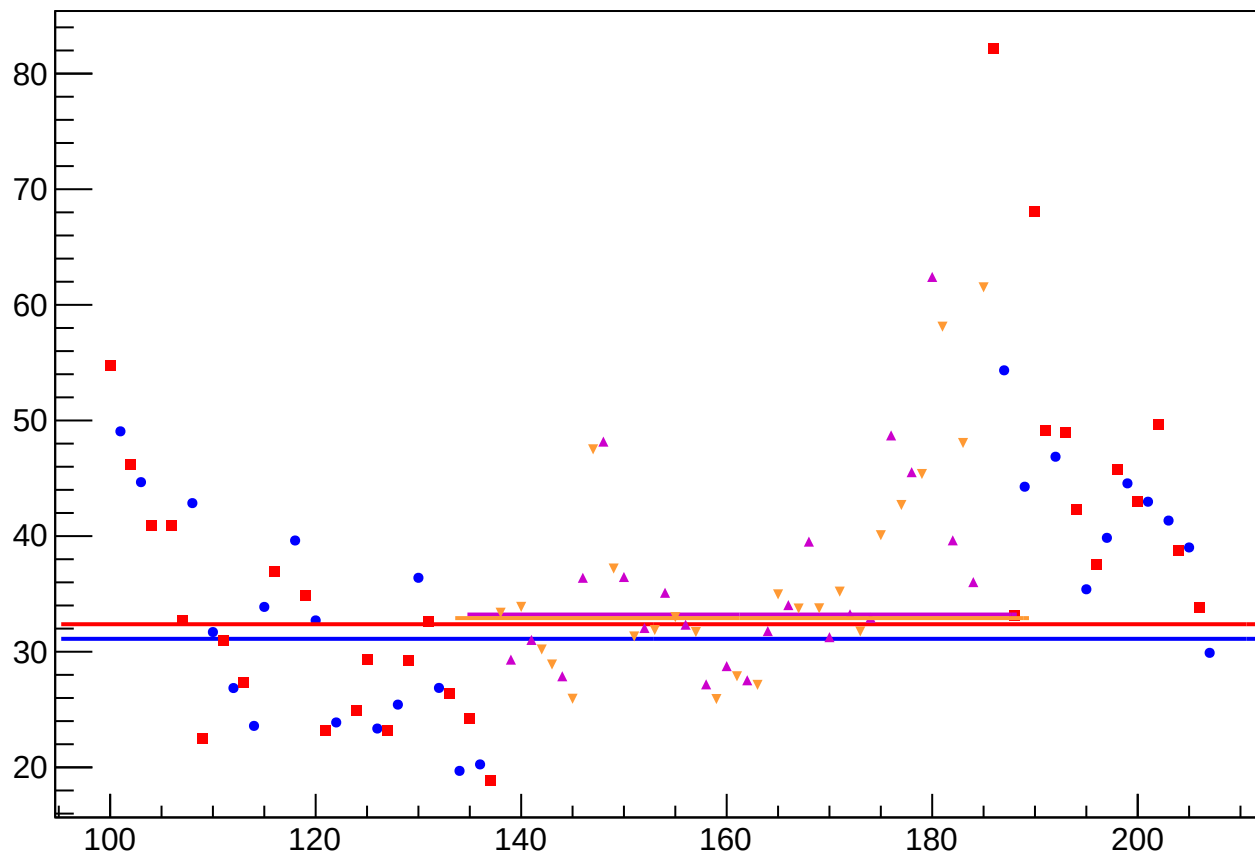
Left In:  $0.003 \pm 0.008$   $\chi^2/\text{NDF}$ : 19.2/22

+ sign  $0.006 \pm 0.006$   $\chi^2/\text{NDF}$ : 57.9/50

All:  $0.004 \pm 0.004$   $\chi^2/\text{NDF}$ : 105.7/104

- sign  $0.001 \pm 0.006$   $\chi^2/\text{NDF}$ : 47.4/53

asym\_sam\_15\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 31.116 $\pm$ 0.006  $\chi^2$ /NDF: 2374734.5/25

Left Out: 32.907 $\pm$ 0.005  $\chi^2$ /NDF:1427924.1/24

Right Out: 32.379 $\pm$ 0.006  $\chi^2$ /NDF: 2420104.2/30

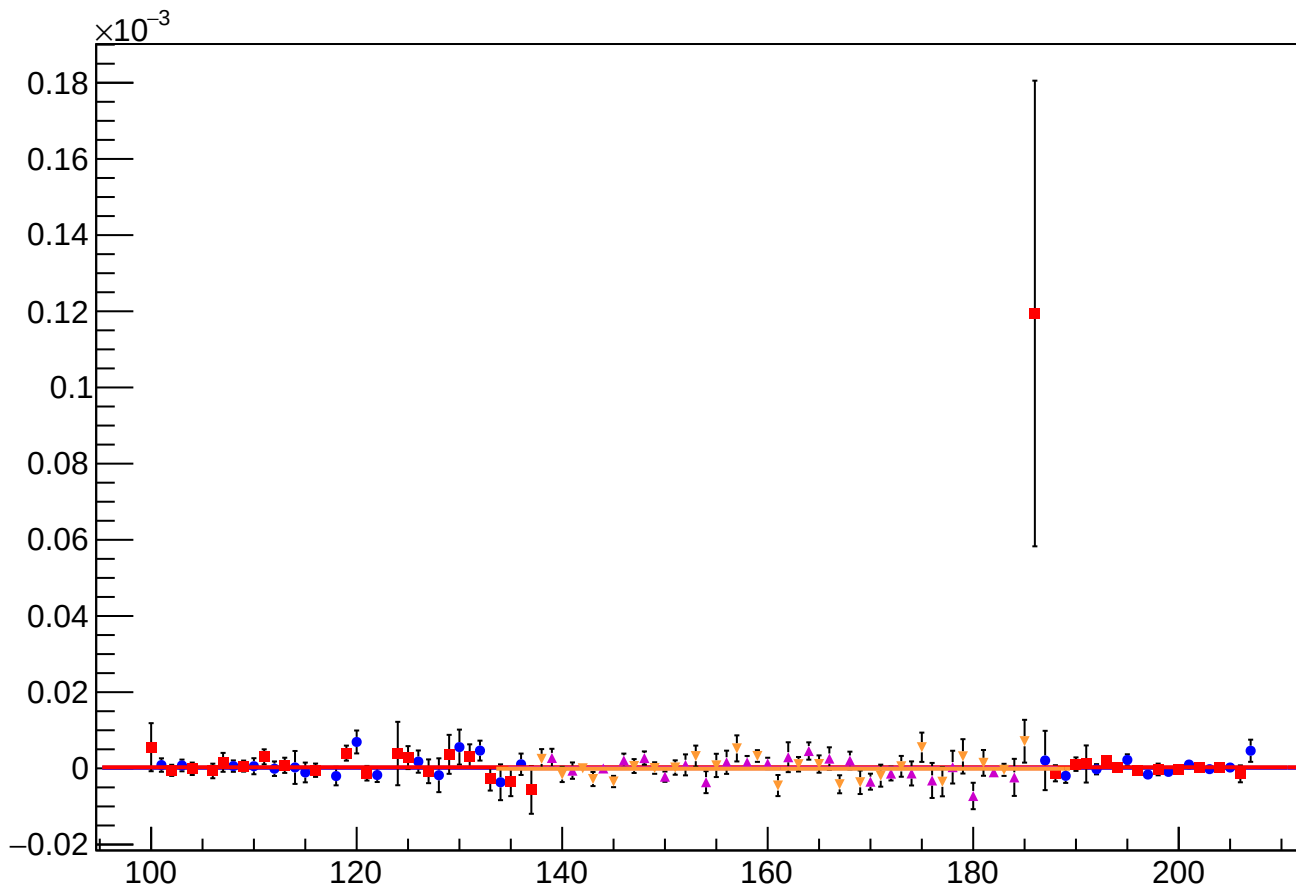
Left In: 33.217 $\pm$ 0.006  $\chi^2$ /NDF:1221447.0/22

+ sign 32.102 $\pm$ 0.004  $\chi^2$ /NDF: 3851592.5/50

All: 32.456 $\pm$ 0.003  $\chi^2$ /NDF: 7519287.6/104

- sign 32.822 $\pm$ 0.004  $\chi^2$ /NDF: 3651988.5/53

asym\_sam\_15\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 23.7/25

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:31.0/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 21.7/30

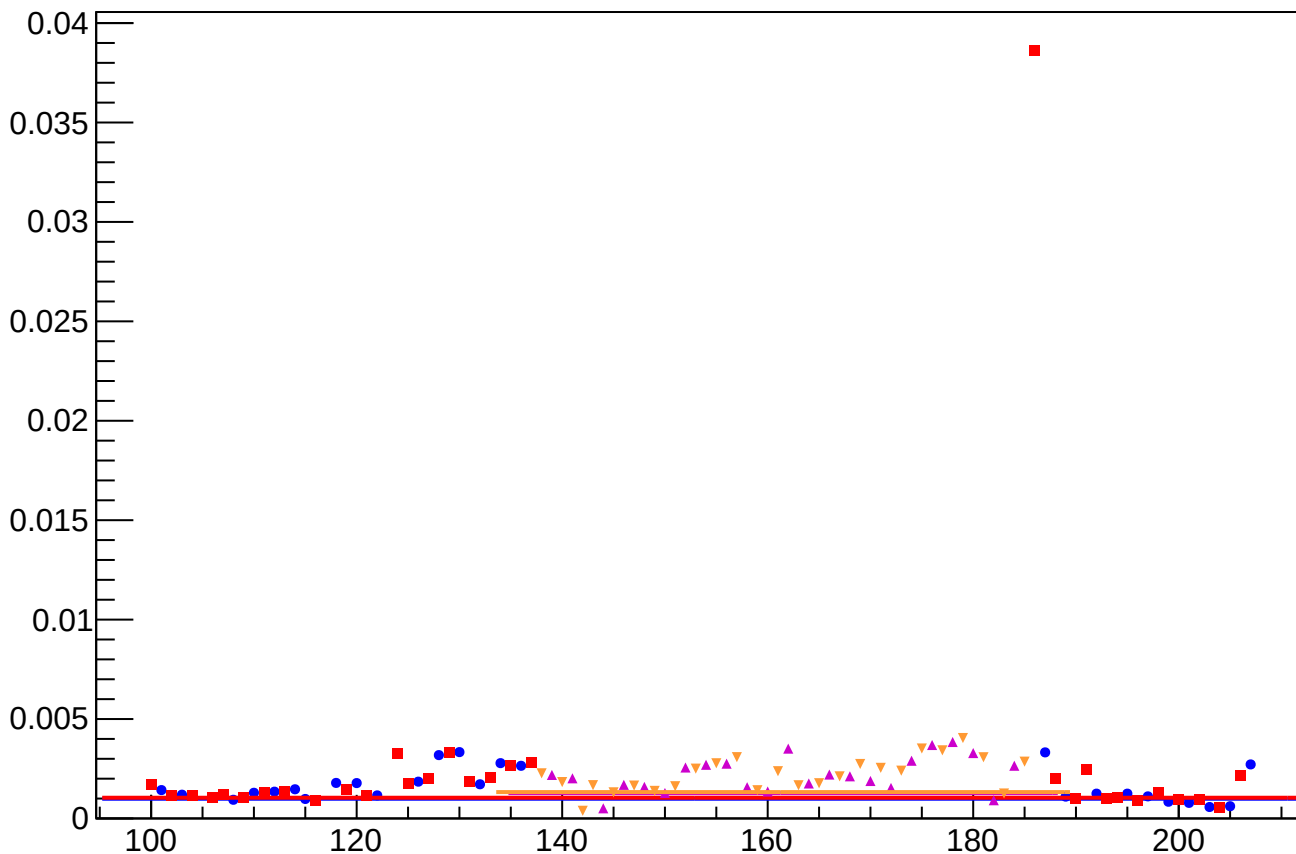
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:27.0/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 55.0/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 104.1/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 49.0/53

asym\_sam\_15\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 5414892.5/25

Left Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ :11159347.0/24

Right Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 5419234.7/30

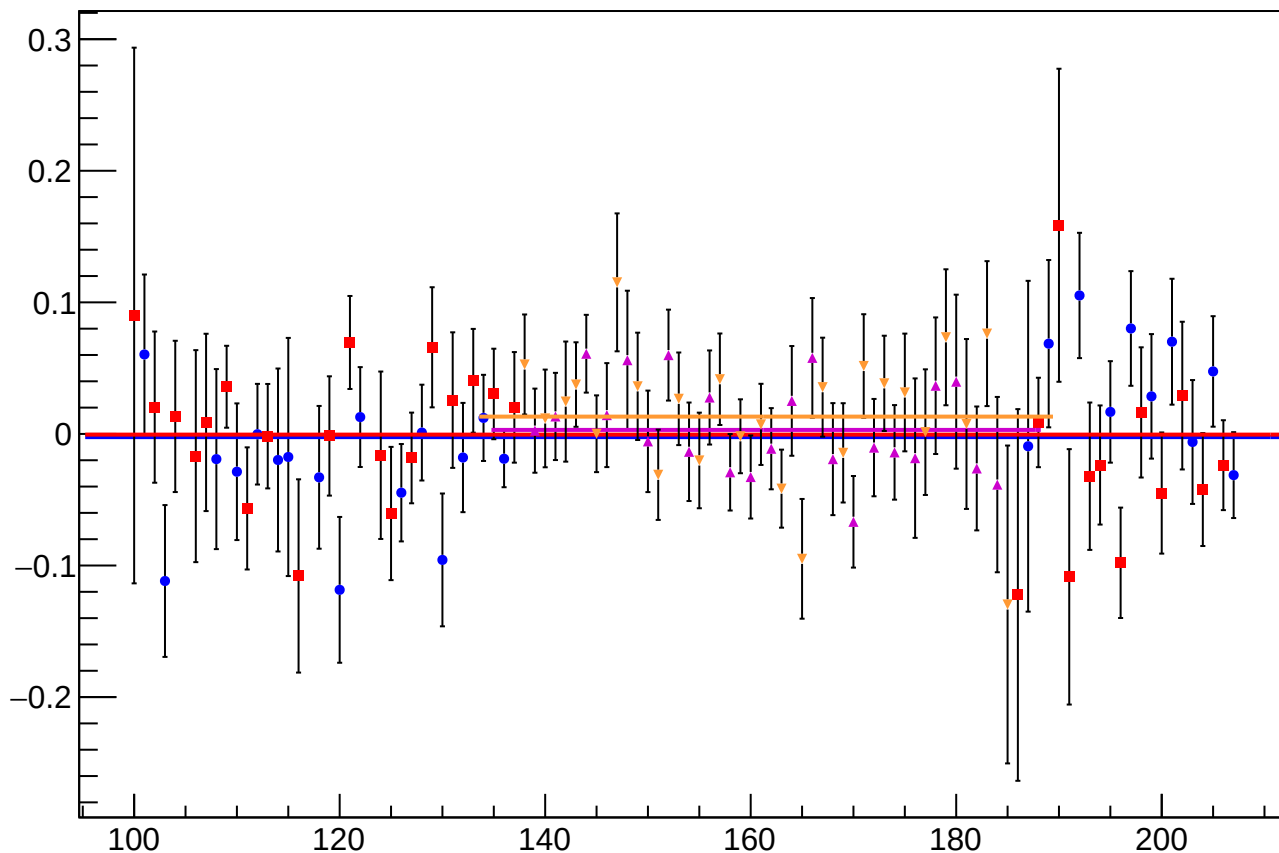
Left In: 0.001+/-0.000  $\chi^2/\text{NDF}$ :9878422.3/22

+ sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 17584060.8/50

All: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 33399242.0/104

- sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 15812802.8/53

asym\_sam\_15\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.002 \pm 0.008$   $\chi^2/\text{NDF}$ : 30.7/25

Left Out:  $0.013 \pm 0.008$   $\chi^2/\text{NDF}$ : 25.4/24

Right Out:  $-0.001 \pm 0.008$   $\chi^2/\text{NDF}$ : 28.1/30

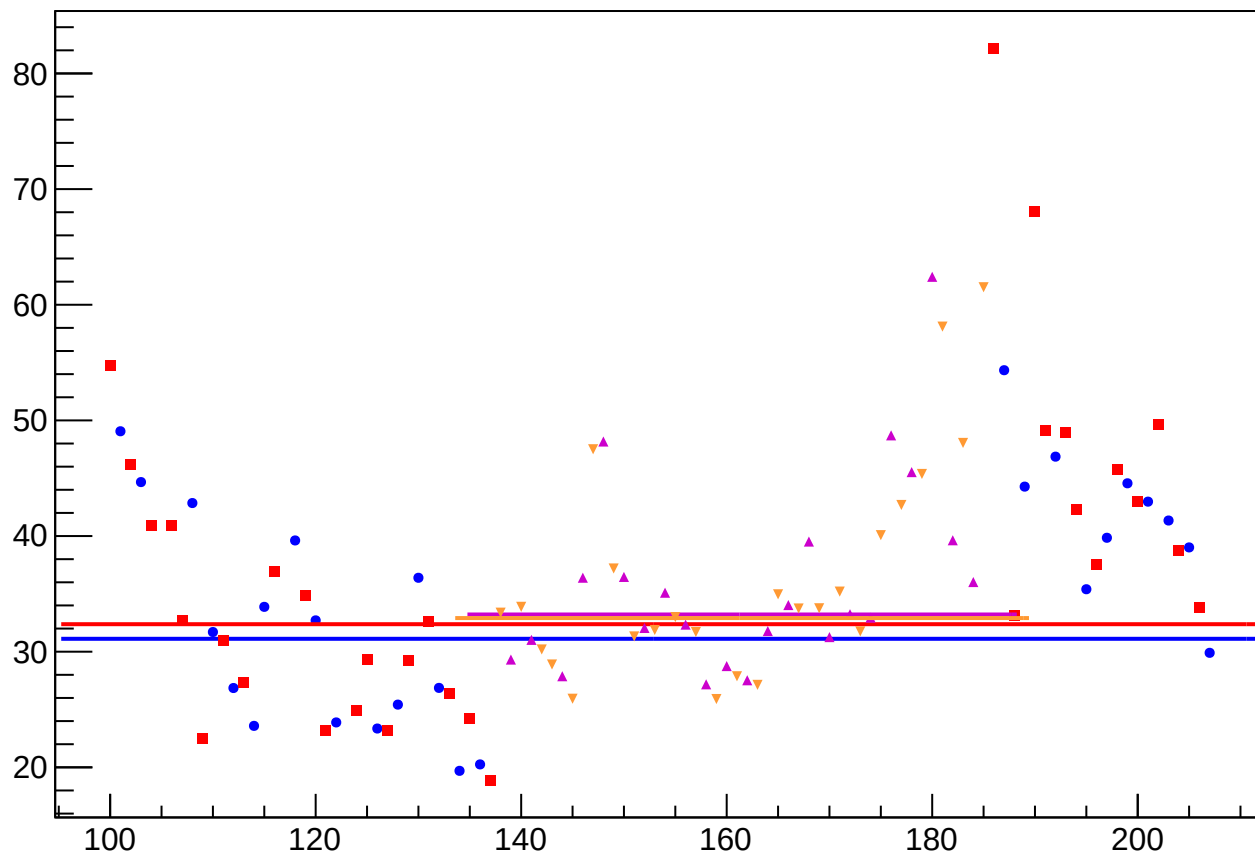
Left In:  $0.003 \pm 0.008$   $\chi^2/\text{NDF}$ : 19.2/22

+ sign  $0.006 \pm 0.006$   $\chi^2/\text{NDF}$ : 57.9/50

All:  $0.004 \pm 0.004$   $\chi^2/\text{NDF}$ : 105.7/104

- sign  $0.001 \pm 0.006$   $\chi^2/\text{NDF}$ : 47.4/53

asym\_sam\_15\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 31.115 $\pm$ 0.006  $\chi^2$ /NDF: 2374935.9/25

Left Out: 32.907 $\pm$ 0.005  $\chi^2$ /NDF:1427993.7/24

Right Out: 32.378 $\pm$ 0.006  $\chi^2$ /NDF: 2420428.3/30

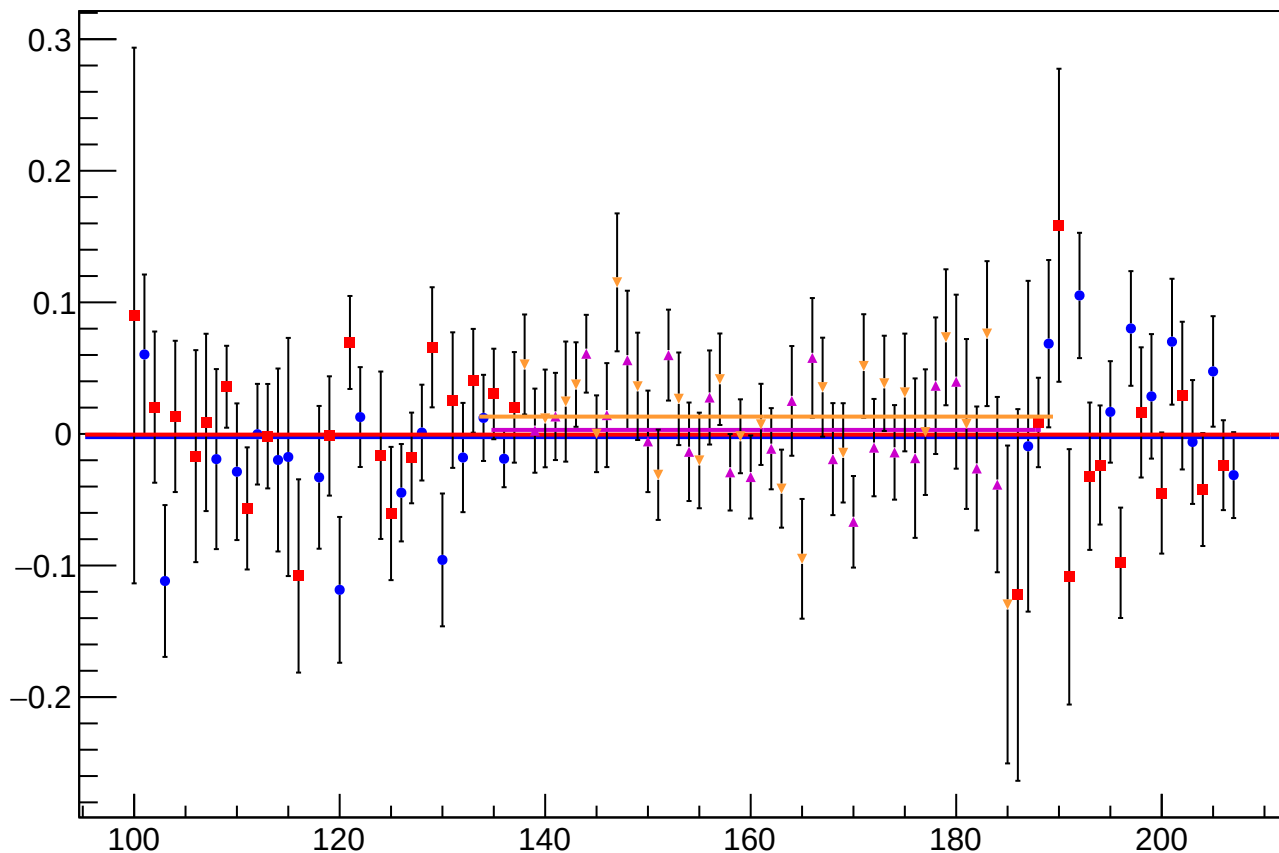
Left In: 33.217 $\pm$ 0.006  $\chi^2$ /NDF:1221516.5/22

+ sign 32.102 $\pm$ 0.004  $\chi^2$ /NDF: 3851908.2/50

All: 32.456 $\pm$ 0.003  $\chi^2$ /NDF: 7520022.8/104

- sign 32.821 $\pm$ 0.004  $\chi^2$ /NDF: 3652411.0/53

asym\_sam\_15\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.002 \pm 0.008$   $\chi^2/\text{NDF}$ : 30.7/25

Left Out:  $0.013 \pm 0.008$   $\chi^2/\text{NDF}$ : 25.4/24

Right Out:  $-0.001 \pm 0.008$   $\chi^2/\text{NDF}$ : 28.1/30

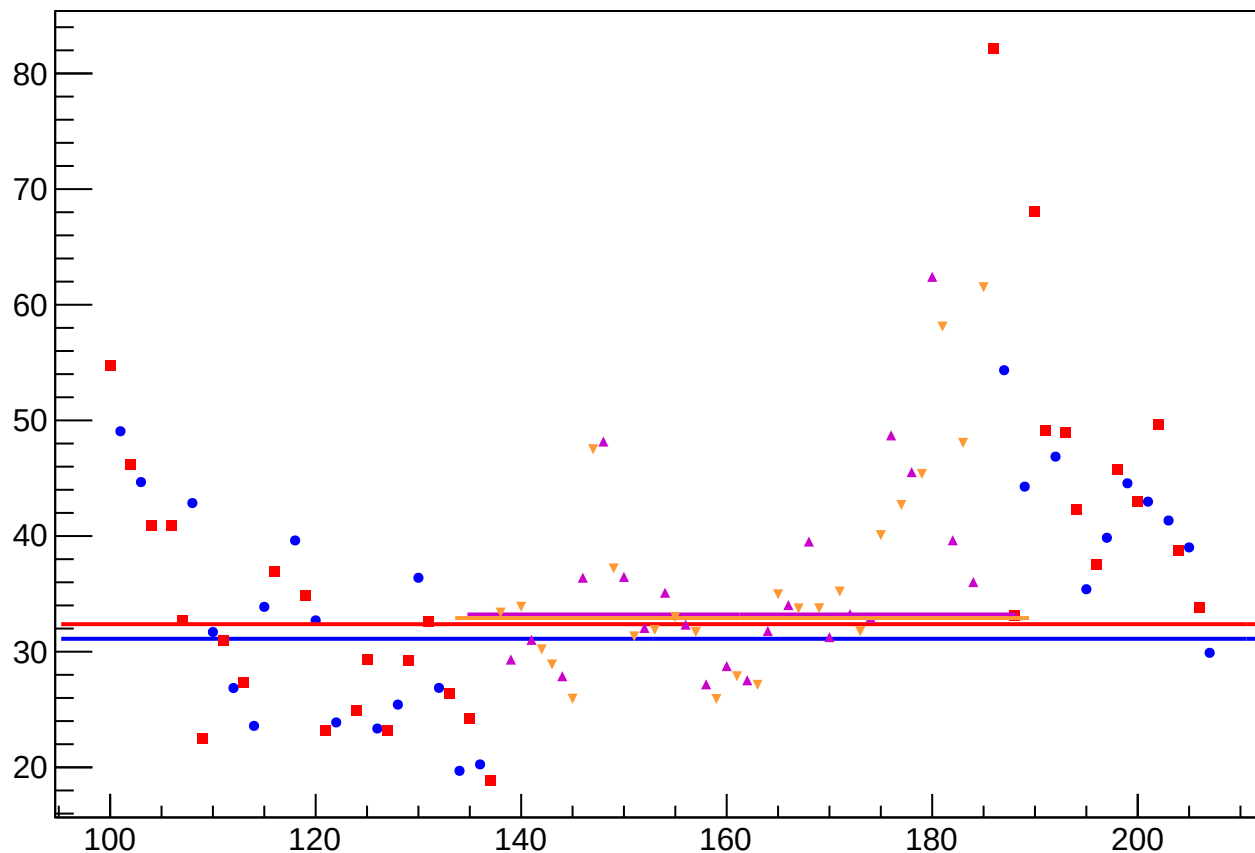
Left In:  $0.003 \pm 0.008$   $\chi^2/\text{NDF}$ : 19.2/22

+ sign  $0.006 \pm 0.006$   $\chi^2/\text{NDF}$ : 57.9/50

All:  $0.004 \pm 0.004$   $\chi^2/\text{NDF}$ : 105.7/104

- sign  $0.001 \pm 0.006$   $\chi^2/\text{NDF}$ : 47.4/53

asym\_sam\_15\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 31.115 $\pm$ 0.006  $\chi^2$ /NDF: 2374935.9/25

Left Out: 32.907 $\pm$ 0.005  $\chi^2$ /NDF: 1427993.7/24

Right Out: 32.378 $\pm$ 0.006  $\chi^2$ /NDF: 2420428.3/30

Left In: 33.217 $\pm$ 0.006  $\chi^2$ /NDF: 1221516.5/22

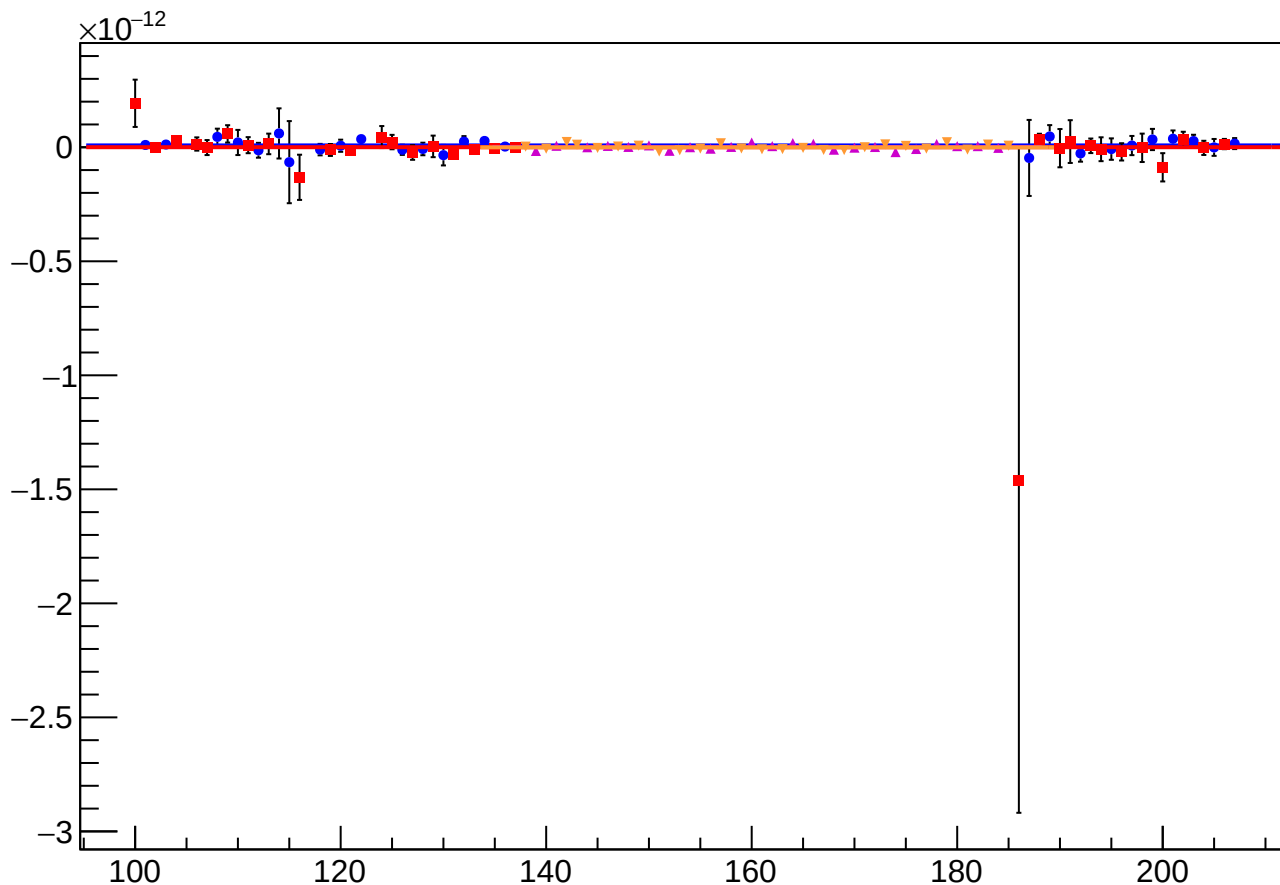
+ sign 32.102 $\pm$ 0.004  $\chi^2$ /NDF: 3851908.2/50

All: 32.456 $\pm$ 0.003  $\chi^2$ /NDF: 7520022.8/104

- sign 32.821 $\pm$ 0.004  $\chi^2$ /NDF: 3652411.0/53



asym\_sam\_15\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11.7/25

Left Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 31.0/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 21.7/30

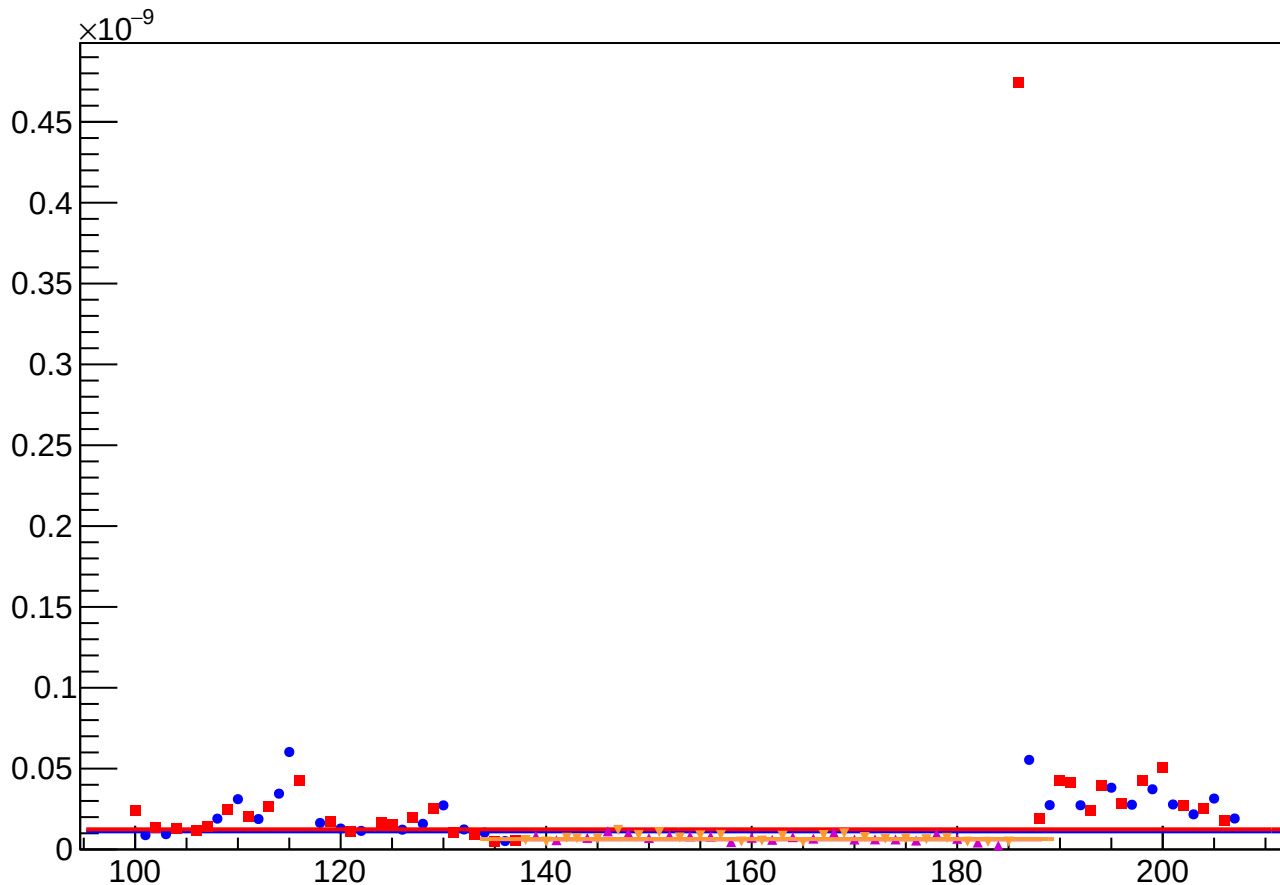
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 25.3/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 46.0/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 93.0/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 47.0/53

asym\_sam\_15\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 6765070.3/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:1879116.4/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 7164051.9/30

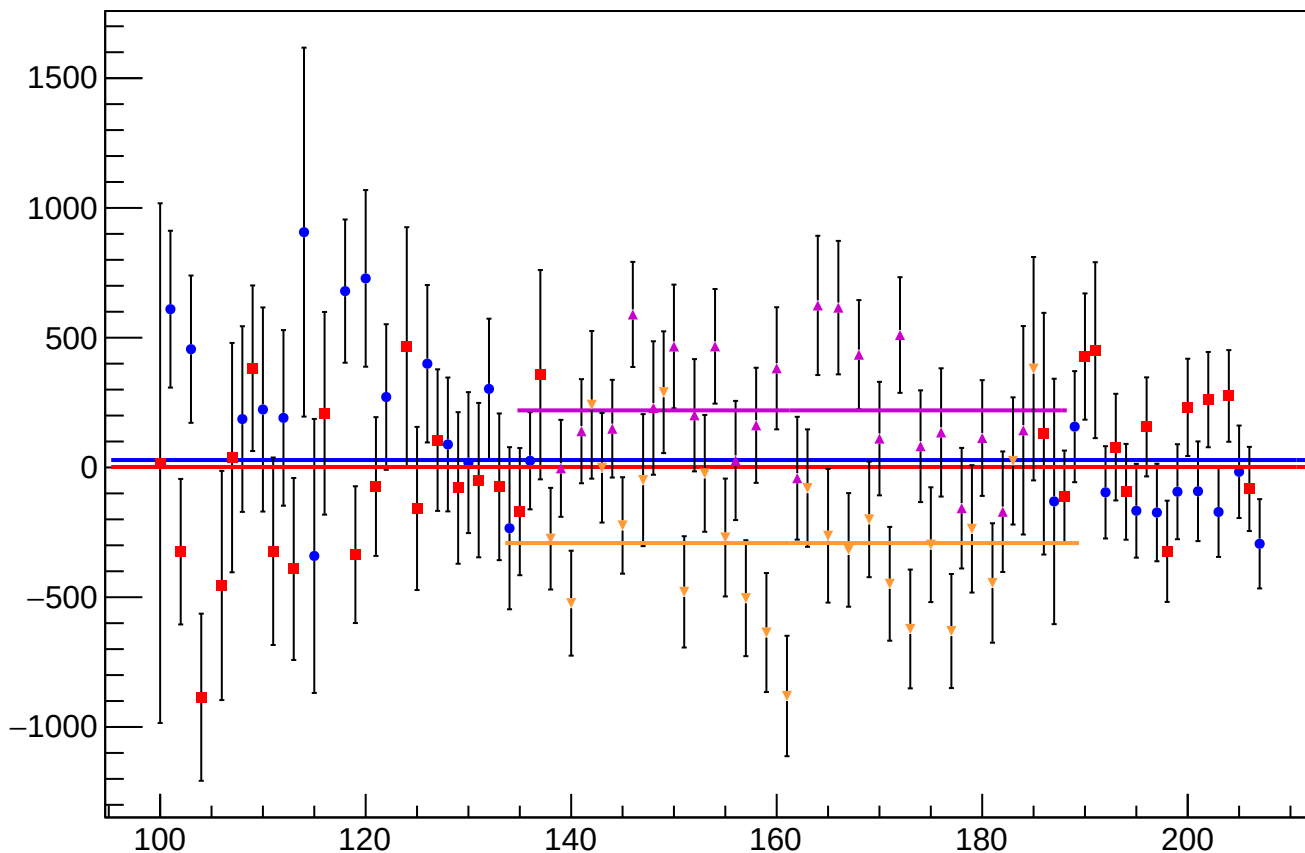
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:2127144.3/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 10774955.9/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 23225753.2/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 12449361.0/53

# reg\_asym\_sam\_26\_dd\_mean vs Slug



Right In:  $28.601 \pm 47.101$   $\chi^2/\text{NDF}$ : 31.5/25

Left Out:  $-291.313 \pm 45.614$   $\chi^2/\text{NDF}$ : 36.4/24

Right Out:  $1.836 \pm 45.747$   $\chi^2/\text{NDF}$ : 33.7/30

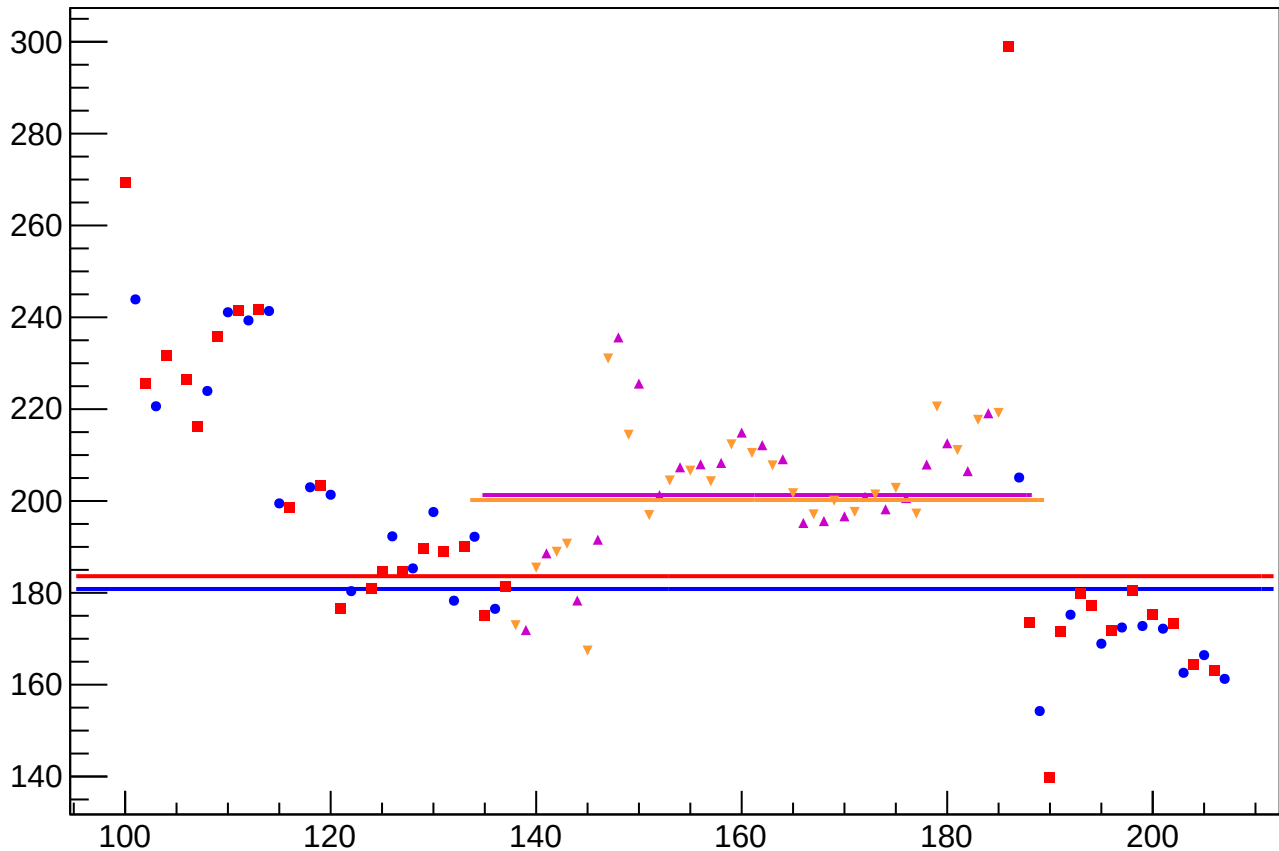
Left In:  $219.974 \pm 47.146$   $\chi^2/\text{NDF}$ : 23.7/22

+ sign  $-136.485 \pm 32.767$   $\chi^2/\text{NDF}$ : 91.7/50

All:  $-14.672 \pm 23.192$   $\chi^2/\text{NDF}$ : 187.8/104

- sign  $107.622 \pm 32.831$   $\chi^2/\text{NDF}$ : 68.5/53

# reg\_asym\_sam\_26\_dd\_rms vs Slug



Right In: 180.840 $\pm$ 0.033  $\chi^2$ /NDF: 434245.3/25

Left Out: 200.210 $\pm$ 0.032  $\chi^2$ /NDF:204393.9/24

Right Out: 183.627 $\pm$ 0.032  $\chi^2$ /NDF: 588287.1/30

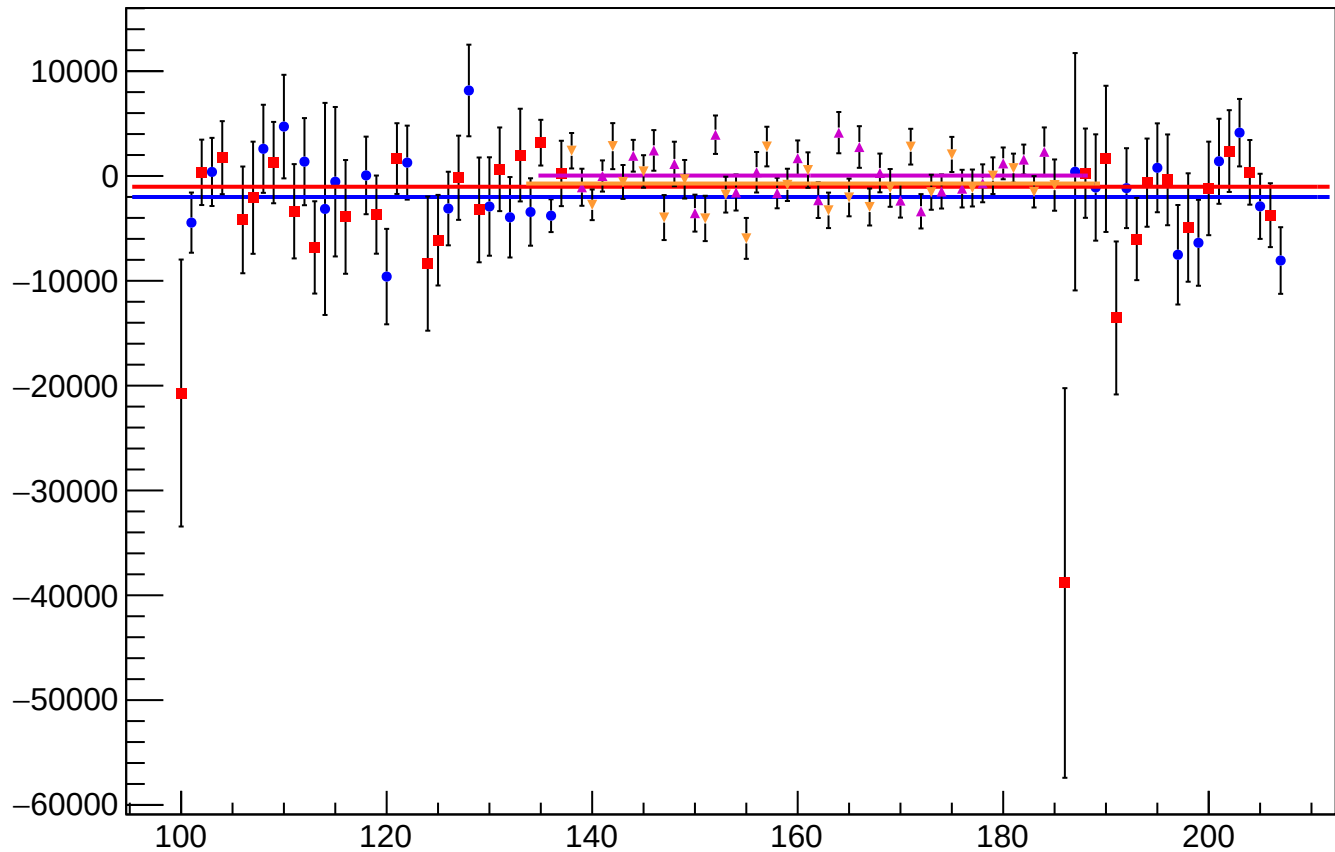
Left In: 201.297 $\pm$ 0.033  $\chi^2$ /NDF:181646.8/22

+ sign 190.835 $\pm$ 0.023  $\chi^2$ /NDF: 813188.0/50

All: 191.514 $\pm$ 0.016  $\chi^2$ /NDF: 1729555.2/104

- sign 192.196 $\pm$ 0.023  $\chi^2$ /NDF: 914646.2/53

# asym\_sam\_26\_dd\_reg\_correction\_mean vs Slug



Right In:  $-2005.873 \pm 708.896$   $\chi^2/\text{NDF}$ : 27.4/25

Left Out:  $-720.700 \pm 346.376$   $\chi^2/\text{NDF}$ : 38.3/24

Right Out:  $-1027.182 \pm 730.949$   $\chi^2/\text{NDF}$ : 26.2/30

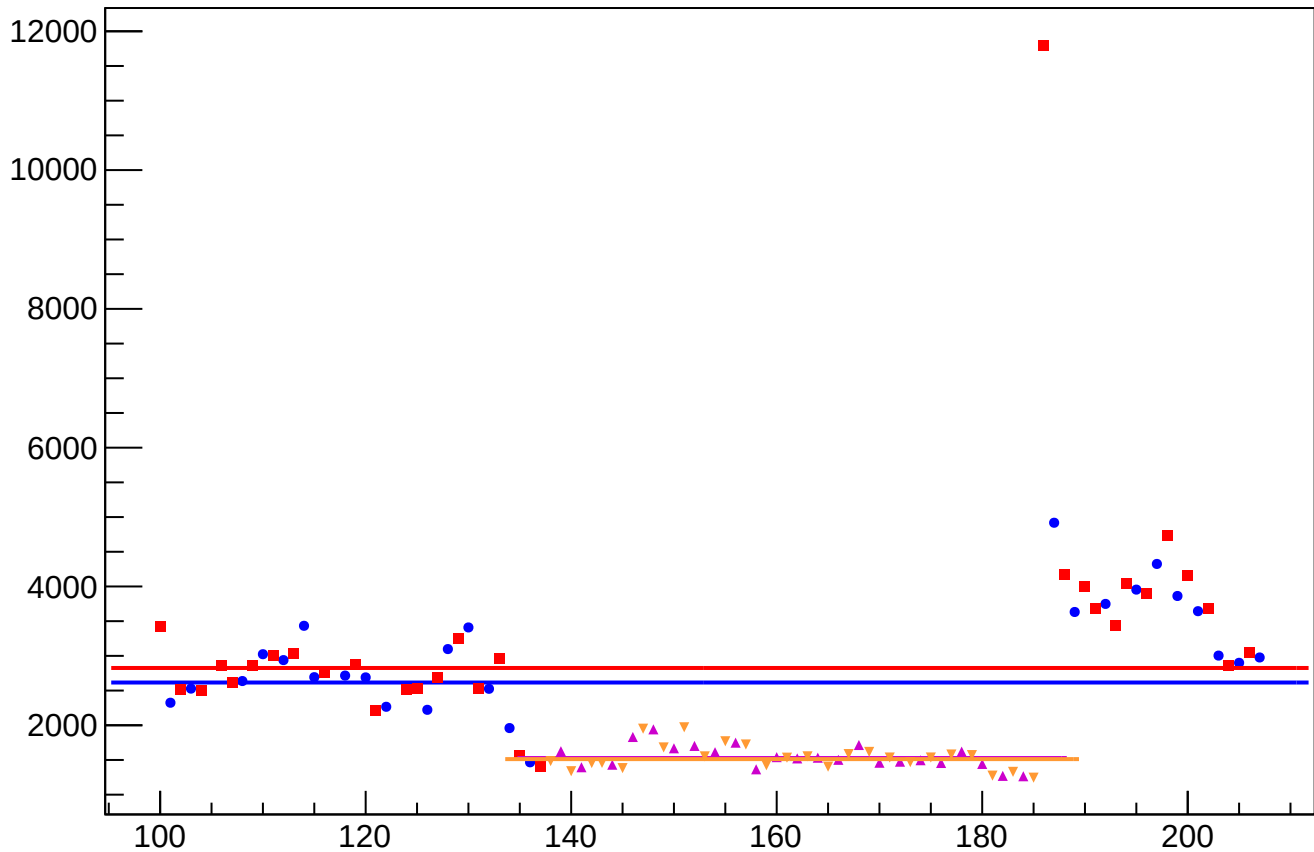
Left In:  $39.277 \pm 359.265$   $\chi^2/\text{NDF}$ : 34.4/22

+ sign  $-968.392 \pm 311.213$   $\chi^2/\text{NDF}$ : 68.3/50

All:  $-582.463 \pm 223.919$   $\chi^2/\text{NDF}$ : 133.8/104

- sign  $-168.227 \pm 322.425$   $\chi^2/\text{NDF}$ : 62.3/53

# asym\_sam\_26\_dd\_reg\_correction\_rms vs Slug



Right In:  $2615.970 \pm 0.501$   $\chi^2/\text{NDF}: 2538128.4/25$

Left Out:  $1512.365 \pm 0.245$   $\chi^2/\text{NDF}: 442558.0/24$

Right Out:  $2825.501 \pm 0.517$   $\chi^2/\text{NDF}: 2901576.3/30$

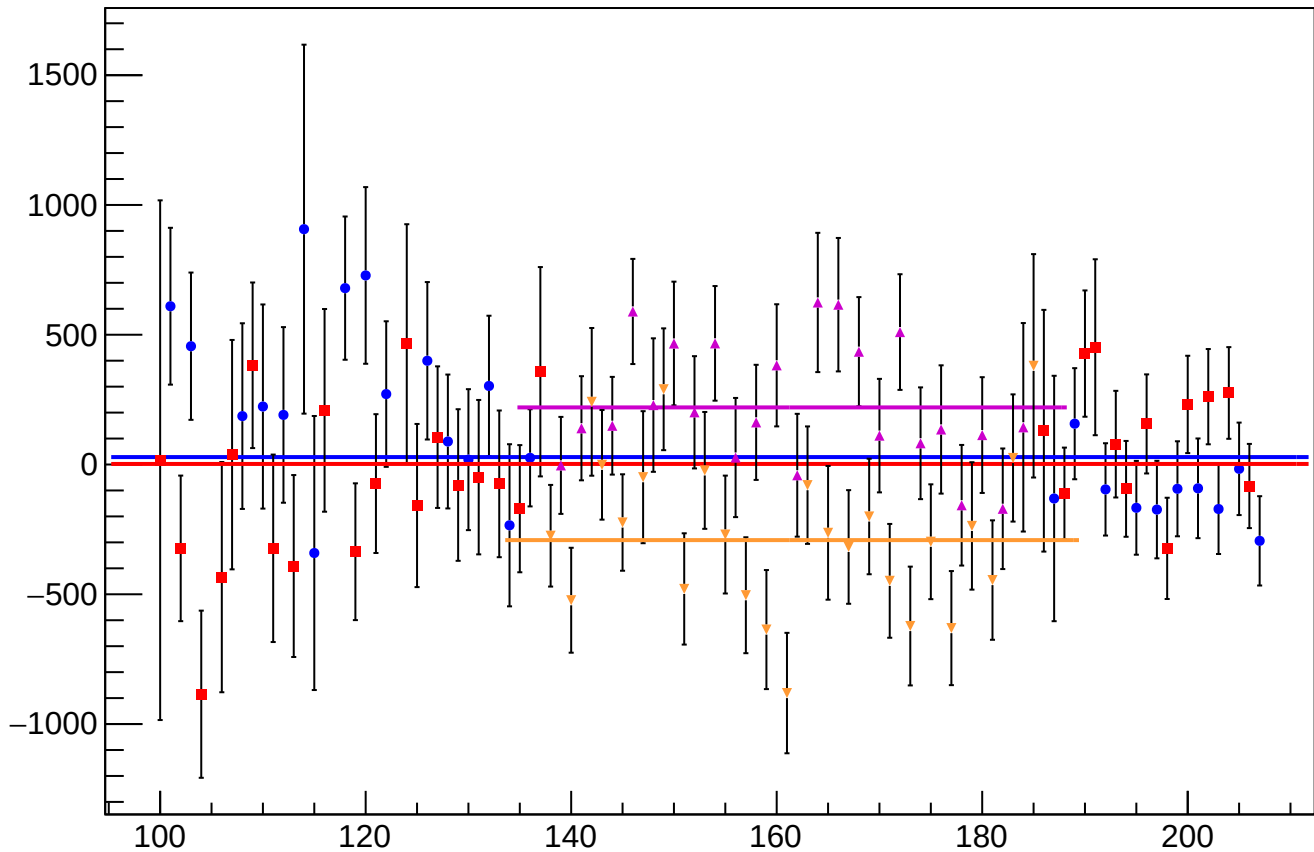
Left In:  $1527.964 \pm 0.254$   $\chi^2/\text{NDF}: 373844.4/22$

+ sign  $1725.062 \pm 0.220$   $\chi^2/\text{NDF}: 6893698.7/50$

All:  $1751.766 \pm 0.158$   $\chi^2/\text{NDF}: 15275641.7/100$

- sign  $1780.429 \pm 0.228$   $\chi^2/\text{NDF}: 8351411.8/53$

# cor\_asym\_sam\_26\_dd\_mean vs Slug



Right In:  $28.595 \pm 47.101$   $\chi^2/\text{NDF}$ : 31.5/25

Left Out:  $-291.316 \pm 45.614$   $\chi^2/\text{NDF}$ : 36.4/24

Right Out:  $2.149 \pm 45.750$   $\chi^2/\text{NDF}$ : 33.6/30

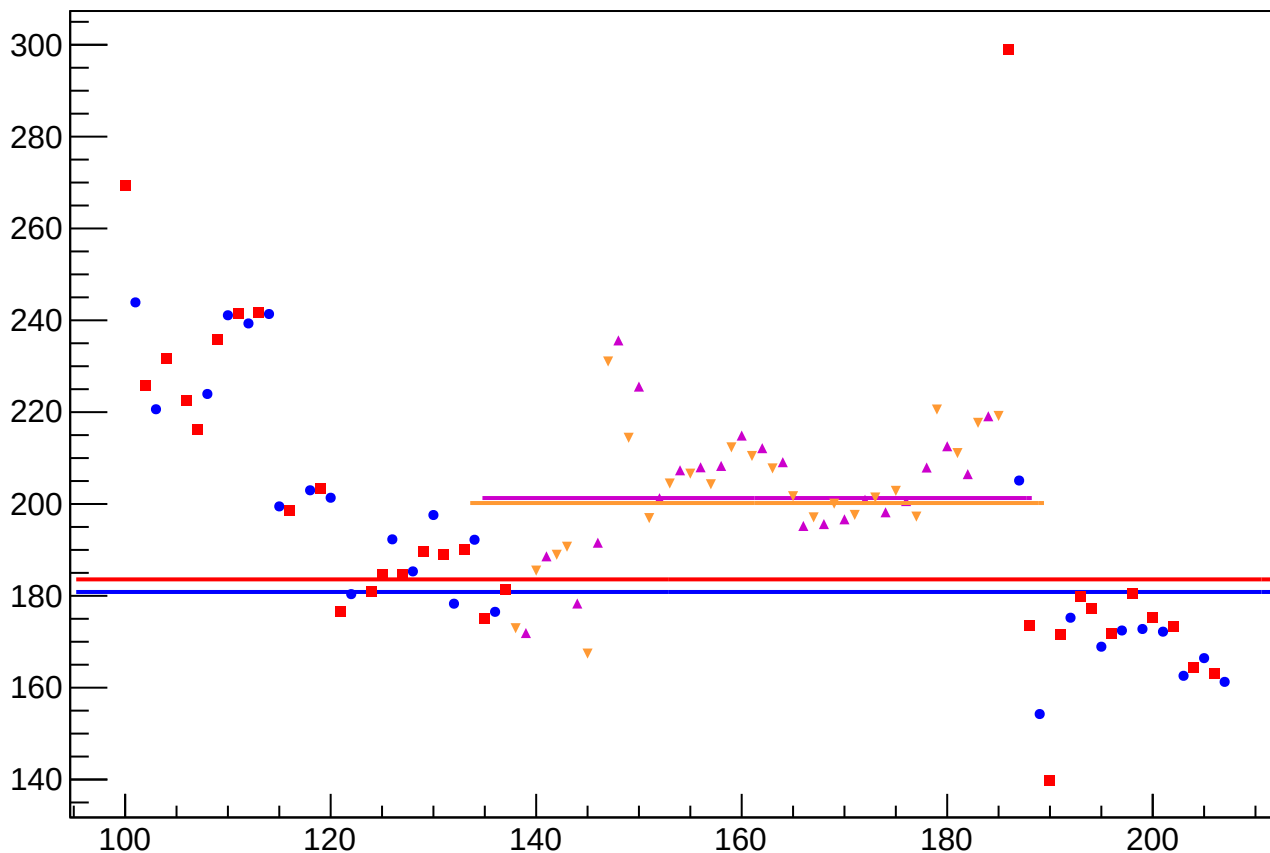
Left In:  $219.983 \pm 47.146$   $\chi^2/\text{NDF}$ : 23.7/22

+ sign  $-136.489 \pm 32.767$   $\chi^2/\text{NDF}$ : 91.7/50

All:  $-14.592 \pm 23.193$   $\chi^2/\text{NDF}$ : 187.7/104

- sign  $107.793 \pm 32.832$   $\chi^2/\text{NDF}$ : 68.3/53

# cor\_asym\_sam\_26\_dd\_rms vs Slug



Right In: 180.840 $\pm$ 0.033  $\chi^2$ /NDF: 434245.8/25

Left Out: 200.210 $\pm$ 0.032  $\chi^2$ /NDF:204394.0/24

Right Out: 183.582 $\pm$ 0.032  $\chi^2$ /NDF: 584975.5/30

Left In: 201.297 $\pm$ 0.033  $\chi^2$ /NDF:181646.8/22

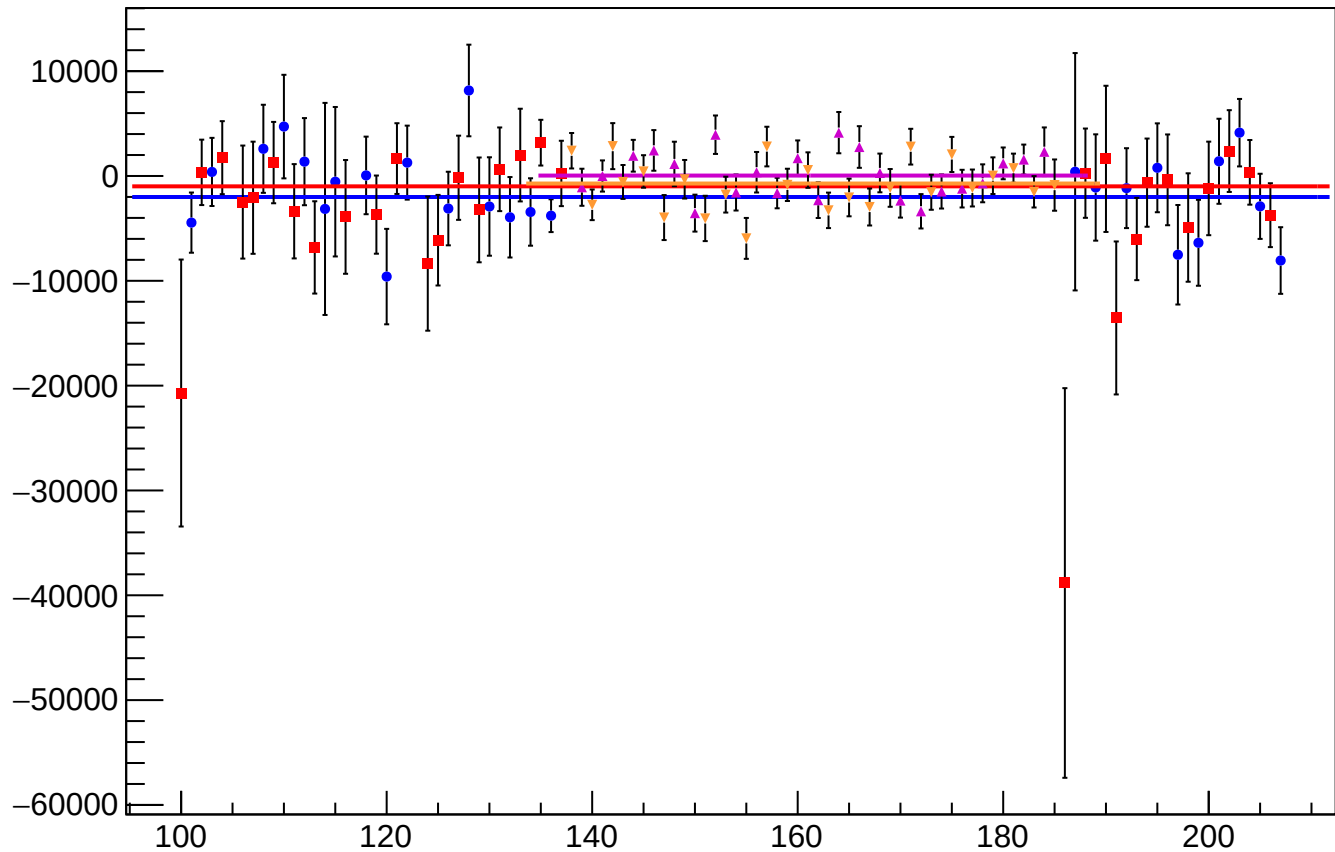
+ sign 190.835 $\pm$ 0.023  $\chi^2$ /NDF: 813188.5/50

All: 191.503 $\pm$ 0.016  $\chi^2$ /NDF: 1726910.5/104

- sign 192.174 $\pm$ 0.023  $\chi^2$ /NDF: 912057.5/53



# asym\_sam\_26\_dd\_cor\_correction\_mean vs Slug



Right In:  $-2005.854 \pm 708.897$   $\chi^2/\text{NDF}$ : 27.4/25

Left Out:  $-720.705 \pm 346.376$   $\chi^2/\text{NDF}$ : 38.3/24

Right Out:  $-988.956 \pm 731.785$   $\chi^2/\text{NDF}$ : 25.9/30

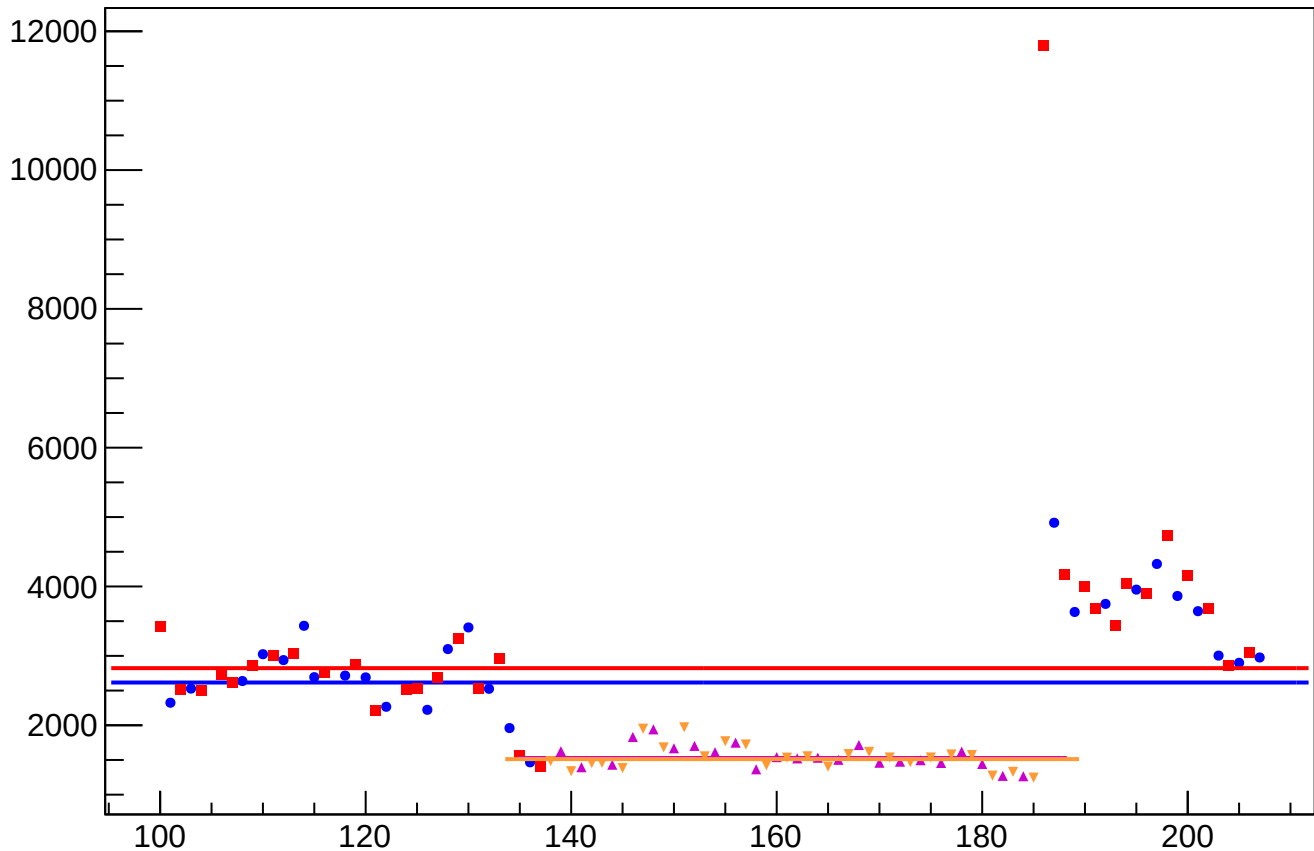
Left In:  $39.275 \pm 359.265$   $\chi^2/\text{NDF}$ : 34.4/22

+ sign  $-968.391 \pm 311.213$   $\chi^2/\text{NDF}$ : 68.3/50

All:  $-578.789 \pm 223.943$   $\chi^2/\text{NDF}$ : 133.4/104

- sign  $-160.423 \pm 322.496$   $\chi^2/\text{NDF}$ : 61.9/53

# asym\_sam\_26\_dd\_cor\_correction\_rms vs Slug



Right In: 2615.973+/-0.501  $\chi^2/\text{NDF}$ : 2538123.5/25

Left Out: 1512.365+/-0.245  $\chi^2/\text{NDF}$ : 442559.1/24

Right Out: 2822.962+/-0.517  $\chi^2/\text{NDF}$ : 2901902.9/30

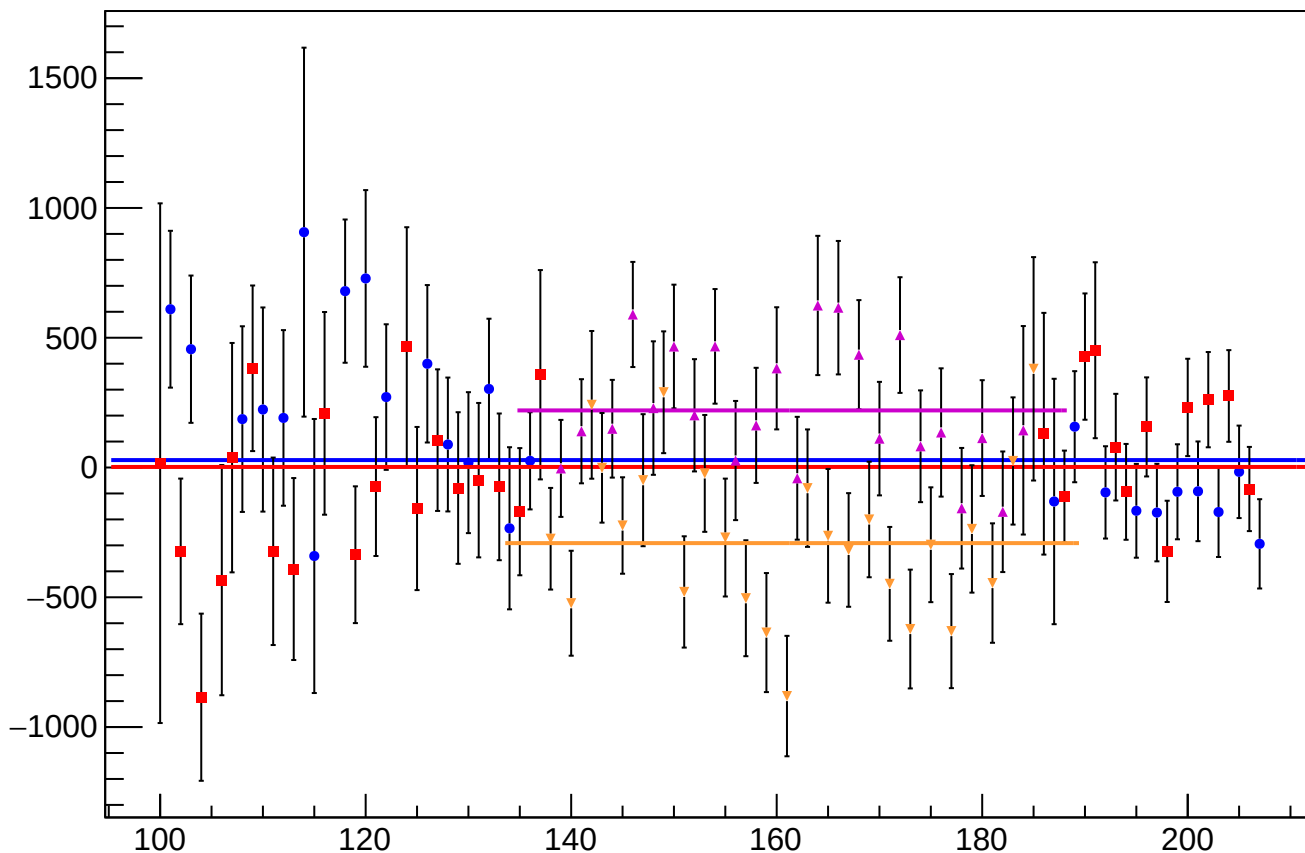
Left In: 1527.964+/-0.254  $\chi^2/\text{NDF}$ : 373845.3/22

+ sign 1725.063+/-0.220  $\chi^2/\text{NDF}$ : 6893711.2/50

All: 1751.299+/-0.158  $\chi^2/\text{NDF}$ : 15245789.4/100

- sign 1779.472+/-0.228  $\chi^2/\text{NDF}$ : 8322600.5/53

# eigen\_cor\_asym\_sam\_26\_dd\_mean vs Slug



Right In: 28.595 $\pm$ 47.101  $\chi^2$ /NDF: 31.5/25

Left Out: -291.316 $\pm$ 45.614  $\chi^2$ /NDF:36.4/24

Right Out: 2.149 $\pm$ 45.750  $\chi^2$ /NDF: 33.6/30

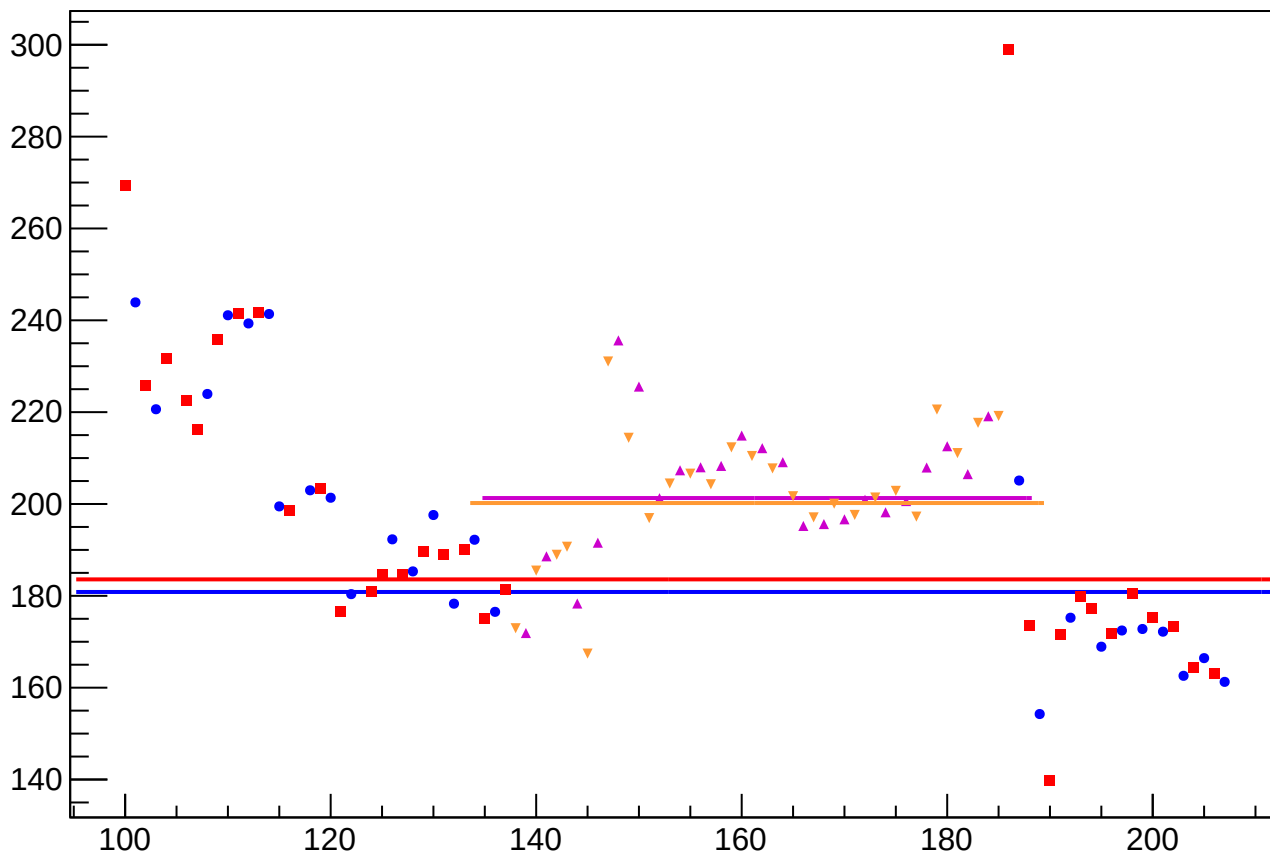
Left In: 219.983 $\pm$ 47.146  $\chi^2$ /NDF:23.7/22

+ sign -136.489 $\pm$ 32.767  $\chi^2$ /NDF: 91.7/50

All: -14.592 $\pm$ 23.193  $\chi^2$ /NDF: 187.7/104

- sign 107.793 $\pm$ 32.832  $\chi^2$ /NDF: 68.3/53

# eigen\_cor\_asym\_sam\_26\_dd\_rms vs Slug



Right In: 180.840 $\pm$ 0.033  $\chi^2$ /NDF: 434245.8/25

Left Out: 200.210 $\pm$ 0.032  $\chi^2$ /NDF:204394.0/24

Right Out: 183.582 $\pm$ 0.032  $\chi^2$ /NDF: 584975.5/30

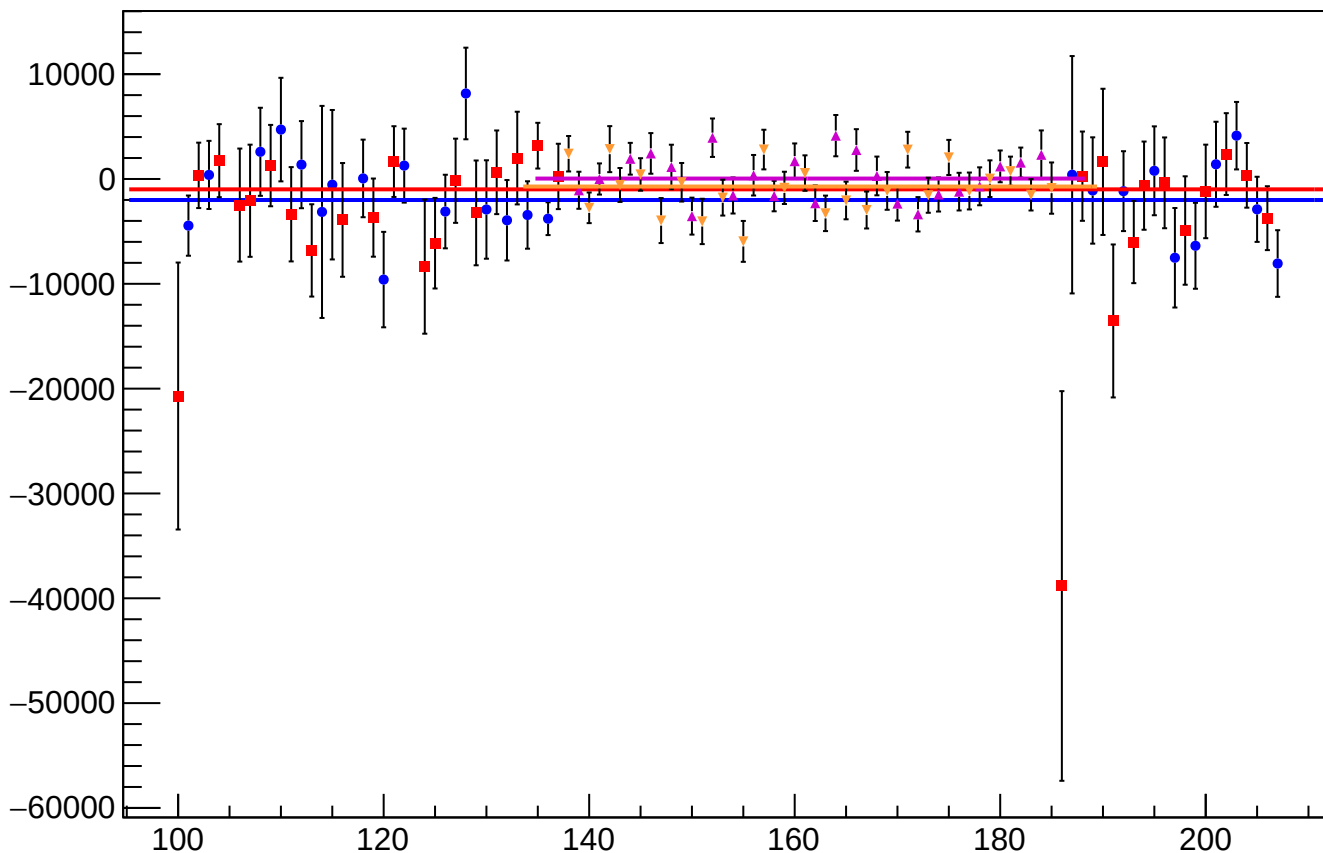
Left In: 201.297 $\pm$ 0.033  $\chi^2$ /NDF:181646.8/22

+ sign 190.835 $\pm$ 0.023  $\chi^2$ /NDF: 813188.5/50

All: 191.503 $\pm$ 0.016  $\chi^2$ /NDF: 1726910.5/104

- sign 192.174 $\pm$ 0.023  $\chi^2$ /NDF: 912057.5/53

asym\_sam\_26\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-2005.854 \pm 708.897$   $\chi^2/\text{NDF}$ : 27.4/25

Left Out:  $-720.705 \pm 346.376$   $\chi^2/\text{NDF}$ : 38.3/24

Right Out:  $-988.956 \pm 731.785$   $\chi^2/\text{NDF}$ : 25.9/30

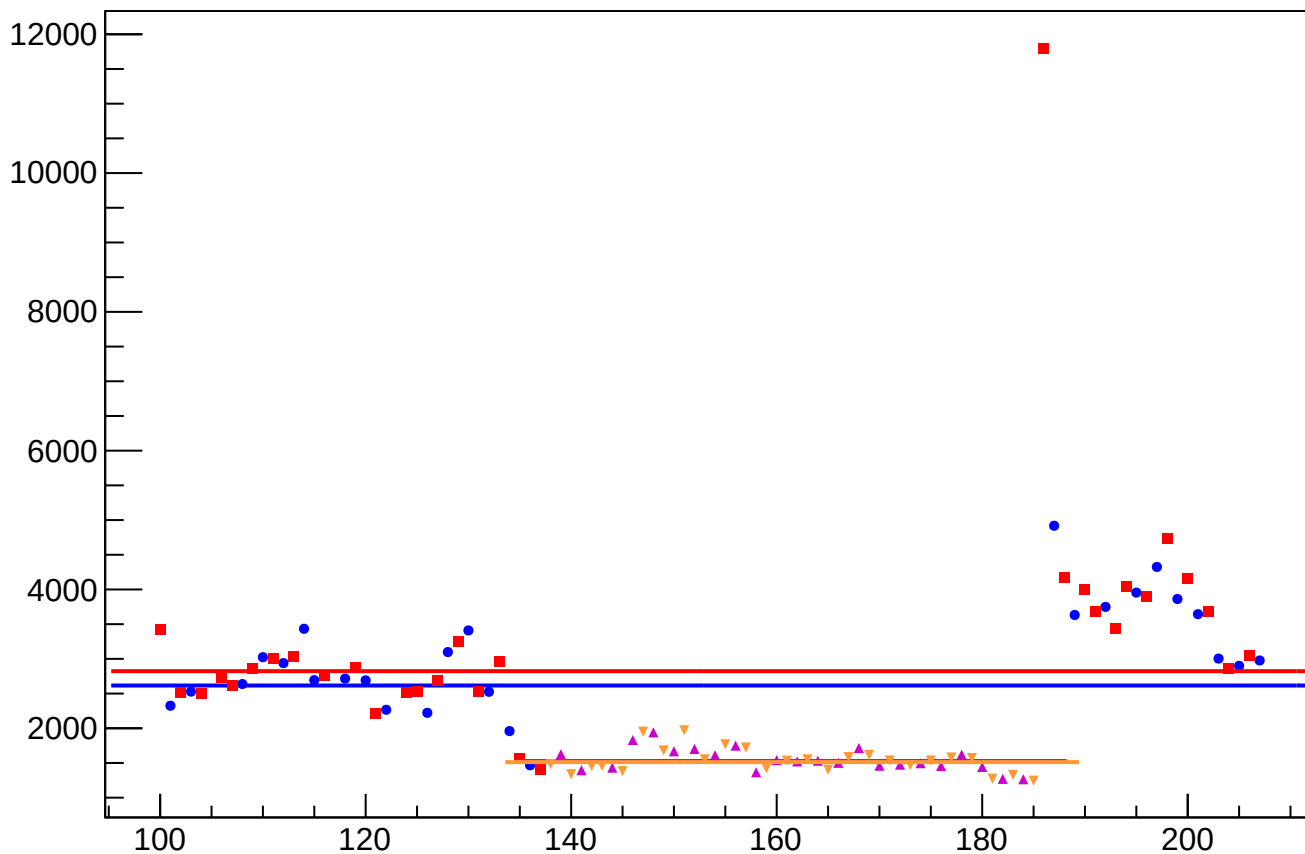
Left In:  $39.275 \pm 359.265$   $\chi^2/\text{NDF}$ : 34.4/22

+ sign  $-968.391 \pm 311.213$   $\chi^2/\text{NDF}$ : 68.3/50

All:  $-578.789 \pm 223.943$   $\chi^2/\text{NDF}$ : 133.4/104

- sign  $-160.423 \pm 322.496$   $\chi^2/\text{NDF}$ : 61.9/53

asym\_sam\_26\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 2615.973+/-0.501  $\chi^2/\text{NDF}$ : 2538123.5/25

Left Out: 1512.365+/-0.245  $\chi^2/\text{NDF}$ : 442559.1/24

Right Out: 2822.962+/-0.517  $\chi^2/\text{NDF}$ : 2901902.9/30

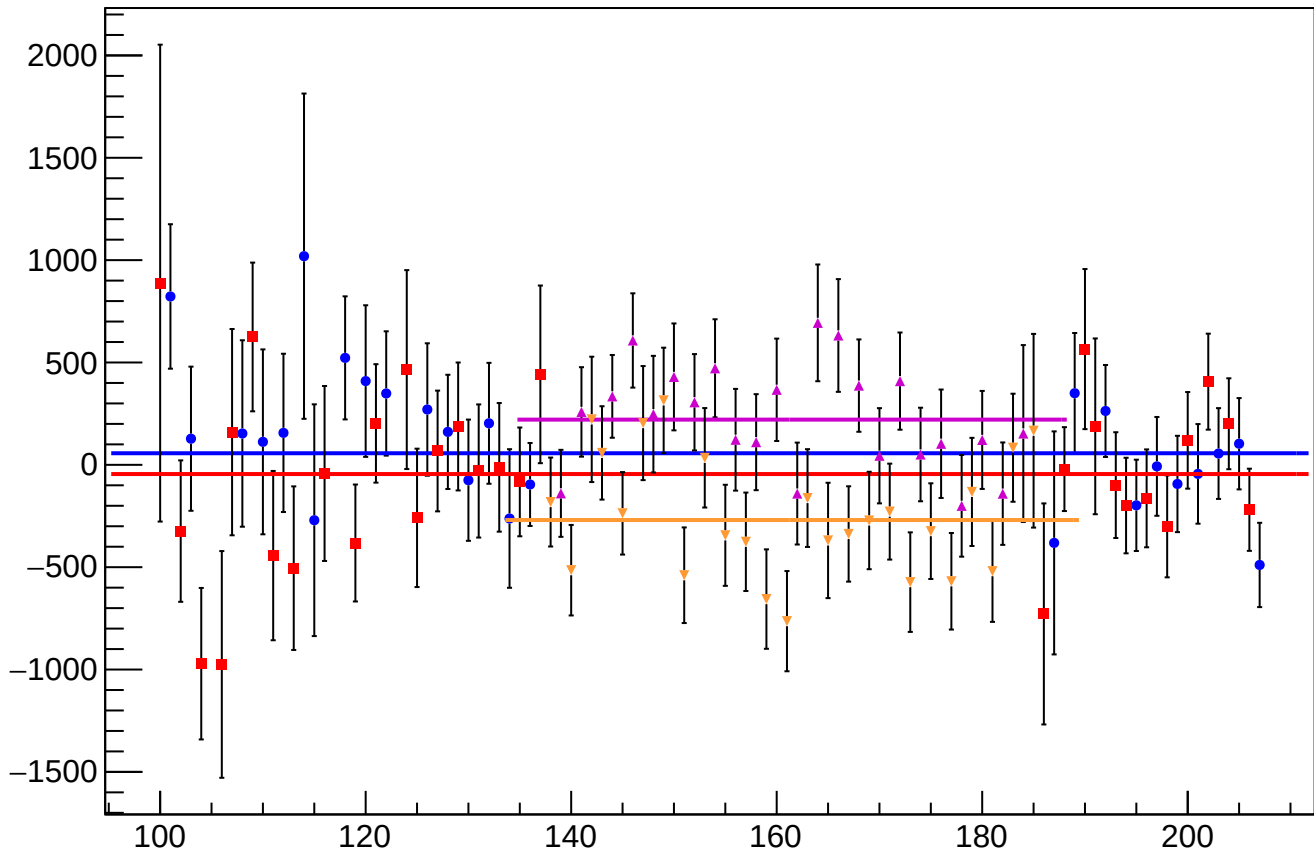
Left In: 1527.964+/-0.254  $\chi^2/\text{NDF}$ : 373845.3/22

+ sign 1725.063+/-0.220  $\chi^2/\text{NDF}$ : 6893711.2/50

All: 1751.299+/-0.158  $\chi^2/\text{NDF}$ : 15245789.4/100

- sign 1779.472+/-0.228  $\chi^2/\text{NDF}$ : 8322600.5/53

# dit\_asym\_sam\_26\_dd\_mean vs Slug



Right In: 56.653 $\pm$ 56.277  $\chi^2/\text{NDF}$ : 24.9/25

Left Out: -269.678 $\pm$ 49.158  $\chi^2/\text{NDF}$ : 31.5/24

Right Out: -44.949 $\pm$ 54.705  $\chi^2/\text{NDF}$ : 34.1/30

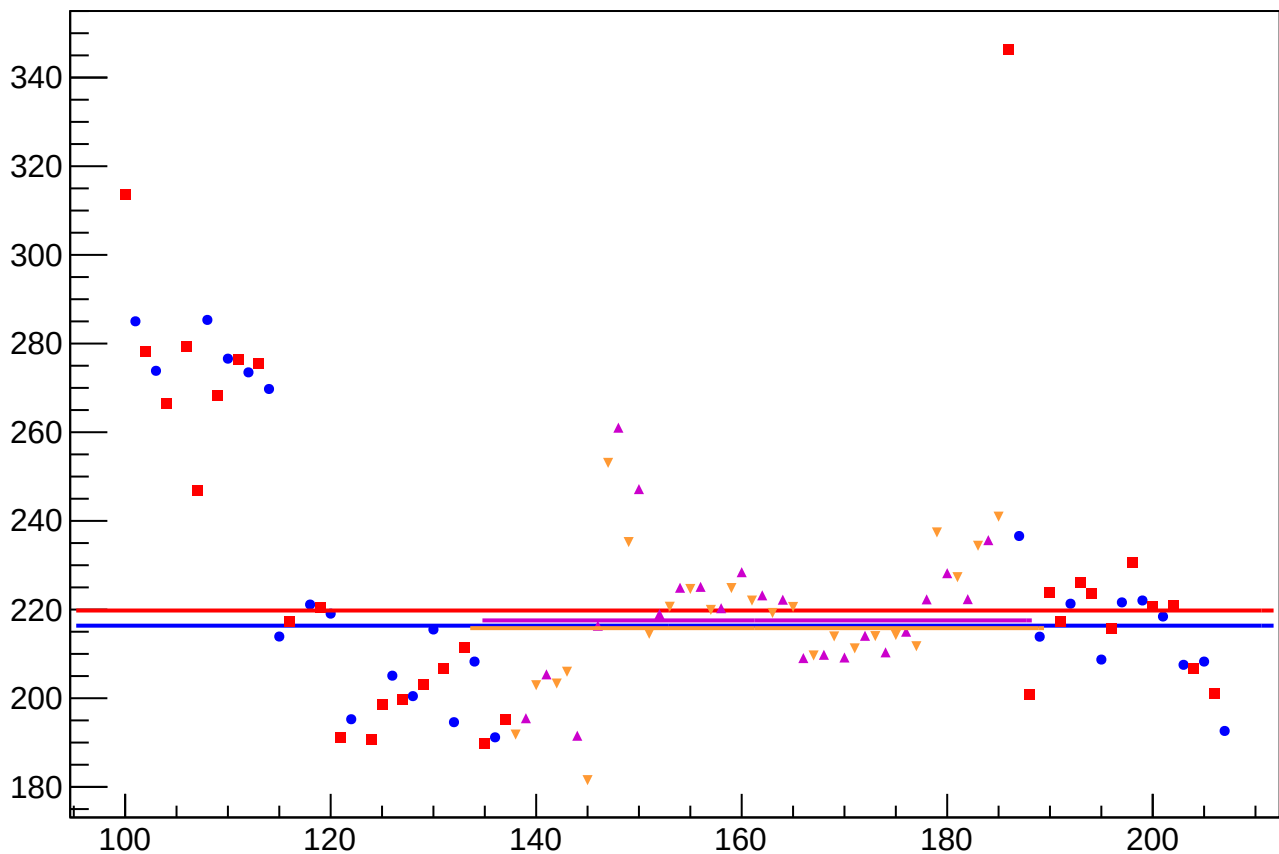
Left In: 220.926 $\pm$ 50.956  $\chi^2/\text{NDF}$ : 23.4/22

+ sign -128.448 $\pm$ 37.022  $\chi^2/\text{NDF}$ : 75.5/50

All: -16.320 $\pm$ 26.272  $\chi^2/\text{NDF}$ : 164.1/104

- sign 97.411 $\pm$ 37.286  $\chi^2/\text{NDF}$ : 70.1/53

# dit\_asym\_sam\_26\_dd\_rms vs Slug



Right In: 216.367 $\pm$ 0.040  $\chi^2$ /NDF: 366178.0/25

Left Out: 215.807 $\pm$ 0.035  $\chi^2$ /NDF:188699.2/24

Right Out: 219.786 $\pm$ 0.039  $\chi^2$ /NDF: 487299.2/30

Left In: 217.555 $\pm$ 0.036  $\chi^2$ /NDF:161066.4/22

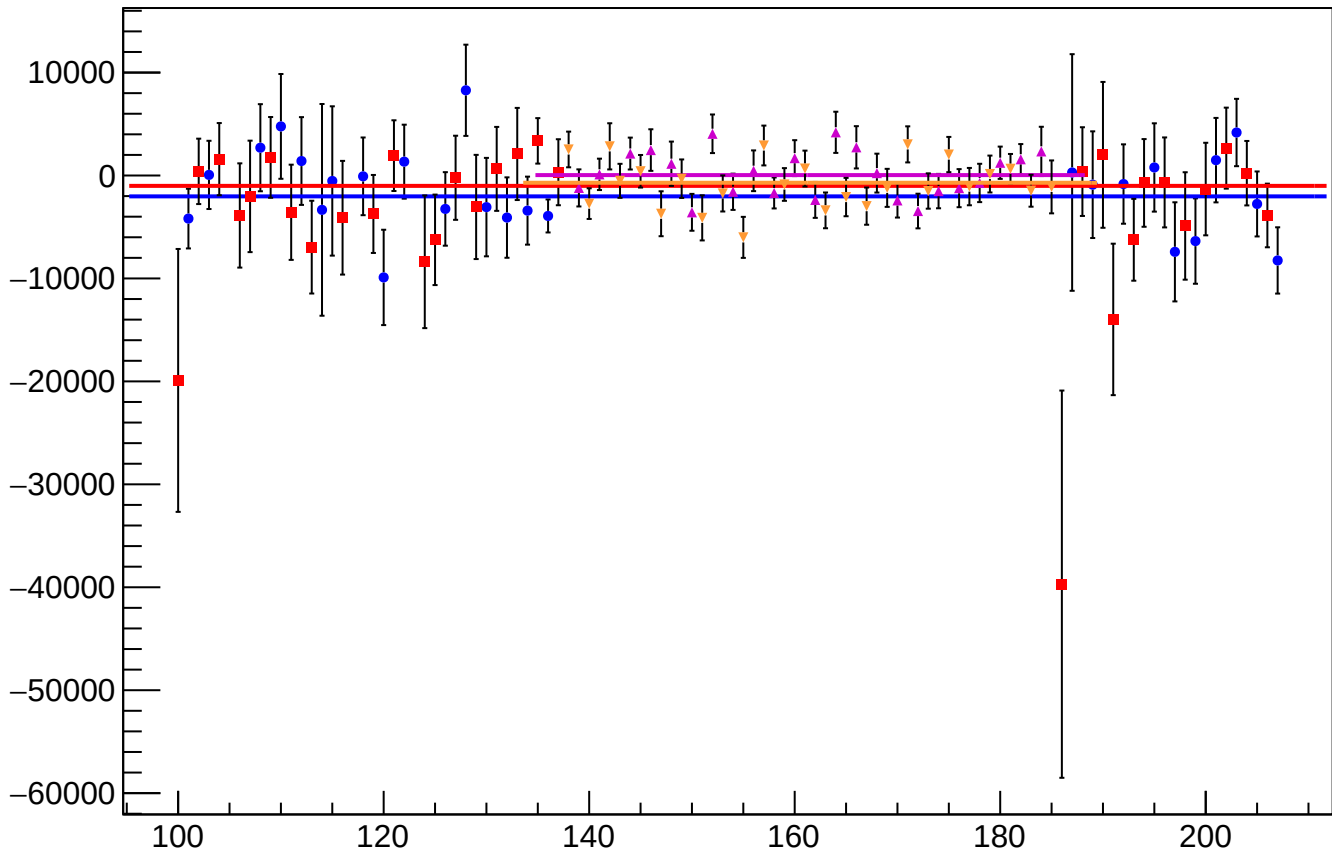
+ sign 216.049 $\pm$ 0.026  $\chi^2$ /NDF: 554989.9/50

All: 217.311 $\pm$ 0.019  $\chi^2$ /NDF: 1209819.2/104

- sign 218.591 $\pm$ 0.026  $\chi^2$ /NDF: 650147.6/53



# asym\_sam\_26\_dd\_dit\_correction\_mean vs Slug



Right In:  $-2027.038 \pm 721.906$   $\chi^2/\text{NDF}$ : 27.2/25

Left Out:  $-704.012 \pm 355.462$   $\chi^2/\text{NDF}$ : 37.6/24

Right Out:  $-1007.145 \pm 741.571$   $\chi^2/\text{NDF}$ : 26.9/30

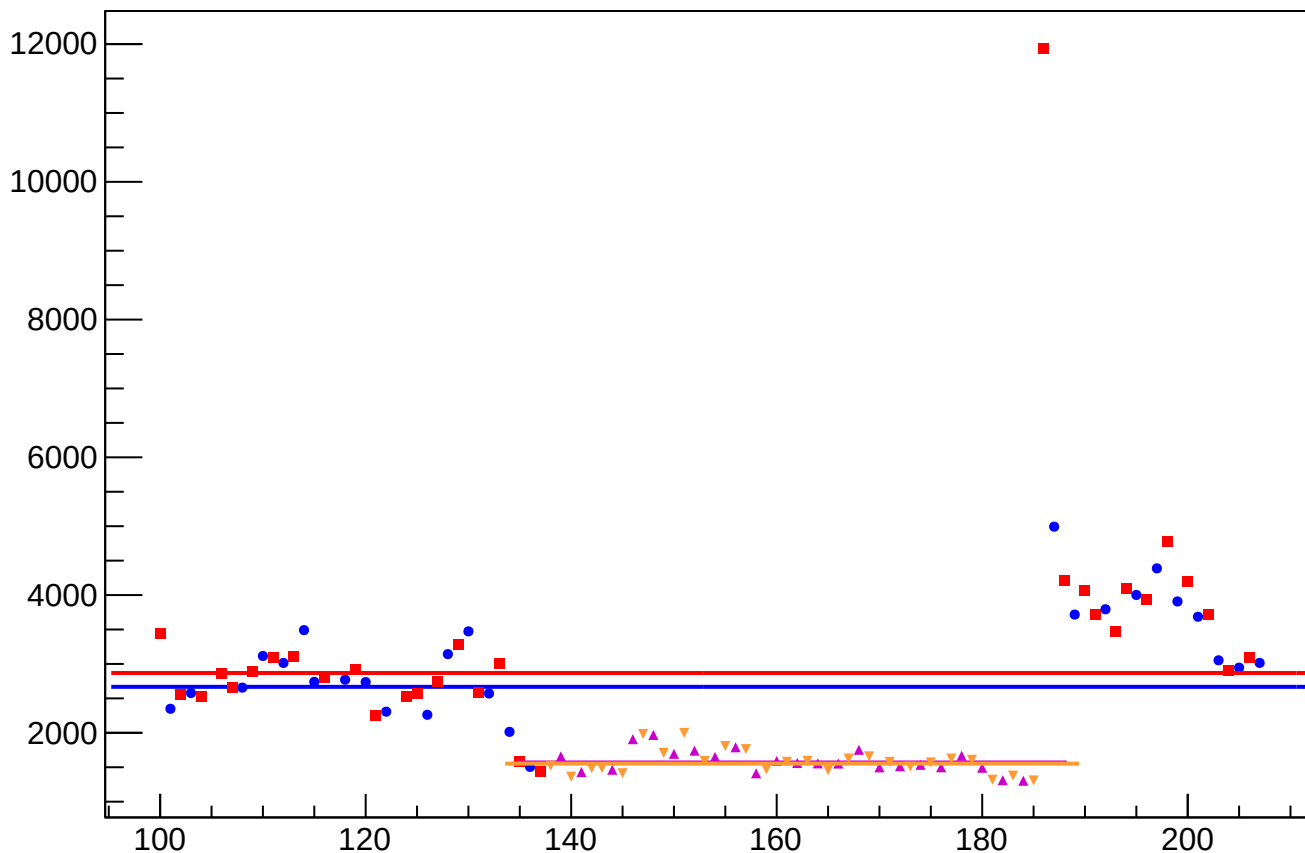
Left In:  $39.658 \pm 368.873$   $\chi^2/\text{NDF}$ : 34.3/22

+ sign  $-962.187 \pm 318.899$   $\chi^2/\text{NDF}$ : 67.6/50

All:  $-578.989 \pm 229.410$   $\chi^2/\text{NDF}$ : 133.4/104

- sign  $-167.976 \pm 330.270$   $\chi^2/\text{NDF}$ : 62.8/53

# asym\_sam\_26\_dd\_dit\_correction\_rms vs Slug



Right In: 2667.457+/-0.510  $\chi^2/\text{NDF}$ : 2477286.7/25

Left Out: 1553.019+/-0.251  $\chi^2/\text{NDF}$ : 409933.8/24

Right Out: 2868.782+/-0.524  $\chi^2/\text{NDF}$ : 2860255.1/30

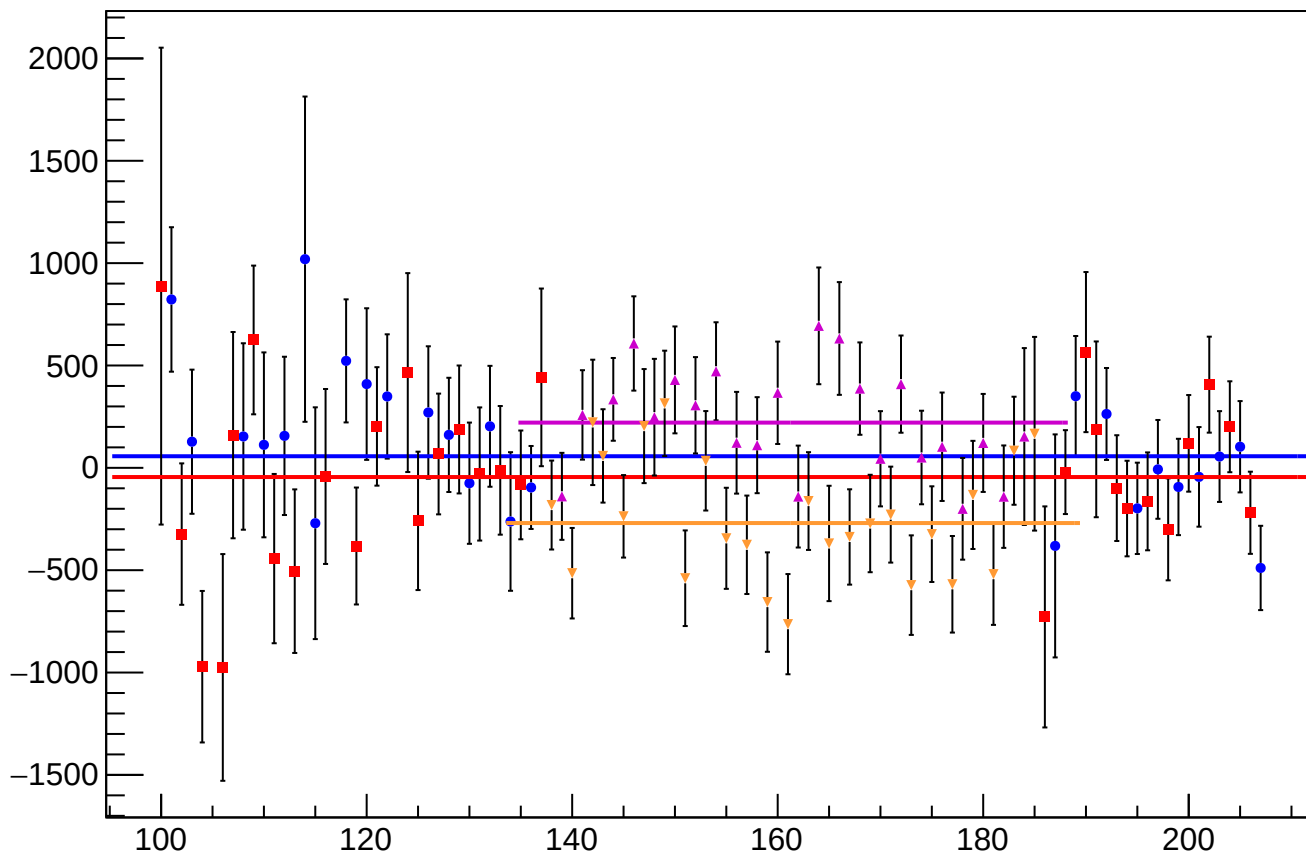
Left In: 1569.383+/-0.261  $\chi^2/\text{NDF}$ : 357481.9/22

+ sign 1770.490+/-0.225  $\chi^2/\text{NDF}$ : 6723415.9/50

All: 1797.813+/-0.162  $\chi^2/\text{NDF}$ : 14894171.6/171

- sign 1827.120+/-0.234  $\chi^2/\text{NDF}$ : 8140326.0/53

# eigen\_dit\_asym\_sam\_26\_dd\_mean vs Slug



Right In: 56.656 $\pm$ 56.277  $\chi^2/\text{NDF}$ : 24.9/25

Left Out: -269.680 $\pm$ 49.158  $\chi^2/\text{NDF}$ : 31.5/24

Right Out: -44.950 $\pm$ 54.705  $\chi^2/\text{NDF}$ : 34.1/30

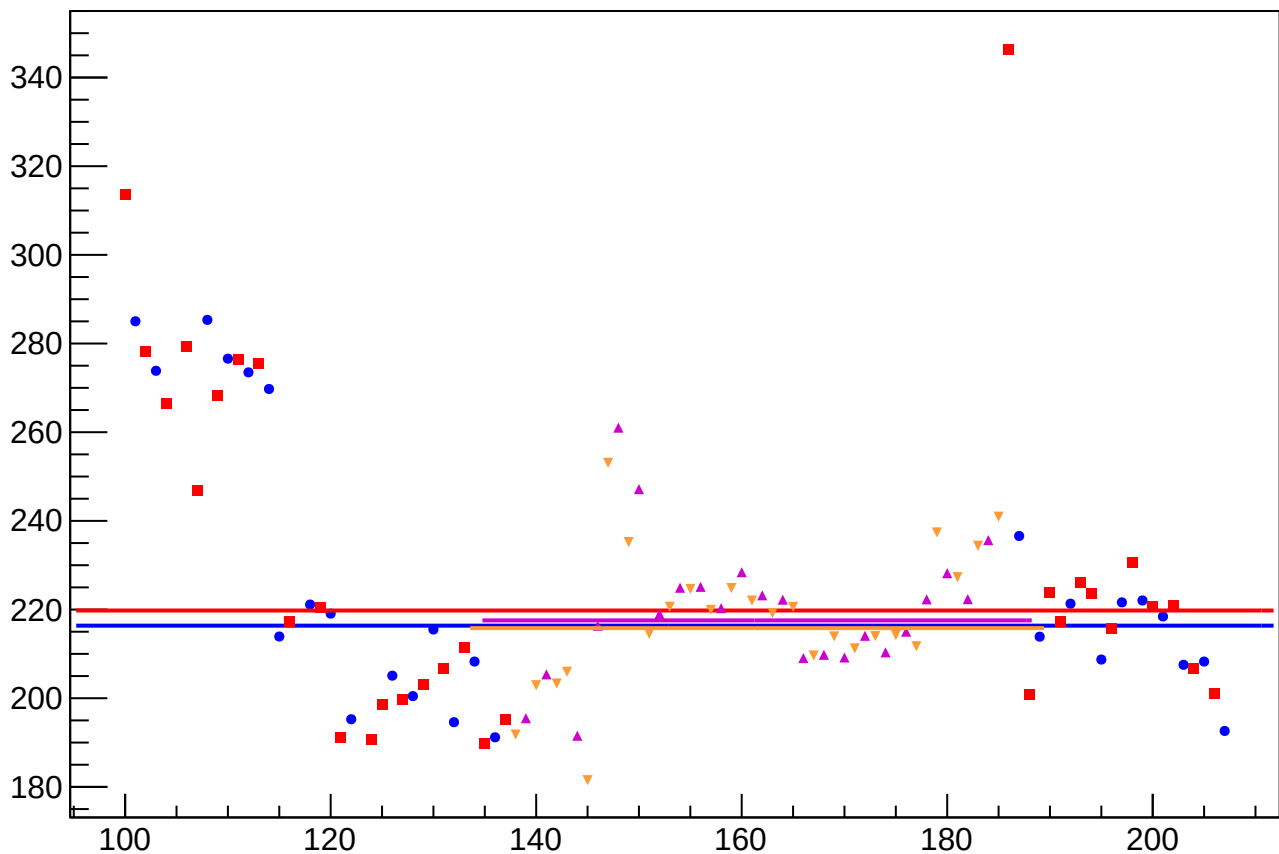
Left In: 220.927 $\pm$ 50.956  $\chi^2/\text{NDF}$ : 23.4/22

+ sign -128.447 $\pm$ 37.022  $\chi^2/\text{NDF}$ : 75.5/50

All: -16.319 $\pm$ 26.272  $\chi^2/\text{NDF}$ : 164.1/104

- sign 97.411 $\pm$ 37.286  $\chi^2/\text{NDF}$ : 70.1/53

# eigen\_dit\_asym\_sam\_26\_dd\_rms vs Slug



Right In: 216.367 $\pm$ 0.040  $\chi^2$ /NDF: 366169.3/25

Left Out: 215.806 $\pm$ 0.035  $\chi^2$ /NDF:188703.4/24

Right Out: 219.786 $\pm$ 0.039  $\chi^2$ /NDF: 487282.1/30

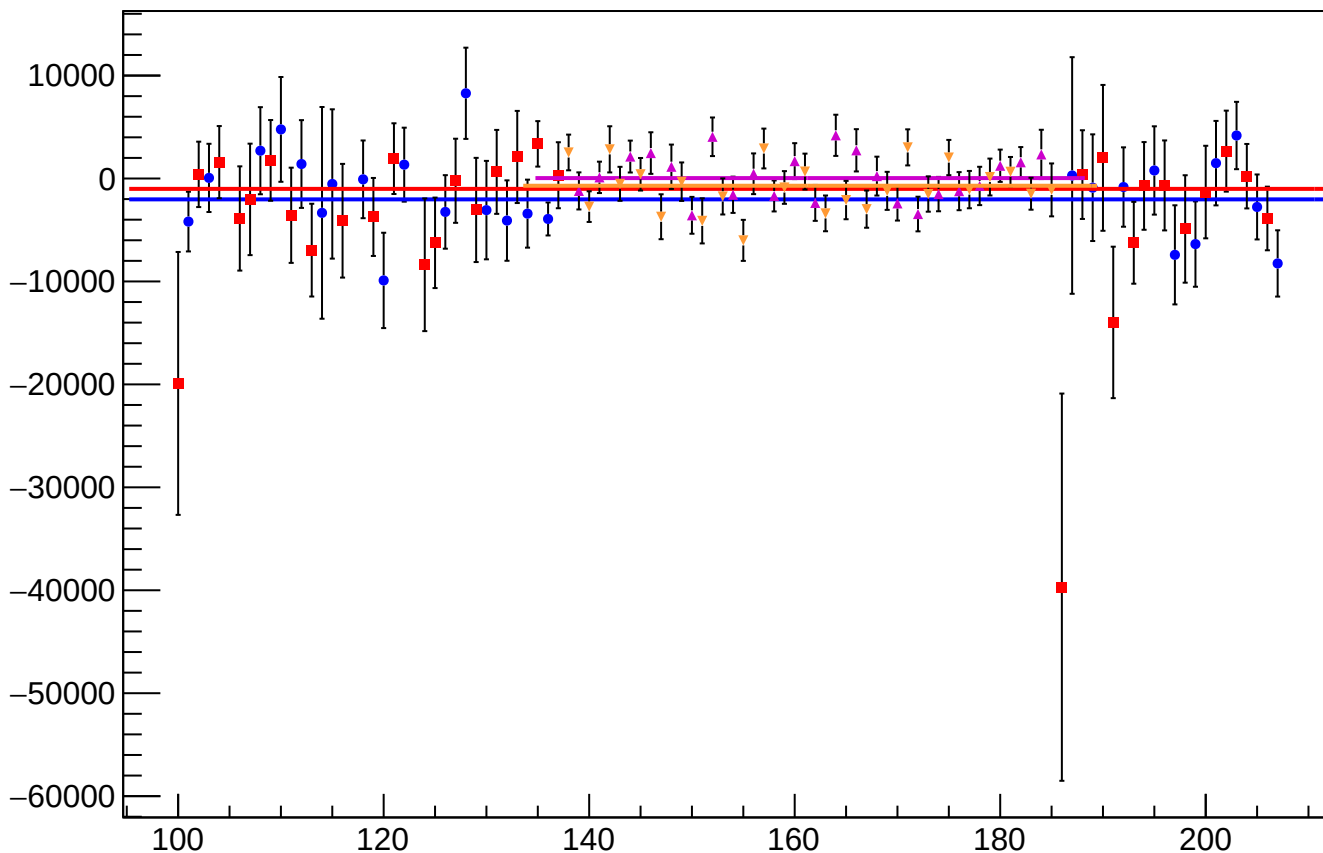
Left In: 217.555 $\pm$ 0.036  $\chi^2$ /NDF:161069.0/22

+ sign 216.049 $\pm$ 0.026  $\chi^2$ /NDF: 554985.1/50

All: 217.311 $\pm$ 0.019  $\chi^2$ /NDF: 1209799.6/104

- sign 218.591 $\pm$ 0.026  $\chi^2$ /NDF: 650132.7/53

asym\_sam\_26\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-2027.035 \pm 721.905$   $\chi^2/\text{NDF}$ : 27.2/25

Left Out:  $-704.012 \pm 355.462$   $\chi^2/\text{NDF}$ : 37.6/24

Right Out:  $-1007.146 \pm 741.570$   $\chi^2/\text{NDF}$ : 26.9/30

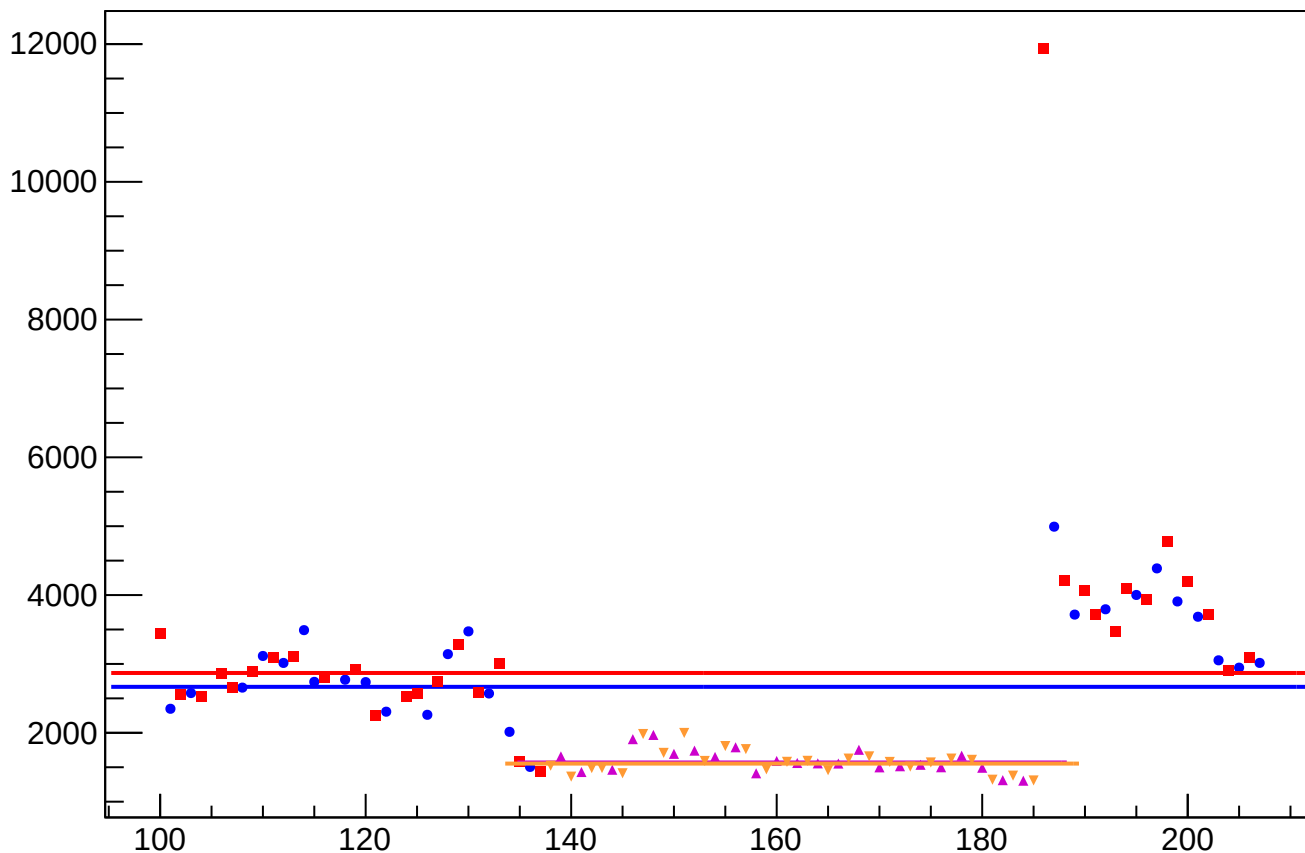
Left In:  $39.657 \pm 368.873$   $\chi^2/\text{NDF}$ : 34.3/22

+ sign  $-962.187 \pm 318.899$   $\chi^2/\text{NDF}$ : 67.6/50

All:  $-578.990 \pm 229.410$   $\chi^2/\text{NDF}$ : 133.4/104

- sign  $-167.978 \pm 330.270$   $\chi^2/\text{NDF}$ : 62.8/53

asym\_sam\_26\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 2667.454+/-0.510  $\chi^2/\text{NDF}$ : 2477283.6/25

Left Out: 1553.020+/-0.251  $\chi^2/\text{NDF}$ : 409936.6/24

Right Out: 2868.779+/-0.524  $\chi^2/\text{NDF}$ : 2860258.0/30

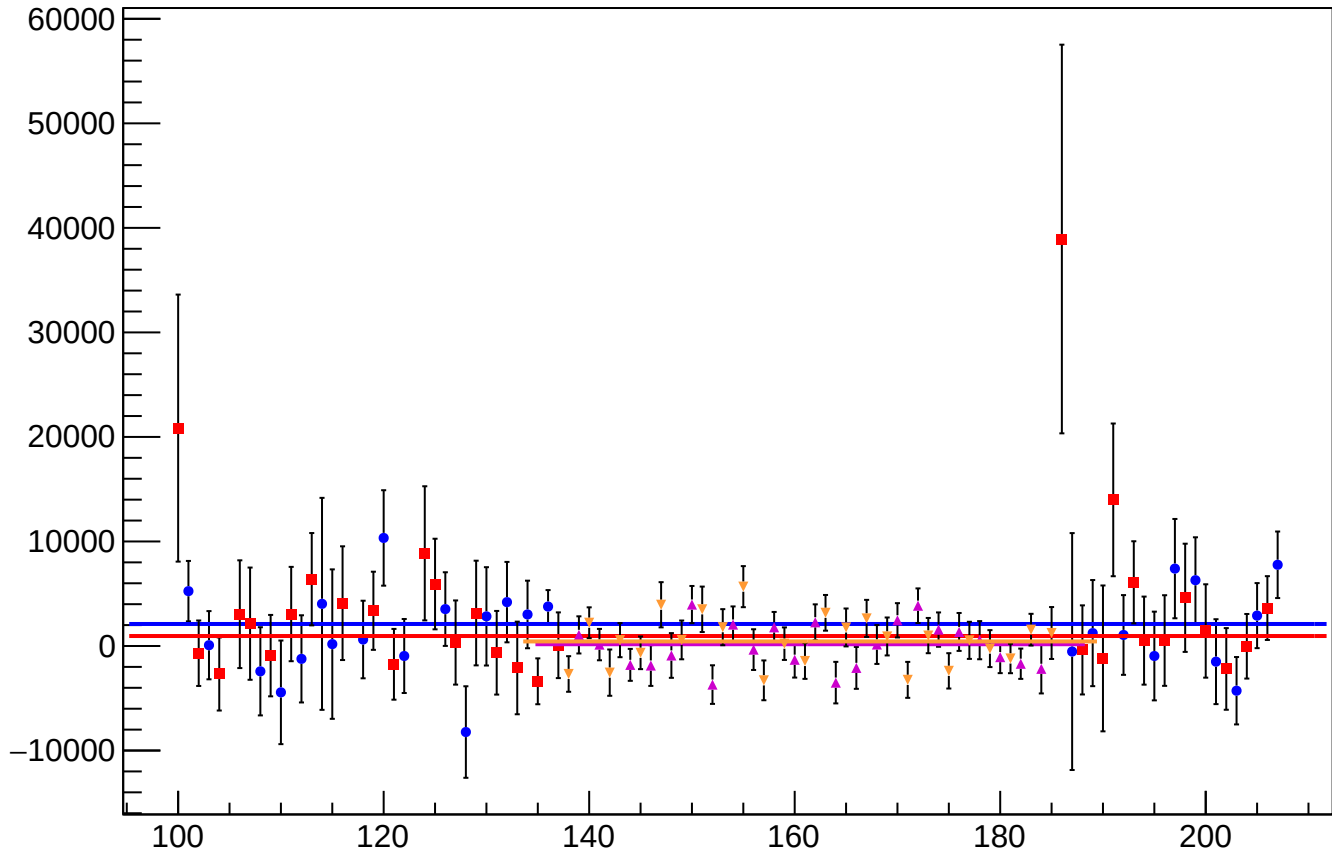
Left In: 1569.383+/-0.261  $\chi^2/\text{NDF}$ : 357484.6/22

+ sign 1770.490+/-0.225  $\chi^2/\text{NDF}$ : 6723401.6/50

All: 1797.813+/-0.162  $\chi^2/\text{NDF}$ : 14894147.7/100

- sign 1827.120+/-0.234  $\chi^2/\text{NDF}$ : 8140316.8/53

# asym\_sam\_26\_dd\_mean vs Slug



Right In: 2105.888 $\pm$ 711.541  $\chi^2$ /NDF: 27.5/25

Left Out: 437.522 $\pm$ 349.581  $\chi^2$ /NDF:38.9/24

Right Out: 954.465 $\pm$ 733.365  $\chi^2$ /NDF: 26.3/30

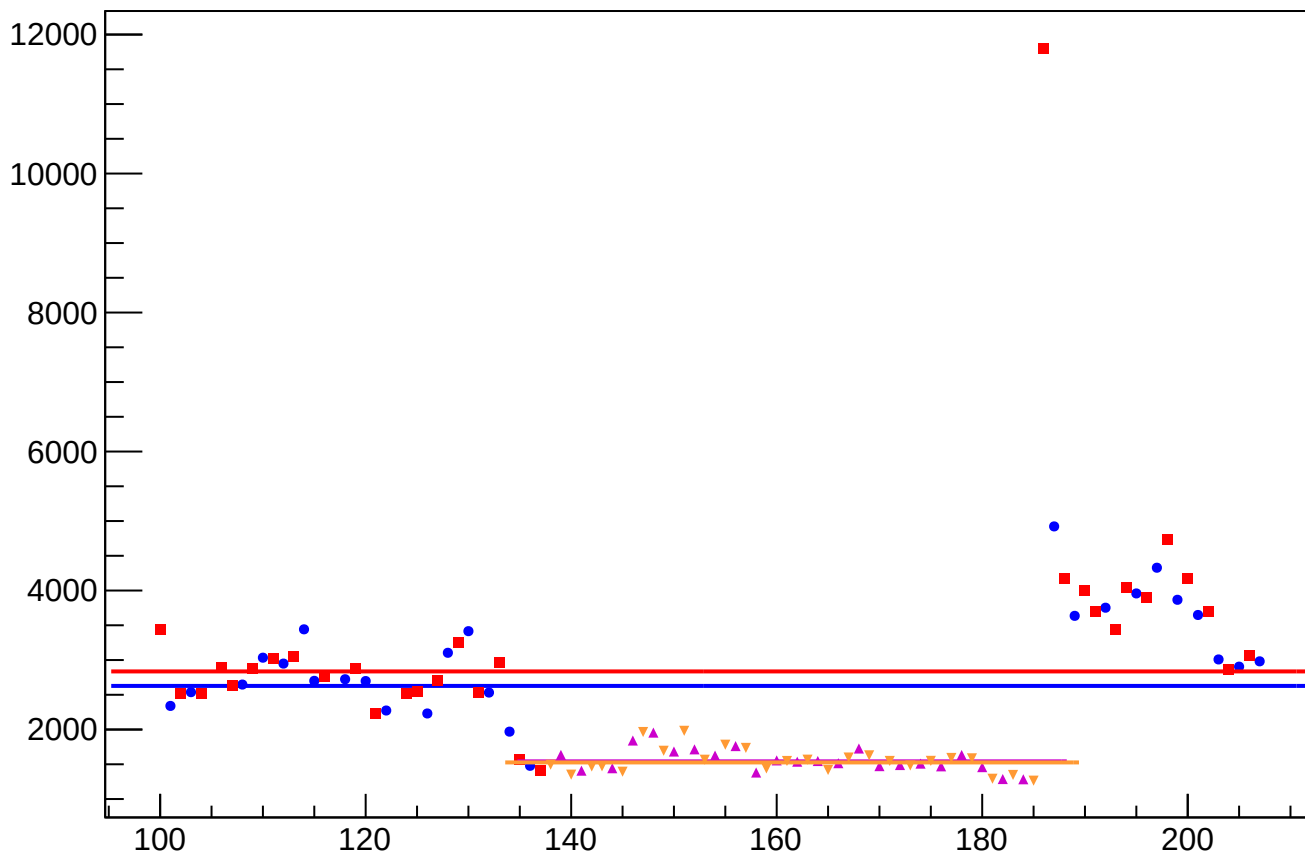
Left In: 169.827 $\pm$ 362.550  $\chi^2$ /NDF:33.0/22

+ sign 761.924 $\pm$ 313.759  $\chi^2$ /NDF: 70.8/50

All: 550.635 $\pm$ 225.732  $\chi^2$ /NDF: 132.0/104

- sign 323.929 $\pm$ 325.004  $\chi^2$ /NDF: 60.2/53

# asym\_sam\_26\_dd\_rms vs Slug



Right In: 2627.618 $\pm$ 0.503  $\chi^2$ /NDF: 2500726.2/25

Left Out: 1526.726 $\pm$ 0.247  $\chi^2$ /NDF: 429467.0/24

Right Out: 2836.152 $\pm$ 0.519  $\chi^2$ /NDF: 2869681.5/30

Left In: 1542.262 $\pm$ 0.256  $\chi^2$ /NDF: 362291.1/22

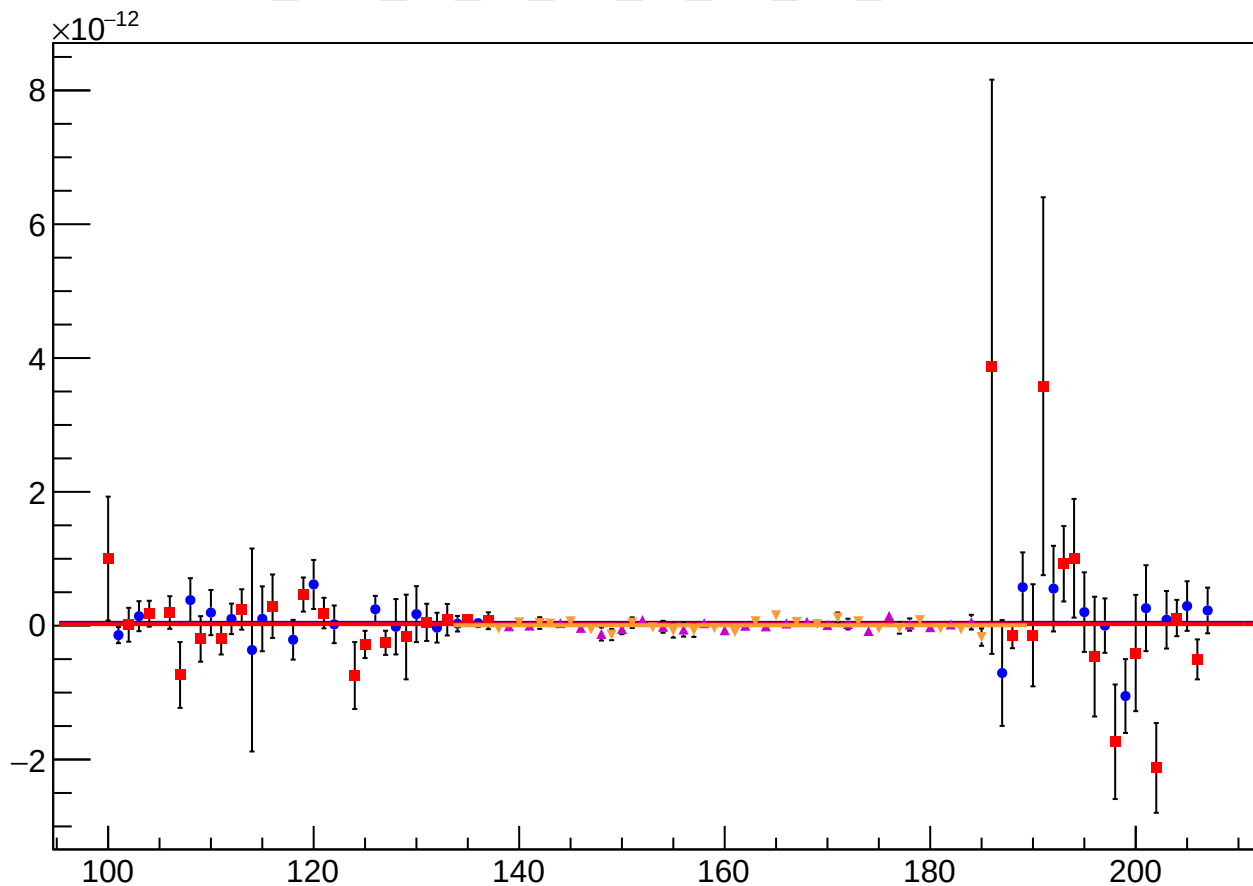
+ sign 1740.787 $\pm$ 0.222  $\chi^2$ /NDF: 6786897.1/50

All: 1767.605 $\pm$ 0.160  $\chi^2$ /NDF: 15052098.8/100

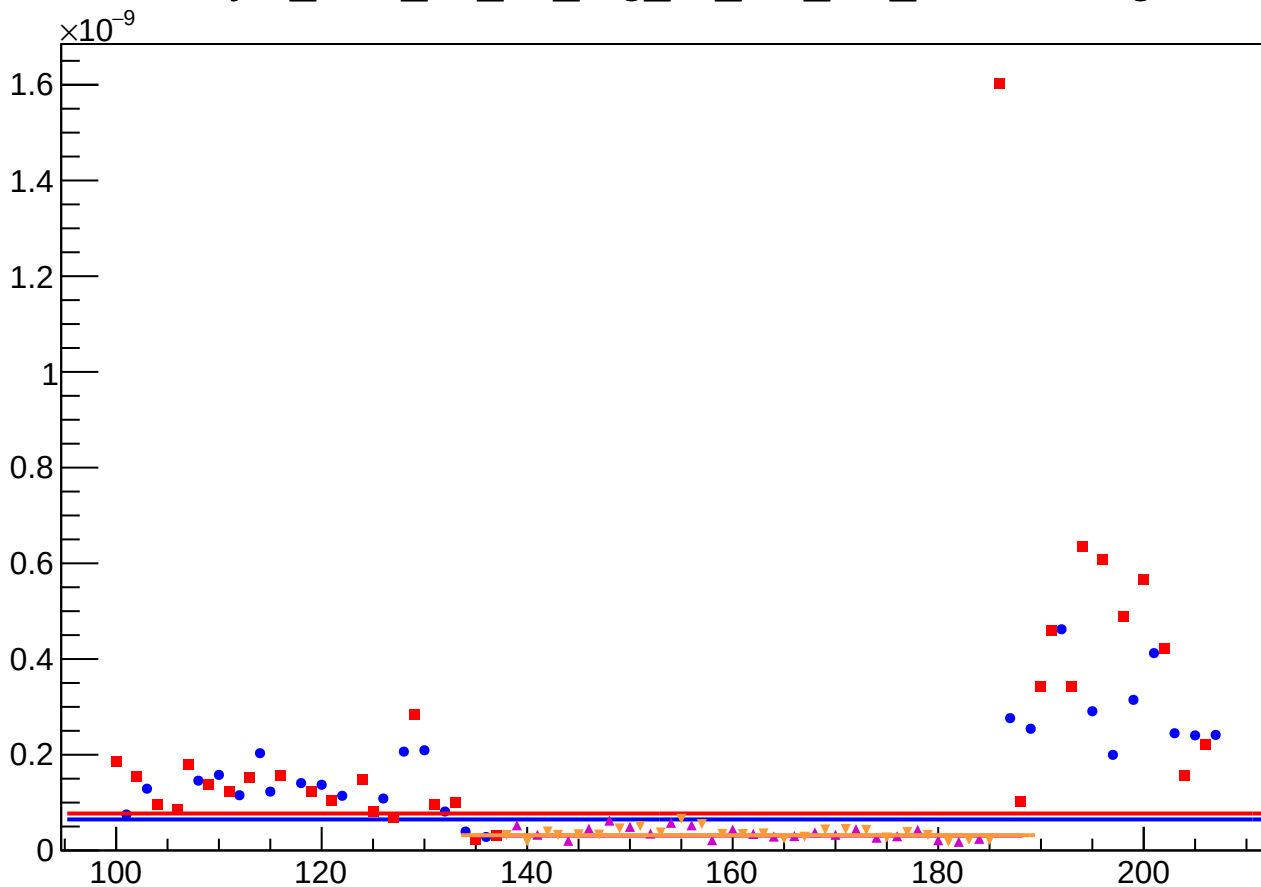
- sign 1796.379 $\pm$ 0.230  $\chi^2$ /NDF: 8234913.1/53



# asym\_sam\_26\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



asym\_sam\_26\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6806536.4/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :1231140.2/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7440717.8/30

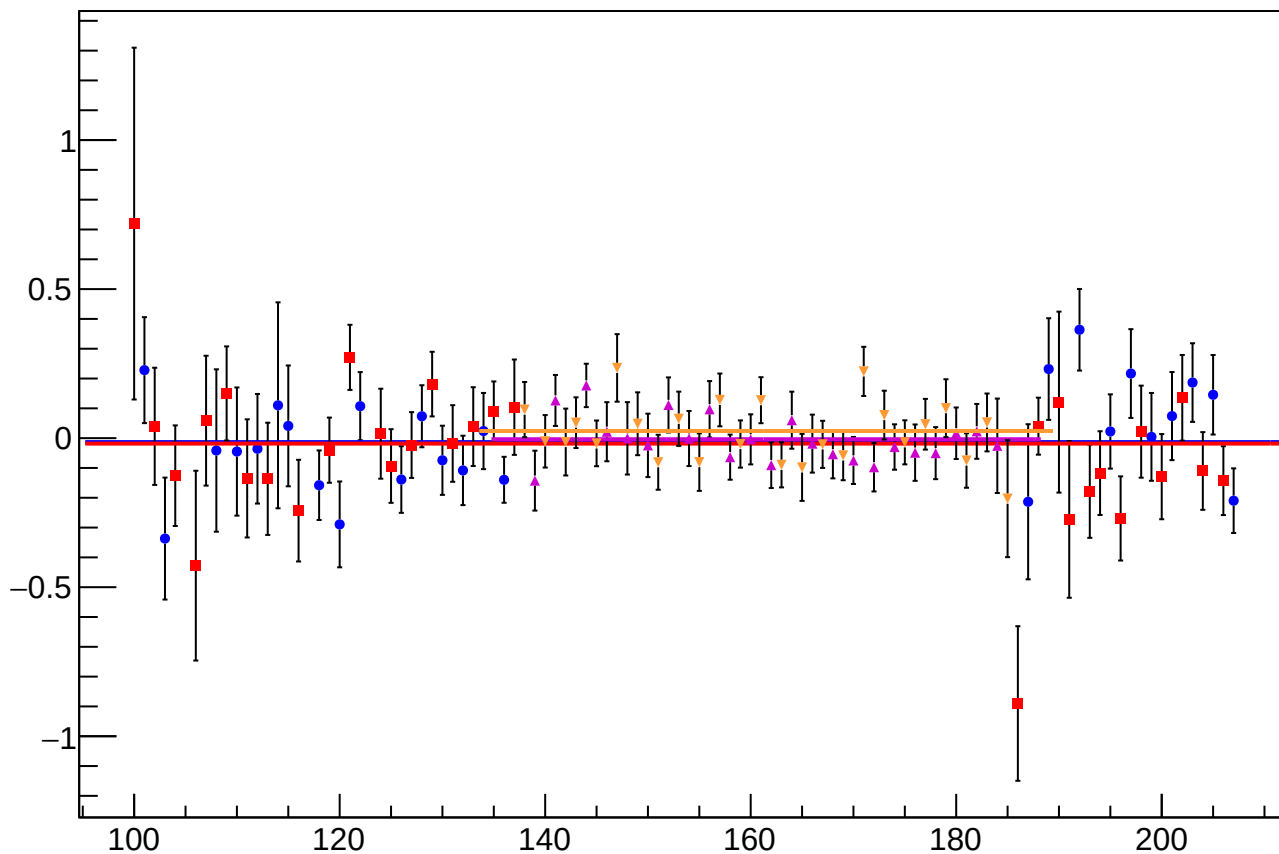
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :1593815.4/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9595879.9/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 20958401.7/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11361887.2/53

asym\_sam\_26\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.013 \pm 0.027$   $\chi^2/\text{NDF}$ : 36.7/25

Left Out:  $0.024 \pm 0.018$   $\chi^2/\text{NDF}$ : 25.5/24

Right Out:  $-0.018 \pm 0.026$   $\chi^2/\text{NDF}$ : 41.2/30

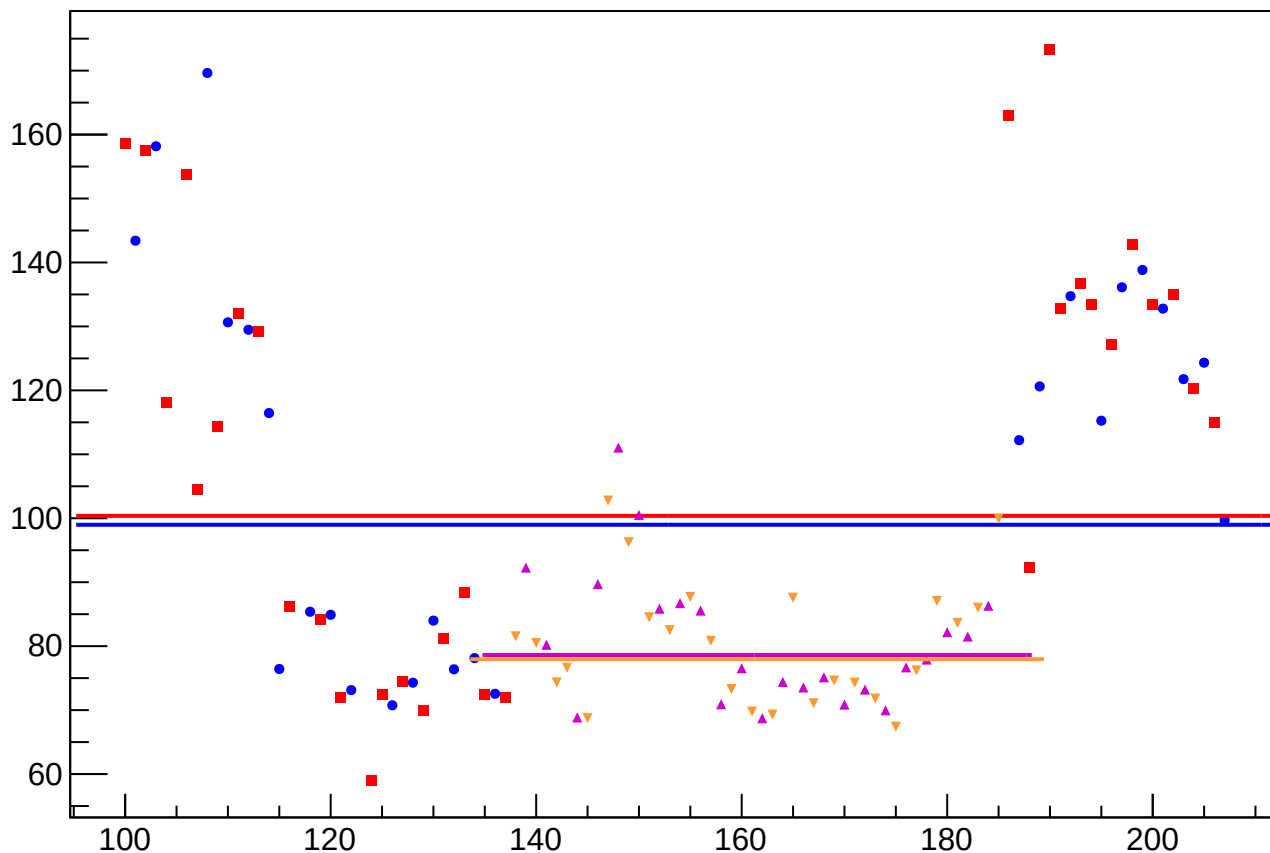
Left In:  $-0.004 \pm 0.019$   $\chi^2/\text{NDF}$ : 18.9/22

+ sign  $0.012 \pm 0.015$   $\chi^2/\text{NDF}$ : 63.5/50

All:  $0.002 \pm 0.011$   $\chi^2/\text{NDF}$ : 124.8/104

- sign  $-0.009 \pm 0.015$   $\chi^2/\text{NDF}$ : 60.3/53

# asym\_sam\_26\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In:  $98.982 \pm 0.019$   $\chi^2/\text{NDF}$ : 2056619.1/25

Left Out:  $77.957 \pm 0.013$   $\chi^2/\text{NDF}$ : 439703.9/24

Right Out:  $100.378 \pm 0.018$   $\chi^2/\text{NDF}$ : 2388716.5/30

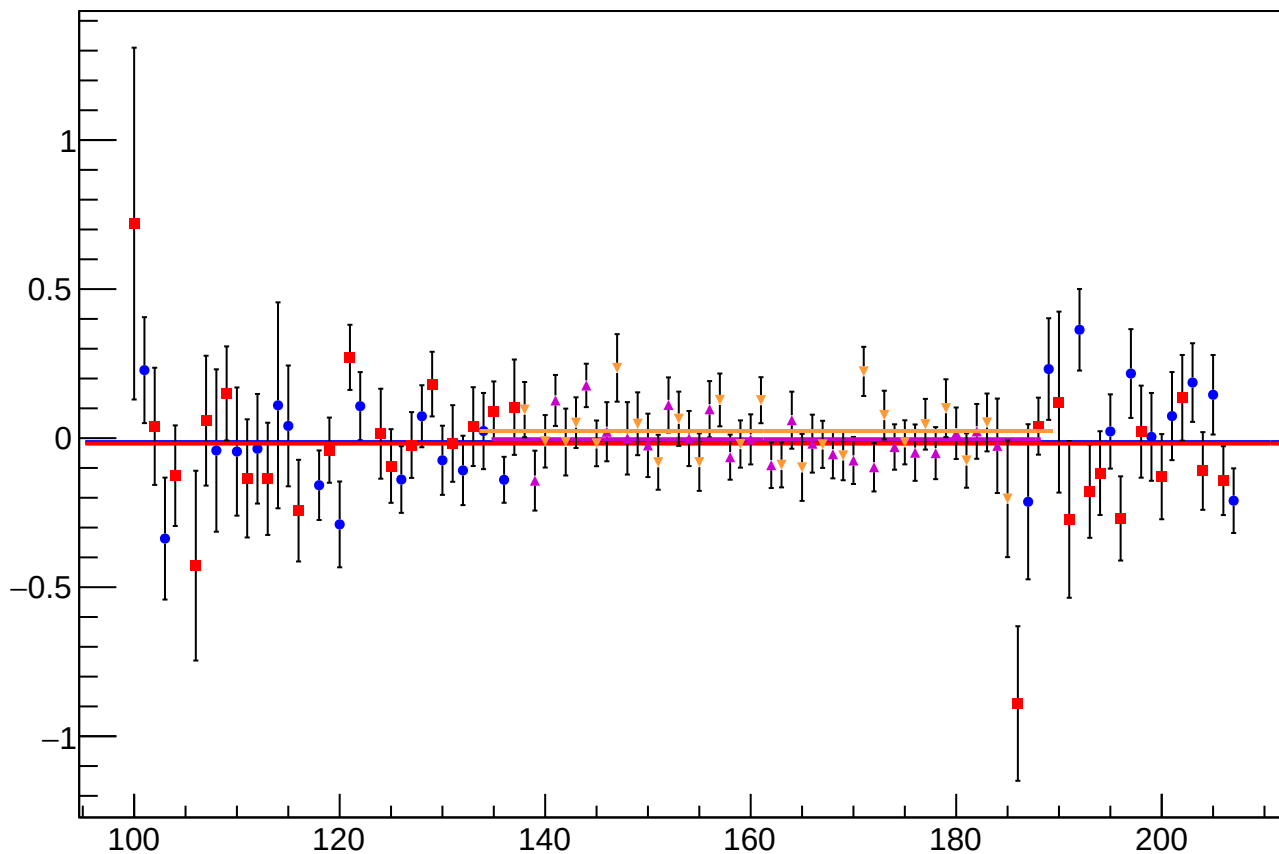
Left In:  $78.615 \pm 0.013$   $\chi^2/\text{NDF}$ : 497808.4/22

+ sign  $84.459 \pm 0.010$   $\chi^2/\text{NDF}$ : 3353743.8/50

All:  $85.208 \pm 0.007$   $\chi^2/\text{NDF}$ : 7181129.5/104

- sign  $85.983 \pm 0.011$   $\chi^2/\text{NDF}$ : 3817018.6/53

asym\_sam\_26\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.013 \pm 0.027$   $\chi^2/\text{NDF}$ : 36.7/25

Left Out:  $0.024 \pm 0.018$   $\chi^2/\text{NDF}$ : 25.5/24

Right Out:  $-0.018 \pm 0.026$   $\chi^2/\text{NDF}$ : 41.2/30

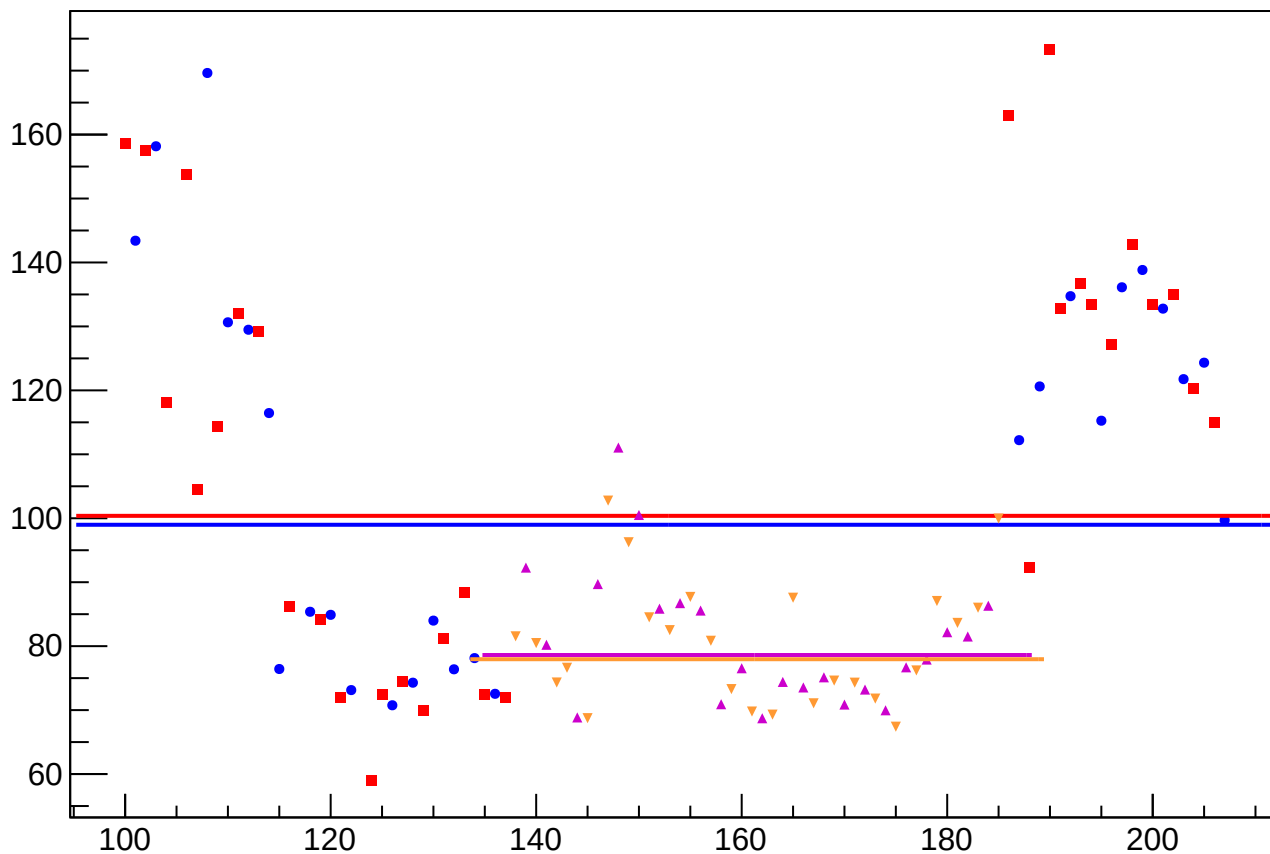
Left In:  $-0.004 \pm 0.019$   $\chi^2/\text{NDF}$ : 18.9/22

+ sign  $0.012 \pm 0.015$   $\chi^2/\text{NDF}$ : 63.5/50

All:  $0.002 \pm 0.011$   $\chi^2/\text{NDF}$ : 124.8/104

- sign  $-0.009 \pm 0.015$   $\chi^2/\text{NDF}$ : 60.3/53

asym\_sam\_26\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 98.982 $\pm$ 0.019  $\chi^2$ /NDF: 2056619.1/25

Left Out: 77.957 $\pm$ 0.013  $\chi^2$ /NDF: 439703.9/24

+ sign 84.459 $\pm$ 0.010  $\chi^2$ /NDF: 3353743.8/50

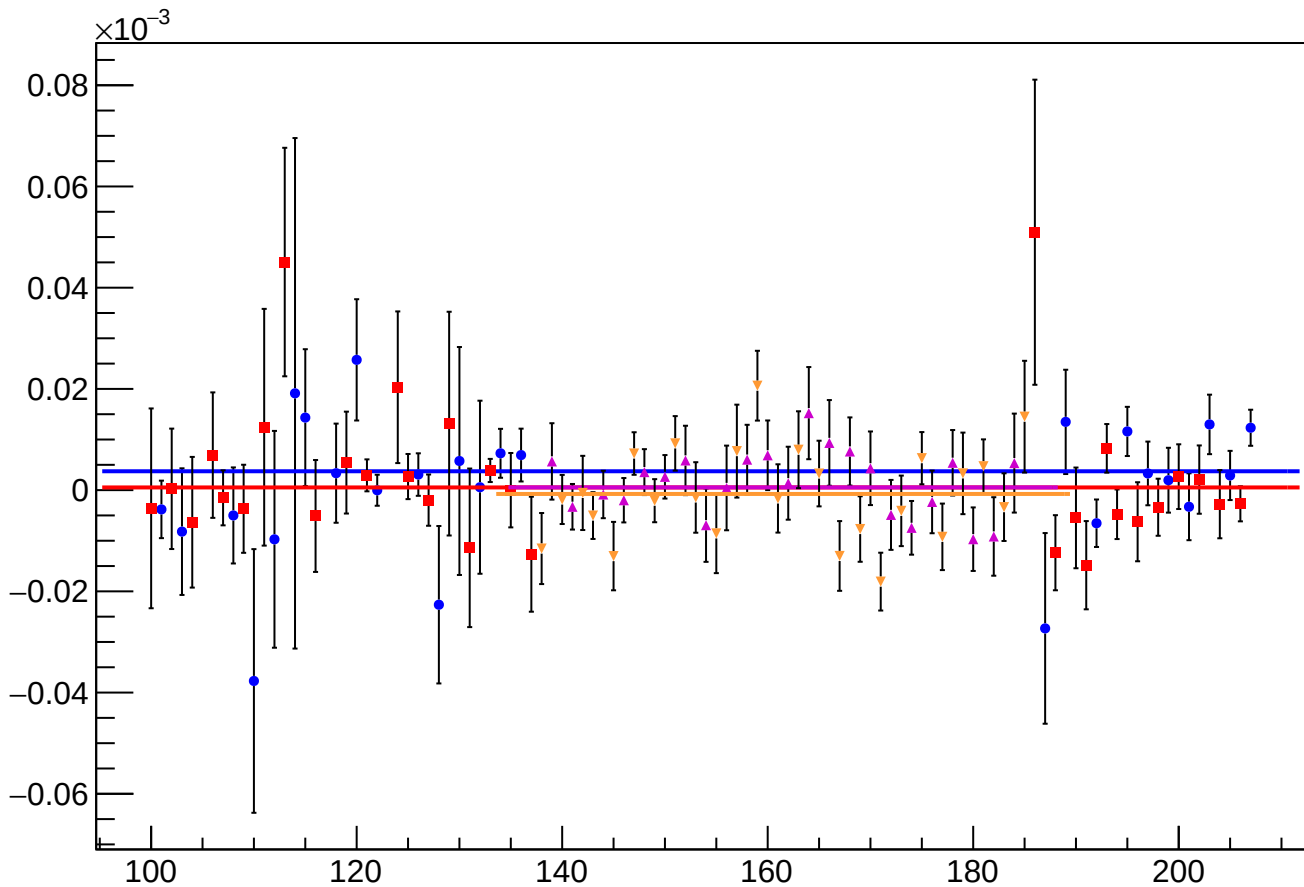
Right Out: 100.378 $\pm$ 0.018  $\chi^2$ /NDF: 2388716.5/30

All: 85.208 $\pm$ 0.007  $\chi^2$ /NDF: 7181129.5/104

- sign 85.983 $\pm$ 0.011  $\chi^2$ /NDF: 3817018.6/53

Left In: 78.615 $\pm$ 0.013  $\chi^2$ /NDF: 497808.4/22

asym\_sam\_26\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 36.4/25

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:47.6/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 28.4/30

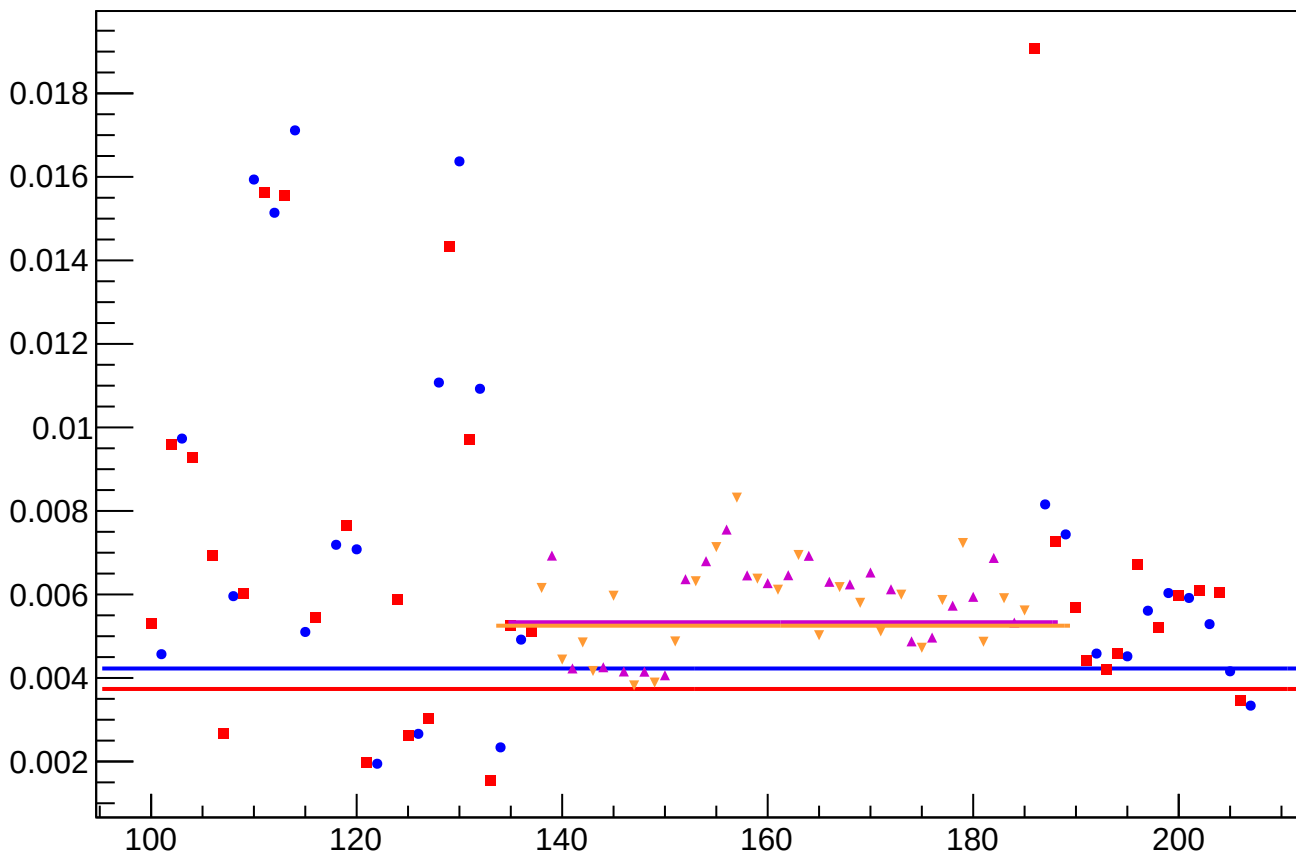
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:18.6/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 90.6/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 138.2/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 47.0/53

asym\_sam\_26\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In:  $0.004 \pm 0.000$   $\chi^2/\text{NDF}$ : 5700432.3/25

Left Out:  $0.005 \pm 0.000$   $\chi^2/\text{NDF}$ : 1511867.7/24

Right Out:  $0.004 \pm 0.000$   $\chi^2/\text{NDF}$ : 8460204.3/30

Left In:  $0.005 \pm 0.000$   $\chi^2/\text{NDF}$ : 1508187.9/22

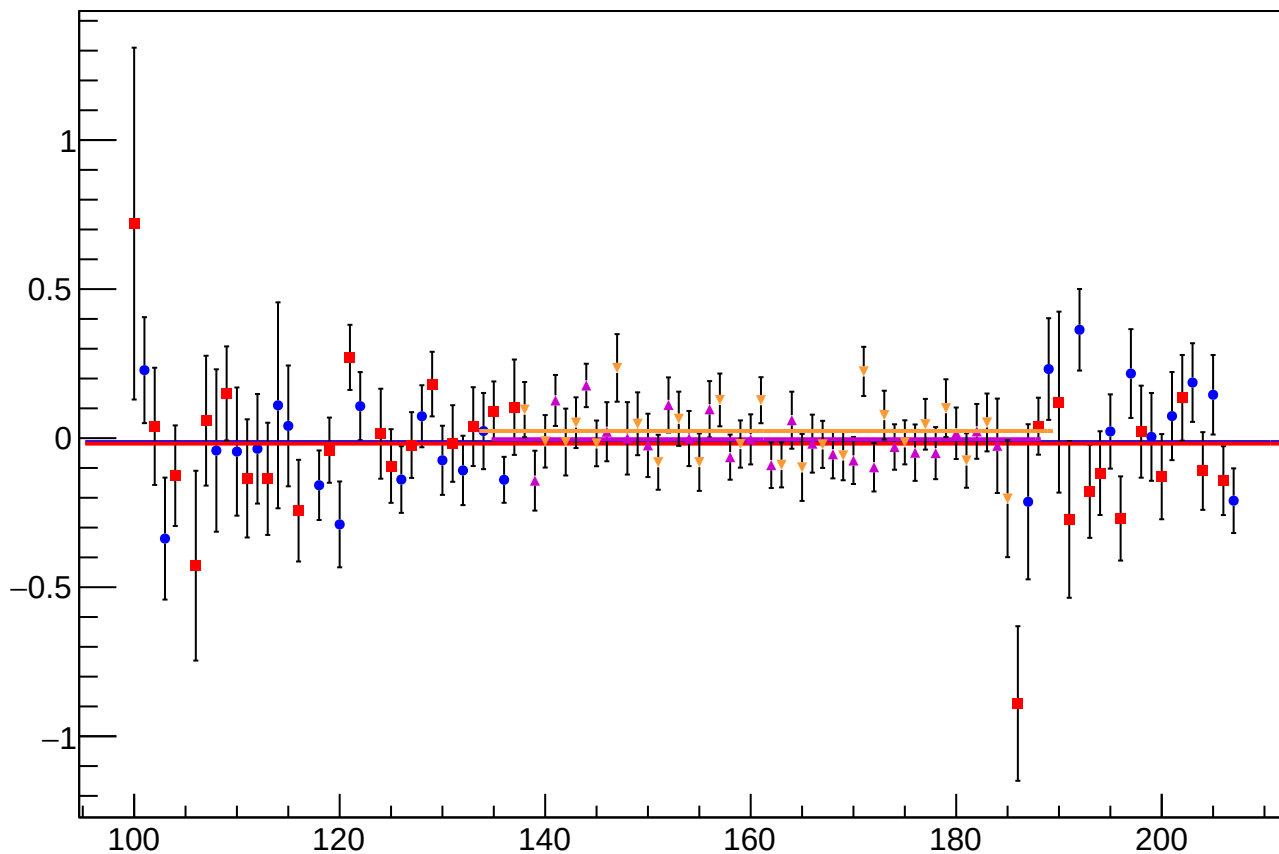
+ sign  $0.005 \pm 0.000$   $\chi^2/\text{NDF}$ : 7904250.9/50

All:  $0.005 \pm 0.000$   $\chi^2/\text{NDF}$ : 19828309.2/104

- sign  $0.004 \pm 0.000$   $\chi^2/\text{NDF}$ : 11768731.2/53



asym\_sam\_26\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.013 \pm 0.027$   $\chi^2/\text{NDF}$ : 36.7/25

Left Out:  $0.024 \pm 0.018$   $\chi^2/\text{NDF}$ : 25.5/24

Right Out:  $-0.018 \pm 0.026$   $\chi^2/\text{NDF}$ : 41.2/30

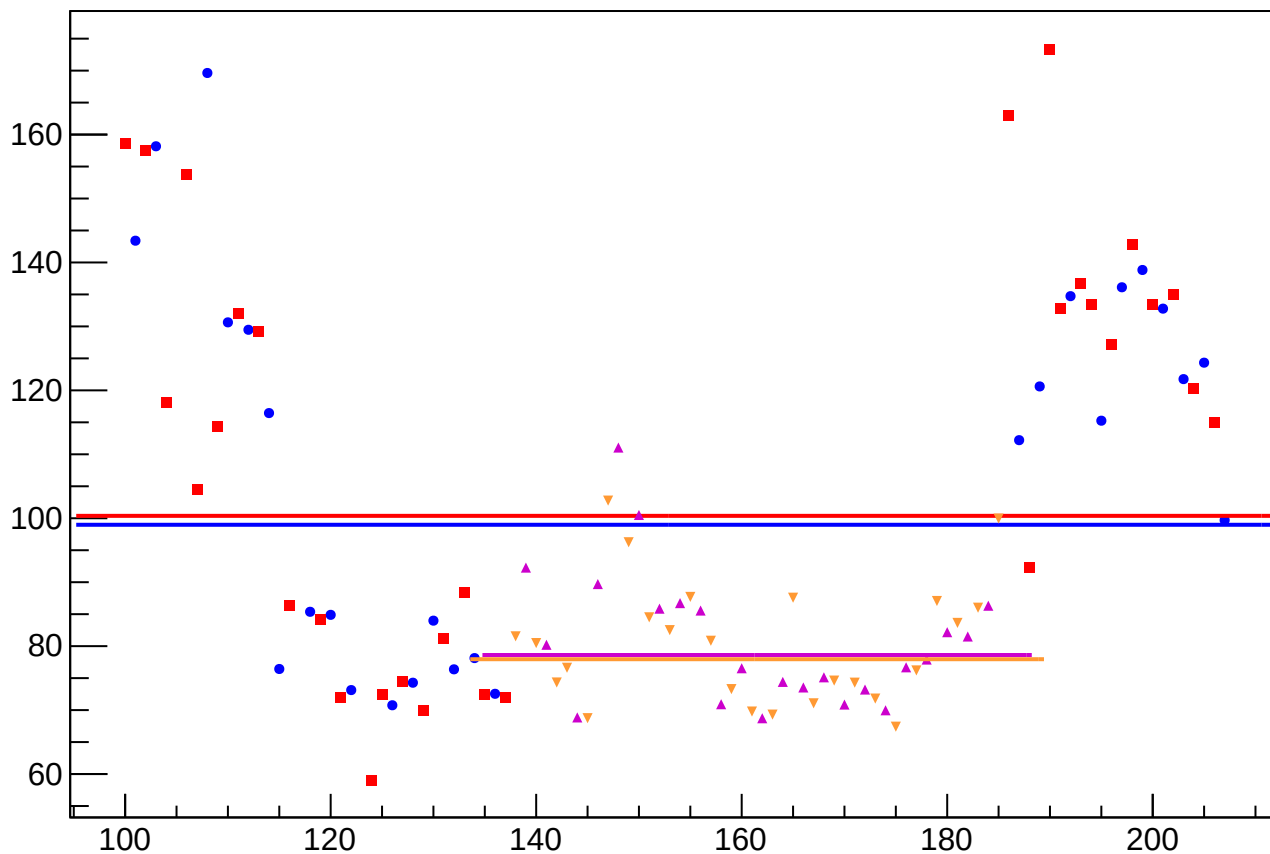
Left In:  $-0.004 \pm 0.019$   $\chi^2/\text{NDF}$ : 18.9/22

+ sign  $0.012 \pm 0.015$   $\chi^2/\text{NDF}$ : 63.5/50

All:  $0.002 \pm 0.011$   $\chi^2/\text{NDF}$ : 124.8/104

- sign  $-0.009 \pm 0.015$   $\chi^2/\text{NDF}$ : 60.3/53

asym\_sam\_26\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 98.980 $\pm$ 0.019  $\chi^2$ /NDF: 2056735.1/25

Left Out: 77.957 $\pm$ 0.013  $\chi^2$ /NDF: 439744.9/24

+ sign 84.458 $\pm$ 0.010  $\chi^2$ /NDF: 3353784.0/50

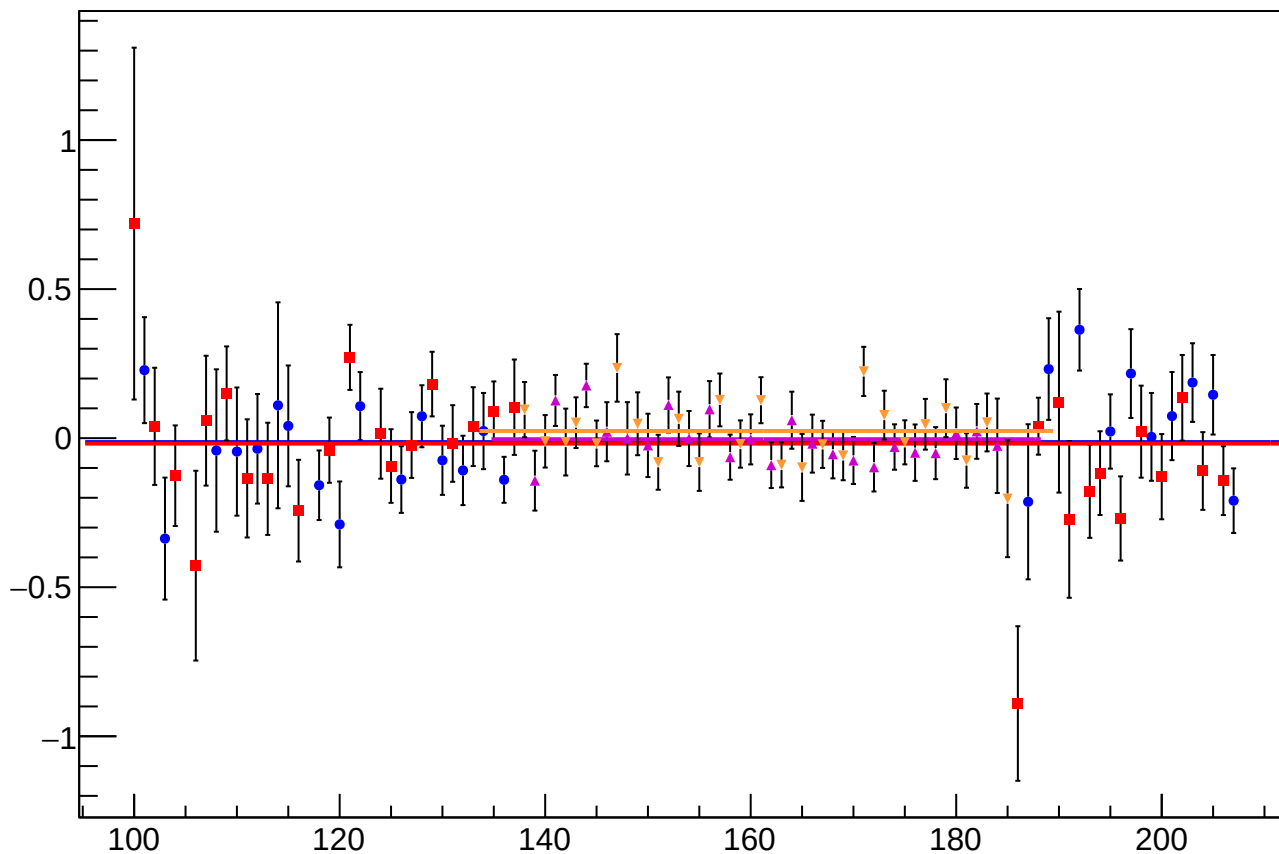
Right Out: 100.376 $\pm$ 0.018  $\chi^2$ /NDF: 238818.0/30

All: 85.207 $\pm$ 0.007  $\chi^2$ /NDF: 7181232.3/104

- sign 85.982 $\pm$ 0.011  $\chi^2$ /NDF: 3817083.7/53

Left In: 78.614 $\pm$ 0.013  $\chi^2$ /NDF: 497846.3/22

asym\_sam\_26\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.013 \pm 0.027$   $\chi^2/\text{NDF}$ : 36.7/25

Left Out:  $0.024 \pm 0.018$   $\chi^2/\text{NDF}$ : 25.5/24

Right Out:  $-0.018 \pm 0.026$   $\chi^2/\text{NDF}$ : 41.2/30

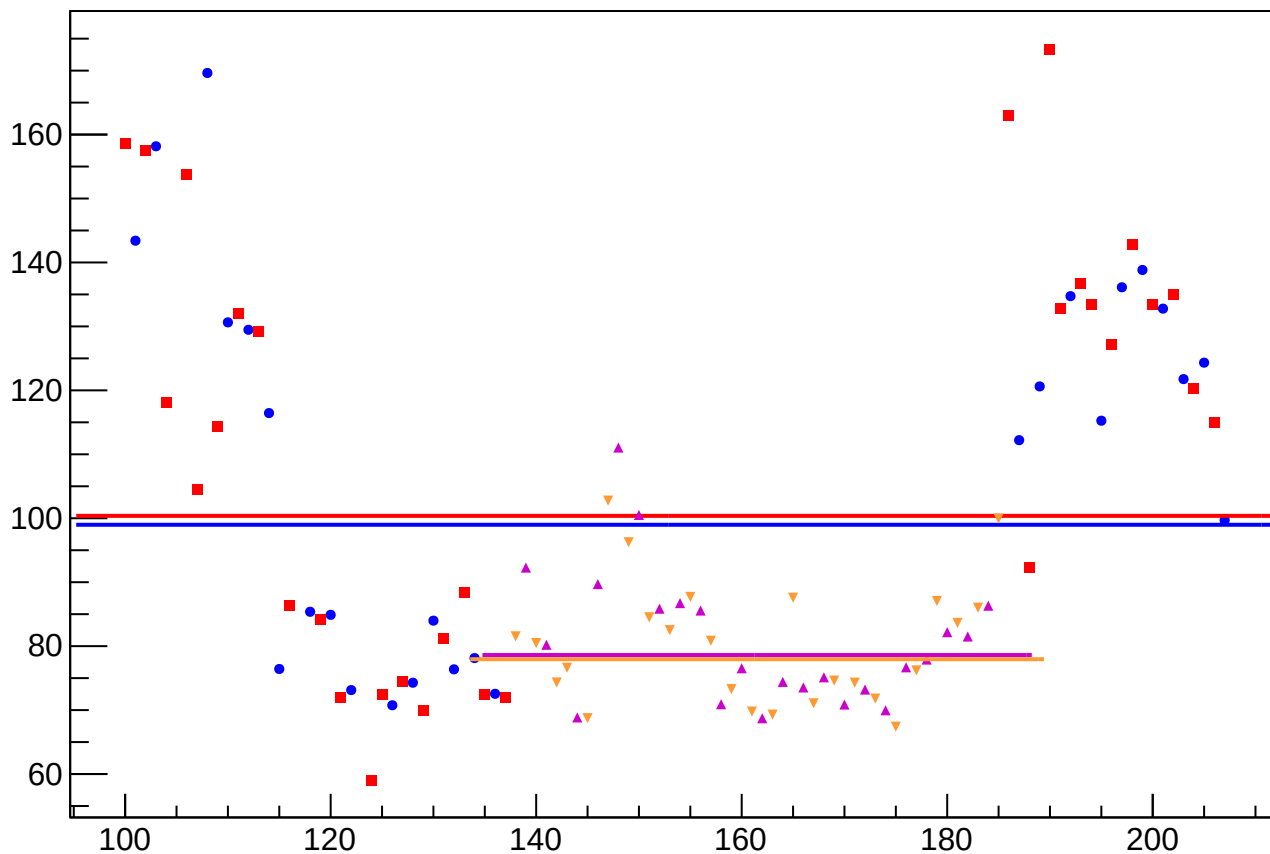
Left In:  $-0.004 \pm 0.019$   $\chi^2/\text{NDF}$ : 18.9/22

+ sign  $0.012 \pm 0.015$   $\chi^2/\text{NDF}$ : 63.5/50

All:  $0.002 \pm 0.011$   $\chi^2/\text{NDF}$ : 124.8/104

- sign  $-0.009 \pm 0.015$   $\chi^2/\text{NDF}$ : 60.3/53

asym\_sam\_26\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 98.980 $\pm$ 0.019  $\chi^2$ /NDF: 2056735.1/25

Left Out: 77.957 $\pm$ 0.013  $\chi^2$ /NDF: 439744.9/24

+ sign 84.458 $\pm$ 0.010  $\chi^2$ /NDF: 3353784.0/50

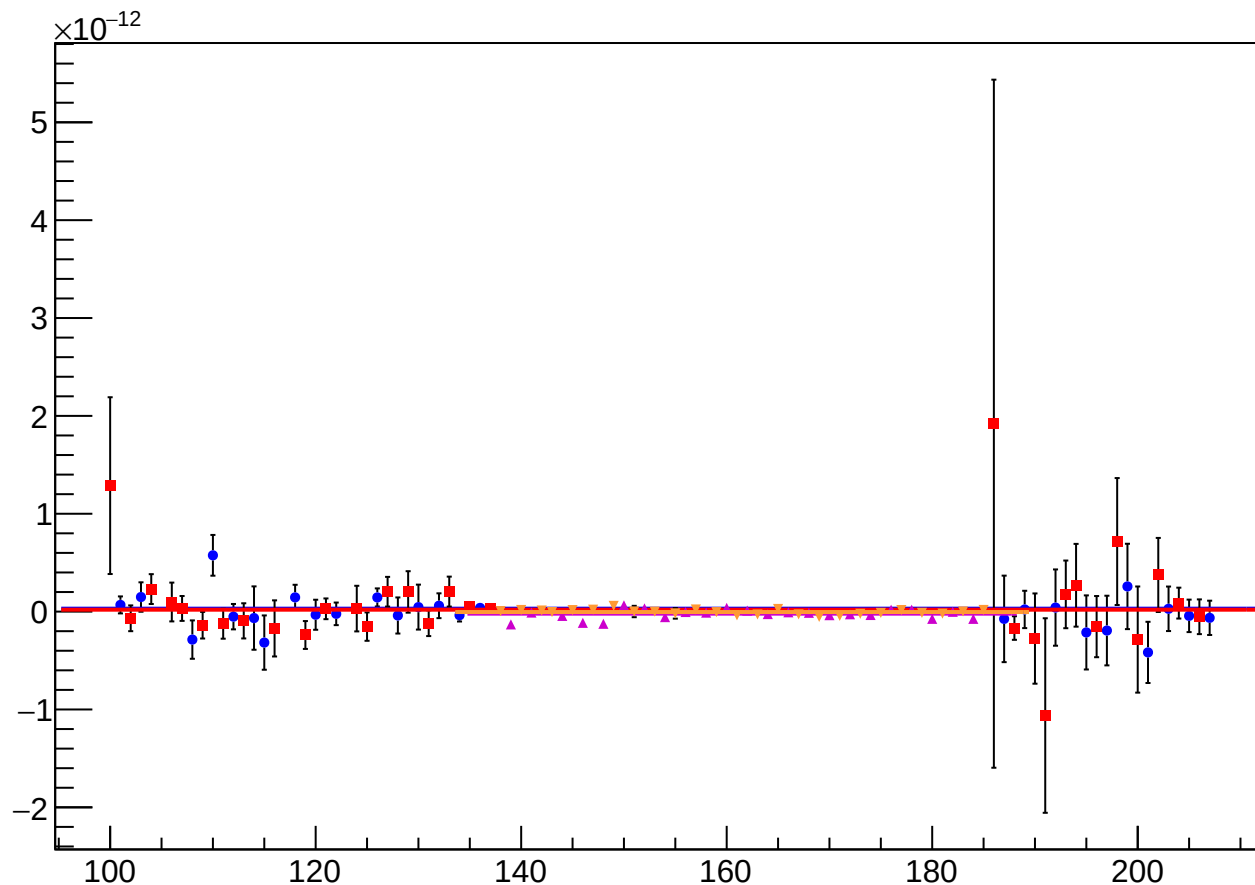
Right Out: 100.376 $\pm$ 0.018  $\chi^2$ /NDF: 238818.0/30

All: 85.207 $\pm$ 0.007  $\chi^2$ /NDF: 7181232.3/104

- sign 85.982 $\pm$ 0.011  $\chi^2$ /NDF: 3817083.7/53

Left In: 78.614 $\pm$ 0.013  $\chi^2$ /NDF: 497846.3/22

asym\_sam\_26\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 20.1/25

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:13.1/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 25.8/30

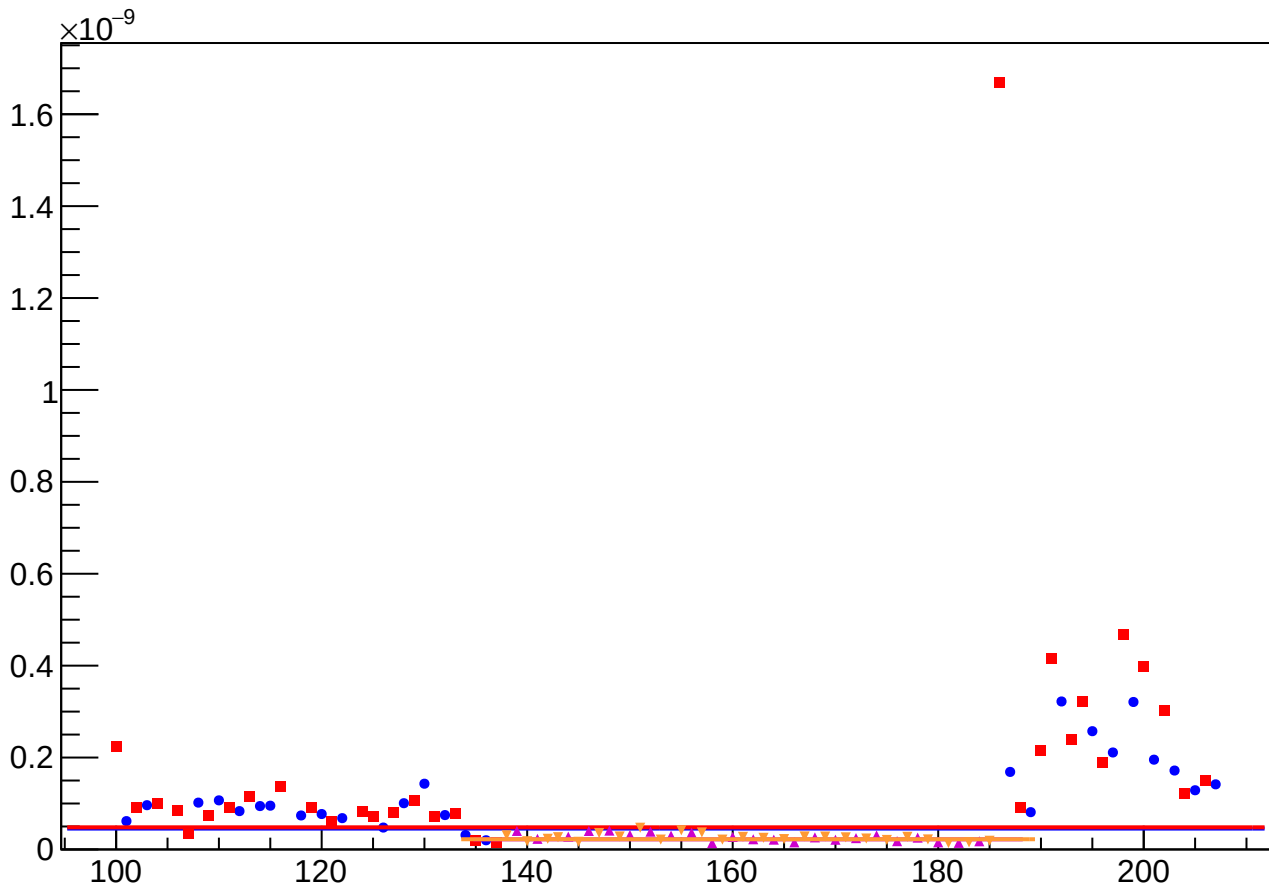
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:40.1/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 35.8/50

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 108.7/104

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 69.2/53

asym\_sam\_26\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 9003925.0/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:2302790.0/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 11249017.4/30

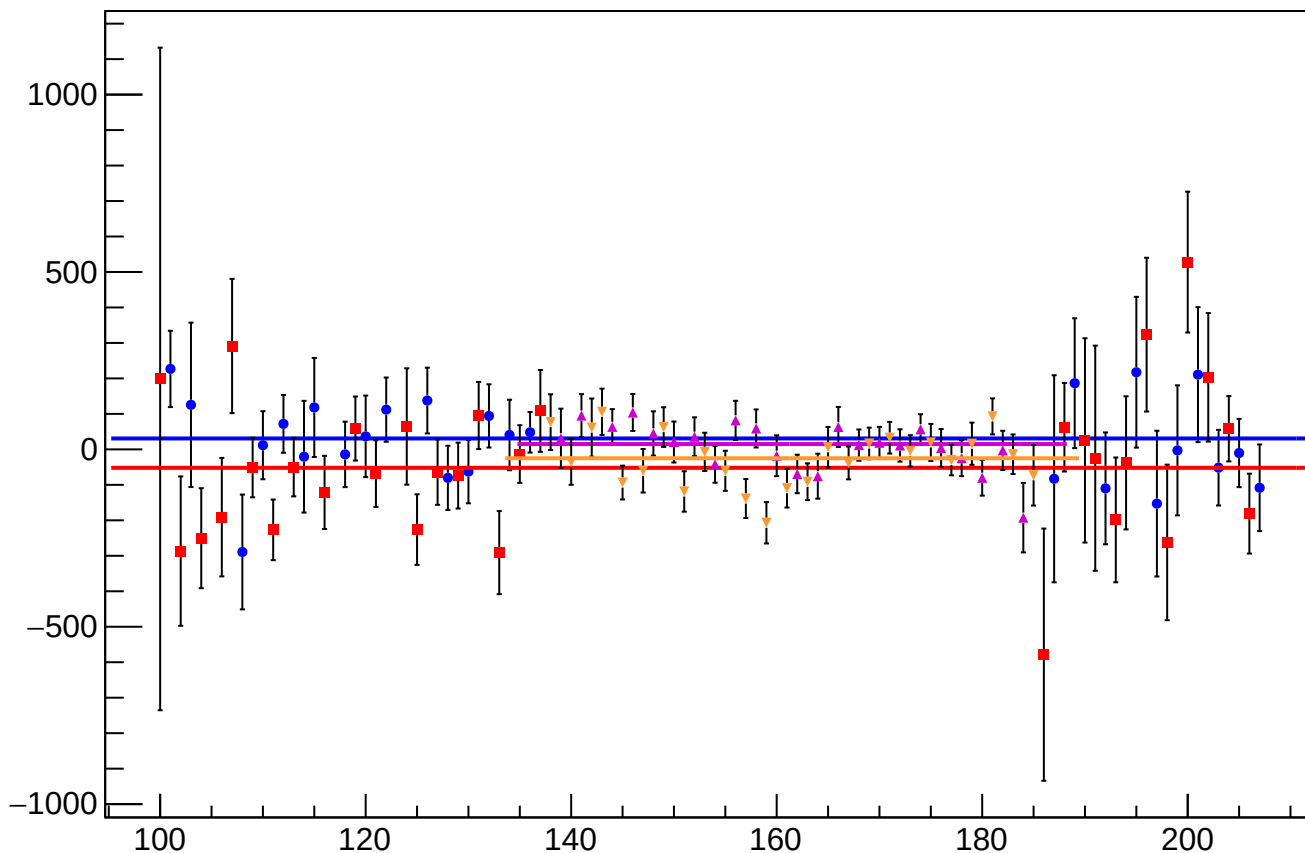
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:2802318.8/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 13770322.0/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 30601650.6/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 16831168.7/53

# reg\_asym\_sam\_37\_dd\_mean vs Slug



Right In:  $30.746 \pm 21.543$   $\chi^2/\text{NDF}$ : 20.0/25

Left Out:  $-24.988 \pm 10.888$   $\chi^2/\text{NDF}$ : 43.1/24

Right Out:  $-51.993 \pm 21.683$   $\chi^2/\text{NDF}$ : 46.9/30

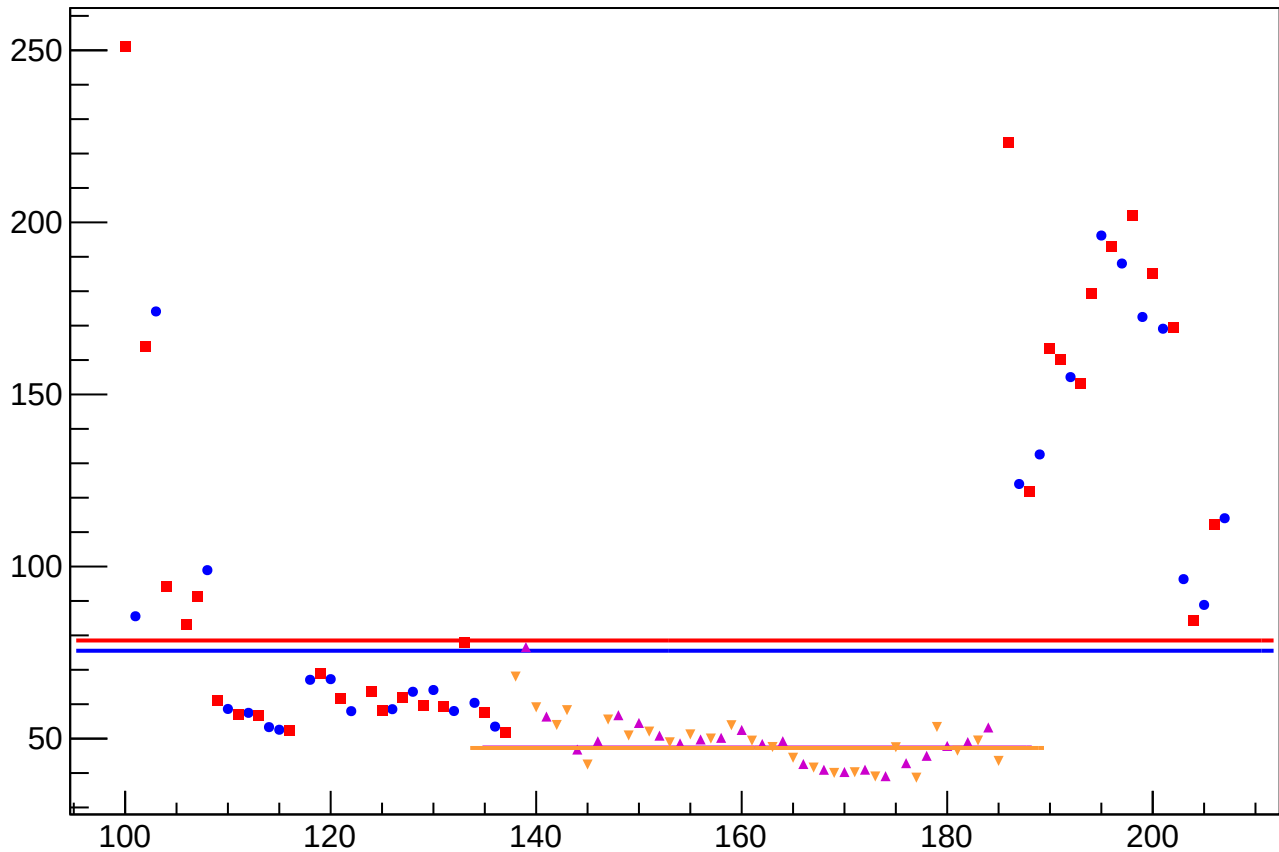
Left In:  $14.994 \pm 11.218$   $\chi^2/\text{NDF}$ : 24.7/22

+ sign  $-13.649 \pm 9.717$   $\chi^2/\text{NDF}$ : 68.5/50

All:  $-6.581 \pm 6.957$   $\chi^2/\text{NDF}$ : 148.7/104

- sign  $0.850 \pm 9.964$   $\chi^2/\text{NDF}$ : 79.1/53

# reg\_asym\_sam\_37\_dd\_rms vs Slug



Right In: 75.534 $\pm$ 0.015  $\chi^2$ /NDF: 4692694.8/25

Left Out: 47.284 $\pm$ 0.008  $\chi^2$ /NDF: 717249.8/24

Right Out: 78.516 $\pm$ 0.015  $\chi^2$ /NDF: 5844095.0/30

Left In: 47.425 $\pm$ 0.008  $\chi^2$ /NDF: 655736.9/22

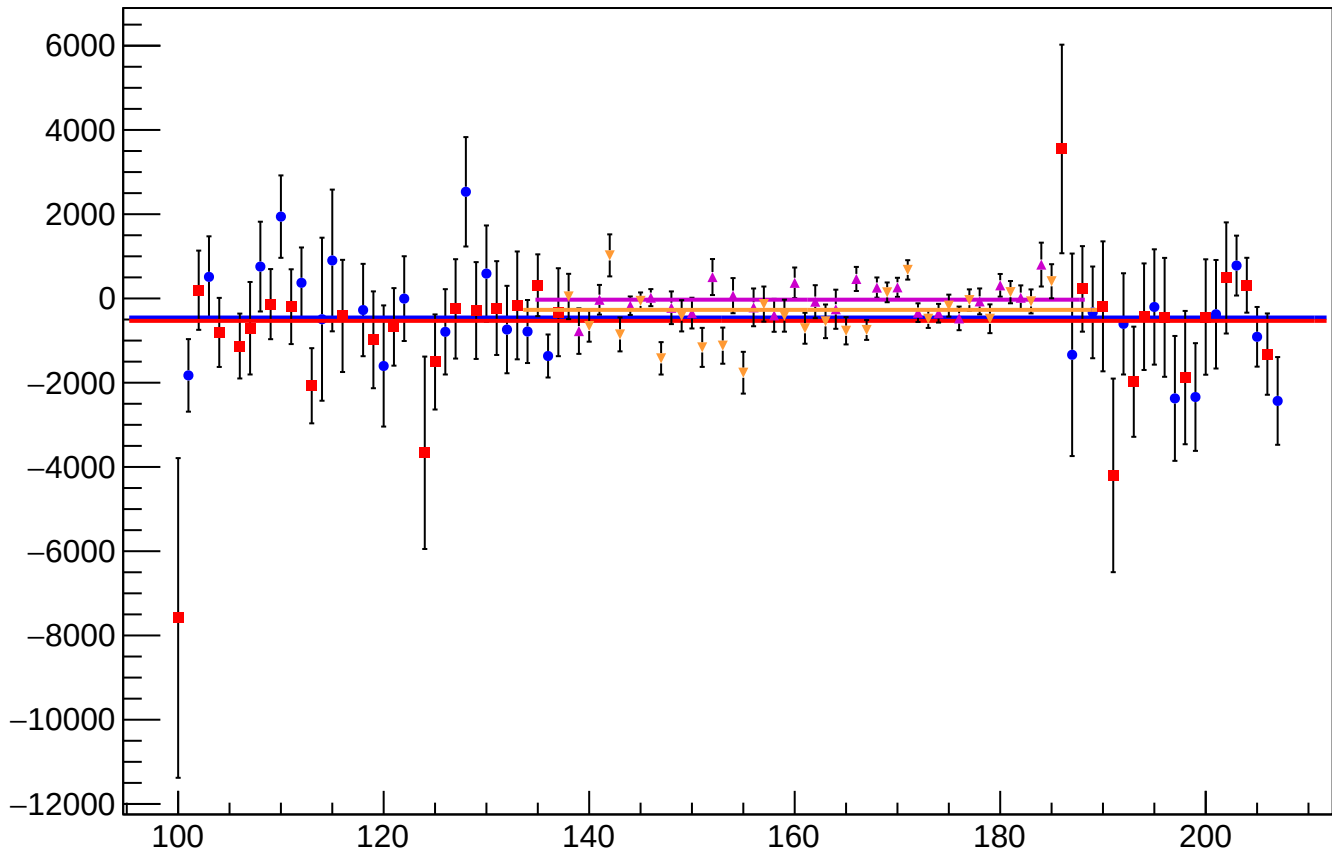
+ sign 53.031 $\pm$ 0.007  $\chi^2$ /NDF: 8149446.7/50

All: 53.498 $\pm$ 0.005  $\chi^2$ /NDF: 17902418.5/104

- sign 53.990 $\pm$ 0.007  $\chi^2$ /NDF: 9743486.0/53



# asym\_sam\_37\_dd\_reg\_correction\_mean vs Slug



Right In:  $-452.590 \pm 194.665$   $\chi^2/\text{NDF}$ : 34.1/25

Left Out:  $-271.031 \pm 62.346$   $\chi^2/\text{NDF}$ : 73.9/24

Right Out:  $-531.916 \pm 193.484$   $\chi^2/\text{NDF}$ : 23.4/30

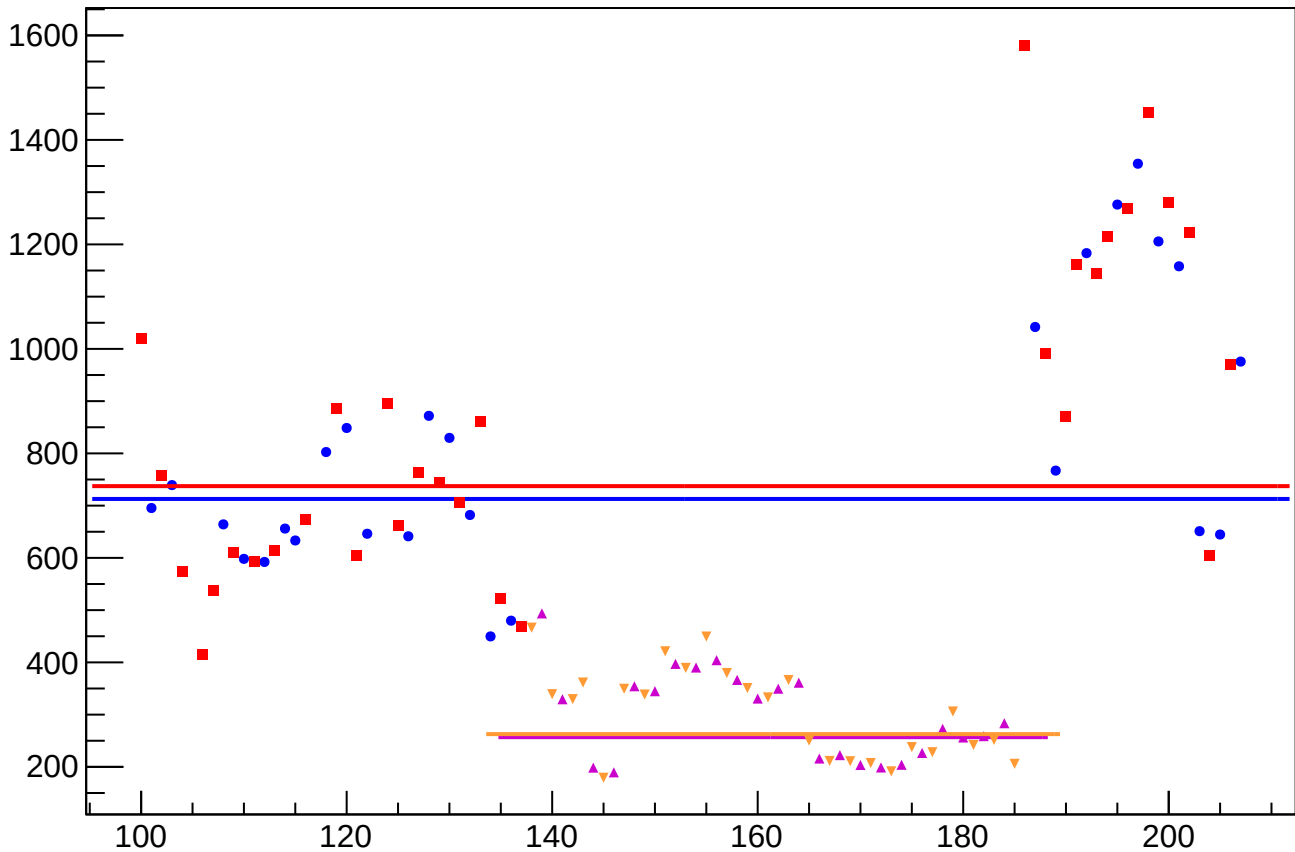
Left In:  $-29.200 \pm 62.671$   $\chi^2/\text{NDF}$ : 24.4/22

+ sign  $-287.922 \pm 59.375$   $\chi^2/\text{NDF}$ : 108.8/50

All:  $-182.865 \pm 42.071$   $\chi^2/\text{NDF}$ : 169.0/104

- sign  $-76.935 \pm 59.621$   $\chi^2/\text{NDF}$ : 53.9/53

# asym\_sam\_37\_dd\_reg\_correction\_rms vs Slug



Right In: 712.803 $\pm$ 0.138  $\chi^2$ /NDF: 2607696.2/25

Left Out: 262.679 $\pm$ 0.044  $\chi^2$ /NDF: 2893255.4/24

Right Out: 737.321 $\pm$ 0.137  $\chi^2$ /NDF: 3465353.3/30

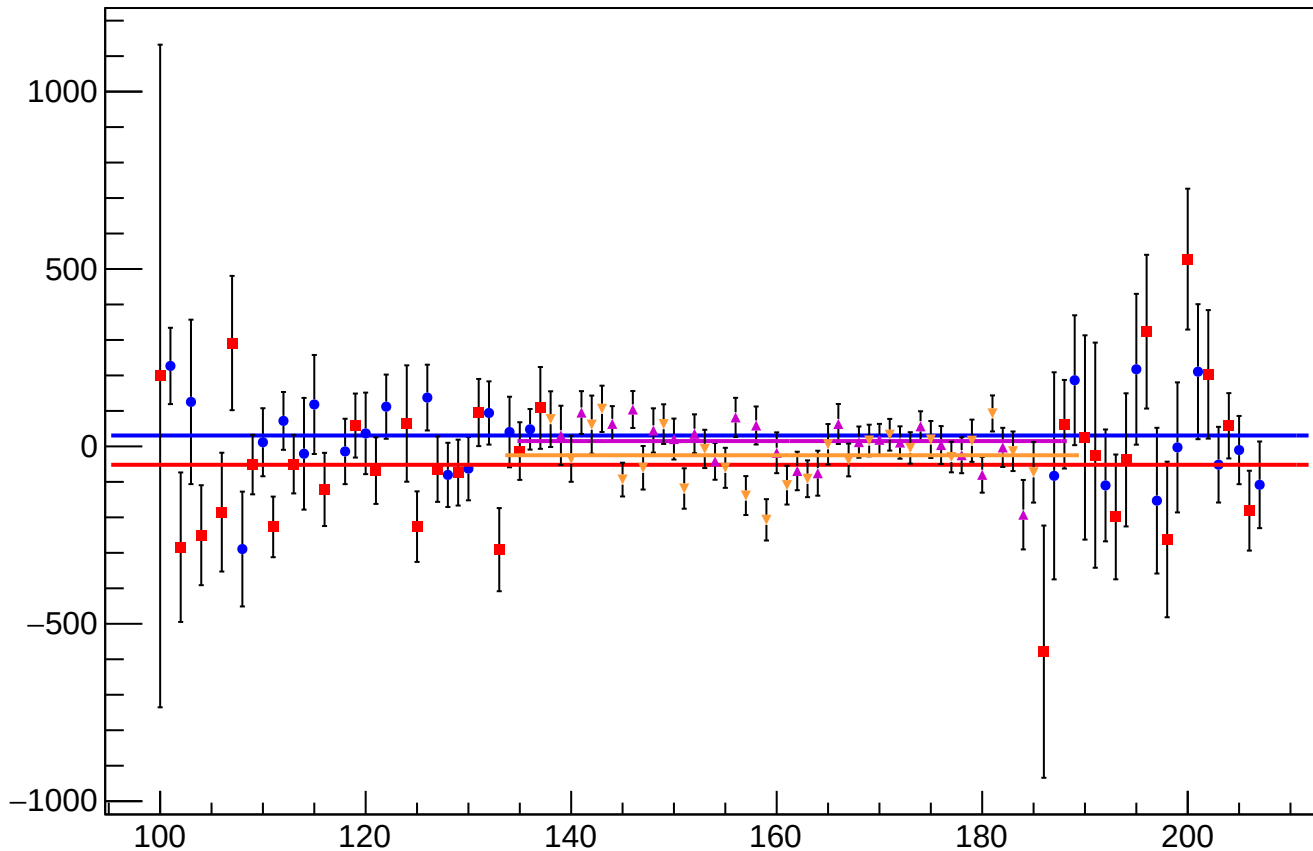
Left In: 256.842 $\pm$ 0.044  $\chi^2$ /NDF: 2639200.9/22

+ sign 304.555 $\pm$ 0.042  $\chi^2$ /NDF: 15199578.1/50

All: 303.514 $\pm$ 0.030  $\chi^2$ /NDF: 32467801.5/10

- sign 302.465 $\pm$ 0.042  $\chi^2$ /NDF: 17266990.1/53

# cor\_asym\_sam\_37\_dd\_mean vs Slug



Right In:  $30.739 \pm 21.543$   $\chi^2/\text{NDF}: 20.0/25$

Left Out:  $-24.985 \pm 10.888$   $\chi^2/\text{NDF}: 43.1/24$

Right Out:  $-51.849 \pm 21.685$   $\chi^2/\text{NDF}: 46.8/30$

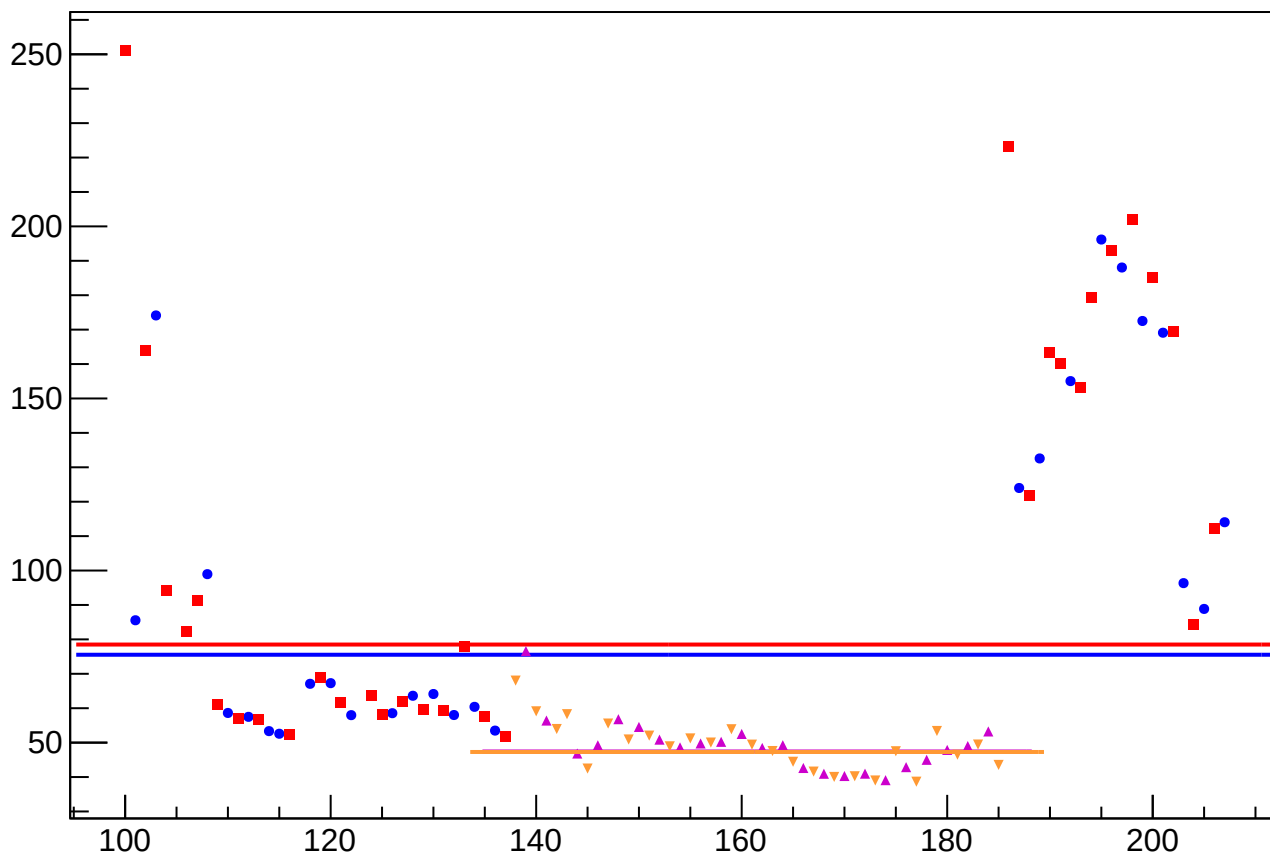
Left In:  $14.992 \pm 11.218$   $\chi^2/\text{NDF}: 24.7/22$

+ sign  $-13.648 \pm 9.717$   $\chi^2/\text{NDF}: 68.5/50$

All:  $-6.566 \pm 6.957$   $\chi^2/\text{NDF}: 148.5/104$

- sign  $0.880 \pm 9.964$   $\chi^2/\text{NDF}: 79.0/53$

# cor\_asym\_sam\_37\_dd\_rms vs Slug



Right In: 75.534+/-0.015     $\chi^2/\text{NDF}$ : 4692697.2/25

Left Out: 47.284+/-0.008     $\chi^2/\text{NDF}$ : 717249.7/24

Right Out: 78.498+/-0.015     $\chi^2/\text{NDF}$ : 5843657.0/30

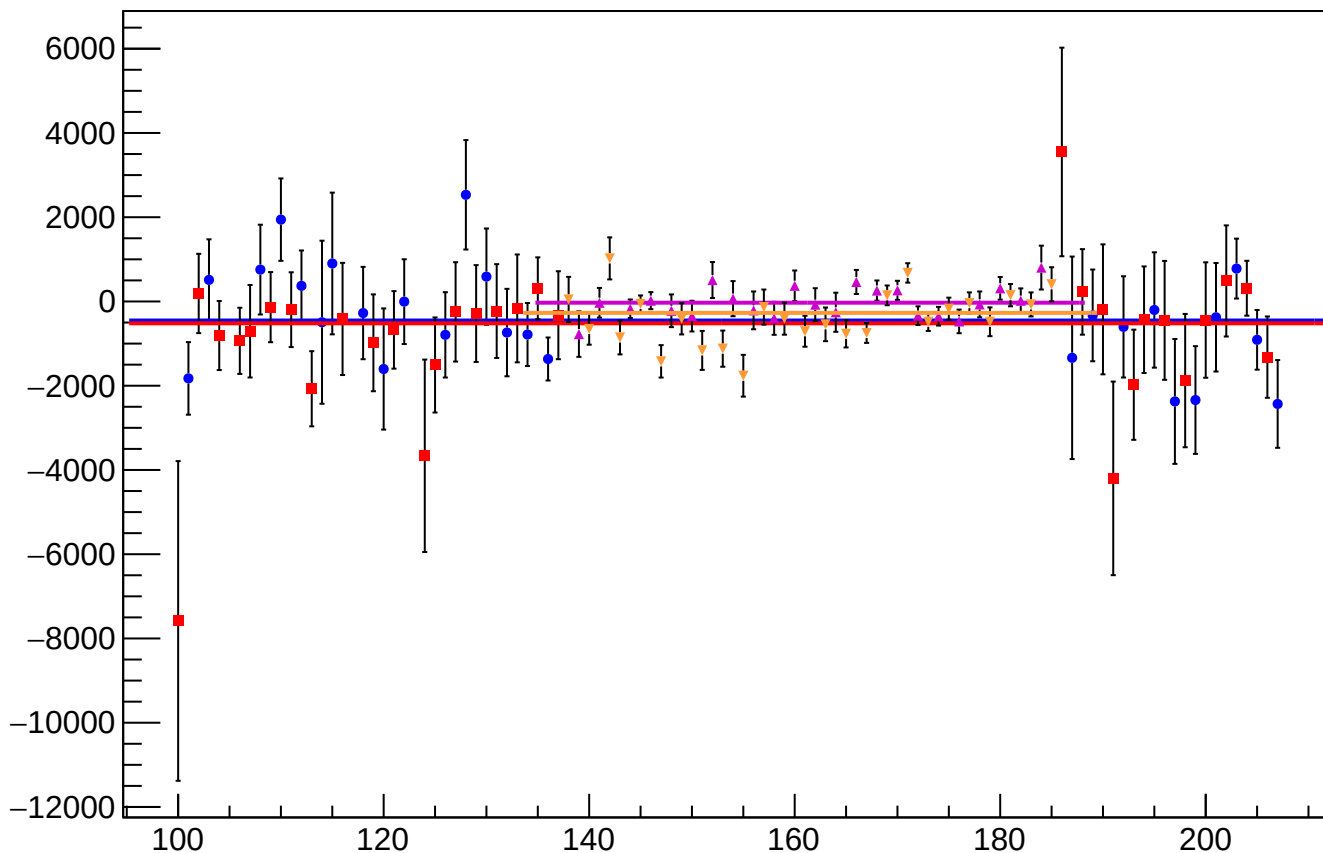
Left In: 47.425+/-0.008     $\chi^2/\text{NDF}$ : 655736.9/22

+ sign 53.031+/-0.007     $\chi^2/\text{NDF}$ : 8149448.4/50

All: 53.496+/-0.005     $\chi^2/\text{NDF}$ : 17897980.1/104

- sign 53.985+/-0.007     $\chi^2/\text{NDF}$ : 9739129.2/53

# asym\_sam\_37\_dd\_cor\_correction\_mean vs Slug



Right In:  $-452.589 \pm 194.666$   $\chi^2/\text{NDF}$ : 34.1/25

Left Out:  $-271.027 \pm 62.346$   $\chi^2/\text{NDF}$ : 73.9/24

Right Out:  $-518.964 \pm 193.732$   $\chi^2/\text{NDF}$ : 23.0/30

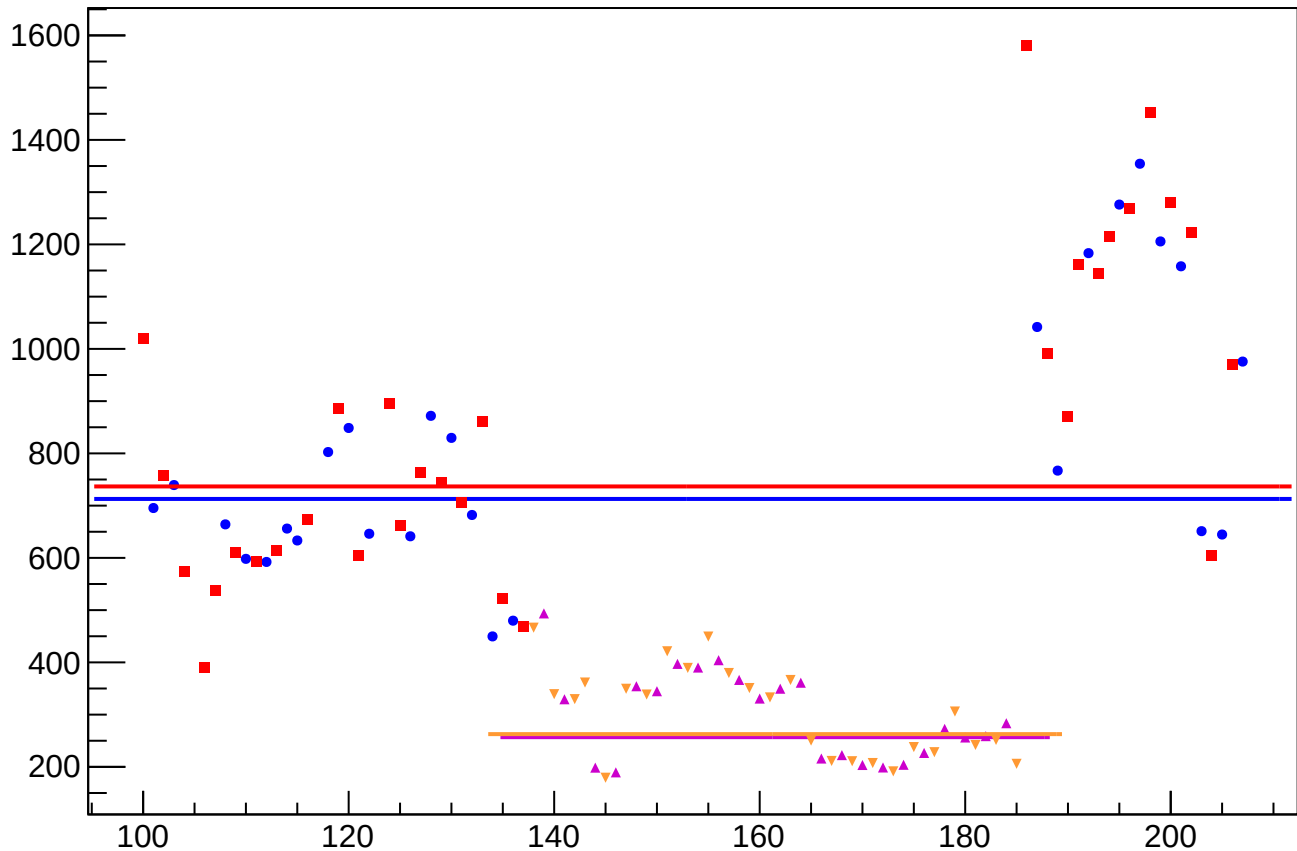
Left In:  $-29.202 \pm 62.671$   $\chi^2/\text{NDF}$ : 24.4/22

+ sign  $-287.918 \pm 59.375$   $\chi^2/\text{NDF}$ : 108.8/50

All:  $-182.210 \pm 42.074$   $\chi^2/\text{NDF}$ : 168.4/104

- sign  $-75.599 \pm 59.628$   $\chi^2/\text{NDF}$ : 53.2/53

# asym\_sam\_37\_dd\_cor\_correction\_rms vs Slug



Right In:  $712.806 \pm 0.138$   $\chi^2/\text{NDF}$ : 2607704.3/25

Left Out:  $262.679 \pm 0.044$   $\chi^2/\text{NDF}$ : 2893257.1/24

Right Out:  $736.725 \pm 0.137$   $\chi^2/\text{NDF}$ : 3502471.2/30

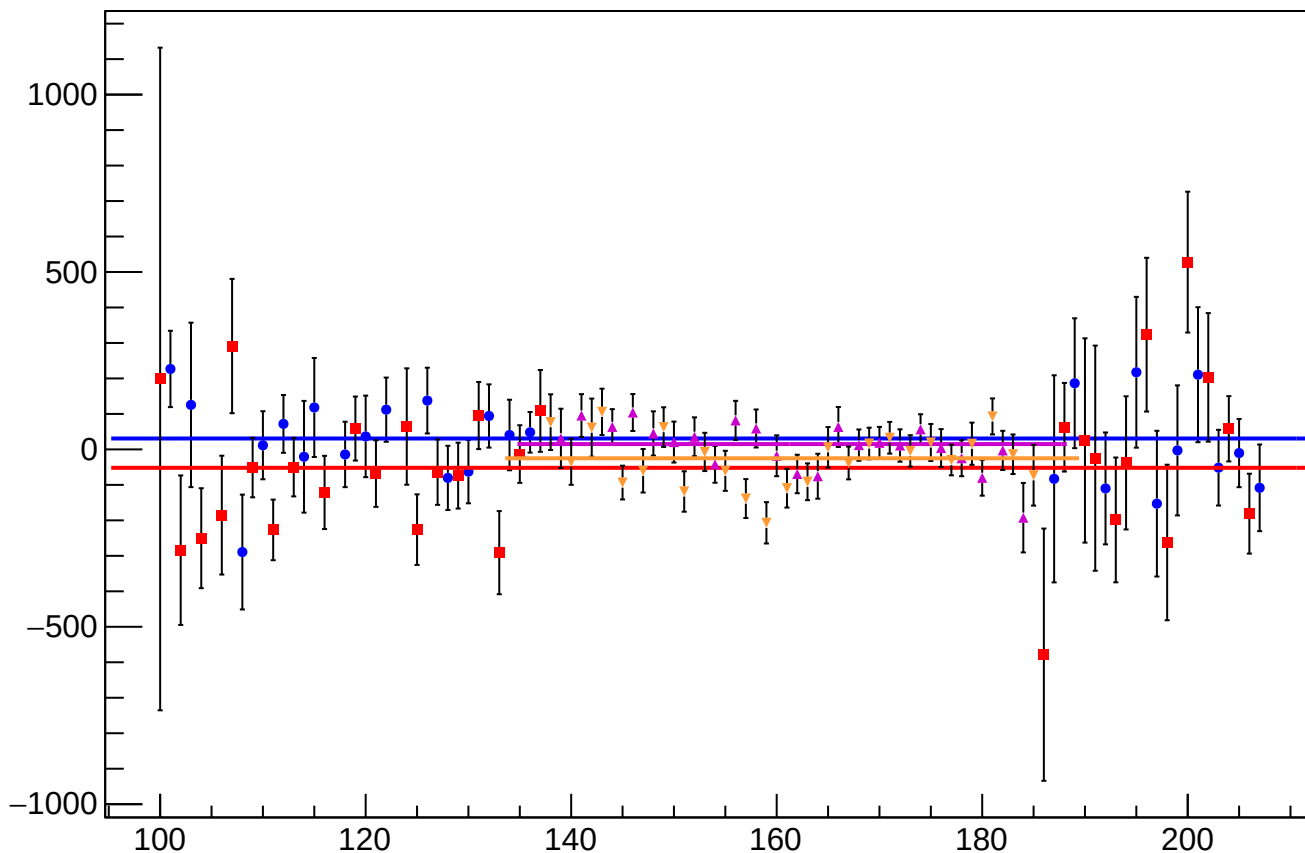
Left In:  $256.842 \pm 0.044$   $\chi^2/\text{NDF}$ : 2639196.2/22

+ sign  $304.554 \pm 0.042$   $\chi^2/\text{NDF}$ : 15199635.4/50

All:  $303.434 \pm 0.030$   $\chi^2/\text{NDF}$ : 32451719.6/10

- sign  $302.303 \pm 0.042$   $\chi^2/\text{NDF}$ : 17250652.6/53

# eigen\_cor\_asym\_sam\_37\_dd\_mean vs Slug



Right In:  $30.739 \pm 21.543$   $\chi^2/\text{NDF}$ : 20.0/25

Left Out:  $-24.985 \pm 10.888$   $\chi^2/\text{NDF}$ : 43.1/24

Right Out:  $-51.849 \pm 21.685$   $\chi^2/\text{NDF}$ : 46.8/30

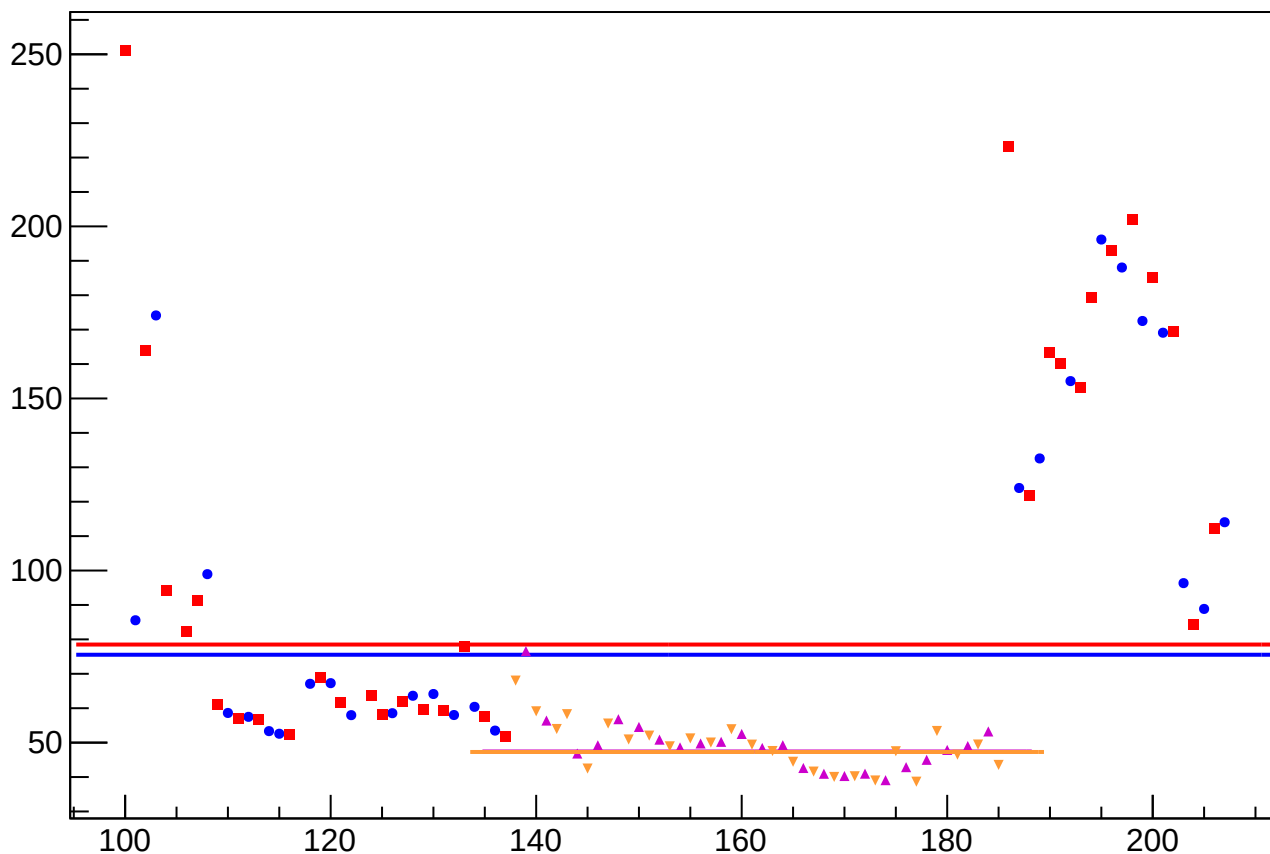
Left In:  $14.992 \pm 11.218$   $\chi^2/\text{NDF}$ : 24.7/22

+ sign  $-13.648 \pm 9.717$   $\chi^2/\text{NDF}$ : 68.5/50

All:  $-6.566 \pm 6.957$   $\chi^2/\text{NDF}$ : 148.5/104

- sign  $0.880 \pm 9.964$   $\chi^2/\text{NDF}$ : 79.0/53

# eigen\_cor\_asym\_sam\_37\_dd\_rms vs Slug



Right In: 75.534 $\pm$ 0.015     $\chi^2$ /NDF: 4692697.2/25

Left Out: 47.284 $\pm$ 0.008     $\chi^2$ /NDF: 717249.7/24

Right Out: 78.498 $\pm$ 0.015     $\chi^2$ /NDF: 5843657.0/30

Left In: 47.425 $\pm$ 0.008     $\chi^2$ /NDF: 655736.9/22

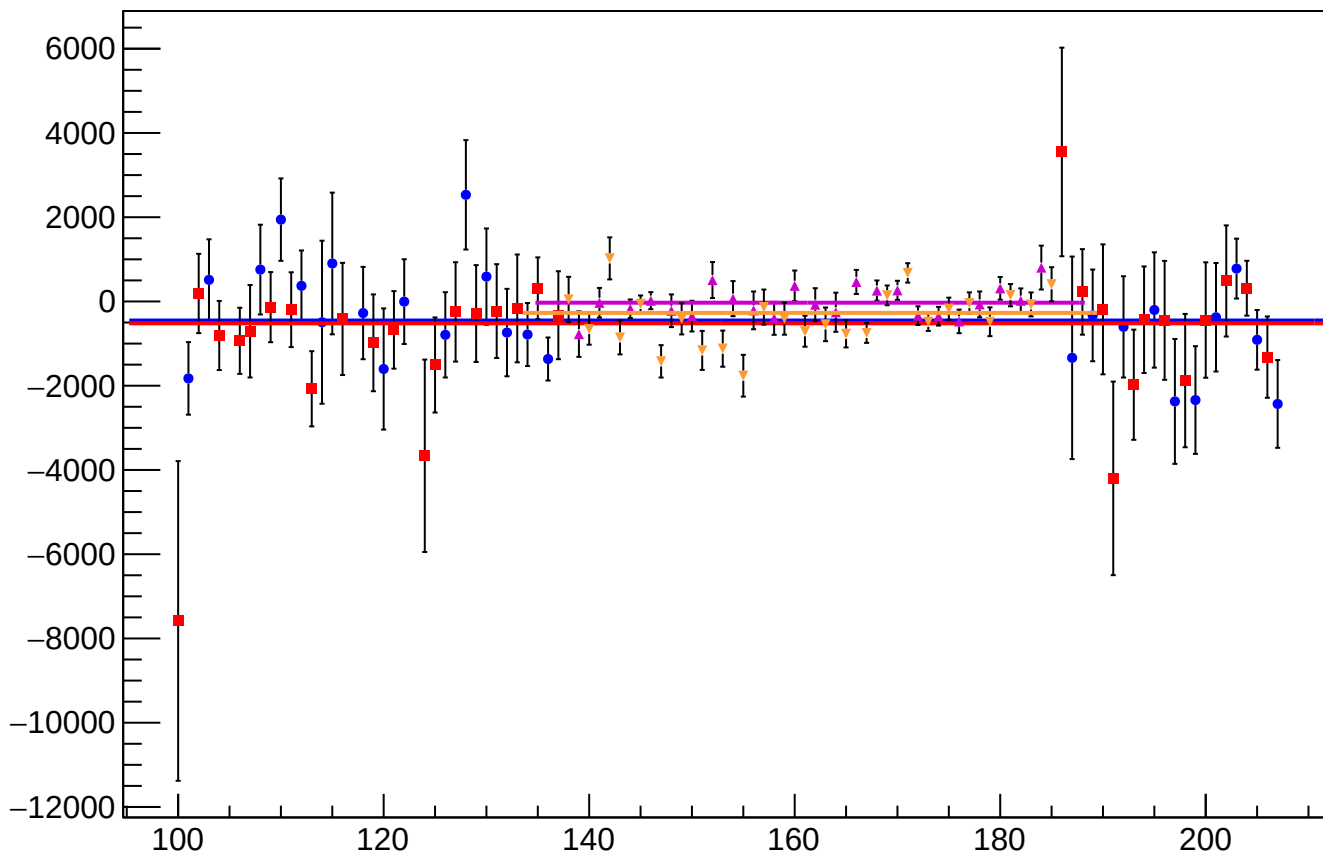
+ sign 53.031 $\pm$ 0.007     $\chi^2$ /NDF: 8149448.4/50

All: 53.496 $\pm$ 0.005     $\chi^2$ /NDF: 17897980.1/104

- sign 53.985 $\pm$ 0.007     $\chi^2$ /NDF: 9739129.2/53



asym\_sam\_37\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-452.589 \pm 194.666$   $\chi^2/\text{NDF}$ : 34.1/25

Left Out:  $-271.027 \pm 62.346$   $\chi^2/\text{NDF}$ : 73.9/24

Right Out:  $-518.964 \pm 193.732$   $\chi^2/\text{NDF}$ : 23.0/30

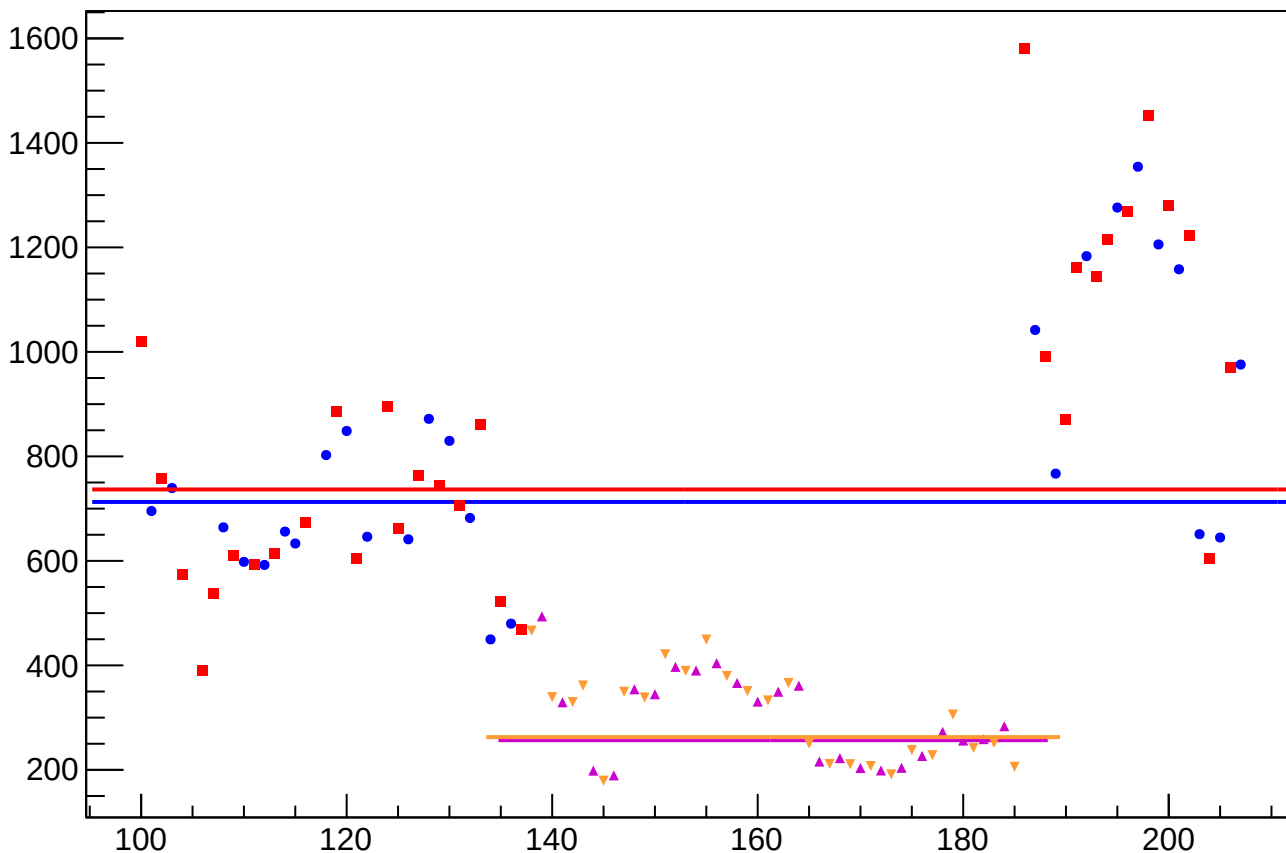
Left In:  $-29.202 \pm 62.671$   $\chi^2/\text{NDF}$ : 24.4/22

+ sign  $-287.918 \pm 59.375$   $\chi^2/\text{NDF}$ : 108.8/50

All:  $-182.210 \pm 42.074$   $\chi^2/\text{NDF}$ : 168.4/104

- sign  $-75.599 \pm 59.628$   $\chi^2/\text{NDF}$ : 53.2/53

asym\_sam\_37\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In:  $712.806 \pm 0.138$   $\chi^2/\text{NDF}$ : 2607704.3/25

Left Out:  $262.679 \pm 0.044$   $\chi^2/\text{NDF}$ : 2893257.1/24

Right Out:  $736.725 \pm 0.137$   $\chi^2/\text{NDF}$ : 3502471.2/30

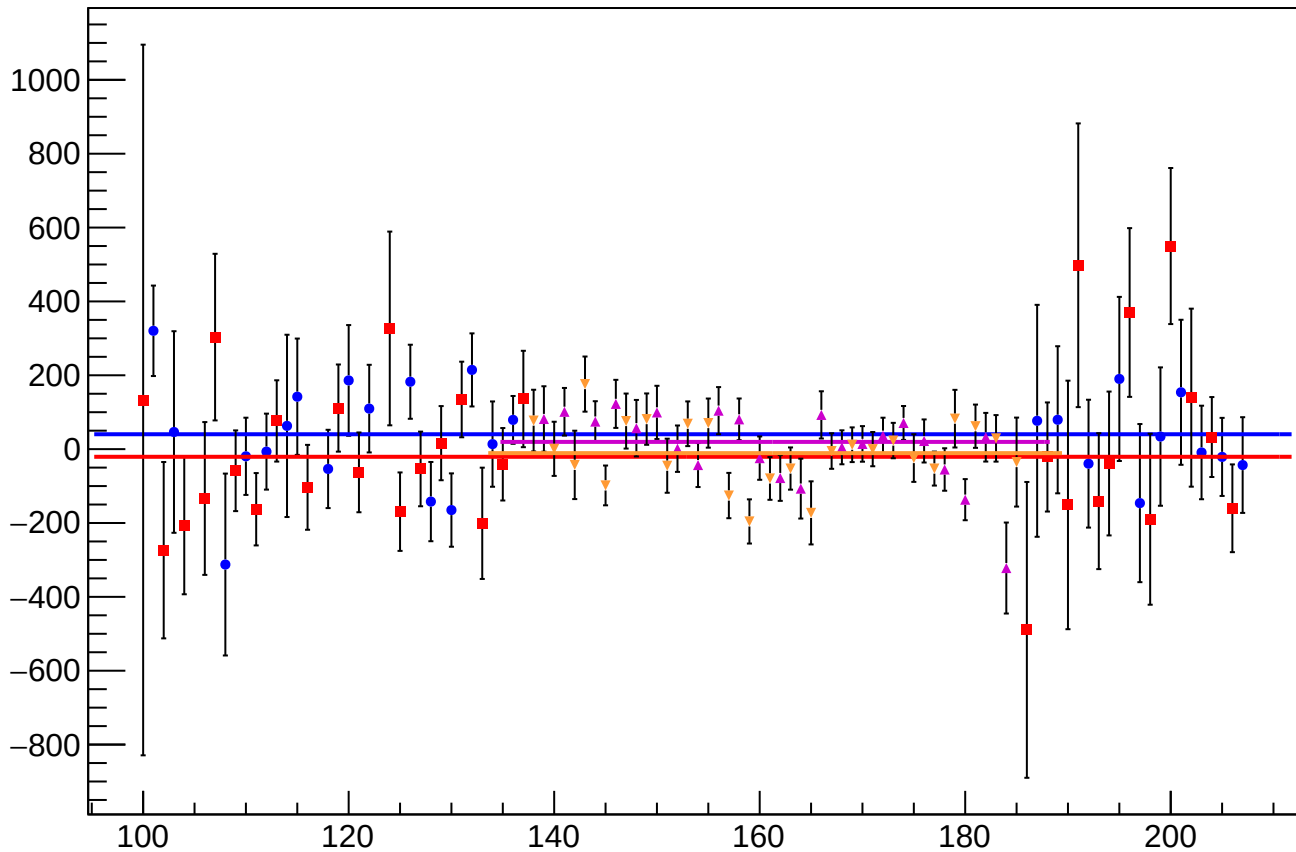
Left In:  $256.842 \pm 0.044$   $\chi^2/\text{NDF}$ : 2639196.2/22

+ sign  $304.554 \pm 0.042$   $\chi^2/\text{NDF}$ : 15199635.4/50

All:  $303.434 \pm 0.030$   $\chi^2/\text{NDF}$ : 32451719.6/10

- sign  $302.303 \pm 0.042$   $\chi^2/\text{NDF}$ : 17250652.6/53

# dit\_asym\_sam\_37\_dd\_mean vs Slug



Right In:  $40.333 \pm 24.816$   $\chi^2/\text{NDF}$ : 25.7/25

Left Out:  $-10.823 \pm 12.306$   $\chi^2/\text{NDF}$ : 40.4/24

Right Out:  $-20.720 \pm 25.370$   $\chi^2/\text{NDF}$ : 35.2/30

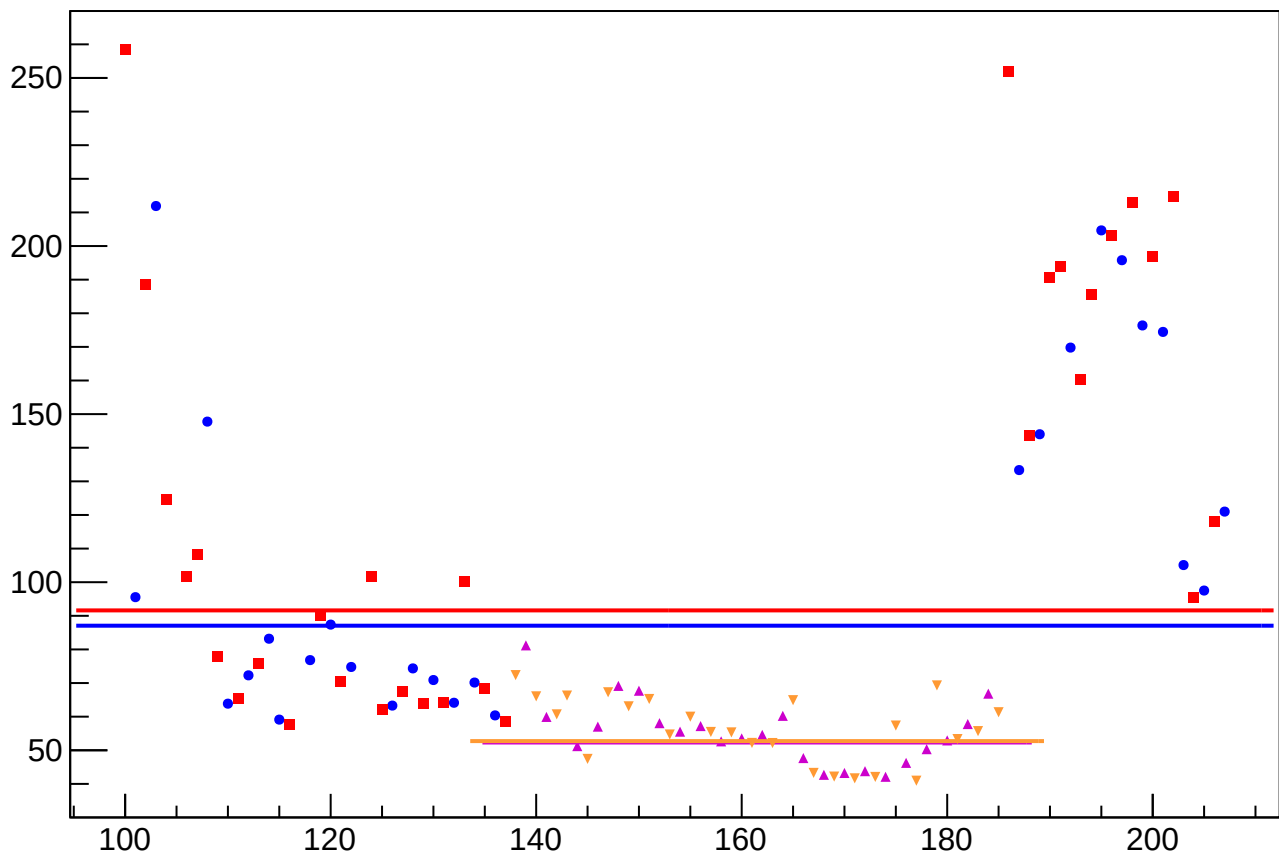
Left In:  $19.597 \pm 12.546$   $\chi^2/\text{NDF}$ : 36.8/22

+ sign  $-0.726 \pm 11.025$   $\chi^2/\text{NDF}$ : 69.5/50

All:  $5.352 \pm 7.873$   $\chi^2/\text{NDF}$ : 144.1/104

- sign  $11.676 \pm 11.246$   $\chi^2/\text{NDF}$ : 74.0/53

dit\_asym\_sam\_37\_dd\_rms vs Slug



Right In: 87.060 $\pm$ 0.018  $\chi^2$ /NDF: 4263655.1/25

Left Out: 52.731 $\pm$ 0.009  $\chi^2$ /NDF: 1167195.4/24

Right Out: 91.612 $\pm$ 0.018  $\chi^2$ /NDF: 5527425.2/30

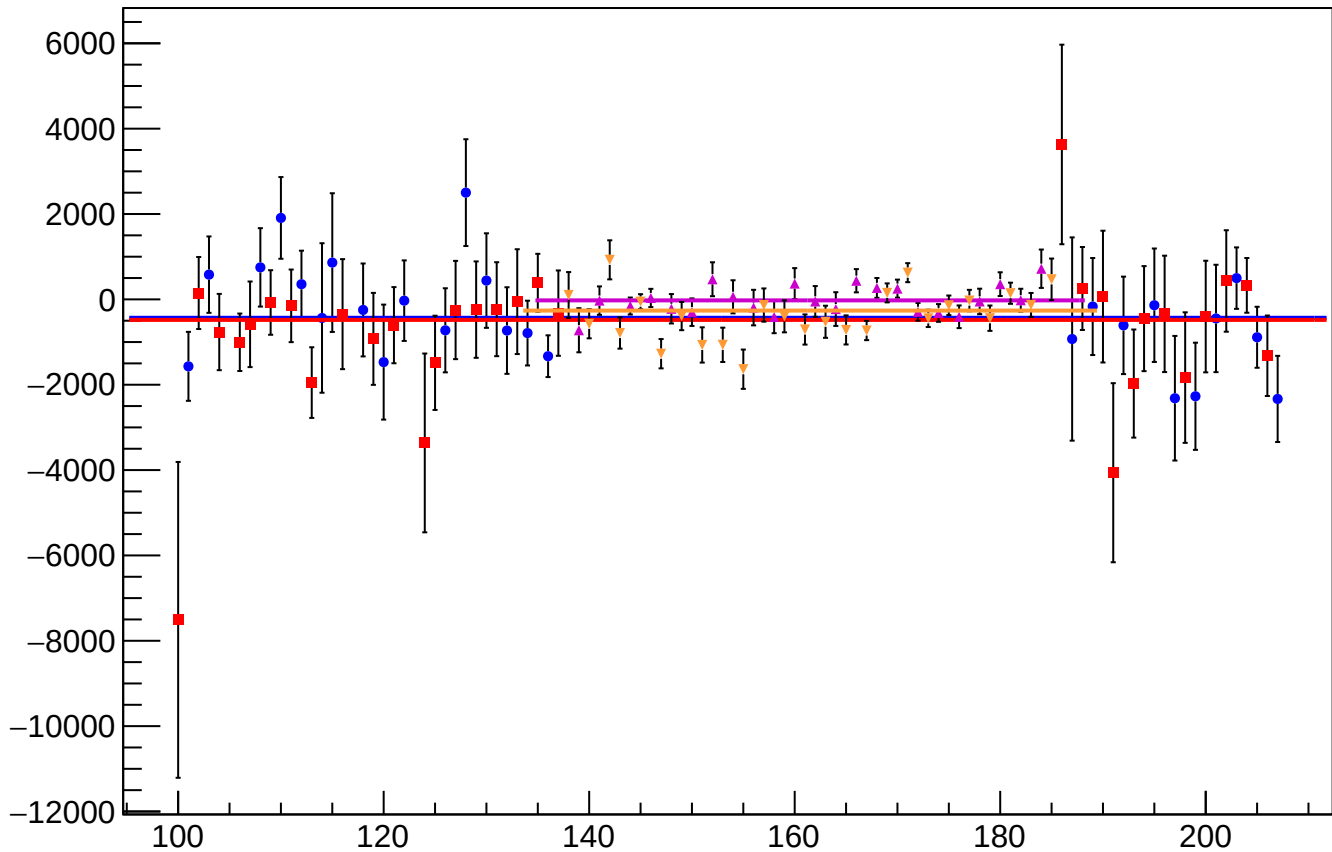
Left In: 52.314 $\pm$ 0.009  $\chi^2$ /NDF: 891847.5/22

+ sign 59.506 $\pm$ 0.008  $\chi^2$ /NDF: 8502718.8/50

All: 59.766 $\pm$ 0.006  $\chi^2$ /NDF: 18780027.5/104

- sign 60.035 $\pm$ 0.008  $\chi^2$ /NDF: 10275053.2/53

# asym\_sam\_37\_dd\_dit\_correction\_mean vs Slug



Right In:  $-431.512 \pm 188.443$   $\chi^2/\text{NDF}$ : 32.8/25

Left Out:  $-262.582 \pm 58.501$   $\chi^2/\text{NDF}$ : 72.2/24

Right Out:  $-481.063 \pm 184.175$   $\chi^2/\text{NDF}$ : 25.2/30

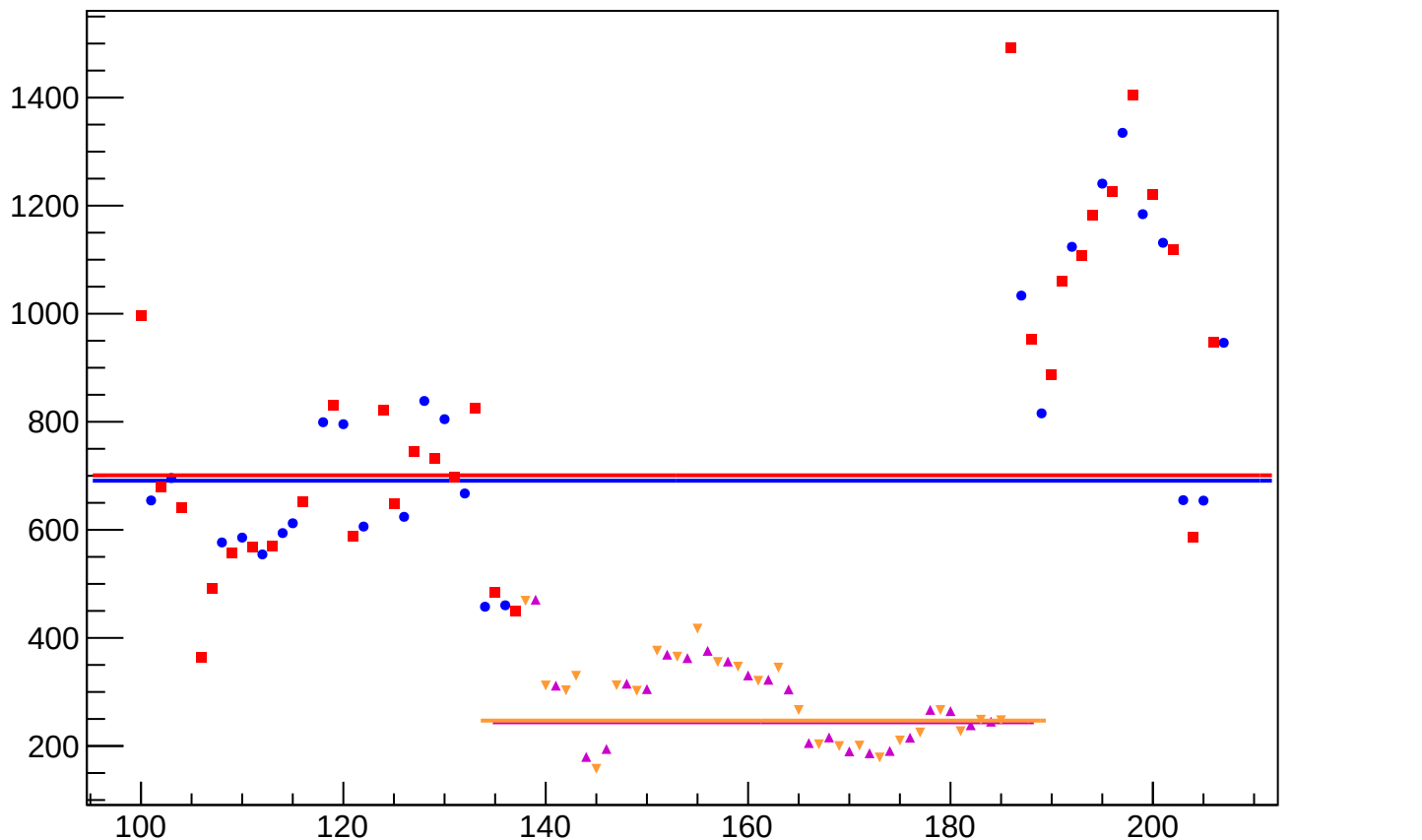
Left In:  $-23.469 \pm 59.397$   $\chi^2/\text{NDF}$ : 24.2/22

+ sign  $-277.431 \pm 55.870$   $\chi^2/\text{NDF}$ : 105.8/50

All:  $-173.241 \pm 39.737$   $\chi^2/\text{NDF}$ : 167.8/104

- sign  $-66.578 \pm 56.530$   $\chi^2/\text{NDF}$ : 55.0/53

# asym\_sam\_37\_dd\_dit\_correction\_rms vs Slug



Right In:  $690.942 \pm 0.133$   $\chi^2/\text{NDF}$ : 2646680.4/25

Left Out:  $246.995 \pm 0.041$   $\chi^2/\text{NDF}$ : 2925691.6/24

Right Out:  $700.922 \pm 0.130$   $\chi^2/\text{NDF}$ : 3663919.7/30

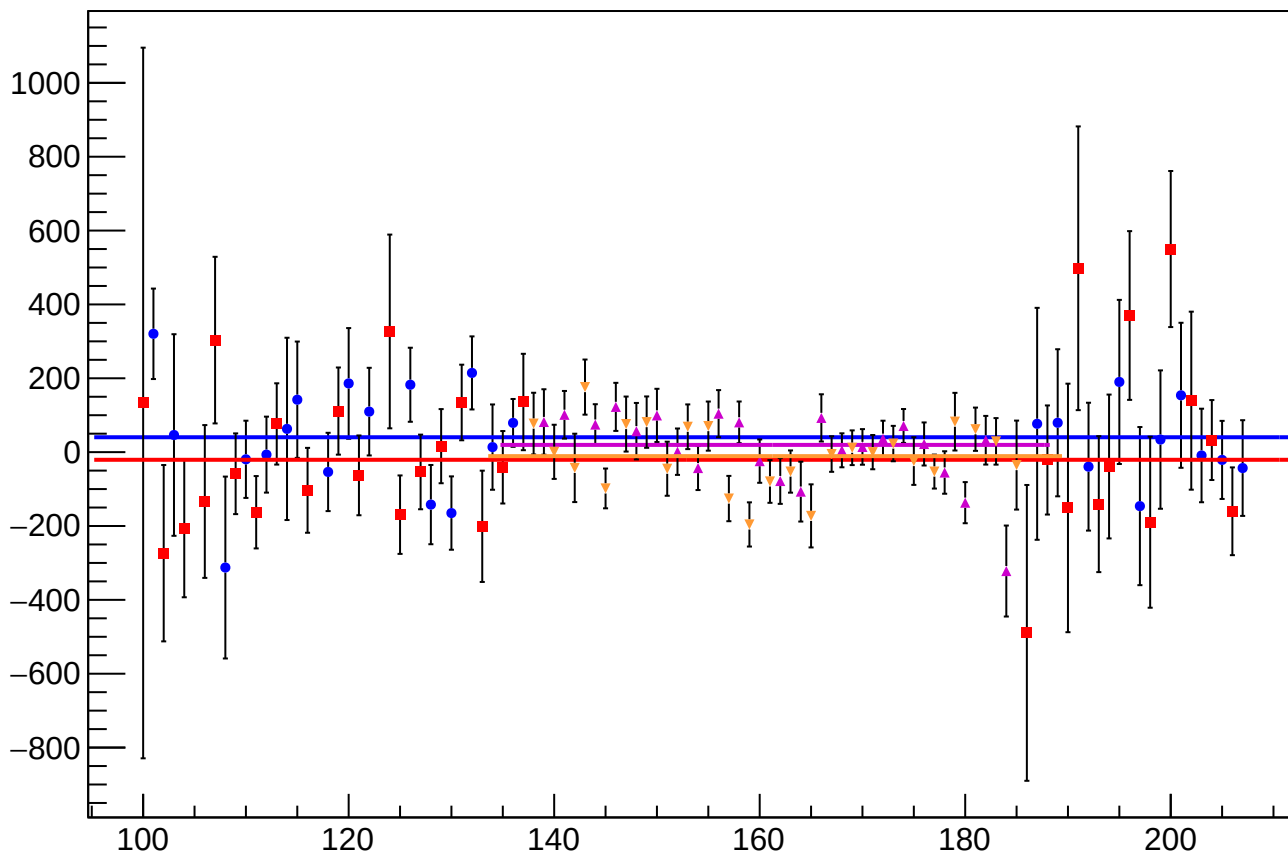
Left In:  $243.825 \pm 0.042$   $\chi^2/\text{NDF}$ : 2490545.8/22

+ sign  $286.020 \pm 0.040$   $\chi^2/\text{NDF}$ : 15696898.2/50

All:  $286.449 \pm 0.028$   $\chi^2/\text{NDF}$ : 33010294.6/10

- sign  $286.888 \pm 0.040$   $\chi^2/\text{NDF}$ : 17313158.2/53

# eigen\_dit\_asym\_sam\_37\_dd\_mean vs Slug



Right In:  $40.333 \pm 24.816$   $\chi^2/\text{NDF}$ : 25.7/25

Left Out:  $-10.822 \pm 12.306$   $\chi^2/\text{NDF}$ : 40.4/24

Right Out:  $-20.719 \pm 25.370$   $\chi^2/\text{NDF}$ : 35.2/30

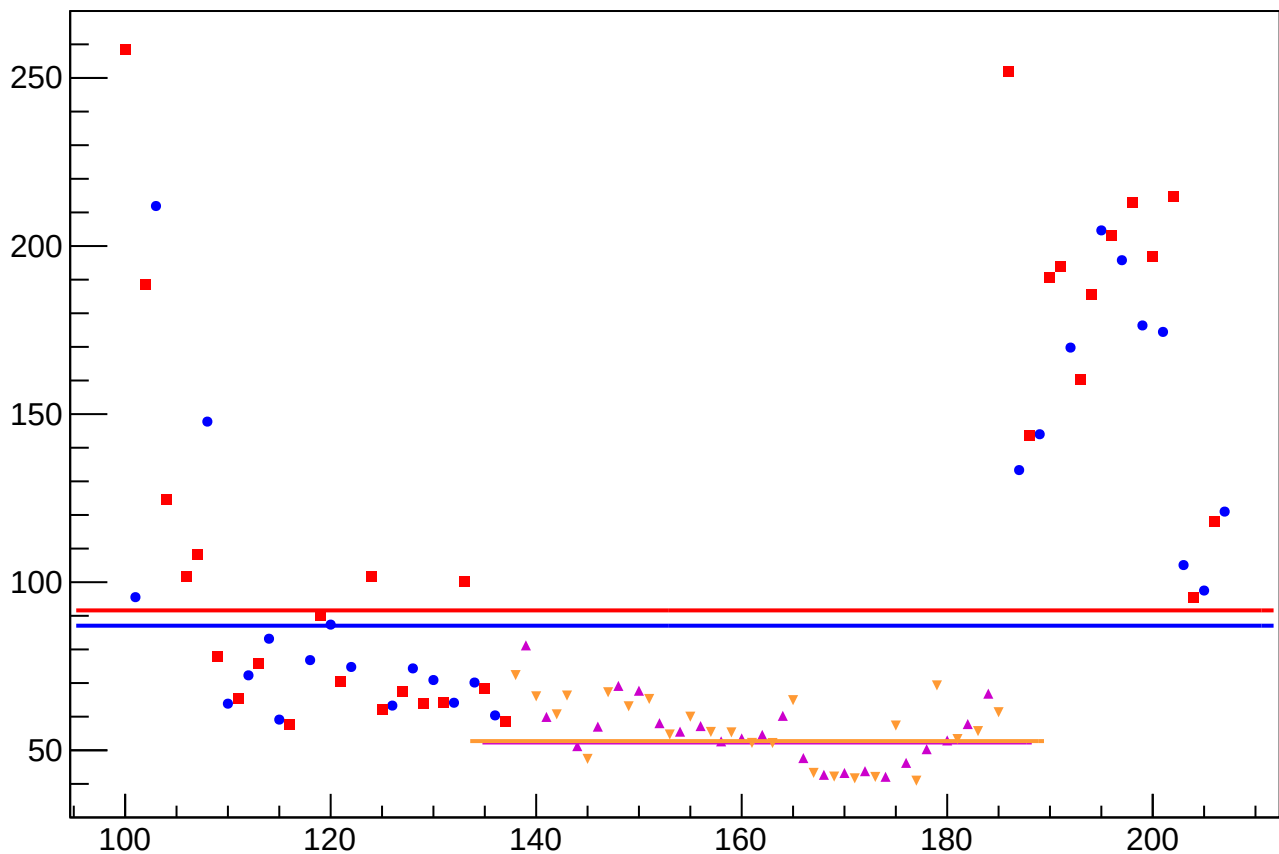
Left In:  $19.598 \pm 12.546$   $\chi^2/\text{NDF}$ : 36.8/22

+ sign  $-0.726 \pm 11.025$   $\chi^2/\text{NDF}$ : 69.5/50

All:  $5.352 \pm 7.873$   $\chi^2/\text{NDF}$ : 144.1/104

- sign  $11.676 \pm 11.246$   $\chi^2/\text{NDF}$ : 74.0/53

eigen\_dit\_asym\_sam\_37\_dd\_rms vs Slug



Right In: 87.060 $\pm$ 0.018  $\chi^2$ /NDF: 4263679.0/25

Left Out: 52.731 $\pm$ 0.009  $\chi^2$ /NDF: 1167223.2/24

Right Out: 91.612 $\pm$ 0.018  $\chi^2$ /NDF: 5527427.5/30

Left In: 52.314 $\pm$ 0.009  $\chi^2$ /NDF: 891856.0/22

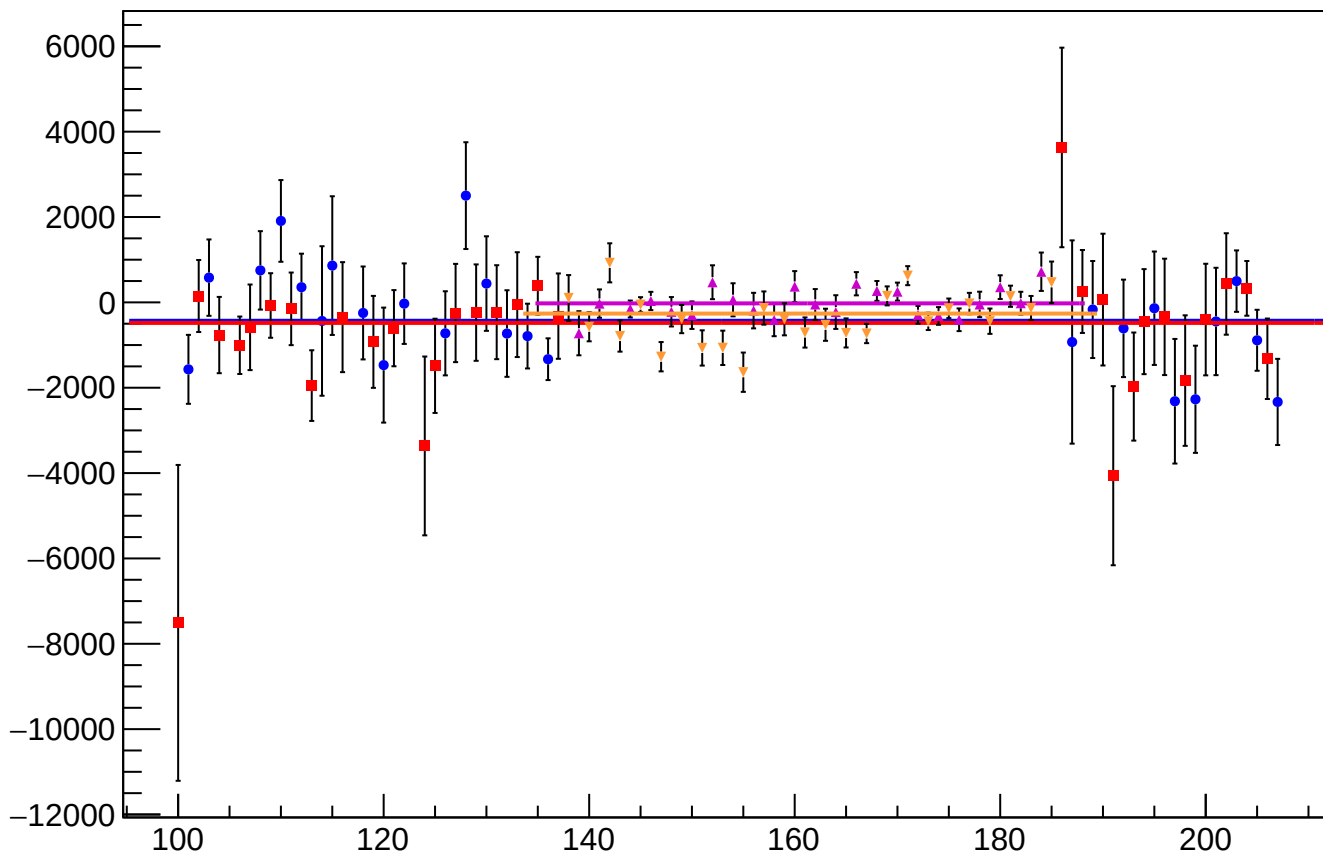
+ sign 59.507 $\pm$ 0.008  $\chi^2$ /NDF: 8502735.5/50

All: 59.766 $\pm$ 0.006  $\chi^2$ /NDF: 18780030.7/104

- sign 60.035 $\pm$ 0.008  $\chi^2$ /NDF: 10275039.6/53



asym\_sam\_37\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-431.512 \pm 188.443$   $\chi^2/\text{NDF}$ : 32.8/25

Left Out:  $-262.582 \pm 58.501$   $\chi^2/\text{NDF}$ : 72.2/24

Right Out:  $-481.063 \pm 184.175$   $\chi^2/\text{NDF}$ : 25.2/30

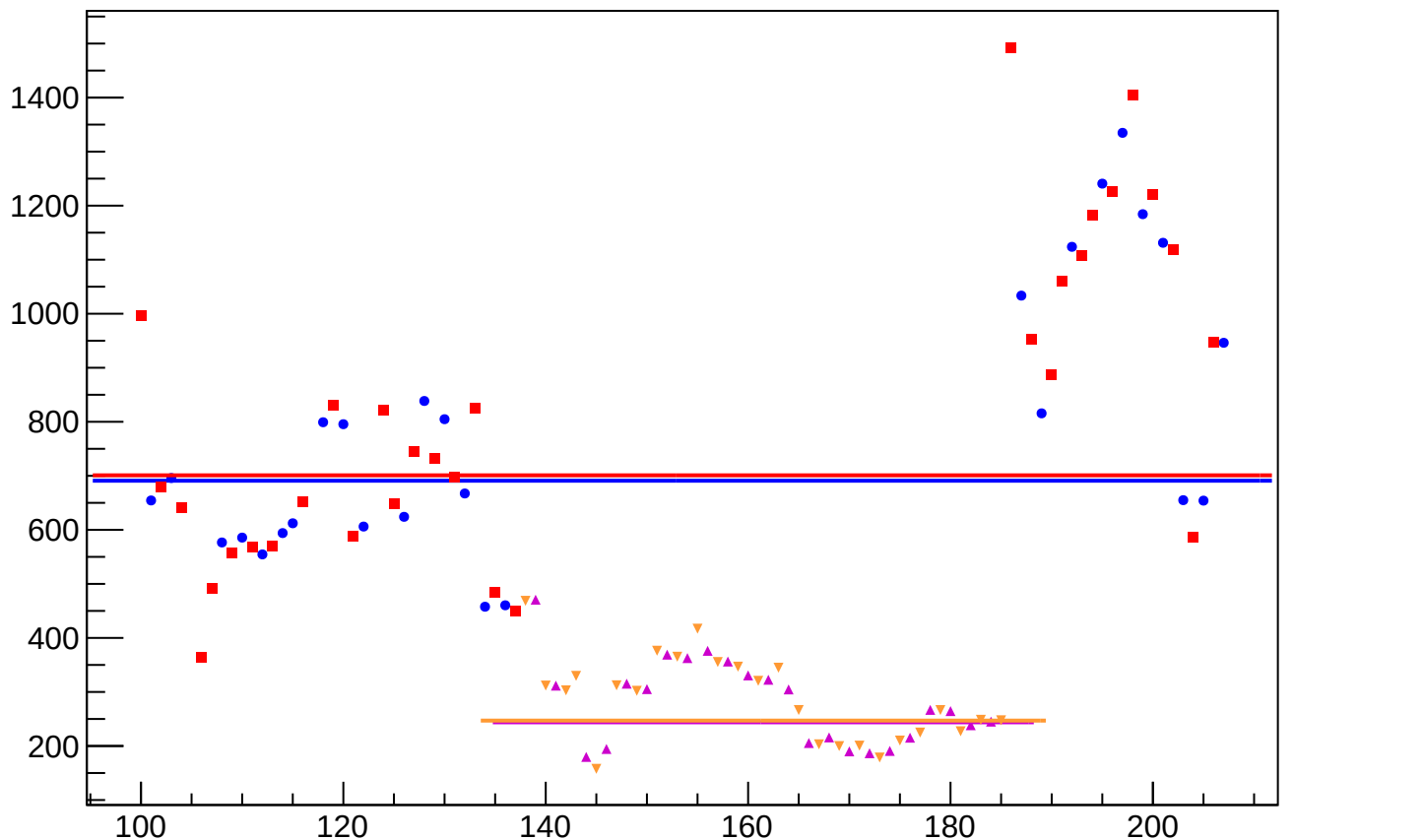
Left In:  $-23.469 \pm 59.397$   $\chi^2/\text{NDF}$ : 24.2/22

+ sign  $-277.432 \pm 55.870$   $\chi^2/\text{NDF}$ : 105.8/50

All:  $-173.241 \pm 39.737$   $\chi^2/\text{NDF}$ : 167.8/104

- sign  $-66.578 \pm 56.530$   $\chi^2/\text{NDF}$ : 55.0/53

asym\_sam\_37\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In:  $690.942 \pm 0.133$   $\chi^2/\text{NDF}$ : 2646667.9/25

Left Out:  $246.995 \pm 0.041$   $\chi^2/\text{NDF}$ : 2925680.1/24

Right Out:  $700.922 \pm 0.130$   $\chi^2/\text{NDF}$ : 3663911.1/30

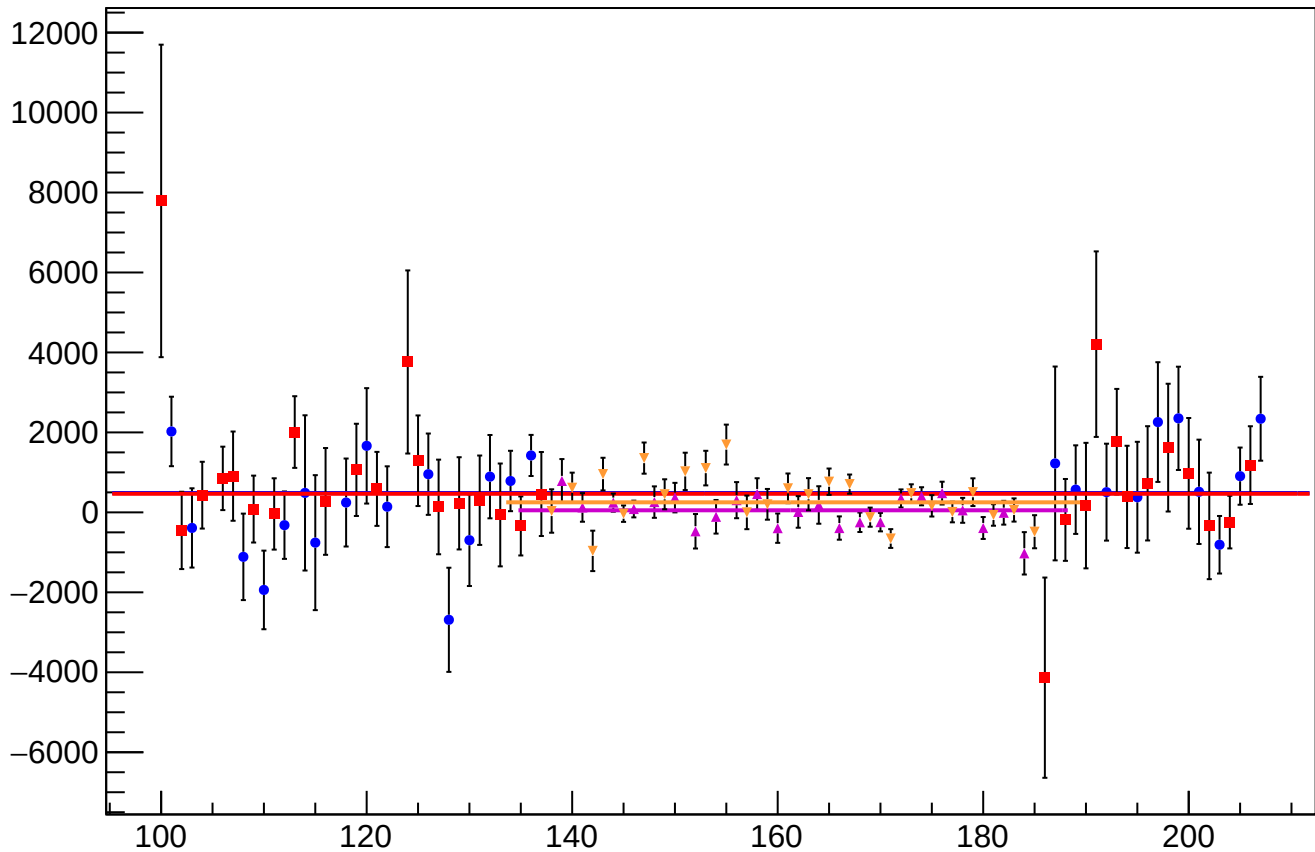
Left In:  $243.825 \pm 0.042$   $\chi^2/\text{NDF}$ : 2490539.0/22

+ sign  $286.020 \pm 0.040$   $\chi^2/\text{NDF}$ : 15696888.5/50

All:  $286.448 \pm 0.028$   $\chi^2/\text{NDF}$ : 33010277.0/10

- sign  $286.887 \pm 0.040$   $\chi^2/\text{NDF}$ : 17313150.3/53

# asym\_sam\_37\_dd\_mean vs Slug



Right In:  $483.670 \pm 196.374$   $\chi^2/\text{NDF}$ : 35.6/25

Left Out:  $251.109 \pm 63.424$   $\chi^2/\text{NDF}$ : 67.5/24

Right Out:  $465.043 \pm 195.462$   $\chi^2/\text{NDF}$ : 22.9/30

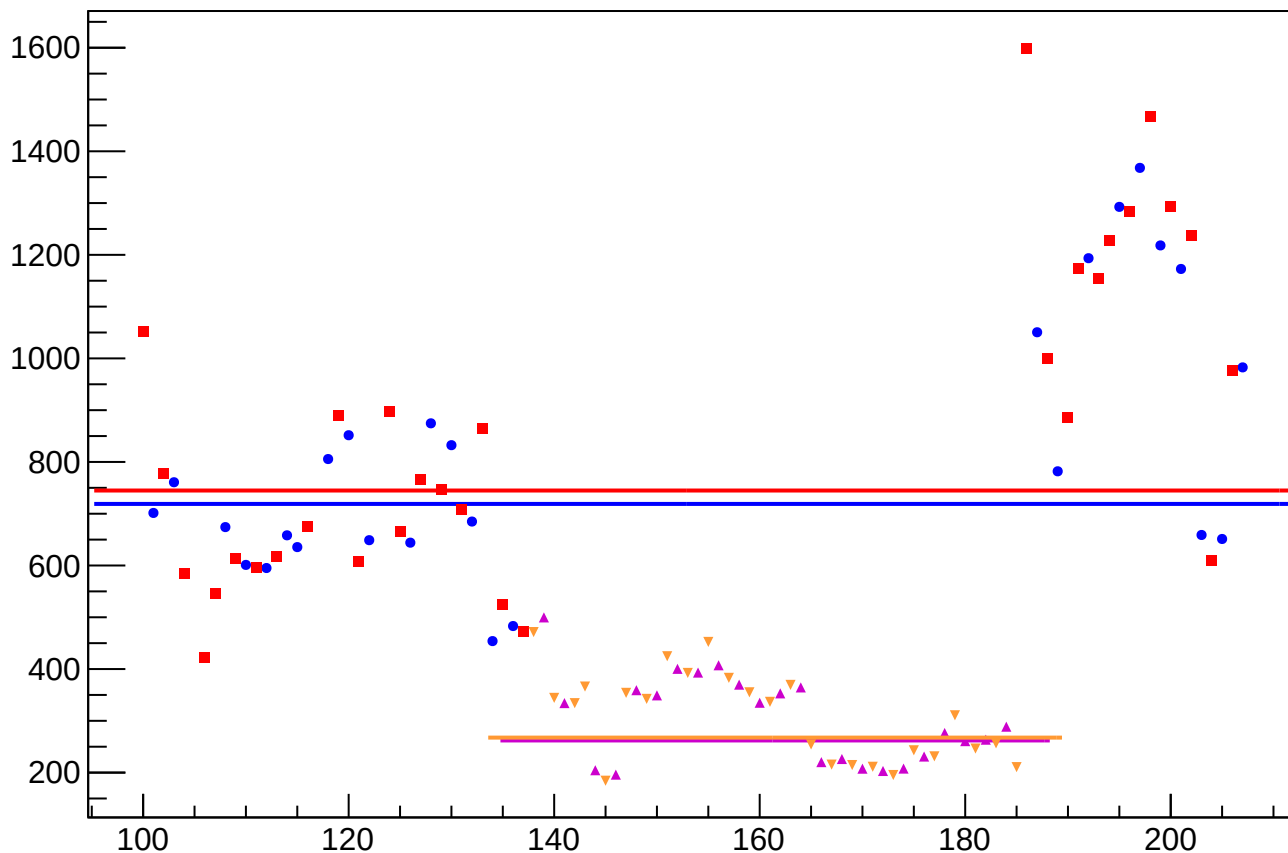
Left In:  $51.707 \pm 63.843$   $\chi^2/\text{NDF}$ : 26.8/22

+ sign  $273.077 \pm 60.354$   $\chi^2/\text{NDF}$ : 104.4/50

All:  $182.816 \pm 42.794$   $\chi^2/\text{NDF}$ : 162.7/104

- sign  $91.553 \pm 60.688$   $\chi^2/\text{NDF}$ : 53.7/53

# asym\_sam\_37\_dd\_rms vs Slug



Right In: 718.925+/-0.139  $\chi^2/\text{NDF}$ : 2621785.3/25

Left Out: 267.589+/-0.045  $\chi^2/\text{NDF}$ : 2801460.2/24

Right Out: 744.815+/-0.138  $\chi^2/\text{NDF}$ : 3455284.5/30

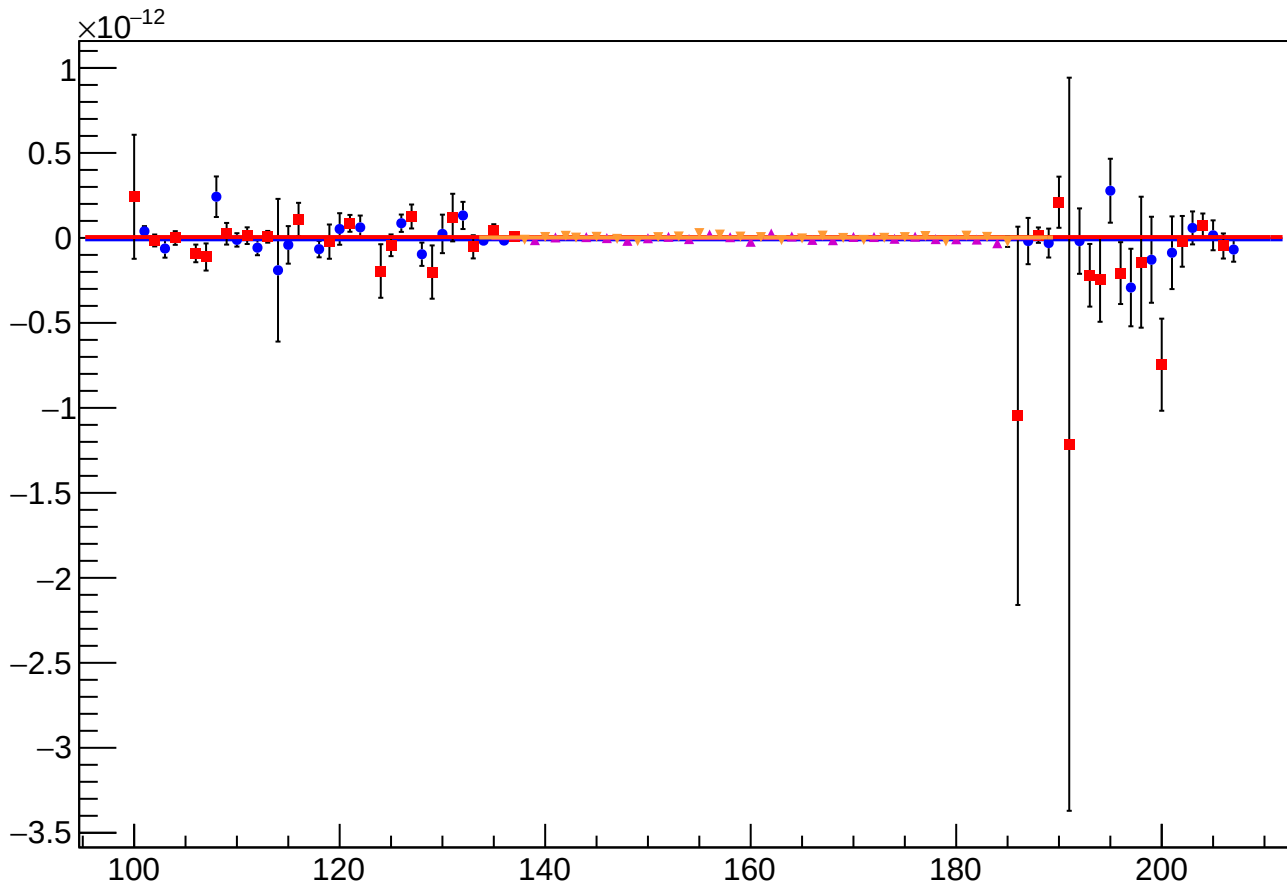
Left In: 262.092+/-0.045  $\chi^2/\text{NDF}$ : 2537465.8/22

+ sign 310.222+/-0.043  $\chi^2/\text{NDF}$ : 14990089.7/50

All: 309.429+/-0.030  $\chi^2/\text{NDF}$ : 32005900.0/100

- sign 308.627+/-0.043  $\chi^2/\text{NDF}$ : 17015116.0/53

# asym\_sam\_37\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 26.5/25$

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 15.2/24$

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 36.3/30$

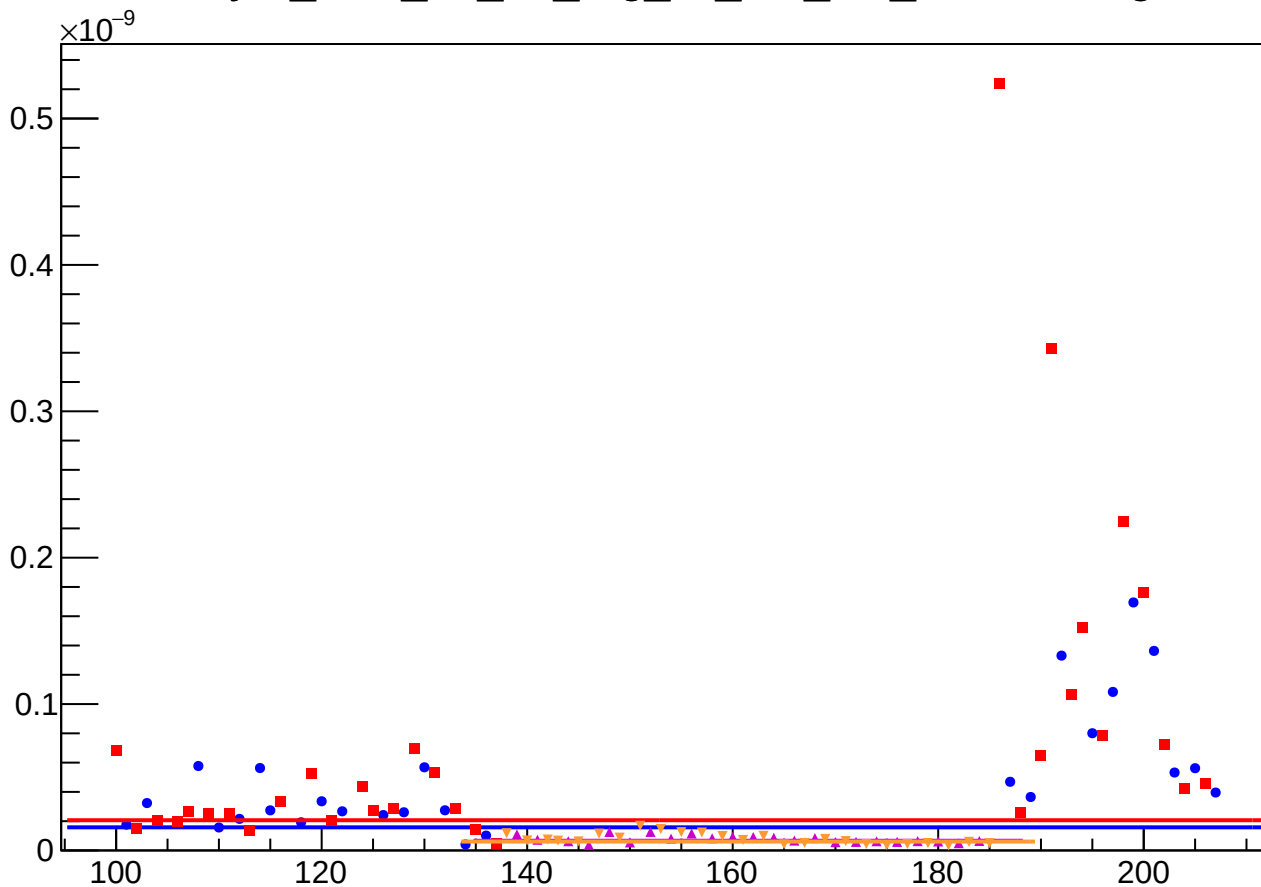
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 12.3/22$

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 43.1/50$

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 92.6/104$

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 48.9/53$

# asym\_sam\_37\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 6084818.7/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 2413933.6/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 5559070.8/30

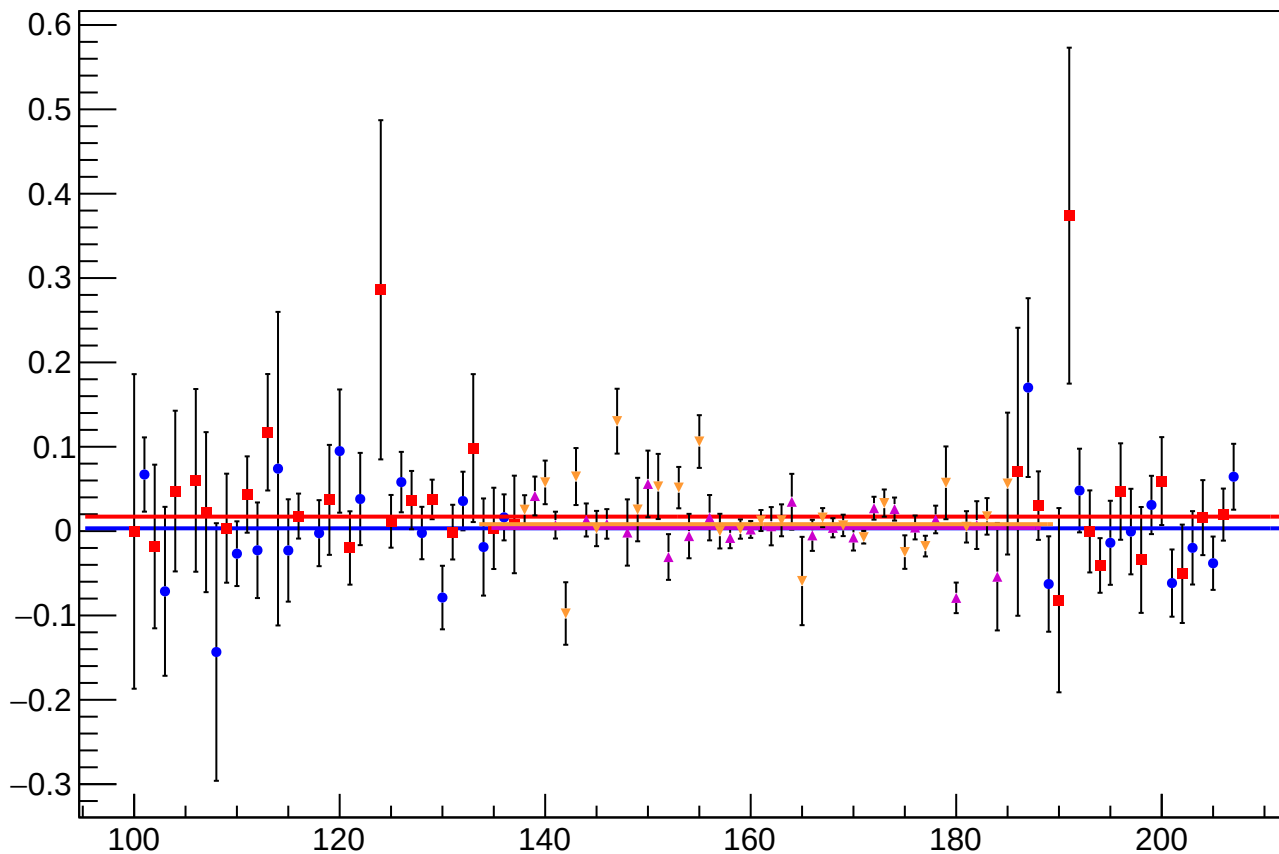
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 1176996.8/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 10636867.7/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 20624103.0/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 9907245.9/53

asym\_sam\_37\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.003 \pm 0.009$   $\chi^2/\text{NDF}$ : 27.6/25

Left Out:  $0.008 \pm 0.003$   $\chi^2/\text{NDF}$ : 58.8/24

Right Out:  $0.017 \pm 0.008$   $\chi^2/\text{NDF}$ : 18.4/30

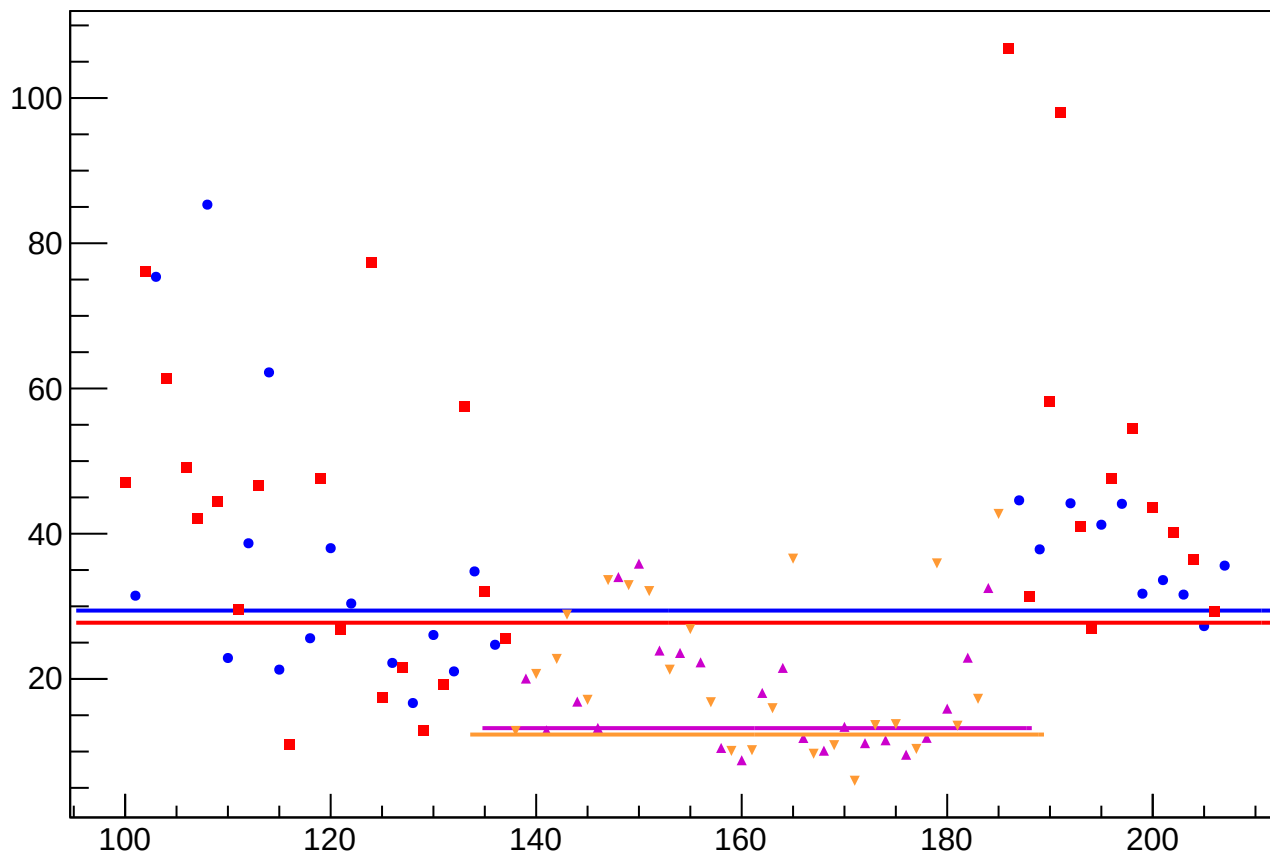
Left In:  $0.004 \pm 0.004$   $\chi^2/\text{NDF}$ : 37.2/22

+ sign  $0.008 \pm 0.003$   $\chi^2/\text{NDF}$ : 86.7/50

All:  $0.007 \pm 0.002$   $\chi^2/\text{NDF}$ : 144.6/104

- sign  $0.006 \pm 0.003$   $\chi^2/\text{NDF}$ : 57.7/53

# asym\_sam\_37\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 29.416 $\pm$ 0.006  $\chi^2/\text{NDF}$ : 2216049.1/25

Left Out: 12.343 $\pm$ 0.002  $\chi^2/\text{NDF}$ : 6743594.0/24

Right Out: 27.742 $\pm$ 0.006  $\chi^2/\text{NDF}$ : 5714894.1/30

Left In: 13.225 $\pm$ 0.003  $\chi^2/\text{NDF}$ : 3870352.4/22

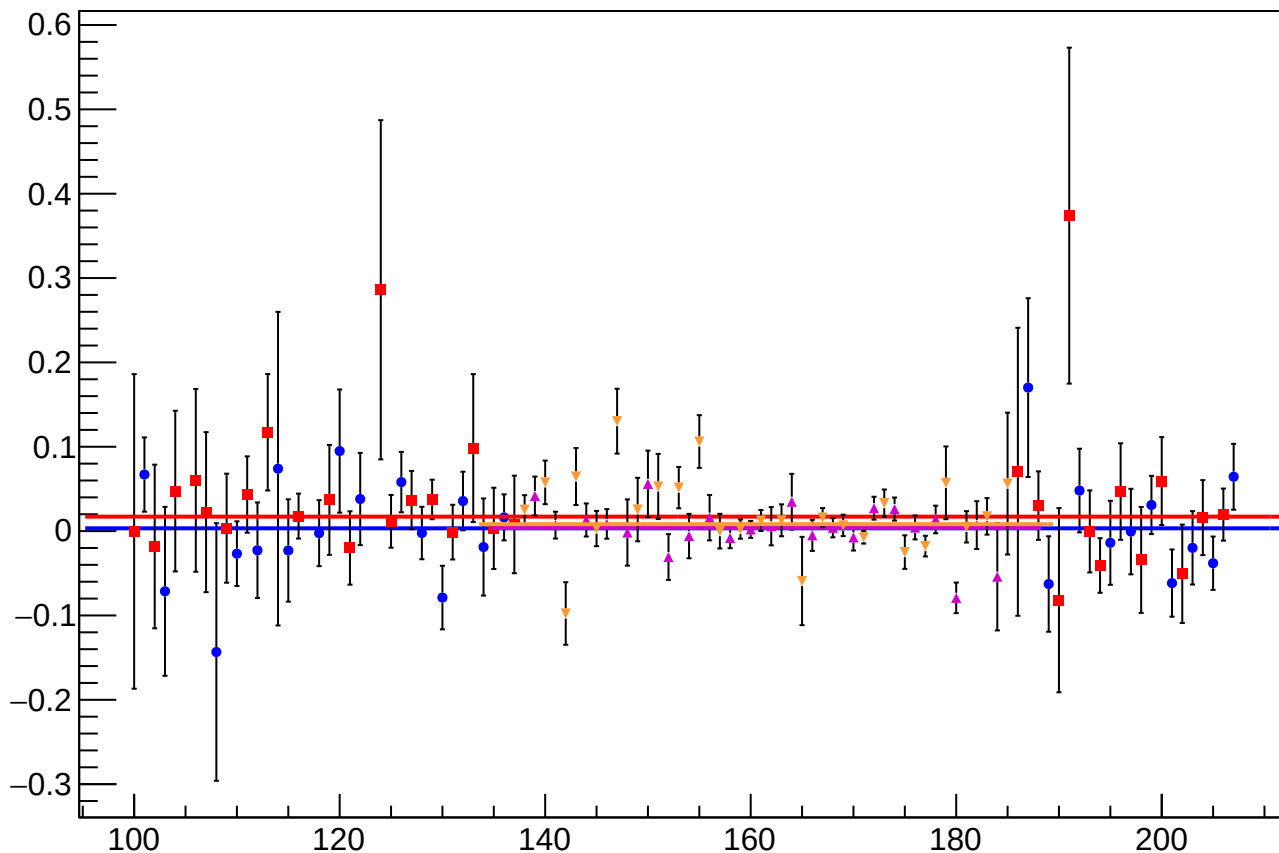
+ sign 14.691 $\pm$ 0.002  $\chi^2/\text{NDF}$ : 15681314.2/50

All: 15.073 $\pm$ 0.002  $\chi^2/\text{NDF}$ : 30297673.2/104

- sign 15.486 $\pm$ 0.002  $\chi^2/\text{NDF}$ : 14557445.0/53



asym\_sam\_37\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.003 \pm 0.009$   $\chi^2/\text{NDF}$ : 27.6/25

Left Out:  $0.008 \pm 0.003$   $\chi^2/\text{NDF}$ : 58.8/24

Right Out:  $0.017 \pm 0.008$   $\chi^2/\text{NDF}$ : 18.4/30

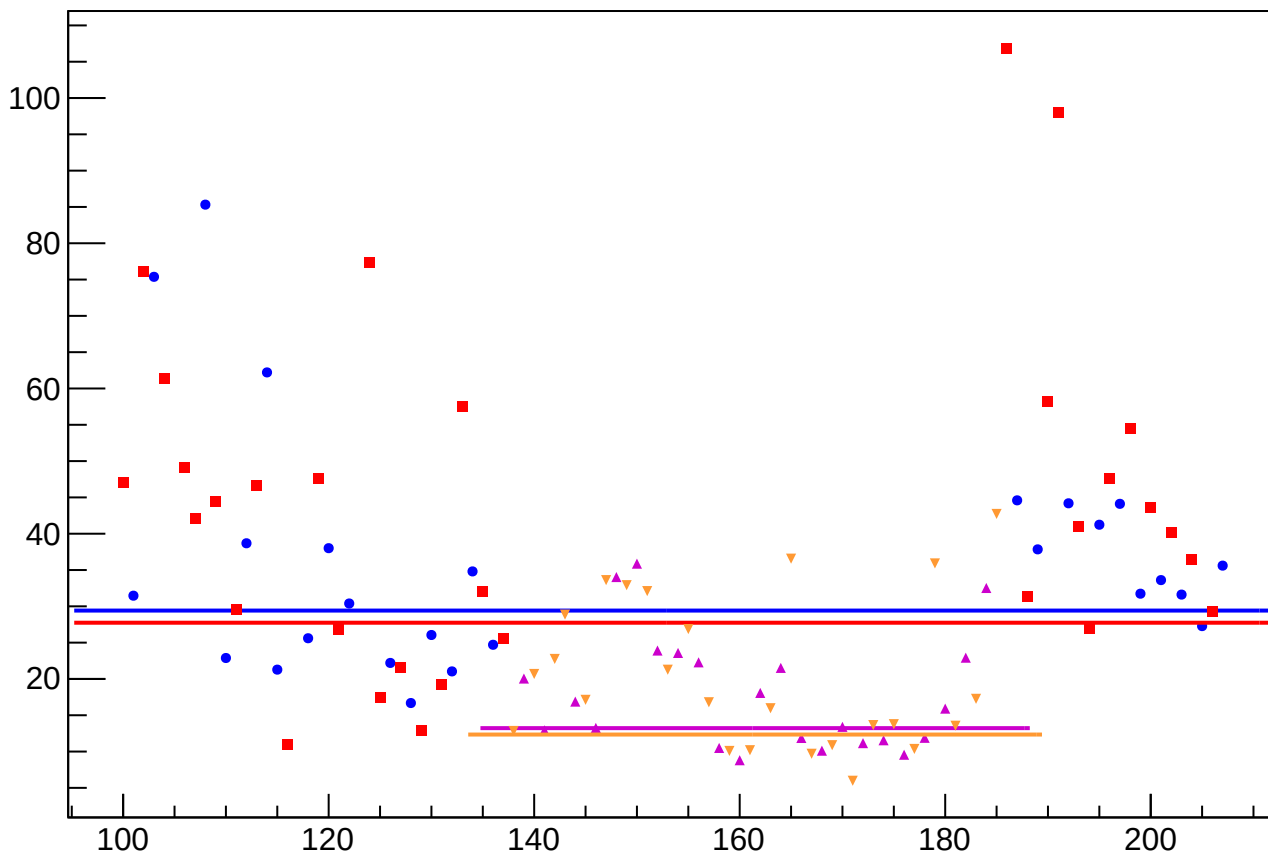
Left In:  $0.004 \pm 0.004$   $\chi^2/\text{NDF}$ : 37.2/22

+ sign  $0.008 \pm 0.003$   $\chi^2/\text{NDF}$ : 86.7/50

All:  $0.007 \pm 0.002$   $\chi^2/\text{NDF}$ : 144.6/104

- sign  $0.006 \pm 0.003$   $\chi^2/\text{NDF}$ : 57.7/53

asym\_sam\_37\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 29.416+/-0.006  $\chi^2$ /NDF: 2216049.1/25

Left Out: 12.343+/-0.002  $\chi^2$ /NDF:6743594.0/24

Right Out: 27.742+/-0.006  $\chi^2$ /NDF: 5714894.1/30

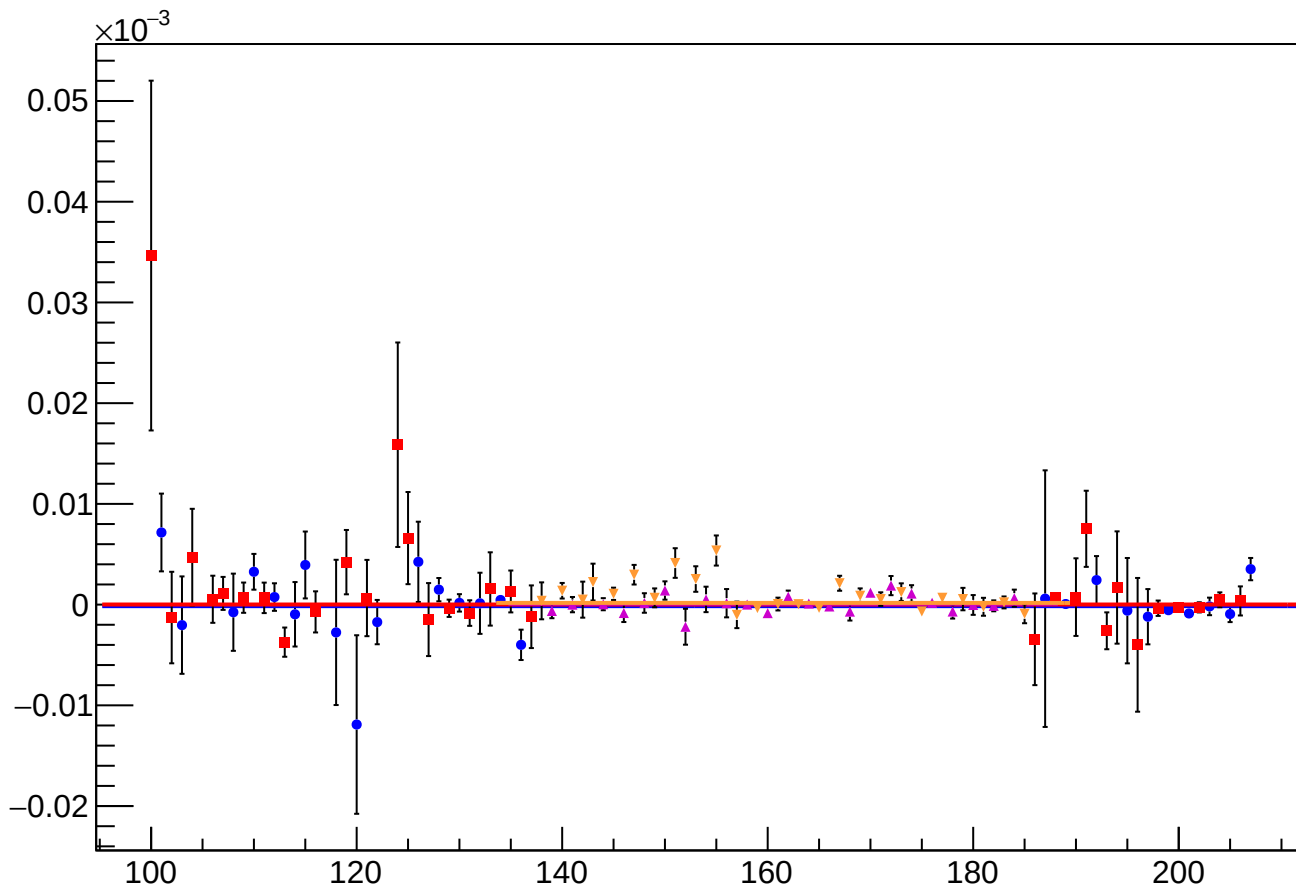
Left In: 13.225+/-0.003  $\chi^2$ /NDF:3870352.4/22

+ sign 14.691+/-0.002  $\chi^2$ /NDF: 15681314.2/50

All: 15.073+/-0.002  $\chi^2$ /NDF: 30297673.2/104

- sign 15.486+/-0.002  $\chi^2$ /NDF: 14557445.0/53

asym\_sam\_37\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 41.6/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:61.5/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 31.3/30

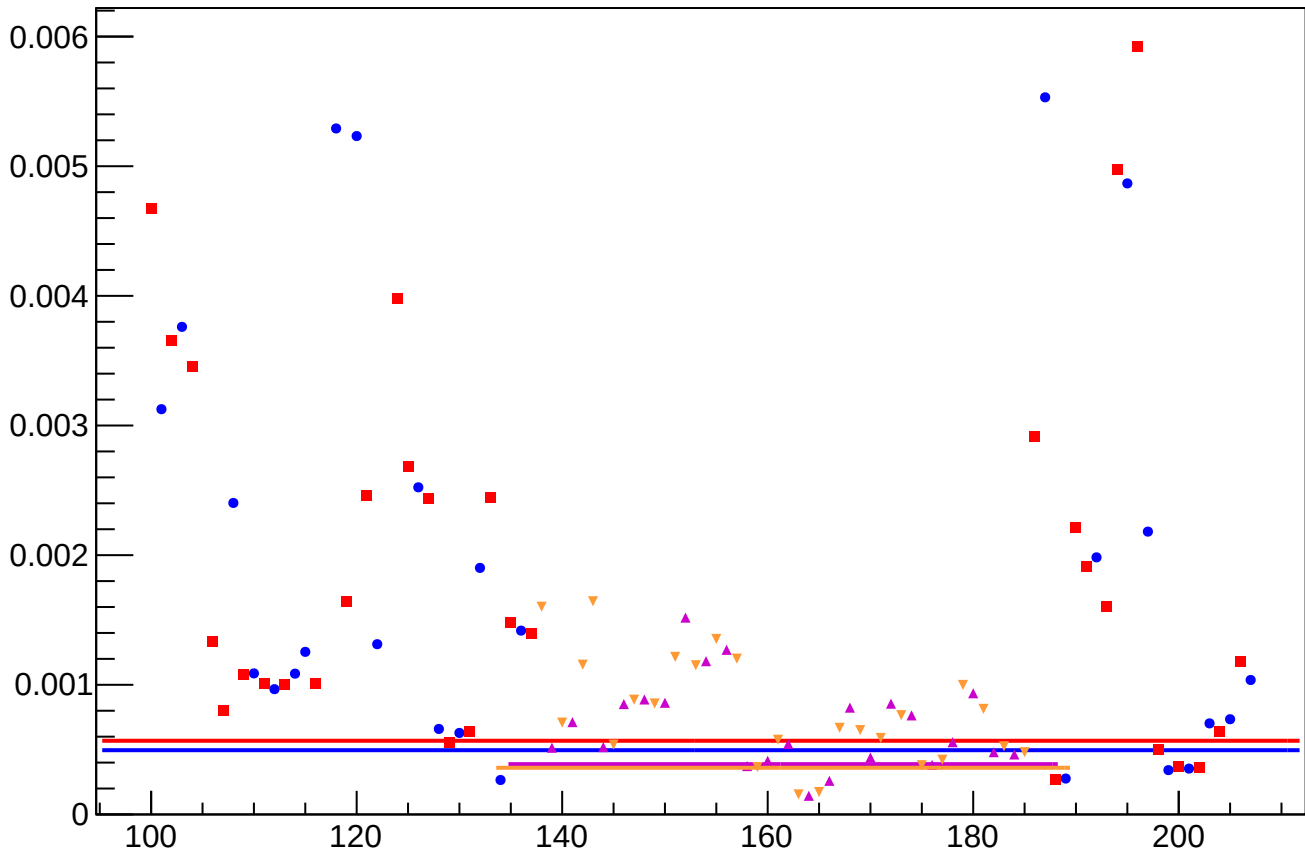
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:24.5/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 105.5/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 161.4/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 55.9/53

asym\_sam\_37\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12017778.5/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14019628.7/24

Right Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 12039239.1/30

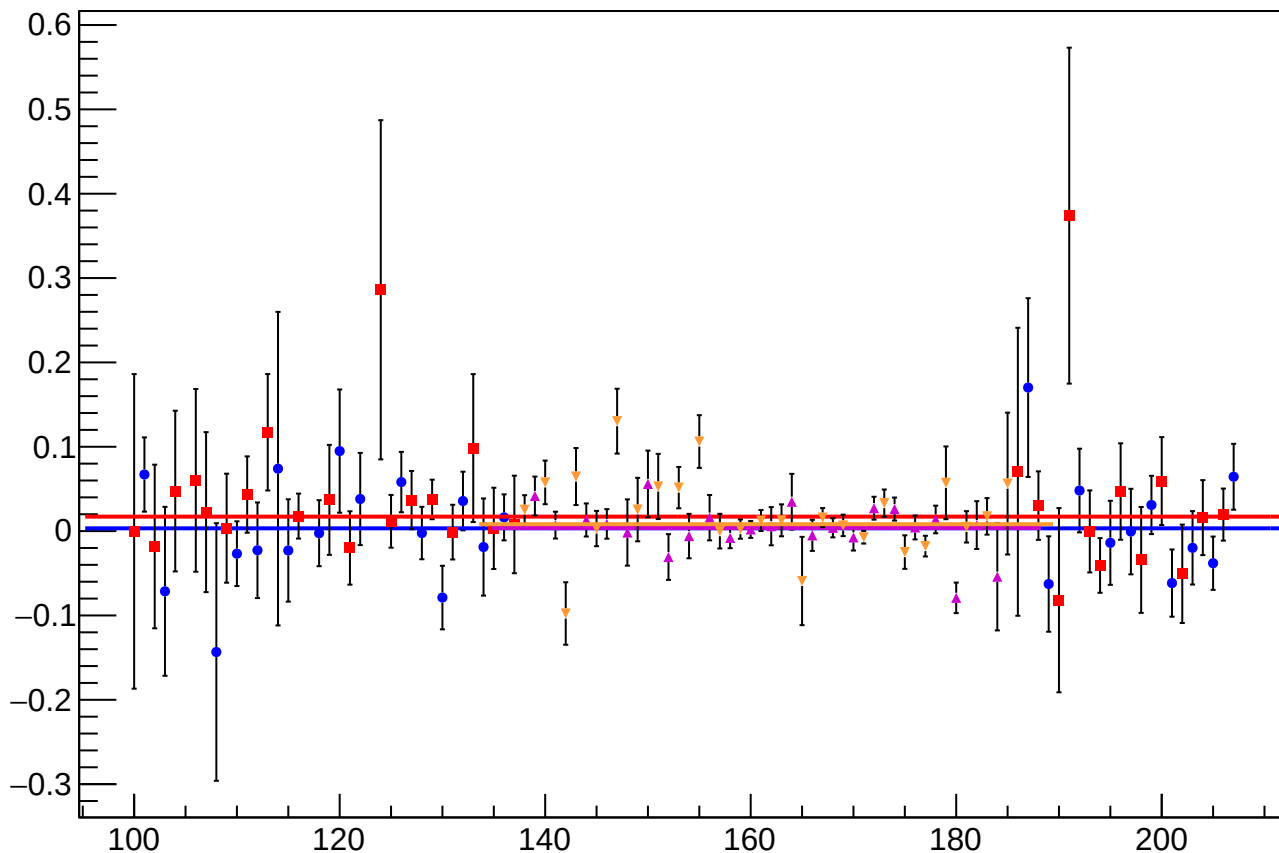
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10459340.6/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 26889472.5/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 50746217.4/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 23713100.7/53

asym\_sam\_37\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.003 \pm 0.009$   $\chi^2/\text{NDF}$ : 27.6/25

Left Out:  $0.008 \pm 0.003$   $\chi^2/\text{NDF}$ : 58.8/24

Right Out:  $0.017 \pm 0.008$   $\chi^2/\text{NDF}$ : 18.4/30

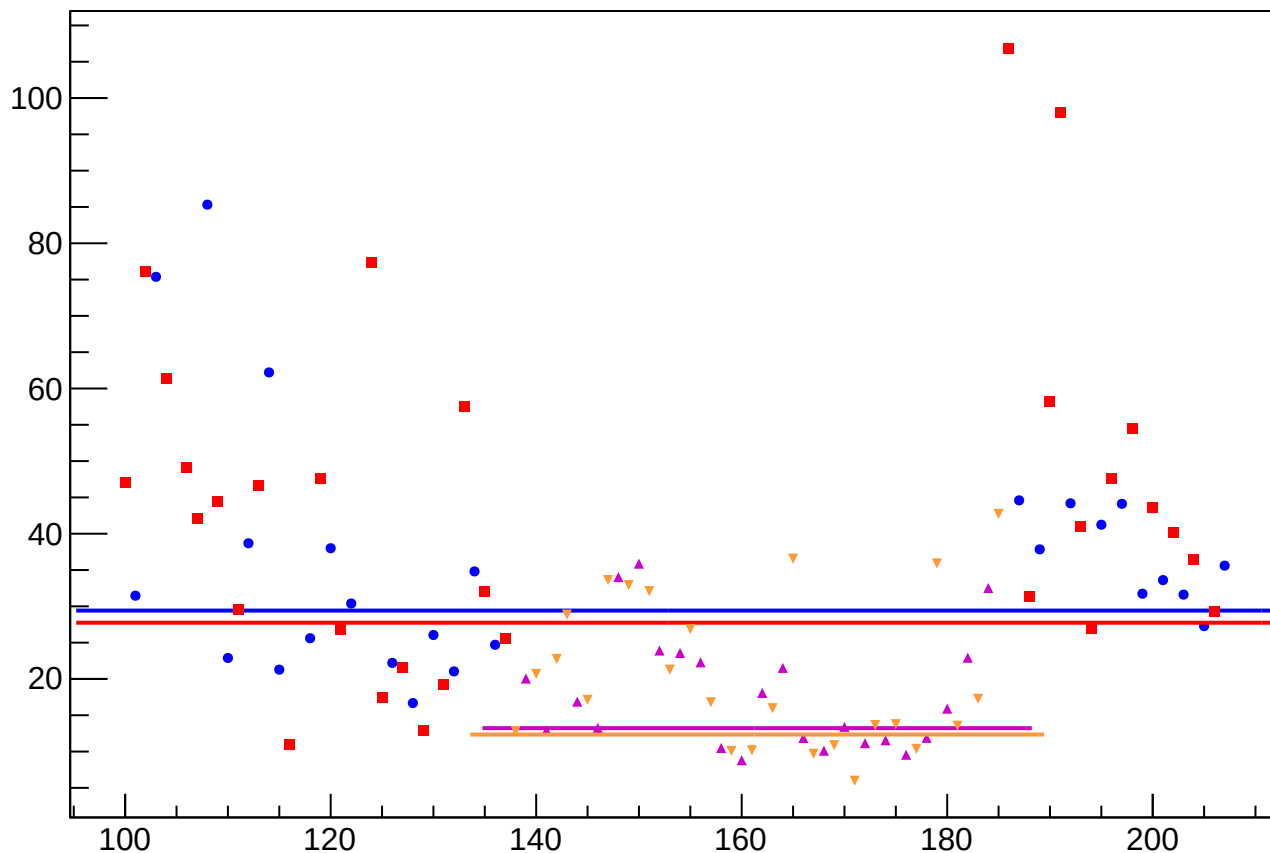
Left In:  $0.004 \pm 0.004$   $\chi^2/\text{NDF}$ : 37.2/22

+ sign  $0.008 \pm 0.003$   $\chi^2/\text{NDF}$ : 86.7/50

All:  $0.007 \pm 0.002$   $\chi^2/\text{NDF}$ : 144.6/104

- sign  $0.006 \pm 0.003$   $\chi^2/\text{NDF}$ : 57.7/53

asym\_sam\_37\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 29.416+/-0.006  $\chi^2/\text{NDF}$ : 2215972.7/25

Left Out: 12.343+/-0.002  $\chi^2/\text{NDF}$ : 6743823.4/24

Right Out: 27.743+/-0.006  $\chi^2/\text{NDF}$ : 5714565.5/30

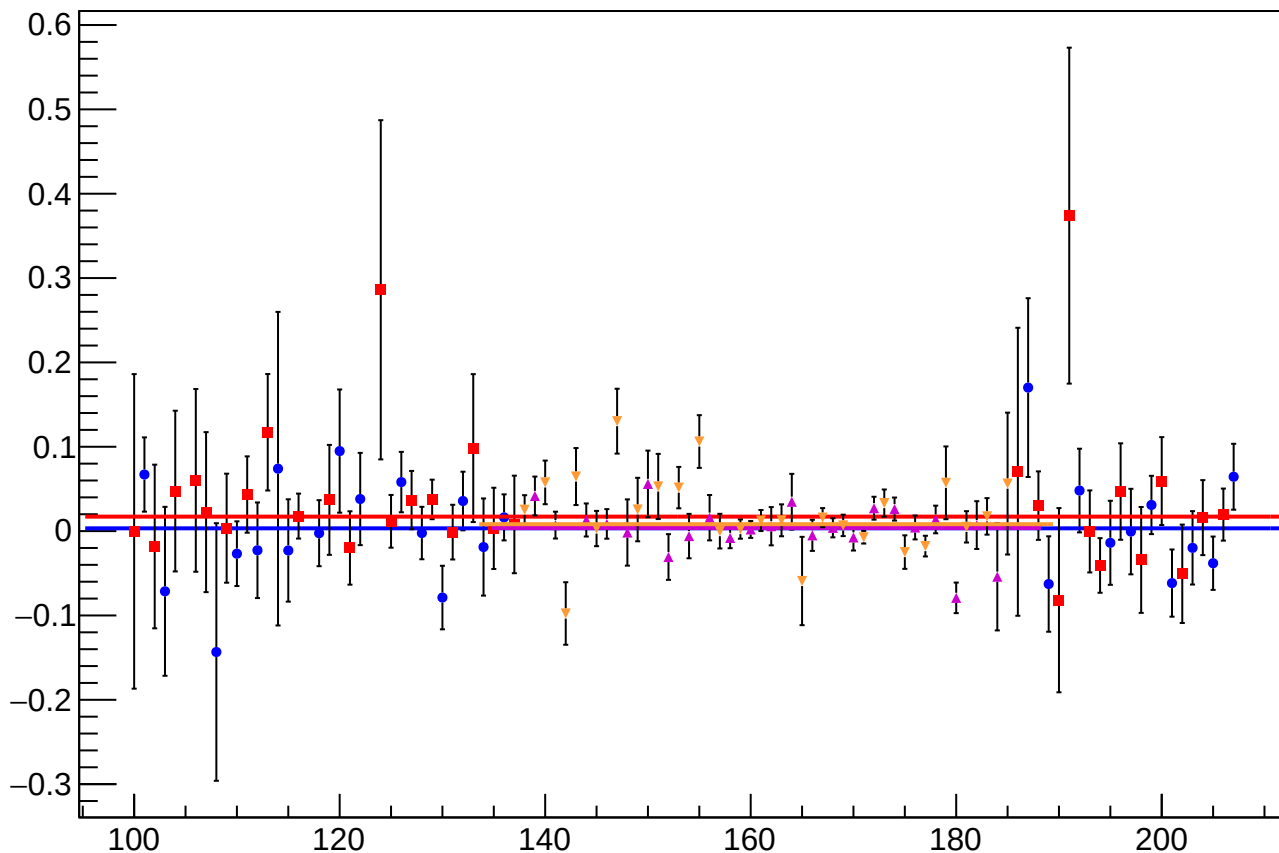
Left In: 13.225+/-0.003  $\chi^2/\text{NDF}$ : 3870507.9/22

+ sign 14.691+/-0.002  $\chi^2/\text{NDF}$ : 15681544.1/50

All: 15.073+/-0.002  $\chi^2/\text{NDF}$ : 30297995.0/104

- sign 15.486+/-0.002  $\chi^2/\text{NDF}$ : 14557540.5/53

asym\_sam\_37\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.003 $\pm$ 0.009  $\chi^2$ /NDF: 27.6/25

Left Out: 0.008 $\pm$ 0.003  $\chi^2$ /NDF:58.8/24

Right Out: 0.017 $\pm$ 0.008  $\chi^2$ /NDF: 18.4/30

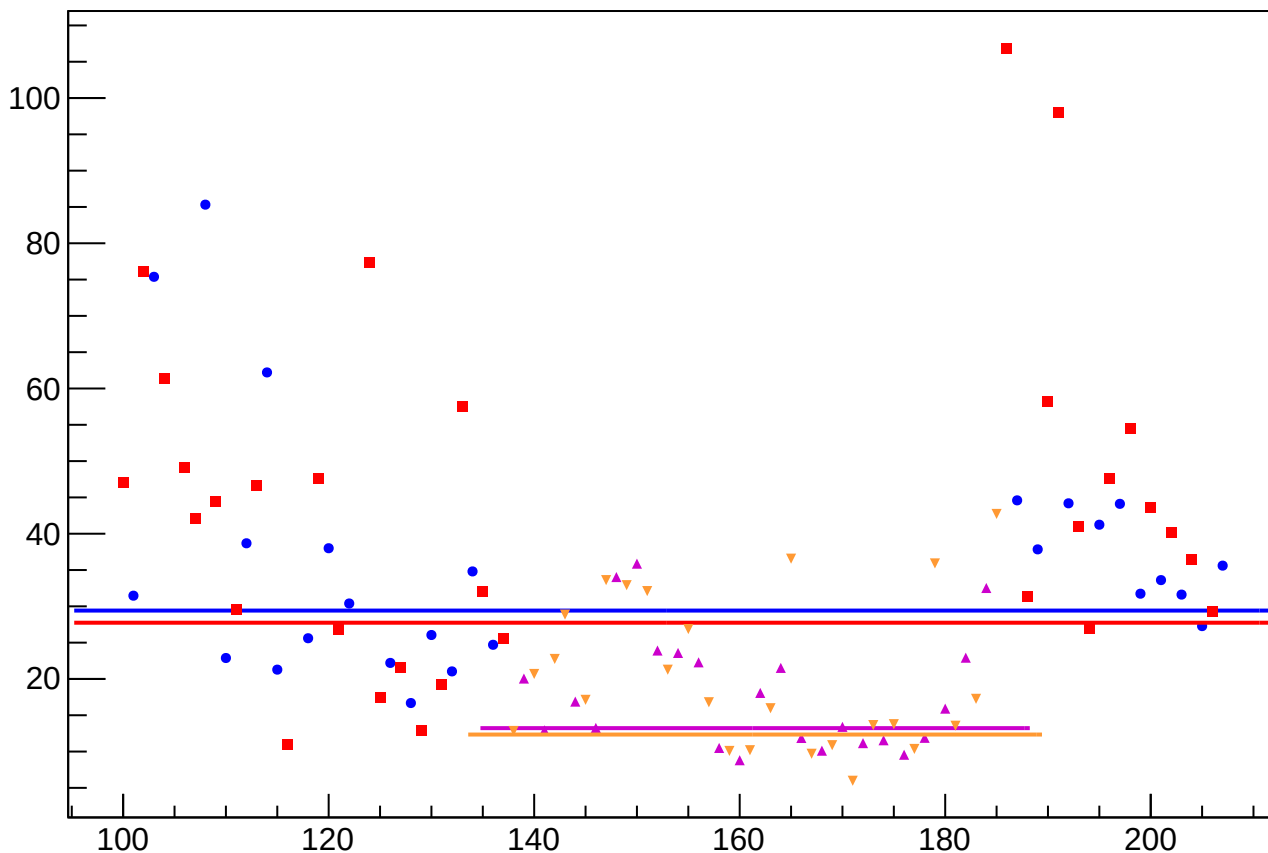
Left In: 0.004 $\pm$ 0.004  $\chi^2$ /NDF:37.2/22

+ sign 0.008 $\pm$ 0.003  $\chi^2$ /NDF: 86.7/50

All: 0.007 $\pm$ 0.002  $\chi^2$ /NDF: 144.6/104

- sign 0.006 $\pm$ 0.003  $\chi^2$ /NDF: 57.7/53

asym\_sam\_37\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 29.416+/-0.006  $\chi^2/\text{NDF}$ : 2215972.7/25

Left Out: 12.343+/-0.002  $\chi^2/\text{NDF}$ : 6743823.4/24

Right Out: 27.743+/-0.006  $\chi^2/\text{NDF}$ : 5714565.5/30

Left In: 13.225+/-0.003  $\chi^2/\text{NDF}$ : 3870507.9/22

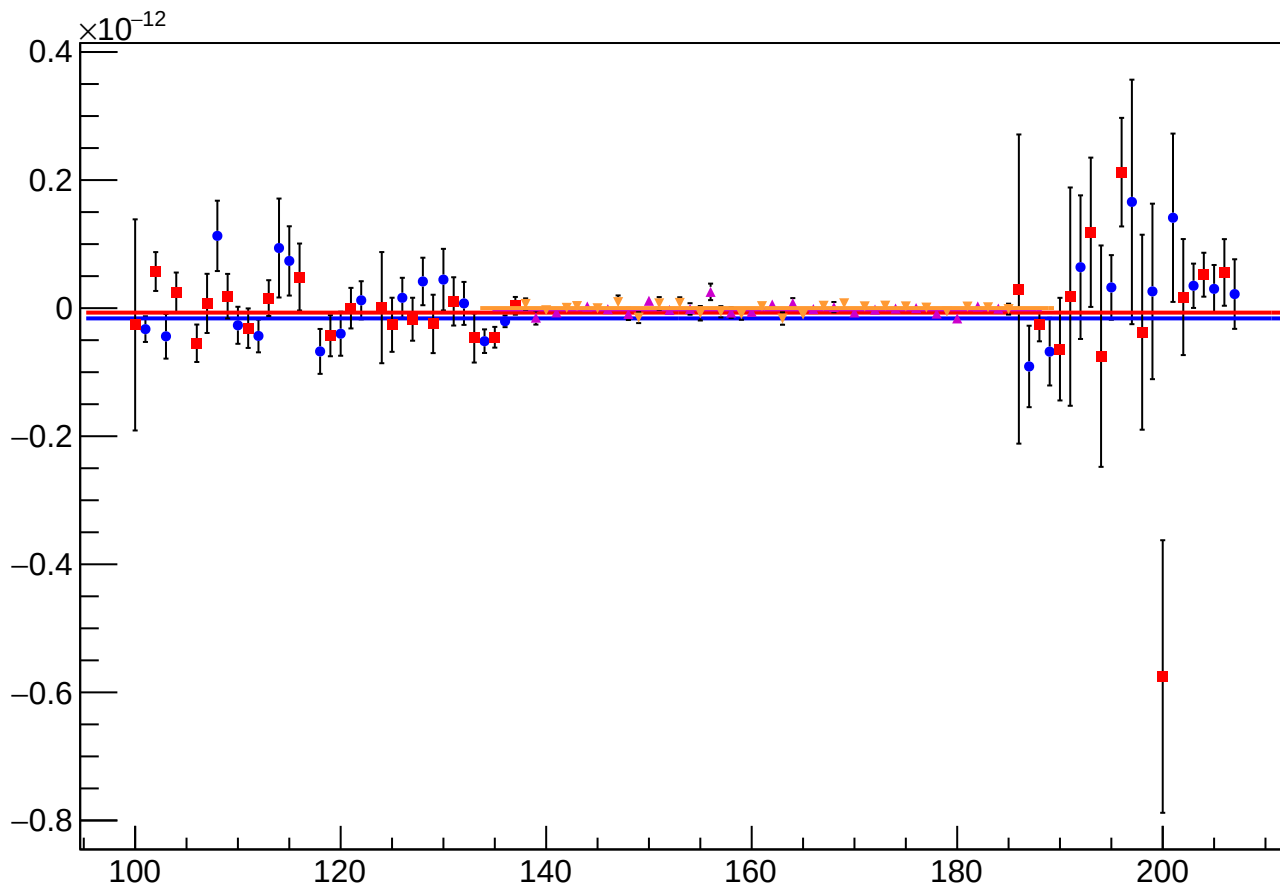
+ sign 14.691+/-0.002  $\chi^2/\text{NDF}$ : 15681544.1/50

All: 15.073+/-0.002  $\chi^2/\text{NDF}$ : 30297995.0/104

- sign 15.486+/-0.002  $\chi^2/\text{NDF}$ : 14557540.5/53



asym\_sam\_37\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 36.4/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 21.5/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 41.3/30

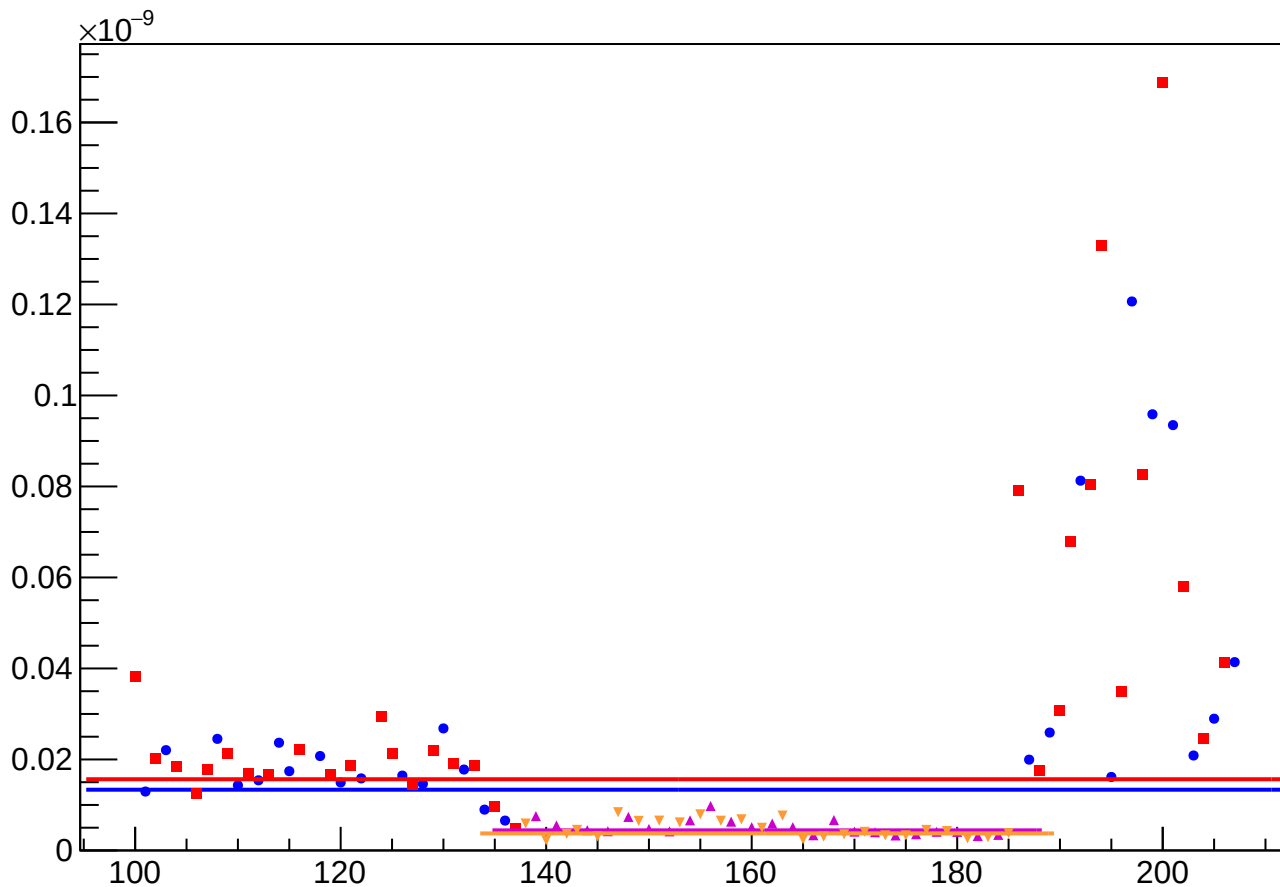
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 25.4/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 65.6/50

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 133.8/104

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 67.3/53

asym\_sam\_37\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5744765.3/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3083424.2/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6417451.7/30

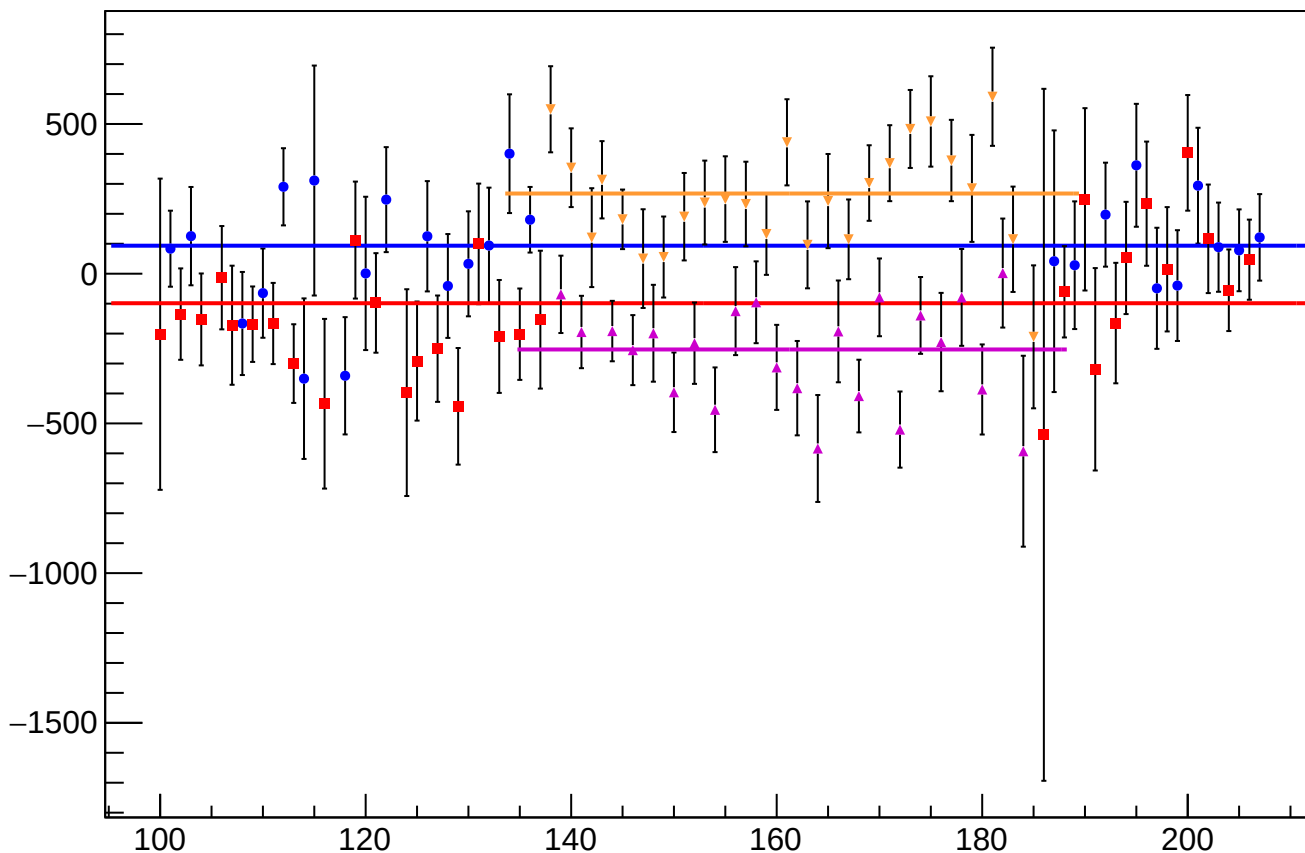
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1736522.0/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14251095.8/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 28884804.5/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14241942.0/53

# reg\_asym\_sam\_48\_dd\_mean vs Slug



Right In: 93.521 $\pm$ 33.818  $\chi^2$ /NDF: 22.8/25

Left Out: 267.782 $\pm$ 28.407  $\chi^2$ /NDF:31.0/24

Right Out: -98.608 $\pm$ 32.715  $\chi^2$ /NDF: 28.5/30

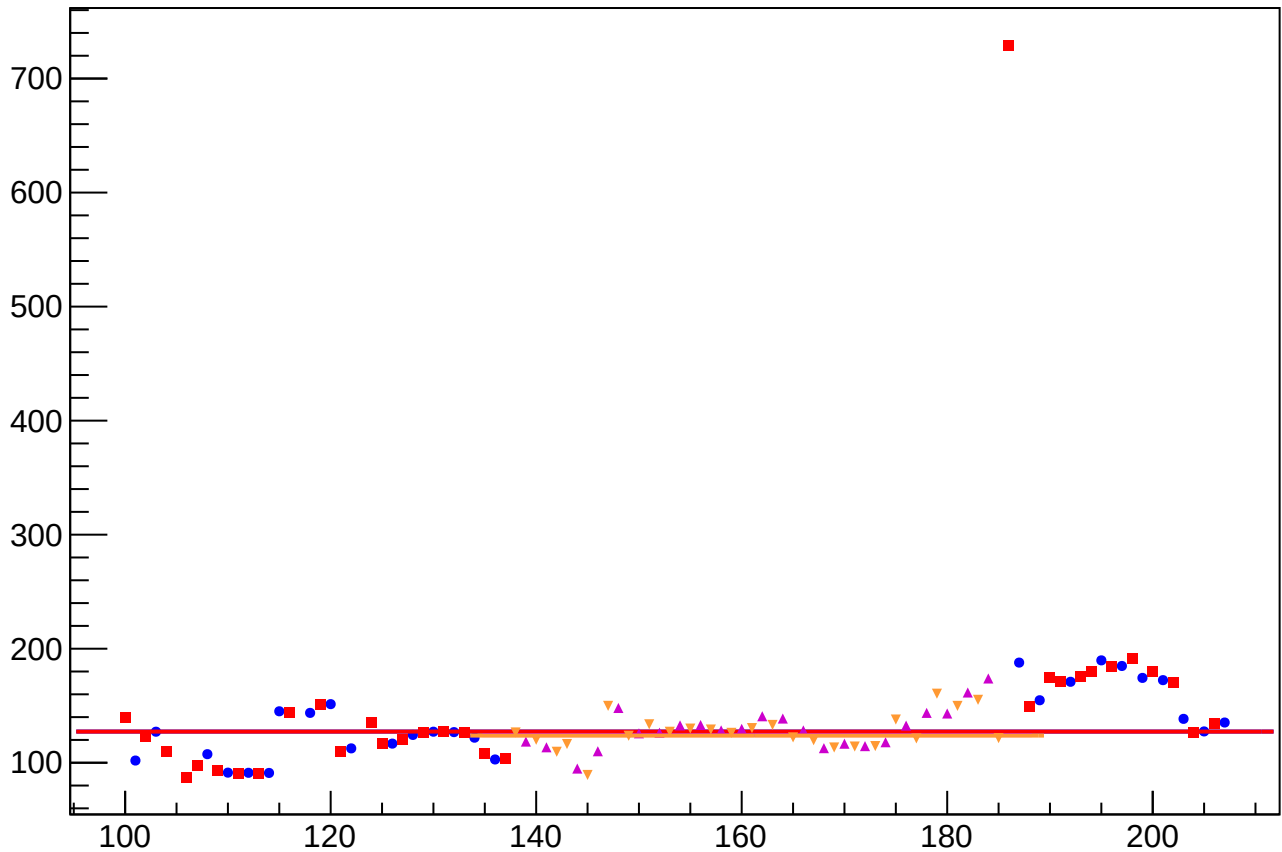
Left In: -253.048 $\pm$ 29.313  $\chi^2$ /NDF:26.2/22

+ sign 195.690 $\pm$ 21.752  $\chi^2$ /NDF: 69.3/50

All: 6.404 $\pm$ 15.409  $\chi^2$ /NDF: 288.4/104

- sign -184.273 $\pm$ 21.831  $\chi^2$ /NDF: 67.0/53

# reg\_asym\_sam\_48\_dd\_rms vs Slug



Right In: 127.349 $\pm$ 0.024  $\chi^2$ /NDF: 1376134.2/25

Left Out: 123.807 $\pm$ 0.020  $\chi^2$ /NDF: 598444.2/24

Right Out: 127.311 $\pm$ 0.023  $\chi^2$ /NDF: 2309962.3/30

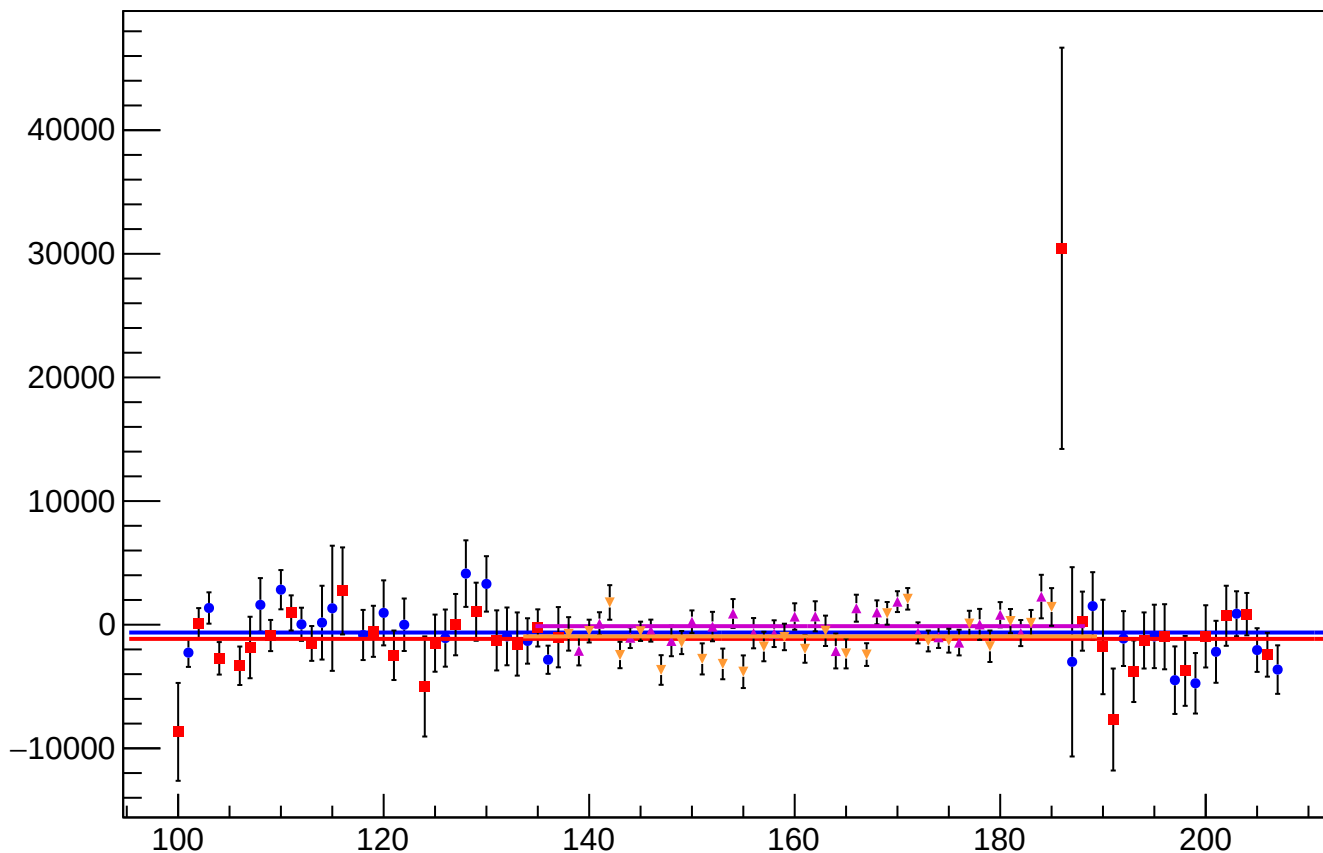
Left In: 124.259 $\pm$ 0.021  $\chi^2$ /NDF: 557214.9/22

+ sign 125.272 $\pm$ 0.015  $\chi^2$ /NDF: 1987436.0/50

All: 125.445 $\pm$ 0.011  $\chi^2$ /NDF: 4864522.9/104

- sign 125.618 $\pm$ 0.015  $\chi^2$ /NDF: 2876835.1/53

# asym\_sam\_48\_dd\_reg\_correction\_mean vs Slug



Right In:  $-633.409 \pm 380.129$   $\chi^2/\text{NDF}$ : 31.0/25

Left Out:  $-947.720 \pm 211.794$   $\chi^2/\text{NDF}$ : 50.3/24

Right Out:  $-1147.174 \pm 365.047$   $\chi^2/\text{NDF}$ : 25.6/30

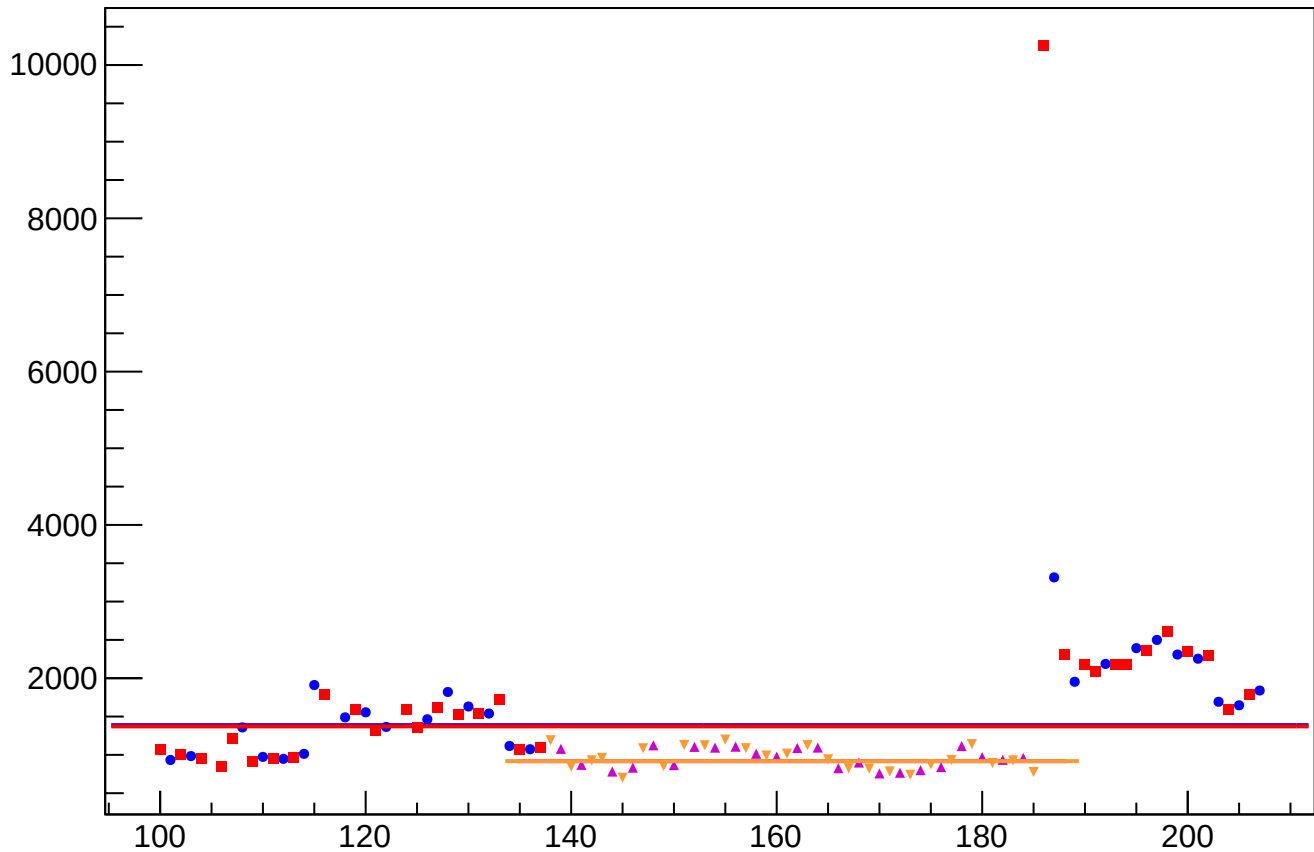
Left In:  $-118.433 \pm 217.165$   $\chi^2/\text{NDF}$ : 24.4/22

+ sign  $-873.263 \pm 185.015$   $\chi^2/\text{NDF}$ : 81.8/50

All:  $-632.422 \pm 131.395$   $\chi^2/\text{NDF}$ : 141.1/104

- sign  $-387.339 \pm 186.637$   $\chi^2/\text{NDF}$ : 55.9/53

# asym\_sam\_48\_dd\_reg\_correction\_rms vs Slug



Right In: 1387.466+/-0.269  $\chi^2/\text{NDF}$ : 3048164.8/25

Left Out: 918.501+/-0.150  $\chi^2/\text{NDF}$ : 887820.0/24

Right Out: 1371.838+/-0.258  $\chi^2/\text{NDF}$ : 4401992.8/30

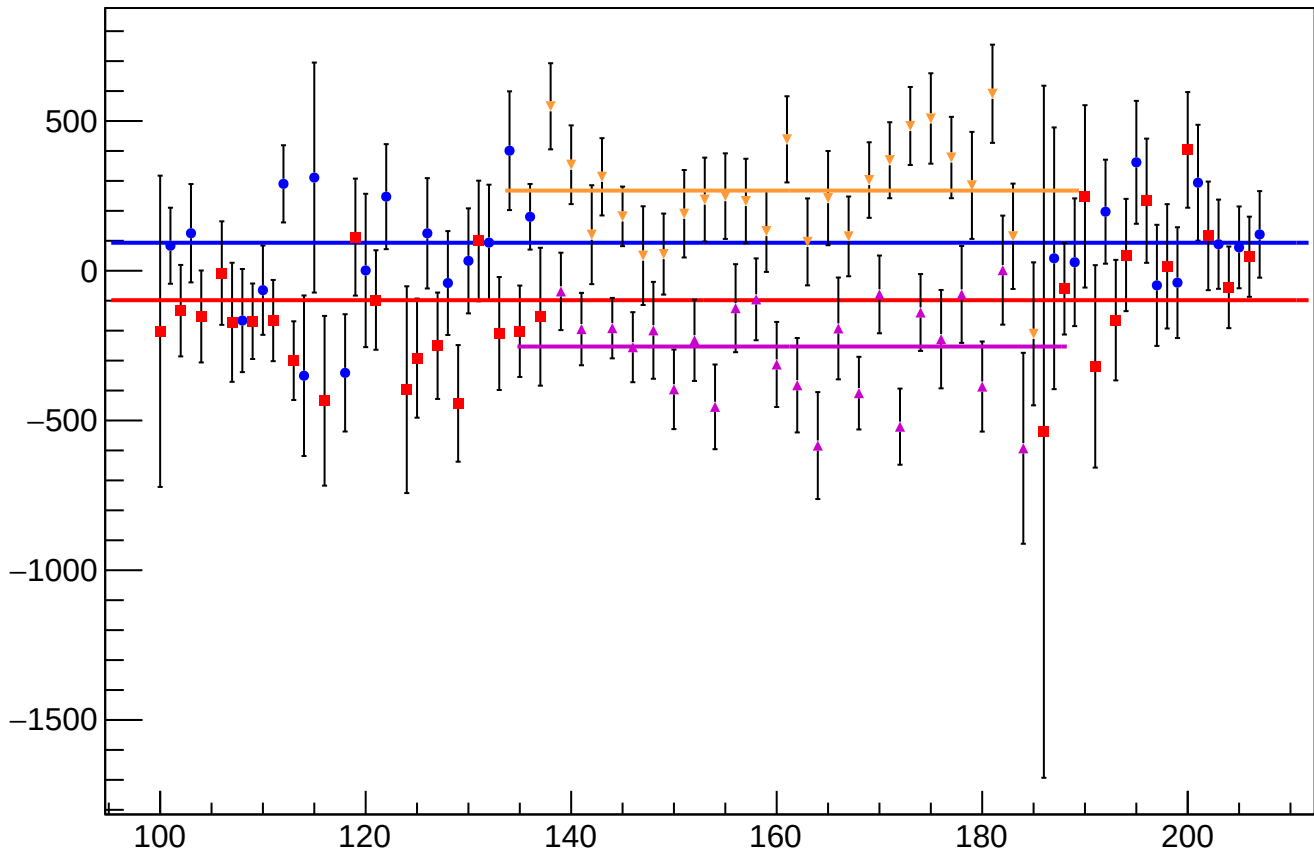
Left In: 918.214+/-0.154  $\chi^2/\text{NDF}$ : 666262.3/22

+ sign 1029.595+/-0.131  $\chi^2/\text{NDF}$ : 6258907.7/50

All: 1033.161+/-0.093  $\chi^2/\text{NDF}$ : 13609722.0/100

- sign 1036.789+/-0.132  $\chi^2/\text{NDF}$ : 7349315.8/53

# cor\_asym\_sam\_48\_dd\_mean vs Slug



Right In: 93.514 $\pm$ 33.818  $\chi^2$ /NDF: 22.8/25

Left Out: 267.791 $\pm$ 28.407  $\chi^2$ /NDF:31.0/24

Right Out: -98.347 $\pm$ 32.718  $\chi^2$ /NDF: 28.5/30

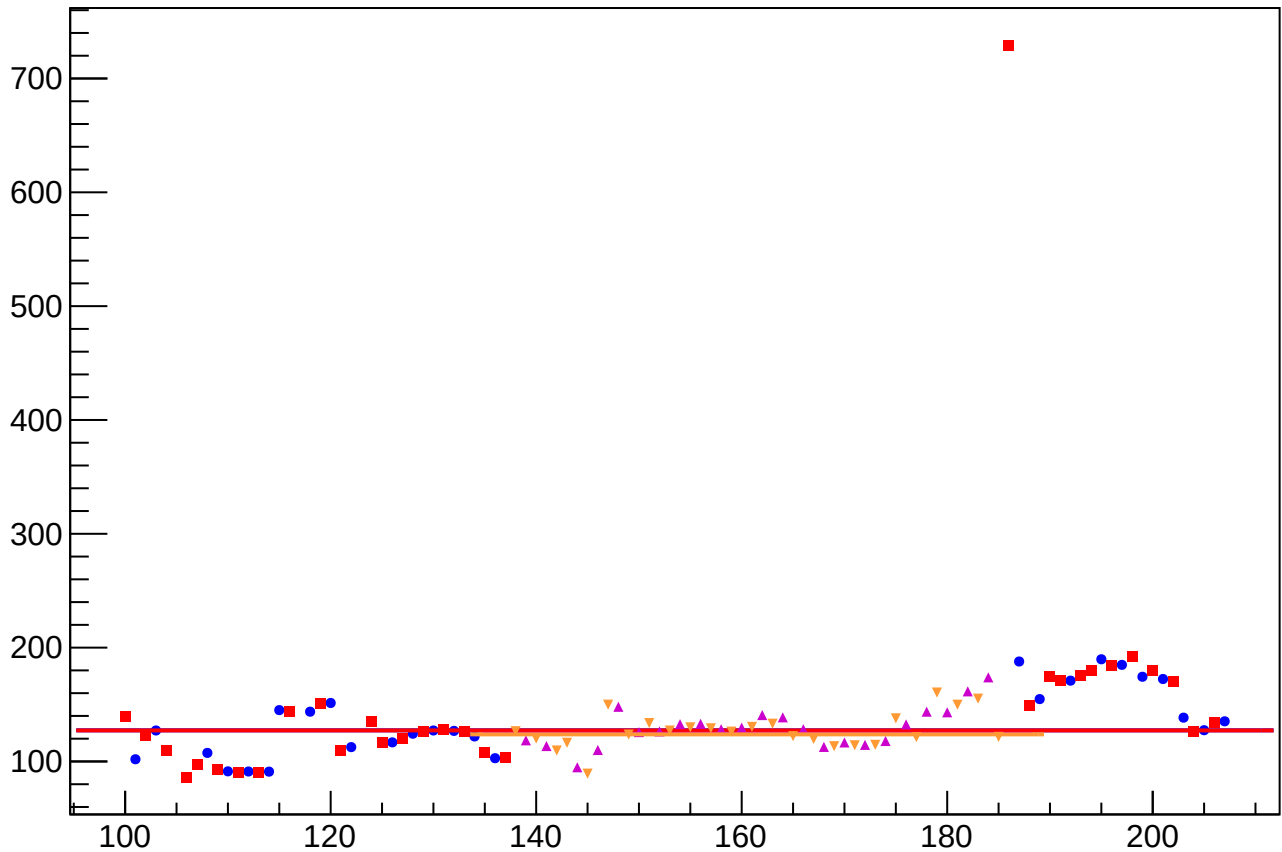
Left In: -253.051 $\pm$ 29.313  $\chi^2$ /NDF:26.2/22

+ sign 195.692 $\pm$ 21.752  $\chi^2$ /NDF: 69.3/50

All: 6.466 $\pm$ 15.409  $\chi^2$ /NDF: 288.3/104

- sign -184.165 $\pm$ 21.832  $\chi^2$ /NDF: 67.1/53

# cor\_asym\_sam\_48\_dd\_rms vs Slug



Right In: 127.349 $\pm$ 0.024  $\chi^2$ /NDF: 1376134.2/25

Left Out: 123.807 $\pm$ 0.020  $\chi^2$ /NDF: 598444.2/24

Right Out: 127.278 $\pm$ 0.023  $\chi^2$ /NDF: 2315788.2/30

Left In: 124.259 $\pm$ 0.021  $\chi^2$ /NDF: 557214.9/22

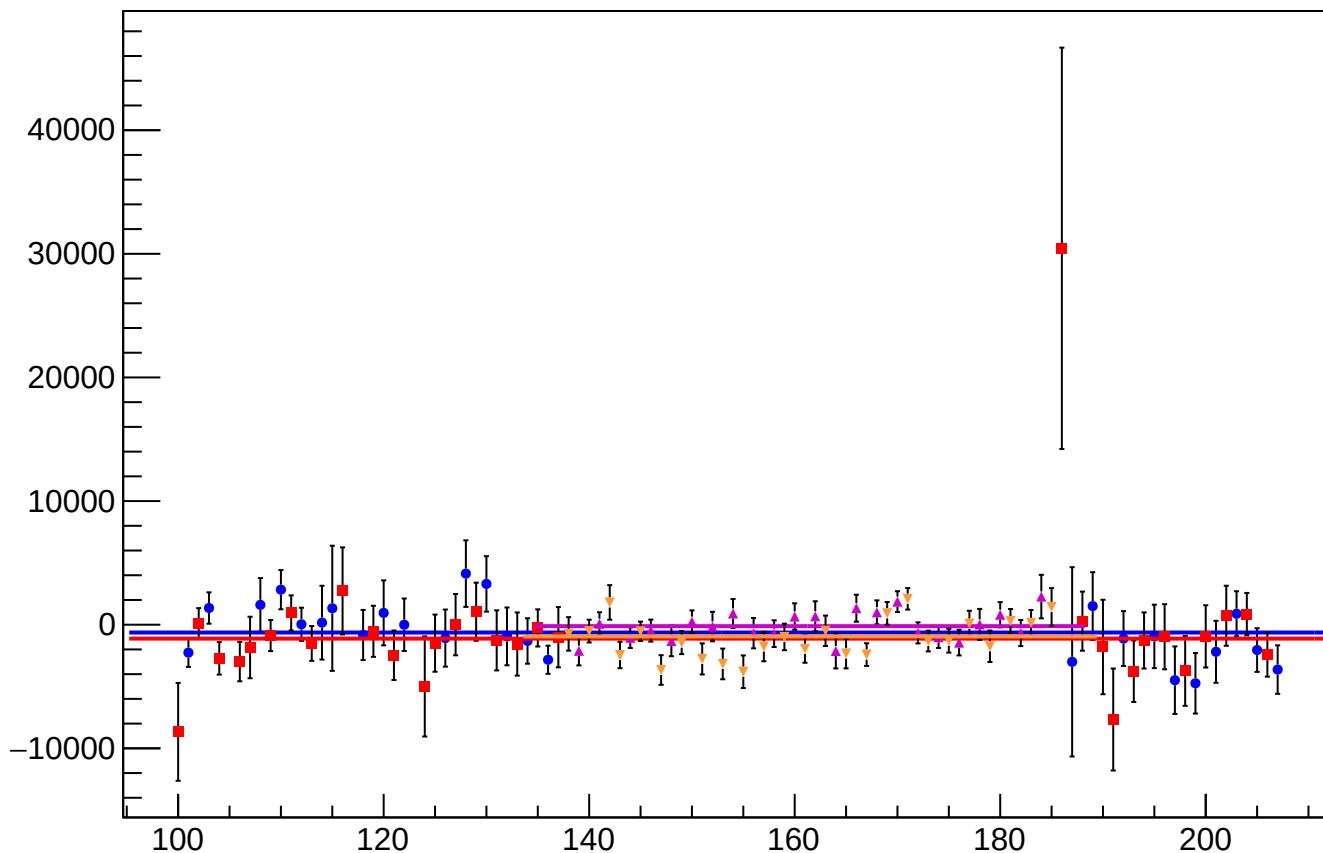
+ sign 125.272 $\pm$ 0.015  $\chi^2$ /NDF: 1987436.2/50

All: 125.437 $\pm$ 0.011  $\chi^2$ /NDF: 4870118.2/104

- sign 125.603 $\pm$ 0.015  $\chi^2$ /NDF: 2882451.4/53



# asym\_sam\_48\_dd\_cor\_correction\_mean vs Slug



Right In:  $-633.476 \pm 380.131$   $\chi^2/\text{NDF}$ : 31.0/25

Left Out:  $-947.709 \pm 211.794$   $\chi^2/\text{NDF}$ : 50.3/24

Right Out:  $-1124.379 \pm 365.520$   $\chi^2/\text{NDF}$ : 25.0/30

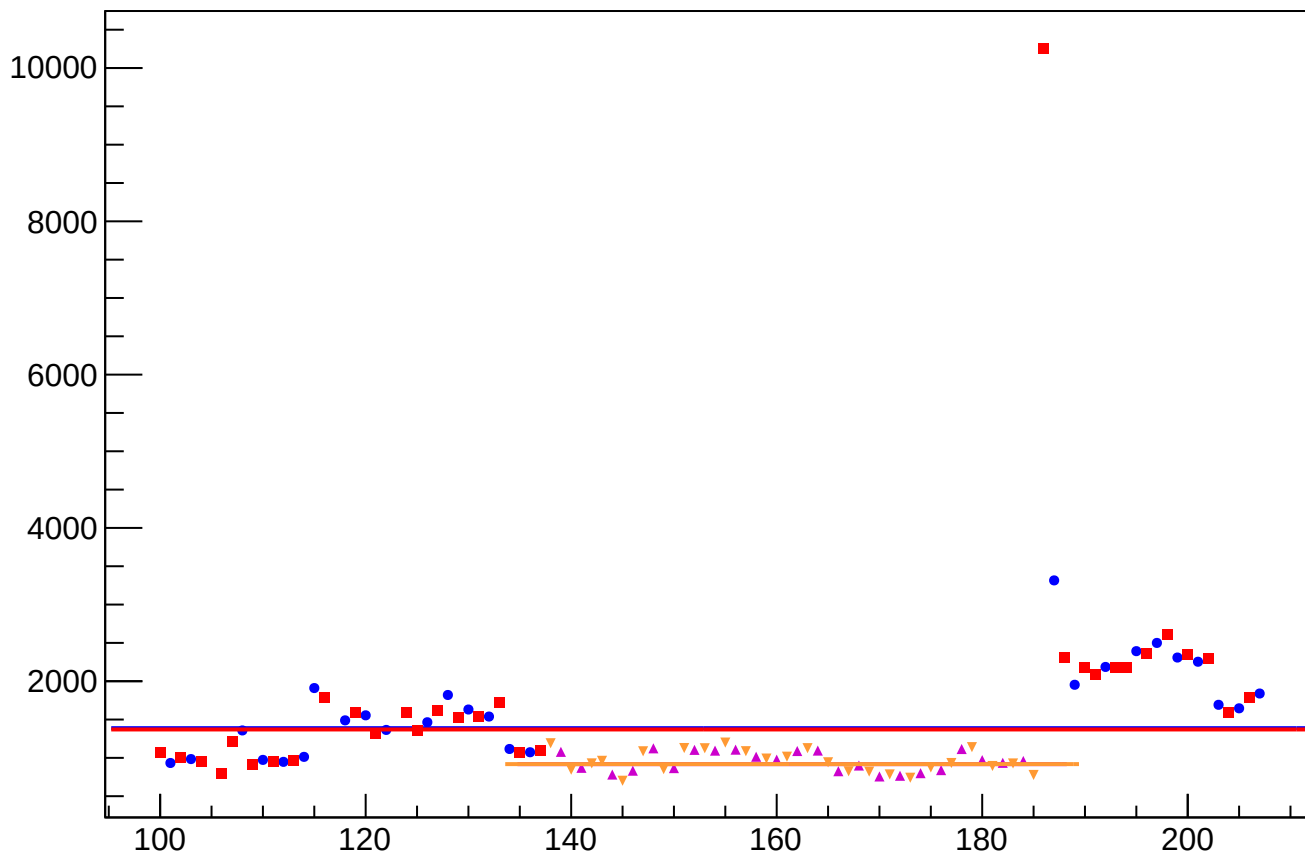
Left In:  $-118.435 \pm 217.165$   $\chi^2/\text{NDF}$ : 24.4/22

+ sign  $-873.270 \pm 185.015$   $\chi^2/\text{NDF}$ : 81.8/50

All:  $-629.308 \pm 131.417$   $\chi^2/\text{NDF}$ : 140.3/104

- sign  $-380.881 \pm 186.700$   $\chi^2/\text{NDF}$ : 55.0/53

# asym\_sam\_48\_dd\_cor\_correction\_rms vs Slug



Right In: 1387.475+/-0.269     $\chi^2/\text{NDF}$ : 3048082.6/25

Left Out: 918.501+/-0.150     $\chi^2/\text{NDF}$ : 887819.5/24

Right Out: 1370.554+/-0.258     $\chi^2/\text{NDF}$ : 4434961.6/30

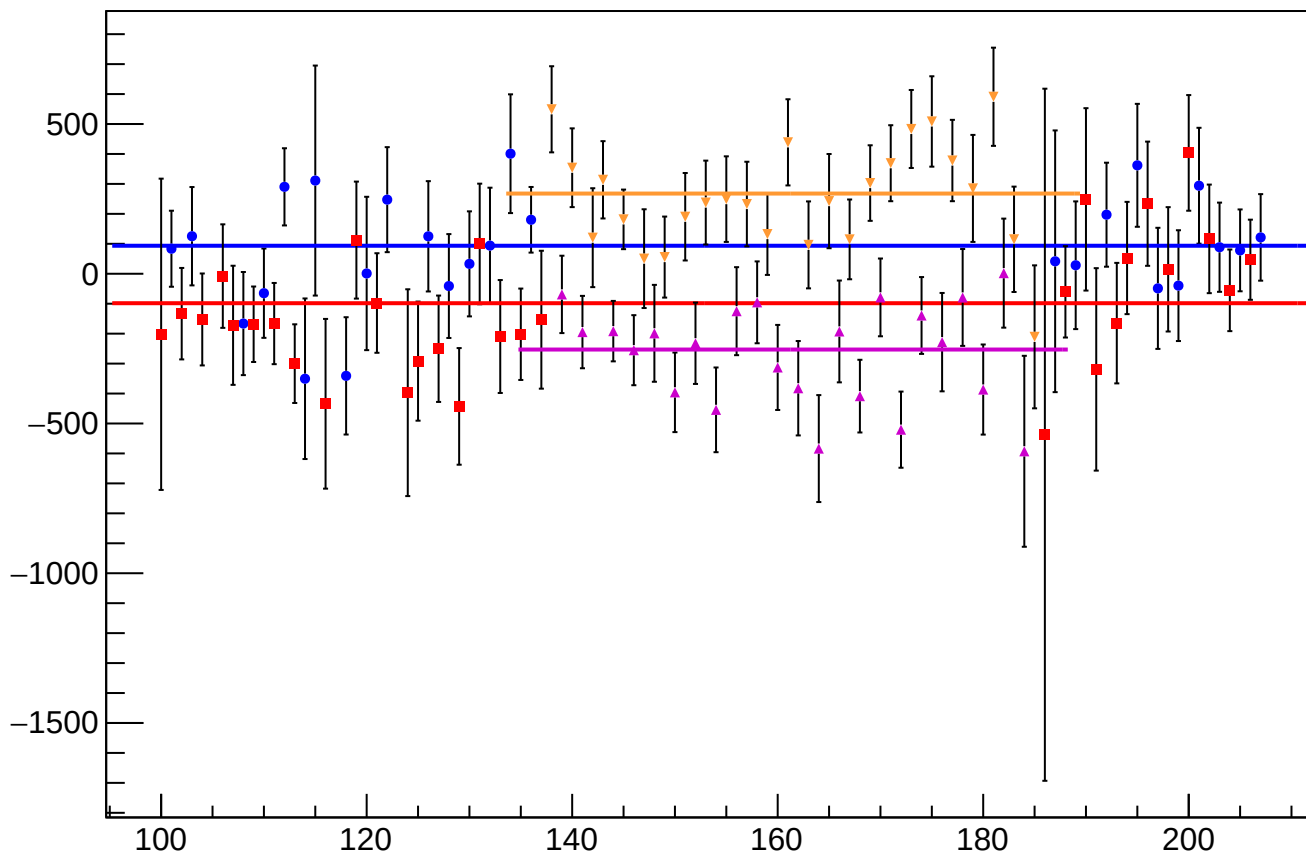
Left In: 918.214+/-0.154     $\chi^2/\text{NDF}$ : 666263.4/22

+ sign 1029.597+/-0.131     $\chi^2/\text{NDF}$ : 6258899.8/50

All: 1032.882+/-0.093     $\chi^2/\text{NDF}$ : 13625232.6/100

- sign 1036.228+/-0.132     $\chi^2/\text{NDF}$ : 7365060.0/53

# eigen\_cor\_asym\_sam\_48\_dd\_mean vs Slug



Right In: 93.514 $\pm$ 33.818  $\chi^2$ /NDF: 22.8/25

Left Out: 267.791 $\pm$ 28.407  $\chi^2$ /NDF:31.0/24

Right Out: -98.347 $\pm$ 32.718  $\chi^2$ /NDF: 28.5/30

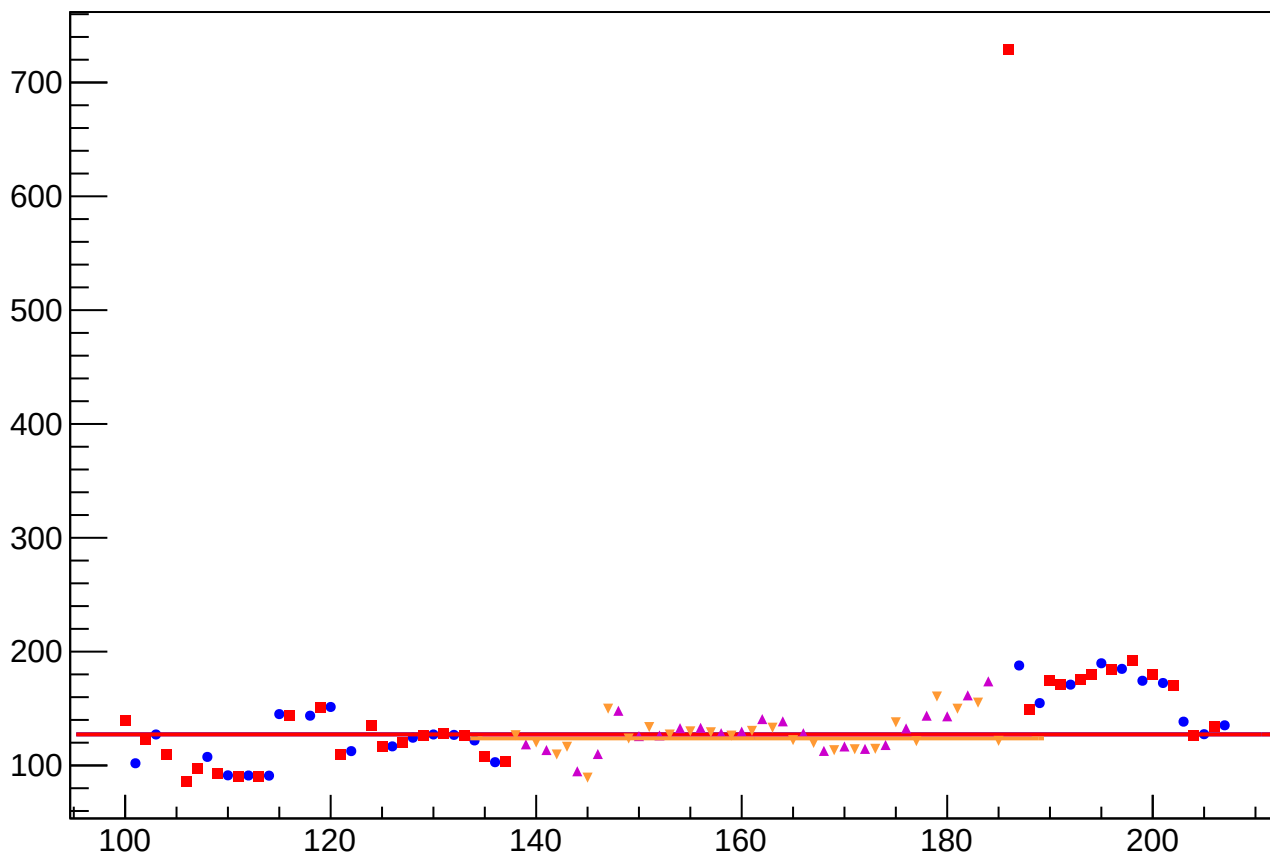
Left In: -253.051 $\pm$ 29.313  $\chi^2$ /NDF:26.2/22

+ sign 195.692 $\pm$ 21.752  $\chi^2$ /NDF: 69.3/50

All: 6.466 $\pm$ 15.409  $\chi^2$ /NDF: 288.3/104

- sign -184.165 $\pm$ 21.832  $\chi^2$ /NDF: 67.1/53

# eigen\_cor\_asym\_sam\_48\_dd\_rms vs Slug



Right In: 127.349+/-0.024     $\chi^2/\text{NDF}$ : 1376134.2/25

Left Out: 123.807+/-0.020     $\chi^2/\text{NDF}$ : 598444.2/24

Right Out: 127.278+/-0.023     $\chi^2/\text{NDF}$ : 2315788.2/30

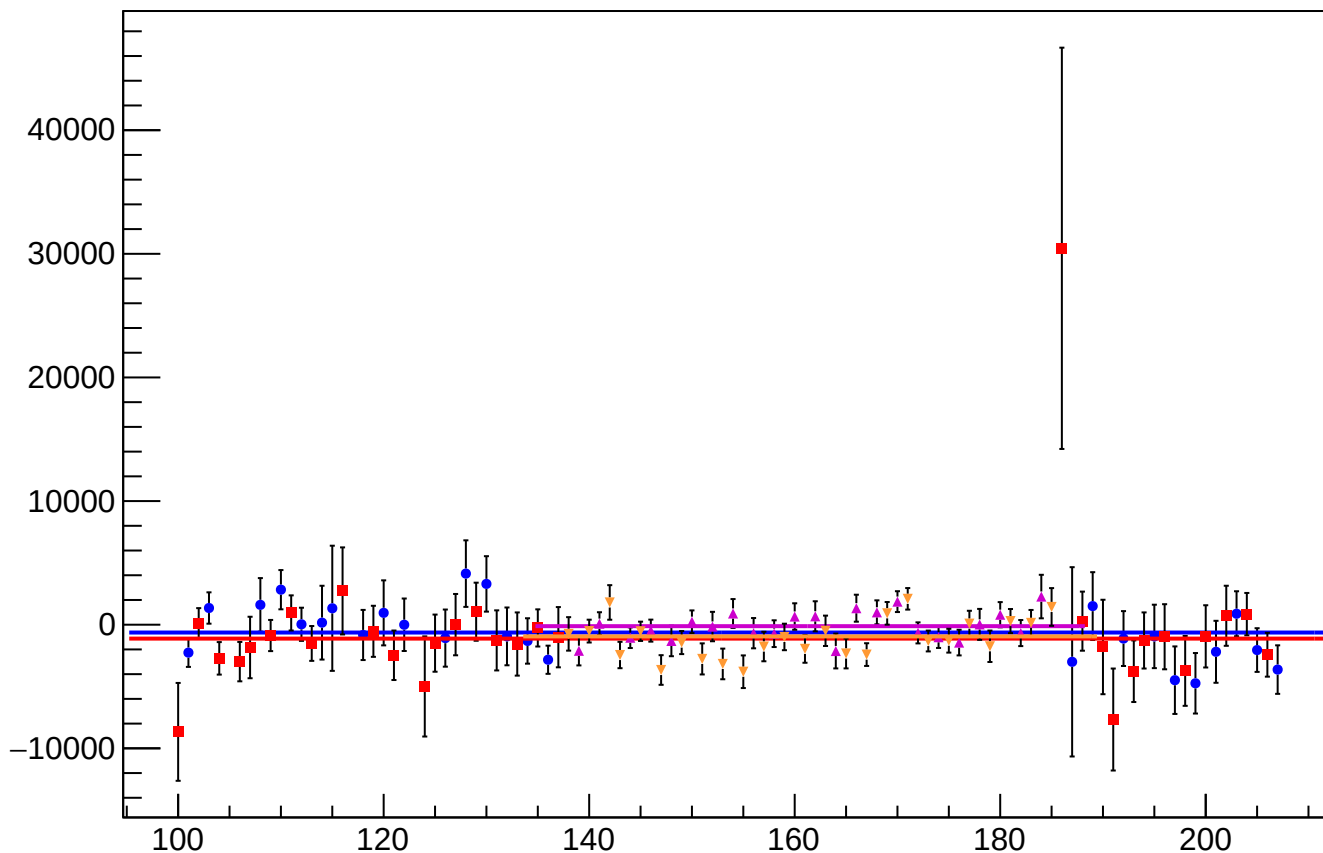
Left In: 124.259+/-0.021     $\chi^2/\text{NDF}$ : 557214.9/22

+ sign 125.272+/-0.015     $\chi^2/\text{NDF}$ : 1987436.2/50

All: 125.437+/-0.011     $\chi^2/\text{NDF}$ : 4870118.2/104

- sign 125.603+/-0.015     $\chi^2/\text{NDF}$ : 2882451.4/53

asym\_sam\_48\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In: -633.476+/-380.131  $\chi^2/\text{NDF}$ : 31.0/25

Left Out: -947.709+/-211.794  $\chi^2/\text{NDF}$ : 50.3/24

Right Out: -1124.379+/-365.520  $\chi^2/\text{NDF}$ : 25.0/30

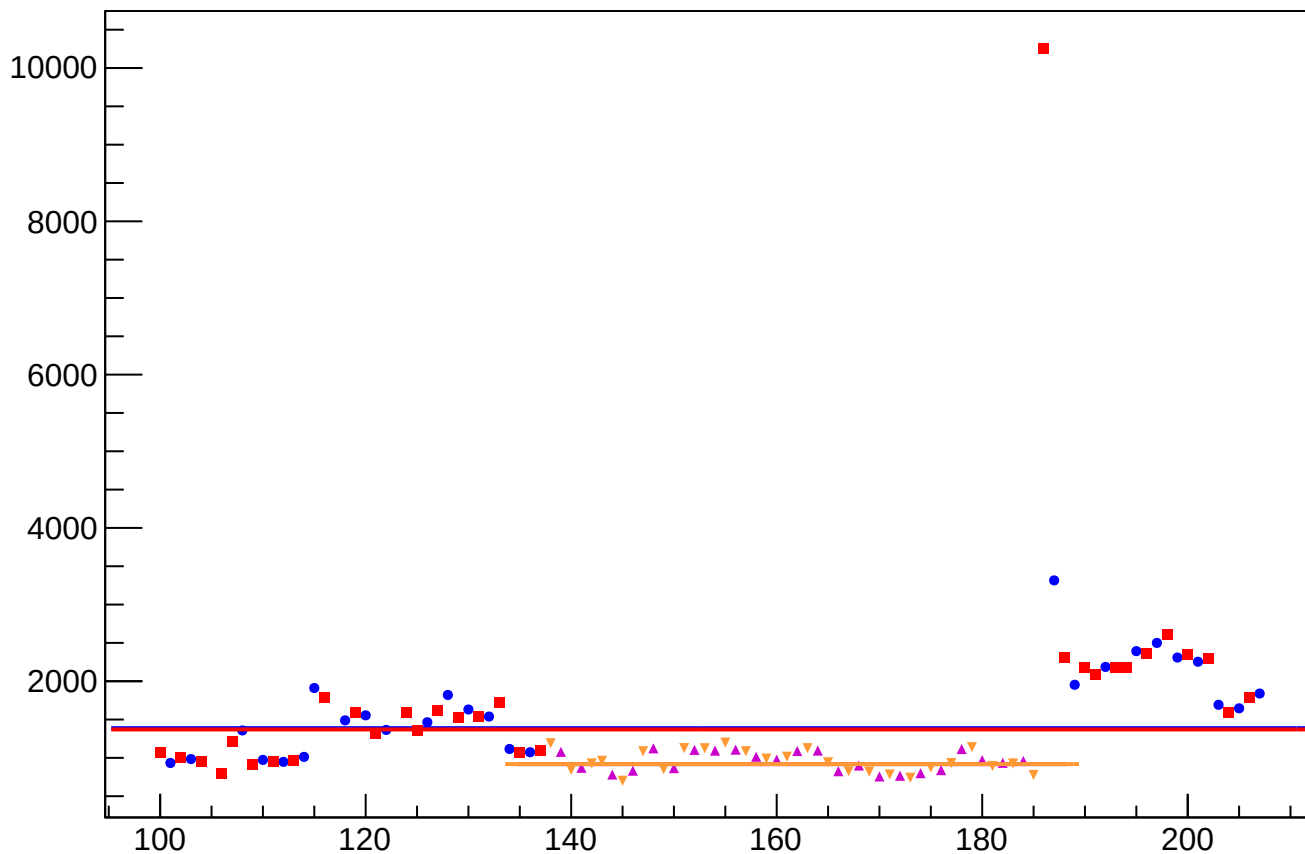
Left In: -118.435+/-217.165  $\chi^2/\text{NDF}$ : 24.4/22

+ sign -873.270+/-185.015  $\chi^2/\text{NDF}$ : 81.8/50

All: -629.308+/-131.417  $\chi^2/\text{NDF}$ : 140.3/104

- sign -380.881+/-186.700  $\chi^2/\text{NDF}$ : 55.0/53

asym\_sam\_48\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 1387.475+/-0.269  $\chi^2/\text{NDF}$ : 3048082.6/25

Left Out: 918.501+/-0.150  $\chi^2/\text{NDF}$ : 887819.5/24

Right Out: 1370.554+/-0.258  $\chi^2/\text{NDF}$ : 4434961.6/30

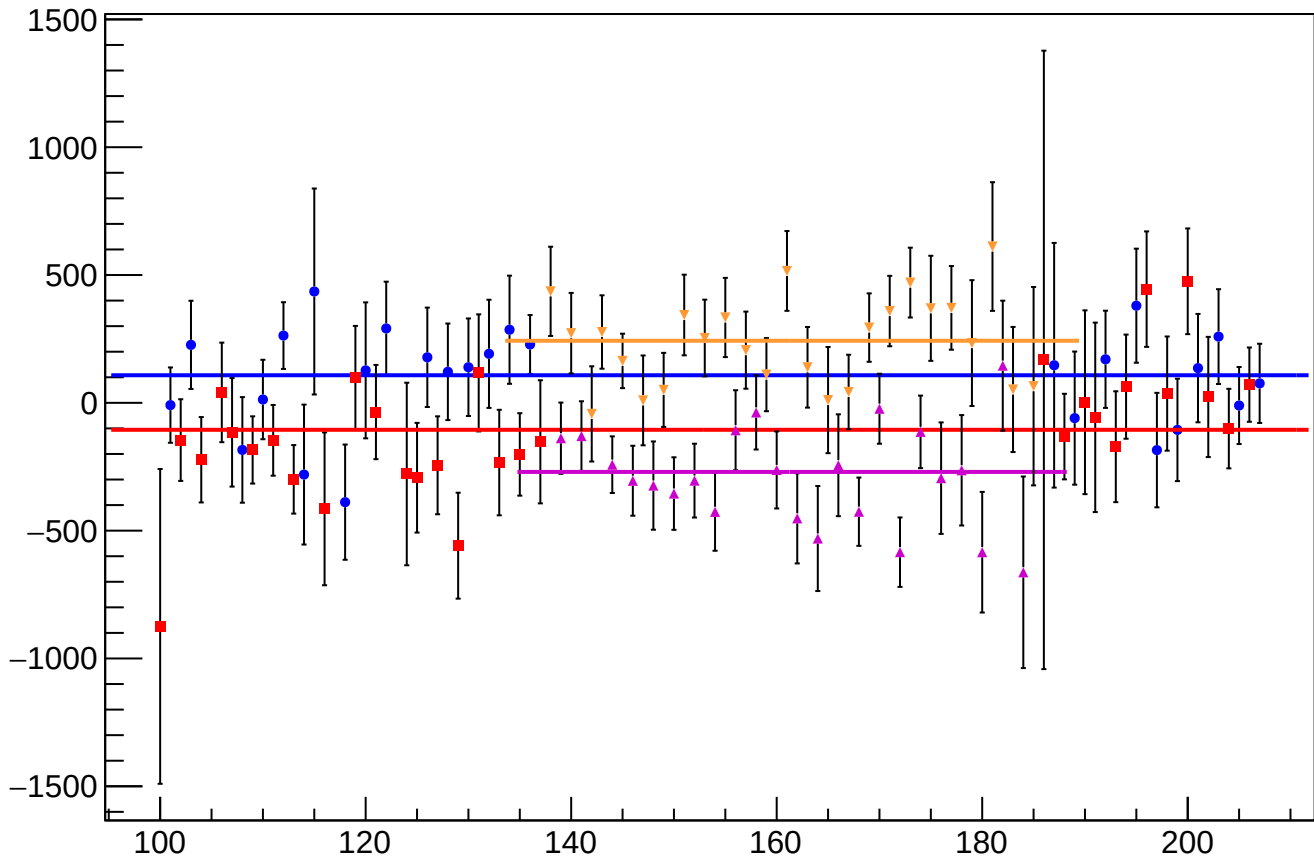
Left In: 918.214+/-0.154  $\chi^2/\text{NDF}$ : 666263.4/22

+ sign 1029.597+/-0.131  $\chi^2/\text{NDF}$ : 6258899.8/50

All: 1032.882+/-0.093  $\chi^2/\text{NDF}$ : 13625232.6/100

- sign 1036.228+/-0.132  $\chi^2/\text{NDF}$ : 7365060.0/53

# dit\_asym\_sam\_48\_dd\_mean vs Slug



Right In: 107.946 $\pm$ 36.826  $\chi^2/\text{NDF}$ : 21.8/25

Left Out: 242.890 $\pm$ 32.138  $\chi^2/\text{NDF}$ : 23.7/24

Right Out: -105.485 $\pm$ 35.314  $\chi^2/\text{NDF}$ : 32.4/30

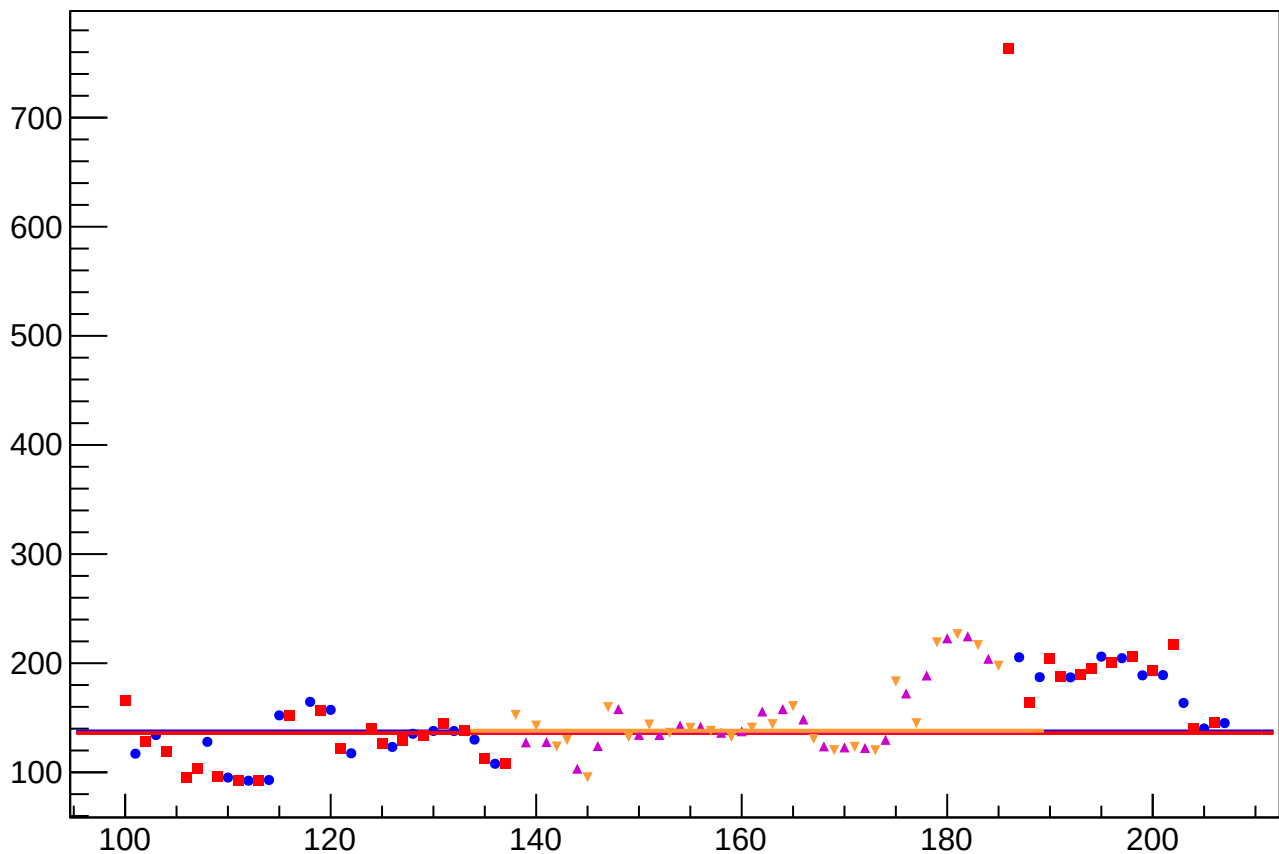
Left In: -270.243 $\pm$ 32.893  $\chi^2/\text{NDF}$ : 26.7/22

+ sign 184.547 $\pm$ 24.214  $\chi^2/\text{NDF}$ : 53.0/50

All: -5.711 $\pm$ 17.071  $\chi^2/\text{NDF}$ : 246.6/104

- sign -193.705 $\pm$ 24.069  $\chi^2/\text{NDF}$ : 70.8/53

dit\_asym\_sam\_48\_dd\_rms vs Slug



Right In: 137.418 $\pm$ 0.026  $\chi^2$ /NDF: 1609375.1/25

Left Out: 138.127 $\pm$ 0.023  $\chi^2$ /NDF:1338308.5/24

Right Out: 136.075 $\pm$ 0.025  $\chi^2$ /NDF: 2629143.7/30

Left In: 137.491 $\pm$ 0.023  $\chi^2$ /NDF:1109333.5/22

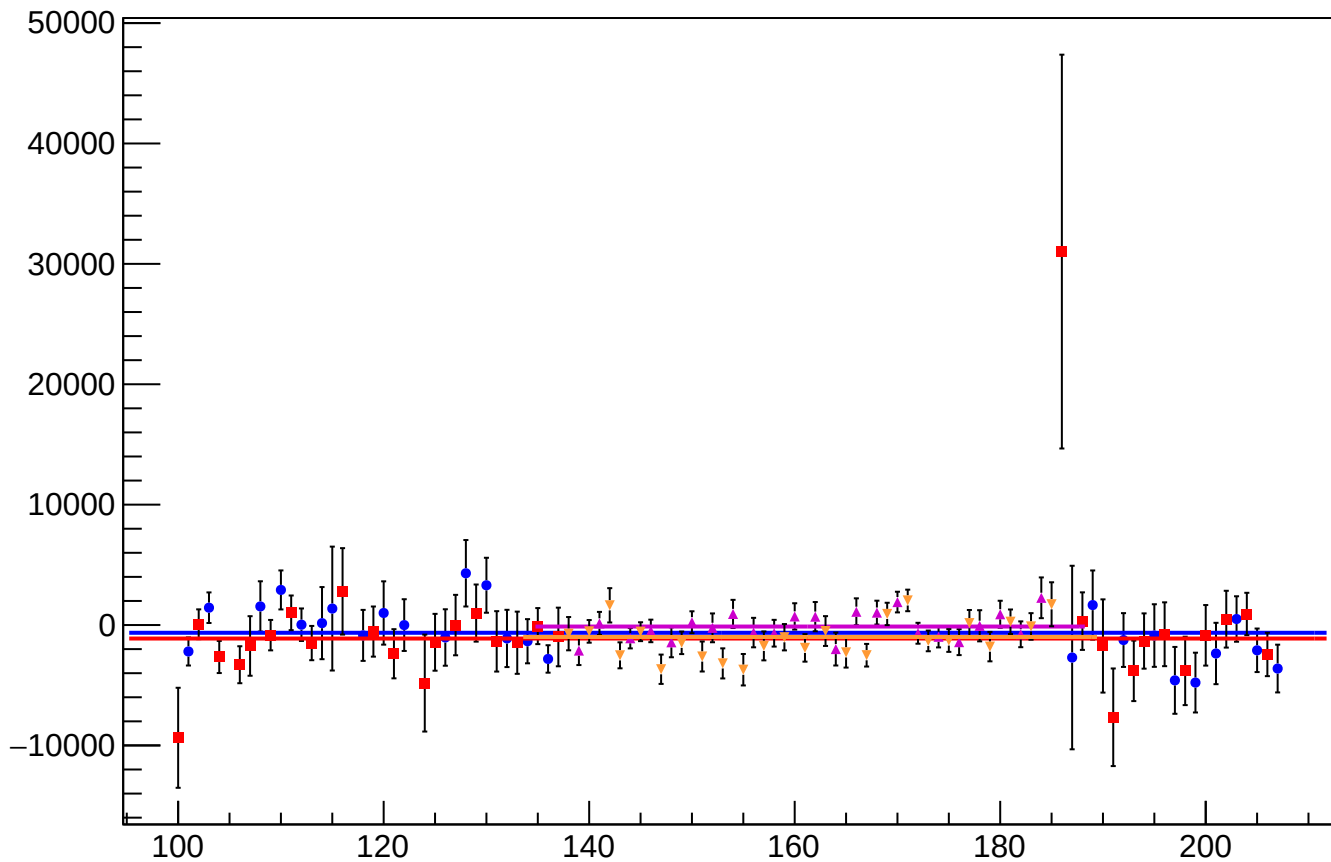
+ sign 137.821 $\pm$ 0.017  $\chi^2$ /NDF: 2948105.1/50

All: 137.324 $\pm$ 0.012  $\chi^2$ /NDF: 6689975.4/104

- sign 136.833 $\pm$ 0.017  $\chi^2$ /NDF: 3740198.8/53



# asym\_sam\_48\_dd\_dit\_correction\_mean vs Slug



Right In: -643.205+/-384.313  $\chi^2/\text{NDF}$ : 30.7/25

Left Out: -993.237+/-215.652  $\chi^2/\text{NDF}$ : 46.9/24

Right Out: -1121.397+/-367.594  $\chi^2/\text{NDF}$ : 25.9/30

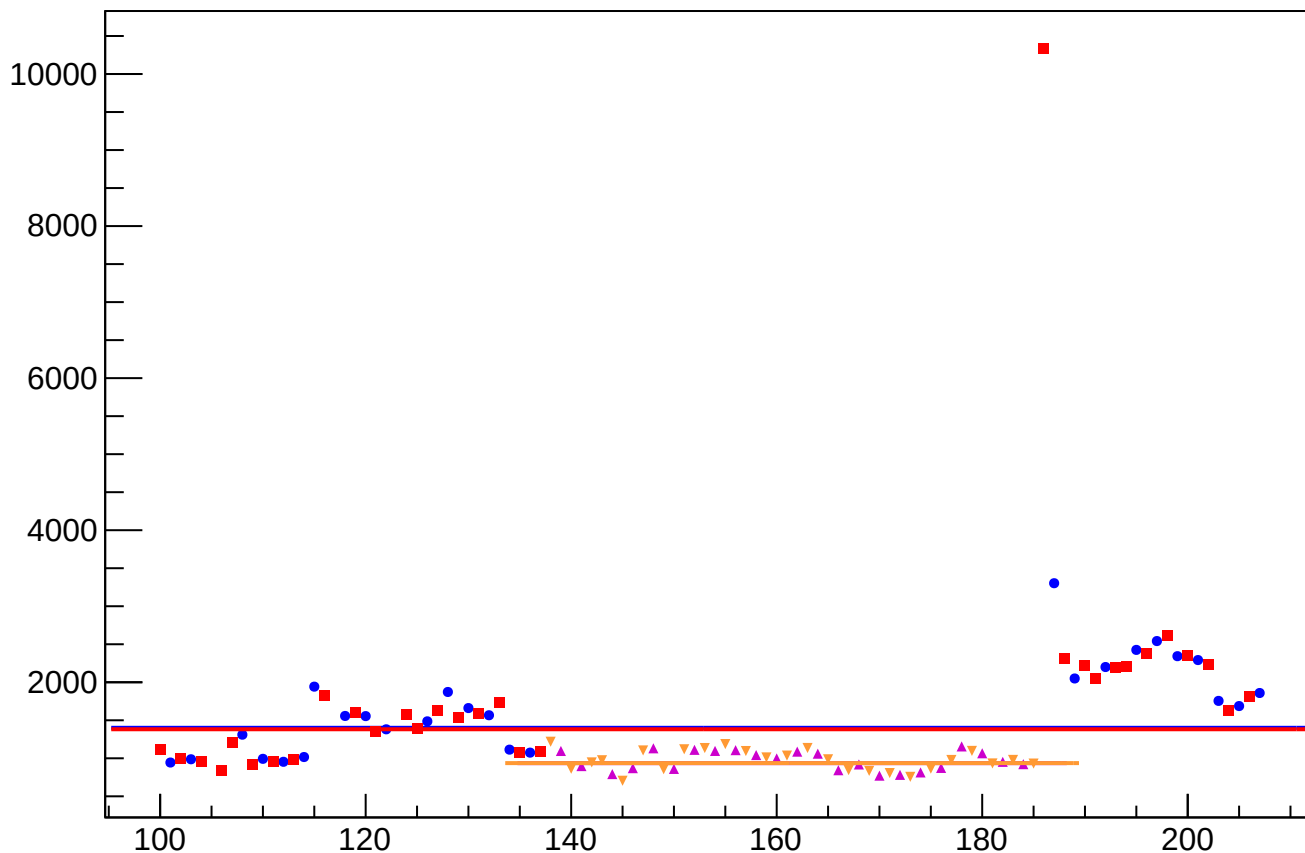
Left In: -124.857+/-221.367  $\chi^2/\text{NDF}$ : 23.9/22

+ sign -909.415+/-188.067  $\chi^2/\text{NDF}$ : 78.3/50

All: -651.901+/-133.534  $\chi^2/\text{NDF}$ : 137.2/104

- sign -390.072+/-189.636  $\chi^2/\text{NDF}$ : 55.1/53

# asym\_sam\_48\_dd\_dit\_correction\_rms vs Slug



Right In: 1401.057+/-0.272  $\chi^2/\text{NDF}$ : 3142309.4/25

Left Out: 936.743+/-0.152  $\chi^2/\text{NDF}$ : 832449.3/24

Right Out: 1381.954+/-0.260  $\chi^2/\text{NDF}$ : 4404551.1/30

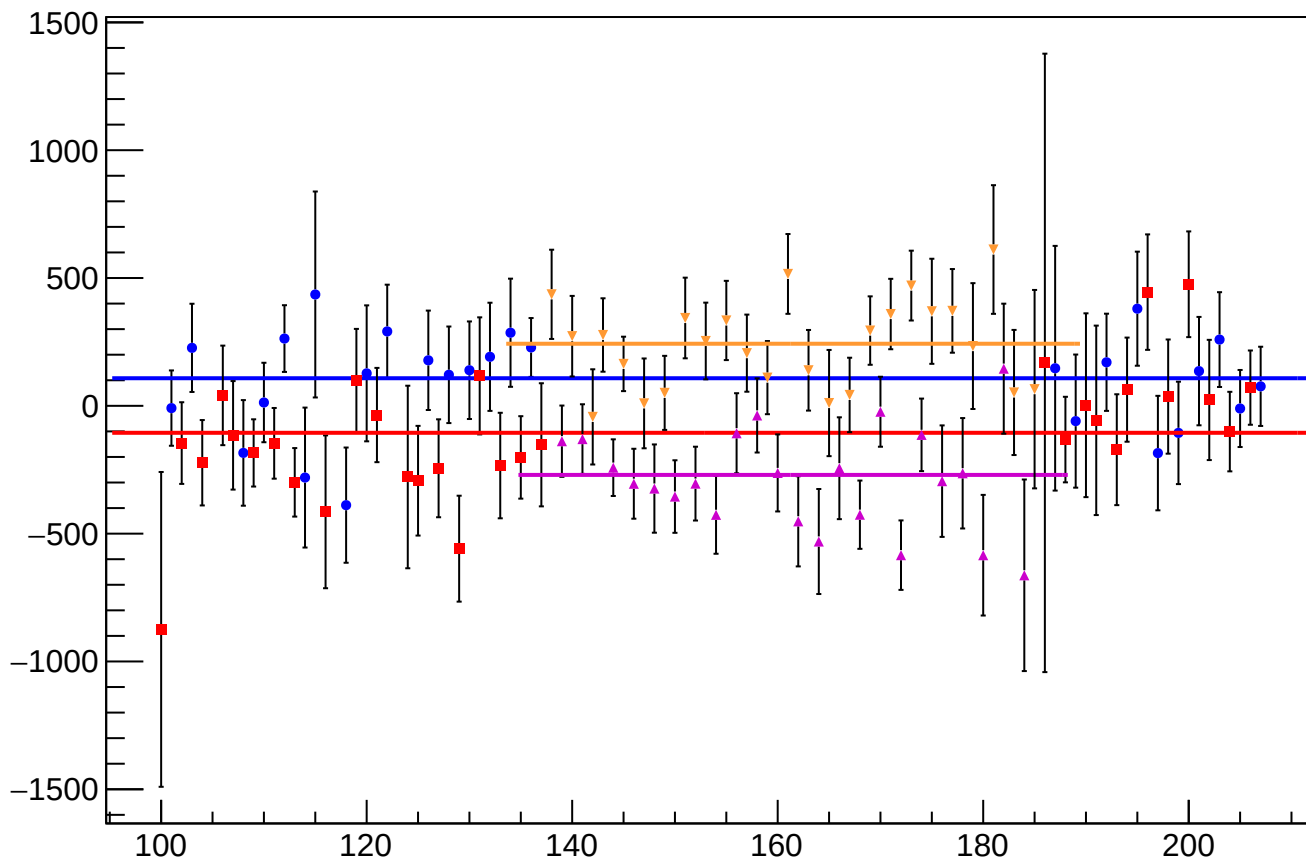
Left In: 936.380+/-0.157  $\chi^2/\text{NDF}$ : 642749.3/22

+ sign 1047.933+/-0.133  $\chi^2/\text{NDF}$ : 6194983.7/50

All: 1051.419+/-0.094  $\chi^2/\text{NDF}$ : 13400163.8/100

- sign 1054.964+/-0.134  $\chi^2/\text{NDF}$ : 7203794.1/53

# eigen\_dit\_asym\_sam\_48\_dd\_mean vs Slug



Right In:  $107.948 \pm 36.826$   $\chi^2/\text{NDF}: 21.8/25$

Left Out:  $242.892 \pm 32.138$   $\chi^2/\text{NDF}: 23.7/24$

Right Out:  $-105.485 \pm 35.314$   $\chi^2/\text{NDF}: 32.4/30$

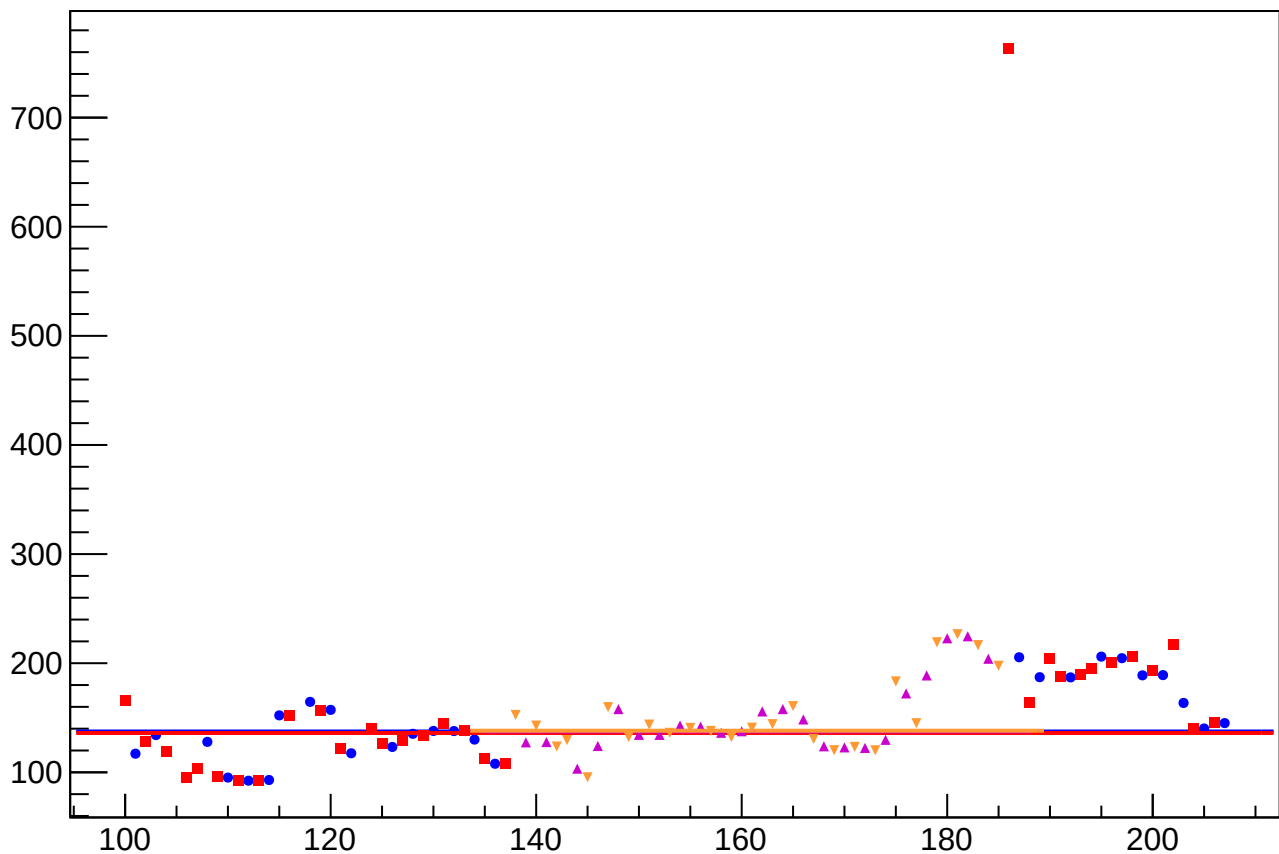
Left In:  $-270.244 \pm 32.893$   $\chi^2/\text{NDF}: 26.7/22$

+ sign  $184.549 \pm 24.214$   $\chi^2/\text{NDF}: 53.0/50$

All:  $-5.711 \pm 17.071$   $\chi^2/\text{NDF}: 246.6/104$

- sign  $-193.706 \pm 24.069$   $\chi^2/\text{NDF}: 70.8/53$

# eigen\_dit\_asym\_sam\_48\_dd\_rms vs Slug



Right In: 137.418 $\pm$ 0.026  $\chi^2$ /NDF: 1609362.7/25

Left Out: 138.127 $\pm$ 0.023  $\chi^2$ /NDF:1338311.7/24

Right Out: 136.075 $\pm$ 0.025  $\chi^2$ /NDF: 2629151.0/30

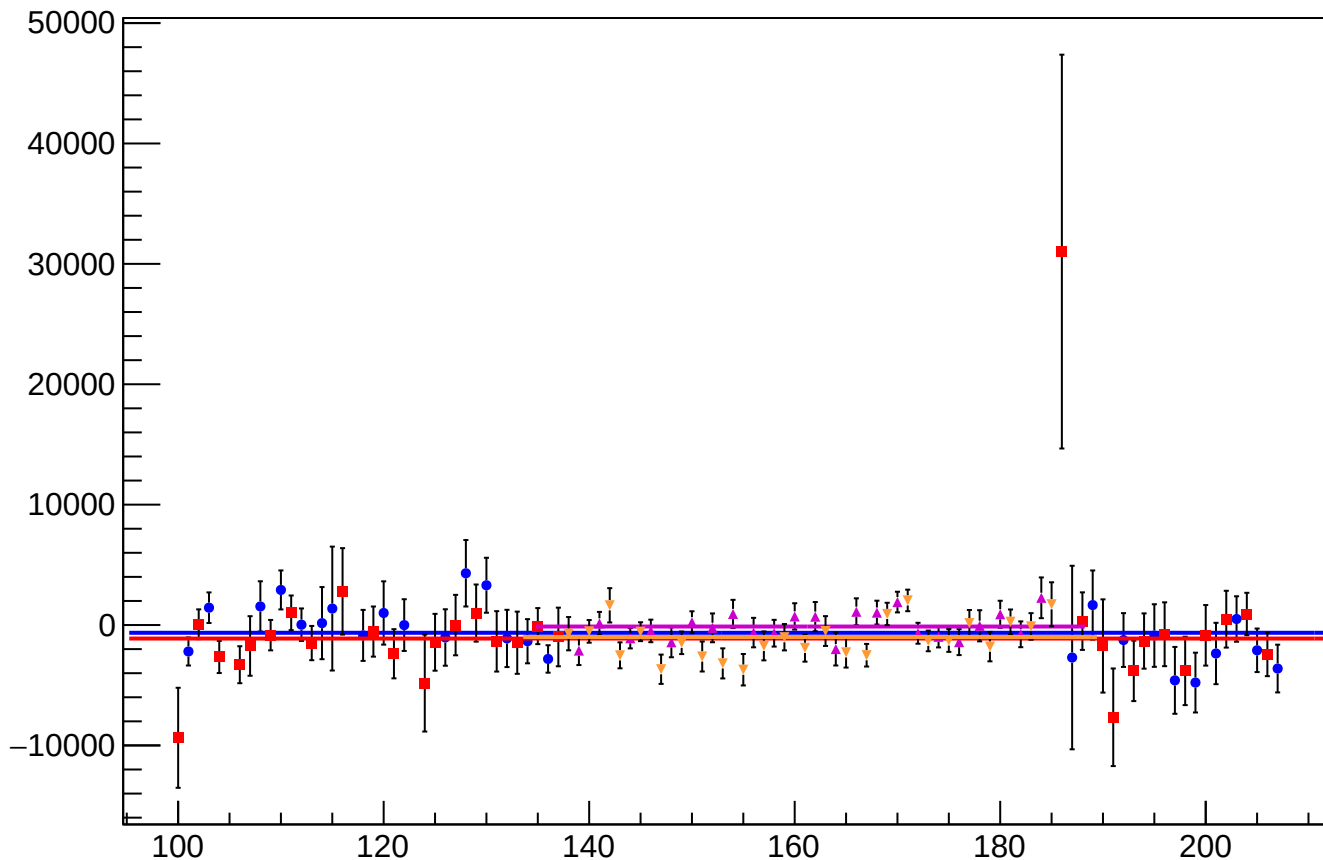
Left In: 137.491 $\pm$ 0.023  $\chi^2$ /NDF:1109319.8/22

+ sign 137.821 $\pm$ 0.017  $\chi^2$ /NDF: 2948096.0/50

All: 137.324 $\pm$ 0.012  $\chi^2$ /NDF: 6689959.8/104

- sign 136.834 $\pm$ 0.017  $\chi^2$ /NDF: 3740192.3/53

asym\_sam\_48\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In: -643.205+/-384.313  $\chi^2/\text{NDF}$ : 30.7/25

Left Out: -993.235+/-215.652  $\chi^2/\text{NDF}$ : 46.9/24

Right Out: -1121.397+/-367.594  $\chi^2/\text{NDF}$ : 25.9/30

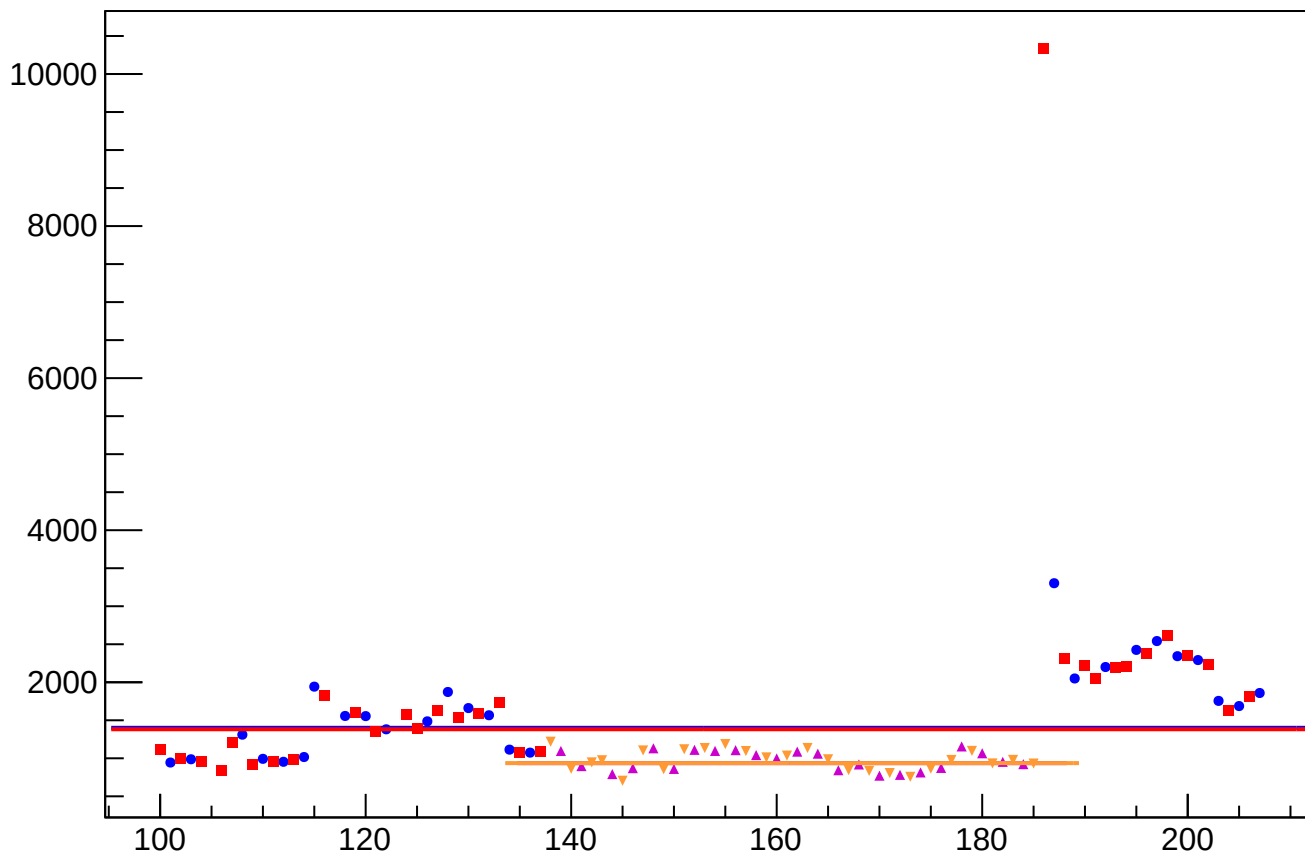
Left In: -124.856+/-221.366  $\chi^2/\text{NDF}$ : 23.9/22

+ sign -909.413+/-188.066  $\chi^2/\text{NDF}$ : 78.3/50

All: -651.899+/-133.534  $\chi^2/\text{NDF}$ : 137.2/104

- sign -390.071+/-189.635  $\chi^2/\text{NDF}$ : 55.1/53

asym\_sam\_48\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 1401.056+/-0.272  $\chi^2/\text{NDF}$ : 3142303.2/25

Left Out: 936.742+/-0.152  $\chi^2/\text{NDF}$ : 832452.0/24

Right Out: 1381.954+/-0.260  $\chi^2/\text{NDF}$ : 4404543.6/30

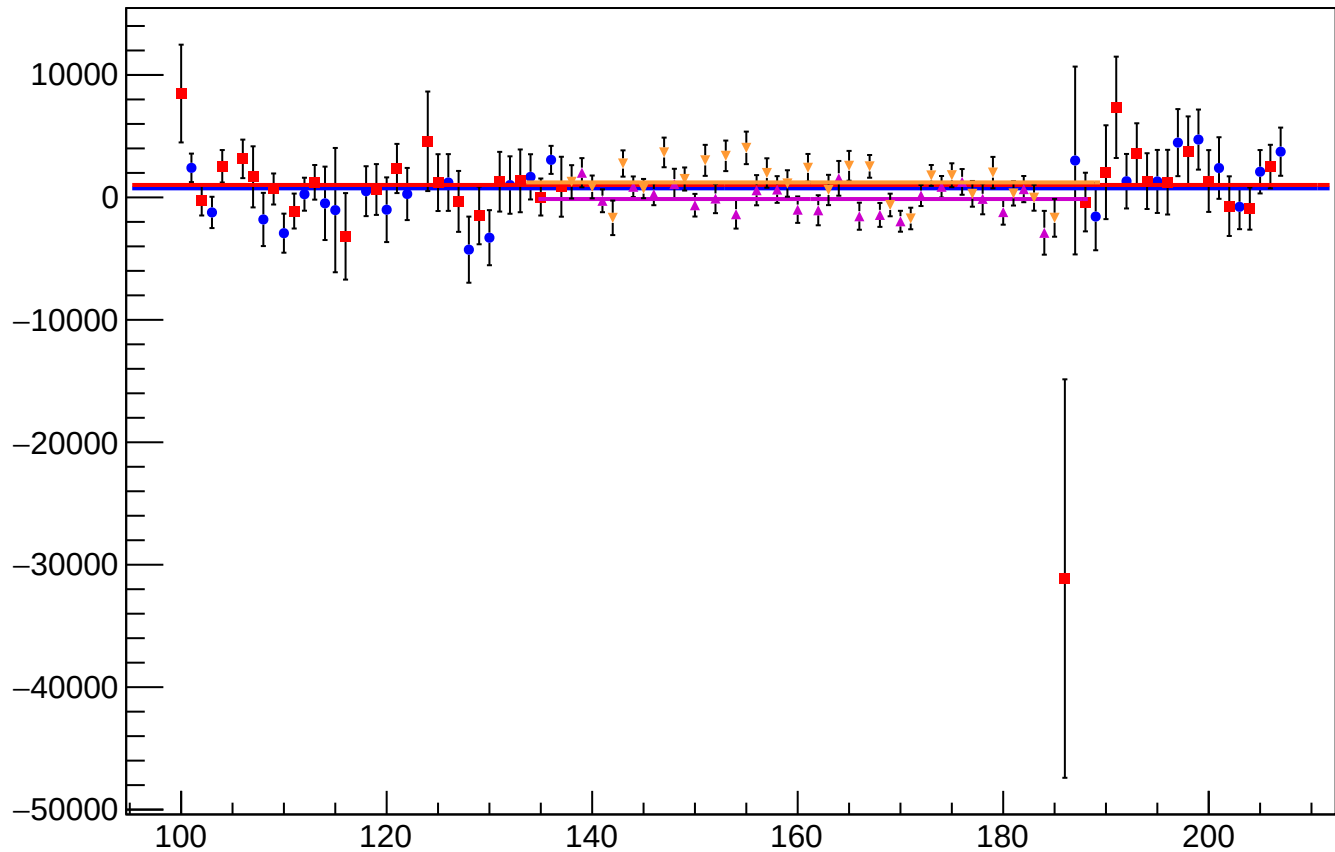
Left In: 936.379+/-0.157  $\chi^2/\text{NDF}$ : 642748.0/22

+ sign 1047.932+/-0.133  $\chi^2/\text{NDF}$ : 6194989.6/50

All: 1051.418+/-0.094  $\chi^2/\text{NDF}$ : 13400167.6/100

- sign 1054.963+/-0.134  $\chi^2/\text{NDF}$ : 7203791.9/53

# asym\_sam\_48\_dd\_mean vs Slug



Right In: 738.356 $\pm$ 381.937  $\chi^2$ /NDF: 32.5/25

Left Out: 1225.521 $\pm$ 213.843  $\chi^2$ /NDF: 48.5/24

Right Out: 1016.663 $\pm$ 366.853  $\chi^2$ /NDF: 25.7/30

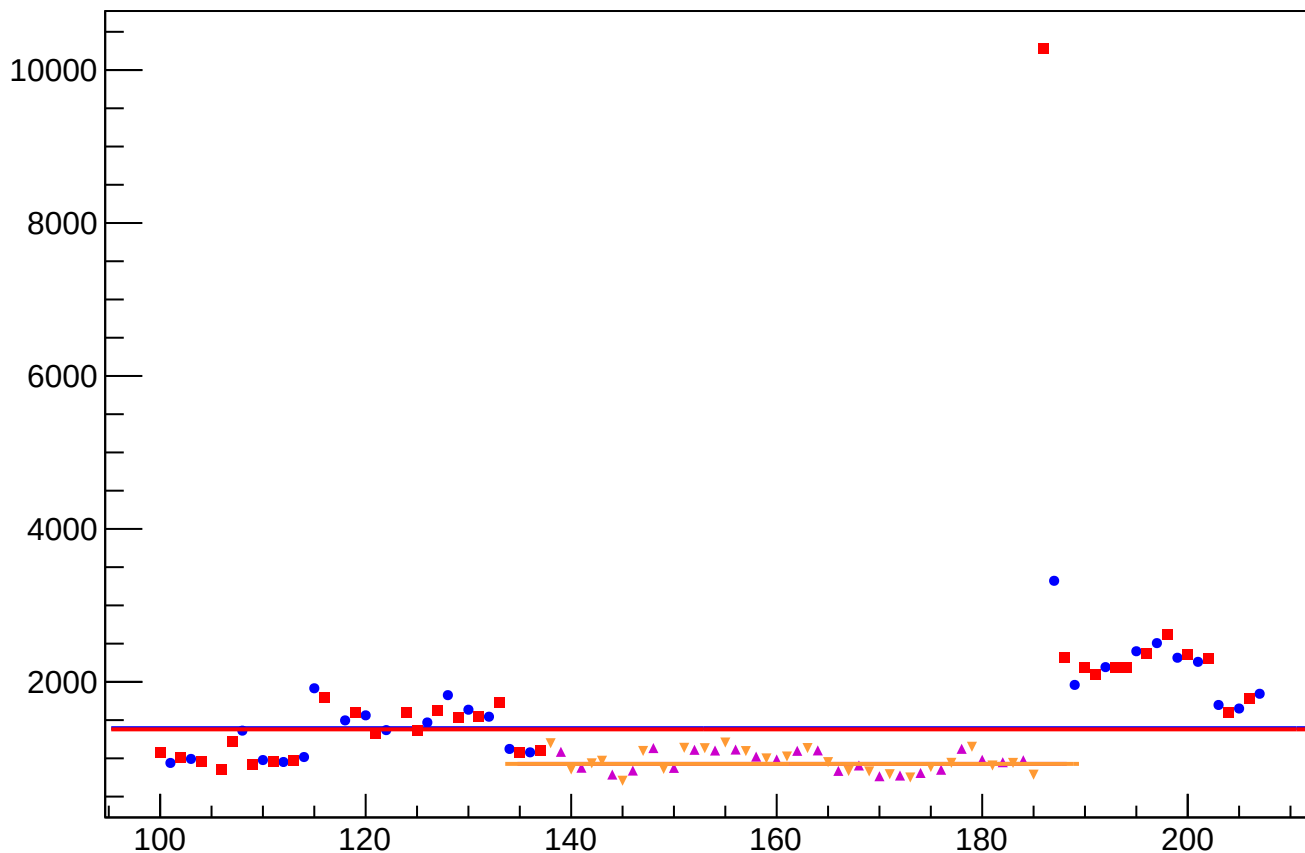
Left In: -132.834 $\pm$ 219.278  $\chi^2$ /NDF: 25.8/22

+ sign 1109.253 $\pm$ 186.588  $\chi^2$ /NDF: 82.2/50

All: 643.586 $\pm$ 132.510  $\chi^2$ /NDF: 153.6/104

- sign 169.749 $\pm$ 188.218  $\chi^2$ /NDF: 58.8/53

# asym\_sam\_48\_dd\_rms vs Slug



Right In: 1394.657+/-0.270  $\chi^2/\text{NDF}$ : 3025861.5/25

Left Out: 927.610+/-0.151  $\chi^2/\text{NDF}$ : 875127.3/24

Right Out: 1379.096+/-0.259  $\chi^2/\text{NDF}$ : 4376314.8/30

Left In: 927.321+/-0.155  $\chi^2/\text{NDF}$ : 656539.8/22

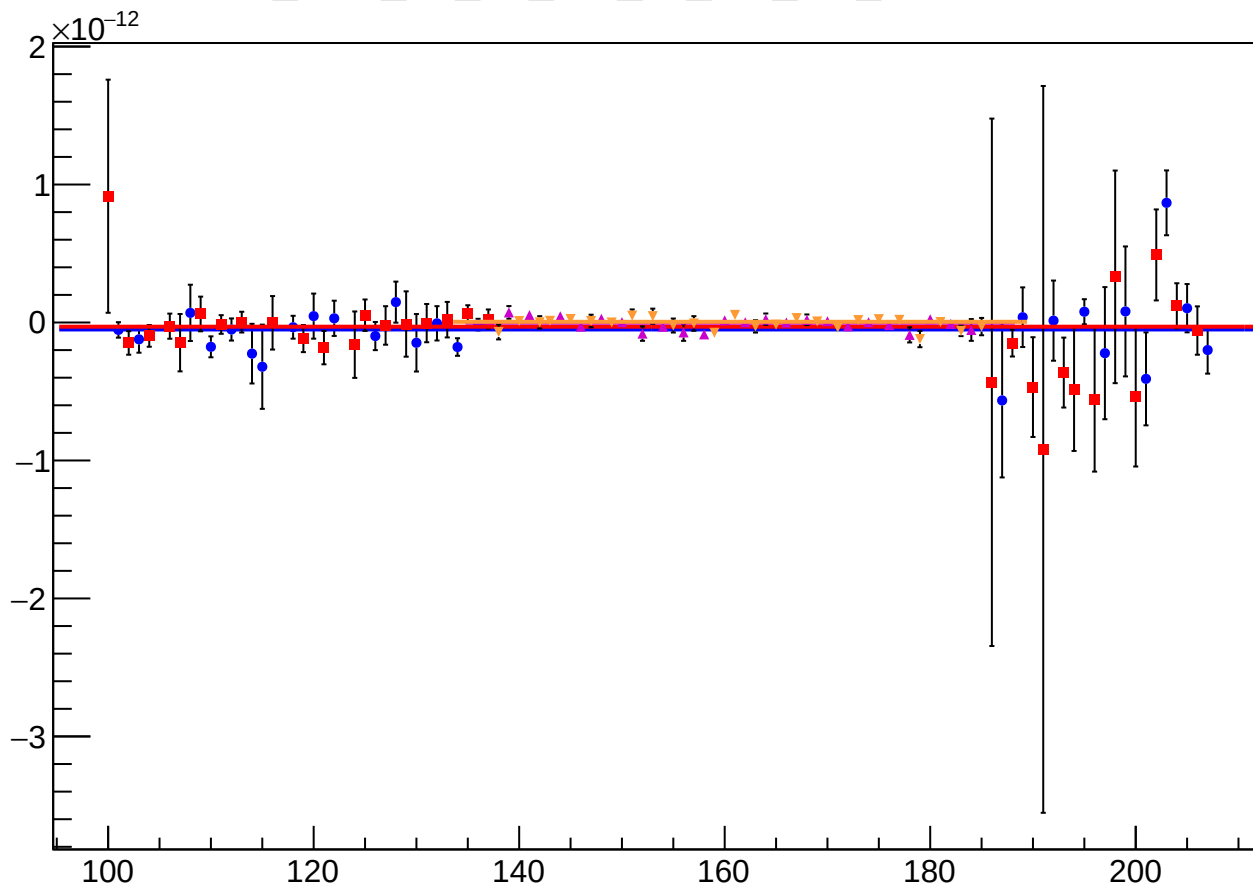
+ sign 1039.076+/-0.132  $\chi^2/\text{NDF}$ : 6177900.3/50

All: 1042.628+/-0.094  $\chi^2/\text{NDF}$ : 13446929.1/100

- sign 1046.242+/-0.133  $\chi^2/\text{NDF}$ : 7267566.8/53



asym\_sam\_48\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 34.1/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 25.4/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 23.1/30

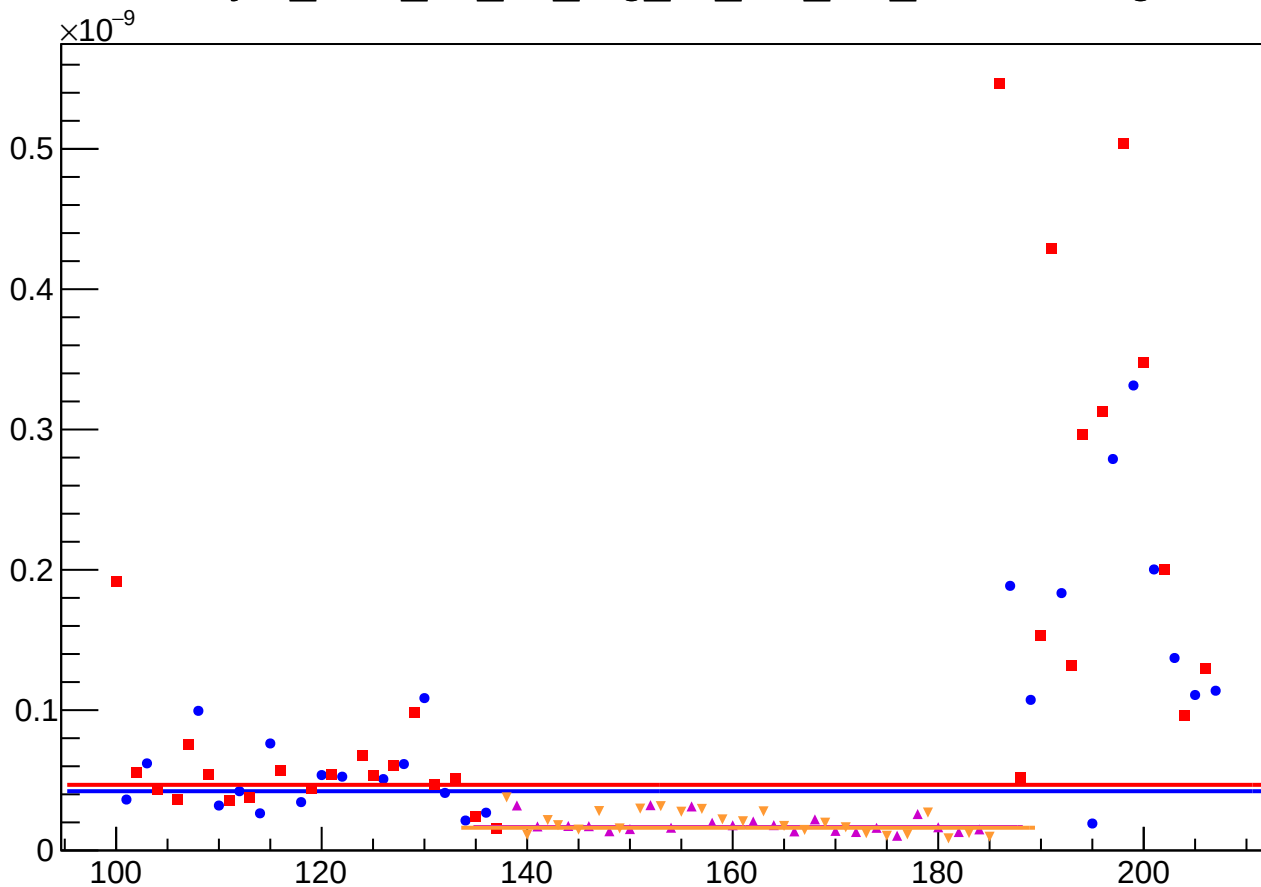
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 27.7/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 66.1/50

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 118.7/104

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 52.5/53

asym\_sam\_48\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4695661.4/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2009728.9/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5276639.8/30

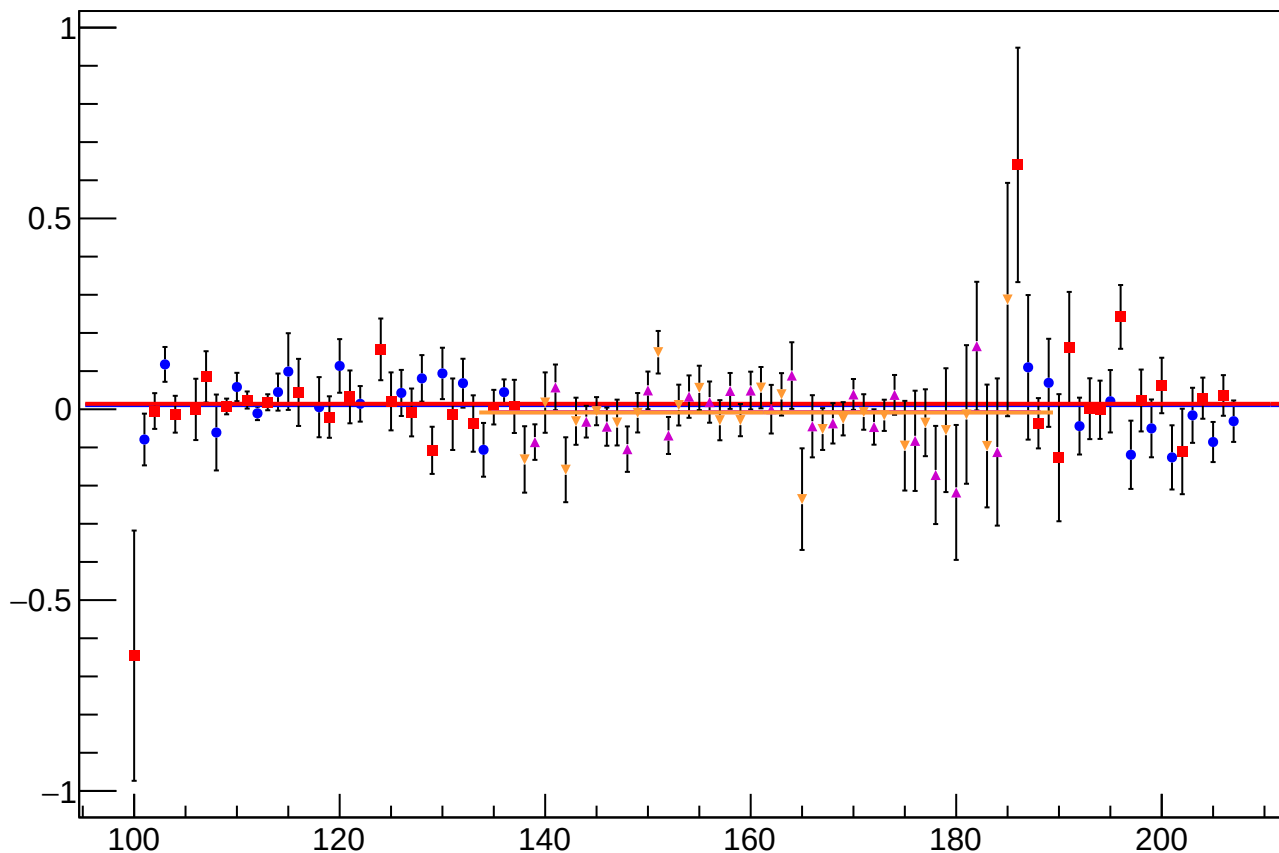
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 928356.7/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9619195.6/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 19300561.6/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9663790.5/53

# asym\_sam\_48\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.011 \pm 0.010$   $\chi^2/\text{NDF}$ : 32.6/25

Left Out:  $-0.008 \pm 0.012$   $\chi^2/\text{NDF}$ : 23.2/24

Right Out:  $0.014 \pm 0.009$   $\chi^2/\text{NDF}$ : 30.3/30

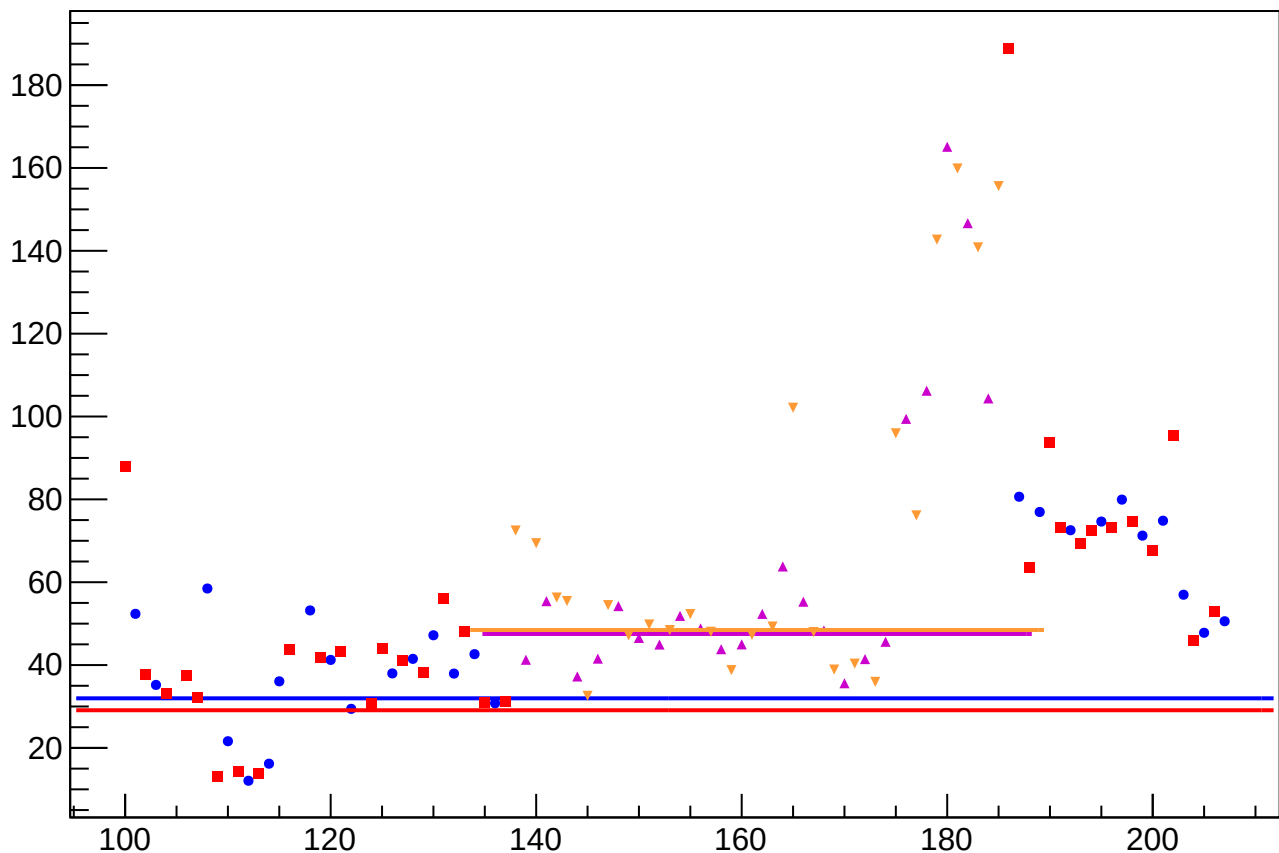
Left In:  $-0.007 \pm 0.012$   $\chi^2/\text{NDF}$ : 23.2/22

+ sign  $0.003 \pm 0.008$   $\chi^2/\text{NDF}$ : 57.3/50

All:  $0.005 \pm 0.005$   $\chi^2/\text{NDF}$ : 113.1/104

- sign  $0.007 \pm 0.007$   $\chi^2/\text{NDF}$ : 55.6/53

# asym\_sam\_48\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 31.972 $\pm$ 0.007  $\chi^2$ /NDF: 7507884.4/25

Left Out: 48.471 $\pm$ 0.008  $\chi^2$ /NDF:4373812.0/24

Right Out: 29.093 $\pm$ 0.006  $\chi^2$ /NDF: 9802989.5/30

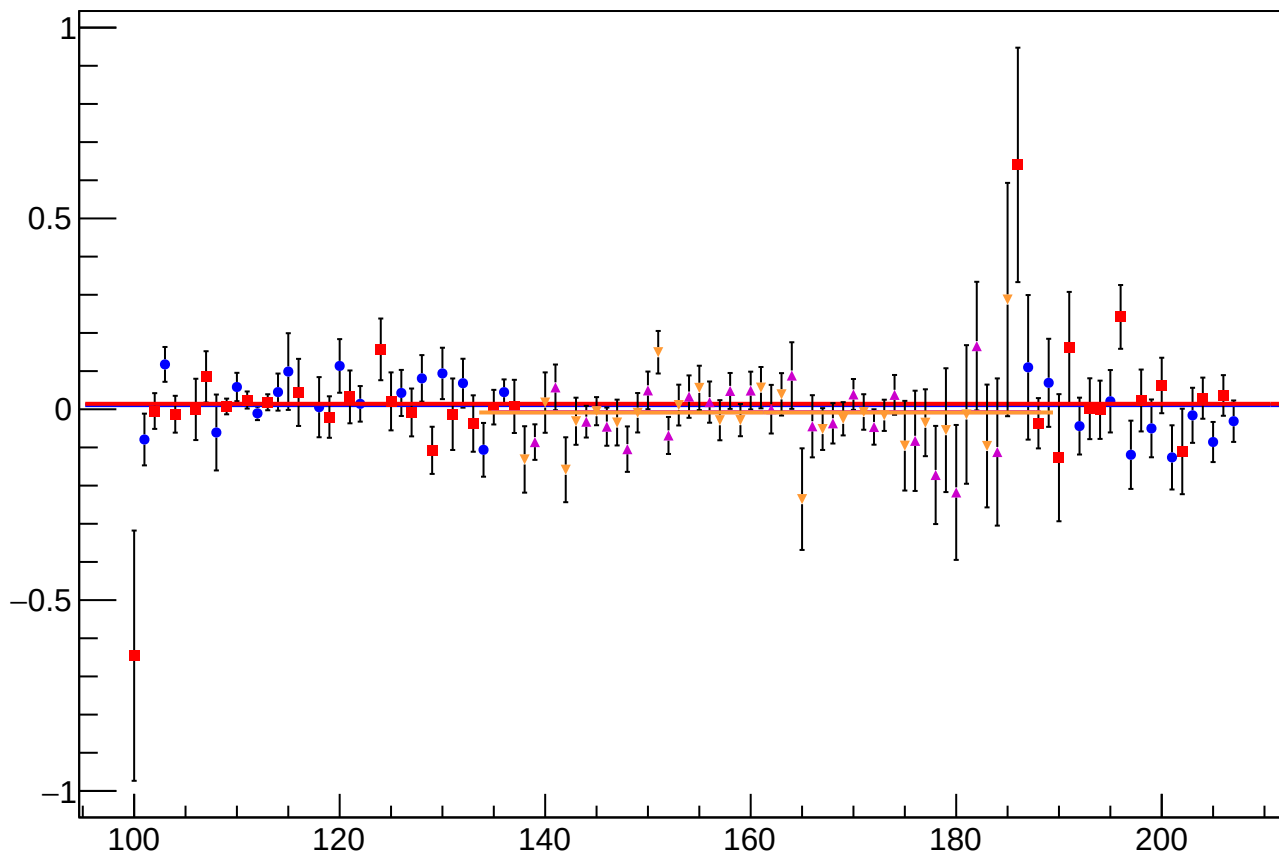
Left In: 47.505 $\pm$ 0.009  $\chi^2$ /NDF:3075161.5/22

+ sign 38.758 $\pm$ 0.005  $\chi^2$ /NDF: 14104941.2/50

All: 37.132 $\pm$ 0.004  $\chi^2$ /NDF: 30151290.3/104

- sign 35.707 $\pm$ 0.005  $\chi^2$ /NDF: 15879114.1/53

asym\_sam\_48\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.011 \pm 0.010$   $\chi^2/\text{NDF}$ : 32.6/25

Left Out:  $-0.008 \pm 0.012$   $\chi^2/\text{NDF}$ : 23.2/24

Right Out:  $0.014 \pm 0.009$   $\chi^2/\text{NDF}$ : 30.3/30

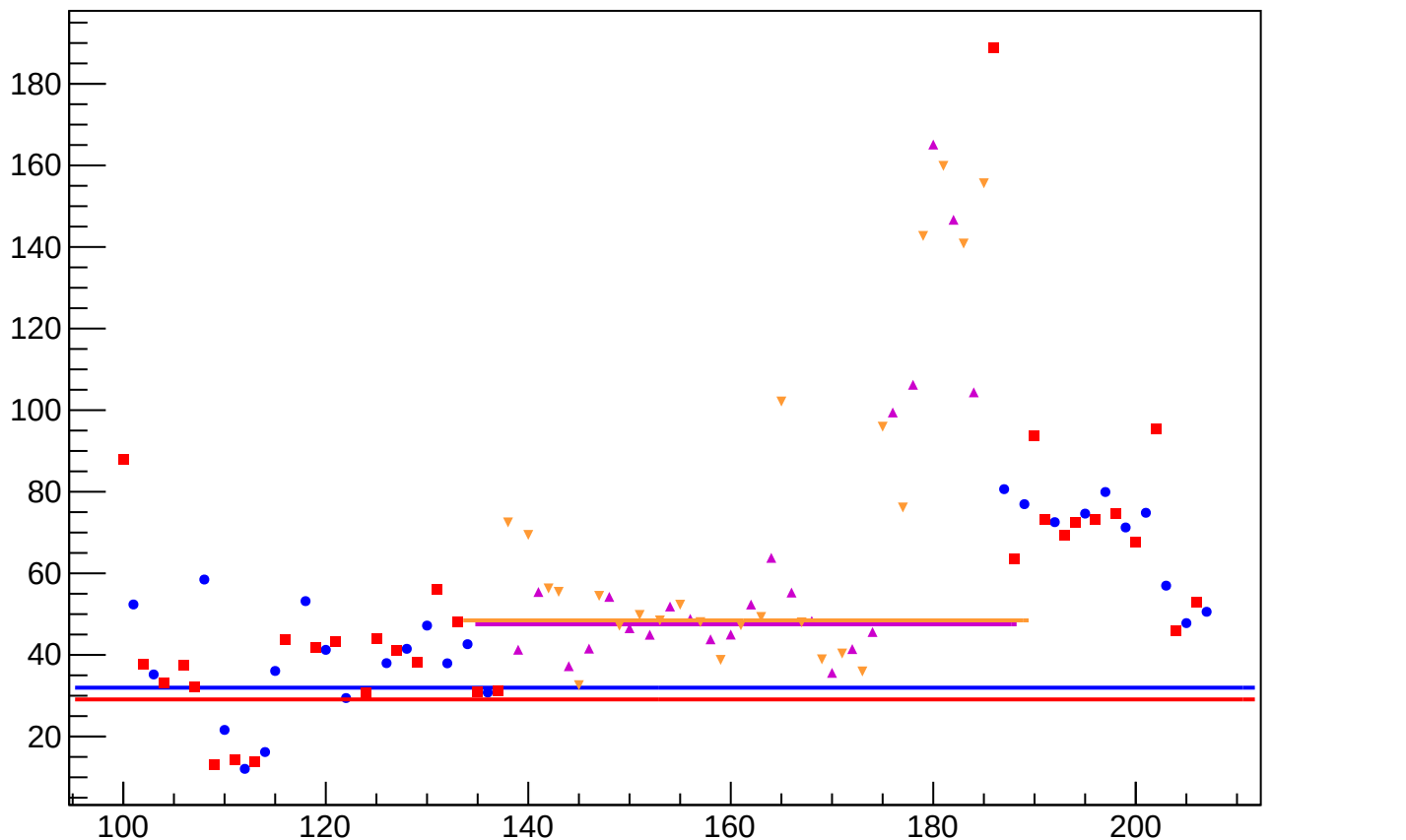
Left In:  $-0.007 \pm 0.012$   $\chi^2/\text{NDF}$ : 23.2/22

+ sign  $0.003 \pm 0.008$   $\chi^2/\text{NDF}$ : 57.3/50

All:  $0.005 \pm 0.005$   $\chi^2/\text{NDF}$ : 113.1/104

- sign  $0.007 \pm 0.007$   $\chi^2/\text{NDF}$ : 55.6/53

asym\_sam\_48\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 31.972 $\pm$ 0.007  $\chi^2$ /NDF: 7507884.4/25

Left Out: 48.471 $\pm$ 0.008  $\chi^2$ /NDF: 4373812.0/24

Right Out: 29.093 $\pm$ 0.006  $\chi^2$ /NDF: 9802989.5/30

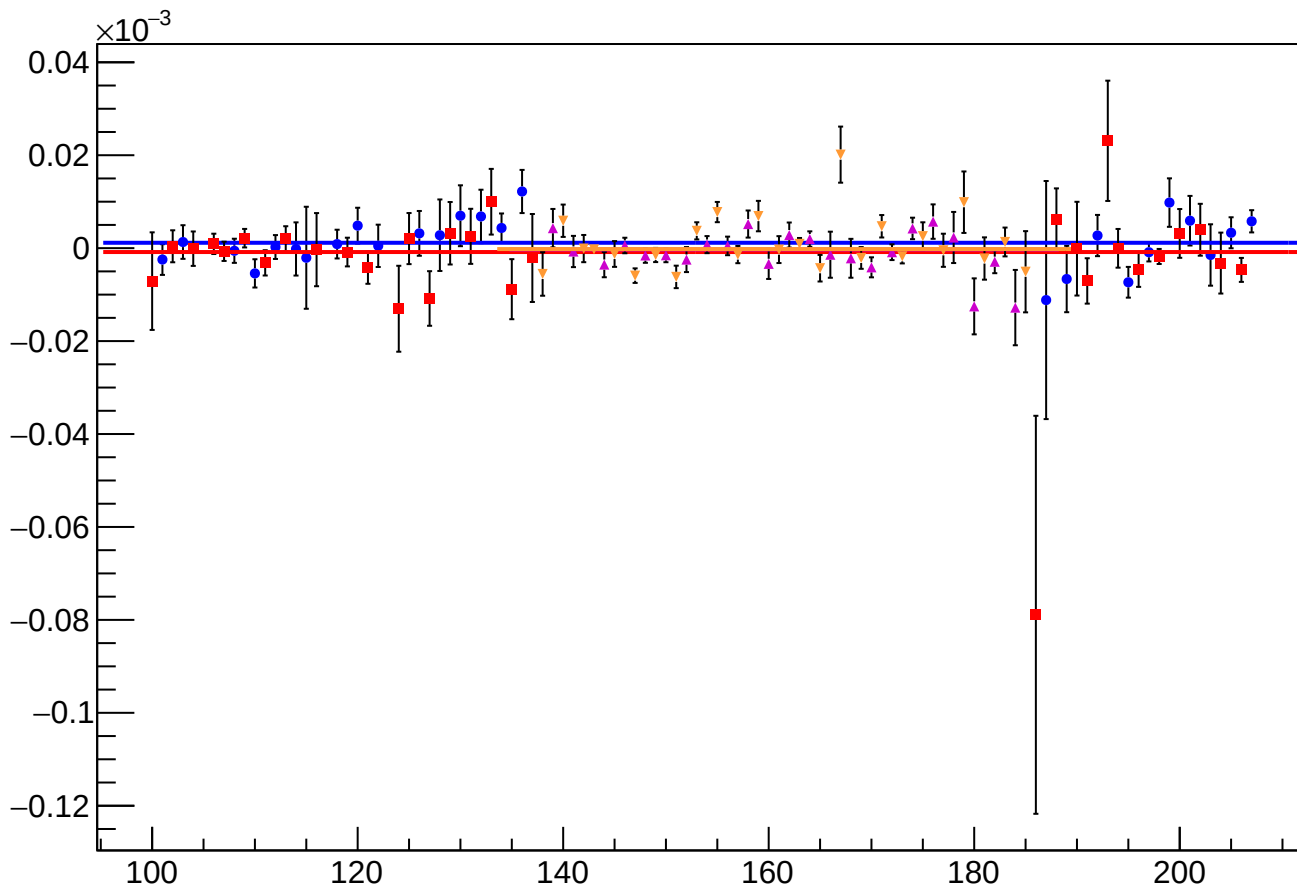
Left In: 47.505 $\pm$ 0.009  $\chi^2$ /NDF: 3075161.5/22

+ sign 38.758 $\pm$ 0.005  $\chi^2$ /NDF: 14104941.2/50

All: 37.132 $\pm$ 0.004  $\chi^2$ /NDF: 30151290.3/104

- sign 35.707 $\pm$ 0.005  $\chi^2$ /NDF: 15879114.1/53

asym\_sam\_48\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 33.2/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 71.7/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 30.2/30

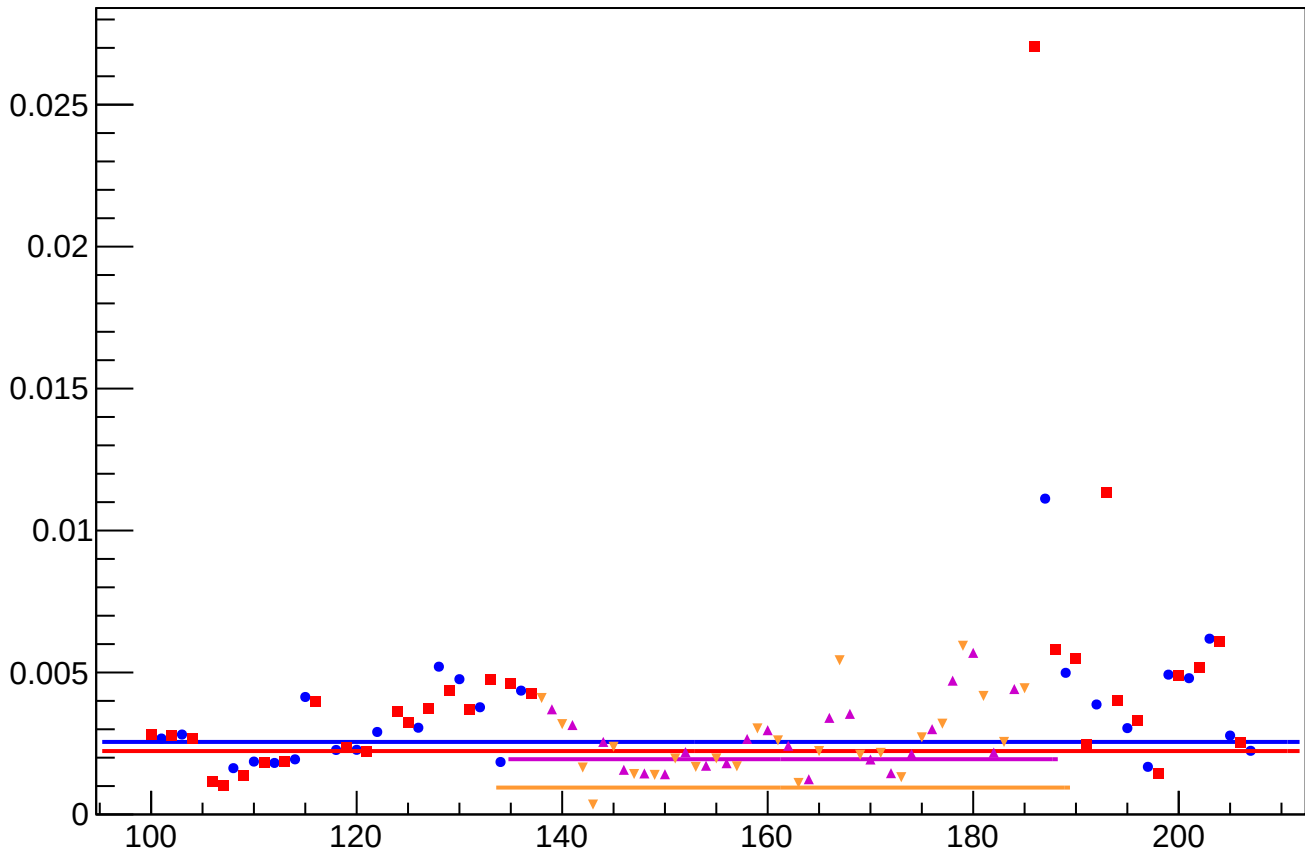
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 30.9/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 107.8/50

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 170.4/104

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 61.6/53

asym\_sam\_48\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 4102608.9/25

Left Out: 0.001 $\pm$ 0.000  $\chi^2$ /NDF:17608951.7/24

Right Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 8247242.1/30

Left In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF:4362371.5/22

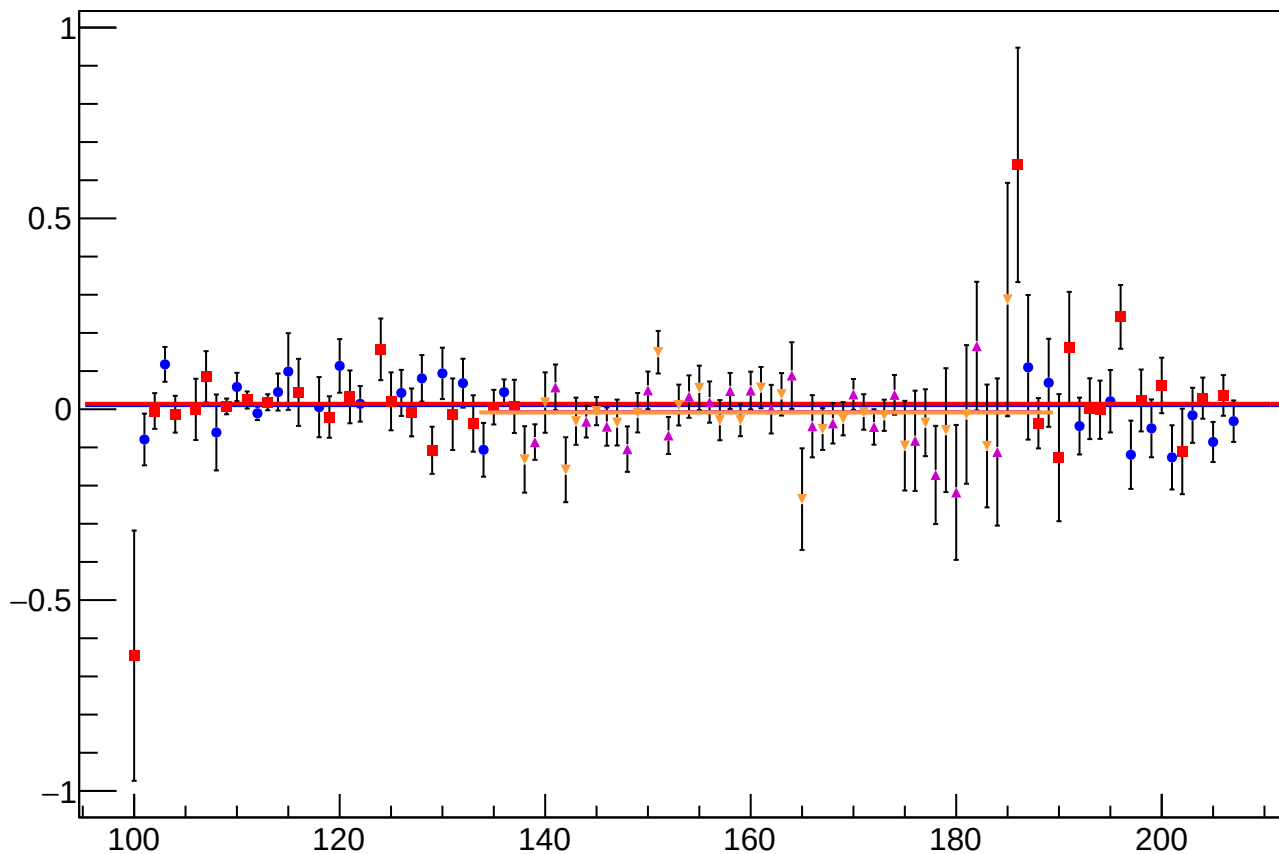
+ sign 0.001 $\pm$ 0.000  $\chi^2$ /NDF: 29990393.5/50

All: 0.001 $\pm$ 0.000  $\chi^2$ /NDF: 49330301.9/104

- sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 12854573.0/53



asym\_sam\_48\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.011 $\pm$ 0.010  $\chi^2$ /NDF: 32.6/25

Left Out: -0.008 $\pm$ 0.012  $\chi^2$ /NDF: 23.2/24

Right Out: 0.014 $\pm$ 0.009  $\chi^2$ /NDF: 30.3/30

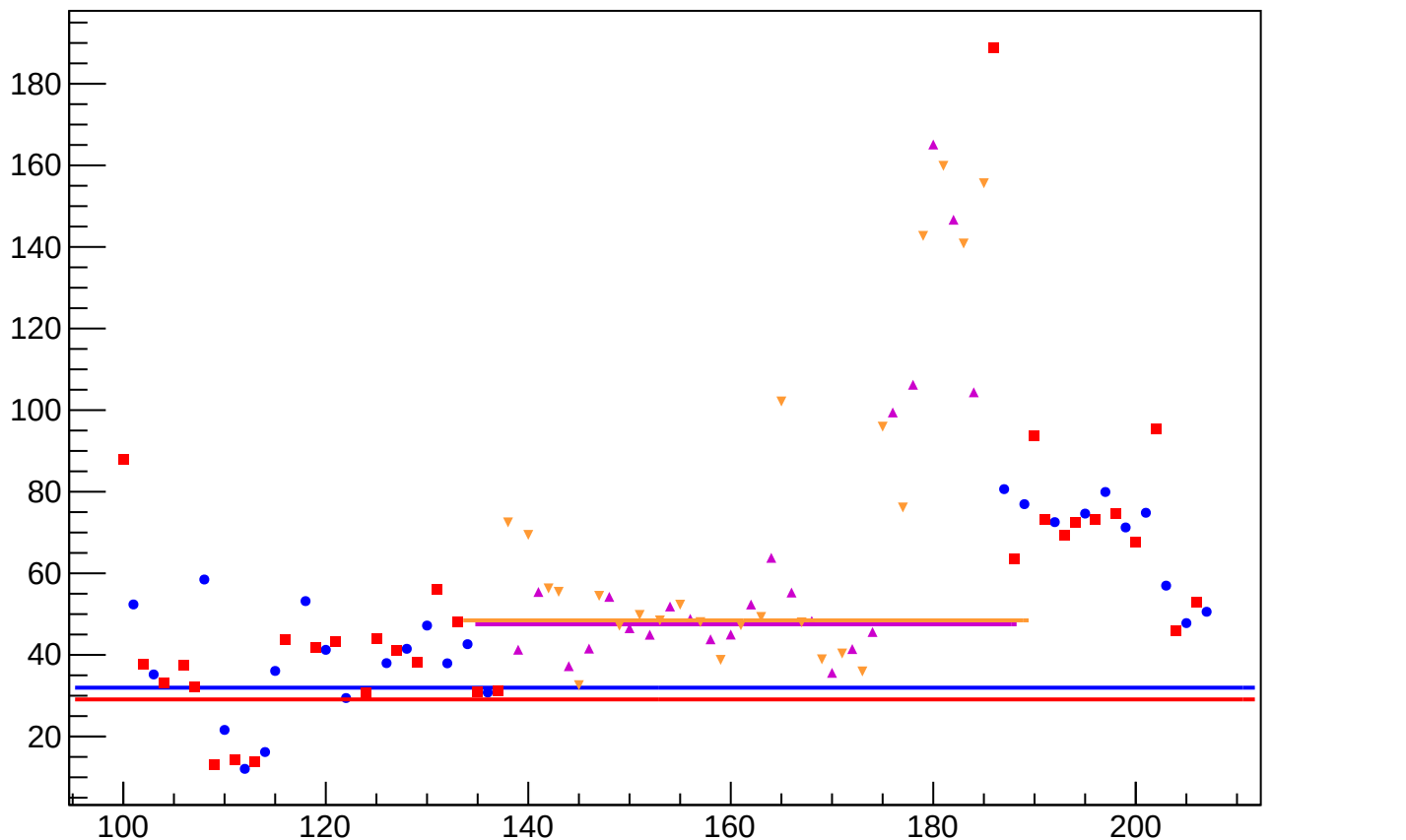
Left In: -0.007 $\pm$ 0.012  $\chi^2$ /NDF: 23.2/22

+ sign 0.003 $\pm$ 0.008  $\chi^2$ /NDF: 57.3/50

All: 0.005 $\pm$ 0.005  $\chi^2$ /NDF: 113.1/104

- sign 0.007 $\pm$ 0.007  $\chi^2$ /NDF: 55.6/53

asym\_sam\_48\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 31.971+/-0.007  $\chi^2/\text{NDF}$ : 7508581.2/25

Left Out: 48.471+/-0.008  $\chi^2/\text{NDF}$ : 4373775.4/24

Right Out: 29.093+/-0.006  $\chi^2/\text{NDF}$ : 9803258.3/30

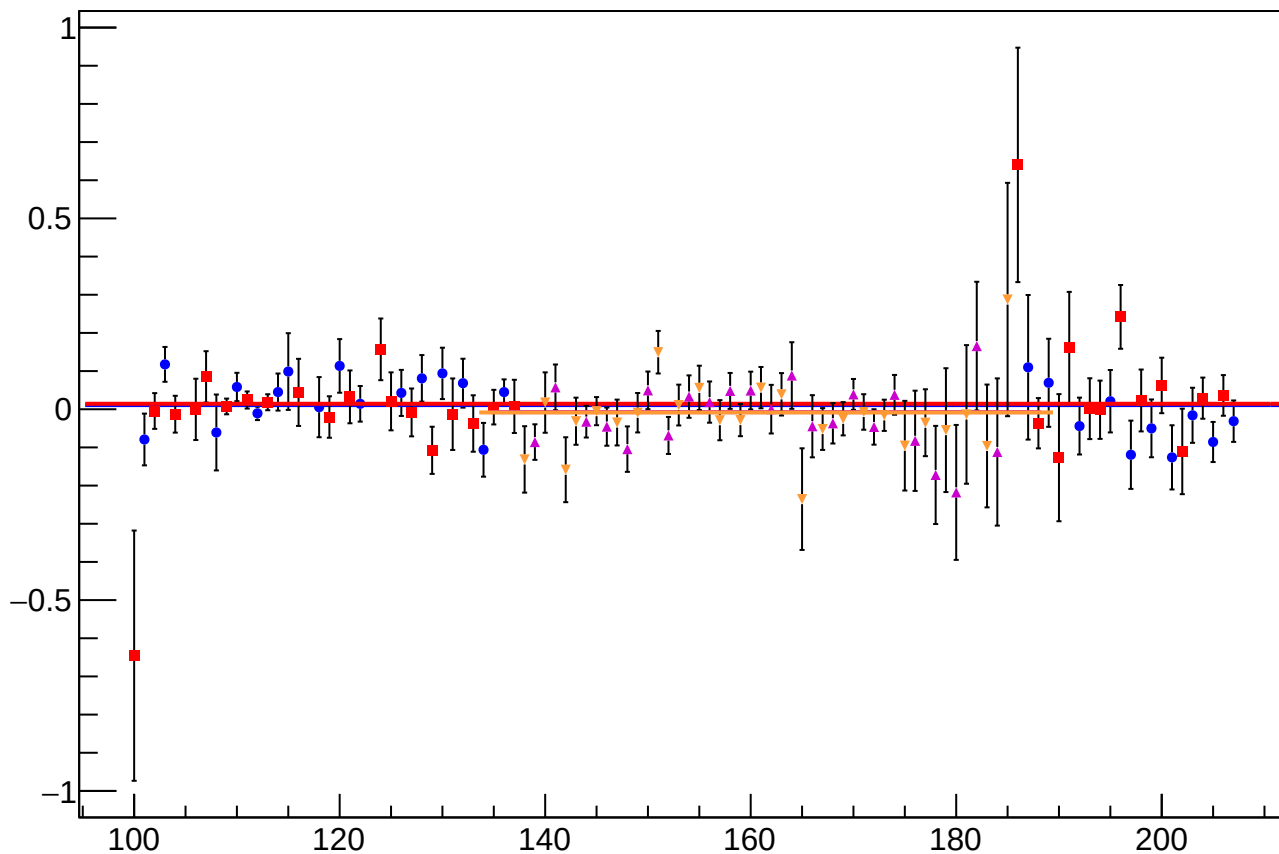
Left In: 47.505+/-0.009  $\chi^2/\text{NDF}$ : 3075116.0/22

+ sign 38.757+/-0.005  $\chi^2/\text{NDF}$ : 14106088.0/50

All: 37.132+/-0.004  $\chi^2/\text{NDF}$ : 30152775.4/104

- sign 35.707+/-0.005  $\chi^2/\text{NDF}$ : 15879531.7/53

asym\_sam\_48\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.011 \pm 0.010$   $\chi^2/\text{NDF}$ : 32.6/25

Left Out:  $-0.008 \pm 0.012$   $\chi^2/\text{NDF}$ : 23.2/24

Right Out:  $0.014 \pm 0.009$   $\chi^2/\text{NDF}$ : 30.3/30

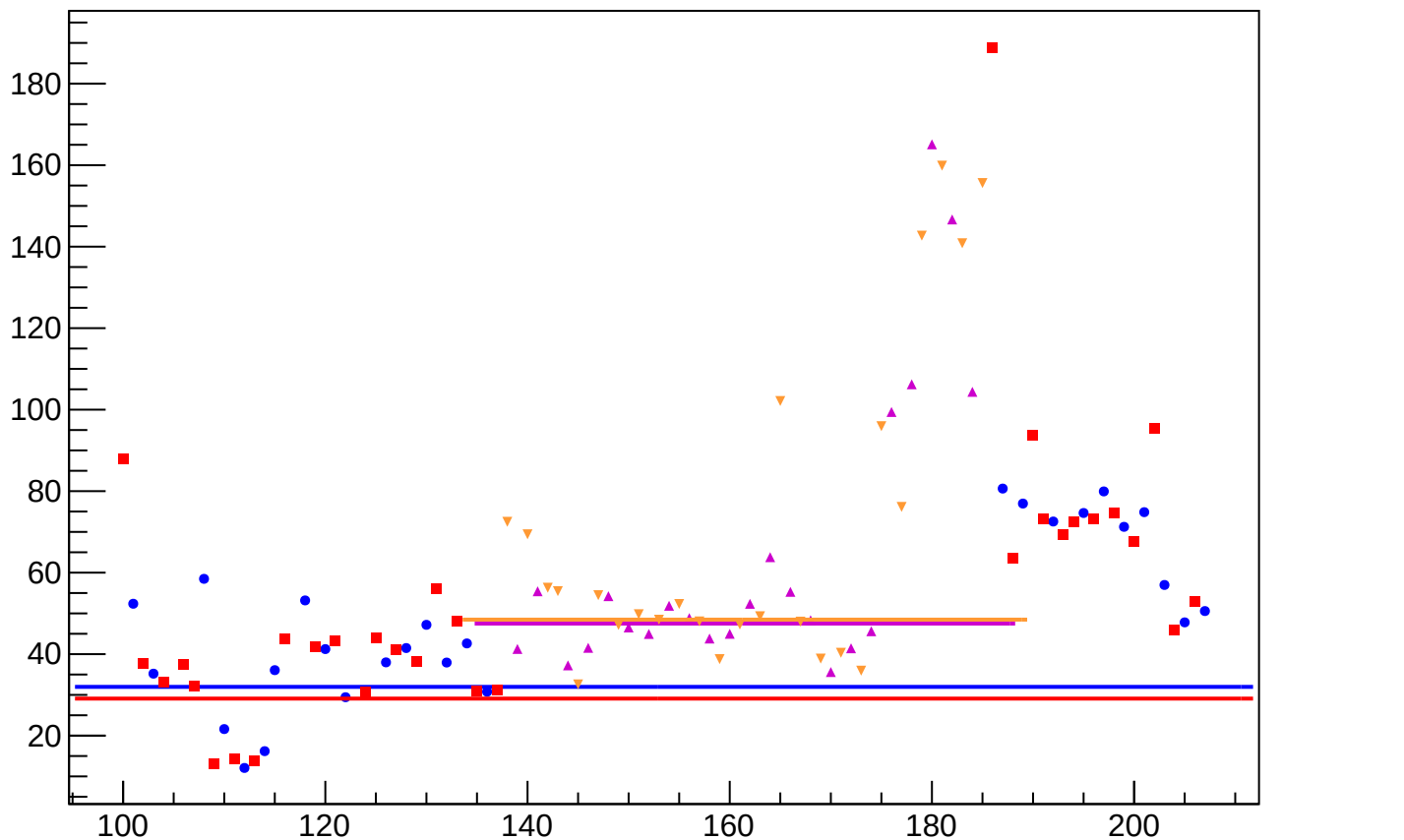
Left In:  $-0.007 \pm 0.012$   $\chi^2/\text{NDF}$ : 23.2/22

+ sign  $0.003 \pm 0.008$   $\chi^2/\text{NDF}$ : 57.3/50

All:  $0.005 \pm 0.005$   $\chi^2/\text{NDF}$ : 113.1/104

- sign  $0.007 \pm 0.007$   $\chi^2/\text{NDF}$ : 55.6/53

asym\_sam\_48\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 31.971 $\pm$ 0.007  $\chi^2$ /NDF: 7508581.2/25

Left Out: 48.471 $\pm$ 0.008  $\chi^2$ /NDF: 4373775.4/24

Right Out: 29.093 $\pm$ 0.006  $\chi^2$ /NDF: 9803258.3/30

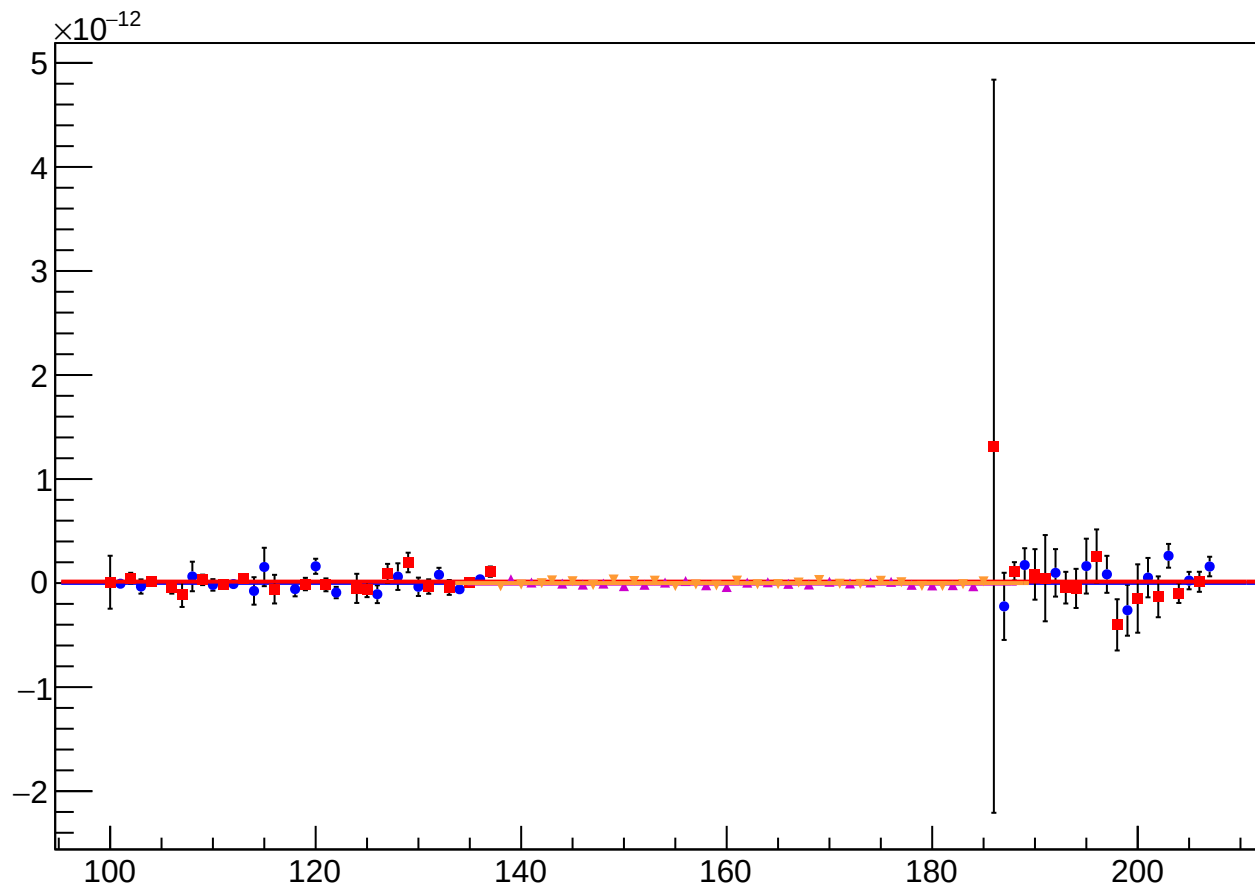
Left In: 47.505 $\pm$ 0.009  $\chi^2$ /NDF: 3075116.0/22

+ sign 38.757 $\pm$ 0.005  $\chi^2$ /NDF: 14106088.0/50

All: 37.132 $\pm$ 0.004  $\chi^2$ /NDF: 30152775.4/104

- sign 35.707 $\pm$ 0.005  $\chi^2$ /NDF: 15879531.7/53

asym\_sam\_48\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 30.8/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:31.4/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 22.7/30

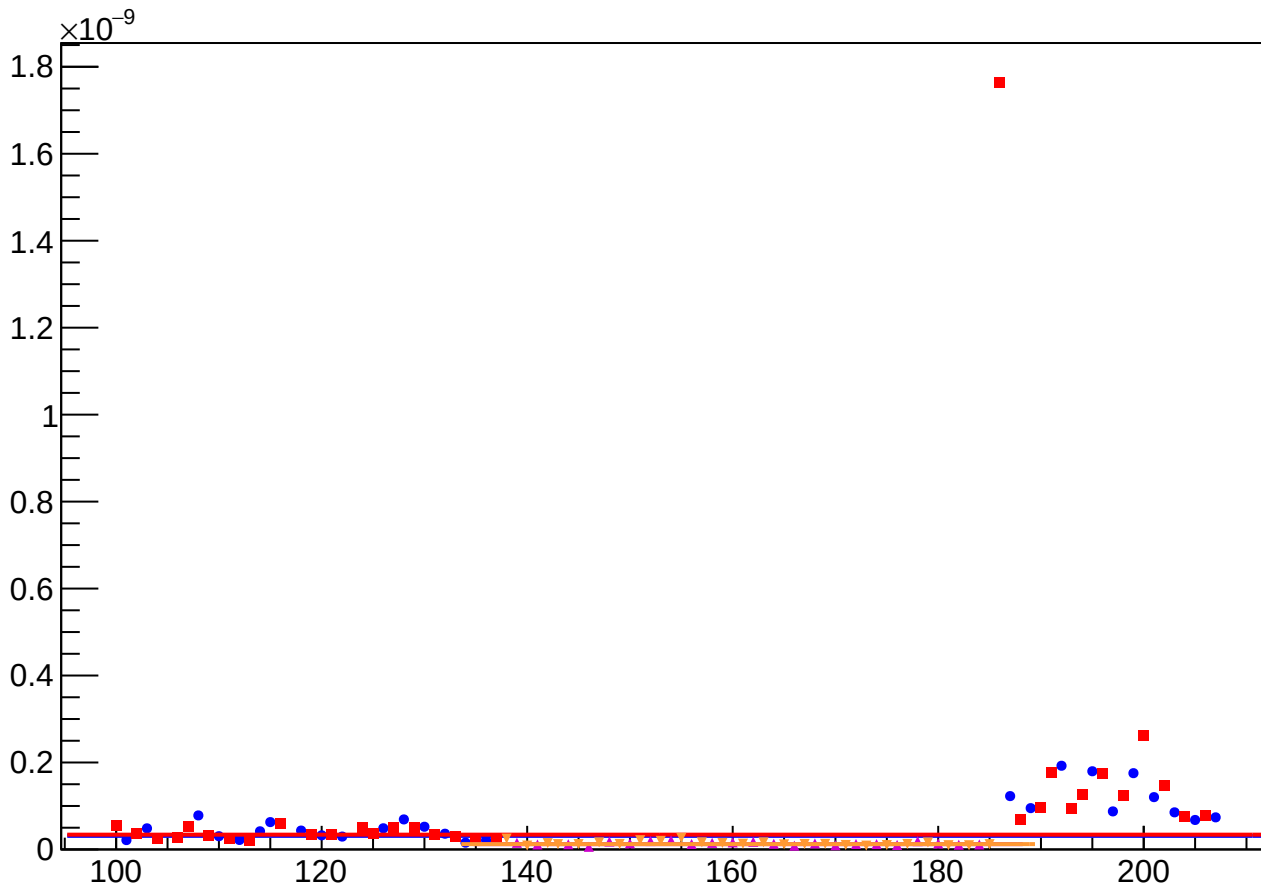
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:19.1/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 62.3/50

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 107.0/104

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 44.0/53

asym\_sam\_48\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 6649637.9/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:1915201.5/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 6436498.6/30

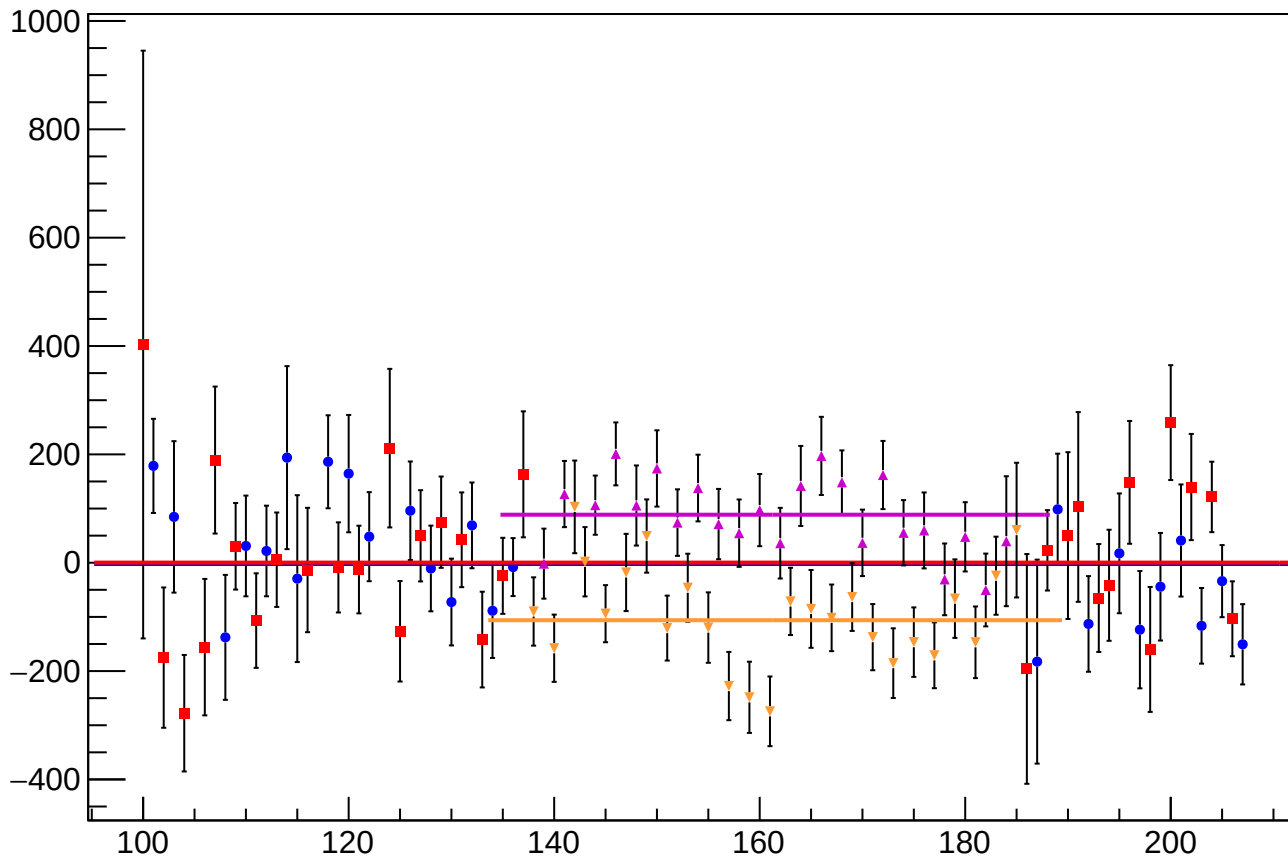
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:1925839.7/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 13034299.0/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 26827998.7/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 13792153.3/53

# reg\_asym\_sam\_13\_57\_dd\_mean vs Slug



Right In:  $-2.323 \pm 17.495$   $\chi^2/\text{NDF}$ : 31.0/25

Left Out:  $-106.100 \pm 13.089$   $\chi^2/\text{NDF}$ : 40.7/24

Right Out:  $0.228 \pm 17.388$   $\chi^2/\text{NDF}$ : 43.6/30

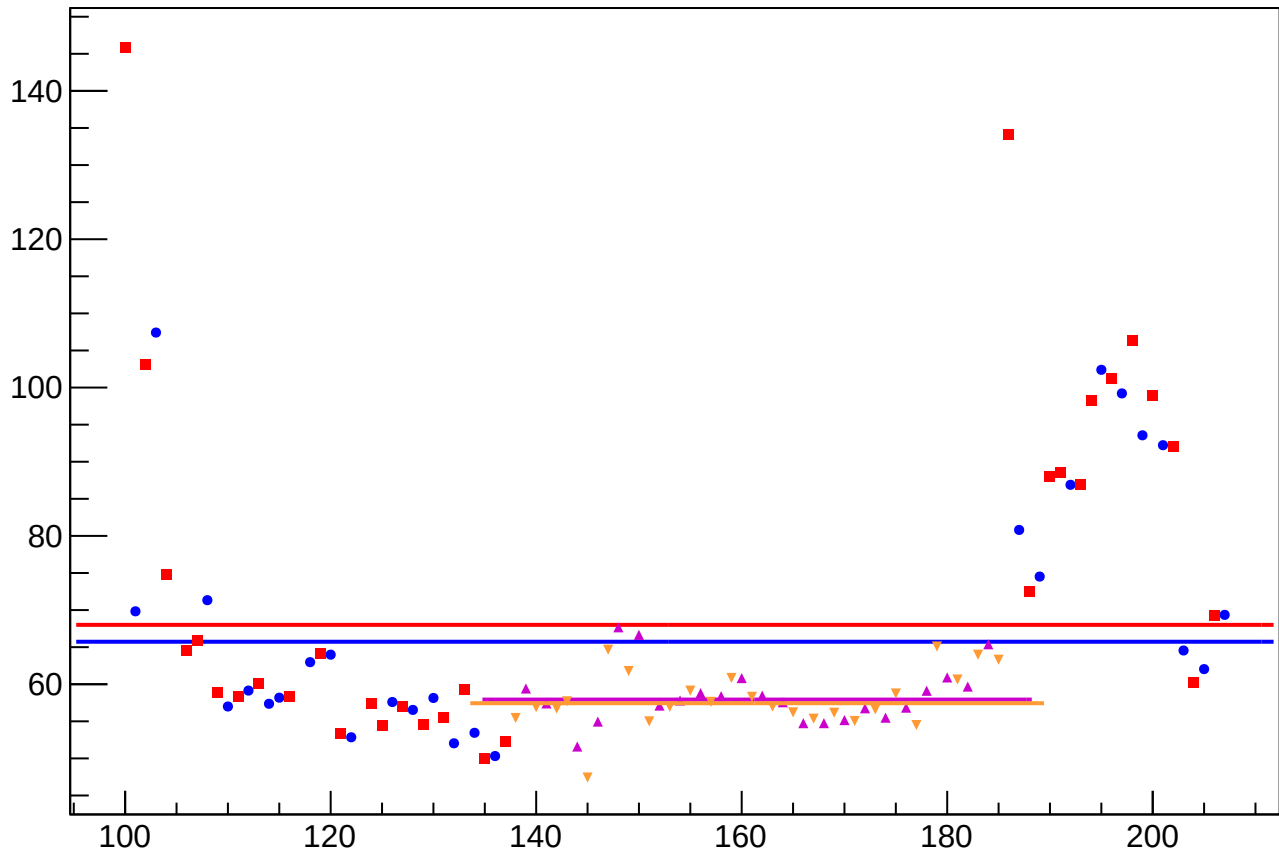
Left In:  $88.619 \pm 13.566$   $\chi^2/\text{NDF}$ : 23.9/22

+ sign  $-68.856 \pm 10.480$   $\chi^2/\text{NDF}$ : 94.3/50

All:  $-8.103 \pm 7.486$   $\chi^2/\text{NDF}$ : 246.4/104

- sign  $55.173 \pm 10.696$   $\chi^2/\text{NDF}$ : 83.5/53

# reg\_asym\_sam\_13\_57\_dd\_rms vs Slug



Right In: 65.730+/-0.012  $\chi^2/\text{NDF}$ : 1458245.3/25

Left Out: 57.440+/-0.009  $\chi^2/\text{NDF}$ :174555.9/24

Right Out: 68.006+/-0.012  $\chi^2/\text{NDF}$ : 1938421.2/30

Left In: 57.933+/-0.010  $\chi^2/\text{NDF}$ :135903.0/22

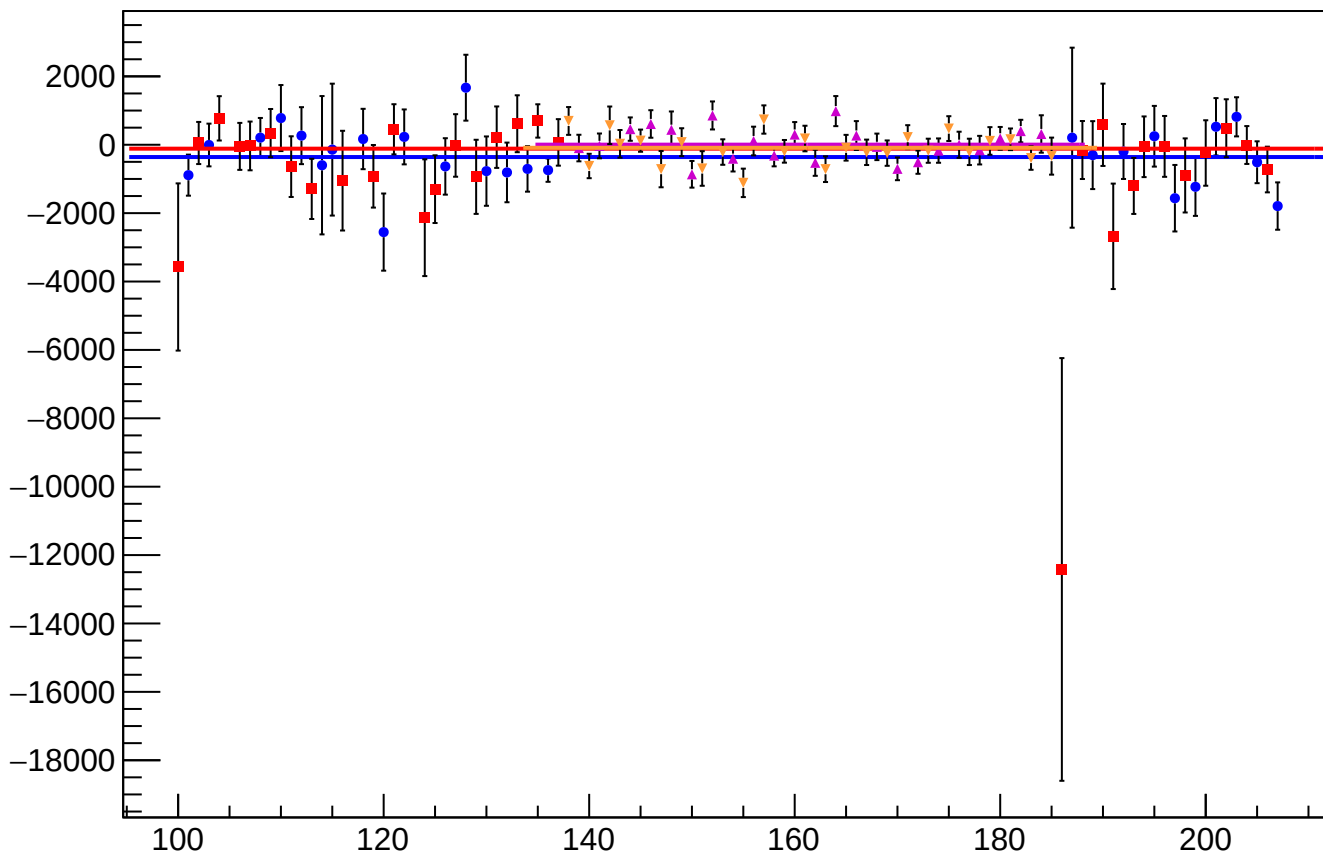
+ sign 60.415+/-0.007  $\chi^2/\text{NDF}$ : 1920699.2/50

All: 61.066+/-0.005  $\chi^2/\text{NDF}$ : 4428002.5/104

- sign 61.744+/-0.008  $\chi^2/\text{NDF}$ : 2491551.3/53



asym\_sam\_13\_57\_dd\_reg\_correction\_mean vs Slug



Right In:  $-359.518 \pm 146.957$   $\chi^2/\text{NDF}$ : 28.1/25

Left Out:  $-89.059 \pm 77.011$   $\chi^2/\text{NDF}$ : 29.9/24

Right Out:  $-114.574 \pm 148.704$   $\chi^2/\text{NDF}$ : 26.2/30

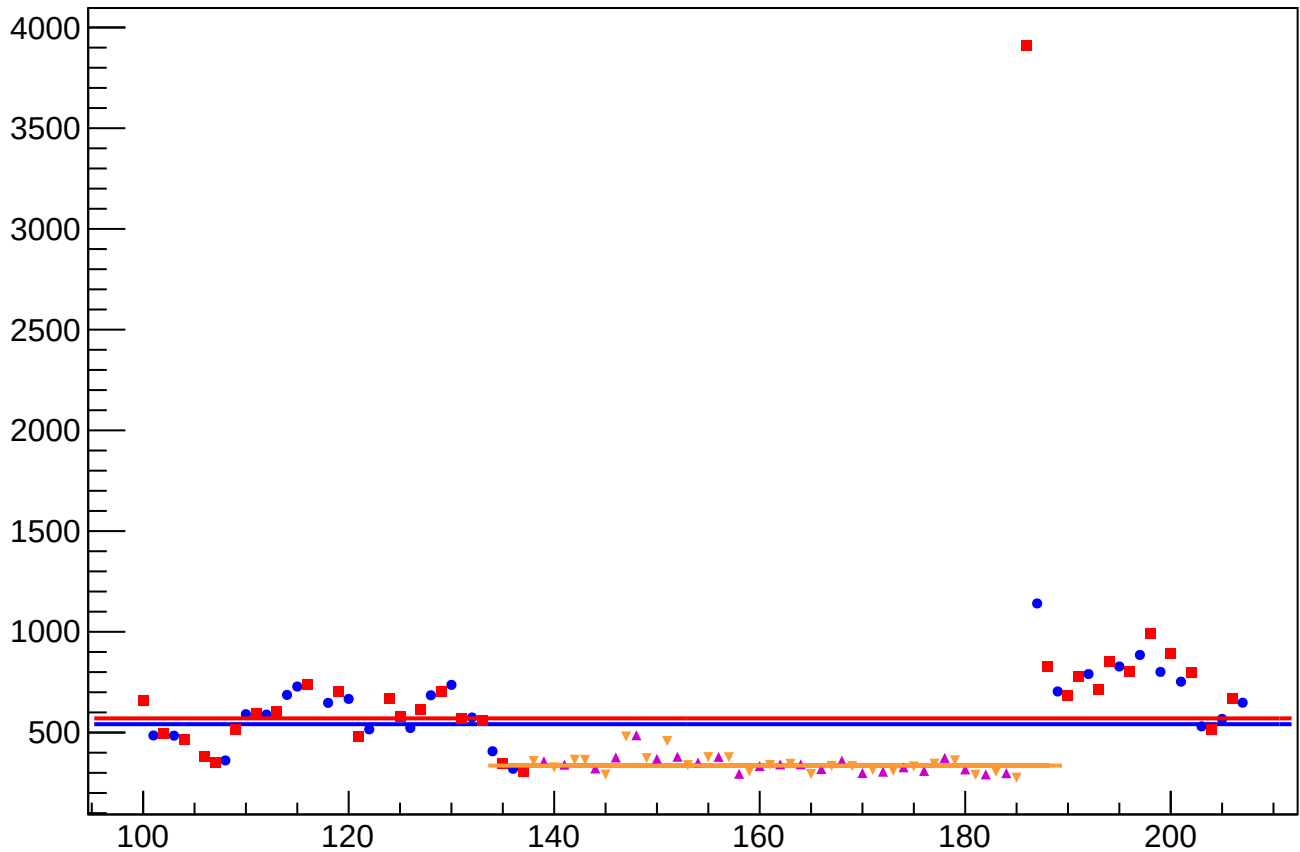
Left In:  $3.046 \pm 79.193$   $\chi^2/\text{NDF}$ : 33.6/22

+ sign  $-147.329 \pm 68.212$   $\chi^2/\text{NDF}$ : 60.6/50

All:  $-86.654 \pm 48.819$   $\chi^2/\text{NDF}$ : 122.5/104

- sign  $-22.942 \pm 69.899$   $\chi^2/\text{NDF}$ : 60.3/53

asym\_sam\_13\_57\_dd\_reg\_correction\_rms vs Slug



Right In: 541.469 $\pm$ 0.104  $\chi^2/\text{NDF}$ : 2541336.1/25

Left Out: 335.894 $\pm$ 0.054  $\chi^2/\text{NDF}$ : 533835.0/24

Right Out: 570.309 $\pm$ 0.105  $\chi^2/\text{NDF}$ : 3266874.1/30

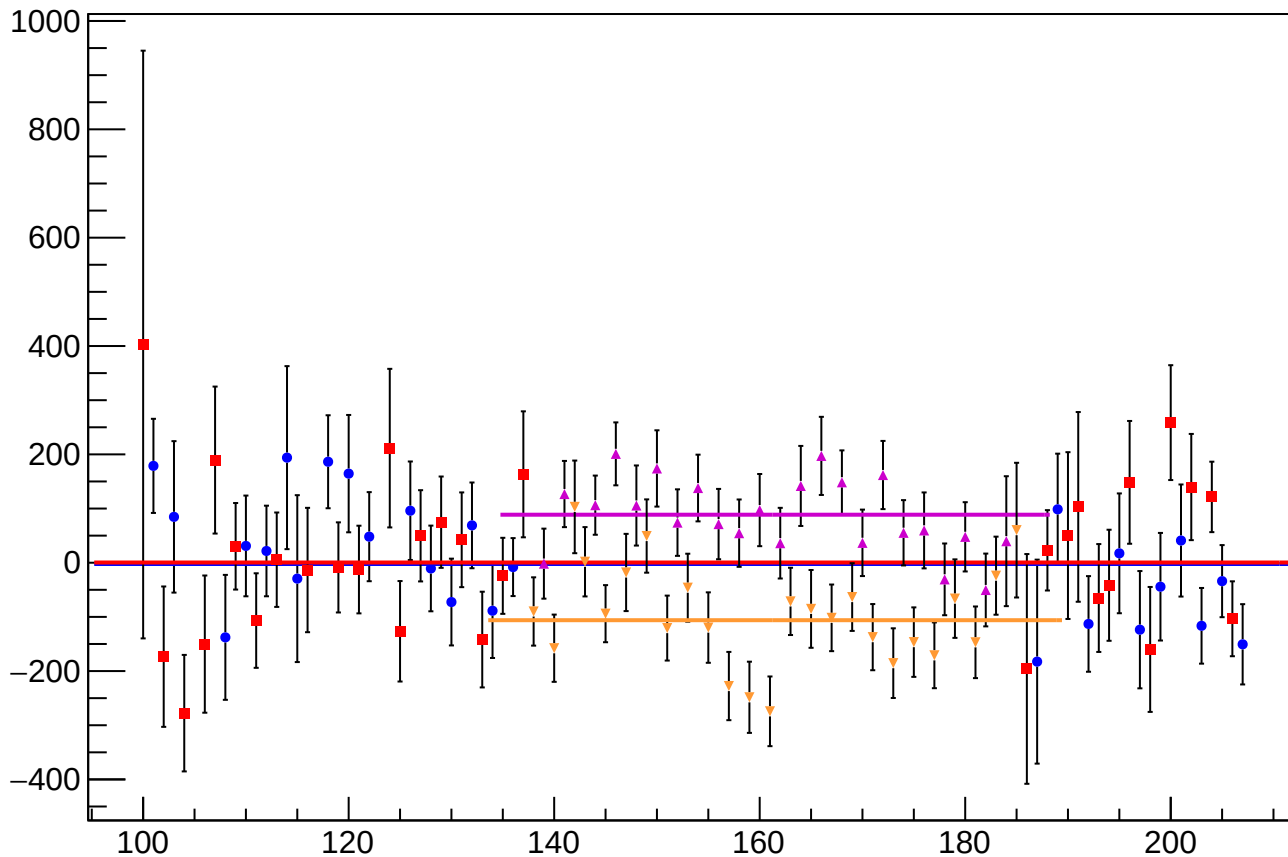
Left In: 336.343 $\pm$ 0.056  $\chi^2/\text{NDF}$ : 414202.1/22

+ sign 380.185 $\pm$ 0.048  $\chi^2/\text{NDF}$ : 6145649.0/50

All: 384.016 $\pm$ 0.035  $\chi^2/\text{NDF}$ : 13696680.5/100

- sign 388.038 $\pm$ 0.049  $\chi^2/\text{NDF}$ : 7538102.3/53

# cor\_asym\_sam\_13\_57\_dd\_mean vs Slug



Right In:  $-2.327 \pm 17.495$   $\chi^2/\text{NDF}$ : 31.0/25

Left Out:  $-106.099 \pm 13.089$   $\chi^2/\text{NDF}$ : 40.7/24

Right Out:  $0.403 \pm 17.390$   $\chi^2/\text{NDF}$ : 43.4/30

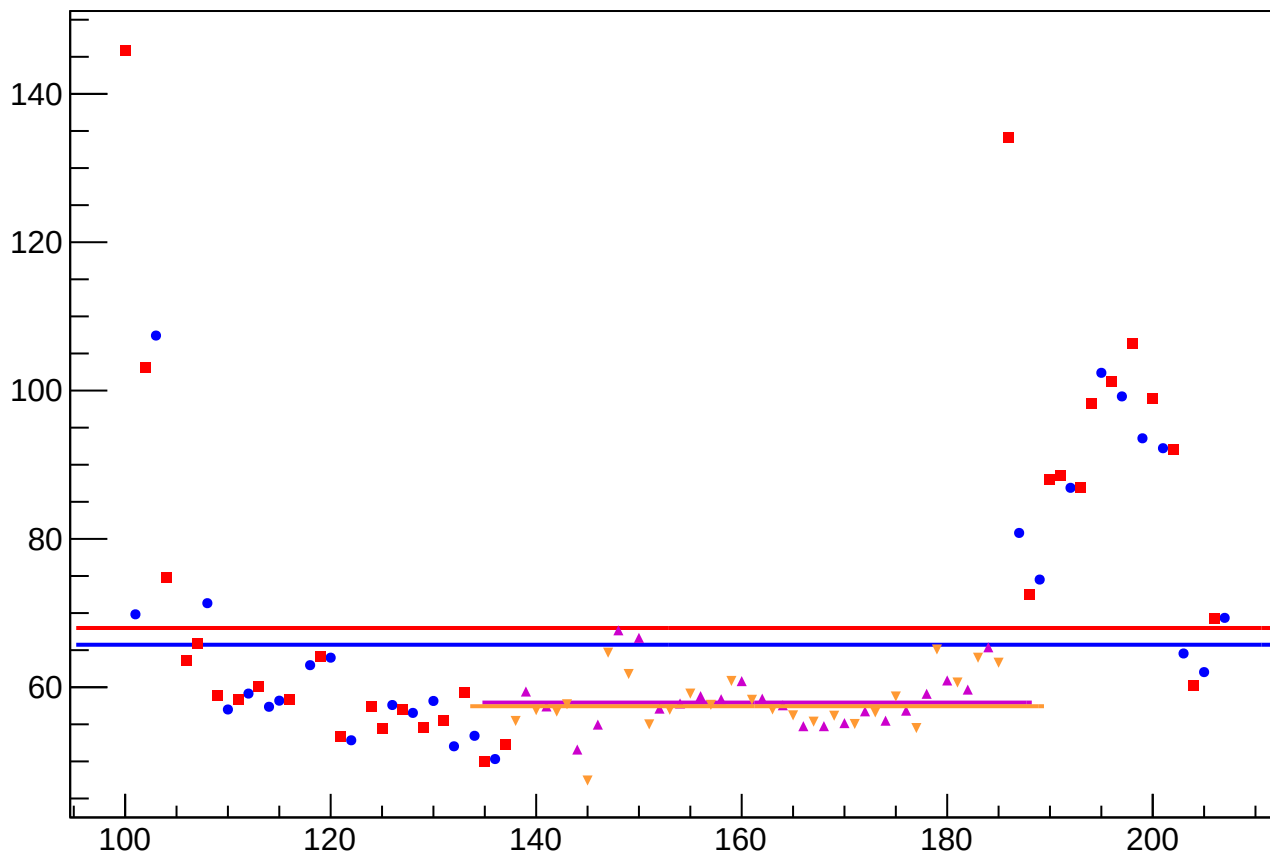
Left In:  $88.621 \pm 13.566$   $\chi^2/\text{NDF}$ : 23.9/22

+ sign  $-68.858 \pm 10.480$   $\chi^2/\text{NDF}$ : 94.3/50

All:  $-8.071 \pm 7.486$   $\chi^2/\text{NDF}$ : 246.2/104

- sign  $55.245 \pm 10.696$   $\chi^2/\text{NDF}$ : 83.3/53

# cor\_asym\_sam\_13\_57\_dd\_rms vs Slug



Right In:  $65.730 \pm 0.012$   $\chi^2/\text{NDF}$ : 1458247.3/25

Left Out:  $57.440 \pm 0.009$   $\chi^2/\text{NDF}$ : 174555.9/24

Right Out:  $67.988 \pm 0.012$   $\chi^2/\text{NDF}$ : 1939576.7/30

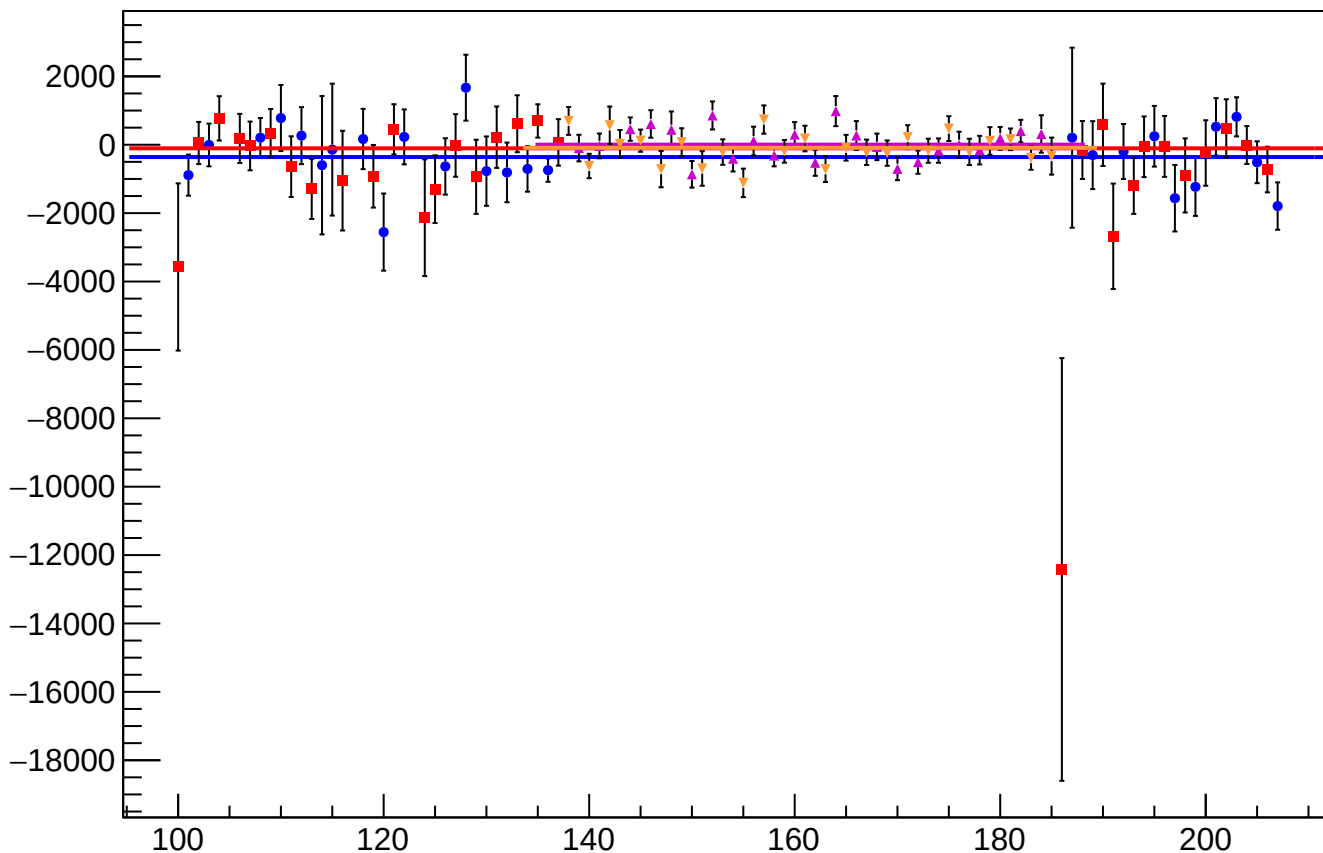
Left In:  $57.933 \pm 0.010$   $\chi^2/\text{NDF}$ : 135903.0/22

+ sign  $60.415 \pm 0.007$   $\chi^2/\text{NDF}$ : 1920701.3/50

All:  $61.063 \pm 0.005$   $\chi^2/\text{NDF}$ : 4427467.0/104

- sign  $61.737 \pm 0.008$   $\chi^2/\text{NDF}$ : 2491185.1/53

asym\_sam\_13\_57\_dd\_cor\_correction\_mean vs Slug



Right In:  $-359.496 \pm 146.958$   $\chi^2/\text{NDF}$ : 28.1/25

Left Out:  $-89.061 \pm 77.011$   $\chi^2/\text{NDF}$ : 29.9/24

Right Out:  $-104.831 \pm 149.007$   $\chi^2/\text{NDF}$ : 26.4/30

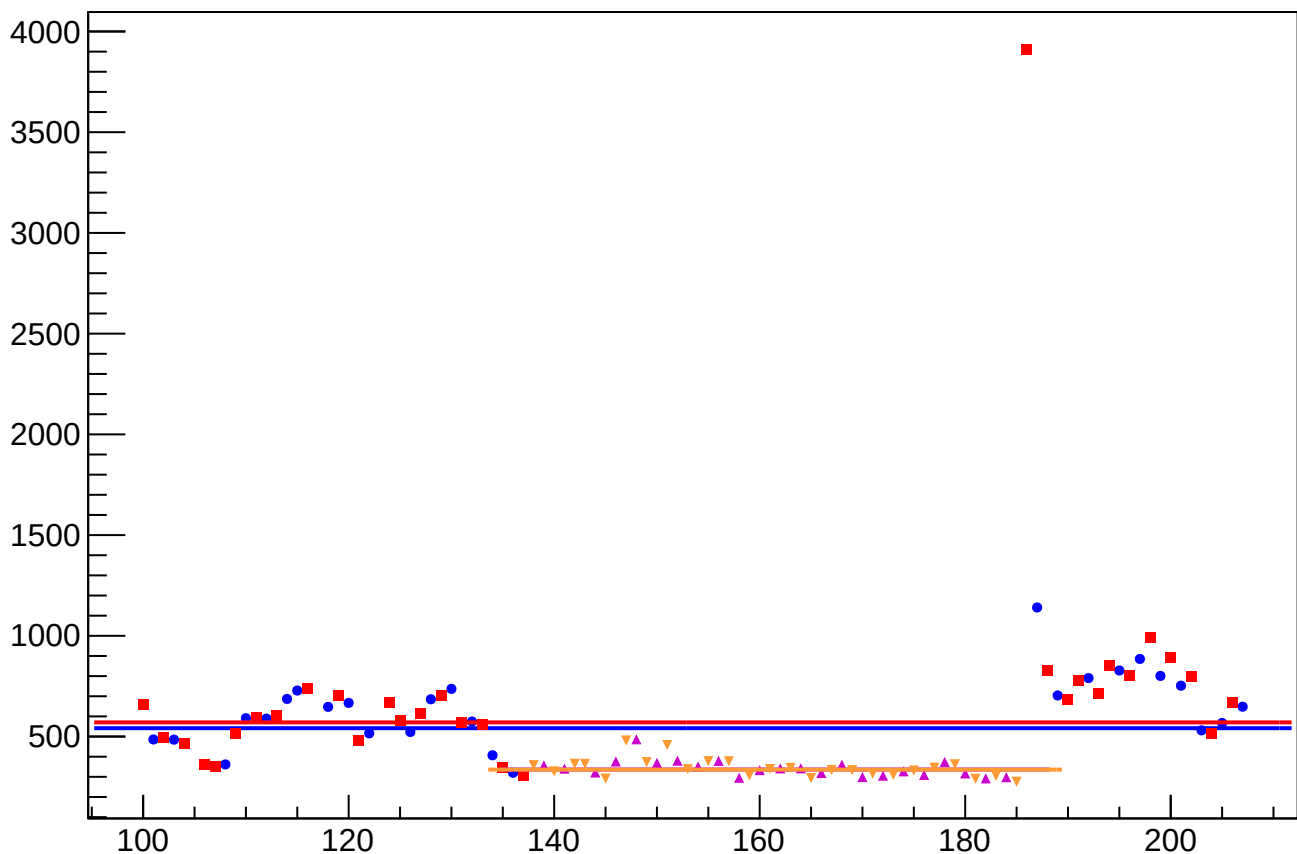
Left In:  $3.047 \pm 79.193$   $\chi^2/\text{NDF}$ : 33.6/22

+ sign  $-147.326 \pm 68.213$   $\chi^2/\text{NDF}$ : 60.6/50

All:  $-85.593 \pm 48.830$   $\chi^2/\text{NDF}$ : 122.7/104

- sign  $-20.713 \pm 69.930$   $\chi^2/\text{NDF}$ : 60.4/53

asym\_sam\_13\_57\_dd\_cor\_correction\_rms vs Slug



Right In: 541.471 $\pm$ 0.104  $\chi^2$ /NDF: 2541311.3/25

Left Out: 335.894 $\pm$ 0.054  $\chi^2$ /NDF: 533835.9/24

Right Out: 570.190 $\pm$ 0.105  $\chi^2$ /NDF: 3286091.9/30

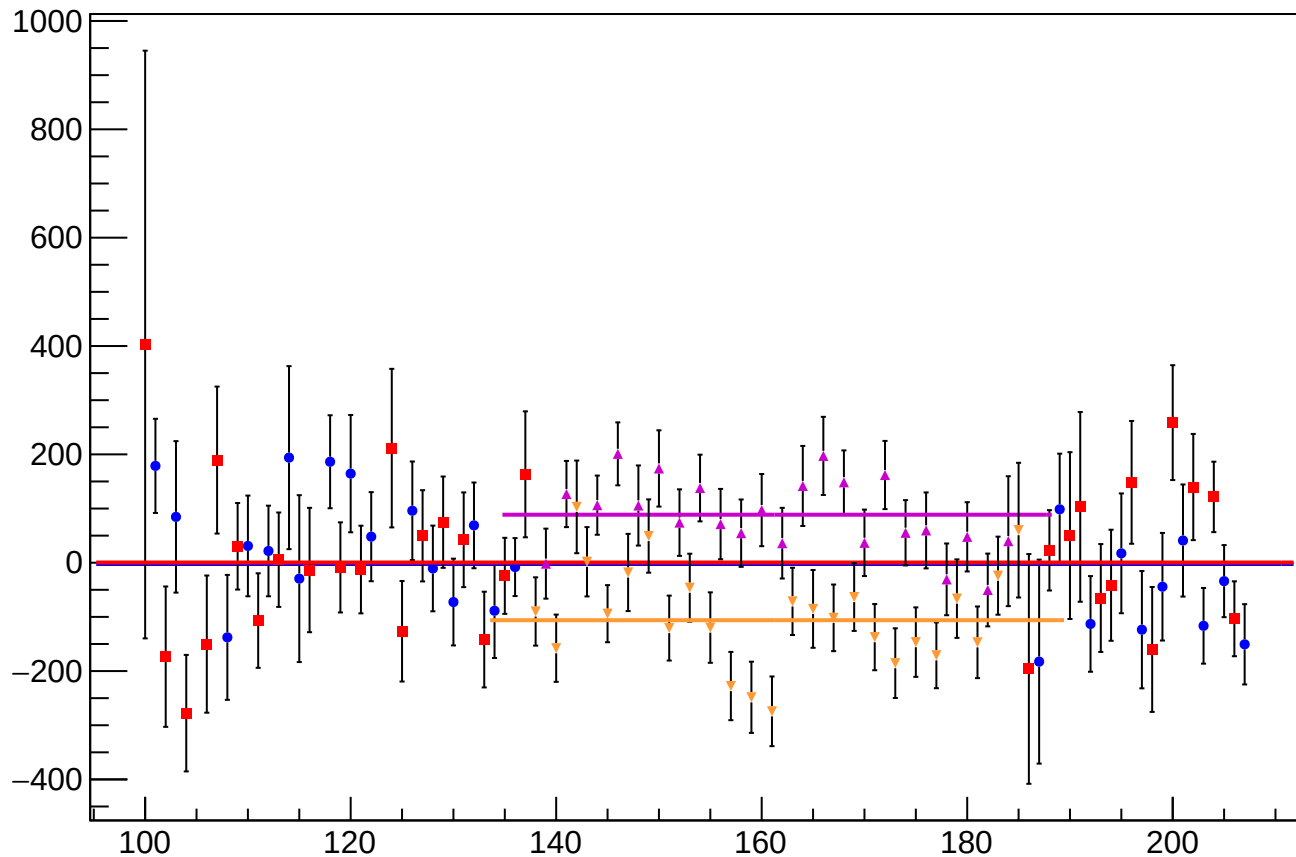
Left In: 336.343 $\pm$ 0.056  $\chi^2$ /NDF: 414205.9/22

+ sign 380.185 $\pm$ 0.048  $\chi^2$ /NDF: 6145674.9/50

All: 383.921 $\pm$ 0.035  $\chi^2$ /NDF: 13699213.6/10

- sign 387.848 $\pm$ 0.049  $\chi^2$ /NDF: 7541232.9/53

# eigen\_cor\_asym\_sam\_13\_57\_dd\_mean vs Slug



Right In:  $-2.327 \pm 17.495$   $\chi^2/\text{NDF}$ : 31.0/25

Left Out:  $-106.099 \pm 13.089$   $\chi^2/\text{NDF}$ : 40.7/24

Right Out:  $0.403 \pm 17.390$   $\chi^2/\text{NDF}$ : 43.4/30

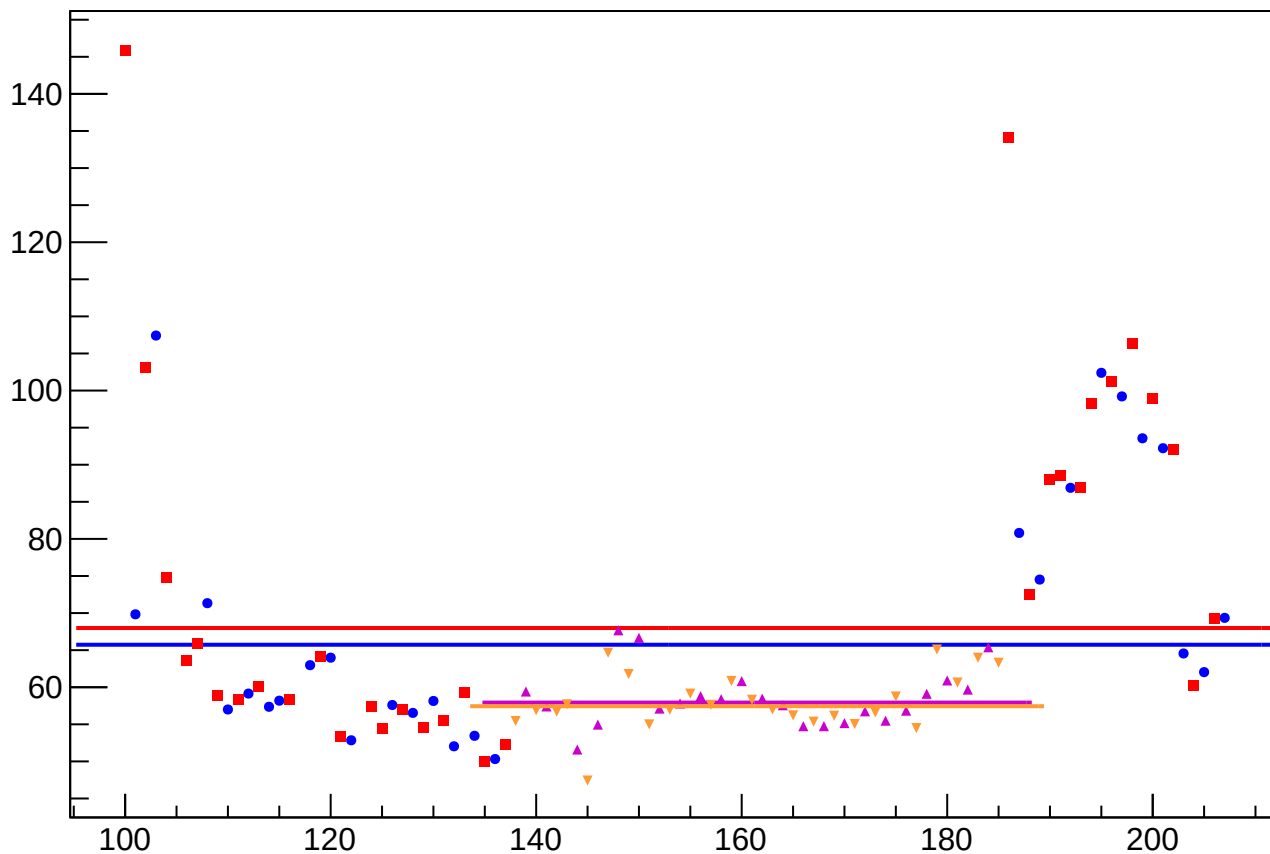
Left In:  $88.621 \pm 13.566$   $\chi^2/\text{NDF}$ : 23.9/22

+ sign  $-68.858 \pm 10.480$   $\chi^2/\text{NDF}$ : 94.3/50

All:  $-8.071 \pm 7.486$   $\chi^2/\text{NDF}$ : 246.2/104

- sign  $55.245 \pm 10.696$   $\chi^2/\text{NDF}$ : 83.3/53

eigen\_cor\_asym\_sam\_13\_57\_dd\_rms vs Slug



Right In: 65.730+/-0.012  $\chi^2/\text{NDF}$ : 1458247.3/25

Left Out: 57.440+/-0.009  $\chi^2/\text{NDF}$ : 174555.9/24

Right Out: 67.988+/-0.012  $\chi^2/\text{NDF}$ : 1939576.7/30

Left In: 57.933+/-0.010  $\chi^2/\text{NDF}$ : 135903.0/22

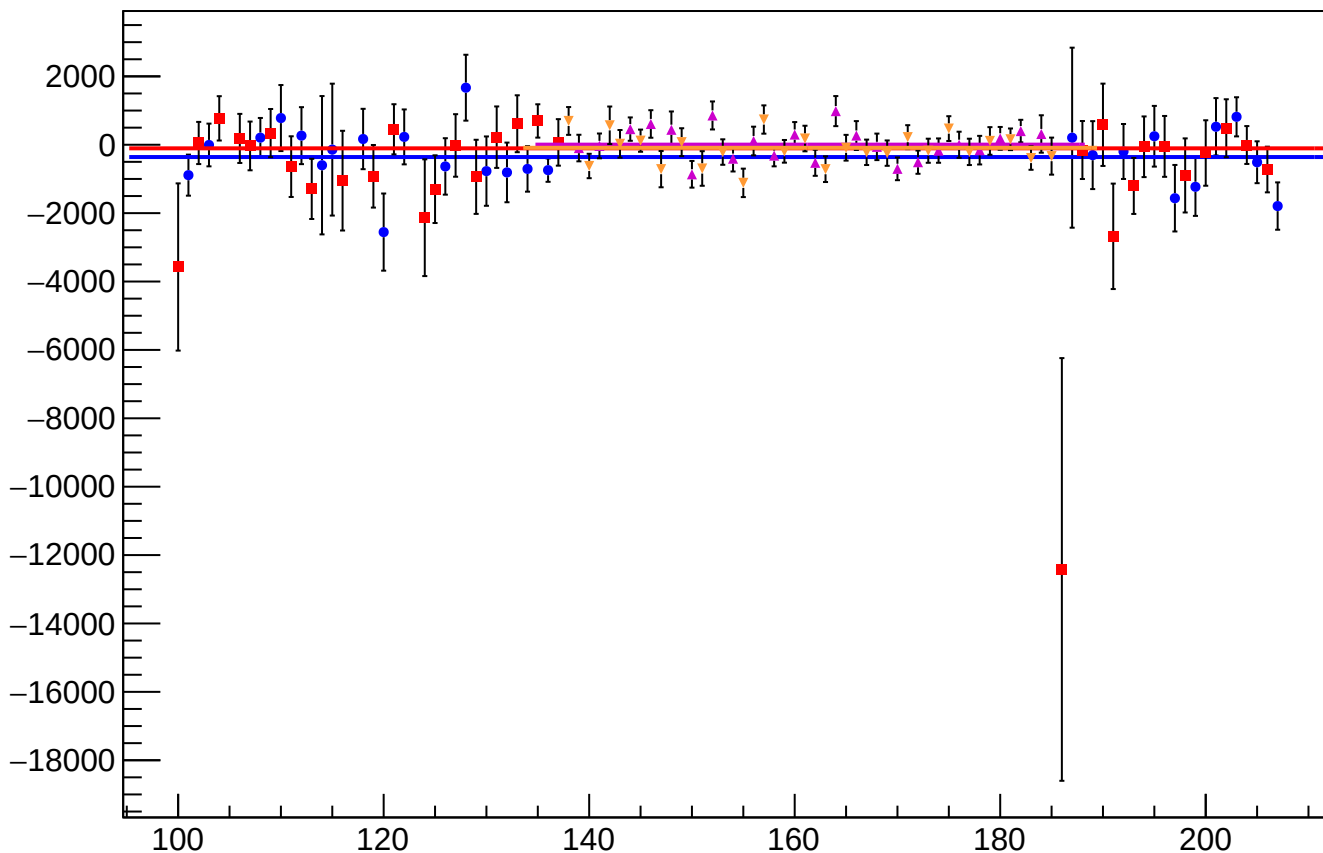
+ sign 60.415+/-0.007  $\chi^2/\text{NDF}$ : 1920701.3/50

All: 61.063+/-0.005  $\chi^2/\text{NDF}$ : 4427467.0/104

- sign 61.737+/-0.008  $\chi^2/\text{NDF}$ : 2491185.1/53



asym\_sam\_13\_57\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-359.496 \pm 146.958$   $\chi^2/\text{NDF}$ : 28.1/25

Left Out:  $-89.061 \pm 77.011$   $\chi^2/\text{NDF}$ : 29.9/24

Right Out:  $-104.831 \pm 149.007$   $\chi^2/\text{NDF}$ : 26.4/30

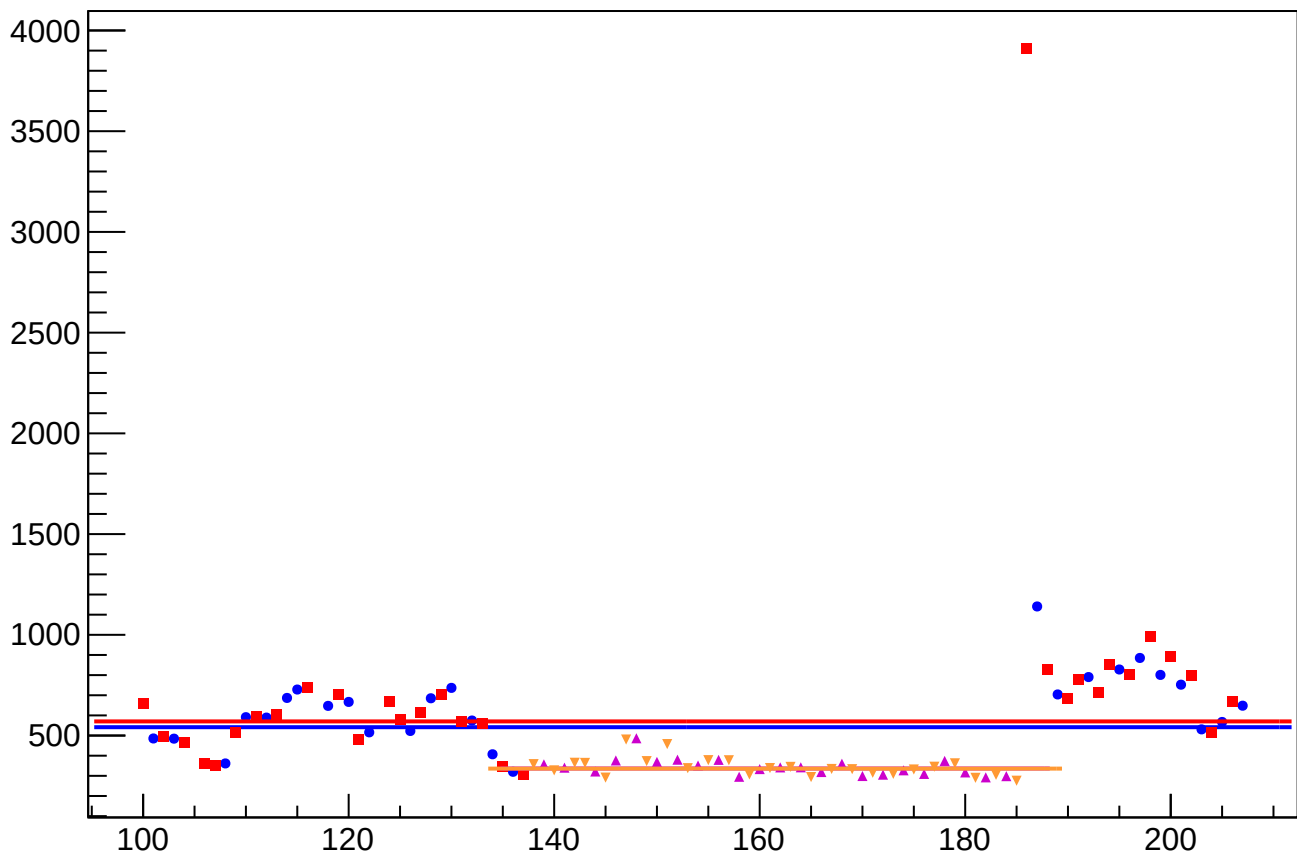
Left In:  $3.047 \pm 79.193$   $\chi^2/\text{NDF}$ : 33.6/22

+ sign  $-147.326 \pm 68.213$   $\chi^2/\text{NDF}$ : 60.6/50

All:  $-85.593 \pm 48.830$   $\chi^2/\text{NDF}$ : 122.7/104

- sign  $-20.713 \pm 69.930$   $\chi^2/\text{NDF}$ : 60.4/53

asym\_sam\_13\_57\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 541.471 $\pm$ 0.104  $\chi^2/\text{NDF}$ : 2541311.3/25

Left Out: 335.894 $\pm$ 0.054  $\chi^2/\text{NDF}$ : 533835.9/24

Right Out: 570.190 $\pm$ 0.105  $\chi^2/\text{NDF}$ : 3286091.9/30

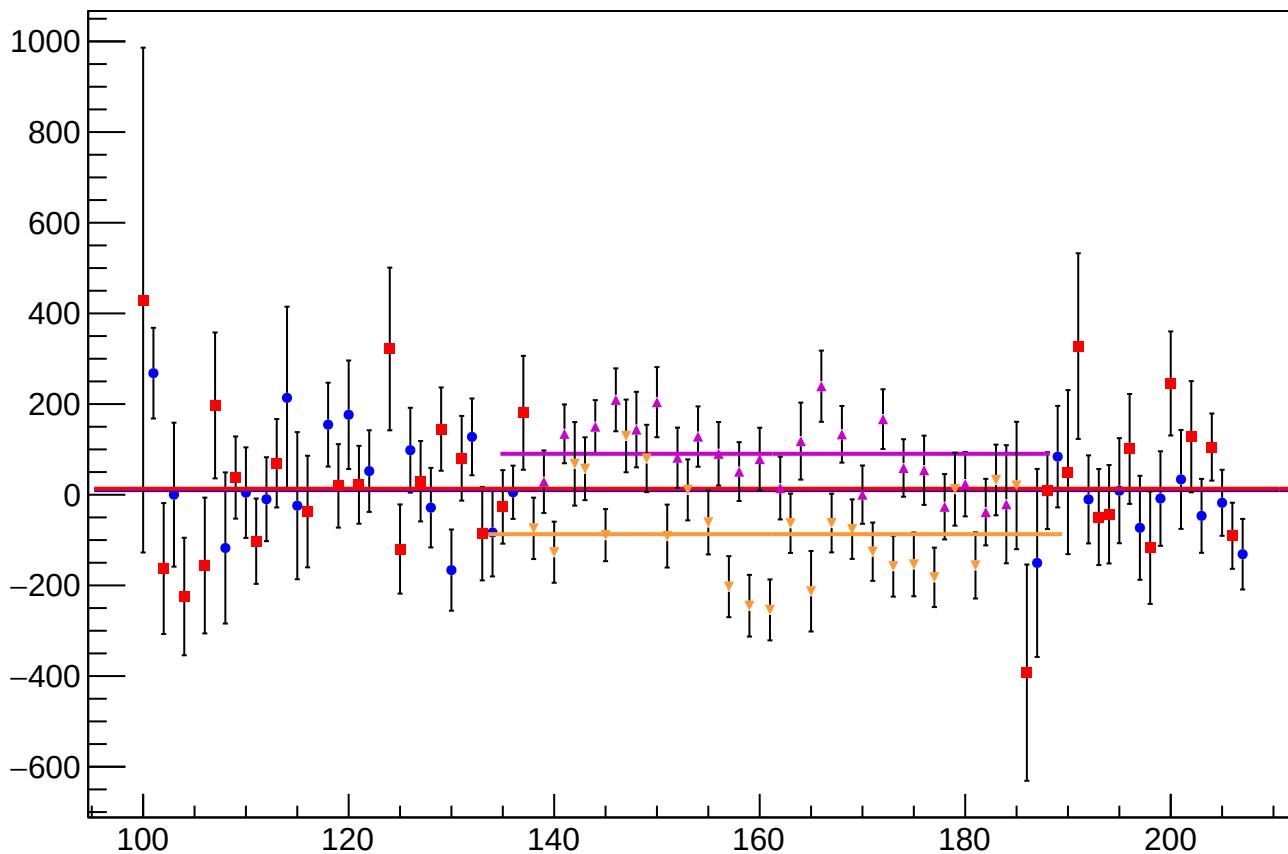
Left In: 336.343 $\pm$ 0.056  $\chi^2/\text{NDF}$ : 414205.9/22

+ sign 380.185 $\pm$ 0.048  $\chi^2/\text{NDF}$ : 6145674.9/50

All: 383.921 $\pm$ 0.035  $\chi^2/\text{NDF}$ : 13699213.6/10

- sign 387.848 $\pm$ 0.049  $\chi^2/\text{NDF}$ : 7541232.9/53

# dit\_asym\_sam\_13\_57\_dd\_mean vs Slug



Right In: 10.219 $\pm$ 19.212  $\chi^2$ /NDF: 26.4/25

Left Out: -86.957 $\pm$ 14.175  $\chi^2$ /NDF: 48.8/24

Right Out: 13.190 $\pm$ 19.287  $\chi^2$ /NDF: 36.5/30

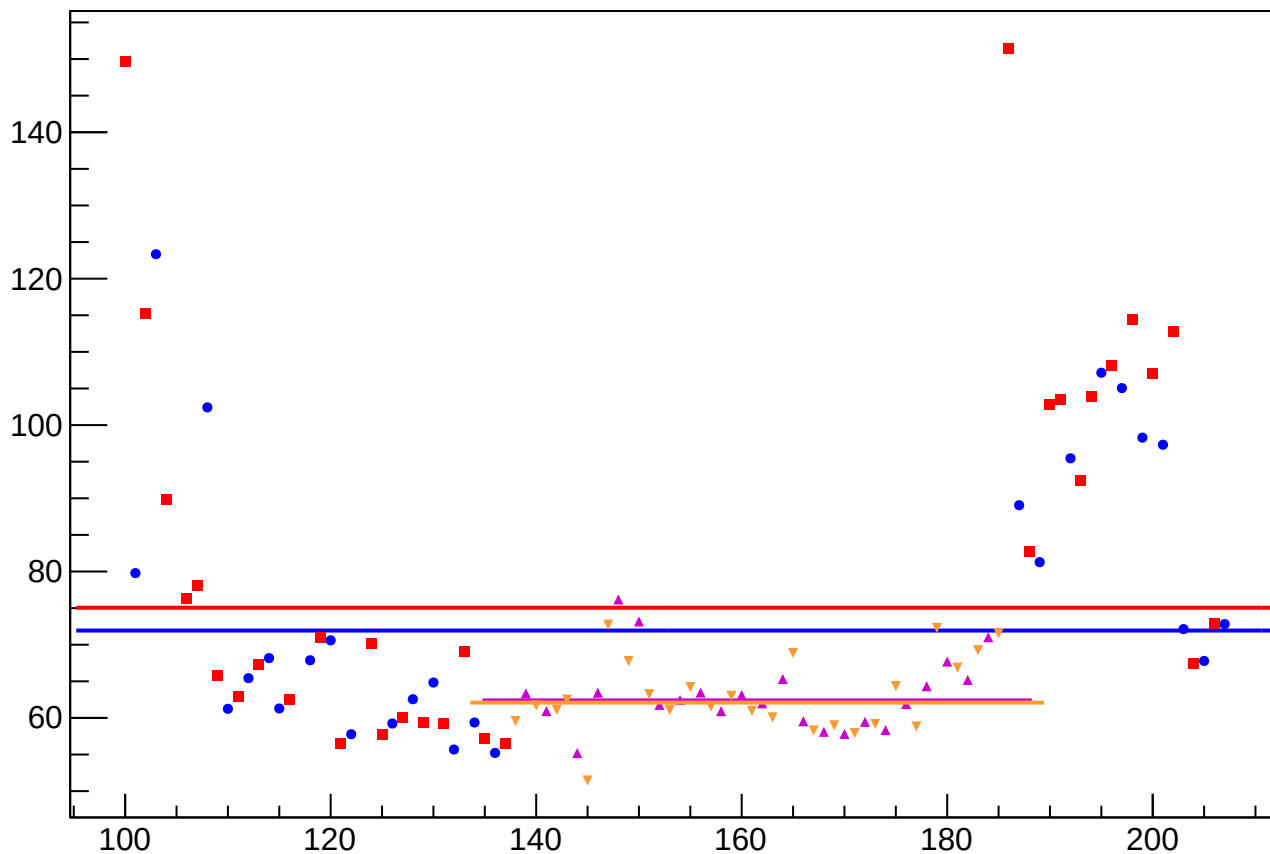
Left In: 90.363 $\pm$ 14.656  $\chi^2$ /NDF: 25.0/22

+ sign -52.704 $\pm$ 11.406  $\chi^2$ /NDF: 91.8/50

All: 3.394 $\pm$ 8.157  $\chi^2$ /NDF: 213.0/104

- sign 62.113 $\pm$ 11.669  $\chi^2$ /NDF: 71.7/53

dit\_asym\_sam\_13\_57\_dd\_rms vs Slug



Right In: 71.934 $\pm$ 0.014  $\chi^2$ /NDF: 1464651.6/25

Left Out: 62.093 $\pm$ 0.010  $\chi^2$ /NDF: 233343.0/24

Right Out: 75.057 $\pm$ 0.014  $\chi^2$ /NDF: 2007873.3/30

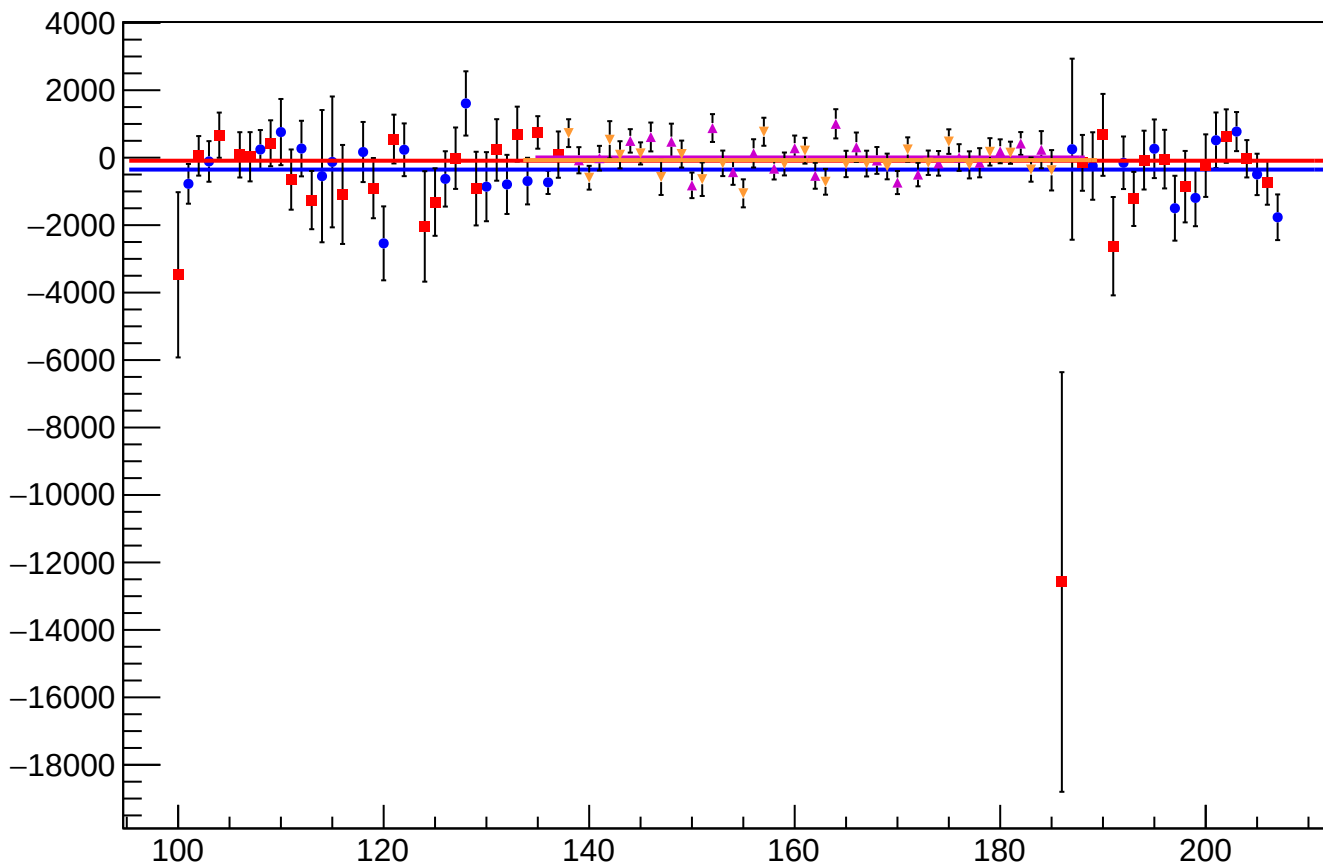
Left In: 62.395 $\pm$ 0.010  $\chi^2$ /NDF: 188814.3/22

+ sign 65.562 $\pm$ 0.008  $\chi^2$ /NDF: 2037807.9/50

All: 66.279 $\pm$ 0.006  $\chi^2$ /NDF: 4797069.1/104

- sign 67.030 $\pm$ 0.008  $\chi^2$ /NDF: 2743074.1/53

# asym\_sam\_13\_57\_dd\_dit\_correction\_mean vs Slug



Right In: -352.853 $\pm$ 146.407  $\chi^2$ /NDF: 27.2/25

Left Out: -71.324 $\pm$ 78.399  $\chi^2$ /NDF: 28.6/24

Right Out: -90.027 $\pm$ 146.833  $\chi^2$ /NDF: 27.7/30

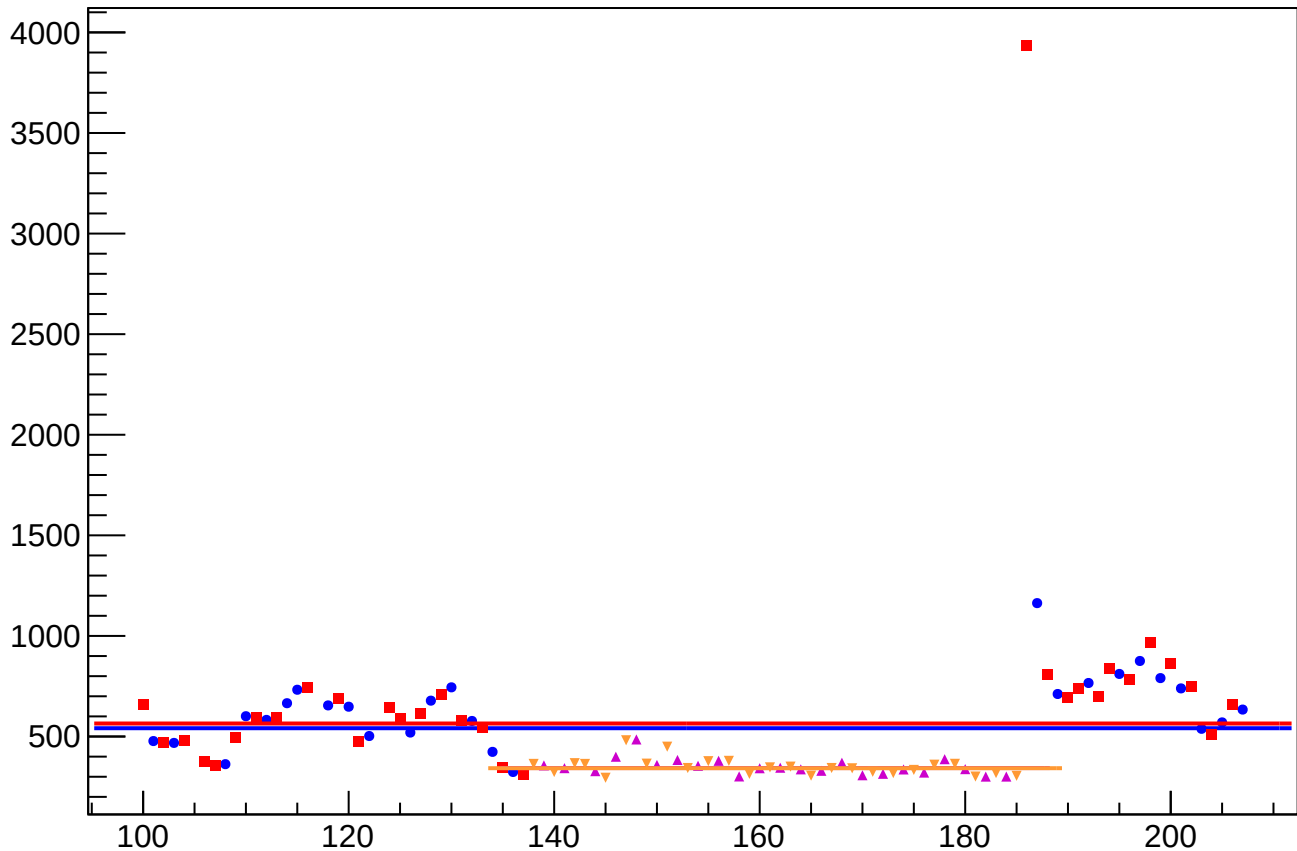
Left In: 6.134 $\pm$ 80.760  $\chi^2$ /NDF: 34.0/22

+ sign -134.062 $\pm$ 69.114  $\chi^2$ /NDF: 58.6/50

All: -76.520 $\pm$ 49.444  $\chi^2$ /NDF: 122.1/104

- sign -16.200 $\pm$ 70.763  $\chi^2$ /NDF: 62.0/53

asym\_sam\_13\_57\_dd\_dit\_correction\_rms vs Slug



Right In: 541.230+/-0.104  $\chi^2/\text{NDF}$ : 2418830.6/25

Left Out: 342.502+/-0.055  $\chi^2/\text{NDF}$ : 434208.3/24

+ sign 386.788+/-0.049  $\chi^2/\text{NDF}$ : 5716726.5/50

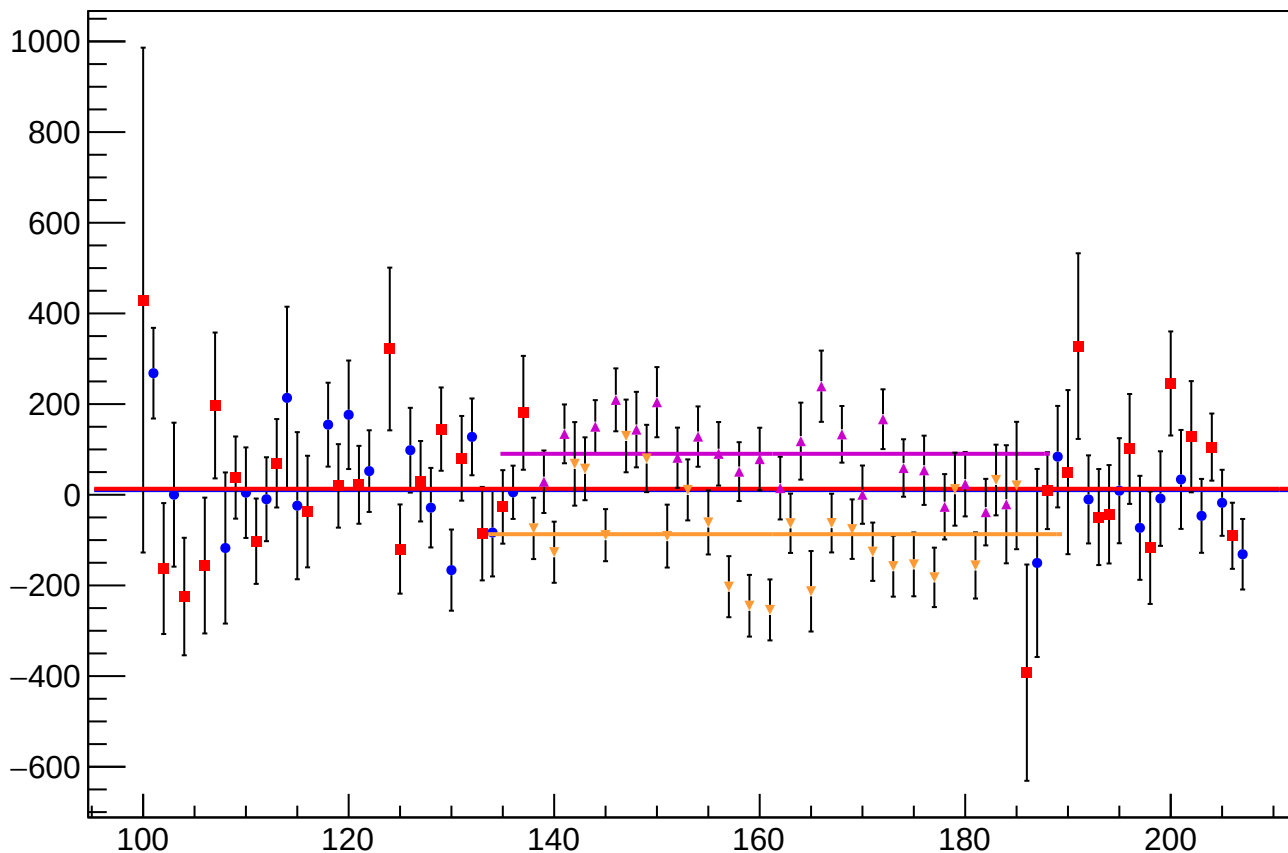
Right Out: 564.656+/-0.104  $\chi^2/\text{NDF}$ : 3128593.2/30

All: 390.635+/-0.035  $\chi^2/\text{NDF}$ : 12722395.8/100

- sign 394.668+/-0.050  $\chi^2/\text{NDF}$ : 6992975.7/53

Left In: 343.245+/-0.057  $\chi^2/\text{NDF}$ : 372991.6/22

# eigen\_dit\_asym\_sam\_13\_57\_dd\_mean vs Slug



Right In:  $10.220 \pm 19.212$   $\chi^2/\text{NDF}: 26.4/25$

Left Out:  $-86.957 \pm 14.175$   $\chi^2/\text{NDF}: 48.8/24$

Right Out:  $13.191 \pm 19.287$   $\chi^2/\text{NDF}: 36.5/30$

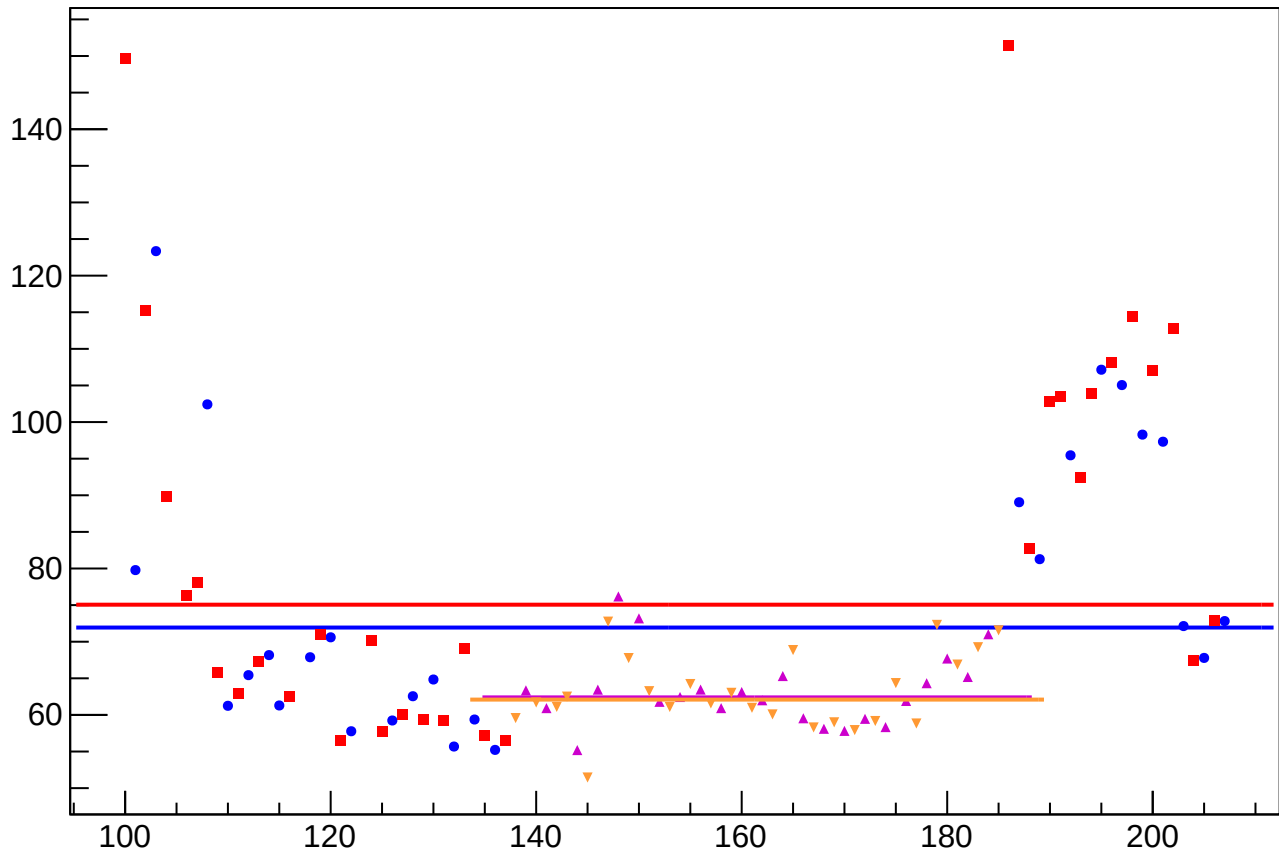
Left In:  $90.363 \pm 14.656$   $\chi^2/\text{NDF}: 25.0/22$

+ sign  $-52.704 \pm 11.406$   $\chi^2/\text{NDF}: 91.8/50$

All:  $3.394 \pm 8.157$   $\chi^2/\text{NDF}: 213.0/104$

- sign  $62.113 \pm 11.669$   $\chi^2/\text{NDF}: 71.7/53$

eigen\_dit\_asym\_sam\_13\_57\_dd\_rms vs Slug



Right In: 71.934 $\pm$ 0.014  $\chi^2$ /NDF: 1464672.9/25

Left Out: 62.093 $\pm$ 0.010  $\chi^2$ /NDF:233347.2/24

Right Out: 75.057 $\pm$ 0.014  $\chi^2$ /NDF: 2007875.5/30

Left In: 62.395 $\pm$ 0.010  $\chi^2$ /NDF:188817.4/22

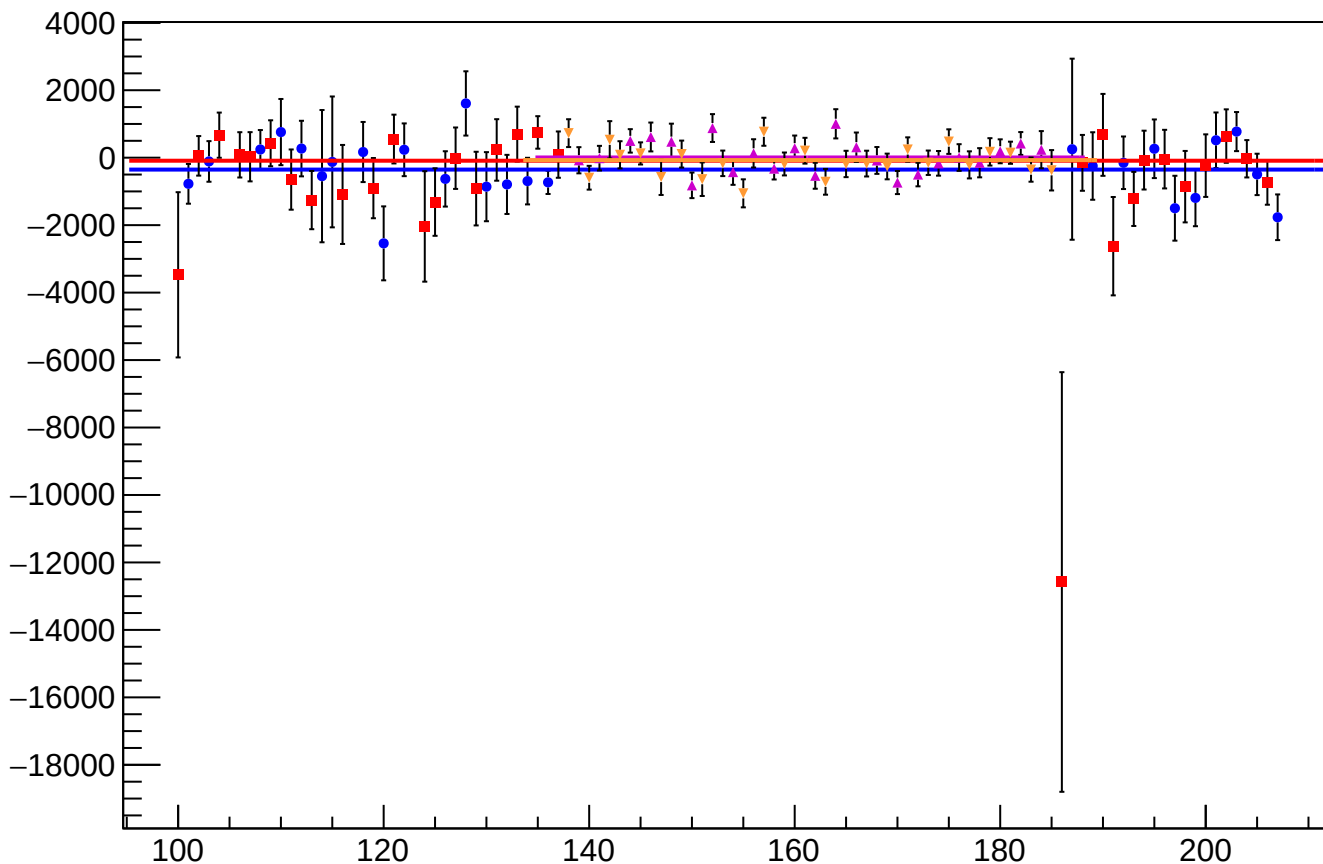
+ sign 65.562 $\pm$ 0.008  $\chi^2$ /NDF: 2037829.4/50

All: 66.279 $\pm$ 0.006  $\chi^2$ /NDF: 4797089.7/104

- sign 67.030 $\pm$ 0.008  $\chi^2$ /NDF: 2743072.7/53



asym\_sam\_13\_57\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-352.852 \pm 146.407$   $\chi^2/\text{NDF}$ : 27.2/25

Left Out:  $-71.324 \pm 78.399$   $\chi^2/\text{NDF}$ : 28.6/24

Right Out:  $-90.027 \pm 146.833$   $\chi^2/\text{NDF}$ : 27.7/30

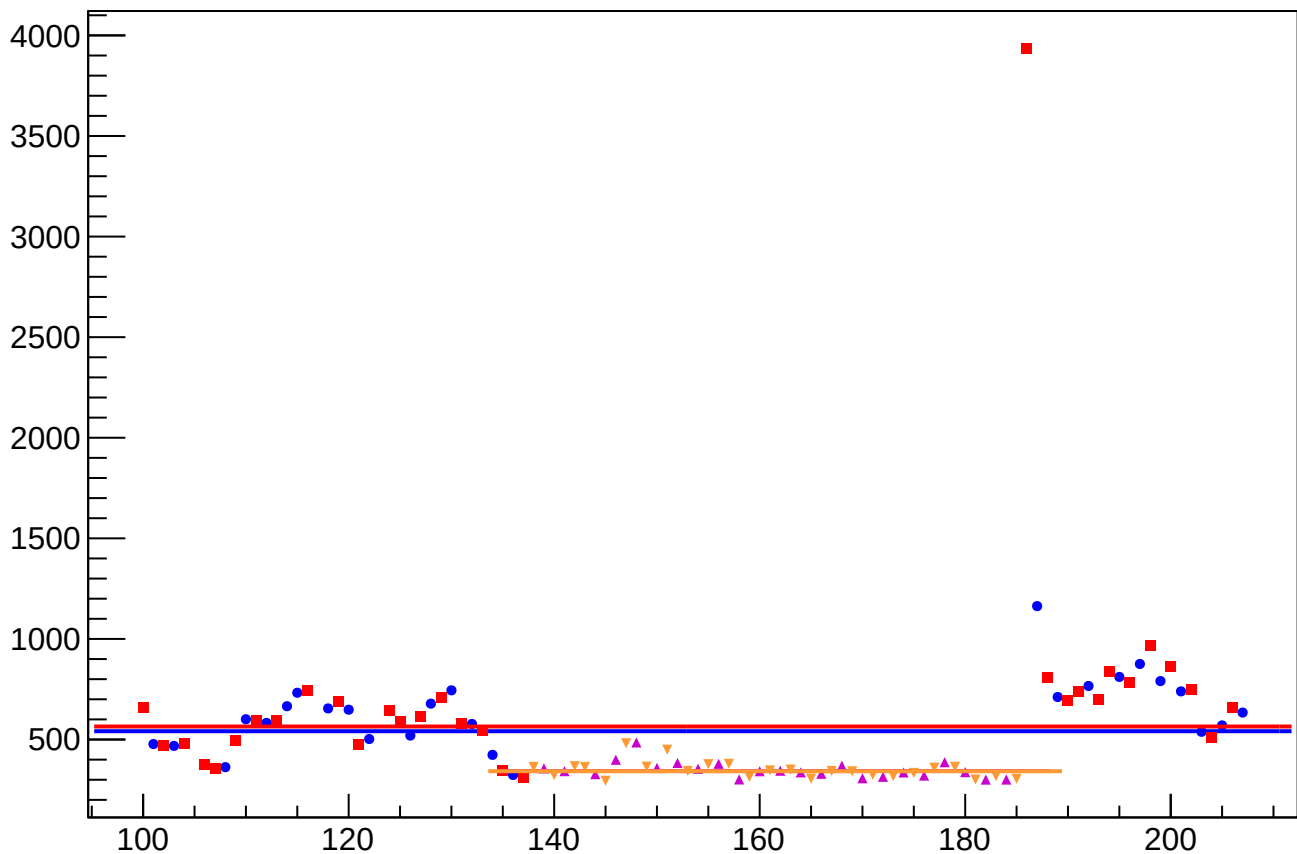
Left In:  $6.134 \pm 80.760$   $\chi^2/\text{NDF}$ : 34.0/22

+ sign  $-134.062 \pm 69.114$   $\chi^2/\text{NDF}$ : 58.6/50

All:  $-76.520 \pm 49.444$   $\chi^2/\text{NDF}$ : 122.1/104

- sign  $-16.199 \pm 70.763$   $\chi^2/\text{NDF}$ : 62.0/53

asym\_sam\_13\_57\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 541.229 $\pm$ 0.104  $\chi^2$ /NDF: 2418834.5/25

Left Out: 342.502 $\pm$ 0.055  $\chi^2$ /NDF: 434210.5/24

Right Out: 564.655 $\pm$ 0.104  $\chi^2$ /NDF: 3128598.6/30

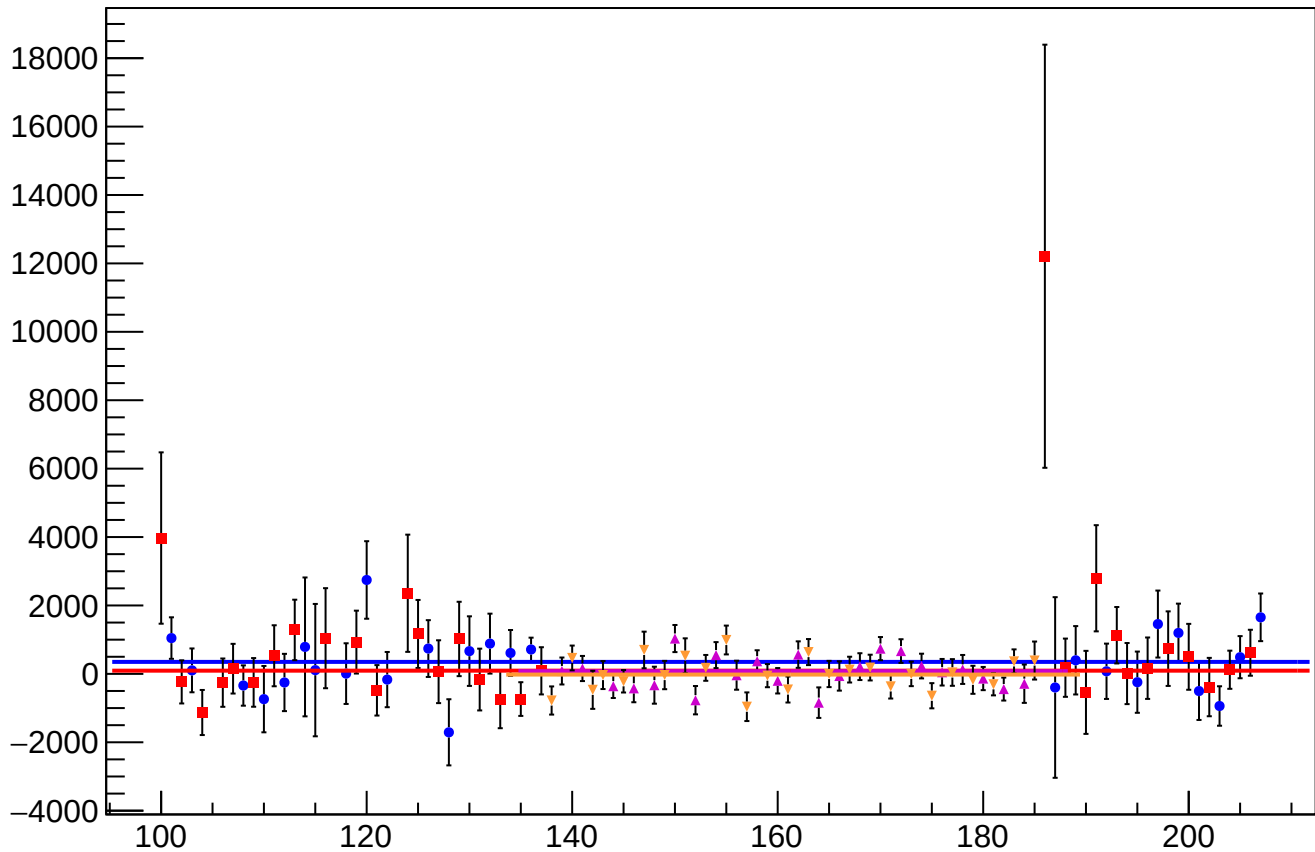
Left In: 343.245 $\pm$ 0.057  $\chi^2$ /NDF: 372993.5/22

+ sign 386.788 $\pm$ 0.049  $\chi^2$ /NDF: 5716719.8/50

All: 390.635 $\pm$ 0.035  $\chi^2$ /NDF: 12722374.3/10

- sign 394.668 $\pm$ 0.050  $\chi^2$ /NDF: 6992960.6/53

# asym\_sam\_13\_57\_dd\_mean vs Slug



Right In: 350.134+/-148.405  $\chi^2/\text{NDF}$ : 28.6/25

Left Out: -20.272+/-78.196  $\chi^2/\text{NDF}$ : 31.4/24

Right Out: 93.725+/-150.205  $\chi^2/\text{NDF}$ : 28.3/30

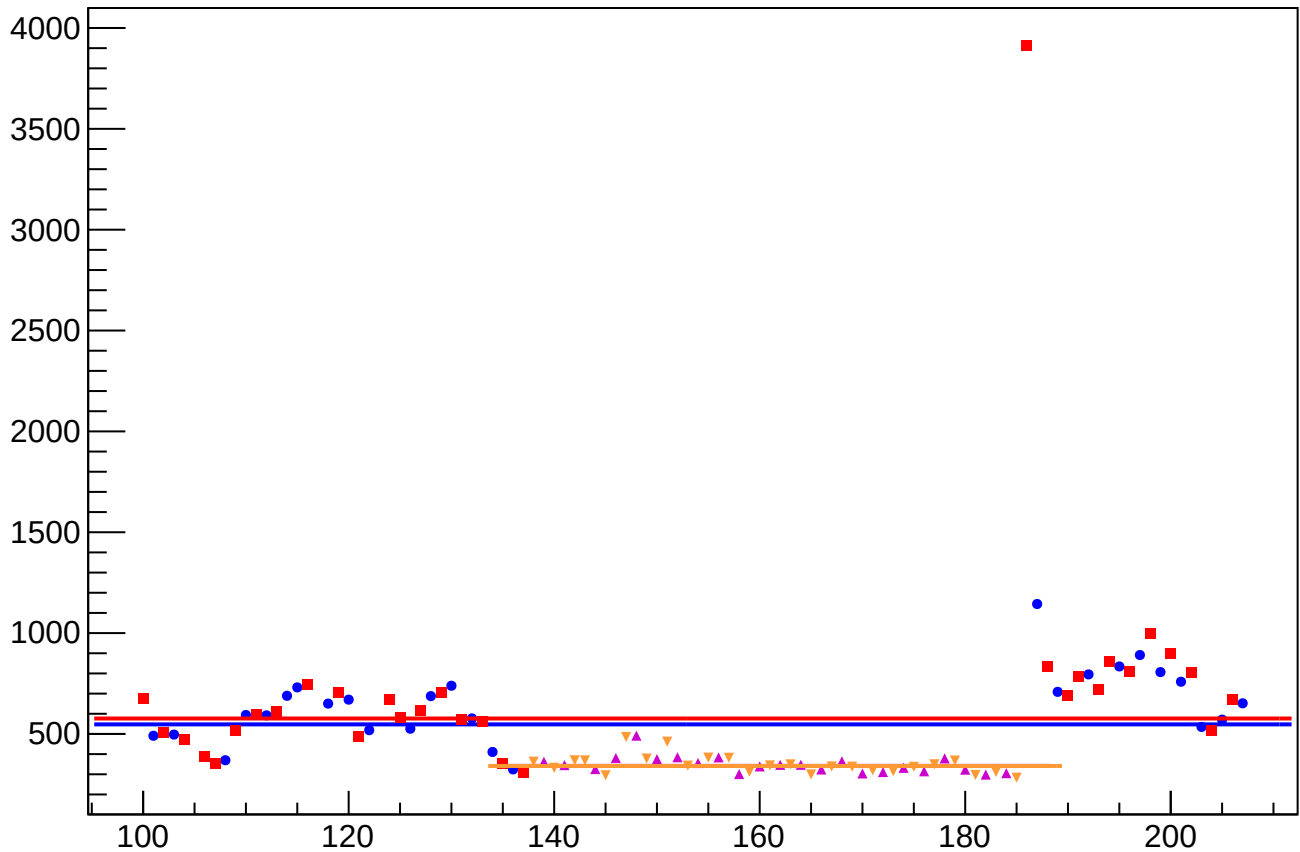
Left In: 78.719+/-80.410  $\chi^2/\text{NDF}$ : 32.9/22

+ sign 60.219+/-69.180  $\chi^2/\text{NDF}$ : 65.0/50

All: 70.873+/-49.512  $\chi^2/\text{NDF}$ : 126.2/104

- sign 82.062+/-70.891  $\chi^2/\text{NDF}$ : 61.2/53

# asym\_sam\_13\_57\_dd\_rms vs Slug



Right In: 547.403+/-0.105  $\chi^2/\text{NDF}$ : 2484726.7/25

Left Out: 341.199+/-0.055  $\chi^2/\text{NDF}$ : 510854.5/24

Right Out: 576.600+/-0.106  $\chi^2/\text{NDF}$ : 3205160.3/30

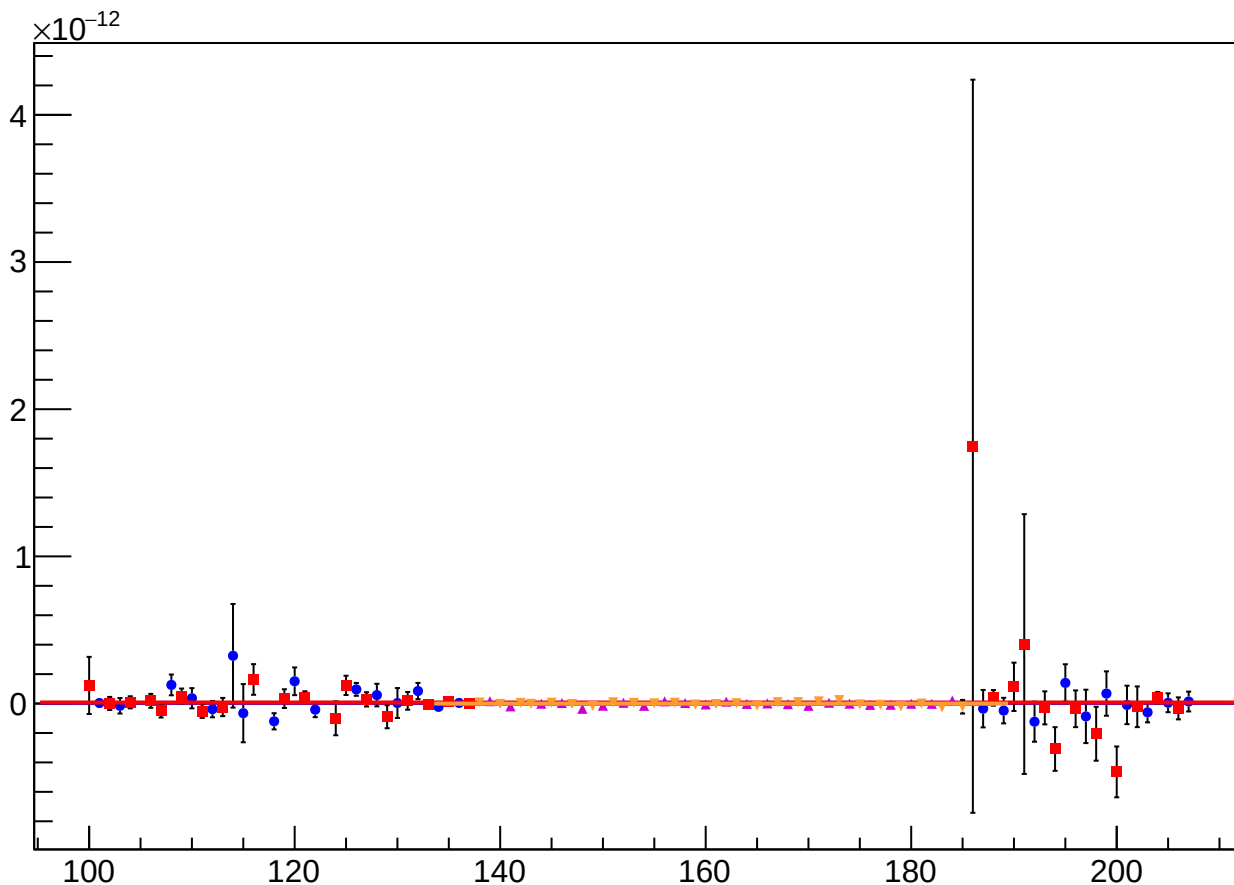
Left In: 341.622+/-0.057  $\chi^2/\text{NDF}$ : 396885.0/22

+ sign 386.008+/-0.049  $\chi^2/\text{NDF}$ : 6017756.6/50

All: 389.888+/-0.035  $\chi^2/\text{NDF}$ : 13437009.1/10

- sign 393.963+/-0.050  $\chi^2/\text{NDF}$ : 7406352.8/53

asym\_sam\_13\_57\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 25.0/25

Left Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 19.2/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 30.0/30

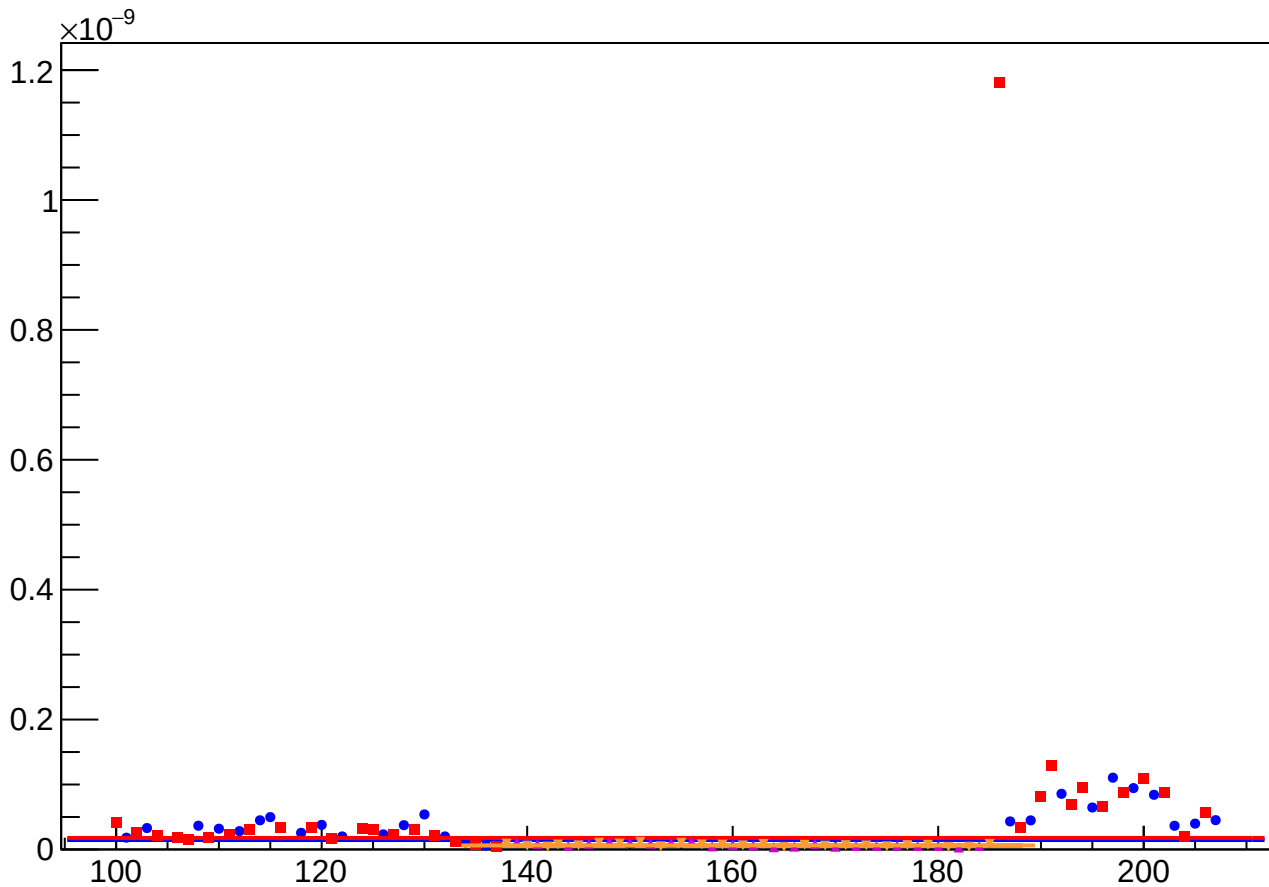
Left In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 14.4/22

+ sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 44.5/50

All: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 90.1/104

- sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 45.4/53

# asym\_sam\_13\_57\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6887093.9/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :1159883.9/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6173500.7/30

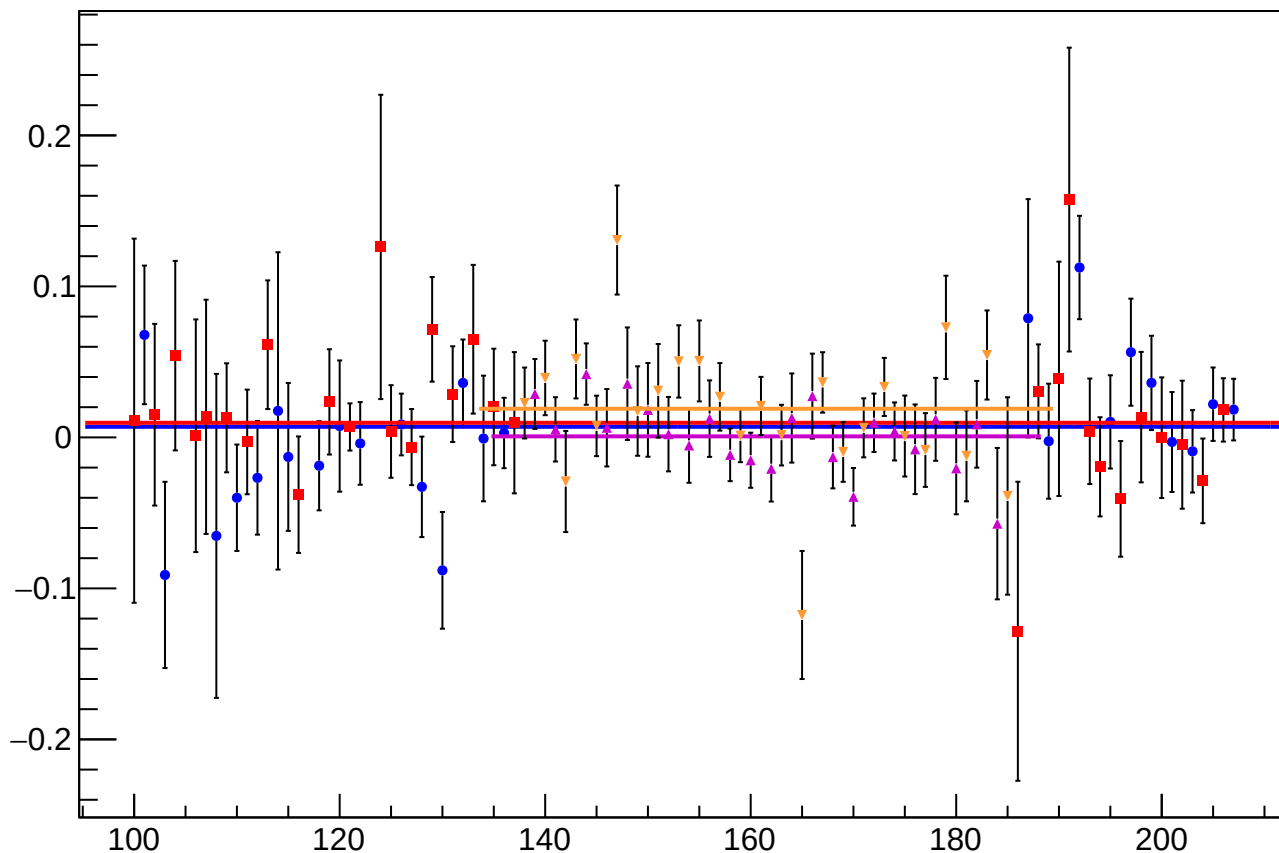
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :1660677.6/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10134669.3/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 21285590.7/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11150919.8/53

asym\_sam\_13\_57\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.007 \pm 0.006$   $\chi^2/\text{NDF}: 31.3/25$

Left Out:  $0.019 \pm 0.005$   $\chi^2/\text{NDF}: 41.2/24$

Right Out:  $0.010 \pm 0.006$   $\chi^2/\text{NDF}: 20.0/30$

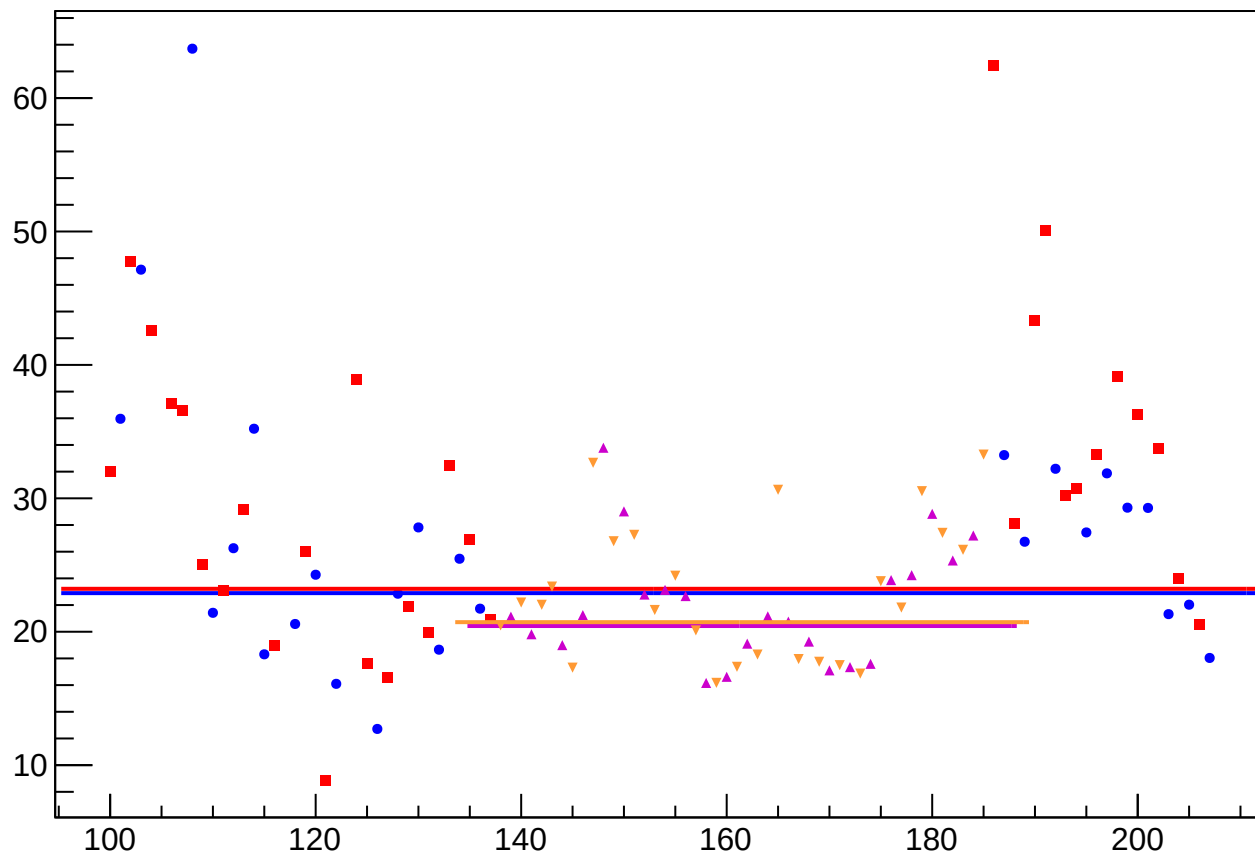
Left In:  $0.001 \pm 0.005$   $\chi^2/\text{NDF}: 17.7/22$

+ sign  $0.015 \pm 0.004$   $\chi^2/\text{NDF}: 74.7/50$

All:  $0.009 \pm 0.003$   $\chi^2/\text{NDF}: 117.3/104$

- sign  $0.004 \pm 0.004$   $\chi^2/\text{NDF}: 38.9/53$

asym\_sam\_13\_57\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 22.894 $\pm$ 0.005  $\chi^2$ /NDF: 2203176.6/25

Left Out: 20.718 $\pm$ 0.003  $\chi^2$ /NDF:1506374.1/24

Right Out: 23.218 $\pm$ 0.005  $\chi^2$ /NDF: 4410897.1/30

Left In: 20.429 $\pm$ 0.003  $\chi^2$ /NDF:1173949.1/22

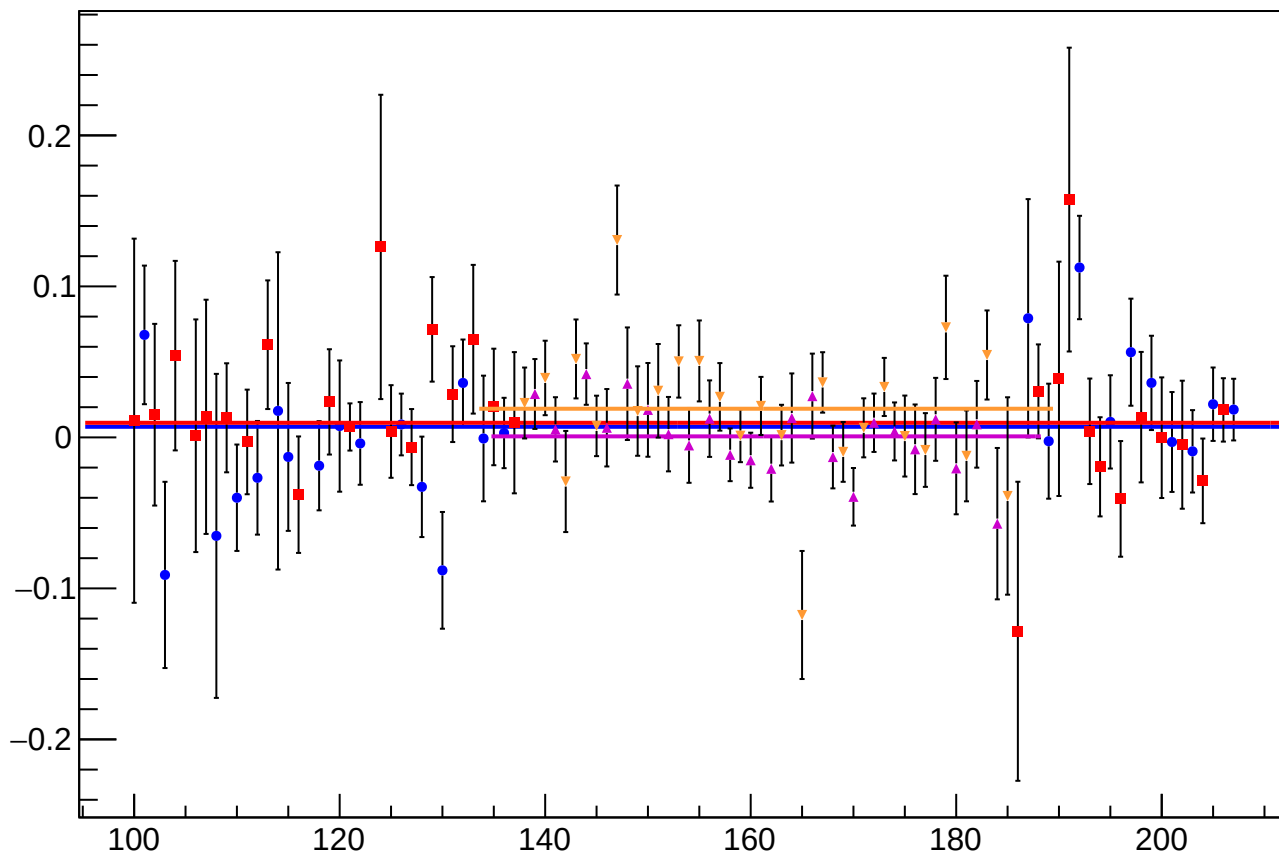
+ sign 21.515 $\pm$ 0.003  $\chi^2$ /NDF: 3855756.4/50

All: 21.485 $\pm$ 0.002  $\chi^2$ /NDF: 9675683.5/104

- sign 21.455 $\pm$ 0.003  $\chi^2$ /NDF: 5819687.9/53



asym\_sam\_13\_57\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.007 \pm 0.006$   $\chi^2/\text{NDF}: 31.3/25$

Left Out:  $0.019 \pm 0.005$   $\chi^2/\text{NDF}: 41.2/24$

Right Out:  $0.010 \pm 0.006$   $\chi^2/\text{NDF}: 20.0/30$

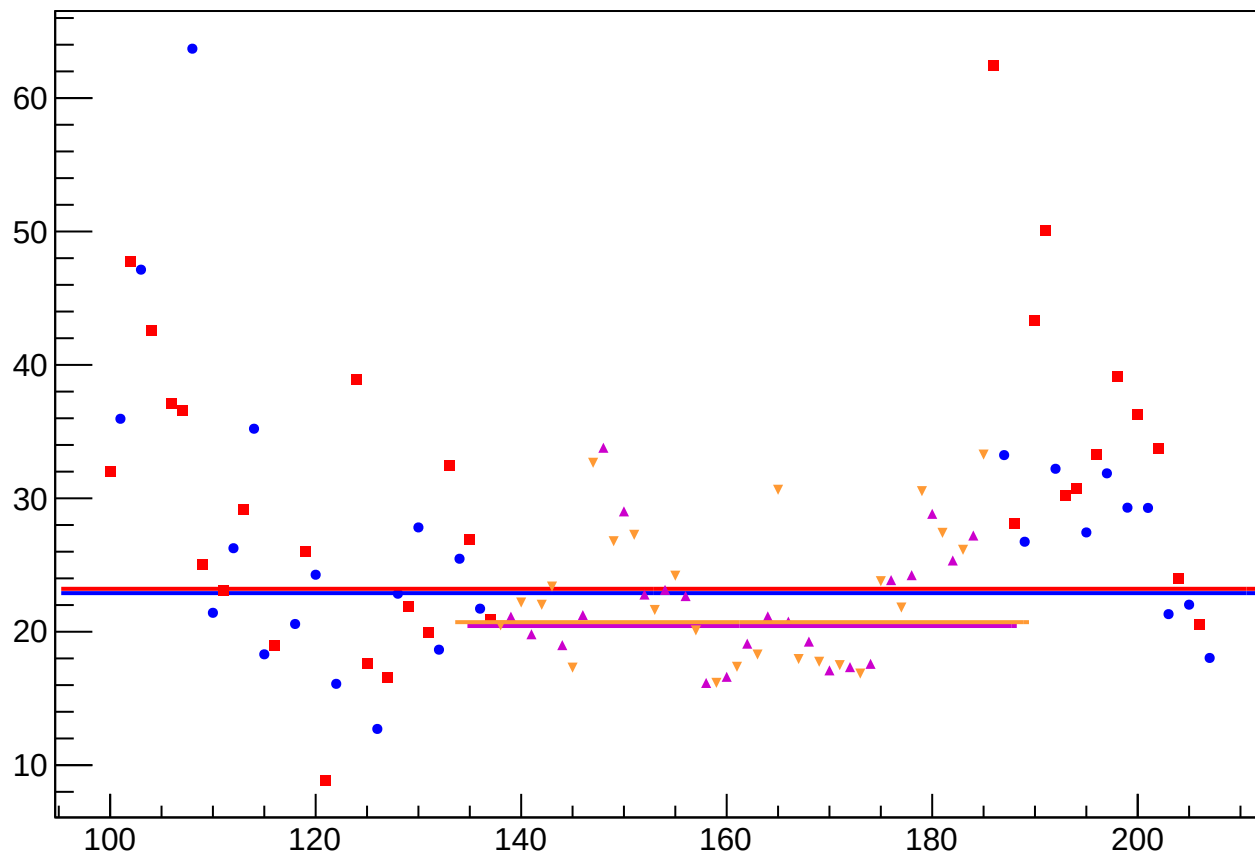
Left In:  $0.001 \pm 0.005$   $\chi^2/\text{NDF}: 17.7/22$

+ sign  $0.015 \pm 0.004$   $\chi^2/\text{NDF}: 74.7/50$

All:  $0.009 \pm 0.003$   $\chi^2/\text{NDF}: 117.3/104$

- sign  $0.004 \pm 0.004$   $\chi^2/\text{NDF}: 38.9/53$

asym\_sam\_13\_57\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 22.894 $\pm$ 0.005  $\chi^2$ /NDF: 2203176.6/25

Left Out: 20.718 $\pm$ 0.003  $\chi^2$ /NDF:1506374.1/24

Right Out: 23.218 $\pm$ 0.005  $\chi^2$ /NDF: 4410897.1/30

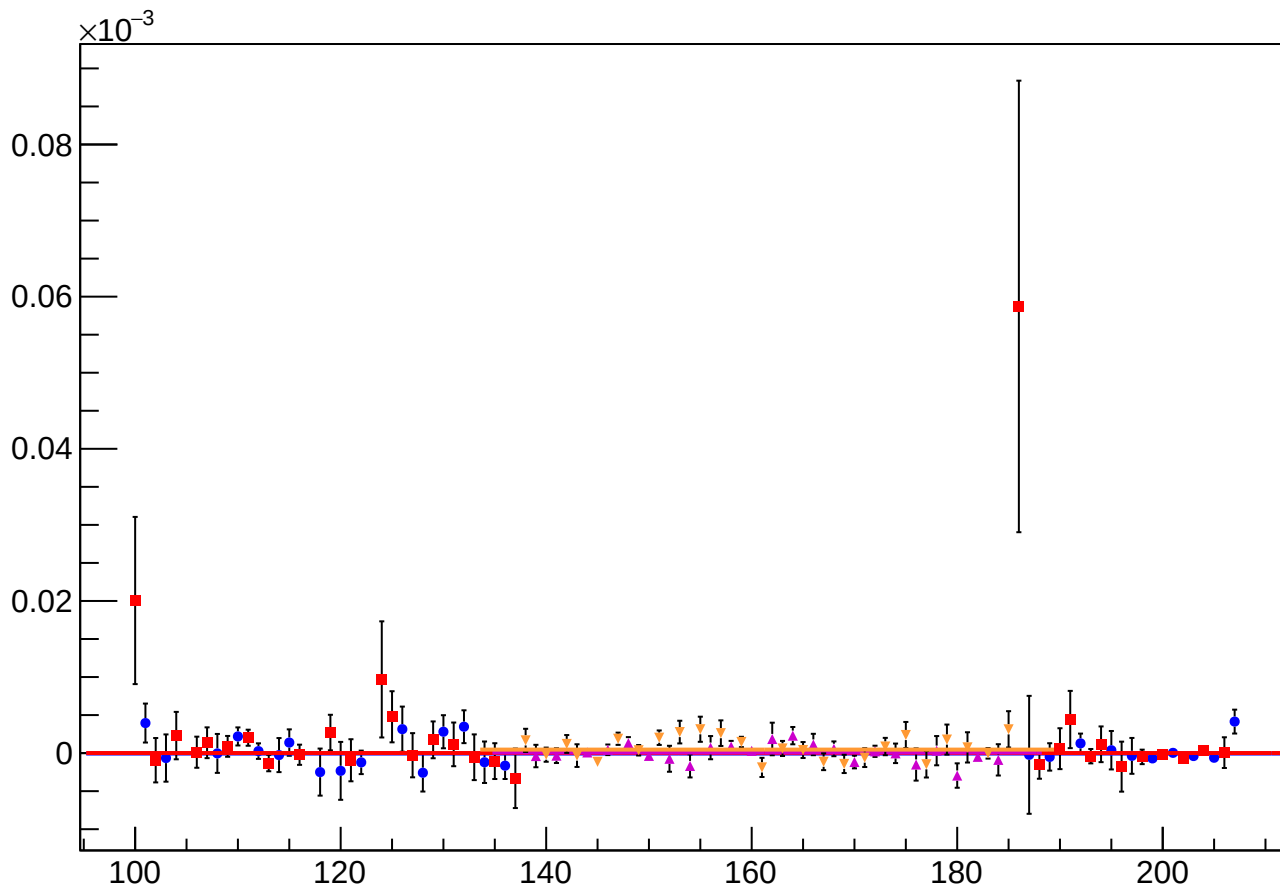
Left In: 20.429 $\pm$ 0.003  $\chi^2$ /NDF:1173949.1/22

+ sign 21.515 $\pm$ 0.003  $\chi^2$ /NDF: 3855756.4/50

All: 21.485 $\pm$ 0.002  $\chi^2$ /NDF: 9675683.5/104

- sign 21.455 $\pm$ 0.003  $\chi^2$ /NDF: 5819687.9/53

asym\_sam\_13\_57\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 27.5/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 36.7/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 25.8/30

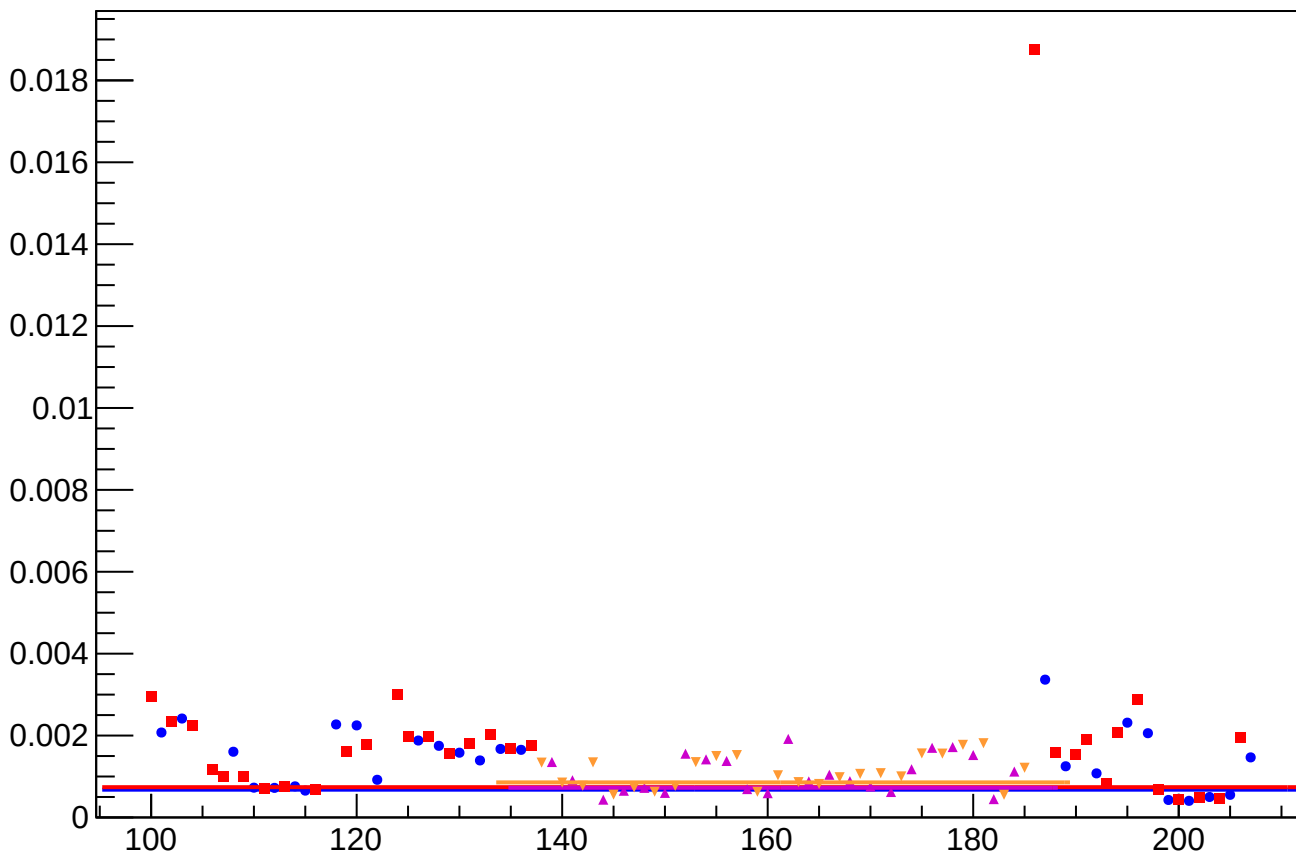
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 19.5/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 67.1/50

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 113.1/104

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 45.4/53

asym\_sam\_13\_57\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.001 $\pm$ 0.000  $\chi^2$ /NDF: 8834702.2/25

Left Out: 0.001 $\pm$ 0.000  $\chi^2$ /NDF:4439075.2/24

Right Out: 0.001 $\pm$ 0.000  $\chi^2$ /NDF: 9542500.8/30

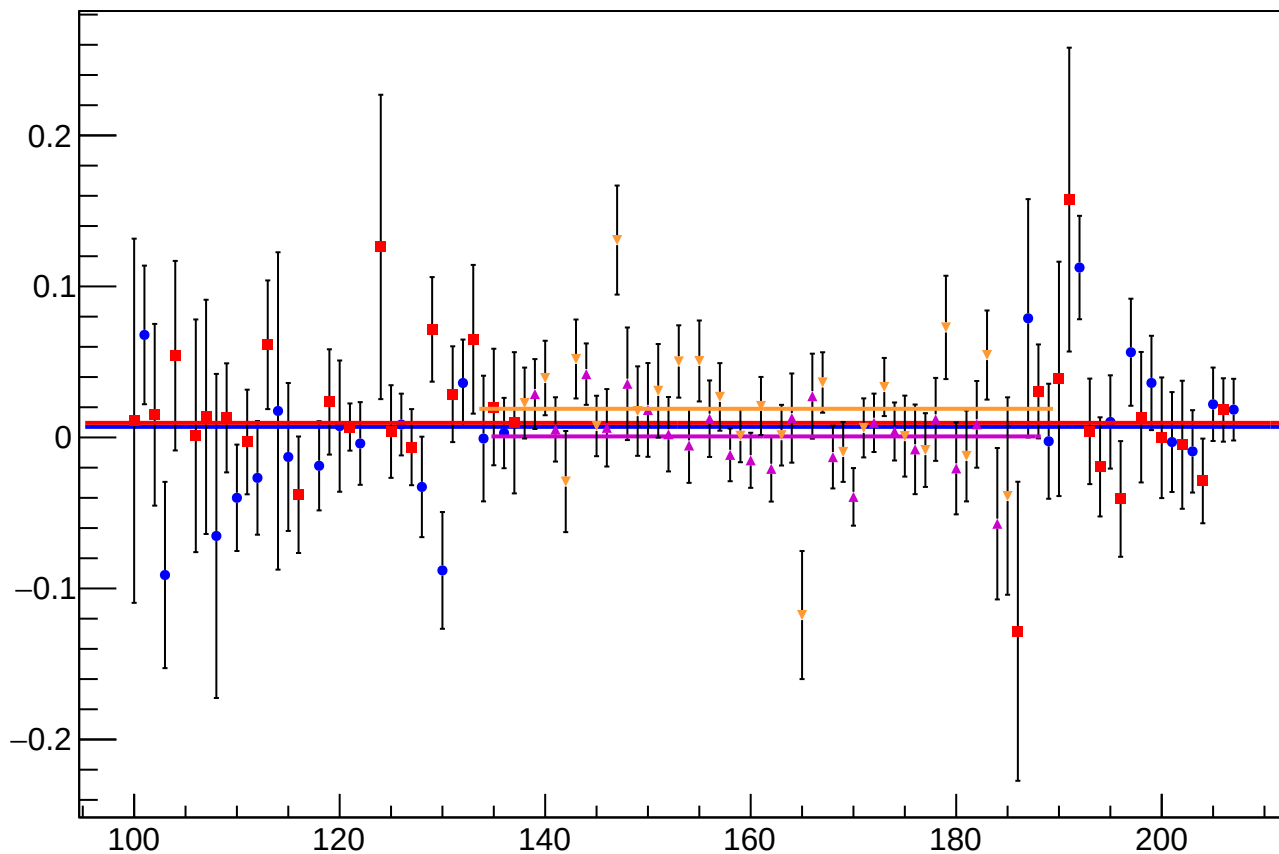
Left In: 0.001 $\pm$ 0.000  $\chi^2$ /NDF:5805288.5/22

+ sign 0.001 $\pm$ 0.000  $\chi^2$ /NDF: 13960581.8/50

All: 0.001 $\pm$ 0.000  $\chi^2$ /NDF: 29381496.4/104

- sign 0.001 $\pm$ 0.000  $\chi^2$ /NDF: 15352138.7/53

asym\_sam\_13\_57\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.007 \pm 0.006$   $\chi^2/\text{NDF}$ : 31.3/25

Left Out:  $0.019 \pm 0.005$   $\chi^2/\text{NDF}$ : 41.2/24

Right Out:  $0.010 \pm 0.006$   $\chi^2/\text{NDF}$ : 20.0/30

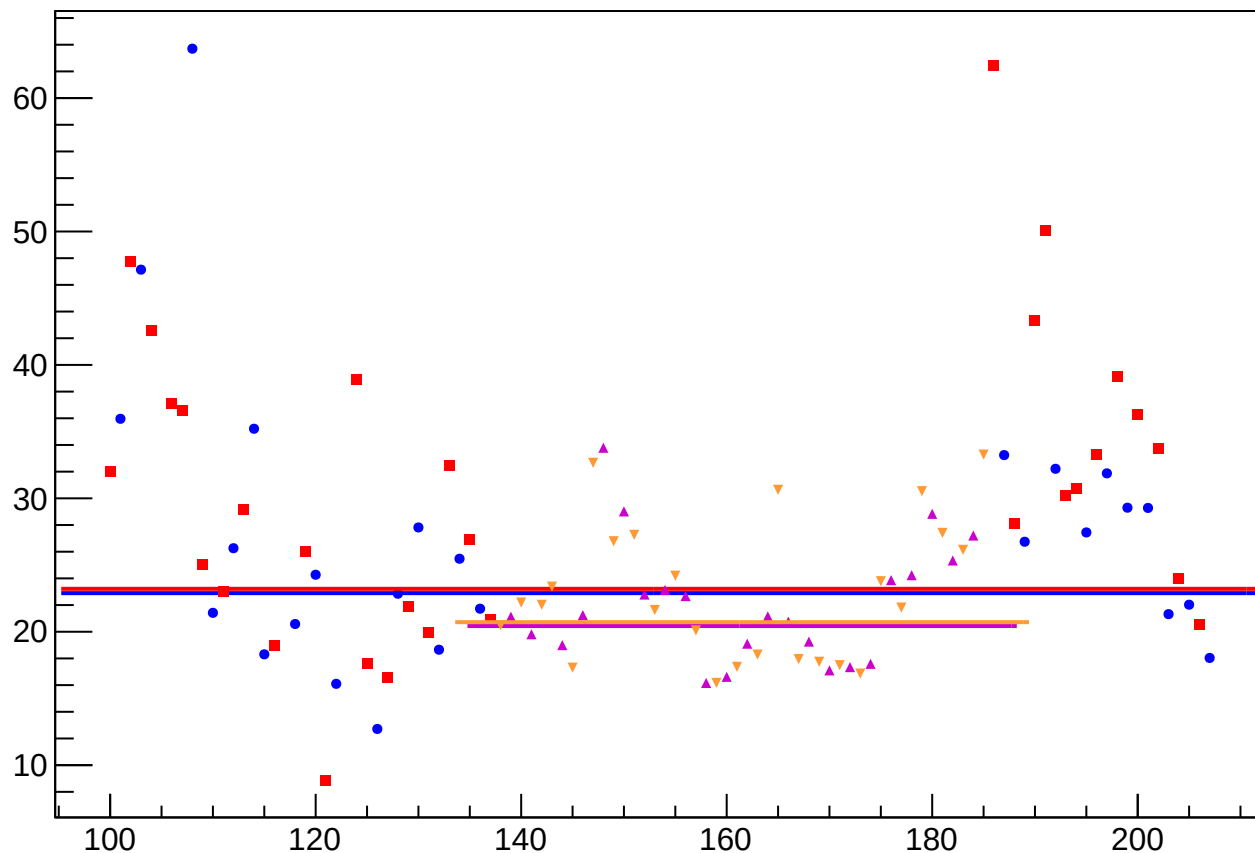
Left In:  $0.001 \pm 0.005$   $\chi^2/\text{NDF}$ : 17.7/22

+ sign  $0.015 \pm 0.004$   $\chi^2/\text{NDF}$ : 74.7/50

All:  $0.009 \pm 0.003$   $\chi^2/\text{NDF}$ : 117.3/104

- sign  $0.004 \pm 0.004$   $\chi^2/\text{NDF}$ : 38.9/53

asym\_sam\_13\_57\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 22.894 $\pm$ 0.005  $\chi^2$ /NDF: 2202972.7/25

Left Out: 20.718 $\pm$ 0.003  $\chi^2$ /NDF: 1506475.9/24

Right Out: 23.219 $\pm$ 0.005  $\chi^2$ /NDF: 4410315.7/30

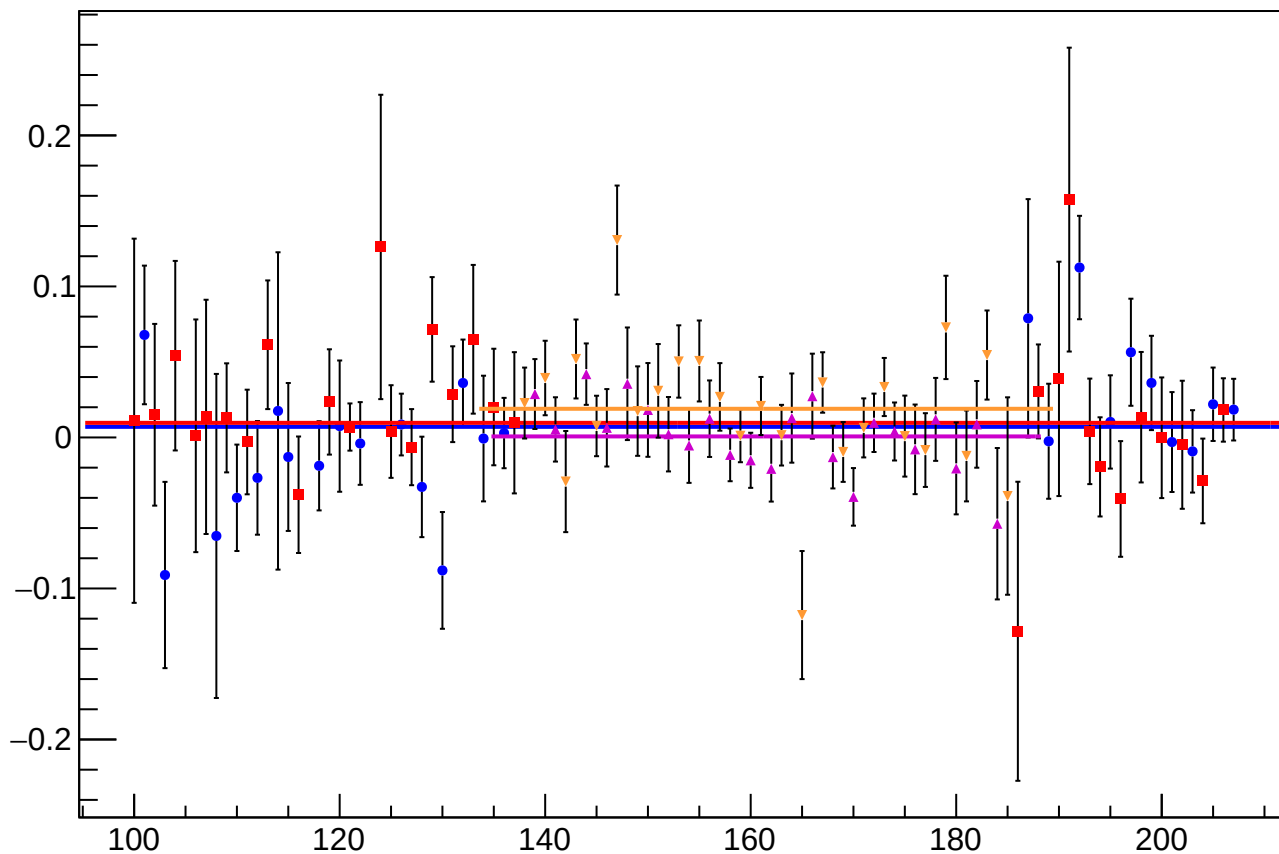
Left In: 20.429 $\pm$ 0.003  $\chi^2$ /NDF: 1173995.4/22

+ sign 21.515 $\pm$ 0.003  $\chi^2$ /NDF: 3855702.0/50

All: 21.485 $\pm$ 0.002  $\chi^2$ /NDF: 9675175.9/104

- sign 21.455 $\pm$ 0.003  $\chi^2$ /NDF: 5819235.8/53

asym\_sam\_13\_57\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.007 \pm 0.006$   $\chi^2/\text{NDF}$ : 31.3/25

Left Out:  $0.019 \pm 0.005$   $\chi^2/\text{NDF}$ : 41.2/24

Right Out:  $0.010 \pm 0.006$   $\chi^2/\text{NDF}$ : 20.0/30

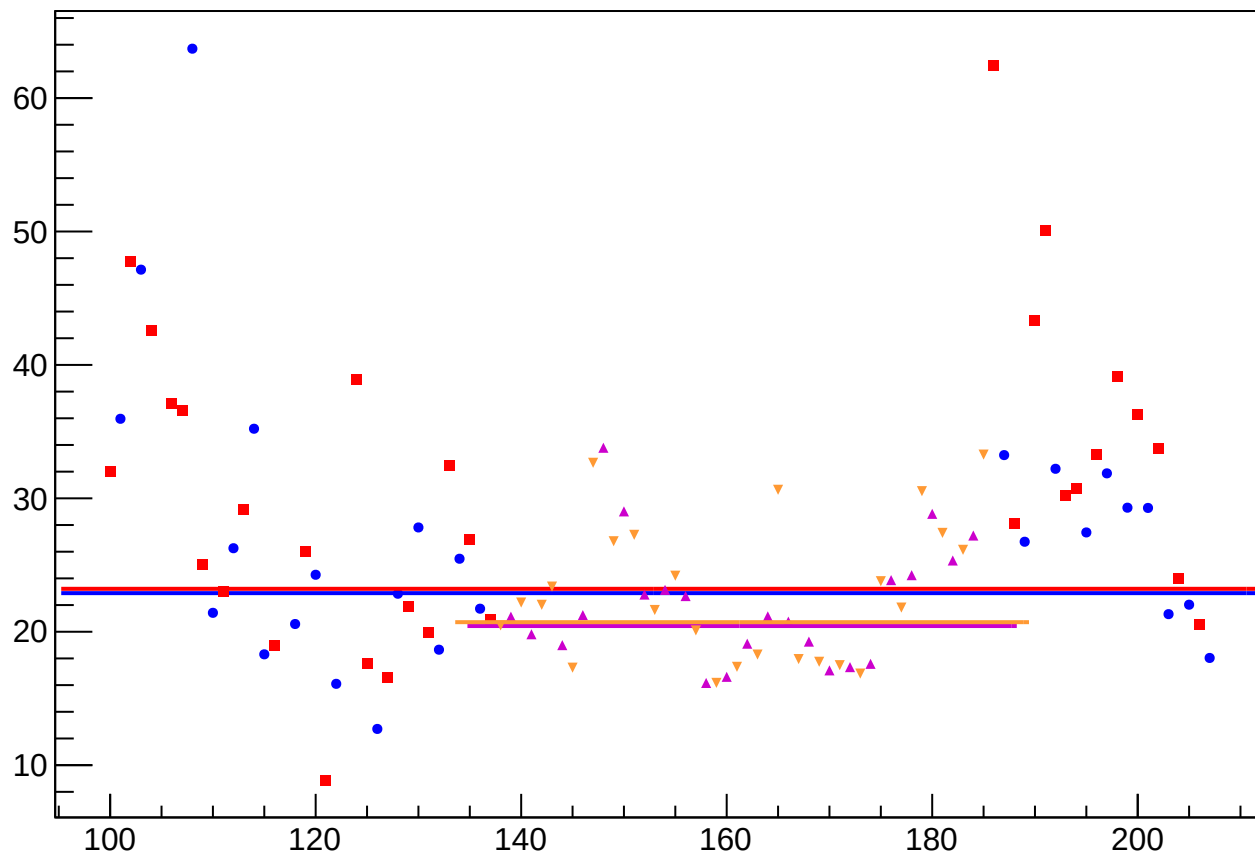
Left In:  $0.001 \pm 0.005$   $\chi^2/\text{NDF}$ : 17.7/22

+ sign  $0.015 \pm 0.004$   $\chi^2/\text{NDF}$ : 74.7/50

All:  $0.009 \pm 0.003$   $\chi^2/\text{NDF}$ : 117.3/104

- sign  $0.004 \pm 0.004$   $\chi^2/\text{NDF}$ : 38.9/53

asym\_sam\_13\_57\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 22.894 $\pm$ 0.005  $\chi^2$ /NDF: 2202972.7/25

Left Out: 20.718 $\pm$ 0.003  $\chi^2$ /NDF: 1506475.9/24

Right Out: 23.219 $\pm$ 0.005  $\chi^2$ /NDF: 4410315.7/30

Left In: 20.429 $\pm$ 0.003  $\chi^2$ /NDF: 1173995.4/22

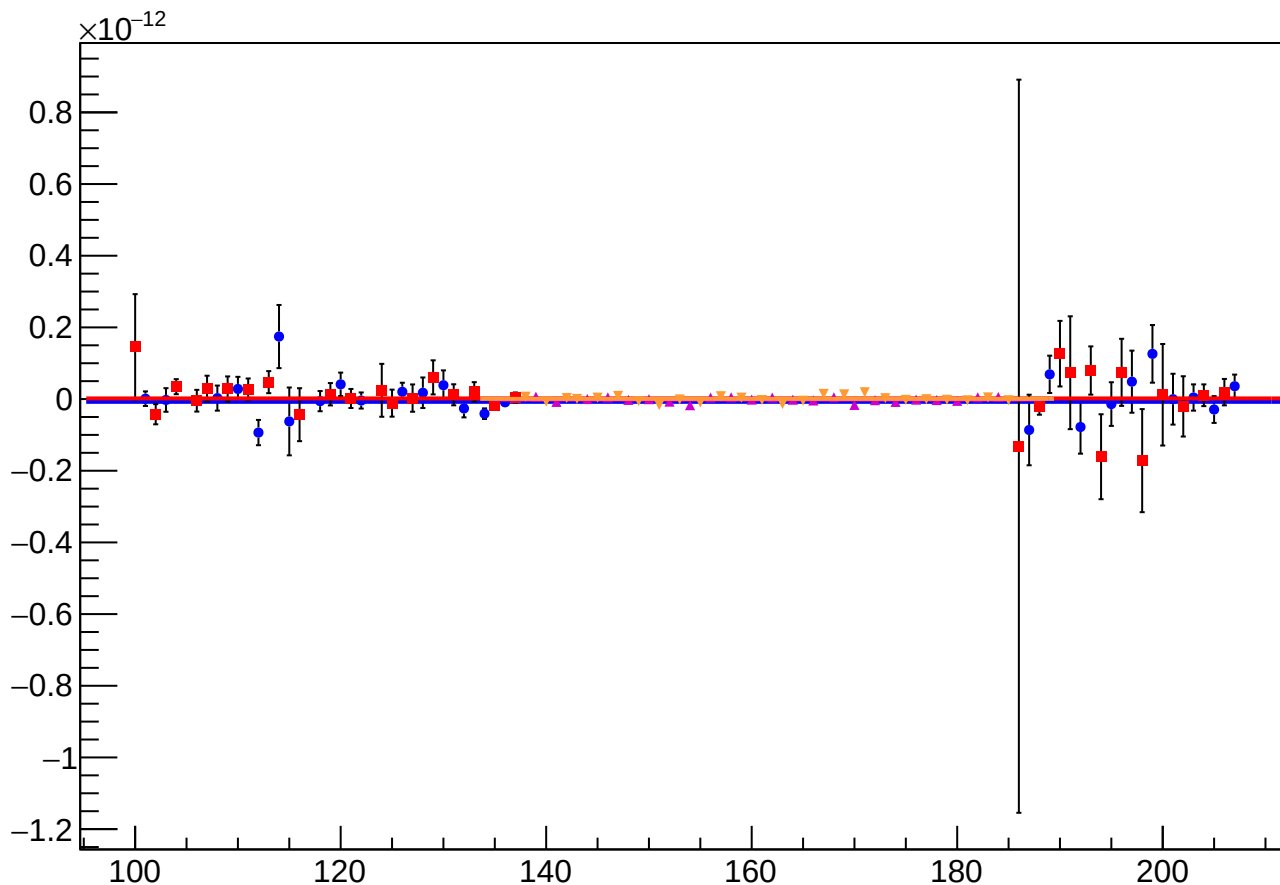
+ sign 21.515 $\pm$ 0.003  $\chi^2$ /NDF: 3855702.0/50

All: 21.485 $\pm$ 0.002  $\chi^2$ /NDF: 9675175.9/104

- sign 21.455 $\pm$ 0.003  $\chi^2$ /NDF: 5819235.8/53



asym\_sam\_13\_57\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 31.8/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 29.0/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 25.7/30

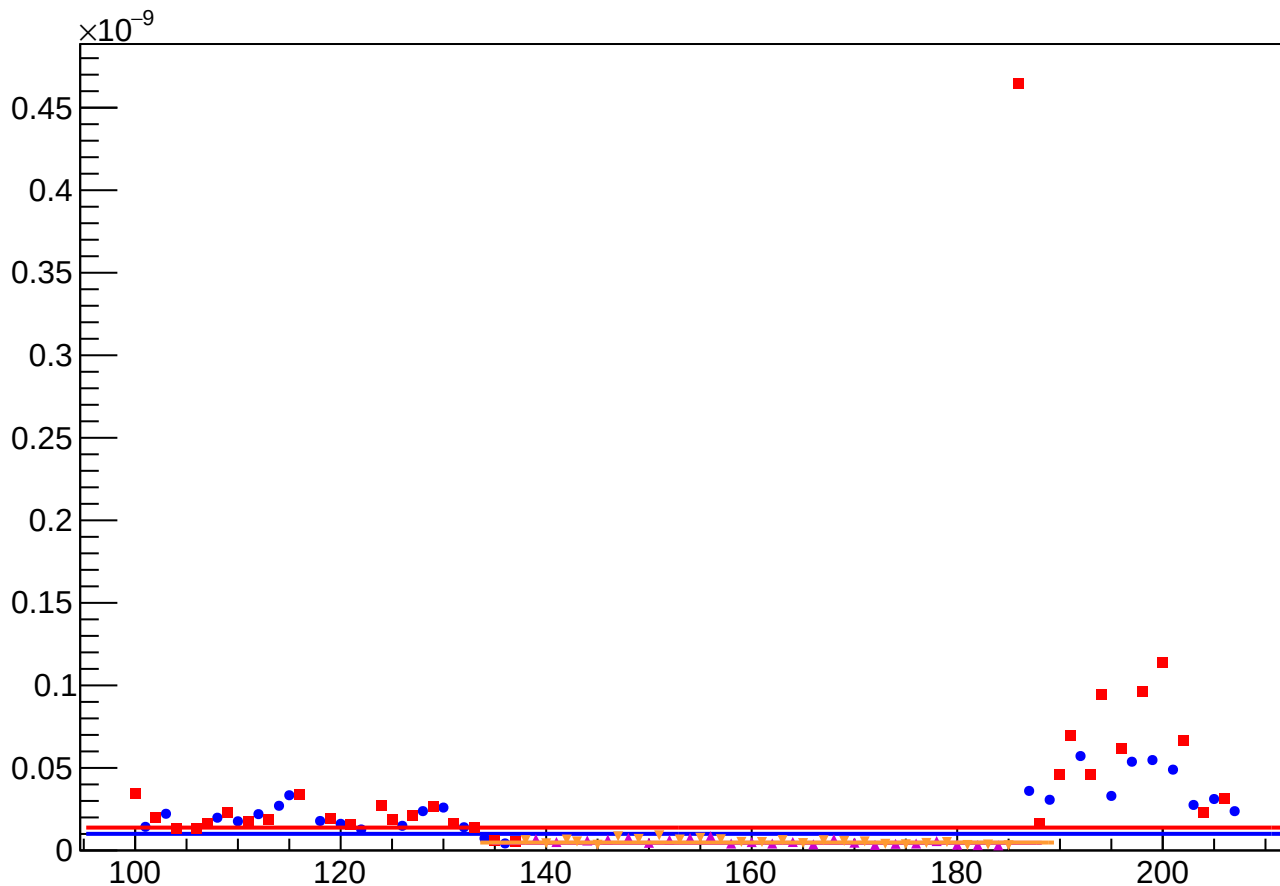
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 20.6/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 64.2/50

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 111.4/104

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 46.7/53

asym\_sam\_13\_57\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8757289.4/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2118264.6/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8817164.7/30

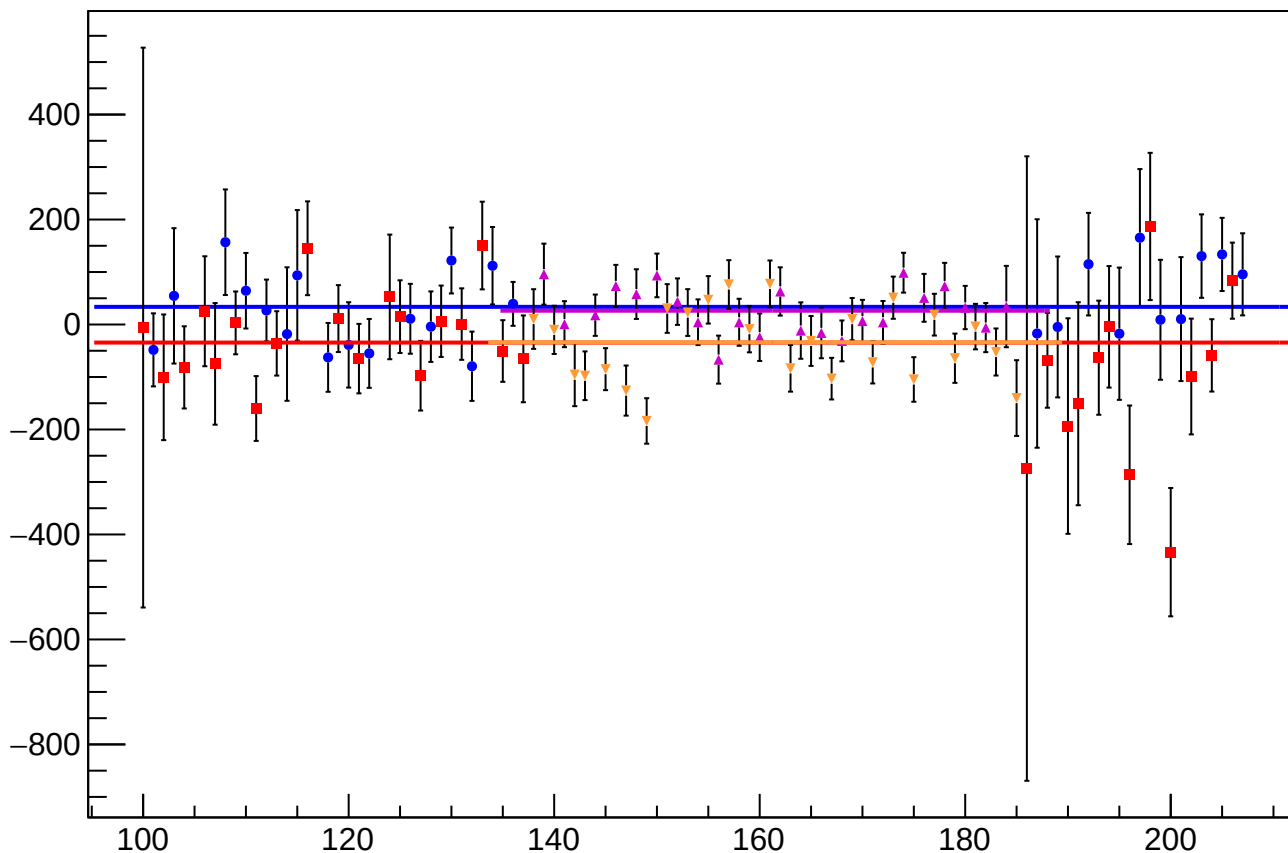
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1908439.7/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13583932.7/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 30016383.0/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 16428240.9/53

# reg\_asym\_sam\_15\_37\_dd\_mean vs Slug



Right In:  $33.641 \pm 15.330$   $\chi^2/\text{NDF}: 21.0/25$

Left Out:  $-33.956 \pm 8.993$   $\chi^2/\text{NDF}: 58.7/24$

Right Out:  $-34.412 \pm 15.214$   $\chi^2/\text{NDF}: 39.4/30$

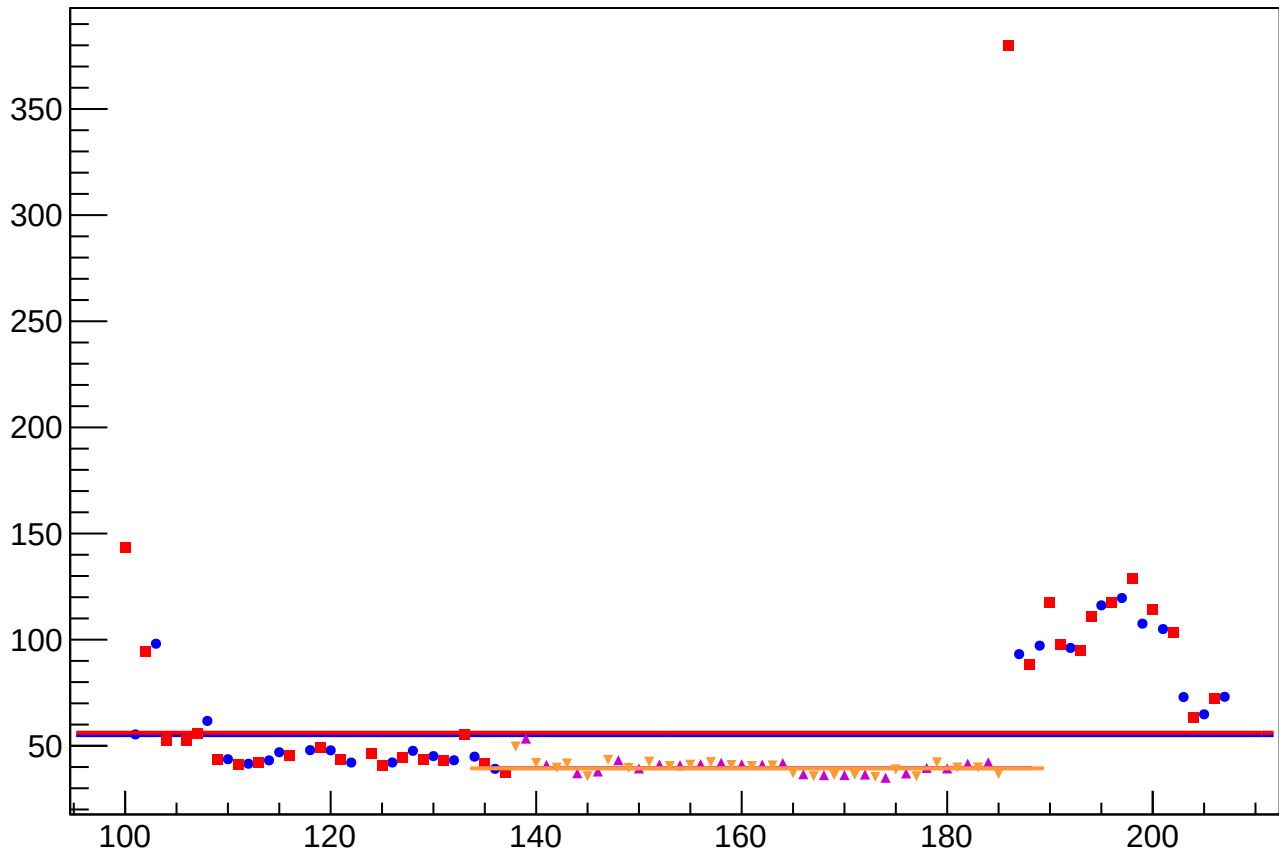
Left In:  $26.267 \pm 9.271$   $\chi^2/\text{NDF}: 22.5/22$

+ sign  $-16.648 \pm 7.757$   $\chi^2/\text{NDF}: 94.2/50$

All:  $-3.677 \pm 5.541$   $\chi^2/\text{NDF}: 173.4/104$

- sign  $9.835 \pm 7.917$   $\chi^2/\text{NDF}: 73.5/53$

# reg\_asym\_sam\_15\_37\_dd\_rms vs Slug



Right In: 55.033 $\pm$ 0.011  $\chi^2$ /NDF: 3668727.2/25

Left Out: 39.383 $\pm$ 0.006  $\chi^2$ /NDF: 228799.9/24

Right Out: 56.165 $\pm$ 0.011  $\chi^2$ /NDF: 4969388.0/30

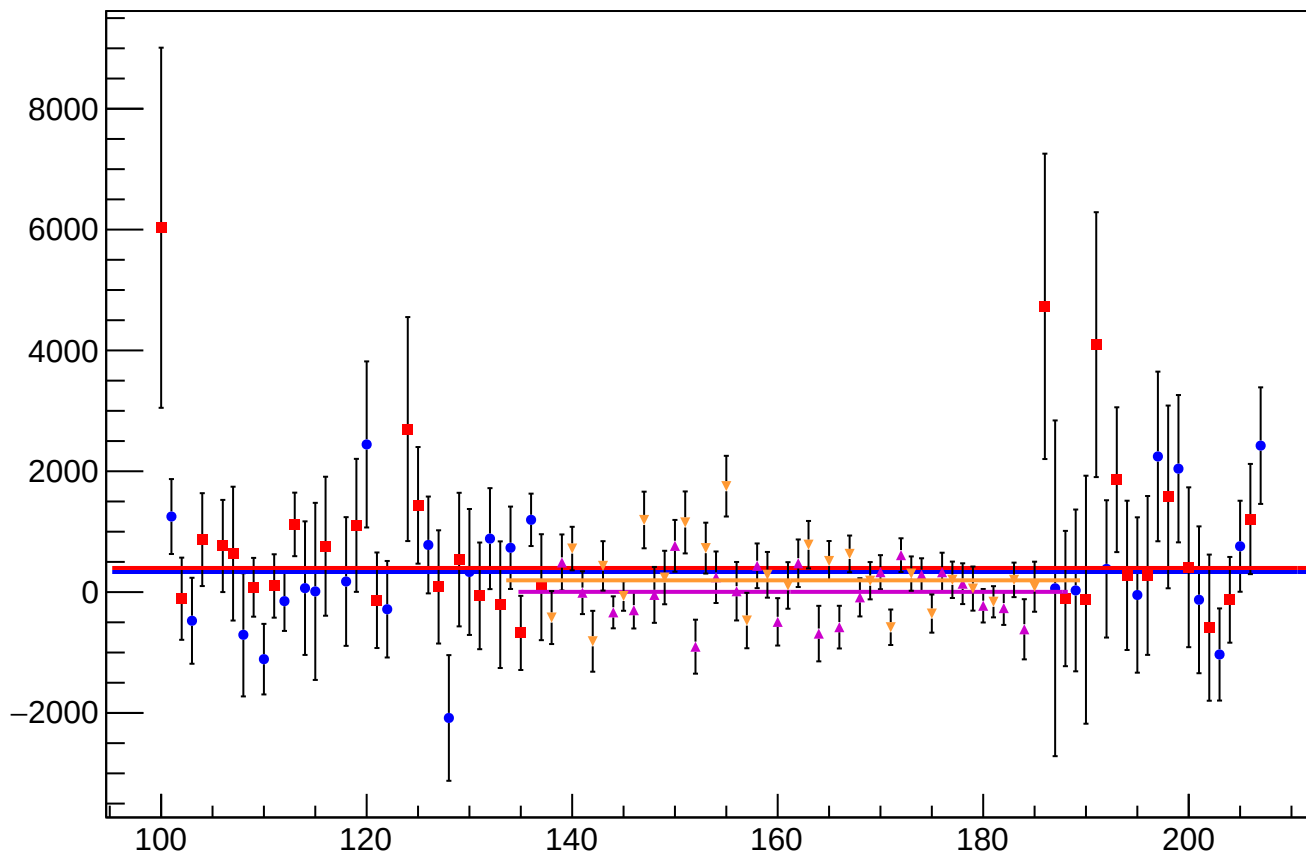
Left In: 39.491 $\pm$ 0.007  $\chi^2$ /NDF: 251801.8/22

+ sign 43.390 $\pm$ 0.005  $\chi^2$ /NDF: 5448241.3/50

All: 43.692 $\pm$ 0.004  $\chi^2$ /NDF: 12427336.7/104

- sign 44.006 $\pm$ 0.006  $\chi^2$ /NDF: 6972907.6/53

asym\_sam\_15\_37\_dd\_reg\_correction\_mean vs Slug



Right In: 332.754 $\pm$ 163.011  $\chi^2$ /NDF: 37.5/25

Left Out: 195.029 $\pm$ 70.093  $\chi^2$ /NDF:48.6/24

Right Out: 399.507 $\pm$ 160.453  $\chi^2$ /NDF: 25.2/30

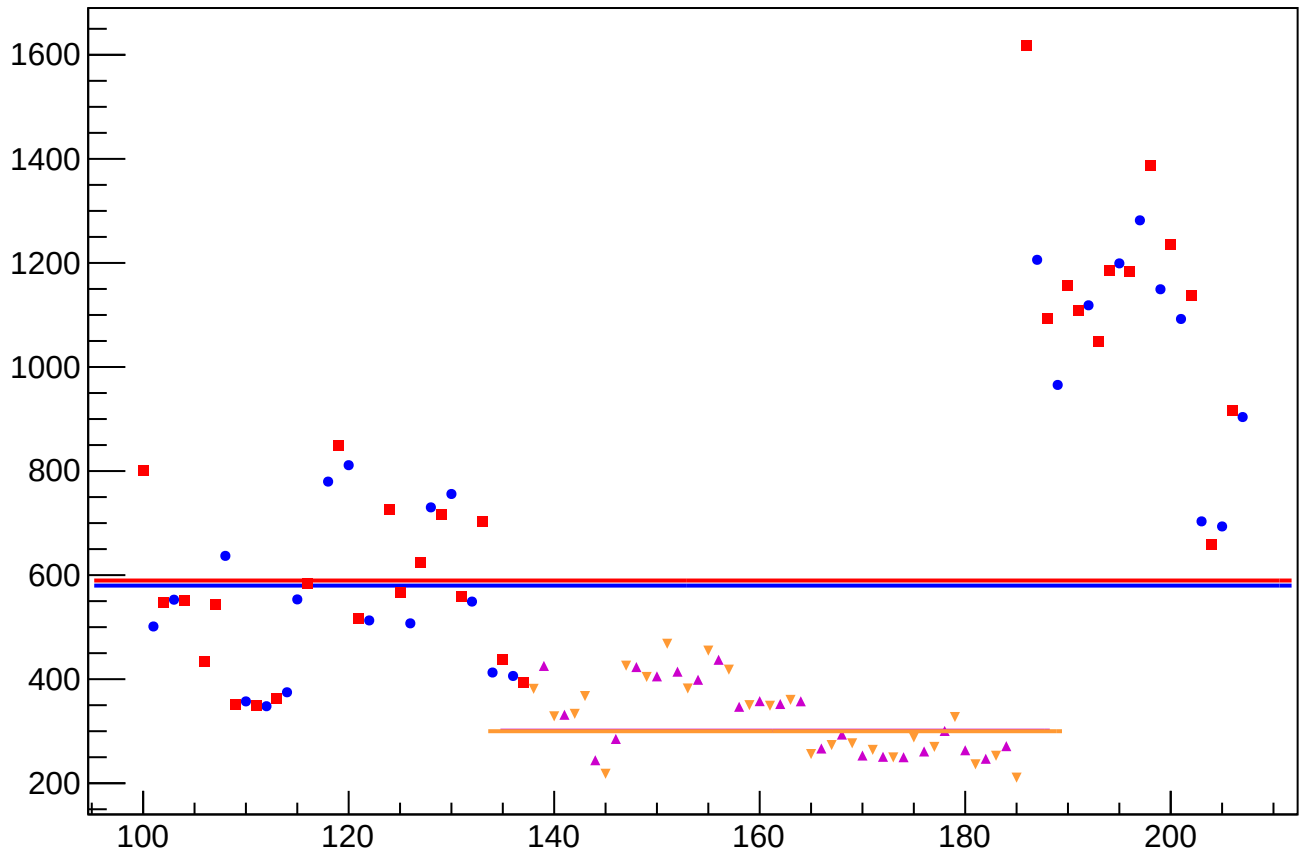
Left In: 4.015 $\pm$ 71.981  $\chi^2$ /NDF:32.4/22

+ sign 216.520 $\pm$ 64.392  $\chi^2$ /NDF: 86.7/50

All: 144.839 $\pm$ 45.979  $\chi^2$ /NDF: 151.8/104

- sign 70.274 $\pm$ 65.675  $\chi^2$ /NDF: 62.6/53

asym\_sam\_15\_37\_dd\_reg\_correction\_rms vs Slug



Right In: 579.862 $\pm$ 0.115  $\chi^2$ /NDF: 4340446.1/25

Left Out: 299.976 $\pm$ 0.050  $\chi^2$ /NDF:1808461.5/24

Right Out: 589.619 $\pm$ 0.113  $\chi^2$ /NDF: 5684544.9/30

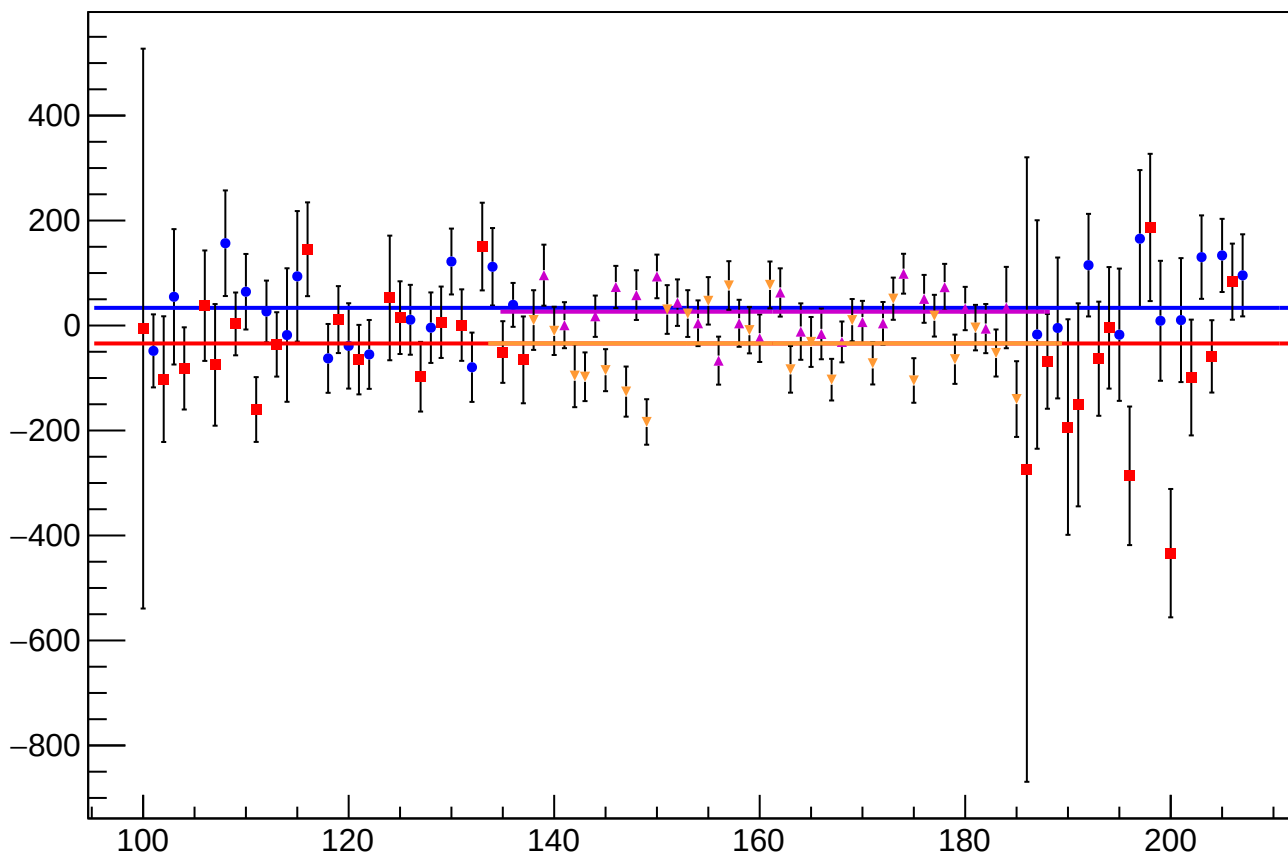
Left In: 301.000 $\pm$ 0.051  $\chi^2$ /NDF:1407198.4/22

+ sign 343.650 $\pm$ 0.046  $\chi^2$ /NDF: 11124926.2/50

All: 346.445 $\pm$ 0.033  $\chi^2$ /NDF: 23611436.2/10

- sign 349.353 $\pm$ 0.046  $\chi^2$ /NDF: 12478818.9/53

# cor\_asym\_sam\_15\_37\_dd\_mean vs Slug



Right In:  $33.646 \pm 15.330$   $\chi^2/\text{NDF}$ : 21.0/25

Left Out:  $-33.955 \pm 8.993$   $\chi^2/\text{NDF}$ : 58.7/24

Right Out:  $-34.186 \pm 15.216$   $\chi^2/\text{NDF}$ : 39.6/30

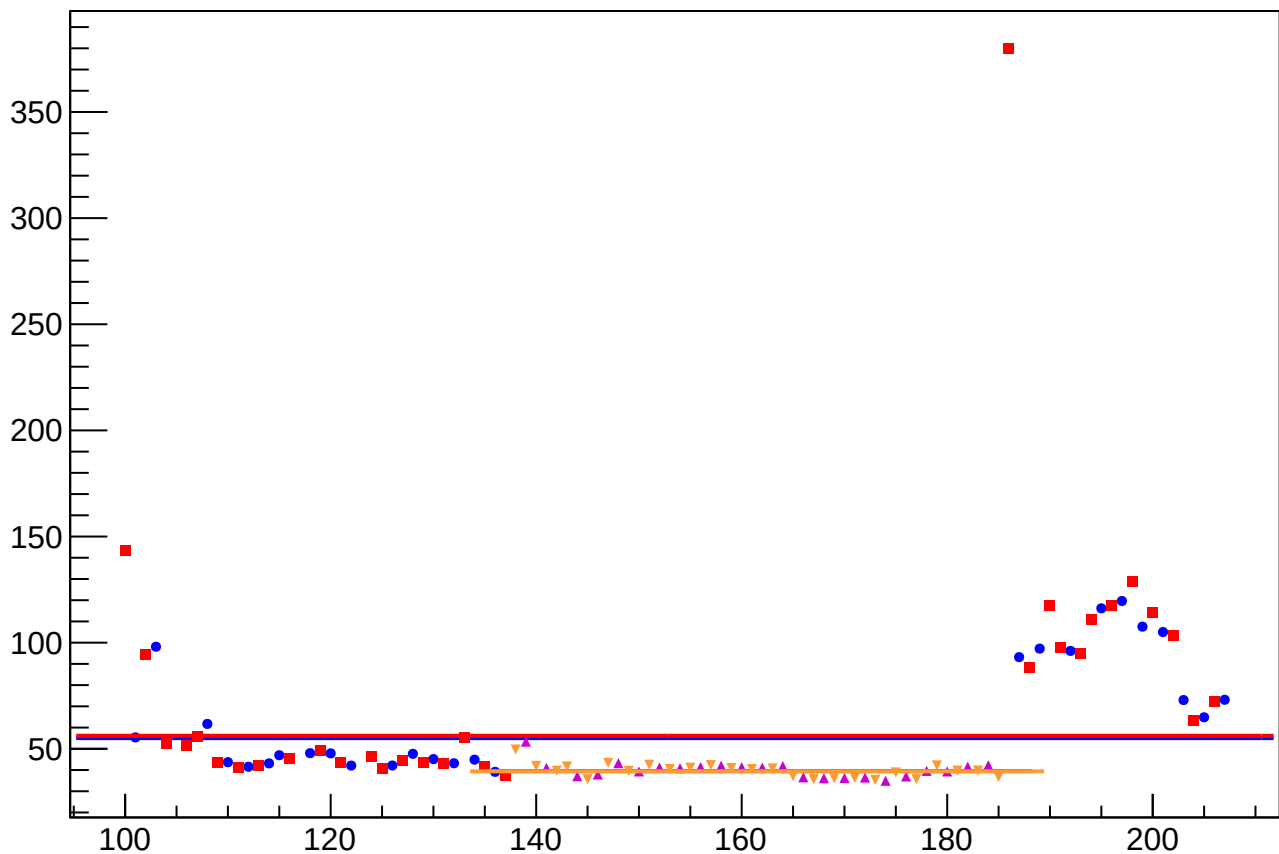
Left In:  $26.267 \pm 9.271$   $\chi^2/\text{NDF}$ : 22.5/22

+ sign  $-16.646 \pm 7.757$   $\chi^2/\text{NDF}$ : 94.2/50

All:  $-3.645 \pm 5.541$   $\chi^2/\text{NDF}$ : 173.5/104

- sign  $9.898 \pm 7.917$   $\chi^2/\text{NDF}$ : 73.6/53

# cor\_asym\_sam\_15\_37\_dd\_rms vs Slug



Right In: 55.033+/-0.011  $\chi^2/\text{NDF}$ : 3668730.3/25

Left Out: 39.383+/-0.006  $\chi^2/\text{NDF}$ : 228799.9/24

Right Out: 56.149+/-0.011  $\chi^2/\text{NDF}$ : 4970794.4/30

Left In: 39.491+/-0.007  $\chi^2/\text{NDF}$ : 251801.8/22

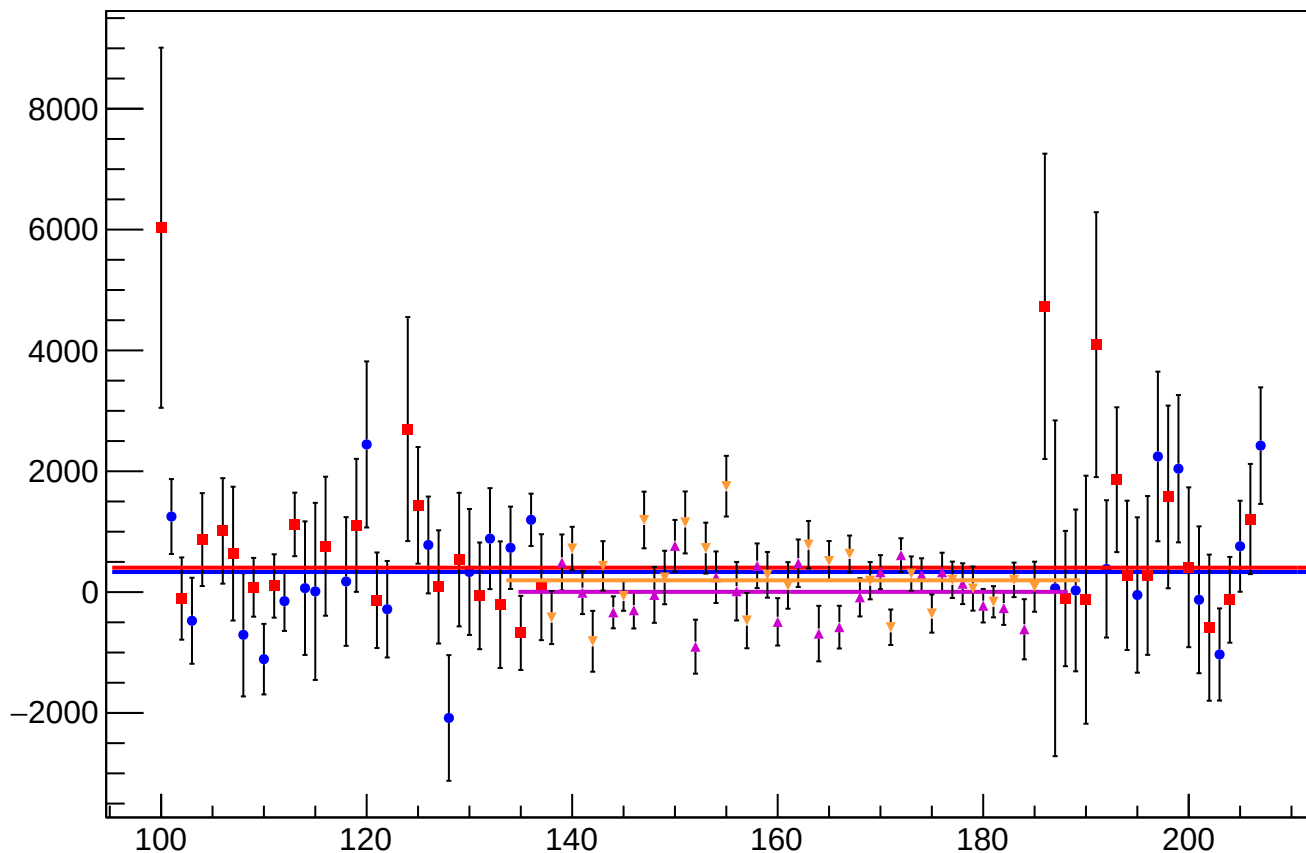
+ sign 43.390+/-0.005  $\chi^2/\text{NDF}$ : 5448244.2/50

All: 43.689+/-0.004  $\chi^2/\text{NDF}$ : 12424963.7/104

- sign 44.001+/-0.006  $\chi^2/\text{NDF}$ : 6970633.3/53



asym\_sam\_15\_37\_dd\_cor\_correction\_mean vs Slug



Right In:  $332.757 \pm 163.011$   $\chi^2/\text{NDF}$ : 37.5/25

Left Out:  $195.028 \pm 70.093$   $\chi^2/\text{NDF}$ : 48.6/24

Right Out:  $404.393 \pm 161.306$   $\chi^2/\text{NDF}$ : 25.4/30

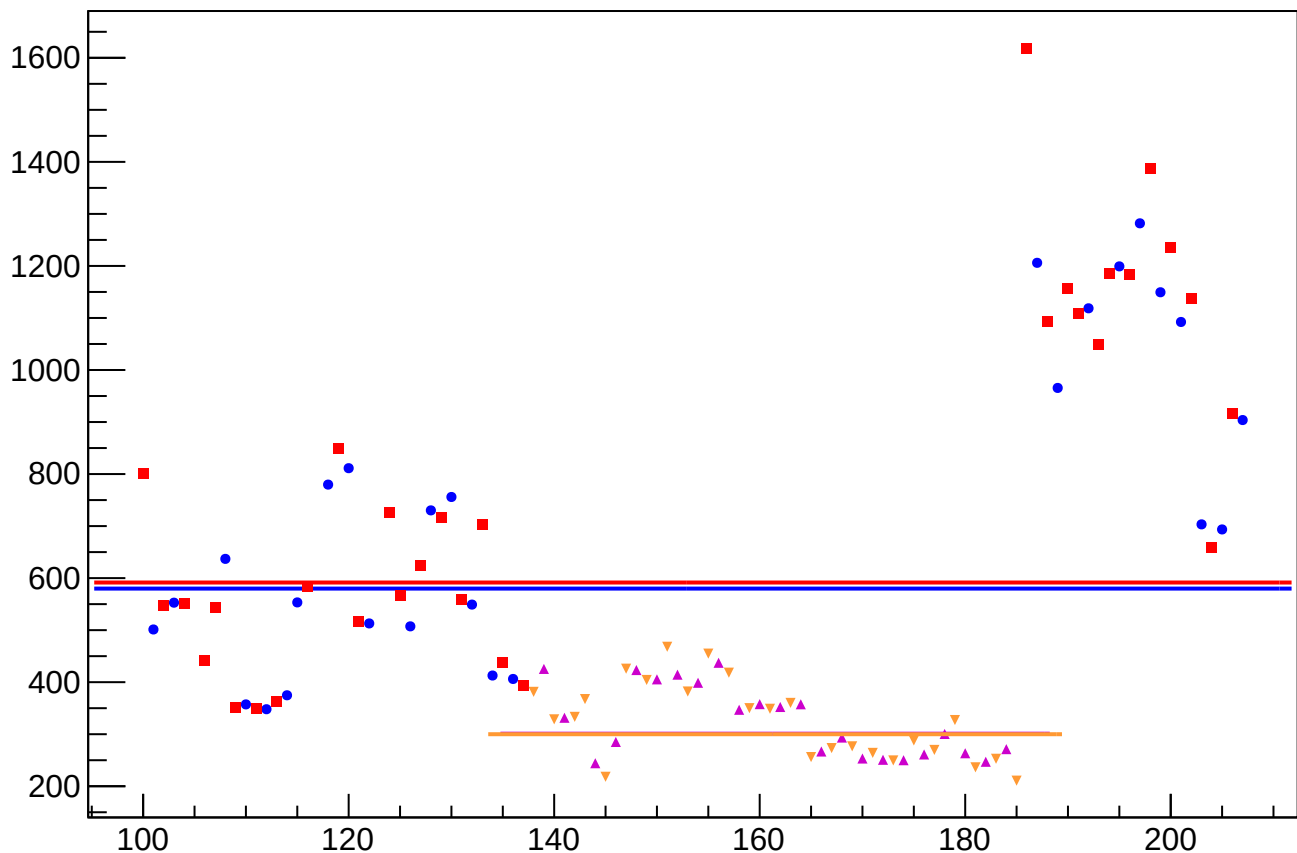
Left In:  $4.014 \pm 71.981$   $\chi^2/\text{NDF}$ : 32.4/22

+ sign  $216.519 \pm 64.392$   $\chi^2/\text{NDF}$ : 86.7/50

All:  $145.015 \pm 45.999$   $\chi^2/\text{NDF}$ : 152.1/104

- sign  $70.502 \pm 65.733$   $\chi^2/\text{NDF}$ : 62.9/53

asym\_sam\_15\_37\_dd\_cor\_correction\_rms vs Slug



Right In: 579.865+/-0.115  $\chi^2/\text{NDF}$ : 4340442.2/25

Left Out: 299.976+/-0.050  $\chi^2/\text{NDF}$ : 1808454.4/24

Right Out: 591.539+/-0.114  $\chi^2/\text{NDF}$ : 5658632.6/30

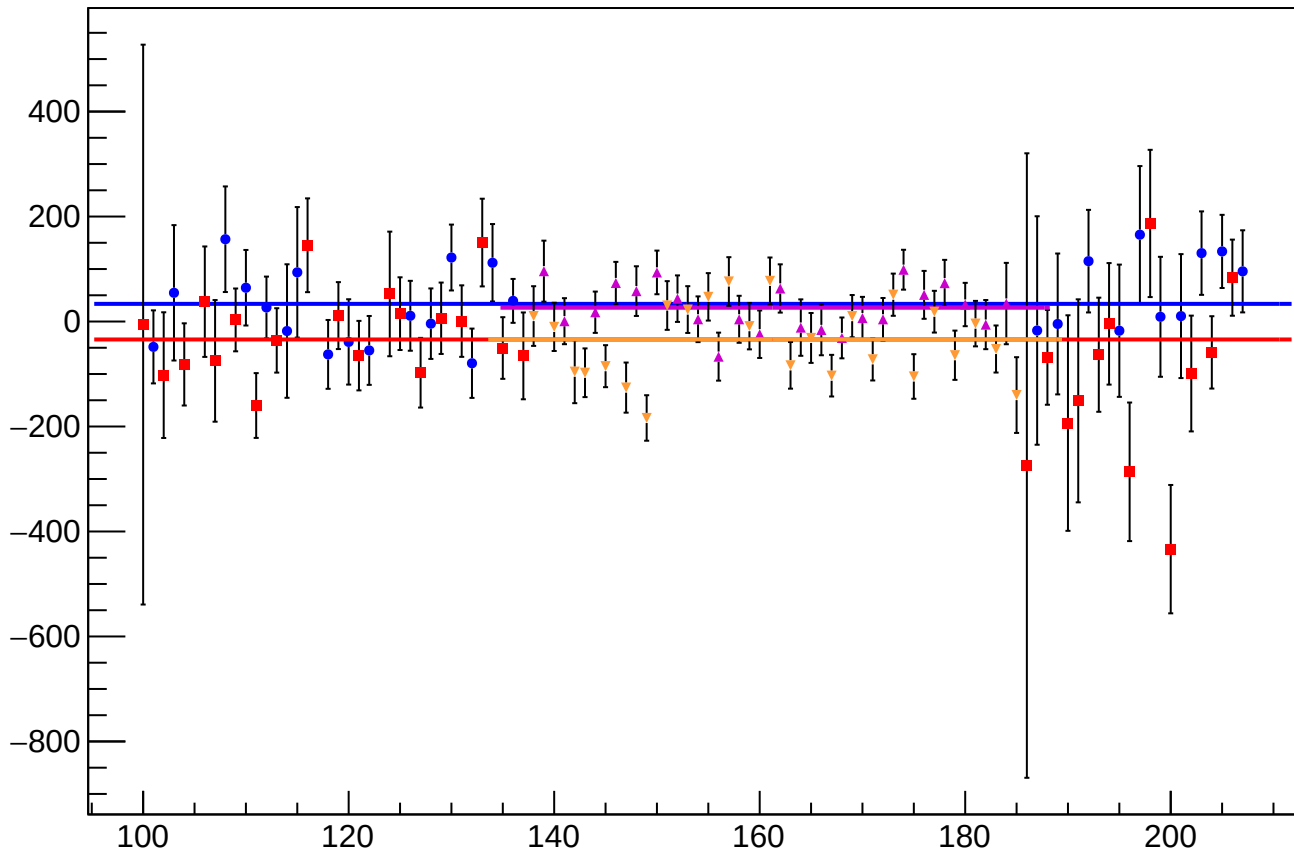
Left In: 300.999+/-0.051  $\chi^2/\text{NDF}$ : 1407206.0/22

+ sign 343.650+/-0.046  $\chi^2/\text{NDF}$ : 11124967.3/50

All: 346.391+/-0.033  $\chi^2/\text{NDF}$ : 23609170.5/10

- sign 349.247+/-0.046  $\chi^2/\text{NDF}$ : 12476803.9/53

# eigen\_cor\_asym\_sam\_15\_37\_dd\_mean vs Slug



Right In:  $33.646 \pm 15.330$   $\chi^2/\text{NDF}$ : 21.0/25

Left Out:  $-33.955 \pm 8.993$   $\chi^2/\text{NDF}$ : 58.7/24

Right Out:  $-34.186 \pm 15.216$   $\chi^2/\text{NDF}$ : 39.6/30

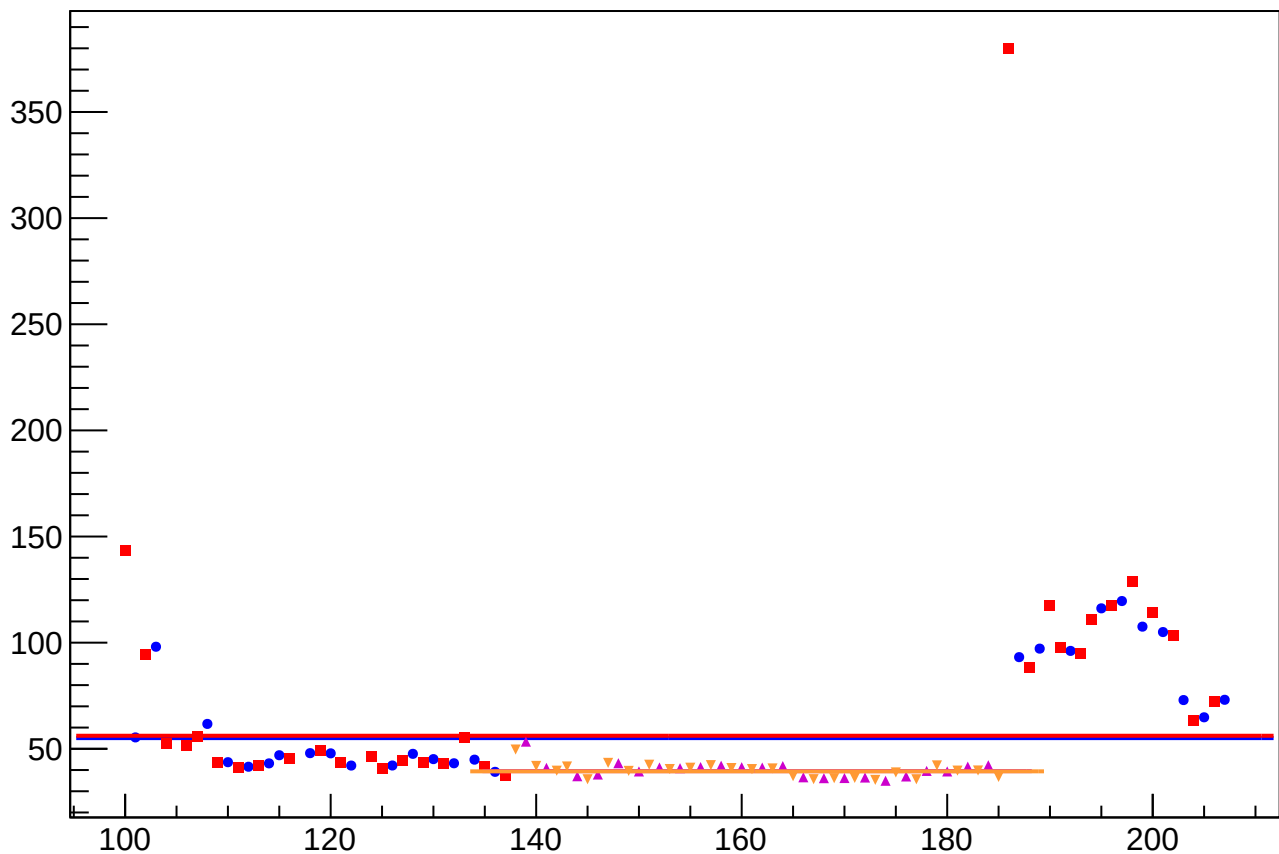
Left In:  $26.267 \pm 9.271$   $\chi^2/\text{NDF}$ : 22.5/22

+ sign  $-16.646 \pm 7.757$   $\chi^2/\text{NDF}$ : 94.2/50

All:  $-3.645 \pm 5.541$   $\chi^2/\text{NDF}$ : 173.5/104

- sign  $9.898 \pm 7.917$   $\chi^2/\text{NDF}$ : 73.6/53

# eigen\_cor\_asym\_sam\_15\_37\_dd\_rms vs Slug



Right In: 55.033+/-0.011  $\chi^2/\text{NDF}$ : 3668730.3/25

Left Out: 39.383+/-0.006  $\chi^2/\text{NDF}$ : 228799.9/24

Right Out: 56.149+/-0.011  $\chi^2/\text{NDF}$ : 4970794.4/30

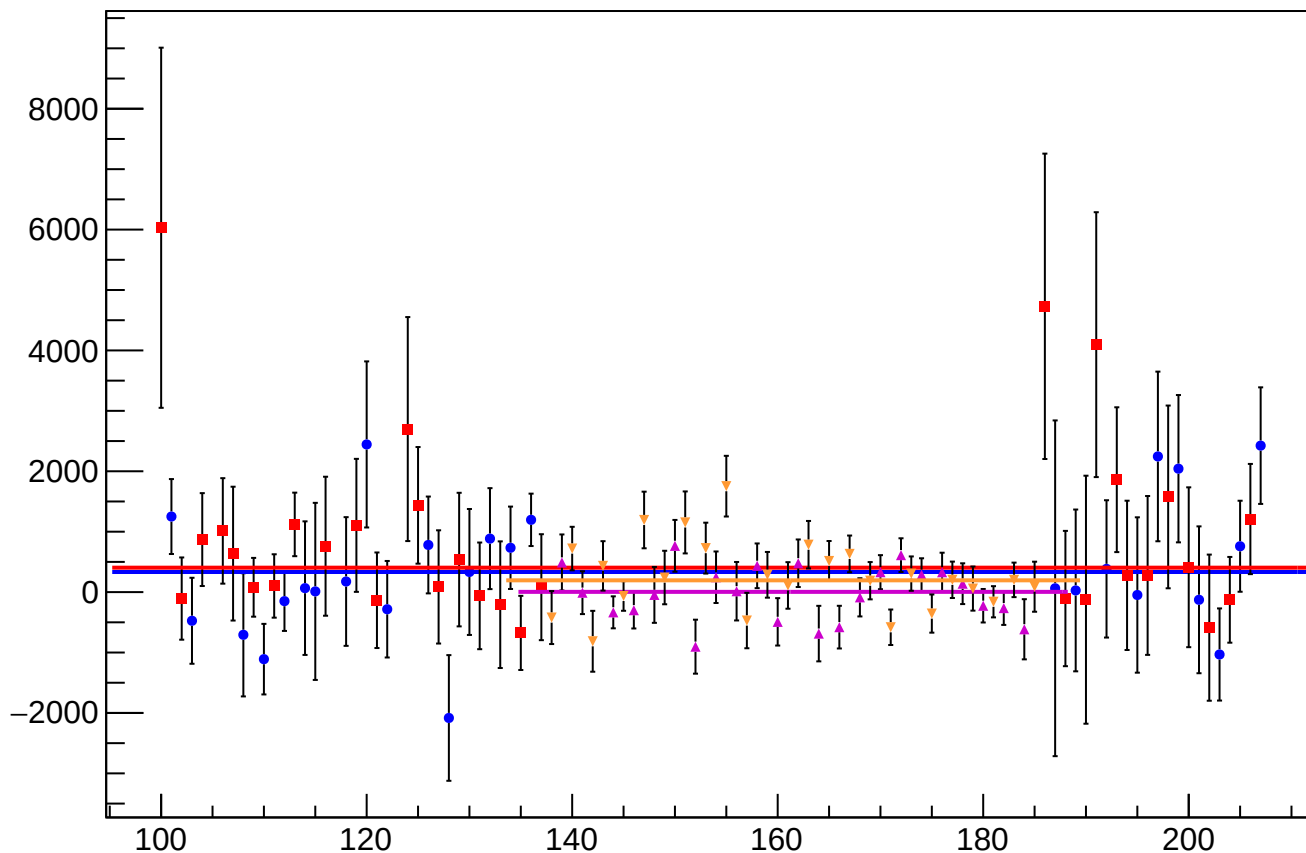
Left In: 39.491+/-0.007  $\chi^2/\text{NDF}$ : 251801.8/22

+ sign 43.390+/-0.005  $\chi^2/\text{NDF}$ : 5448244.2/50

All: 43.689+/-0.004  $\chi^2/\text{NDF}$ : 12424963.7/104

- sign 44.001+/-0.006  $\chi^2/\text{NDF}$ : 6970633.3/53

asym\_sam\_15\_37\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In:  $332.757 \pm 163.011$   $\chi^2/\text{NDF}$ : 37.5/25

Left Out:  $195.028 \pm 70.093$   $\chi^2/\text{NDF}$ : 48.6/24

Right Out:  $404.393 \pm 161.306$   $\chi^2/\text{NDF}$ : 25.4/30

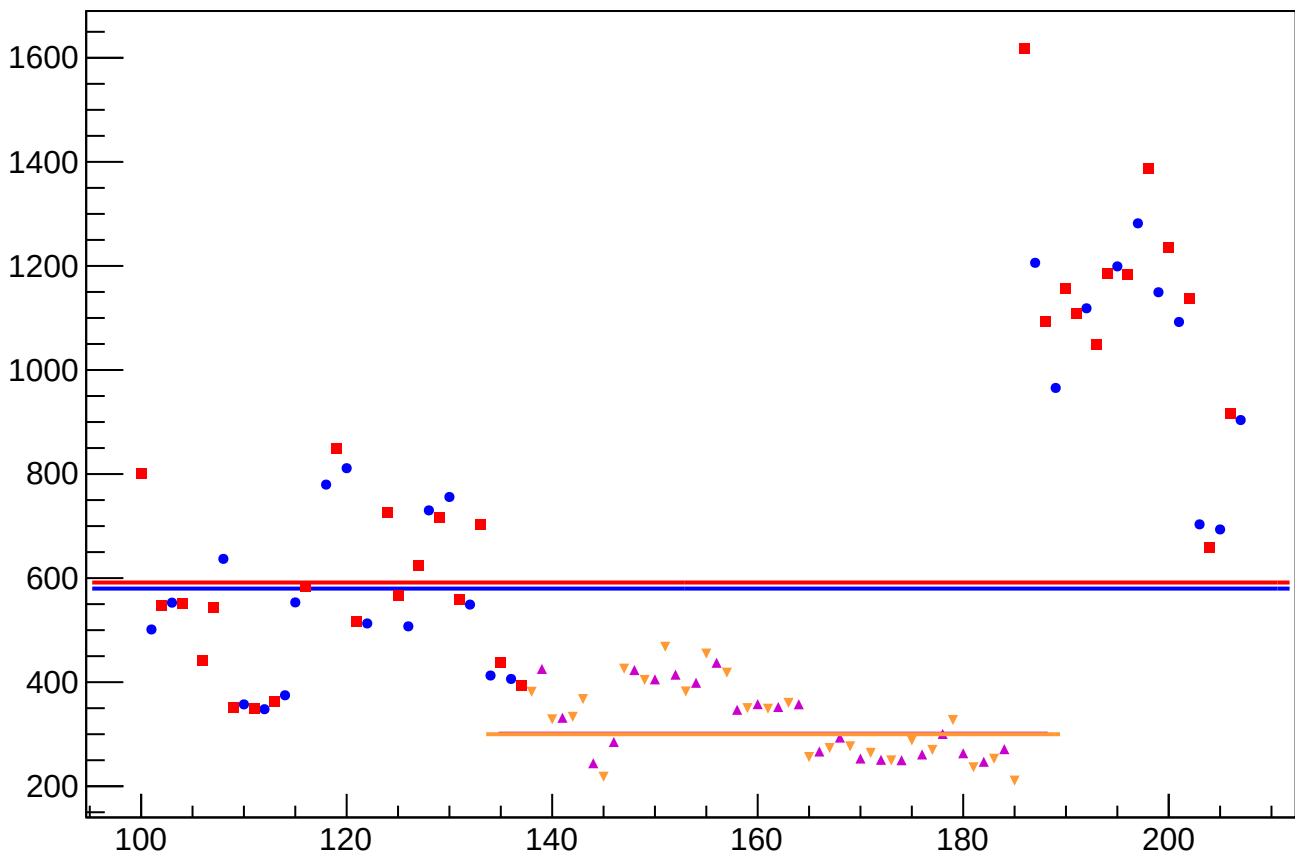
Left In:  $4.014 \pm 71.981$   $\chi^2/\text{NDF}$ : 32.4/22

+ sign  $216.519 \pm 64.392$   $\chi^2/\text{NDF}$ : 86.7/50

All:  $145.015 \pm 45.999$   $\chi^2/\text{NDF}$ : 152.1/104

- sign  $70.502 \pm 65.733$   $\chi^2/\text{NDF}$ : 62.9/53

asym\_sam\_15\_37\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 579.865+/-0.115  $\chi^2/\text{NDF}$ : 4340442.2/25

Left Out: 299.976+/-0.050  $\chi^2/\text{NDF}$ : 1808454.4/24

Right Out: 591.539+/-0.114  $\chi^2/\text{NDF}$ : 5658632.6/30

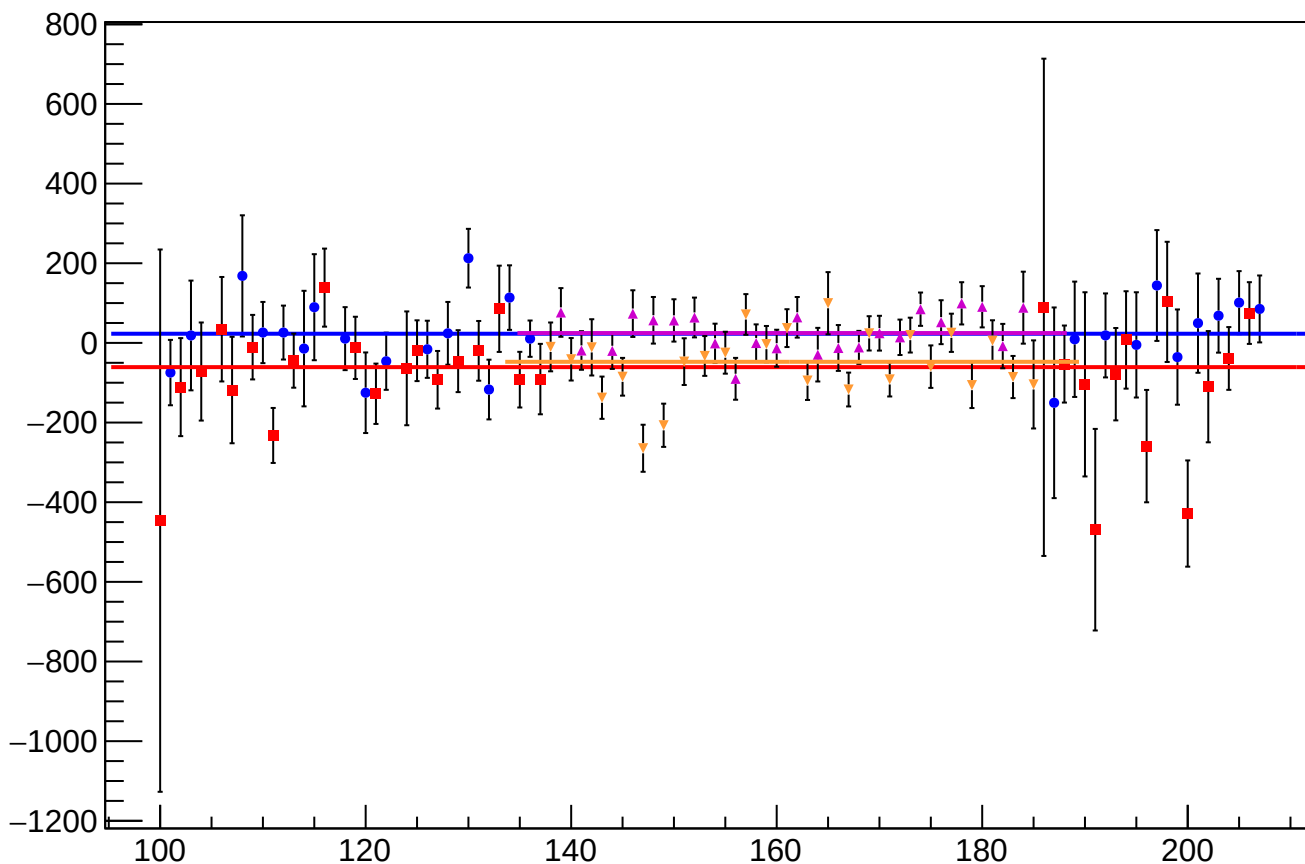
Left In: 300.999+/-0.051  $\chi^2/\text{NDF}$ : 1407206.0/22

+ sign 343.650+/-0.046  $\chi^2/\text{NDF}$ : 11124967.3/50

All: 346.391+/-0.033  $\chi^2/\text{NDF}$ : 23609170.5/10

- sign 349.247+/-0.046  $\chi^2/\text{NDF}$ : 12476803.9/53

# dit\_asym\_sam\_15\_37\_dd\_mean vs Slug



Right In: 23.009+/-17.267  $\chi^2$ /NDF: 20.9/25

Left Out: -47.480+/-10.392  $\chi^2$ /NDF: 54.7/24

Right Out: -60.854+/-17.523  $\chi^2$ /NDF: 33.2/30

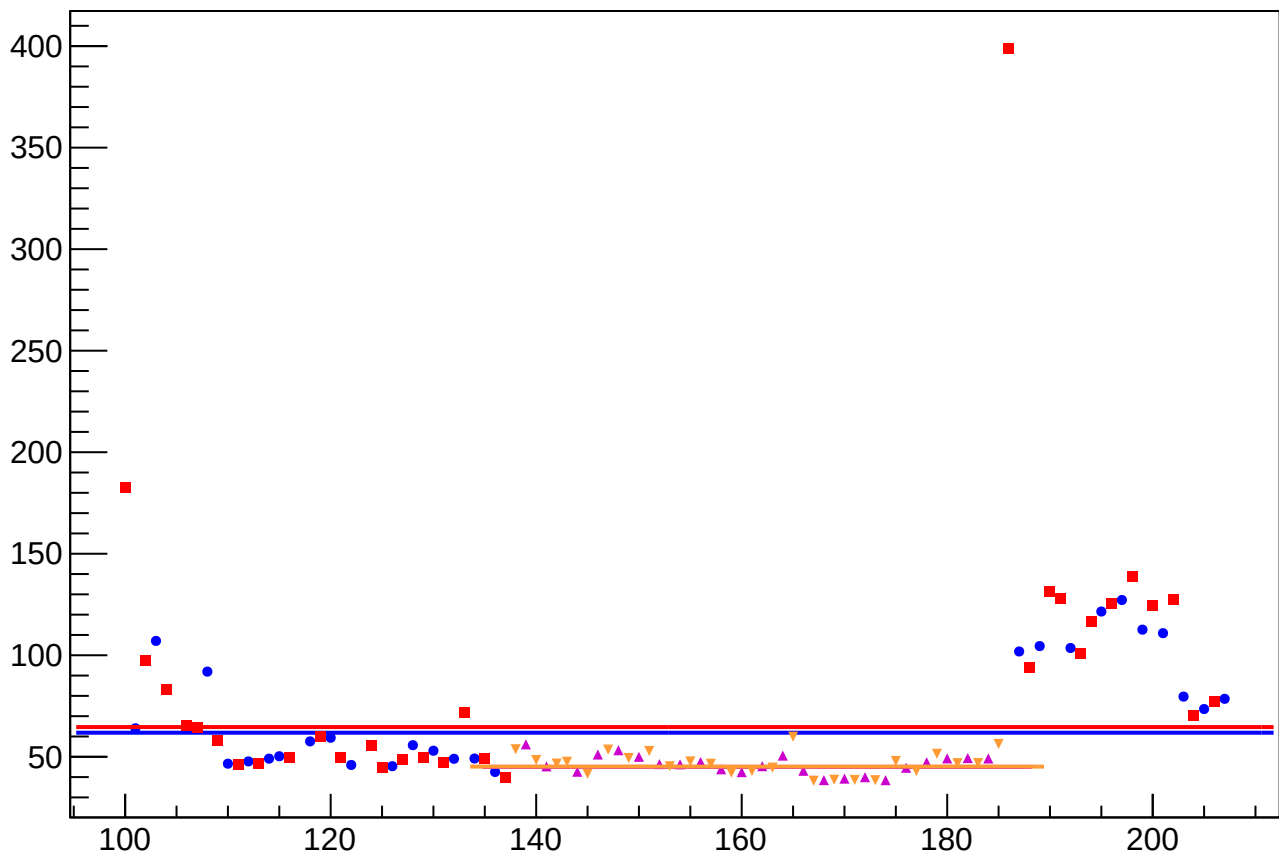
Left In: 24.687+/-10.660  $\chi^2$ /NDF: 19.7/22

+ sign -28.736+/-8.904  $\chi^2$ /NDF: 87.8/50

All: -13.920+/-6.367  $\chi^2$ /NDF: 163.7/104

- sign 1.581+/-9.107  $\chi^2$ /NDF: 70.3/53

# dit\_asym\_sam\_15\_37\_dd\_rms vs Slug



Right In:  $61.859 \pm 0.012$   $\chi^2/\text{NDF}$ : 3468647.4/25

Left Out:  $45.175 \pm 0.007$   $\chi^2/\text{NDF}$ : 489860.2/24

Right Out:  $64.639 \pm 0.012$   $\chi^2/\text{NDF}$ : 4701817.7/30

Left In:  $45.017 \pm 0.008$   $\chi^2/\text{NDF}$ : 372690.8/22

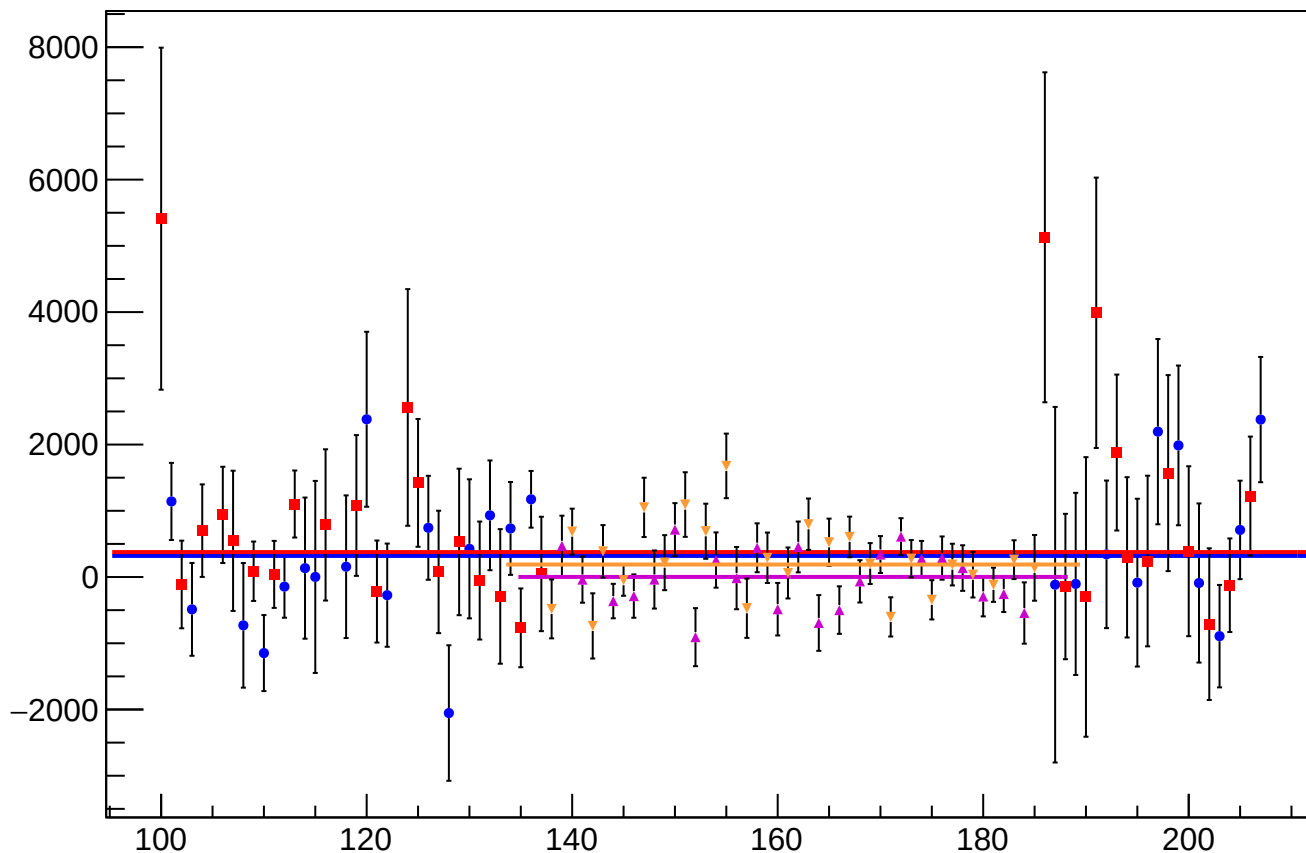
+ sign  $49.611 \pm 0.006$   $\chi^2/\text{NDF}$ : 5329150.9/50

All:  $49.956 \pm 0.005$   $\chi^2/\text{NDF}$ : 12240079.8/104

- sign  $50.317 \pm 0.006$   $\chi^2/\text{NDF}$ : 6904783.2/53



asym\_sam\_15\_37\_dd\_dit\_correction\_mean vs Slug



Right In:  $318.829 \pm 159.812$   $\chi^2/\text{NDF}$ : 37.3/25

Left Out:  $188.812 \pm 69.714$   $\chi^2/\text{NDF}$ : 46.8/24

Right Out:  $376.829 \pm 154.856$   $\chi^2/\text{NDF}$ : 28.3/30

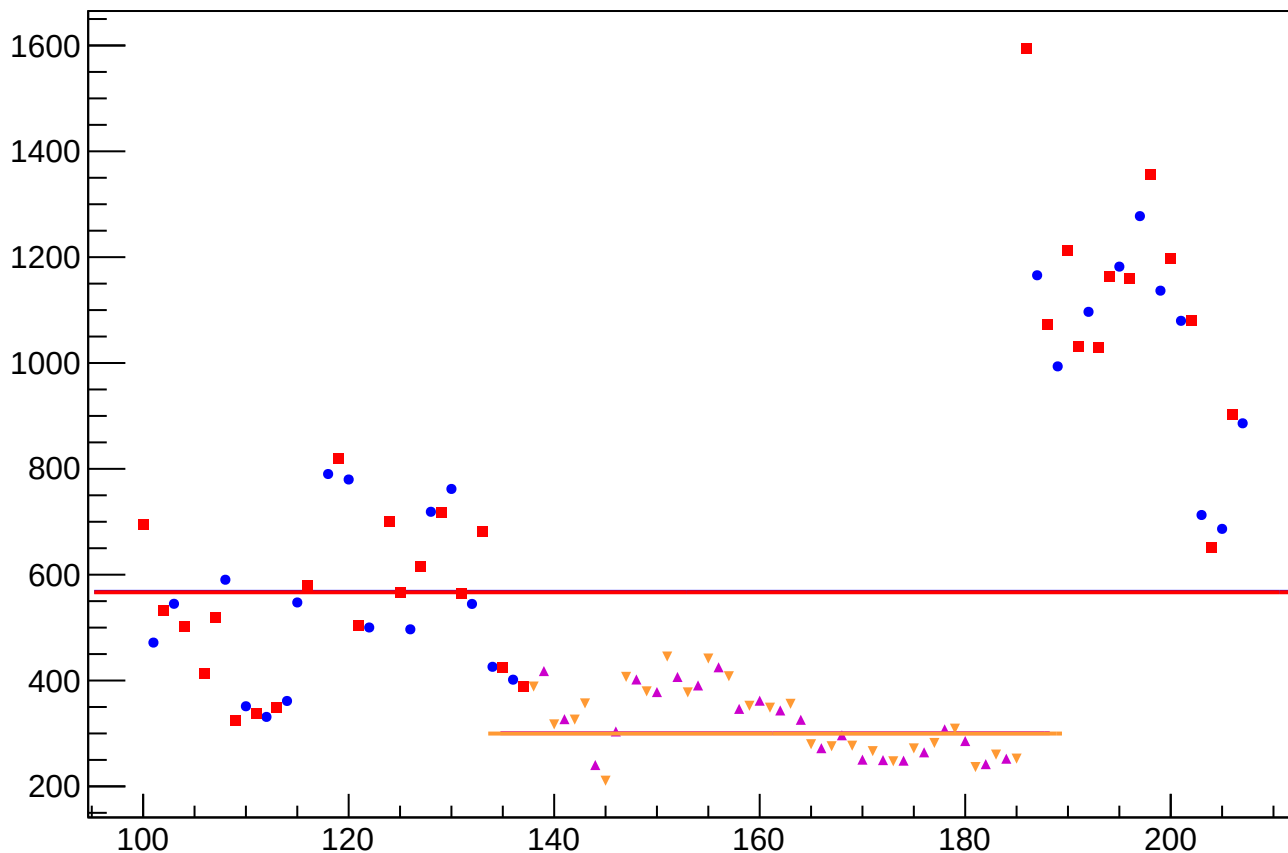
Left In:  $1.655 \pm 71.712$   $\chi^2/\text{NDF}$ : 32.2/22

+ sign  $209.598 \pm 63.899$   $\chi^2/\text{NDF}$ : 84.6/50

All:  $140.042 \pm 45.593$   $\chi^2/\text{NDF}$ : 152.3/104

- sign  $67.905 \pm 65.073$   $\chi^2/\text{NDF}$ : 65.3/53

# asym\_sam\_15\_37\_dd\_dit\_correction\_rms vs Slug



Right In: 567.554 $\pm$ 0.113  $\chi^2$ /NDF: 4474215.1/25

Left Out: 299.798 $\pm$ 0.049  $\chi^2$ /NDF:1577420.4/24

Right Out: 566.814 $\pm$ 0.109  $\chi^2$ /NDF: 5927137.9/30

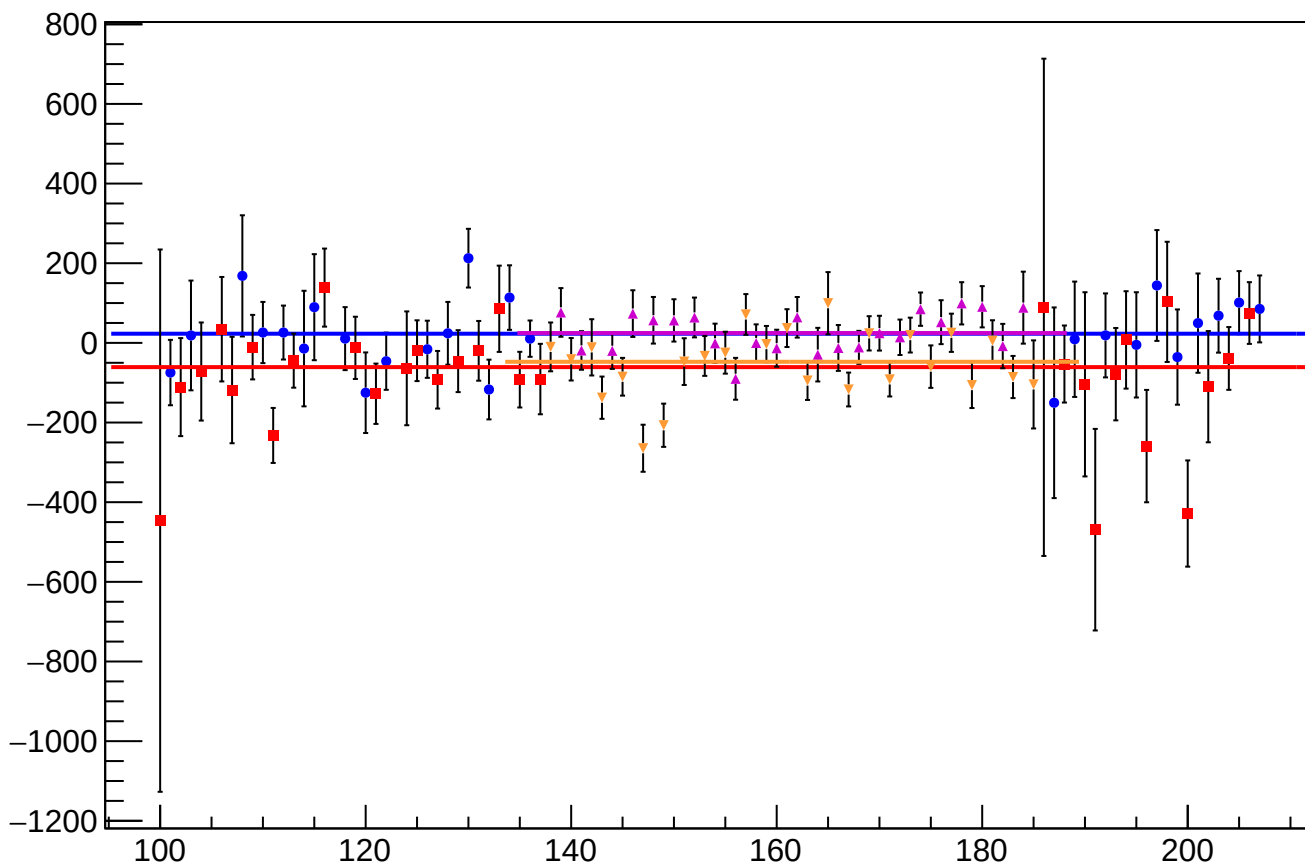
Left In: 300.544 $\pm$ 0.051  $\chi^2$ /NDF:1259270.5/22

+ sign 342.604 $\pm$ 0.045  $\chi^2$ /NDF: 10768319.5/50

All: 345.039 $\pm$ 0.032  $\chi^2$ /NDF: 22829624.4/10

- sign 347.563 $\pm$ 0.046  $\chi^2$ /NDF: 12055391.3/53

# eigen\_dit\_asym\_sam\_15\_37\_dd\_mean vs Slug



Right In:  $23.009 \pm 17.267$   $\chi^2/\text{NDF}$ : 20.9/25

Left Out:  $-47.480 \pm 10.392$   $\chi^2/\text{NDF}$ : 54.7/24

Right Out:  $-60.855 \pm 17.523$   $\chi^2/\text{NDF}$ : 33.2/30

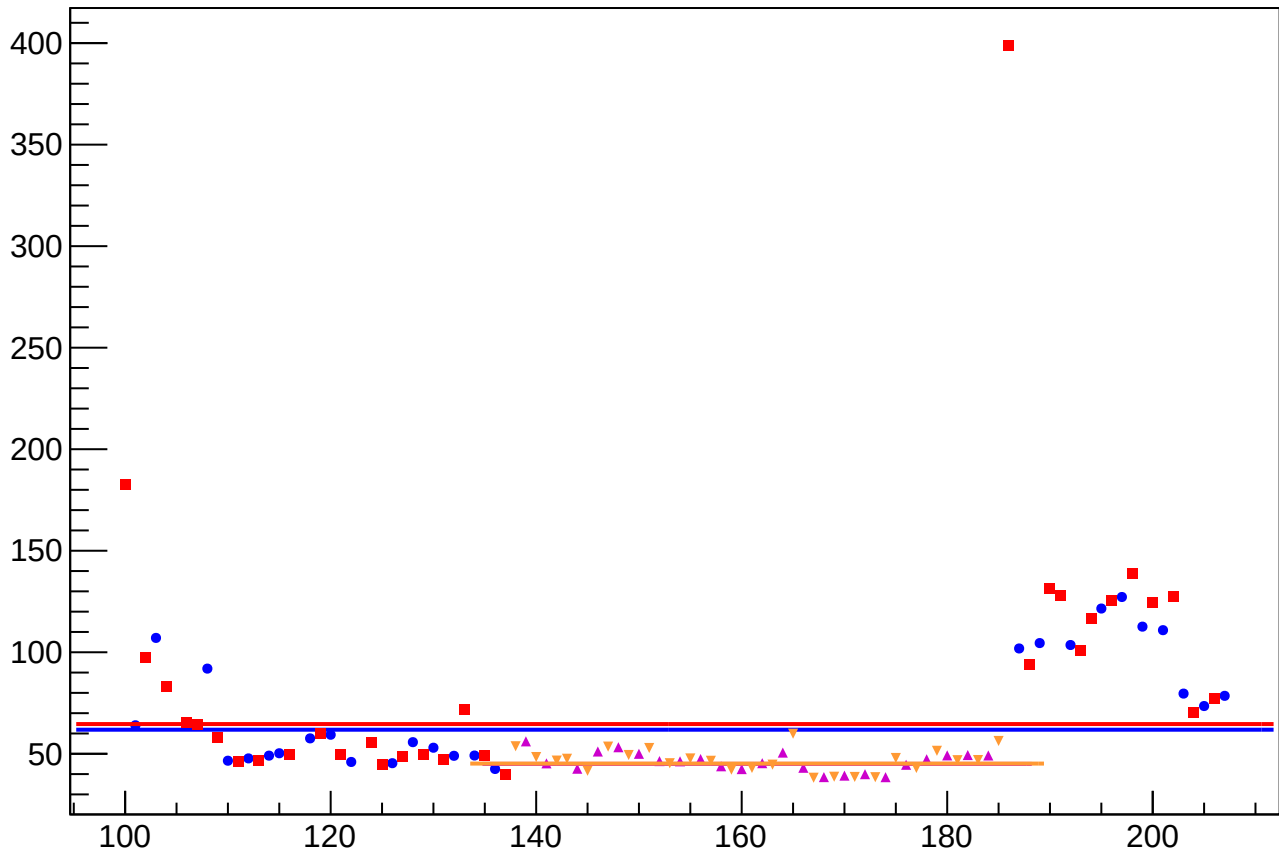
Left In:  $24.687 \pm 10.660$   $\chi^2/\text{NDF}$ : 19.7/22

+ sign  $-28.737 \pm 8.904$   $\chi^2/\text{NDF}$ : 87.8/50

All:  $-13.920 \pm 6.367$   $\chi^2/\text{NDF}$ : 163.7/104

- sign  $1.581 \pm 9.107$   $\chi^2/\text{NDF}$ : 70.3/53

# eigen\_dit\_asym\_sam\_15\_37\_dd\_rms vs Slug



Right In: 61.859+/-0.012  $\chi^2/\text{NDF}$ : 3468653.1/25

Left Out: 45.175+/-0.007  $\chi^2/\text{NDF}$ : 489860.2/24

Right Out: 64.639+/-0.012  $\chi^2/\text{NDF}$ : 4701822.0/30

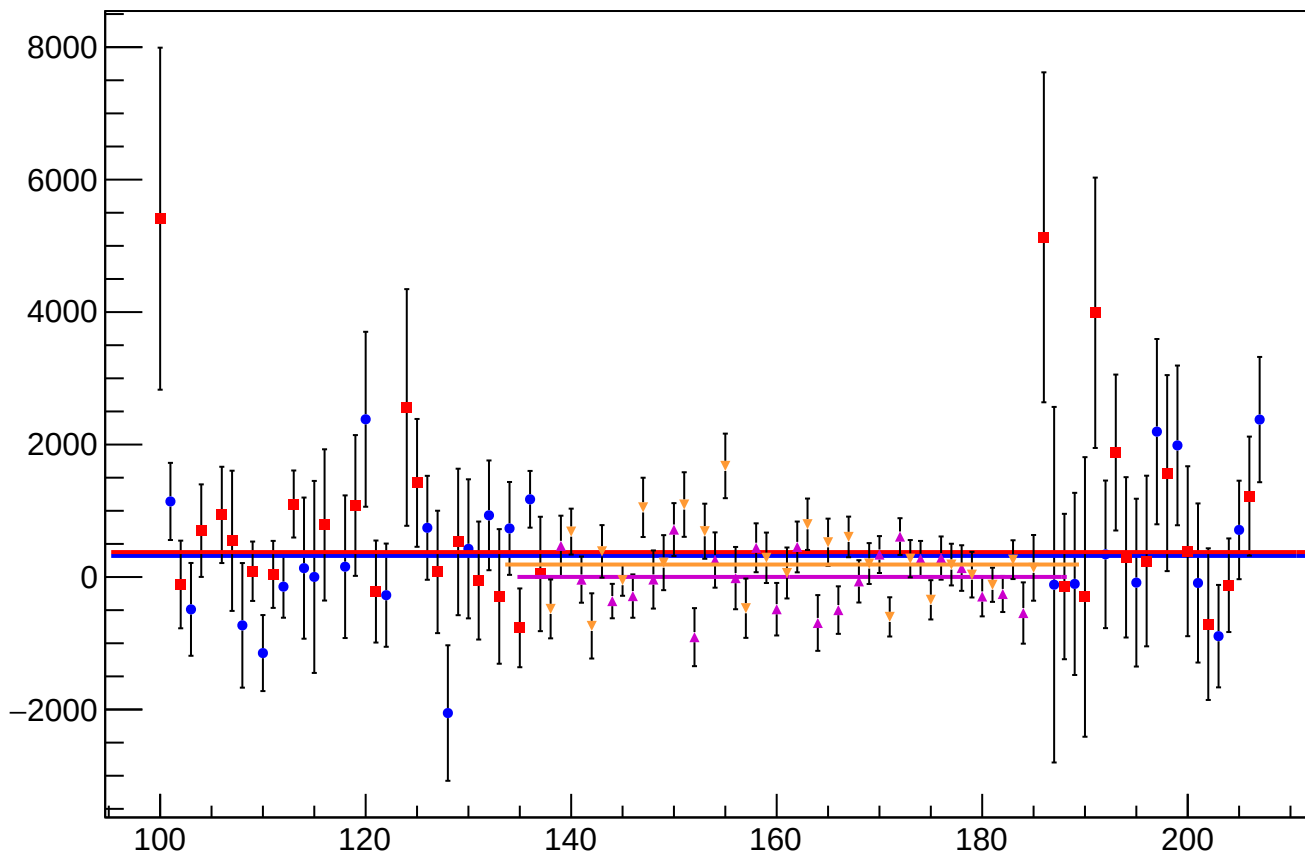
Left In: 45.017+/-0.008  $\chi^2/\text{NDF}$ : 372691.9/22

+ sign 49.611+/-0.006  $\chi^2/\text{NDF}$ : 5329159.3/50

All: 49.956+/-0.005  $\chi^2/\text{NDF}$ : 12240096.1/104

- sign 50.317+/-0.006  $\chi^2/\text{NDF}$ : 6904790.5/53

asym\_sam\_15\_37\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $318.828 \pm 159.812$   $\chi^2/\text{NDF}$ : 37.3/25

Left Out:  $188.813 \pm 69.714$   $\chi^2/\text{NDF}$ : 46.8/24

Right Out:  $376.828 \pm 154.855$   $\chi^2/\text{NDF}$ : 28.3/30

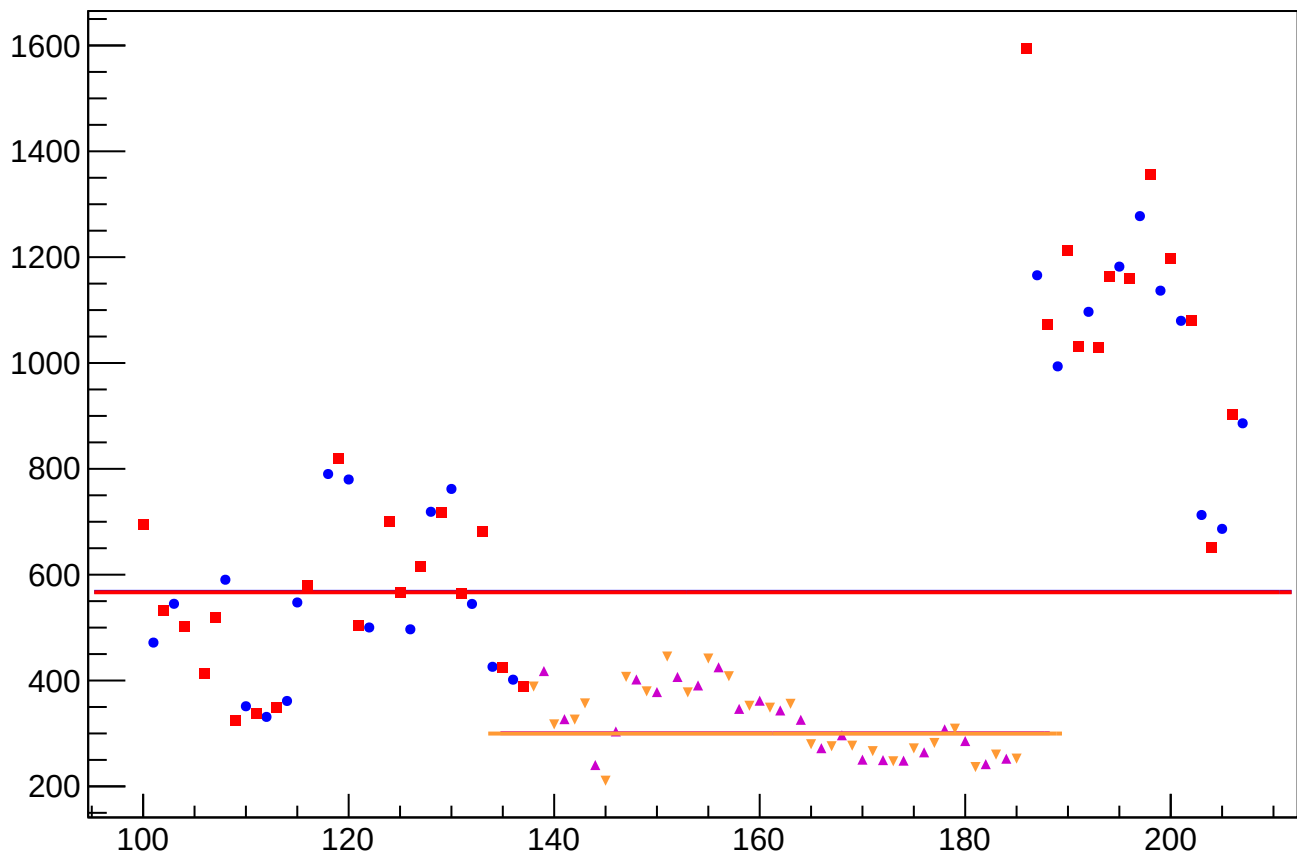
Left In:  $1.654 \pm 71.712$   $\chi^2/\text{NDF}$ : 32.2/22

+ sign  $209.598 \pm 63.899$   $\chi^2/\text{NDF}$ : 84.6/50

All:  $140.042 \pm 45.593$   $\chi^2/\text{NDF}$ : 152.3/104

- sign  $67.905 \pm 65.073$   $\chi^2/\text{NDF}$ : 65.3/53

asym\_sam\_15\_37\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 567.553 $\pm$ 0.113  $\chi^2$ /NDF: 4474227.5/25

Left Out: 299.798 $\pm$ 0.049  $\chi^2$ /NDF:1577421.4/24

Right Out: 566.813 $\pm$ 0.109  $\chi^2$ /NDF: 5927144.9/30

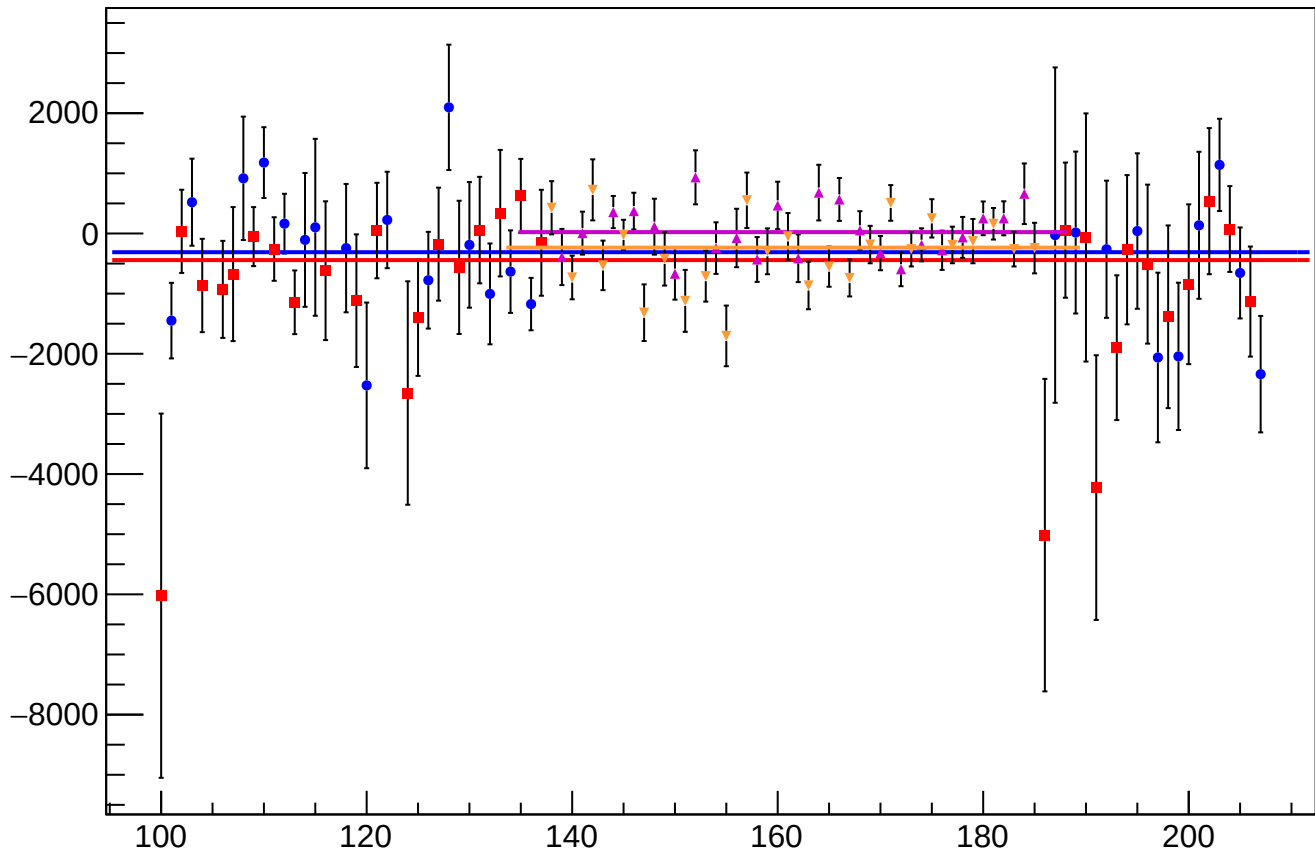
Left In: 300.544 $\pm$ 0.051  $\chi^2$ /NDF:1259265.2/22

+ sign 342.604 $\pm$ 0.045  $\chi^2$ /NDF: 10768304.7/50

All: 345.039 $\pm$ 0.032  $\chi^2$ /NDF: 22829574.1/10

- sign 347.564 $\pm$ 0.046  $\chi^2$ /NDF: 12055355.4/53

# asym\_sam\_15\_37\_dd\_mean vs Slug



Right In:  $-311.287 \pm 164.038$   $\chi^2/\text{NDF}$ : 39.0/25

Left Out:  $-235.168 \pm 70.741$   $\chi^2/\text{NDF}$ : 47.5/24

Right Out:  $-442.525 \pm 161.793$   $\chi^2/\text{NDF}$ : 24.3/30

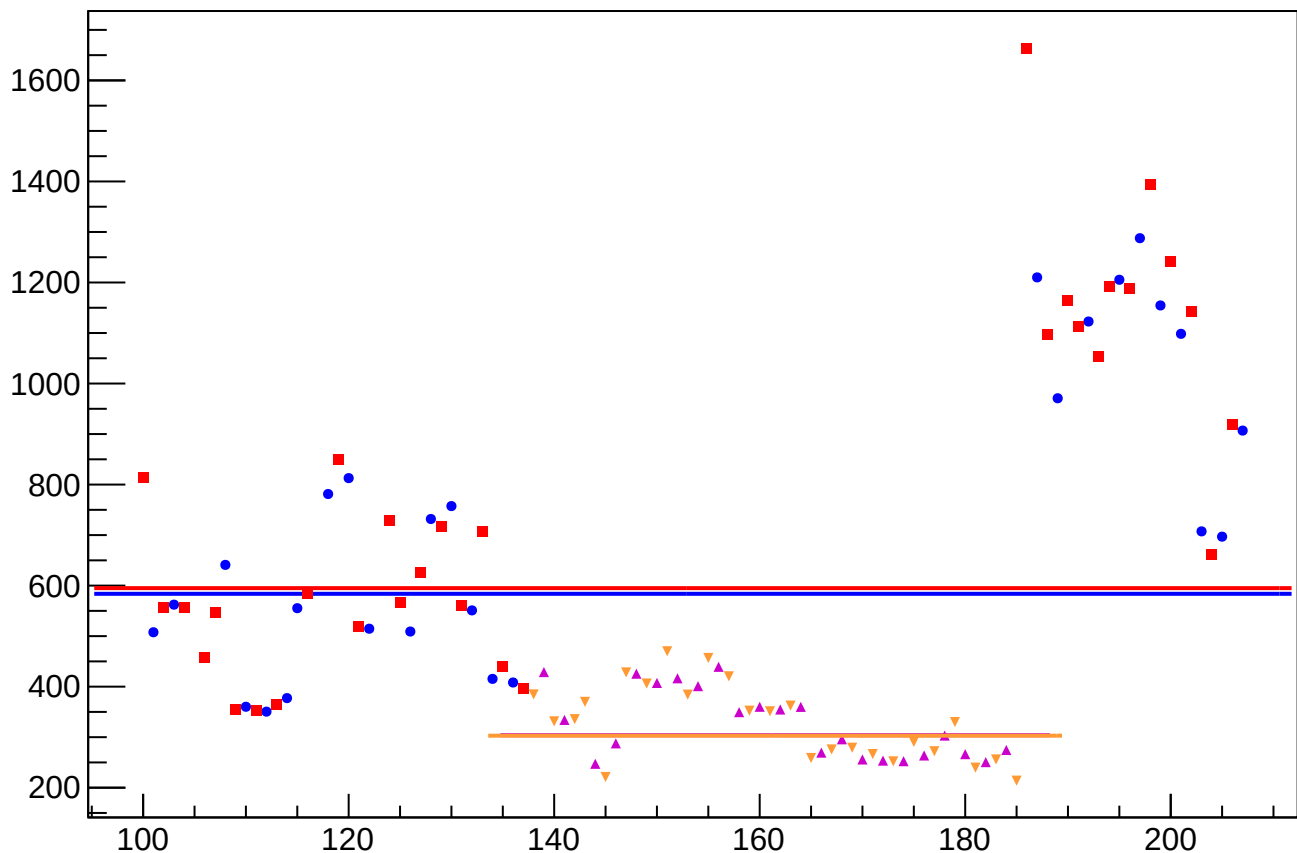
Left In:  $22.662 \pm 72.642$   $\chi^2/\text{NDF}$ : 29.9/22

+ sign  $-247.104 \pm 64.958$   $\chi^2/\text{NDF}$ : 86.7/50

All:  $-153.158 \pm 46.389$   $\chi^2/\text{NDF}$ : 152.0/104

- sign  $-55.381 \pm 66.269$   $\chi^2/\text{NDF}$ : 61.0/53

# asym\_sam\_15\_37\_dd\_rms vs Slug



Right In: 583.768+/-0.116  $\chi^2/\text{NDF}$ : 4318817.3/25

Left Out: 302.944+/-0.050  $\chi^2/\text{NDF}$ : 1766061.8/24

Right Out: 595.004+/-0.114  $\chi^2/\text{NDF}$ : 5638616.8/30

Left In: 303.923+/-0.051  $\chi^2/\text{NDF}$ : 1376278.3/22

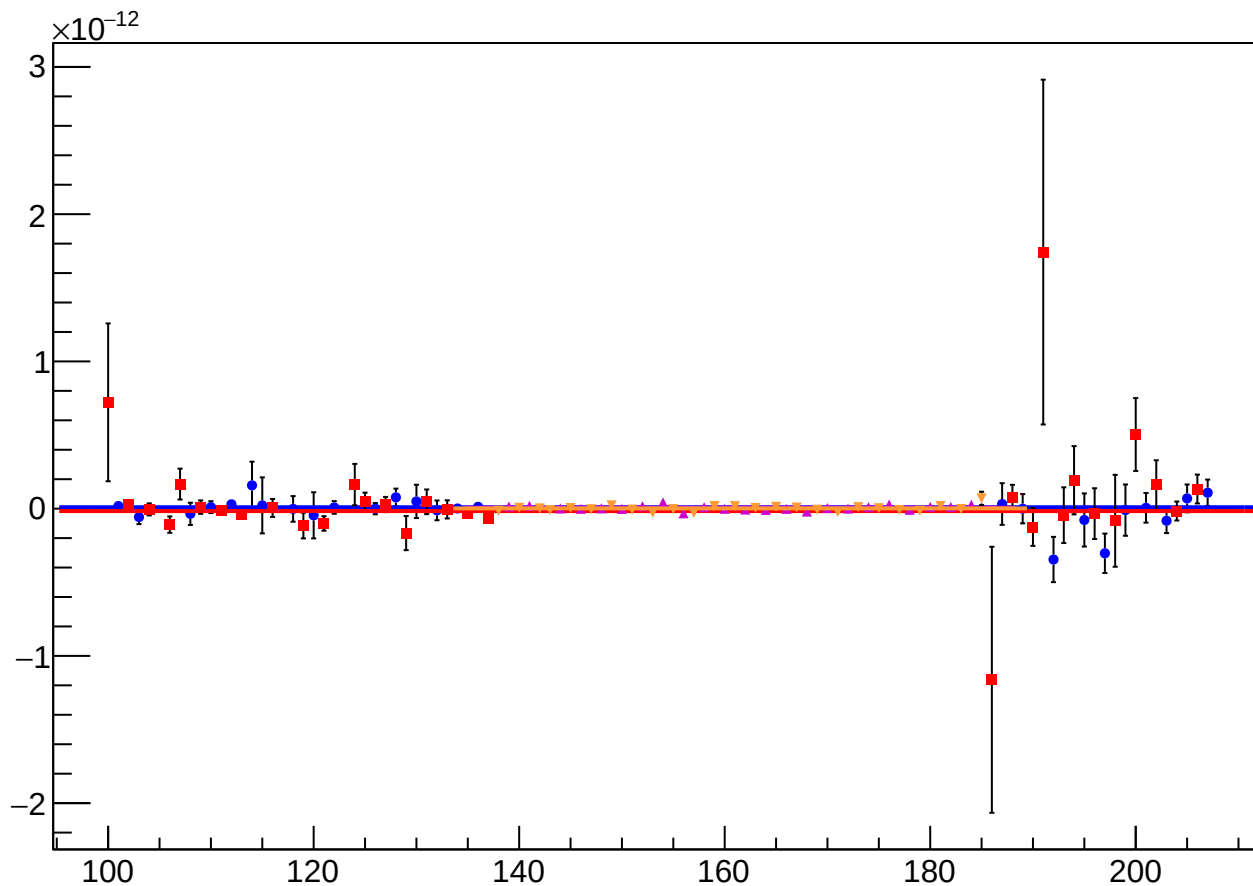
+ sign 346.980+/-0.046  $\chi^2/\text{NDF}$ : 11027273.6/50

All: 349.811+/-0.033  $\chi^2/\text{NDF}$ : 23437405.2/100

- sign 352.757+/-0.047  $\chi^2/\text{NDF}$ : 12402382.2/53



# asym\_sam\_15\_37\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 19.4/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 22.9/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 38.5/30

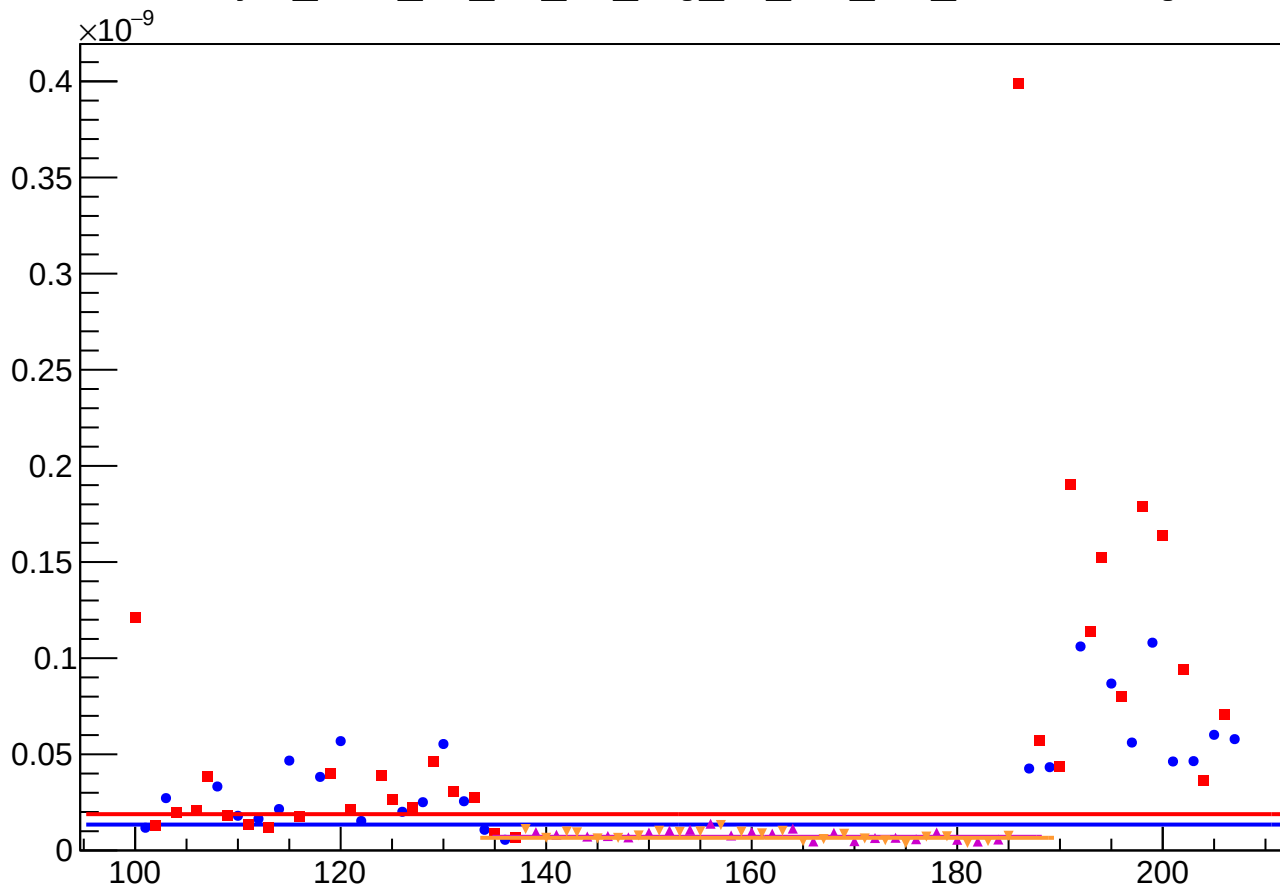
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 18.2/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 43.1/50

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 104.8/104

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 61.5/53

asym\_sam\_15\_37\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5877361.8/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1479029.9/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6014955.6/30

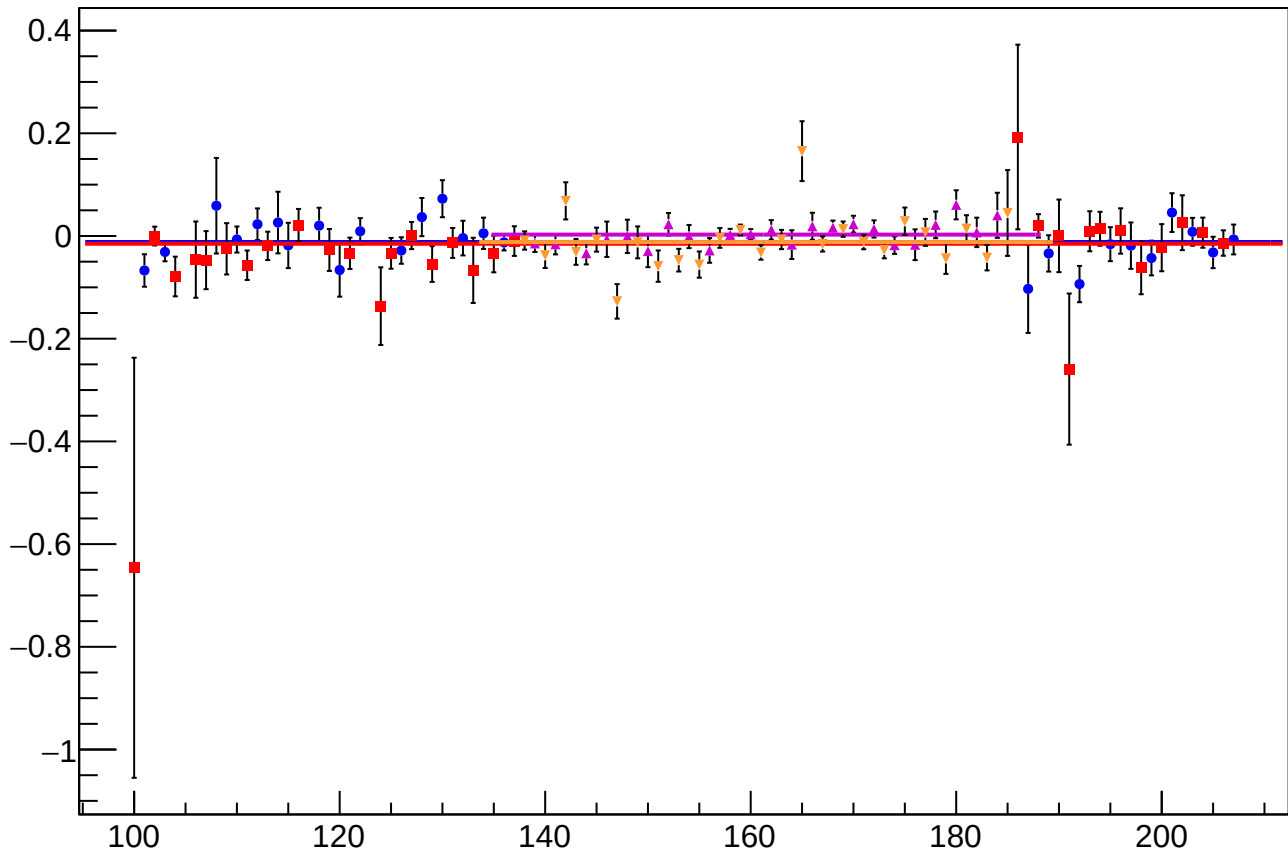
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 981529.7/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8754339.5/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 18438380.2/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9609414.8/53

asym\_sam\_15\_37\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.012 \pm 0.006$   $\chi^2/\text{NDF}$ : 28.2/25

Left Out:  $-0.012 \pm 0.004$   $\chi^2/\text{NDF}$ : 53.4/24

Right Out:  $-0.015 \pm 0.006$   $\chi^2/\text{NDF}$ : 25.8/30

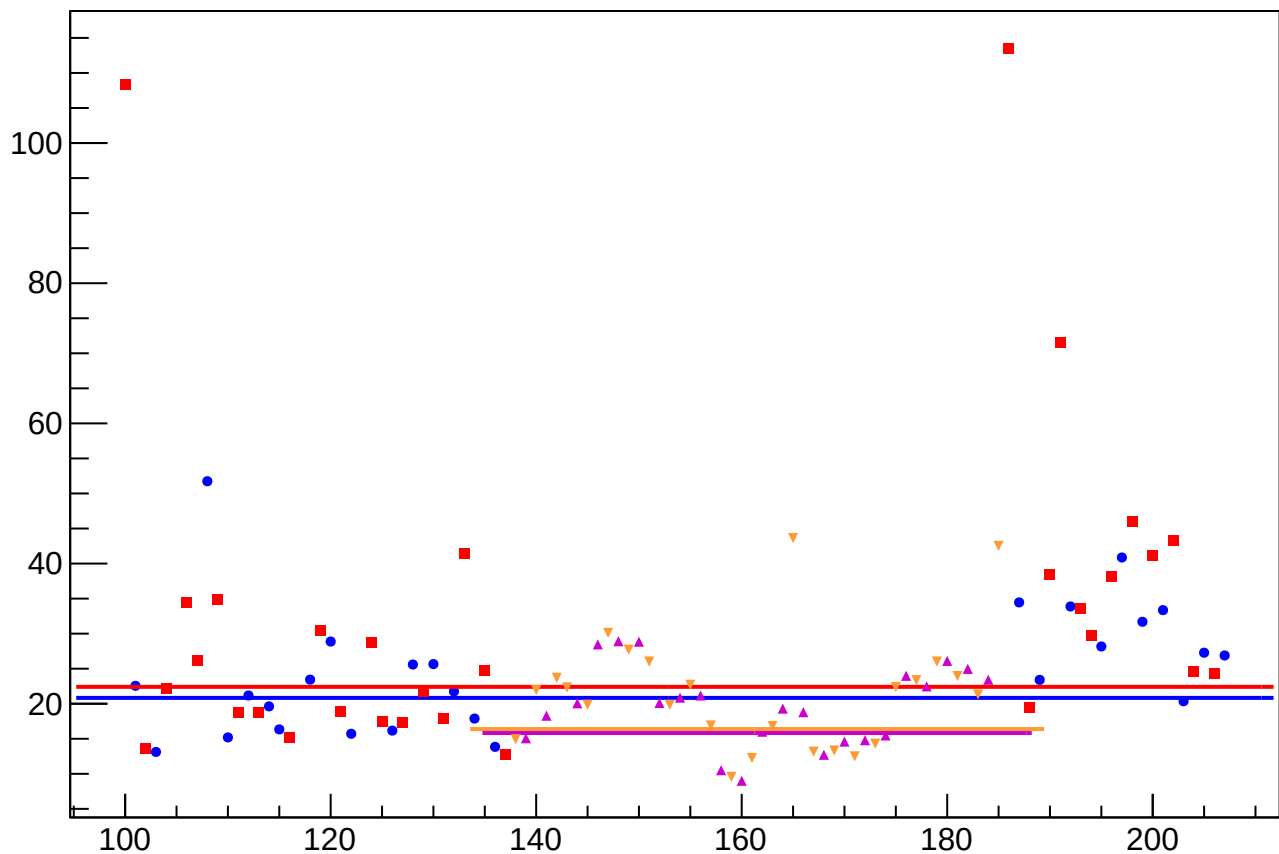
Left In:  $0.003 \pm 0.004$   $\chi^2/\text{NDF}$ : 19.8/22

+ sign  $-0.012 \pm 0.003$   $\chi^2/\text{NDF}$ : 81.6/50

All:  $-0.007 \pm 0.002$   $\chi^2/\text{NDF}$ : 136.5/104

- sign  $-0.002 \pm 0.003$   $\chi^2/\text{NDF}$ : 51.2/53

asym\_sam\_15\_37\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 20.835 $\pm$ 0.004  $\chi^2/\text{NDF}$ : 2826236.7/25

Left Out: 16.387 $\pm$ 0.003  $\chi^2/\text{NDF}$ : 4030028.3/24

Right Out: 22.410 $\pm$ 0.004  $\chi^2/\text{NDF}$ : 4095278.7/30

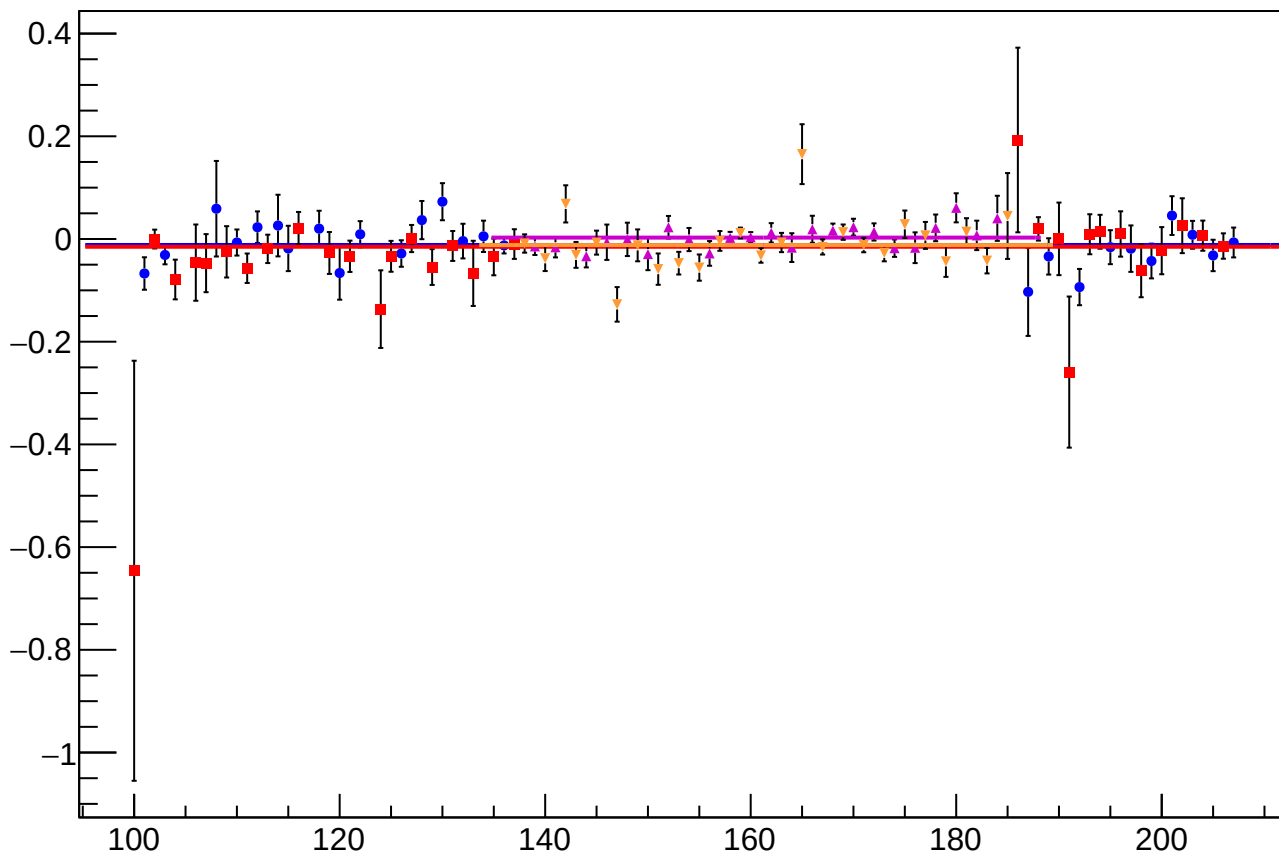
Left In: 15.824 $\pm$ 0.003  $\chi^2/\text{NDF}$ : 3654469.7/22

+ sign 17.782 $\pm$ 0.002  $\chi^2/\text{NDF}$ : 7606302.8/50

All: 17.757 $\pm$ 0.002  $\chi^2/\text{NDF}$ : 16895463.0/104

- sign 17.731 $\pm$ 0.002  $\chi^2/\text{NDF}$ : 9288934.9/53

asym\_sam\_15\_37\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.012 \pm 0.006$   $\chi^2/\text{NDF}$ : 28.2/25

Left Out:  $-0.012 \pm 0.004$   $\chi^2/\text{NDF}$ : 53.4/24

Right Out:  $-0.015 \pm 0.006$   $\chi^2/\text{NDF}$ : 25.8/30

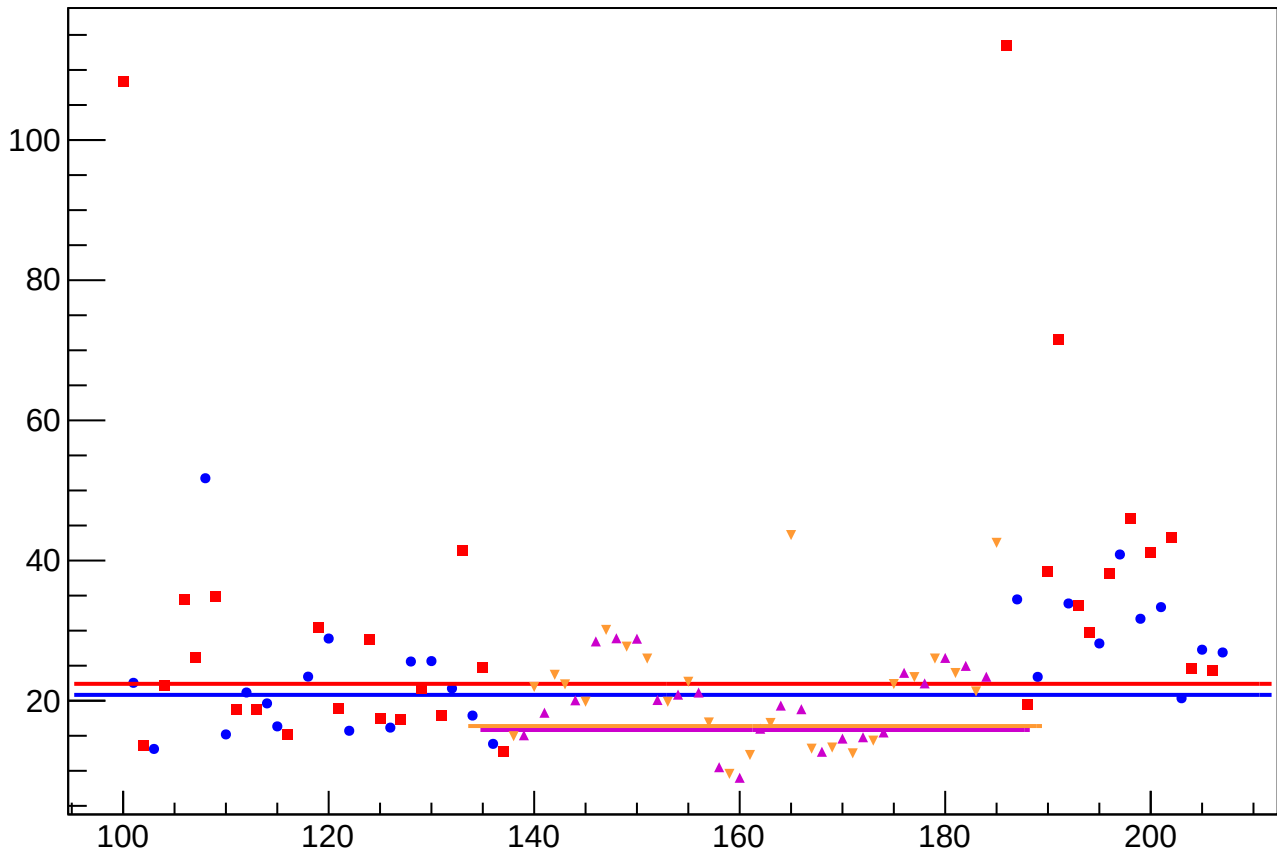
Left In:  $0.003 \pm 0.004$   $\chi^2/\text{NDF}$ : 19.8/22

+ sign  $-0.012 \pm 0.003$   $\chi^2/\text{NDF}$ : 81.6/50

All:  $-0.007 \pm 0.002$   $\chi^2/\text{NDF}$ : 136.5/104

- sign  $-0.002 \pm 0.003$   $\chi^2/\text{NDF}$ : 51.2/53

asym\_sam\_15\_37\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 20.835 $\pm$ 0.004  $\chi^2$ /NDF: 2826236.7/25

Left Out: 16.387 $\pm$ 0.003  $\chi^2$ /NDF: 4030028.3/24

Right Out: 22.410 $\pm$ 0.004  $\chi^2$ /NDF: 4095278.7/30

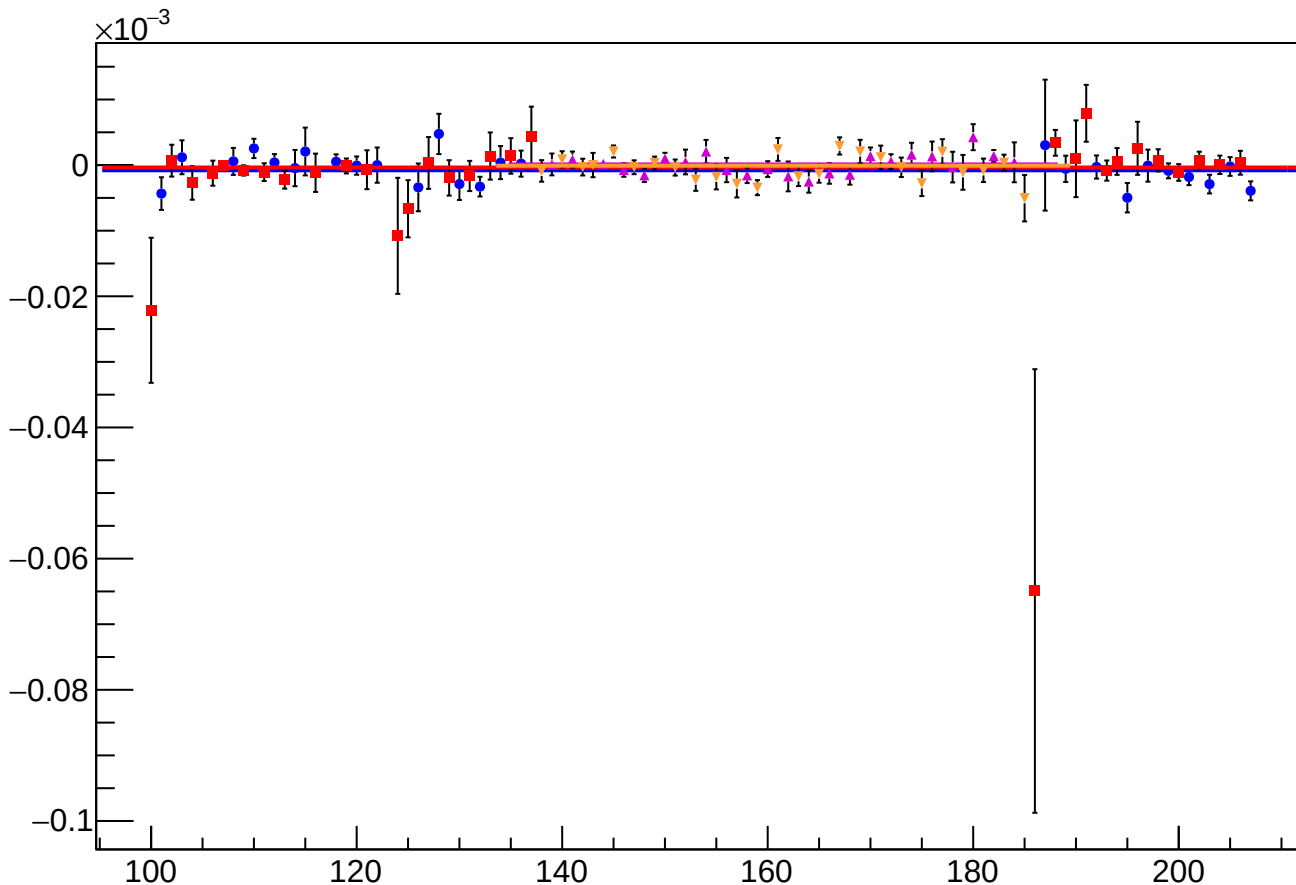
Left In: 15.824 $\pm$ 0.003  $\chi^2$ /NDF: 3654469.7/22

+ sign 17.782 $\pm$ 0.002  $\chi^2$ /NDF: 7606302.8/50

All: 17.757 $\pm$ 0.002  $\chi^2$ /NDF: 16895463.0/104

- sign 17.731 $\pm$ 0.002  $\chi^2$ /NDF: 9288934.9/53

asym\_sam\_15\_37\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 30.6/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 36.1/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 27.2/30

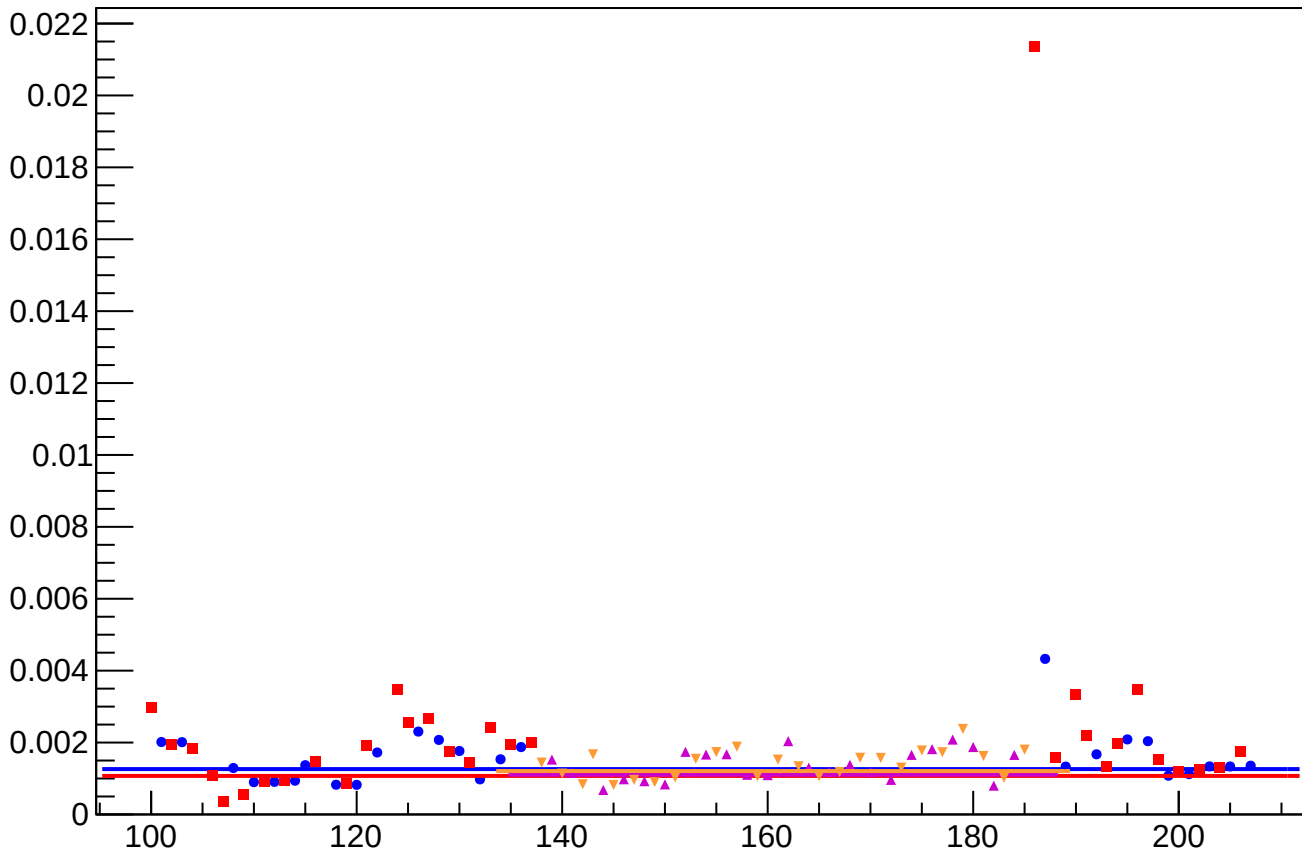
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 21.9/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 69.1/50

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 120.4/104

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 50.4/53

asym\_sam\_15\_37\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 2755316.7/25

Left Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 2720984.6/24

Right Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 7965371.2/30

Left In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 3494983.4/22

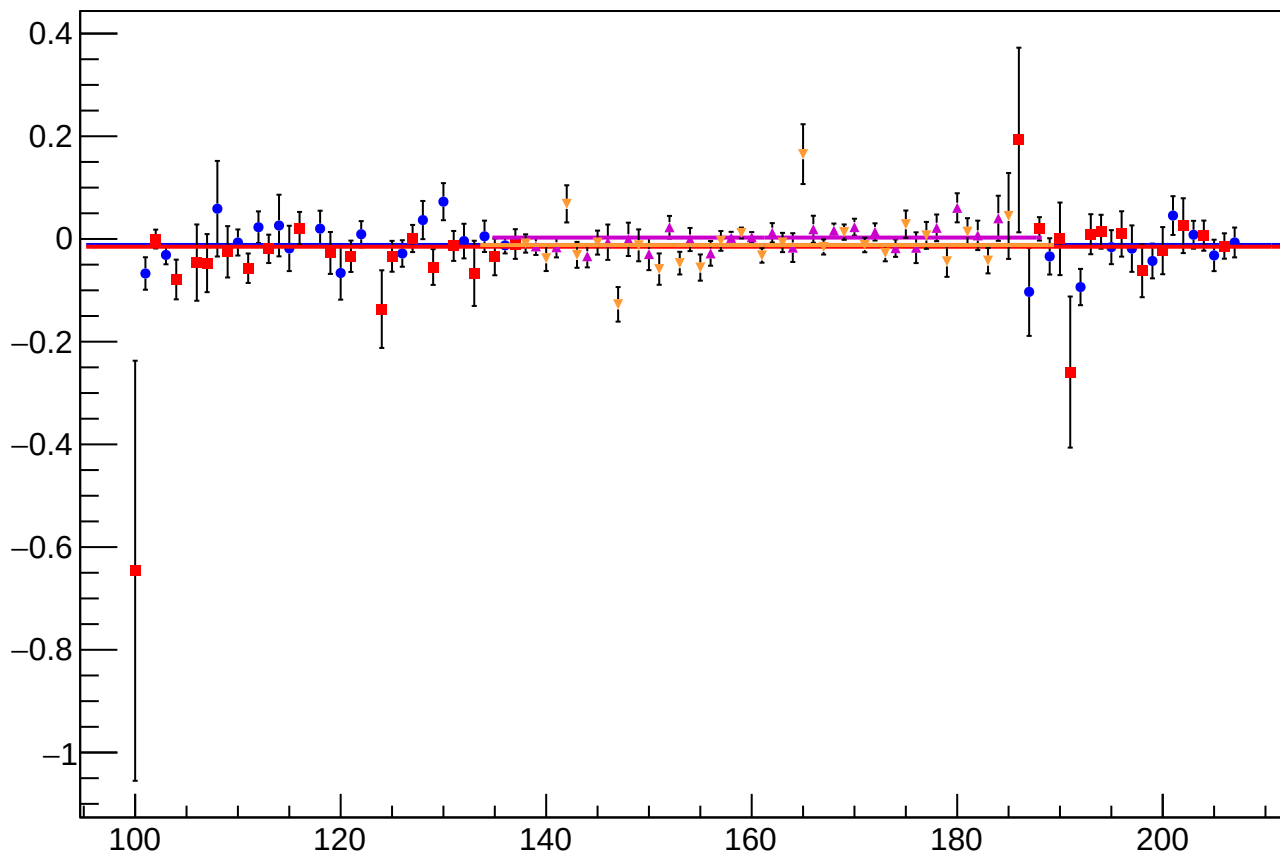
+ sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 5504811.4/50

All: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 17403896.4/104

- sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 11472345.9/53



asym\_sam\_15\_37\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.012 \pm 0.006$   $\chi^2/\text{NDF}$ : 28.2/25

Left Out:  $-0.012 \pm 0.004$   $\chi^2/\text{NDF}$ : 53.4/24

Right Out:  $-0.015 \pm 0.006$   $\chi^2/\text{NDF}$ : 25.8/30

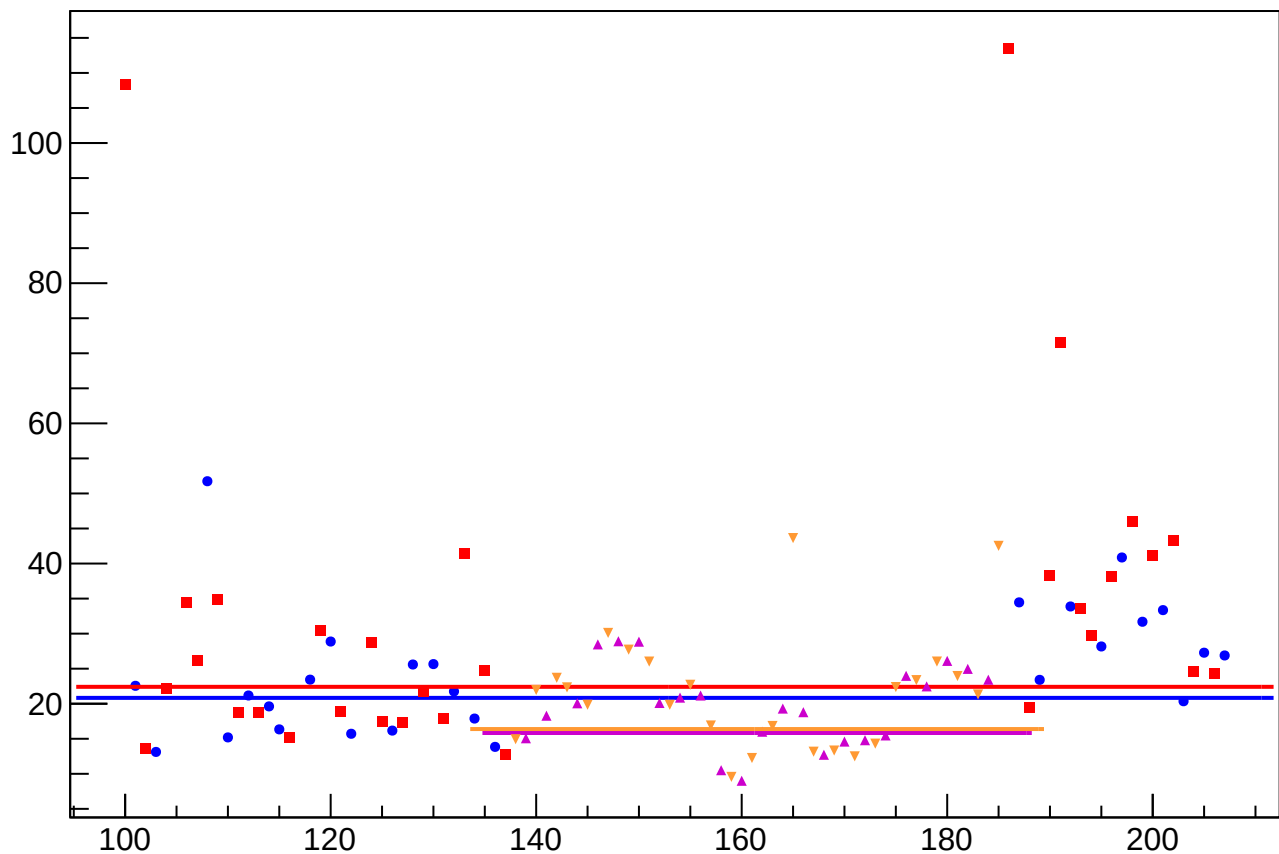
Left In:  $0.003 \pm 0.004$   $\chi^2/\text{NDF}$ : 19.8/22

+ sign  $-0.012 \pm 0.003$   $\chi^2/\text{NDF}$ : 81.6/50

All:  $-0.007 \pm 0.002$   $\chi^2/\text{NDF}$ : 136.5/104

- sign  $-0.002 \pm 0.003$   $\chi^2/\text{NDF}$ : 51.2/53

asym\_sam\_15\_37\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 20.835 $\pm$ 0.004  $\chi^2$ /NDF: 2826251.5/25

Left Out: 16.387 $\pm$ 0.003  $\chi^2$ /NDF: 4030277.2/24

Right Out: 22.411 $\pm$ 0.004  $\chi^2$ /NDF: 4095009.1/30

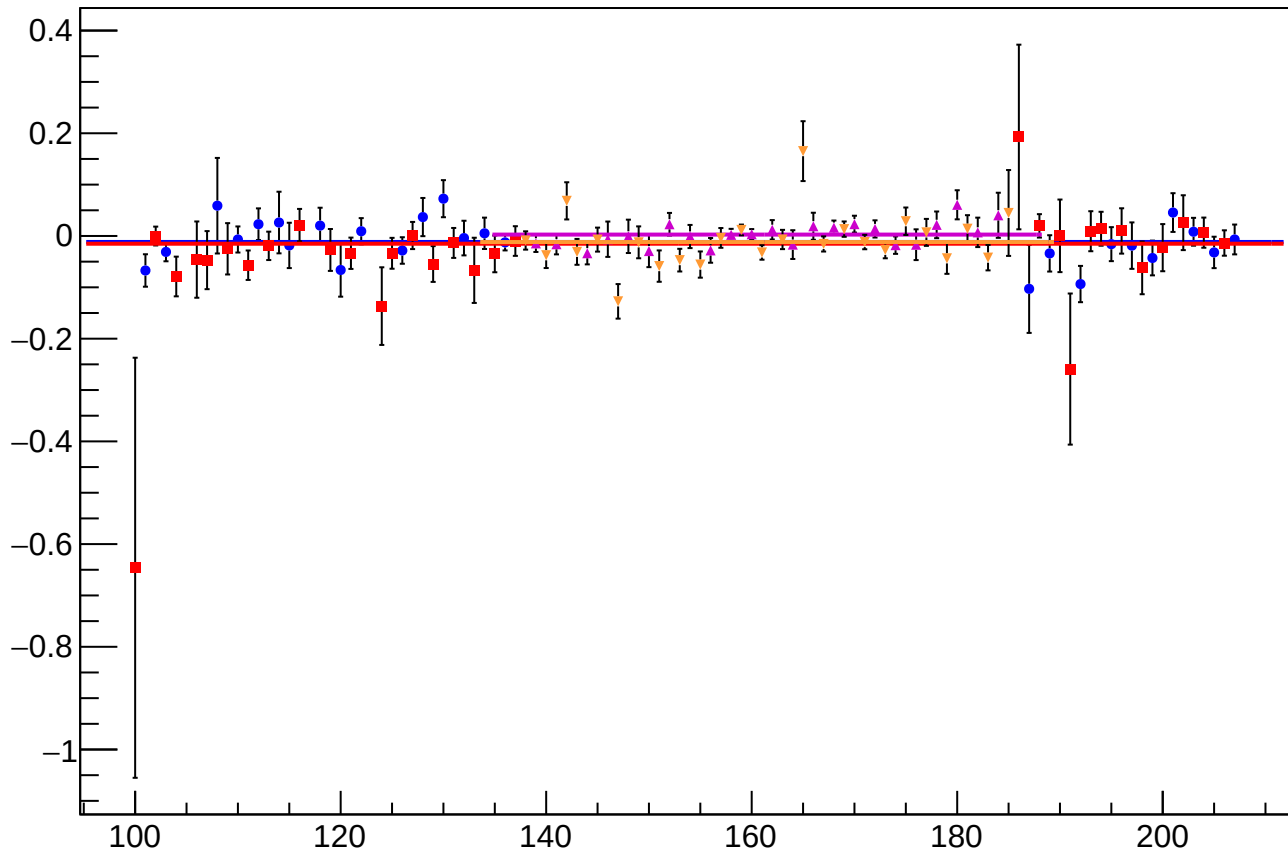
Left In: 15.823 $\pm$ 0.003  $\chi^2$ /NDF: 3654834.3/22

+ sign 17.782 $\pm$ 0.002  $\chi^2$ /NDF: 7606655.8/50

All: 17.756 $\pm$ 0.002  $\chi^2$ /NDF: 16896244.2/104

- sign 17.731 $\pm$ 0.002  $\chi^2$ /NDF: 9289363.3/53

asym\_sam\_15\_37\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: -0.012 $\pm$ 0.006  $\chi^2$ /NDF: 28.2/25

Left Out: -0.012 $\pm$ 0.004  $\chi^2$ /NDF: 53.4/24

Right Out: -0.015 $\pm$ 0.006  $\chi^2$ /NDF: 25.8/30

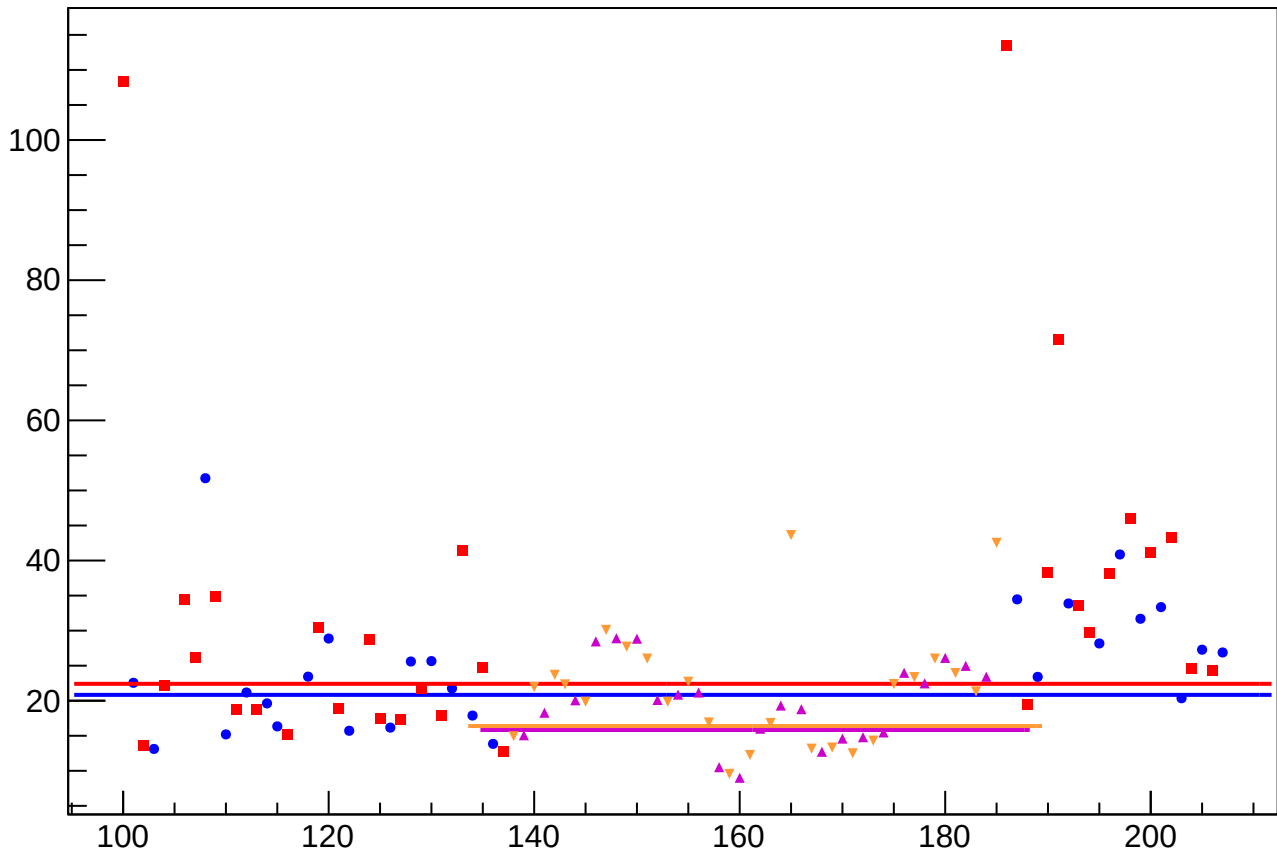
Left In: 0.003 $\pm$ 0.004  $\chi^2$ /NDF: 19.8/22

+ sign -0.012 $\pm$ 0.003  $\chi^2$ /NDF: 81.6/50

All: -0.007 $\pm$ 0.002  $\chi^2$ /NDF: 136.5/104

- sign -0.002 $\pm$ 0.003  $\chi^2$ /NDF: 51.2/53

asym\_sam\_15\_37\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 20.835 $\pm$ 0.004  $\chi^2$ /NDF: 2826251.5/25

Left Out: 16.387 $\pm$ 0.003  $\chi^2$ /NDF: 4030277.2/24

Right Out: 22.411 $\pm$ 0.004  $\chi^2$ /NDF: 4095009.1/30

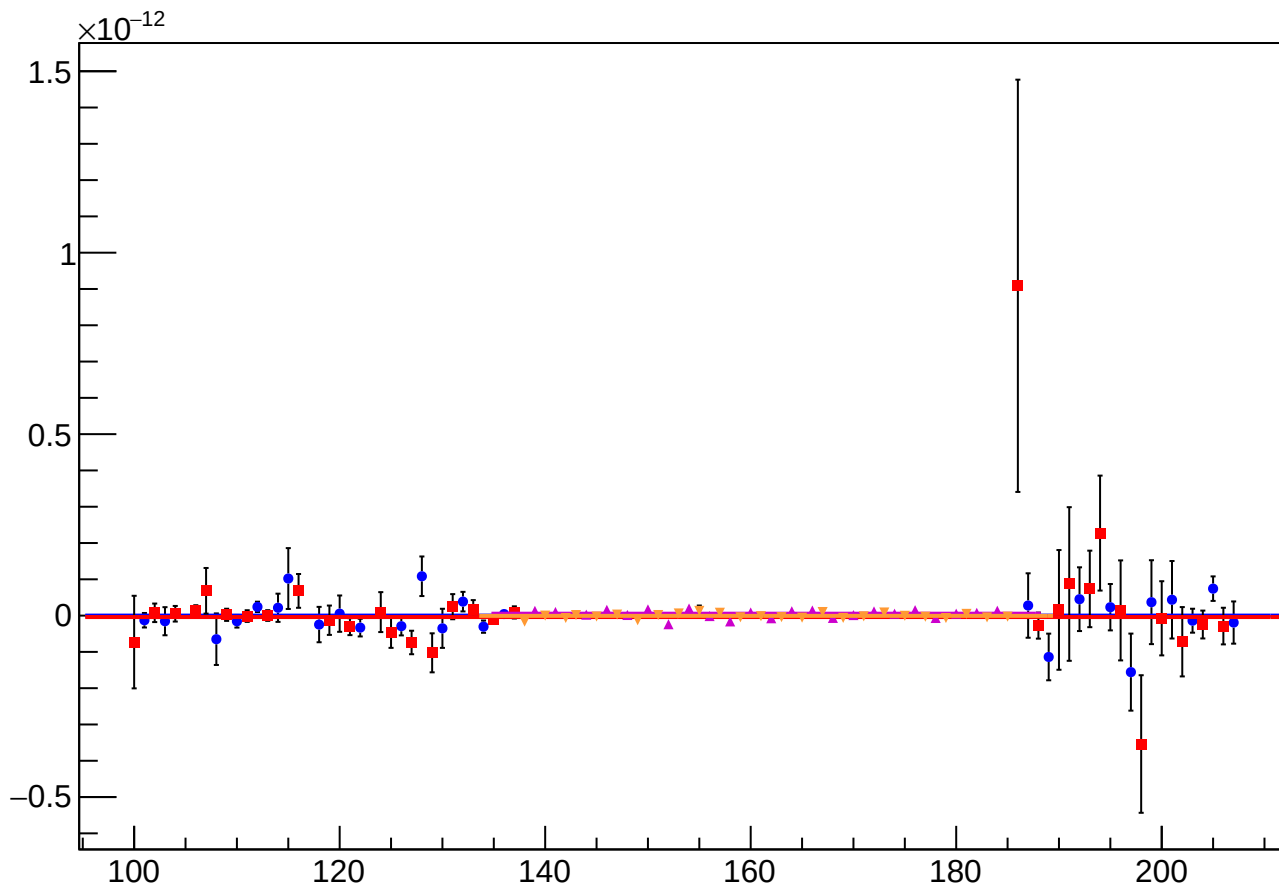
Left In: 15.823 $\pm$ 0.003  $\chi^2$ /NDF: 3654834.3/22

+ sign 17.782 $\pm$ 0.002  $\chi^2$ /NDF: 7606655.8/50

All: 17.756 $\pm$ 0.002  $\chi^2$ /NDF: 16896244.2/104

- sign 17.731 $\pm$ 0.002  $\chi^2$ /NDF: 9289363.3/53

asym\_sam\_15\_37\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 31.5/25

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:19.1/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 29.6/30

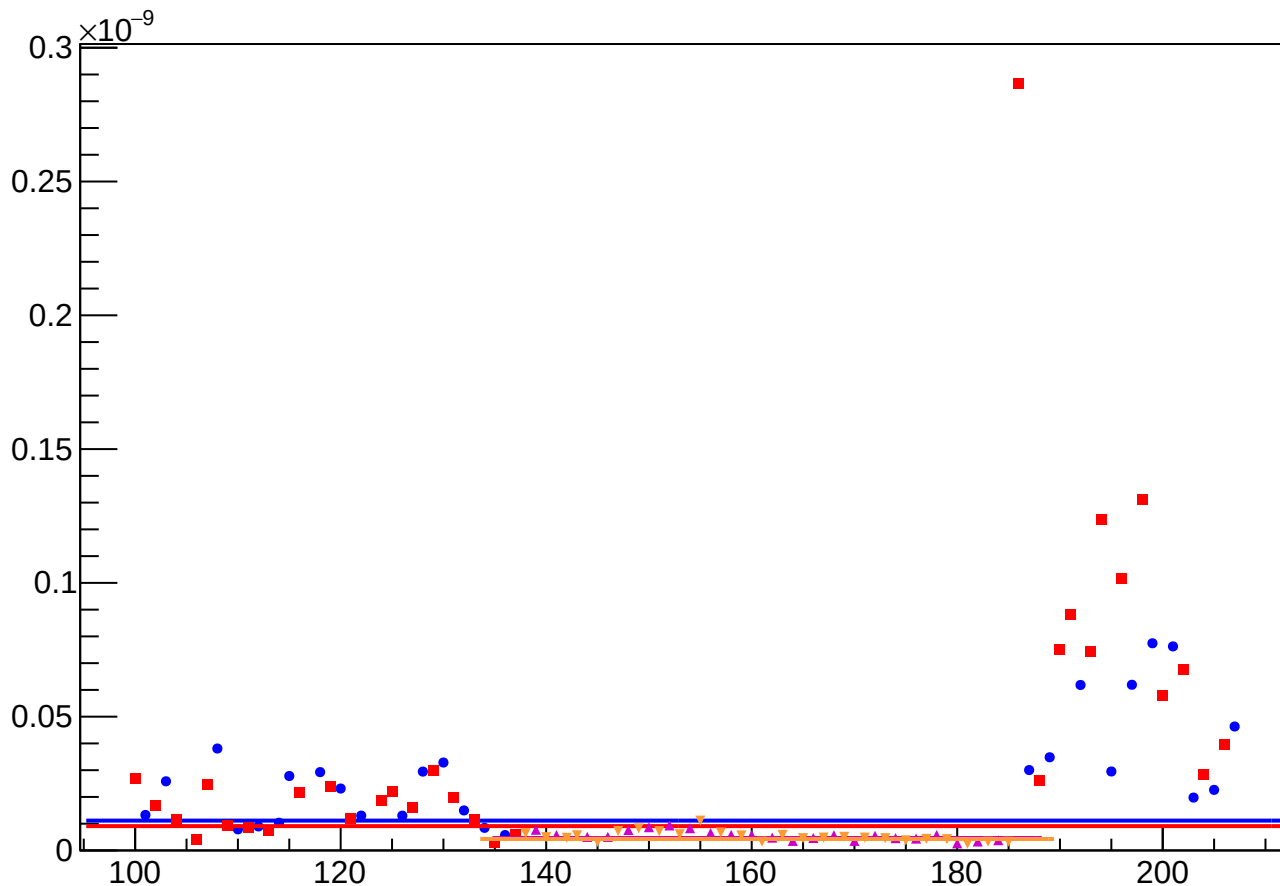
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:37.9/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 50.6/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 130.1/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 71.6/53

asym\_sam\_15\_37\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6985249.3/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2583638.5/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10816872.1/30

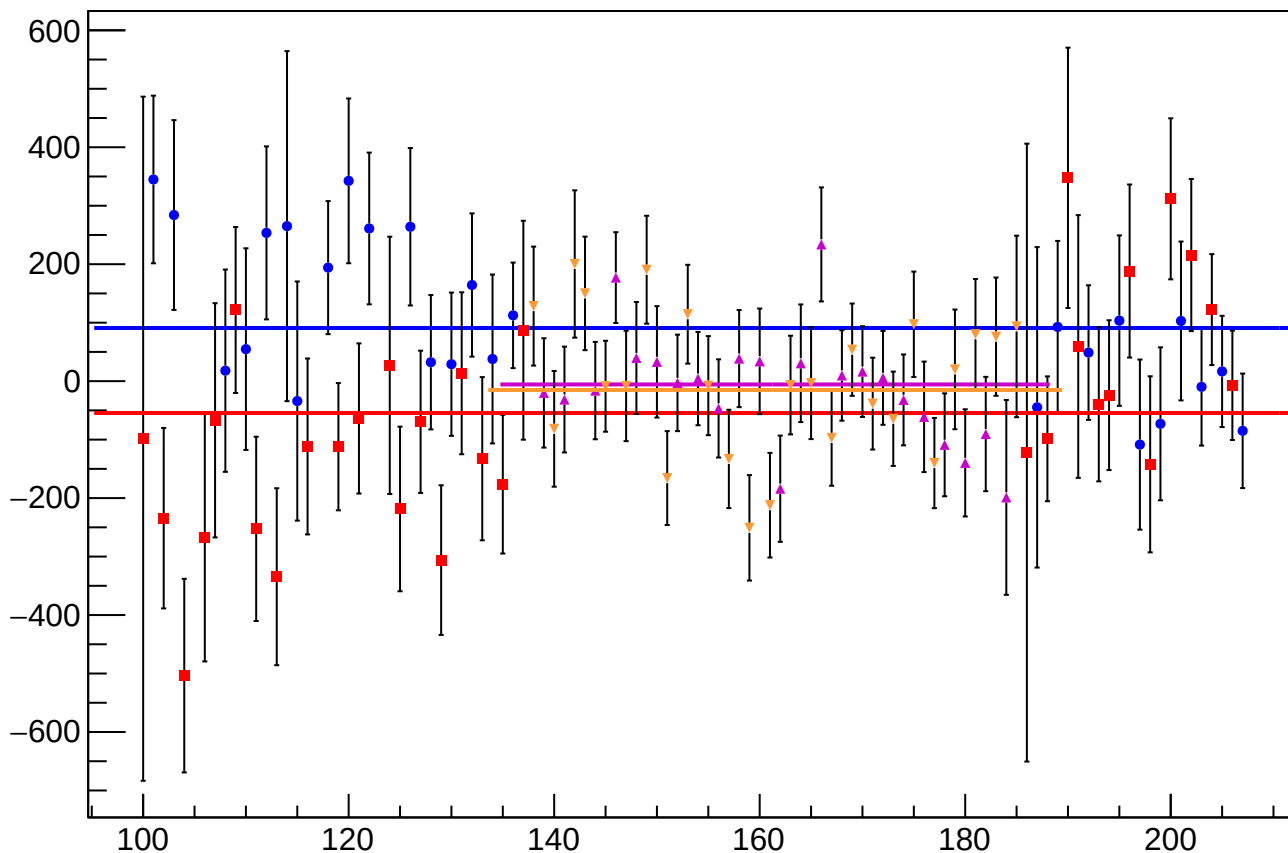
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2508440.7/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13287291.7/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 28547383.6/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 15189249.2/53

# reg\_asym\_sam\_24\_68\_dd\_mean vs Slug



Right In: 90.919 $\pm$ 25.715  $\chi^2$ /NDF: 23.8/25

Left Out: -15.100 $\pm$ 17.957  $\chi^2$ /NDF: 41.6/24

Right Out: -54.508 $\pm$ 25.555  $\chi^2$ /NDF: 46.2/30

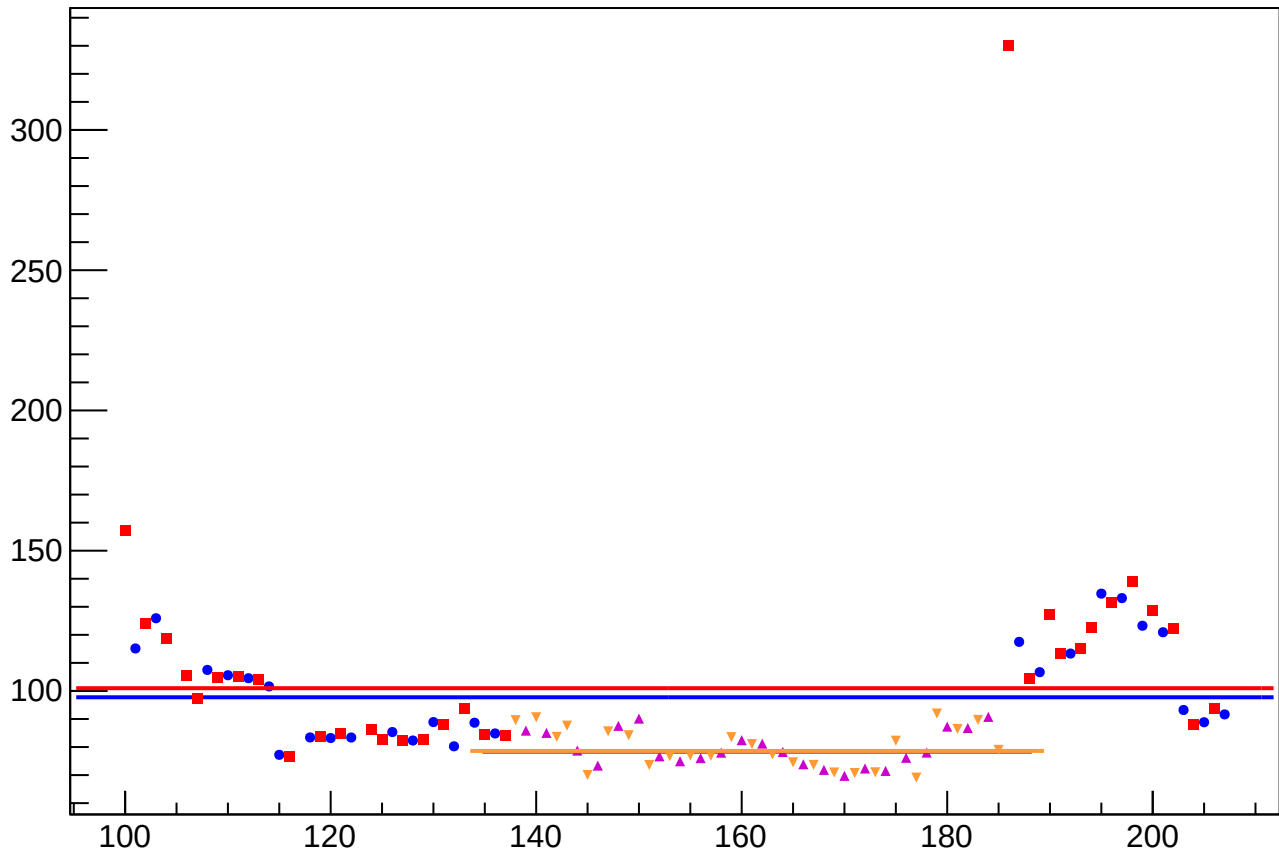
Left In: -5.629 $\pm$ 18.382  $\chi^2$ /NDF: 23.0/22

+ sign 19.653 $\pm$ 14.723  $\chi^2$ /NDF: 76.9/50

All: -1.039 $\pm$ 10.480  $\chi^2$ /NDF: 152.5/104

- sign -22.296 $\pm$ 14.922  $\chi^2$ /NDF: 71.6/53

# reg\_asym\_sam\_24\_68\_dd\_rms vs Slug



Right In: 97.741 $\pm$ 0.018  $\chi^2$ /NDF: 820110.8/25

Left Out: 78.618 $\pm$ 0.013  $\chi^2$ /NDF: 307235.6/24

Right Out: 100.978 $\pm$ 0.018  $\chi^2$ /NDF: 1323576.7/30

Left In: 78.334 $\pm$ 0.013  $\chi^2$ /NDF: 209146.2/22

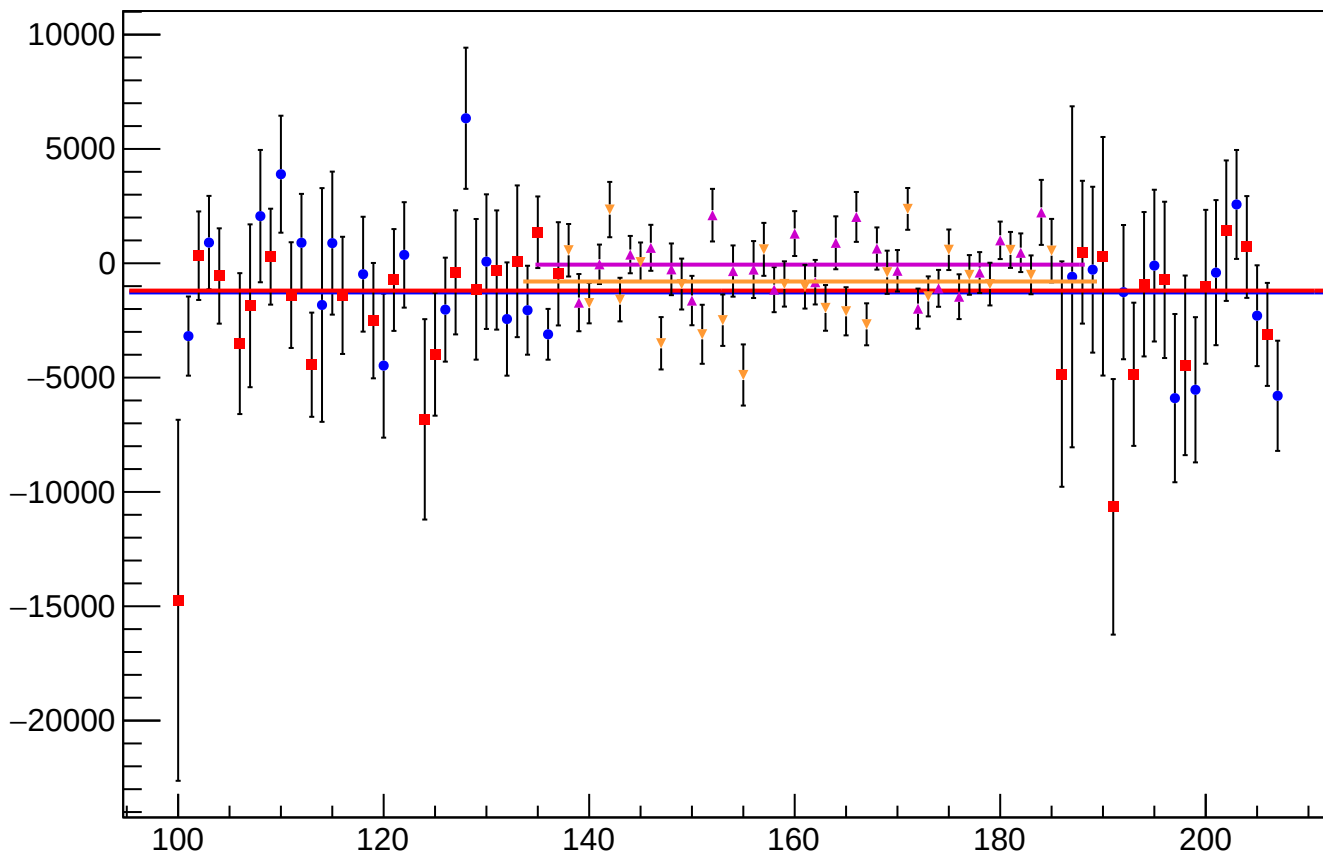
+ sign 84.887 $\pm$ 0.010  $\chi^2$ /NDF: 1870841.4/50

All: 85.463 $\pm$ 0.007  $\chi^2$ /NDF: 4444585.8/104

- sign 86.055 $\pm$ 0.011  $\chi^2$ /NDF: 2567531.0/53



asym\_sam\_24\_68\_dd\_reg\_correction\_mean vs Slug



Right In:  $-1274.804 \pm 475.082$   $\chi^2/\text{NDF}$ : 30.4/25

Left Out:  $-797.000 \pm 197.884$   $\chi^2/\text{NDF}$ : 59.5/24

Right Out:  $-1194.896 \pm 485.198$   $\chi^2/\text{NDF}$ : 21.0/30

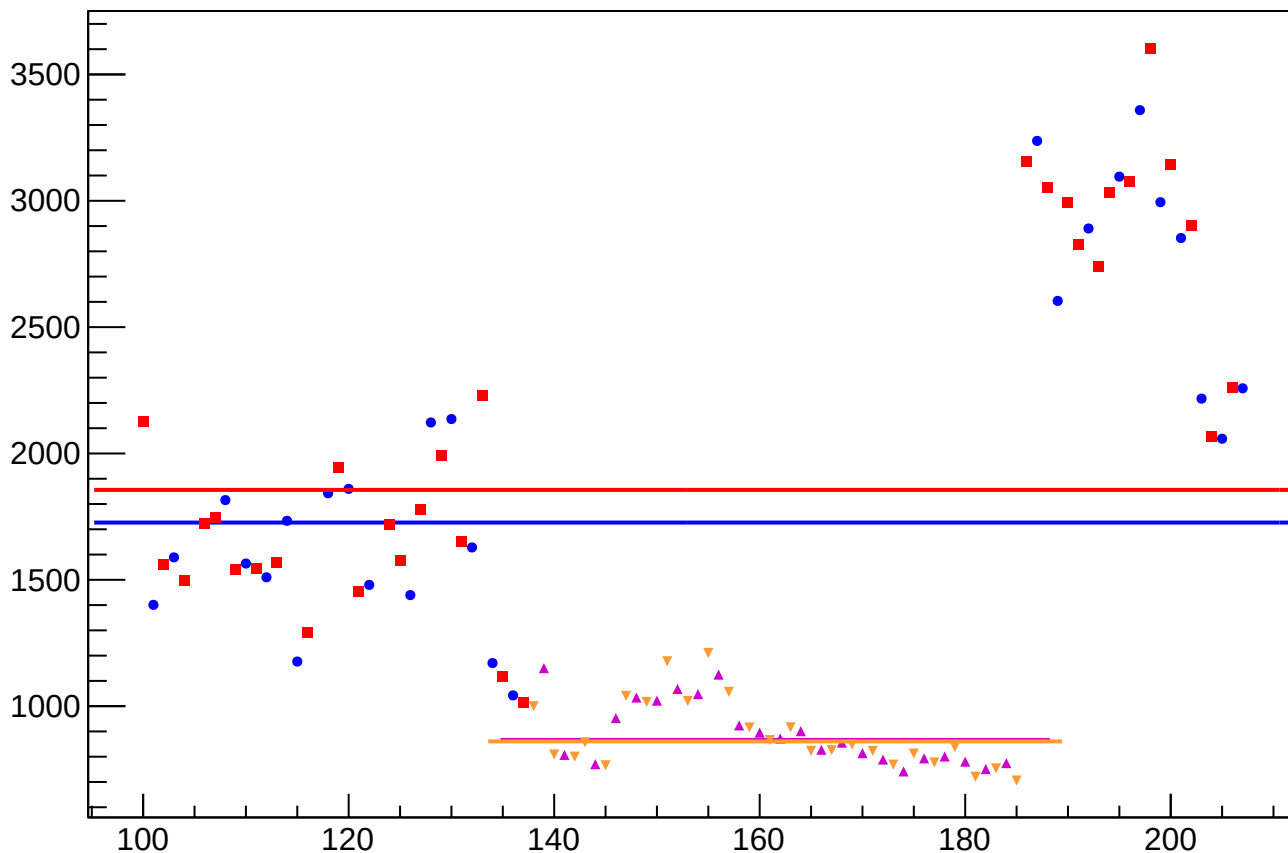
Left In:  $-59.494 \pm 204.437$   $\chi^2/\text{NDF}$ : 30.5/22

+ sign  $-867.641 \pm 182.671$   $\chi^2/\text{NDF}$ : 90.8/50

All:  $-558.983 \pm 131.145$   $\chi^2/\text{NDF}$ : 152.8/104

- sign  $-230.675 \pm 188.396$   $\chi^2/\text{NDF}$ : 56.1/53

asym\_sam\_24\_68\_dd\_reg\_correction\_rms vs Slug



Right In: 1726.604 $\pm$ 0.336  $\chi^2/\text{NDF}$ : 3276195.1/25

Left Out: 860.492 $\pm$ 0.140  $\chi^2/\text{NDF}$ : 699252.0/24

Right Out: 1855.889 $\pm$ 0.343  $\chi^2/\text{NDF}$ : 3466595.6/30

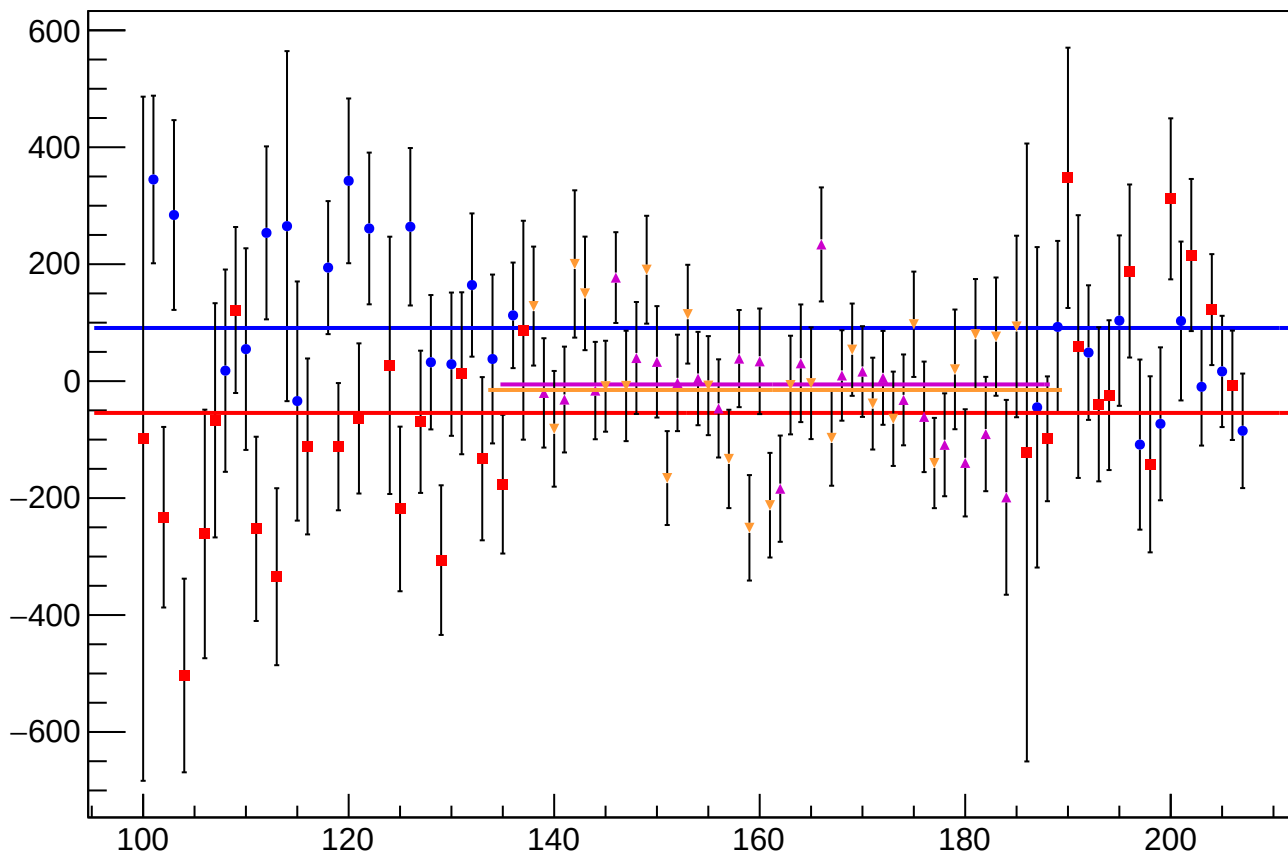
Left In: 866.351 $\pm$ 0.145  $\chi^2/\text{NDF}$ : 613257.7/22

+ sign 988.542 $\pm$ 0.129  $\chi^2/\text{NDF}$ : 9639934.9/50

All: 1001.625 $\pm$ 0.093  $\chi^2/\text{NDF}$ : 20805483.2/100

- sign 1015.541 $\pm$ 0.133  $\chi^2/\text{NDF}$ : 11144376.1/53

# cor\_asym\_sam\_24\_68\_dd\_mean vs Slug



Right In:  $90.914 \pm 25.715$   $\chi^2/\text{NDF}$ : 23.8/25

Left Out:  $-15.098 \pm 17.957$   $\chi^2/\text{NDF}$ : 41.6/24

Right Out:  $-54.362 \pm 25.556$   $\chi^2/\text{NDF}$ : 46.1/30

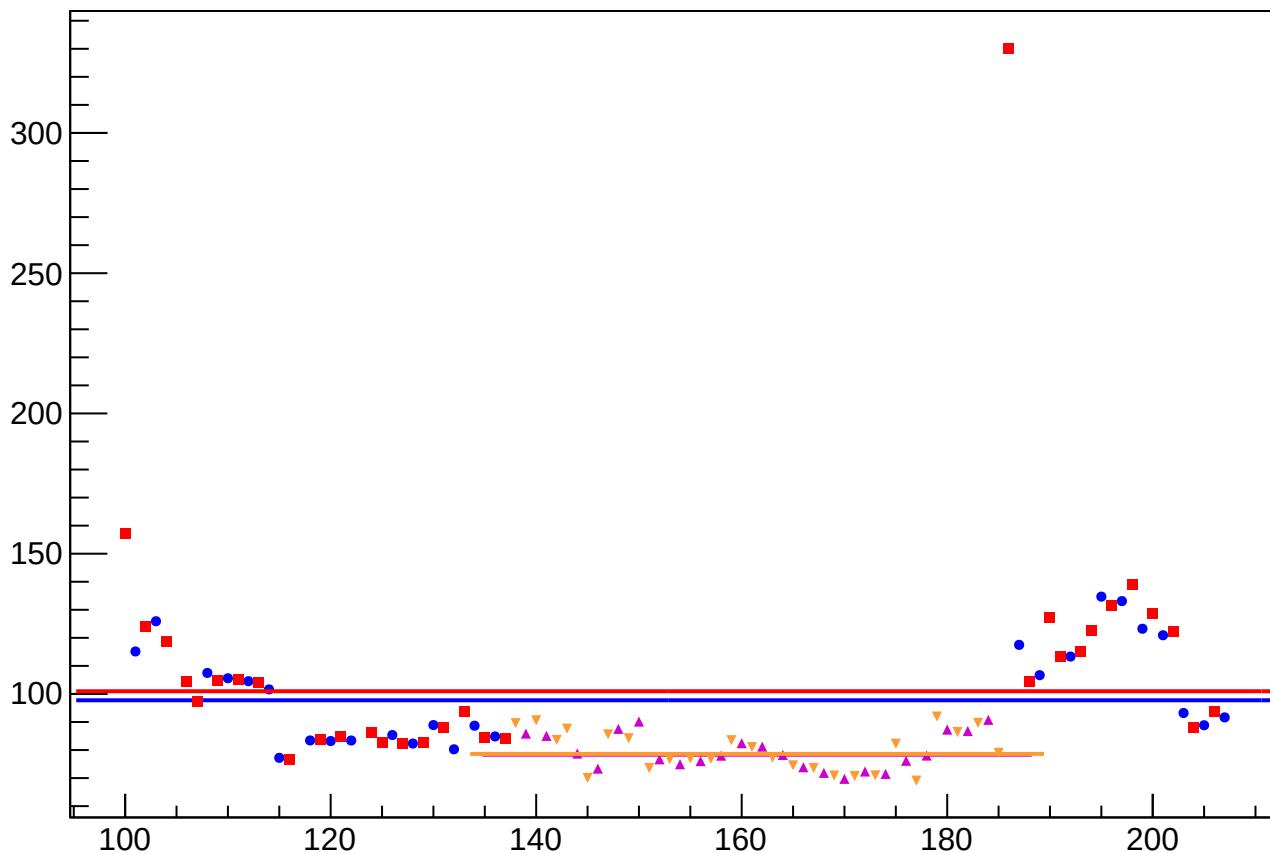
Left In:  $-5.626 \pm 18.382$   $\chi^2/\text{NDF}$ : 23.0/22

+ sign  $19.652 \pm 14.723$   $\chi^2/\text{NDF}$ : 76.9/50

All:  $-1.013 \pm 10.480$   $\chi^2/\text{NDF}$ : 152.4/104

- sign  $-22.243 \pm 14.922$   $\chi^2/\text{NDF}$ : 71.5/53

# cor\_asym\_sam\_24\_68\_dd\_rms vs Slug



Right In: 97.741+/-0.018  $\chi^2/\text{NDF}$ : 820112.3/25

Left Out: 78.618+/-0.013  $\chi^2/\text{NDF}$ : 307235.6/24

Right Out: 100.960+/-0.018  $\chi^2/\text{NDF}$ : 1323294.9/30

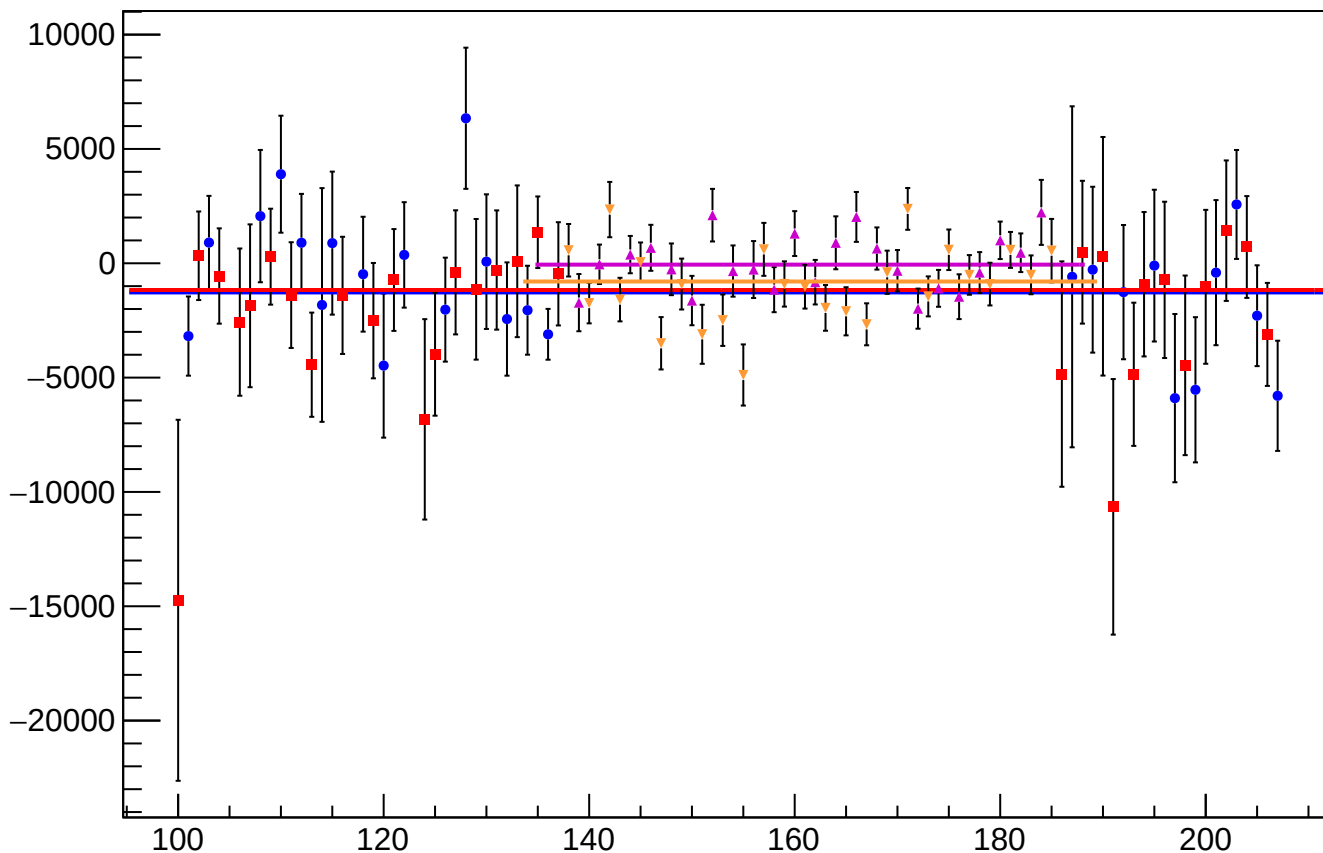
Left In: 78.334+/-0.013  $\chi^2/\text{NDF}$ : 209146.2/22

+ sign 84.887+/-0.010  $\chi^2/\text{NDF}$ : 1870843.3/50

All: 85.460+/-0.007  $\chi^2/\text{NDF}$ : 4442560.7/104

- sign 86.049+/-0.011  $\chi^2/\text{NDF}$ : 2565572.3/53

asym\_sam\_24\_68\_dd\_cor\_correction\_mean vs Slug



Right In:  $-1274.788 \pm 475.083$   $\chi^2/\text{NDF}$ : 30.4/25

Left Out:  $-797.000 \pm 197.884$   $\chi^2/\text{NDF}$ : 59.5/24

Right Out:  $-1168.950 \pm 485.718$   $\chi^2/\text{NDF}$ : 20.6/30

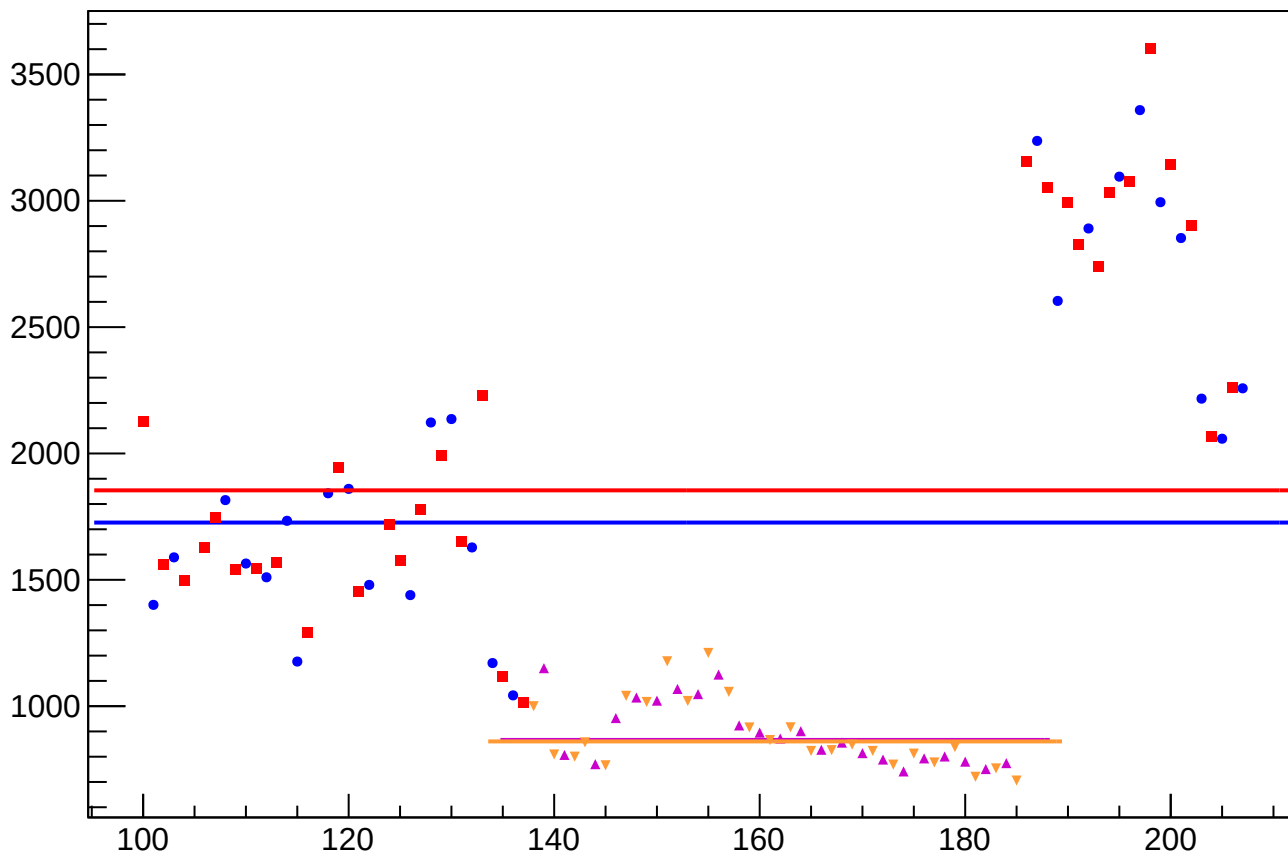
Left In:  $-59.494 \pm 204.437$   $\chi^2/\text{NDF}$ : 30.5/22

+ sign  $-867.638 \pm 182.671$   $\chi^2/\text{NDF}$ : 90.8/50

All:  $-556.991 \pm 131.156$   $\chi^2/\text{NDF}$ : 152.2/104

- sign  $-226.460 \pm 188.427$   $\chi^2/\text{NDF}$ : 55.5/53

asym\_sam\_24\_68\_dd\_cor\_correction\_rms vs Slug



Right In: 1726.608 $\pm$ 0.336  $\chi^2$ /NDF: 3276187.0/25

Left Out: 860.492 $\pm$ 0.140  $\chi^2$ /NDF: 699250.7/24

Right Out: 1854.084 $\pm$ 0.343  $\chi^2$ /NDF: 3472557.8/30

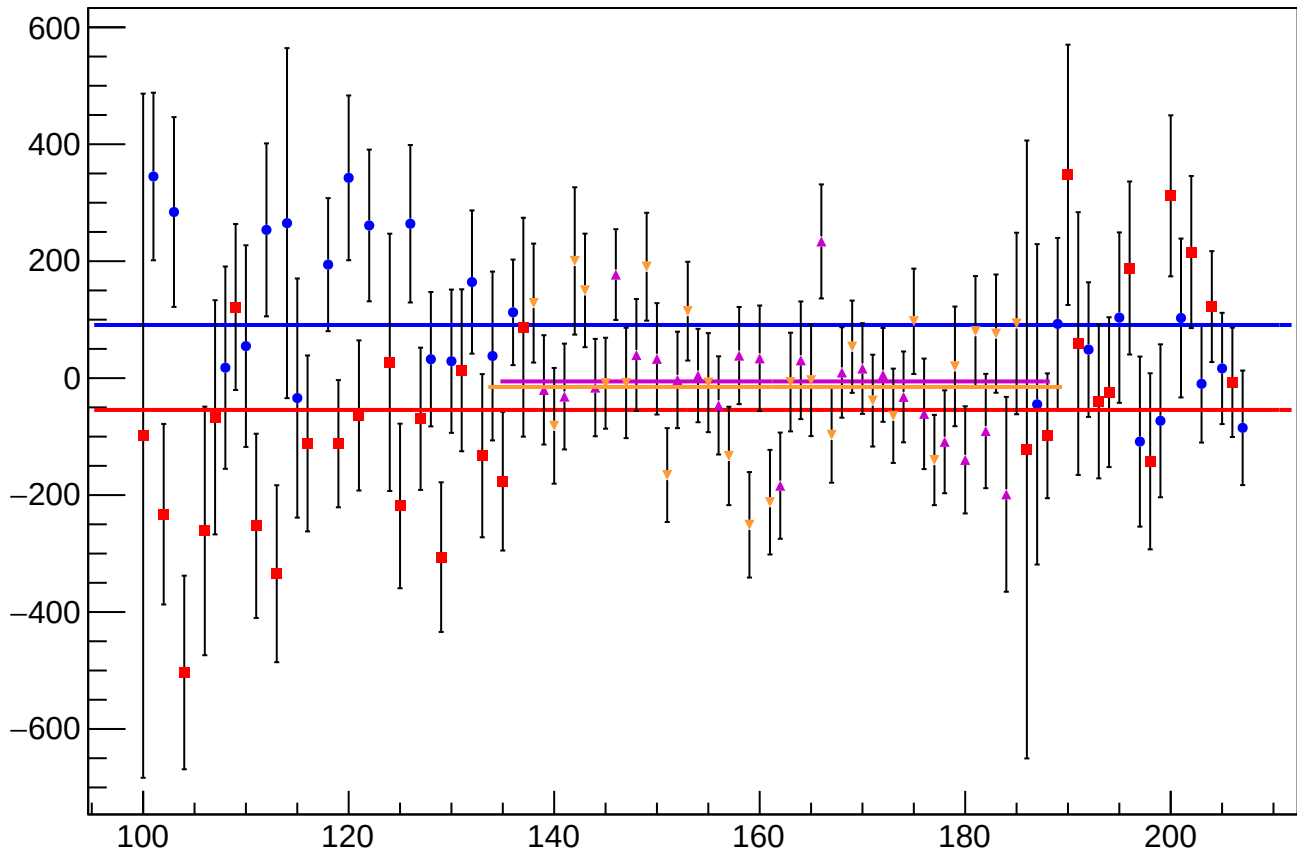
Left In: 866.352 $\pm$ 0.145  $\chi^2$ /NDF: 613256.3/22

+ sign 988.542 $\pm$ 0.129  $\chi^2$ /NDF: 9639954.9/50

All: 1001.360 $\pm$ 0.093  $\chi^2$ /NDF: 20772083.6/100

- sign 1014.999 $\pm$ 0.133  $\chi^2$ /NDF: 11111802.0/53

# eigen\_cor\_asym\_sam\_24\_68\_dd\_mean vs Slug



Right In: 90.914 $\pm$ 25.715  $\chi^2/\text{NDF}$ : 23.8/25

Left Out: -15.098 $\pm$ 17.957  $\chi^2/\text{NDF}$ : 41.6/24

Right Out: -54.362 $\pm$ 25.556  $\chi^2/\text{NDF}$ : 46.1/30

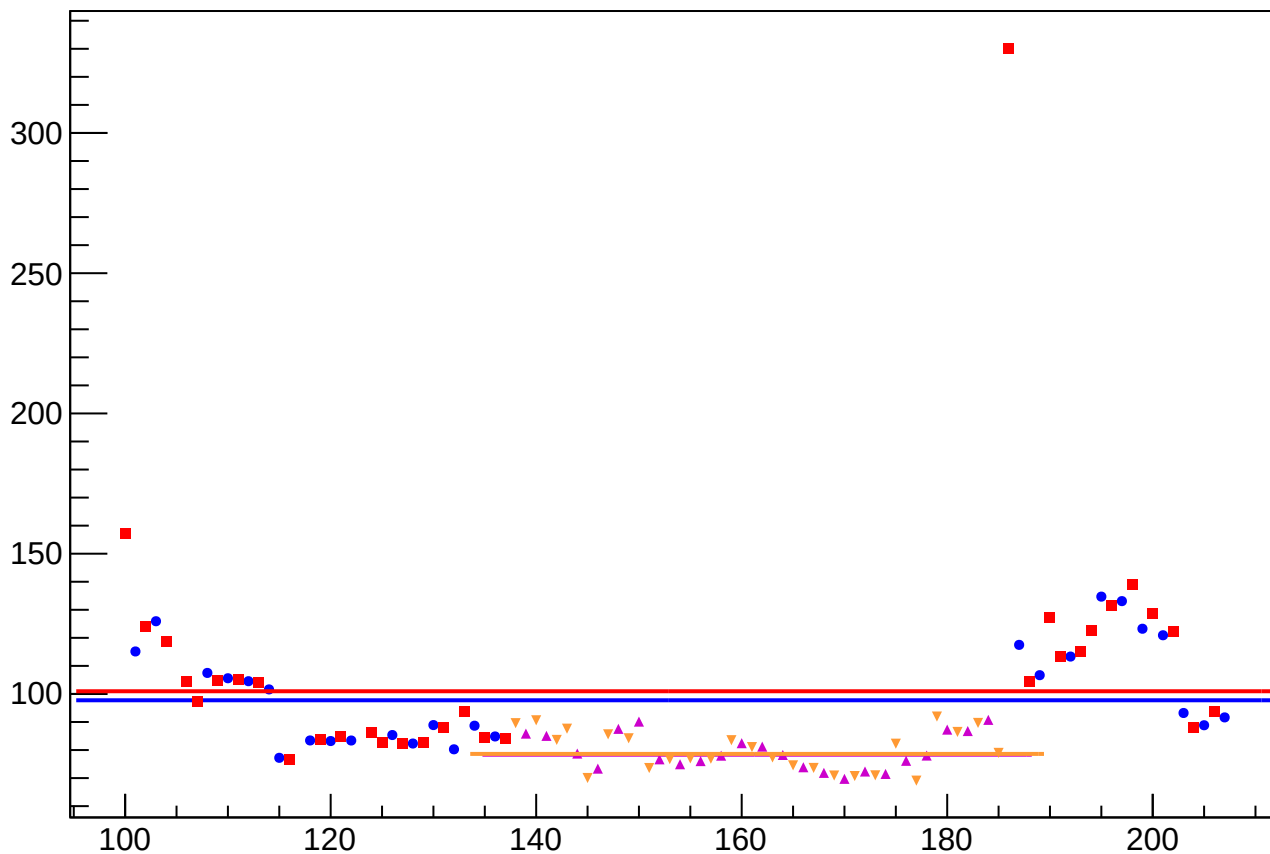
Left In: -5.626 $\pm$ 18.382  $\chi^2/\text{NDF}$ : 23.0/22

+ sign 19.652 $\pm$ 14.723  $\chi^2/\text{NDF}$ : 76.9/50

All: -1.013 $\pm$ 10.480  $\chi^2/\text{NDF}$ : 152.4/104

- sign -22.243 $\pm$ 14.922  $\chi^2/\text{NDF}$ : 71.5/53

# eigen\_cor\_asym\_sam\_24\_68\_dd\_rms vs Slug



Right In: 97.741 $\pm$ 0.018  $\chi^2$ /NDF: 820112.3/25

Left Out: 78.618 $\pm$ 0.013  $\chi^2$ /NDF: 307235.6/24

Right Out: 100.960 $\pm$ 0.018  $\chi^2$ /NDF: 1323294.9/30

Left In: 78.334 $\pm$ 0.013  $\chi^2$ /NDF: 209146.2/22

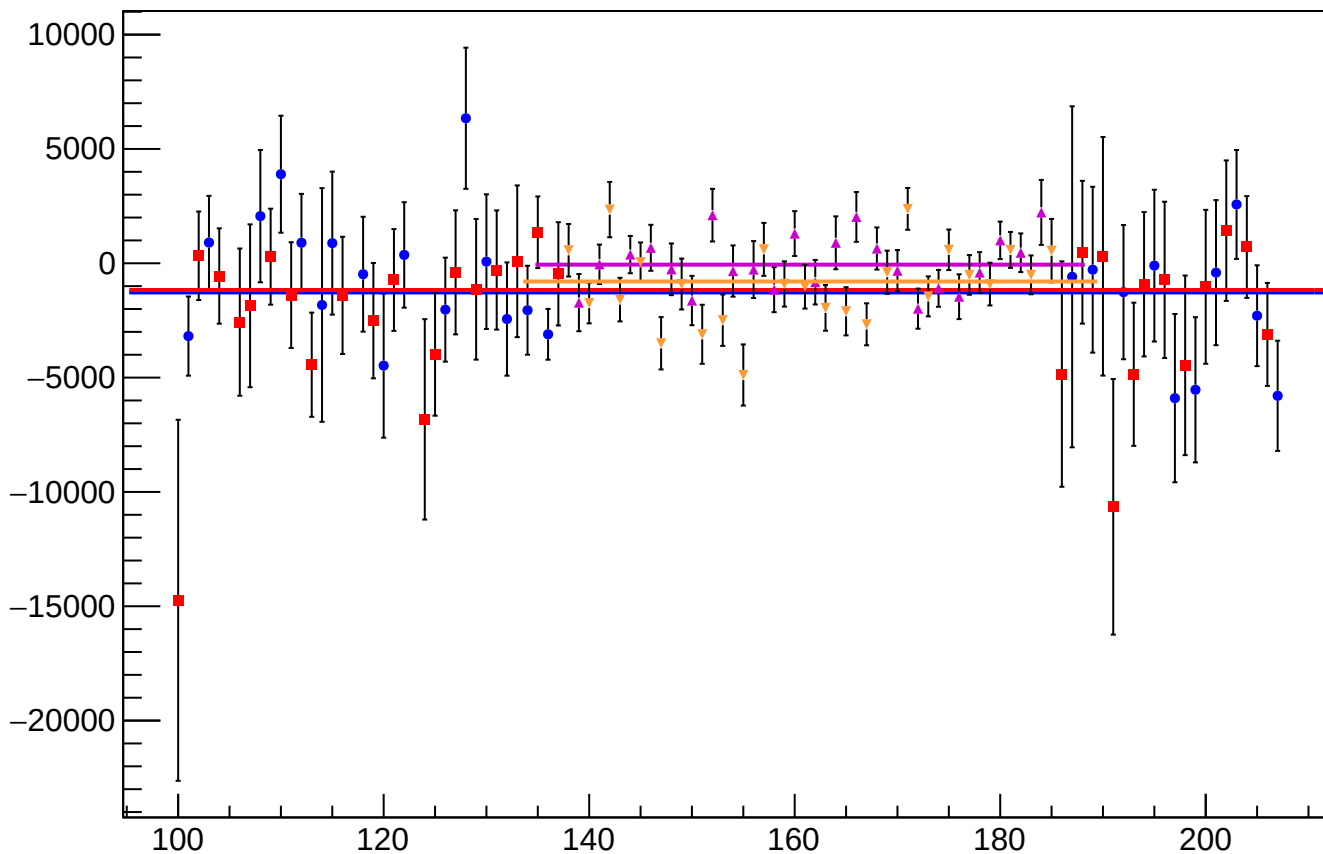
+ sign 84.887 $\pm$ 0.010  $\chi^2$ /NDF: 1870843.3/50

All: 85.460 $\pm$ 0.007  $\chi^2$ /NDF: 4442560.7/104

- sign 86.049 $\pm$ 0.011  $\chi^2$ /NDF: 2565572.3/53



asym\_sam\_24\_68\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-1274.788 \pm 475.083$   $\chi^2/\text{NDF}$ : 30.4/25

Left Out:  $-797.000 \pm 197.884$   $\chi^2/\text{NDF}$ : 59.5/24

Right Out:  $-1168.950 \pm 485.718$   $\chi^2/\text{NDF}$ : 20.6/30

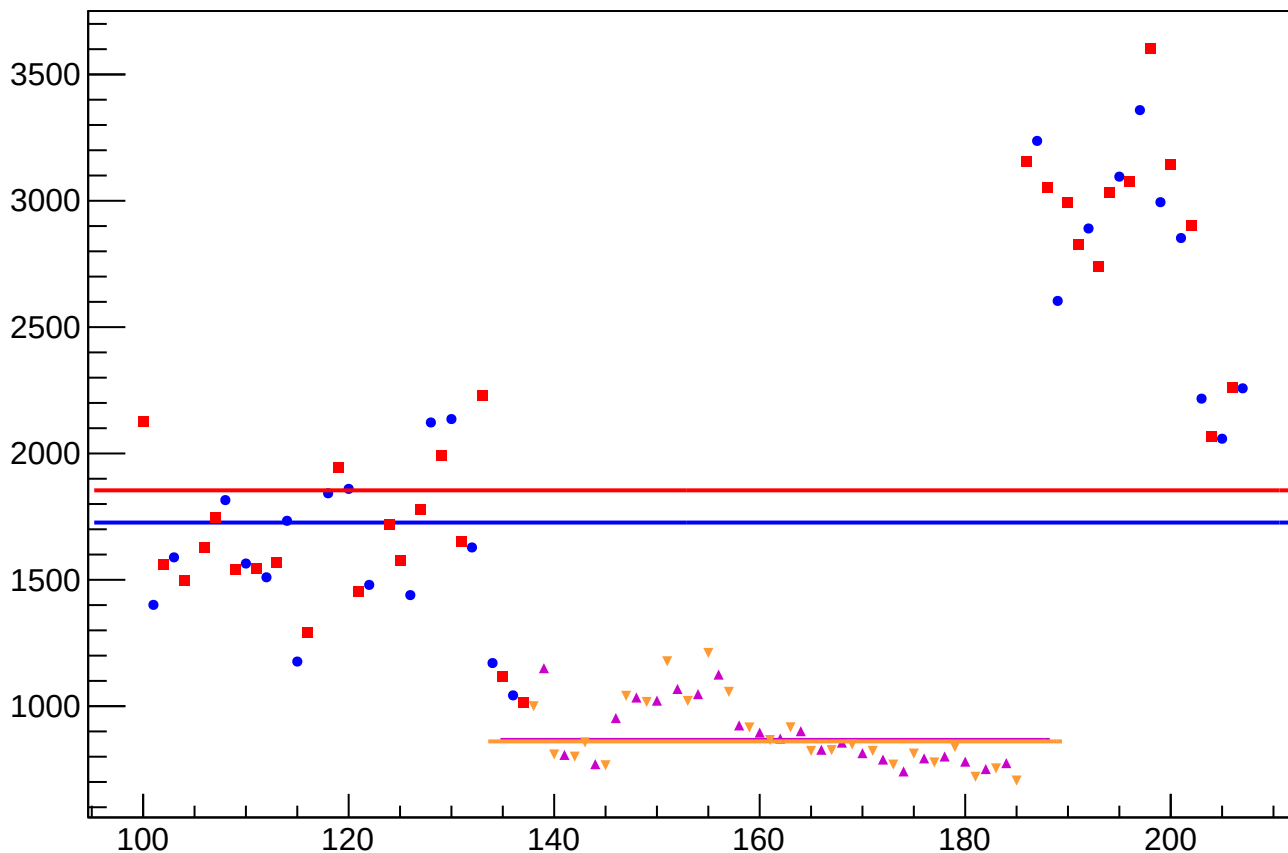
Left In:  $-59.494 \pm 204.437$   $\chi^2/\text{NDF}$ : 30.5/22

+ sign  $-867.638 \pm 182.671$   $\chi^2/\text{NDF}$ : 90.8/50

All:  $-556.991 \pm 131.156$   $\chi^2/\text{NDF}$ : 152.2/104

- sign  $-226.460 \pm 188.427$   $\chi^2/\text{NDF}$ : 55.5/53

asym\_sam\_24\_68\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 1726.608 $\pm$ 0.336  $\chi^2$ /NDF: 3276187.0/25

Left Out: 860.492 $\pm$ 0.140  $\chi^2$ /NDF: 699250.7/24

+ sign 988.542 $\pm$ 0.129  $\chi^2$ /NDF: 9639954.9/50

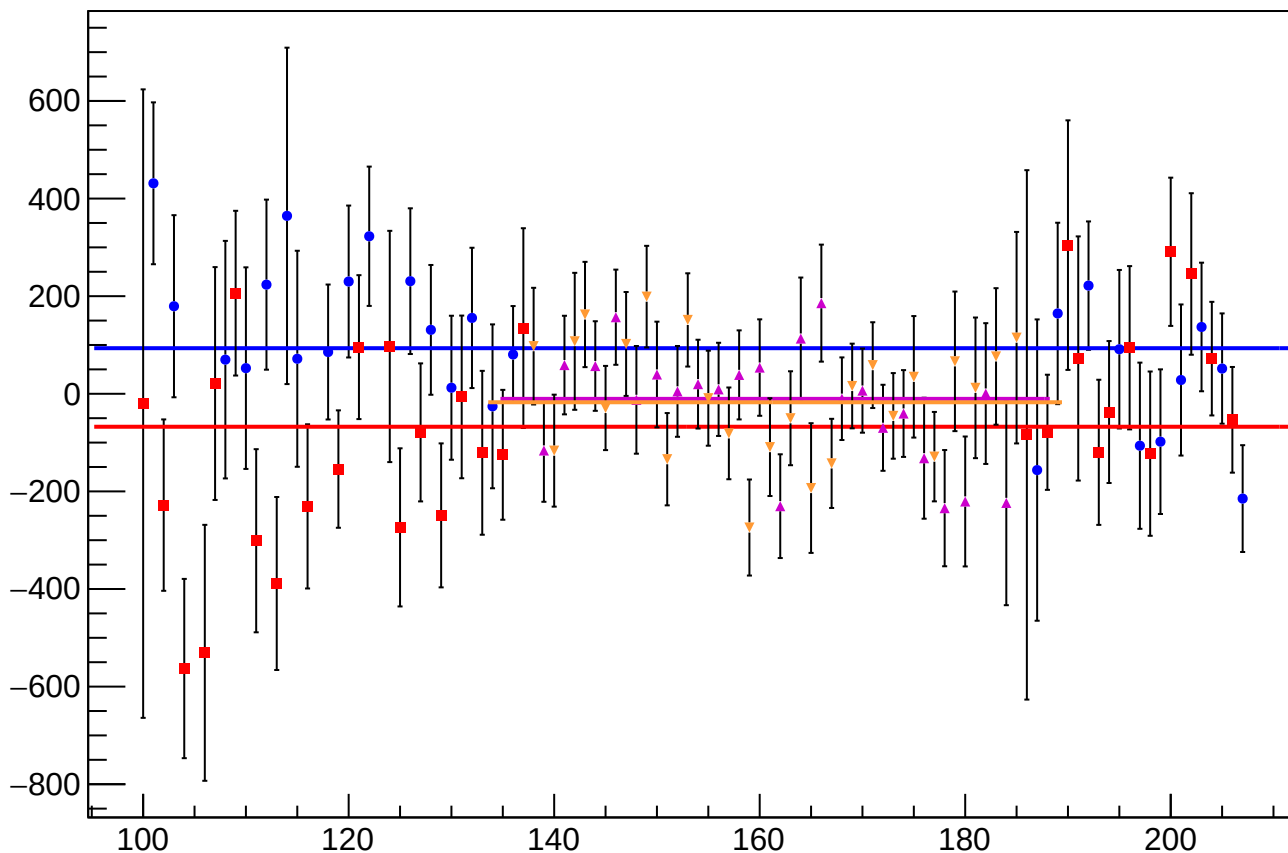
Right Out: 1854.084 $\pm$ 0.343  $\chi^2$ /NDF: 3472557.8/30

All: 1001.360 $\pm$ 0.093  $\chi^2$ /NDF: 20772083.6/1

- sign 1014.999 $\pm$ 0.133  $\chi^2$ /NDF: 11111802.0/53

Left In: 866.352 $\pm$ 0.145  $\chi^2$ /NDF: 613256.3/22

dit\_asym\_sam\_24\_68\_dd\_mean vs Slug



Right In:  $93.416 \pm 29.893$   $\chi^2/\text{NDF}$ : 24.0/25

Left Out:  $-17.356 \pm 20.987$   $\chi^2/\text{NDF}$ : 31.2/24

Right Out:  $-67.536 \pm 29.422$   $\chi^2/\text{NDF}$ : 40.8/30

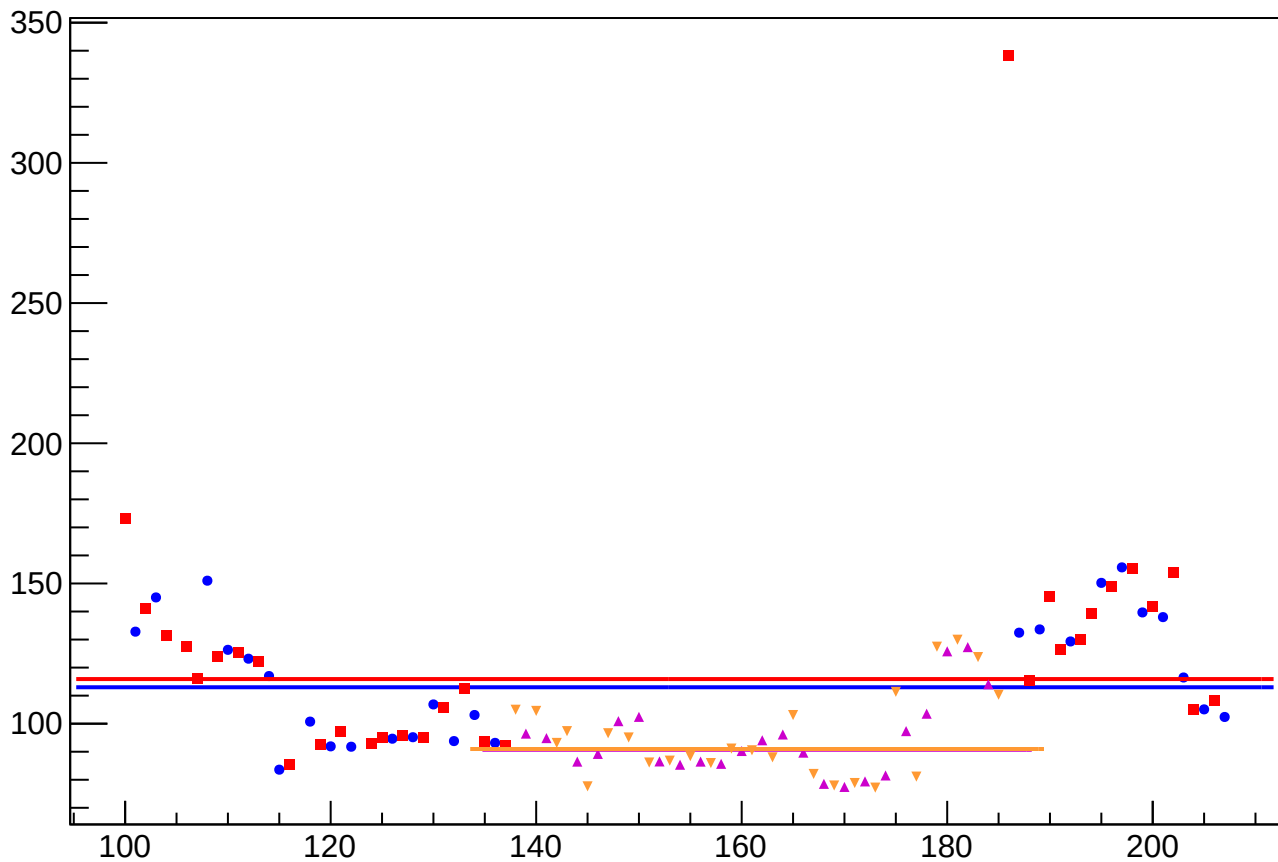
Left In:  $-10.412 \pm 21.503$   $\chi^2/\text{NDF}$ : 22.6/22

+ sign  $19.215 \pm 17.176$   $\chi^2/\text{NDF}$ : 64.4/50

All:  $-5.278 \pm 12.210$   $\chi^2/\text{NDF}$ : 134.4/104

- sign  $-30.301 \pm 17.361$   $\chi^2/\text{NDF}$ : 65.9/53

# dit\_asym\_sam\_24\_68\_dd\_rms vs Slug



Right In:  $112.986 \pm 0.021$   $\chi^2/\text{NDF}$ : 917279.4/25

Left Out:  $90.967 \pm 0.015$   $\chi^2/\text{NDF}$ : 784523.6/24

Right Out:  $115.913 \pm 0.021$   $\chi^2/\text{NDF}$ : 1297527.2/30

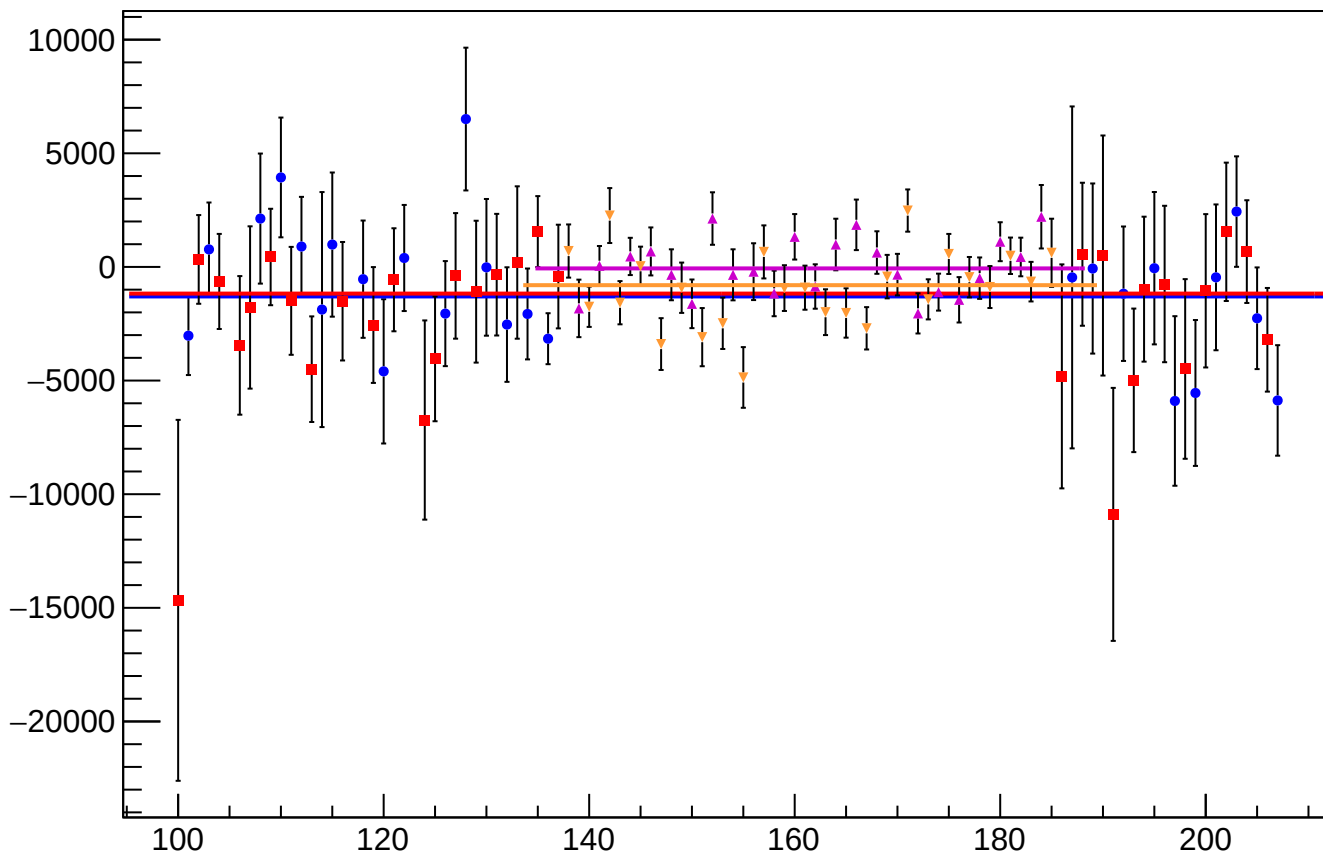
Left In:  $90.690 \pm 0.015$   $\chi^2/\text{NDF}$ : 545969.6/22

+ sign  $98.237 \pm 0.012$   $\chi^2/\text{NDF}$ : 2428687.7/50

All:  $98.848 \pm 0.009$   $\chi^2/\text{NDF}$ : 5235375.1/104

- sign  $99.472 \pm 0.012$   $\chi^2/\text{NDF}$ : 2801569.7/53

asym\_sam\_24\_68\_dd\_dit\_correction\_mean vs Slug



Right In:  $-1298.363 \pm 481.545$   $\chi^2/\text{NDF}$ : 29.9/25

Left Out:  $-802.532 \pm 199.851$   $\chi^2/\text{NDF}$ : 58.3/24

Right Out:  $-1173.191 \pm 490.010$   $\chi^2/\text{NDF}$ : 21.8/30

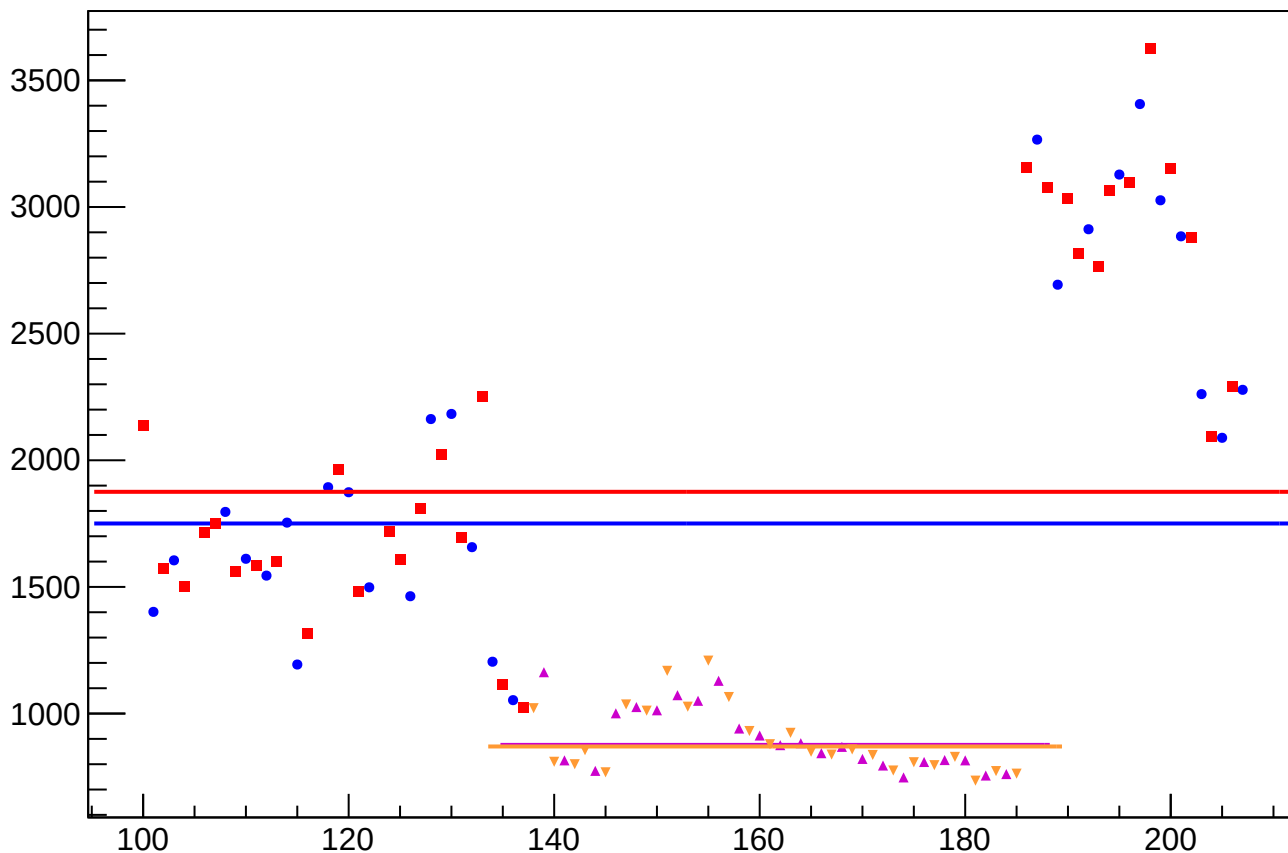
Left In:  $-65.218 \pm 206.677$   $\chi^2/\text{NDF}$ : 30.7/22

+ sign  $-875.386 \pm 184.586$   $\chi^2/\text{NDF}$ : 89.1/50

All:  $-563.990 \pm 132.540$   $\chi^2/\text{NDF}$ : 151.9/104

- sign  $-232.557 \pm 190.431$   $\chi^2/\text{NDF}$ : 56.9/53

asym\_sam\_24\_68\_dd\_dit\_correction\_rms vs Slug



Right In: 1750.437 $\pm$ 0.341  $\chi^2$ /NDF: 3284076.3/25

Left Out: 870.009 $\pm$ 0.141  $\chi^2$ /NDF: 647274.1/24

Right Out: 1875.498 $\pm$ 0.346  $\chi^2$ /NDF: 3441857.7/30

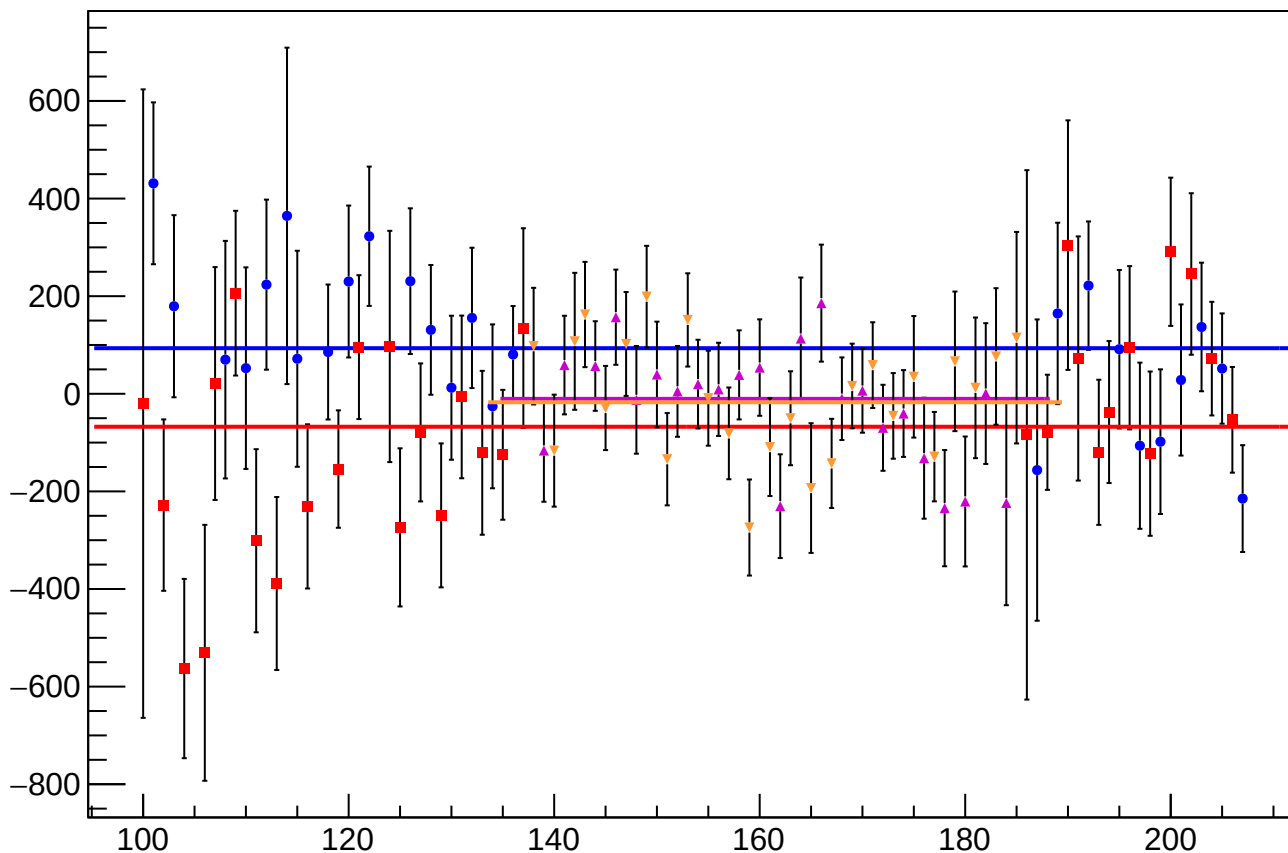
Left In: 876.273 $\pm$ 0.146  $\chi^2$ /NDF: 597200.7/22

+ sign 999.373 $\pm$ 0.131  $\chi^2$ /NDF: 9634662.1/50

All: 1012.847 $\pm$ 0.094  $\chi^2$ /NDF: 20756262.5/100

- sign 1027.187 $\pm$ 0.135  $\chi^2$ /NDF: 11099602.5/53

# eigen\_dit\_asym\_sam\_24\_68\_dd\_mean vs Slug



Right In: 93.419 $\pm$ 29.893  $\chi^2/\text{NDF}$ : 24.0/25

Left Out: -17.356 $\pm$ 20.987  $\chi^2/\text{NDF}$ :31.2/24

Right Out: -67.536 $\pm$ 29.422  $\chi^2/\text{NDF}$ : 40.8/30

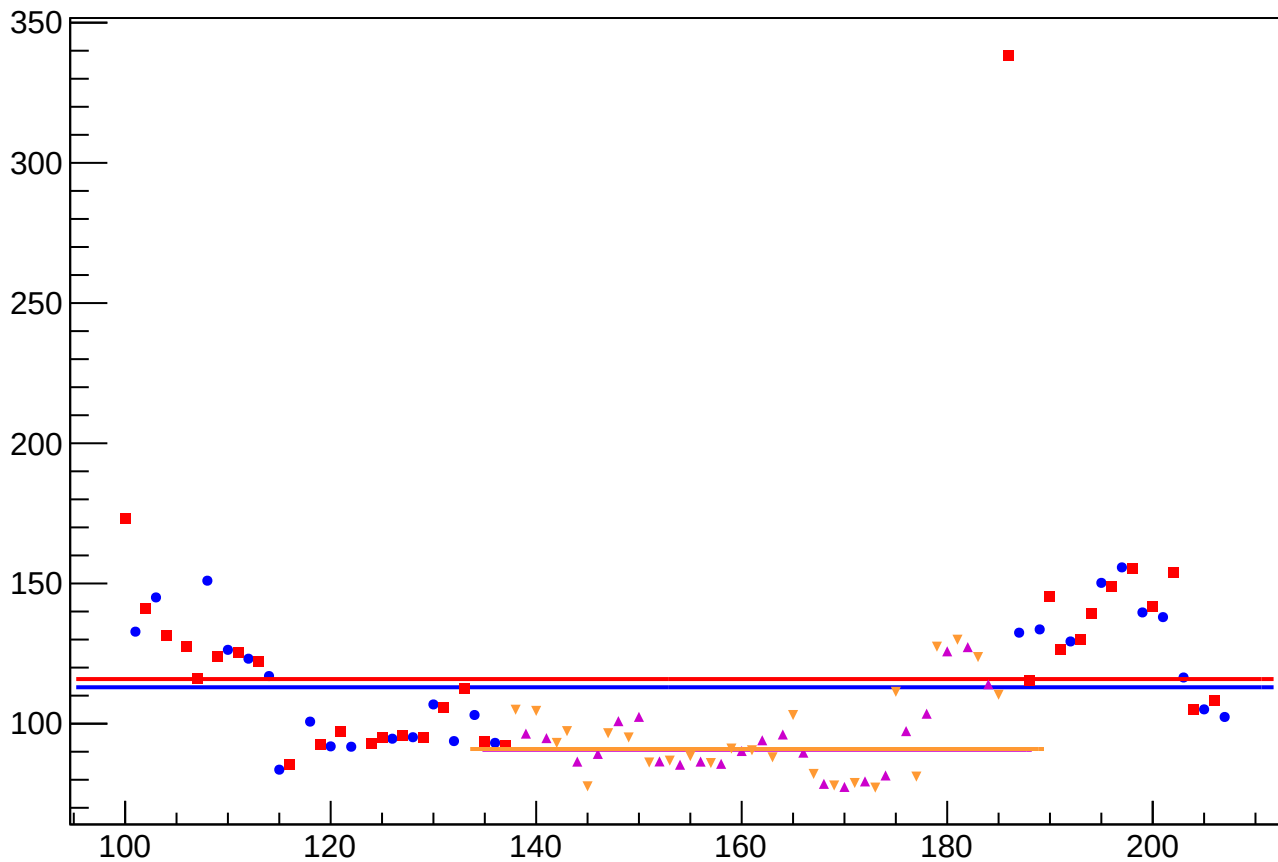
Left In: -10.412 $\pm$ 21.503  $\chi^2/\text{NDF}$ :22.6/22

+ sign 19.217 $\pm$ 17.176  $\chi^2/\text{NDF}$ : 64.4/50

All: -5.278 $\pm$ 12.210  $\chi^2/\text{NDF}$ : 134.4/104

- sign -30.301 $\pm$ 17.361  $\chi^2/\text{NDF}$ : 65.9/53

# eigen\_dit\_asym\_sam\_24\_68\_dd\_rms vs Slug



Right In: 112.985 $\pm$ 0.021  $\chi^2$ /NDF: 917299.7/25

Left Out: 90.967 $\pm$ 0.015  $\chi^2$ /NDF: 784529.9/24

Right Out: 115.912 $\pm$ 0.021  $\chi^2$ /NDF: 1297549.8/30

Left In: 90.690 $\pm$ 0.015  $\chi^2$ /NDF: 545960.7/22

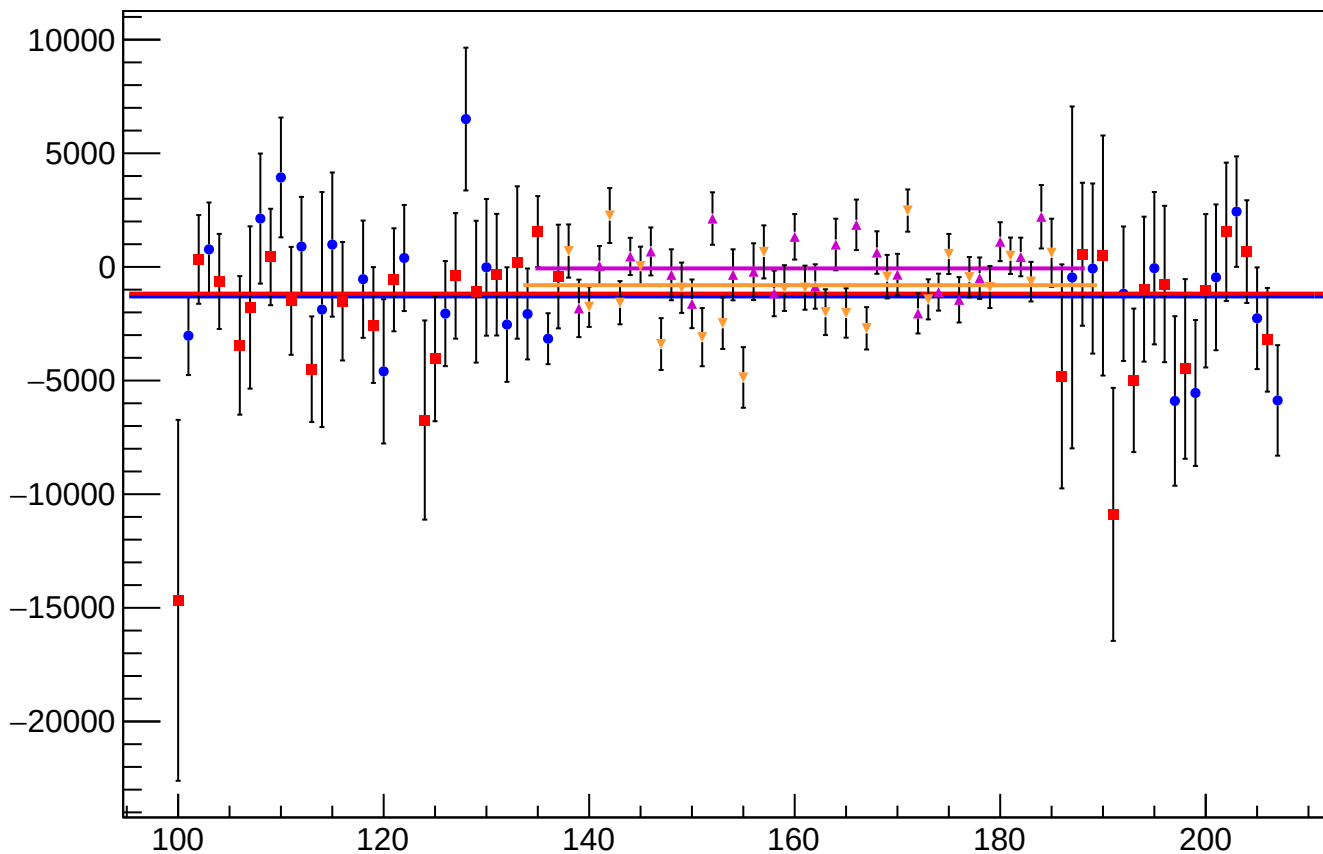
+ sign 98.236 $\pm$ 0.012  $\chi^2$ /NDF: 2428663.3/50

All: 98.848 $\pm$ 0.009  $\chi^2$ /NDF: 5235333.7/104

- sign 99.472 $\pm$ 0.012  $\chi^2$ /NDF: 2801553.0/53



asym\_sam\_24\_68\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-1298.359 \pm 481.544$   $\chi^2/\text{NDF}$ : 29.9/25

Left Out:  $-802.531 \pm 199.851$   $\chi^2/\text{NDF}$ : 58.3/24

Right Out:  $-1173.190 \pm 490.009$   $\chi^2/\text{NDF}$ : 21.8/30

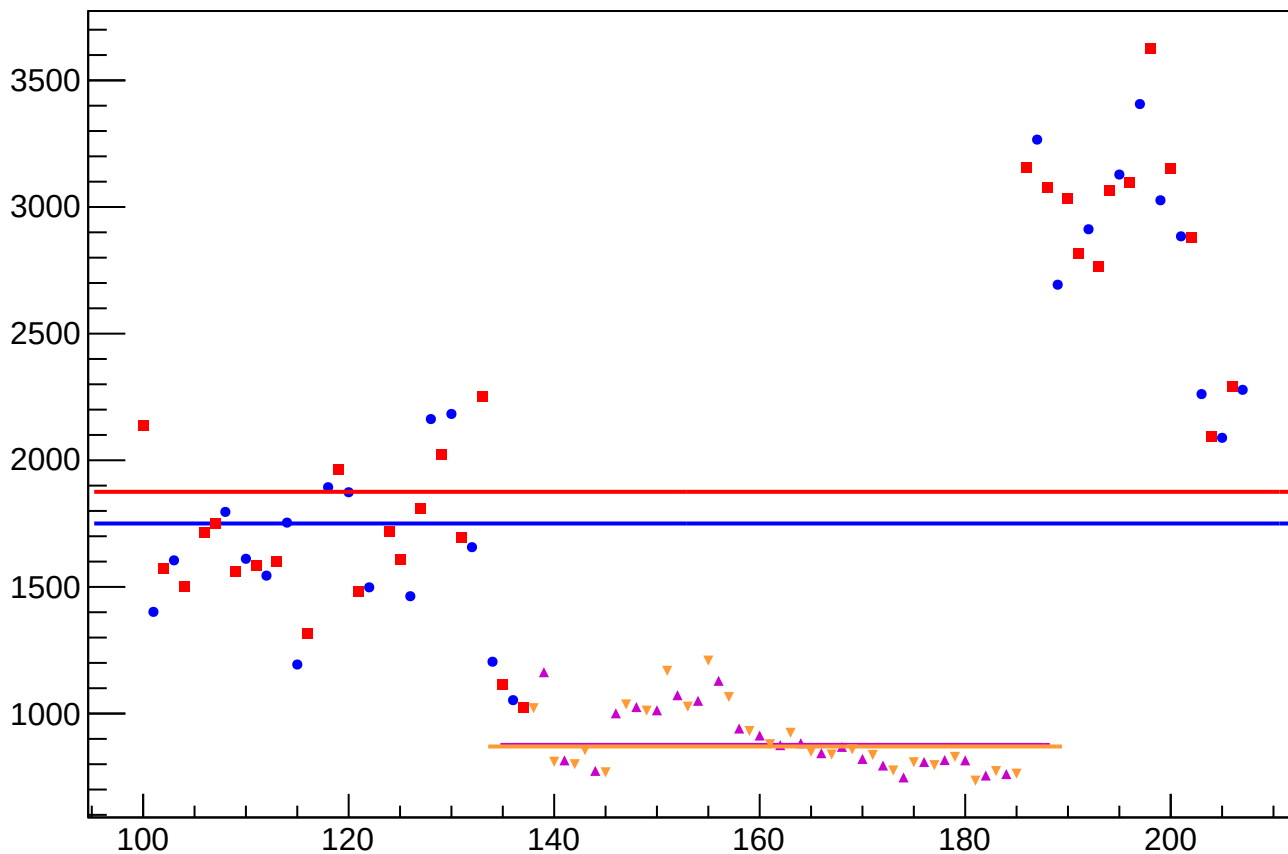
Left In:  $-65.218 \pm 206.677$   $\chi^2/\text{NDF}$ : 30.7/22

+ sign  $-875.385 \pm 184.585$   $\chi^2/\text{NDF}$ : 89.1/50

All:  $-563.989 \pm 132.540$   $\chi^2/\text{NDF}$ : 151.9/104

- sign  $-232.557 \pm 190.431$   $\chi^2/\text{NDF}$ : 56.9/53

asym\_sam\_24\_68\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 1750.434 $\pm$ 0.341  $\chi^2/\text{NDF}$ : 3284081.7/25

Left Out: 870.008 $\pm$ 0.141  $\chi^2/\text{NDF}$ : 647275.9/24

Right Out: 1875.495 $\pm$ 0.346  $\chi^2/\text{NDF}$ : 3441868.7/30

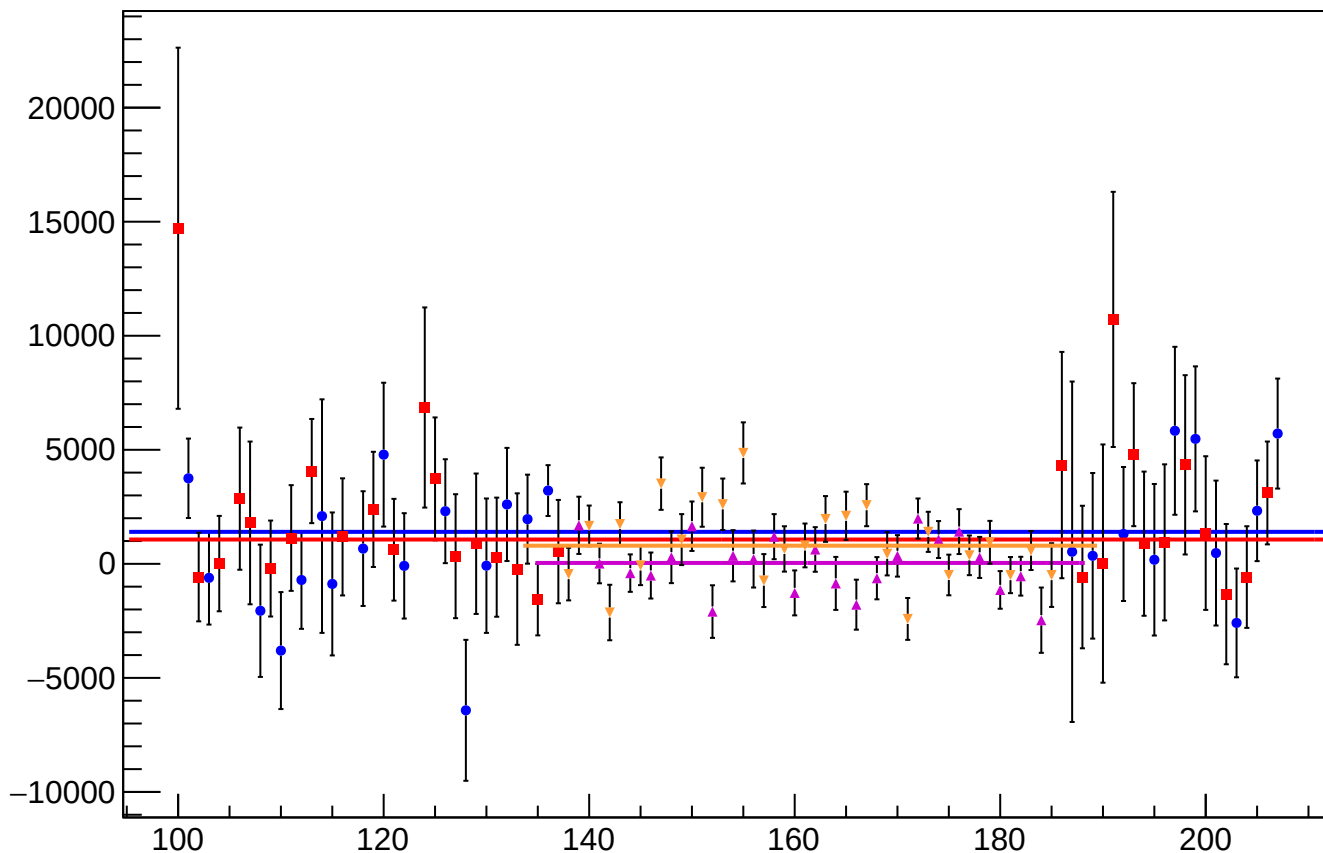
Left In: 876.272 $\pm$ 0.146  $\chi^2/\text{NDF}$ : 597200.9/22

+ sign 999.372 $\pm$ 0.131  $\chi^2/\text{NDF}$ : 9634658.0/50

All: 1012.846 $\pm$ 0.094  $\chi^2/\text{NDF}$ : 20756256.9/100

- sign 1027.186 $\pm$ 0.135  $\chi^2/\text{NDF}$ : 11099601.2/53

# asym\_sam\_24\_68\_dd\_mean vs Slug



Right In:  $1402.438 \pm 476.171$   $\chi^2/\text{NDF}$ : 30.9/25

Left Out:  $796.287 \pm 198.802$   $\chi^2/\text{NDF}$ : 57.2/24

Right Out:  $1066.592 \pm 486.244$   $\chi^2/\text{NDF}$ : 20.4/30

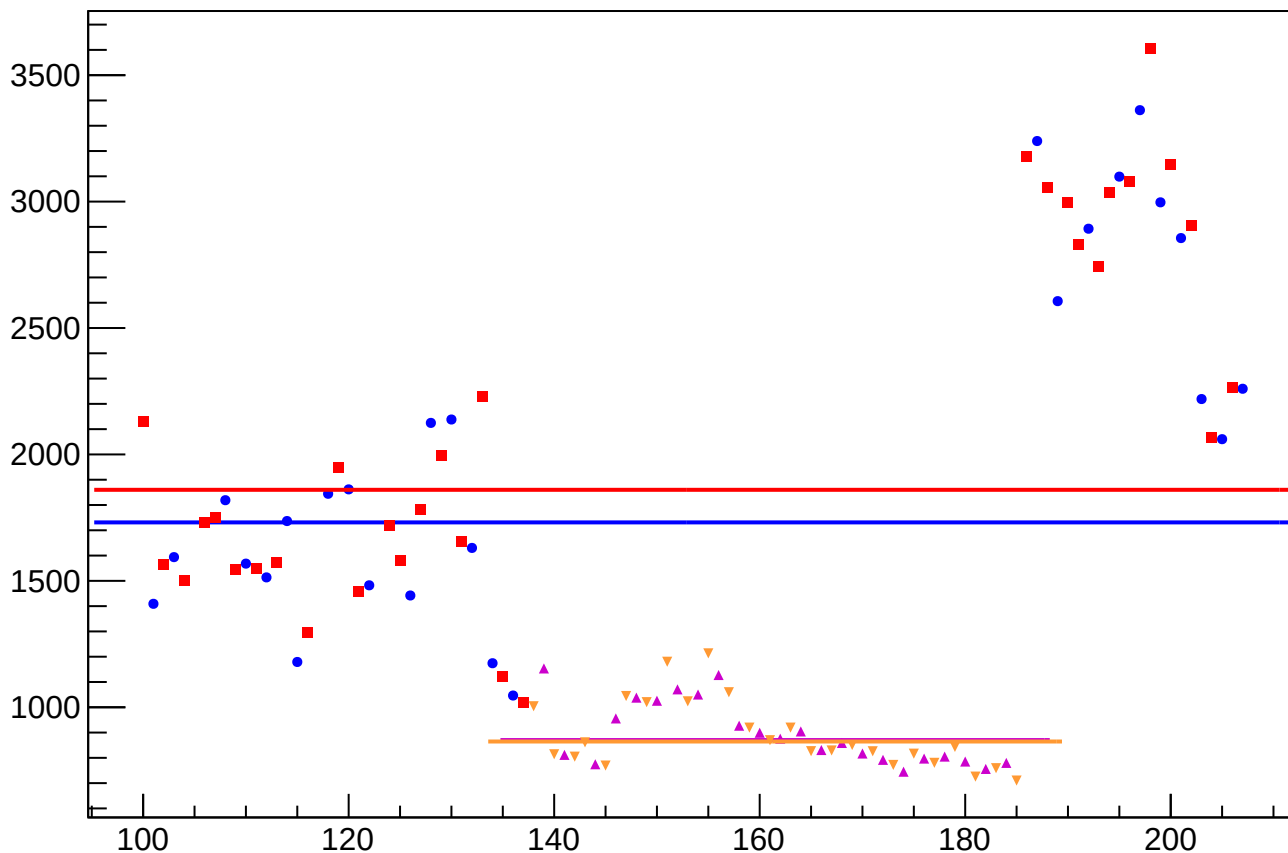
Left In:  $39.746 \pm 205.349$   $\chi^2/\text{NDF}$ : 29.7/22

+ sign  $886.261 \pm 183.455$   $\chi^2/\text{NDF}$ : 89.4/50

All:  $551.313 \pm 131.697$   $\chi^2/\text{NDF}$ : 150.2/104

- sign  $195.166 \pm 189.172$   $\chi^2/\text{NDF}$ : 53.9/53

# asym\_sam\_24\_68\_dd\_rms vs Slug



Right In: 1731.203 $\pm$ 0.337  $\chi^2$ /NDF: 3257755.2/25

Left Out: 864.637 $\pm$ 0.141  $\chi^2$ /NDF: 688948.2/24

Right Out: 1860.076 $\pm$ 0.344  $\chi^2$ /NDF: 3453968.0/30

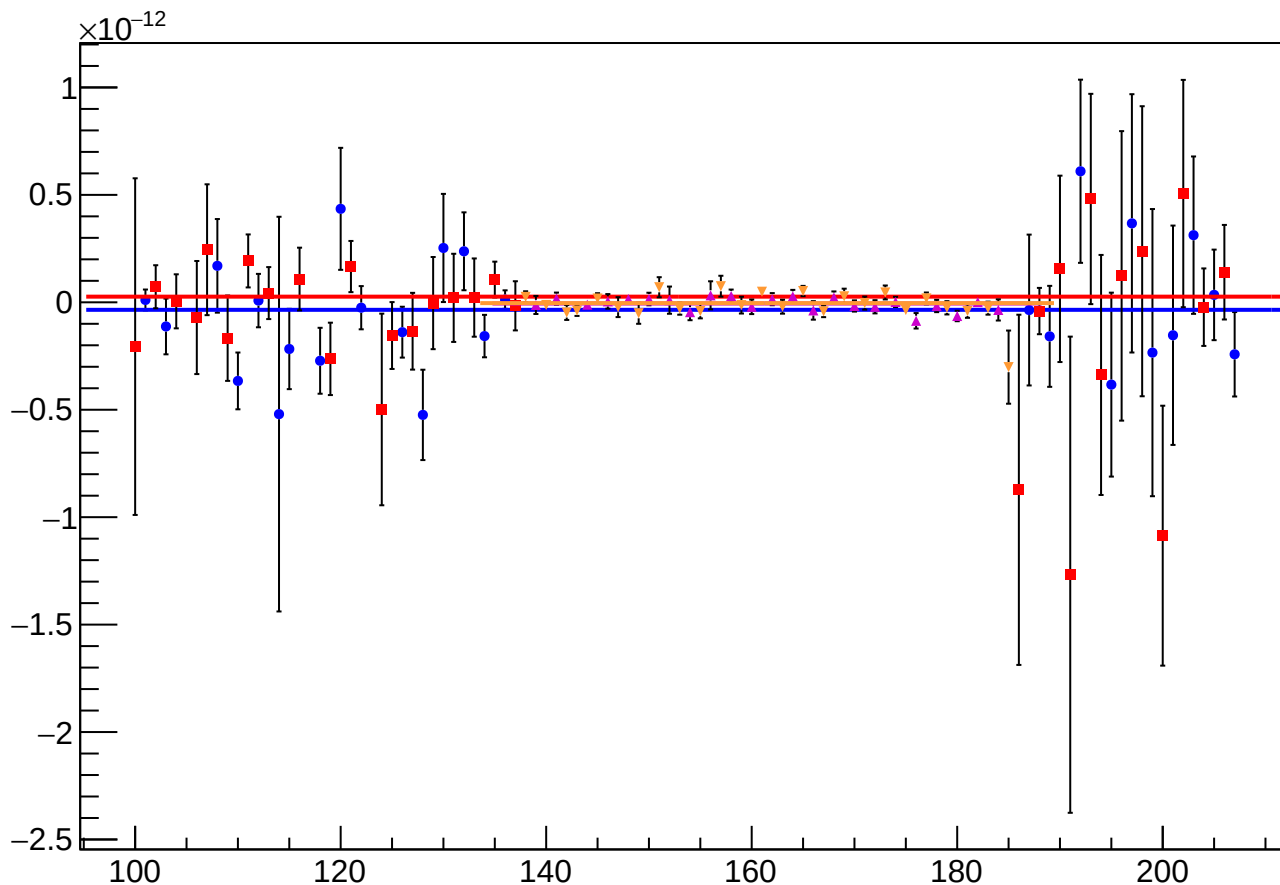
Left In: 870.346 $\pm$ 0.145  $\chi^2$ /NDF: 604520.6/22

+ sign 993.265 $\pm$ 0.130  $\chi^2$ /NDF: 9587315.6/50

All: 1006.294 $\pm$ 0.093  $\chi^2$ /NDF: 20698621.3/100

- sign 1020.149 $\pm$ 0.134  $\chi^2$ /NDF: 11090490.0/53

asym\_sam\_24\_68\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 33.3/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 38.7/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 22.0/30

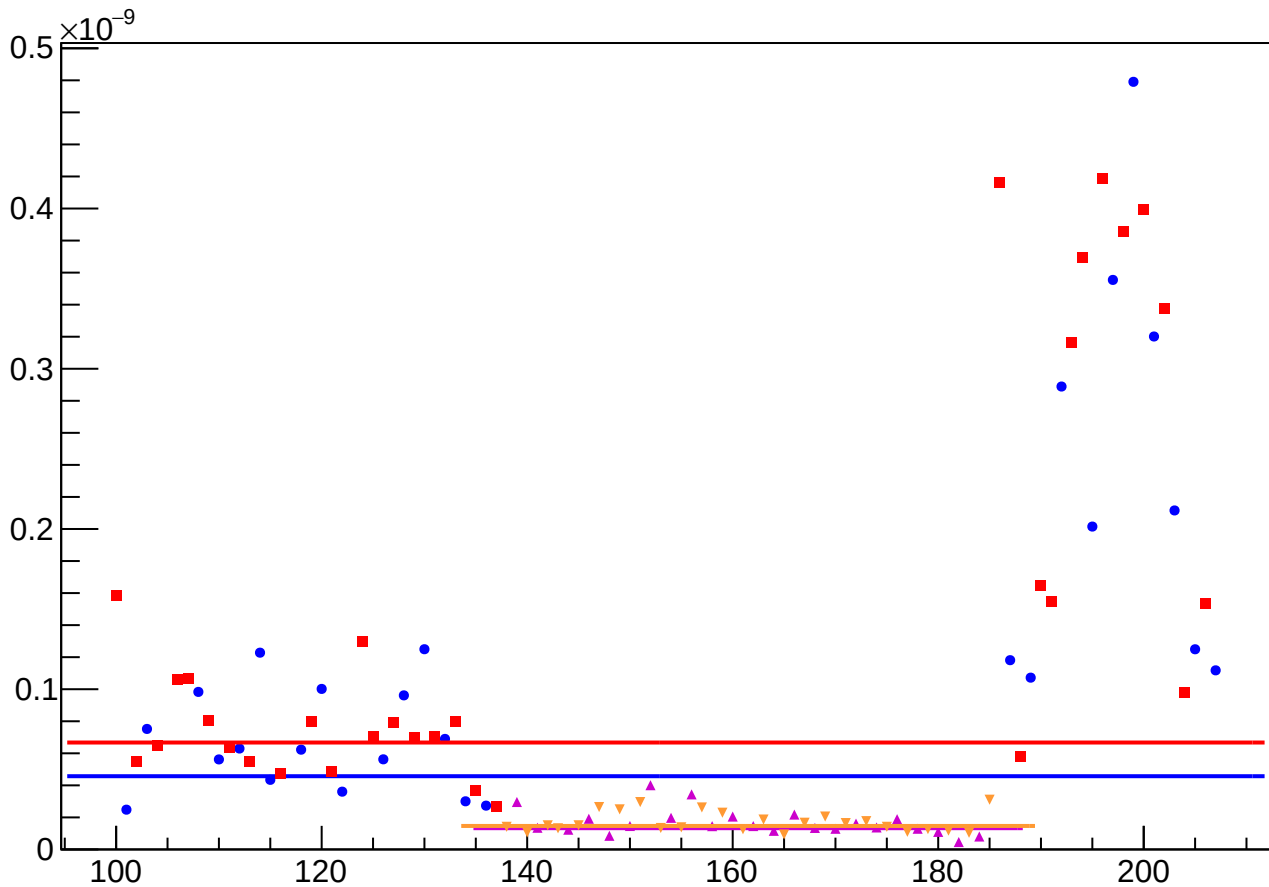
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 20.6/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 73.6/50

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 117.3/104

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 43.7/53

asym\_sam\_24\_68\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 5555826.1/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:1073691.3/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 4920424.6/30

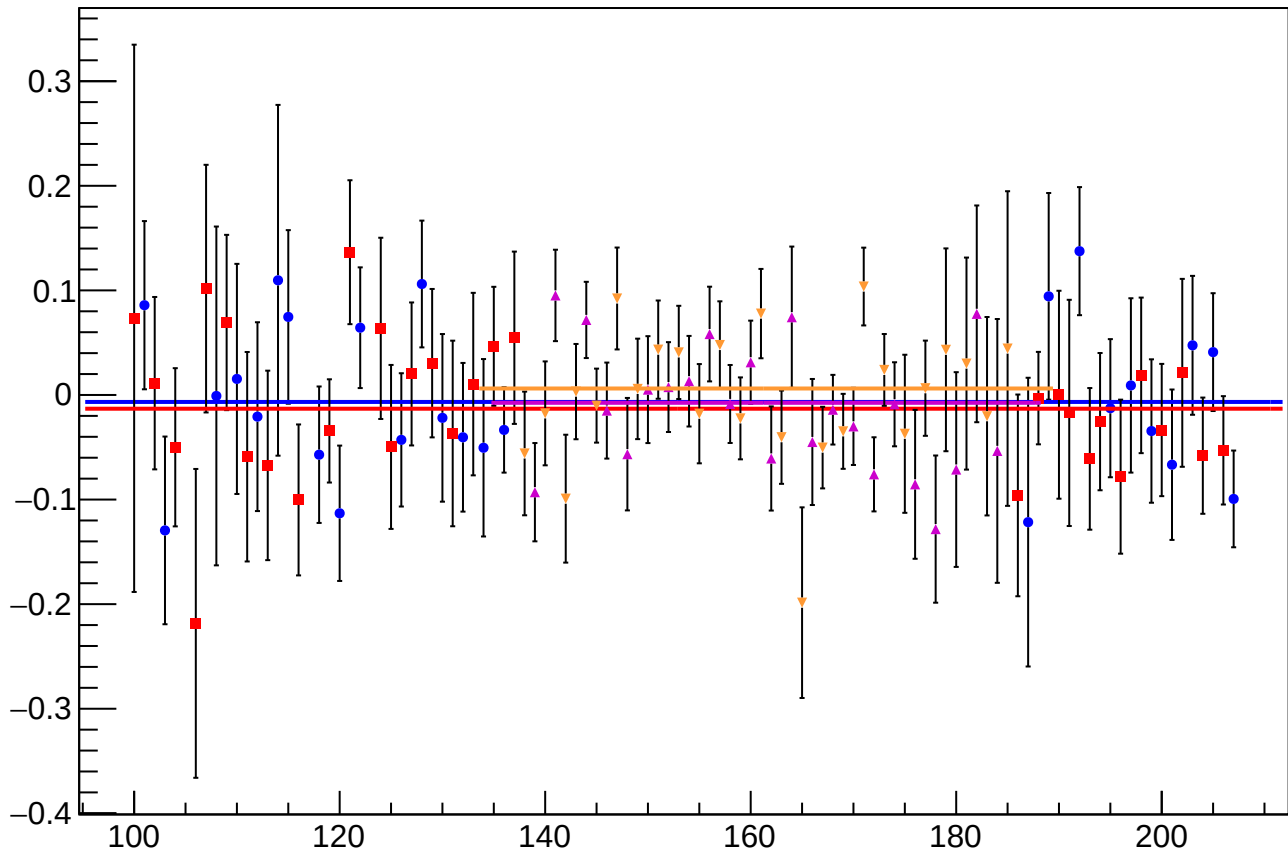
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:1970835.1/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 9712000.1/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 22374572.5/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 12616583.9/53

asym\_sam\_24\_68\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.007 \pm 0.014$   $\chi^2/\text{NDF}$ : 27.9/25

Left Out:  $0.006 \pm 0.010$   $\chi^2/\text{NDF}$ : 30.8/24

Right Out:  $-0.013 \pm 0.013$   $\chi^2/\text{NDF}$ : 18.6/30

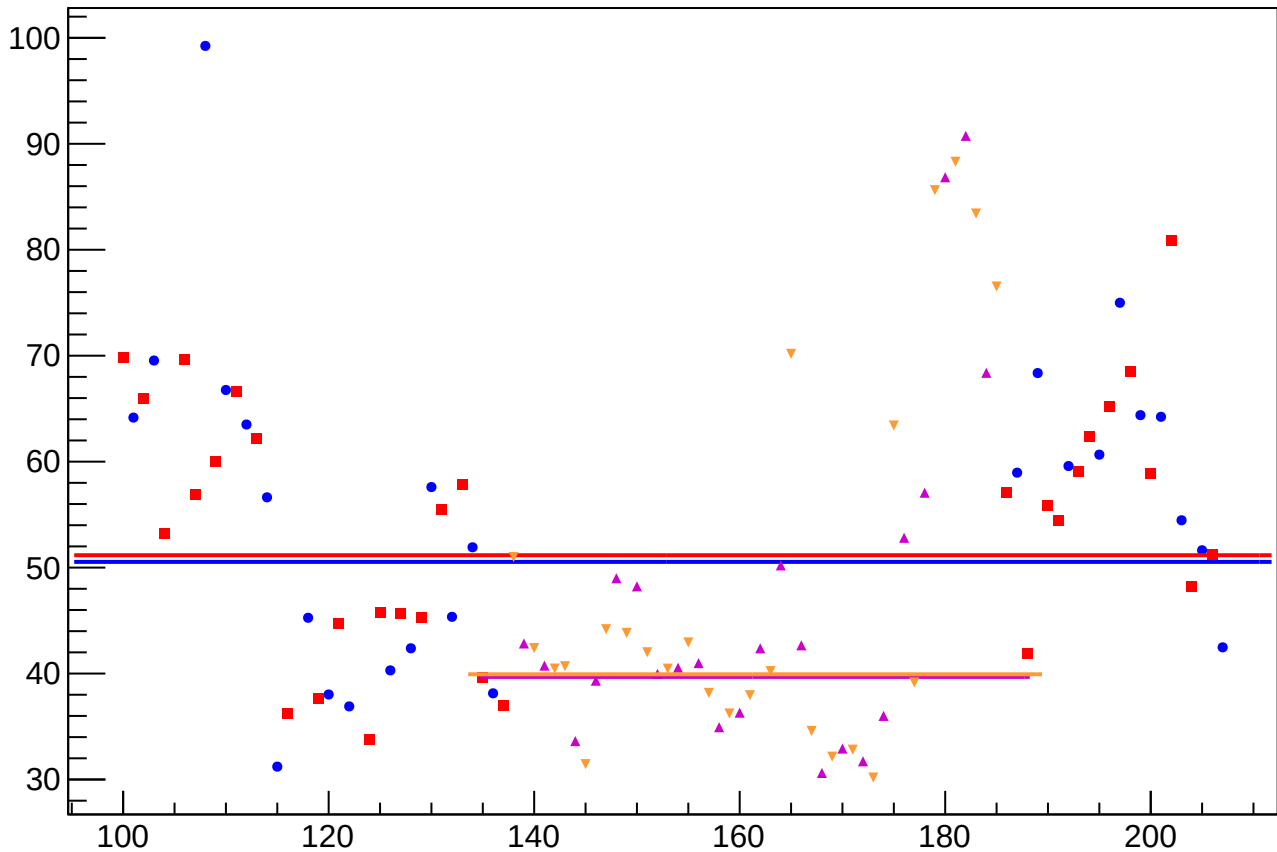
Left In:  $-0.007 \pm 0.010$   $\chi^2/\text{NDF}$ : 30.4/22

+ sign  $0.002 \pm 0.008$   $\chi^2/\text{NDF}$ : 59.3/50

All:  $-0.004 \pm 0.006$   $\chi^2/\text{NDF}$ : 109.4/104

- sign  $-0.009 \pm 0.008$   $\chi^2/\text{NDF}$ : 49.1/53

asym\_sam\_24\_68\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 50.539 $\pm$ 0.010  $\chi^2$ /NDF: 1580951.6/25

Left Out: 39.930 $\pm$ 0.007  $\chi^2$ /NDF: 2475485.4/24

Right Out: 51.168 $\pm$ 0.009  $\chi^2$ /NDF: 1361176.3/30

Left In: 39.686 $\pm$ 0.007  $\chi^2$ /NDF: 1915871.4/22

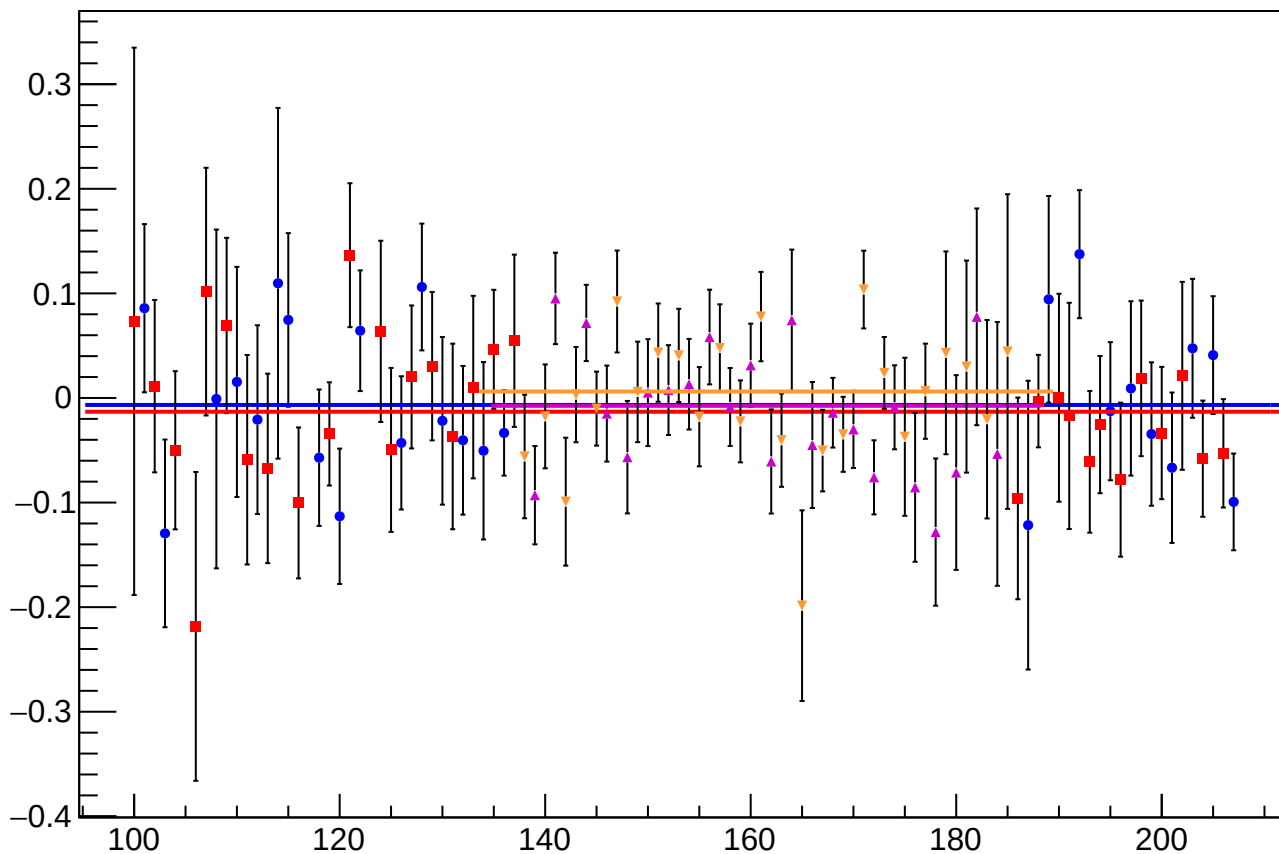
+ sign 43.398 $\pm$ 0.006  $\chi^2$ /NDF: 4859535.0/50

All: 43.577 $\pm$ 0.004  $\chi^2$ /NDF: 9116838.5/104

- sign 43.756 $\pm$ 0.006  $\chi^2$ /NDF: 4255225.6/53



asym\_sam\_24\_68\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.007 \pm 0.014$   $\chi^2/\text{NDF}$ : 27.9/25

Left Out:  $0.006 \pm 0.010$   $\chi^2/\text{NDF}$ : 30.8/24

Right Out:  $-0.013 \pm 0.013$   $\chi^2/\text{NDF}$ : 18.6/30

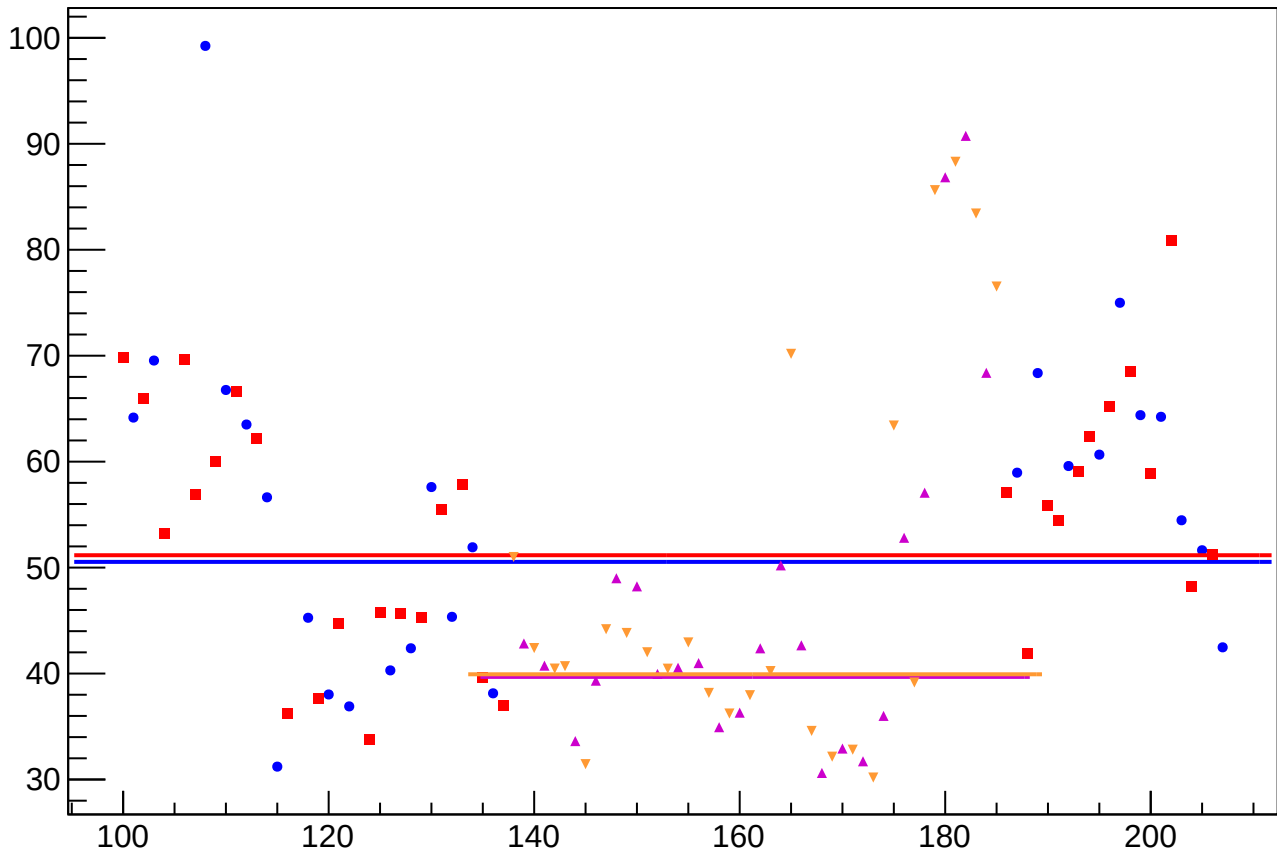
Left In:  $-0.007 \pm 0.010$   $\chi^2/\text{NDF}$ : 30.4/22

+ sign  $0.002 \pm 0.008$   $\chi^2/\text{NDF}$ : 59.3/50

All:  $-0.004 \pm 0.006$   $\chi^2/\text{NDF}$ : 109.4/104

- sign  $-0.009 \pm 0.008$   $\chi^2/\text{NDF}$ : 49.1/53

asym\_sam\_24\_68\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 50.539 $\pm$ 0.010  $\chi^2$ /NDF: 1580951.6/25

Left Out: 39.930 $\pm$ 0.007  $\chi^2$ /NDF: 2475485.4/24

Right Out: 51.168 $\pm$ 0.009  $\chi^2$ /NDF: 1361176.3/30

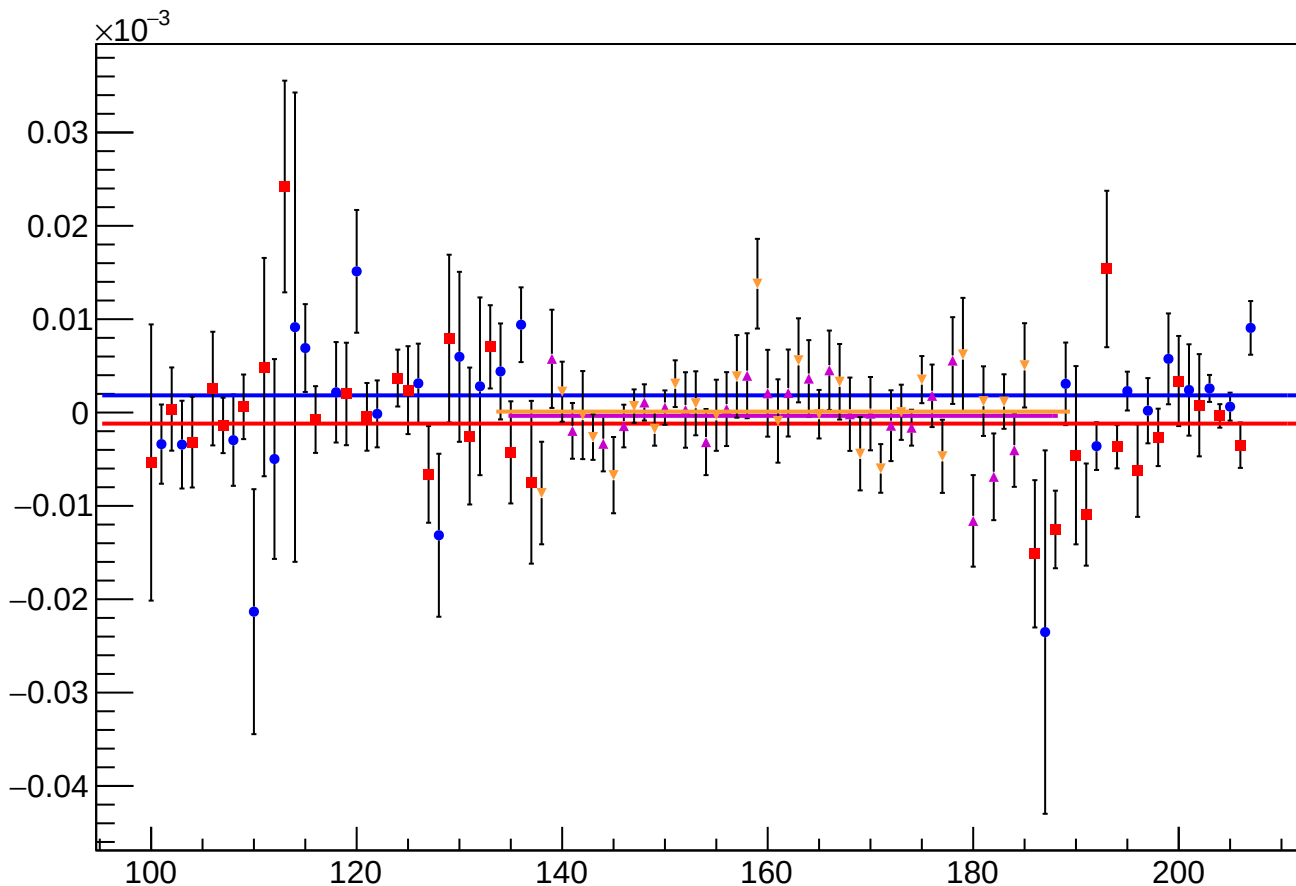
Left In: 39.686 $\pm$ 0.007  $\chi^2$ /NDF: 1915871.4/22

+ sign 43.398 $\pm$ 0.006  $\chi^2$ /NDF: 4859535.0/50

All: 43.577 $\pm$ 0.004  $\chi^2$ /NDF: 9116838.5/104

- sign 43.756 $\pm$ 0.006  $\chi^2$ /NDF: 4255225.6/53

asym\_sam\_24\_68\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 34.4/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 33.2/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 38.8/30

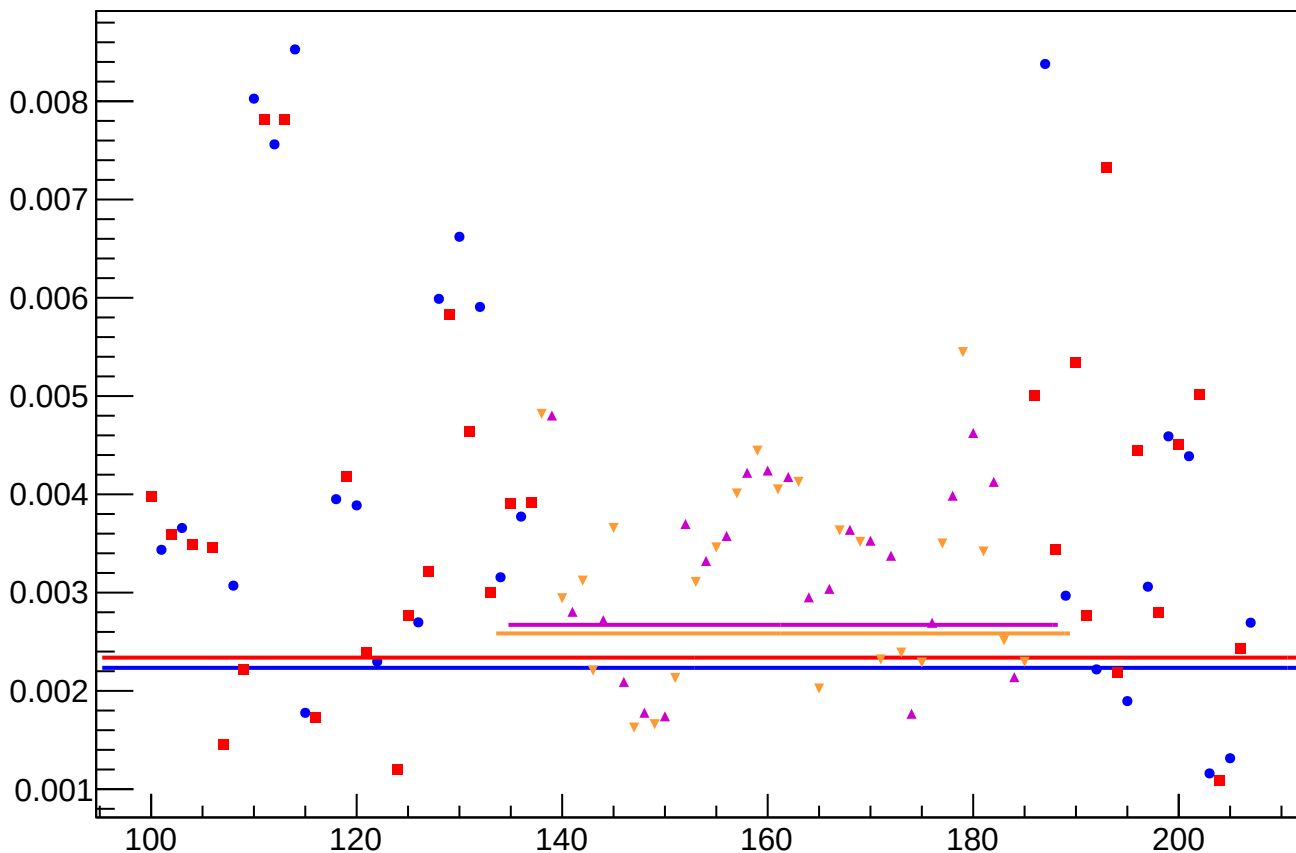
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 18.7/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 71.2/50

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 135.8/104

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 58.3/53

asym\_sam\_24\_68\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 6460224.6/25

Left Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 3892707.7/24

Right Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 7428974.1/30

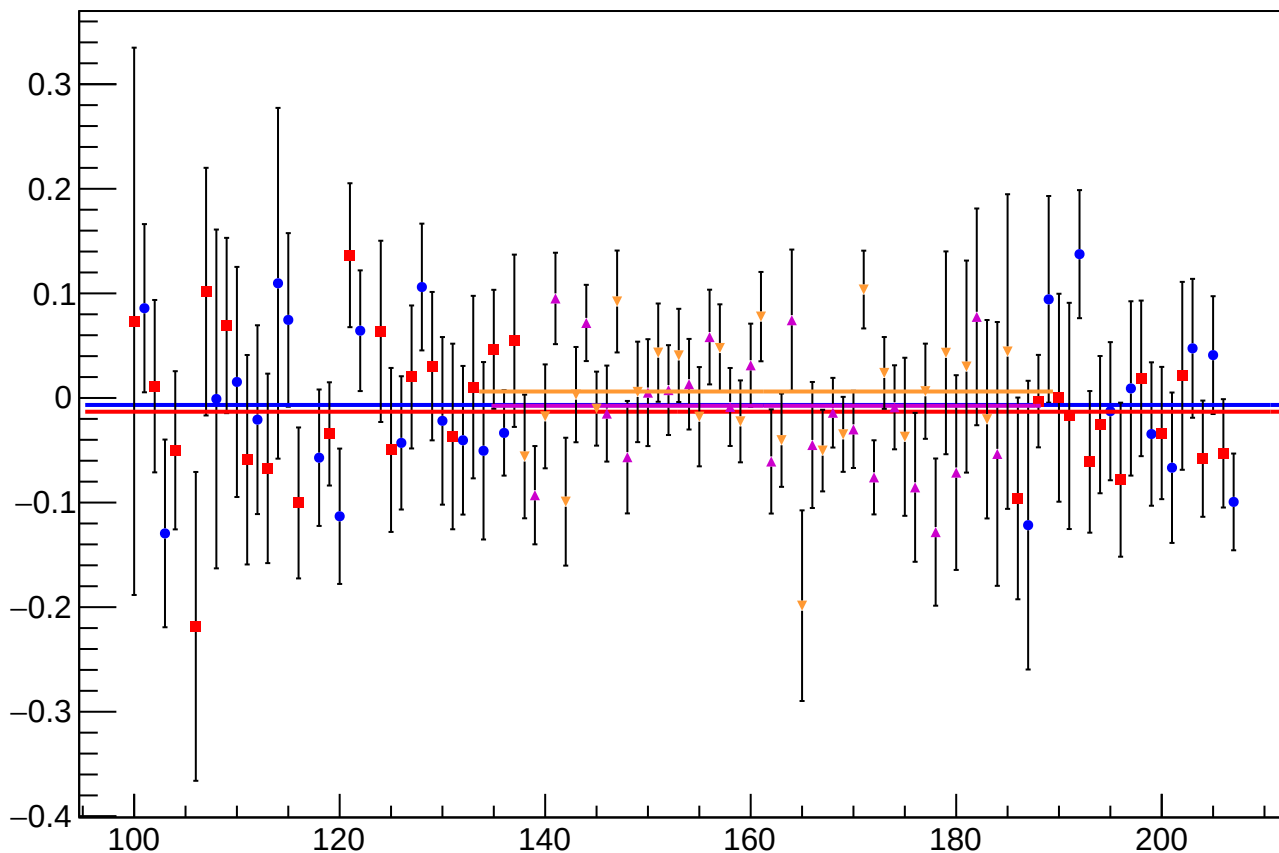
Left In: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 3825662.0/22

+ sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 10640703.3/50

All: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 22173215.4/104

- sign 0.003+/-0.000  $\chi^2/\text{NDF}$ : 11500333.9/53

asym\_sam\_24\_68\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.007 \pm 0.014$   $\chi^2/\text{NDF}$ : 27.9/25

Left Out:  $0.006 \pm 0.010$   $\chi^2/\text{NDF}$ : 30.8/24

Right Out:  $-0.013 \pm 0.013$   $\chi^2/\text{NDF}$ : 18.6/30

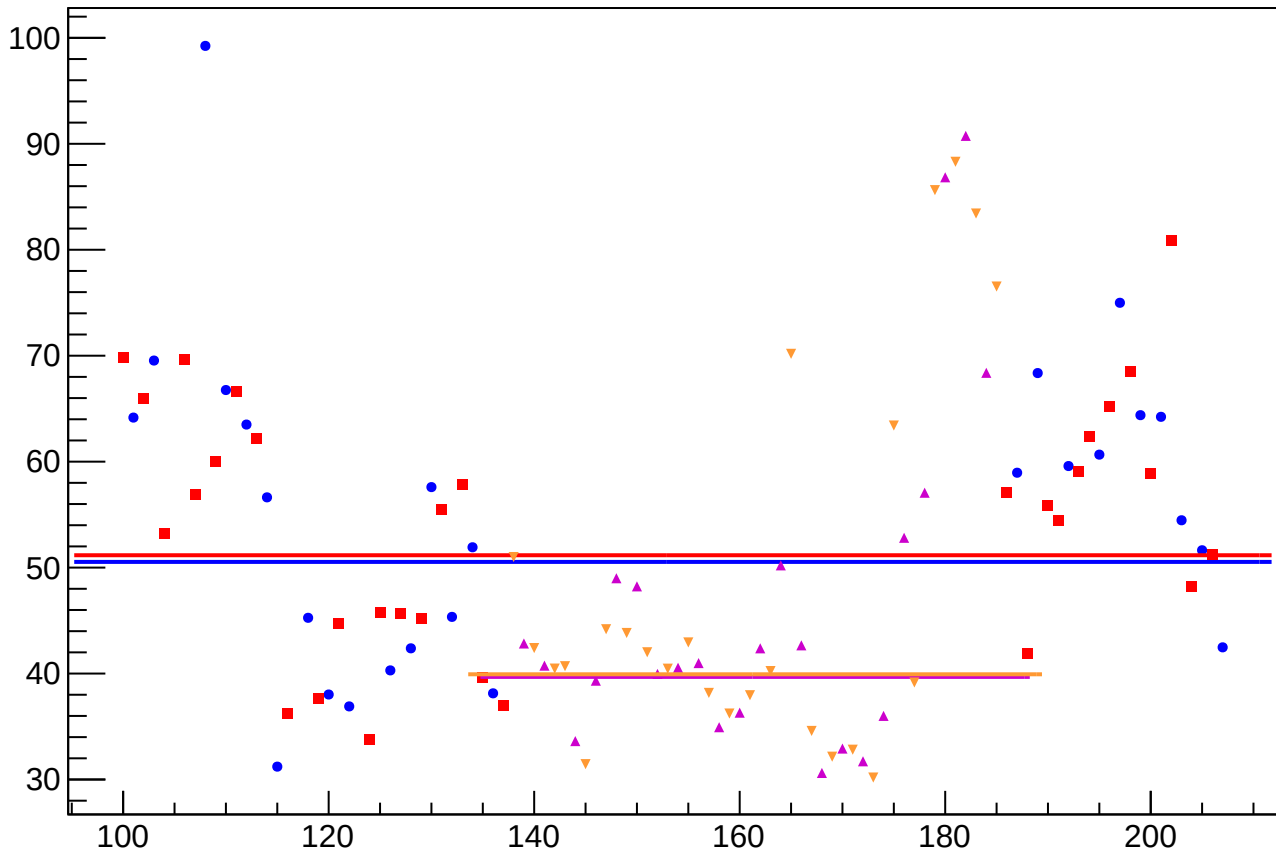
Left In:  $-0.007 \pm 0.010$   $\chi^2/\text{NDF}$ : 30.4/22

+ sign  $0.002 \pm 0.008$   $\chi^2/\text{NDF}$ : 59.3/50

All:  $-0.004 \pm 0.006$   $\chi^2/\text{NDF}$ : 109.4/104

- sign  $-0.009 \pm 0.008$   $\chi^2/\text{NDF}$ : 49.1/53

asym\_sam\_24\_68\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 50.538 $\pm$ 0.010  $\chi^2$ /NDF: 1581002.1/25

Left Out: 39.930 $\pm$ 0.007  $\chi^2$ /NDF: 2475527.1/24

Right Out: 51.167 $\pm$ 0.009  $\chi^2$ /NDF: 1361211.3/30

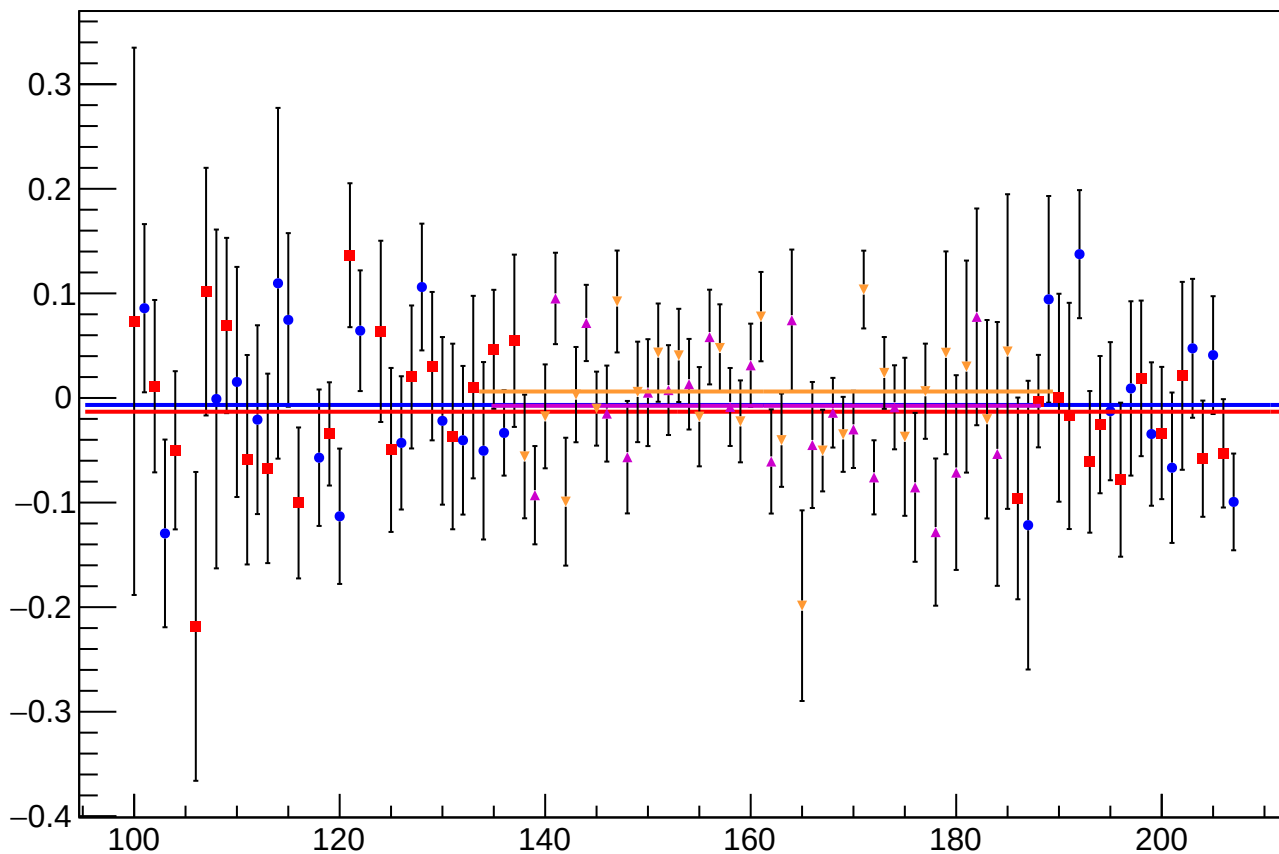
Left In: 39.685 $\pm$ 0.007  $\chi^2$ /NDF: 1915901.2/22

+ sign 43.397 $\pm$ 0.006  $\chi^2$ /NDF: 4859445.3/50

All: 43.576 $\pm$ 0.004  $\chi^2$ /NDF: 9116747.7/104

- sign 43.755 $\pm$ 0.006  $\chi^2$ /NDF: 4255225.4/53

asym\_sam\_24\_68\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.007 \pm 0.014$   $\chi^2/\text{NDF}$ : 27.9/25

Left Out:  $0.006 \pm 0.010$   $\chi^2/\text{NDF}$ : 30.8/24

Right Out:  $-0.013 \pm 0.013$   $\chi^2/\text{NDF}$ : 18.6/30

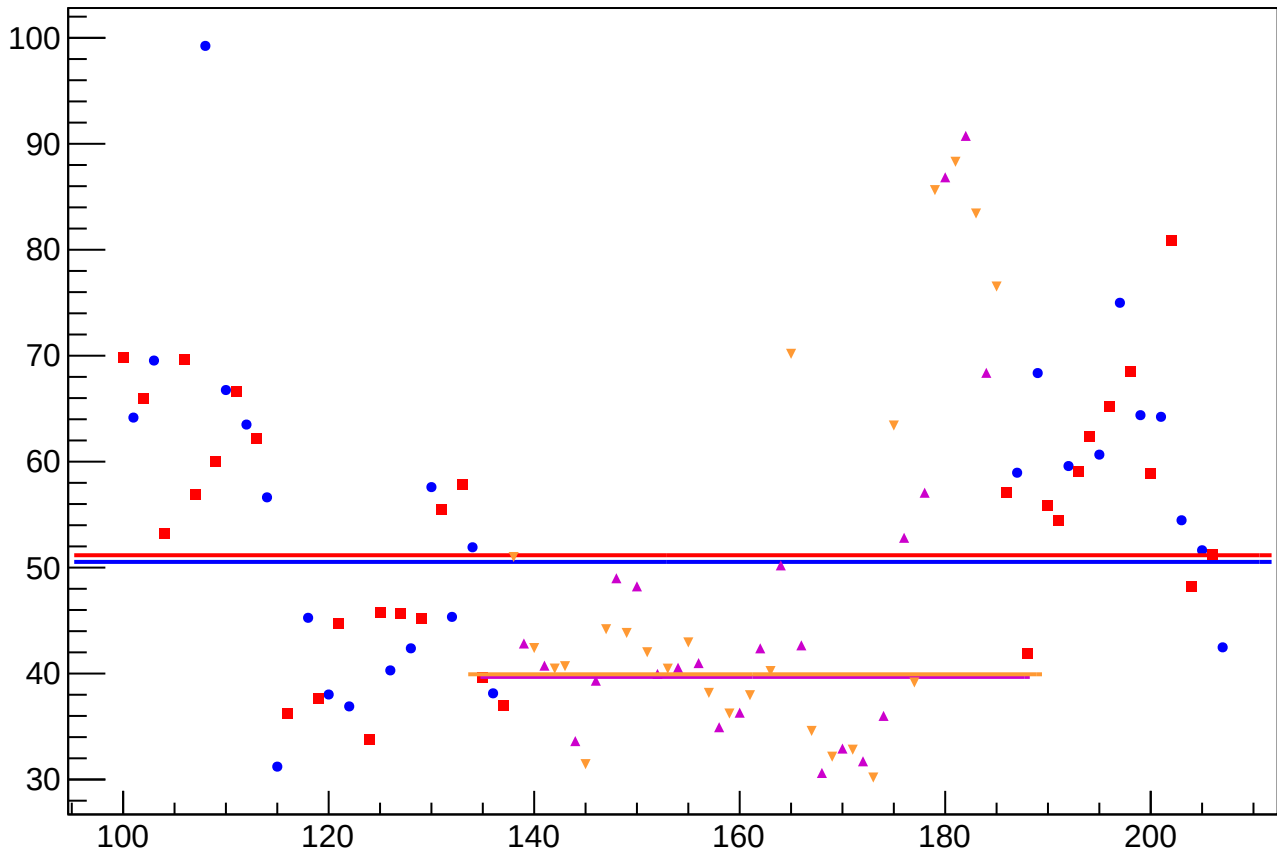
Left In:  $-0.007 \pm 0.010$   $\chi^2/\text{NDF}$ : 30.4/22

+ sign  $0.002 \pm 0.008$   $\chi^2/\text{NDF}$ : 59.3/50

All:  $-0.004 \pm 0.006$   $\chi^2/\text{NDF}$ : 109.4/104

- sign  $-0.009 \pm 0.008$   $\chi^2/\text{NDF}$ : 49.1/53

asym\_sam\_24\_68\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 50.538 $\pm$ 0.010  $\chi^2$ /NDF: 1581002.1/25

Left Out: 39.930 $\pm$ 0.007  $\chi^2$ /NDF: 2475527.1/24

Right Out: 51.167 $\pm$ 0.009  $\chi^2$ /NDF: 1361211.3/30

Left In: 39.685 $\pm$ 0.007  $\chi^2$ /NDF: 1915901.2/22

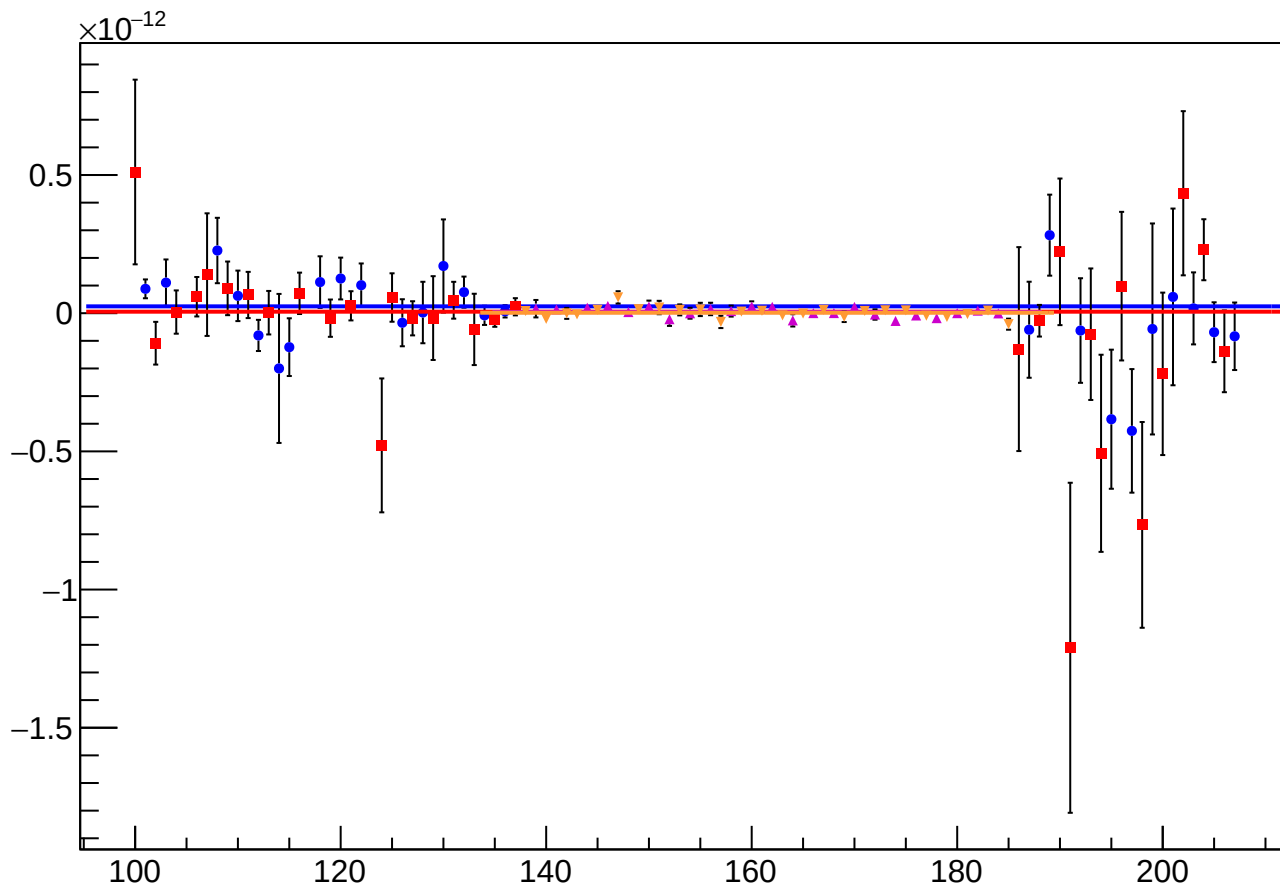
+ sign 43.397 $\pm$ 0.006  $\chi^2$ /NDF: 4859445.3/50

All: 43.576 $\pm$ 0.004  $\chi^2$ /NDF: 9116747.7/104

- sign 43.755 $\pm$ 0.006  $\chi^2$ /NDF: 4255225.4/53



asym\_sam\_24\_68\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 32.8/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:28.0/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 33.9/30

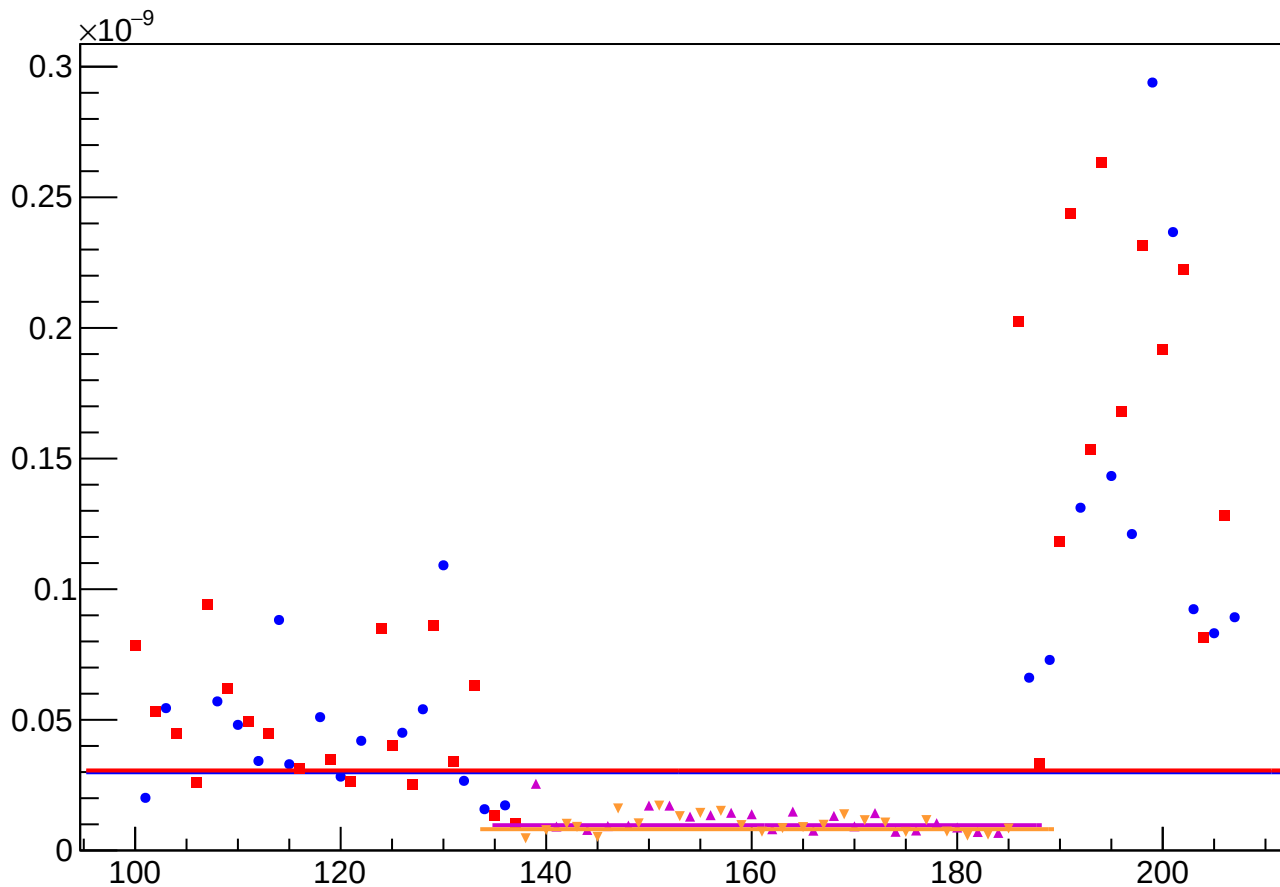
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:27.5/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 63.8/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 125.3/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 61.4/53

asym\_sam\_24\_68\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7136506.8/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2354980.4/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 9155716.5/30

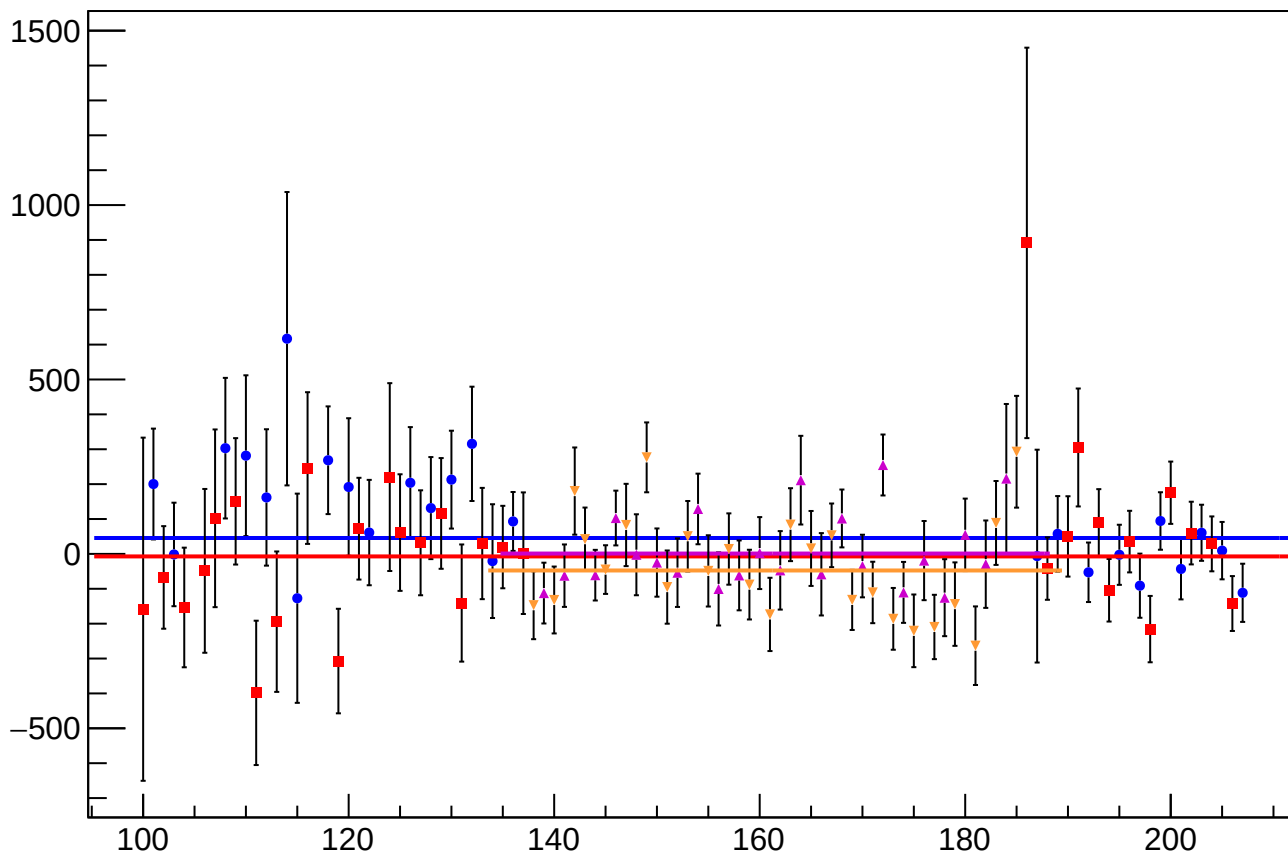
Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2106161.0/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 14832898.4/50

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 30978293.7/104

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 15766476.5/53

# reg\_asym\_sam\_26\_48\_dd\_mean vs Slug



Right In:  $45.592 \pm 23.272$   $\chi^2/\text{NDF}$ : 23.9/25

Left Out:  $-47.524 \pm 19.983$   $\chi^2/\text{NDF}$ : 44.0/24

Right Out:  $-7.237 \pm 22.927$   $\chi^2/\text{NDF}$ : 35.8/30

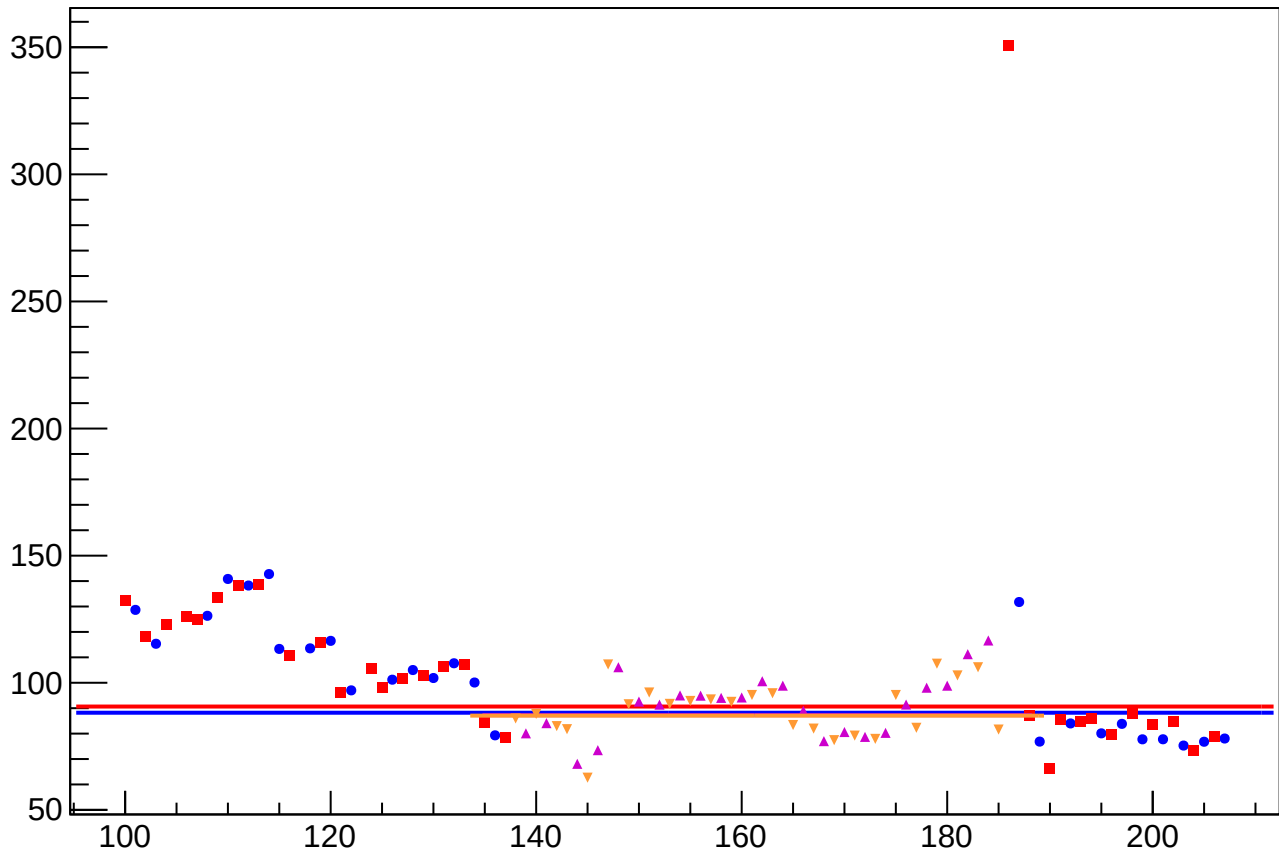
Left In:  $0.986 \pm 20.604$   $\chi^2/\text{NDF}$ : 25.5/22

+ sign  $-8.006 \pm 15.161$   $\chi^2/\text{NDF}$ : 77.1/50

All:  $-5.376 \pm 10.778$   $\chi^2/\text{NDF}$ : 138.5/104

- sign  $-2.688 \pm 15.325$   $\chi^2/\text{NDF}$ : 61.4/53

# reg\_asym\_sam\_26\_48\_dd\_rms vs Slug



Right In: 88.216+/-0.016  $\chi^2/\text{NDF}$ : 1042983.6/25

Left Out: 87.072+/-0.014  $\chi^2/\text{NDF}$ : 620626.5/24

Right Out: 90.649+/-0.016  $\chi^2/\text{NDF}$ : 1472651.3/30

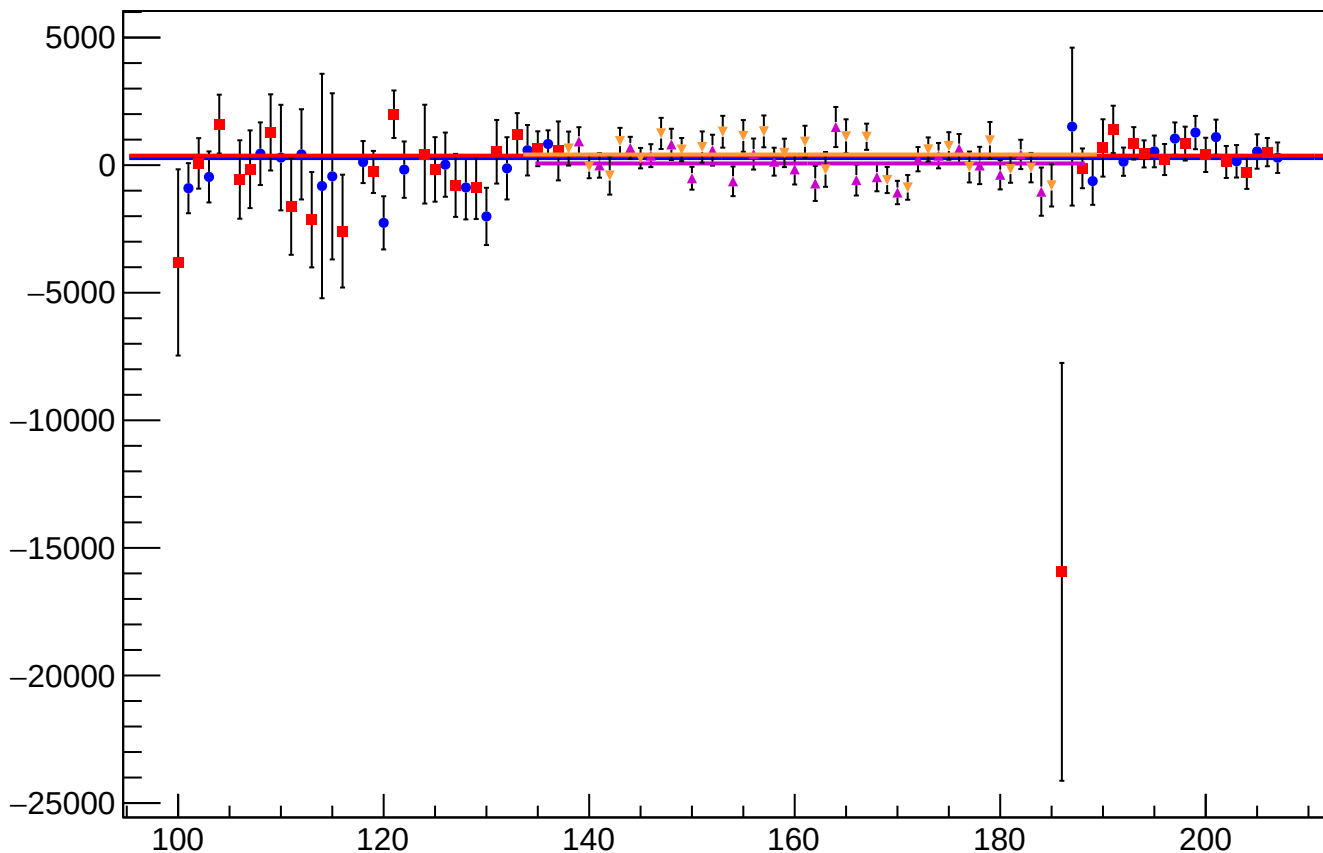
Left In: 87.257+/-0.015  $\chi^2/\text{NDF}$ : 595793.1/22

+ sign 87.557+/-0.011  $\chi^2/\text{NDF}$ : 1666391.3/50

All: 88.158+/-0.008  $\chi^2/\text{NDF}$ : 3765405.0/104

- sign 88.772+/-0.011  $\chi^2/\text{NDF}$ : 2092661.8/53

asym\_sam\_26\_48\_dd\_reg\_correction\_mean vs Slug



Right In: 276.632 $\pm$ 168.035  $\chi^2$ /NDF: 21.3/25

Left Out: 416.424 $\pm$ 112.336  $\chi^2$ /NDF: 32.4/24

Right Out: 372.230 $\pm$ 160.742  $\chi^2$ /NDF: 23.1/30

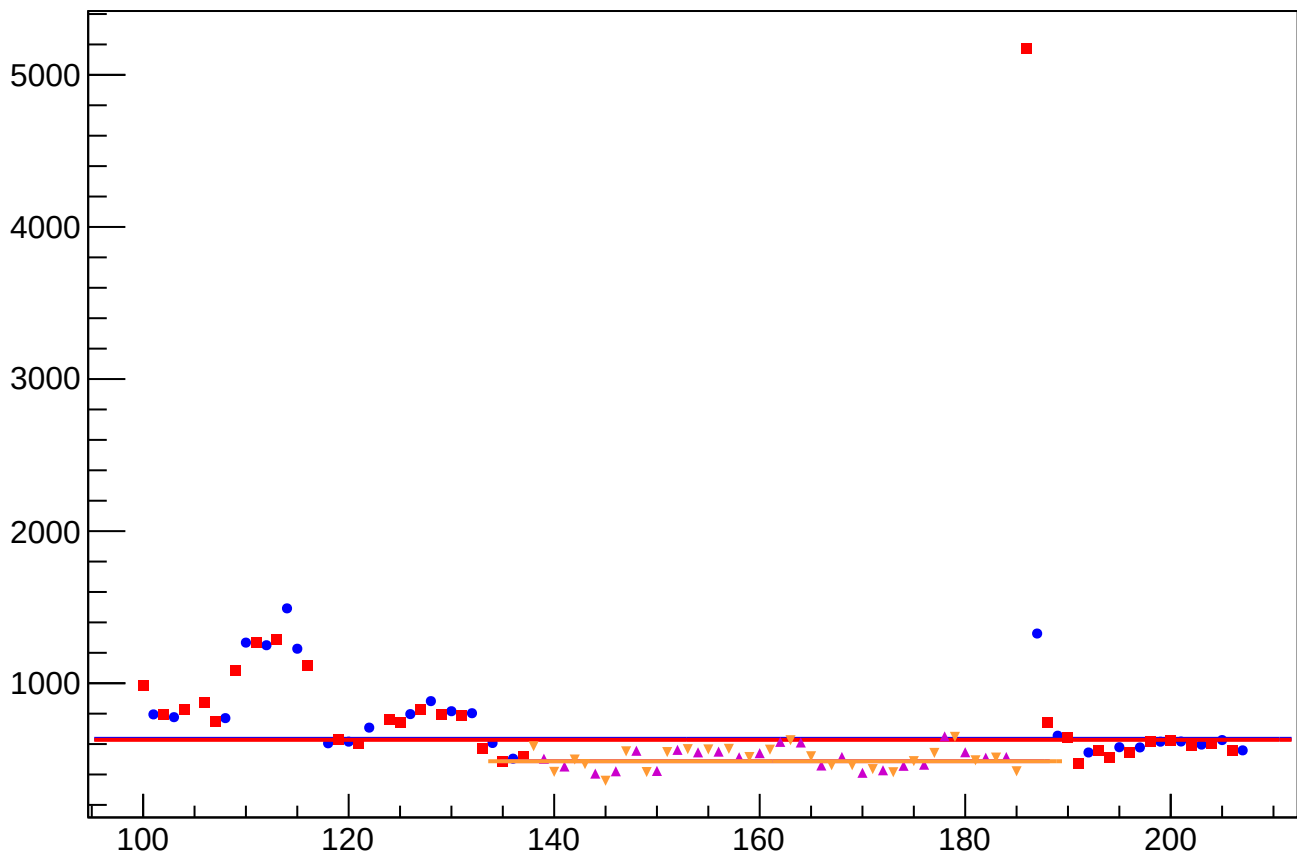
Left In: 66.675 $\pm$ 115.419  $\chi^2$ /NDF: 27.5/22

+ sign 373.245 $\pm$ 93.389  $\chi^2$ /NDF: 54.2/50

All: 272.328 $\pm$ 66.165  $\chi^2$ /NDF: 109.6/104

- sign 170.621 $\pm$ 93.754  $\chi^2$ /NDF: 53.0/53

asym\_sam\_26\_48\_dd\_reg\_correction\_rms vs Slug



Right In: 634.305 $\pm$ 0.119  $\chi^2$ /NDF: 1253109.1/25

Left Out: 487.081 $\pm$ 0.079  $\chi^2$ /NDF: 821265.9/24

Right Out: 627.883 $\pm$ 0.114  $\chi^2$ /NDF: 2147851.8/30

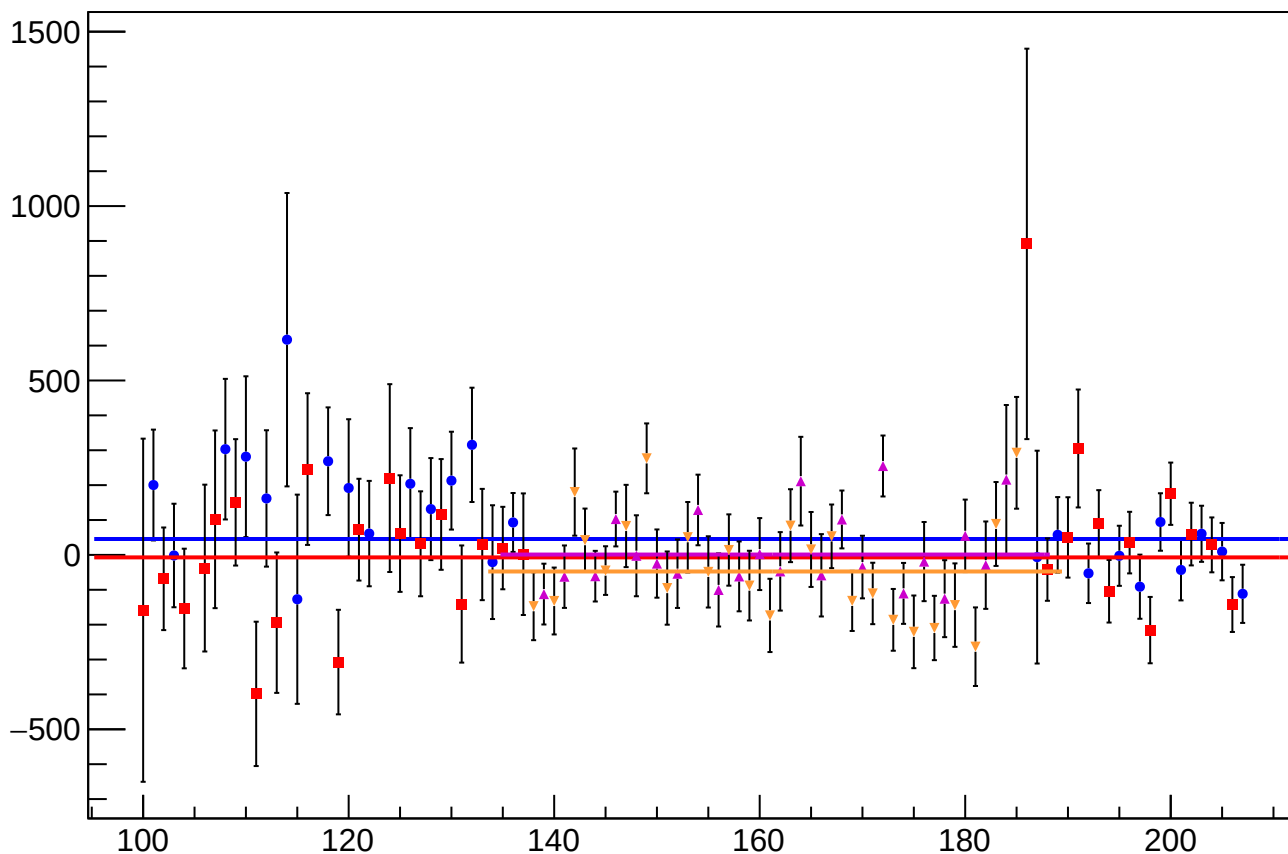
Left In: 487.930 $\pm$ 0.082  $\chi^2$ /NDF: 634269.5/22

+ sign 532.555 $\pm$ 0.066  $\chi^2$ /NDF: 3135433.4/50

All: 534.042 $\pm$ 0.047  $\chi^2$ /NDF: 6918920.1/104

- sign 535.540 $\pm$ 0.066  $\chi^2$ /NDF: 3782469.3/53

# cor\_asym\_sam\_26\_48\_dd\_mean vs Slug



Right In: 45.583 $\pm$ 23.272  $\chi^2/\text{NDF}$ : 23.9/25

Left Out: -47.532 $\pm$ 19.983  $\chi^2/\text{NDF}$ : 44.0/24

Right Out: -7.147 $\pm$ 22.931  $\chi^2/\text{NDF}$ : 35.8/30

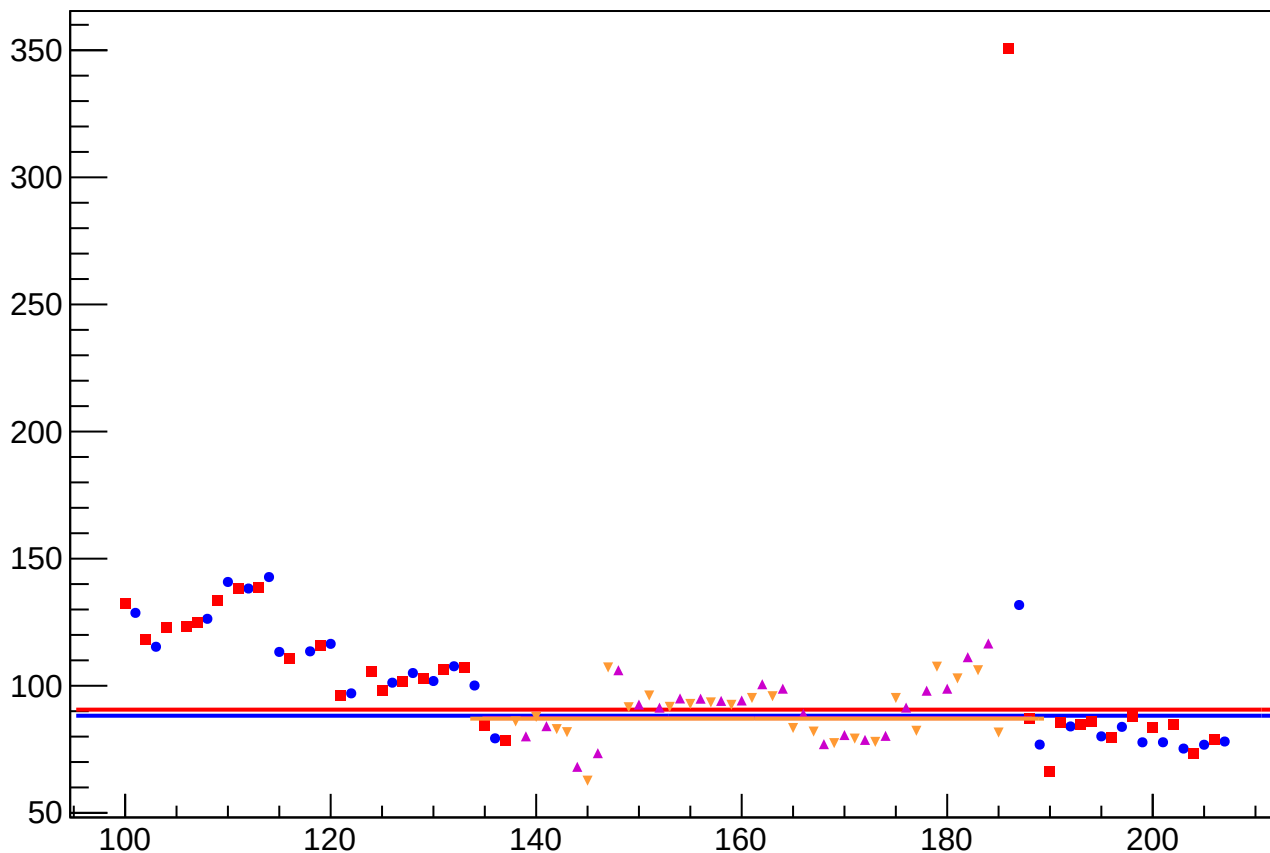
Left In: 0.988 $\pm$ 20.604  $\chi^2/\text{NDF}$ : 25.5/22

+ sign -8.015 $\pm$ 15.161  $\chi^2/\text{NDF}$ : 77.1/50

All: -5.359 $\pm$ 10.778  $\chi^2/\text{NDF}$ : 138.5/104

- sign -2.646 $\pm$ 15.326  $\chi^2/\text{NDF}$ : 61.4/53

# cor\_asym\_sam\_26\_48\_dd\_rms vs Slug



Right In: 88.216 $\pm$ 0.016  $\chi^2$ /NDF: 1042984.0/25

Left Out: 87.072 $\pm$ 0.014  $\chi^2$ /NDF: 620626.5/24

Right Out: 90.611 $\pm$ 0.016  $\chi^2$ /NDF: 1464408.5/30

Left In: 87.257 $\pm$ 0.015  $\chi^2$ /NDF: 595793.1/22

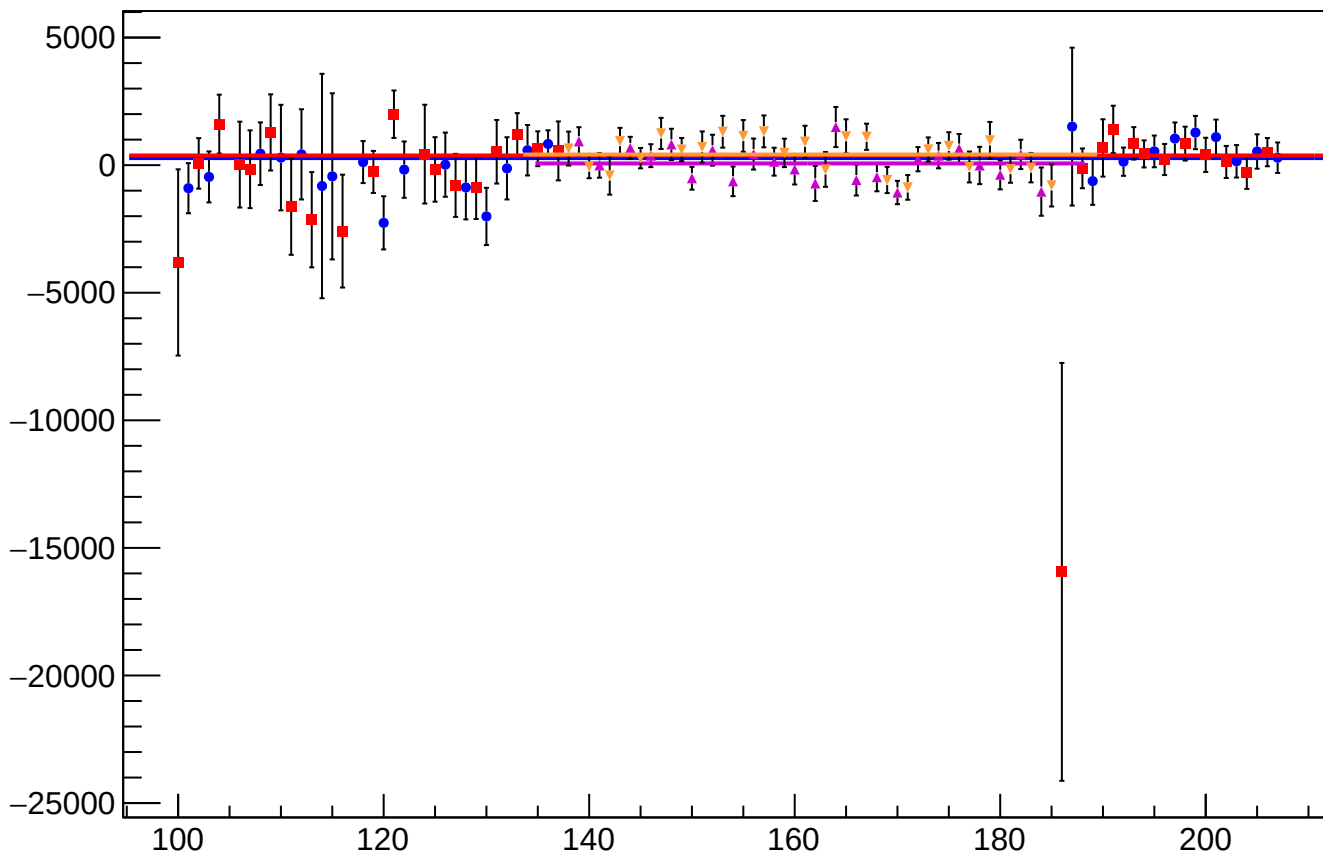
+ sign 87.557 $\pm$ 0.011  $\chi^2$ /NDF: 1666391.7/50

All: 88.150 $\pm$ 0.008  $\chi^2$ /NDF: 3756441.9/104

- sign 88.755 $\pm$ 0.011  $\chi^2$ /NDF: 2083877.3/53



asym\_sam\_26\_48\_dd\_cor\_correction\_mean vs Slug



Right In: 276.630 $\pm$ 168.035  $\chi^2$ /NDF: 21.3/25

Left Out: 416.416 $\pm$ 112.336  $\chi^2$ /NDF: 32.4/24

Right Out: 379.264 $\pm$ 160.890  $\chi^2$ /NDF: 22.8/30

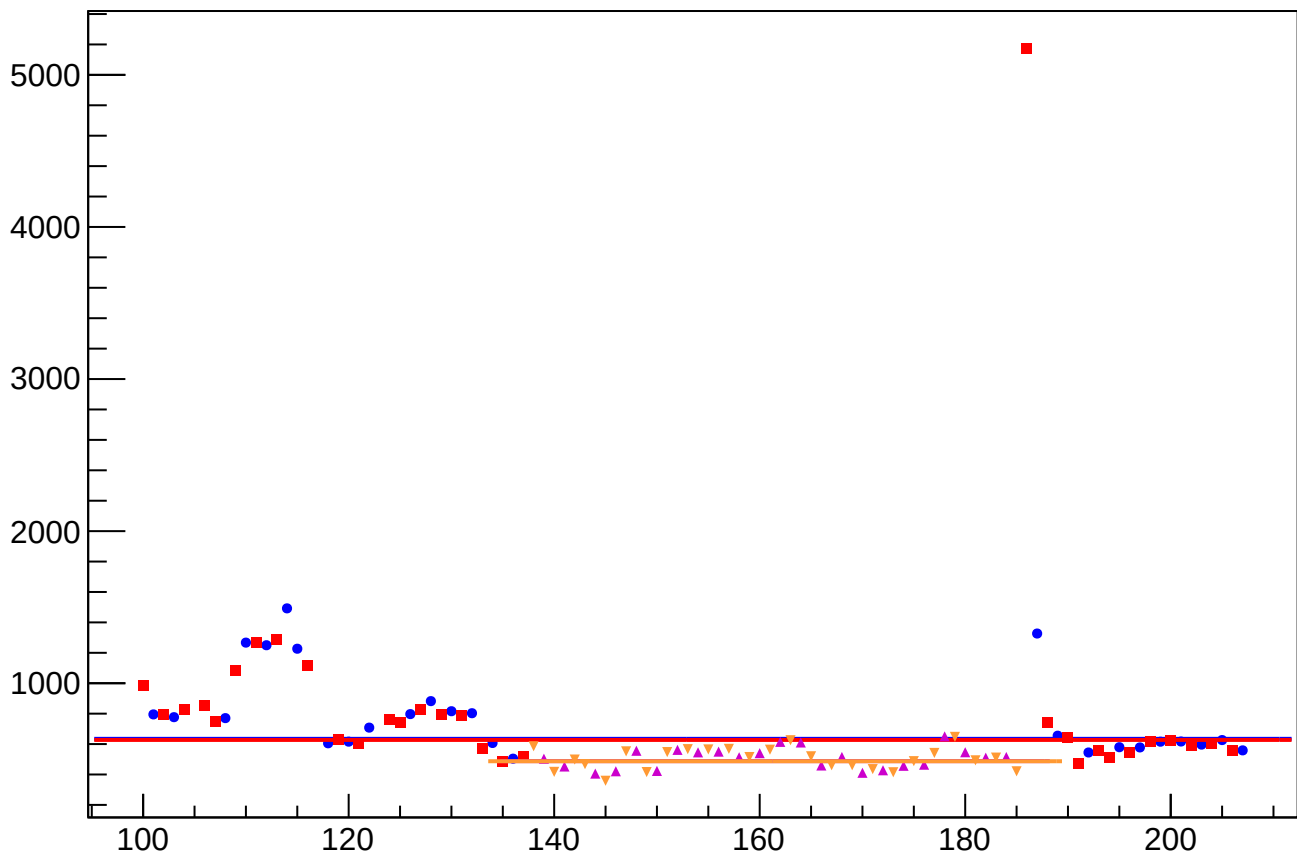
Left In: 66.674 $\pm$ 115.419  $\chi^2$ /NDF: 27.5/22

+ sign 373.239 $\pm$ 93.389  $\chi^2$ /NDF: 54.2/50

All: 273.483 $\pm$ 66.175  $\chi^2$ /NDF: 109.3/104

- sign 172.884 $\pm$ 93.783  $\chi^2$ /NDF: 52.8/53

asym\_sam\_26\_48\_dd\_cor\_correction\_rms vs Slug



Right In: 634.305 $\pm$ 0.119  $\chi^2$ /NDF: 1253121.0/25

Left Out: 487.081 $\pm$ 0.079  $\chi^2$ /NDF: 821261.6/24

Right Out: 627.257 $\pm$ 0.114  $\chi^2$ /NDF: 2132798.5/30

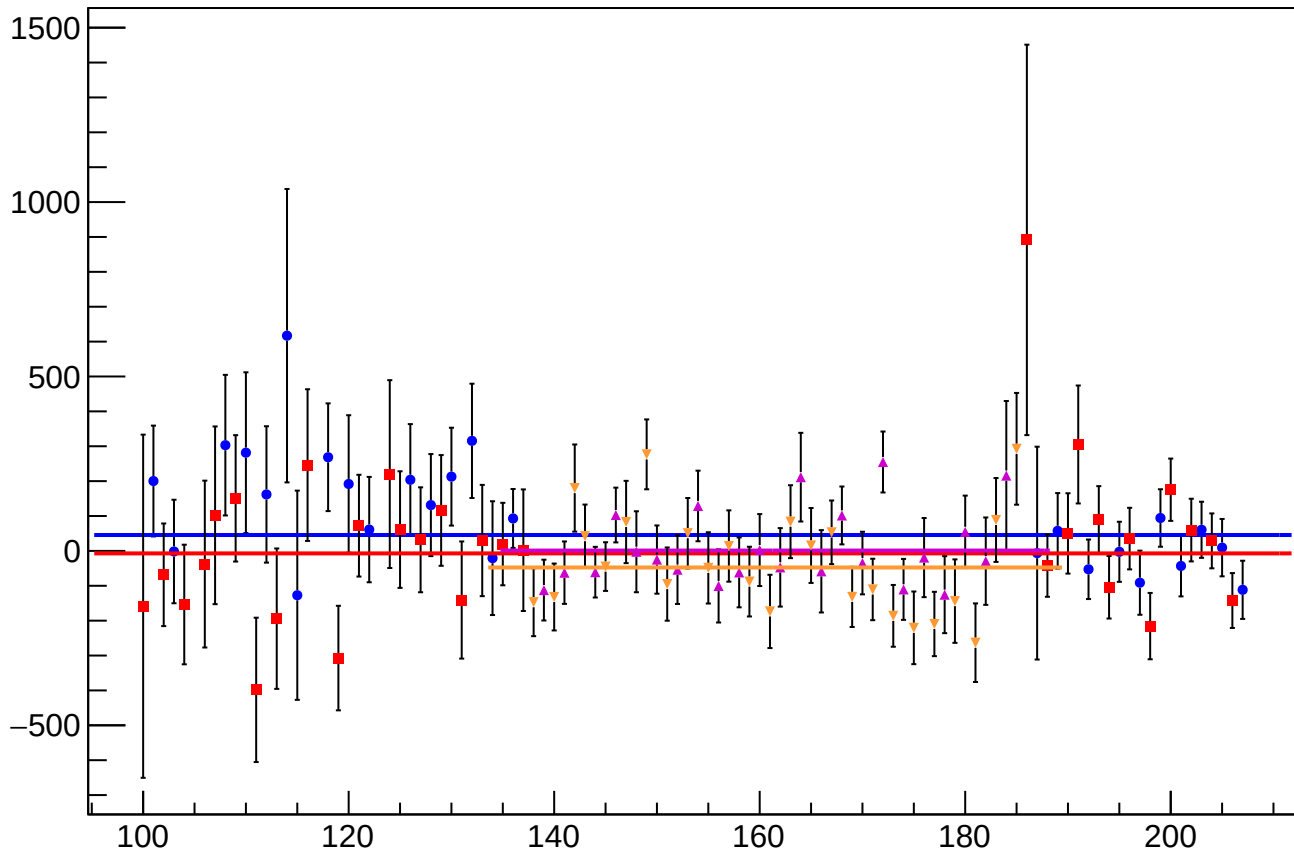
Left In: 487.930 $\pm$ 0.082  $\chi^2$ /NDF: 634273.3/22

+ sign 532.555 $\pm$ 0.066  $\chi^2$ /NDF: 3135439.2/50

All: 533.907 $\pm$ 0.047  $\chi^2$ /NDF: 6893569.0/104

- sign 535.270 $\pm$ 0.066  $\chi^2$ /NDF: 3757288.8/53

# eigen\_cor\_asym\_sam\_26\_48\_dd\_mean vs Slug



Right In: 45.583 $\pm$ 23.272  $\chi^2/\text{NDF}$ : 23.9/25

Left Out: -47.532 $\pm$ 19.983  $\chi^2/\text{NDF}$ : 44.0/24

Right Out: -7.147 $\pm$ 22.931  $\chi^2/\text{NDF}$ : 35.8/30

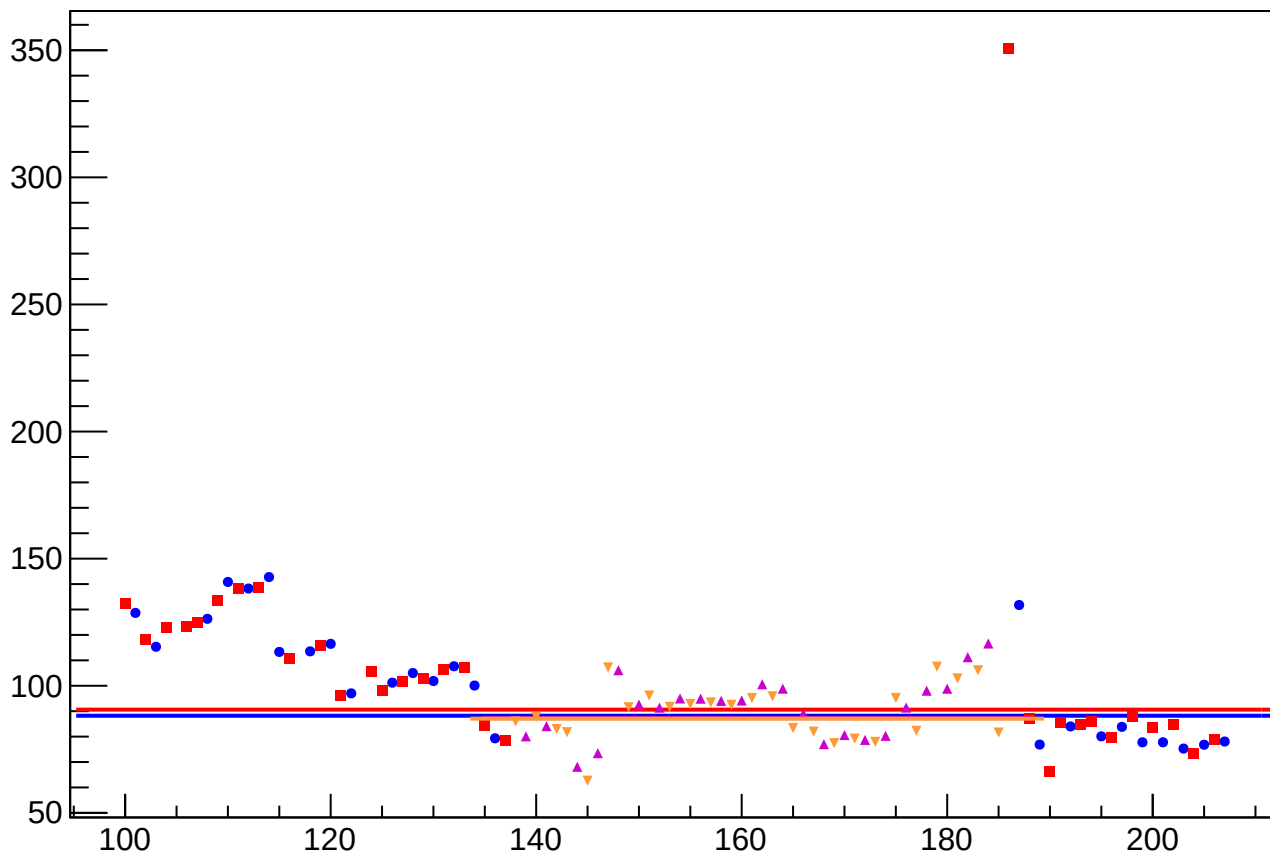
Left In: 0.988 $\pm$ 20.604  $\chi^2/\text{NDF}$ : 25.5/22

+ sign -8.015 $\pm$ 15.161  $\chi^2/\text{NDF}$ : 77.1/50

All: -5.359 $\pm$ 10.778  $\chi^2/\text{NDF}$ : 138.5/104

- sign -2.646 $\pm$ 15.326  $\chi^2/\text{NDF}$ : 61.4/53

# eigen\_cor\_asym\_sam\_26\_48\_dd\_rms vs Slug



Right In: 88.216 $\pm$ 0.016  $\chi^2$ /NDF: 1042984.0/25

Left Out: 87.072 $\pm$ 0.014  $\chi^2$ /NDF: 620626.5/24

Right Out: 90.611 $\pm$ 0.016  $\chi^2$ /NDF: 1464408.5/30

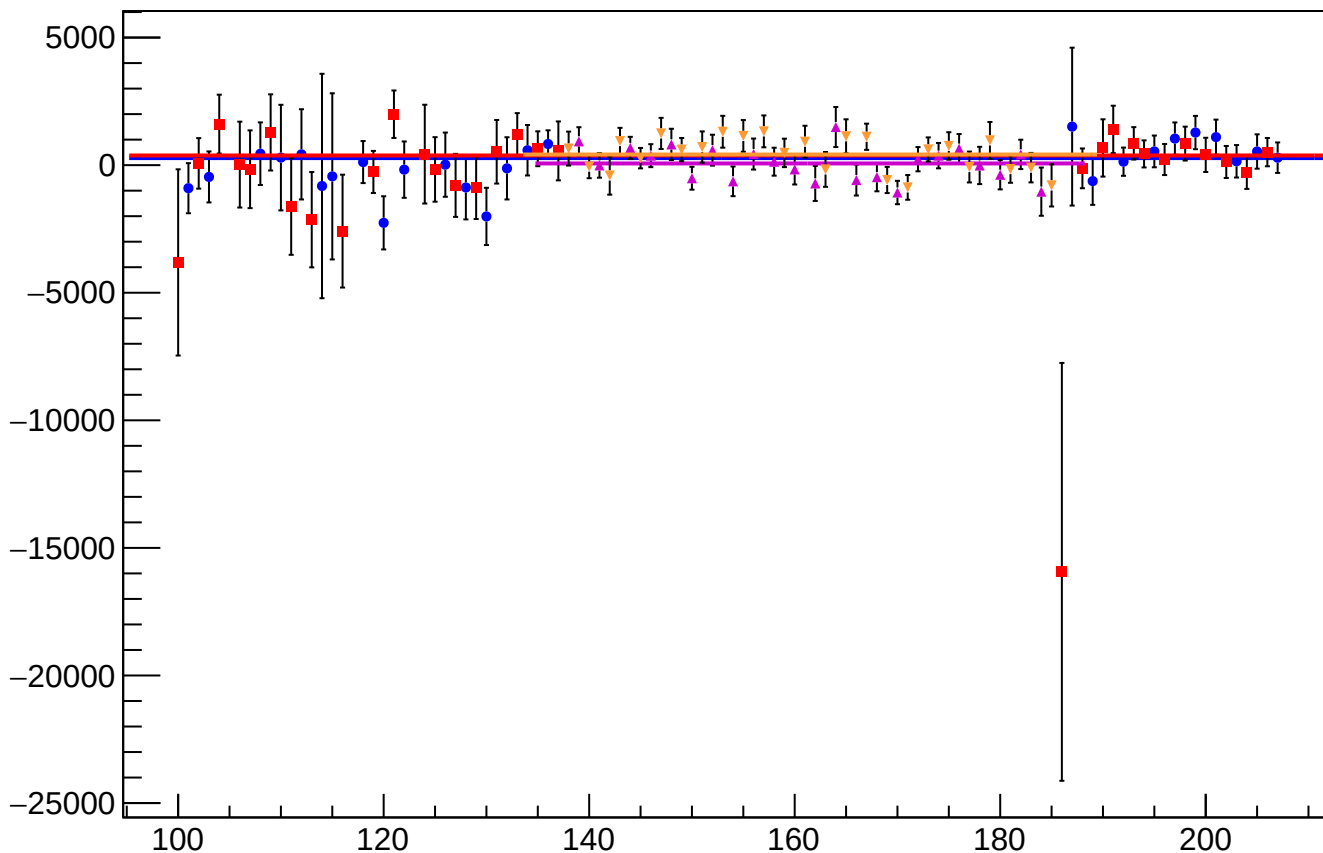
Left In: 87.257 $\pm$ 0.015  $\chi^2$ /NDF: 595793.1/22

+ sign 87.557 $\pm$ 0.011  $\chi^2$ /NDF: 1666391.7/50

All: 88.150 $\pm$ 0.008  $\chi^2$ /NDF: 3756441.9/104

- sign 88.755 $\pm$ 0.011  $\chi^2$ /NDF: 2083877.3/53

asym\_sam\_26\_48\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In: 276.630 $\pm$ 168.035  $\chi^2$ /NDF: 21.3/25

Left Out: 416.416 $\pm$ 112.336  $\chi^2$ /NDF:32.4/24

Right Out: 379.264 $\pm$ 160.890  $\chi^2$ /NDF: 22.8/30

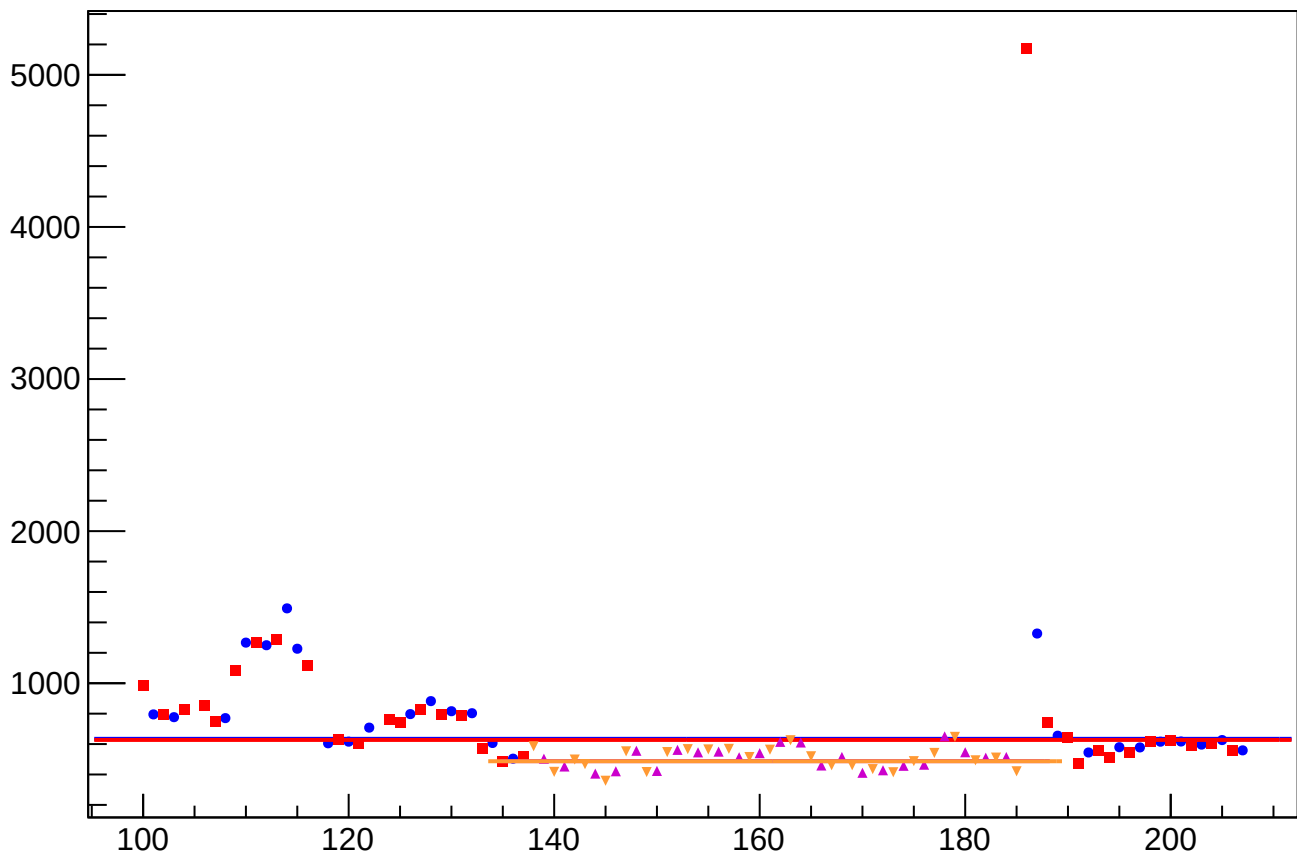
Left In: 66.674 $\pm$ 115.419  $\chi^2$ /NDF:27.5/22

+ sign 373.239 $\pm$ 93.389  $\chi^2$ /NDF: 54.2/50

All: 273.483 $\pm$ 66.175  $\chi^2$ /NDF: 109.3/104

- sign 172.884 $\pm$ 93.783  $\chi^2$ /NDF: 52.8/53

asym\_sam\_26\_48\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 634.305+/-0.119  $\chi^2/\text{NDF}$ : 1253121.0/25

Left Out: 487.081+/-0.079  $\chi^2/\text{NDF}$ : 821261.6/24

Right Out: 627.257+/-0.114  $\chi^2/\text{NDF}$ : 2132798.5/30

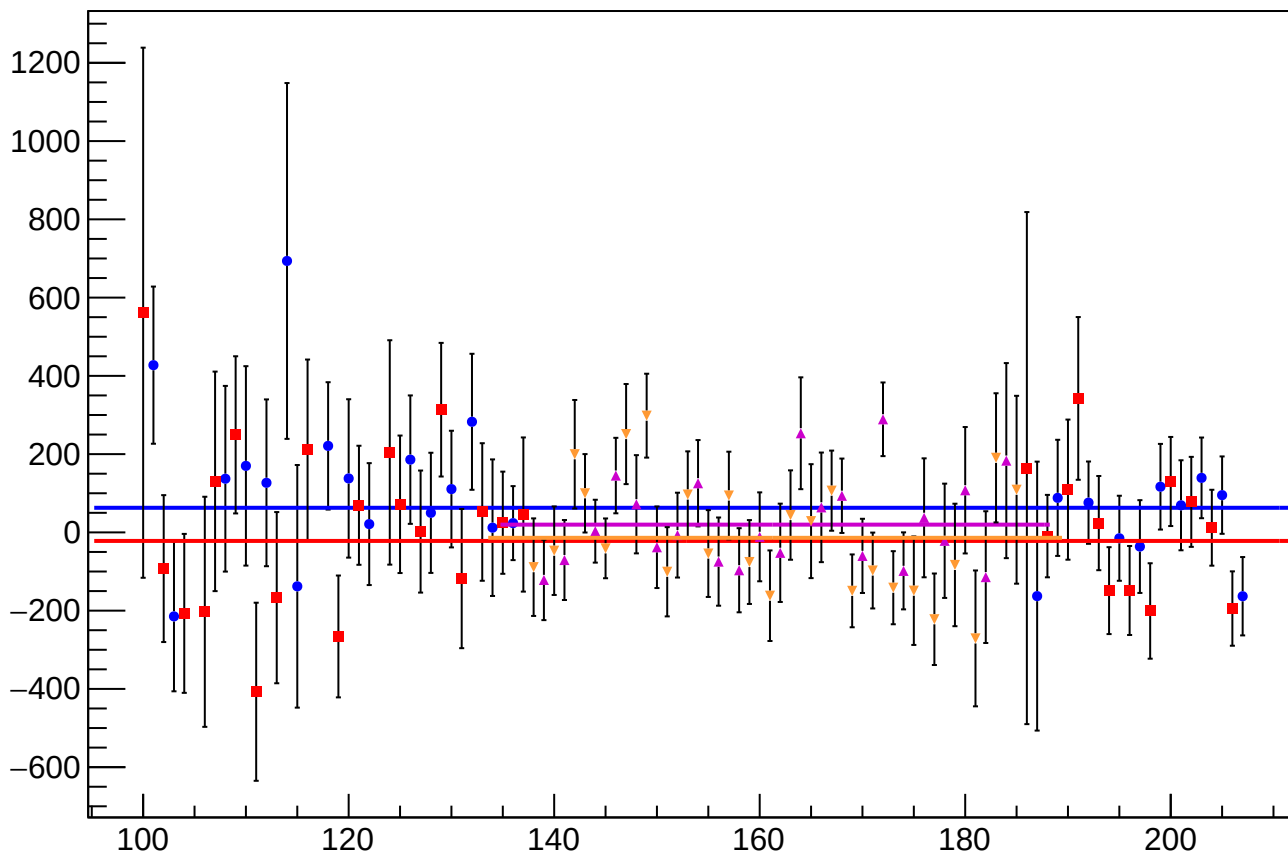
Left In: 487.930+/-0.082  $\chi^2/\text{NDF}$ : 634273.3/22

+ sign 532.555+/-0.066  $\chi^2/\text{NDF}$ : 3135439.2/50

All: 533.907+/-0.047  $\chi^2/\text{NDF}$ : 6893569.0/104

- sign 535.270+/-0.066  $\chi^2/\text{NDF}$ : 3757288.8/53

# dit\_asym\_sam\_26\_48\_dd\_mean vs Slug



Right In: 62.876 $\pm$ 27.912  $\chi^2/\text{NDF}$ : 19.5/25

Left Out: -13.904 $\pm$ 22.916  $\chi^2/\text{NDF}$ : 36.4/24

Right Out: -21.831 $\pm$ 27.451  $\chi^2/\text{NDF}$ : 31.4/30

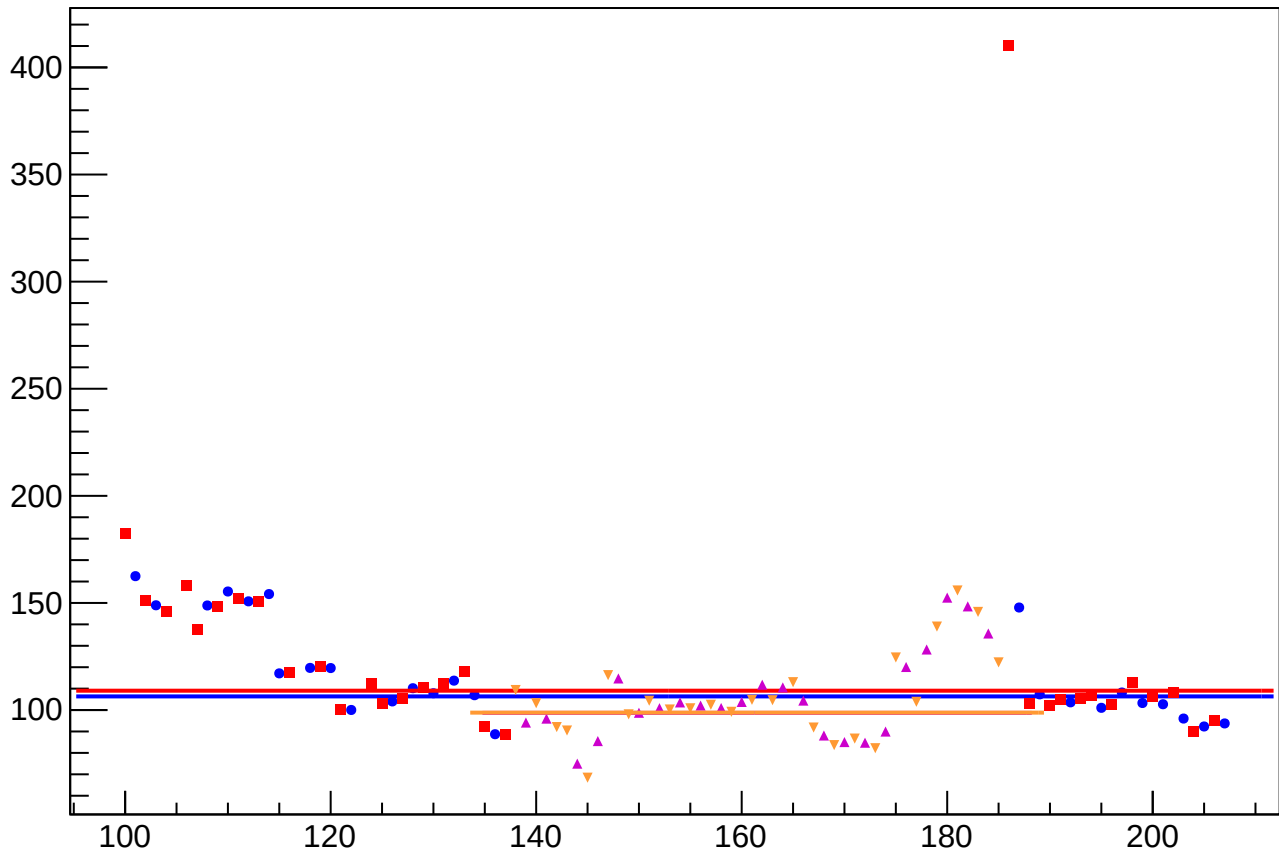
Left In: 19.805 $\pm$ 23.571  $\chi^2/\text{NDF}$ : 23.3/22

+ sign 17.011 $\pm$ 17.712  $\chi^2/\text{NDF}$ : 60.4/50

All: 9.645 $\pm$ 12.584  $\chi^2/\text{NDF}$ : 116.7/104

- sign 2.135 $\pm$ 17.883  $\chi^2/\text{NDF}$ : 56.0/53

dit\_asym\_sam\_26\_48\_dd\_rms vs Slug



Right In: 106.370 $\pm$ 0.020  $\chi^2$ /NDF: 736154.0/25

Left Out: 98.799 $\pm$ 0.016  $\chi^2$ /NDF:1185806.0/24

Right Out: 109.039 $\pm$ 0.019  $\chi^2$ /NDF: 1138387.2/30

Left In: 98.673 $\pm$ 0.017  $\chi^2$ /NDF:987817.0/22

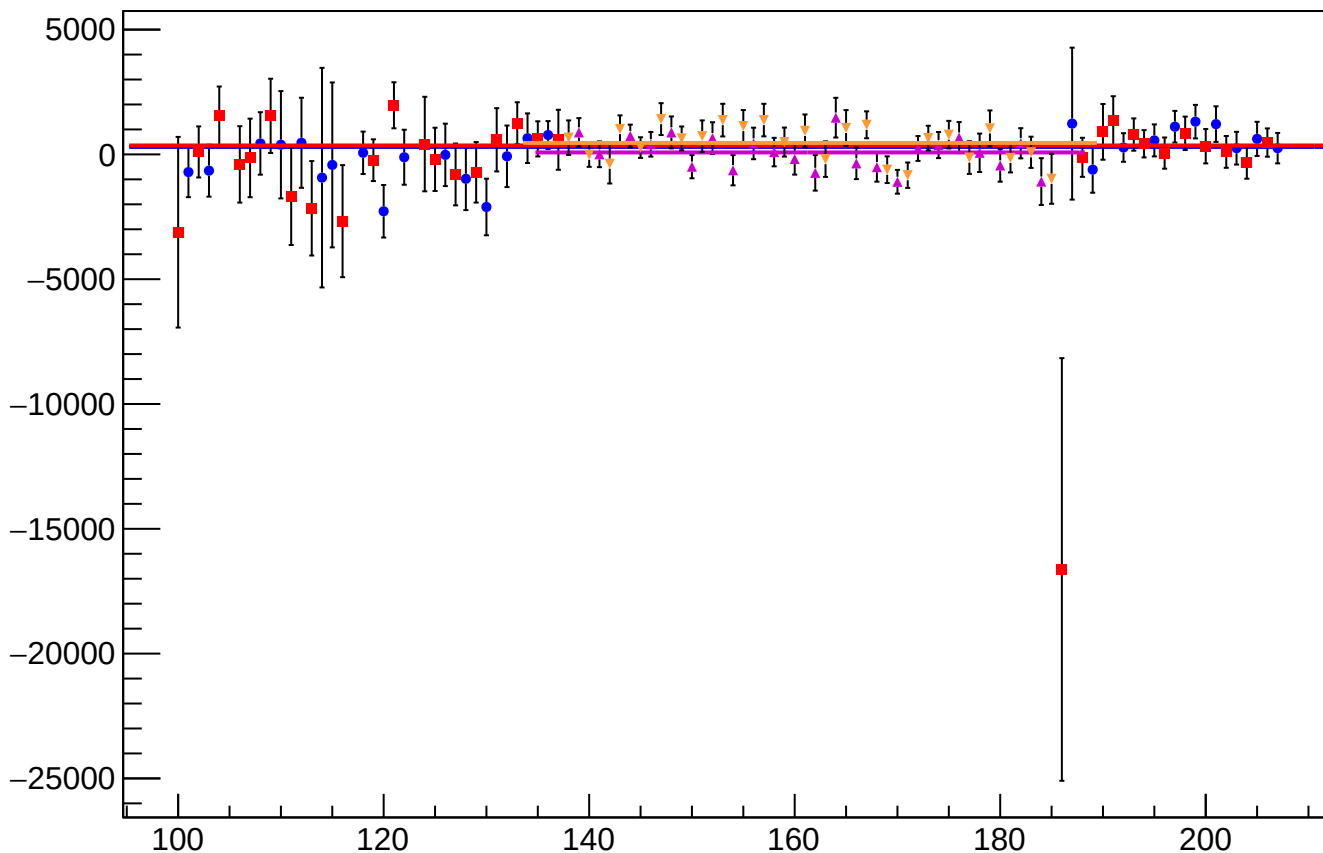
+ sign 101.847 $\pm$ 0.013  $\chi^2$ /NDF: 2009855.4/50

All: 102.454 $\pm$ 0.009  $\chi^2$ /NDF: 4304951.3/104

- sign 103.072 $\pm$ 0.013  $\chi^2$ /NDF: 2290358.9/53



asym\_sam\_26\_48\_dd\_dit\_correction\_mean vs Slug



Right In:  $299.832 \pm 171.929$   $\chi^2/\text{NDF}$ : 21.8/25

Left Out:  $459.094 \pm 118.111$   $\chi^2/\text{NDF}$ : 30.8/24

Right Out:  $357.508 \pm 163.604$   $\chi^2/\text{NDF}$ : 22.4/30

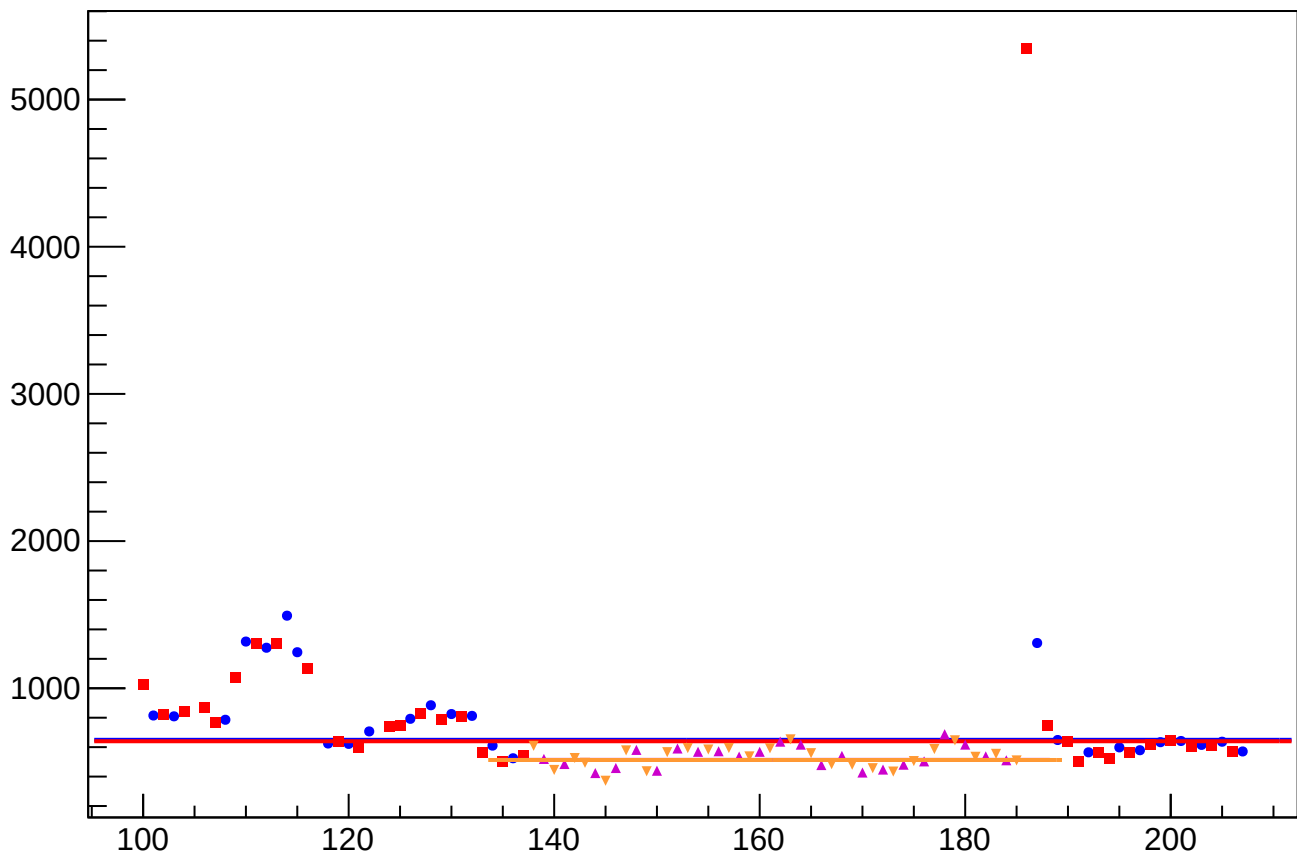
Left In:  $78.791 \pm 121.436$   $\chi^2/\text{NDF}$ : 26.2/22

+ sign  $408.031 \pm 97.353$   $\chi^2/\text{NDF}$ : 53.1/50

All:  $293.102 \pm 68.894$   $\chi^2/\text{NDF}$ : 106.5/104

- sign  $177.800 \pm 97.510$   $\chi^2/\text{NDF}$ : 50.5/53

asym\_sam\_26\_48\_dd\_dit\_correction\_rms vs Slug



Right In: 649.783 $\pm$ 0.122  $\chi^2$ /NDF: 1204110.1/25

Left Out: 512.768 $\pm$ 0.084  $\chi^2$ /NDF: 799239.4/24

Right Out: 640.031 $\pm$ 0.116  $\chi^2$ /NDF: 2080040.0/30

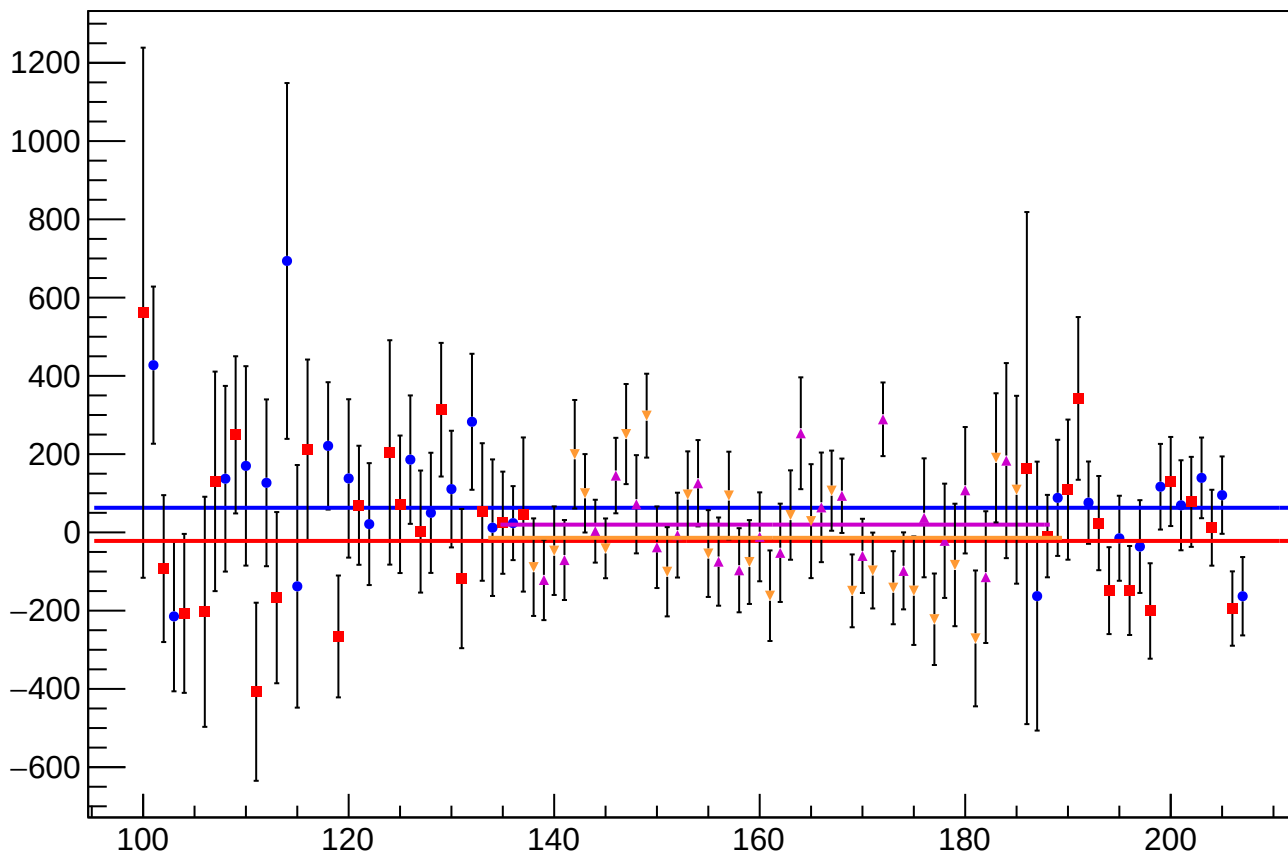
Left In: 513.375 $\pm$ 0.086  $\chi^2$ /NDF: 634000.2/22

+ sign 556.698 $\pm$ 0.069  $\chi^2$ /NDF: 2866282.2/50

All: 557.531 $\pm$ 0.049  $\chi^2$ /NDF: 6353473.5/104

- sign 558.367 $\pm$ 0.069  $\chi^2$ /NDF: 3486897.9/53

# eigen\_dit\_asym\_sam\_26\_48\_dd\_mean vs Slug



Right In: 62.876 $\pm$ 27.912  $\chi^2$ /NDF: 19.5/25

Left Out: -13.906 $\pm$ 22.916  $\chi^2$ /NDF: 36.4/24

Right Out: -21.832 $\pm$ 27.451  $\chi^2$ /NDF: 31.4/30

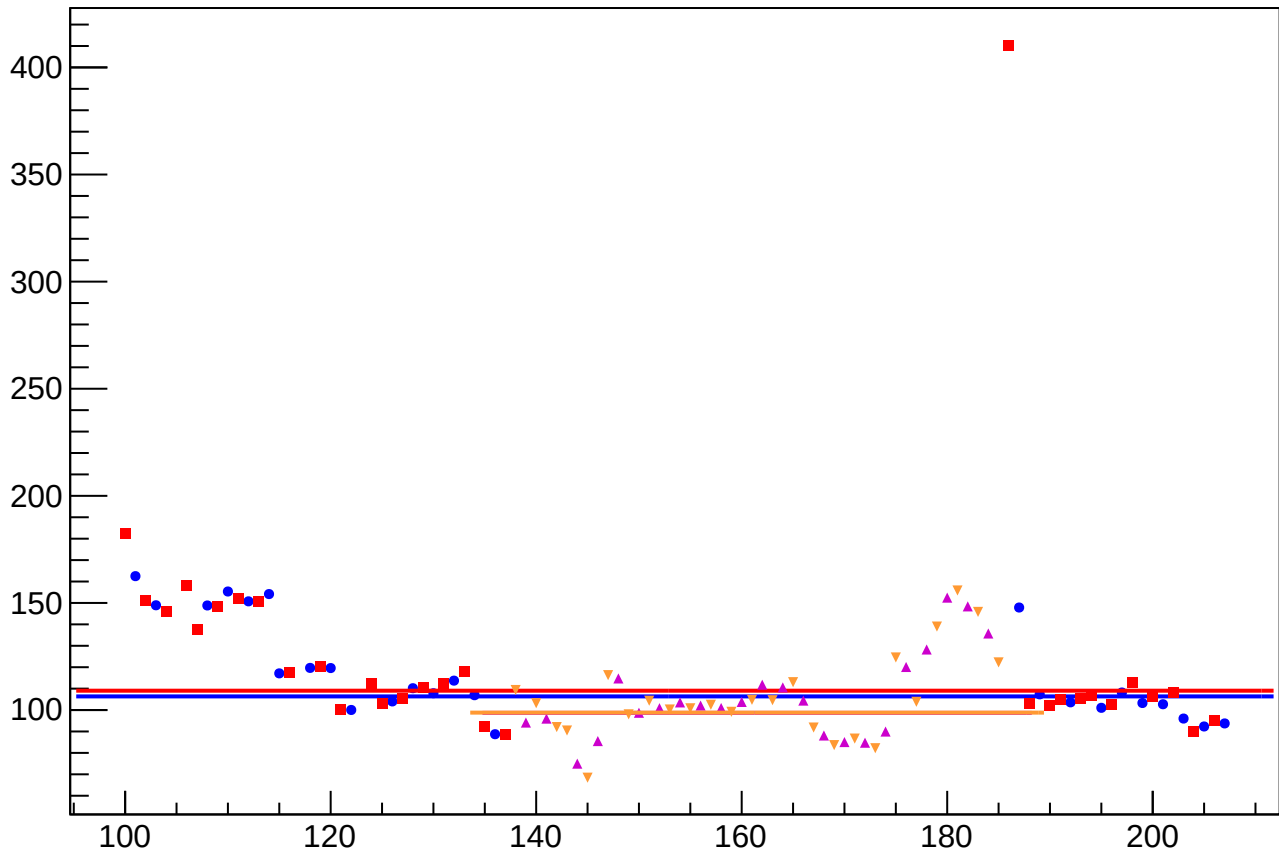
Left In: 19.805 $\pm$ 23.571  $\chi^2$ /NDF: 23.3/22

+ sign 17.010 $\pm$ 17.712  $\chi^2$ /NDF: 60.4/50

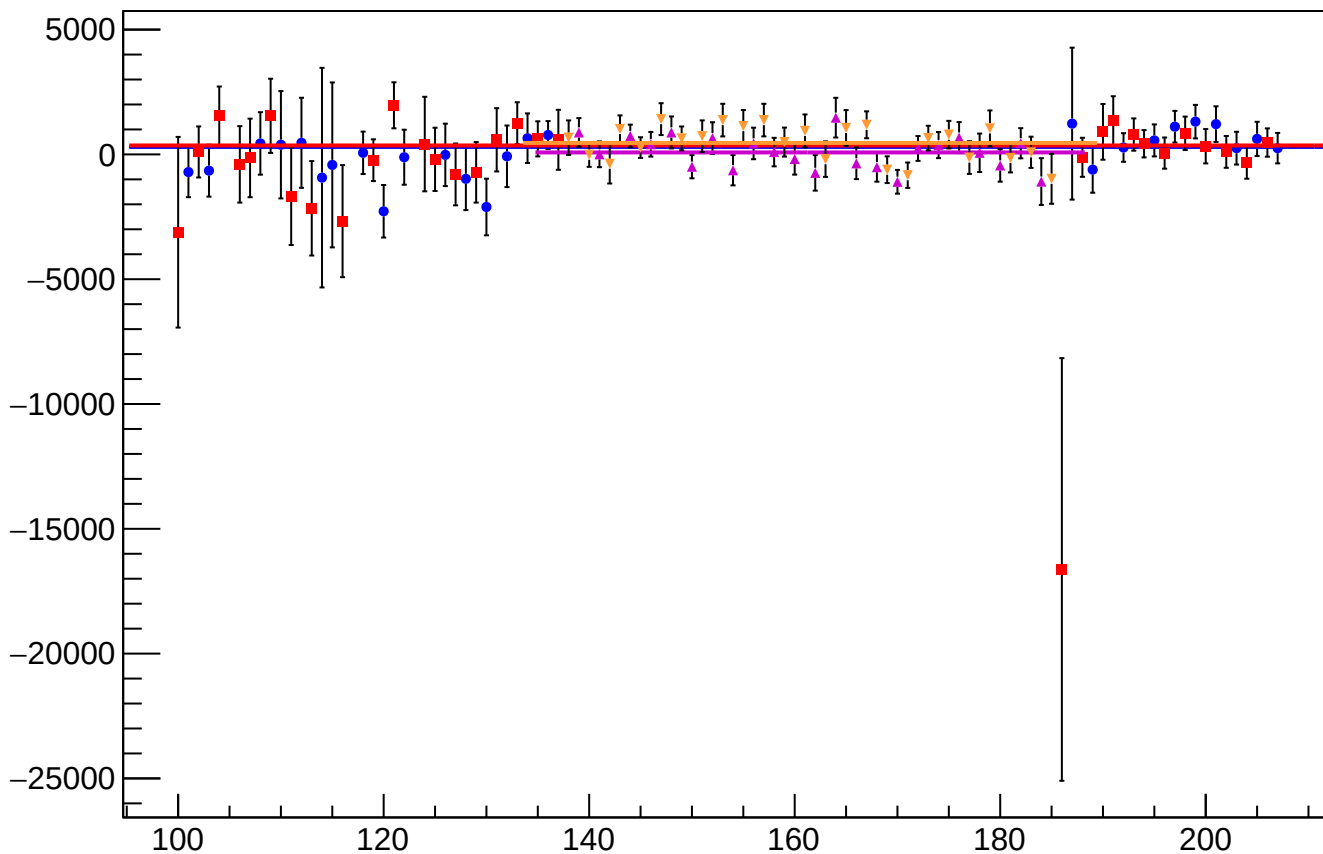
All: 9.644 $\pm$ 12.584  $\chi^2$ /NDF: 116.7/104

- sign 2.135 $\pm$ 17.883  $\chi^2$ /NDF: 56.0/53

eigen\_dit\_asym\_sam\_26\_48\_dd\_rms vs Slug



asym\_sam\_26\_48\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $299.832 \pm 171.929$   $\chi^2/\text{NDF}$ : 21.8/25

Left Out:  $459.092 \pm 118.111$   $\chi^2/\text{NDF}$ : 30.8/24

Right Out:  $357.507 \pm 163.604$   $\chi^2/\text{NDF}$ : 22.4/30

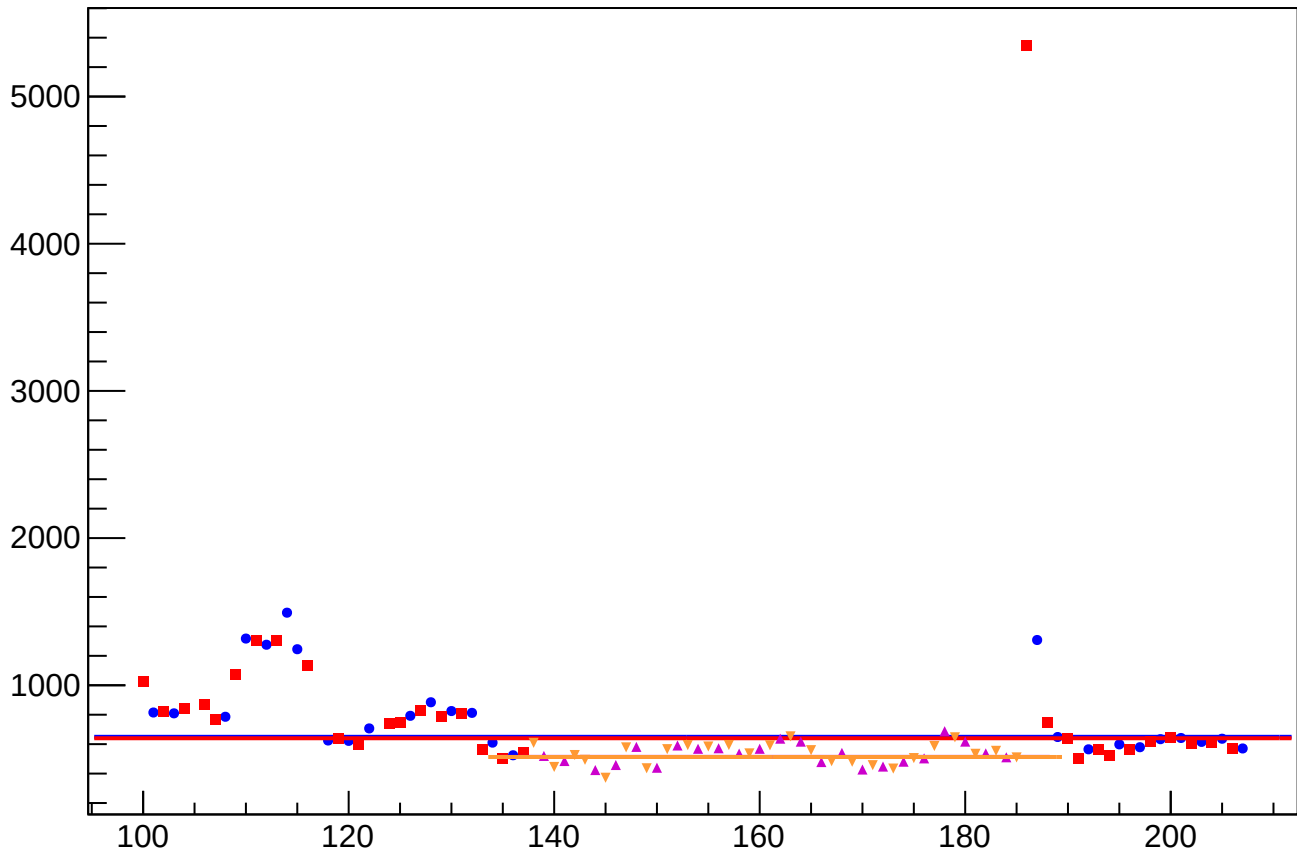
Left In:  $78.791 \pm 121.436$   $\chi^2/\text{NDF}$ : 26.2/22

+ sign  $408.030 \pm 97.352$   $\chi^2/\text{NDF}$ : 53.1/50

All:  $293.101 \pm 68.894$   $\chi^2/\text{NDF}$ : 106.5/104

- sign  $177.800 \pm 97.510$   $\chi^2/\text{NDF}$ : 50.5/53

asym\_sam\_26\_48\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In:  $649.782 \pm 0.122$   $\chi^2/\text{NDF}$ : 1204107.6/25

Left Out:  $512.768 \pm 0.084$   $\chi^2/\text{NDF}$ : 799239.0/24

Right Out:  $640.030 \pm 0.116$   $\chi^2/\text{NDF}$ : 2080036.2/30

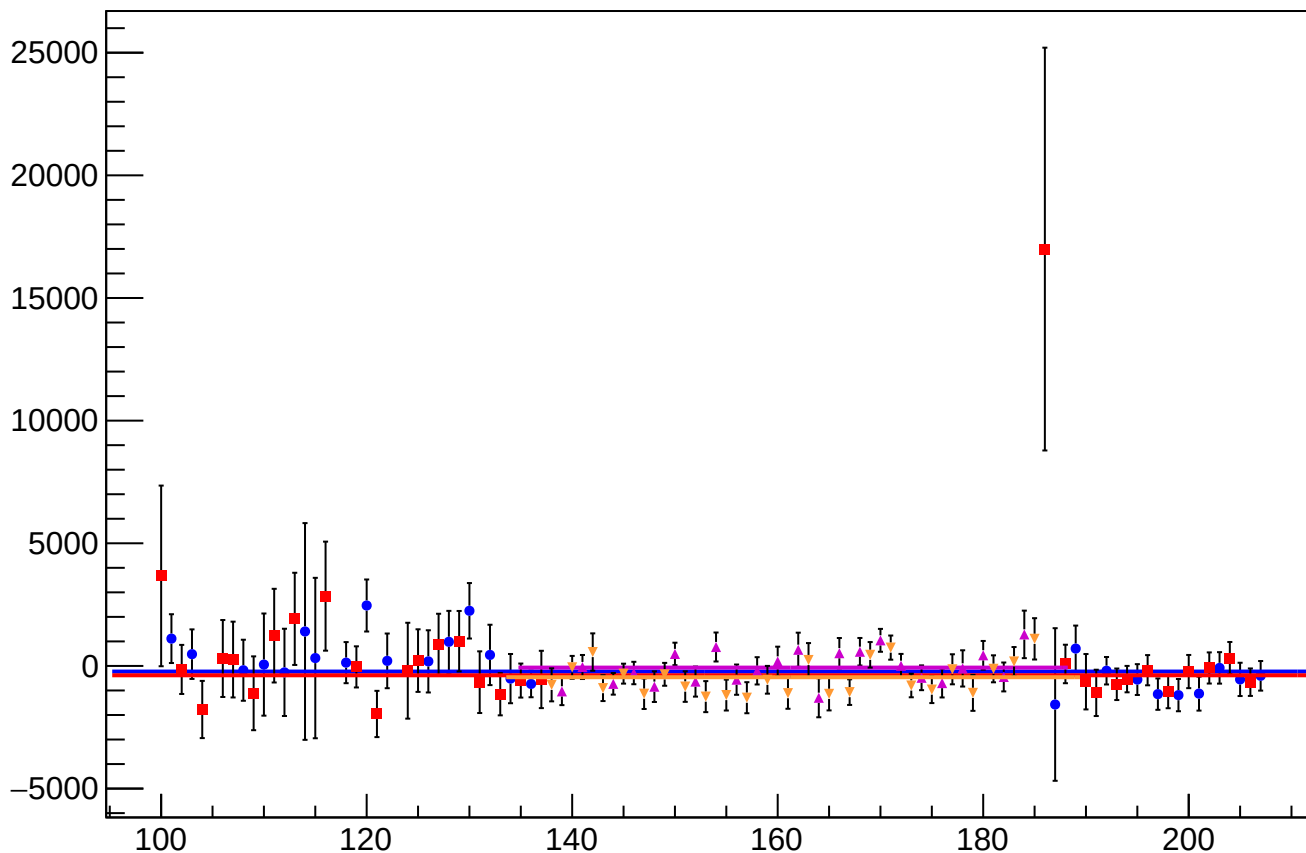
Left In:  $513.374 \pm 0.086$   $\chi^2/\text{NDF}$ : 633997.9/22

+ sign  $556.698 \pm 0.069$   $\chi^2/\text{NDF}$ : 2866272.8/50

All:  $557.531 \pm 0.049$   $\chi^2/\text{NDF}$ : 6353446.9/104

- sign  $558.367 \pm 0.069$   $\chi^2/\text{NDF}$ : 3486880.9/53

# asym\_sam\_26\_48\_dd\_mean vs Slug



Right In:  $-228.975 \pm 169.828$   $\chi^2/\text{NDF}$ : 24.1/25

Left Out:  $-459.862 \pm 114.233$   $\chi^2/\text{NDF}$ : 30.8/24

Right Out:  $-381.295 \pm 162.588$   $\chi^2/\text{NDF}$ : 22.7/30

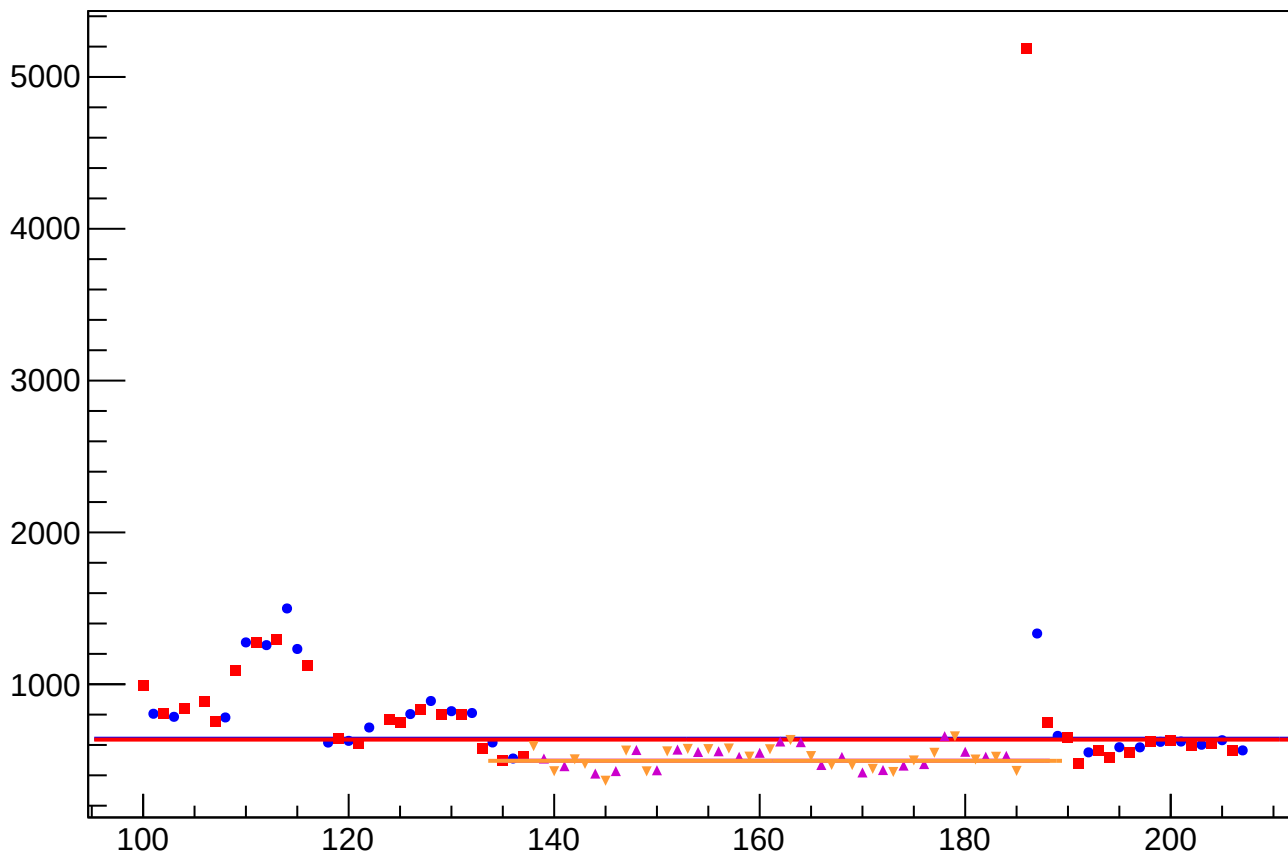
Left In:  $-68.043 \pm 117.366$   $\chi^2/\text{NDF}$ : 28.6/22

+ sign  $-387.940 \pm 94.785$   $\chi^2/\text{NDF}$ : 56.2/50

All:  $-282.070 \pm 67.156$   $\chi^2/\text{NDF}$ : 112.5/104

- sign  $-175.355 \pm 95.163$   $\chi^2/\text{NDF}$ : 53.8/53

# asym\_sam\_26\_48\_dd\_rms vs Slug



Right In: 641.244+/-0.120  $\chi^2/\text{NDF}$ : 1242001.5/25

Left Out: 495.514+/-0.081  $\chi^2/\text{NDF}$ : 804659.4/24

Right Out: 635.357+/-0.115  $\chi^2/\text{NDF}$ : 2126914.2/30

Left In: 496.307+/-0.083  $\chi^2/\text{NDF}$ : 622356.2/22

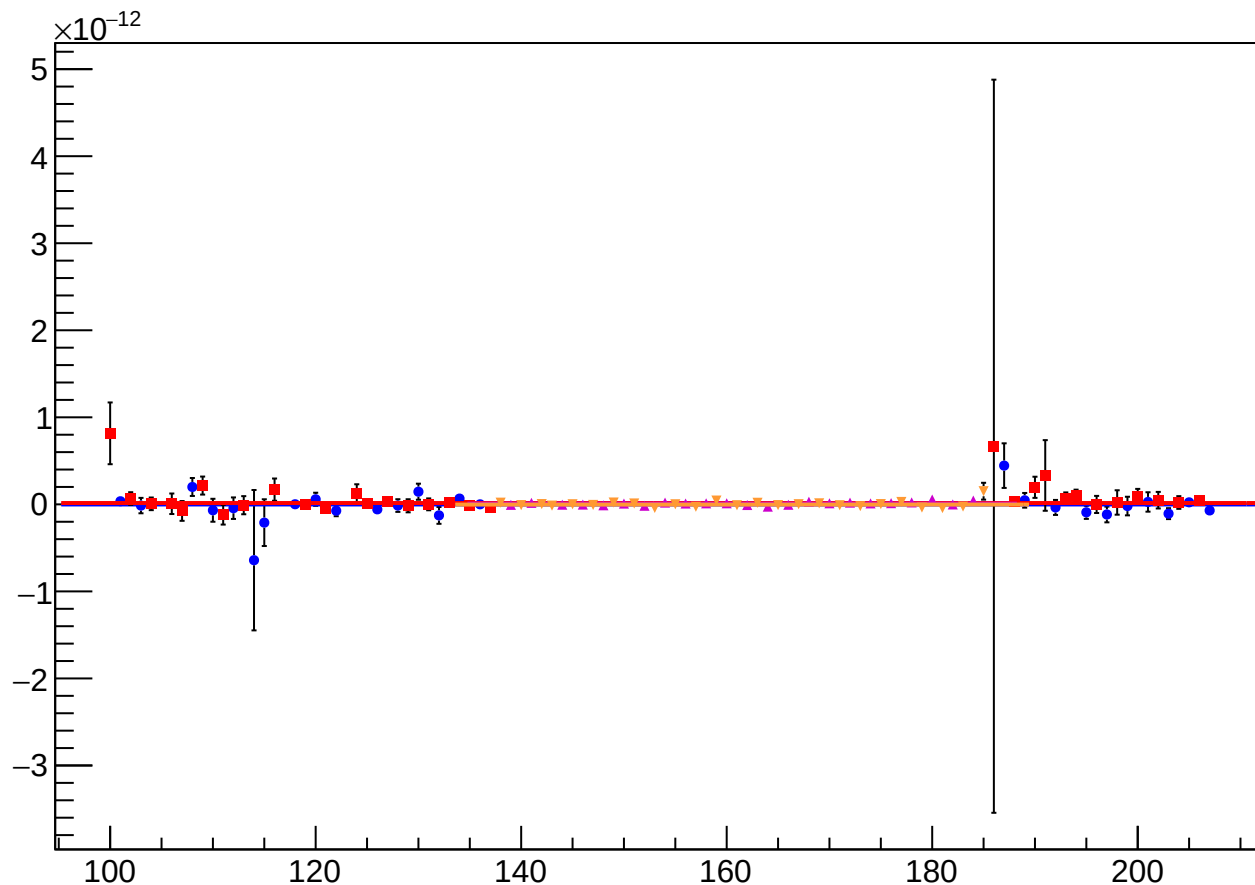
+ sign 540.909+/-0.067  $\chi^2/\text{NDF}$ : 3060590.3/50

All: 542.420+/-0.047  $\chi^2/\text{NDF}$ : 6772577.5/104

- sign 543.942+/-0.067  $\chi^2/\text{NDF}$ : 3710967.5/53



asym\_sam\_26\_48\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2$ /NDF: 29.2/25

Left Out: -0.000+/-0.000  $\chi^2$ /NDF: 25.1/24

Right Out: 0.000+/-0.000  $\chi^2$ /NDF: 25.9/30

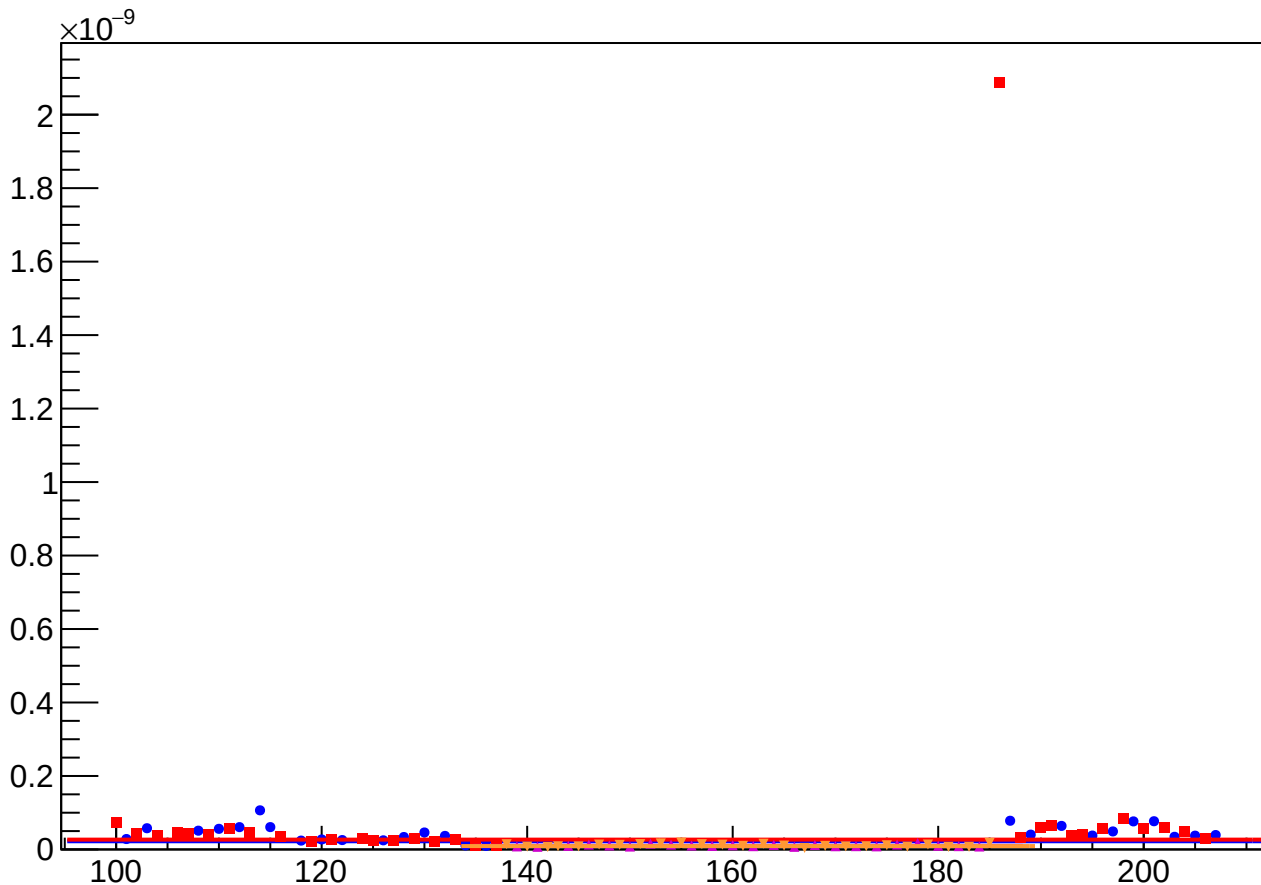
Left In: 0.000+/-0.000  $\chi^2$ /NDF: 15.5/22

+ sign -0.000+/-0.000  $\chi^2$ /NDF: 54.3/50

All: 0.000+/-0.000  $\chi^2$ /NDF: 101.0/104

- sign 0.000+/-0.000  $\chi^2$ /NDF: 41.8/53

# asym\_sam\_26\_48\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5064536.6/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :1832944.8/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4047074.6/30

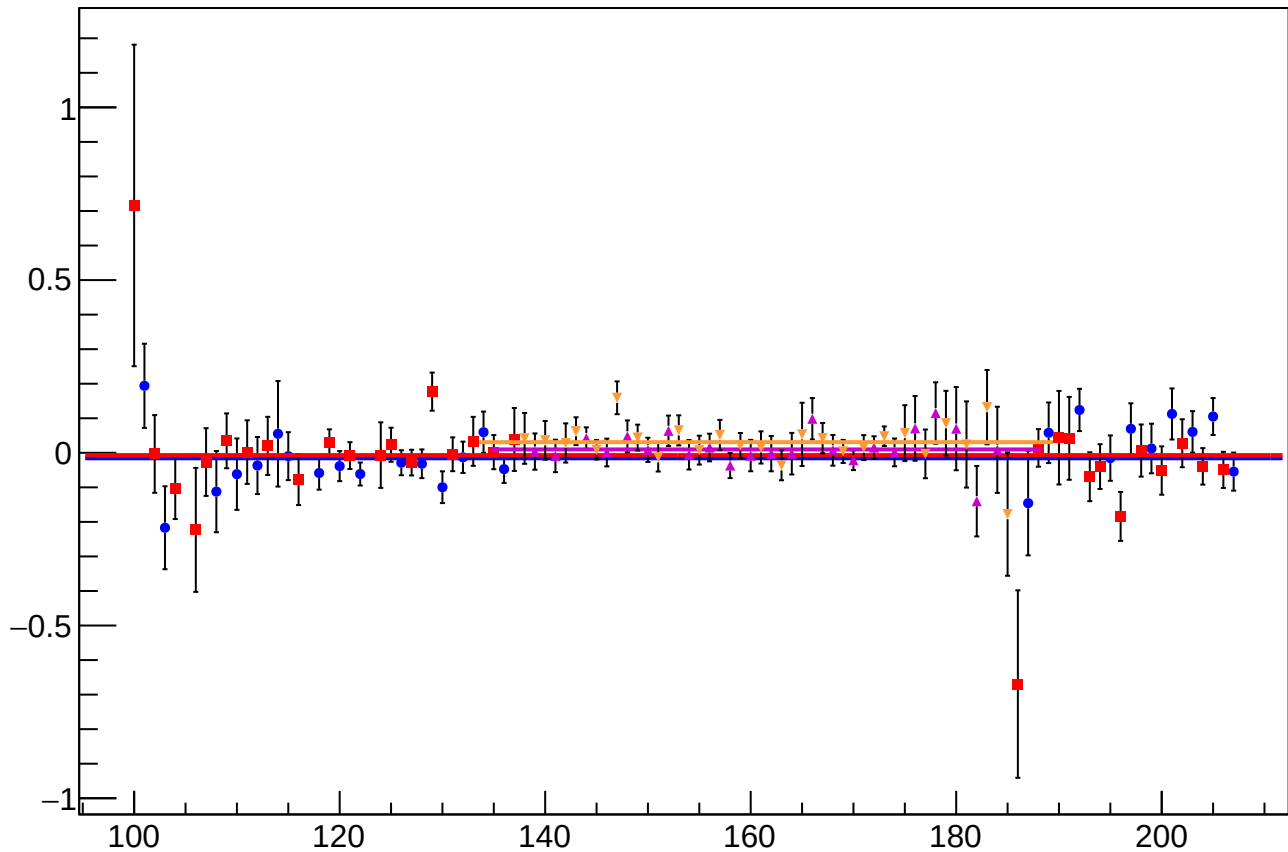
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :622904.8/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9711819.4/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 18400276.8/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8627043.1/53

asym\_sam\_26\_48\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.016 \pm 0.011$   $\chi^2/\text{NDF}$ : 34.1/25

Left Out:  $0.031 \pm 0.009$   $\chi^2/\text{NDF}$ : 17.8/24

Right Out:  $-0.007 \pm 0.012$   $\chi^2/\text{NDF}$ : 35.0/30

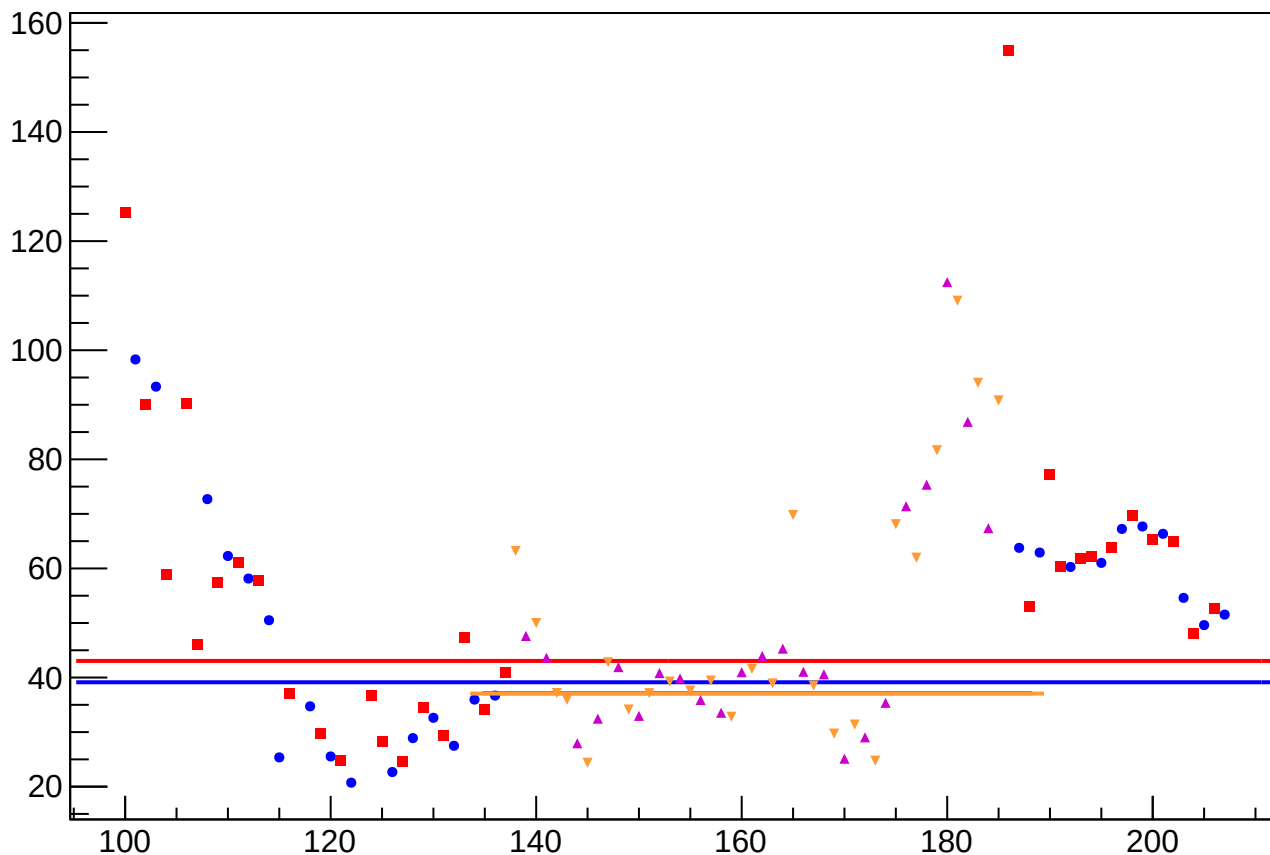
Left In:  $0.010 \pm 0.009$   $\chi^2/\text{NDF}$ : 13.2/22

+ sign  $0.012 \pm 0.007$   $\chi^2/\text{NDF}$ : 62.3/50

All:  $0.008 \pm 0.005$   $\chi^2/\text{NDF}$ : 112.6/104

- sign  $0.003 \pm 0.007$   $\chi^2/\text{NDF}$ : 49.4/53

asym\_sam\_26\_48\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 39.135 $\pm$ 0.008  $\chi^2/\text{NDF}$ : 4729341.8/25

Left Out: 37.057 $\pm$ 0.006  $\chi^2/\text{NDF}$ : 4053719.8/24

Right Out: 43.045 $\pm$ 0.008  $\chi^2/\text{NDF}$ : 4262253.1/30

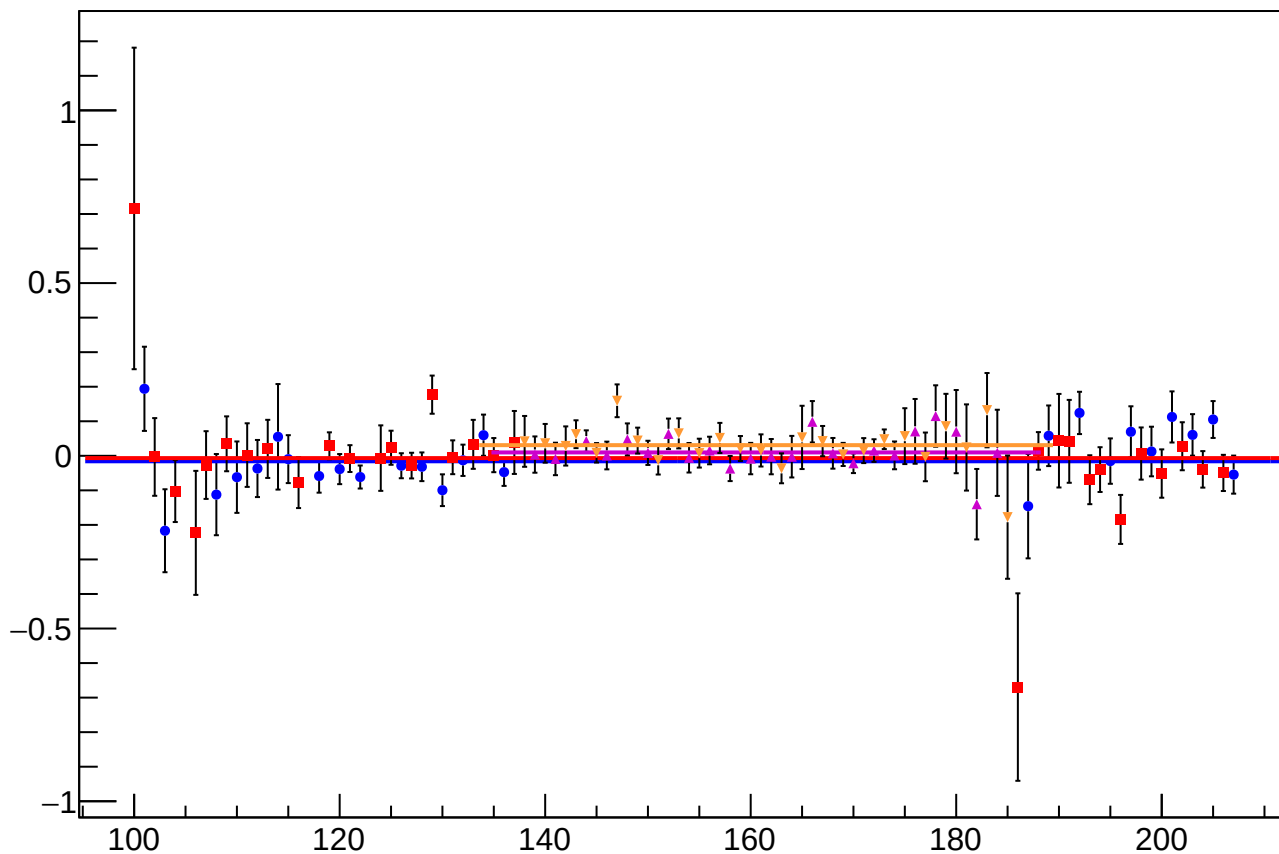
Left In: 37.127 $\pm$ 0.007  $\chi^2/\text{NDF}$ : 3012795.5/22

+ sign 37.886 $\pm$ 0.005  $\chi^2/\text{NDF}$ : 8824390.2/50

All: 38.649 $\pm$ 0.004  $\chi^2/\text{NDF}$ : 16461513.7/104

- sign 39.460 $\pm$ 0.005  $\chi^2/\text{NDF}$ : 7589172.8/53

asym\_sam\_26\_48\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.016 \pm 0.011$   $\chi^2/\text{NDF}$ : 34.1/25

Left Out:  $0.031 \pm 0.009$   $\chi^2/\text{NDF}$ : 17.8/24

Right Out:  $-0.007 \pm 0.012$   $\chi^2/\text{NDF}$ : 35.0/30

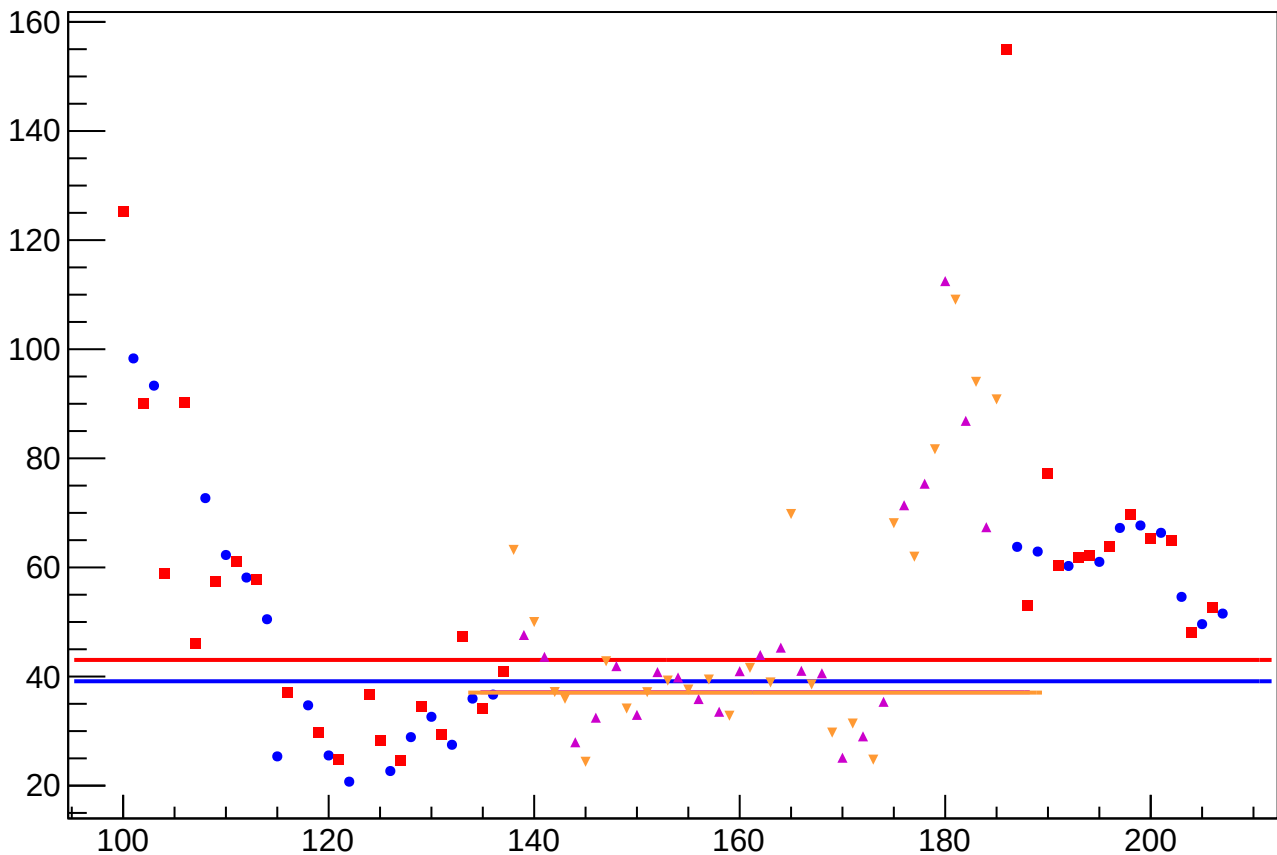
Left In:  $0.010 \pm 0.009$   $\chi^2/\text{NDF}$ : 13.2/22

+ sign  $0.012 \pm 0.007$   $\chi^2/\text{NDF}$ : 62.3/50

All:  $0.008 \pm 0.005$   $\chi^2/\text{NDF}$ : 112.6/104

- sign  $0.003 \pm 0.007$   $\chi^2/\text{NDF}$ : 49.4/53

asym\_sam\_26\_48\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 39.135 $\pm$ 0.008  $\chi^2$ /NDF: 4729341.8/25

Left Out: 37.057 $\pm$ 0.006  $\chi^2$ /NDF: 4053719.8/24

Right Out: 43.045 $\pm$ 0.008  $\chi^2$ /NDF: 4262253.1/30

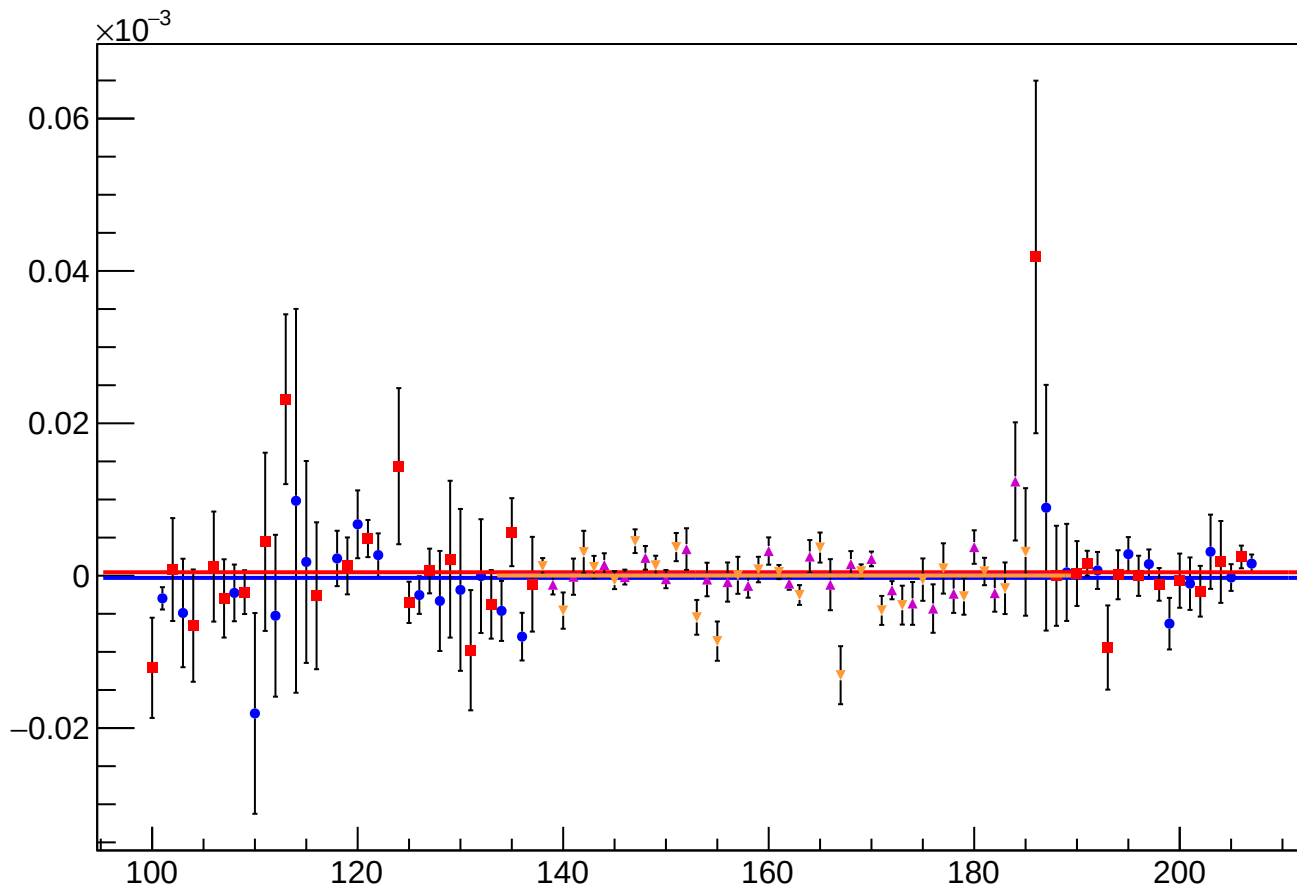
Left In: 37.127 $\pm$ 0.007  $\chi^2$ /NDF: 3012795.5/22

+ sign 37.886 $\pm$ 0.005  $\chi^2$ /NDF: 8824390.2/50

All: 38.649 $\pm$ 0.004  $\chi^2$ /NDF: 16461513.7/104

- sign 39.460 $\pm$ 0.005  $\chi^2$ /NDF: 7589172.8/53

asym\_sam\_26\_48\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 28.2/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 67.6/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 31.6/30

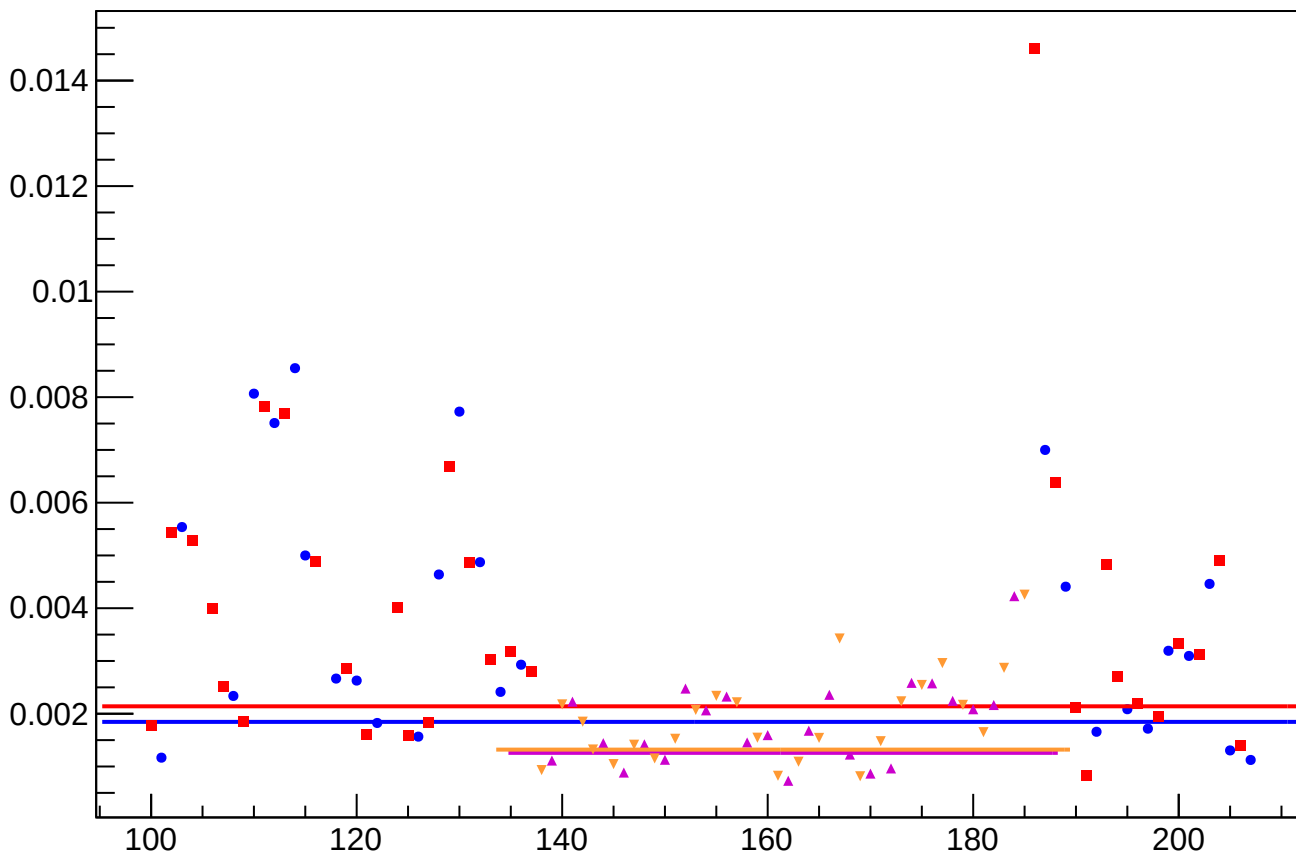
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 32.2/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 96.0/50

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 160.4/104

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 64.1/53

asym\_sam\_26\_48\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 6686939.6/25

Left Out: 0.001 $\pm$ 0.000  $\chi^2$ /NDF:5632532.9/24

Right Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 8016732.3/30

Left In: 0.001 $\pm$ 0.000  $\chi^2$ /NDF:5369001.1/22

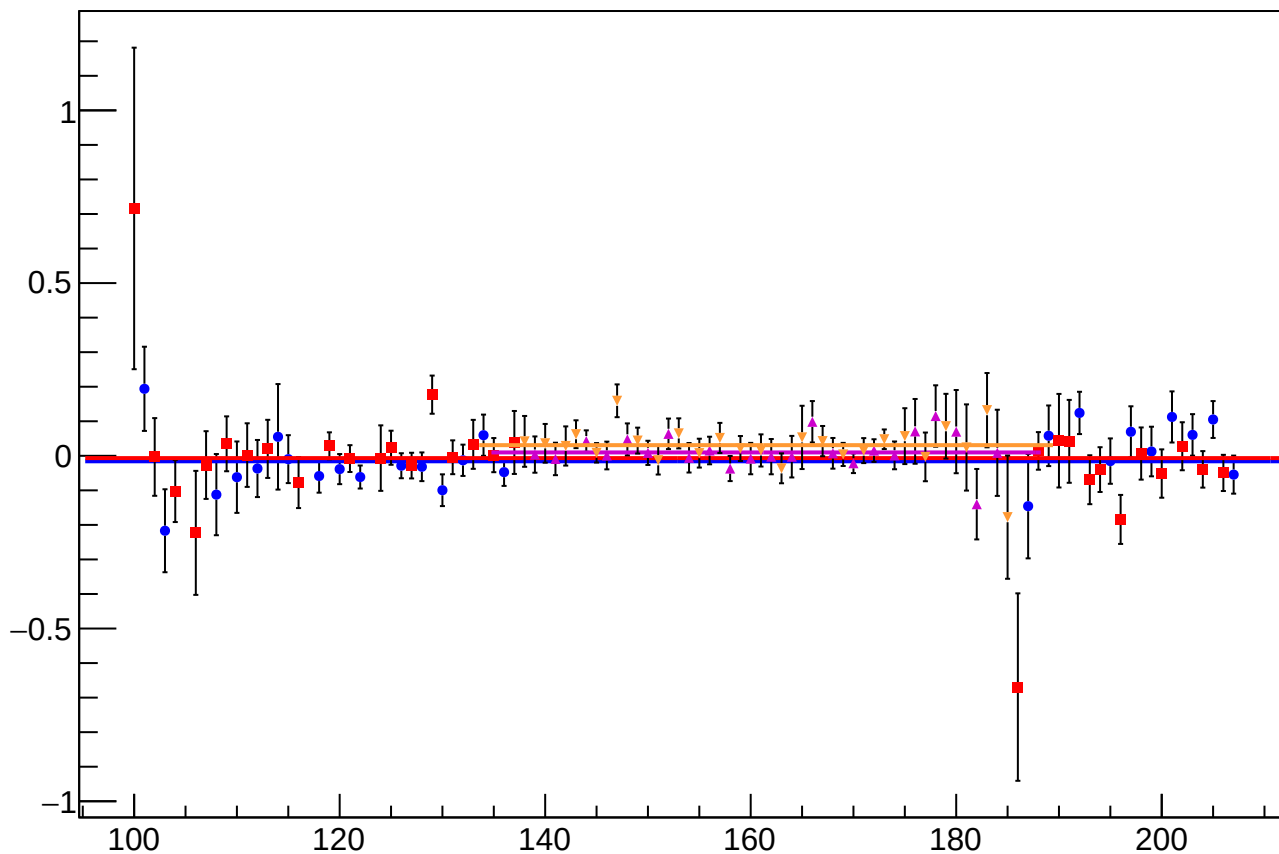
+ sign 0.001 $\pm$ 0.000  $\chi^2$ /NDF: 13600181.9/50

All: 0.001 $\pm$ 0.000  $\chi^2$ /NDF: 30073109.1/104

- sign 0.001 $\pm$ 0.000  $\chi^2$ /NDF: 16472342.4/53



asym\_sam\_26\_48\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.016 \pm 0.011$   $\chi^2/\text{NDF}$ : 34.1/25

Left Out:  $0.031 \pm 0.009$   $\chi^2/\text{NDF}$ : 17.8/24

Right Out:  $-0.007 \pm 0.012$   $\chi^2/\text{NDF}$ : 35.0/30

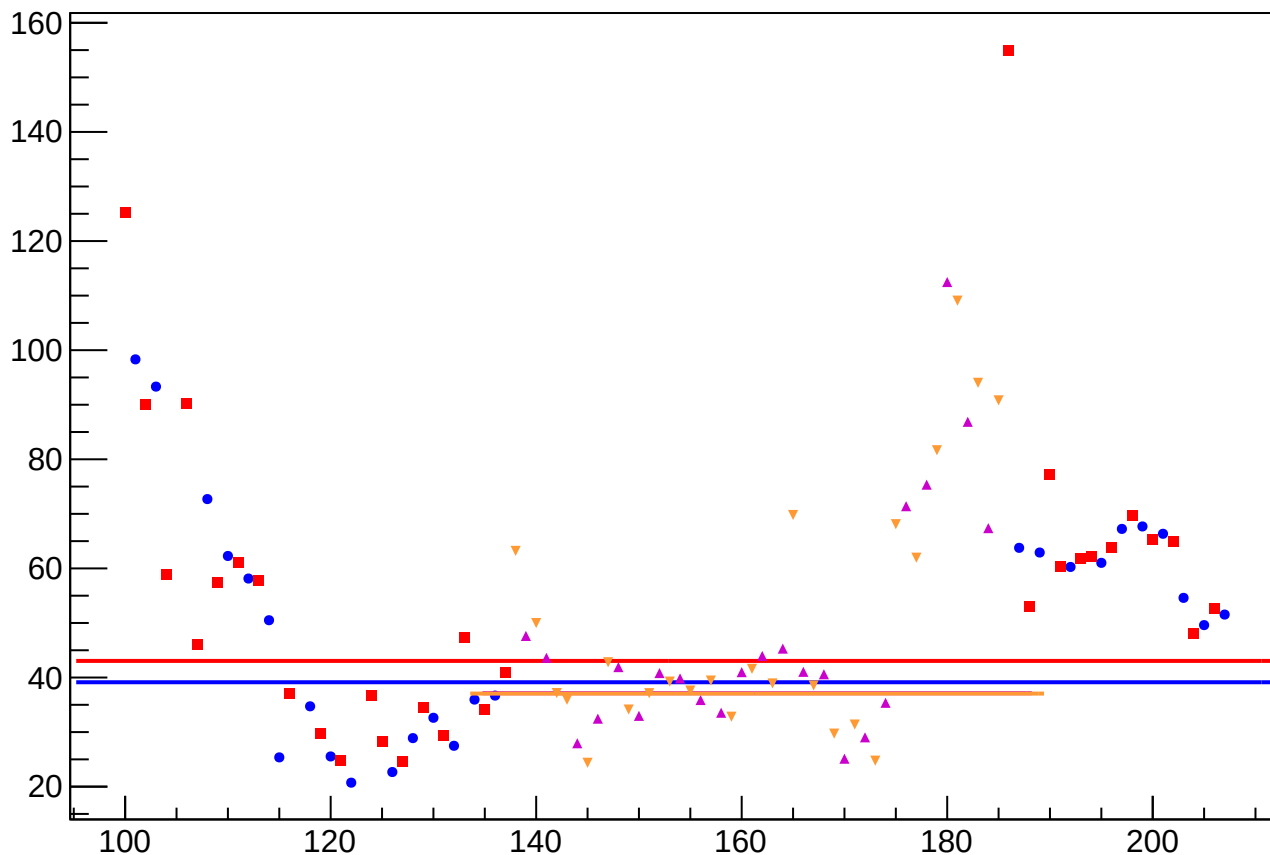
Left In:  $0.010 \pm 0.009$   $\chi^2/\text{NDF}$ : 13.2/22

+ sign  $0.012 \pm 0.007$   $\chi^2/\text{NDF}$ : 62.3/50

All:  $0.008 \pm 0.005$   $\chi^2/\text{NDF}$ : 112.5/104

- sign  $0.003 \pm 0.007$   $\chi^2/\text{NDF}$ : 49.4/53

asym\_sam\_26\_48\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 39.135 $\pm$ 0.008  $\chi^2$ /NDF: 4729235.4/25

Left Out: 37.057 $\pm$ 0.006  $\chi^2$ /NDF: 4053728.9/24

Right Out: 43.045 $\pm$ 0.008  $\chi^2$ /NDF: 4262048.3/30

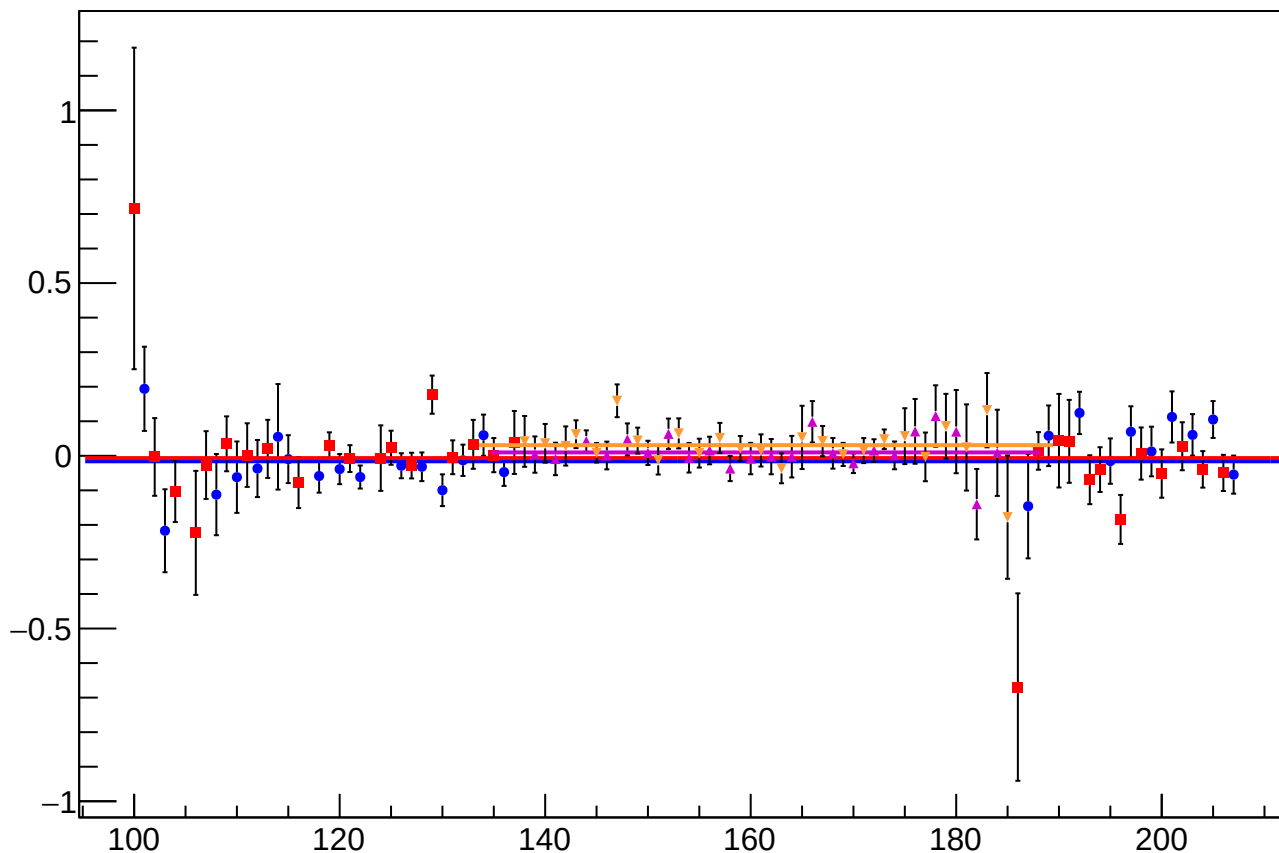
Left In: 37.127 $\pm$ 0.007  $\chi^2$ /NDF: 3012767.1/22

+ sign 37.886 $\pm$ 0.005  $\chi^2$ /NDF: 8824307.2/50

All: 38.649 $\pm$ 0.004  $\chi^2$ /NDF: 16461245.3/104

- sign 39.460 $\pm$ 0.005  $\chi^2$ /NDF: 7588987.3/53

asym\_sam\_26\_48\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.016 \pm 0.011$   $\chi^2/\text{NDF}$ : 34.1/25

Left Out:  $0.031 \pm 0.009$   $\chi^2/\text{NDF}$ : 17.8/24

Right Out:  $-0.007 \pm 0.012$   $\chi^2/\text{NDF}$ : 35.0/30

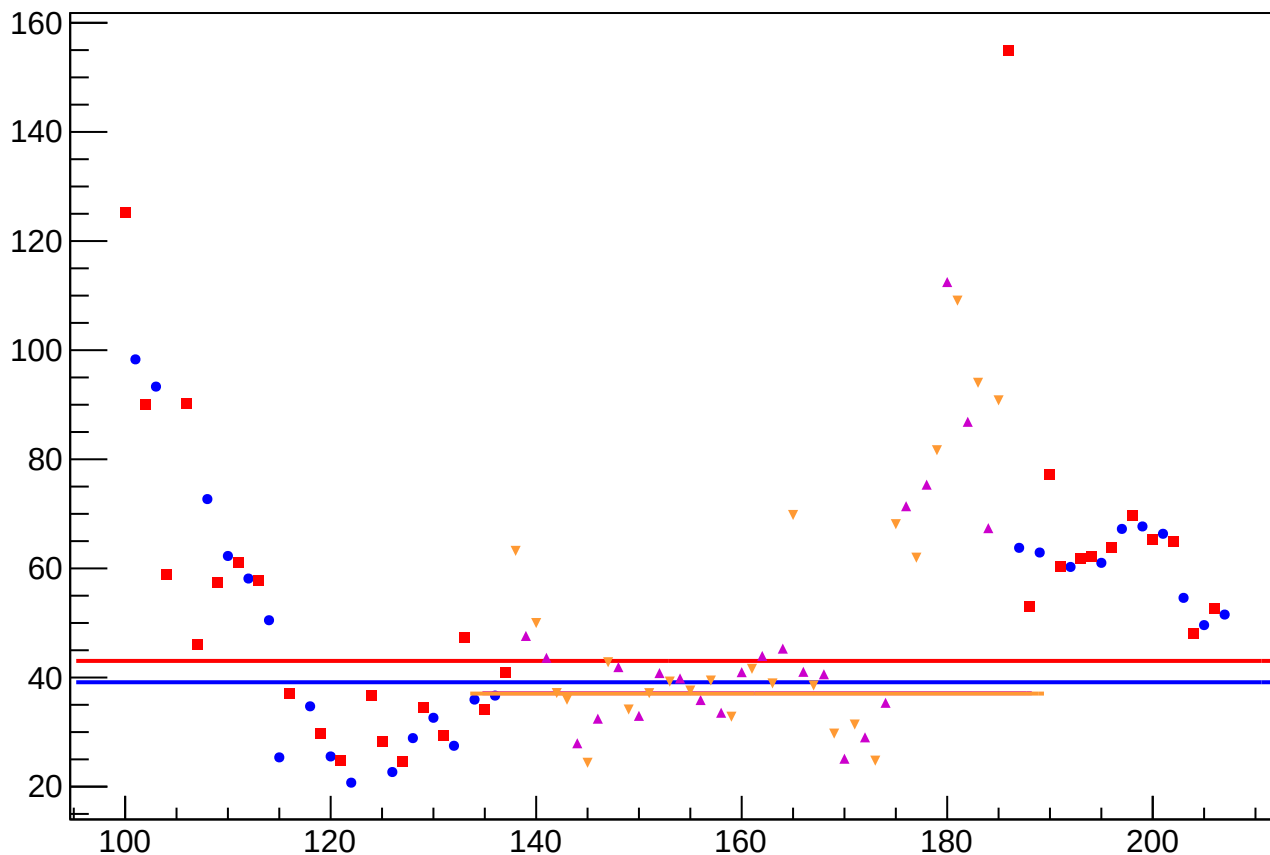
Left In:  $0.010 \pm 0.009$   $\chi^2/\text{NDF}$ : 13.2/22

+ sign  $0.012 \pm 0.007$   $\chi^2/\text{NDF}$ : 62.3/50

All:  $0.008 \pm 0.005$   $\chi^2/\text{NDF}$ : 112.5/104

- sign  $0.003 \pm 0.007$   $\chi^2/\text{NDF}$ : 49.4/53

asym\_sam\_26\_48\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 39.135 $\pm$ 0.008  $\chi^2$ /NDF: 4729235.4/25

Left Out: 37.057 $\pm$ 0.006  $\chi^2$ /NDF: 4053728.9/24

Right Out: 43.045 $\pm$ 0.008  $\chi^2$ /NDF: 4262048.3/30

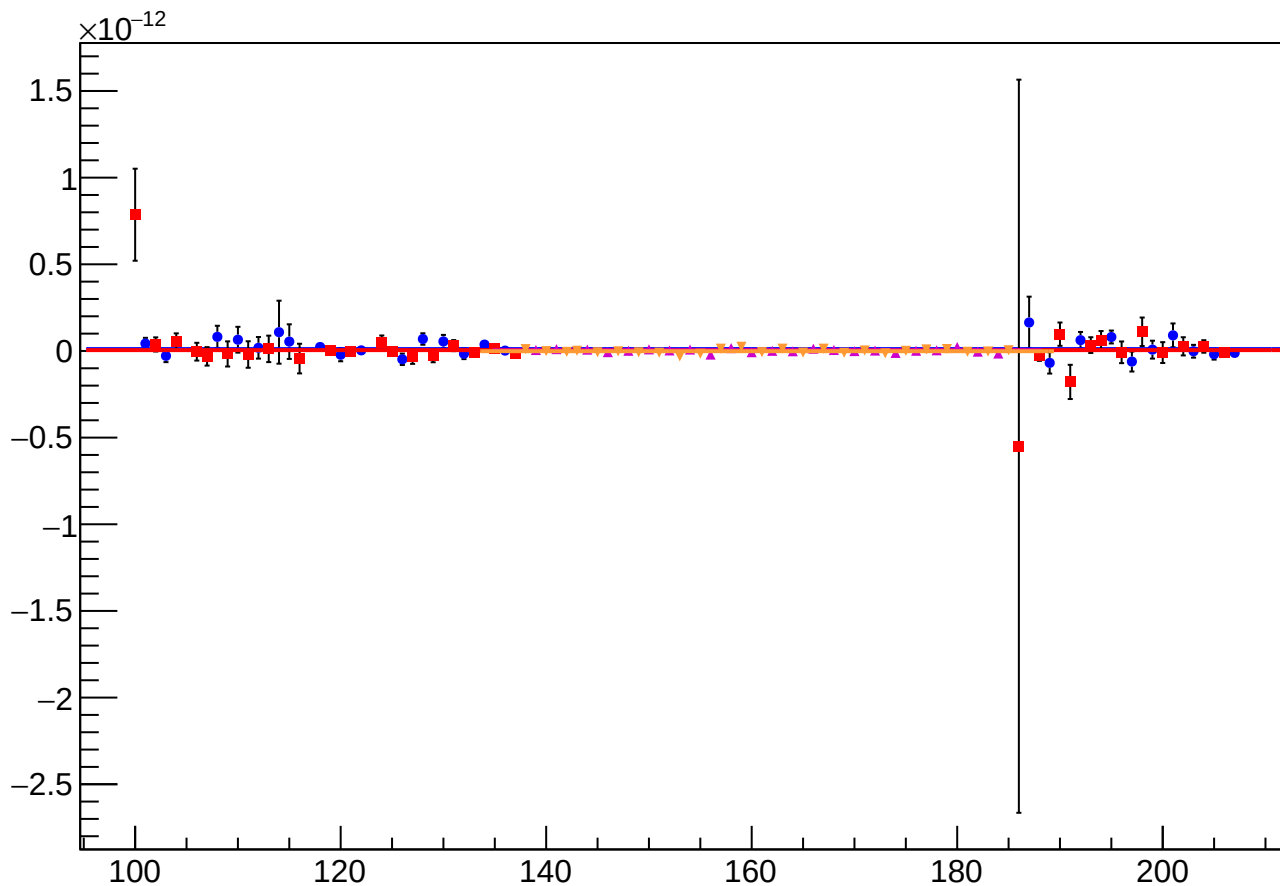
Left In: 37.127 $\pm$ 0.007  $\chi^2$ /NDF: 3012767.1/22

+ sign 37.886 $\pm$ 0.005  $\chi^2$ /NDF: 8824307.2/50

All: 38.649 $\pm$ 0.004  $\chi^2$ /NDF: 16461245.3/104

- sign 39.460 $\pm$ 0.005  $\chi^2$ /NDF: 7588987.3/53

asym\_sam\_26\_48\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 28.8/25

Left Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 26.0/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 27.8/30

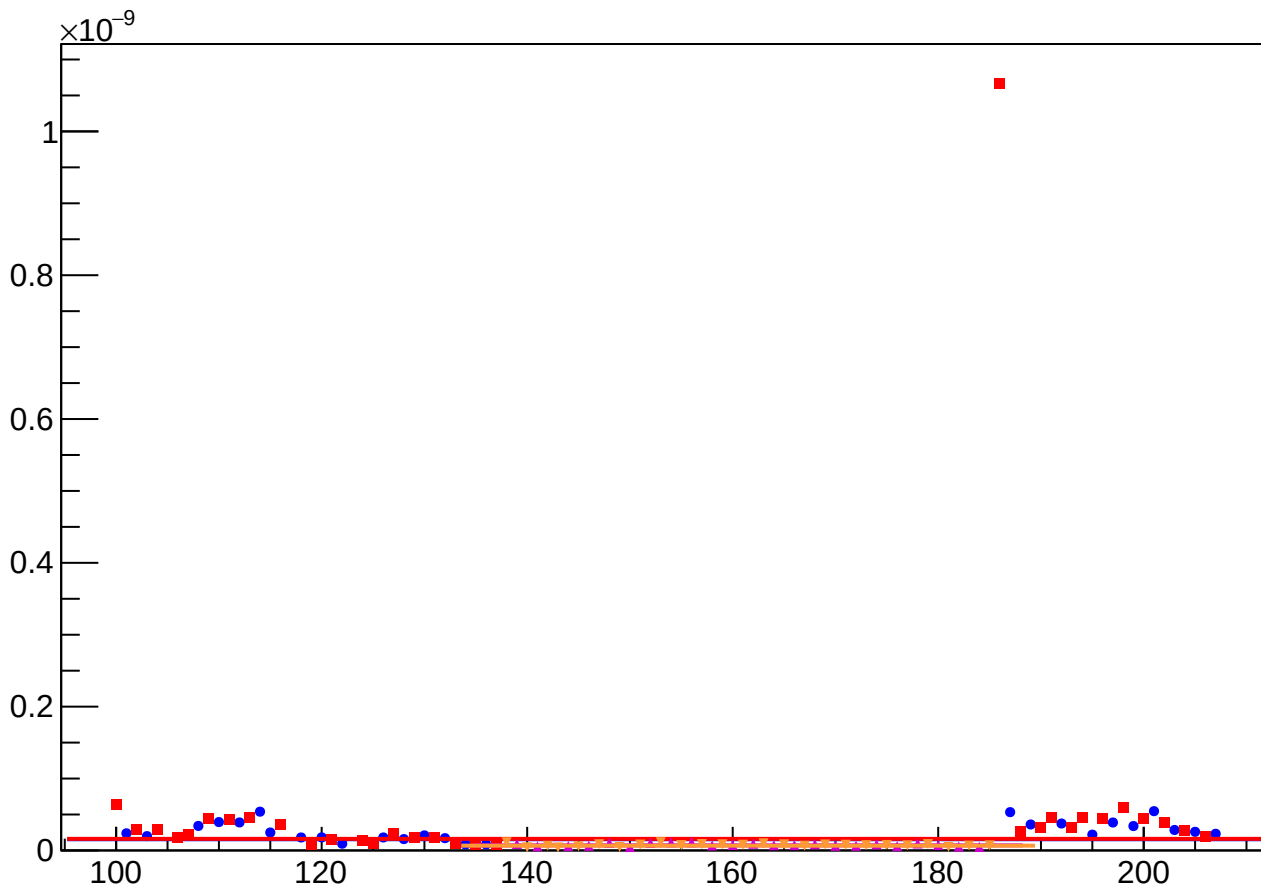
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 20.6/22

+ sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 58.6/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 108.7/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 48.4/53

asym\_sam\_26\_48\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2$ /NDF: 5279968.7/25

Left Out: 0.000+/-0.000  $\chi^2$ /NDF:1953818.9/24

Right Out: 0.000+/-0.000  $\chi^2$ /NDF: 7184501.3/30

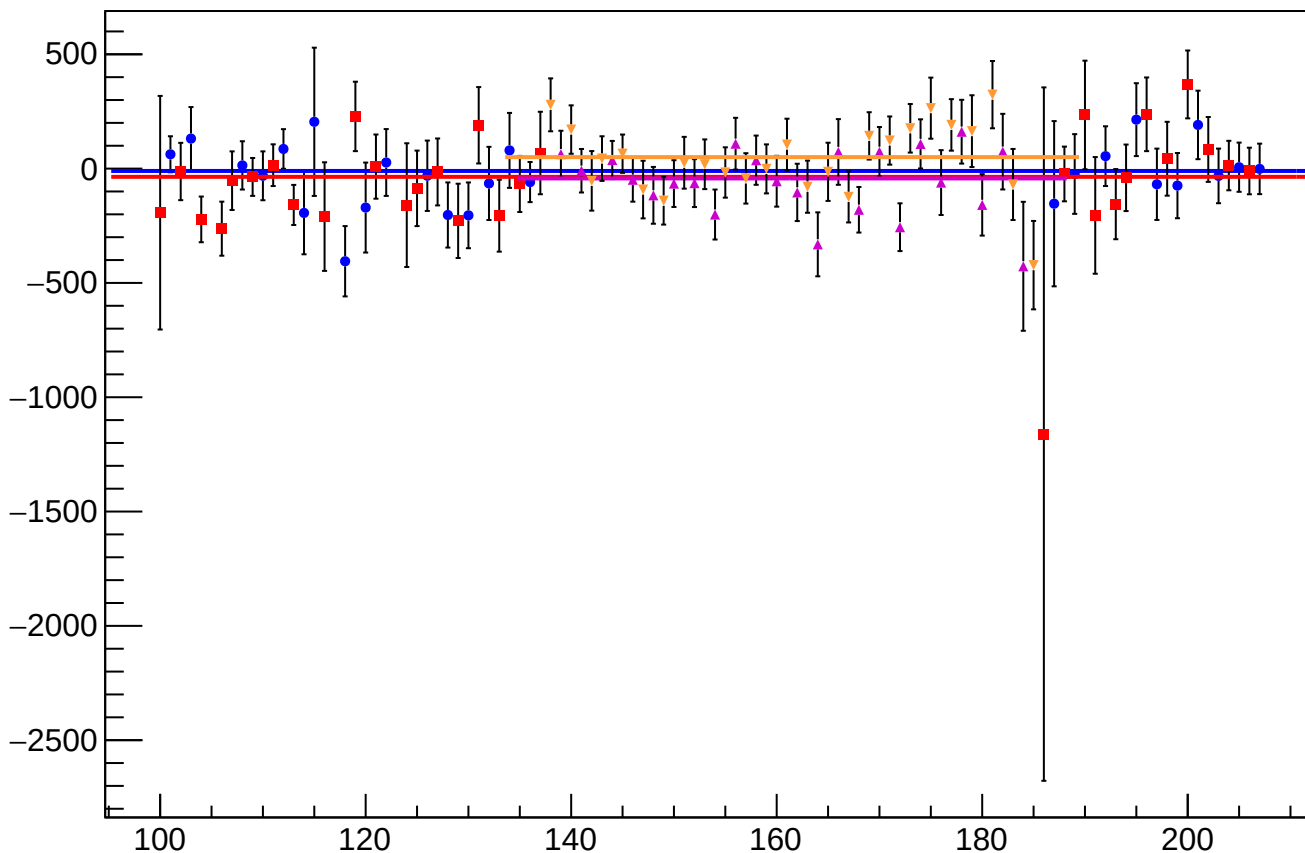
Left In: 0.000+/-0.000  $\chi^2$ /NDF:1431998.0/22

+ sign 0.000+/-0.000  $\chi^2$ /NDF: 11483384.3/50

All: 0.000+/-0.000  $\chi^2$ /NDF: 24325586.8/104

- sign 0.000+/-0.000  $\chi^2$ /NDF: 12768325.7/53

# reg\_asym\_sam\_1548\_avg\_mean vs Slug



Right In:  $-10.288 \pm 25.507$   $\chi^2/\text{NDF}: 21.0/25$

Left Out:  $50.314 \pm 22.958$   $\chi^2/\text{NDF}: 33.5/24$

Right Out:  $-35.962 \pm 24.525$   $\chi^2/\text{NDF}: 32.8/30$

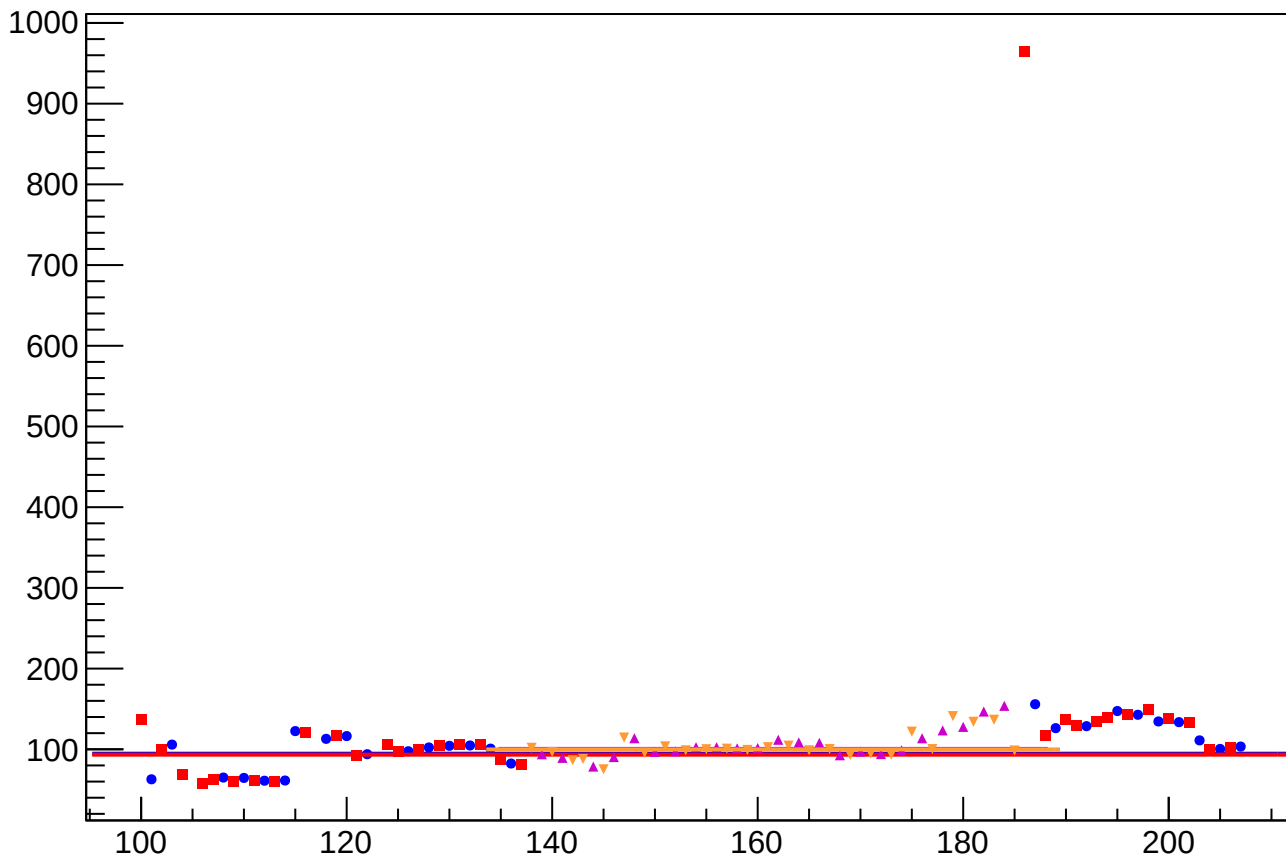
Left In:  $-43.026 \pm 23.758$   $\chi^2/\text{NDF}: 26.6/22$

+ sign  $23.192 \pm 17.064$   $\chi^2/\text{NDF}: 57.6/50$

All:  $-8.206 \pm 12.066$   $\chi^2/\text{NDF}: 123.8/104$

- sign  $-39.606 \pm 17.064$   $\chi^2/\text{NDF}: 59.4/53$

# reg\_asym\_sam\_1548\_avg\_rms vs Slug



Right In: 94.538 $\pm$ 0.018     $\chi^2$ /NDF: 2172998.8/25

Left Out: 99.839 $\pm$ 0.016     $\chi^2$ /NDF: 697768.7/24

Right Out: 93.348 $\pm$ 0.017     $\chi^2$ /NDF: 3425681.5/30

Left In: 100.498 $\pm$ 0.017     $\chi^2$ /NDF: 656850.1/22

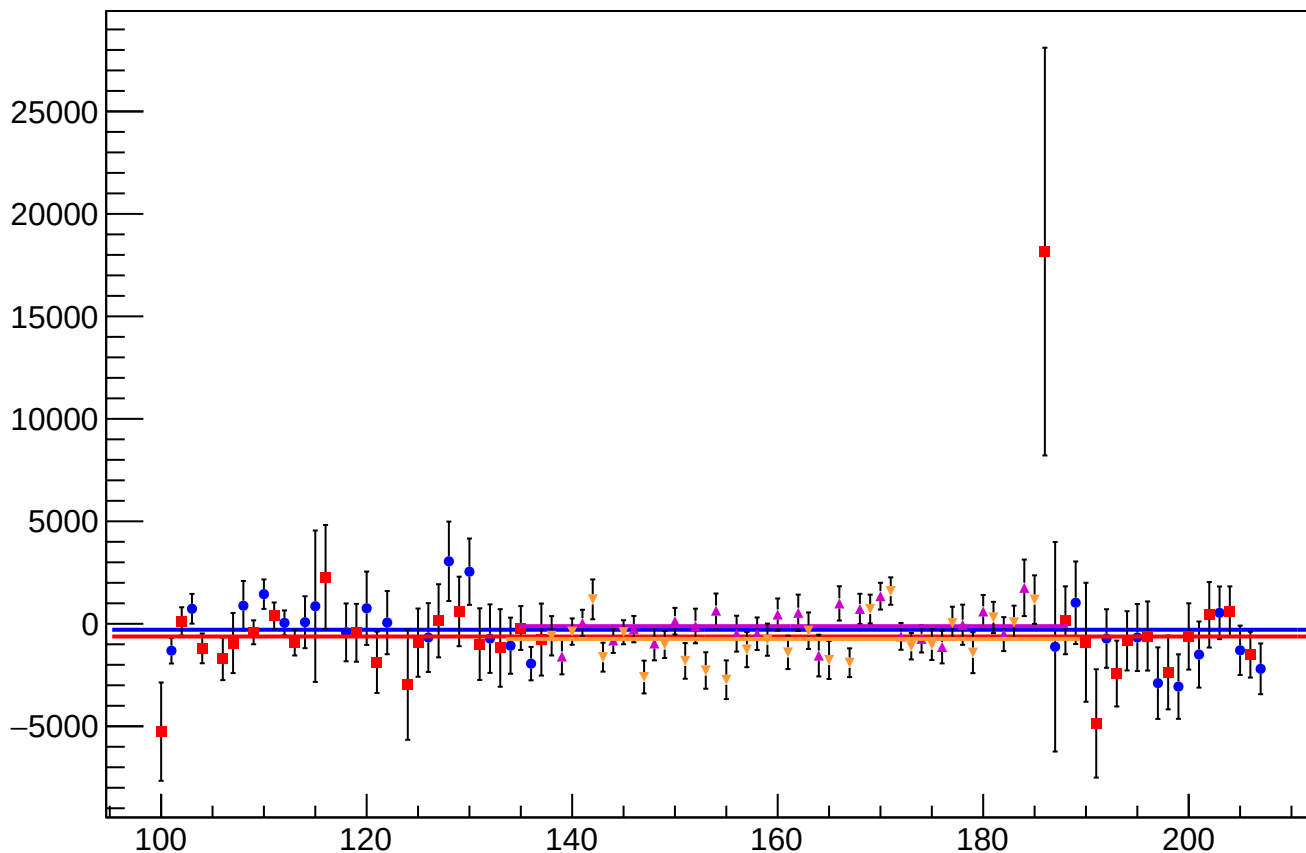
+ sign 97.467 $\pm$ 0.012     $\chi^2$ /NDF: 2918480.5/50

All: 97.252 $\pm$ 0.009     $\chi^2$ /NDF: 7089339.4/104

- sign 97.036 $\pm$ 0.012     $\chi^2$ /NDF: 4170223.2/53



asym\_sam\_1548\_avg\_reg\_correction\_mean vs Slug



Right In: -290.103+/-227.304  $\chi^2/\text{NDF}$ : 32.9/25

Left Out: -738.364+/-156.311  $\chi^2/\text{NDF}$ : 49.7/24

Right Out: -619.006+/-213.218  $\chi^2/\text{NDF}$ : 24.1/30

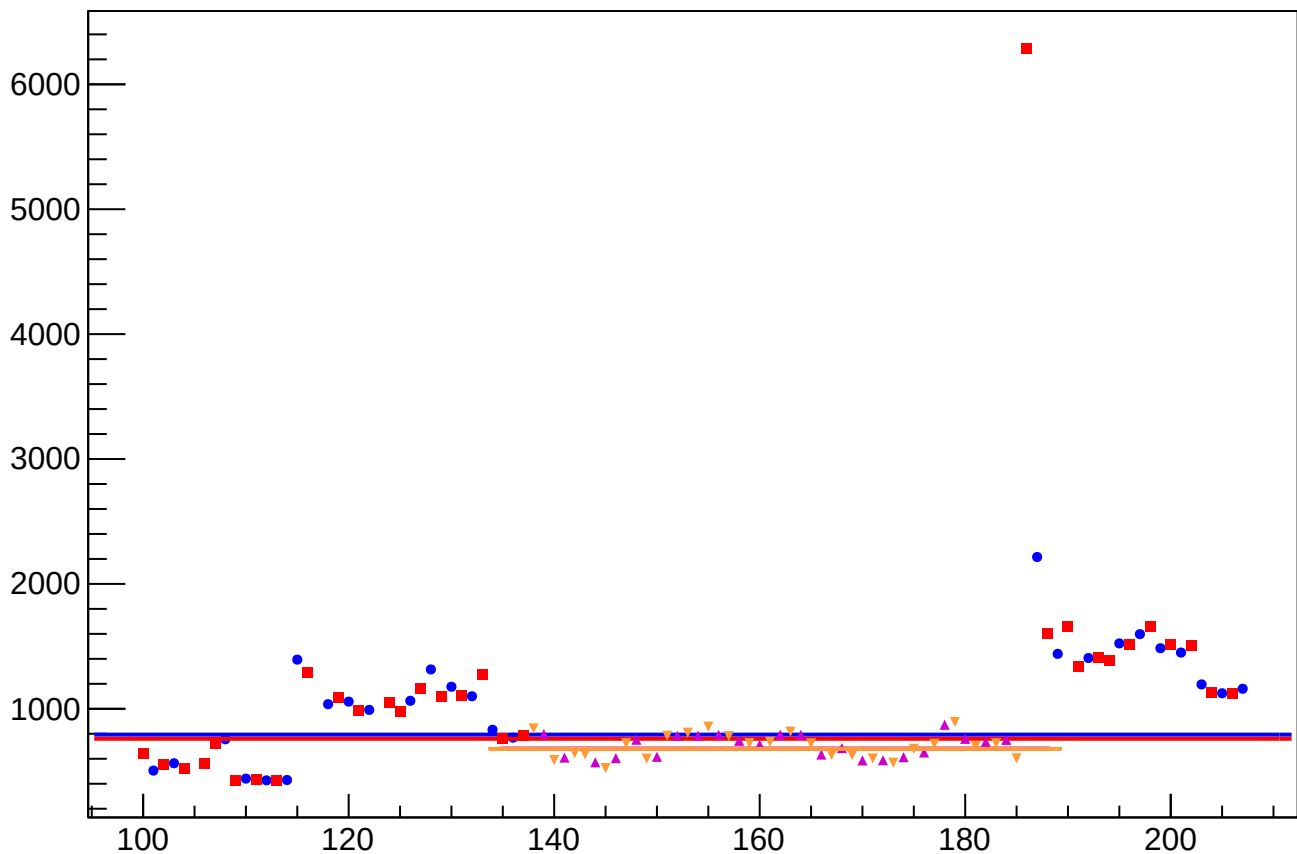
Left In: -115.639+/-160.990  $\chi^2/\text{NDF}$ : 23.7/22

+ sign -594.443+/-128.796  $\chi^2/\text{NDF}$ : 85.2/50

All: -446.062+/-90.961  $\chi^2/\text{NDF}$ : 139.2/104

- sign -298.410+/-128.480  $\chi^2/\text{NDF}$ : 51.3/53

asym\_sam\_1548\_avg\_reg\_correction\_rms vs Slug



Right In: 793.166+/-0.161  $\chi^2/\text{NDF}$ : 5368545.7/25

Left Out: 679.146+/-0.111  $\chi^2/\text{NDF}$ : 737419.7/24

Right Out: 760.081+/-0.151  $\chi^2/\text{NDF}$ : 7234494.7/30

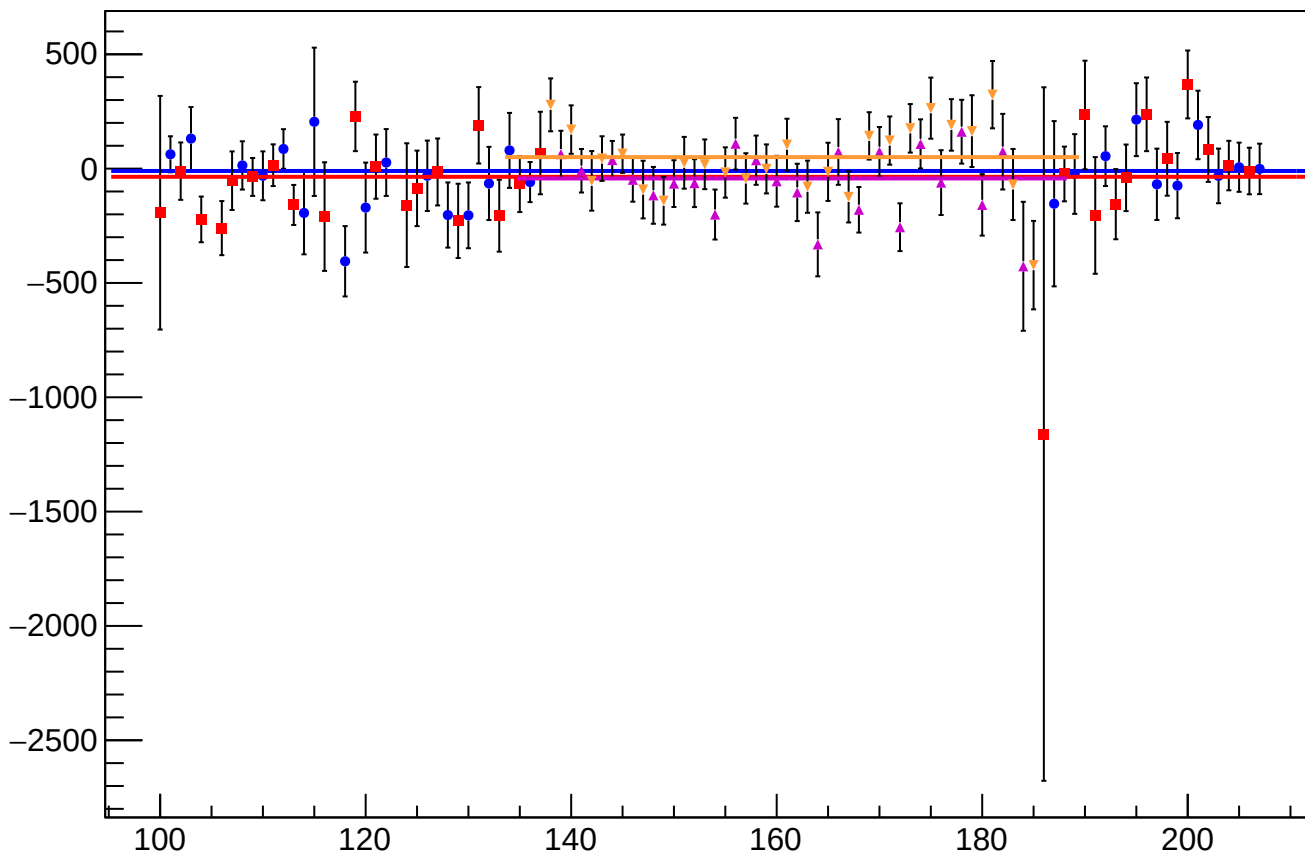
Left In: 681.893+/-0.114  $\chi^2/\text{NDF}$ : 573812.4/22

+ sign 715.754+/-0.091  $\chi^2/\text{NDF}$ : 6447632.4/50

All: 713.012+/-0.064  $\chi^2/\text{NDF}$ : 14429037.7/10

- sign 710.283+/-0.091  $\chi^2/\text{NDF}$ : 7979596.3/53

# cor\_asym\_sam\_1548\_avg\_mean vs Slug



Right In:  $-10.289 \pm 25.507$   $\chi^2/\text{NDF}: 21.0/25$

Left Out:  $50.322 \pm 22.958$   $\chi^2/\text{NDF}: 33.4/24$

Right Out:  $-35.785 \pm 24.526$   $\chi^2/\text{NDF}: 32.7/30$

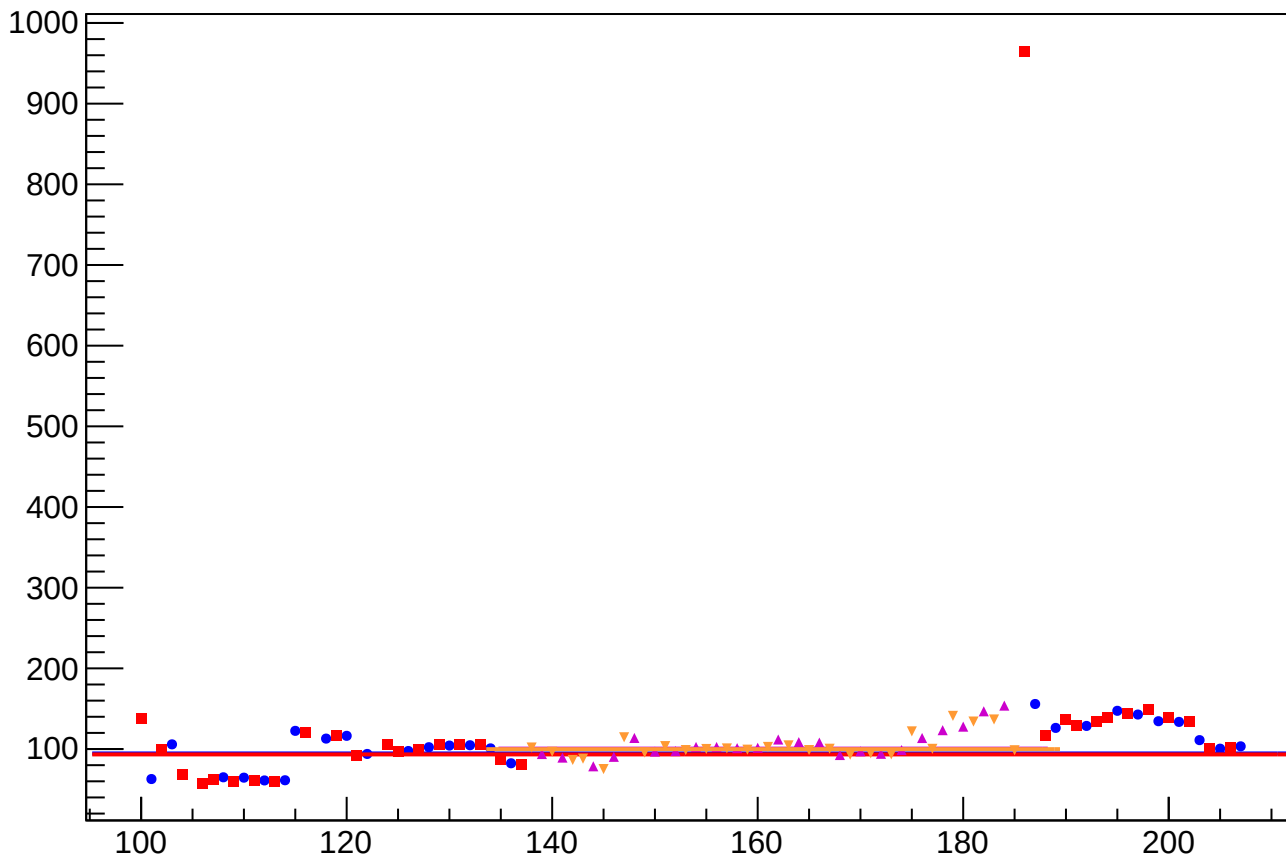
Left In:  $-43.026 \pm 23.758$   $\chi^2/\text{NDF}: 26.6/22$

+ sign  $23.196 \pm 17.064$   $\chi^2/\text{NDF}: 57.6/50$

All:  $-8.161 \pm 12.066$   $\chi^2/\text{NDF}: 123.7/104$

- sign  $-39.521 \pm 17.064$   $\chi^2/\text{NDF}: 59.4/53$

# cor\_asym\_sam\_1548\_avg\_rms vs Slug



Right In: 94.538 $\pm$ 0.018     $\chi^2$ /NDF: 2173000.0/25

Left Out: 99.839 $\pm$ 0.016     $\chi^2$ /NDF: 697768.8/24

Right Out: 93.337 $\pm$ 0.017     $\chi^2$ /NDF: 3429010.6/30

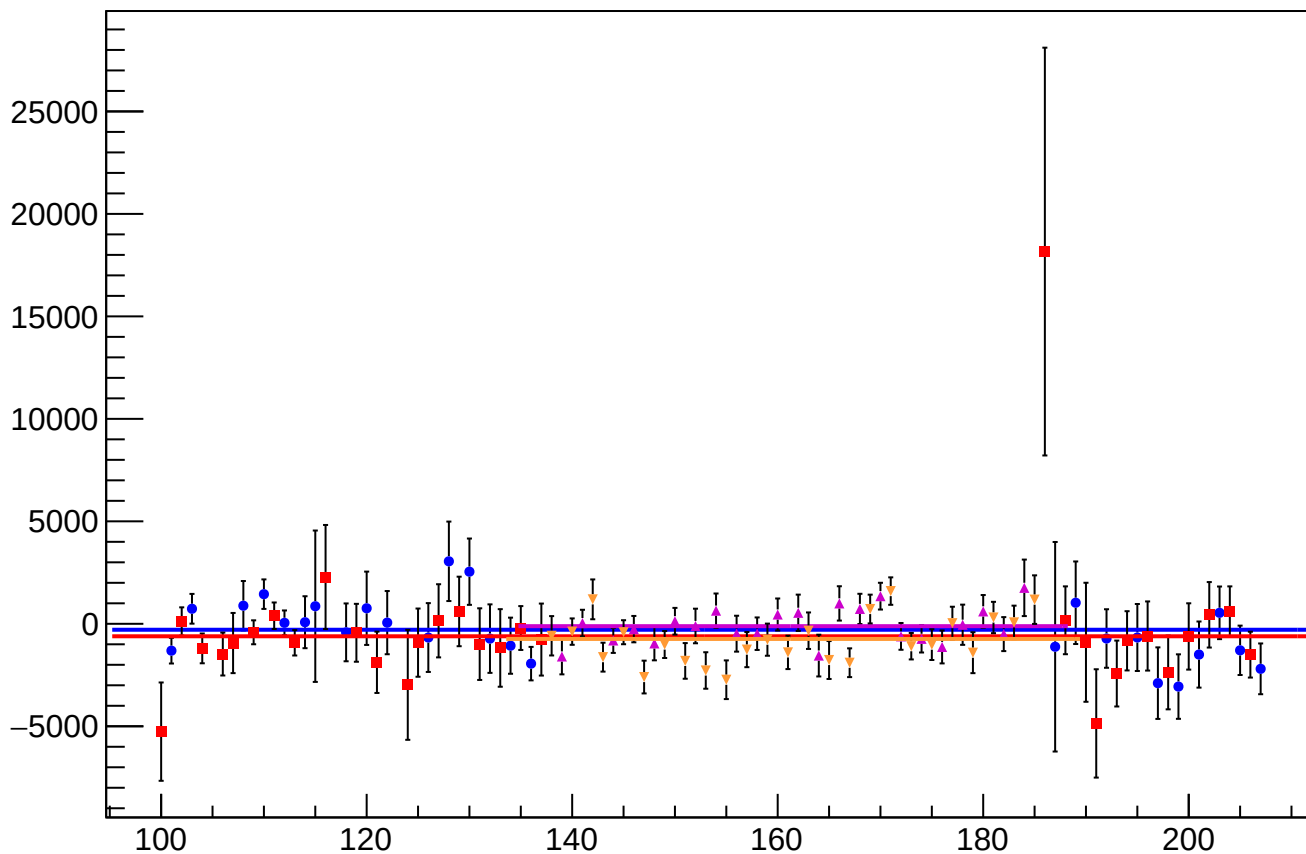
Left In: 100.498 $\pm$ 0.017     $\chi^2$ /NDF: 656850.1/22

+ sign 97.467 $\pm$ 0.012     $\chi^2$ /NDF: 2918481.5/50

All: 97.249 $\pm$ 0.009     $\chi^2$ /NDF: 7092958.3/104

- sign 97.031 $\pm$ 0.012     $\chi^2$ /NDF: 4173825.2/53

asym\_sam\_1548\_avg\_cor\_correction\_mean vs Slug



Right In:  $-290.127 \pm 227.306$   $\chi^2/\text{NDF}$ : 32.9/25

Left Out:  $-738.352 \pm 156.311$   $\chi^2/\text{NDF}$ : 49.7/24

Right Out:  $-608.720 \pm 213.324$   $\chi^2/\text{NDF}$ : 23.6/30

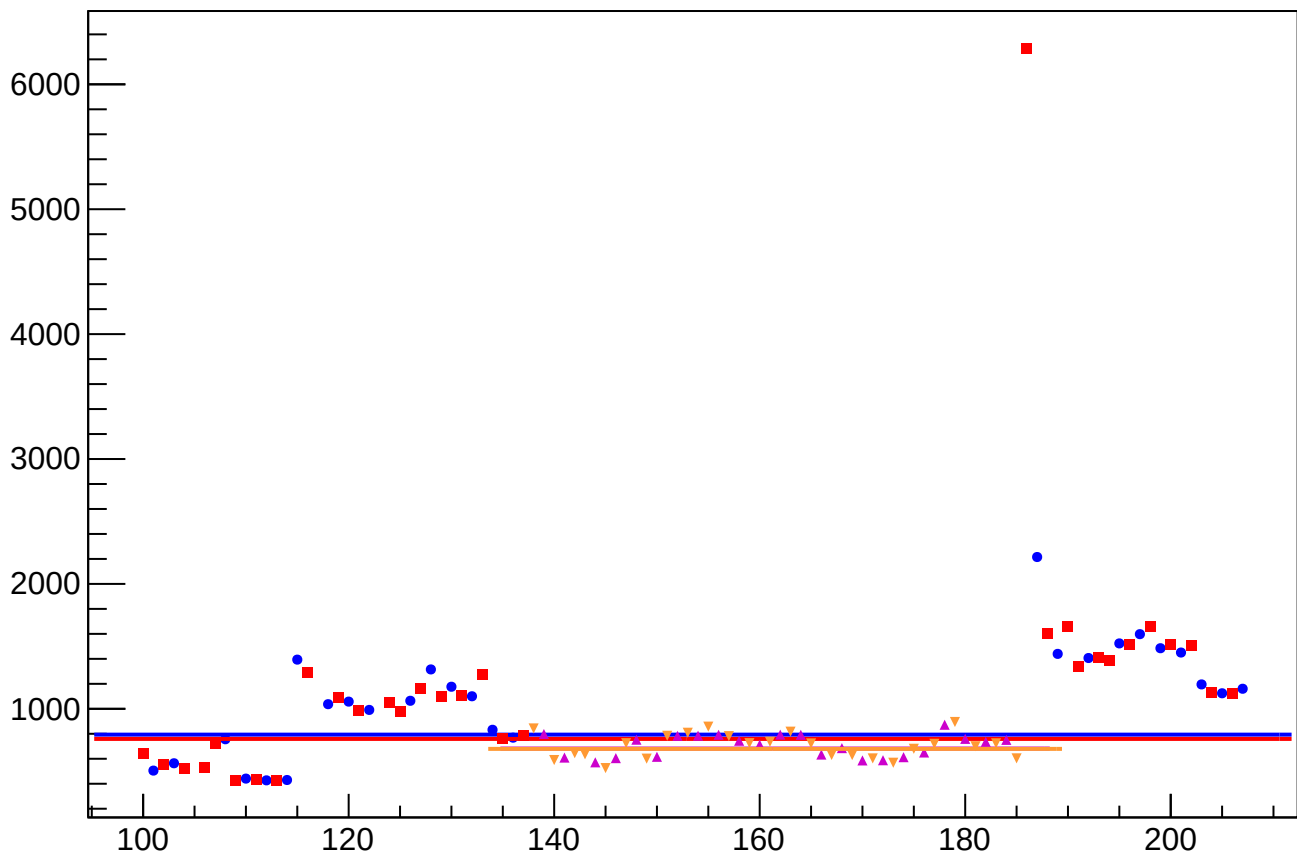
Left In:  $-115.639 \pm 160.990$   $\chi^2/\text{NDF}$ : 23.7/22

+ sign  $-594.444 \pm 128.797$   $\chi^2/\text{NDF}$ : 85.2/50

All:  $-444.161 \pm 90.969$   $\chi^2/\text{NDF}$ : 138.6/104

- sign  $-294.562 \pm 128.503$   $\chi^2/\text{NDF}$ : 50.7/53

asym\_sam\_1548\_avg\_cor\_correction\_rms vs Slug



Right In: 793.176+/-0.161  $\chi^2/\text{NDF}$ : 5368407.0/25

Left Out: 679.146+/-0.111  $\chi^2/\text{NDF}$ : 737418.6/24

Right Out: 758.896+/-0.151  $\chi^2/\text{NDF}$ : 7258931.4/30

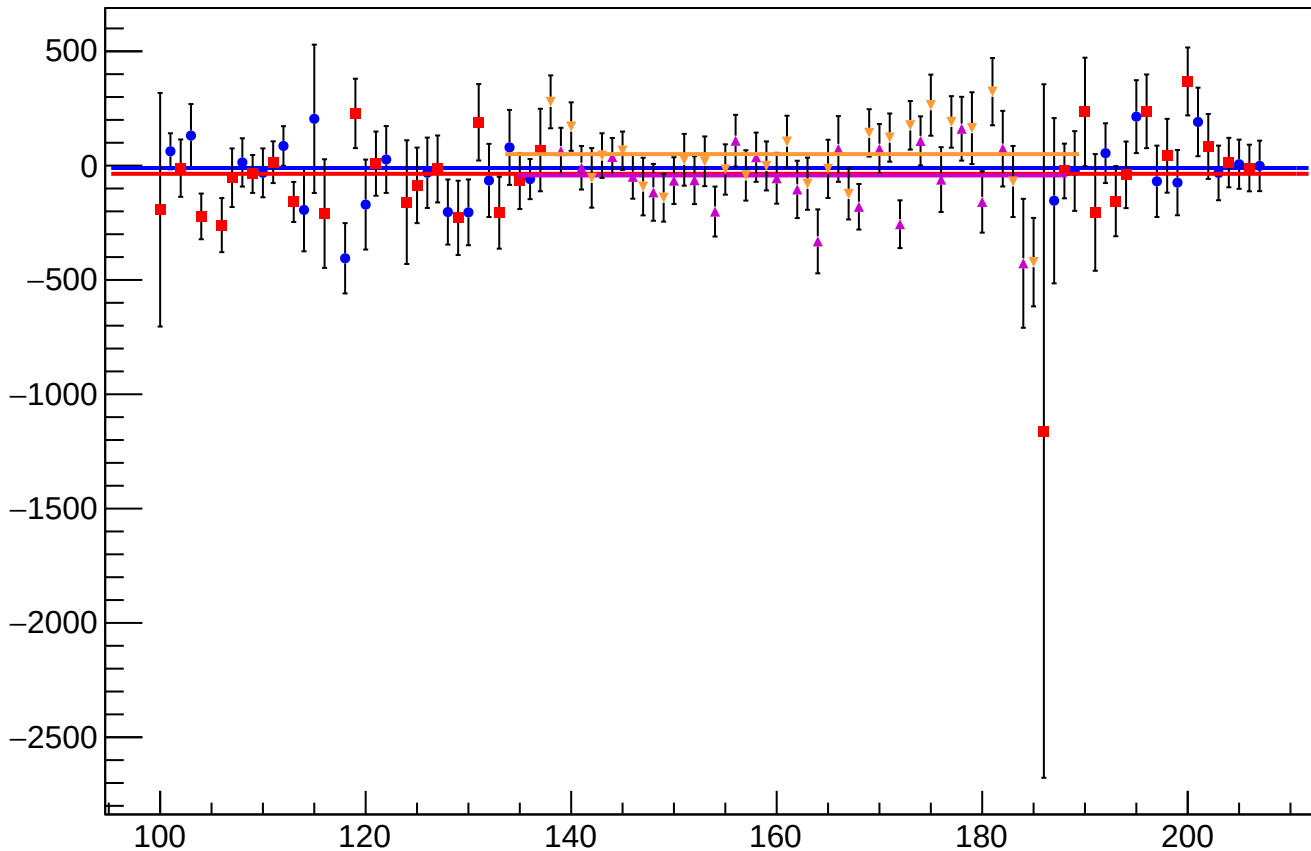
Left In: 681.893+/-0.114  $\chi^2/\text{NDF}$ : 573813.6/22

+ sign 715.757+/-0.091  $\chi^2/\text{NDF}$ : 6447547.6/50

All: 712.789+/-0.064  $\chi^2/\text{NDF}$ : 14448443.6/100

- sign 709.835+/-0.091  $\chi^2/\text{NDF}$ : 7998777.1/53

# eigen\_cor\_asym\_sam\_1548\_avg\_mean vs Slug



Right In:  $-10.289 \pm 25.507$   $\chi^2/\text{NDF}$ : 21.0/25

Left Out:  $50.322 \pm 22.958$   $\chi^2/\text{NDF}$ : 33.4/24

Right Out:  $-35.785 \pm 24.526$   $\chi^2/\text{NDF}$ : 32.7/30

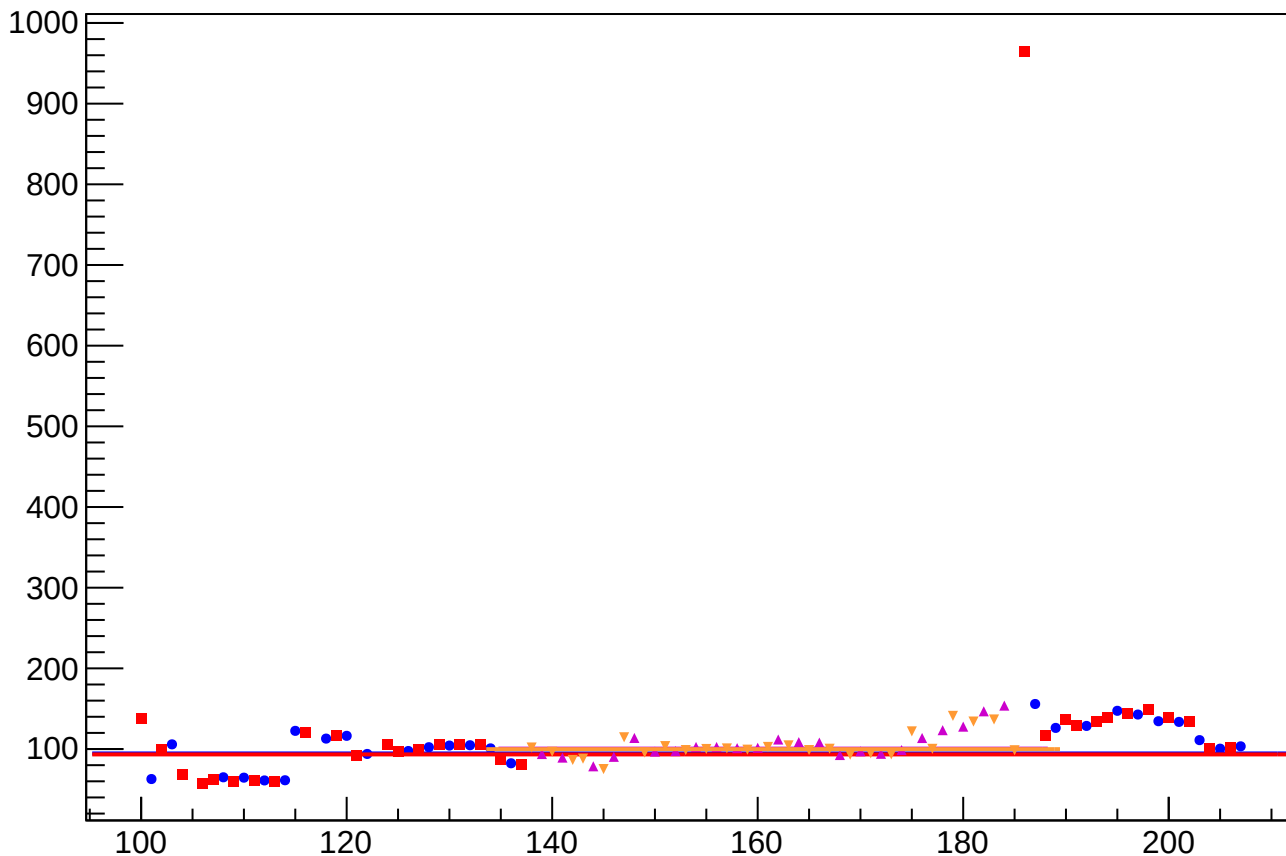
Left In:  $-43.026 \pm 23.758$   $\chi^2/\text{NDF}$ : 26.6/22

+ sign  $23.196 \pm 17.064$   $\chi^2/\text{NDF}$ : 57.6/50

All:  $-8.161 \pm 12.066$   $\chi^2/\text{NDF}$ : 123.7/104

- sign  $-39.521 \pm 17.064$   $\chi^2/\text{NDF}$ : 59.4/53

eigen\_cor\_asym\_sam\_1548\_avg\_rms vs Slug



Right In: 94.538 $\pm$ 0.018  $\chi^2$ /NDF: 2173000.0/25

Left Out: 99.839 $\pm$ 0.016  $\chi^2$ /NDF: 697768.8/24

Right Out: 93.337 $\pm$ 0.017  $\chi^2$ /NDF: 3429010.6/30

Left In: 100.498 $\pm$ 0.017  $\chi^2$ /NDF: 656850.1/22

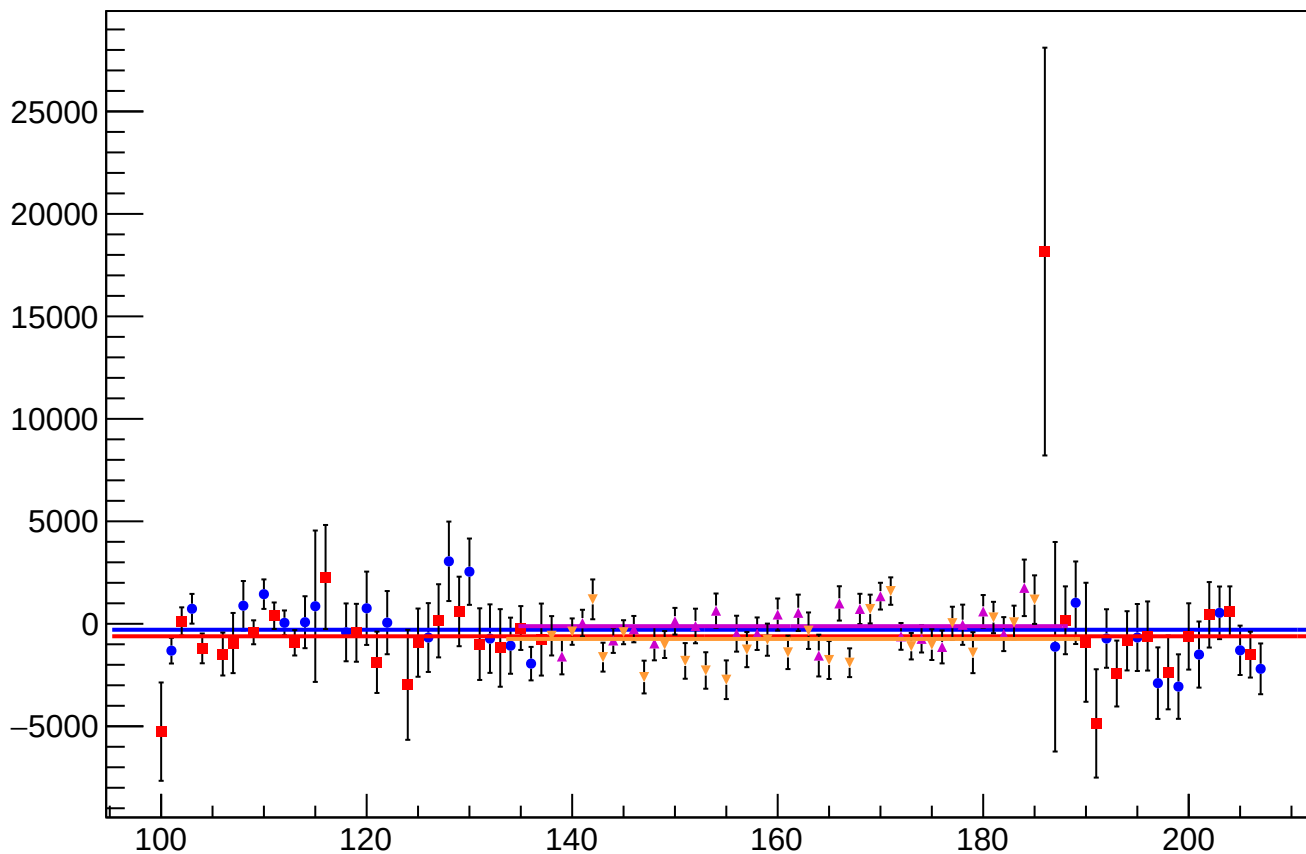
+ sign 97.467 $\pm$ 0.012  $\chi^2$ /NDF: 2918481.5/50

All: 97.249 $\pm$ 0.009  $\chi^2$ /NDF: 7092958.3/104

- sign 97.031 $\pm$ 0.012  $\chi^2$ /NDF: 4173825.2/53



asym\_sam\_1548\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-290.127 \pm 227.306$   $\chi^2/\text{NDF}$ : 32.9/25

Left Out:  $-738.352 \pm 156.311$   $\chi^2/\text{NDF}$ : 49.7/24

Right Out:  $-608.720 \pm 213.324$   $\chi^2/\text{NDF}$ : 23.6/30

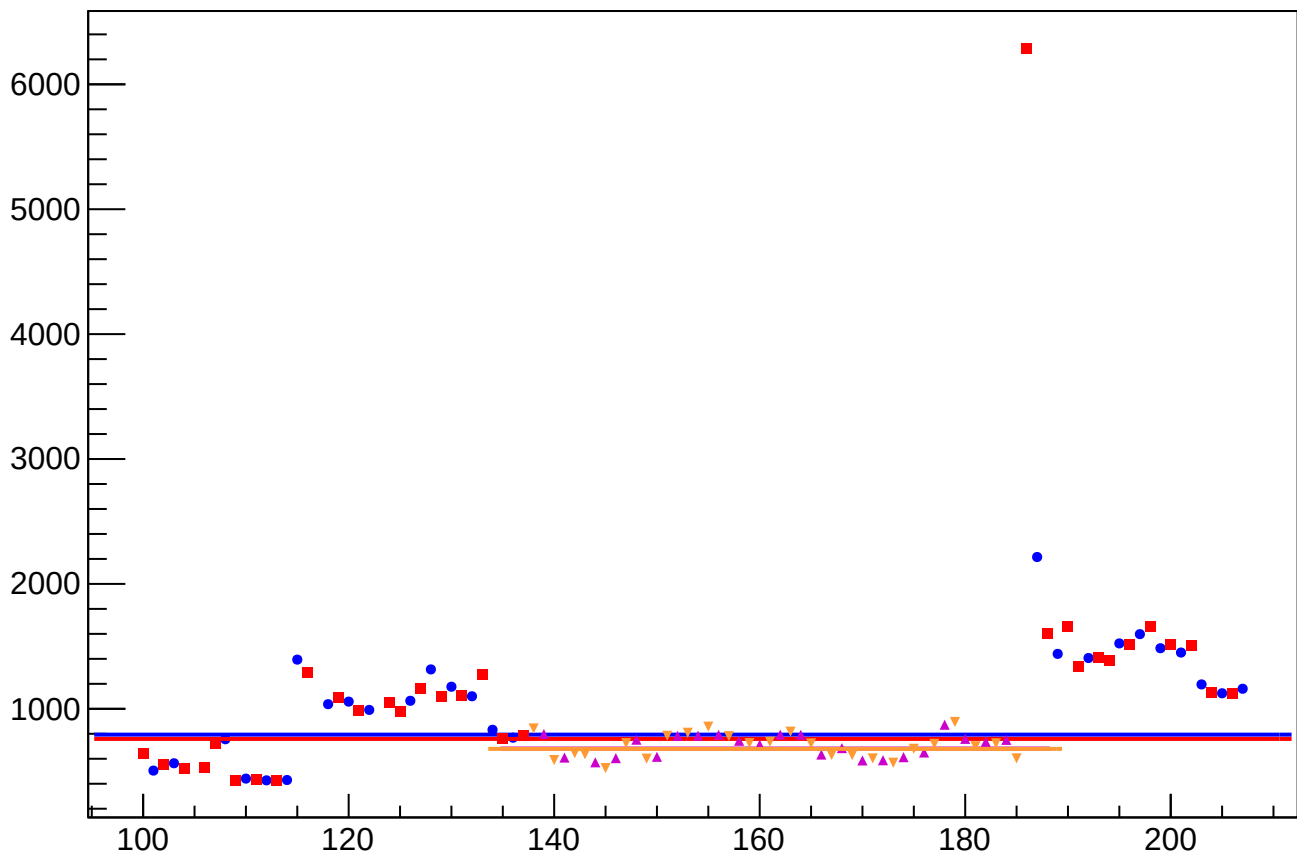
Left In:  $-115.639 \pm 160.990$   $\chi^2/\text{NDF}$ : 23.7/22

+ sign  $-594.444 \pm 128.797$   $\chi^2/\text{NDF}$ : 85.2/50

All:  $-444.161 \pm 90.969$   $\chi^2/\text{NDF}$ : 138.6/104

- sign  $-294.562 \pm 128.503$   $\chi^2/\text{NDF}$ : 50.7/53

asym\_sam\_1548\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 793.176+/-0.161  $\chi^2/\text{NDF}$ : 5368407.0/25

Left Out: 679.146+/-0.111  $\chi^2/\text{NDF}$ : 737418.6/24

Right Out: 758.896+/-0.151  $\chi^2/\text{NDF}$ : 7258931.4/30

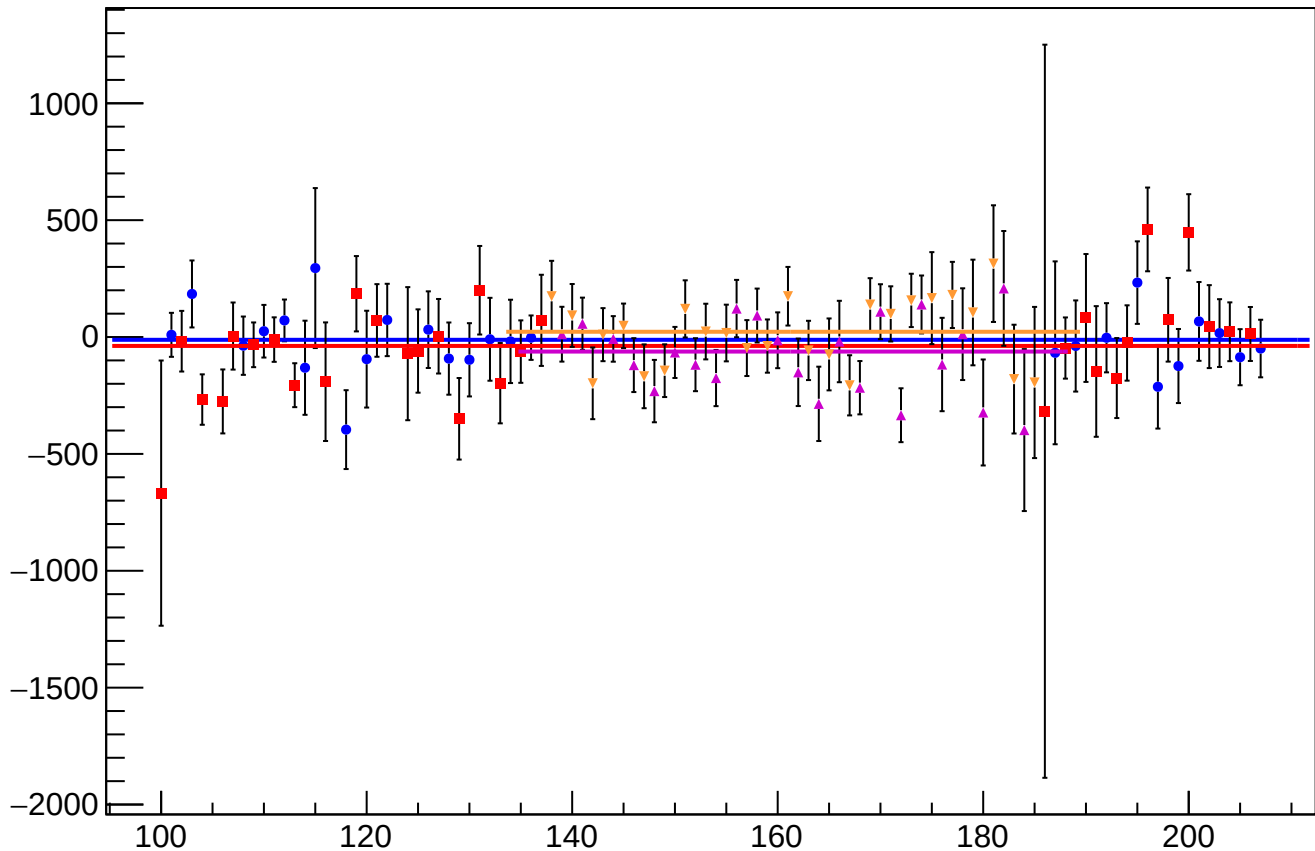
Left In: 681.893+/-0.114  $\chi^2/\text{NDF}$ : 573813.6/22

+ sign 715.757+/-0.091  $\chi^2/\text{NDF}$ : 6447547.6/50

All: 712.789+/-0.064  $\chi^2/\text{NDF}$ : 14448443.6/100

- sign 709.835+/-0.091  $\chi^2/\text{NDF}$ : 7998777.1/53

# dit\_asym\_sam\_1548\_avg\_mean vs Slug



Right In:  $-11.854 \pm 28.204$   $\chi^2/\text{NDF}$ : 14.9/25

Left Out:  $22.542 \pm 26.643$   $\chi^2/\text{NDF}$ : 21.6/24

Right Out:  $-38.029 \pm 27.052$   $\chi^2/\text{NDF}$ : 39.7/30

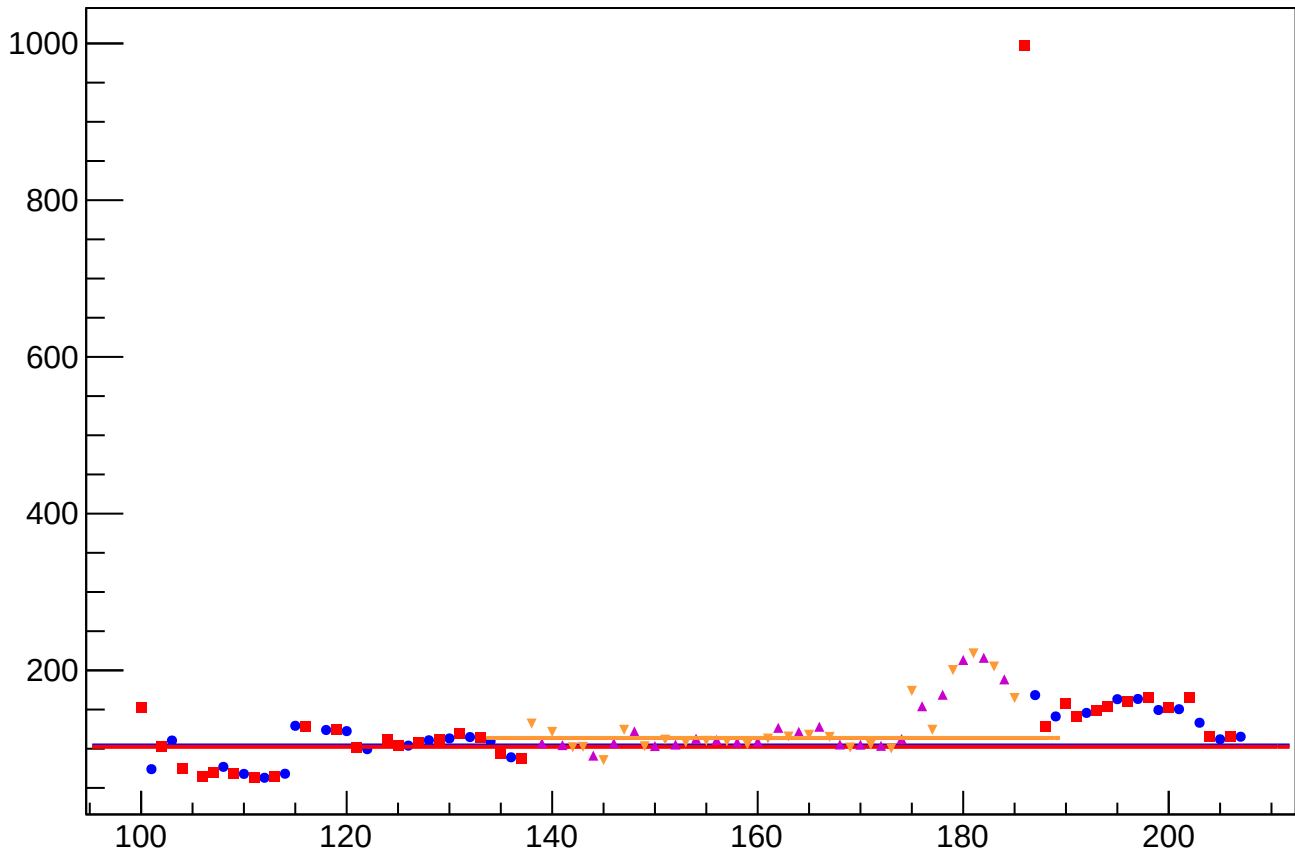
Left In:  $-62.169 \pm 27.339$   $\chi^2/\text{NDF}$ : 27.3/22

+ sign  $6.322 \pm 19.368$   $\chi^2/\text{NDF}$ : 37.2/50

All:  $-22.027 \pm 13.646$   $\chi^2/\text{NDF}$ : 108.9/104

- sign  $-49.972 \pm 19.229$   $\chi^2/\text{NDF}$ : 67.4/53

dit\_asym\_sam\_1548\_avg\_rms vs Slug



Right In: 104.140 $\pm$ 0.020  $\chi^2$ /NDF: 2275136.5/25

Left Out: 113.766 $\pm$ 0.019  $\chi^2$ /NDF:1579920.3/24

Right Out: 102.403 $\pm$ 0.019  $\chi^2$ /NDF: 3585785.6/30

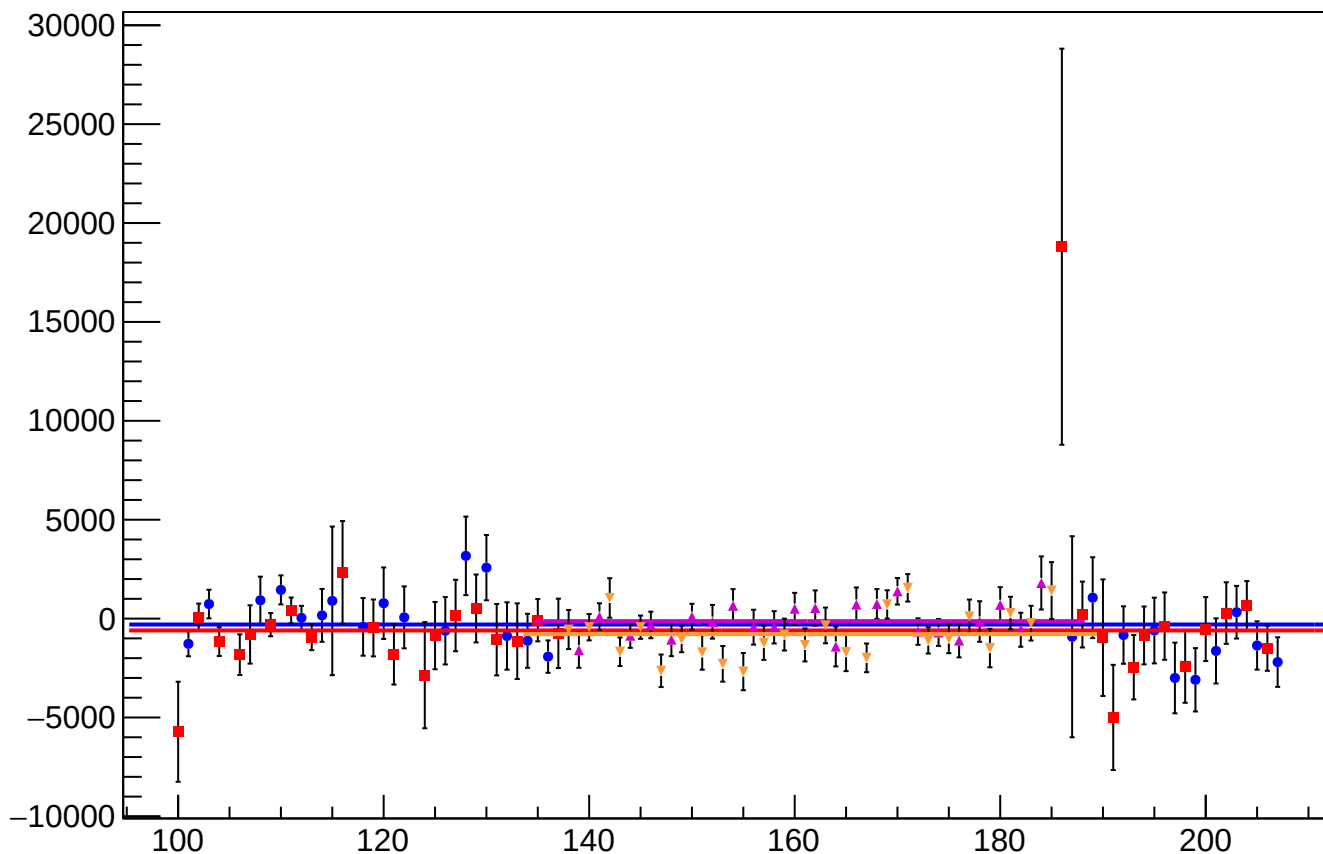
Left In: 113.677 $\pm$ 0.019  $\chi^2$ /NDF:1316044.6/22

+ sign 109.227 $\pm$ 0.014  $\chi^2$ /NDF: 3978172.5/50

All: 108.599 $\pm$ 0.010  $\chi^2$ /NDF: 9056026.2/104

- sign 107.980 $\pm$ 0.014  $\chi^2$ /NDF: 5073682.5/53

asym\_sam\_1548\_avg\_dit\_correction\_mean vs Slug



Right In:  $-298.829 \pm 229.906$   $\chi^2/\text{NDF}$ : 32.5/25

Left Out:  $-784.286 \pm 160.482$   $\chi^2/\text{NDF}$ : 45.4/24

Right Out:  $-597.304 \pm 215.611$   $\chi^2/\text{NDF}$ : 24.8/30

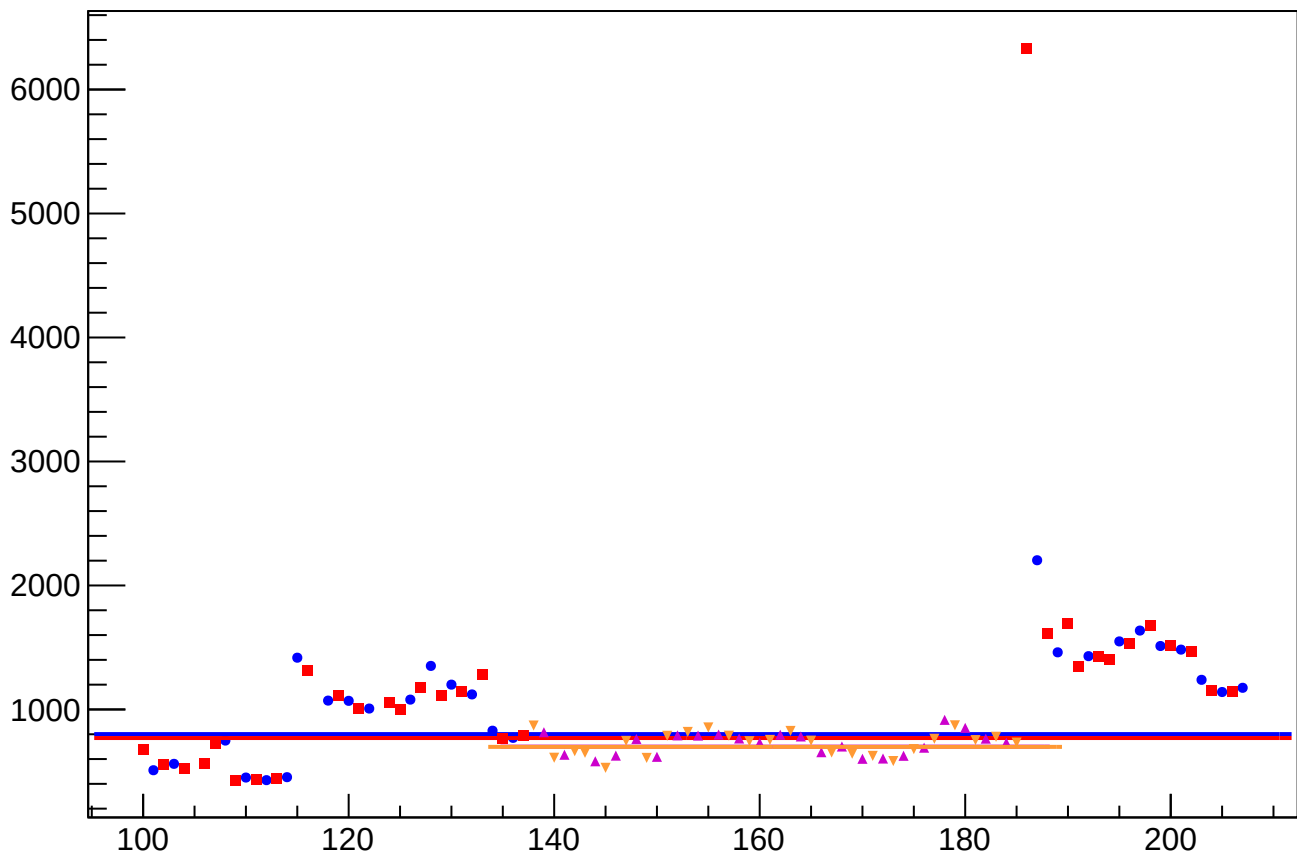
Left In:  $-128.155 \pm 165.255$   $\chi^2/\text{NDF}$ : 22.7/22

+ sign  $-625.241 \pm 131.593$   $\chi^2/\text{NDF}$ : 81.0/50

All:  $-462.972 \pm 92.897$   $\chi^2/\text{NDF}$ : 134.5/104

- sign  $-301.767 \pm 131.161$   $\chi^2/\text{NDF}$ : 50.5/53

# asym\_sam\_1548\_avg\_dit\_correction\_rms vs Slug



Right In: 801.272 $\pm$ 0.163  $\chi^2$ /NDF: 5450418.5/25

Left Out: 698.237 $\pm$ 0.113  $\chi^2$ /NDF: 714686.8/24

Right Out: 769.517 $\pm$ 0.152  $\chi^2$ /NDF: 7202662.5/30

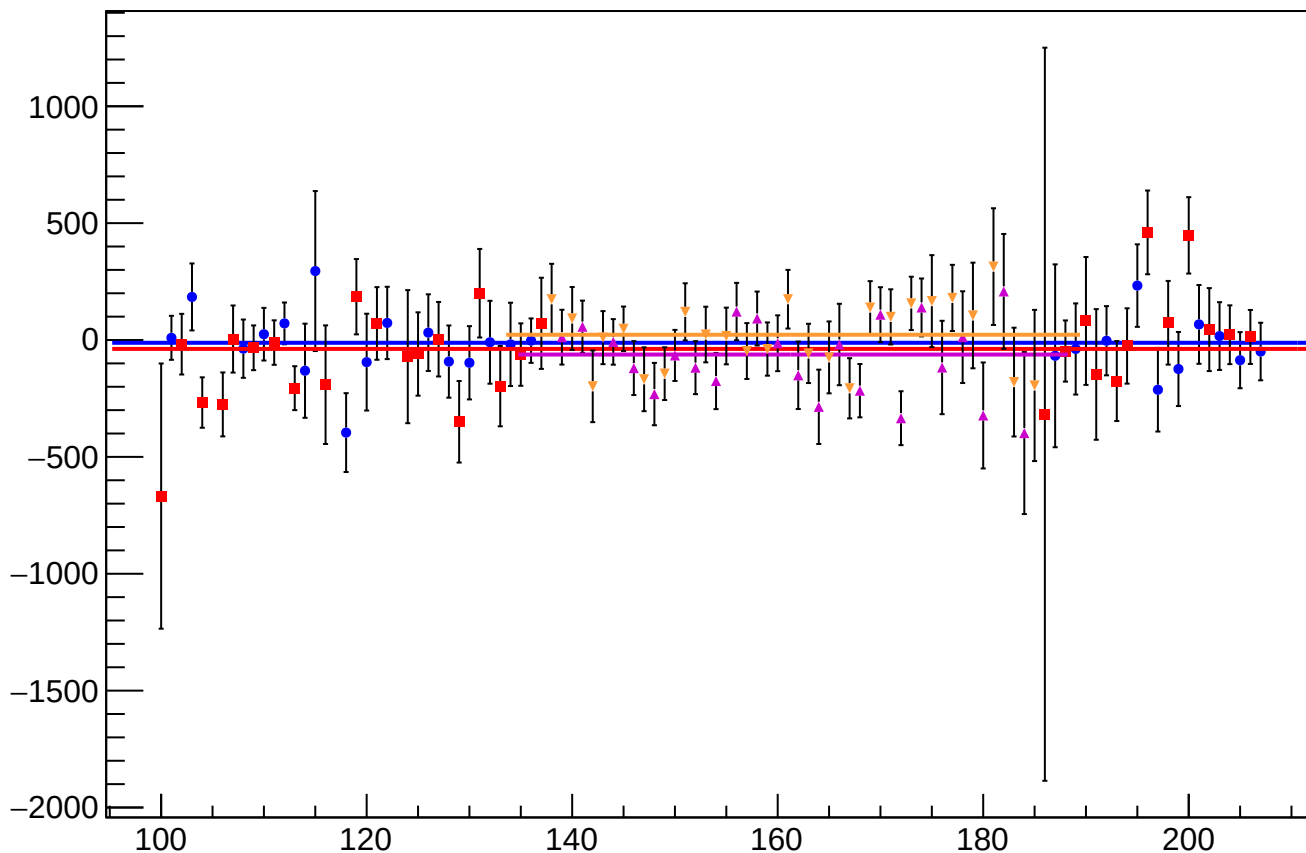
Left In: 700.079 $\pm$ 0.117  $\chi^2$ /NDF: 584318.7/22

+ sign 731.993 $\pm$ 0.093  $\chi^2$ /NDF: 6435198.6/50

All: 728.874 $\pm$ 0.066  $\chi^2$ /NDF: 14355092.5/10

- sign 725.775 $\pm$ 0.093  $\chi^2$ /NDF: 7917653.9/53

# eigen\_dit\_asym\_sam\_1548\_avg\_mean vs Slug



Right In:  $-11.853 \pm 28.204$   $\chi^2/\text{NDF}$ : 14.9/25

Left Out:  $22.544 \pm 26.643$   $\chi^2/\text{NDF}$ : 21.6/24

Right Out:  $-38.029 \pm 27.052$   $\chi^2/\text{NDF}$ : 39.7/30

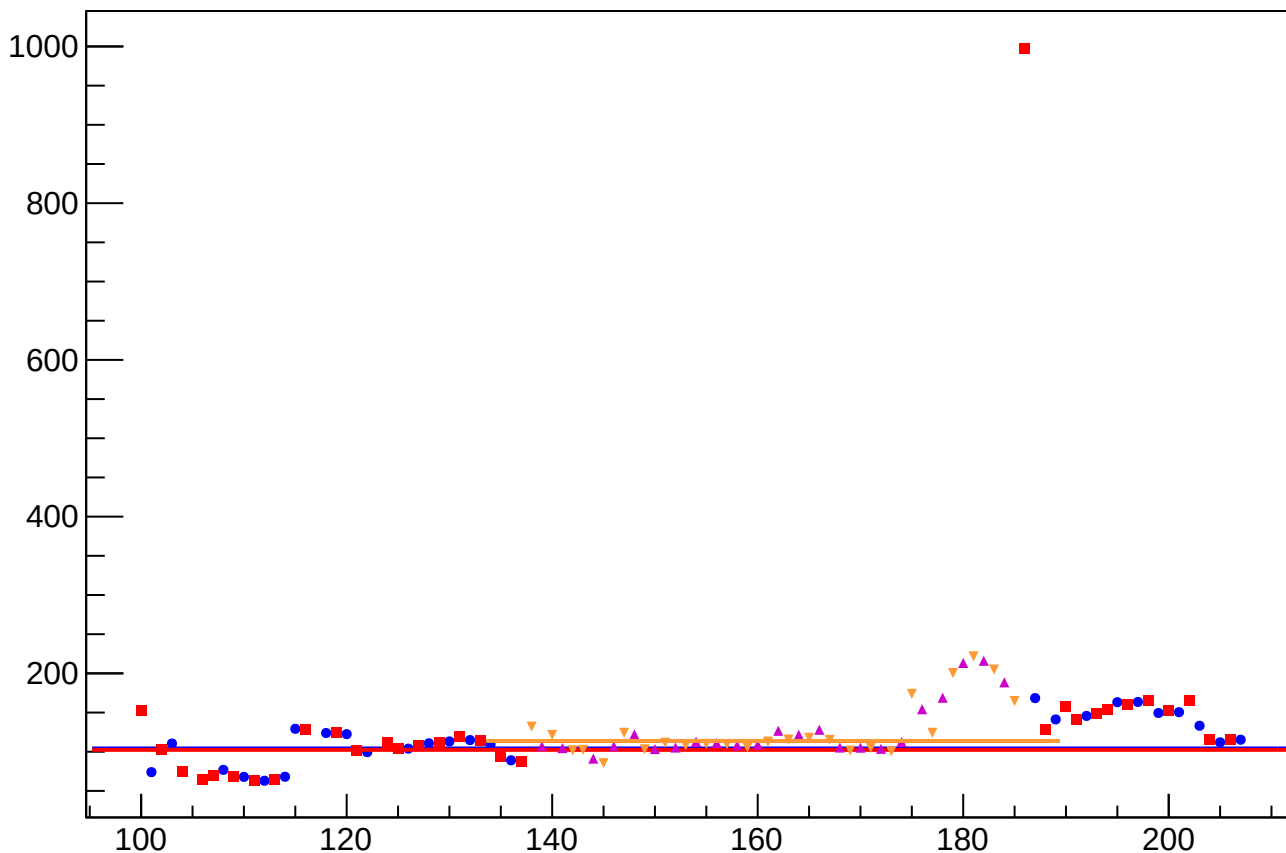
Left In:  $-62.169 \pm 27.339$   $\chi^2/\text{NDF}$ : 27.3/22

+ sign  $6.323 \pm 19.368$   $\chi^2/\text{NDF}$ : 37.2/50

All:  $-22.026 \pm 13.646$   $\chi^2/\text{NDF}$ : 108.9/104

- sign  $-49.972 \pm 19.229$   $\chi^2/\text{NDF}$ : 67.4/53

eigen\_dit\_asym\_sam\_1548\_avg\_rms vs Slug



Right In: 104.140+/-0.020     $\chi^2/\text{NDF}$ : 2275123.0/25

Left Out: 113.766 $\pm$ 0.019     $\chi^2$ /NDF:1579910.8/24

Right Out: 102.403+/-0.019     $\chi^2/\text{NDF}$ : 3585790.0/30

Left In: 113.677+/-0.019     $\chi^2/\text{NDF}$ :1316023.5/22

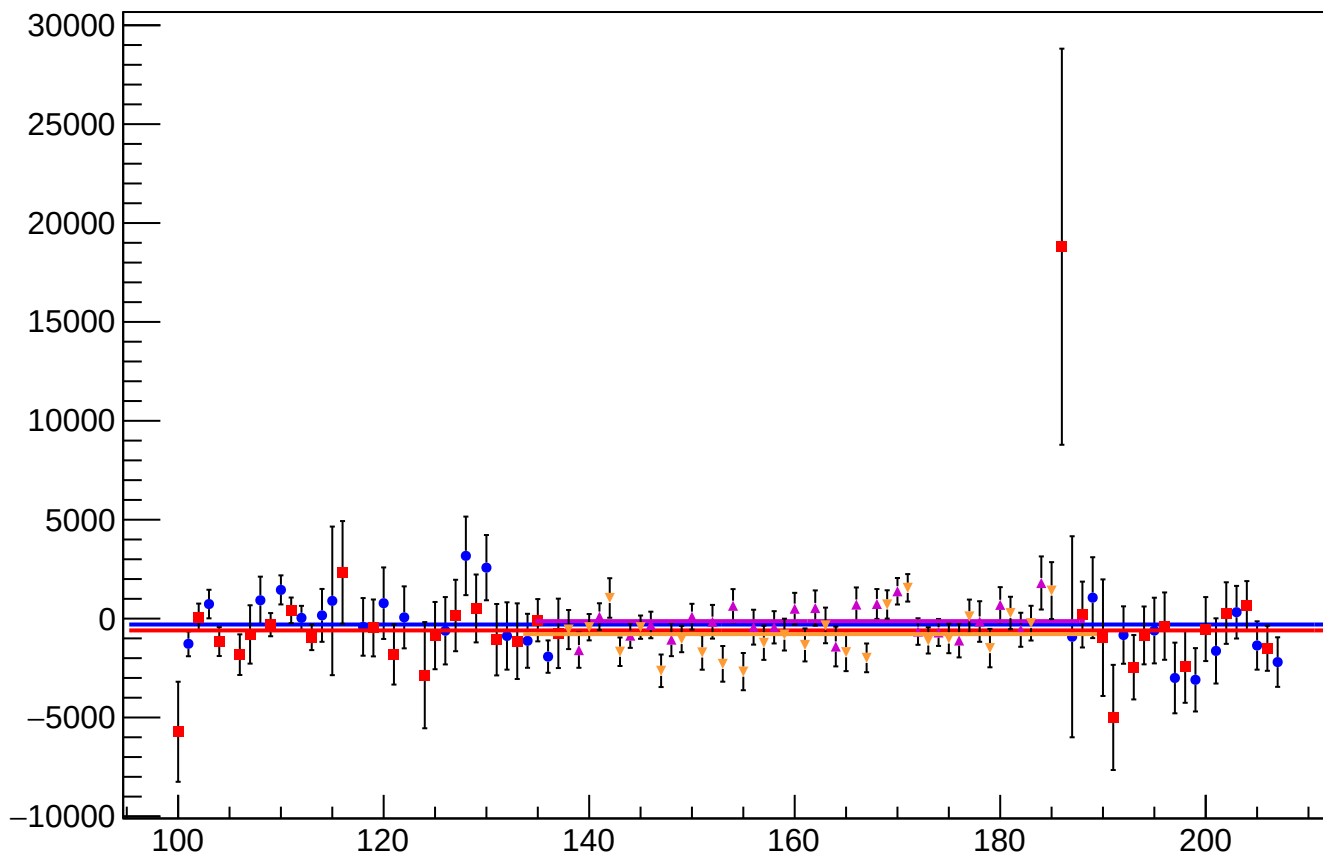
+ sign 109.227+/-0.014     $\chi^2/\text{NDF}$ : 3978154.5/50

All:  $108.599 \pm 0.010$      $\chi^2/\text{NDF}: 9055997.4/104$

- sign 107.980+/-0.014     $\chi^2/\text{NDF}$ : 5073671.9/53



asym\_sam\_1548\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-298.829 \pm 229.905$   $\chi^2/\text{NDF}$ : 32.5/25

Left Out:  $-784.284 \pm 160.482$   $\chi^2/\text{NDF}$ : 45.4/24

Right Out:  $-597.304 \pm 215.611$   $\chi^2/\text{NDF}$ : 24.8/30

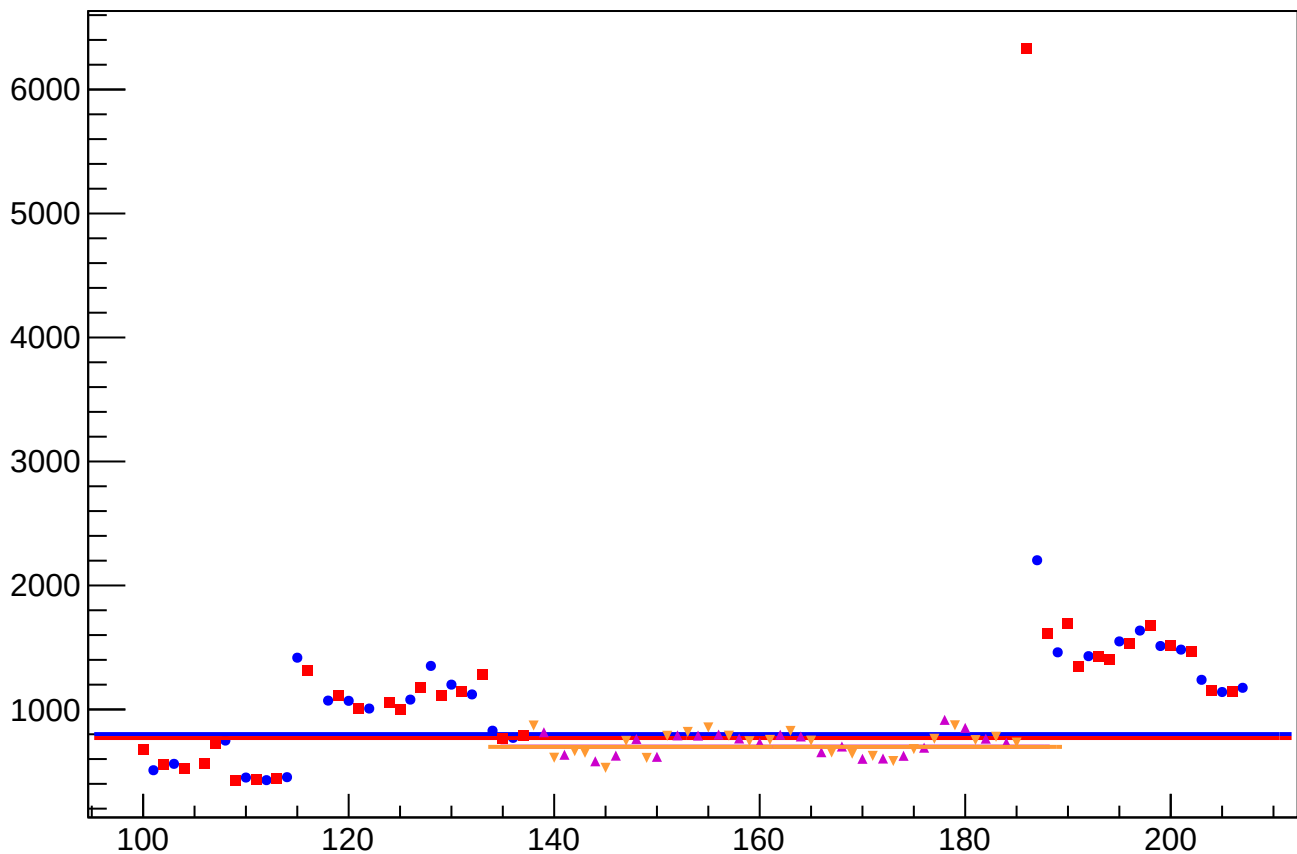
Left In:  $-128.154 \pm 165.255$   $\chi^2/\text{NDF}$ : 22.7/22

+ sign  $-625.240 \pm 131.593$   $\chi^2/\text{NDF}$ : 81.0/50

All:  $-462.971 \pm 92.897$   $\chi^2/\text{NDF}$ : 134.5/104

- sign  $-301.766 \pm 131.161$   $\chi^2/\text{NDF}$ : 50.5/53

asym\_sam\_1548\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 801.271+/-0.163  $\chi^2/\text{NDF}$ : 5450418.7/25

Left Out: 698.236+/-0.113  $\chi^2/\text{NDF}$ : 714685.1/24

Right Out: 769.516+/-0.152  $\chi^2/\text{NDF}$ : 7202658.3/30

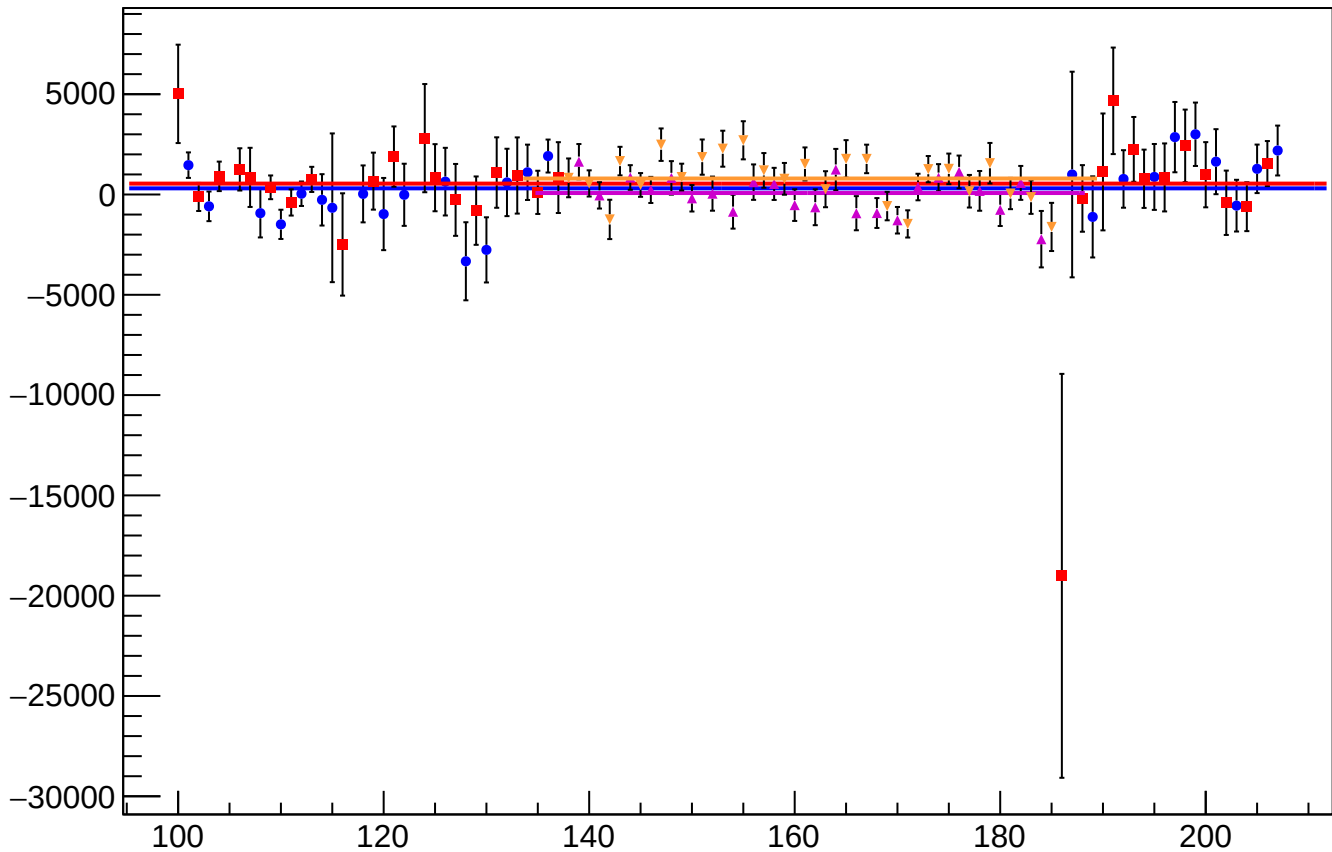
Left In: 700.079+/-0.117  $\chi^2/\text{NDF}$ : 584314.1/22

+ sign 731.992+/-0.093  $\chi^2/\text{NDF}$ : 6435196.8/50

All: 728.873+/-0.066  $\chi^2/\text{NDF}$ : 14355081.2/10

- sign 725.775+/-0.093  $\chi^2/\text{NDF}$ : 7917644.5/53

# asym\_sam\_1548\_avg\_mean vs Slug



Right In:  $306.410 \pm 229.449$   $\chi^2/\text{NDF}$ : 34.1/25

Left Out:  $796.905 \pm 158.142$   $\chi^2/\text{NDF}$ : 46.4/24

Right Out:  $542.843 \pm 215.277$   $\chi^2/\text{NDF}$ : 22.2/30

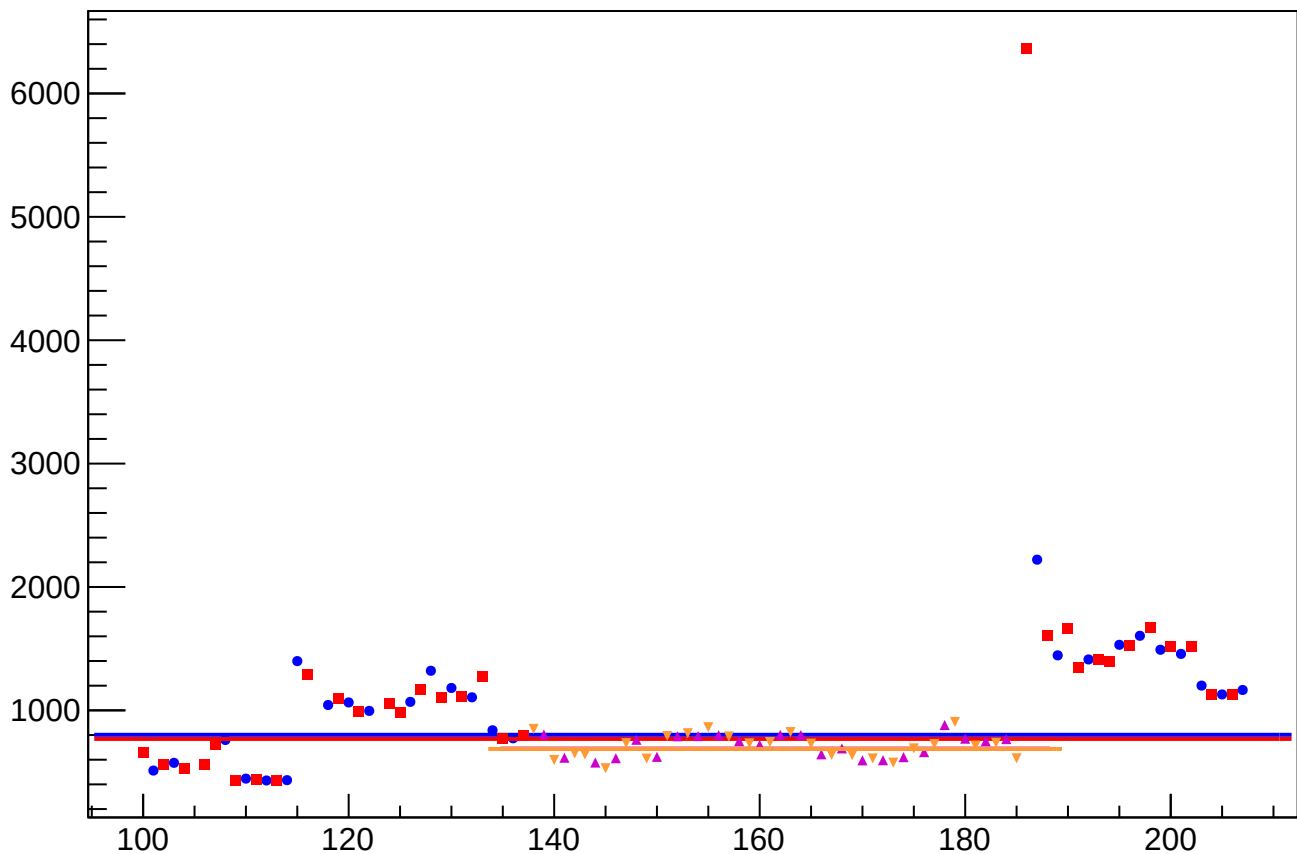
Left In:  $73.501 \pm 162.879$   $\chi^2/\text{NDF}$ : 24.9/22

+ sign  $638.942 \pm 130.211$   $\chi^2/\text{NDF}$ : 83.6/50

All:  $441.168 \pm 91.959$   $\chi^2/\text{NDF}$ : 138.3/104

- sign  $244.365 \pm 129.891$   $\chi^2/\text{NDF}$ : 50.1/53

# asym\_sam\_1548\_avg\_rms vs Slug



Right In: 801.911+/-0.162  $\chi^2/\text{NDF}$ : 5286613.9/25

Left Out: 687.243+/-0.112  $\chi^2/\text{NDF}$ : 727994.0/24

Right Out: 768.436+/-0.152  $\chi^2/\text{NDF}$ : 7151011.6/30

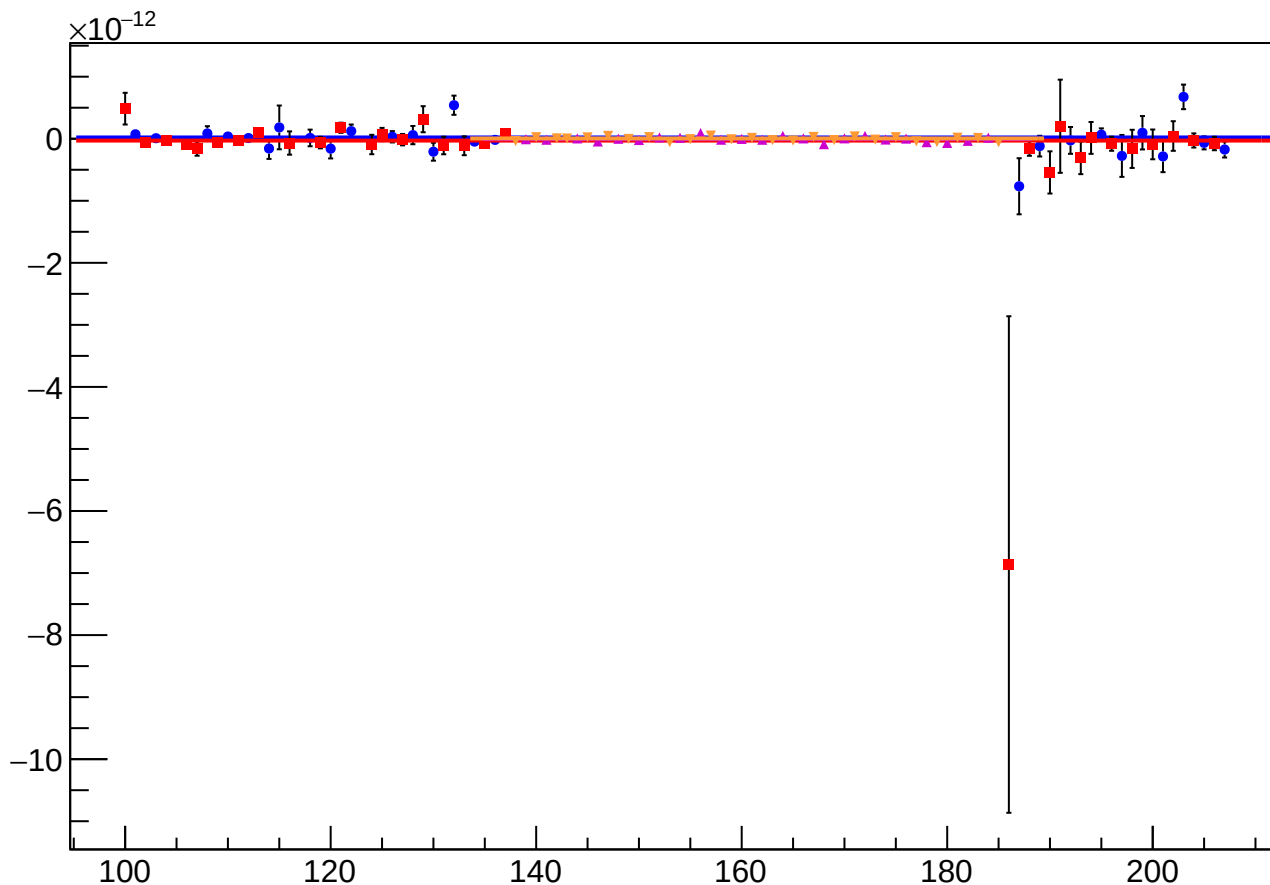
Left In: 689.997+/-0.115  $\chi^2/\text{NDF}$ : 567089.0/22

+ sign 724.172+/-0.092  $\chi^2/\text{NDF}$ : 6353251.8/50

All: 721.355+/-0.065  $\chi^2/\text{NDF}$ : 14242078.9/10

- sign 718.553+/-0.092  $\chi^2/\text{NDF}$ : 7886960.4/53

asym\_sam\_1548\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 43.8/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:22.0/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 34.3/30

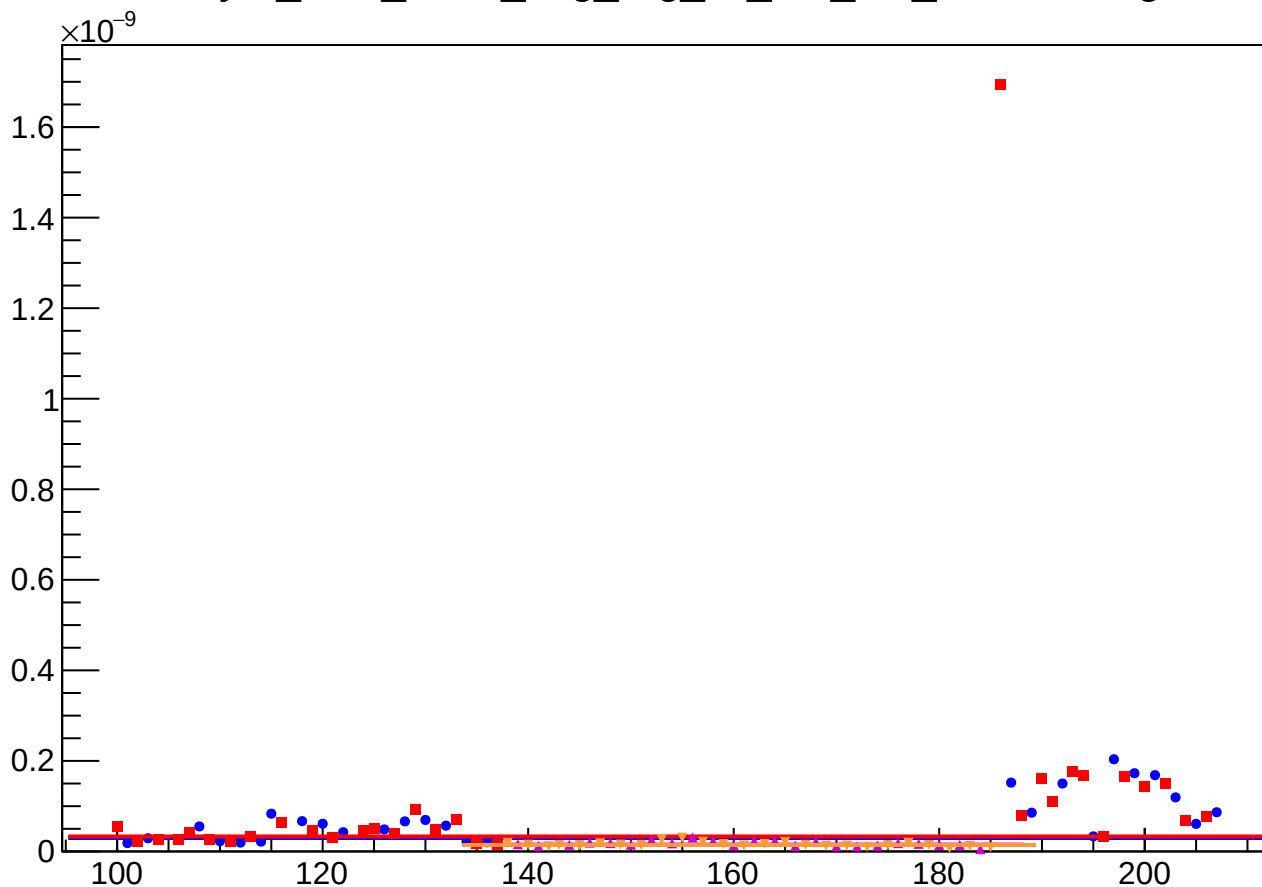
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:26.4/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 66.8/50

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 133.8/104

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 62.7/53

asym\_sam\_1548\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5150950.4/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 992947.6/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5088135.3/30

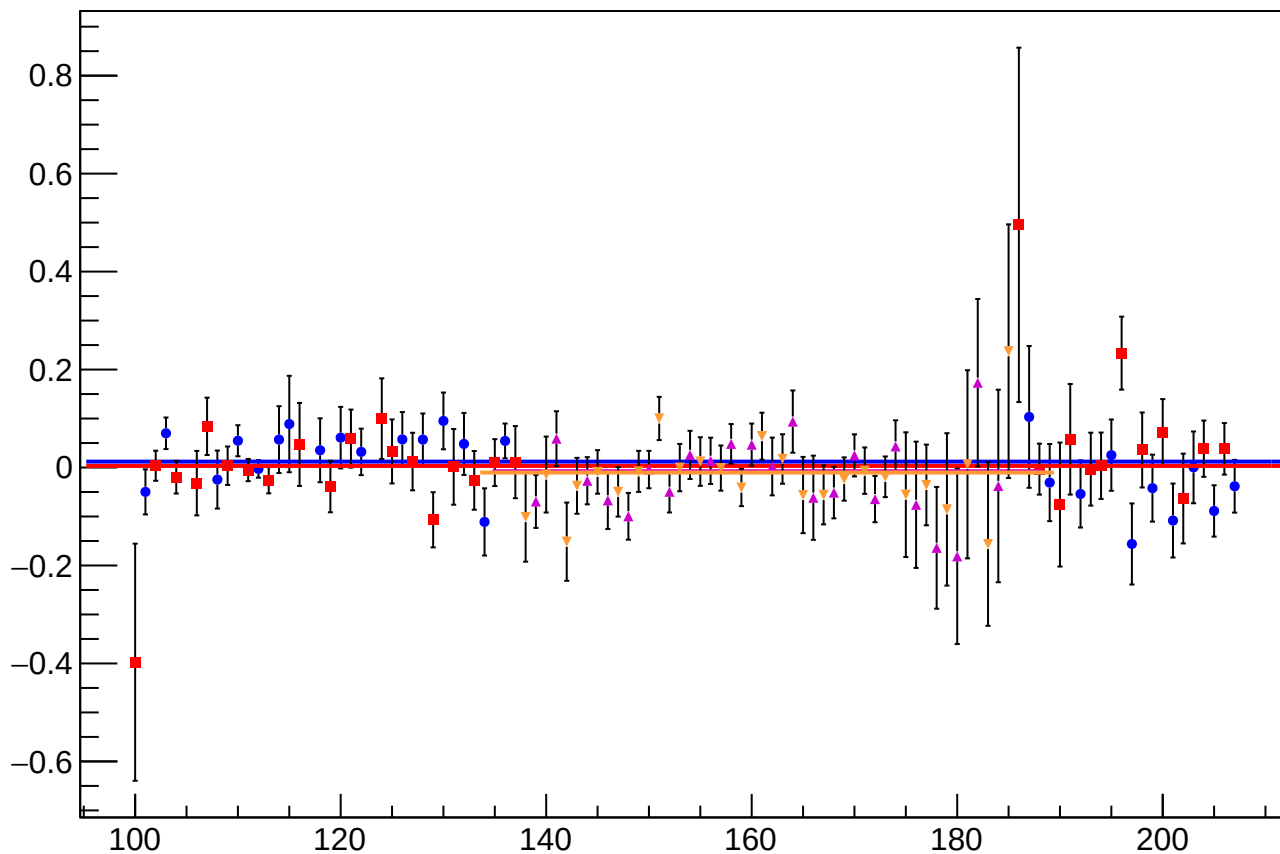
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1107168.2/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8104480.8/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 16664234.9/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8505956.6/53

asym\_sam\_1548\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.012 \pm 0.009$   $\chi^2/\text{NDF}$ : 31.8/25

Left Out:  $-0.010 \pm 0.011$   $\chi^2/\text{NDF}$ : 18.1/24

Right Out:  $0.003 \pm 0.009$   $\chi^2/\text{NDF}$ : 28.9/30

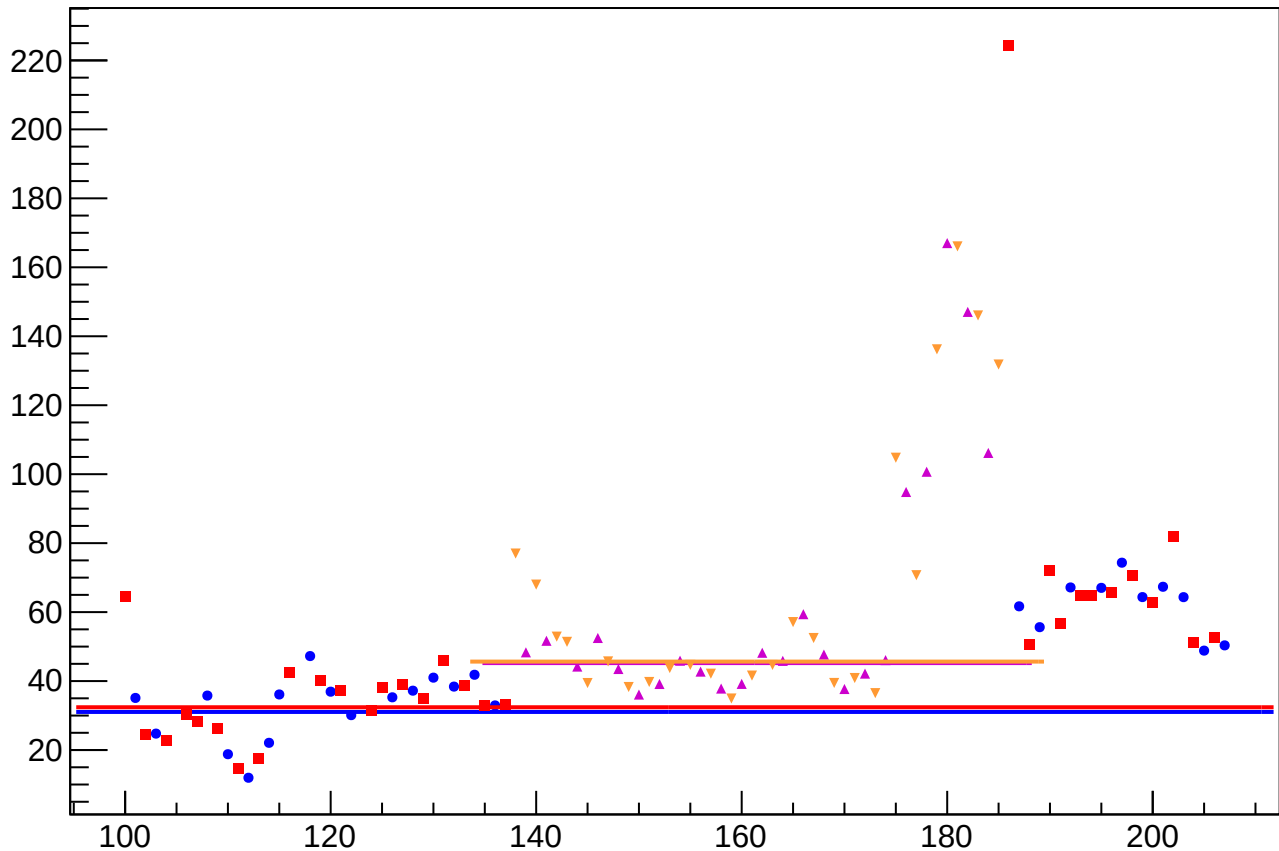
Left In:  $-0.008 \pm 0.011$   $\chi^2/\text{NDF}$ : 23.3/22

+ sign  $0.003 \pm 0.007$   $\chi^2/\text{NDF}$ : 52.2/50

All:  $0.001 \pm 0.005$   $\chi^2/\text{NDF}$ : 105.0/104

- sign  $-0.001 \pm 0.007$   $\chi^2/\text{NDF}$ : 52.7/53

asym\_sam\_1548\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 31.049+/-0.007  $\chi^2/\text{NDF}$ : 6757838.3/25

Left Out: 45.650+/-0.008  $\chi^2/\text{NDF}$ : 4015230.2/24

Right Out: 32.409+/-0.007  $\chi^2/\text{NDF}$ : 6809199.1/30

Left In: 45.217+/-0.008  $\chi^2/\text{NDF}$ : 2992534.4/22

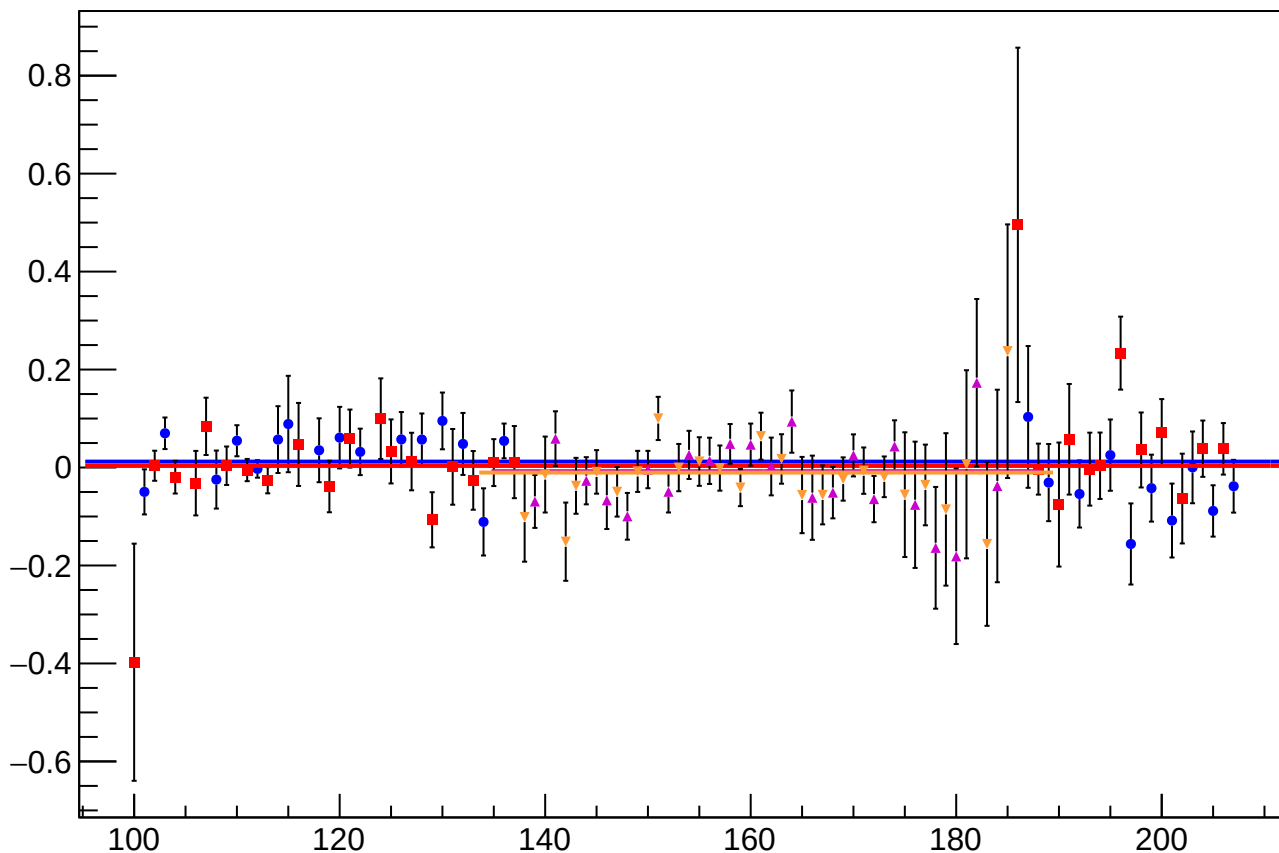
+ sign 37.021+/-0.005  $\chi^2/\text{NDF}$ : 12755283.9/50

All: 37.264+/-0.004  $\chi^2/\text{NDF}$ : 24077297.4/104

- sign 37.506+/-0.005  $\chi^2/\text{NDF}$ : 11317488.1/53



asym\_sam\_1548\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.012 $\pm$ 0.009  $\chi^2$ /NDF: 31.8/25

Left Out: -0.010 $\pm$ 0.011  $\chi^2$ /NDF: 18.1/24

Right Out: 0.003 $\pm$ 0.009  $\chi^2$ /NDF: 28.9/30

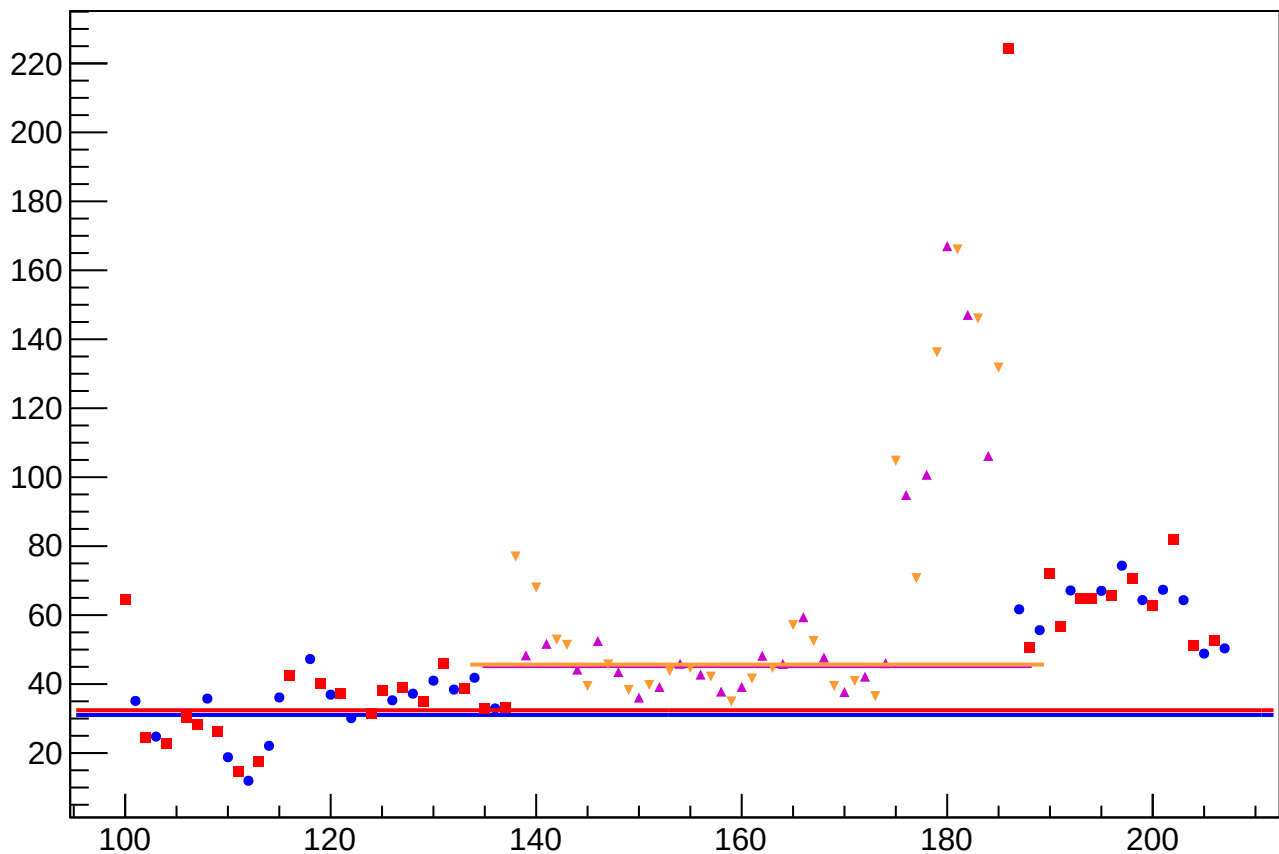
Left In: -0.008 $\pm$ 0.011  $\chi^2$ /NDF: 23.3/22

+ sign 0.003 $\pm$ 0.007  $\chi^2$ /NDF: 52.2/50

All: 0.001 $\pm$ 0.005  $\chi^2$ /NDF: 105.0/104

- sign -0.001 $\pm$ 0.007  $\chi^2$ /NDF: 52.7/53

asym\_sam\_1548\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 31.049+/-0.007  $\chi^2/\text{NDF}$ : 6757838.3/25

Left Out: 45.650+/-0.008  $\chi^2/\text{NDF}$ : 4015230.2/24

Right Out: 32.409+/-0.007  $\chi^2/\text{NDF}$ : 6809199.1/30

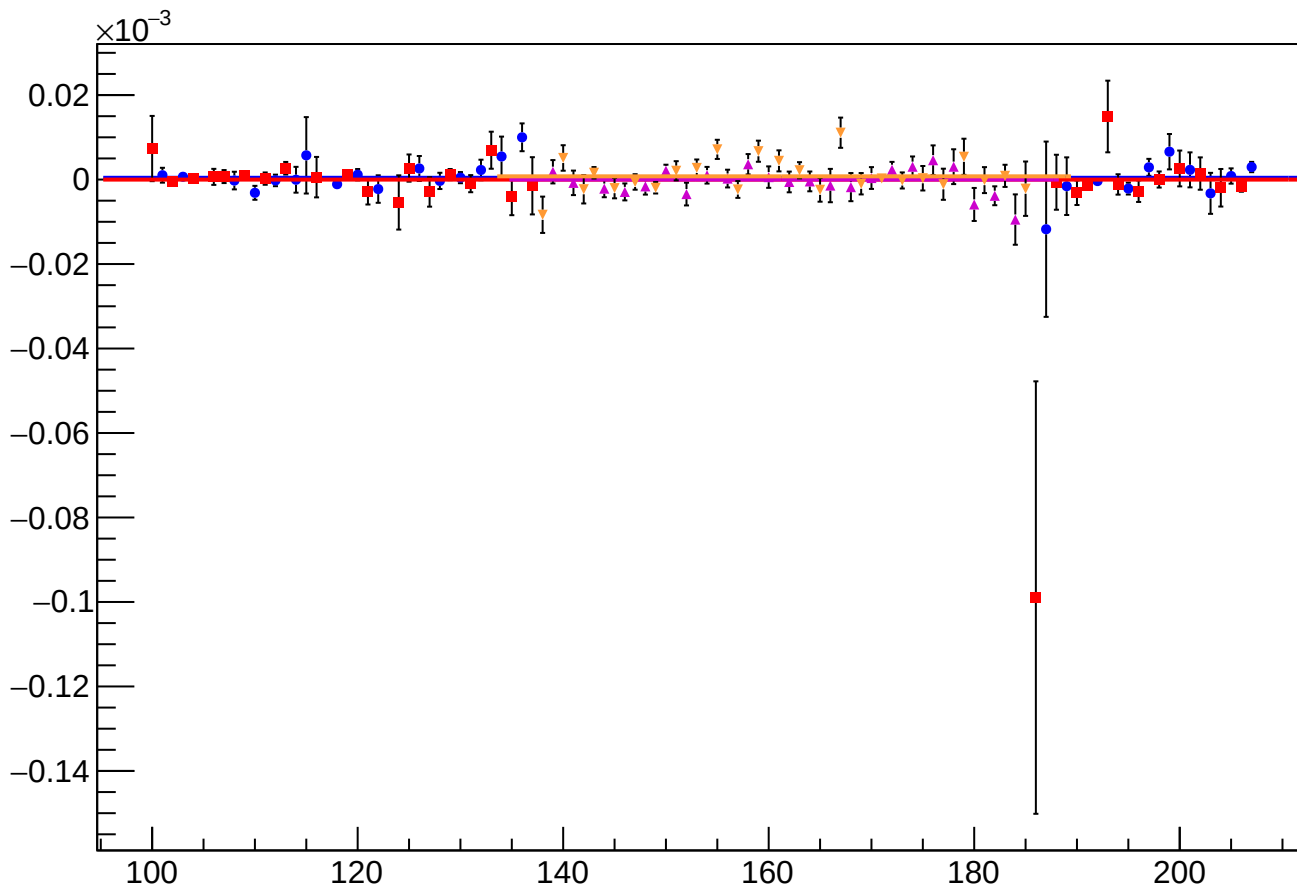
Left In: 45.217+/-0.008  $\chi^2/\text{NDF}$ : 2992534.4/22

+ sign 37.021+/-0.005  $\chi^2/\text{NDF}$ : 12755283.9/50

All: 37.264+/-0.004  $\chi^2/\text{NDF}$ : 24077297.4/104

- sign 37.506+/-0.005  $\chi^2/\text{NDF}$ : 11317488.1/53

asym\_sam\_1548\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 32.5/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:46.2/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 29.0/30

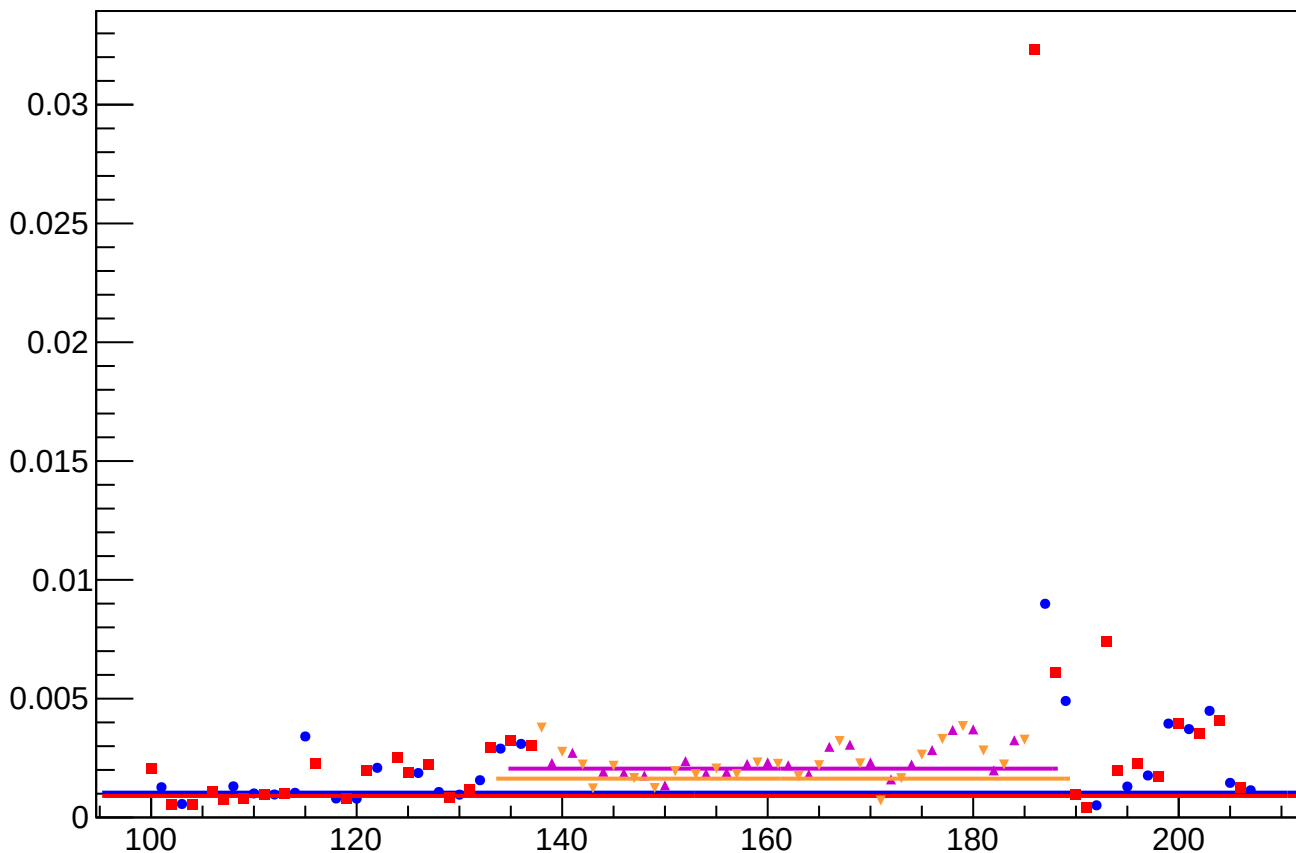
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:24.5/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 79.1/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 135.0/104

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 53.5/53

asym\_sam\_1548\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 7451012.0/25

Left Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 6495366.7/24

Right Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 11899050.1/30

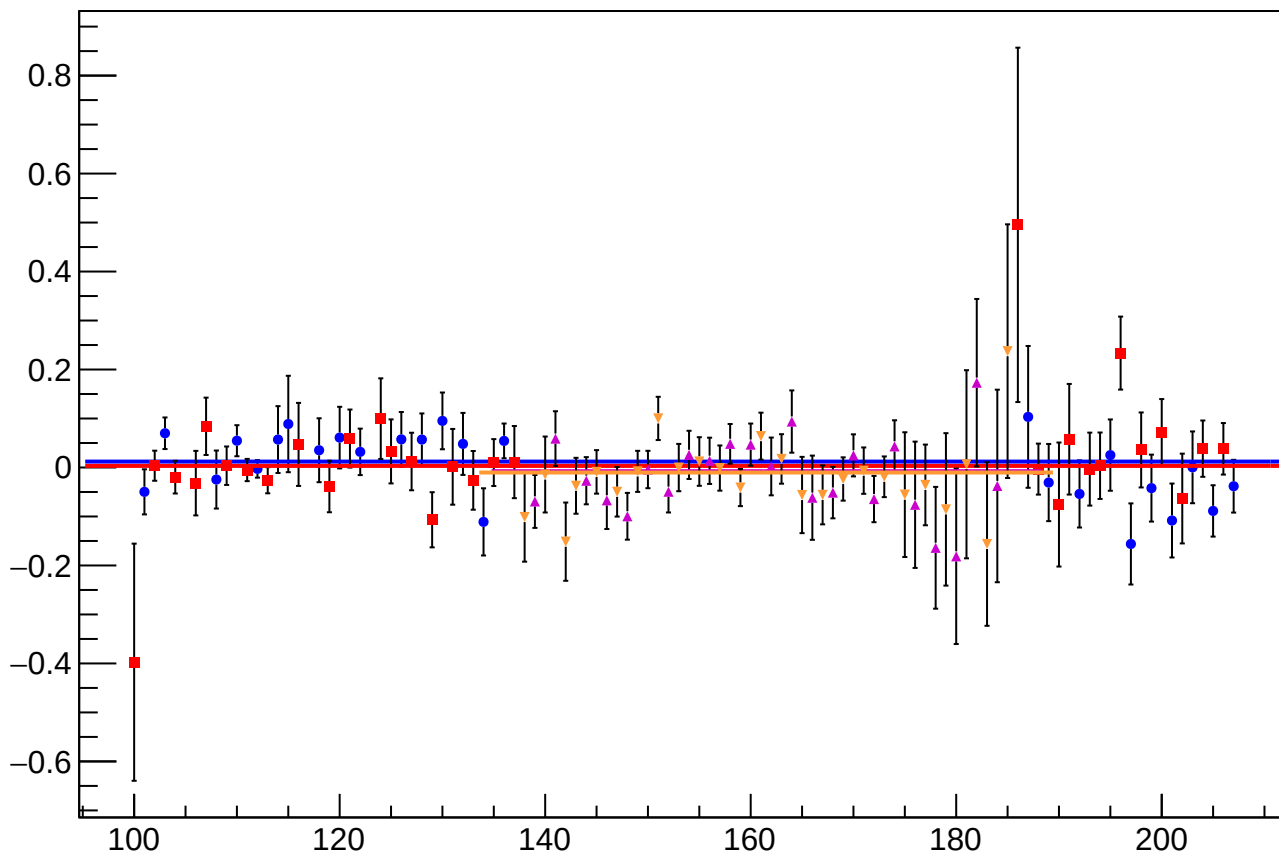
Left In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 2093048.8/22

+ sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 16421827.8/50

All: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 38383375.7/104

- sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 21857593.4/53

asym\_sam\_1548\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.012 $\pm$ 0.009  $\chi^2$ /NDF: 31.8/25

Left Out: -0.010 $\pm$ 0.011  $\chi^2$ /NDF:18.1/24

Right Out: 0.003 $\pm$ 0.009  $\chi^2$ /NDF: 28.9/30

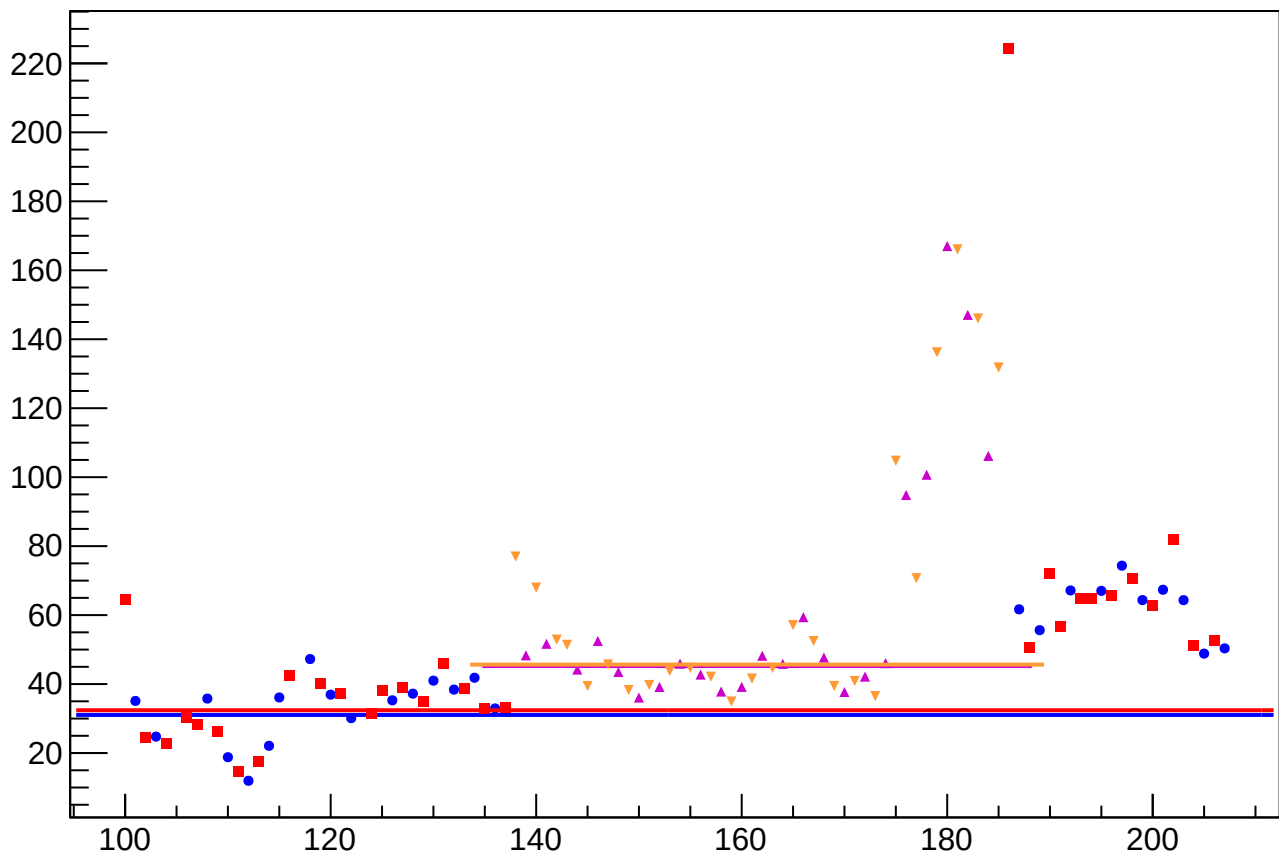
Left In: -0.008 $\pm$ 0.011  $\chi^2$ /NDF:23.3/22

+ sign 0.003 $\pm$ 0.007  $\chi^2$ /NDF: 52.2/50

All: 0.001 $\pm$ 0.005  $\chi^2$ /NDF: 105.0/104

- sign -0.001 $\pm$ 0.007  $\chi^2$ /NDF: 52.7/53

asym\_sam\_1548\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 31.048 $\pm$ 0.007  $\chi^2$ /NDF: 6758094.3/25

Left Out: 45.651 $\pm$ 0.008  $\chi^2$ /NDF: 4015154.4/24

Right Out: 32.408 $\pm$ 0.007  $\chi^2$ /NDF: 6809446.9/30

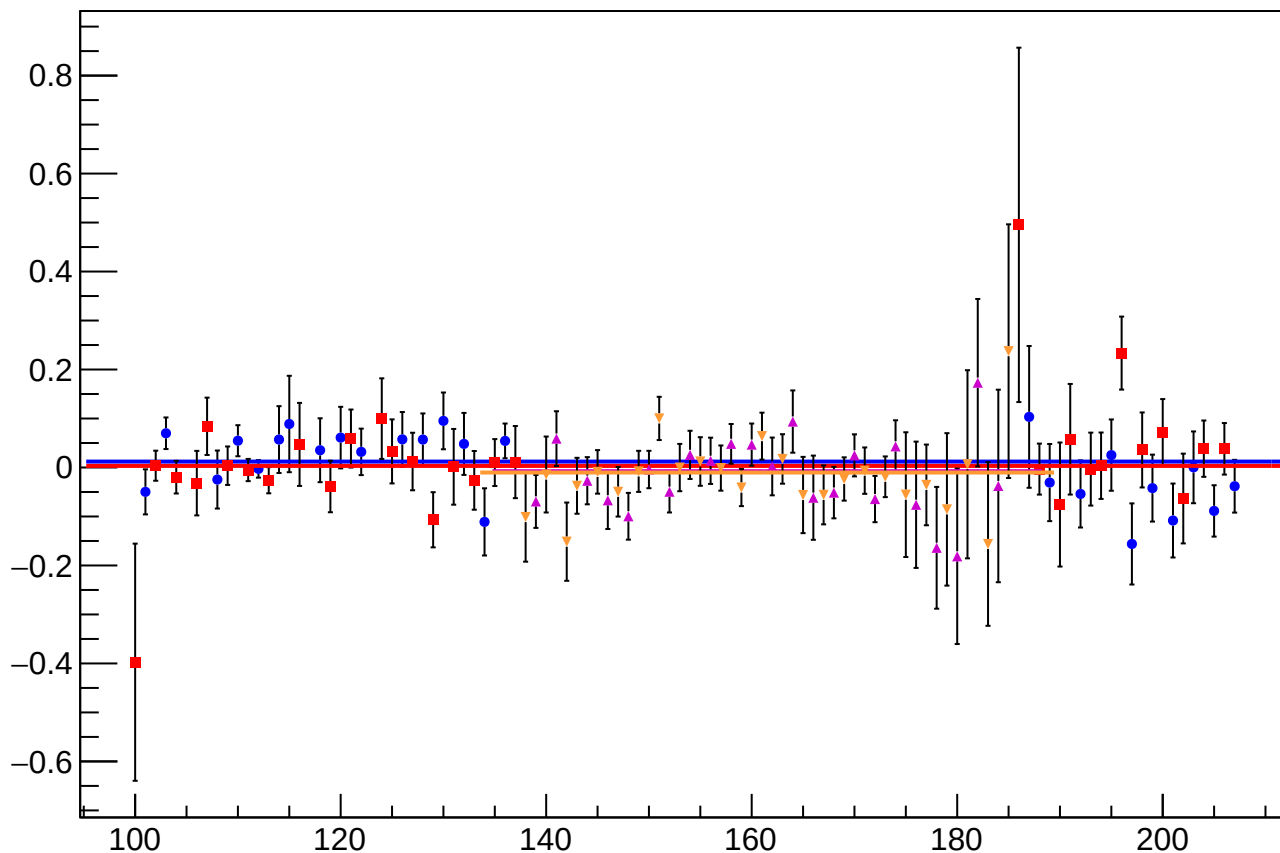
Left In: 45.218 $\pm$ 0.008  $\chi^2$ /NDF: 2992449.1/22

+ sign 37.021 $\pm$ 0.005  $\chi^2$ /NDF: 12755741.7/50

All: 37.264 $\pm$ 0.004  $\chi^2$ /NDF: 24078125.0/104

- sign 37.506 $\pm$ 0.005  $\chi^2$ /NDF: 11317855.0/53

asym\_sam\_1548\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.012 \pm 0.009$   $\chi^2/\text{NDF}$ : 31.8/25

Left Out:  $-0.010 \pm 0.011$   $\chi^2/\text{NDF}$ : 18.1/24

Right Out:  $0.003 \pm 0.009$   $\chi^2/\text{NDF}$ : 28.9/30

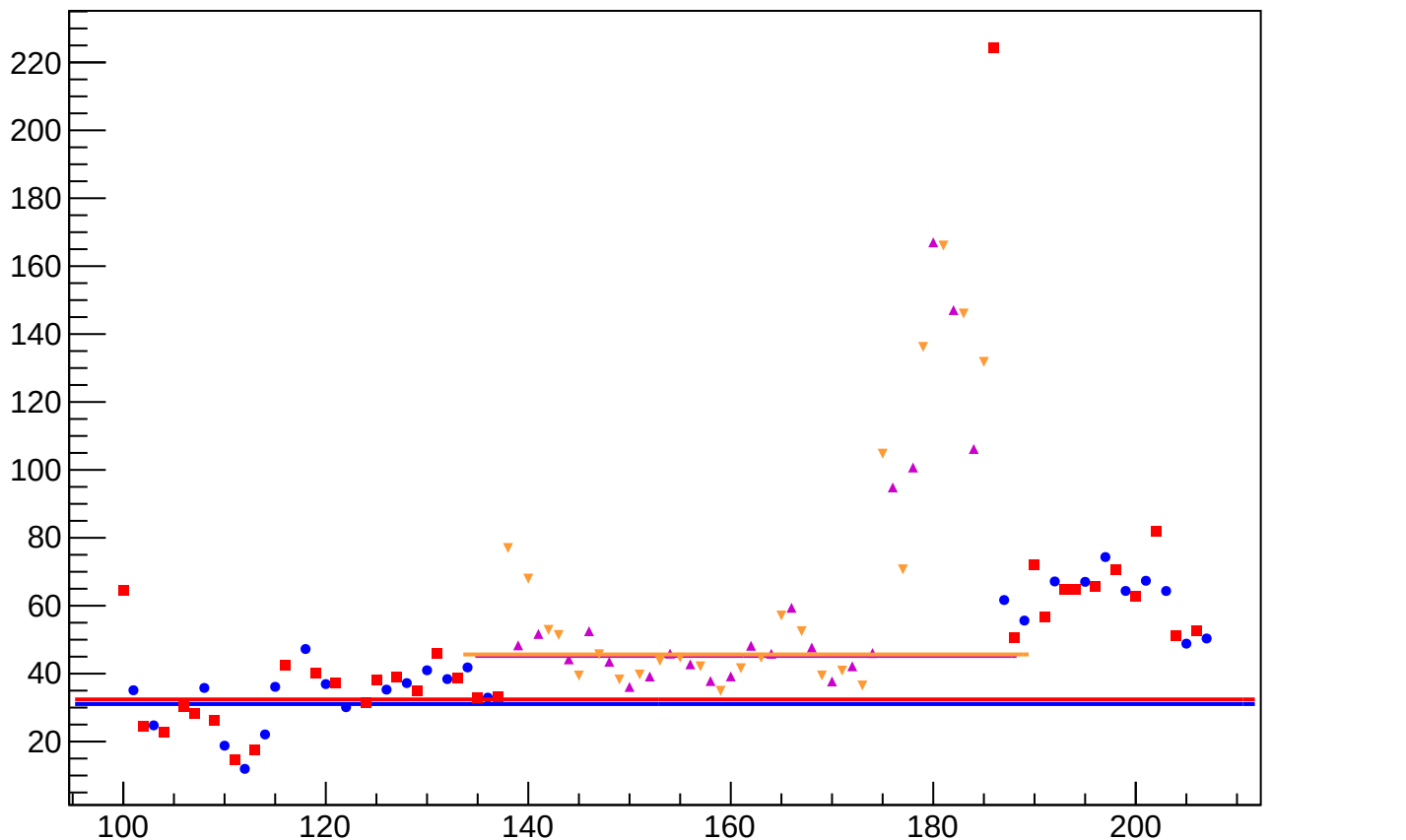
Left In:  $-0.008 \pm 0.011$   $\chi^2/\text{NDF}$ : 23.3/22

+ sign  $0.003 \pm 0.007$   $\chi^2/\text{NDF}$ : 52.2/50

All:  $0.001 \pm 0.005$   $\chi^2/\text{NDF}$ : 105.0/104

- sign  $-0.001 \pm 0.007$   $\chi^2/\text{NDF}$ : 52.7/53

asym\_sam\_1548\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 31.048 $\pm$ 0.007  $\chi^2$ /NDF: 6758094.3/25

Left Out: 45.651 $\pm$ 0.008  $\chi^2$ /NDF: 4015154.4/24

Right Out: 32.408 $\pm$ 0.007  $\chi^2$ /NDF: 6809446.9/30

Left In: 45.218 $\pm$ 0.008  $\chi^2$ /NDF: 2992449.1/22

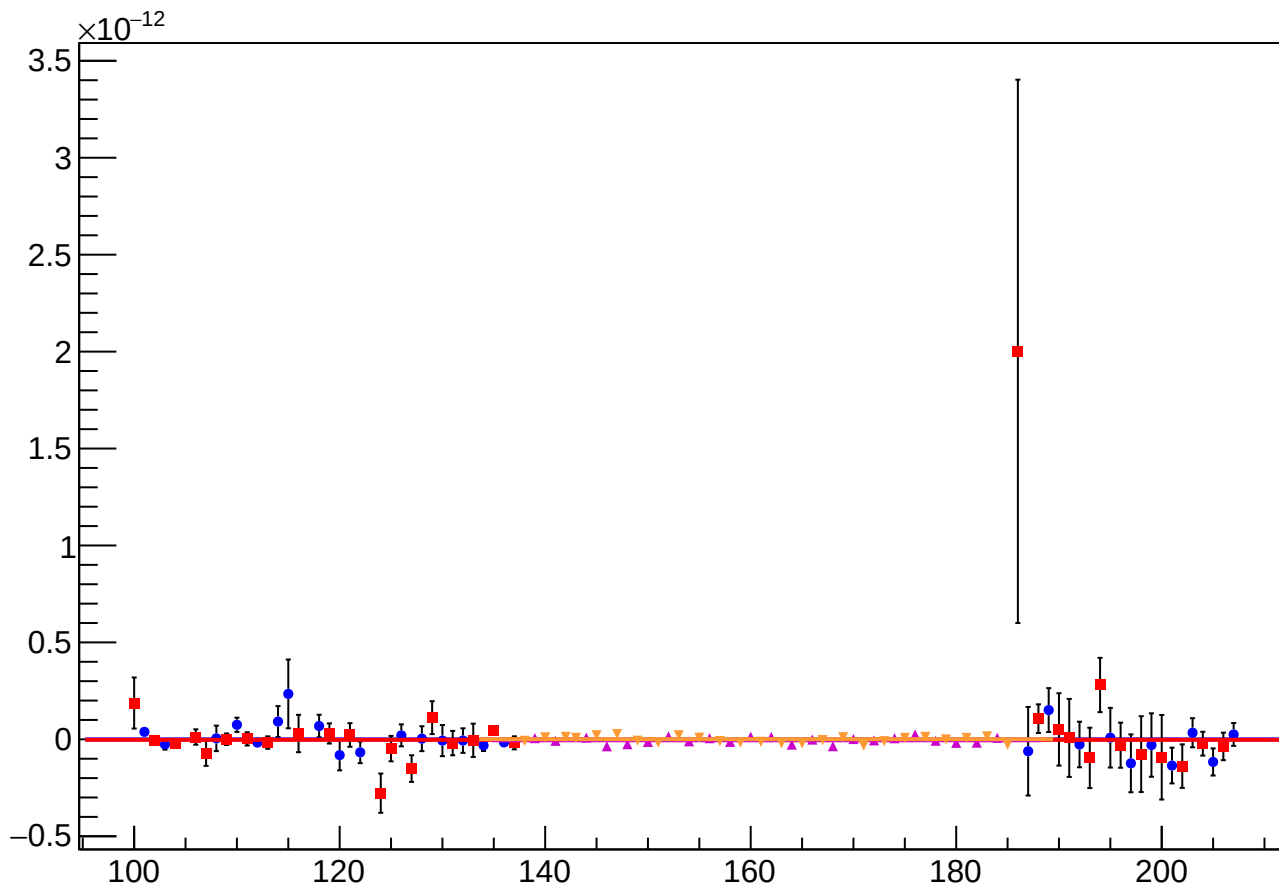
+ sign 37.021 $\pm$ 0.005  $\chi^2$ /NDF: 12755741.7/50

All: 37.264 $\pm$ 0.004  $\chi^2$ /NDF: 24078125.0/104

- sign 37.506 $\pm$ 0.005  $\chi^2$ /NDF: 11317855.0/53



asym\_sam\_1548\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 26.7/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 25.4/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 34.4/30

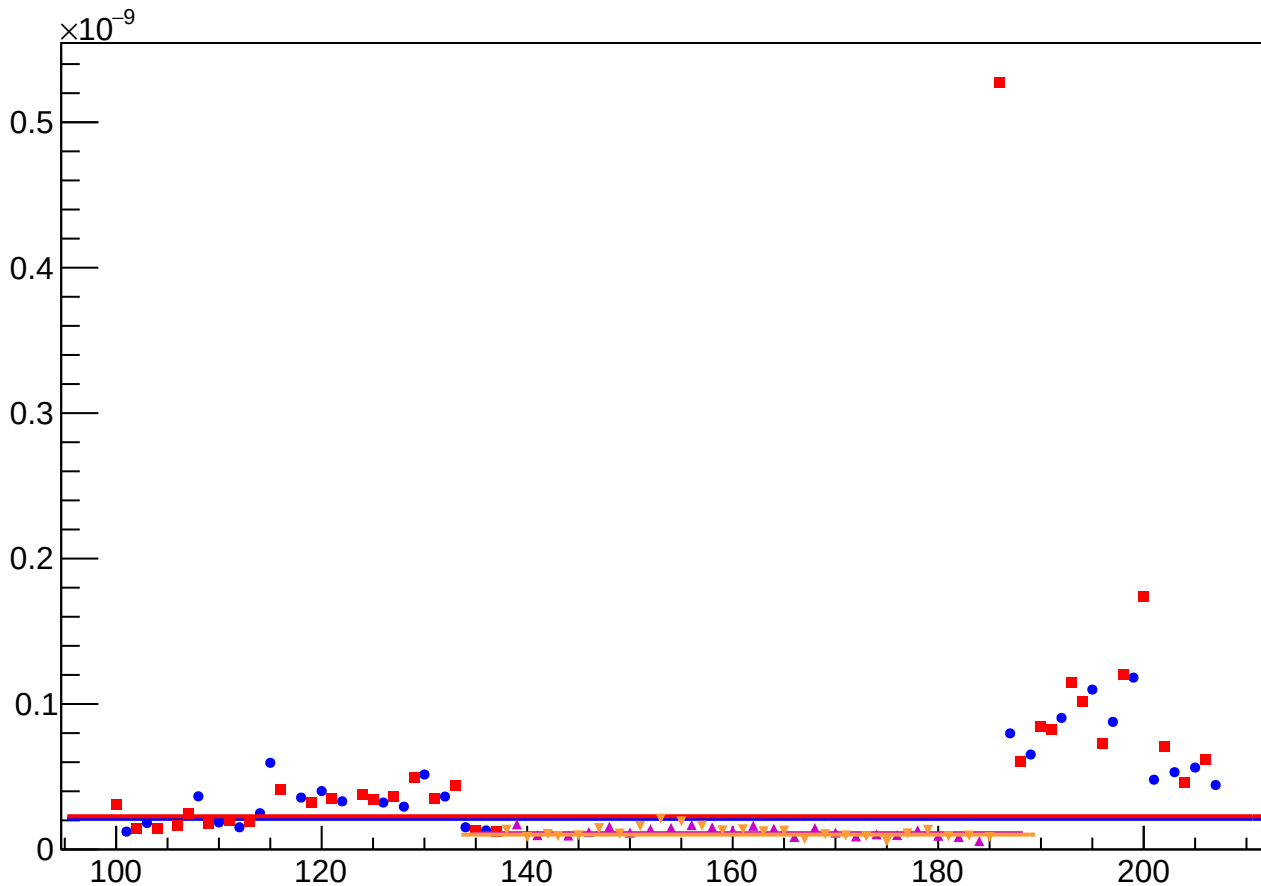
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 23.7/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 52.1/50

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 111.9/104

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 58.1/53

asym\_sam\_1548\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6407114.0/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2257651.3/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7545203.6/30

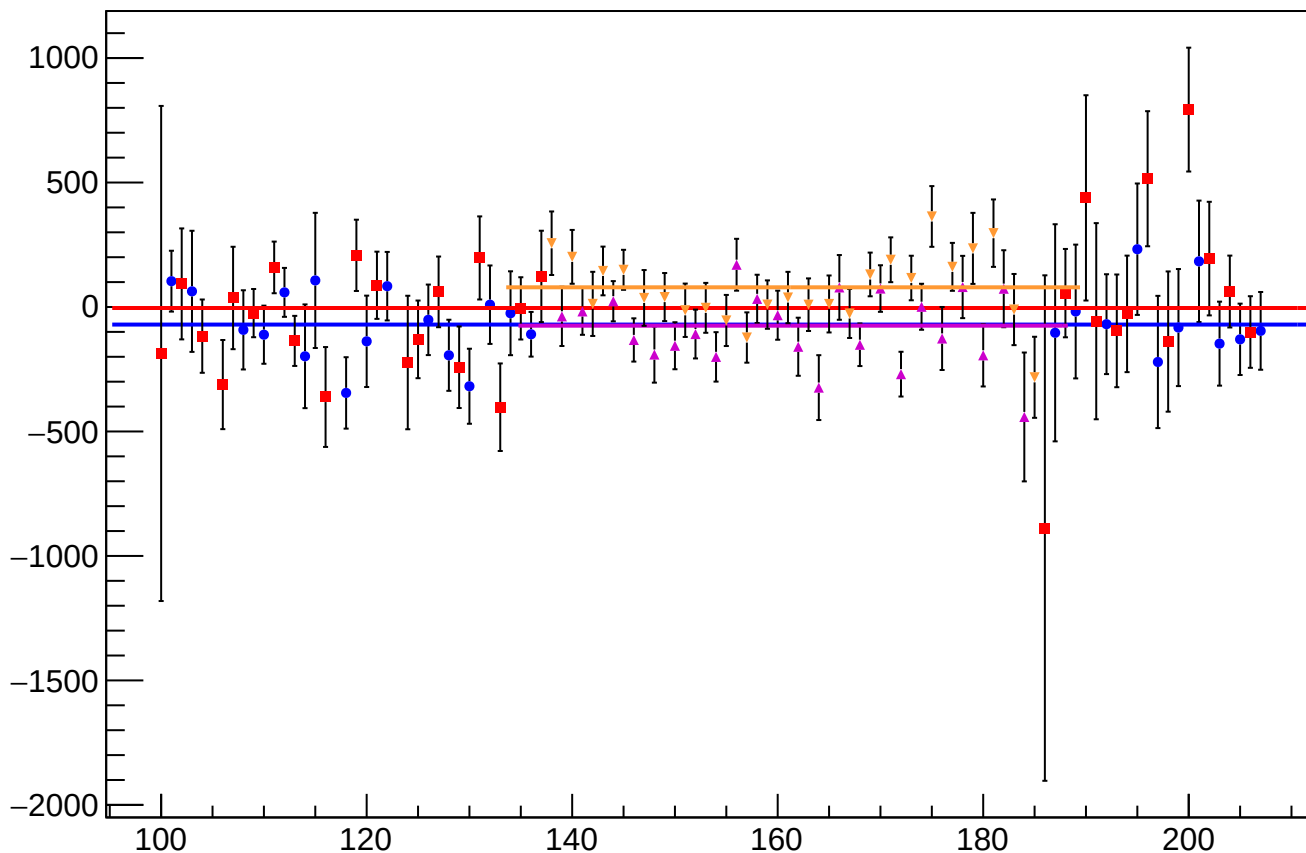
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1536588.2/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11669200.6/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 24027627.5/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12203136.8/53

# reg\_asym\_sam\_3748\_avg\_mean vs Slug



Right In:  $-70.591 \pm 30.966$   $\chi^2/\text{NDF}: 17.2/25$

Left Out:  $79.098 \pm 21.102$   $\chi^2/\text{NDF}: 32.0/24$

Right Out:  $-4.037 \pm 30.240$   $\chi^2/\text{NDF}: 42.4/30$

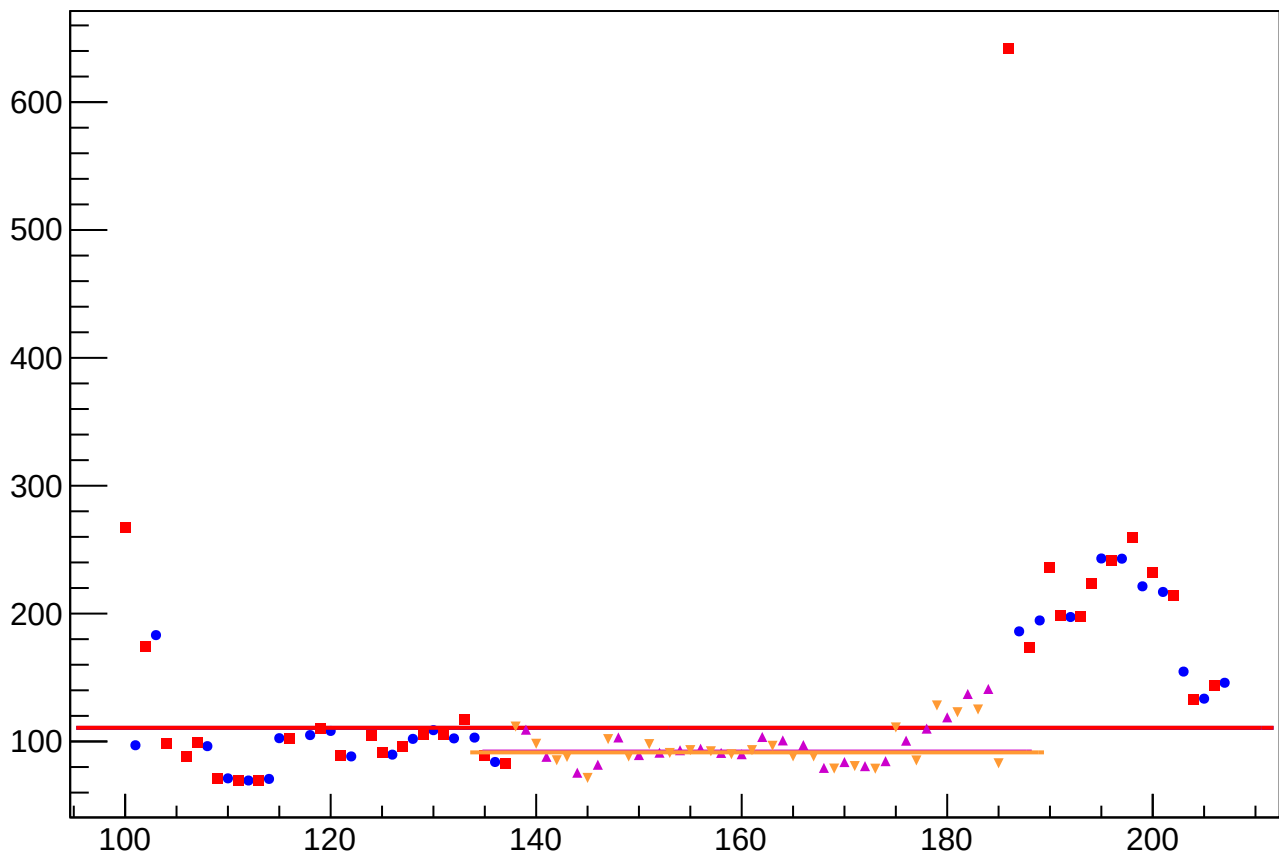
Left In:  $-75.048 \pm 21.837$   $\chi^2/\text{NDF}: 32.6/22$

+ sign  $31.628 \pm 17.438$   $\chi^2/\text{NDF}: 65.2/50$

All:  $-8.919 \pm 12.423$   $\chi^2/\text{NDF}: 154.8/104$

- sign  $-50.711 \pm 17.704$   $\chi^2/\text{NDF}: 78.6/53$

# reg\_asym\_sam\_3748\_avg\_rms vs Slug



Right In: 110.597 $\pm$ 0.022  $\chi^2$ /NDF: 3908420.5/25

Left Out: 91.462 $\pm$ 0.015  $\chi^2$ /NDF: 751213.9/24

Right Out: 110.707 $\pm$ 0.021  $\chi^2$ /NDF: 5385418.1/30

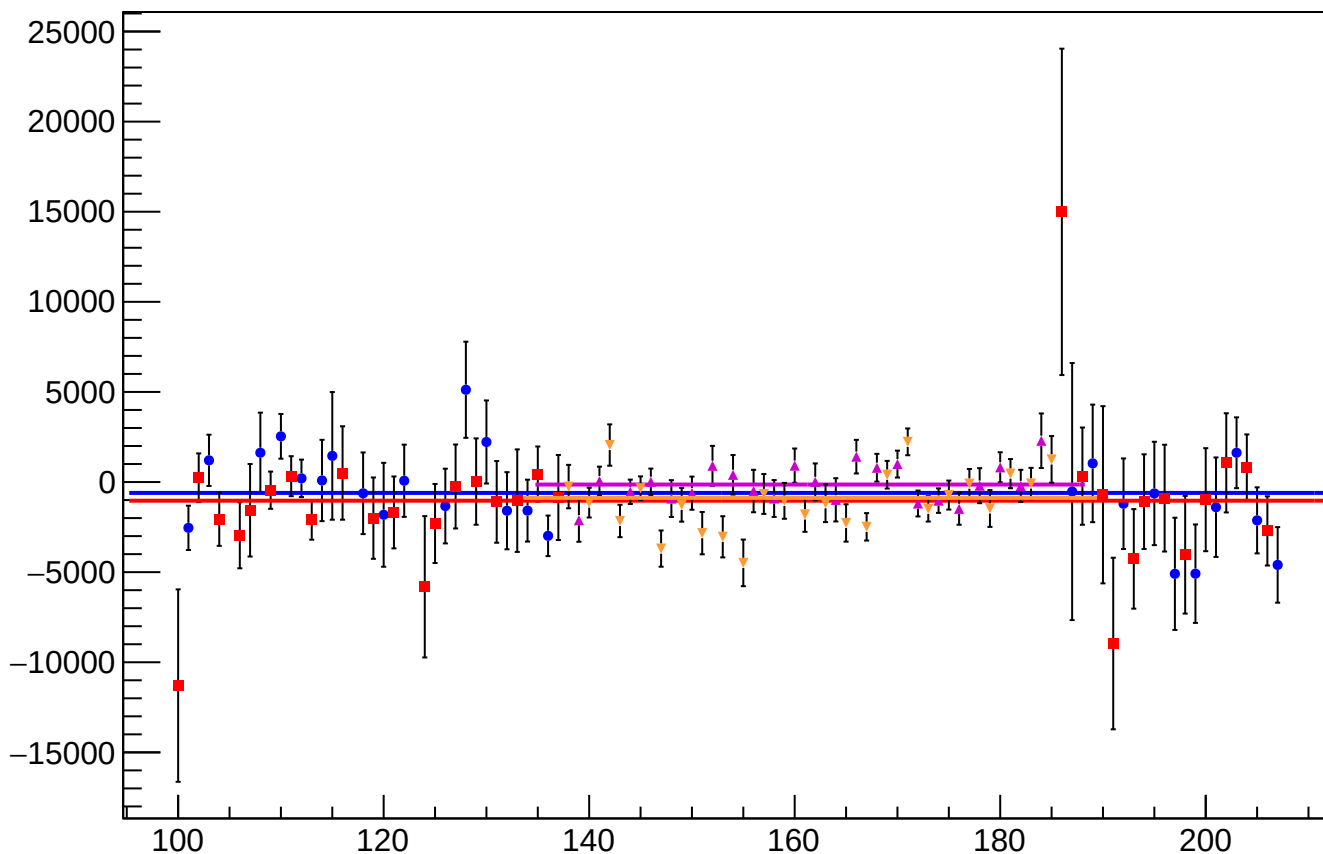
Left In: 92.100 $\pm$ 0.015  $\chi^2$ /NDF: 699590.1/22

+ sign 97.530 $\pm$ 0.012  $\chi^2$ /NDF: 5181137.7/50

All: 97.996 $\pm$ 0.009  $\chi^2$ /NDF: 11766718.9/104

- sign 98.478 $\pm$ 0.013  $\chi^2$ /NDF: 6582672.1/53

asym\_sam\_3748\_avg\_reg\_correction\_mean vs Slug



Right In: -602.525+/-371.981  $\chi^2/\text{NDF}$ : 34.9/25

Left Out: -878.463+/-182.188  $\chi^2/\text{NDF}$ : 67.7/24

Right Out: -1033.975+/-358.697  $\chi^2/\text{NDF}$ : 23.4/30

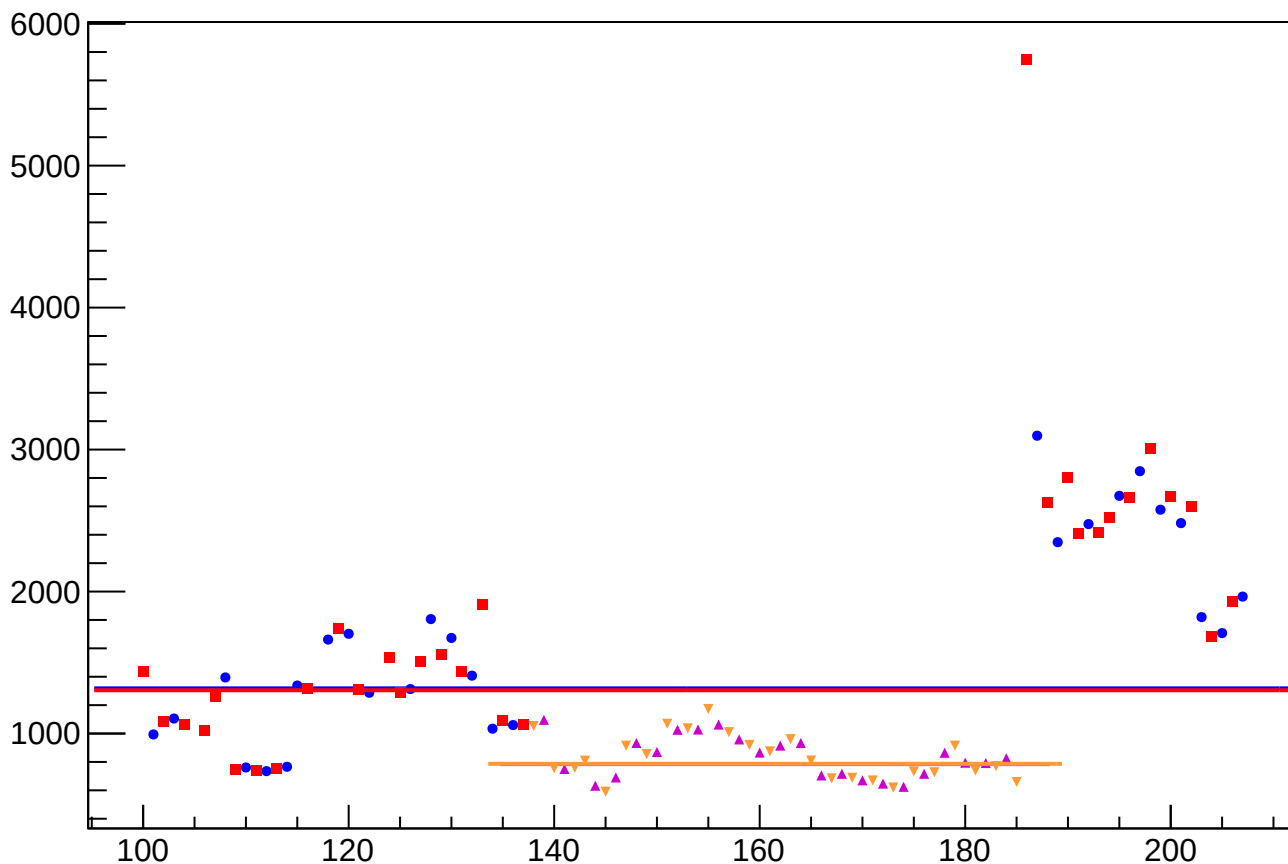
Left In: -138.728+/-186.573  $\chi^2/\text{NDF}$ : 24.2/22

+ sign -825.077+/-163.617  $\chi^2/\text{NDF}$ : 103.0/50

All: -580.086+/-116.362  $\chi^2/\text{NDF}$ : 160.1/104

- sign -329.359+/-165.521  $\chi^2/\text{NDF}$ : 52.5/53

asym\_sam\_3748\_avg\_reg\_correction\_rms vs Slug



Right In: 1318.106 $\pm$ 0.263  $\chi^2$ /NDF: 4566323.5/25

Left Out: 786.758 $\pm$ 0.129  $\chi^2$ /NDF: 1210893.0/24

Right Out: 1304.939 $\pm$ 0.254  $\chi^2$ /NDF: 6194180.6/30

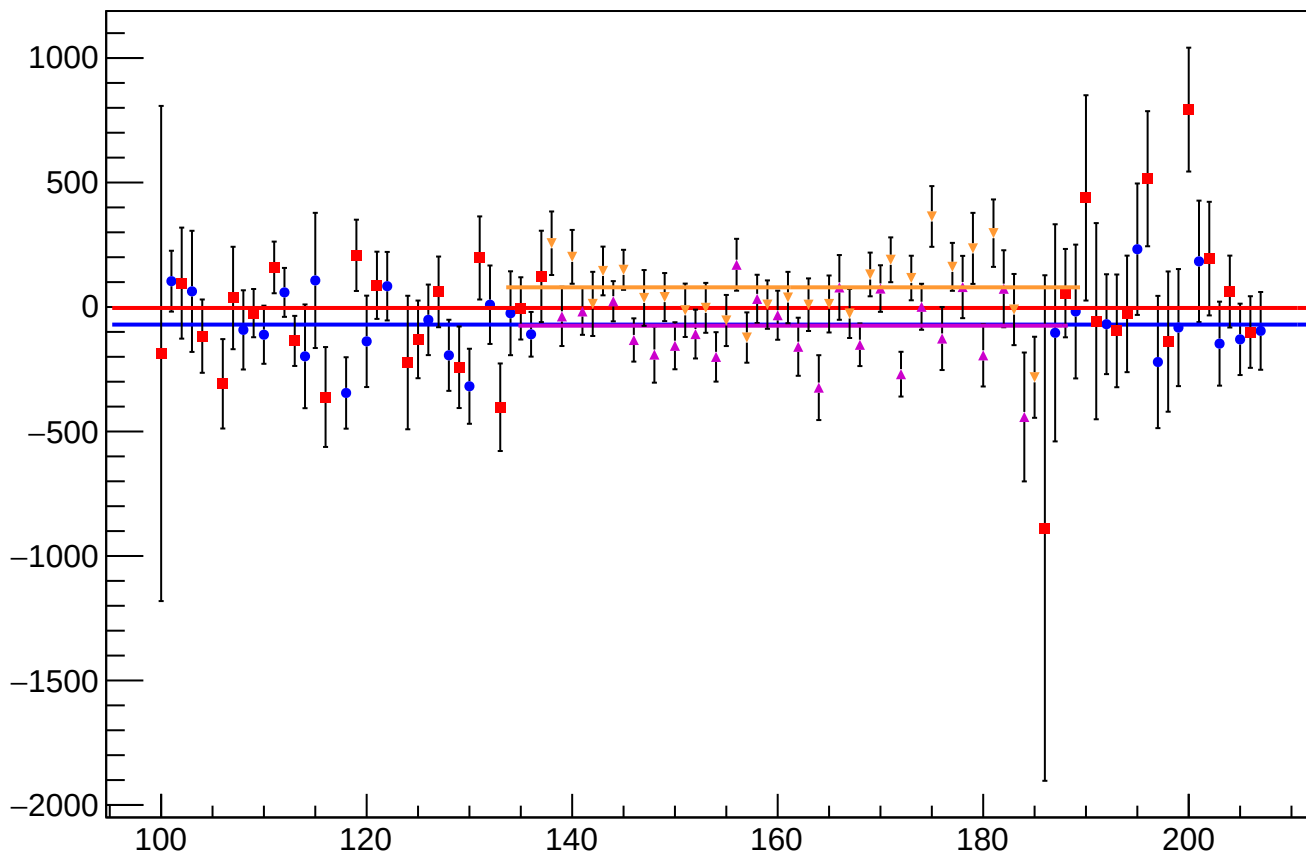
Left In: 784.833 $\pm$ 0.132  $\chi^2$ /NDF: 1063747.2/22

+ sign 889.559 $\pm$ 0.116  $\chi^2$ /NDF: 9068501.7/50

All: 892.536 $\pm$ 0.082  $\chi^2$ /NDF: 19637298.6/10

- sign 895.583 $\pm$ 0.117  $\chi^2$ /NDF: 10567456.9/53

# cor\_asym\_sam\_3748\_avg\_mean vs Slug



Right In:  $-70.601 \pm 30.966$   $\chi^2/\text{NDF}: 17.2/25$

Left Out:  $79.106 \pm 21.102$   $\chi^2/\text{NDF}: 32.0/24$

Right Out:  $-3.839 \pm 30.243$   $\chi^2/\text{NDF}: 42.3/30$

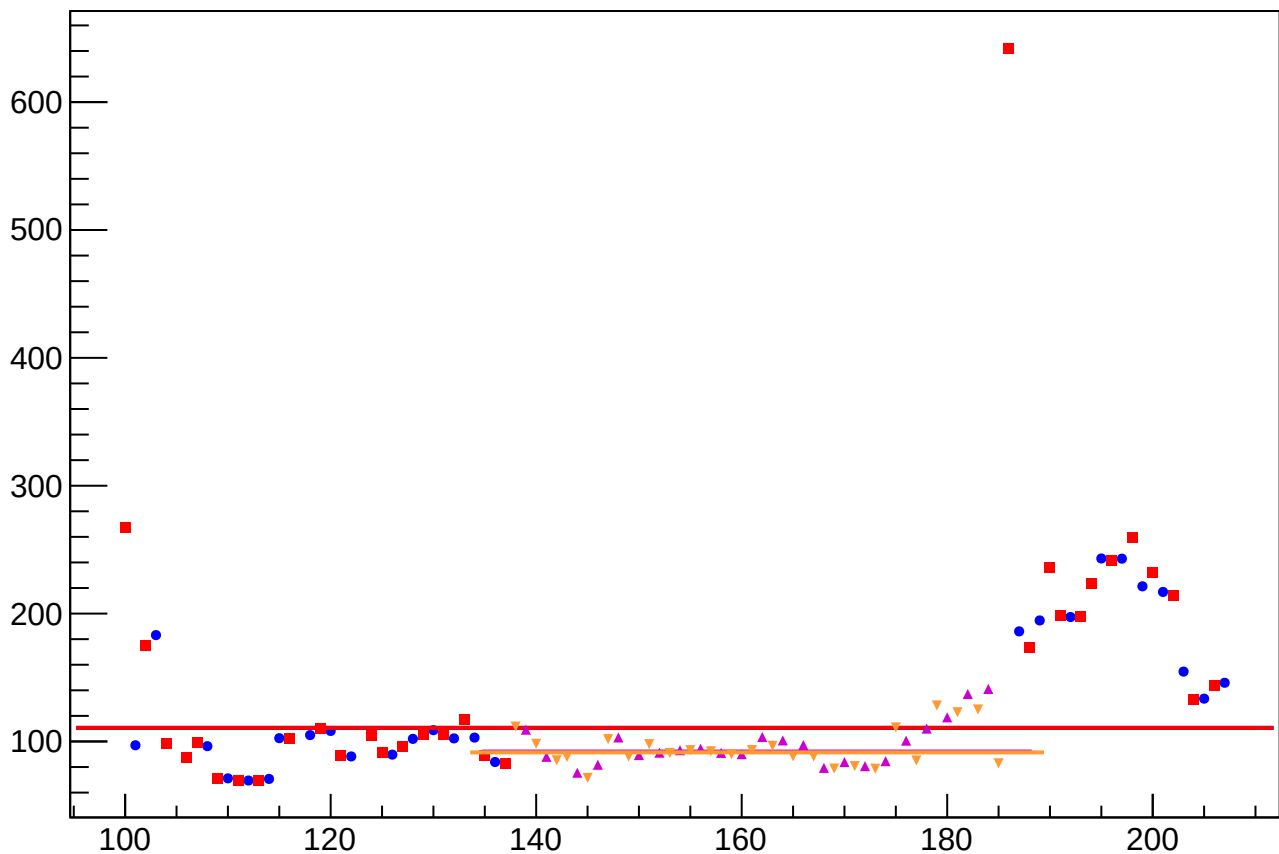
Left In:  $-75.049 \pm 21.837$   $\chi^2/\text{NDF}: 32.6/22$

+ sign  $31.631 \pm 17.438$   $\chi^2/\text{NDF}: 65.2/50$

All:  $-8.885 \pm 12.424$   $\chi^2/\text{NDF}: 154.7/104$

- sign  $-50.646 \pm 17.704$   $\chi^2/\text{NDF}: 78.6/53$

cor\_asym\_sam\_3748\_avg\_rms vs Slug



Right In: 110.597 $\pm$ 0.022  $\chi^2$ /NDF: 3908423.6/25

Left Out: 91.462 $\pm$ 0.015  $\chi^2$ /NDF: 751213.9/24

Right Out: 110.674 $\pm$ 0.021  $\chi^2$ /NDF: 5389159.6/30

Left In: 92.100 $\pm$ 0.015  $\chi^2$ /NDF: 699590.1/22

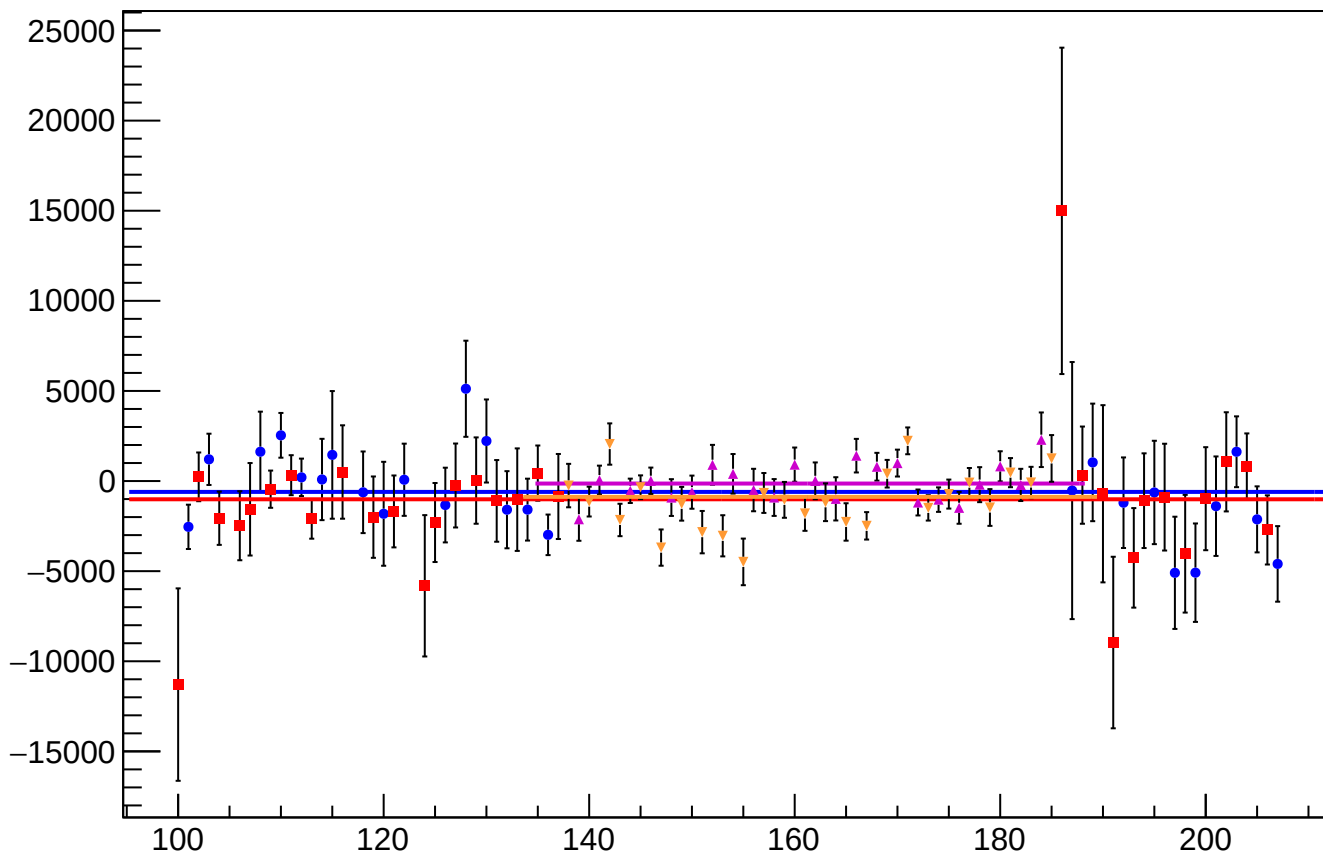
+ sign 97.530 $\pm$ 0.012  $\chi^2$ /NDF: 5181140.8/50

All: 97.991 $\pm$ 0.009  $\chi^2$ /NDF: 11768560.1/104

- sign 98.465 $\pm$ 0.013  $\chi^2$ /NDF: 6584584.3/53



asym\_sam\_3748\_avg\_cor\_correction\_mean vs Slug



Right In:  $-602.543 \pm 371.984$   $\chi^2/\text{NDF}$ : 34.9/25

Left Out:  $-878.453 \pm 182.188$   $\chi^2/\text{NDF}$ : 67.7/24

Right Out:  $-1011.959 \pm 359.276$   $\chi^2/\text{NDF}$ : 22.9/30

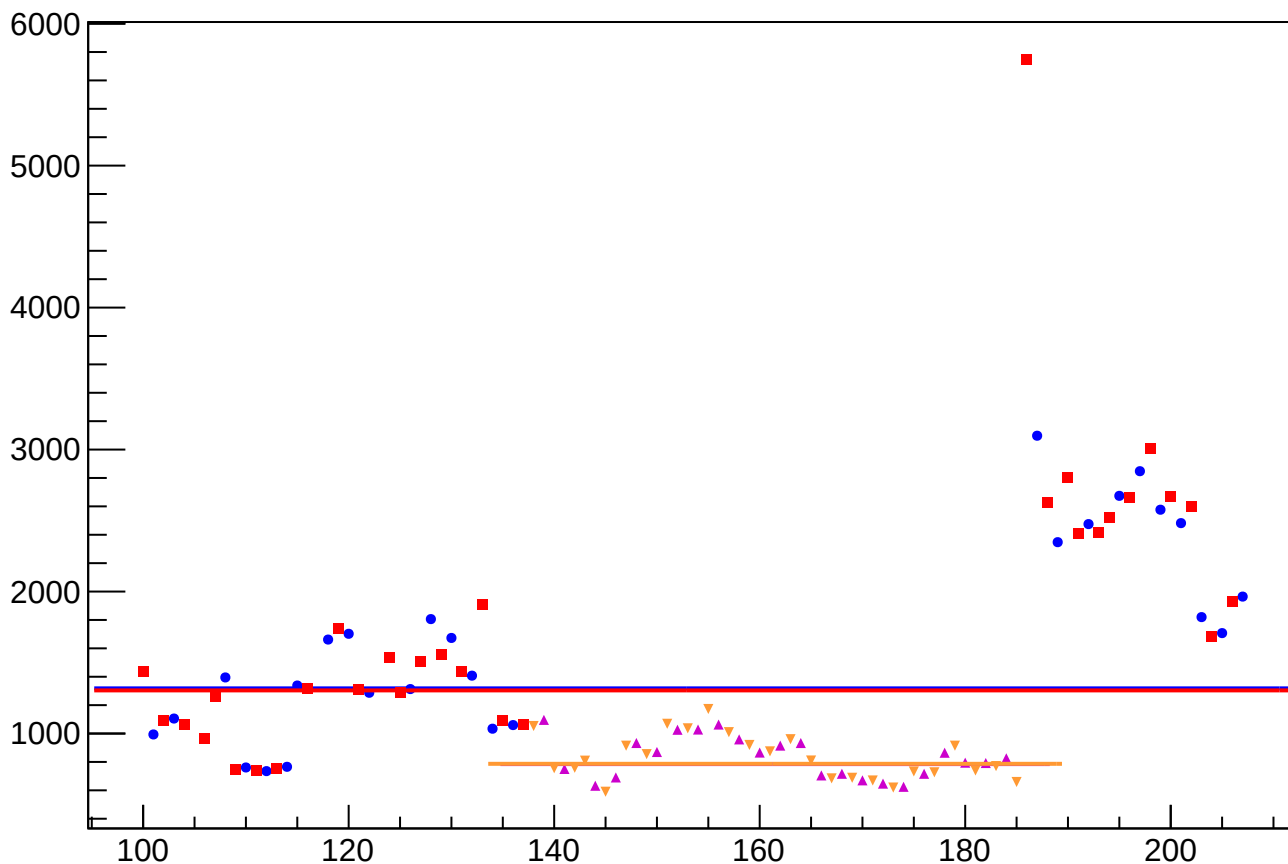
Left In:  $-138.730 \pm 186.573$   $\chi^2/\text{NDF}$ : 24.2/22

+ sign  $-825.073 \pm 163.617$   $\chi^2/\text{NDF}$ : 103.0/50

All:  $-577.620 \pm 116.382$   $\chi^2/\text{NDF}$ : 159.4/104

- sign  $-324.201 \pm 165.578$   $\chi^2/\text{NDF}$ : 51.8/53

asym\_sam\_3748\_avg\_cor\_correction\_rms vs Slug



Right In: 1318.116 $\pm$ 0.263  $\chi^2$ /NDF: 4566273.6/25

Left Out: 786.758 $\pm$ 0.129  $\chi^2$ /NDF: 1210893.0/24

Right Out: 1303.891 $\pm$ 0.254  $\chi^2$ /NDF: 6209115.7/30

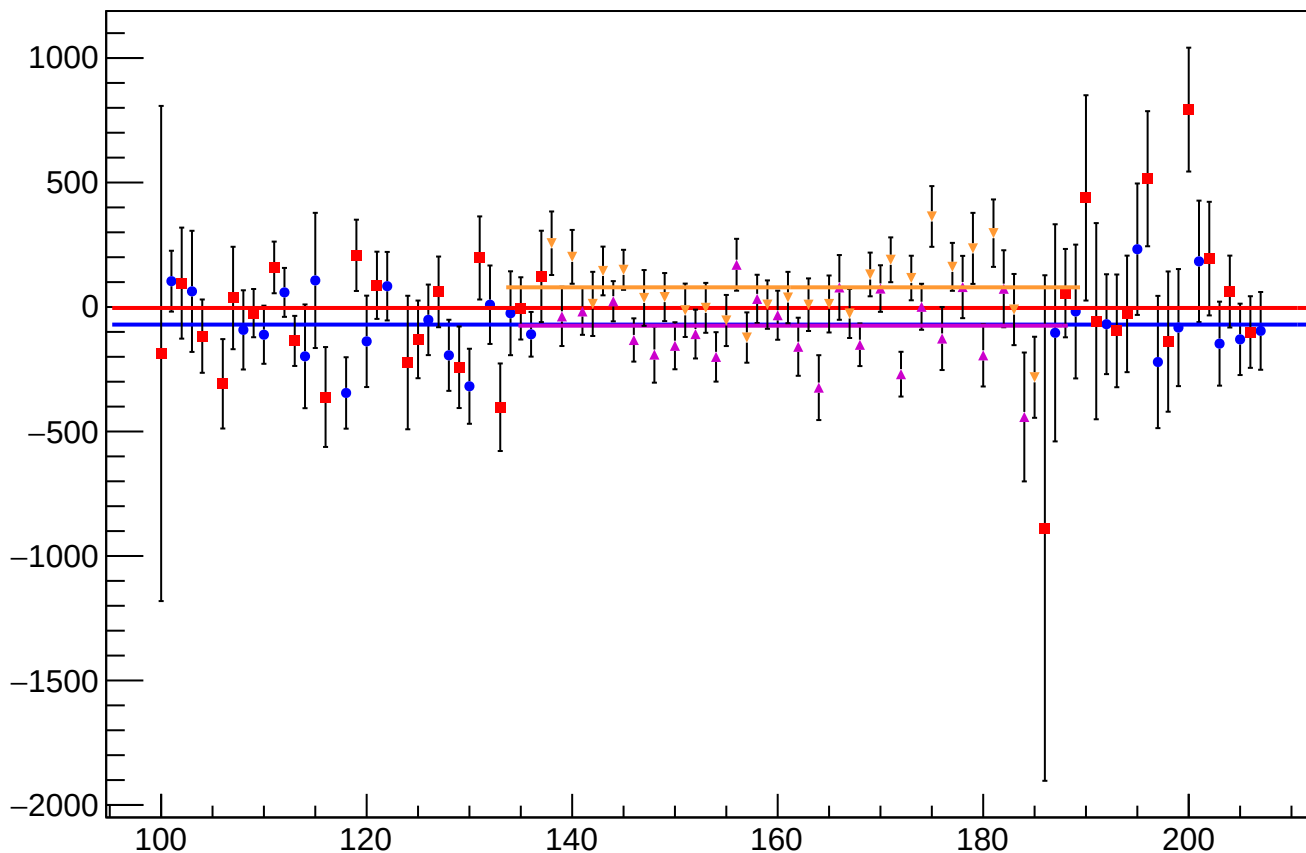
Left In: 784.833 $\pm$ 0.132  $\chi^2$ /NDF: 1063746.9/22

+ sign 889.559 $\pm$ 0.116  $\chi^2$ /NDF: 9068541.8/50

All: 892.287 $\pm$ 0.082  $\chi^2$ /NDF: 19630370.0/100

- sign 895.080 $\pm$ 0.117  $\chi^2$ /NDF: 10560703.4/53

eigen\_cor\_asym\_sam\_3748\_avg\_mean vs Slug



Right In:  $-70.601 \pm 30.966$   $\chi^2/\text{NDF}$ : 17.2/25

Left Out:  $79.106 \pm 21.102$   $\chi^2/\text{NDF}$ : 32.0/24

Right Out:  $-3.839 \pm 30.243$   $\chi^2/\text{NDF}$ : 42.3/30

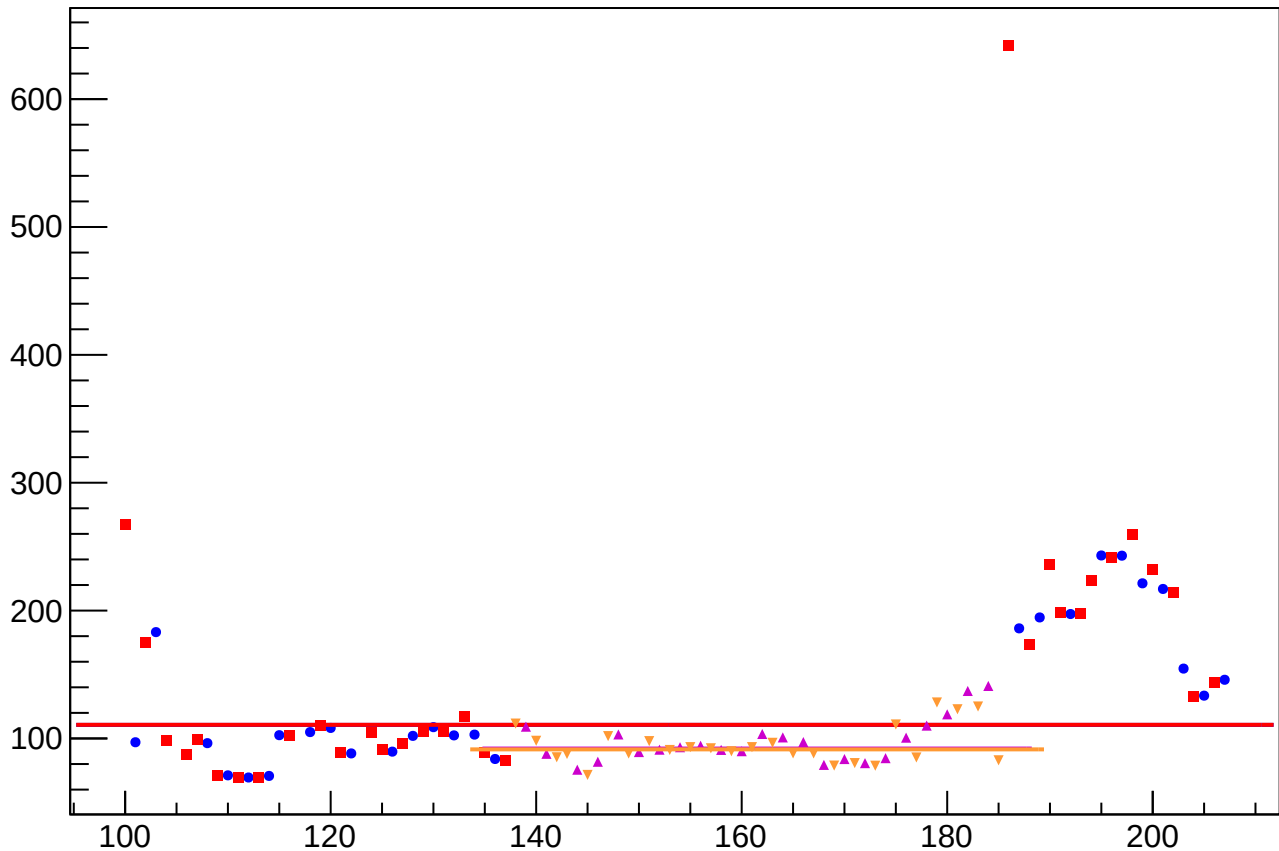
Left In:  $-75.049 \pm 21.837$   $\chi^2/\text{NDF}$ : 32.6/22

+ sign  $31.631 \pm 17.438$   $\chi^2/\text{NDF}$ : 65.2/50

All:  $-8.885 \pm 12.424$   $\chi^2/\text{NDF}$ : 154.7/104

- sign  $-50.646 \pm 17.704$   $\chi^2/\text{NDF}$ : 78.6/53

eigen\_cor\_asym\_sam\_3748\_avg\_rms vs Slug



Right In: 110.597 $\pm$ 0.022  $\chi^2$ /NDF: 3908423.6/25

Left Out: 91.462 $\pm$ 0.015  $\chi^2$ /NDF: 751213.9/24

Right Out: 110.674 $\pm$ 0.021  $\chi^2$ /NDF: 5389159.6/30

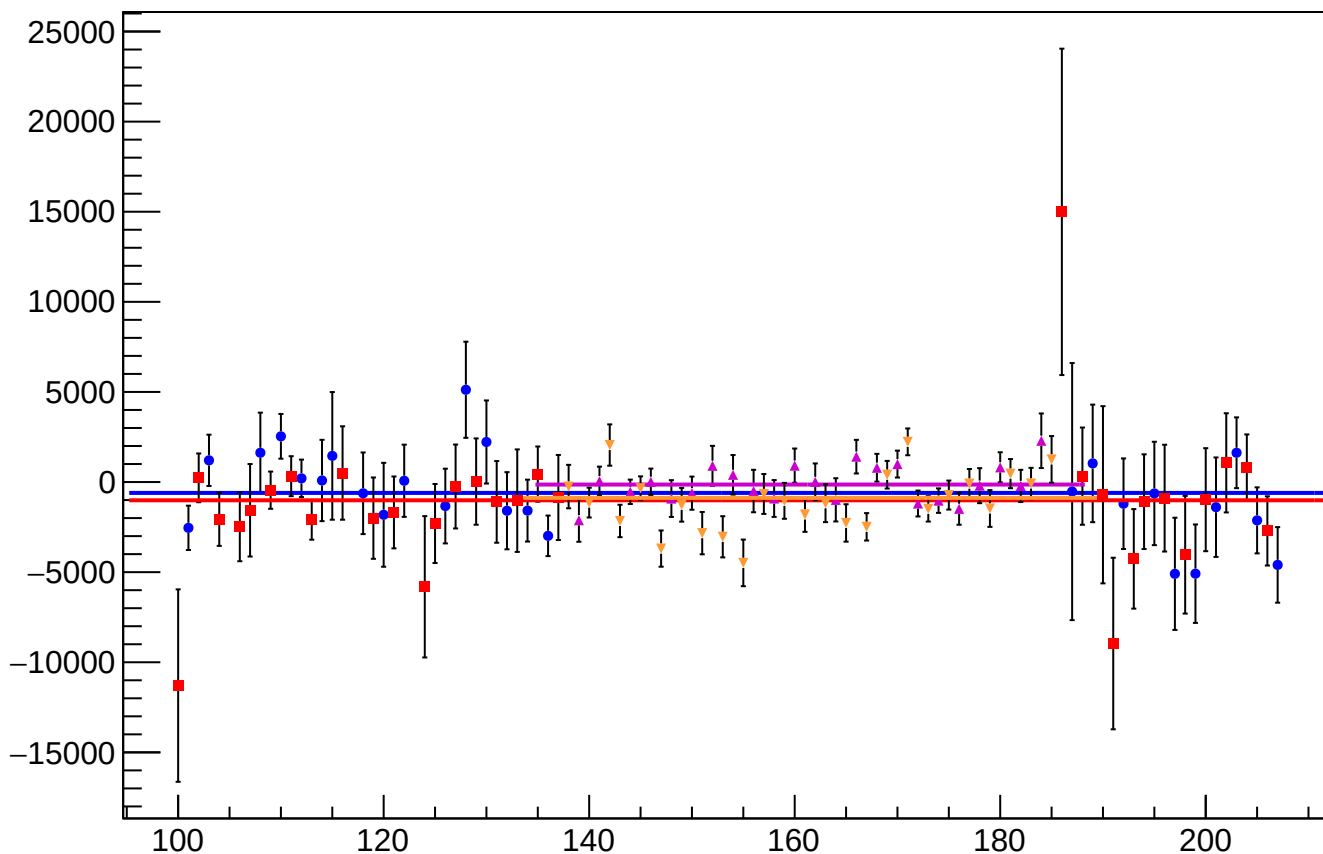
Left In: 92.100 $\pm$ 0.015  $\chi^2$ /NDF: 699590.1/22

+ sign 97.530 $\pm$ 0.012  $\chi^2$ /NDF: 5181140.8/50

All: 97.991 $\pm$ 0.009  $\chi^2$ /NDF: 11768560.1/104

- sign 98.465 $\pm$ 0.013  $\chi^2$ /NDF: 6584584.3/53

asym\_sam\_3748\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In: -602.543+/-371.984  $\chi^2/\text{NDF}$ : 34.9/25

Left Out: -878.453+/-182.188  $\chi^2/\text{NDF}$ : 67.7/24

Right Out: -1011.959+/-359.276  $\chi^2/\text{NDF}$ : 22.9/30

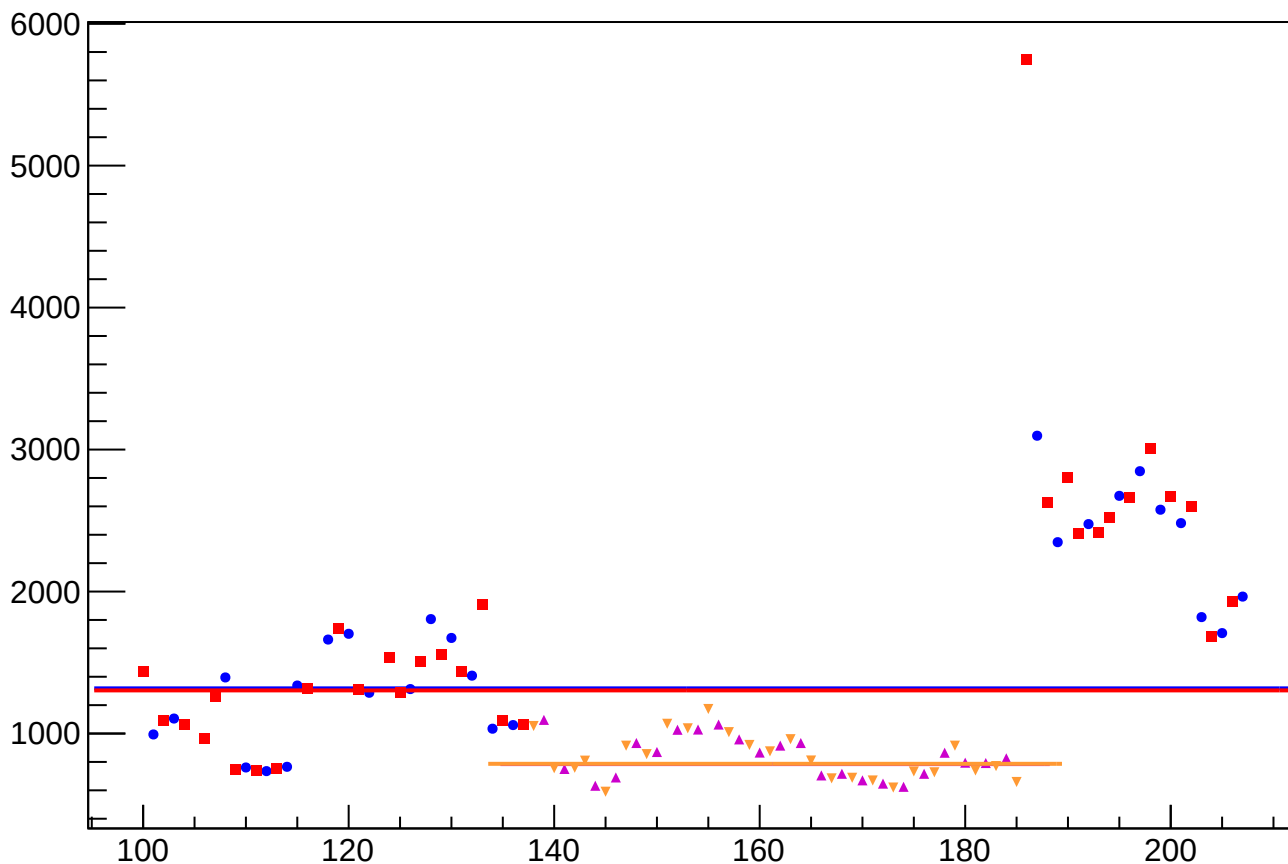
Left In: -138.730+/-186.573  $\chi^2/\text{NDF}$ : 24.2/22

+ sign -825.073+/-163.617  $\chi^2/\text{NDF}$ : 103.0/50

All: -577.620+/-116.382  $\chi^2/\text{NDF}$ : 159.4/104

- sign -324.201+/-165.578  $\chi^2/\text{NDF}$ : 51.8/53

asym\_sam\_3748\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 1318.116 $\pm$ 0.263  $\chi^2$ /NDF: 4566273.6/25

Left Out: 786.758 $\pm$ 0.129  $\chi^2$ /NDF: 1210893.0/24

Right Out: 1303.891 $\pm$ 0.254  $\chi^2$ /NDF: 6209115.7/30

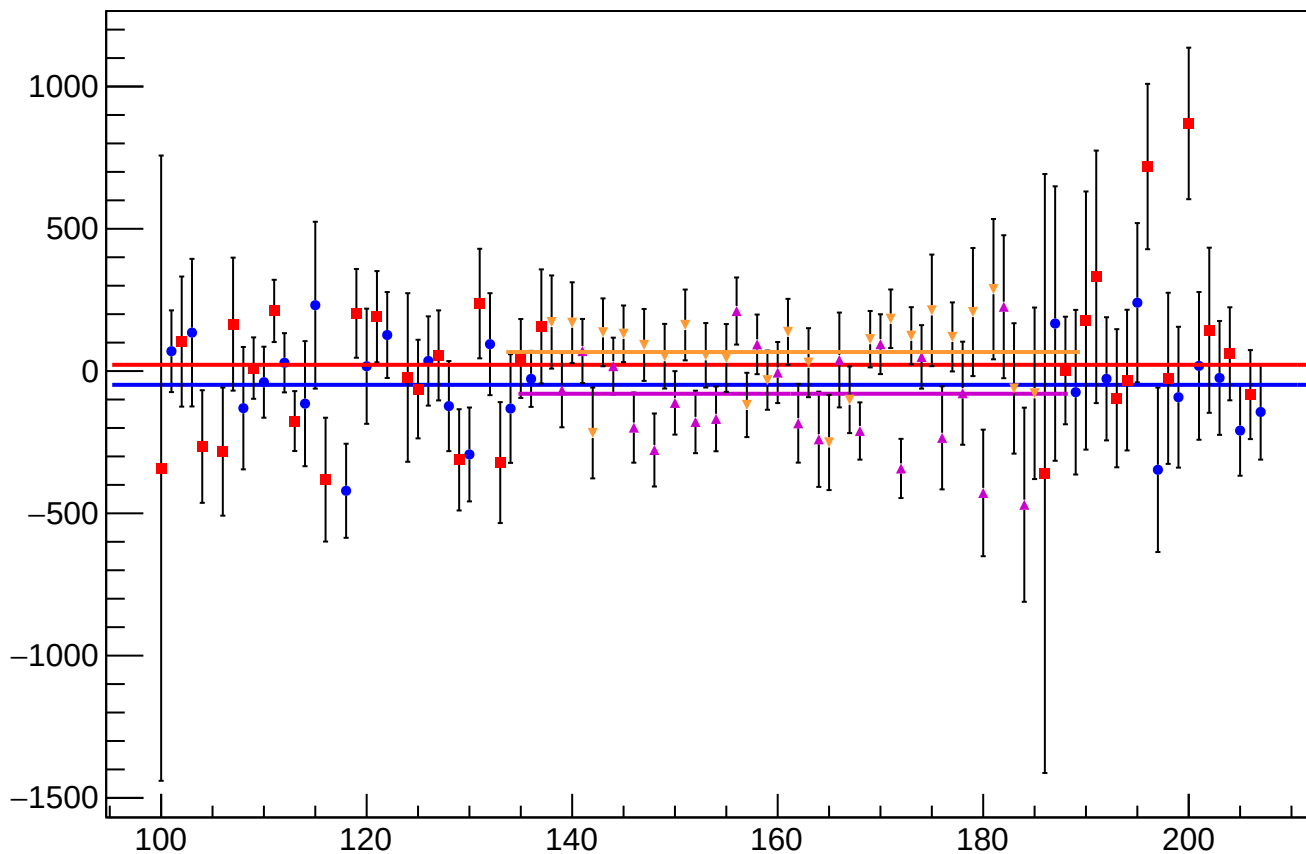
Left In: 784.833 $\pm$ 0.132  $\chi^2$ /NDF: 1063746.9/22

+ sign 889.559 $\pm$ 0.116  $\chi^2$ /NDF: 9068541.8/50

All: 892.287 $\pm$ 0.082  $\chi^2$ /NDF: 19630370.0/10

- sign 895.080 $\pm$ 0.117  $\chi^2$ /NDF: 10560703.4/53

dit\_asym\_sam\_3748\_avg\_mean vs Slug



Right In:  $-48.354 \pm 34.267$   $\chi^2/\text{NDF}$ : 16.8/25

Left Out:  $66.896 \pm 25.584$   $\chi^2/\text{NDF}$ : 19.6/24

Right Out:  $21.983 \pm 33.598$   $\chi^2/\text{NDF}$ : 42.8/30

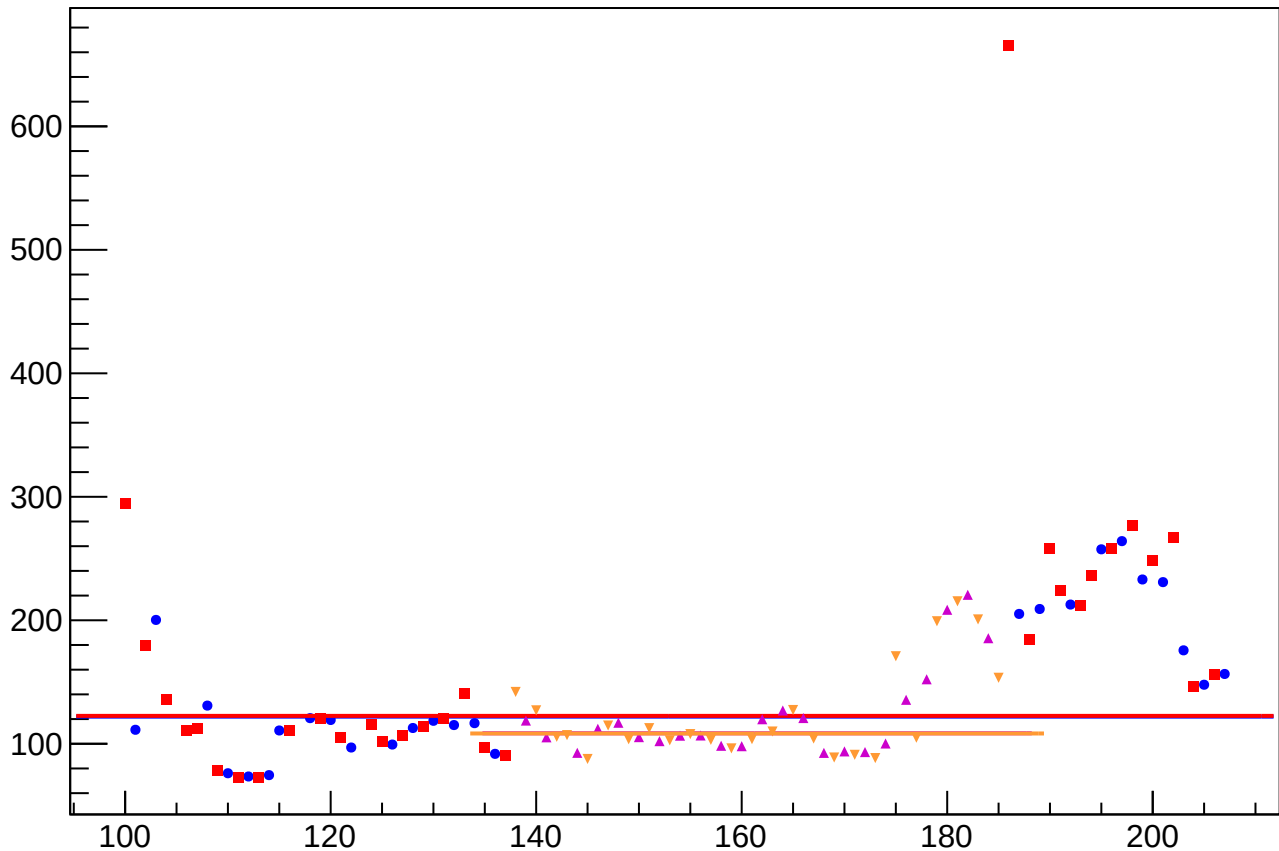
Left In:  $-79.766 \pm 26.299$   $\chi^2/\text{NDF}$ : 36.9/22

+ sign  $25.647 \pm 20.500$   $\chi^2/\text{NDF}$ : 43.7/50

All:  $-7.394 \pm 14.569$   $\chi^2/\text{NDF}$ : 134.3/104

- sign  $-41.109 \pm 20.709$   $\chi^2/\text{NDF}$ : 85.4/53

dit\_asym\_sam\_3748\_avg\_rms vs Slug



Right In: 121.999 $\pm$ 0.024  $\chi^2$ /NDF: 3875293.3/25

Left Out: 108.330 $\pm$ 0.018  $\chi^2$ /NDF: 1774599.9/24

Right Out: 122.584 $\pm$ 0.024  $\chi^2$ /NDF: 5366557.0/30

Left In: 108.492 $\pm$ 0.019  $\chi^2$ /NDF: 1379398.3/22

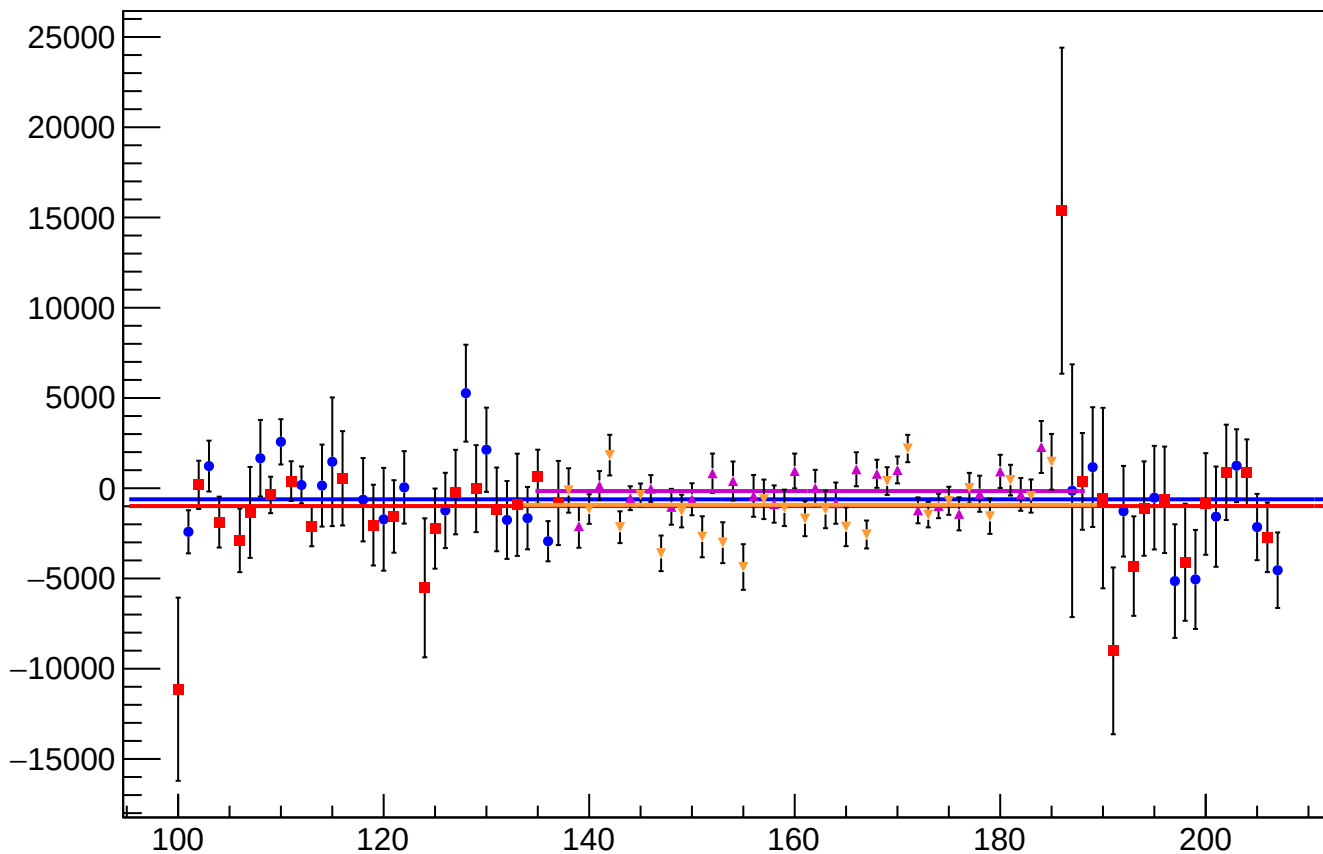
+ sign 113.222 $\pm$ 0.014  $\chi^2$ /NDF: 5854230.6/50

All: 113.531 $\pm$ 0.010  $\chi^2$ /NDF: 12819256.0/10

- sign 113.846 $\pm$ 0.015  $\chi^2$ /NDF: 6964109.5/53



asym\_sam\_3748\_avg\_dit\_correction\_mean vs Slug



Right In: -613.919+/-370.773  $\chi^2$ /NDF: 34.4/25

Left Out: -918.735+/-182.461  $\chi^2$ /NDF: 64.1/24

Right Out: -987.596+/-355.159  $\chi^2$ /NDF: 24.4/30

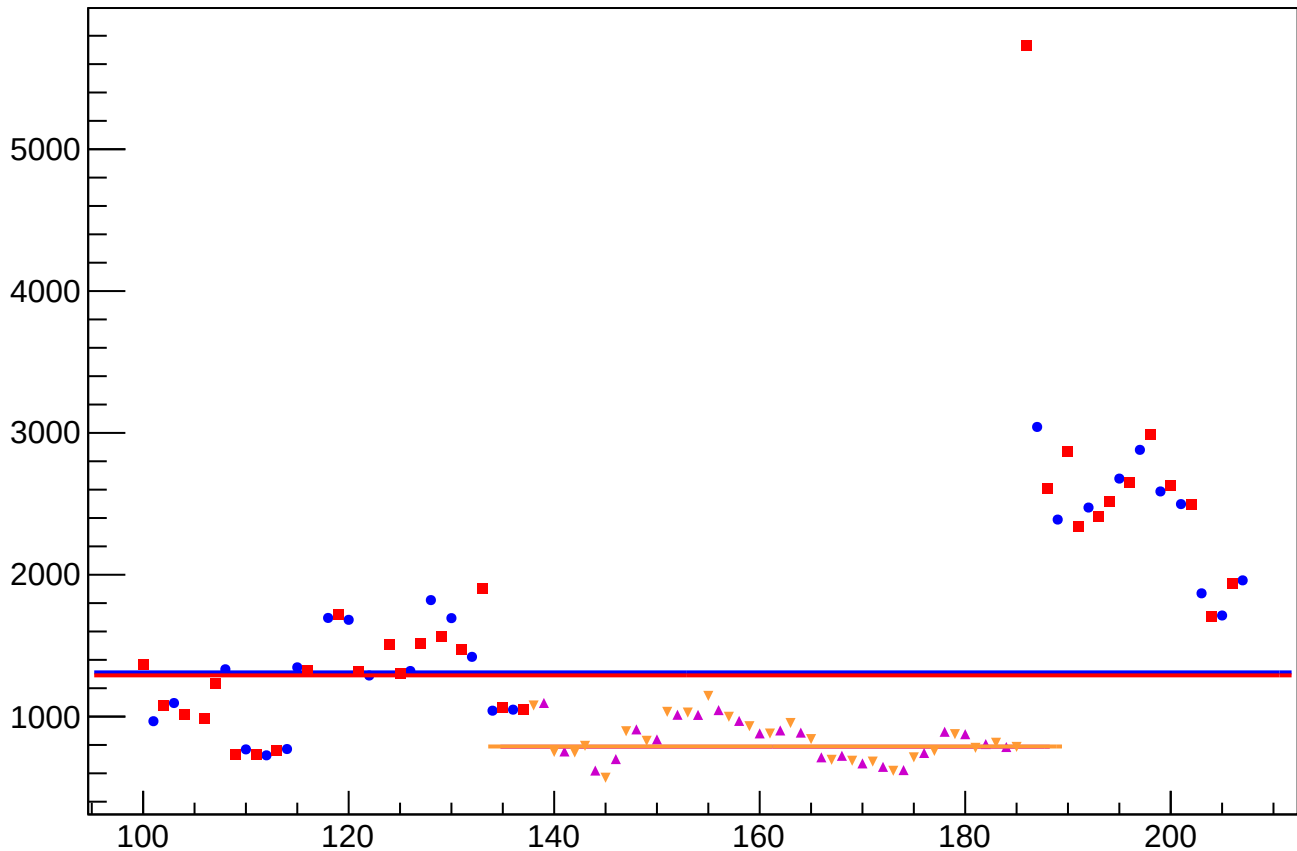
Left In: -155.874+/-187.116  $\chi^2$ /NDF: 23.1/22

+ sign -859.309+/-163.712  $\chi^2$ /NDF: 99.0/50

All: -600.855+/-116.405  $\chi^2$ /NDF: 155.9/104

- sign -336.578+/-165.546  $\chi^2$ /NDF: 51.8/53

asym\_sam\_3748\_avg\_dit\_correction\_rms vs Slug



Right In: 1311.582 $\pm$ 0.262  $\chi^2$ /NDF: 4678440.6/25

Left Out: 789.250 $\pm$ 0.129  $\chi^2$ /NDF: 1176799.1/24

Right Out: 1290.642 $\pm$ 0.251  $\chi^2$ /NDF: 6270336.1/30

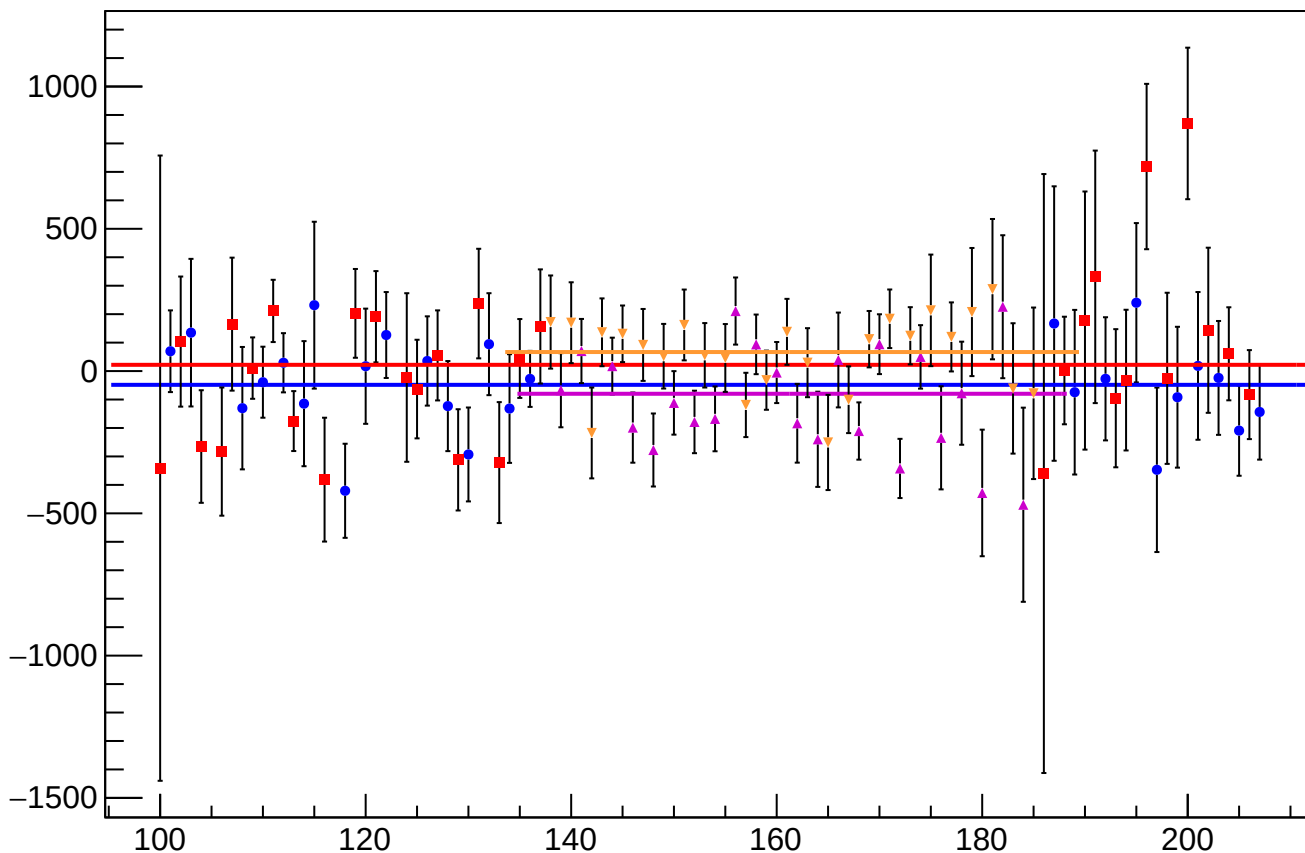
Left In: 787.390 $\pm$ 0.132  $\chi^2$ /NDF: 1041390.9/22

+ sign 891.083 $\pm$ 0.116  $\chi^2$ /NDF: 9050651.9/50

All: 893.875 $\pm$ 0.082  $\chi^2$ /NDF: 19506747.0/100

- sign 896.729 $\pm$ 0.117  $\chi^2$ /NDF: 10454919.0/53

# eigen\_dit\_asym\_sam\_3748\_avg\_mean vs Slug



Right In:  $-48.352 \pm 34.267$   $\chi^2/\text{NDF}$ : 16.8/25

Left Out:  $66.898 \pm 25.584$   $\chi^2/\text{NDF}$ : 19.6/24

Right Out:  $21.984 \pm 33.598$   $\chi^2/\text{NDF}$ : 42.8/30

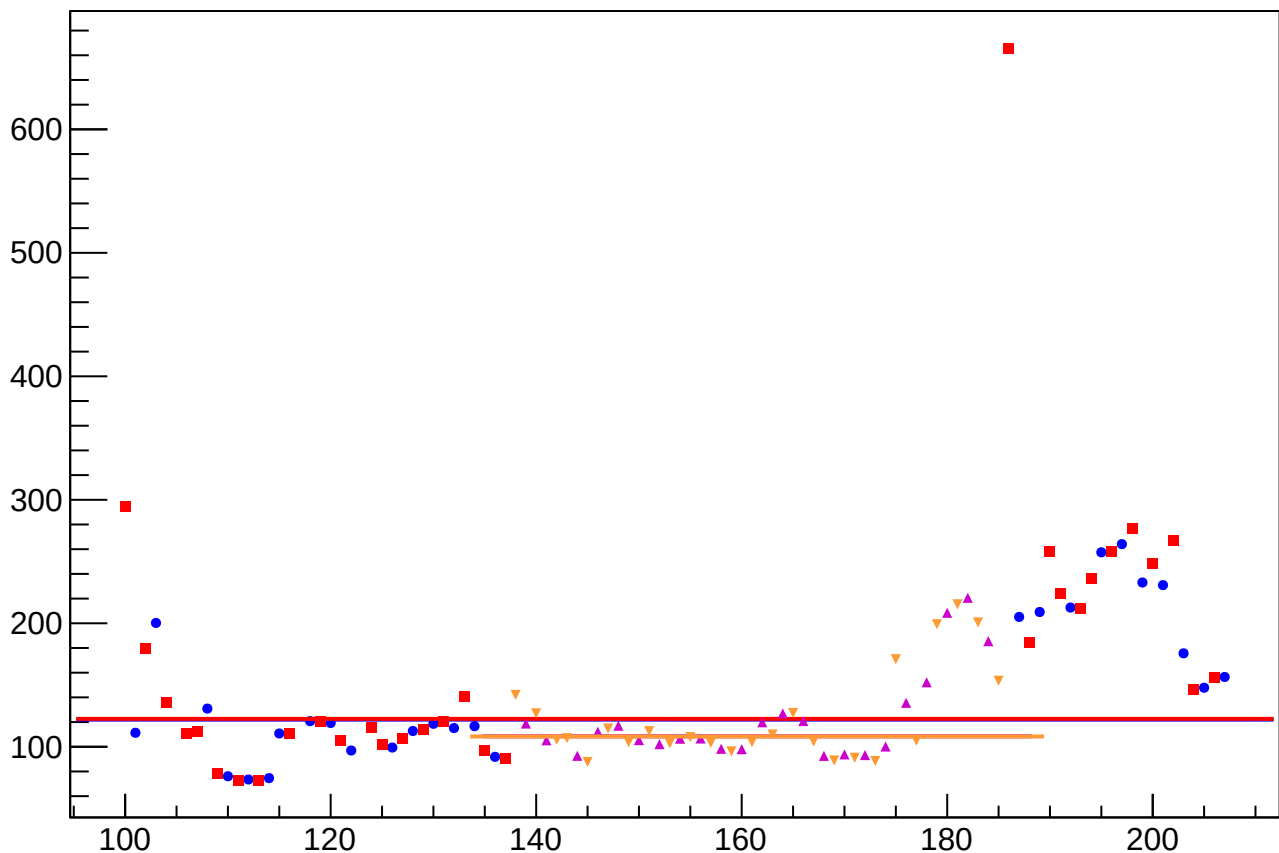
Left In:  $-79.766 \pm 26.299$   $\chi^2/\text{NDF}$ : 36.9/22

+ sign  $25.648 \pm 20.500$   $\chi^2/\text{NDF}$ : 43.7/50

All:  $-7.393 \pm 14.569$   $\chi^2/\text{NDF}$ : 134.3/104

- sign  $-41.108 \pm 20.709$   $\chi^2/\text{NDF}$ : 85.4/53

eigen\_dit\_asym\_sam\_3748\_avg\_rms vs Slug



Right In: 121.999 $\pm$ 0.024  $\chi^2$ /NDF: 3875281.0/25

Left Out: 108.330 $\pm$ 0.018  $\chi^2$ /NDF:1774594.6/24

Right Out: 122.584 $\pm$ 0.024  $\chi^2$ /NDF: 5366560.8/30

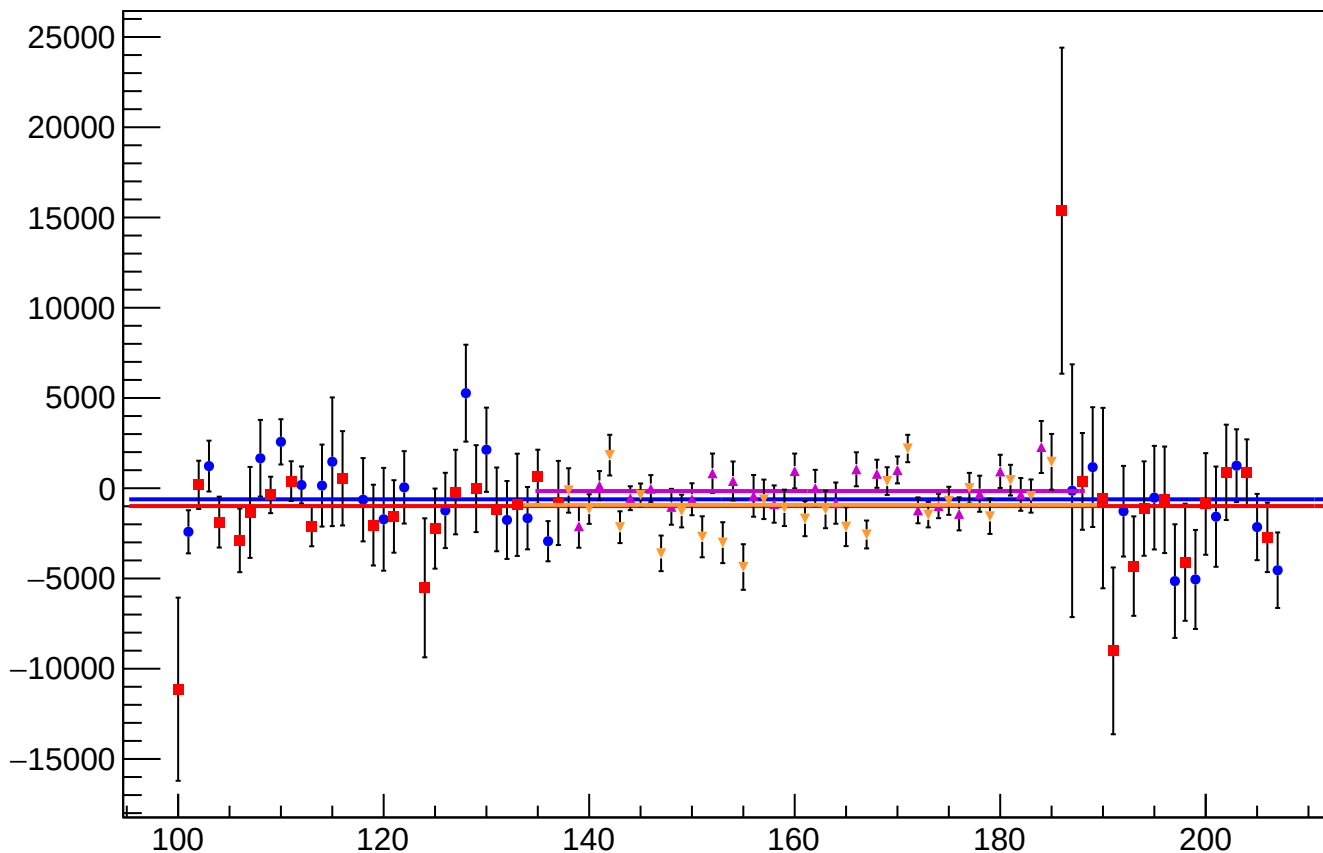
Left In: 108.493 $\pm$ 0.019  $\chi^2$ /NDF:1379379.3/22

+ sign 113.223 $\pm$ 0.014  $\chi^2$ /NDF: 5854207.5/50

All: 113.531 $\pm$ 0.010  $\chi^2$ /NDF: 12819212.6/10

- sign 113.846 $\pm$ 0.015  $\chi^2$ /NDF: 6964089.2/53

asym\_sam\_3748\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In: -613.917 $\pm$ 370.772  $\chi^2$ /NDF: 34.4/25

Left Out: -918.734 $\pm$ 182.461  $\chi^2$ /NDF: 64.1/24

Right Out: -987.595 $\pm$ 355.158  $\chi^2$ /NDF: 24.4/30

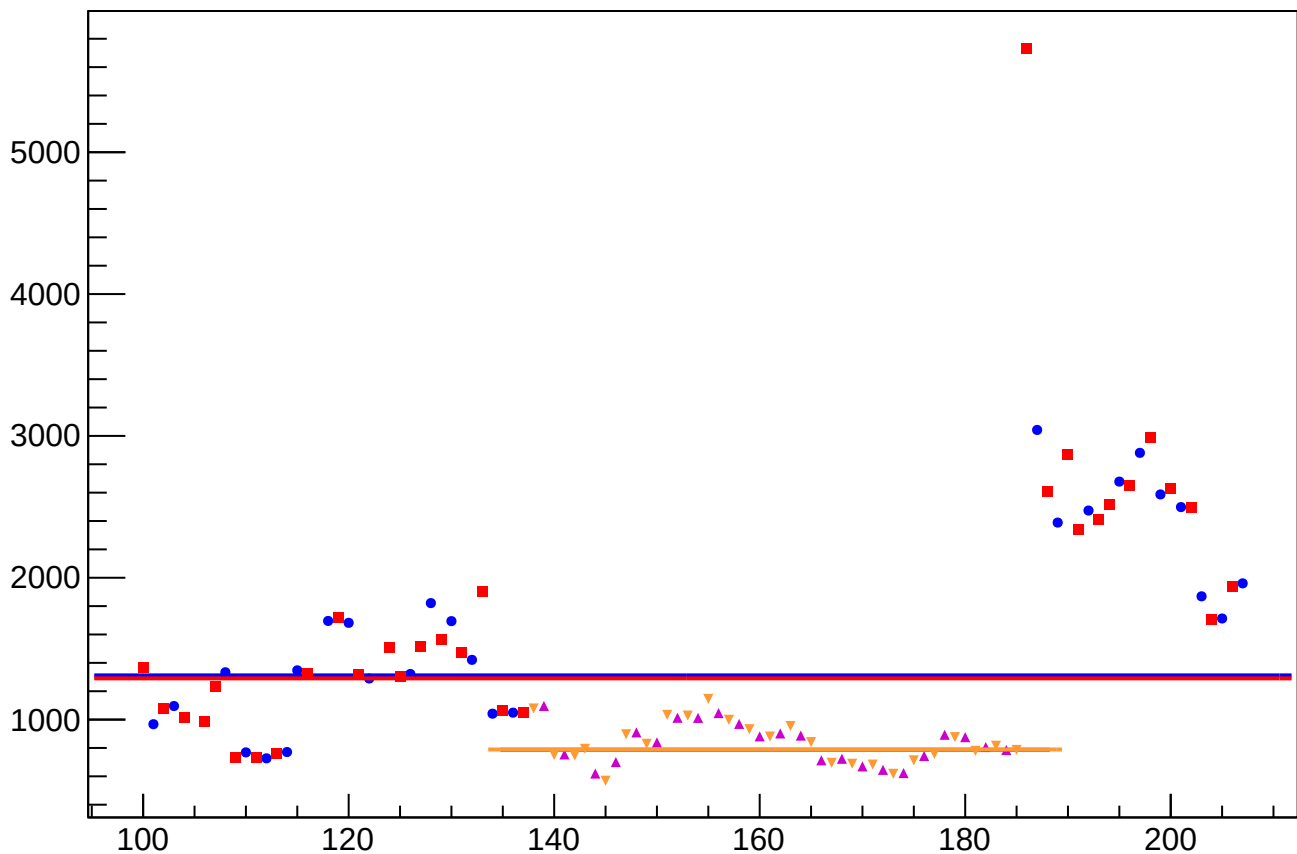
Left In: -155.873 $\pm$ 187.115  $\chi^2$ /NDF: 23.1/22

+ sign -859.307 $\pm$ 163.711  $\chi^2$ /NDF: 99.0/50

All: -600.854 $\pm$ 116.404  $\chi^2$ /NDF: 155.9/104

- sign -336.577 $\pm$ 165.545  $\chi^2$ /NDF: 51.8/53

asym\_sam\_3748\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 1311.580 $\pm$ 0.262  $\chi^2$ /NDF: 4678450.1/25

Left Out: 789.248 $\pm$ 0.129  $\chi^2$ /NDF: 1176801.9/24

Right Out: 1290.640 $\pm$ 0.251  $\chi^2$ /NDF: 6270340.8/30

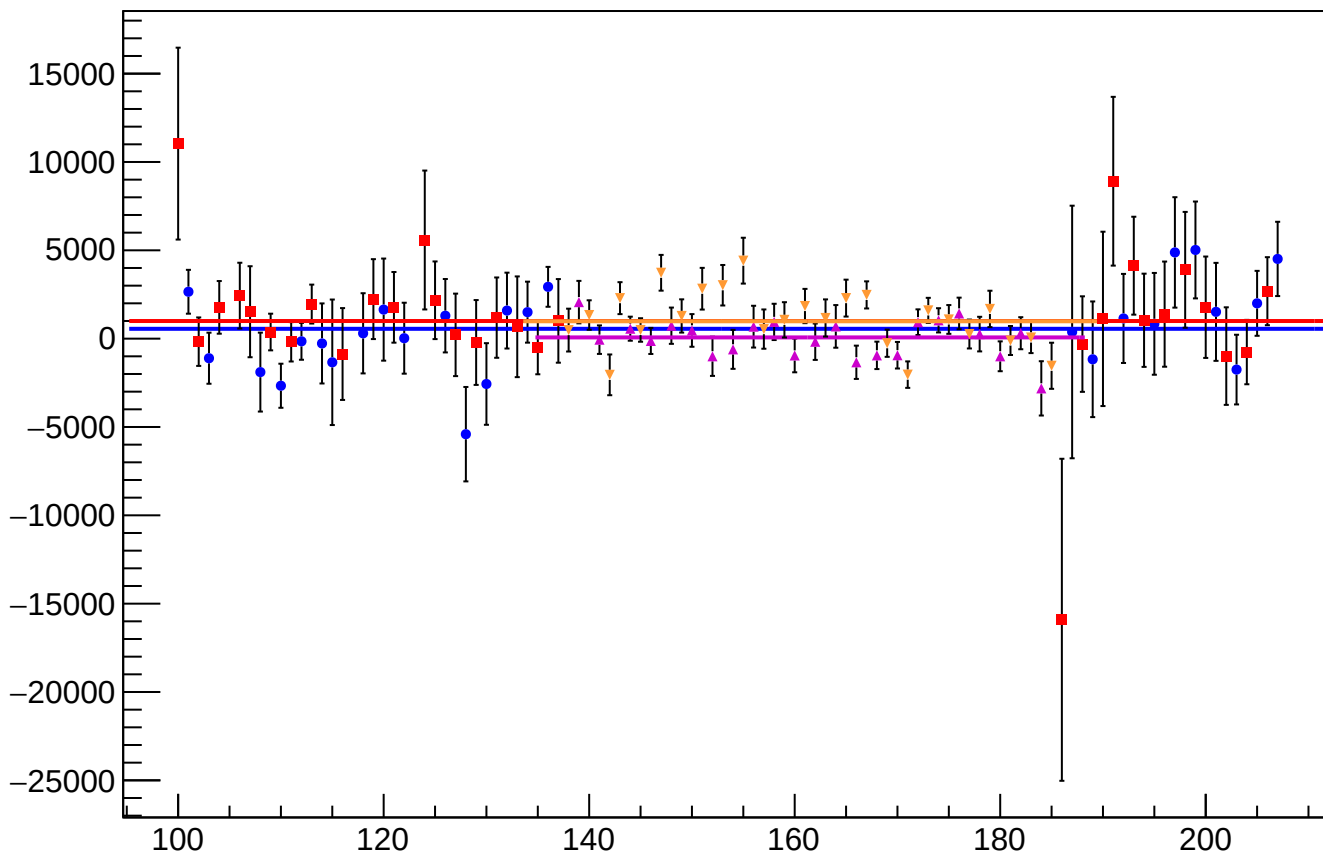
Left In: 787.388 $\pm$ 0.132  $\chi^2$ /NDF: 1041391.2/22

+ sign 891.082 $\pm$ 0.116  $\chi^2$ /NDF: 9050663.8/50

All: 893.873 $\pm$ 0.082  $\chi^2$ /NDF: 19506765.5/100

- sign 896.727 $\pm$ 0.117  $\chi^2$ /NDF: 10454925.6/53

# asym\_sam\_3748\_avg\_mean vs Slug



Right In: 557.048 $\pm$ 373.842  $\chi^2/\text{NDF}$ : 35.6/25

Left Out: 985.656 $\pm$ 183.601  $\chi^2/\text{NDF}$ : 63.7/24

Right Out: 998.012 $\pm$ 360.580  $\chi^2/\text{NDF}$ : 22.0/30

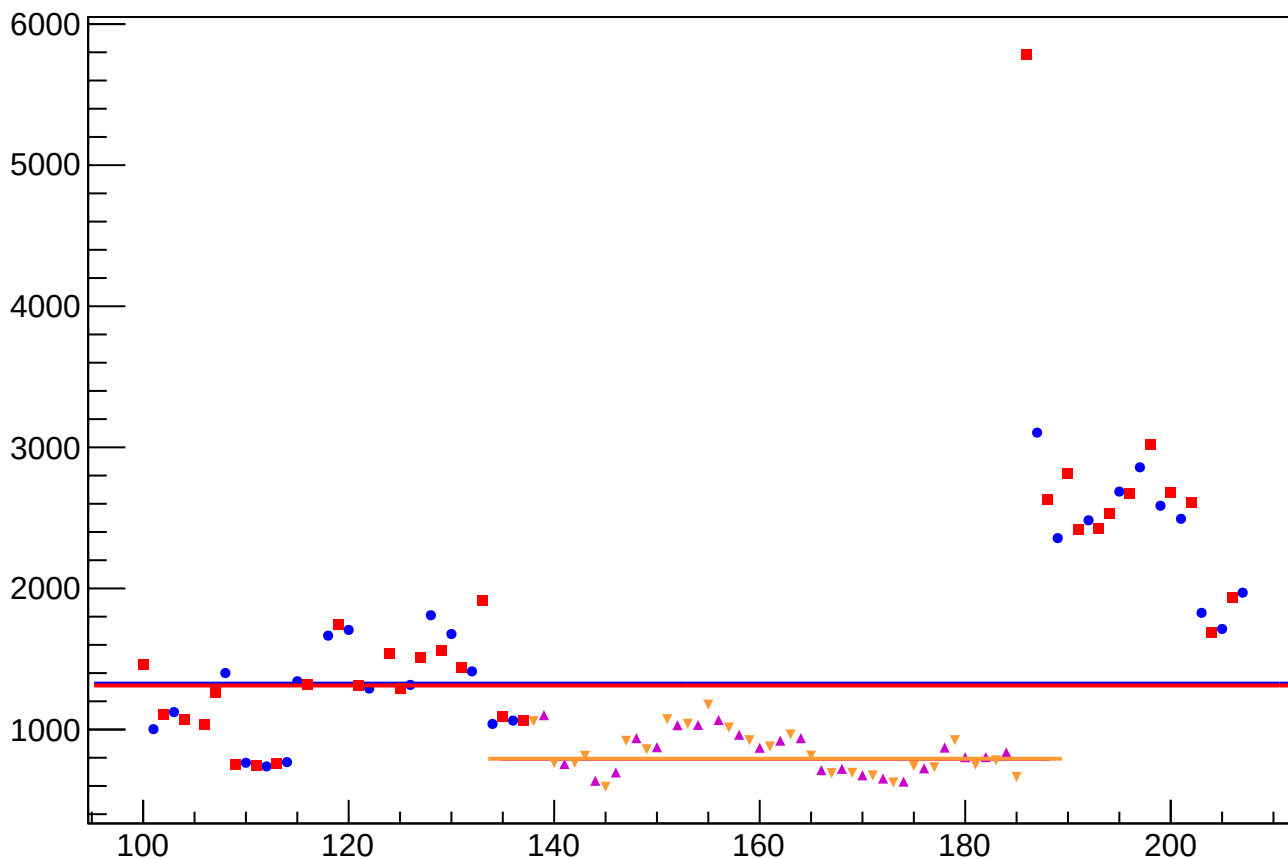
Left In: 70.089 $\pm$ 188.036  $\chi^2/\text{NDF}$ : 24.4/22

+ sign 902.366 $\pm$ 164.799  $\chi^2/\text{NDF}$ : 100.4/50

All: 589.110 $\pm$ 117.206  $\chi^2/\text{NDF}$ : 159.3/104

- sign 268.480 $\pm$ 166.727  $\chi^2/\text{NDF}$ : 51.6/53

# asym\_sam\_3748\_avg\_rms vs Slug



Right In: 1325.232 $\pm$ 0.264  $\chi^2$ /NDF: 4547016.3/25

Left Out: 793.051 $\pm$ 0.130  $\chi^2$ /NDF: 1193972.3/24

Right Out: 1312.055 $\pm$ 0.255  $\chi^2$ /NDF: 6174591.9/30

Left In: 791.155 $\pm$ 0.133  $\chi^2$ /NDF: 1049107.7/22

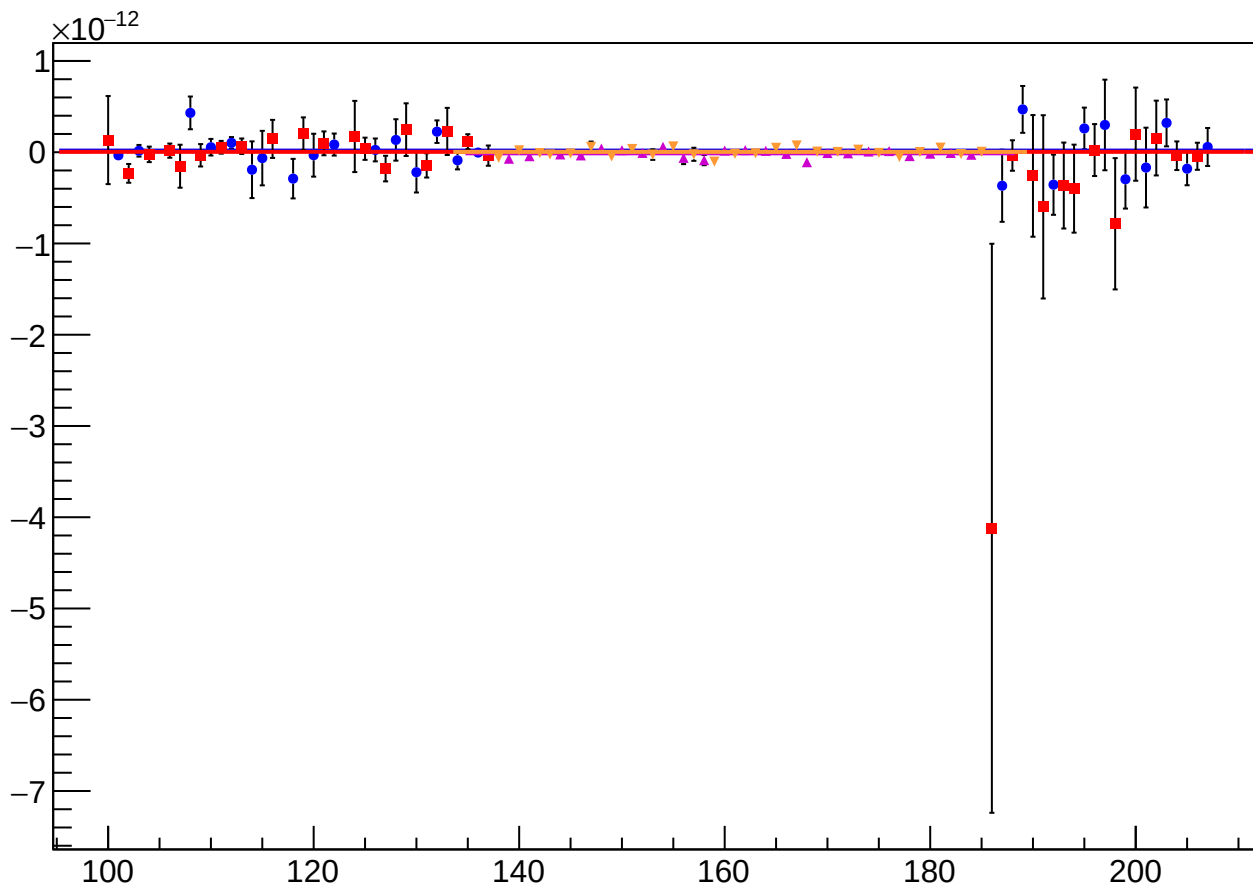
+ sign 896.468 $\pm$ 0.117  $\chi^2$ /NDF: 9006346.8/50

All: 899.461 $\pm$ 0.083  $\chi^2$ /NDF: 19512836.9/100

- sign 902.524 $\pm$ 0.118  $\chi^2$ /NDF: 10505155.4/53



asym\_sam\_3748\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 27.4/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:34.0/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 21.2/30

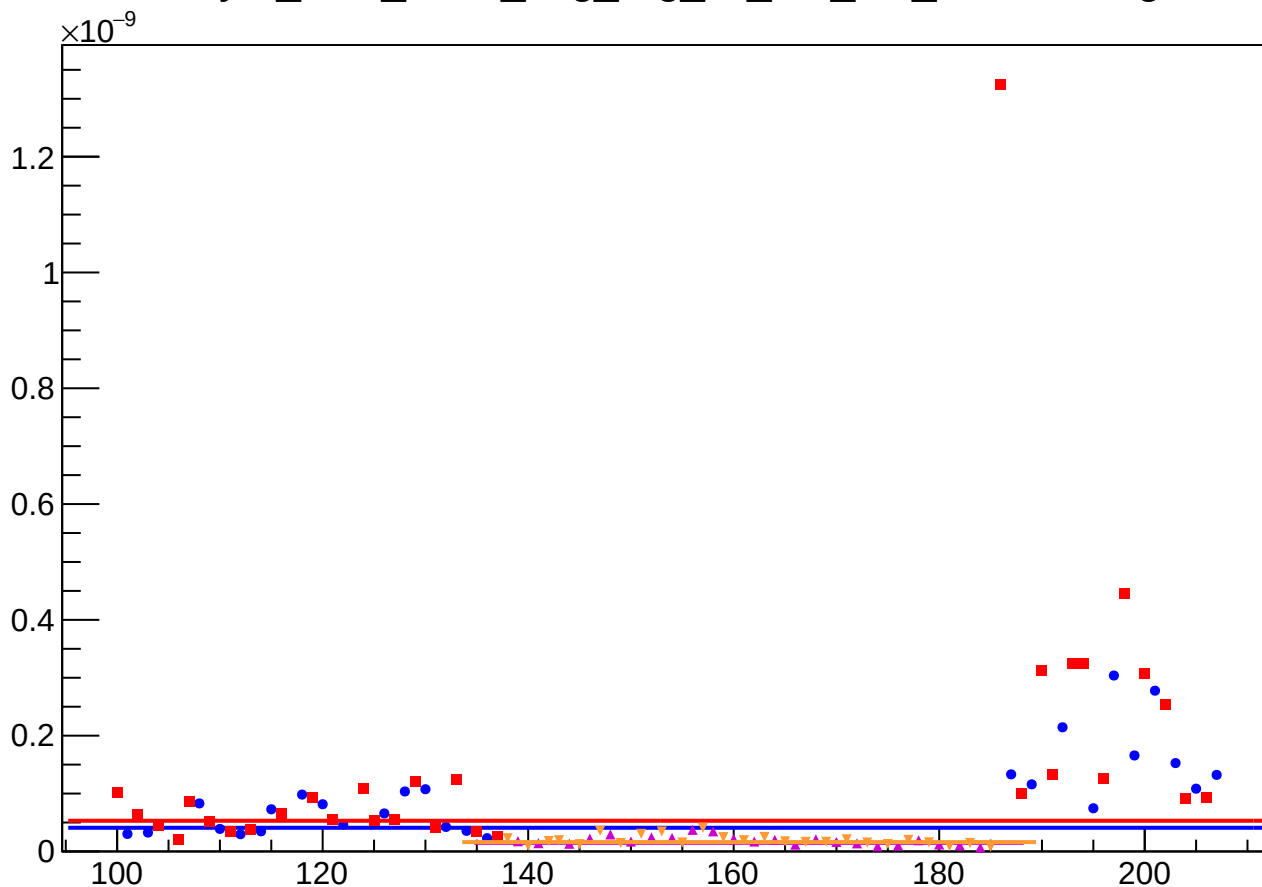
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:25.3/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 61.8/50

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 112.0/104

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 46.9/53

asym\_sam\_3748\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4723814.7/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1725685.8/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5370494.6/30

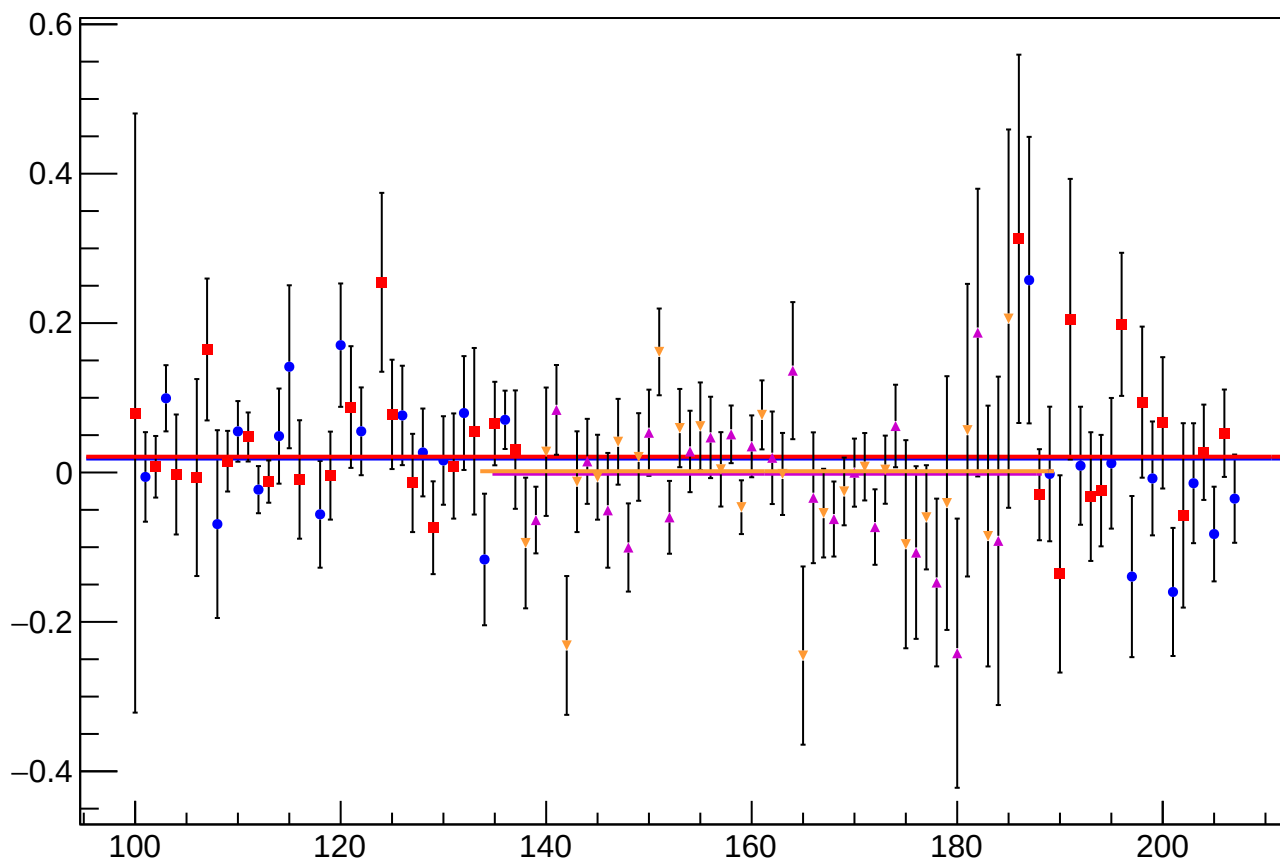
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1661952.2/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8950238.9/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 20235781.1/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11249181.6/53

asym\_sam\_3748\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.019 \pm 0.012$   $\chi^2/\text{NDF}$ : 30.2/25

Left Out:  $0.002 \pm 0.012$   $\chi^2/\text{NDF}$ : 30.4/24

Right Out:  $0.021 \pm 0.012$   $\chi^2/\text{NDF}$ : 23.5/30

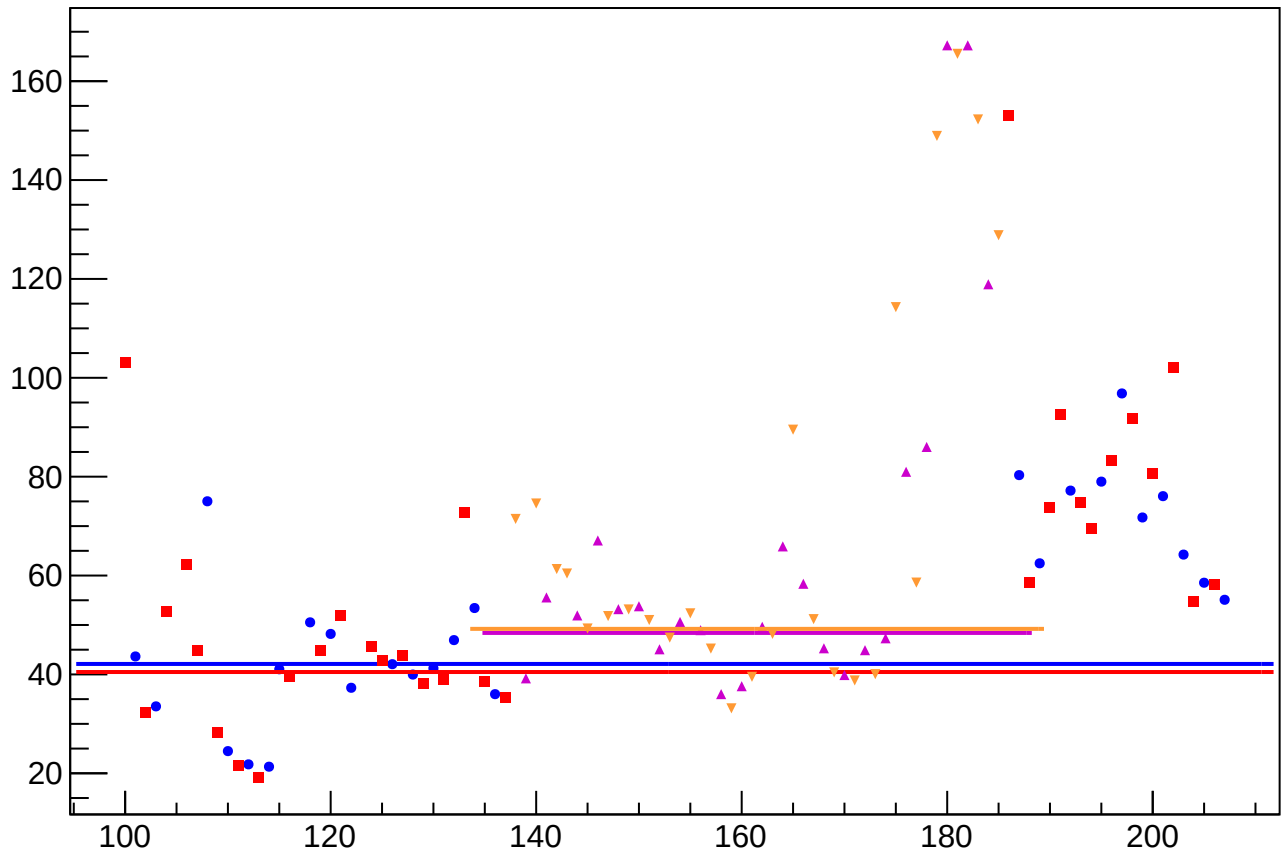
Left In:  $-0.002 \pm 0.012$   $\chi^2/\text{NDF}$ : 26.1/22

+ sign  $0.010 \pm 0.009$   $\chi^2/\text{NDF}$ : 61.5/50

All:  $0.010 \pm 0.006$   $\chi^2/\text{NDF}$ : 112.9/104

- sign  $0.010 \pm 0.008$   $\chi^2/\text{NDF}$ : 51.4/53

asym\_sam\_3748\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 42.119+/-0.009  $\chi^2/\text{NDF}$ : 4221950.2/25

Left Out: 49.216+/-0.009  $\chi^2/\text{NDF}$ : 4171670.0/24

Right Out: 40.486+/-0.008  $\chi^2/\text{NDF}$ : 6066873.2/30

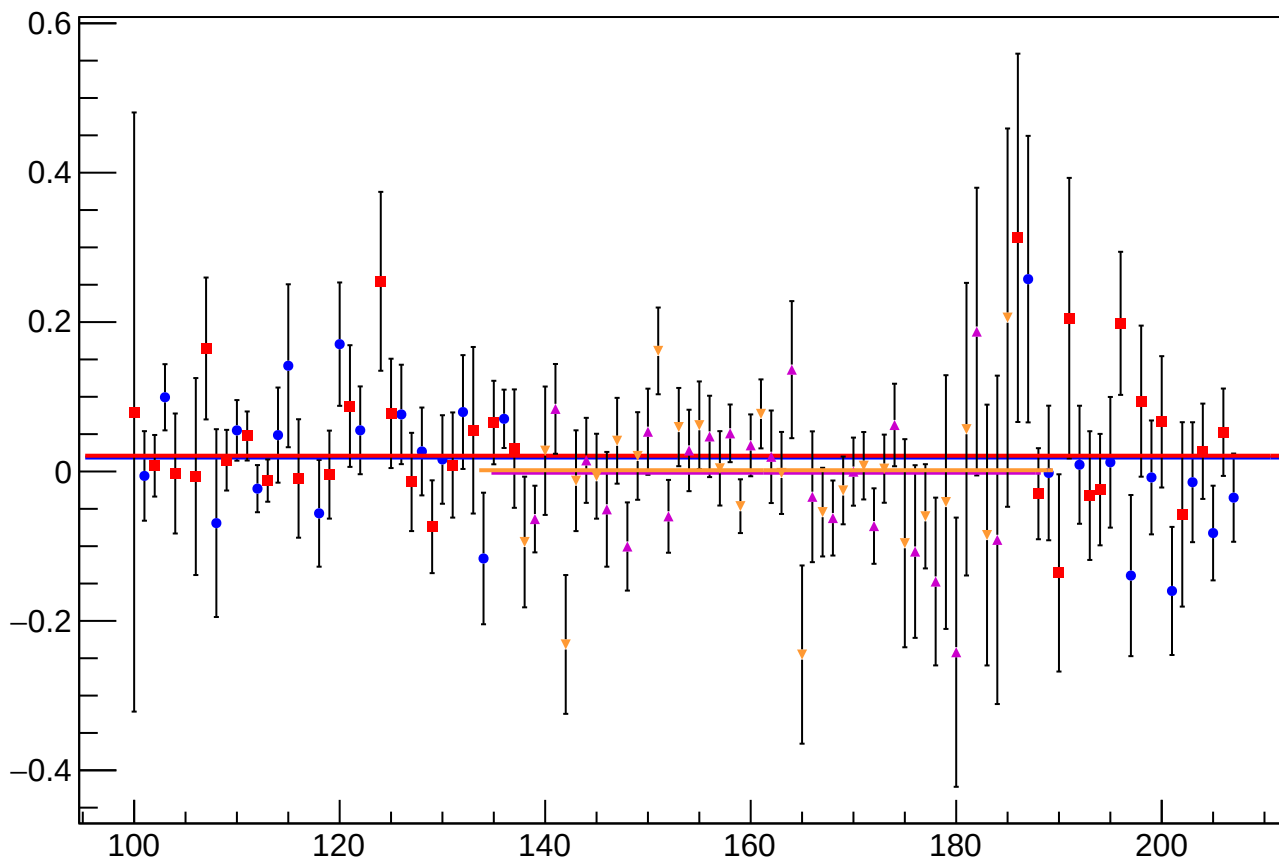
Left In: 48.392+/-0.009  $\chi^2/\text{NDF}$ : 3033240.8/22

+ sign 45.642+/-0.006  $\chi^2/\text{NDF}$ : 8729146.4/50

All: 44.896+/-0.004  $\chi^2/\text{NDF}$ : 18292887.3/104

- sign 44.185+/-0.006  $\chi^2/\text{NDF}$ : 9534813.3/53

asym\_sam\_3748\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.019 $\pm$ 0.012  $\chi^2$ /NDF: 30.2/25

Left Out: 0.002 $\pm$ 0.012  $\chi^2$ /NDF:30.4/24

Right Out: 0.021 $\pm$ 0.012  $\chi^2$ /NDF: 23.5/30

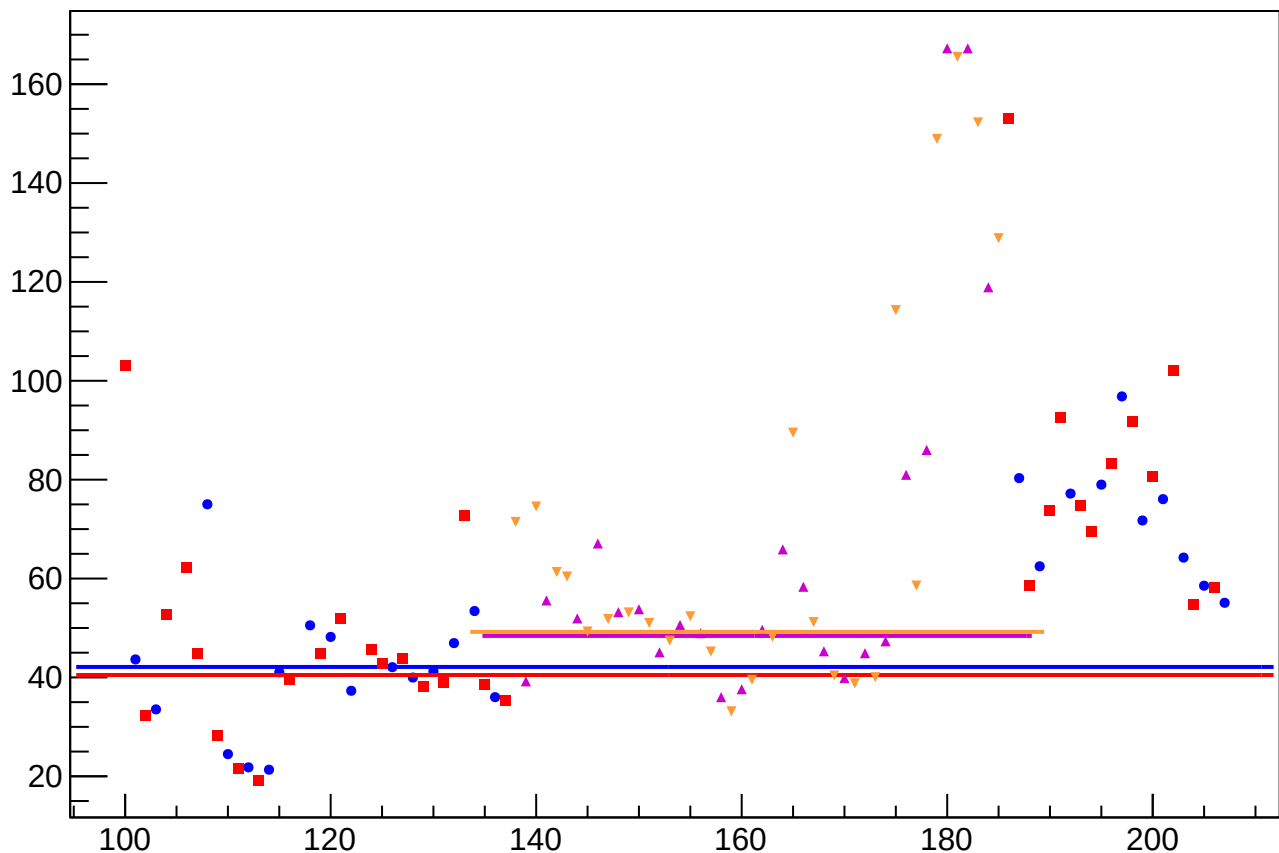
Left In: -0.002 $\pm$ 0.012  $\chi^2$ /NDF:26.1/22

+ sign 0.010 $\pm$ 0.009  $\chi^2$ /NDF: 61.5/50

All: 0.010 $\pm$ 0.006  $\chi^2$ /NDF: 112.9/104

- sign 0.010 $\pm$ 0.008  $\chi^2$ /NDF: 51.4/53

asym\_sam\_3748\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 42.119+/-0.009  $\chi^2/\text{NDF}$ : 4221950.2/25

Left Out: 49.216+/-0.009  $\chi^2/\text{NDF}$ : 4171670.0/24

Right Out: 40.486+/-0.008  $\chi^2/\text{NDF}$ : 6066873.2/30

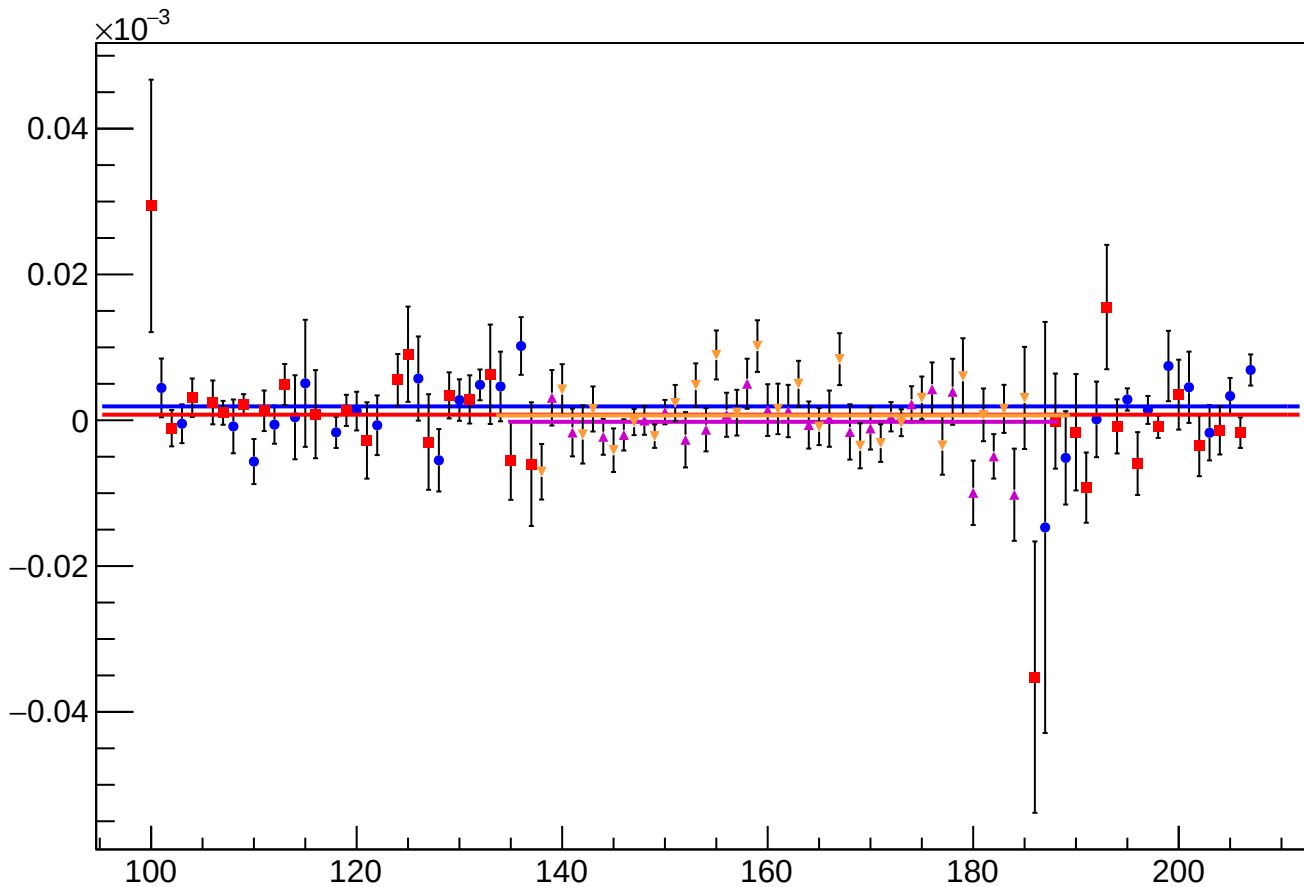
Left In: 48.392+/-0.009  $\chi^2/\text{NDF}$ : 3033240.8/22

+ sign 45.642+/-0.006  $\chi^2/\text{NDF}$ : 8729146.4/50

All: 44.896+/-0.004  $\chi^2/\text{NDF}$ : 18292887.3/104

- sign 44.185+/-0.006  $\chi^2/\text{NDF}$ : 9534813.3/53

asym\_sam\_3748\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 32.7/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:41.7/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 33.8/30

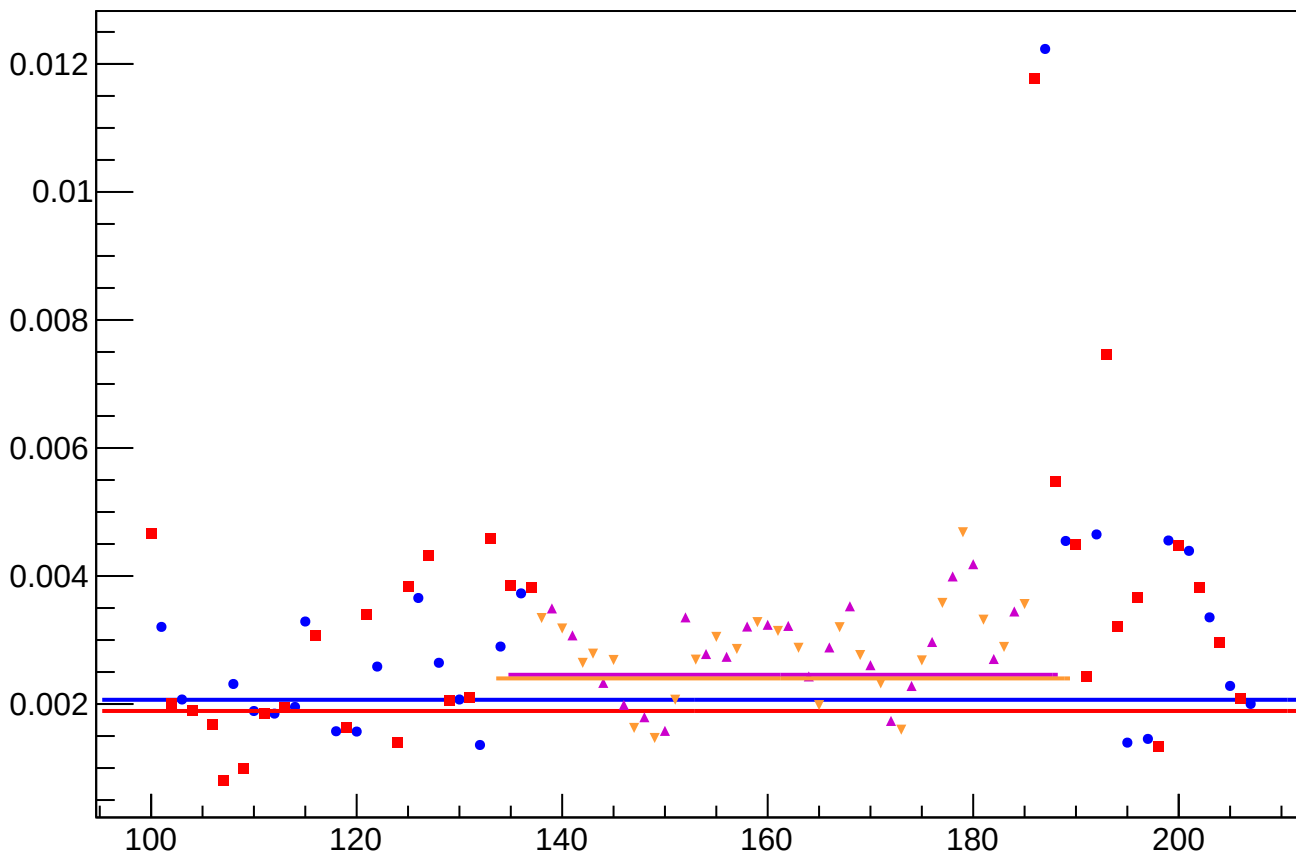
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:19.8/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 76.7/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 134.3/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 55.0/53

asym\_sam\_3748\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 4138249.6/25

Left Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF:3123870.1/24

Right Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 7579403.8/30

Left In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF:2629718.7/22

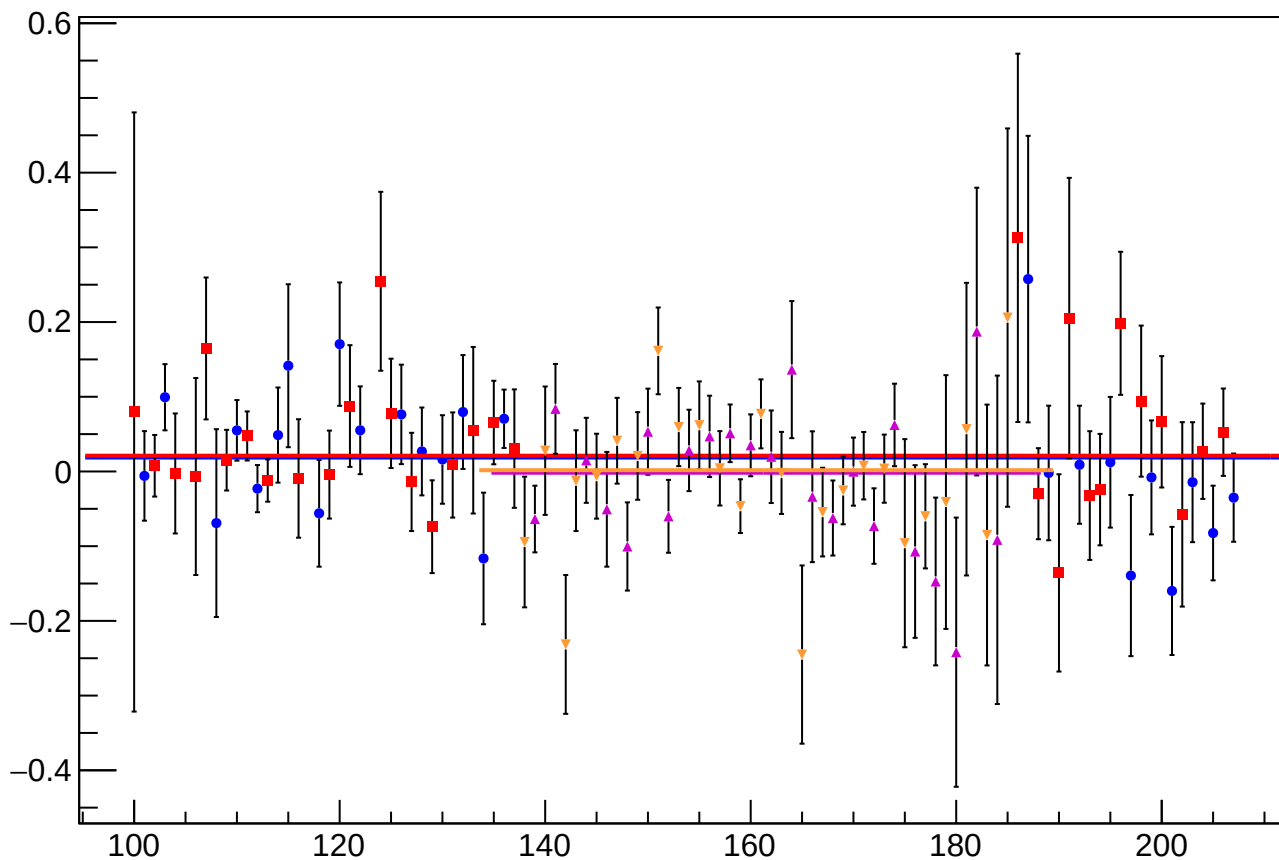
+ sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 7589081.9/50

All: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 18808369.6/104

- sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 11170588.4/53



asym\_sam\_3748\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.019 $\pm$ 0.012  $\chi^2$ /NDF: 30.2/25

Left Out: 0.002 $\pm$ 0.012  $\chi^2$ /NDF:30.4/24

Right Out: 0.021 $\pm$ 0.012  $\chi^2$ /NDF: 23.5/30

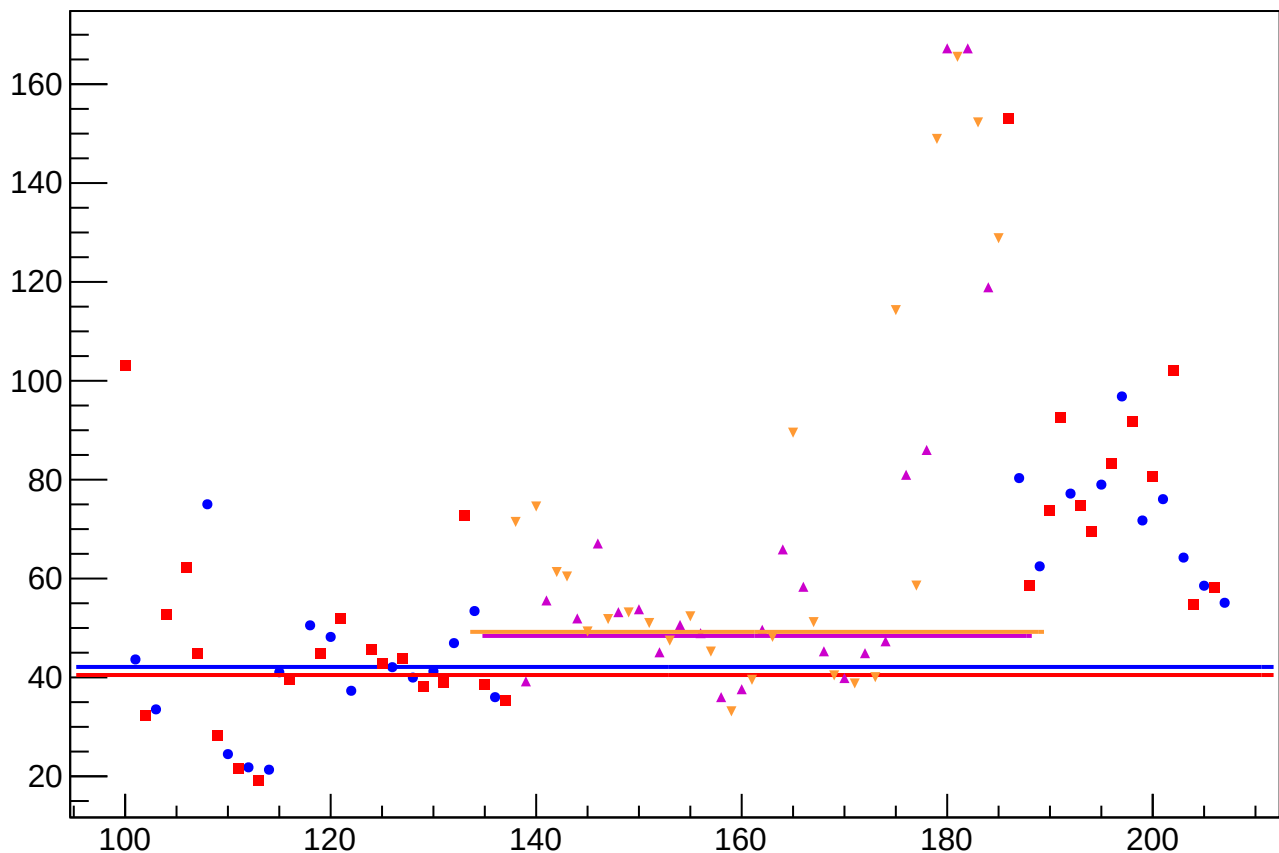
Left In: -0.002 $\pm$ 0.012  $\chi^2$ /NDF:26.1/22

+ sign 0.010 $\pm$ 0.009  $\chi^2$ /NDF: 61.5/50

All: 0.010 $\pm$ 0.006  $\chi^2$ /NDF: 112.9/104

- sign 0.010 $\pm$ 0.008  $\chi^2$ /NDF: 51.4/53

asym\_sam\_3748\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 42.119+/-0.009  $\chi^2$ /NDF: 4221829.8/25

Left Out: 49.217+/-0.009  $\chi^2$ /NDF: 4171640.8/24

Right Out: 40.487+/-0.008  $\chi^2$ /NDF: 6066814.2/30

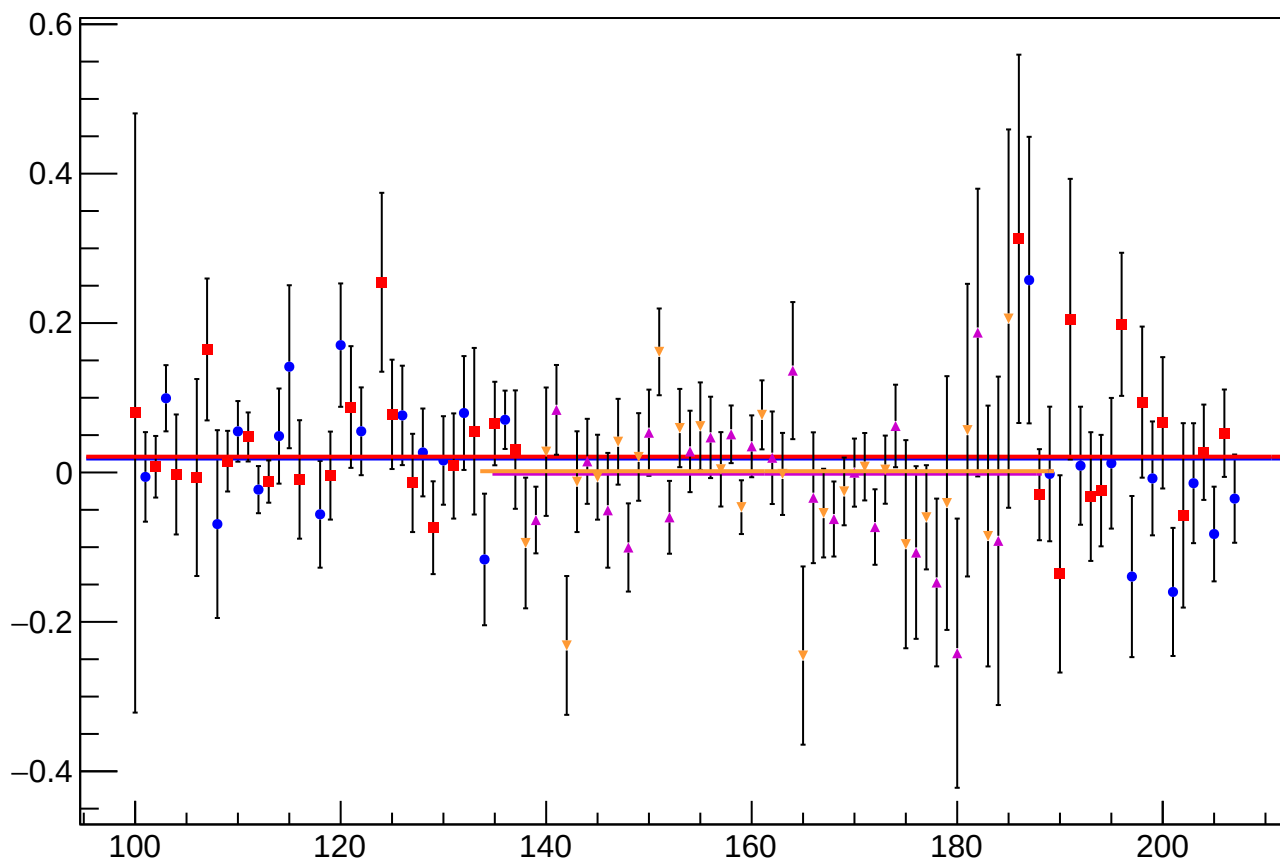
Left In: 48.393+/-0.009  $\chi^2$ /NDF: 3033208.4/22

+ sign 45.642+/-0.006  $\chi^2$ /NDF: 8729011.5/50

All: 44.897+/-0.004  $\chi^2$ /NDF: 18292659.1/104

- sign 44.186+/-0.006  $\chi^2$ /NDF: 9534722.5/53

asym\_sam\_3748\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.019 $\pm$ 0.012  $\chi^2$ /NDF: 30.2/25

Left Out: 0.002 $\pm$ 0.012  $\chi^2$ /NDF:30.4/24

Right Out: 0.021 $\pm$ 0.012  $\chi^2$ /NDF: 23.5/30

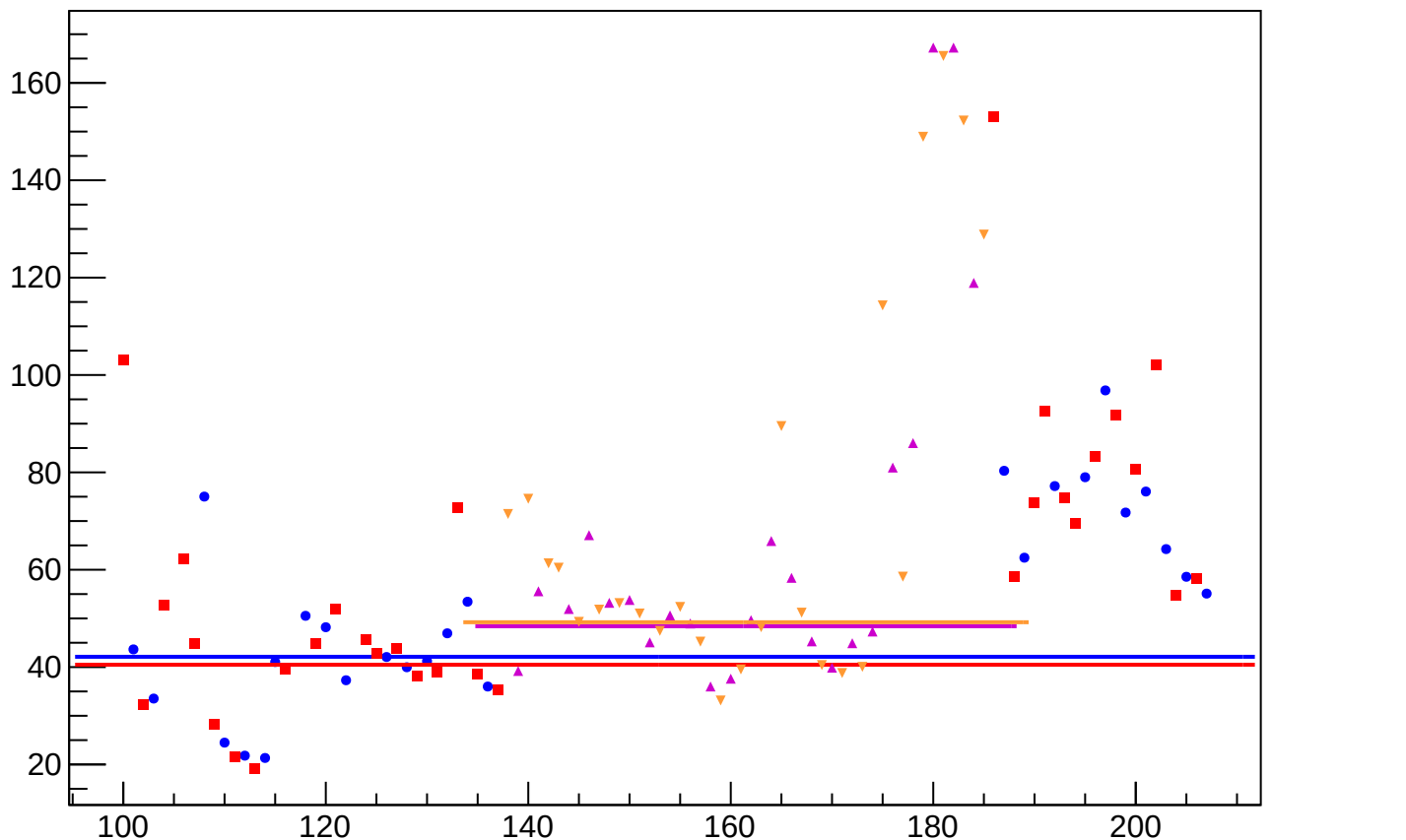
Left In: -0.002 $\pm$ 0.012  $\chi^2$ /NDF:26.1/22

+ sign 0.010 $\pm$ 0.009  $\chi^2$ /NDF: 61.5/50

All: 0.010 $\pm$ 0.006  $\chi^2$ /NDF: 112.9/104

- sign 0.010 $\pm$ 0.008  $\chi^2$ /NDF: 51.4/53

asym\_sam\_3748\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 42.119+/-0.009  $\chi^2/\text{NDF}$ : 4221829.8/25

Left Out: 49.217+/-0.009  $\chi^2/\text{NDF}$ : 4171640.8/24

Right Out: 40.487+/-0.008  $\chi^2/\text{NDF}$ : 6066814.2/30

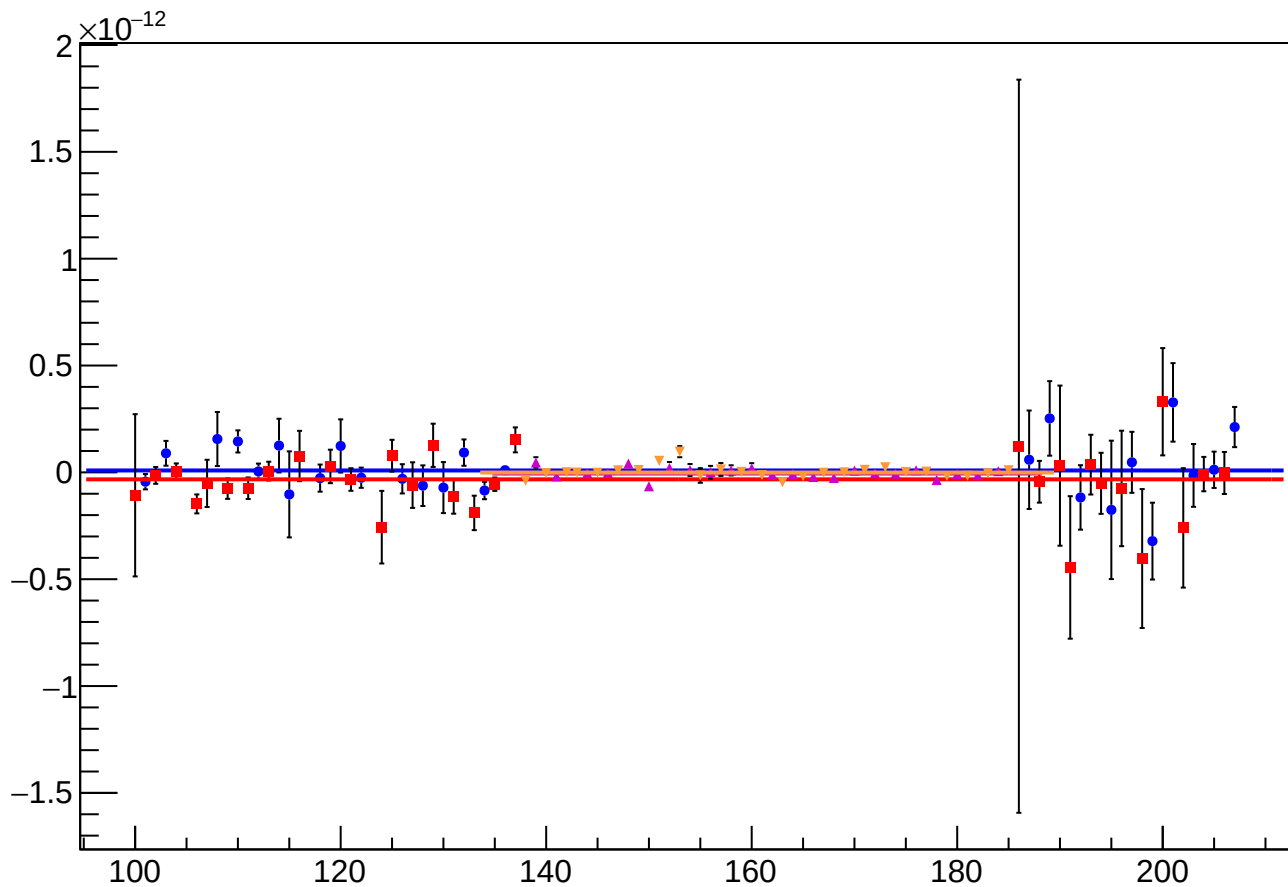
Left In: 48.393+/-0.009  $\chi^2/\text{NDF}$ : 3033208.4/22

+ sign 45.642+/-0.006  $\chi^2/\text{NDF}$ : 8729011.5/50

All: 44.897+/-0.004  $\chi^2/\text{NDF}$ : 18292659.1/104

- sign 44.186+/-0.006  $\chi^2/\text{NDF}$ : 9534722.5/53

asym\_sam\_3748\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 37.8/25

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 37.0/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 39.6/30

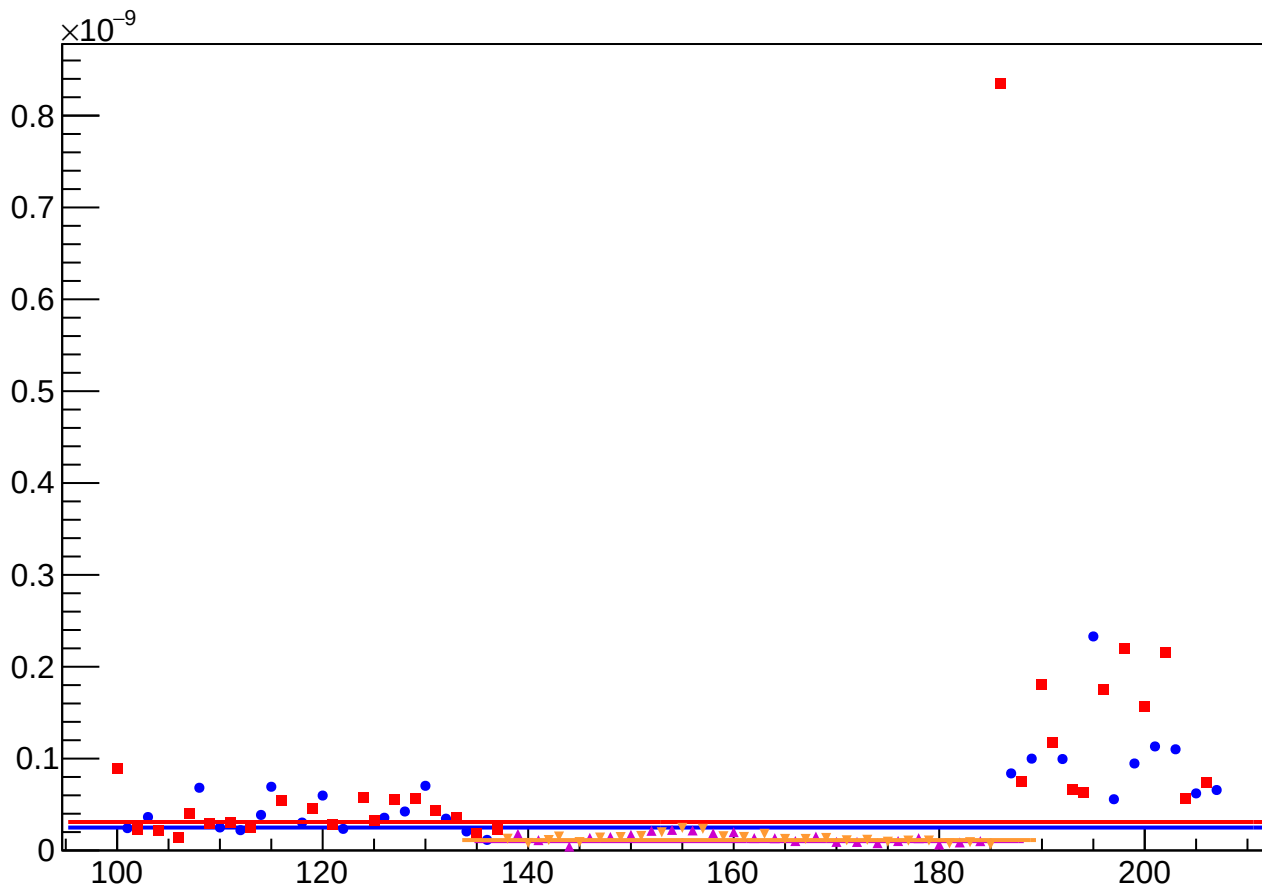
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 28.4/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 75.5/50

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 150.6/104

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 72.5/53

asym\_sam\_3748\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 6402572.2/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:2206266.5/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 6186461.8/30

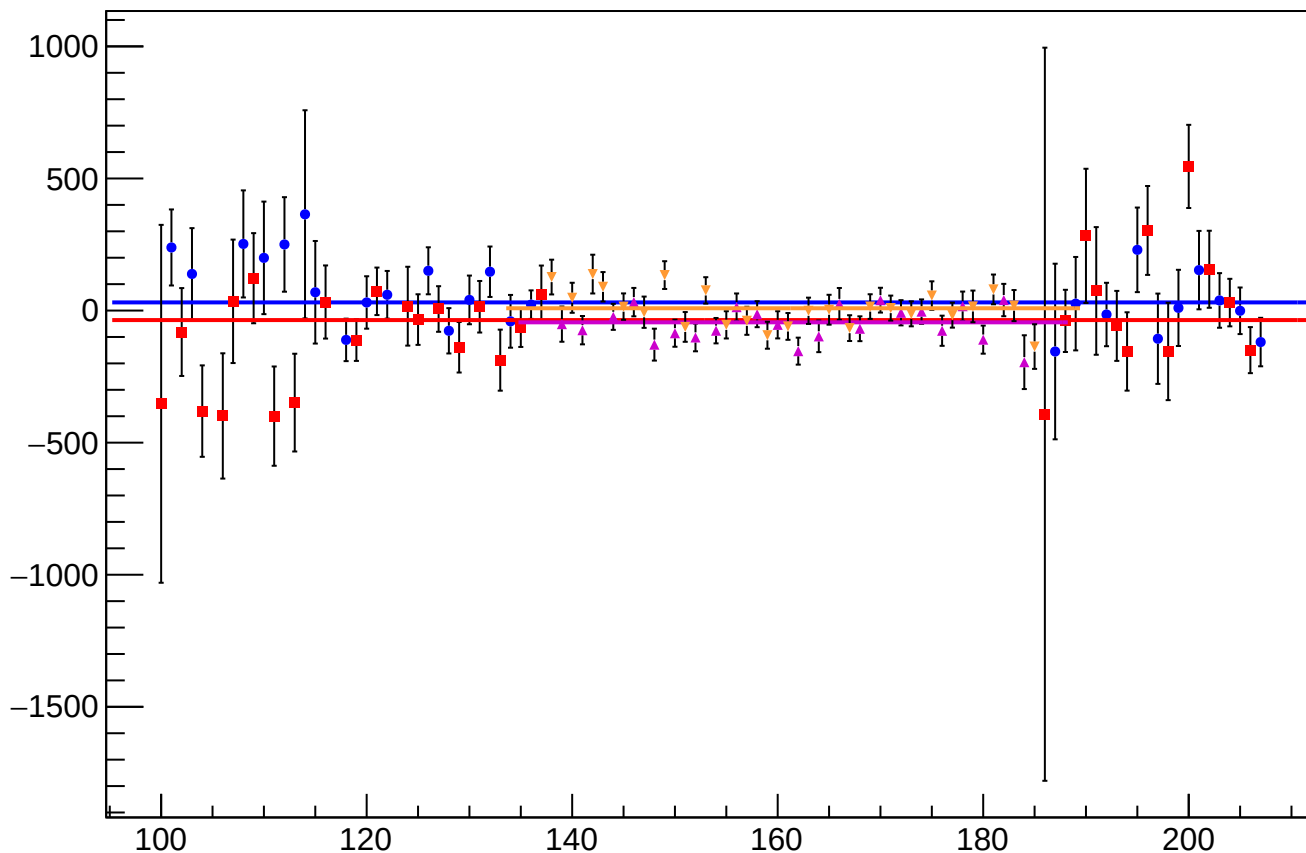
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:4024430.8/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 11406872.3/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 26939902.9/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 15433857.0/53

# reg\_asym\_sam\_1526\_avg\_mean vs Slug



Right In:  $30.872 \pm 21.705$   $\chi^2/\text{NDF}$ : 21.3/25

Left Out:  $8.756 \pm 10.770$   $\chi^2/\text{NDF}$ : 34.6/24

Right Out:  $-36.006 \pm 22.374$   $\chi^2/\text{NDF}$ : 45.9/30

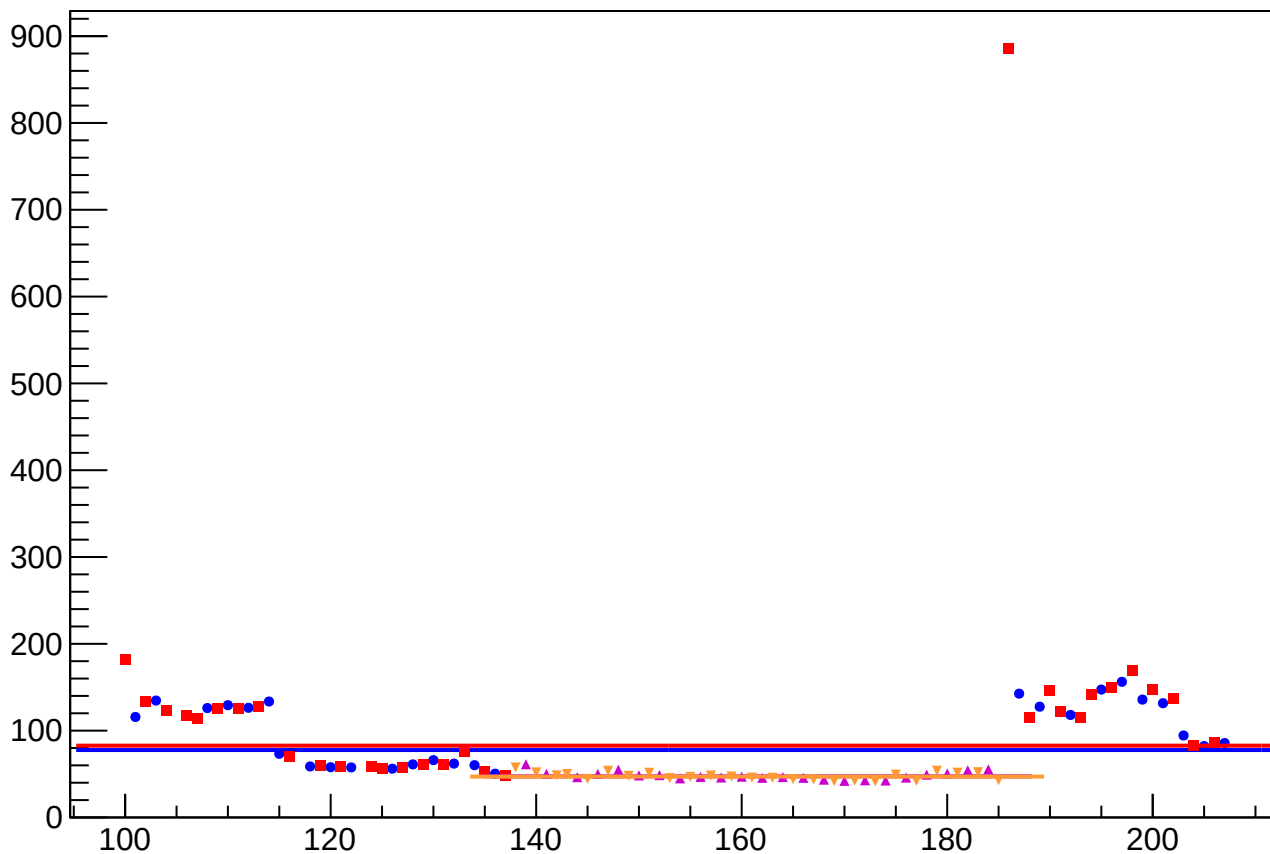
Left In:  $-44.541 \pm 11.149$   $\chi^2/\text{NDF}$ : 27.0/22

+ sign  $13.125 \pm 9.647$   $\chi^2/\text{NDF}$ : 56.8/50

All:  $-13.915 \pm 6.936$   $\chi^2/\text{NDF}$ : 146.1/104

- sign  $-42.844 \pm 9.978$   $\chi^2/\text{NDF}$ : 73.0/53

# reg\_asym\_sam\_1526\_avg\_rms vs Slug



Right In: 77.666 $\pm$ 0.015  $\chi^2$ /NDF: 3838426.1/25

Left Out: 47.064 $\pm$ 0.008  $\chi^2$ /NDF: 287590.7/24

Right Out: 82.715 $\pm$ 0.016  $\chi^2$ /NDF: 4986987.2/30

Left In: 47.384 $\pm$ 0.008  $\chi^2$ /NDF: 271036.5/22

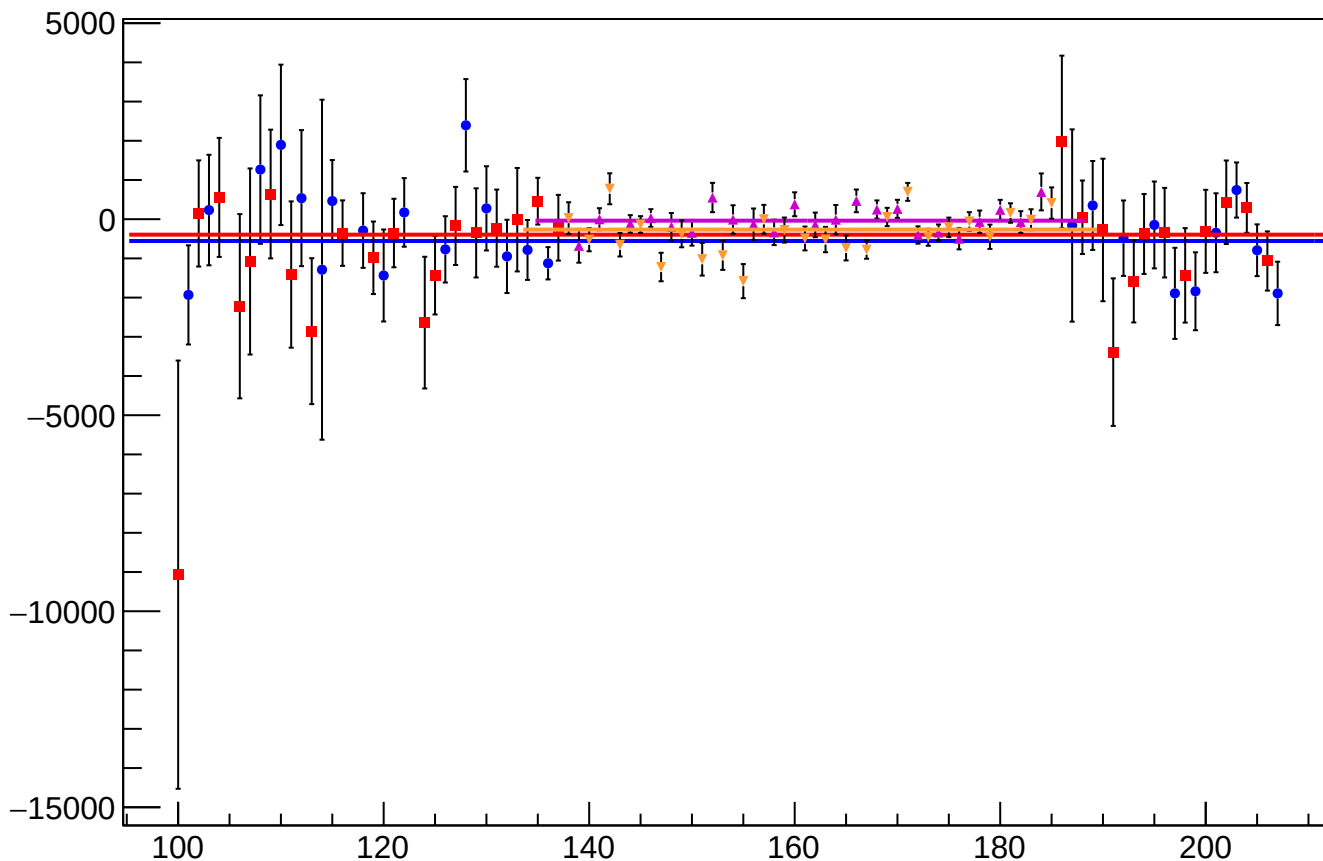
+ sign 53.110 $\pm$ 0.007  $\chi^2$ /NDF: 7316322.5/50

All: 53.739 $\pm$ 0.005  $\chi^2$ /NDF: 16587452.4/104

- sign 54.411 $\pm$ 0.007  $\chi^2$ /NDF: 9253541.4/53



asym\_sam\_1526\_avg\_reg\_correction\_mean vs Slug



Right In: -556.046 $\pm$ 184.948  $\chi^2$ /NDF: 25.8/25

Left Out: -265.684 $\pm$ 58.031  $\chi^2$ /NDF: 69.8/24

Right Out: -394.821 $\pm$ 194.359  $\chi^2$ /NDF: 20.2/30

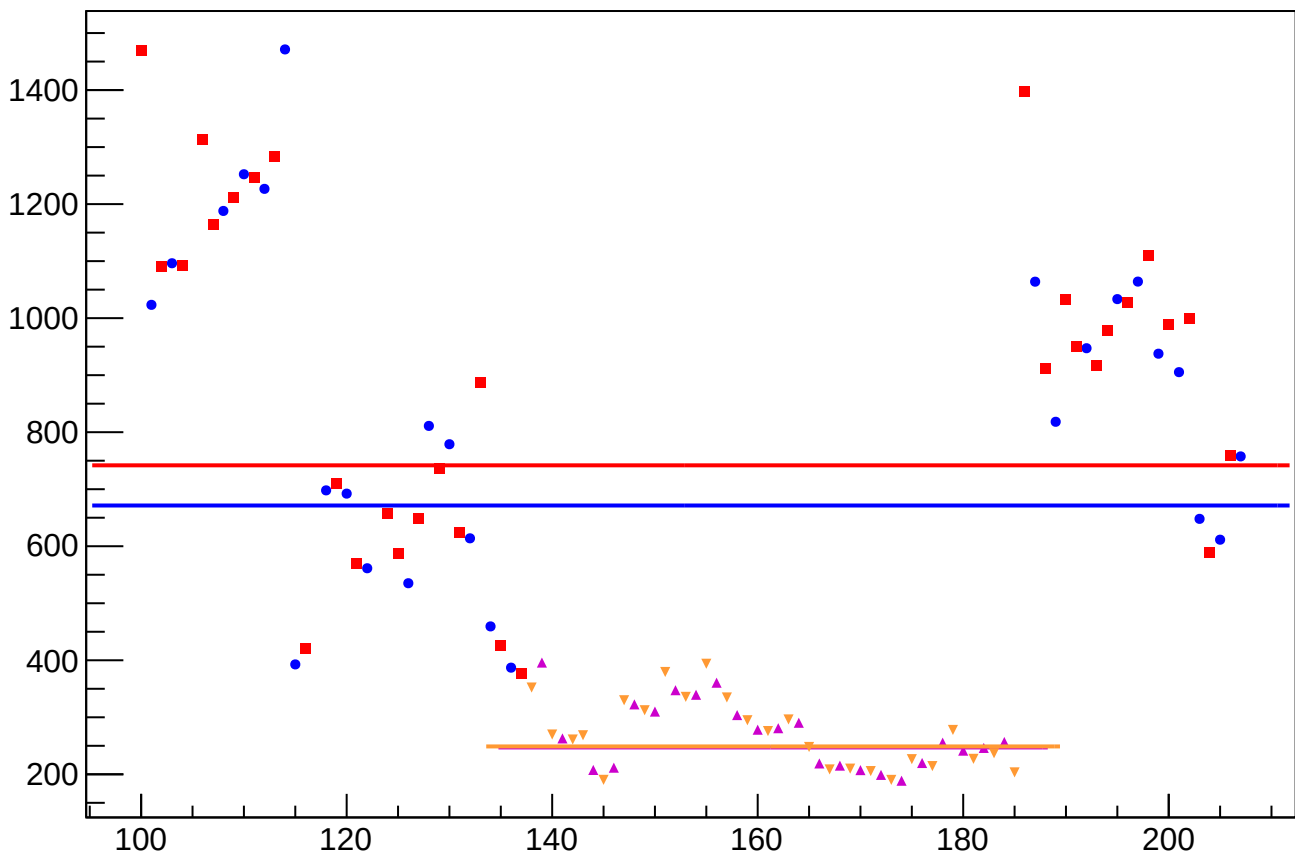
Left In: -37.530 $\pm$ 59.159  $\chi^2$ /NDF: 26.6/22

+ sign -291.708 $\pm$ 55.370  $\chi^2$ /NDF: 97.8/50

All: -182.218 $\pm$ 39.579  $\chi^2$ /NDF: 155.8/104

- sign -67.825 $\pm$ 56.596  $\chi^2$ /NDF: 49.9/53

asym\_sam\_1526\_avg\_reg\_correction\_rms vs Slug



Right In:  $671.432 \pm 0.131$   $\chi^2/\text{NDF}$ : 3293108.9/25

Left Out:  $248.891 \pm 0.041$   $\chi^2/\text{NDF}$ : 1663709.5/24

Right Out:  $741.887 \pm 0.137$   $\chi^2/\text{NDF}$ : 3512791.1/30

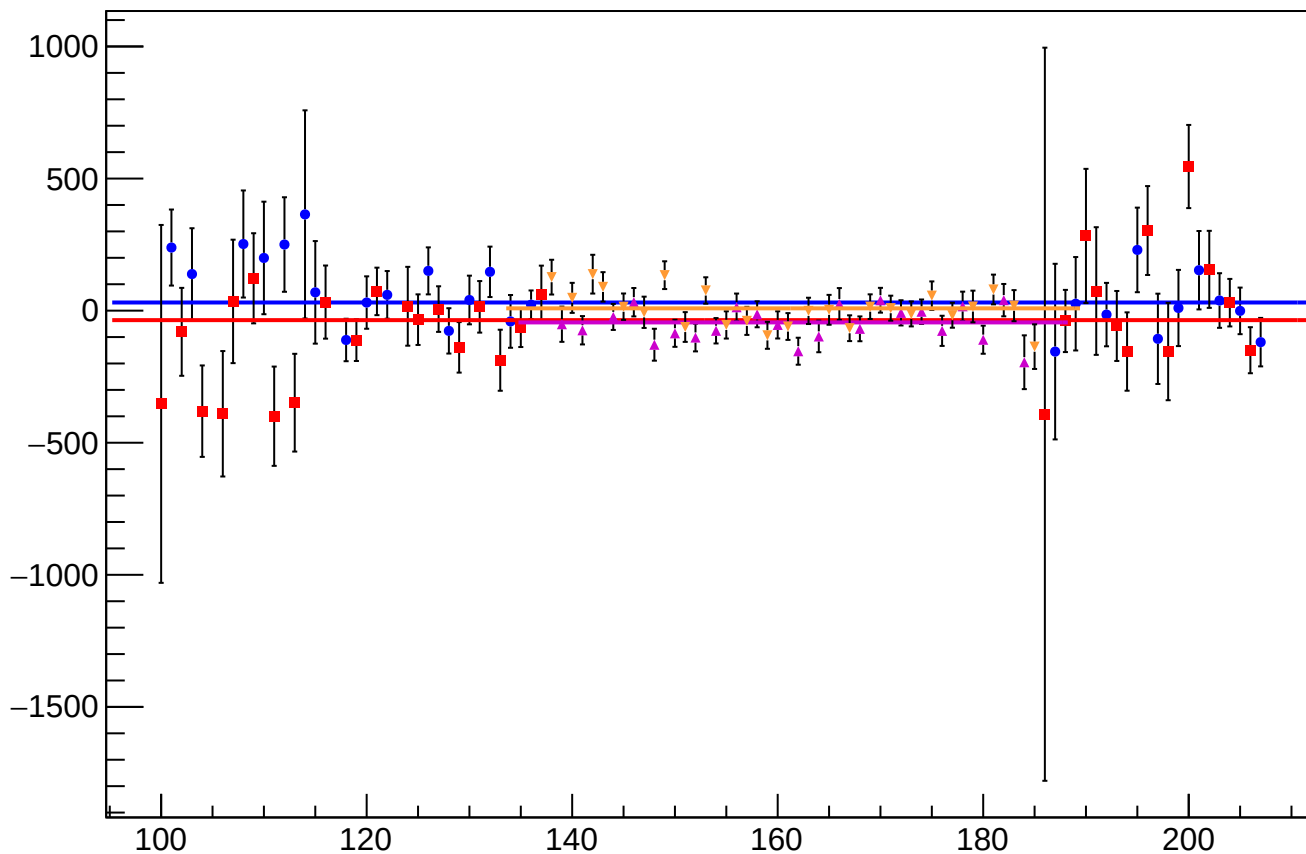
Left In:  $247.109 \pm 0.042$   $\chi^2/\text{NDF}$ : 1484450.6/22

+ sign  $286.762 \pm 0.039$   $\chi^2/\text{NDF}$ : 14460365.5/50

All:  $287.887 \pm 0.028$   $\chi^2/\text{NDF}$ : 31321372.5/10

- sign  $289.063 \pm 0.040$   $\chi^2/\text{NDF}$ : 16859318.4/53

# cor\_asym\_sam\_1526\_avg\_mean vs Slug



Right In:  $30.864 \pm 21.705$   $\chi^2/\text{NDF}$ : 21.3/25

Left Out:  $8.758 \pm 10.770$   $\chi^2/\text{NDF}$ : 34.6/24

Right Out:  $-35.904 \pm 22.374$   $\chi^2/\text{NDF}$ : 45.8/30

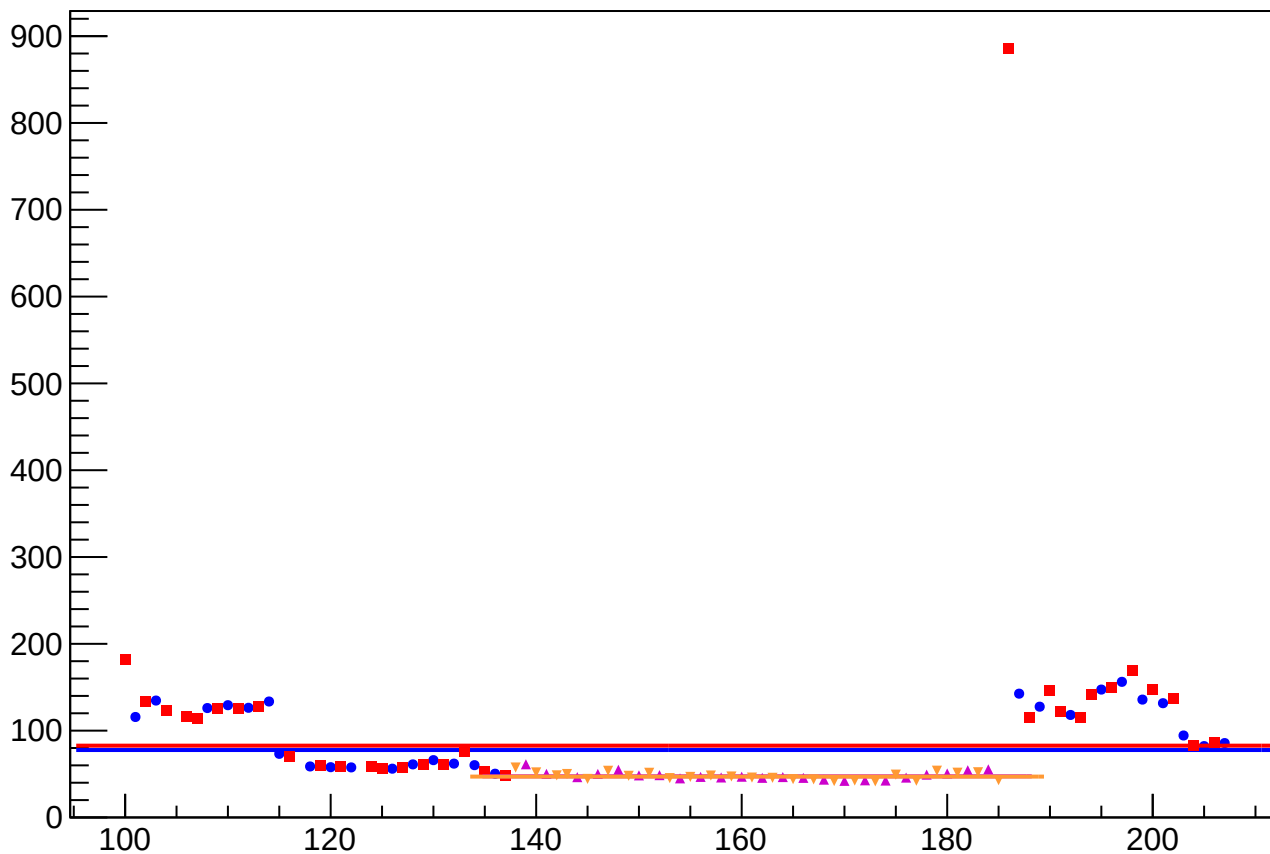
Left In:  $-44.540 \pm 11.149$   $\chi^2/\text{NDF}$ : 27.0/22

+ sign  $13.125 \pm 9.647$   $\chi^2/\text{NDF}$ : 56.8/50

All:  $-13.905 \pm 6.936$   $\chi^2/\text{NDF}$ : 145.9/104

- sign  $-42.822 \pm 9.978$   $\chi^2/\text{NDF}$ : 72.9/53

# cor\_asym\_sam\_1526\_avg\_rms vs Slug



Right In: 77.666 $\pm$ 0.015  $\chi^2$ /NDF: 3838428.4/25

Left Out: 47.064 $\pm$ 0.008  $\chi^2$ /NDF: 287590.7/24

Right Out: 82.706 $\pm$ 0.016  $\chi^2$ /NDF: 4984734.6/30

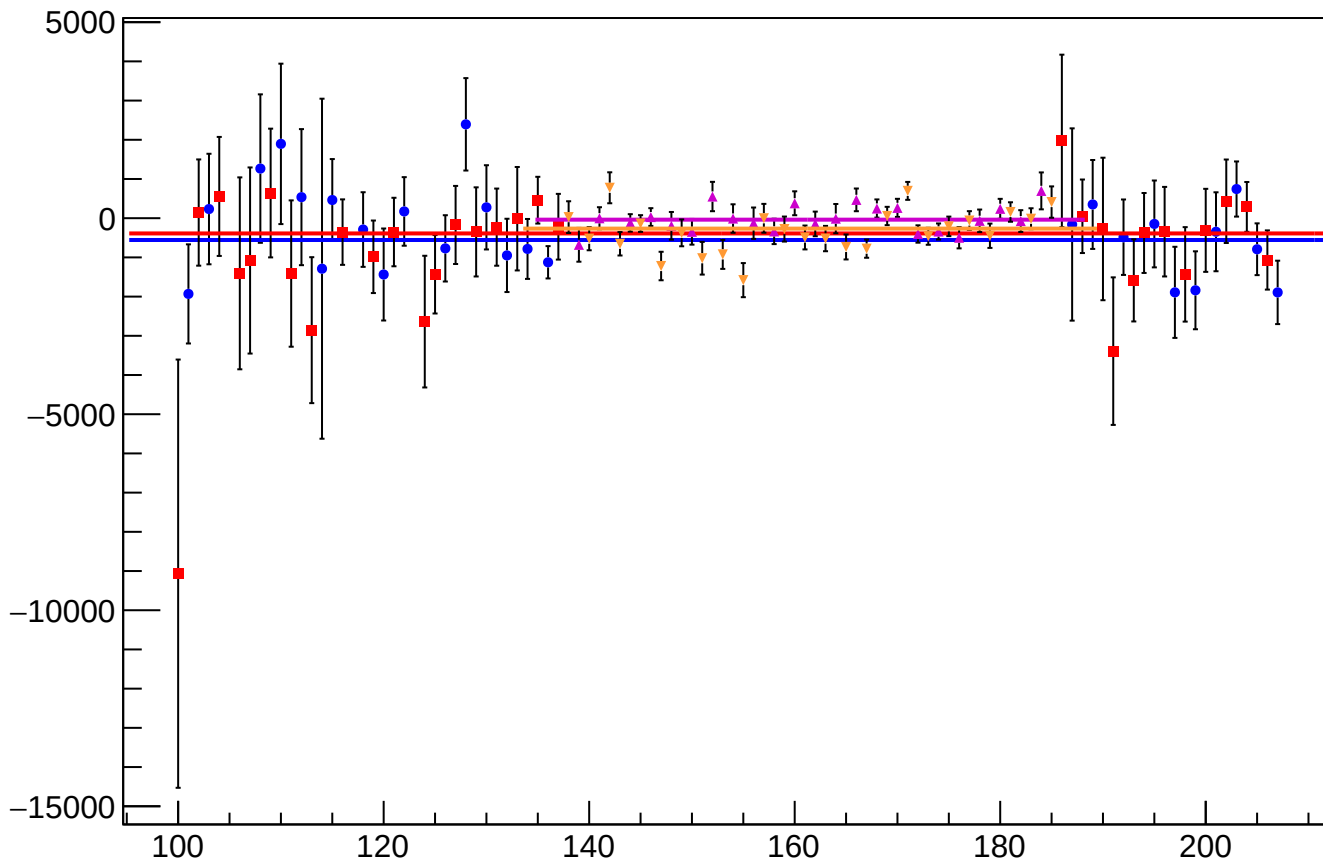
Left In: 47.384 $\pm$ 0.008  $\chi^2$ /NDF: 271036.5/22

+ sign 53.110 $\pm$ 0.007  $\chi^2$ /NDF: 7316324.5/50

All: 53.738 $\pm$ 0.005  $\chi^2$ /NDF: 16582887.8/104

- sign 54.409 $\pm$ 0.007  $\chi^2$ /NDF: 9249031.4/53

asym\_sam\_1526\_avg\_cor\_correction\_mean vs Slug



Right In:  $-556.037 \pm 184.949$   $\chi^2/\text{NDF}$ : 25.8/25

Left Out:  $-265.680 \pm 58.031$   $\chi^2/\text{NDF}$ : 69.8/24

Right Out:  $-388.772 \pm 194.414$   $\chi^2/\text{NDF}$ : 19.8/30

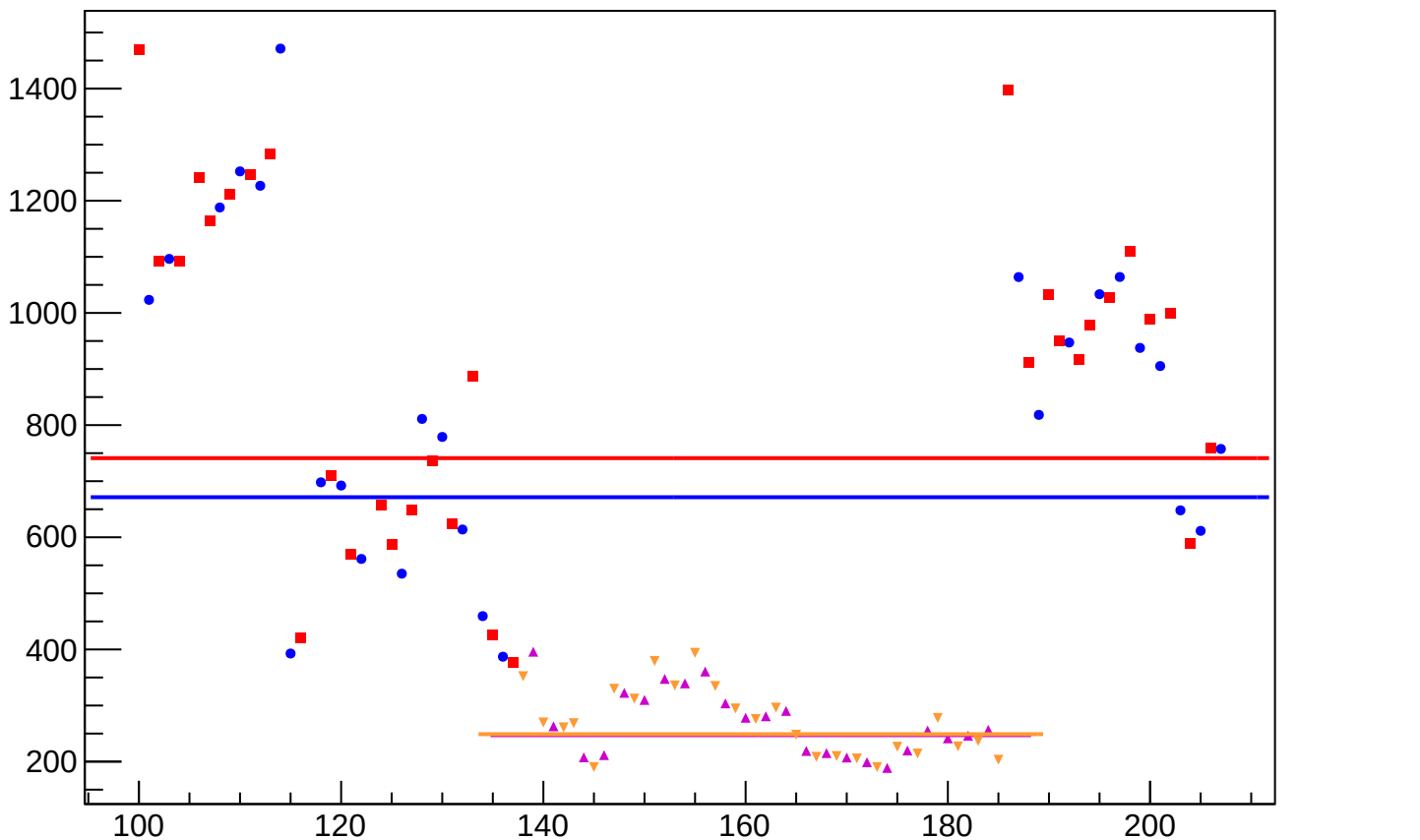
Left In:  $-37.527 \pm 59.159$   $\chi^2/\text{NDF}$ : 26.6/22

+ sign  $-291.704 \pm 55.370$   $\chi^2/\text{NDF}$ : 97.8/50

All:  $-181.959 \pm 39.579$   $\chi^2/\text{NDF}$ : 155.3/104

- sign  $-67.294 \pm 56.597$   $\chi^2/\text{NDF}$ : 49.4/53

asym\_sam\_1526\_avg\_cor\_correction\_rms vs Slug



Right In: 671.432 $\pm$ 0.131  $\chi^2$ /NDF: 3293148.3/25

Left Out: 248.891 $\pm$ 0.041  $\chi^2$ /NDF:1663717.9/24

Right Out: 741.131 $\pm$ 0.137  $\chi^2$ /NDF: 3478158.5/30

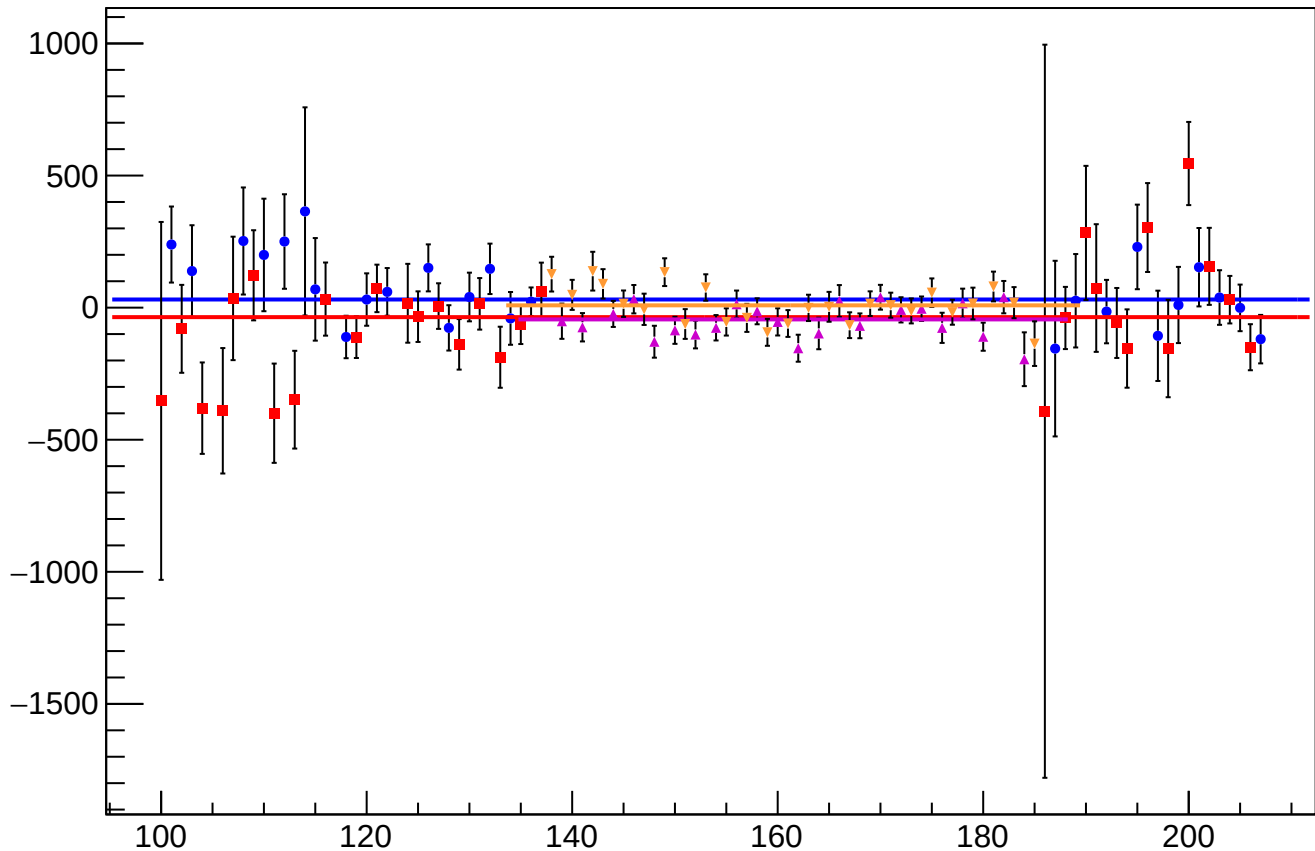
Left In: 247.109 $\pm$ 0.042  $\chi^2$ /NDF:1484445.1/22

+ sign 286.762 $\pm$ 0.039  $\chi^2$ /NDF: 14460406.0/50

All: 287.845 $\pm$ 0.028  $\chi^2$ /NDF: 31244312.2/10

- sign 288.977 $\pm$ 0.040  $\chi^2$ /NDF: 16782340.8/53

# eigen\_cor\_asym\_sam\_1526\_avg\_mean vs Slug



Right In:  $30.864 \pm 21.705$   $\chi^2/\text{NDF}$ : 21.3/25

Left Out:  $8.758 \pm 10.770$   $\chi^2/\text{NDF}$ : 34.6/24

Right Out:  $-35.904 \pm 22.374$   $\chi^2/\text{NDF}$ : 45.8/30

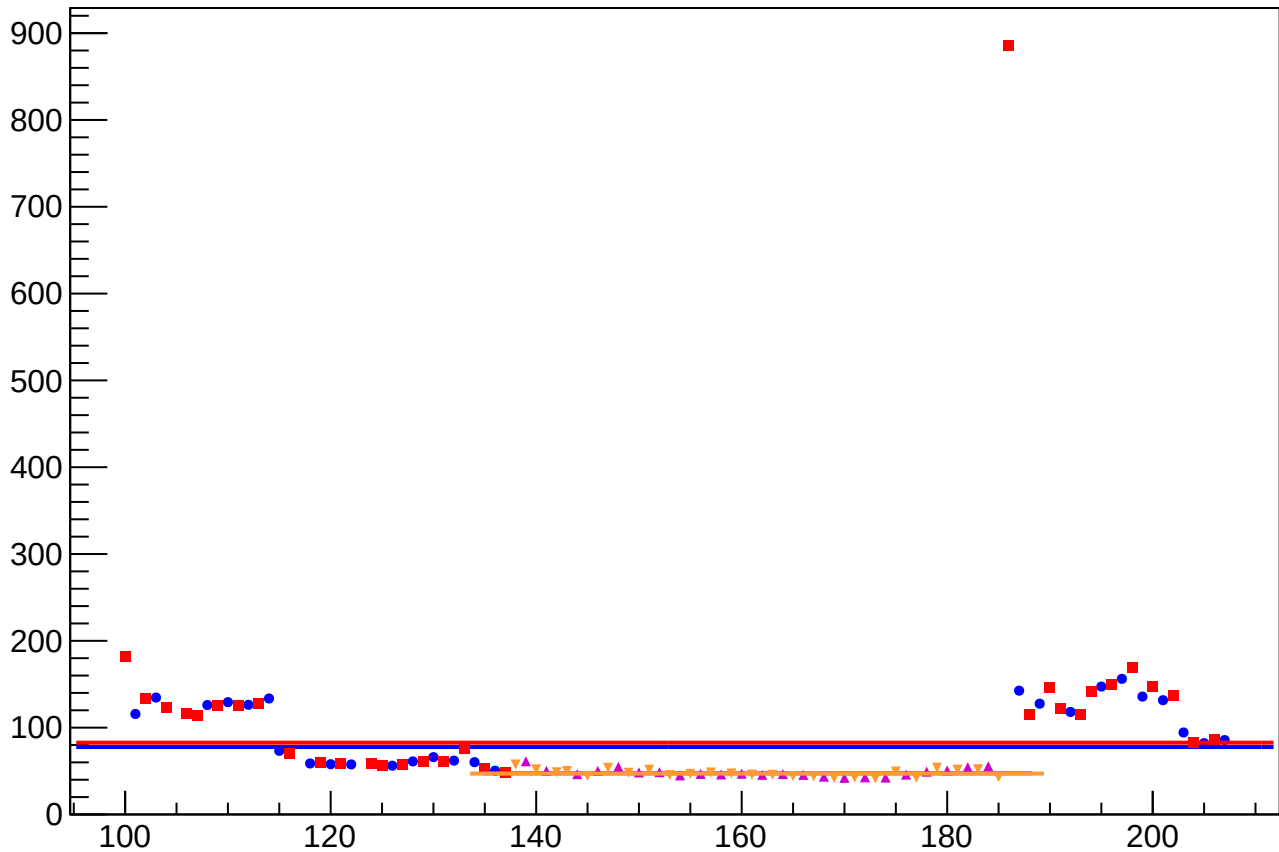
Left In:  $-44.540 \pm 11.149$   $\chi^2/\text{NDF}$ : 27.0/22

+ sign  $13.125 \pm 9.647$   $\chi^2/\text{NDF}$ : 56.8/50

All:  $-13.905 \pm 6.936$   $\chi^2/\text{NDF}$ : 145.9/104

- sign  $-42.822 \pm 9.978$   $\chi^2/\text{NDF}$ : 72.9/53

# eigen\_cor\_asym\_sam\_1526\_avg\_rms vs Slug



Right In: 77.666 $\pm$ 0.015  $\chi^2$ /NDF: 3838428.4/25

Left Out: 47.064 $\pm$ 0.008  $\chi^2$ /NDF: 287590.7/24

Right Out: 82.706 $\pm$ 0.016  $\chi^2$ /NDF: 4984734.6/30

Left In: 47.384 $\pm$ 0.008  $\chi^2$ /NDF: 271036.5/22

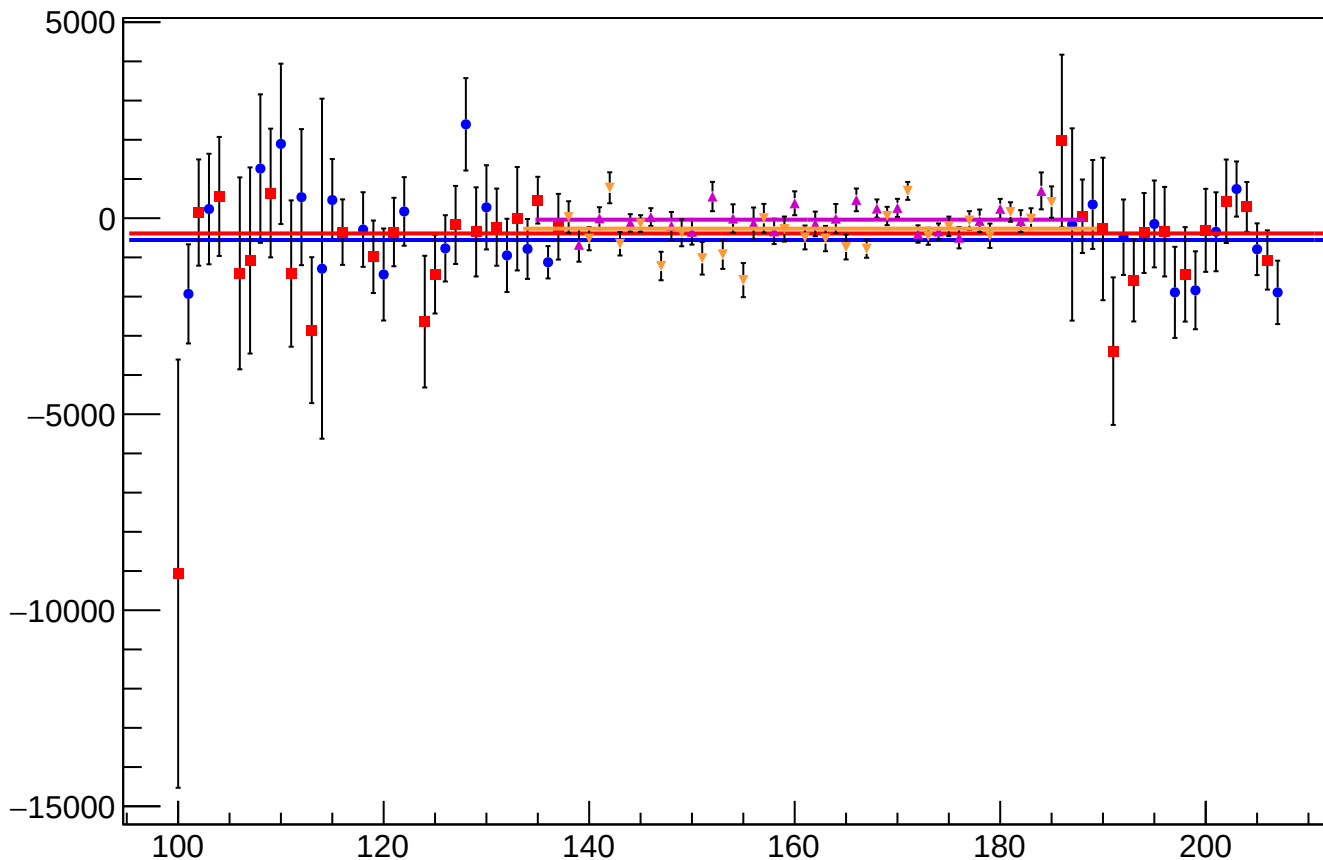
+ sign 53.110 $\pm$ 0.007  $\chi^2$ /NDF: 7316324.5/50

All: 53.738 $\pm$ 0.005  $\chi^2$ /NDF: 16582887.8/104

- sign 54.409 $\pm$ 0.007  $\chi^2$ /NDF: 9249031.4/53



asym\_sam\_1526\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-556.037 \pm 184.949$   $\chi^2/\text{NDF}$ : 25.8/25

Left Out:  $-265.680 \pm 58.031$   $\chi^2/\text{NDF}$ : 69.8/24

Right Out:  $-388.772 \pm 194.414$   $\chi^2/\text{NDF}$ : 19.8/30

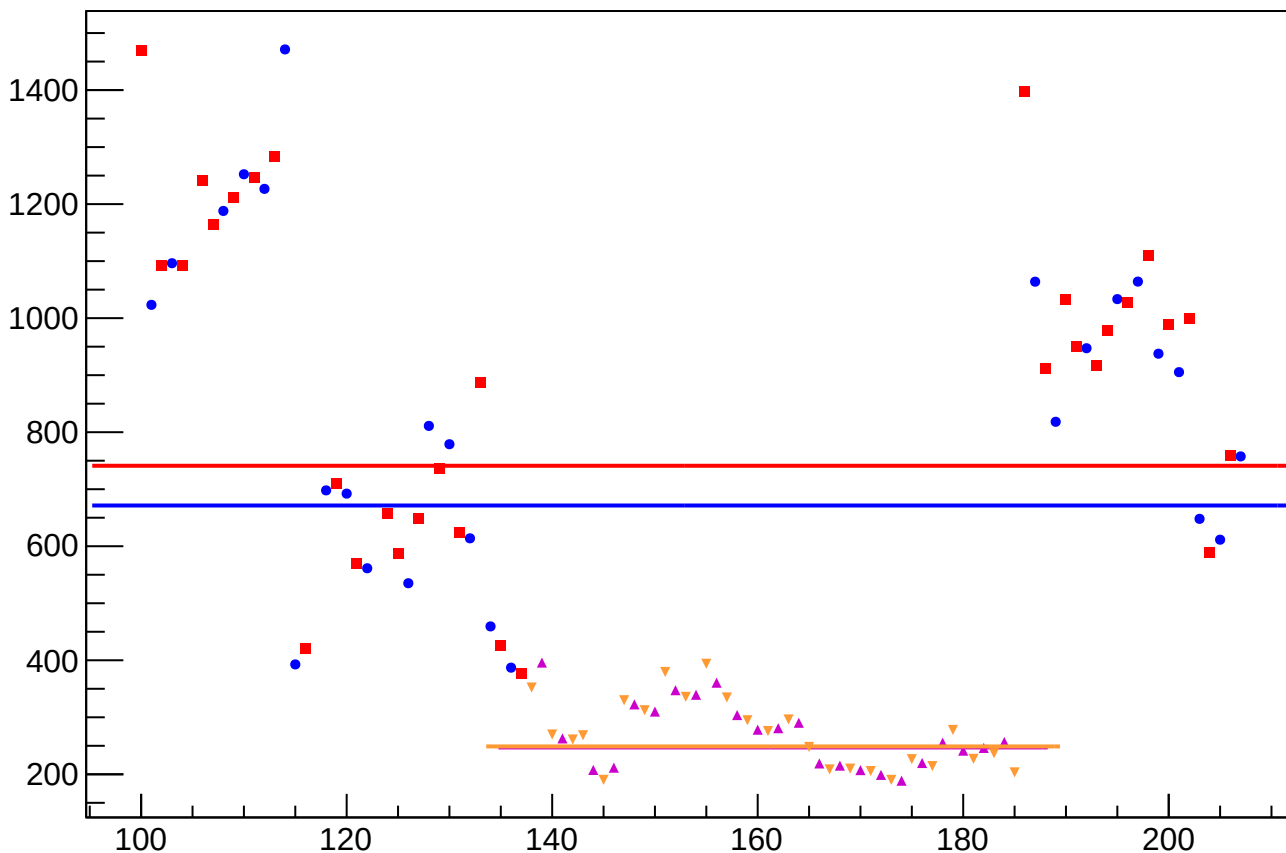
Left In:  $-37.527 \pm 59.159$   $\chi^2/\text{NDF}$ : 26.6/22

+ sign  $-291.704 \pm 55.370$   $\chi^2/\text{NDF}$ : 97.8/50

All:  $-181.959 \pm 39.579$   $\chi^2/\text{NDF}$ : 155.3/104

- sign  $-67.294 \pm 56.597$   $\chi^2/\text{NDF}$ : 49.4/53

asym\_sam\_1526\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 671.432 $\pm$ 0.131  $\chi^2$ /NDF: 3293148.3/25

Left Out: 248.891 $\pm$ 0.041  $\chi^2$ /NDF:1663717.9/24

Right Out: 741.131 $\pm$ 0.137  $\chi^2$ /NDF: 3478158.5/30

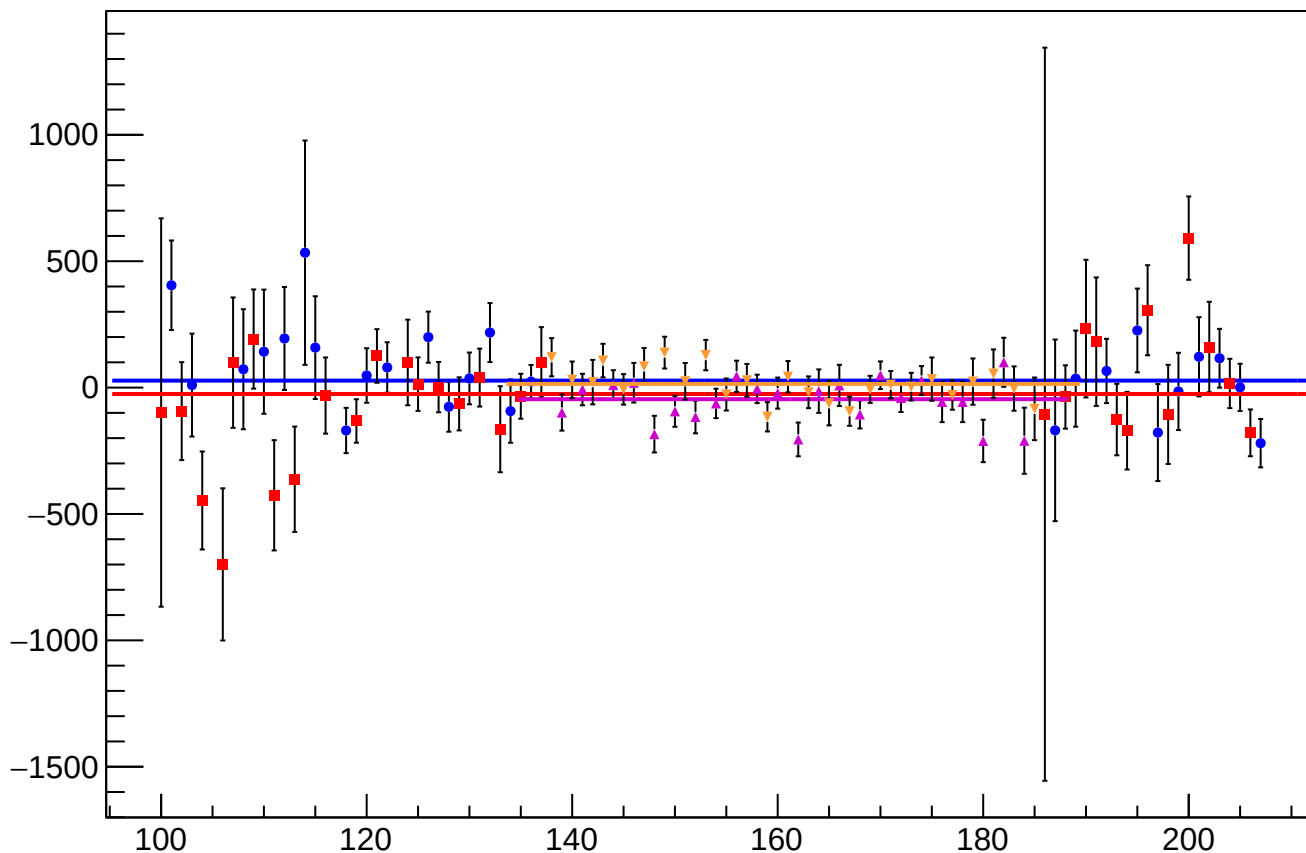
Left In: 247.109 $\pm$ 0.042  $\chi^2$ /NDF:1484445.1/22

+ sign 286.762 $\pm$ 0.039  $\chi^2$ /NDF: 14460406.0/50

All: 287.845 $\pm$ 0.028  $\chi^2$ /NDF: 31244312.2/10

- sign 288.977 $\pm$ 0.040  $\chi^2$ /NDF: 16782340.8/53

dit\_asym\_sam\_1526\_avg\_mean vs Slug



Right In: 27.599 $\pm$ 24.547  $\chi^2/\text{NDF}$ : 30.7/25

Left Out: 14.498 $\pm$ 13.454  $\chi^2/\text{NDF}$ : 24.5/24

Right Out: -25.343 $\pm$ 25.343  $\chi^2/\text{NDF}$ : 48.2/30

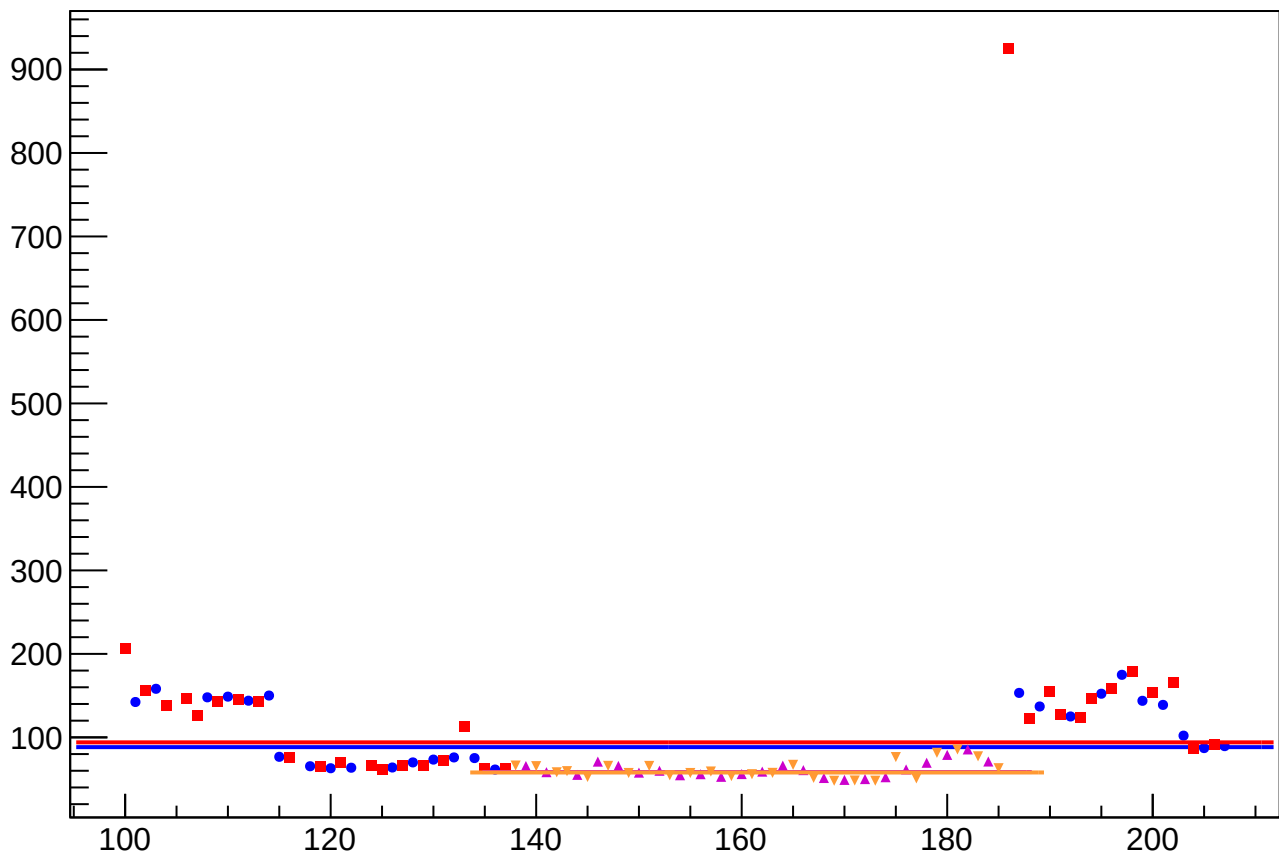
Left In: -45.806 $\pm$ 13.931  $\chi^2/\text{NDF}$ : 30.7/22

+ sign 17.525 $\pm$ 11.798  $\chi^2/\text{NDF}$ : 55.4/50

All: -10.766 $\pm$ 8.484  $\chi^2/\text{NDF}$ : 146.8/104

- sign -41.058 $\pm$ 12.208  $\chi^2/\text{NDF}$ : 79.5/53

# dit\_asym\_sam\_1526\_avg\_rms vs Slug



Right In: 88.302+/-0.017  $\chi^2/\text{NDF}$ : 3399758.7/25

Left Out: 57.965+/-0.010  $\chi^2/\text{NDF}$ : 896947.4/24

Right Out: 94.028+/-0.018  $\chi^2/\text{NDF}$ : 4561271.7/30

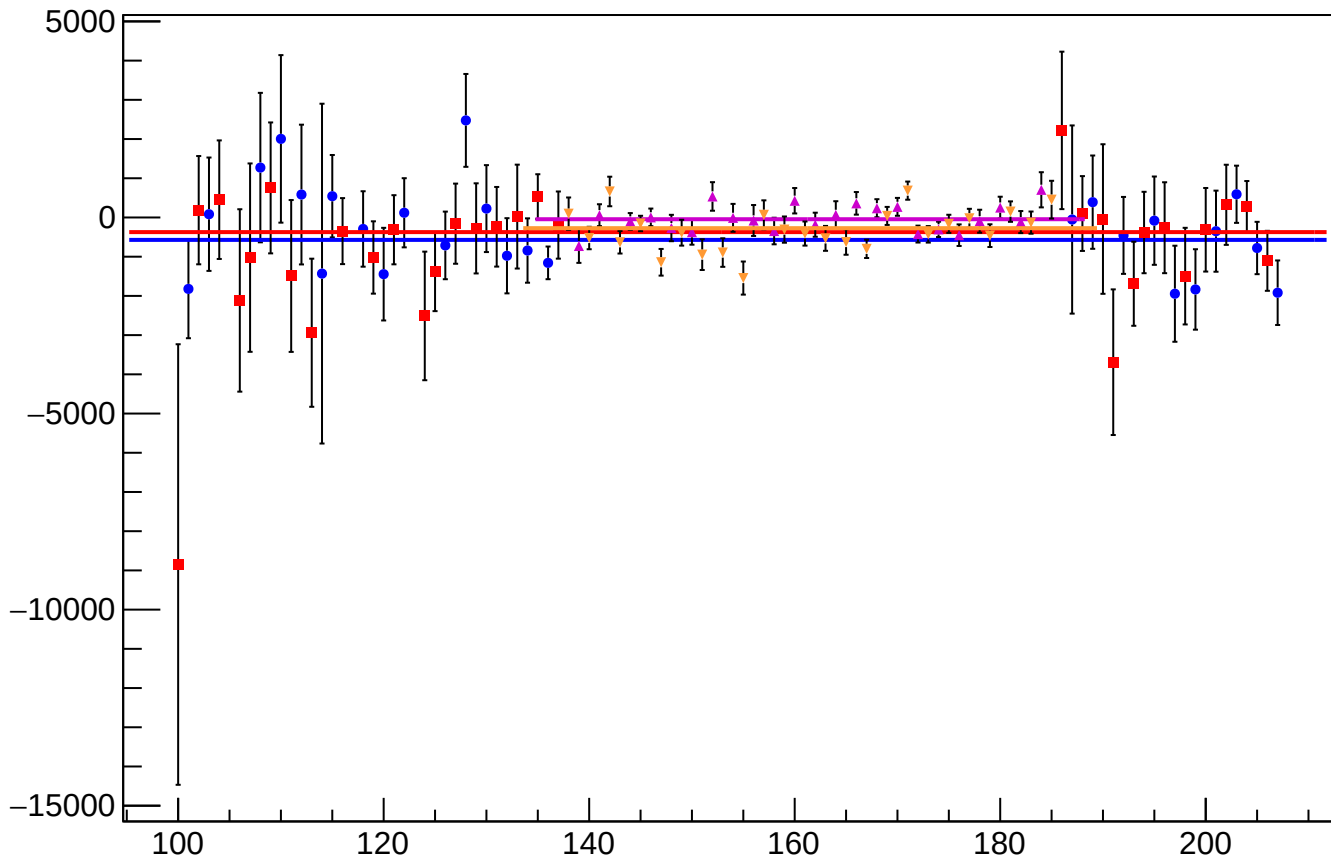
Left In: 58.479+/-0.010  $\chi^2/\text{NDF}$ : 649919.9/22

+ sign 64.973+/-0.008  $\chi^2/\text{NDF}$ : 6645688.7/50

All: 65.821+/-0.006  $\chi^2/\text{NDF}$ : 14900228.2/104

- sign 66.728+/-0.009  $\chi^2/\text{NDF}$ : 8233173.4/53

asym\_sam\_1526\_avg\_dit\_correction\_mean vs Slug



Right In:  $-571.688 \pm 188.862$   $\chi^2/\text{NDF}$ : 24.9/25

Left Out:  $-272.513 \pm 57.274$   $\chi^2/\text{NDF}$ : 65.8/24

Right Out:  $-373.173 \pm 195.492$   $\chi^2/\text{NDF}$ : 21.8/30

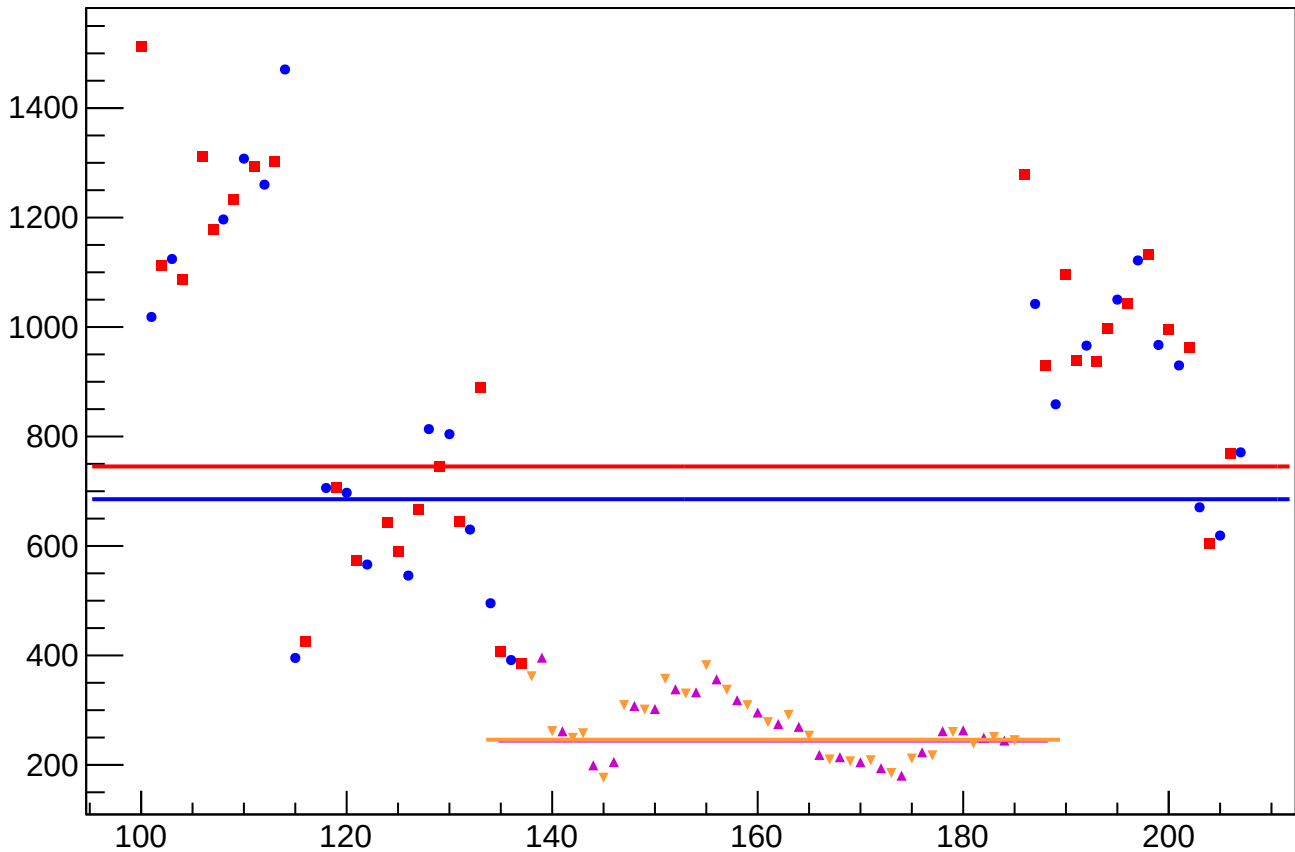
Left In:  $-44.553 \pm 58.614$   $\chi^2/\text{NDF}$ : 26.5/22

+ sign  $-297.710 \pm 54.809$   $\chi^2/\text{NDF}$ : 93.0/50

All:  $-187.405 \pm 39.220$   $\chi^2/\text{NDF}$ : 152.1/104

- sign  $-71.658 \pm 56.145$   $\chi^2/\text{NDF}$ : 50.9/53

asym\_sam\_1526\_avg\_dit\_correction\_rms vs Slug



Right In: 685.429+/-0.134  $\chi^2/\text{NDF}$ : 3329089.0/25

Left Out: 246.017+/-0.040  $\chi^2/\text{NDF}$ : 1680565.1/24

Right Out: 745.277+/-0.138  $\chi^2/\text{NDF}$ : 3615576.4/30

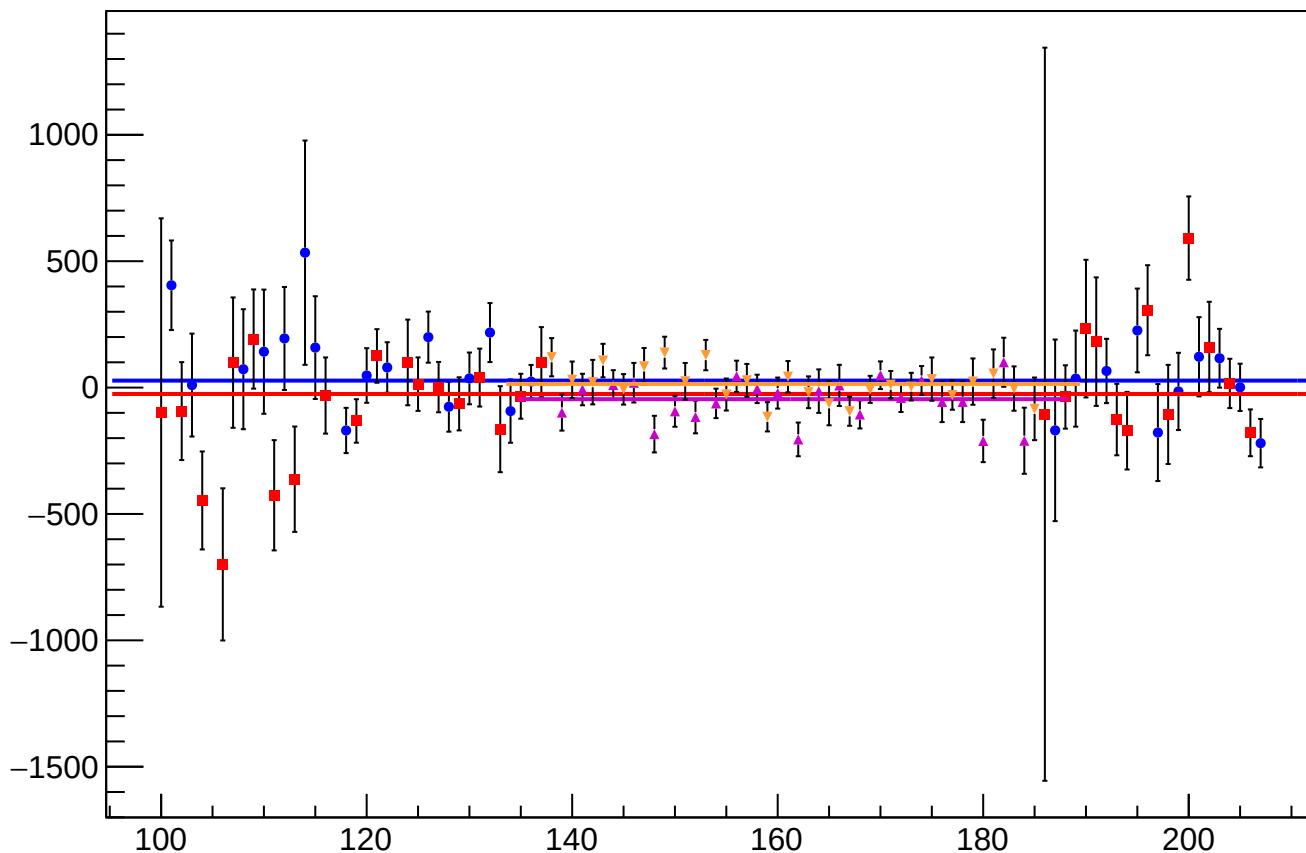
Left In: 244.450+/-0.041  $\chi^2/\text{NDF}$ : 1596988.0/22

+ sign 283.024+/-0.039  $\chi^2/\text{NDF}$ : 14924316.4/50

All: 284.359+/-0.028  $\chi^2/\text{NDF}$ : 32183065.5/10

- sign 285.760+/-0.040  $\chi^2/\text{NDF}$ : 17256318.6/53

# eigen\_dit\_asym\_sam\_1526\_avg\_mean vs Slug



Right In:  $27.601 \pm 24.547$   $\chi^2/\text{NDF}$ : 30.7/25

Left Out:  $14.498 \pm 13.454$   $\chi^2/\text{NDF}$ : 24.5/24

Right Out:  $-25.343 \pm 25.343$   $\chi^2/\text{NDF}$ : 48.2/30

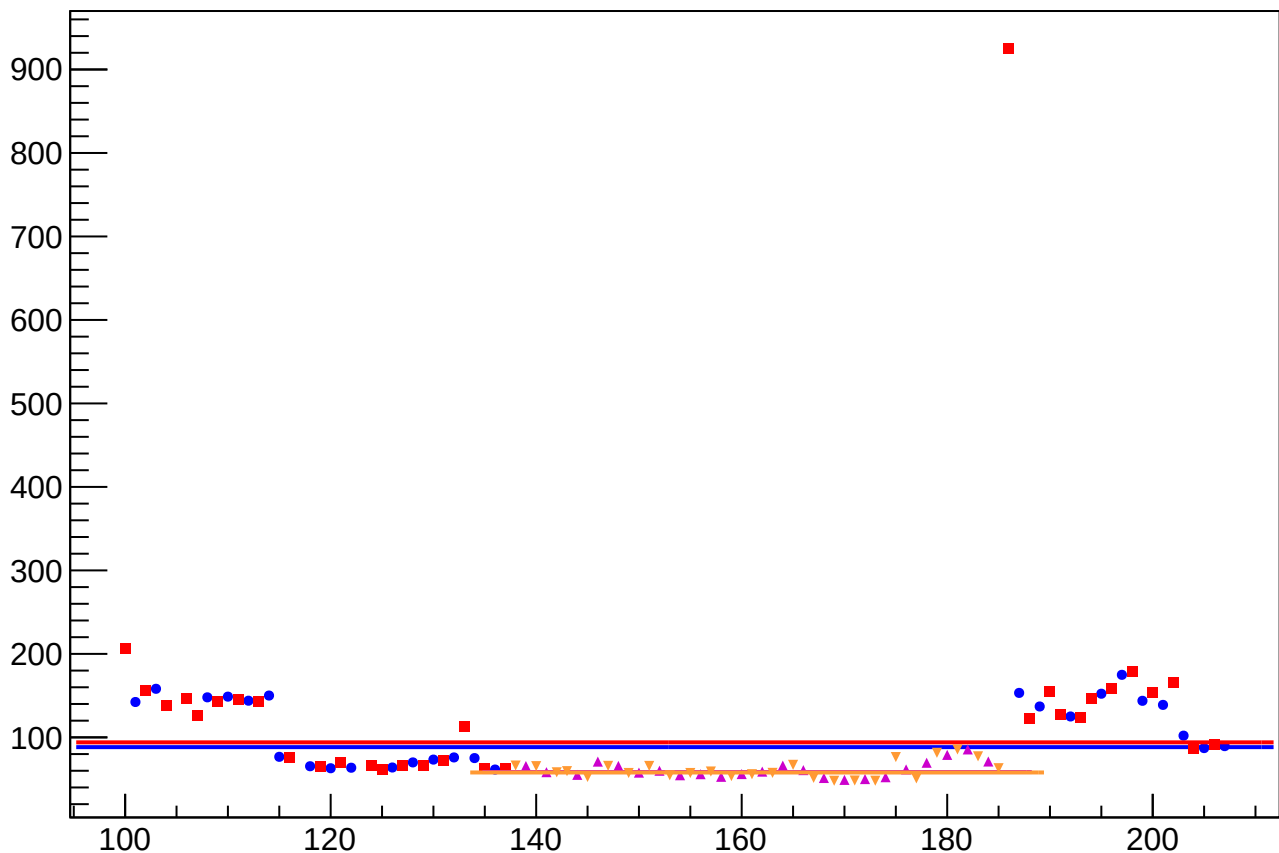
Left In:  $-45.805 \pm 13.931$   $\chi^2/\text{NDF}$ : 30.7/22

+ sign  $17.525 \pm 11.798$   $\chi^2/\text{NDF}$ : 55.4/50

All:  $-10.766 \pm 8.484$   $\chi^2/\text{NDF}$ : 146.8/104

- sign  $-41.057 \pm 12.208$   $\chi^2/\text{NDF}$ : 79.5/53

# eigen\_dit\_asym\_sam\_1526\_avg\_rms vs Slug



Right In: 88.301+/-0.017  $\chi^2/\text{NDF}$ : 3399761.2/25

Left Out: 57.965+/-0.010  $\chi^2/\text{NDF}$ : 896952.8/24

Right Out: 94.028+/-0.018  $\chi^2/\text{NDF}$ : 4561285.7/30

Left In: 58.479+/-0.010  $\chi^2/\text{NDF}$ : 649911.4/22

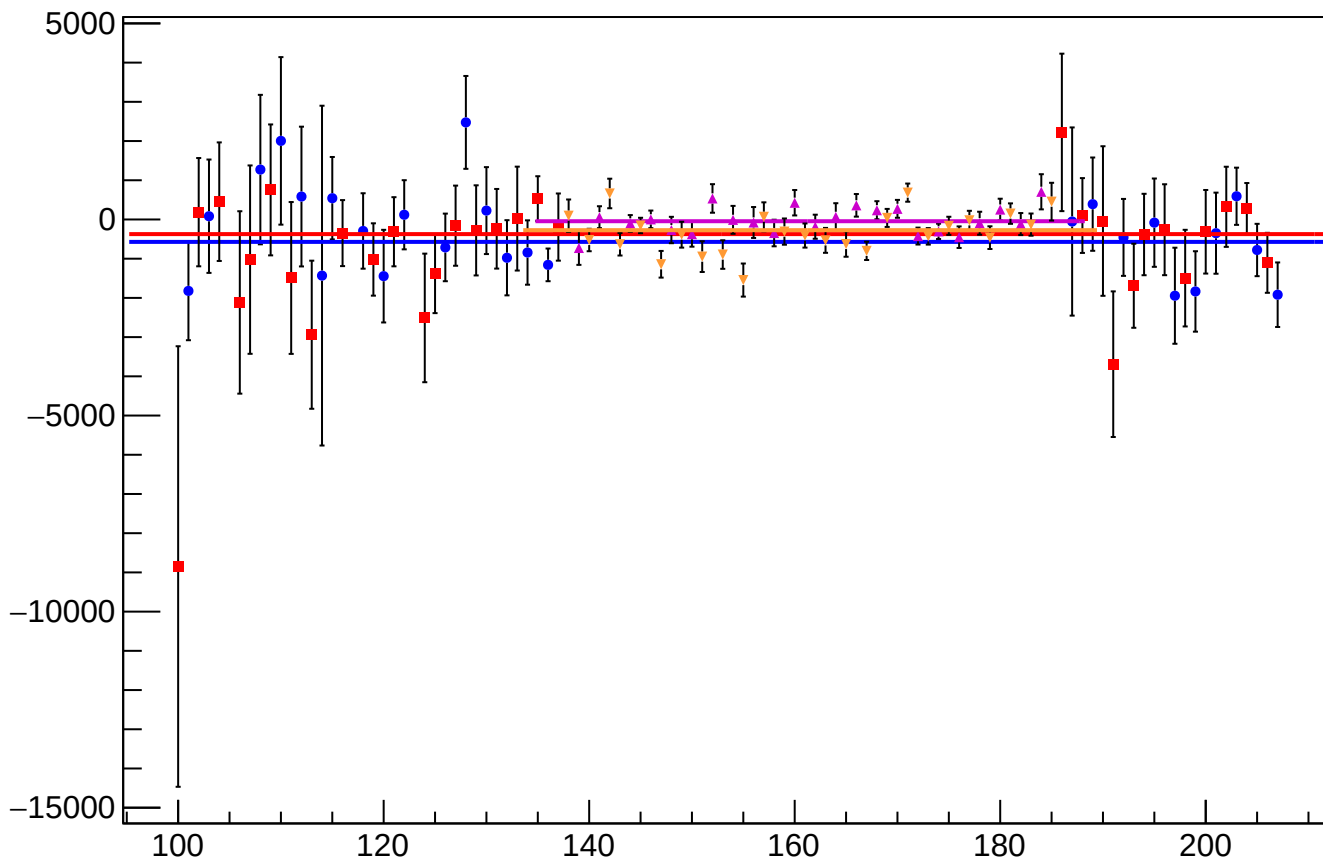
+ sign 64.974+/-0.008  $\chi^2/\text{NDF}$ : 6645644.5/50

All: 65.821+/-0.006  $\chi^2/\text{NDF}$ : 14900127.0/104

- sign 66.728+/-0.009  $\chi^2/\text{NDF}$ : 8233114.6/53



asym\_sam\_1526\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In: -571.687 $\pm$ 188.861  $\chi^2$ /NDF: 24.9/25

Left Out: -272.512 $\pm$ 57.274  $\chi^2$ /NDF: 65.8/24

Right Out: -373.174 $\pm$ 195.492  $\chi^2$ /NDF: 21.8/30

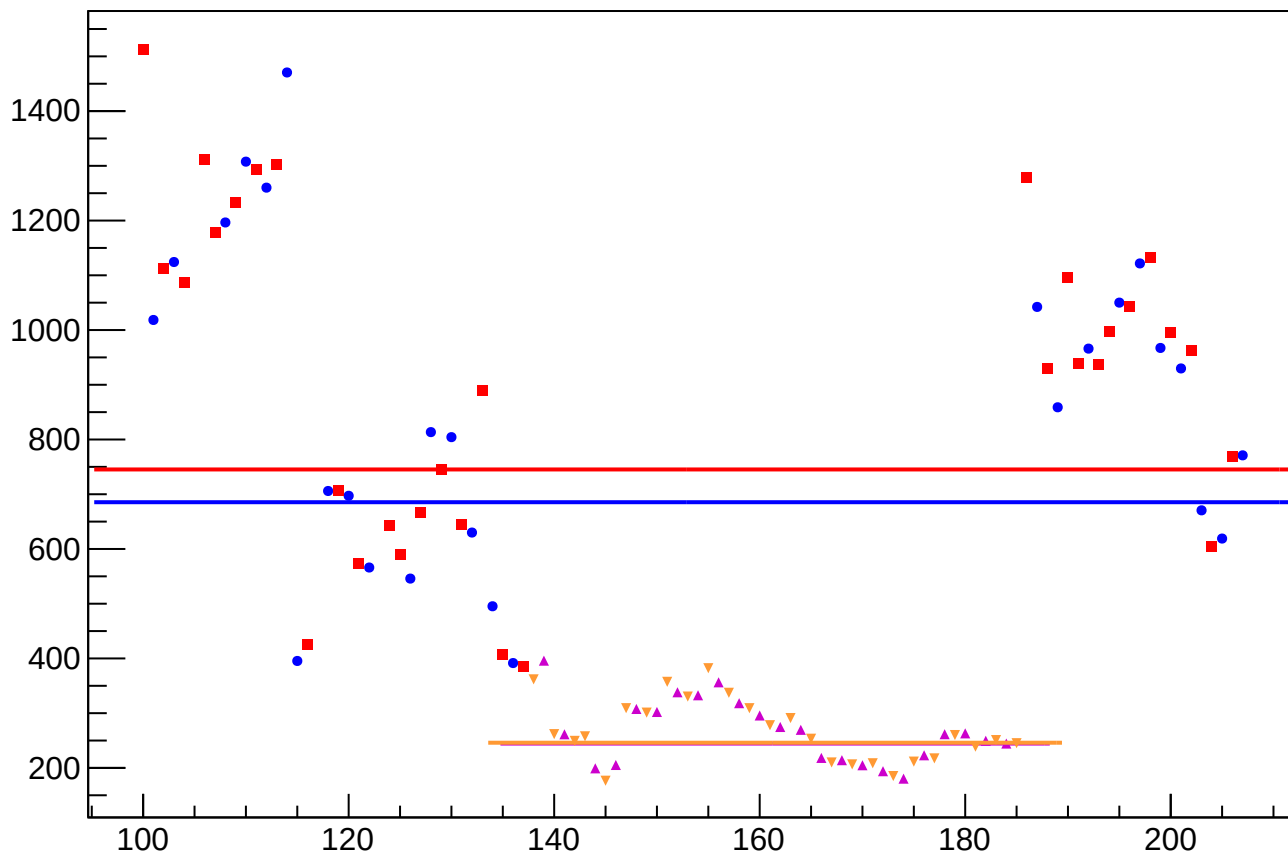
Left In: -44.552 $\pm$ 58.614  $\chi^2$ /NDF: 26.5/22

+ sign -297.709 $\pm$ 54.809  $\chi^2$ /NDF: 93.0/50

All: -187.404 $\pm$ 39.220  $\chi^2$ /NDF: 152.1/104

- sign -71.658 $\pm$ 56.145  $\chi^2$ /NDF: 50.9/53

asym\_sam\_1526\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 685.429 $\pm$ 0.134  $\chi^2$ /NDF: 3329071.7/25

Left Out: 246.016 $\pm$ 0.040  $\chi^2$ /NDF:1680566.1/24

Right Out: 745.276 $\pm$ 0.138  $\chi^2$ /NDF: 3615557.4/30

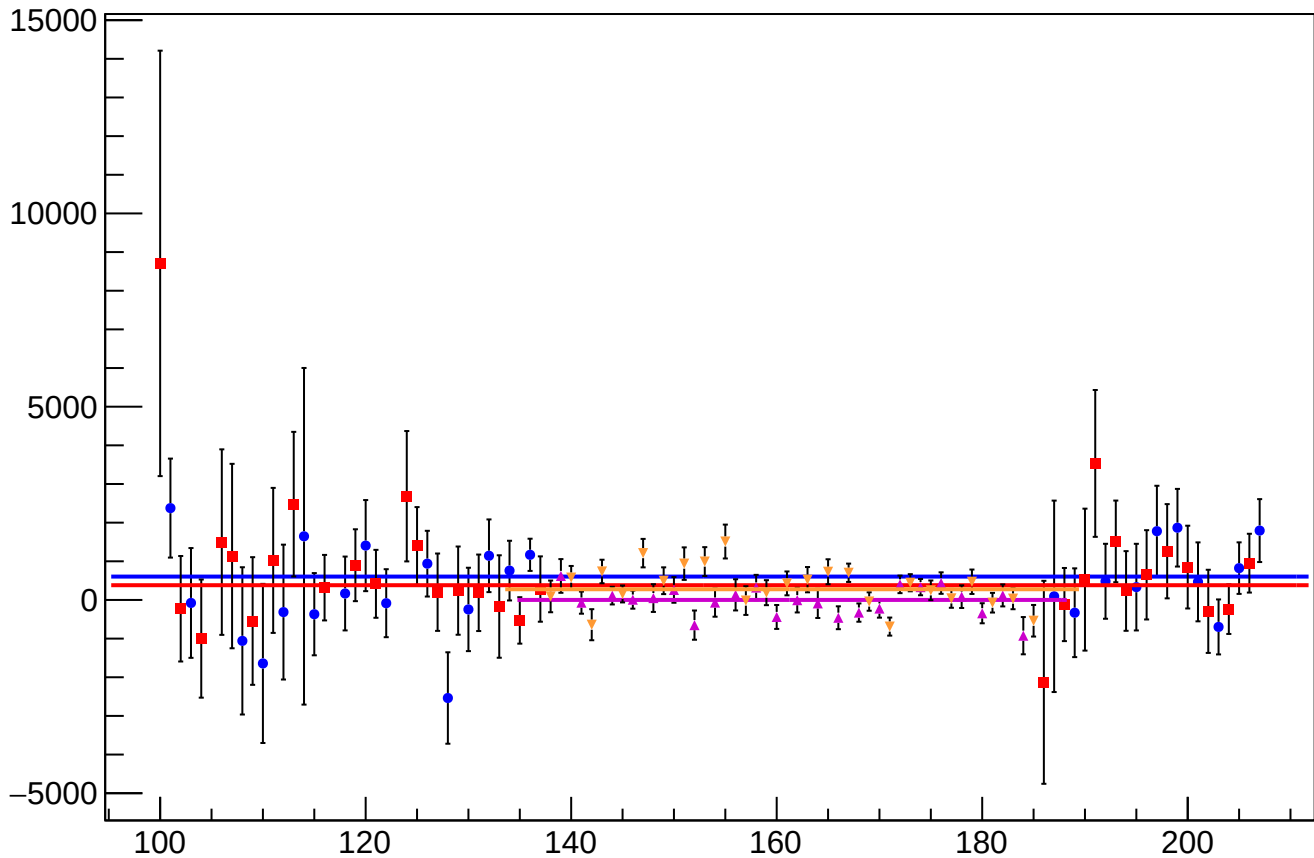
Left In: 244.450 $\pm$ 0.041  $\chi^2$ /NDF:1596977.8/22

+ sign 283.024 $\pm$ 0.039  $\chi^2$ /NDF: 14924322.1/50

All: 284.359 $\pm$ 0.028  $\chi^2$ /NDF: 32183058.9/10

- sign 285.759 $\pm$ 0.040  $\chi^2$ /NDF: 17256305.9/53

# asym\_sam\_1526\_avg\_mean vs Slug



Right In: 604.673 $\pm$ 186.633  $\chi^2/\text{NDF}$ : 25.6/25

Left Out: 277.077 $\pm$ 59.149  $\chi^2/\text{NDF}$ : 64.1/24

Right Out: 381.425 $\pm$ 196.188  $\chi^2/\text{NDF}$ : 18.9/30

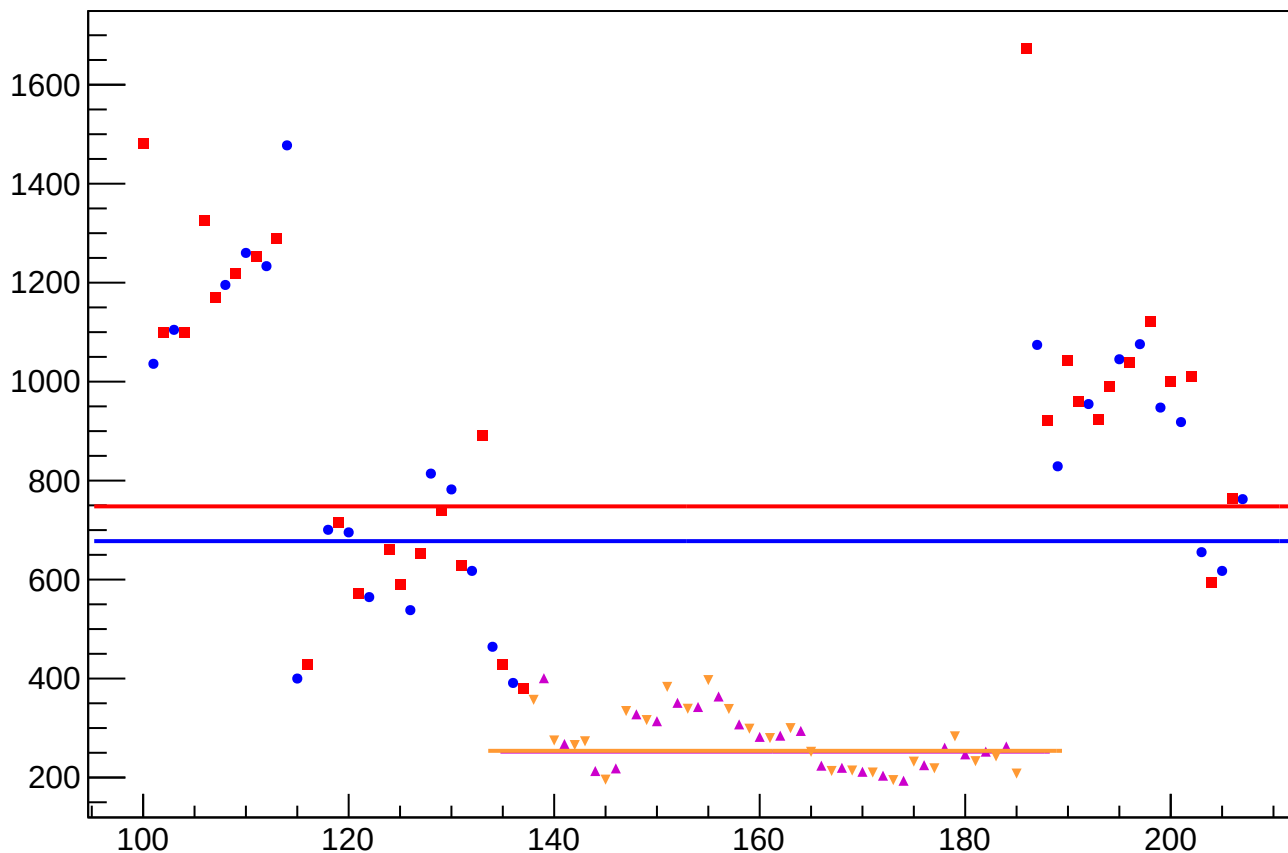
Left In: 0.556 $\pm$ 60.356  $\chi^2/\text{NDF}$ : 28.1/22

+ sign 306.978 $\pm$ 56.385  $\chi^2/\text{NDF}$ : 92.4/50

All: 173.356 $\pm$ 40.323  $\chi^2/\text{NDF}$ : 154.4/104

- sign 33.486 $\pm$ 57.688  $\chi^2/\text{NDF}$ : 50.4/53

# asym\_sam\_1526\_avg\_rms vs Slug



Right In:  $677.700 \pm 0.132$   $\chi^2/\text{NDF}$ : 3282446.2/25

Left Out:  $253.953 \pm 0.042$   $\chi^2/\text{NDF}$ : 1590761.5/24

Right Out:  $747.924 \pm 0.139$   $\chi^2/\text{NDF}$ : 3580473.2/30

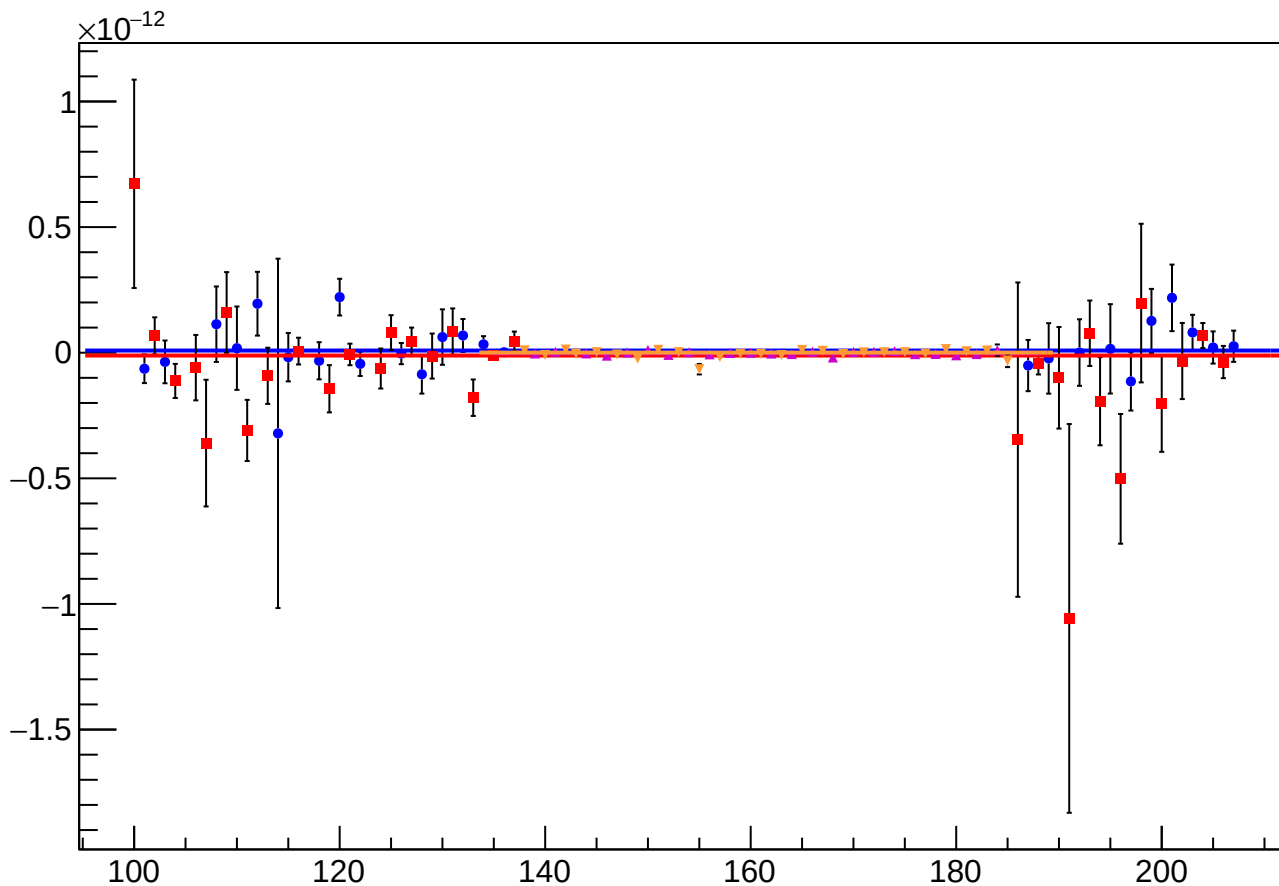
Left In:  $252.390 \pm 0.043$   $\chi^2/\text{NDF}$ : 1412169.8/22

+ sign  $292.630 \pm 0.040$   $\chi^2/\text{NDF}$ : 14242318.7/50

All:  $293.903 \pm 0.029$   $\chi^2/\text{NDF}$ : 30893270.5/10

- sign  $295.235 \pm 0.041$   $\chi^2/\text{NDF}$ : 16648866.6/53

# asym\_sam\_1526\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 24.4/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 26.9/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 41.5/30

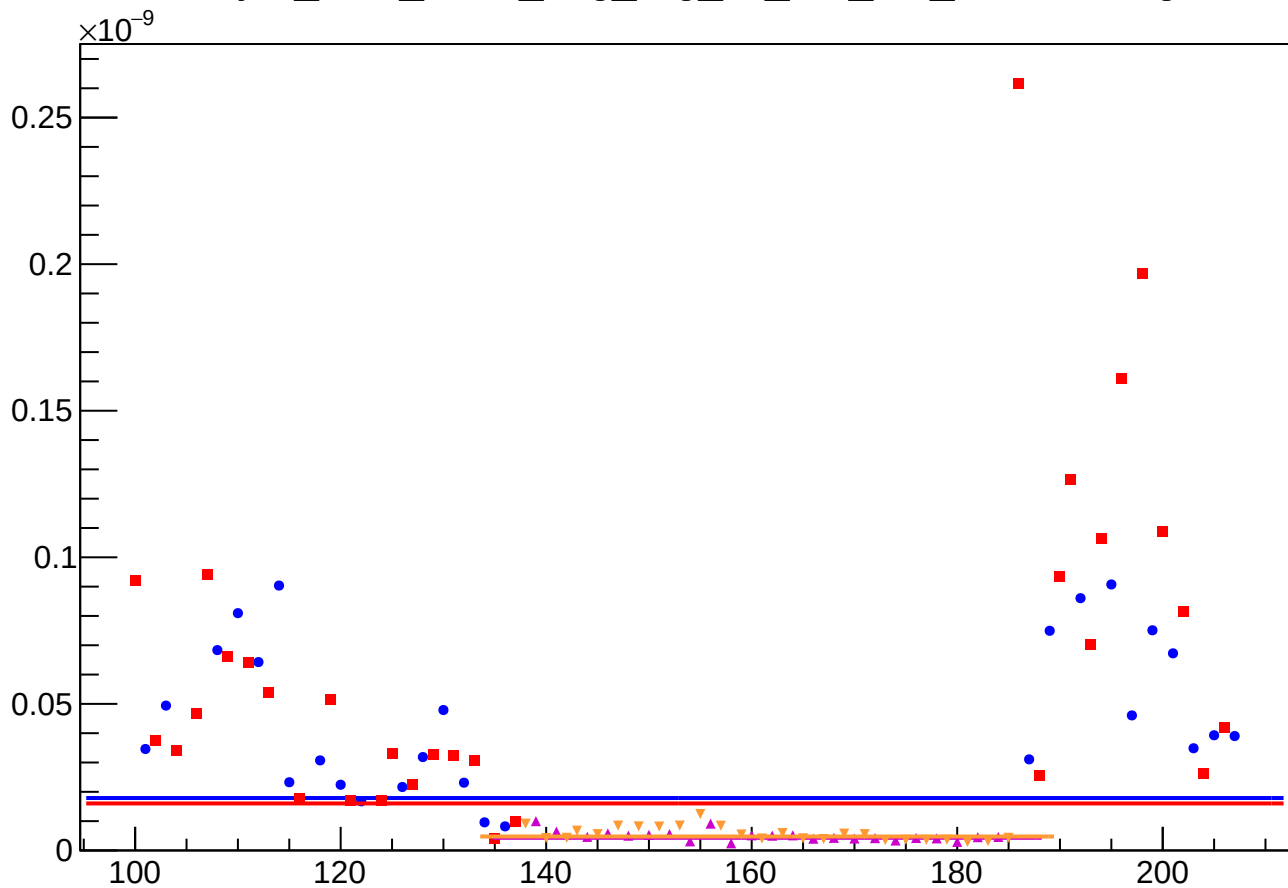
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 14.0/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 51.9/50

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 109.4/104

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 56.4/53

asym\_sam\_1526\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5333560.1/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1613401.1/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7868434.0/30

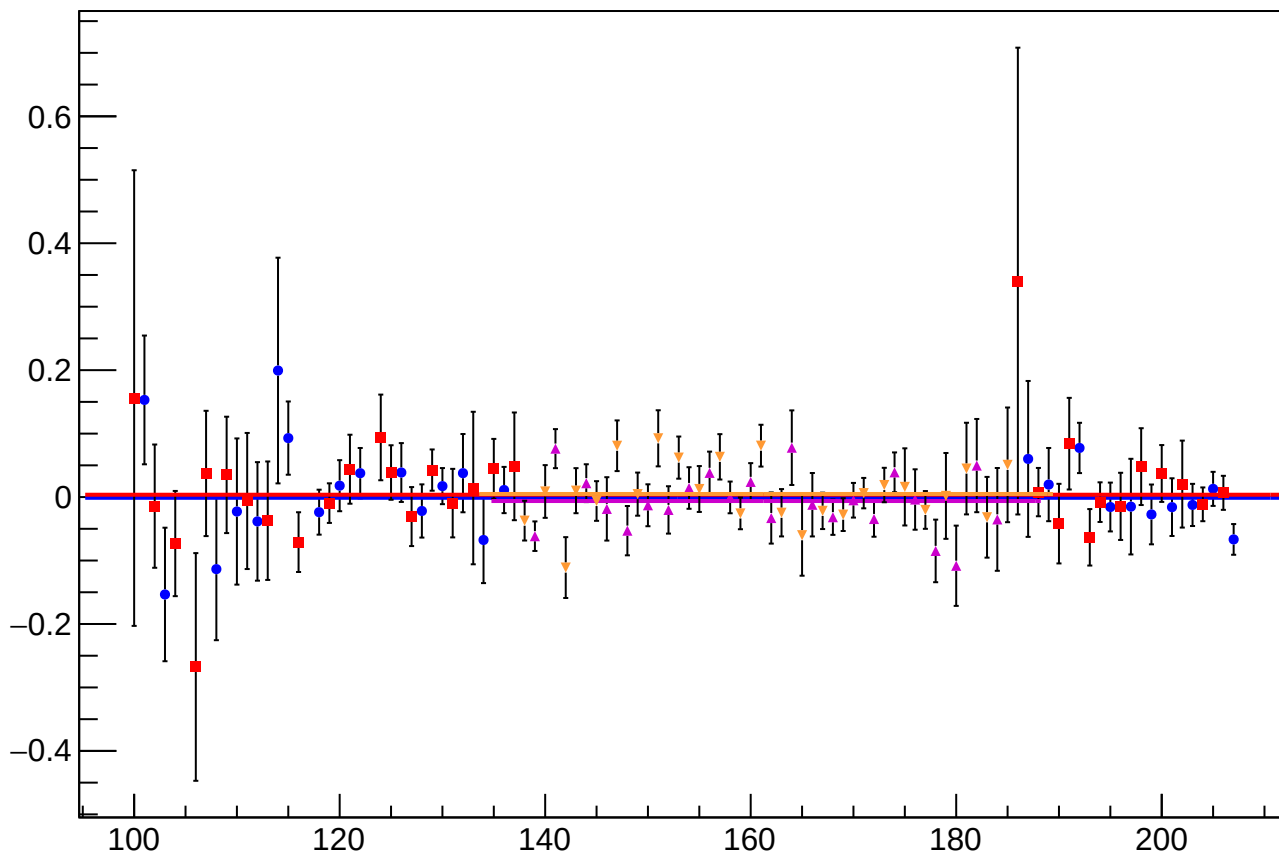
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 983290.8/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10323574.4/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 21990713.2/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11593170.5/53

asym\_sam\_1526\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.001 \pm 0.009$   $\chi^2/\text{NDF}$ : 26.6/25

Left Out:  $0.005 \pm 0.007$   $\chi^2/\text{NDF}$ : 34.0/24

Right Out:  $0.004 \pm 0.009$   $\chi^2/\text{NDF}$ : 19.2/30

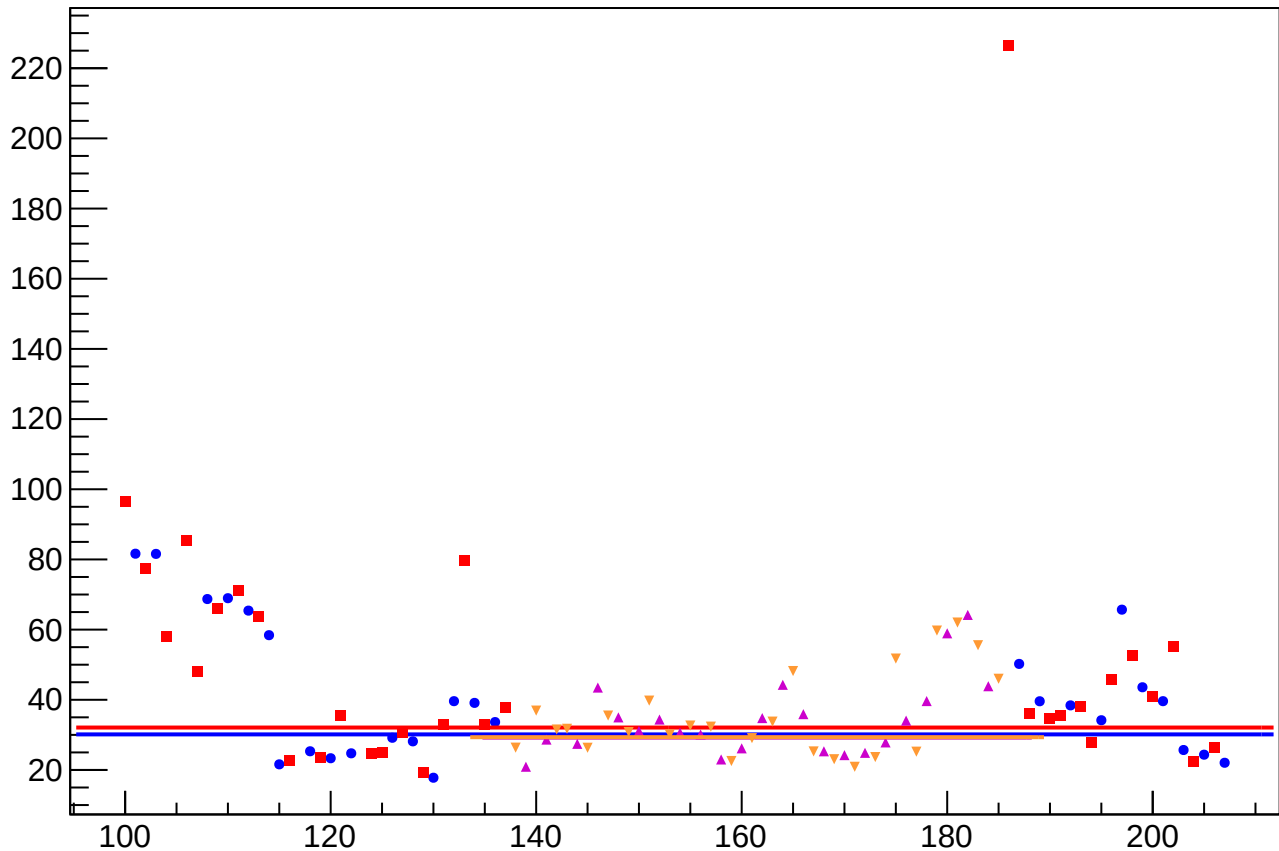
Left In:  $-0.006 \pm 0.007$   $\chi^2/\text{NDF}$ : 31.0/22

+ sign  $0.002 \pm 0.006$   $\chi^2/\text{NDF}$ : 60.9/50

All:  $0.000 \pm 0.004$   $\chi^2/\text{NDF}$ : 112.2/104

- sign  $-0.002 \pm 0.006$   $\chi^2/\text{NDF}$ : 50.9/53

asym\_sam\_1526\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 30.137 $\pm$ 0.006  $\chi^2$ /NDF: 3714385.2/25

Left Out: 29.338 $\pm$ 0.005  $\chi^2$ /NDF: 2687159.2/24

Right Out: 32.091 $\pm$ 0.006  $\chi^2$ /NDF: 4351021.7/30

Left In: 29.226 $\pm$ 0.005  $\chi^2$ /NDF: 2097657.8/22

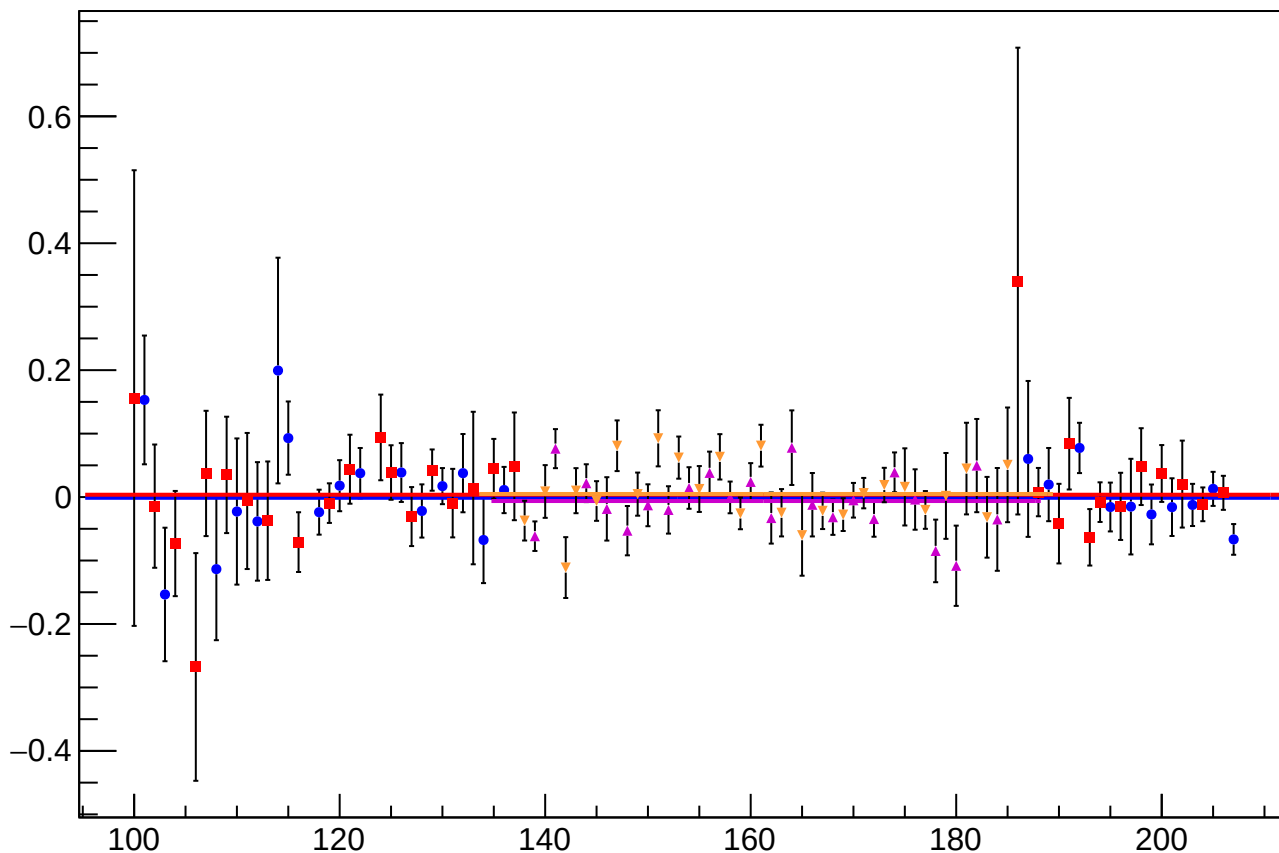
+ sign 29.656 $\pm$ 0.004  $\chi^2$ /NDF: 6411645.1/50

All: 30.003 $\pm$ 0.003  $\chi^2$ /NDF: 13000248.9/104

- sign 30.365 $\pm$ 0.004  $\chi^2$ /NDF: 6572423.9/53



asym\_sam\_1526\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.001 \pm 0.009$   $\chi^2/\text{NDF}$ : 26.6/25

Left Out:  $0.005 \pm 0.007$   $\chi^2/\text{NDF}$ : 34.0/24

Right Out:  $0.004 \pm 0.009$   $\chi^2/\text{NDF}$ : 19.2/30

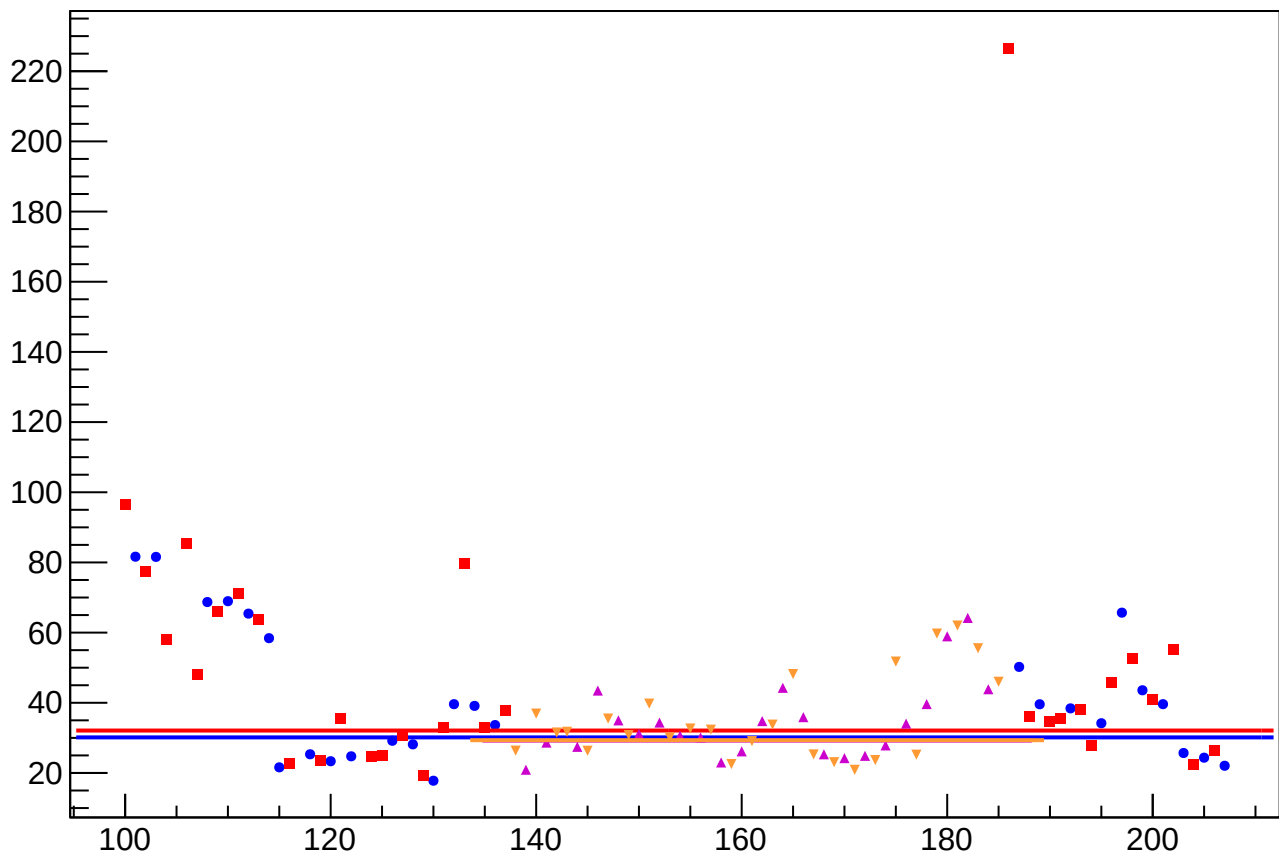
Left In:  $-0.006 \pm 0.007$   $\chi^2/\text{NDF}$ : 31.0/22

+ sign  $0.002 \pm 0.006$   $\chi^2/\text{NDF}$ : 60.9/50

All:  $0.000 \pm 0.004$   $\chi^2/\text{NDF}$ : 112.2/104

- sign  $-0.002 \pm 0.006$   $\chi^2/\text{NDF}$ : 50.9/53

asym\_sam\_1526\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 30.137 $\pm$ 0.006  $\chi^2$ /NDF: 3714385.2/25

Left Out: 29.338 $\pm$ 0.005  $\chi^2$ /NDF: 2687159.2/24

Right Out: 32.091 $\pm$ 0.006  $\chi^2$ /NDF: 4351021.7/30

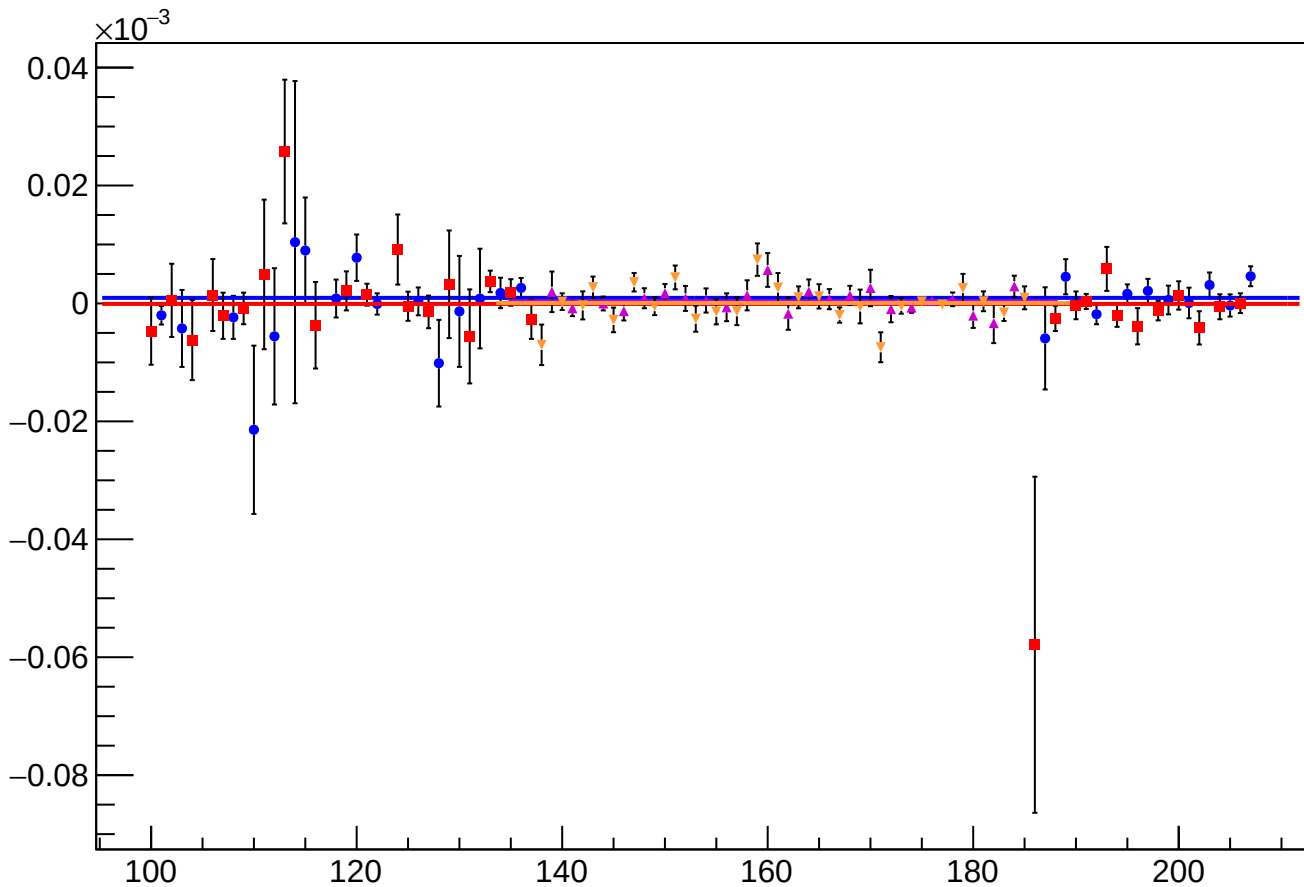
Left In: 29.226 $\pm$ 0.005  $\chi^2$ /NDF: 2097657.8/22

+ sign 29.656 $\pm$ 0.004  $\chi^2$ /NDF: 6411645.1/50

All: 30.003 $\pm$ 0.003  $\chi^2$ /NDF: 13000248.9/104

- sign 30.365 $\pm$ 0.004  $\chi^2$ /NDF: 6572423.9/53

asym\_sam\_1526\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 27.2/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 43.7/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 30.5/30

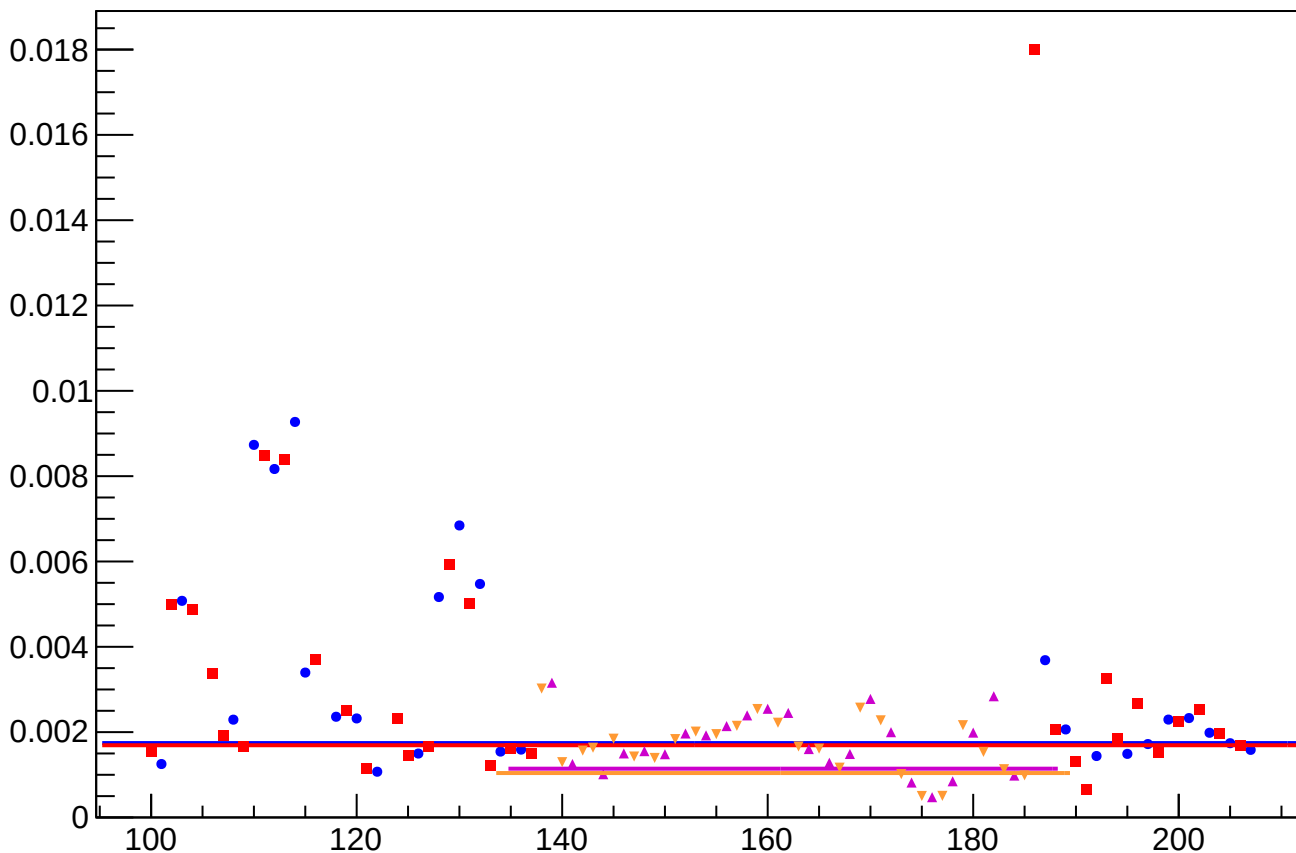
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 15.5/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 73.2/50

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 119.7/104

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 46.4/53

asym\_sam\_1526\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 4419544.6/25

Left Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 9825407.0/24

Right Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 6769643.0/30

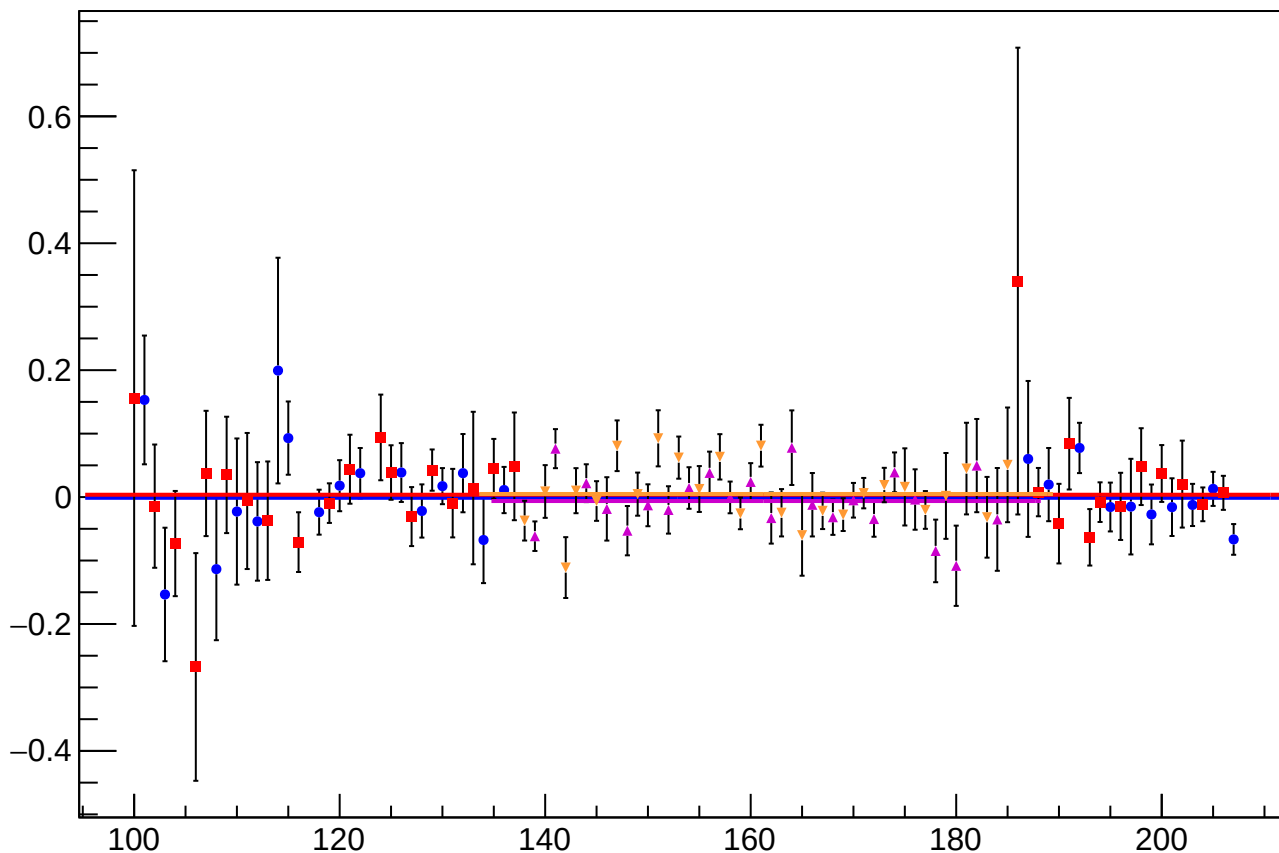
Left In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 8291862.8/22

+ sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 17252190.0/50

All: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 34315275.3/104

- sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 16912012.9/53

asym\_sam\_1526\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.001 \pm 0.009$   $\chi^2/\text{NDF}$ : 26.6/25

Left Out:  $0.005 \pm 0.007$   $\chi^2/\text{NDF}$ : 34.0/24

Right Out:  $0.004 \pm 0.009$   $\chi^2/\text{NDF}$ : 19.2/30

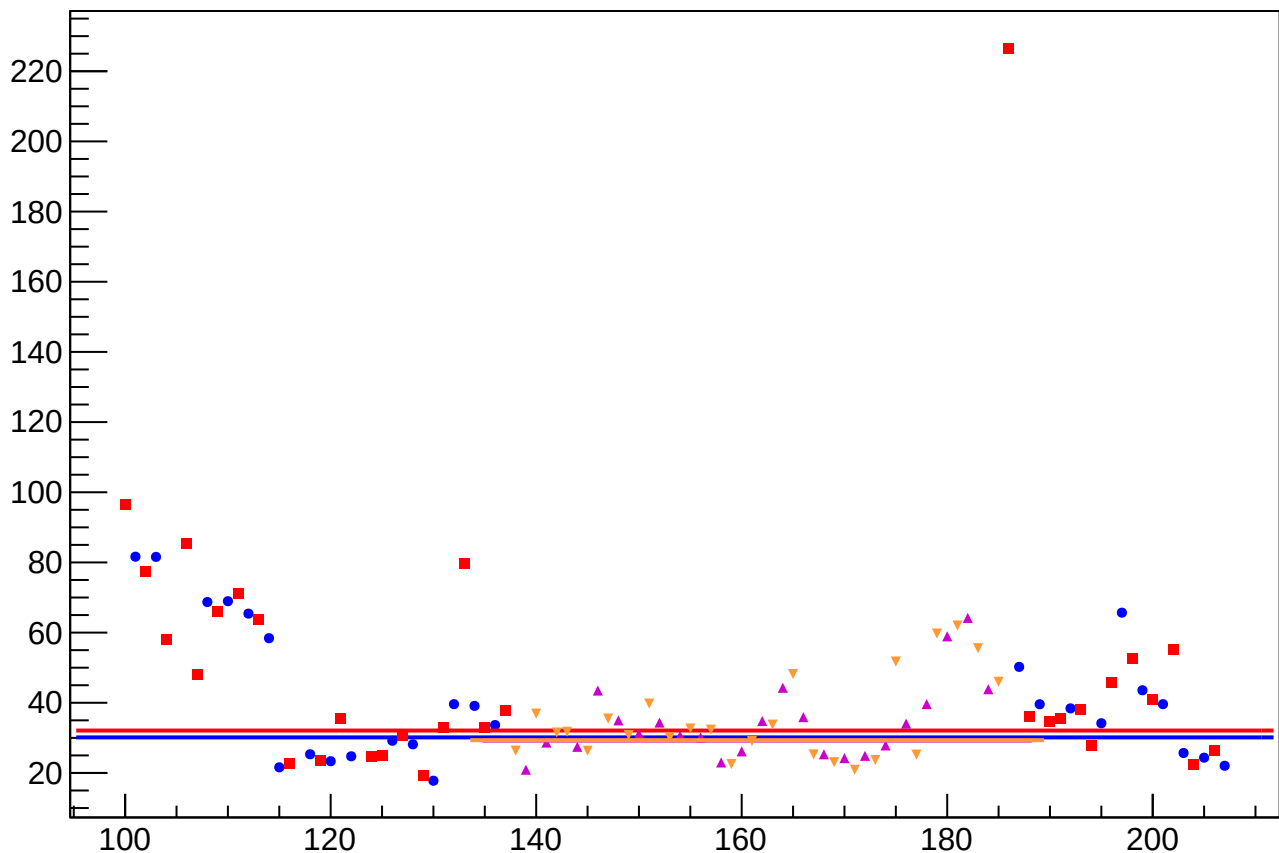
Left In:  $-0.006 \pm 0.007$   $\chi^2/\text{NDF}$ : 31.0/22

+ sign  $0.002 \pm 0.006$   $\chi^2/\text{NDF}$ : 60.9/50

All:  $0.000 \pm 0.004$   $\chi^2/\text{NDF}$ : 112.2/104

- sign  $-0.002 \pm 0.006$   $\chi^2/\text{NDF}$ : 50.9/53

asym\_sam\_1526\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 30.136+/-0.006  $\chi^2/\text{NDF}$ : 3714668.5/25

Left Out: 29.338+/-0.005  $\chi^2/\text{NDF}$ : 2687200.3/24

Right Out: 32.090+/-0.006  $\chi^2/\text{NDF}$ : 4351200.8/30

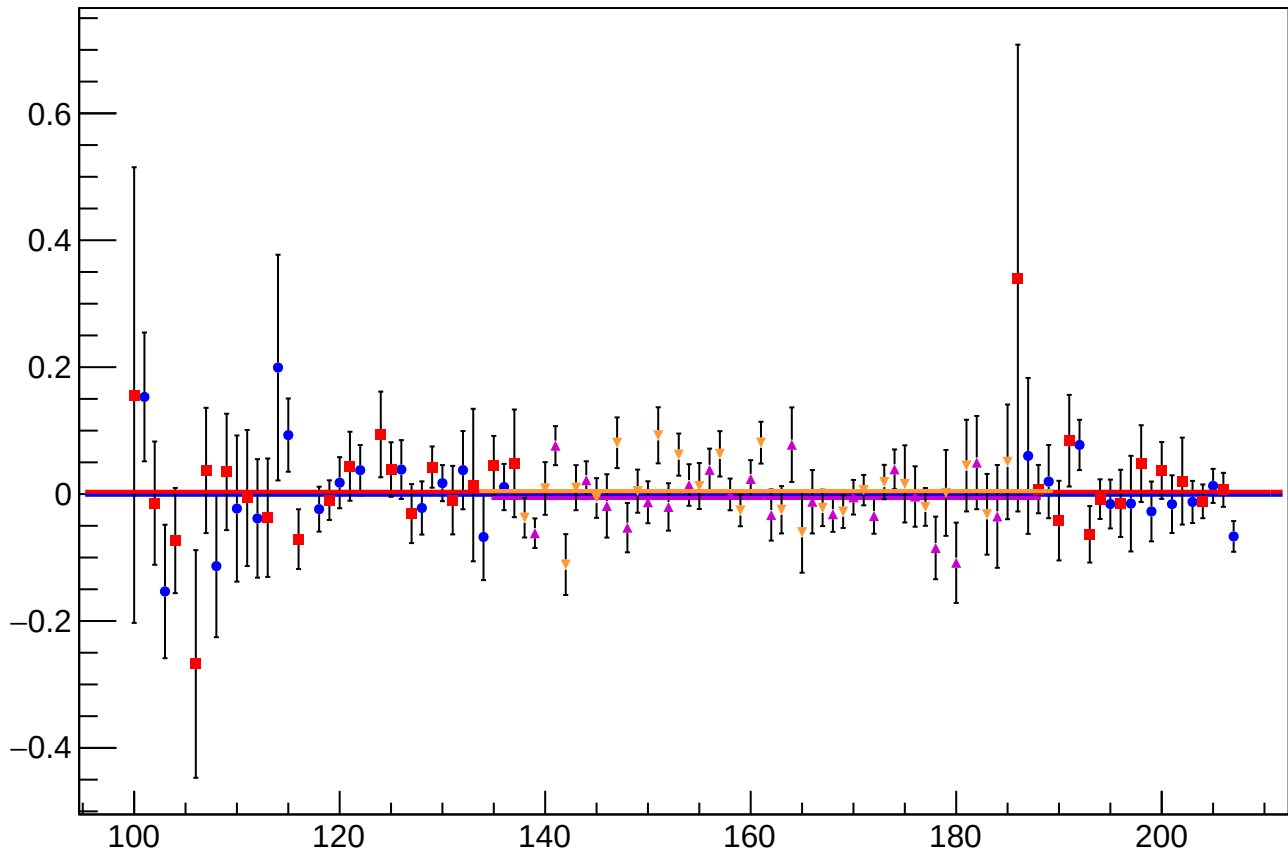
Left In: 29.227+/-0.005  $\chi^2/\text{NDF}$ : 2097621.4/22

+ sign 29.656+/-0.004  $\chi^2/\text{NDF}$ : 6411944.6/50

All: 30.003+/-0.003  $\chi^2/\text{NDF}$ : 13000624.7/104

- sign 30.365+/-0.004  $\chi^2/\text{NDF}$ : 6572487.8/53

asym\_sam\_1526\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.001 \pm 0.009$   $\chi^2/\text{NDF}$ : 26.6/25

Left Out:  $0.005 \pm 0.007$   $\chi^2/\text{NDF}$ : 34.0/24

Right Out:  $0.004 \pm 0.009$   $\chi^2/\text{NDF}$ : 19.2/30

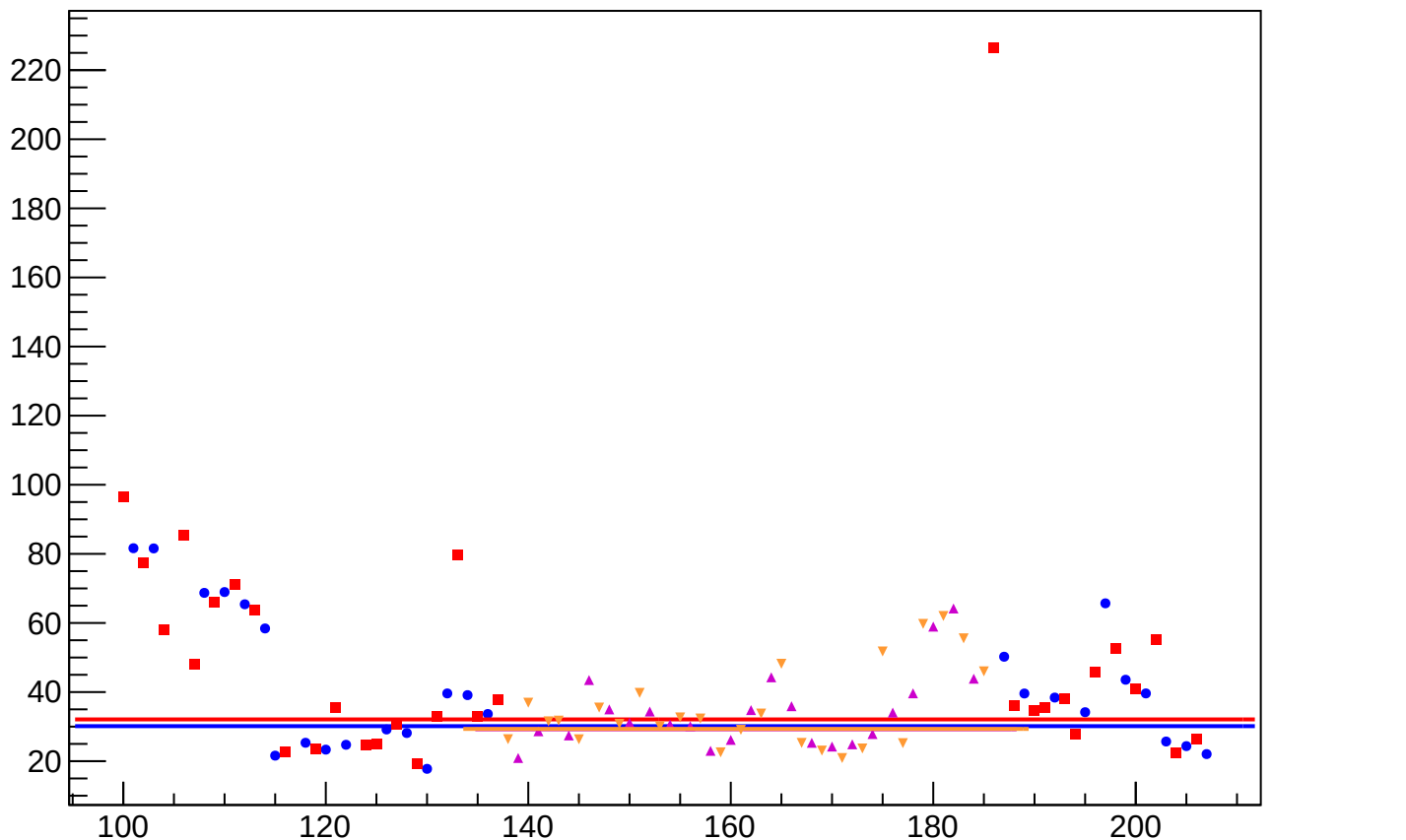
Left In:  $-0.006 \pm 0.007$   $\chi^2/\text{NDF}$ : 31.0/22

+ sign  $0.002 \pm 0.006$   $\chi^2/\text{NDF}$ : 60.9/50

All:  $0.000 \pm 0.004$   $\chi^2/\text{NDF}$ : 112.2/104

- sign  $-0.002 \pm 0.006$   $\chi^2/\text{NDF}$ : 50.9/53

asym\_sam\_1526\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 30.136+/-0.006  $\chi^2/\text{NDF}$ : 3714668.5/25

Left Out: 29.338+/-0.005  $\chi^2/\text{NDF}$ : 2687200.3/24

Right Out: 32.090+/-0.006  $\chi^2/\text{NDF}$ : 4351200.8/30

Left In: 29.227+/-0.005  $\chi^2/\text{NDF}$ : 2097621.4/22

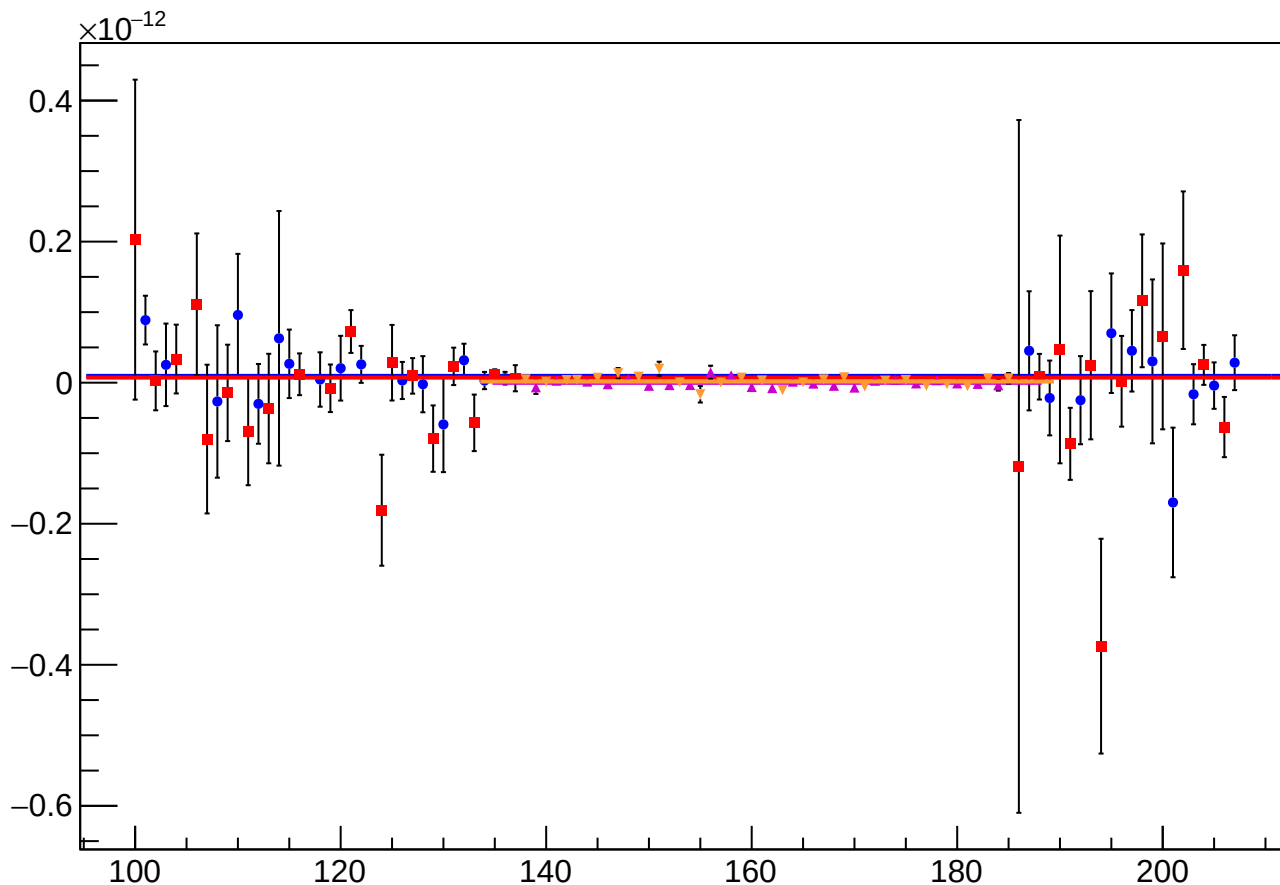
+ sign 29.656+/-0.004  $\chi^2/\text{NDF}$ : 6411944.6/50

All: 30.003+/-0.003  $\chi^2/\text{NDF}$ : 13000624.7/104

- sign 30.365+/-0.004  $\chi^2/\text{NDF}$ : 6572487.8/53



asym\_sam\_1526\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 15.5/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:35.0/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 37.8/30

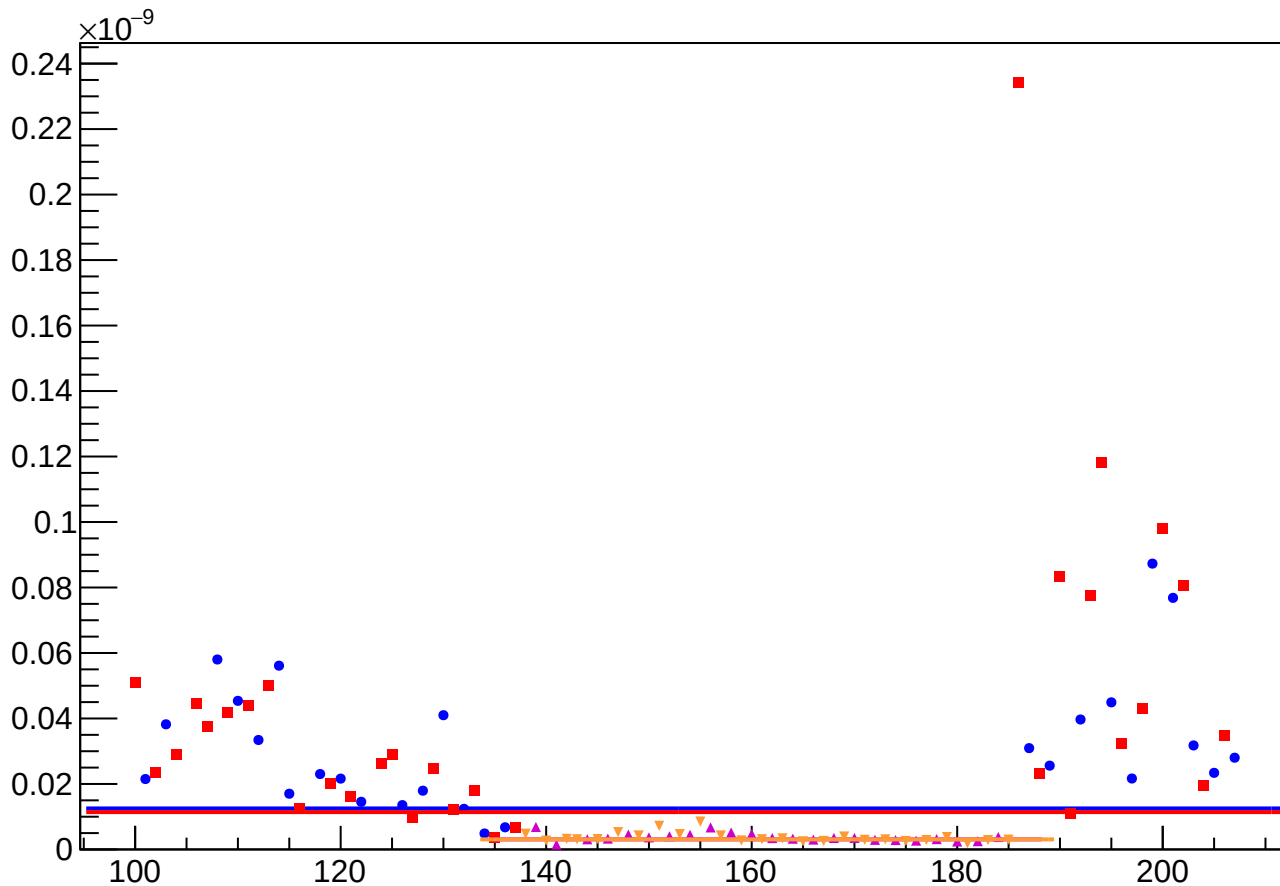
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:18.6/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 52.5/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 112.4/104

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 58.0/53

asym\_sam\_1526\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7246512.5/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2024861.7/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10517128.9/30

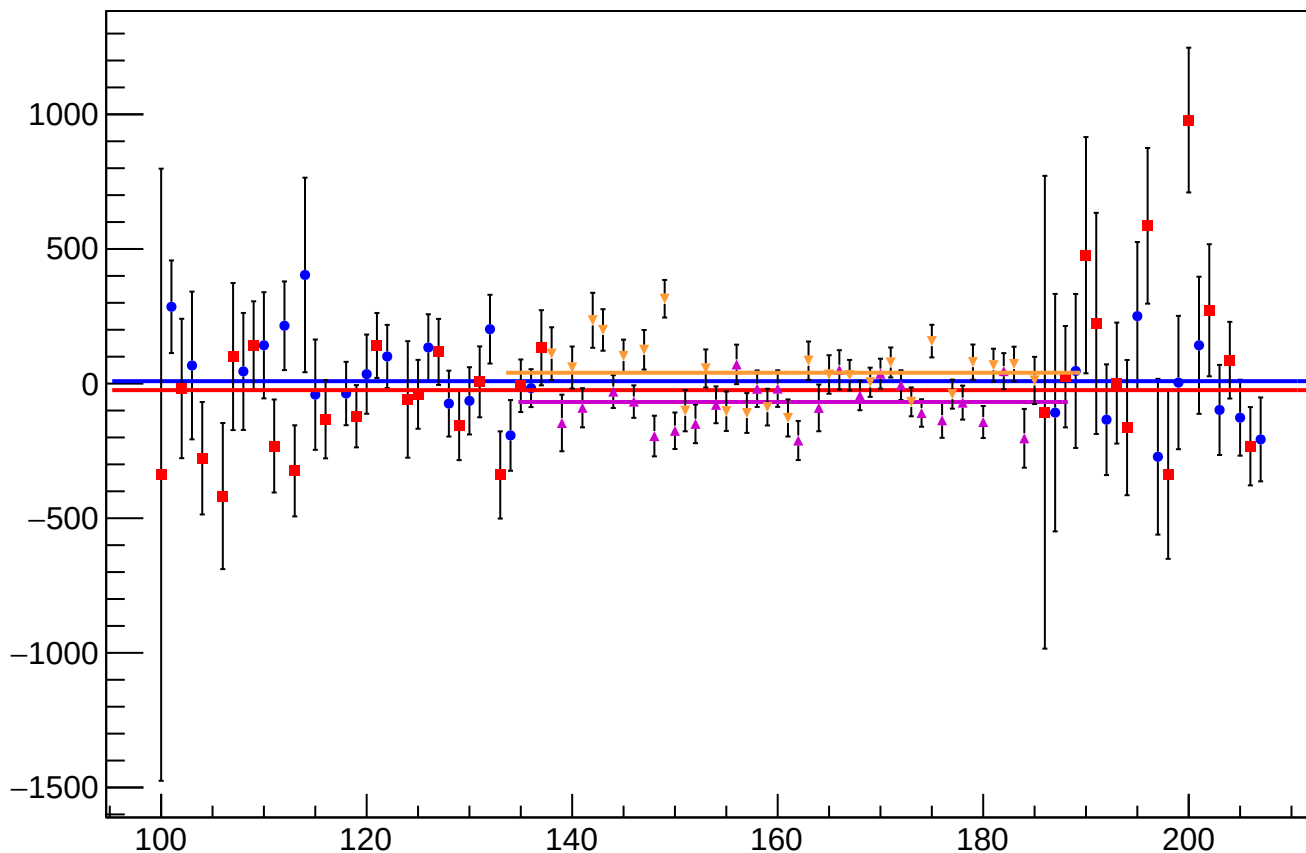
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2149738.1/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14714370.5/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 31733355.6/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 17018944.4/53

# reg\_asym\_sam\_3726\_avg\_mean vs Slug



Right In:  $9.035 \pm 30.203$   $\chi^2/\text{NDF}: 19.2/25$

Left Out:  $40.342 \pm 13.402$   $\chi^2/\text{NDF}: 59.4/24$

Right Out:  $-24.294 \pm 30.878$   $\chi^2/\text{NDF}: 45.7/30$

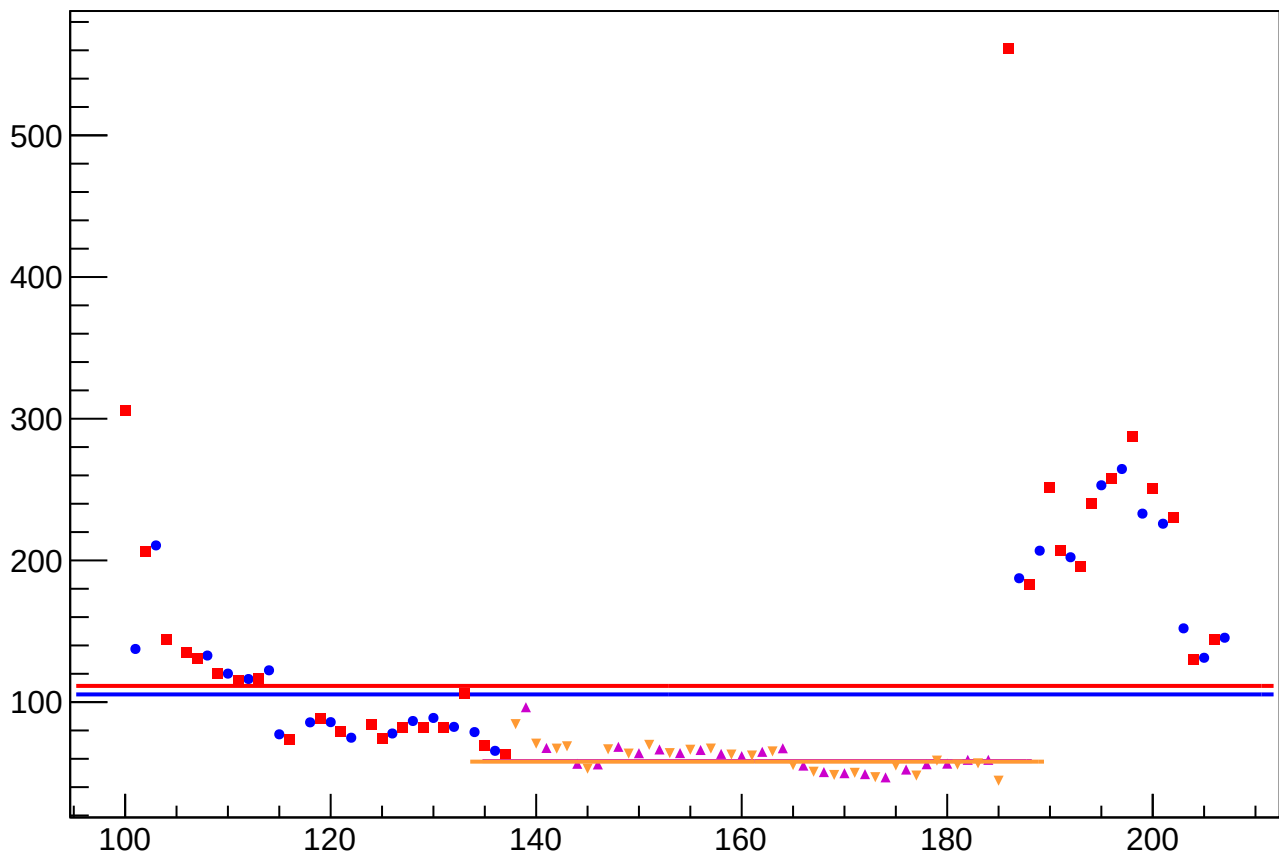
Left In:  $-68.344 \pm 13.866$   $\chi^2/\text{NDF}: 31.8/22$

+ sign  $35.192 \pm 12.250$   $\chi^2/\text{NDF}: 79.5/50$

All:  $-11.339 \pm 8.800$   $\chi^2/\text{NDF}: 188.4/104$

- sign  $-60.952 \pm 12.649$   $\chi^2/\text{NDF}: 79.2/53$

# reg\_asym\_sam\_3726\_avg\_rms vs Slug



Right In: 105.439 $\pm$ 0.021  $\chi^2$ /NDF: 4930288.6/25

Left Out: 57.996 $\pm$ 0.009  $\chi^2$ /NDF:807648.8/24

Right Out: 111.442 $\pm$ 0.022  $\chi^2$ /NDF: 6112586.4/30

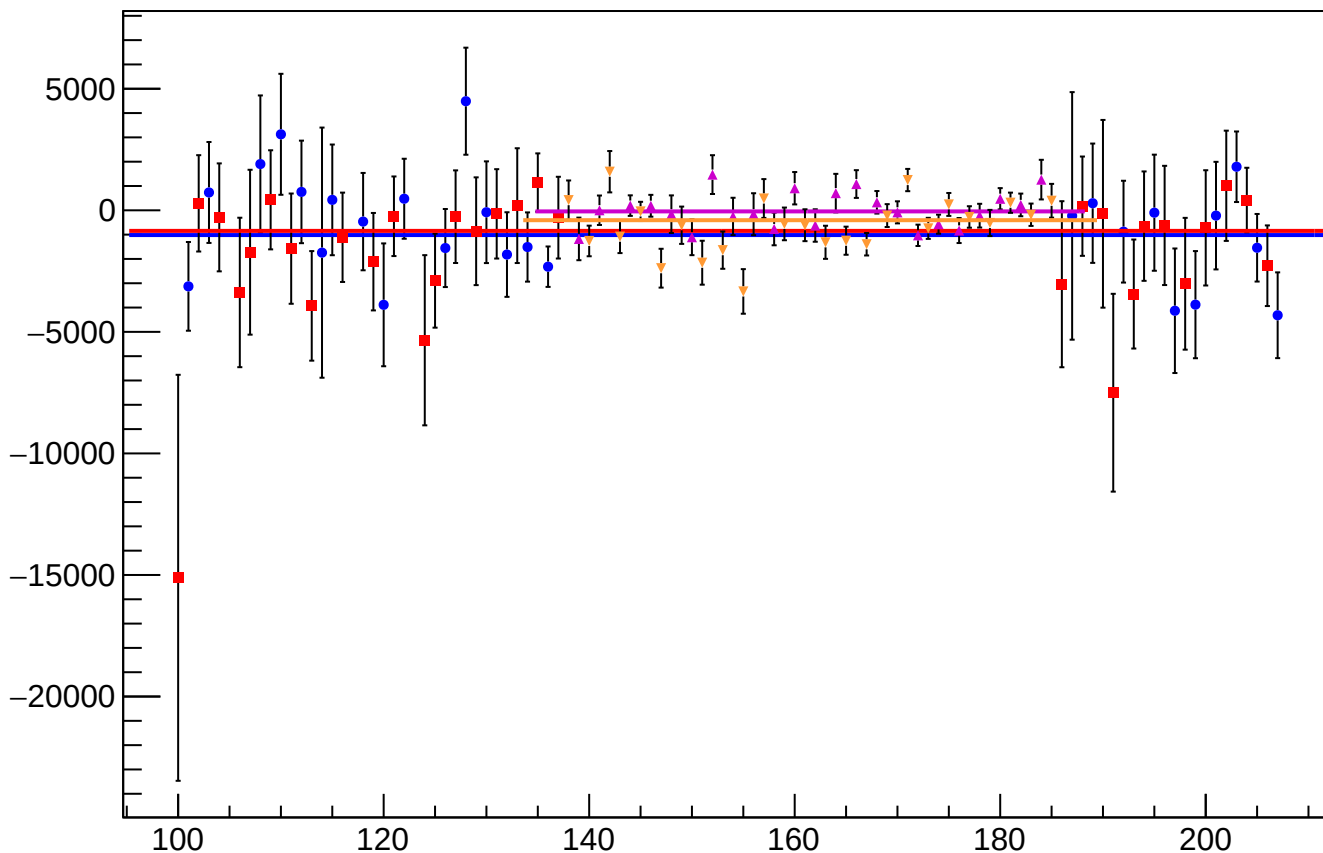
Left In: 58.397 $\pm$ 0.010  $\chi^2$ /NDF:735208.2/22

+ sign 65.800 $\pm$ 0.009  $\chi^2$ /NDF: 9861053.2/50

All: 66.525 $\pm$ 0.006  $\chi^2$ /NDF: 21635224.4/104

- sign 67.299 $\pm$ 0.009  $\chi^2$ /NDF: 11759686.5/53

asym\_sam\_3726\_avg\_reg\_correction\_mean vs Slug



Right In:  $-1018.300 \pm 362.051$   $\chi^2/\text{NDF}$ : 29.7/25

Left Out:  $-406.322 \pm 113.468$   $\chi^2/\text{NDF}$ : 63.2/24

Right Out:  $-846.286 \pm 377.313$   $\chi^2/\text{NDF}$ : 20.8/30

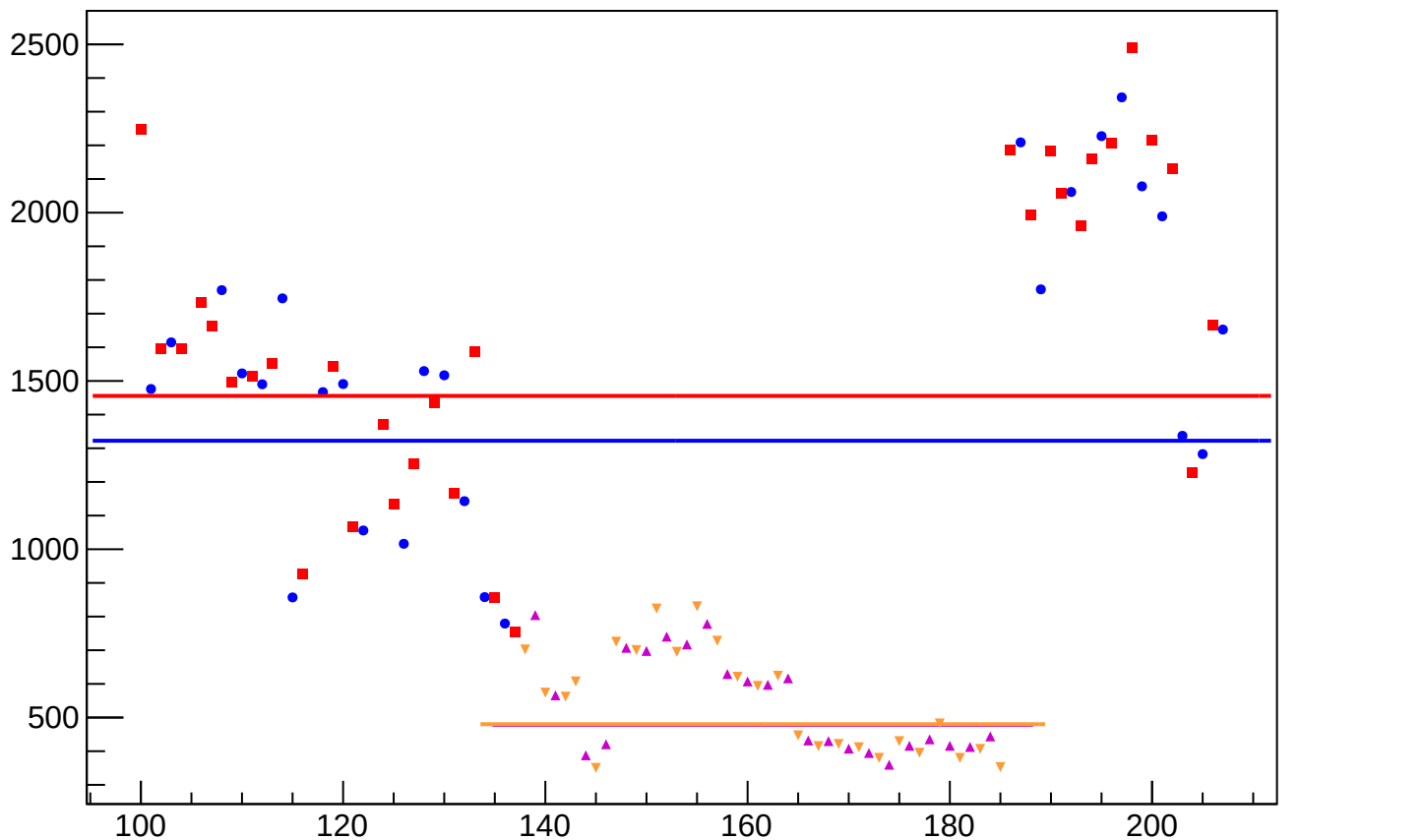
Left In:  $-44.831 \pm 115.765$   $\chi^2/\text{NDF}$ : 31.1/22

+ sign  $-461.055 \pm 108.275$   $\chi^2/\text{NDF}$ : 95.5/50

All:  $-291.224 \pm 77.396$   $\chi^2/\text{NDF}$ : 156.5/104

- sign  $-113.785 \pm 110.673$   $\chi^2/\text{NDF}$ : 55.9/53

asym\_sam\_3726\_avg\_reg\_correction\_rms vs Slug



Right In: 1322.410 $\pm$ 0.256  $\chi^2$ /NDF: 2964696.1/25

Left Out: 480.162 $\pm$ 0.080  $\chi^2$ /NDF: 2582213.9/24

Right Out: 1455.621 $\pm$ 0.267  $\chi^2$ /NDF: 2923641.1/30

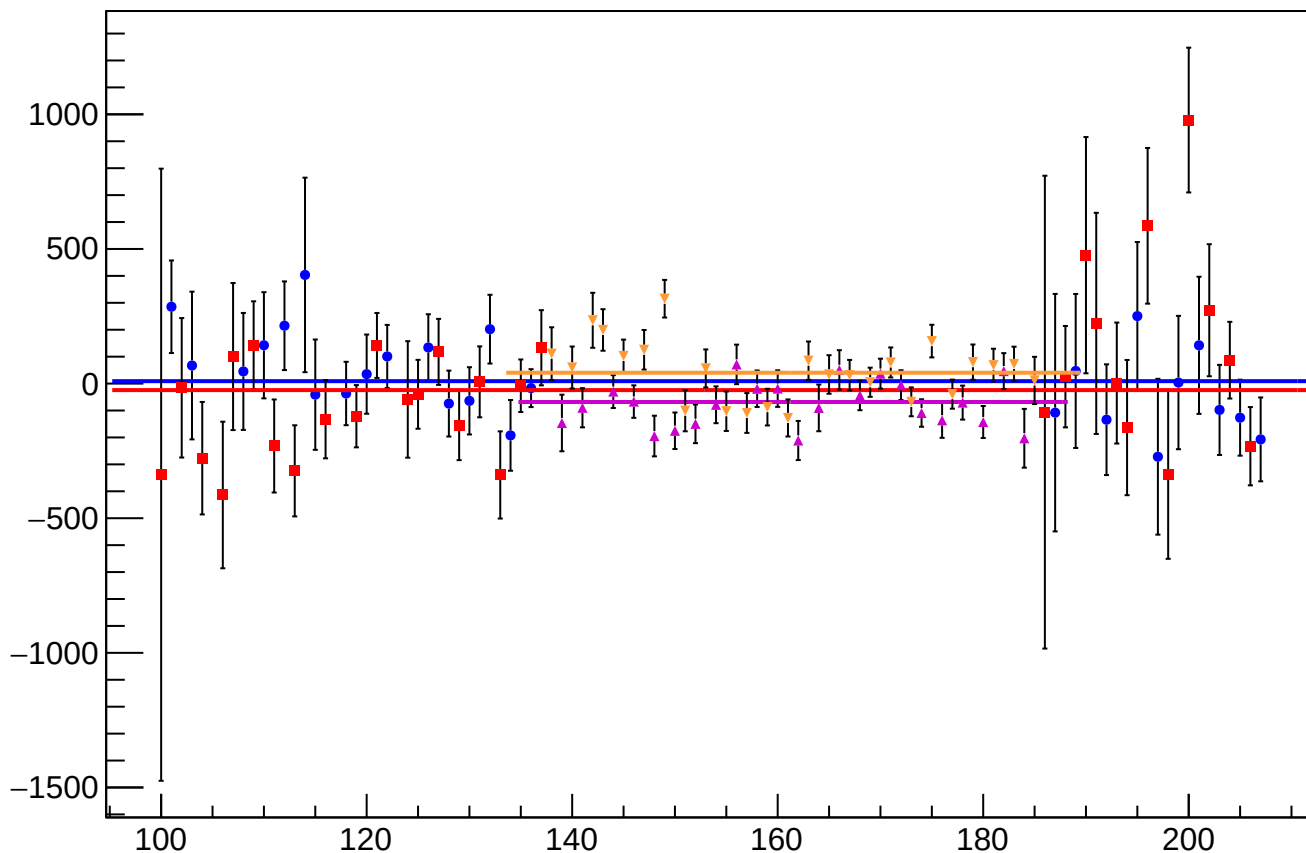
Left In: 478.084 $\pm$ 0.082  $\chi^2$ /NDF: 2215520.4/22

+ sign 555.490 $\pm$ 0.077  $\chi^2$ /NDF: 15402475.9/50

All: 558.765 $\pm$ 0.055  $\chi^2$ /NDF: 32814744.7/10

- sign 562.187 $\pm$ 0.078  $\chi^2$ /NDF: 17408526.6/53

# cor\_asym\_sam\_3726\_avg\_mean vs Slug



Right In:  $9.025 \pm 30.203$   $\chi^2/\text{NDF}: 19.1/25$

Left Out:  $40.344 \pm 13.402$   $\chi^2/\text{NDF}: 59.4/24$

Right Out:  $-24.176 \pm 30.879$   $\chi^2/\text{NDF}: 45.7/30$

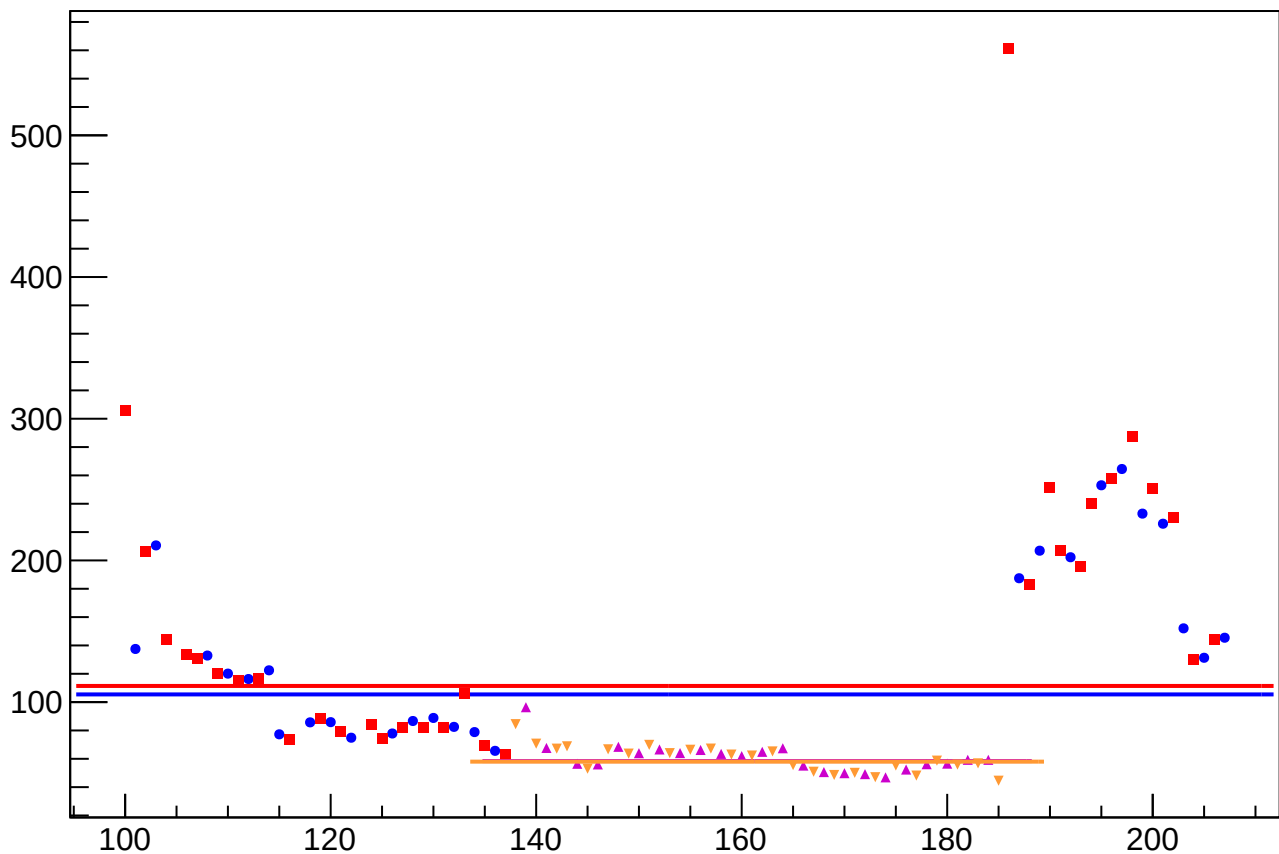
Left In:  $-68.343 \pm 13.866$   $\chi^2/\text{NDF}: 31.7/22$

+ sign  $35.192 \pm 12.250$   $\chi^2/\text{NDF}: 79.5/50$

All:  $-11.329 \pm 8.800$   $\chi^2/\text{NDF}: 188.4/104$

- sign  $-60.932 \pm 12.649$   $\chi^2/\text{NDF}: 79.1/53$

cor\_asym\_sam\_3726\_avg\_rms vs Slug



Right In: 105.439 $\pm$ 0.021  $\chi^2$ /NDF: 4930291.6/25

Left Out: 57.996 $\pm$ 0.009  $\chi^2$ /NDF:807648.7/24

Right Out: 111.415 $\pm$ 0.022  $\chi^2$ /NDF: 6110401.1/30

Left In: 58.397 $\pm$ 0.010  $\chi^2$ /NDF:735208.2/22

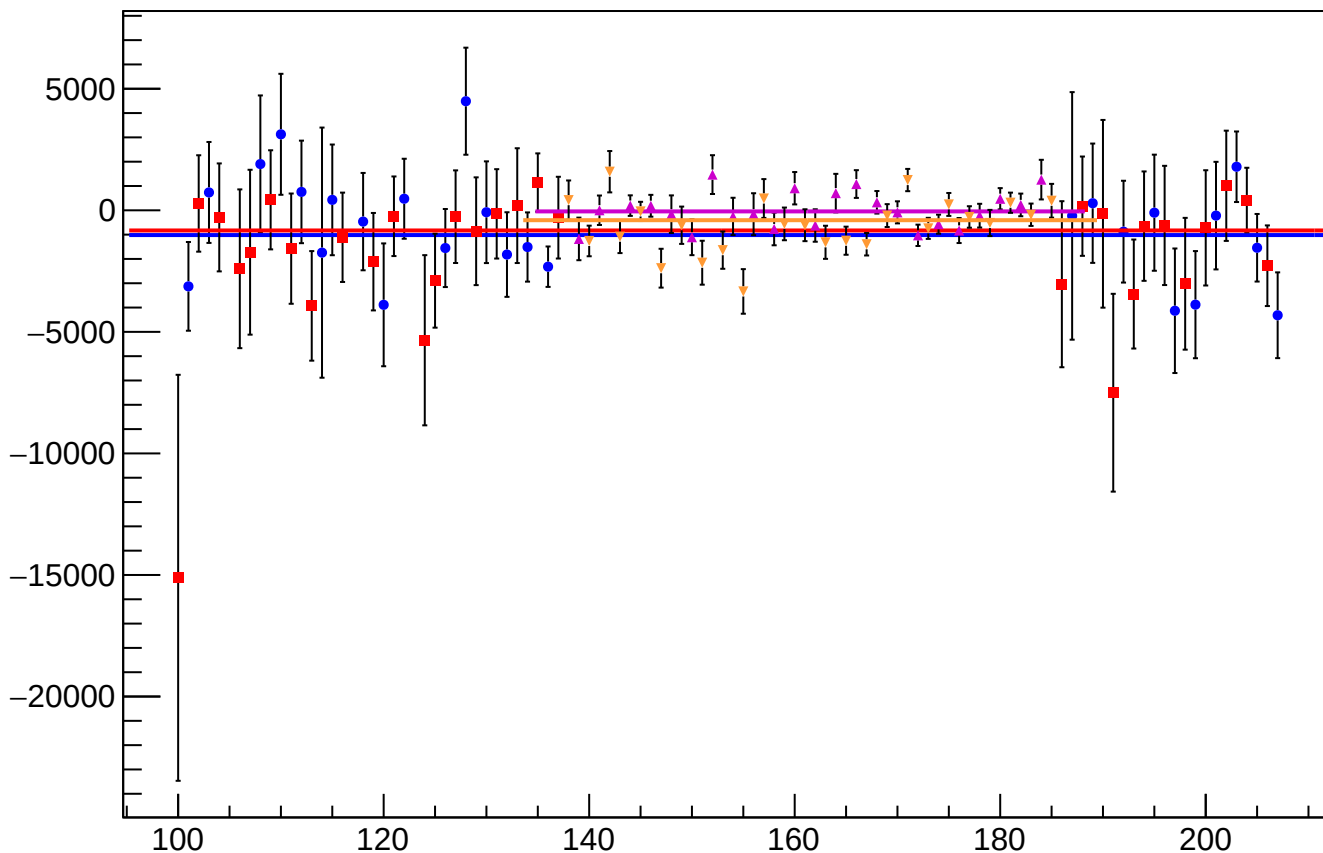
+ sign 65.800 $\pm$ 0.009  $\chi^2$ /NDF: 9861055.5/50

All: 66.523 $\pm$ 0.006  $\chi^2$ /NDF: 21627537.5/104

- sign 67.293 $\pm$ 0.009  $\chi^2$ /NDF: 11752098.8/53



asym\_sam\_3726\_avg\_cor\_correction\_mean vs Slug



Right In:  $-1018.279 \pm 362.052$   $\chi^2/\text{NDF}$ : 29.7/25

Left Out:  $-406.320 \pm 113.468$   $\chi^2/\text{NDF}$ : 63.2/24

Right Out:  $-829.189 \pm 377.647$   $\chi^2/\text{NDF}$ : 20.3/30

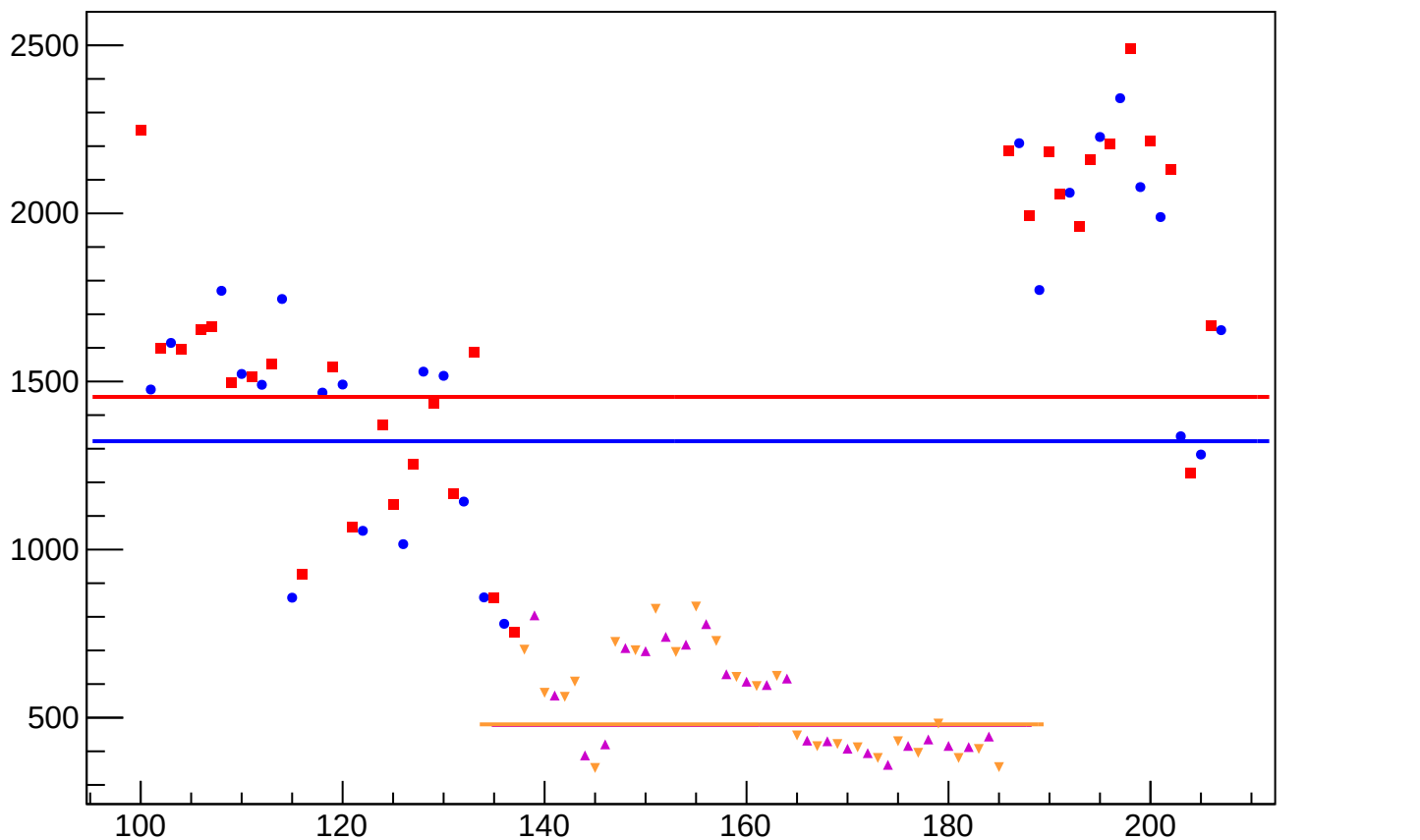
Left In:  $-44.830 \pm 115.765$   $\chi^2/\text{NDF}$ : 31.1/22

+ sign  $-461.051 \pm 108.275$   $\chi^2/\text{NDF}$ : 95.5/50

All:  $-290.462 \pm 77.399$   $\chi^2/\text{NDF}$ : 155.9/104

- sign  $-112.204 \pm 110.681$   $\chi^2/\text{NDF}$ : 55.3/53

asym\_sam\_3726\_avg\_cor\_correction\_rms vs Slug



Right In: 1322.412+/-0.256  $\chi^2/\text{NDF}$ : 2964725.6/25

Left Out: 480.162+/-0.080  $\chi^2/\text{NDF}$ : 2582209.1/24

Right Out: 1454.135+/-0.267  $\chi^2/\text{NDF}$ : 2914911.8/30

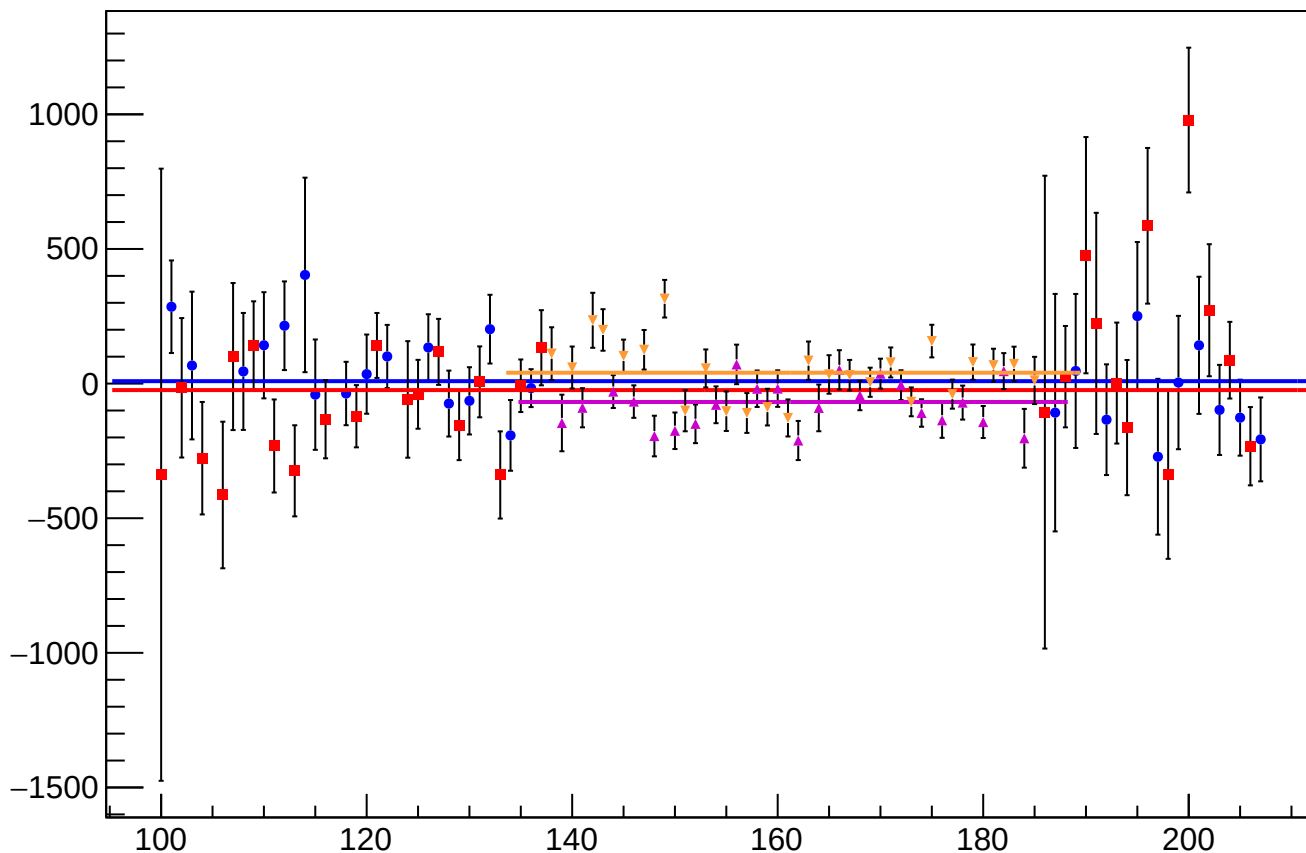
Left In: 478.084+/-0.082  $\chi^2/\text{NDF}$ : 2215518.9/22

+ sign 555.489+/-0.077  $\chi^2/\text{NDF}$ : 15402504.6/50

All: 558.636+/-0.055  $\chi^2/\text{NDF}$ : 32748696.6/10

- sign 561.923+/-0.078  $\chi^2/\text{NDF}$ : 17342738.5/53

# eigen\_cor\_asym\_sam\_3726\_avg\_mean vs Slug



Right In:  $9.025 \pm 30.203$   $\chi^2/\text{NDF}: 19.1/25$

Left Out:  $40.344 \pm 13.402$   $\chi^2/\text{NDF}: 59.4/24$

Right Out:  $-24.176 \pm 30.879$   $\chi^2/\text{NDF}: 45.7/30$

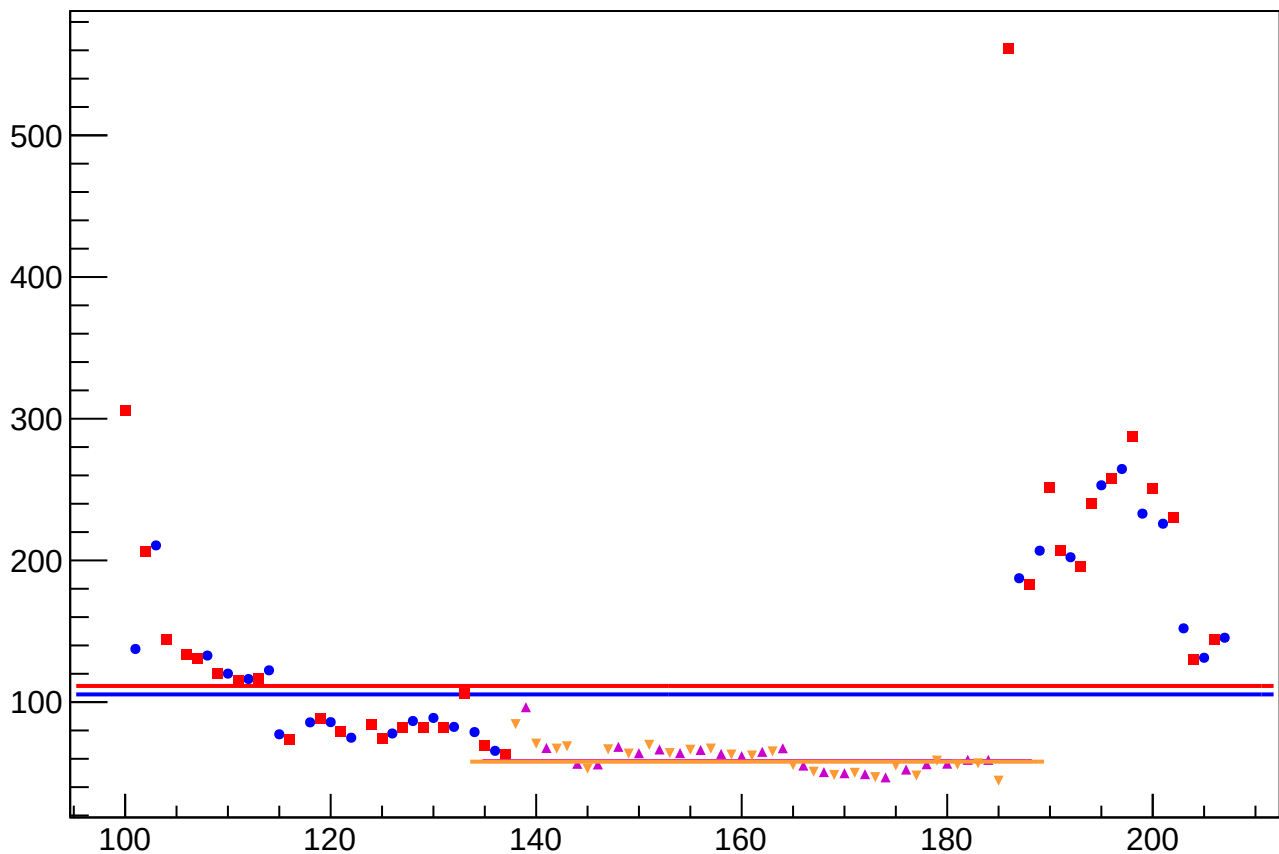
Left In:  $-68.343 \pm 13.866$   $\chi^2/\text{NDF}: 31.7/22$

+ sign  $35.192 \pm 12.250$   $\chi^2/\text{NDF}: 79.5/50$

All:  $-11.329 \pm 8.800$   $\chi^2/\text{NDF}: 188.4/104$

- sign  $-60.932 \pm 12.649$   $\chi^2/\text{NDF}: 79.1/53$

eigen\_cor\_asym\_sam\_3726\_avg\_rms vs Slug



Right In: 105.439+/-0.021  $\chi^2/\text{NDF}$ : 4930291.6/25

Left Out: 57.996+/-0.009  $\chi^2/\text{NDF}$ : 807648.7/24

Right Out: 111.415+/-0.022  $\chi^2/\text{NDF}$ : 6110401.1/30

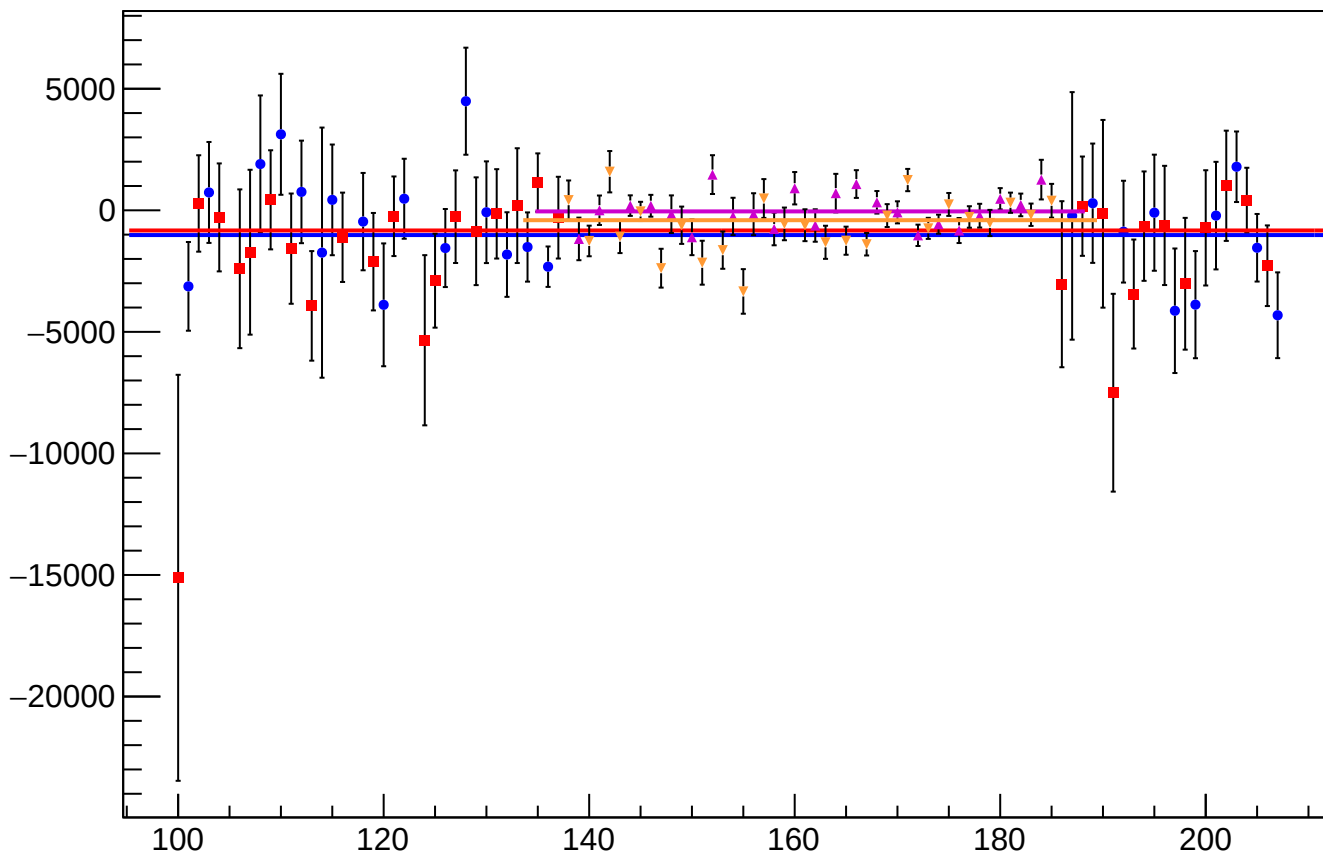
Left In: 58.397+/-0.010  $\chi^2/\text{NDF}$ : 735208.2/22

+ sign 65.800+/-0.009  $\chi^2/\text{NDF}$ : 9861055.5/50

All: 66.523+/-0.006  $\chi^2/\text{NDF}$ : 21627537.5/104

- sign 67.293+/-0.009  $\chi^2/\text{NDF}$ : 11752098.8/53

asym\_sam\_3726\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-1018.279 \pm 362.052$   $\chi^2/\text{NDF}$ : 29.7/25

Left Out:  $-406.320 \pm 113.468$   $\chi^2/\text{NDF}$ : 63.2/24

Right Out:  $-829.189 \pm 377.647$   $\chi^2/\text{NDF}$ : 20.3/30

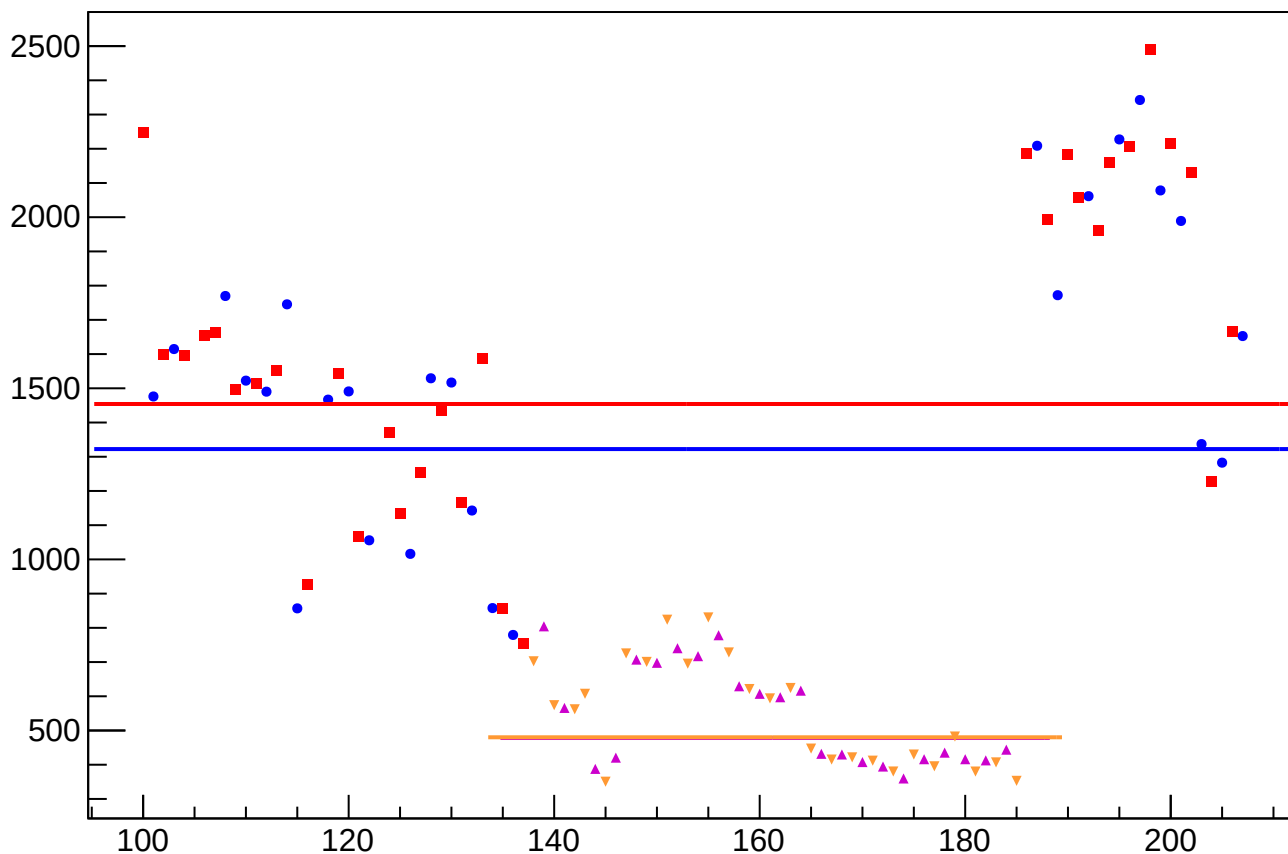
Left In:  $-44.830 \pm 115.765$   $\chi^2/\text{NDF}$ : 31.1/22

+ sign  $-461.051 \pm 108.275$   $\chi^2/\text{NDF}$ : 95.5/50

All:  $-290.462 \pm 77.399$   $\chi^2/\text{NDF}$ : 155.9/104

- sign  $-112.204 \pm 110.681$   $\chi^2/\text{NDF}$ : 55.3/53

asym\_sam\_3726\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 1322.412 $\pm$ 0.256  $\chi^2$ /NDF: 2964725.6/25

Left Out: 480.162 $\pm$ 0.080  $\chi^2$ /NDF: 2582209.1/24

Right Out: 1454.135 $\pm$ 0.267  $\chi^2$ /NDF: 2914911.8/30

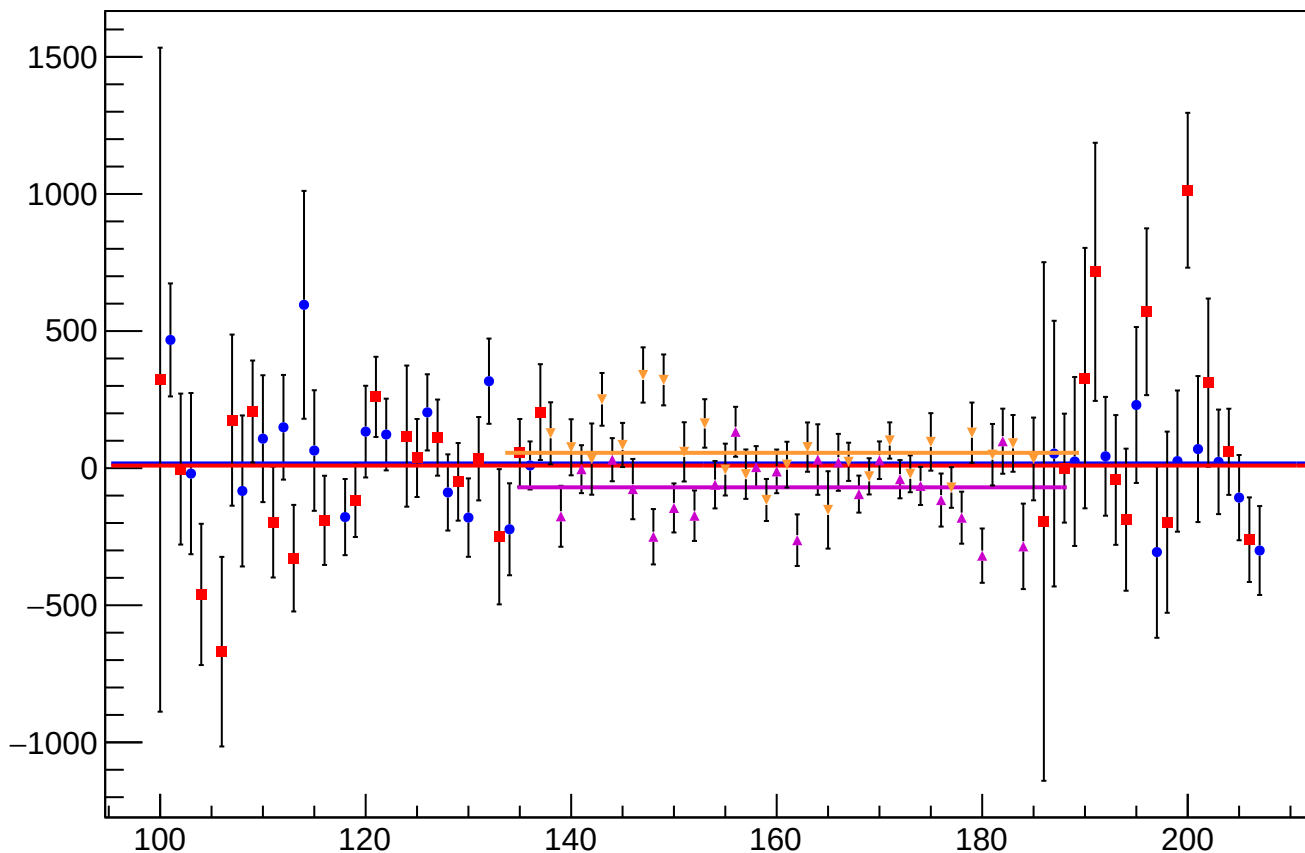
Left In: 478.084 $\pm$ 0.082  $\chi^2$ /NDF: 2215518.9/22

+ sign 555.489 $\pm$ 0.077  $\chi^2$ /NDF: 15402504.6/50

All: 558.636 $\pm$ 0.055  $\chi^2$ /NDF: 32748696.6/10

- sign 561.923 $\pm$ 0.078  $\chi^2$ /NDF: 17342738.5/53

# dit\_asym\_sam\_3726\_avg\_mean vs Slug



Right In: 17.224 $\pm$ 34.891  $\chi^2$ /NDF: 26.9/25

Left Out: 55.949 $\pm$ 17.949  $\chi^2$ /NDF:38.3/24

Right Out: 9.420 $\pm$ 35.646  $\chi^2$ /NDF: 45.5/30

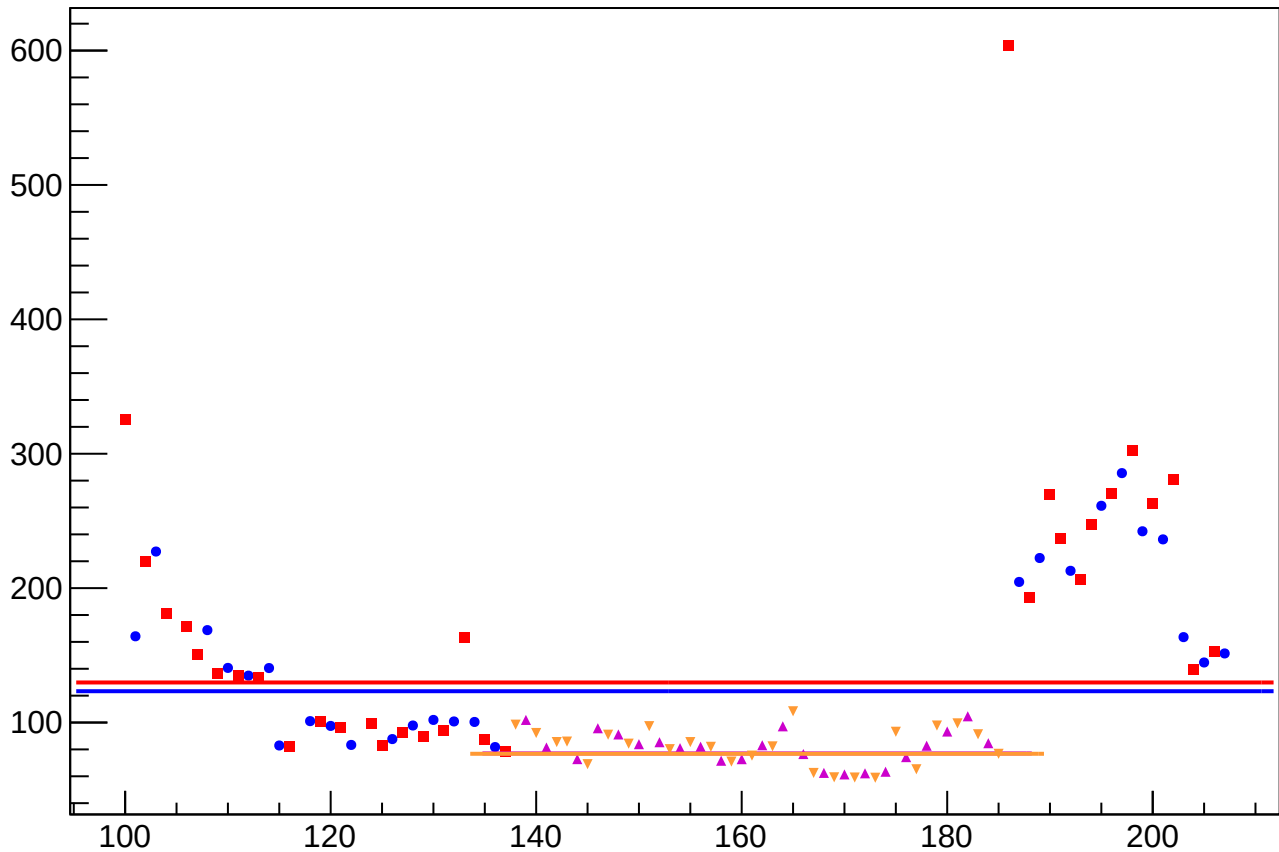
Left In: -69.844 $\pm$ 18.497  $\chi^2$ /NDF:34.5/22

+ sign 47.845 $\pm$ 15.961  $\chi^2$ /NDF: 66.2/50

All: -1.169 $\pm$ 11.444  $\chi^2$ /NDF: 169.5/104

- sign -53.029 $\pm$ 16.418  $\chi^2$ /NDF: 83.9/53

# dit\_asym\_sam\_3726\_avg\_rms vs Slug



Right In: 123.305 $\pm$ 0.025  $\chi^2$ /NDF: 4119961.9/25

Left Out: 76.744 $\pm$ 0.013  $\chi^2$ /NDF:1234629.1/24

Right Out: 129.806 $\pm$ 0.025  $\chi^2$ /NDF: 5426991.4/30

Left In: 77.018 $\pm$ 0.013  $\chi^2$ /NDF:858871.7/22

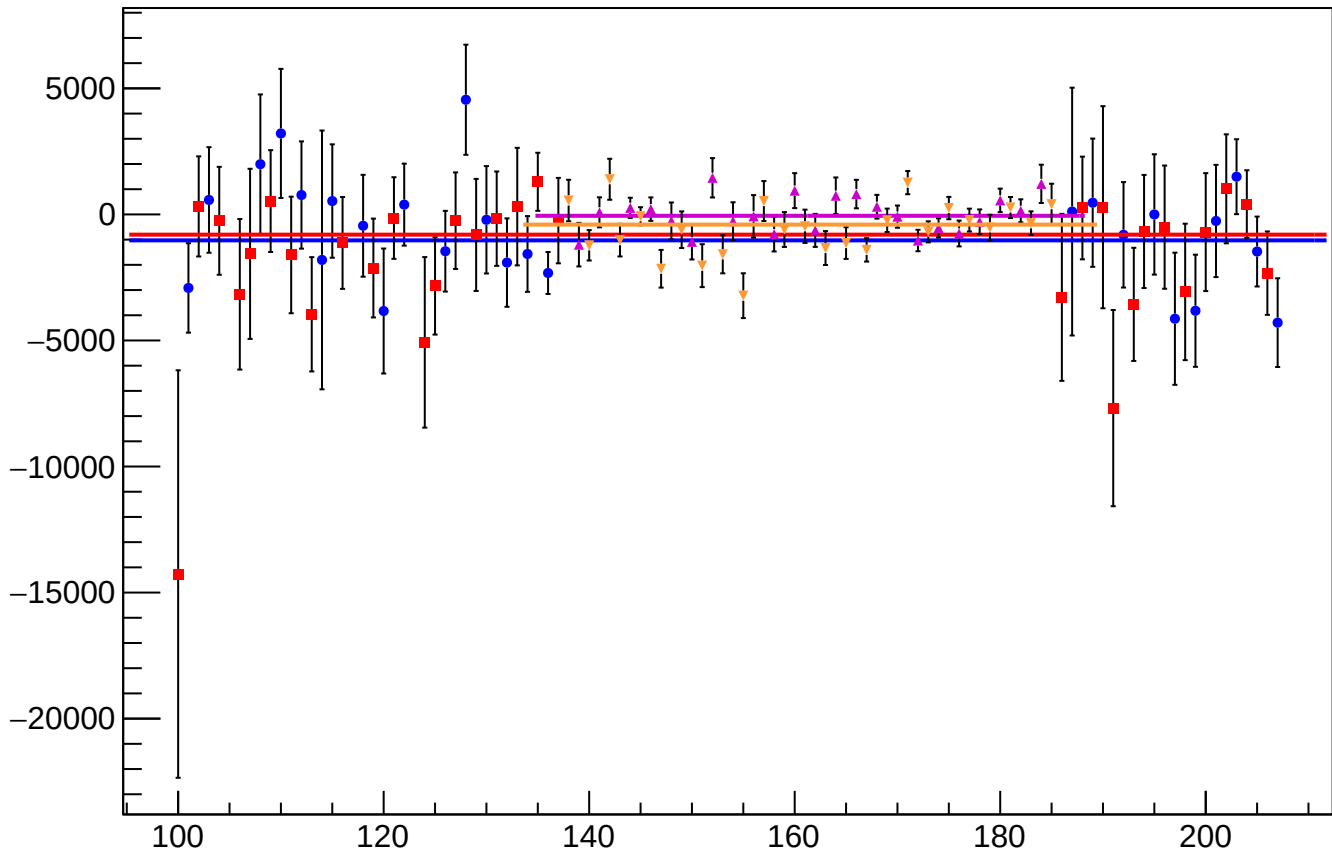
+ sign 86.487 $\pm$ 0.011  $\chi^2$ /NDF: 8170928.3/50

All: 87.327 $\pm$ 0.008  $\chi^2$ /NDF: 17923778.9/104

- sign 88.216 $\pm$ 0.012  $\chi^2$ /NDF: 9741451.8/53



asym\_sam\_3726\_avg\_dit\_correction\_mean vs Slug



Right In:  $-1029.230 \pm 363.989$   $\chi^2/\text{NDF}$ : 28.7/25

Left Out:  $-403.375 \pm 111.773$   $\chi^2/\text{NDF}$ : 60.7/24

Right Out:  $-802.170 \pm 374.269$   $\chi^2/\text{NDF}$ : 22.2/30

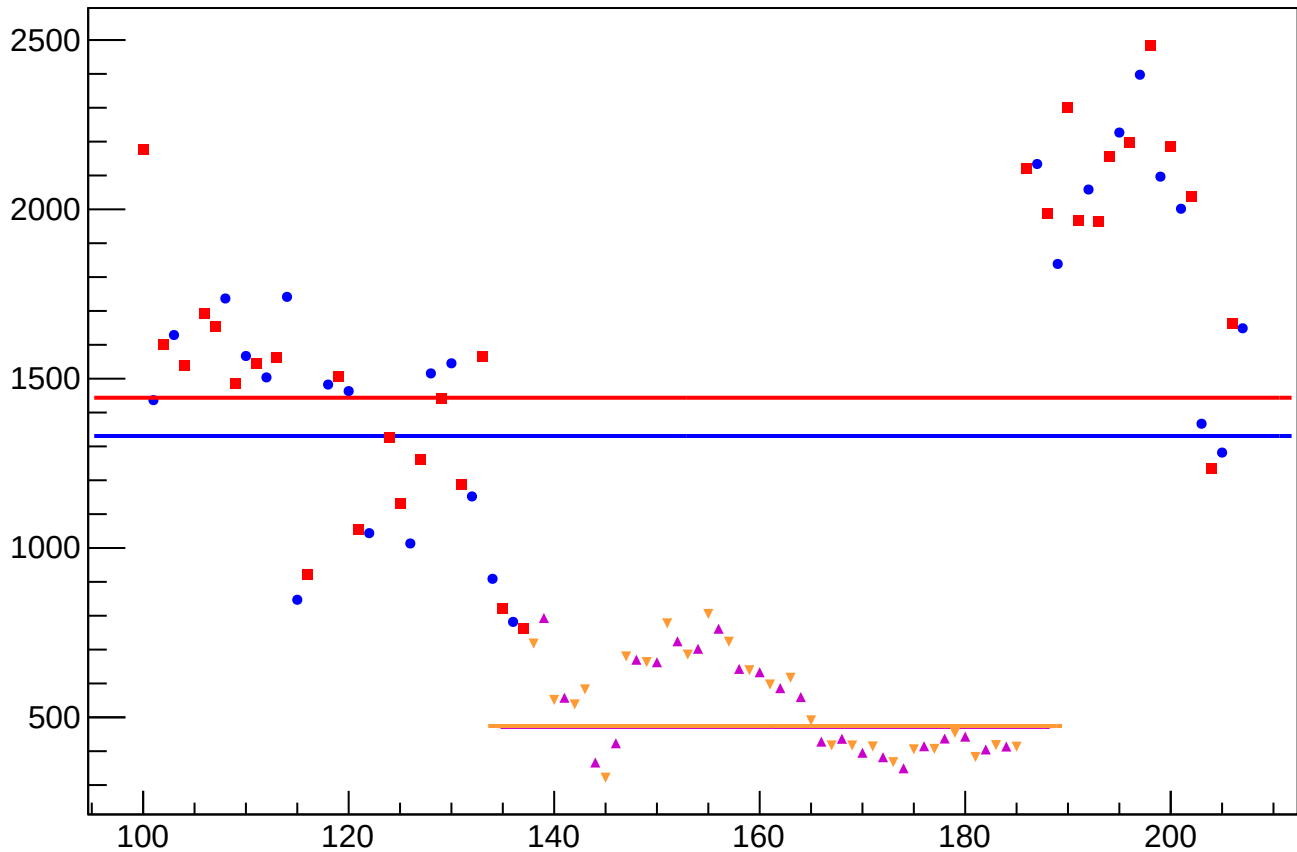
Left In:  $-54.192 \pm 114.223$   $\chi^2/\text{NDF}$ : 30.7/22

+ sign  $-457.306 \pm 106.849$   $\chi^2/\text{NDF}$ : 92.1/50

All:  $-291.383 \pm 76.388$   $\chi^2/\text{NDF}$ : 153.6/104

- sign  $-117.923 \pm 109.249$   $\chi^2/\text{NDF}$ : 56.5/53

asym\_sam\_3726\_avg\_dit\_correction\_rms vs Slug



Right In: 1330.717 $\pm$ 0.257  $\chi^2$ /NDF: 2942611.5/25

Left Out: 474.294 $\pm$ 0.079  $\chi^2$ /NDF: 2538995.4/24

Right Out: 1443.717 $\pm$ 0.265  $\chi^2$ /NDF: 2954405.9/30

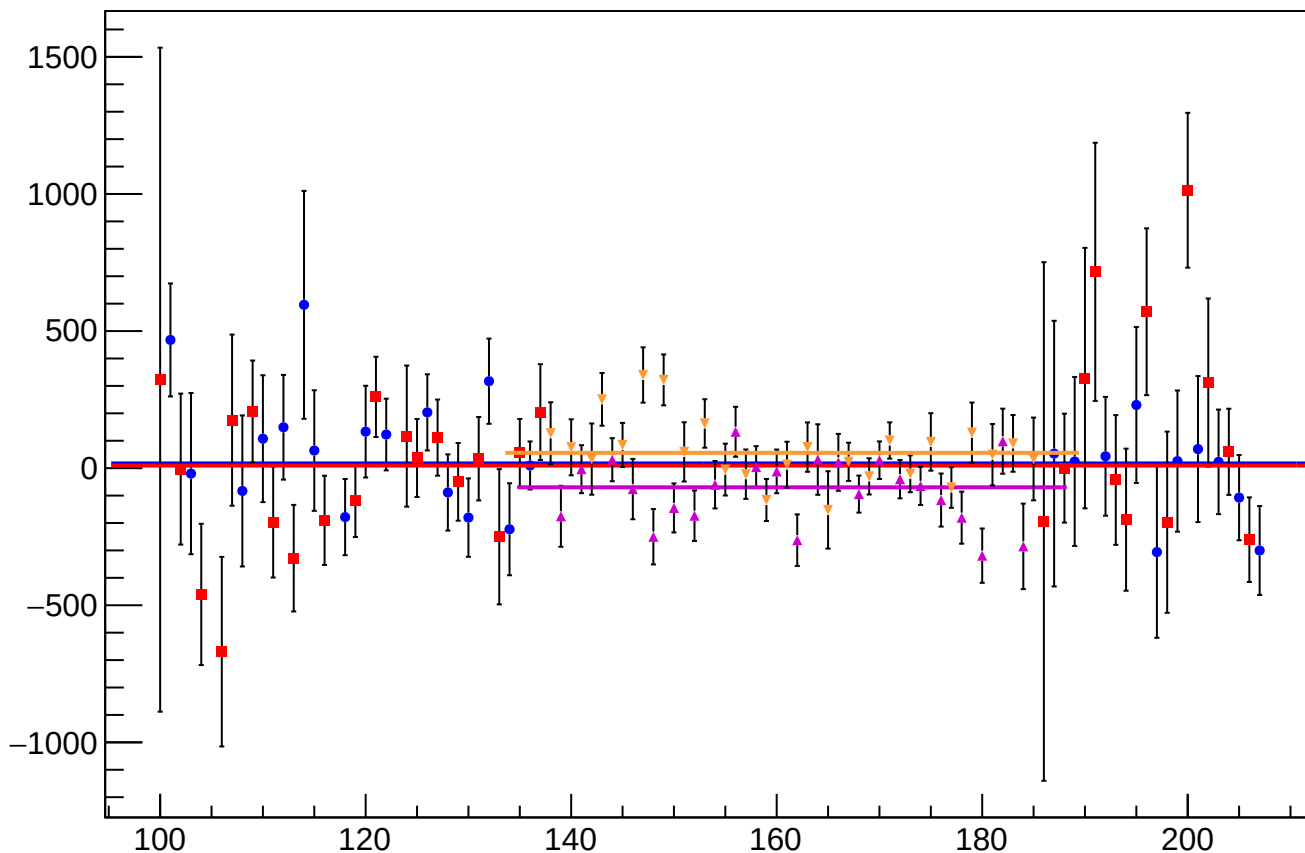
Left In: 471.456 $\pm$ 0.081  $\chi^2$ /NDF: 2209343.4/22

+ sign 548.093 $\pm$ 0.076  $\chi^2$ /NDF: 15599631.0/50

All: 551.126 $\pm$ 0.054  $\chi^2$ /NDF: 33113400.0/10

- sign 554.297 $\pm$ 0.077  $\chi^2$ /NDF: 17510472.4/53

# eigen\_dit\_asym\_sam\_3726\_avg\_mean vs Slug



Right In: 17.225 $\pm$ 34.891  $\chi^2$ /NDF: 26.9/25

Left Out: 55.948 $\pm$ 17.949  $\chi^2$ /NDF: 38.3/24

Right Out: 9.422 $\pm$ 35.646  $\chi^2$ /NDF: 45.5/30

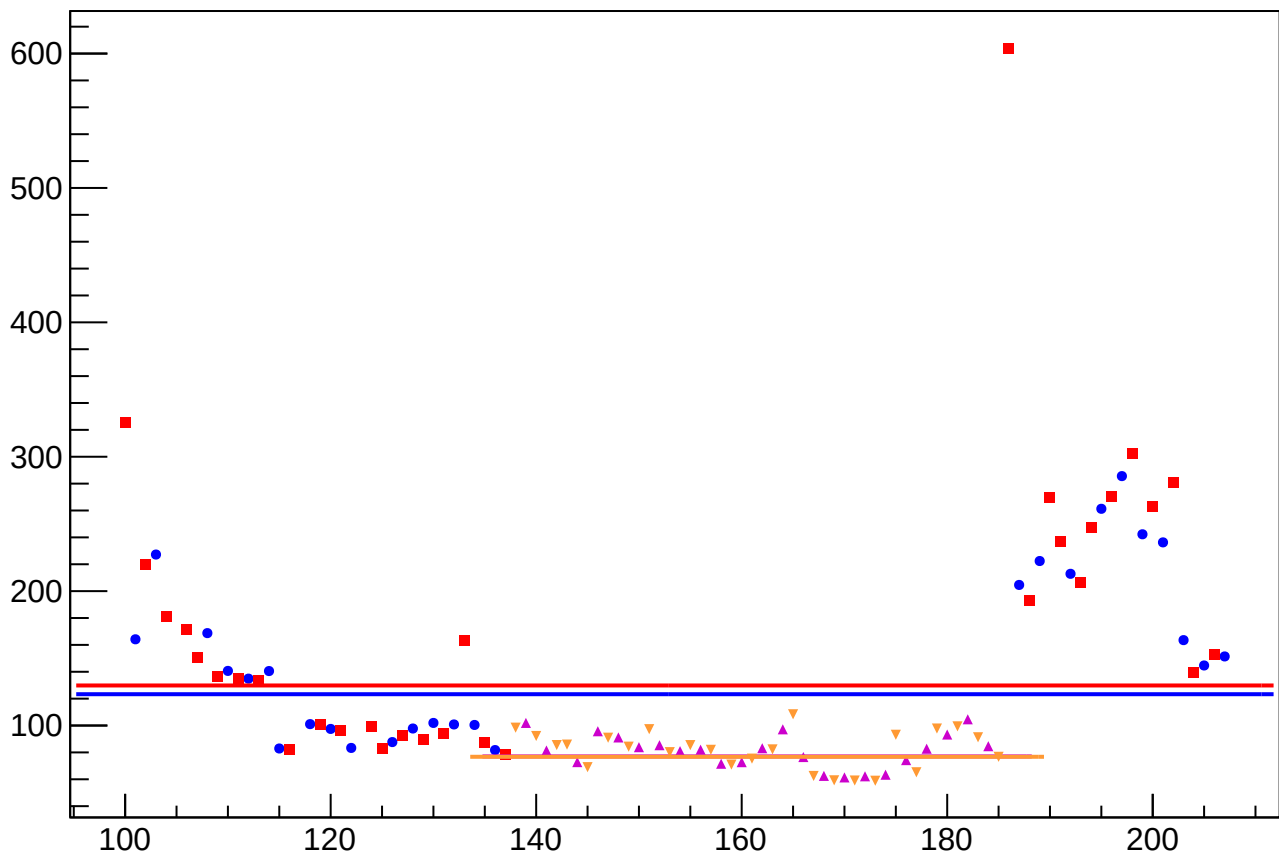
Left In: -69.843 $\pm$ 18.497  $\chi^2$ /NDF: 34.5/22

+ sign 47.845 $\pm$ 15.961  $\chi^2$ /NDF: 66.2/50

All: -1.169 $\pm$ 11.444  $\chi^2$ /NDF: 169.5/104

- sign -53.028 $\pm$ 16.418  $\chi^2$ /NDF: 83.9/53

eigen\_dit\_asym\_sam\_3726\_avg\_rms vs Slug



Right In: 123.305 $\pm$ 0.025  $\chi^2$ /NDF: 4119970.1/25

Left Out: 76.744 $\pm$ 0.013  $\chi^2$ /NDF:1234627.7/24

Right Out: 129.806 $\pm$ 0.025  $\chi^2$ /NDF: 5427001.1/30

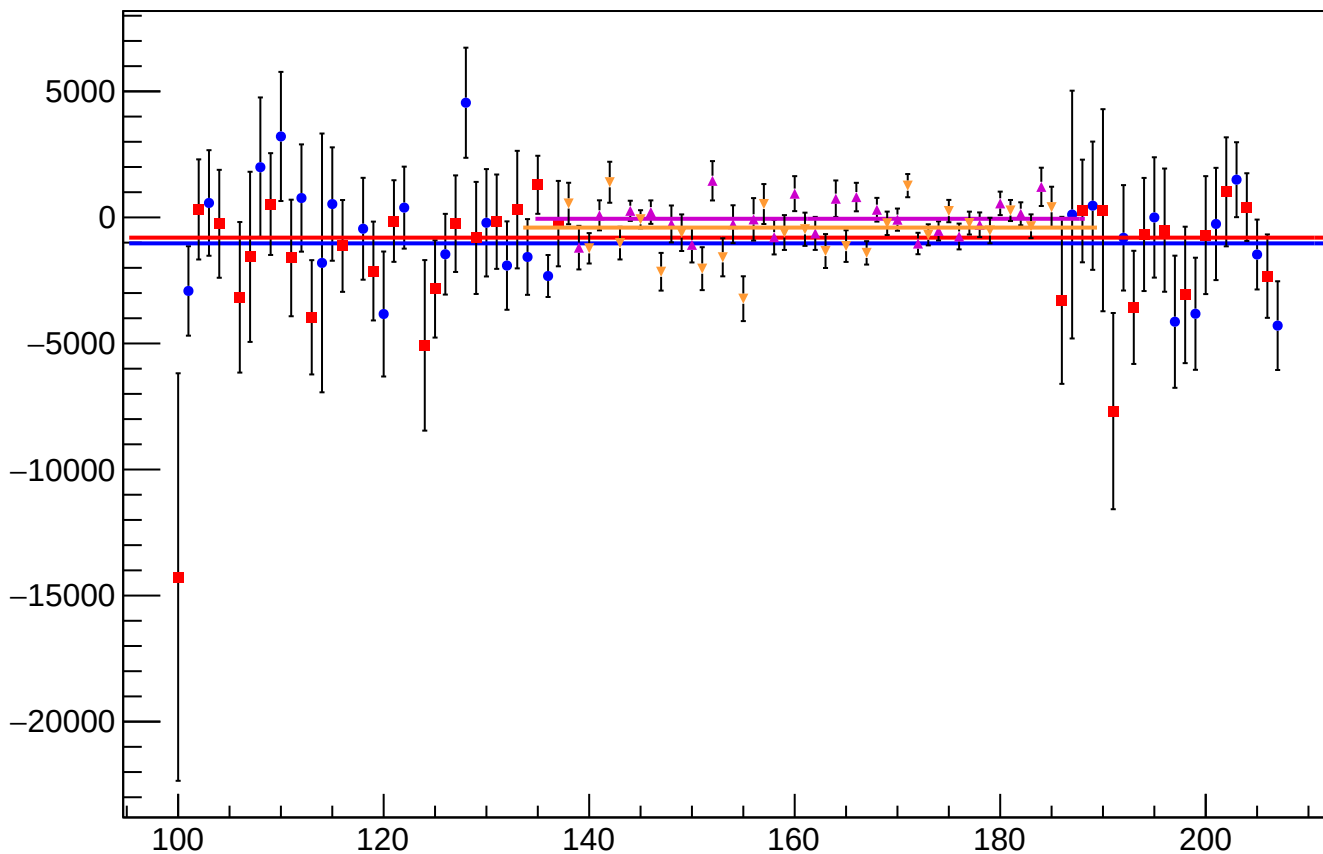
Left In: 77.018 $\pm$ 0.013  $\chi^2$ /NDF:858863.2/22

+ sign 86.488 $\pm$ 0.011  $\chi^2$ /NDF: 8170877.5/50

All: 87.328 $\pm$ 0.008  $\chi^2$ /NDF: 17923677.2/104

- sign 88.216 $\pm$ 0.012  $\chi^2$ /NDF: 9741400.4/53

asym\_sam\_3726\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In: -1029.227 $\pm$ 363.988  $\chi^2$ /NDF: 28.7/25

Left Out: -403.375 $\pm$ 111.773  $\chi^2$ /NDF:60.7/24

Right Out: -802.171 $\pm$ 374.269  $\chi^2$ /NDF: 22.2/30

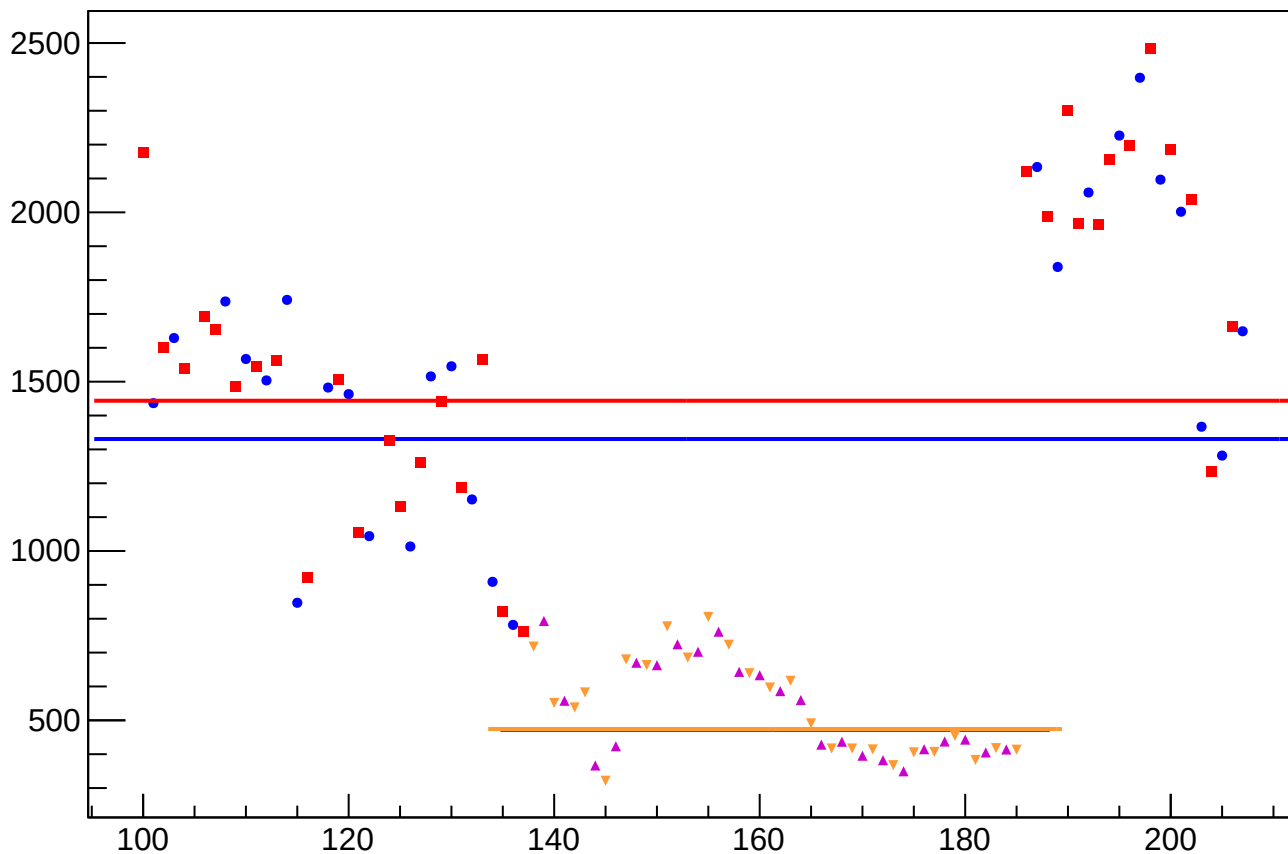
Left In: -54.192 $\pm$ 114.223  $\chi^2$ /NDF:30.7/22

+ sign -457.305 $\pm$ 106.849  $\chi^2$ /NDF: 92.1/50

All: -291.383 $\pm$ 76.388  $\chi^2$ /NDF: 153.6/104

- sign -117.924 $\pm$ 109.249  $\chi^2$ /NDF: 56.5/53

asym\_sam\_3726\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 1330.716 $\pm$ 0.257  $\chi^2$ /NDF: 2942601.8/25

Left Out: 474.294 $\pm$ 0.079  $\chi^2$ /NDF: 2538999.2/24

Right Out: 1443.716 $\pm$ 0.265  $\chi^2$ /NDF: 2954401.2/30

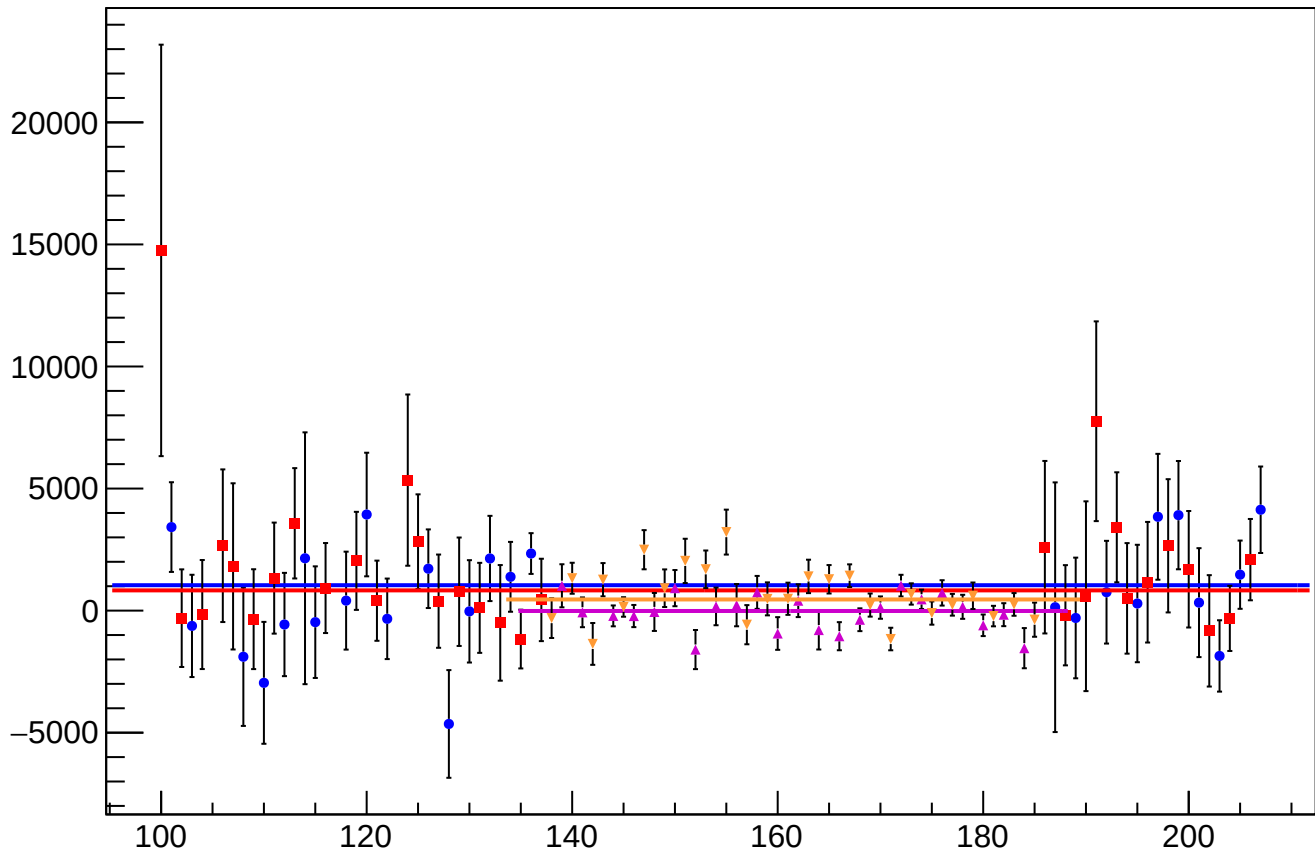
Left In: 471.456 $\pm$ 0.081  $\chi^2$ /NDF: 2209338.4/22

+ sign 548.093 $\pm$ 0.076  $\chi^2$ /NDF: 15599627.9/50

All: 551.126 $\pm$ 0.054  $\chi^2$ /NDF: 33113380.2/10

- sign 554.297 $\pm$ 0.077  $\chi^2$ /NDF: 17510455.6/53

# asym\_sam\_3726\_avg\_mean vs Slug



Right In:  $1040.849 \pm 363.744$   $\chi^2/\text{NDF}$ : 29.5/25

Left Out:  $457.286 \pm 114.351$   $\chi^2/\text{NDF}$ : 59.4/24

Right Out:  $828.963 \pm 379.129$   $\chi^2/\text{NDF}$ : 19.2/30

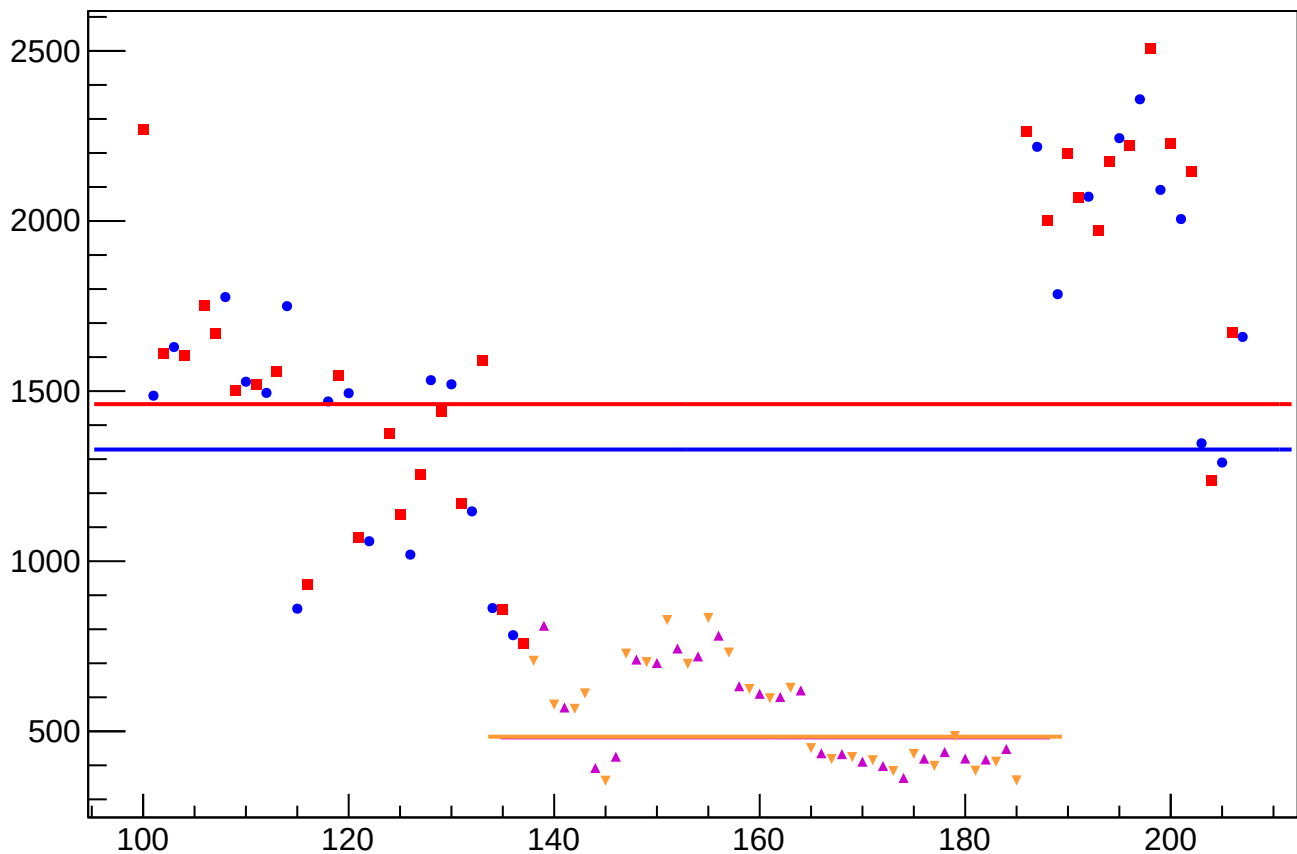
Left In:  $-15.089 \pm 116.701$   $\chi^2/\text{NDF}$ : 30.3/22

+ sign  $509.773 \pm 109.088$   $\chi^2/\text{NDF}$ : 91.3/50

All:  $288.881 \pm 77.988$   $\chi^2/\text{NDF}$ : 153.6/104

- sign  $57.962 \pm 111.536$   $\chi^2/\text{NDF}$ : 54.0/53

# asym\_sam\_3726\_avg\_rms vs Slug



Right In: 1328.339 $\pm$ 0.257  $\chi^2$ /NDF: 2976193.0/25

Left Out: 484.128 $\pm$ 0.081  $\chi^2$ /NDF: 2548479.4/24

Right Out: 1461.720 $\pm$ 0.268  $\chi^2$ /NDF: 2954362.6/30

Left In: 482.160 $\pm$ 0.083  $\chi^2$ /NDF: 2186689.9/22

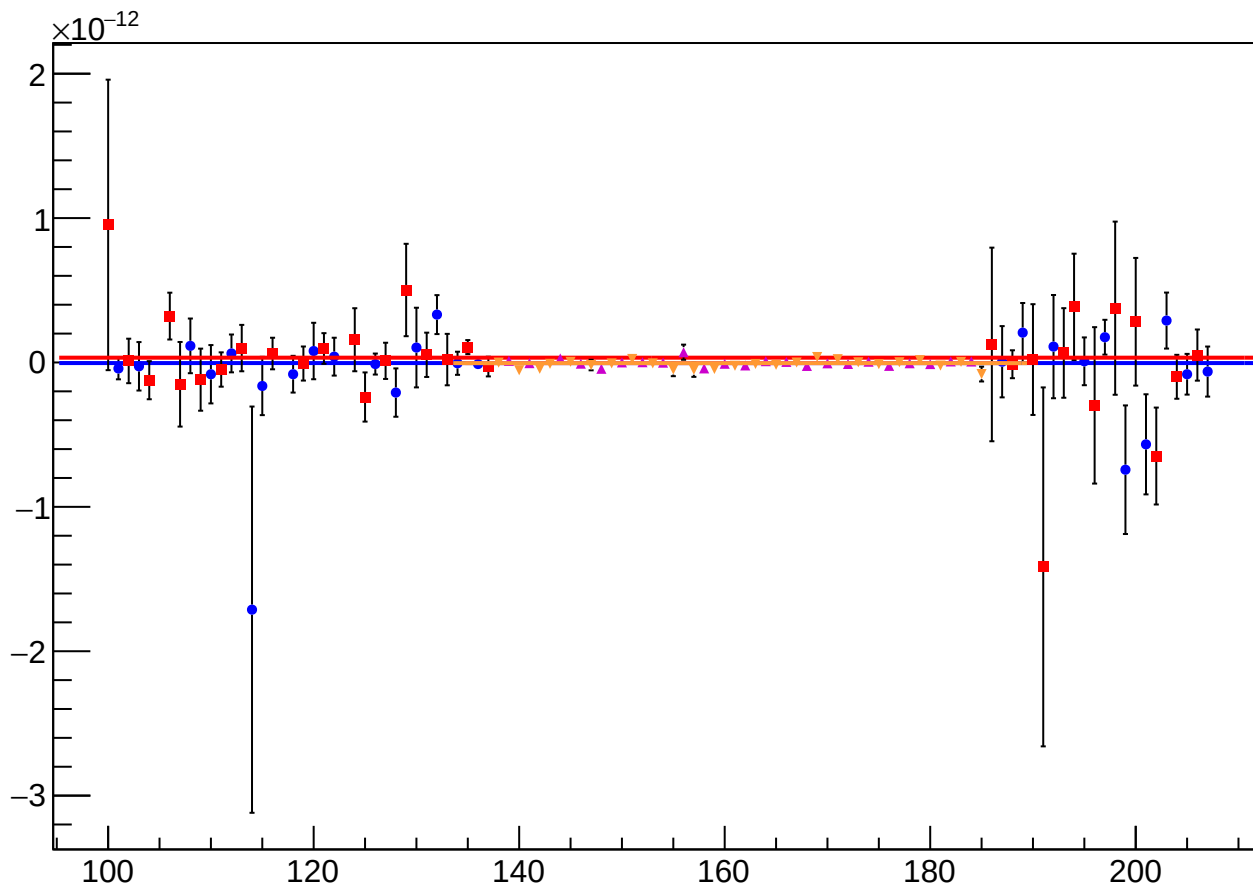
+ sign 560.058 $\pm$ 0.077  $\chi^2$ /NDF: 15328818.2/50

All: 563.422 $\pm$ 0.055  $\chi^2$ /NDF: 32669355.2/10

- sign 566.939 $\pm$ 0.079  $\chi^2$ /NDF: 17336646.2/53



asym\_sam\_3726\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 23.2/25$

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 31.0/24$

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 24.1/30$

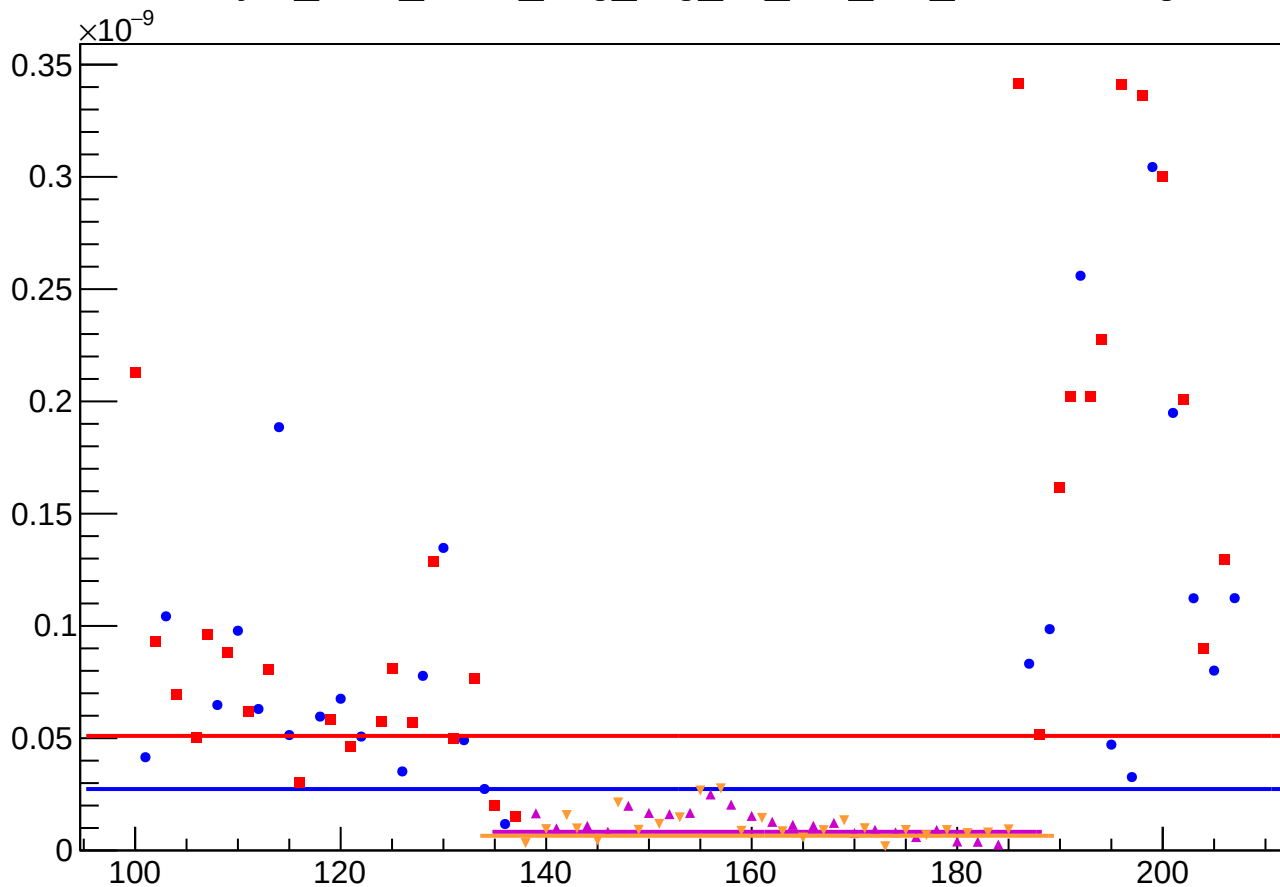
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 15.0/22$

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 54.3/50$

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 95.6/104$

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 41.3/53$

asym\_sam\_3726\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6585178.0/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3737127.3/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6190867.3/30

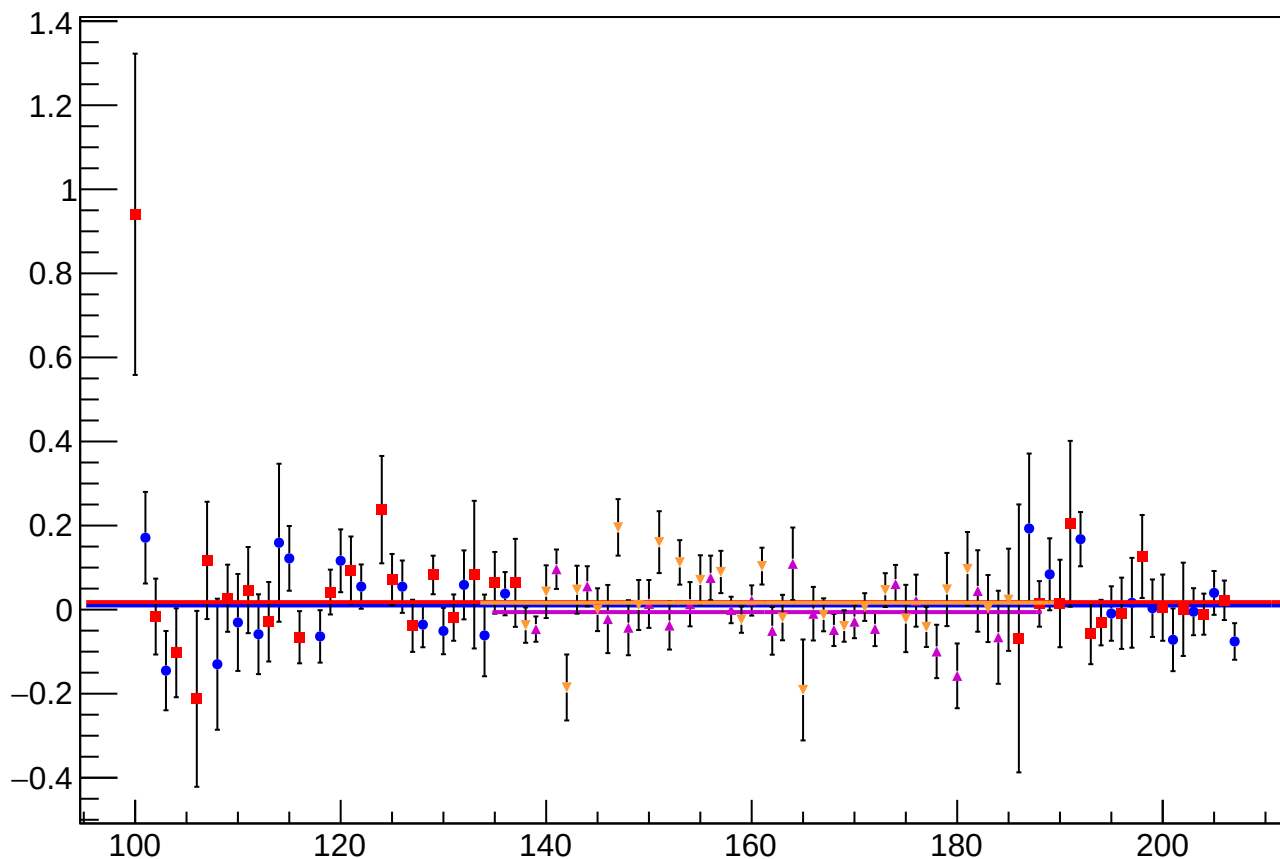
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2799238.8/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13334515.3/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 28353167.1/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14680562.0/53

asym\_sam\_3726\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.010 \pm 0.014$   $\chi^2/\text{NDF}: 30.2/25$

Left Out:  $0.016 \pm 0.010$   $\chi^2/\text{NDF}: 41.1/24$

Right Out:  $0.018 \pm 0.014$   $\chi^2/\text{NDF}: 24.5/30$

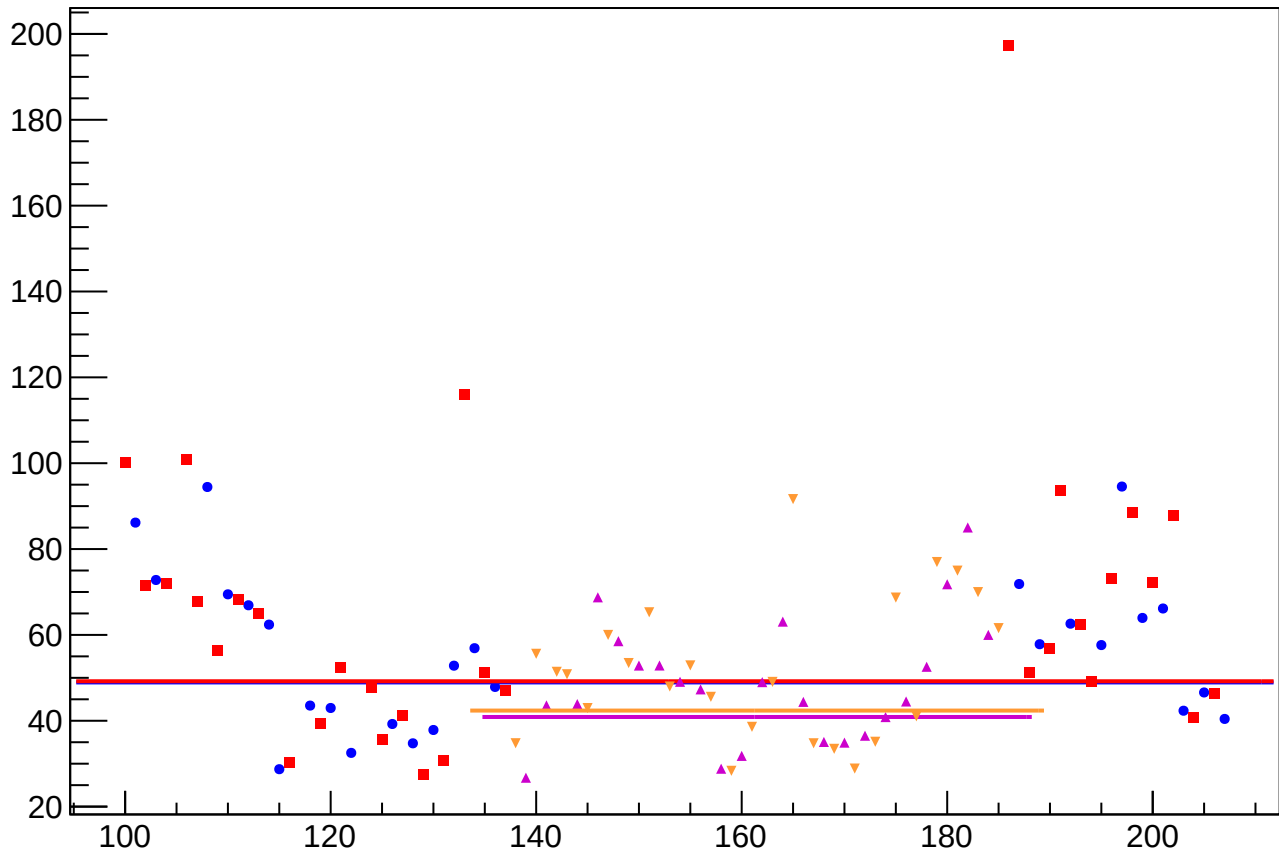
Left In:  $-0.006 \pm 0.010$   $\chi^2/\text{NDF}: 26.0/22$

+ sign  $0.014 \pm 0.008$   $\chi^2/\text{NDF}: 71.4/50$

All:  $0.008 \pm 0.006$   $\chi^2/\text{NDF}: 124.8/104$

- sign  $0.003 \pm 0.008$   $\chi^2/\text{NDF}: 52.5/53$

asym\_sam\_3726\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 48.929+/-0.010  $\chi^2/\text{NDF}$ : 2179486.0/25

Left Out: 42.375+/-0.007  $\chi^2/\text{NDF}$ : 3190972.5/24

Right Out: 49.203+/-0.010  $\chi^2/\text{NDF}$ : 3474328.5/30

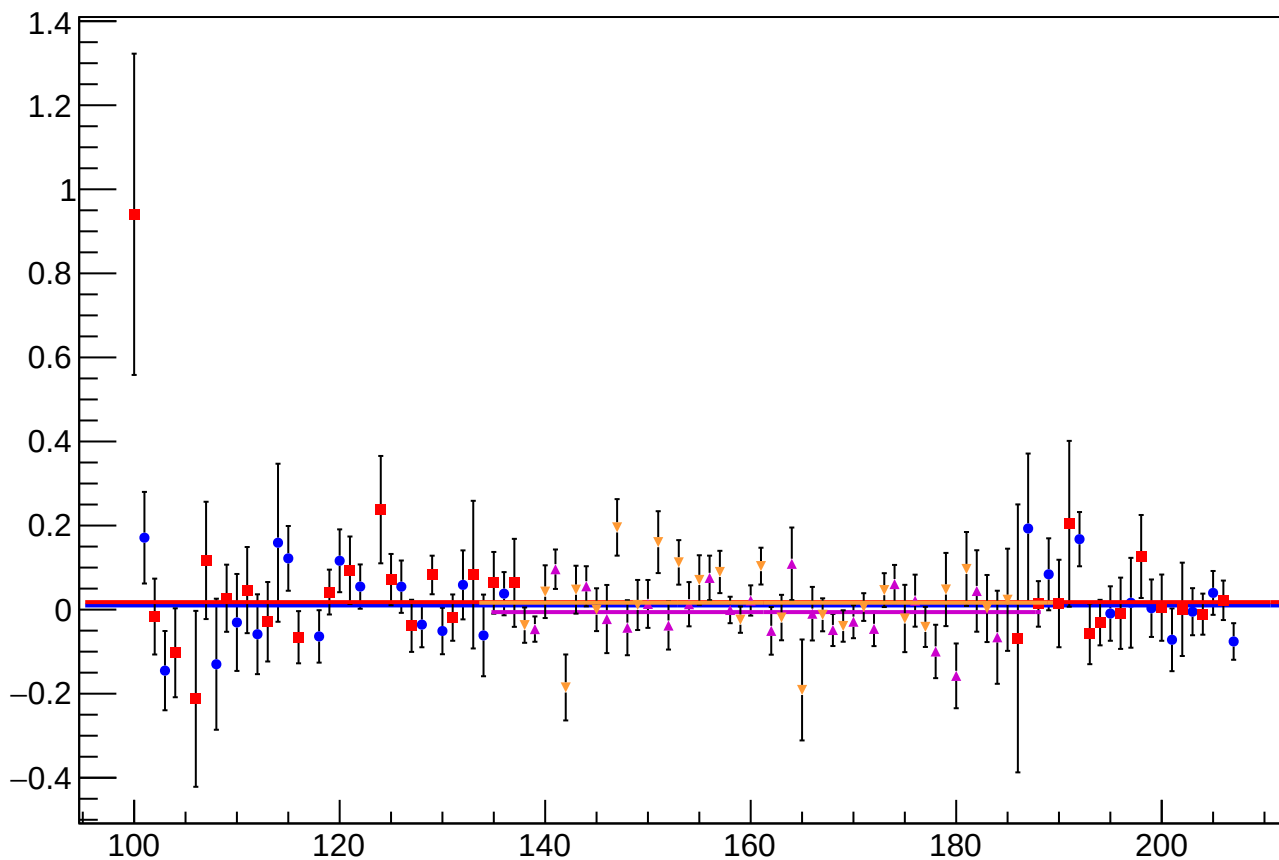
Left In: 40.881+/-0.007  $\chi^2/\text{NDF}$ : 2678327.2/22

+ sign 44.754+/-0.006  $\chi^2/\text{NDF}$ : 5661725.2/50

All: 44.341+/-0.004  $\chi^2/\text{NDF}$ : 12305243.2/104

- sign 43.935+/-0.006  $\chi^2/\text{NDF}$ : 6633596.1/53

asym\_sam\_3726\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.010 $\pm$ 0.014  $\chi^2$ /NDF: 30.2/25

Left Out: 0.016 $\pm$ 0.010  $\chi^2$ /NDF: 41.1/24

Right Out: 0.018 $\pm$ 0.014  $\chi^2$ /NDF: 24.5/30

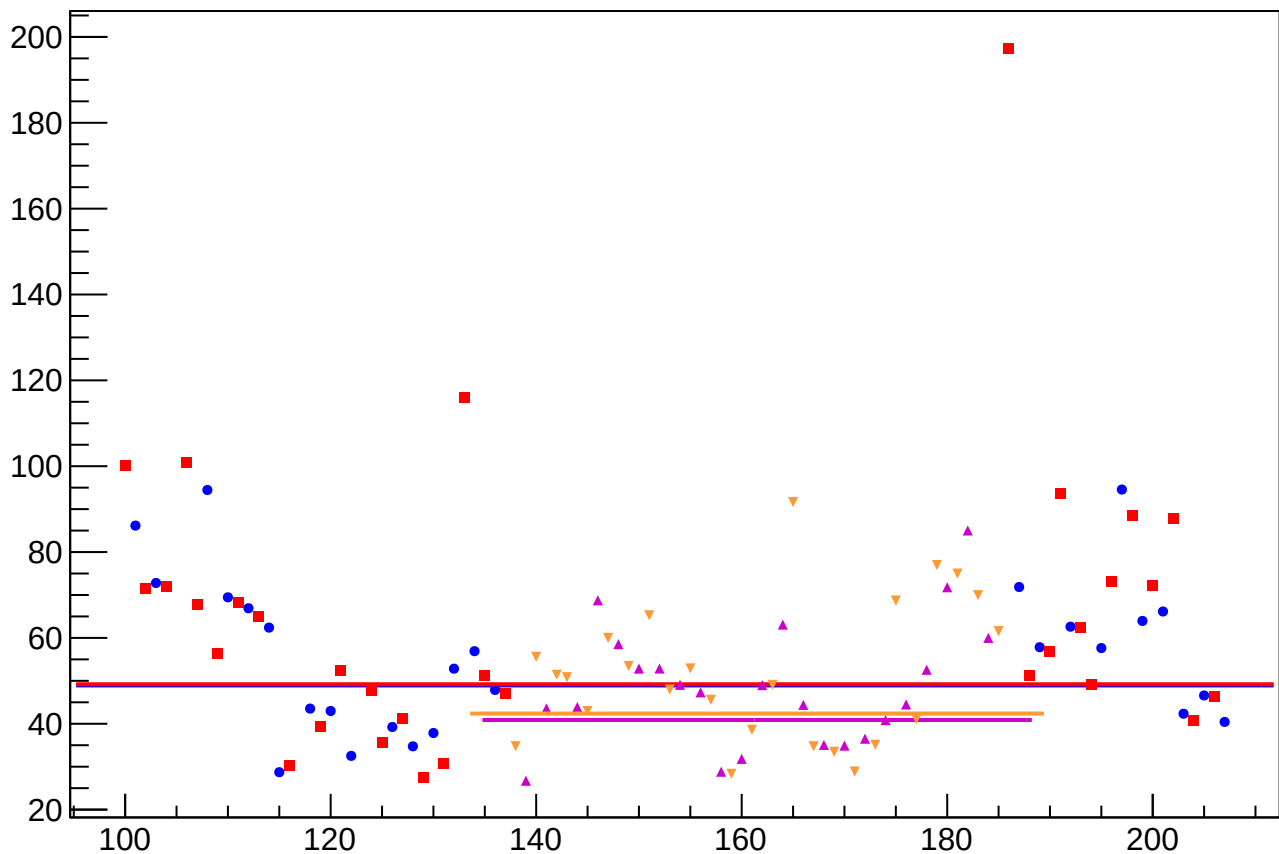
Left In: -0.006 $\pm$ 0.010  $\chi^2$ /NDF: 26.0/22

+ sign 0.014 $\pm$ 0.008  $\chi^2$ /NDF: 71.4/50

All: 0.008 $\pm$ 0.006  $\chi^2$ /NDF: 124.8/104

- sign 0.003 $\pm$ 0.008  $\chi^2$ /NDF: 52.5/53

asym\_sam\_3726\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 48.929+/-0.010  $\chi^2/\text{NDF}$ : 2179486.0/25

Left Out: 42.375+/-0.007  $\chi^2/\text{NDF}$ : 3190972.5/24

Right Out: 49.203+/-0.010  $\chi^2/\text{NDF}$ : 3474328.5/30

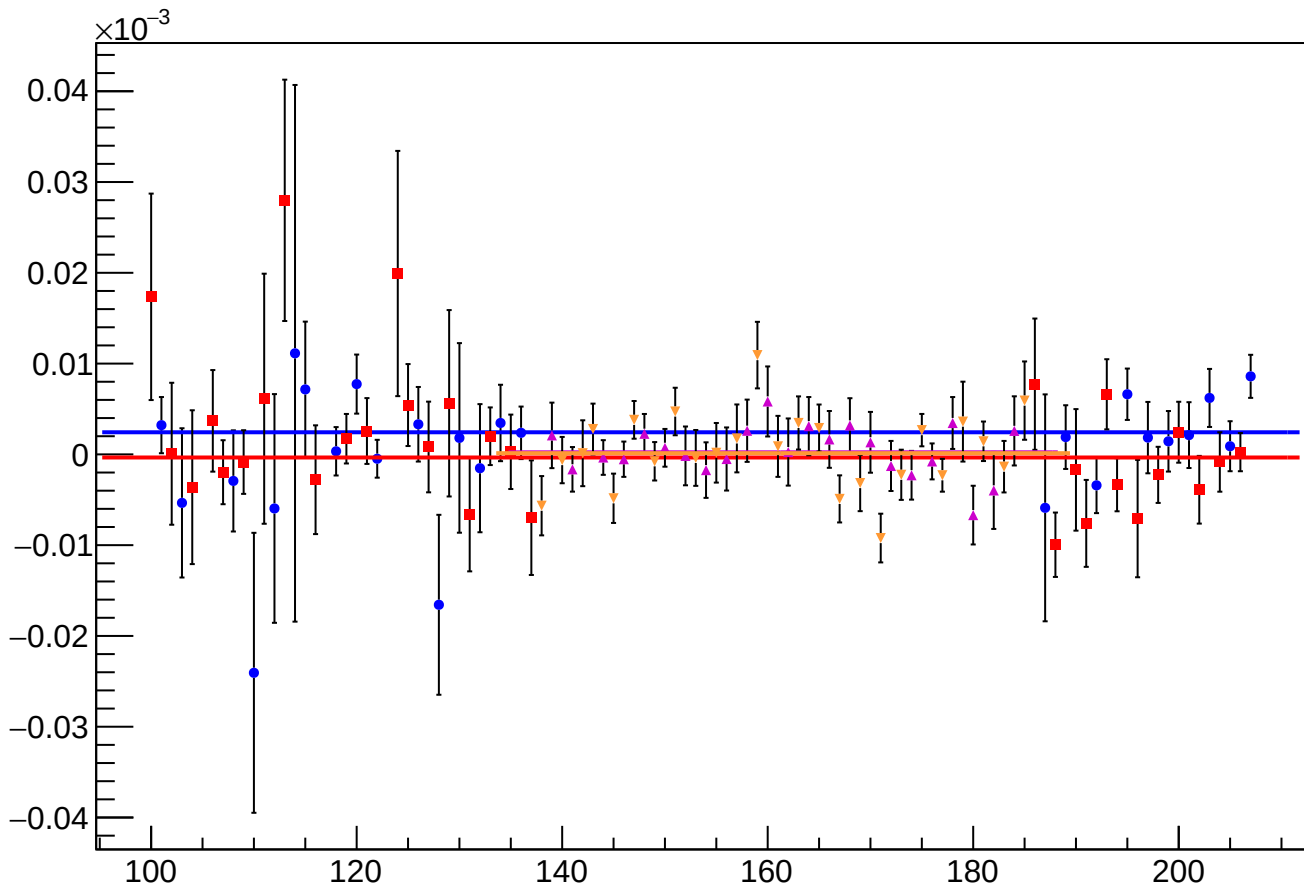
Left In: 40.881+/-0.007  $\chi^2/\text{NDF}$ : 2678327.2/22

+ sign 44.754+/-0.006  $\chi^2/\text{NDF}$ : 5661725.2/50

All: 44.341+/-0.004  $\chi^2/\text{NDF}$ : 12305243.2/104

- sign 43.935+/-0.006  $\chi^2/\text{NDF}$ : 6633596.1/53

asym\_sam\_3726\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 30.0/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:49.9/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 34.8/30

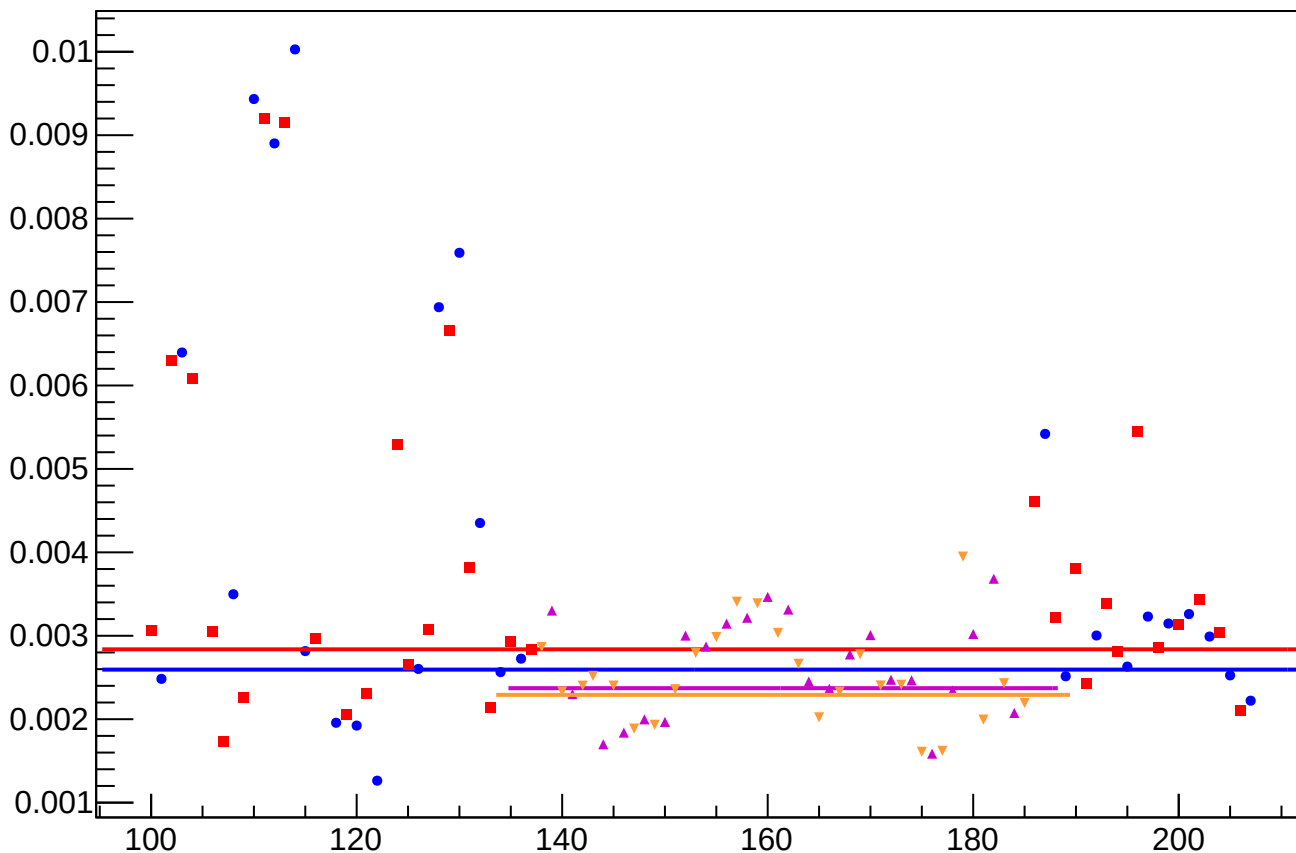
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:15.8/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 86.4/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 139.5/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 51.0/53

asym\_sam\_3726\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 3886302.8/25

Left Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF:1818891.6/24

Right Out: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 3409059.5/30

Left In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF:2020314.6/22

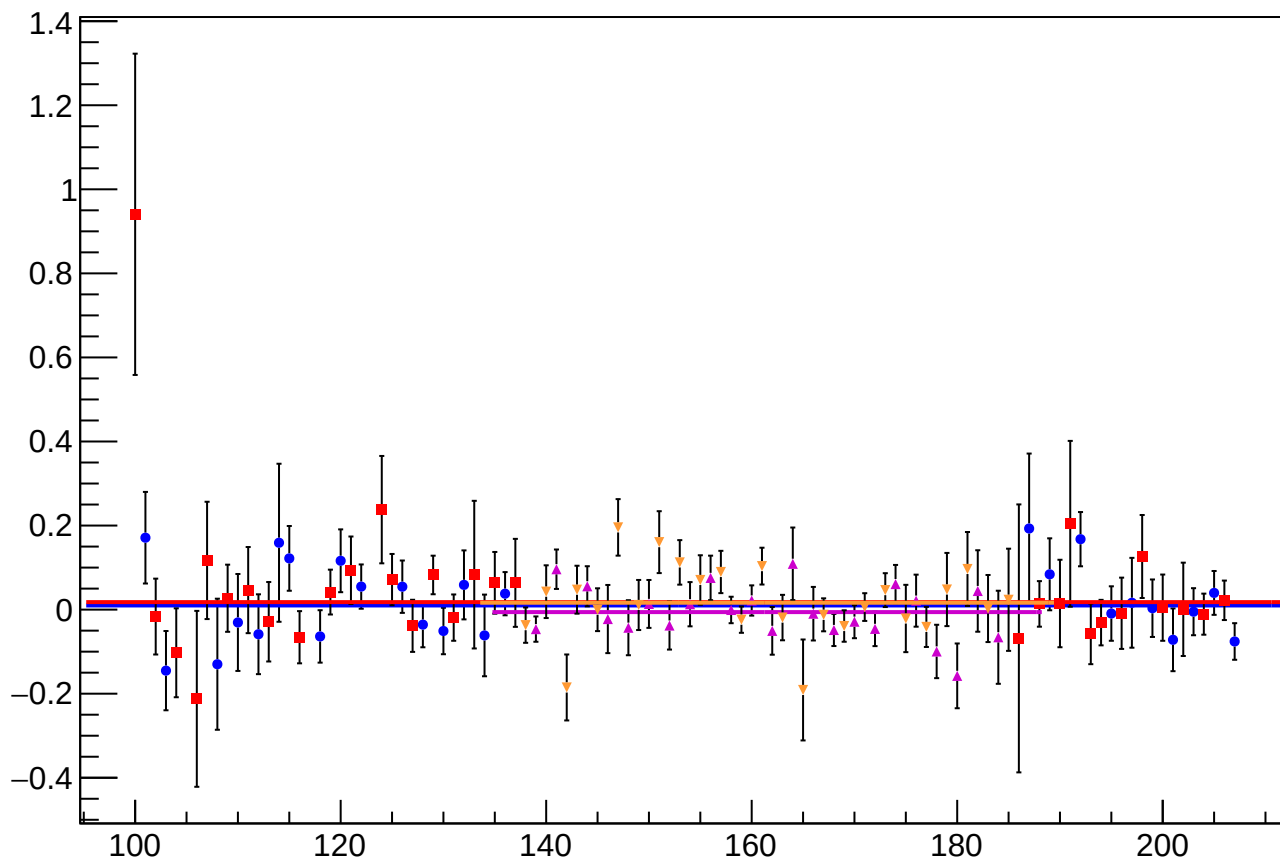
+ sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 5928443.4/50

All: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 11943731.0/104

- sign 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 5908670.8/53



asym\_sam\_3726\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.010 $\pm$ 0.014  $\chi^2$ /NDF: 30.2/25

Left Out: 0.016 $\pm$ 0.010  $\chi^2$ /NDF: 41.1/24

Right Out: 0.018 $\pm$ 0.014  $\chi^2$ /NDF: 24.5/30

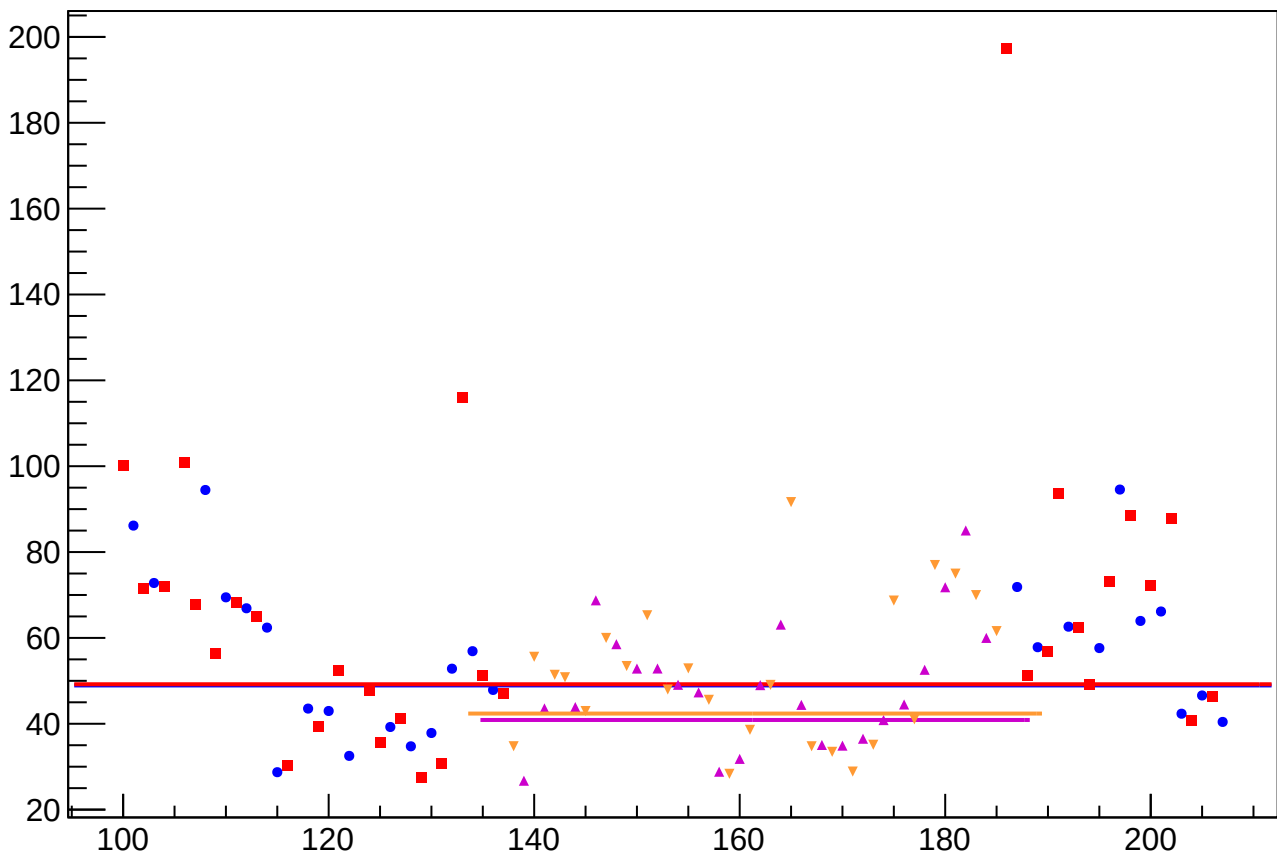
Left In: -0.006 $\pm$ 0.010  $\chi^2$ /NDF: 26.0/22

+ sign 0.014 $\pm$ 0.008  $\chi^2$ /NDF: 71.4/50

All: 0.008 $\pm$ 0.006  $\chi^2$ /NDF: 124.8/104

- sign 0.003 $\pm$ 0.008  $\chi^2$ /NDF: 52.5/53

asym\_sam\_3726\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 48.929+/-0.010  $\chi^2/\text{NDF}$ : 2179444.9/25

Left Out: 42.375+/-0.007  $\chi^2/\text{NDF}$ : 3190999.9/24

Right Out: 49.203+/-0.010  $\chi^2/\text{NDF}$ : 3474232.3/30

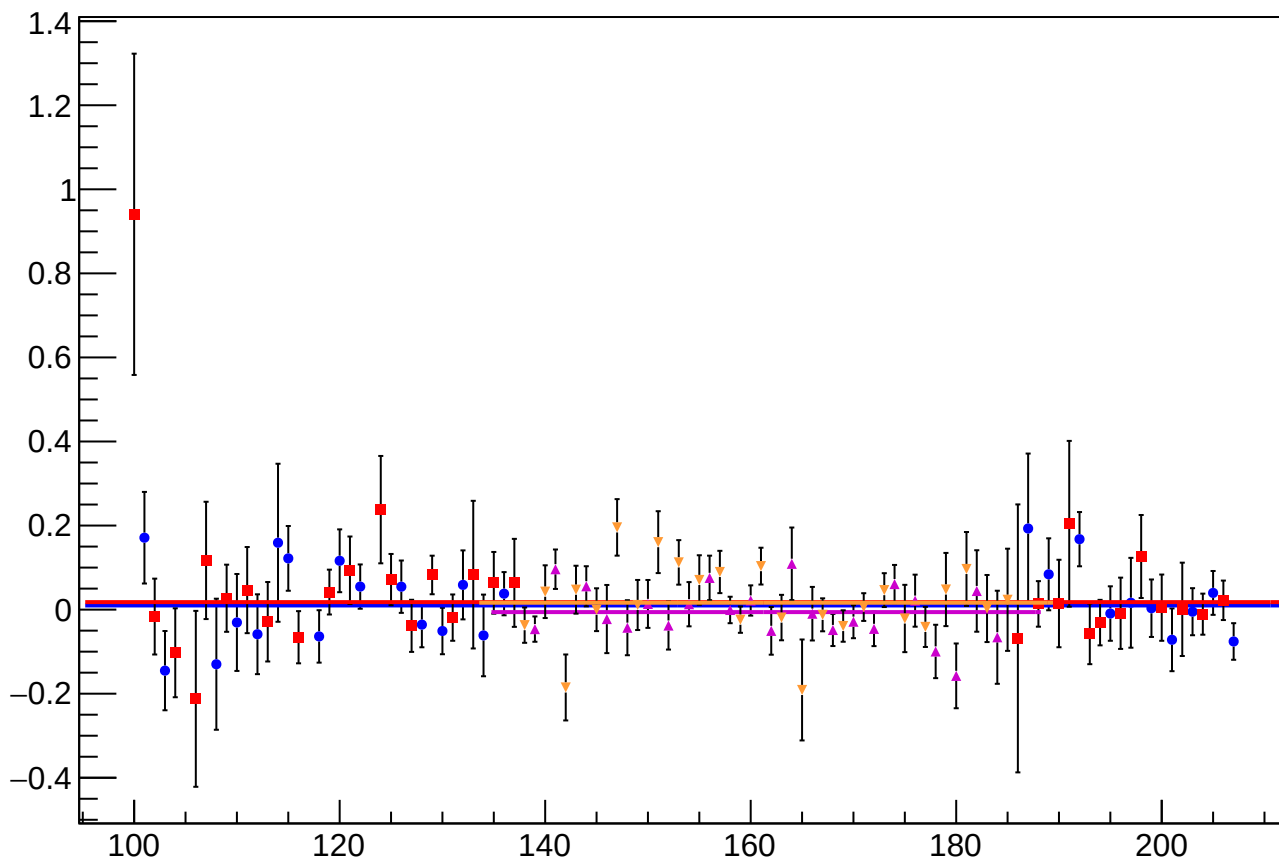
Left In: 40.881+/-0.007  $\chi^2/\text{NDF}$ : 2678344.3/22

+ sign 44.754+/-0.006  $\chi^2/\text{NDF}$ : 5661678.7/50

All: 44.341+/-0.004  $\chi^2/\text{NDF}$ : 12305095.6/104

- sign 43.936+/-0.006  $\chi^2/\text{NDF}$ : 6633498.2/53

asym\_sam\_3726\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.010 $\pm$ 0.014  $\chi^2$ /NDF: 30.2/25

Left Out: 0.016 $\pm$ 0.010  $\chi^2$ /NDF: 41.1/24

Right Out: 0.018 $\pm$ 0.014  $\chi^2$ /NDF: 24.5/30

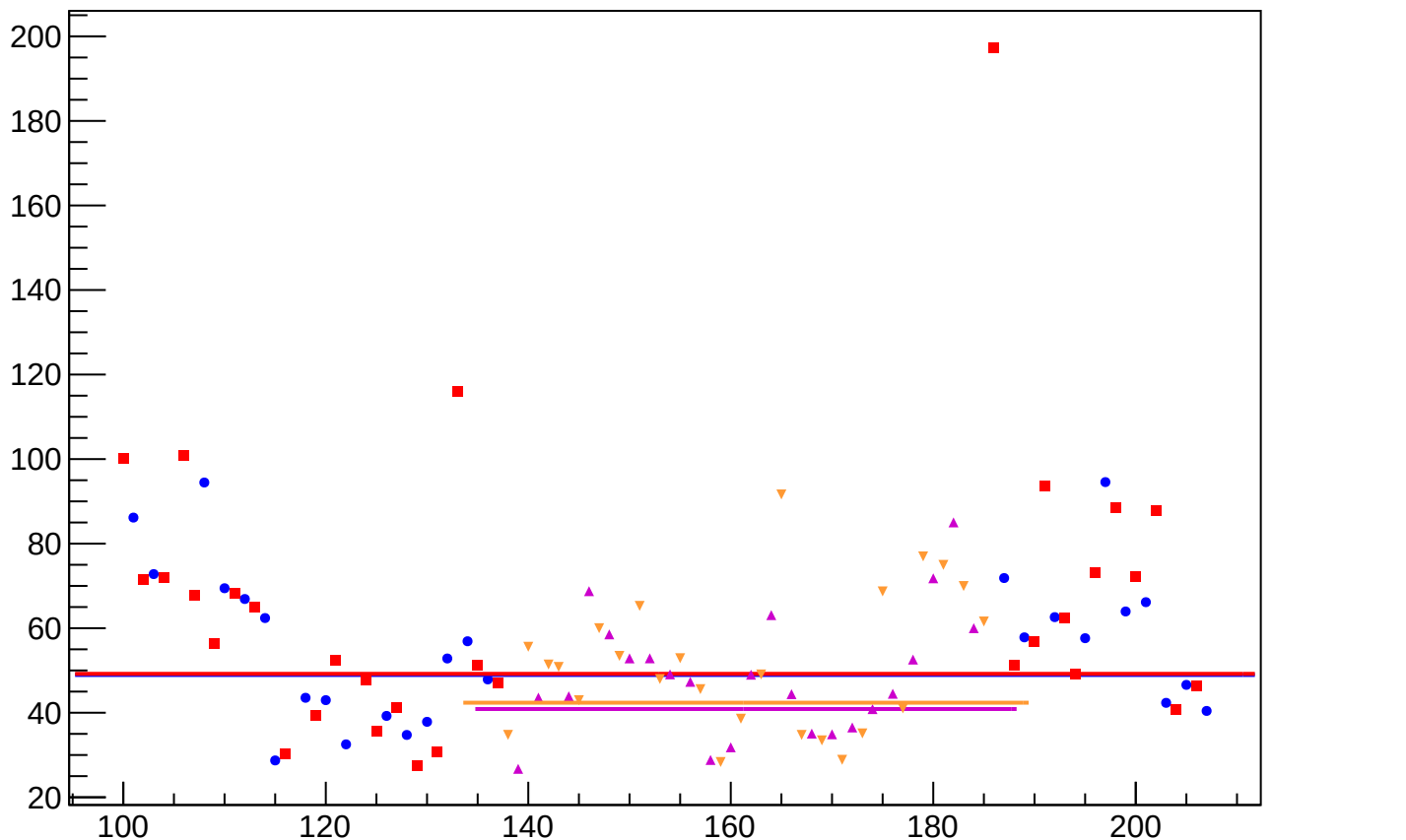
Left In: -0.006 $\pm$ 0.010  $\chi^2$ /NDF: 26.0/22

+ sign 0.014 $\pm$ 0.008  $\chi^2$ /NDF: 71.4/50

All: 0.008 $\pm$ 0.006  $\chi^2$ /NDF: 124.8/104

- sign 0.003 $\pm$ 0.008  $\chi^2$ /NDF: 52.5/53

asym\_sam\_3726\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In:  $48.929 \pm 0.010$   $\chi^2/\text{NDF}: 2179444.9/25$

Left Out:  $42.375 \pm 0.007$   $\chi^2/\text{NDF}: 3190999.9/24$

Right Out:  $49.203 \pm 0.010$   $\chi^2/\text{NDF}: 3474232.3/30$

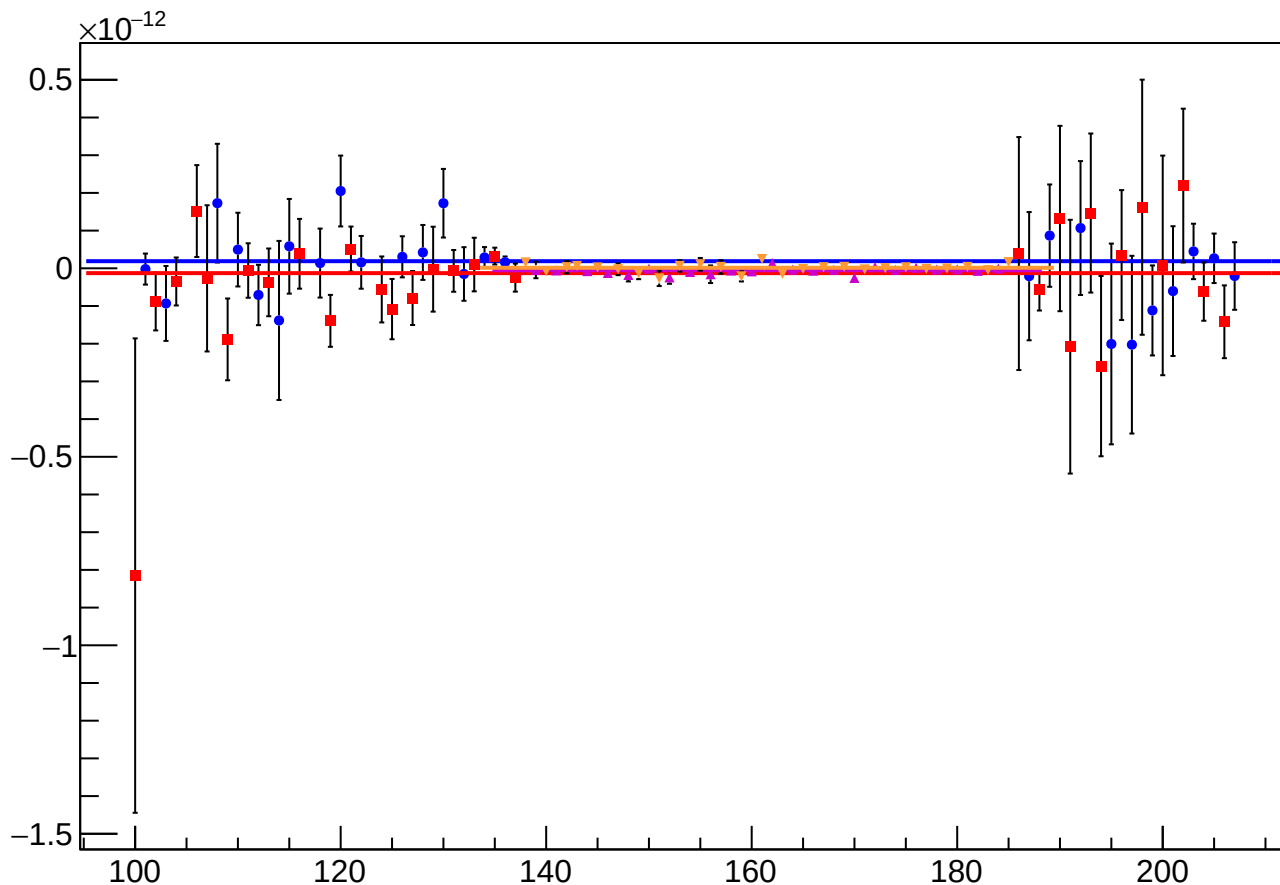
Left In:  $40.881 \pm 0.007$   $\chi^2/\text{NDF}: 2678344.3/22$

+ sign  $44.754 \pm 0.006$   $\chi^2/\text{NDF}: 5661678.7/50$

All:  $44.341 \pm 0.004$   $\chi^2/\text{NDF}: 12305095.6/104$

- sign  $43.936 \pm 0.006$   $\chi^2/\text{NDF}: 6633498.2/53$

asym\_sam\_3726\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 15.7/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 19.7/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 25.7/30

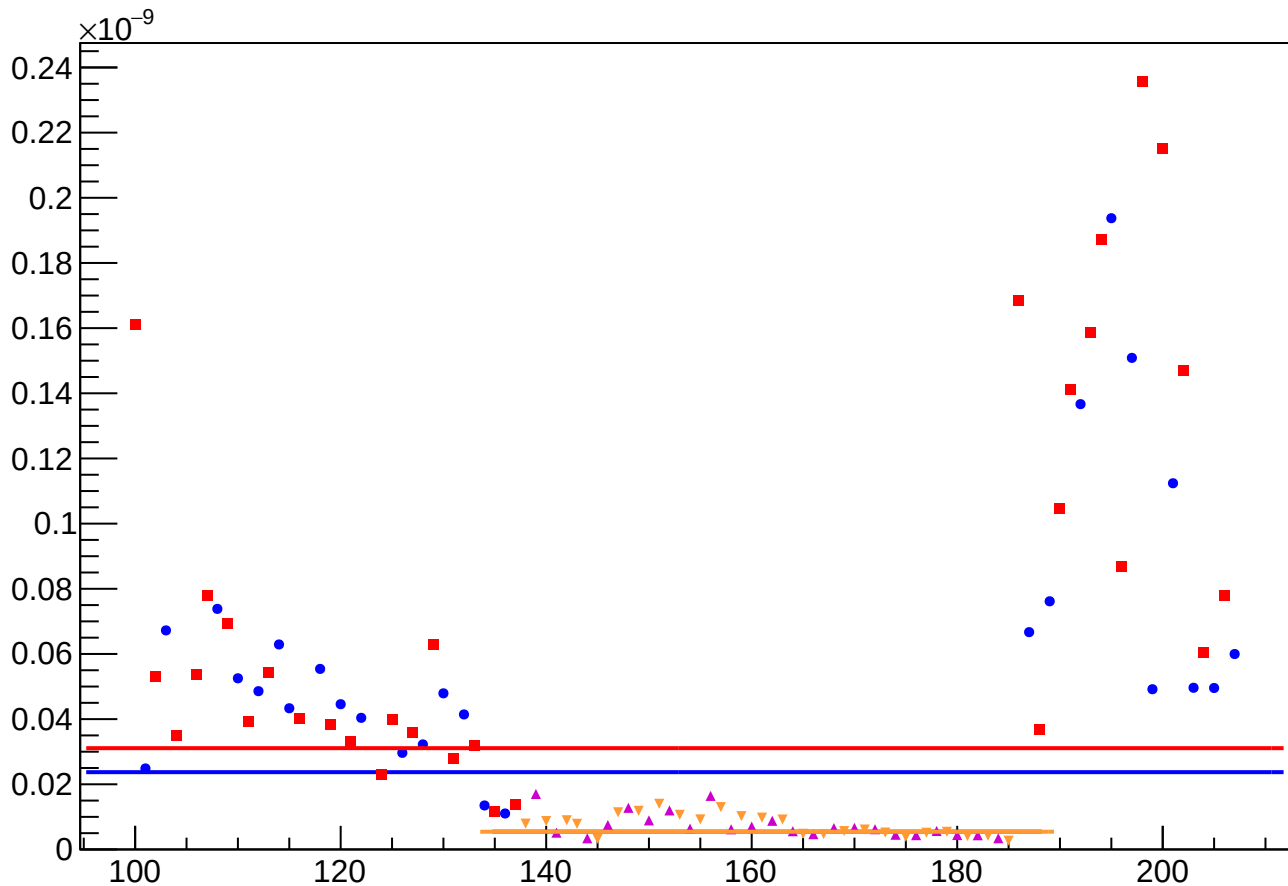
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 13.2/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 37.9/50

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 85.6/104

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 39.2/53

asym\_sam\_3726\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7648526.6/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3789045.4/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8571877.8/30

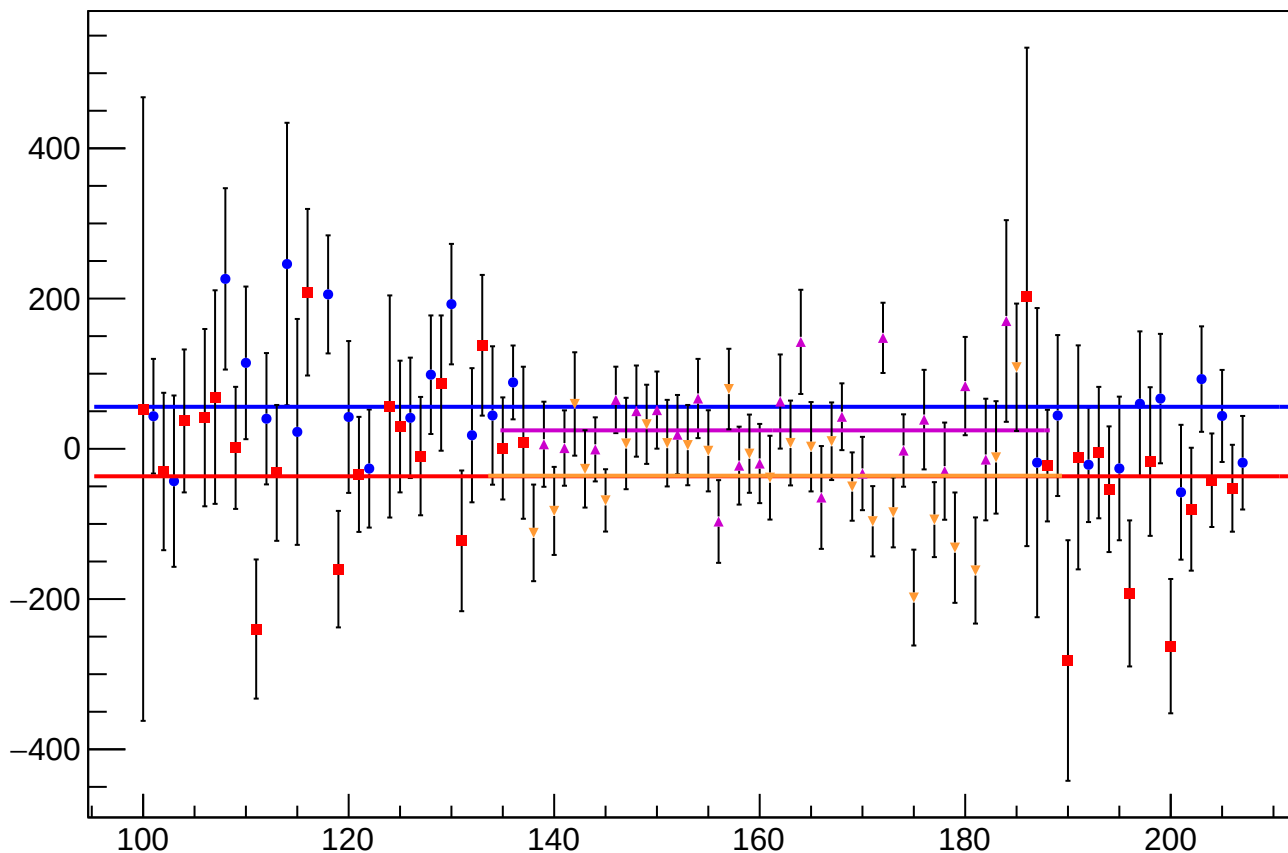
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2801443.3/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 17166238.8/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 36366386.3/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 19199231.1/53

# reg\_asym\_sam\_15\_48\_dd\_mean vs Slug



Right In:  $55.932 \pm 16.542$   $\chi^2/\text{NDF}$ : 18.1/25

Left Out:  $-35.787 \pm 11.119$   $\chi^2/\text{NDF}$ : 33.7/24

Right Out:  $-36.574 \pm 16.380$   $\chi^2/\text{NDF}$ : 34.4/30

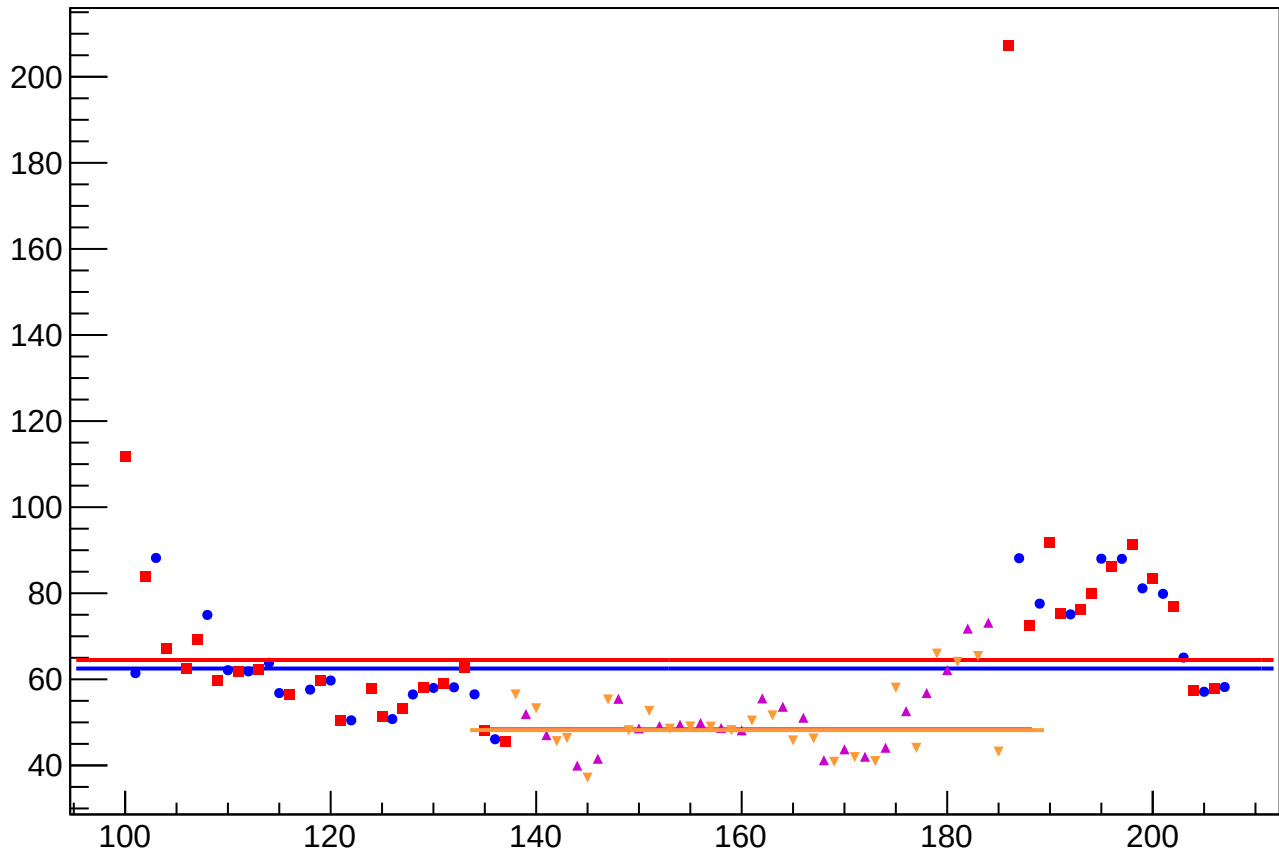
Left In:  $24.572 \pm 11.471$   $\chi^2/\text{NDF}$ : 25.7/22

+ sign  $-7.243 \pm 9.228$   $\chi^2/\text{NDF}$ : 72.9/50

All:  $-1.501 \pm 6.584$   $\chi^2/\text{NDF}$ : 143.2/104

- sign  $4.451 \pm 9.396$   $\chi^2/\text{NDF}$ : 69.5/53

# reg\_asym\_sam\_15\_48\_dd\_rms vs Slug



Right In: 62.507 $\pm$ 0.012  $\chi^2$ /NDF: 1083787.4/25

Left Out: 48.198 $\pm$ 0.008  $\chi^2$ /NDF: 780285.2/24

Right Out: 64.495 $\pm$ 0.012  $\chi^2$ /NDF: 1487486.5/30

Left In: 48.381 $\pm$ 0.008  $\chi^2$ /NDF: 695381.8/22

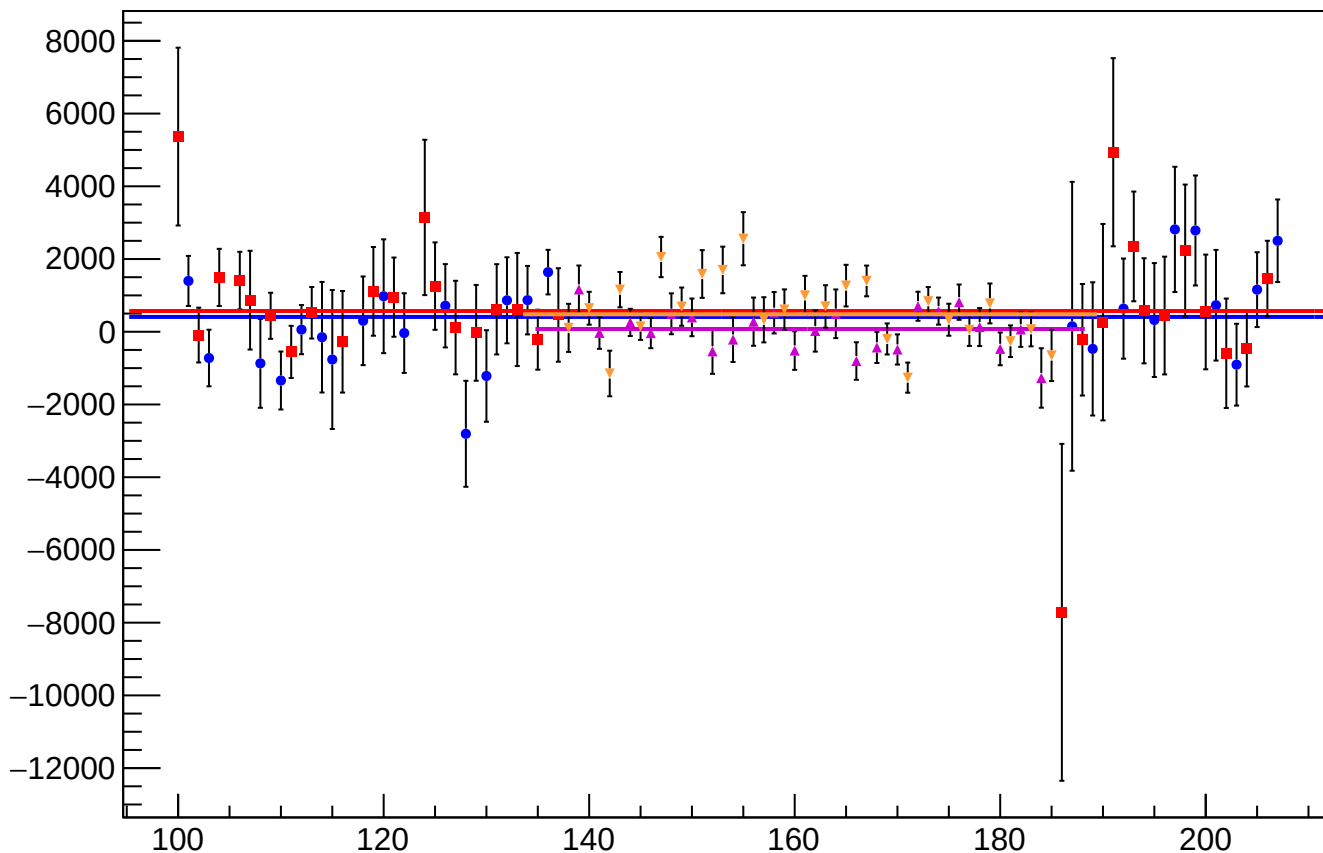
+ sign 52.651 $\pm$ 0.007  $\chi^2$ /NDF: 2894688.9/50

All: 53.158 $\pm$ 0.005  $\chi^2$ /NDF: 6388576.1/104

- sign 53.683 $\pm$ 0.007  $\chi^2$ /NDF: 3481607.9/53



asym\_sam\_15\_48\_dd\_reg\_correction\_mean vs Slug



Right In: 407.576 $\pm$ 212.242  $\chi^2$ /NDF: 32.2/25

Left Out: 480.215 $\pm$ 100.526  $\chi^2$ /NDF:69.2/24

Right Out: 570.357 $\pm$ 202.396  $\chi^2$ /NDF: 24.3/30

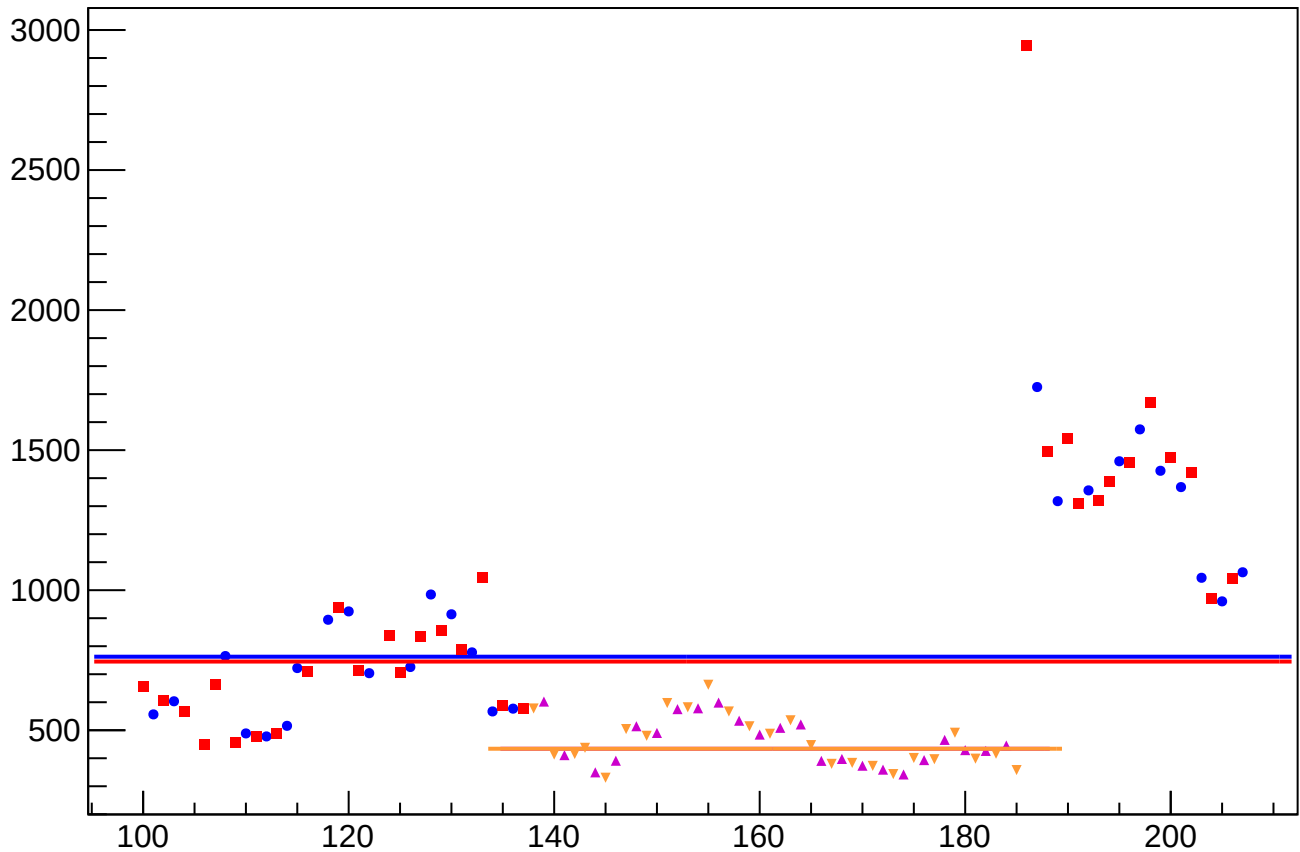
Left In: 75.662 $\pm$ 103.128  $\chi^2$ /NDF:24.5/22

+ sign 466.906 $\pm$ 90.850  $\chi^2$ /NDF: 101.5/50

All: 323.907 $\pm$ 64.605  $\chi^2$ /NDF: 160.0/104

- sign 177.626 $\pm$ 91.888  $\chi^2$ /NDF: 53.5/53

asym\_sam\_15\_48\_dd\_reg\_correction\_rms vs Slug



Right In: 762.527 $\pm$ 0.150  $\chi^2$ /NDF: 3861708.9/25

Left Out: 433.945 $\pm$ 0.071  $\chi^2$ /NDF: 1243704.6/24

Right Out: 745.208 $\pm$ 0.143  $\chi^2$ /NDF: 5560864.4/30

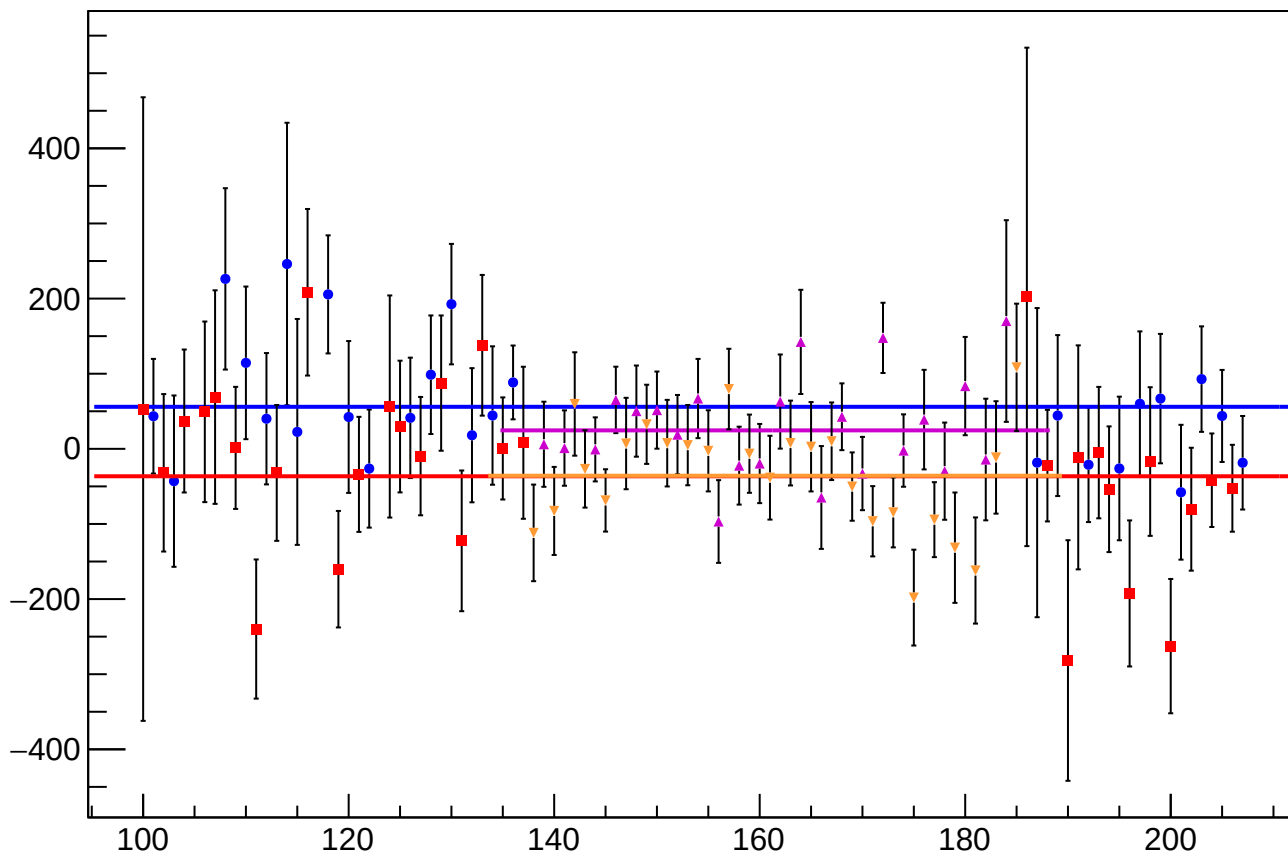
Left In: 433.722 $\pm$ 0.073  $\chi^2$ /NDF: 1094788.8/22

+ sign 494.151 $\pm$ 0.064  $\chi^2$ /NDF: 9020619.3/50

All: 496.016 $\pm$ 0.046  $\chi^2$ /NDF: 19438596.1/10

- sign 497.923 $\pm$ 0.065  $\chi^2$ /NDF: 10416271.8/53

# cor\_asym\_sam\_15\_48\_dd\_mean vs Slug



Right In:  $55.935 \pm 16.542$   $\chi^2/\text{NDF}$ : 18.1/25

Left Out:  $-35.792 \pm 11.119$   $\chi^2/\text{NDF}$ : 33.7/24

Right Out:  $-36.527 \pm 16.386$   $\chi^2/\text{NDF}$ : 34.4/30

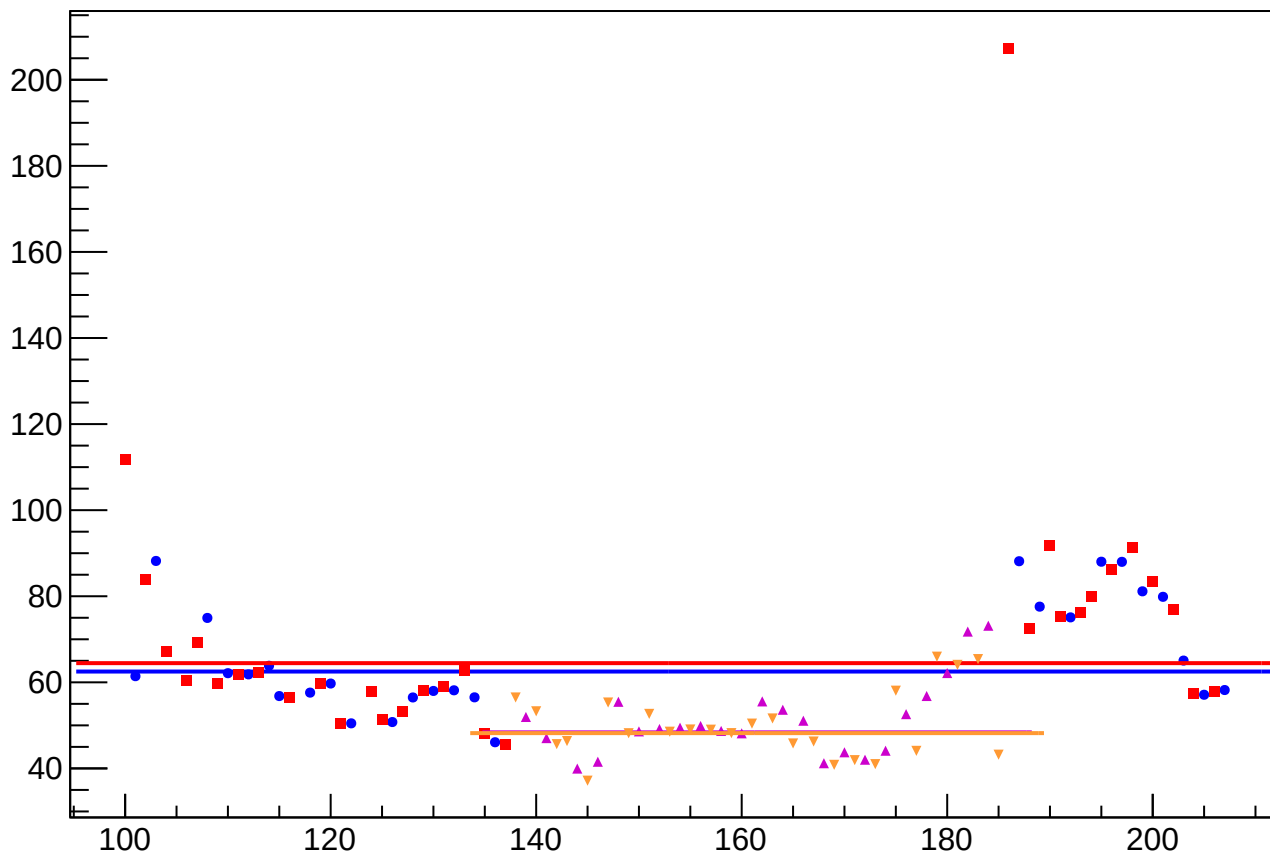
Left In:  $24.573 \pm 11.471$   $\chi^2/\text{NDF}$ : 25.7/22

+ sign  $-7.246 \pm 9.228$   $\chi^2/\text{NDF}$ : 73.0/50

All:  $-1.490 \pm 6.584$   $\chi^2/\text{NDF}$ : 143.2/104

- sign  $4.477 \pm 9.397$   $\chi^2/\text{NDF}$ : 69.5/53

# cor\_asym\_sam\_15\_48\_dd\_rms vs Slug



Right In: 62.507 $\pm$ 0.012  $\chi^2$ /NDF: 1083790.8/25

Left Out: 48.198 $\pm$ 0.008  $\chi^2$ /NDF: 780285.2/24

Right Out: 64.459 $\pm$ 0.012  $\chi^2$ /NDF: 1489378.5/30

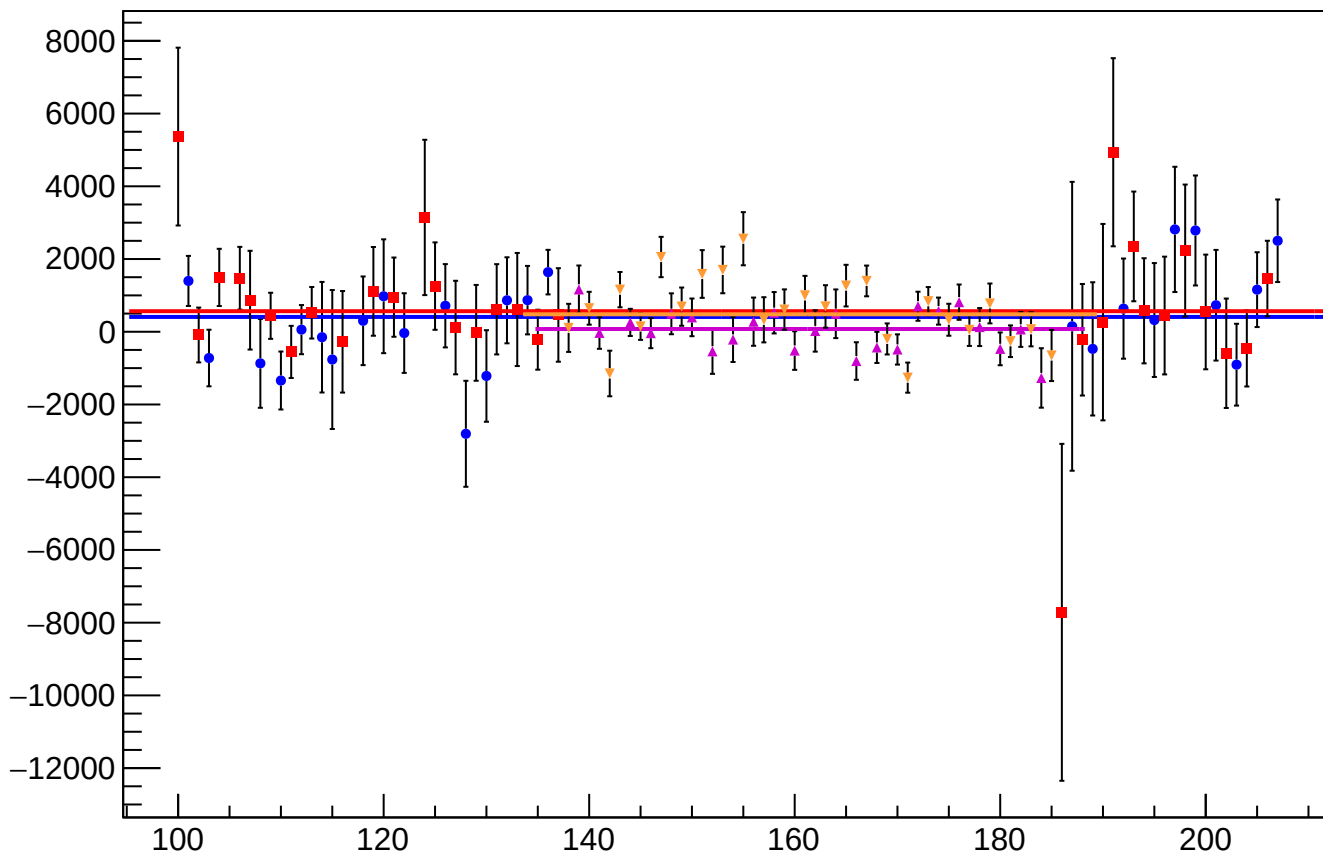
Left In: 48.381 $\pm$ 0.008  $\chi^2$ /NDF: 695381.8/22

+ sign 52.651 $\pm$ 0.007  $\chi^2$ /NDF: 2894692.8/50

All: 53.151 $\pm$ 0.005  $\chi^2$ /NDF: 6383704.1/104

- sign 53.669 $\pm$ 0.007  $\chi^2$ /NDF: 3477074.2/53

asym\_sam\_15\_48\_dd\_cor\_correction\_mean vs Slug



Right In: 407.606 $\pm$ 212.243  $\chi^2$ /NDF: 32.2/25

Left Out: 480.210 $\pm$ 100.526  $\chi^2$ /NDF: 69.2/24

Right Out: 565.365 $\pm$ 203.462  $\chi^2$ /NDF: 24.2/30

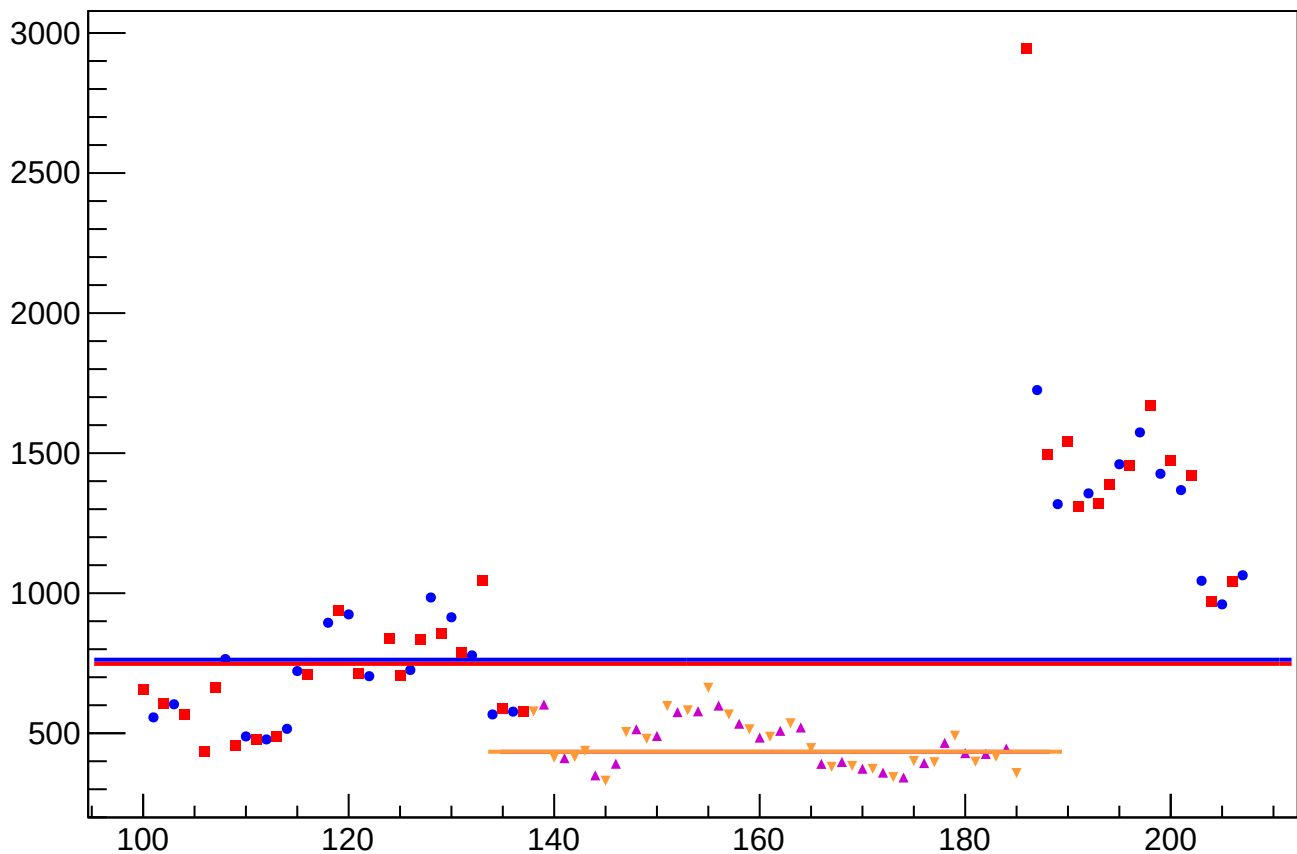
Left In: 75.665 $\pm$ 103.128  $\chi^2$ /NDF: 24.5/22

+ sign 466.908 $\pm$ 90.851  $\chi^2$ /NDF: 101.5/50

All: 323.143 $\pm$ 64.639  $\chi^2$ /NDF: 159.9/104

- sign 175.760 $\pm$ 91.987  $\chi^2$ /NDF: 53.3/53

asym\_sam\_15\_48\_dd\_cor\_correction\_rms vs Slug



Right In: 762.532 $\pm$ 0.150  $\chi^2$ /NDF: 3861648.5/25

Left Out: 433.945 $\pm$ 0.071  $\chi^2$ /NDF: 1243702.1/24

Right Out: 747.627 $\pm$ 0.144  $\chi^2$ /NDF: 5536926.2/30

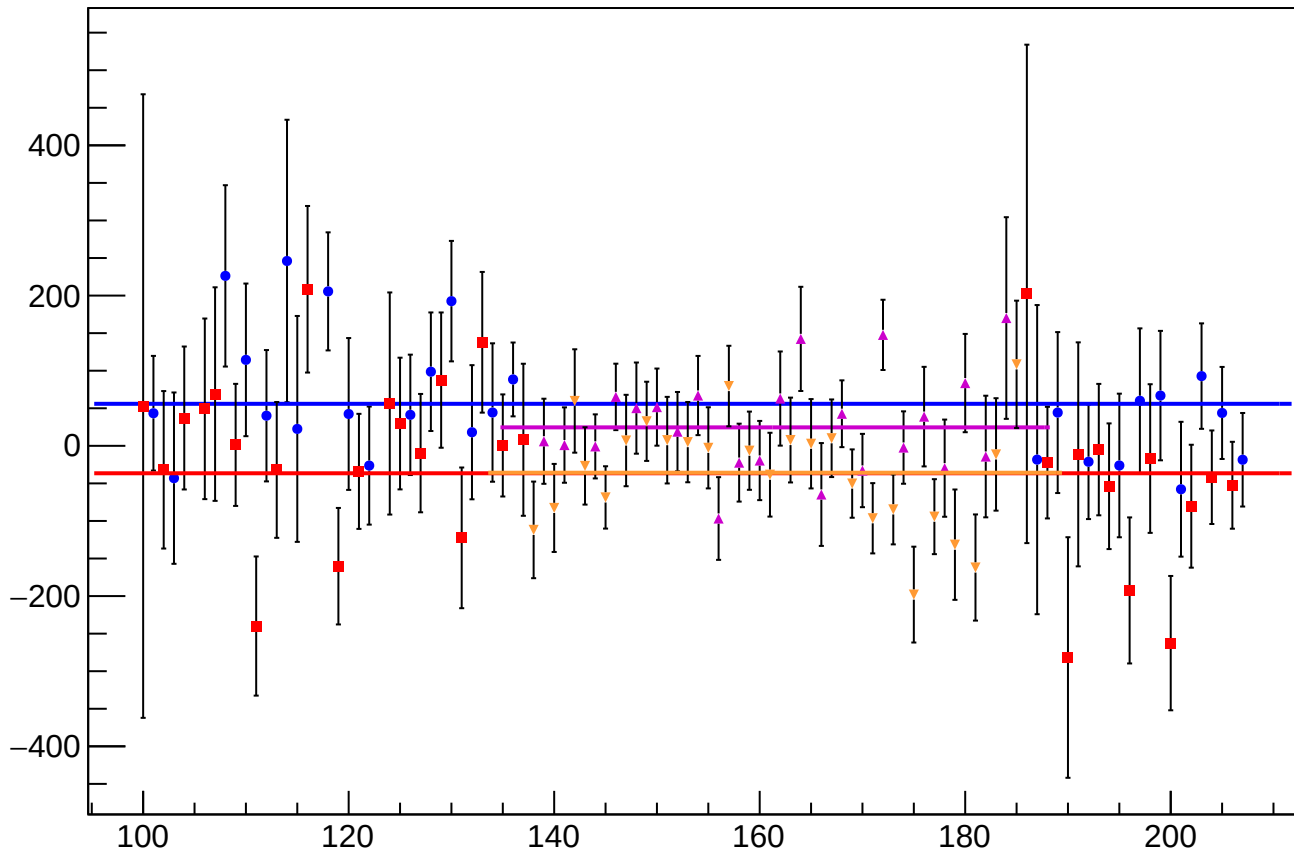
Left In: 433.722 $\pm$ 0.073  $\chi^2$ /NDF: 1094788.4/22

+ sign 494.151 $\pm$ 0.064  $\chi^2$ /NDF: 9020644.2/50

All: 495.994 $\pm$ 0.046  $\chi^2$ /NDF: 19441526.6/10

- sign 497.884 $\pm$ 0.065  $\chi^2$ /NDF: 10419214.8/53

# eigen\_cor\_asym\_sam\_15\_48\_dd\_mean vs Slug



Right In:  $55.935 \pm 16.542$   $\chi^2/\text{NDF}$ : 18.1/25

Left Out:  $-35.792 \pm 11.119$   $\chi^2/\text{NDF}$ : 33.7/24

Right Out:  $-36.527 \pm 16.386$   $\chi^2/\text{NDF}$ : 34.4/30

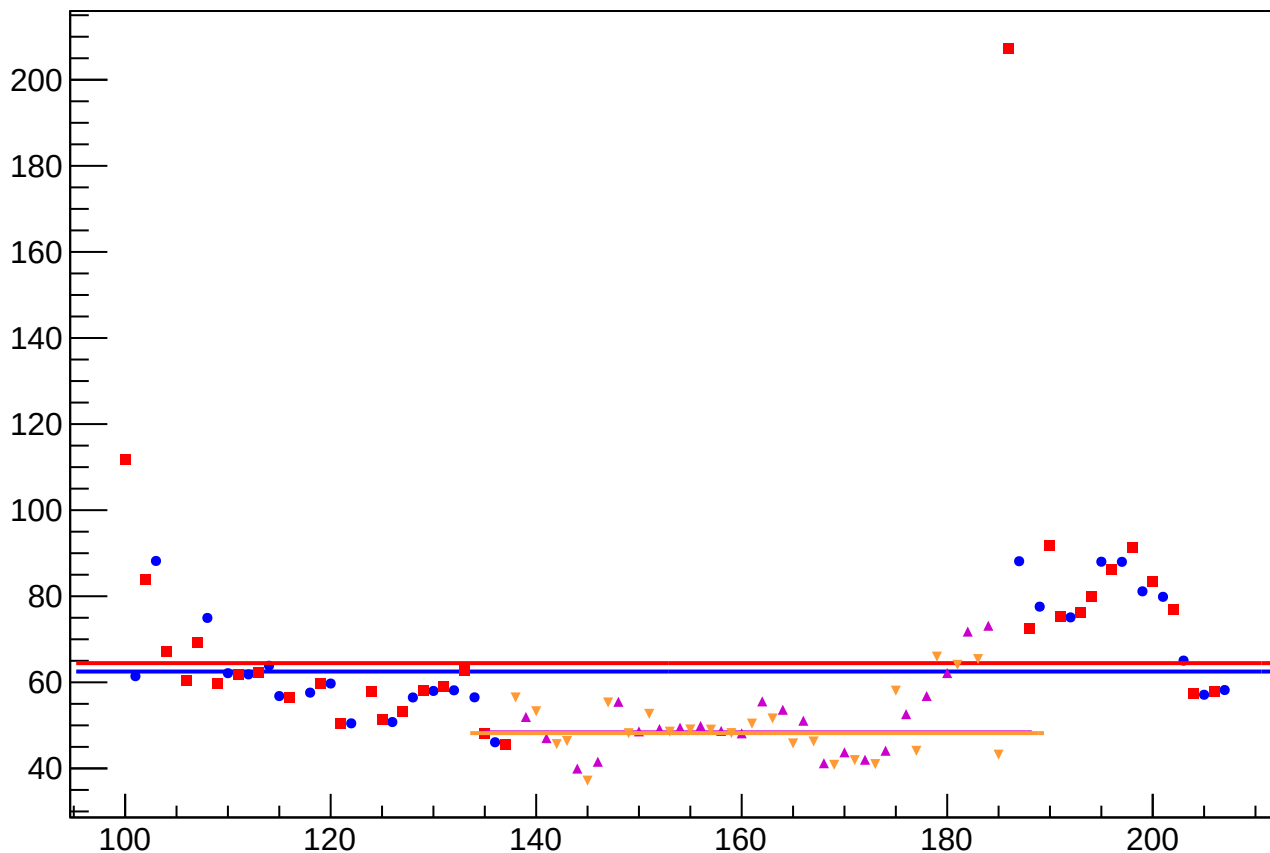
Left In:  $24.573 \pm 11.471$   $\chi^2/\text{NDF}$ : 25.7/22

+ sign  $-7.246 \pm 9.228$   $\chi^2/\text{NDF}$ : 73.0/50

All:  $-1.490 \pm 6.584$   $\chi^2/\text{NDF}$ : 143.2/104

- sign  $4.477 \pm 9.397$   $\chi^2/\text{NDF}$ : 69.5/53

# eigen\_cor\_asym\_sam\_15\_48\_dd\_rms vs Slug



Right In: 62.507 $\pm$ 0.012  $\chi^2/\text{NDF}$ : 1083790.8/25

Left Out: 48.198 $\pm$ 0.008  $\chi^2/\text{NDF}$ : 780285.2/24

Right Out: 64.459 $\pm$ 0.012  $\chi^2/\text{NDF}$ : 1489378.5/30

Left In: 48.381 $\pm$ 0.008  $\chi^2/\text{NDF}$ : 695381.8/22

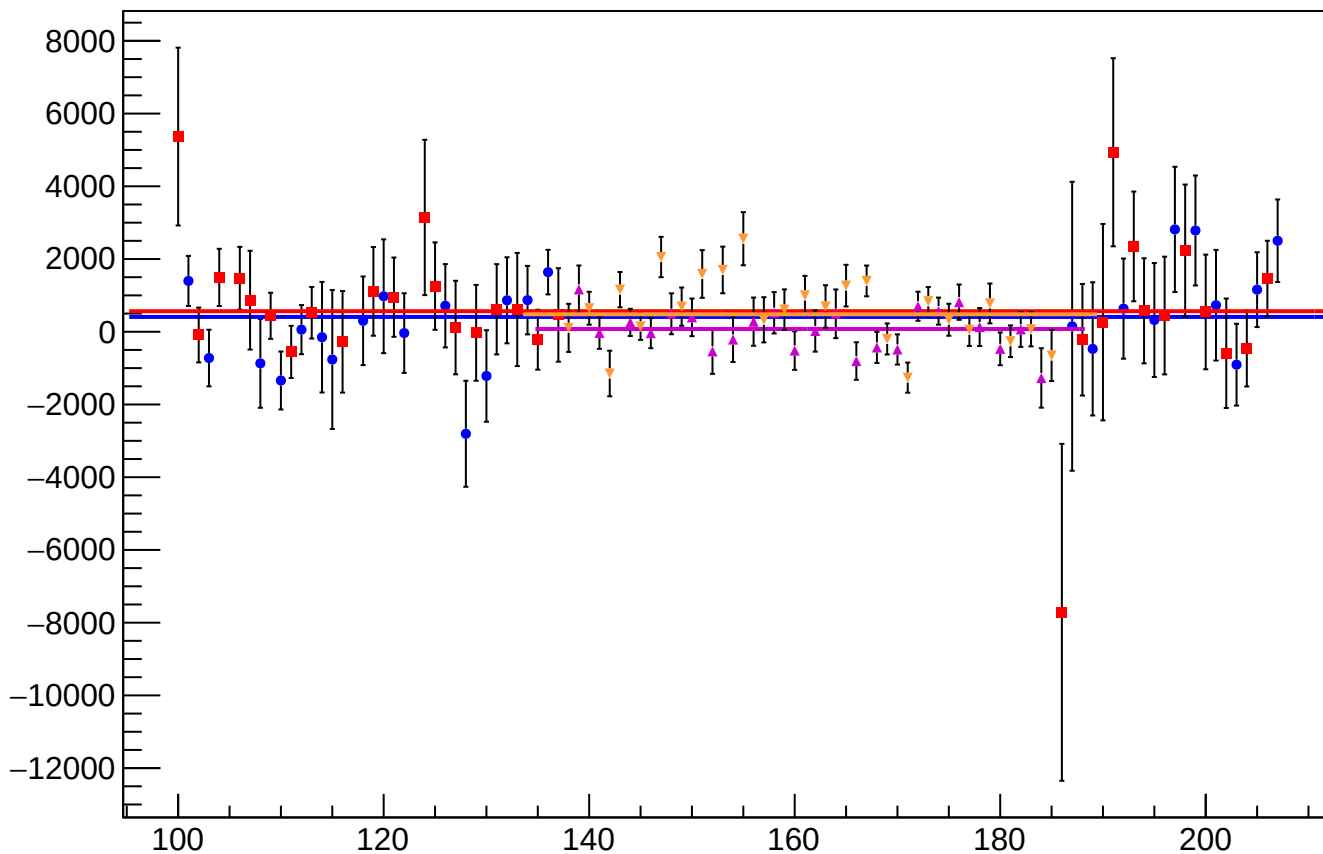
+ sign 52.651 $\pm$ 0.007  $\chi^2/\text{NDF}$ : 2894692.8/50

All: 53.151 $\pm$ 0.005  $\chi^2/\text{NDF}$ : 6383704.1/104

- sign 53.669 $\pm$ 0.007  $\chi^2/\text{NDF}$ : 3477074.2/53



asym\_sam\_15\_48\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In: 407.606 $\pm$ 212.243  $\chi^2$ /NDF: 32.2/25

Left Out: 480.210 $\pm$ 100.526  $\chi^2$ /NDF: 69.2/24

Right Out: 565.365 $\pm$ 203.462  $\chi^2$ /NDF: 24.2/30

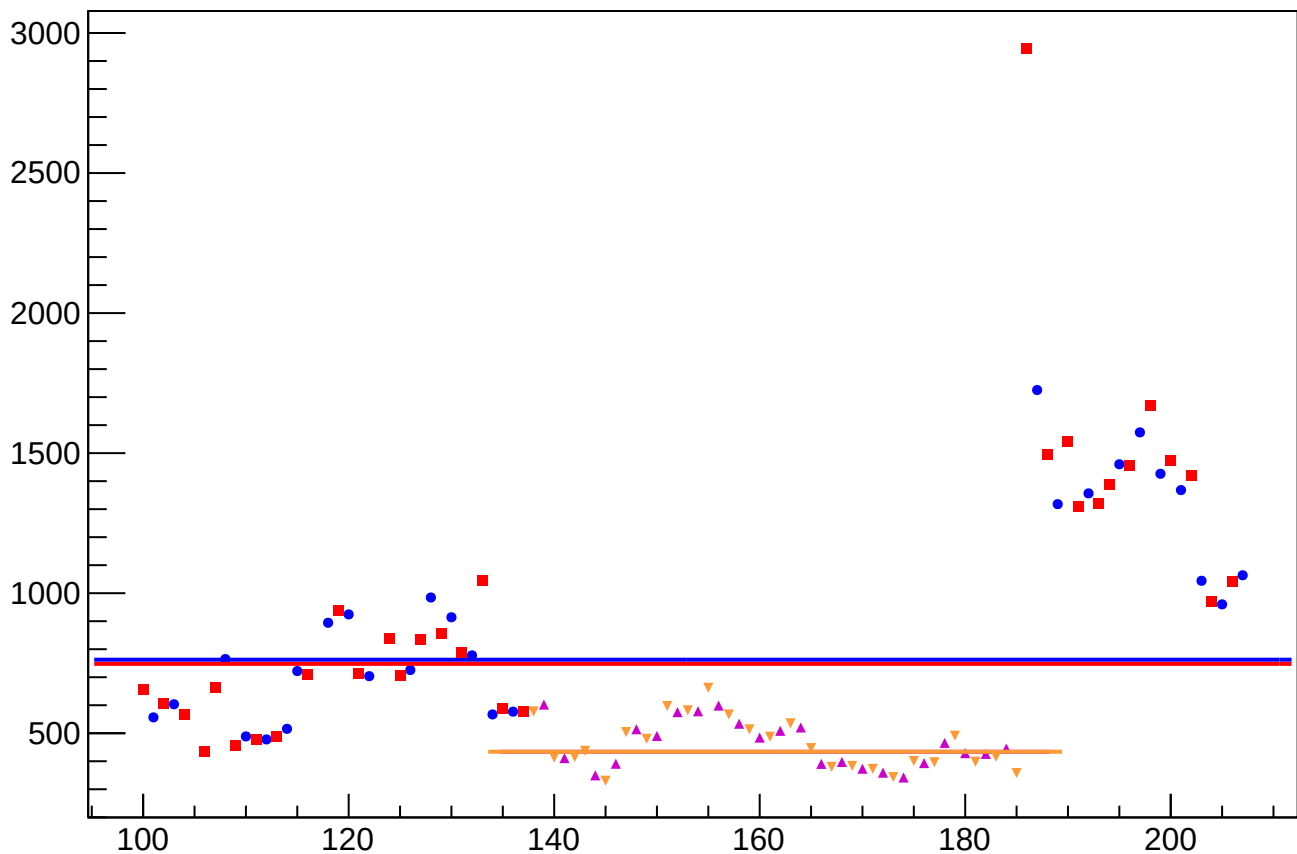
Left In: 75.665 $\pm$ 103.128  $\chi^2$ /NDF: 24.5/22

+ sign 466.908 $\pm$ 90.851  $\chi^2$ /NDF: 101.5/50

All: 323.143 $\pm$ 64.639  $\chi^2$ /NDF: 159.9/104

- sign 175.760 $\pm$ 91.987  $\chi^2$ /NDF: 53.3/53

asym\_sam\_15\_48\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 762.532 $\pm$ 0.150  $\chi^2$ /NDF: 3861648.5/25

Left Out: 433.945 $\pm$ 0.071  $\chi^2$ /NDF:1243702.1/24

Right Out: 747.627 $\pm$ 0.144  $\chi^2$ /NDF: 5536926.2/30

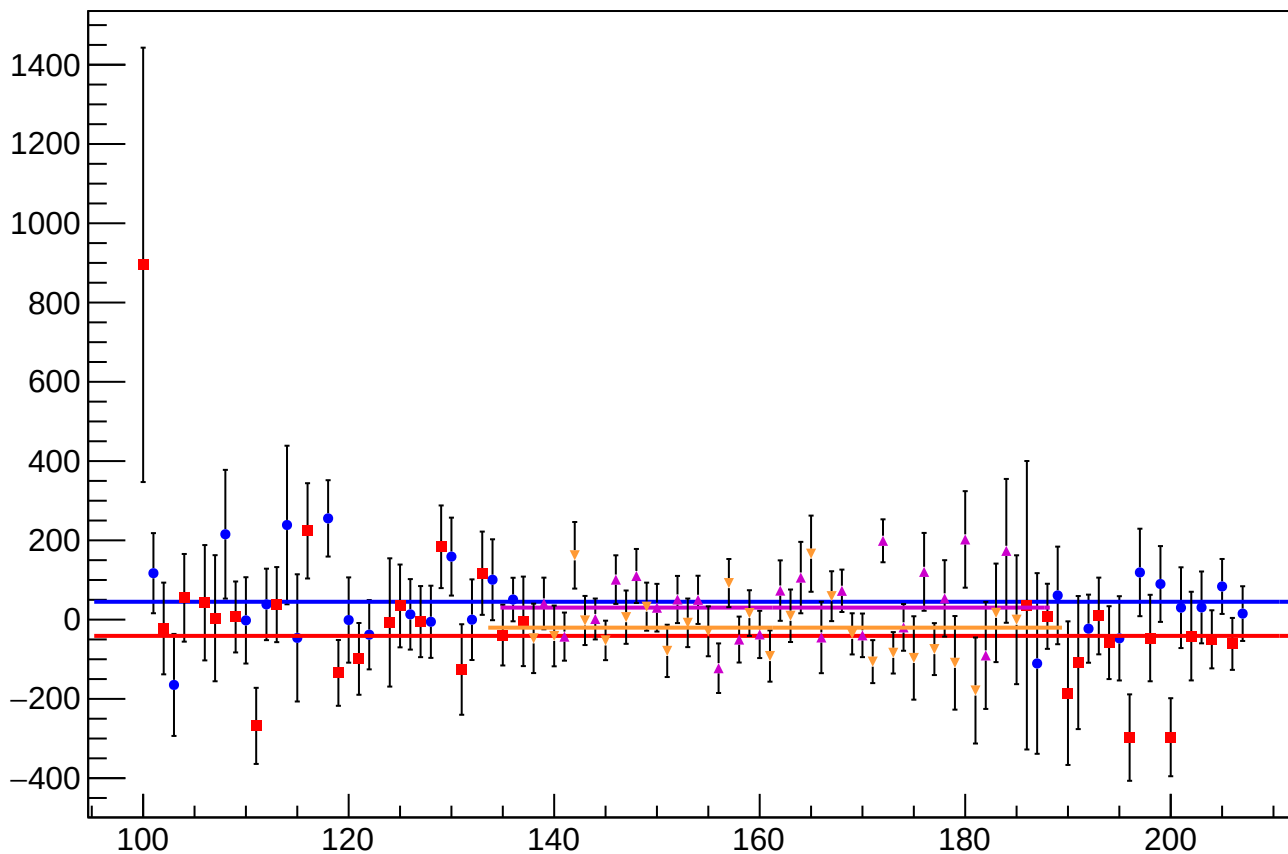
Left In: 433.722 $\pm$ 0.073  $\chi^2$ /NDF:1094788.4/22

+ sign 494.151 $\pm$ 0.064  $\chi^2$ /NDF: 9020644.2/50

All: 495.994 $\pm$ 0.046  $\chi^2$ /NDF: 19441526.6/10

- sign 497.884 $\pm$ 0.065  $\chi^2$ /NDF: 10419214.8/53

# dit\_asym\_sam\_15\_48\_dd\_mean vs Slug



Right In: 45.034 $\pm$ 18.886  $\chi^2$ /NDF: 16.9/25

Left Out: -20.270 $\pm$ 13.636  $\chi^2$ /NDF: 25.1/24

Right Out: -41.037 $\pm$ 18.546  $\chi^2$ /NDF: 39.4/30

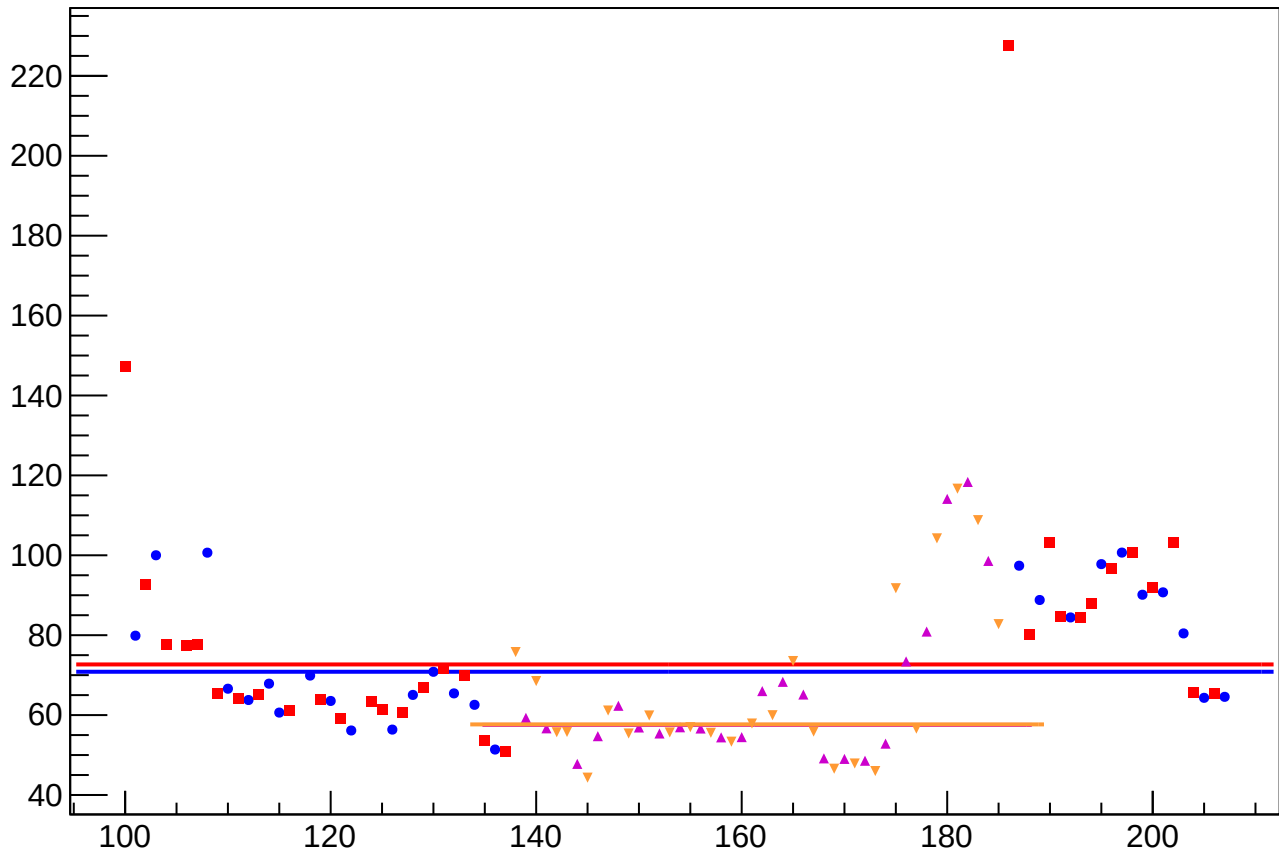
Left In: 30.318 $\pm$ 13.979  $\chi^2$ /NDF: 32.6/22

+ sign 2.109 $\pm$ 11.056  $\chi^2$ /NDF: 49.9/50

All: 3.276 $\pm$ 7.855  $\chi^2$ /NDF: 131.4/104

- sign 4.467 $\pm$ 11.163  $\chi^2$ /NDF: 81.4/53

# dit\_asym\_sam\_15\_48\_dd\_rms vs Slug



Right In: 70.848+/-0.013  $\chi^2/\text{NDF}$ : 1215608.3/25

Left Out: 57.668+/-0.010  $\chi^2/\text{NDF}$ : 1909743.5/24

Right Out: 72.679+/-0.013  $\chi^2/\text{NDF}$ : 1530205.2/30

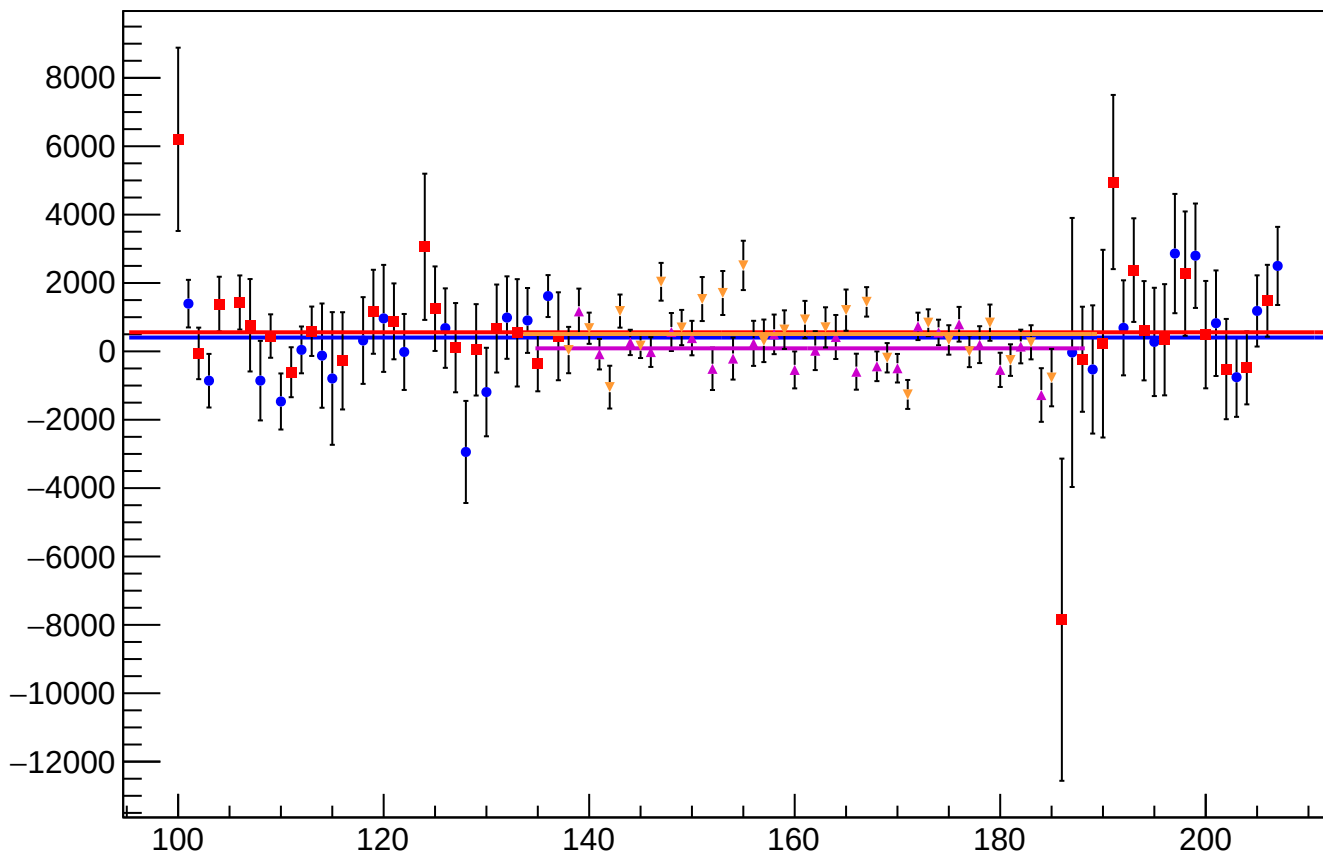
Left In: 57.539+/-0.010  $\chi^2/\text{NDF}$ : 1443279.4/22

+ sign 62.185+/-0.008  $\chi^2/\text{NDF}$ : 3765584.3/50

All: 62.600+/-0.006  $\chi^2/\text{NDF}$ : 7594711.2/104

- sign 63.024+/-0.008  $\chi^2/\text{NDF}$ : 3823413.3/53

asym\_sam\_15\_48\_dd\_dit\_correction\_mean vs Slug



Right In:  $404.484 \pm 214.686$   $\chi^2/\text{NDF}: 32.8/25$

Left Out:  $507.171 \pm 101.776$   $\chi^2/\text{NDF}: 65.8/24$

Right Out:  $558.222 \pm 204.318$   $\chi^2/\text{NDF}: 24.9/30$

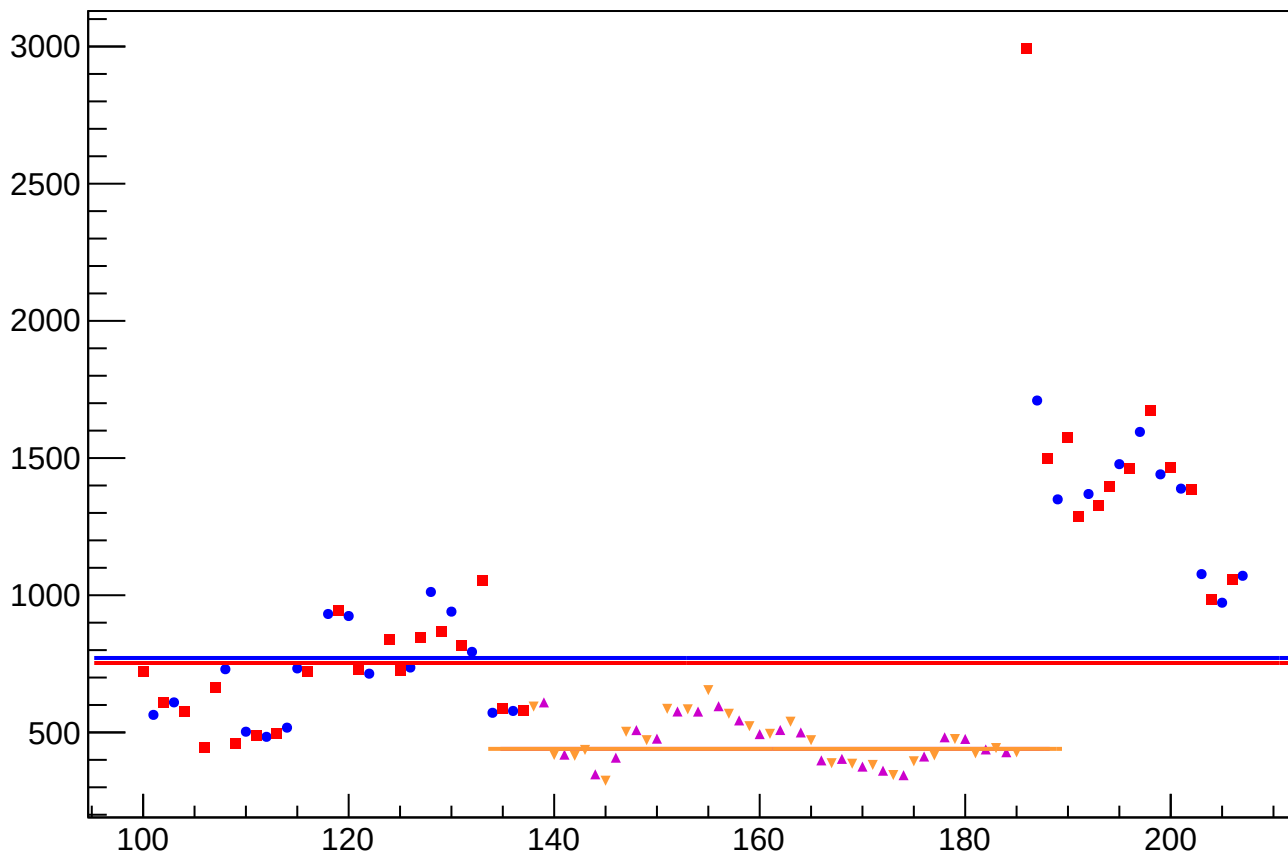
Left In:  $88.471 \pm 104.542$   $\chi^2/\text{NDF}: 23.3/22$

+ sign  $488.327 \pm 91.965$   $\chi^2/\text{NDF}: 98.8/50$

All:  $338.931 \pm 65.415$   $\chi^2/\text{NDF}: 156.5/104$

- sign  $185.935 \pm 93.067$   $\chi^2/\text{NDF}: 52.4/53$

asym\_sam\_15\_48\_dd\_dit\_correction\_rms vs Slug



Right In:  $771.341 \pm 0.152$   $\chi^2/\text{NDF}: 3892506.8/25$

Left Out:  $440.075 \pm 0.072$   $\chi^2/\text{NDF}: 1196985.5/24$

Right Out:  $753.052 \pm 0.144$   $\chi^2/\text{NDF}: 5513687.5/30$

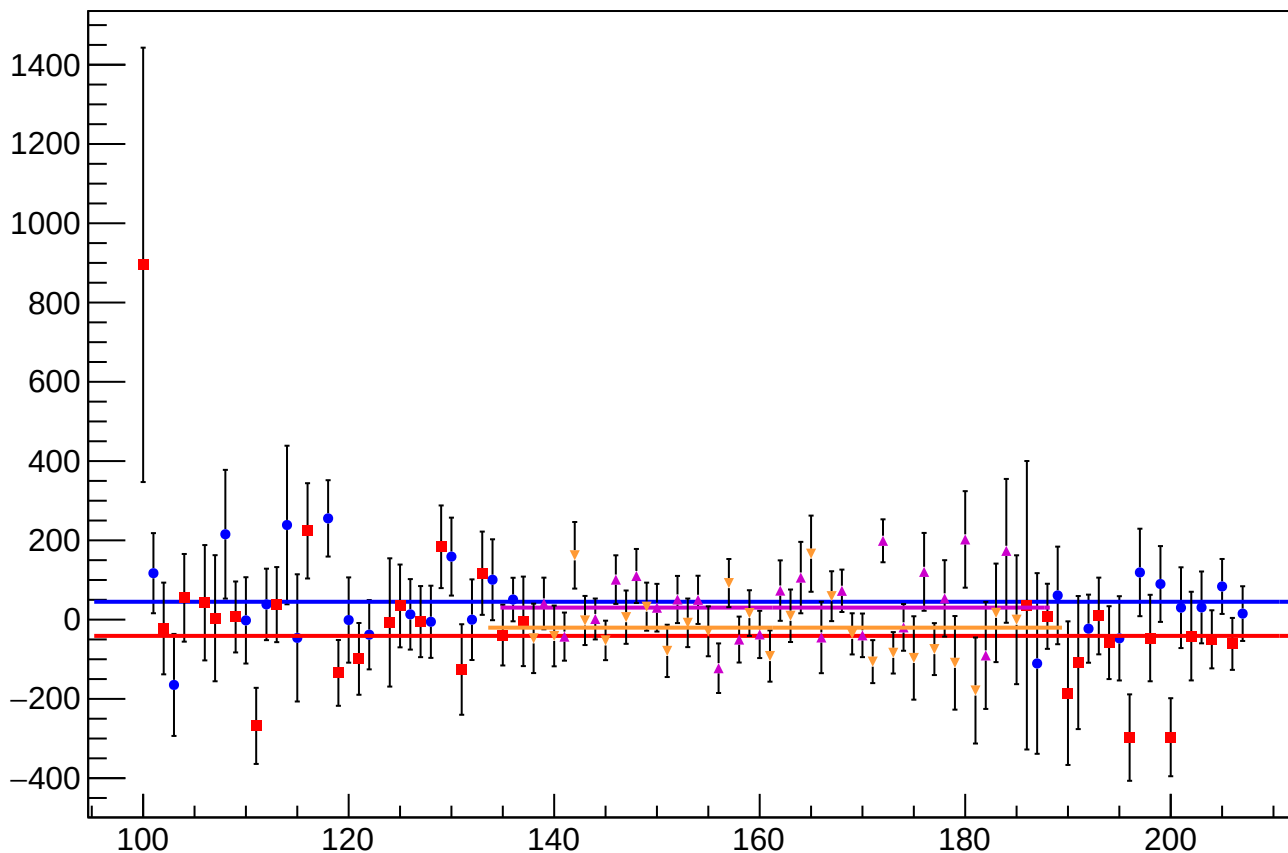
Left In:  $439.877 \pm 0.074$   $\chi^2/\text{NDF}: 1061910.1/22$

+ sign  $500.863 \pm 0.065$   $\chi^2/\text{NDF}: 8977517.2/50$

All:  $502.835 \pm 0.046$   $\chi^2/\text{NDF}: 19278918.2/100$

- sign  $504.855 \pm 0.066$   $\chi^2/\text{NDF}: 10299539.6/53$

# eigen\_dit\_asym\_sam\_15\_48\_dd\_mean vs Slug



Right In:  $45.032 \pm 18.886$   $\chi^2/\text{NDF}$ : 16.9/25

Left Out:  $-20.271 \pm 13.636$   $\chi^2/\text{NDF}$ : 25.1/24

Right Out:  $-41.037 \pm 18.546$   $\chi^2/\text{NDF}$ : 39.4/30

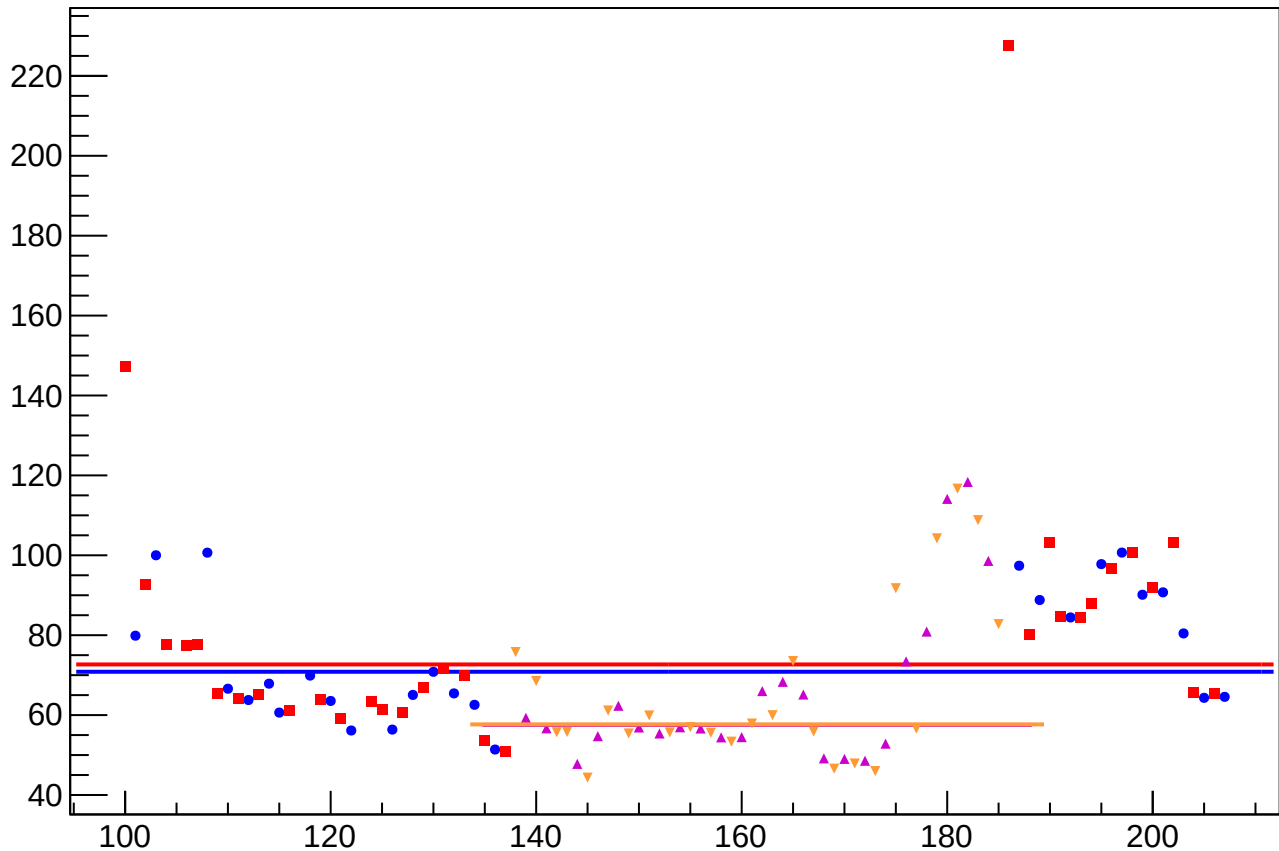
Left In:  $30.318 \pm 13.979$   $\chi^2/\text{NDF}$ : 32.6/22

+ sign  $2.108 \pm 11.056$   $\chi^2/\text{NDF}$ : 49.9/50

All:  $3.276 \pm 7.855$   $\chi^2/\text{NDF}$ : 131.4/104

- sign  $4.467 \pm 11.163$   $\chi^2/\text{NDF}$ : 81.4/53

# eigen\_dit\_asym\_sam\_15\_48\_dd\_rms vs Slug



Right In: 70.848 $\pm$ 0.013  $\chi^2/\text{NDF}$ : 1215594.9/25

Left Out: 57.668 $\pm$ 0.010  $\chi^2/\text{NDF}$ : 1909739.8/24

Right Out: 72.679 $\pm$ 0.013  $\chi^2/\text{NDF}$ : 1530219.8/30

Left In: 57.539 $\pm$ 0.010  $\chi^2/\text{NDF}$ : 1443262.3/22

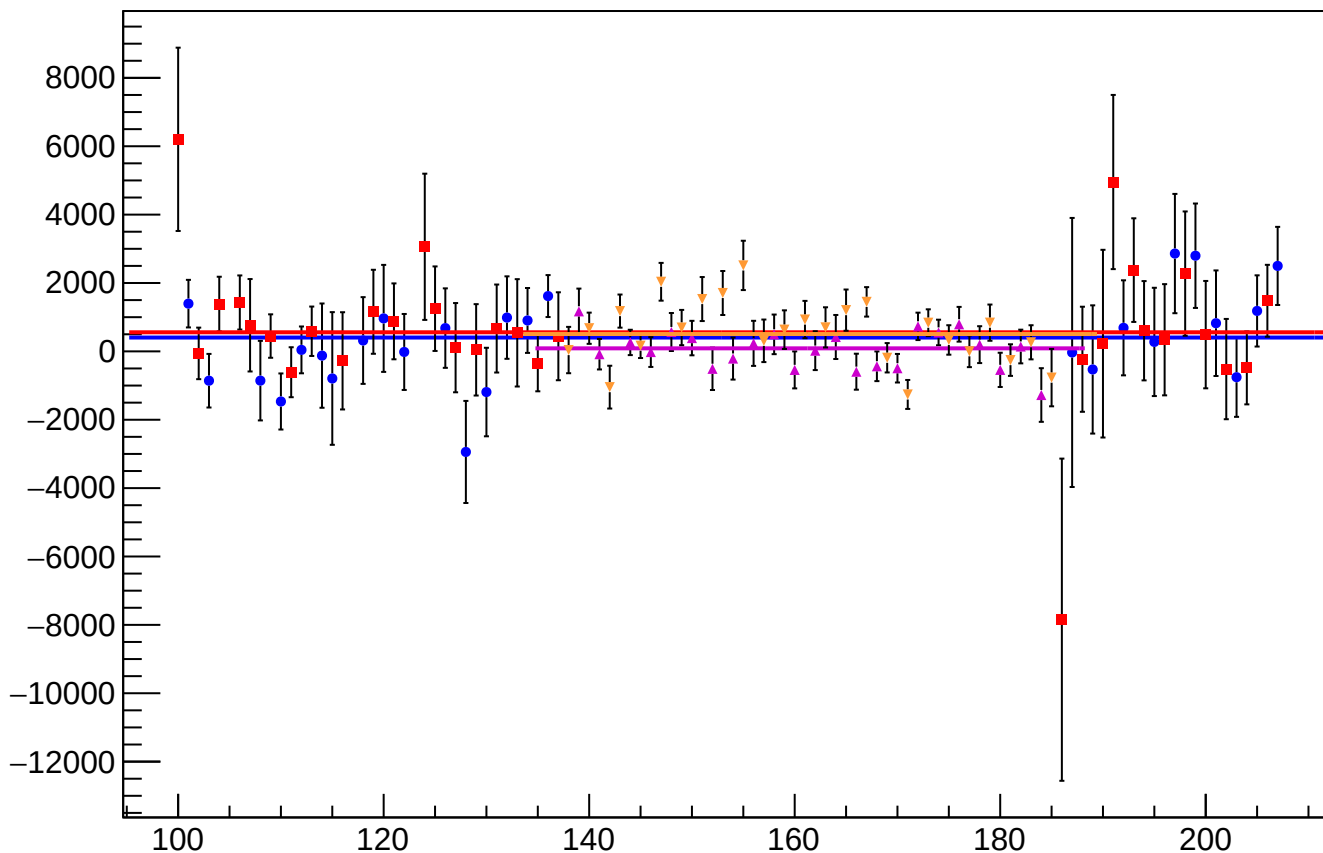
+ sign 62.185 $\pm$ 0.008  $\chi^2/\text{NDF}$ : 3765547.9/50

All: 62.600 $\pm$ 0.006  $\chi^2/\text{NDF}$ : 7594657.0/104

- sign 63.024 $\pm$ 0.008  $\chi^2/\text{NDF}$ : 3823396.2/53



asym\_sam\_15\_48\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $404.483 \pm 214.686$   $\chi^2/\text{NDF}$ : 32.8/25

Left Out:  $507.170 \pm 101.776$   $\chi^2/\text{NDF}$ : 65.8/24

Right Out:  $558.221 \pm 204.317$   $\chi^2/\text{NDF}$ : 24.9/30

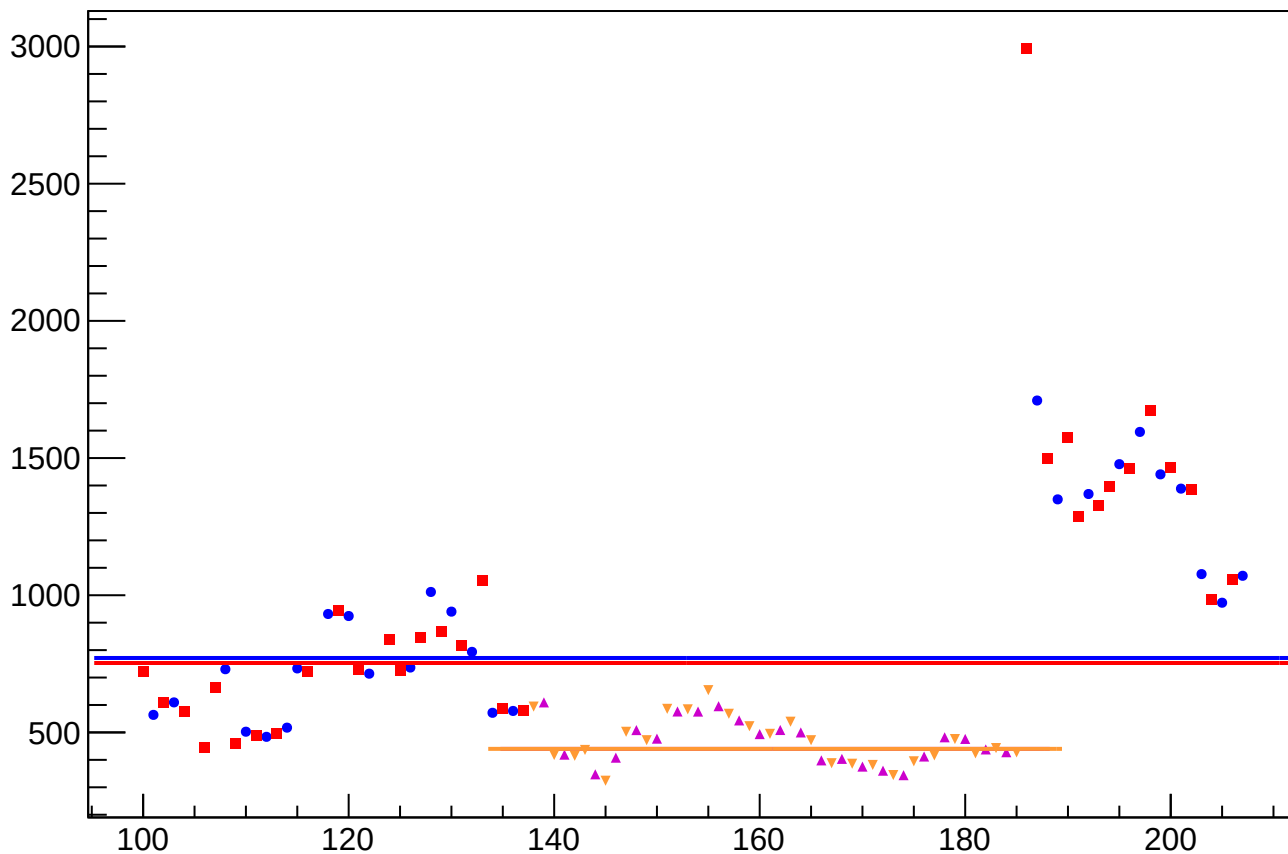
Left In:  $88.471 \pm 104.541$   $\chi^2/\text{NDF}$ : 23.3/22

+ sign  $488.327 \pm 91.965$   $\chi^2/\text{NDF}$ : 98.8/50

All:  $338.930 \pm 65.415$   $\chi^2/\text{NDF}$ : 156.5/104

- sign  $185.935 \pm 93.066$   $\chi^2/\text{NDF}$ : 52.4/53

asym\_sam\_15\_48\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 771.340 $\pm$ 0.152  $\chi^2$ /NDF: 3892510.6/25

Left Out: 440.074 $\pm$ 0.072  $\chi^2$ /NDF: 1196993.4/24

Right Out: 753.051 $\pm$ 0.144  $\chi^2$ /NDF: 5513690.7/30

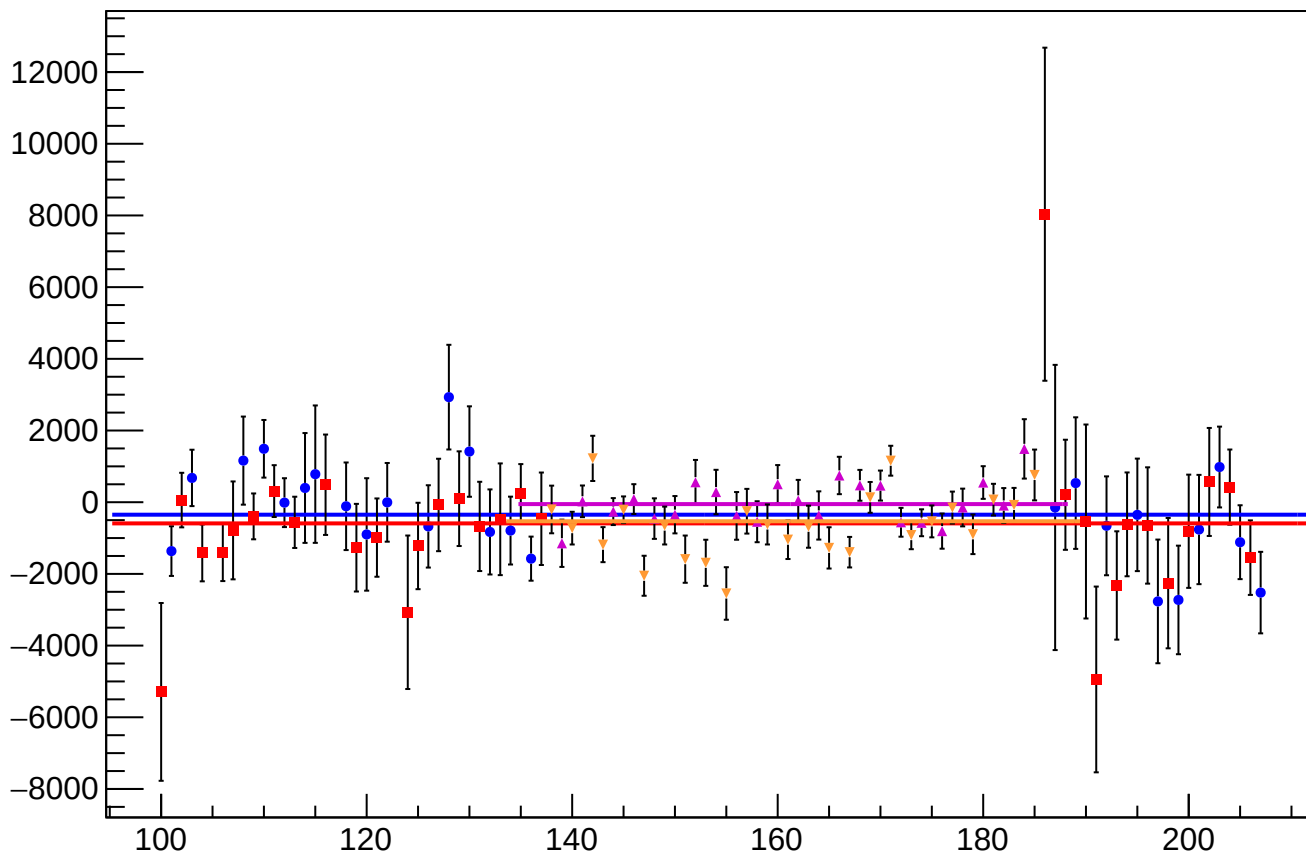
Left In: 439.876 $\pm$ 0.074  $\chi^2$ /NDF: 1061916.6/22

+ sign 500.862 $\pm$ 0.065  $\chi^2$ /NDF: 8977543.6/50

All: 502.834 $\pm$ 0.046  $\chi^2$ /NDF: 19278972.4/10

- sign 504.853 $\pm$ 0.066  $\chi^2$ /NDF: 10299567.4/53

# asym\_sam\_15\_48\_dd\_mean vs Slug



Right In:  $-348.345 \pm 213.261$   $\chi^2/\text{NDF}$ : 33.5/25

Left Out:  $-531.569 \pm 101.245$   $\chi^2/\text{NDF}$ : 65.6/24

Right Out:  $-591.051 \pm 203.631$   $\chi^2/\text{NDF}$ : 23.2/30

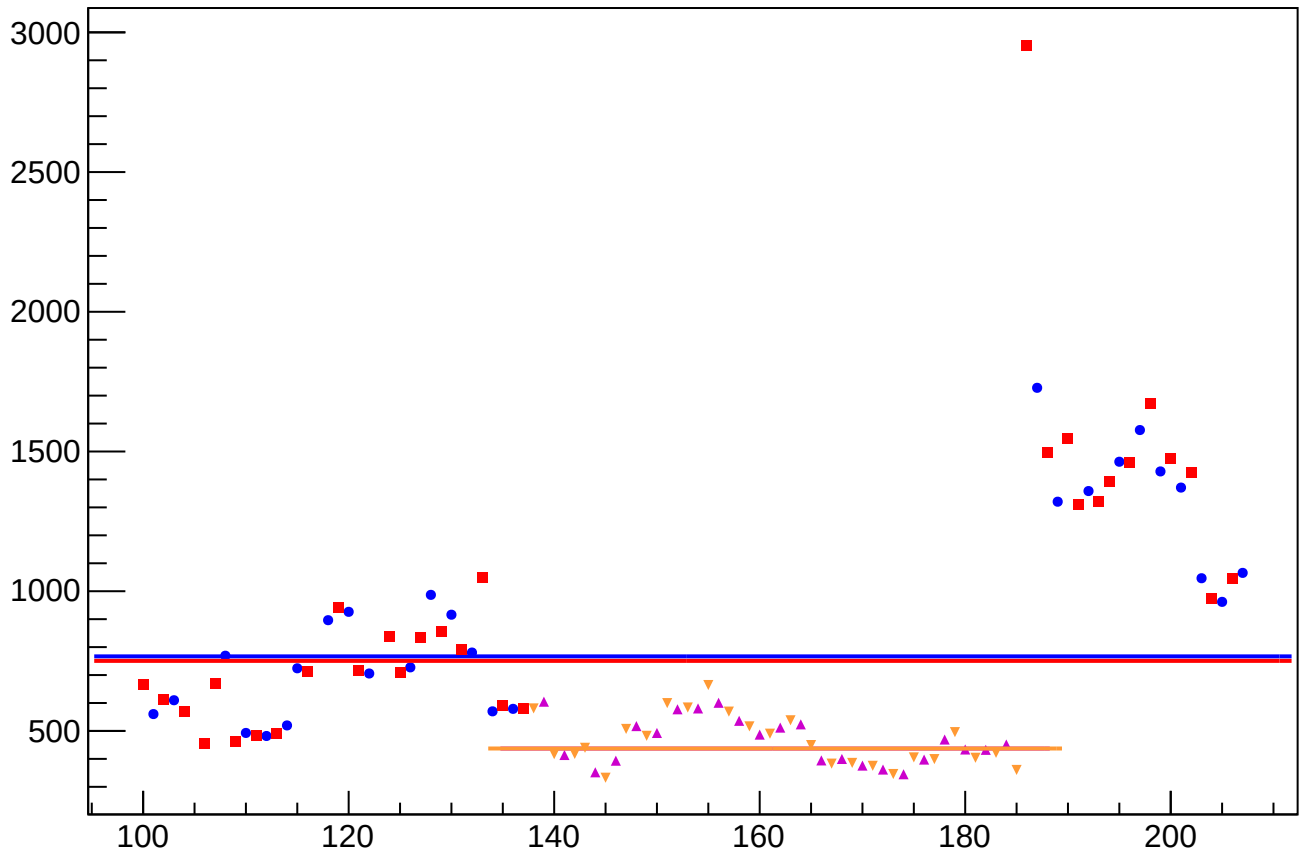
Left In:  $-52.554 \pm 103.870$   $\chi^2/\text{NDF}$ : 24.1/22

+ sign  $-497.869 \pm 91.461$   $\chi^2/\text{NDF}$ : 99.7/50

All:  $-332.739 \pm 65.047$   $\chi^2/\text{NDF}$ : 159.1/104

- sign  $-163.737 \pm 92.528$   $\chi^2/\text{NDF}$ : 52.9/53

# asym\_sam\_15\_48\_dd\_rms vs Slug



Right In: 766.820 $\pm$ 0.151  $\chi^2$ /NDF: 3820462.2/25

Left Out: 437.157 $\pm$ 0.072  $\chi^2$ /NDF:1227453.3/24

Right Out: 750.724 $\pm$ 0.144  $\chi^2$ /NDF: 5489601.5/30

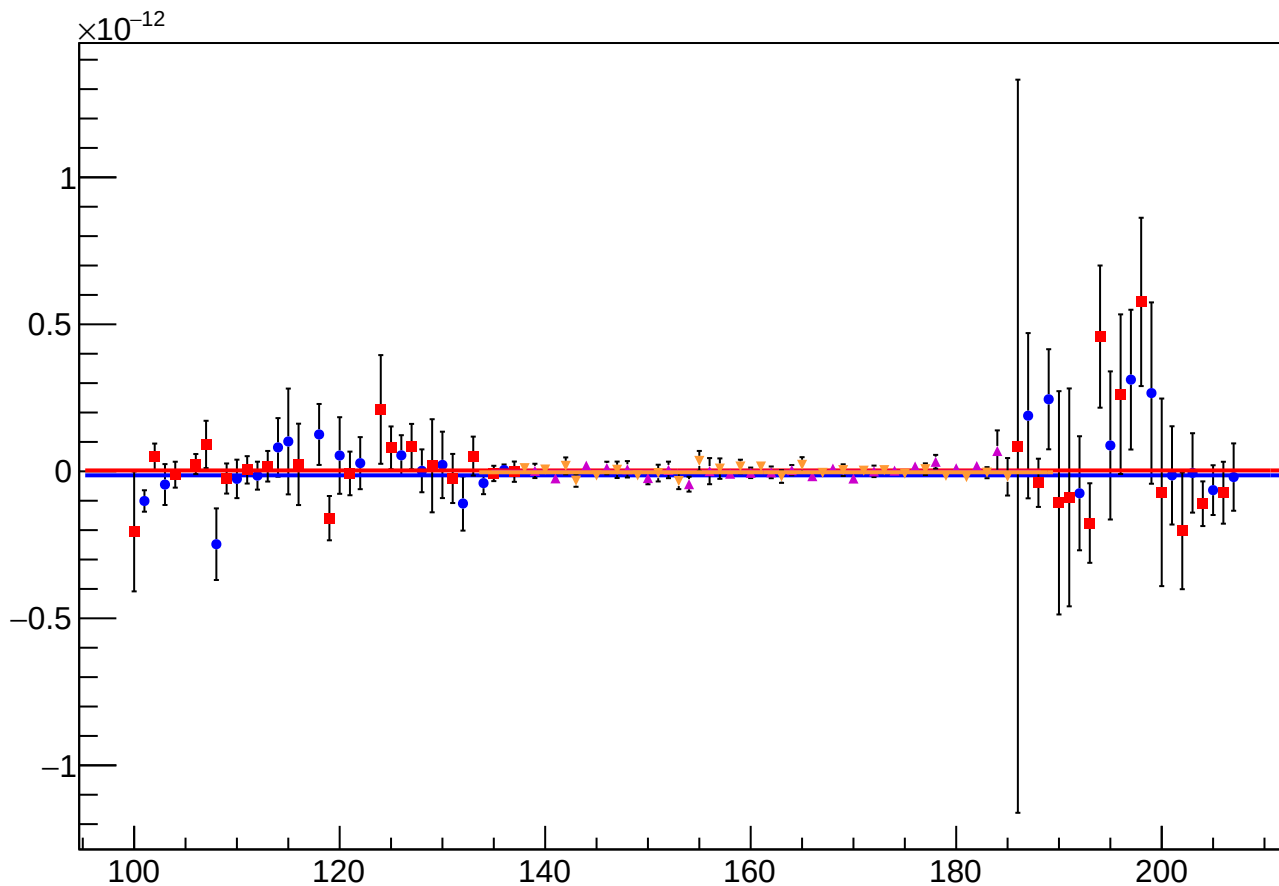
Left In: 436.937 $\pm$ 0.073  $\chi^2$ /NDF:1080038.0/22

+ sign 497.792 $\pm$ 0.065  $\chi^2$ /NDF: 8948024.1/50

All: 499.736 $\pm$ 0.046  $\chi^2$ /NDF: 19288058.8/10

- sign 501.725 $\pm$ 0.065  $\chi^2$ /NDF: 10338206.8/53

asym\_sam\_15\_48\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2$ /NDF: 23.1/25

Left Out: -0.000+/-0.000  $\chi^2$ /NDF: 14.3/24

Right Out: 0.000+/-0.000  $\chi^2$ /NDF: 27.6/30

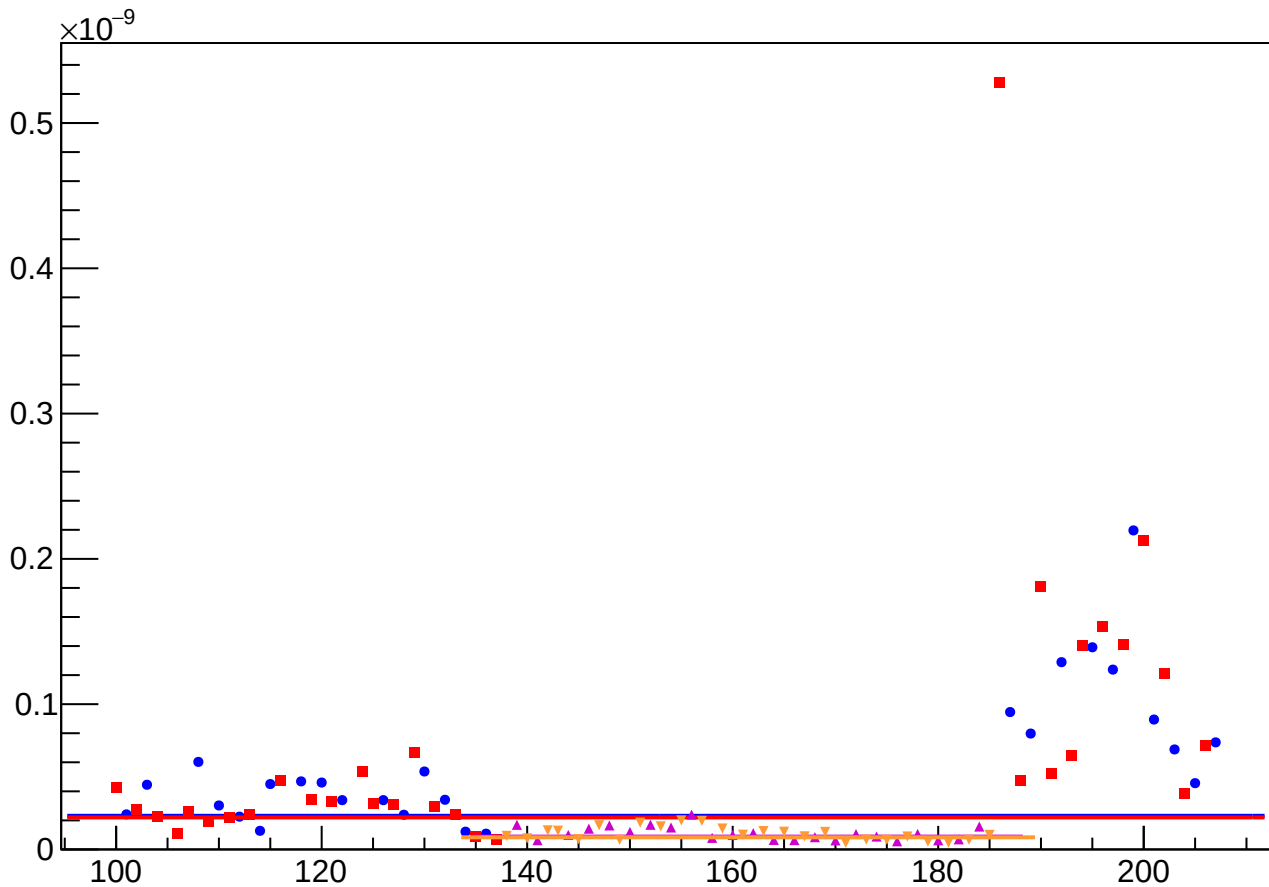
Left In: -0.000+/-0.000  $\chi^2$ /NDF: 22.0/22

+ sign -0.000+/-0.000  $\chi^2$ /NDF: 38.1/50

All: -0.000+/-0.000  $\chi^2$ /NDF: 88.3/104

- sign -0.000+/-0.000  $\chi^2$ /NDF: 49.8/53

asym\_sam\_15\_48\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5519569.4/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2207304.6/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5749823.7/30

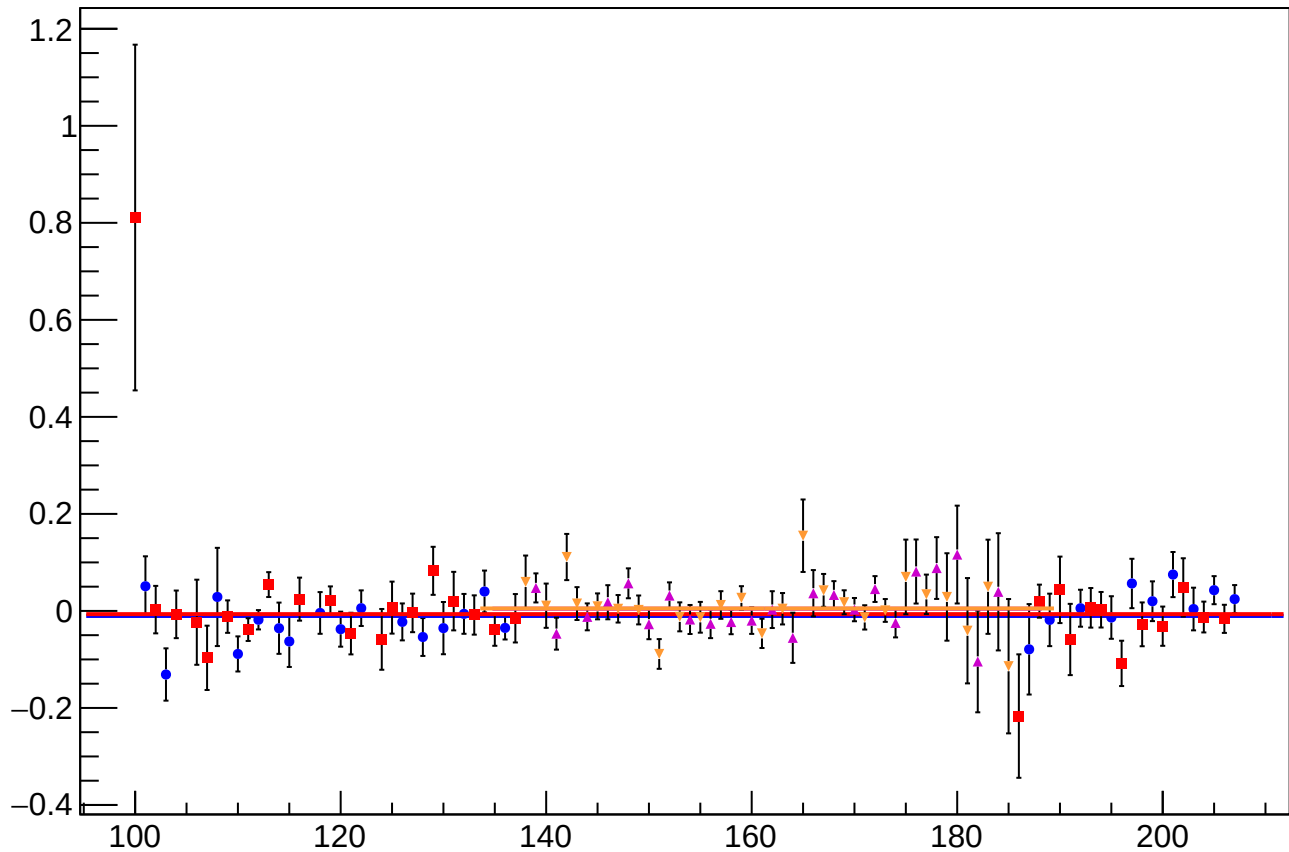
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1644276.1/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10454798.1/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 20204726.9/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9720606.1/53

asym\_sam\_15\_48\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.010 \pm 0.008$   $\chi^2/\text{NDF}$ : 28.3/25

Left Out:  $0.005 \pm 0.007$   $\chi^2/\text{NDF}$ : 28.4/24

Right Out:  $-0.007 \pm 0.007$   $\chi^2/\text{NDF}$ : 33.2/30

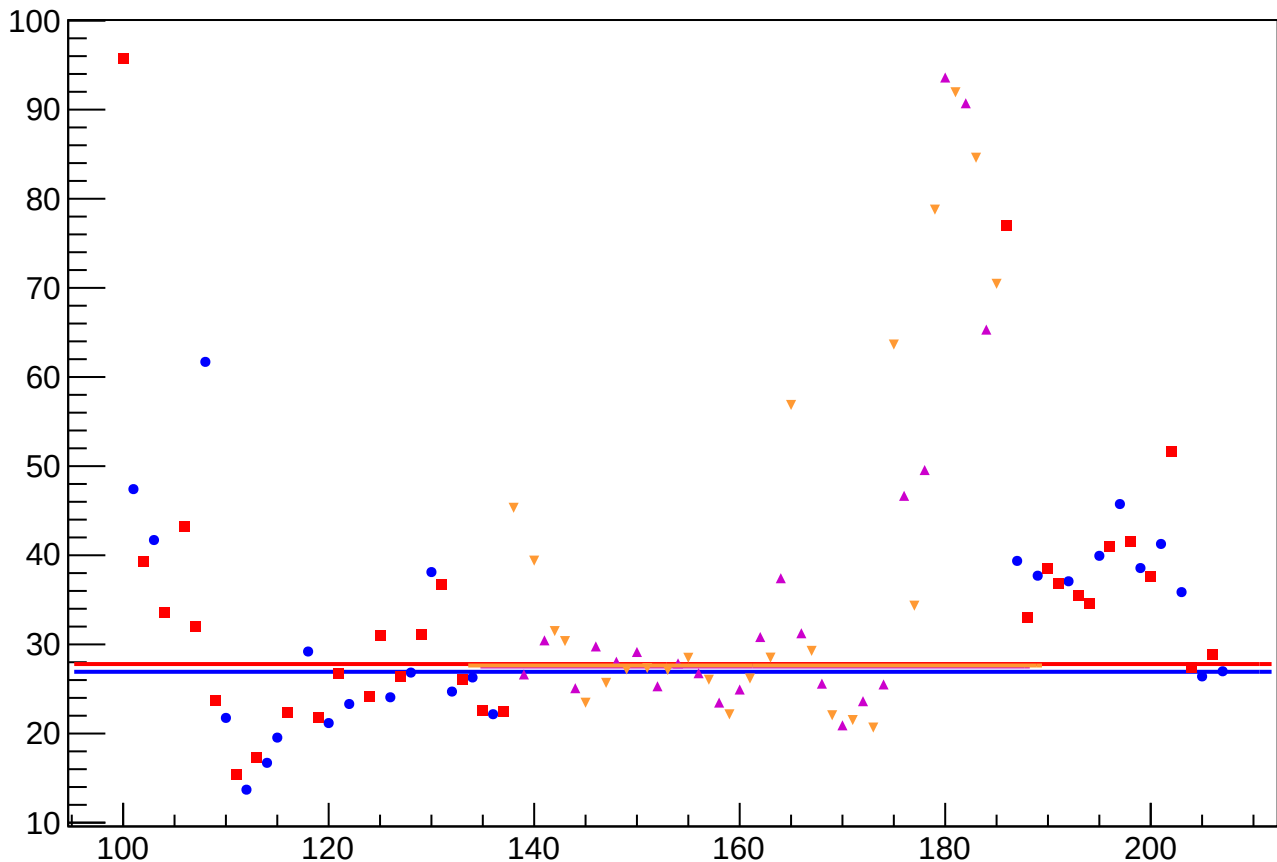
Left In:  $0.005 \pm 0.007$   $\chi^2/\text{NDF}$ : 25.1/22

+ sign  $-0.002 \pm 0.005$   $\chi^2/\text{NDF}$ : 59.0/50

All:  $-0.001 \pm 0.004$   $\chi^2/\text{NDF}$ : 118.5/104

- sign  $-0.001 \pm 0.005$   $\chi^2/\text{NDF}$ : 59.5/53

asym\_sam\_15\_48\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 26.927 $\pm$ 0.005     $\chi^2$ /NDF: 3043430.2/25

Left Out: 27.635 $\pm$ 0.005     $\chi^2$ /NDF:3974084.8/24

Right Out: 27.797 $\pm$ 0.005     $\chi^2$ /NDF: 2822047.3/30

Left In: 27.524 $\pm$ 0.005     $\chi^2$ /NDF:2634540.9/22

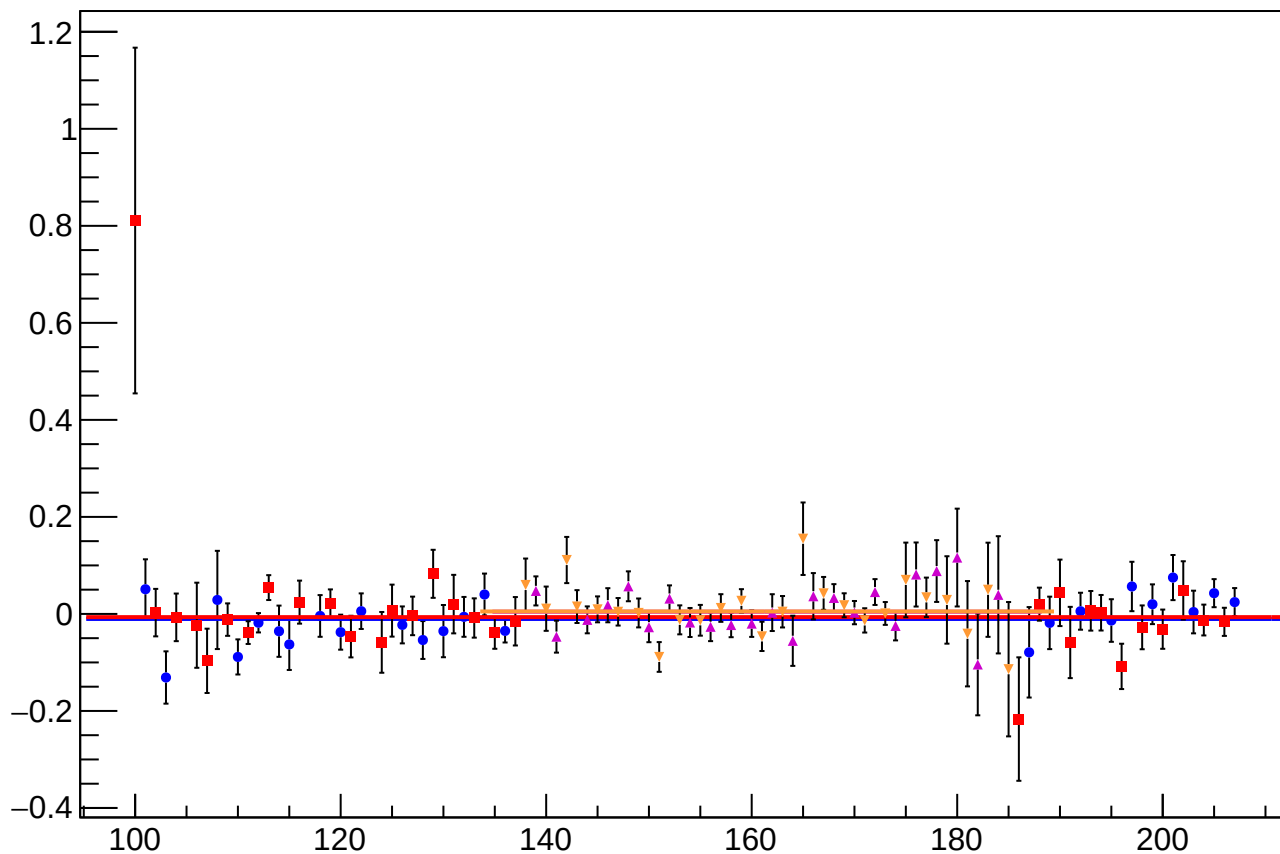
+ sign 27.317 $\pm$ 0.004     $\chi^2$ /NDF: 7027093.0/50

All: 27.485 $\pm$ 0.003     $\chi^2$ /NDF: 12489468.8/104

- sign 27.653 $\pm$ 0.004     $\chi^2$ /NDF: 5458024.9/53



asym\_sam\_15\_48\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.010 \pm 0.008$   $\chi^2/\text{NDF}$ : 28.3/25

Left Out:  $0.005 \pm 0.007$   $\chi^2/\text{NDF}$ : 28.4/24

Right Out:  $-0.007 \pm 0.007$   $\chi^2/\text{NDF}$ : 33.2/30

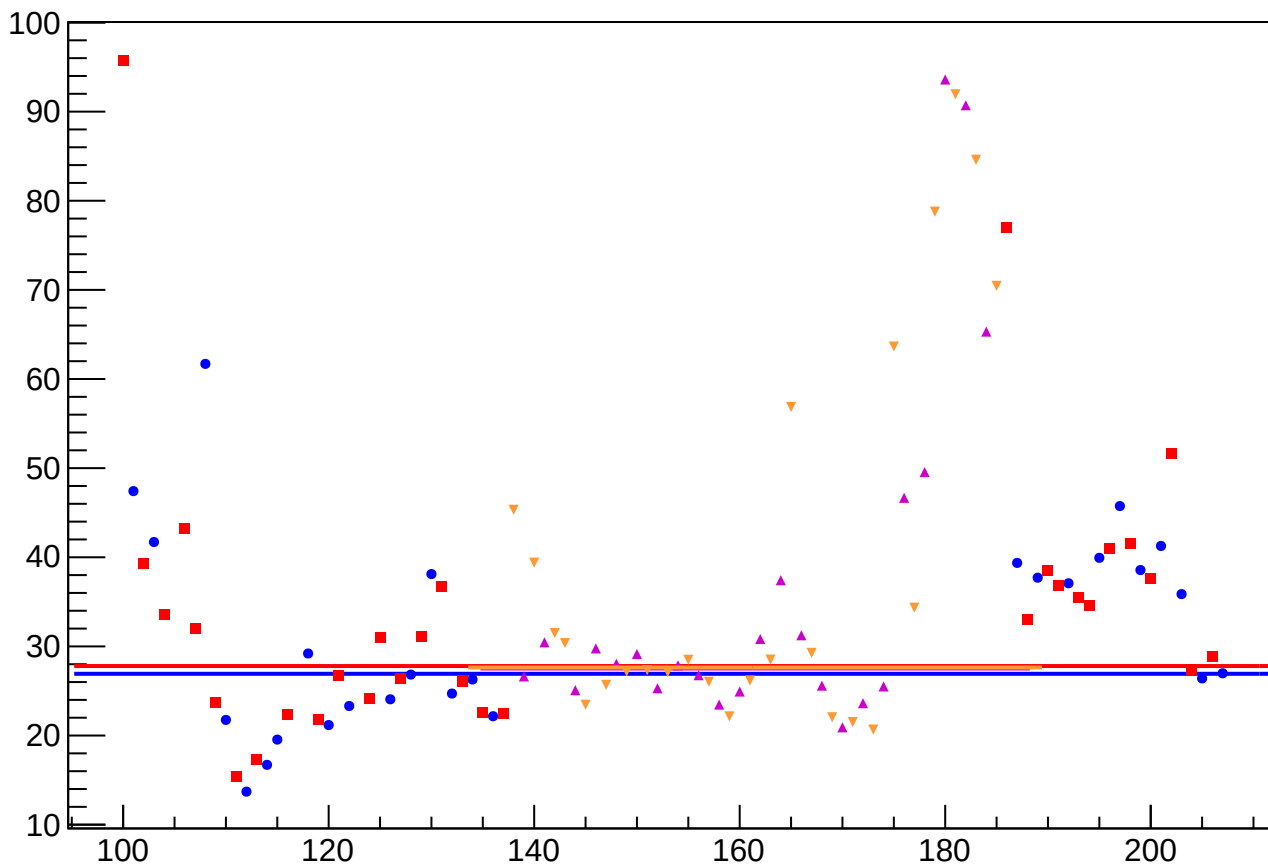
Left In:  $0.005 \pm 0.007$   $\chi^2/\text{NDF}$ : 25.1/22

+ sign  $-0.002 \pm 0.005$   $\chi^2/\text{NDF}$ : 59.0/50

All:  $-0.001 \pm 0.004$   $\chi^2/\text{NDF}$ : 118.5/104

- sign  $-0.001 \pm 0.005$   $\chi^2/\text{NDF}$ : 59.5/53

asym\_sam\_15\_48\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 26.927 $\pm$ 0.005  $\chi^2$ /NDF: 3043430.2/25

Left Out: 27.635 $\pm$ 0.005  $\chi^2$ /NDF:3974084.8/24

Right Out: 27.797 $\pm$ 0.005  $\chi^2$ /NDF: 2822047.3/30

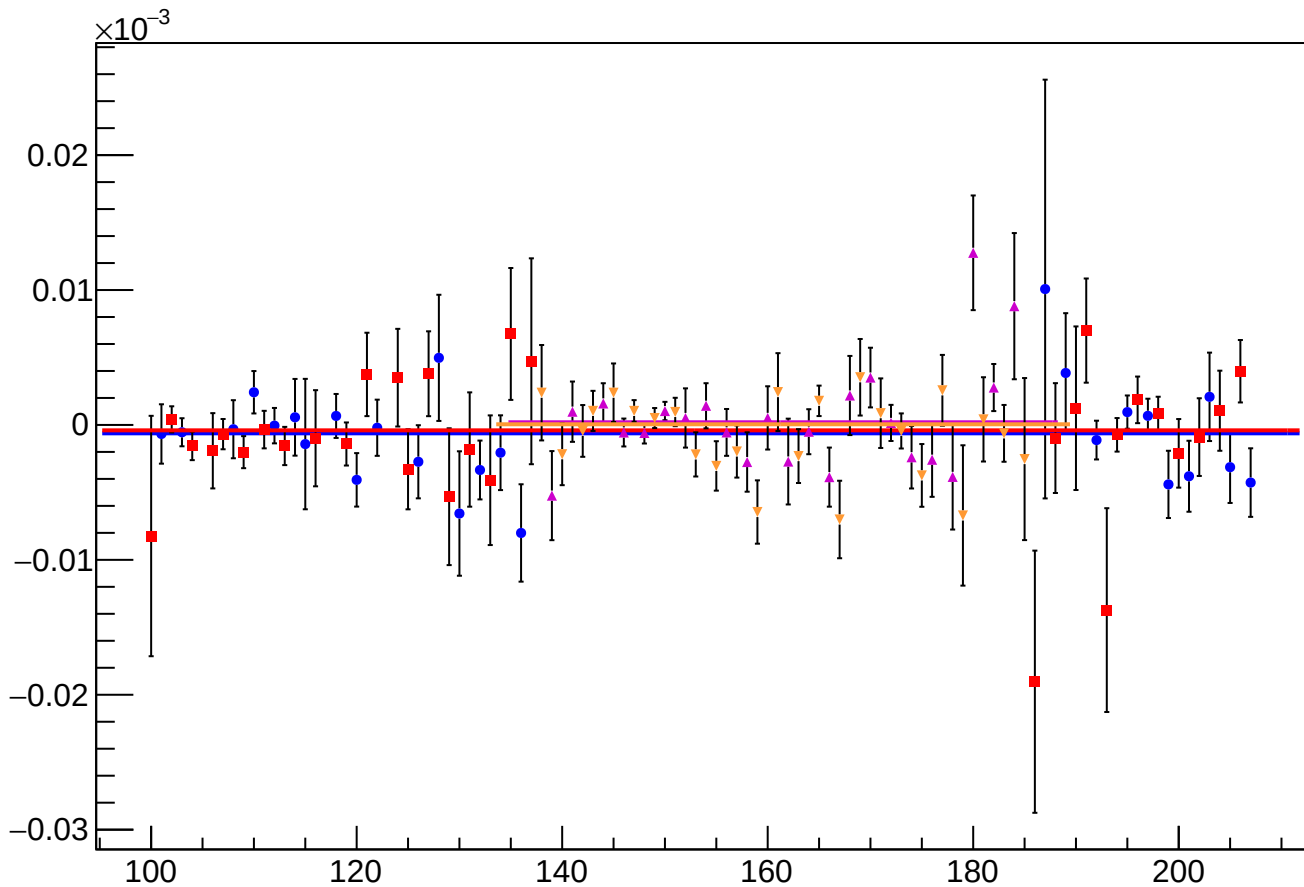
Left In: 27.524 $\pm$ 0.005  $\chi^2$ /NDF:2634540.9/22

+ sign 27.317 $\pm$ 0.004  $\chi^2$ /NDF: 7027093.0/50

All: 27.485 $\pm$ 0.003  $\chi^2$ /NDF: 12489468.8/104

- sign 27.653 $\pm$ 0.004  $\chi^2$ /NDF: 5458024.9/53

asym\_sam\_15\_48\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 29.3/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 37.0/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 33.5/30

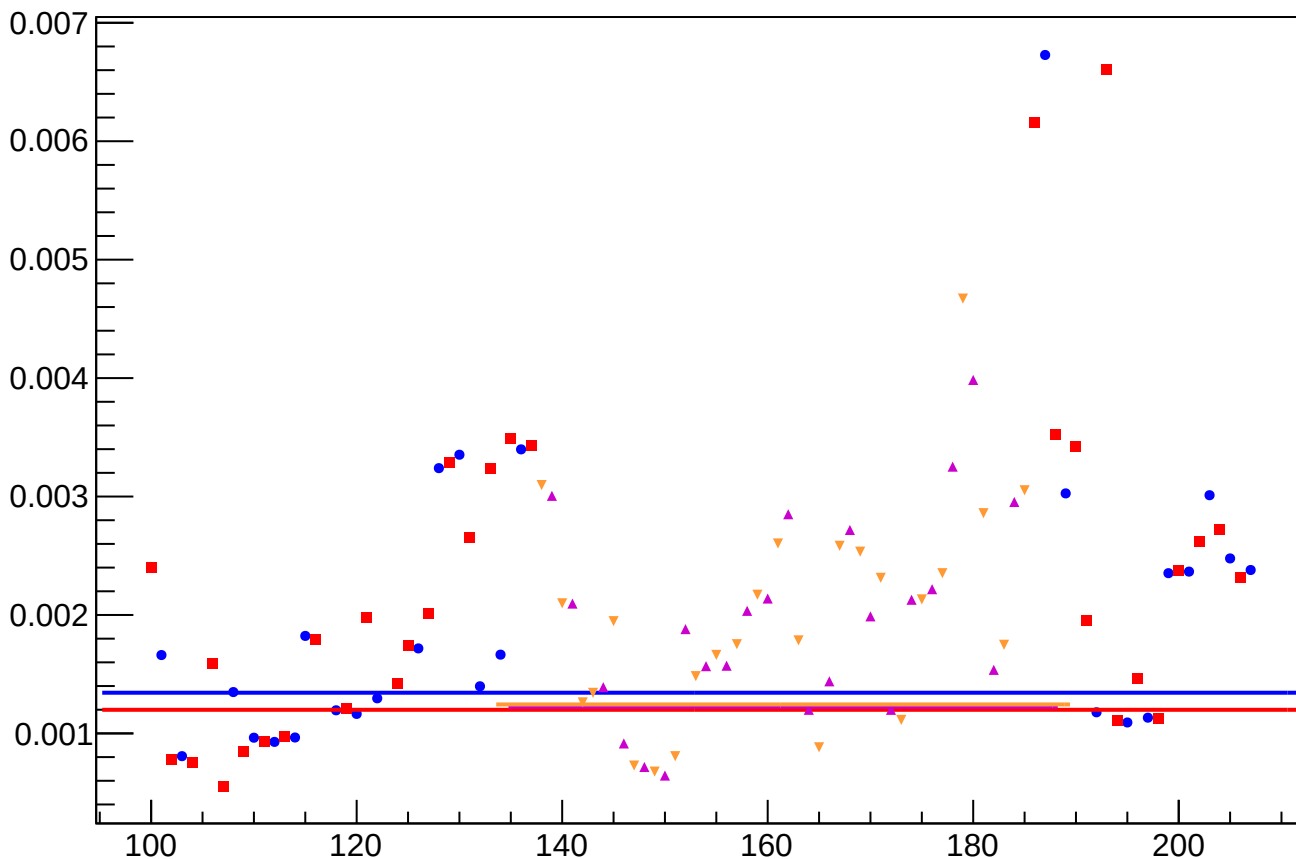
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 33.3/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 68.0/50

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 136.5/104

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 68.3/53

asym\_sam\_15\_48\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 4941273.2/25

Left Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 8341059.1/24

Right Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 8239396.8/30

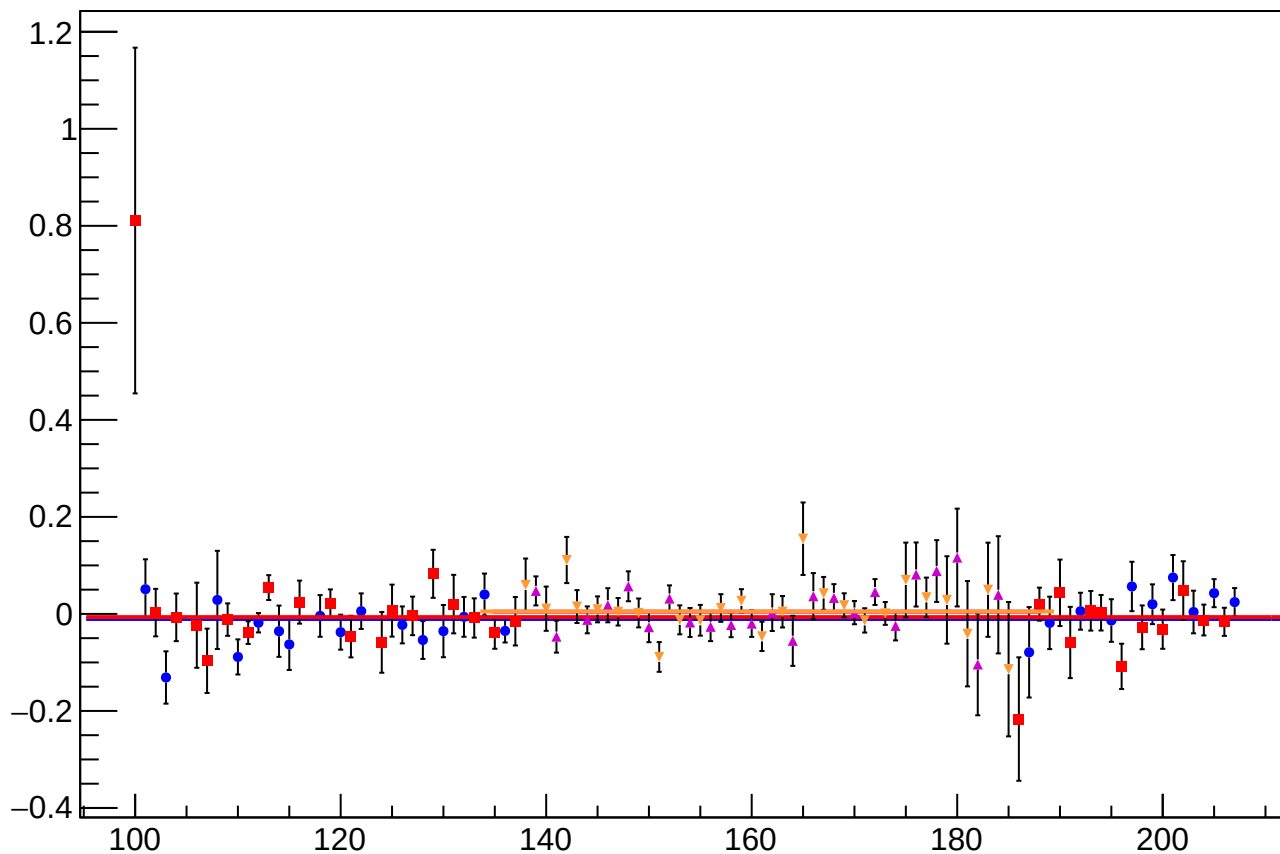
Left In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 7822849.8/22

+ sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 13358095.6/50

All: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 29511450.8/104

- sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 16067979.8/53

asym\_sam\_15\_48\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.010 \pm 0.008$   $\chi^2/\text{NDF}$ : 28.3/25

Left Out:  $0.005 \pm 0.007$   $\chi^2/\text{NDF}$ : 28.4/24

Right Out:  $-0.007 \pm 0.007$   $\chi^2/\text{NDF}$ : 33.2/30

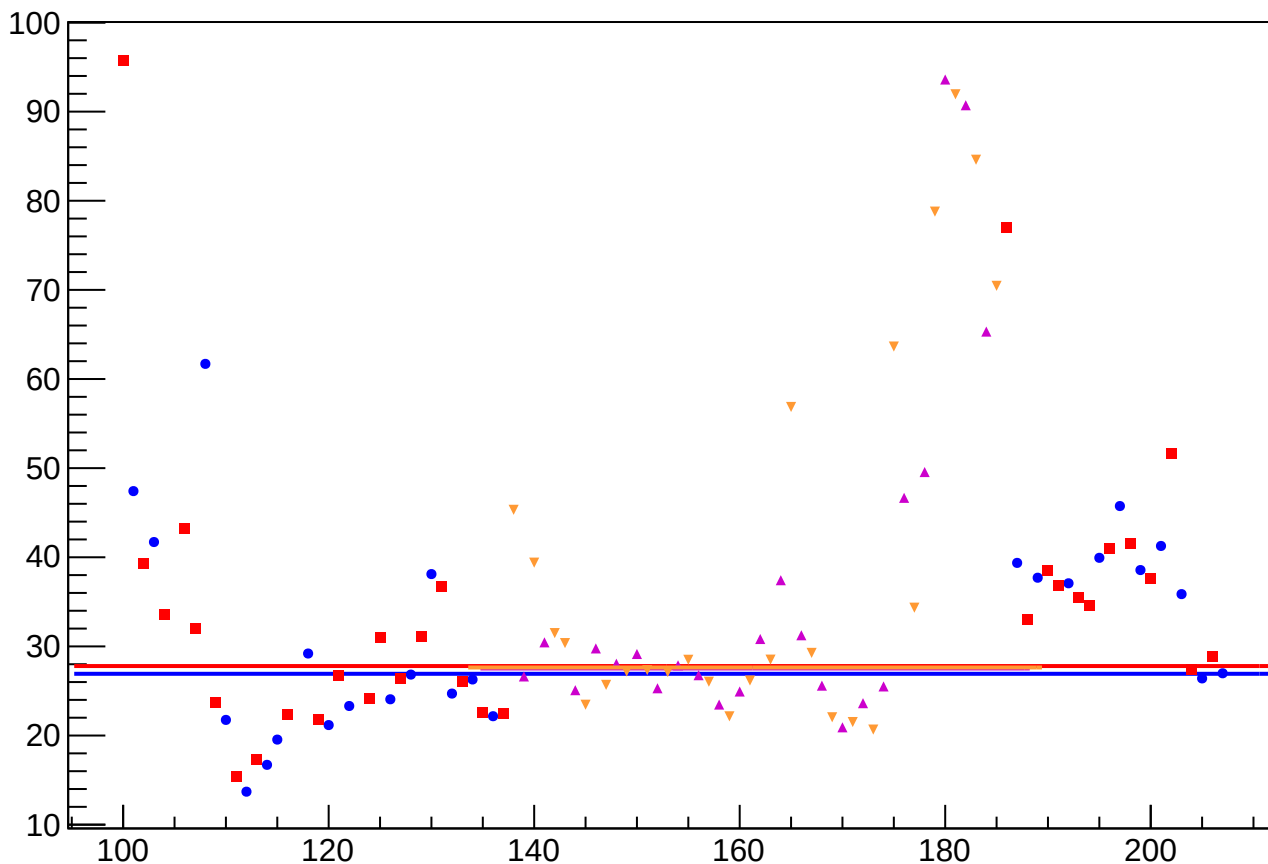
Left In:  $0.005 \pm 0.007$   $\chi^2/\text{NDF}$ : 25.1/22

+ sign  $-0.002 \pm 0.005$   $\chi^2/\text{NDF}$ : 59.0/50

All:  $-0.001 \pm 0.004$   $\chi^2/\text{NDF}$ : 118.5/104

- sign  $-0.001 \pm 0.005$   $\chi^2/\text{NDF}$ : 59.5/53

asym\_sam\_15\_48\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 26.927 $\pm$ 0.005  $\chi^2$ /NDF: 3043427.4/25

Left Out: 27.635 $\pm$ 0.005  $\chi^2$ /NDF:3974025.3/24

Right Out: 27.797 $\pm$ 0.005  $\chi^2$ /NDF: 2822161.5/30

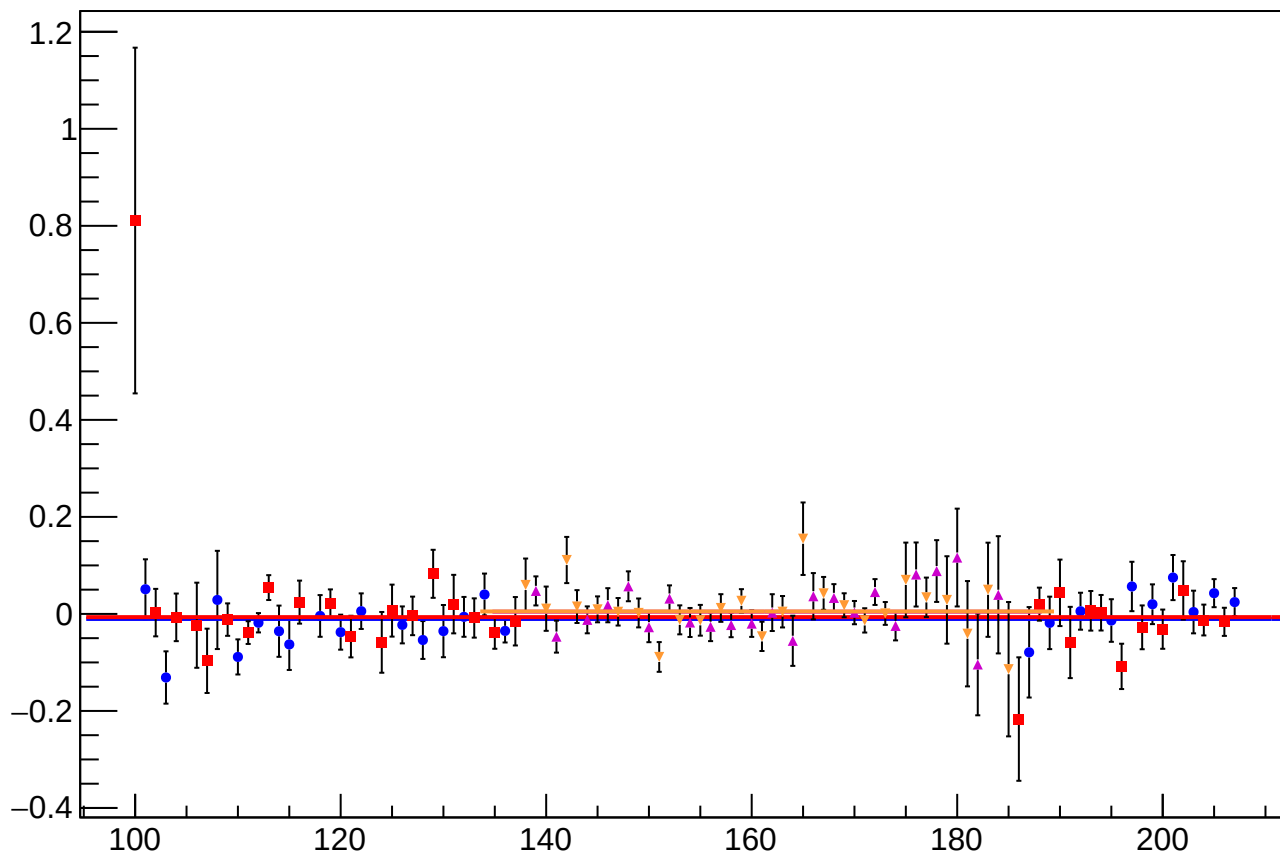
Left In: 27.524 $\pm$ 0.005  $\chi^2$ /NDF:2634508.8/22

+ sign 27.317 $\pm$ 0.004  $\chi^2$ /NDF: 7027043.1/50

All: 27.485 $\pm$ 0.003  $\chi^2$ /NDF: 12489494.8/104

- sign 27.653 $\pm$ 0.004  $\chi^2$ /NDF: 5458103.3/53

asym\_sam\_15\_48\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.010 \pm 0.008$   $\chi^2/\text{NDF}$ : 28.3/25

Left Out:  $0.005 \pm 0.007$   $\chi^2/\text{NDF}$ : 28.4/24

Right Out:  $-0.007 \pm 0.007$   $\chi^2/\text{NDF}$ : 33.2/30

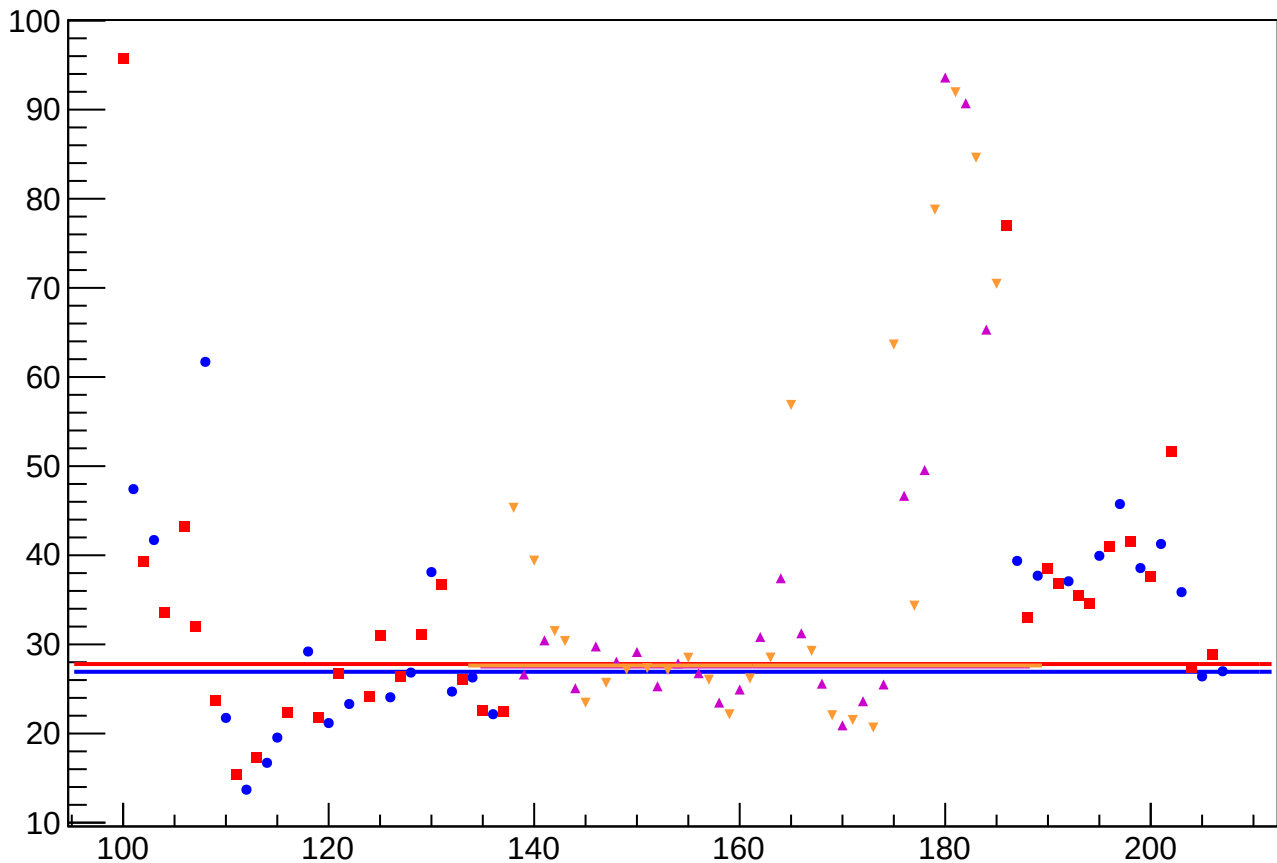
Left In:  $0.005 \pm 0.007$   $\chi^2/\text{NDF}$ : 25.1/22

+ sign  $-0.002 \pm 0.005$   $\chi^2/\text{NDF}$ : 59.0/50

All:  $-0.001 \pm 0.004$   $\chi^2/\text{NDF}$ : 118.5/104

- sign  $-0.001 \pm 0.005$   $\chi^2/\text{NDF}$ : 59.5/53

asym\_sam\_15\_48\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 26.927 $\pm$ 0.005  $\chi^2$ /NDF: 3043427.4/25

Left Out: 27.635 $\pm$ 0.005  $\chi^2$ /NDF: 3974025.3/24

Right Out: 27.797 $\pm$ 0.005  $\chi^2$ /NDF: 2822161.5/30

Left In: 27.524 $\pm$ 0.005  $\chi^2$ /NDF: 2634508.8/22

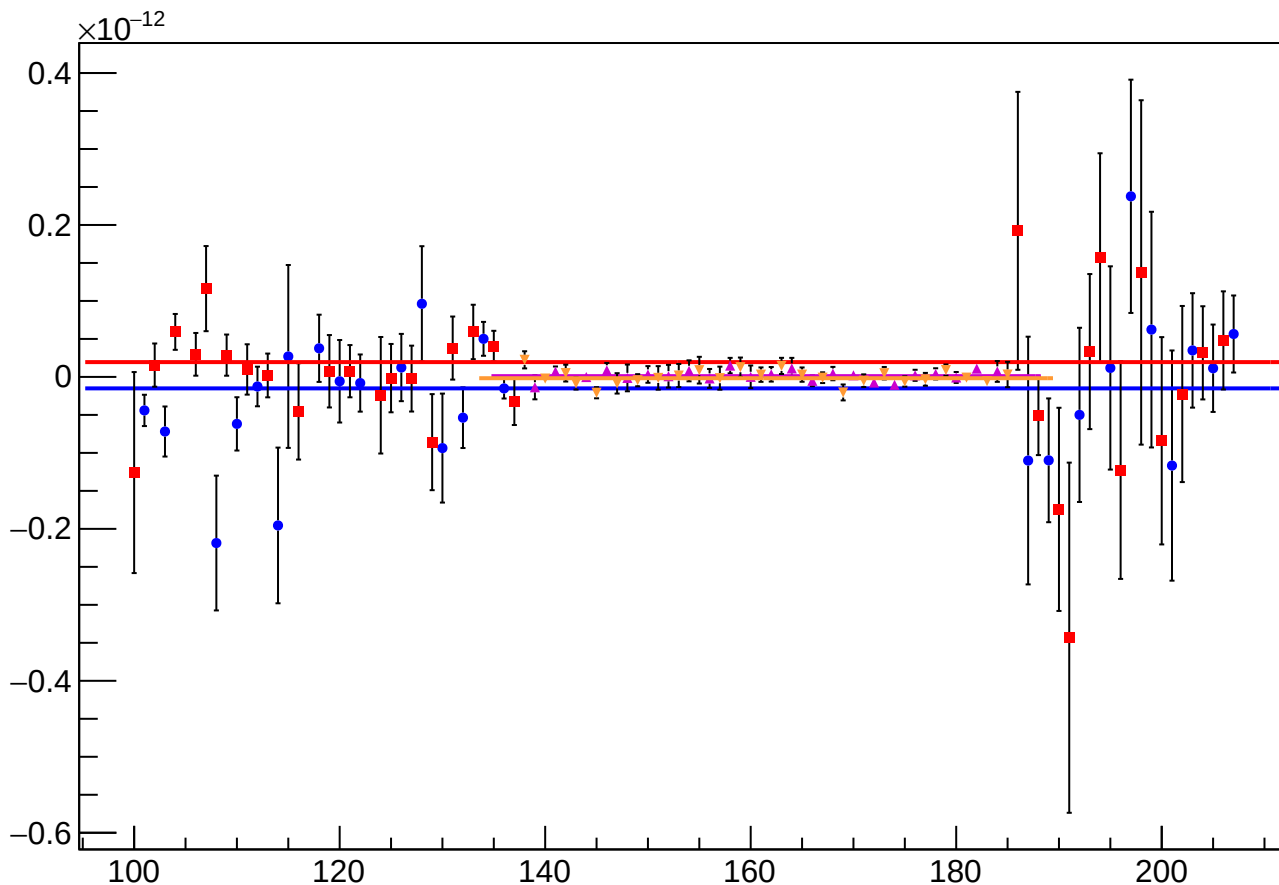
+ sign 27.317 $\pm$ 0.004  $\chi^2$ /NDF: 7027043.1/50

All: 27.485 $\pm$ 0.003  $\chi^2$ /NDF: 12489494.8/104

- sign 27.653 $\pm$ 0.004  $\chi^2$ /NDF: 5458103.3/53



asym\_sam\_15\_48\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 37.8/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 24.4/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 28.6/30

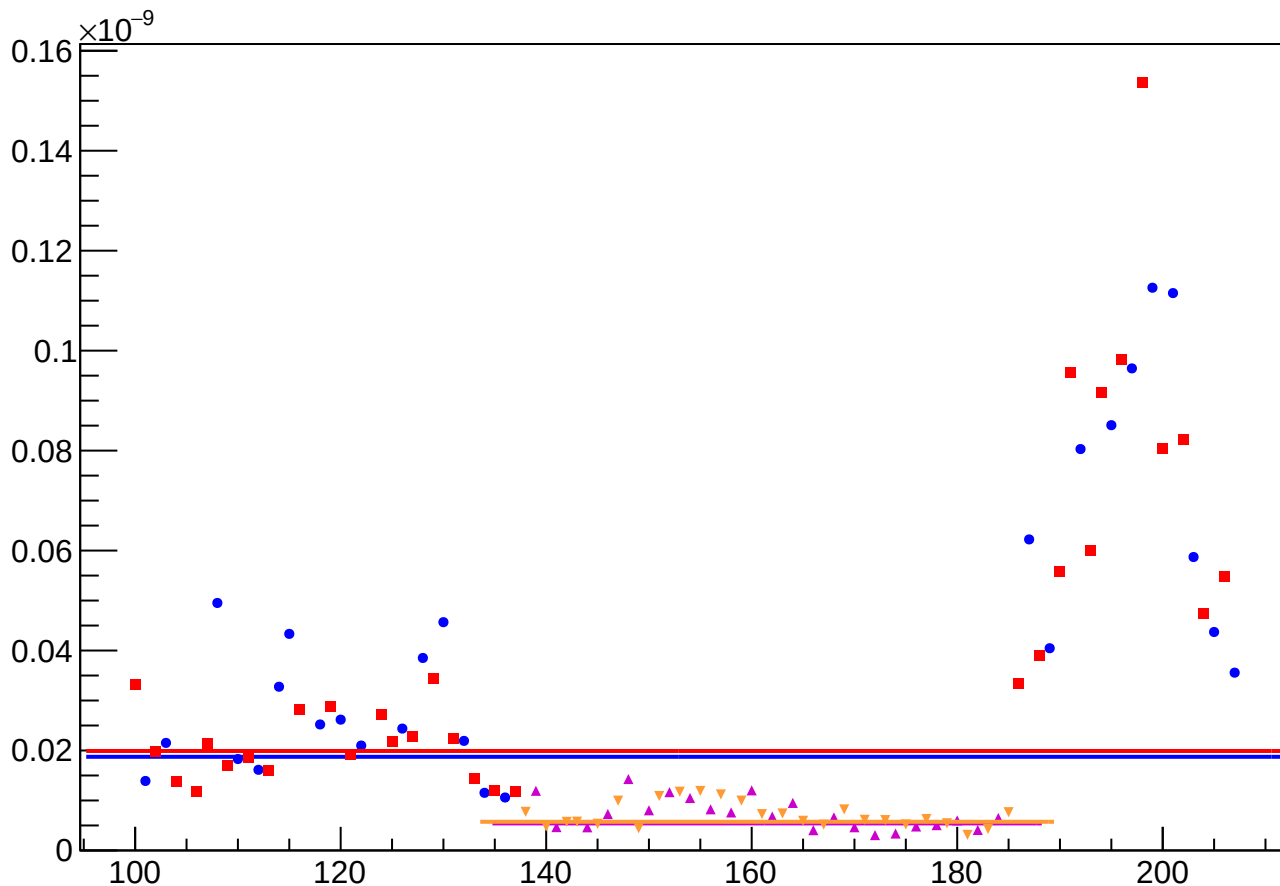
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 16.5/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 65.3/50

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 119.4/104

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 50.8/53

asym\_sam\_15\_48\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6525431.1/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2645460.0/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5880954.3/30

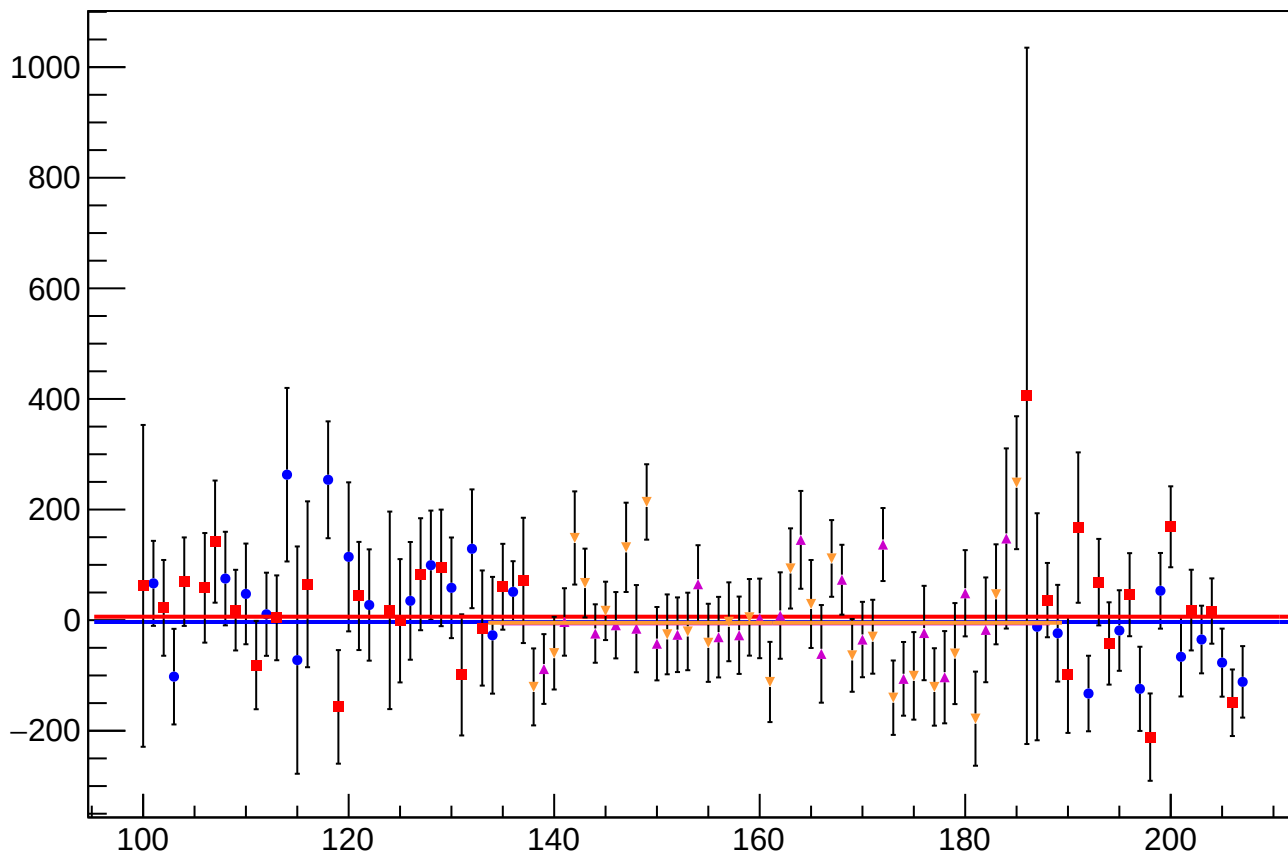
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3476696.9/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14919443.0/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 31256507.4/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 16309123.9/53

# reg\_asym\_sam\_37\_48\_dd\_mean vs Slug



Right In:  $-3.320 \pm 16.287$   $\chi^2/\text{NDF}: 29.5/25$

Left Out:  $-4.742 \pm 14.432$   $\chi^2/\text{NDF}: 47.4/24$

Right Out:  $6.252 \pm 15.909$   $\chi^2/\text{NDF}: 33.2/30$

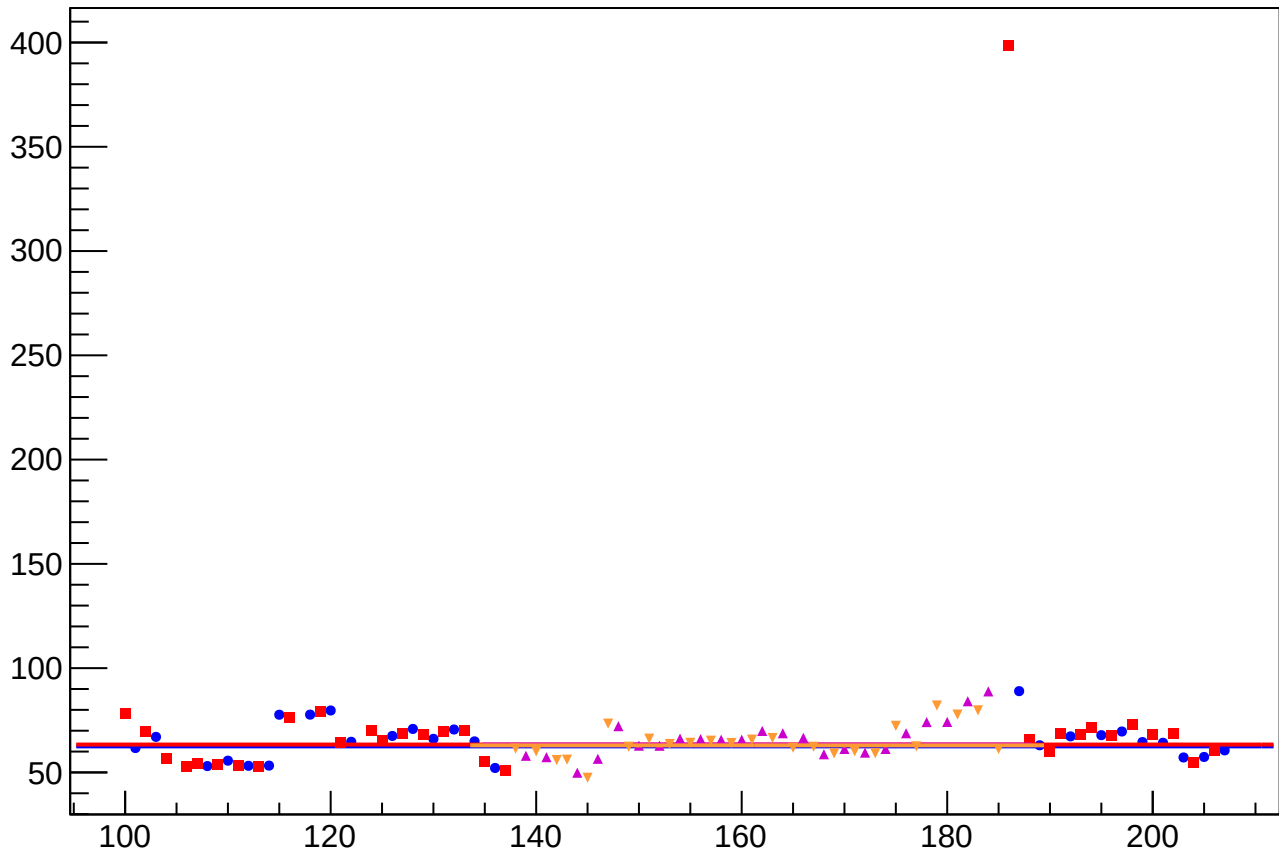
Left In:  $-5.776 \pm 14.931$   $\chi^2/\text{NDF}: 18.3/22$

+ sign  $-4.117 \pm 10.801$   $\chi^2/\text{NDF}: 76.8/50$

All:  $-2.146 \pm 7.668$   $\chi^2/\text{NDF}: 128.7/104$

- sign  $-0.143 \pm 10.887$   $\chi^2/\text{NDF}: 51.8/53$

# reg\_asym\_sam\_37\_48\_dd\_rms vs Slug



Right In: 62.492 $\pm$ 0.012  $\chi^2$ /NDF: 374819.8/25

Left Out: 62.976 $\pm$ 0.010  $\chi^2$ /NDF: 526859.8/24

Right Out: 63.365 $\pm$ 0.011  $\chi^2$ /NDF: 1014399.2/30

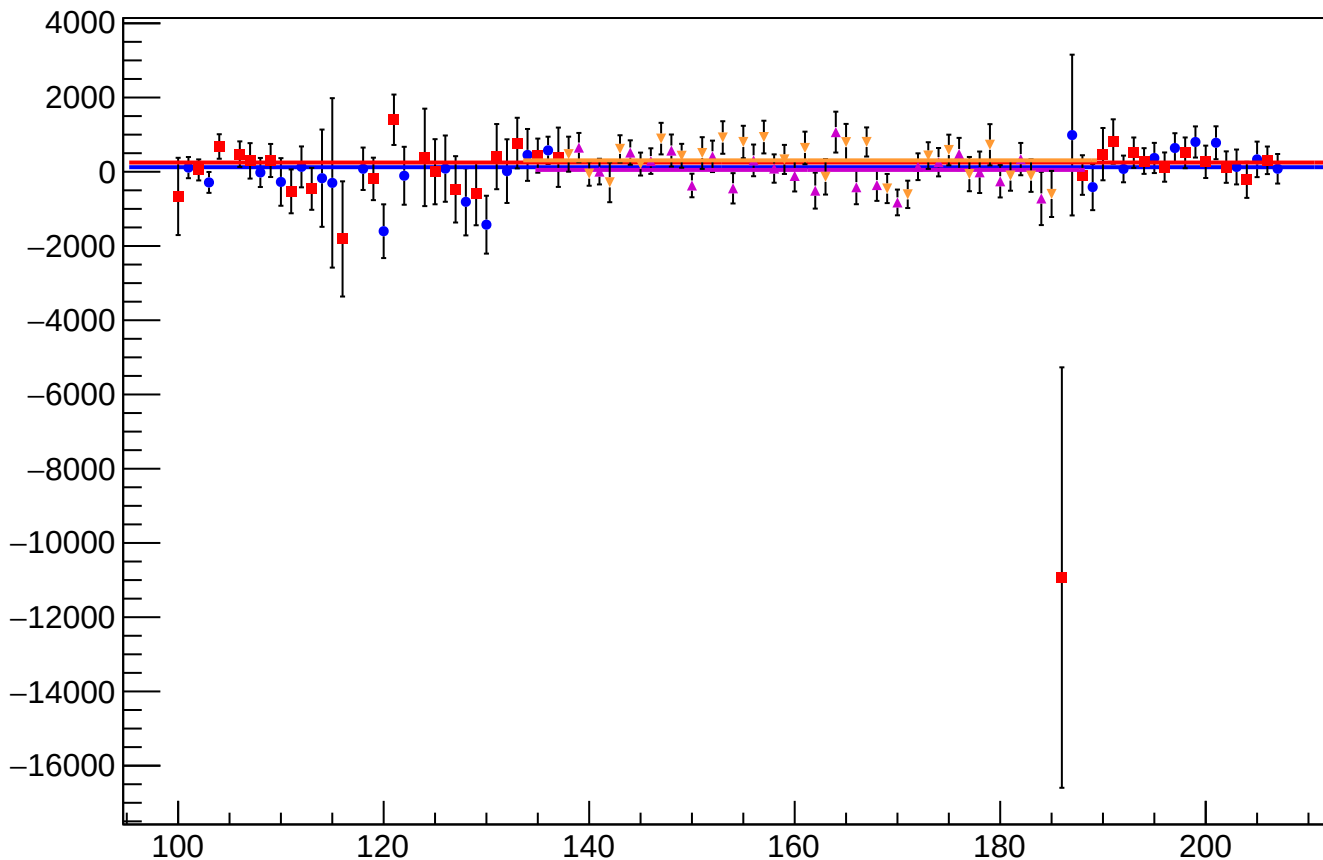
Left In: 63.365 $\pm$ 0.011  $\chi^2$ /NDF: 496926.2/22

+ sign 62.763 $\pm$ 0.008  $\chi^2$ /NDF: 902670.6/50

All: 63.062 $\pm$ 0.005  $\chi^2$ /NDF: 2417076.2/104

- sign 63.365 $\pm$ 0.008  $\chi^2$ /NDF: 1511325.3/53

asym\_sam\_37\_48\_dd\_reg\_correction\_mean vs Slug



Right In: 122.749 $\pm$ 96.083  $\chi^2$ /NDF: 23.3/25

Left Out: 307.183 $\pm$ 82.361  $\chi^2$ /NDF:30.6/24

Right Out: 248.753 $\pm$ 89.961  $\chi^2$ /NDF: 21.8/30

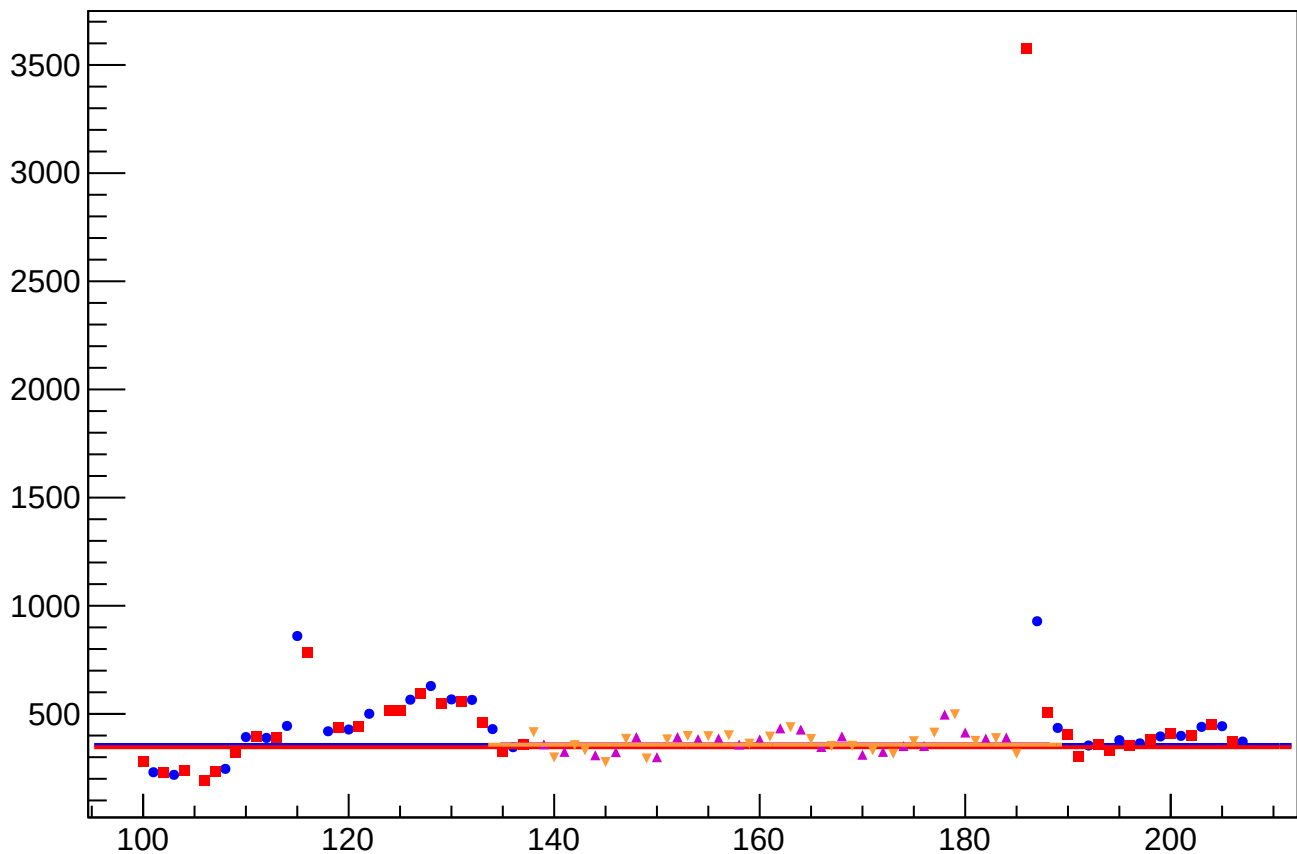
Left In: 50.030 $\pm$ 84.838  $\chi^2$ /NDF:27.3/22

+ sign 229.065 $\pm$ 62.532  $\chi^2$ /NDF: 56.0/50

All: 185.761 $\pm$ 43.927  $\chi^2$ /NDF: 108.6/104

- sign 143.573 $\pm$ 61.721  $\chi^2$ /NDF: 51.6/53

asym\_sam\_37\_48\_dd\_reg\_correction\_rms vs Slug



Right In: 356.287 $\pm$ 0.068  $\chi^2$ /NDF: 2189782.0/25

Left Out: 357.731 $\pm$ 0.058  $\chi^2$ /NDF: 683730.4/24

Right Out: 346.155 $\pm$ 0.064  $\chi^2$ /NDF: 2986156.1/30

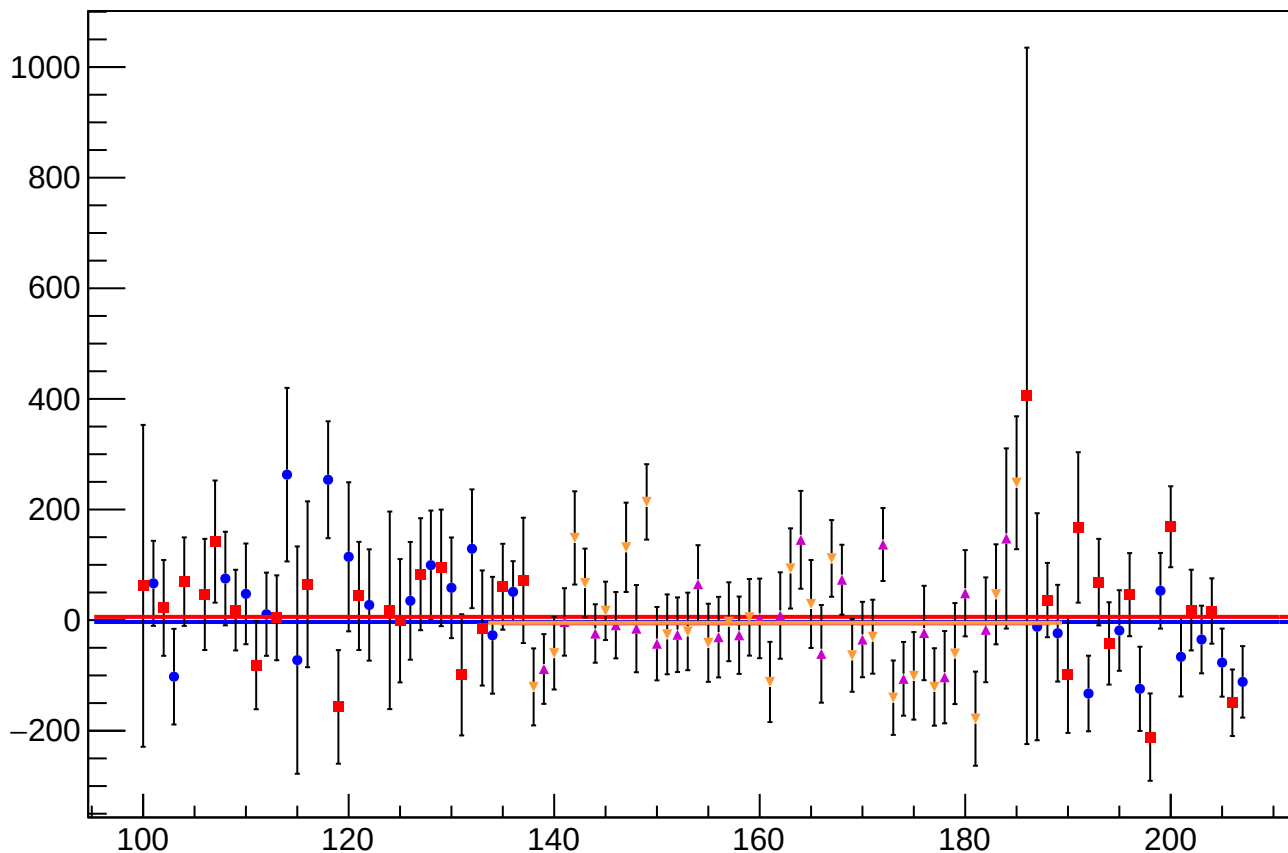
Left In: 359.350 $\pm$ 0.060  $\chi^2$ /NDF: 519759.9/22

+ sign 357.119 $\pm$ 0.044  $\chi^2$ /NDF: 2873773.1/50

All: 355.103 $\pm$ 0.031  $\chi^2$ /NDF: 6406565.5/104

- sign 353.139 $\pm$ 0.044  $\chi^2$ /NDF: 3528687.7/53

# cor\_asym\_sam\_37\_48\_dd\_mean vs Slug



Right In:  $-3.327 \pm 16.287$   $\chi^2/\text{NDF}: 29.5/25$

Left Out:  $-4.748 \pm 14.432$   $\chi^2/\text{NDF}: 47.4/24$

Right Out:  $5.913 \pm 15.915$   $\chi^2/\text{NDF}: 33.1/30$

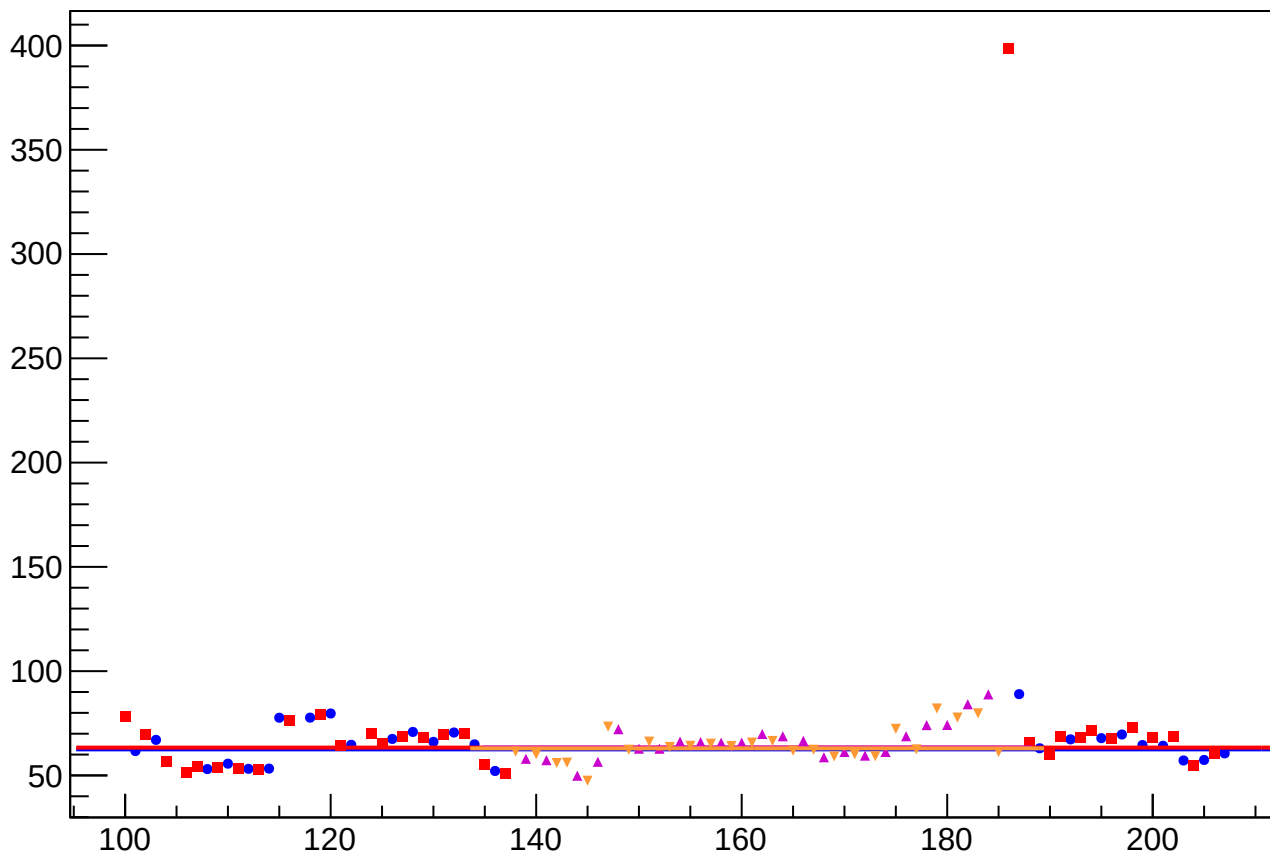
Left In:  $-5.775 \pm 14.931$   $\chi^2/\text{NDF}: 18.3/22$

+ sign  $-4.123 \pm 10.801$   $\chi^2/\text{NDF}: 76.8/50$

All:  $-2.229 \pm 7.668$   $\chi^2/\text{NDF}: 128.6/104$

- sign  $-0.304 \pm 10.889$   $\chi^2/\text{NDF}: 51.7/53$

# cor\_asym\_sam\_37\_48\_dd\_rms vs Slug



Right In: 62.492 $\pm$ 0.012  $\chi^2$ /NDF: 374820.0/25

Left Out: 62.976 $\pm$ 0.010  $\chi^2$ /NDF: 526859.8/24

Right Out: 63.346 $\pm$ 0.011  $\chi^2$ /NDF: 1018533.9/30

Left In: 63.365 $\pm$ 0.011  $\chi^2$ /NDF: 496926.2/22

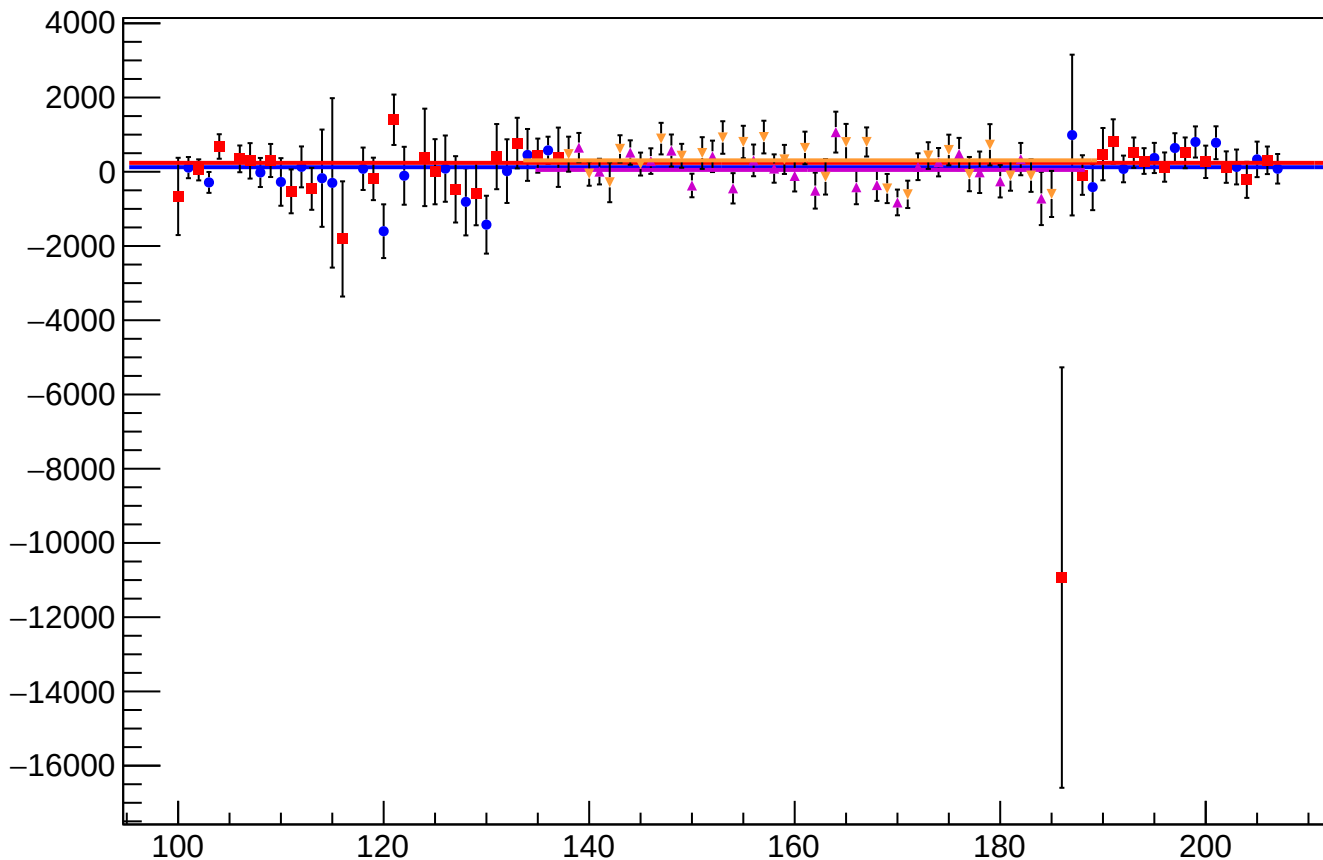
+ sign 62.763 $\pm$ 0.008  $\chi^2$ /NDF: 902670.8/50

All: 63.057 $\pm$ 0.005  $\chi^2$ /NDF: 2421124.0/104

- sign 63.356 $\pm$ 0.008  $\chi^2$ /NDF: 1515461.7/53



asym\_sam\_37\_48\_dd\_cor\_correction\_mean vs Slug



Right In: 122.755 $\pm$ 96.083  $\chi^2$ /NDF: 23.3/25

Left Out: 307.177 $\pm$ 82.361  $\chi^2$ /NDF:30.6/24

Right Out: 239.617 $\pm$ 90.235  $\chi^2$ /NDF: 21.4/30

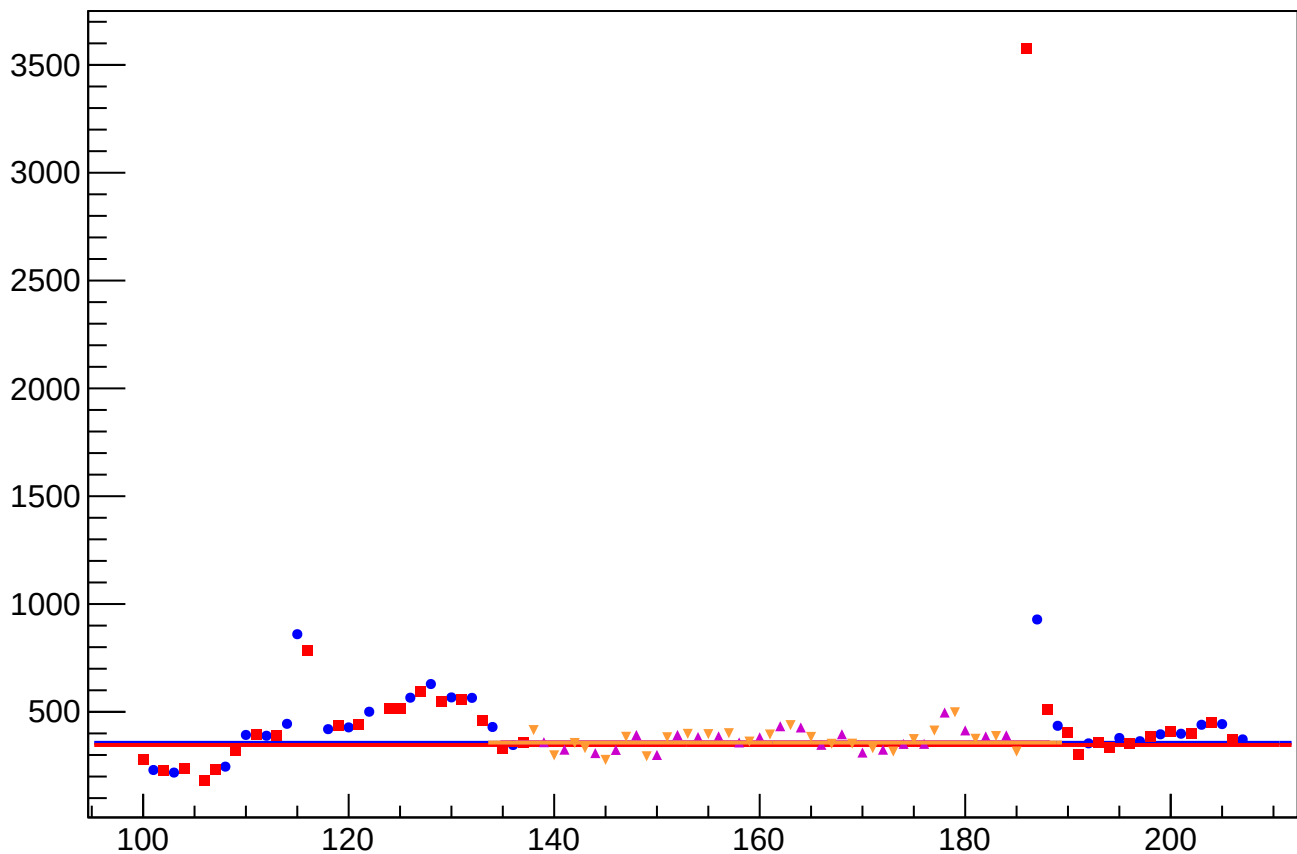
Left In: 50.029 $\pm$ 84.838  $\chi^2$ /NDF:27.3/22

+ sign 229.064 $\pm$ 62.532  $\chi^2$ /NDF: 56.0/50

All: 183.501 $\pm$ 43.959  $\chi^2$ /NDF: 108.1/104

- sign 138.984 $\pm$ 61.810  $\chi^2$ /NDF: 51.0/53

asym\_sam\_37\_48\_dd\_cor\_correction\_rms vs Slug



Right In: 356.288 $\pm$ 0.068  $\chi^2$ /NDF: 2189699.9/25

Left Out: 357.732 $\pm$ 0.058  $\chi^2$ /NDF: 683726.4/24

Right Out: 346.455 $\pm$ 0.064  $\chi^2$ /NDF: 3001375.0/30

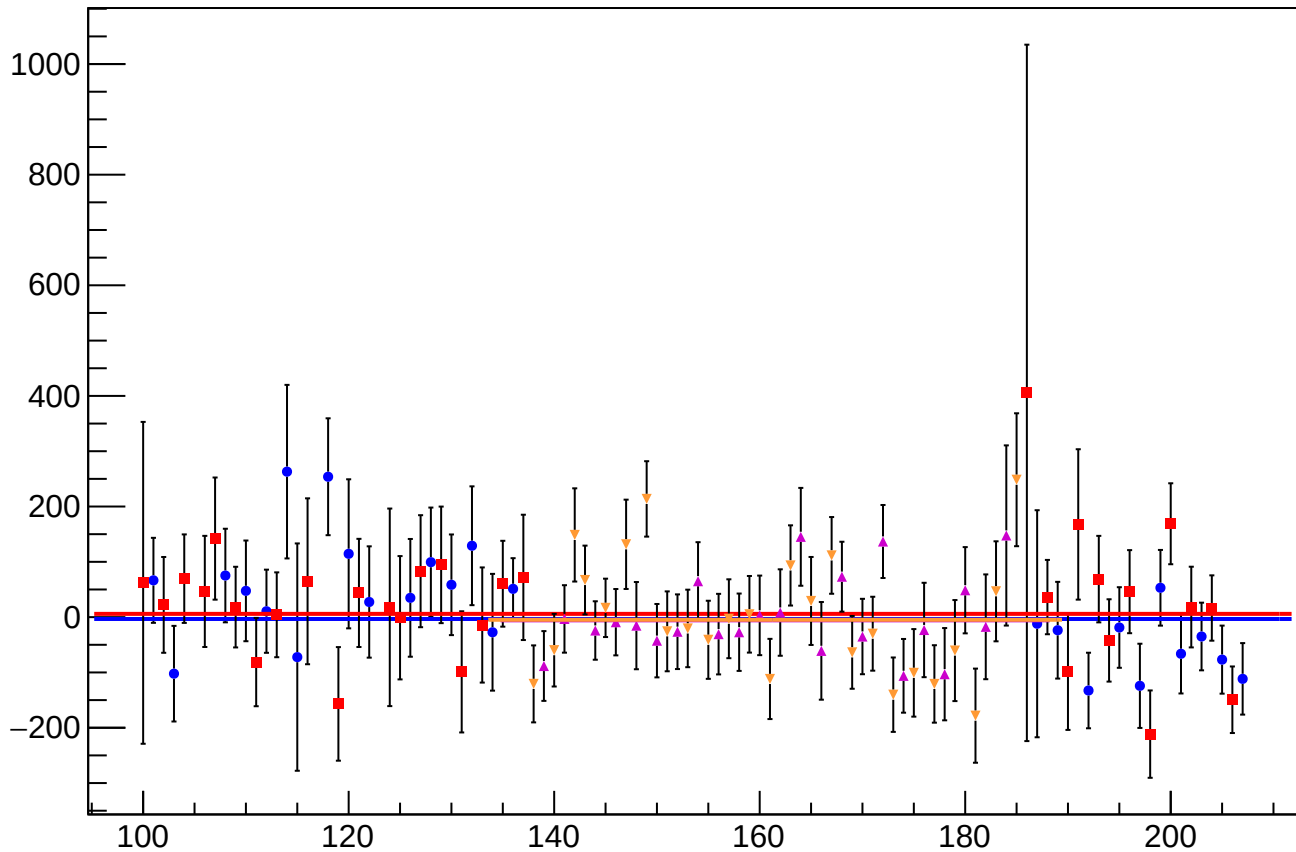
Left In: 359.350 $\pm$ 0.060  $\chi^2$ /NDF: 519762.7/22

+ sign 357.120 $\pm$ 0.044  $\chi^2$ /NDF: 2873686.4/50

All: 355.188 $\pm$ 0.031  $\chi^2$ /NDF: 6420281.3/104

- sign 353.300 $\pm$ 0.044  $\chi^2$ /NDF: 3542818.1/53

# eigen\_cor\_asym\_sam\_37\_48\_dd\_mean vs Slug



Right In:  $-3.327 \pm 16.287$   $\chi^2/\text{NDF}: 29.5/25$

Left Out:  $-4.748 \pm 14.432$   $\chi^2/\text{NDF}: 47.4/24$

Right Out:  $5.913 \pm 15.915$   $\chi^2/\text{NDF}: 33.1/30$

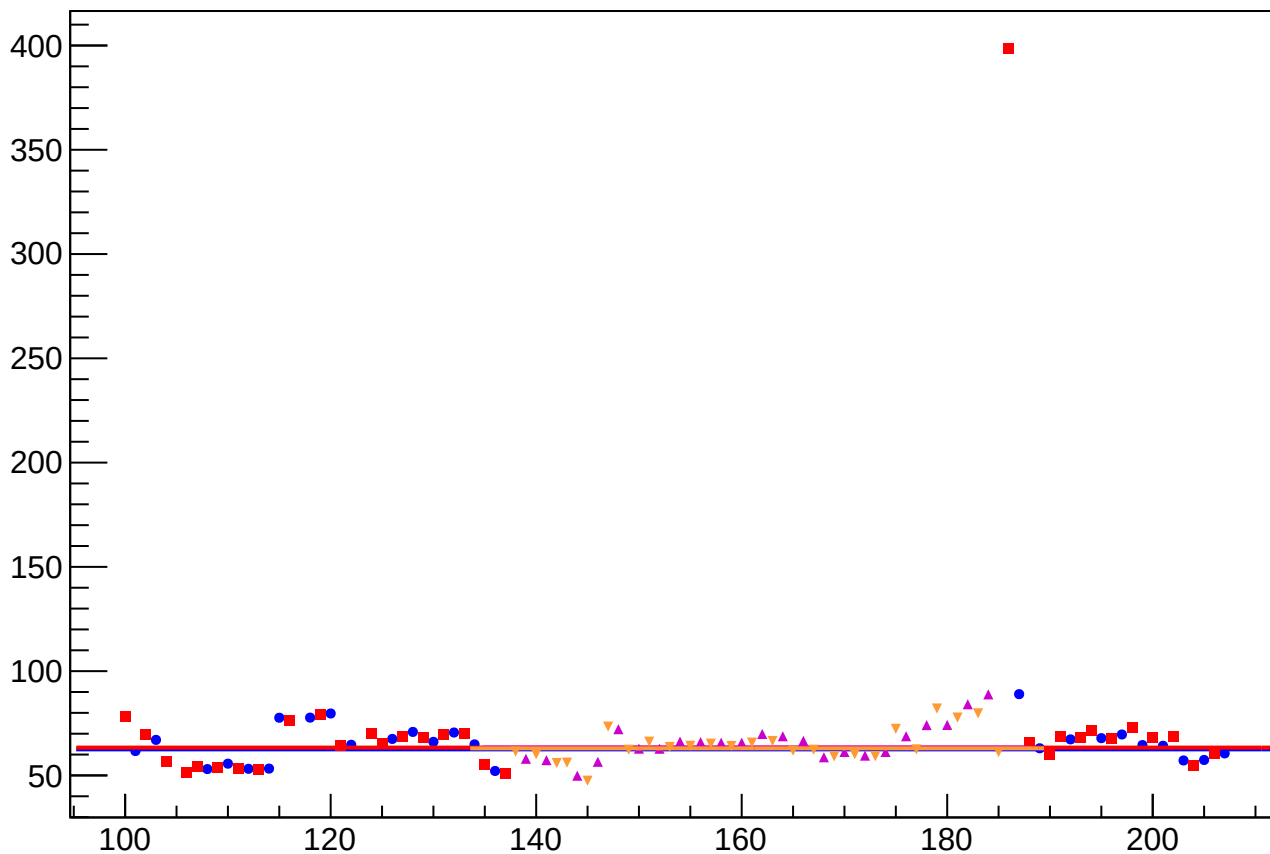
Left In:  $-5.775 \pm 14.931$   $\chi^2/\text{NDF}: 18.3/22$

+ sign  $-4.123 \pm 10.801$   $\chi^2/\text{NDF}: 76.8/50$

All:  $-2.229 \pm 7.668$   $\chi^2/\text{NDF}: 128.6/104$

- sign  $-0.304 \pm 10.889$   $\chi^2/\text{NDF}: 51.7/53$

# eigen\_cor\_asym\_sam\_37\_48\_dd\_rms vs Slug



Right In: 62.492 $\pm$ 0.012  $\chi^2$ /NDF: 374820.0/25

Left Out: 62.976 $\pm$ 0.010  $\chi^2$ /NDF: 526859.8/24

Right Out: 63.346 $\pm$ 0.011  $\chi^2$ /NDF: 1018533.9/30

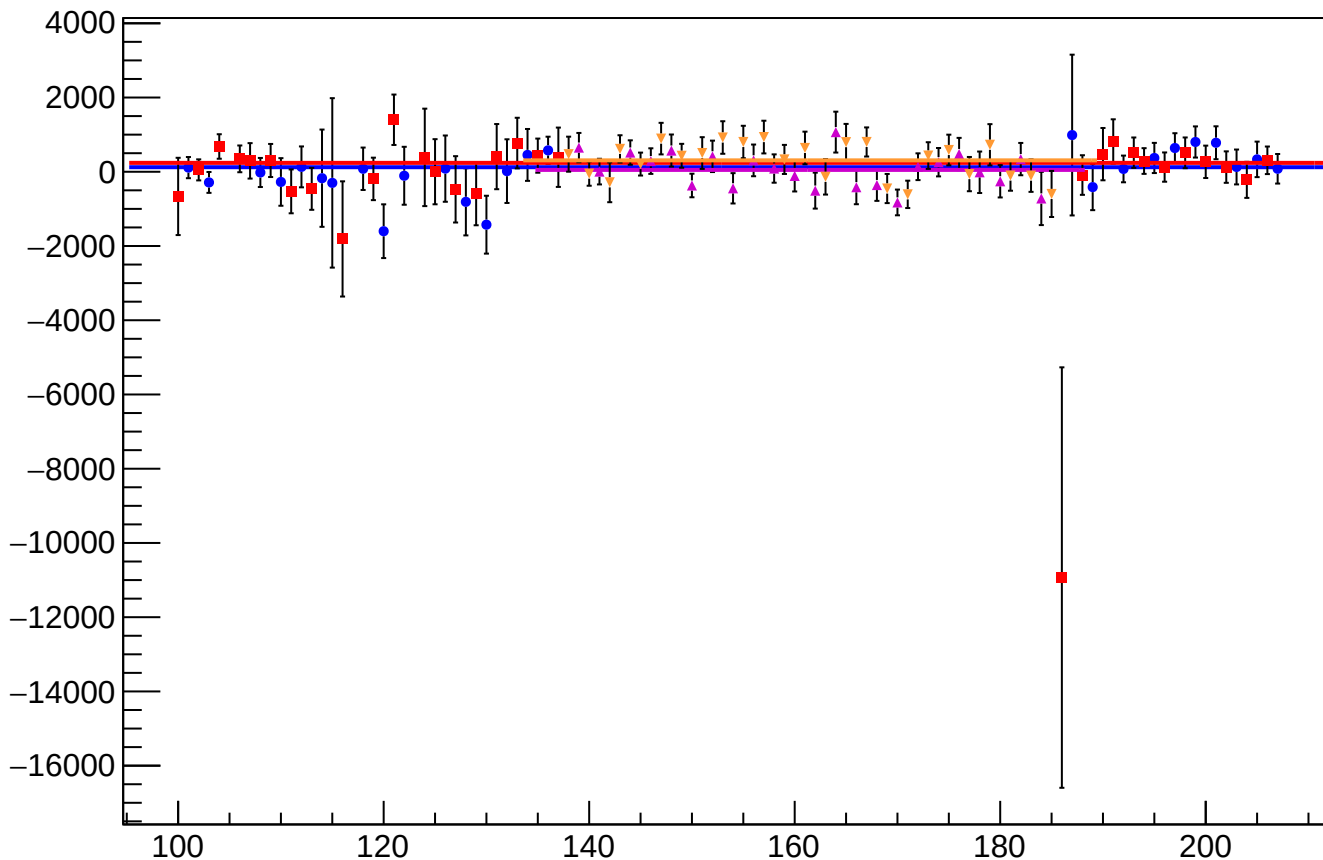
Left In: 63.365 $\pm$ 0.011  $\chi^2$ /NDF: 496926.2/22

+ sign 62.763 $\pm$ 0.008  $\chi^2$ /NDF: 902670.8/50

All: 63.057 $\pm$ 0.005  $\chi^2$ /NDF: 2421124.0/104

- sign 63.356 $\pm$ 0.008  $\chi^2$ /NDF: 1515461.7/53

asym\_sam\_37\_48\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In: 122.755 $\pm$ 96.083  $\chi^2$ /NDF: 23.3/25

Left Out: 307.177 $\pm$ 82.361  $\chi^2$ /NDF:30.6/24

Right Out: 239.617 $\pm$ 90.235  $\chi^2$ /NDF: 21.4/30

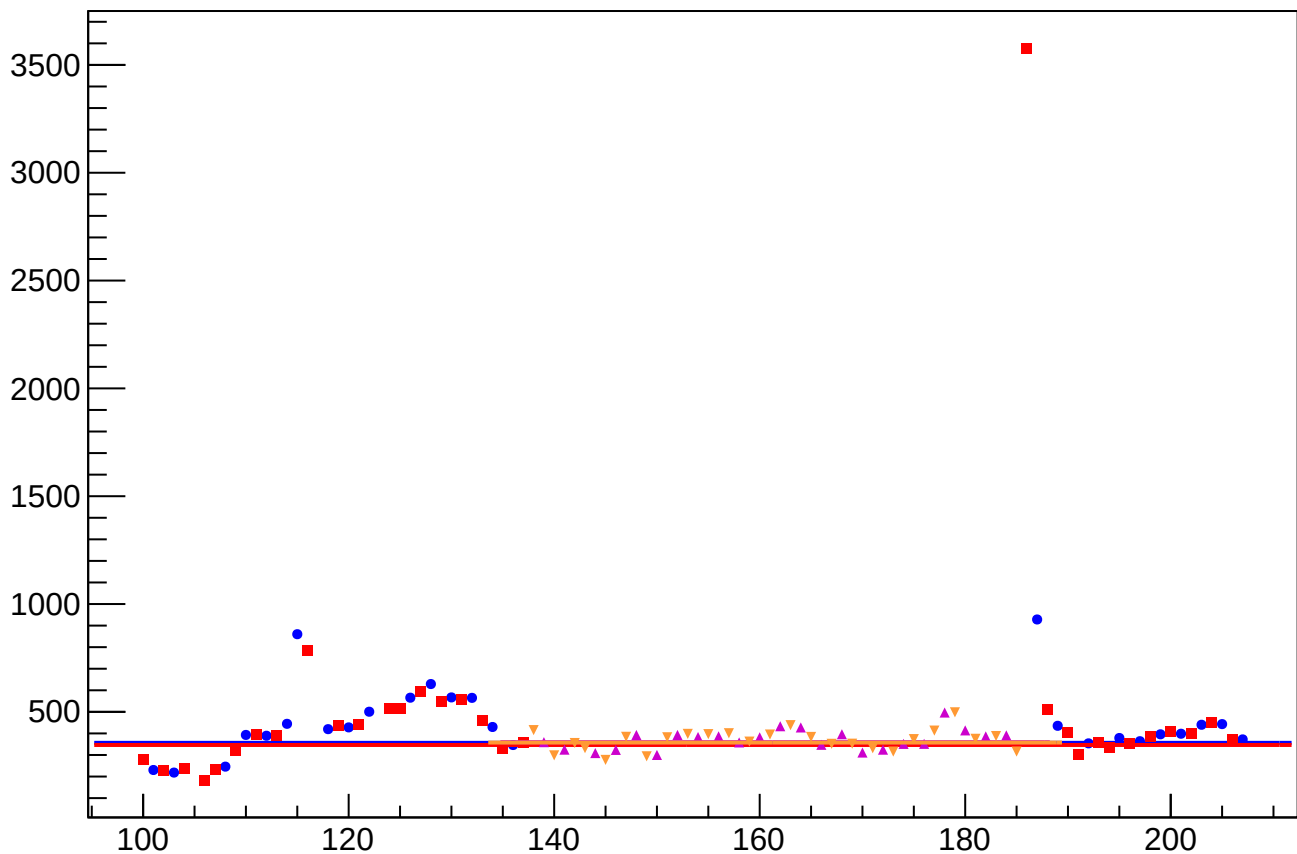
Left In: 50.029 $\pm$ 84.838  $\chi^2$ /NDF:27.3/22

+ sign 229.064 $\pm$ 62.532  $\chi^2$ /NDF: 56.0/50

All: 183.501 $\pm$ 43.959  $\chi^2$ /NDF: 108.1/104

- sign 138.984 $\pm$ 61.810  $\chi^2$ /NDF: 51.0/53

asym\_sam\_37\_48\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 356.288 $\pm$ 0.068  $\chi^2$ /NDF: 2189699.9/25

Left Out: 357.732 $\pm$ 0.058  $\chi^2$ /NDF: 683726.4/24

Right Out: 346.455 $\pm$ 0.064  $\chi^2$ /NDF: 3001375.0/30

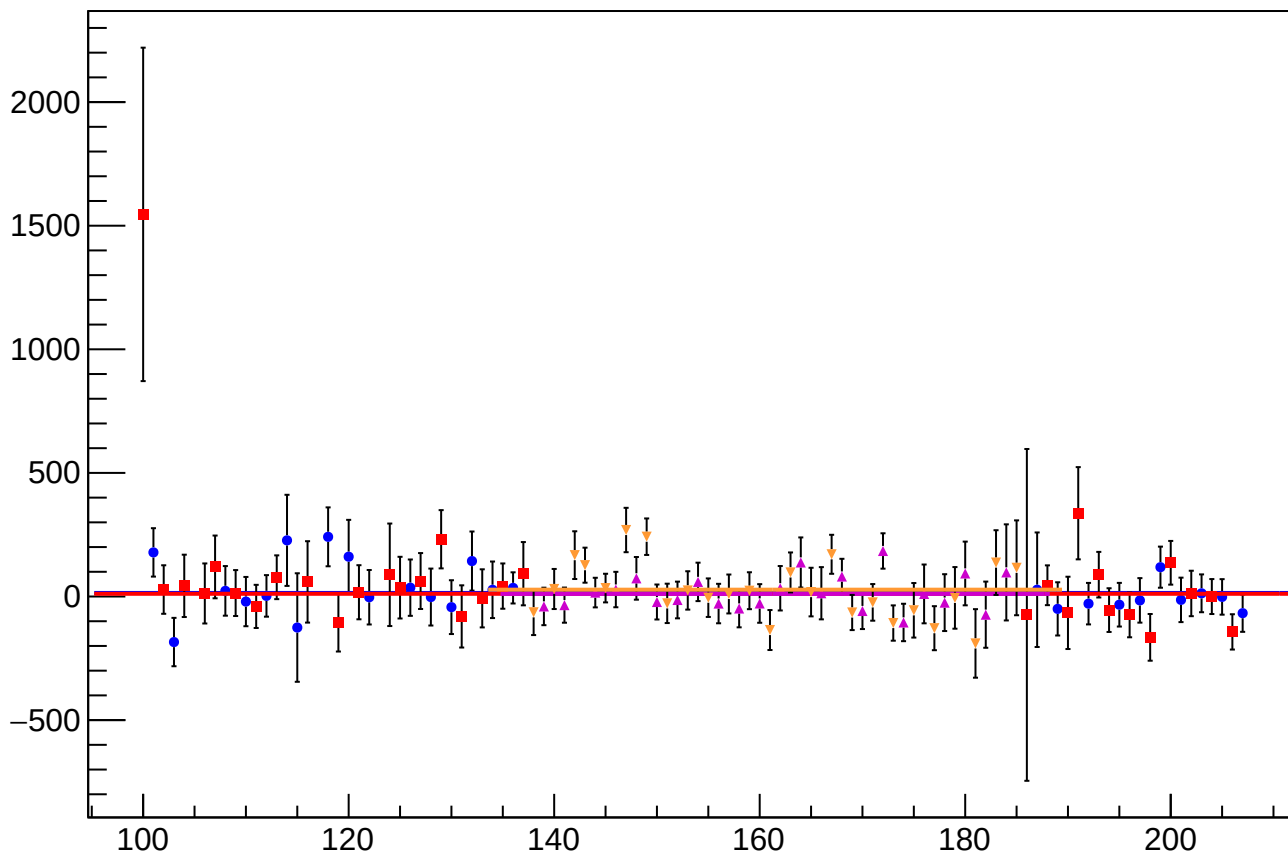
Left In: 359.350 $\pm$ 0.060  $\chi^2$ /NDF: 519762.7/22

+ sign 357.120 $\pm$ 0.044  $\chi^2$ /NDF: 2873686.4/50

All: 355.188 $\pm$ 0.031  $\chi^2$ /NDF: 6420281.3/104

- sign 353.300 $\pm$ 0.044  $\chi^2$ /NDF: 3542818.1/53

# dit\_asym\_sam\_37\_48\_dd\_mean vs Slug



Right In: 14.366+/-19.105     $\chi^2/\text{NDF}$ : 19.0/25

Left Out: 27.627+/-16.742     $\chi^2/\text{NDF}$ : 42.4/24

Right Out: 10.999+/-18.985     $\chi^2/\text{NDF}$ : 28.8/30

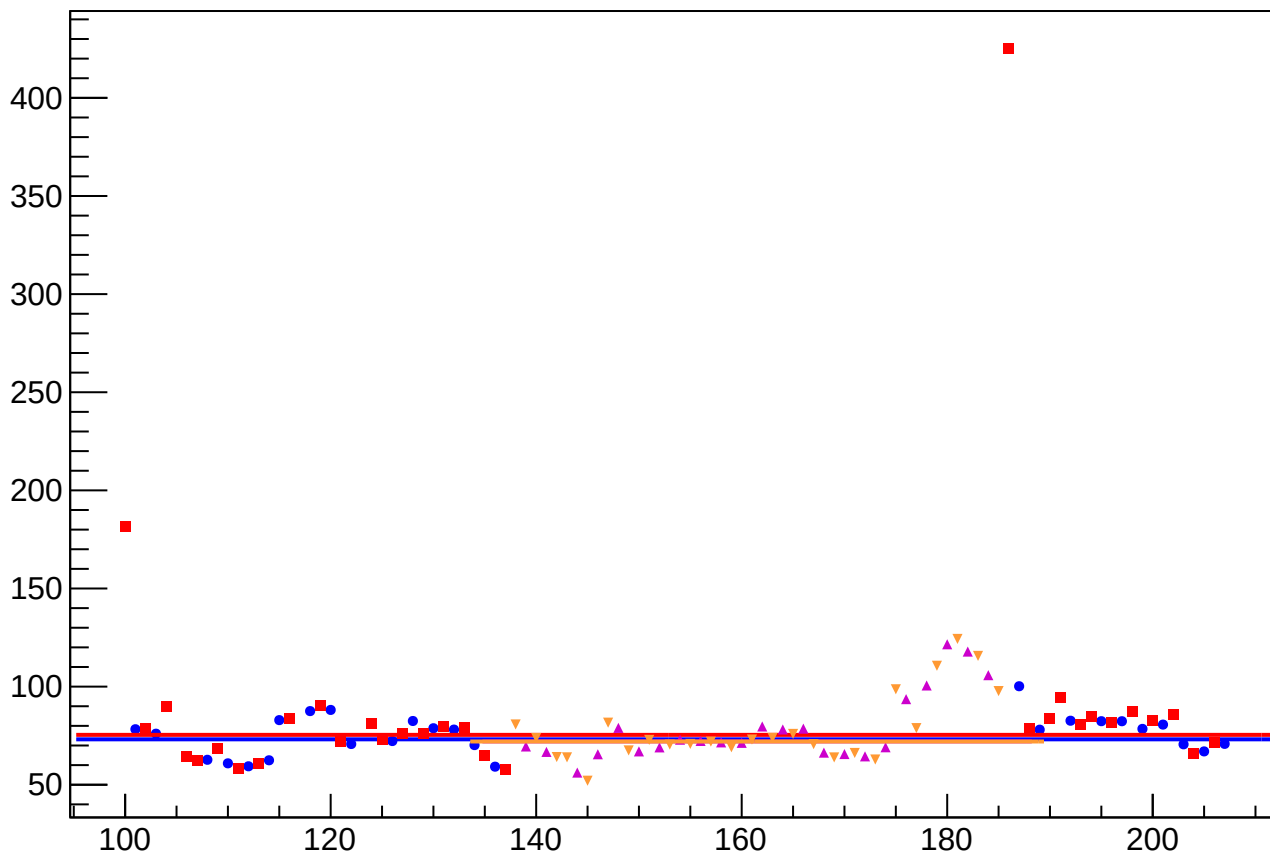
Left In: 10.521+/-17.225     $\chi^2/\text{NDF}$ : 16.1/22

+ sign 21.867+/-12.591     $\chi^2/\text{NDF}$ : 61.6/50

All: 16.375+/-8.961     $\chi^2/\text{NDF}$ : 106.9/104

- sign 10.737+/-12.757     $\chi^2/\text{NDF}$ : 44.9/53

dit\_asym\_sam\_37\_48\_dd\_rms vs Slug



Right In: 73.142 $\pm$ 0.014  $\chi^2$ /NDF: 435379.9/25

Left Out: 72.041 $\pm$ 0.012  $\chi^2$ /NDF: 1269471.8/24

Right Out: 75.417 $\pm$ 0.013  $\chi^2$ /NDF: 1095251.6/30

Left In: 72.092 $\pm$ 0.012  $\chi^2$ /NDF: 1058857.2/22

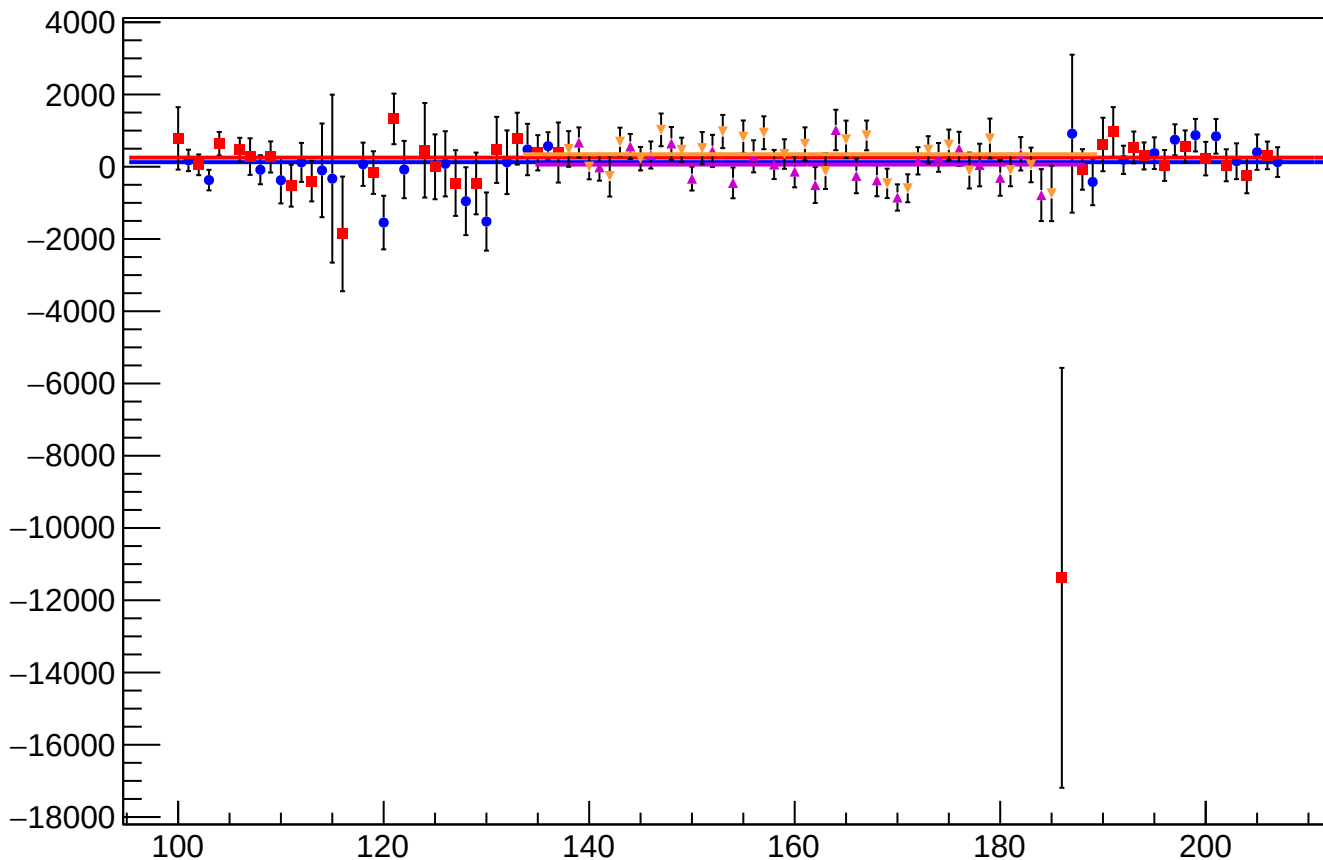
+ sign 72.519 $\pm$ 0.009  $\chi^2$ /NDF: 1708611.7/50

All: 73.049 $\pm$ 0.006  $\chi^2$ /NDF: 3903543.6/104

- sign 73.593 $\pm$ 0.009  $\chi^2$ /NDF: 2187750.1/53



asym\_sam\_37\_48\_dd\_dit\_correction\_mean vs Slug



Right In: 126.426+/-100.086  $\chi^2/\text{NDF}$ : 24.8/25

Left Out: 345.973+/-86.822  $\chi^2/\text{NDF}$ : 28.9/24

Right Out: 252.614+/-92.720  $\chi^2/\text{NDF}$ : 20.5/30

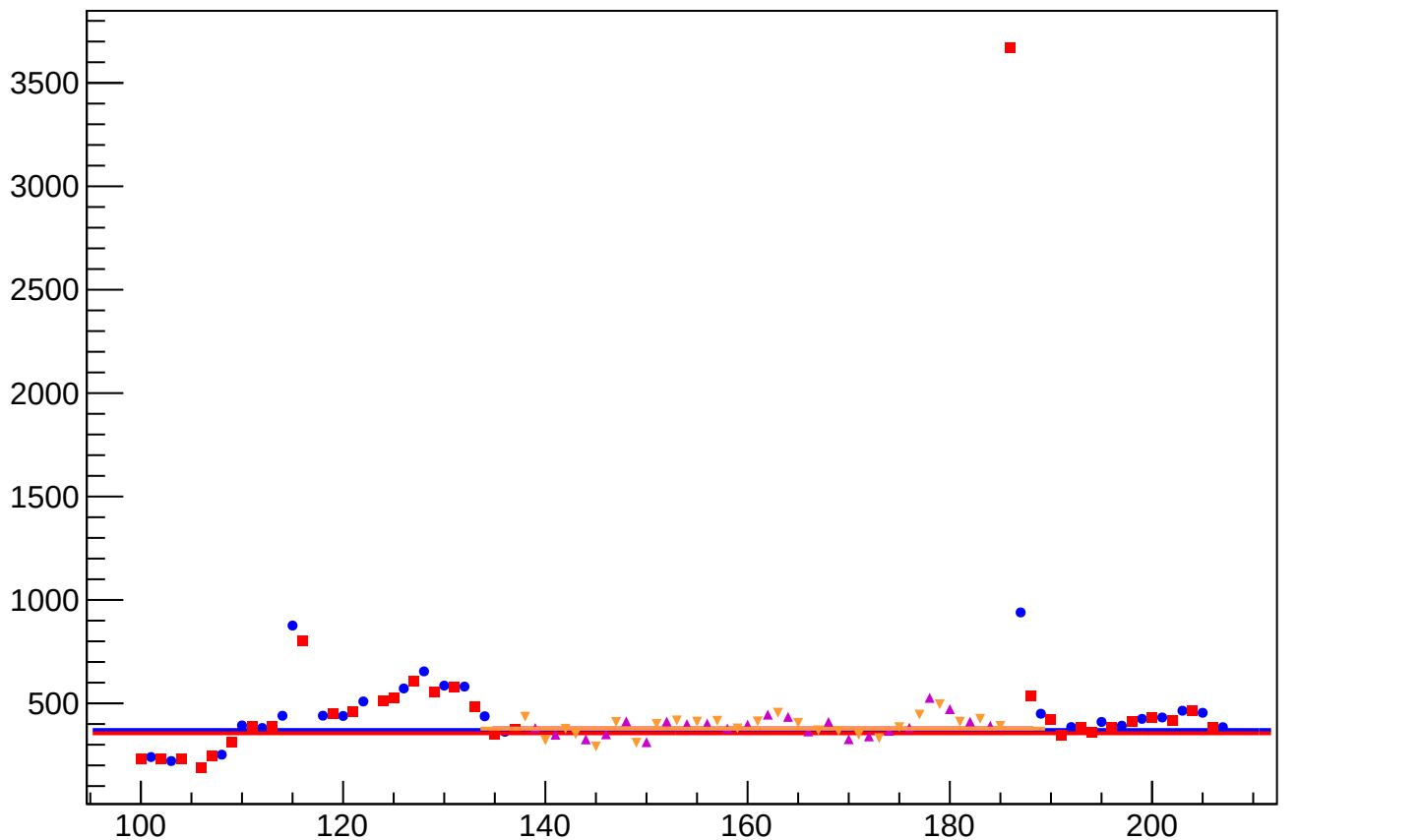
Left In: 59.908+/-89.411  $\chi^2/\text{NDF}$ : 25.8/22

+ sign 251.701+/-65.584  $\chi^2/\text{NDF}$ : 56.5/50

All: 201.300+/-45.937  $\chi^2/\text{NDF}$ : 106.3/104

- sign 152.761+/-64.361  $\chi^2/\text{NDF}$ : 48.6/53

# asym\_sam\_37\_48\_dd\_dit\_correction\_rms vs Slug



Right In: 370.874 $\pm$ 0.071  $\chi^2$ /NDF: 2262739.0/25

Left Out: 377.797 $\pm$ 0.061  $\chi^2$ /NDF: 636714.9/24

+ sign 374.824 $\pm$ 0.046  $\chi^2$ /NDF: 2904914.4/50

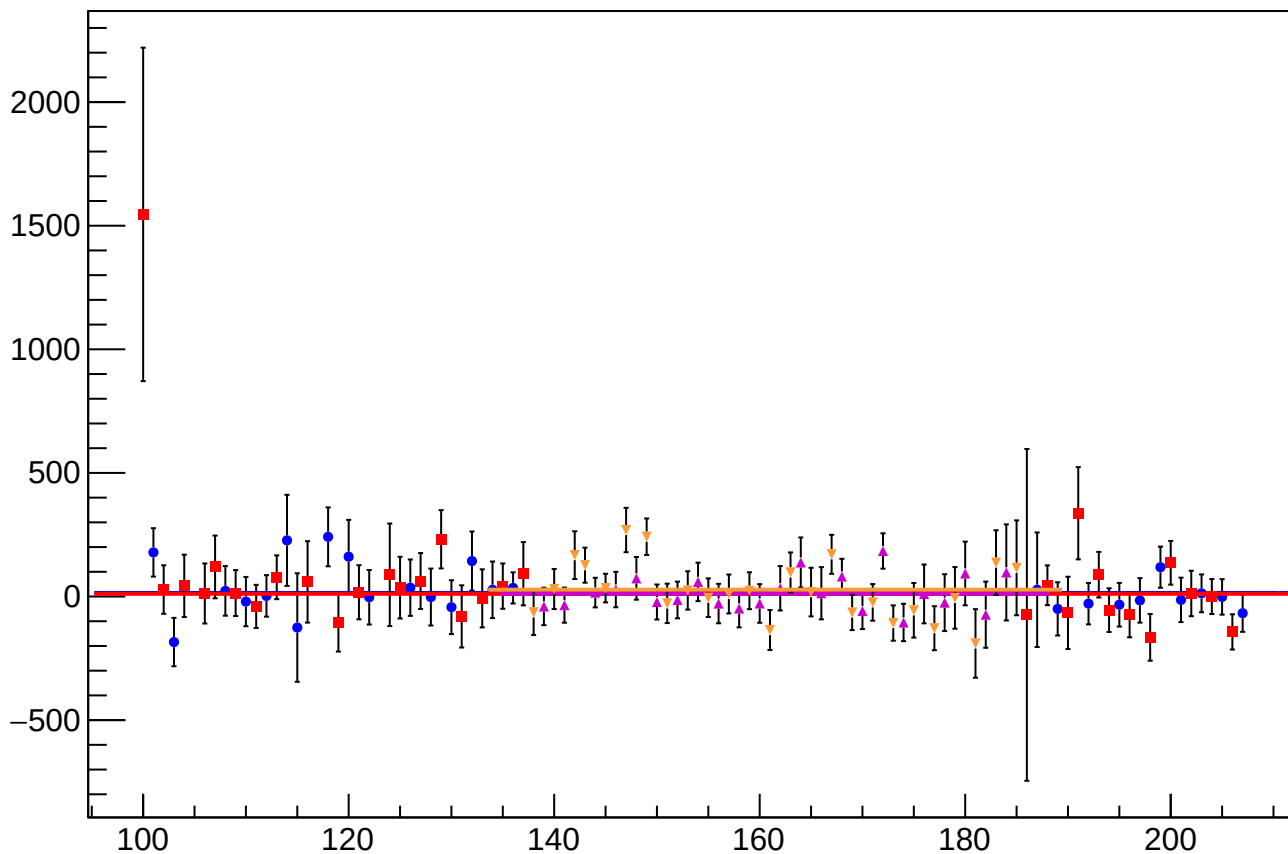
Right Out: 355.416 $\pm$ 0.066  $\chi^2$ /NDF: 3262716.6/30

All: 371.128 $\pm$ 0.032  $\chi^2$ /NDF: 6774089.3/104

- sign 367.569 $\pm$ 0.046  $\chi^2$ /NDF: 3856706.6/53

Left In: 378.869 $\pm$ 0.063  $\chi^2$ /NDF: 527685.1/22

# eigen\_dit\_asym\_sam\_37\_48\_dd\_mean vs Slug



Right In: 14.366 $\pm$ 19.105  $\chi^2$ /NDF: 19.0/25

Left Out: 27.626 $\pm$ 16.742  $\chi^2$ /NDF: 42.4/24

Right Out: 10.999 $\pm$ 18.985  $\chi^2$ /NDF: 28.8/30

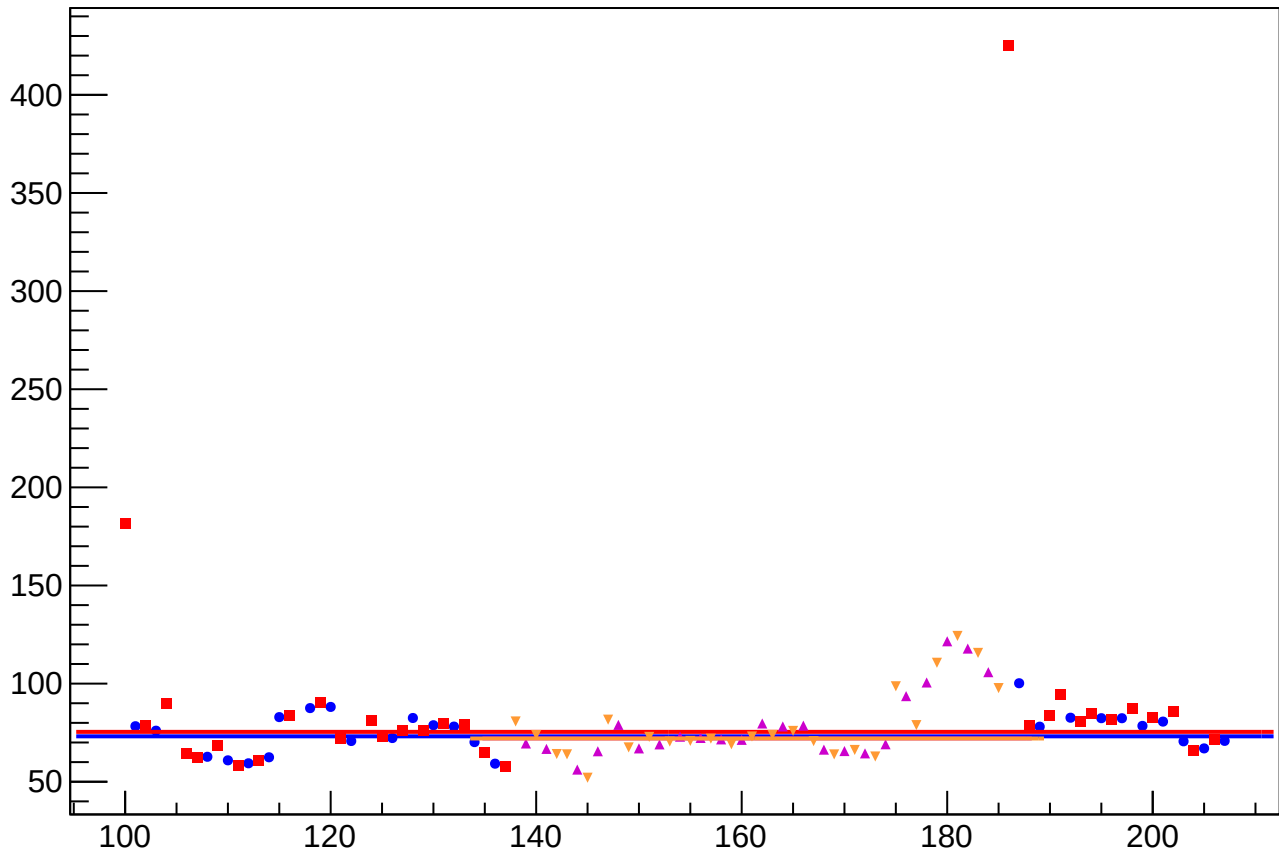
Left In: 10.521 $\pm$ 17.225  $\chi^2$ /NDF: 16.1/22

+ sign 21.866 $\pm$ 12.591  $\chi^2$ /NDF: 61.6/50

All: 16.374 $\pm$ 8.961  $\chi^2$ /NDF: 106.9/104

- sign 10.737 $\pm$ 12.757  $\chi^2$ /NDF: 44.9/53

eigen\_dit\_asym\_sam\_37\_48\_dd\_rms vs Slug



Right In: 73.142 $\pm$ 0.014  $\chi^2$ /NDF: 435377.6/25

Left Out: 72.041 $\pm$ 0.012  $\chi^2$ /NDF: 1269479.1/24

Right Out: 75.417 $\pm$ 0.013  $\chi^2$ /NDF: 1095252.1/30

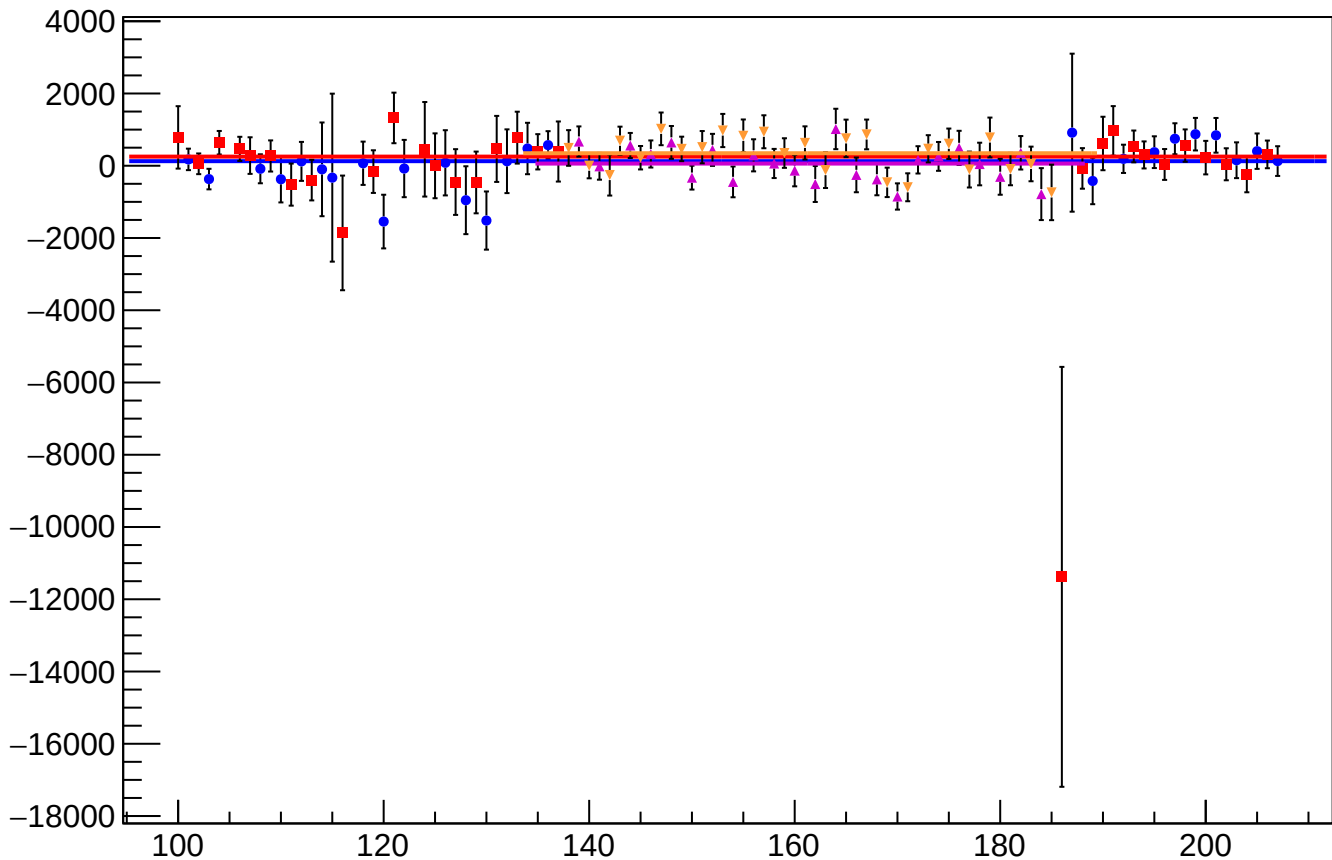
Left In: 72.092 $\pm$ 0.012  $\chi^2$ /NDF: 1058847.4/22

+ sign 72.519 $\pm$ 0.009  $\chi^2$ /NDF: 1708616.8/50

All: 73.049 $\pm$ 0.006  $\chi^2$ /NDF: 3903539.4/104

- sign 73.593 $\pm$ 0.009  $\chi^2$ /NDF: 2187740.8/53

asym\_sam\_37\_48\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In: 126.426 $\pm$ 100.085  $\chi^2$ /NDF: 24.8/25

Left Out: 345.972 $\pm$ 86.822  $\chi^2$ /NDF: 28.9/24

Right Out: 252.614 $\pm$ 92.720  $\chi^2$ /NDF: 20.5/30

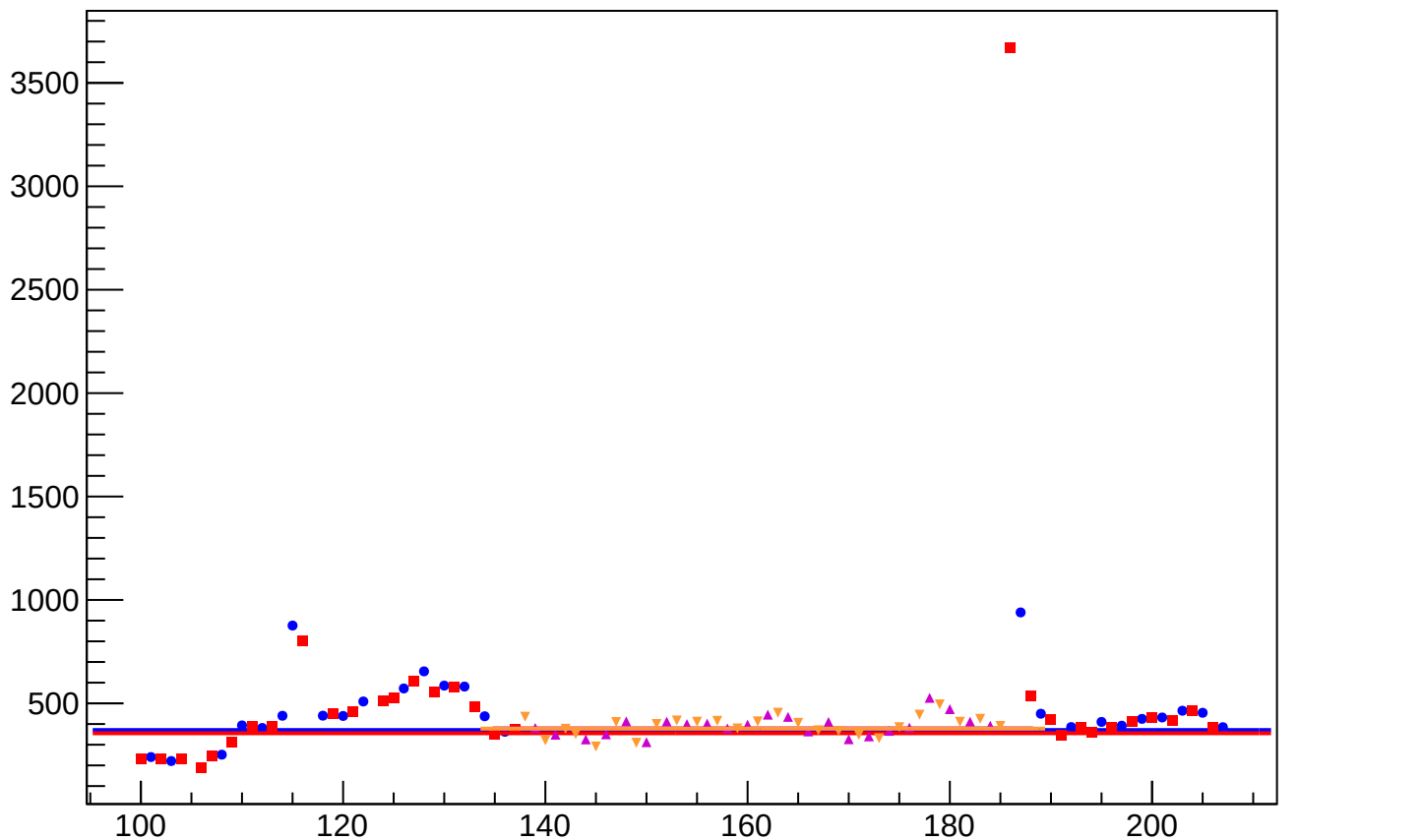
Left In: 59.907 $\pm$ 89.411  $\chi^2$ /NDF: 25.8/22

+ sign 251.700 $\pm$ 65.584  $\chi^2$ /NDF: 56.5/50

All: 201.299 $\pm$ 45.937  $\chi^2$ /NDF: 106.3/104

- sign 152.761 $\pm$ 64.361  $\chi^2$ /NDF: 48.6/53

asym\_sam\_37\_48\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 370.873 $\pm$ 0.071  $\chi^2$ /NDF: 2262729.3/25

Left Out: 377.796 $\pm$ 0.061  $\chi^2$ /NDF: 636714.9/24

Right Out: 355.416 $\pm$ 0.066  $\chi^2$ /NDF: 3262703.3/30

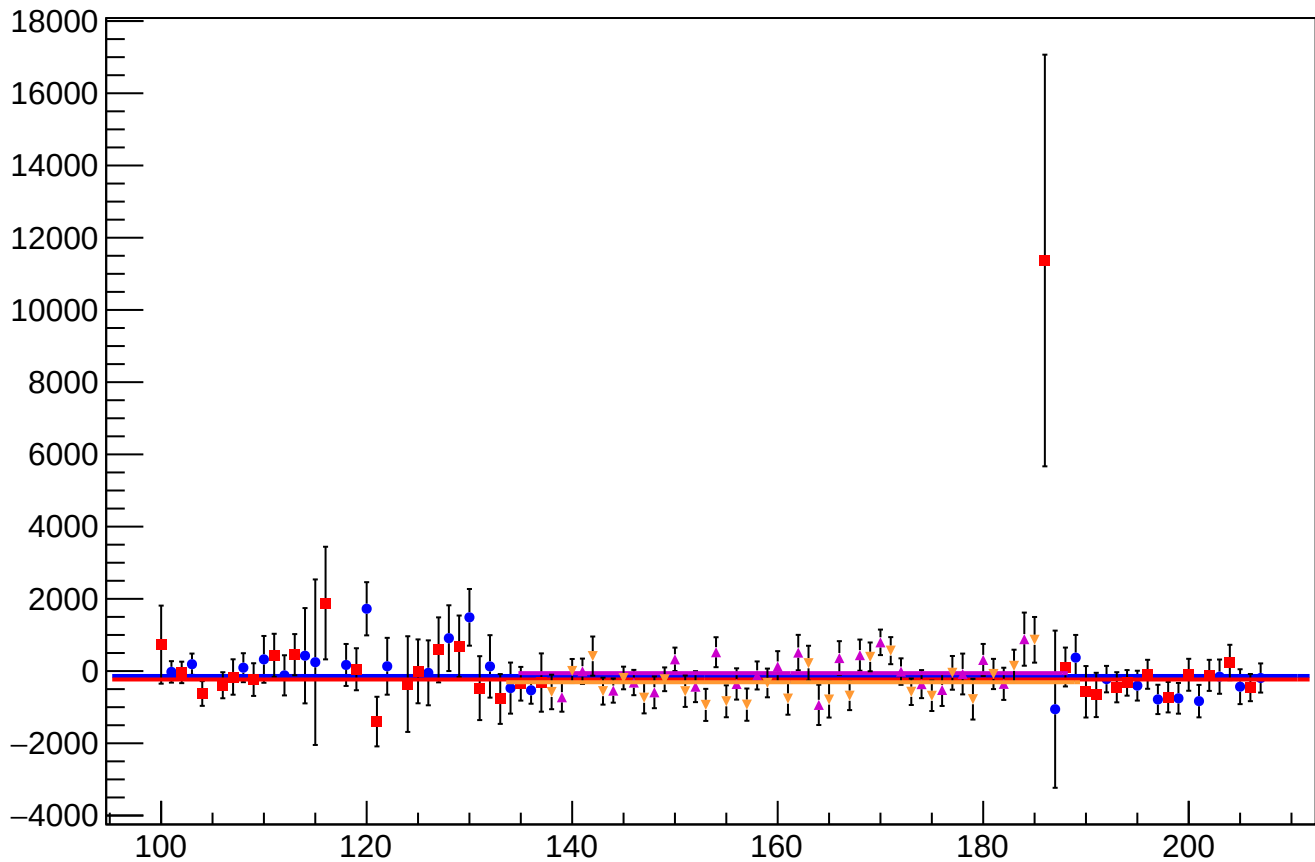
Left In: 378.869 $\pm$ 0.063  $\chi^2$ /NDF: 527680.9/22

+ sign 374.824 $\pm$ 0.046  $\chi^2$ /NDF: 2904904.1/50

All: 371.128 $\pm$ 0.032  $\chi^2$ /NDF: 6774060.8/104

- sign 367.568 $\pm$ 0.046  $\chi^2$ /NDF: 3856688.4/53

# asym\_sam\_37\_48\_dd\_mean vs Slug



Right In: -135.912 $\pm$ 98.069  $\chi^2$ /NDF: 25.0/25

Left Out: -309.330 $\pm$ 83.706  $\chi^2$ /NDF:30.0/24

Right Out: -233.357 $\pm$ 91.984  $\chi^2$ /NDF: 21.8/30

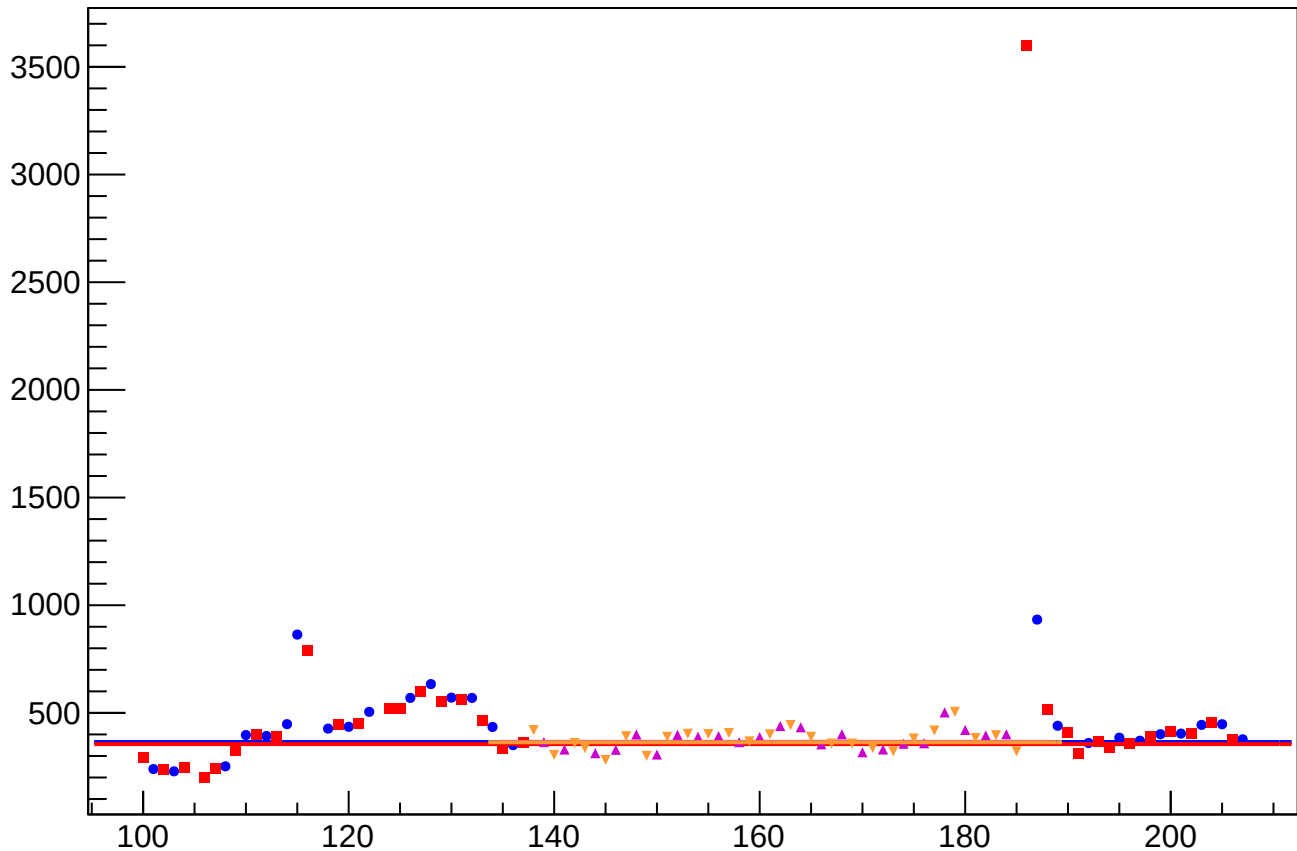
Left In: -57.543 $\pm$ 86.225  $\chi^2$ /NDF:28.0/22

+ sign -236.239 $\pm$ 63.667  $\chi^2$ /NDF: 56.8/50

All: -187.427 $\pm$ 44.749  $\chi^2$ /NDF: 109.7/104

- sign -139.774 $\pm$ 62.908  $\chi^2$ /NDF: 51.7/53

# asym\_sam\_37\_48\_dd\_rms vs Slug



Right In: 364.713+/-0.069     $\chi^2$ /NDF: 2029399.0/25

Left Out: 363.714+/-0.059     $\chi^2$ /NDF:669244.7/24

Right Out: 355.059+/-0.065     $\chi^2$ /NDF: 2804121.5/30

Left In: 365.324+/-0.061     $\chi^2$ /NDF:509496.4/22

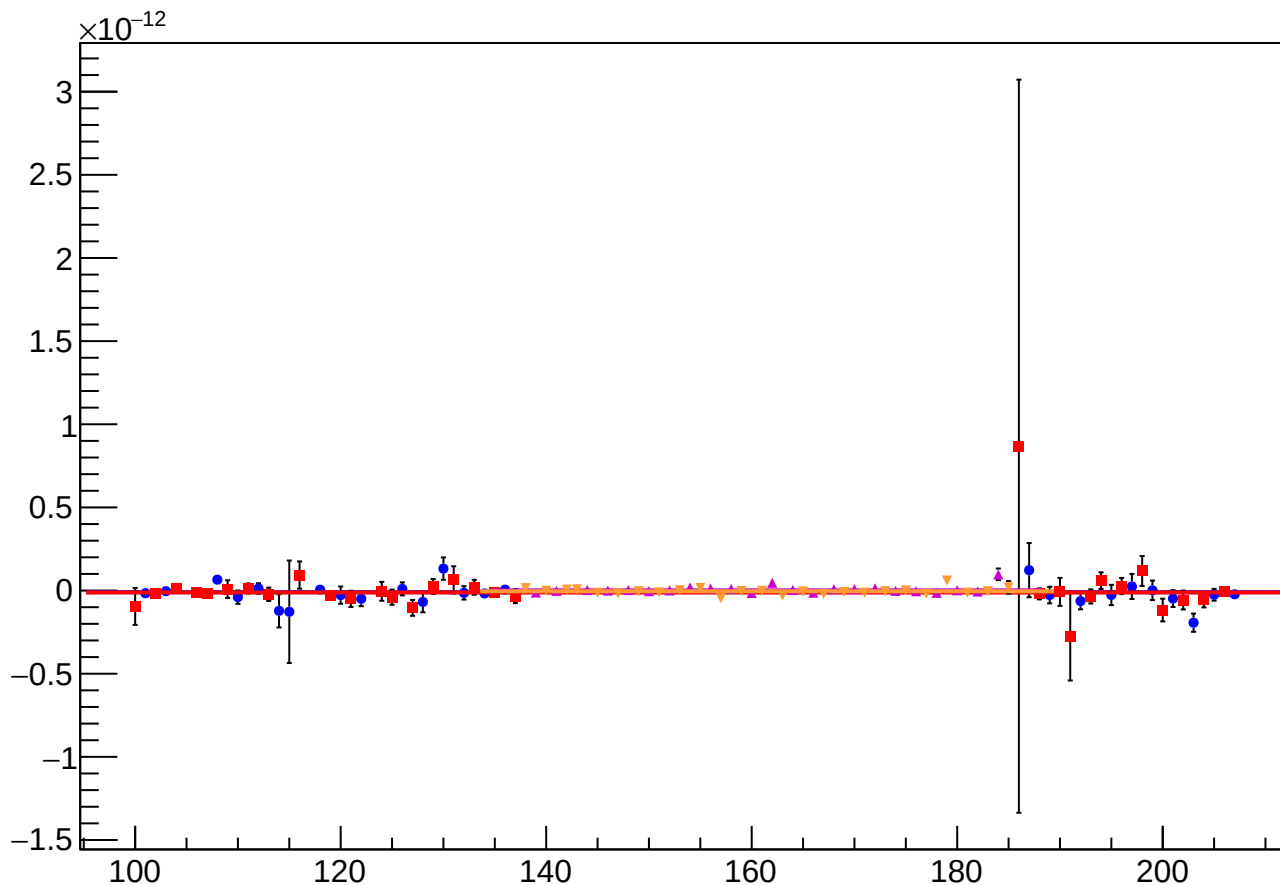
+ sign 364.135+/-0.045     $\chi^2$ /NDF: 2698763.7/50

All: 362.307+/-0.032     $\chi^2$ /NDF: 6028895.1/104

- sign 360.523+/-0.044     $\chi^2$ /NDF: 3326874.3/53



asym\_sam\_37\_48\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2$ /NDF: 31.6/25

Left Out: -0.000+/-0.000  $\chi^2$ /NDF: 21.9/24

Right Out: -0.000+/-0.000  $\chi^2$ /NDF: 22.8/30

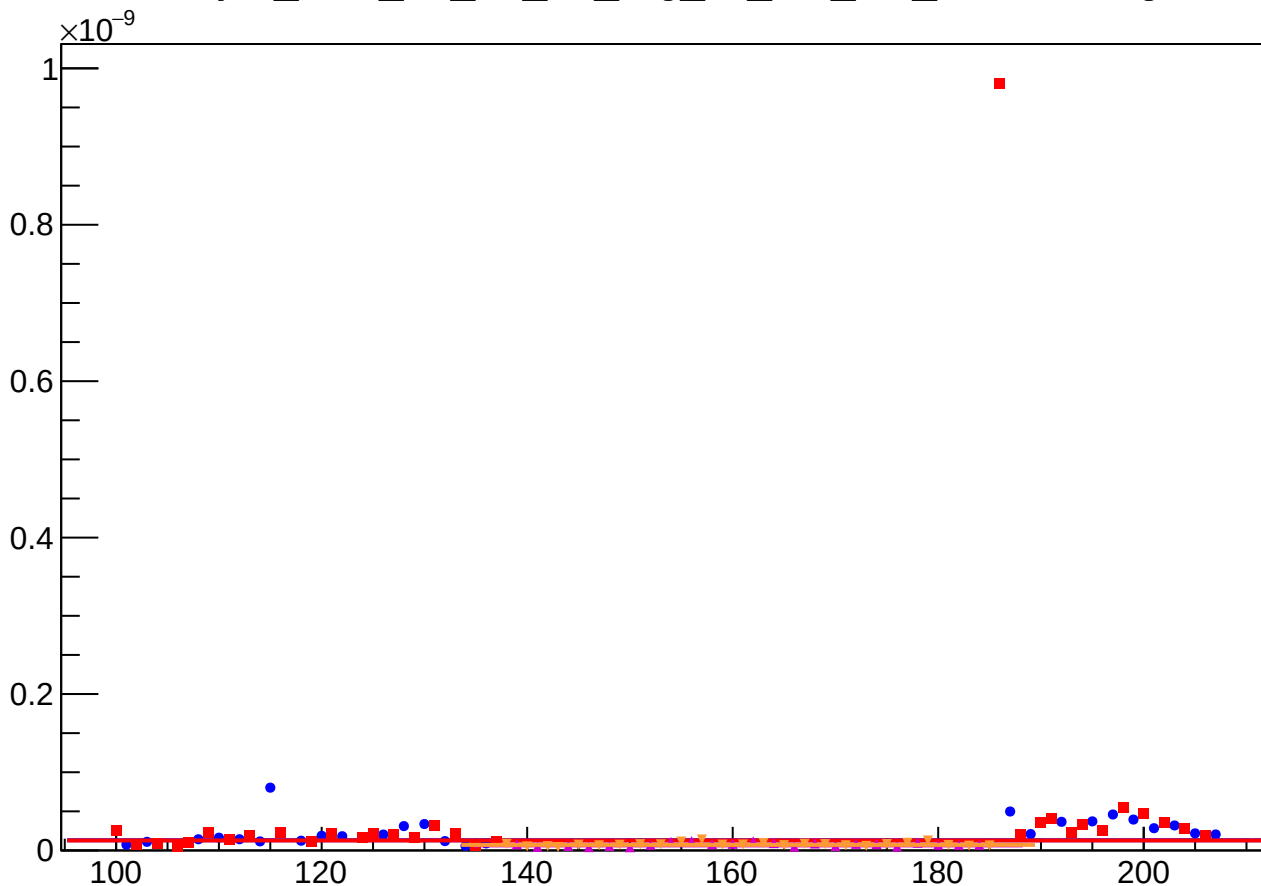
Left In: 0.000+/-0.000  $\chi^2$ /NDF: 21.7/22

+ sign -0.000+/-0.000  $\chi^2$ /NDF: 54.2/50

All: -0.000+/-0.000  $\chi^2$ /NDF: 104.2/104

- sign -0.000+/-0.000  $\chi^2$ /NDF: 48.4/53

asym\_sam\_37\_48\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3890438.3/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 872904.8/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4685988.7/30

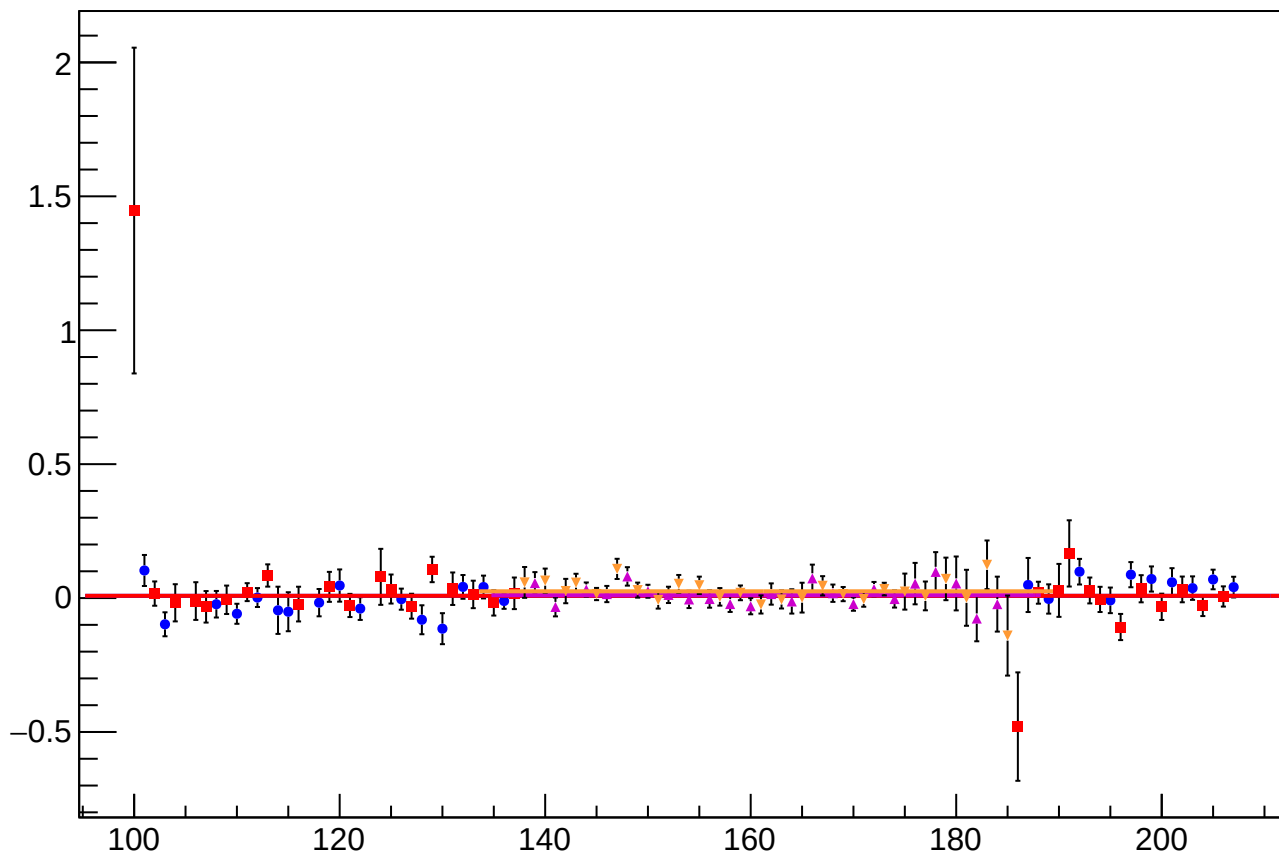
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1216388.8/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6414547.0/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14333720.2/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7860972.5/53

asym\_sam\_37\_48\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.008 \pm 0.009$   $\chi^2/\text{NDF}$ : 37.2/25

Left Out:  $0.025 \pm 0.007$   $\chi^2/\text{NDF}$ : 17.4/24

Right Out:  $0.008 \pm 0.009$   $\chi^2/\text{NDF}$ : 33.1/30

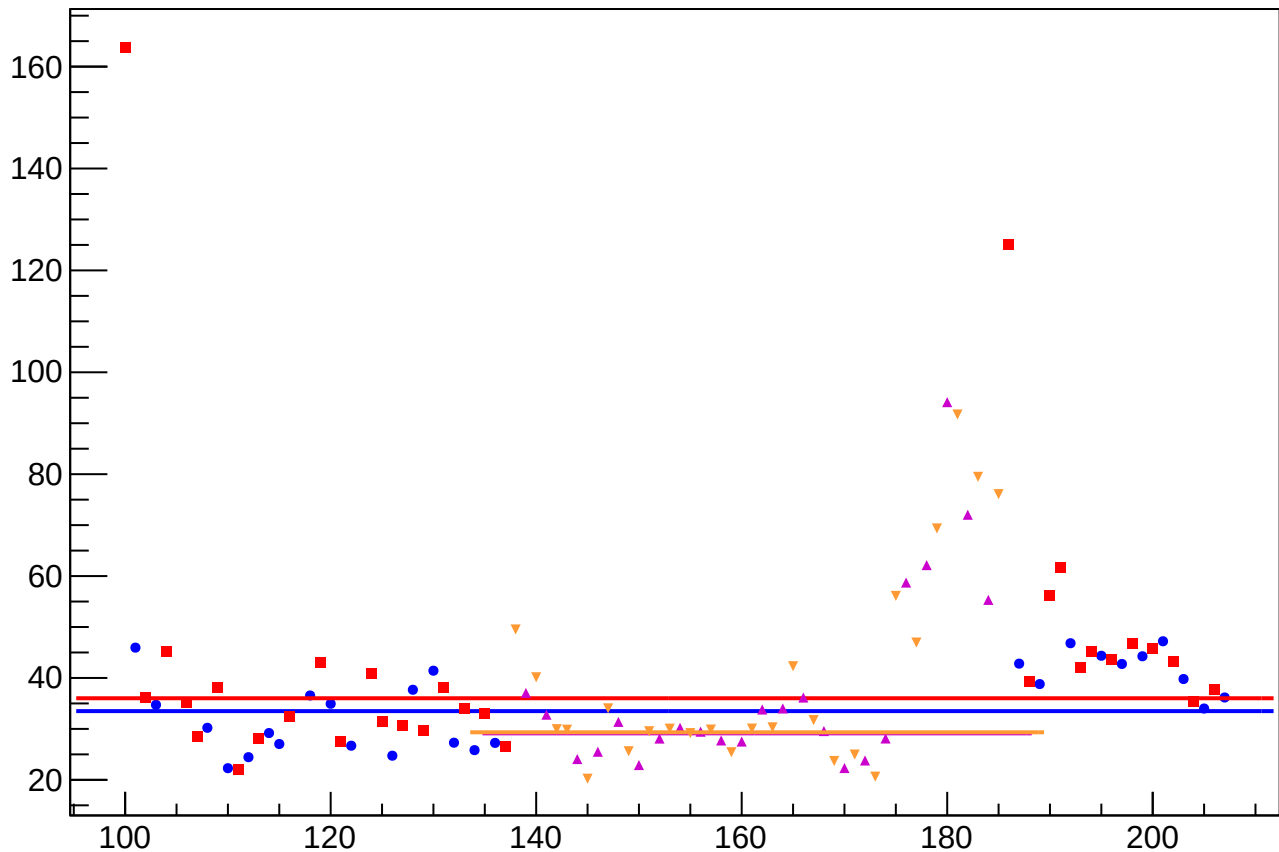
Left In:  $0.011 \pm 0.007$   $\chi^2/\text{NDF}$ : 19.0/22

+ sign  $0.019 \pm 0.006$   $\chi^2/\text{NDF}$ : 56.8/50

All:  $0.014 \pm 0.004$   $\chi^2/\text{NDF}$ : 110.1/104

- sign  $0.010 \pm 0.006$   $\chi^2/\text{NDF}$ : 52.1/53

asym\_sam\_37\_48\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 33.492 $\pm$ 0.006  $\chi^2$ /NDF: 1500607.6/25

Left Out: 29.335 $\pm$ 0.005  $\chi^2$ /NDF: 3874774.5/24

Right Out: 36.017 $\pm$ 0.007  $\chi^2$ /NDF: 1782087.1/30

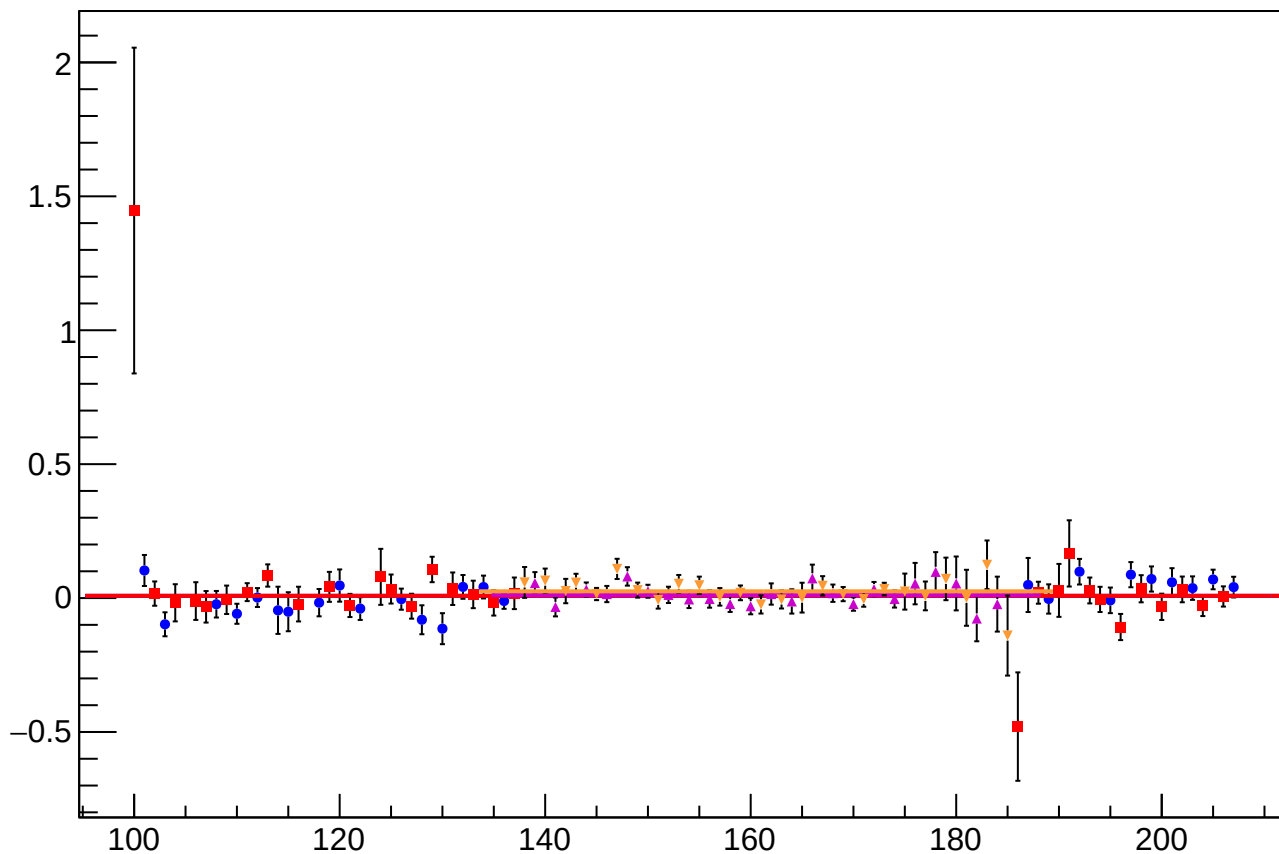
Left In: 29.125 $\pm$ 0.005  $\chi^2$ /NDF: 2839115.6/22

+ sign 30.946 $\pm$ 0.004  $\chi^2$ /NDF: 5635309.4/50

All: 31.338 $\pm$ 0.003  $\chi^2$ /NDF: 10955505.0/104

- sign 31.747 $\pm$ 0.004  $\chi^2$ /NDF: 5300284.0/53

asym\_sam\_37\_48\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.008 $\pm$ 0.009  $\chi^2$ /NDF: 37.2/25

Left Out: 0.025 $\pm$ 0.007  $\chi^2$ /NDF:17.4/24

Right Out: 0.008 $\pm$ 0.009  $\chi^2$ /NDF: 33.1/30

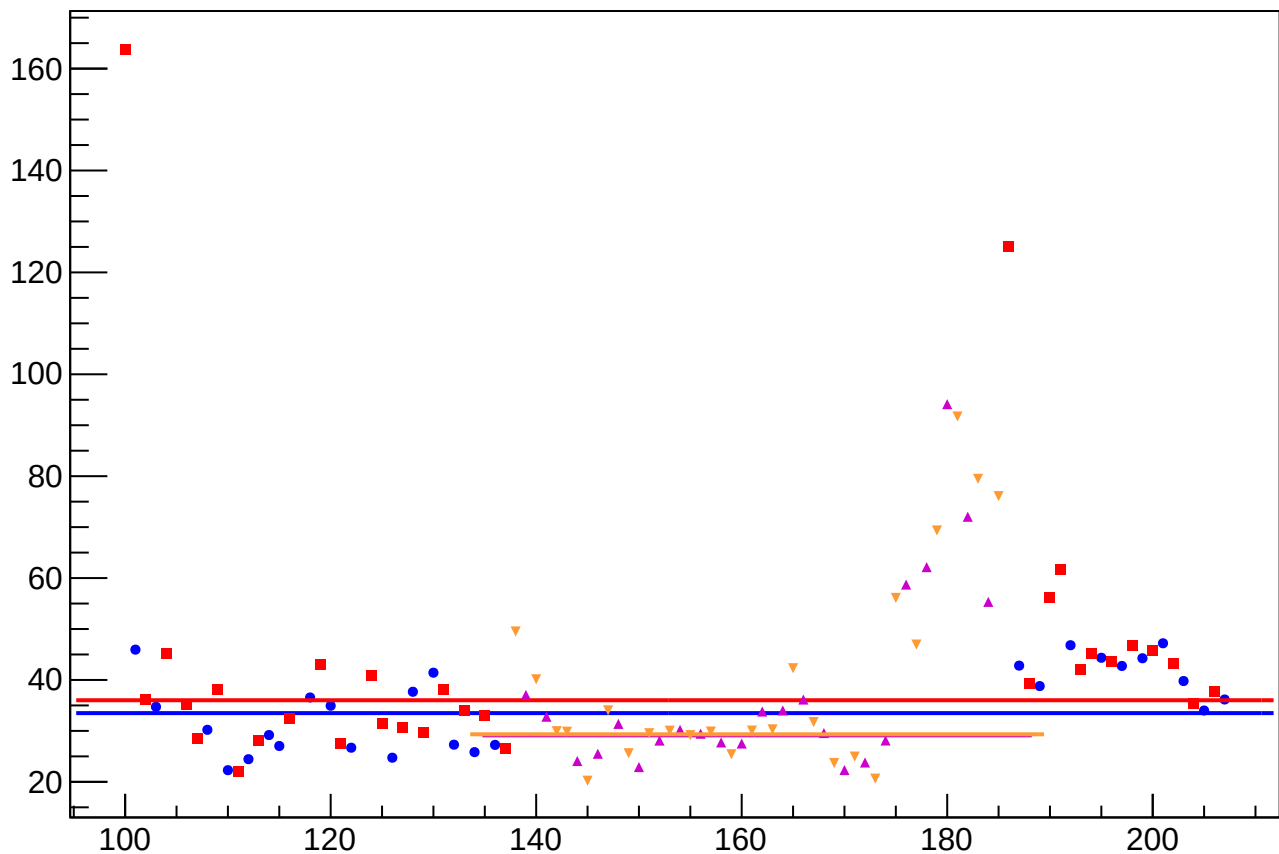
Left In: 0.011 $\pm$ 0.007  $\chi^2$ /NDF:19.0/22

+ sign 0.019 $\pm$ 0.006  $\chi^2$ /NDF: 56.8/50

All: 0.014 $\pm$ 0.004  $\chi^2$ /NDF: 110.1/104

- sign 0.010 $\pm$ 0.006  $\chi^2$ /NDF: 52.1/53

asym\_sam\_37\_48\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 33.492 $\pm$ 0.006  $\chi^2$ /NDF: 1500607.6/25

Left Out: 29.335 $\pm$ 0.005  $\chi^2$ /NDF: 3874774.5/24

Right Out: 36.017 $\pm$ 0.007  $\chi^2$ /NDF: 1782087.1/30

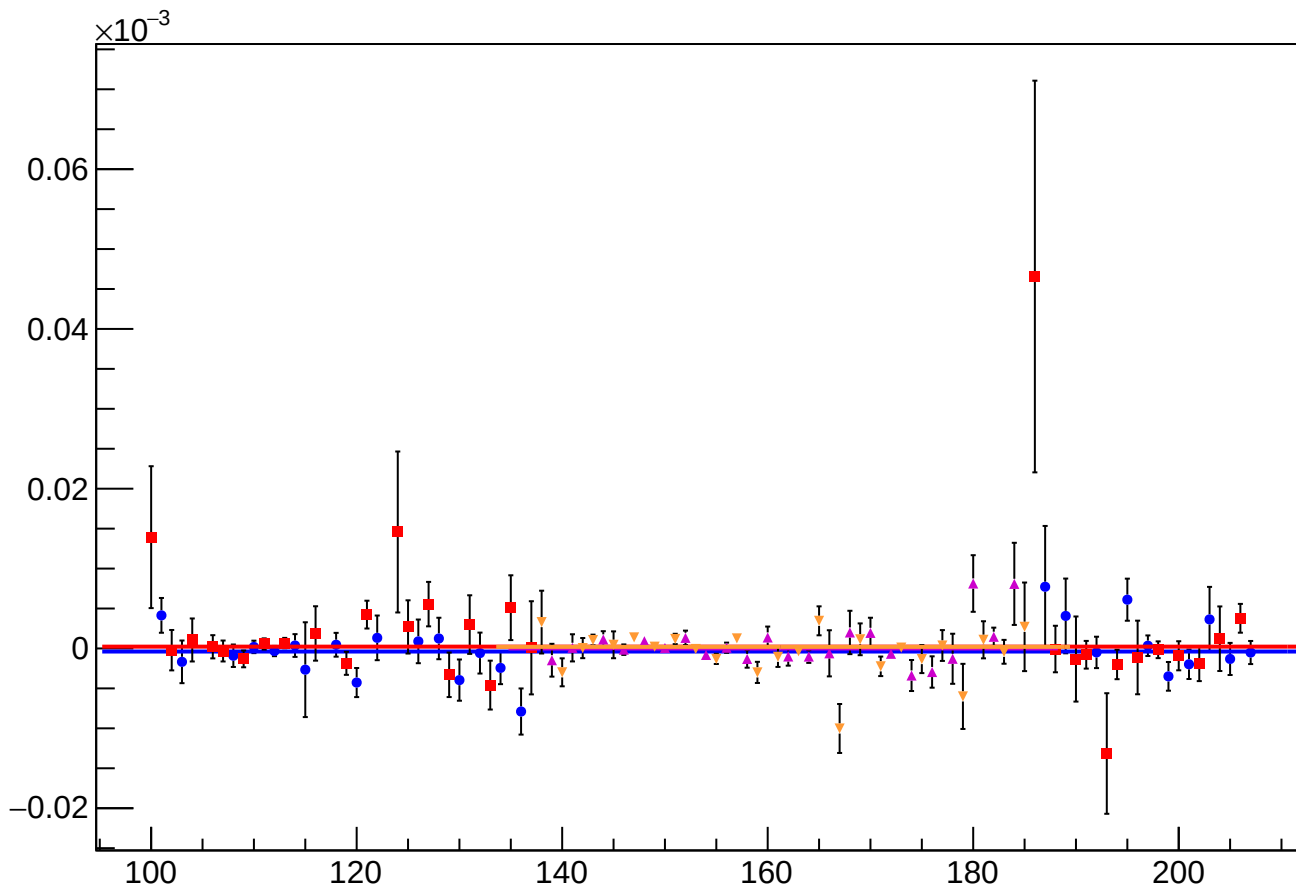
Left In: 29.125 $\pm$ 0.005  $\chi^2$ /NDF: 2839115.6/22

+ sign 30.946 $\pm$ 0.004  $\chi^2$ /NDF: 5635309.4/50

All: 31.338 $\pm$ 0.003  $\chi^2$ /NDF: 10955505.0/104

- sign 31.747 $\pm$ 0.004  $\chi^2$ /NDF: 5300284.0/53

asym\_sam\_37\_48\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 34.6/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 52.6/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 39.6/30

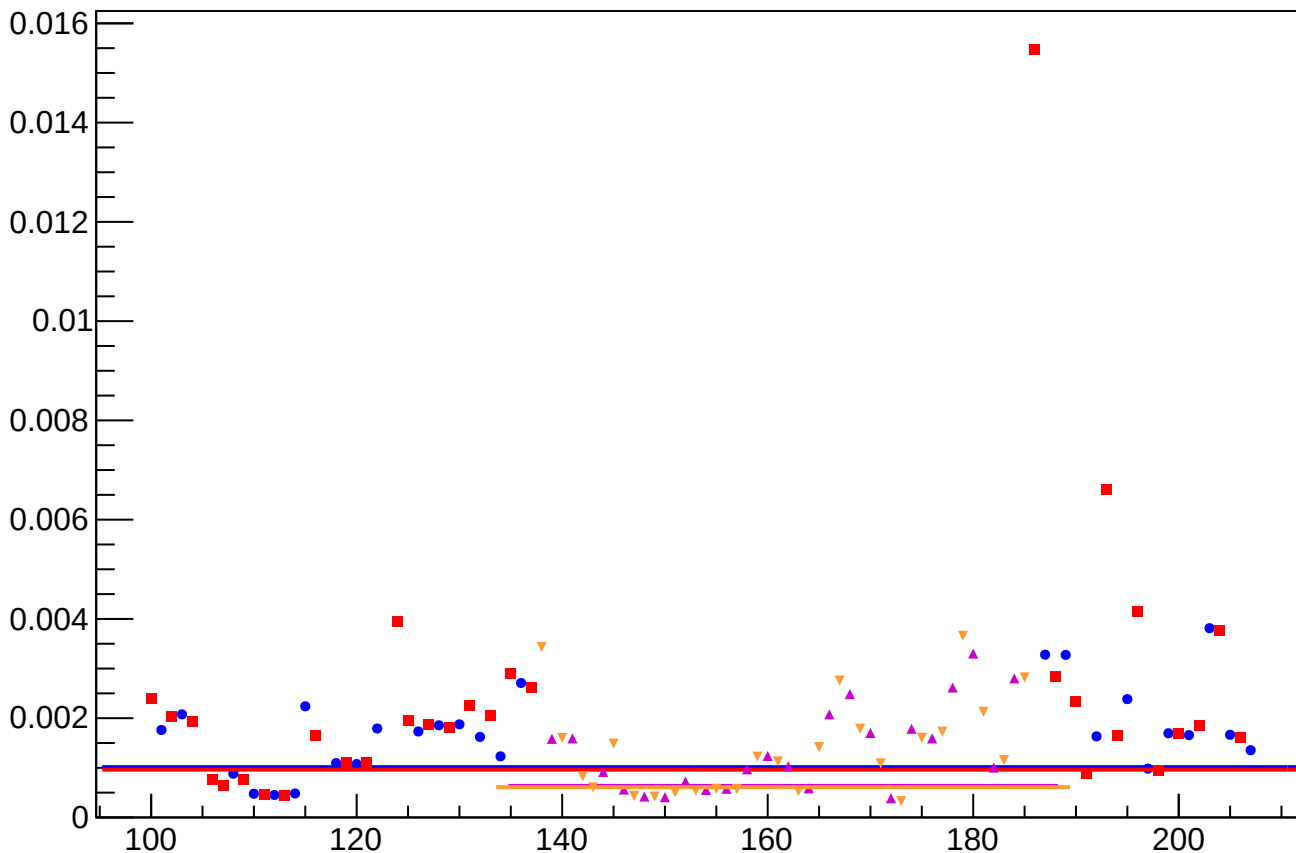
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 32.9/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 89.8/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 162.8/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 72.9/53

asym\_sam\_37\_48\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 8156790.7/25

Left Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ :10964161.2/24

Right Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 11083384.6/30

Left In: 0.001+/-0.000  $\chi^2/\text{NDF}$ :9376124.7/22

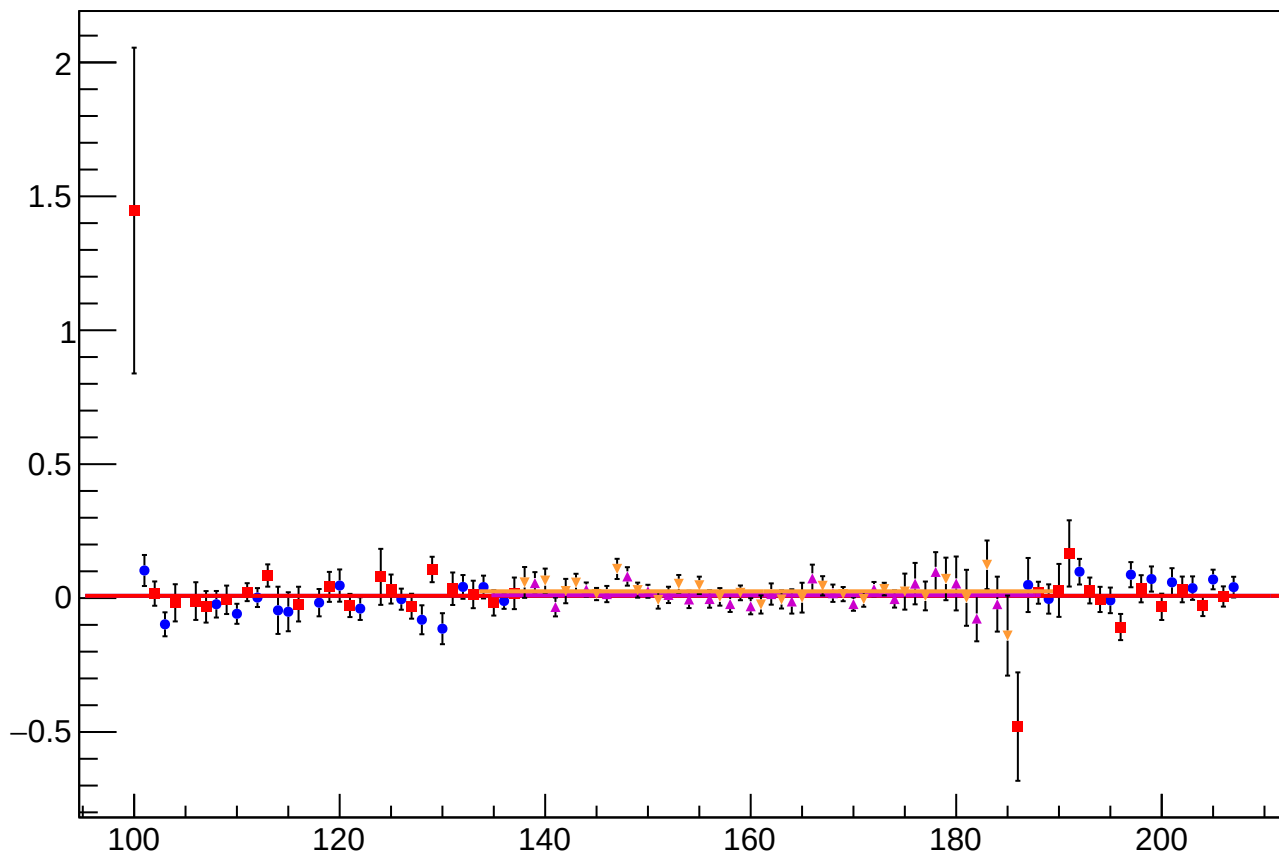
+ sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 21618100.7/50

All: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 43826257.5/104

- sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 22181958.1/53



asym\_sam\_37\_48\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.008 \pm 0.009$   $\chi^2/\text{NDF}: 37.2/25$

Left Out:  $0.025 \pm 0.007$   $\chi^2/\text{NDF}: 17.4/24$

Right Out:  $0.008 \pm 0.009$   $\chi^2/\text{NDF}: 33.1/30$

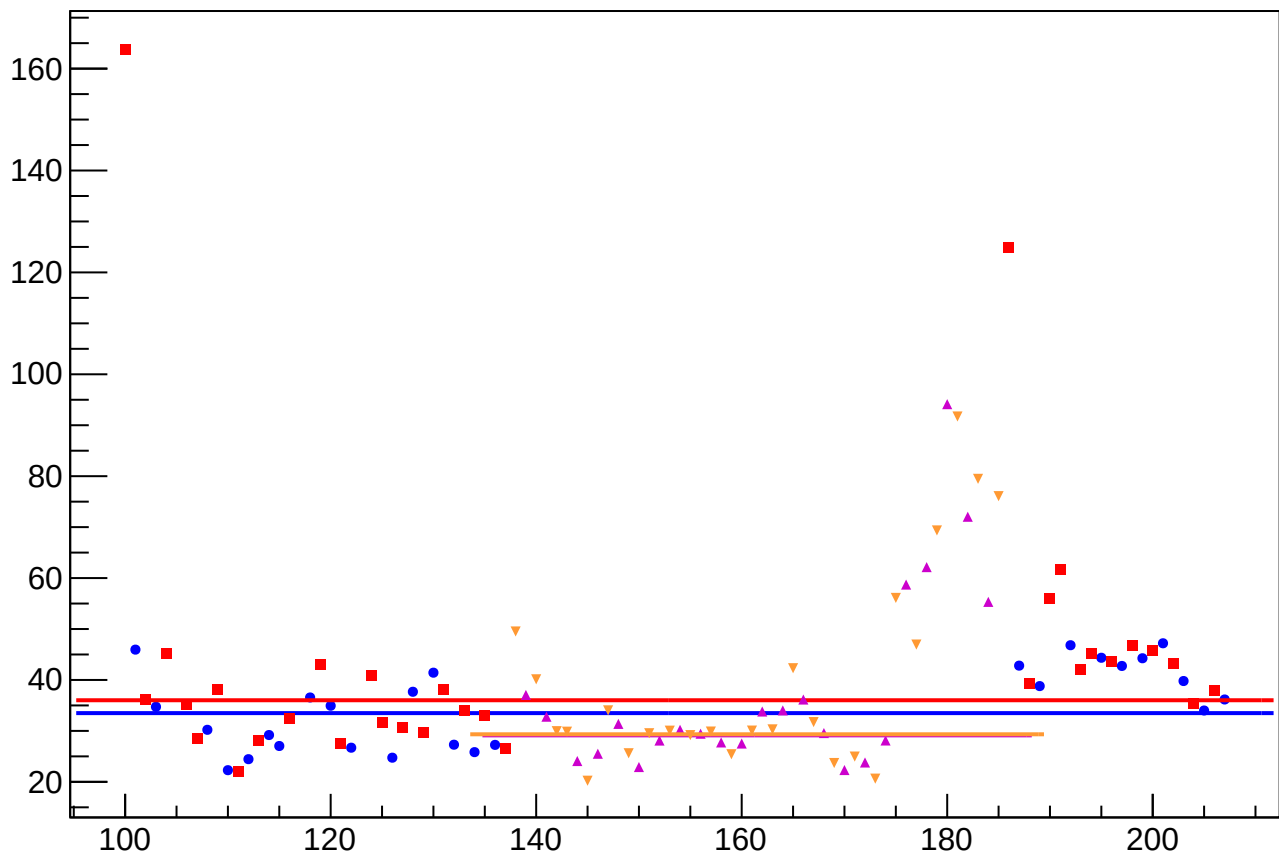
Left In:  $0.011 \pm 0.007$   $\chi^2/\text{NDF}: 19.0/22$

+ sign  $0.019 \pm 0.006$   $\chi^2/\text{NDF}: 56.8/50$

All:  $0.014 \pm 0.004$   $\chi^2/\text{NDF}: 110.1/104$

- sign  $0.010 \pm 0.006$   $\chi^2/\text{NDF}: 52.1/53$

asym\_sam\_37\_48\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 33.492 $\pm$ 0.006  $\chi^2$ /NDF: 1500526.1/25

Left Out: 29.334 $\pm$ 0.005  $\chi^2$ /NDF: 3874839.0/24

Right Out: 36.017 $\pm$ 0.007  $\chi^2$ /NDF: 1781988.9/30

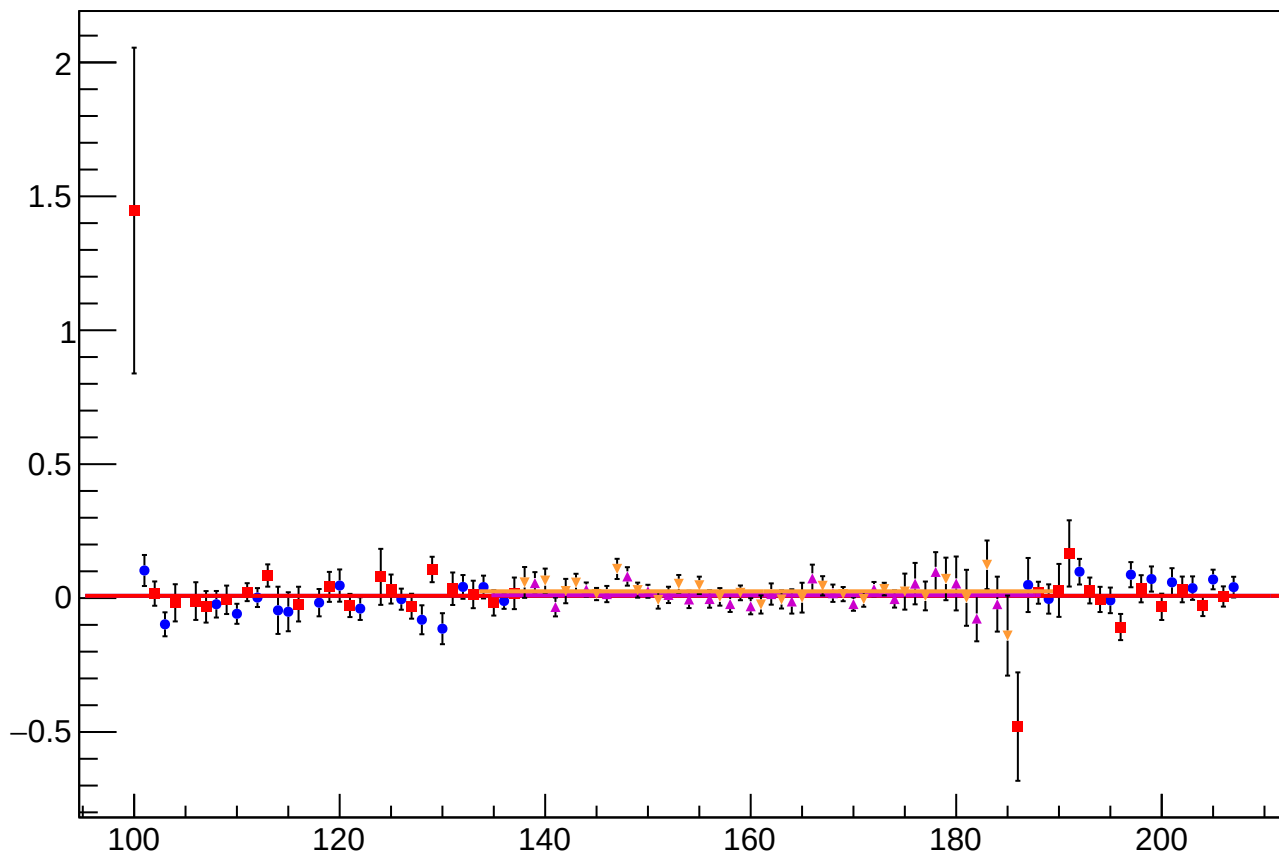
Left In: 29.124 $\pm$ 0.005  $\chi^2$ /NDF: 2839078.4/22

+ sign 30.945 $\pm$ 0.004  $\chi^2$ /NDF: 5635319.6/50

All: 31.337 $\pm$ 0.003  $\chi^2$ /NDF: 10955433.7/104

- sign 31.747 $\pm$ 0.004  $\chi^2$ /NDF: 5300200.2/53

asym\_sam\_37\_48\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.008 \pm 0.009$   $\chi^2/\text{NDF}$ : 37.2/25

Left Out:  $0.025 \pm 0.007$   $\chi^2/\text{NDF}$ : 17.4/24

Right Out:  $0.008 \pm 0.009$   $\chi^2/\text{NDF}$ : 33.1/30

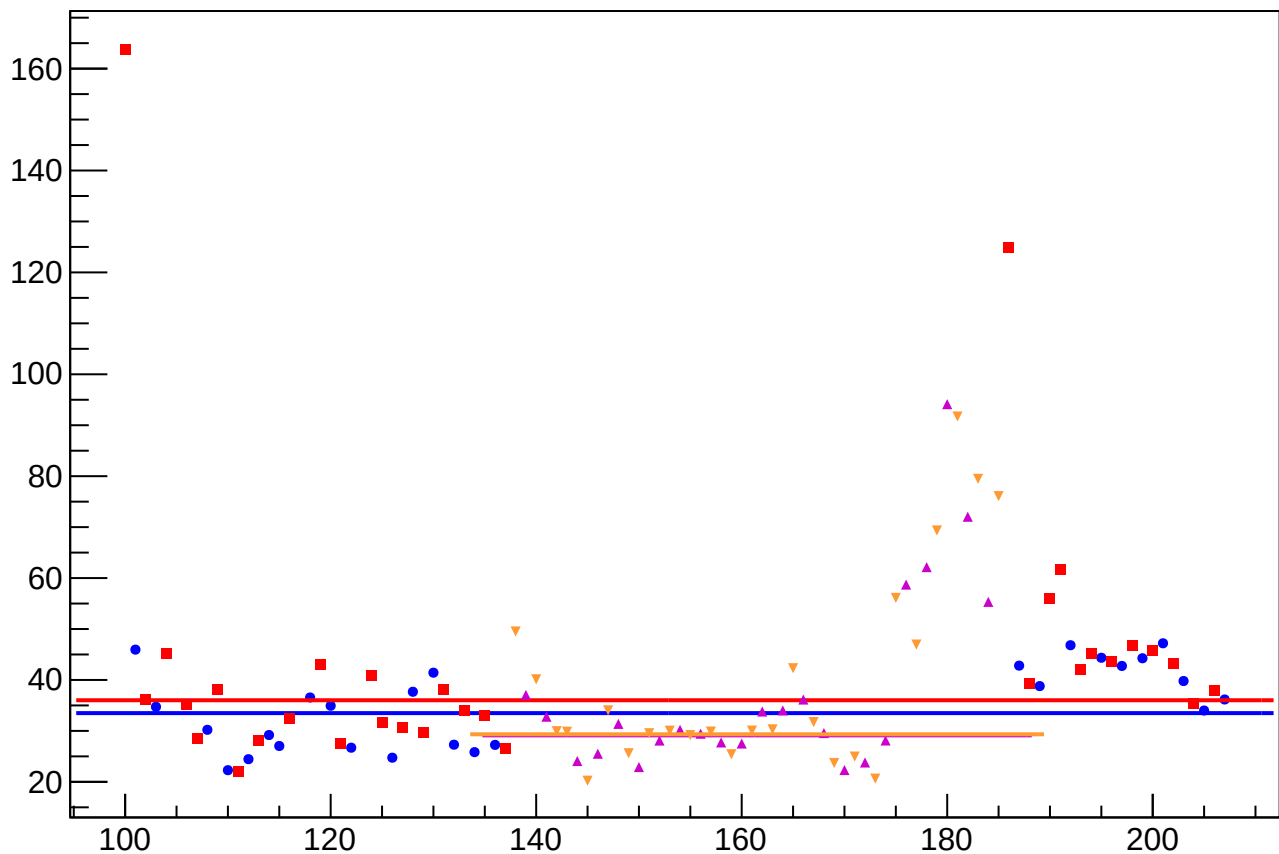
Left In:  $0.011 \pm 0.007$   $\chi^2/\text{NDF}$ : 19.0/22

+ sign  $0.019 \pm 0.006$   $\chi^2/\text{NDF}$ : 56.8/50

All:  $0.014 \pm 0.004$   $\chi^2/\text{NDF}$ : 110.1/104

- sign  $0.010 \pm 0.006$   $\chi^2/\text{NDF}$ : 52.1/53

asym\_sam\_37\_48\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 33.492 $\pm$ 0.006  $\chi^2$ /NDF: 1500526.1/25

Left Out: 29.334 $\pm$ 0.005  $\chi^2$ /NDF: 3874839.0/24

Right Out: 36.017 $\pm$ 0.007  $\chi^2$ /NDF: 1781988.9/30

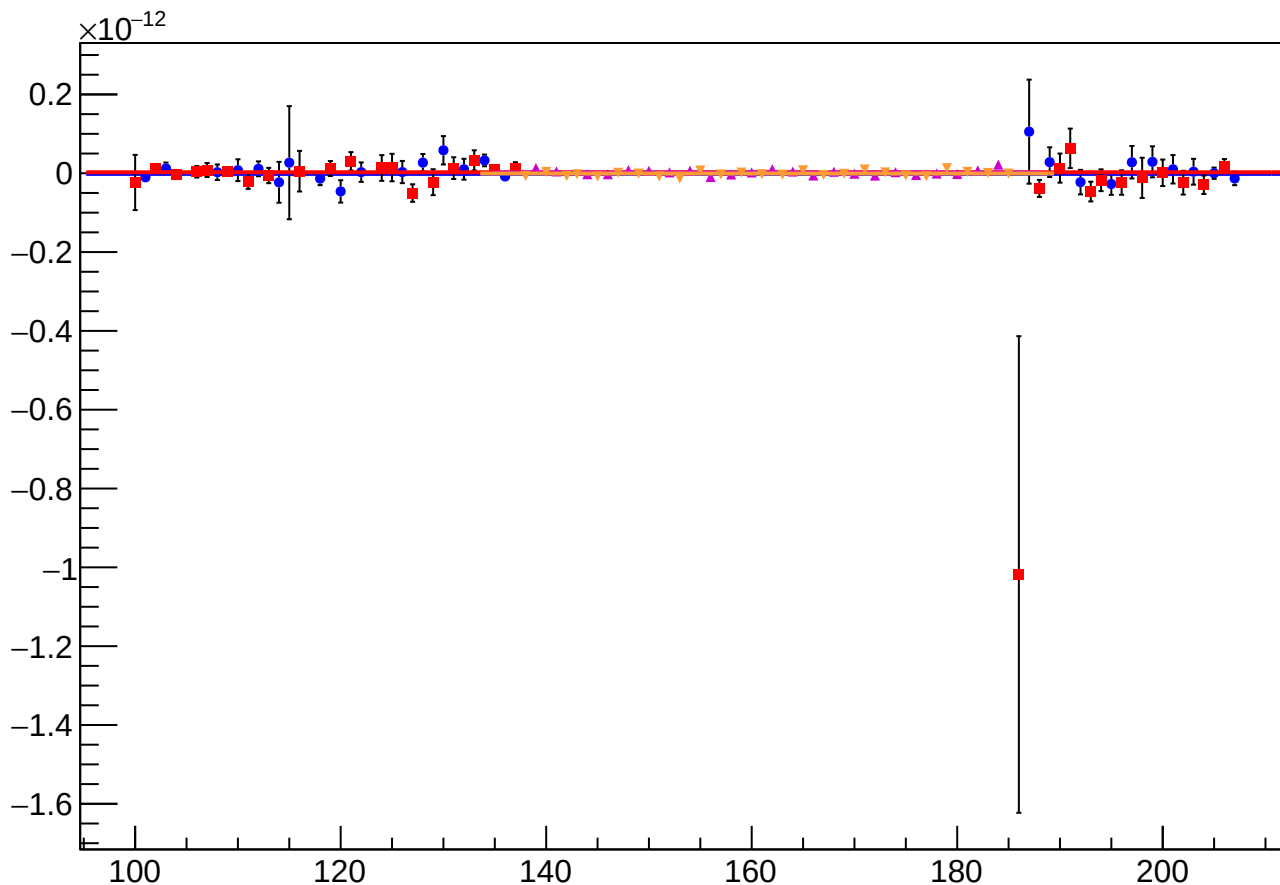
Left In: 29.124 $\pm$ 0.005  $\chi^2$ /NDF: 2839078.4/22

+ sign 30.945 $\pm$ 0.004  $\chi^2$ /NDF: 5635319.6/50

All: 31.337 $\pm$ 0.003  $\chi^2$ /NDF: 10955433.7/104

- sign 31.747 $\pm$ 0.004  $\chi^2$ /NDF: 5300200.2/53

asym\_sam\_37\_48\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 21.3/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 15.1/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 30.6/30

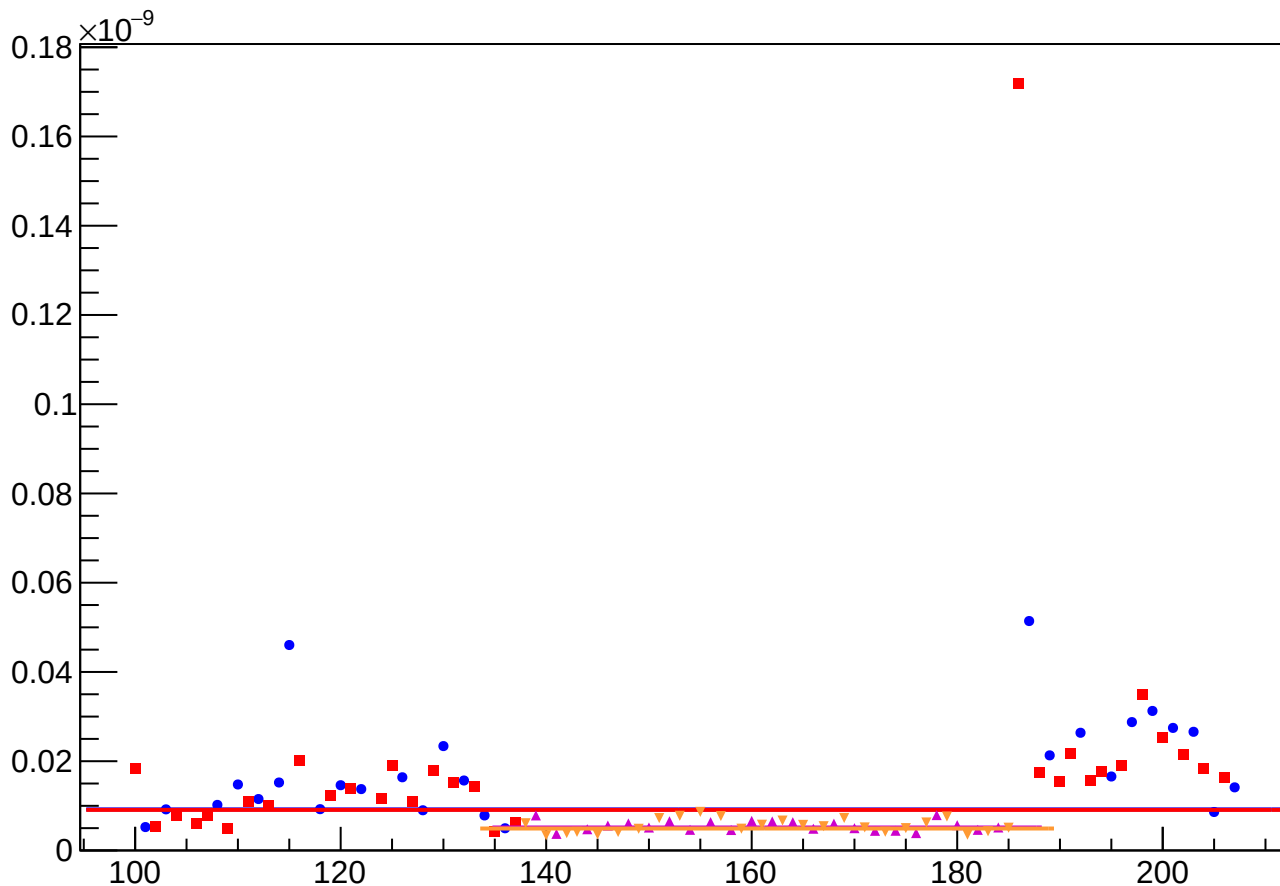
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 16.5/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 36.4/50

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 85.4/104

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 47.2/53

asym\_sam\_37\_48\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 5852529.9/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1871499.4/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 5625516.9/30

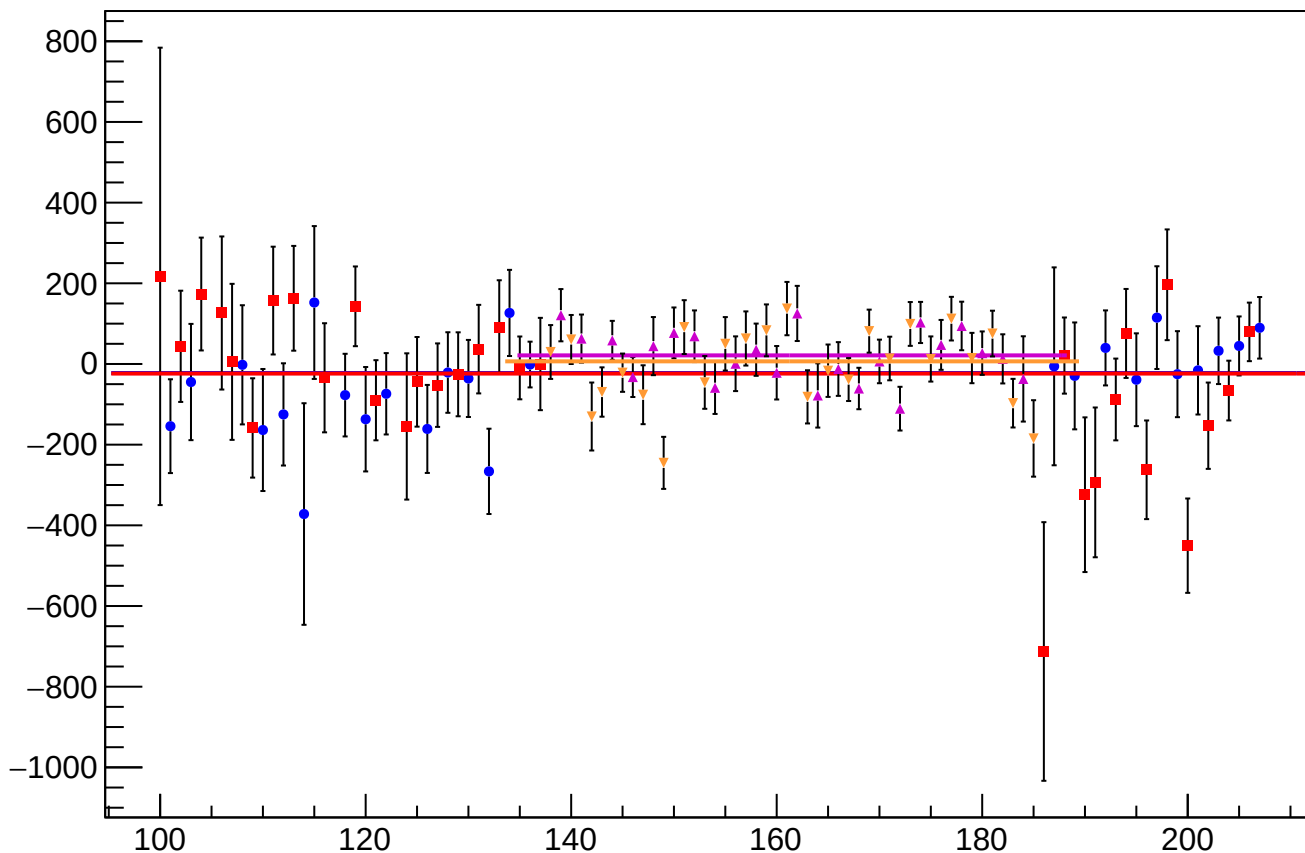
Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 976775.4/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 10336729.3/50

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 19321219.0/104

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 8942200.3/53

# reg\_asym\_sam\_15\_26\_dd\_mean vs Slug



Right In:  $-22.438 \pm 20.610$   $\chi^2/\text{NDF}$ : 20.8/25

Left Out:  $6.523 \pm 12.287$   $\chi^2/\text{NDF}$ : 50.6/24

Right Out:  $-23.736 \pm 20.820$   $\chi^2/\text{NDF}$ : 47.6/30

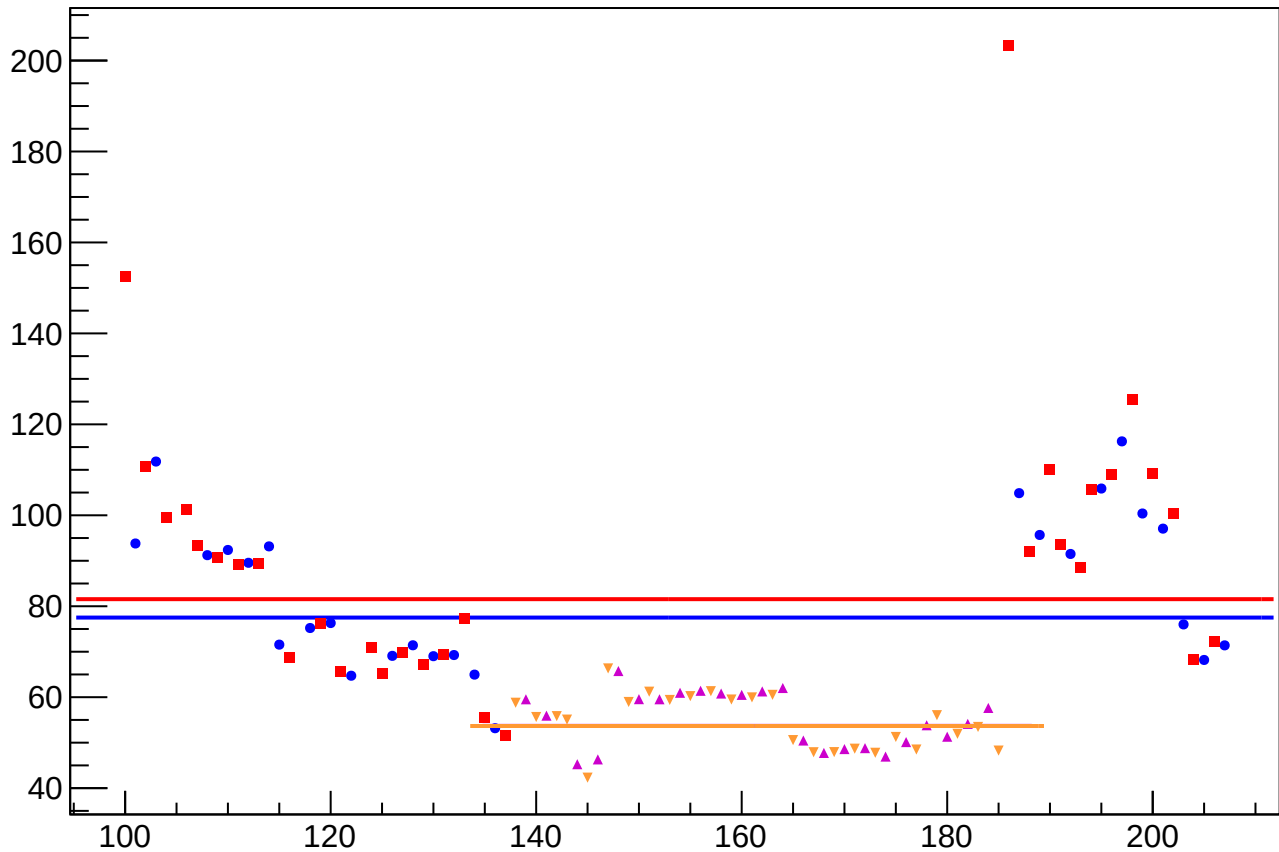
Left In:  $21.336 \pm 12.649$   $\chi^2/\text{NDF}$ : 25.4/22

+ sign  $-1.071 \pm 10.554$   $\chi^2/\text{NDF}$ : 72.8/50

All:  $3.933 \pm 7.552$   $\chi^2/\text{NDF}$ : 149.6/104

- sign  $9.184 \pm 10.810$   $\chi^2/\text{NDF}$ : 76.4/53

# reg\_asym\_sam\_15\_26\_dd\_rms vs Slug



Right In: 77.510 $\pm$ 0.015  $\chi^2/\text{NDF}$ : 1308911.3/25

Left Out: 53.666 $\pm$ 0.009  $\chi^2/\text{NDF}$ : 472206.8/24

Right Out: 81.556 $\pm$ 0.015  $\chi^2/\text{NDF}$ : 1834685.3/30

Left In: 53.695 $\pm$ 0.009  $\chi^2/\text{NDF}$ : 471343.7/22

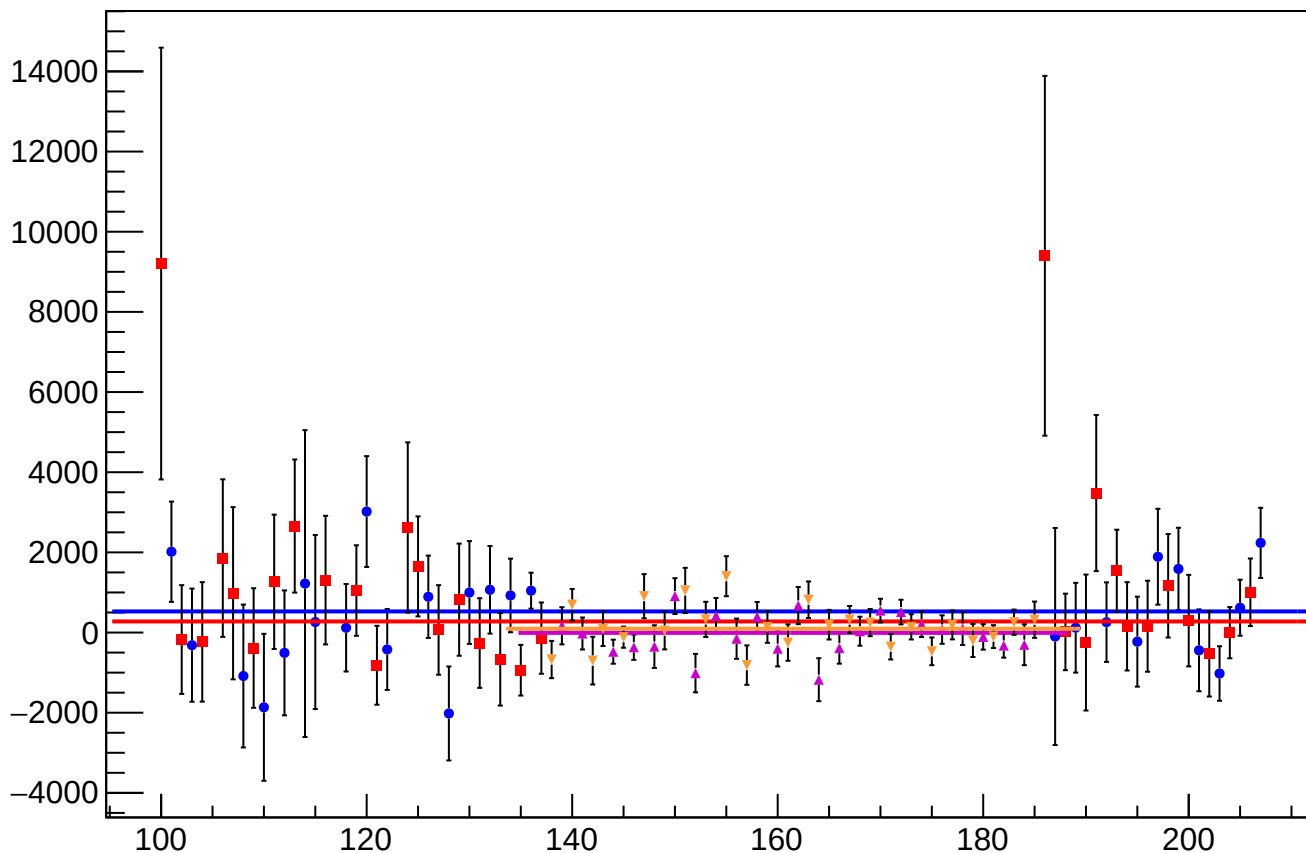
+ sign 59.918 $\pm$ 0.007  $\chi^2/\text{NDF}$ : 3756098.6/50

All: 60.547 $\pm$ 0.005  $\chi^2/\text{NDF}$ : 8692779.3/104

- sign 61.206 $\pm$ 0.008  $\chi^2/\text{NDF}$ : 4922135.0/53



asym\_sam\_15\_26\_dd\_reg\_correction\_mean vs Slug



Right In: 526.877 $\pm$ 200.352  $\chi^2/\text{NDF}$ : 28.8/25

Left Out: 95.456 $\pm$ 77.134  $\chi^2/\text{NDF}$ :33.2/24

Right Out: 277.268 $\pm$ 209.421  $\chi^2/\text{NDF}$ : 26.5/30

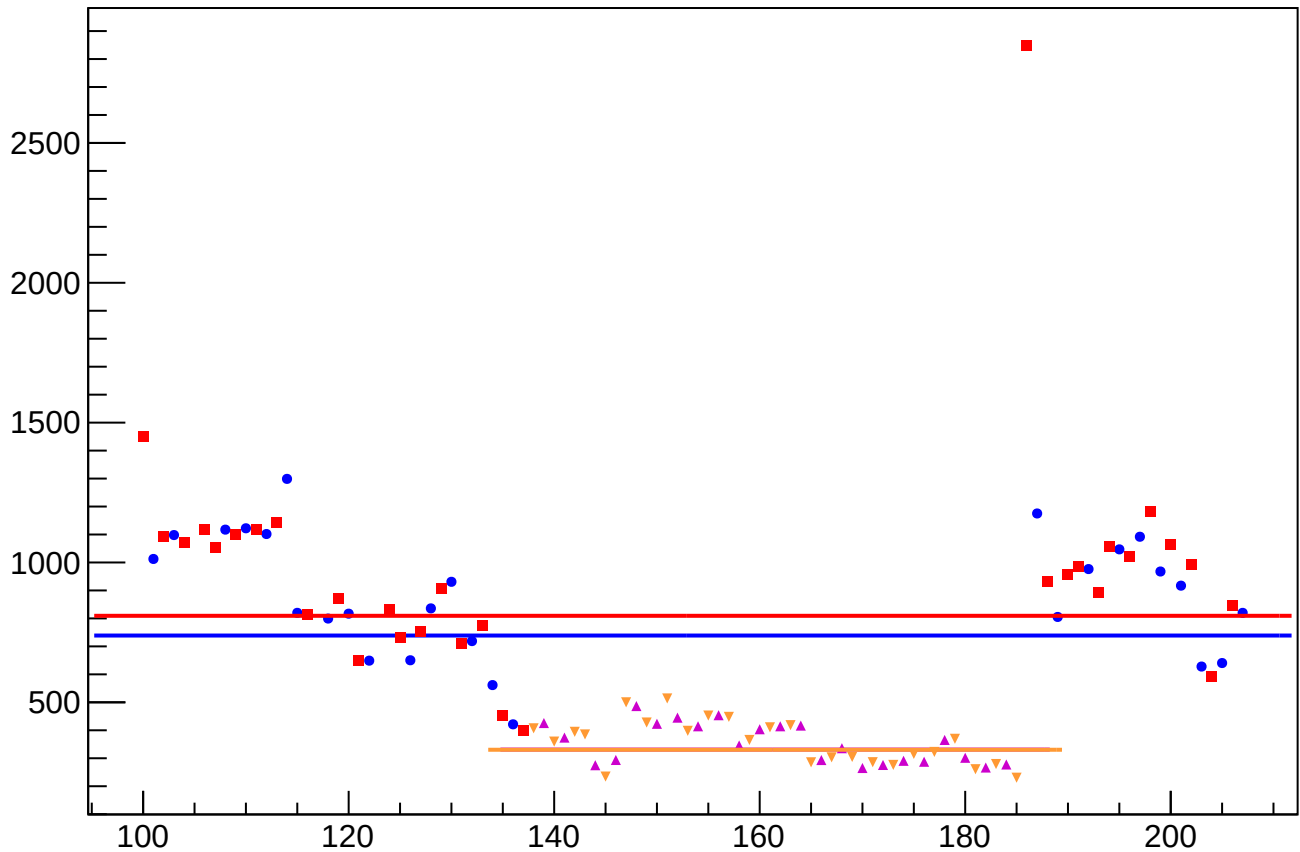
Left In: -7.879 $\pm$ 79.125  $\chi^2/\text{NDF}$ :32.3/22

+ sign 151.147 $\pm$ 71.984  $\chi^2/\text{NDF}$ : 66.0/50

All: 91.164 $\pm$ 51.604  $\chi^2/\text{NDF}$ : 127.8/104

- sign 27.742 $\pm$ 74.018  $\chi^2/\text{NDF}$ : 60.4/53

asym\_sam\_15\_26\_dd\_reg\_correction\_rms vs Slug



Right In: 738.783 $\pm$ 0.142  $\chi^2$ /NDF: 2501786.8/25

Left Out: 330.405 $\pm$ 0.055  $\chi^2$ /NDF: 1752470.5/24

Right Out: 809.322 $\pm$ 0.148  $\chi^2$ /NDF: 2867570.5/30

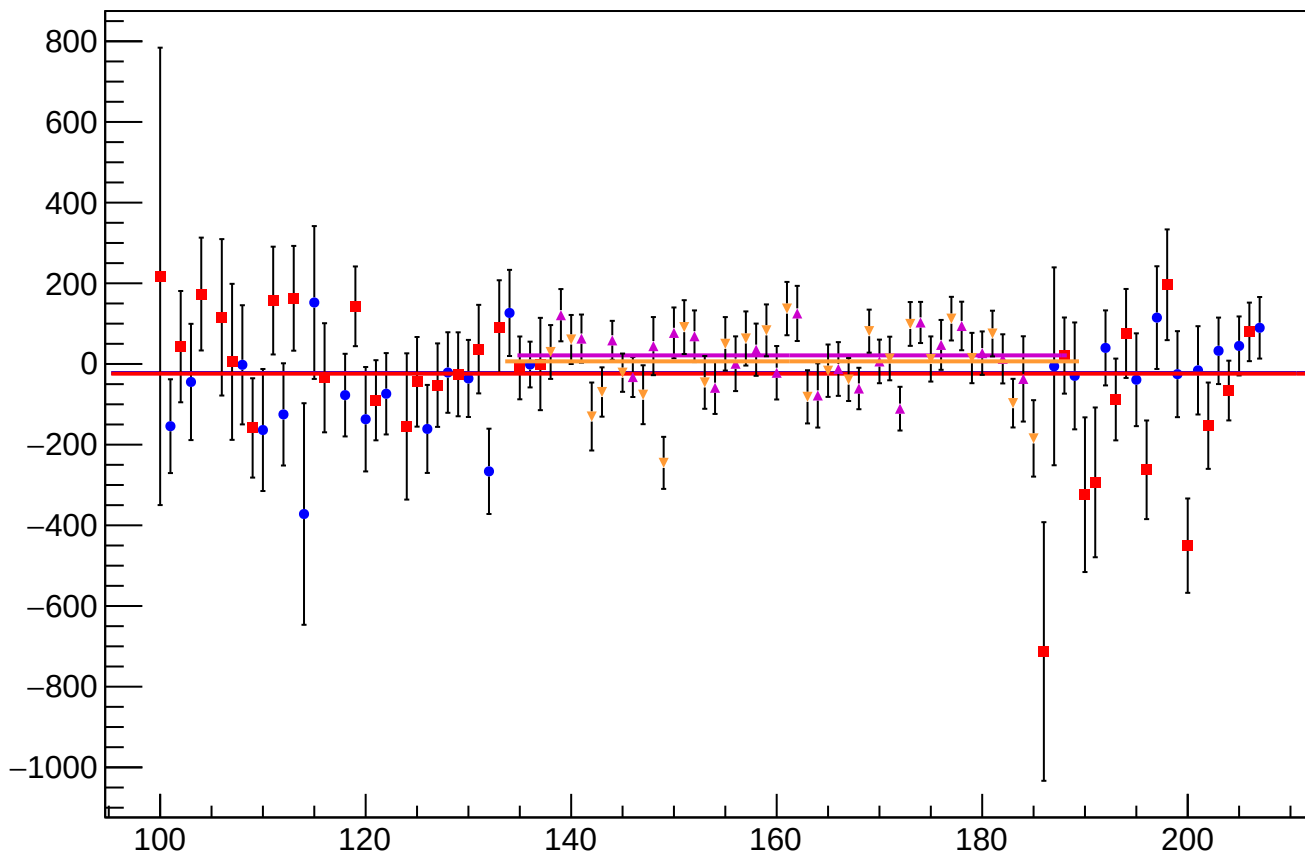
Left In: 331.059 $\pm$ 0.056  $\chi^2$ /NDF: 1325602.5/22

+ sign 383.121 $\pm$ 0.051  $\chi^2$ /NDF: 11490984.9/50

All: 386.856 $\pm$ 0.036  $\chi^2$ /NDF: 24823113.3/10

- sign 390.804 $\pm$ 0.052  $\chi^2$ /NDF: 13321055.3/53

# cor\_asym\_sam\_15\_26\_dd\_mean vs Slug



Right In:  $-22.430 \pm 20.610$   $\chi^2/\text{NDF}$ : 20.8/25

Left Out:  $6.526 \pm 12.287$   $\chi^2/\text{NDF}$ : 50.6/24

Right Out:  $-23.956 \pm 20.825$   $\chi^2/\text{NDF}$ : 47.4/30

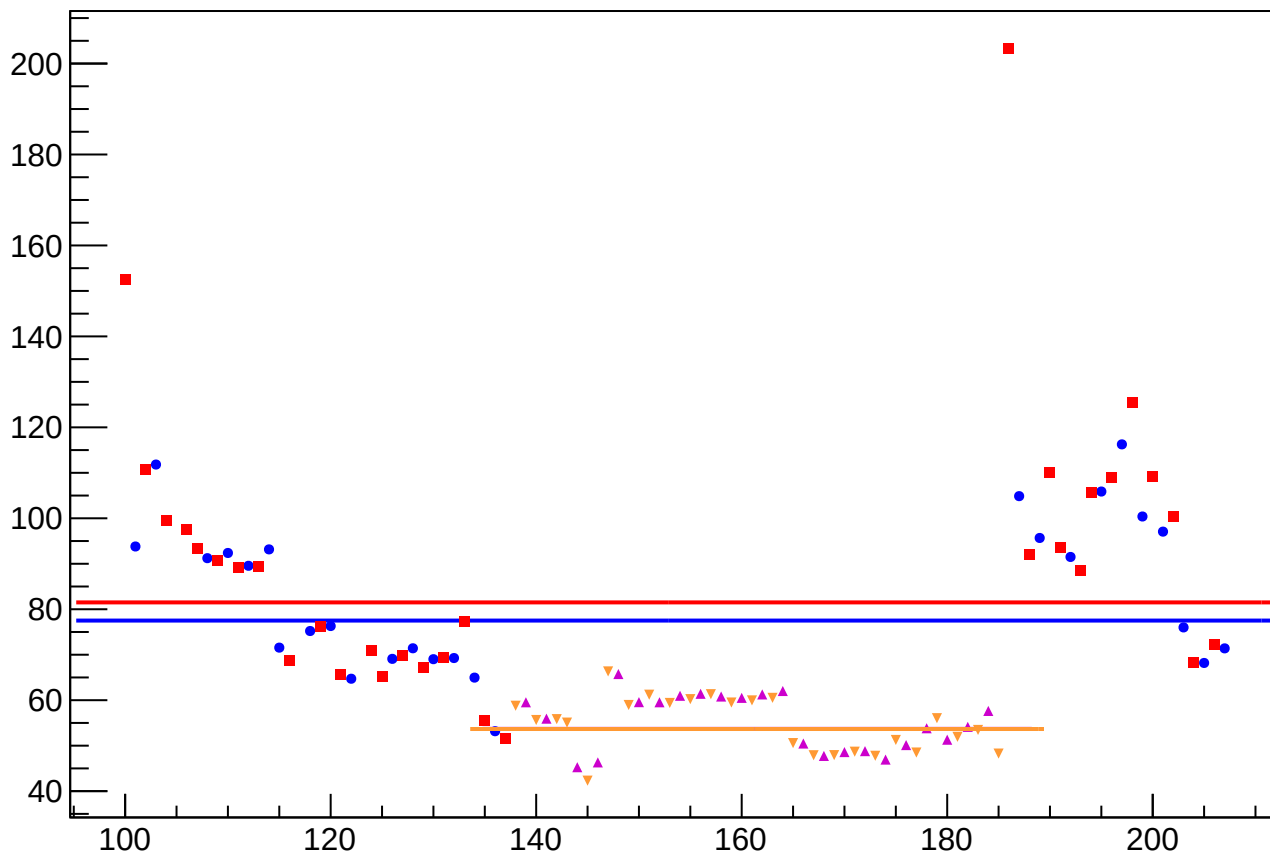
Left In:  $21.335 \pm 12.649$   $\chi^2/\text{NDF}$ : 25.4/22

+ sign  $-1.067 \pm 10.554$   $\chi^2/\text{NDF}$ : 72.8/50

All:  $3.908 \pm 7.552$   $\chi^2/\text{NDF}$ : 149.6/104

- sign  $9.129 \pm 10.811$   $\chi^2/\text{NDF}$ : 76.3/53

# cor\_asym\_sam\_15\_26\_dd\_rms vs Slug



Right In:  $77.510 \pm 0.015$   $\chi^2/\text{NDF}: 1308913.6/25$

Left Out:  $53.666 \pm 0.009$   $\chi^2/\text{NDF}: 472206.8/24$

Right Out:  $81.505 \pm 0.015$   $\chi^2/\text{NDF}: 1827035.3/30$

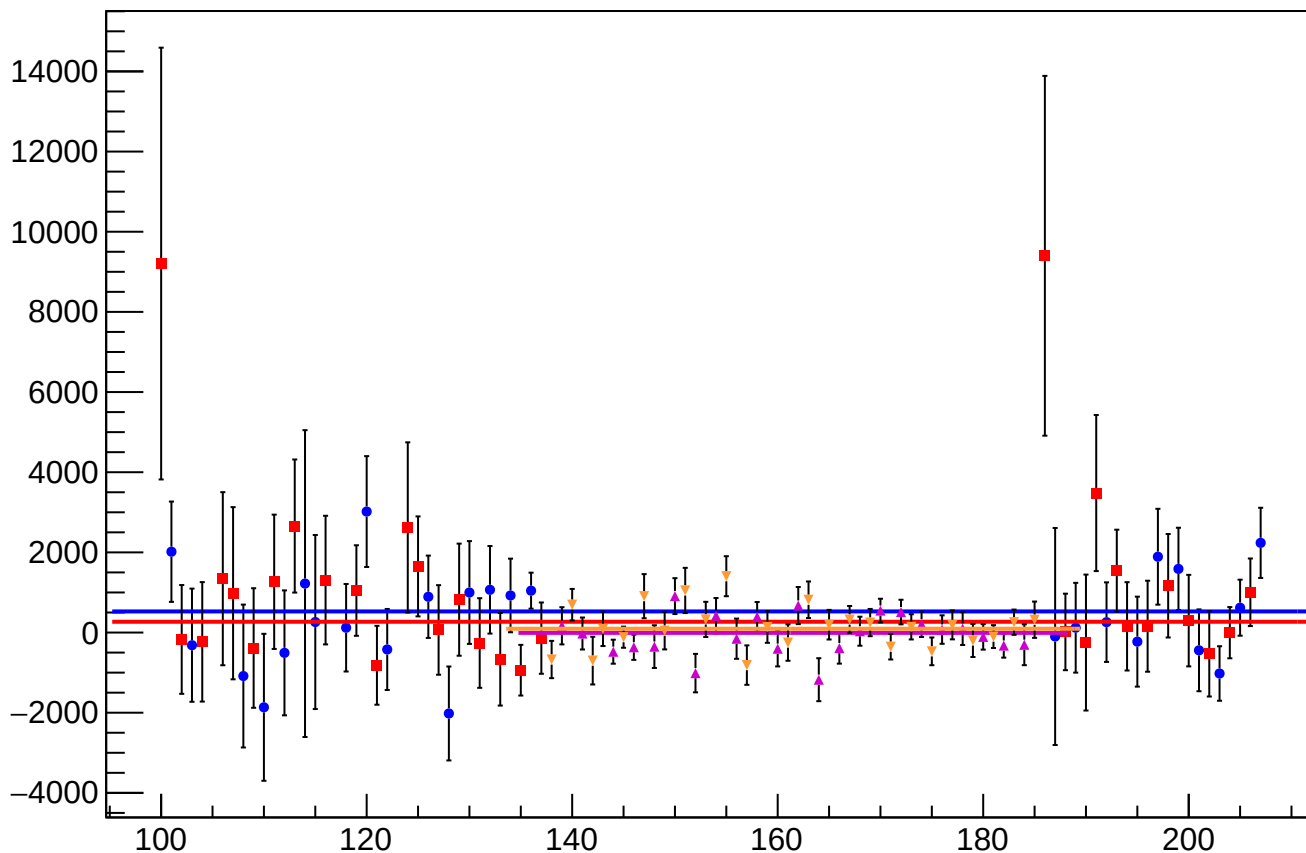
Left In:  $53.695 \pm 0.009$   $\chi^2/\text{NDF}: 471343.7/22$

+ sign  $59.918 \pm 0.007$   $\chi^2/\text{NDF}: 3756101.2/50$

All:  $60.538 \pm 0.005$   $\chi^2/\text{NDF}: 8673976.5/104$

- sign  $61.189 \pm 0.008$   $\chi^2/\text{NDF}: 4903710.9/53$

asym\_sam\_15\_26\_dd\_cor\_correction\_mean vs Slug



Right In: 526.873 $\pm$ 200.352  $\chi^2$ /NDF: 28.8/25

Left Out: 95.458 $\pm$ 77.134  $\chi^2$ /NDF:33.2/24

Right Out: 269.428 $\pm$ 209.628  $\chi^2$ /NDF: 26.1/30

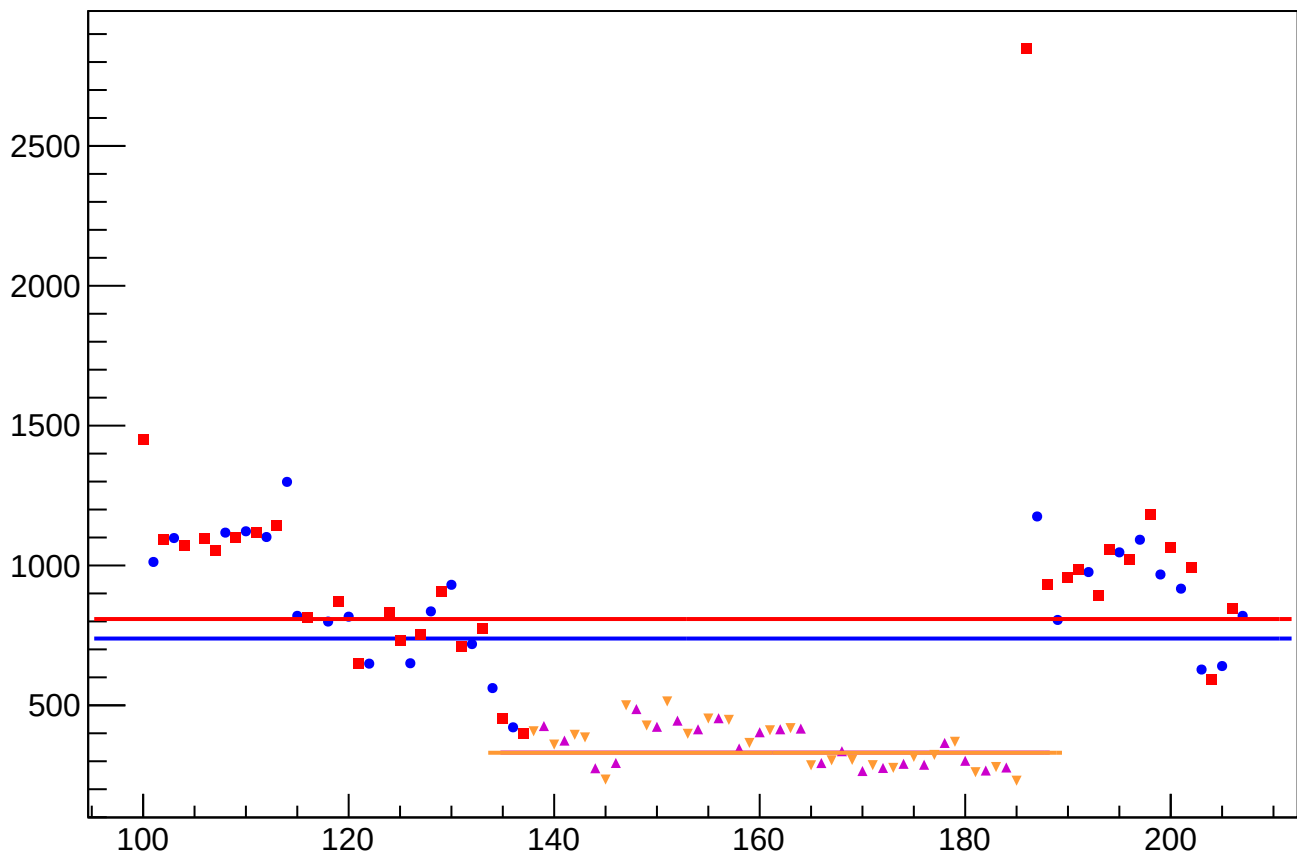
Left In: -7.875 $\pm$ 79.125  $\chi^2$ /NDF:32.3/22

+ sign 151.148 $\pm$ 71.984  $\chi^2$ /NDF: 66.0/50

All: 90.669 $\pm$ 51.608  $\chi^2$ /NDF: 127.4/104

- sign 26.706 $\pm$ 74.027  $\chi^2$ /NDF: 59.9/53

asym\_sam\_15\_26\_dd\_cor\_correction\_rms vs Slug



Right In: 738.783 $\pm$ 0.142  $\chi^2$ /NDF: 2501810.2/25

Left Out: 330.405 $\pm$ 0.055  $\chi^2$ /NDF: 1752469.2/24

Right Out: 808.513 $\pm$ 0.148  $\chi^2$ /NDF: 2853579.8/30

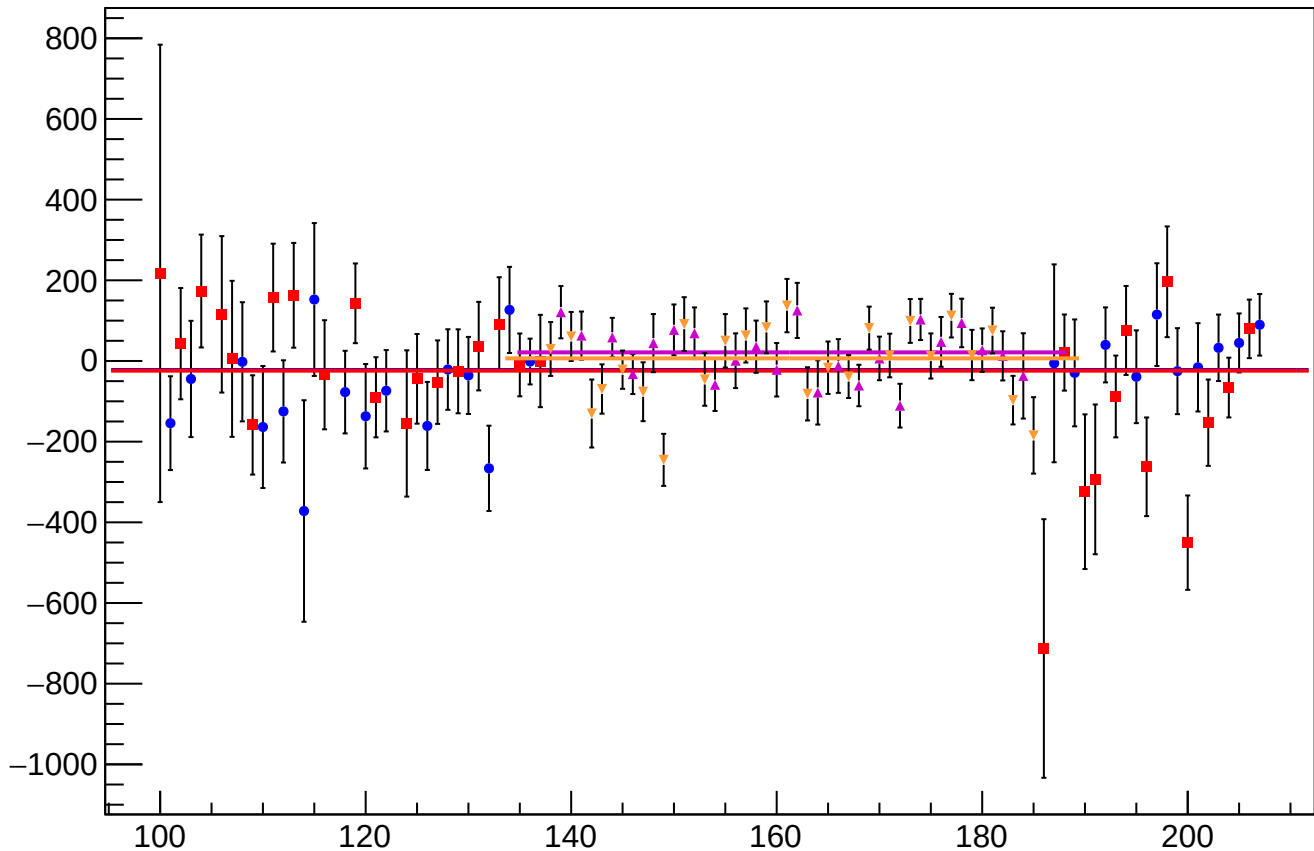
Left In: 331.058 $\pm$ 0.056  $\chi^2$ /NDF: 1325610.1/22

+ sign 383.121 $\pm$ 0.051  $\chi^2$ /NDF: 11491005.1/50

All: 386.756 $\pm$ 0.036  $\chi^2$ /NDF: 24762000.1/10

- sign 390.600 $\pm$ 0.052  $\chi^2$ /NDF: 13260504.2/53

eigen\_cor\_asym\_sam\_15\_26\_dd\_mean vs Slug



Right In:  $-22.430 \pm 20.610$   $\chi^2/\text{NDF}$ : 20.8/25

Left Out:  $6.526 \pm 12.287$   $\chi^2/\text{NDF}$ : 50.6/24

Right Out:  $-23.956 \pm 20.825$   $\chi^2/\text{NDF}$ : 47.4/30

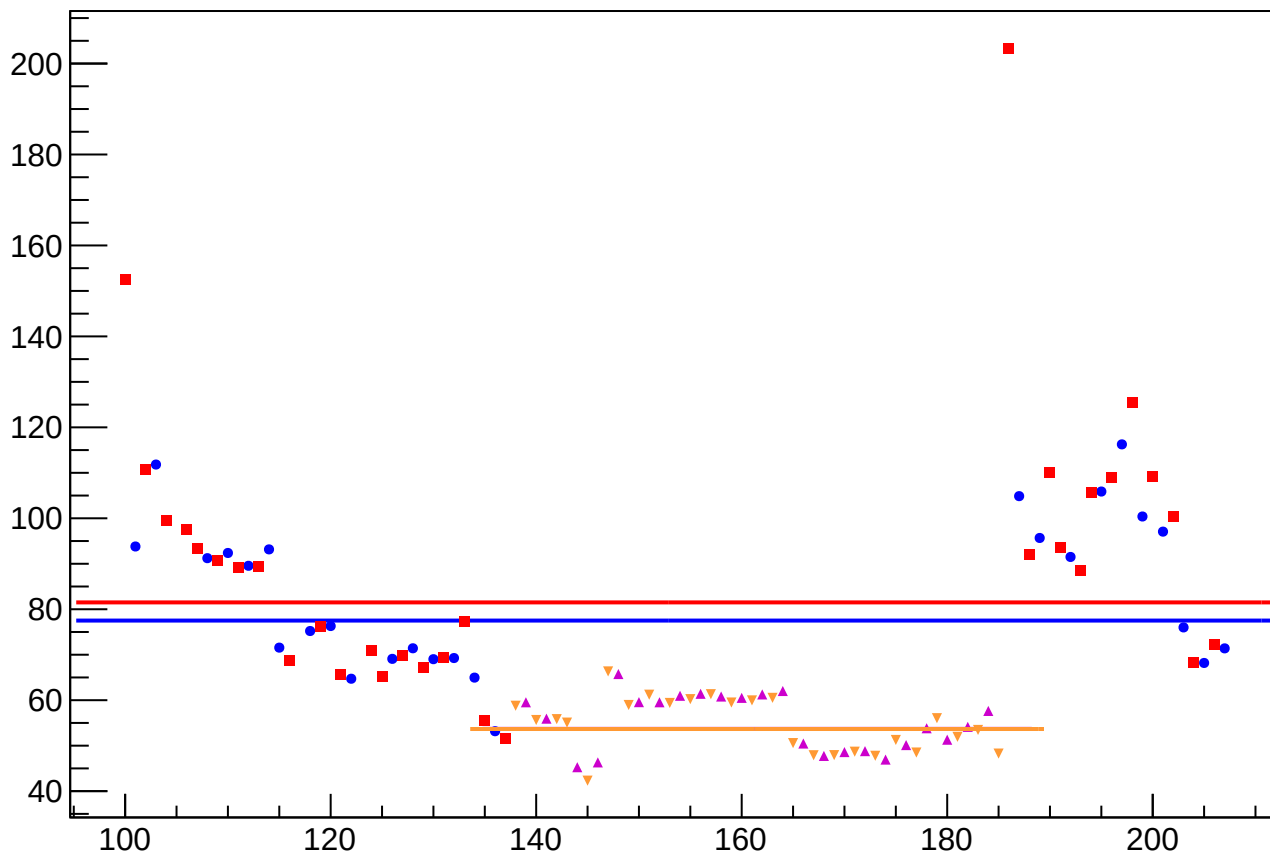
Left In:  $21.335 \pm 12.649$   $\chi^2/\text{NDF}$ : 25.4/22

+ sign  $-1.067 \pm 10.554$   $\chi^2/\text{NDF}$ : 72.8/50

All:  $3.908 \pm 7.552$   $\chi^2/\text{NDF}$ : 149.6/104

- sign  $9.129 \pm 10.811$   $\chi^2/\text{NDF}$ : 76.3/53

# eigen\_cor\_asym\_sam\_15\_26\_dd\_rms vs Slug



Right In:  $77.510 \pm 0.015$   $\chi^2/\text{NDF}: 1308913.6/25$

Left Out:  $53.666 \pm 0.009$   $\chi^2/\text{NDF}: 472206.8/24$

Right Out:  $81.505 \pm 0.015$   $\chi^2/\text{NDF}: 1827035.3/30$

Left In:  $53.695 \pm 0.009$   $\chi^2/\text{NDF}: 471343.7/22$

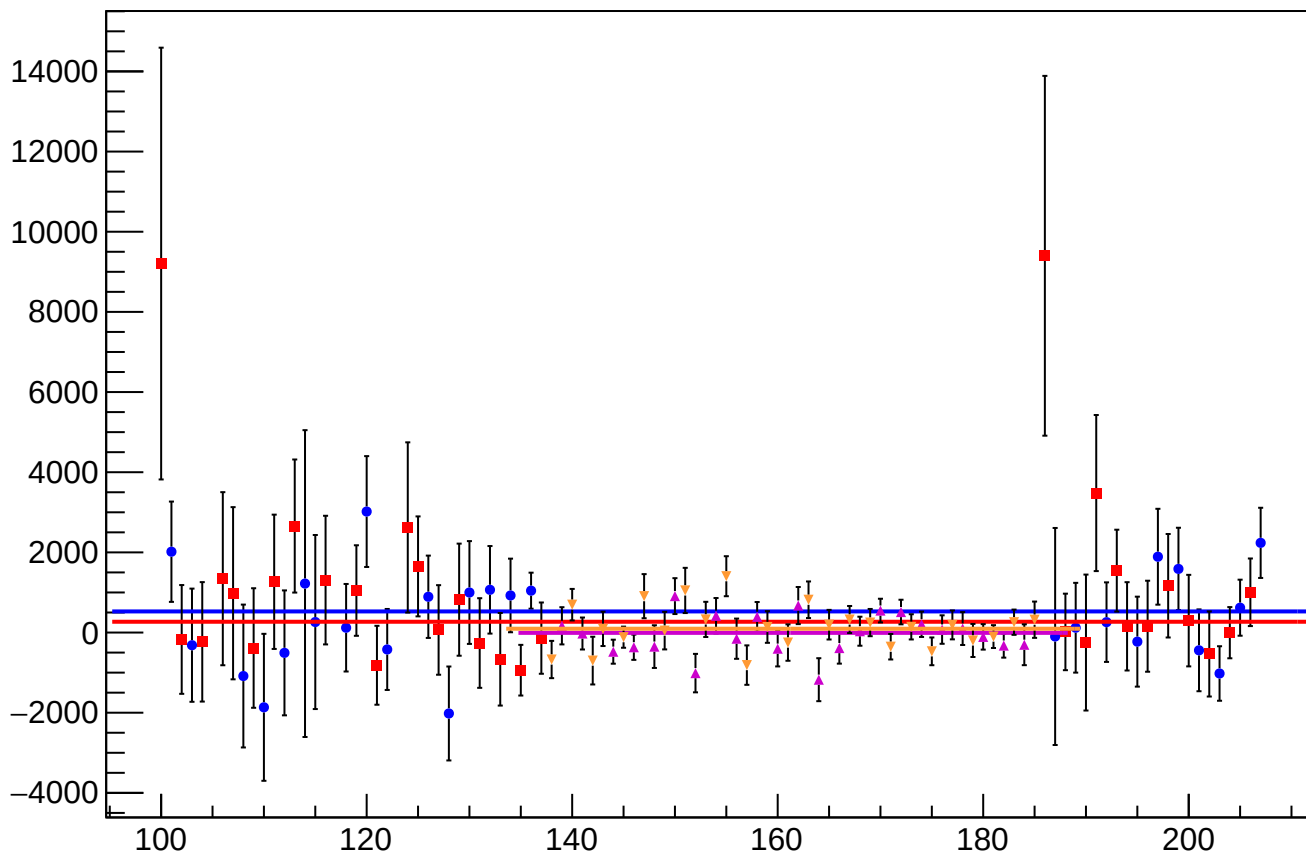
+ sign  $59.918 \pm 0.007$   $\chi^2/\text{NDF}: 3756101.2/50$

All:  $60.538 \pm 0.005$   $\chi^2/\text{NDF}: 8673976.5/104$

- sign  $61.189 \pm 0.008$   $\chi^2/\text{NDF}: 4903710.9/53$



asym\_sam\_15\_26\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In: 526.873 $\pm$ 200.352  $\chi^2$ /NDF: 28.8/25

Left Out: 95.458 $\pm$ 77.134  $\chi^2$ /NDF:33.2/24

Right Out: 269.428 $\pm$ 209.628  $\chi^2$ /NDF: 26.1/30

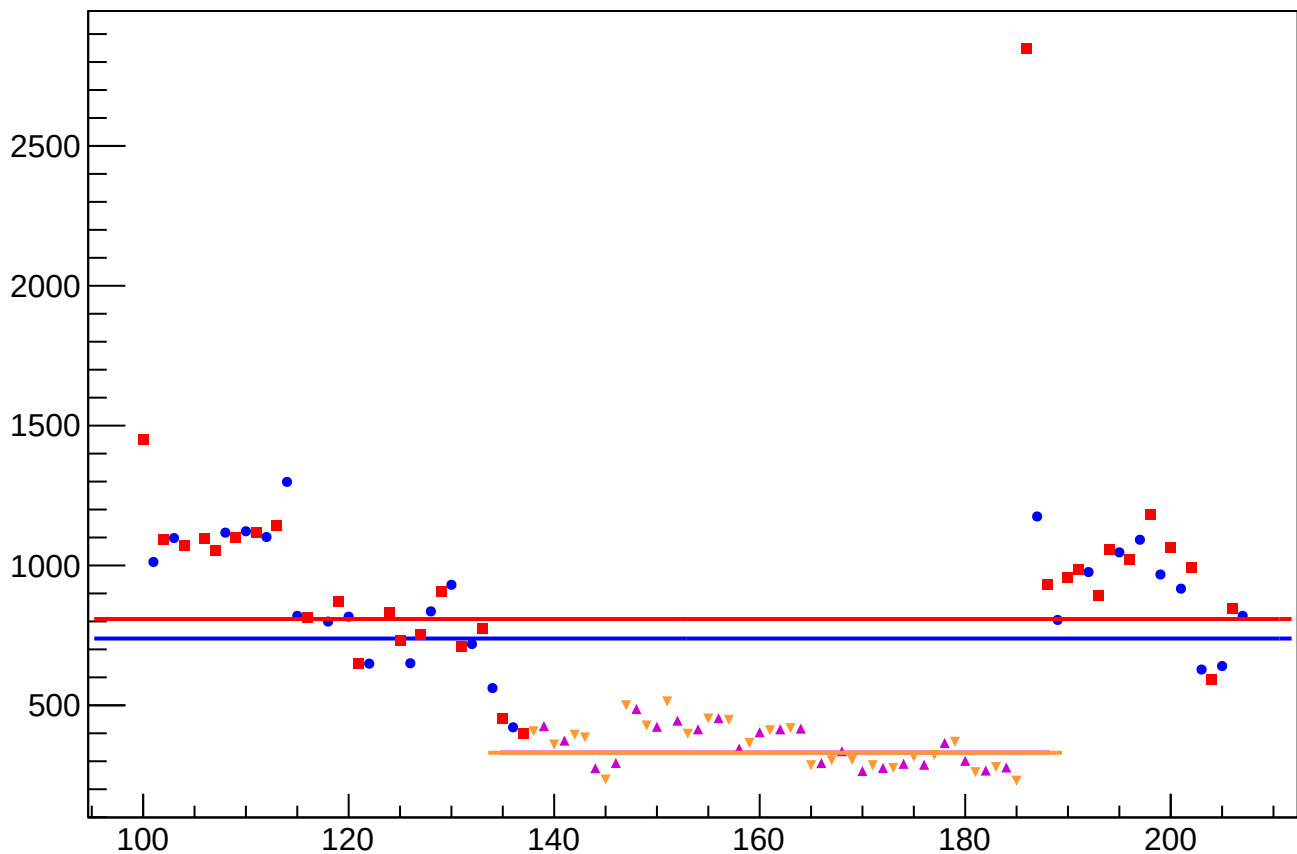
Left In: -7.875 $\pm$ 79.125  $\chi^2$ /NDF:32.3/22

+ sign 151.148 $\pm$ 71.984  $\chi^2$ /NDF: 66.0/50

All: 90.669 $\pm$ 51.608  $\chi^2$ /NDF: 127.4/104

- sign 26.706 $\pm$ 74.027  $\chi^2$ /NDF: 59.9/53

asym\_sam\_15\_26\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 738.783 $\pm$ 0.142  $\chi^2$ /NDF: 2501810.2/25

Left Out: 330.405 $\pm$ 0.055  $\chi^2$ /NDF: 1752469.2/24

Right Out: 808.513 $\pm$ 0.148  $\chi^2$ /NDF: 2853579.8/30

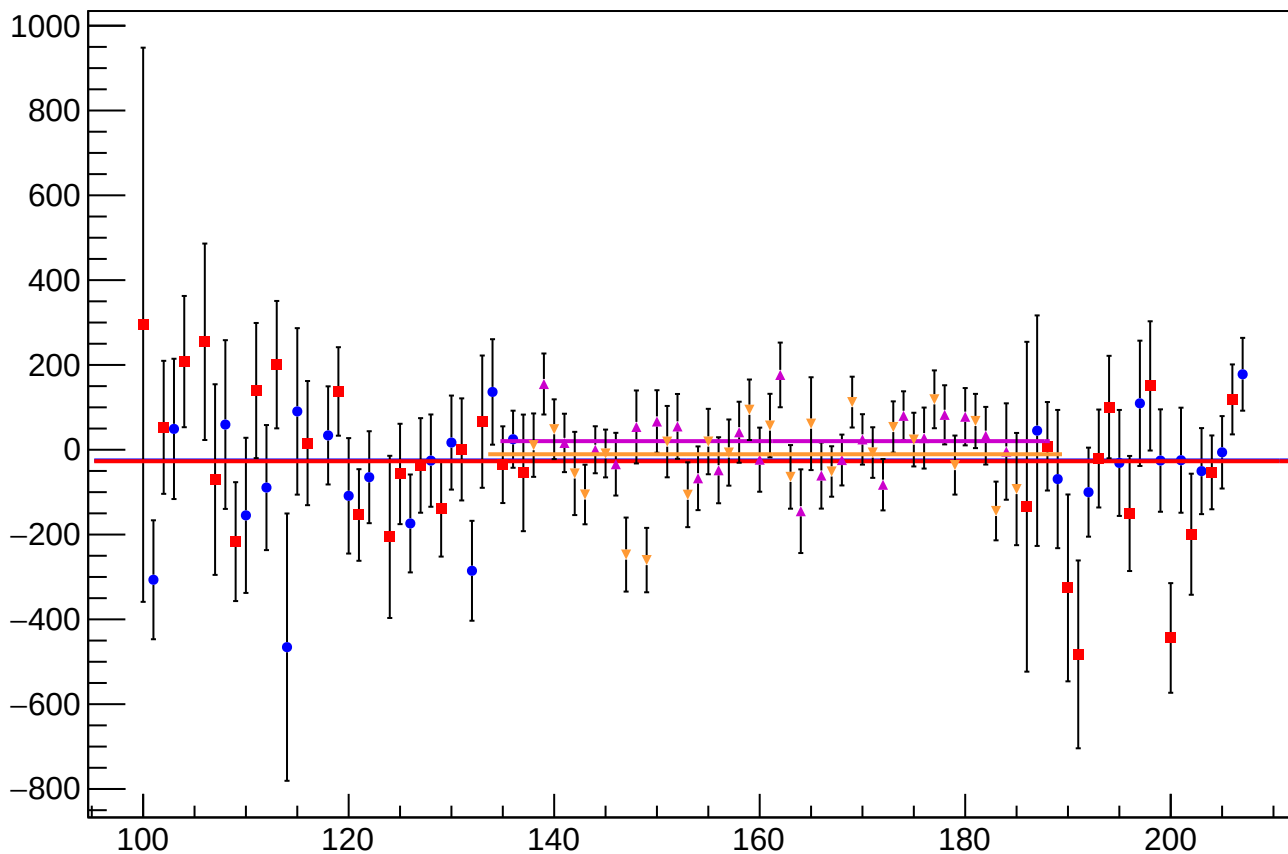
Left In: 331.058 $\pm$ 0.056  $\chi^2$ /NDF: 1325610.1/22

+ sign 383.121 $\pm$ 0.051  $\chi^2$ /NDF: 11491005.1/50

All: 386.756 $\pm$ 0.036  $\chi^2$ /NDF: 24762000.1/10

- sign 390.600 $\pm$ 0.052  $\chi^2$ /NDF: 13260504.2/53

# dit\_asym\_sam\_15\_26\_dd\_mean vs Slug



Right In:  $-25.272 \pm 23.624$   $\chi^2/\text{NDF}$ : 24.3/25

Left Out:  $-10.614 \pm 14.311$   $\chi^2/\text{NDF}$ : 42.2/24

Right Out:  $-27.083 \pm 23.616$   $\chi^2/\text{NDF}$ : 40.5/30

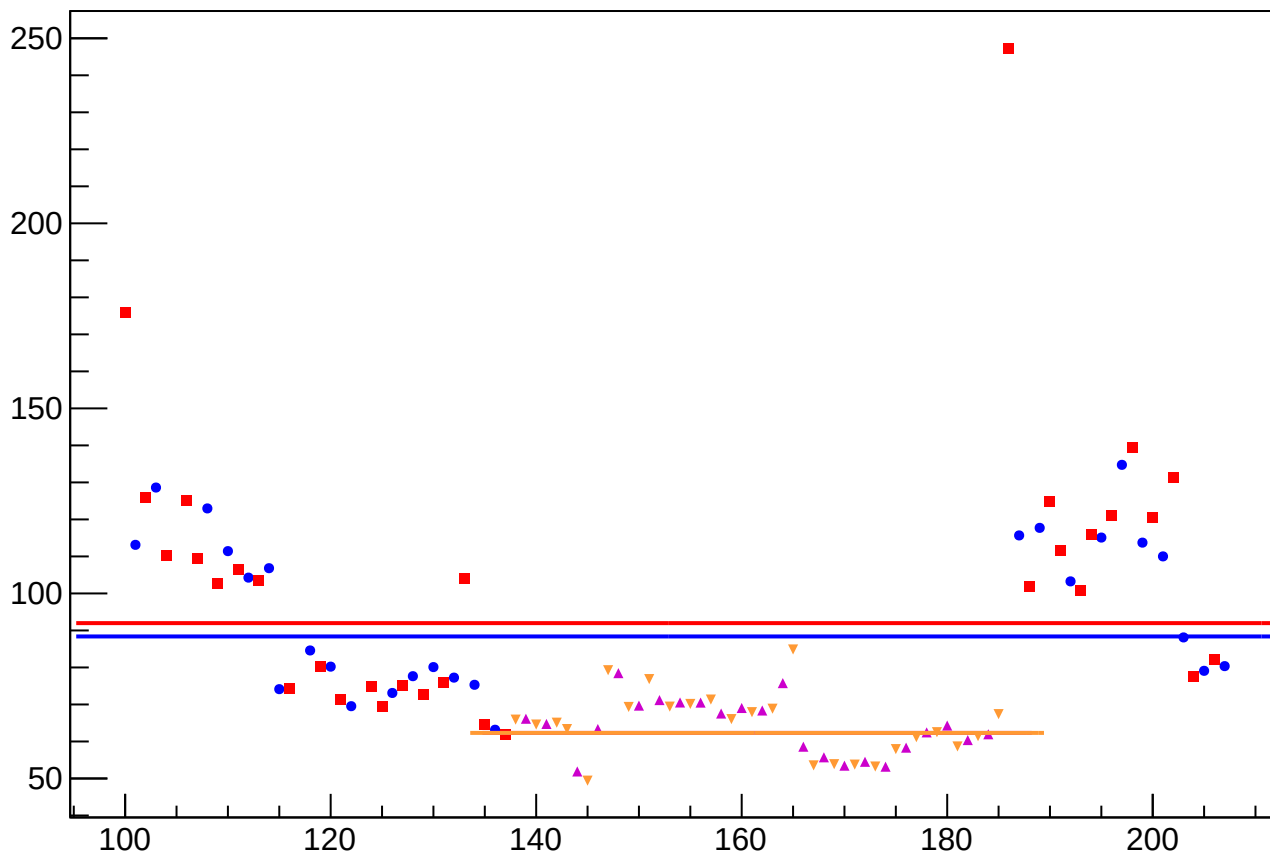
Left In:  $20.306 \pm 14.750$   $\chi^2/\text{NDF}$ : 21.7/22

+ sign  $-14.549 \pm 12.240$   $\chi^2/\text{NDF}$ : 66.8/50

All:  $-4.006 \pm 8.749$   $\chi^2/\text{NDF}$ : 133.4/104

- sign  $7.007 \pm 12.510$   $\chi^2/\text{NDF}$ : 65.1/53

dit\_asym\_sam\_15\_26\_dd\_rms vs Slug



Right In:  $88.378 \pm 0.017$   $\chi^2/\text{NDF}: 1372962.4/25$

Left Out:  $62.316 \pm 0.010$   $\chi^2/\text{NDF}: 636269.1/24$

Right Out:  $91.980 \pm 0.017$   $\chi^2/\text{NDF}: 2000590.4/30$

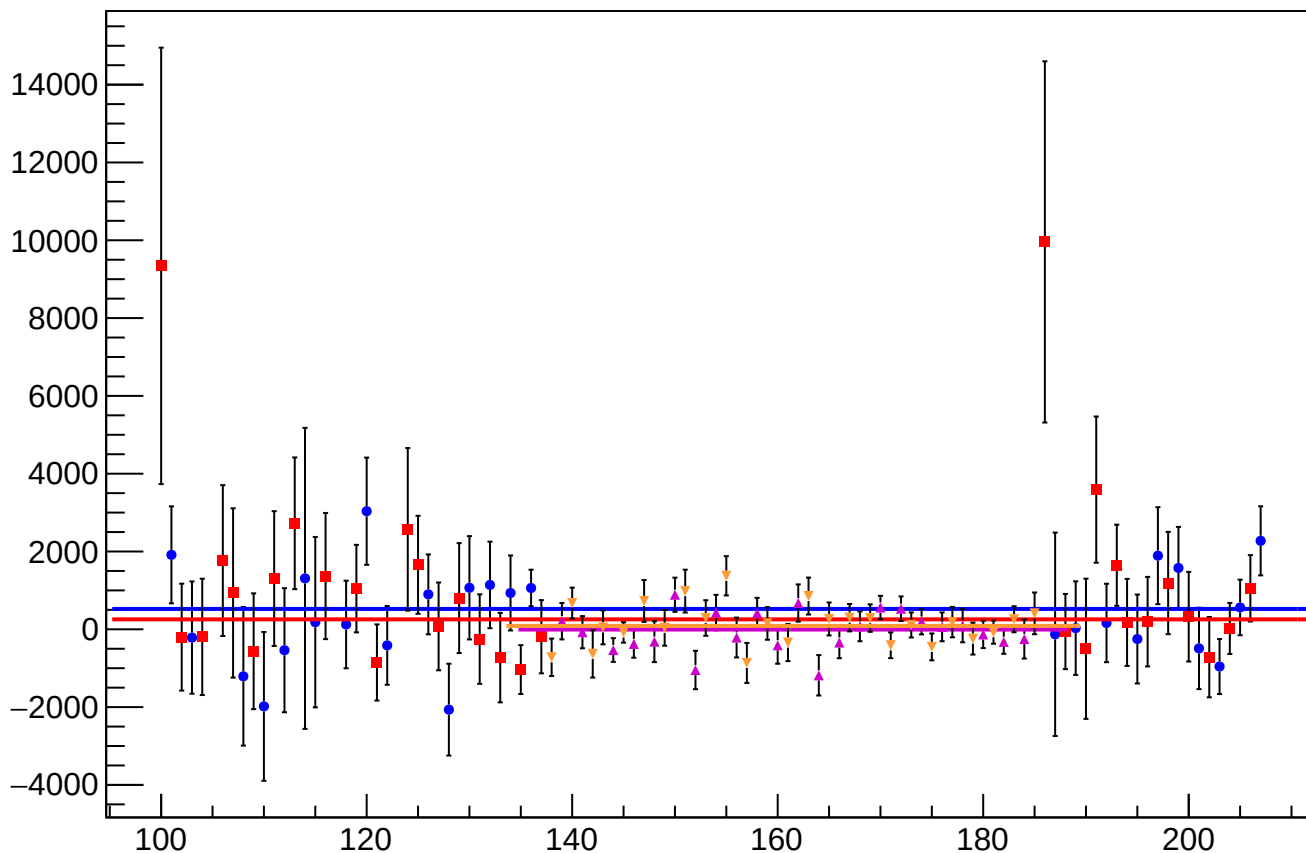
Left In:  $62.310 \pm 0.010$   $\chi^2/\text{NDF}: 484549.5/22$

+ sign  $69.313 \pm 0.009$   $\chi^2/\text{NDF}: 3789920.8/50$

All:  $69.960 \pm 0.006$   $\chi^2/\text{NDF}: 8557430.2/104$

- sign  $70.637 \pm 0.009$   $\chi^2/\text{NDF}: 4756065.5/53$

asym\_sam\_15\_26\_dd\_dit\_correction\_mean vs Slug



Right In:  $523.840 \pm 205.871$   $\chi^2/\text{NDF}$ : 28.1/25

Left Out:  $86.985 \pm 79.837$   $\chi^2/\text{NDF}$ : 31.7/24

Right Out:  $255.847 \pm 211.749$   $\chi^2/\text{NDF}$ : 28.6/30

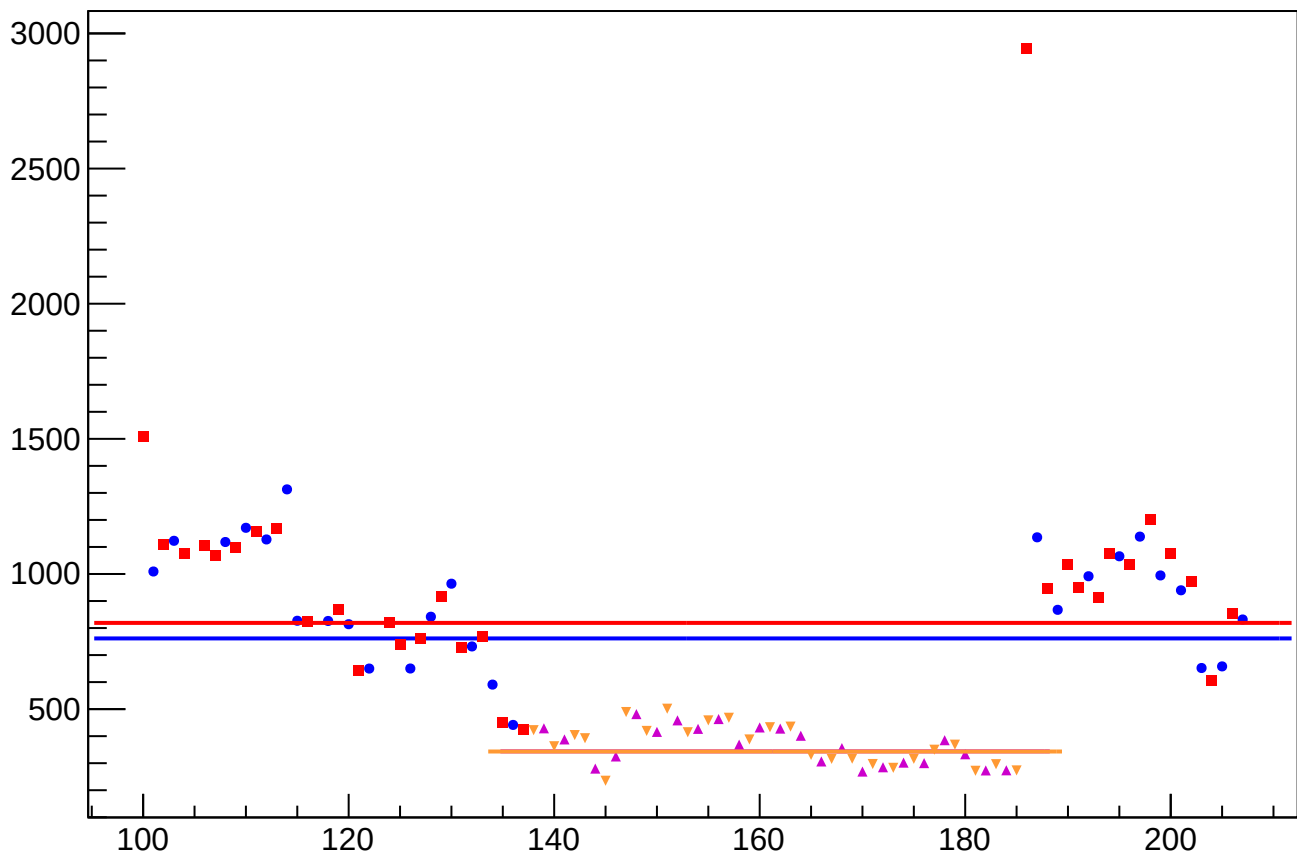
Left In:  $-6.497 \pm 82.111$   $\chi^2/\text{NDF}$ : 32.4/22

+ sign  $144.094 \pm 74.435$   $\chi^2/\text{NDF}$ : 63.7/50

All:  $87.578 \pm 53.368$   $\chi^2/\text{NDF}$ : 127.2/104

- sign  $27.795 \pm 76.556$   $\chi^2/\text{NDF}$ : 62.3/53

asym\_sam\_15\_26\_dd\_dit\_correction\_rms vs Slug



Right In: 761.574 $\pm$ 0.146  $\chi^2$ /NDF: 2371476.2/25

Left Out: 343.225 $\pm$ 0.056  $\chi^2$ /NDF: 1595394.3/24

Right Out: 819.045 $\pm$ 0.150  $\chi^2$ /NDF: 2844070.2/30

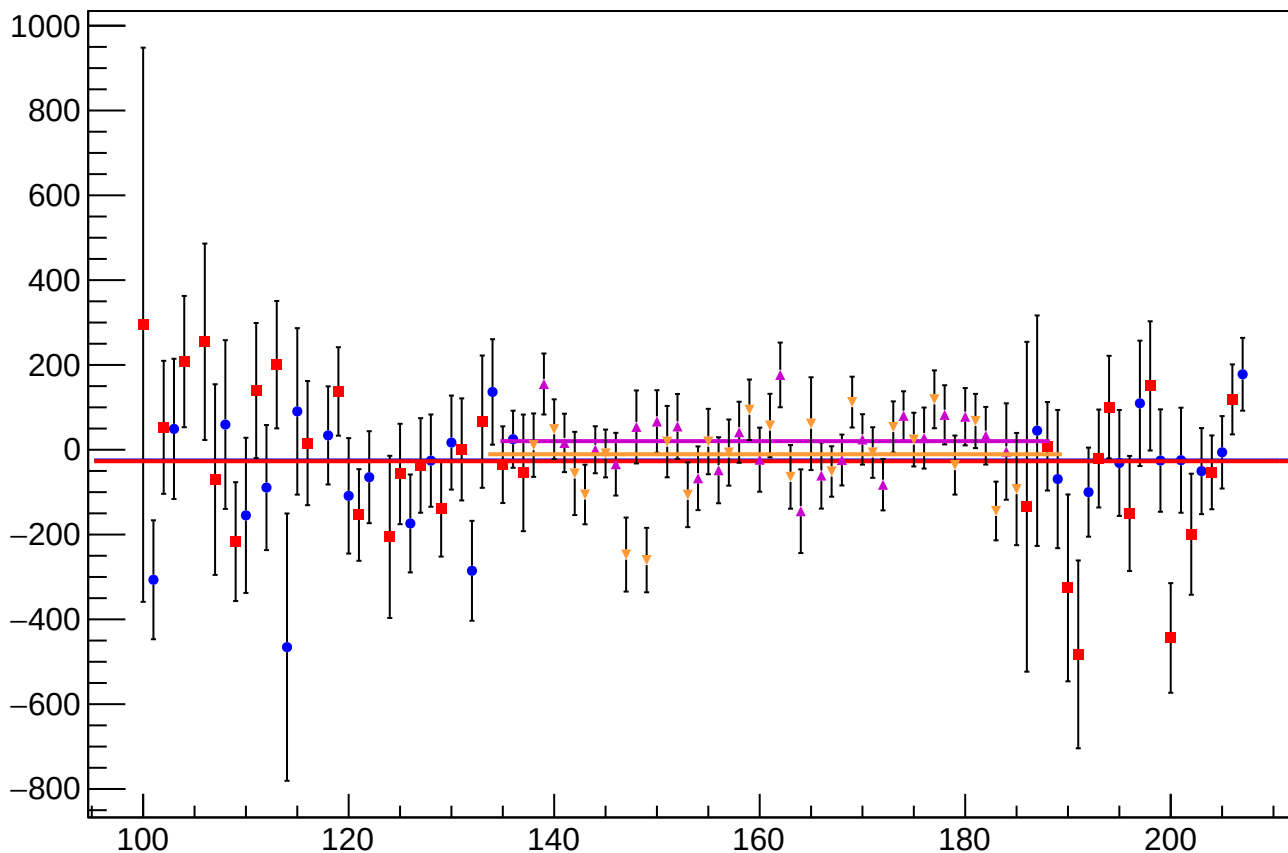
Left In: 343.717 $\pm$ 0.058  $\chi^2$ /NDF: 1258376.8/22

+ sign 397.915 $\pm$ 0.053  $\chi^2$ /NDF: 11146036.2/50

All: 401.770 $\pm$ 0.038  $\chi^2$ /NDF: 24020195.9/10

- sign 405.848 $\pm$ 0.054  $\chi^2$ /NDF: 12863119.4/53

# eigen\_dit\_asym\_sam\_15\_26\_dd\_mean vs Slug



Right In:  $-25.274 \pm 23.624$   $\chi^2/\text{NDF}$ : 24.3/25

Left Out:  $-10.613 \pm 14.311$   $\chi^2/\text{NDF}$ : 42.2/24

Right Out:  $-27.083 \pm 23.616$   $\chi^2/\text{NDF}$ : 40.5/30

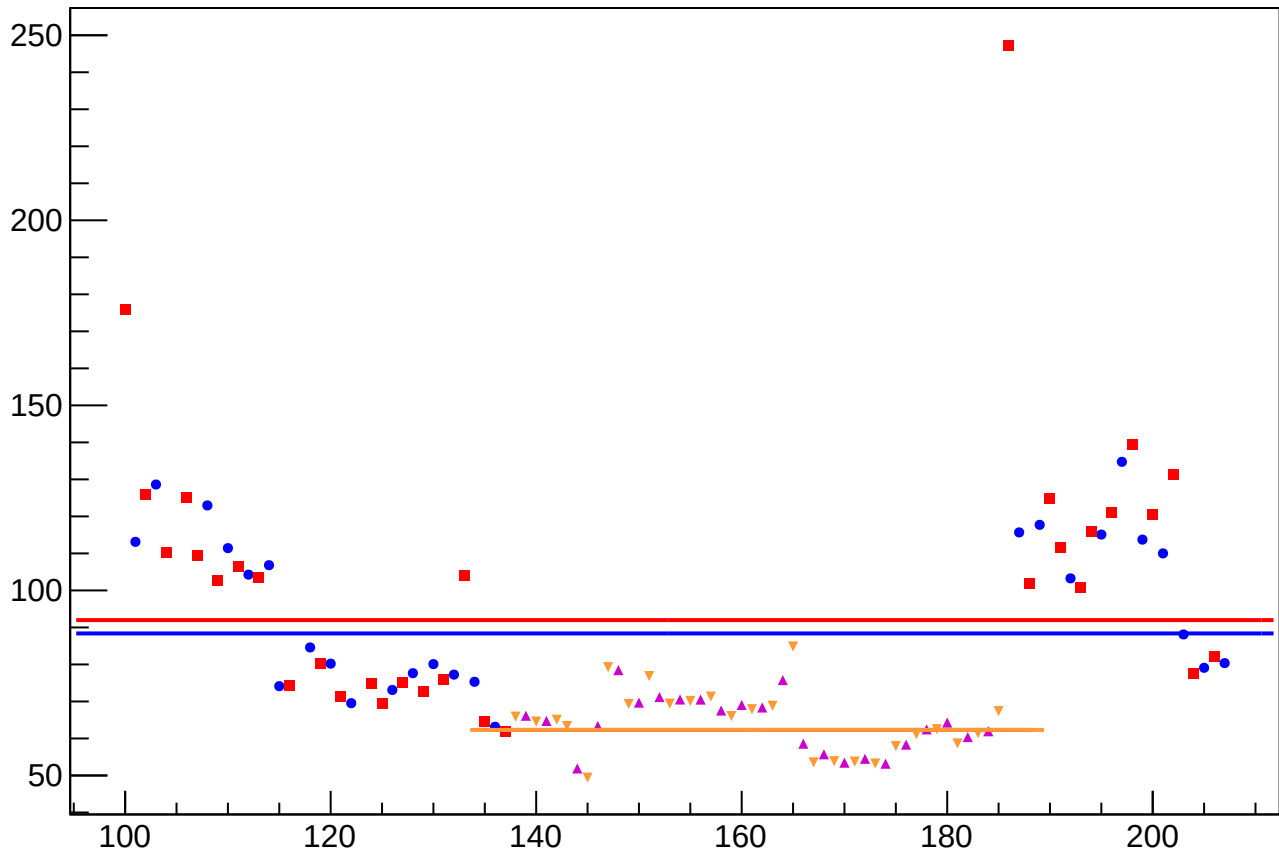
Left In:  $20.306 \pm 14.750$   $\chi^2/\text{NDF}$ : 21.7/22

+ sign  $-14.549 \pm 12.240$   $\chi^2/\text{NDF}$ : 66.8/50

All:  $-4.006 \pm 8.749$   $\chi^2/\text{NDF}$ : 133.4/104

- sign  $7.007 \pm 12.510$   $\chi^2/\text{NDF}$ : 65.1/53

eigen\_dit\_asym\_sam\_15\_26\_dd\_rms vs Slug



Right In: 88.378+/-0.017  $\chi^2/\text{NDF}$ : 1372980.2/25

Left Out: 62.316+/-0.010  $\chi^2/\text{NDF}$ : 636268.2/24

Right Out: 91.980+/-0.017  $\chi^2/\text{NDF}$ : 2000588.3/30

Left In: 62.311+/-0.010  $\chi^2/\text{NDF}$ : 484544.3/22

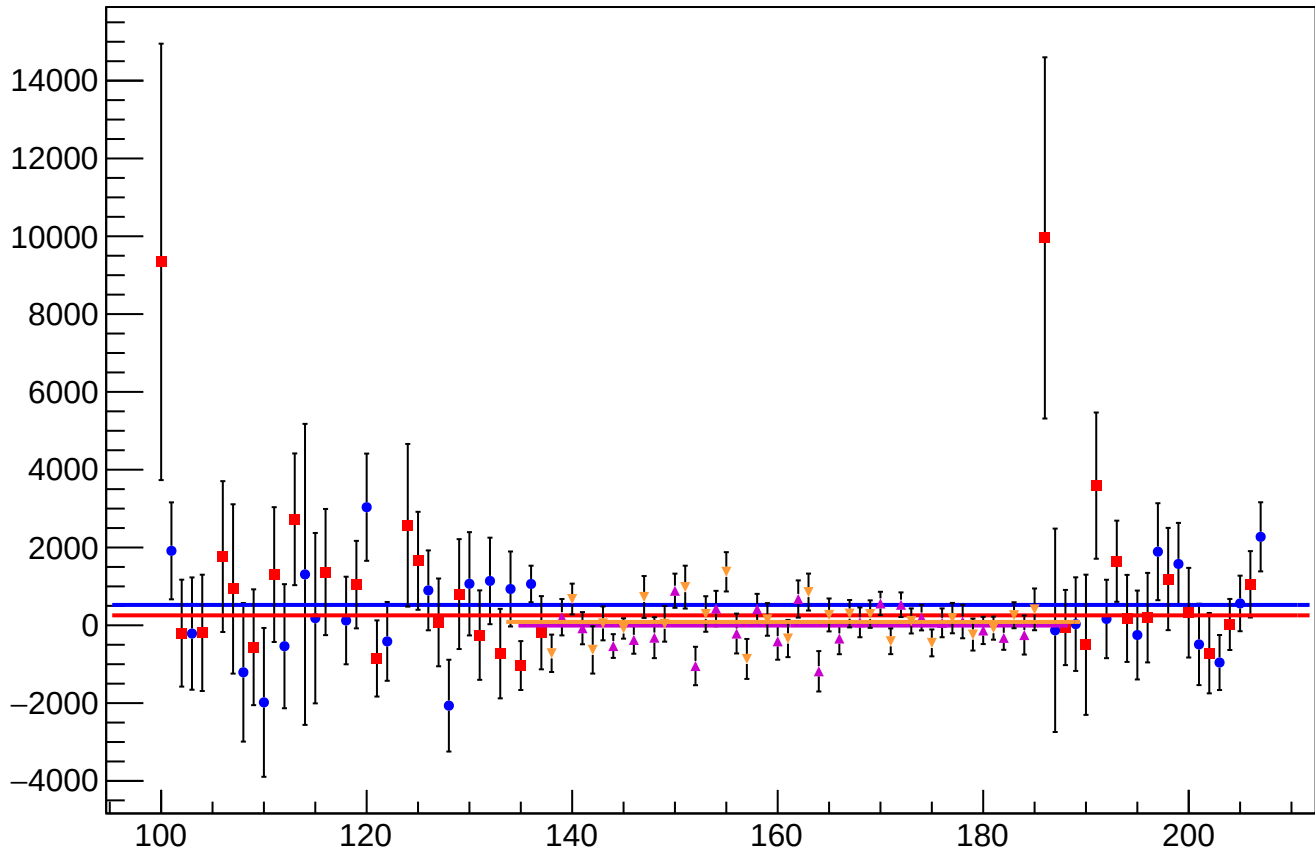
+ sign 69.313+/-0.009  $\chi^2/\text{NDF}$ : 3789893.2/50

All: 69.960+/-0.006  $\chi^2/\text{NDF}$ : 8557346.1/104

- sign 70.637+/-0.009  $\chi^2/\text{NDF}$ : 4756006.5/53



asym\_sam\_15\_26\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In: 523.841 $\pm$ 205.870  $\chi^2$ /NDF: 28.1/25

Left Out: 86.985 $\pm$ 79.837  $\chi^2$ /NDF:31.7/24

Right Out: 255.848 $\pm$ 211.749  $\chi^2$ /NDF: 28.6/30

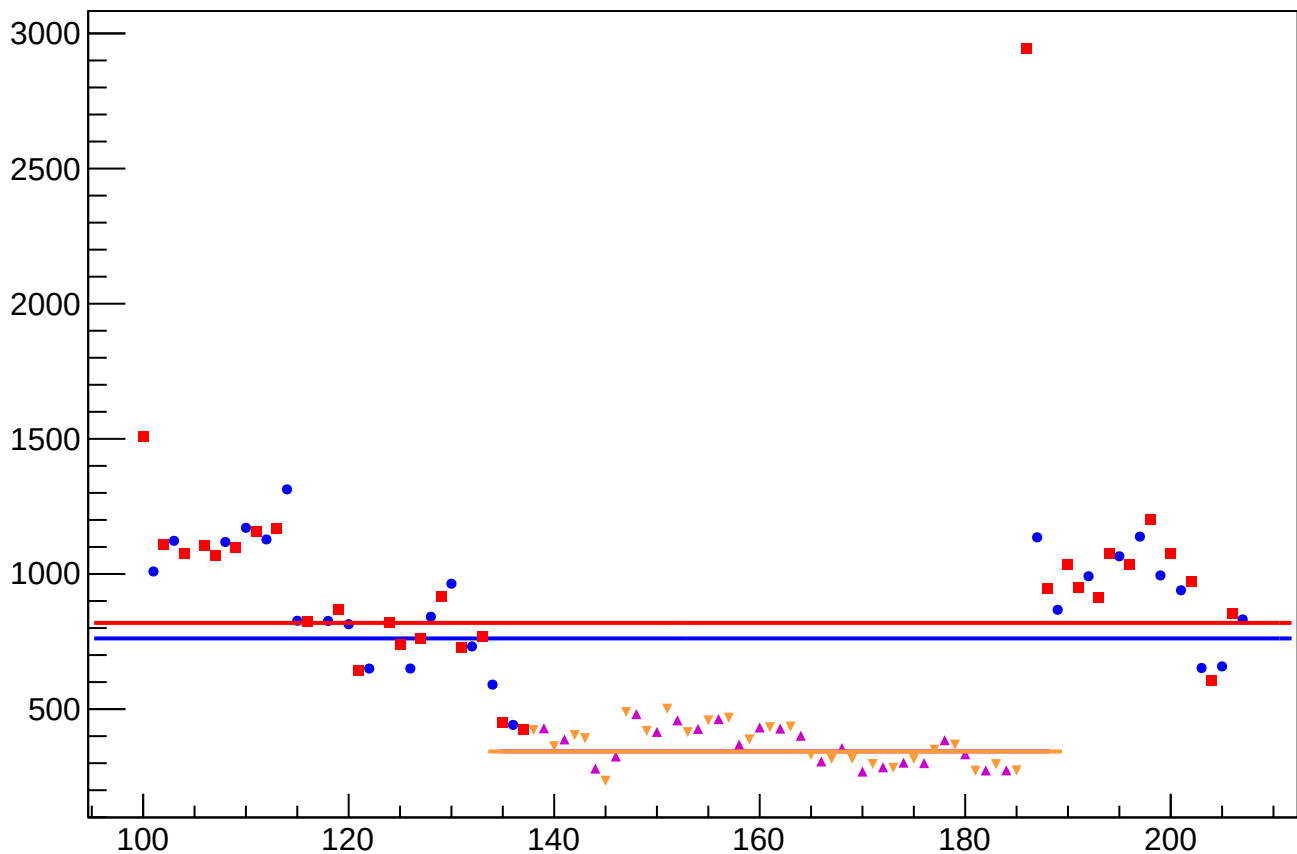
Left In: -6.497 $\pm$ 82.111  $\chi^2$ /NDF:32.4/22

+ sign 144.094 $\pm$ 74.435  $\chi^2$ /NDF: 63.7/50

All: 87.578 $\pm$ 53.368  $\chi^2$ /NDF: 127.2/104

- sign 27.795 $\pm$ 76.556  $\chi^2$ /NDF: 62.3/53

asym\_sam\_15\_26\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In:  $761.574 \pm 0.146$   $\chi^2/\text{NDF}$ : 2371462.0/25

Left Out:  $343.225 \pm 0.056$   $\chi^2/\text{NDF}$ : 1595415.4/24

Right Out:  $819.045 \pm 0.150$   $\chi^2/\text{NDF}$ : 2844059.7/30

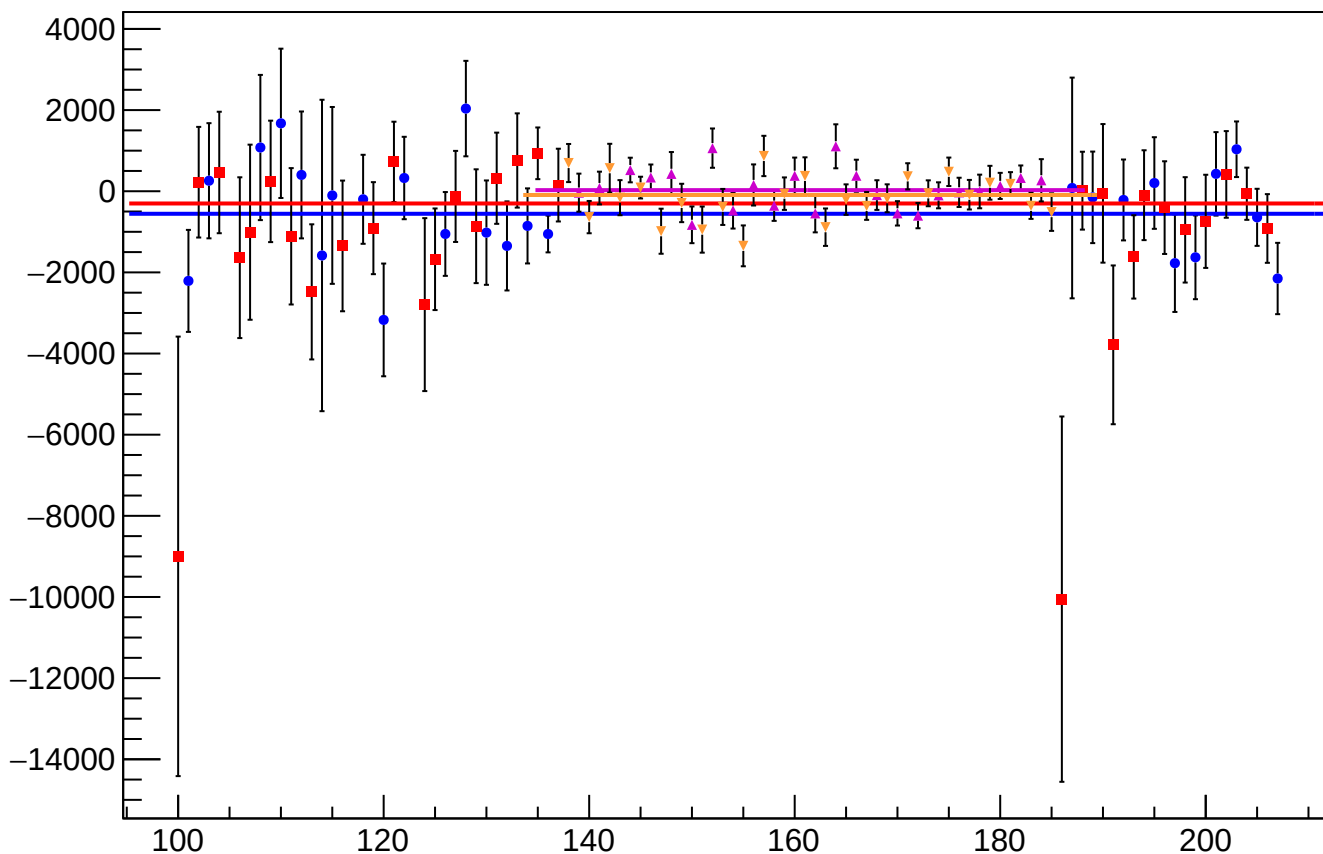
Left In:  $343.717 \pm 0.058$   $\chi^2/\text{NDF}$ : 1258392.0/22

+ sign  $397.915 \pm 0.053$   $\chi^2/\text{NDF}$ : 11146044.3/50

All:  $401.770 \pm 0.038$   $\chi^2/\text{NDF}$ : 24020204.3/100

- sign  $405.849 \pm 0.054$   $\chi^2/\text{NDF}$ : 12863119.3/53

# asym\_sam\_15\_26\_dd\_mean vs Slug



Right In:  $-555.601 \pm 201.589$   $\chi^2/\text{NDF}$ : 28.8/25

Left Out:  $-92.671 \pm 78.184$   $\chi^2/\text{NDF}$ : 34.2/24

Right Out:  $-301.830 \pm 210.594$   $\chi^2/\text{NDF}$ : 26.5/30

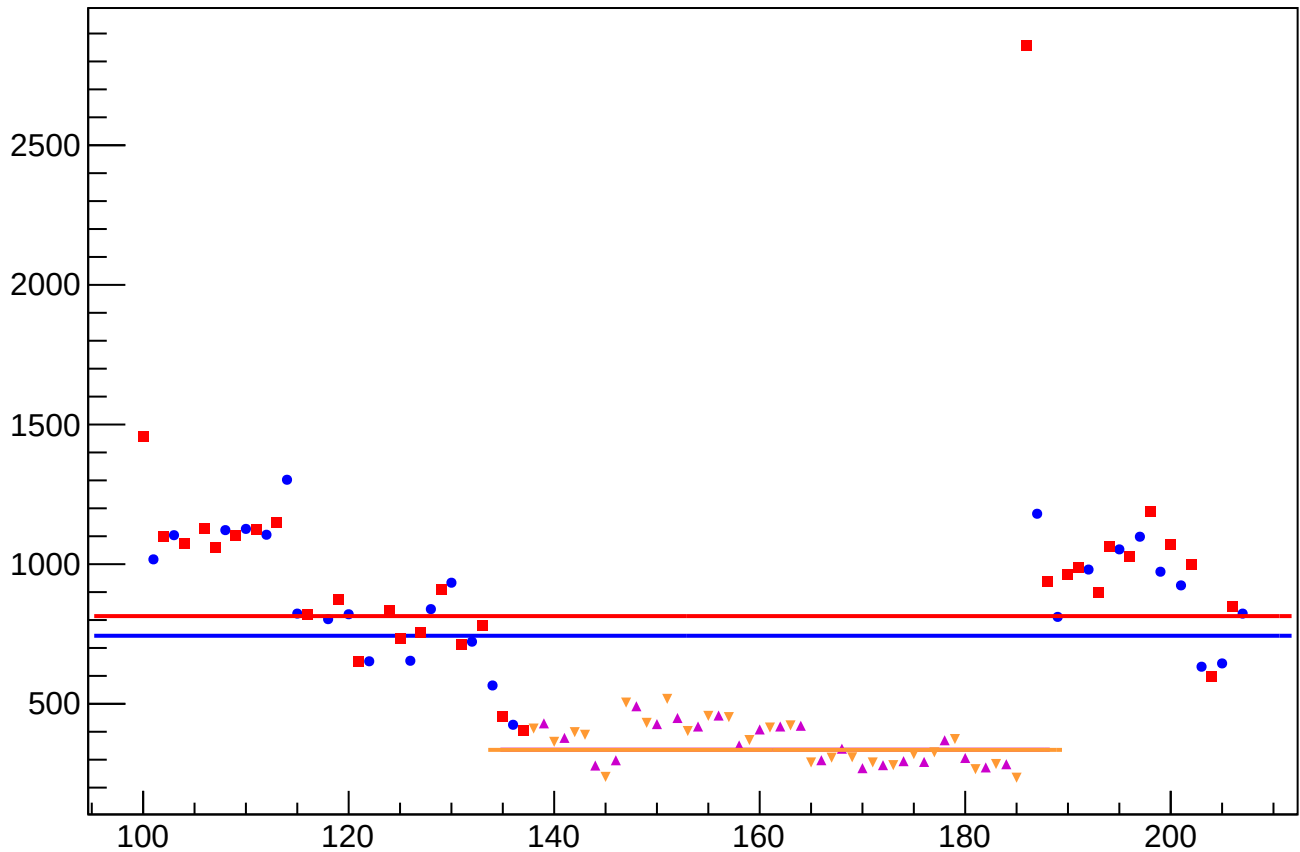
Left In:  $27.173 \pm 80.207$   $\chi^2/\text{NDF}$ : 30.9/22

+ sign  $-153.200 \pm 72.894$   $\chi^2/\text{NDF}$ : 67.6/50

All:  $-85.786 \pm 52.257$   $\chi^2/\text{NDF}$ : 128.9/104

- sign  $-14.505 \pm 74.955$   $\chi^2/\text{NDF}$ : 59.6/53

# asym\_sam\_15\_26\_dd\_rms vs Slug



Right In: 743.682 $\pm$ 0.143  $\chi^2$ /NDF: 2479641.3/25

Left Out: 335.150 $\pm$ 0.055  $\chi^2$ /NDF: 1706014.2/24

Right Out: 814.106 $\pm$ 0.149  $\chi^2$ /NDF: 2850983.8/30

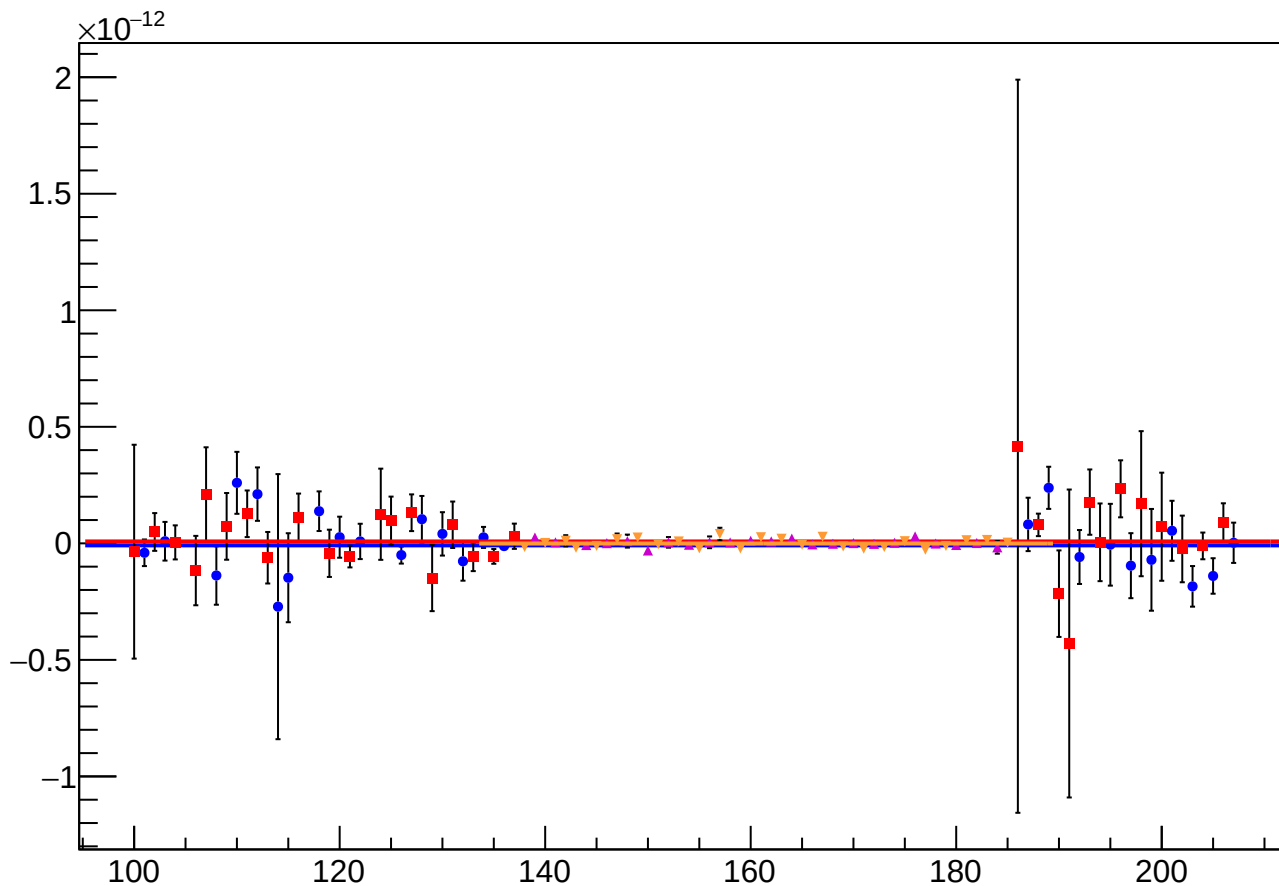
Left In: 335.787 $\pm$ 0.057  $\chi^2$ /NDF: 1291376.5/22

+ sign 388.566 $\pm$ 0.052  $\chi^2$ /NDF: 11325567.2/50

All: 392.365 $\pm$ 0.037  $\chi^2$ /NDF: 24489541.5/10

- sign 396.381 $\pm$ 0.053  $\chi^2$ /NDF: 13152801.5/53

asym\_sam\_15\_26\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2$ /NDF: 33.3/25

Left Out: -0.000+/-0.000  $\chi^2$ /NDF:33.3/24

Right Out: 0.000+/-0.000  $\chi^2$ /NDF: 28.4/30

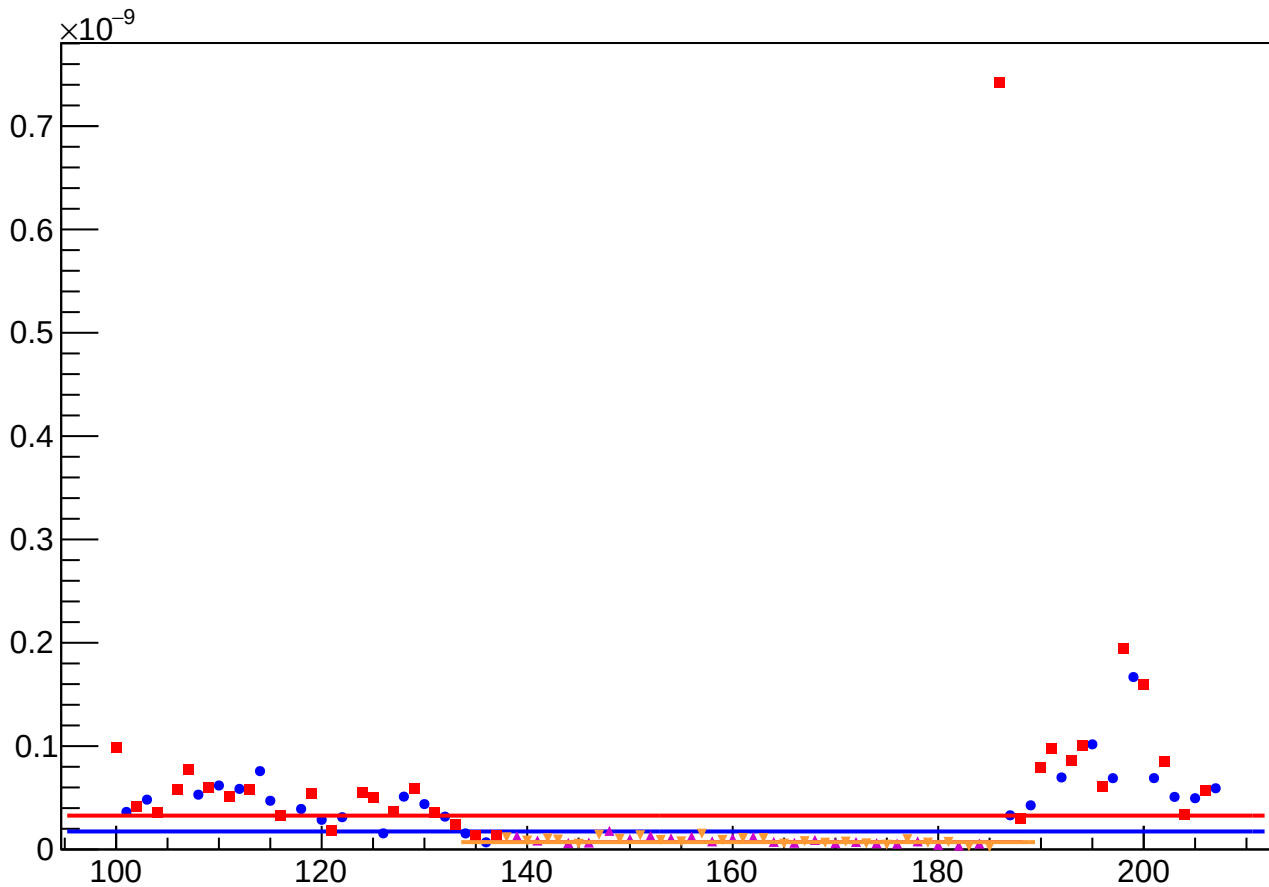
Left In: 0.000+/-0.000  $\chi^2$ /NDF:14.8/22

+ sign -0.000+/-0.000  $\chi^2$ /NDF: 67.1/50

All: 0.000+/-0.000  $\chi^2$ /NDF: 111.1/104

- sign 0.000+/-0.000  $\chi^2$ /NDF: 43.3/53

asym\_sam\_15\_26\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7034513.5/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2000233.5/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4795914.9/30

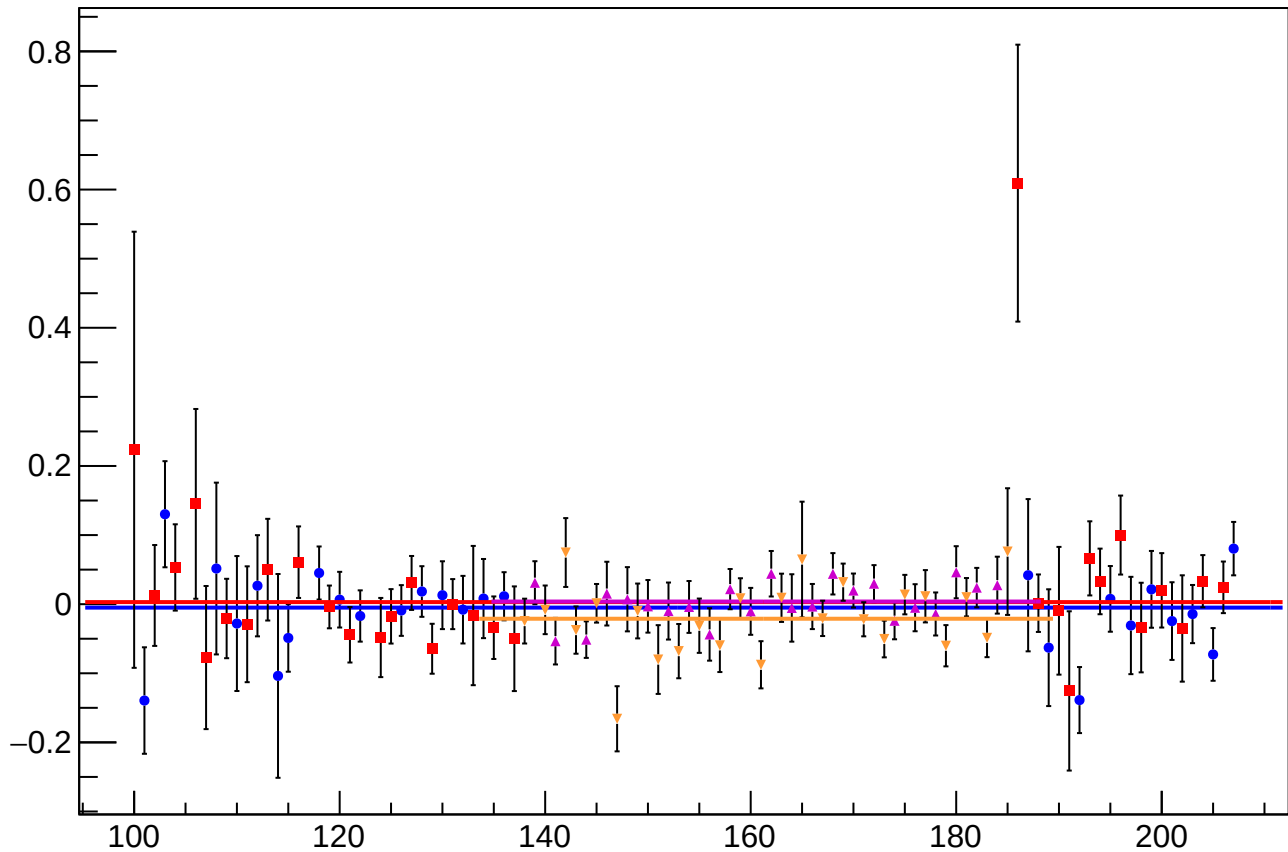
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1604062.0/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11013574.3/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 23046008.4/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12018853.7/53

asym\_sam\_15\_26\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.005 \pm 0.010$   $\chi^2/\text{NDF}$ : 27.7/25

Left Out:  $-0.021 \pm 0.007$   $\chi^2/\text{NDF}$ : 37.2/24

Right Out:  $0.003 \pm 0.009$   $\chi^2/\text{NDF}$ : 29.2/30

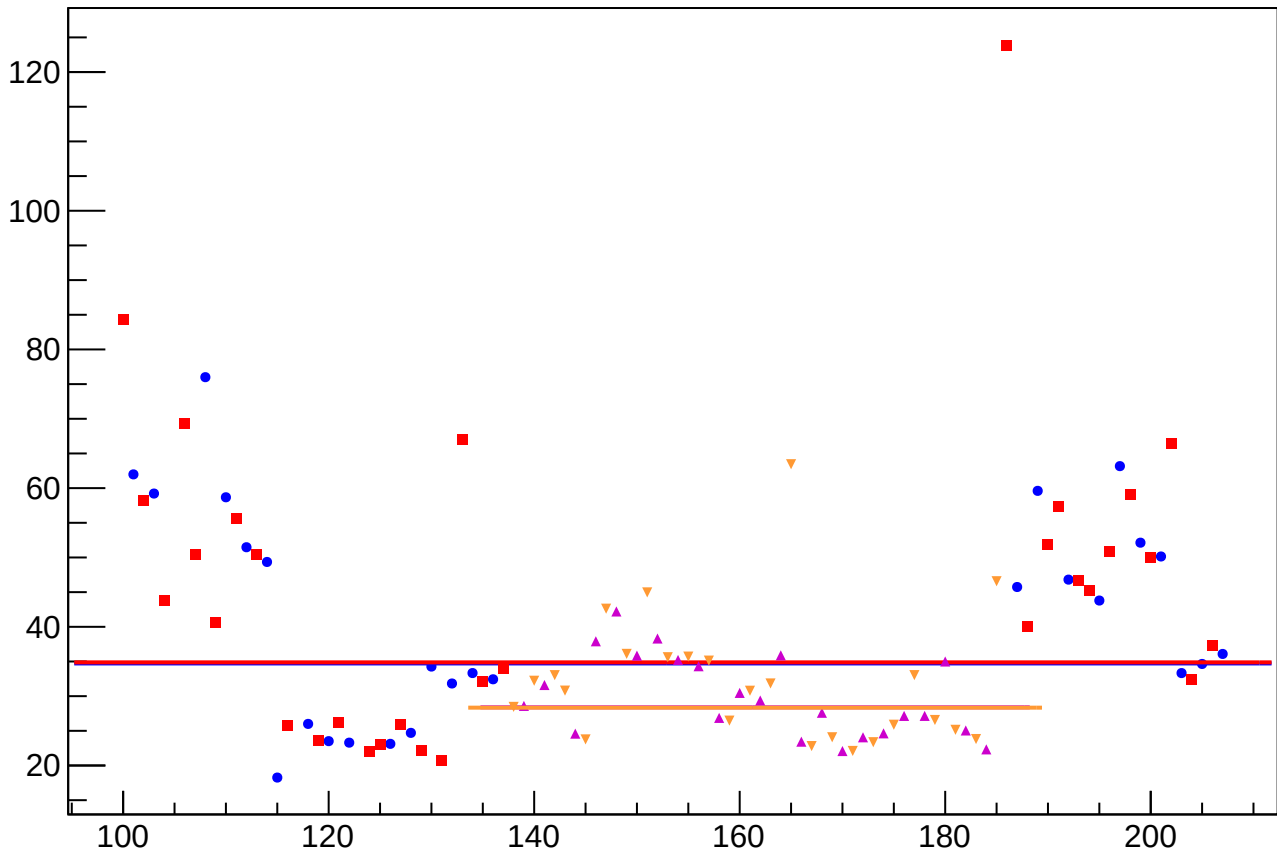
Left In:  $0.004 \pm 0.007$   $\chi^2/\text{NDF}$ : 18.7/22

+ sign  $-0.016 \pm 0.006$   $\chi^2/\text{NDF}$ : 66.7/50

All:  $-0.006 \pm 0.004$   $\chi^2/\text{NDF}$ : 120.9/104

- sign  $0.004 \pm 0.006$   $\chi^2/\text{NDF}$ : 47.9/53

asym\_sam\_15\_26\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 34.718 $\pm$ 0.007  $\chi^2$ /NDF: 3032289.1/25

Left Out: 28.342 $\pm$ 0.005  $\chi^2$ /NDF:1733592.1/24

Right Out: 34.875 $\pm$ 0.007  $\chi^2$ /NDF: 3977827.9/30

Left In: 28.389 $\pm$ 0.005  $\chi^2$ /NDF:1098849.1/22

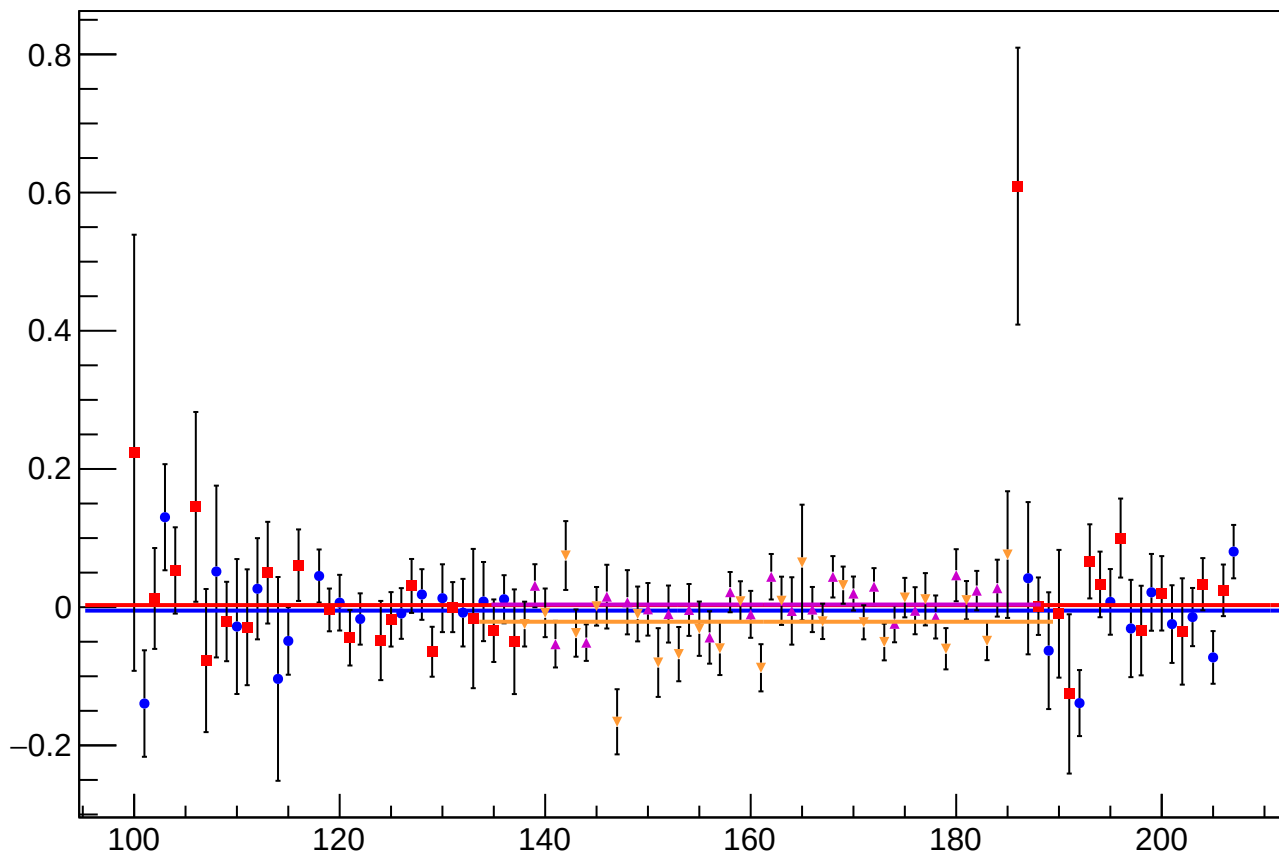
+ sign 30.372 $\pm$ 0.004  $\chi^2$ /NDF: 5347740.5/50

All: 30.500 $\pm$ 0.003  $\chi^2$ /NDF: 11044516.5/104

- sign 30.631 $\pm$ 0.004  $\chi^2$ /NDF: 5694571.2/53



asym\_sam\_15\_26\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.005 \pm 0.010$   $\chi^2/\text{NDF}$ : 27.7/25

Left Out:  $-0.021 \pm 0.007$   $\chi^2/\text{NDF}$ : 37.2/24

Right Out:  $0.003 \pm 0.009$   $\chi^2/\text{NDF}$ : 29.2/30

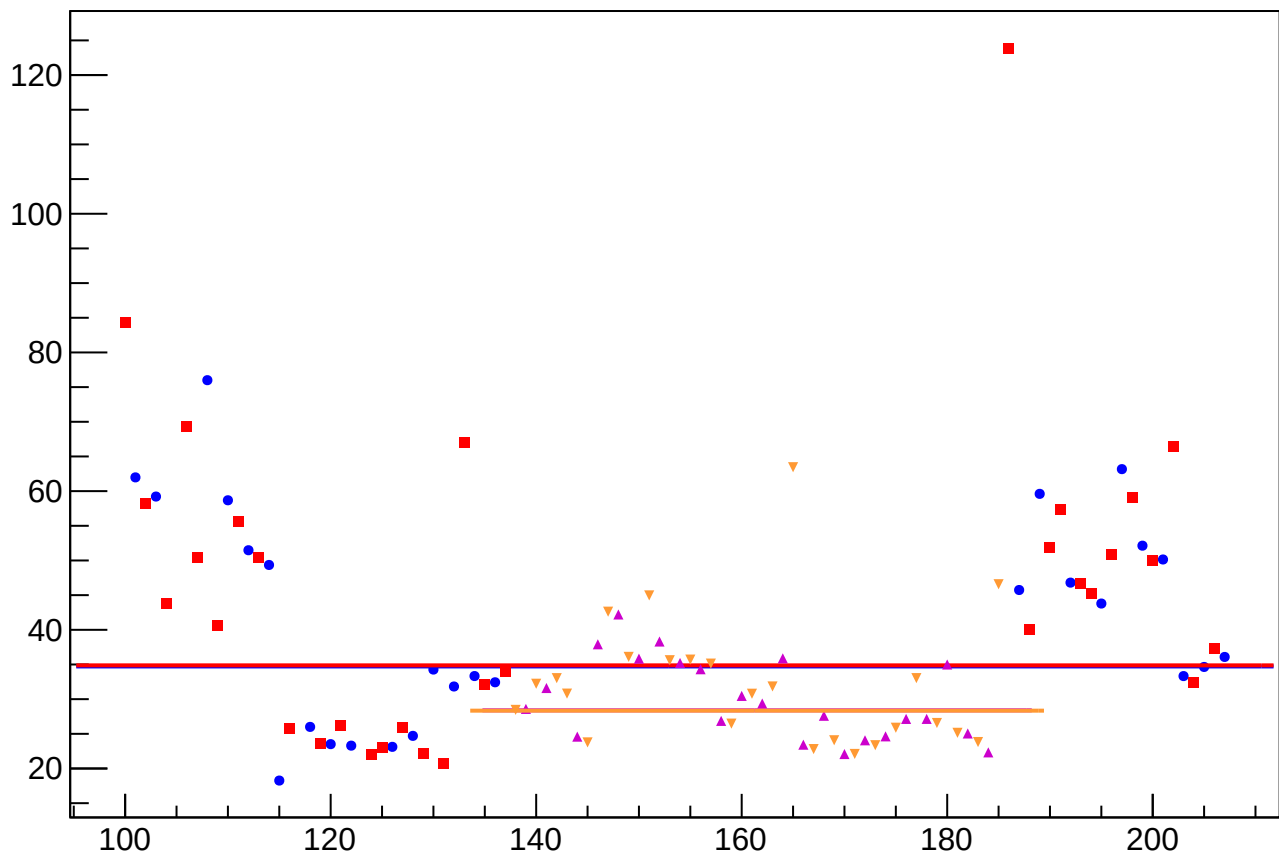
Left In:  $0.004 \pm 0.007$   $\chi^2/\text{NDF}$ : 18.7/22

+ sign  $-0.016 \pm 0.006$   $\chi^2/\text{NDF}$ : 66.7/50

All:  $-0.006 \pm 0.004$   $\chi^2/\text{NDF}$ : 120.9/104

- sign  $0.004 \pm 0.006$   $\chi^2/\text{NDF}$ : 47.9/53

asym\_sam\_15\_26\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 34.718 $\pm$ 0.007  $\chi^2$ /NDF: 3032289.1/25

Left Out: 28.342 $\pm$ 0.005  $\chi^2$ /NDF: 1733592.1/24

Right Out: 34.875 $\pm$ 0.007  $\chi^2$ /NDF: 3977827.9/30

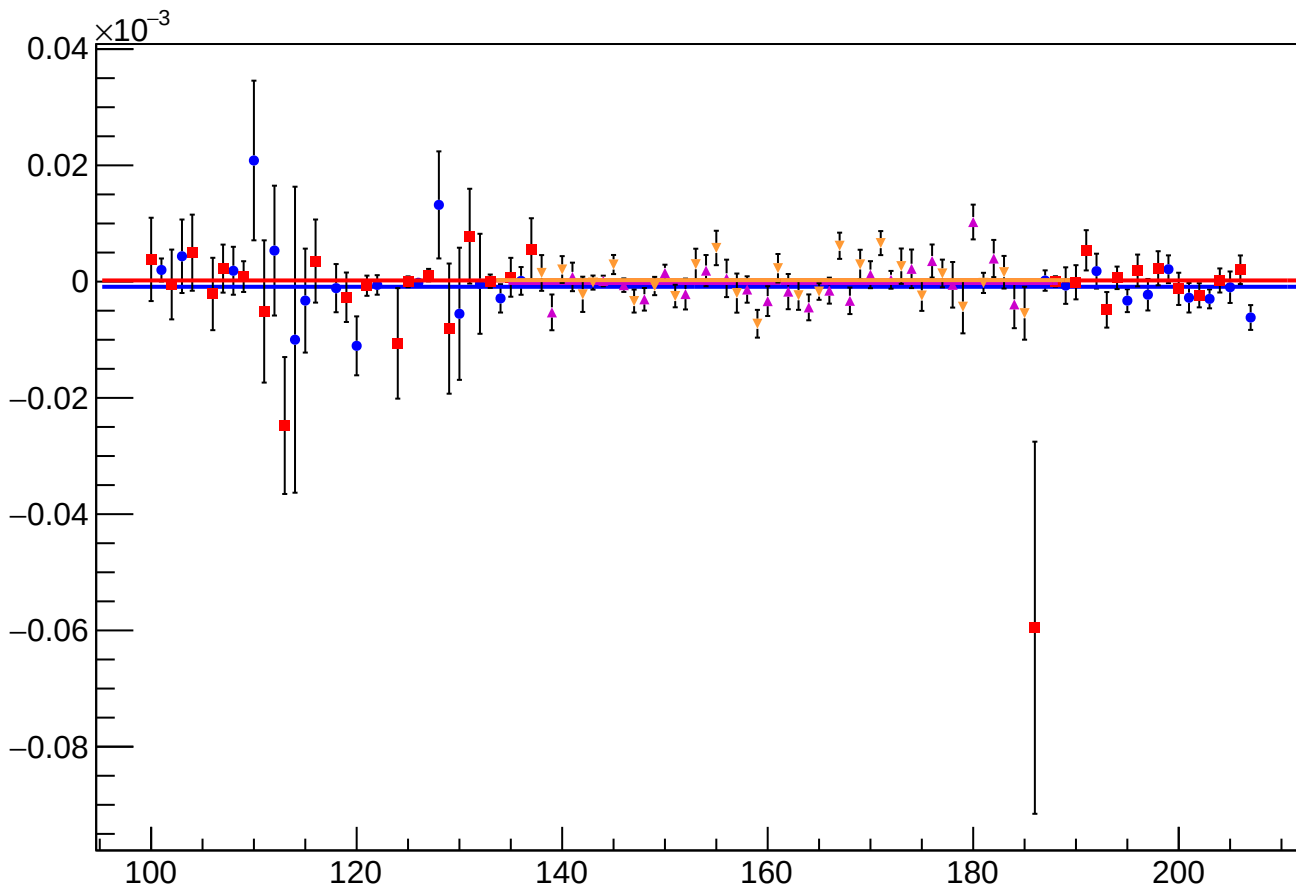
Left In: 28.389 $\pm$ 0.005  $\chi^2$ /NDF: 1098849.1/22

+ sign 30.372 $\pm$ 0.004  $\chi^2$ /NDF: 5347740.5/50

All: 30.500 $\pm$ 0.003  $\chi^2$ /NDF: 11044516.5/104

- sign 30.631 $\pm$ 0.004  $\chi^2$ /NDF: 5694571.2/53

asym\_sam\_15\_26\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 27.2/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 50.8/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 23.3/30

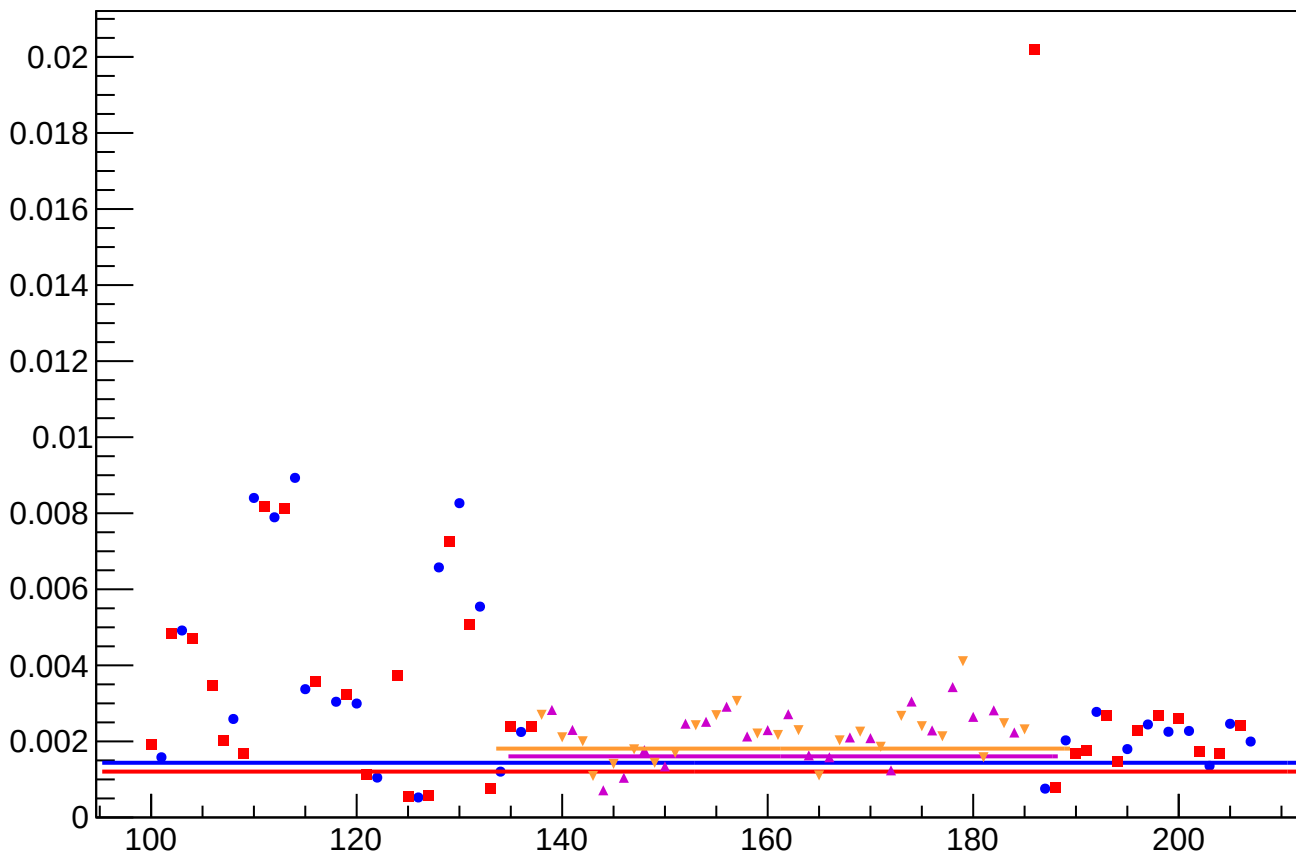
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 33.2/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 81.2/50

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 138.7/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 57.1/53

asym\_sam\_15\_26\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 9266377.2/25

Left Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 3433566.6/24

Right Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 11040166.1/30

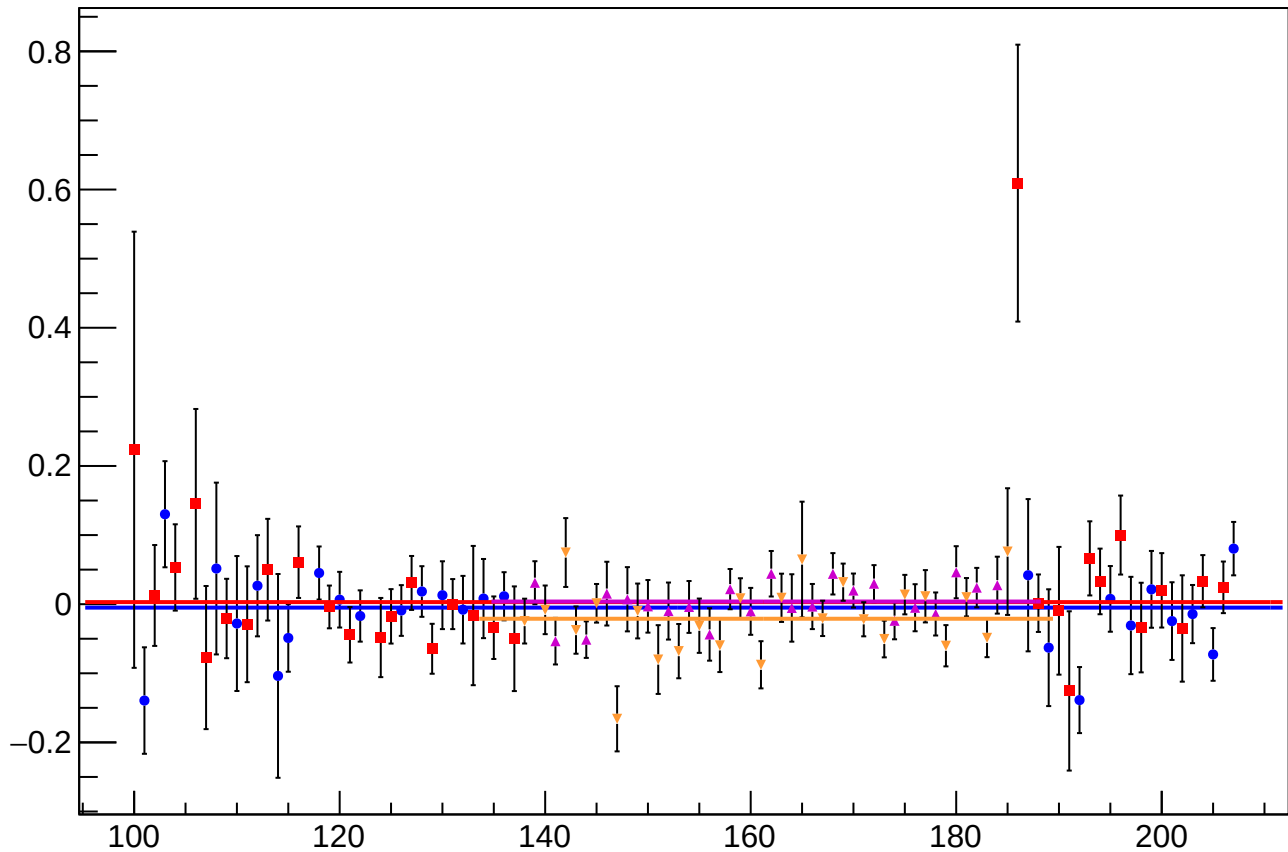
Left In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 6034225.5/22

+ sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 13386854.3/50

All: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 32083976.8/104

- sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 18038383.4/53

asym\_sam\_15\_26\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: -0.005 $\pm$ 0.010  $\chi^2$ /NDF: 27.7/25

Left Out: -0.021 $\pm$ 0.007  $\chi^2$ /NDF:37.2/24

Right Out: 0.003 $\pm$ 0.009  $\chi^2$ /NDF: 29.2/30

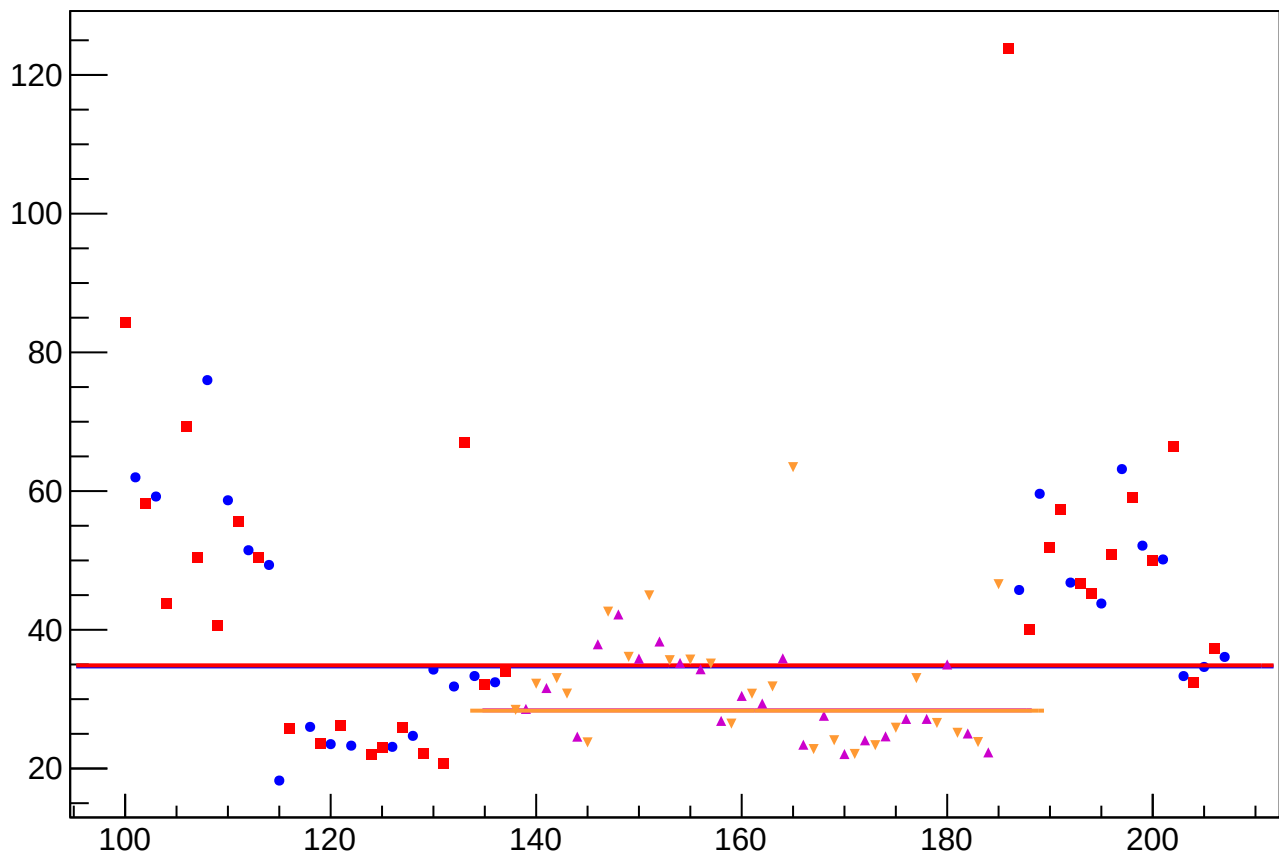
Left In: 0.004 $\pm$ 0.007  $\chi^2$ /NDF:18.7/22

+ sign -0.016 $\pm$ 0.006  $\chi^2$ /NDF: 66.7/50

All: -0.006 $\pm$ 0.004  $\chi^2$ /NDF: 120.9/104

- sign 0.004 $\pm$ 0.006  $\chi^2$ /NDF: 47.9/53

asym\_sam\_15\_26\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 34.718 $\pm$ 0.007  $\chi^2$ /NDF: 3032158.2/25

Left Out: 28.342 $\pm$ 0.005  $\chi^2$ /NDF:1733585.3/24

Right Out: 34.874 $\pm$ 0.007  $\chi^2$ /NDF: 3977936.2/30

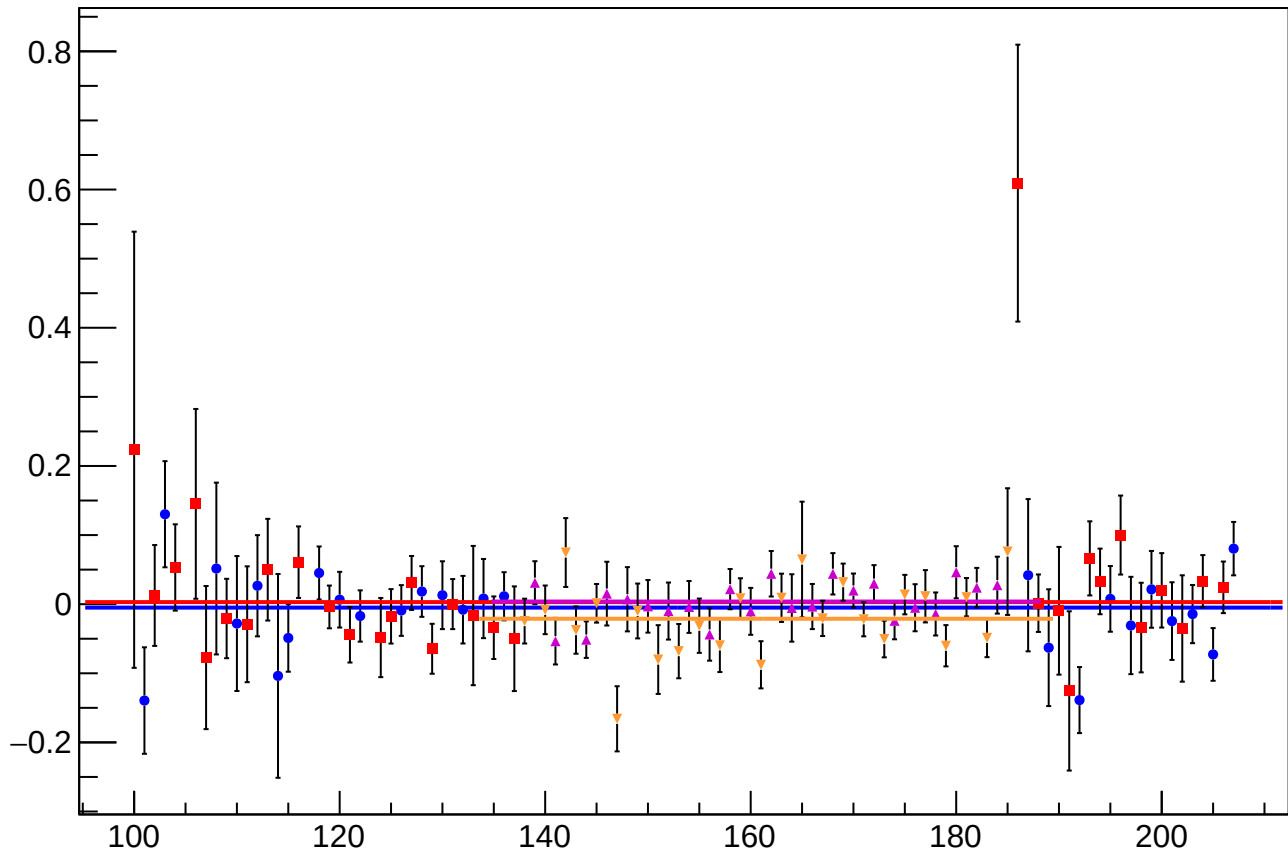
Left In: 28.389 $\pm$ 0.005  $\chi^2$ /NDF:1098852.1/22

+ sign 30.372 $\pm$ 0.004  $\chi^2$ /NDF: 5347587.4/50

All: 30.501 $\pm$ 0.003  $\chi^2$ /NDF: 11044345.9/104

- sign 30.631 $\pm$ 0.004  $\chi^2$ /NDF: 5694553.5/53

asym\_sam\_15\_26\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.005 \pm 0.010$   $\chi^2/\text{NDF}$ : 27.7/25

Left Out:  $-0.021 \pm 0.007$   $\chi^2/\text{NDF}$ : 37.2/24

Right Out:  $0.003 \pm 0.009$   $\chi^2/\text{NDF}$ : 29.2/30

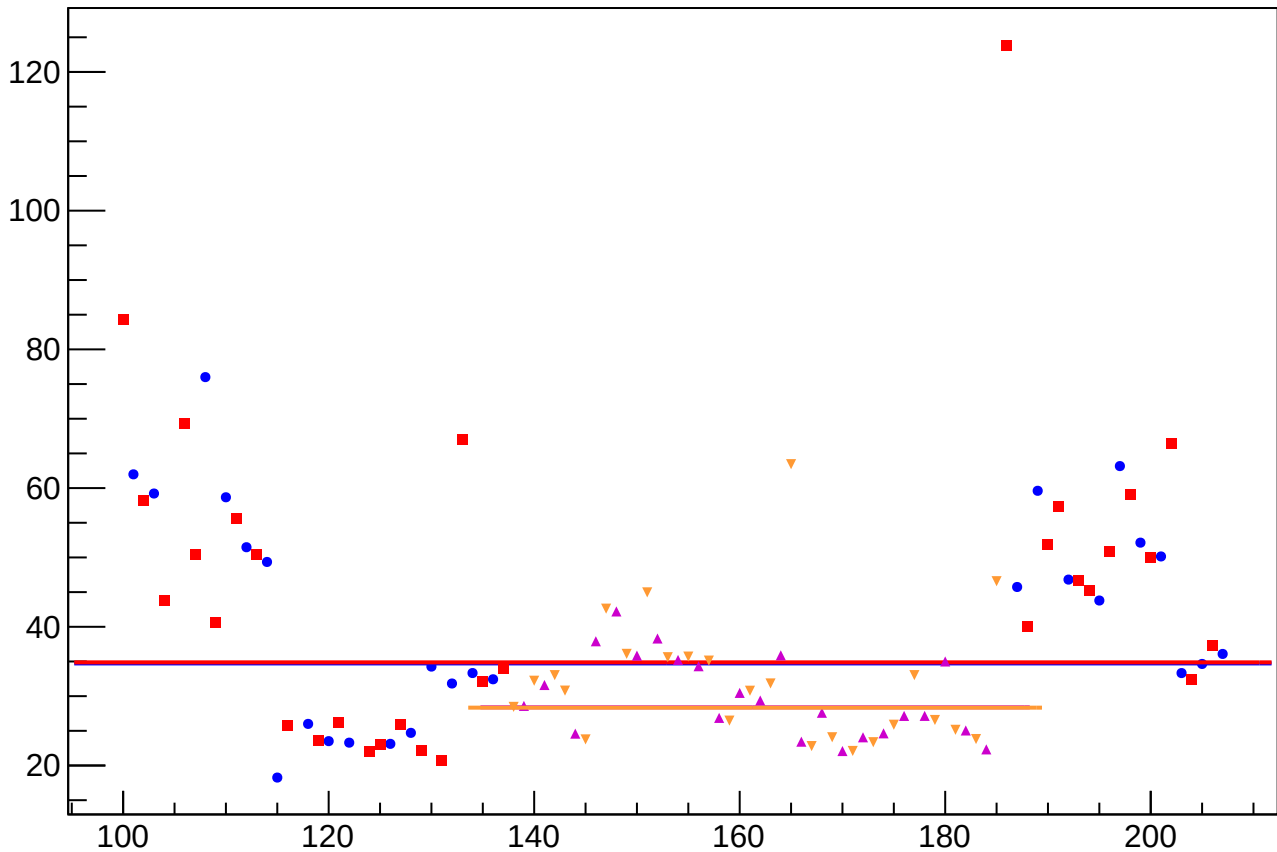
Left In:  $0.004 \pm 0.007$   $\chi^2/\text{NDF}$ : 18.7/22

+ sign  $-0.016 \pm 0.006$   $\chi^2/\text{NDF}$ : 66.7/50

All:  $-0.006 \pm 0.004$   $\chi^2/\text{NDF}$ : 120.9/104

- sign  $0.004 \pm 0.006$   $\chi^2/\text{NDF}$ : 47.9/53

asym\_sam\_15\_26\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 34.718 $\pm$ 0.007  $\chi^2$ /NDF: 3032158.2/25

Left Out: 28.342 $\pm$ 0.005  $\chi^2$ /NDF:1733585.3/24

Right Out: 34.874 $\pm$ 0.007  $\chi^2$ /NDF: 3977936.2/30

Left In: 28.389 $\pm$ 0.005  $\chi^2$ /NDF:1098852.1/22

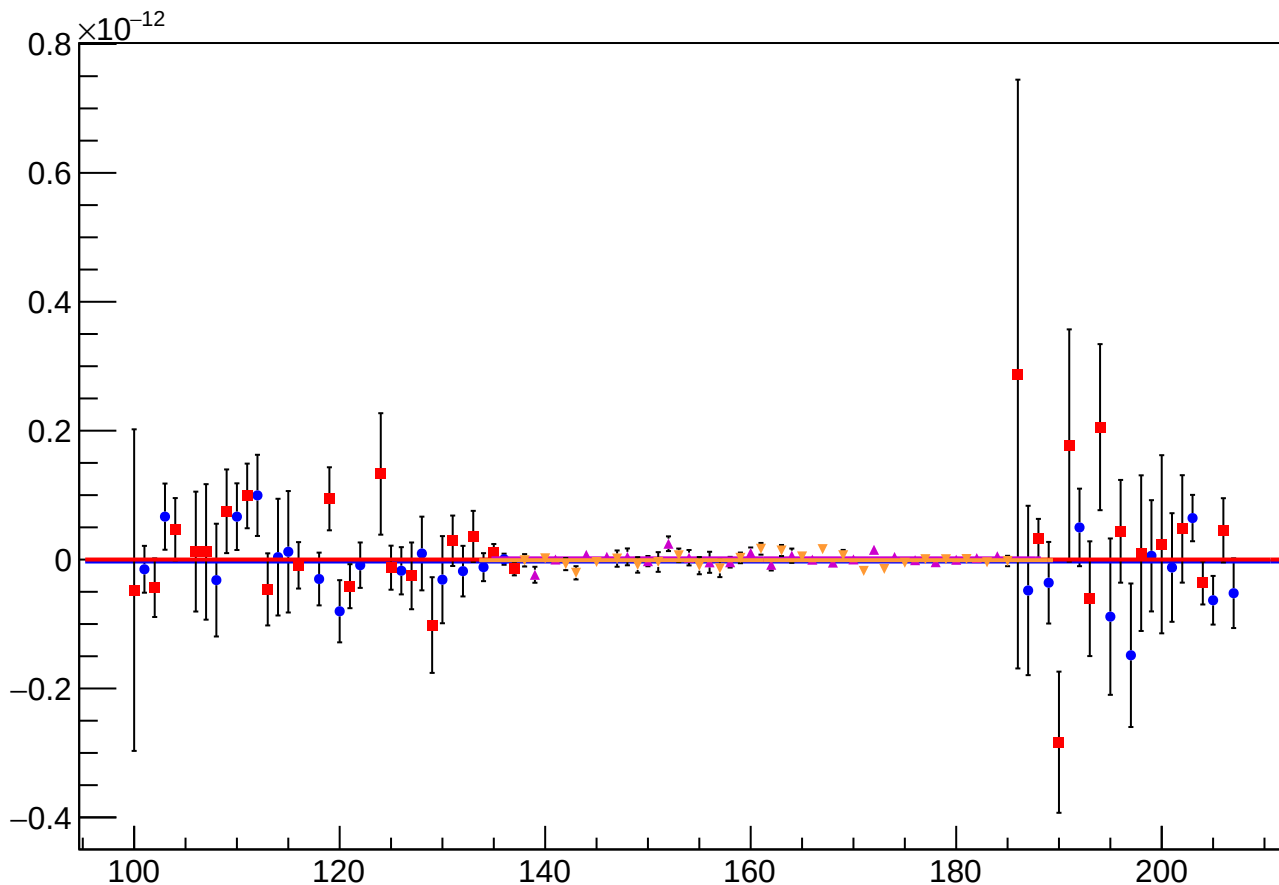
+ sign 30.372 $\pm$ 0.004  $\chi^2$ /NDF: 5347587.4/50

All: 30.501 $\pm$ 0.003  $\chi^2$ /NDF: 11044345.9/104

- sign 30.631 $\pm$ 0.004  $\chi^2$ /NDF: 5694553.5/53



asym\_sam\_15\_26\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 20.7/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 34.1/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 36.2/30

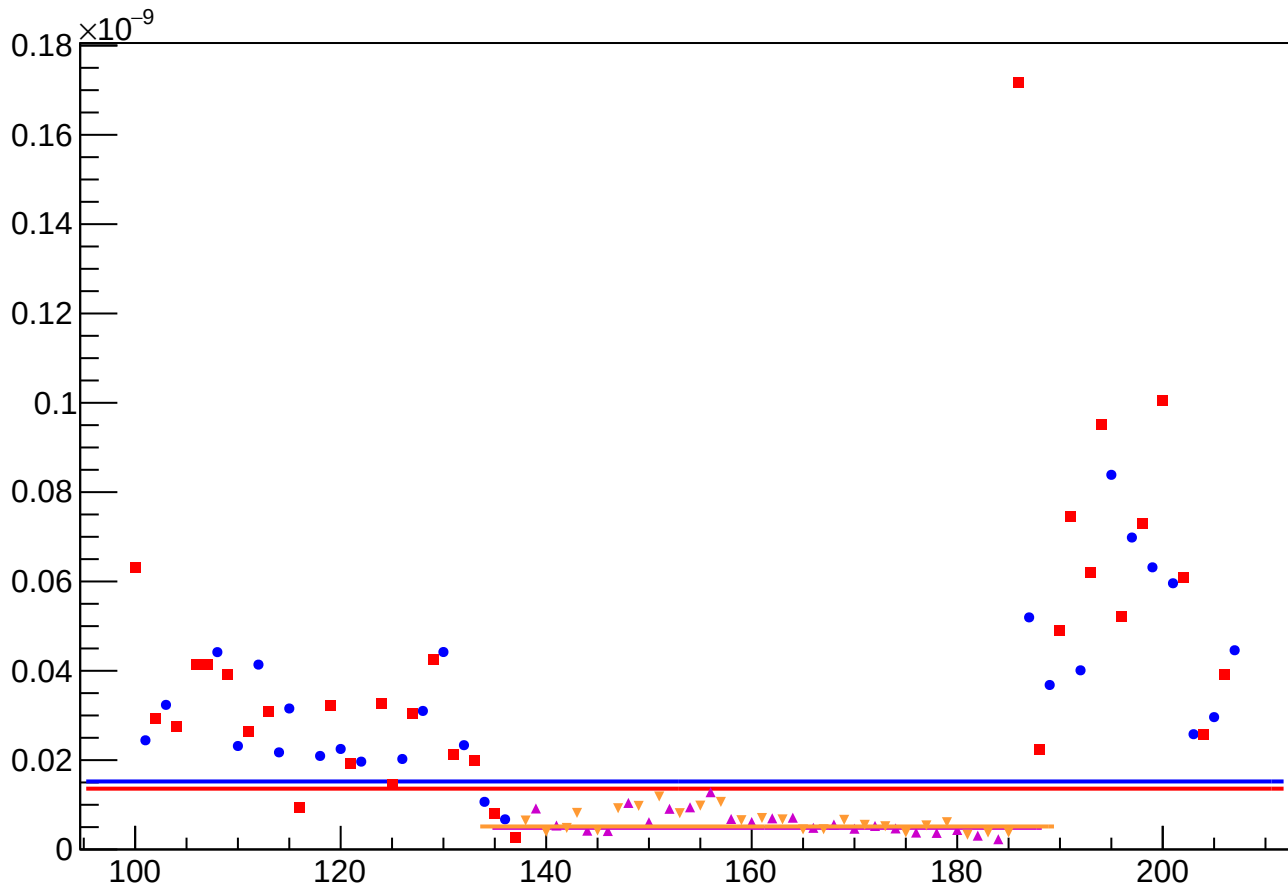
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 19.5/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 54.9/50

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 112.8/104

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 55.8/53

asym\_sam\_15\_26\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7903442.7/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ :3035355.5/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 10596904.1/30

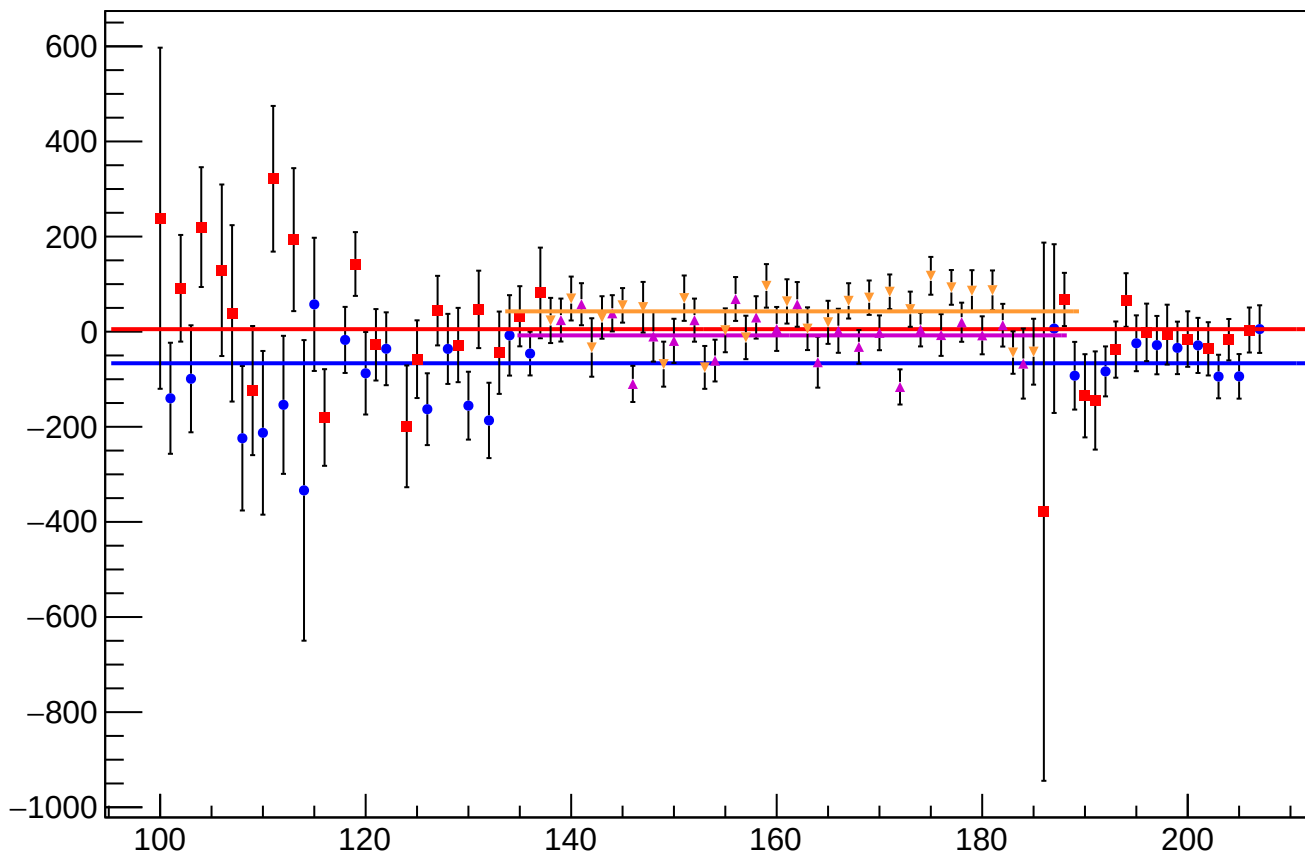
Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ :3040812.9/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 15633753.3/50

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 33078119.9/104

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 17378462.2/53

# reg\_asym\_sam\_37\_26\_dd\_mean vs Slug



Right In:  $-66.405 \pm 13.762$   $\chi^2/\text{NDF}$ : 16.0/25

Left Out:  $42.765 \pm 8.698$   $\chi^2/\text{NDF}$ : 34.7/24

Right Out:  $5.302 \pm 13.717$   $\chi^2/\text{NDF}$ : 33.0/30

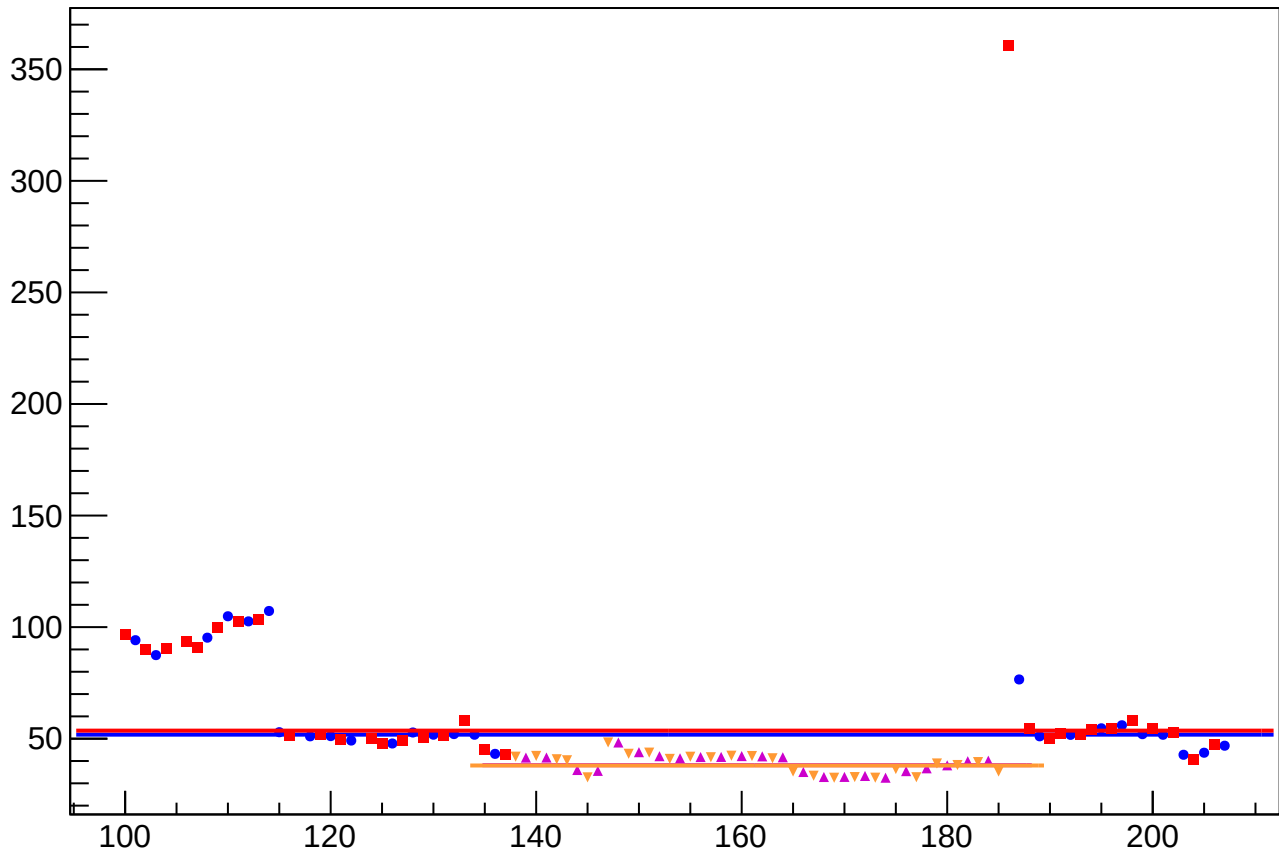
Left In:  $-7.783 \pm 8.974$   $\chi^2/\text{NDF}$ : 30.6/22

+ sign  $11.602 \pm 7.353$   $\chi^2/\text{NDF}$ : 95.8/50

All:  $4.034 \pm 5.254$   $\chi^2/\text{NDF}$ : 162.1/104

- sign  $-3.861 \pm 7.510$   $\chi^2/\text{NDF}$ : 64.2/53

# reg\_asym\_sam\_37\_26\_dd\_rms vs Slug



Right In: 51.816+/-0.010  $\chi^2/\text{NDF}$ : 1412455.3/25

Left Out: 37.990+/-0.006  $\chi^2/\text{NDF}$ : 513605.5/24

Right Out: 53.613+/-0.010  $\chi^2/\text{NDF}$ : 2166920.3/30

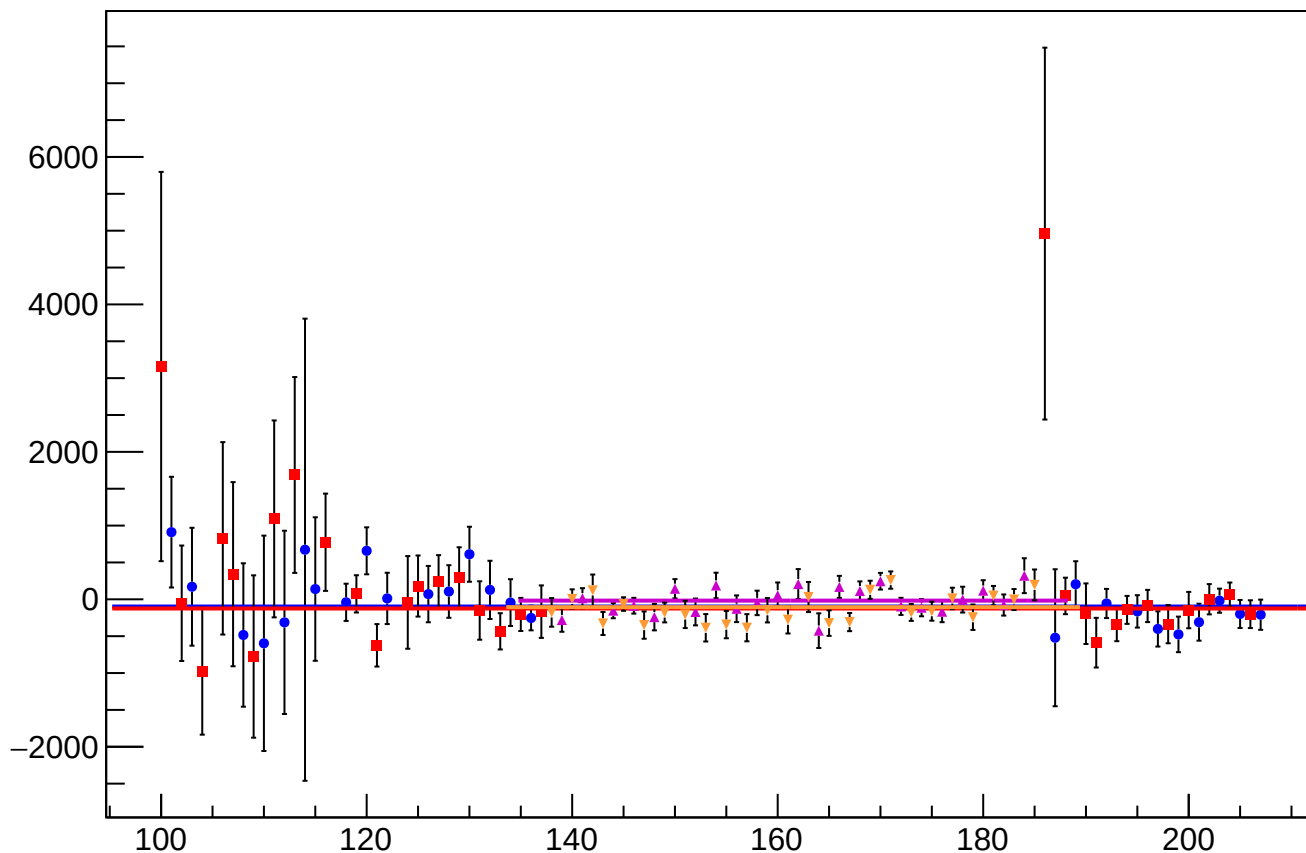
Left In: 38.133+/-0.006  $\chi^2/\text{NDF}$ : 428309.7/22

+ sign 41.936+/-0.005  $\chi^2/\text{NDF}$ : 3368523.9/50

All: 42.346+/-0.004  $\chi^2/\text{NDF}$ : 7760130.6/104

- sign 42.773+/-0.005  $\chi^2/\text{NDF}$ : 4378941.6/53

asym\_sam\_37\_26\_dd\_reg\_correction\_mean vs Slug



Right In:  $-97.866 \pm 56.661$   $\chi^2/\text{NDF}$ : 20.3/25

Left Out:  $-106.506 \pm 29.563$   $\chi^2/\text{NDF}$ : 37.6/24

Right Out:  $-124.524 \pm 55.184$   $\chi^2/\text{NDF}$ : 25.9/30

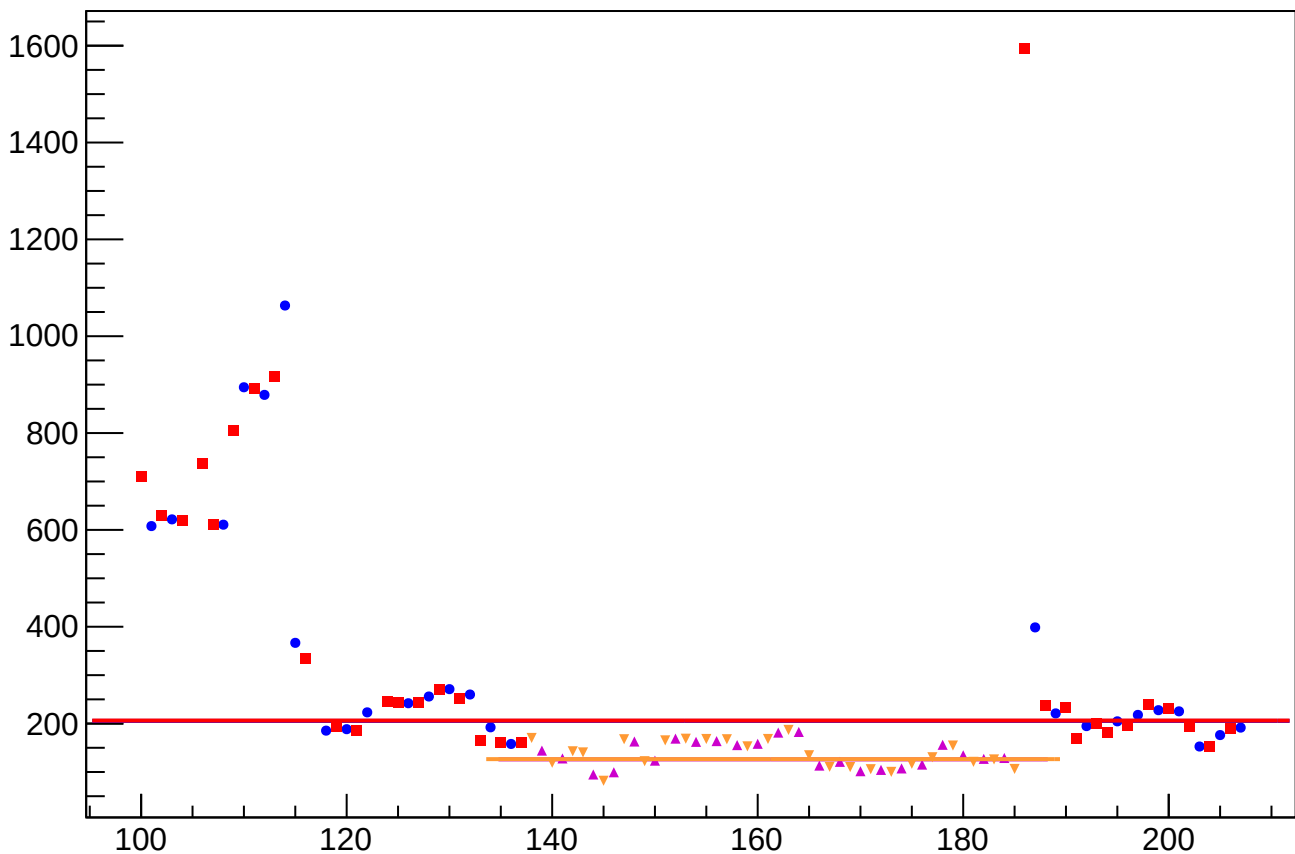
Left In:  $-17.517 \pm 30.185$   $\chi^2/\text{NDF}$ : 28.2/22

+ sign  $-104.657 \pm 26.210$   $\chi^2/\text{NDF}$ : 58.0/50

All:  $-73.732 \pm 18.629$   $\chi^2/\text{NDF}$ : 117.9/104

- sign  $-42.160 \pm 26.482$   $\chi^2/\text{NDF}$ : 57.1/53

asym\_sam\_37\_26\_dd\_reg\_correction\_rms vs Slug



Right In: 205.509 $\pm$ 0.040  $\chi^2$ /NDF: 3444336.7/25

Left Out: 126.561 $\pm$ 0.021  $\chi^2$ /NDF:1758158.3/24

Right Out: 206.221 $\pm$ 0.039  $\chi^2$ /NDF: 4735252.9/30

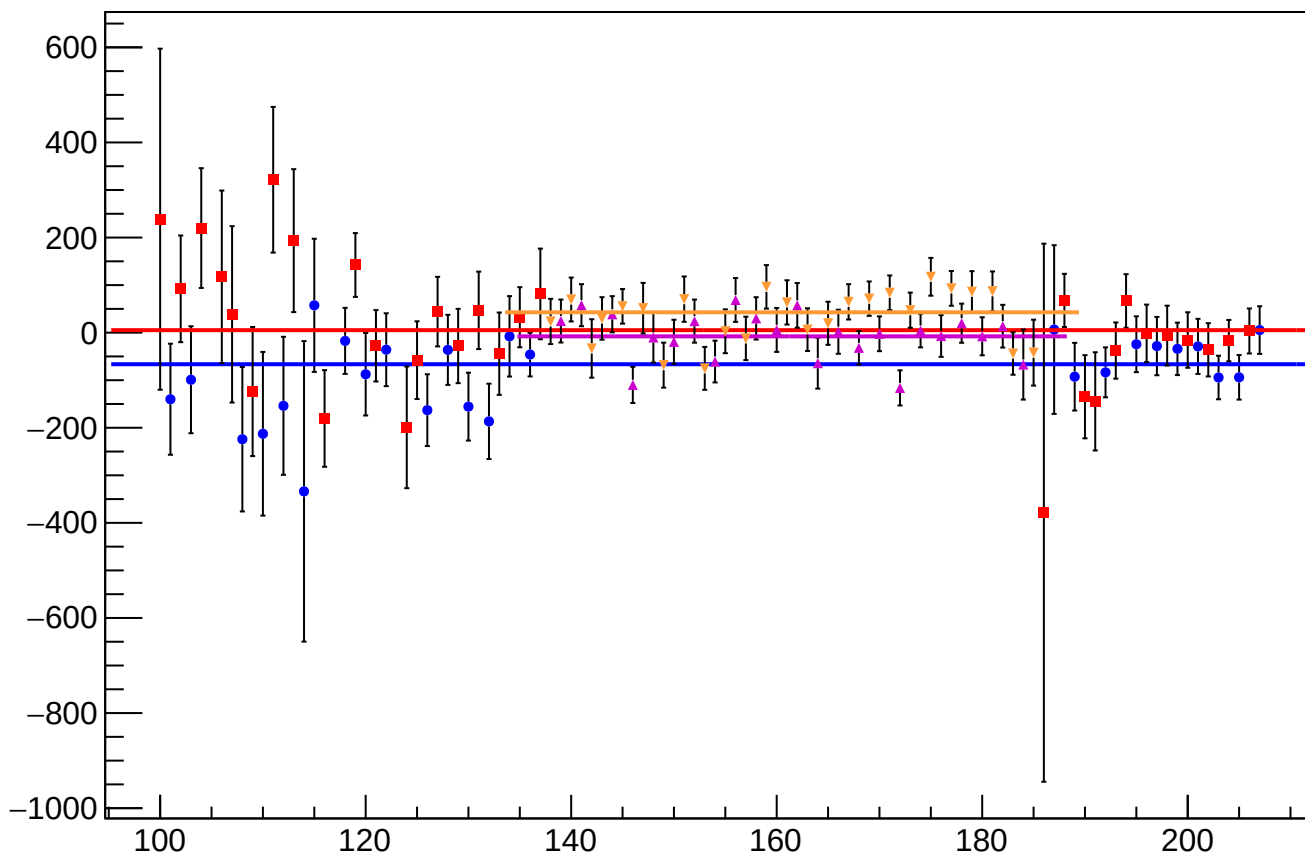
Left In: 126.013 $\pm$ 0.021  $\chi^2$ /NDF:1410655.7/22

+ sign 143.454 $\pm$ 0.019  $\chi^2$ /NDF: 8254438.1/50

All: 143.964 $\pm$ 0.013  $\chi^2$ /NDF: 17653924.3/10

- sign 144.485 $\pm$ 0.019  $\chi^2$ /NDF: 9397955.0/53

# cor\_asym\_sam\_37\_26\_dd\_mean vs Slug



Right In:  $-66.403 \pm 13.762$   $\chi^2/\text{NDF}$ : 16.0/25

Left Out:  $42.767 \pm 8.698$   $\chi^2/\text{NDF}$ : 34.7/24

Right Out:  $5.239 \pm 13.717$   $\chi^2/\text{NDF}$ : 32.9/30

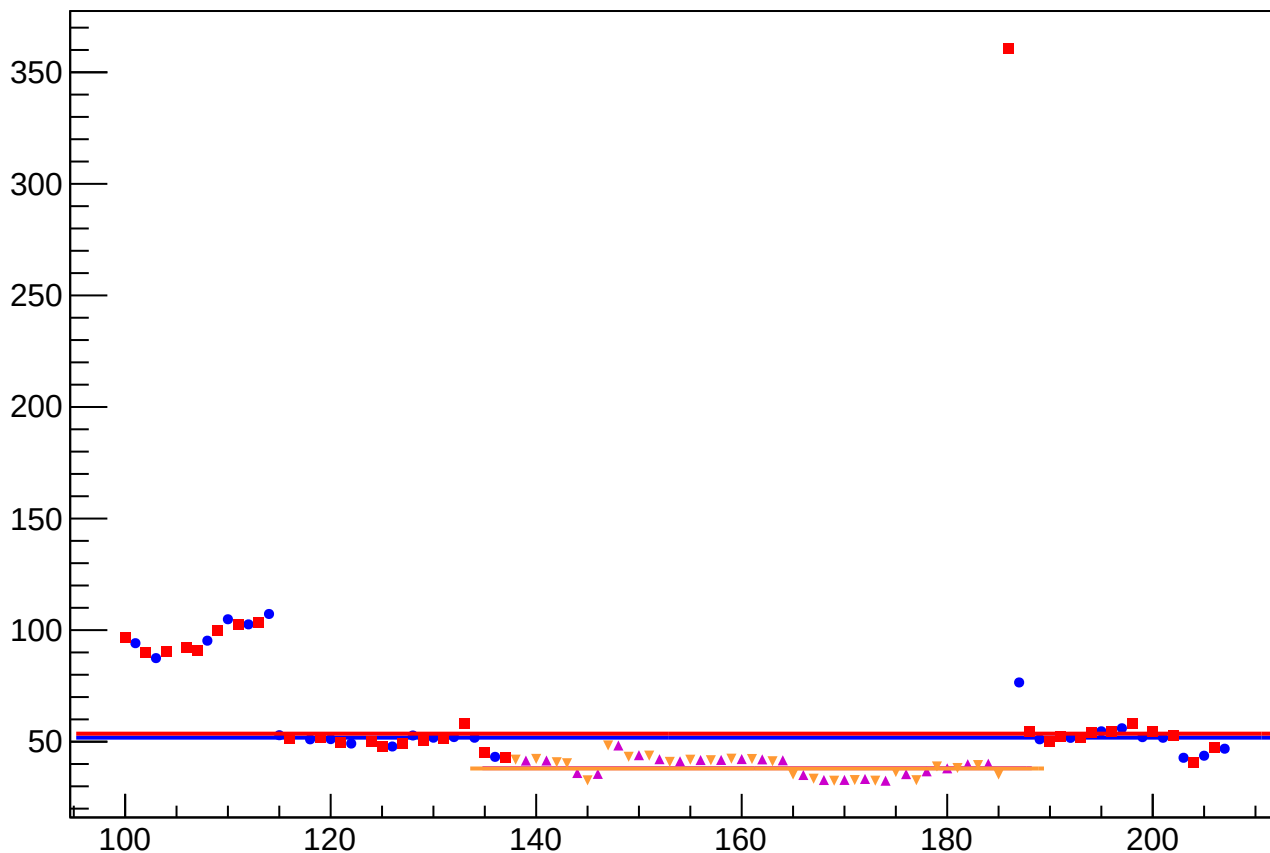
Left In:  $-7.785 \pm 8.974$   $\chi^2/\text{NDF}$ : 30.6/22

+ sign  $11.603 \pm 7.353$   $\chi^2/\text{NDF}$ : 95.8/50

All:  $4.025 \pm 5.254$   $\chi^2/\text{NDF}$ : 162.0/104

- sign  $-3.881 \pm 7.510$   $\chi^2/\text{NDF}$ : 64.1/53

# cor\_asym\_sam\_37\_26\_dd\_rms vs Slug



Right In: 51.816+/-0.010  $\chi^2/\text{NDF}$ : 1412455.6/25

Left Out: 37.990+/-0.006  $\chi^2/\text{NDF}$ : 513605.5/24

Right Out: 53.601+/-0.010  $\chi^2/\text{NDF}$ : 2158578.5/30

Left In: 38.133+/-0.006  $\chi^2/\text{NDF}$ : 428309.7/22

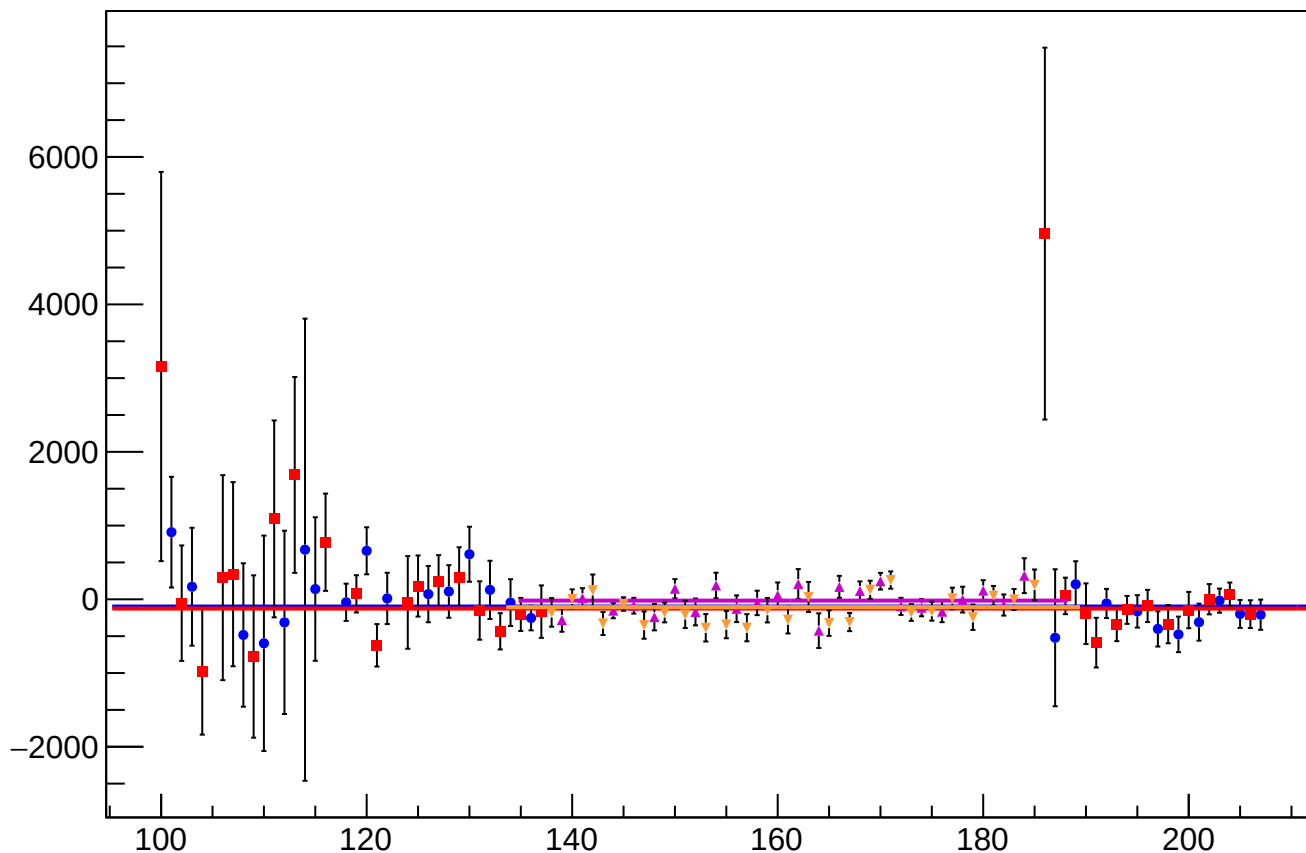
+ sign 41.936+/-0.005  $\chi^2/\text{NDF}$ : 3368524.1/50

All: 42.344+/-0.004  $\chi^2/\text{NDF}$ : 7748948.4/104

- sign 42.769+/-0.005  $\chi^2/\text{NDF}$ : 4367870.4/53



asym\_sam\_37\_26\_dd\_cor\_correction\_mean vs Slug



Right In:  $-97.864 \pm 56.661$   $\chi^2/\text{NDF}$ : 20.3/25

Left Out:  $-106.505 \pm 29.563$   $\chi^2/\text{NDF}$ : 37.6/24

Right Out:  $-125.554 \pm 55.190$   $\chi^2/\text{NDF}$ : 25.5/30

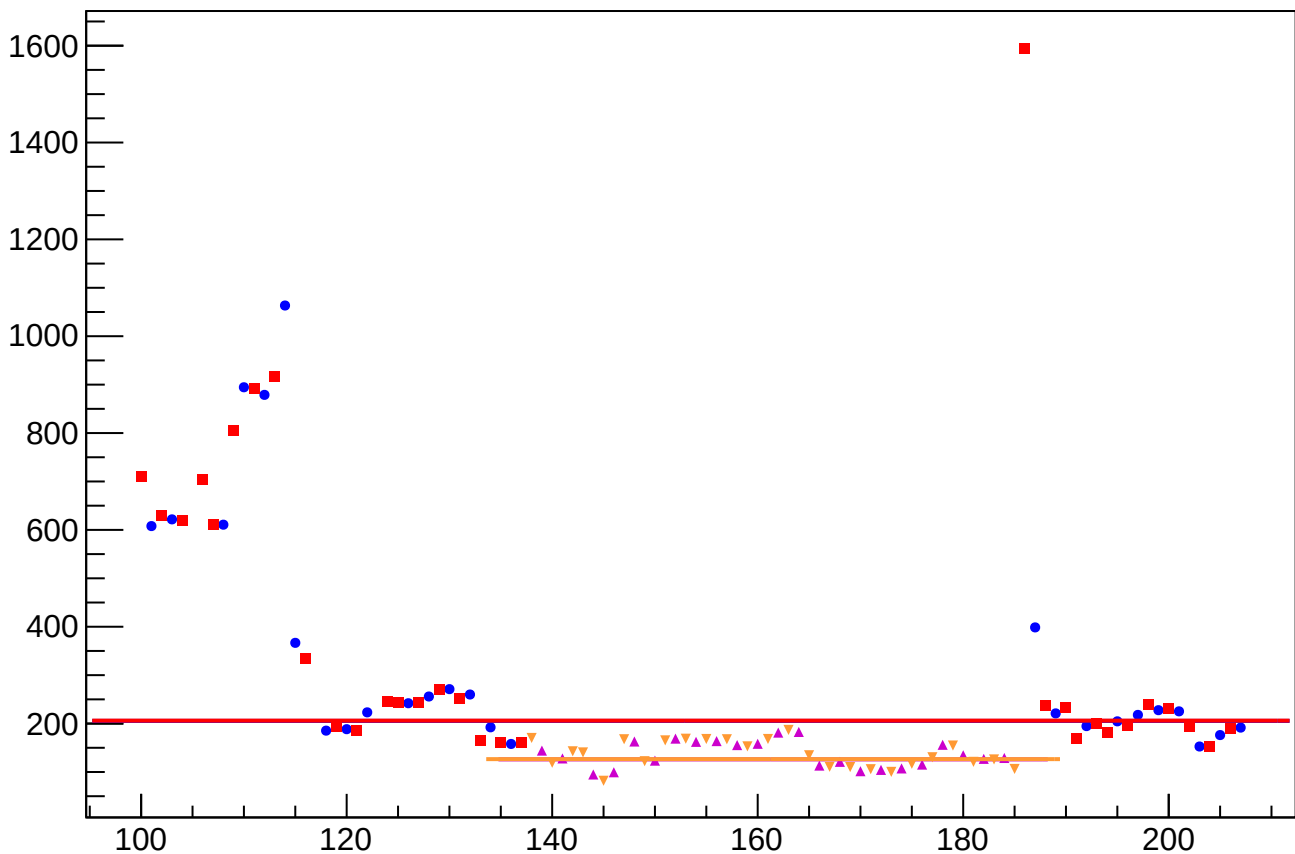
Left In:  $-17.517 \pm 30.185$   $\chi^2/\text{NDF}$ : 28.2/22

+ sign  $-104.656 \pm 26.210$   $\chi^2/\text{NDF}$ : 58.0/50

All:  $-73.847 \pm 18.629$   $\chi^2/\text{NDF}$ : 117.5/104

- sign  $-42.393 \pm 26.483$   $\chi^2/\text{NDF}$ : 56.7/53

asym\_sam\_37\_26\_dd\_cor\_correction\_rms vs Slug



Right In: 205.509 $\pm$ 0.040  $\chi^2$ /NDF: 3444344.9/25

Left Out: 126.561 $\pm$ 0.021  $\chi^2$ /NDF:1758151.9/24

Right Out: 206.057 $\pm$ 0.039  $\chi^2$ /NDF: 4662102.2/30

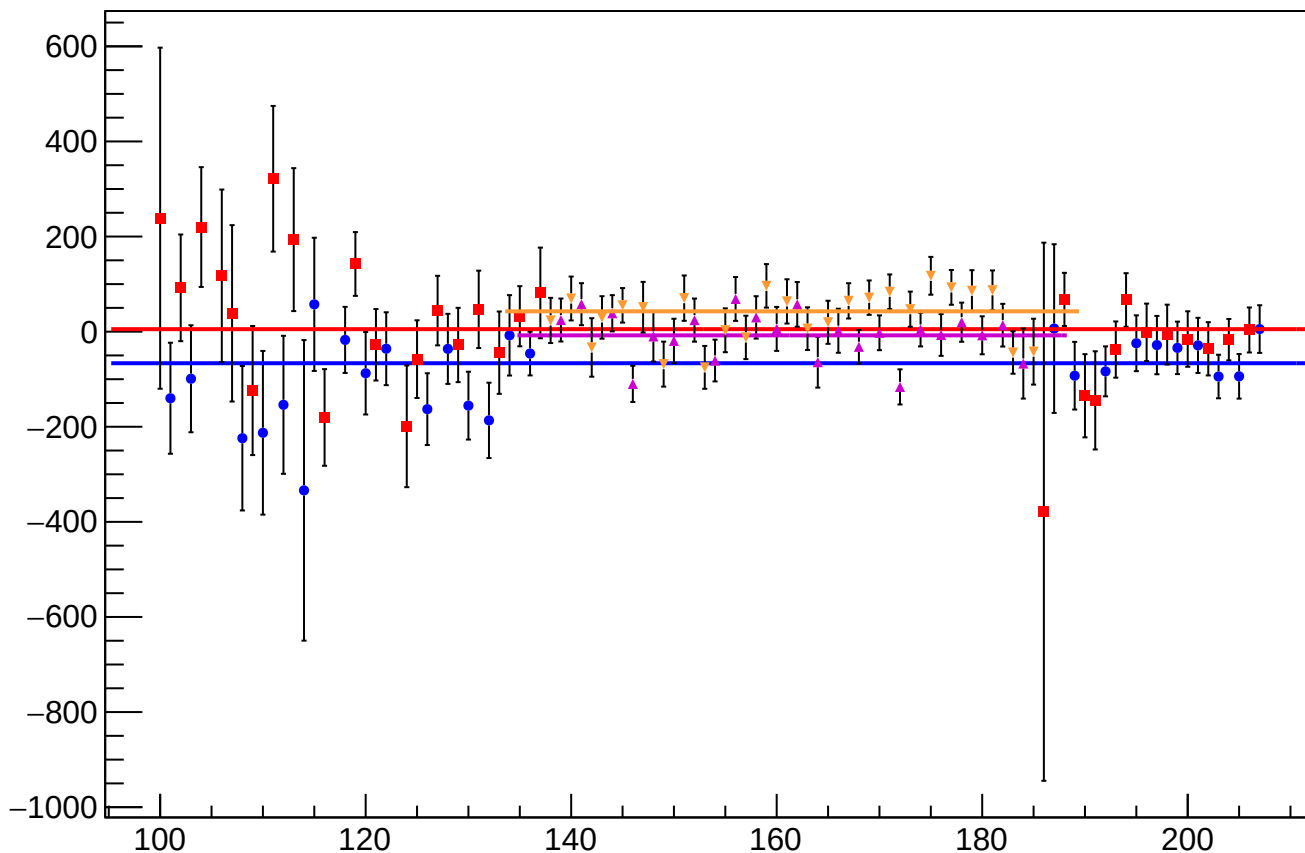
Left In: 126.013 $\pm$ 0.021  $\chi^2$ /NDF:1410664.0/22

+ sign 143.454 $\pm$ 0.019  $\chi^2$ /NDF: 8254434.5/50

All: 143.944 $\pm$ 0.013  $\chi^2$ /NDF: 17566867.2/10

- sign 144.444 $\pm$ 0.019  $\chi^2$ /NDF: 9311020.5/53

# eigen\_cor\_asym\_sam\_37\_26\_dd\_mean vs Slug



Right In: -66.403 $\pm$ 13.762  $\chi^2/\text{NDF}$ : 16.0/25

Left Out: 42.767 $\pm$ 8.698  $\chi^2/\text{NDF}$ :34.7/24

Right Out: 5.239 $\pm$ 13.717  $\chi^2/\text{NDF}$ : 32.9/30

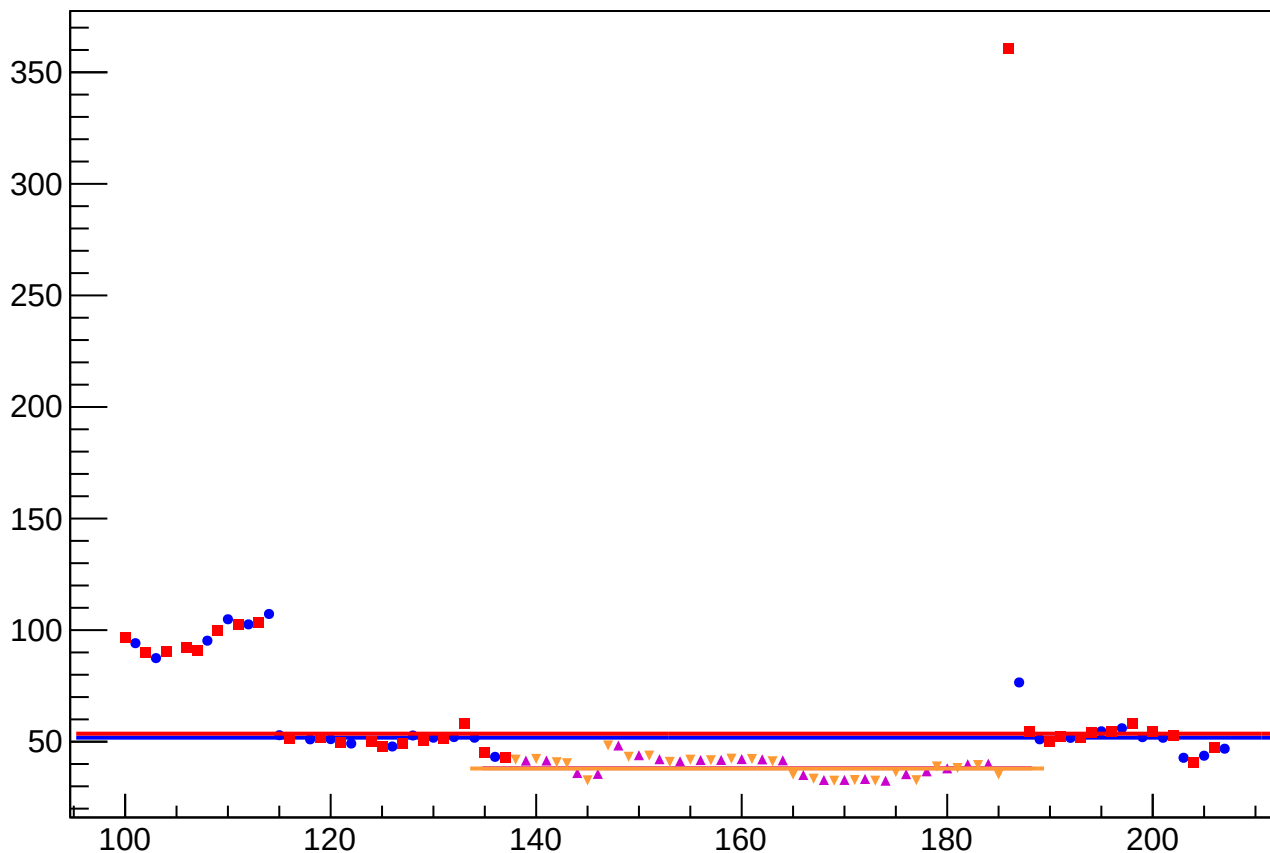
Left In: -7.785 $\pm$ 8.974  $\chi^2/\text{NDF}$ :30.6/22

+ sign 11.603 $\pm$ 7.353  $\chi^2/\text{NDF}$ : 95.8/50

All: 4.025 $\pm$ 5.254  $\chi^2/\text{NDF}$ : 162.0/104

- sign -3.881 $\pm$ 7.510  $\chi^2/\text{NDF}$ : 64.1/53

# eigen\_cor\_asym\_sam\_37\_26\_dd\_rms vs Slug



Right In: 51.816+/-0.010  $\chi^2/\text{NDF}$ : 1412455.6/25

Left Out: 37.990+/-0.006  $\chi^2/\text{NDF}$ : 513605.5/24

Right Out: 53.601+/-0.010  $\chi^2/\text{NDF}$ : 2158578.5/30

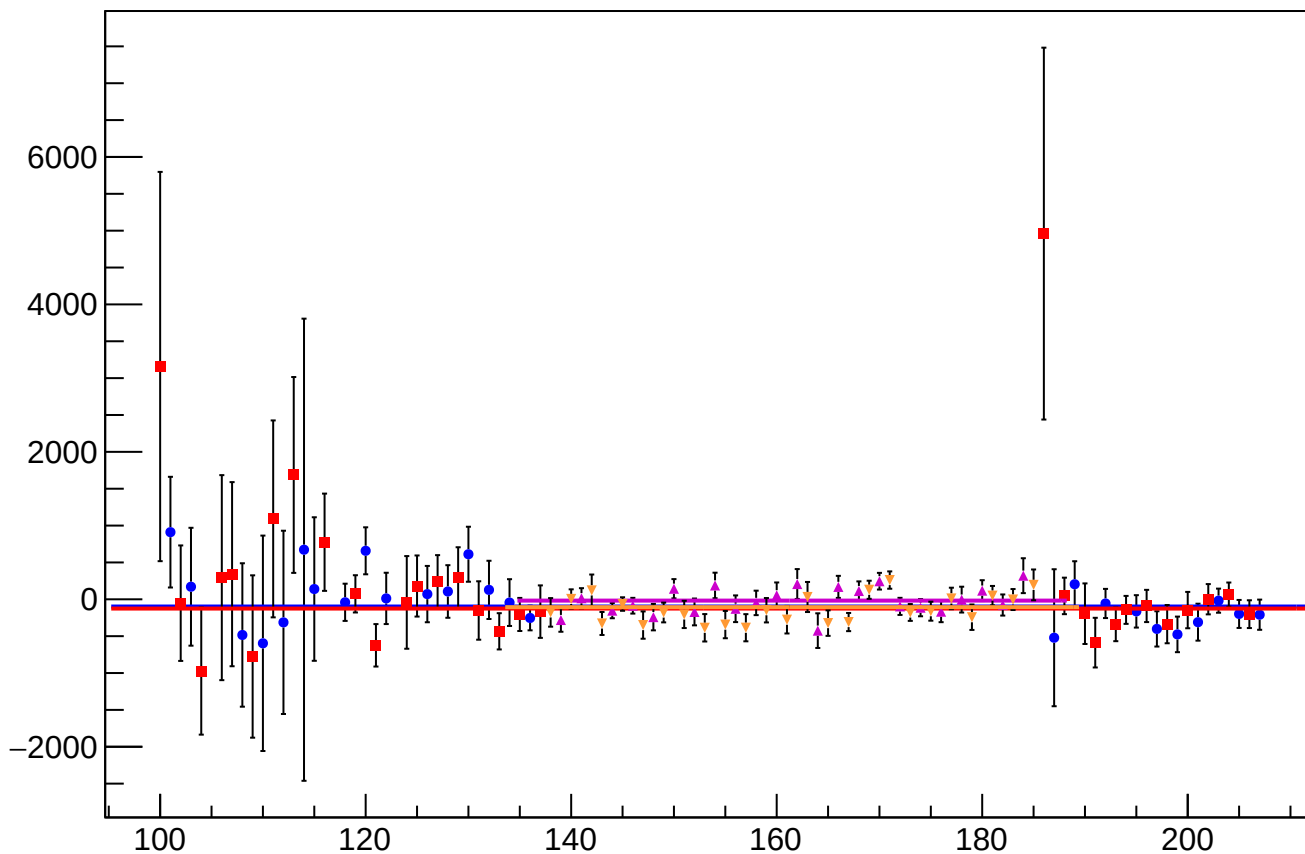
Left In: 38.133+/-0.006  $\chi^2/\text{NDF}$ : 428309.7/22

+ sign 41.936+/-0.005  $\chi^2/\text{NDF}$ : 3368524.1/50

All: 42.344+/-0.004  $\chi^2/\text{NDF}$ : 7748948.4/104

- sign 42.769+/-0.005  $\chi^2/\text{NDF}$ : 4367870.4/53

asym\_sam\_37\_26\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-97.864 \pm 56.661$   $\chi^2/\text{NDF}$ : 20.3/25

Left Out:  $-106.505 \pm 29.563$   $\chi^2/\text{NDF}$ : 37.6/24

Right Out:  $-125.554 \pm 55.190$   $\chi^2/\text{NDF}$ : 25.5/30

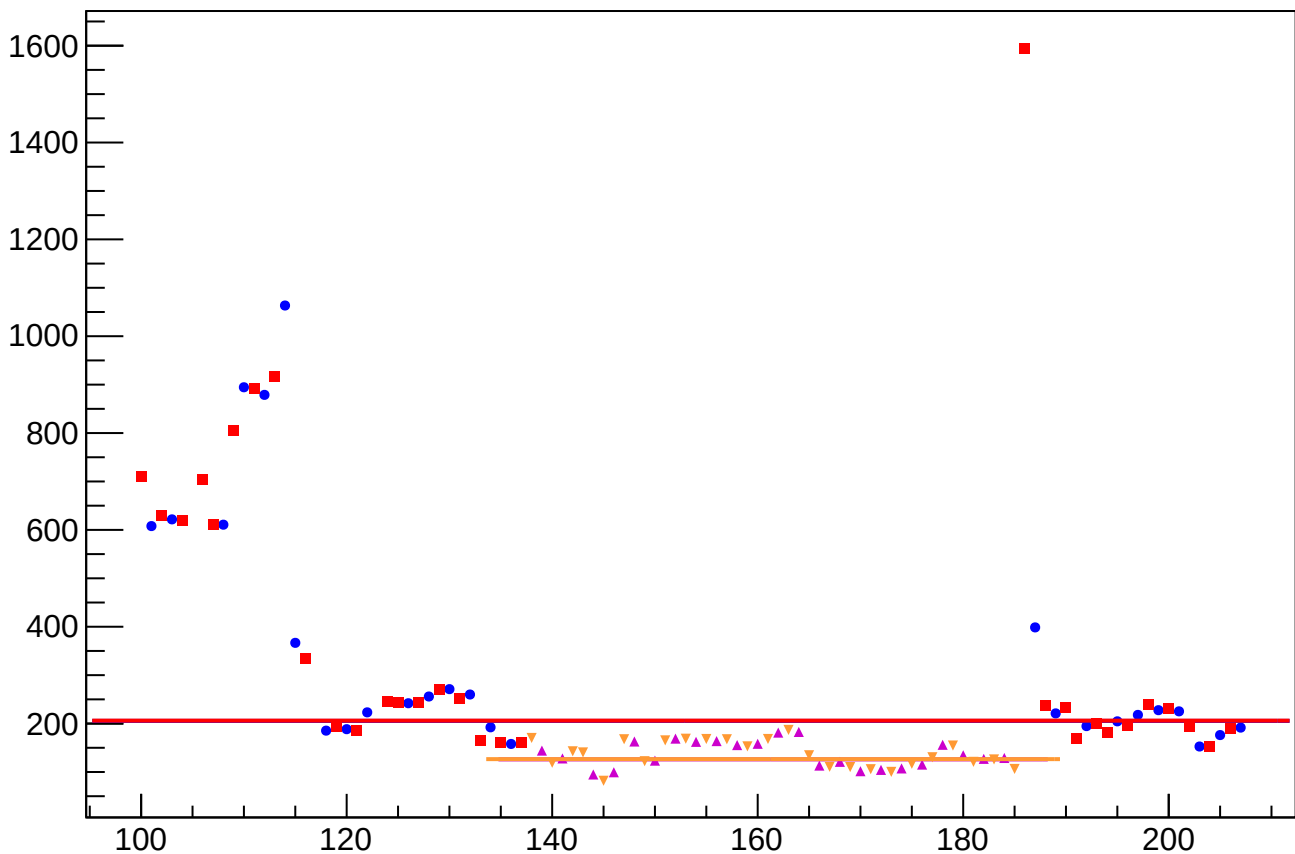
Left In:  $-17.517 \pm 30.185$   $\chi^2/\text{NDF}$ : 28.2/22

+ sign  $-104.656 \pm 26.210$   $\chi^2/\text{NDF}$ : 58.0/50

All:  $-73.847 \pm 18.629$   $\chi^2/\text{NDF}$ : 117.5/104

- sign  $-42.393 \pm 26.483$   $\chi^2/\text{NDF}$ : 56.7/53

asym\_sam\_37\_26\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 205.509 $\pm$ 0.040  $\chi^2$ /NDF: 3444344.9/25

Left Out: 126.561 $\pm$ 0.021  $\chi^2$ /NDF:1758151.9/24

Right Out: 206.057 $\pm$ 0.039  $\chi^2$ /NDF: 4662102.2/30

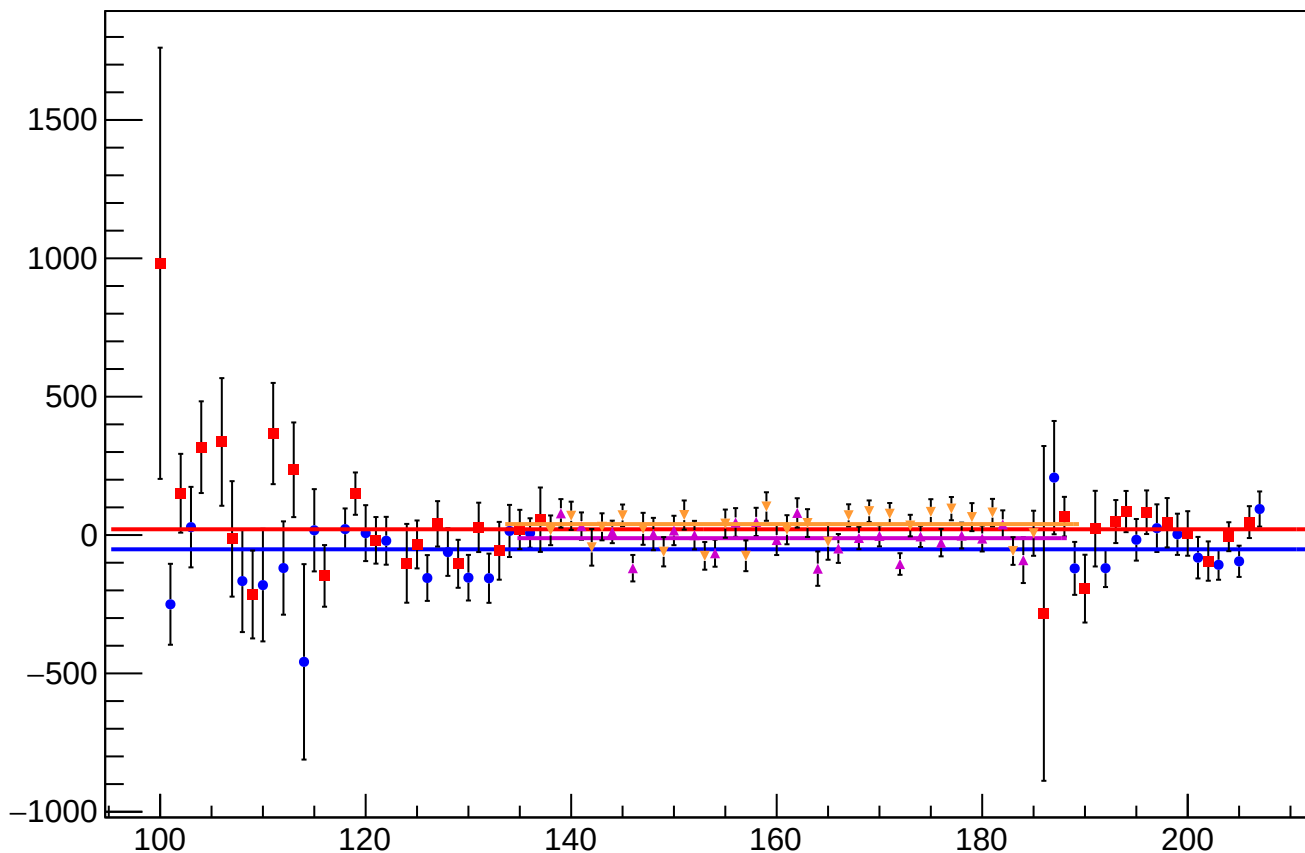
Left In: 126.013 $\pm$ 0.021  $\chi^2$ /NDF:1410664.0/22

+ sign 143.454 $\pm$ 0.019  $\chi^2$ /NDF: 8254434.5/50

All: 143.944 $\pm$ 0.013  $\chi^2$ /NDF: 17566867.2/10

- sign 144.444 $\pm$ 0.019  $\chi^2$ /NDF: 9311020.5/53

# dit\_asym\_sam\_37\_26\_dd\_mean vs Slug



Right In:  $-51.551 \pm 16.692$   $\chi^2/\text{NDF}: 24.0/25$

Left Out:  $39.563 \pm 9.745$   $\chi^2/\text{NDF}: 29.6/24$

Right Out:  $20.847 \pm 16.786$   $\chi^2/\text{NDF}: 32.5/30$

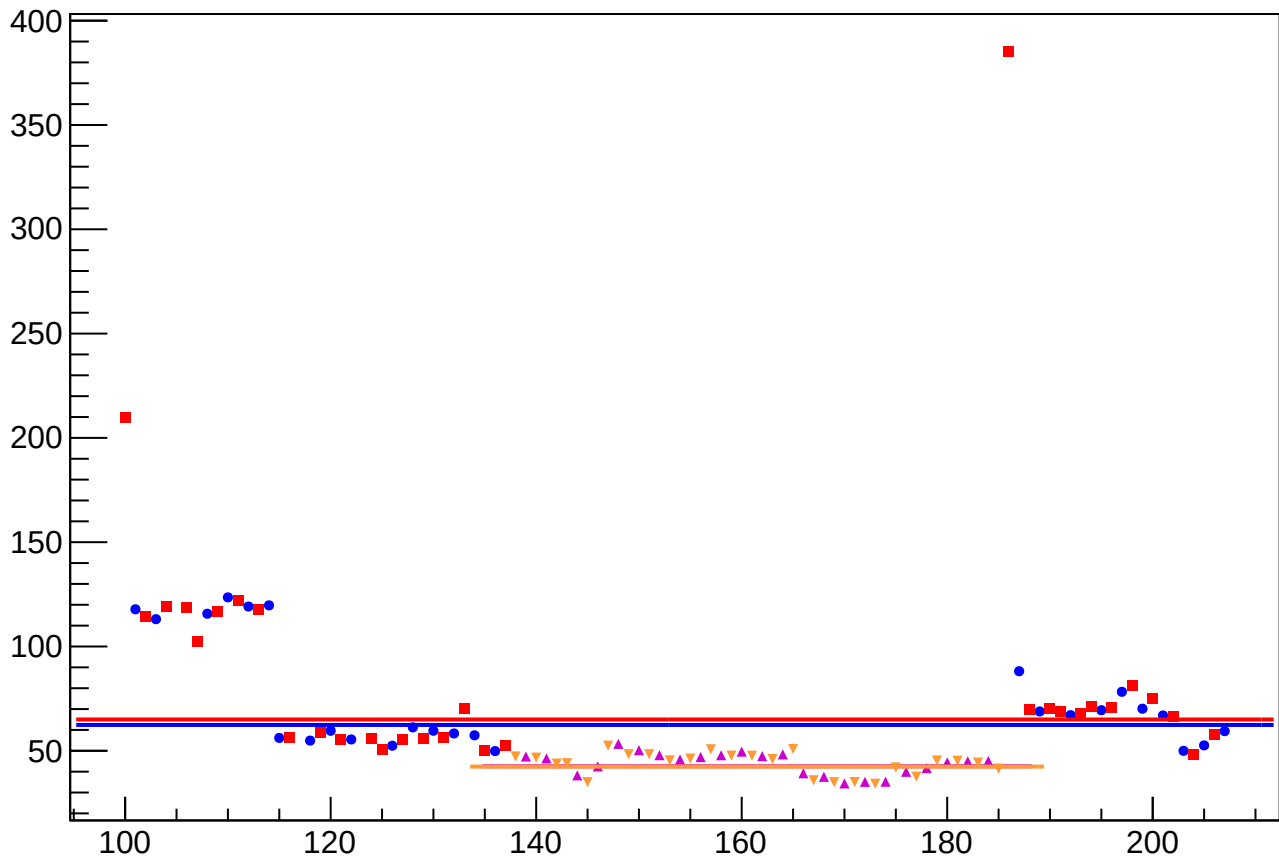
Left In:  $-11.306 \pm 10.077$   $\chi^2/\text{NDF}: 27.9/22$

+ sign  $16.402 \pm 8.416$   $\chi^2/\text{NDF}: 75.8/50$

All:  $7.059 \pm 6.029$   $\chi^2/\text{NDF}: 141.5/104$

- sign  $-2.788 \pm 8.640$   $\chi^2/\text{NDF}: 63.1/53$

# dit\_asym\_sam\_37\_26\_dd\_rms vs Slug



Right In: 62.393 $\pm$ 0.012  $\chi^2$ /NDF: 1683796.4/25

Left Out: 42.426 $\pm$ 0.007  $\chi^2$ /NDF: 698766.0/24

Right Out: 65.015 $\pm$ 0.012  $\chi^2$ /NDF: 2528158.1/30

Left In: 42.579 $\pm$ 0.007  $\chi^2$ /NDF: 589897.0/22

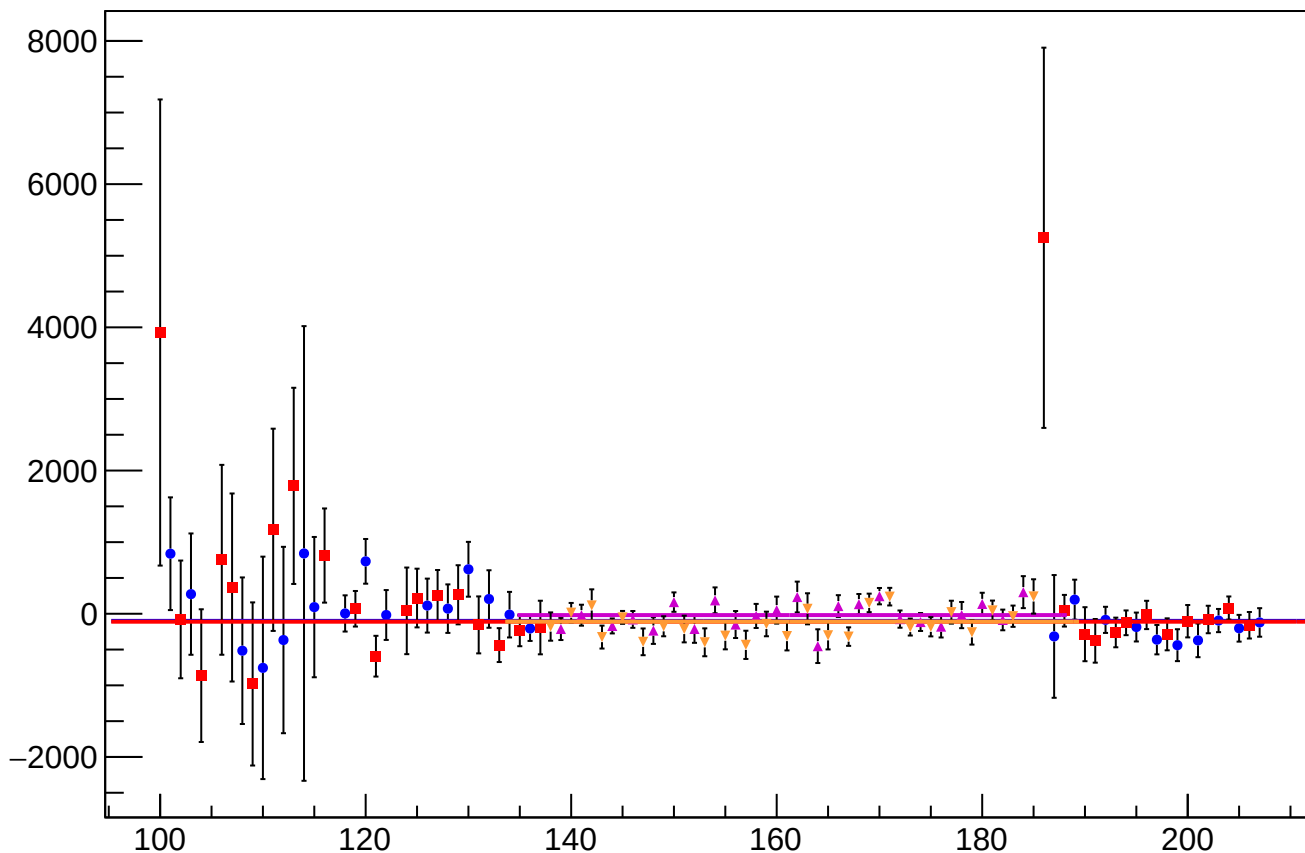
+ sign 47.502 $\pm$ 0.006  $\chi^2$ /NDF: 4516679.5/50

All: 47.999 $\pm$ 0.004  $\chi^2$ /NDF: 10275394.7/104

- sign 48.523 $\pm$ 0.006  $\chi^2$ /NDF: 5744384.9/53



asym\_sam\_37\_26\_dd\_dit\_correction\_mean vs Slug



Right In:  $-99.616 \pm 54.660$   $\chi^2/\text{NDF}$ : 21.6/25

Left Out:  $-109.869 \pm 30.759$   $\chi^2/\text{NDF}$ : 36.3/24

Right Out:  $-110.823 \pm 52.205$   $\chi^2/\text{NDF}$ : 24.8/30

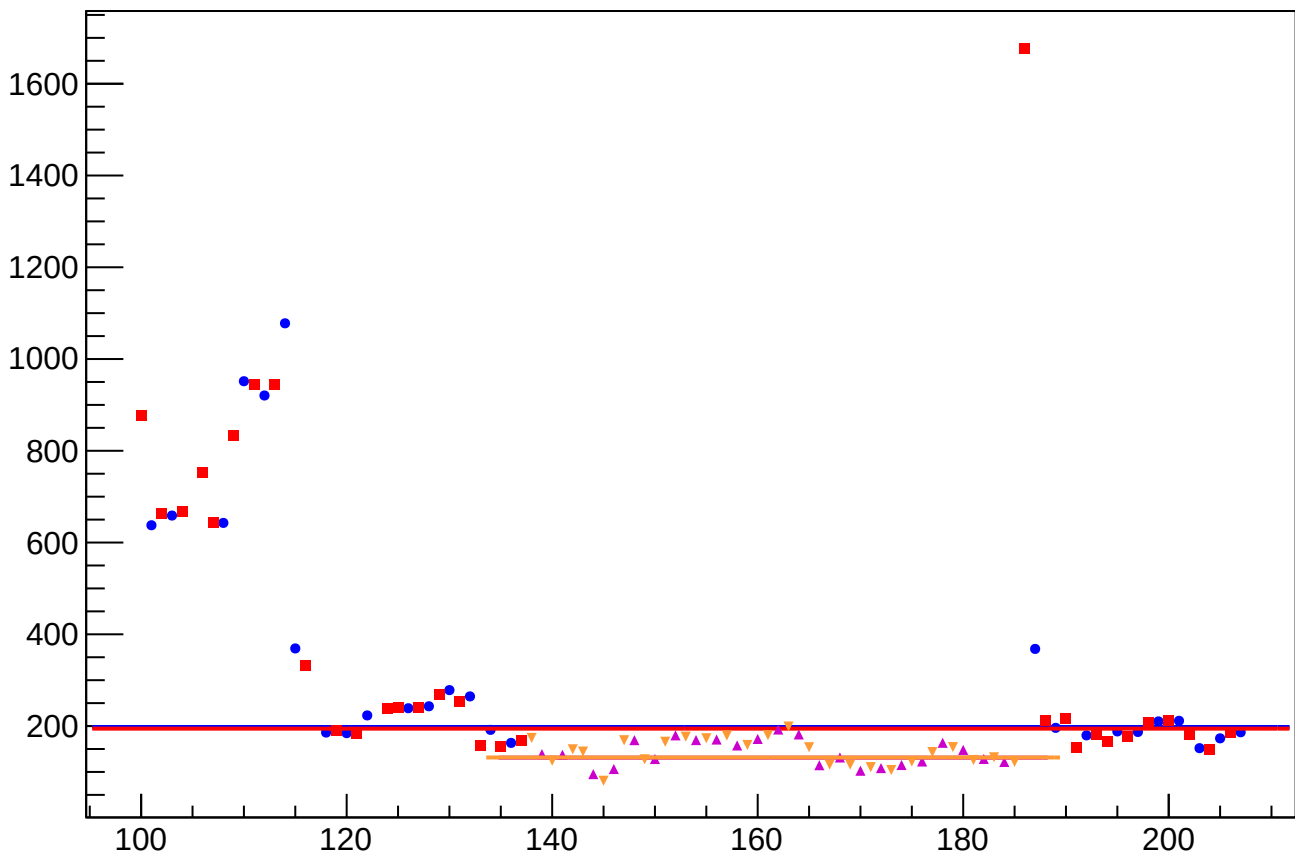
Left In:  $-18.838 \pm 31.477$   $\chi^2/\text{NDF}$ : 27.2/22

+ sign  $-107.404 \pm 26.806$   $\chi^2/\text{NDF}$ : 57.9/50

All:  $-75.562 \pm 19.007$   $\chi^2/\text{NDF}$ : 115.0/104

- sign  $-43.362 \pm 26.956$   $\chi^2/\text{NDF}$ : 54.3/53

asym\_sam\_37\_26\_dd\_dit\_correction\_rms vs Slug



Right In: 197.959+/-0.039  $\chi^2/\text{NDF}$ : 3522699.1/25

Left Out: 131.515+/-0.022  $\chi^2/\text{NDF}$ : 1902958.8/24

Right Out: 194.409+/-0.037  $\chi^2/\text{NDF}$ : 4966698.8/30

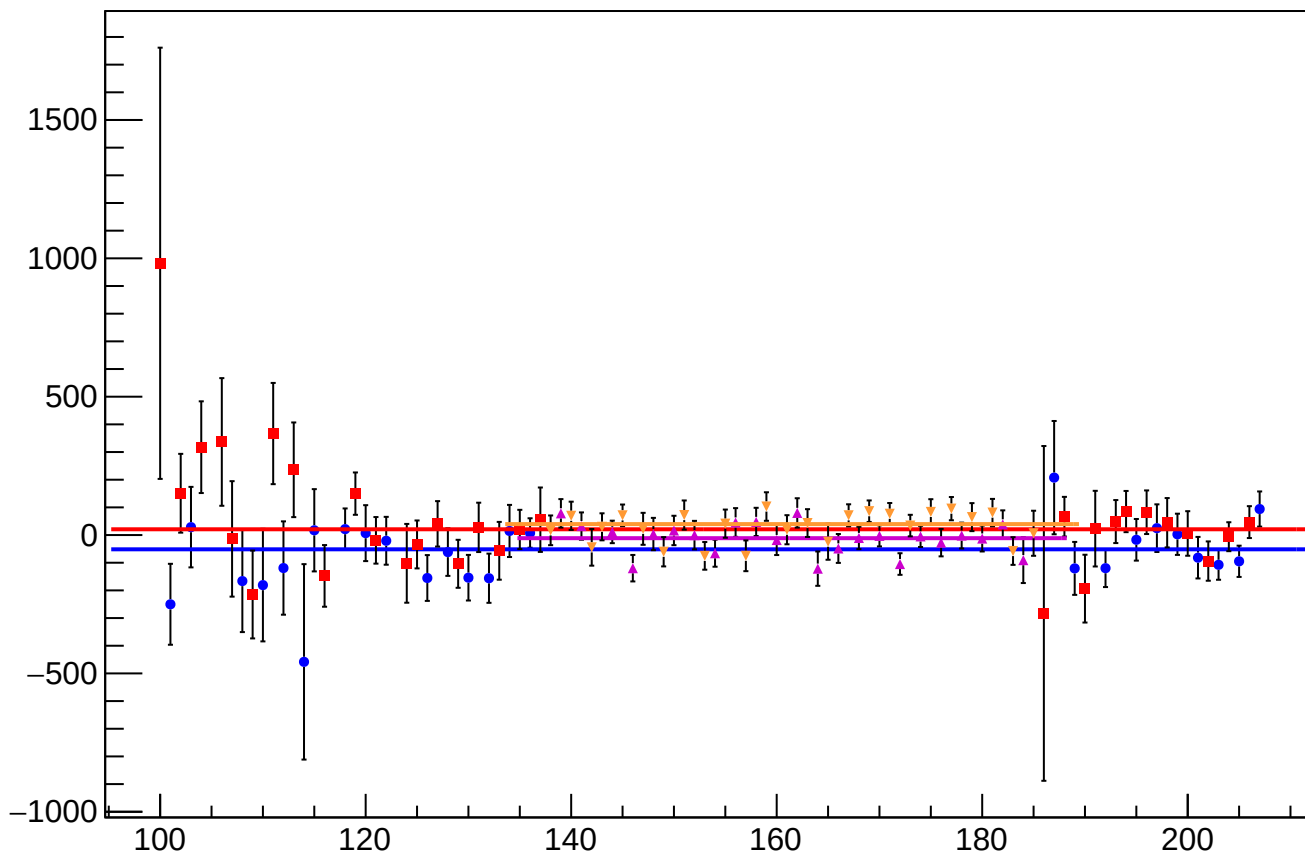
Left In: 131.074+/-0.022  $\chi^2/\text{NDF}$ : 1467806.6/22

+ sign 147.495+/-0.019  $\chi^2/\text{NDF}$ : 7670203.1/50

All: 147.726+/-0.013  $\chi^2/\text{NDF}$ : 16263897.5/100

- sign 147.960+/-0.019  $\chi^2/\text{NDF}$ : 8593395.4/53

# eigen\_dit\_asym\_sam\_37\_26\_dd\_mean vs Slug



Right In:  $-51.551 \pm 16.692$   $\chi^2/\text{NDF}$ : 24.0/25

Left Out:  $39.564 \pm 9.745$   $\chi^2/\text{NDF}$ : 29.6/24

Right Out:  $20.848 \pm 16.786$   $\chi^2/\text{NDF}$ : 32.5/30

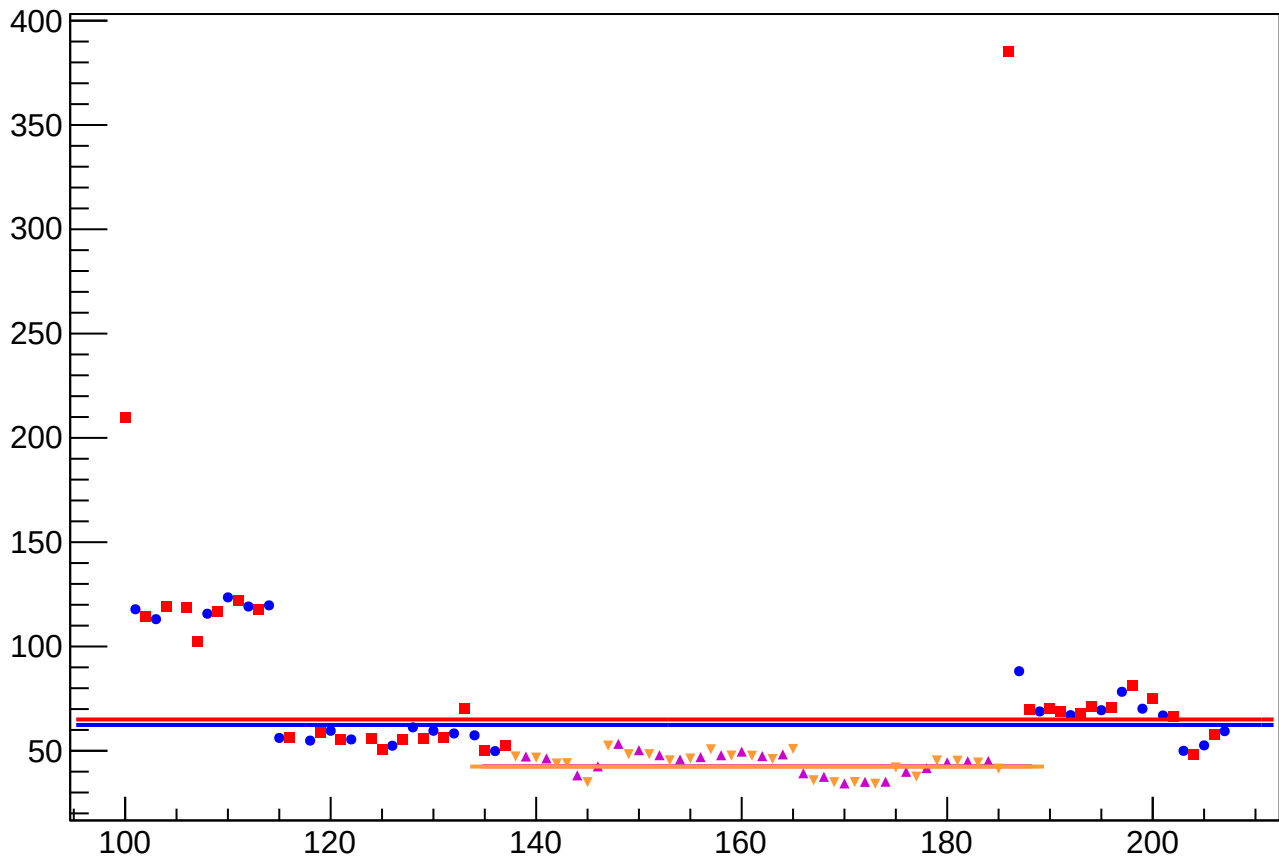
Left In:  $-11.306 \pm 10.077$   $\chi^2/\text{NDF}$ : 27.9/22

+ sign  $16.403 \pm 8.416$   $\chi^2/\text{NDF}$ : 75.8/50

All:  $7.059 \pm 6.029$   $\chi^2/\text{NDF}$ : 141.5/104

- sign  $-2.788 \pm 8.640$   $\chi^2/\text{NDF}$ : 63.1/53

eigen\_dit\_asym\_sam\_37\_26\_dd\_rms vs Slug



Right In: 62.393 $\pm$ 0.012  $\chi^2$ /NDF: 1683786.7/25

Left Out: 42.426 $\pm$ 0.007  $\chi^2$ /NDF: 698784.4/24

Right Out: 65.015 $\pm$ 0.012  $\chi^2$ /NDF: 2528133.8/30

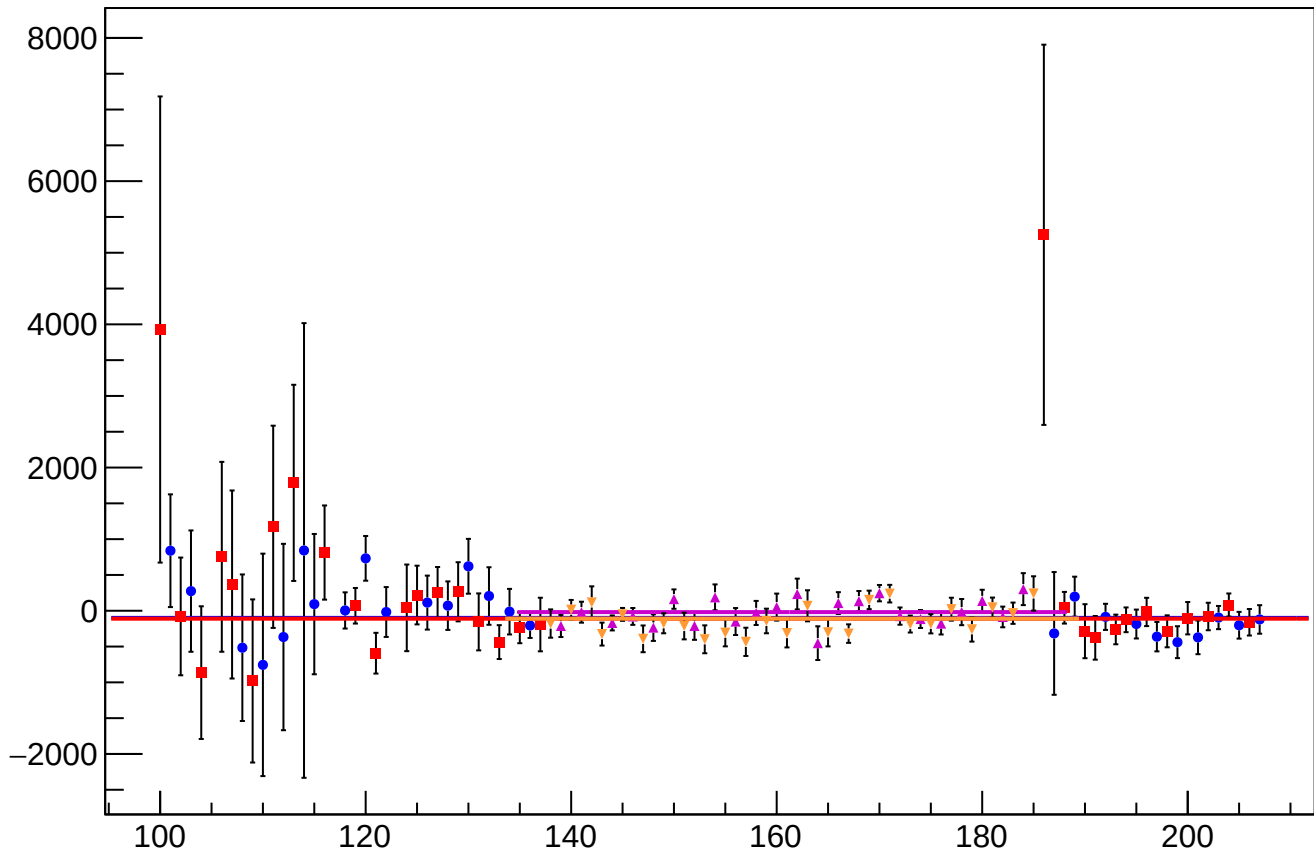
Left In: 42.579 $\pm$ 0.007  $\chi^2$ /NDF: 589901.9/22

+ sign 47.502 $\pm$ 0.006  $\chi^2$ /NDF: 4516692.3/50

All: 47.999 $\pm$ 0.004  $\chi^2$ /NDF: 10275423.5/104

- sign 48.523 $\pm$ 0.006  $\chi^2$ /NDF: 5744397.7/53

asym\_sam\_37\_26\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-99.616 \pm 54.660$   $\chi^2/\text{NDF}$ : 21.6/25

Left Out:  $-109.869 \pm 30.759$   $\chi^2/\text{NDF}$ : 36.3/24

Right Out:  $-110.822 \pm 52.205$   $\chi^2/\text{NDF}$ : 24.8/30

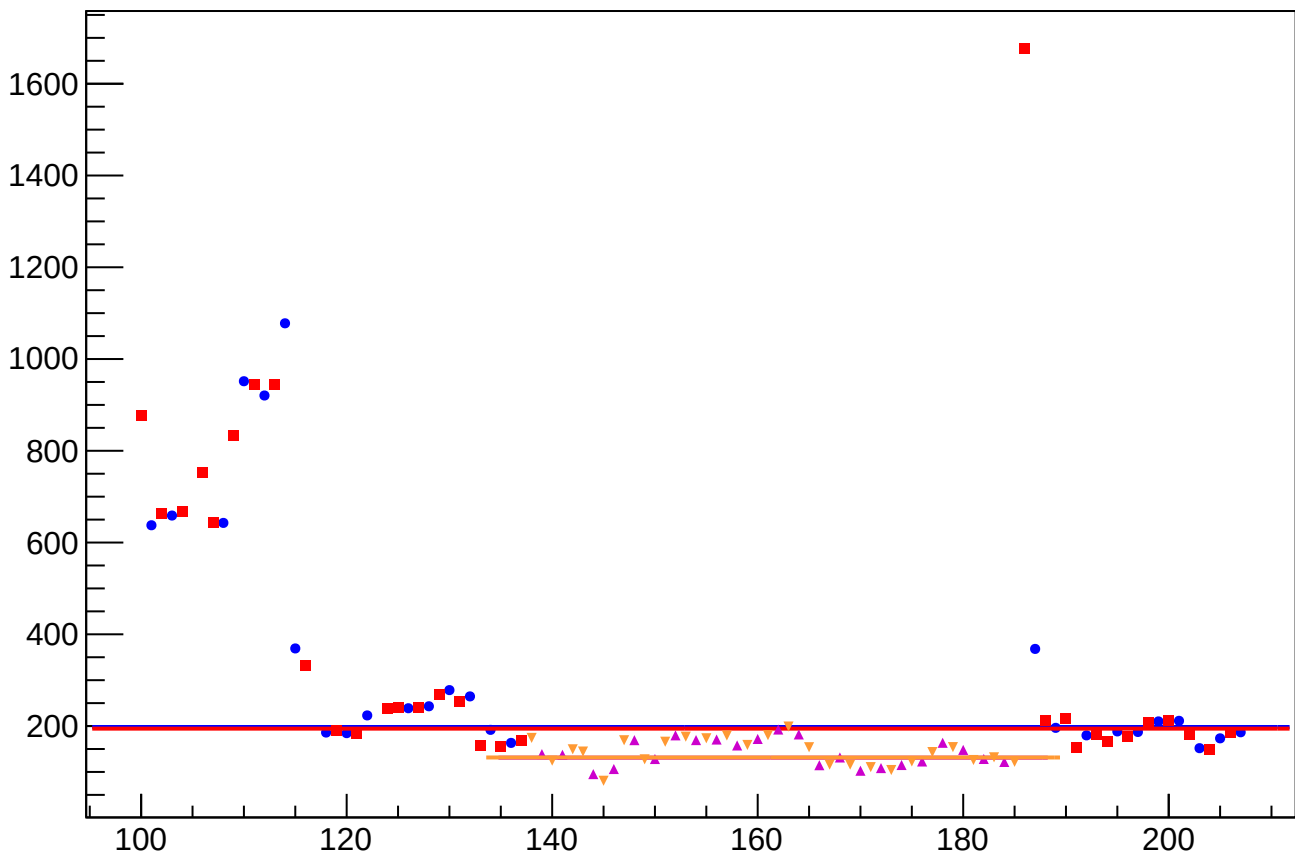
Left In:  $-18.838 \pm 31.477$   $\chi^2/\text{NDF}$ : 27.2/22

+ sign  $-107.403 \pm 26.806$   $\chi^2/\text{NDF}$ : 57.9/50

All:  $-75.562 \pm 19.007$   $\chi^2/\text{NDF}$ : 115.0/104

- sign  $-43.362 \pm 26.956$   $\chi^2/\text{NDF}$ : 54.3/53

asym\_sam\_37\_26\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 197.959+/-0.039  $\chi^2/\text{NDF}$ : 3522690.2/25

Left Out: 131.515+/-0.022  $\chi^2/\text{NDF}$ :1902951.8/24

Right Out: 194.409+/-0.037  $\chi^2/\text{NDF}$ : 4966700.4/30

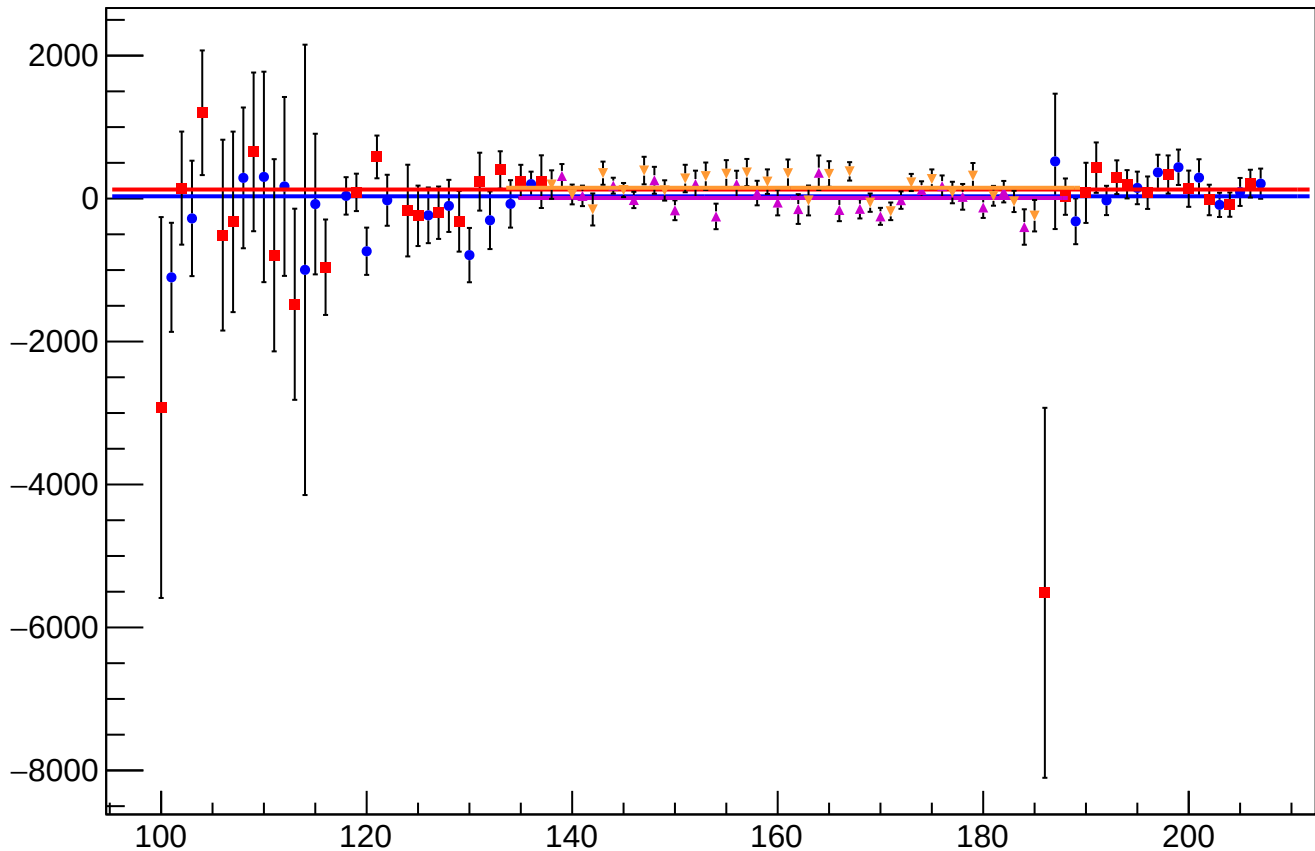
Left In: 131.074+/-0.022  $\chi^2/\text{NDF}$ :1467810.7/22

+ sign 147.495+/-0.019  $\chi^2/\text{NDF}$ : 7670144.6/50

All: 147.726+/-0.013  $\chi^2/\text{NDF}$ : 16263793.8/10

- sign 147.960+/-0.019  $\chi^2/\text{NDF}$ : 8593350.3/53

# asym\_sam\_37\_26\_dd\_mean vs Slug



Right In:  $31.870 \pm 58.506$   $\chi^2/\text{NDF}$ : 23.7/25

Left Out:  $151.108 \pm 30.952$   $\chi^2/\text{NDF}$ : 33.1/24

Right Out:  $126.806 \pm 57.116$   $\chi^2/\text{NDF}$ : 23.9/30

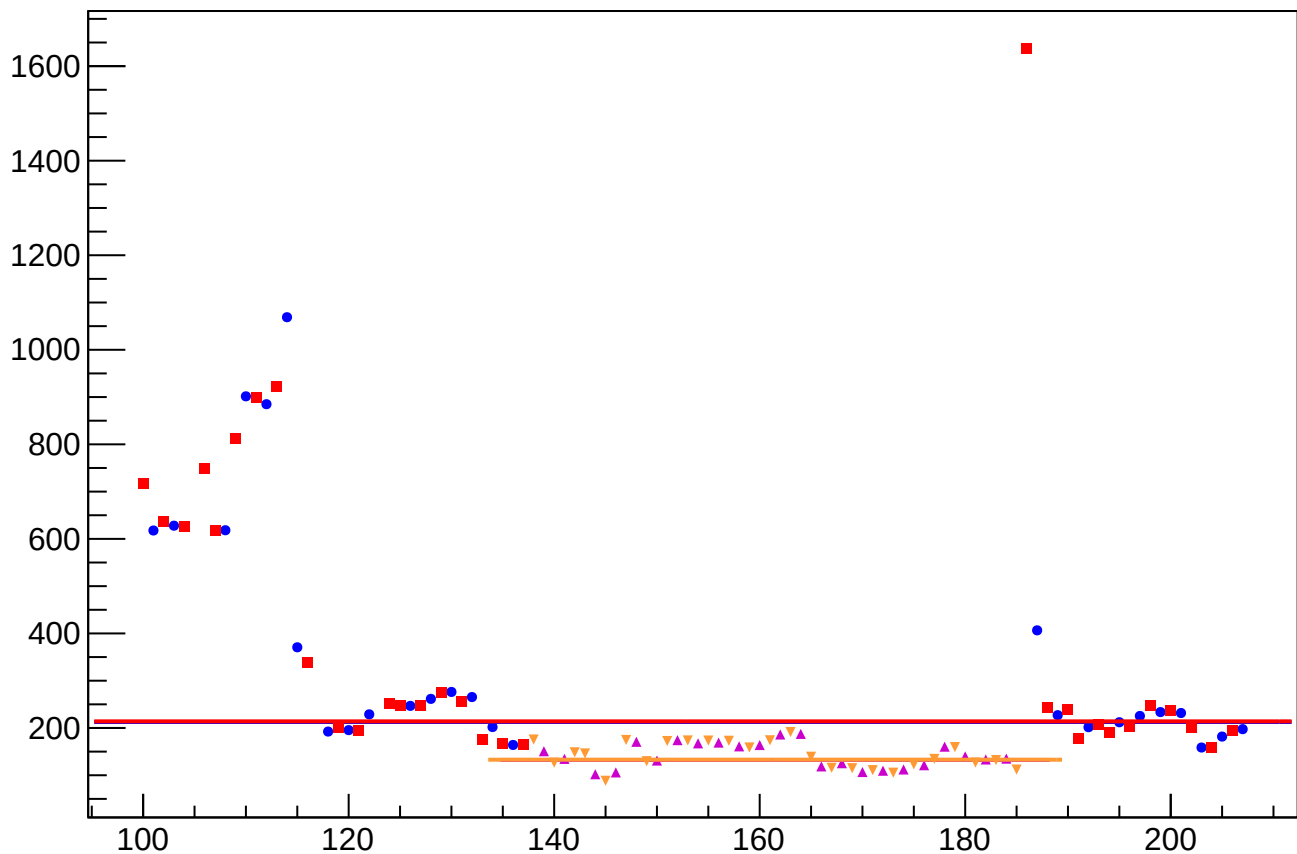
Left In:  $7.941 \pm 31.621$   $\chi^2/\text{NDF}$ : 29.5/22

+ sign  $125.033 \pm 27.359$   $\chi^2/\text{NDF}$ : 60.0/50

All:  $80.925 \pm 19.453$   $\chi^2/\text{NDF}$ : 121.9/104

- sign  $35.827 \pm 27.664$   $\chi^2/\text{NDF}$ : 56.6/53

# asym\_sam\_37\_26\_dd\_rms vs Slug



Right In: 212.626+/-0.041  $\chi^2/\text{NDF}$ : 3353195.7/25

Left Out: 132.876+/-0.022  $\chi^2/\text{NDF}$ :1592310.5/24

Right Out: 213.976+/-0.040  $\chi^2/\text{NDF}$ : 4610441.7/30

Left In: 132.342+/-0.022  $\chi^2/\text{NDF}$ :1277761.6/22

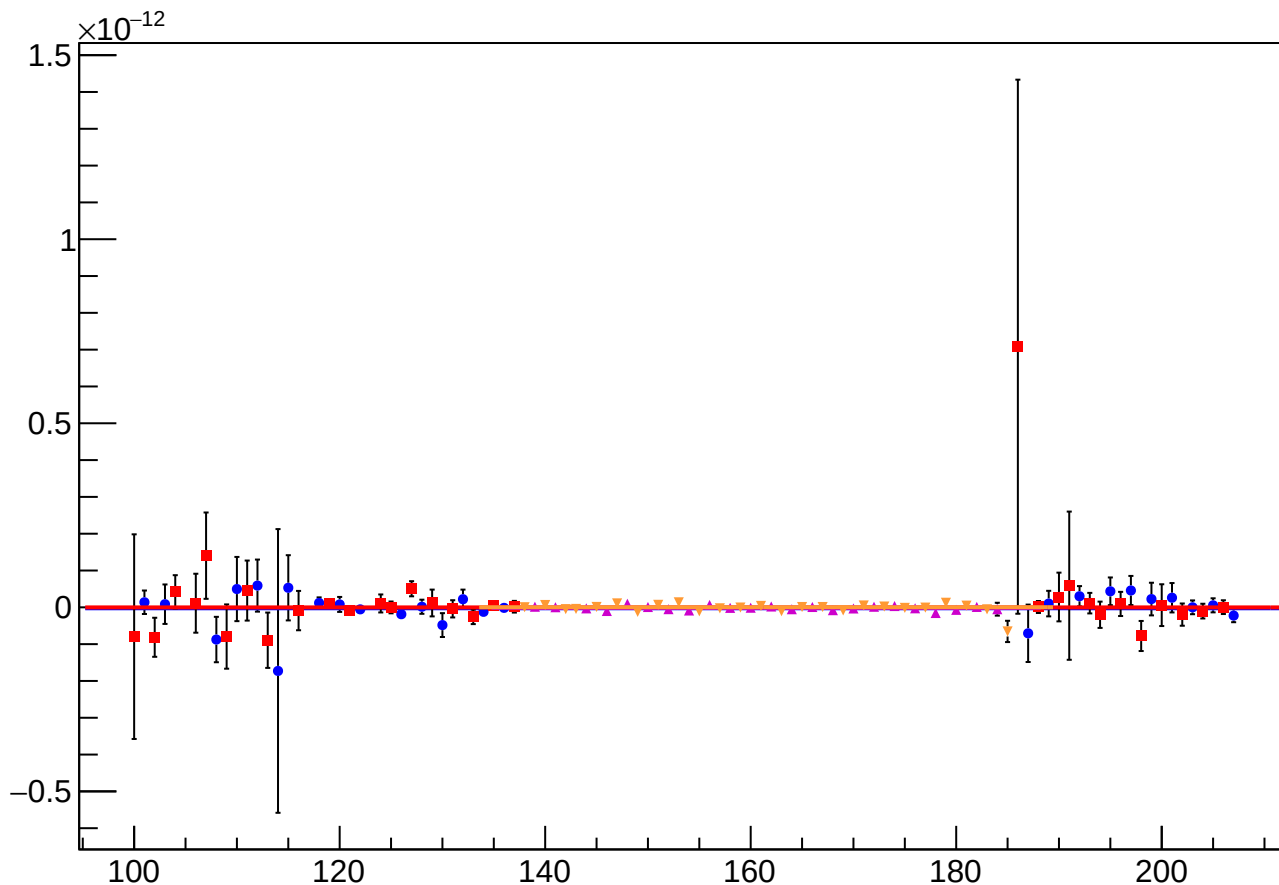
+ sign 150.315+/-0.019  $\chi^2/\text{NDF}$ : 7849035.5/50

All: 150.898+/-0.014  $\chi^2/\text{NDF}$ : 16866193.9/100

- sign 151.493+/-0.020  $\chi^2/\text{NDF}$ : 9015325.7/53



asym\_sam\_37\_26\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 19.1/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 32.2/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 24.2/30

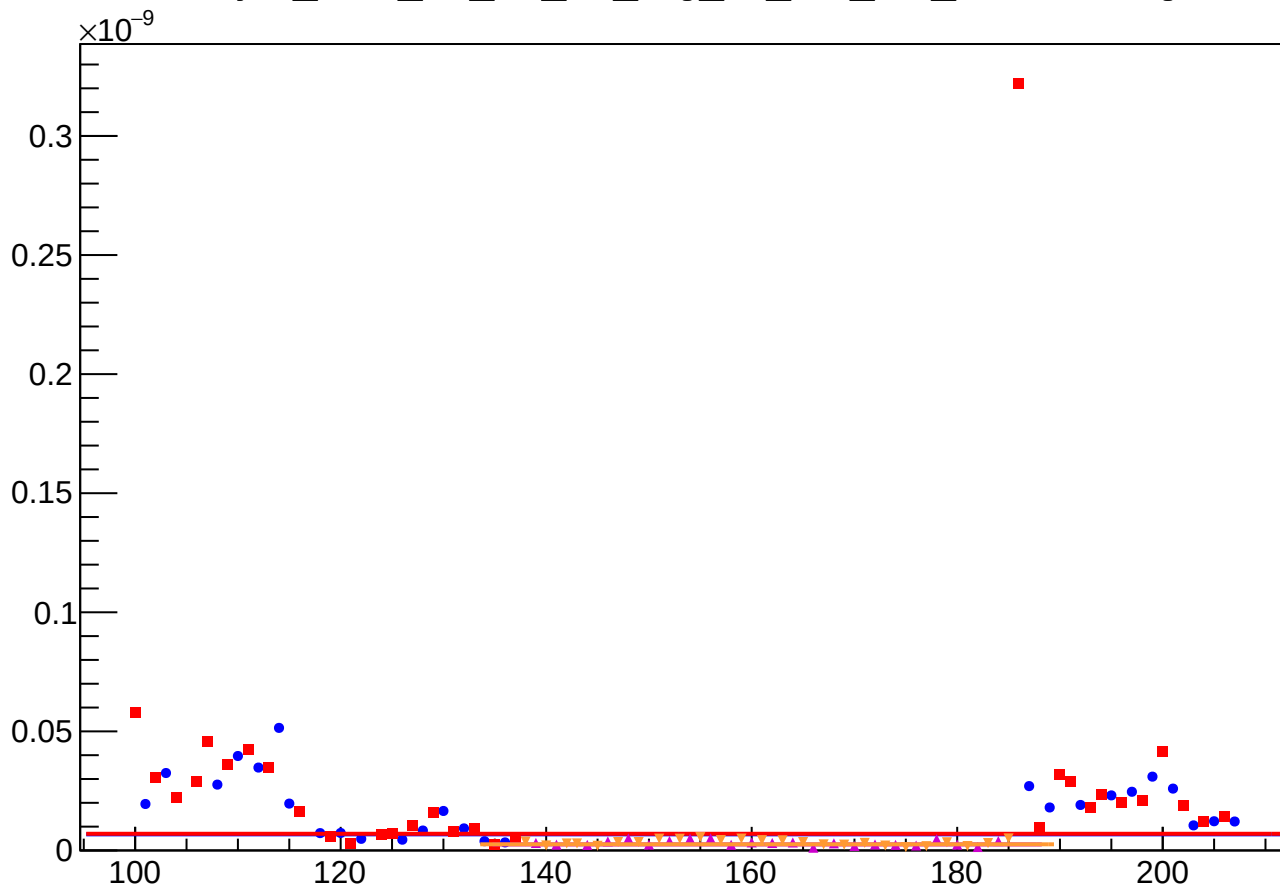
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 14.9/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 52.0/50

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 92.0/104

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 39.2/53

asym\_sam\_37\_26\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 6023067.1/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:2174042.6/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 7235371.5/30

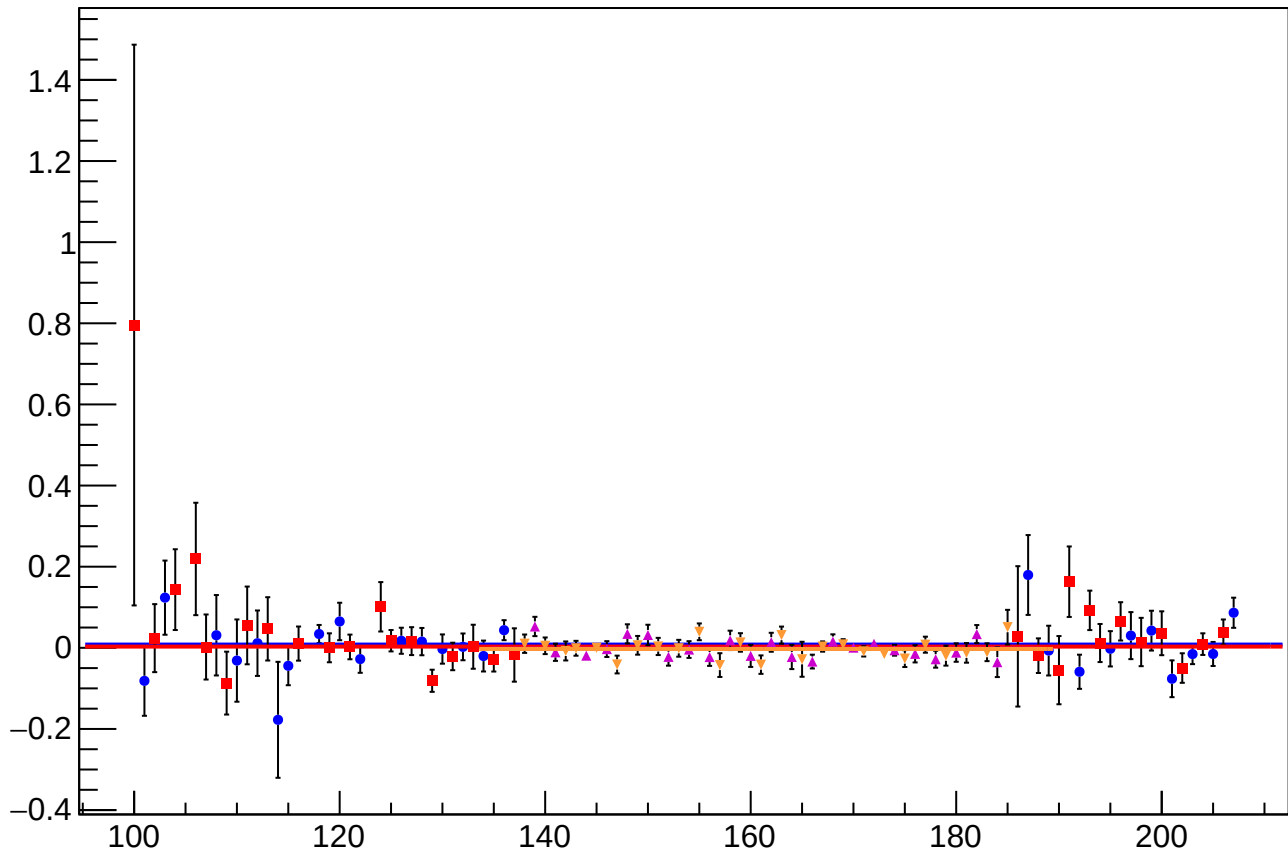
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:1530752.8/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 11004913.7/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 22655949.5/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 11649119.7/53

asym\_sam\_37\_26\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.008 \pm 0.008$   $\chi^2/\text{NDF}$ : 28.4/25

Left Out:  $-0.003 \pm 0.004$   $\chi^2/\text{NDF}$ : 22.6/24

Right Out:  $0.003 \pm 0.008$   $\chi^2/\text{NDF}$ : 35.5/30

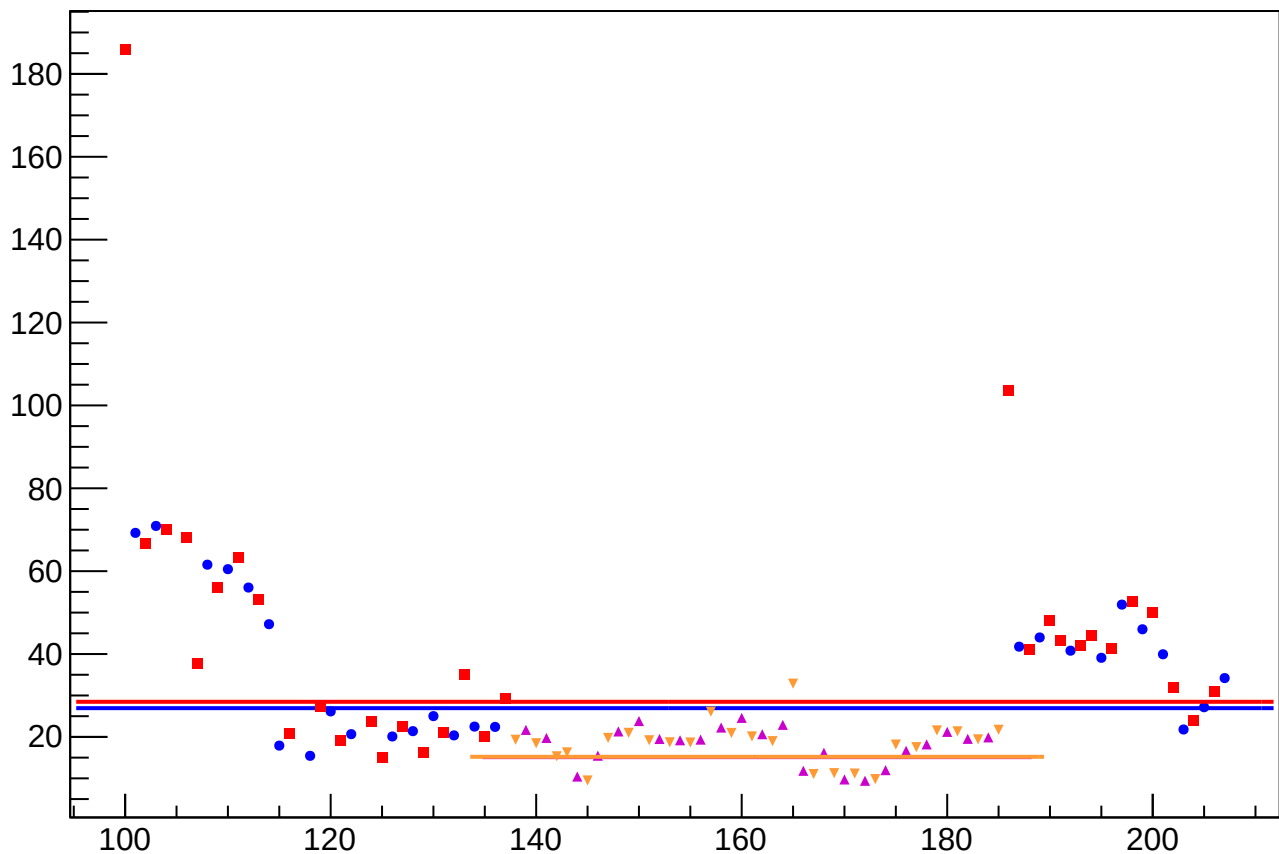
Left In:  $-0.002 \pm 0.004$   $\chi^2/\text{NDF}$ : 26.9/22

+ sign  $-0.001 \pm 0.003$   $\chi^2/\text{NDF}$ : 52.6/50

All:  $-0.001 \pm 0.002$   $\chi^2/\text{NDF}$ : 115.4/104

- sign  $-0.001 \pm 0.003$   $\chi^2/\text{NDF}$ : 62.8/53

asym\_sam\_37\_26\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 26.938 $\pm$ 0.006  $\chi^2$ /NDF: 4276705.8/25

Left Out: 15.202 $\pm$ 0.003  $\chi^2$ /NDF: 3441921.2/24

Right Out: 28.477 $\pm$ 0.006  $\chi^2$ /NDF: 5315840.1/30

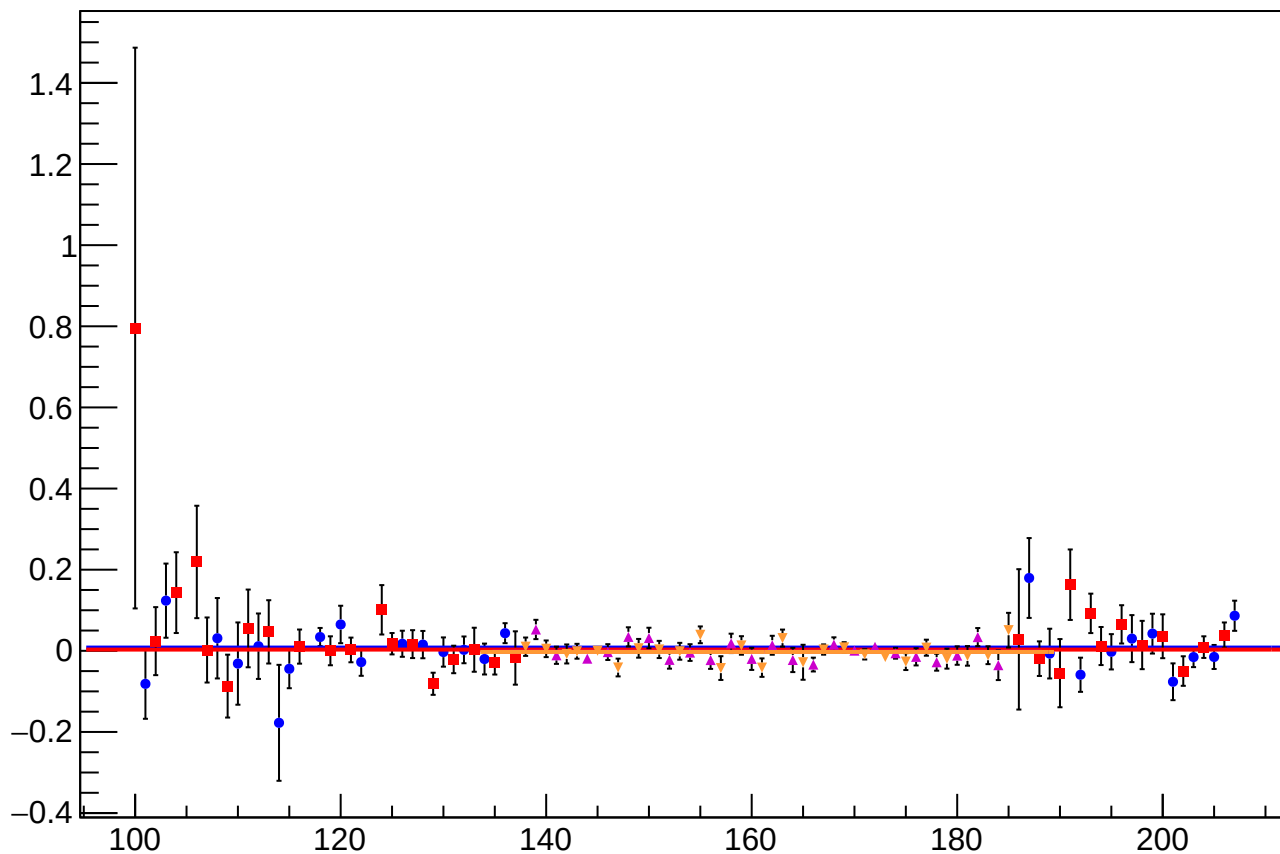
Left In: 15.116 $\pm$ 0.003  $\chi^2$ /NDF: 3402288.3/22

+ sign 17.366 $\pm$ 0.002  $\chi^2$ /NDF: 11419094.9/50

All: 17.496 $\pm$ 0.002  $\chi^2$ /NDF: 24741285.1/104

- sign 17.634 $\pm$ 0.002  $\chi^2$ /NDF: 13315929.0/53

asym\_sam\_37\_26\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.008 \pm 0.008$   $\chi^2/\text{NDF}$ : 28.4/25

Left Out:  $-0.003 \pm 0.004$   $\chi^2/\text{NDF}$ : 22.6/24

Right Out:  $0.003 \pm 0.008$   $\chi^2/\text{NDF}$ : 35.5/30

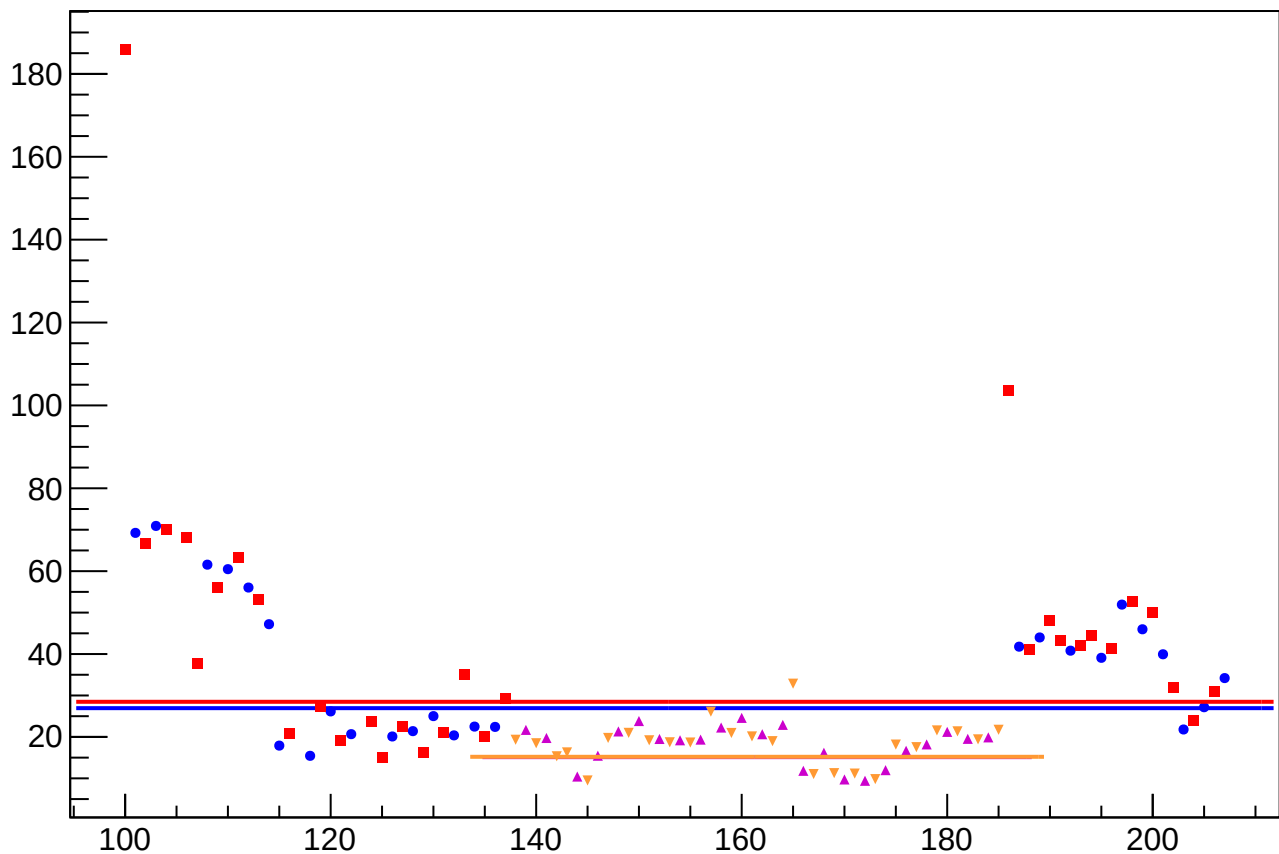
Left In:  $-0.002 \pm 0.004$   $\chi^2/\text{NDF}$ : 26.9/22

+ sign  $-0.001 \pm 0.003$   $\chi^2/\text{NDF}$ : 52.6/50

All:  $-0.001 \pm 0.002$   $\chi^2/\text{NDF}$ : 115.4/104

- sign  $-0.001 \pm 0.003$   $\chi^2/\text{NDF}$ : 62.8/53

asym\_sam\_37\_26\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 26.938 $\pm$ 0.006  $\chi^2$ /NDF: 4276705.8/25

Left Out: 15.202 $\pm$ 0.003  $\chi^2$ /NDF: 3441921.2/24

Right Out: 28.477 $\pm$ 0.006  $\chi^2$ /NDF: 5315840.1/30

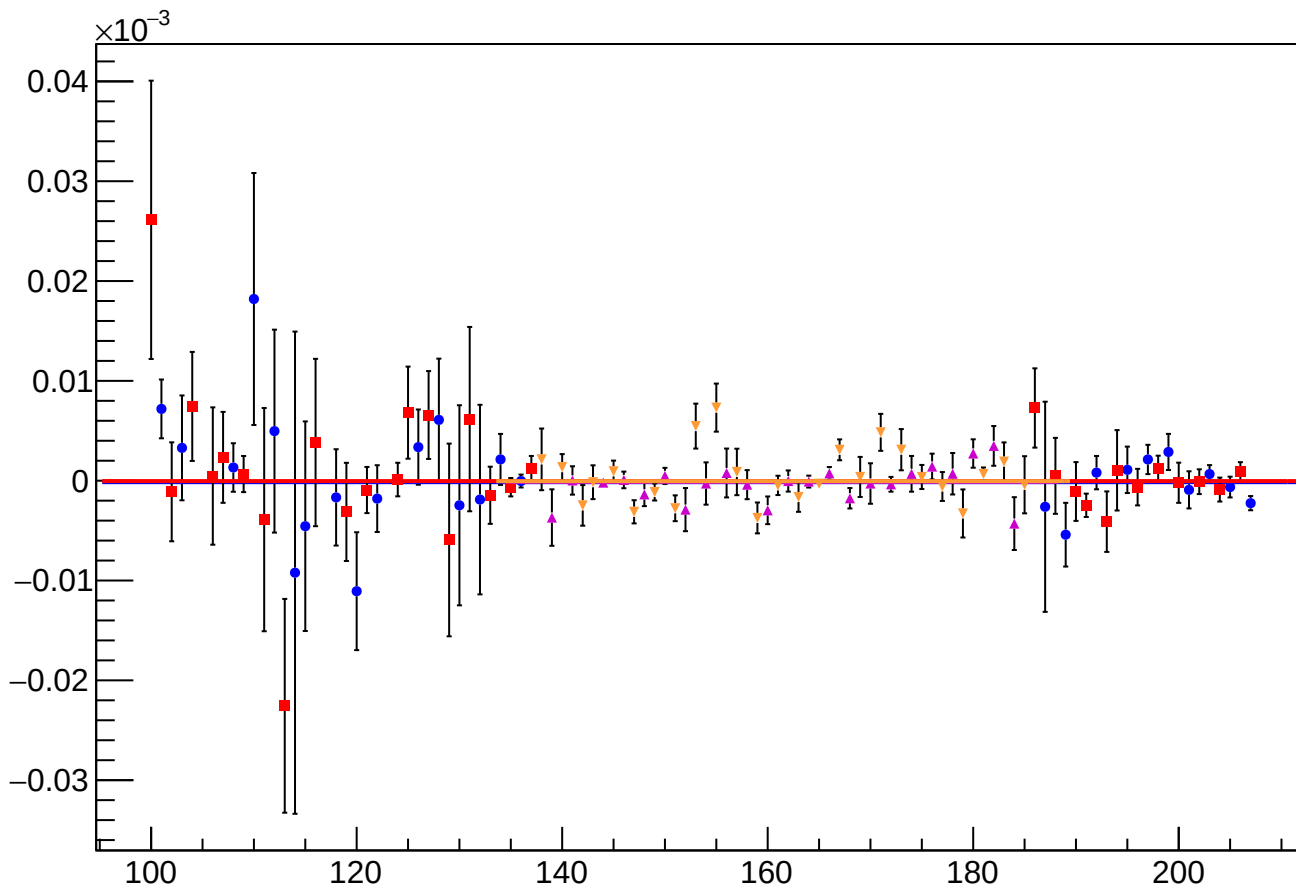
Left In: 15.116 $\pm$ 0.003  $\chi^2$ /NDF: 3402288.3/22

+ sign 17.366 $\pm$ 0.002  $\chi^2$ /NDF: 11419094.9/50

All: 17.496 $\pm$ 0.002  $\chi^2$ /NDF: 24741285.1/104

- sign 17.634 $\pm$ 0.002  $\chi^2$ /NDF: 13315929.0/53

asym\_sam\_37\_26\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 34.8/25

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 62.8/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 30.4/30

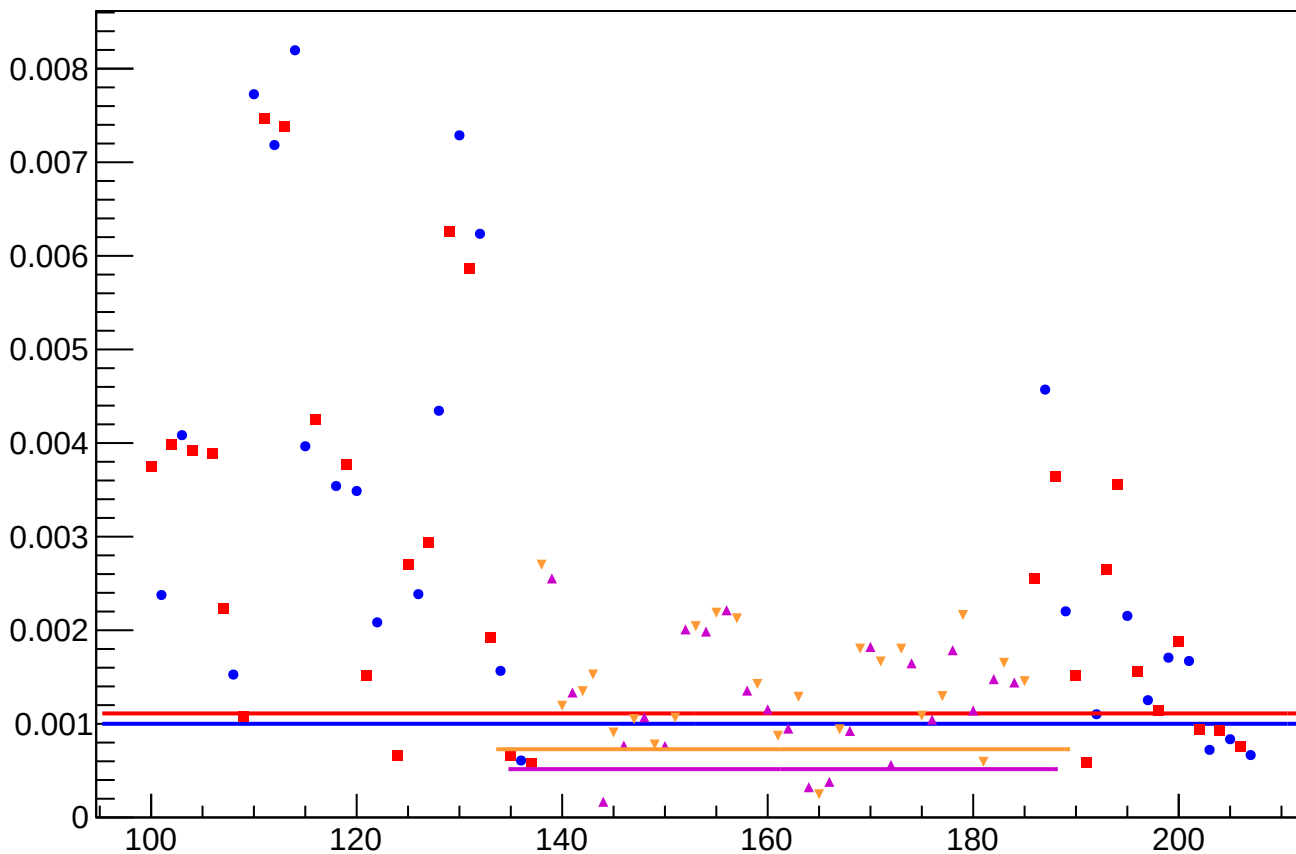
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 25.5/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 97.7/50

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 153.7/104

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 56.0/53

asym\_sam\_37\_26\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 9398975.6/25

Left Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 13120515.6/24

Right Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 10399281.3/30

Left In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 15027708.0/22

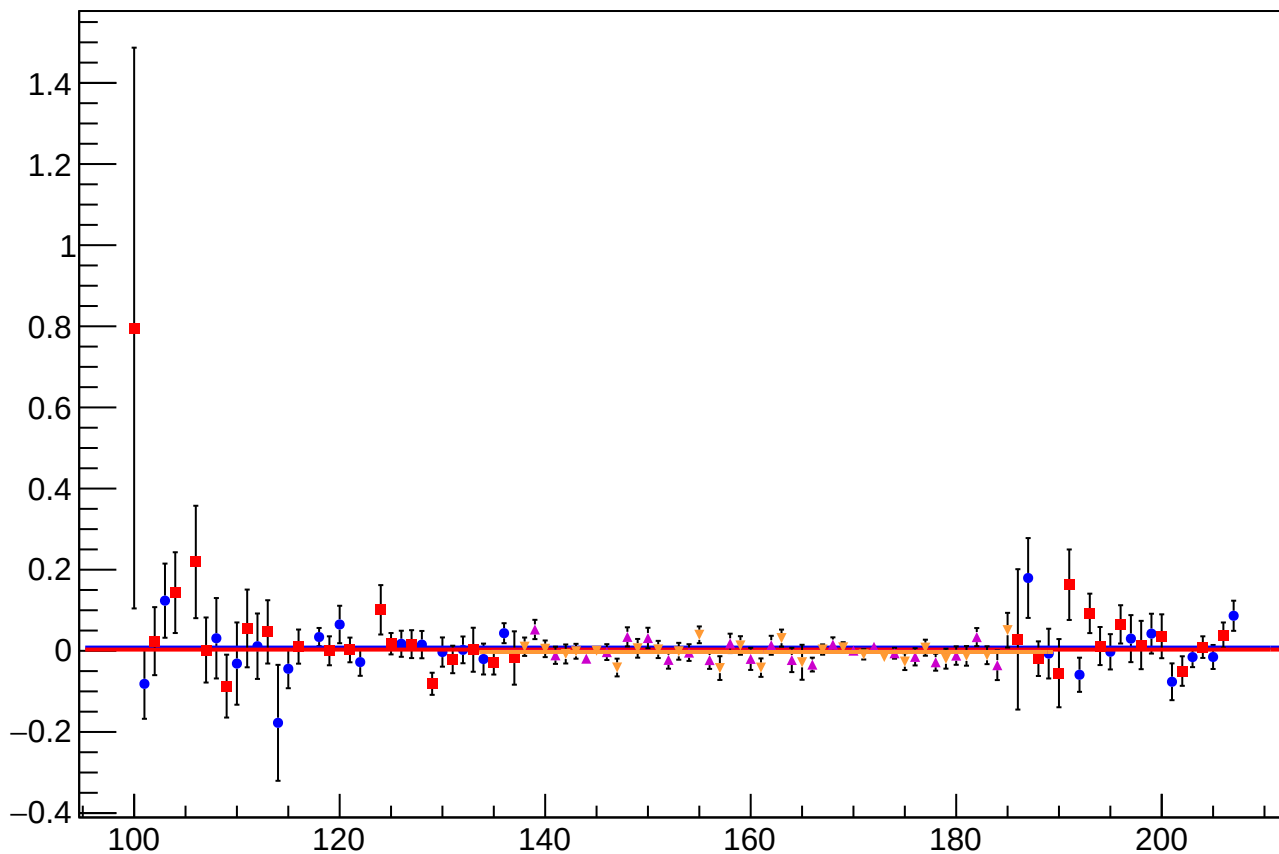
+ sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 23477476.1/50

All: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 54469490.4/104

- sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 29910860.9/53



asym\_sam\_37\_26\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.008 \pm 0.008$   $\chi^2/\text{NDF}$ : 28.4/25

Left Out:  $-0.003 \pm 0.004$   $\chi^2/\text{NDF}$ : 22.6/24

Right Out:  $0.003 \pm 0.008$   $\chi^2/\text{NDF}$ : 35.5/30

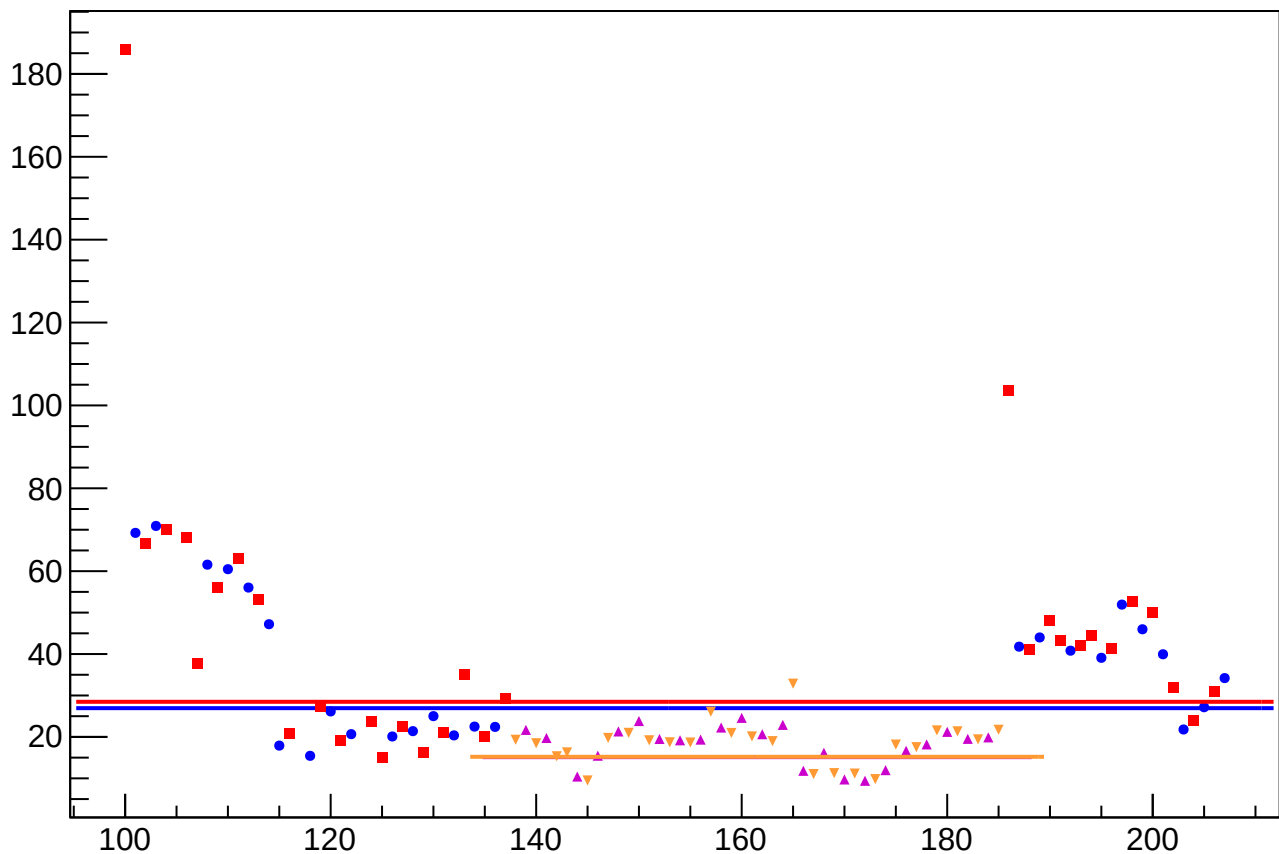
Left In:  $-0.002 \pm 0.004$   $\chi^2/\text{NDF}$ : 26.9/22

+ sign  $-0.001 \pm 0.003$   $\chi^2/\text{NDF}$ : 52.6/50

All:  $-0.001 \pm 0.002$   $\chi^2/\text{NDF}$ : 115.4/104

- sign  $-0.001 \pm 0.003$   $\chi^2/\text{NDF}$ : 62.8/53

asym\_sam\_37\_26\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 26.938+/-0.006  $\chi^2/\text{NDF}$ : 4277033.7/25

Left Out: 15.202+/-0.003  $\chi^2/\text{NDF}$ : 3442015.2/24

Right Out: 28.476+/-0.006  $\chi^2/\text{NDF}$ : 5316038.6/30

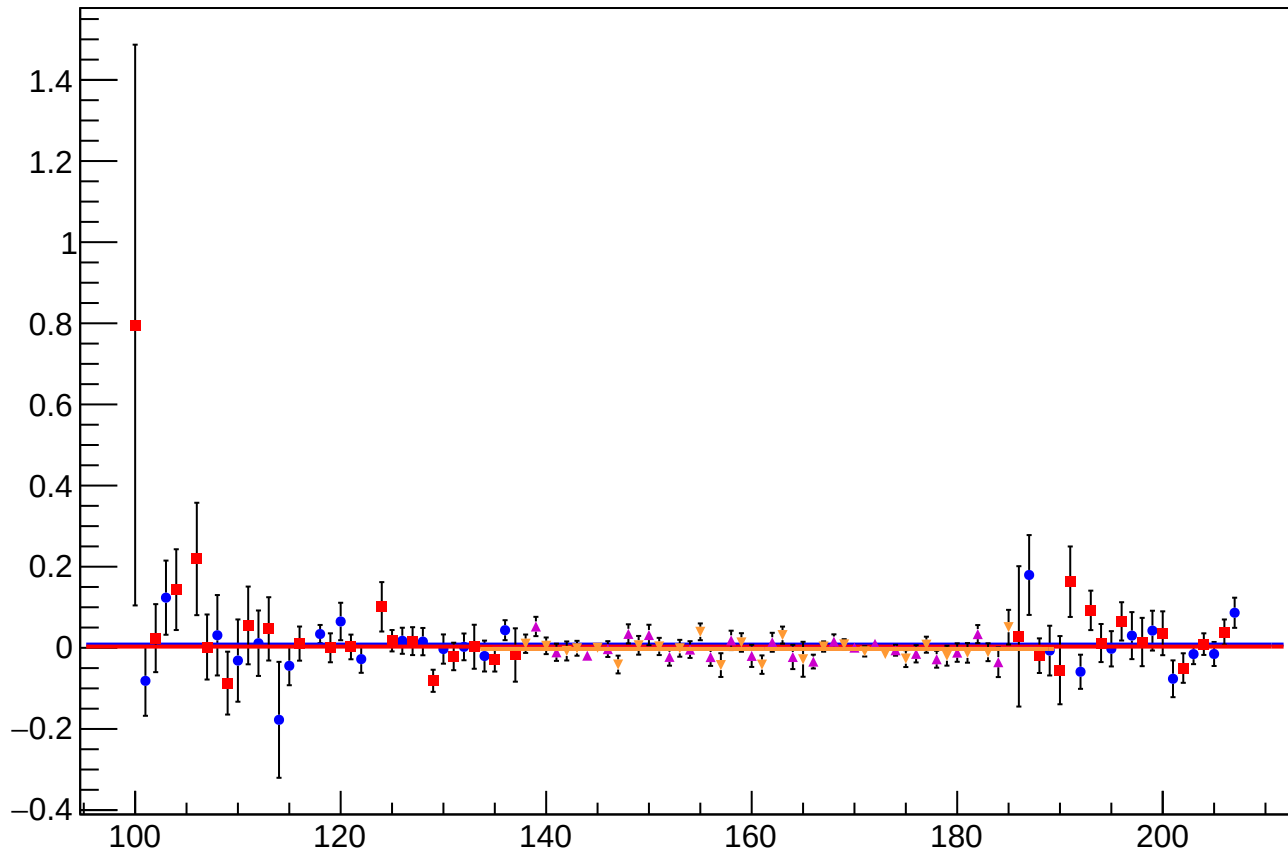
Left In: 15.117+/-0.003  $\chi^2/\text{NDF}$ : 3402318.1/22

+ sign 17.366+/-0.002  $\chi^2/\text{NDF}$ : 11419077.2/50

All: 17.496+/-0.002  $\chi^2/\text{NDF}$ : 24741294.1/104

- sign 17.634+/-0.002  $\chi^2/\text{NDF}$ : 13315951.0/53

asym\_sam\_37\_26\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.008 \pm 0.008$   $\chi^2/\text{NDF}$ : 28.4/25

Left Out:  $-0.003 \pm 0.004$   $\chi^2/\text{NDF}$ : 22.6/24

Right Out:  $0.003 \pm 0.008$   $\chi^2/\text{NDF}$ : 35.5/30

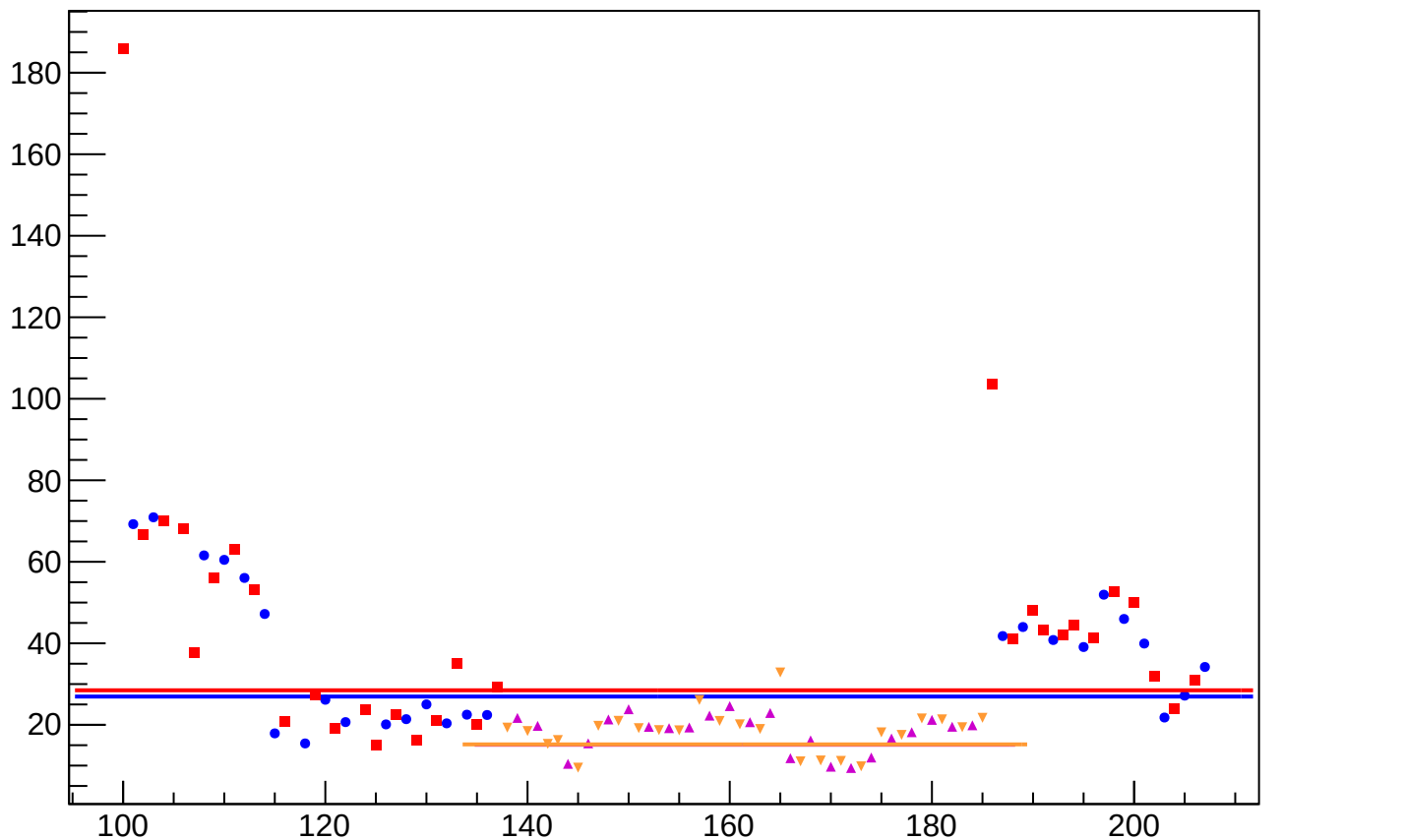
Left In:  $-0.002 \pm 0.004$   $\chi^2/\text{NDF}$ : 26.9/22

+ sign  $-0.001 \pm 0.003$   $\chi^2/\text{NDF}$ : 52.6/50

All:  $-0.001 \pm 0.002$   $\chi^2/\text{NDF}$ : 115.4/104

- sign  $-0.001 \pm 0.003$   $\chi^2/\text{NDF}$ : 62.8/53

asym\_sam\_37\_26\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 26.938 $\pm$ 0.006  $\chi^2$ /NDF: 4277033.7/25

Left Out: 15.202 $\pm$ 0.003  $\chi^2$ /NDF: 3442015.2/24

Right Out: 28.476 $\pm$ 0.006  $\chi^2$ /NDF: 5316038.6/30

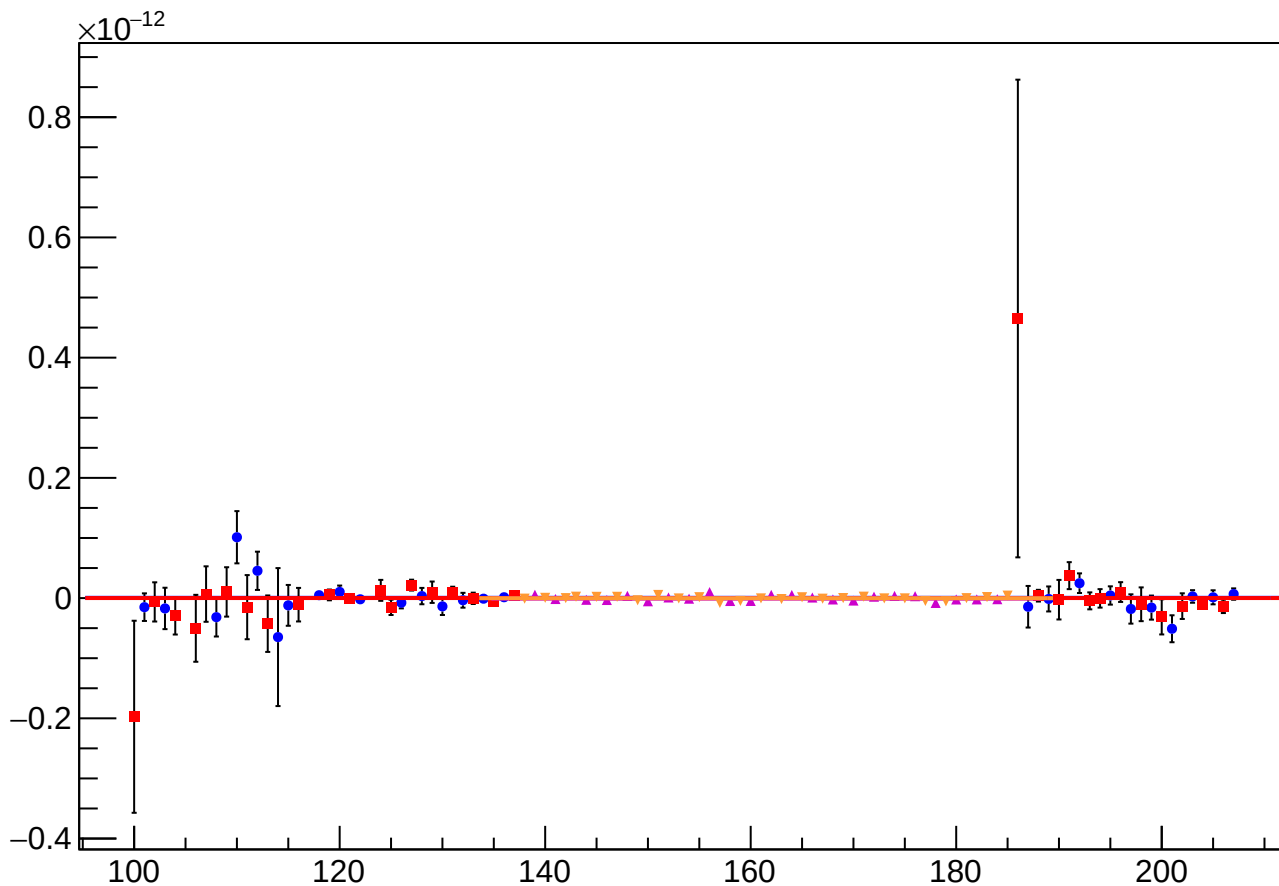
Left In: 15.117 $\pm$ 0.003  $\chi^2$ /NDF: 3402318.1/22

+ sign 17.366 $\pm$ 0.002  $\chi^2$ /NDF: 11419077.2/50

All: 17.496 $\pm$ 0.002  $\chi^2$ /NDF: 24741294.1/104

- sign 17.634 $\pm$ 0.002  $\chi^2$ /NDF: 13315951.0/53

asym\_sam\_37\_26\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 22.4/25

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 21.4/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 25.9/30

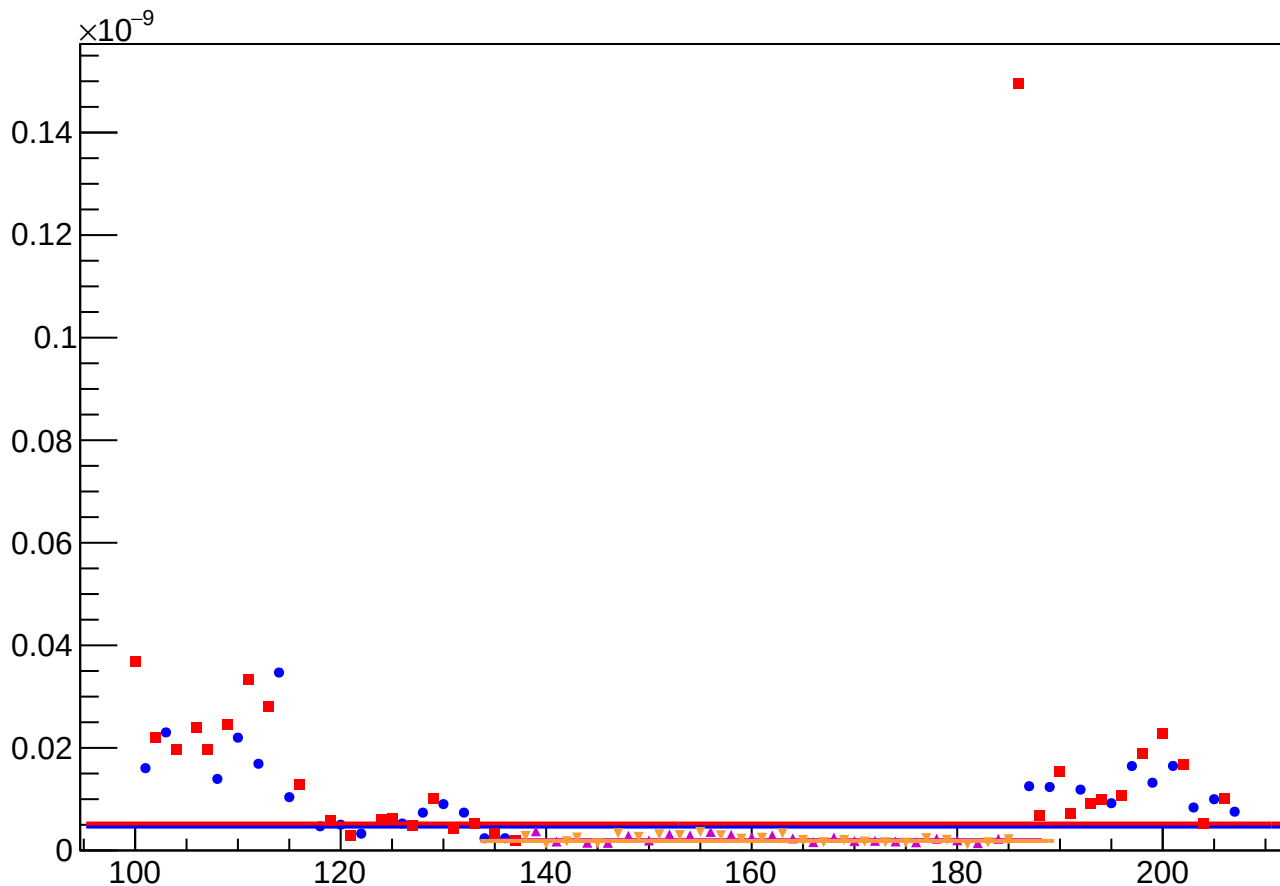
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 39.5/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 43.9/50

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 110.1/104

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 65.6/53

asym\_sam\_37\_26\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7281366.3/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2645485.0/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8126162.3/30

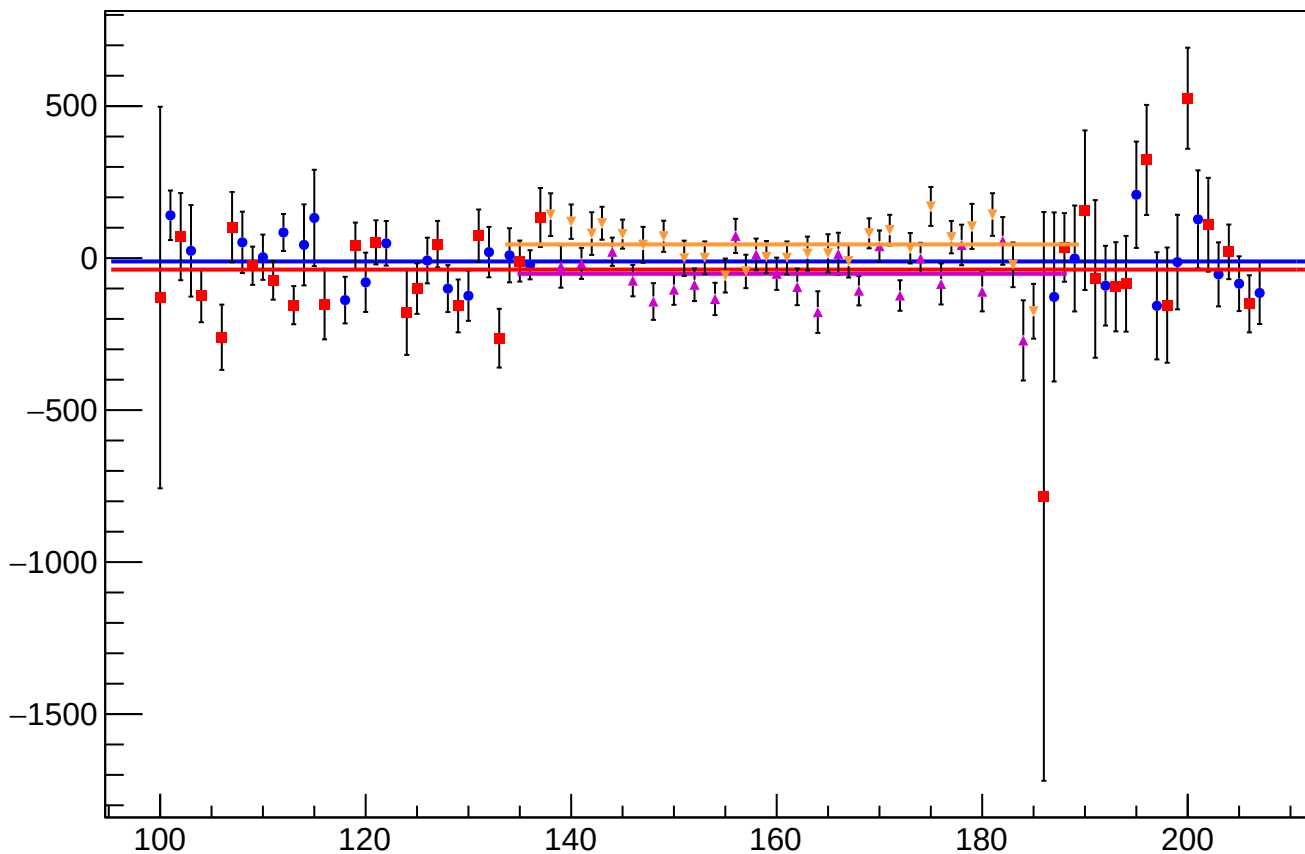
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1948585.8/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14002036.7/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 28840471.6/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14729548.3/53

# reg\_asym\_sam\_1357\_avg\_mean vs Slug



Right In:  $-10.963 \pm 18.080$   $\chi^2/\text{NDF}: 20.2/25$

Left Out:  $45.093 \pm 11.495$   $\chi^2/\text{NDF}: 31.3/24$

Right Out:  $-37.686 \pm 17.770$   $\chi^2/\text{NDF}: 50.2/30$

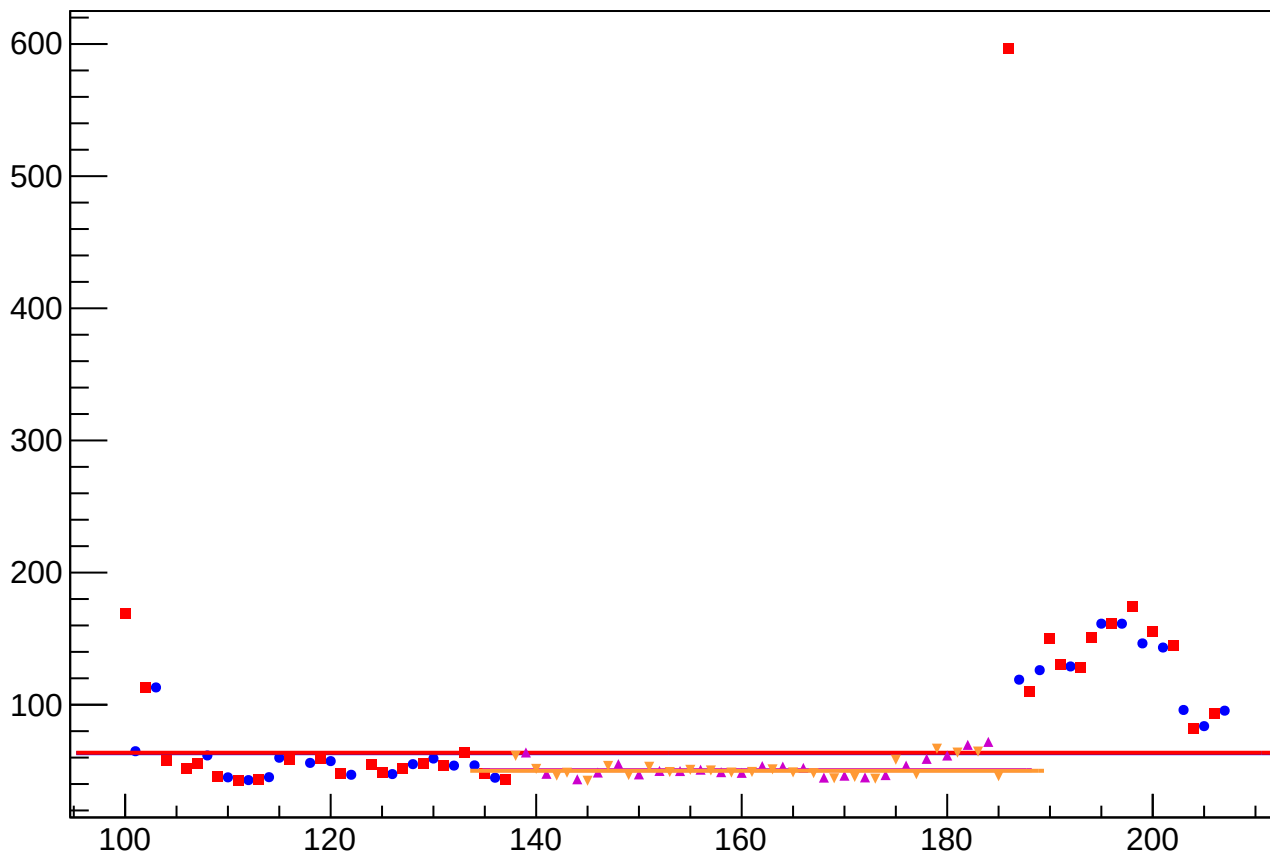
Left In:  $-51.616 \pm 11.929$   $\chi^2/\text{NDF}: 35.9/22$

+ sign  $28.957 \pm 9.700$   $\chi^2/\text{NDF}: 58.4/50$

All:  $-8.373 \pm 6.930$   $\chi^2/\text{NDF}: 175.1/104$

- sign  $-47.289 \pm 9.904$   $\chi^2/\text{NDF}: 86.5/53$

# reg\_asym\_sam\_1357\_avg\_rms vs Slug



Right In: 63.332 $\pm$ 0.013  $\chi^2$ /NDF: 4835183.7/25

Left Out: 50.021 $\pm$ 0.008  $\chi^2$ /NDF: 509100.0/24

Right Out: 63.667 $\pm$ 0.013  $\chi^2$ /NDF: 6445646.7/30

Left In: 50.512 $\pm$ 0.008  $\chi^2$ /NDF: 503409.2/22

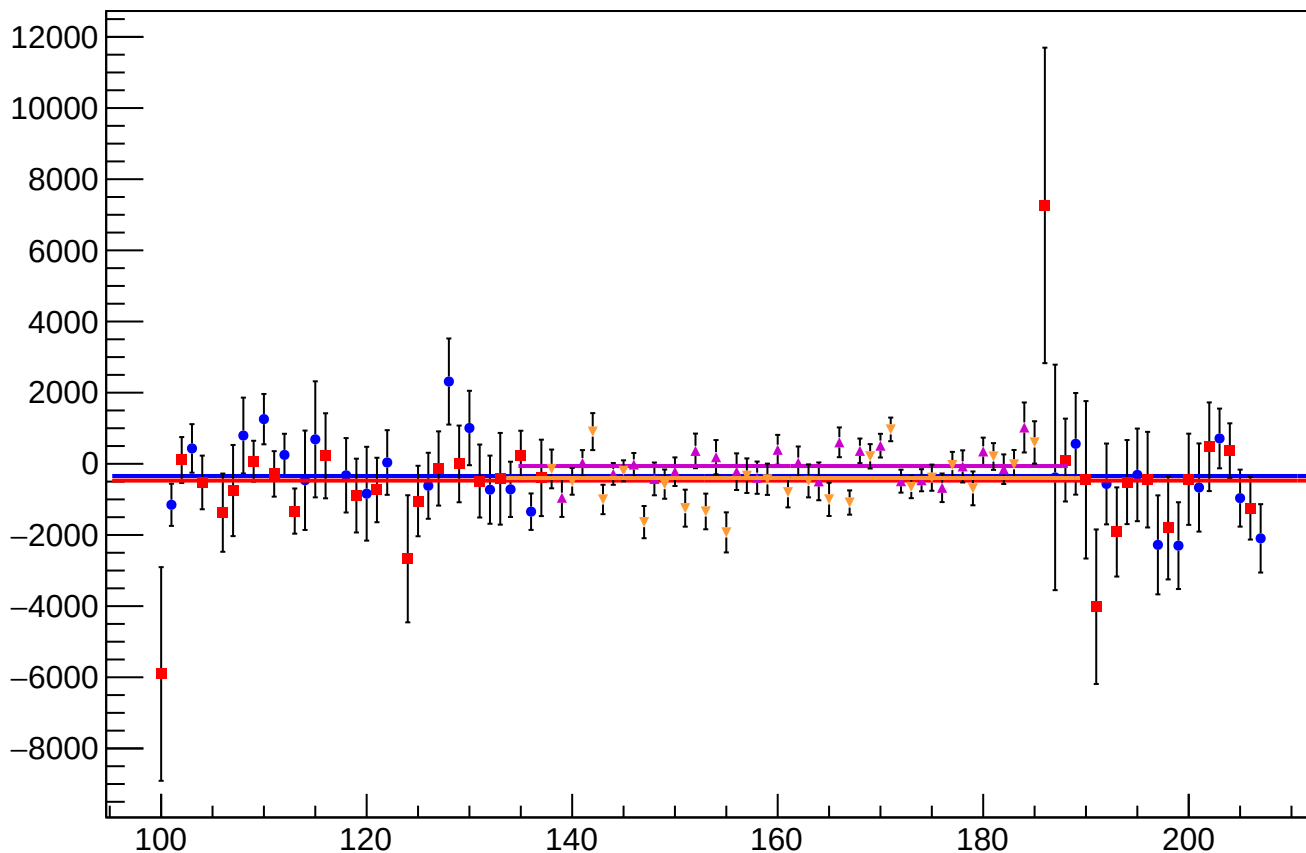
+ sign 53.853 $\pm$ 0.007  $\chi^2$ /NDF: 6116296.6/50

All: 54.218 $\pm$ 0.005  $\chi^2$ /NDF: 13826740.9/104

- sign 54.599 $\pm$ 0.007  $\chi^2$ /NDF: 7704651.2/53



asym\_sam\_1357\_avg\_reg\_correction\_mean vs Slug



Right In:  $-341.776 \pm 178.277$   $\chi^2/\text{NDF}$ : 32.4/25

Left Out:  $-399.363 \pm 82.064$   $\chi^2/\text{NDF}$ : 65.4/24

Right Out:  $-471.057 \pm 177.168$   $\chi^2/\text{NDF}$ : 22.0/30

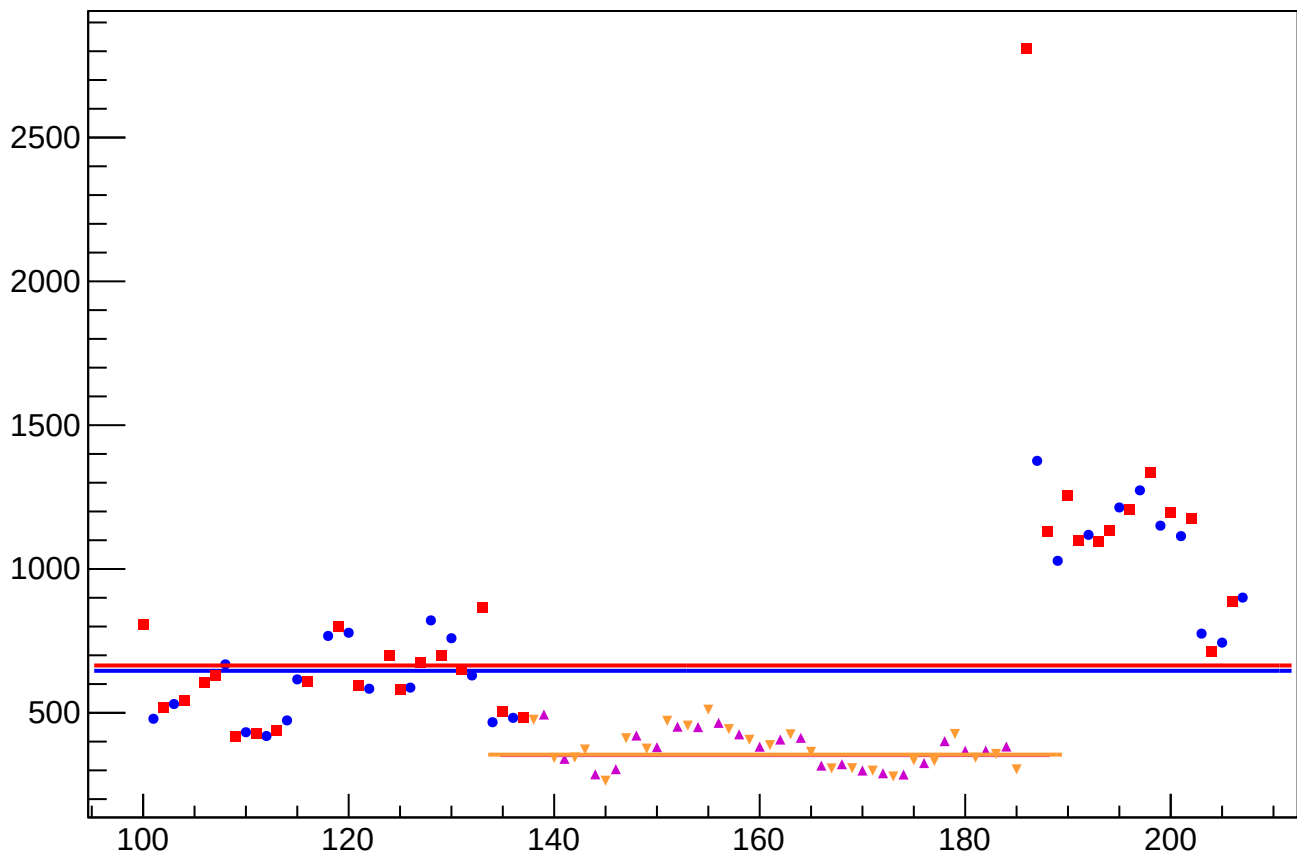
Left In:  $-62.038 \pm 83.892$   $\chi^2/\text{NDF}$ : 23.9/22

+ sign  $-389.295 \pm 74.545$   $\chi^2/\text{NDF}$ : 97.9/50

All:  $-265.265 \pm 53.157$   $\chi^2/\text{NDF}$ : 153.8/104

- sign  $-136.951 \pm 75.822$   $\chi^2/\text{NDF}$ : 50.3/53

asym\_sam\_1357\_avg\_reg\_correction\_rms vs Slug



Right In: 646.109 $\pm$ 0.126  $\chi^2/\text{NDF}$ : 3389211.0/25

Left Out: 354.670 $\pm$ 0.058  $\chi^2/\text{NDF}$ : 1145465.6/24

Right Out: 664.632 $\pm$ 0.125  $\chi^2/\text{NDF}$ : 4483738.6/30

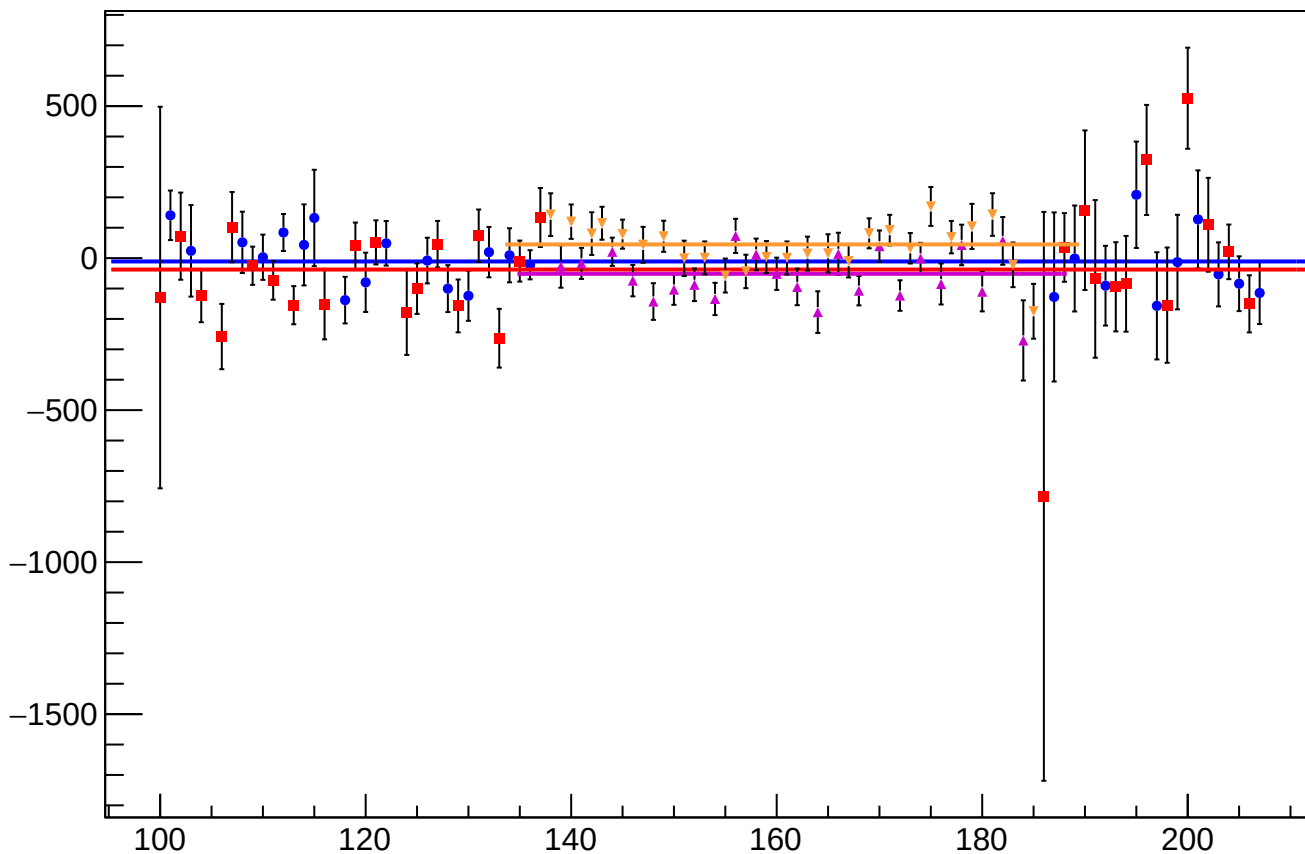
Left In: 353.110 $\pm$ 0.059  $\chi^2/\text{NDF}$ : 1004127.0/22

+ sign 405.626 $\pm$ 0.053  $\chi^2/\text{NDF}$ : 8945010.5/50

All: 407.857 $\pm$ 0.038  $\chi^2/\text{NDF}$ : 19487529.3/100

- sign 410.166 $\pm$ 0.054  $\chi^2/\text{NDF}$ : 10538872.2/53

# cor\_asym\_sam\_1357\_avg\_mean vs Slug



Right In:  $-10.967 \pm 18.080$   $\chi^2/\text{NDF}$ : 20.2/25

Left Out:  $45.096 \pm 11.495$   $\chi^2/\text{NDF}$ : 31.3/24

Right Out:  $-37.591 \pm 17.770$   $\chi^2/\text{NDF}$ : 50.1/30

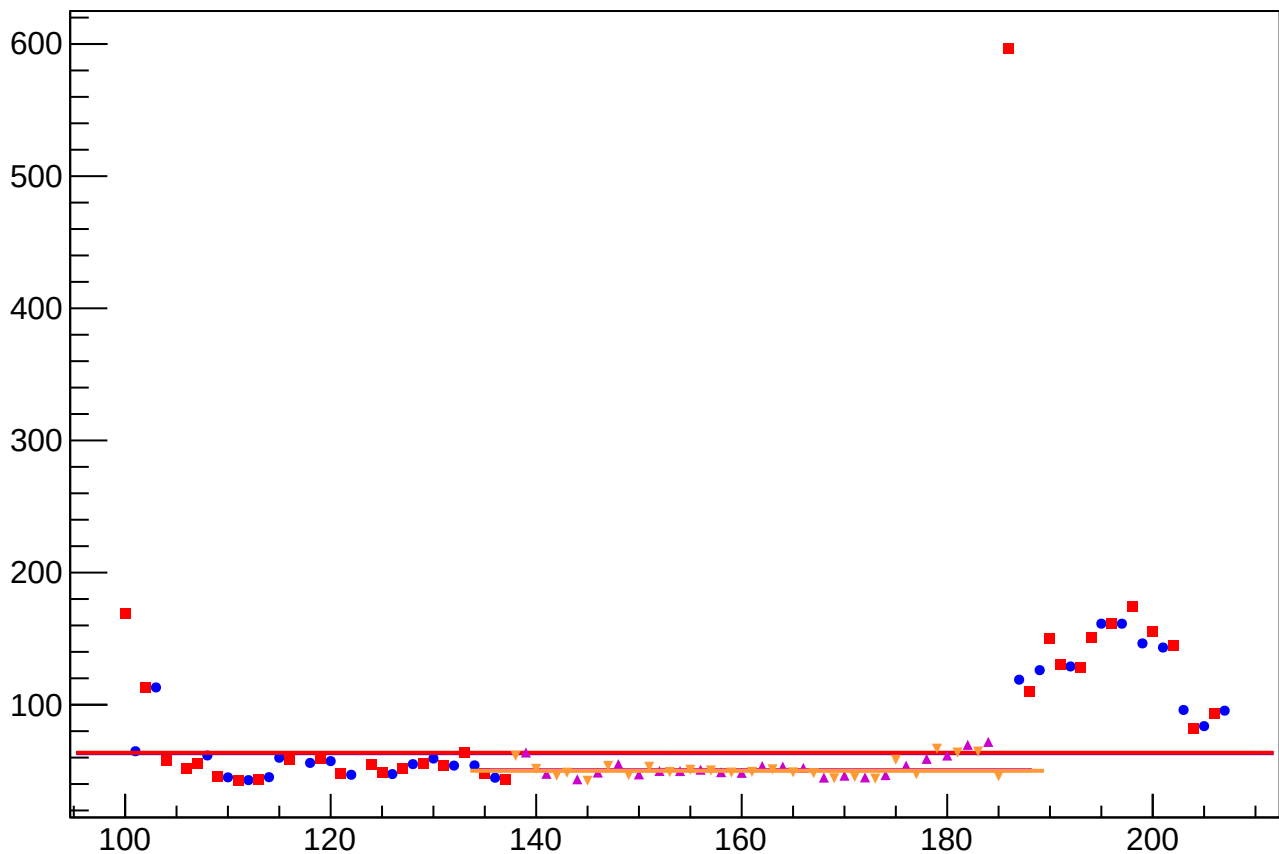
Left In:  $-51.616 \pm 11.929$   $\chi^2/\text{NDF}$ : 35.8/22

+ sign  $28.959 \pm 9.700$   $\chi^2/\text{NDF}$ : 58.4/50

All:  $-8.358 \pm 6.930$   $\chi^2/\text{NDF}$ : 175.0/104

- sign  $-47.259 \pm 9.904$   $\chi^2/\text{NDF}$ : 86.4/53

cor\_asym\_sam\_1357\_avg\_rms vs Slug



Right In: 63.332 $\pm$ 0.013  $\chi^2$ /NDF: 4835186.0/25

Left Out: 50.021 $\pm$ 0.008  $\chi^2$ /NDF: 509100.0/24

Right Out: 63.659 $\pm$ 0.013  $\chi^2$ /NDF: 6447124.2/30

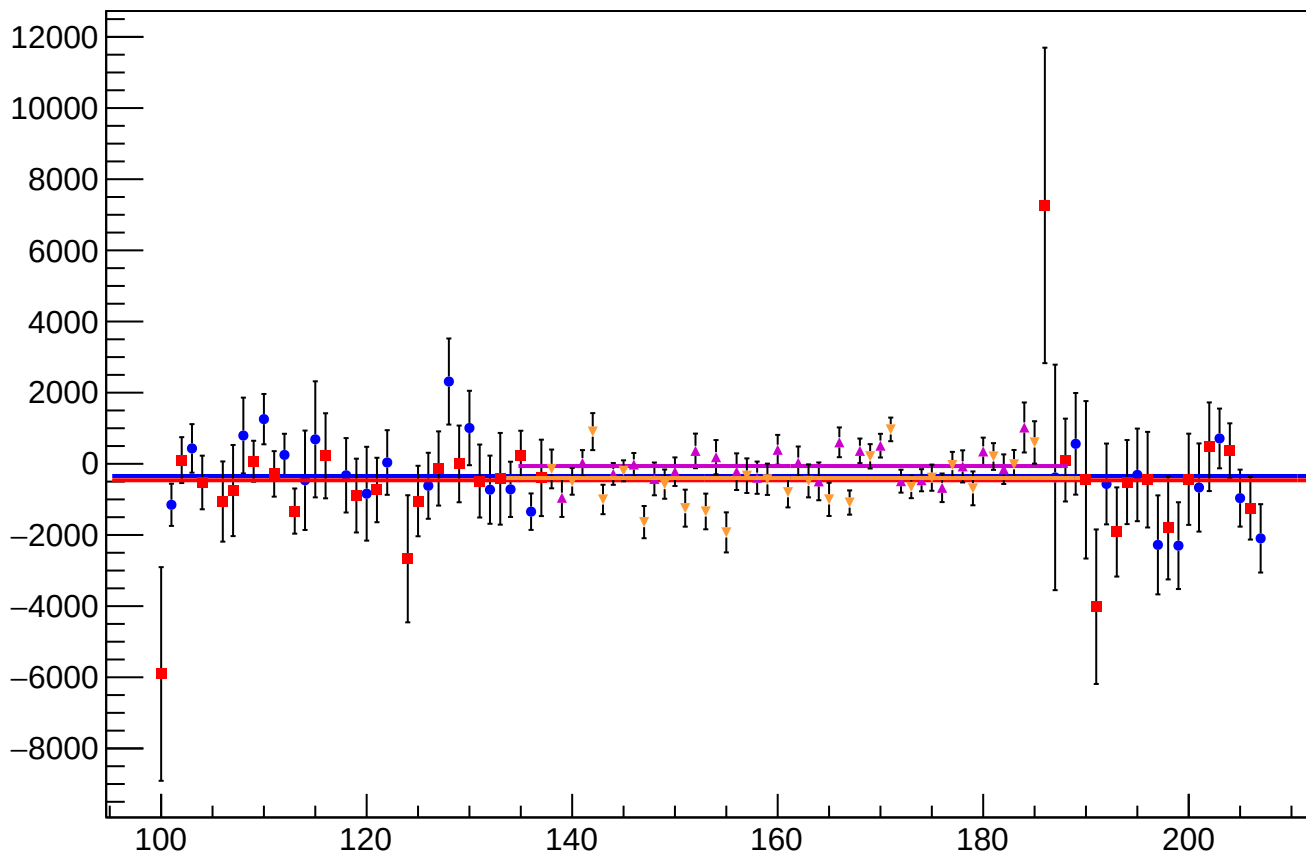
Left In: 50.512 $\pm$ 0.008  $\chi^2$ /NDF: 503409.2/22

+ sign 53.853 $\pm$ 0.007  $\chi^2$ /NDF: 6116298.9/50

All: 54.217 $\pm$ 0.005  $\chi^2$ /NDF: 13827247.2/104

- sign 54.596 $\pm$ 0.007  $\chi^2$ /NDF: 7705195.2/53

asym\_sam\_1357\_avg\_cor\_correction\_mean vs Slug



Right In: -341.760+/-178.278  $\chi^2/\text{NDF}$ : 32.4/25

Left Out: -399.358+/-82.064  $\chi^2/\text{NDF}$ : 65.4/24

Right Out: -462.509+/-177.295  $\chi^2/\text{NDF}$ : 21.6/30

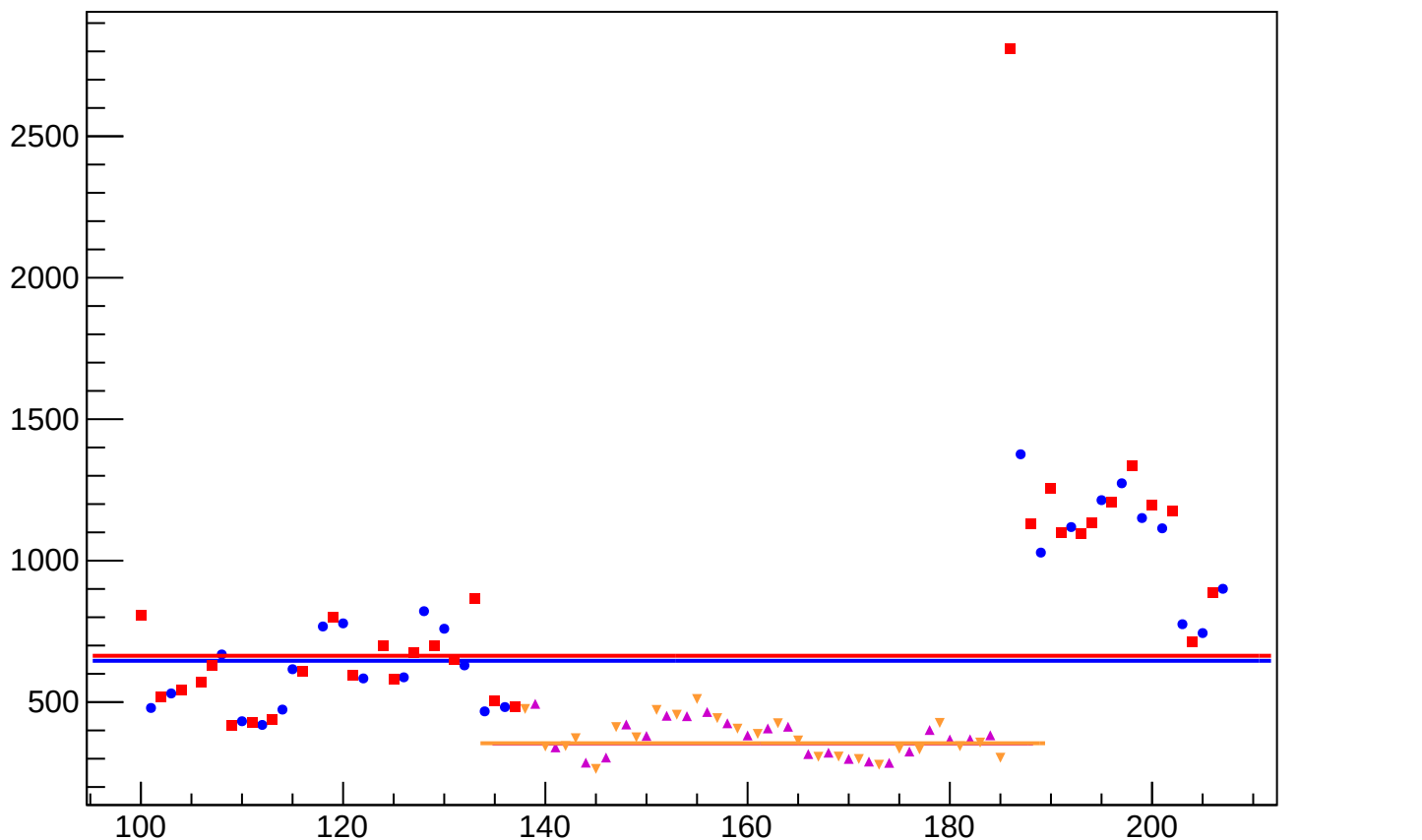
Left In: -62.038+/-83.892  $\chi^2/\text{NDF}$ : 23.9/22

+ sign -389.288+/-74.545  $\chi^2/\text{NDF}$ : 97.9/50

All: -264.466+/-53.160  $\chi^2/\text{NDF}$ : 153.3/104

- sign -135.300+/-75.831  $\chi^2/\text{NDF}$ : 49.7/53

asym\_sam\_1357\_avg\_cor\_correction\_rms vs Slug



Right In: 646.114 $\pm$ 0.126  $\chi^2$ /NDF: 3389143.7/25

Left Out: 354.670 $\pm$ 0.058  $\chi^2$ /NDF: 1145468.3/24

Right Out: 663.888 $\pm$ 0.125  $\chi^2$ /NDF: 4491054.5/30

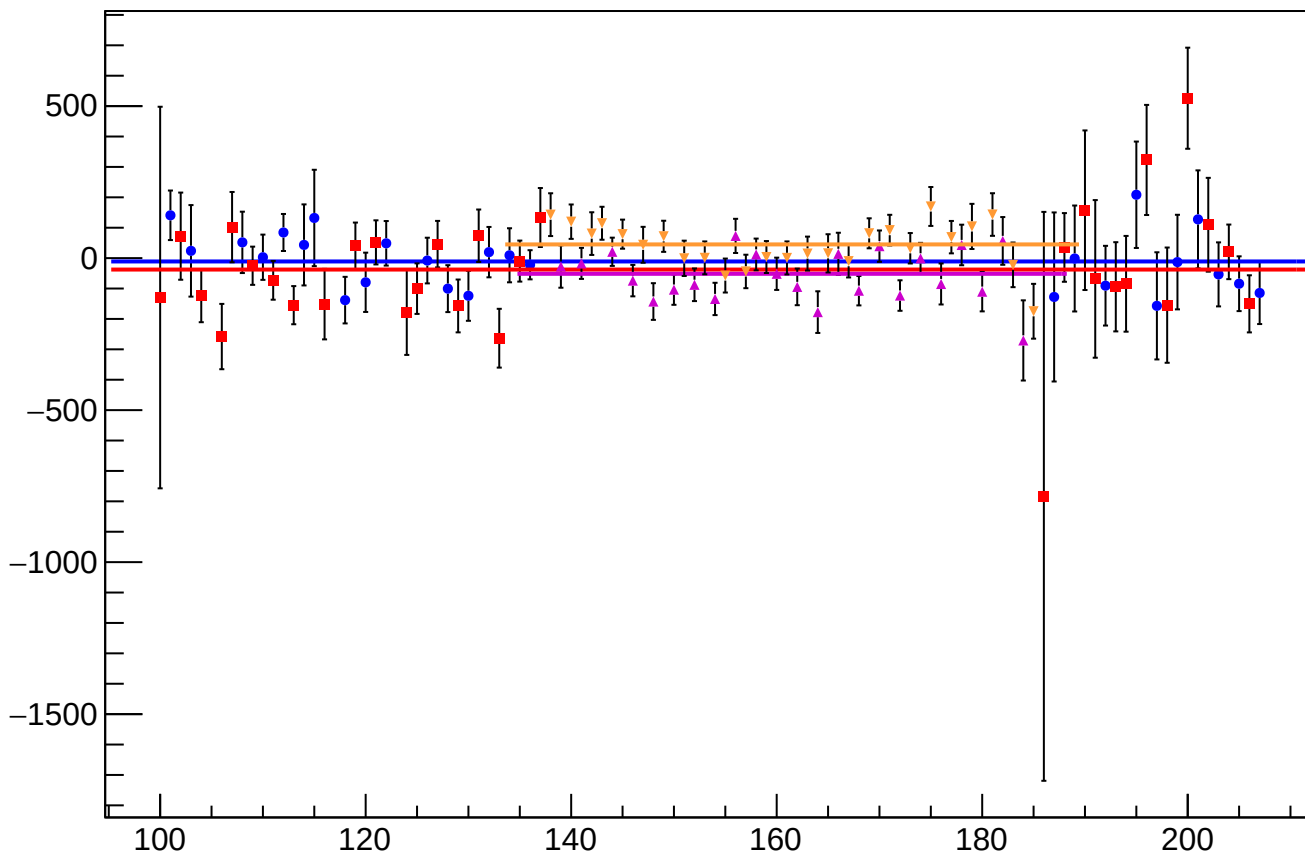
Left In: 353.110 $\pm$ 0.059  $\chi^2$ /NDF: 1004126.9/22

+ sign 405.626 $\pm$ 0.053  $\chi^2$ /NDF: 8945066.1/50

All: 407.758 $\pm$ 0.038  $\chi^2$ /NDF: 19464614.0/10

- sign 409.963 $\pm$ 0.054  $\chi^2$ /NDF: 10516220.4/53

# eigen\_cor\_asym\_sam\_1357\_avg\_mean vs Slug



Right In:  $-10.967 \pm 18.080$   $\chi^2/\text{NDF}: 20.2/25$

Left Out:  $45.096 \pm 11.495$   $\chi^2/\text{NDF}: 31.3/24$

Right Out:  $-37.591 \pm 17.770$   $\chi^2/\text{NDF}: 50.1/30$

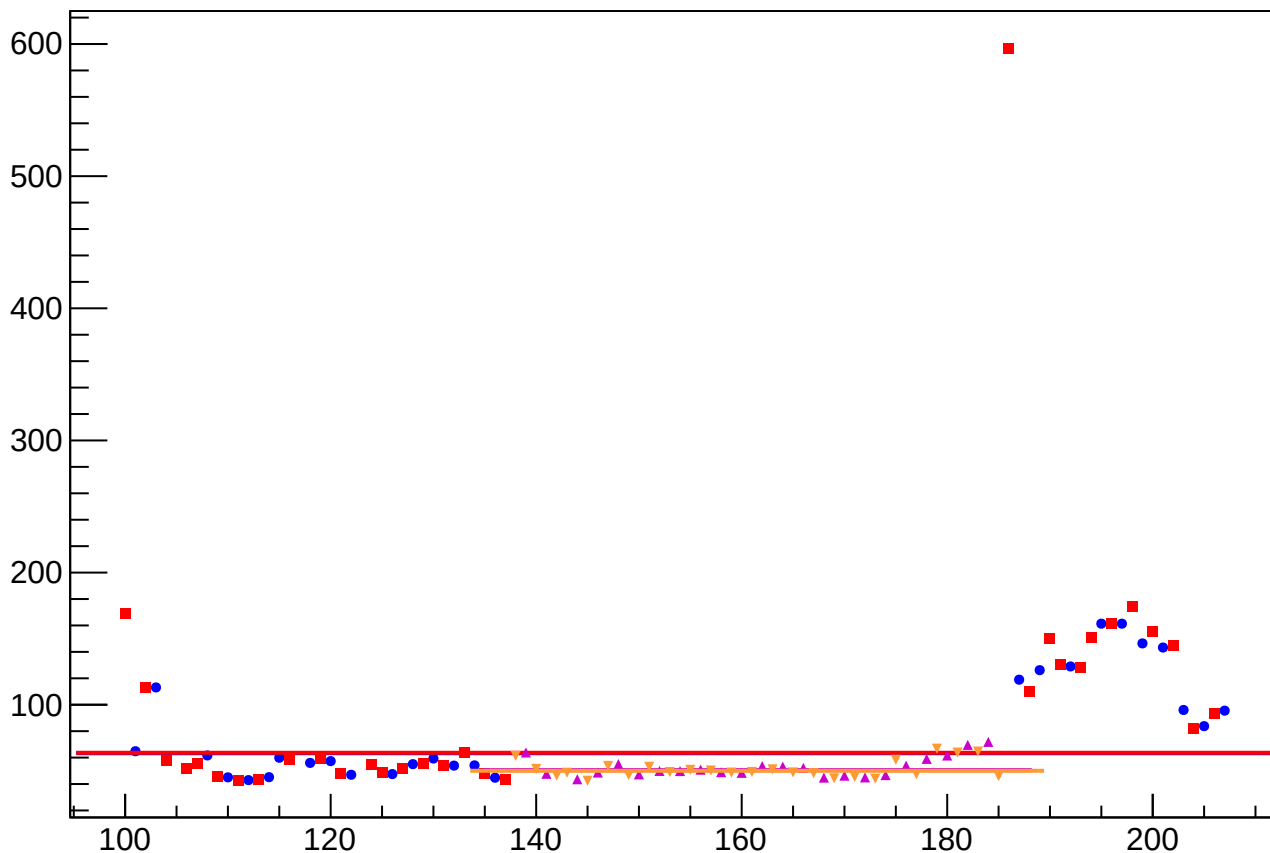
Left In:  $-51.616 \pm 11.929$   $\chi^2/\text{NDF}: 35.8/22$

+ sign  $28.959 \pm 9.700$   $\chi^2/\text{NDF}: 58.4/50$

All:  $-8.358 \pm 6.930$   $\chi^2/\text{NDF}: 175.0/104$

- sign  $-47.259 \pm 9.904$   $\chi^2/\text{NDF}: 86.4/53$

# eigen\_cor\_asym\_sam\_1357\_avg\_rms vs Slug



Right In: 63.332 $\pm$ 0.013  $\chi^2$ /NDF: 4835186.0/25

Left Out: 50.021 $\pm$ 0.008  $\chi^2$ /NDF: 509100.0/24

Right Out: 63.659 $\pm$ 0.013  $\chi^2$ /NDF: 6447124.2/30

Left In: 50.512 $\pm$ 0.008  $\chi^2$ /NDF: 503409.2/22

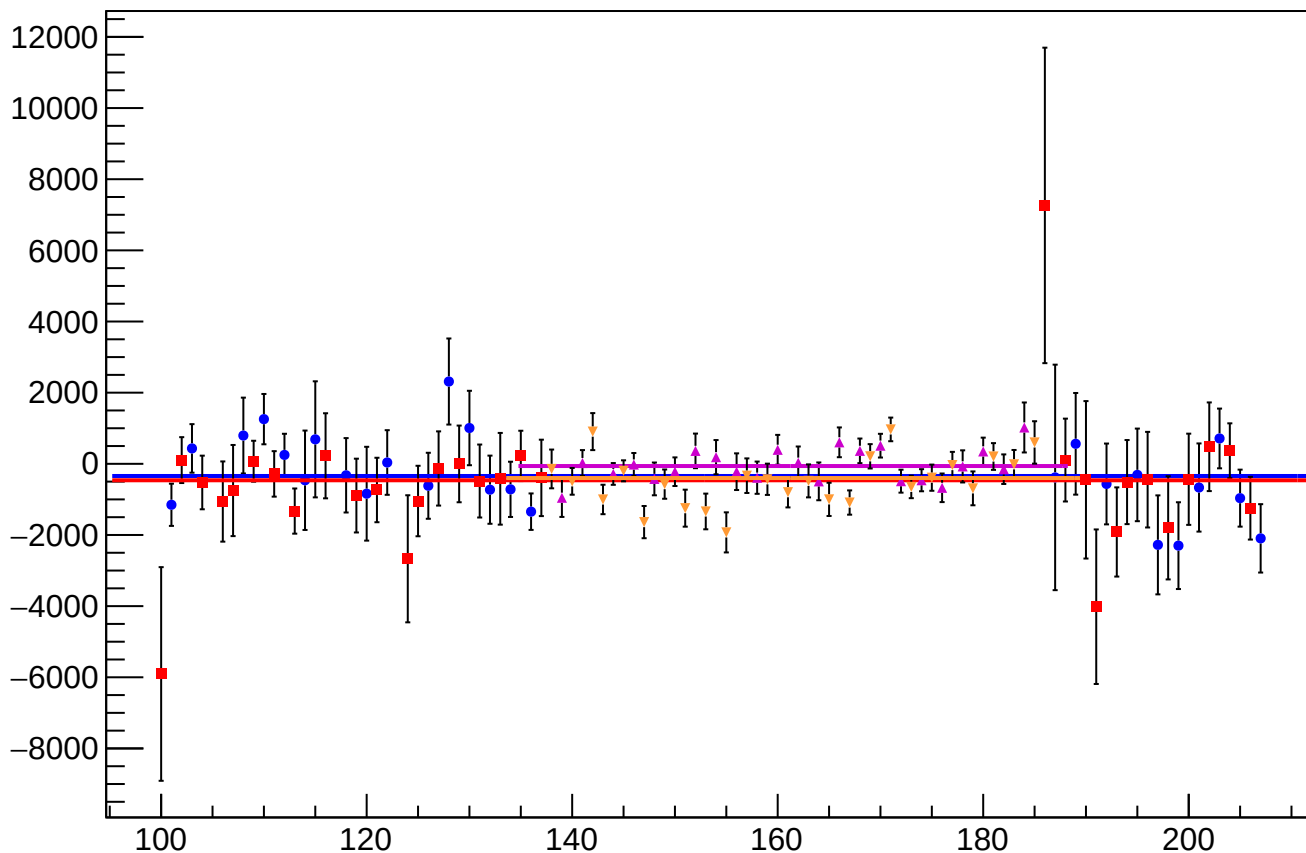
+ sign 53.853 $\pm$ 0.007  $\chi^2$ /NDF: 6116298.9/50

All: 54.217 $\pm$ 0.005  $\chi^2$ /NDF: 13827247.2/104

- sign 54.596 $\pm$ 0.007  $\chi^2$ /NDF: 7705195.2/53



asym\_sam\_1357\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-341.760 \pm 178.278$   $\chi^2/\text{NDF}$ : 32.4/25

Left Out:  $-399.358 \pm 82.064$   $\chi^2/\text{NDF}$ : 65.4/24

Right Out:  $-462.509 \pm 177.295$   $\chi^2/\text{NDF}$ : 21.6/30

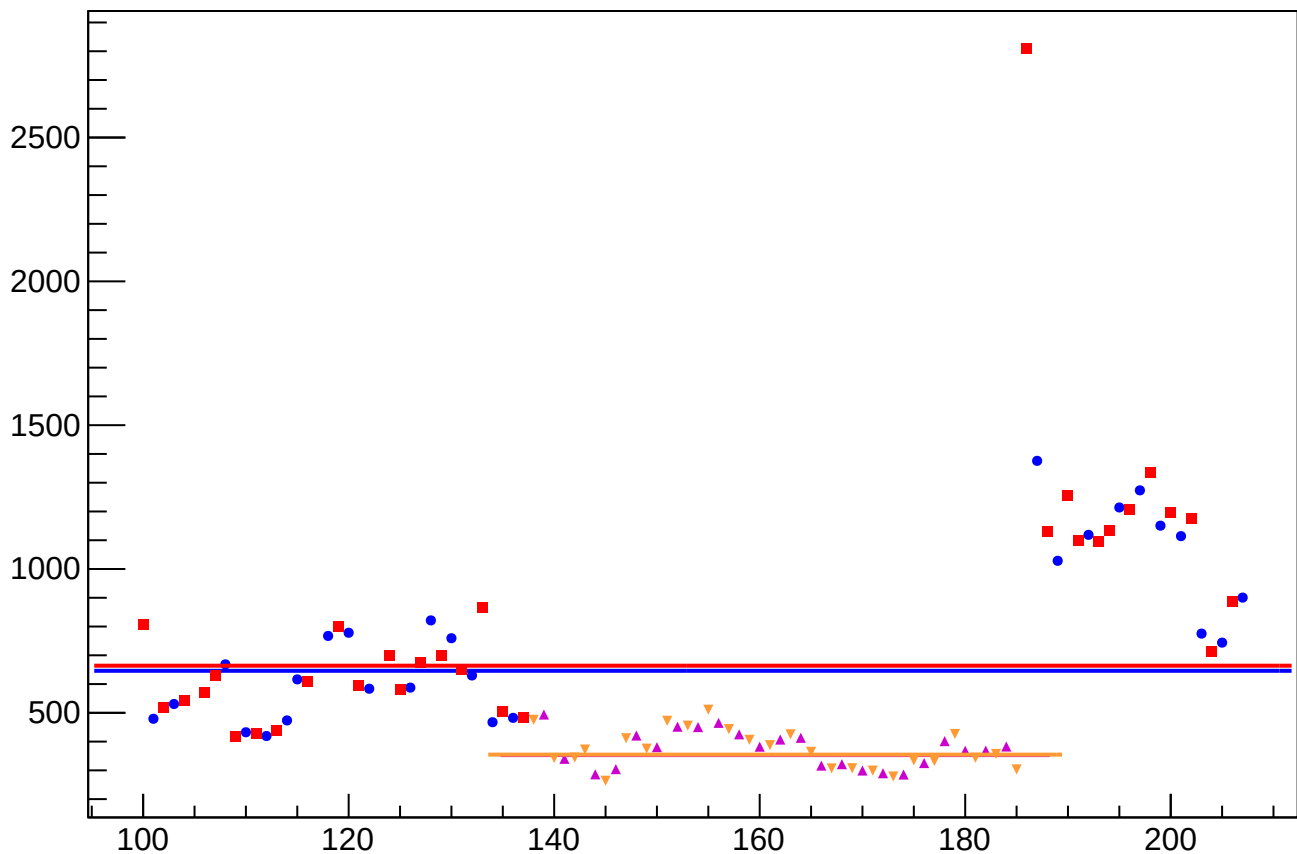
Left In:  $-62.038 \pm 83.892$   $\chi^2/\text{NDF}$ : 23.9/22

+ sign  $-389.288 \pm 74.545$   $\chi^2/\text{NDF}$ : 97.9/50

All:  $-264.466 \pm 53.160$   $\chi^2/\text{NDF}$ : 153.3/104

- sign  $-135.300 \pm 75.831$   $\chi^2/\text{NDF}$ : 49.7/53

asym\_sam\_1357\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 646.114 $\pm$ 0.126  $\chi^2$ /NDF: 3389143.7/25

Left Out: 354.670 $\pm$ 0.058  $\chi^2$ /NDF: 1145468.3/24

Right Out: 663.888 $\pm$ 0.125  $\chi^2$ /NDF: 4491054.5/30

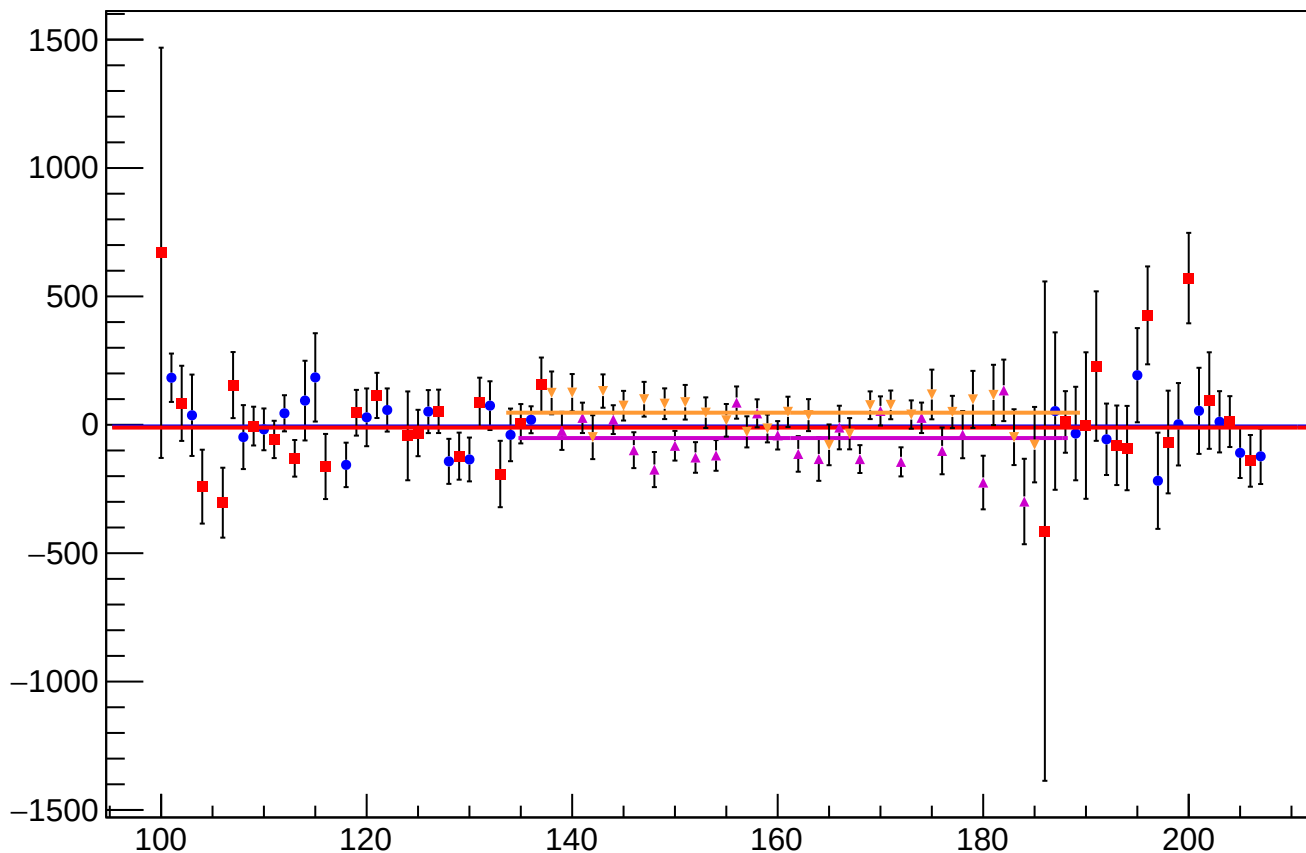
Left In: 353.110 $\pm$ 0.059  $\chi^2$ /NDF: 1004126.9/22

+ sign 405.626 $\pm$ 0.053  $\chi^2$ /NDF: 8945066.1/50

All: 407.758 $\pm$ 0.038  $\chi^2$ /NDF: 19464614.0/10

- sign 409.963 $\pm$ 0.054  $\chi^2$ /NDF: 10516220.4/53

# dit\_asym\_sam\_1357\_avg\_mean vs Slug



Right In:  $-6.416 \pm 20.144$   $\chi^2/\text{NDF}$ : 21.4/25

Left Out:  $47.151 \pm 13.511$   $\chi^2/\text{NDF}$ : 17.0/24

Right Out:  $-10.817 \pm 20.345$   $\chi^2/\text{NDF}$ : 44.2/30

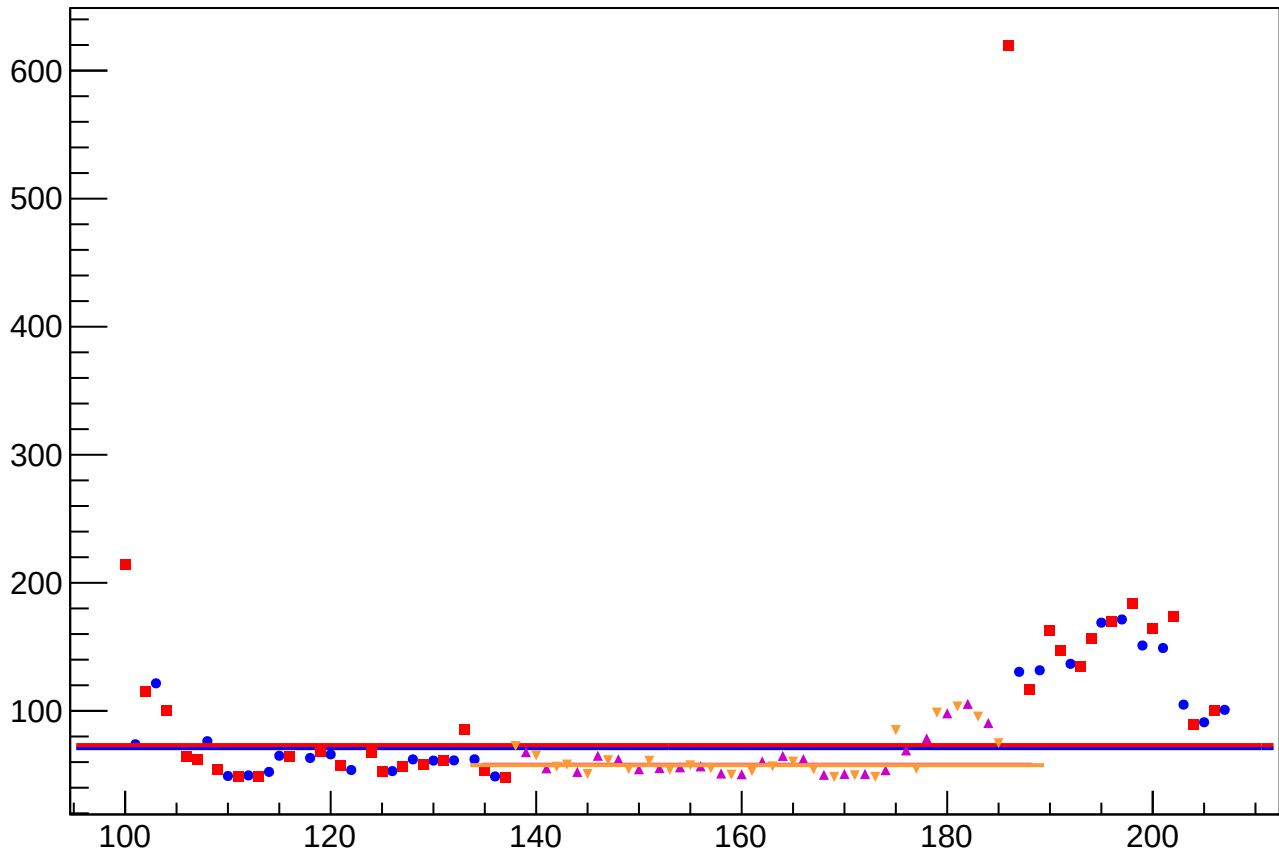
Left In:  $-51.652 \pm 13.934$   $\chi^2/\text{NDF}$ : 38.2/22

+ sign  $30.530 \pm 11.221$   $\chi^2/\text{NDF}$ : 43.3/50

All:  $-3.205 \pm 8.030$   $\chi^2/\text{NDF}$ : 147.0/104

- sign  $-38.613 \pm 11.496$   $\chi^2/\text{NDF}$ : 85.2/53

# dit\_asym\_sam\_1357\_avg\_rms vs Slug



Right In: 70.900 $\pm$ 0.014  $\chi^2$ /NDF: 4423185.2/25

Left Out: 57.631 $\pm$ 0.010  $\chi^2$ /NDF:1365448.6/24

Right Out: 73.314 $\pm$ 0.014  $\chi^2$ /NDF: 5993186.6/30

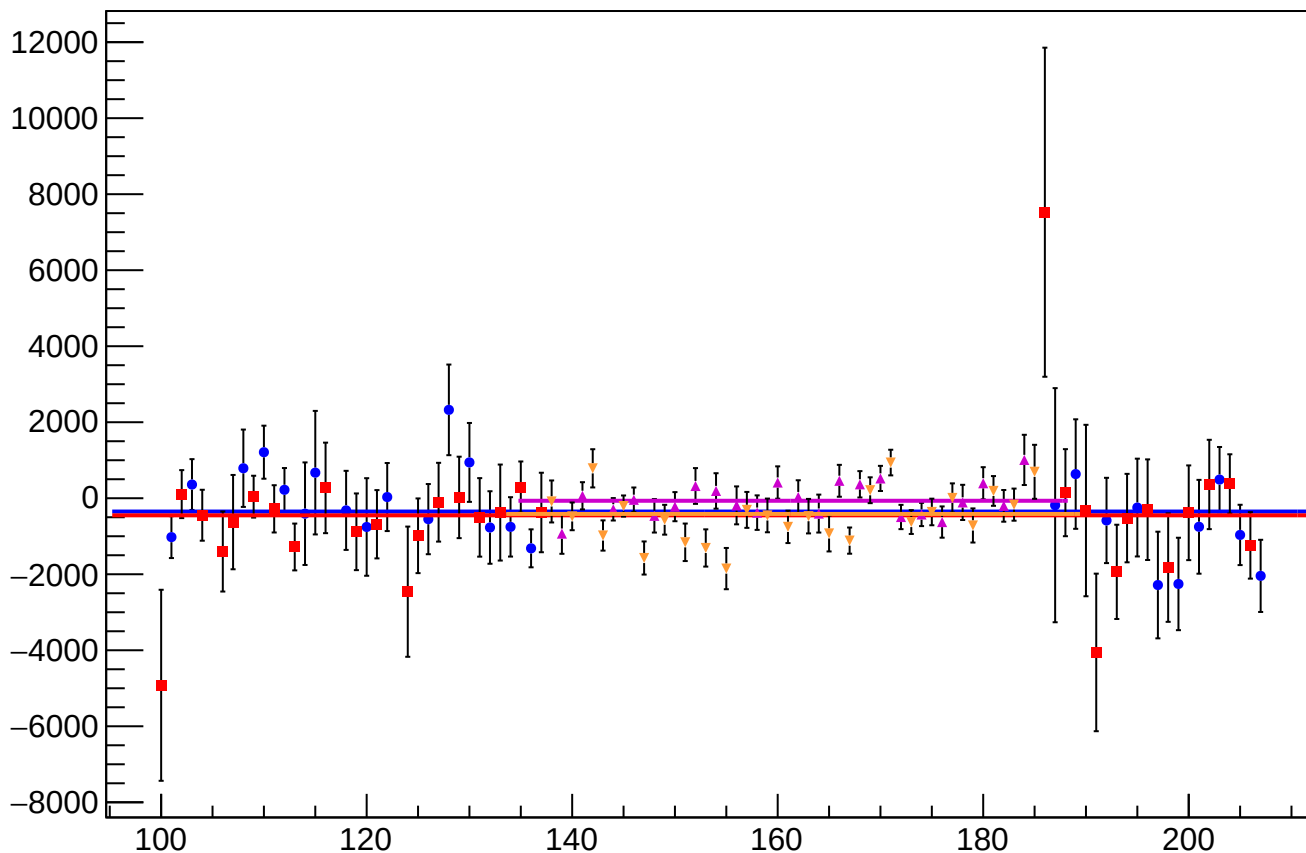
Left In: 57.940 $\pm$ 0.010  $\chi^2$ /NDF:1124523.3/22

+ sign 61.748 $\pm$ 0.008  $\chi^2$ /NDF: 6387133.9/50

All: 62.285 $\pm$ 0.006  $\chi^2$ /NDF: 14291693.6/104

- sign 62.849 $\pm$ 0.008  $\chi^2$ /NDF: 7895167.5/53

asym\_sam\_1357\_avg\_dit\_correction\_mean vs Slug



Right In:  $-349.952 \pm 174.787$   $\chi^2/\text{NDF}$ : 31.1/25

Left Out:  $-413.053 \pm 81.134$   $\chi^2/\text{NDF}$ : 61.3/24

Right Out:  $-449.839 \pm 172.051$   $\chi^2/\text{NDF}$ : 22.8/30

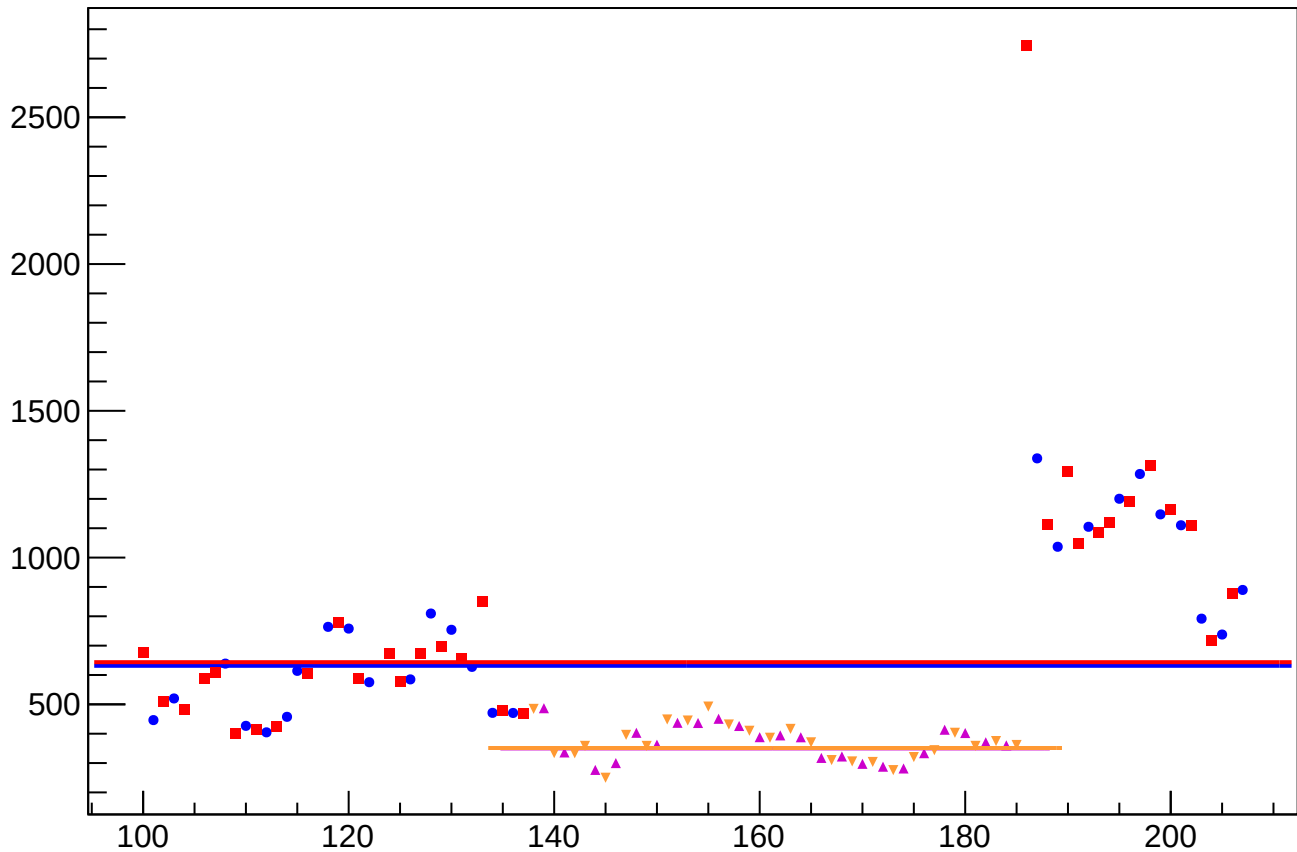
Left In:  $-66.637 \pm 83.082$   $\chi^2/\text{NDF}$ : 22.9/22

+ sign  $-401.867 \pm 73.592$   $\chi^2/\text{NDF}$ : 92.5/50

All:  $-272.648 \pm 52.465$   $\chi^2/\text{NDF}$ : 148.6/104

- sign  $-139.097 \pm 74.816$   $\chi^2/\text{NDF}$ : 49.7/53

# asym\_sam\_1357\_avg\_dit\_correction\_rms vs Slug



Right In:  $631.331 \pm 0.124$   $\chi^2/\text{NDF}: 3587888.8/25$

Left Out:  $351.264 \pm 0.057$   $\chi^2/\text{NDF}: 1118247.7/24$

Right Out:  $643.648 \pm 0.122$   $\chi^2/\text{NDF}: 4666224.5/30$

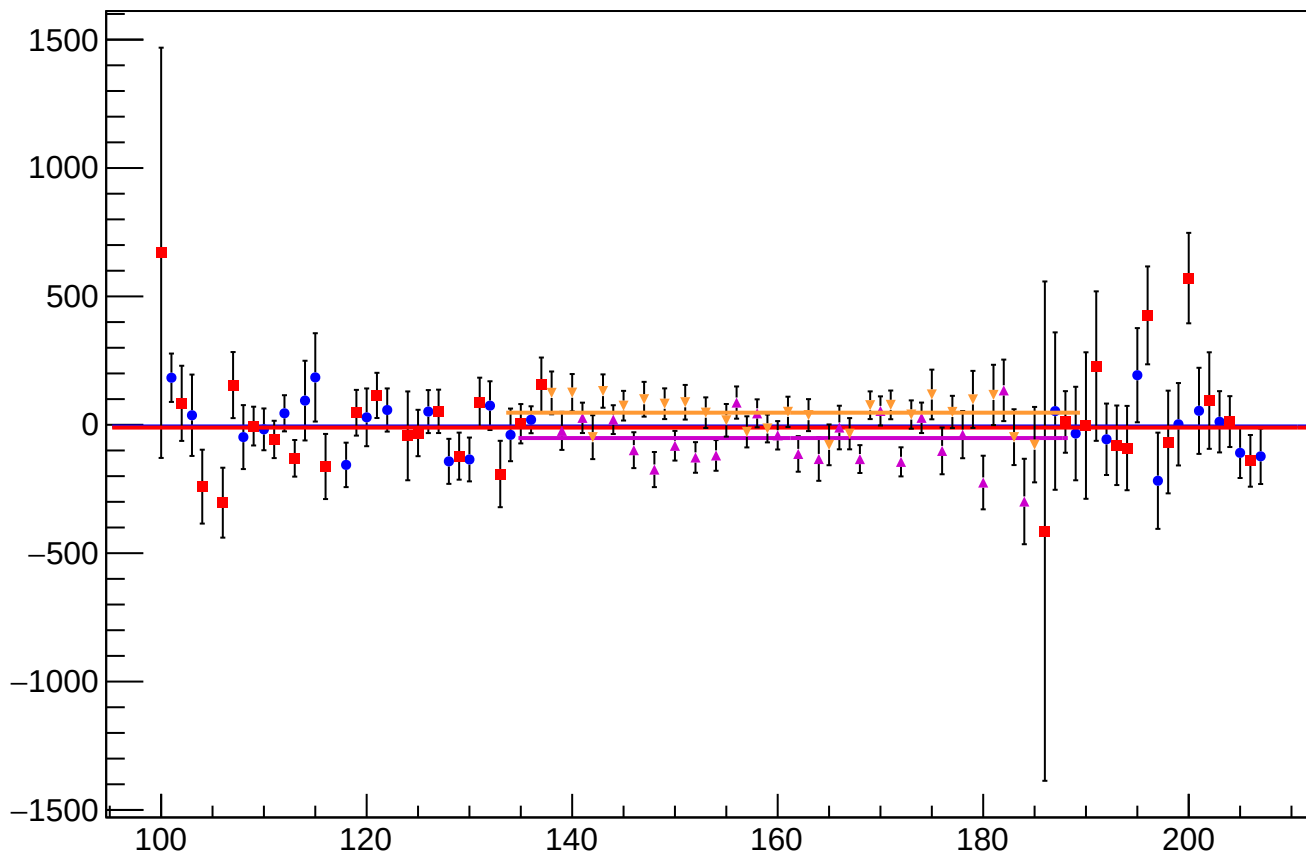
Left In:  $349.813 \pm 0.059$   $\chi^2/\text{NDF}: 990366.6/22$

+ sign  $400.913 \pm 0.052$   $\chi^2/\text{NDF}: 8930790.1/50$

All:  $403.107 \pm 0.037$   $\chi^2/\text{NDF}: 19321378.1/10$

- sign  $405.375 \pm 0.053$   $\chi^2/\text{NDF}: 10386973.1/53$

# eigen\_dit\_asym\_sam\_1357\_avg\_mean vs Slug



Right In:  $-6.415 \pm 20.144$   $\chi^2/\text{NDF}: 21.4/25$

Left Out:  $47.151 \pm 13.511$   $\chi^2/\text{NDF}: 17.0/24$

Right Out:  $-10.815 \pm 20.345$   $\chi^2/\text{NDF}: 44.2/30$

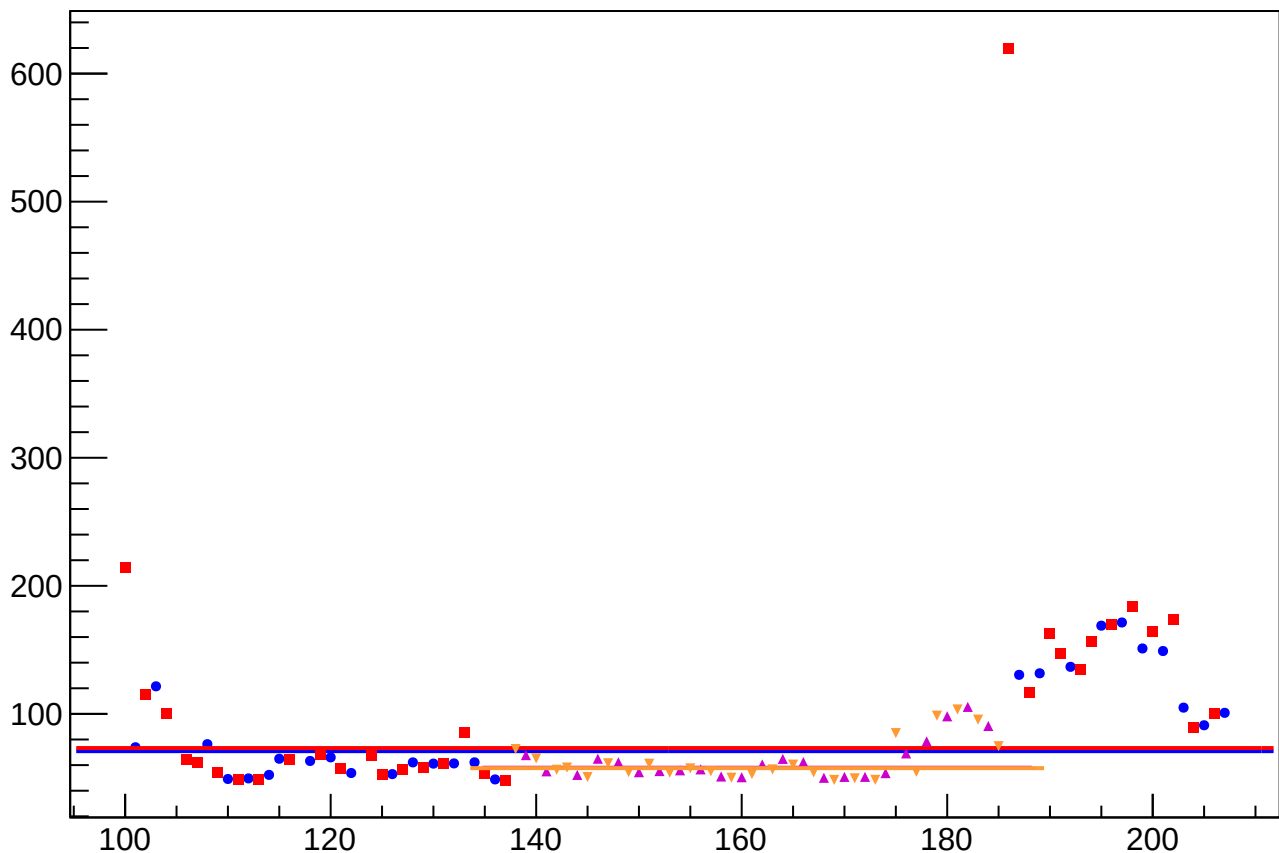
Left In:  $-51.651 \pm 13.934$   $\chi^2/\text{NDF}: 38.2/22$

+ sign  $30.530 \pm 11.221$   $\chi^2/\text{NDF}: 43.3/50$

All:  $-3.205 \pm 8.030$   $\chi^2/\text{NDF}: 147.0/104$

- sign  $-38.613 \pm 11.496$   $\chi^2/\text{NDF}: 85.2/53$

eigen\_dit\_asym\_sam\_1357\_avg\_rms vs Slug



Right In: 70.900 $\pm$ 0.014  $\chi^2$ /NDF: 4423165.7/25

Left Out: 57.631 $\pm$ 0.010  $\chi^2$ /NDF: 1365443.1/24

Right Out: 73.314 $\pm$ 0.014  $\chi^2$ /NDF: 5993174.6/30

Left In: 57.940 $\pm$ 0.010  $\chi^2$ /NDF: 1124509.8/22

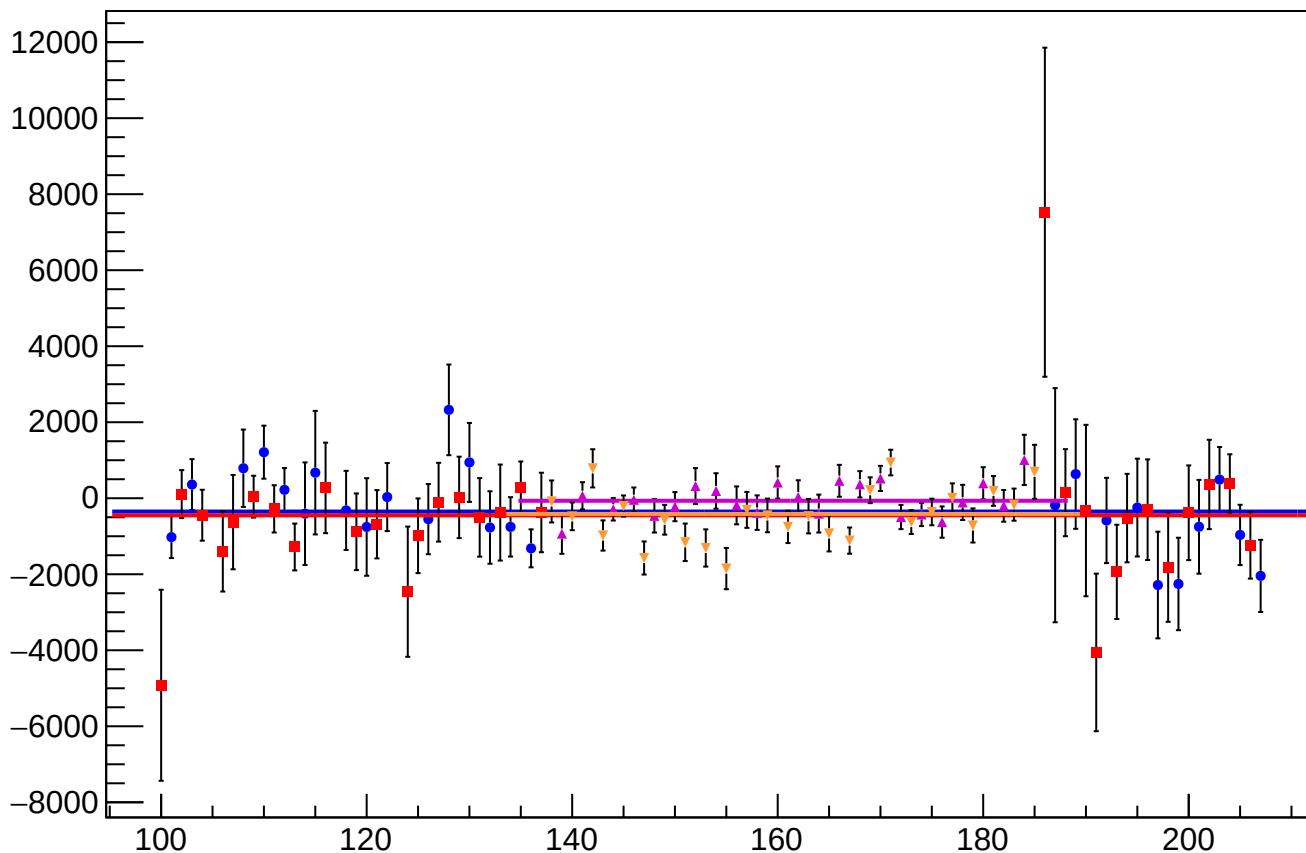
+ sign 61.748 $\pm$ 0.008  $\chi^2$ /NDF: 6387109.0/50

All: 62.285 $\pm$ 0.006  $\chi^2$ /NDF: 14291643.1/104

- sign 62.849 $\pm$ 0.008  $\chi^2$ /NDF: 7895141.4/53



asym\_sam\_1357\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-349.951 \pm 174.786$   $\chi^2/\text{NDF}$ : 31.1/25

Left Out:  $-413.053 \pm 81.134$   $\chi^2/\text{NDF}$ : 61.3/24

Right Out:  $-449.838 \pm 172.050$   $\chi^2/\text{NDF}$ : 22.8/30

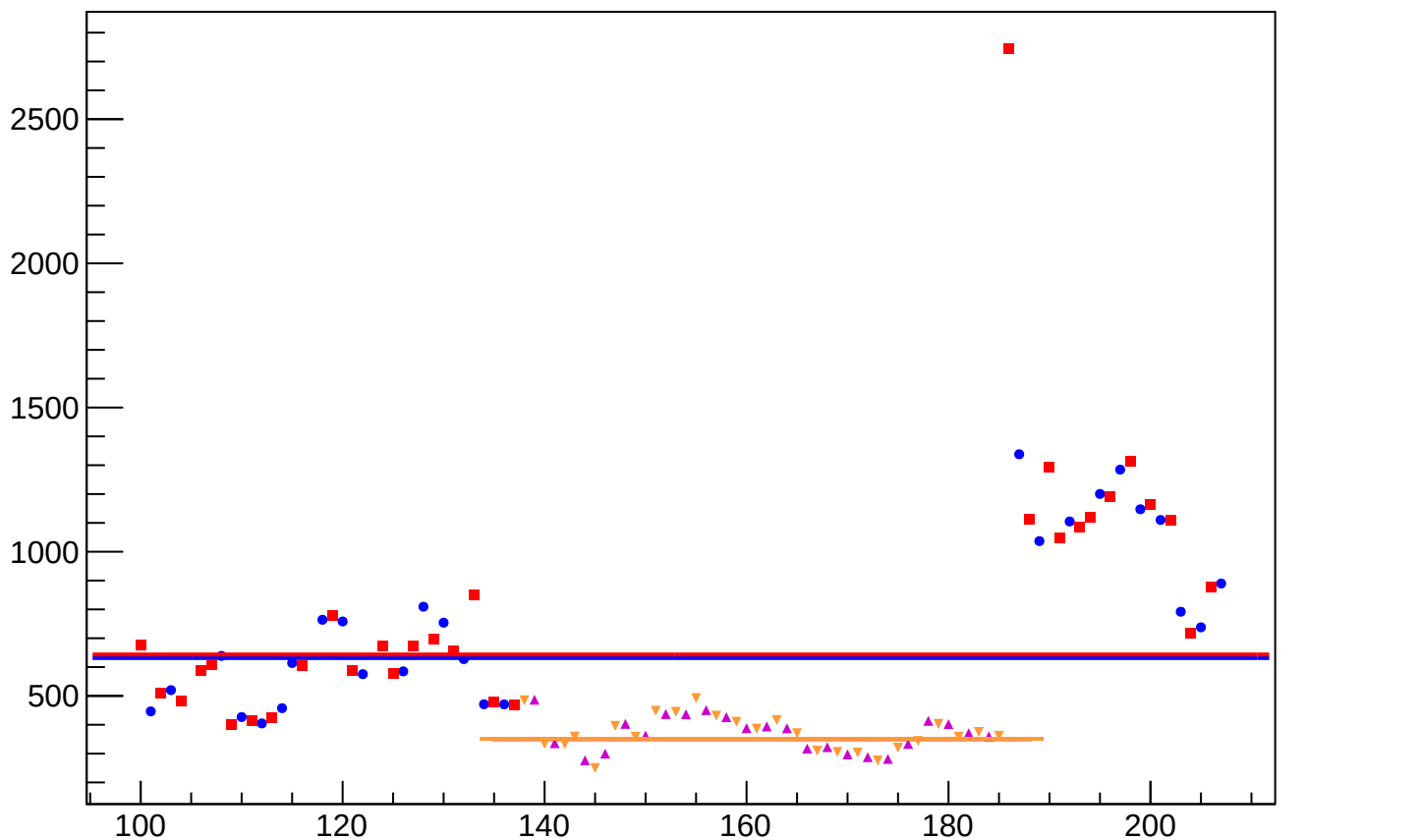
Left In:  $-66.637 \pm 83.082$   $\chi^2/\text{NDF}$ : 22.9/22

+ sign  $-401.866 \pm 73.592$   $\chi^2/\text{NDF}$ : 92.5/50

All:  $-272.648 \pm 52.465$   $\chi^2/\text{NDF}$ : 148.6/104

- sign  $-139.097 \pm 74.815$   $\chi^2/\text{NDF}$ : 49.7/53

asym\_sam\_1357\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In:  $631.330 \pm 0.124$   $\chi^2/\text{NDF}: 3587897.4/25$

Left Out:  $351.264 \pm 0.057$   $\chi^2/\text{NDF}: 1118243.1/24$

Right Out:  $643.646 \pm 0.122$   $\chi^2/\text{NDF}: 4666229.3/30$

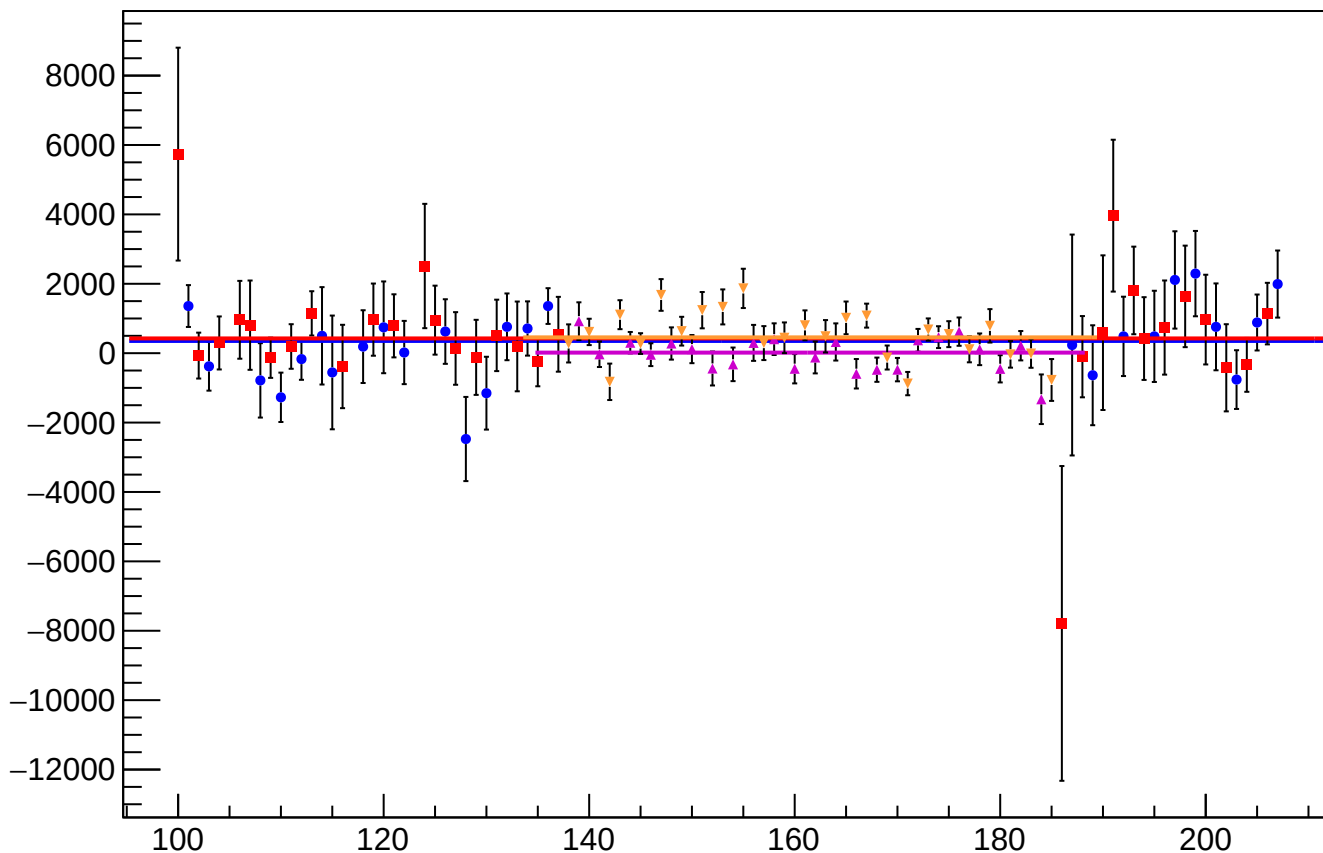
Left In:  $349.813 \pm 0.059$   $\chi^2/\text{NDF}: 990359.9/22$

+ sign  $400.913 \pm 0.052$   $\chi^2/\text{NDF}: 8930781.5/50$

All:  $403.107 \pm 0.037$   $\chi^2/\text{NDF}: 19321349.5/10$

- sign  $405.374 \pm 0.053$   $\chi^2/\text{NDF}: 10386952.9/53$

# asym\_sam\_1357\_avg\_mean vs Slug



Right In:  $352.966 \pm 179.708$   $\chi^2/\text{NDF}$ : 33.0/25

Left Out:  $455.234 \pm 82.961$   $\chi^2/\text{NDF}$ : 60.8/24

Right Out:  $425.015 \pm 178.590$   $\chi^2/\text{NDF}$ : 20.3/30

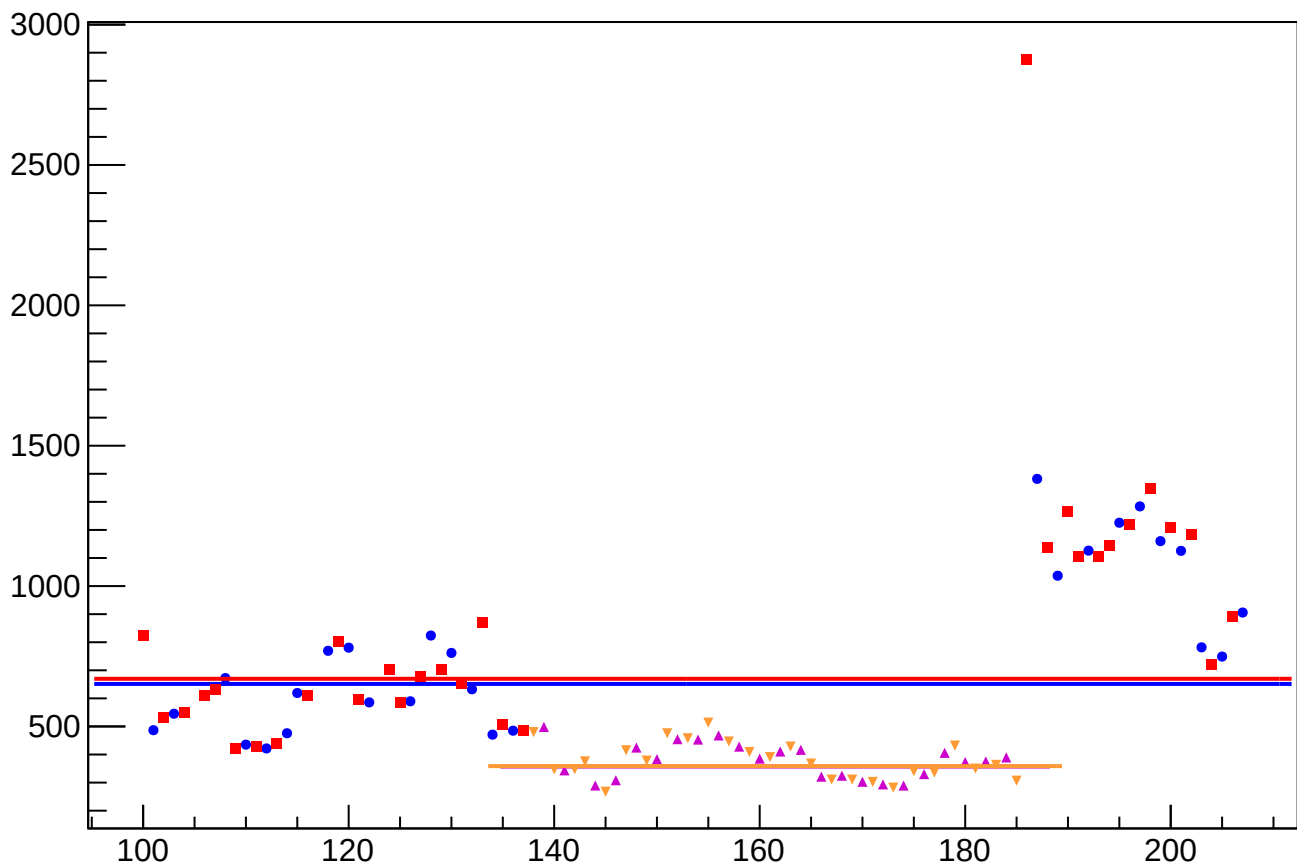
Left In:  $16.073 \pm 84.830$   $\chi^2/\text{NDF}$ : 24.9/22

+ sign  $437.268 \pm 75.322$   $\chi^2/\text{NDF}$ : 94.1/50

All:  $267.279 \pm 53.716$   $\chi^2/\text{NDF}$ : 153.9/104

- sign  $91.355 \pm 76.625$   $\chi^2/\text{NDF}$ : 49.4/53

# asym\_sam\_1357\_avg\_rms vs Slug



Right In: 651.416 $\pm$ 0.127  $\chi^2$ /NDF: 3377639.1/25

Left Out: 358.677 $\pm$ 0.059  $\chi^2$ /NDF:1119535.1/24

Right Out: 669.790 $\pm$ 0.126  $\chi^2$ /NDF: 4481938.7/30

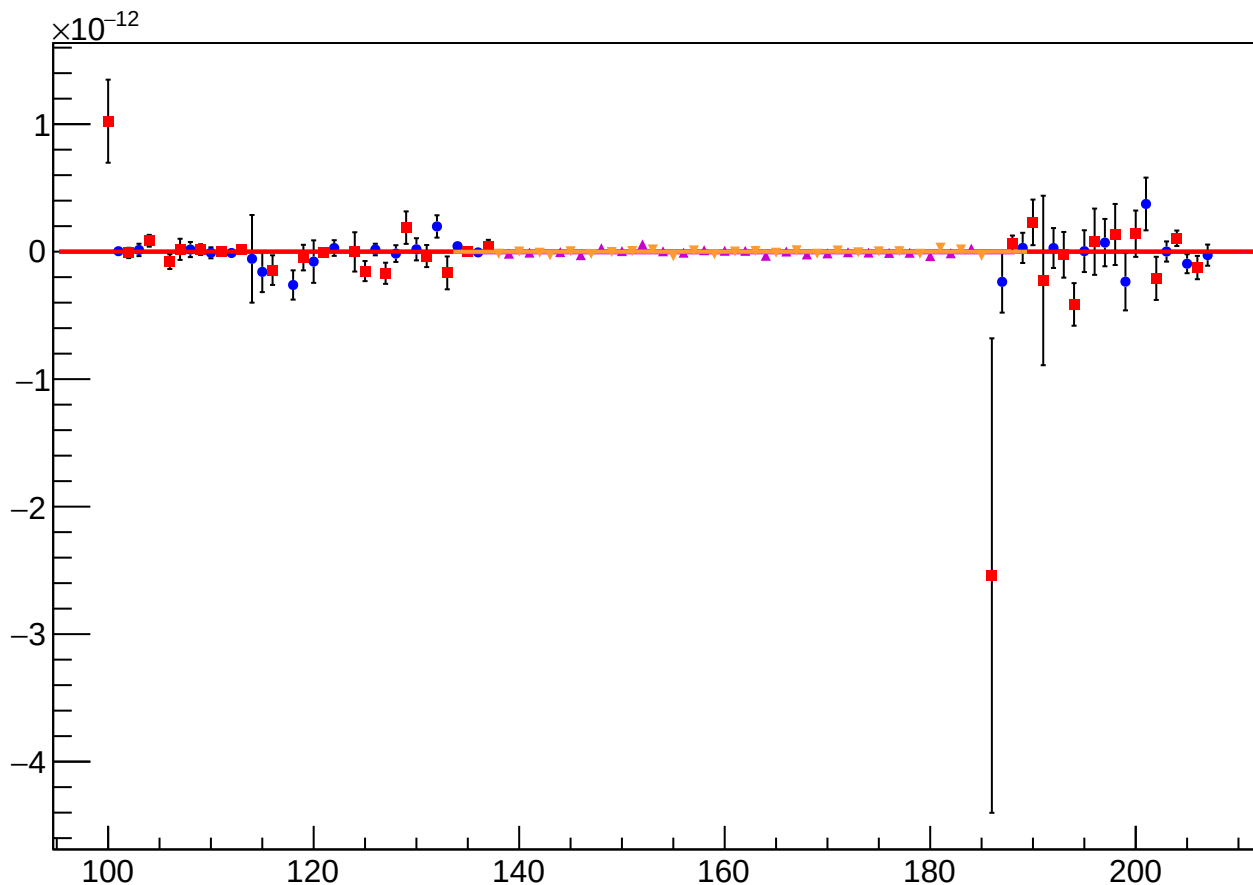
Left In: 357.182 $\pm$ 0.060  $\chi^2$ /NDF:981641.8/22

+ sign 410.103 $\pm$ 0.053  $\chi^2$ /NDF: 8871934.1/50

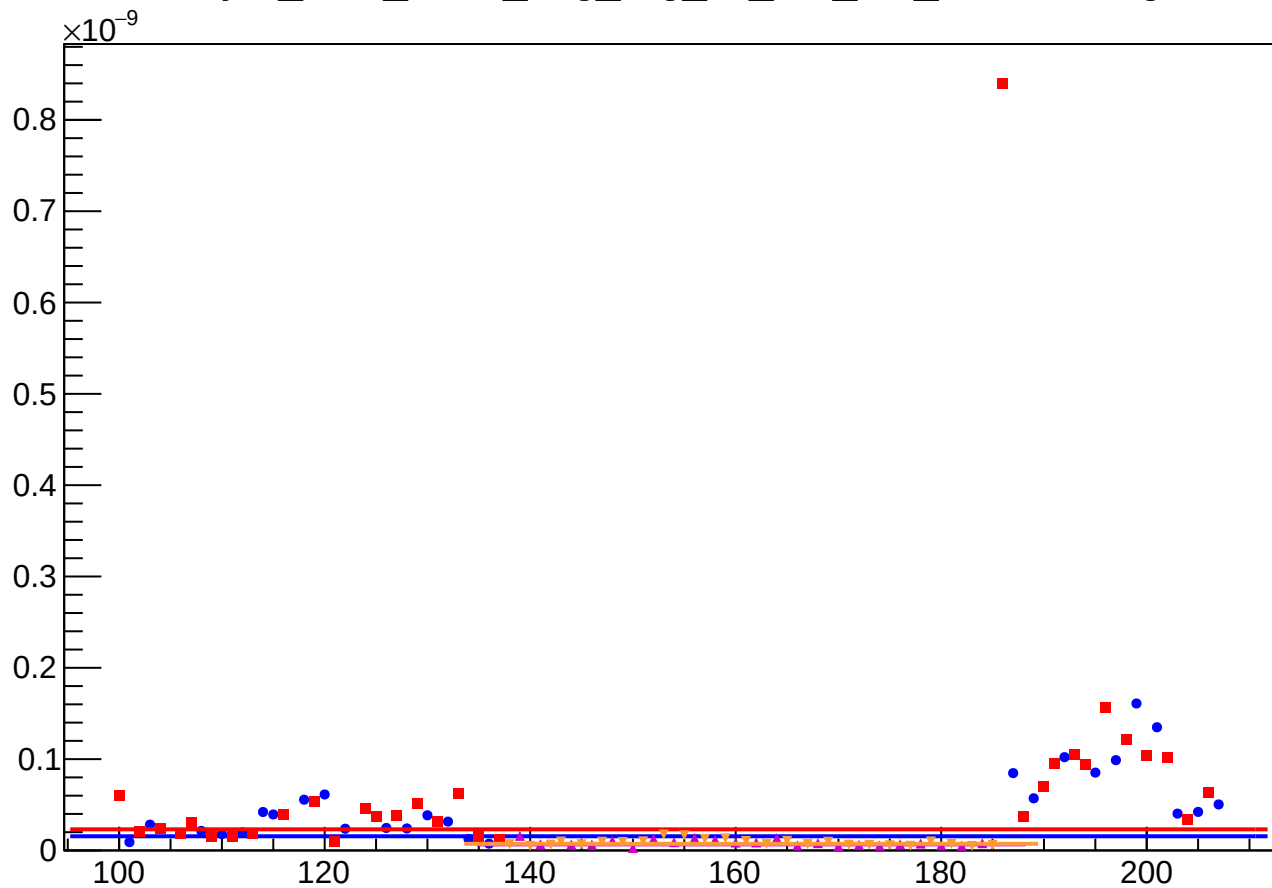
All: 412.377 $\pm$ 0.038  $\chi^2$ /NDF: 19339092.4/10

- sign 414.730 $\pm$ 0.054  $\chi^2$ /NDF: 10463449.1/53

asym\_sam\_1357\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



asym\_sam\_1357\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6022981.8/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :1438289.6/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5140568.4/30

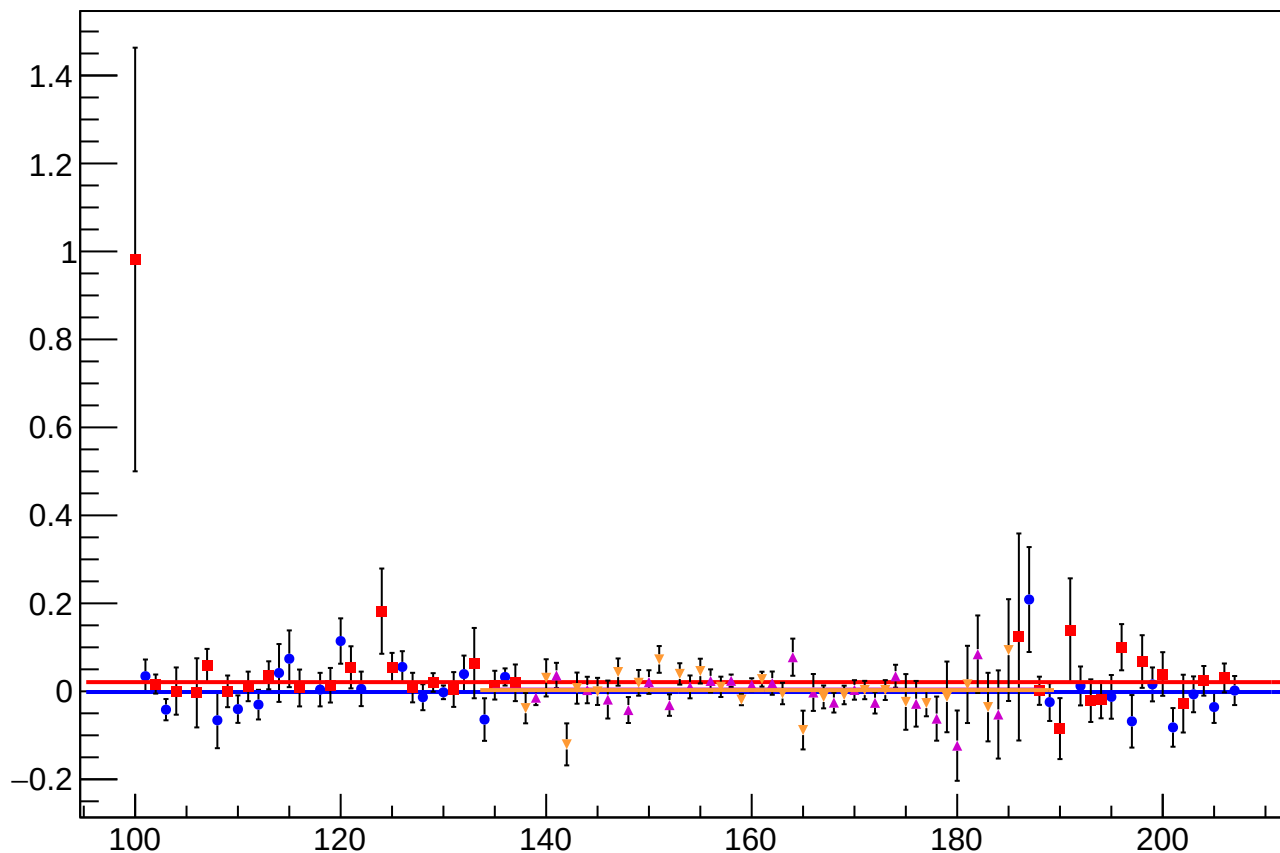
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :1746143.3/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9058093.7/50

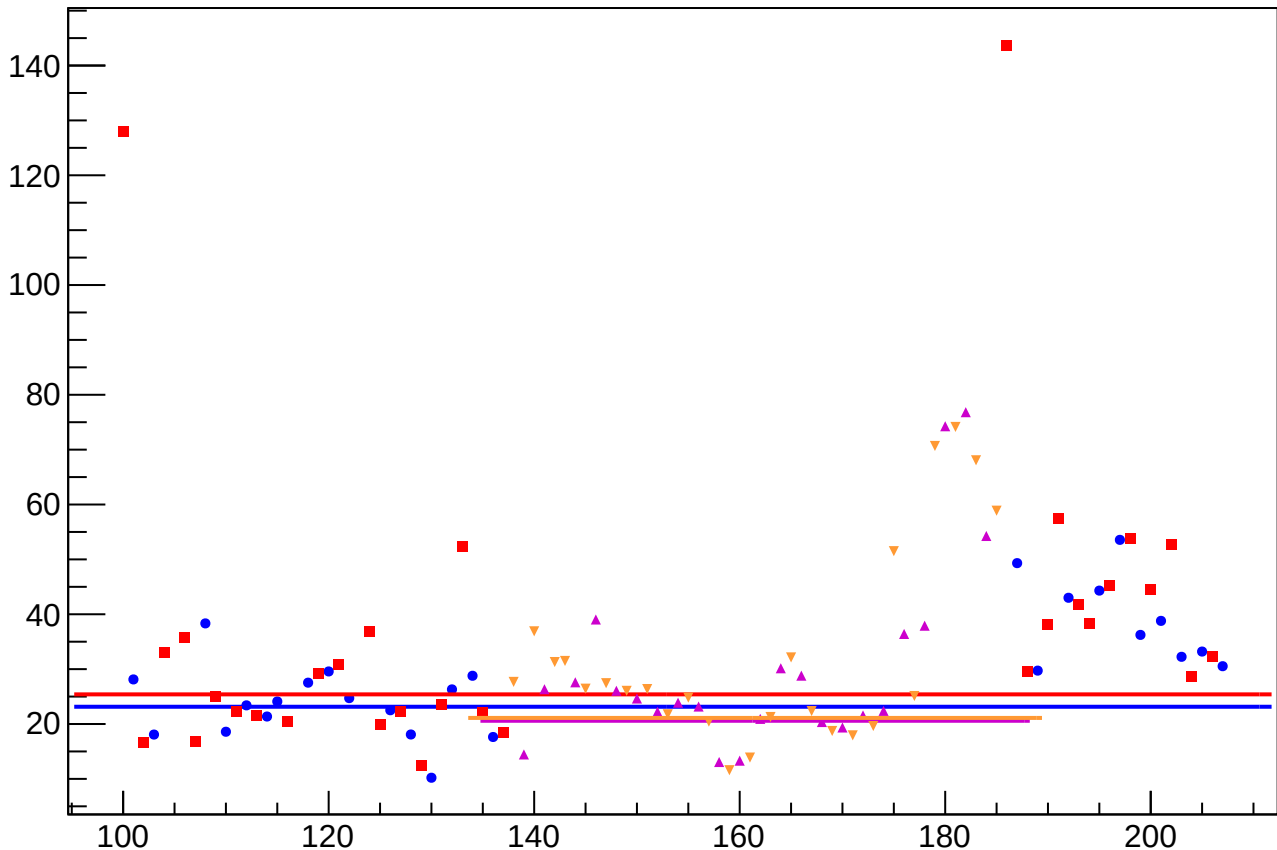
All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 19864552.6/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10780623.3/53

asym\_sam\_1357\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



asym\_sam\_1357\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 23.146+/-0.005  $\chi^2/\text{NDF}: 4245814.3/25$

Left Out: 21.109+/-0.004  $\chi^2/\text{NDF}: 5546528.5/24$

Right Out: 25.402+/-0.005  $\chi^2/\text{NDF}: 4540577.4/30$

Left In: 20.591+/-0.004  $\chi^2/\text{NDF}: 4599493.5/22$

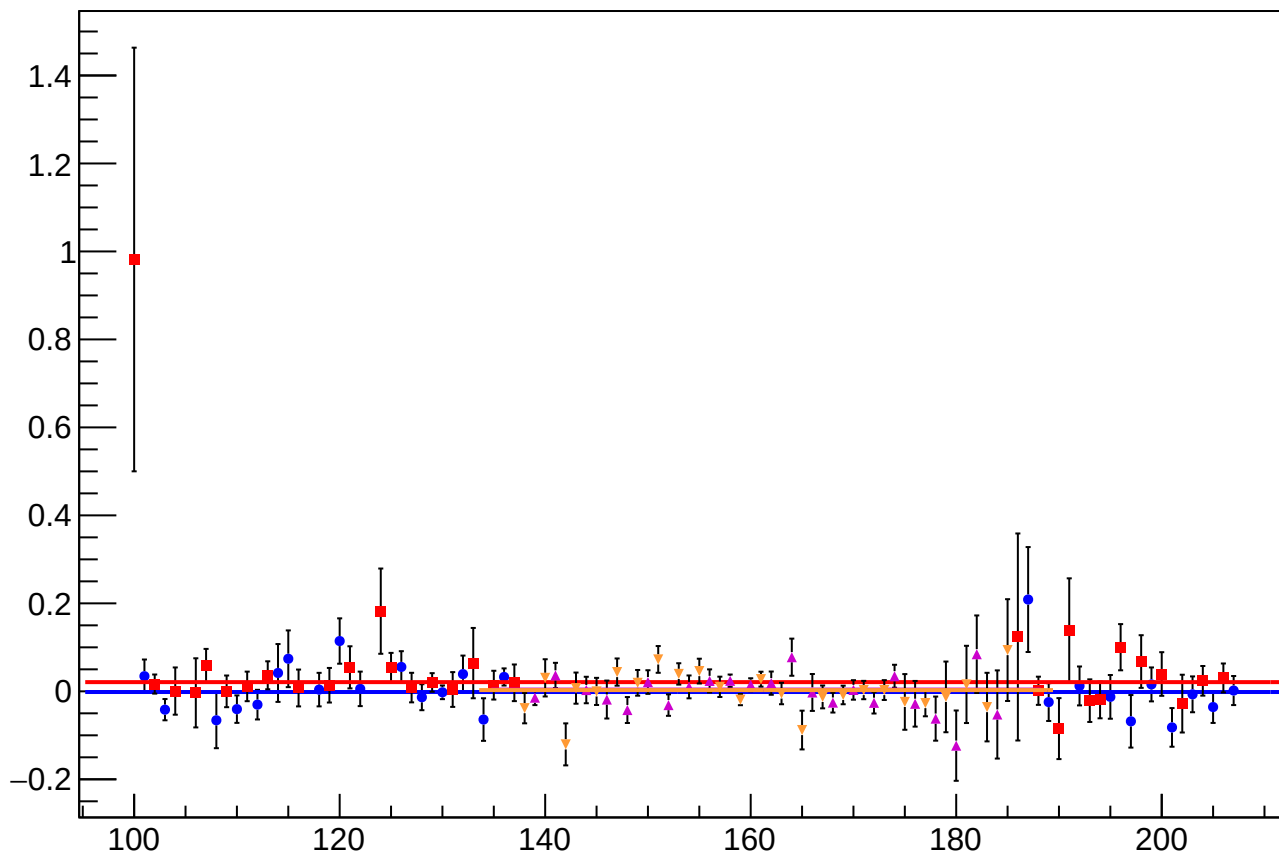
+ sign 21.907+/-0.003  $\chi^2/\text{NDF}: 9901805.4/50$

All: 22.120+/-0.002  $\chi^2/\text{NDF}: 19622199.7/104$

- sign 22.342+/-0.003  $\chi^2/\text{NDF}: 9710166.2/53$



asym\_sam\_1357\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.002 \pm 0.007$   $\chi^2/\text{NDF}$ : 31.5/25

Left Out:  $0.003 \pm 0.005$   $\chi^2/\text{NDF}$ : 32.8/24

Right Out:  $0.021 \pm 0.007$   $\chi^2/\text{NDF}$ : 20.1/30

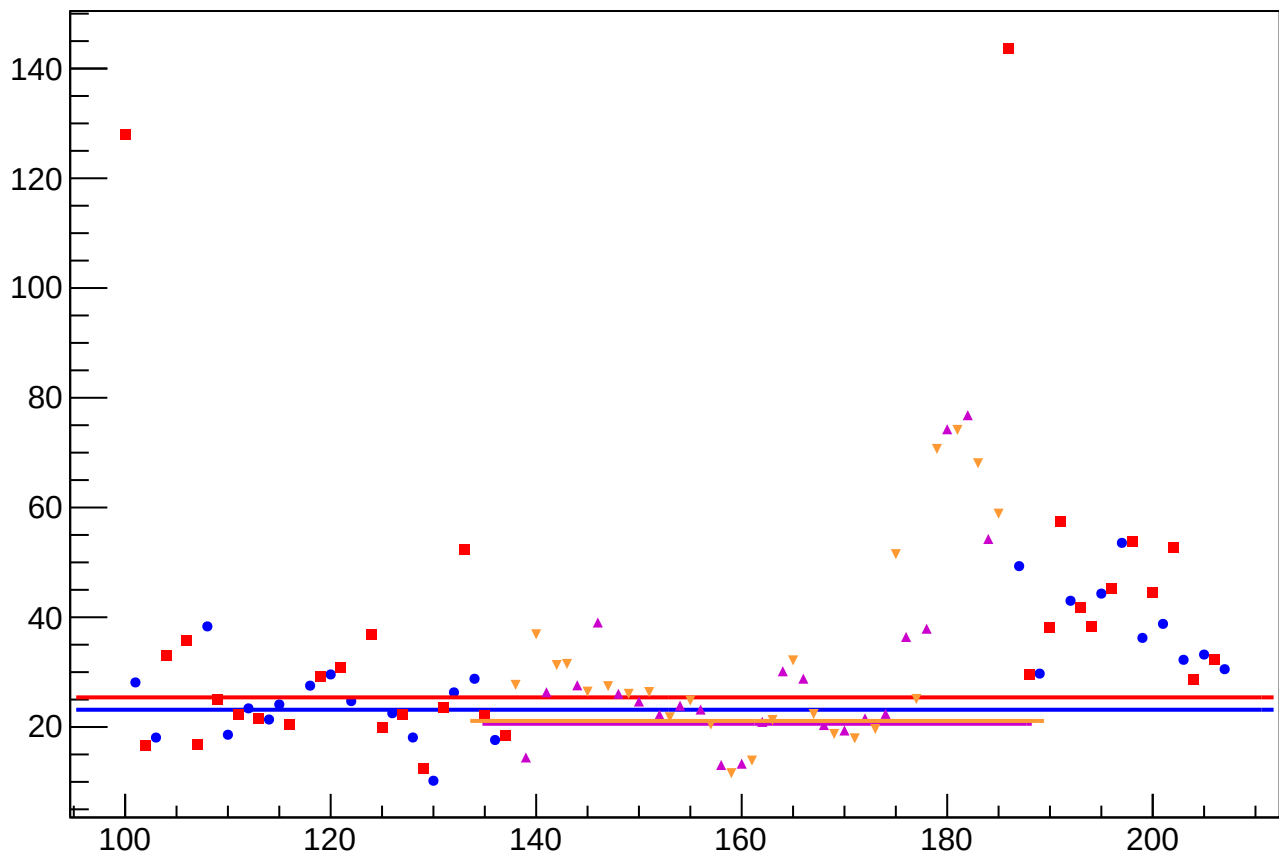
Left In:  $0.004 \pm 0.005$   $\chi^2/\text{NDF}$ : 24.6/22

+ sign  $0.001 \pm 0.004$   $\chi^2/\text{NDF}$ : 64.6/50

All:  $0.006 \pm 0.003$   $\chi^2/\text{NDF}$ : 115.0/104

- sign  $0.010 \pm 0.004$   $\chi^2/\text{NDF}$ : 48.2/53

asym\_sam\_1357\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 23.146 $\pm$ 0.005  $\chi^2$ /NDF: 4245814.3/25

Left Out: 21.109 $\pm$ 0.004  $\chi^2$ /NDF: 5546528.5/24

Right Out: 25.402 $\pm$ 0.005  $\chi^2$ /NDF: 4540577.4/30

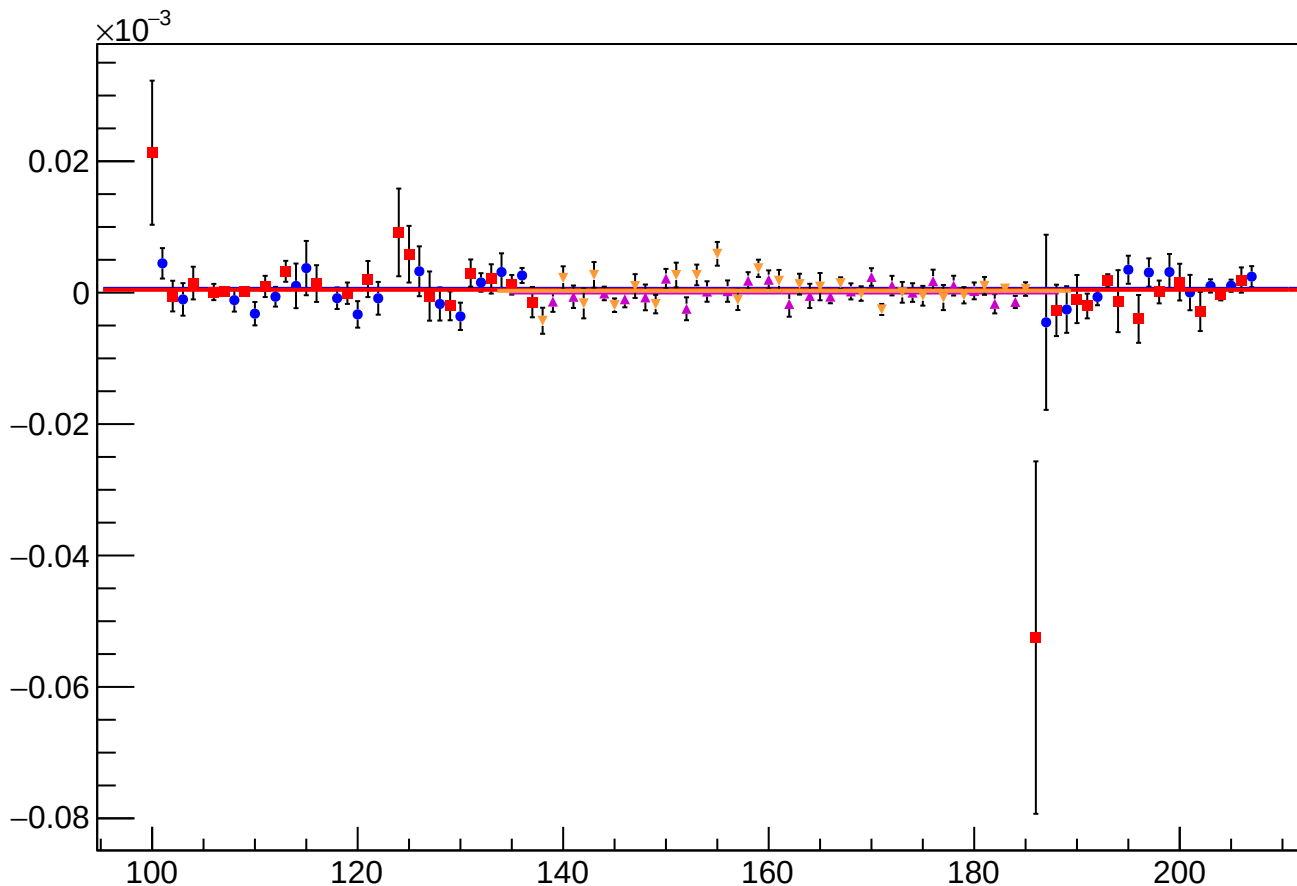
Left In: 20.591 $\pm$ 0.004  $\chi^2$ /NDF: 4599493.5/22

+ sign 21.907 $\pm$ 0.003  $\chi^2$ /NDF: 9901805.4/50

All: 22.120 $\pm$ 0.002  $\chi^2$ /NDF: 19622199.7/104

- sign 22.342 $\pm$ 0.003  $\chi^2$ /NDF: 9710166.2/53

asym\_sam\_1357\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 32.4/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:52.6/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 28.4/30

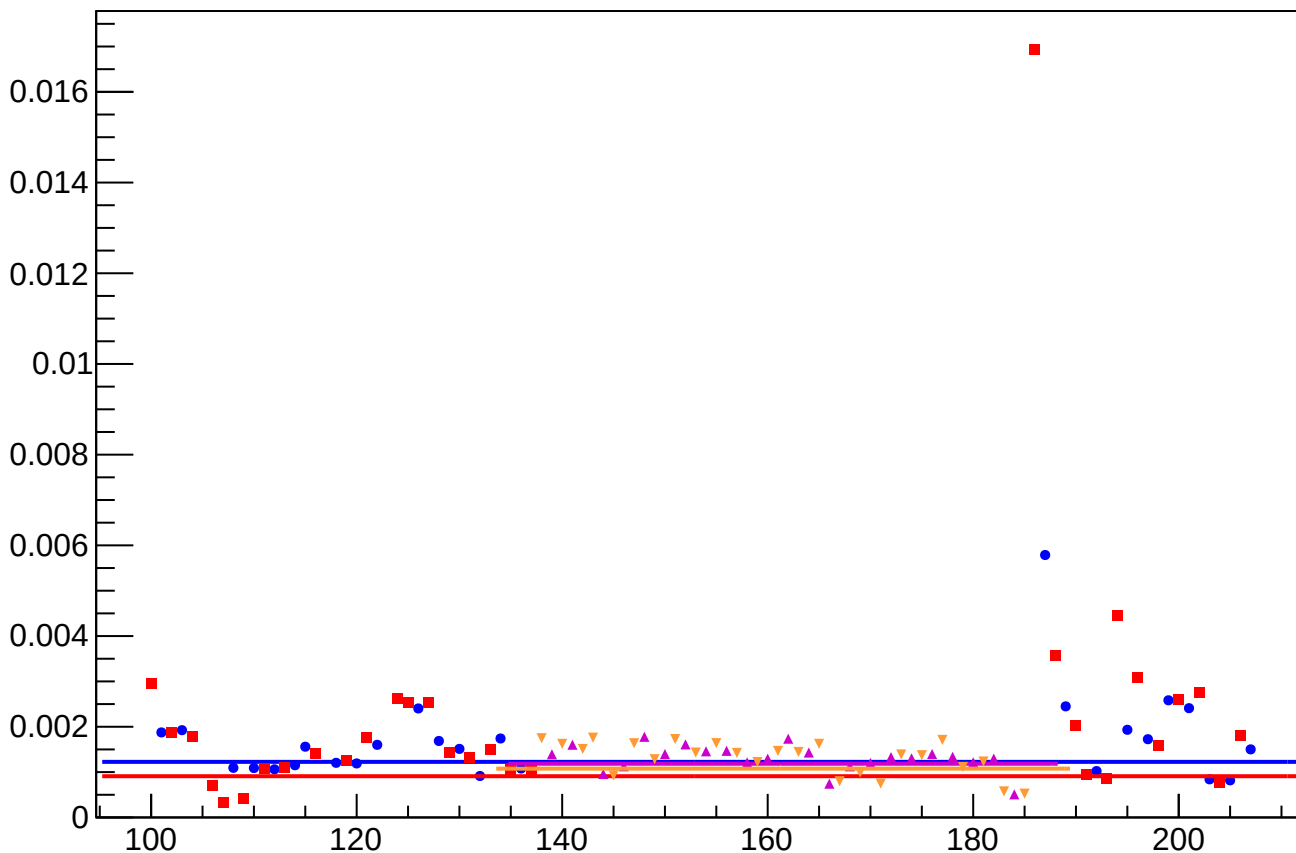
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:19.8/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 85.4/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 135.0/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 49.2/53

asym\_sam\_1357\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.001 $\pm$ 0.000  $\chi^2$ /NDF: 3389246.5/25

Left Out: 0.001 $\pm$ 0.000  $\chi^2$ /NDF:4545392.2/24

Right Out: 0.001 $\pm$ 0.000  $\chi^2$ /NDF: 11036995.9/30

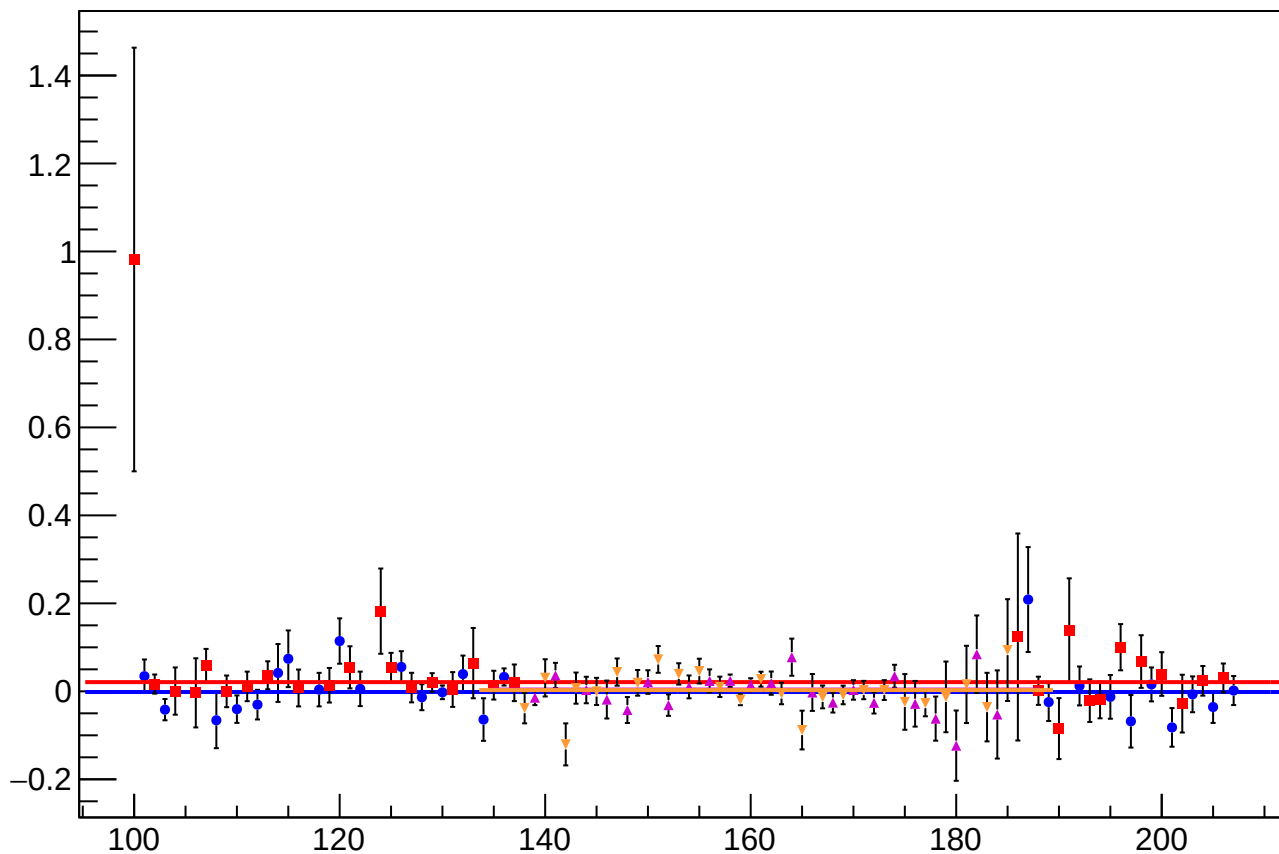
Left In: 0.001 $\pm$ 0.000  $\chi^2$ /NDF:2456537.2/22

+ sign 0.001 $\pm$ 0.000  $\chi^2$ /NDF: 8168551.3/50

All: 0.001 $\pm$ 0.000  $\chi^2$ /NDF: 22759006.7/104

- sign 0.001 $\pm$ 0.000  $\chi^2$ /NDF: 14417370.1/53

asym\_sam\_1357\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.002 \pm 0.007$   $\chi^2/\text{NDF}$ : 31.5/25

Left Out:  $0.003 \pm 0.005$   $\chi^2/\text{NDF}$ : 32.8/24

Right Out:  $0.021 \pm 0.007$   $\chi^2/\text{NDF}$ : 20.1/30

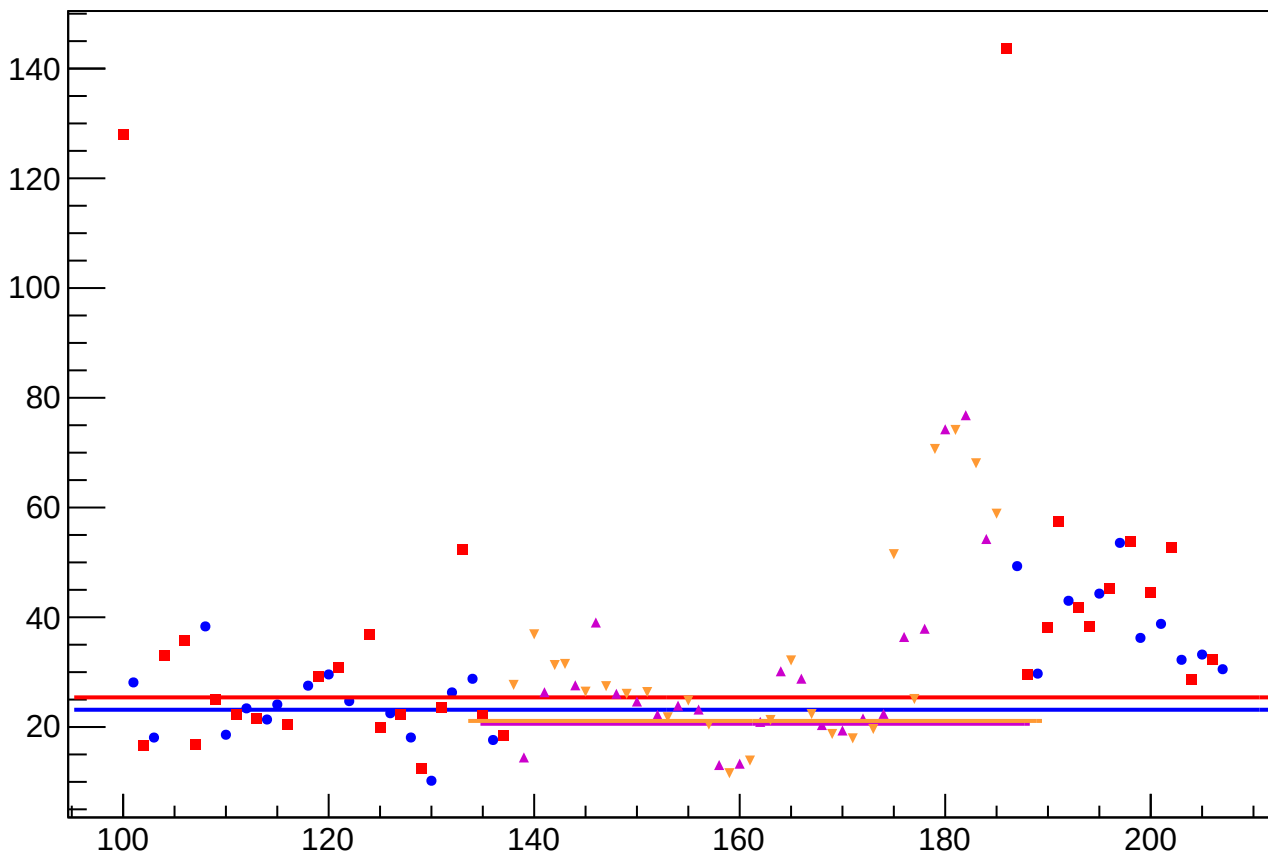
Left In:  $0.004 \pm 0.005$   $\chi^2/\text{NDF}$ : 24.6/22

+ sign  $0.001 \pm 0.004$   $\chi^2/\text{NDF}$ : 64.6/50

All:  $0.006 \pm 0.003$   $\chi^2/\text{NDF}$ : 115.0/104

- sign  $0.010 \pm 0.004$   $\chi^2/\text{NDF}$ : 48.2/53

asym\_sam\_1357\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 23.146 $\pm$ 0.005  $\chi^2$ /NDF: 4245559.8/25

Left Out: 21.109 $\pm$ 0.004  $\chi^2$ /NDF: 5546663.4/24

Right Out: 25.402 $\pm$ 0.005  $\chi^2$ /NDF: 4540549.7/30

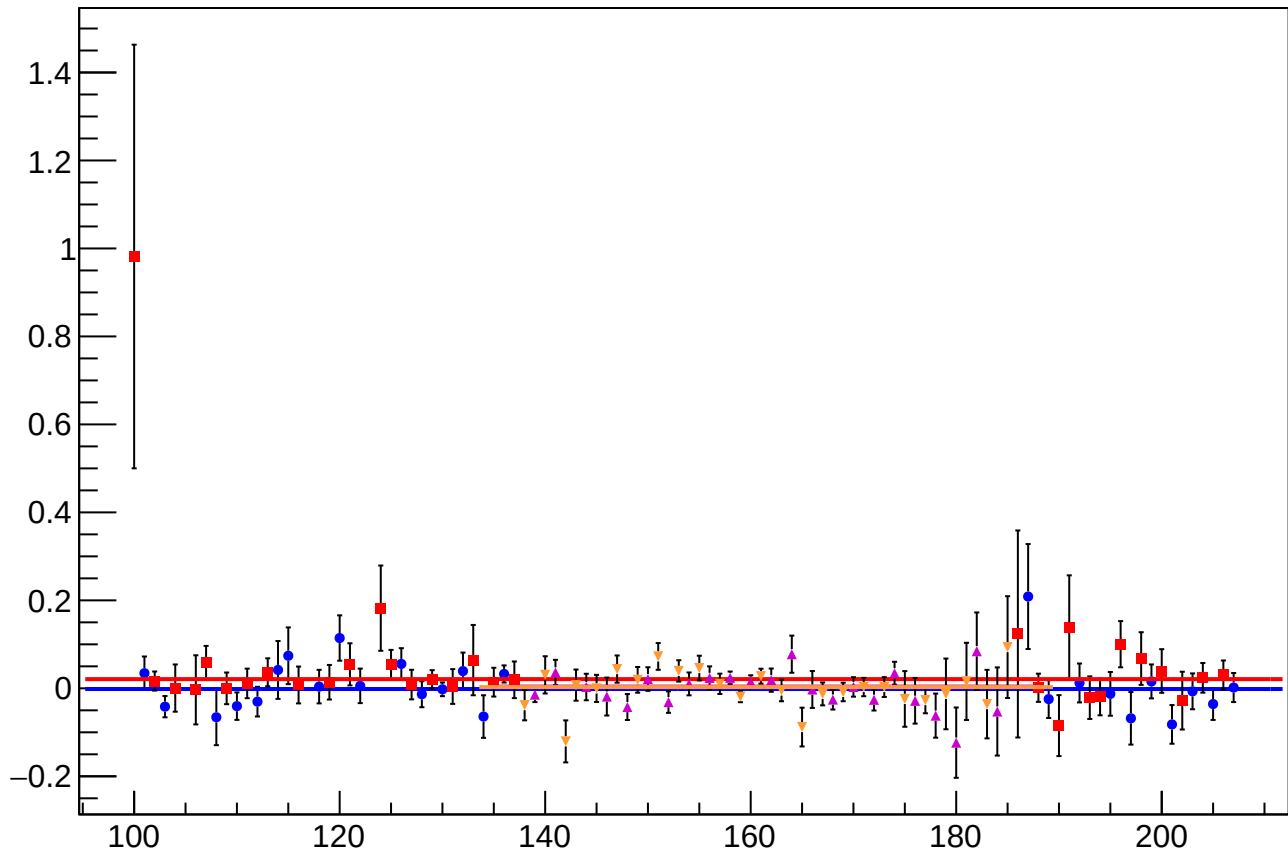
Left In: 20.592 $\pm$ 0.004  $\chi^2$ /NDF: 4599496.2/22

+ sign 21.908 $\pm$ 0.003  $\chi^2$ /NDF: 9901722.8/50

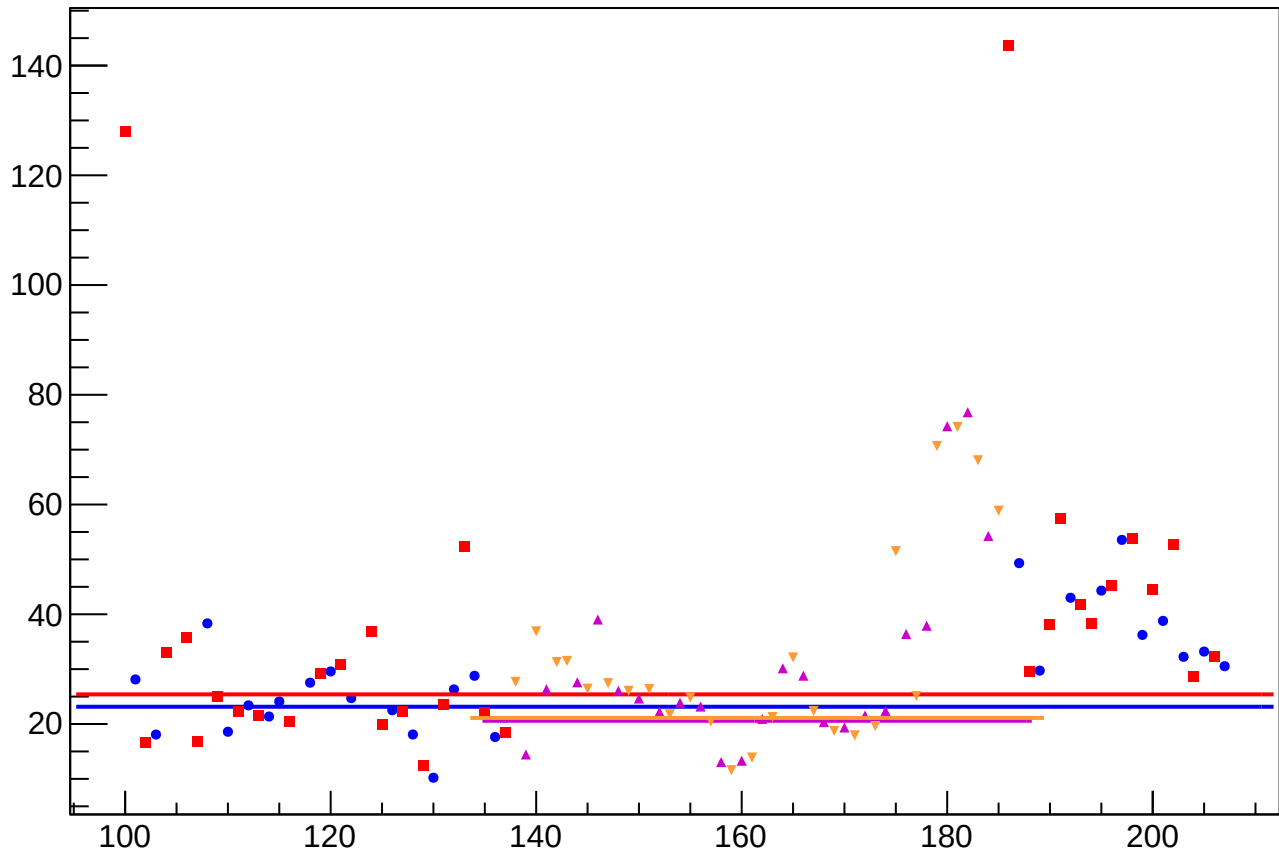
All: 22.121 $\pm$ 0.002  $\chi^2$ /NDF: 19622084.4/104

- sign 22.342 $\pm$ 0.003  $\chi^2$ /NDF: 9710131.7/53

asym\_sam\_1357\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



asym\_sam\_1357\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 23.146 $\pm$ 0.005  $\chi^2$ /NDF: 4245559.8/25

Left Out: 21.109 $\pm$ 0.004  $\chi^2$ /NDF: 5546663.4/24

Right Out: 25.402 $\pm$ 0.005  $\chi^2$ /NDF: 4540549.7/30

Left In: 20.592 $\pm$ 0.004  $\chi^2$ /NDF: 4599496.2/22

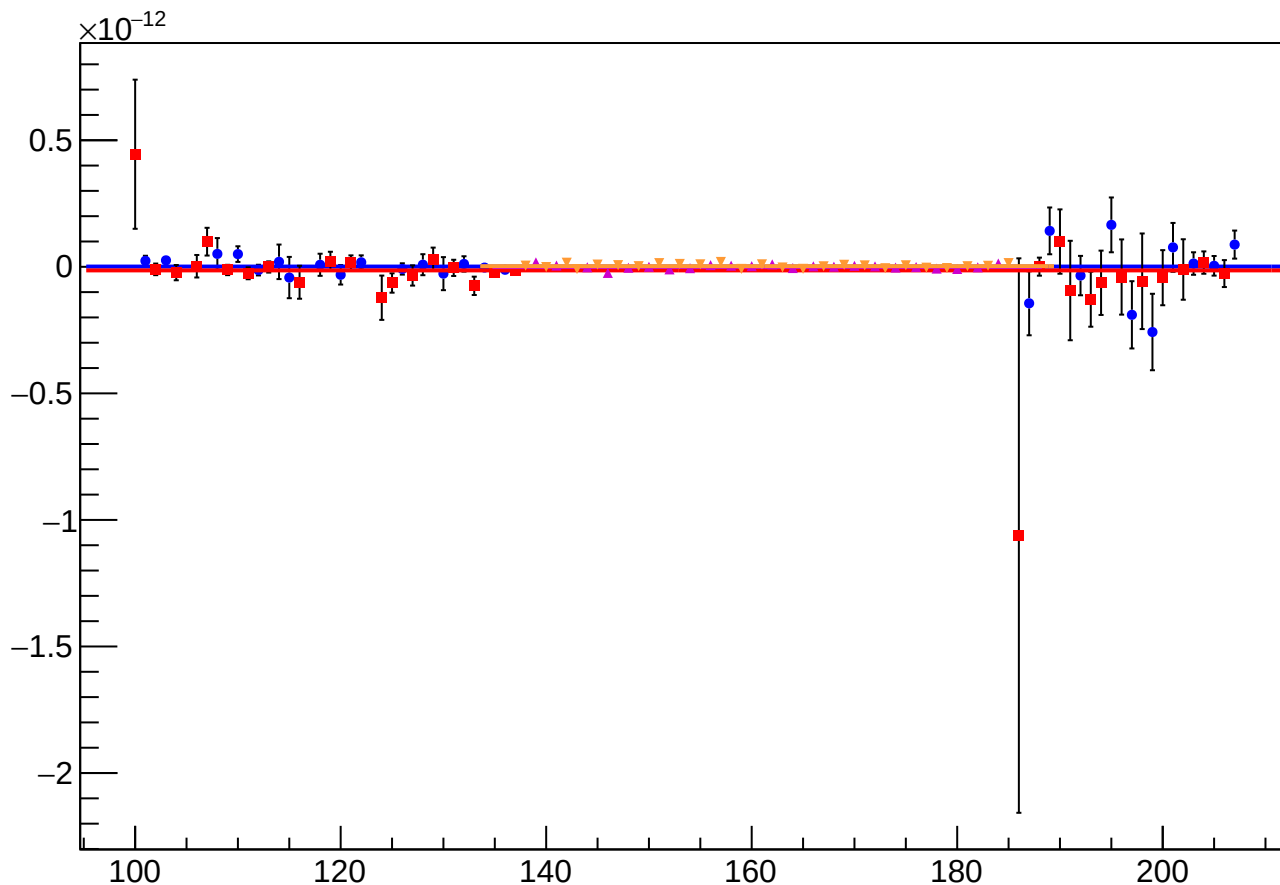
+ sign 21.908 $\pm$ 0.003  $\chi^2$ /NDF: 9901722.8/50

All: 22.121 $\pm$ 0.002  $\chi^2$ /NDF: 19622084.4/104

- sign 22.342 $\pm$ 0.003  $\chi^2$ /NDF: 9710131.7/53



asym\_sam\_1357\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 24.9/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:20.6/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 21.6/30

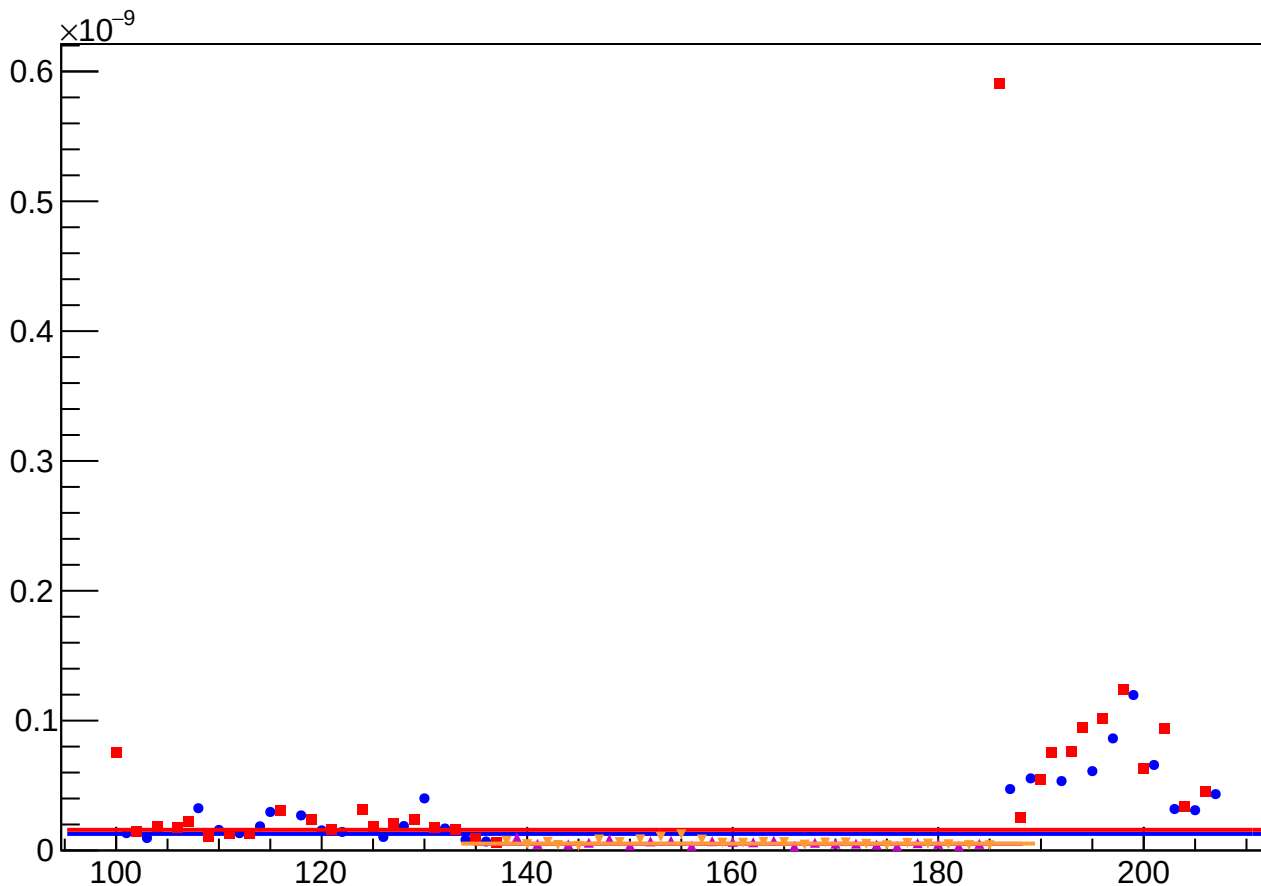
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:21.4/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 45.6/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 96.6/104

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 47.3/53

asym\_sam\_1357\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7269068.5/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2053779.9/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7628362.7/30

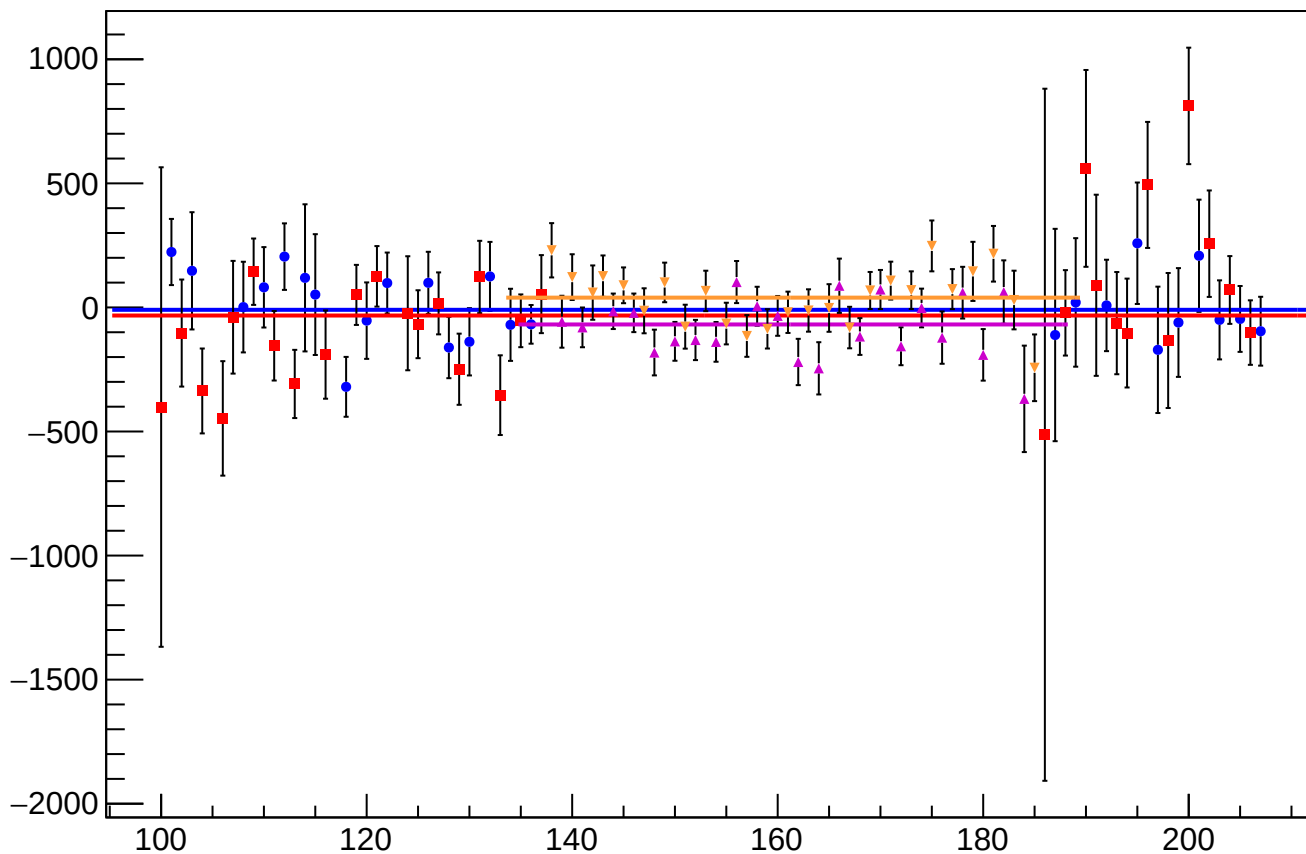
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1700889.7/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12843840.3/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 27812474.1/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14961854.5/53

# reg\_asym\_sam\_2468\_avg\_mean vs Slug



Right In:  $-9.585 \pm 29.866$   $\chi^2/\text{NDF}: 22.1/25$

Left Out:  $39.477 \pm 17.666$   $\chi^2/\text{NDF}: 31.9/24$

Right Out:  $-32.599 \pm 30.206$   $\chi^2/\text{NDF}: 46.7/30$

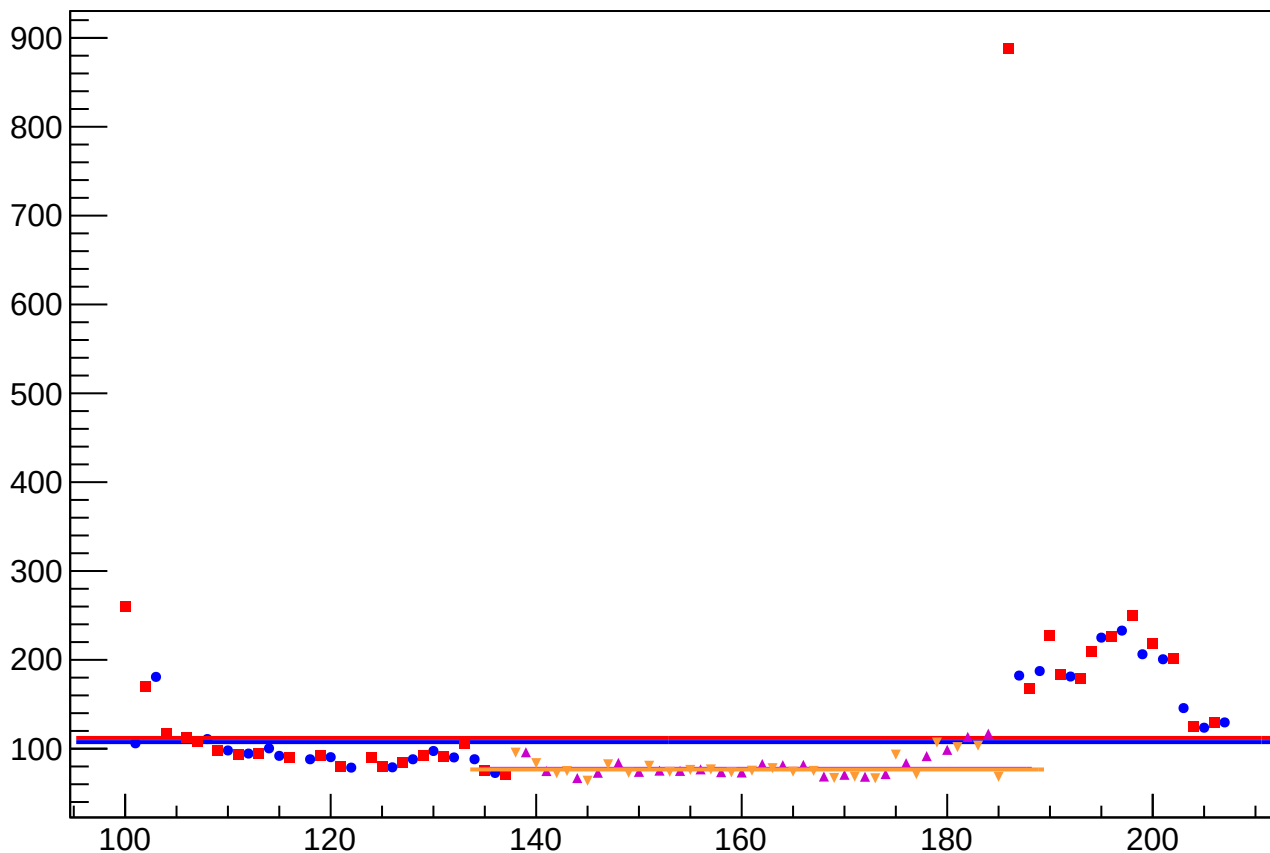
Left In:  $-68.620 \pm 18.317$   $\chi^2/\text{NDF}: 29.0/22$

+ sign  $26.760 \pm 15.205$   $\chi^2/\text{NDF}: 56.1/50$

All:  $-14.819 \pm 10.910$   $\chi^2/\text{NDF}: 148.3/104$

- sign  $-58.935 \pm 15.662$   $\chi^2/\text{NDF}: 76.8/53$

# reg\_asym\_sam\_2468\_avg\_rms vs Slug



Right In: 107.407 $\pm$ 0.021  $\chi^2$ /NDF: 3503264.0/25

Left Out: 76.646 $\pm$ 0.012  $\chi^2$ /NDF: 654608.6/24

Right Out: 112.098 $\pm$ 0.021  $\chi^2$ /NDF: 4608233.6/30

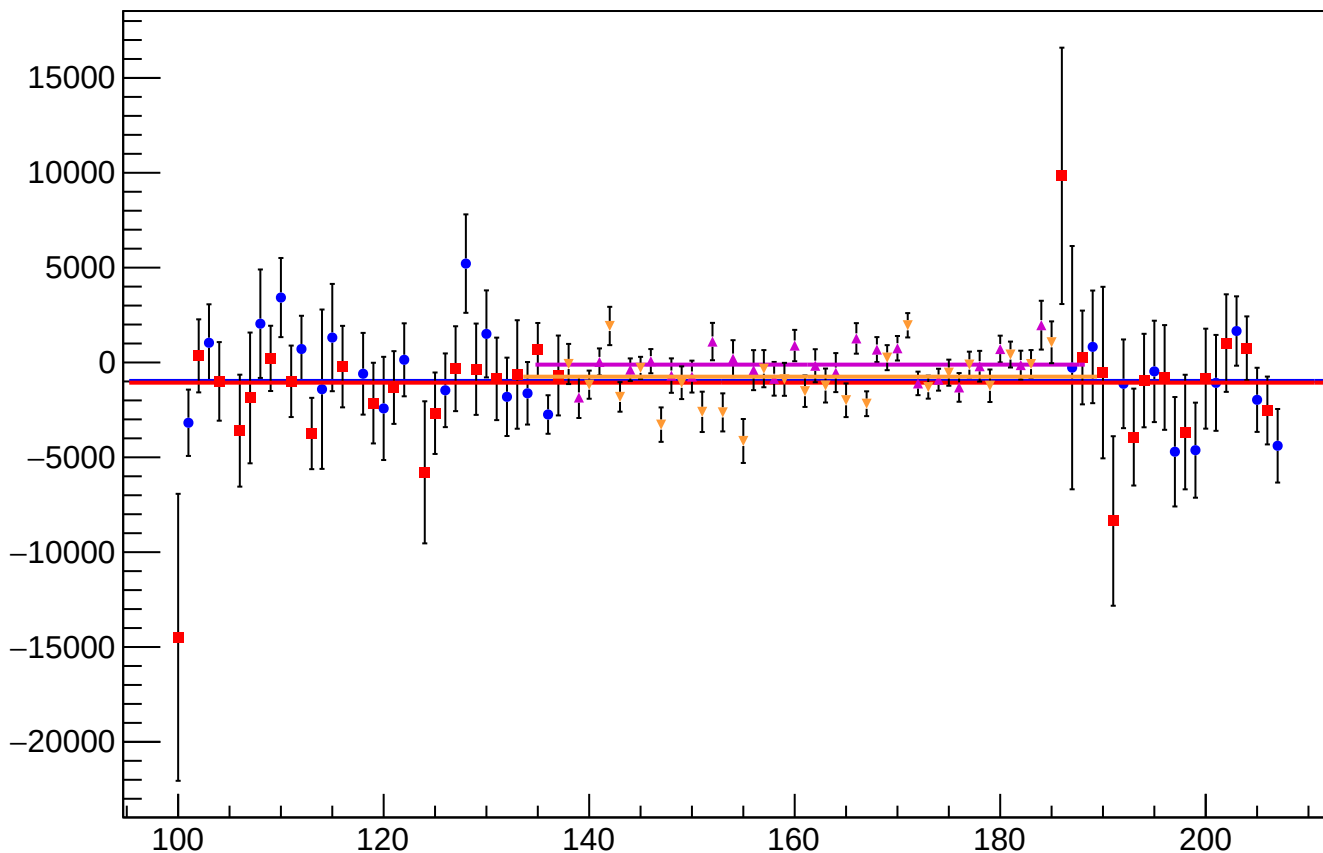
Left In: 77.348 $\pm$ 0.013  $\chi^2$ /NDF: 590414.8/22

+ sign 84.620 $\pm$ 0.011  $\chi^2$ /NDF: 5729568.9/50

All: 85.625 $\pm$ 0.008  $\chi^2$ /NDF: 12881470.4/104

- sign 86.691 $\pm$ 0.011  $\chi^2$ /NDF: 7133893.0/53

asym\_sam\_2468\_avg\_reg\_correction\_mean vs Slug



Right In:  $-973.618 \pm 406.995$   $\chi^2/\text{NDF}$ : 30.4/25

Left Out:  $-749.641 \pm 158.081$   $\chi^2/\text{NDF}$ : 70.0/24

Right Out:  $-1064.712 \pm 412.942$   $\chi^2/\text{NDF}$ : 21.5/30

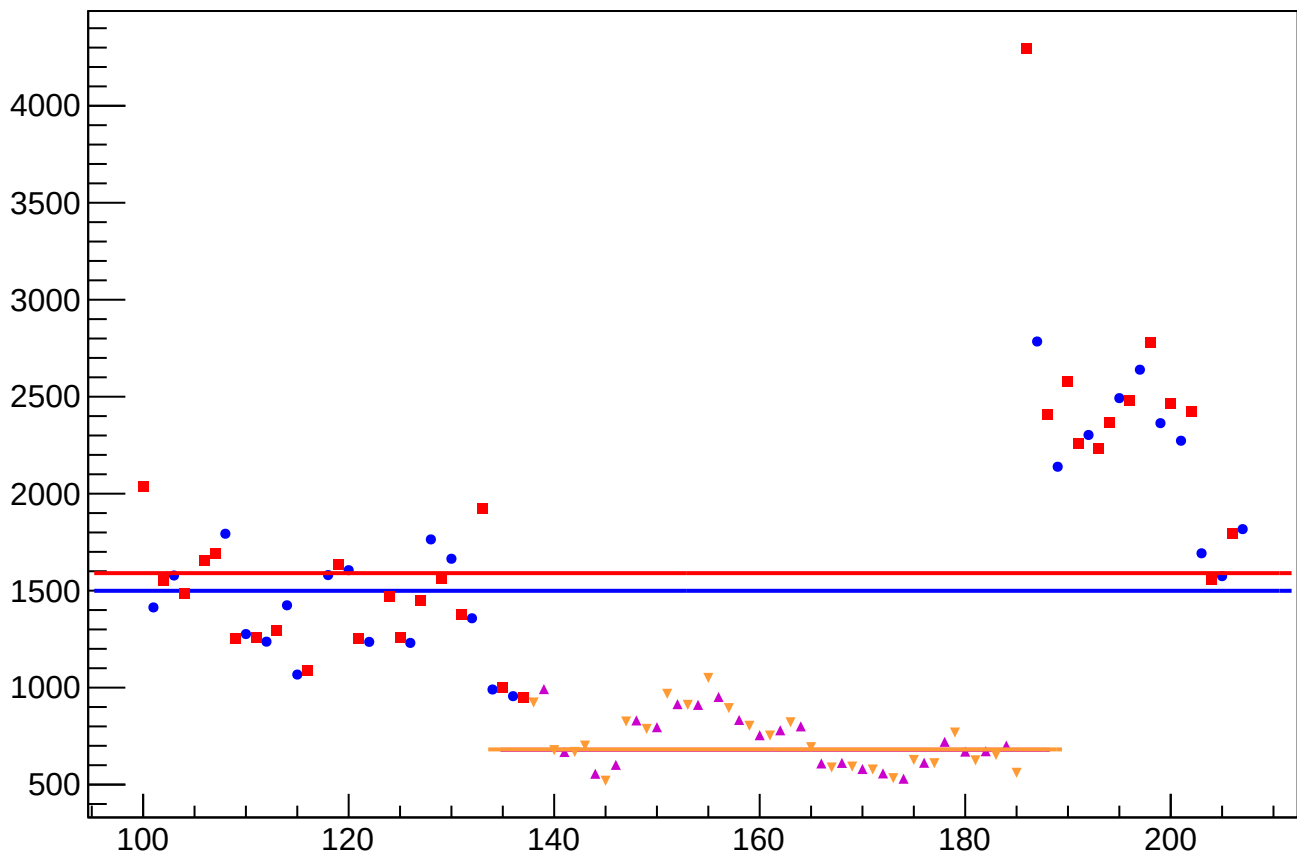
Left In:  $-113.799 \pm 161.809$   $\chi^2/\text{NDF}$ : 25.1/22

+ sign  $-779.001 \pm 147.356$   $\chi^2/\text{NDF}$ : 100.6/50

All:  $-515.649 \pm 105.344$   $\chi^2/\text{NDF}$ : 158.3/104

- sign  $-240.370 \pm 150.656$   $\chi^2/\text{NDF}$ : 51.2/53

asym\_sam\_2468\_avg\_reg\_correction\_rms vs Slug



Right In: 1499.221 $\pm$ 0.288  $\chi^2$ /NDF: 2532445.6/25

Left Out: 681.427 $\pm$ 0.112  $\chi^2$ /NDF:1334213.4/24

Right Out: 1590.305 $\pm$ 0.292  $\chi^2$ /NDF: 2999117.0/30

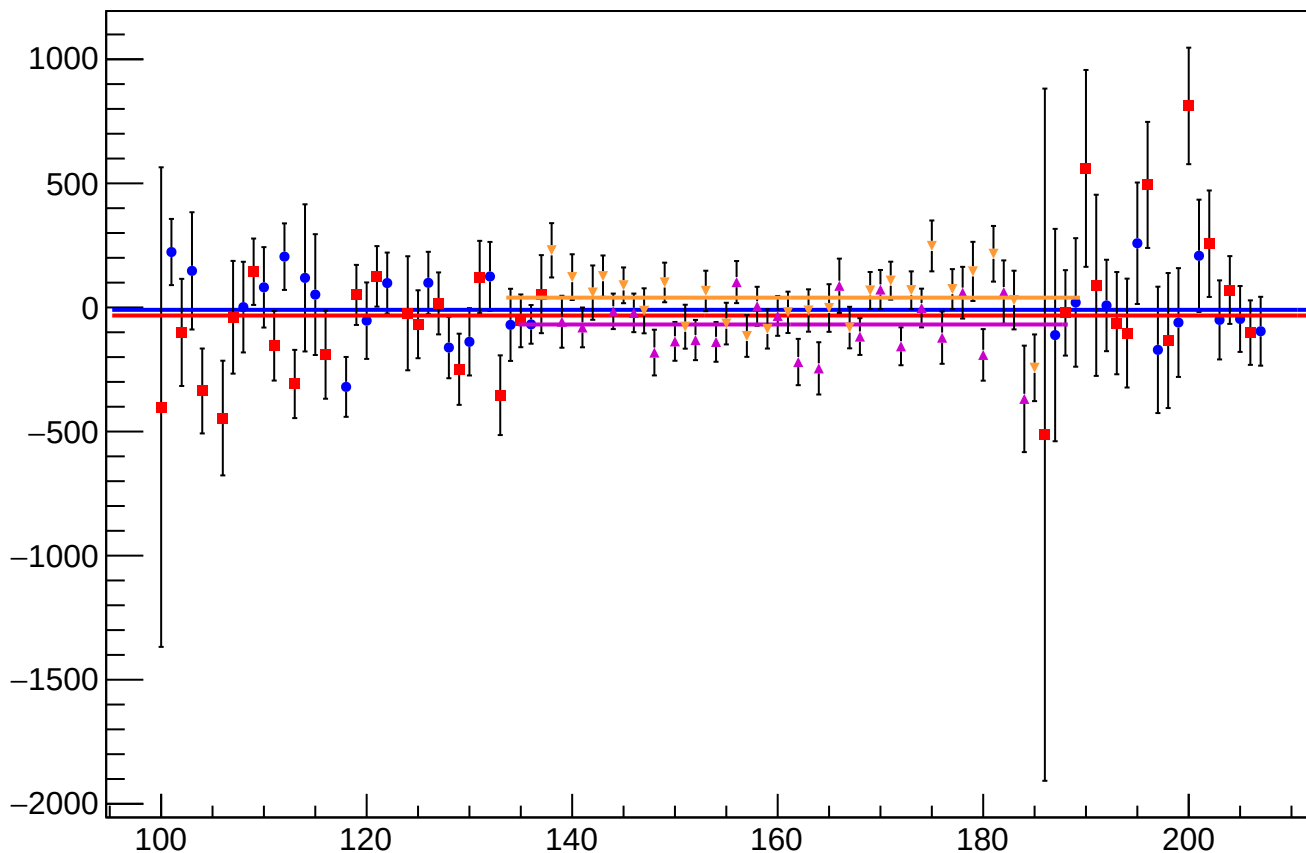
Left In: 679.413 $\pm$ 0.114  $\chi^2$ /NDF:1185267.0/22

+ sign 788.628 $\pm$ 0.104  $\chi^2$ /NDF: 10883101.2/50

All: 794.510 $\pm$ 0.074  $\chi^2$ /NDF: 23510286.6/10

- sign 800.657 $\pm$ 0.107  $\chi^2$ /NDF: 12620669.2/53

# cor\_asym\_sam\_2468\_avg\_mean vs Slug



Right In:  $-9.595 \pm 29.866$   $\chi^2/\text{NDF}$ : 22.1/25

Left Out:  $39.484 \pm 17.666$   $\chi^2/\text{NDF}$ : 31.9/24

Right Out:  $-32.491 \pm 30.208$   $\chi^2/\text{NDF}$ : 46.7/30

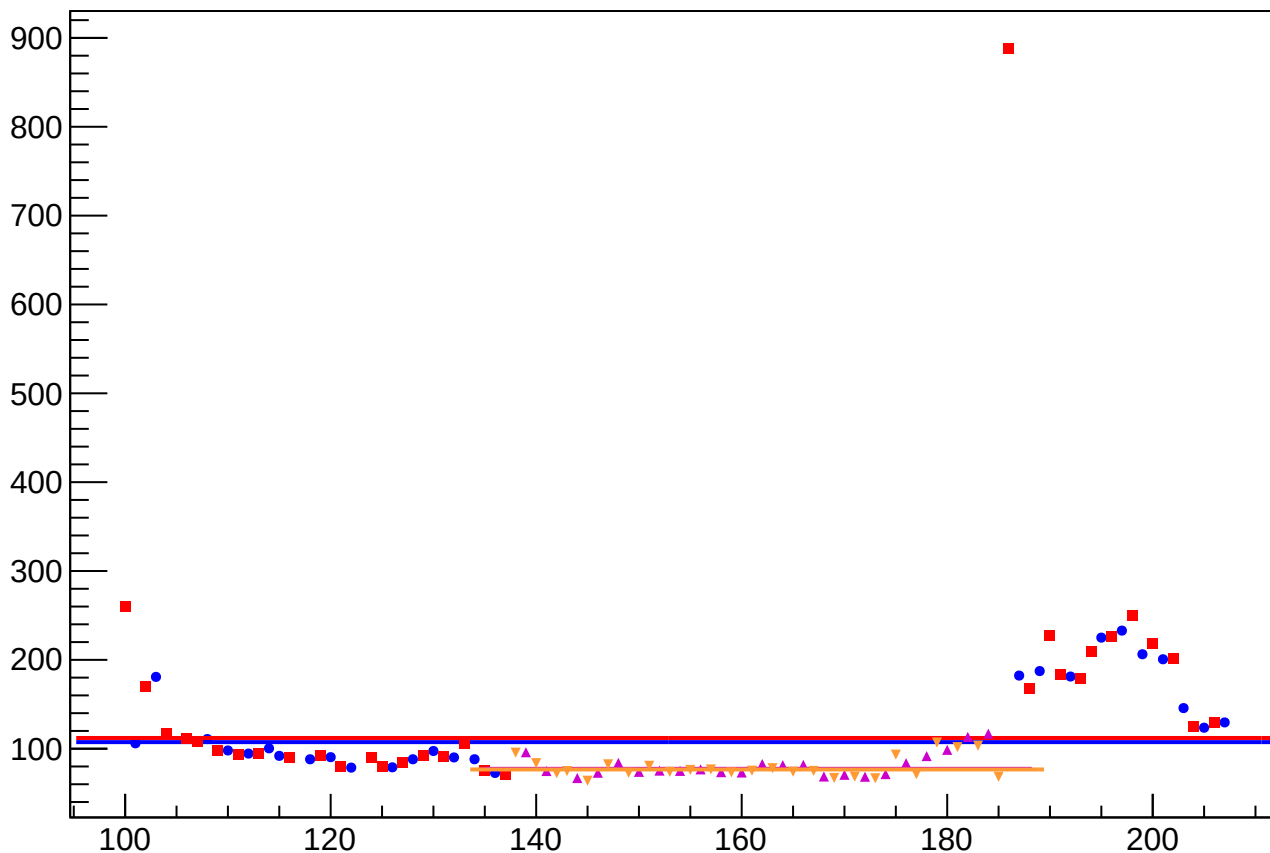
Left In:  $-68.620 \pm 18.317$   $\chi^2/\text{NDF}$ : 29.0/22

+ sign  $26.763 \pm 15.205$   $\chi^2/\text{NDF}$ : 56.1/50

All:  $-14.803 \pm 10.910$   $\chi^2/\text{NDF}$ : 148.2/104

- sign  $-58.907 \pm 15.663$   $\chi^2/\text{NDF}$ : 76.7/53

cor\_asym\_sam\_2468\_avg\_rms vs Slug



Right In: 107.407 $\pm$ 0.021  $\chi^2$ /NDF: 3503267.6/25

Left Out: 76.646 $\pm$ 0.012  $\chi^2$ /NDF:654608.7/24

Right Out: 112.076 $\pm$ 0.021  $\chi^2$ /NDF: 4608479.9/30

Left In: 77.348 $\pm$ 0.013  $\chi^2$ /NDF:590414.8/22

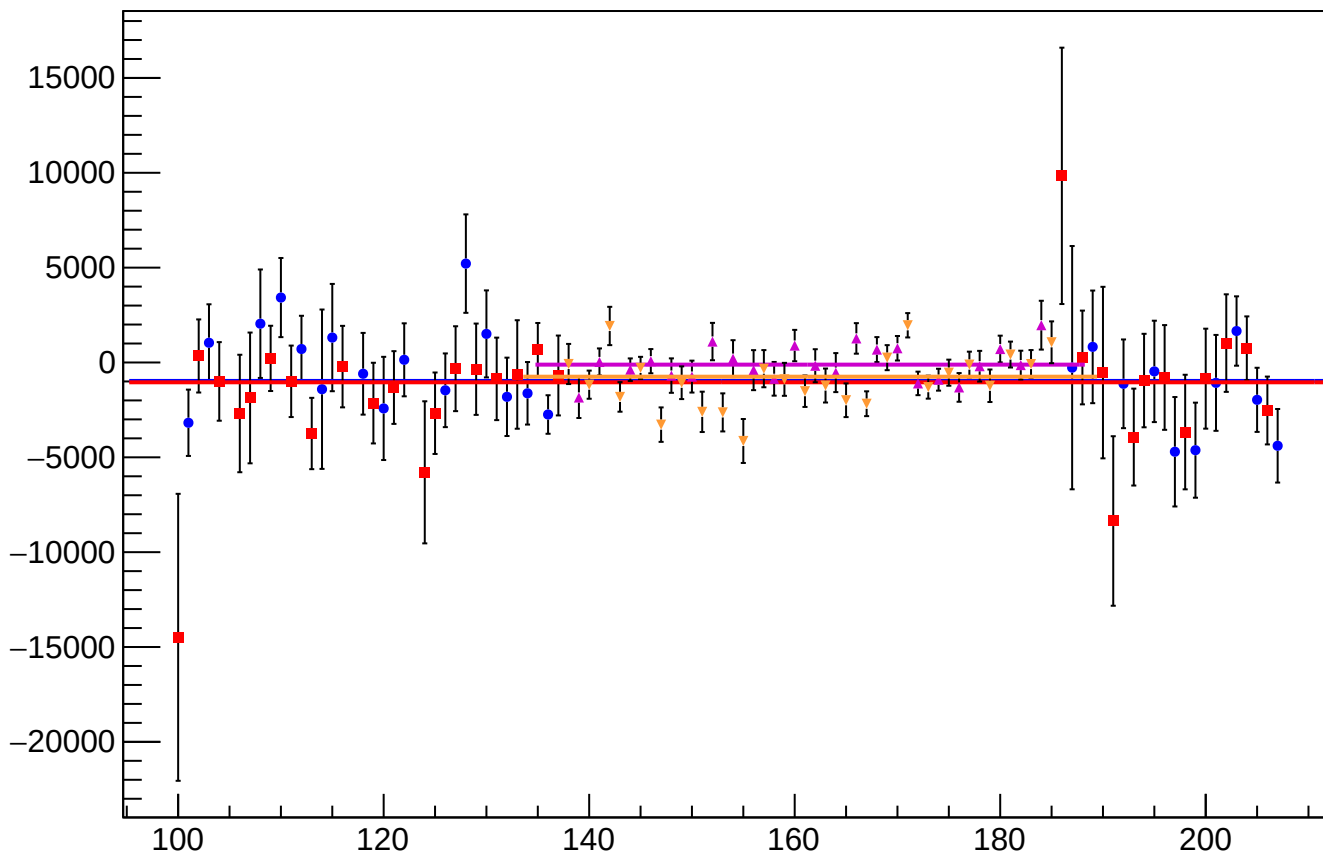
+ sign 84.620 $\pm$ 0.011  $\chi^2$ /NDF: 5729572.5/50

All: 85.621 $\pm$ 0.008  $\chi^2$ /NDF: 12879019.0/104

- sign 86.684 $\pm$ 0.011  $\chi^2$ /NDF: 7131551.6/53



asym\_sam\_2468\_avg\_cor\_correction\_mean vs Slug



Right In:  $-973.593 \pm 406.996$   $\chi^2/\text{NDF}: 30.4/25$

Left Out:  $-749.632 \pm 158.081$   $\chi^2/\text{NDF}: 70.0/24$

Right Out:  $-1044.421 \pm 413.326$   $\chi^2/\text{NDF}: 21.1/30$

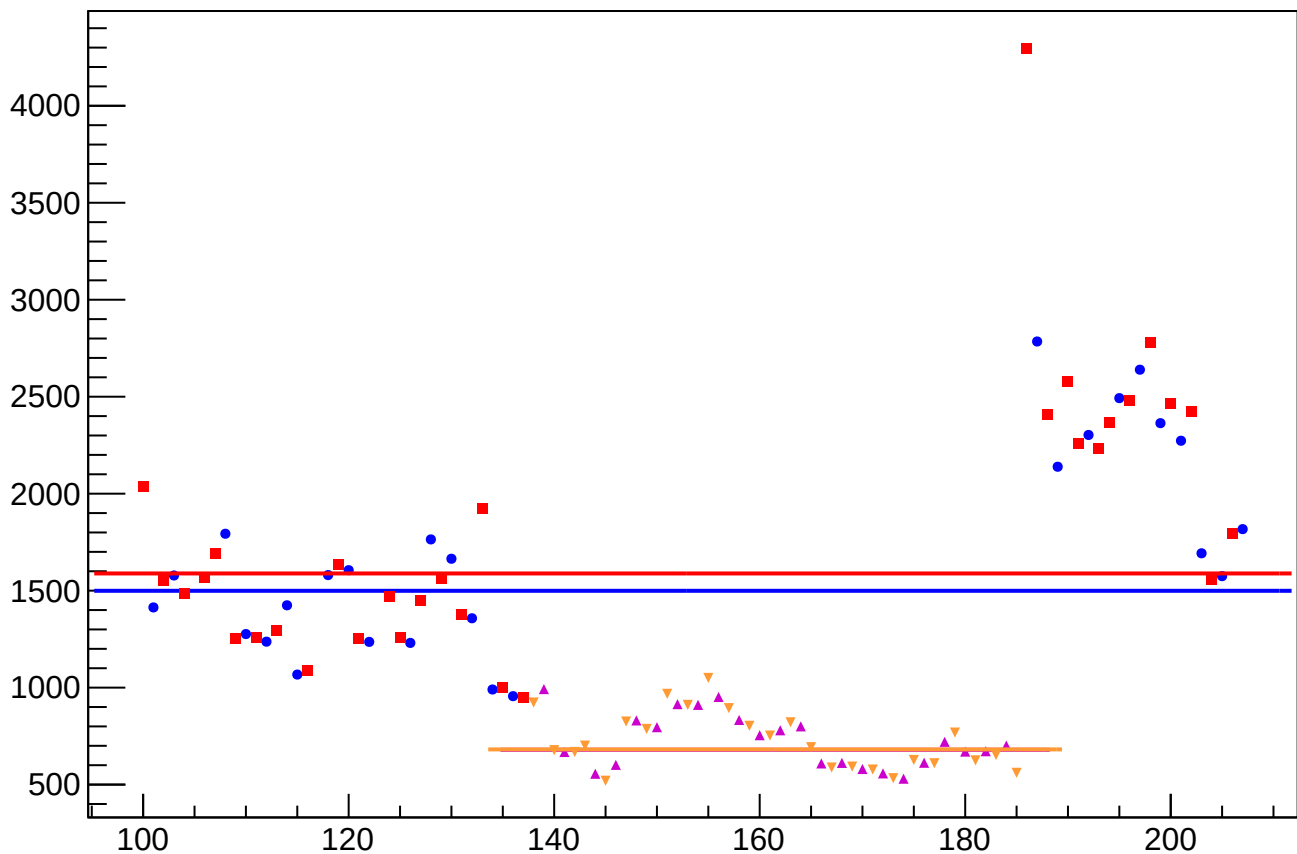
Left In:  $-113.799 \pm 161.809$   $\chi^2/\text{NDF}: 25.1/22$

+ sign  $-778.990 \pm 147.356$   $\chi^2/\text{NDF}: 100.6/50$

All:  $-514.259 \pm 105.350$   $\chi^2/\text{NDF}: 157.7/104$

- sign  $-237.470 \pm 150.675$   $\chi^2/\text{NDF}: 50.5/53$

asym\_sam\_2468\_avg\_cor\_correction\_rms vs Slug



Right In: 1499.224+/-0.288  $\chi^2/\text{NDF}$ : 2532458.0/25

Left Out: 681.426+/-0.112  $\chi^2/\text{NDF}$ :1334214.9/24

Right Out: 1588.698+/-0.292  $\chi^2/\text{NDF}$ : 2998177.1/30

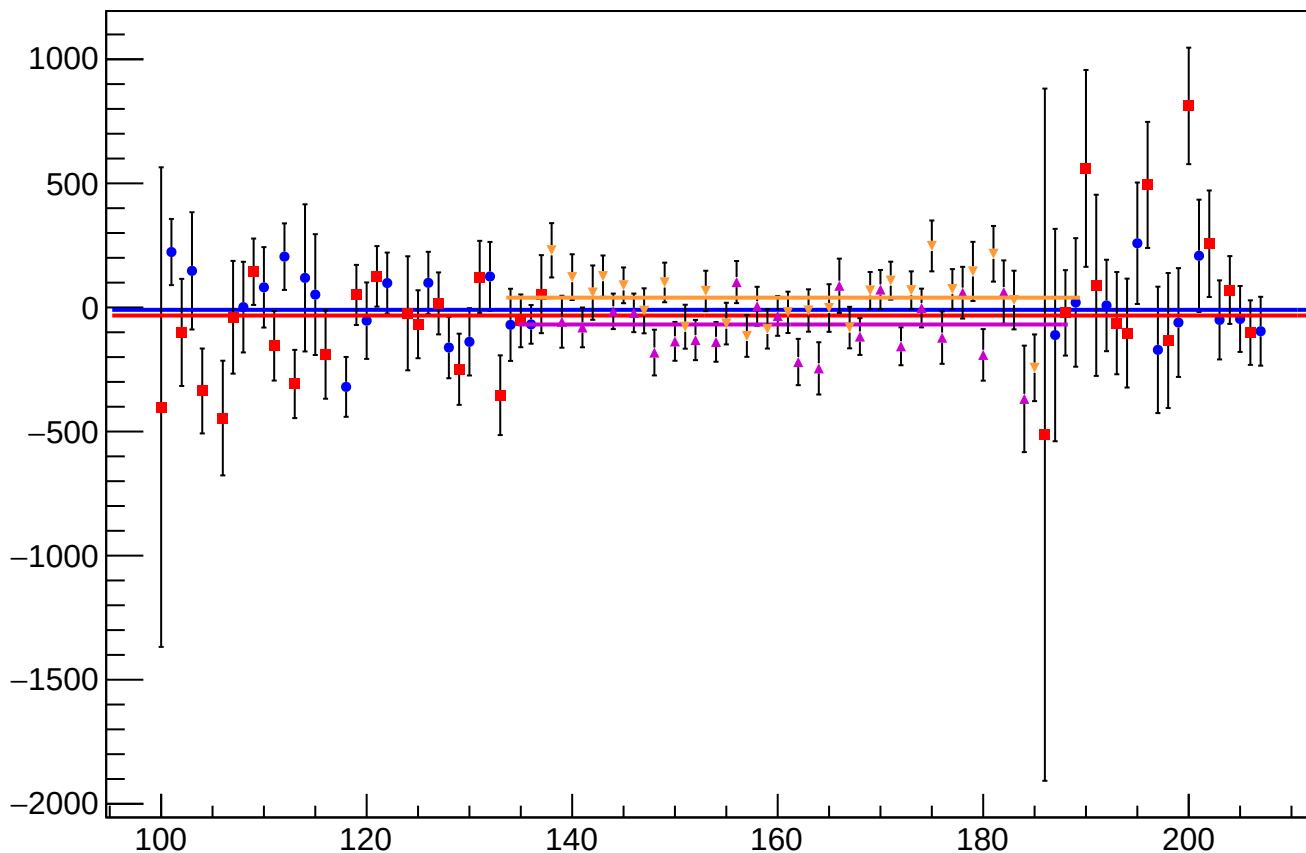
Left In: 679.414+/-0.114  $\chi^2/\text{NDF}$ :1185265.0/22

+ sign 788.628+/-0.104  $\chi^2/\text{NDF}$ : 10883147.0/50

All: 794.309+/-0.074  $\chi^2/\text{NDF}$ : 23465664.4/10

- sign 800.249+/-0.107  $\chi^2/\text{NDF}$ : 12576436.9/53

# eigen\_cor\_asym\_sam\_2468\_avg\_mean vs Slug



Right In:  $-9.595 \pm 29.866$   $\chi^2/\text{NDF}$ : 22.1/25

Left Out:  $39.484 \pm 17.666$   $\chi^2/\text{NDF}$ : 31.9/24

Right Out:  $-32.491 \pm 30.208$   $\chi^2/\text{NDF}$ : 46.7/30

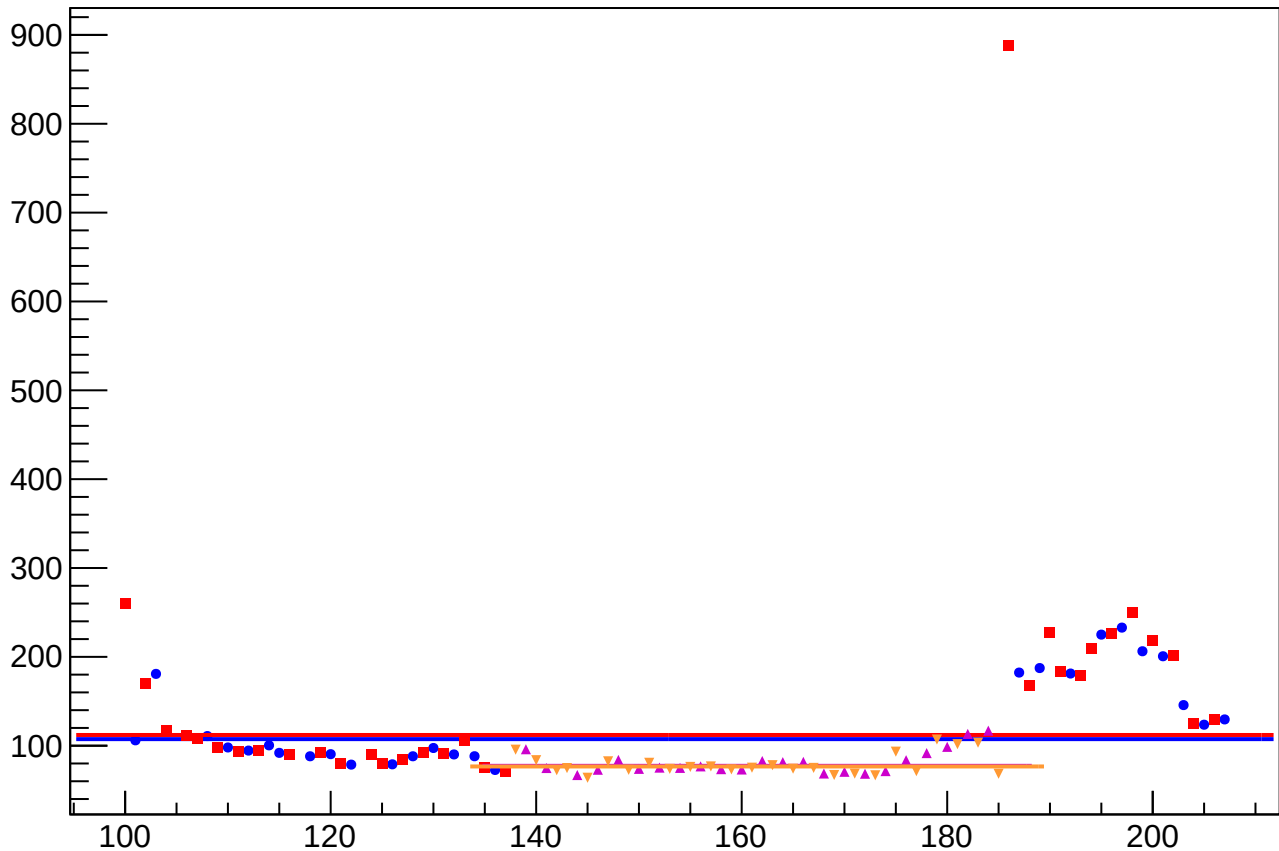
Left In:  $-68.620 \pm 18.317$   $\chi^2/\text{NDF}$ : 29.0/22

+ sign  $26.763 \pm 15.205$   $\chi^2/\text{NDF}$ : 56.1/50

All:  $-14.803 \pm 10.910$   $\chi^2/\text{NDF}$ : 148.2/104

- sign  $-58.907 \pm 15.663$   $\chi^2/\text{NDF}$ : 76.7/53

eigen\_cor\_asym\_sam\_2468\_avg\_rms vs Slug



Right In: 107.407 $\pm$ 0.021  $\chi^2$ /NDF: 3503267.6/25

Left Out: 76.646 $\pm$ 0.012  $\chi^2$ /NDF: 654608.7/24

Right Out: 112.076 $\pm$ 0.021  $\chi^2$ /NDF: 4608479.9/30

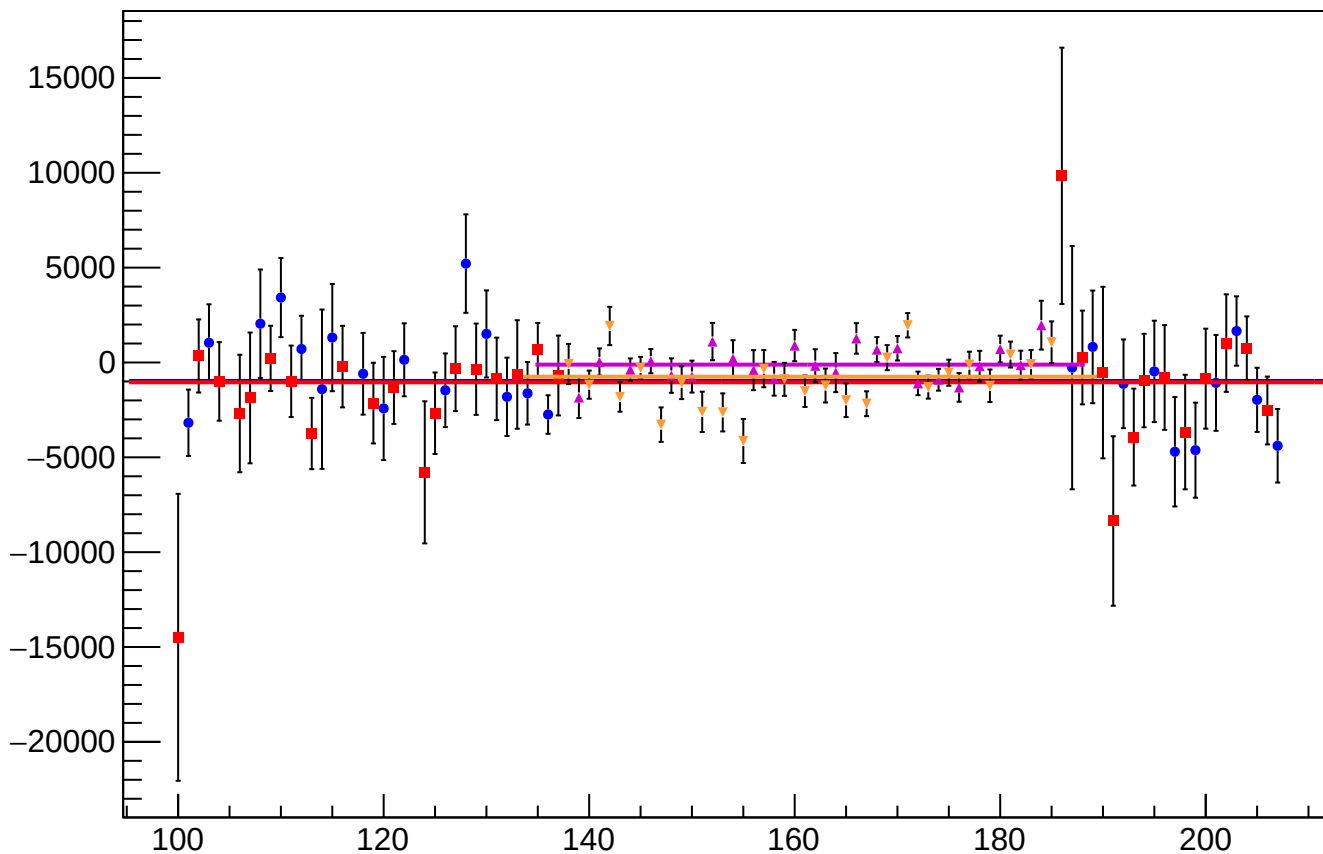
Left In: 77.348 $\pm$ 0.013  $\chi^2$ /NDF: 590414.8/22

+ sign 84.620 $\pm$ 0.011  $\chi^2$ /NDF: 5729572.5/50

All: 85.621 $\pm$ 0.008  $\chi^2$ /NDF: 12879019.0/104

- sign 86.684 $\pm$ 0.011  $\chi^2$ /NDF: 7131551.6/53

asym\_sam\_2468\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-973.593 \pm 406.996$   $\chi^2/\text{NDF}$ : 30.4/25

Left Out:  $-749.632 \pm 158.081$   $\chi^2/\text{NDF}$ : 70.0/24

Right Out:  $-1044.421 \pm 413.326$   $\chi^2/\text{NDF}$ : 21.1/30

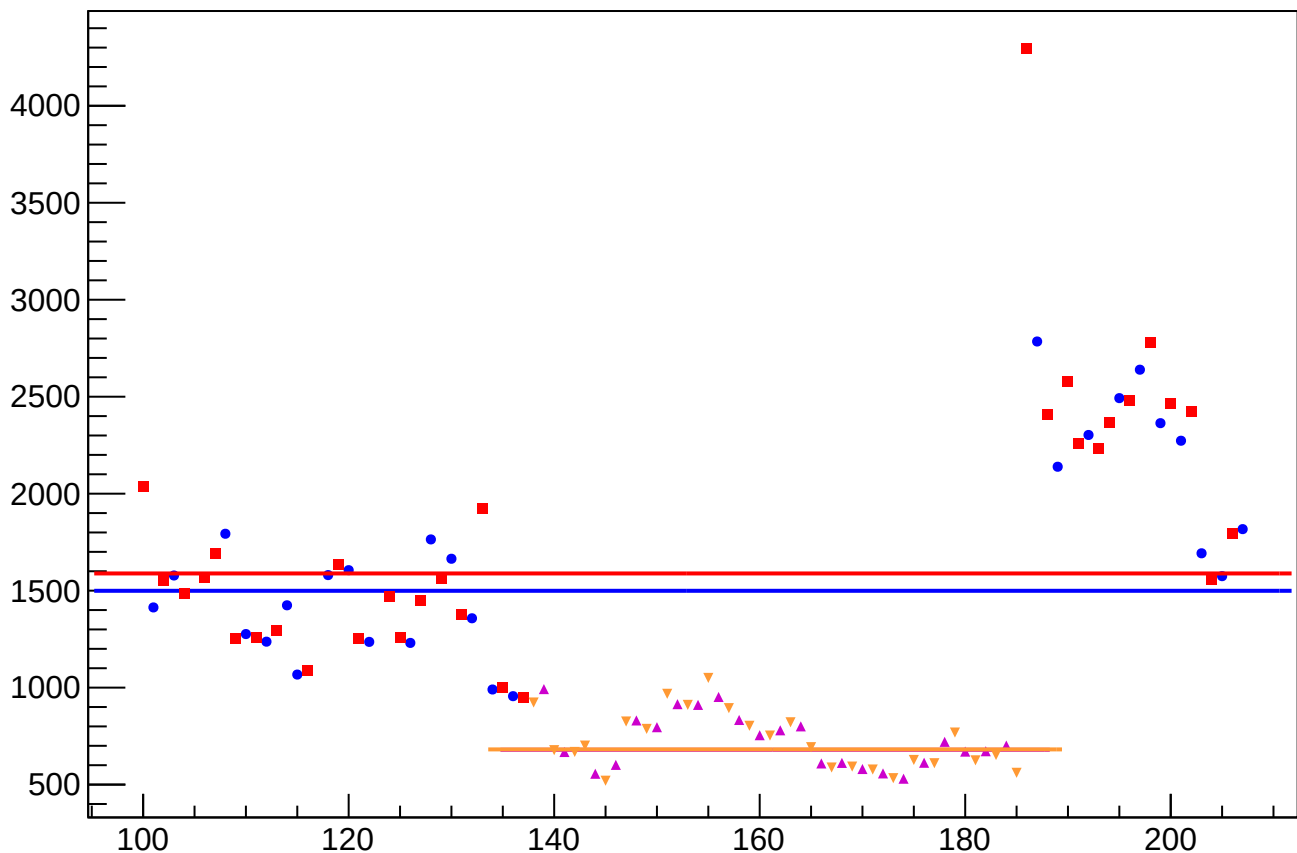
Left In:  $-113.799 \pm 161.809$   $\chi^2/\text{NDF}$ : 25.1/22

+ sign  $-778.990 \pm 147.356$   $\chi^2/\text{NDF}$ : 100.6/50

All:  $-514.259 \pm 105.350$   $\chi^2/\text{NDF}$ : 157.7/104

- sign  $-237.470 \pm 150.675$   $\chi^2/\text{NDF}$ : 50.5/53

asym\_sam\_2468\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 1499.224 $\pm$ 0.288  $\chi^2$ /NDF: 2532458.0/25

Left Out: 681.426 $\pm$ 0.112  $\chi^2$ /NDF:1334214.9/24

Right Out: 1588.698 $\pm$ 0.292  $\chi^2$ /NDF: 2998177.1/30

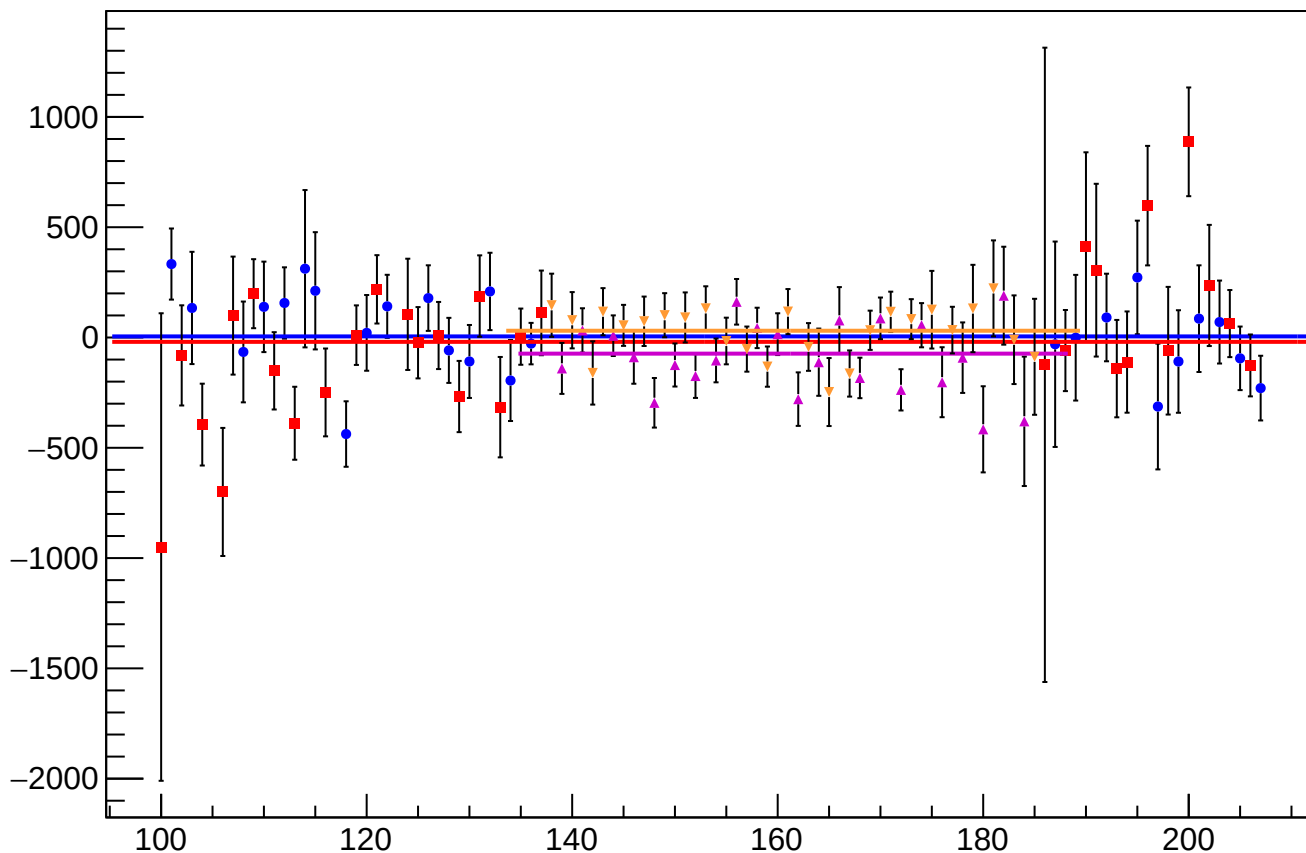
Left In: 679.414 $\pm$ 0.114  $\chi^2$ /NDF:1185265.0/22

+ sign 788.628 $\pm$ 0.104  $\chi^2$ /NDF: 10883147.0/50

All: 794.309 $\pm$ 0.074  $\chi^2$ /NDF: 23465664.4/10

- sign 800.249 $\pm$ 0.107  $\chi^2$ /NDF: 12576436.9/53

# dit\_asym\_sam\_2468\_avg\_mean vs Slug



Right In:  $4.980 \pm 34.990$   $\chi^2/\text{NDF}$ : 27.6/25

Left Out:  $30.684 \pm 22.856$   $\chi^2/\text{NDF}$ : 19.9/24

Right Out:  $-19.703 \pm 35.121$   $\chi^2/\text{NDF}$ : 50.7/30

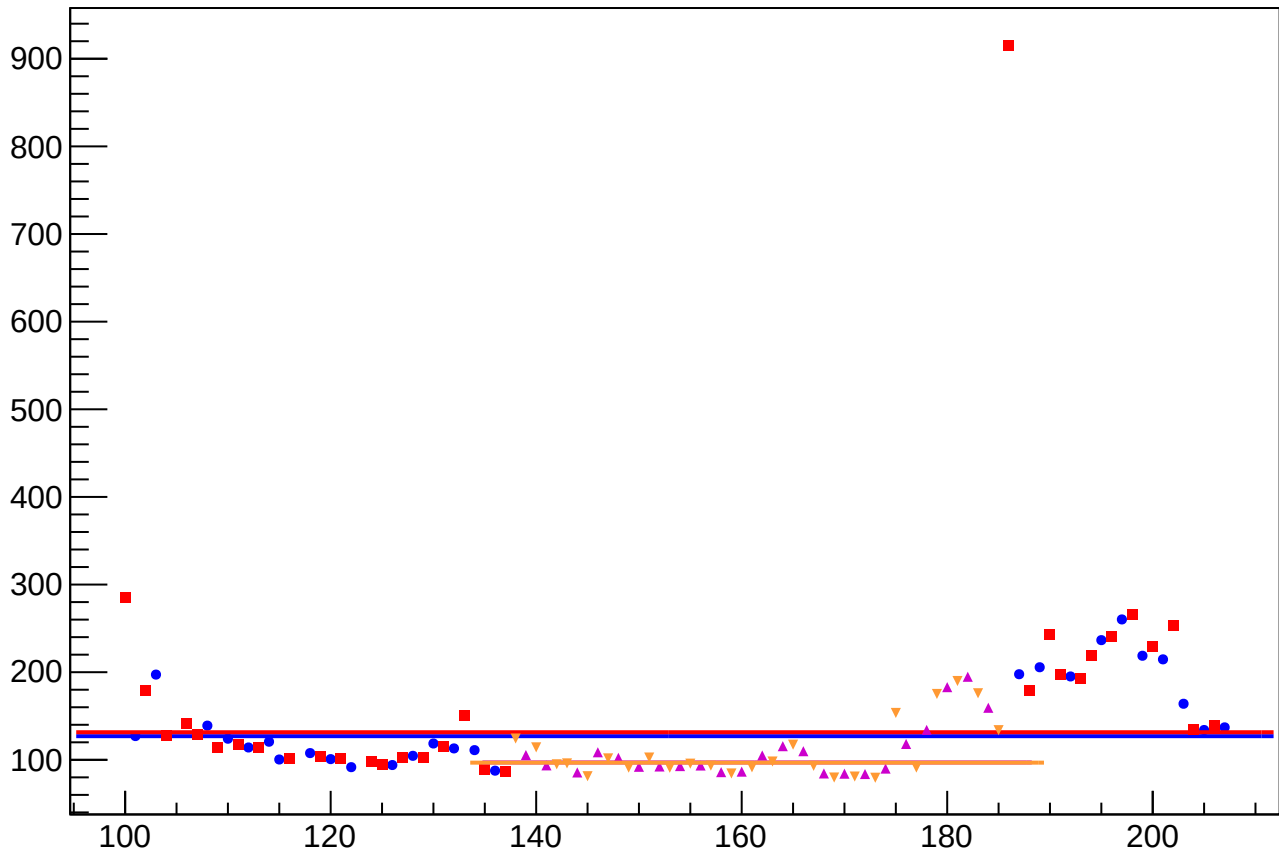
Left In:  $-73.147 \pm 23.510$   $\chi^2/\text{NDF}$ : 34.5/22

+ sign  $22.996 \pm 19.135$   $\chi^2/\text{NDF}$ : 48.0/50

All:  $-15.979 \pm 13.670$   $\chi^2/\text{NDF}$ : 143.2/104

- sign  $-56.609 \pm 19.537$   $\chi^2/\text{NDF}$ : 86.8/53

# dit\_asym\_sam\_2468\_avg\_rms vs Slug



Right In:  $126.995 \pm 0.025$   $\chi^2/\text{NDF}: 2821865.4/25$

Left Out:  $96.794 \pm 0.016$   $\chi^2/\text{NDF}: 1720415.9/24$

Right Out:  $131.502 \pm 0.025$   $\chi^2/\text{NDF}: 3875112.9/30$

Left In:  $97.017 \pm 0.017$   $\chi^2/\text{NDF}: 1321187.5/22$

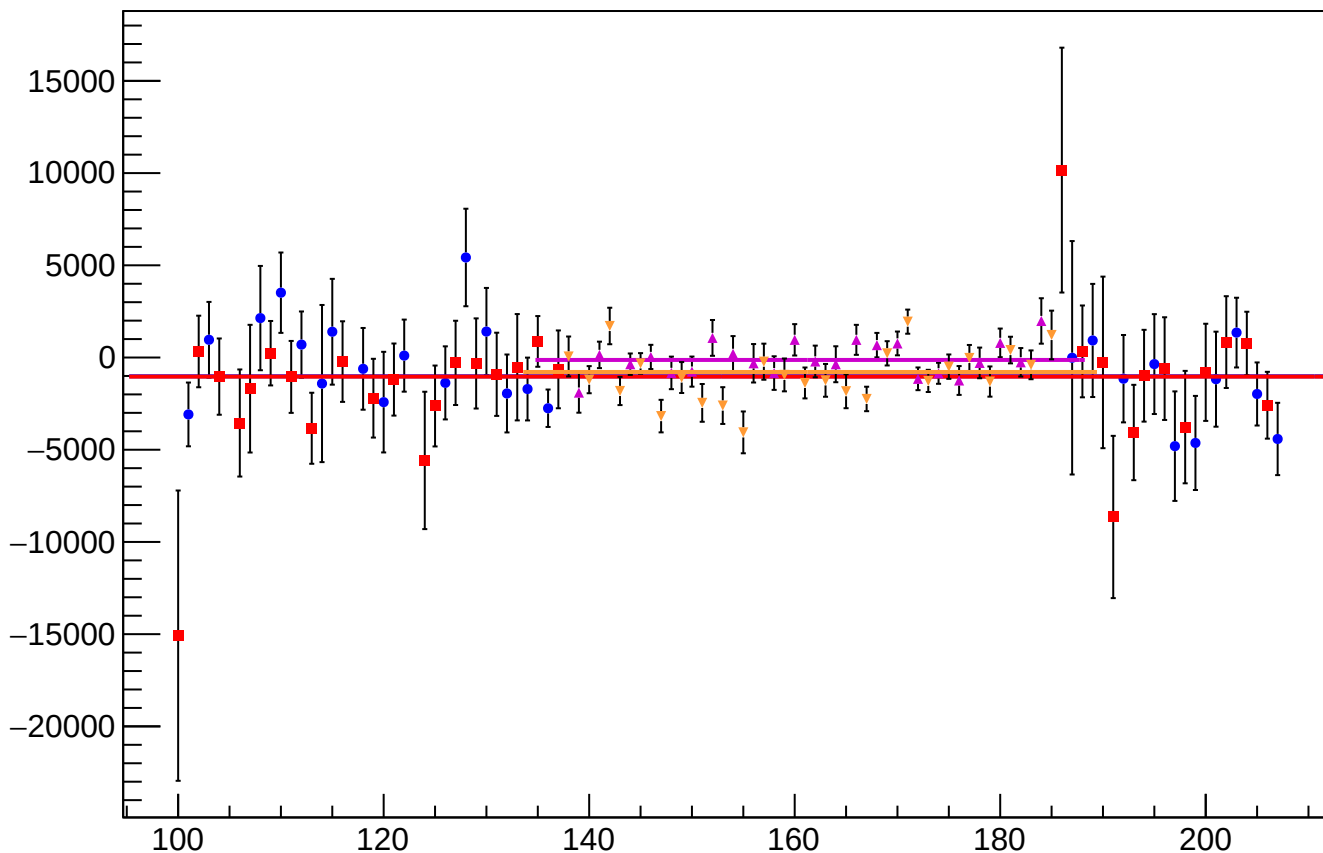
+ sign  $105.827 \pm 0.014$   $\chi^2/\text{NDF}: 5586620.6/50$

All:  $106.738 \pm 0.010$   $\chi^2/\text{NDF}: 12123722.6/100$

- sign  $107.688 \pm 0.014$   $\chi^2/\text{NDF}: 6527838.5/53$



asym\_sam\_2468\_avg\_dit\_correction\_mean vs Slug



Right In:  $-1018.851 \pm 413.247$   $\chi^2/\text{NDF}$ : 29.5/25

Left Out:  $-783.756 \pm 158.329$   $\chi^2/\text{NDF}$ : 66.3/24

Right Out:  $-1035.567 \pm 416.855$   $\chi^2/\text{NDF}$ : 22.5/30

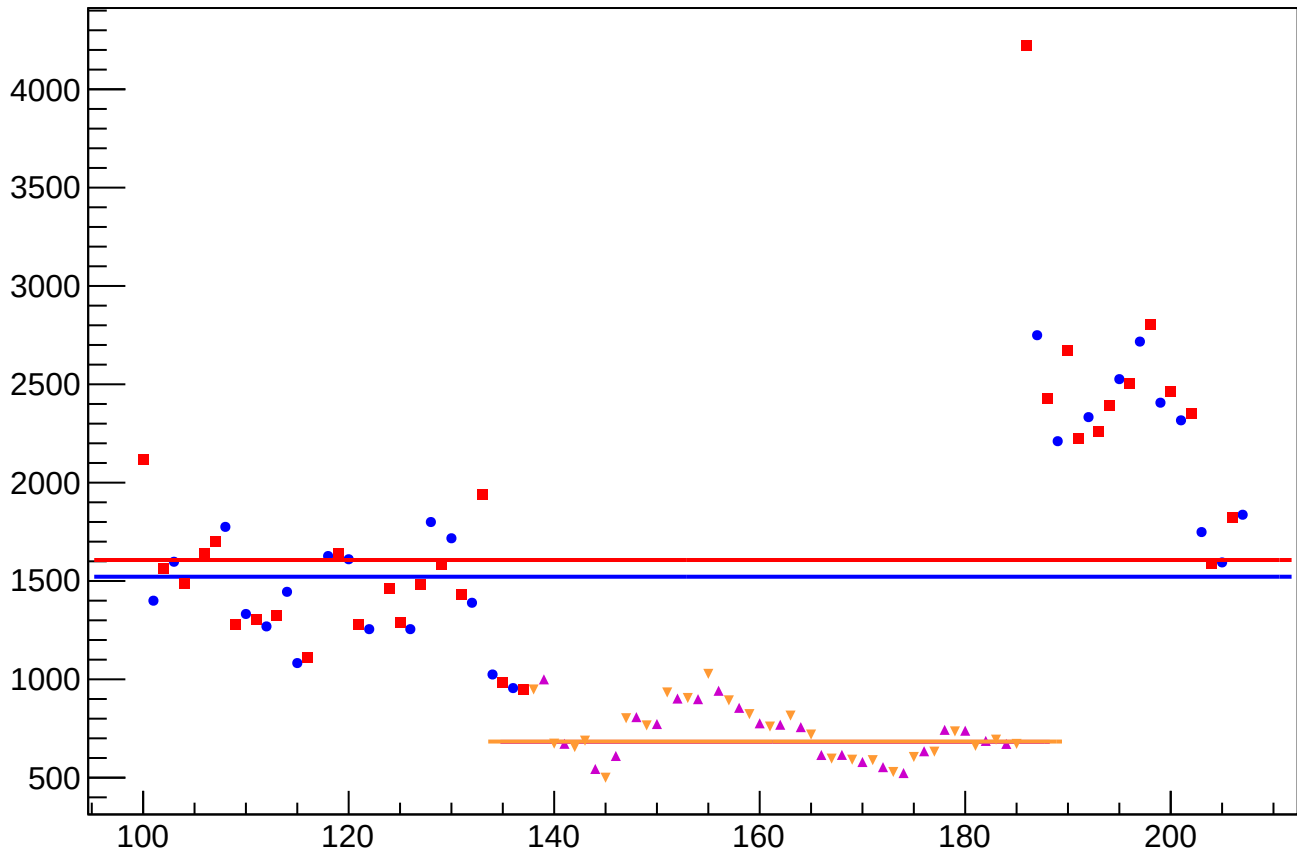
Left In:  $-131.380 \pm 162.409$   $\chi^2/\text{NDF}$ : 24.3/22

+ sign  $-813.848 \pm 147.849$   $\chi^2/\text{NDF}$ : 96.1/50

All:  $-538.748 \pm 105.754$   $\chi^2/\text{NDF}$ : 154.1/104

- sign  $-250.542 \pm 151.330$   $\chi^2/\text{NDF}$ : 50.9/53

asym\_sam\_2468\_avg\_dit\_correction\_rms vs Slug



Right In: 1521.688 $\pm$ 0.292  $\chi^2$ /NDF: 2573087.3/25

Left Out: 683.698 $\pm$ 0.112  $\chi^2$ /NDF: 1297969.4/24

+ sign 790.962 $\pm$ 0.105  $\chi^2$ /NDF: 11042476.4/50

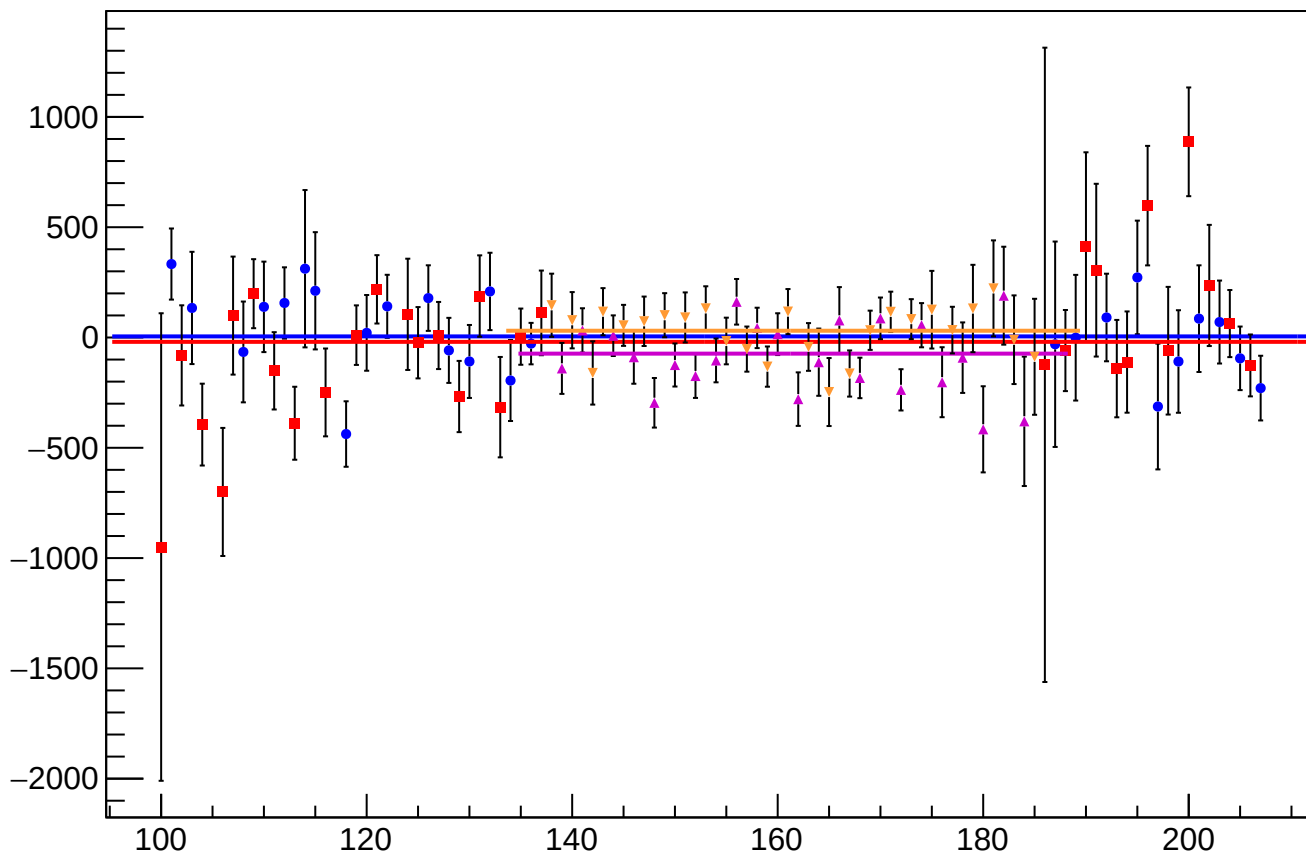
Right Out: 1606.691 $\pm$ 0.295  $\chi^2$ /NDF: 2971013.0/30

All: 797.247 $\pm$ 0.075  $\chi^2$ /NDF: 23752097.8/10

Left In: 681.961 $\pm$ 0.115  $\chi^2$ /NDF: 1186135.0/22

- sign 803.831 $\pm$ 0.107  $\chi^2$ /NDF: 12702222.2/53

# eigen\_dit\_asym\_sam\_2468\_avg\_mean vs Slug



Right In:  $4.981 \pm 34.989$   $\chi^2/\text{NDF}$ : 27.6/25

Left Out:  $30.684 \pm 22.856$   $\chi^2/\text{NDF}$ : 19.9/24

Right Out:  $-19.702 \pm 35.121$   $\chi^2/\text{NDF}$ : 50.7/30

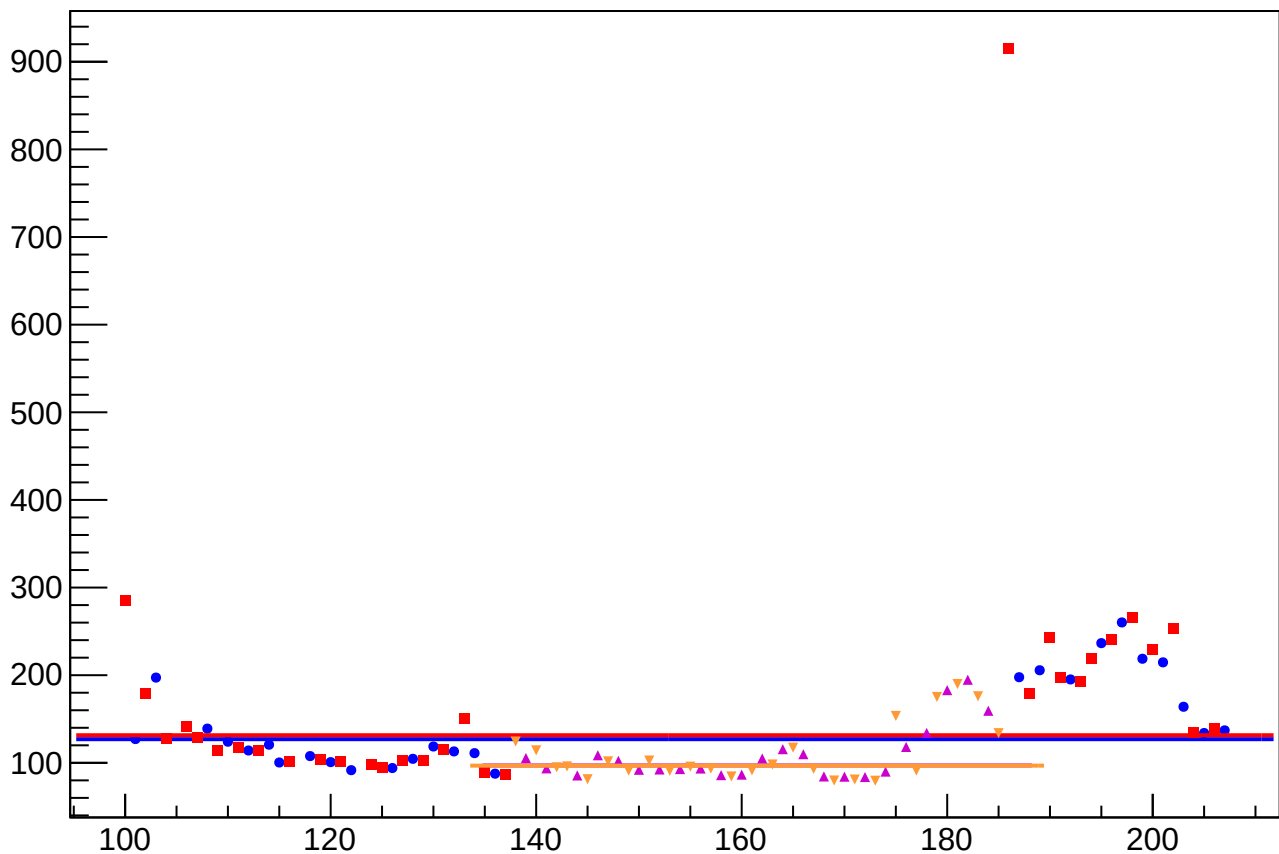
Left In:  $-73.146 \pm 23.510$   $\chi^2/\text{NDF}$ : 34.5/22

+ sign  $22.997 \pm 19.135$   $\chi^2/\text{NDF}$ : 48.0/50

All:  $-15.978 \pm 13.670$   $\chi^2/\text{NDF}$ : 143.2/104

- sign  $-56.608 \pm 19.537$   $\chi^2/\text{NDF}$ : 86.8/53

eigen\_dit\_asym\_sam\_2468\_avg\_rms vs Slug



Right In: 126.994 $\pm$ 0.025  $\chi^2$ /NDF: 2821884.2/25

Left Out: 96.795 $\pm$ 0.016  $\chi^2$ /NDF:1720415.9/24

Right Out: 131.501 $\pm$ 0.025  $\chi^2$ /NDF: 3875149.5/30

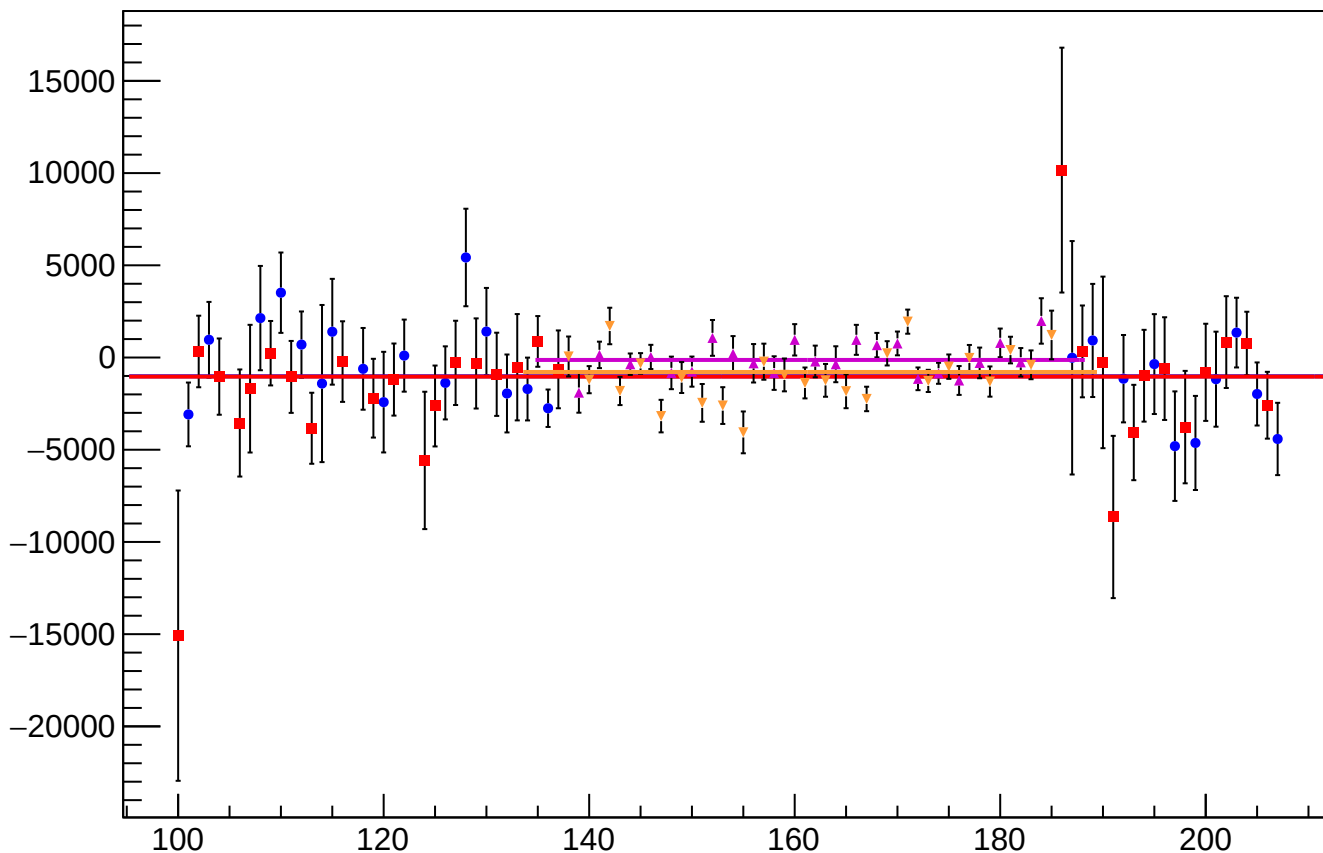
Left In: 97.017 $\pm$ 0.017  $\chi^2$ /NDF:1321171.2/22

+ sign 105.827 $\pm$ 0.014  $\chi^2$ /NDF: 5586572.3/50

All: 106.738 $\pm$ 0.010  $\chi^2$ /NDF: 12123627.9/100

- sign 107.688 $\pm$ 0.014  $\chi^2$ /NDF: 6527791.8/53

asym\_sam\_2468\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-1018.845 \pm 413.246$   $\chi^2/\text{NDF}$ : 29.5/25

Left Out:  $-783.754 \pm 158.328$   $\chi^2/\text{NDF}$ : 66.3/24

Right Out:  $-1035.567 \pm 416.854$   $\chi^2/\text{NDF}$ : 22.5/30

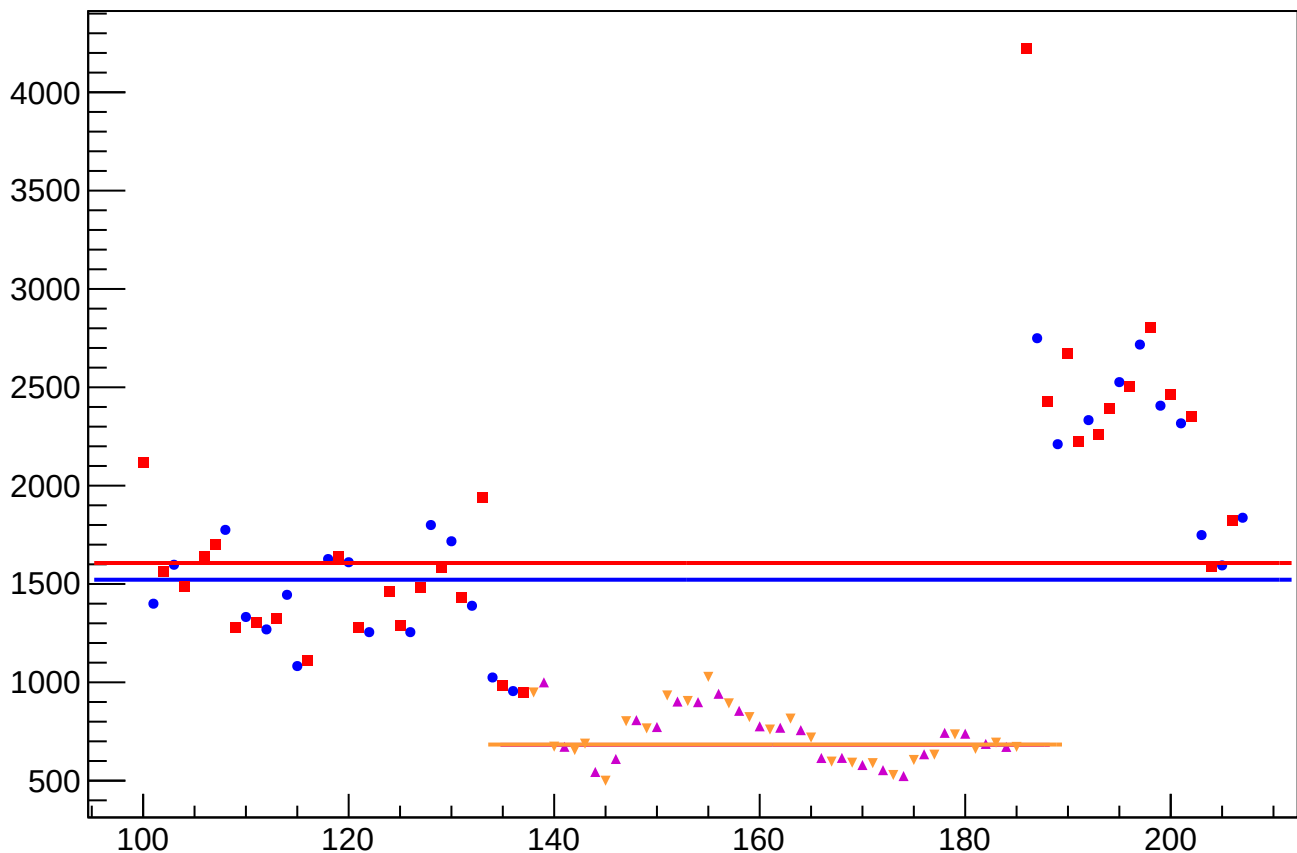
Left In:  $-131.379 \pm 162.409$   $\chi^2/\text{NDF}$ : 24.3/22

+ sign  $-813.846 \pm 147.848$   $\chi^2/\text{NDF}$ : 96.1/50

All:  $-538.747 \pm 105.754$   $\chi^2/\text{NDF}$ : 154.1/104

- sign  $-250.541 \pm 151.329$   $\chi^2/\text{NDF}$ : 50.9/53

asym\_sam\_2468\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 1521.685 $\pm$ 0.292  $\chi^2$ /NDF: 2573093.8/25

Left Out: 683.696 $\pm$ 0.112  $\chi^2$ /NDF:1297975.5/24

Right Out: 1606.688 $\pm$ 0.295  $\chi^2$ /NDF: 2971023.3/30

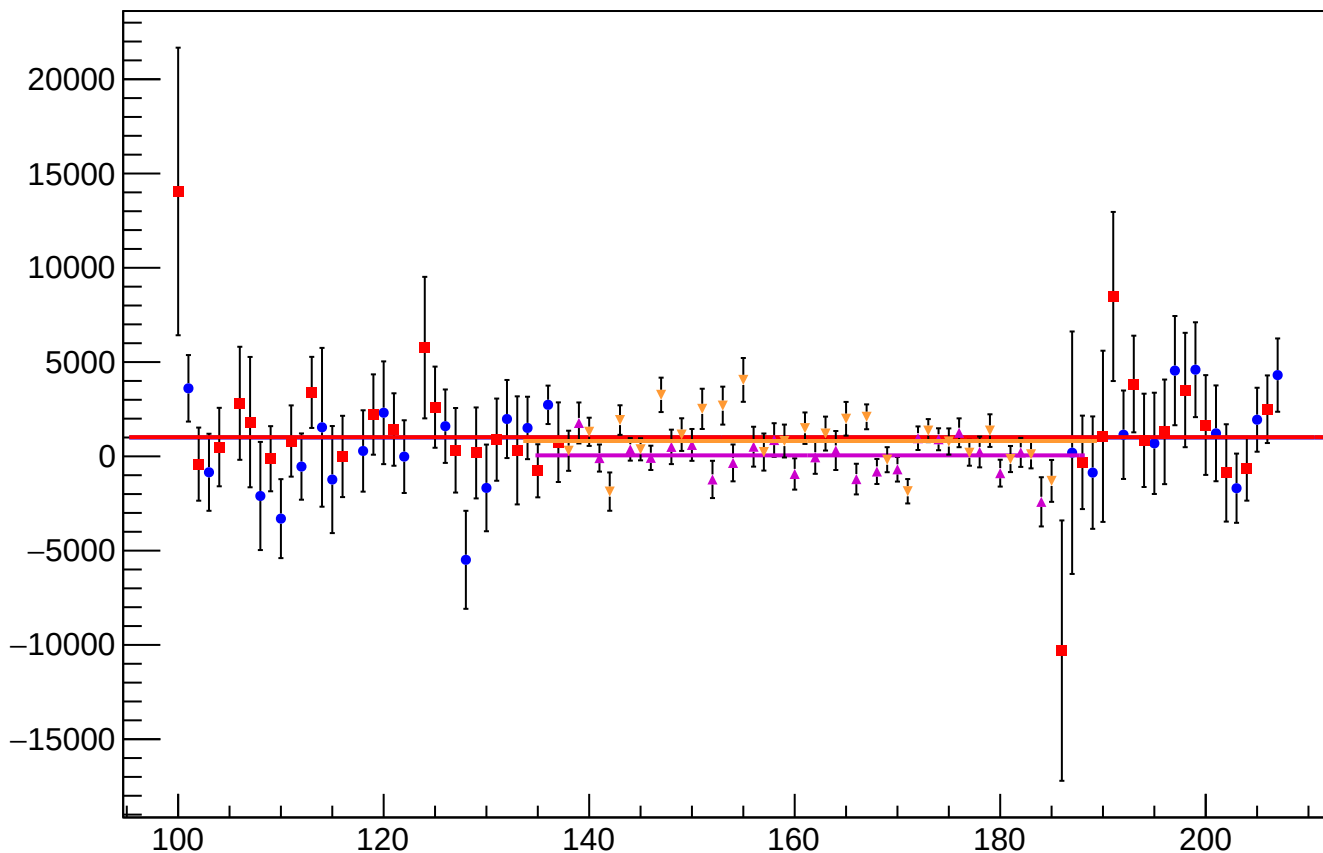
Left In: 681.960 $\pm$ 0.115  $\chi^2$ /NDF:1186136.6/22

+ sign 790.960 $\pm$ 0.105  $\chi^2$ /NDF: 11042491.1/50

All: 797.245 $\pm$ 0.075  $\chi^2$ /NDF: 23752125.1/10

- sign 803.829 $\pm$ 0.107  $\chi^2$ /NDF: 12702234.8/53

# asym\_sam\_2468\_avg\_mean vs Slug



Right In: 1000.031 $\pm$ 408.476  $\chi^2$ /NDF: 30.6/25

Left Out: 814.067 $\pm$ 159.256  $\chi^2$ /NDF: 65.8/24

Right Out: 1018.096 $\pm$ 414.405  $\chi^2$ /NDF: 20.5/30

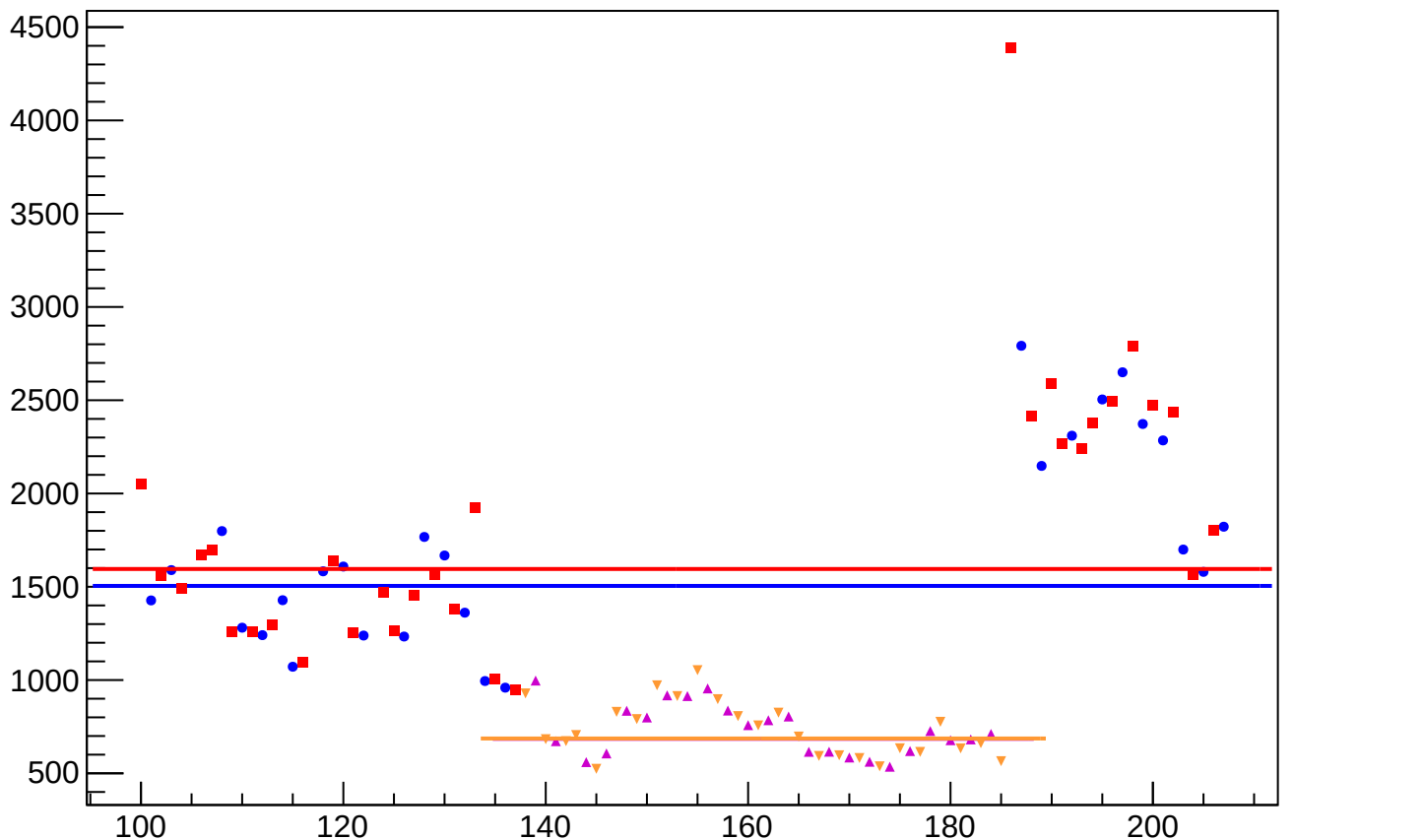
Left In: 52.290 $\pm$ 163.036  $\chi^2$ /NDF: 25.4/22

+ sign 838.605 $\pm$ 148.378  $\chi^2$ /NDF: 96.6/50

All: 517.481 $\pm$ 106.080  $\chi^2$ /NDF: 156.8/104

- sign 181.741 $\pm$ 151.717  $\chi^2$ /NDF: 50.6/53

# asym\_sam\_2468\_avg\_rms vs Slug



Right In: 1504.670 $\pm$ 0.289  $\chi^2$ /NDF: 2534022.4/25

Left Out: 686.700 $\pm$ 0.113  $\chi^2$ /NDF:1312231.8/24

Right Out: 1595.377 $\pm$ 0.293  $\chi^2$ /NDF: 3011511.8/30

Left In: 684.763 $\pm$ 0.115  $\chi^2$ /NDF:1165205.5/22

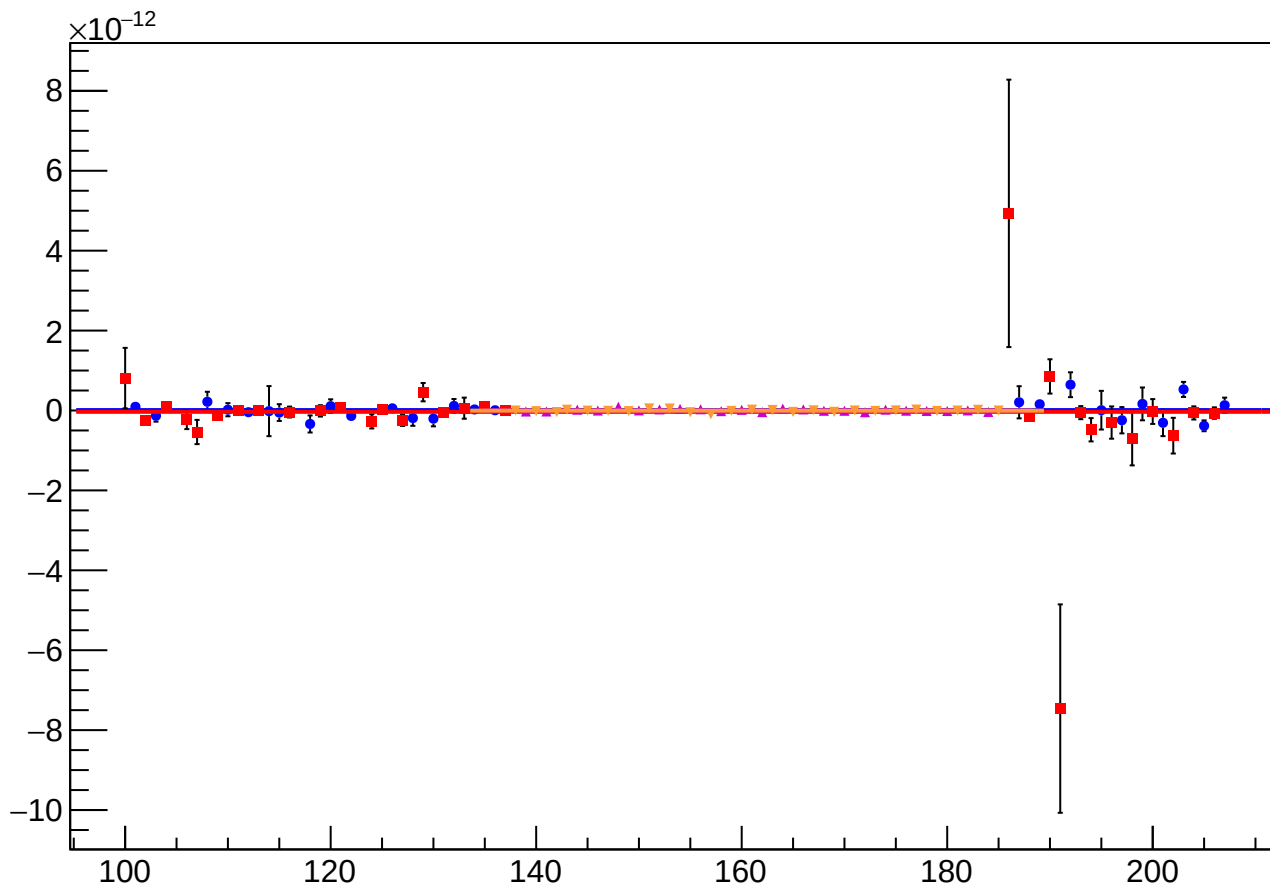
+ sign 794.630 $\pm$ 0.105  $\chi^2$ /NDF: 10807990.8/50

All: 800.588 $\pm$ 0.075  $\chi^2$ /NDF: 23354049.3/10

- sign 806.817 $\pm$ 0.107  $\chi^2$ /NDF: 12539462.2/53



asym\_sam\_2468\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000+/-0.000  $\chi^2$ /NDF: 35.4/25

Left Out: -0.000+/-0.000  $\chi^2$ /NDF:16.5/24

Right Out: -0.000+/-0.000  $\chi^2$ /NDF: 45.8/30

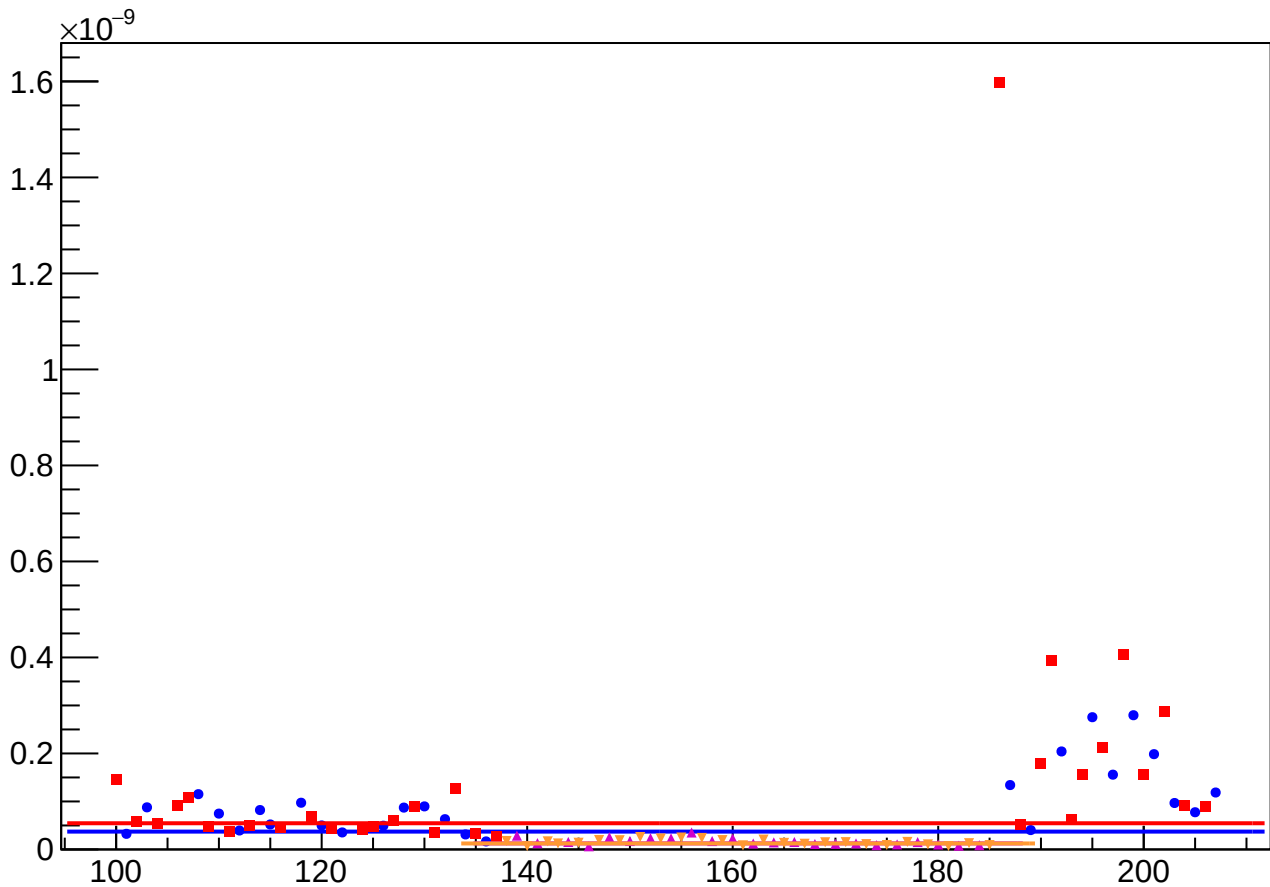
Left In: 0.000+/-0.000  $\chi^2$ /NDF:20.5/22

+ sign -0.000+/-0.000  $\chi^2$ /NDF: 52.3/50

All: -0.000+/-0.000  $\chi^2$ /NDF: 120.2/104

- sign -0.000+/-0.000  $\chi^2$ /NDF: 67.9/53

asym\_sam\_2468\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5431475.2/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1742020.0/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3557959.1/30

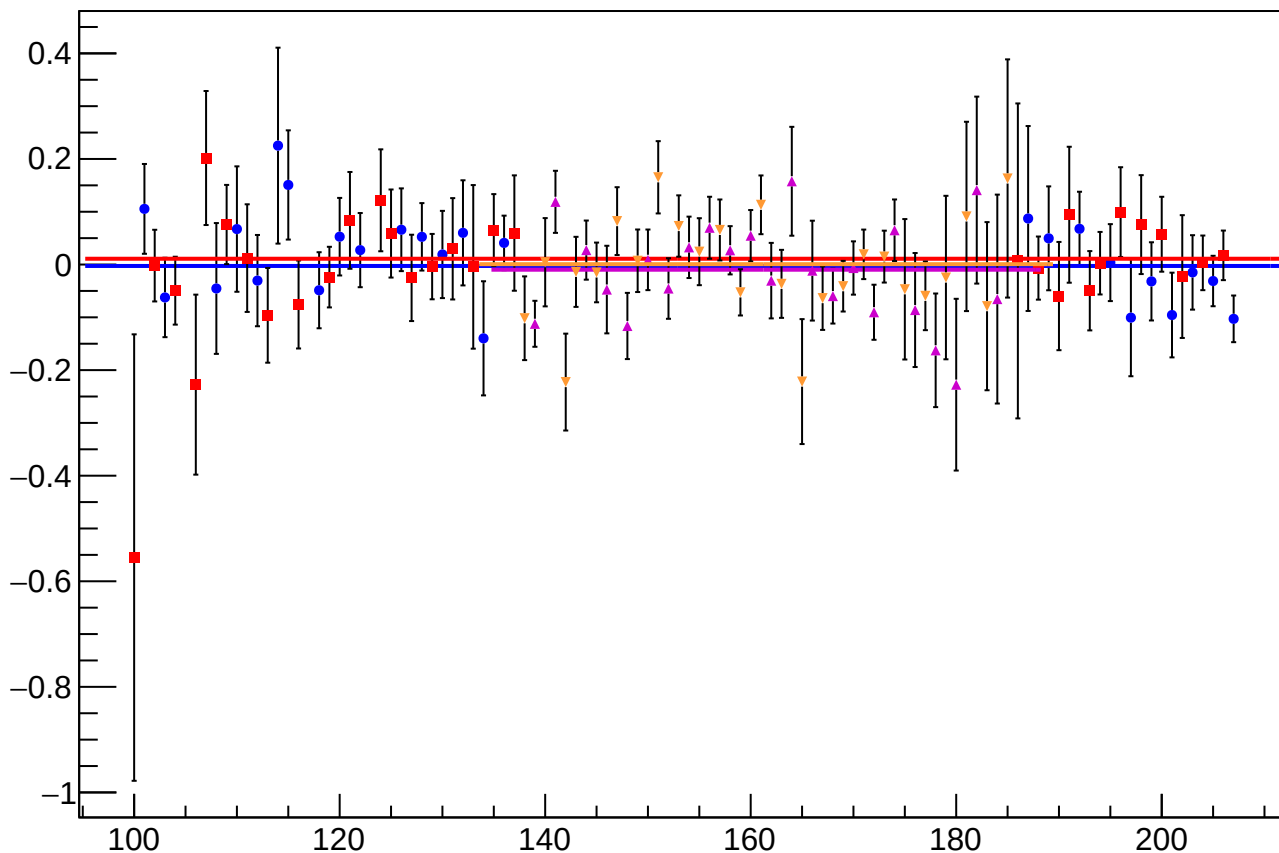
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1961578.1/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9890282.2/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 20445293.1/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10548808.6/53

asym\_sam\_2468\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.003 \pm 0.015$   $\chi^2/\text{NDF}$ : 21.3/25

Left Out:  $0.001 \pm 0.013$   $\chi^2/\text{NDF}$ : 31.7/24

Right Out:  $0.011 \pm 0.014$   $\chi^2/\text{NDF}$ : 17.7/30

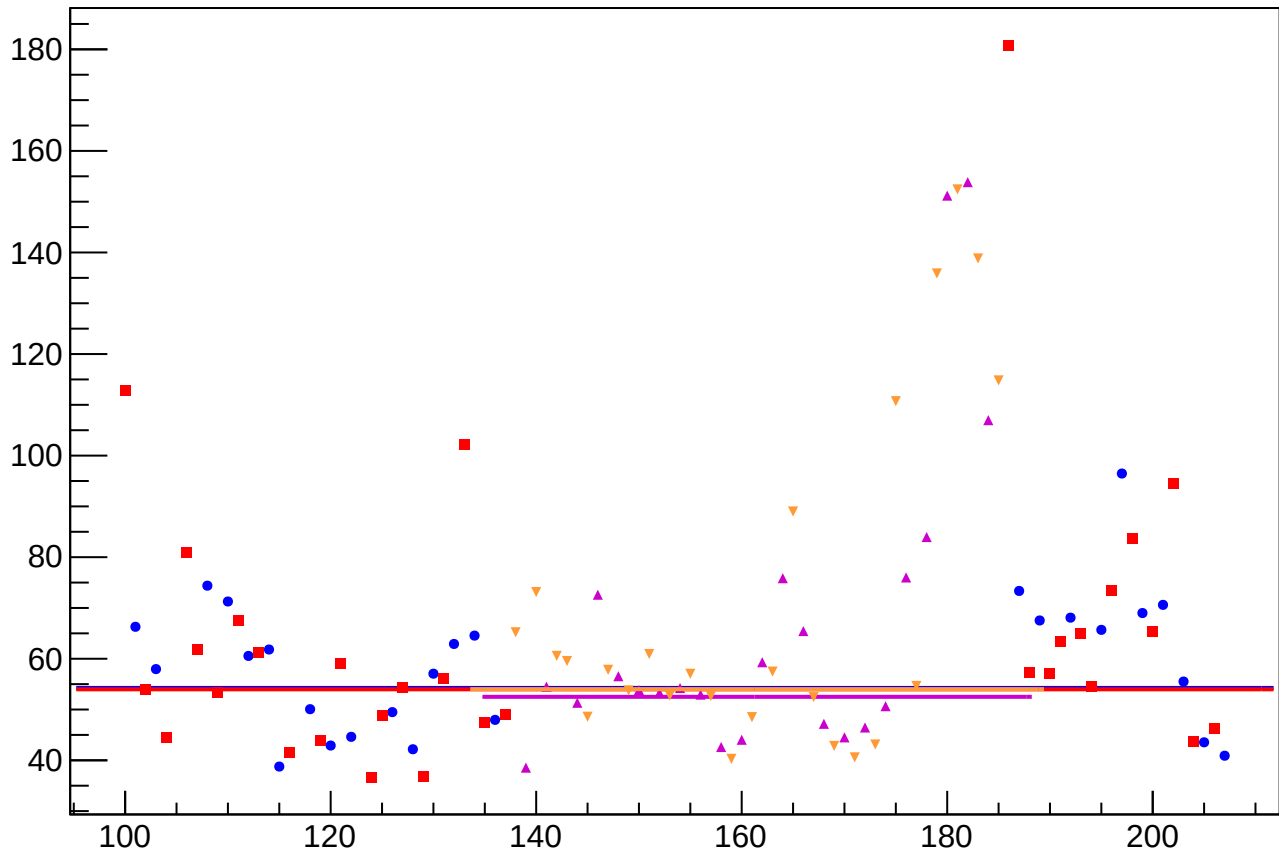
Left In:  $-0.010 \pm 0.013$   $\chi^2/\text{NDF}$ : 31.9/22

+ sign  $-0.001 \pm 0.010$   $\chi^2/\text{NDF}$ : 53.0/50

All:  $-0.001 \pm 0.007$   $\chi^2/\text{NDF}$ : 103.8/104

- sign  $-0.000 \pm 0.010$   $\chi^2/\text{NDF}$ : 50.8/53

asym\_sam\_2468\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 54.254 $\pm$ 0.011  $\chi^2$ /NDF: 1356229.7/25

Left Out: 54.014 $\pm$ 0.009  $\chi^2$ /NDF: 3227550.5/24

Right Out: 53.978 $\pm$ 0.010  $\chi^2$ /NDF: 1897144.4/30

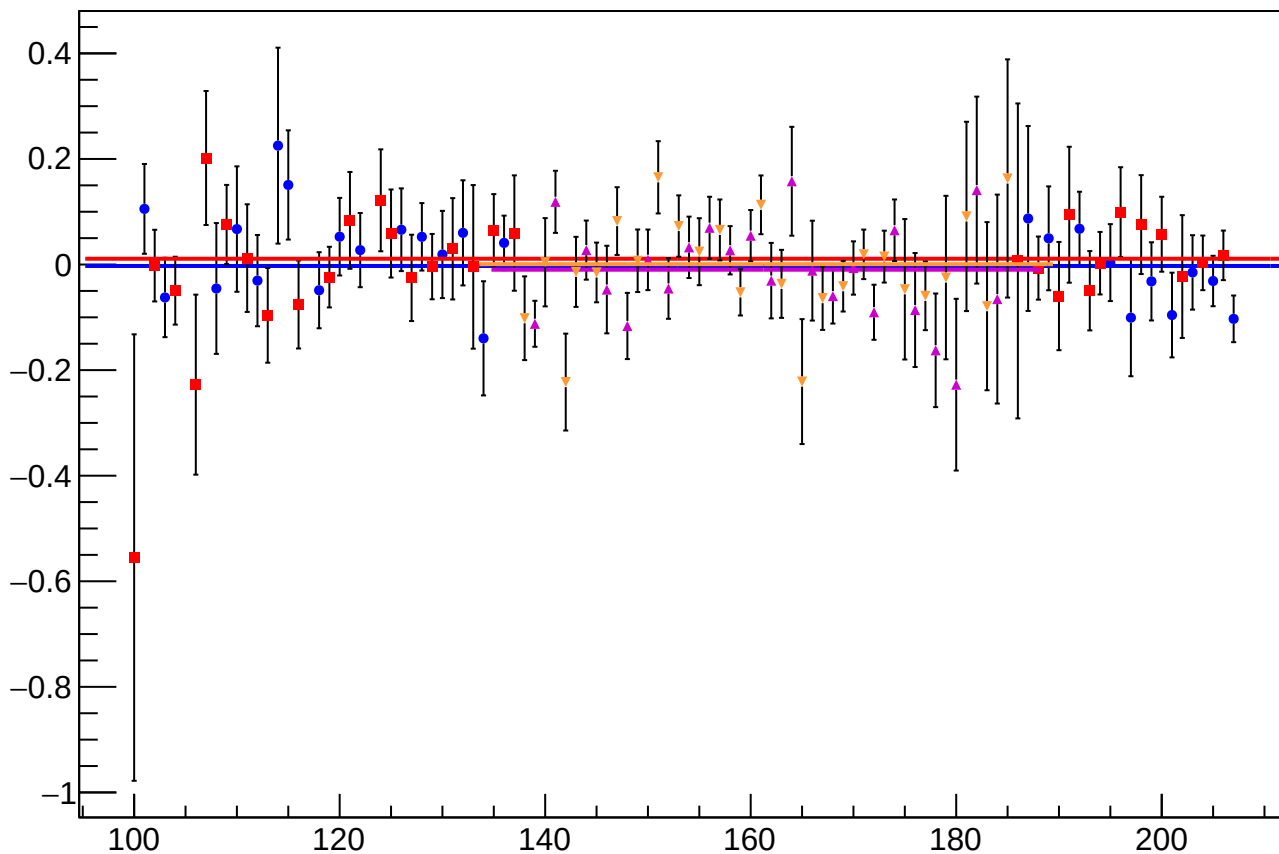
Left In: 52.502 $\pm$ 0.009  $\chi^2$ /NDF: 2557763.5/22

+ sign 54.120 $\pm$ 0.007  $\chi^2$ /NDF: 4584071.0/50

All: 53.642 $\pm$ 0.005  $\chi^2$ /NDF: 9059621.9/104

- sign 53.183 $\pm$ 0.007  $\chi^2$ /NDF: 4466404.2/53

asym\_sam\_2468\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.003 \pm 0.015$   $\chi^2/\text{NDF}$ : 21.3/25

Left Out:  $0.001 \pm 0.013$   $\chi^2/\text{NDF}$ : 31.7/24

Right Out:  $0.011 \pm 0.014$   $\chi^2/\text{NDF}$ : 17.7/30

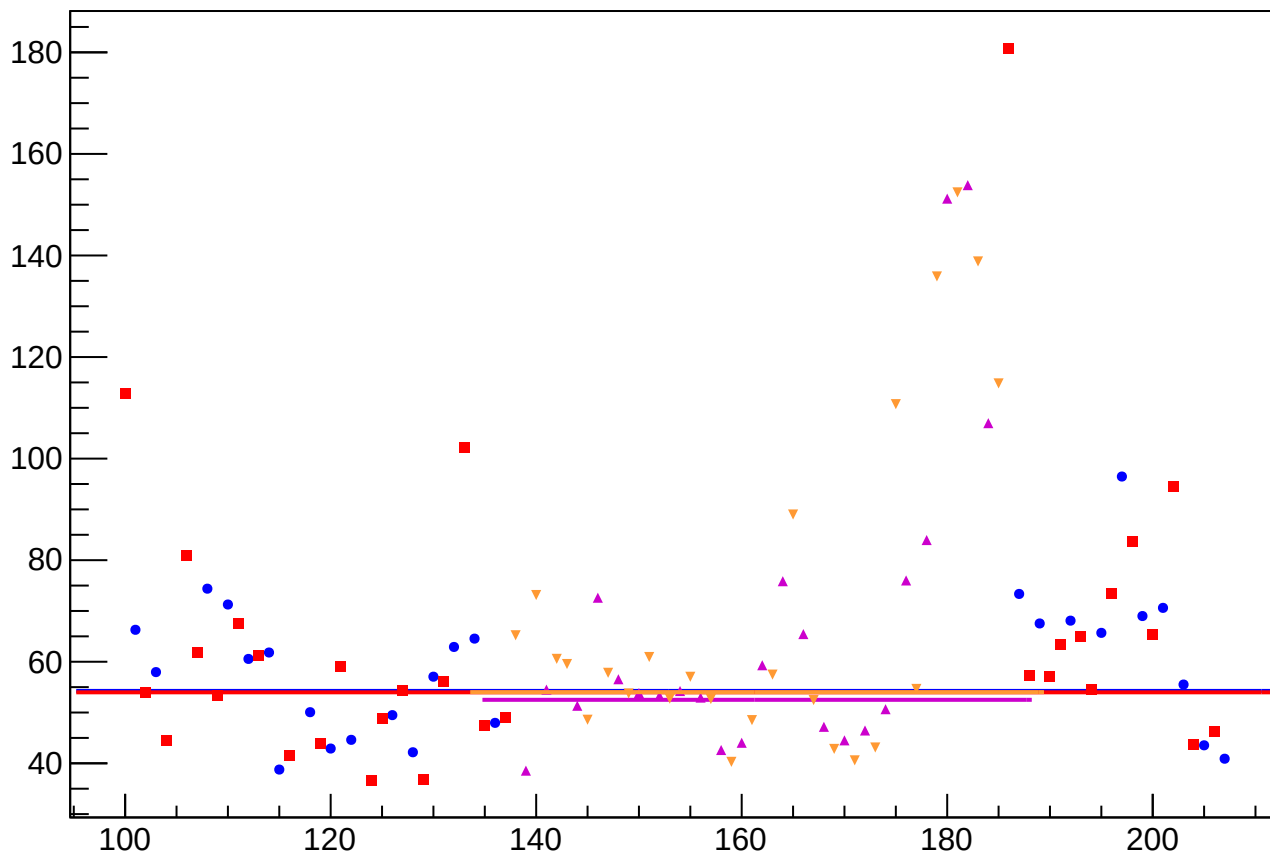
Left In:  $-0.010 \pm 0.013$   $\chi^2/\text{NDF}$ : 31.9/22

+ sign  $-0.001 \pm 0.010$   $\chi^2/\text{NDF}$ : 53.0/50

All:  $-0.001 \pm 0.007$   $\chi^2/\text{NDF}$ : 103.8/104

- sign  $-0.000 \pm 0.010$   $\chi^2/\text{NDF}$ : 50.8/53

asym\_sam\_2468\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 54.254 $\pm$ 0.011  $\chi^2$ /NDF: 1356229.7/25

Left Out: 54.014 $\pm$ 0.009  $\chi^2$ /NDF:3227550.5/24

Right Out: 53.978 $\pm$ 0.010  $\chi^2$ /NDF: 1897144.4/30

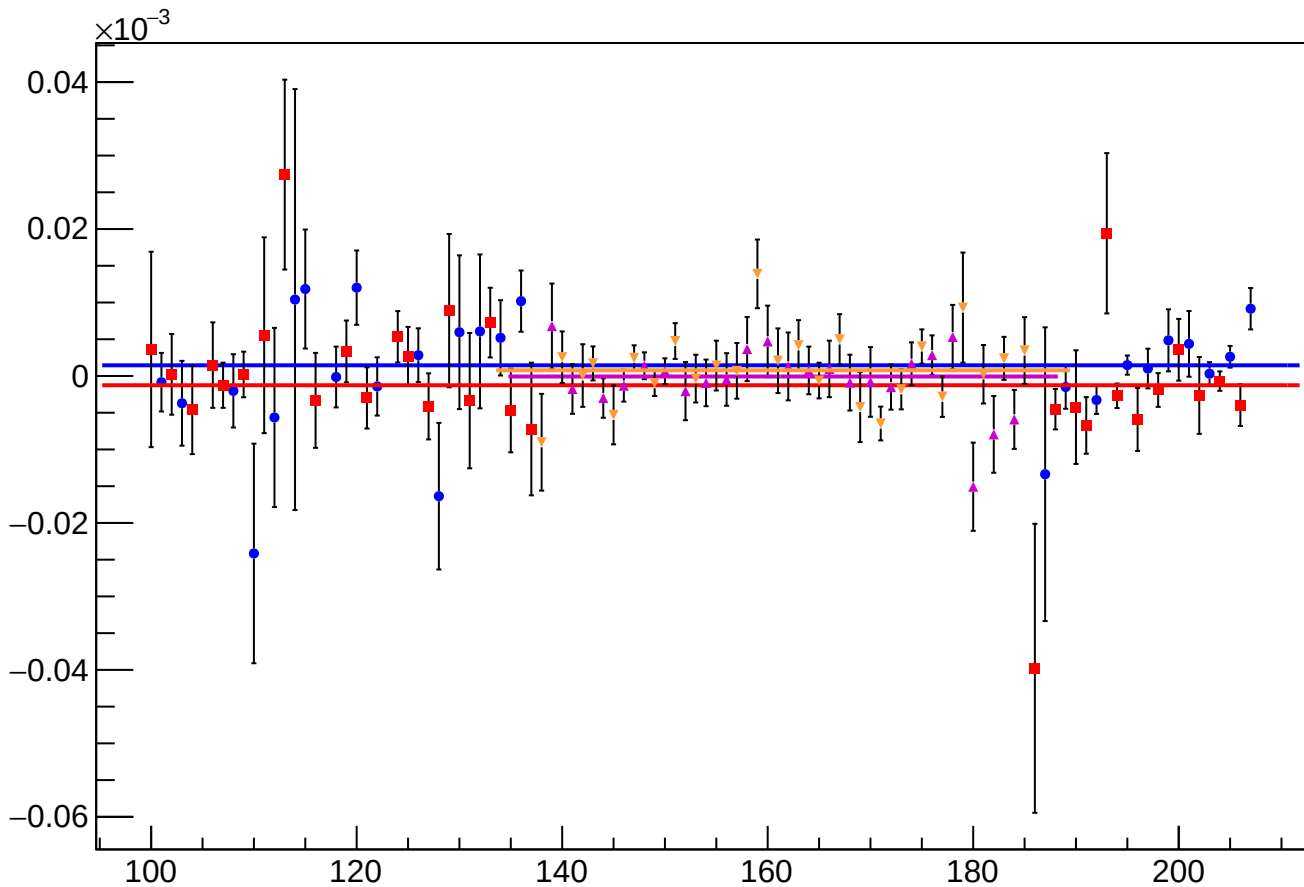
Left In: 52.502 $\pm$ 0.009  $\chi^2$ /NDF:2557763.5/22

+ sign 54.120 $\pm$ 0.007  $\chi^2$ /NDF: 4584071.0/50

All: 53.642 $\pm$ 0.005  $\chi^2$ /NDF: 9059621.9/104

- sign 53.183 $\pm$ 0.007  $\chi^2$ /NDF: 4466404.2/53

asym\_sam\_2468\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 37.8/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:38.1/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 33.1/30

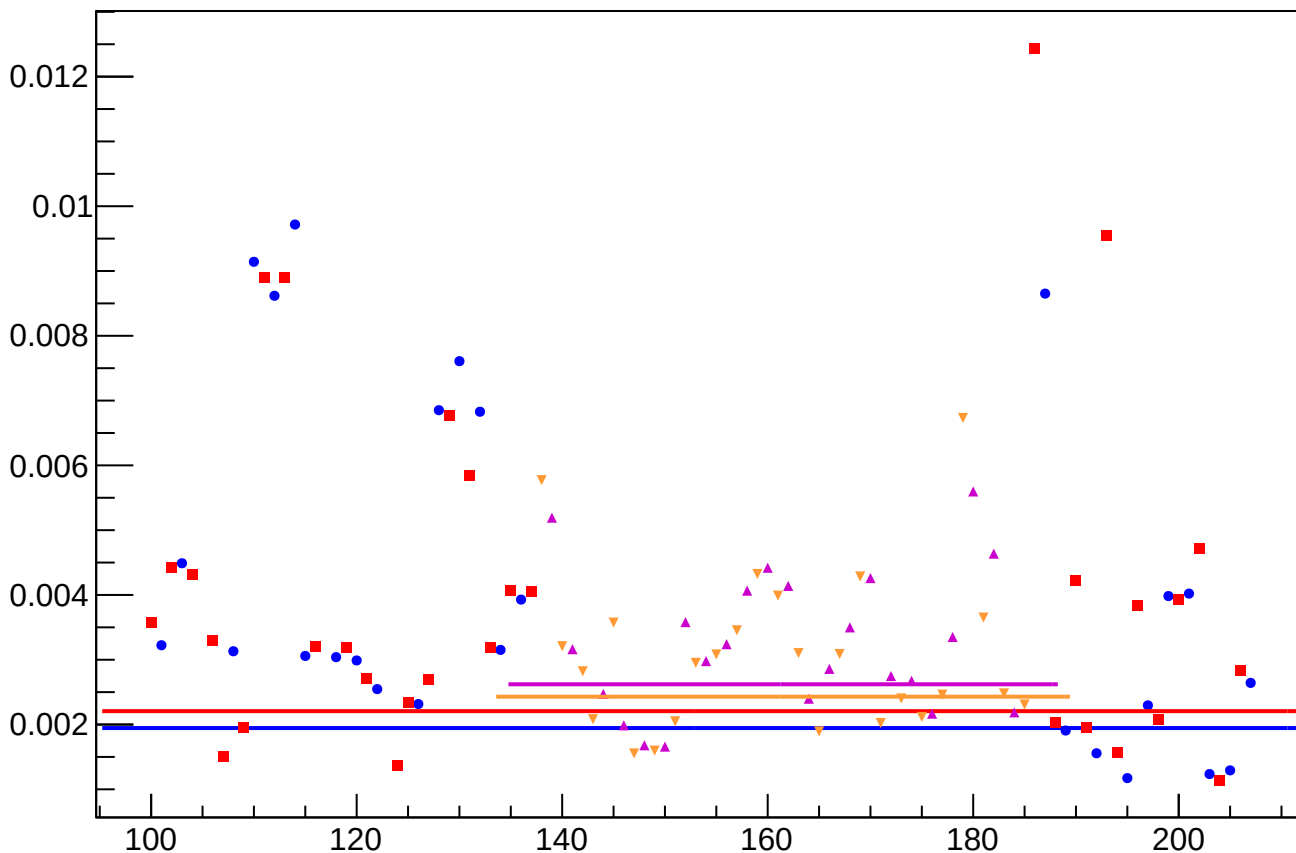
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:20.2/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 76.5/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 139.6/104

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 55.0/53

asym\_sam\_2468\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 7178821.8/25

Left Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 4218362.5/24

Right Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 7631869.9/30

Left In: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 3955310.5/22

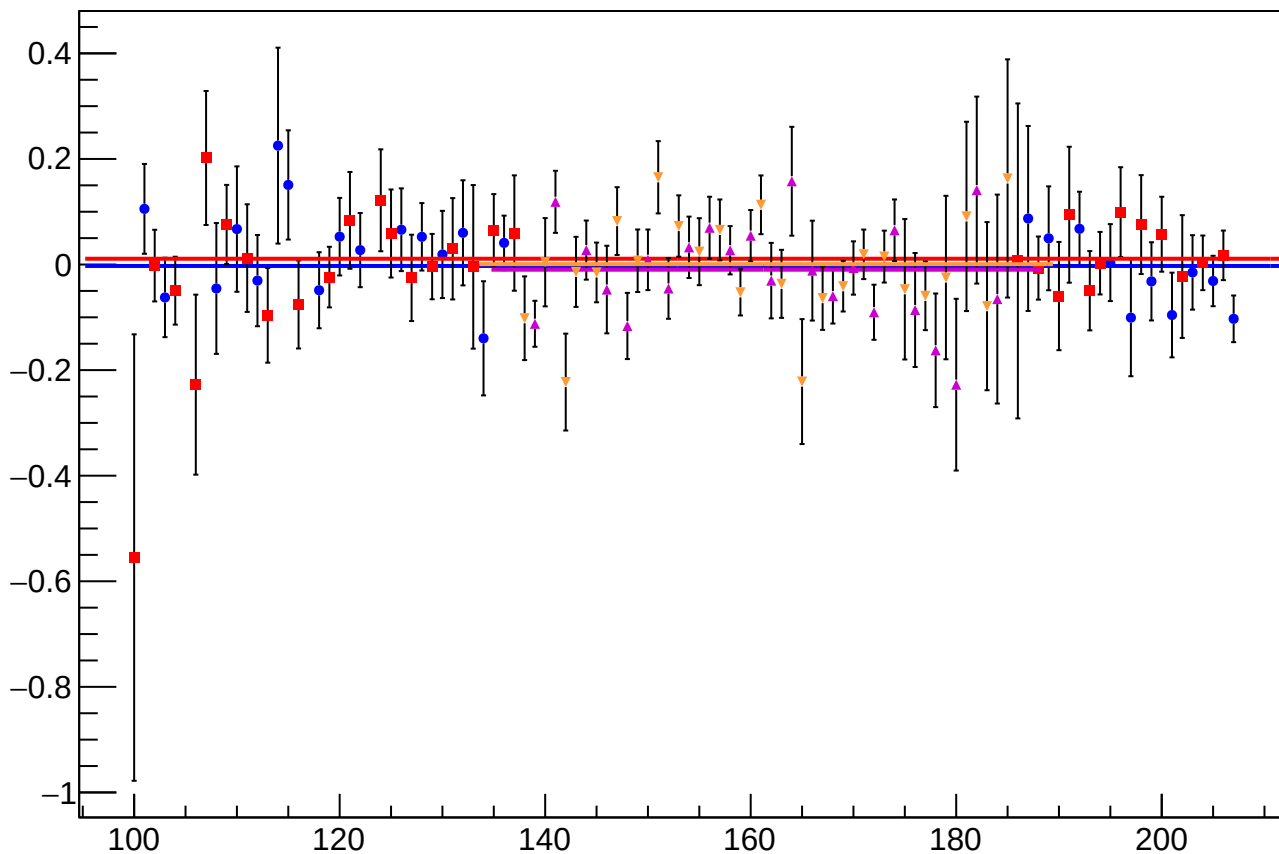
+ sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 12053808.7/50

All: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 24281713.3/104

- sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 11988383.3/53



asym\_sam\_2468\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.003 \pm 0.015$   $\chi^2/\text{NDF}$ : 21.3/25

Left Out:  $0.001 \pm 0.013$   $\chi^2/\text{NDF}$ : 31.7/24

Right Out:  $0.011 \pm 0.014$   $\chi^2/\text{NDF}$ : 17.7/30

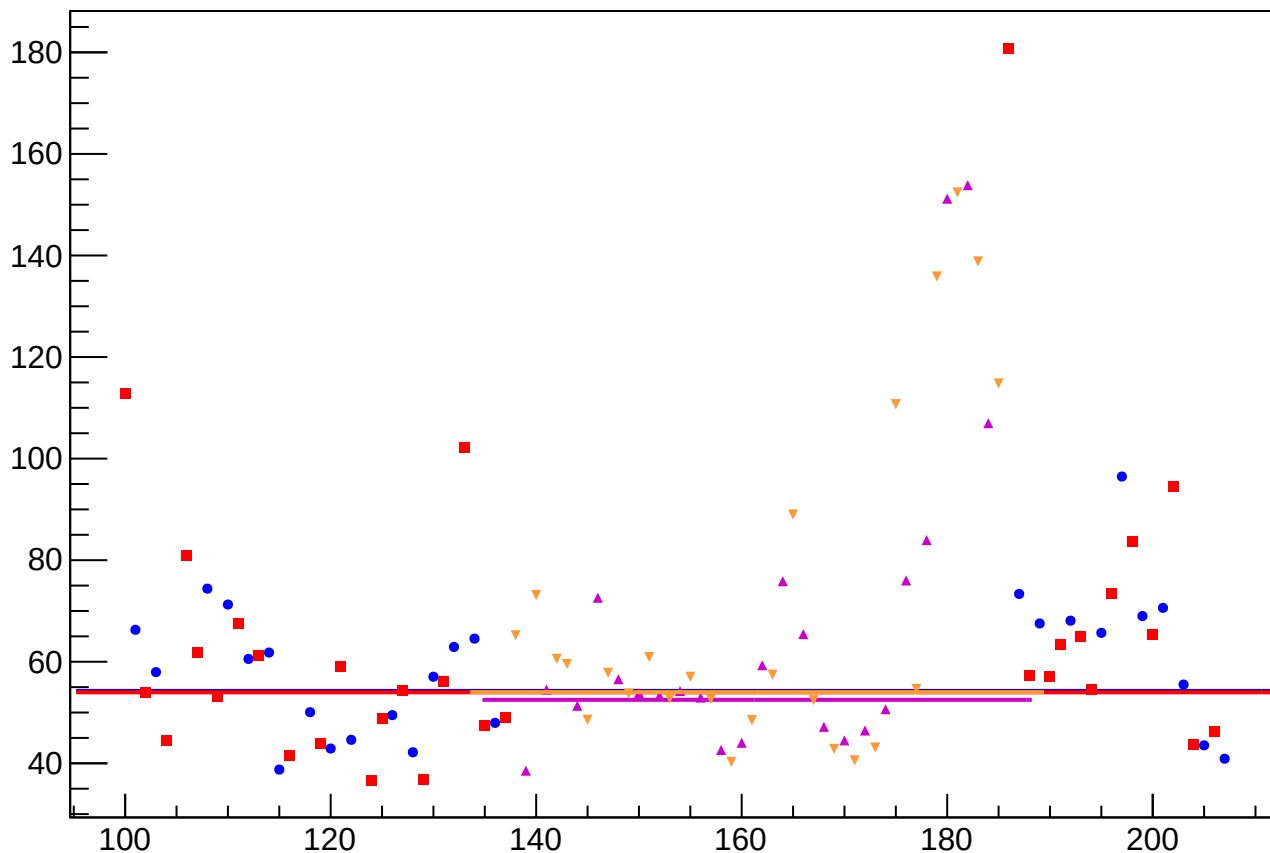
Left In:  $-0.010 \pm 0.013$   $\chi^2/\text{NDF}$ : 31.9/22

+ sign  $-0.001 \pm 0.010$   $\chi^2/\text{NDF}$ : 53.0/50

All:  $-0.001 \pm 0.007$   $\chi^2/\text{NDF}$ : 103.8/104

- sign  $-0.000 \pm 0.010$   $\chi^2/\text{NDF}$ : 50.8/53

asym\_sam\_2468\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 54.254 $\pm$ 0.011  $\chi^2$ /NDF: 1356208.4/25

Left Out: 54.014 $\pm$ 0.009  $\chi^2$ /NDF: 3227569.4/24

Right Out: 53.977 $\pm$ 0.010  $\chi^2$ /NDF: 1897191.8/30

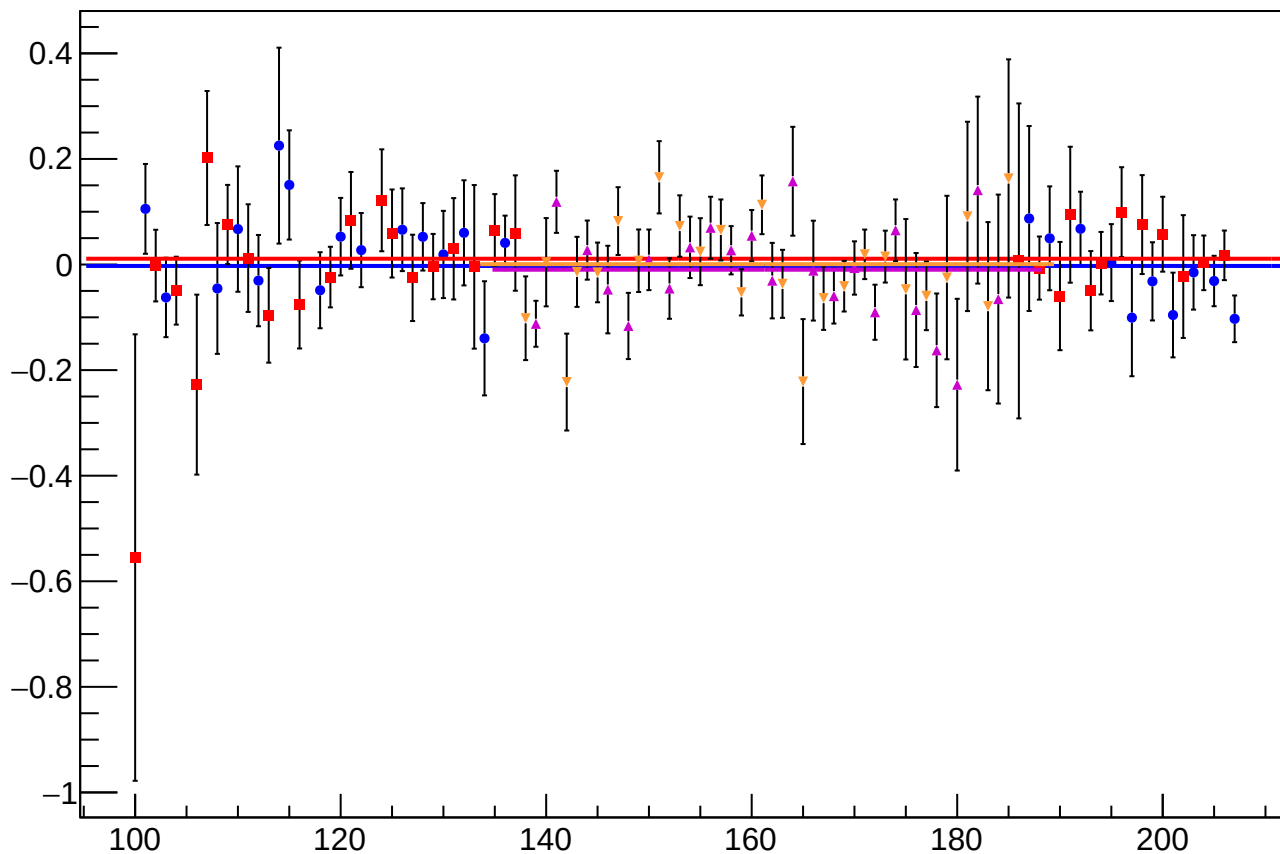
Left In: 52.502 $\pm$ 0.009  $\chi^2$ /NDF: 2557805.6/22

+ sign 54.120 $\pm$ 0.007  $\chi^2$ /NDF: 4584065.6/50

All: 53.642 $\pm$ 0.005  $\chi^2$ /NDF: 9059690.6/104

- sign 53.183 $\pm$ 0.007  $\chi^2$ /NDF: 4466479.4/53

asym\_sam\_2468\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.003 \pm 0.015$   $\chi^2/\text{NDF}$ : 21.3/25

Left Out:  $0.001 \pm 0.013$   $\chi^2/\text{NDF}$ : 31.7/24

Right Out:  $0.011 \pm 0.014$   $\chi^2/\text{NDF}$ : 17.7/30

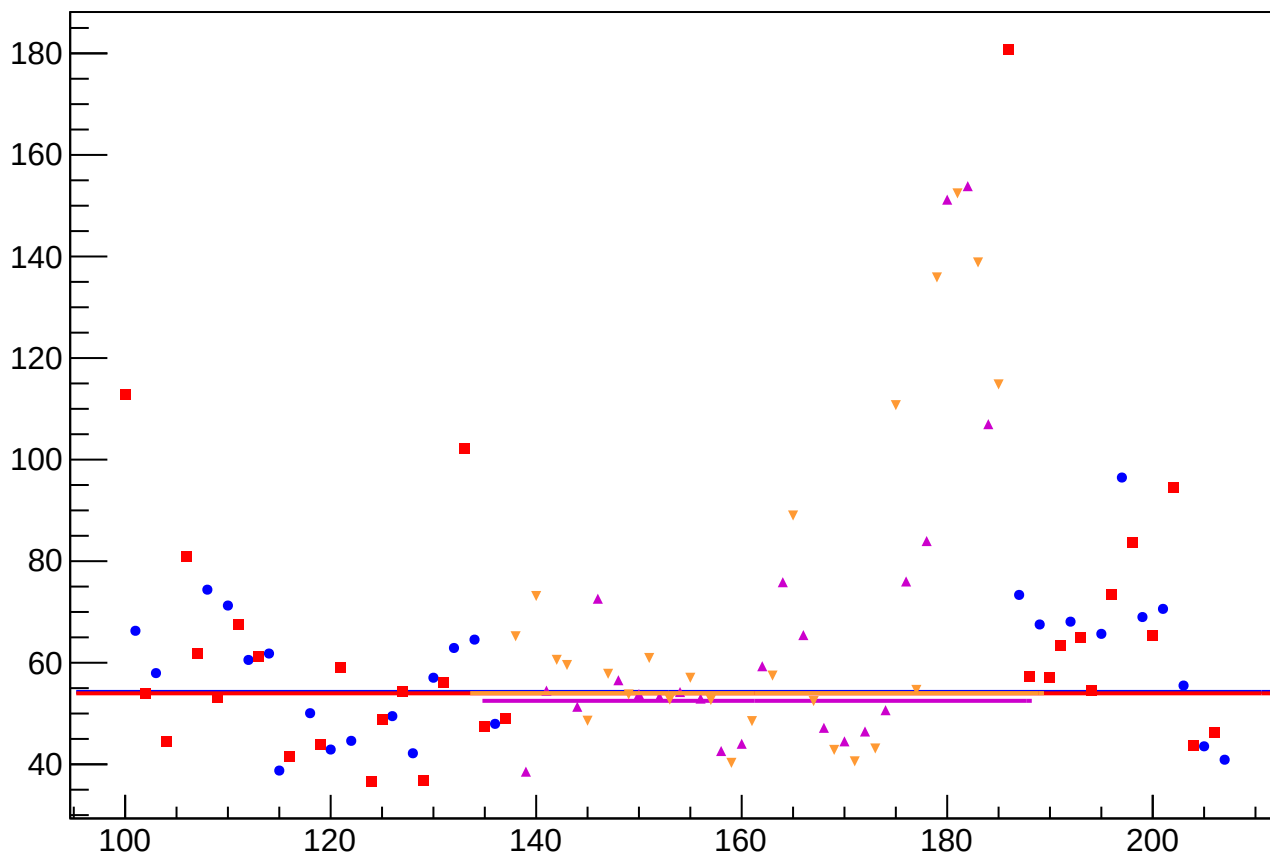
Left In:  $-0.010 \pm 0.013$   $\chi^2/\text{NDF}$ : 31.9/22

+ sign  $-0.001 \pm 0.010$   $\chi^2/\text{NDF}$ : 53.0/50

All:  $-0.001 \pm 0.007$   $\chi^2/\text{NDF}$ : 103.8/104

- sign  $-0.000 \pm 0.010$   $\chi^2/\text{NDF}$ : 50.8/53

asym\_sam\_2468\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 54.254 $\pm$ 0.011  $\chi^2$ /NDF: 1356208.4/25

Left Out: 54.014 $\pm$ 0.009  $\chi^2$ /NDF: 3227569.4/24

Right Out: 53.977 $\pm$ 0.010  $\chi^2$ /NDF: 1897191.8/30

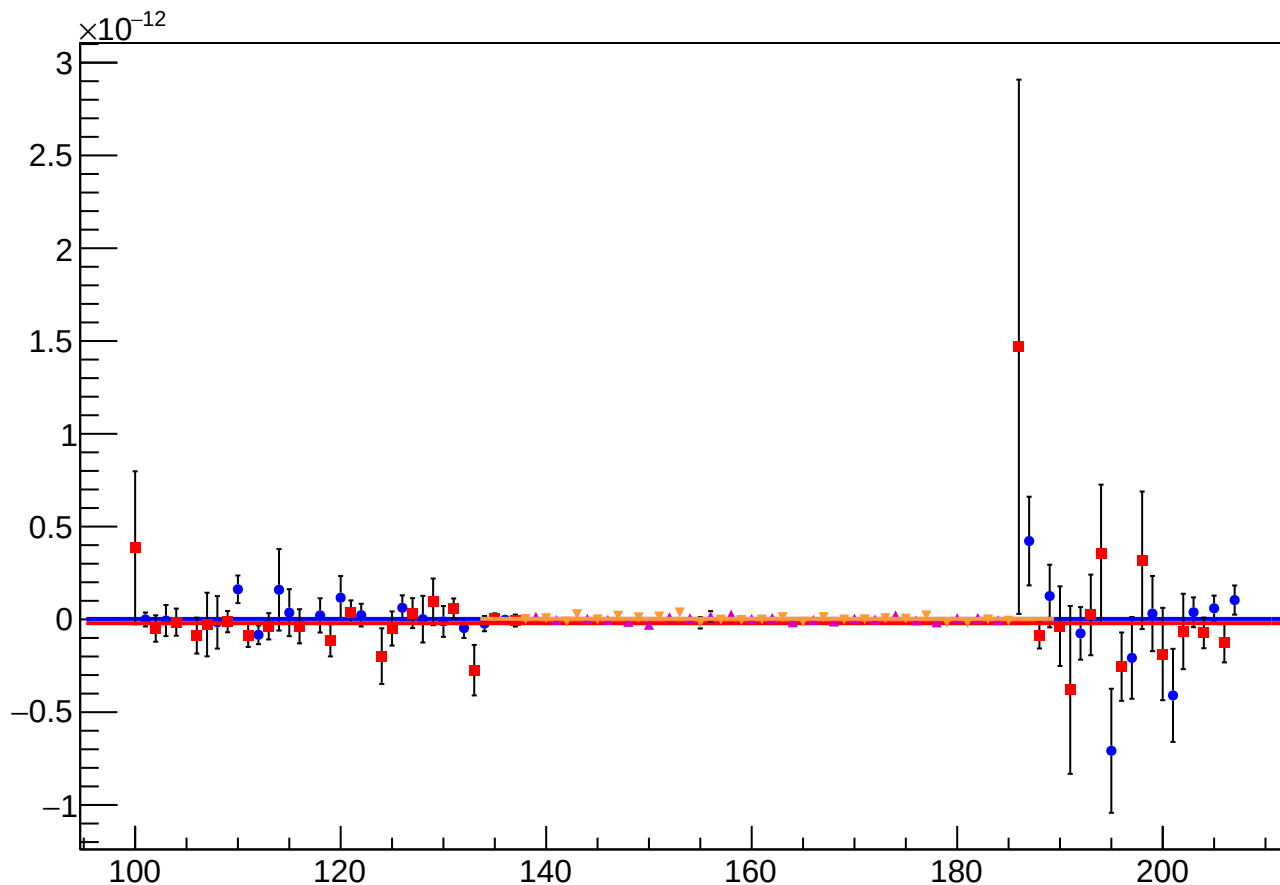
Left In: 52.502 $\pm$ 0.009  $\chi^2$ /NDF: 2557805.6/22

+ sign 54.120 $\pm$ 0.007  $\chi^2$ /NDF: 4584065.6/50

All: 53.642 $\pm$ 0.005  $\chi^2$ /NDF: 9059690.6/104

- sign 53.183 $\pm$ 0.007  $\chi^2$ /NDF: 4466479.4/53

asym\_sam\_2468\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 26.0/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:21.8/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 21.9/30

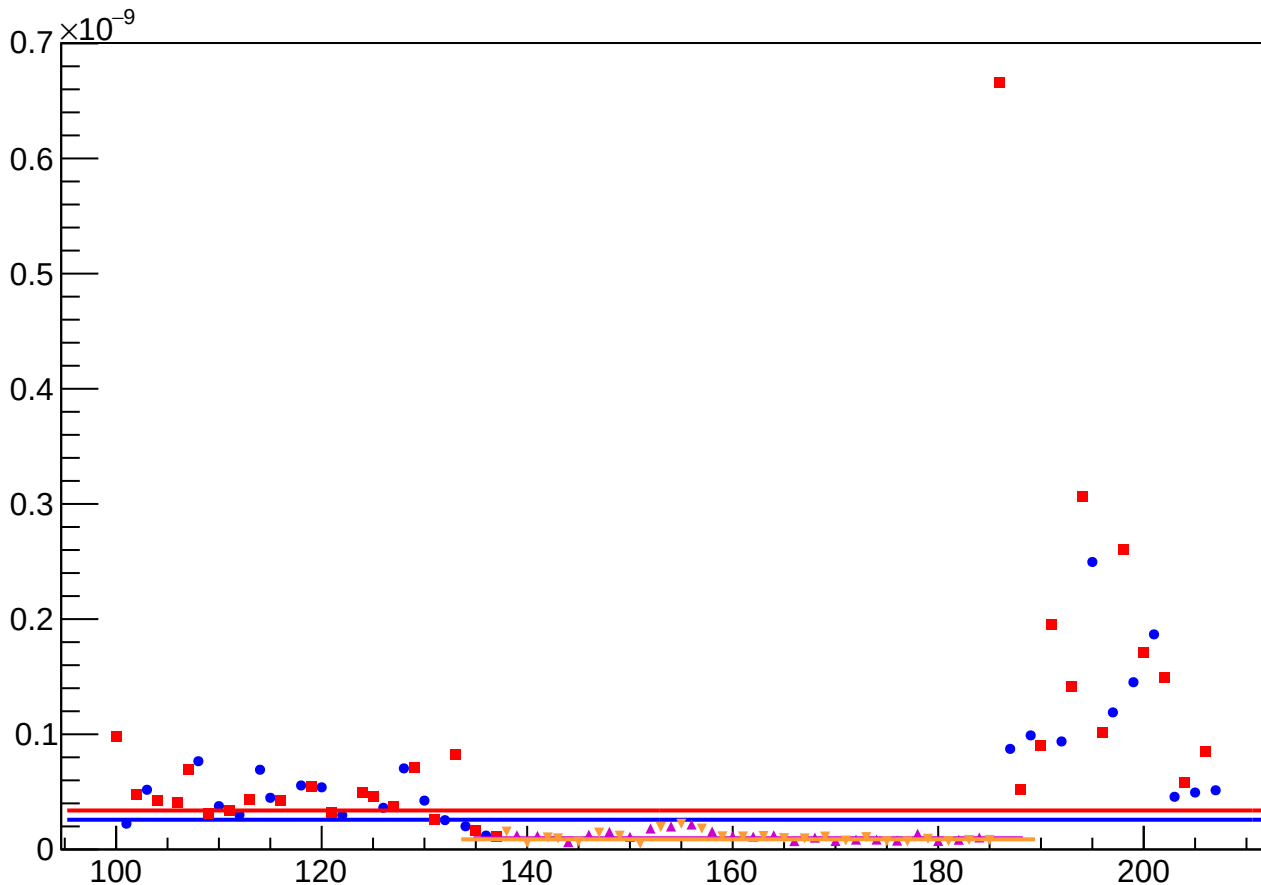
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:15.3/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 47.8/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 87.8/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 39.6/53

asym\_sam\_2468\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7076395.6/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2517075.4/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 8085590.1/30

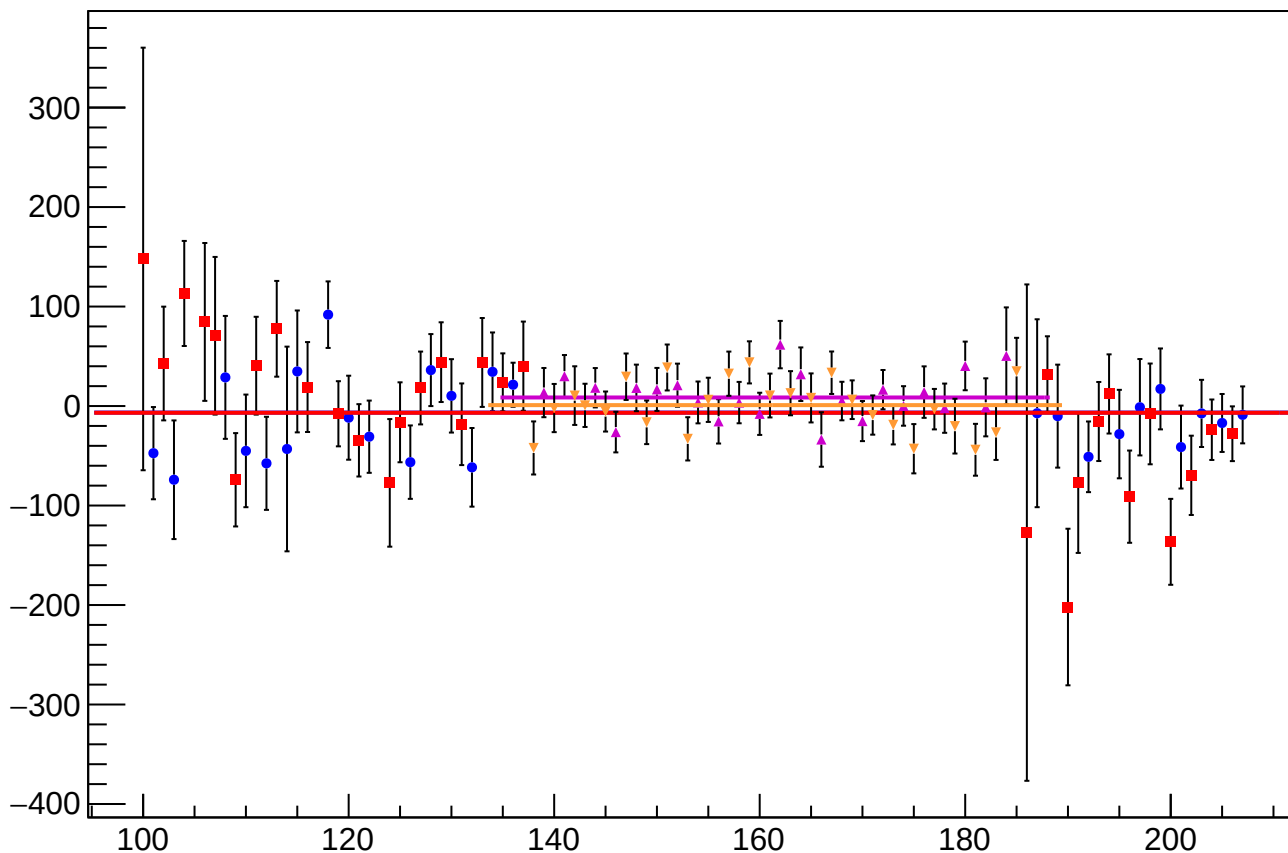
Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2320113.6/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 13797499.7/50

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 30286192.3/104

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 16329963.2/53

# reg\_asym\_sam\_1357\_2468\_dd\_mean vs Slug



Right In:  $-6.579 \pm 7.767$   $\chi^2/\text{NDF}$ : 24.8/25

Left Out:  $0.917 \pm 4.574$   $\chi^2/\text{NDF}$ : 29.2/24

Right Out:  $-6.750 \pm 7.845$   $\chi^2/\text{NDF}$ : 47.0/30

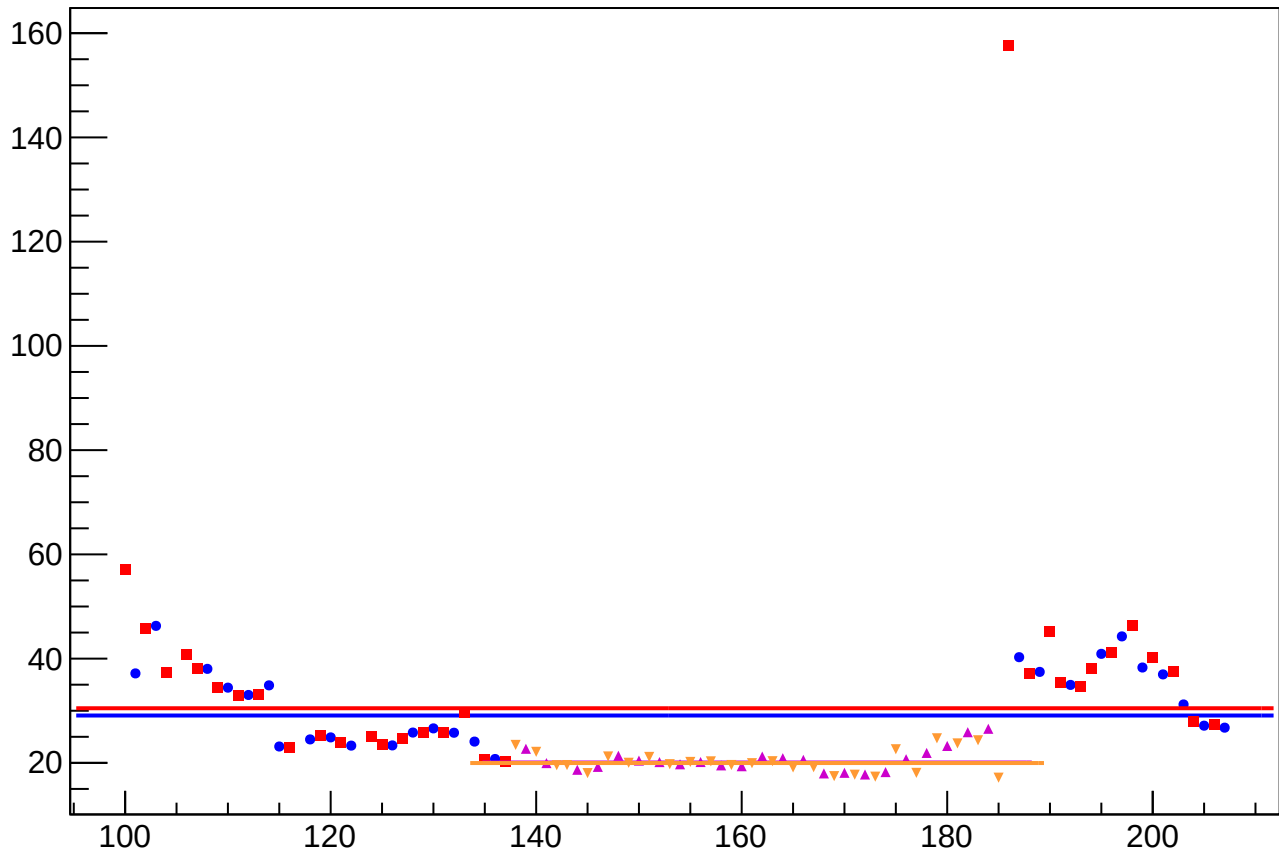
Left In:  $8.600 \pm 4.724$   $\chi^2/\text{NDF}$ : 19.4/22

+ sign  $-1.013 \pm 3.941$   $\chi^2/\text{NDF}$ : 54.7/50

All:  $1.679 \pm 2.823$   $\chi^2/\text{NDF}$ : 124.8/104

- sign  $4.516 \pm 4.047$   $\chi^2/\text{NDF}$ : 69.2/53

# reg\_asym\_sam\_1357\_2468\_dd\_rms vs Slug



Right In: 29.086+/-0.005  $\chi^2/\text{NDF}$ : 1515369.2/25

Left Out: 19.969+/-0.003  $\chi^2/\text{NDF}$ : 386763.9/24

Right Out: 30.479+/-0.006  $\chi^2/\text{NDF}$ : 2229231.3/30

Left In: 20.072+/-0.003  $\chi^2/\text{NDF}$ : 301705.2/22

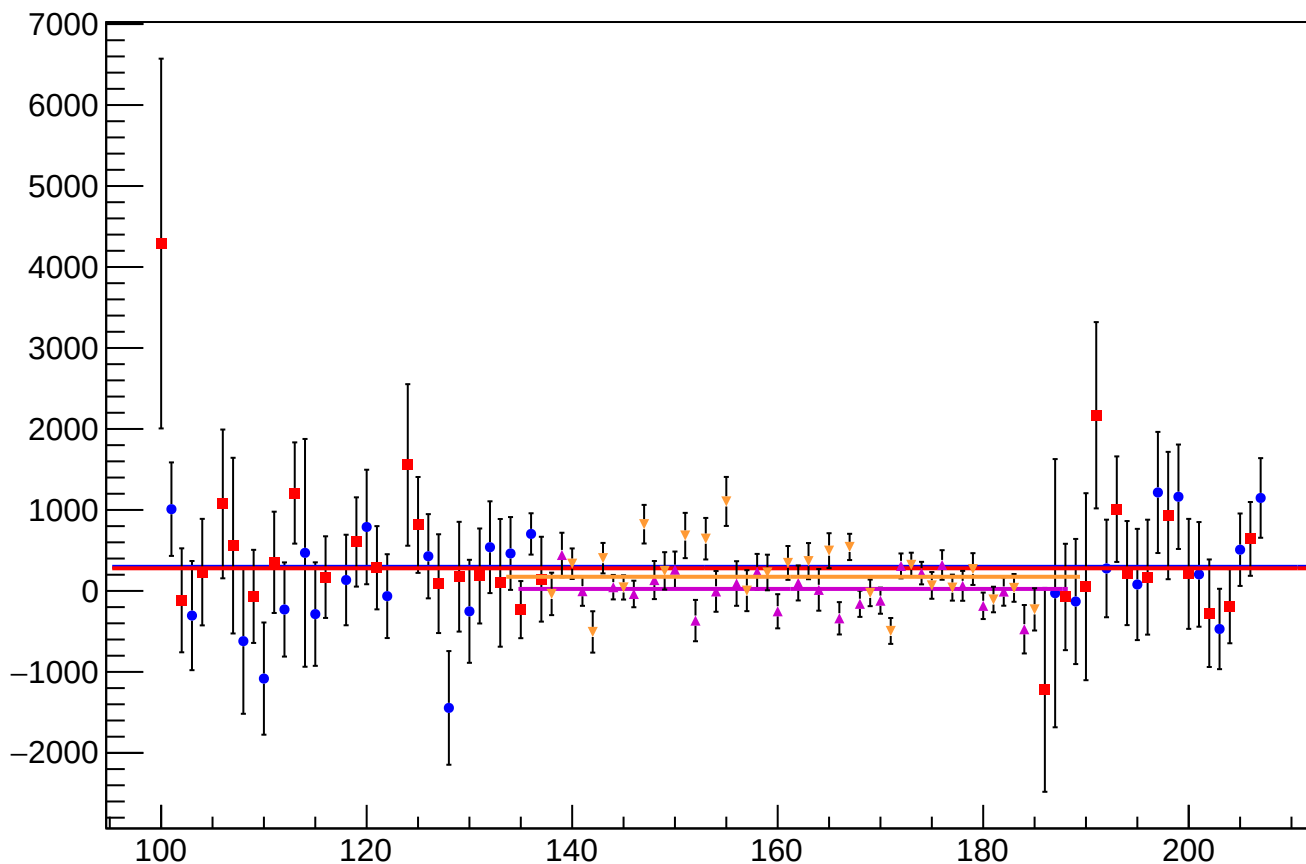
+ sign 22.316+/-0.003  $\chi^2/\text{NDF}$ : 3948129.1/50

All: 22.572+/-0.002  $\chi^2/\text{NDF}$ : 9079330.1/104

- sign 22.841+/-0.003  $\chi^2/\text{NDF}$ : 5113907.9/53



asym\_sam\_1357\_2468\_dd\_reg\_correction\_mean vs Slug



Right In: 297.627 $\pm$ 110.653  $\chi^2$ /NDF: 29.3/25

Left Out: 174.693 $\pm$ 39.049  $\chi^2$ /NDF:71.2/24

Right Out: 279.339 $\pm$ 113.302  $\chi^2$ /NDF: 20.9/30

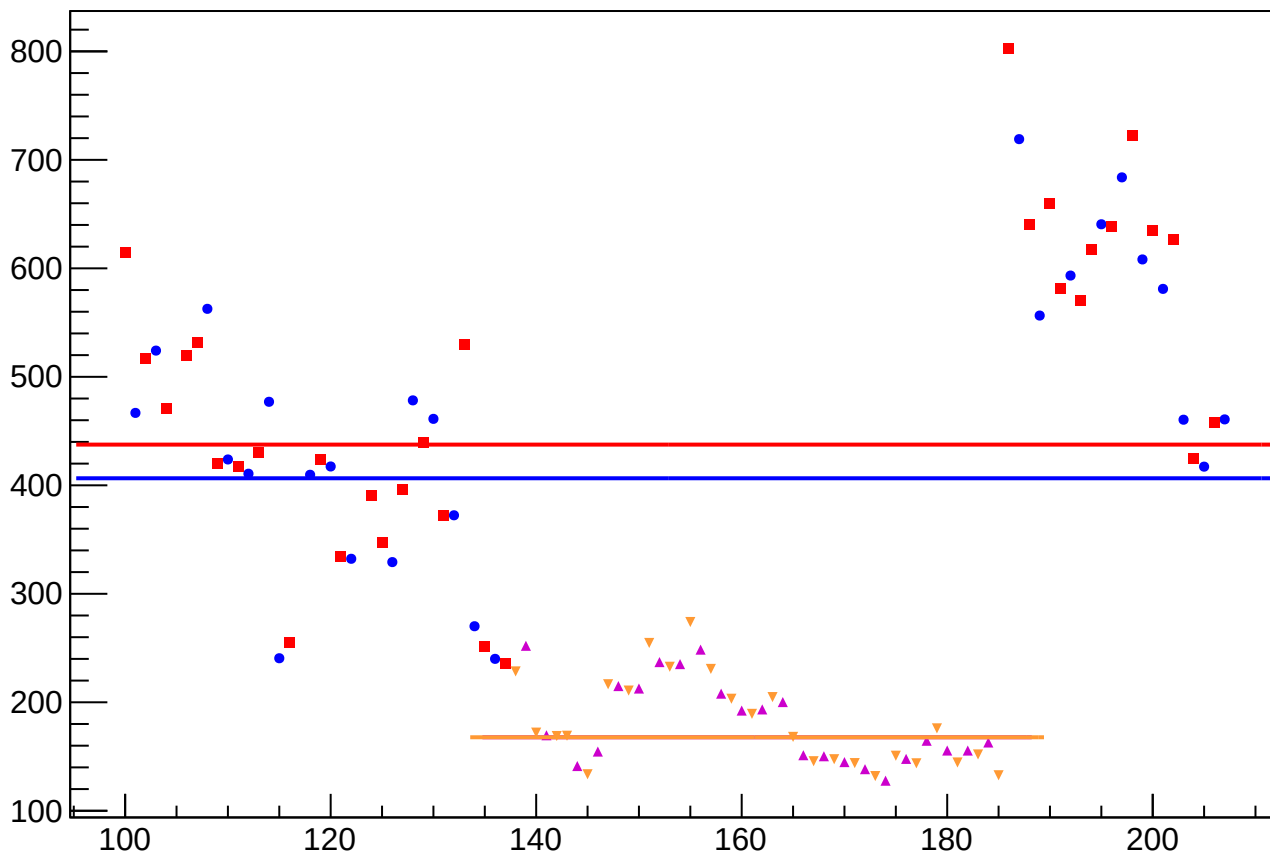
Left In: 24.589 $\pm$ 40.070  $\chi^2$ /NDF:26.9/22

+ sign 188.307 $\pm$ 36.823  $\chi^2$ /NDF: 101.6/50

All: 122.339 $\pm$ 26.369  $\chi^2$ /NDF: 160.4/104

- sign 52.910 $\pm$ 37.777  $\chi^2$ /NDF: 52.3/53

asym\_sam\_1357\_2468\_dd\_reg\_correction\_rms vs Slug



Right In:  $406.494 \pm 0.078$   $\chi^2/\text{NDF}$ : 2684831.5/25

Left Out:  $167.754 \pm 0.028$   $\chi^2/\text{NDF}$ : 1578232.9/24

Right Out:  $437.522 \pm 0.080$   $\chi^2/\text{NDF}$ : 2855586.8/30

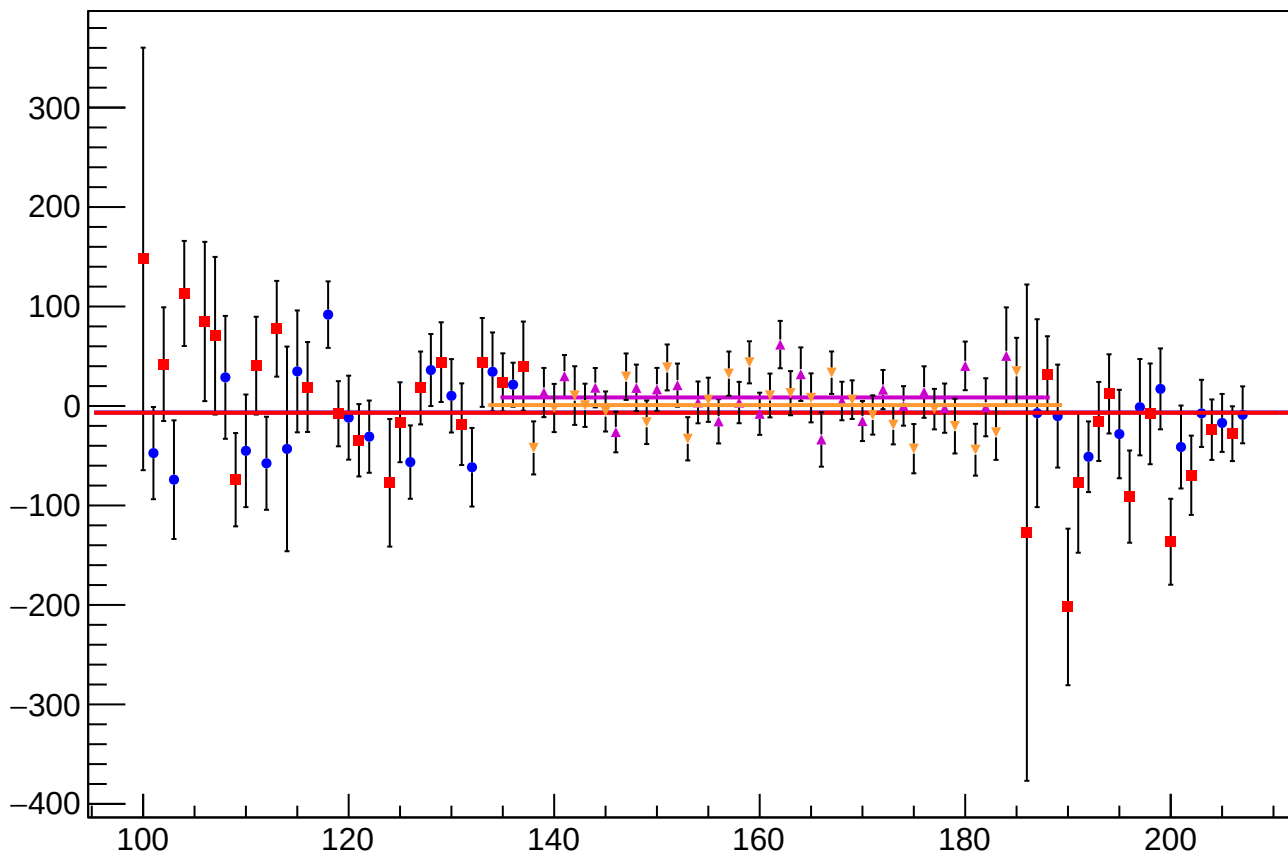
Left In:  $167.748 \pm 0.028$   $\chi^2/\text{NDF}$ : 1403124.0/22

+ sign  $194.193 \pm 0.026$   $\chi^2/\text{NDF}$ : 12542036.7/50

All:  $195.921 \pm 0.019$   $\chi^2/\text{NDF}$ : 26887752.4/10

- sign  $197.739 \pm 0.027$   $\chi^2/\text{NDF}$ : 14336680.7/53

# cor\_asym\_sam\_1357\_2468\_dd\_mean vs Slug



Right In:  $-6.578 \pm 7.767$   $\chi^2/\text{NDF}$ : 24.8/25

Left Out:  $0.915 \pm 4.574$   $\chi^2/\text{NDF}$ : 29.2/24

Right Out:  $-6.777 \pm 7.846$   $\chi^2/\text{NDF}$ : 47.0/30

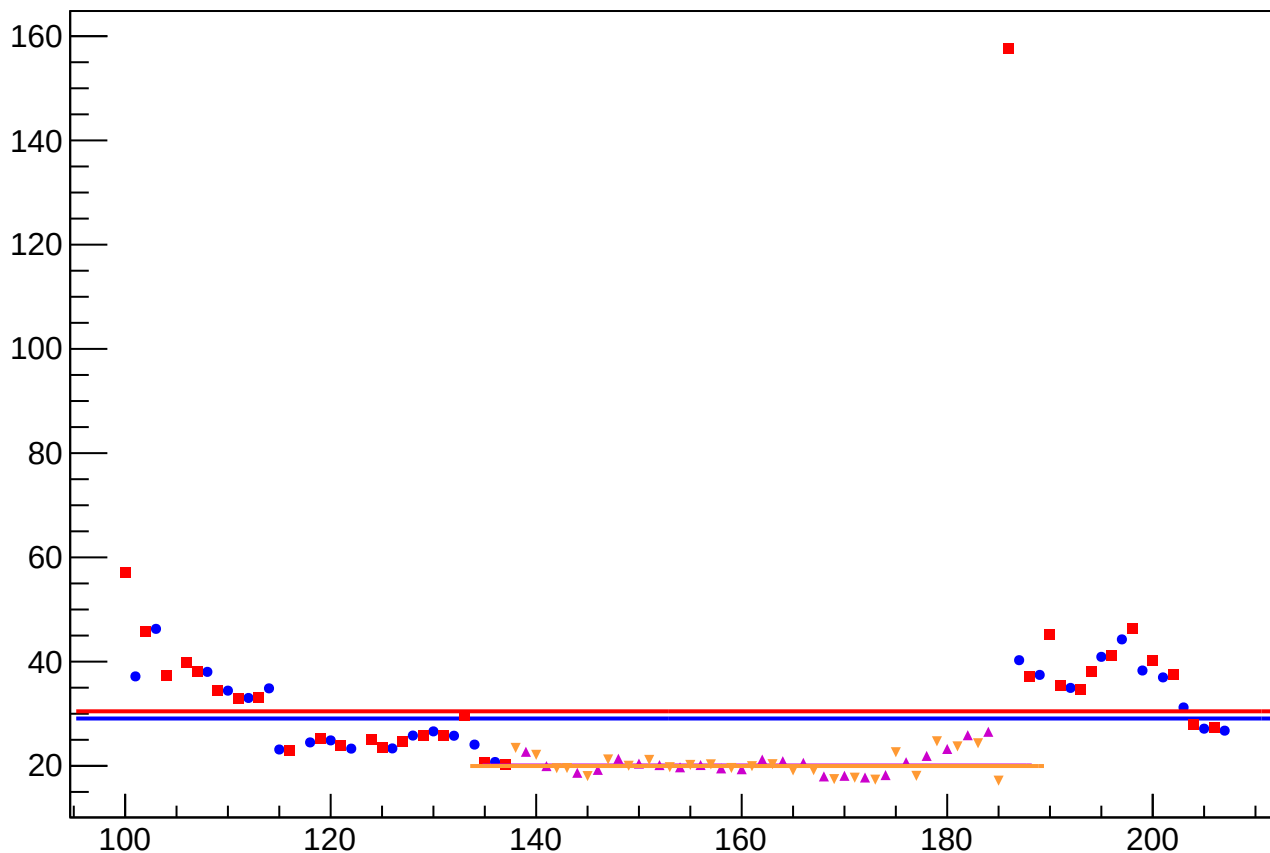
Left In:  $8.600 \pm 4.724$   $\chi^2/\text{NDF}$ : 19.4/22

+ sign  $-1.014 \pm 3.941$   $\chi^2/\text{NDF}$ : 54.7/50

All:  $1.675 \pm 2.824$   $\chi^2/\text{NDF}$ : 124.8/104

- sign  $4.510 \pm 4.047$   $\chi^2/\text{NDF}$ : 69.1/53

# cor\_asym\_sam\_1357\_2468\_dd\_rms vs Slug



Right In:  $29.086 \pm 0.005$   $\chi^2/\text{NDF}$ : 1515372.4/25

Left Out:  $19.969 \pm 0.003$   $\chi^2/\text{NDF}$ : 386763.9/24

Right Out:  $30.467 \pm 0.006$   $\chi^2/\text{NDF}$ : 2222192.3/30

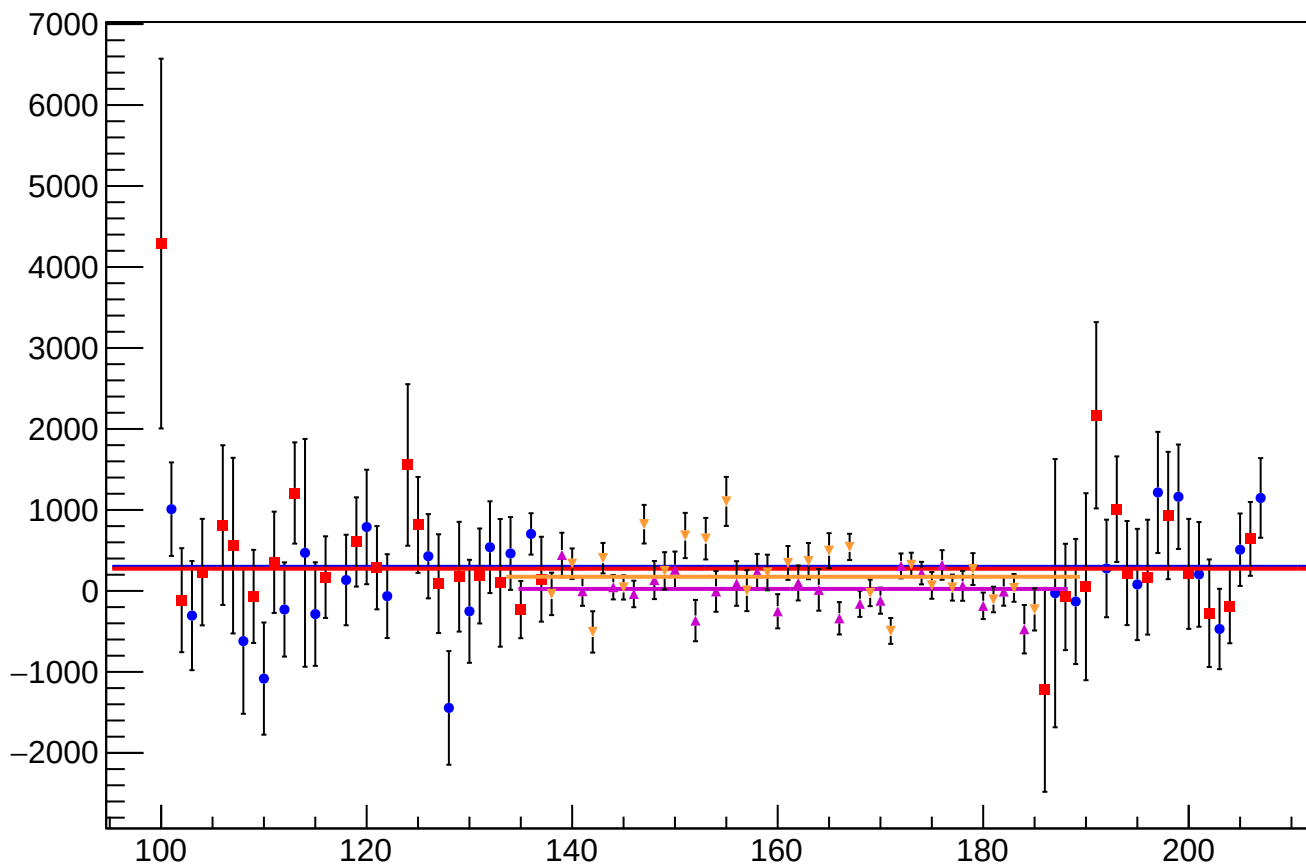
Left In:  $20.072 \pm 0.003$   $\chi^2/\text{NDF}$ : 301705.2/22

+ sign  $22.316 \pm 0.003$   $\chi^2/\text{NDF}$ : 3948132.4/50

All:  $22.570 \pm 0.002$   $\chi^2/\text{NDF}$ : 9065663.8/104

- sign  $22.838 \pm 0.003$   $\chi^2/\text{NDF}$ : 5100476.6/53

asym\_sam\_1357\_2468\_dd\_cor\_correction\_mean vs Slug



Right In: 297.623 $\pm$ 110.654  $\chi^2$ /NDF: 29.3/25

Left Out: 174.691 $\pm$ 39.049  $\chi^2$ /NDF: 71.2/24

Right Out: 274.346 $\pm$ 113.417  $\chi^2$ /NDF: 20.4/30

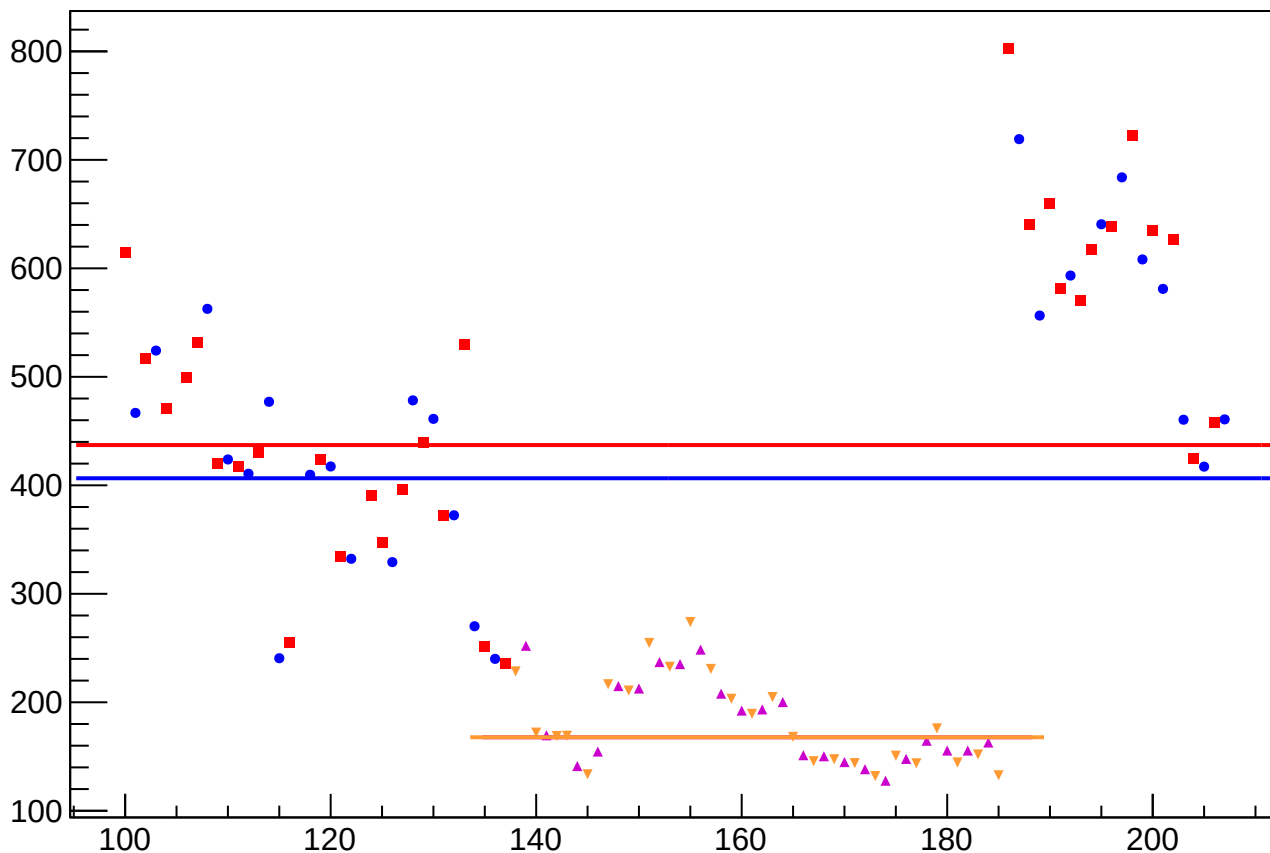
Left In: 24.590 $\pm$ 40.070  $\chi^2$ /NDF: 26.9/22

+ sign 188.305 $\pm$ 36.823  $\chi^2$ /NDF: 101.6/50

All: 122.051 $\pm$ 26.370  $\chi^2$ /NDF: 159.9/104

- sign 52.305 $\pm$ 37.782  $\chi^2$ /NDF: 51.6/53

asym\_sam\_1357\_2468\_dd\_cor\_correction\_rms vs Slug



Right In:  $406.494 \pm 0.078$   $\chi^2/\text{NDF}$ : 2684857.0/25

Left Out:  $167.754 \pm 0.028$   $\chi^2/\text{NDF}$ : 1578231.3/24

Right Out:  $437.093 \pm 0.080$   $\chi^2/\text{NDF}$ : 2847557.4/30

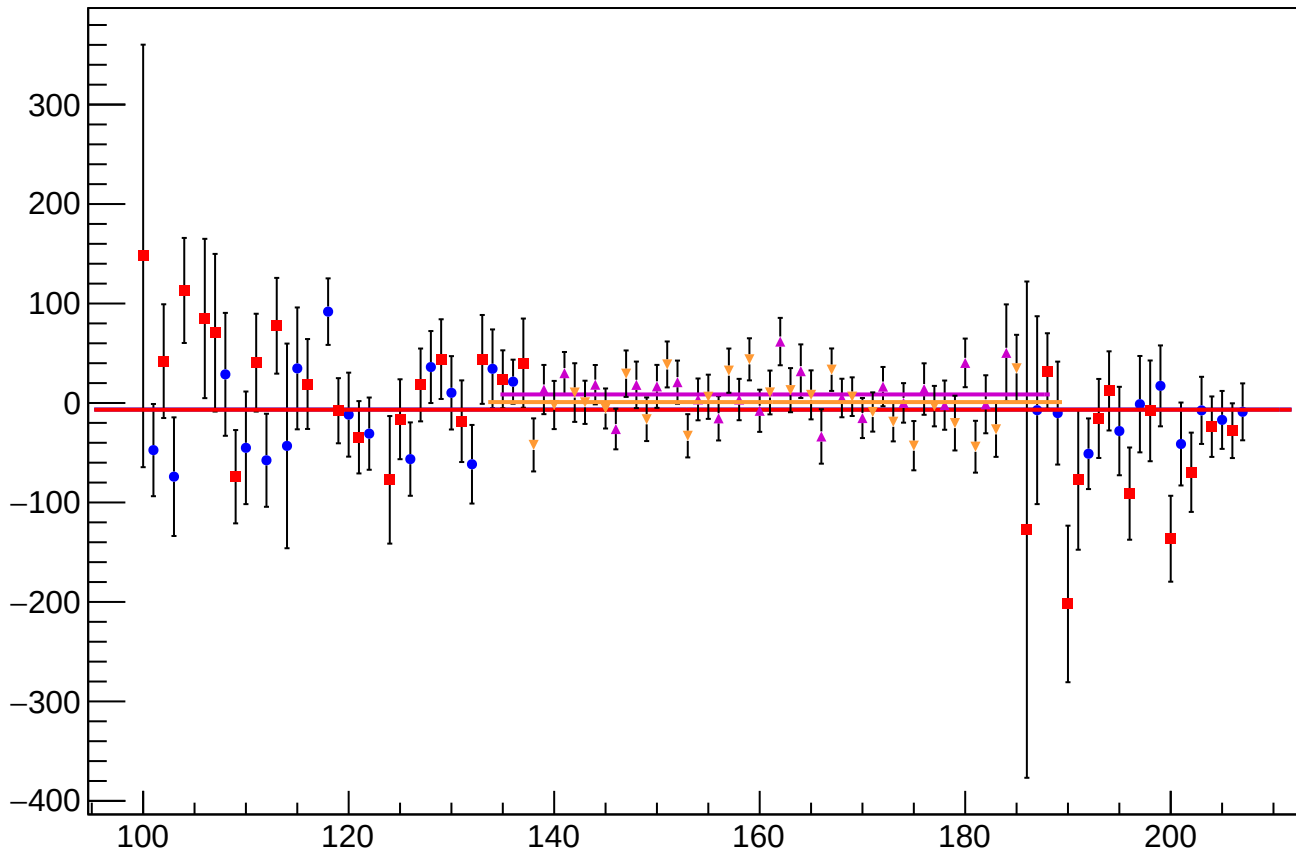
Left In:  $167.748 \pm 0.028$   $\chi^2/\text{NDF}$ : 1403120.1/22

+ sign  $194.193 \pm 0.026$   $\chi^2/\text{NDF}$ : 12542061.1/50

All:  $195.871 \pm 0.019$   $\chi^2/\text{NDF}$ : 26829055.9/10

- sign  $197.637 \pm 0.027$   $\chi^2/\text{NDF}$ : 14278471.2/53

eigen\_cor\_asym\_sam\_1357\_2468\_dd\_mean vs Slug



Right In:  $-6.578 \pm 7.767$   $\chi^2/\text{NDF}$ : 24.8/25

Left Out:  $0.915 \pm 4.574$   $\chi^2/\text{NDF}$ : 29.2/24

Right Out:  $-6.777 \pm 7.846$   $\chi^2/\text{NDF}$ : 47.0/30

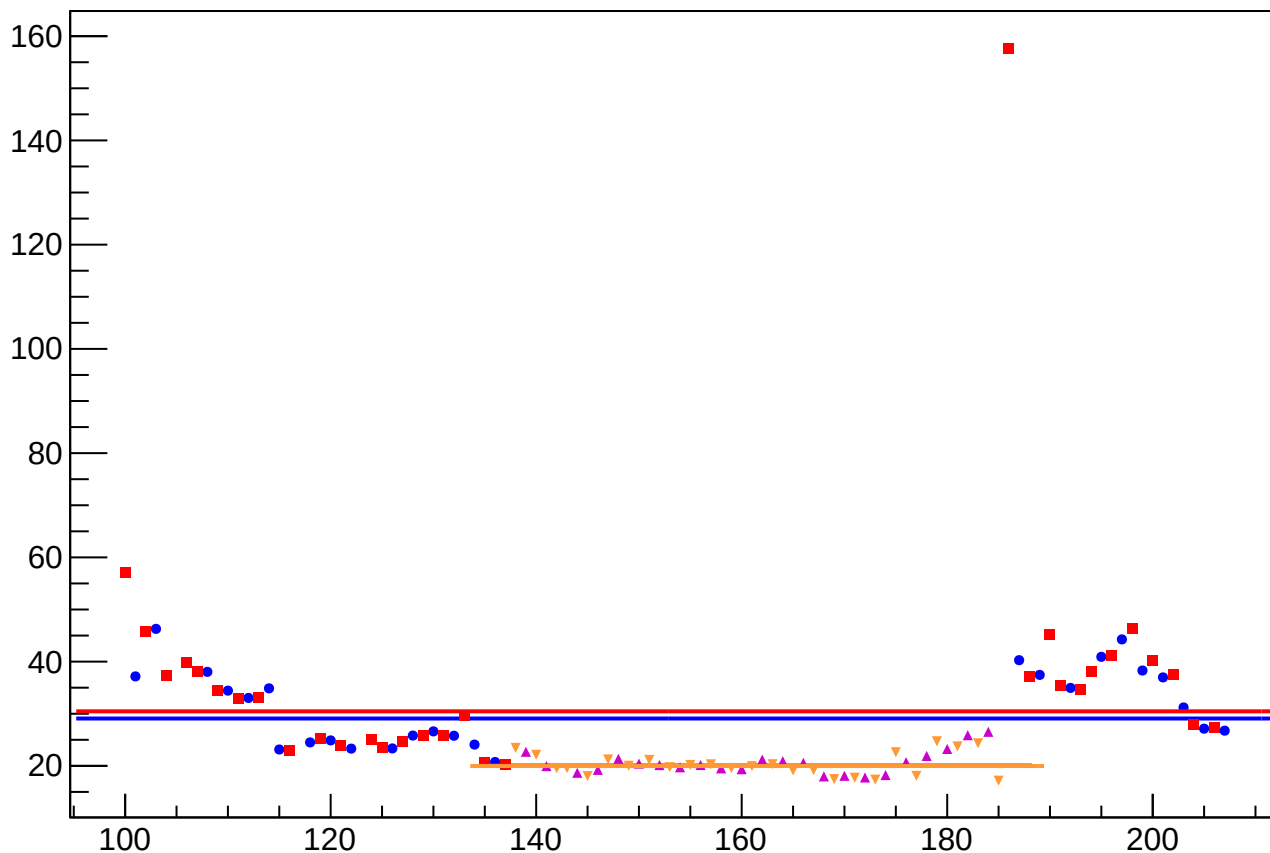
Left In:  $8.600 \pm 4.724$   $\chi^2/\text{NDF}$ : 19.4/22

+ sign  $-1.014 \pm 3.941$   $\chi^2/\text{NDF}$ : 54.7/50

All:  $1.675 \pm 2.824$   $\chi^2/\text{NDF}$ : 124.8/104

- sign  $4.510 \pm 4.047$   $\chi^2/\text{NDF}$ : 69.1/53

eigen\_cor\_asym\_sam\_1357\_2468\_dd\_rms vs Slug



Right In: 29.086 $\pm$ 0.005  $\chi^2$ /NDF: 1515372.4/25

Left Out: 19.969 $\pm$ 0.003  $\chi^2$ /NDF: 386763.9/24

Right Out: 30.467 $\pm$ 0.006  $\chi^2$ /NDF: 2222192.3/30

Left In: 20.072 $\pm$ 0.003  $\chi^2$ /NDF: 301705.2/22

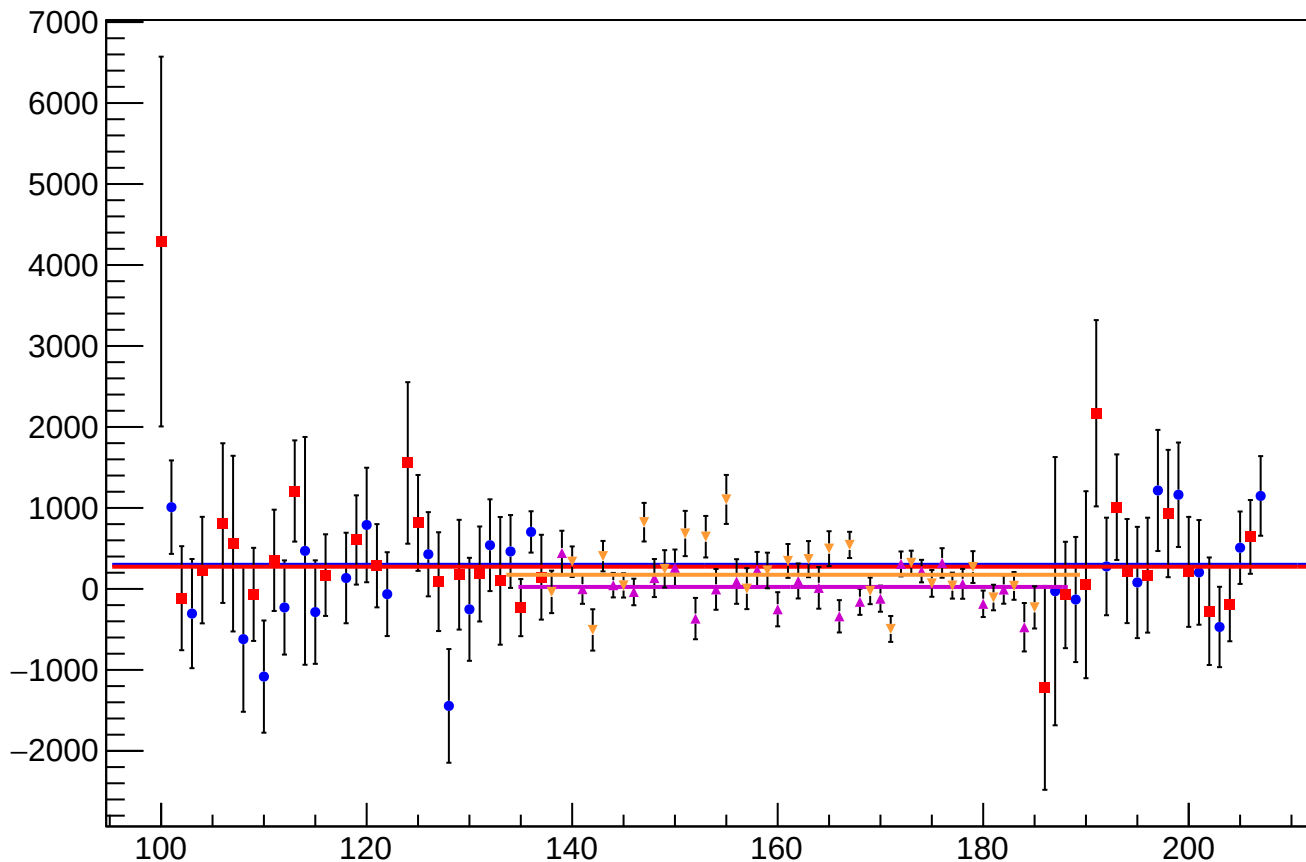
+ sign 22.316 $\pm$ 0.003  $\chi^2$ /NDF: 3948132.4/50

All: 22.570 $\pm$ 0.002  $\chi^2$ /NDF: 9065663.8/104

- sign 22.838 $\pm$ 0.003  $\chi^2$ /NDF: 5100476.6/53



asym\_sam\_1357\_2468\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In: 297.623 $\pm$ 110.654  $\chi^2$ /NDF: 29.3/25

Left Out: 174.691 $\pm$ 39.049  $\chi^2$ /NDF:71.2/24

Right Out: 274.346 $\pm$ 113.417  $\chi^2$ /NDF: 20.4/30

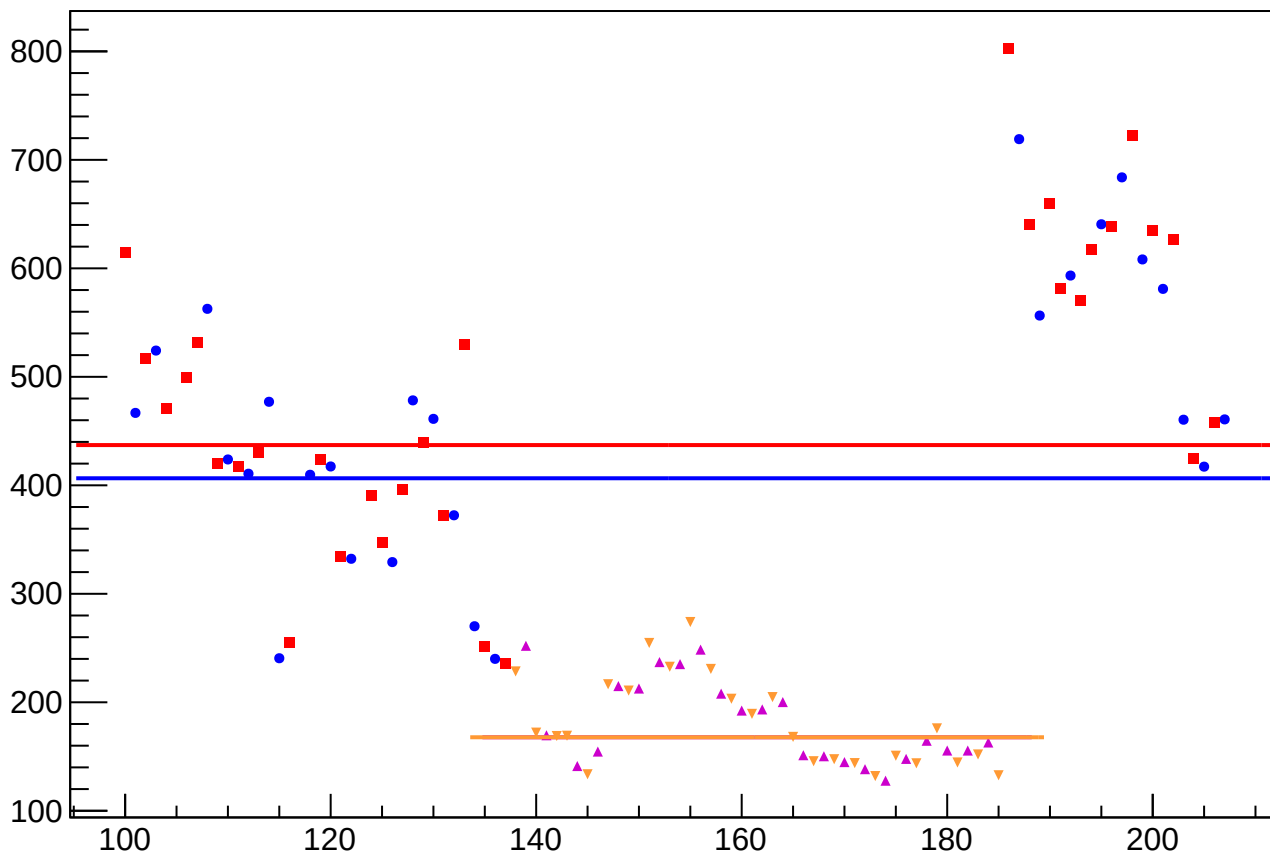
Left In: 24.590 $\pm$ 40.070  $\chi^2$ /NDF:26.9/22

+ sign 188.305 $\pm$ 36.823  $\chi^2$ /NDF: 101.6/50

All: 122.051 $\pm$ 26.370  $\chi^2$ /NDF: 159.9/104

- sign 52.305 $\pm$ 37.782  $\chi^2$ /NDF: 51.6/53

asym\_sam\_1357\_2468\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In:  $406.494 \pm 0.078$   $\chi^2/\text{NDF}$ : 2684857.0/25

Left Out:  $167.754 \pm 0.028$   $\chi^2/\text{NDF}$ : 1578231.3/24

Right Out:  $437.093 \pm 0.080$   $\chi^2/\text{NDF}$ : 2847557.4/30

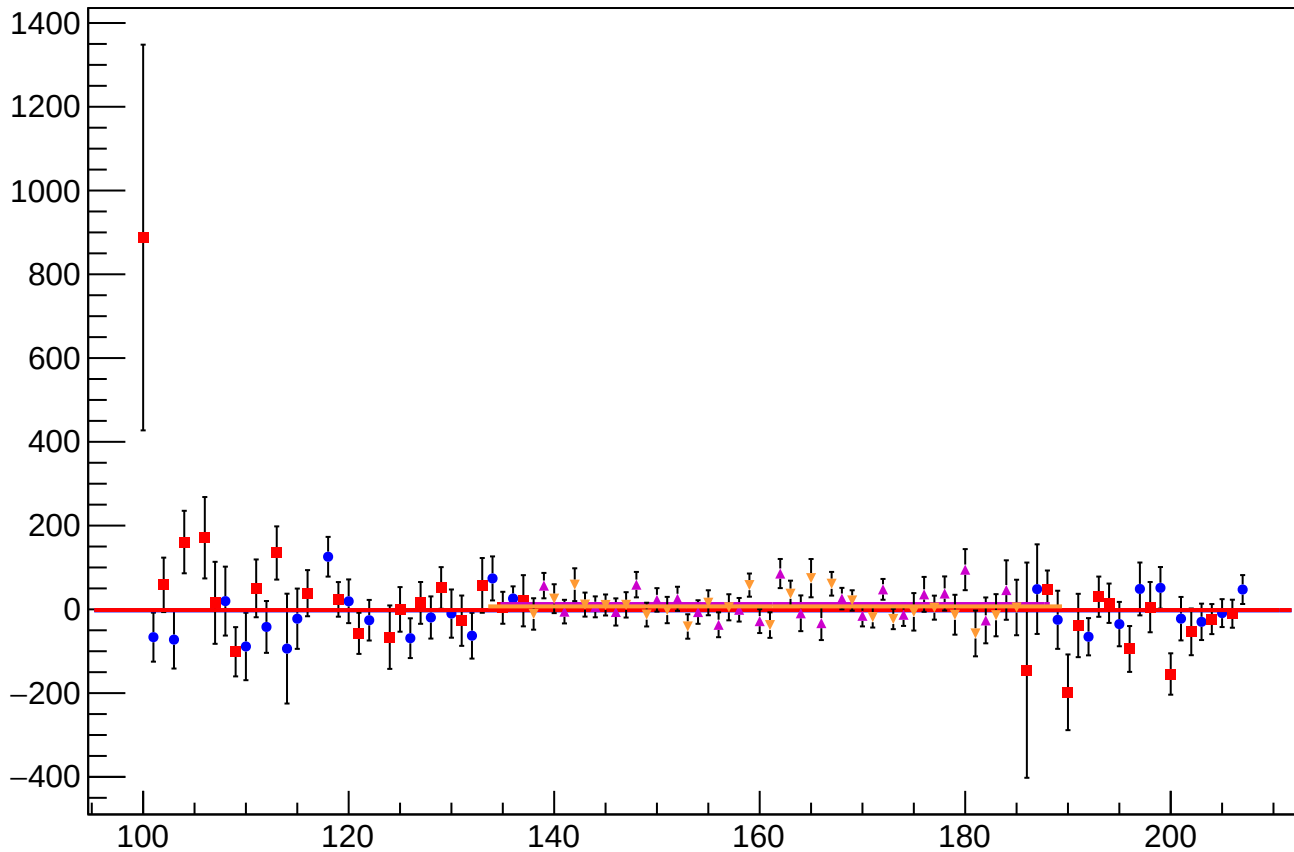
Left In:  $167.748 \pm 0.028$   $\chi^2/\text{NDF}$ : 1403120.1/22

+ sign  $194.193 \pm 0.026$   $\chi^2/\text{NDF}$ : 12542061.1/50

All:  $195.871 \pm 0.019$   $\chi^2/\text{NDF}$ : 26829055.9/10

- sign  $197.637 \pm 0.027$   $\chi^2/\text{NDF}$ : 14278471.2/53

# dit\_asym\_sam\_1357\_2468\_dd\_mean vs Slug



Right In:  $-2.497 \pm 9.985$   $\chi^2/\text{NDF}$ : 25.7/25

Left Out:  $7.079 \pm 6.333$   $\chi^2/\text{NDF}$ : 22.7/24

Right Out:  $-1.618 \pm 9.908$   $\chi^2/\text{NDF}$ : 46.5/30

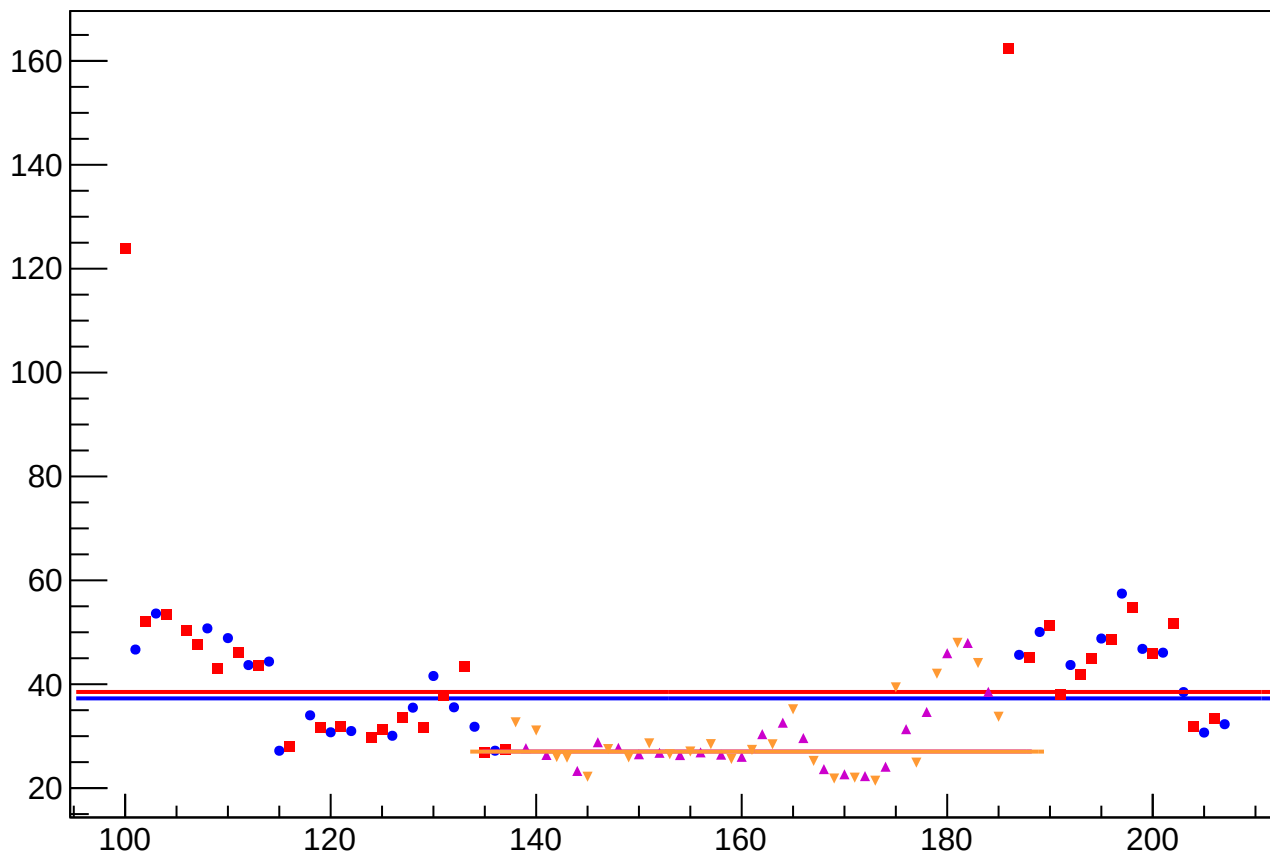
Left In:  $12.697 \pm 6.513$   $\chi^2/\text{NDF}$ : 25.6/22

+ sign  $4.332 \pm 5.348$   $\chi^2/\text{NDF}$ : 49.1/50

All:  $6.319 \pm 3.815$   $\chi^2/\text{NDF}$ : 122.9/104

- sign  $8.377 \pm 5.443$   $\chi^2/\text{NDF}$ : 73.6/53

dit\_asym\_sam\_1357\_2468\_dd\_rms vs Slug



Right In: 37.271 $\pm$ 0.007  $\chi^2$ /NDF: 1397090.4/25

Left Out: 27.026 $\pm$ 0.004  $\chi^2$ /NDF: 1430523.7/24

Right Out: 38.510 $\pm$ 0.007  $\chi^2$ /NDF: 1958255.7/30

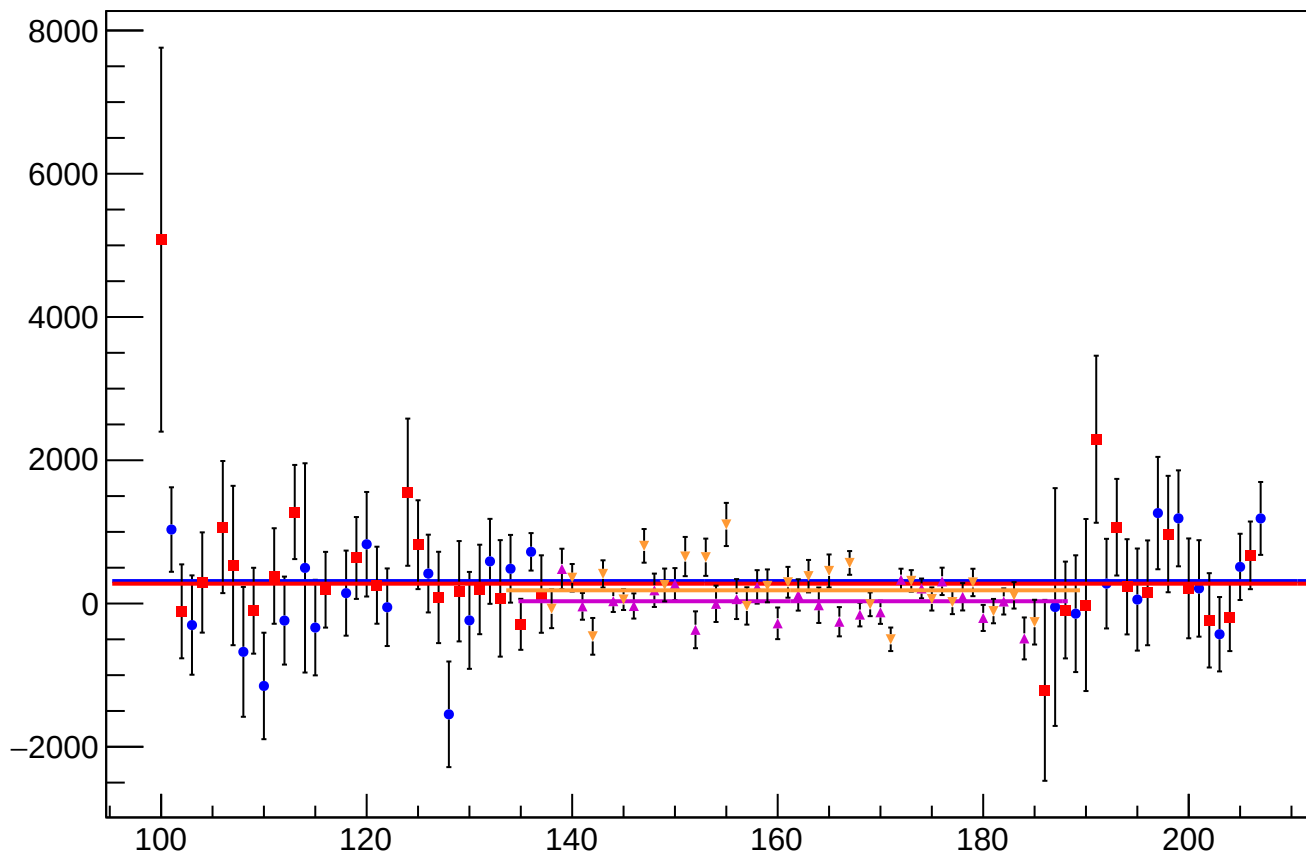
Left In: 27.052 $\pm$ 0.005  $\chi^2$ /NDF: 1044359.4/22

+ sign 29.965 $\pm$ 0.004  $\chi^2$ /NDF: 4328974.8/50

All: 30.233 $\pm$ 0.003  $\chi^2$ /NDF: 9209179.8/104

- sign 30.509 $\pm$ 0.004  $\chi^2$ /NDF: 4870040.3/53

asym\_sam\_1357\_2468\_dd\_dit\_correction\_mean vs Slug



Right In:  $313.448 \pm 115.072$   $\chi^2/\text{NDF}$ : 28.9/25

Left Out:  $184.675 \pm 39.832$   $\chi^2/\text{NDF}$ : 67.7/24

Right Out:  $276.995 \pm 117.255$   $\chi^2/\text{NDF}$ : 21.8/30

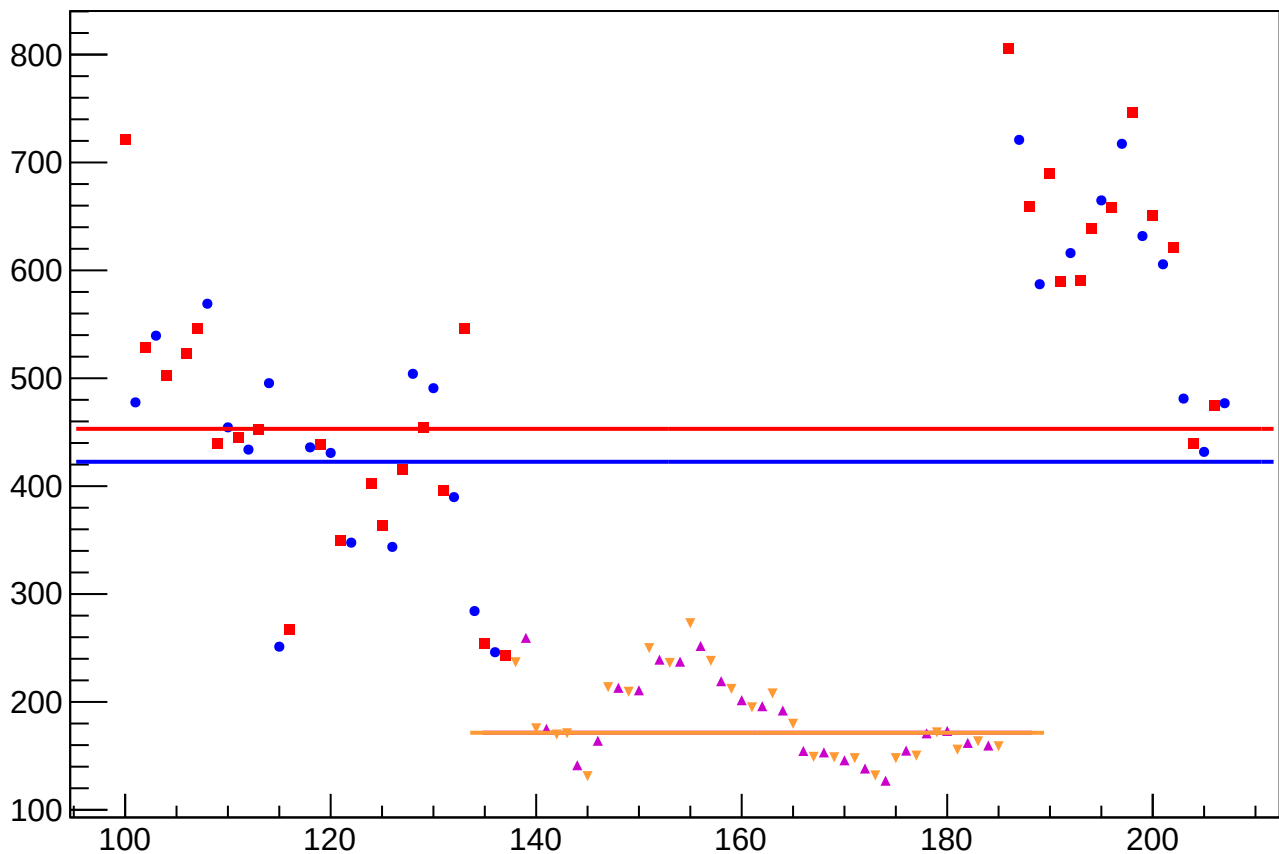
Left In:  $31.891 \pm 40.975$   $\chi^2/\text{NDF}$ : 26.4/22

+ sign  $198.453 \pm 37.641$   $\chi^2/\text{NDF}$ : 97.7/50

All:  $130.416 \pm 26.976$   $\chi^2/\text{NDF}$ : 156.4/104

- sign  $58.565 \pm 38.681$   $\chi^2/\text{NDF}$ : 52.0/53

asym\_sam\_1357\_2468\_dd\_dit\_correction\_rms vs Slug



Right In: 422.592 $\pm$ 0.081  $\chi^2$ /NDF: 2724821.3/25

Left Out: 171.427 $\pm$ 0.028  $\chi^2$ /NDF: 1526852.0/24

Right Out: 453.124 $\pm$ 0.083  $\chi^2$ /NDF: 2828146.1/30

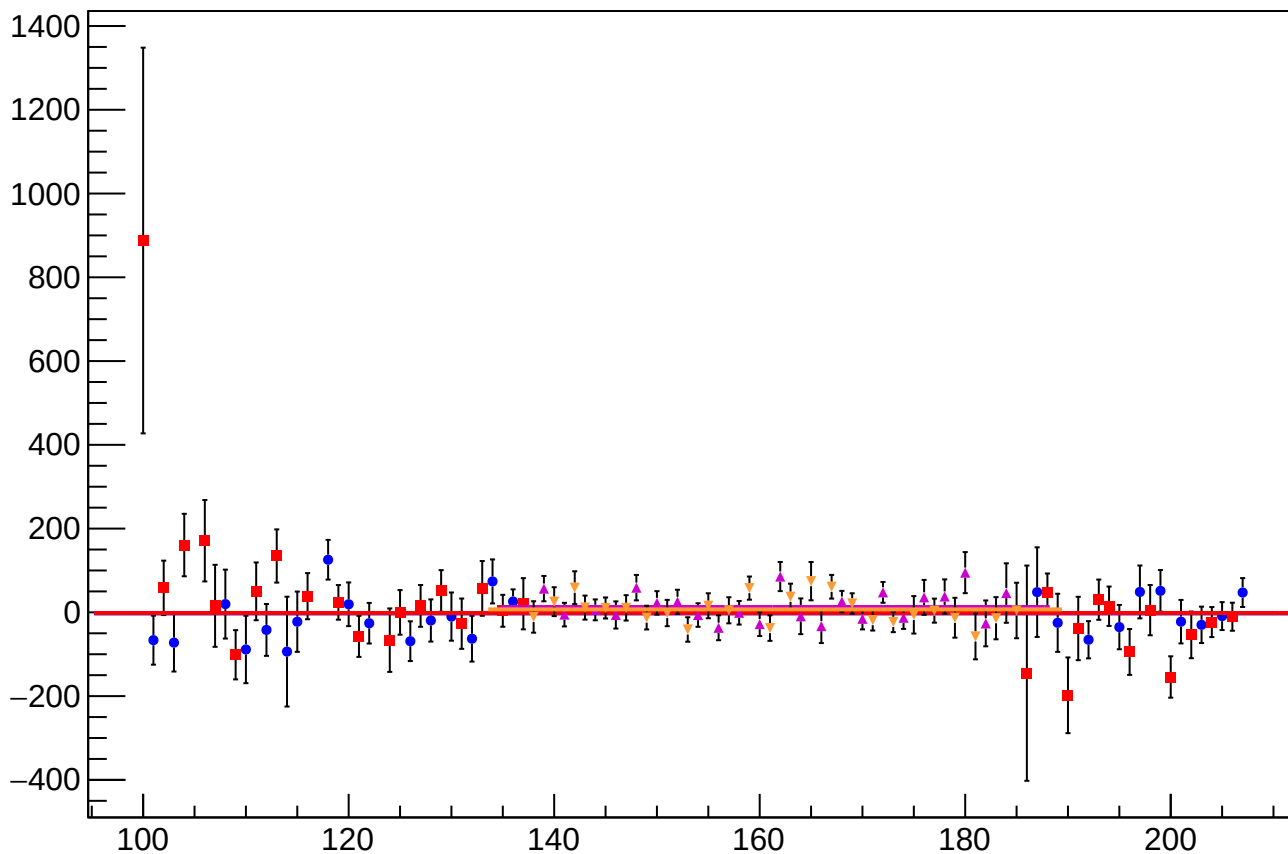
Left In: 171.490 $\pm$ 0.029  $\chi^2$ /NDF: 1415769.4/22

+ sign 198.301 $\pm$ 0.027  $\chi^2$ /NDF: 12760349.0/50

All: 200.168 $\pm$ 0.019  $\chi^2$ /NDF: 27296849.8/10

- sign 202.139 $\pm$ 0.027  $\chi^2$ /NDF: 14526387.4/53

eigen\_dit\_asym\_sam\_1357\_2468\_dd\_mean vs Slug



Right In:  $-2.499 \pm 9.985$   $\chi^2/\text{NDF}: 25.7/25$

Left Out:  $7.079 \pm 6.333$   $\chi^2/\text{NDF}: 22.7/24$

Right Out:  $-1.617 \pm 9.908$   $\chi^2/\text{NDF}: 46.5/30$

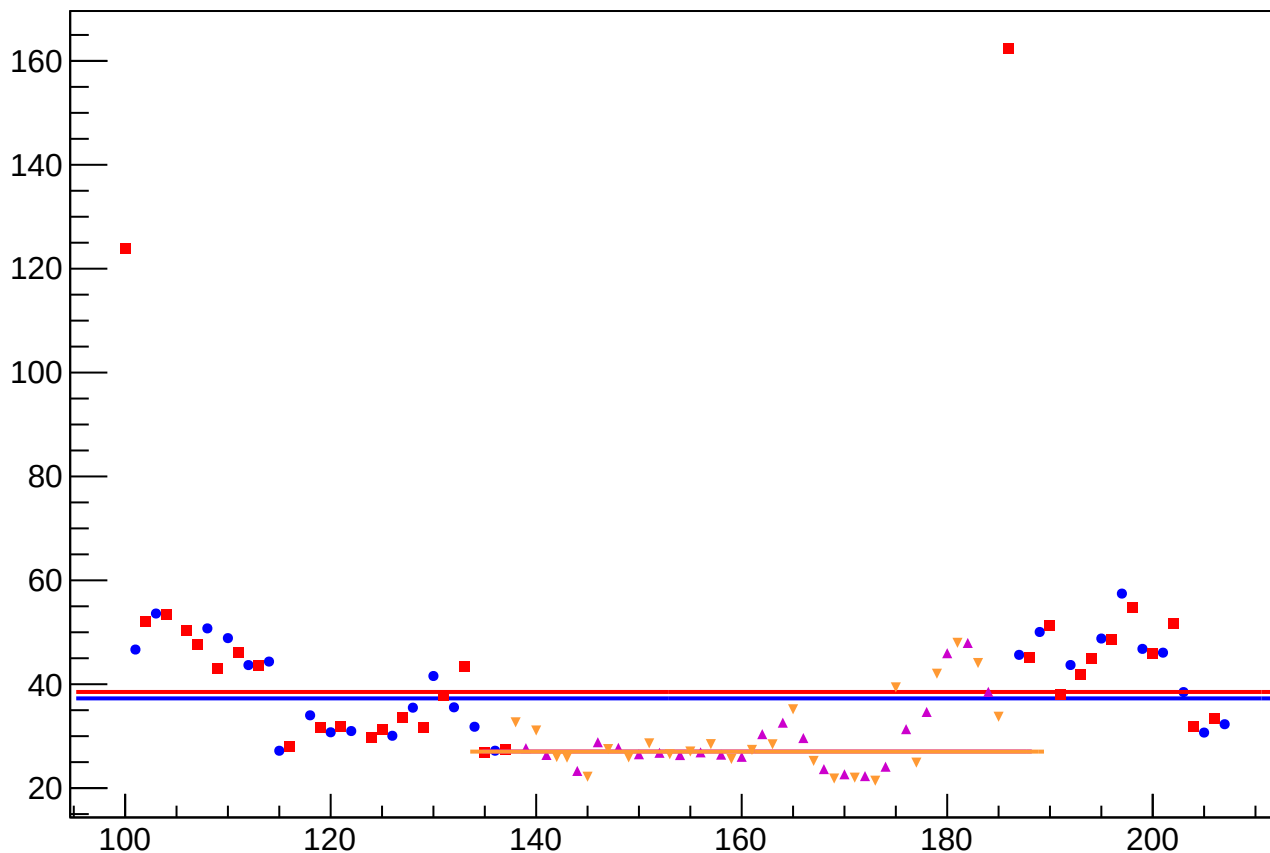
Left In:  $12.697 \pm 6.513$   $\chi^2/\text{NDF}: 25.6/22$

+ sign  $4.331 \pm 5.348$   $\chi^2/\text{NDF}: 49.1/50$

All:  $6.319 \pm 3.815$   $\chi^2/\text{NDF}: 122.9/104$

- sign  $8.378 \pm 5.443$   $\chi^2/\text{NDF}: 73.6/53$

eigen\_dit\_asym\_sam\_1357\_2468\_dd\_rms vs Slug



Right In: 37.270 $\pm$ 0.007  $\chi^2$ /NDF: 1397081.0/25

Left Out: 27.026 $\pm$ 0.004  $\chi^2$ /NDF:1430534.9/24

Right Out: 38.510 $\pm$ 0.007  $\chi^2$ /NDF: 1958262.5/30

Left In: 27.052 $\pm$ 0.005  $\chi^2$ /NDF:1044338.2/22

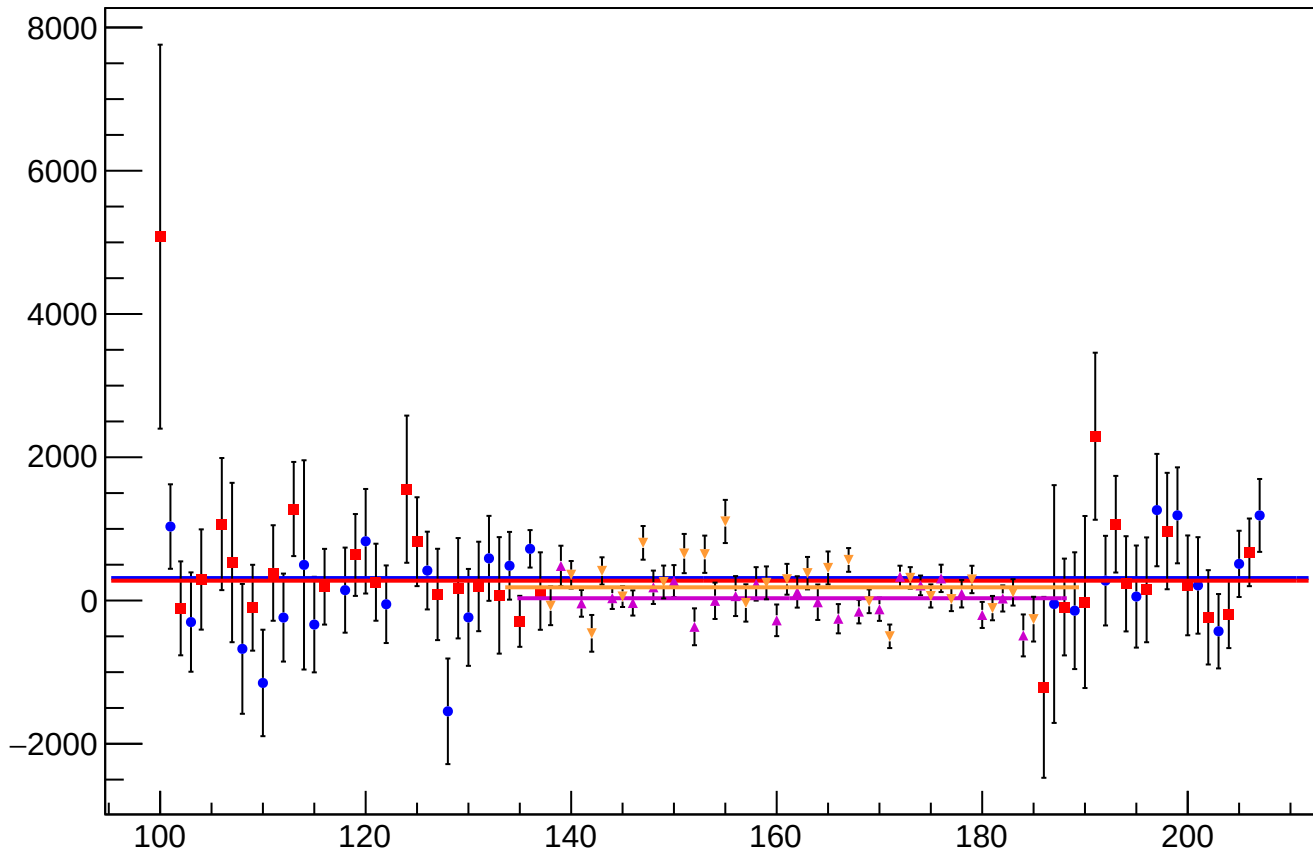
+ sign 29.965 $\pm$ 0.004  $\chi^2$ /NDF: 4328870.4/50

All: 30.233 $\pm$ 0.003  $\chi^2$ /NDF: 9208990.8/104

- sign 30.509 $\pm$ 0.004  $\chi^2$ /NDF: 4869955.7/53



asym\_sam\_1357\_2468\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $313.446 \pm 115.072$   $\chi^2/\text{NDF}$ : 28.9/25

Left Out:  $184.674 \pm 39.832$   $\chi^2/\text{NDF}$ : 67.7/24

Right Out:  $276.996 \pm 117.255$   $\chi^2/\text{NDF}$ : 21.8/30

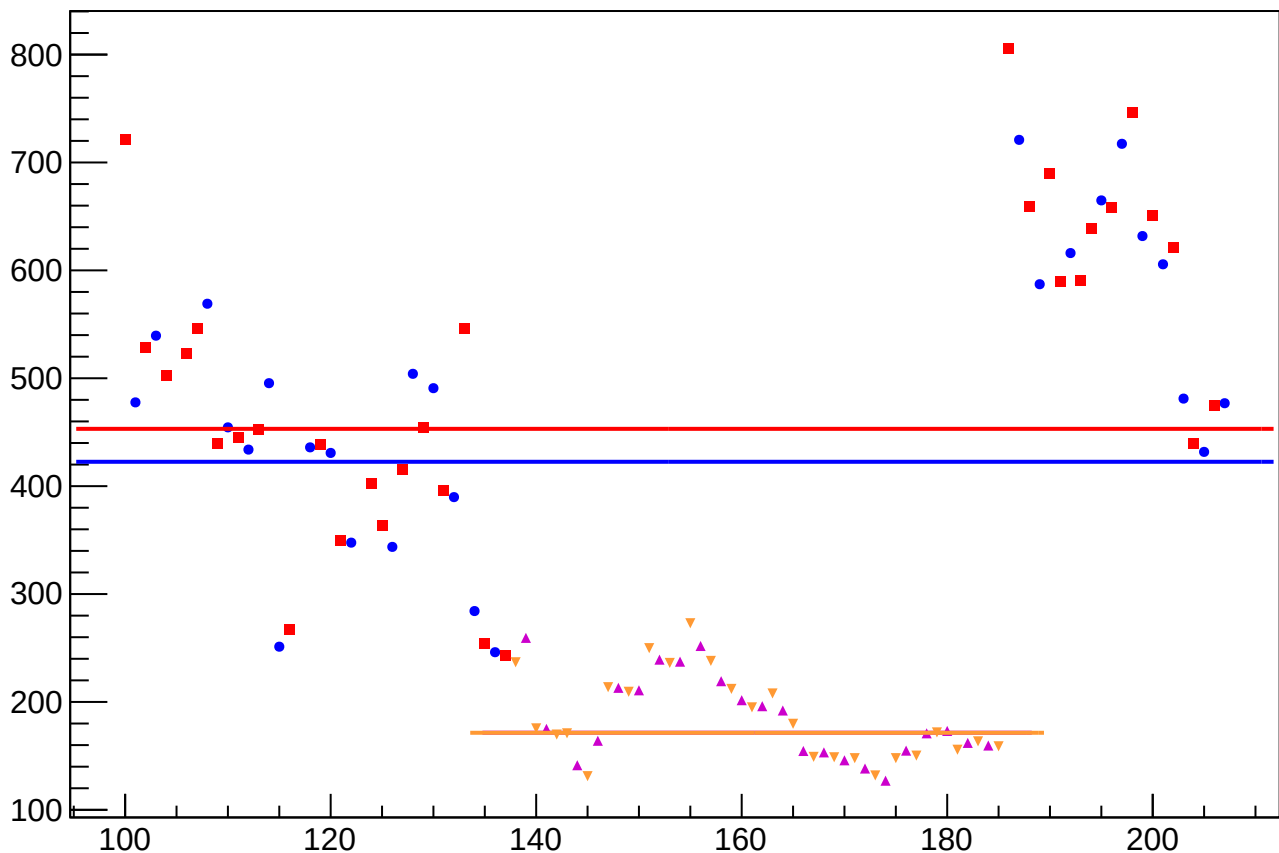
Left In:  $31.891 \pm 40.975$   $\chi^2/\text{NDF}$ : 26.4/22

+ sign  $198.452 \pm 37.641$   $\chi^2/\text{NDF}$ : 97.7/50

All:  $130.415 \pm 26.976$   $\chi^2/\text{NDF}$ : 156.4/104

- sign  $58.565 \pm 38.681$   $\chi^2/\text{NDF}$ : 52.0/53

asym\_sam\_1357\_2468\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 422.591 $\pm$ 0.081  $\chi^2$ /NDF: 2724827.4/25

Left Out: 171.426 $\pm$ 0.028  $\chi^2$ /NDF:1526868.9/24

Right Out: 453.123 $\pm$ 0.083  $\chi^2$ /NDF: 2828158.2/30

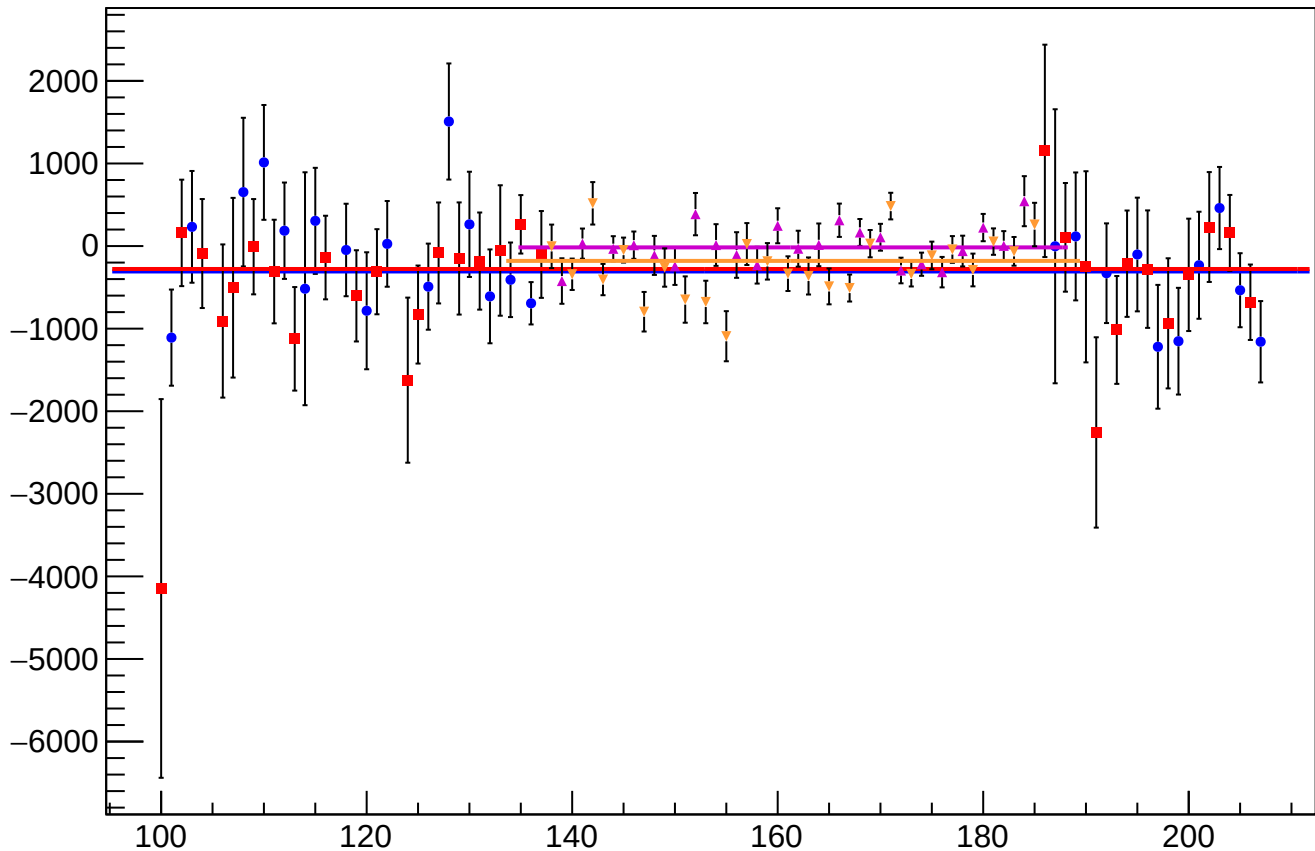
Left In: 171.489 $\pm$ 0.029  $\chi^2$ /NDF:1415782.1/22

+ sign 198.300 $\pm$ 0.027  $\chi^2$ /NDF: 12760386.4/50

All: 200.167 $\pm$ 0.019  $\chi^2$ /NDF: 27296937.2/10

- sign 202.138 $\pm$ 0.027  $\chi^2$ /NDF: 14526438.0/53

# asym\_sam\_1357\_2468\_dd\_mean vs Slug



Right In:  $-307.745 \pm 110.996$   $\chi^2/\text{NDF}$ : 29.5/25

Left Out:  $-179.656 \pm 39.364$   $\chi^2/\text{NDF}$ : 67.1/24

Right Out:  $-277.556 \pm 113.639$   $\chi^2/\text{NDF}$ : 20.5/30

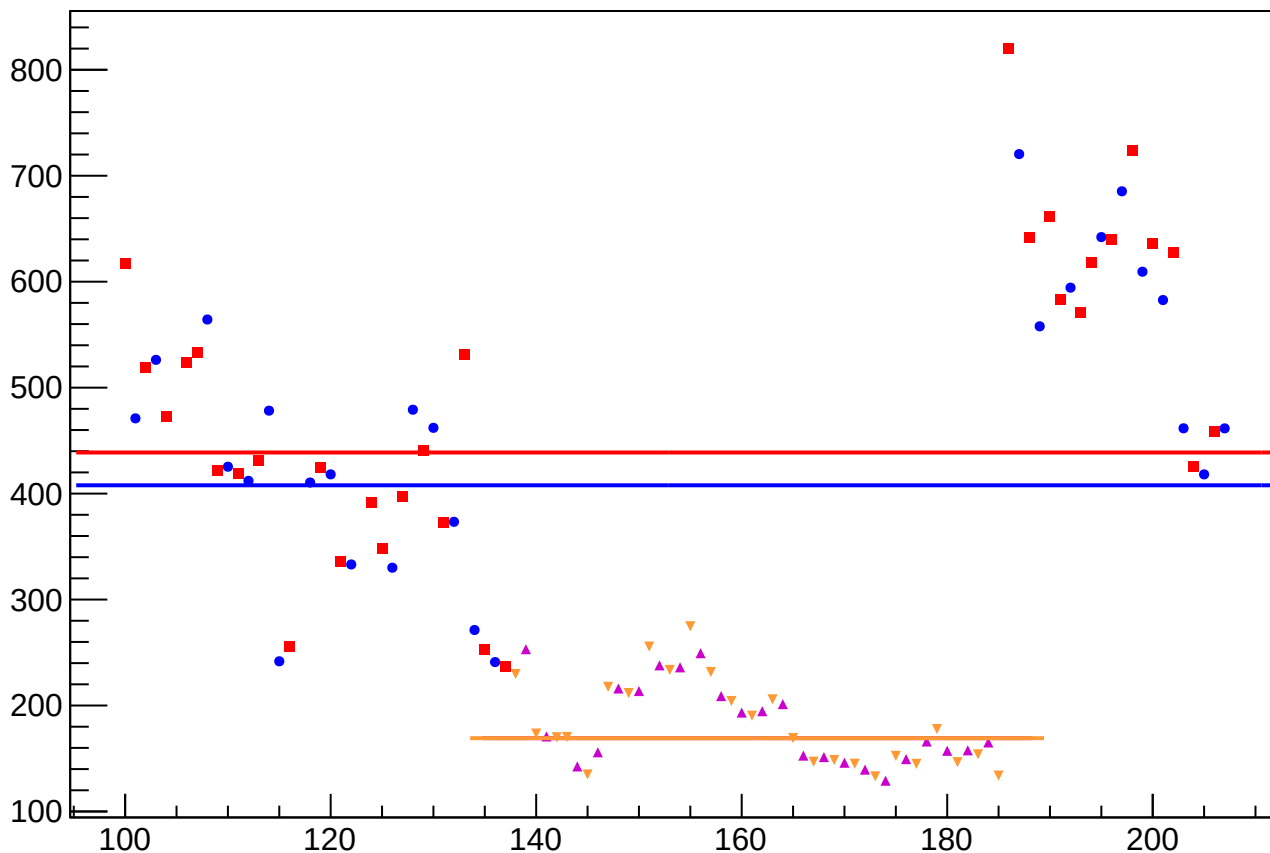
Left In:  $-16.057 \pm 40.396$   $\chi^2/\text{NDF}$ : 26.6/22

+ sign  $-193.965 \pm 37.100$   $\chi^2/\text{NDF}$ : 97.7/50

All:  $-121.584 \pm 26.567$   $\chi^2/\text{NDF}$ : 157.4/104

- sign  $-45.394 \pm 38.063$   $\chi^2/\text{NDF}$ : 51.8/53

# asym\_sam\_1357\_2468\_dd\_rms vs Slug



Right In: 407.845 $\pm$ 0.078  $\chi^2$ /NDF: 2675701.4/25

Left Out: 169.182 $\pm$ 0.028  $\chi^2$ /NDF:1547748.9/24

Right Out: 438.811 $\pm$ 0.080  $\chi^2$ /NDF: 2855627.6/30

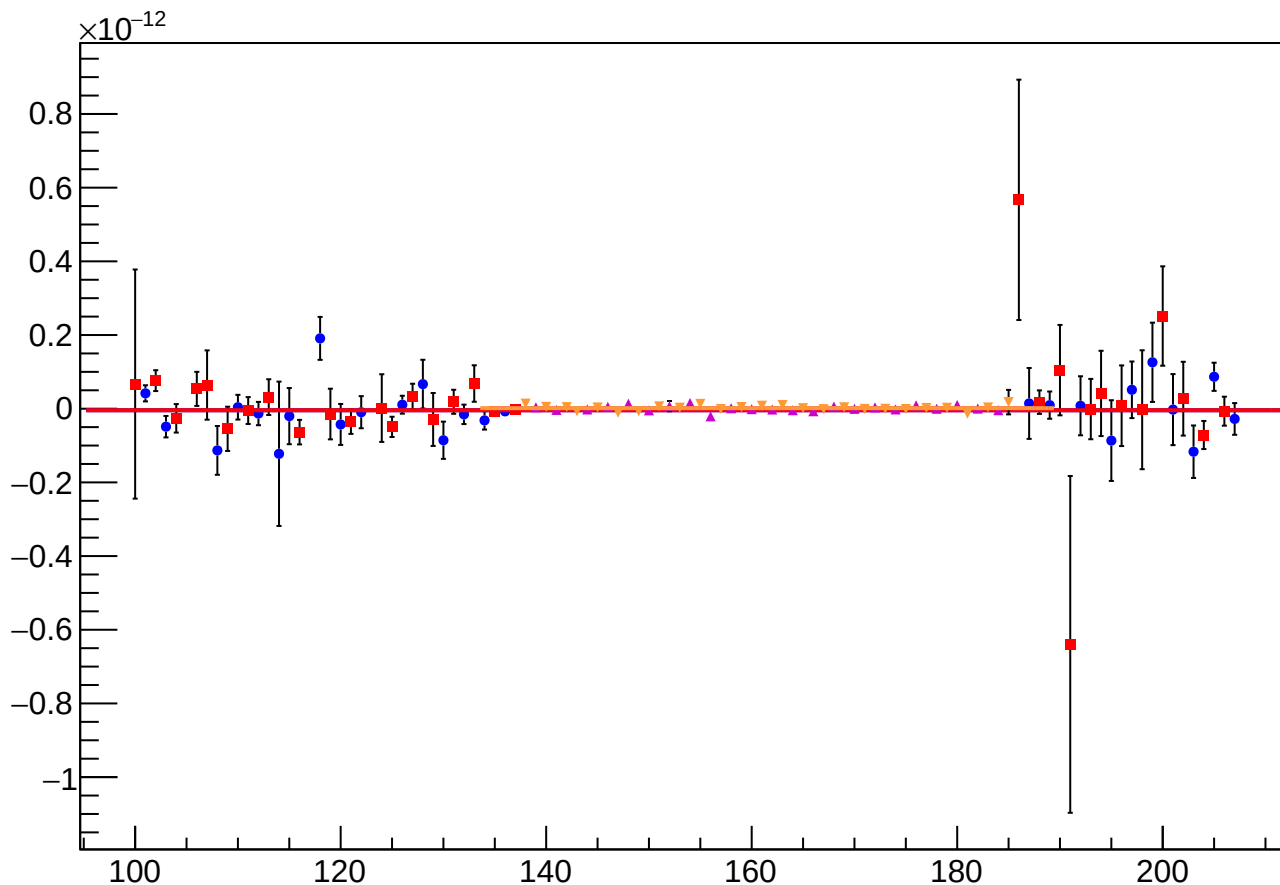
Left In: 169.187 $\pm$ 0.029  $\chi^2$ /NDF:1374439.5/22

+ sign 195.845 $\pm$ 0.026  $\chi^2$ /NDF: 12437111.9/50

All: 197.594 $\pm$ 0.019  $\chi^2$ /NDF: 26672084.4/10

- sign 199.436 $\pm$ 0.027  $\chi^2$ /NDF: 14225842.9/53

asym\_sam\_1357\_2468\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 38.6/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:18.8/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 36.2/30

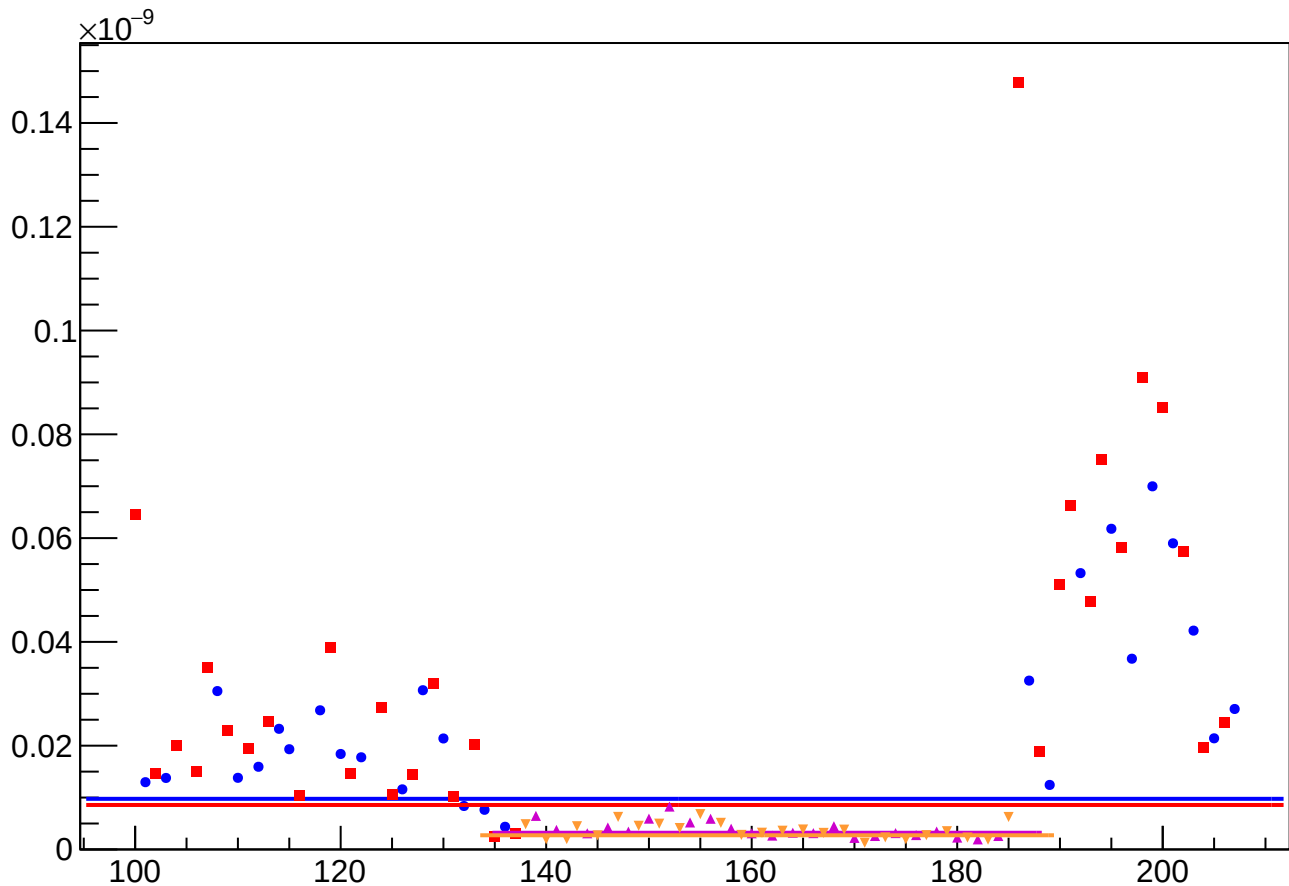
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:19.7/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 58.4/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 115.3/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 56.9/53

asym\_sam\_1357\_2468\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 5624590.0/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1923193.7/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 8110340.7/30

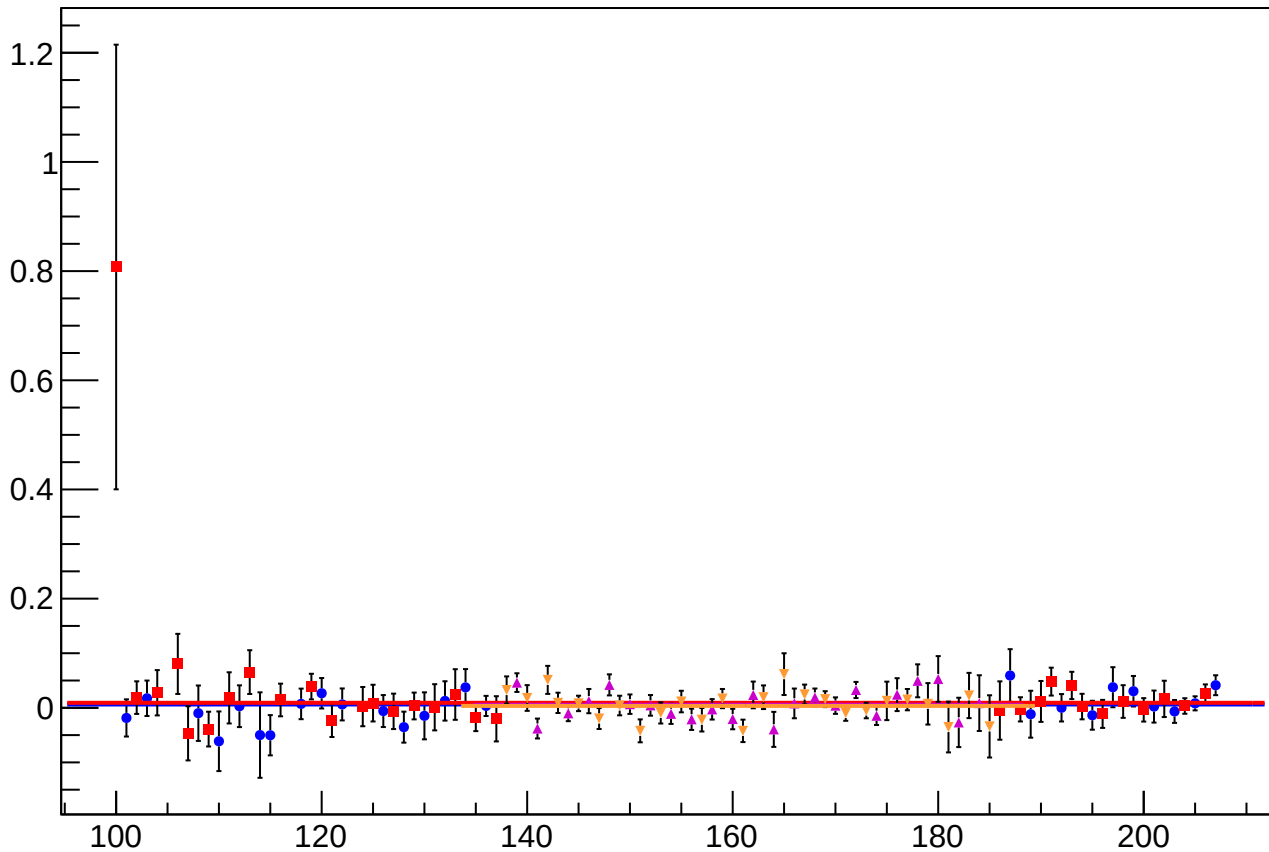
Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1355602.1/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 10732201.2/50

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 22263212.7/104

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 11367461.6/53

asym\_sam\_1357\_2468\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.006 $\pm$ 0.005  $\chi^2$ /NDF: 16.8/25

Left Out: 0.003 $\pm$ 0.004  $\chi^2$ /NDF:26.9/24

Right Out: 0.009 $\pm$ 0.005  $\chi^2$ /NDF: 22.9/30

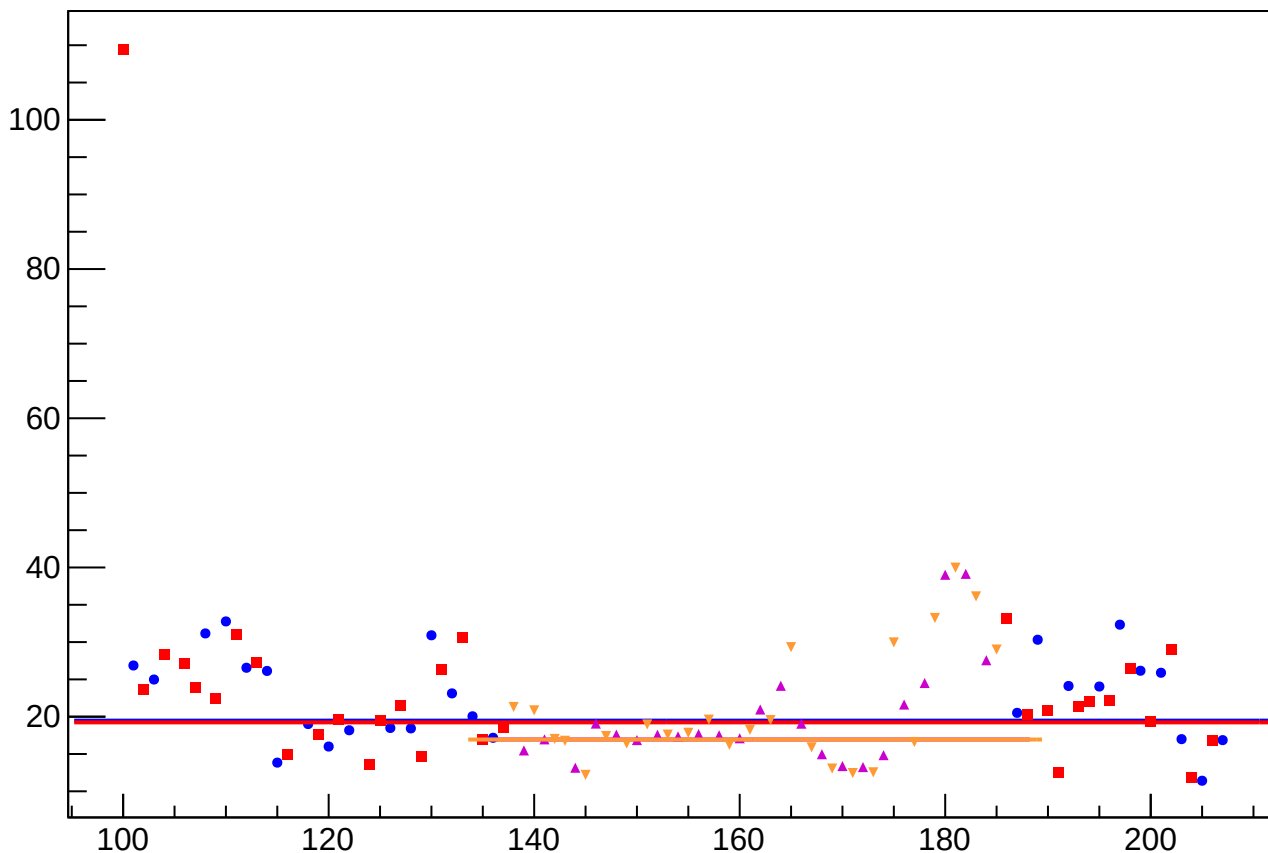
Left In: 0.005 $\pm$ 0.004  $\chi^2$ /NDF:33.2/22

+ sign 0.004 $\pm$ 0.003  $\chi^2$ /NDF: 43.9/50

All: 0.006 $\pm$ 0.002  $\chi^2$ /NDF: 100.6/104

- sign 0.007 $\pm$ 0.003  $\chi^2$ /NDF: 56.4/53

asym\_sam\_1357\_2468\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 19.471 $\pm$ 0.004  $\chi^2$ /NDF: 2301623.5/25

Left Out: 16.939 $\pm$ 0.003  $\chi^2$ /NDF: 2836877.8/24

Right Out: 19.239 $\pm$ 0.004  $\chi^2$ /NDF: 2113985.6/30

Left In: 16.943 $\pm$ 0.003  $\chi^2$ /NDF: 1941845.2/22

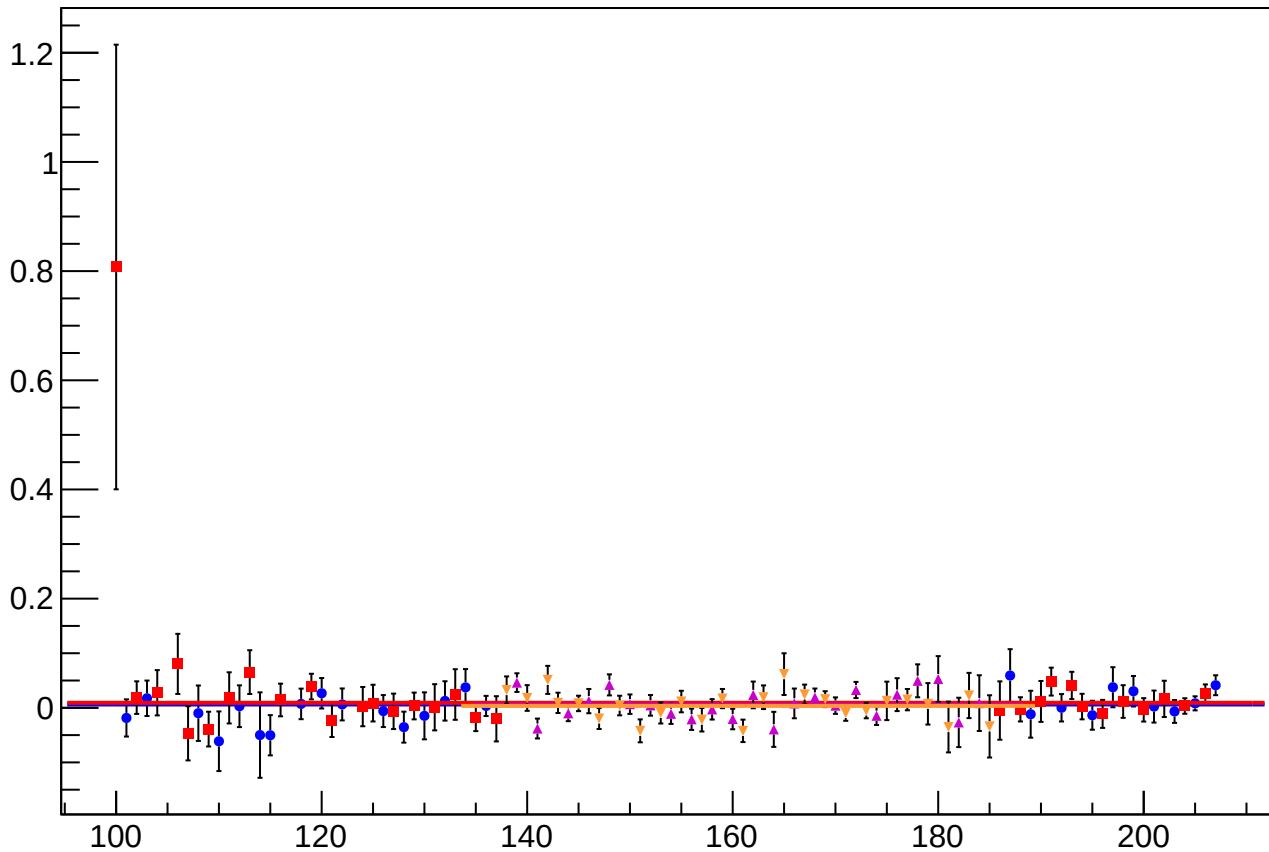
+ sign 17.855 $\pm$ 0.002  $\chi^2$ /NDF: 5415754.8/50

All: 17.860 $\pm$ 0.002  $\chi^2$ /NDF: 9712634.6/104

- sign 17.865 $\pm$ 0.002  $\chi^2$ /NDF: 4296870.3/53



asym\_sam\_1357\_2468\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.006 \pm 0.005$   $\chi^2/\text{NDF}$ : 16.8/25

Left Out:  $0.003 \pm 0.004$   $\chi^2/\text{NDF}$ : 26.9/24

Right Out:  $0.009 \pm 0.005$   $\chi^2/\text{NDF}$ : 22.9/30

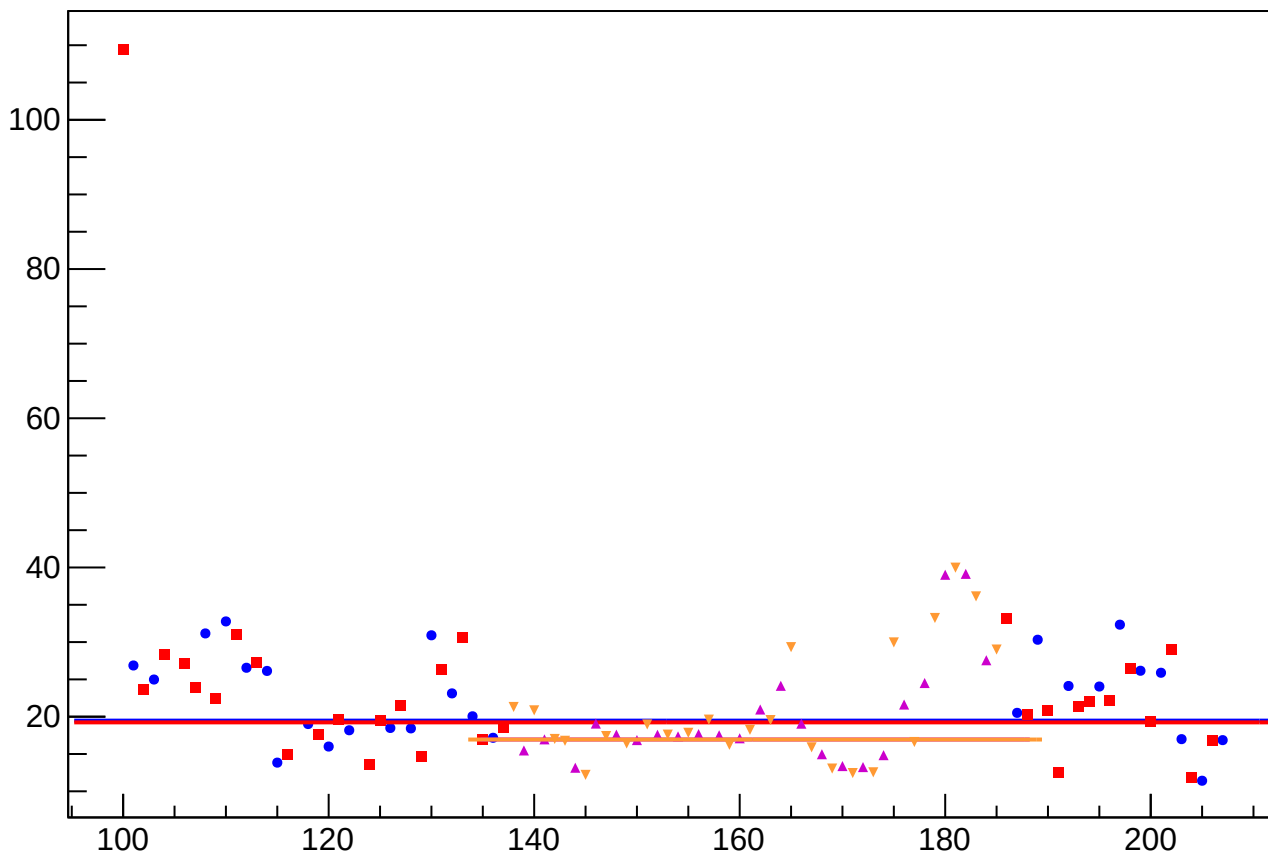
Left In:  $0.005 \pm 0.004$   $\chi^2/\text{NDF}$ : 33.2/22

+ sign  $0.004 \pm 0.003$   $\chi^2/\text{NDF}$ : 43.9/50

All:  $0.006 \pm 0.002$   $\chi^2/\text{NDF}$ : 100.6/104

- sign  $0.007 \pm 0.003$   $\chi^2/\text{NDF}$ : 56.4/53

asym\_sam\_1357\_2468\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 19.471 $\pm$ 0.004  $\chi^2$ /NDF: 2301623.5/25

Left Out: 16.939 $\pm$ 0.003  $\chi^2$ /NDF: 2836877.8/24

Right Out: 19.239 $\pm$ 0.004  $\chi^2$ /NDF: 2113985.6/30

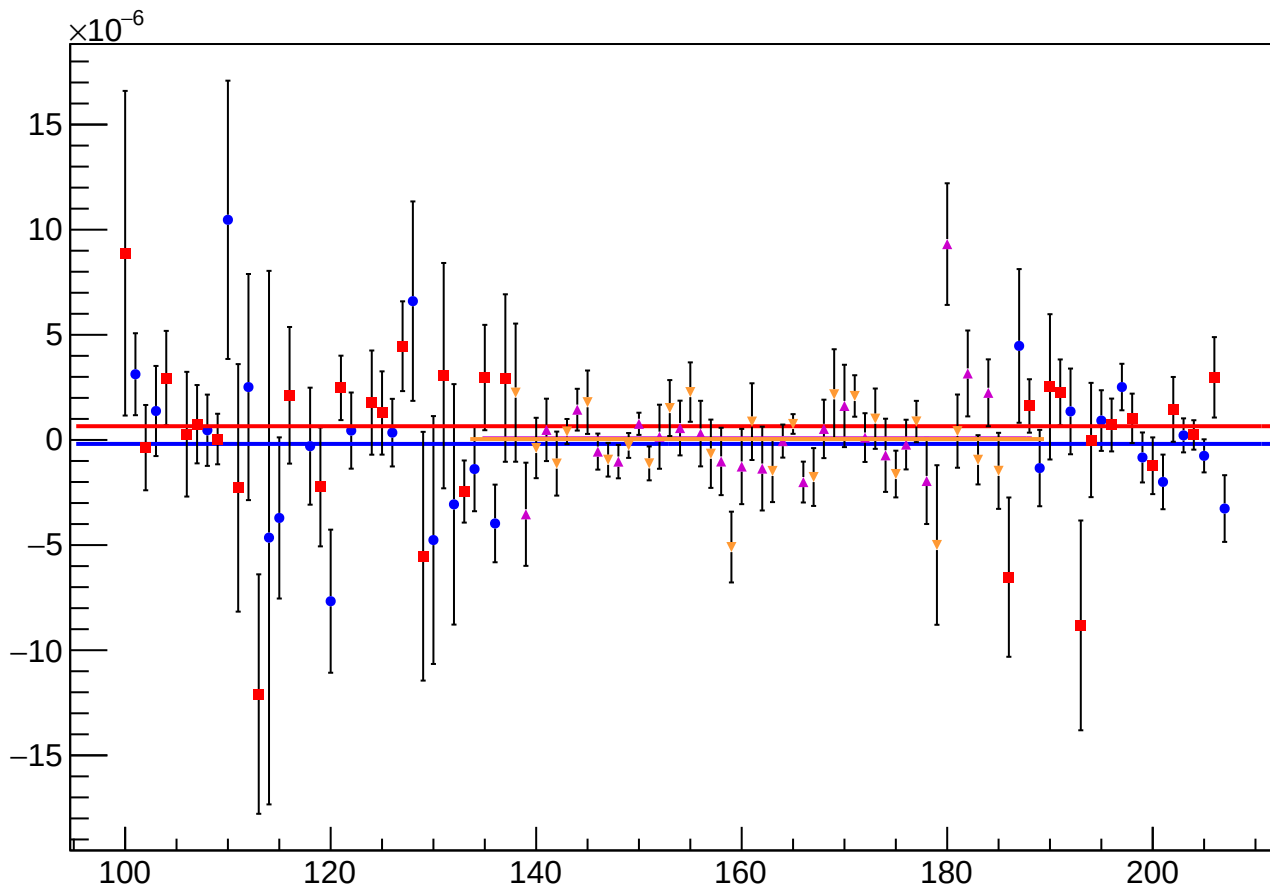
Left In: 16.943 $\pm$ 0.003  $\chi^2$ /NDF: 1941845.2/22

+ sign 17.855 $\pm$ 0.002  $\chi^2$ /NDF: 5415754.8/50

All: 17.860 $\pm$ 0.002  $\chi^2$ /NDF: 9712634.6/104

- sign 17.865 $\pm$ 0.002  $\chi^2$ /NDF: 4296870.3/53

asym\_sam\_1357\_2468\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 35.8/25

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 37.2/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 34.3/30

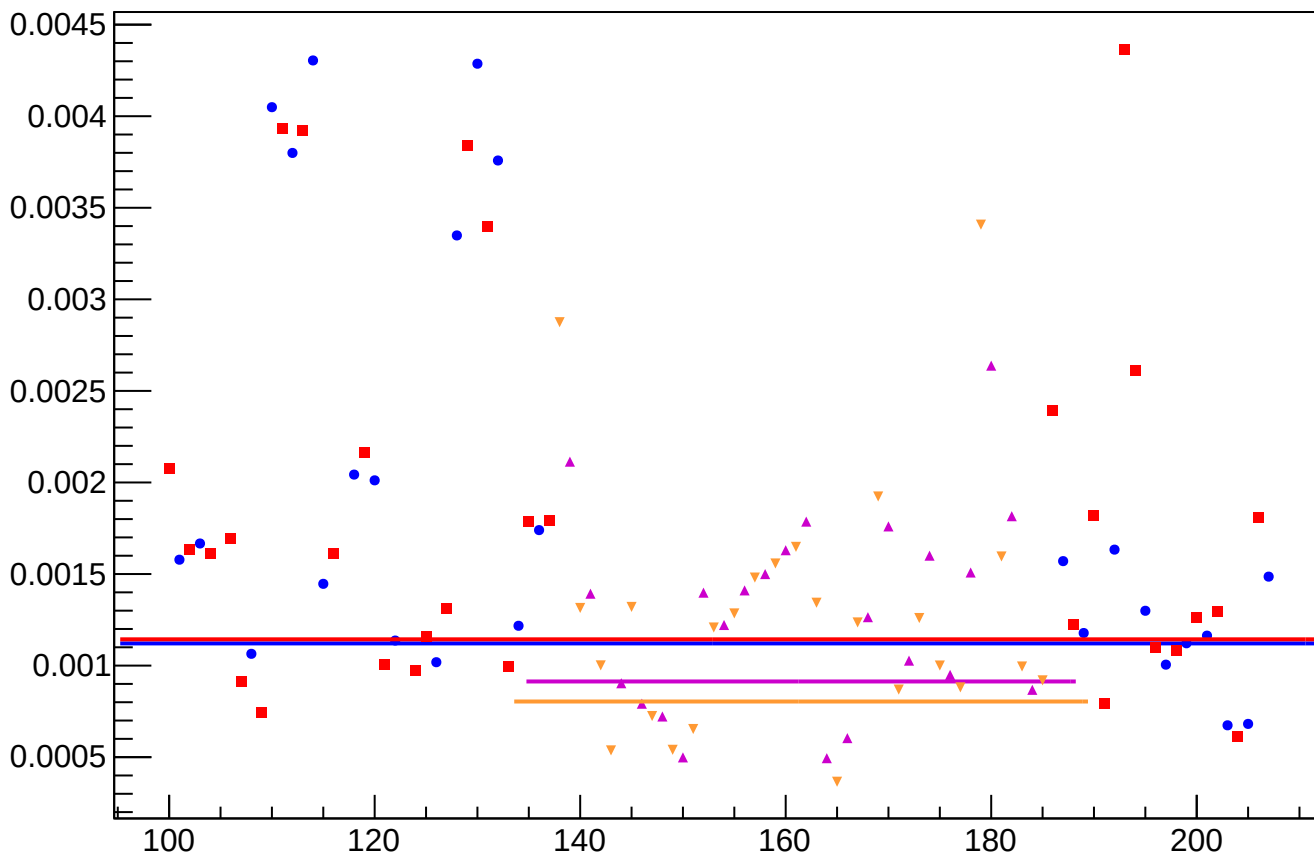
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 31.0/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 73.4/50

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 142.1/104

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 67.3/53

asym\_sam\_1357\_2468\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.001 $\pm$ 0.000  $\chi^2$ /NDF: 4861929.8/25

Left Out: 0.001 $\pm$ 0.000  $\chi^2$ /NDF:8261261.7/24

Right Out: 0.001 $\pm$ 0.000  $\chi^2$ /NDF: 6044334.8/30

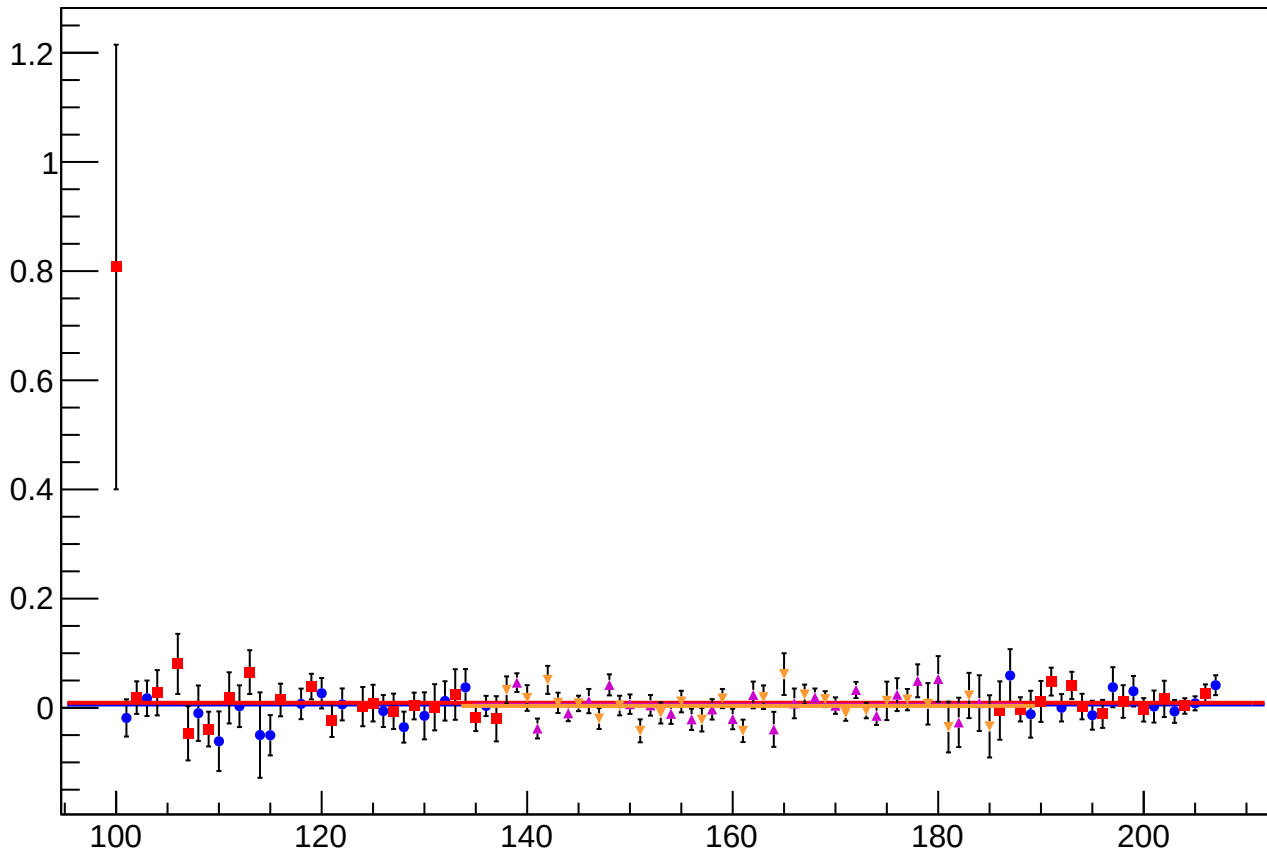
Left In: 0.001 $\pm$ 0.000  $\chi^2$ /NDF:6446479.8/22

+ sign 0.001 $\pm$ 0.000  $\chi^2$ /NDF: 14451308.0/50

All: 0.001 $\pm$ 0.000  $\chi^2$ /NDF: 27892223.9/104

- sign 0.001 $\pm$ 0.000  $\chi^2$ /NDF: 13139693.1/53

asym\_sam\_1357\_2468\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.006 $\pm$ 0.005  $\chi^2$ /NDF: 16.8/25

Left Out: 0.003 $\pm$ 0.004  $\chi^2$ /NDF:26.9/24

Right Out: 0.009 $\pm$ 0.005  $\chi^2$ /NDF: 22.9/30

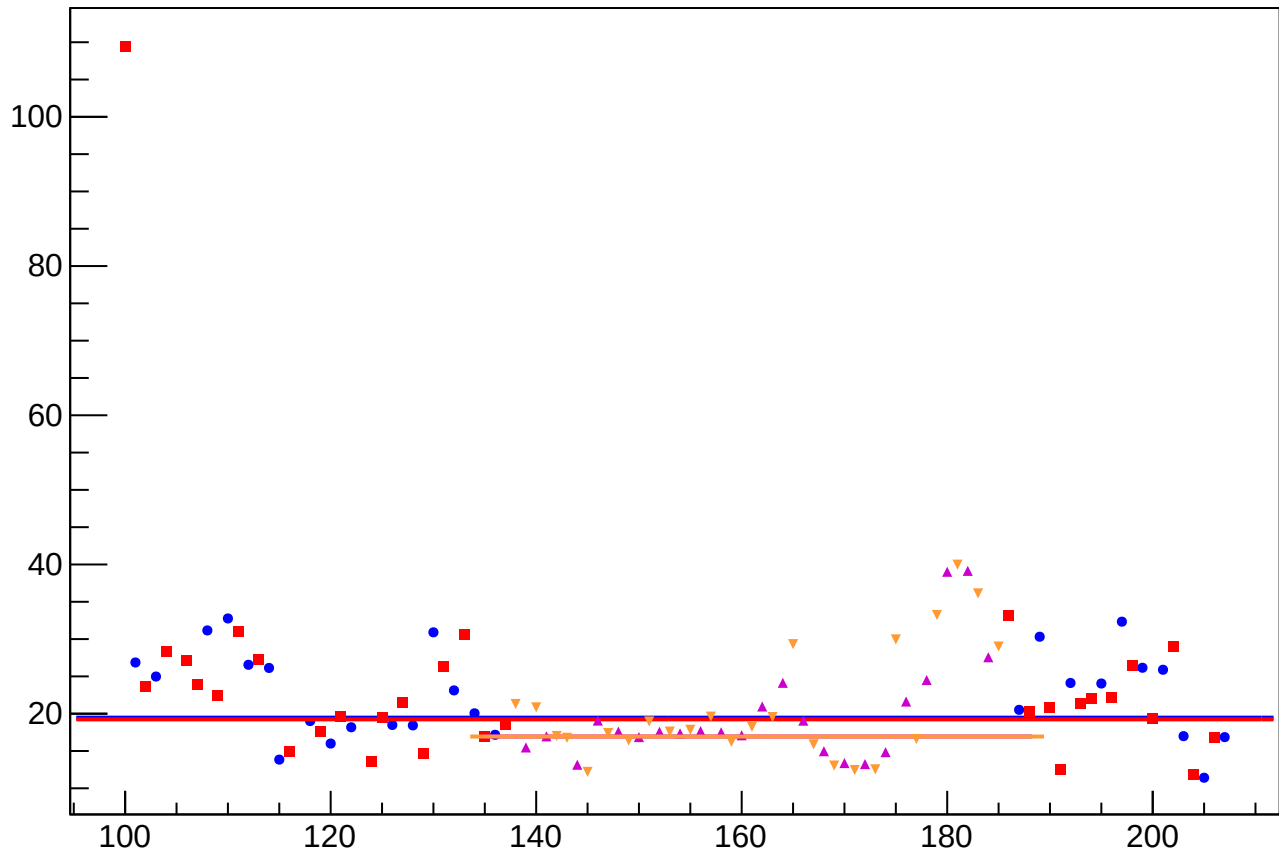
Left In: 0.005 $\pm$ 0.004  $\chi^2$ /NDF:33.2/22

+ sign 0.004 $\pm$ 0.003  $\chi^2$ /NDF: 43.9/50

All: 0.006 $\pm$ 0.002  $\chi^2$ /NDF: 100.6/104

- sign 0.007 $\pm$ 0.003  $\chi^2$ /NDF: 56.4/53

asym\_sam\_1357\_2468\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 19.471 $\pm$ 0.004  $\chi^2$ /NDF: 2301621.6/25

Left Out: 16.939 $\pm$ 0.003  $\chi^2$ /NDF: 2836863.1/24

Right Out: 19.239 $\pm$ 0.004  $\chi^2$ /NDF: 2114034.5/30

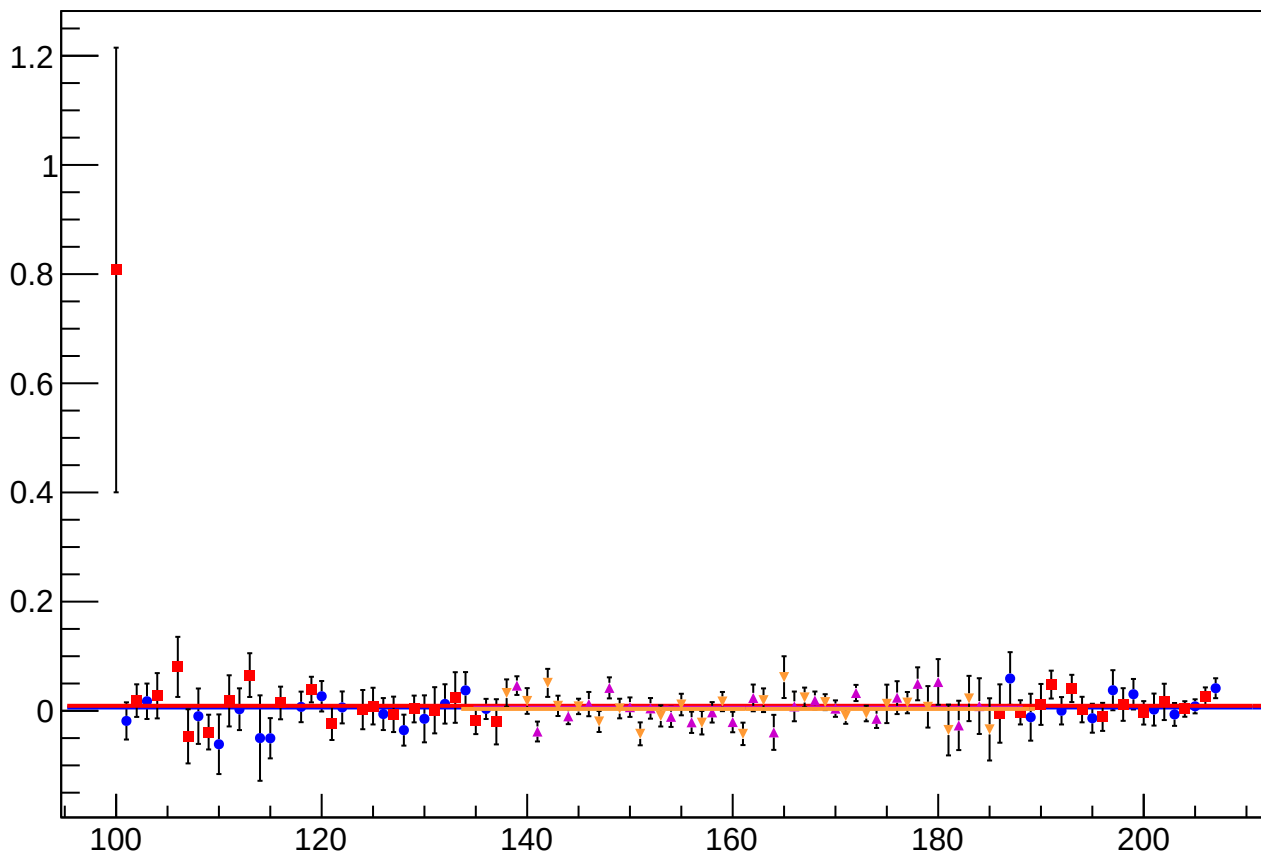
Left In: 16.943 $\pm$ 0.003  $\chi^2$ /NDF: 1941834.9/22

+ sign 17.855 $\pm$ 0.002  $\chi^2$ /NDF: 5415624.9/50

All: 17.860 $\pm$ 0.002  $\chi^2$ /NDF: 9712475.9/104

- sign 17.865 $\pm$ 0.002  $\chi^2$ /NDF: 4296841.6/53

asym\_sam\_1357\_2468\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.006 $\pm$ 0.005  $\chi^2$ /NDF: 16.8/25

Left Out: 0.003 $\pm$ 0.004  $\chi^2$ /NDF:26.9/24

Right Out: 0.009 $\pm$ 0.005  $\chi^2$ /NDF: 22.9/30

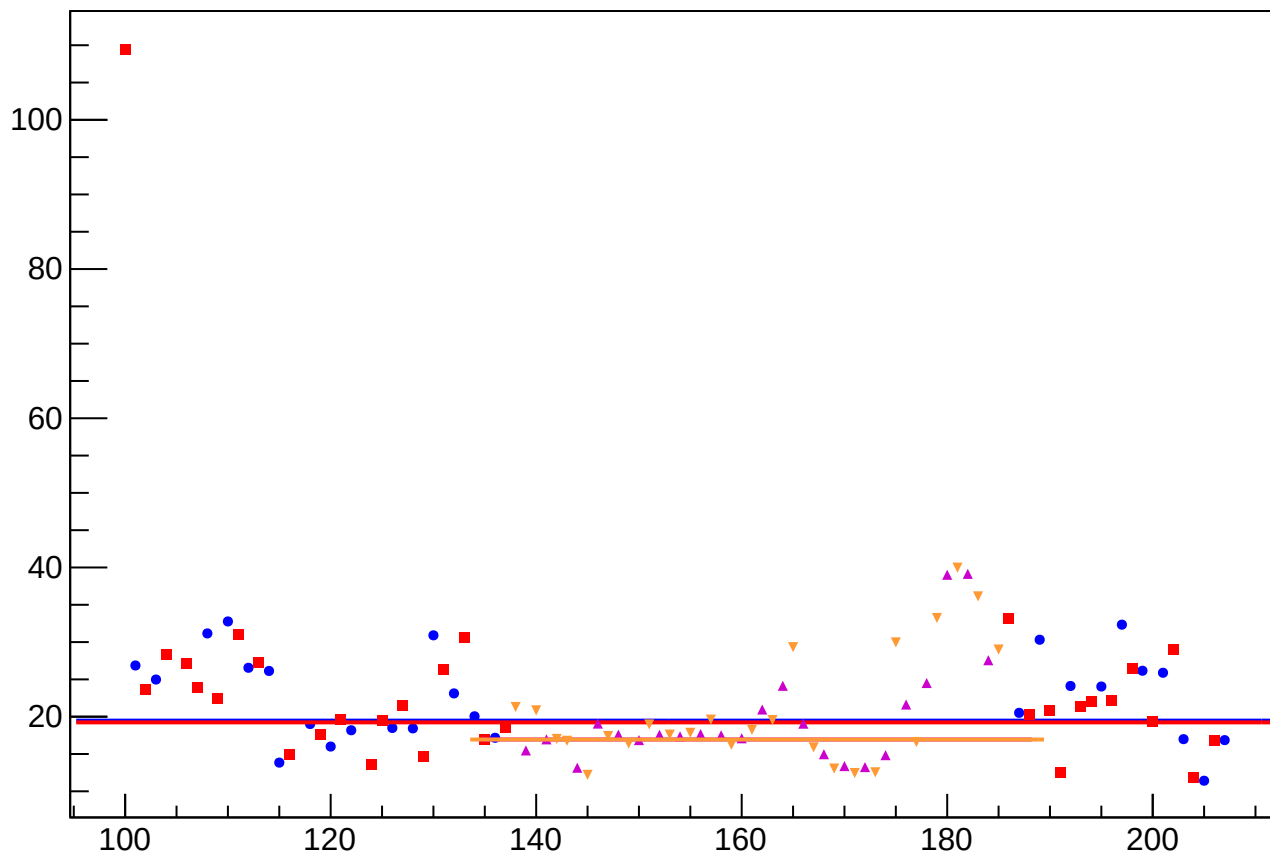
Left In: 0.005 $\pm$ 0.004  $\chi^2$ /NDF:33.2/22

+ sign 0.004 $\pm$ 0.003  $\chi^2$ /NDF: 43.9/50

All: 0.006 $\pm$ 0.002  $\chi^2$ /NDF: 100.6/104

- sign 0.007 $\pm$ 0.003  $\chi^2$ /NDF: 56.4/53

asym\_sam\_1357\_2468\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 19.471 $\pm$ 0.004  $\chi^2$ /NDF: 2301621.6/25

Left Out: 16.939 $\pm$ 0.003  $\chi^2$ /NDF: 2836863.1/24

Right Out: 19.239 $\pm$ 0.004  $\chi^2$ /NDF: 2114034.5/30

Left In: 16.943 $\pm$ 0.003  $\chi^2$ /NDF: 1941834.9/22

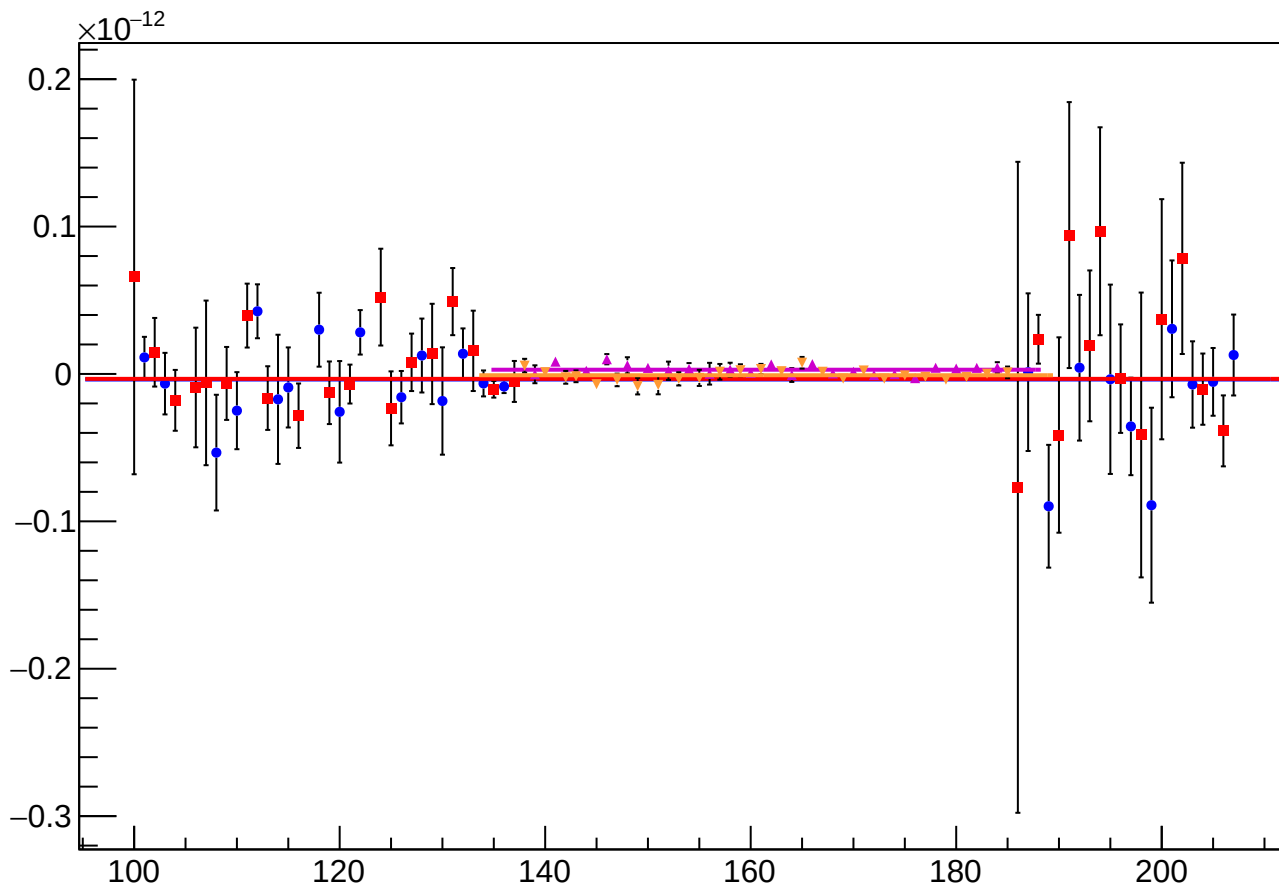
+ sign 17.855 $\pm$ 0.002  $\chi^2$ /NDF: 5415624.9/50

All: 17.860 $\pm$ 0.002  $\chi^2$ /NDF: 9712475.9/104

- sign 17.865 $\pm$ 0.002  $\chi^2$ /NDF: 4296841.6/53



asym\_sam\_1357\_2468\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 27.8/25

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 23.6/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 29.4/30

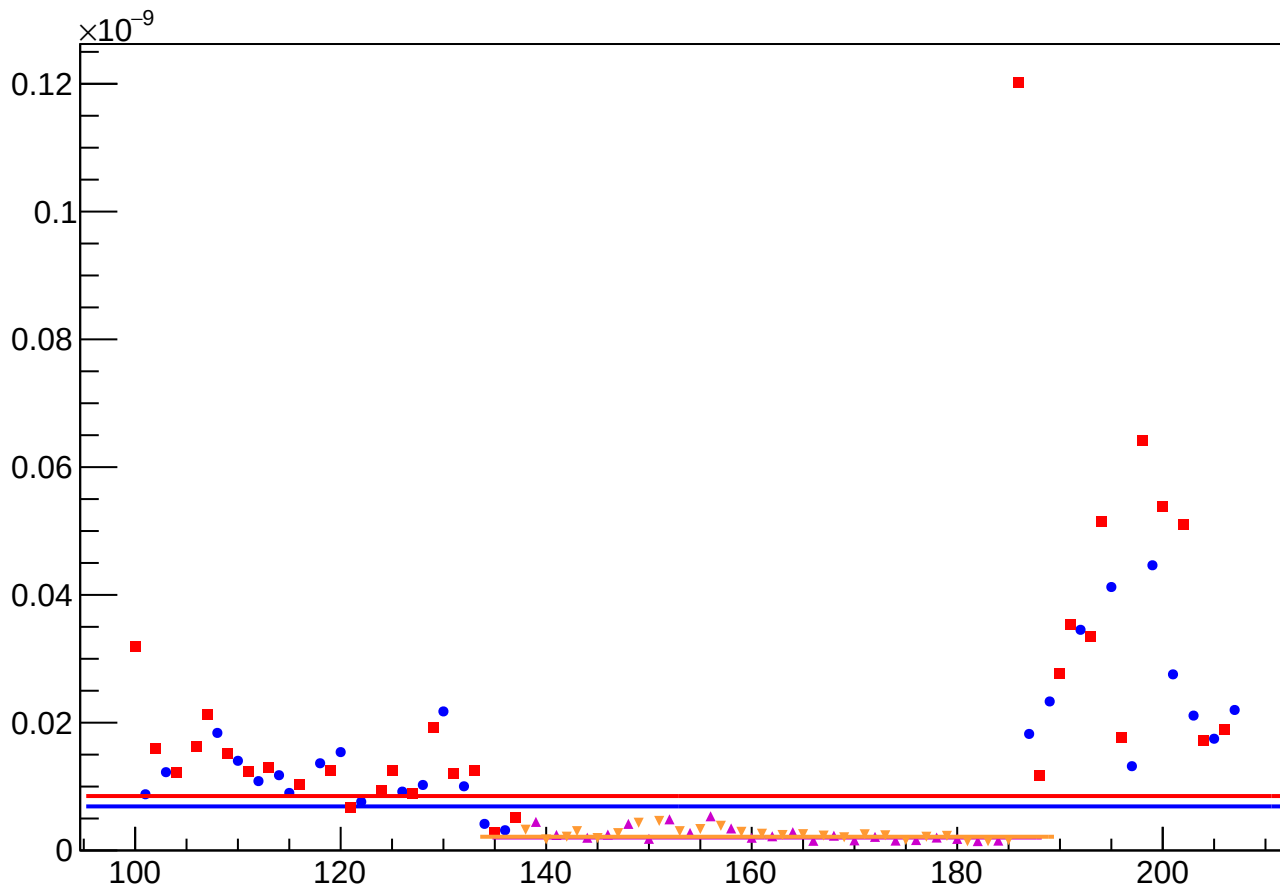
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 23.1/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 52.3/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 124.8/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 55.3/53

asym\_sam\_1357\_2468\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 7199164.2/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:2184835.6/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 8466020.1/30

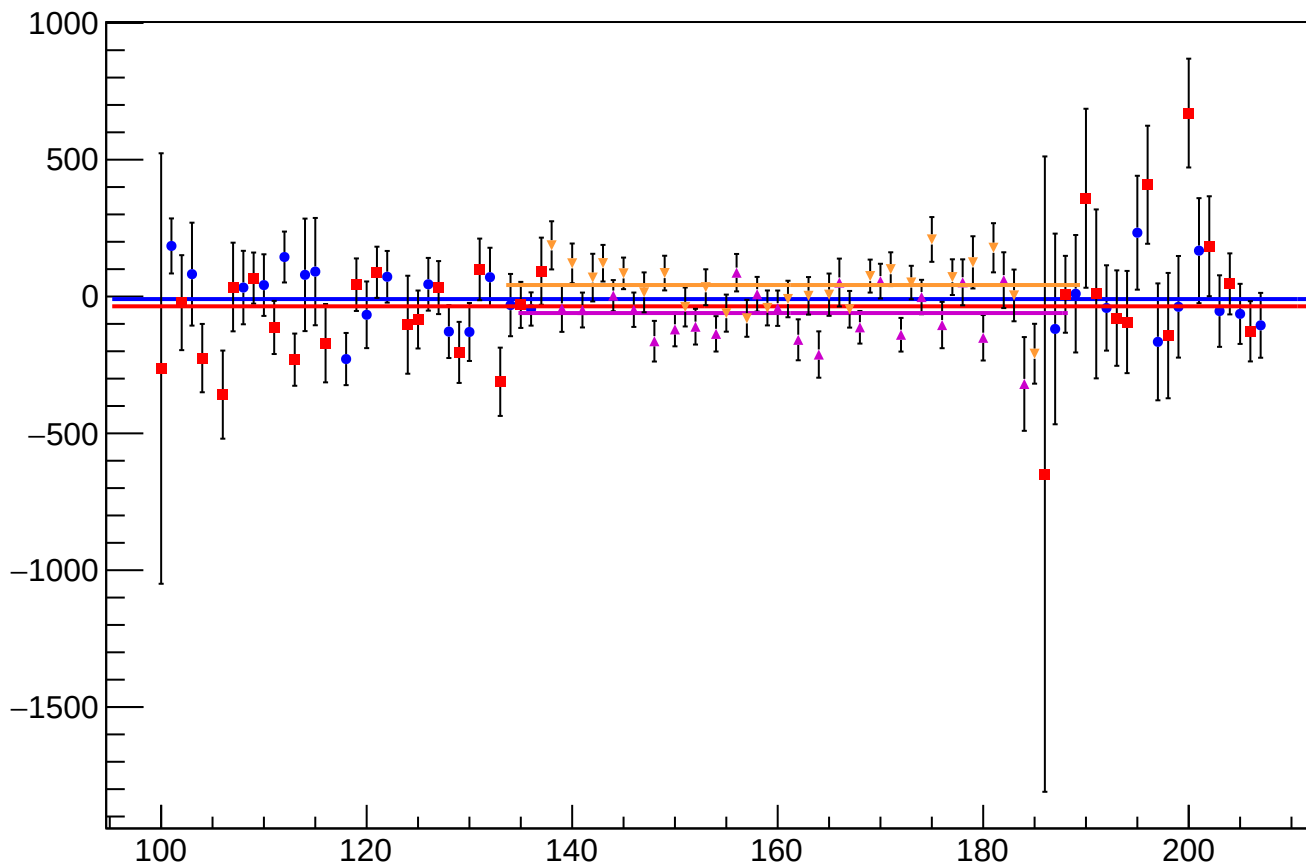
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:2375362.0/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 13796224.1/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 30913254.9/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 17080243.0/53

# reg\_asym\_sam\_12345678\_avg\_mean vs Slug



Right In:  $-9.320 \pm 23.310$   $\chi^2/\text{NDF}$ : 21.7/25

Left Out:  $42.012 \pm 14.181$   $\chi^2/\text{NDF}$ : 32.0/24

Right Out:  $-35.763 \pm 23.386$   $\chi^2/\text{NDF}$ : 48.3/30

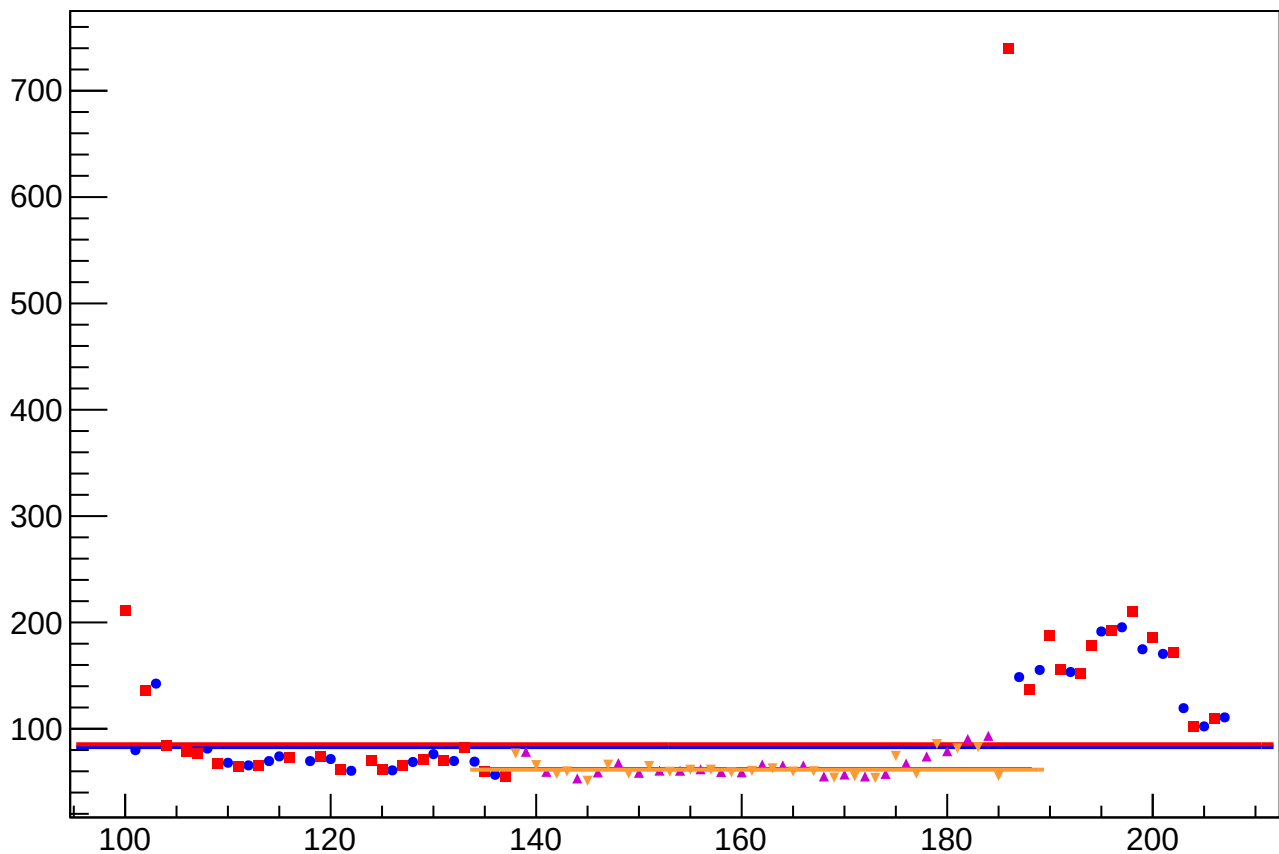
Left In:  $-60.376 \pm 14.714$   $\chi^2/\text{NDF}$ : 32.2/22

+ sign  $28.146 \pm 12.115$   $\chi^2/\text{NDF}$ : 57.3/50

All:  $-11.502 \pm 8.684$   $\chi^2/\text{NDF}$ : 160.5/104

- sign  $-53.396 \pm 12.454$   $\chi^2/\text{NDF}$ : 81.3/53

reg\_asym\_sam\_12345678\_avg\_rms vs Slug



Right In: 82.786 $\pm$ 0.016  $\chi^2$ /NDF: 4116569.1/25

Left Out: 61.544 $\pm$ 0.010  $\chi^2$ /NDF: 637834.8/24

Right Out: 85.452 $\pm$ 0.017  $\chi^2$ /NDF: 5402636.1/30

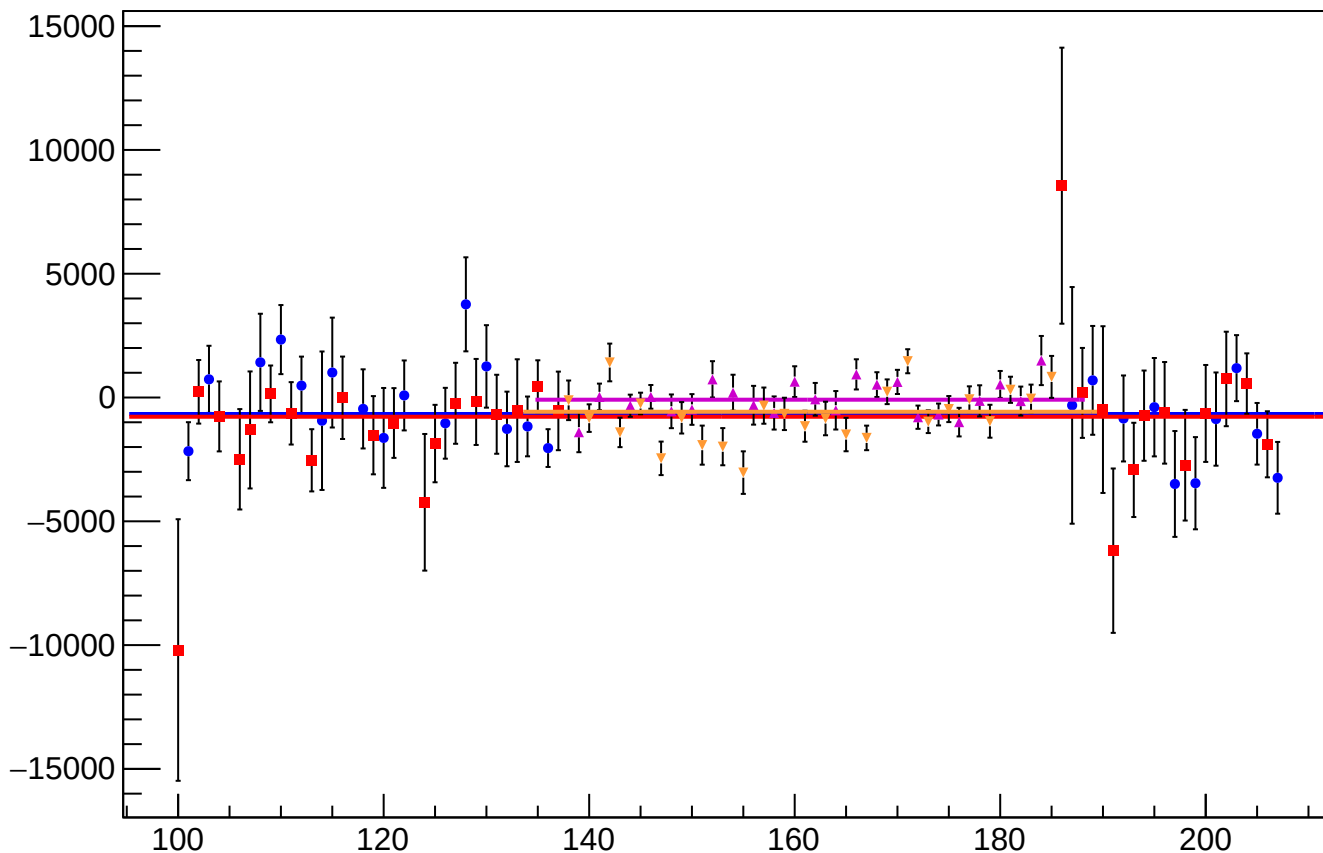
Left In: 62.144 $\pm$ 0.010  $\chi^2$ /NDF: 596754.9/22

+ sign 67.282 $\pm$ 0.009  $\chi^2$ /NDF: 5966548.2/50

All: 67.998 $\pm$ 0.006  $\chi^2$ /NDF: 13403441.5/104

- sign 68.754 $\pm$ 0.009  $\chi^2$ /NDF: 7422536.9/53

asym\_sam\_12345678\_avg\_reg\_correction\_mean vs Slug



Right In: -665.812 $\pm$ 294.564  $\chi^2$ /NDF: 30.9/25

Left Out: -574.818 $\pm$ 119.736  $\chi^2$ /NDF:68.8/24

Right Out: -776.389 $\pm$ 297.273  $\chi^2$ /NDF: 21.6/30

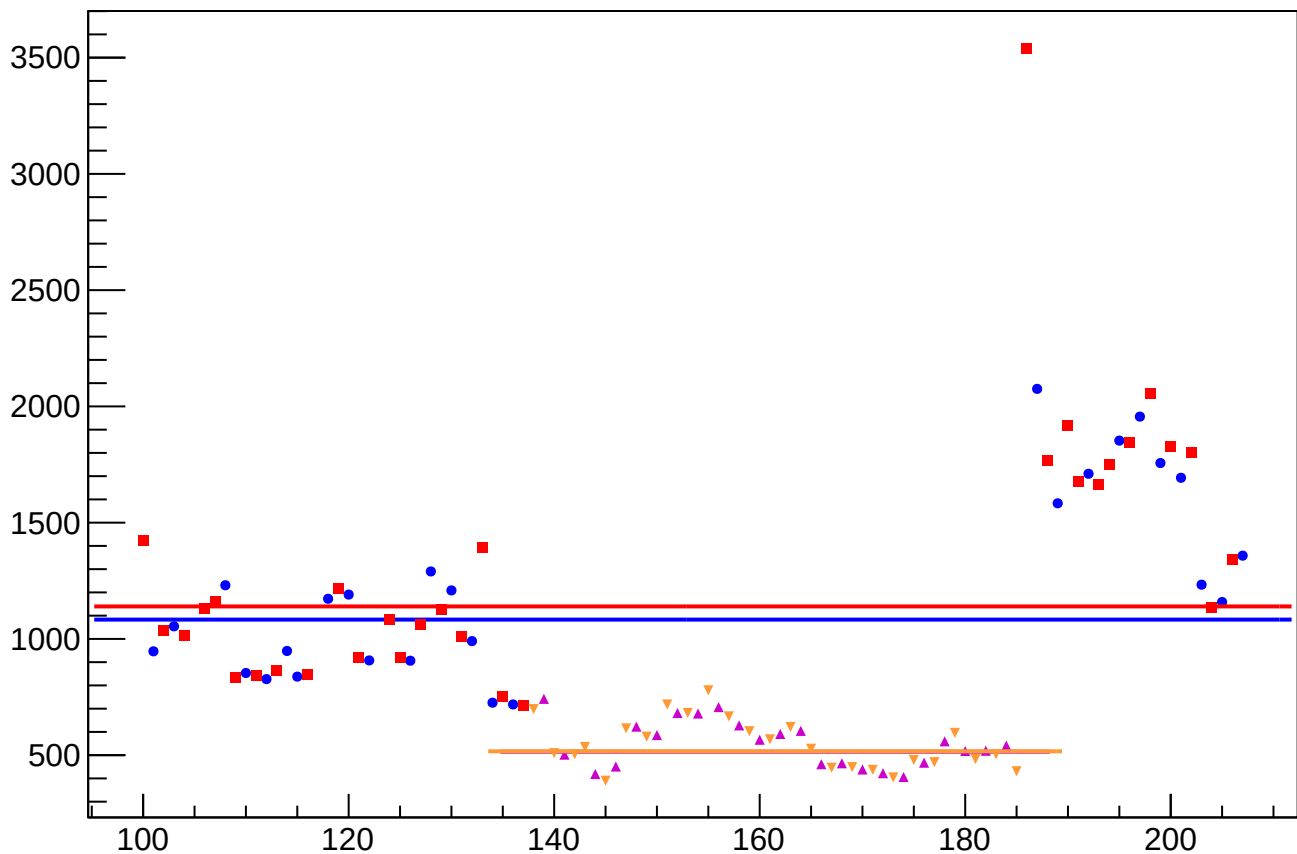
Left In: -88.334 $\pm$ 122.492  $\chi^2$ /NDF:24.6/22

+ sign -587.721 $\pm$ 110.922  $\chi^2$ /NDF: 99.8/50

All: -392.117 $\pm$ 79.246  $\chi^2$ /NDF: 157.0/104

- sign -188.201 $\pm$ 113.254  $\chi^2$ /NDF: 50.8/53

asym\_sam\_12345678\_avg\_reg\_correction\_rms vs Slug



Right In: 1083.104 $\pm$ 0.208  $\chi^2$ /NDF: 2627710.0/25

Left Out: 516.635 $\pm$ 0.085  $\chi^2$ /NDF: 1265161.0/24

Right Out: 1139.713 $\pm$ 0.210  $\chi^2$ /NDF: 3256042.4/30

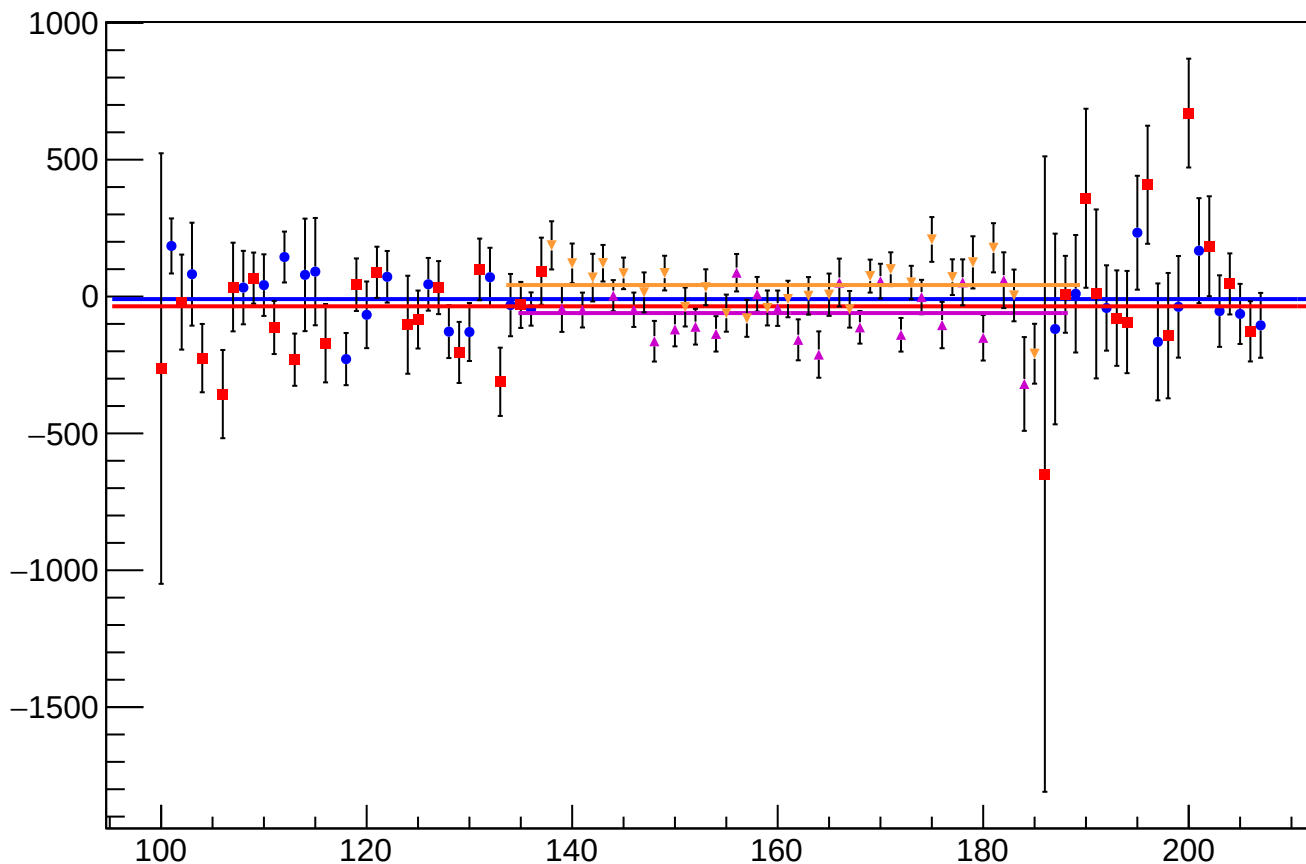
Left In: 514.781 $\pm$ 0.087  $\chi^2$ /NDF: 1120436.1/22

+ sign 596.961 $\pm$ 0.078  $\chi^2$ /NDF: 10240474.2/50

All: 601.135 $\pm$ 0.056  $\chi^2$ /NDF: 22178483.0/10

- sign 605.486 $\pm$ 0.080  $\chi^2$ /NDF: 11932224.6/53

# cor\_asym\_sam\_12345678\_avg\_mean vs Slug



Right In:  $-9.327 \pm 23.310$   $\chi^2/\text{NDF}$ : 21.7/25

Left Out:  $42.017 \pm 14.181$   $\chi^2/\text{NDF}$ : 32.0/24

Right Out:  $-35.667 \pm 23.387$   $\chi^2/\text{NDF}$ : 48.2/30

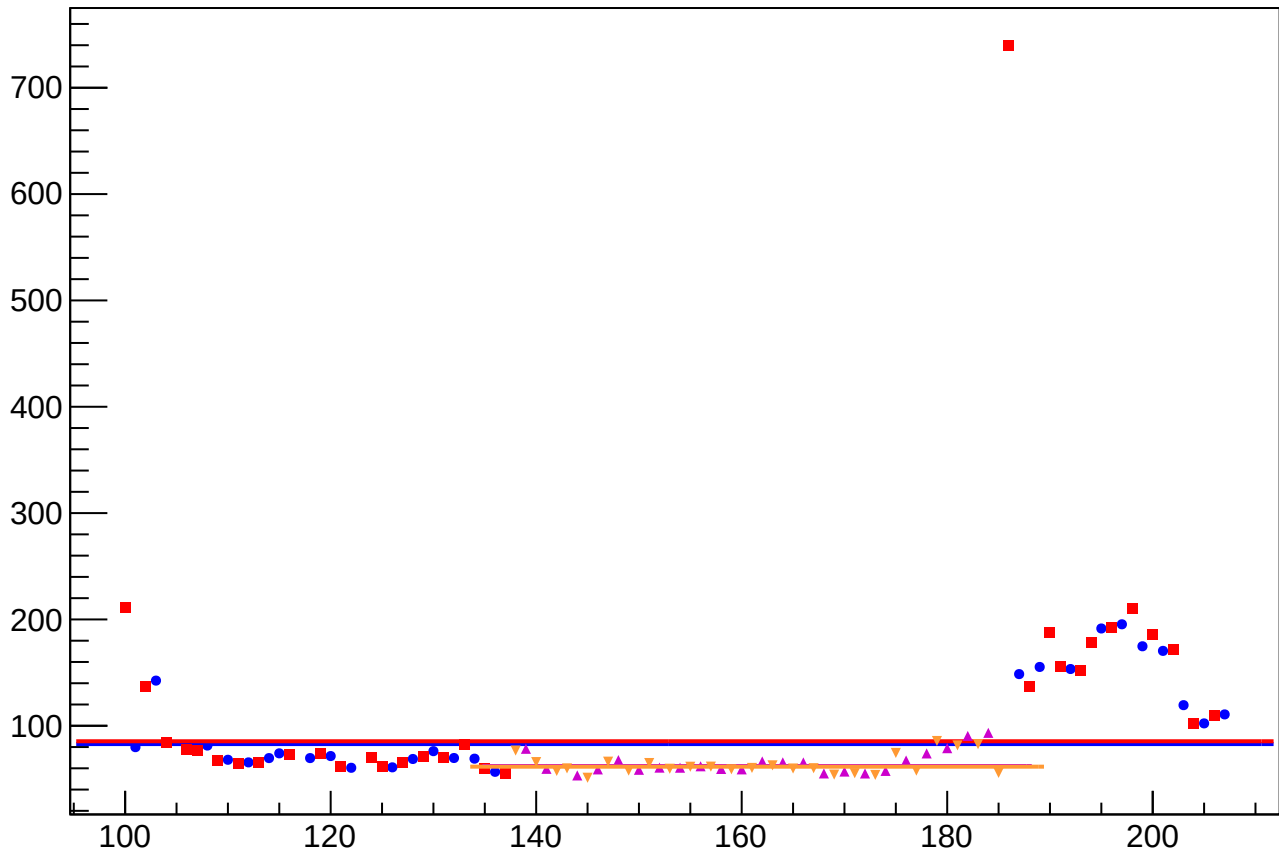
Left In:  $-60.376 \pm 14.714$   $\chi^2/\text{NDF}$ : 32.2/22

+ sign  $28.148 \pm 12.115$   $\chi^2/\text{NDF}$ : 57.3/50

All:  $-11.487 \pm 8.684$   $\chi^2/\text{NDF}$ : 160.5/104

- sign  $-53.369 \pm 12.454$   $\chi^2/\text{NDF}$ : 81.2/53

cor\_asym\_sam\_12345678\_avg\_rms vs Slug



Right In: 82.786 $\pm$ 0.016  $\chi^2$ /NDF: 4116572.1/25

Left Out: 61.544 $\pm$ 0.010  $\chi^2$ /NDF: 637834.9/24

Right Out: 85.438 $\pm$ 0.017  $\chi^2$ /NDF: 5403715.1/30

Left In: 62.144 $\pm$ 0.010  $\chi^2$ /NDF: 596754.9/22

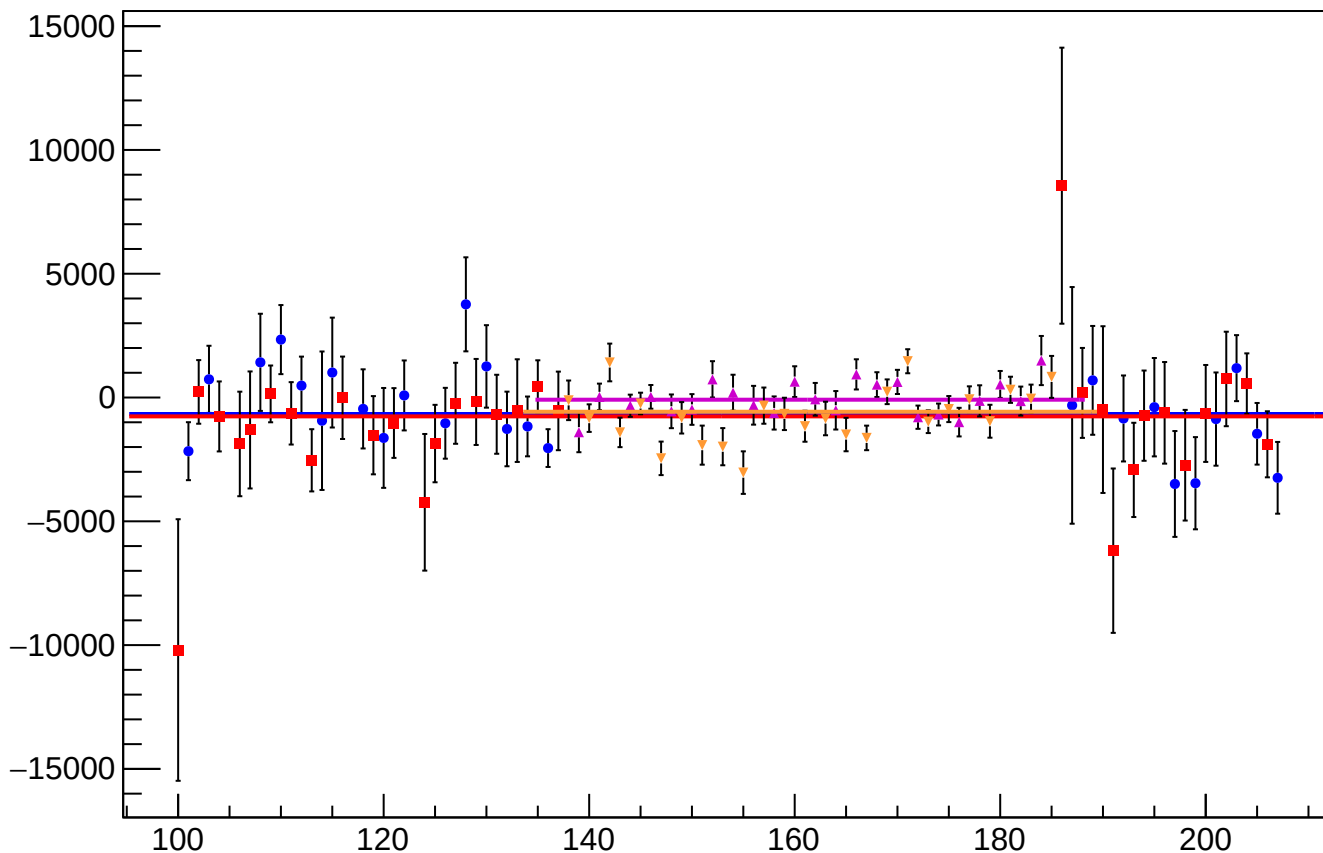
+ sign 67.282 $\pm$ 0.009  $\chi^2$ /NDF: 5966551.3/50

All: 67.996 $\pm$ 0.006  $\chi^2$ /NDF: 13402650.5/104

- sign 68.750 $\pm$ 0.009  $\chi^2$ /NDF: 7421826.9/53



asym\_sam\_12345678\_avg\_cor\_correction\_mean vs Slug



Right In: -665.792 $\pm$ 294.565  $\chi^2$ /NDF: 30.9/25

Left Out: -574.811 $\pm$ 119.736  $\chi^2$ /NDF:68.8/24

Right Out: -761.569 $\pm$ 297.533  $\chi^2$ /NDF: 21.2/30

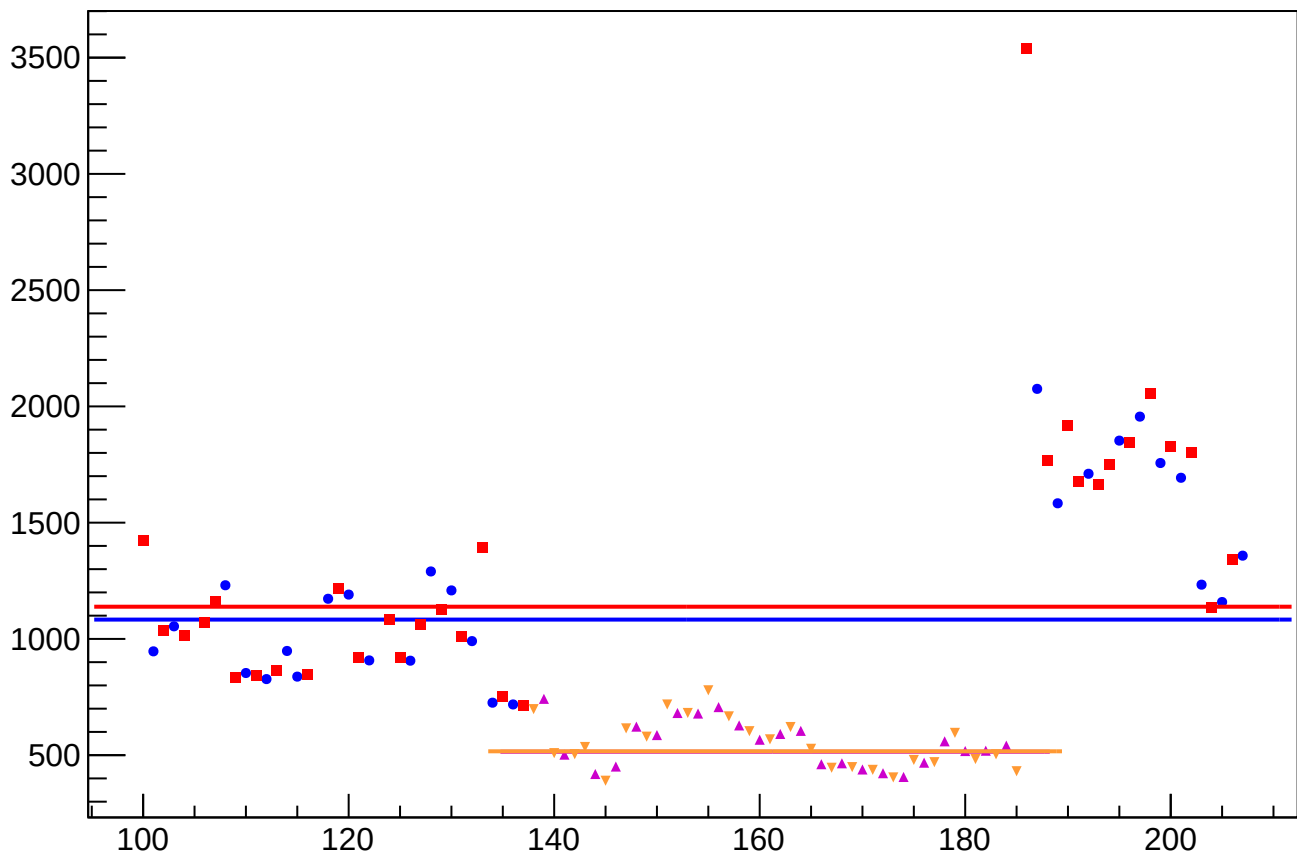
Left In: -88.333 $\pm$ 122.492  $\chi^2$ /NDF:24.6/22

+ sign -587.712 $\pm$ 110.922  $\chi^2$ /NDF: 99.8/50

All: -391.013 $\pm$ 79.251  $\chi^2$ /NDF: 156.4/104

- sign -185.904 $\pm$ 113.269  $\chi^2$ /NDF: 50.2/53

asym\_sam\_12345678\_avg\_cor\_correction\_rms vs Slug



Right In: 1083.108 $\pm$ 0.208  $\chi^2$ /NDF: 2627708.9/25

Left Out: 516.635 $\pm$ 0.085  $\chi^2$ /NDF: 1265163.0/24

Right Out: 1138.530 $\pm$ 0.210  $\chi^2$ /NDF: 3257987.8/30

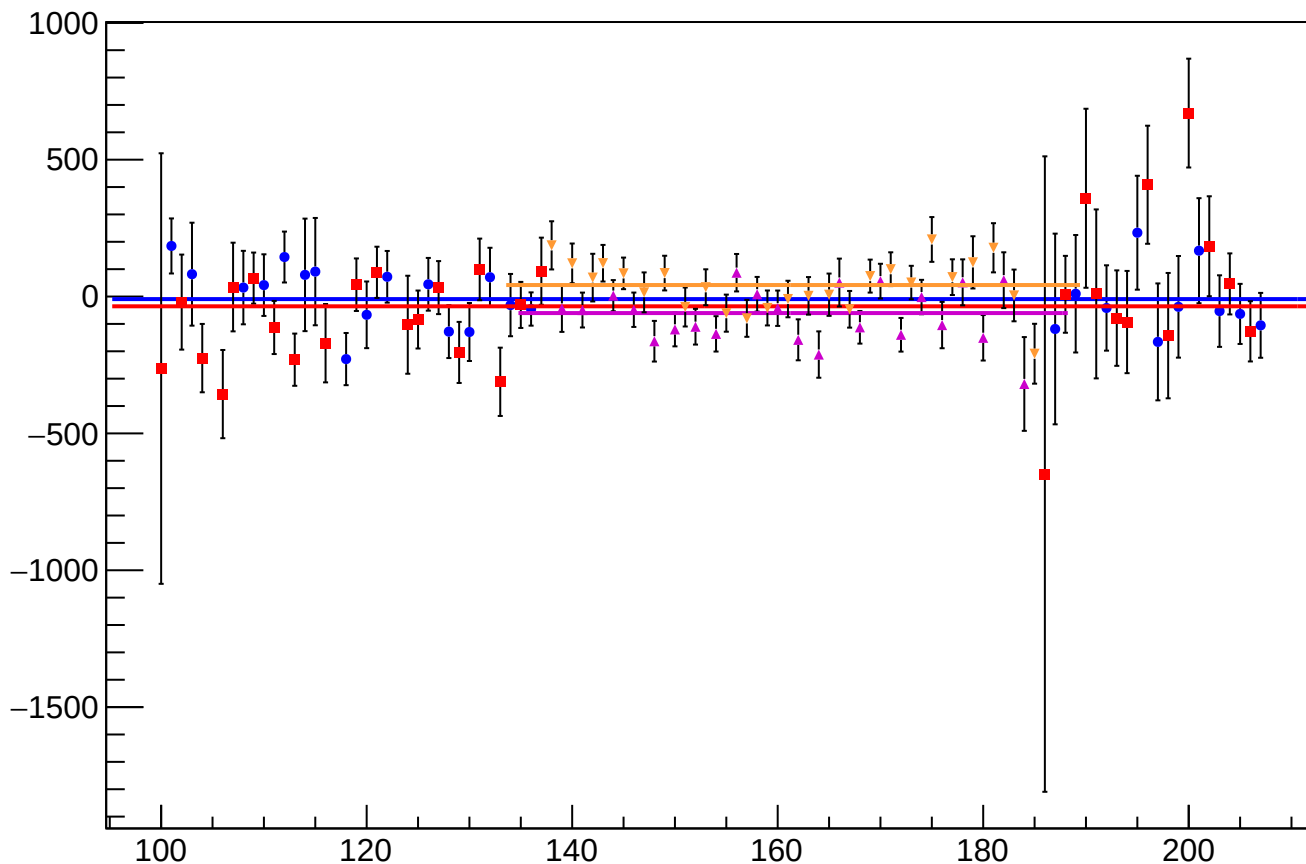
Left In: 514.781 $\pm$ 0.087  $\chi^2$ /NDF: 1120434.8/22

+ sign 596.961 $\pm$ 0.078  $\chi^2$ /NDF: 10240527.1/50

All: 600.984 $\pm$ 0.056  $\chi^2$ /NDF: 22140243.2/10

- sign 605.179 $\pm$ 0.080  $\chi^2$ /NDF: 11894341.4/53

eigen\_cor\_asym\_sam\_12345678\_avg\_mean vs Slug



Right In:  $-9.327 \pm 23.310$   $\chi^2/\text{NDF}$ : 21.7/25

Left Out:  $42.017 \pm 14.181$   $\chi^2/\text{NDF}$ : 32.0/24

Right Out:  $-35.667 \pm 23.387$   $\chi^2/\text{NDF}$ : 48.2/30

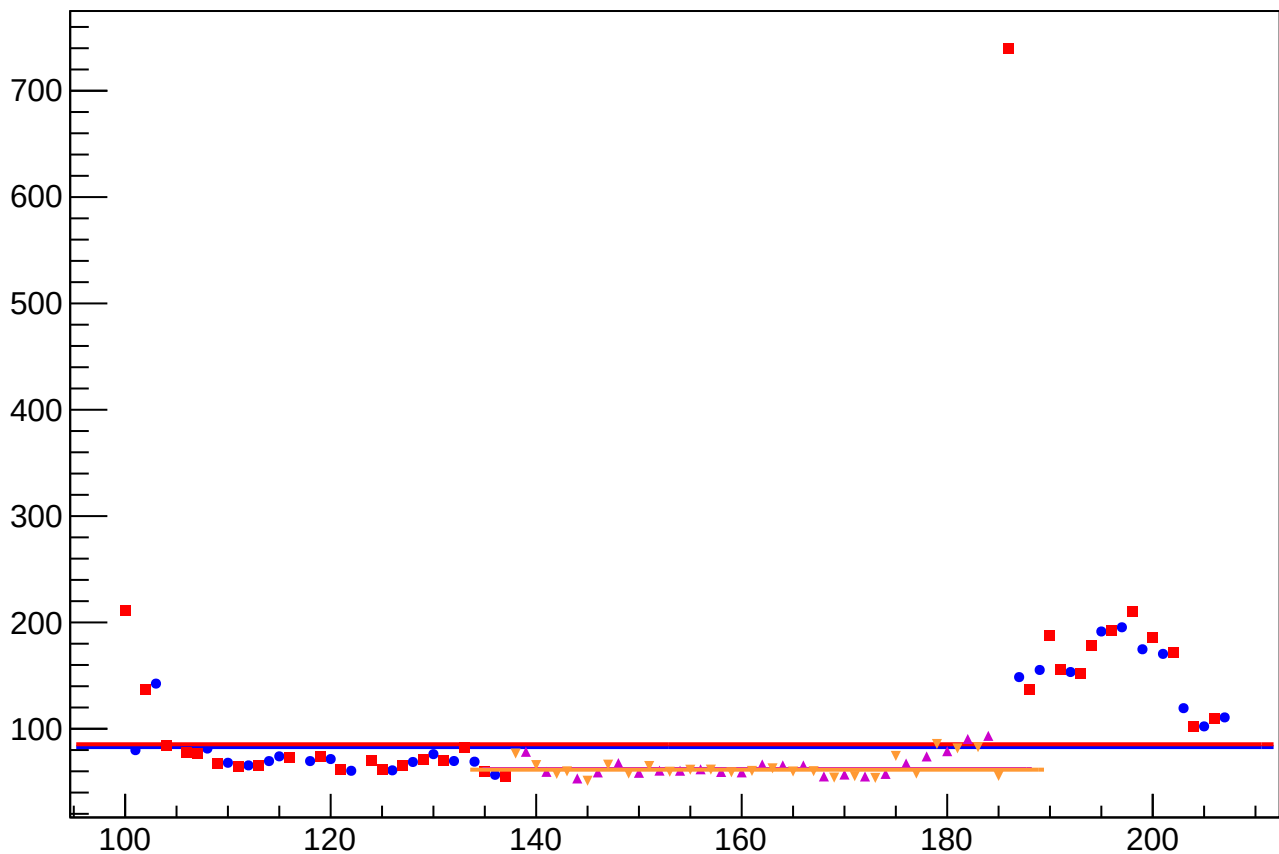
Left In:  $-60.376 \pm 14.714$   $\chi^2/\text{NDF}$ : 32.2/22

+ sign  $28.148 \pm 12.115$   $\chi^2/\text{NDF}$ : 57.3/50

All:  $-11.487 \pm 8.684$   $\chi^2/\text{NDF}$ : 160.5/104

- sign  $-53.369 \pm 12.454$   $\chi^2/\text{NDF}$ : 81.2/53

eigen\_cor\_asym\_sam\_12345678\_avg\_rms vs Slug



Right In: 82.786 $\pm$ 0.016  $\chi^2$ /NDF: 4116572.1/25

Left Out: 61.544 $\pm$ 0.010  $\chi^2$ /NDF: 637834.9/24

Right Out: 85.438 $\pm$ 0.017  $\chi^2$ /NDF: 5403715.1/30

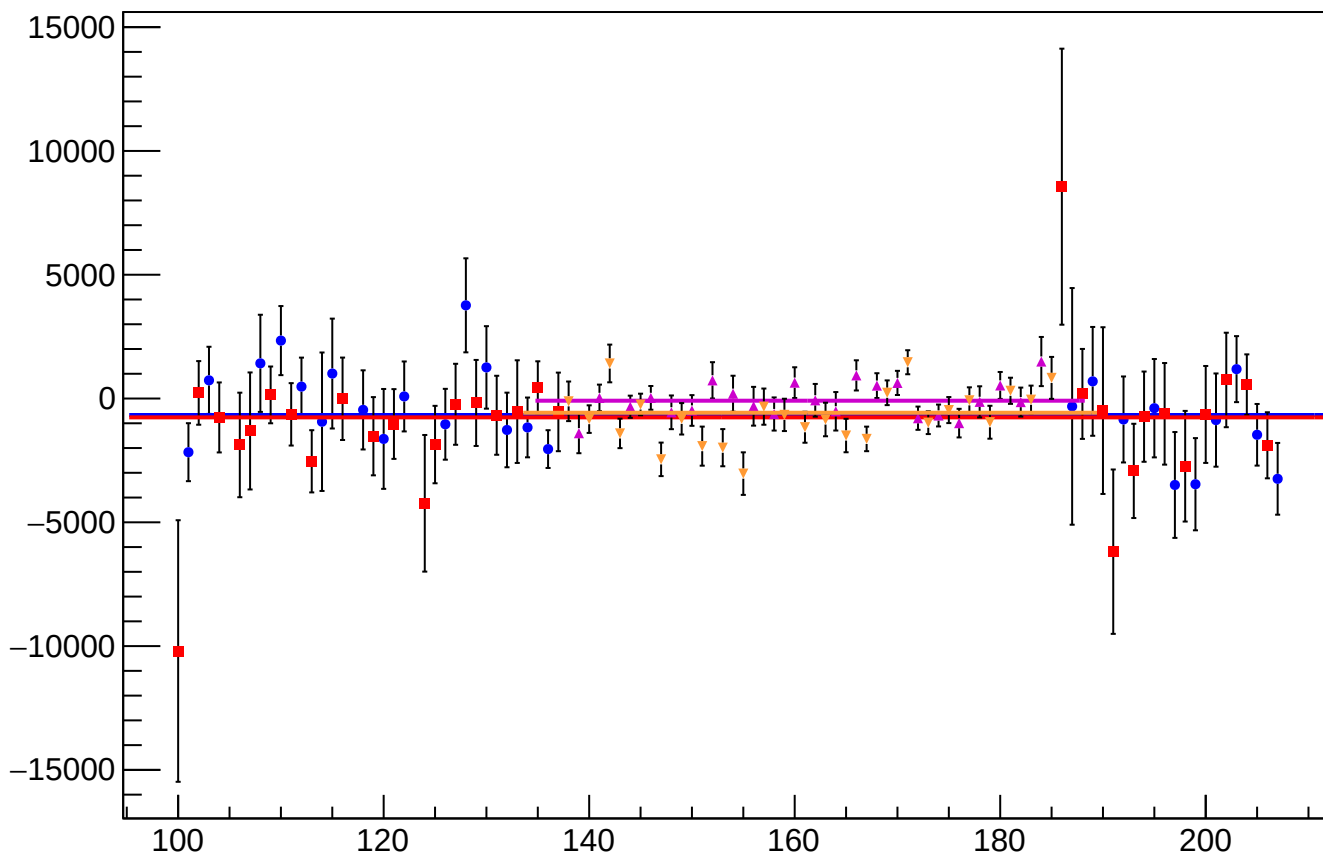
Left In: 62.144 $\pm$ 0.010  $\chi^2$ /NDF: 596754.9/22

+ sign 67.282 $\pm$ 0.009  $\chi^2$ /NDF: 5966551.3/50

All: 67.996 $\pm$ 0.006  $\chi^2$ /NDF: 13402650.5/104

- sign 68.750 $\pm$ 0.009  $\chi^2$ /NDF: 7421826.9/53

asym\_sam\_12345678\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In: -665.792 $\pm$ 294.565  $\chi^2$ /NDF: 30.9/25

Left Out: -574.811 $\pm$ 119.736  $\chi^2$ /NDF:68.8/24

Right Out: -761.569 $\pm$ 297.533  $\chi^2$ /NDF: 21.2/30

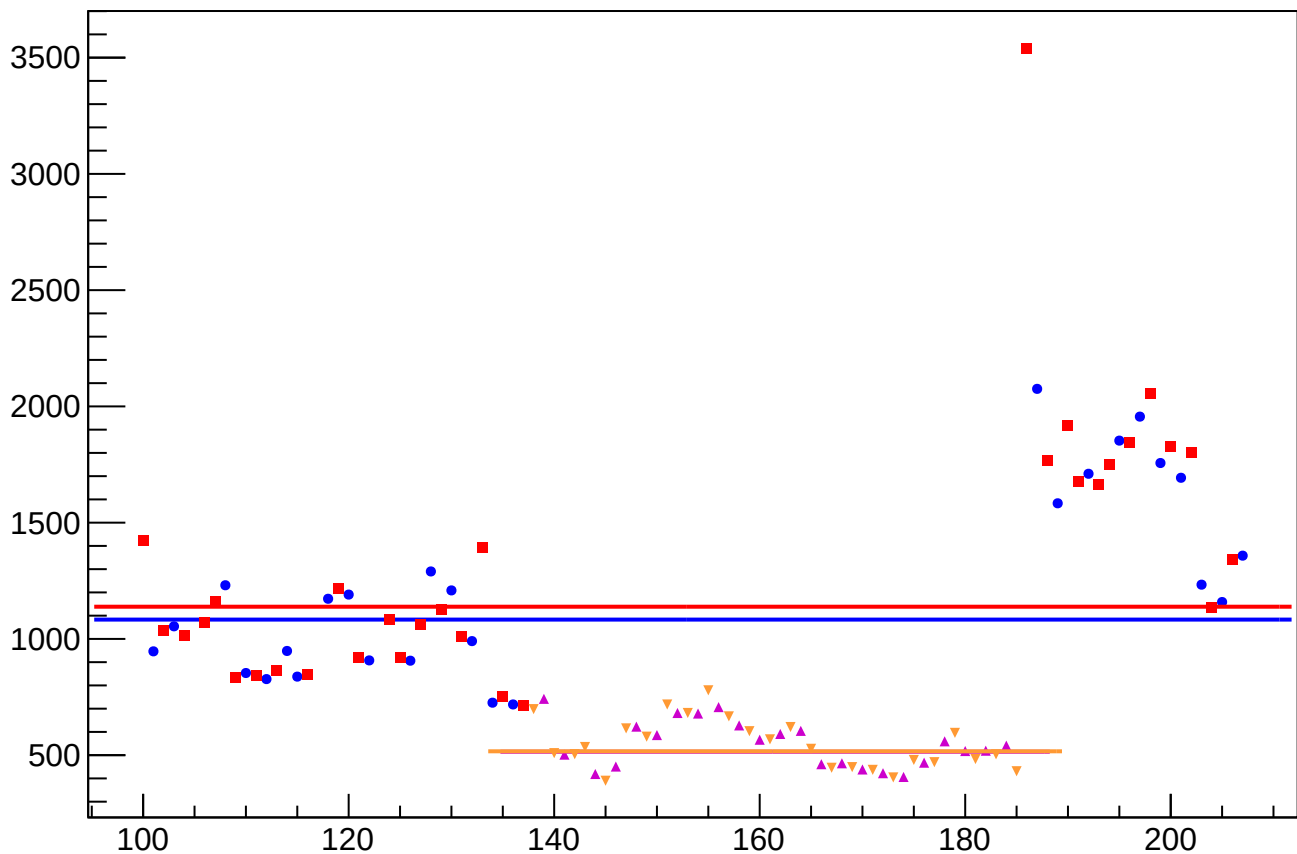
Left In: -88.333 $\pm$ 122.492  $\chi^2$ /NDF:24.6/22

+ sign -587.712 $\pm$ 110.922  $\chi^2$ /NDF: 99.8/50

All: -391.013 $\pm$ 79.251  $\chi^2$ /NDF: 156.4/104

- sign -185.904 $\pm$ 113.269  $\chi^2$ /NDF: 50.2/53

asym\_sam\_12345678\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 1083.108 $\pm$ 0.208  $\chi^2$ /NDF: 2627708.9/25

Left Out: 516.635 $\pm$ 0.085  $\chi^2$ /NDF: 1265163.0/24

Right Out: 1138.530 $\pm$ 0.210  $\chi^2$ /NDF: 3257987.8/30

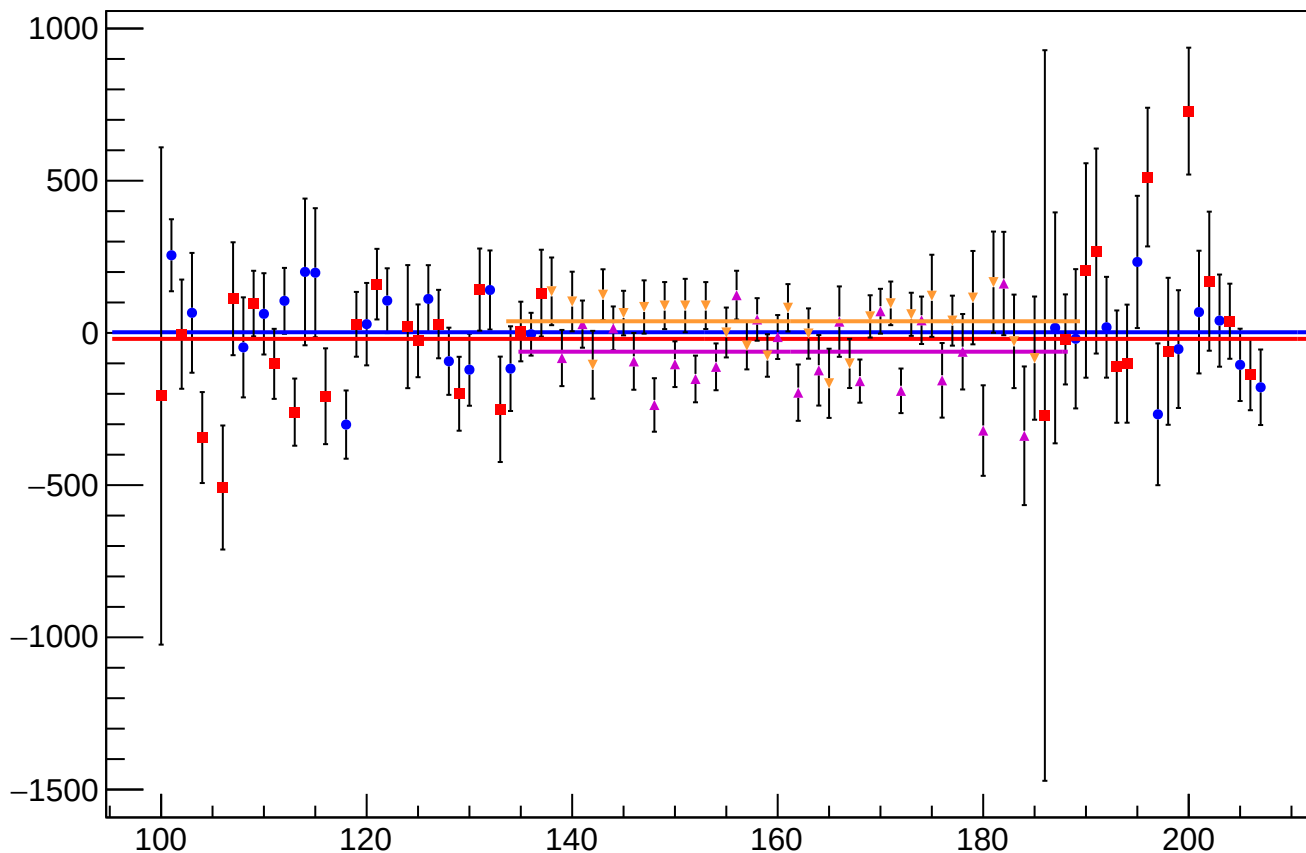
Left In: 514.781 $\pm$ 0.087  $\chi^2$ /NDF: 1120434.8/22

+ sign 596.961 $\pm$ 0.078  $\chi^2$ /NDF: 10240527.1/50

All: 600.984 $\pm$ 0.056  $\chi^2$ /NDF: 22140243.2/10

- sign 605.179 $\pm$ 0.080  $\chi^2$ /NDF: 11894341.4/53

dit\_asym\_sam\_12345678\_avg\_mean vs Slug



Right In: 2.235 $\pm$ 26.548  $\chi^2$ /NDF: 26.1/25

Left Out: 38.281 $\pm$ 17.669  $\chi^2$ /NDF:18.8/24

Right Out: -19.570 $\pm$ 26.759  $\chi^2$ /NDF: 50.2/30

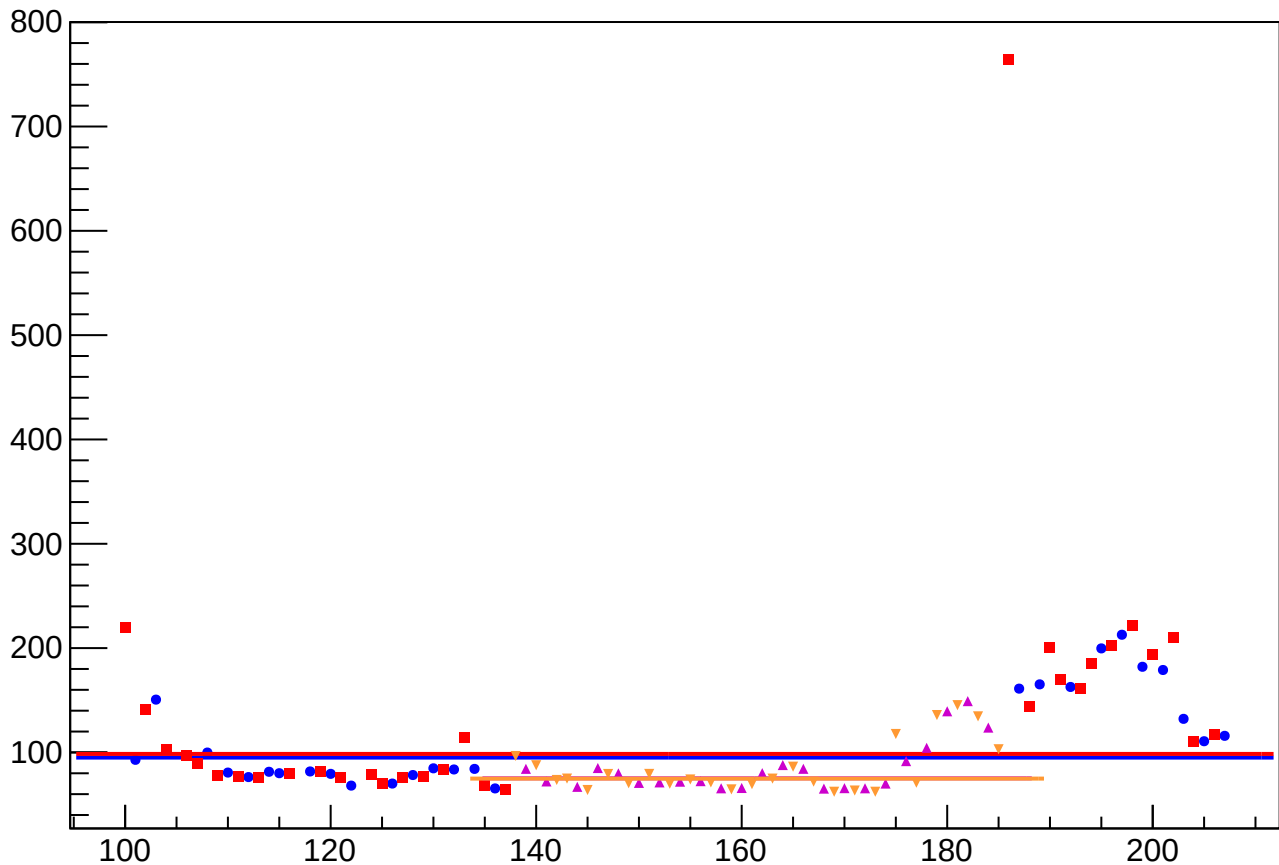
Left In: -61.723 $\pm$ 18.192  $\chi^2$ /NDF:36.7/22

+ sign 27.215 $\pm$ 14.709  $\chi^2$ /NDF: 46.2/50

All: -9.741 $\pm$ 10.517  $\chi^2$ /NDF: 147.7/104

- sign -48.399 $\pm$ 15.044  $\chi^2$ /NDF: 88.6/53

dit\_asym\_sam\_12345678\_avg\_rms vs Slug



Right In: 95.046+/-0.019  $\chi^2/\text{NDF}$ : 3508811.6/25

Left Out: 74.903+/-0.012  $\chi^2/\text{NDF}$ :1661552.1/24

Right Out: 98.554+/-0.019  $\chi^2/\text{NDF}$ : 4762550.3/30

Left In: 75.156+/-0.013  $\chi^2/\text{NDF}$ :1312543.0/22

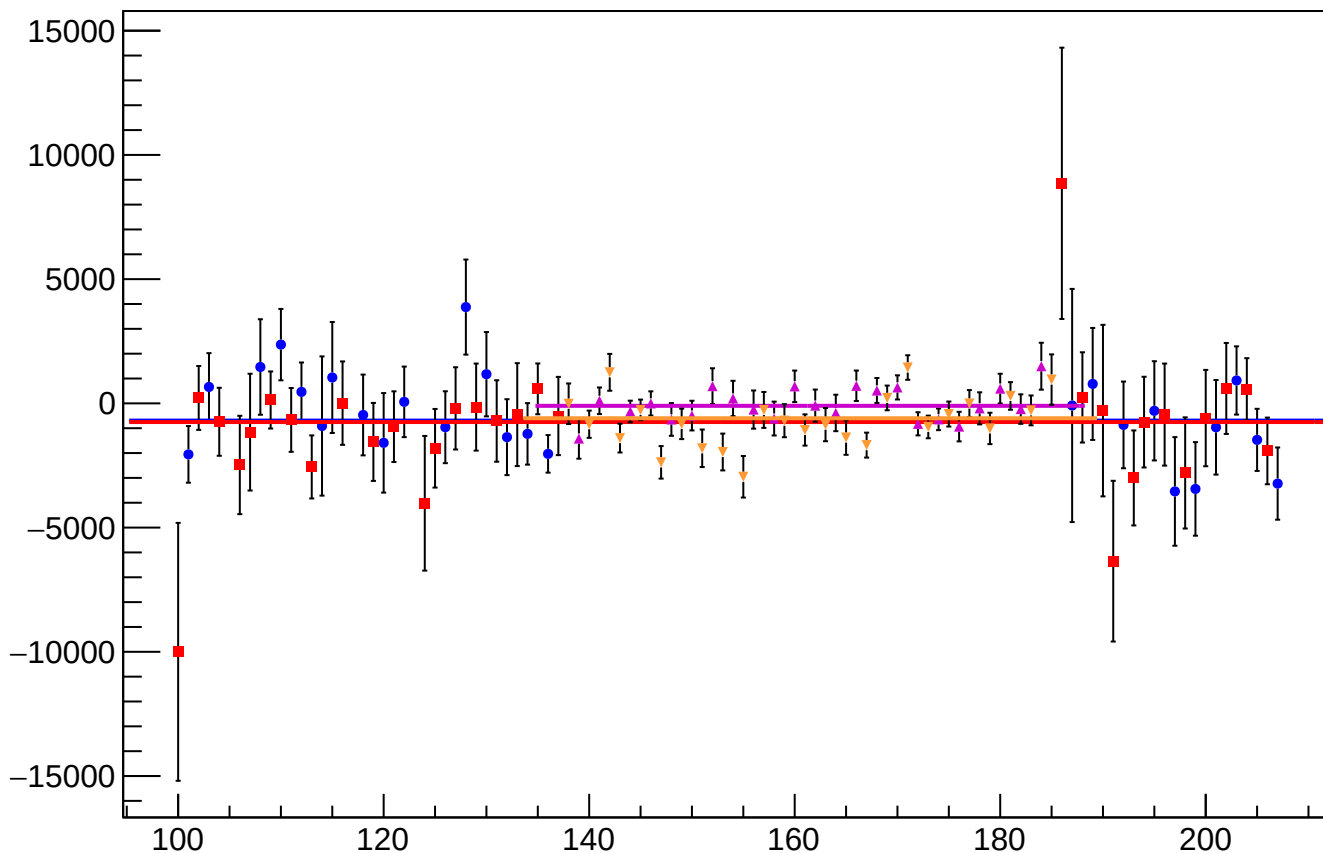
+ sign 81.087+/-0.010  $\chi^2/\text{NDF}$ : 5968340.7/50

All: 81.803+/-0.007  $\chi^2/\text{NDF}$ : 13098990.3/104

- sign 82.552+/-0.011  $\chi^2/\text{NDF}$ : 7120956.5/53



asym\_sam\_12345678\_avg\_dit\_correction\_mean vs Slug



Right In:  $-694.031 \pm 296.277$   $\chi^2/\text{NDF}: 29.9/25$

Left Out:  $-598.826 \pm 119.324$   $\chi^2/\text{NDF}: 65.0/24$

Right Out:  $-751.522 \pm 297.076$   $\chi^2/\text{NDF}: 22.6/30$

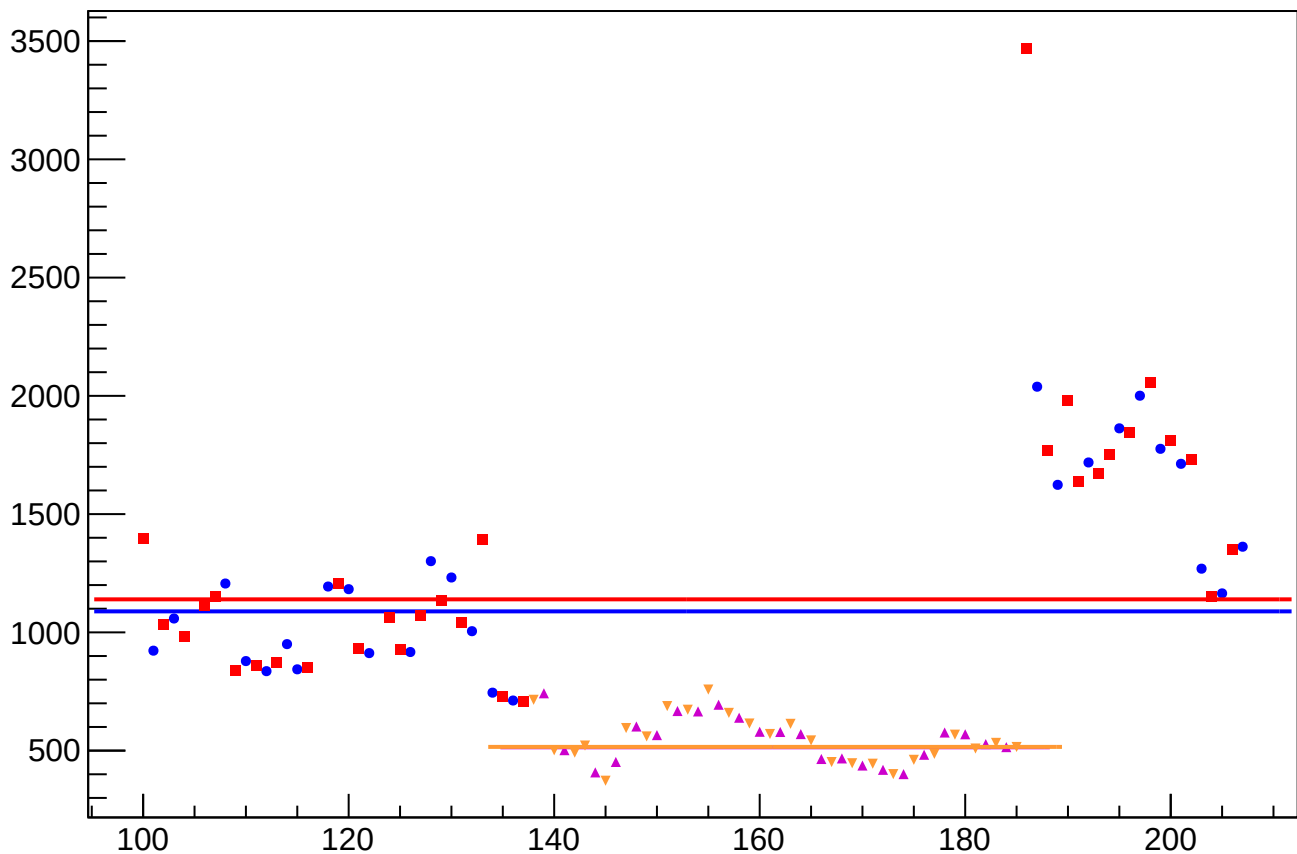
Left In:  $-99.102 \pm 122.310$   $\chi^2/\text{NDF}: 23.7/22$

+ sign  $-612.114 \pm 110.684$   $\chi^2/\text{NDF}: 95.0/50$

All:  $-407.405 \pm 79.106$   $\chi^2/\text{NDF}: 152.4/104$

- sign  $-193.664 \pm 113.100$   $\chi^2/\text{NDF}: 50.4/53$

asym\_sam\_12345678\_avg\_dit\_correction\_rms vs Slug



Right In: 1088.764 $\pm$ 0.209  $\chi^2$ /NDF: 2679784.7/25

Left Out: 515.762 $\pm$ 0.084  $\chi^2$ /NDF: 1232478.6/24

Right Out: 1139.632 $\pm$ 0.210  $\chi^2$ /NDF: 3243816.1/30

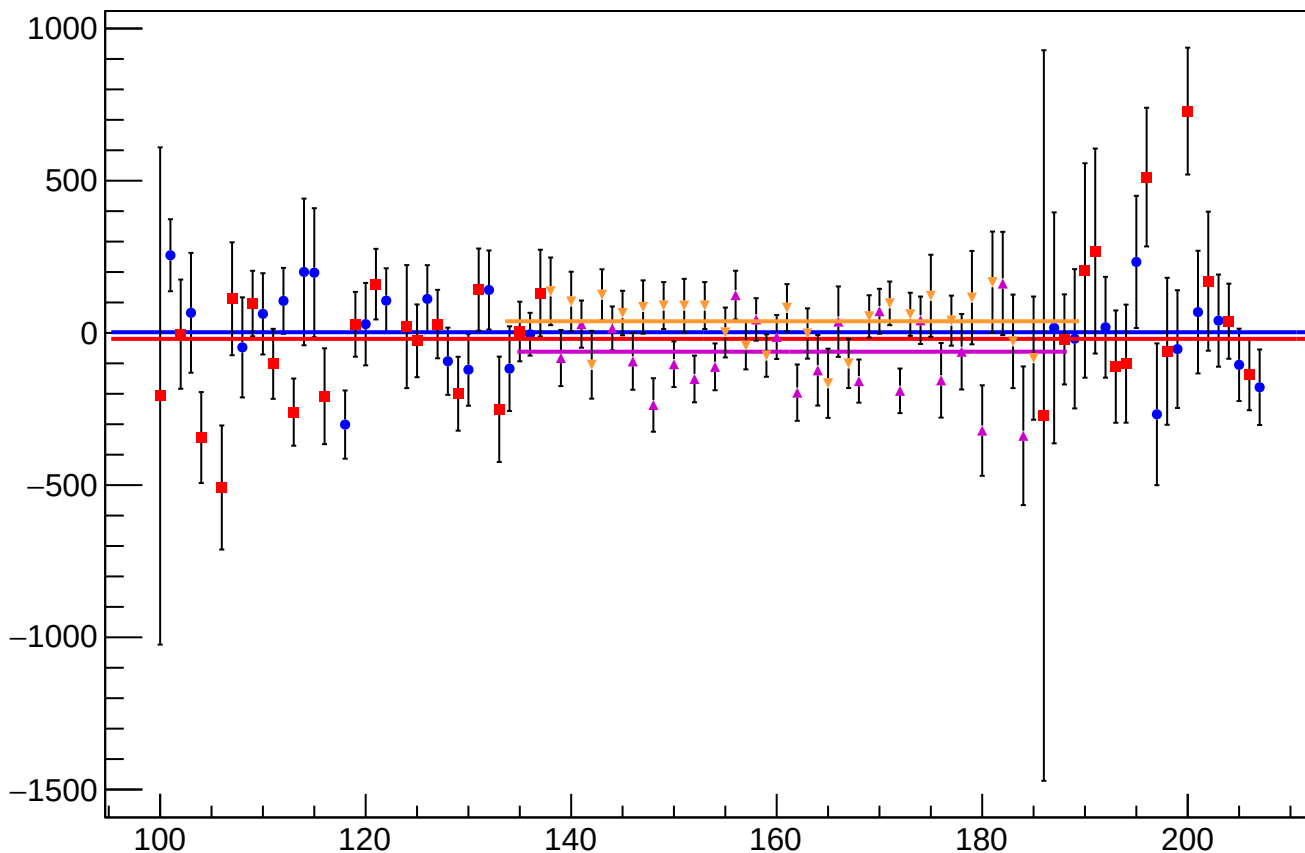
Left In: 514.088 $\pm$ 0.086  $\chi^2$ /NDF: 1116884.3/22

+ sign 595.733 $\pm$ 0.078  $\chi^2$ /NDF: 10348981.6/50

All: 600.146 $\pm$ 0.056  $\chi^2$ /NDF: 22298628.4/10

- sign 604.755 $\pm$ 0.080  $\chi^2$ /NDF: 11943146.3/53

eigen\_dit\_asym\_sam\_12345678\_avg\_mean vs Slug



Right In: 2.235 $\pm$ 26.548  $\chi^2$ /NDF: 26.1/25

Left Out: 38.282 $\pm$ 17.670  $\chi^2$ /NDF:18.8/24

Right Out: -19.568 $\pm$ 26.759  $\chi^2$ /NDF: 50.2/30

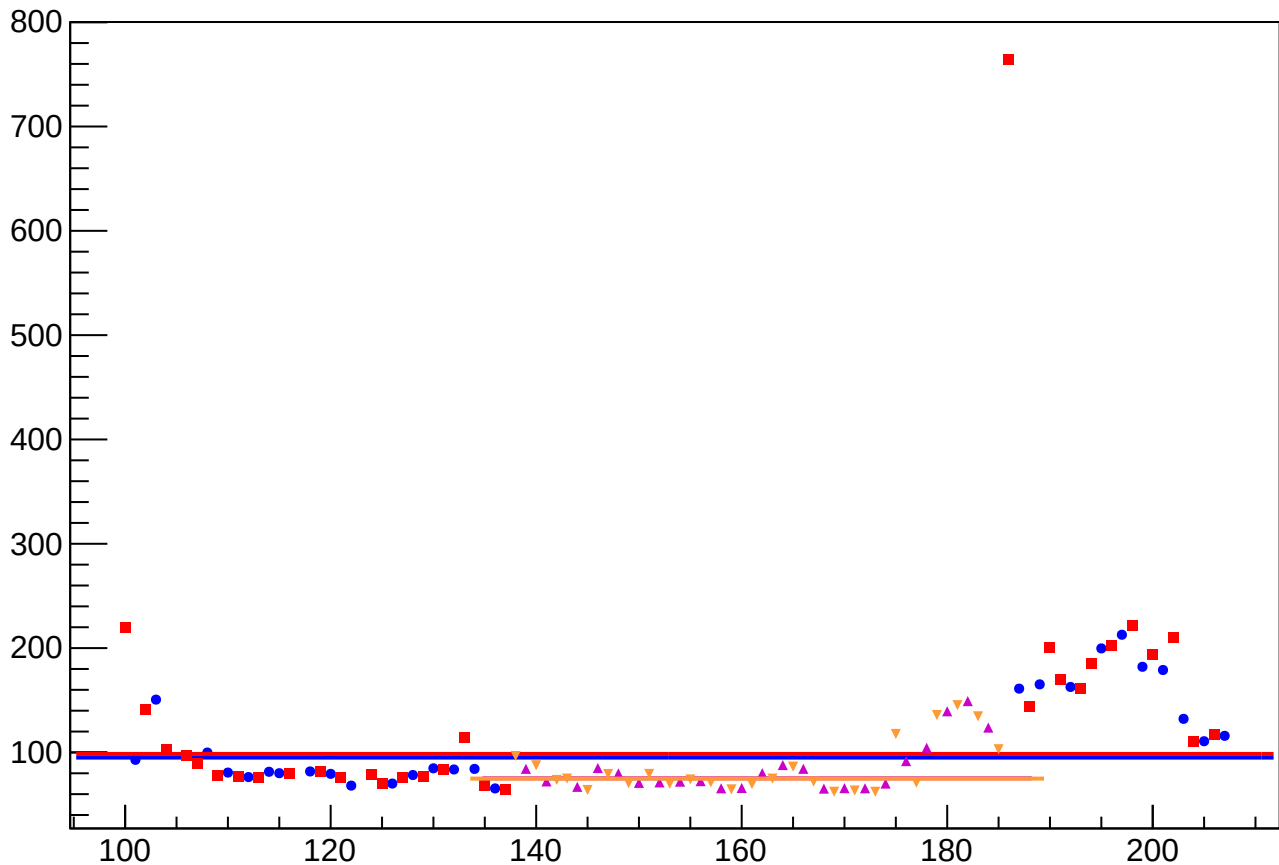
Left In: -61.723 $\pm$ 18.192  $\chi^2$ /NDF:36.7/22

+ sign 27.216 $\pm$ 14.709  $\chi^2$ /NDF: 46.2/50

All: -9.740 $\pm$ 10.518  $\chi^2$ /NDF: 147.7/104

- sign -48.399 $\pm$ 15.044  $\chi^2$ /NDF: 88.6/53

eigen\_dit\_asym\_sam\_12345678\_avg\_rms vs Slug



Right In: 95.046 $\pm$ 0.019  $\chi^2$ /NDF: 3508822.5/25

Left Out: 74.903 $\pm$ 0.012  $\chi^2$ /NDF:1661550.3/24

Right Out: 98.554 $\pm$ 0.019  $\chi^2$ /NDF: 4762579.6/30

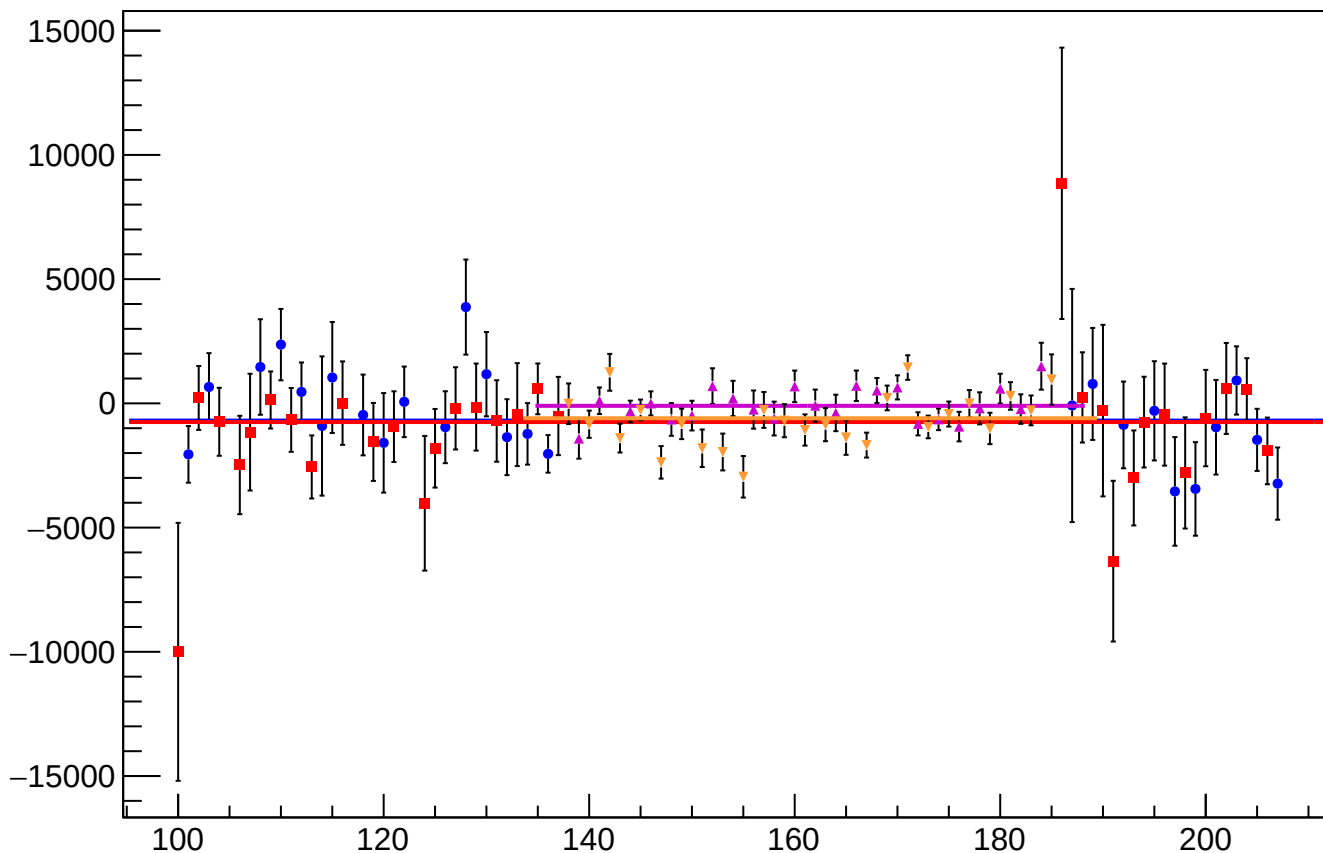
Left In: 75.156 $\pm$ 0.013  $\chi^2$ /NDF:1312527.7/22

+ sign 81.087 $\pm$ 0.010  $\chi^2$ /NDF: 5968313.2/50

All: 81.803 $\pm$ 0.007  $\chi^2$ /NDF: 13098937.3/104

- sign 82.552 $\pm$ 0.011  $\chi^2$ /NDF: 7120930.6/53

asym\_sam\_12345678\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In: -694.028 $\pm$ 296.276  $\chi^2$ /NDF: 29.9/25

Left Out: -598.825 $\pm$ 119.324  $\chi^2$ /NDF:65.0/24

Right Out: -751.521 $\pm$ 297.075  $\chi^2$ /NDF: 22.6/30

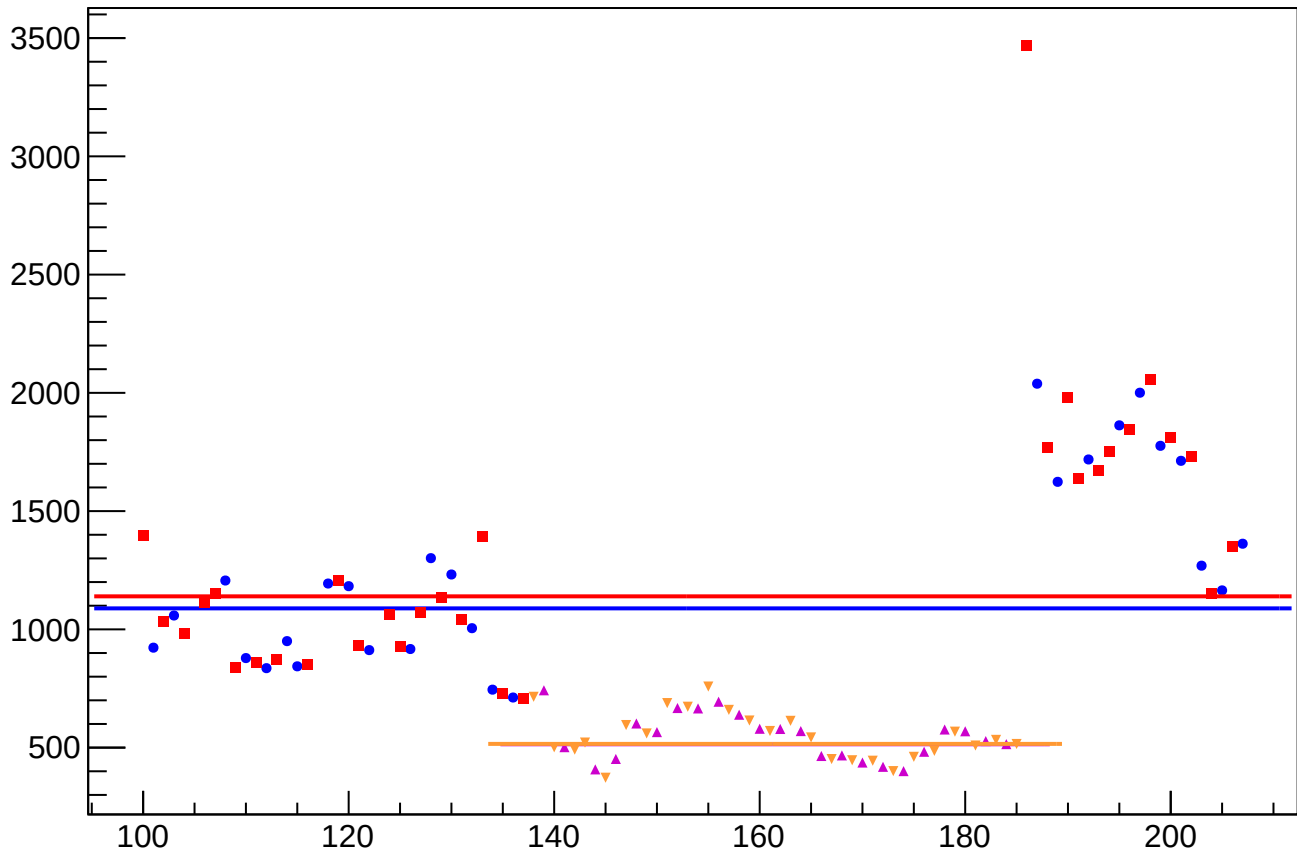
Left In: -99.101 $\pm$ 122.310  $\chi^2$ /NDF:23.7/22

+ sign -612.112 $\pm$ 110.684  $\chi^2$ /NDF: 95.0/50

All: -407.404 $\pm$ 79.106  $\chi^2$ /NDF: 152.4/104

- sign -193.664 $\pm$ 113.100  $\chi^2$ /NDF: 50.4/53

asym\_sam\_12345678\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In:  $1088.762 \pm 0.209$   $\chi^2/\text{NDF}: 2679791.8/25$

Left Out:  $515.761 \pm 0.084$   $\chi^2/\text{NDF}: 1232481.1/24$

Right Out:  $1139.630 \pm 0.210$   $\chi^2/\text{NDF}: 3243826.1/30$

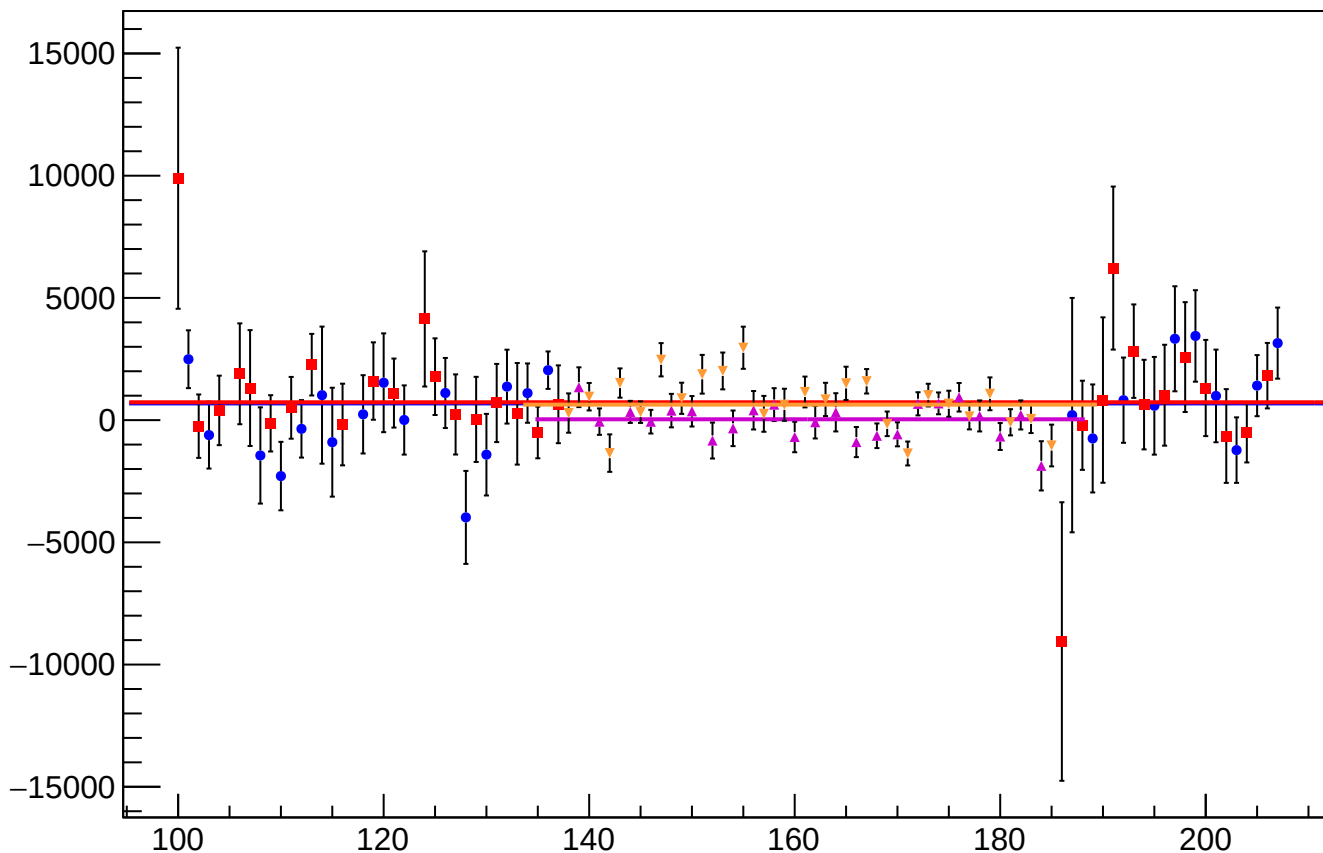
Left In:  $514.087 \pm 0.086$   $\chi^2/\text{NDF}: 1116882.7/22$

+ sign  $595.732 \pm 0.078$   $\chi^2/\text{NDF}: 10348988.2/50$

All:  $600.145 \pm 0.056$   $\chi^2/\text{NDF}: 22298635.5/100$

- sign  $604.753 \pm 0.080$   $\chi^2/\text{NDF}: 11943146.7/53$

# asym\_sam\_12345678\_avg\_mean vs Slug



Right In:  $683.326 \pm 295.863$   $\chi^2/\text{NDF}$ : 31.3/25

Left Out:  $634.783 \pm 120.717$   $\chi^2/\text{NDF}$ : 64.5/24

Right Out:  $730.766 \pm 298.556$   $\chi^2/\text{NDF}$ : 20.4/30

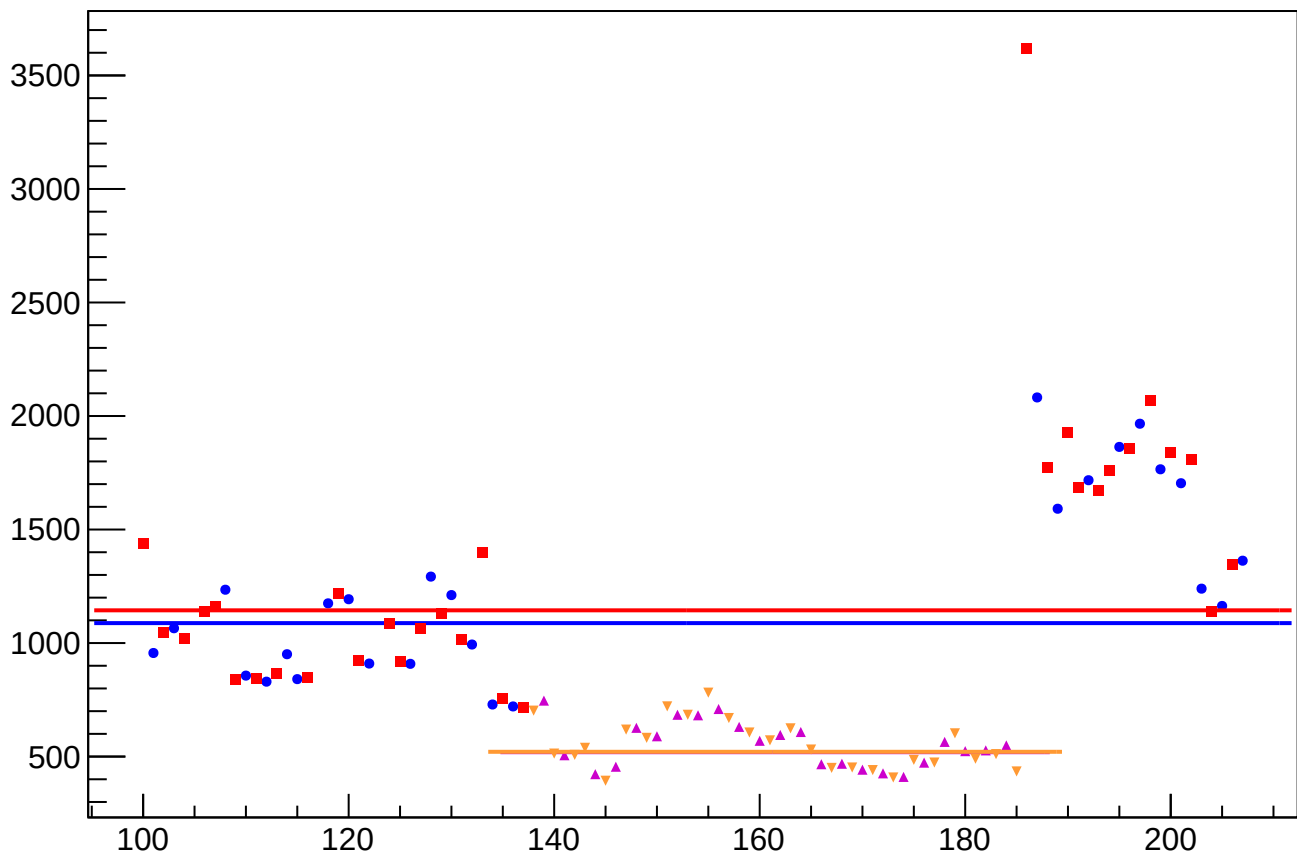
Left In:  $34.808 \pm 123.517$   $\chi^2/\text{NDF}$ : 25.1/22

+ sign  $641.711 \pm 111.771$   $\chi^2/\text{NDF}$ : 95.8/50

All:  $394.402 \pm 79.857$   $\chi^2/\text{NDF}$ : 156.0/104

- sign  $136.520 \pm 114.135$   $\chi^2/\text{NDF}$ : 50.2/53

# asym\_sam\_12345678\_avg\_rms vs Slug



Right In: 1087.818 $\pm$ 0.209  $\chi^2$ /NDF: 2631173.4/25

Left Out: 521.025 $\pm$ 0.085  $\chi^2$ /NDF:1243003.9/24

Right Out: 1144.119 $\pm$ 0.211  $\chi^2$ /NDF: 3270994.6/30

Left In: 519.239 $\pm$ 0.087  $\chi^2$ /NDF:1100553.3/22

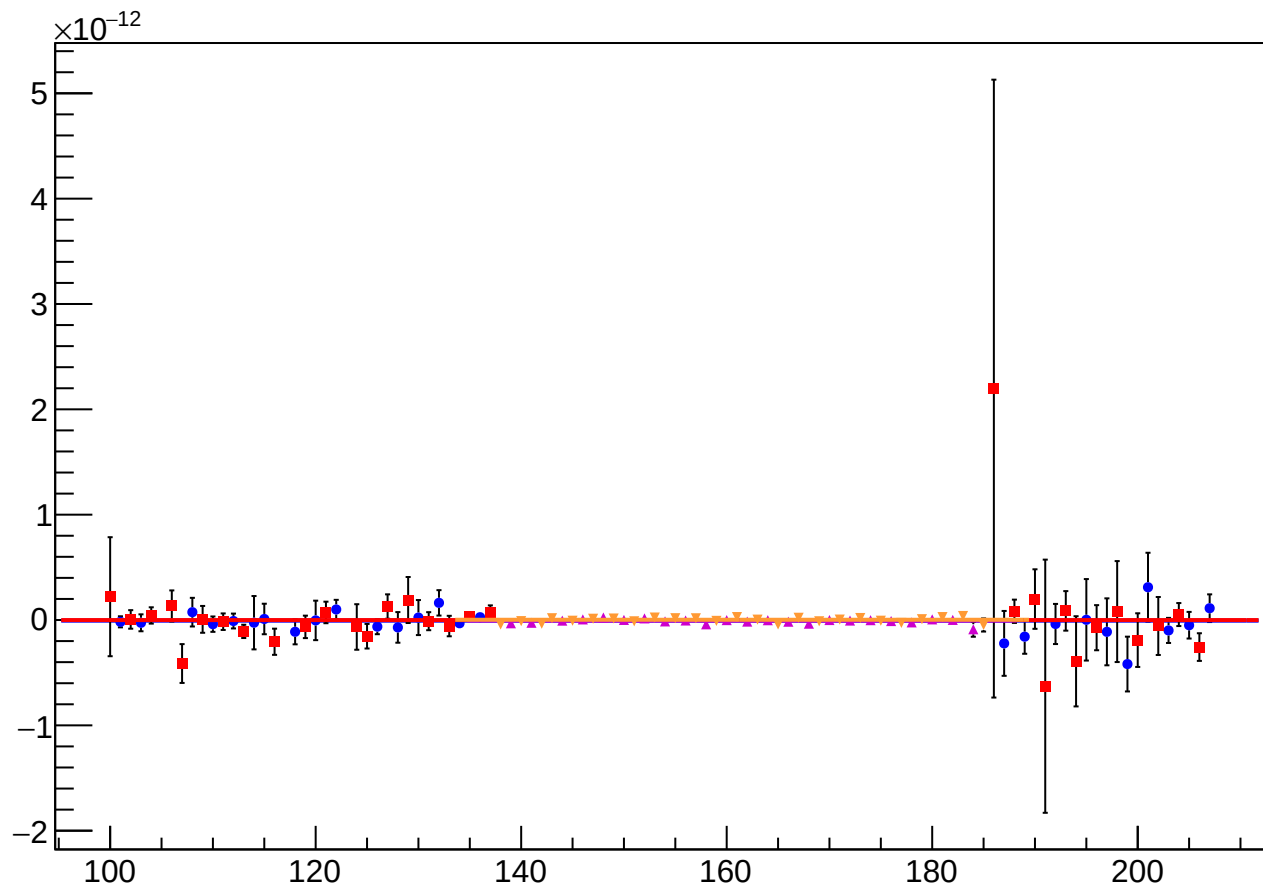
+ sign 601.917 $\pm$ 0.079  $\chi^2$ /NDF: 10166655.8/50

All: 606.149 $\pm$ 0.056  $\chi^2$ /NDF: 22024988.3/10

- sign 610.563 $\pm$ 0.081  $\chi^2$ /NDF: 11852472.9/53



asym\_sam\_12345678\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 13.6/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:22.4/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 27.2/30

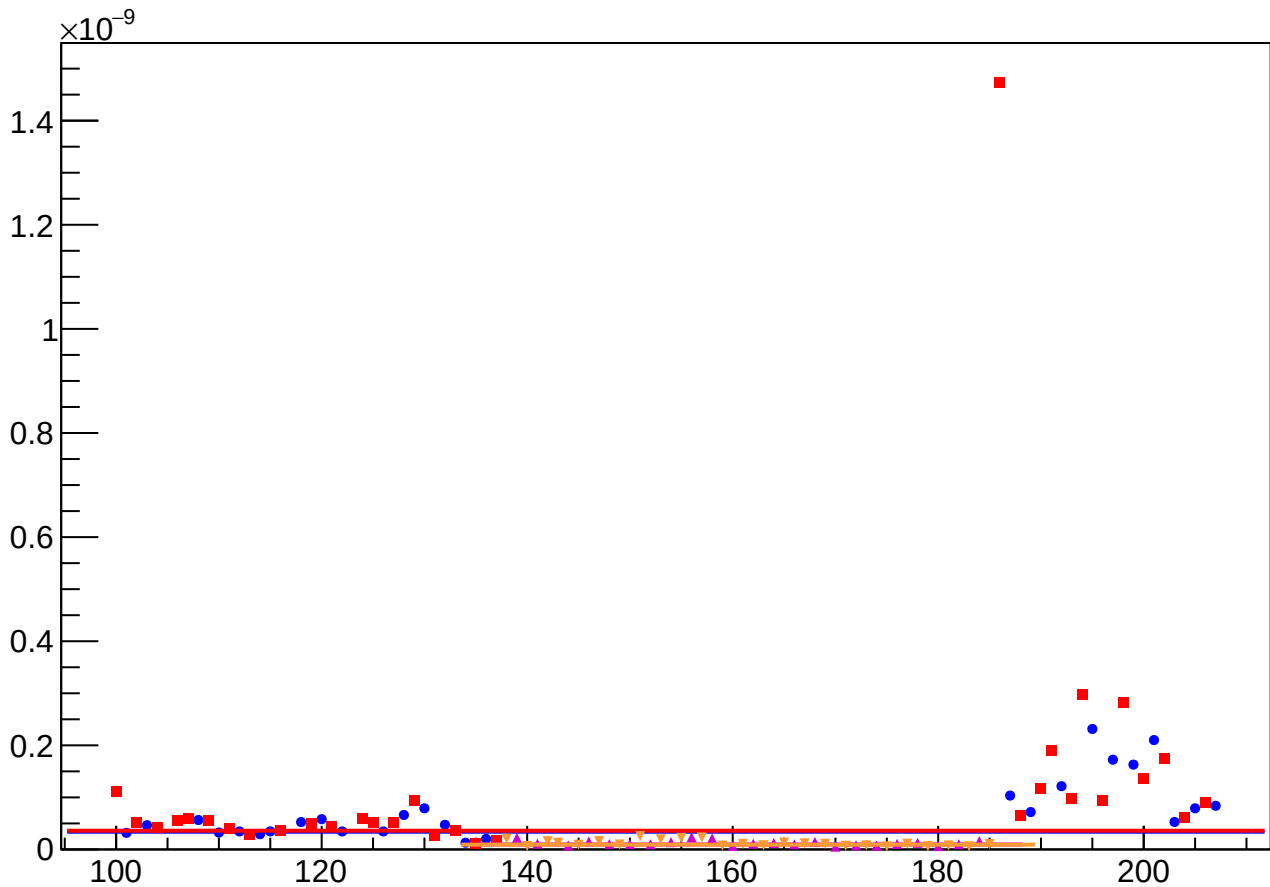
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:10.8/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 36.3/50

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 75.8/104

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 38.0/53

asym\_sam\_12345678\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4542639.3/25

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2137290.7/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5623791.7/30

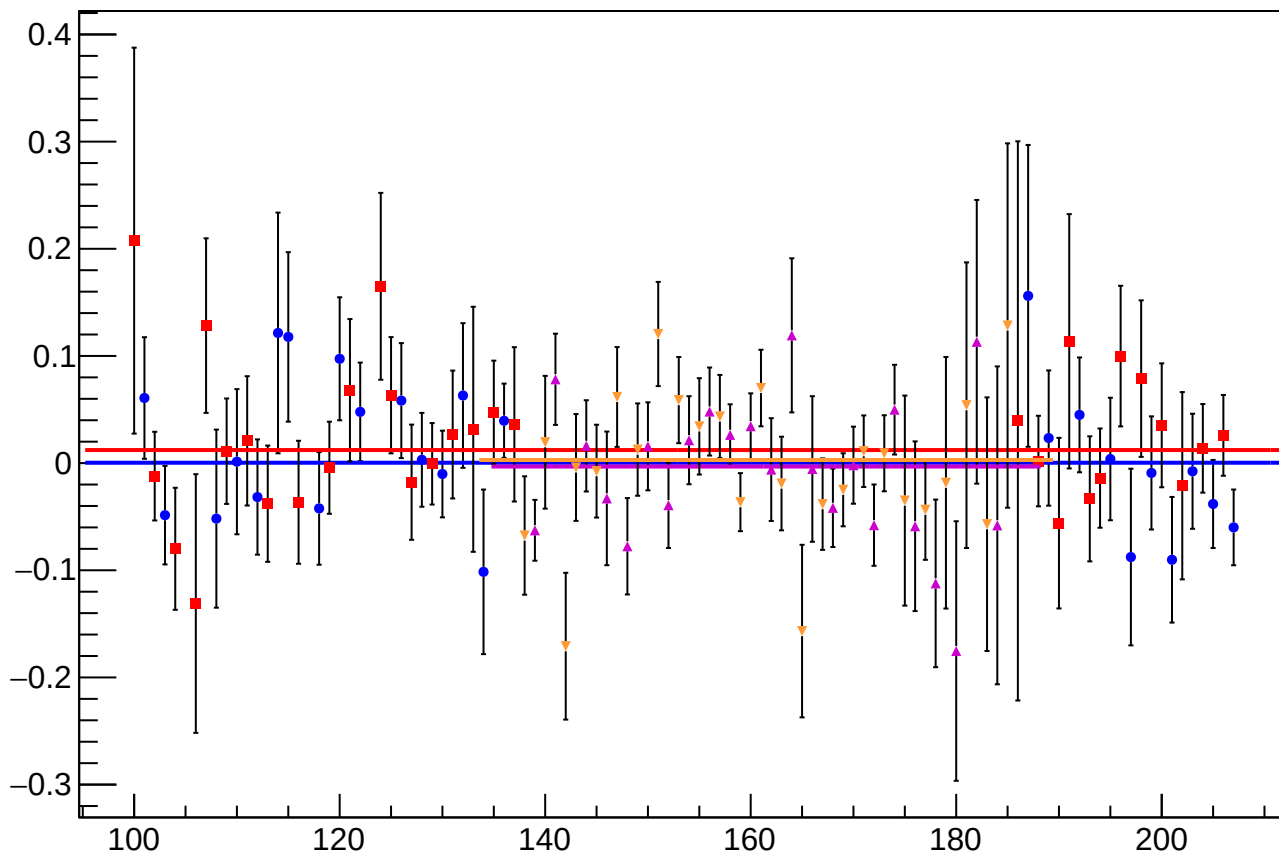
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1614718.4/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10792296.1/50

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 22057713.6/104

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11254159.2/53

asym\_sam\_12345678\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.011  $\chi^2$ /NDF: 25.5/25

Left Out: 0.003 $\pm$ 0.009  $\chi^2$ /NDF:32.9/24

Right Out: 0.012 $\pm$ 0.010  $\chi^2$ /NDF: 20.7/30

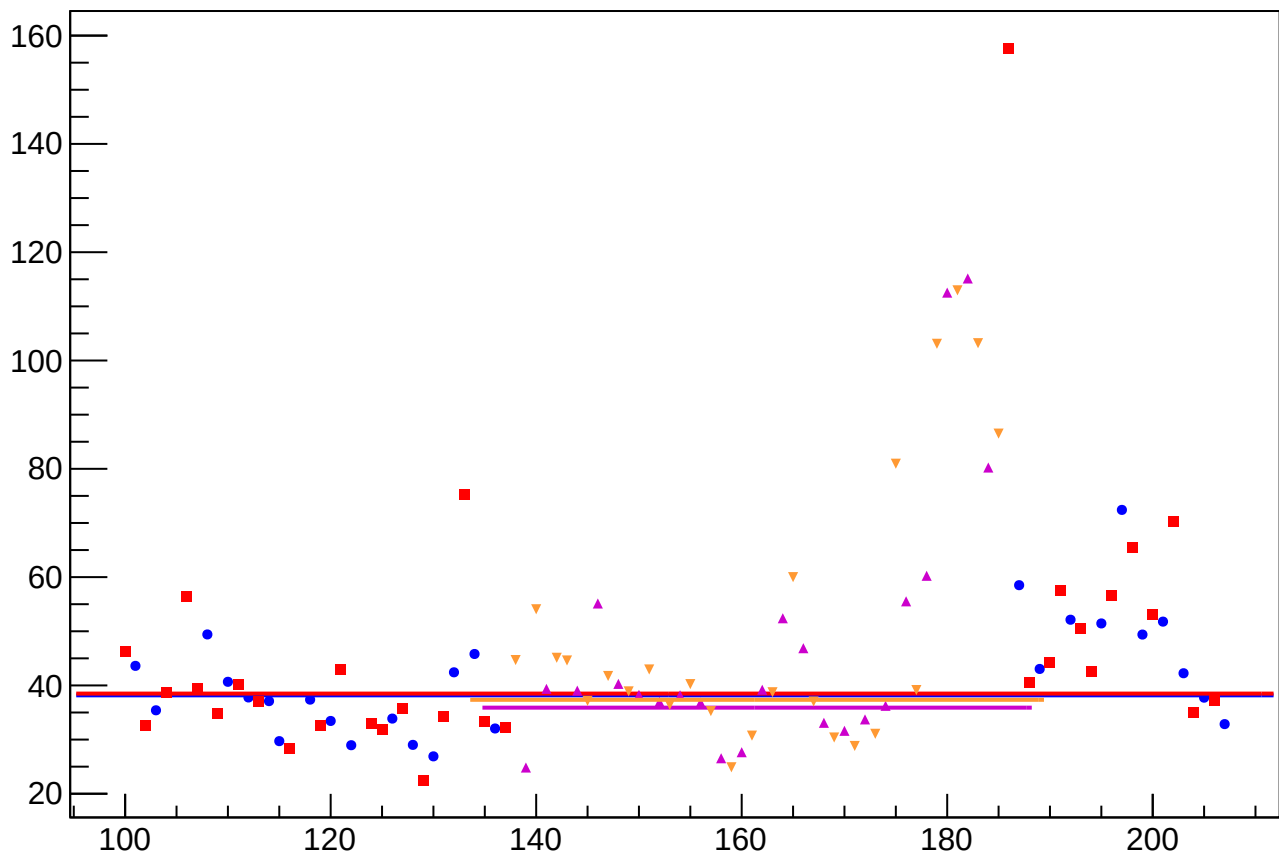
Left In: -0.003 $\pm$ 0.009  $\chi^2$ /NDF:29.8/22

+ sign 0.002 $\pm$ 0.007  $\chi^2$ /NDF: 58.4/50

All: 0.003 $\pm$ 0.005  $\chi^2$ /NDF: 110.2/104

- sign 0.004 $\pm$ 0.007  $\chi^2$ /NDF: 51.7/53

asym\_sam\_12345678\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 38.170 $\pm$ 0.007  $\chi^2$ /NDF: 1425726.6/25

Left Out: 37.344 $\pm$ 0.007  $\chi^2$ /NDF: 3696647.0/24

Right Out: 38.492 $\pm$ 0.007  $\chi^2$ /NDF: 2285889.5/30

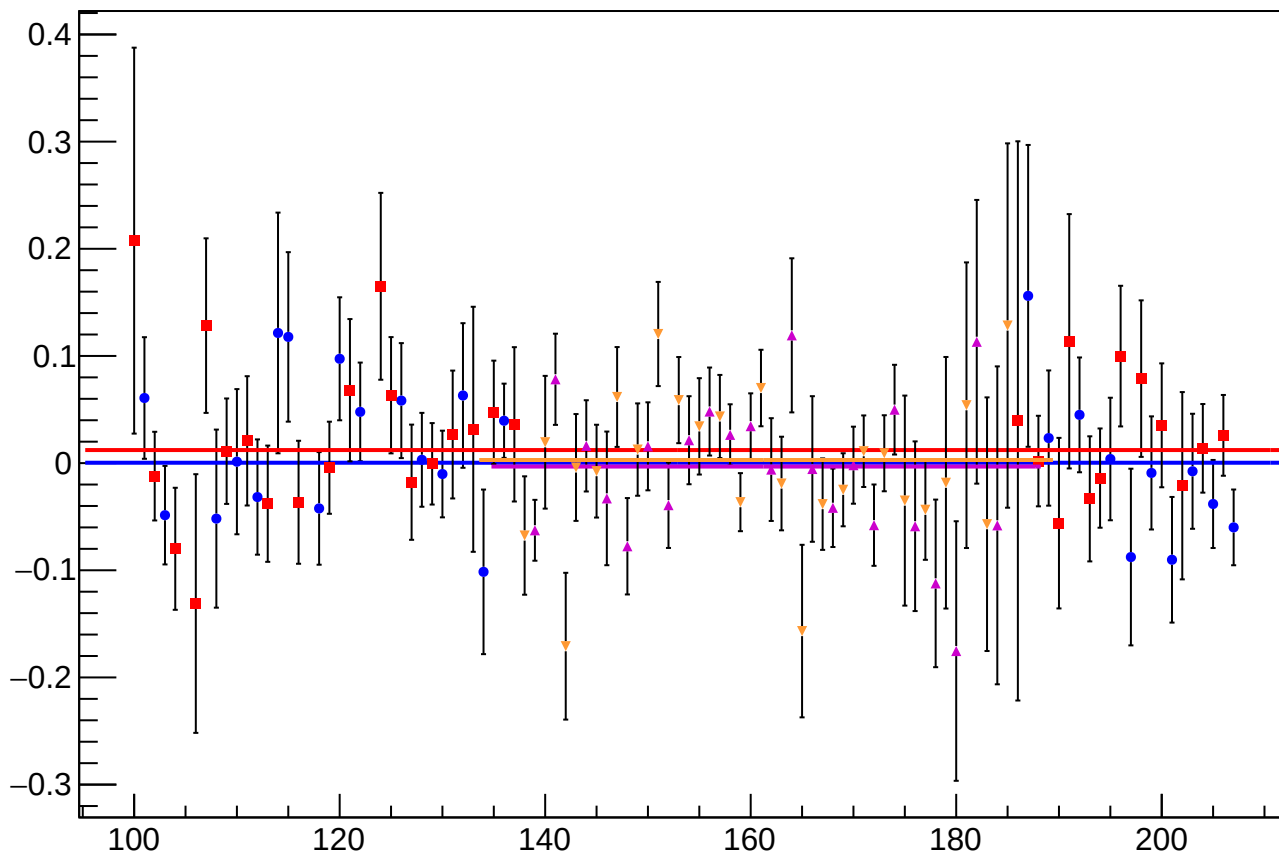
Left In: 35.896 $\pm$ 0.006  $\chi^2$ /NDF: 3138291.6/22

+ sign 37.705 $\pm$ 0.005  $\chi^2$ /NDF: 5129343.2/50

All: 37.369 $\pm$ 0.003  $\chi^2$ /NDF: 10633760.1/104

- sign 37.043 $\pm$ 0.005  $\chi^2$ /NDF: 5495189.9/53

asym\_sam\_12345678\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.011  $\chi^2$ /NDF: 25.5/25

Left Out: 0.003 $\pm$ 0.009  $\chi^2$ /NDF:32.9/24

Right Out: 0.012 $\pm$ 0.010  $\chi^2$ /NDF: 20.7/30

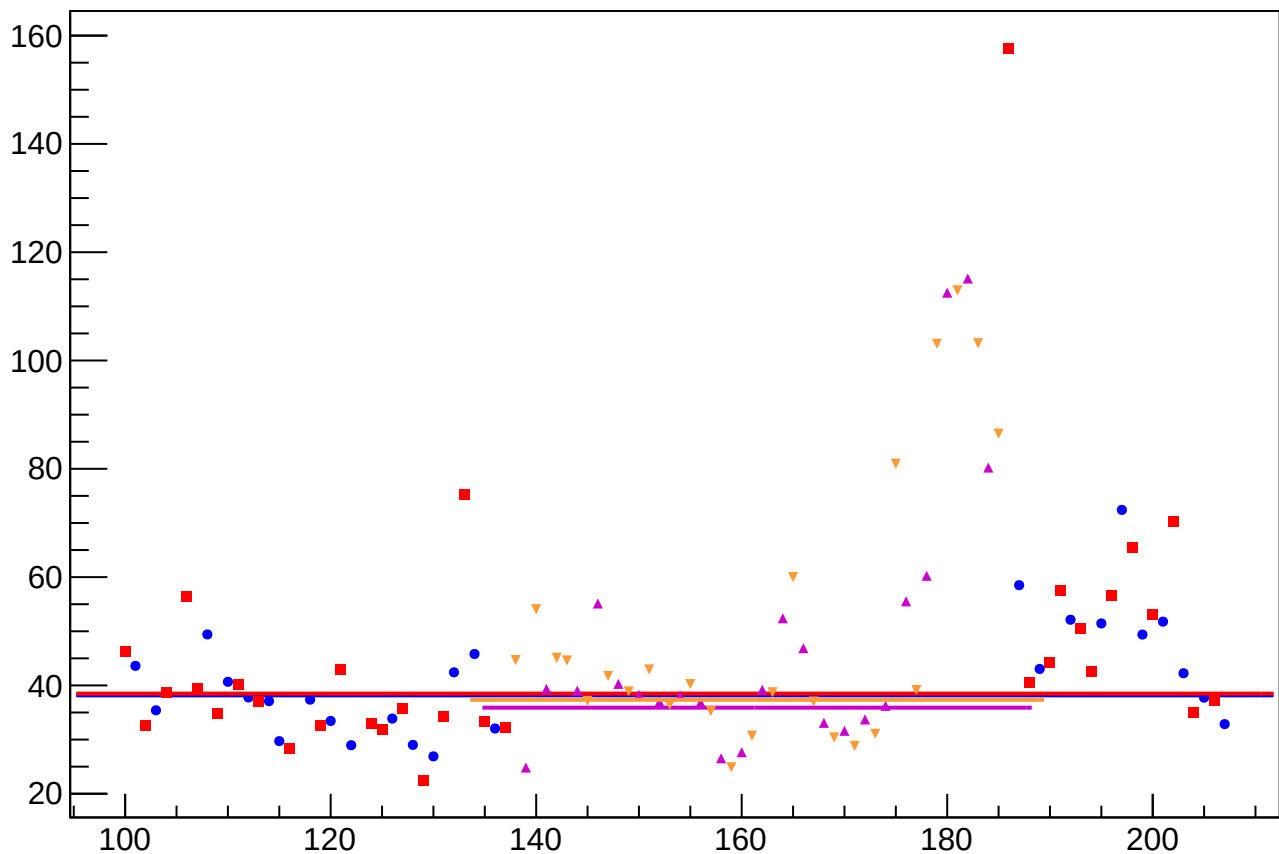
Left In: -0.003 $\pm$ 0.009  $\chi^2$ /NDF:29.8/22

+ sign 0.002 $\pm$ 0.007  $\chi^2$ /NDF: 58.4/50

All: 0.003 $\pm$ 0.005  $\chi^2$ /NDF: 110.2/104

- sign 0.004 $\pm$ 0.007  $\chi^2$ /NDF: 51.7/53

asym\_sam\_12345678\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 38.170+/-0.007  $\chi^2/\text{NDF}$ : 1425726.6/25

Left Out: 37.344+/-0.007  $\chi^2/\text{NDF}$ : 3696647.0/24

Right Out: 38.492+/-0.007  $\chi^2/\text{NDF}$ : 2285889.5/30

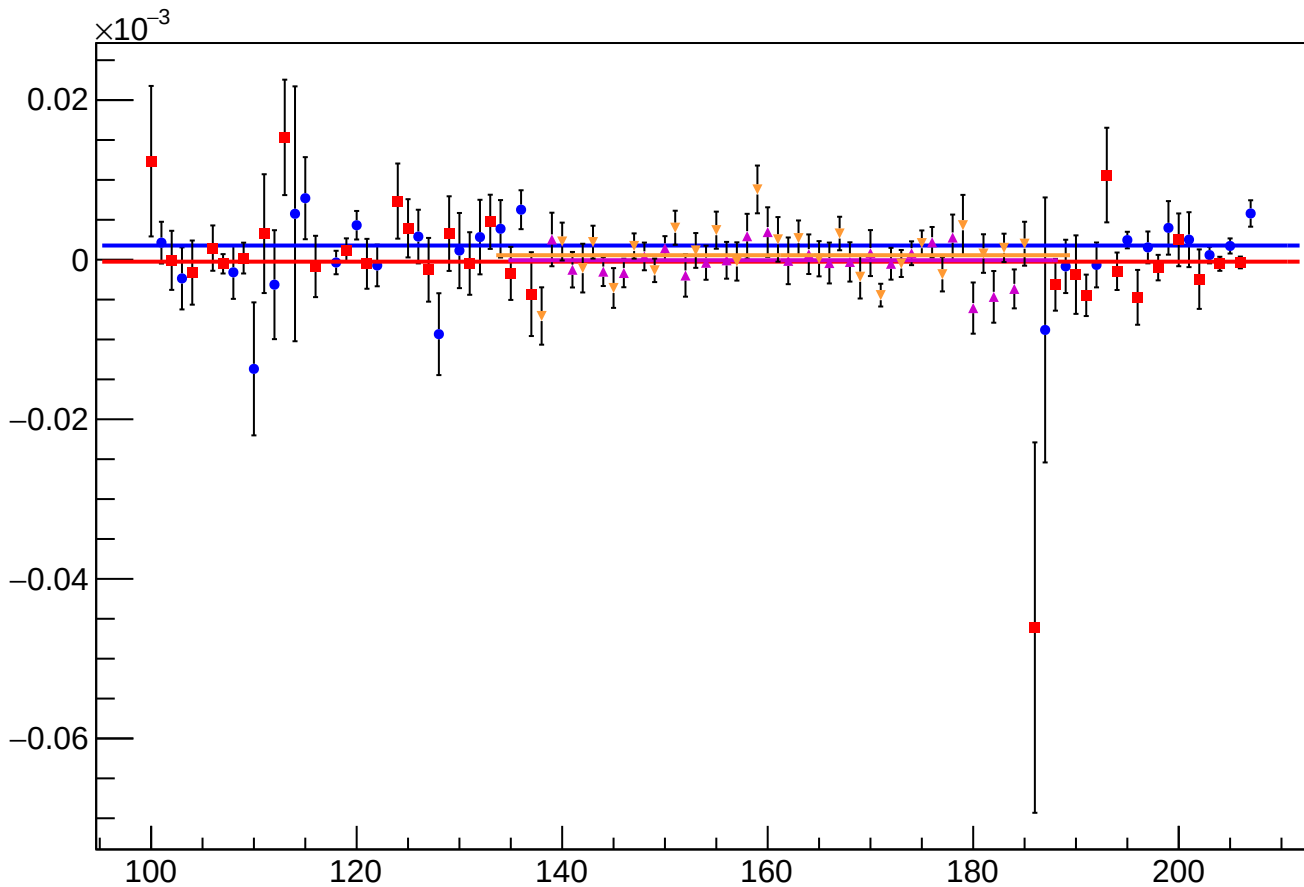
Left In: 35.896+/-0.006  $\chi^2/\text{NDF}$ : 3138291.6/22

+ sign 37.705+/-0.005  $\chi^2/\text{NDF}$ : 5129343.2/50

All: 37.369+/-0.003  $\chi^2/\text{NDF}$ : 10633760.1/104

- sign 37.043+/-0.005  $\chi^2/\text{NDF}$ : 5495189.9/53

asym\_sam\_12345678\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 31.1/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:43.5/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 29.8/30

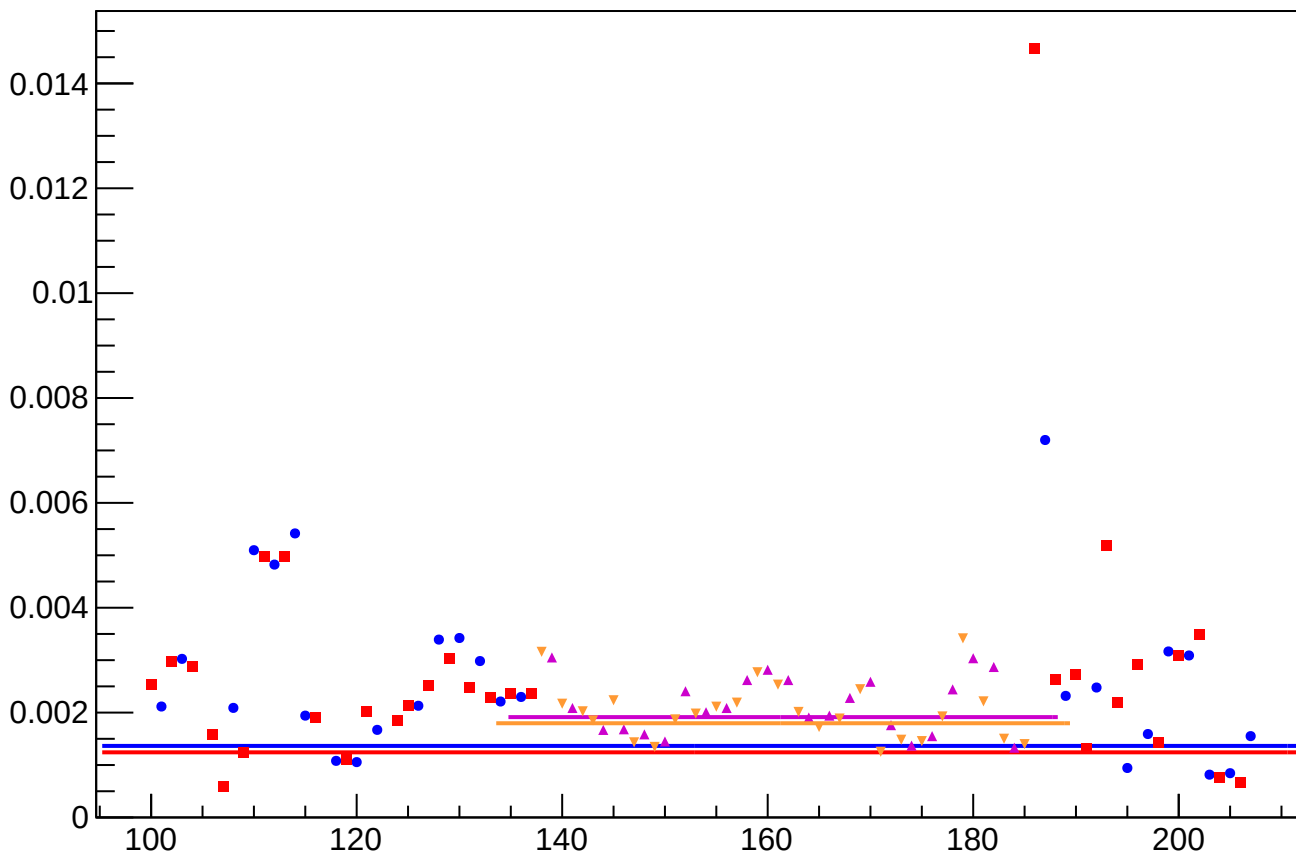
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:16.9/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 78.8/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 136.0/104

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 46.9/53

asym\_sam\_12345678\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 6643072.9/25

Left Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ :2279340.7/24

Right Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 10109731.0/30

Left In: 0.002+/-0.000  $\chi^2/\text{NDF}$ :2171715.8/22

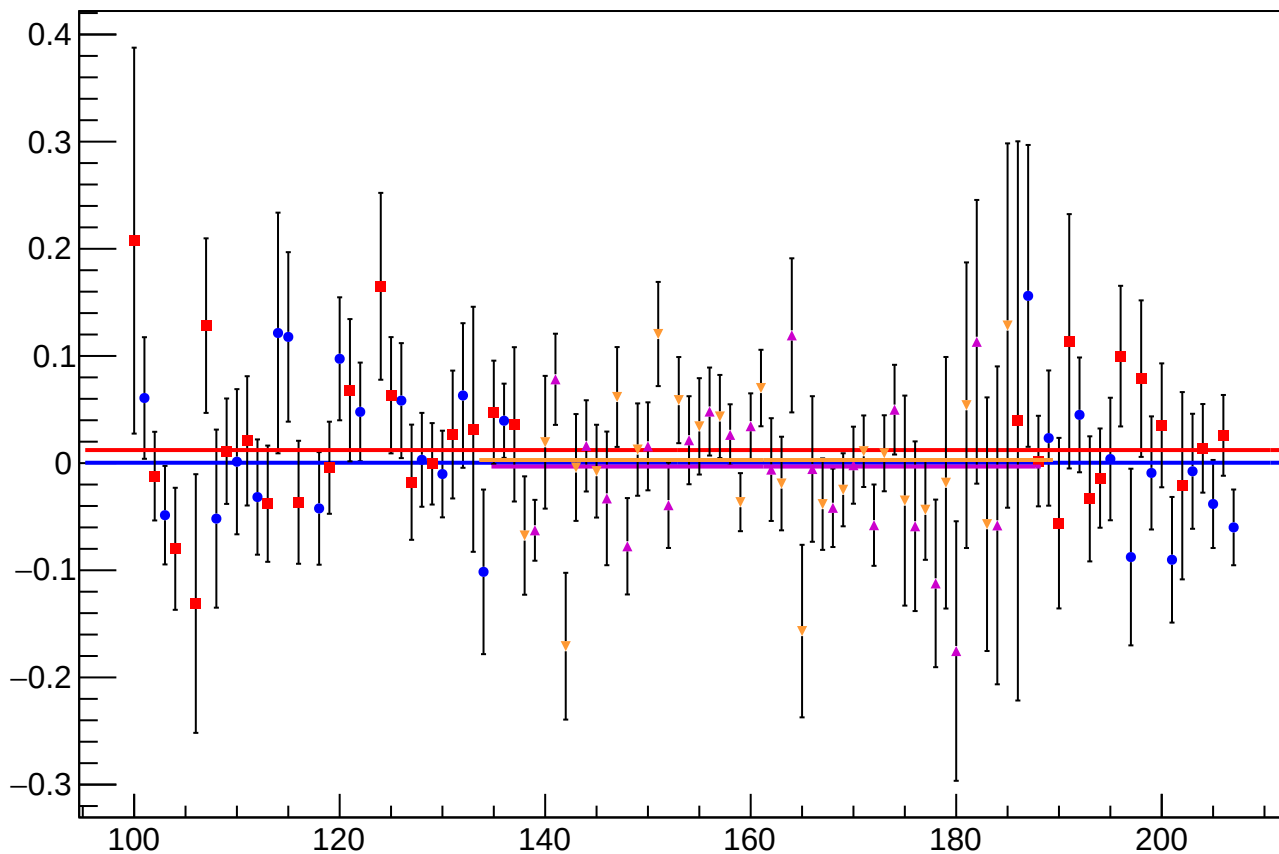
+ sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 9978417.3/50

All: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 24766125.4/104

- sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 14746681.1/53



asym\_sam\_12345678\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.011  $\chi^2$ /NDF: 25.5/25

Left Out: 0.003 $\pm$ 0.009  $\chi^2$ /NDF:32.9/24

Right Out: 0.012 $\pm$ 0.010  $\chi^2$ /NDF: 20.7/30

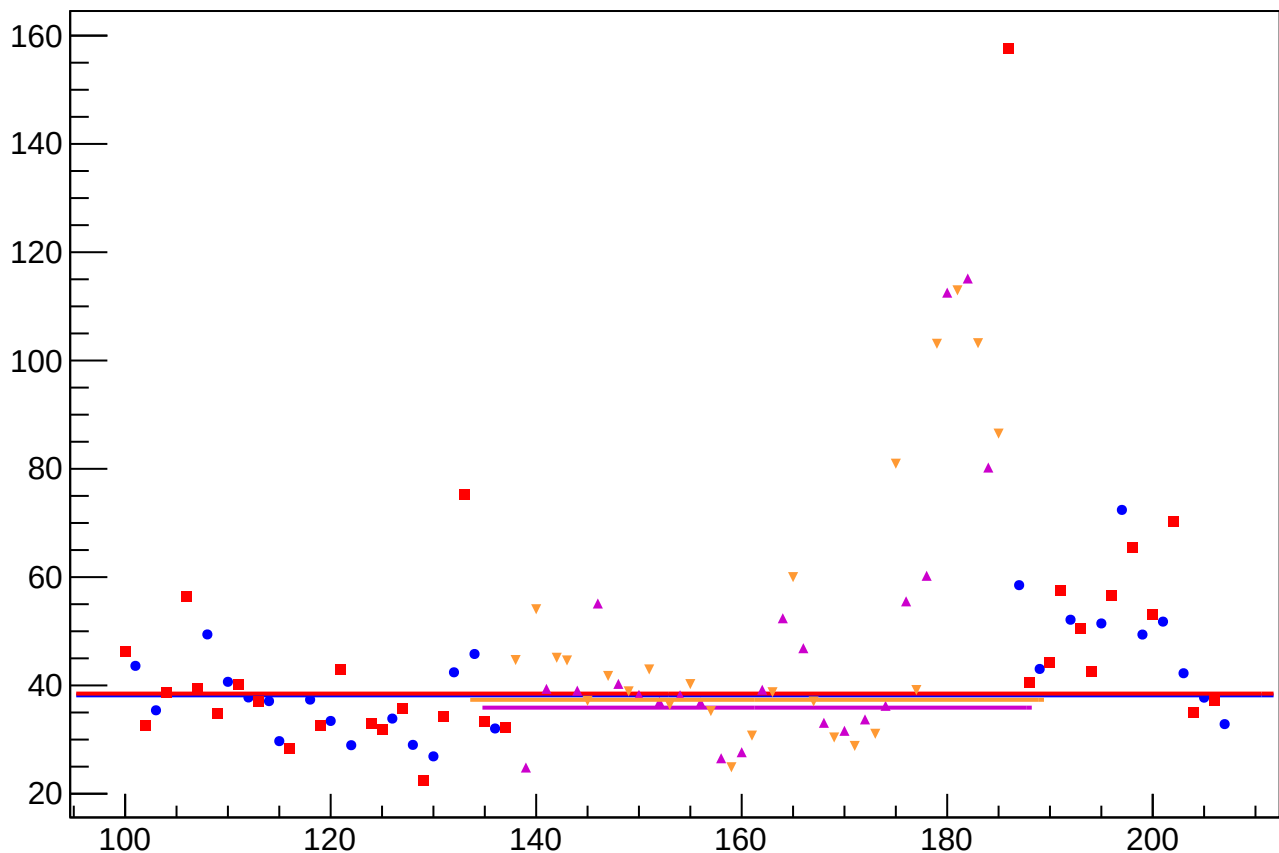
Left In: -0.003 $\pm$ 0.009  $\chi^2$ /NDF:29.8/22

+ sign 0.002 $\pm$ 0.007  $\chi^2$ /NDF: 58.4/50

All: 0.003 $\pm$ 0.005  $\chi^2$ /NDF: 110.2/104

- sign 0.004 $\pm$ 0.007  $\chi^2$ /NDF: 51.7/53

asym\_sam\_12345678\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 38.170+/-0.007  $\chi^2/\text{NDF}$ : 1425836.6/25

Left Out: 37.344+/-0.007  $\chi^2/\text{NDF}$ : 3696697.3/24

Right Out: 38.492+/-0.007  $\chi^2/\text{NDF}$ : 2286006.9/30

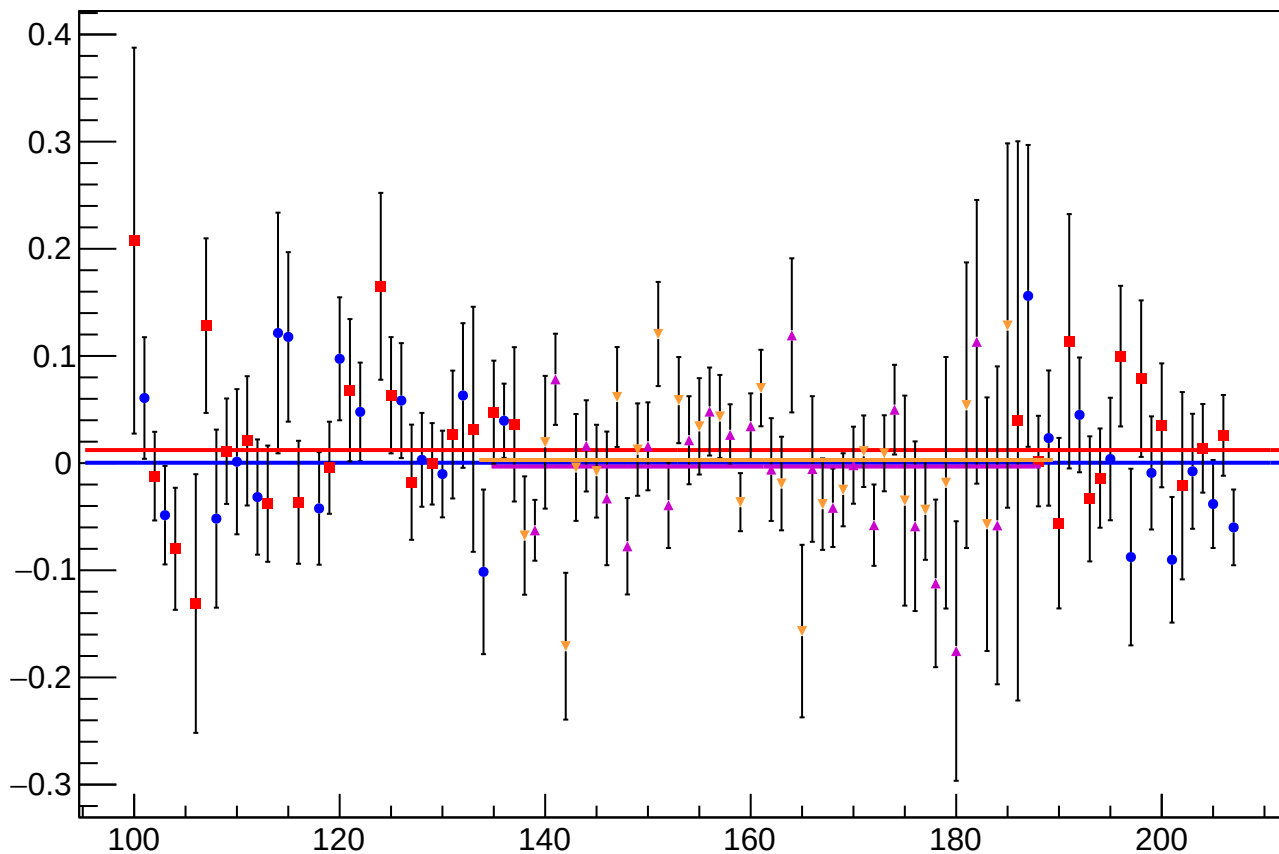
Left In: 35.896+/-0.006  $\chi^2/\text{NDF}$ : 3138307.4/22

+ sign 37.705+/-0.005  $\chi^2/\text{NDF}$ : 5129489.1/50

All: 37.369+/-0.003  $\chi^2/\text{NDF}$ : 10633997.3/104

- sign 37.043+/-0.005  $\chi^2/\text{NDF}$ : 5495286.6/53

asym\_sam\_12345678\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.011  $\chi^2$ /NDF: 25.5/25

Left Out: 0.003 $\pm$ 0.009  $\chi^2$ /NDF:32.9/24

Right Out: 0.012 $\pm$ 0.010  $\chi^2$ /NDF: 20.7/30

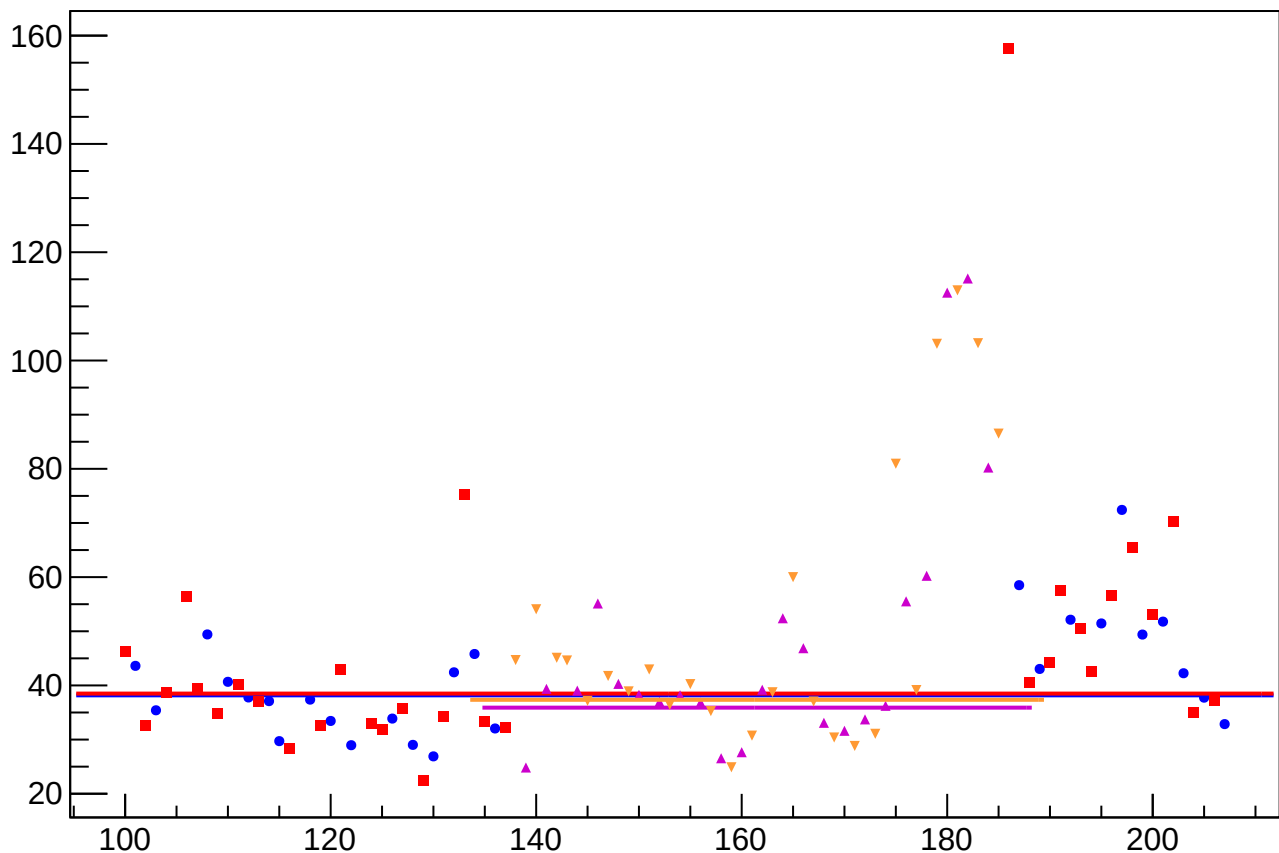
Left In: -0.003 $\pm$ 0.009  $\chi^2$ /NDF:29.8/22

+ sign 0.002 $\pm$ 0.007  $\chi^2$ /NDF: 58.4/50

All: 0.003 $\pm$ 0.005  $\chi^2$ /NDF: 110.2/104

- sign 0.004 $\pm$ 0.007  $\chi^2$ /NDF: 51.7/53

asym\_sam\_12345678\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 38.170+/-0.007  $\chi^2/\text{NDF}$ : 1425836.6/25

Left Out: 37.344+/-0.007  $\chi^2/\text{NDF}$ : 3696697.3/24

Right Out: 38.492+/-0.007  $\chi^2/\text{NDF}$ : 2286006.9/30

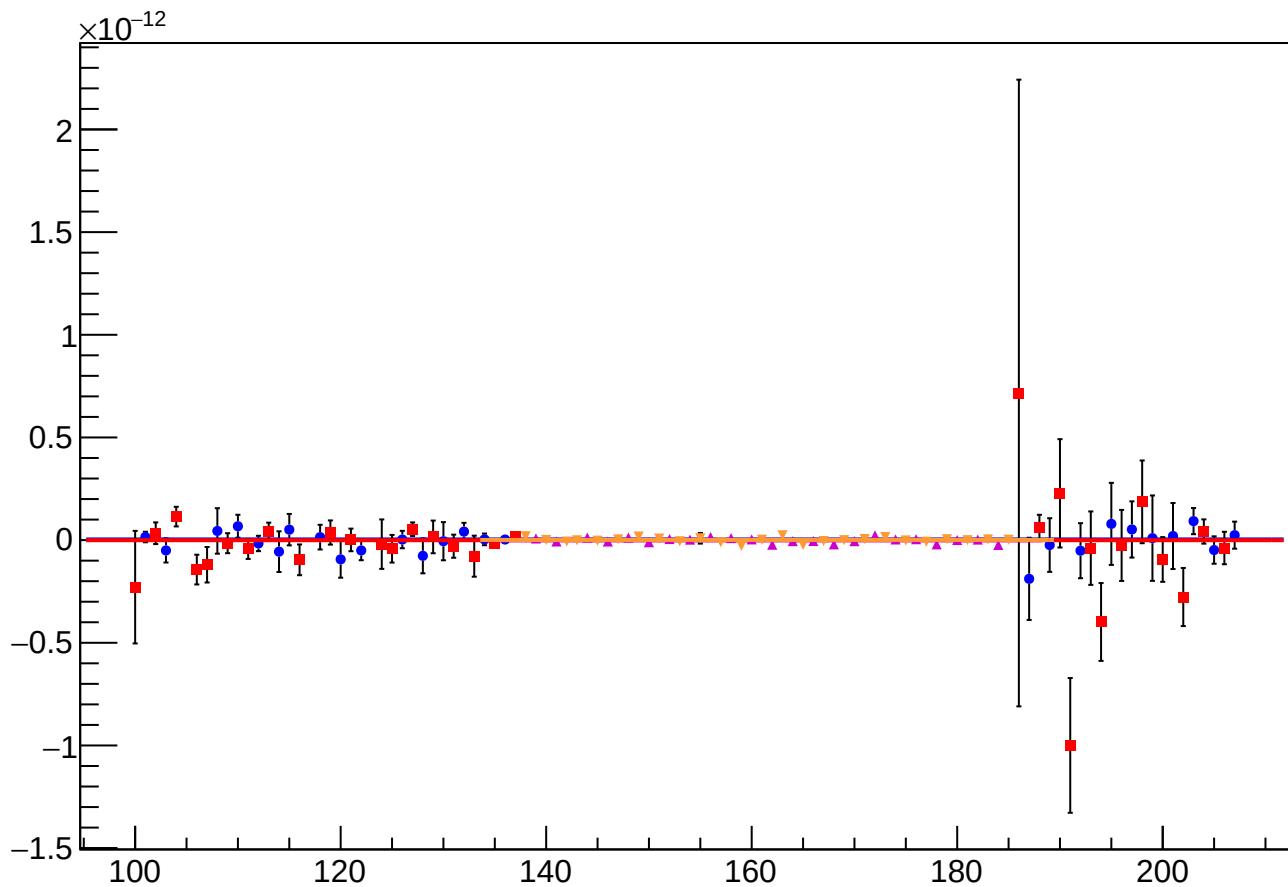
Left In: 35.896+/-0.006  $\chi^2/\text{NDF}$ : 3138307.4/22

+ sign 37.705+/-0.005  $\chi^2/\text{NDF}$ : 5129489.1/50

All: 37.369+/-0.003  $\chi^2/\text{NDF}$ : 10633997.3/104

- sign 37.043+/-0.005  $\chi^2/\text{NDF}$ : 5495286.6/53

asym\_sam\_12345678\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 11.8/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:21.4/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 43.3/30

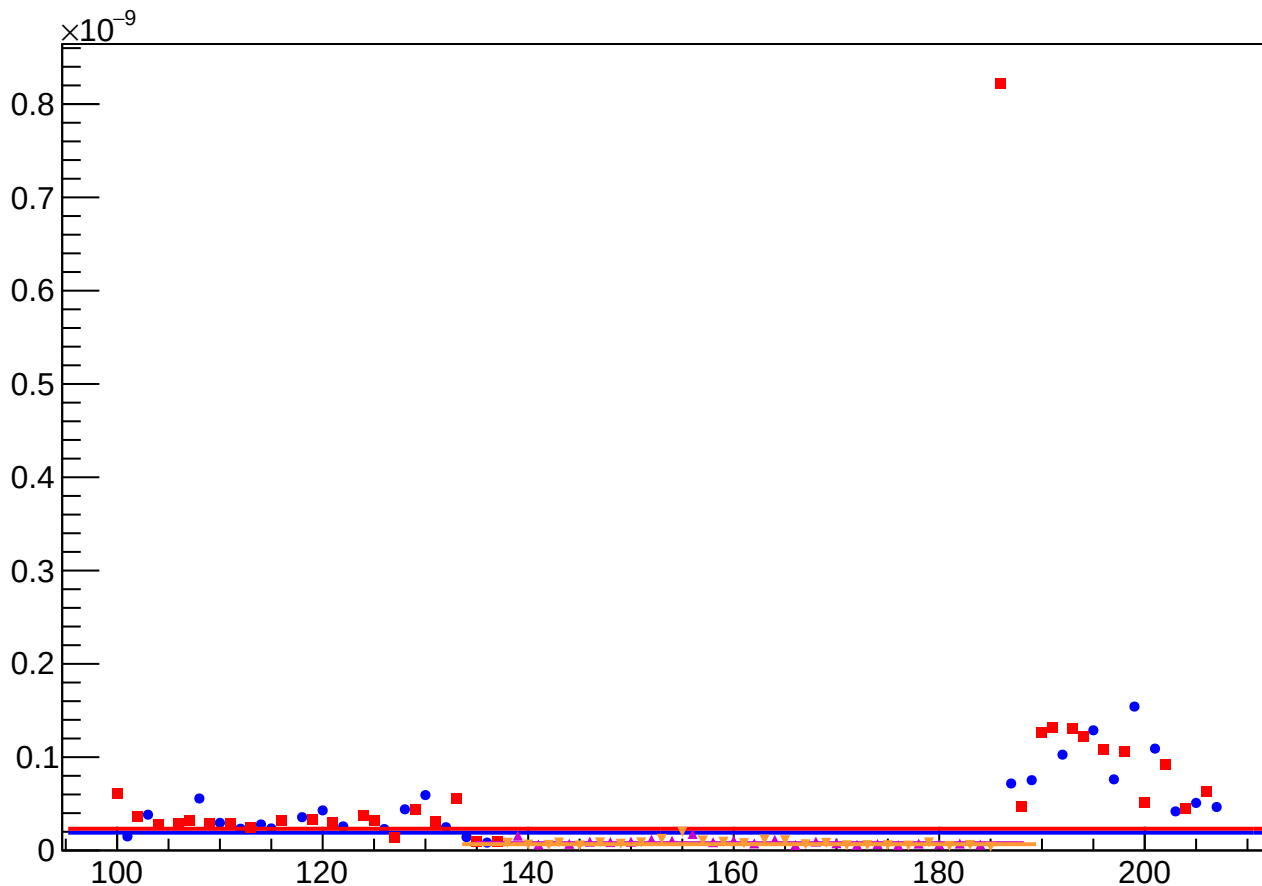
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:29.2/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 33.2/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 106.1/104

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 72.5/53

asym\_sam\_12345678\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 7848242.1/25

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:2192403.1/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 7573116.8/30

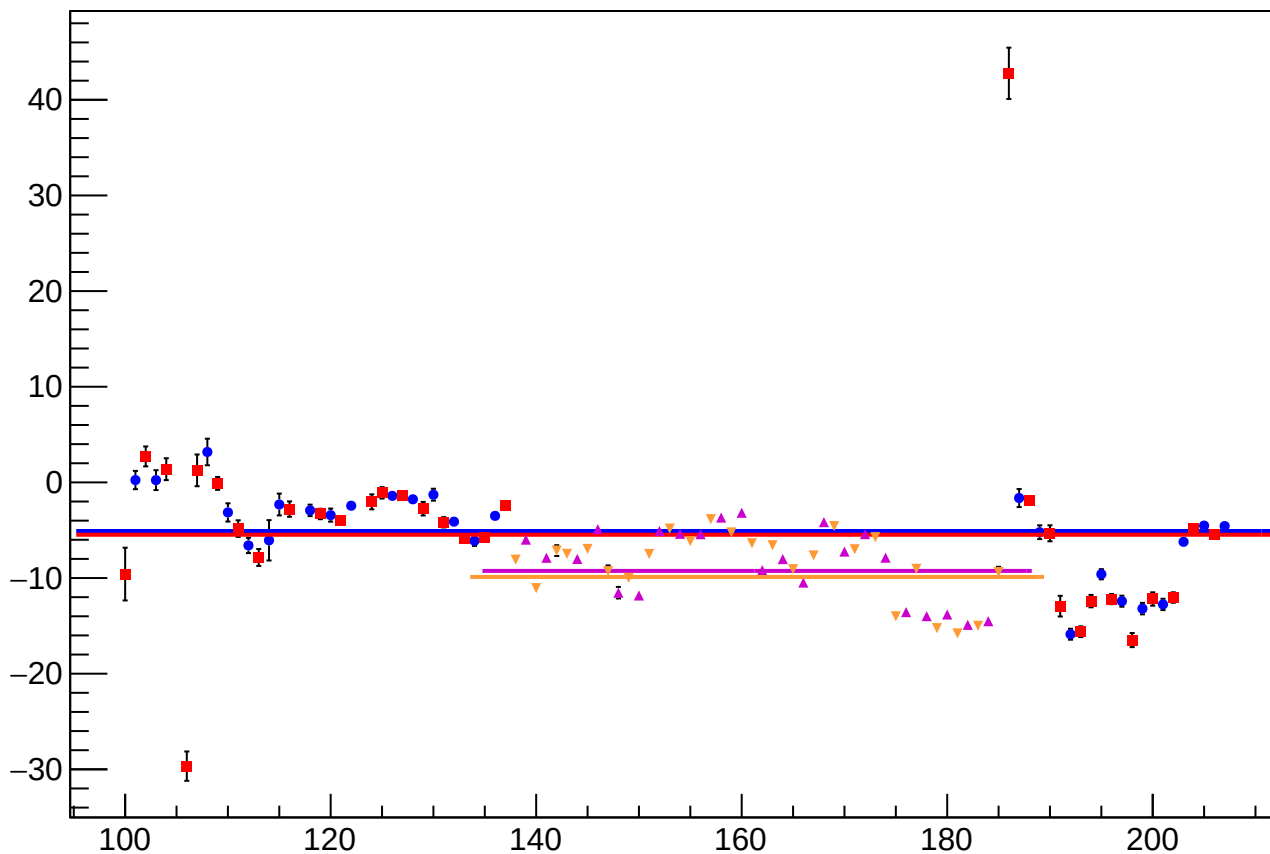
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:1582294.4/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 14130359.3/50

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 28434924.9/104

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 13972201.8/53

# reg\_asym\_sam1\_diff\_bpm1X\_slope vs Slug



Right In:  $-5.082 \pm 0.105$   $\chi^2/\text{NDF}: 1317.7/25$

Left Out:  $-9.886 \pm 0.070$   $\chi^2/\text{NDF}: 3206.9/24$

Right Out:  $-5.475 \pm 0.105$   $\chi^2/\text{NDF}: 2253.5/30$

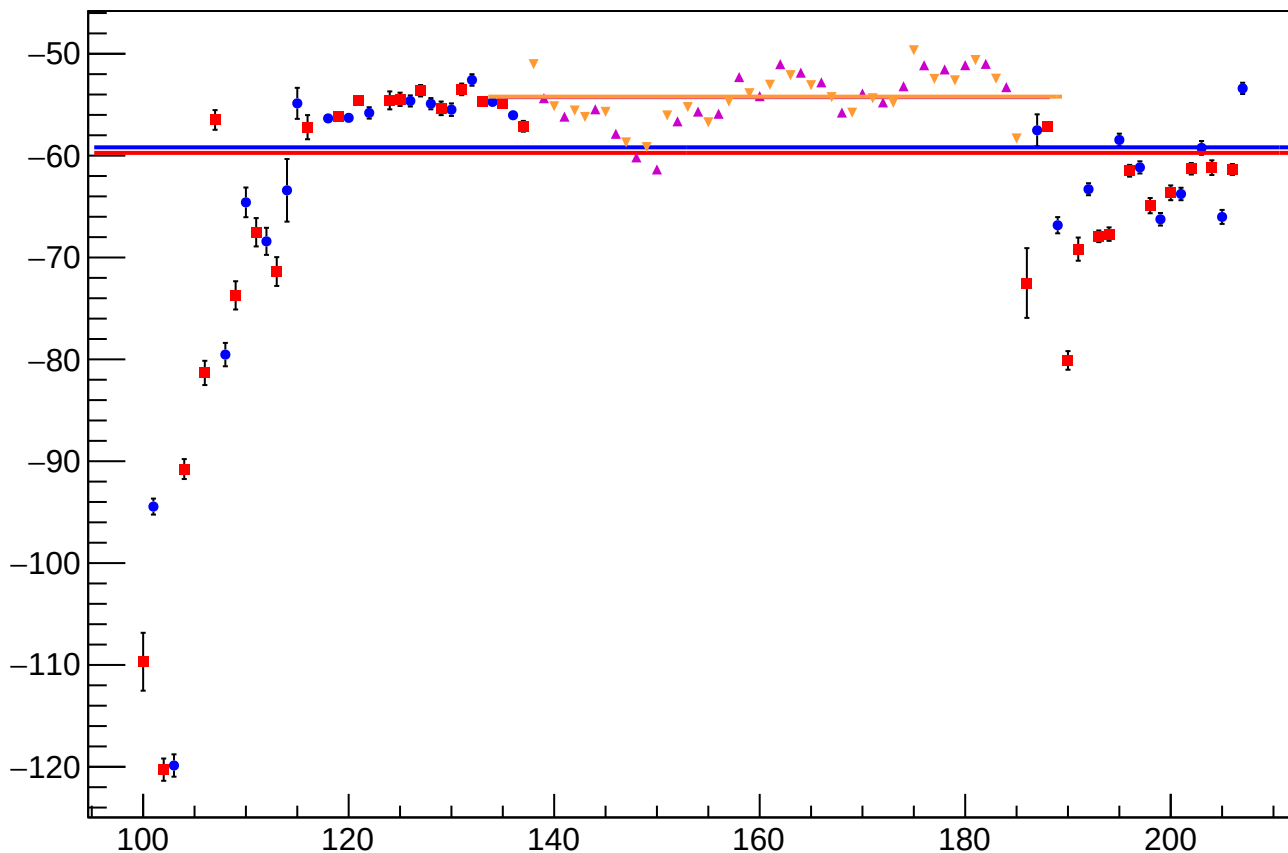
Left In:  $-9.255 \pm 0.072$   $\chi^2/\text{NDF}: 3067.6/22$

+ sign  $-8.427 \pm 0.058$   $\chi^2/\text{NDF}: 5974.3/50$

All:  $-8.241 \pm 0.041$   $\chi^2/\text{NDF}: 12206.6/104$

- sign  $-8.047 \pm 0.059$   $\chi^2/\text{NDF}: 6211.2/53$

reg\_asym\_sam1\_diff\_bpm4aY\_slope vs Slug



Right In:  $-59.185 \pm 0.114$   $\chi^2/\text{NDF}$ : 6729.1/25

Left Out:  $-54.206 \pm 0.056$   $\chi^2/\text{NDF}$ : 1857.6/24

Right Out:  $-59.729 \pm 0.112$   $\chi^2/\text{NDF}$ : 7053.1/30

Left In:  $-54.257 \pm 0.058$   $\chi^2/\text{NDF}$ : 2489.9/22

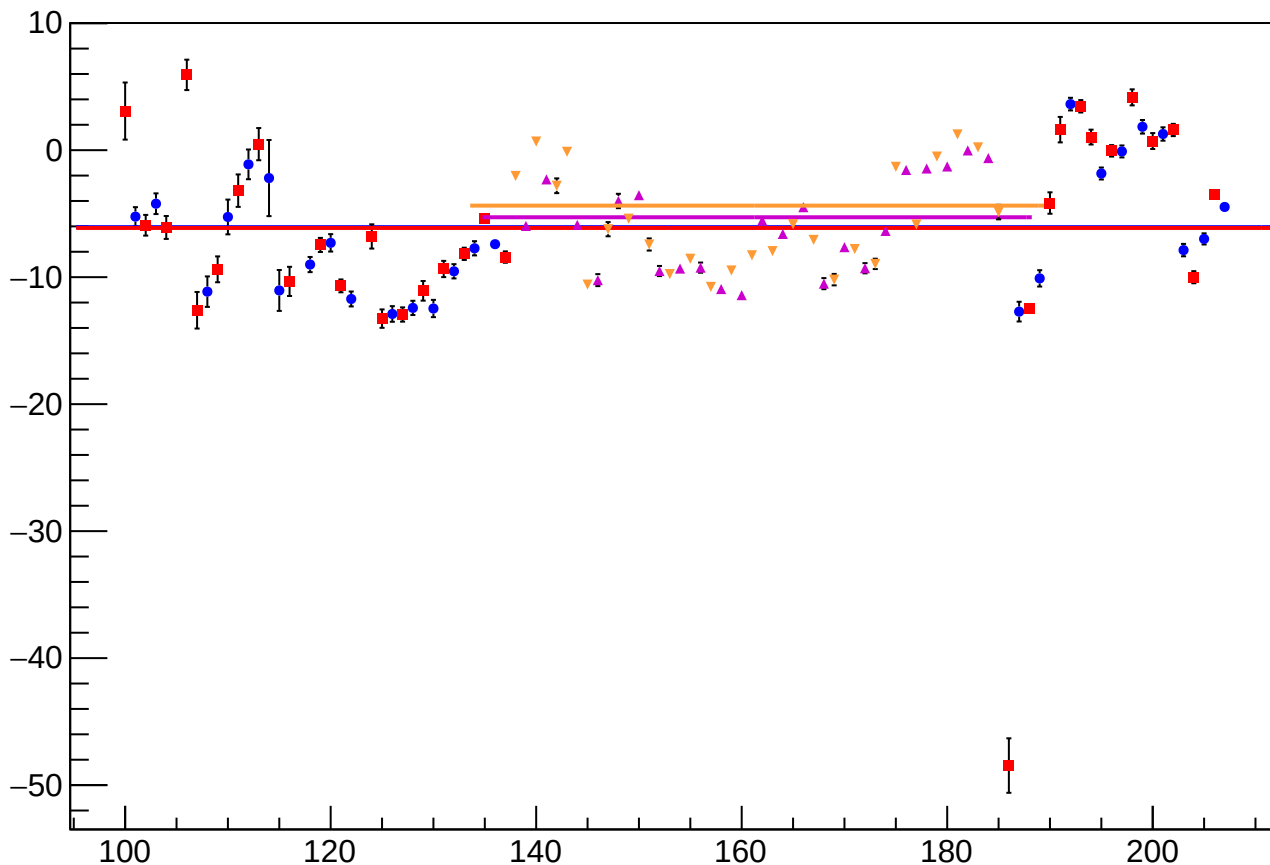
+ sign  $-55.176 \pm 0.050$   $\chi^2/\text{NDF}$ : 10135.6/50

All:  $-55.293 \pm 0.036$   $\chi^2/\text{NDF}$ : 21557.6/104

- sign  $-55.418 \pm 0.052$   $\chi^2/\text{NDF}$ : 11410.7/53



# reg\_asym\_sam1\_diff\_bpm4eX\_slope vs Slug



Right In:  $-6.063 \pm 0.106$   $\chi^2/\text{NDF}$ : 1779.9/25

Left Out:  $-4.366 \pm 0.069$   $\chi^2/\text{NDF}$ : 3701.4/24

Right Out:  $-6.124 \pm 0.103$   $\chi^2/\text{NDF}$ : 3161.4/30

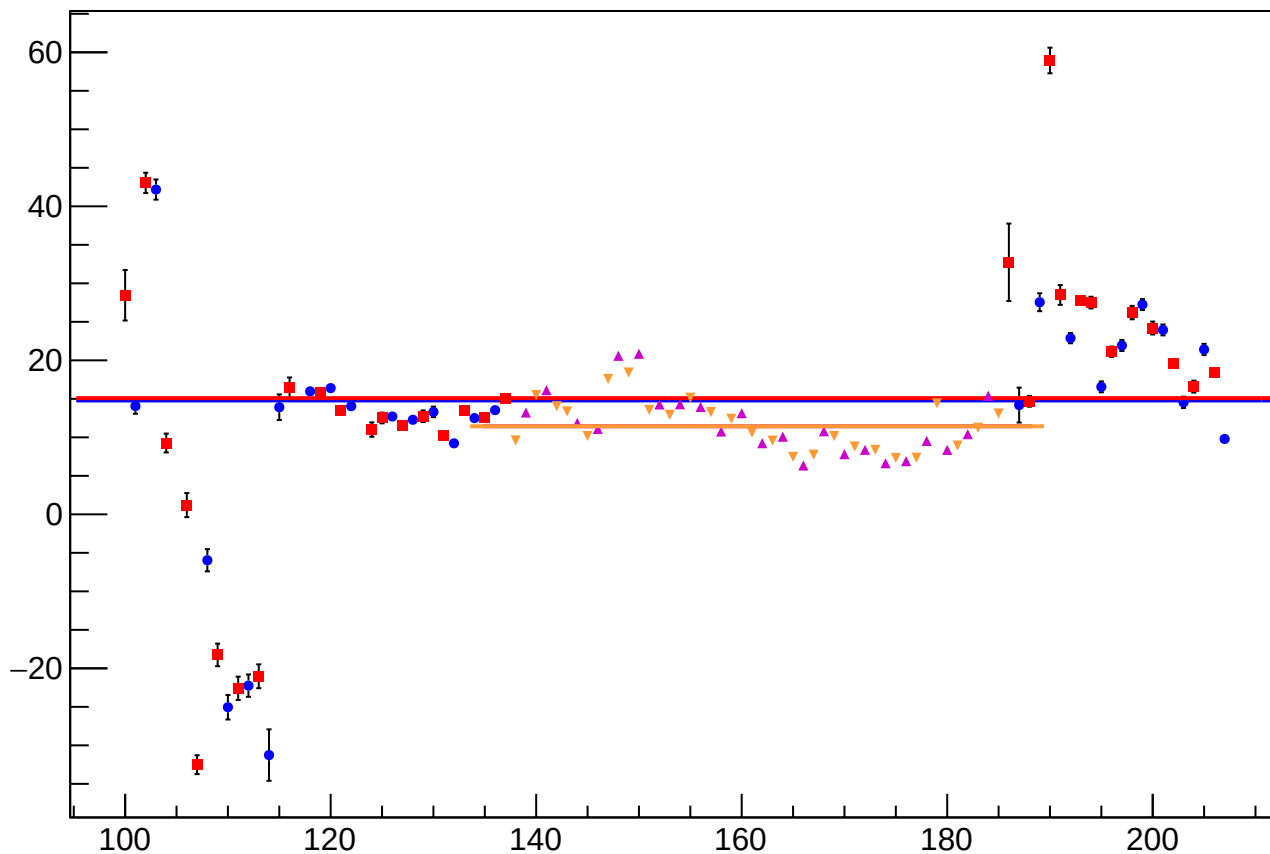
Left In:  $-5.283 \pm 0.071$   $\chi^2/\text{NDF}$ : 2750.2/22

+ sign  $-4.876 \pm 0.058$   $\chi^2/\text{NDF}$ : 5661.6/50

All:  $-5.211 \pm 0.041$   $\chi^2/\text{NDF}$ : 11685.9/104

- sign  $-5.554 \pm 0.059$   $\chi^2/\text{NDF}$ : 5956.6/53

# reg\_asym\_sam1\_diff\_bpm4eY\_slope vs Slug



Right In: 14.795+/-0.127  $\chi^2/\text{NDF}$ : 3300.1/25

Left Out: 11.438+/-0.062  $\chi^2/\text{NDF}$ : 2435.7/24

Right Out: 15.089+/-0.128  $\chi^2/\text{NDF}$ : 5901.2/30

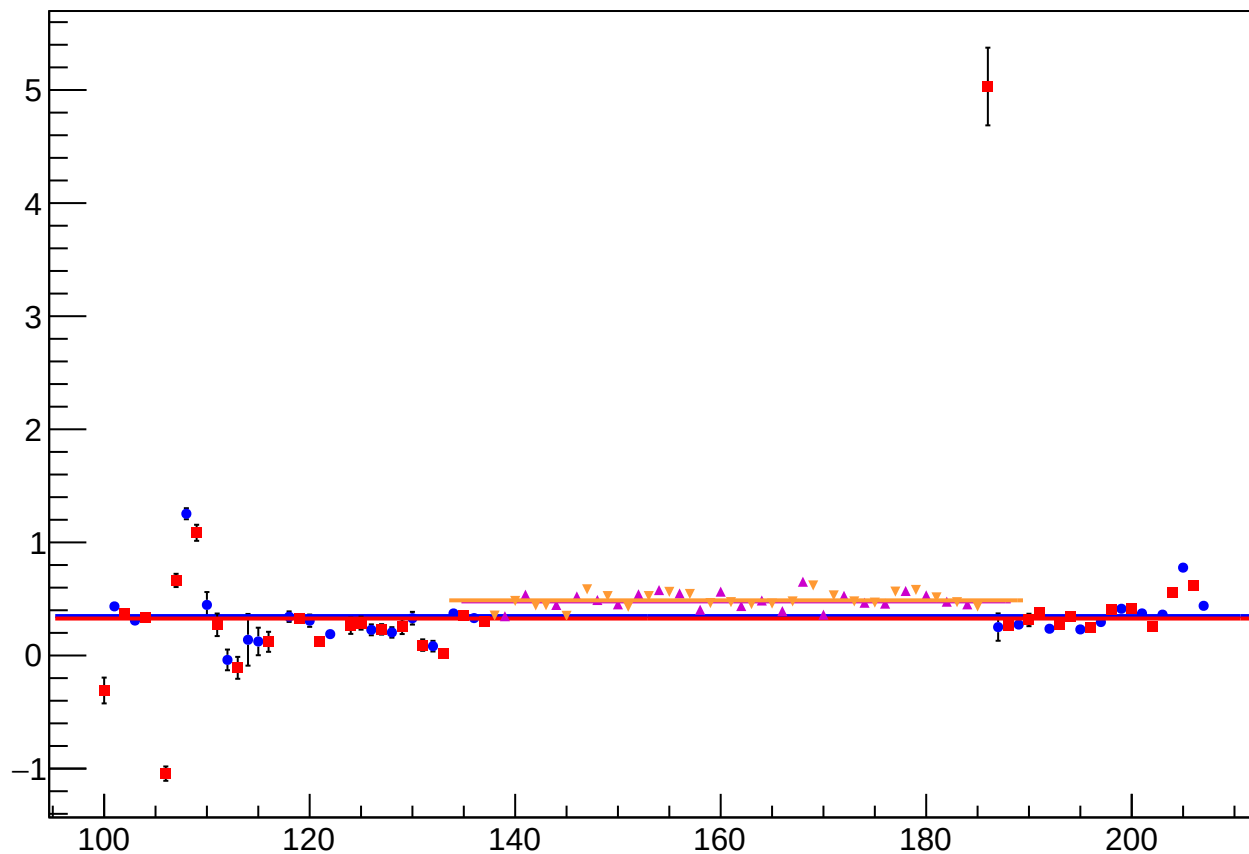
Left In: 11.441+/-0.064  $\chi^2/\text{NDF}$ : 3358.4/22

+ sign 12.083+/-0.056  $\chi^2/\text{NDF}$ : 6299.8/50

All: 12.127+/-0.040  $\chi^2/\text{NDF}$ : 16209.0/104

- sign 12.174+/-0.057  $\chi^2/\text{NDF}$ : 9907.9/53

# reg\_asym\_sam1\_diff\_bpm12X\_slope vs Slug



Right In:  $0.349 \pm 0.006$   $\chi^2/\text{NDF}$ : 695.1/25

Left Out:  $0.488 \pm 0.003$   $\chi^2/\text{NDF}$ : 539.4/24

Right Out:  $0.327 \pm 0.006$   $\chi^2/\text{NDF}$ : 1291.1/30

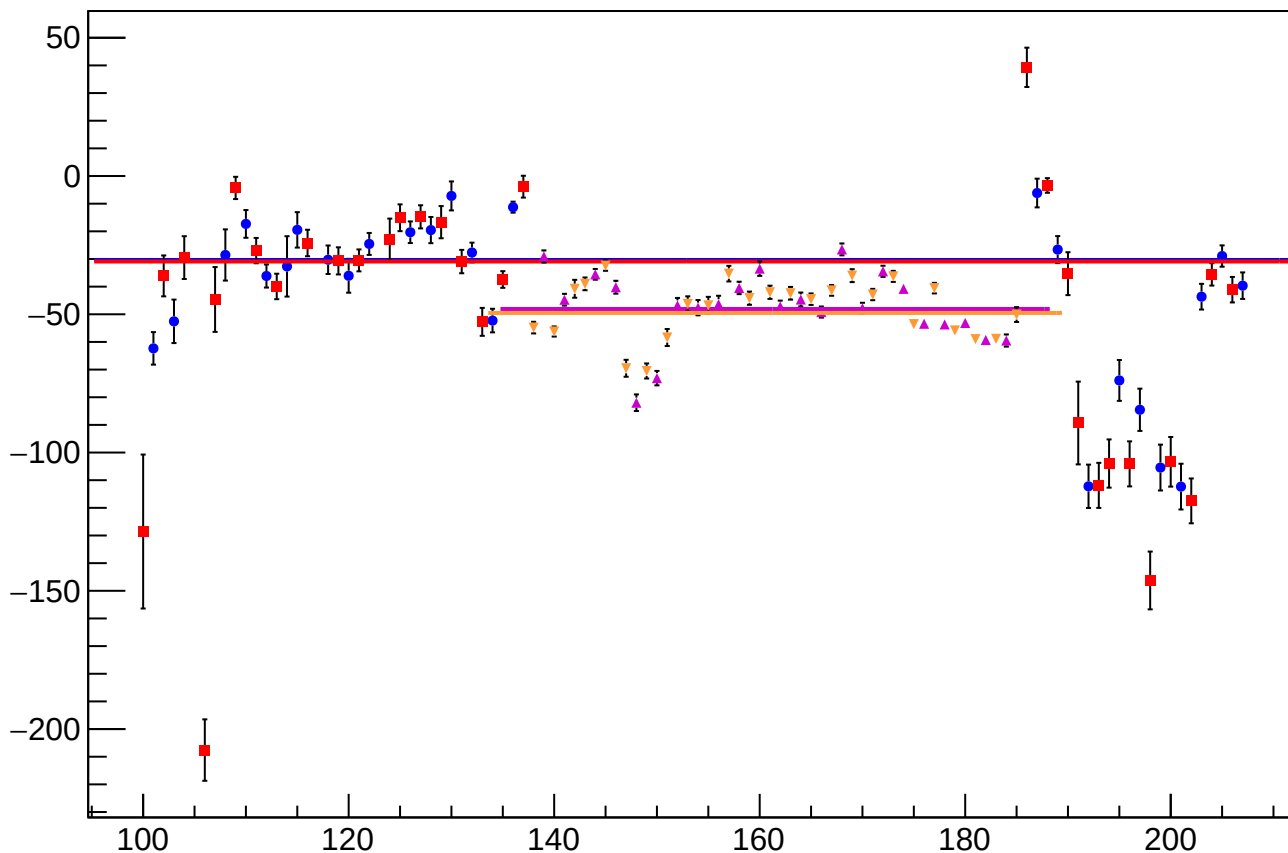
Left In:  $0.478 \pm 0.003$   $\chi^2/\text{NDF}$ : 798.2/22

+ sign  $0.461 \pm 0.002$   $\chi^2/\text{NDF}$ : 1739.8/50

All:  $0.455 \pm 0.002$   $\chi^2/\text{NDF}$ : 4434.4/104

- sign  $0.449 \pm 0.002$   $\chi^2/\text{NDF}$ : 2682.6/53

# reg\_asym\_sam2\_diff\_bpm1X\_slope vs Slug



Right In:  $-30.360 \pm 0.927$   $\chi^2/\text{NDF}$ : 611.3/25

Left Out:  $-49.516 \pm 0.402$   $\chi^2/\text{NDF}$ : 576.3/24

Right Out:  $-30.910 \pm 0.934$   $\chi^2/\text{NDF}$ : 1198.7/30

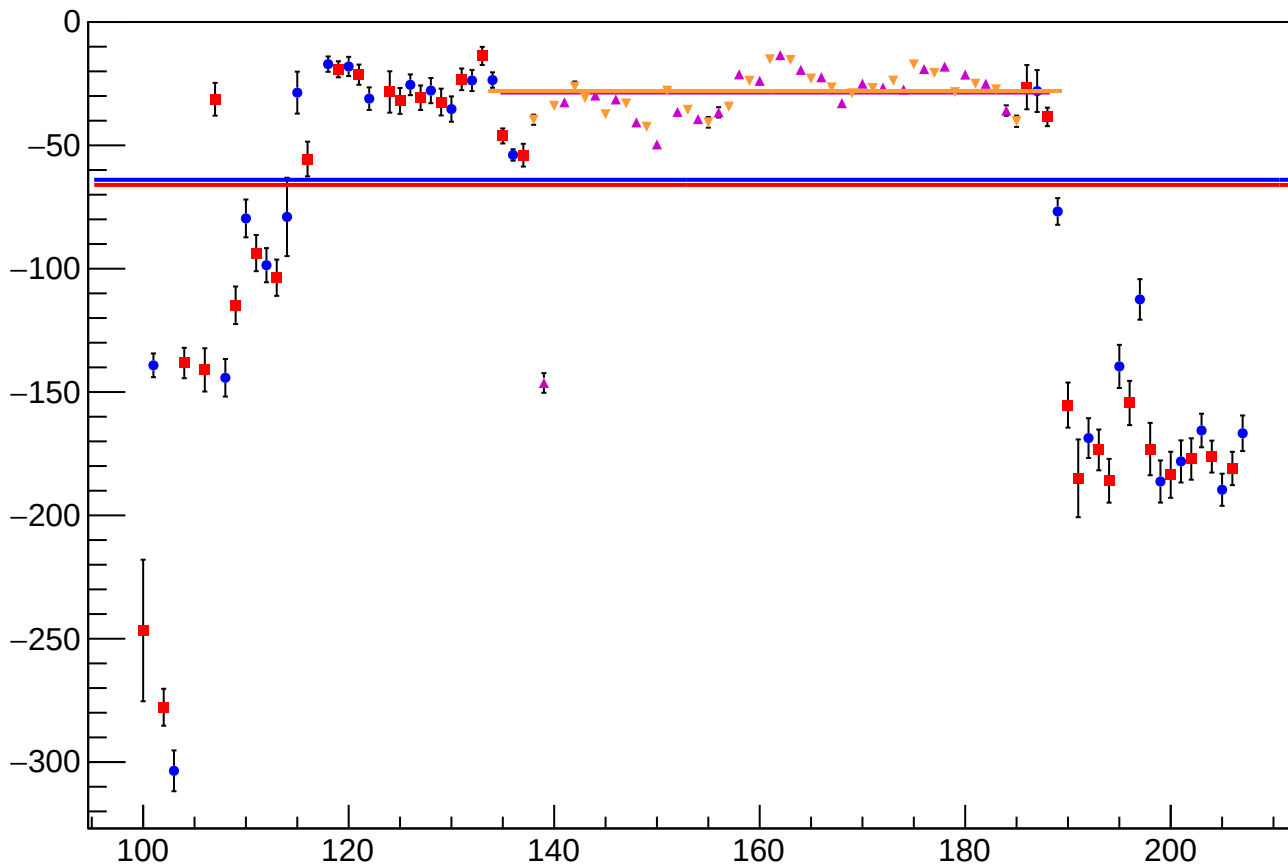
Left In:  $-48.087 \pm 0.418$   $\chi^2/\text{NDF}$ : 706.2/22

+ sign  $-46.478 \pm 0.369$   $\chi^2/\text{NDF}$ : 1547.1/50

All:  $-45.869 \pm 0.265$   $\chi^2/\text{NDF}$ : 3739.1/104

- sign  $-45.216 \pm 0.382$   $\chi^2/\text{NDF}$ : 2186.4/53

# reg\_asym\_sam2\_diff\_bpm4aY\_slope vs Slug



Right In:  $-63.957 \pm 0.996$   $\chi^2/\text{NDF}: 3584.1/25$

Left Out:  $-27.957 \pm 0.321$   $\chi^2/\text{NDF}: 497.7/24$

Right Out:  $-66.035 \pm 1.034$   $\chi^2/\text{NDF}: 3675.2/30$

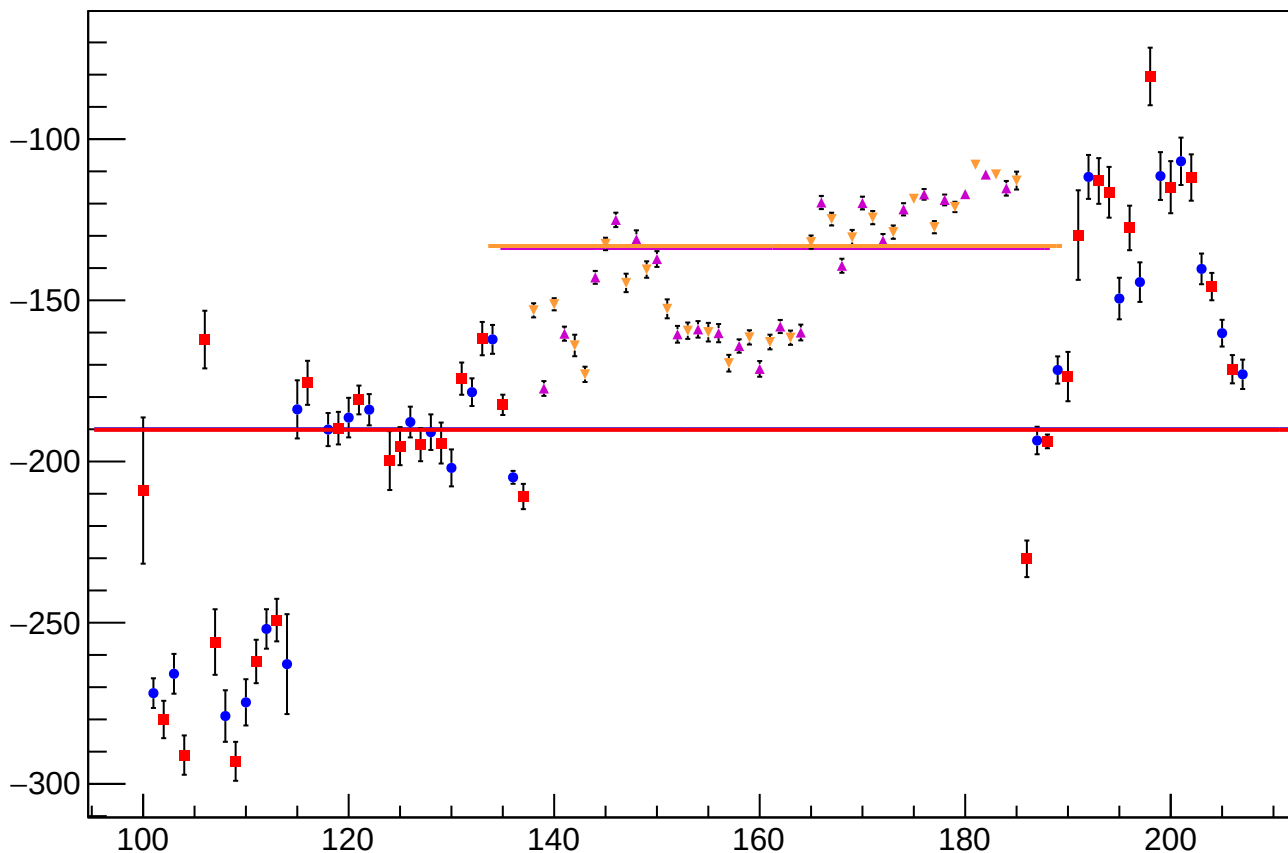
Left In:  $-28.592 \pm 0.334$   $\chi^2/\text{NDF}: 1480.6/22$

+ sign  $-31.347 \pm 0.306$   $\chi^2/\text{NDF}: 5265.5/50$

All:  $-31.720 \pm 0.220$   $\chi^2/\text{NDF}: 11611.7/104$

- sign  $-32.122 \pm 0.317$   $\chi^2/\text{NDF}: 6343.2/53$

# reg\_asym\_sam2\_diff\_bpm4eX\_slope vs Slug



Right In:  $-190.004 \pm 0.958$   $\chi^2/\text{NDF}: 1624.6/25$

Left Out:  $-133.155 \pm 0.403$   $\chi^2/\text{NDF}: 2530.7/24$

Right Out:  $-190.166 \pm 0.955$   $\chi^2/\text{NDF}: 1984.2/30$

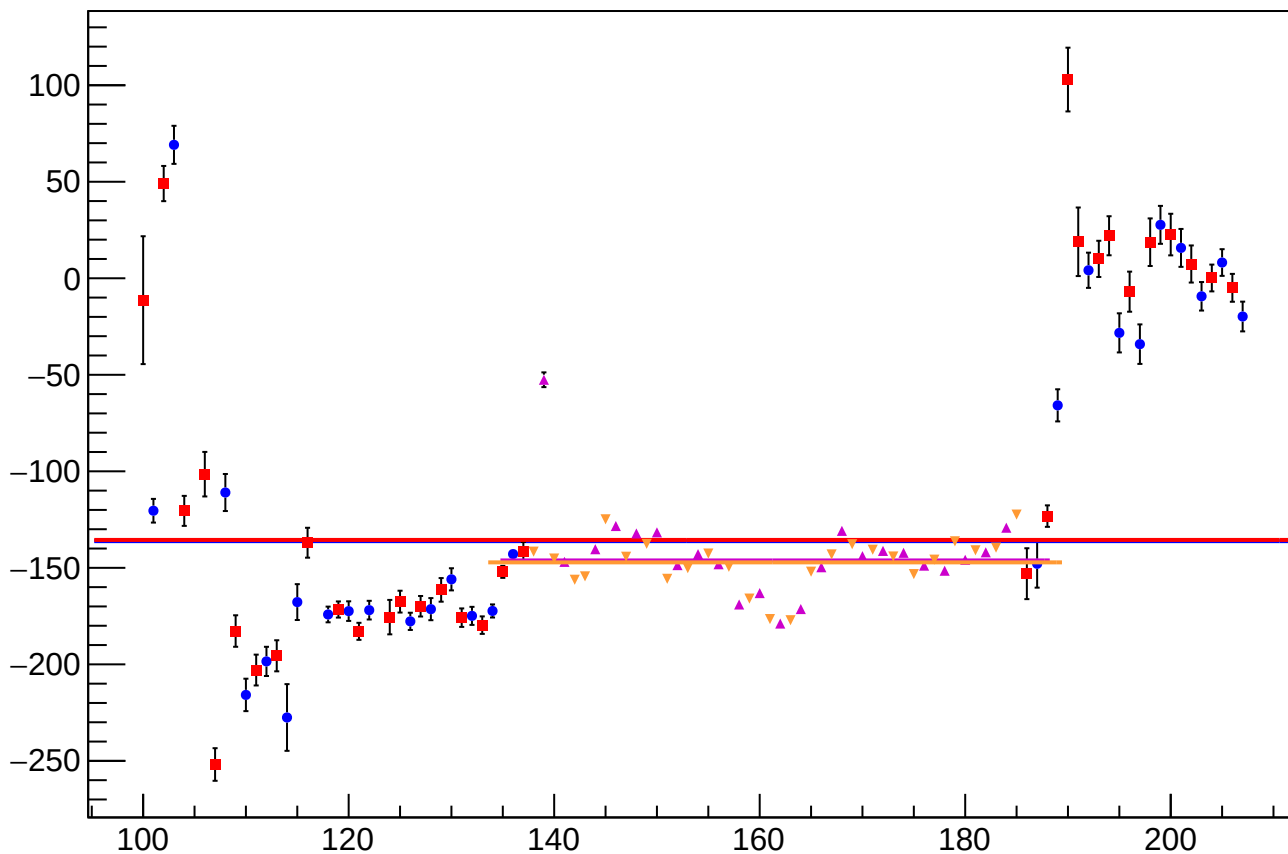
Left In:  $-133.777 \pm 0.417$   $\chi^2/\text{NDF}: 2440.7/22$

+ sign  $-141.706 \pm 0.371$   $\chi^2/\text{NDF}: 7149.6/50$

All:  $-142.240 \pm 0.266$   $\chi^2/\text{NDF}: 14506.7/104$

- sign  $-142.805 \pm 0.382$   $\chi^2/\text{NDF}: 7352.7/53$

# reg\_asym\_sam2\_diff\_bpm4eY\_slope vs Slug



Right In: -136.171 $\pm$ 1.122  $\chi^2$ /NDF: 3163.1/25

Left Out: -147.167 $\pm$ 0.358  $\chi^2$ /NDF:1245.6/24

Right Out: -135.544 $\pm$ 1.185  $\chi^2$ /NDF: 3514.0/30

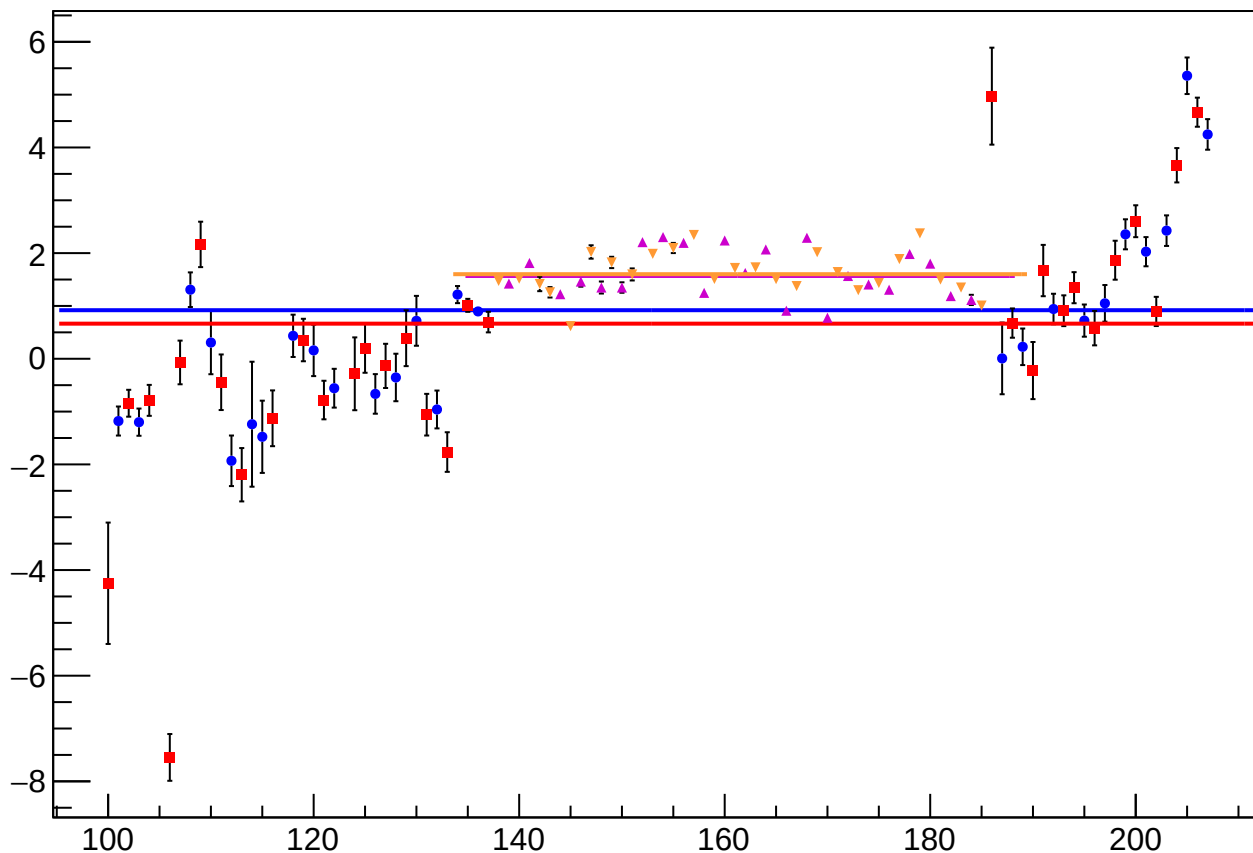
Left In: -146.173 $\pm$ 0.371  $\chi^2$ /NDF:1793.8/22

+ sign -146.149 $\pm$ 0.341  $\chi^2$ /NDF: 4495.9/50

All: -145.705 $\pm$ 0.246  $\chi^2$ /NDF: 9880.5/104

- sign -145.227 $\pm$ 0.354  $\chi^2$ /NDF: 5381.0/53

# reg\_asym\_sam2\_diff\_bpm12X\_slope vs Slug



Right In:  $0.919 \pm 0.054$   $\chi^2/\text{NDF}$ : 628.4/25

Left Out:  $1.601 \pm 0.016$   $\chi^2/\text{NDF}$ : 581.8/24

Right Out:  $0.665 \pm 0.058$   $\chi^2/\text{NDF}$ : 961.5/30

Left In:  $1.567 \pm 0.016$   $\chi^2/\text{NDF}$ : 735.2/22

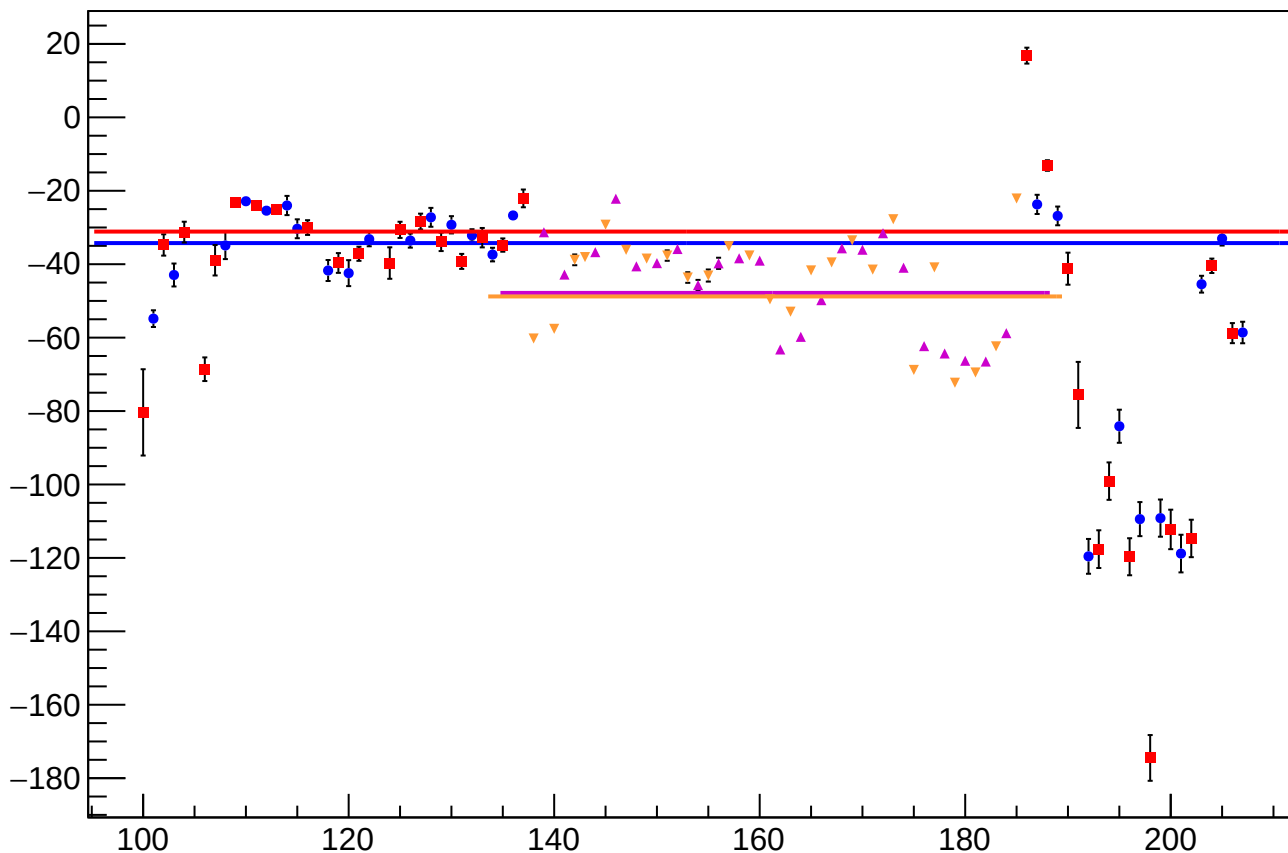
+ sign  $1.547 \pm 0.015$   $\chi^2/\text{NDF}$ : 1354.5/50

All:  $1.524 \pm 0.011$   $\chi^2/\text{NDF}$ : 3282.0/104

- sign  $1.500 \pm 0.016$   $\chi^2/\text{NDF}$ : 1922.9/53



# reg\_asym\_sam3\_diff\_bpm1X\_slope vs Slug



Right In: -34.246 +/- 0.420  $\chi^2/\text{NDF}$ : 1641.6/25

Left Out: -48.783 +/- 0.167  $\chi^2/\text{NDF}$ : 8953.8/24

Right Out: -31.113 +/- 0.399  $\chi^2/\text{NDF}$ : 2935.6/30

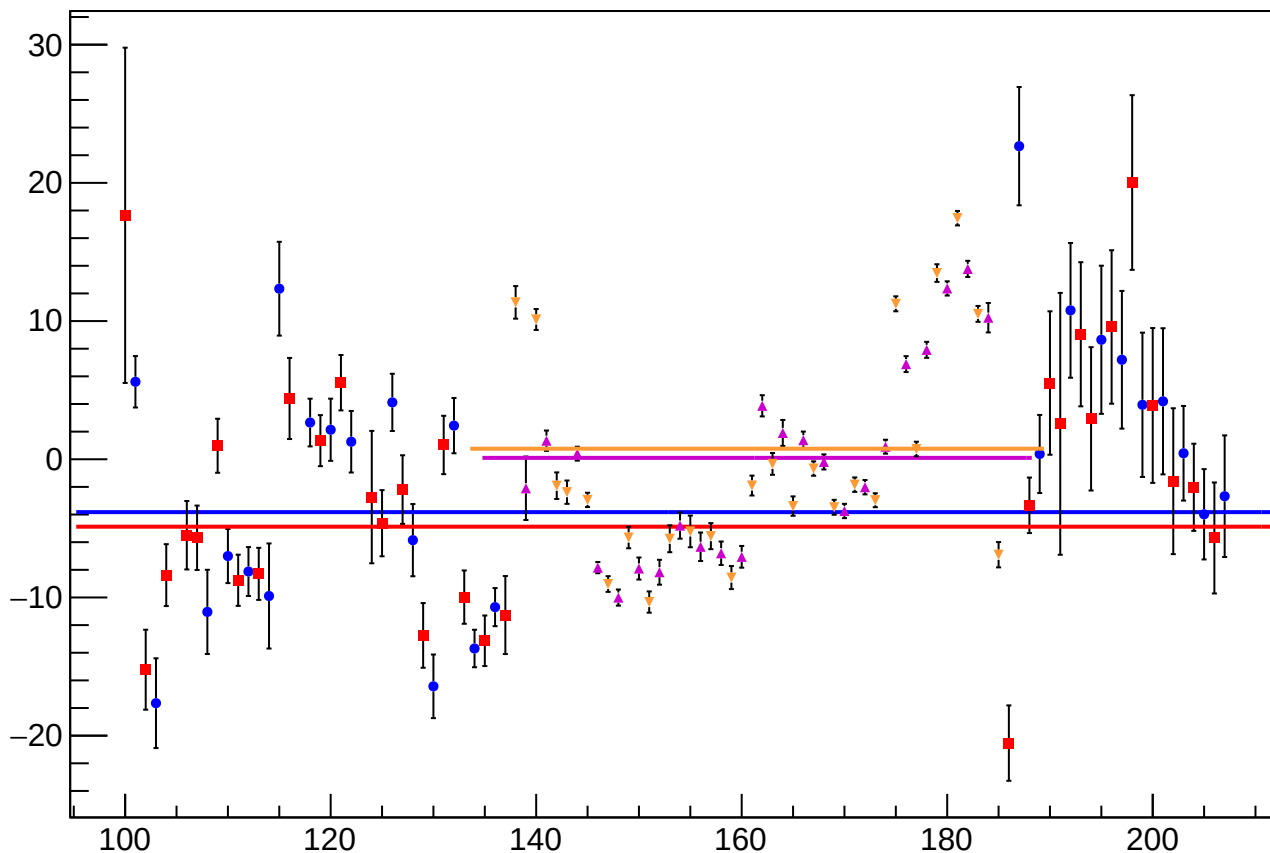
Left In: -47.822 +/- 0.170  $\chi^2/\text{NDF}$ : 7223.0/22

+ sign -46.803 +/- 0.155  $\chi^2/\text{NDF}$ : 11630.4/50

All: -46.033 +/- 0.110  $\chi^2/\text{NDF}$ : 23326.2/104

- sign -45.250 +/- 0.156  $\chi^2/\text{NDF}$ : 11646.0/53

# reg\_asym\_sam3\_diff\_bpm4aY\_slope vs Slug



Right In: -3.825±/0.474  $\chi^2/\text{NDF}$ : 308.4/25

Left Out: 0.765±/0.132  $\chi^2/\text{NDF}$ :3467.2/24

Right Out: -4.878±/0.475  $\chi^2/\text{NDF}$ : 210.5/30

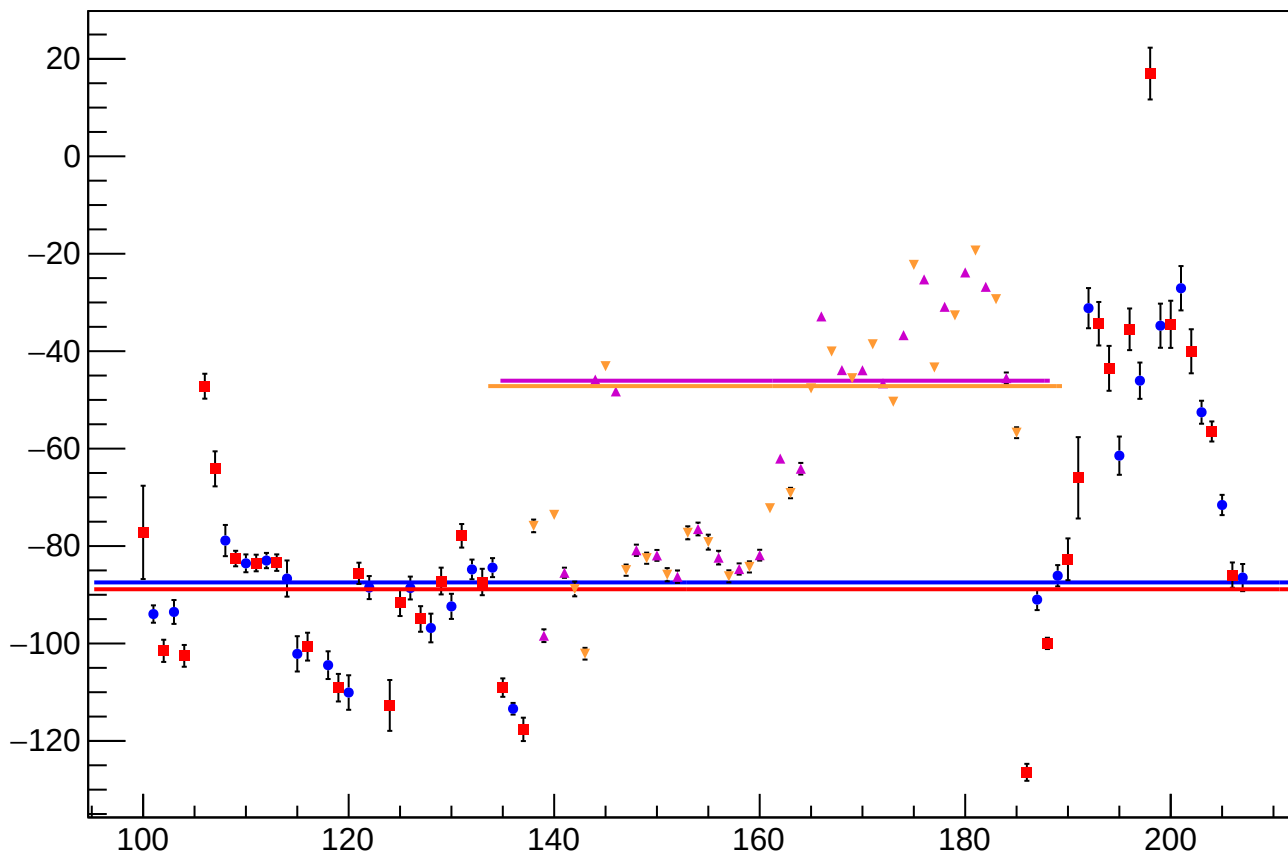
Left In: 0.102±/0.133  $\chi^2/\text{NDF}$ :2721.8/22

+ sign 0.434±/0.127  $\chi^2/\text{NDF}$ : 3862.6/50

All: 0.088±/0.090  $\chi^2/\text{NDF}$ : 6911.8/104

- sign -0.260±/0.128  $\chi^2/\text{NDF}$ : 3034.4/53

# reg\_asym\_sam3\_diff\_bpm4eX\_slope vs Slug



Right In:  $-87.462 \pm 0.460$   $\chi^2/\text{NDF}$ : 1566.5/25

Left Out:  $-47.167 \pm 0.168$   $\chi^2/\text{NDF}$ : 17658.5/24

Right Out:  $-88.867 \pm 0.439$   $\chi^2/\text{NDF}$ : 2652.3/30

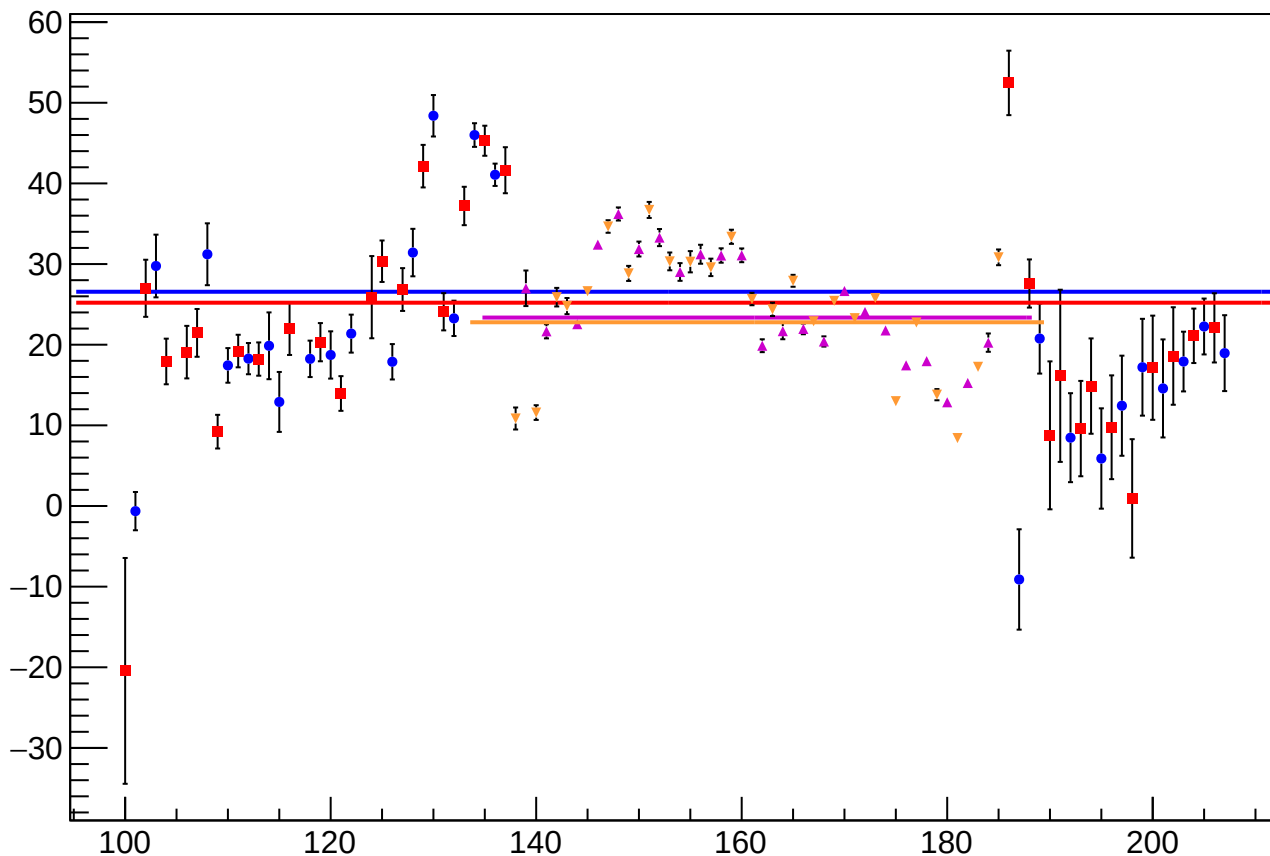
Left In:  $-46.058 \pm 0.170$   $\chi^2/\text{NDF}$ : 14769.8/22

+ sign  $-51.886 \pm 0.157$   $\chi^2/\text{NDF}$ : 25999.0/50

All:  $-51.774 \pm 0.112$   $\chi^2/\text{NDF}$ : 51703.5/104

- sign  $-51.659 \pm 0.159$   $\chi^2/\text{NDF}$ : 25703.4/53

# reg\_asym\_sam3\_diff\_bpm4eY\_slope vs Slug



Right In:  $26.566 \pm 0.534$   $\chi^2/\text{NDF}: 667.7/25$

Left Out:  $22.782 \pm 0.147$   $\chi^2/\text{NDF}: 2412.9/24$

Right Out:  $25.208 \pm 0.546$   $\chi^2/\text{NDF}: 437.4/30$

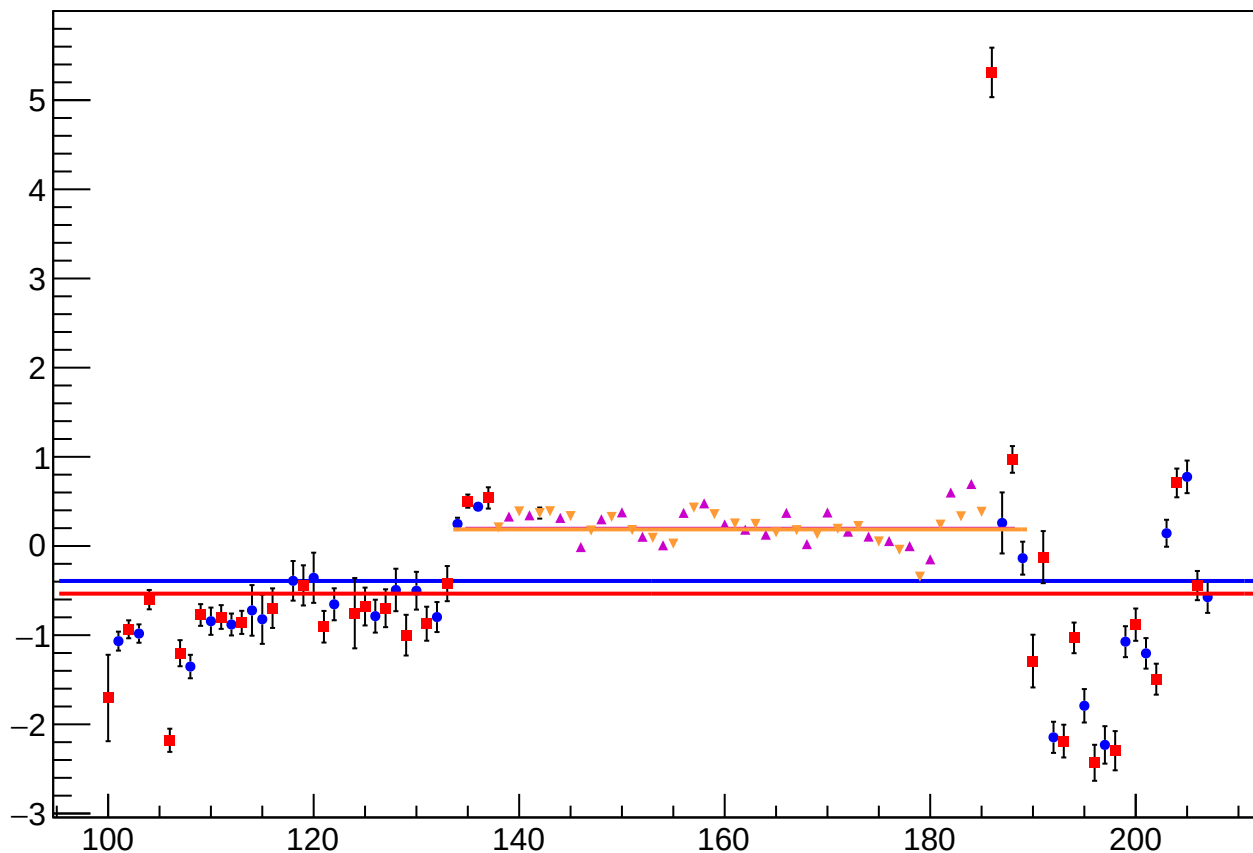
Left In:  $23.366 \pm 0.149$   $\chi^2/\text{NDF}: 1785.4/22$

+ sign  $23.050 \pm 0.142$   $\chi^2/\text{NDF}: 3127.3/50$

All:  $23.269 \pm 0.101$   $\chi^2/\text{NDF}: 5365.5/104$

- sign  $23.493 \pm 0.144$   $\chi^2/\text{NDF}: 2233.3/53$

# reg\_asym\_sam3\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.392 \pm 0.027$   $\chi^2/\text{NDF}: 800.9/25$

Left Out:  $0.186 \pm 0.007$   $\chi^2/\text{NDF}: 645.7/24$

Right Out:  $-0.534 \pm 0.028$   $\chi^2/\text{NDF}: 1398.9/30$

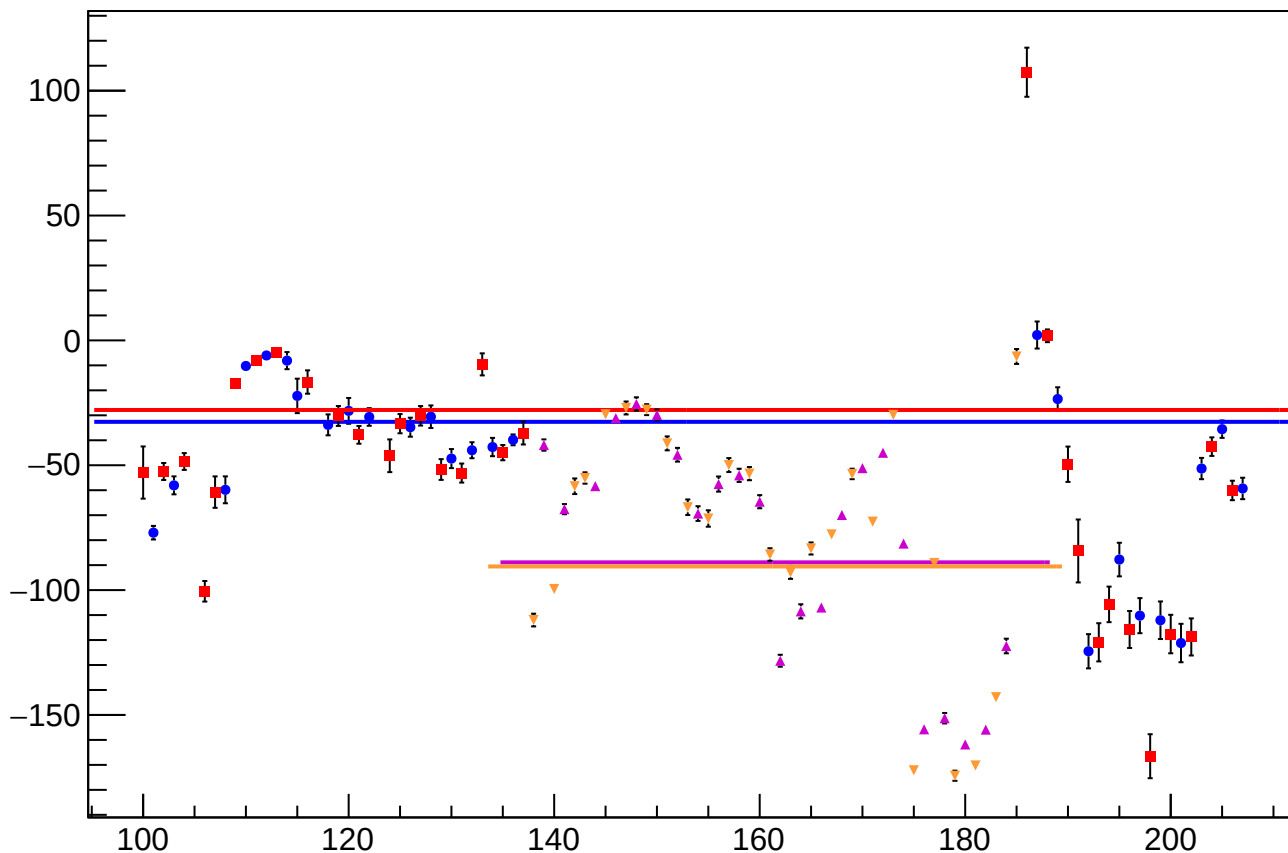
Left In:  $0.193 \pm 0.007$   $\chi^2/\text{NDF}: 938.2/22$

+ sign  $0.154 \pm 0.006$   $\chi^2/\text{NDF}: 1876.3/50$

All:  $0.154 \pm 0.005$   $\chi^2/\text{NDF}: 4843.0/104$

- sign  $0.155 \pm 0.006$   $\chi^2/\text{NDF}: 2966.6/53$

# reg\_asym\_sam4\_diff\_bpm1X\_slope vs Slug



Right In:  $-32.612 \pm 0.665$   $\chi^2/\text{NDF}: 1652.4/25$

Left Out:  $-90.534 \pm 0.421$   $\chi^2/\text{NDF}: 15358.6/24$

Right Out:  $-27.862 \pm 0.608$   $\chi^2/\text{NDF}: 2395.6/30$

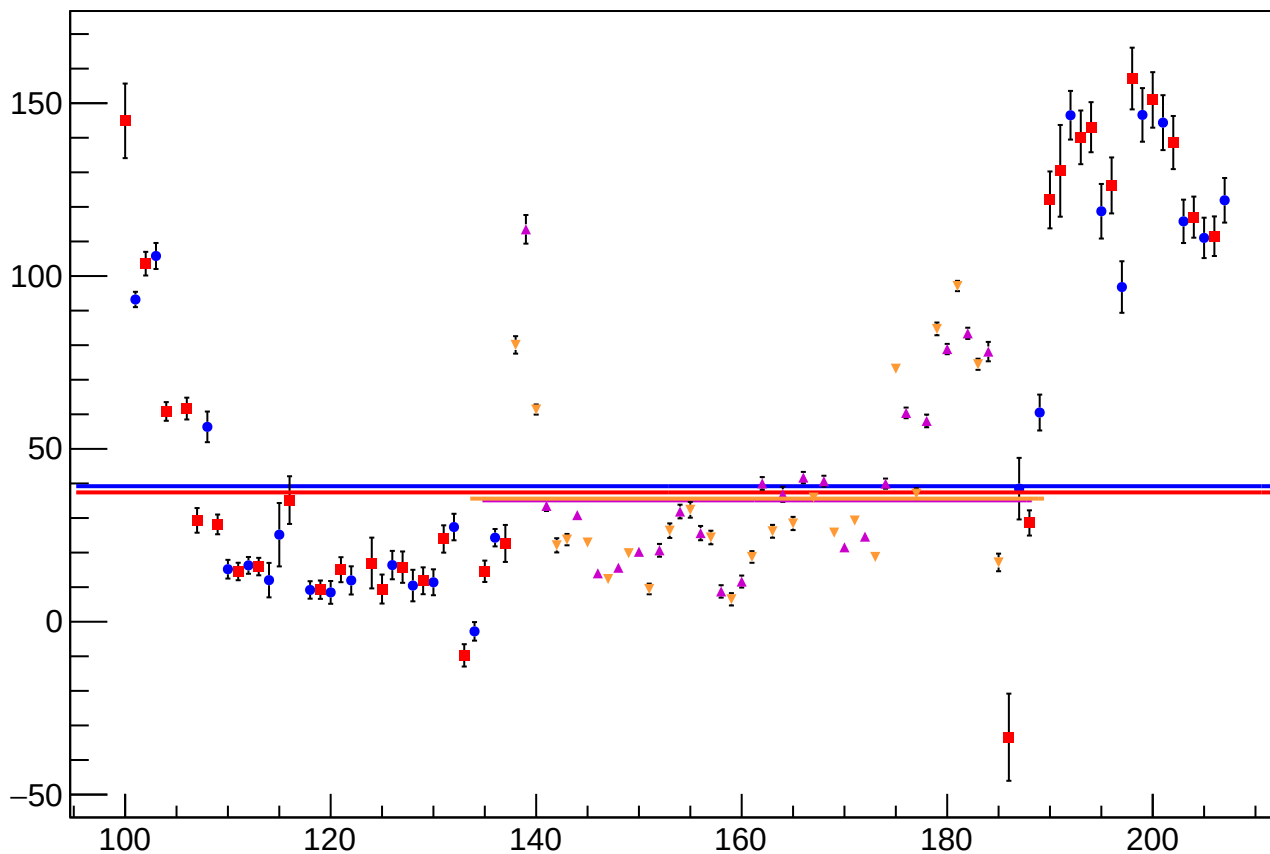
Left In:  $-88.888 \pm 0.435$   $\chi^2/\text{NDF}: 11815.7/22$

+ sign  $-73.962 \pm 0.356$   $\chi^2/\text{NDF}: 22419.4/50$

All:  $-71.084 \pm 0.251$   $\chi^2/\text{NDF}: 43432.6/104$

- sign  $-68.247 \pm 0.353$   $\chi^2/\text{NDF}: 20883.3/53$

# reg\_asym\_sam4\_diff\_bpm4aY\_slope vs Slug



Right In: 39.204 $\pm$ 0.756  $\chi^2$ /NDF: 3049.5/25

Left Out: 35.612 $\pm$ 0.326  $\chi^2$ /NDF: 5973.0/24

Right Out: 37.408 $\pm$ 0.739  $\chi^2$ /NDF: 2932.7/30

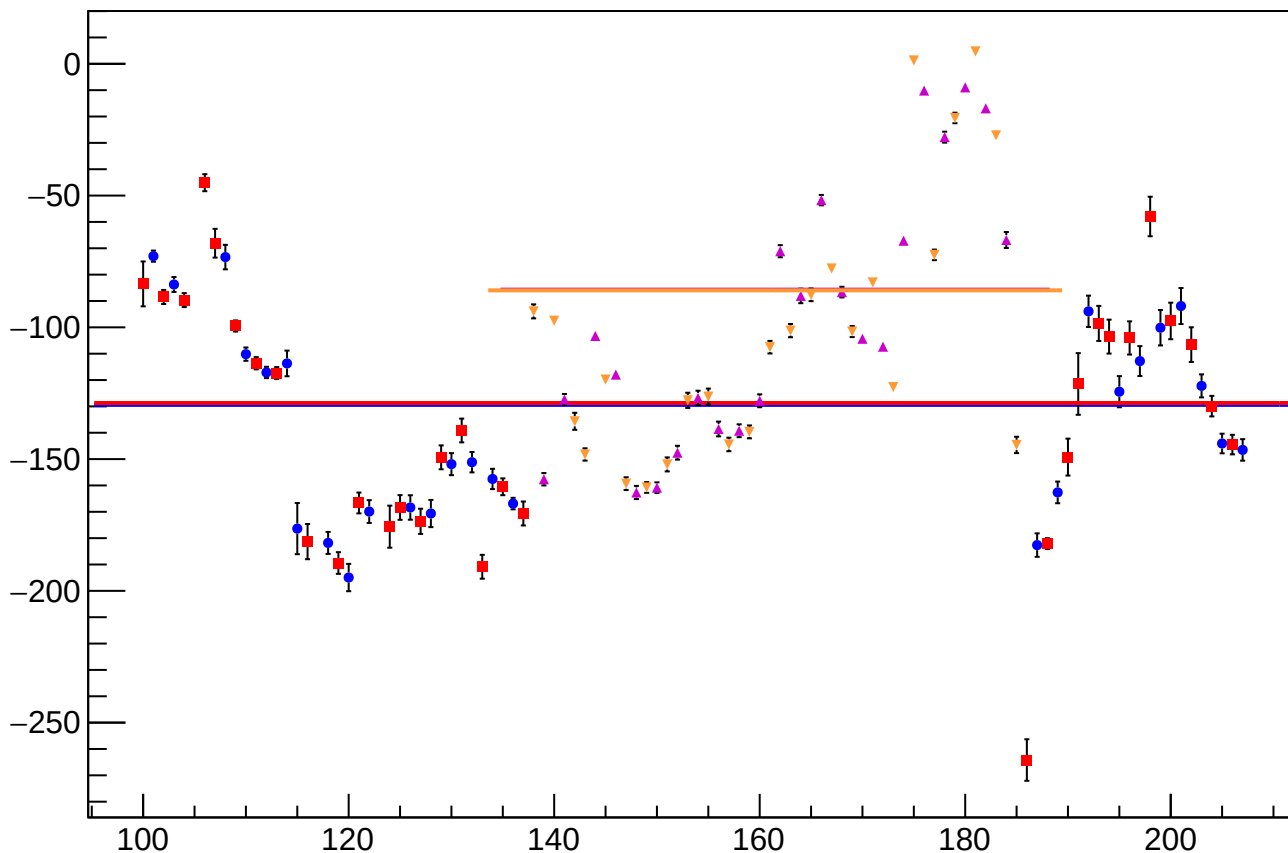
Left In: 35.112 $\pm$ 0.336  $\chi^2$ /NDF: 4144.4/22

+ sign 36.174 $\pm$ 0.299  $\chi^2$ /NDF: 9041.6/50

All: 35.848 $\pm$ 0.214  $\chi^2$ /NDF: 16129.2/104

- sign 35.506 $\pm$ 0.306  $\chi^2$ /NDF: 7085.1/53

# reg\_asym\_sam4\_diff\_bpm4eX\_slope vs Slug



Right In:  $-129.421 \pm 0.729$   $\chi^2/\text{NDF}$ : 2523.0/25

Left Out:  $-85.969 \pm 0.421$   $\chi^2/\text{NDF}$ : 16232.5/24

Right Out:  $-128.715 \pm 0.686$   $\chi^2/\text{NDF}$ : 3652.5/30

Left In:  $-85.705 \pm 0.432$   $\chi^2/\text{NDF}$ : 13758.7/22

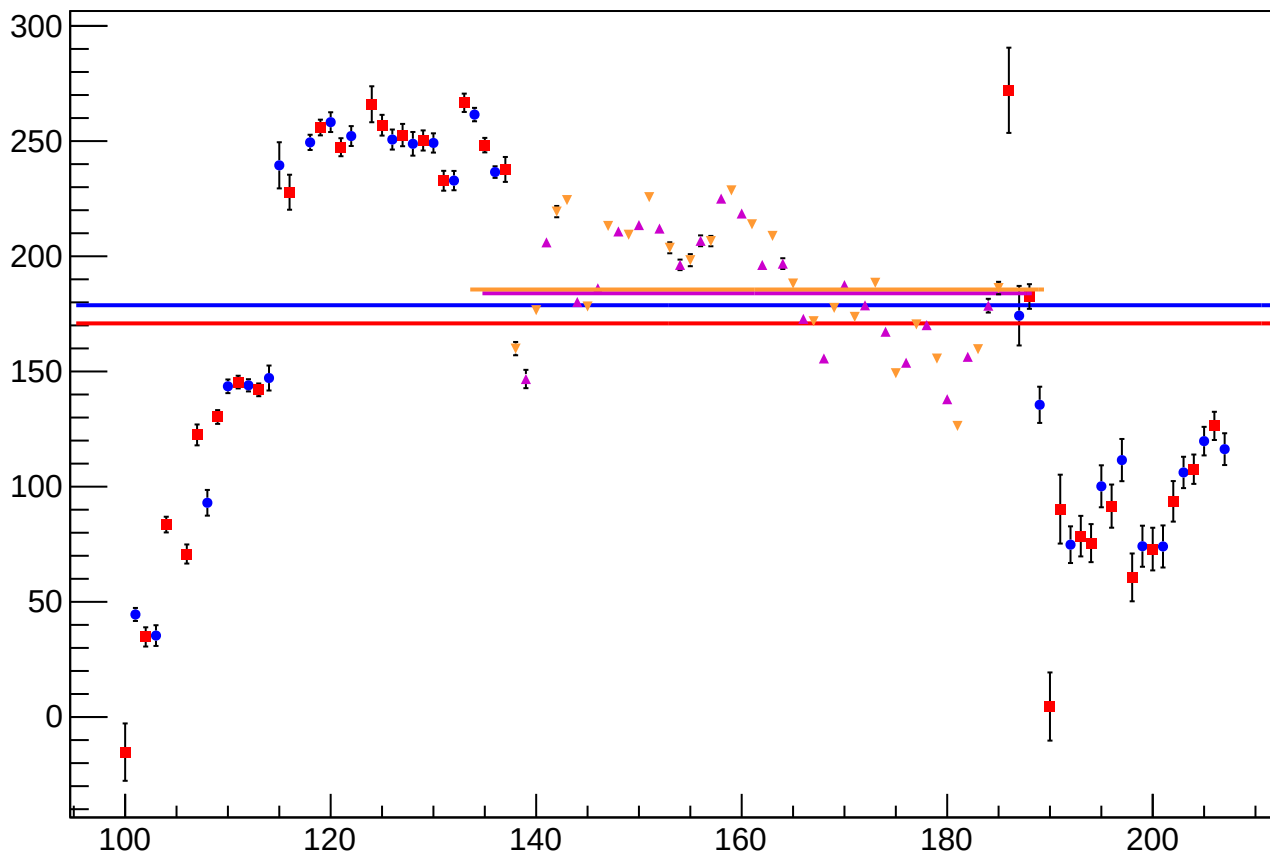
+ sign  $-96.818 \pm 0.365$   $\chi^2/\text{NDF}$ : 21417.6/50

All:  $-97.371 \pm 0.258$   $\chi^2/\text{NDF}$ : 41644.2/104

- sign  $-97.928 \pm 0.366$   $\chi^2/\text{NDF}$ : 20222.0/53



# reg\_asym\_sam4\_diff\_bpm4eY\_slope vs Slug



Right In: 178.753 $\pm$ 0.863  $\chi^2$ /NDF: 8106.7/25

Left Out: 185.583 $\pm$ 0.367  $\chi^2$ /NDF: 5354.7/24

Right Out: 170.870 $\pm$ 0.850  $\chi^2$ /NDF: 7707.1/30

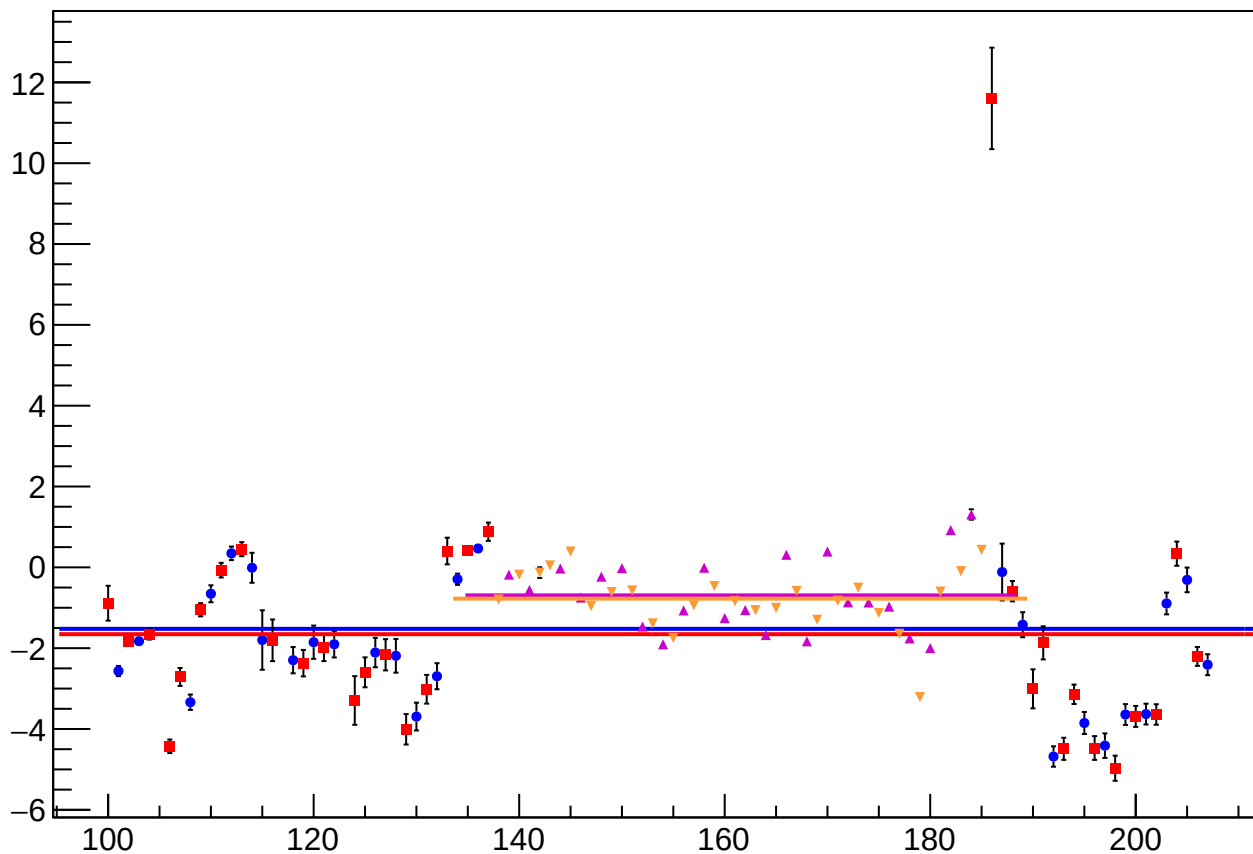
Left In: 183.940 $\pm$ 0.378  $\chi^2$ /NDF: 3873.5/22

+ sign 184.539 $\pm$ 0.338  $\chi^2$ /NDF: 13514.4/50

All: 183.193 $\pm$ 0.241  $\chi^2$ /NDF: 25325.0/104

- sign 181.785 $\pm$ 0.345  $\chi^2$ /NDF: 11778.0/53

# reg\_asym\_sam4\_diff\_bpm12X\_slope vs Slug



Right In:  $-1.522 \pm 0.042$   $\chi^2/\text{NDF}$ : 1342.0/25

Left Out:  $-0.774 \pm 0.016$   $\chi^2/\text{NDF}$ : 1822.9/24

Right Out:  $-1.654 \pm 0.041$   $\chi^2/\text{NDF}$ : 1719.1/30

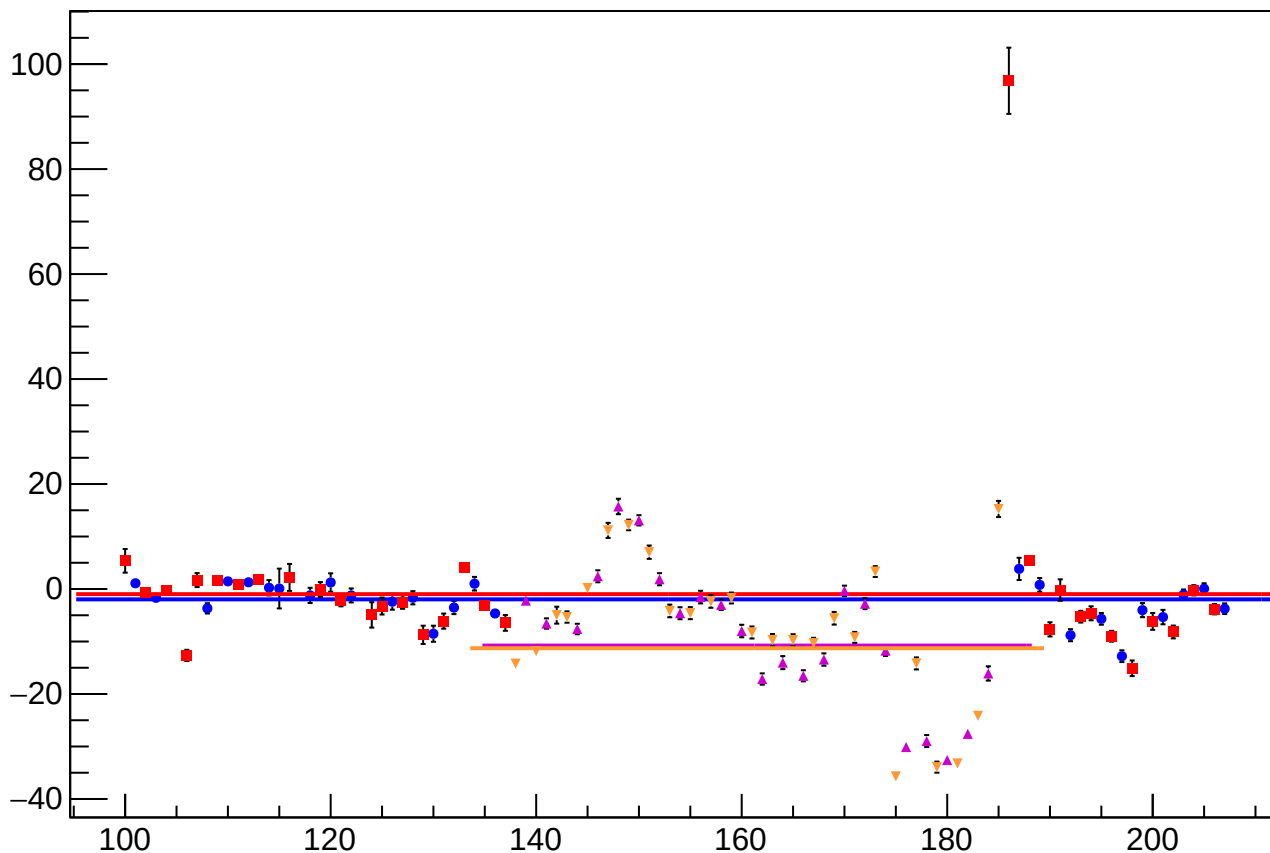
Left In:  $-0.694 \pm 0.017$   $\chi^2/\text{NDF}$ : 2565.3/22

+ sign  $-0.872 \pm 0.015$   $\chi^2/\text{NDF}$ : 3435.2/50

All:  $-0.851 \pm 0.011$   $\chi^2/\text{NDF}$ : 8185.4/104

- sign  $-0.829 \pm 0.016$   $\chi^2/\text{NDF}$ : 4746.4/53

# reg\_asym\_sam5\_diff\_bpm1X\_slope vs Slug



Right In:  $-1.968 \pm 0.209$   $\chi^2/\text{NDF}$ : 286.3/25

Left Out:  $-11.283 \pm 0.208$   $\chi^2/\text{NDF}$ : 4500.3/24

Right Out:  $-0.981 \pm 0.185$   $\chi^2/\text{NDF}$ : 890.4/30

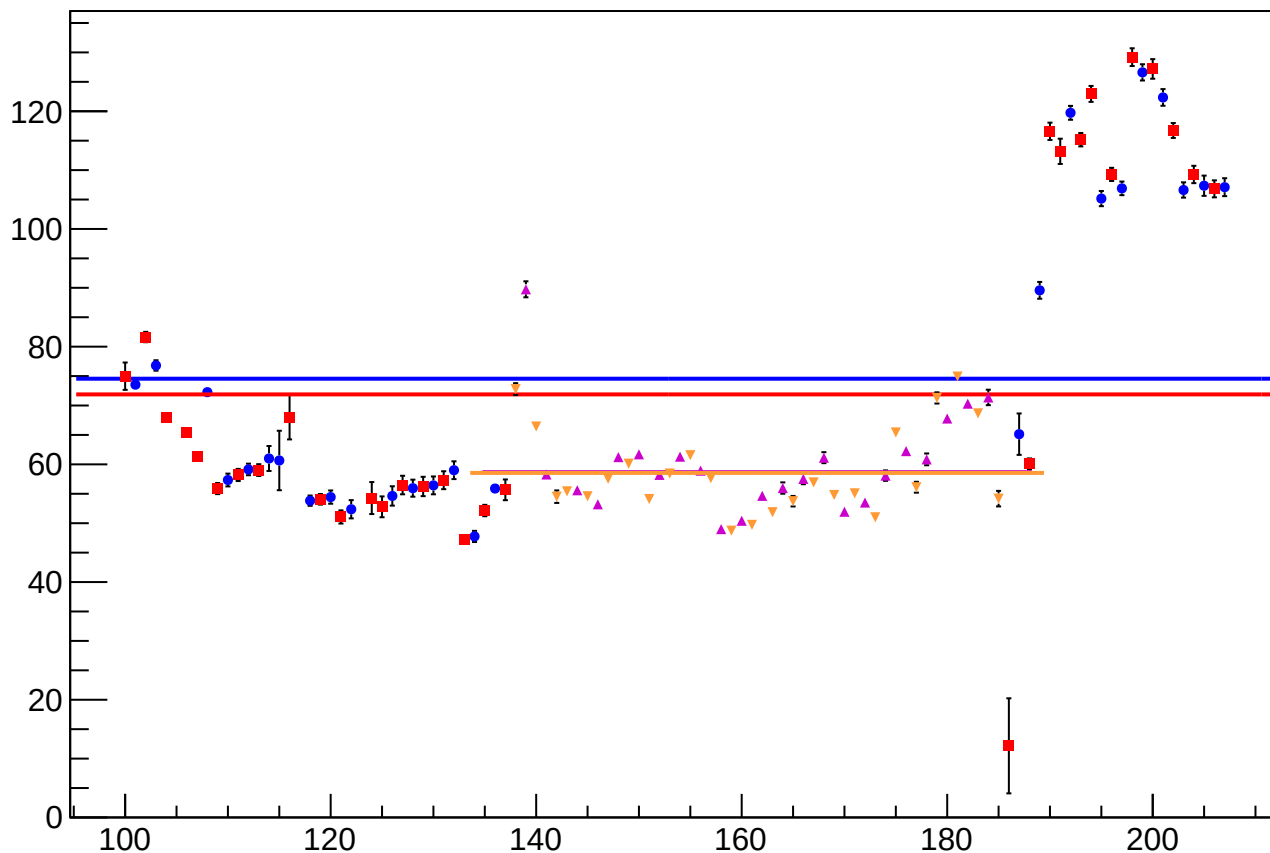
Left In:  $-10.776 \pm 0.213$   $\chi^2/\text{NDF}$ : 3699.2/22

+ sign  $-6.658 \pm 0.148$   $\chi^2/\text{NDF}$ : 5782.7/50

All:  $-5.877 \pm 0.101$   $\chi^2/\text{NDF}$ : 11630.0/104

- sign  $-5.177 \pm 0.140$   $\chi^2/\text{NDF}$ : 5794.2/53

# reg\_asym\_sam5\_diff\_bpm4aY\_slope vs Slug



Right In: 74.554+/-0.228  $\chi^2/\text{NDF}$ : 10425.1/25

Left Out: 58.550+/-0.161  $\chi^2/\text{NDF}$ :1902.5/24

Right Out: 71.887+/-0.208  $\chi^2/\text{NDF}$ : 14651.1/30

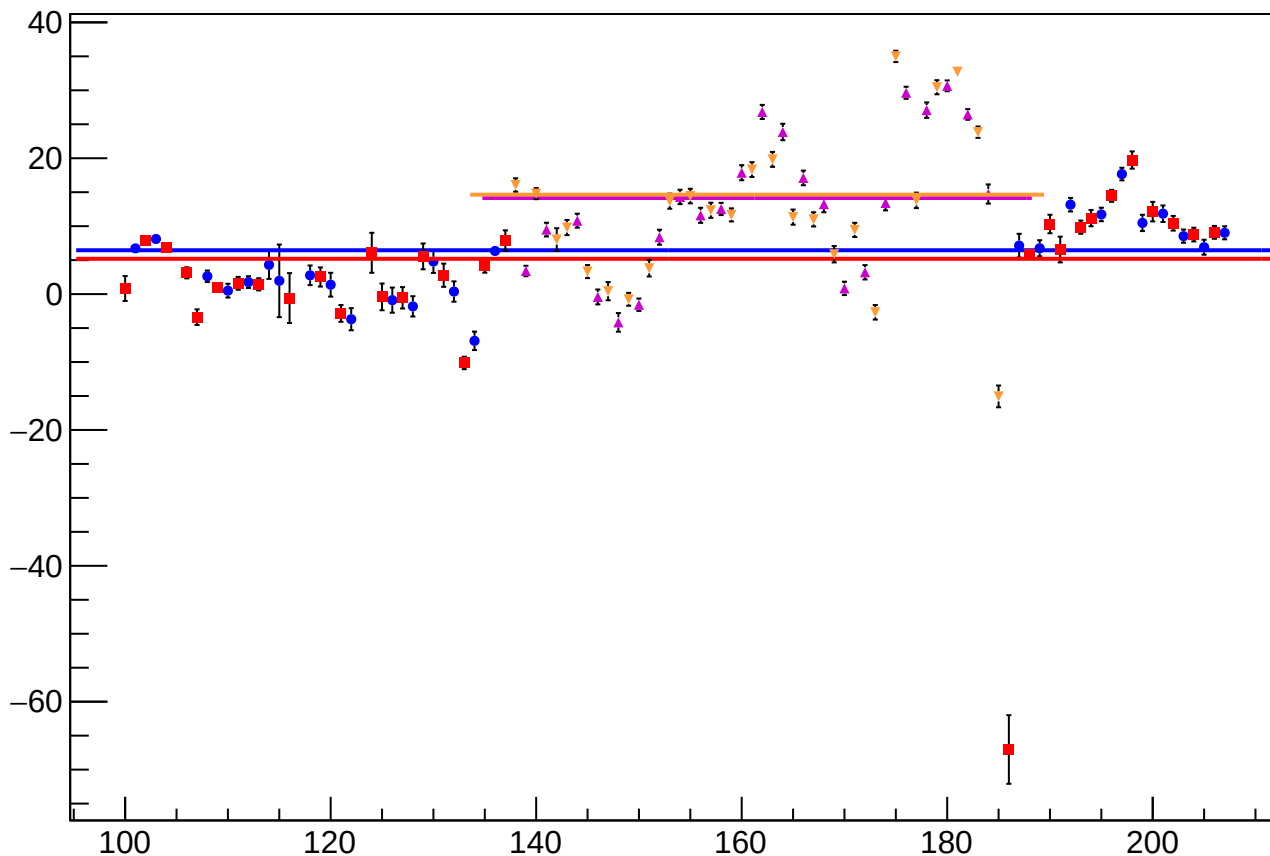
Left In: 58.679+/-0.168  $\chi^2/\text{NDF}$ :1613.4/22

+ sign 63.880+/-0.132  $\chi^2/\text{NDF}$ : 15611.5/50

All: 63.896+/-0.093  $\chi^2/\text{NDF}$ : 34314.7/104

- sign 63.913+/-0.131  $\chi^2/\text{NDF}$ : 18703.2/53

# reg\_asym\_sam5\_diff\_bpm4eX\_slope vs Slug



Right In:  $6.455 \pm 0.210$   $\chi^2/\text{NDF}$ : 569.5/25

Left Out:  $14.634 \pm 0.207$   $\chi^2/\text{NDF}$ : 2962.1/24

Right Out:  $5.196 \pm 0.188$   $\chi^2/\text{NDF}$ : 1100.2/30

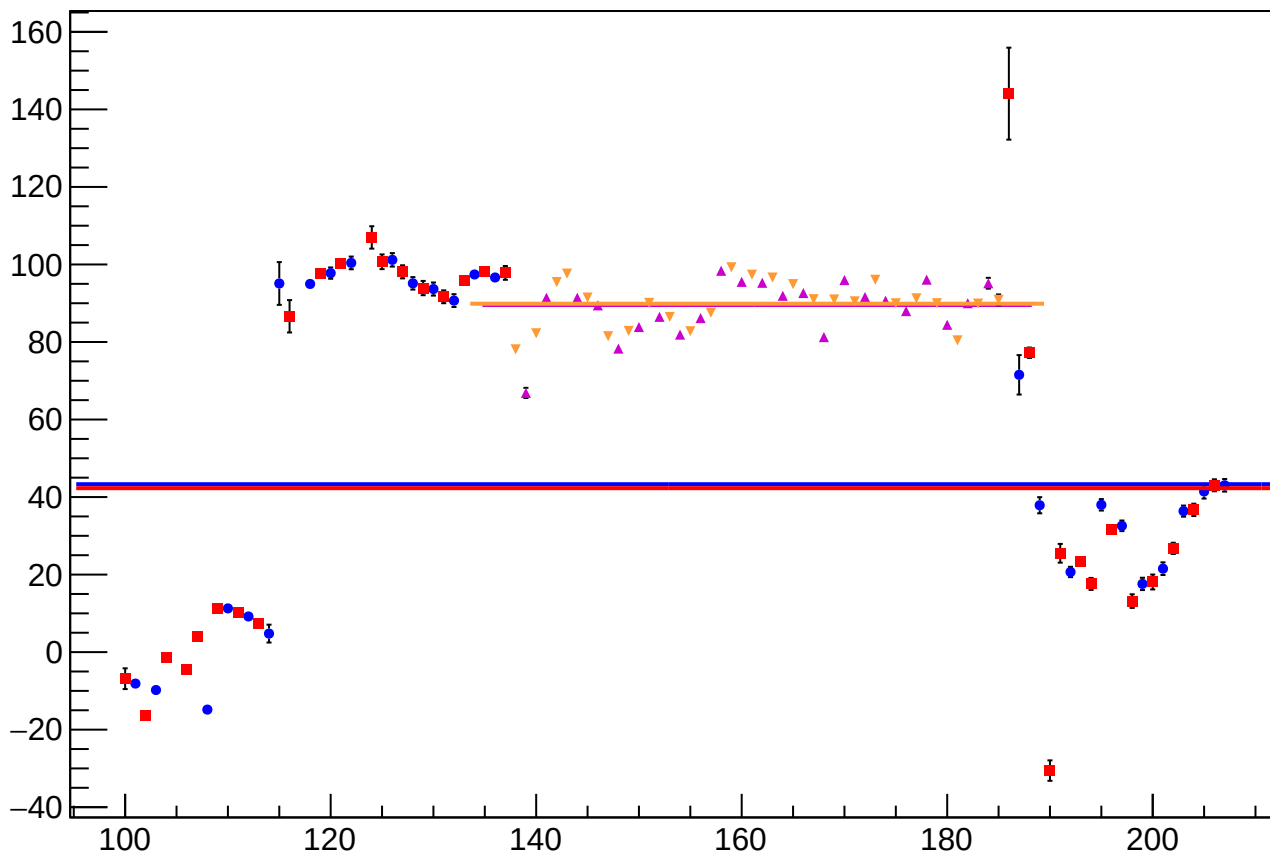
Left In:  $14.146 \pm 0.211$   $\chi^2/\text{NDF}$ : 2541.2/22

+ sign  $10.602 \pm 0.147$   $\chi^2/\text{NDF}$ : 4303.5/50

All:  $9.837 \pm 0.102$   $\chi^2/\text{NDF}$ : 8999.6/104

- sign  $9.142 \pm 0.140$   $\chi^2/\text{NDF}$ : 4644.6/53

# reg\_asym\_sam5\_diff\_bpm4eY\_slope vs Slug



Right In: 43.314 $\pm$ 0.264  $\chi^2$ /NDF: 27932.0/25

Left Out: 89.875 $\pm$ 0.181  $\chi^2$ /NDF:1065.4/24

Right Out: 42.286 $\pm$ 0.244  $\chi^2$ /NDF: 31737.3/30

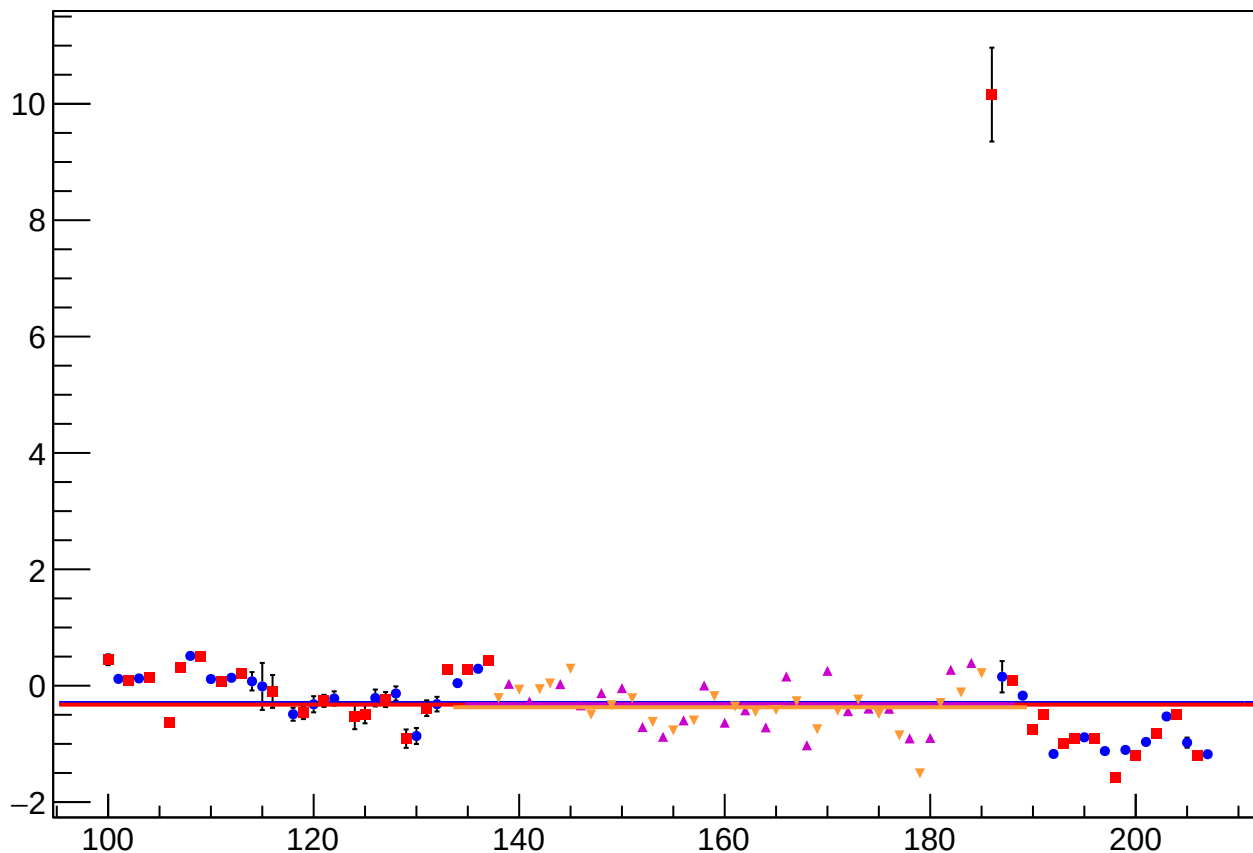
Left In: 89.541 $\pm$ 0.188  $\chi^2$ /NDF:1095.3/22

+ sign 75.018 $\pm$ 0.149  $\chi^2$ /NDF: 50106.3/50

All: 73.515 $\pm$ 0.105  $\chi^2$ /NDF: 106678.9/104

- sign 72.024 $\pm$ 0.149  $\chi^2$ /NDF: 56370.8/53

# reg\_asym\_sam5\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.297 \pm 0.011$   $\chi^2/\text{NDF}$ : 3168.3/25

Left Out:  $-0.371 \pm 0.008$   $\chi^2/\text{NDF}$ : 1769.5/24

Right Out:  $-0.325 \pm 0.010$   $\chi^2/\text{NDF}$ : 3684.8/30

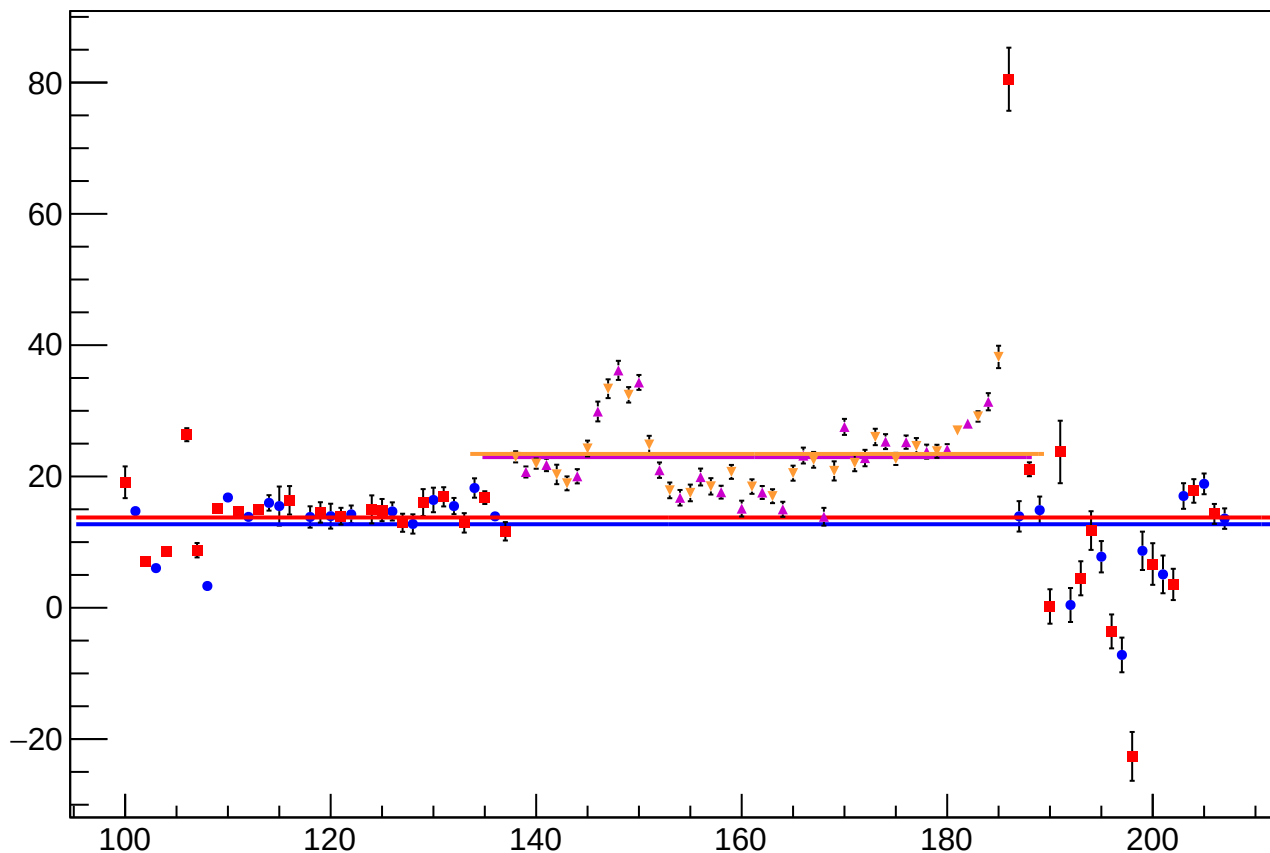
Left In:  $-0.319 \pm 0.008$   $\chi^2/\text{NDF}$ : 2441.1/22

+ sign  $-0.344 \pm 0.006$   $\chi^2/\text{NDF}$ : 4968.0/50

All:  $-0.333 \pm 0.005$   $\chi^2/\text{NDF}$ : 11100.4/104

- sign  $-0.322 \pm 0.006$   $\chi^2/\text{NDF}$ : 6126.2/53

# reg\_asym\_sam6\_diff\_bpm1X\_slope vs Slug



Right In: 12.723 $\pm$ 0.204  $\chi^2$ /NDF: 502.6/25

Left Out: 23.431 $\pm$ 0.216  $\chi^2$ /NDF: 427.8/24

Right Out: 13.753 $\pm$ 0.194  $\chi^2$ /NDF: 858.6/30

Left In: 22.949 $\pm$ 0.225  $\chi^2$ /NDF: 565.2/22

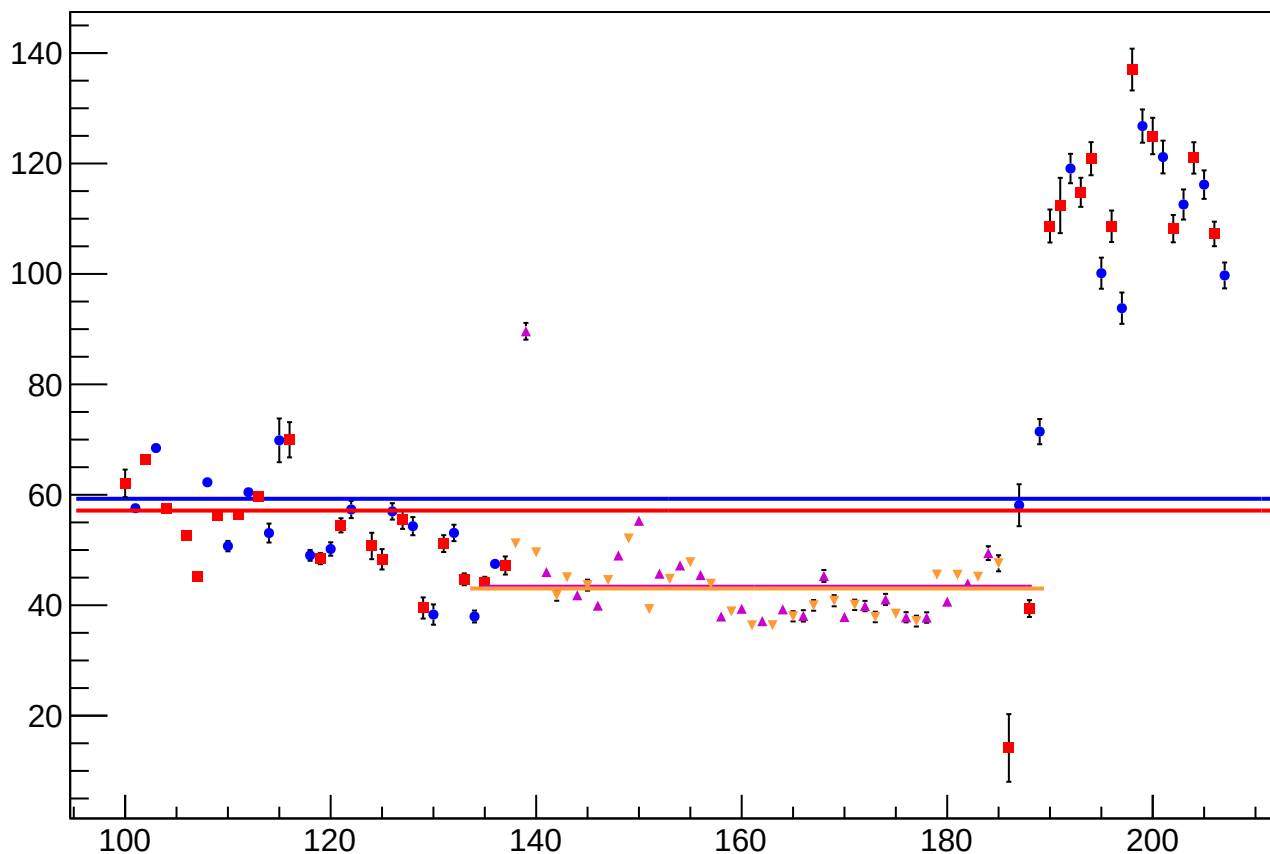
+ sign 17.775 $\pm$ 0.148  $\chi^2$ /NDF: 2230.4/50

All: 17.718 $\pm$ 0.104  $\chi^2$ /NDF: 4611.9/104

- sign 17.661 $\pm$ 0.147  $\chi^2$ /NDF: 2381.2/53



# reg\_asym\_sam6\_diff\_bpm4aY\_slope vs Slug



Right In:  $59.278 \pm 0.215$   $\chi^2/\text{NDF}$ : 4248.6/25

Left Out:  $43.029 \pm 0.167$   $\chi^2/\text{NDF}$ : 780.7/24

Right Out:  $57.144 \pm 0.216$   $\chi^2/\text{NDF}$ : 5353.8/30

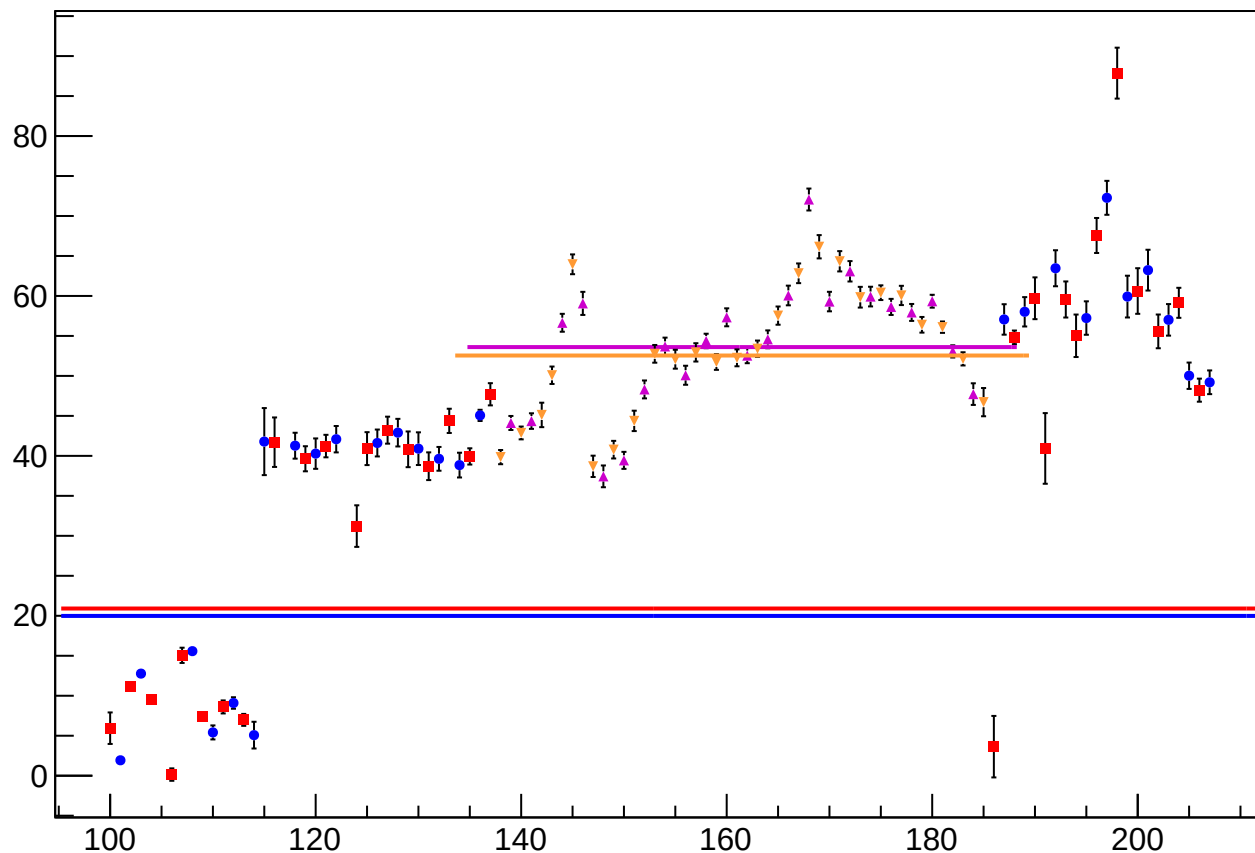
Left In:  $43.361 \pm 0.177$   $\chi^2/\text{NDF}$ : 1683.3/22

+ sign  $49.162 \pm 0.132$   $\chi^2/\text{NDF}$ : 8590.3/50

All:  $49.039 \pm 0.095$   $\chi^2/\text{NDF}$ : 18066.8/104

- sign  $48.906 \pm 0.137$   $\chi^2/\text{NDF}$ : 9474.7/53

# reg\_asym\_sam6\_diff\_bpm4eX\_slope vs Slug



Right In: 19.983 $\pm$ 0.202  $\chi^2$ /NDF: 9302.6/25

Left Out: 52.550 $\pm$ 0.215  $\chi^2$ /NDF:1186.2/24

Right Out: 20.909 $\pm$ 0.203  $\chi^2$ /NDF: 8962.6/30

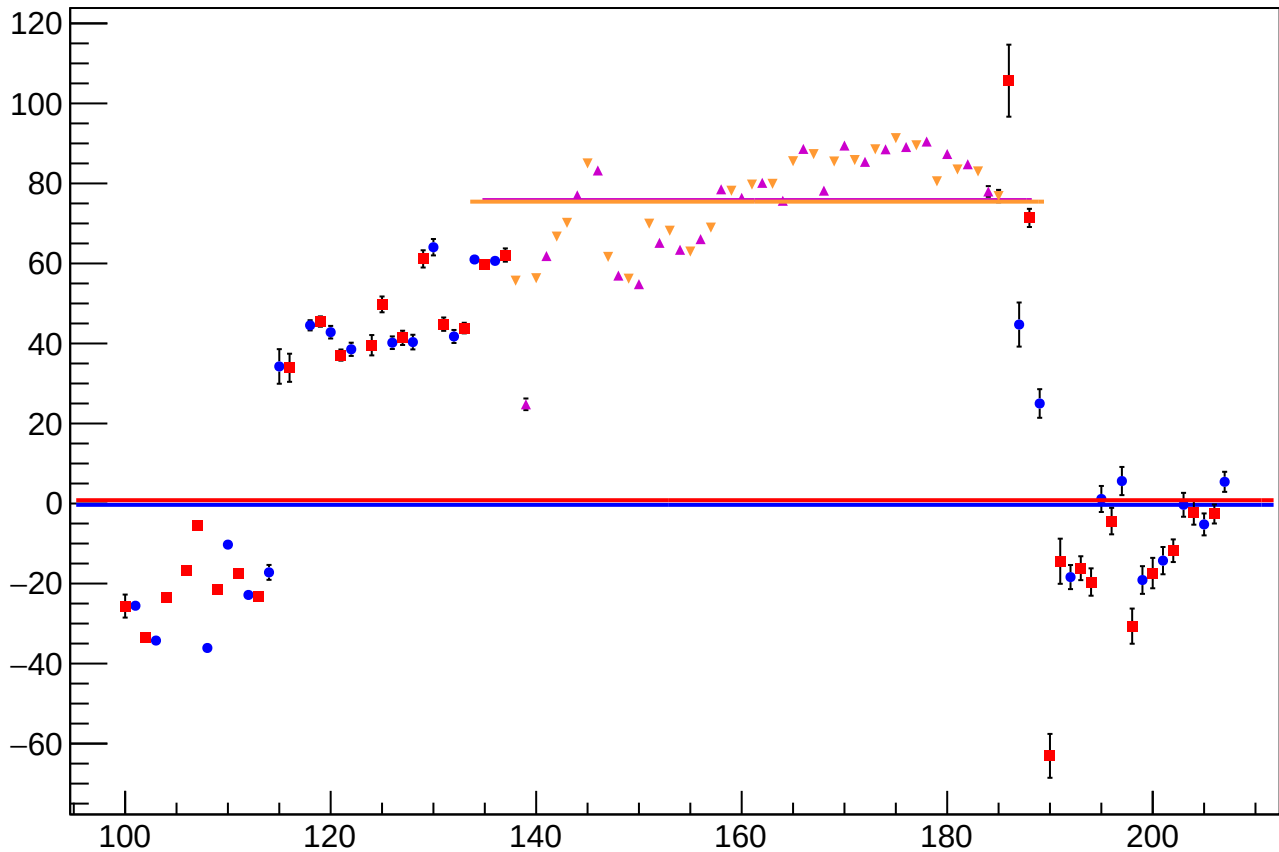
Left In: 53.605 $\pm$ 0.223  $\chi^2$ /NDF:1015.9/22

+ sign 35.307 $\pm$ 0.147  $\chi^2$ /NDF: 22684.4/50

All: 35.524 $\pm$ 0.105  $\chi^2$ /NDF: 44417.7/104

- sign 35.749 $\pm$ 0.150  $\chi^2$ /NDF: 21728.8/53

# reg\_asym\_sam6\_diff\_bpm4eY\_slope vs Slug



Right In:  $-0.324 \pm 0.253$   $\chi^2/\text{NDF}: 21241.5/25$

Left Out:  $75.448 \pm 0.188$   $\chi^2/\text{NDF}: 3469.1/24$

Right Out:  $0.829 \pm 0.254$   $\chi^2/\text{NDF}: 17440.6/30$

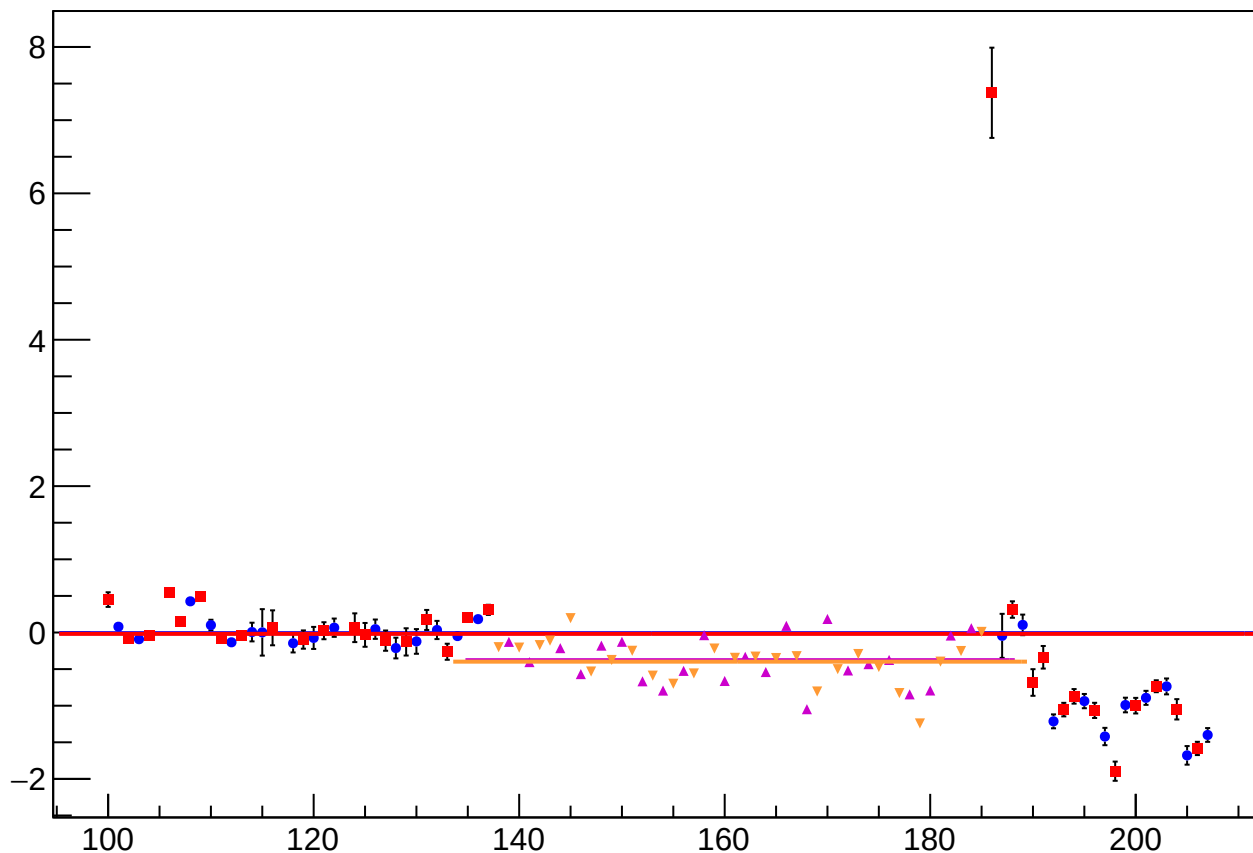
Left In:  $75.844 \pm 0.197$   $\chi^2/\text{NDF}: 4265.6/22$

+ sign  $48.449 \pm 0.151$   $\chi^2/\text{NDF}: 82383.1/50$

All:  $48.059 \pm 0.108$   $\chi^2/\text{NDF}: 158470.4/104$

- sign  $47.644 \pm 0.156$   $\chi^2/\text{NDF}: 76073.6/53$

# reg\_asym\_sam6\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.009 \pm 0.011$   $\chi^2/\text{NDF}$ : 1398.5/25

Left Out:  $-0.398 \pm 0.008$   $\chi^2/\text{NDF}$ : 1031.5/24

Right Out:  $-0.018 \pm 0.011$   $\chi^2/\text{NDF}$ : 1681.2/30

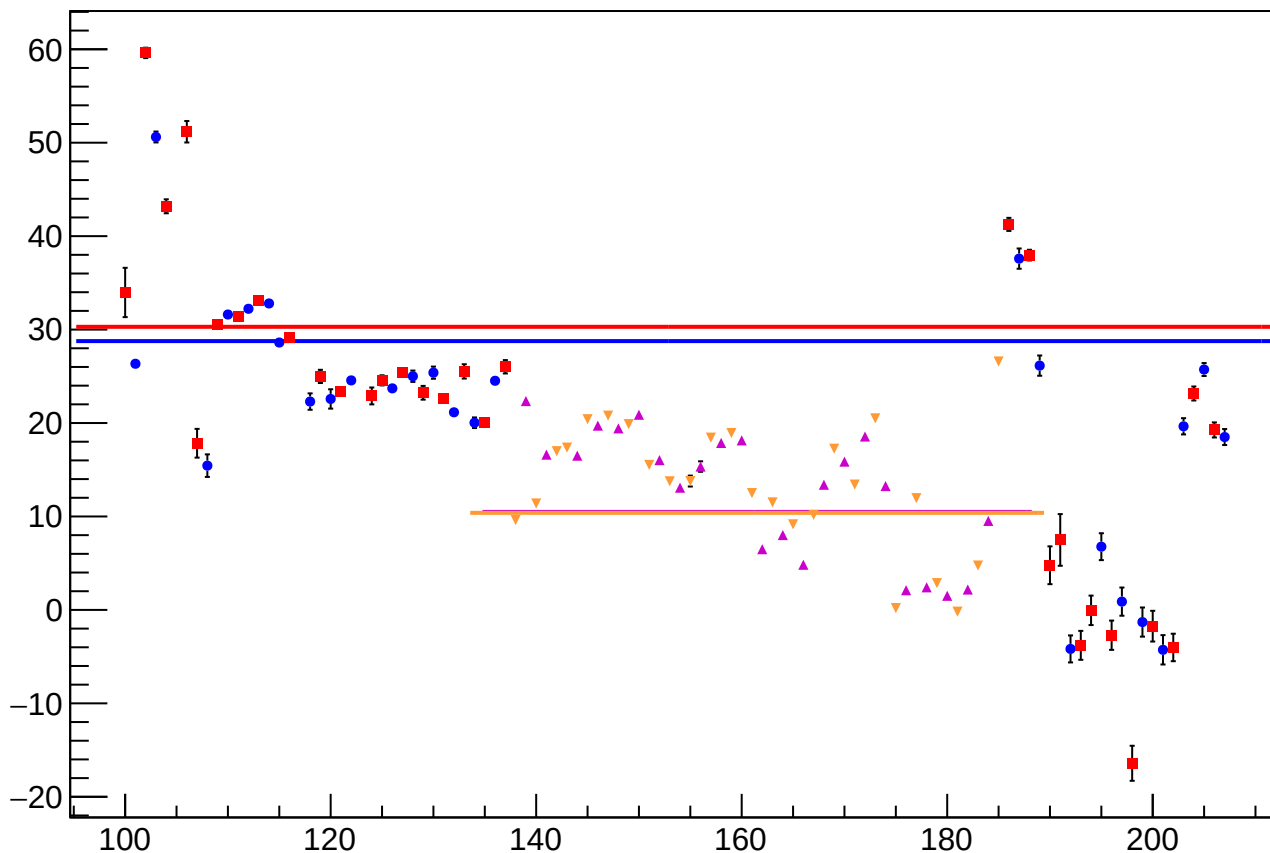
Left In:  $-0.378 \pm 0.009$   $\chi^2/\text{NDF}$ : 1351.5/22

+ sign  $-0.249 \pm 0.007$   $\chi^2/\text{NDF}$ : 3249.5/50

All:  $-0.244 \pm 0.005$   $\chi^2/\text{NDF}$ : 6964.3/104

- sign  $-0.238 \pm 0.007$   $\chi^2/\text{NDF}$ : 3713.3/53

# reg\_asym\_sam7\_diff\_bpm1X\_slope vs Slug



Right In:  $28.767 \pm 0.089$   $\chi^2/\text{NDF}: 5698.2/25$

Left Out:  $10.390 \pm 0.064$   $\chi^2/\text{NDF}: 13792.8/24$

Right Out:  $30.299 \pm 0.077$   $\chi^2/\text{NDF}: 8890.9/30$

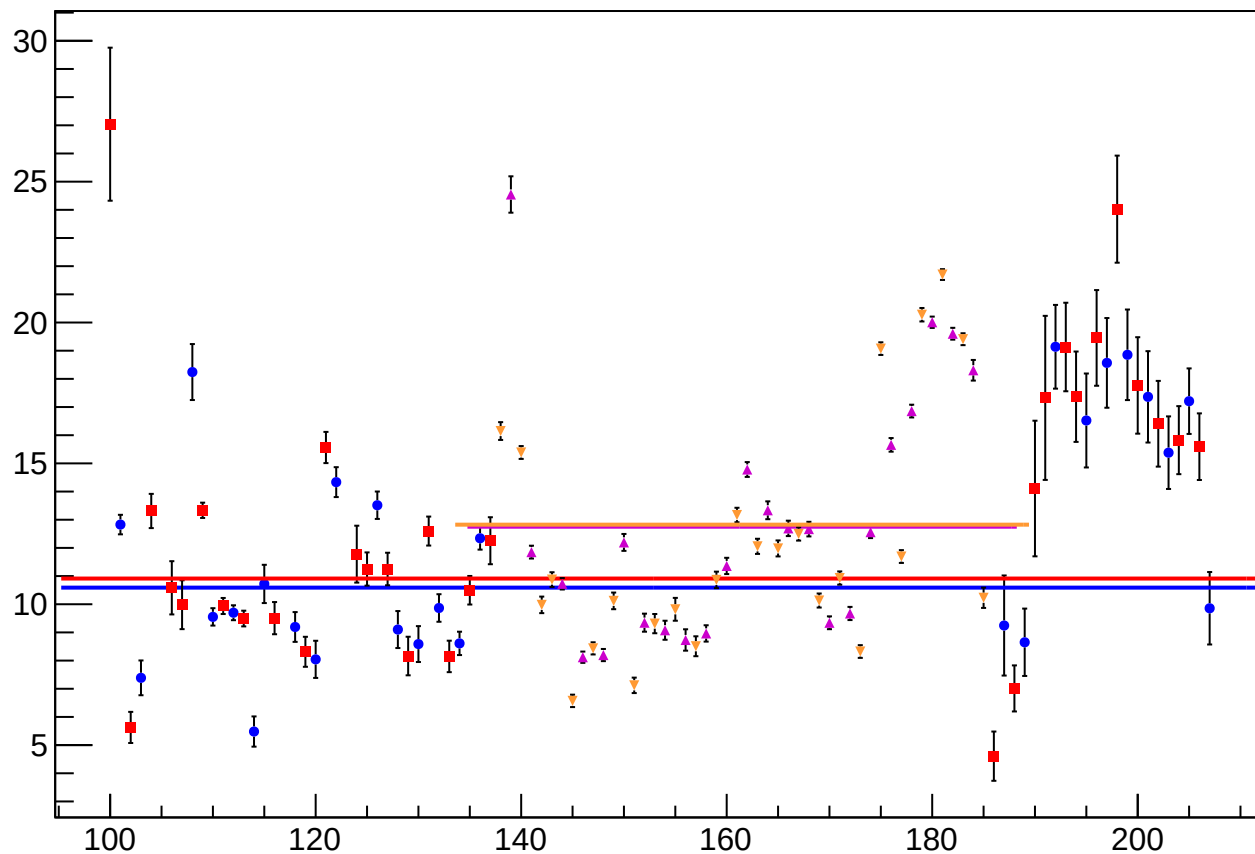
Left In:  $10.488 \pm 0.067$   $\chi^2/\text{NDF}: 11498.1/22$

+ sign  $16.693 \pm 0.052$   $\chi^2/\text{NDF}: 47661.8/50$

All:  $17.847 \pm 0.036$   $\chi^2/\text{NDF}: 106548.7/104$

- sign  $18.940 \pm 0.051$   $\chi^2/\text{NDF}: 57927.5/53$

# reg\_asym\_sam7\_diff\_bpm4aY\_slope vs Slug



Right In:  $10.590 \pm 0.110$   $\chi^2/\text{NDF}$ : 572.6/25

Left Out:  $12.825 \pm 0.051$   $\chi^2/\text{NDF}$ : 8016.5/24

Right Out:  $10.912 \pm 0.108$   $\chi^2/\text{NDF}$ : 676.5/30

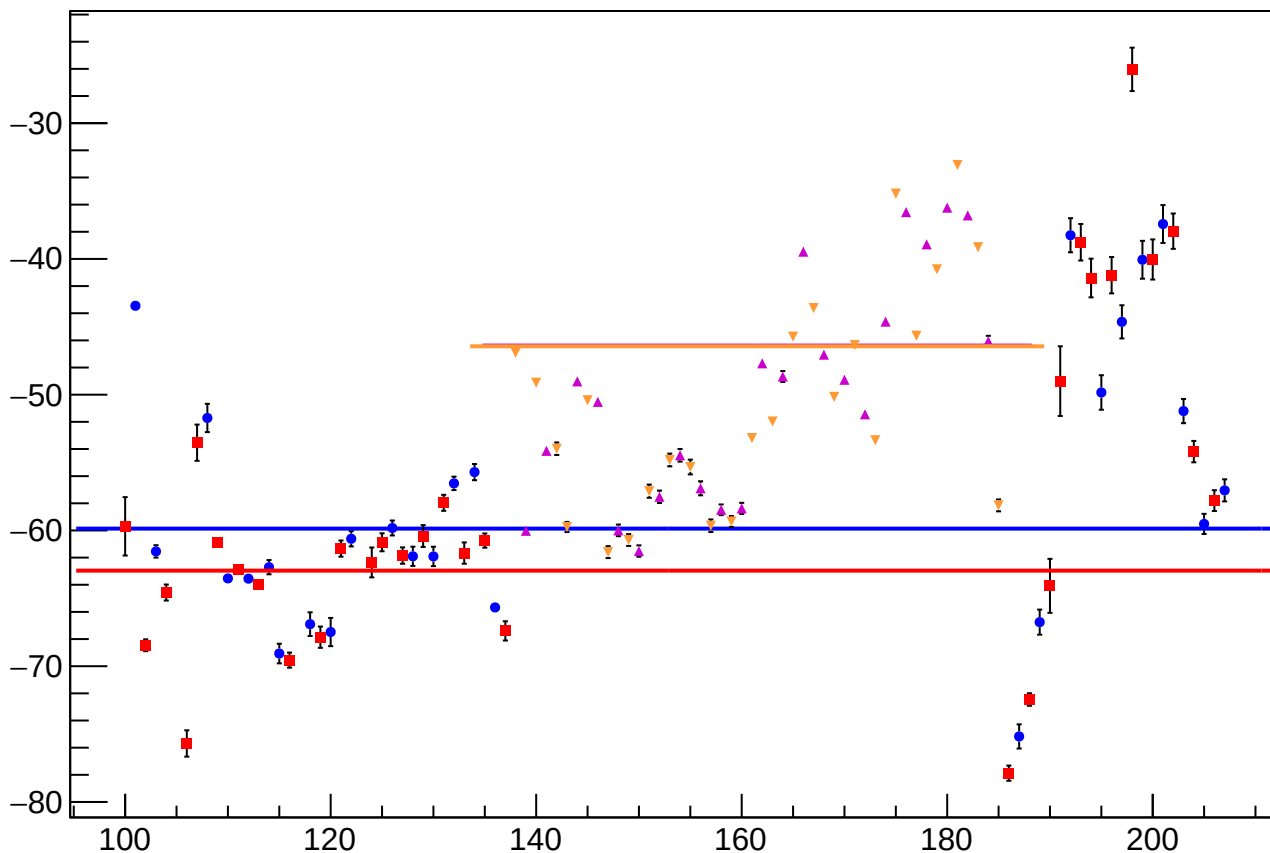
Left In:  $12.752 \pm 0.053$   $\chi^2/\text{NDF}$ : 5502.5/22

+ sign  $12.431 \pm 0.046$   $\chi^2/\text{NDF}$ : 8926.3/50

All:  $12.415 \pm 0.033$   $\chi^2/\text{NDF}$ : 15338.3/104

- sign  $12.398 \pm 0.048$   $\chi^2/\text{NDF}$ : 6411.8/53

# reg\_asym\_sam7\_diff\_bpm4eX\_slope vs Slug



Right In:  $-59.864 \pm 0.106$   $\chi^2/\text{NDF}: 5048.4/25$

Left Out:  $-46.435 \pm 0.064$   $\chi^2/\text{NDF}: 18170.4/24$

Right Out:  $-62.959 \pm 0.099$   $\chi^2/\text{NDF}: 4131.0/30$

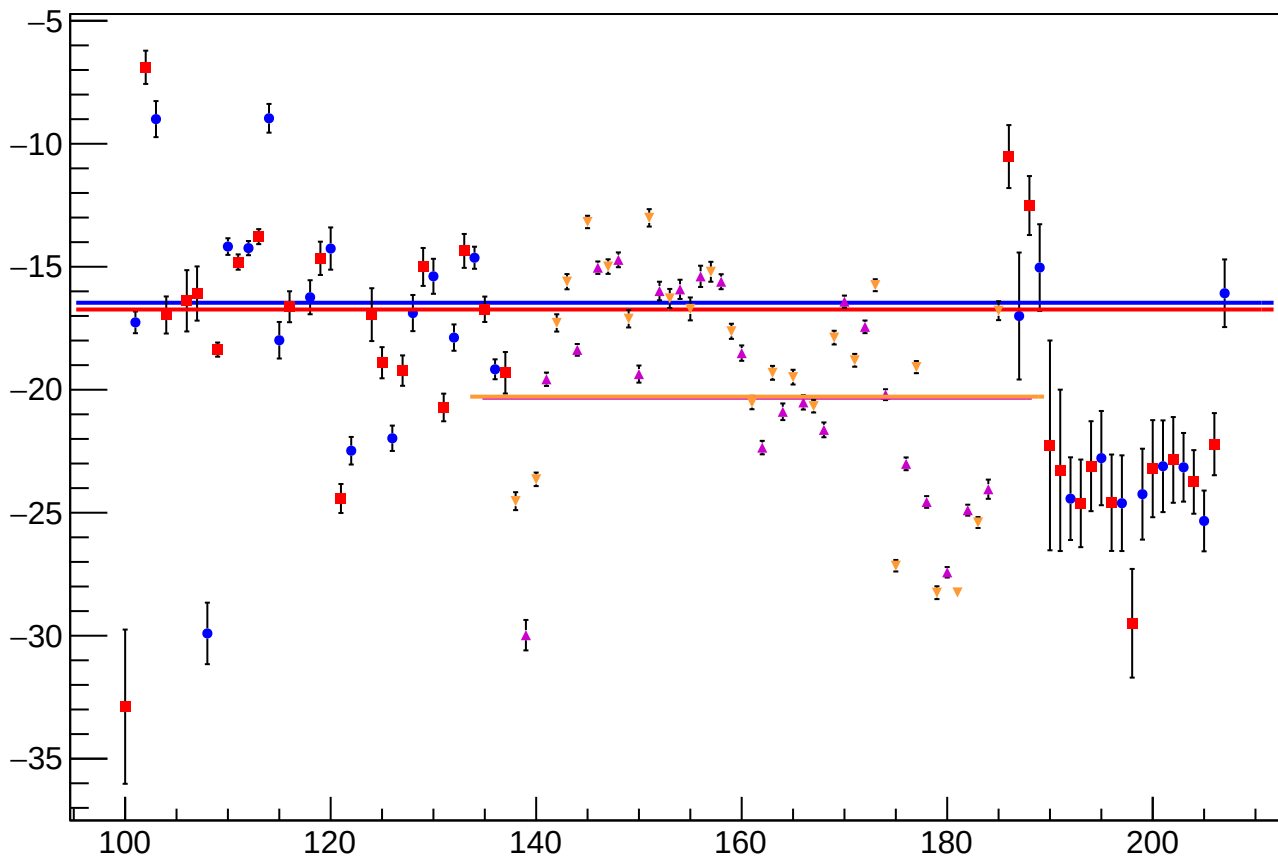
Left In:  $-46.383 \pm 0.067$   $\chi^2/\text{NDF}: 15080.6/22$

+ sign  $-50.036 \pm 0.055$   $\chi^2/\text{NDF}: 34868.4/50$

All:  $-50.790 \pm 0.039$   $\chi^2/\text{NDF}: 73659.8/104$

- sign  $-51.552 \pm 0.055$   $\chi^2/\text{NDF}: 38415.0/53$

# reg\_asym\_sam7\_diff\_bpm4eY\_slope vs Slug



Right In:  $-16.463 \pm 0.124$   $\chi^2/\text{NDF}$ : 959.9/25

Left Out:  $-20.281 \pm 0.057$   $\chi^2/\text{NDF}$ : 7019.5/24

Right Out:  $-16.738 \pm 0.121$   $\chi^2/\text{NDF}$ : 882.0/30

Left In:  $-20.324 \pm 0.059$   $\chi^2/\text{NDF}$ : 4272.7/22

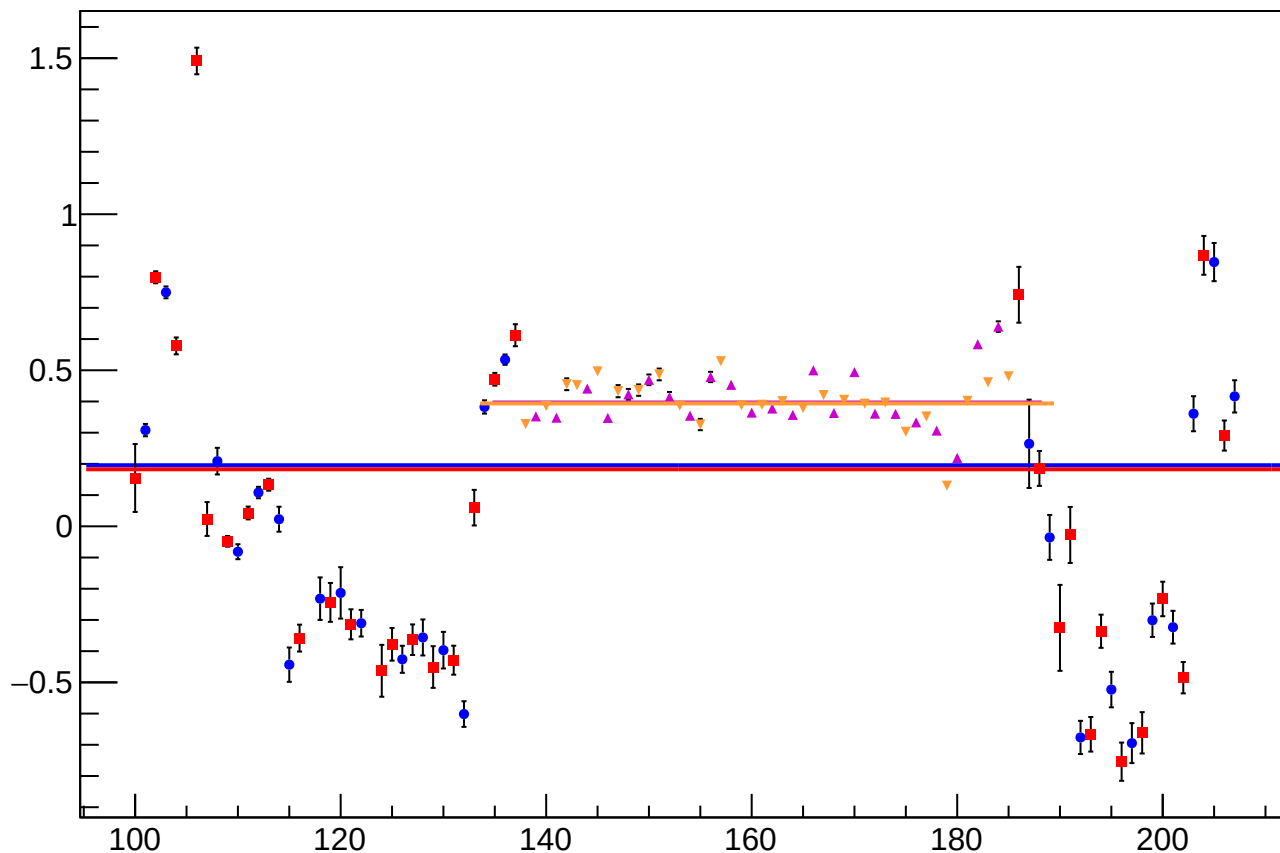
+ sign  $-19.610 \pm 0.052$   $\chi^2/\text{NDF}$ : 8766.1/50

All:  $-19.620 \pm 0.037$   $\chi^2/\text{NDF}$ : 14633.8/104

- sign  $-19.630 \pm 0.053$   $\chi^2/\text{NDF}$ : 5867.6/53



# reg\_asym\_sam7\_diff\_bpm12X\_slope vs Slug



Right In:  $0.196 \pm 0.007$   $\chi^2/\text{NDF}: 3624.9/25$

Left Out:  $0.394 \pm 0.003$   $\chi^2/\text{NDF}: 946.9/24$

Right Out:  $0.183 \pm 0.007$   $\chi^2/\text{NDF}: 4797.1/30$

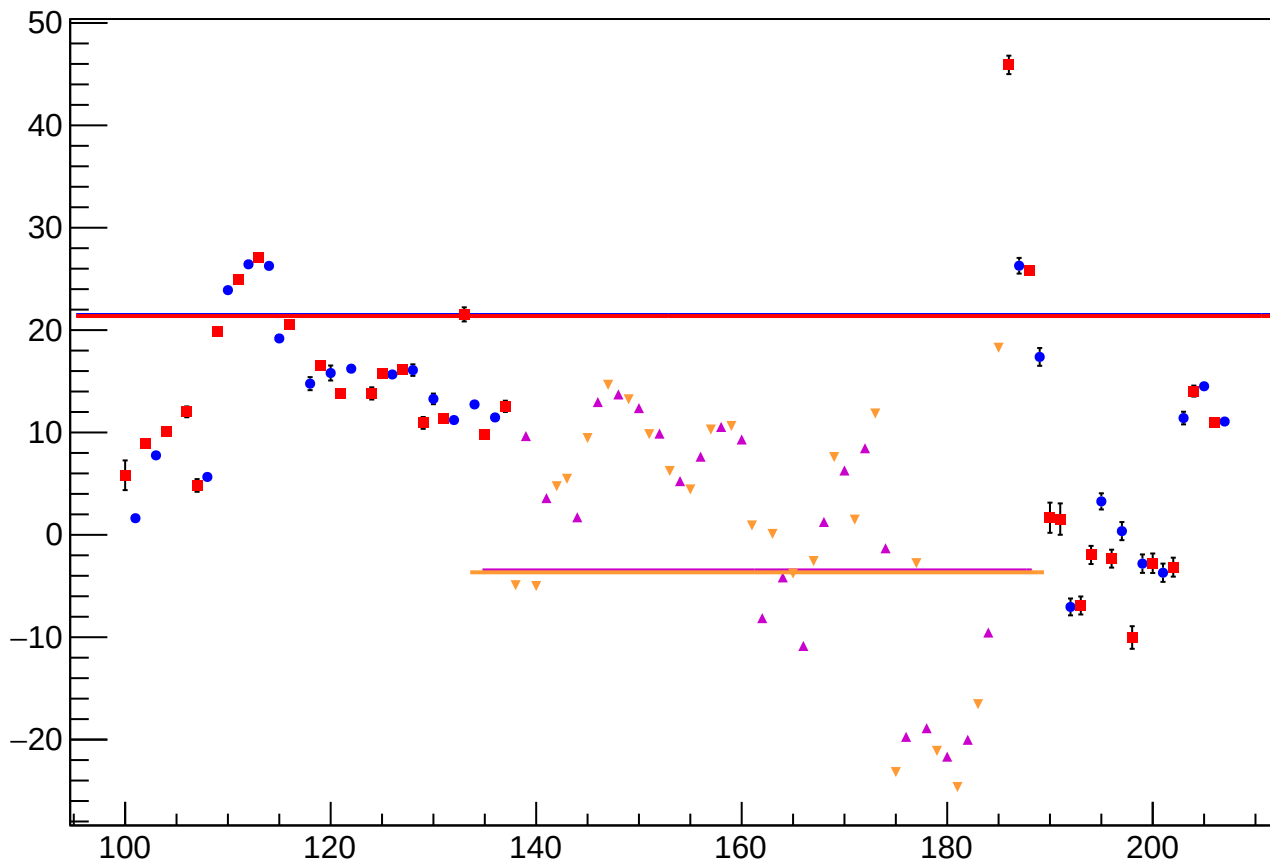
Left In:  $0.397 \pm 0.003$   $\chi^2/\text{NDF}: 1295.7/22$

+ sign  $0.368 \pm 0.002$   $\chi^2/\text{NDF}: 5351.8/50$

All:  $0.368 \pm 0.002$   $\chi^2/\text{NDF}: 12356.1/104$

- sign  $0.367 \pm 0.002$   $\chi^2/\text{NDF}: 7004.2/53$

# reg\_asym\_sam8\_diff\_bpm1X\_slope vs Slug



Right In:  $21.472 \pm 0.055$   $\chi^2/\text{NDF}: 17552.0/25$

Left Out:  $-3.660 \pm 0.055$   $\chi^2/\text{NDF}: 56739.4/24$

Right Out:  $21.375 \pm 0.045$   $\chi^2/\text{NDF}: 17446.8/30$

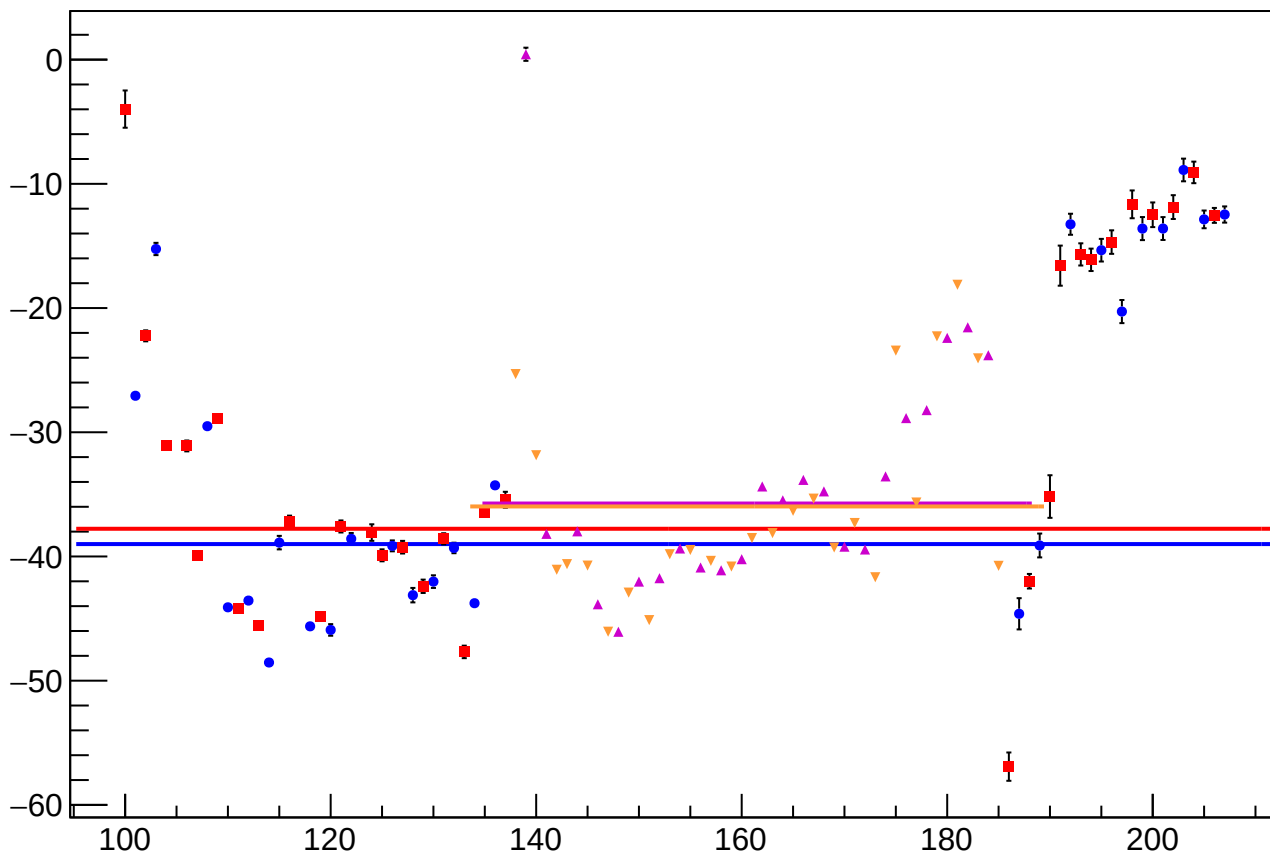
Left In:  $-3.475 \pm 0.057$   $\chi^2/\text{NDF}: 45103.9/22$

+ sign  $8.895 \pm 0.039$   $\chi^2/\text{NDF}: 180378.8/50$

All:  $10.516 \pm 0.026$   $\chi^2/\text{NDF}: 361997.8/104$

- sign  $11.887 \pm 0.035$   $\chi^2/\text{NDF}: 178359.9/53$

# reg\_asym\_sam8\_diff\_bpm4aY\_slope vs Slug



Right In:  $-39.002 \pm 0.074$   $\chi^2/\text{NDF}: 15898.1/25$

Left Out:  $-35.973 \pm 0.042$   $\chi^2/\text{NDF}: 33609.3/24$

Right Out:  $-37.770 \pm 0.068$   $\chi^2/\text{NDF}: 17474.1/30$

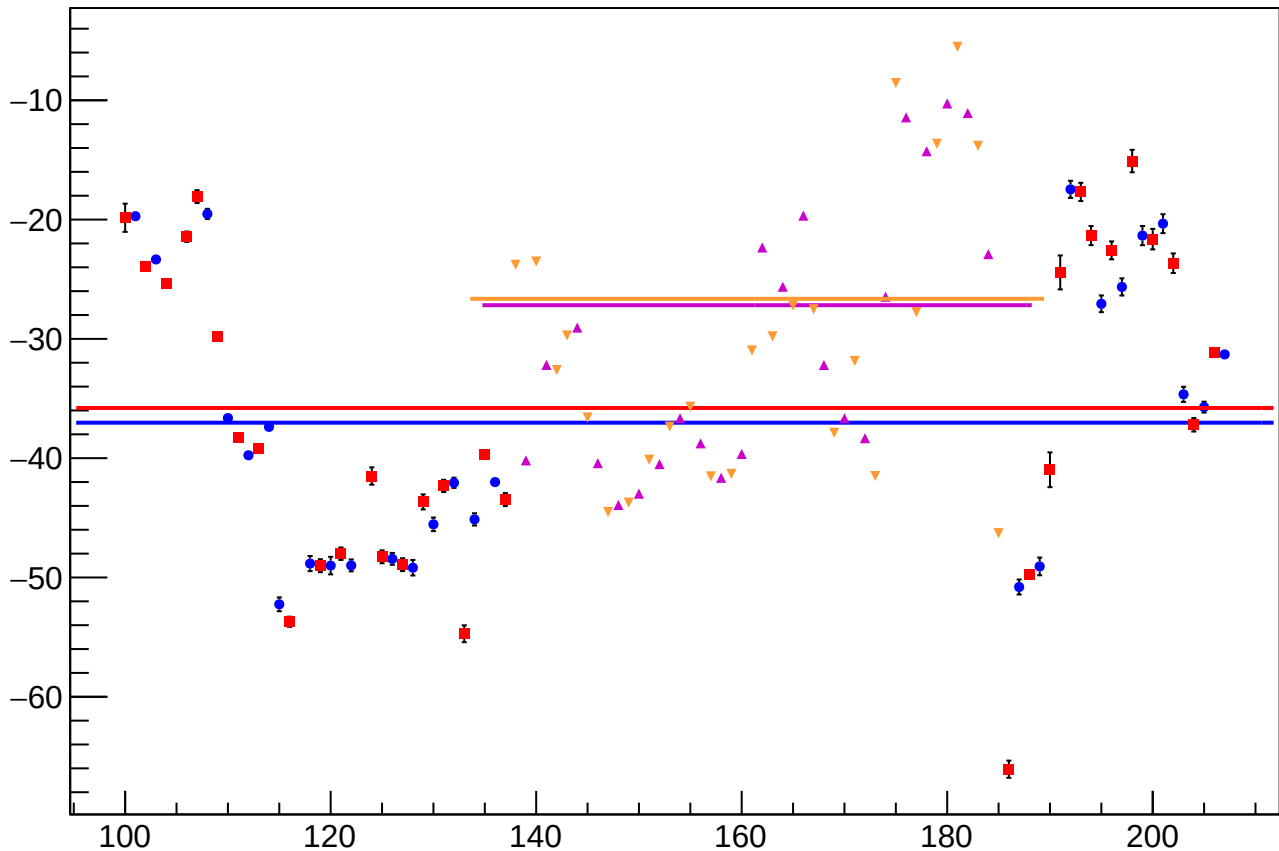
Left In:  $-35.737 \pm 0.045$   $\chi^2/\text{NDF}: 27154.8/22$

+ sign  $-36.727 \pm 0.037$   $\chi^2/\text{NDF}: 50777.2/50$

All:  $-36.542 \pm 0.026$   $\chi^2/\text{NDF}: 96073.6/104$

- sign  $-36.349 \pm 0.038$   $\chi^2/\text{NDF}: 45244.5/53$

# reg\_asym\_sam8\_diff\_bpm4eX\_slope vs Slug



Right In:  $-37.025 \pm 0.069$   $\chi^2/\text{NDF}: 13908.7/25$

Left Out:  $-26.639 \pm 0.055$   $\chi^2/\text{NDF}: 50051.9/24$

Right Out:  $-35.791 \pm 0.061$   $\chi^2/\text{NDF}: 19213.9/30$

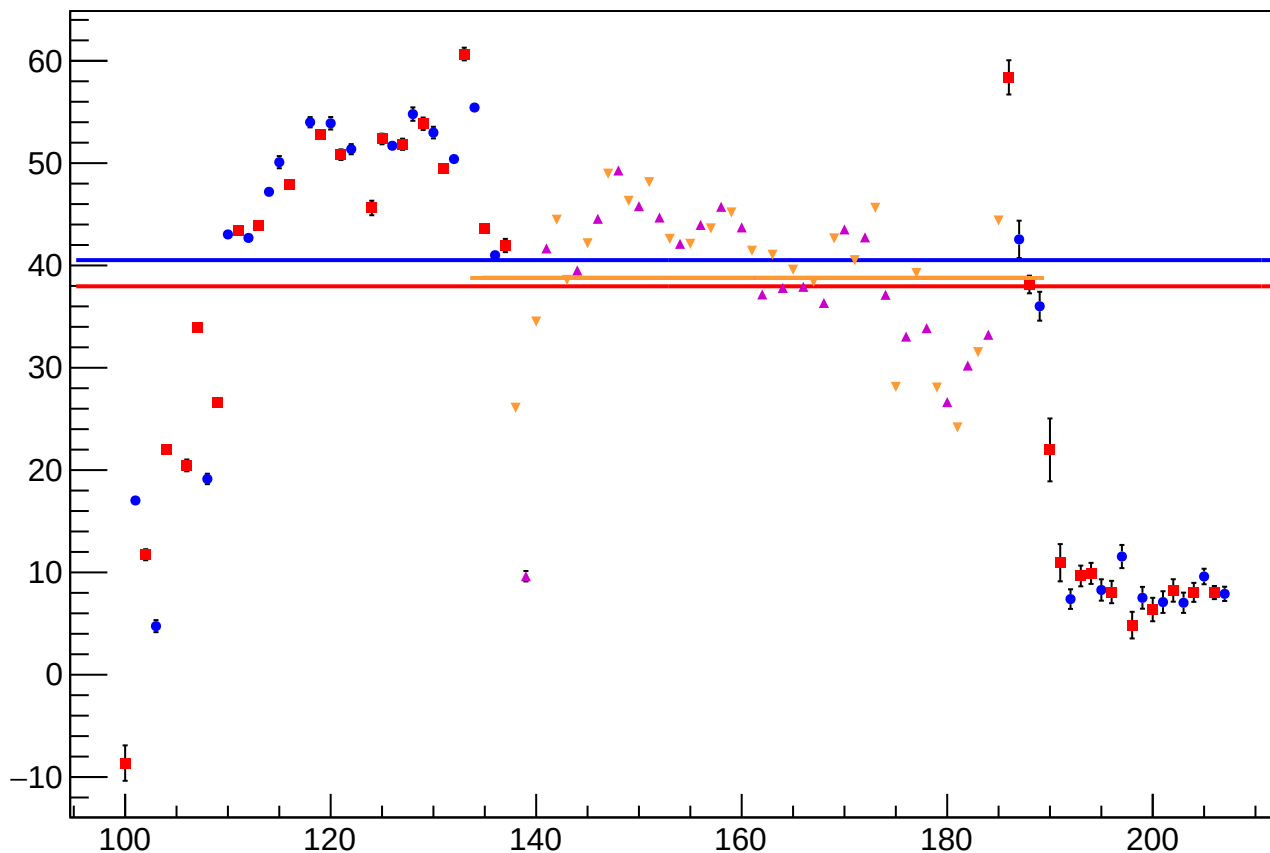
Left In:  $-27.176 \pm 0.057$   $\chi^2/\text{NDF}: 40990.1/22$

+ sign  $-30.641 \pm 0.043$   $\chi^2/\text{NDF}: 77912.3/50$

All:  $-30.948 \pm 0.030$   $\chi^2/\text{NDF}: 148901.9/104$

- sign  $-31.238 \pm 0.042$   $\chi^2/\text{NDF}: 70889.7/53$

# reg\_asym\_sam8\_diff\_bpm4eY\_slope vs Slug



Right In: 40.522 $\pm$ 0.082  $\chi^2$ /NDF: 25189.4/25

Left Out: 38.777 $\pm$ 0.048  $\chi^2$ /NDF: 21070.6/24

Right Out: 37.961 $\pm$ 0.076  $\chi^2$ /NDF: 26409.5/30

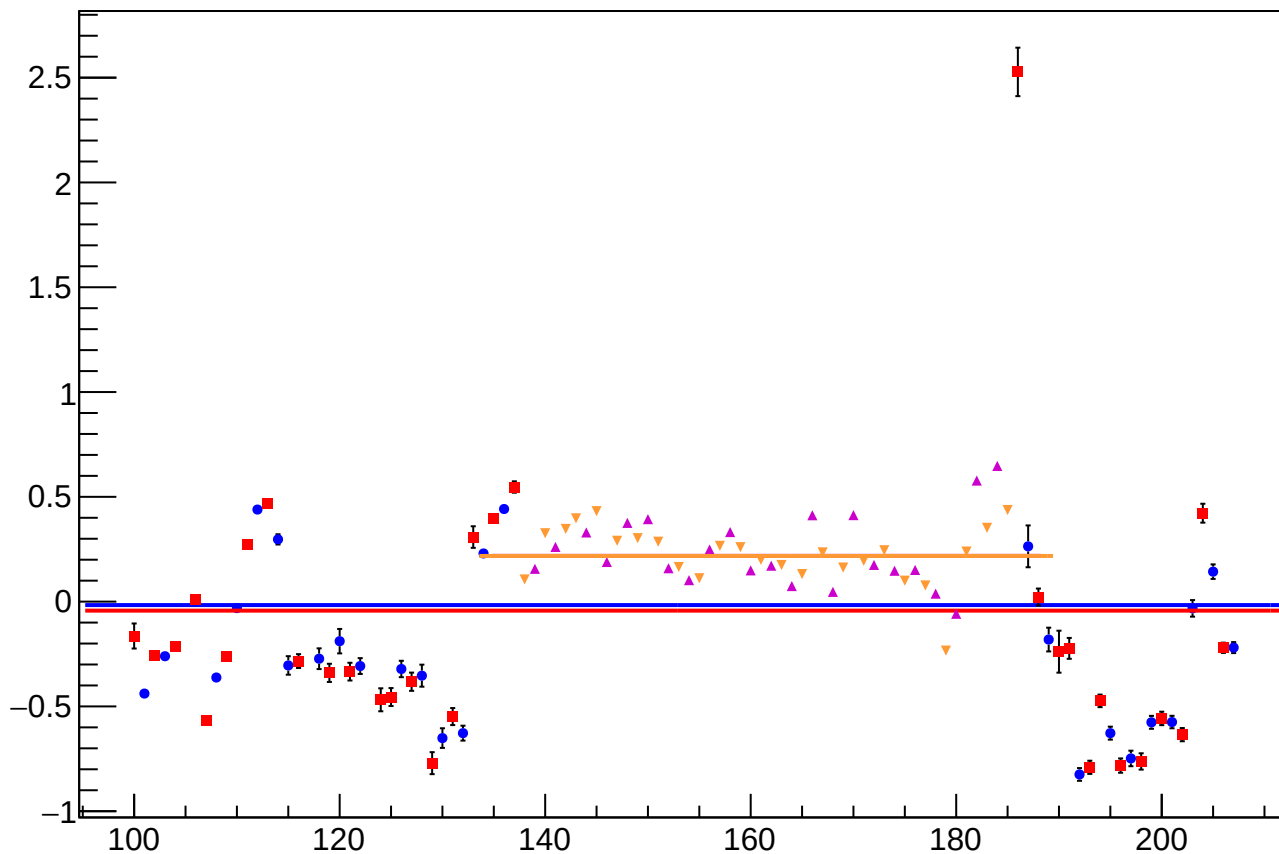
Left In: 38.791 $\pm$ 0.050  $\chi^2$ /NDF: 16240.7/22

+ sign 39.218 $\pm$ 0.041  $\chi^2$ /NDF: 46597.6/50

All: 38.883 $\pm$ 0.029  $\chi^2$ /NDF: 89465.0/104

- sign 38.538 $\pm$ 0.042  $\chi^2$ /NDF: 42733.6/53

# reg\_asym\_sam8\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.017 \pm 0.004$   $\chi^2/\text{NDF}$ : 8045.3/25

Left Out:  $0.218 \pm 0.002$   $\chi^2/\text{NDF}$ : 4075.0/24

Right Out:  $-0.043 \pm 0.004$   $\chi^2/\text{NDF}$ : 9487.5/30

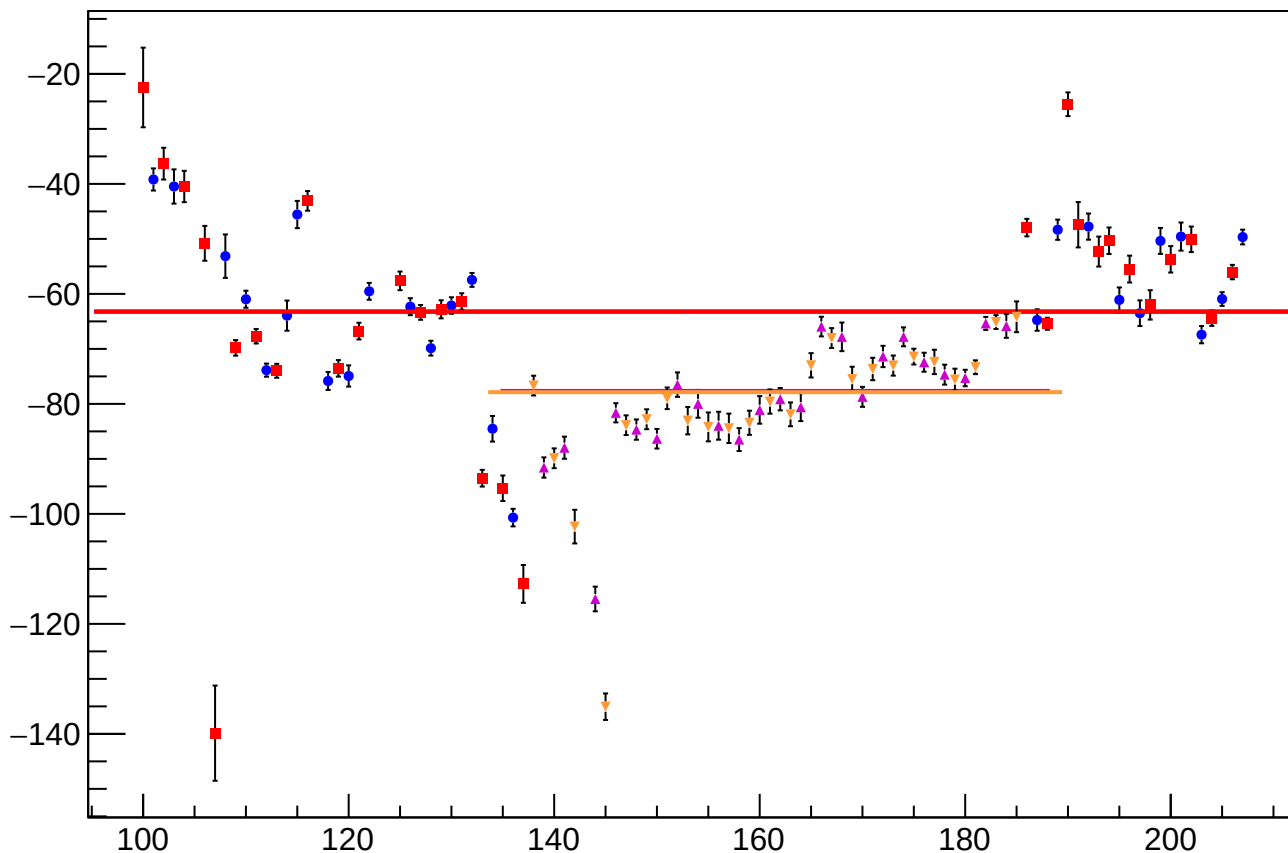
Left In:  $0.218 \pm 0.002$   $\chi^2/\text{NDF}$ : 5312.2/22

+ sign  $0.173 \pm 0.002$   $\chi^2/\text{NDF}$ : 14390.4/50

All:  $0.165 \pm 0.001$   $\chi^2/\text{NDF}$ : 32414.3/104

- sign  $0.158 \pm 0.002$   $\chi^2/\text{NDF}$ : 17991.6/53

# reg\_asym\_usl\_diff\_bpm1X\_slope vs Slug



Right In:  $-63.231 \pm 0.342$   $\chi^2/\text{NDF}: 1397.2/25$

Left Out:  $-77.867 \pm 0.394$   $\chi^2/\text{NDF}: 932.3/23$

Right Out:  $-63.196 \pm 0.329$   $\chi^2/\text{NDF}: 1921.6/29$

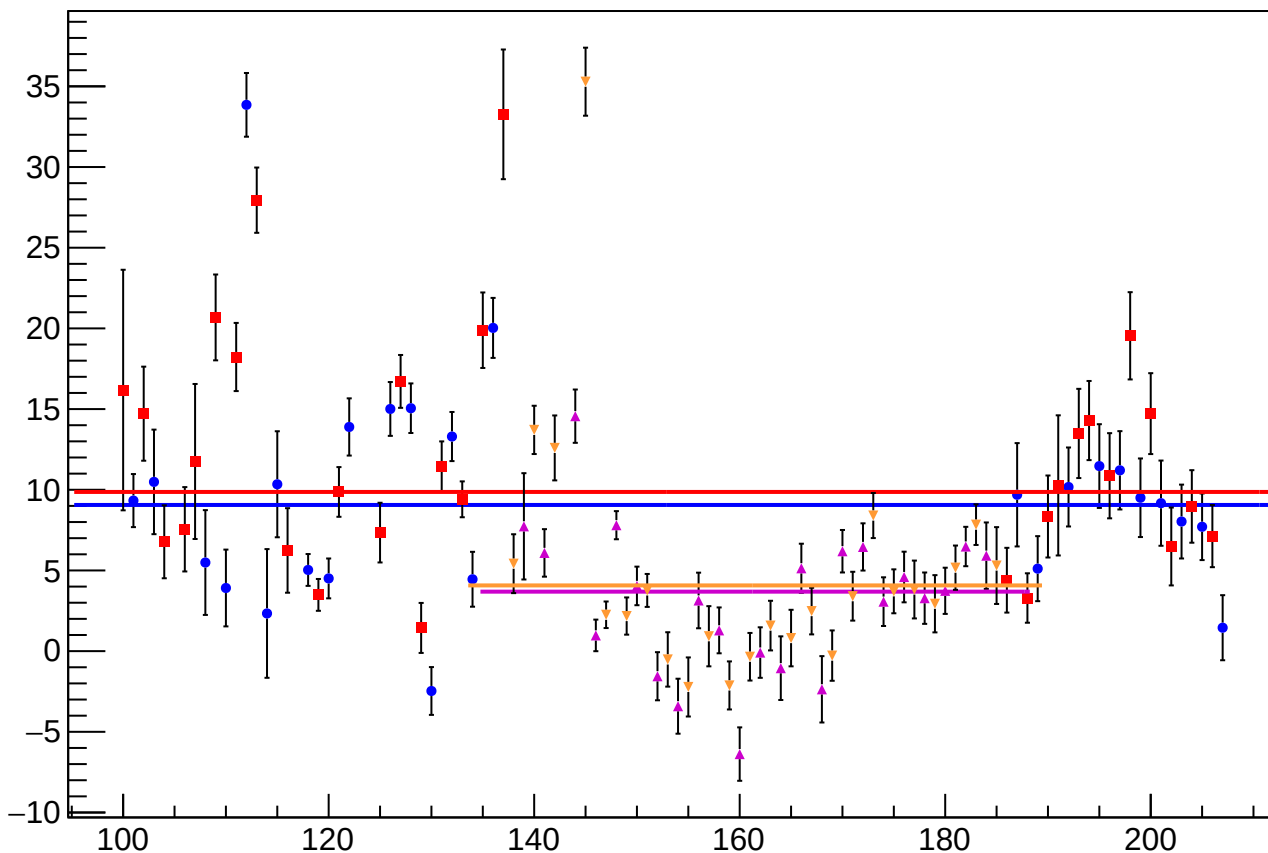
Left In:  $-77.643 \pm 0.396$   $\chi^2/\text{NDF}: 693.3/22$

+ sign  $-69.512 \pm 0.258$   $\chi^2/\text{NDF}: 3116.9/49$

All:  $-69.292 \pm 0.181$   $\chi^2/\text{NDF}: 6520.2/102$

- sign  $-69.081 \pm 0.253$   $\chi^2/\text{NDF}: 3401.9/52$

# reg\_asym\_usl\_diff\_bpm4aY\_slope vs Slug



Right In:  $9.059 \pm 0.371$   $\chi^2/\text{NDF}$ : 363.5/25

Left Out:  $4.073 \pm 0.297$   $\chi^2/\text{NDF}$ : 370.6/23

Right Out:  $9.865 \pm 0.364$   $\chi^2/\text{NDF}$ : 316.5/29

Left In:  $3.686 \pm 0.302$   $\chi^2/\text{NDF}$ : 182.6/22

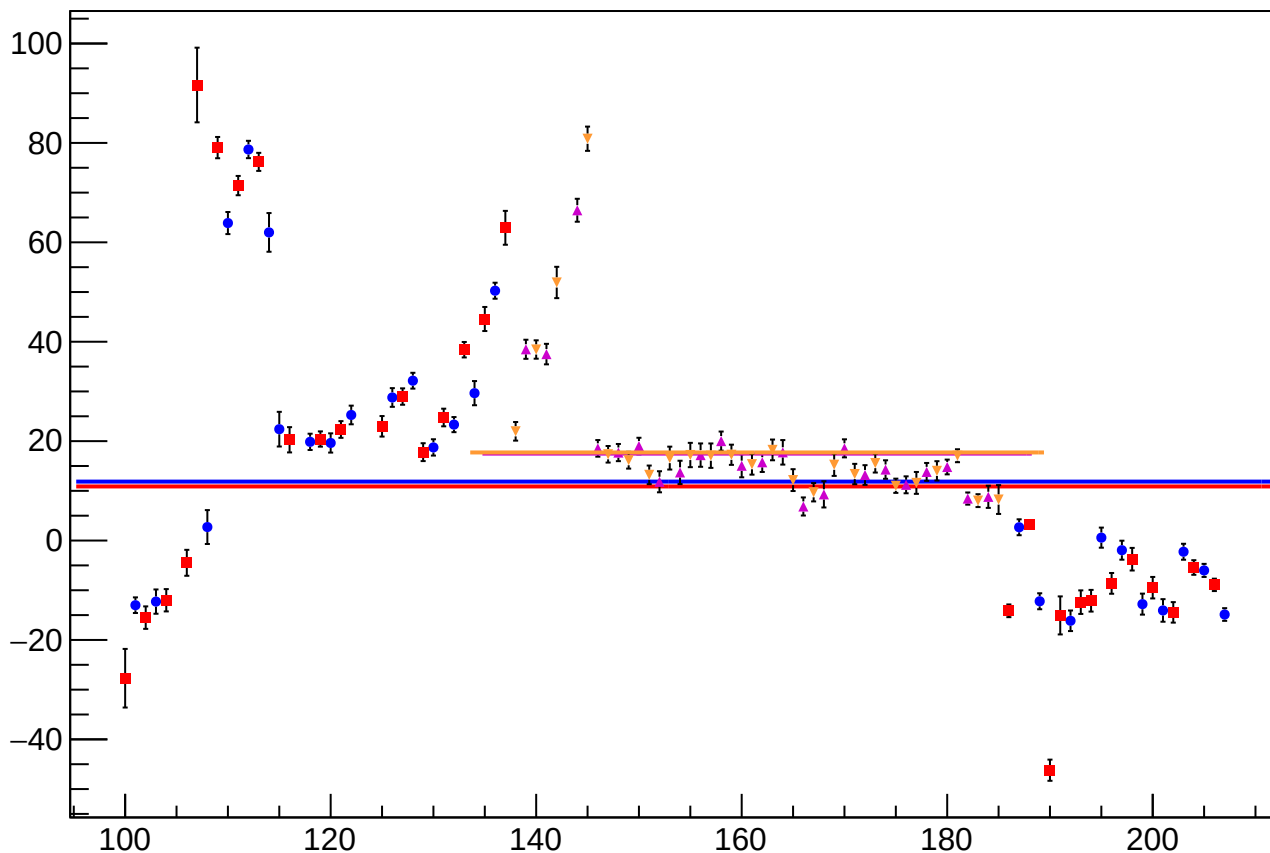
+ sign  $6.019 \pm 0.232$   $\chi^2/\text{NDF}$ : 844.3/49

All:  $6.108 \pm 0.164$   $\chi^2/\text{NDF}$ : 1514.3/102

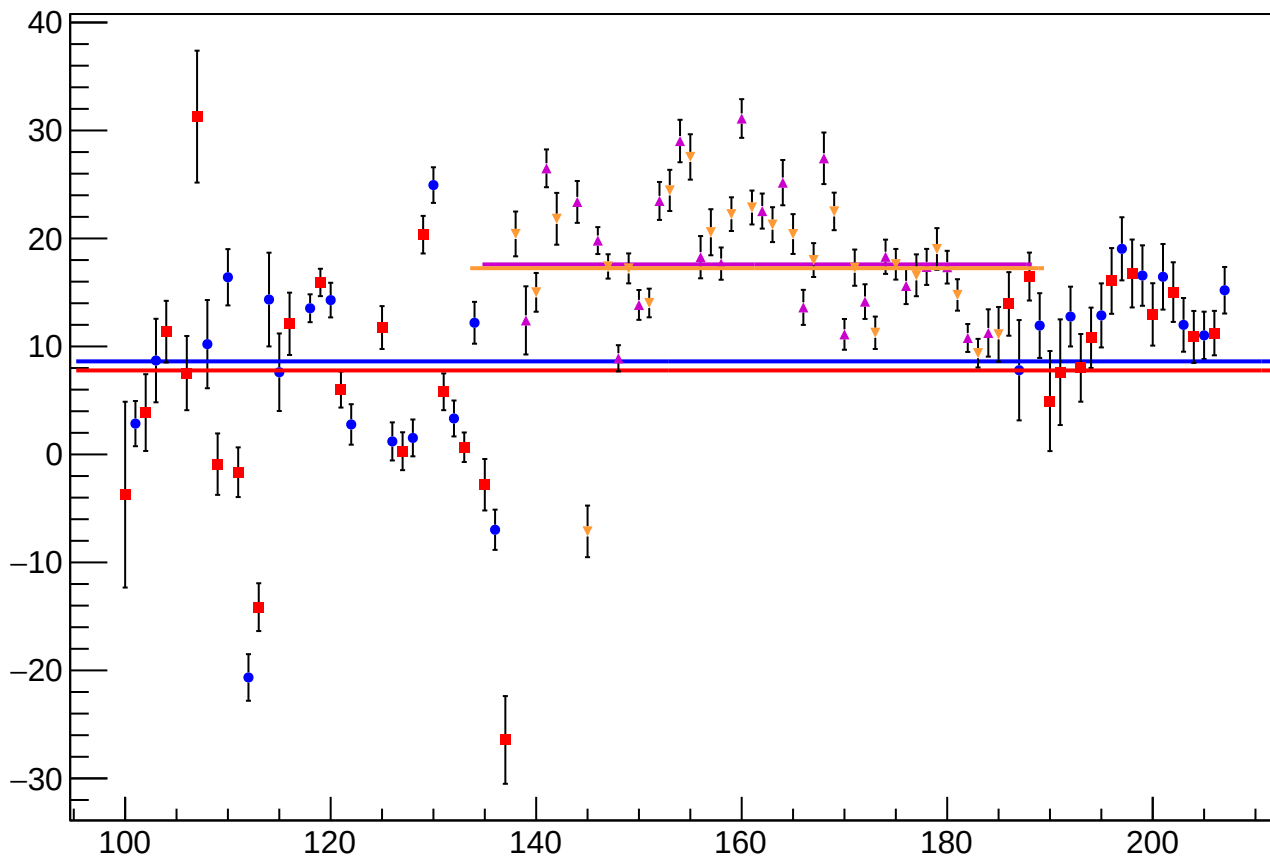
- sign  $6.199 \pm 0.232$   $\chi^2/\text{NDF}$ : 669.7/52



# reg\_asym\_usl\_diff\_bpm4eX\_slope vs Slug



# reg\_asym\_usl\_diff\_bpm4eY\_slope vs Slug



Right In:  $8.618 \pm 0.430$   $\chi^2/\text{NDF}$ : 501.4/25

Left Out:  $17.245 \pm 0.338$   $\chi^2/\text{NDF}$ : 260.8/23

Right Out:  $7.778 \pm 0.427$   $\chi^2/\text{NDF}$ : 433.2/29

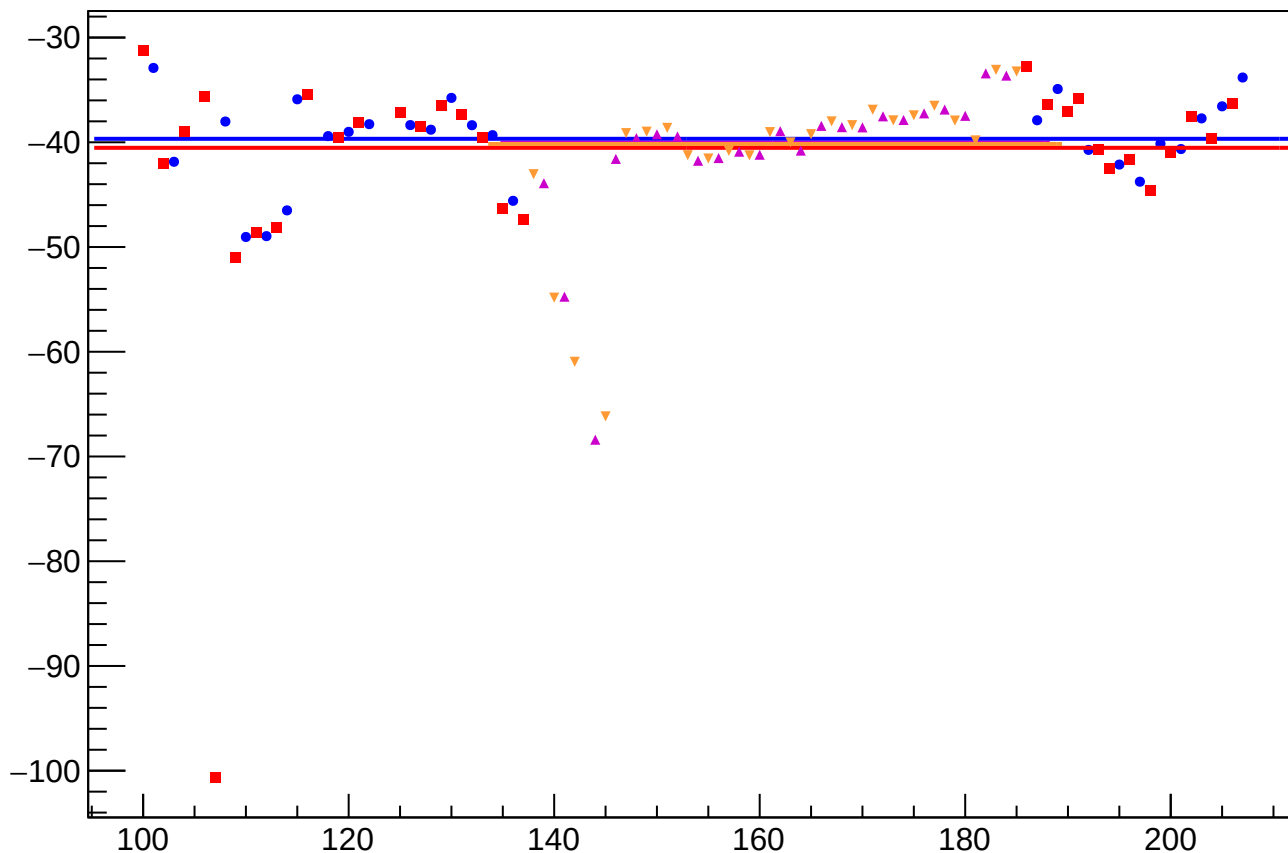
Left In:  $17.597 \pm 0.342$   $\chi^2/\text{NDF}$ : 309.7/22

+ sign  $13.947 \pm 0.266$   $\chi^2/\text{NDF}$ : 1011.1/49

All:  $13.854 \pm 0.188$   $\chi^2/\text{NDF}$ : 2075.9/102

- sign  $13.760 \pm 0.267$   $\chi^2/\text{NDF}$ : 1064.6/52

# reg\_asym\_usl\_diff\_bpm12X\_slope vs Slug



Right In:  $-39.668 \pm 0.022$   $\chi^2/\text{NDF}: 32273.6/25$

Left Out:  $-40.165 \pm 0.015$   $\chi^2/\text{NDF}: 163335.9/23$

Right Out:  $-40.528 \pm 0.021$   $\chi^2/\text{NDF}: 72572.7/29$

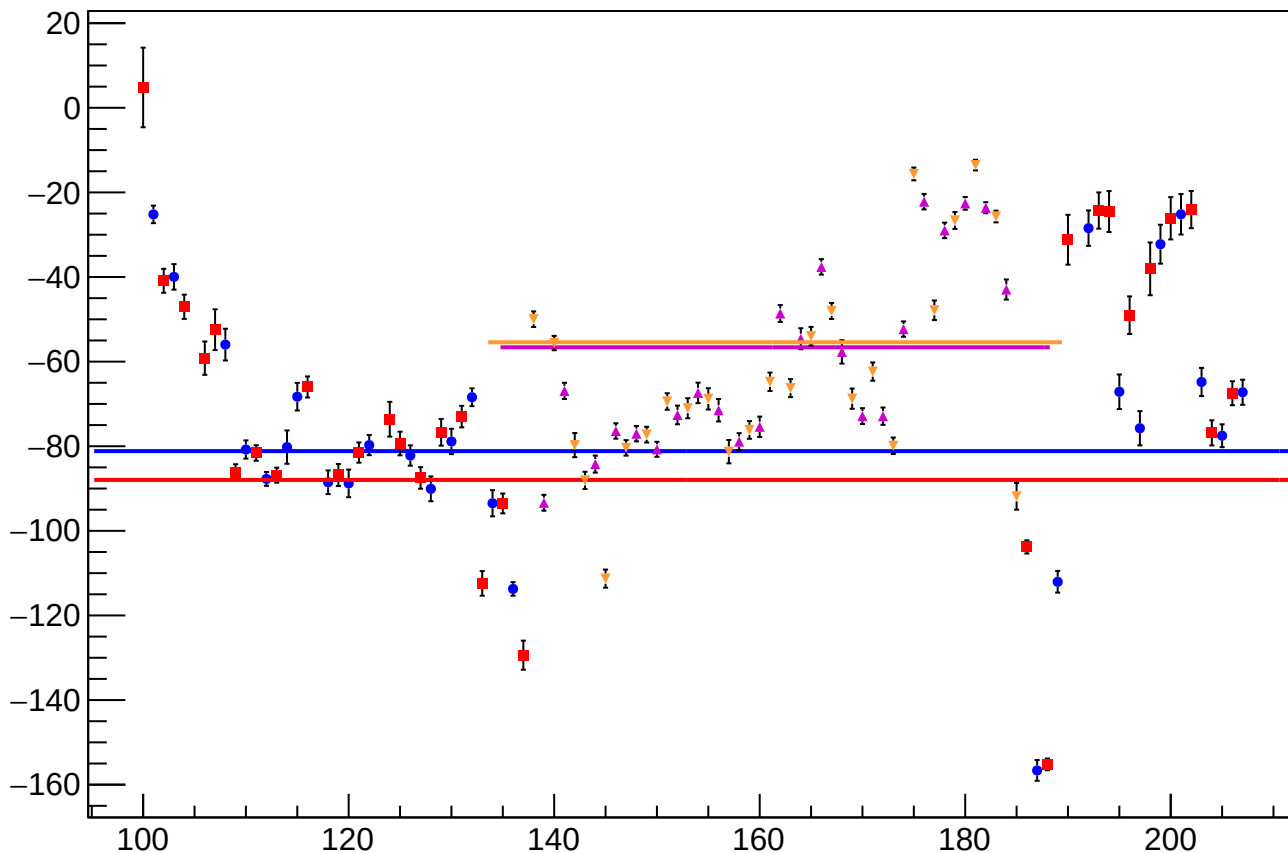
Left In:  $-40.050 \pm 0.015$   $\chi^2/\text{NDF}: 136438.5/22$

+ sign  $-39.998 \pm 0.013$   $\chi^2/\text{NDF}: 195956.1/49$

All:  $-40.108 \pm 0.009$   $\chi^2/\text{NDF}: 405451.8/102$

- sign  $-40.215 \pm 0.012$   $\chi^2/\text{NDF}: 209345.5/52$

# reg\_asym\_usr\_diff\_bpm1X\_slope vs Slug



Right In:  $-81.156 \pm 0.527$   $\chi^2/\text{NDF}$ : 3046.4/25

Left Out:  $-55.424 \pm 0.393$   $\chi^2/\text{NDF}$ : 4525.3/24

Right Out:  $-87.959 \pm 0.488$   $\chi^2/\text{NDF}$ : 4602.0/29

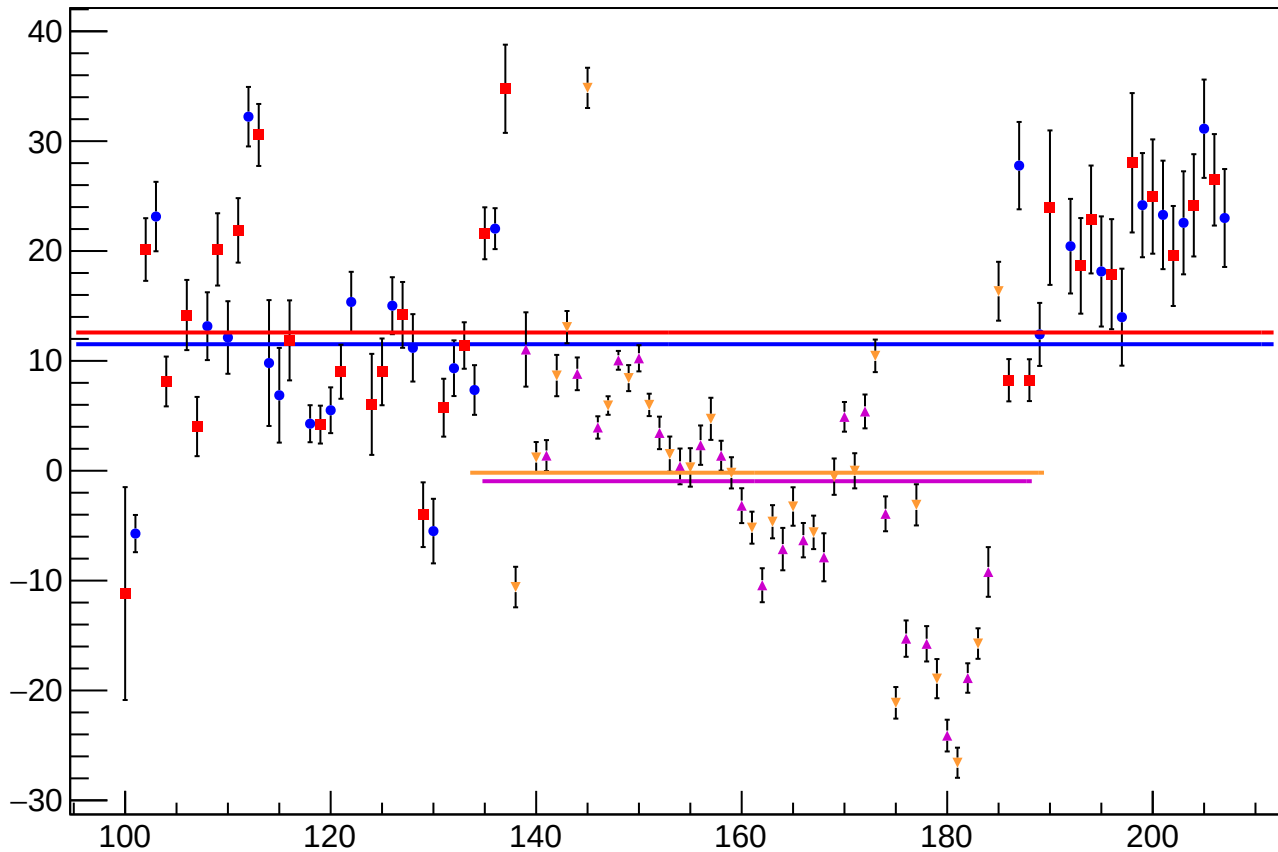
Left In:  $-56.609 \pm 0.404$   $\chi^2/\text{NDF}$ : 3350.3/22

+ sign  $-64.638 \pm 0.315$   $\chi^2/\text{NDF}$ : 9104.5/50

All:  $-67.031 \pm 0.221$   $\chi^2/\text{NDF}$ : 19623.1/103

- sign  $-69.361 \pm 0.311$   $\chi^2/\text{NDF}$ : 10404.8/52

# reg\_asym\_usr\_diff\_bpm4aY\_slope vs Slug



Right In:  $11.516 \pm 0.563$   $\chi^2/\text{NDF}: 344.5/25$

Left Out:  $-0.179 \pm 0.294$   $\chi^2/\text{NDF}: 1598.6/24$

Right Out:  $12.584 \pm 0.544$   $\chi^2/\text{NDF}: 248.2/29$

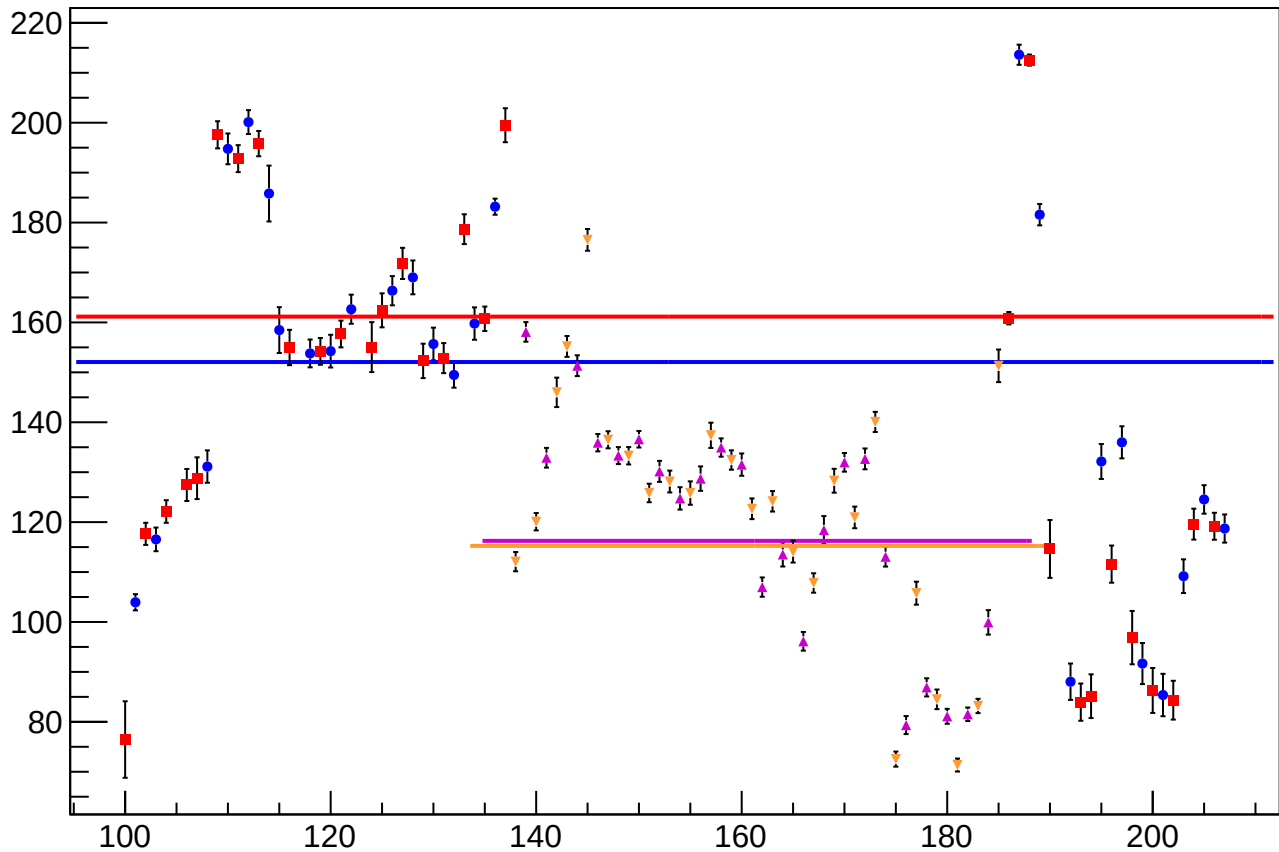
Left In:  $-0.952 \pm 0.304$   $\chi^2/\text{NDF}: 1069.6/22$

+ sign  $2.327 \pm 0.261$   $\chi^2/\text{NDF}: 2281.9/50$

All:  $2.299 \pm 0.186$   $\chi^2/\text{NDF}: 4071.5/103$

- sign  $2.271 \pm 0.265$   $\chi^2/\text{NDF}: 1789.5/52$

# reg\_asym\_usr\_diff\_bpm4eX\_slope vs Slug



Right In: 152.066 $\pm$ 0.538  $\chi^2$ /NDF: 4571.8/25

Left Out: 115.243 $\pm$ 0.390  $\chi^2$ /NDF: 4836.5/24

Right Out: 161.161 $\pm$ 0.487  $\chi^2$ /NDF: 6030.8/29

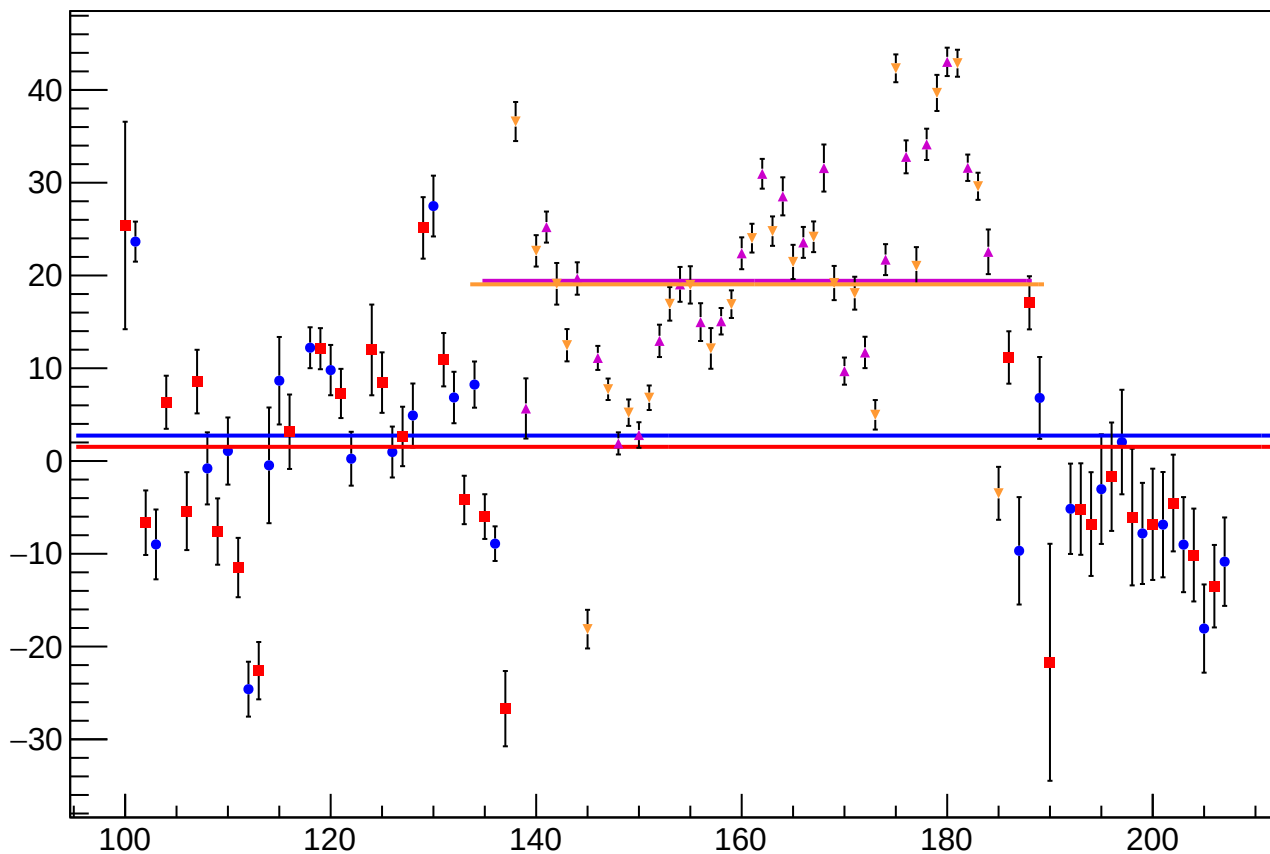
Left In: 116.246 $\pm$ 0.399  $\chi^2$ /NDF: 3637.3/22

+ sign 127.938 $\pm$ 0.316  $\chi^2$ /NDF: 12476.4/50

All: 131.194 $\pm$ 0.221  $\chi^2$ /NDF: 27441.8/103

- sign 134.302 $\pm$ 0.309  $\chi^2$ /NDF: 14757.8/52

# reg\_asym\_usr\_diff\_bpm4eY\_slope vs Slug



Right In:  $2.741 \pm 0.654$   $\chi^2/\text{NDF}$ : 369.8/25

Left Out:  $19.046 \pm 0.336$   $\chi^2/\text{NDF}$ : 1545.8/24

Right Out:  $1.528 \pm 0.646$   $\chi^2/\text{NDF}$ : 334.9/29

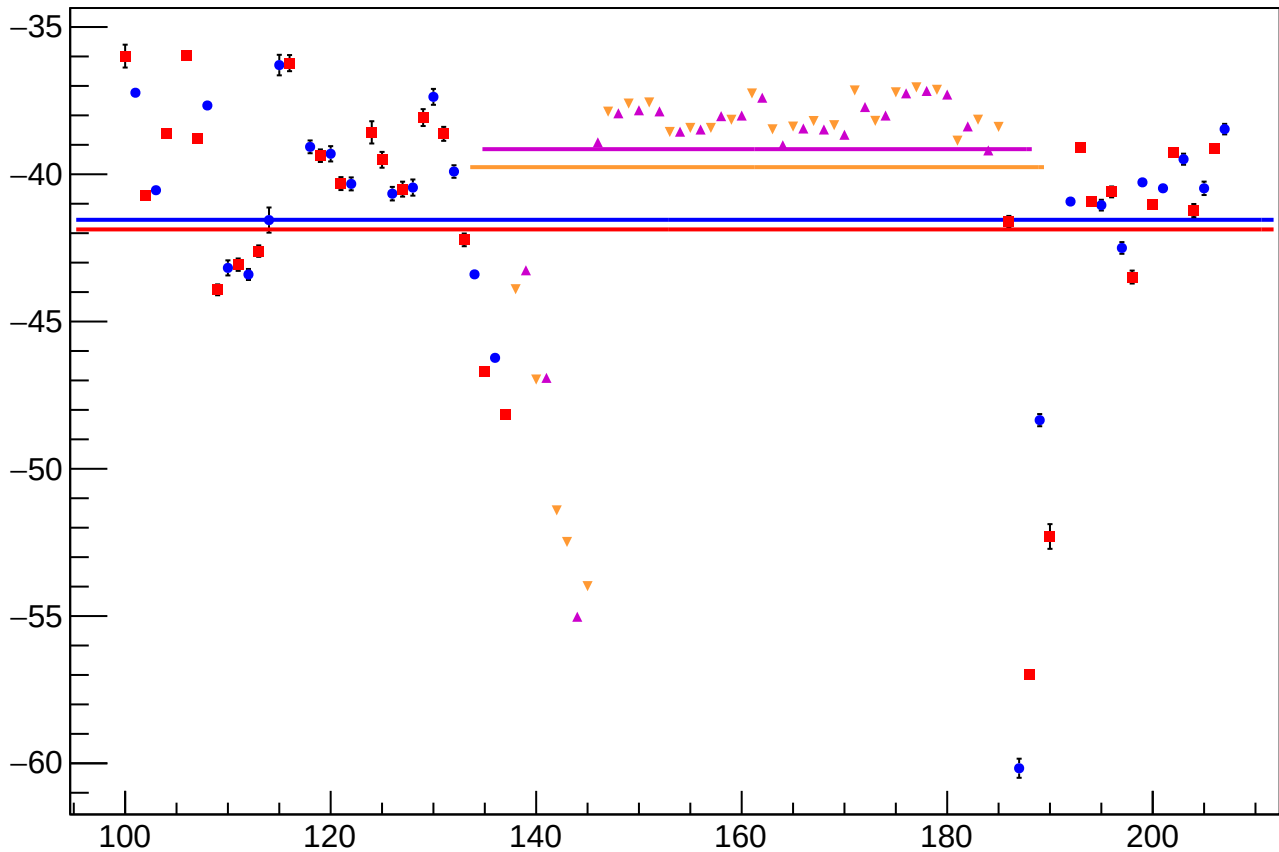
Left In:  $19.425 \pm 0.346$   $\chi^2/\text{NDF}$ : 1077.2/22

+ sign  $15.641 \pm 0.299$   $\chi^2/\text{NDF}$ : 2407.0/50

All:  $15.542 \pm 0.213$   $\chi^2/\text{NDF}$ : 4416.1/103

- sign  $15.439 \pm 0.305$   $\chi^2/\text{NDF}$ : 2009.0/52

# reg\_asym\_usr\_diff\_bpm12X\_slope vs Slug



Right In:  $-41.546 \pm 0.032$   $\chi^2/\text{NDF}$ : 12890.0/25

Left Out:  $-39.758 \pm 0.015$   $\chi^2/\text{NDF}$ : 81865.0/24

Right Out:  $-41.873 \pm 0.032$   $\chi^2/\text{NDF}$ : 19732.4/29

Left In:  $-39.147 \pm 0.016$   $\chi^2/\text{NDF}$ : 46907.5/22

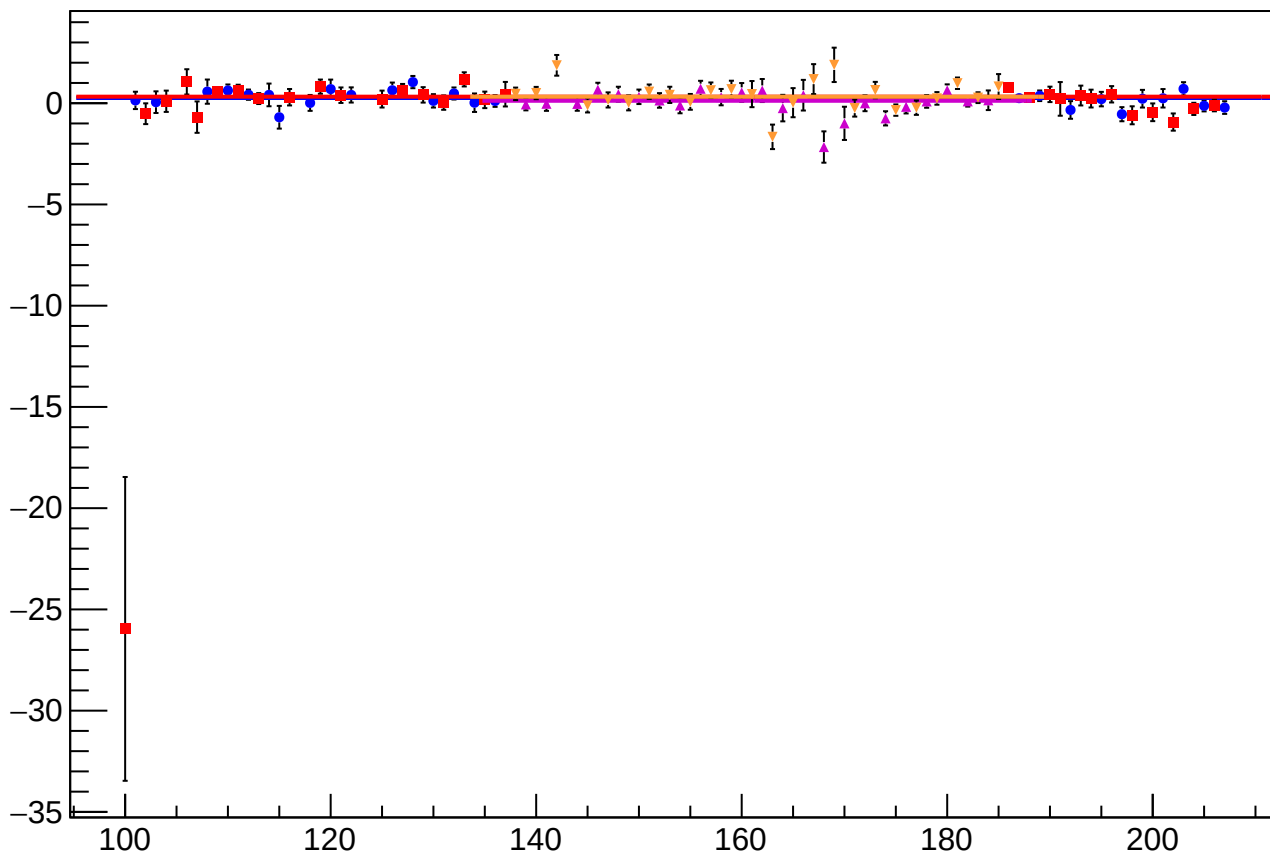
+ sign  $-40.096 \pm 0.014$   $\chi^2/\text{NDF}$ : 97288.1/50

All:  $-39.886 \pm 0.010$   $\chi^2/\text{NDF}$ : 170255.0/103

- sign  $-39.672 \pm 0.014$   $\chi^2/\text{NDF}$ : 72505.8/52



# reg\_asym\_dsl\_diff\_bpm1X\_slope vs Slug



Right In:  $0.258 \pm 0.068$   $\chi^2/\text{NDF}$ : 29.2/25

Left Out:  $0.321 \pm 0.078$   $\chi^2/\text{NDF}$ : 46.9/23

Right Out:  $0.323 \pm 0.060$   $\chi^2/\text{NDF}$ : 60.2/29

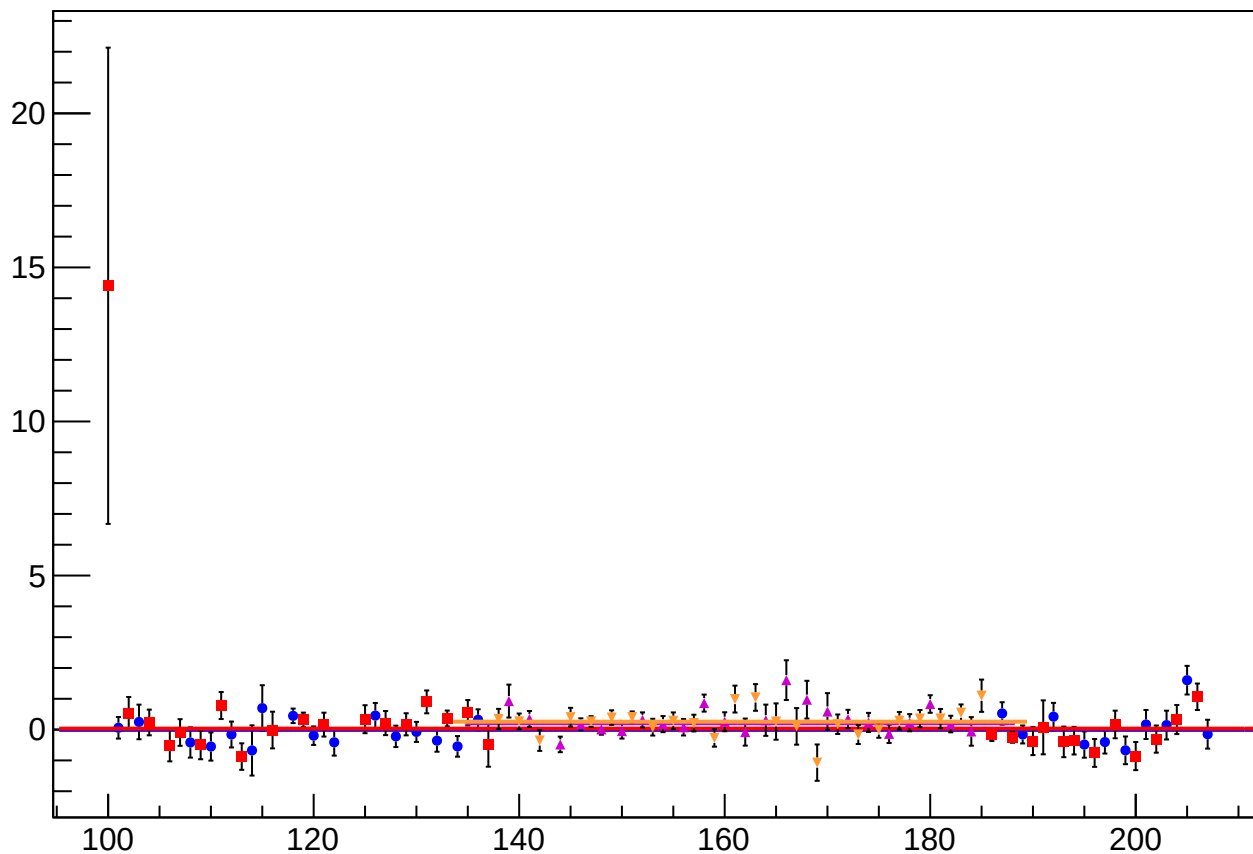
Left In:  $0.120 \pm 0.079$   $\chi^2/\text{NDF}$ : 30.0/22

+ sign  $0.285 \pm 0.051$   $\chi^2/\text{NDF}$ : 76.5/49

All:  $0.266 \pm 0.035$   $\chi^2/\text{NDF}$ : 171.1/102

- sign  $0.249 \pm 0.048$   $\chi^2/\text{NDF}$ : 94.3/52

# reg\_asym\_dsl\_diff\_bpm4aY\_slope vs Slug



Right In:  $-0.008 \pm 0.076$   $\chi^2/\text{NDF}$ : 35.4/25

Left Out:  $0.257 \pm 0.059$   $\chi^2/\text{NDF}$ : 26.5/23

Right Out:  $0.031 \pm 0.069$   $\chi^2/\text{NDF}$ : 45.1/29

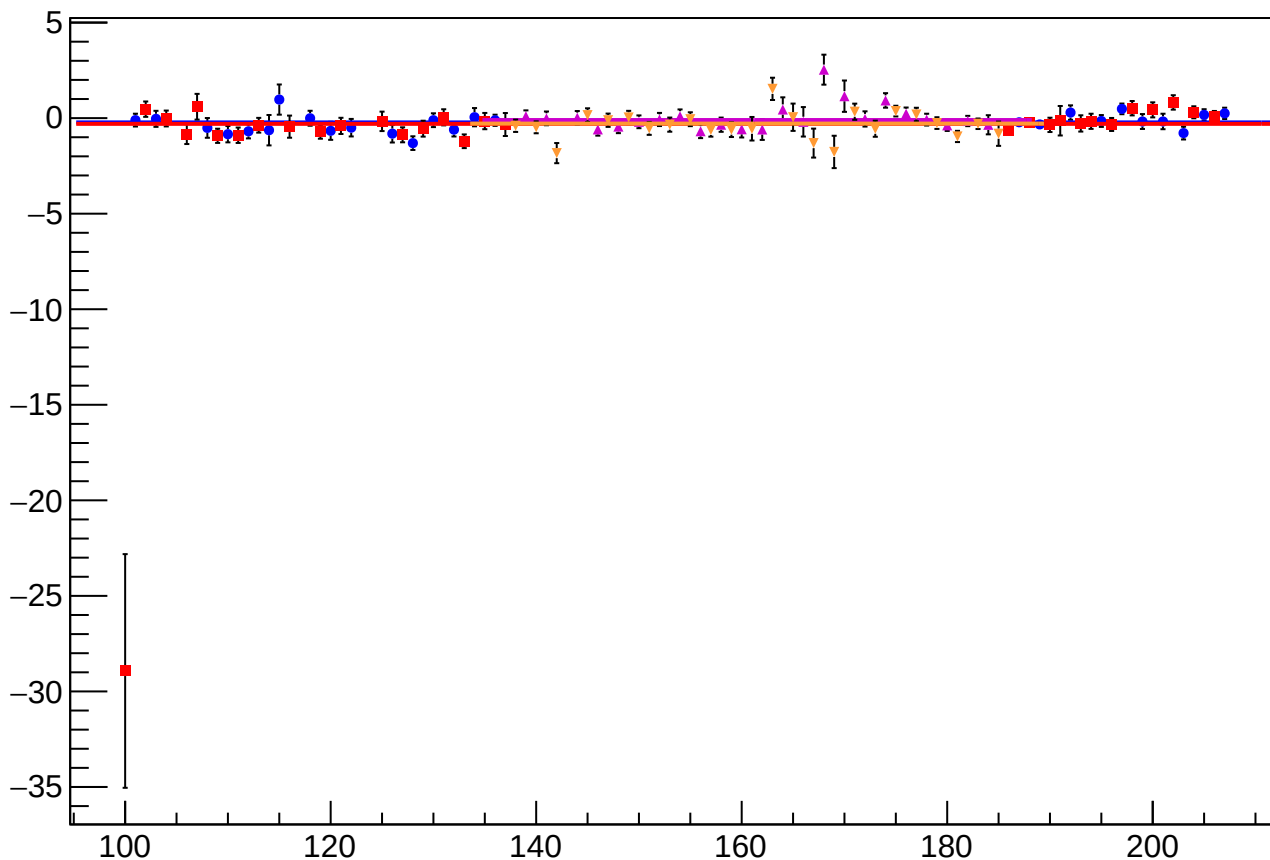
Left In:  $0.207 \pm 0.060$   $\chi^2/\text{NDF}$ : 31.9/22

+ sign  $0.157 \pm 0.047$   $\chi^2/\text{NDF}$ : 69.4/49

All:  $0.144 \pm 0.033$   $\chi^2/\text{NDF}$ : 150.2/102

- sign  $0.131 \pm 0.046$   $\chi^2/\text{NDF}$ : 80.6/52

# reg\_asym\_dsl\_diff\_bpm4eX\_slope vs Slug



Right In:  $-0.224 \pm 0.068$   $\chi^2/\text{NDF}$ : 36.6/25

Left Out:  $-0.286 \pm 0.077$   $\chi^2/\text{NDF}$ : 45.0/23

Right Out:  $-0.299 \pm 0.057$   $\chi^2/\text{NDF}$ : 74.7/29

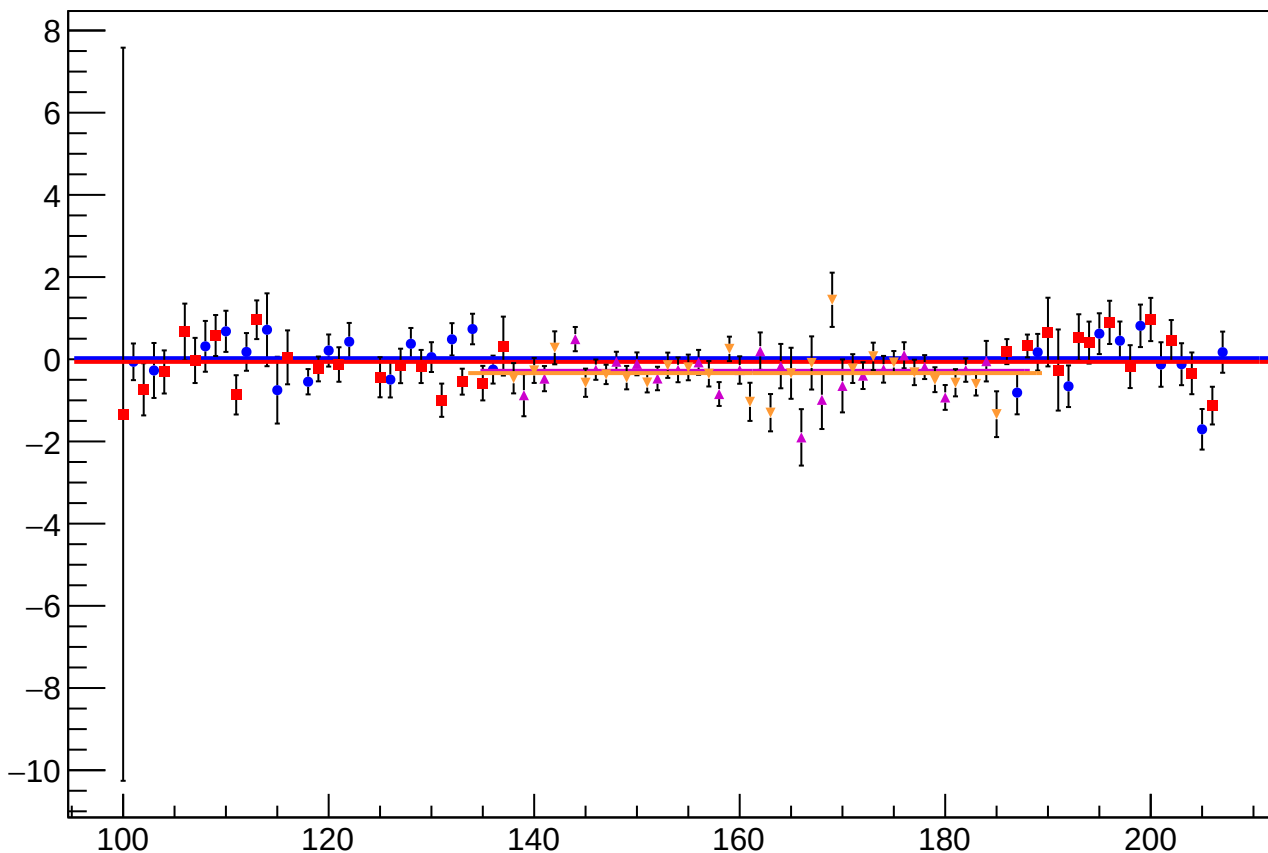
Left In:  $-0.100 \pm 0.078$   $\chi^2/\text{NDF}$ : 33.2/22

+ sign  $-0.251 \pm 0.051$   $\chi^2/\text{NDF}$ : 82.0/49

All:  $-0.240 \pm 0.034$   $\chi^2/\text{NDF}$ : 194.3/102

- sign  $-0.231 \pm 0.046$   $\chi^2/\text{NDF}$ : 112.2/52

# reg\_asym\_dsl\_diff\_bpm4eY\_slope vs Slug



Right In:  $0.026 \pm 0.089$   $\chi^2/\text{NDF}$ : 37.8/25

Left Out:  $-0.337 \pm 0.068$   $\chi^2/\text{NDF}$ : 30.1/23

Right Out:  $-0.063 \pm 0.085$   $\chi^2/\text{NDF}$ : 41.5/29

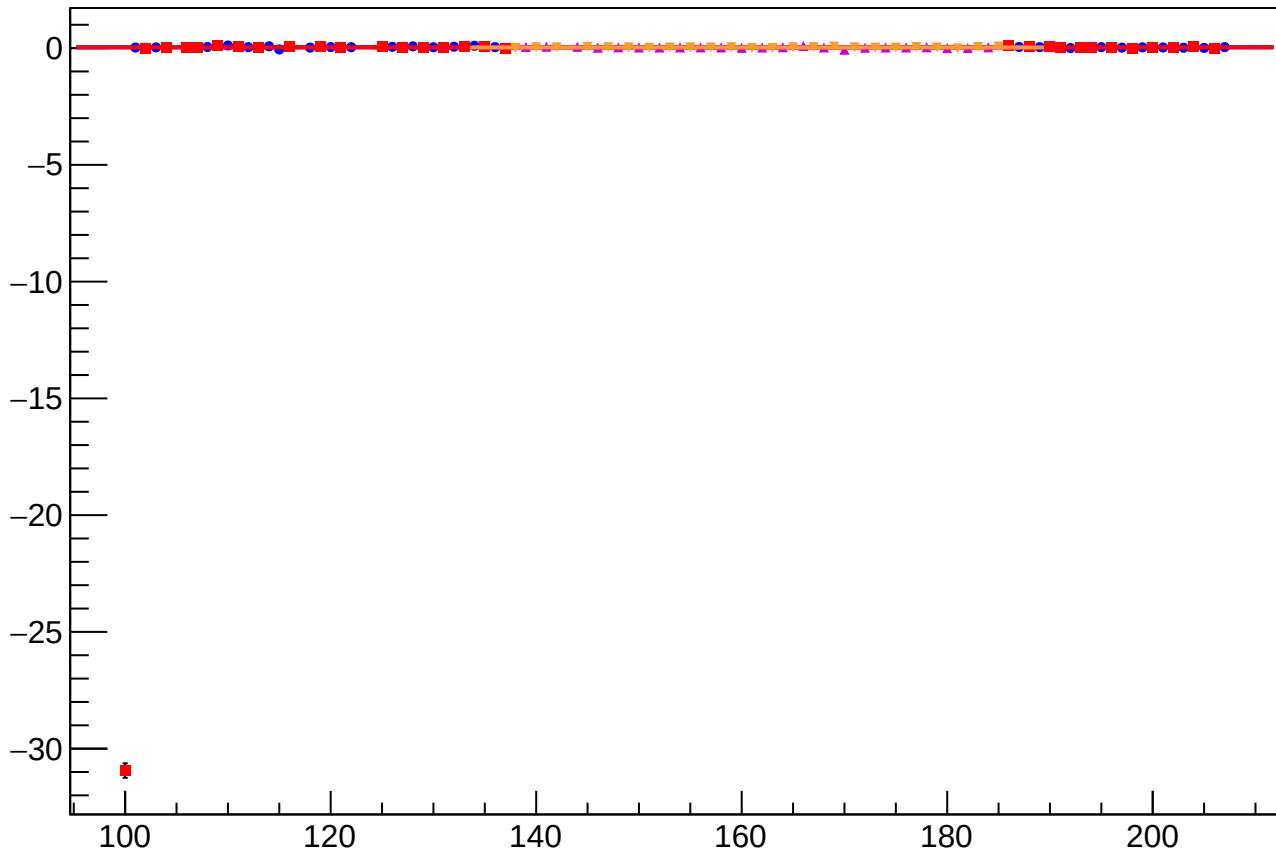
Left In:  $-0.282 \pm 0.069$   $\chi^2/\text{NDF}$ : 29.0/22

+ sign  $-0.203 \pm 0.054$   $\chi^2/\text{NDF}$ : 78.4/49

All:  $-0.199 \pm 0.038$   $\chi^2/\text{NDF}$ : 152.9/102

- sign  $-0.195 \pm 0.053$   $\chi^2/\text{NDF}$ : 74.6/52

# reg\_asym\_dsl\_diff\_bpm12X\_slope vs Slug



Right In: 0.037 $\pm$ 0.004  $\chi^2$ /NDF: 31.6/25

Left Out: 0.028 $\pm$ 0.003  $\chi^2$ /NDF: 27.6/23

Right Out: 0.031 $\pm$ 0.004  $\chi^2$ /NDF: 10054.5/29

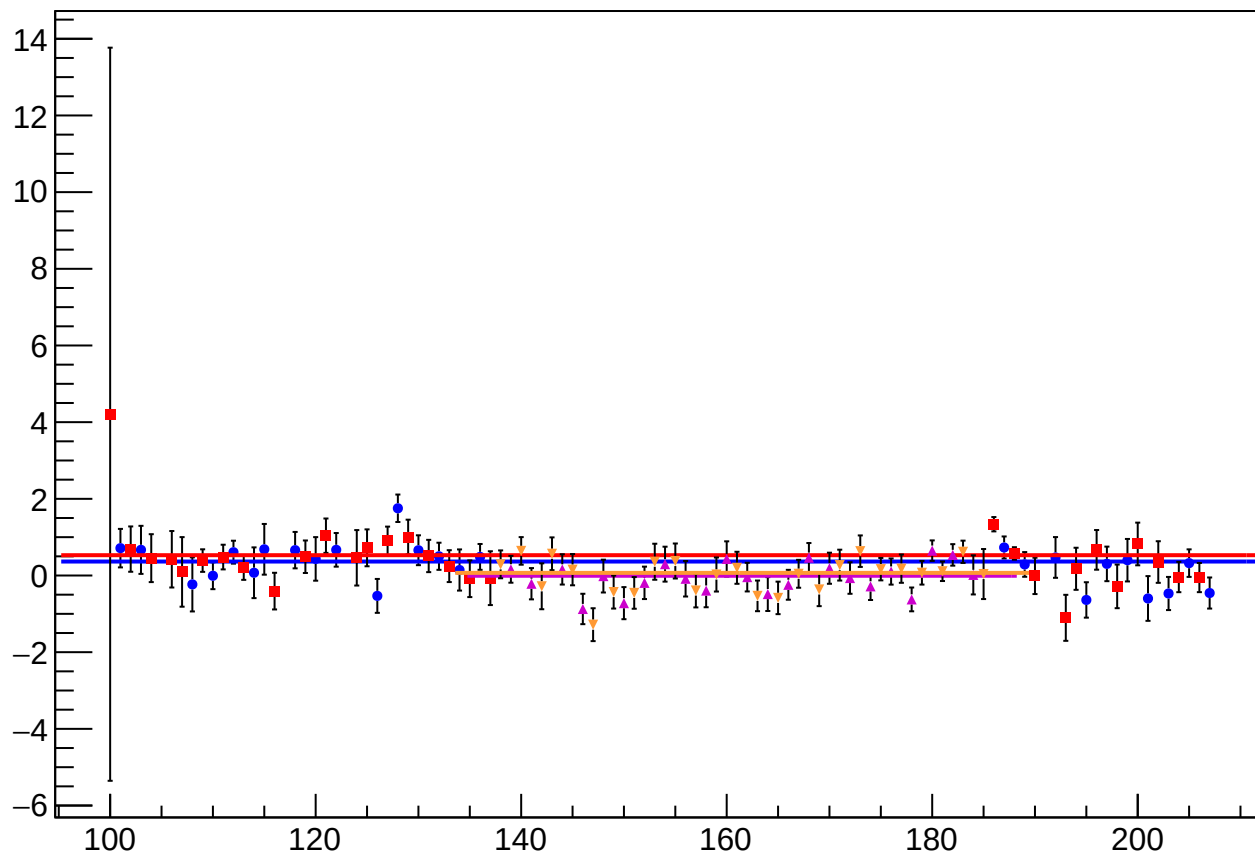
Left In: 0.029 $\pm$ 0.003  $\chi^2$ /NDF: 38.9/22

+ sign 0.031 $\pm$ 0.002  $\chi^2$ /NDF: 62.1/49

All: 0.031 $\pm$ 0.002  $\chi^2$ /NDF: 10155.7/102

- sign 0.030 $\pm$ 0.002  $\chi^2$ /NDF: 10093.5/52

# reg\_asym\_dsr\_diff\_bpm1X\_slope vs Slug



Right In:  $0.364 \pm 0.083$   $\chi^2/\text{NDF}$ : 41.7/25

Left Out:  $0.069 \pm 0.077$   $\chi^2/\text{NDF}$ : 31.1/24

Right Out:  $0.530 \pm 0.072$   $\chi^2/\text{NDF}$ : 46.8/29

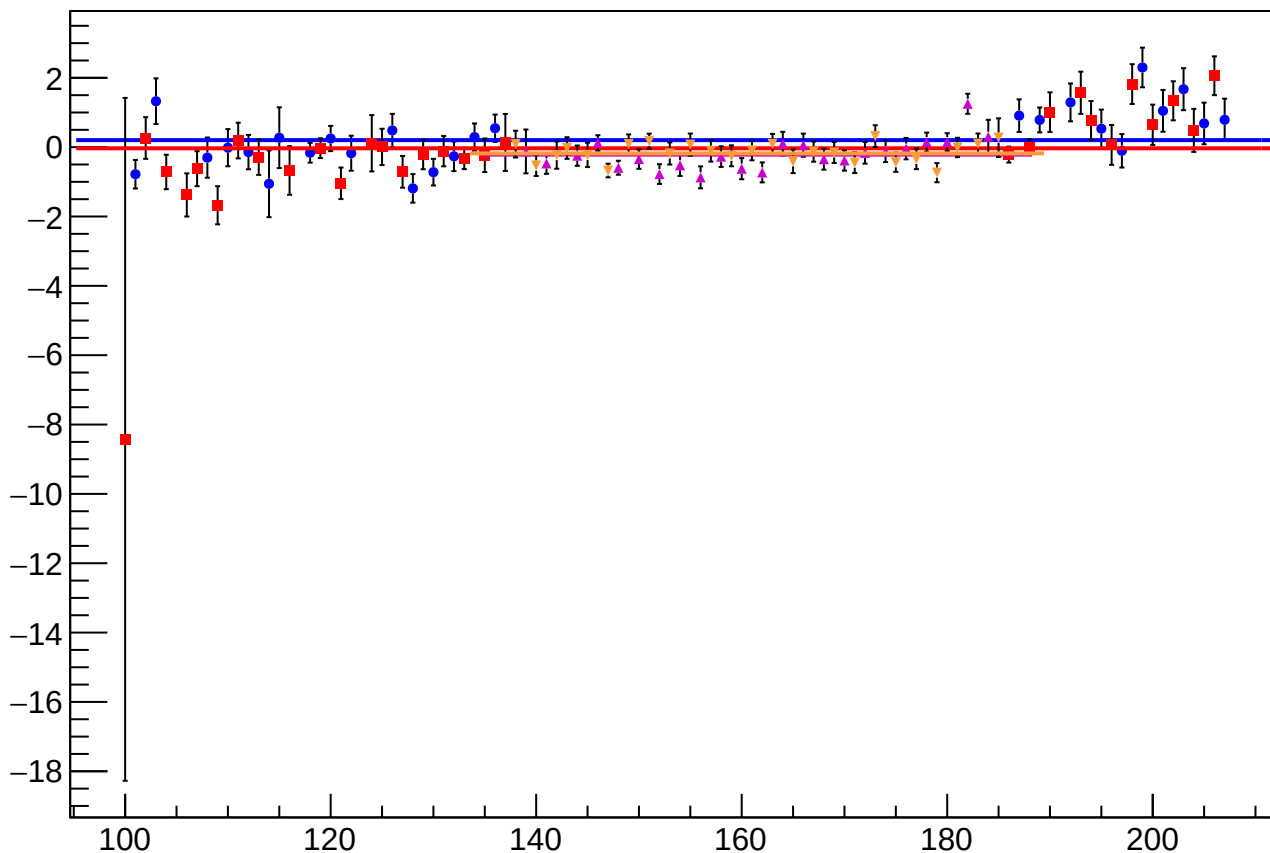
Left In:  $-0.006 \pm 0.079$   $\chi^2/\text{NDF}$ : 28.5/22

+ sign  $0.206 \pm 0.057$   $\chi^2/\text{NDF}$ : 79.7/50

All:  $0.250 \pm 0.039$   $\chi^2/\text{NDF}$ : 181.3/103

- sign  $0.289 \pm 0.053$   $\chi^2/\text{NDF}$ : 100.4/52

# reg\_asym\_dsr\_diff\_bpm4aY\_slope vs Slug



Right In:  $0.203 \pm 0.092$   $\chi^2/\text{NDF}$ : 66.0/25

Left Out:  $-0.180 \pm 0.059$   $\chi^2/\text{NDF}$ : 24.7/24

Right Out:  $-0.033 \pm 0.083$   $\chi^2/\text{NDF}$ : 73.0/29

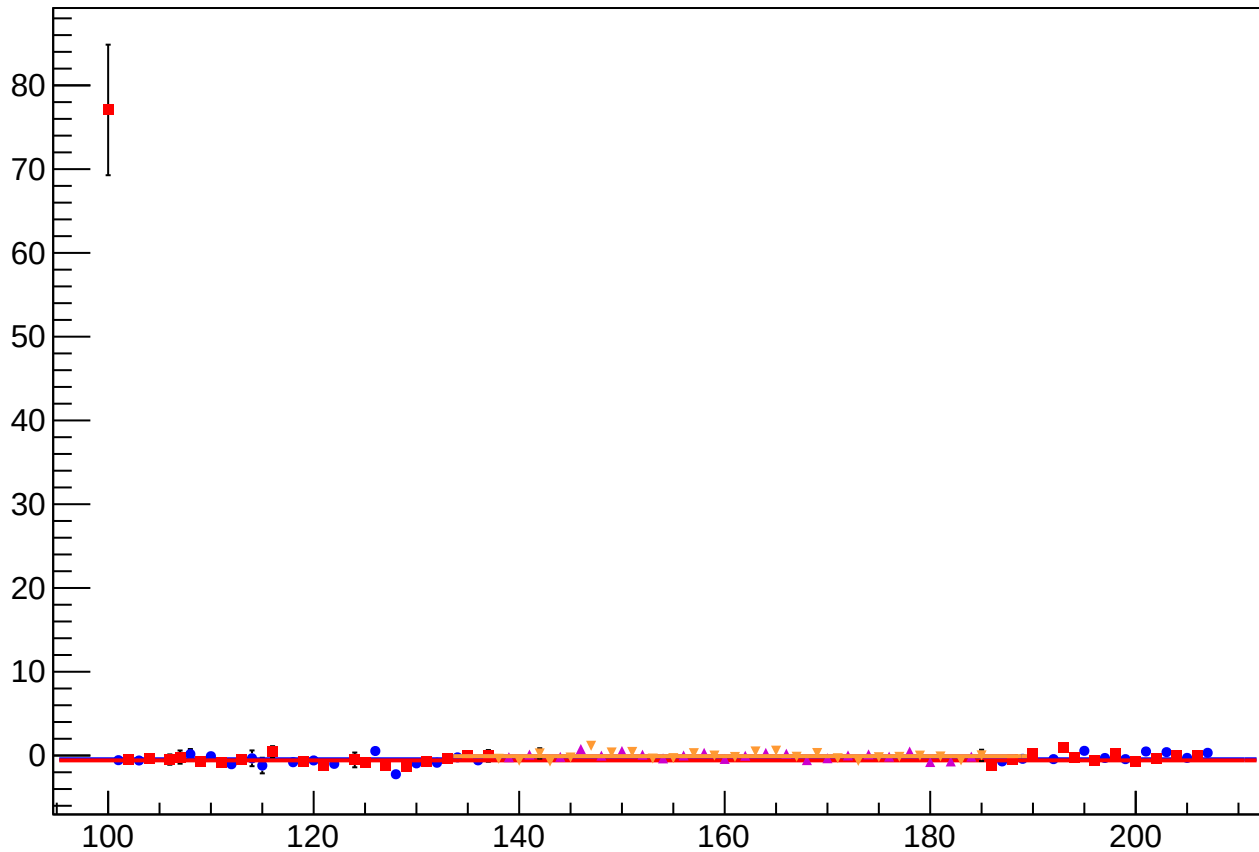
Left In:  $-0.216 \pm 0.062$   $\chi^2/\text{NDF}$ : 53.6/22

+ sign  $-0.068 \pm 0.050$   $\chi^2/\text{NDF}$ : 102.9/50

All:  $-0.110 \pm 0.035$   $\chi^2/\text{NDF}$ : 234.1/103

- sign  $-0.151 \pm 0.049$   $\chi^2/\text{NDF}$ : 129.8/52

# reg\_asym\_dsr\_diff\_bpm4eX\_slope vs Slug



Right In:  $-0.448 \pm 0.083$   $\chi^2/\text{NDF}$ : 48.5/25

Left Out:  $-0.077 \pm 0.077$   $\chi^2/\text{NDF}$ : 30.0/24

Right Out:  $-0.580 \pm 0.068$   $\chi^2/\text{NDF}$ : 145.3/29

Left In:  $-0.075 \pm 0.079$   $\chi^2/\text{NDF}$ : 28.3/22

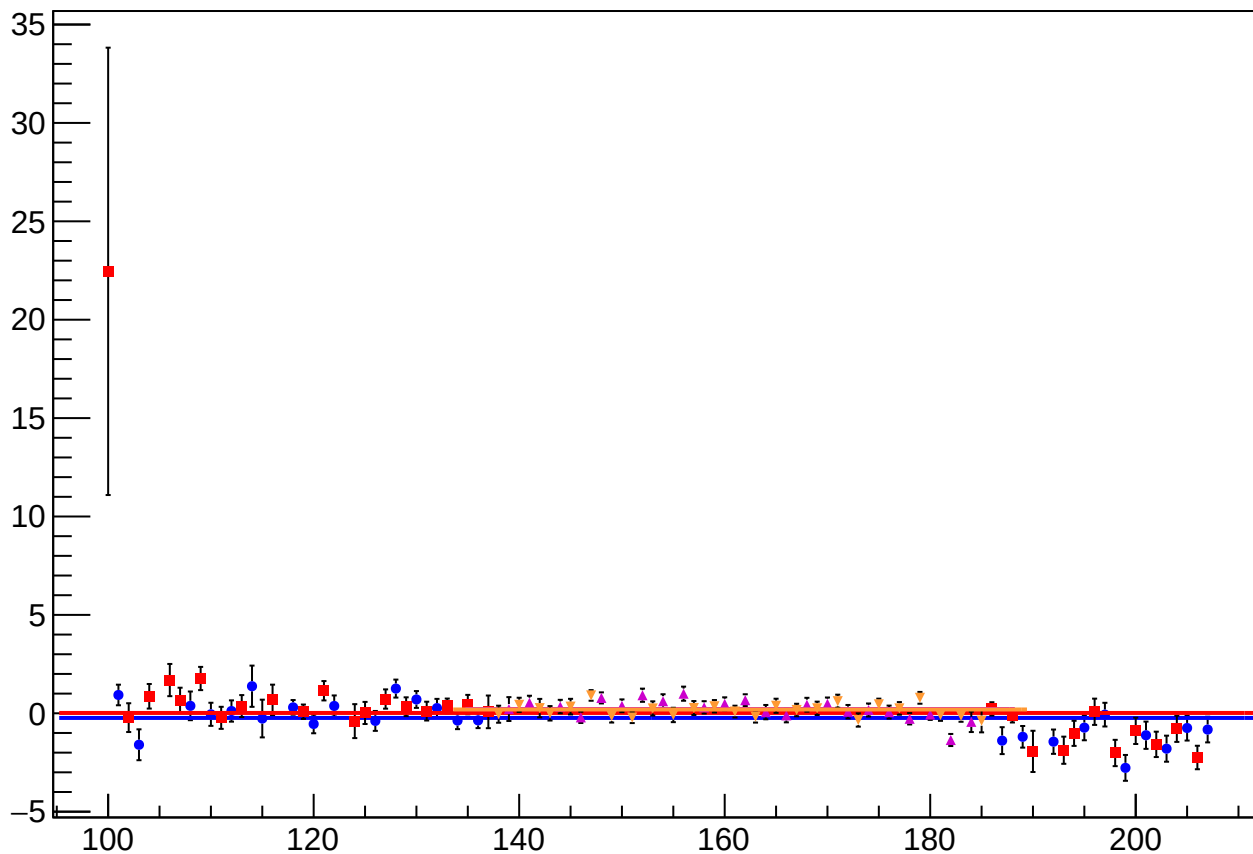
+ sign  $-0.247 \pm 0.056$   $\chi^2/\text{NDF}$ : 89.2/50

All:  $-0.310 \pm 0.038$   $\chi^2/\text{NDF}$ : 288.6/103

- sign  $-0.363 \pm 0.052$   $\chi^2/\text{NDF}$ : 197.1/52



# reg\_asym\_dsr\_diff\_bpm4eY\_slope vs Slug



Right In:  $-0.236 \pm 0.108$   $\chi^2/\text{NDF}$ : 66.2/25

Left Out:  $0.193 \pm 0.067$   $\chi^2/\text{NDF}$ : 25.9/24

Right Out:  $0.017 \pm 0.101$   $\chi^2/\text{NDF}$ : 78.2/29

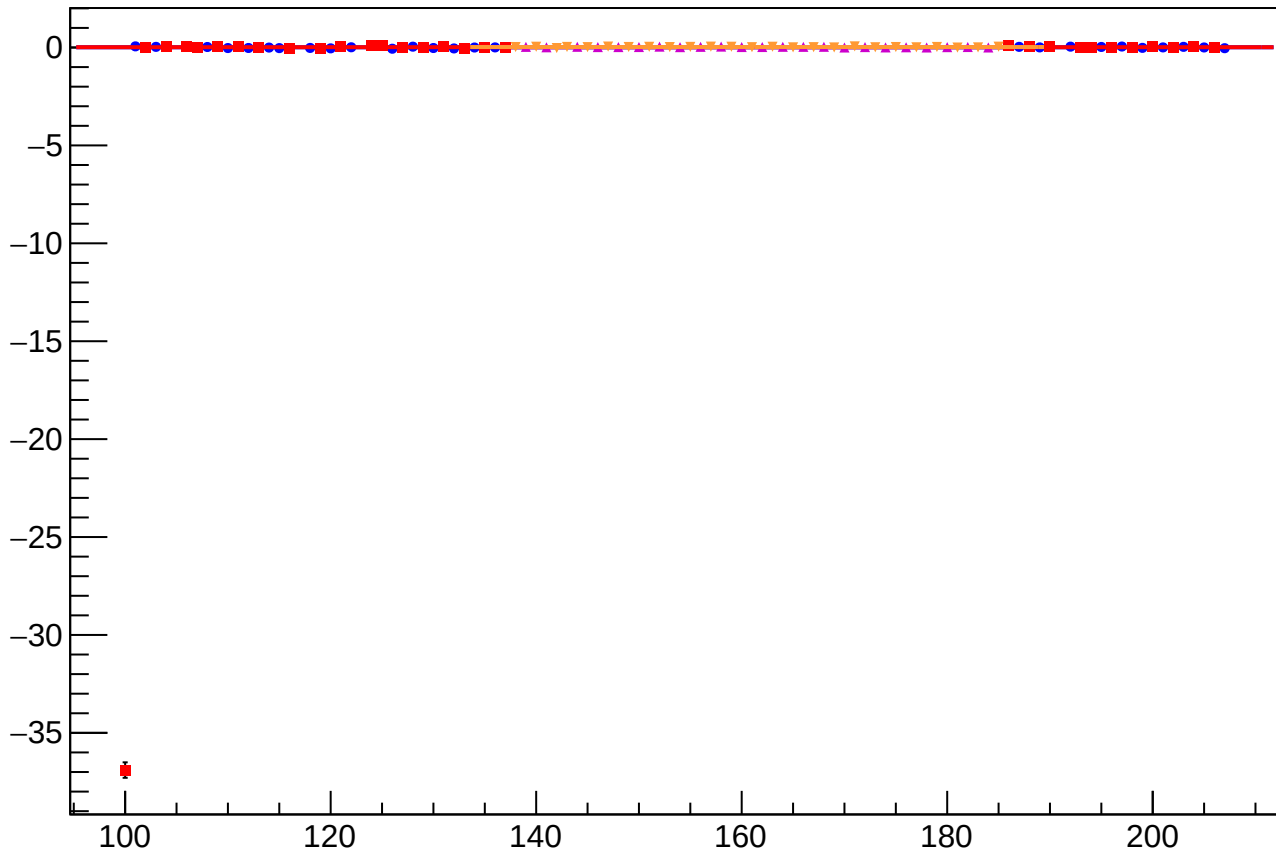
Left In:  $0.215 \pm 0.069$   $\chi^2/\text{NDF}$ : 55.1/22

+ sign  $0.074 \pm 0.057$   $\chi^2/\text{NDF}$ : 103.6/50

All:  $0.113 \pm 0.040$   $\chi^2/\text{NDF}$ : 240.3/103

- sign  $0.152 \pm 0.057$   $\chi^2/\text{NDF}$ : 135.9/52

# reg\_asym\_dsr\_diff\_bpm12X\_slope vs Slug



Right In: 0.011 $\pm$ 0.005  $\chi^2$ /NDF: 32.4/25

Left Out: 0.024 $\pm$ 0.003  $\chi^2$ /NDF:30.2/24

Right Out: 0.015 $\pm$ 0.005  $\chi^2$ /NDF: 8779.6/29

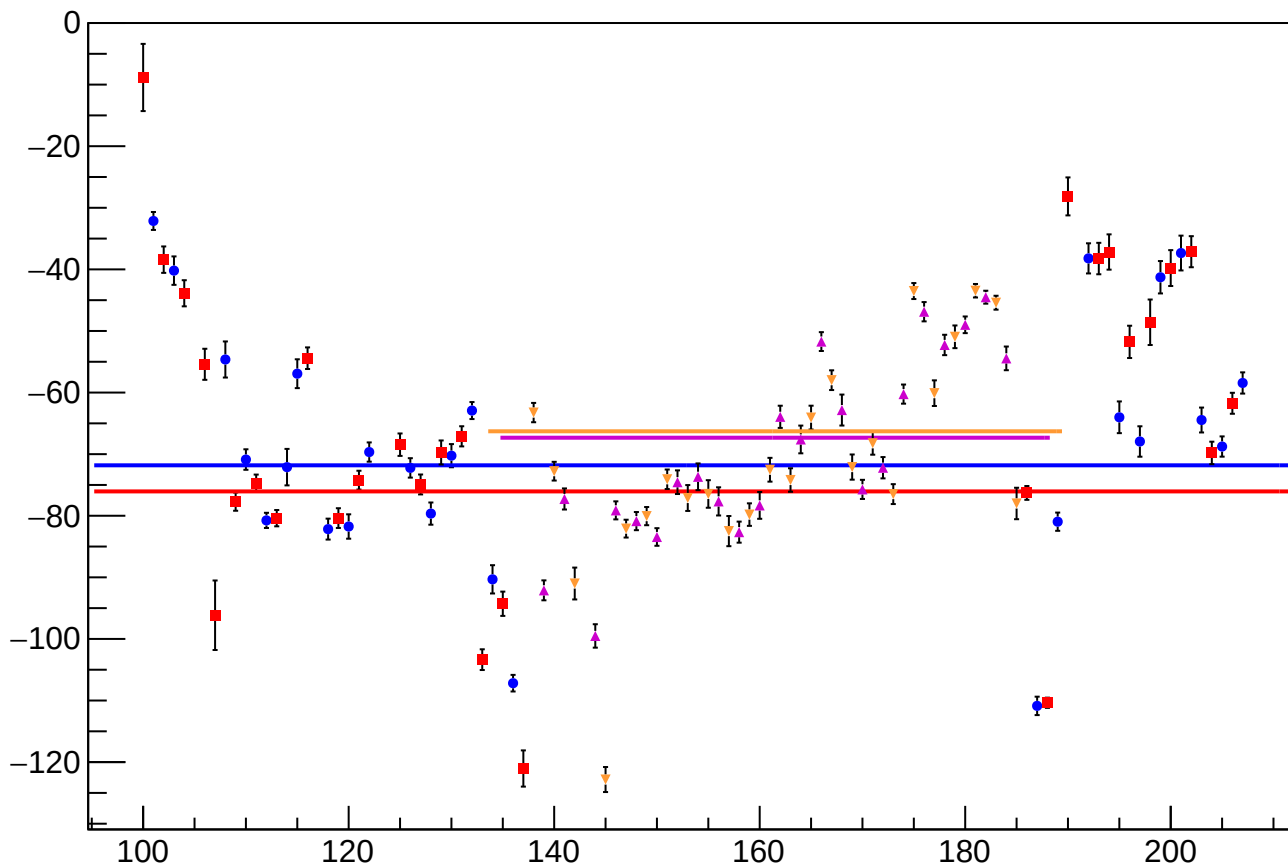
Left In: 0.024 $\pm$ 0.003  $\chi^2$ /NDF:18.0/22

+ sign 0.021 $\pm$ 0.003  $\chi^2$ /NDF: 67.5/50

All: 0.021 $\pm$ 0.002  $\chi^2$ /NDF: 8867.6/103

- sign 0.022 $\pm$ 0.003  $\chi^2$ /NDF: 8800.0/52

# reg\_asym\_us\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-71.812 \pm 0.354$   $\chi^2/\text{NDF}: 3218.2/25$

Left Out:  $-66.289 \pm 0.344$   $\chi^2/\text{NDF}: 2550.4/23$

Right Out:  $-76.049 \pm 0.330$   $\chi^2/\text{NDF}: 4564.2/28$

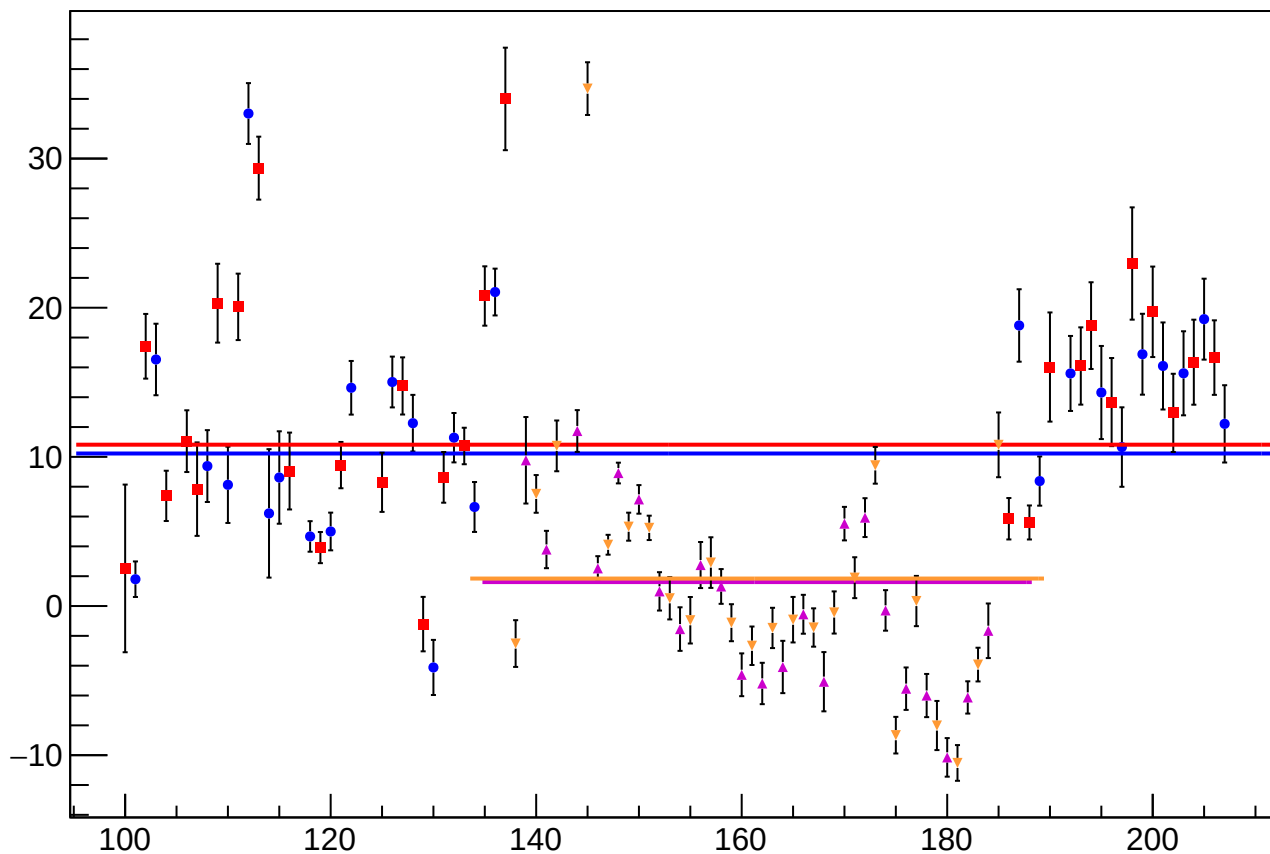
Left In:  $-67.331 \pm 0.345$   $\chi^2/\text{NDF}: 2102.6/22$

+ sign  $-68.967 \pm 0.247$   $\chi^2/\text{NDF}: 5893.7/49$

All:  $-70.473 \pm 0.172$   $\chi^2/\text{NDF}: 12965.6/101$

- sign  $-71.882 \pm 0.239$   $\chi^2/\text{NDF}: 6999.8/51$

# reg\_asym\_us\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $10.226 \pm 0.374$   $\chi^2/\text{NDF}: 403.7/25$

Left Out:  $1.842 \pm 0.254$   $\chi^2/\text{NDF}: 781.5/23$

Right Out:  $10.817 \pm 0.365$   $\chi^2/\text{NDF}: 367.5/28$

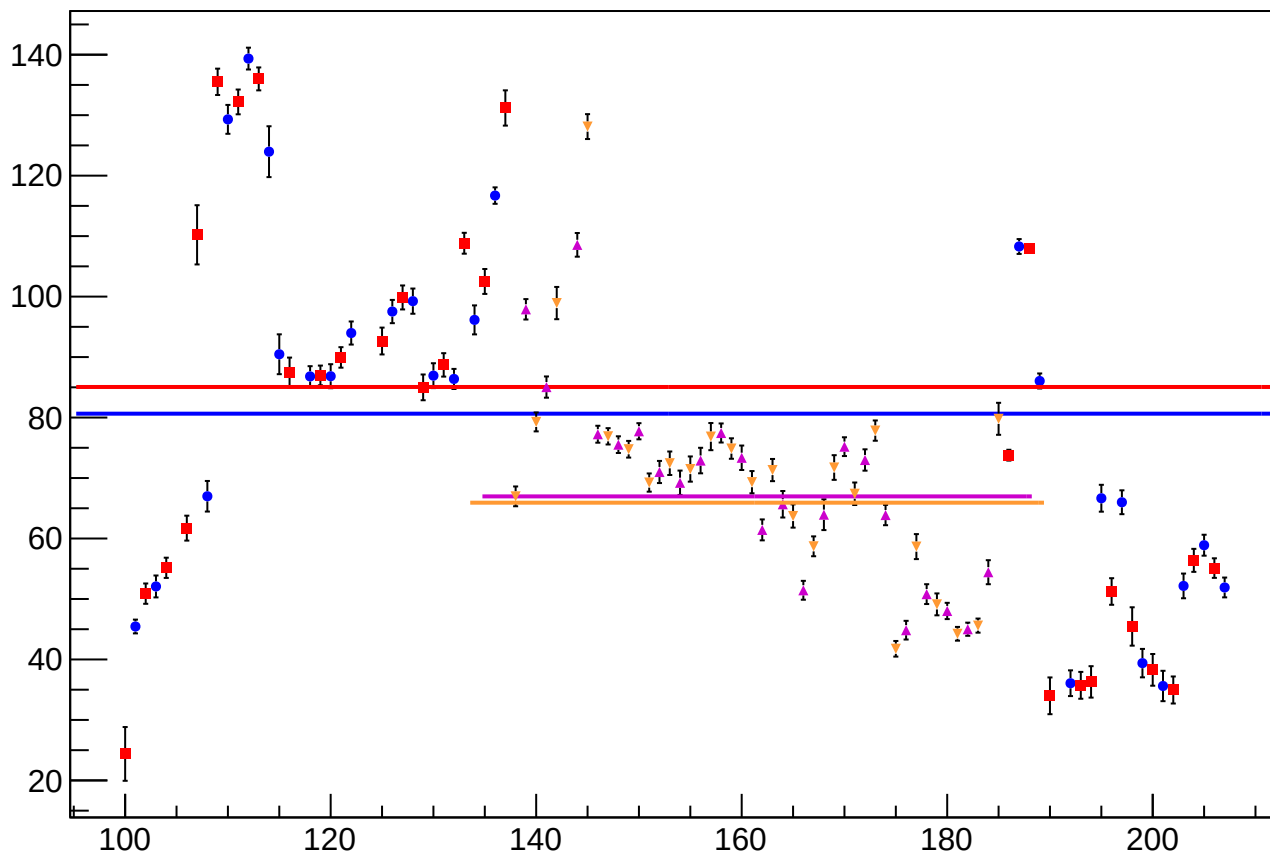
Left In:  $1.605 \pm 0.258$   $\chi^2/\text{NDF}: 496.6/22$

+ sign  $4.492 \pm 0.210$   $\chi^2/\text{NDF}: 1528.3/49$

All:  $4.587 \pm 0.149$   $\chi^2/\text{NDF}: 2817.4/101$

- sign  $4.683 \pm 0.211$   $\chi^2/\text{NDF}: 1288.7/51$

# reg\_asym\_us\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $80.641 \pm 0.357$   $\chi^2/\text{NDF}$ : 6164.0/25

Left Out:  $65.923 \pm 0.341$   $\chi^2/\text{NDF}$ : 2555.6/23

Right Out:  $85.056 \pm 0.323$   $\chi^2/\text{NDF}$ : 7708.6/28

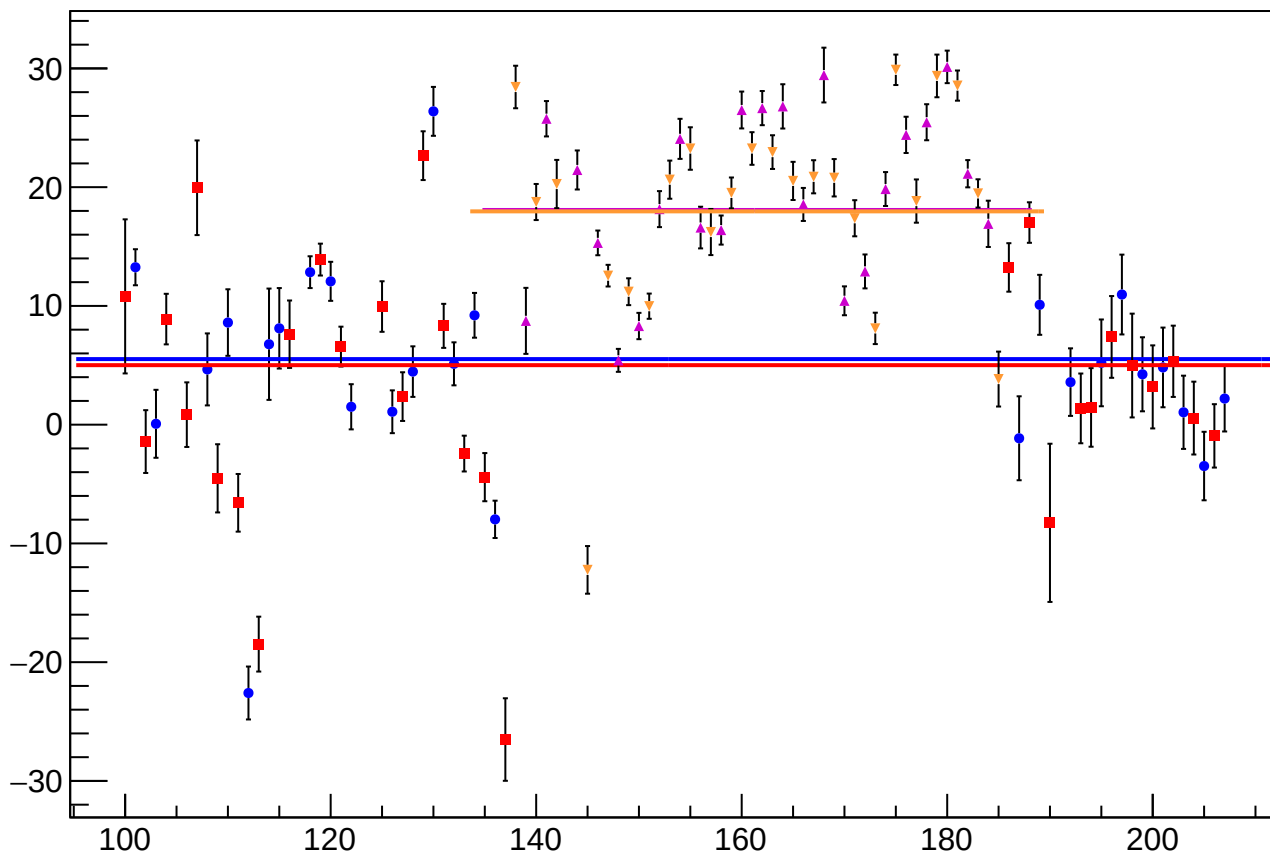
Left In:  $66.964 \pm 0.341$   $\chi^2/\text{NDF}$ : 2221.3/22

+ sign  $72.926 \pm 0.247$   $\chi^2/\text{NDF}$ : 9608.6/49

All:  $74.798 \pm 0.170$   $\chi^2/\text{NDF}$ : 21129.4/101

- sign  $76.495 \pm 0.235$   $\chi^2/\text{NDF}$ : 11410.9/51

# reg\_asym\_us\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $5.522 \pm 0.440$   $\chi^2/\text{NDF}$ : 451.0/25

Left Out:  $17.963 \pm 0.292$   $\chi^2/\text{NDF}$ : 732.1/23

Right Out:  $5.011 \pm 0.437$   $\chi^2/\text{NDF}$ : 501.8/28

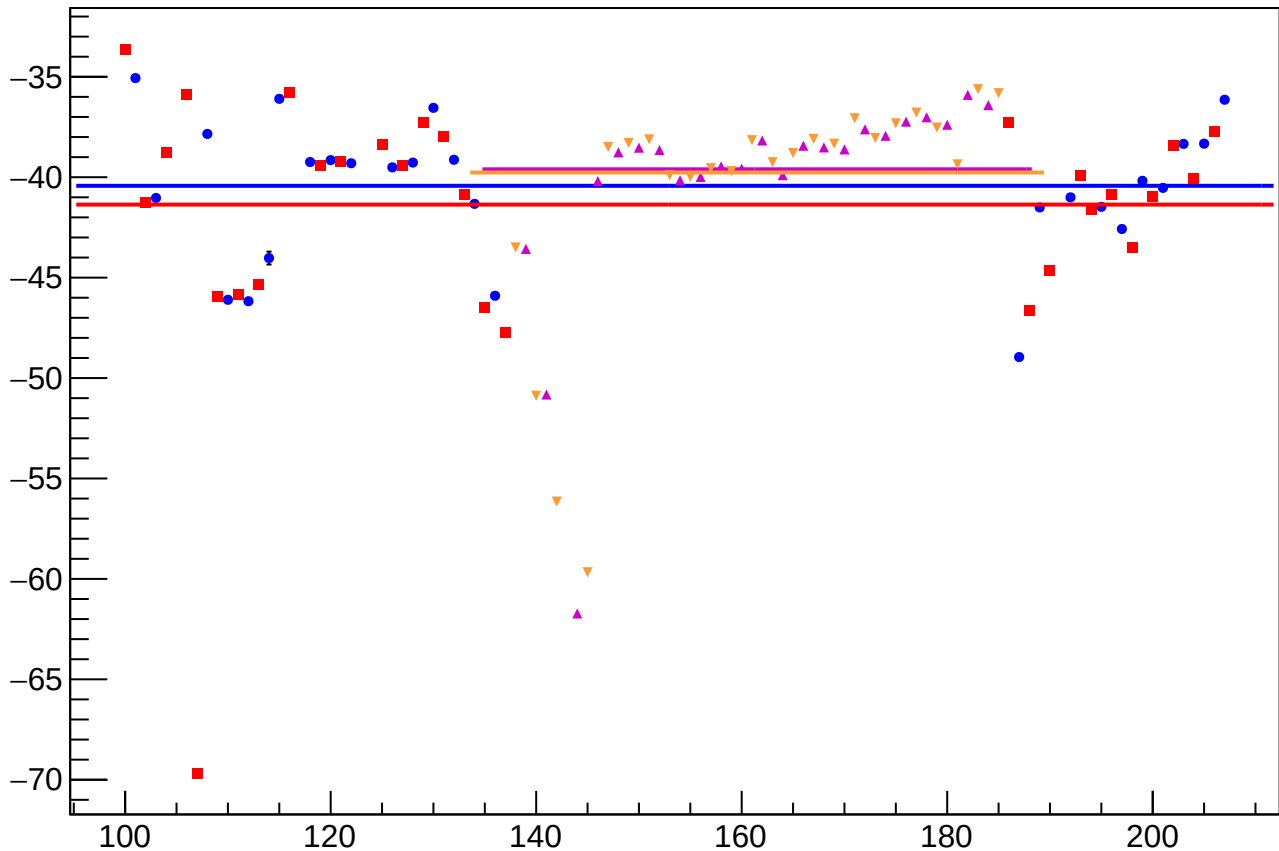
Left In:  $18.079 \pm 0.295$   $\chi^2/\text{NDF}$ : 605.0/22

+ sign  $14.164 \pm 0.243$   $\chi^2/\text{NDF}$ : 1737.6/49

All:  $14.077 \pm 0.172$   $\chi^2/\text{NDF}$ : 3459.5/101

- sign  $13.989 \pm 0.244$   $\chi^2/\text{NDF}$ : 1721.6/51

# reg\_asym\_us\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-40.428 \pm 0.022$   $\chi^2/\text{NDF}: 22856.3/25$

Left Out:  $-39.765 \pm 0.013$   $\chi^2/\text{NDF}: 129895.4/23$

Right Out:  $-41.364 \pm 0.022$   $\chi^2/\text{NDF}: 44618.1/28$

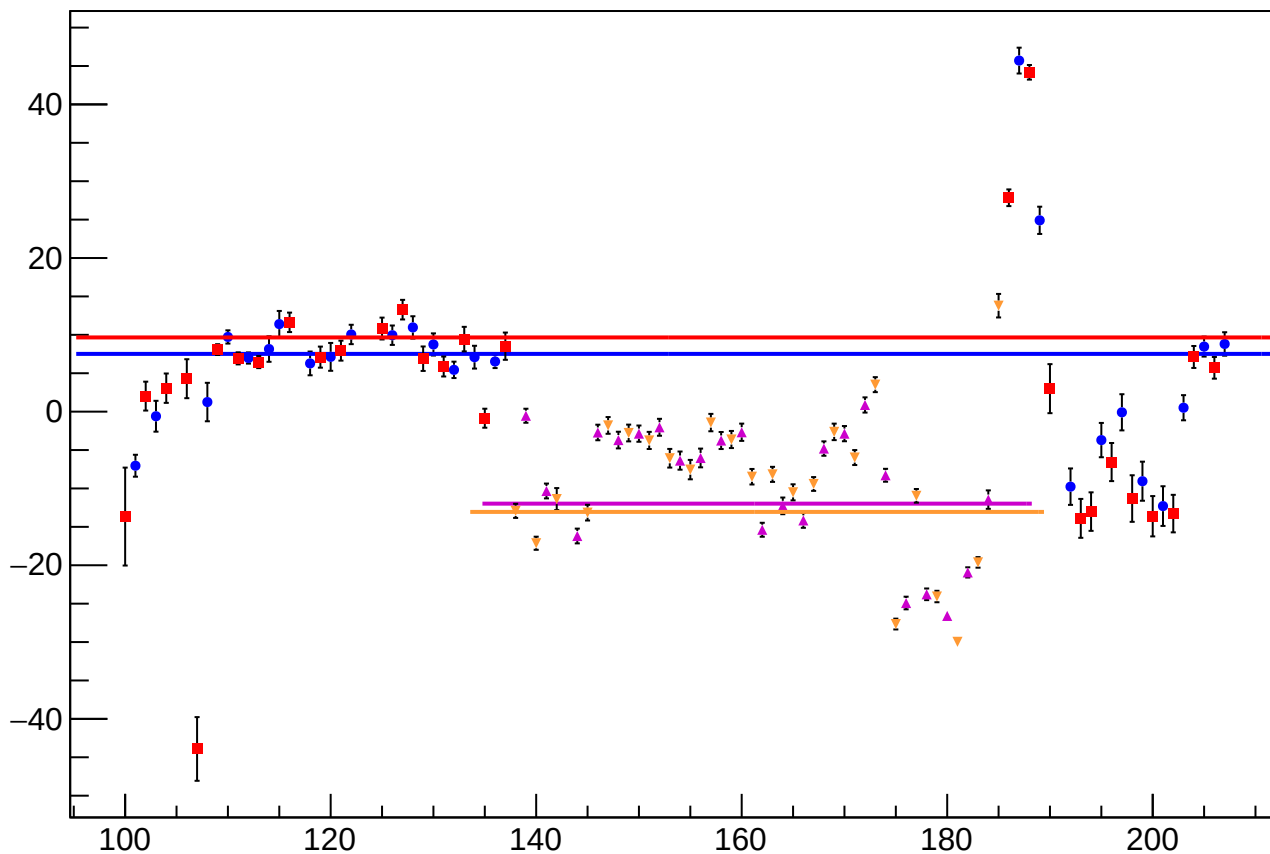
Left In:  $-39.606 \pm 0.013$   $\chi^2/\text{NDF}: 106639.2/22$

+ sign  $-39.947 \pm 0.011$   $\chi^2/\text{NDF}: 153416.7/49$

All:  $-40.019 \pm 0.008$   $\chi^2/\text{NDF}: 309508.7/101$

- sign  $-40.090 \pm 0.011$   $\chi^2/\text{NDF}: 156013.8/51$

# reg\_asym\_us\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $7.518 \pm 0.273$   $\chi^2/\text{NDF}: 980.4/25$

Left Out:  $-13.054 \pm 0.193$   $\chi^2/\text{NDF}: 2868.1/23$

Right Out:  $9.660 \pm 0.257$   $\chi^2/\text{NDF}: 2387.1/28$

Left In:  $-11.978 \pm 0.195$   $\chi^2/\text{NDF}: 2176.6/22$

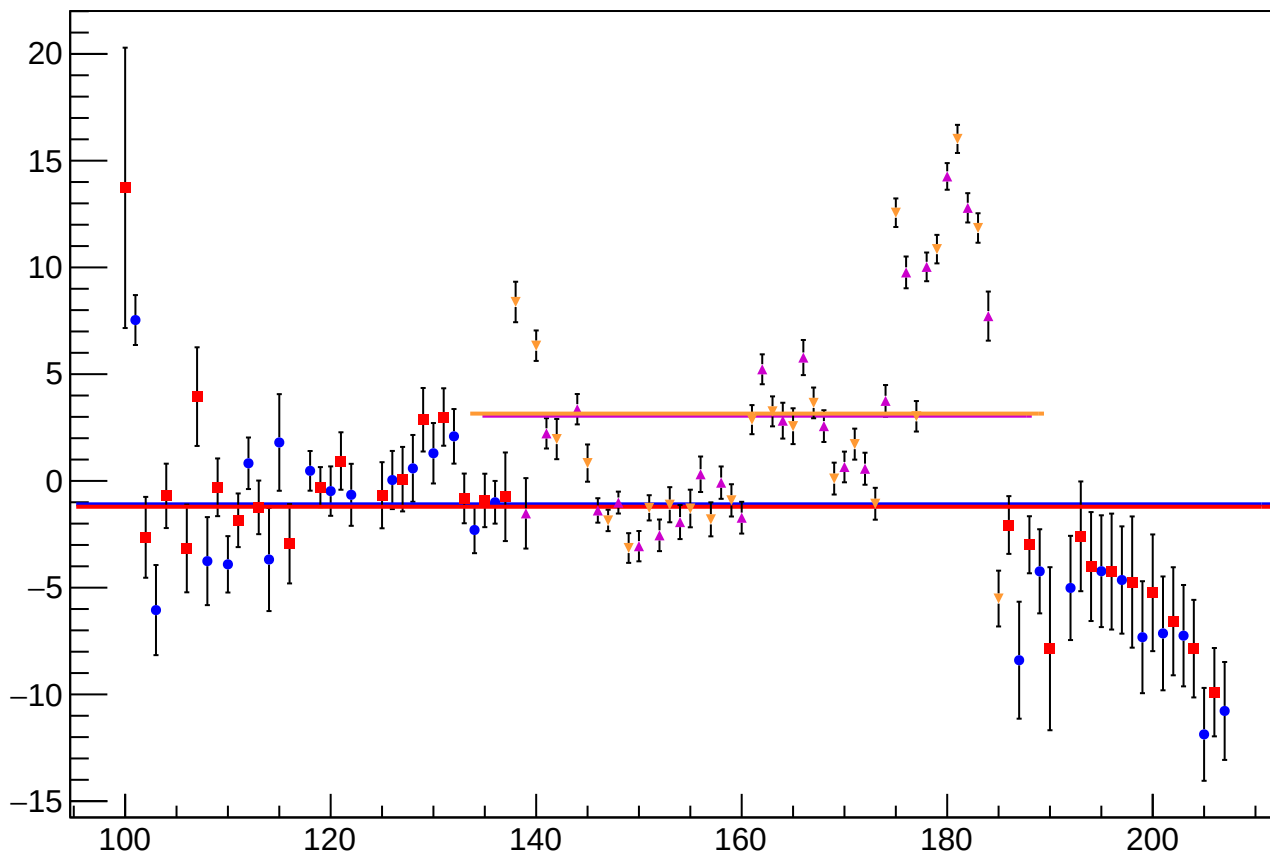
+ sign  $-6.221 \pm 0.158$   $\chi^2/\text{NDF}: 7631.4/49$

All:  $-5.112 \pm 0.111$   $\chi^2/\text{NDF}: 16793.1/101$

- sign  $-4.031 \pm 0.155$   $\chi^2/\text{NDF}: 9063.8/51$



# reg\_asym\_us\_dd\_diff\_bpm4aY\_slope vs Slug



Right In: -1.097 $\pm$ 0.304  $\chi^2/\text{NDF}$ : 162.4/25

Left Out: 3.153 $\pm$ 0.149  $\chi^2/\text{NDF}$ :1385.1/23

Right Out: -1.210 $\pm$ 0.303  $\chi^2/\text{NDF}$ : 77.2/28

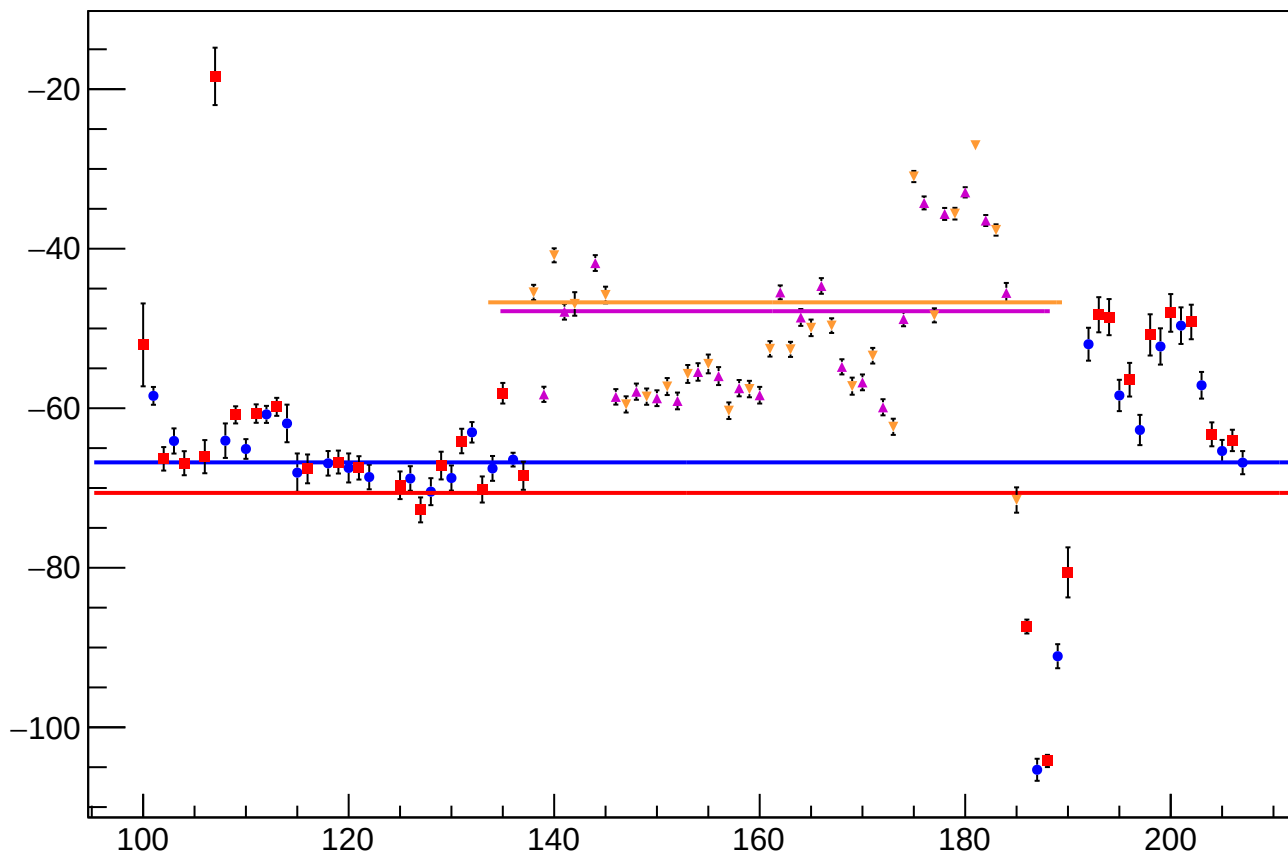
Left In: 3.055 $\pm$ 0.152  $\chi^2/\text{NDF}$ :1145.0/22

+ sign 2.328 $\pm$ 0.134  $\chi^2/\text{NDF}$ : 1705.1/49

All: 2.264 $\pm$ 0.095  $\chi^2/\text{NDF}$ : 3085.8/101

- sign 2.199 $\pm$ 0.136  $\chi^2/\text{NDF}$ : 1380.3/51

# reg\_asym\_us\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-66.787 \pm 0.295$   $\chi^2/\text{NDF}$ : 1360.6/25

Left Out:  $-46.724 \pm 0.192$   $\chi^2/\text{NDF}$ : 3446.1/23

Right Out:  $-70.615 \pm 0.277$   $\chi^2/\text{NDF}$ : 3467.3/28

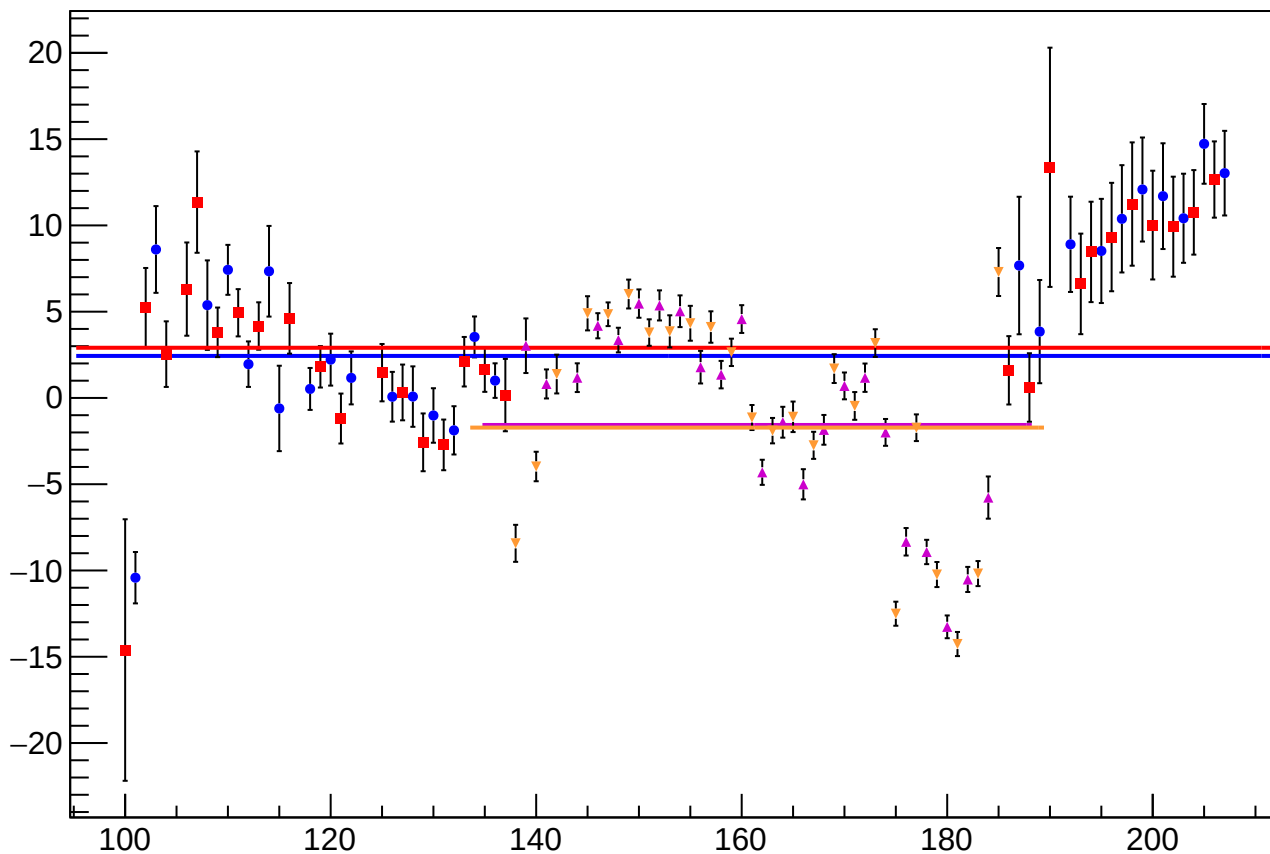
Left In:  $-47.835 \pm 0.194$   $\chi^2/\text{NDF}$ : 2557.6/22

+ sign  $-52.660 \pm 0.161$   $\chi^2/\text{NDF}$ : 8052.8/49

All:  $-53.999 \pm 0.113$   $\chi^2/\text{NDF}$ : 18744.3/101

- sign  $-55.307 \pm 0.159$   $\chi^2/\text{NDF}$ : 10554.4/51

# reg\_asym\_us\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $2.436 \pm 0.347$   $\chi^2/\text{NDF}$ : 217.6/25

Left Out:  $-1.718 \pm 0.168$   $\chi^2/\text{NDF}$ : 1406.1/23

Right Out:  $2.909 \pm 0.351$   $\chi^2/\text{NDF}$ : 120.6/28

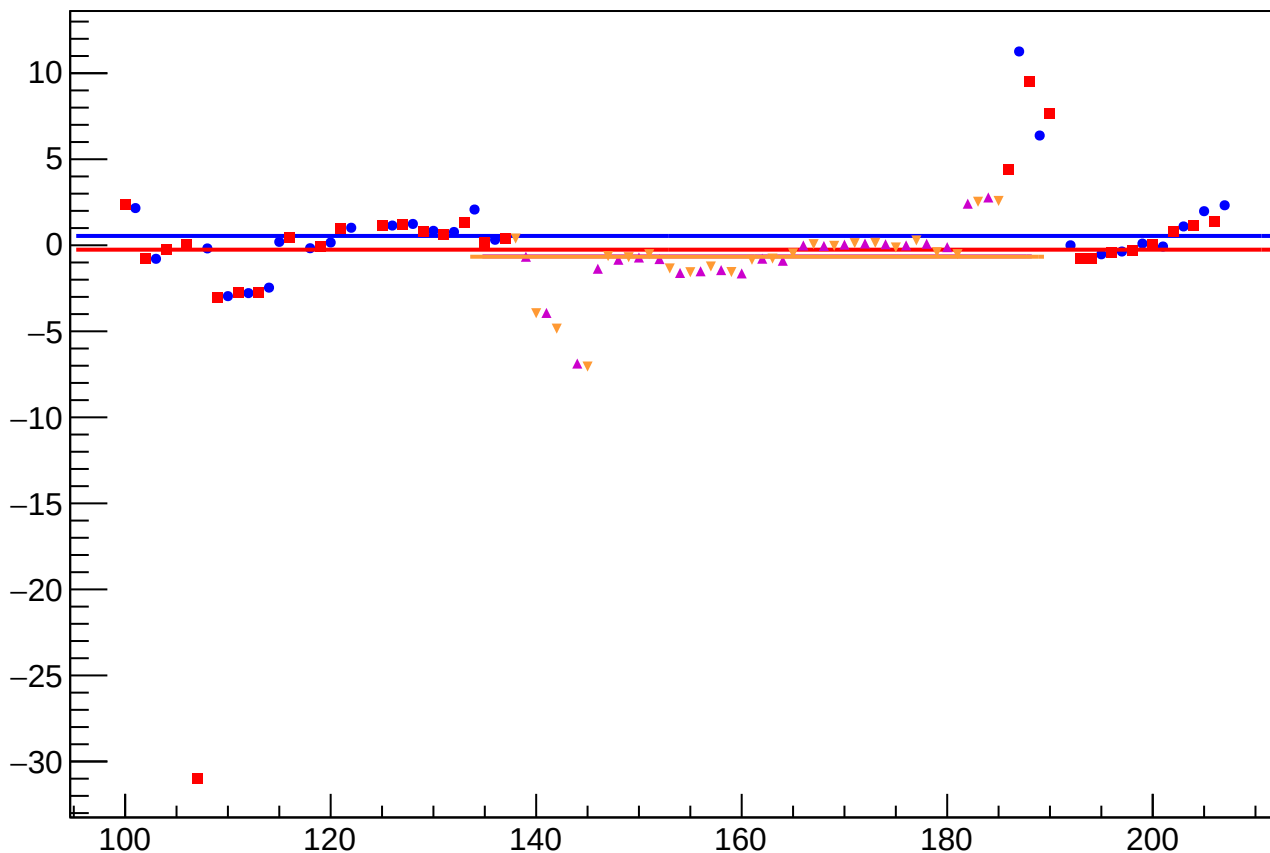
Left In:  $-1.567 \pm 0.171$   $\chi^2/\text{NDF}$ : 1117.7/22

+ sign  $-0.929 \pm 0.151$   $\chi^2/\text{NDF}$ : 1740.1/49

All:  $-0.822 \pm 0.108$   $\chi^2/\text{NDF}$ : 3111.0/101

- sign  $-0.711 \pm 0.153$   $\chi^2/\text{NDF}$ : 1369.9/51

# reg\_asym\_us\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $0.543 \pm 0.018$   $\chi^2/\text{NDF}$ : 10280.7/25

Left Out:  $-0.666 \pm 0.008$   $\chi^2/\text{NDF}$ : 55276.7/23

Right Out:  $-0.256 \pm 0.018$   $\chi^2/\text{NDF}$ : 60728.3/28

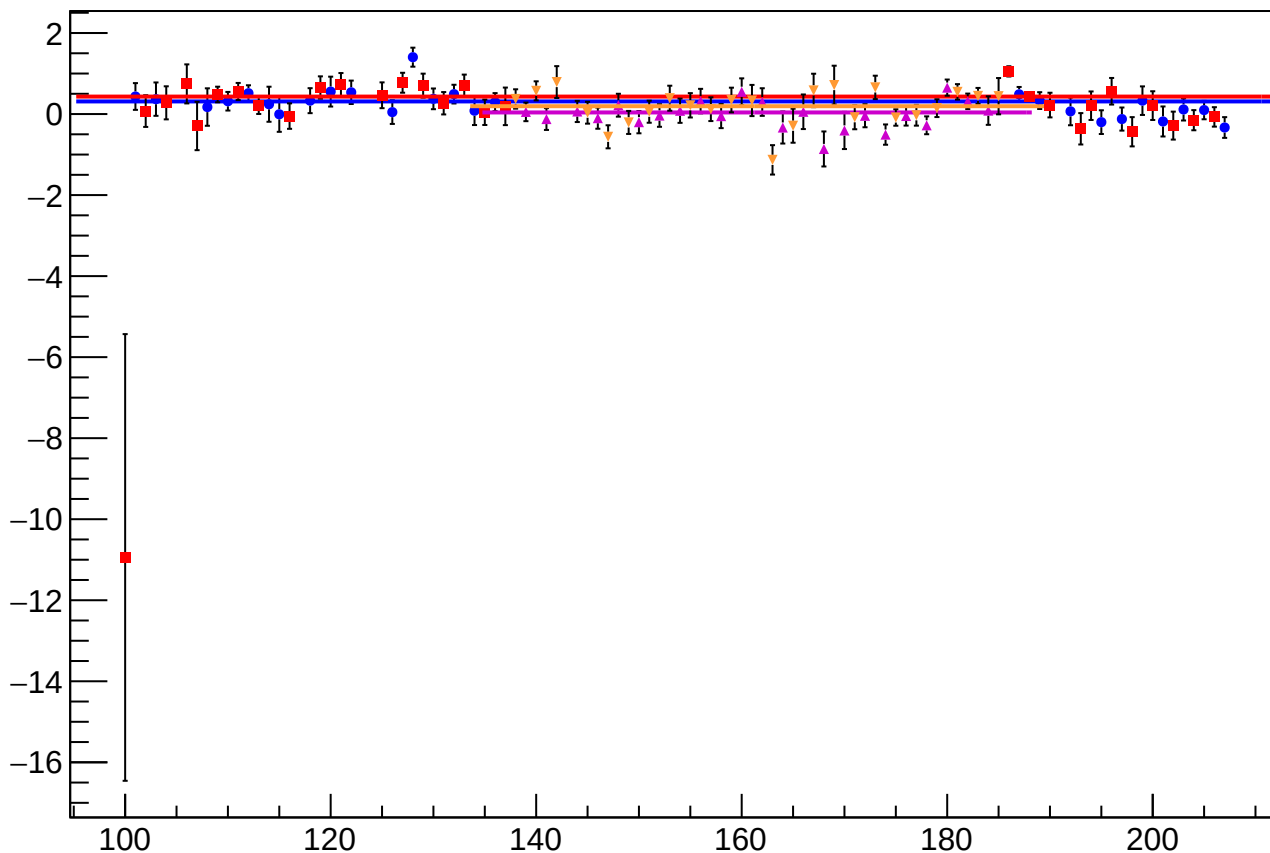
Left In:  $-0.646 \pm 0.008$   $\chi^2/\text{NDF}$ : 45569.5/22

+ sign  $-0.479 \pm 0.007$   $\chi^2/\text{NDF}$ : 69560.0/49

All:  $-0.532 \pm 0.005$   $\chi^2/\text{NDF}$ : 176385.5/101

- sign  $-0.587 \pm 0.007$   $\chi^2/\text{NDF}$ : 106703.7/51

# reg\_asym\_ds\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $0.311 \pm 0.054$   $\chi^2/\text{NDF}$ : 42.9/25

Left Out:  $0.194 \pm 0.057$   $\chi^2/\text{NDF}$ : 44.2/23

Right Out:  $0.431 \pm 0.047$   $\chi^2/\text{NDF}$ : 68.4/28

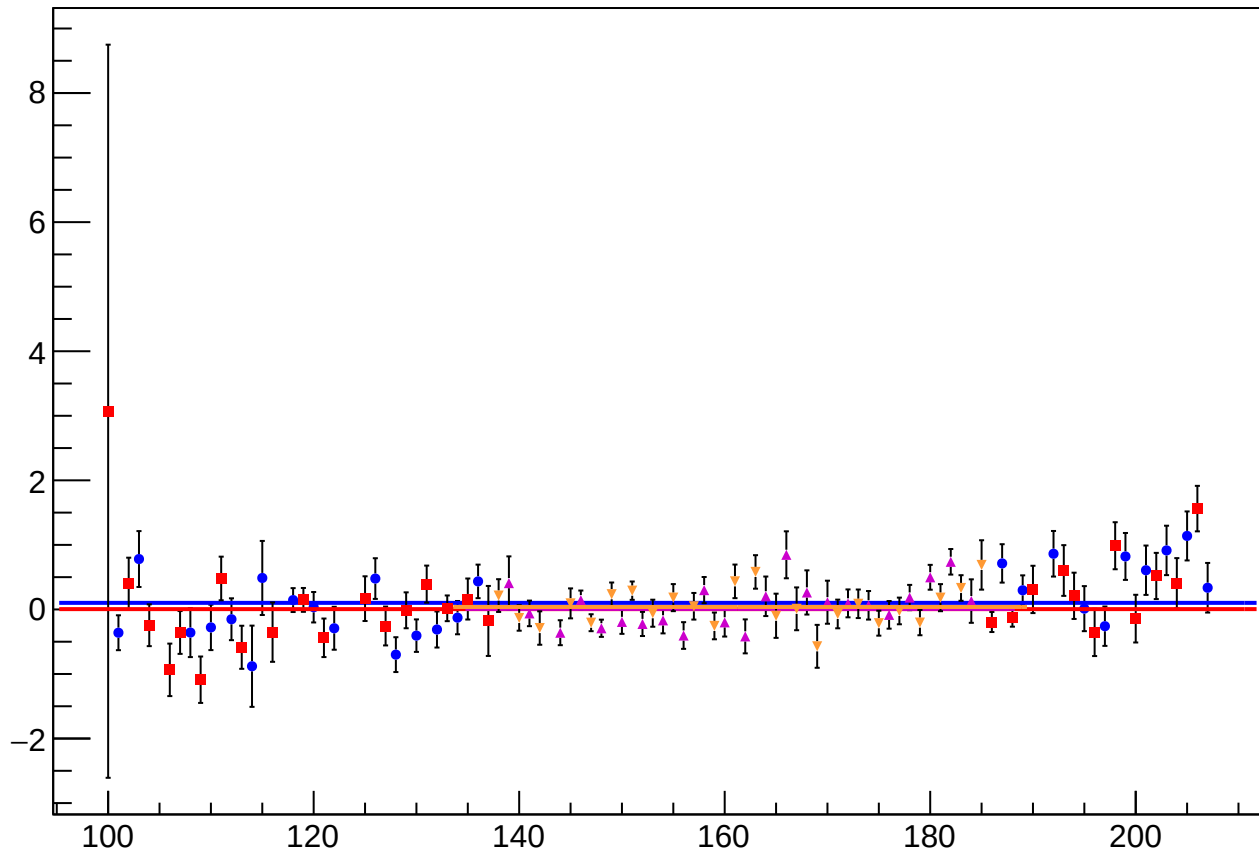
Left In:  $0.039 \pm 0.058$   $\chi^2/\text{NDF}$ : 30.5/22

+ sign  $0.256 \pm 0.039$   $\chi^2/\text{NDF}$ : 89.3/49

All:  $0.266 \pm 0.027$   $\chi^2/\text{NDF}$ : 216.2/101

- sign  $0.275 \pm 0.036$   $\chi^2/\text{NDF}$ : 126.7/51

# reg\_asym\_ds\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $0.102 \pm 0.060$   $\chi^2/\text{NDF}$ : 61.0/25

Left Out:  $0.038 \pm 0.043$   $\chi^2/\text{NDF}$ : 32.8/23

Right Out:  $0.005 \pm 0.054$   $\chi^2/\text{NDF}$ : 66.1/28

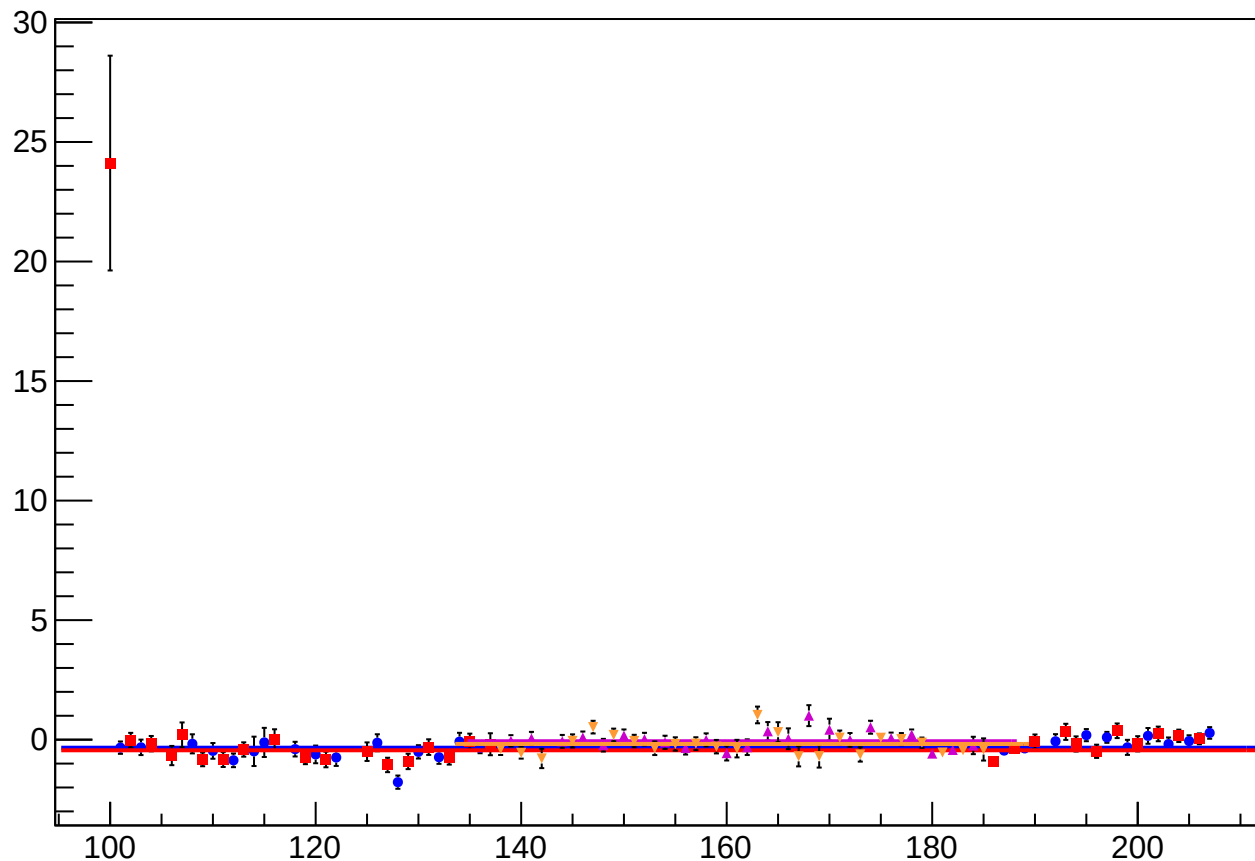
Left In:  $0.008 \pm 0.044$   $\chi^2/\text{NDF}$ : 51.4/22

+ sign  $0.060 \pm 0.035$   $\chi^2/\text{NDF}$ : 94.6/49

All:  $0.033 \pm 0.025$   $\chi^2/\text{NDF}$ : 213.2/101

- sign  $0.007 \pm 0.034$   $\chi^2/\text{NDF}$ : 117.5/51

# reg\_asym\_ds\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $-0.336 \pm 0.054$   $\chi^2/\text{NDF}$ : 55.8/25

Left Out:  $-0.178 \pm 0.056$   $\chi^2/\text{NDF}$ : 42.1/23

Right Out:  $-0.444 \pm 0.045$   $\chi^2/\text{NDF}$ : 100.8/28

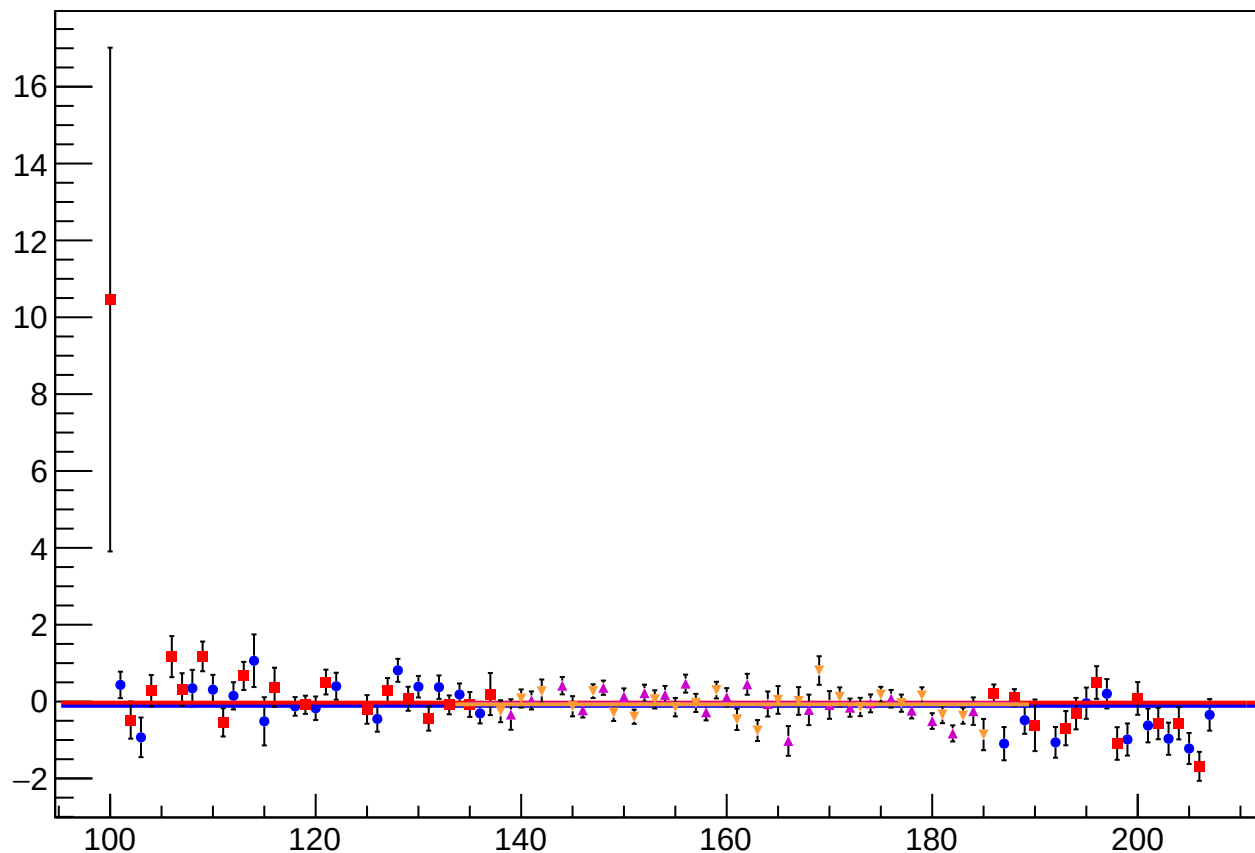
Left In:  $-0.066 \pm 0.057$   $\chi^2/\text{NDF}$ : 31.4/22

+ sign  $-0.261 \pm 0.039$   $\chi^2/\text{NDF}$ : 102.1/49

All:  $-0.282 \pm 0.026$   $\chi^2/\text{NDF}$ : 262.2/101

- sign  $-0.300 \pm 0.035$   $\chi^2/\text{NDF}$ : 159.5/51

# reg\_asym\_ds\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $-0.110 \pm 0.070$   $\chi^2/\text{NDF}$ : 61.6/25

Left Out:  $-0.072 \pm 0.049$   $\chi^2/\text{NDF}$ : 37.7/23

Right Out:  $-0.028 \pm 0.066$   $\chi^2/\text{NDF}$ : 67.3/28

Left In:  $-0.047 \pm 0.050$   $\chi^2/\text{NDF}$ : 50.5/22

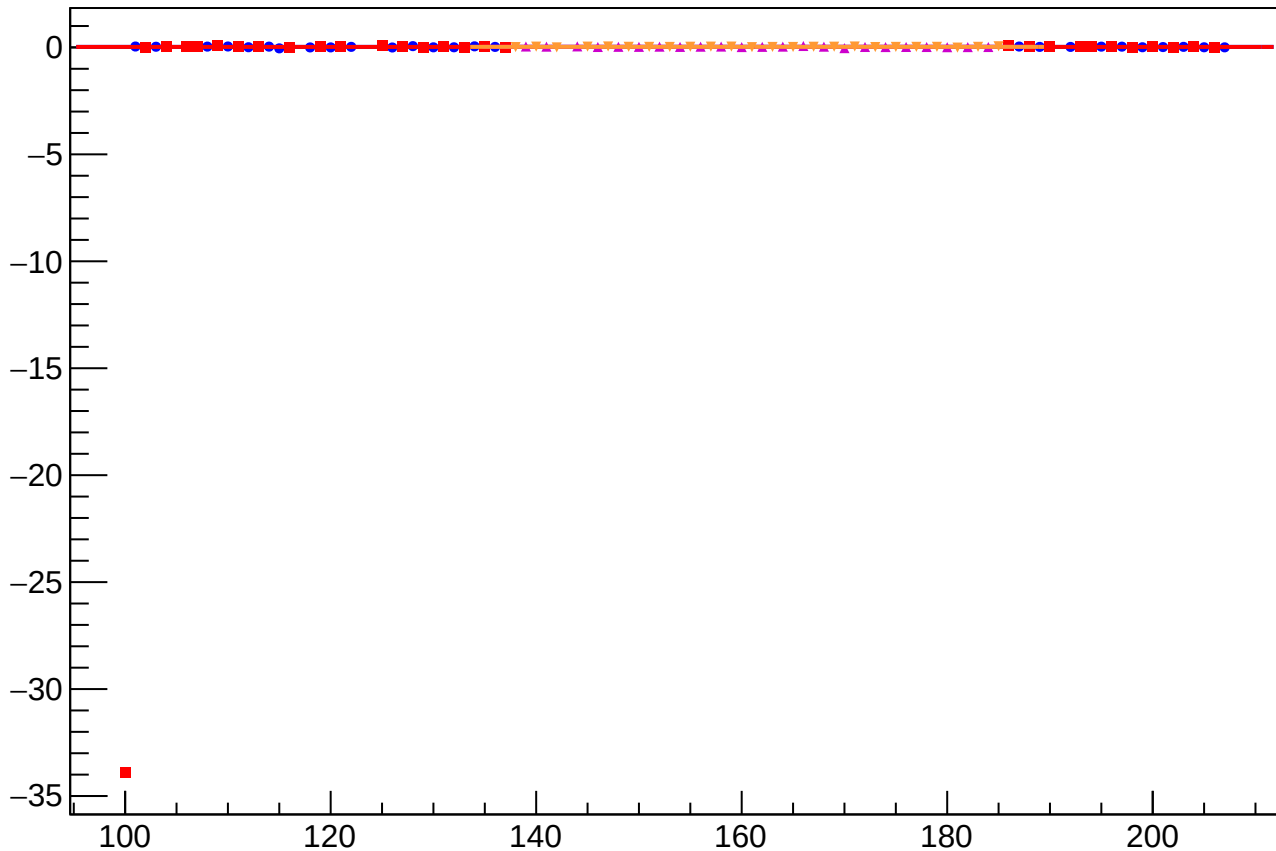
+ sign  $-0.084 \pm 0.040$   $\chi^2/\text{NDF}$ : 99.5/49

All:  $-0.062 \pm 0.028$   $\chi^2/\text{NDF}$ : 217.9/101

- sign  $-0.040 \pm 0.040$   $\chi^2/\text{NDF}$ : 117.8/51



# reg\_asym\_ds\_avg\_diff\_bpm12X\_slope vs Slug



Right In: 0.024 $\pm$ 0.003  $\chi^2$ /NDF: 22.2/25

Left Out: 0.026 $\pm$ 0.002  $\chi^2$ /NDF:31.4/23

Right Out: 0.022 $\pm$ 0.003  $\chi^2$ /NDF: 22315.0/28

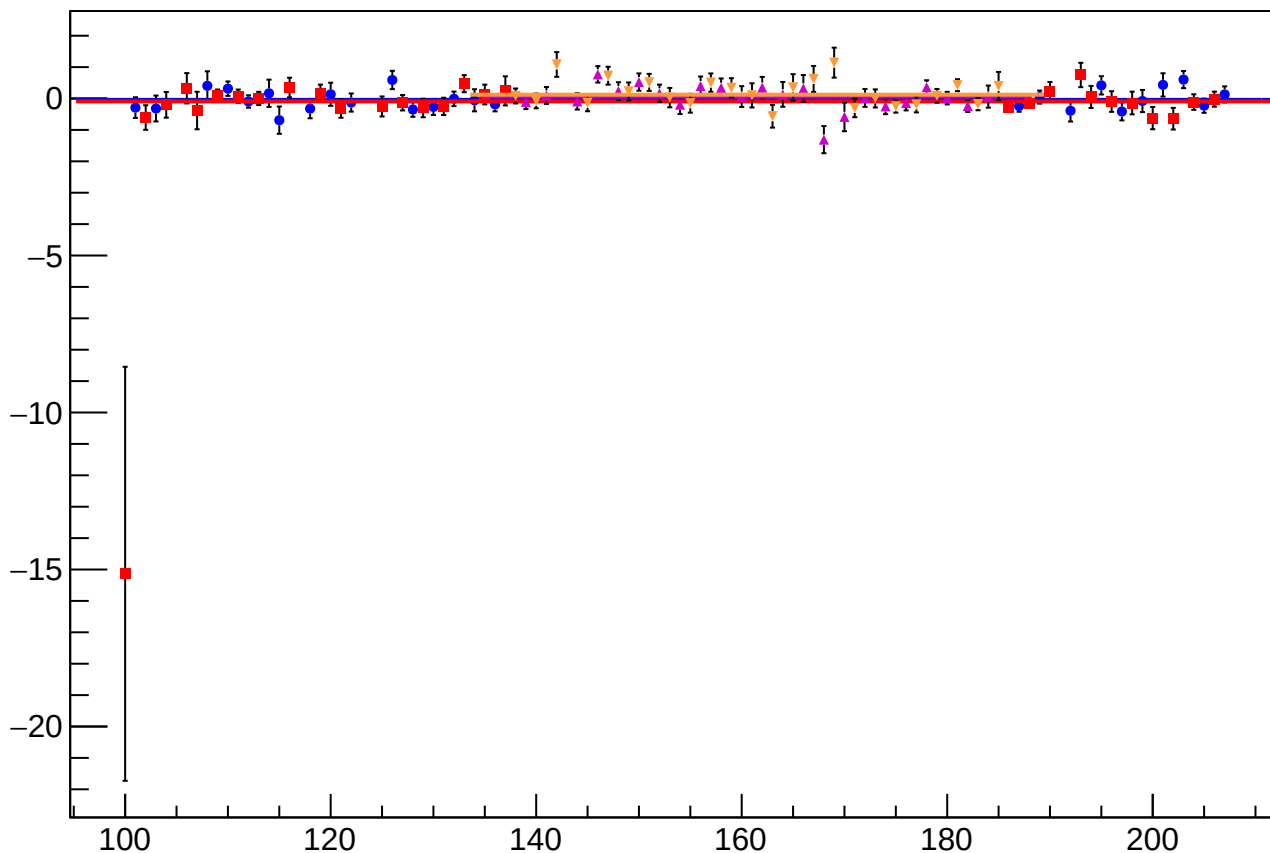
Left In: 0.026 $\pm$ 0.002  $\chi^2$ /NDF:39.5/22

+ sign 0.026 $\pm$ 0.002  $\chi^2$ /NDF: 53.8/49

All: 0.025 $\pm$ 0.001  $\chi^2$ /NDF: 22409.6/101

- sign 0.025 $\pm$ 0.002  $\chi^2$ /NDF: 22355.7/51

# reg\_asym\_ds\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-0.044 \pm 0.054$   $\chi^2/\text{NDF}$ : 30.6/25

Left Out:  $0.122 \pm 0.057$   $\chi^2/\text{NDF}$ : 39.6/23

Right Out:  $-0.092 \pm 0.047$   $\chi^2/\text{NDF}$ : 33.6/28

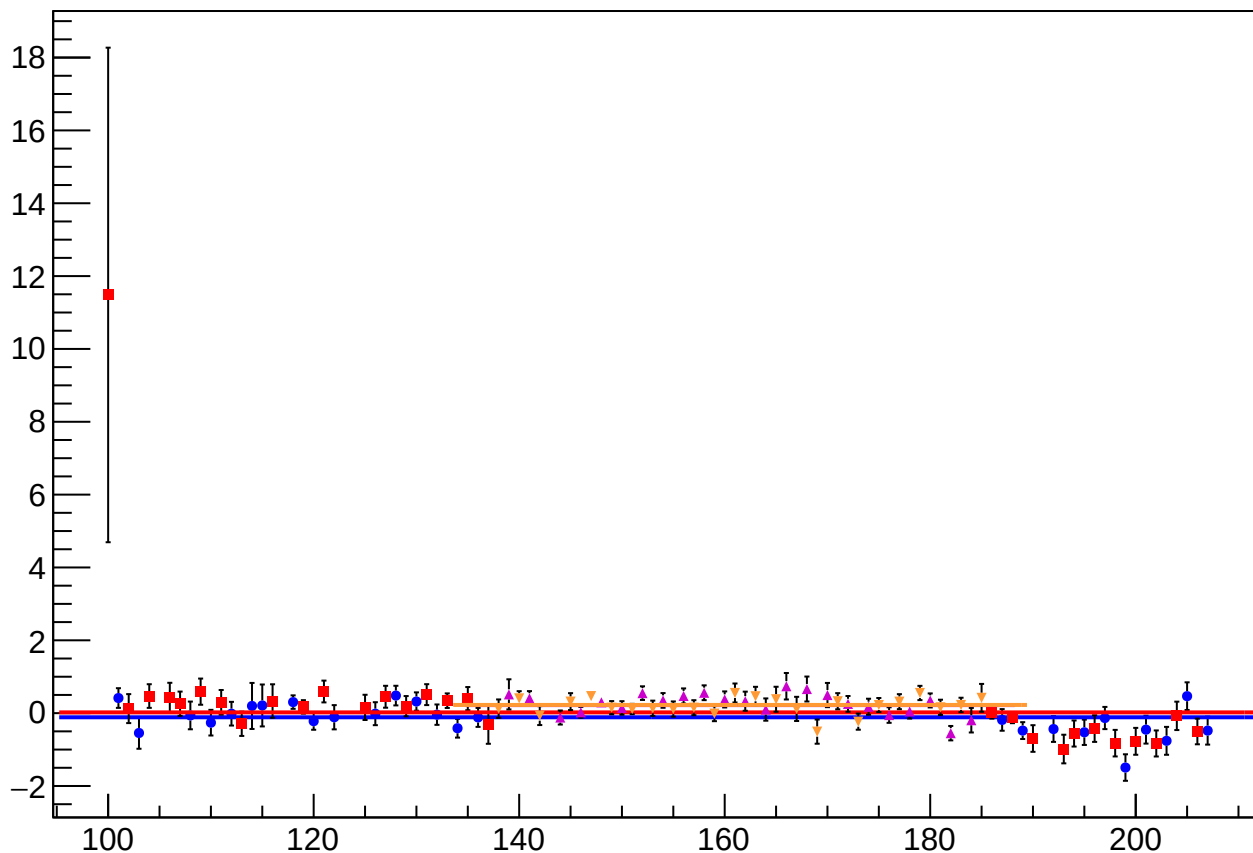
Left In:  $0.063 \pm 0.058$   $\chi^2/\text{NDF}$ : 34.2/22

+ sign  $0.034 \pm 0.039$   $\chi^2/\text{NDF}$ : 74.8/49

All:  $-0.000 \pm 0.027$   $\chi^2/\text{NDF}$ : 148.4/101

- sign  $-0.030 \pm 0.036$   $\chi^2/\text{NDF}$ : 72.2/51

# reg\_asym\_ds\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-0.113 \pm 0.060$   $\chi^2/\text{NDF}: 46.4/25$

Left Out:  $0.225 \pm 0.043$   $\chi^2/\text{NDF}: 24.1/23$

Right Out:  $0.021 \pm 0.054$   $\chi^2/\text{NDF}: 58.4/28$

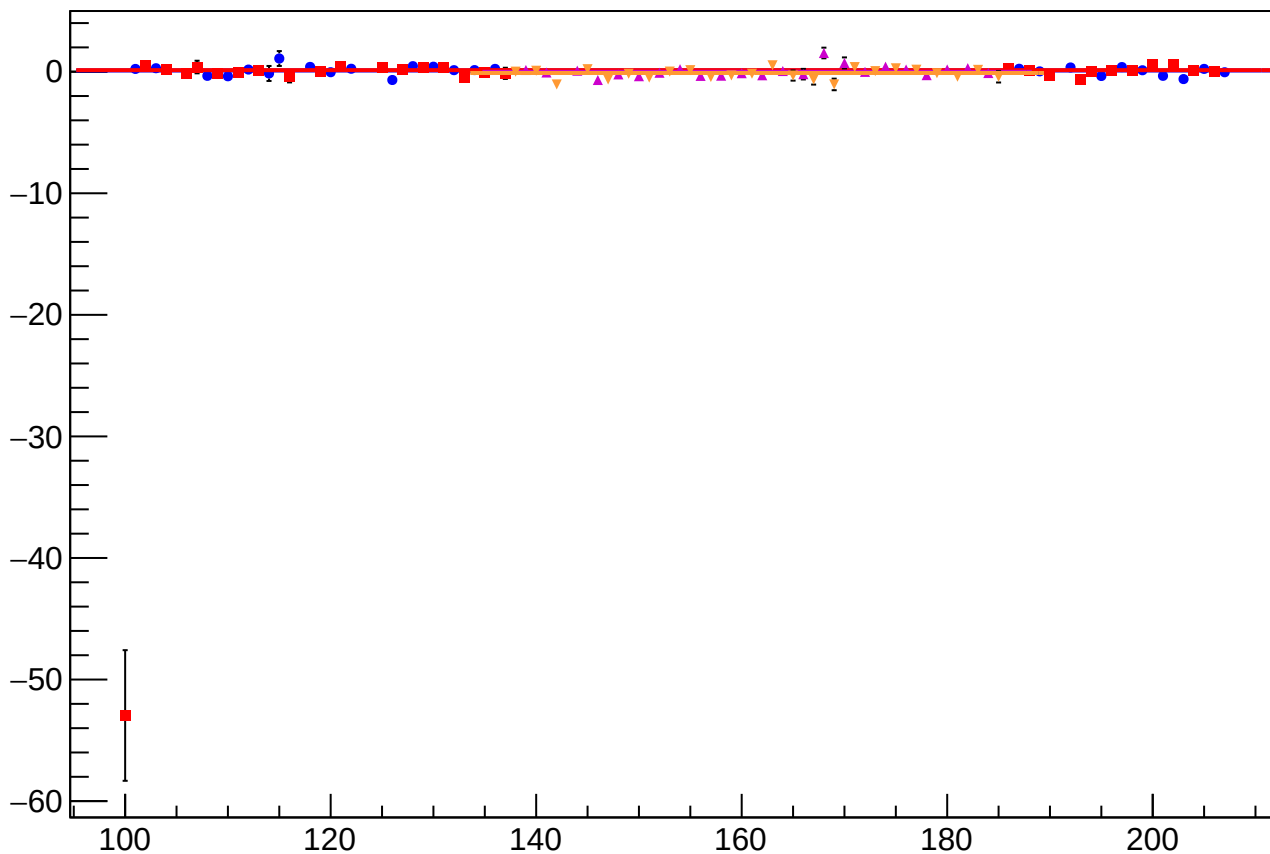
Left In:  $0.221 \pm 0.044$   $\chi^2/\text{NDF}: 39.3/22$

+ sign  $0.109 \pm 0.035$   $\chi^2/\text{NDF}: 91.5/49$

All:  $0.125 \pm 0.025$   $\chi^2/\text{NDF}: 197.9/101$

- sign  $0.142 \pm 0.034$   $\chi^2/\text{NDF}: 105.9/51$

# reg\_asym\_ds\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $0.101 \pm 0.054$   $\chi^2/\text{NDF}$ : 31.5/25

Left Out:  $-0.105 \pm 0.056$   $\chi^2/\text{NDF}$ : 37.6/23

Right Out:  $0.129 \pm 0.045$   $\chi^2/\text{NDF}$ : 122.8/28

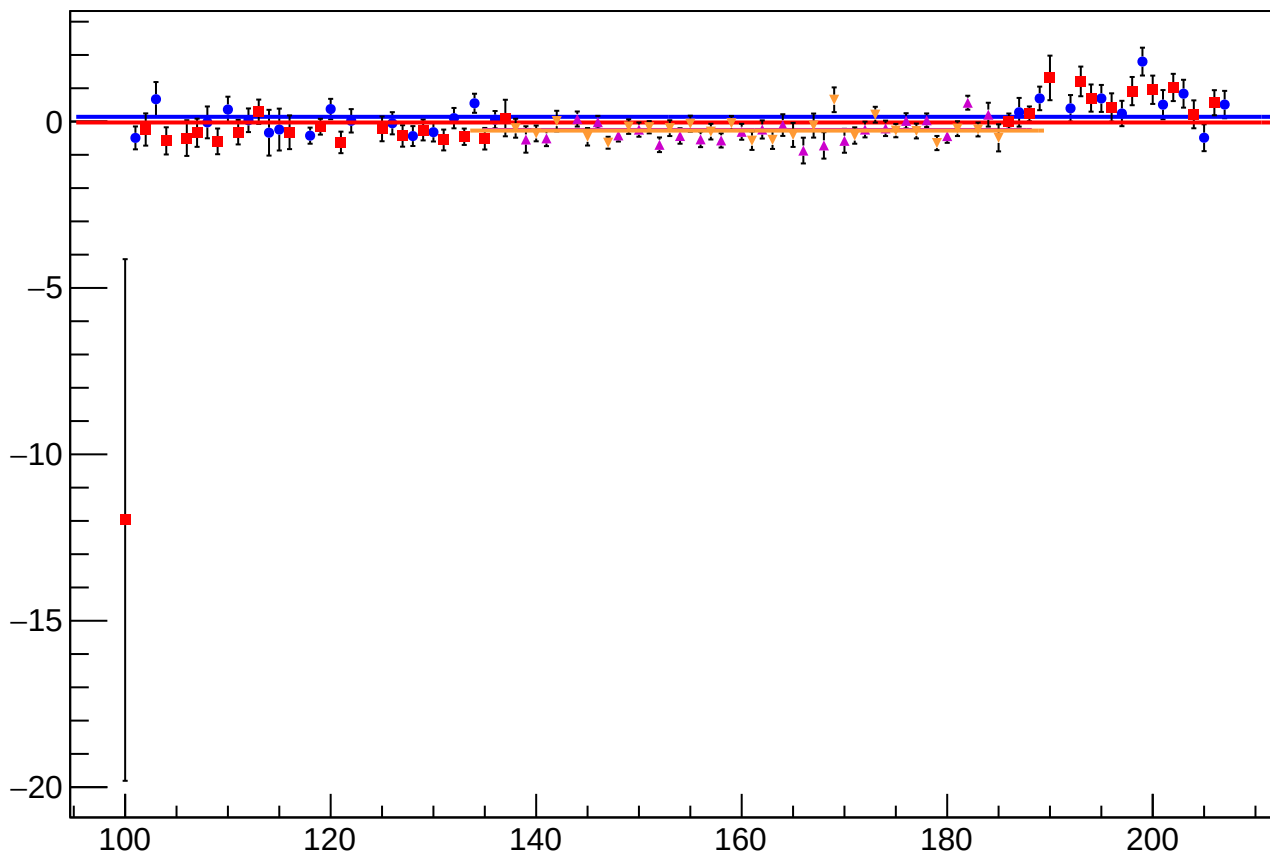
Left In:  $-0.009 \pm 0.057$   $\chi^2/\text{NDF}$ : 38.0/22

+ sign  $0.003 \pm 0.039$   $\chi^2/\text{NDF}$ : 76.1/49

All:  $0.043 \pm 0.026$   $\chi^2/\text{NDF}$ : 242.5/101

- sign  $0.076 \pm 0.035$   $\chi^2/\text{NDF}$ : 164.4/51

# reg\_asym\_ds\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $0.142 \pm 0.070$   $\chi^2/\text{NDF}$ : 48.2/25

Left Out:  $-0.272 \pm 0.049$   $\chi^2/\text{NDF}$ : 24.8/23

Right Out:  $-0.029 \pm 0.066$   $\chi^2/\text{NDF}$ : 61.0/28

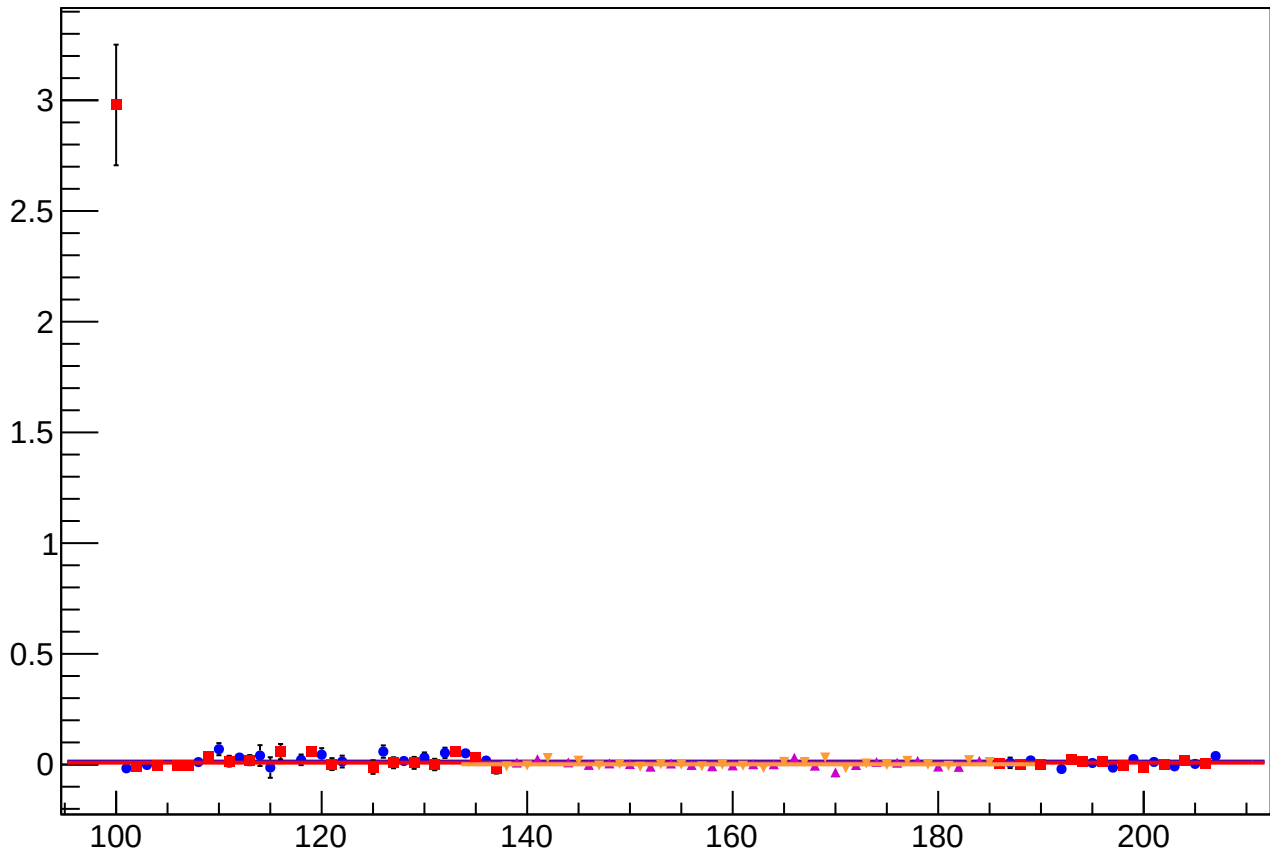
Left In:  $-0.254 \pm 0.050$   $\chi^2/\text{NDF}$ : 40.6/22

+ sign  $-0.135 \pm 0.040$   $\chi^2/\text{NDF}$ : 96.3/49

All:  $-0.154 \pm 0.028$   $\chi^2/\text{NDF}$ : 205.6/101

- sign  $-0.172 \pm 0.040$   $\chi^2/\text{NDF}$ : 108.9/51

# reg\_asym\_ds\_dd\_diff\_bpm12X\_slope vs Slug



Right In: 0.013 $\pm$ 0.003     $\chi^2$ /NDF: 42.8/25

Left Out: 0.001 $\pm$ 0.002     $\chi^2$ /NDF: 26.7/23

Right Out: 0.009 $\pm$ 0.003     $\chi^2$ /NDF: 149.7/28

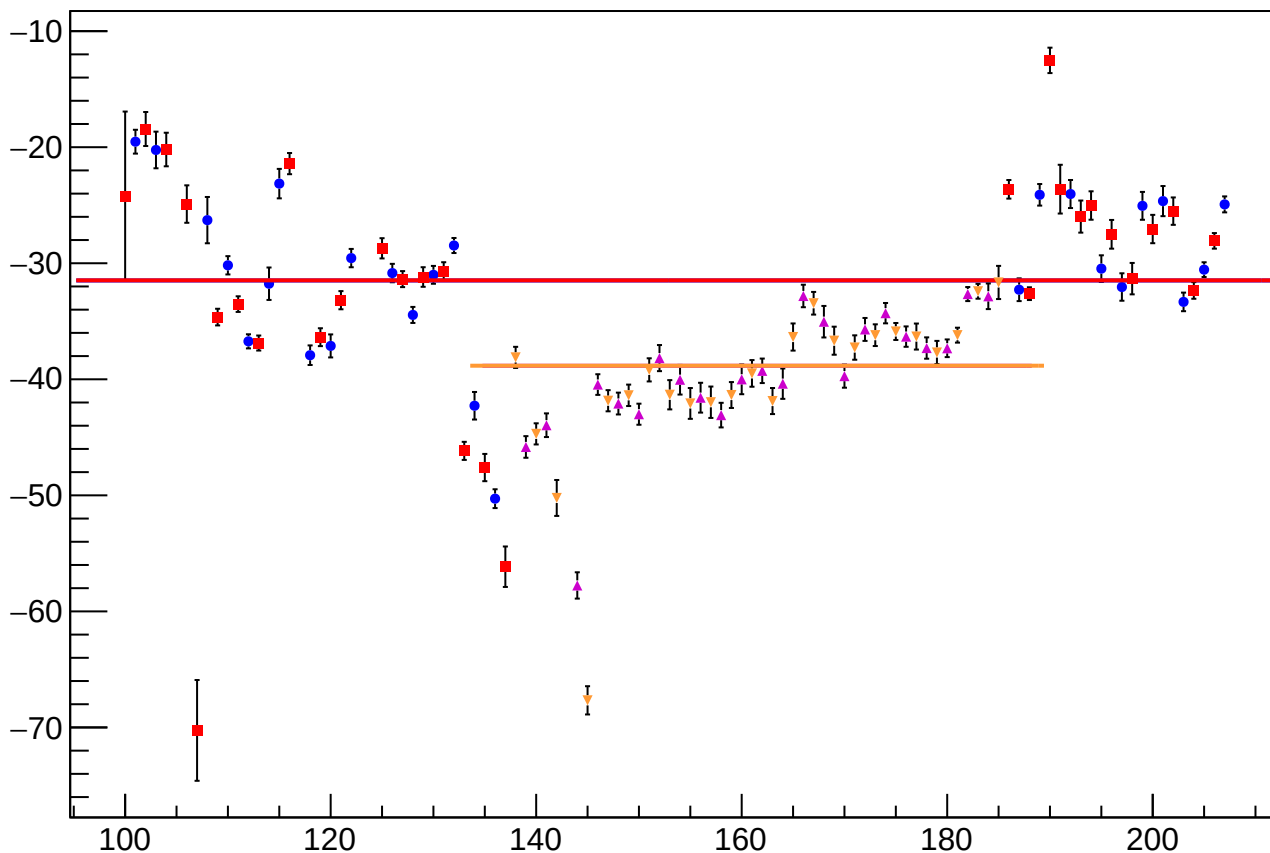
Left In: 0.002 $\pm$ 0.002     $\chi^2$ /NDF: 24.6/22

+ sign 0.005 $\pm$ 0.002     $\chi^2$ /NDF: 78.8/49

All: 0.005 $\pm$ 0.001     $\chi^2$ /NDF: 256.0/101

- sign 0.004 $\pm$ 0.002     $\chi^2$ /NDF: 177.2/51

# reg\_asym\_left\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-31.485 \pm 0.175$   $\chi^2/\text{NDF}$ : 1329.6/25

Left Out:  $-38.829 \pm 0.202$   $\chi^2/\text{NDF}$ : 917.0/23

Right Out:  $-31.472 \pm 0.168$   $\chi^2/\text{NDF}$ : 1792.2/29

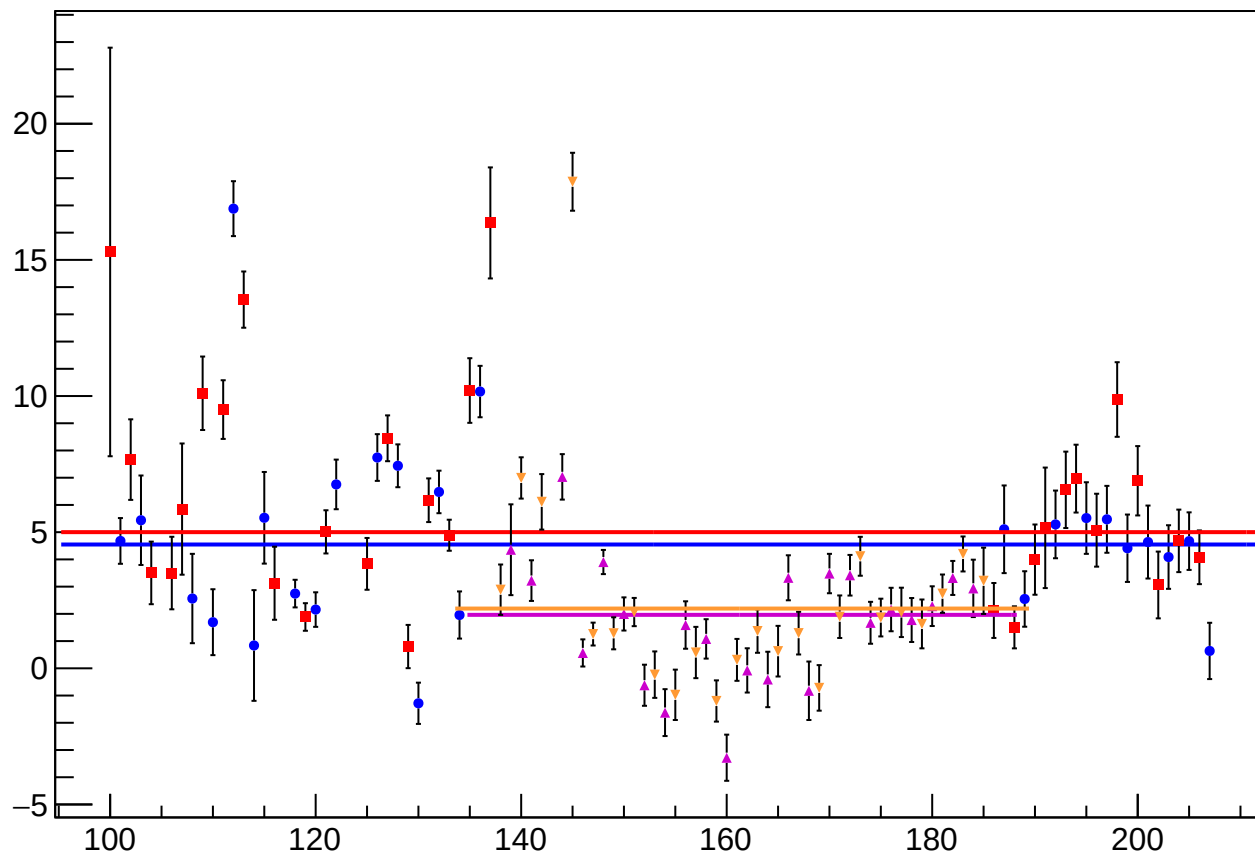
Left In:  $-38.837 \pm 0.203$   $\chi^2/\text{NDF}$ : 653.4/22

+ sign  $-34.623 \pm 0.132$   $\chi^2/\text{NDF}$ : 3003.3/49

All:  $-34.536 \pm 0.092$   $\chi^2/\text{NDF}$ : 6230.2/102

- sign  $-34.453 \pm 0.129$   $\chi^2/\text{NDF}$ : 3226.1/52

# reg\_asym\_left\_avg\_diff\_bpm4aY\_slope vs Slug



Right In: 4.547 $\pm$ 0.190  $\chi^2/\text{NDF}$ : 350.3/25

Left Out: 2.195 $\pm$ 0.152  $\chi^2/\text{NDF}$ :365.1/23

Right Out: 5.001 $\pm$ 0.186  $\chi^2/\text{NDF}$ : 298.0/29

Left In: 1.964 $\pm$ 0.155  $\chi^2/\text{NDF}$ :173.2/22

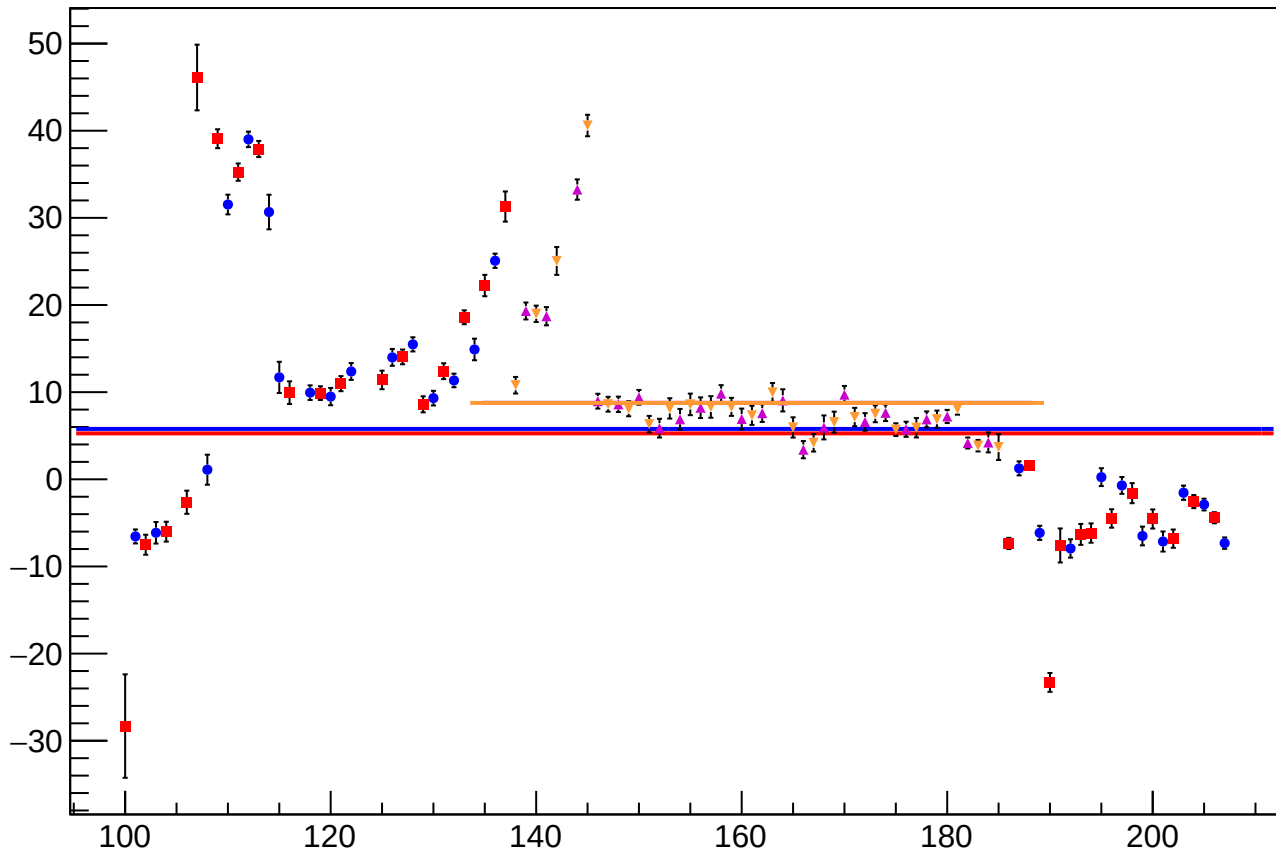
+ sign 3.117 $\pm$ 0.119  $\chi^2/\text{NDF}$ : 808.9/49

All: 3.160 $\pm$ 0.084  $\chi^2/\text{NDF}$ : 1437.8/102

- sign 3.204 $\pm$ 0.119  $\chi^2/\text{NDF}$ : 628.6/52



# reg\_asym\_left\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $5.782 \pm 0.182$   $\chi^2/\text{NDF}$ : 4785.2/25

Left Out:  $8.766 \pm 0.200$   $\chi^2/\text{NDF}$ : 1035.4/23

Right Out:  $5.271 \pm 0.172$   $\chi^2/\text{NDF}$ : 6602.3/29

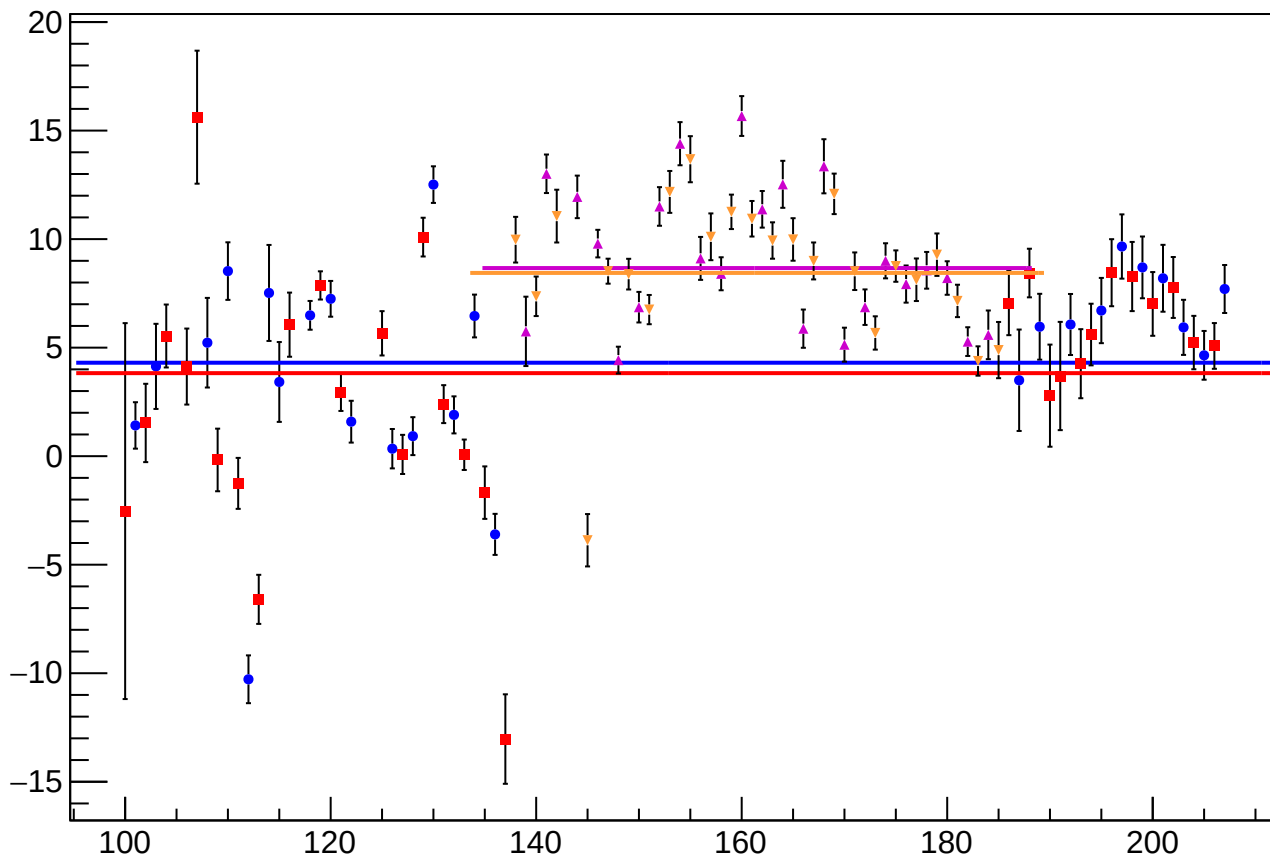
Left In:  $8.773 \pm 0.201$   $\chi^2/\text{NDF}$ : 795.1/22

+ sign  $7.133 \pm 0.135$   $\chi^2/\text{NDF}$ : 5941.7/49

All:  $6.936 \pm 0.094$   $\chi^2/\text{NDF}$ : 13517.9/102

- sign  $6.750 \pm 0.131$   $\chi^2/\text{NDF}$ : 7572.0/52

# reg\_asym\_left\_avg\_diff\_bpm4eY\_slope vs Slug



Right In: 4.305 $\pm$ 0.220  $\chi^2$ /NDF: 483.8/25

Left Out: 8.442 $\pm$ 0.174  $\chi^2$ /NDF: 264.2/23

Right Out: 3.825 $\pm$ 0.219  $\chi^2$ /NDF: 416.3/29

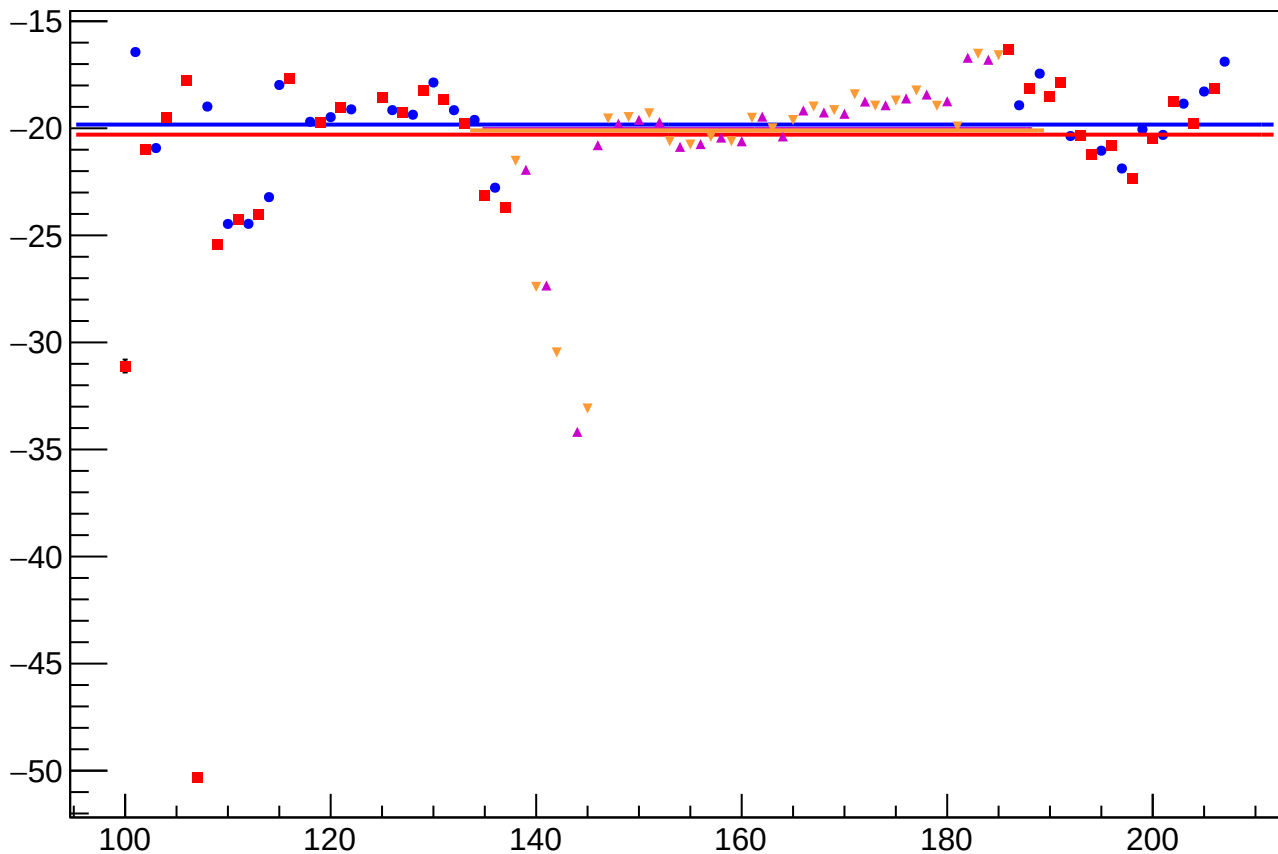
Left In: 8.666 $\pm$ 0.176  $\chi^2$ /NDF: 304.8/22

+ sign 6.853 $\pm$ 0.136  $\chi^2$ /NDF: 966.3/49

All: 6.810 $\pm$ 0.097  $\chi^2$ /NDF: 1985.8/102

- sign 6.766 $\pm$ 0.137  $\chi^2$ /NDF: 1019.3/52

# reg\_asym\_left\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-19.826 \pm 0.011$   $\chi^2/\text{NDF}$ : 30994.1/25

Left Out:  $-20.096 \pm 0.008$   $\chi^2/\text{NDF}$ : 159293.0/23

Right Out:  $-20.296 \pm 0.011$   $\chi^2/\text{NDF}$ : 71472.4/29

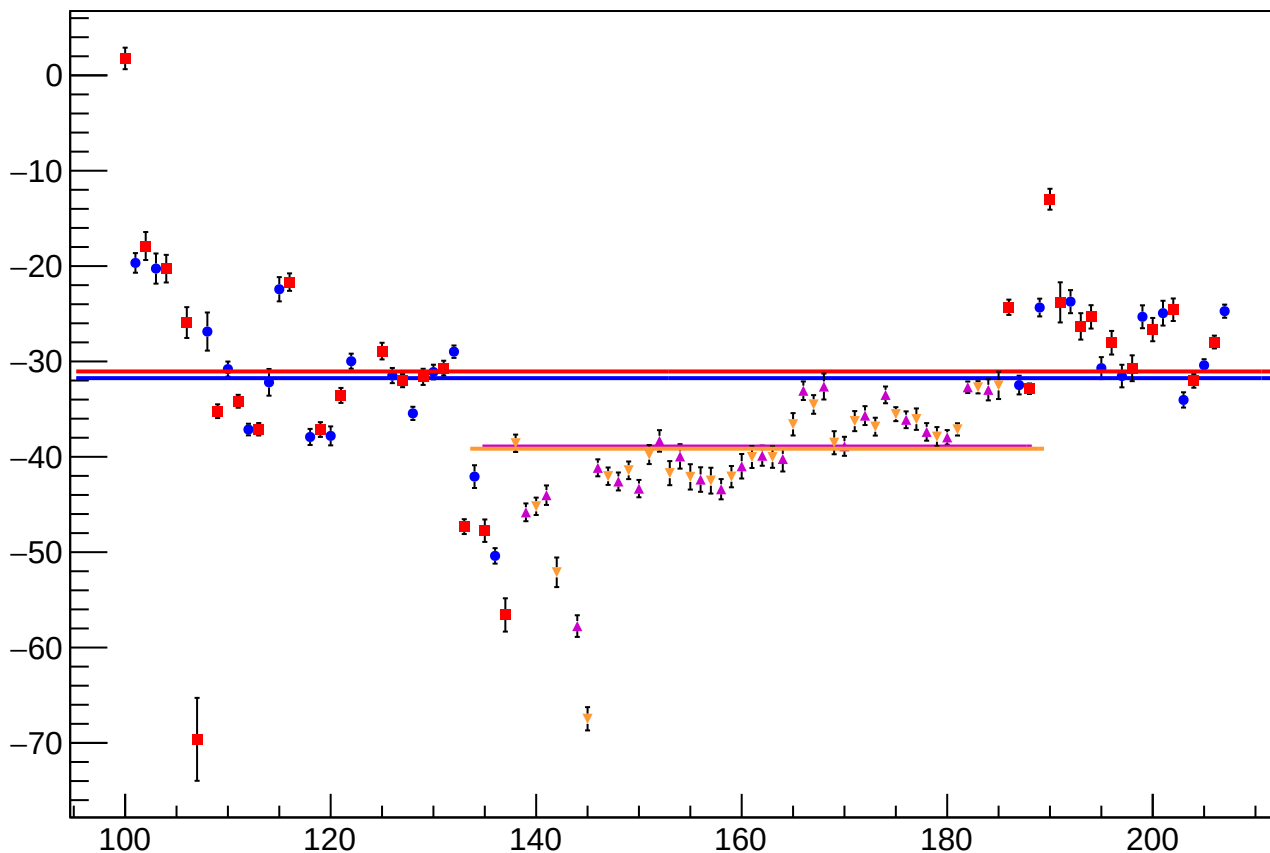
Left In:  $-20.037 \pm 0.008$   $\chi^2/\text{NDF}$ : 132291.6/22

+ sign  $-20.005 \pm 0.006$   $\chi^2/\text{NDF}$ : 190680.0/49

All:  $-20.067 \pm 0.005$   $\chi^2/\text{NDF}$ : 395002.2/102

- sign  $-20.127 \pm 0.006$   $\chi^2/\text{NDF}$ : 204138.4/52

# reg\_asym\_left\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-31.751 \pm 0.175$   $\chi^2/\text{NDF}: 1355.8/25$

Left Out:  $-39.148 \pm 0.202$   $\chi^2/\text{NDF}: 898.8/23$

Right Out:  $-31.049 \pm 0.166$   $\chi^2/\text{NDF}: 2719.1/29$

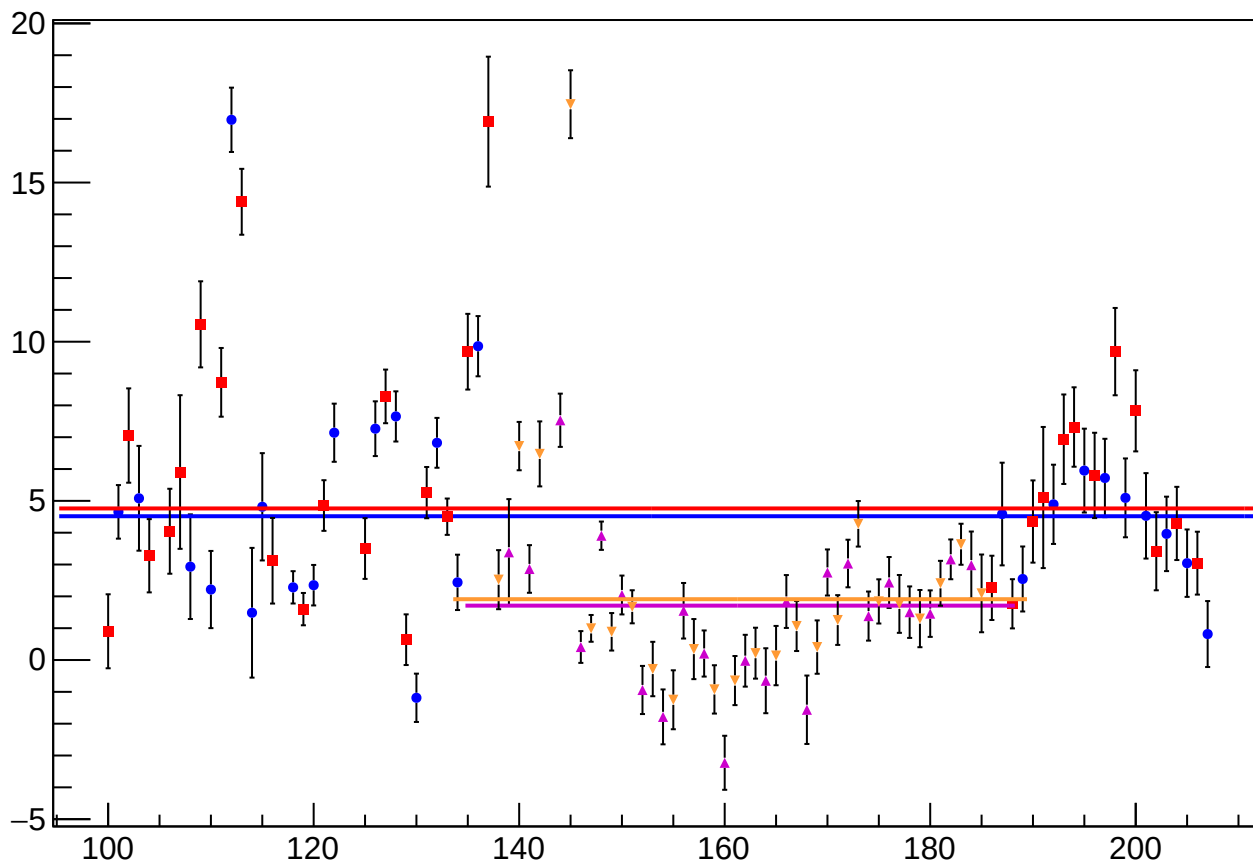
Left In:  $-38.921 \pm 0.204$   $\chi^2/\text{NDF}: 684.4/22$

+ sign  $-34.912 \pm 0.132$   $\chi^2/\text{NDF}: 3019.1/49$

All:  $-34.544 \pm 0.092$   $\chi^2/\text{NDF}: 7333.8/102$

- sign  $-34.195 \pm 0.129$   $\chi^2/\text{NDF}: 4299.6/52$

# reg\_asym\_left\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $4.517 \pm 0.190$   $\chi^2/\text{NDF}$ : 347.9/25

Left Out:  $1.911 \pm 0.152$   $\chi^2/\text{NDF}$ : 359.3/23

Right Out:  $4.762 \pm 0.184$   $\chi^2/\text{NDF}$ : 325.0/29

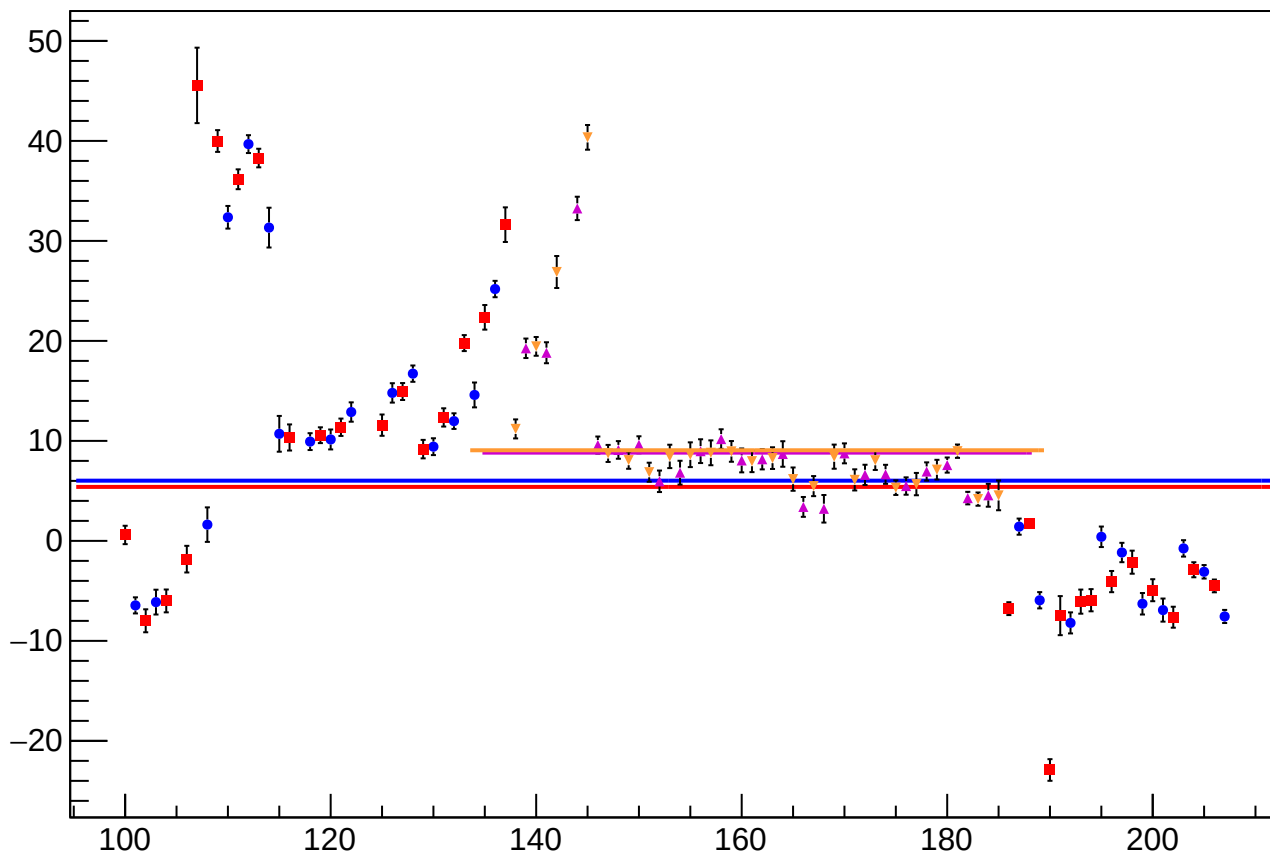
Left In:  $1.709 \pm 0.155$   $\chi^2/\text{NDF}$ : 182.6/22

+ sign  $2.932 \pm 0.119$   $\chi^2/\text{NDF}$ : 821.7/49

All:  $2.953 \pm 0.084$   $\chi^2/\text{NDF}$ : 1490.1/102

- sign  $2.974 \pm 0.119$   $\chi^2/\text{NDF}$ : 668.3/52

# reg\_asym\_left\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $6.022 \pm 0.183$   $\chi^2/\text{NDF}$ : 4935.0/25

Left Out:  $9.061 \pm 0.201$   $\chi^2/\text{NDF}$ : 1033.5/23

Right Out:  $5.398 \pm 0.170$   $\chi^2/\text{NDF}$ : 6785.3/29

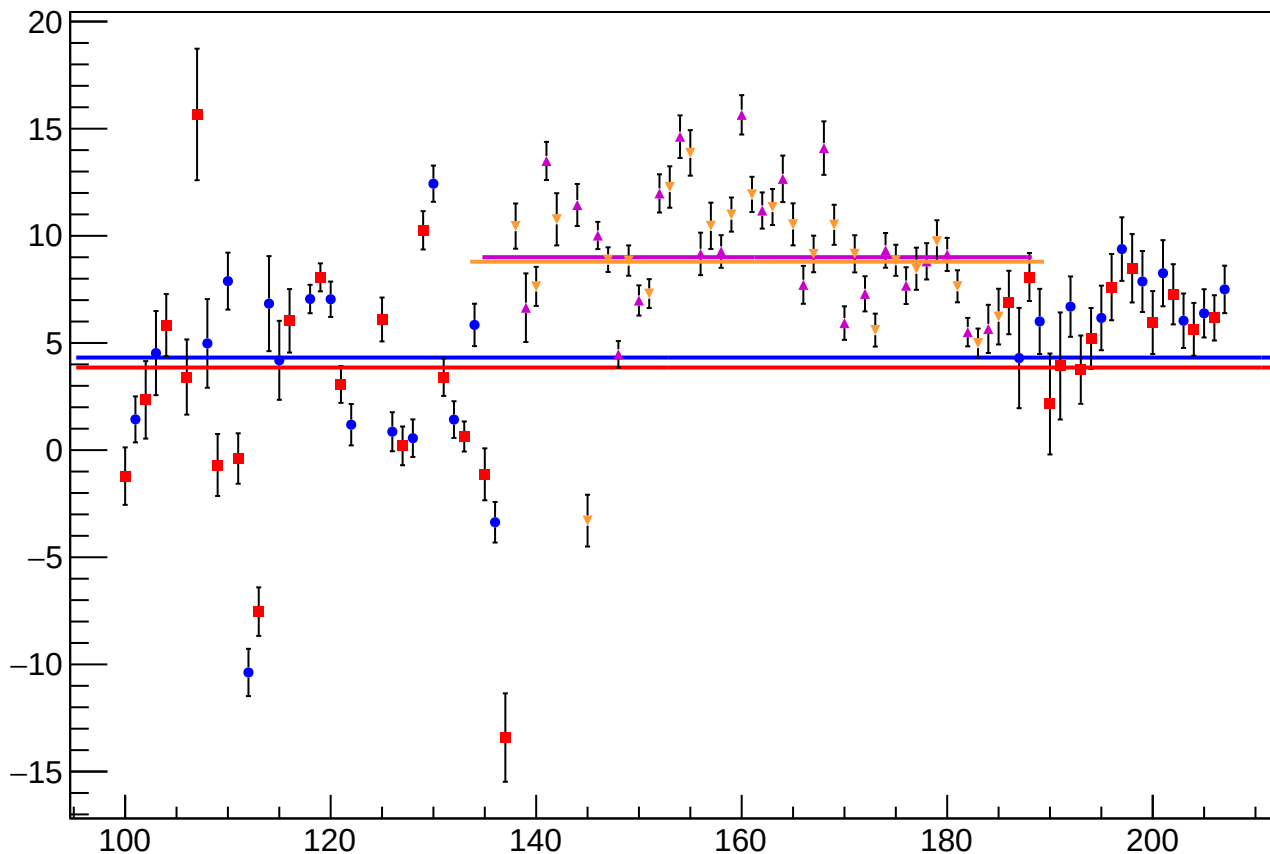
Left In:  $8.826 \pm 0.202$   $\chi^2/\text{NDF}$ : 801.4/22

+ sign  $7.398 \pm 0.135$   $\chi^2/\text{NDF}$ : 6093.8/49

All:  $7.096 \pm 0.094$   $\chi^2/\text{NDF}$ : 13859.1/102

- sign  $6.817 \pm 0.130$   $\chi^2/\text{NDF}$ : 7755.6/52

# reg\_asym\_left\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $4.319 \pm 0.220$   $\chi^2/\text{NDF}$ : 479.6/25

Left Out:  $8.793 \pm 0.174$   $\chi^2/\text{NDF}$ : 244.1/23

Right Out:  $3.855 \pm 0.216$   $\chi^2/\text{NDF}$ : 430.1/29

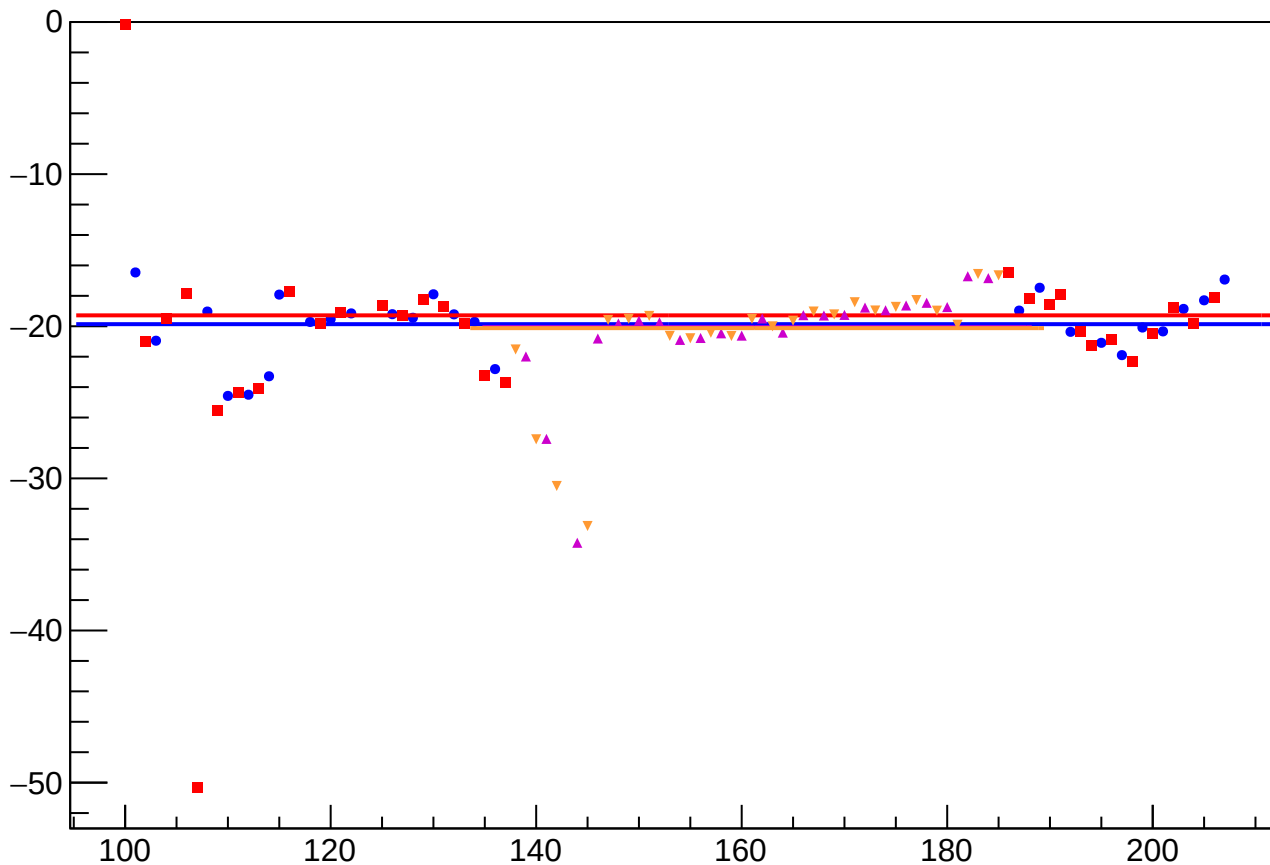
Left In:  $9.004 \pm 0.176$   $\chi^2/\text{NDF}$ : 289.6/22

+ sign  $7.075 \pm 0.136$   $\chi^2/\text{NDF}$ : 977.9/49

All:  $7.013 \pm 0.096$   $\chi^2/\text{NDF}$ : 2039.3/102

- sign  $6.951 \pm 0.136$   $\chi^2/\text{NDF}$ : 1060.9/52

# reg\_asym\_left\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $-19.862 \pm 0.011$   $\chi^2/\text{NDF}$ : 31011.5/25

Left Out:  $-20.123 \pm 0.008$   $\chi^2/\text{NDF}$ : 158578.7/23

Right Out:  $-19.283 \pm 0.011$   $\chi^2/\text{NDF}$ : 247532.7/29

Left In:  $-20.063 \pm 0.008$   $\chi^2/\text{NDF}$ : 132690.0/22

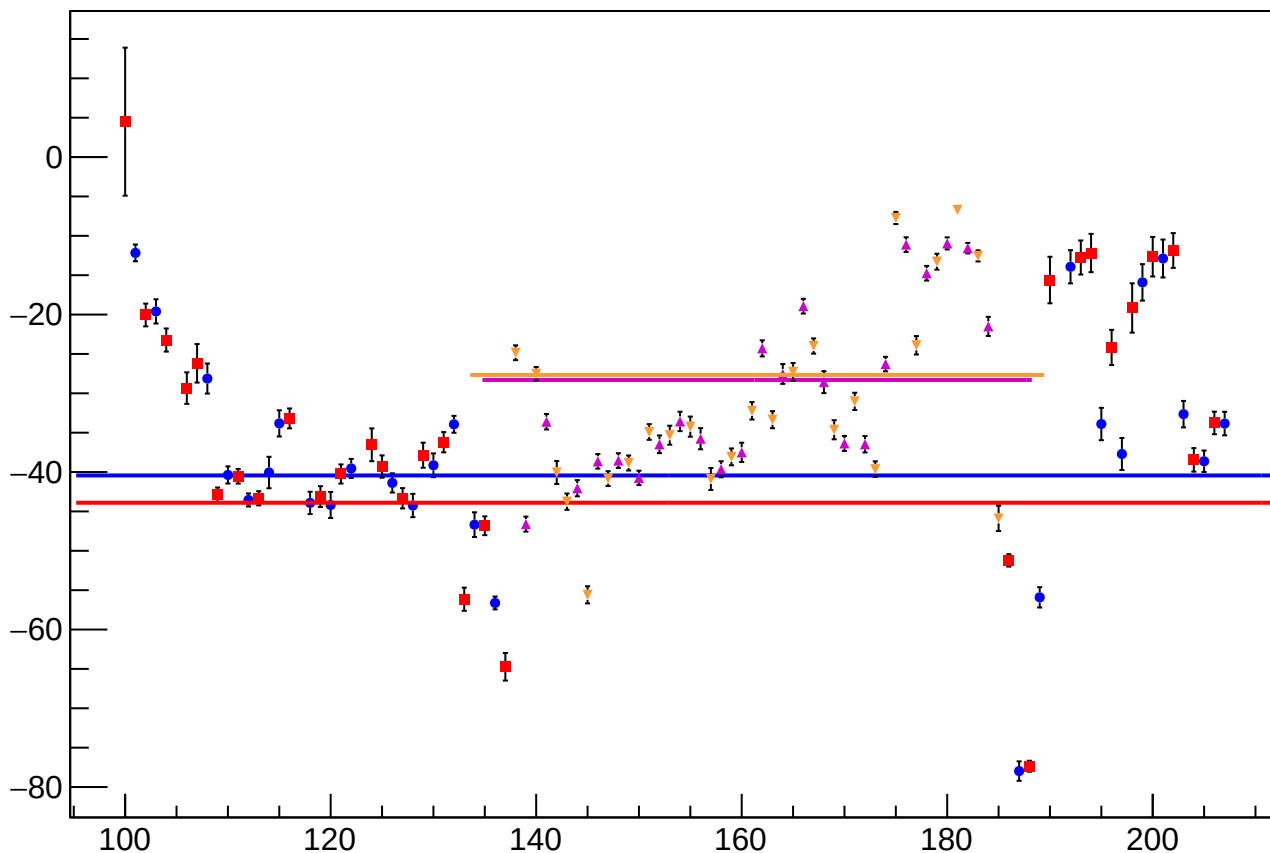
+ sign  $-20.035 \pm 0.006$   $\chi^2/\text{NDF}$ : 189956.1/49

All:  $-19.906 \pm 0.005$   $\chi^2/\text{NDF}$ : 574459.5/102

- sign  $-19.782 \pm 0.006$   $\chi^2/\text{NDF}$ : 383722.6/52



# reg\_asym\_right\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-40.432 \pm 0.267$   $\chi^2/\text{NDF}$ : 2950.0/25

Left Out:  $-27.668 \pm 0.200$   $\chi^2/\text{NDF}$ : 4396.9/24

Right Out:  $-43.896 \pm 0.247$   $\chi^2/\text{NDF}$ : 4425.4/29

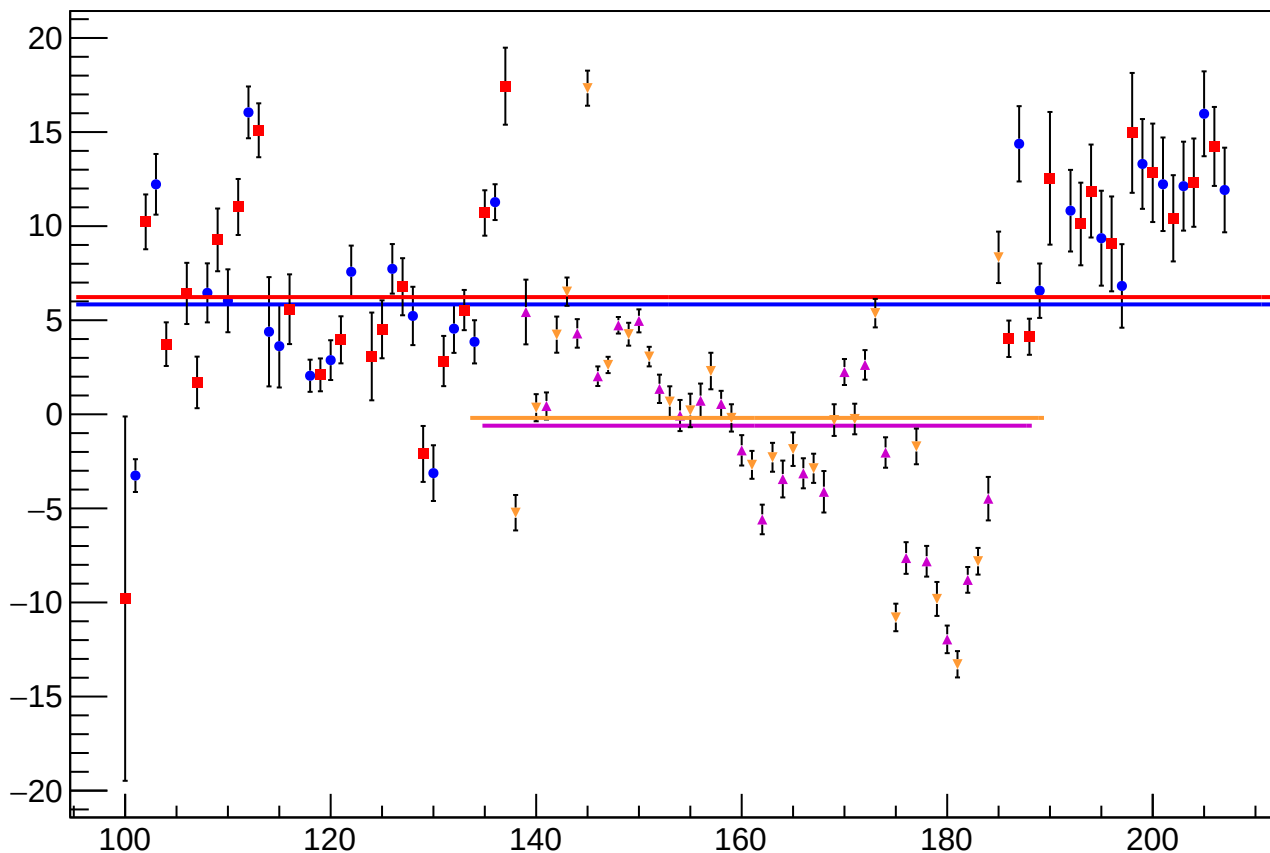
Left In:  $-28.303 \pm 0.206$   $\chi^2/\text{NDF}$ : 3273.4/22

+ sign  $-32.268 \pm 0.160$   $\chi^2/\text{NDF}$ : 8808.1/50

All:  $-33.496 \pm 0.113$   $\chi^2/\text{NDF}$ : 18975.1/103

- sign  $-34.690 \pm 0.158$   $\chi^2/\text{NDF}$ : 10051.3/52

# reg\_asym\_right\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $5.841 \pm 0.286$   $\chi^2/\text{NDF}: 362.6/25$

Left Out:  $-0.192 \pm 0.150$   $\chi^2/\text{NDF}: 1545.3/24$

Right Out:  $6.229 \pm 0.276$   $\chi^2/\text{NDF}: 250.3/29$

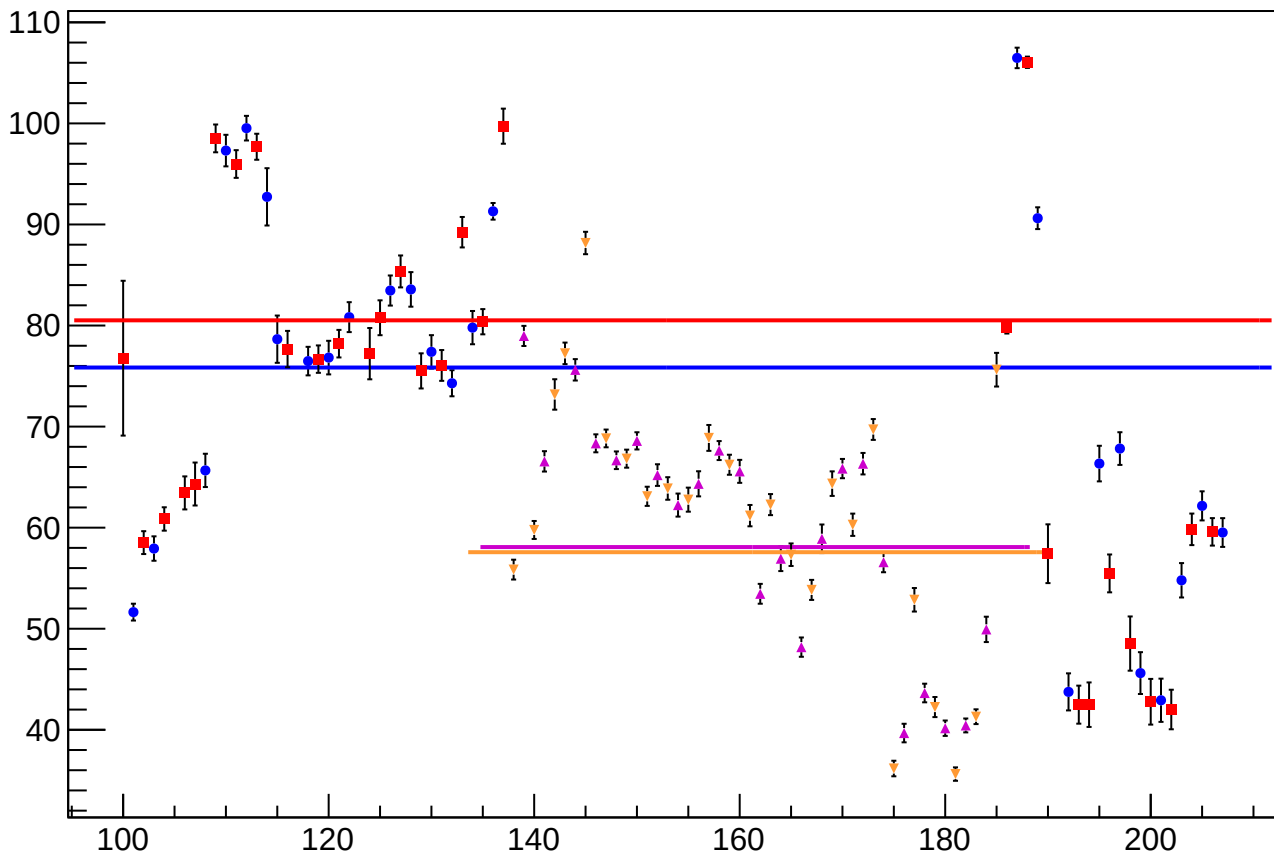
Left In:  $-0.605 \pm 0.155$   $\chi^2/\text{NDF}: 974.6/22$

+ sign  $1.111 \pm 0.133$   $\chi^2/\text{NDF}: 2256.8/50$

All:  $1.075 \pm 0.095$   $\chi^2/\text{NDF}: 3948.1/103$

- sign  $1.037 \pm 0.135$   $\chi^2/\text{NDF}: 1691.1/52$

# reg\_asym\_right\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $75.845 \pm 0.273$   $\chi^2/\text{NDF}$ : 4412.2/25

Left Out:  $57.573 \pm 0.199$   $\chi^2/\text{NDF}$ : 4685.5/24

Right Out:  $80.514 \pm 0.247$   $\chi^2/\text{NDF}$ : 5767.8/29

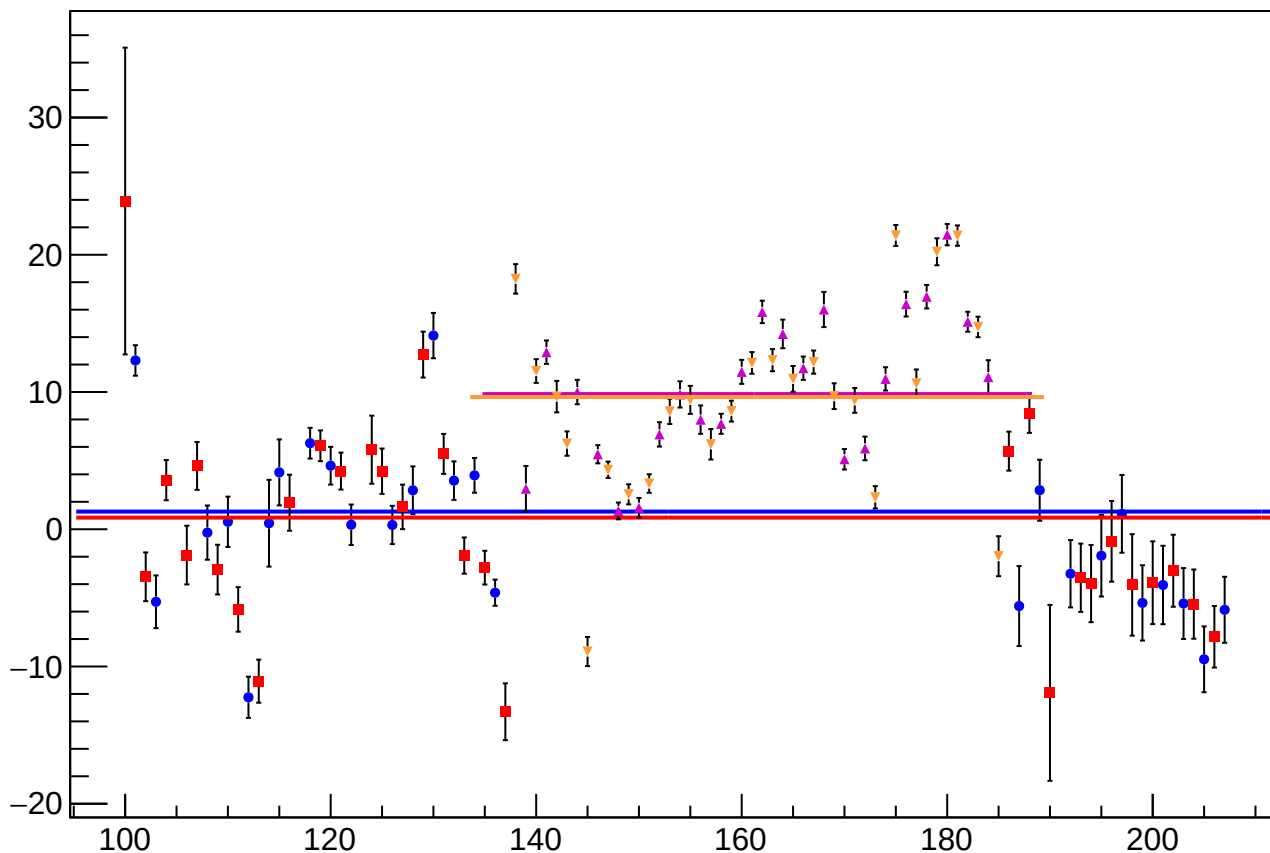
Left In:  $58.080 \pm 0.203$   $\chi^2/\text{NDF}$ : 3558.6/22

+ sign  $63.914 \pm 0.161$   $\chi^2/\text{NDF}$ : 12024.0/50

All:  $65.579 \pm 0.112$   $\chi^2/\text{NDF}$ : 26484.1/103

- sign  $67.166 \pm 0.157$   $\chi^2/\text{NDF}$ : 14250.5/52

# reg\_asym\_right\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $1.288 \pm 0.332$   $\chi^2/\text{NDF}$ : 382.4/25

Left Out:  $9.636 \pm 0.171$   $\chi^2/\text{NDF}$ : 1491.5/24

Right Out:  $0.850 \pm 0.328$   $\chi^2/\text{NDF}$ : 333.7/29

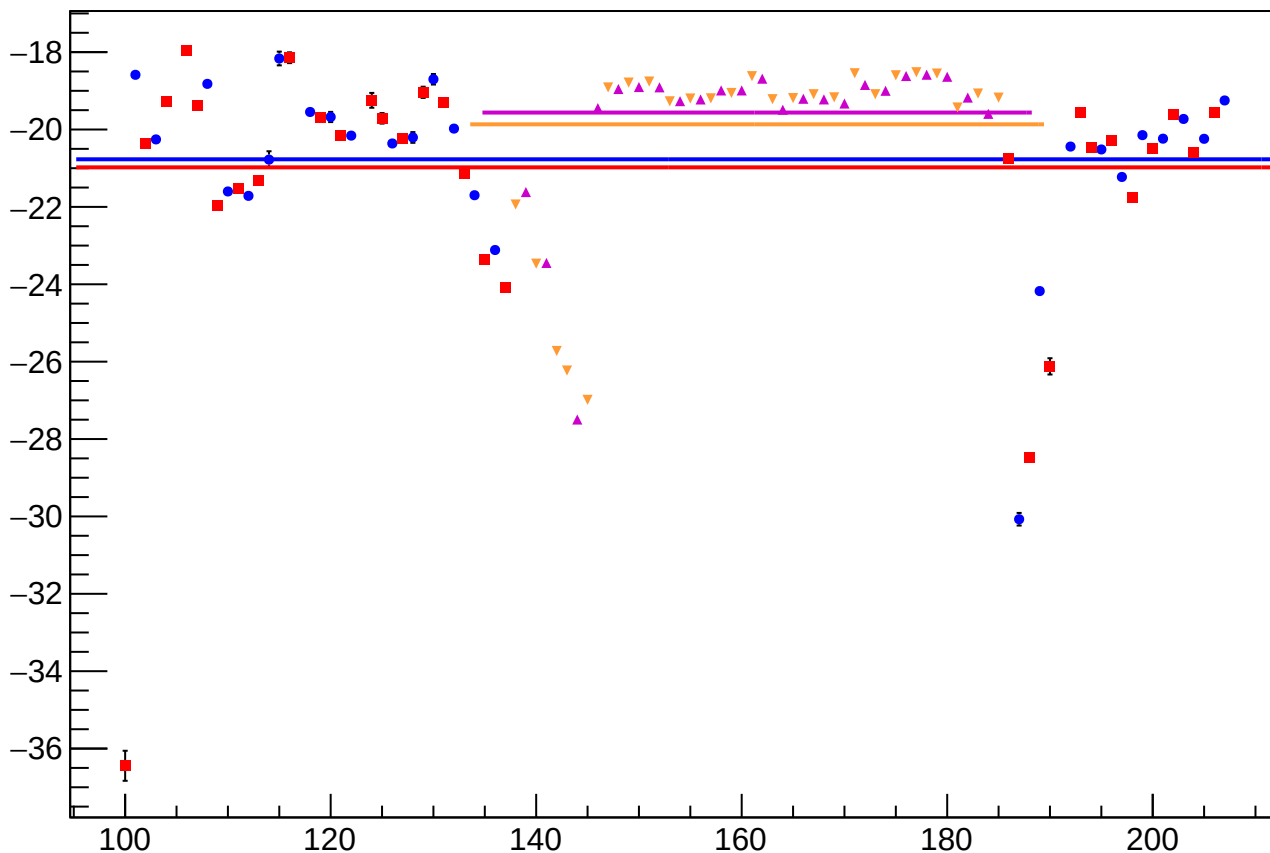
Left In:  $9.849 \pm 0.176$   $\chi^2/\text{NDF}$ : 993.0/22

+ sign  $7.880 \pm 0.152$   $\chi^2/\text{NDF}$ : 2372.7/50

All:  $7.855 \pm 0.109$   $\chi^2/\text{NDF}$ : 4284.3/103

- sign  $7.829 \pm 0.155$   $\chi^2/\text{NDF}$ : 1911.5/52

# reg\_asym\_right\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-20.770 \pm 0.016$   $\chi^2/\text{NDF}: 12534.7/25$

Left Out:  $-19.866 \pm 0.008$   $\chi^2/\text{NDF}: 78894.3/24$

Right Out:  $-20.978 \pm 0.016$   $\chi^2/\text{NDF}: 20670.6/29$

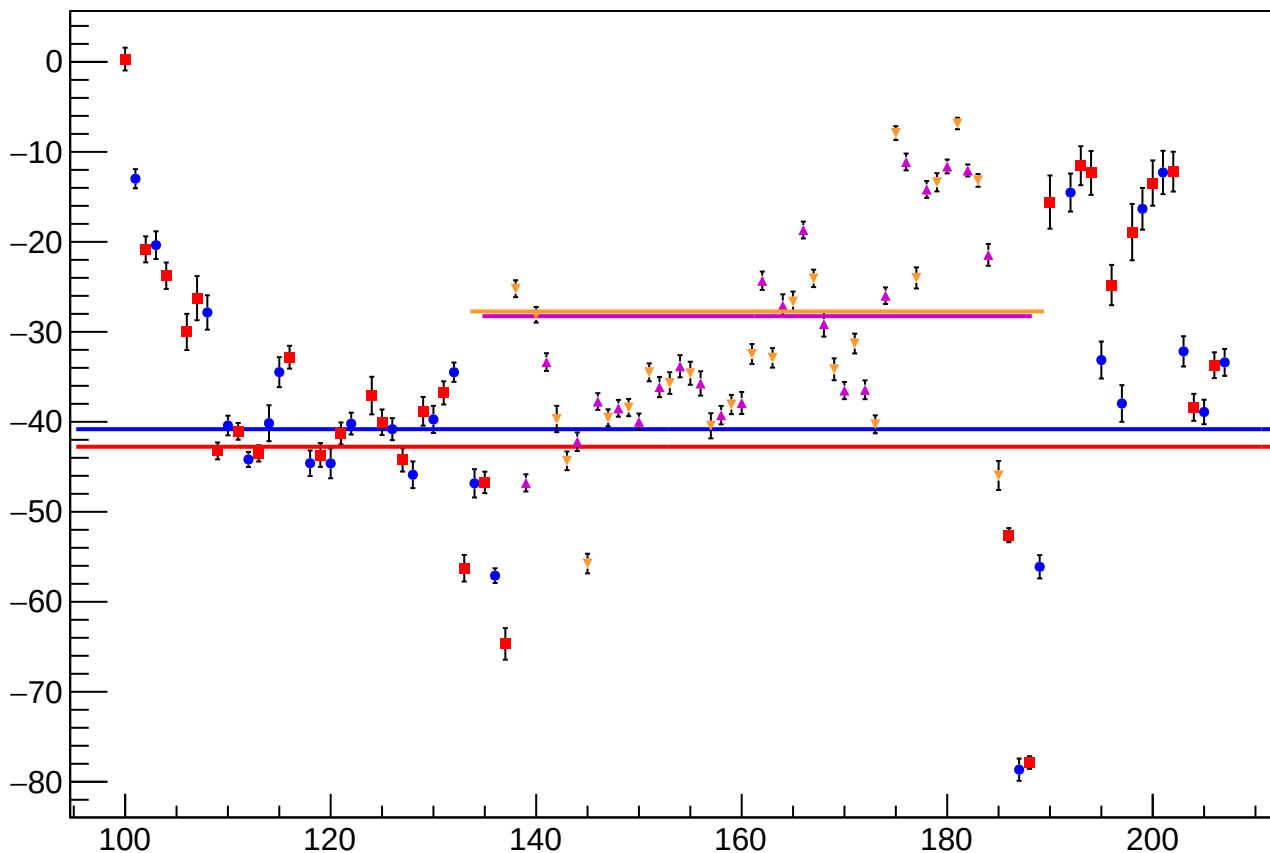
Left In:  $-19.562 \pm 0.008$   $\chi^2/\text{NDF}: 45172.6/22$

+ sign  $-20.038 \pm 0.007$   $\chi^2/\text{NDF}: 93937.0/50$

All:  $-19.937 \pm 0.005$   $\chi^2/\text{NDF}: 166311.2/103$

- sign  $-19.835 \pm 0.007$   $\chi^2/\text{NDF}: 71969.6/52$

# reg\_asym\_right\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-40.816 \pm 0.267$   $\chi^2/\text{NDF}: 2958.6/25$

Left Out:  $-27.729 \pm 0.201$   $\chi^2/\text{NDF}: 4299.7/24$

Right Out:  $-42.768 \pm 0.243$   $\chi^2/\text{NDF}: 5637.1/29$

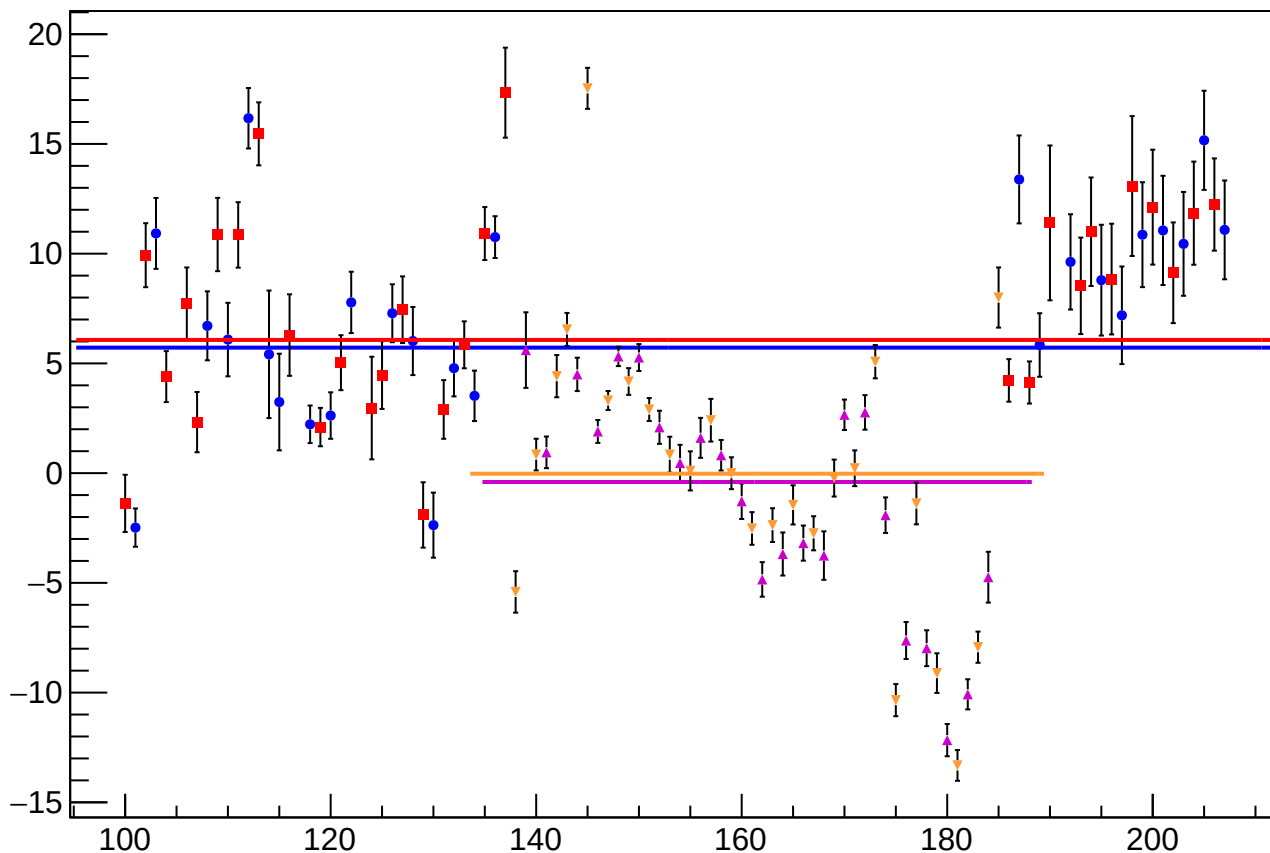
Left In:  $-28.260 \pm 0.206$   $\chi^2/\text{NDF}: 3172.7/22$

+ sign  $-32.446 \pm 0.161$   $\chi^2/\text{NDF}: 8790.0/50$

All:  $-33.411 \pm 0.112$   $\chi^2/\text{NDF}: 19744.2/103$

- sign  $-34.336 \pm 0.157$   $\chi^2/\text{NDF}: 10883.5/52$

# reg\_asym\_right\_dd\_diff\_bpm4aY\_slope vs Slug



Right In: 5.719 $\pm$ 0.286  $\chi^2/\text{NDF}$ : 305.0/25

Left Out: -0.026 $\pm$ 0.150  $\chi^2/\text{NDF}$ :1531.8/24

Right Out: 6.070 $\pm$ 0.270  $\chi^2/\text{NDF}$ : 260.2/29

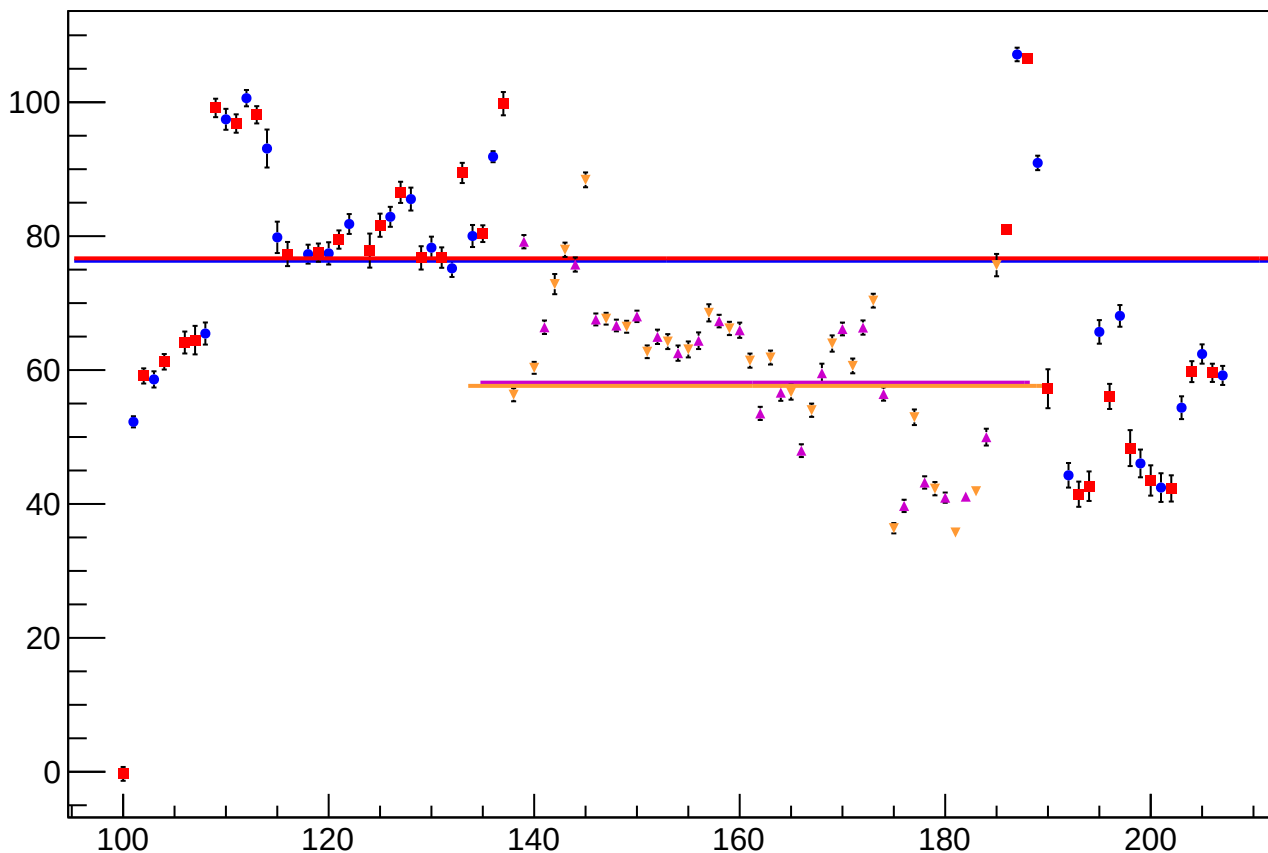
Left In: -0.404 $\pm$ 0.155  $\chi^2/\text{NDF}$ :1084.1/22

+ sign 1.215 $\pm$ 0.133  $\chi^2/\text{NDF}$ : 2152.3/50

All: 1.210 $\pm$ 0.095  $\chi^2/\text{NDF}$ : 3927.4/103

- sign 1.204 $\pm$ 0.135  $\chi^2/\text{NDF}$ : 1775.1/52

# reg\_asym\_right\_dd\_diff\_bpm4eX\_slope vs Slug



Right In: 76.326 $\pm$ 0.273  $\chi^2$ /NDF: 4470.9/25

Left Out: 57.638 $\pm$ 0.199  $\chi^2$ /NDF: 4612.7/24

Right Out: 76.683 $\pm$ 0.240  $\chi^2$ /NDF: 11683.8/29

Left In: 58.117 $\pm$ 0.204  $\chi^2$ /NDF: 3443.9/22

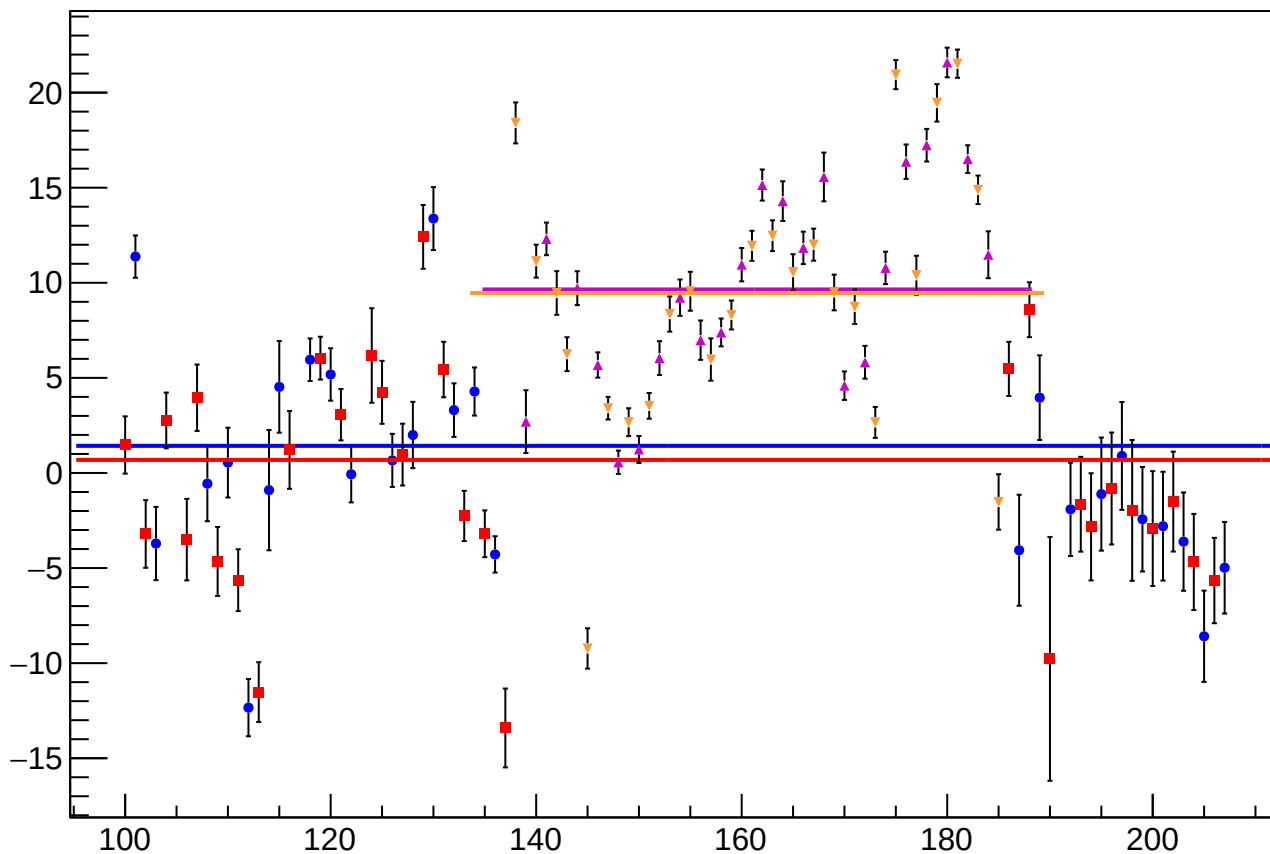
+ sign 64.123 $\pm$ 0.161  $\chi^2$ /NDF: 12135.8/50

All: 65.036 $\pm$ 0.112  $\chi^2$ /NDF: 30796.8/103

- sign 65.887 $\pm$ 0.155  $\chi^2$ /NDF: 18598.9/52



# reg\_asym\_right\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $1.426 \pm 0.333$   $\chi^2/\text{NDF}$ : 334.4/25

Left Out:  $9.461 \pm 0.172$   $\chi^2/\text{NDF}$ : 1483.1/24

Right Out:  $0.686 \pm 0.321$   $\chi^2/\text{NDF}$ : 316.3/29

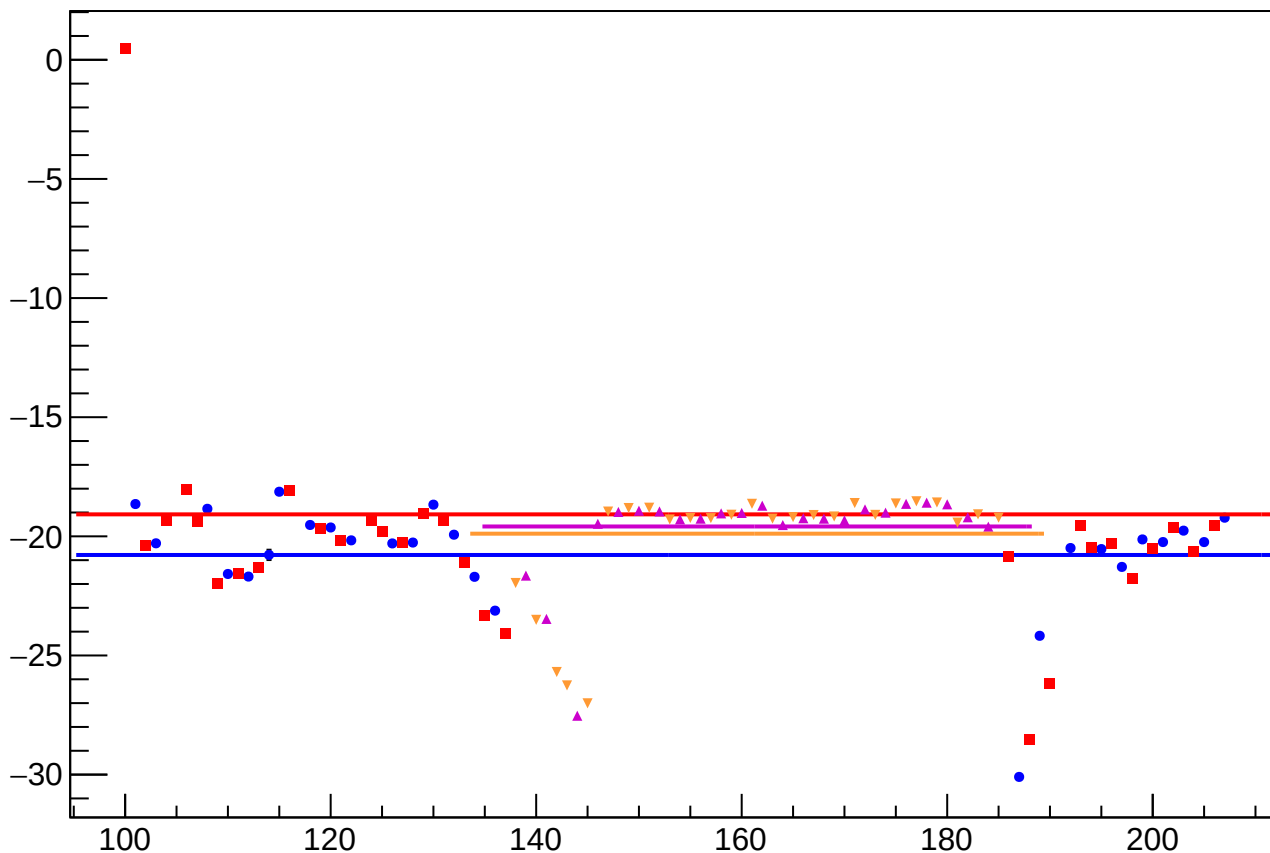
Left In:  $9.650 \pm 0.177$   $\chi^2/\text{NDF}$ : 1078.5/22

+ sign  $7.771 \pm 0.153$   $\chi^2/\text{NDF}$ : 2278.3/50

All:  $7.670 \pm 0.109$   $\chi^2/\text{NDF}$ : 4273.2/103

- sign  $7.565 \pm 0.155$   $\chi^2/\text{NDF}$ : 1994.0/52

# reg\_asym\_right\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $-20.782 \pm 0.016$   $\chi^2/\text{NDF}: 12424.2/25$

Left Out:  $-19.889 \pm 0.008$   $\chi^2/\text{NDF}: 78512.6/24$

Right Out:  $-19.078 \pm 0.016$   $\chi^2/\text{NDF}: 171882.8/29$

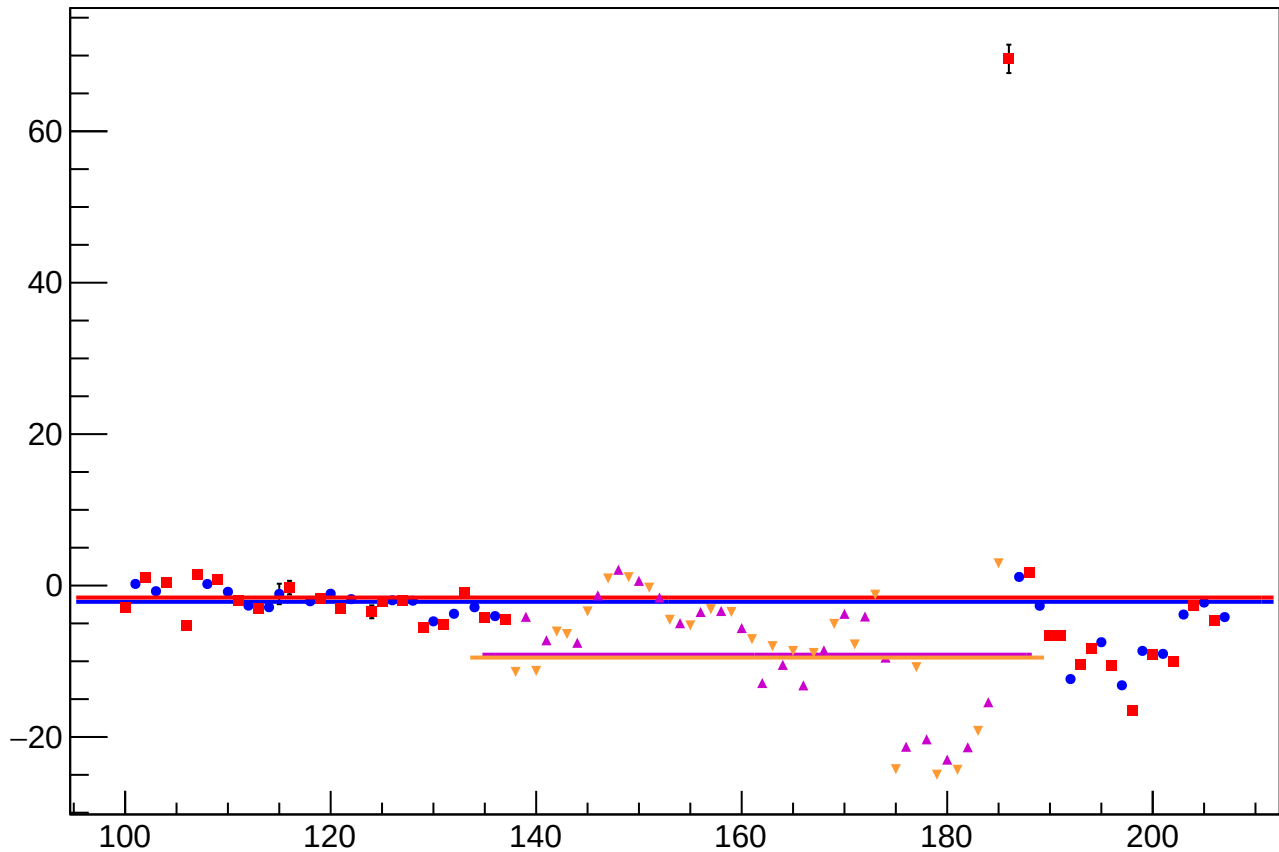
Left In:  $-19.586 \pm 0.008$   $\chi^2/\text{NDF}: 45085.3/22$

+ sign  $-20.058 \pm 0.007$   $\chi^2/\text{NDF}: 93381.4/50$

All:  $-19.770 \pm 0.005$   $\chi^2/\text{NDF}: 314517.6/103$

- sign  $-19.481 \pm 0.007$   $\chi^2/\text{NDF}: 217815.0/52$

reg\_asym\_sam\_15\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-2.147 \pm 0.050$   $\chi^2/\text{NDF}$ : 3344.5/25

Left Out:  $-9.512 \pm 0.073$   $\chi^2/\text{NDF}$ : 12916.4/24

Right Out:  $-1.582 \pm 0.046$   $\chi^2/\text{NDF}$ : 6948.5/30

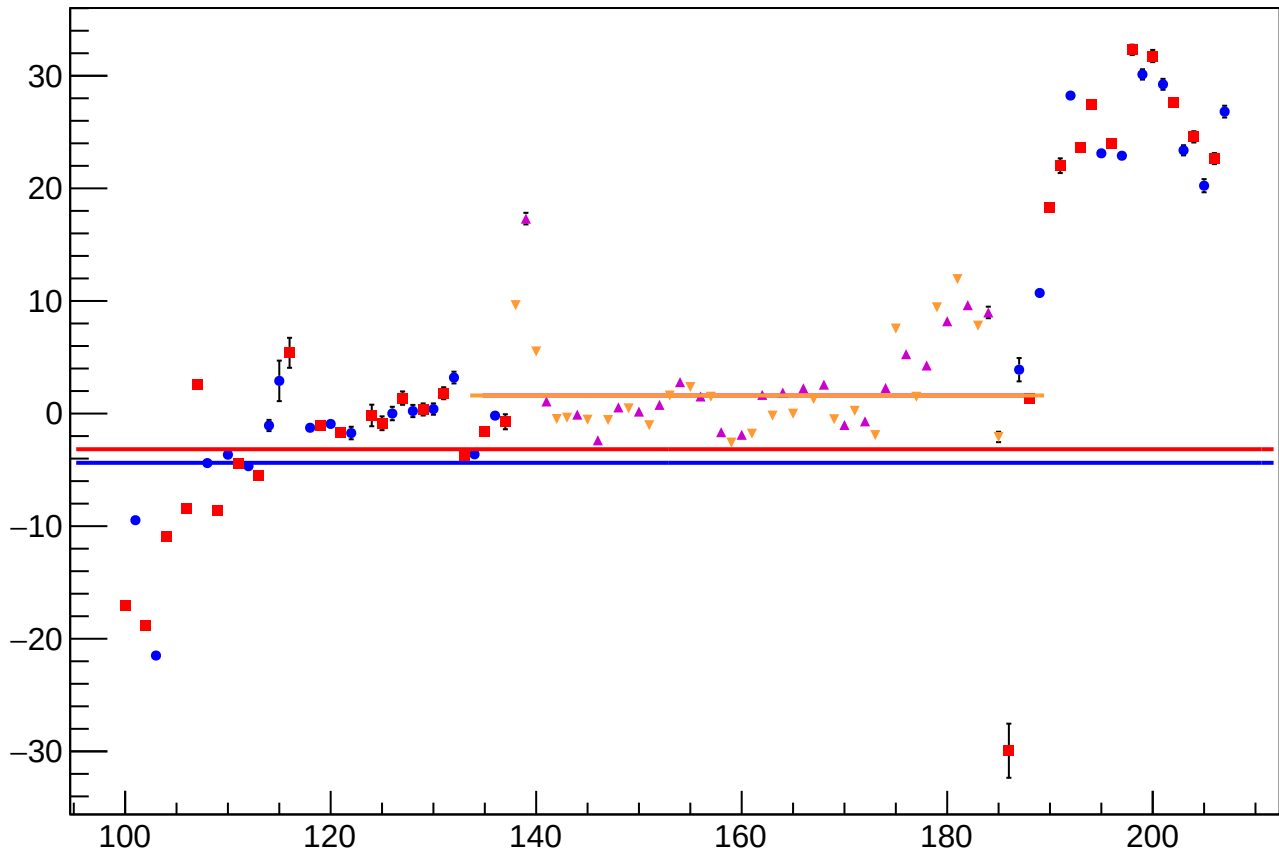
Left In:  $-9.131 \pm 0.075$   $\chi^2/\text{NDF}$ : 10390.6/22

+ sign  $-4.499 \pm 0.041$   $\chi^2/\text{NDF}$ : 23259.1/50

All:  $-4.043 \pm 0.028$   $\chi^2/\text{NDF}$ : 48256.2/104

- sign  $-3.633 \pm 0.039$   $\chi^2/\text{NDF}$ : 24763.0/53

reg\_asym\_sam\_15\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $-4.374 \pm 0.053$   $\chi^2/\text{NDF}: 57719.7/25$

Left Out:  $1.606 \pm 0.055$   $\chi^2/\text{NDF}: 4677.2/24$

Right Out:  $-3.167 \pm 0.052$   $\chi^2/\text{NDF}: 63254.8/30$

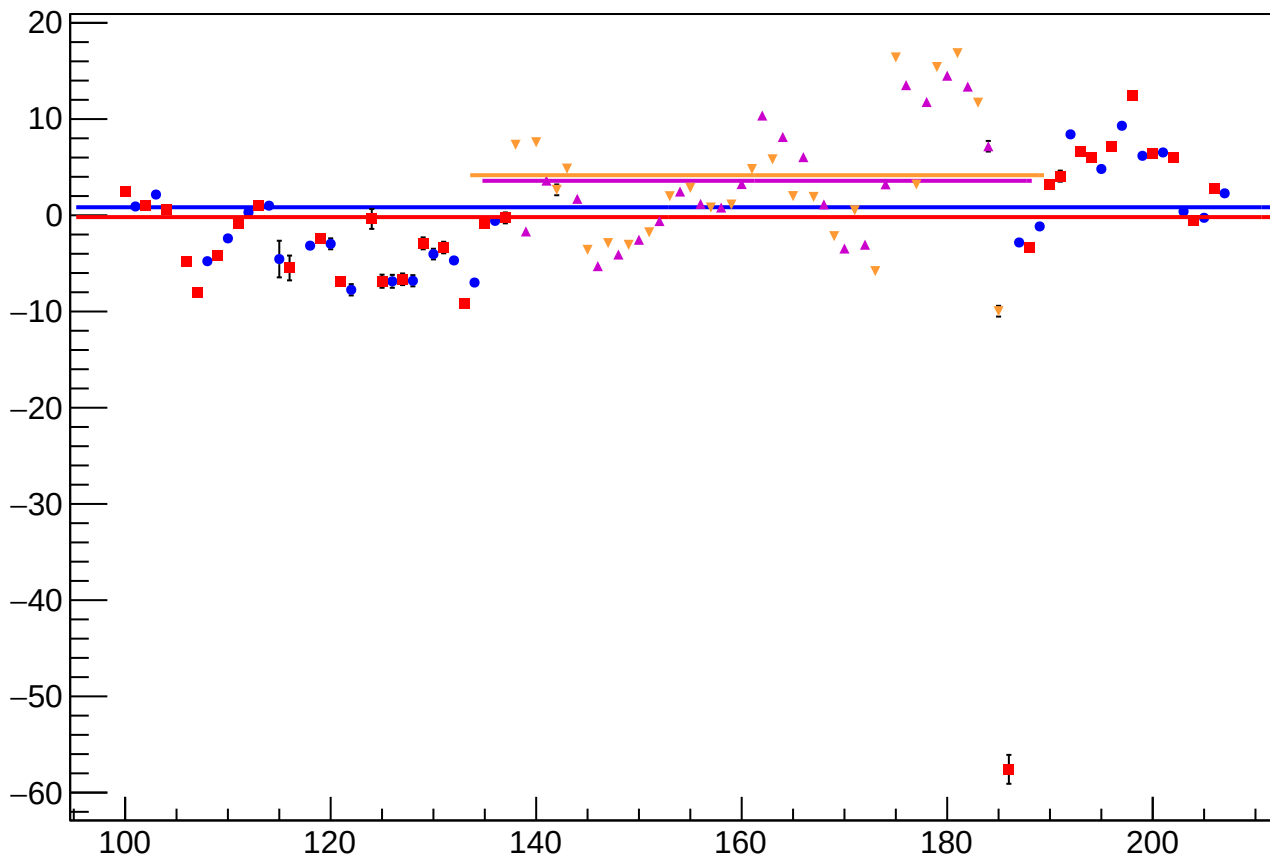
Left In:  $1.605 \pm 0.058$   $\chi^2/\text{NDF}: 3656.4/22$

+ sign  $-1.506 \pm 0.038$   $\chi^2/\text{NDF}: 68508.1/50$

All:  $-1.264 \pm 0.027$   $\chi^2/\text{NDF}: 139261.2/104$

- sign  $-1.017 \pm 0.039$   $\chi^2/\text{NDF}: 70672.4/53$

reg\_asym\_sam\_15\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $0.837 \pm 0.048$   $\chi^2/\text{NDF}$ : 4172.7/25

Left Out:  $4.167 \pm 0.072$   $\chi^2/\text{NDF}$ : 9246.5/24

Right Out:  $-0.188 \pm 0.046$   $\chi^2/\text{NDF}$ : 8208.3/30

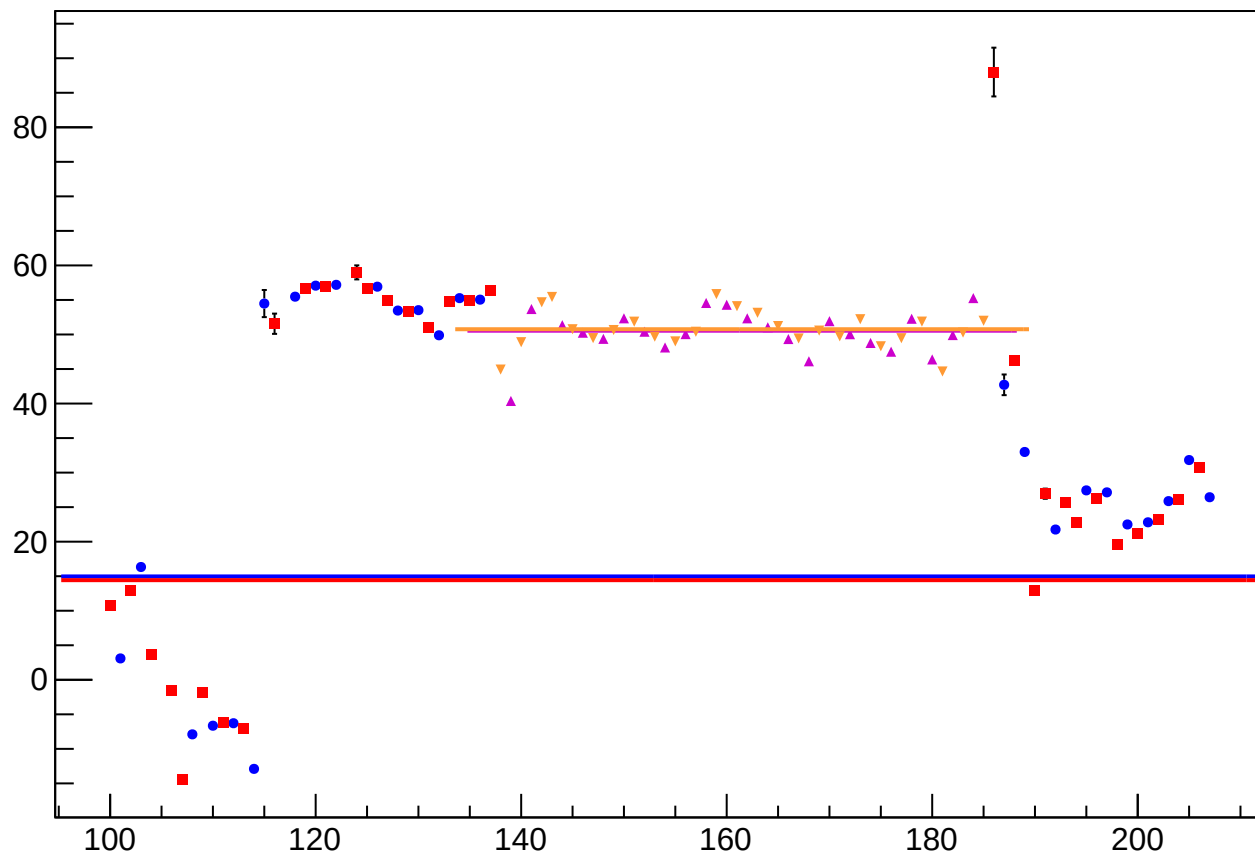
Left In:  $3.584 \pm 0.074$   $\chi^2/\text{NDF}$ : 7228.4/22

+ sign  $1.853 \pm 0.040$   $\chi^2/\text{NDF}$ : 14901.3/50

All:  $1.350 \pm 0.028$   $\chi^2/\text{NDF}$ : 32525.5/104

- sign  $0.866 \pm 0.039$   $\chi^2/\text{NDF}$ : 17311.4/53

reg\_asym\_sam\_15\_avg\_diff\_bpm4eY\_slope vs Slug



Right In: 14.967 $\pm$ 0.063  $\chi^2$ /NDF: 114328.9/25

Left Out: 50.761 $\pm$ 0.062  $\chi^2$ /NDF:1748.6/24

Right Out: 14.427 $\pm$ 0.062  $\chi^2$ /NDF: 130737.0/30

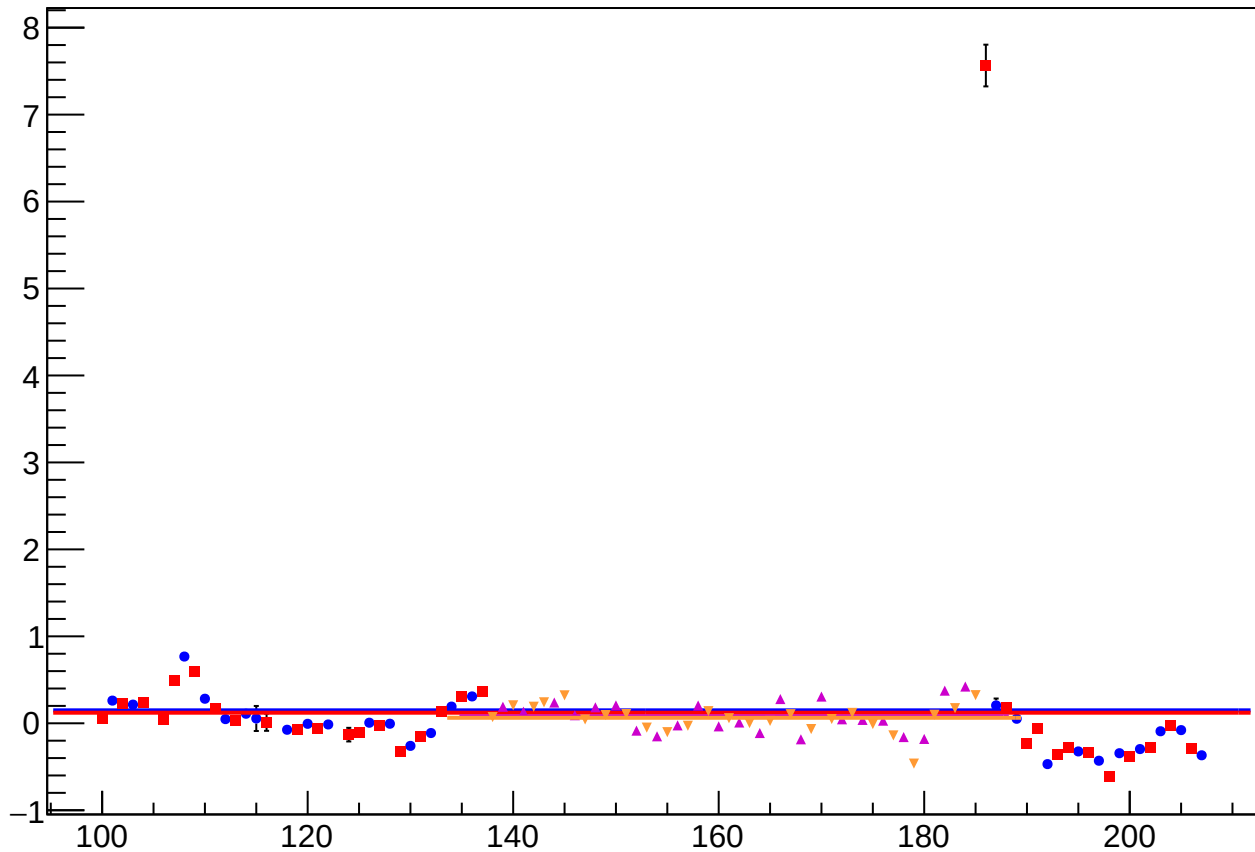
Left In: 50.550 $\pm$ 0.065  $\chi^2$ /NDF:1717.7/22

+ sign 33.035 $\pm$ 0.044  $\chi^2$ /NDF: 278830.5/50

All: 32.375 $\pm$ 0.032  $\chi^2$ /NDF: 574021.6/104

- sign 31.703 $\pm$ 0.045  $\chi^2$ /NDF: 294744.8/53

reg\_asym\_sam\_15\_avg\_diff\_bpm12X\_slope vs Slug



Right In: 0.149 $\pm$ 0.002     $\chi^2$ /NDF: 13251.8/25

Left Out: 0.063 $\pm$ 0.003     $\chi^2$ /NDF:2566.7/24

Right Out: 0.122 $\pm$ 0.002     $\chi^2$ /NDF: 12949.9/30

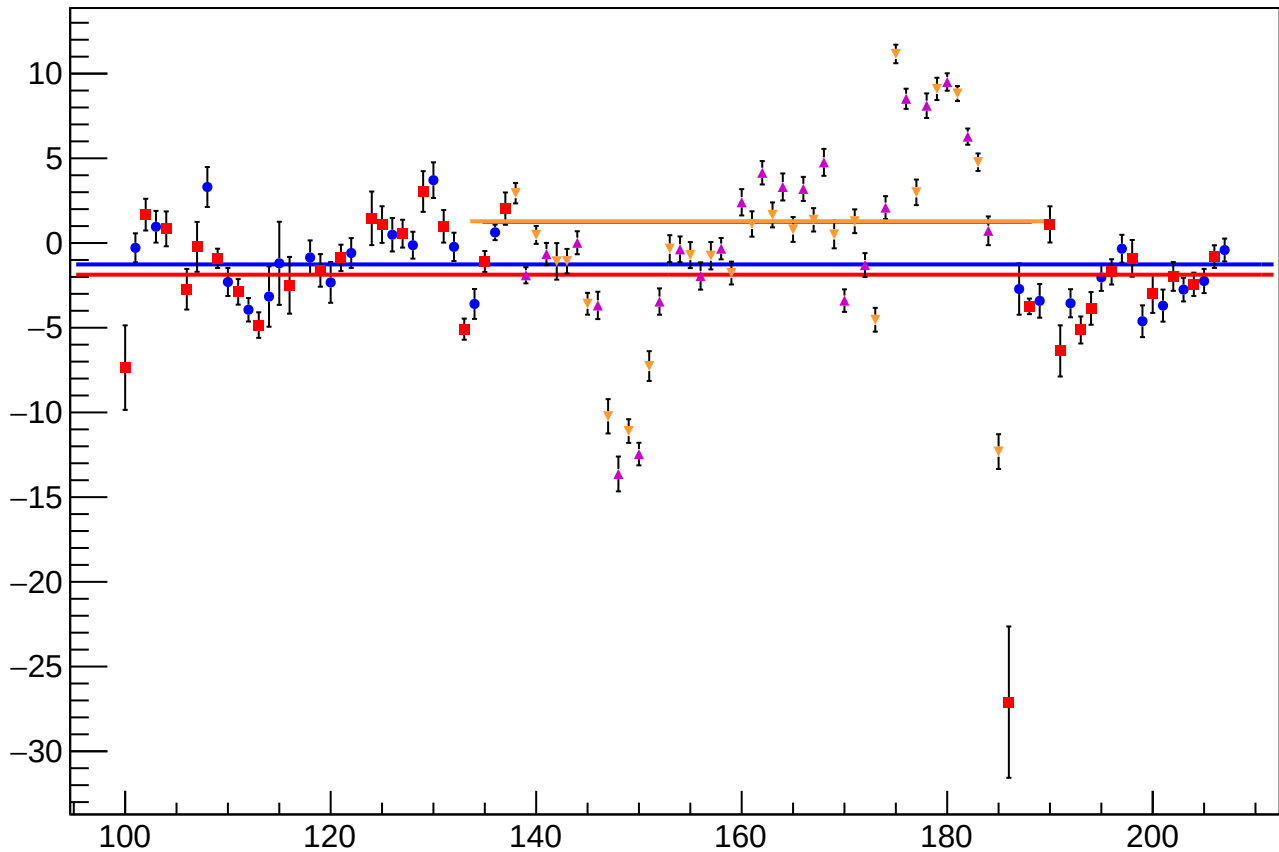
Left In: 0.080 $\pm$ 0.003     $\chi^2$ /NDF:3446.5/22

+ sign 0.111 $\pm$ 0.002     $\chi^2$ /NDF: 16342.0/50

All: 0.108 $\pm$ 0.001     $\chi^2$ /NDF: 32874.4/104

- sign 0.104 $\pm$ 0.002     $\chi^2$ /NDF: 16525.3/53

# reg\_asym\_sam\_15\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-1.263 \pm 0.168$   $\chi^2/\text{NDF}: 137.0/25$

Left Out:  $1.283 \pm 0.137$   $\chi^2/\text{NDF}: 1715.5/24$

Right Out:  $-1.869 \pm 0.155$   $\chi^2/\text{NDF}: 232.2/30$

Left In:  $1.247 \pm 0.140$   $\chi^2/\text{NDF}: 1512.4/22$

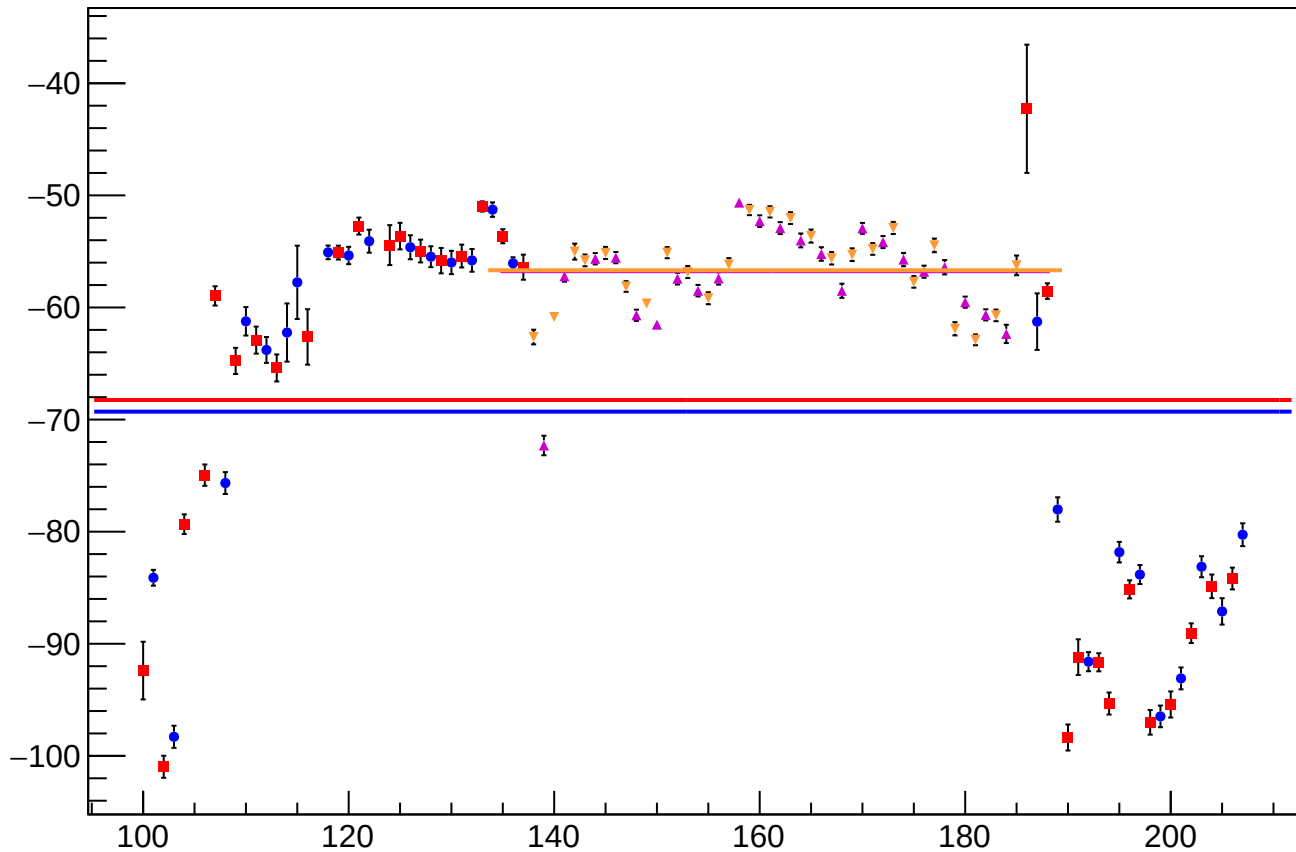
+ sign  $0.263 \pm 0.106$   $\chi^2/\text{NDF}: 1991.0/50$

All:  $0.046 \pm 0.074$   $\chi^2/\text{NDF}: 3966.4/104$

- sign  $-0.162 \pm 0.104$   $\chi^2/\text{NDF}: 1967.2/53$



# reg\_asym\_sam\_15\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-69.290 \pm 0.180$   $\chi^2/\text{NDF}: 7849.1/25$

Left Out:  $-56.680 \pm 0.107$   $\chi^2/\text{NDF}: 1014.5/24$

Right Out:  $-68.255 \pm 0.168$   $\chi^2/\text{NDF}: 10612.2/30$

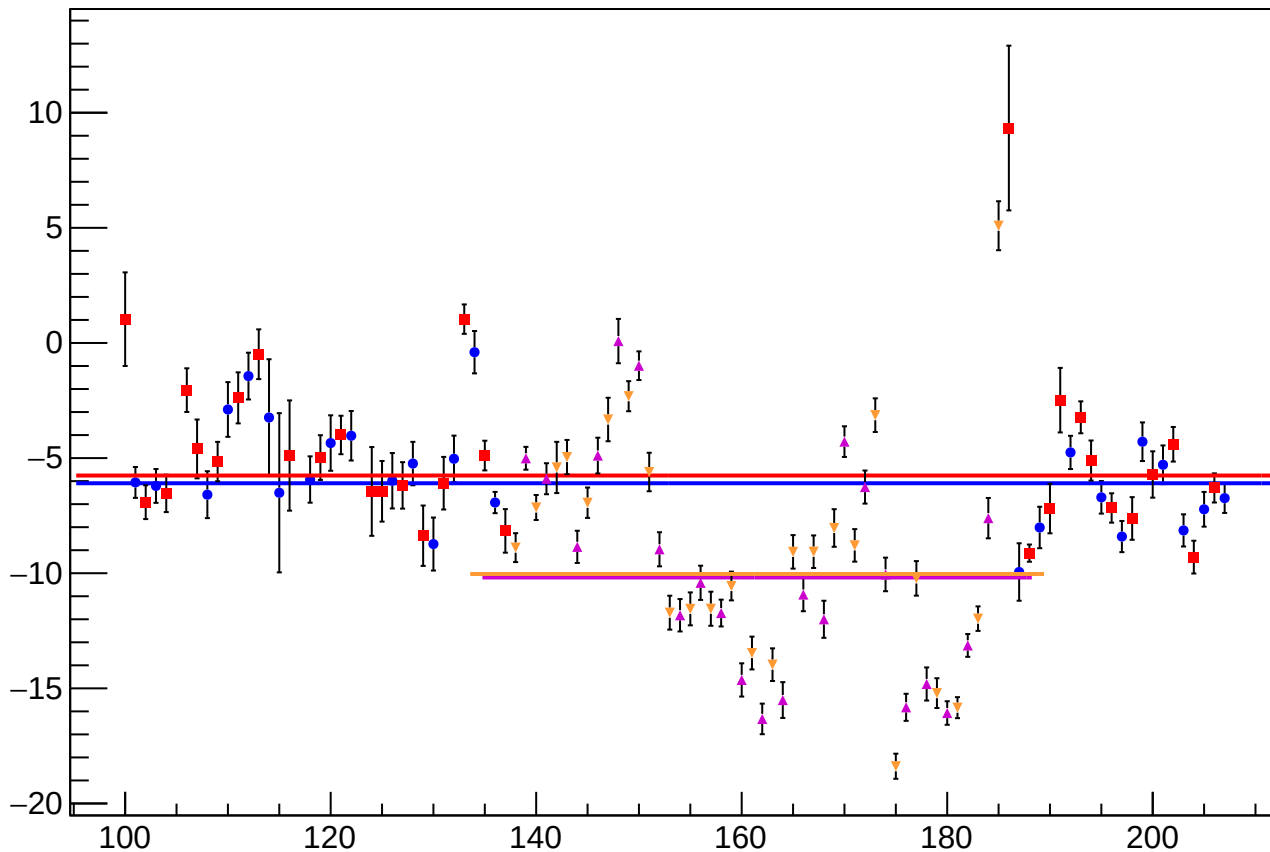
Left In:  $-56.765 \pm 0.112$   $\chi^2/\text{NDF}: 1108.9/22$

+ sign  $-59.973 \pm 0.092$   $\chi^2/\text{NDF}: 12475.8/50$

All:  $-60.139 \pm 0.065$   $\chi^2/\text{NDF}: 27452.1/104$

- sign  $-60.309 \pm 0.093$   $\chi^2/\text{NDF}: 14969.7/53$

# reg\_asym\_sam\_15\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-6.092 \pm 0.167$   $\chi^2/\text{NDF}$ : 131.8/25

Left Out:  $-10.034 \pm 0.136$   $\chi^2/\text{NDF}$ : 1182.4/24

Right Out:  $-5.756 \pm 0.152$   $\chi^2/\text{NDF}$ : 353.5/30

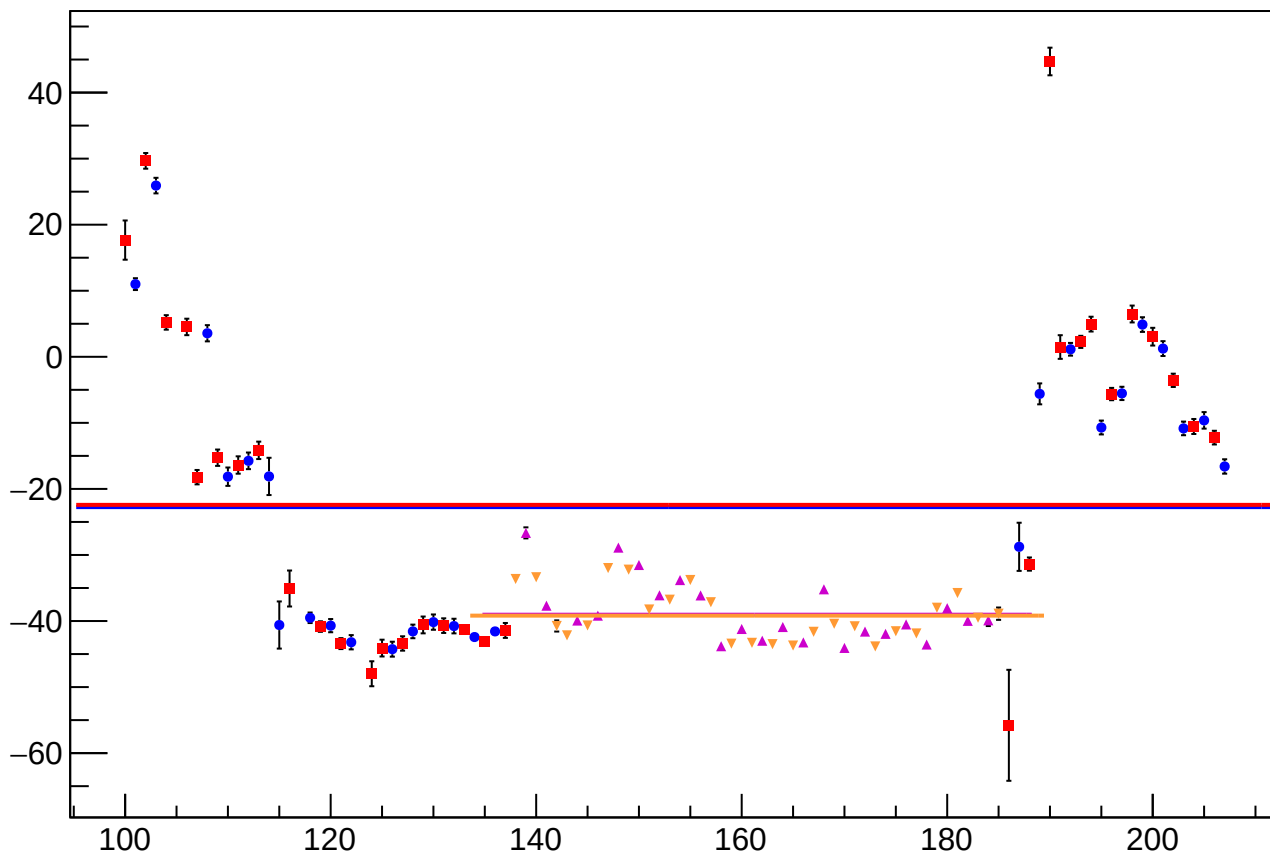
Left In:  $-10.184 \pm 0.139$   $\chi^2/\text{NDF}$ : 1142.6/22

+ sign  $-8.456 \pm 0.105$   $\chi^2/\text{NDF}$ : 1649.3/50

All:  $-8.310 \pm 0.074$   $\chi^2/\text{NDF}$ : 3609.6/104

- sign  $-8.171 \pm 0.103$   $\chi^2/\text{NDF}$ : 1956.6/53

# reg\_asym\_sam\_15\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-22.755 \pm 0.206$   $\chi^2/\text{NDF}$ : 10438.1/25

Left Out:  $-39.183 \pm 0.120$   $\chi^2/\text{NDF}$ : 1034.1/24

Right Out:  $-22.415 \pm 0.195$   $\chi^2/\text{NDF}$ : 12672.9/30

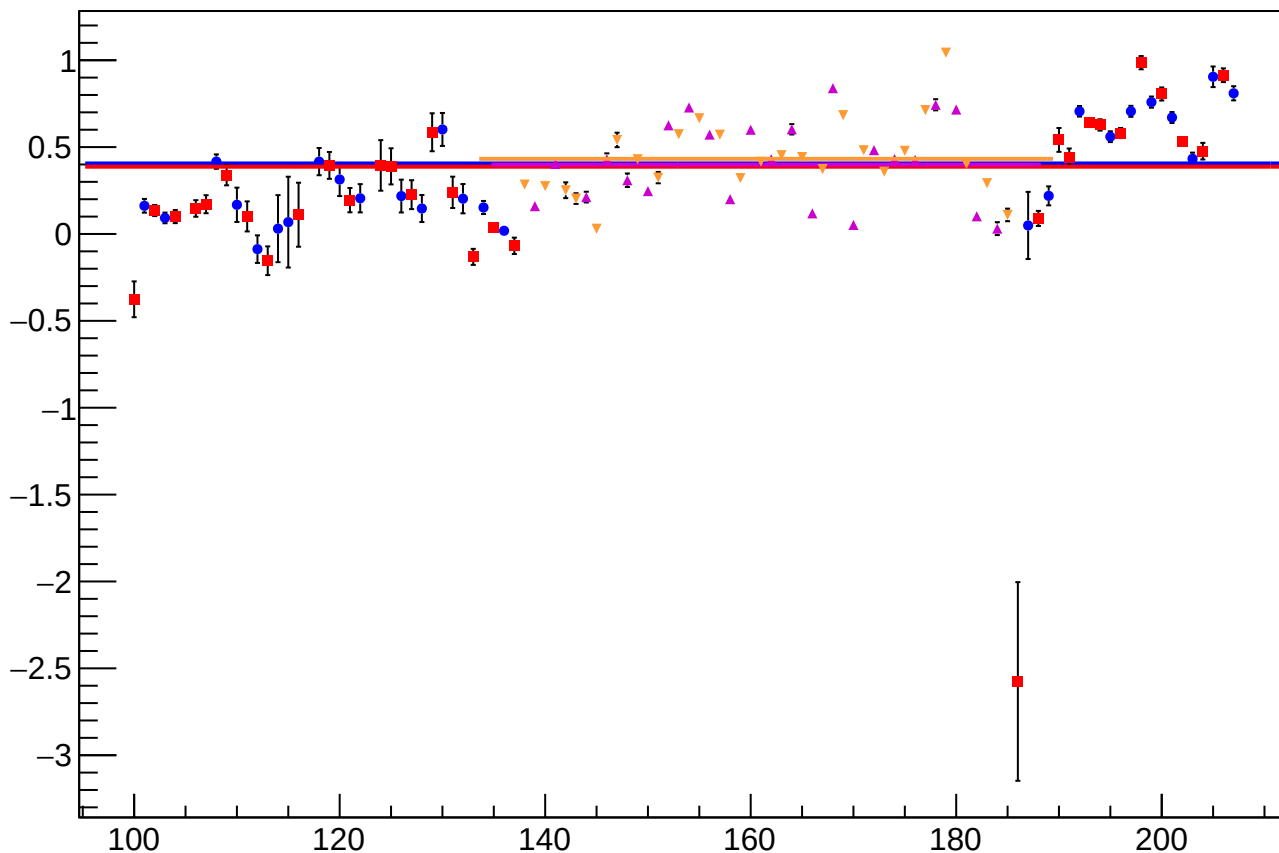
Left In:  $-39.044 \pm 0.124$   $\chi^2/\text{NDF}$ : 1226.4/22

+ sign  $-35.023 \pm 0.104$   $\chi^2/\text{NDF}$ : 16217.5/50

All:  $-34.641 \pm 0.074$   $\chi^2/\text{NDF}$ : 35308.0/104

- sign  $-34.250 \pm 0.105$   $\chi^2/\text{NDF}$ : 19063.0/53

# reg\_asym\_sam\_15\_dd\_diff\_bpm12X\_slope vs Slug



Right In: 0.406 $\pm$ 0.009  $\chi^2$ /NDF: 1179.1/25

Left Out: 0.432 $\pm$ 0.005  $\chi^2$ /NDF:1368.7/24

Right Out: 0.387 $\pm$ 0.008  $\chi^2$ /NDF: 1536.1/30

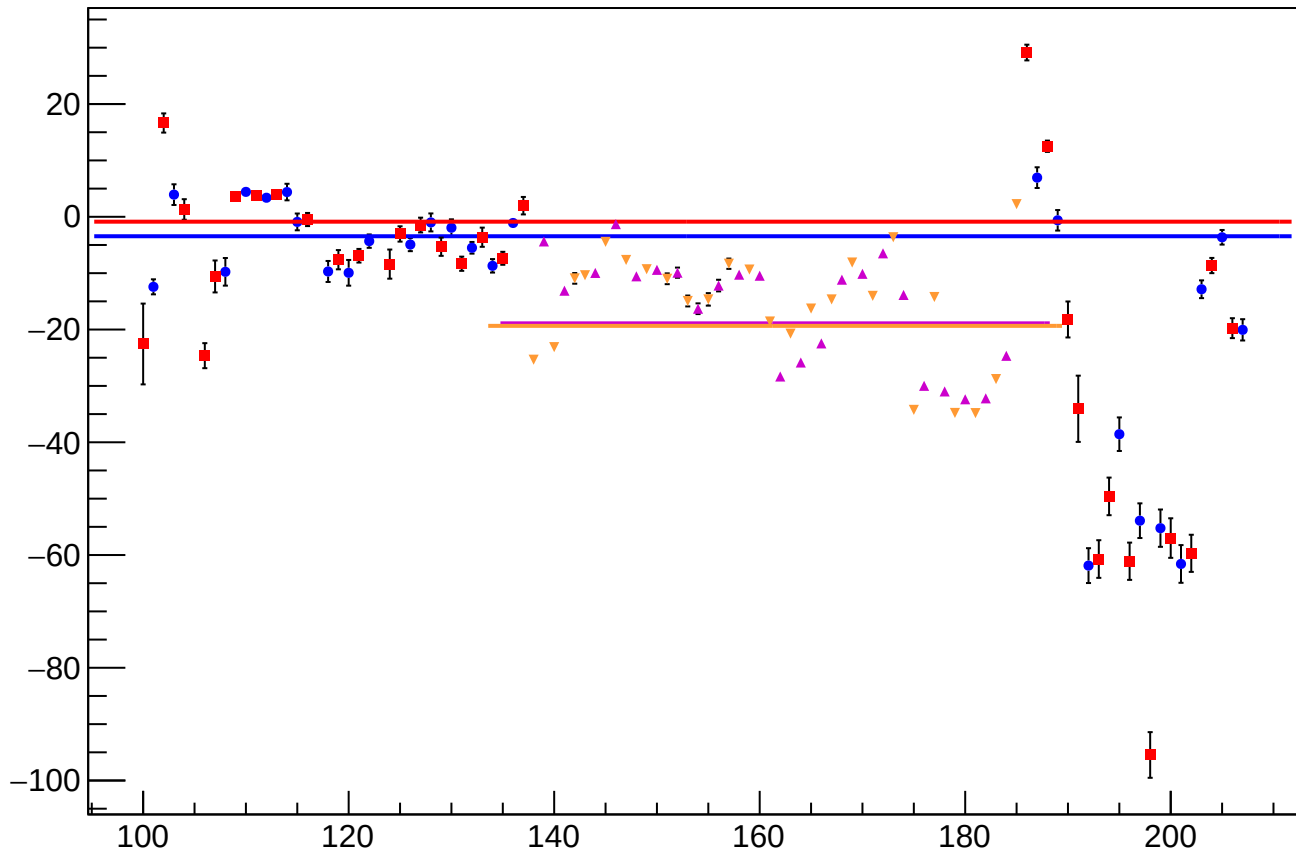
Left In: 0.399 $\pm$ 0.005  $\chi^2$ /NDF:1923.8/22

+ sign 0.425 $\pm$ 0.005  $\chi^2$ /NDF: 2554.7/50

All: 0.410 $\pm$ 0.003  $\chi^2$ /NDF: 6037.5/104

- sign 0.395 $\pm$ 0.004  $\chi^2$ /NDF: 3461.3/53

# reg\_asym\_sam\_37\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-3.450 \pm 0.257$   $\chi^2/\text{NDF}$ : 1862.3/25

Left Out:  $-19.347 \pm 0.113$   $\chi^2/\text{NDF}$ : 10394.7/24

Right Out:  $-0.866 \pm 0.242$   $\chi^2/\text{NDF}$ : 3373.8/30

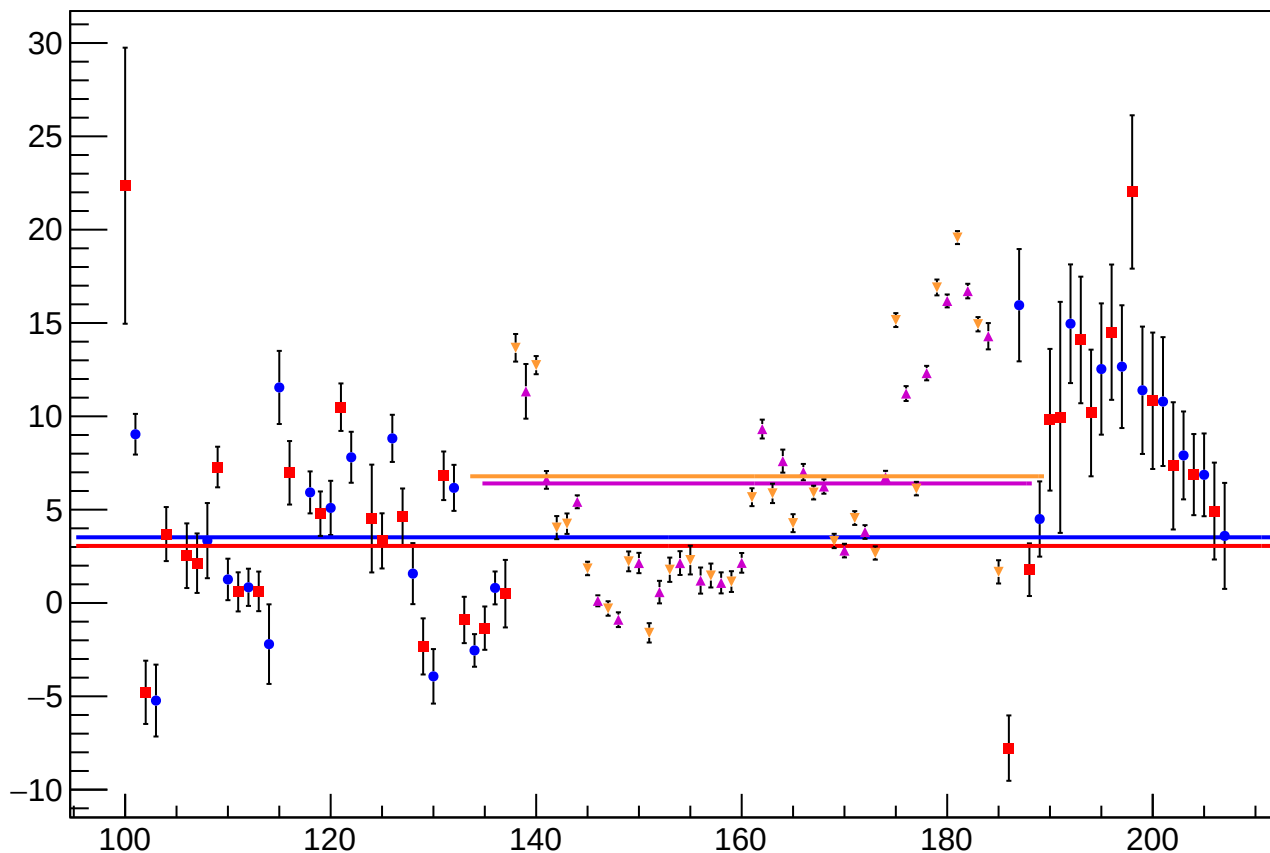
Left In:  $-18.902 \pm 0.116$   $\chi^2/\text{NDF}$ : 8286.2/22

+ sign  $-16.766 \pm 0.104$   $\chi^2/\text{NDF}$ : 15449.7/50

All:  $-16.148 \pm 0.074$   $\chi^2/\text{NDF}$ : 31706.5/104

- sign  $-15.518 \pm 0.105$   $\chi^2/\text{NDF}$ : 16185.0/53

reg\_asym\_sam\_37\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $3.520 \pm 0.295$   $\chi^2/\text{NDF}$ : 264.6/25

Left Out:  $6.788 \pm 0.090$   $\chi^2/\text{NDF}$ : 4632.5/24

Right Out:  $3.057 \pm 0.296$   $\chi^2/\text{NDF}$ : 244.9/30

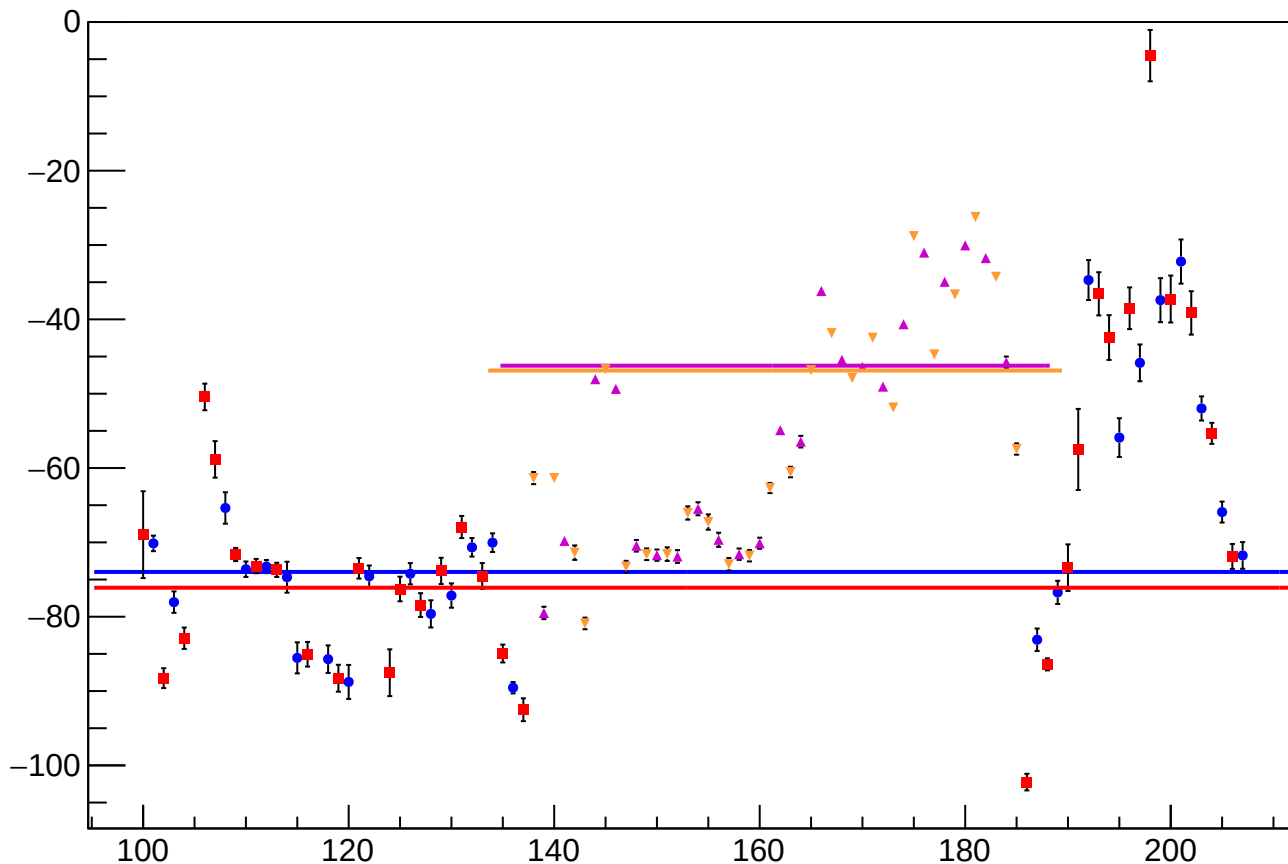
Left In:  $6.404 \pm 0.091$   $\chi^2/\text{NDF}$ : 3410.4/22

+ sign  $6.509 \pm 0.086$   $\chi^2/\text{NDF}$ : 5009.3/50

All:  $6.314 \pm 0.061$   $\chi^2/\text{NDF}$ : 8791.5/104

- sign  $6.115 \pm 0.087$   $\chi^2/\text{NDF}$ : 3771.9/53

reg\_asym\_sam\_37\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $-73.978 \pm 0.287$   $\chi^2/\text{NDF}: 1594.4/25$

Left Out:  $-46.883 \pm 0.114$   $\chi^2/\text{NDF}: 17974.5/24$

Right Out:  $-76.099 \pm 0.275$   $\chi^2/\text{NDF}: 2868.0/30$

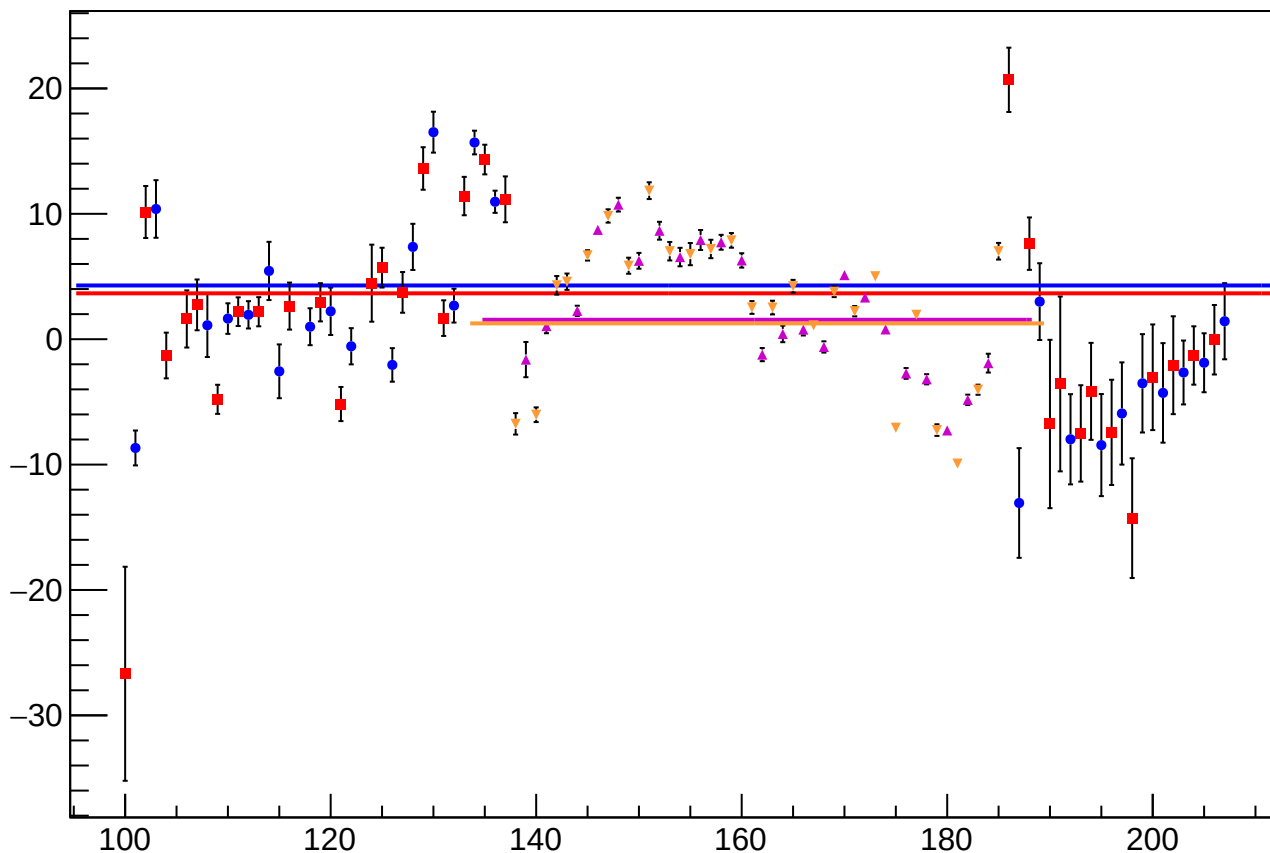
Left In:  $-46.231 \pm 0.116$   $\chi^2/\text{NDF}: 15169.3/22$

+ sign  $-50.562 \pm 0.106$   $\chi^2/\text{NDF}: 27253.1/50$

All:  $-50.662 \pm 0.075$   $\chi^2/\text{NDF}: 55309.6/104$

- sign  $-50.765 \pm 0.107$   $\chi^2/\text{NDF}: 28054.7/53$

reg\_asym\_sam\_37\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $4.286 \pm 0.331$   $\chi^2/\text{NDF}$ : 485.6/25

Left Out:  $1.261 \pm 0.100$   $\chi^2/\text{NDF}$ : 3445.7/24

Right Out:  $3.659 \pm 0.338$   $\chi^2/\text{NDF}$ : 387.6/30

Left In:  $1.551 \pm 0.102$   $\chi^2/\text{NDF}$ : 2335.7/22

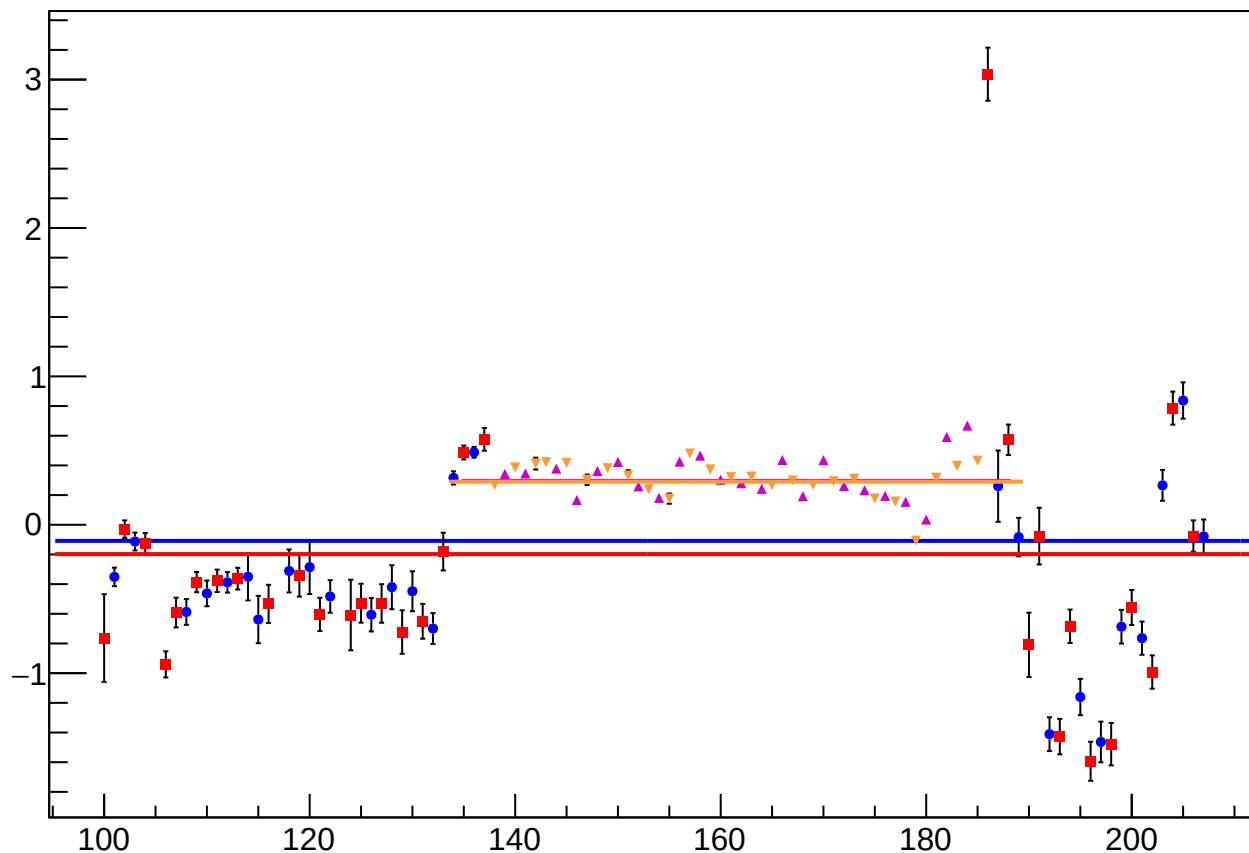
+ sign  $1.516 \pm 0.096$   $\chi^2/\text{NDF}$ : 4007.5/50

All:  $1.620 \pm 0.068$   $\chi^2/\text{NDF}$ : 6768.8/104

- sign  $1.727 \pm 0.098$   $\chi^2/\text{NDF}$ : 2758.9/53



reg\_asym\_sam\_37\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.109 \pm 0.017$   $\chi^2/\text{NDF}: 970.5/25$

Left Out:  $0.290 \pm 0.004$   $\chi^2/\text{NDF}: 719.3/24$

Right Out:  $-0.198 \pm 0.018$   $\chi^2/\text{NDF}: 1347.9/30$

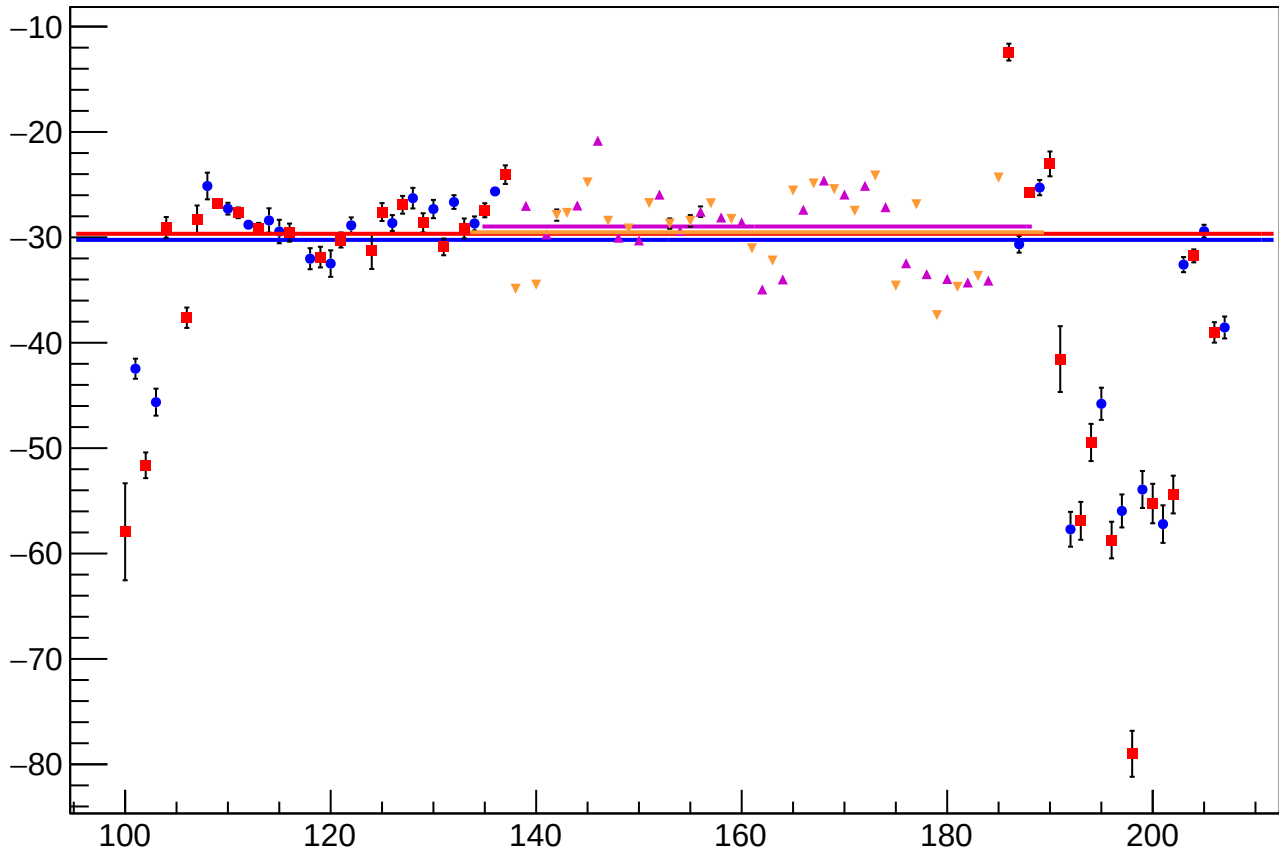
Left In:  $0.295 \pm 0.005$   $\chi^2/\text{NDF}: 1035.4/22$

+ sign  $0.264 \pm 0.004$   $\chi^2/\text{NDF}: 2204.3/50$

All:  $0.264 \pm 0.003$   $\chi^2/\text{NDF}: 5316.3/104$

- sign  $0.264 \pm 0.004$   $\chi^2/\text{NDF}: 3112.0/53$

# reg\_asym\_sam\_37\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-30.239 \pm 0.158$   $\chi^2/\text{NDF}: 1739.2/25$

Left Out:  $-29.516 \pm 0.056$   $\chi^2/\text{NDF}: 6088.5/24$

Right Out:  $-29.660 \pm 0.152$   $\chi^2/\text{NDF}: 2782.6/30$

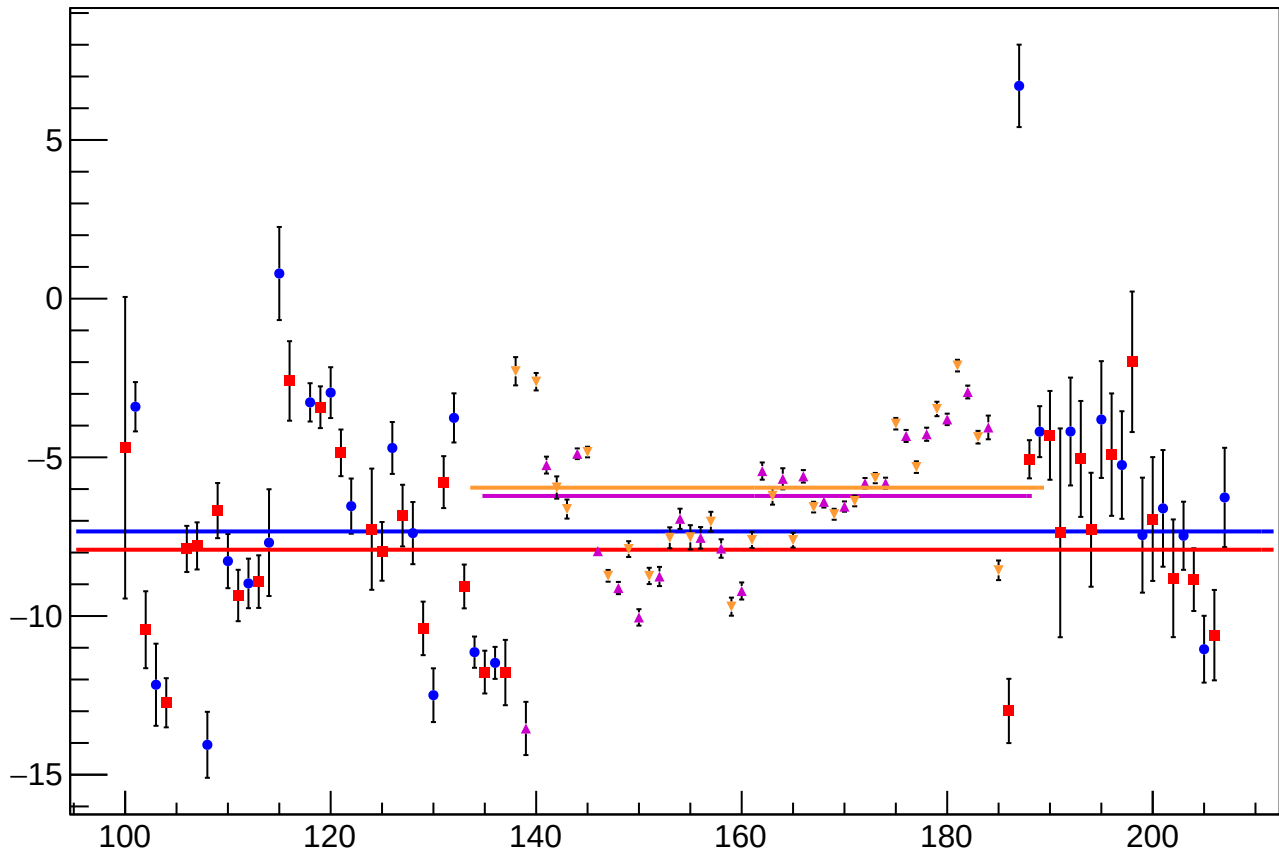
Left In:  $-28.971 \pm 0.057$   $\chi^2/\text{NDF}: 5348.6/22$

+ sign  $-29.597 \pm 0.053$   $\chi^2/\text{NDF}: 7846.2/50$

All:  $-29.328 \pm 0.038$   $\chi^2/\text{NDF}: 16047.2/104$

- sign  $-29.056 \pm 0.053$   $\chi^2/\text{NDF}: 8149.3/53$

reg\_asym\_sam\_37\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-7.335 \pm 0.176$   $\chi^2/\text{NDF}$ : 543.8/25

Left Out:  $-5.956 \pm 0.044$   $\chi^2/\text{NDF}$ : 1857.8/24

Right Out:  $-7.911 \pm 0.173$   $\chi^2/\text{NDF}$ : 269.9/30

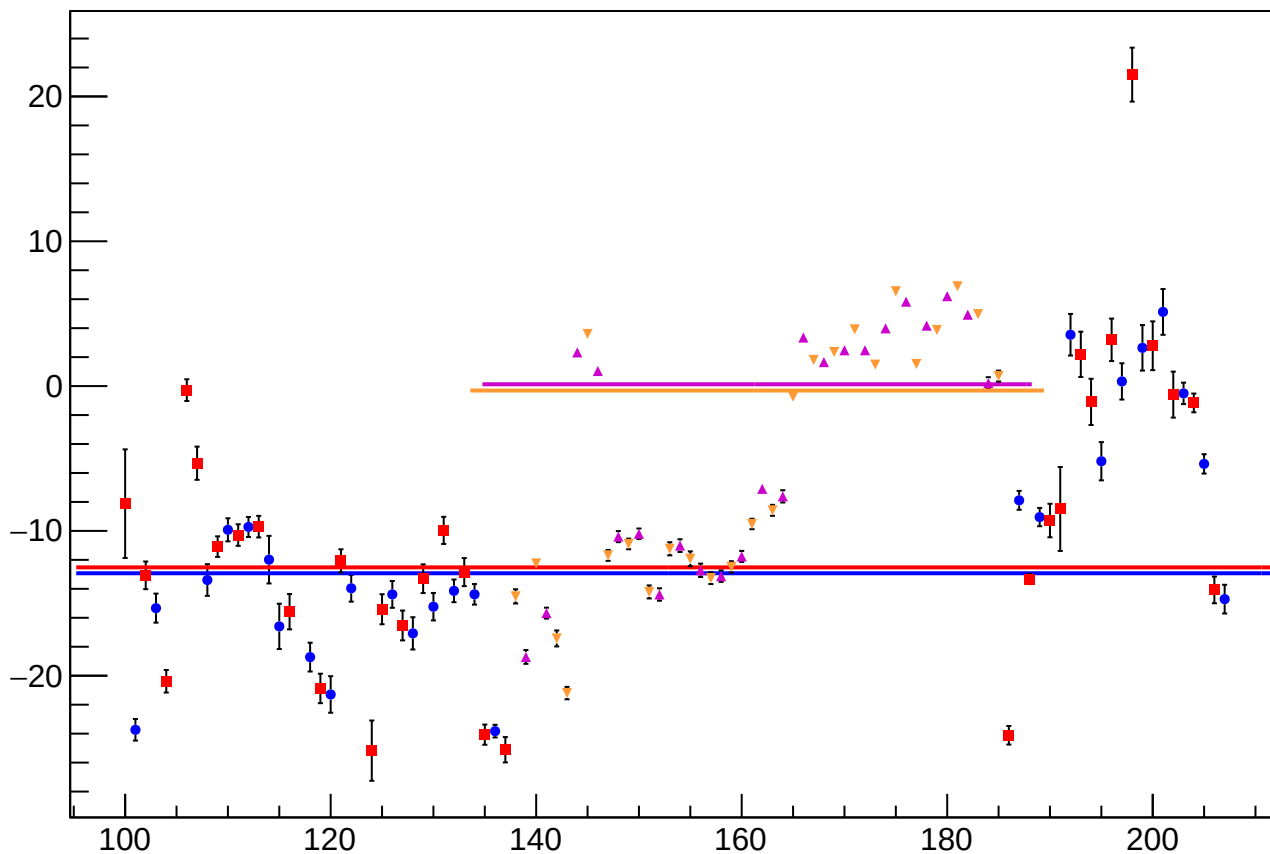
Left In:  $-6.217 \pm 0.044$   $\chi^2/\text{NDF}$ : 1741.8/22

+ sign  $-6.039 \pm 0.043$   $\chi^2/\text{NDF}$ : 2459.2/50

All:  $-6.180 \pm 0.030$   $\chi^2/\text{NDF}$ : 4582.3/104

- sign  $-6.320 \pm 0.043$   $\chi^2/\text{NDF}$ : 2101.5/53

# reg\_asym\_sam\_37\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-12.925 \pm 0.168$   $\chi^2/\text{NDF}$ : 2001.7/25

Left Out:  $-0.306 \pm 0.057$   $\chi^2/\text{NDF}$ : 17181.6/24

Right Out:  $-12.518 \pm 0.158$   $\chi^2/\text{NDF}$ : 2439.1/30

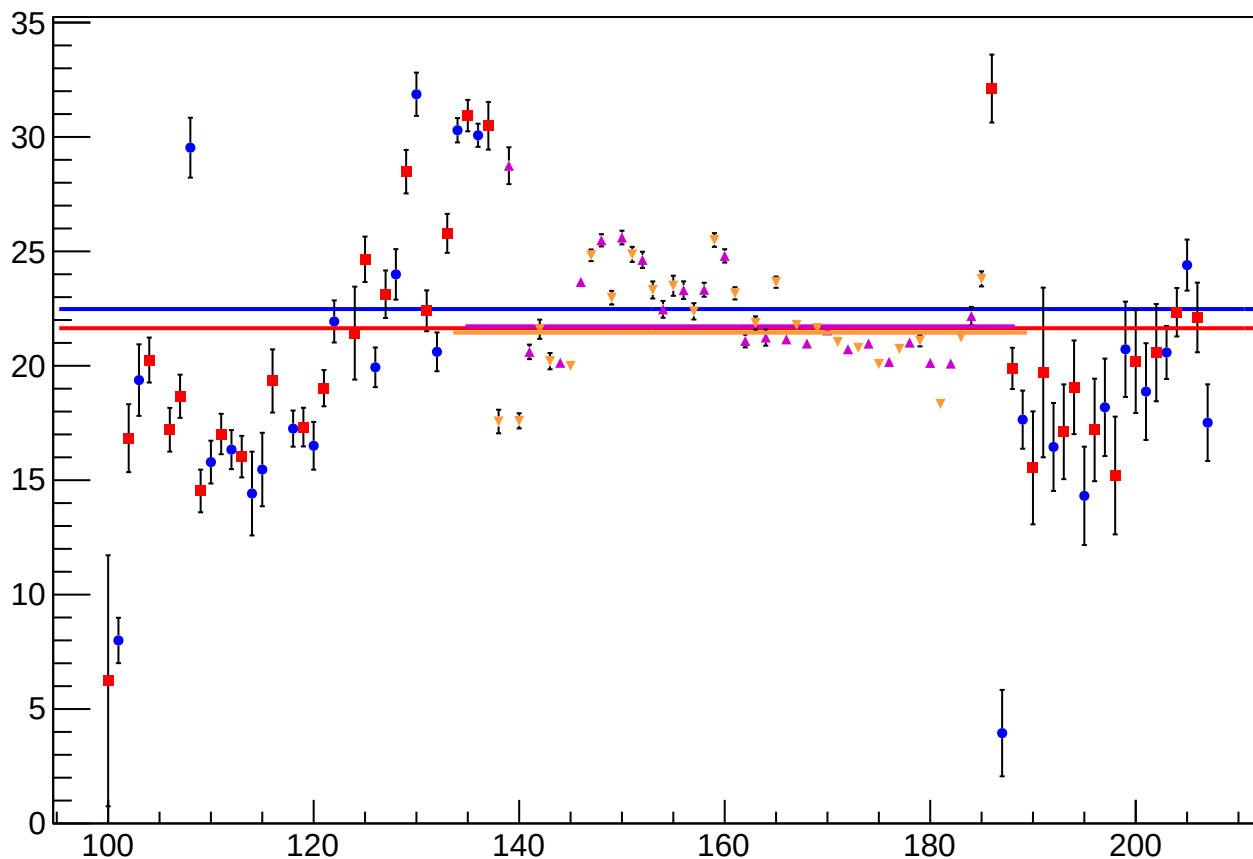
Left In:  $0.125 \pm 0.057$   $\chi^2/\text{NDF}$ : 13838.6/22

+ sign  $-1.585 \pm 0.054$   $\chi^2/\text{NDF}$ : 24228.5/50

All:  $-1.457 \pm 0.038$   $\chi^2/\text{NDF}$ : 46178.4/104

- sign  $-1.330 \pm 0.054$   $\chi^2/\text{NDF}$ : 21938.6/53

reg\_asym\_sam\_37\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $22.479 \pm 0.200$   $\chi^2/\text{NDF}$ : 1176.6/25

Left Out:  $21.447 \pm 0.050$   $\chi^2/\text{NDF}$ : 1325.2/24

Right Out:  $21.642 \pm 0.203$   $\chi^2/\text{NDF}$ : 636.1/30

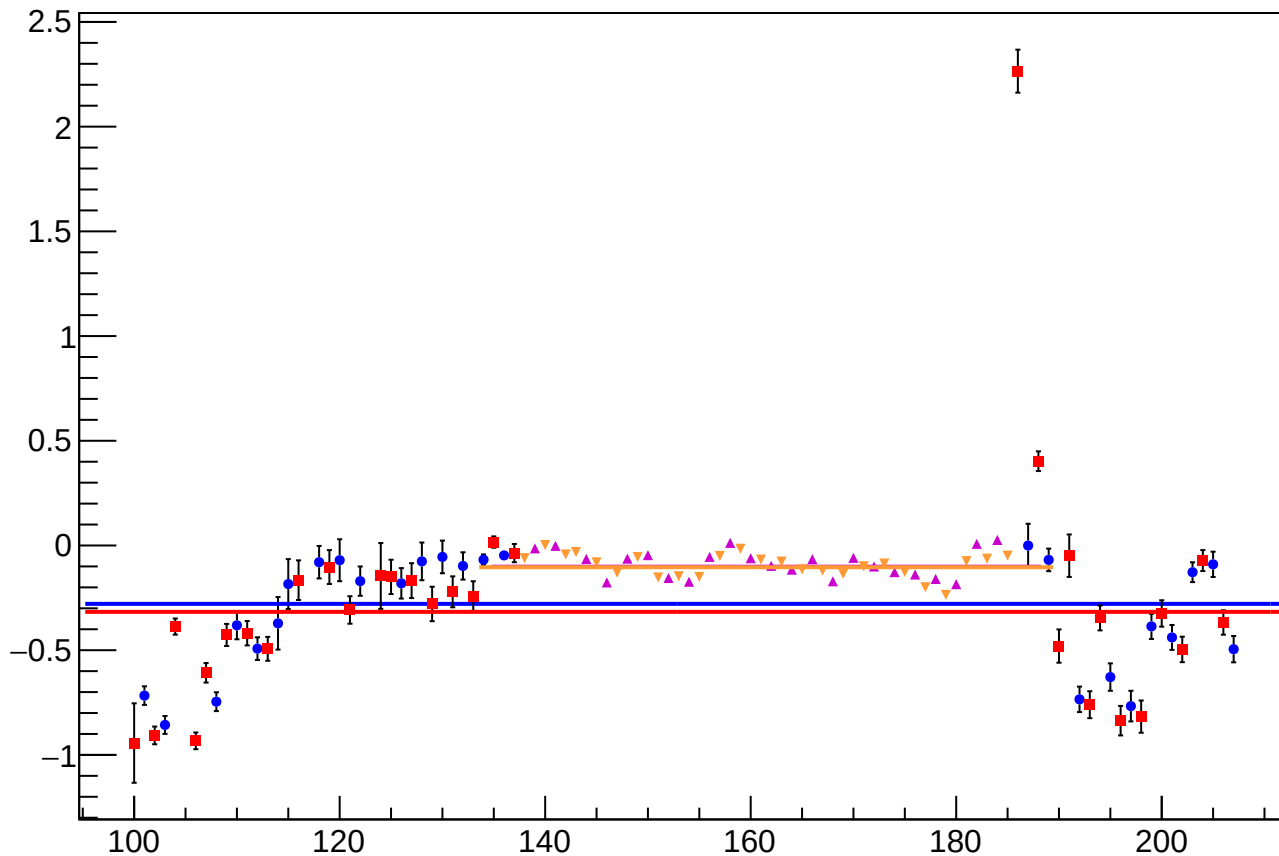
Left In:  $21.725 \pm 0.050$   $\chi^2/\text{NDF}$ : 1173.7/22

+ sign  $21.506 \pm 0.048$   $\chi^2/\text{NDF}$ : 2526.9/50

All:  $21.613 \pm 0.034$   $\chi^2/\text{NDF}$ : 4346.8/104

- sign  $21.721 \pm 0.048$   $\chi^2/\text{NDF}$ : 1809.9/53

reg\_asym\_sam\_37\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.279 \pm 0.010$   $\chi^2/\text{NDF}$ : 833.4/25

Left Out:  $-0.104 \pm 0.002$   $\chi^2/\text{NDF}$ : 547.4/24

Right Out:  $-0.317 \pm 0.010$   $\chi^2/\text{NDF}$ : 1773.2/30

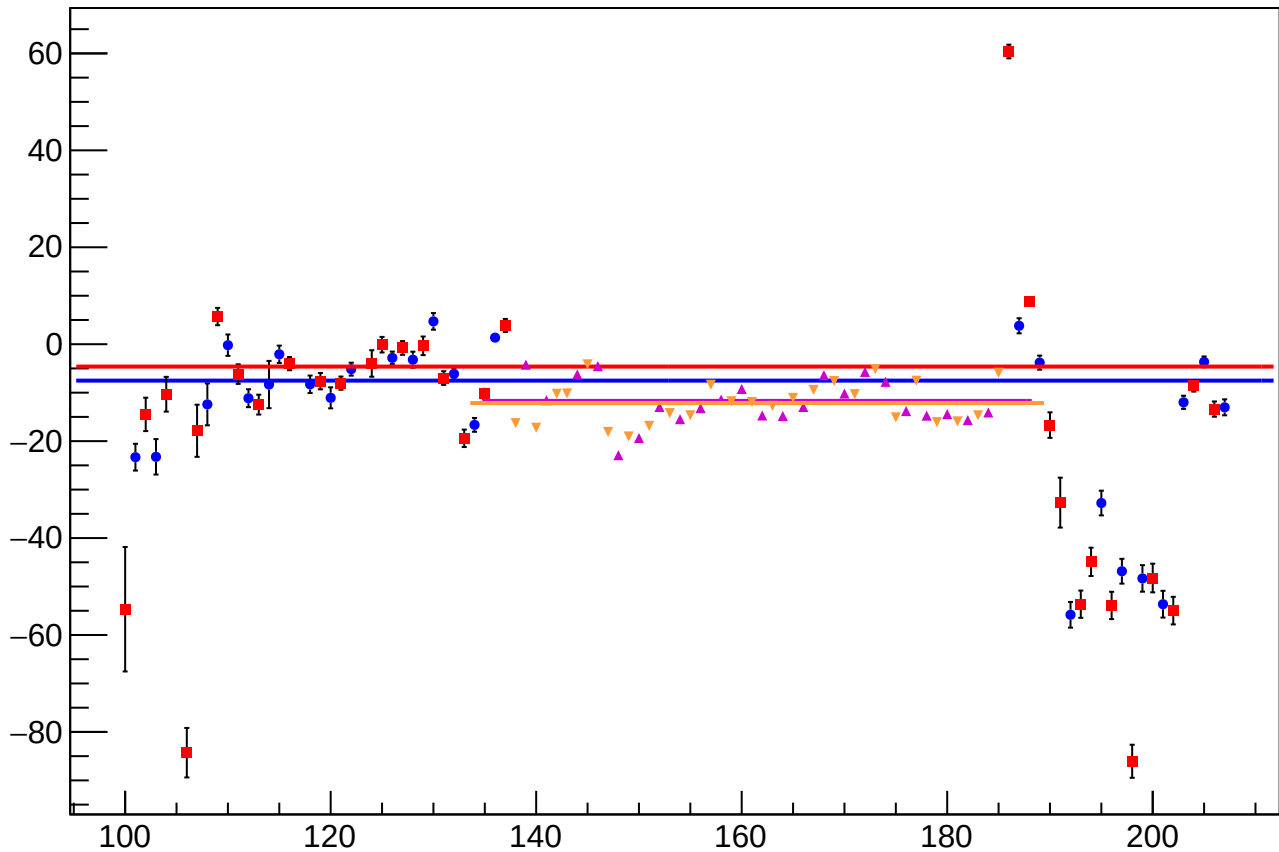
Left In:  $-0.101 \pm 0.002$   $\chi^2/\text{NDF}$ : 757.6/22

+ sign  $-0.112 \pm 0.002$   $\chi^2/\text{NDF}$ : 1673.1/50

All:  $-0.111 \pm 0.002$   $\chi^2/\text{NDF}$ : 4624.5/104

- sign  $-0.111 \pm 0.002$   $\chi^2/\text{NDF}$ : 2951.3/53

reg\_asym\_sam\_26\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-7.512 \pm 0.314$   $\chi^2/\text{NDF}$ : 1627.3/25

Left Out:  $-12.143 \pm 0.092$   $\chi^2/\text{NDF}$ : 2130.5/24

Right Out:  $-4.617 \pm 0.316$   $\chi^2/\text{NDF}$ : 4874.9/30

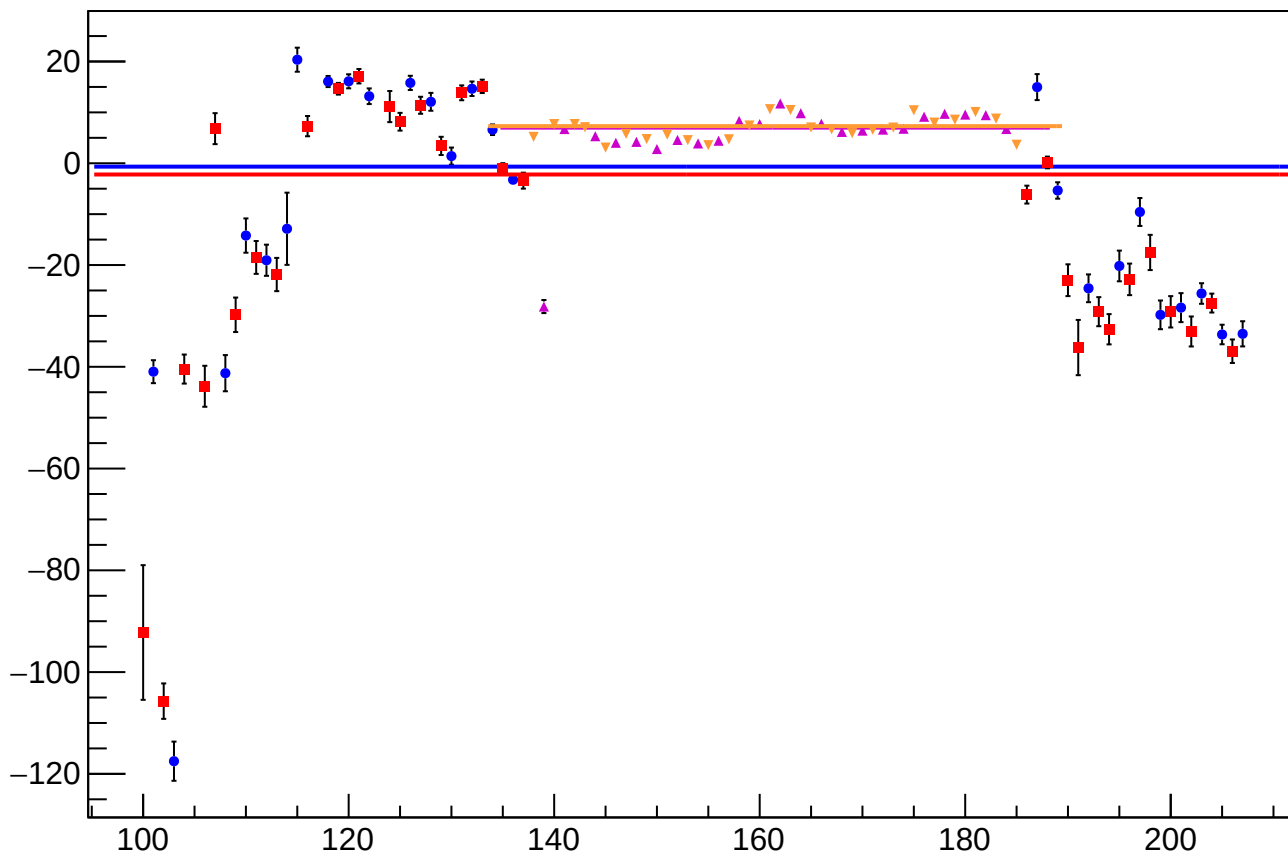
Left In:  $-11.698 \pm 0.094$   $\chi^2/\text{NDF}$ : 1951.0/22

+ sign  $-11.780 \pm 0.088$   $\chi^2/\text{NDF}$ : 3958.6/50

All:  $-11.458 \pm 0.063$   $\chi^2/\text{NDF}$ : 11273.9/104

- sign  $-11.118 \pm 0.090$   $\chi^2/\text{NDF}$ : 7287.8/53

reg\_asym\_sam\_26\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $-0.663 \pm 0.341$   $\chi^2/\text{NDF}$ : 3334.1/25

Left Out:  $7.297 \pm 0.075$   $\chi^2/\text{NDF}$ : 822.9/24

Right Out:  $-2.207 \pm 0.355$   $\chi^2/\text{NDF}$ : 3151.6/30

Left In:  $7.004 \pm 0.076$   $\chi^2/\text{NDF}$ : 1576.0/22

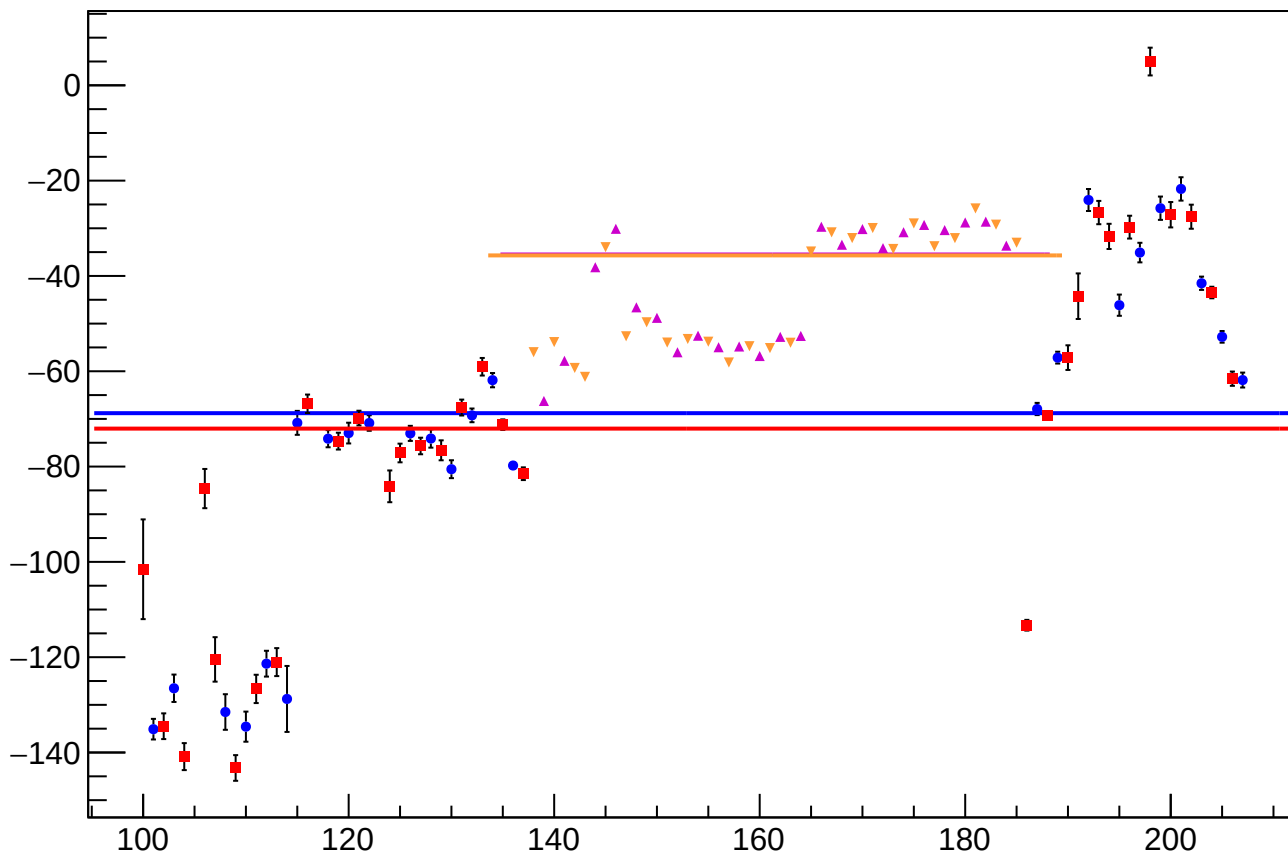
+ sign  $6.931 \pm 0.073$   $\chi^2/\text{NDF}$ : 4675.9/50

All:  $6.768 \pm 0.052$   $\chi^2/\text{NDF}$ : 10057.2/104

- sign  $6.601 \pm 0.074$   $\chi^2/\text{NDF}$ : 5371.3/53



reg\_asym\_sam\_26\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $-68.795 \pm 0.323$   $\chi^2/\text{NDF}: 4947.7/25$

Left Out:  $-35.690 \pm 0.092$   $\chi^2/\text{NDF}: 12778.3/24$

Right Out:  $-72.034 \pm 0.316$   $\chi^2/\text{NDF}: 6929.7/30$

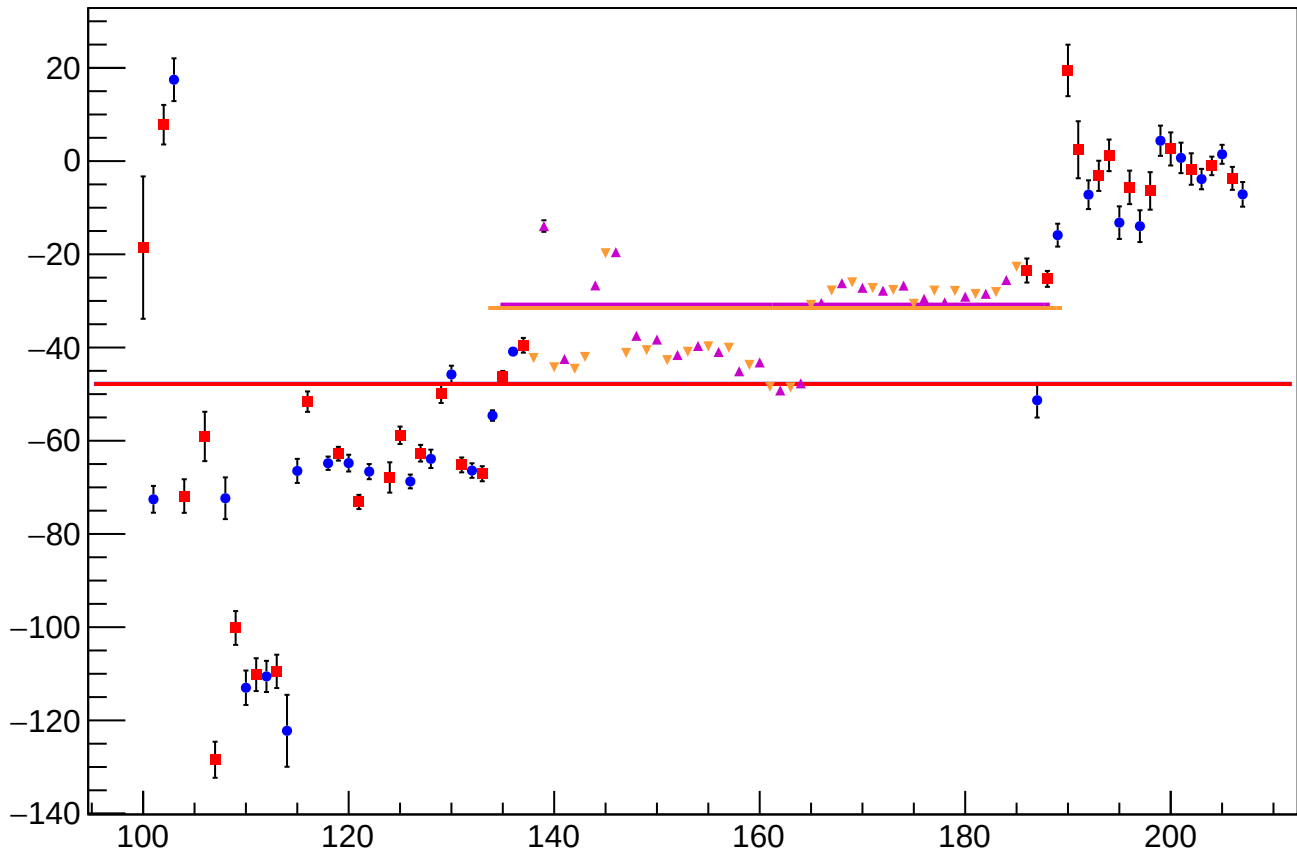
Left In:  $-35.497 \pm 0.095$   $\chi^2/\text{NDF}: 11162.0/22$

+ sign  $-38.180 \pm 0.089$   $\chi^2/\text{NDF}: 27416.3/50$

All:  $-38.334 \pm 0.063$   $\chi^2/\text{NDF}: 57756.1/104$

- sign  $-38.495 \pm 0.091$   $\chi^2/\text{NDF}: 30333.7/53$

reg\_asym\_sam\_26\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $-47.784 \pm 0.383$   $\chi^2/\text{NDF}$ : 4243.5/25

Left Out:  $-31.520 \pm 0.083$   $\chi^2/\text{NDF}$ : 8457.7/24

Right Out:  $-47.830 \pm 0.409$   $\chi^2/\text{NDF}$ : 4674.5/30

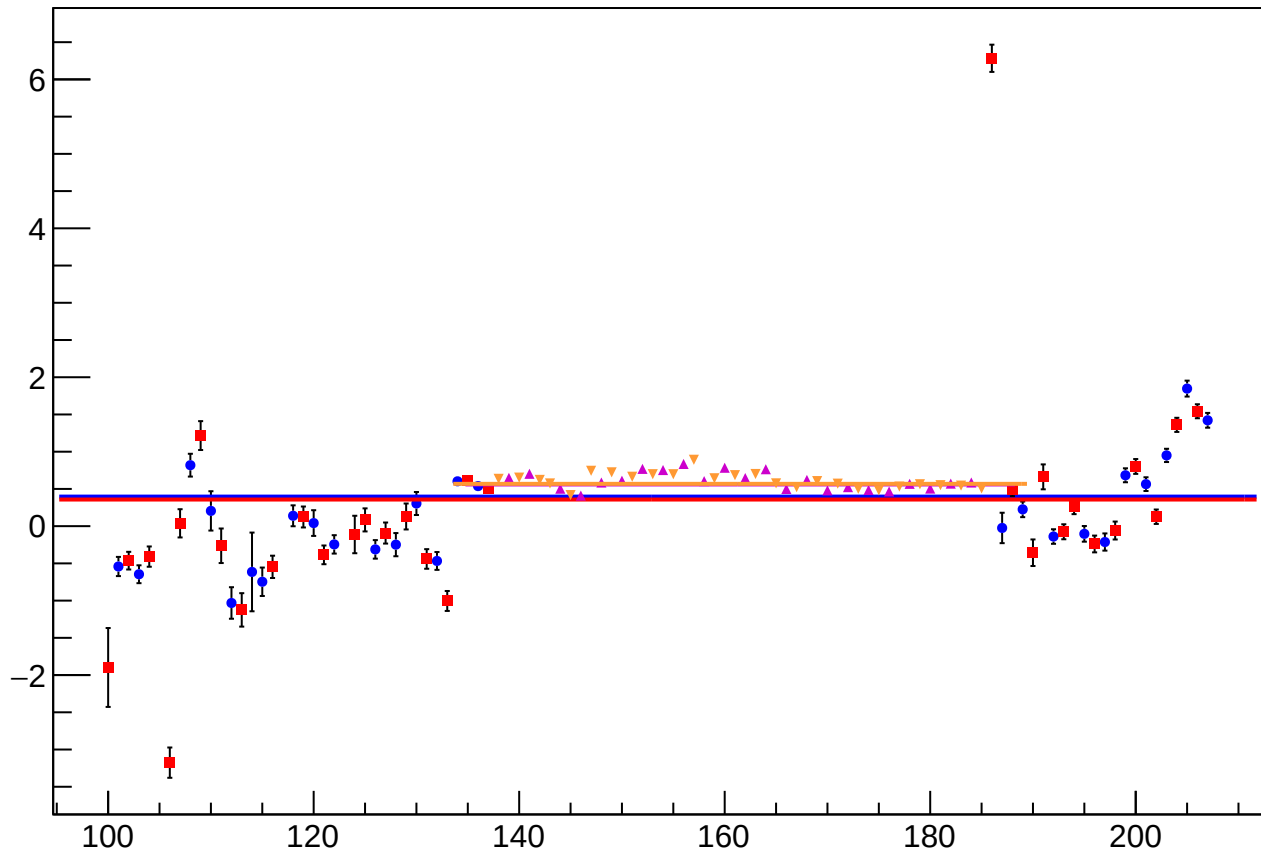
Left In:  $-30.789 \pm 0.084$   $\chi^2/\text{NDF}$ : 7548.8/22

+ sign  $-32.245 \pm 0.081$   $\chi^2/\text{NDF}$ : 14422.0/50

All:  $-31.872 \pm 0.058$   $\chi^2/\text{NDF}$ : 28355.3/104

- sign  $-31.484 \pm 0.083$   $\chi^2/\text{NDF}$ : 13889.9/53

reg\_asym\_sam\_26\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $0.397 \pm 0.019$   $\chi^2/\text{NDF}$ : 820.9/25

Left Out:  $0.568 \pm 0.004$   $\chi^2/\text{NDF}$ : 554.5/24

Right Out:  $0.357 \pm 0.020$   $\chi^2/\text{NDF}$ : 2172.5/30

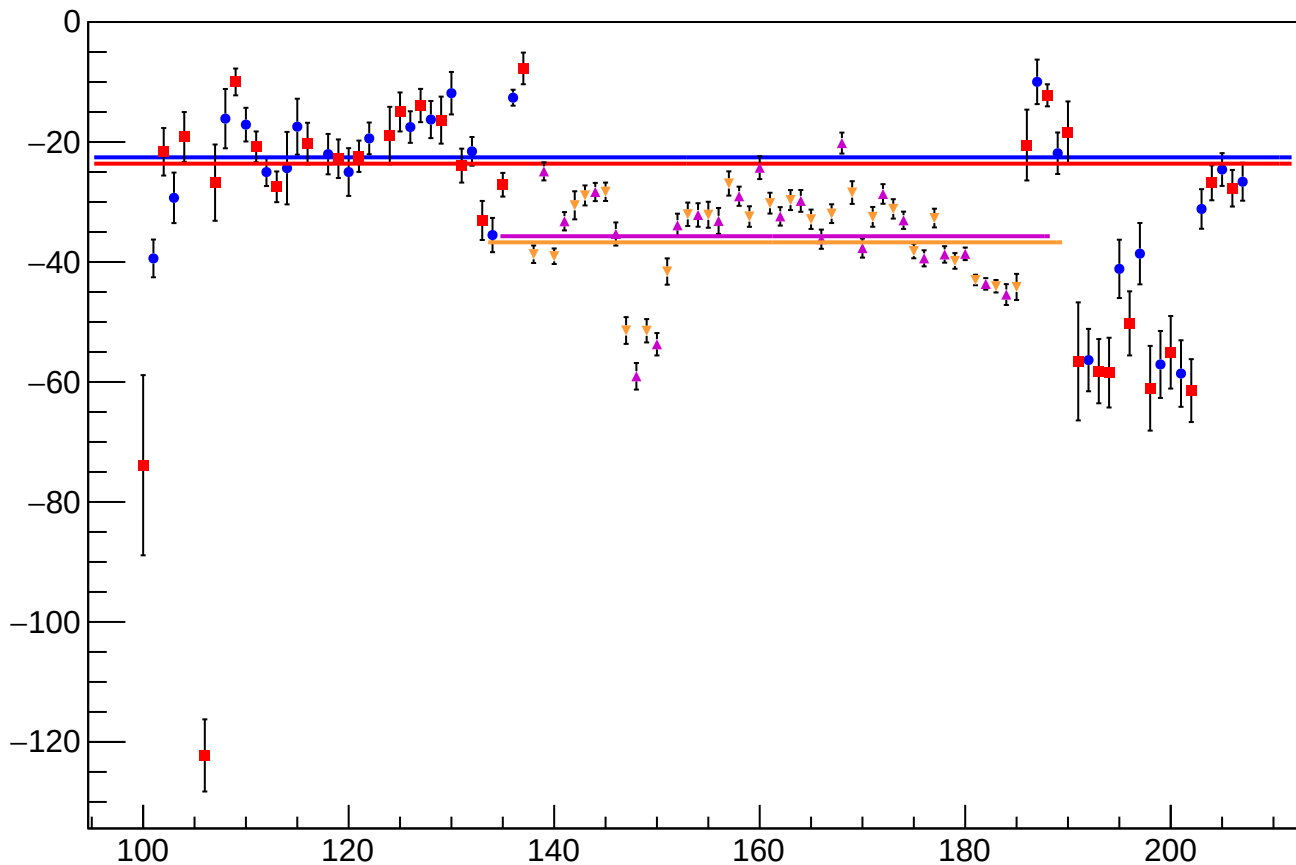
Left In:  $0.560 \pm 0.004$   $\chi^2/\text{NDF}$ : 671.5/22

+ sign  $0.562 \pm 0.004$   $\chi^2/\text{NDF}$ : 1455.4/50

All:  $0.558 \pm 0.003$   $\chi^2/\text{NDF}$ : 4399.0/104

- sign  $0.553 \pm 0.004$   $\chi^2/\text{NDF}$ : 2940.7/53

# reg\_asym\_sam\_26\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-22.555 \pm 0.605$   $\chi^2/\text{NDF}$ : 302.6/25

Left Out:  $-36.724 \pm 0.310$   $\chi^2/\text{NDF}$ : 420.8/24

Right Out:  $-23.611 \pm 0.604$   $\chi^2/\text{NDF}$ : 658.7/30

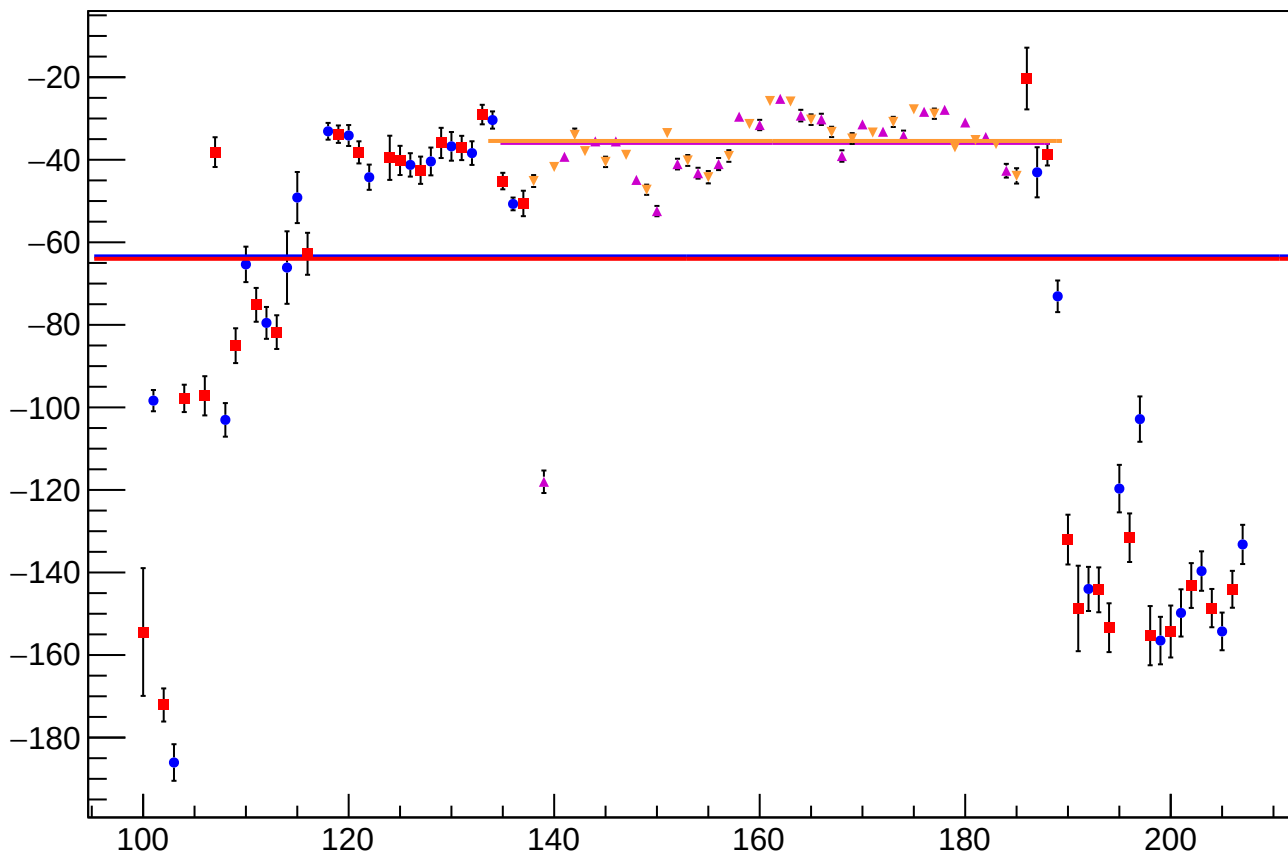
Left In:  $-35.706 \pm 0.323$   $\chi^2/\text{NDF}$ : 578.6/22

+ sign  $-33.771 \pm 0.276$   $\chi^2/\text{NDF}$ : 1158.1/50

All:  $-33.404 \pm 0.198$   $\chi^2/\text{NDF}$ : 2711.1/104

- sign  $-33.012 \pm 0.285$   $\chi^2/\text{NDF}$ : 1549.3/53

# reg\_asym\_sam\_26\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-63.411 \pm 0.648$   $\chi^2/\text{NDF}: 3772.4/25$

Left Out:  $-35.442 \pm 0.245$   $\chi^2/\text{NDF}: 537.8/24$

Right Out:  $-63.995 \pm 0.666$   $\chi^2/\text{NDF}: 4022.5/30$

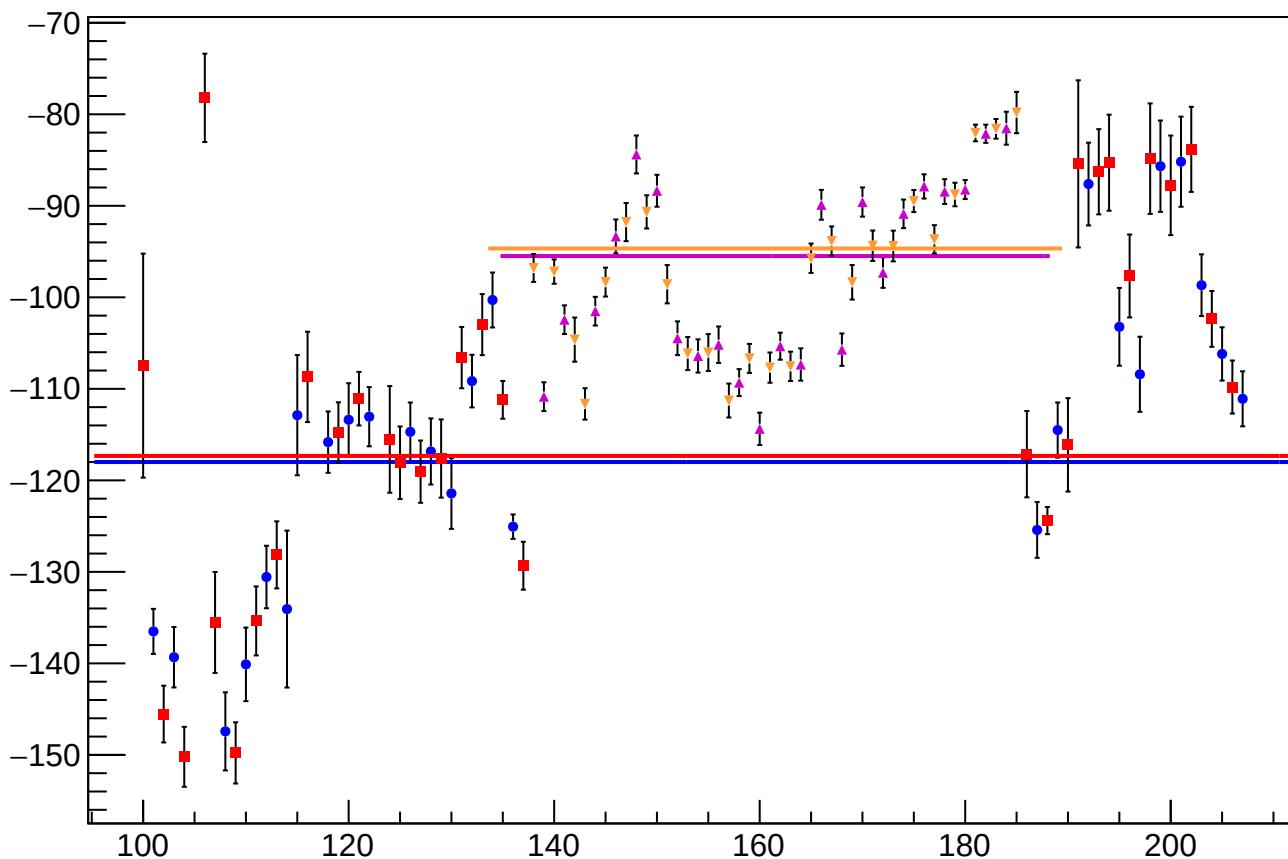
Left In:  $-35.913 \pm 0.256$   $\chi^2/\text{NDF}: 1543.1/22$

+ sign  $-38.941 \pm 0.229$   $\chi^2/\text{NDF}: 5942.3/50$

All:  $-39.223 \pm 0.165$   $\chi^2/\text{NDF}: 13059.0/104$

- sign  $-39.529 \pm 0.239$   $\chi^2/\text{NDF}: 7113.5/53$

reg\_asym\_sam\_26\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-117.996 \pm 0.625$   $\chi^2/\text{NDF}$ : 482.9/25

Left Out:  $-94.663 \pm 0.310$   $\chi^2/\text{NDF}$ : 900.1/24

Right Out:  $-117.330 \pm 0.623$   $\chi^2/\text{NDF}$ : 730.4/30

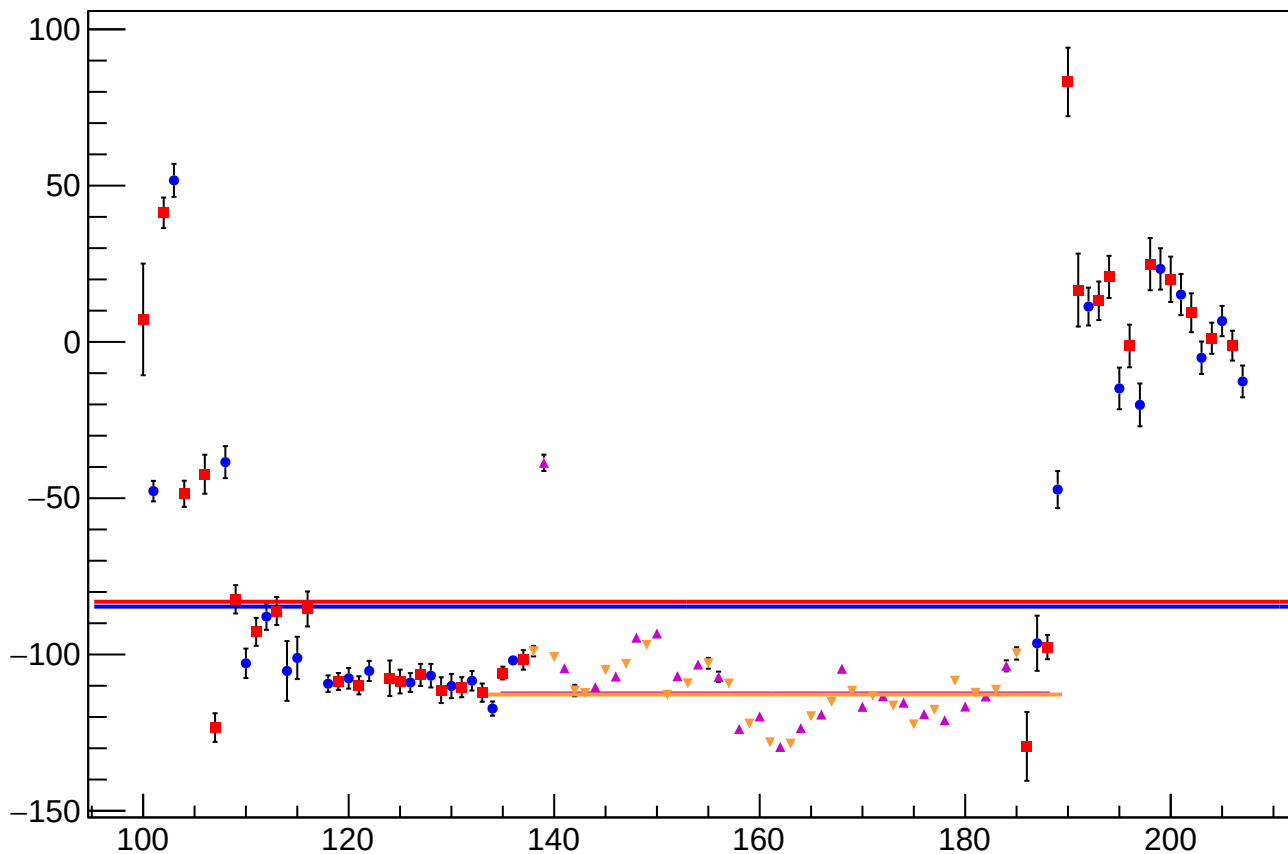
Left In:  $-95.489 \pm 0.321$   $\chi^2/\text{NDF}$ : 970.1/22

+ sign  $-99.262 \pm 0.278$   $\chi^2/\text{NDF}$ : 2500.8/50

All:  $-99.655 \pm 0.199$   $\chi^2/\text{NDF}$ : 5175.3/104

- sign  $-100.070 \pm 0.286$   $\chi^2/\text{NDF}$ : 2670.4/53

reg\_asym\_sam\_26\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-84.682 \pm 0.732$   $\chi^2/\text{NDF}$ : 3384.5/25

Left Out:  $-112.794 \pm 0.274$   $\chi^2/\text{NDF}$ : 936.4/24

Right Out:  $-83.118 \pm 0.764$   $\chi^2/\text{NDF}$ : 3660.4/30

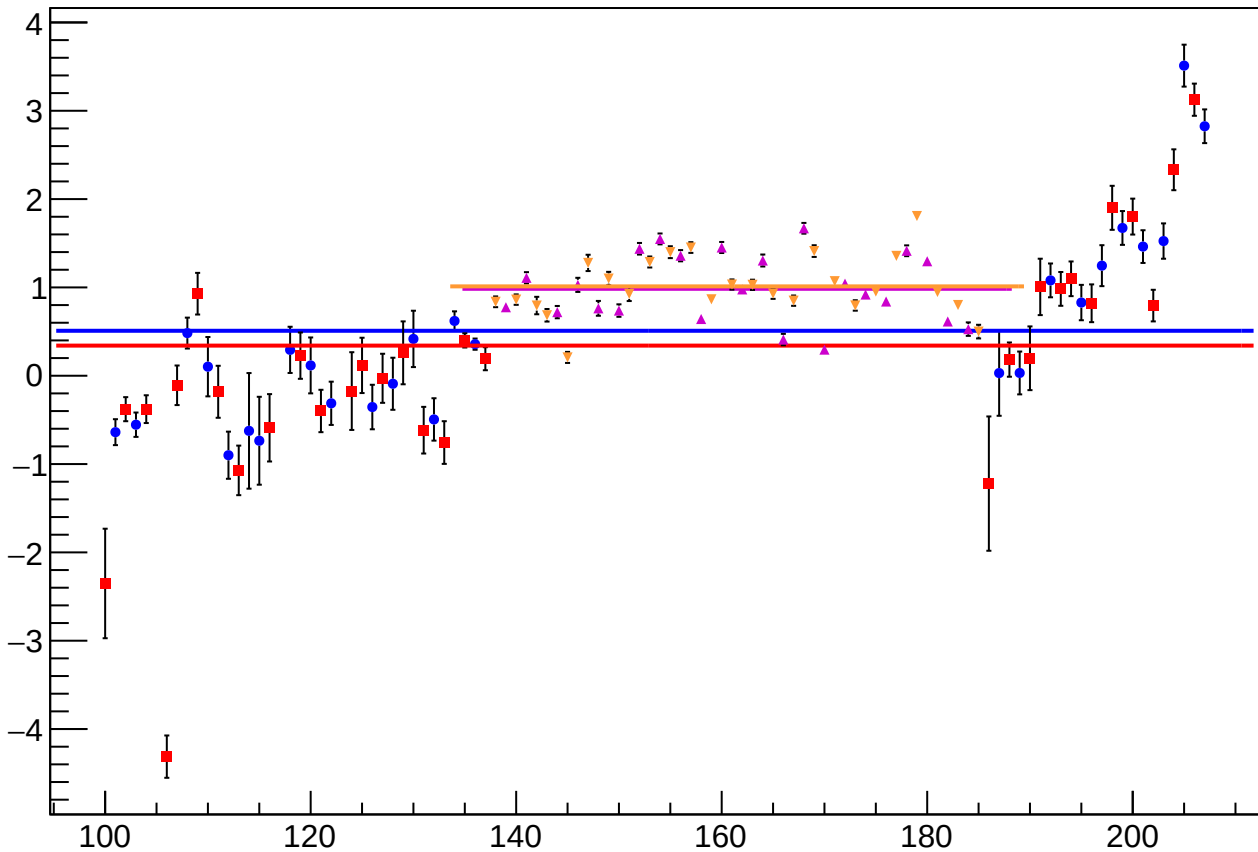
Left In:  $-112.465 \pm 0.285$   $\chi^2/\text{NDF}$ : 1788.6/22

+ sign  $-109.337 \pm 0.257$   $\chi^2/\text{NDF}$ : 5614.8/50

All:  $-109.121 \pm 0.185$   $\chi^2/\text{NDF}$ : 12359.6/104

- sign  $-108.887 \pm 0.267$   $\chi^2/\text{NDF}$ : 6743.3/53

# reg\_asym\_sam\_26\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $0.509 \pm 0.035$   $\chi^2/\text{NDF}$ : 635.5/25

Left Out:  $1.012 \pm 0.012$   $\chi^2/\text{NDF}$ : 691.2/24

Right Out:  $0.341 \pm 0.037$   $\chi^2/\text{NDF}$ : 984.1/30

Left In:  $0.984 \pm 0.013$   $\chi^2/\text{NDF}$ : 900.0/22

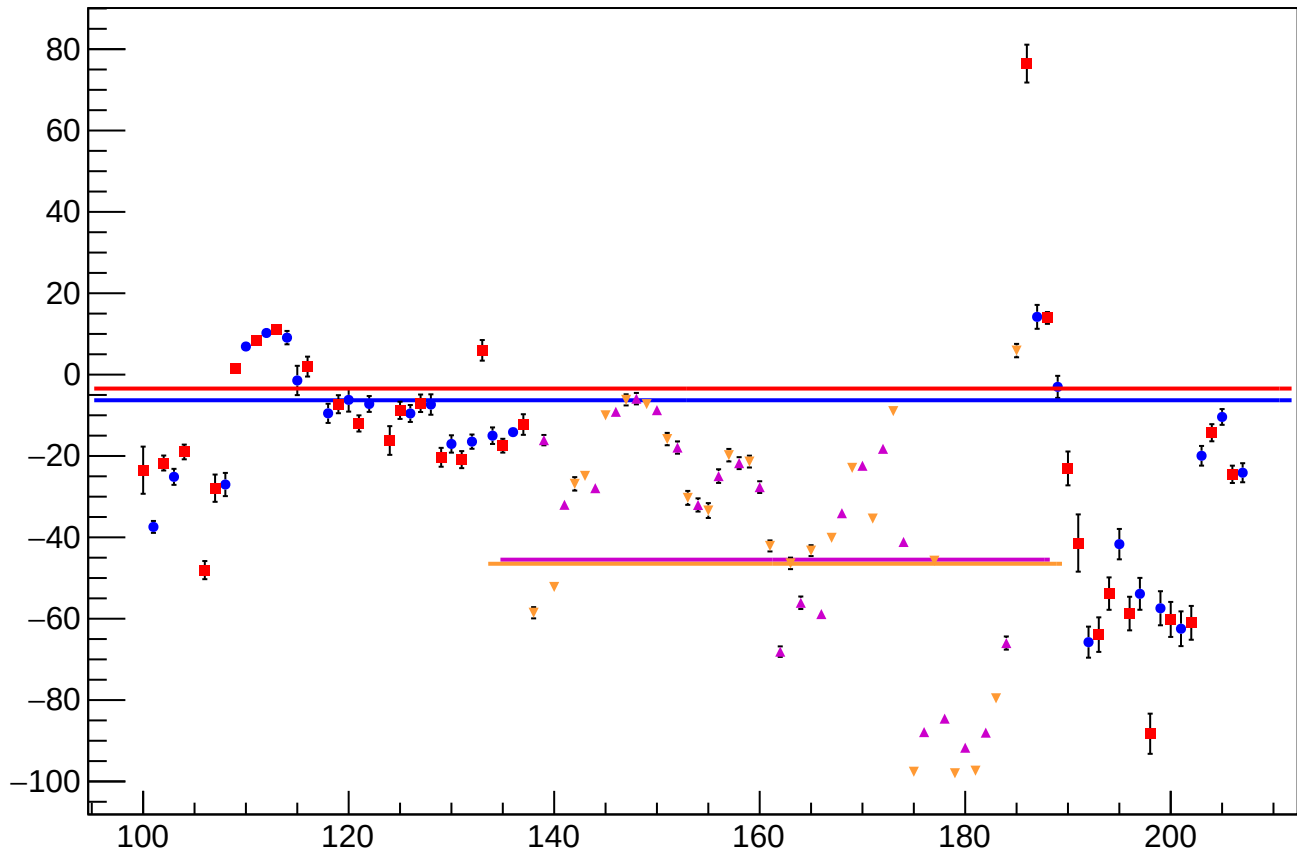
+ sign  $0.957 \pm 0.012$   $\chi^2/\text{NDF}$ : 1508.6/50

All:  $0.938 \pm 0.008$   $\chi^2/\text{NDF}$ : 3671.9/104

- sign  $0.917 \pm 0.012$   $\chi^2/\text{NDF}$ : 2157.5/53



reg\_asym\_sam\_48\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-6.302 \pm 0.349$   $\chi^2/\text{NDF}$ : 2529.3/25

Left Out:  $-46.493 \pm 0.230$   $\chi^2/\text{NDF}$ : 20046.7/24

Right Out:  $-3.426 \pm 0.315$   $\chi^2/\text{NDF}$ : 3374.4/30

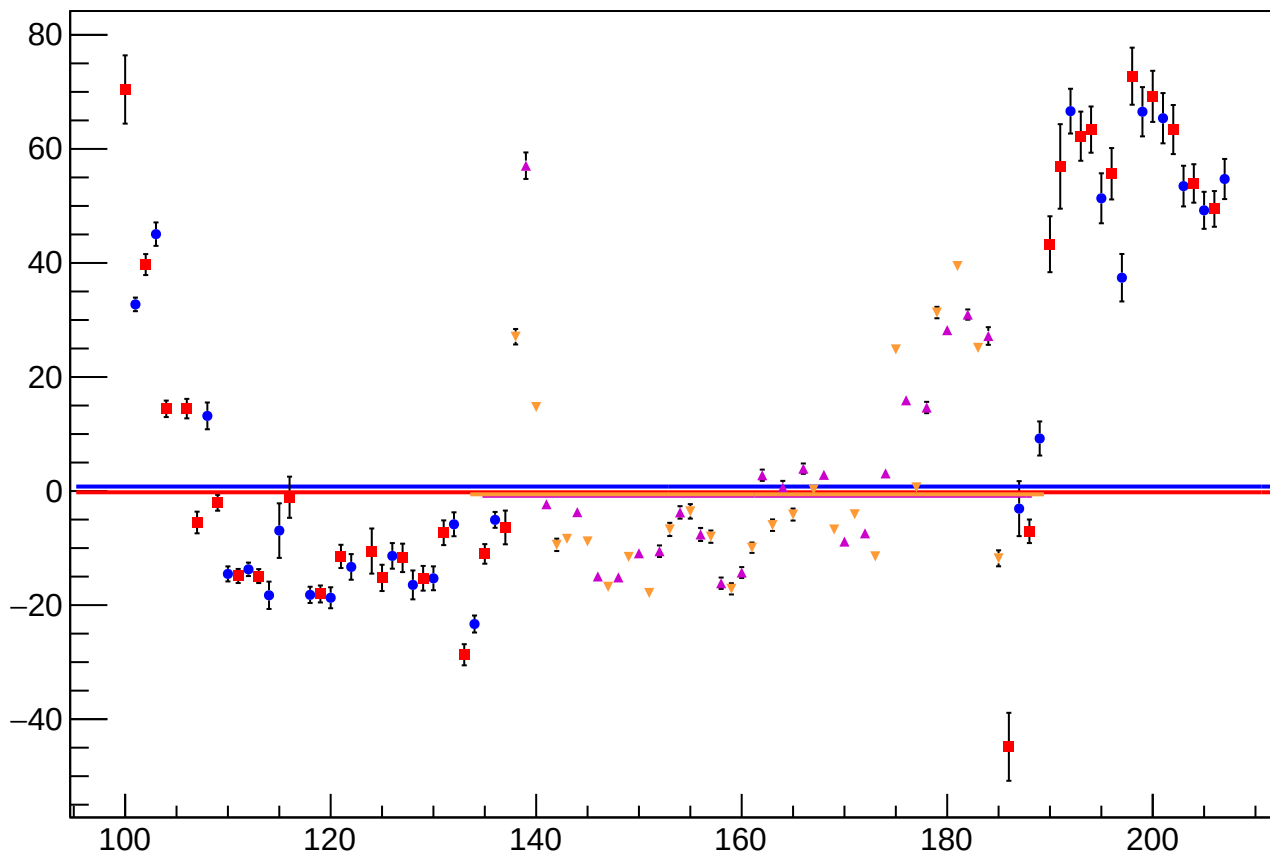
Left In:  $-45.487 \pm 0.238$   $\chi^2/\text{NDF}$ : 15571.1/22

+ sign  $-34.294 \pm 0.192$   $\chi^2/\text{NDF}$ : 31837.4/50

All:  $-32.221 \pm 0.135$   $\chi^2/\text{NDF}$ : 62394.6/104

- sign  $-30.199 \pm 0.190$   $\chi^2/\text{NDF}$ : 30327.0/53

reg\_asym\_sam\_48\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $0.790 \pm 0.406$   $\chi^2/\text{NDF}$ : 3934.8/25

Left Out:  $-0.572 \pm 0.177$   $\chi^2/\text{NDF}$ : 8451.5/24

Right Out:  $-0.215 \pm 0.394$   $\chi^2/\text{NDF}$ : 3661.0/30

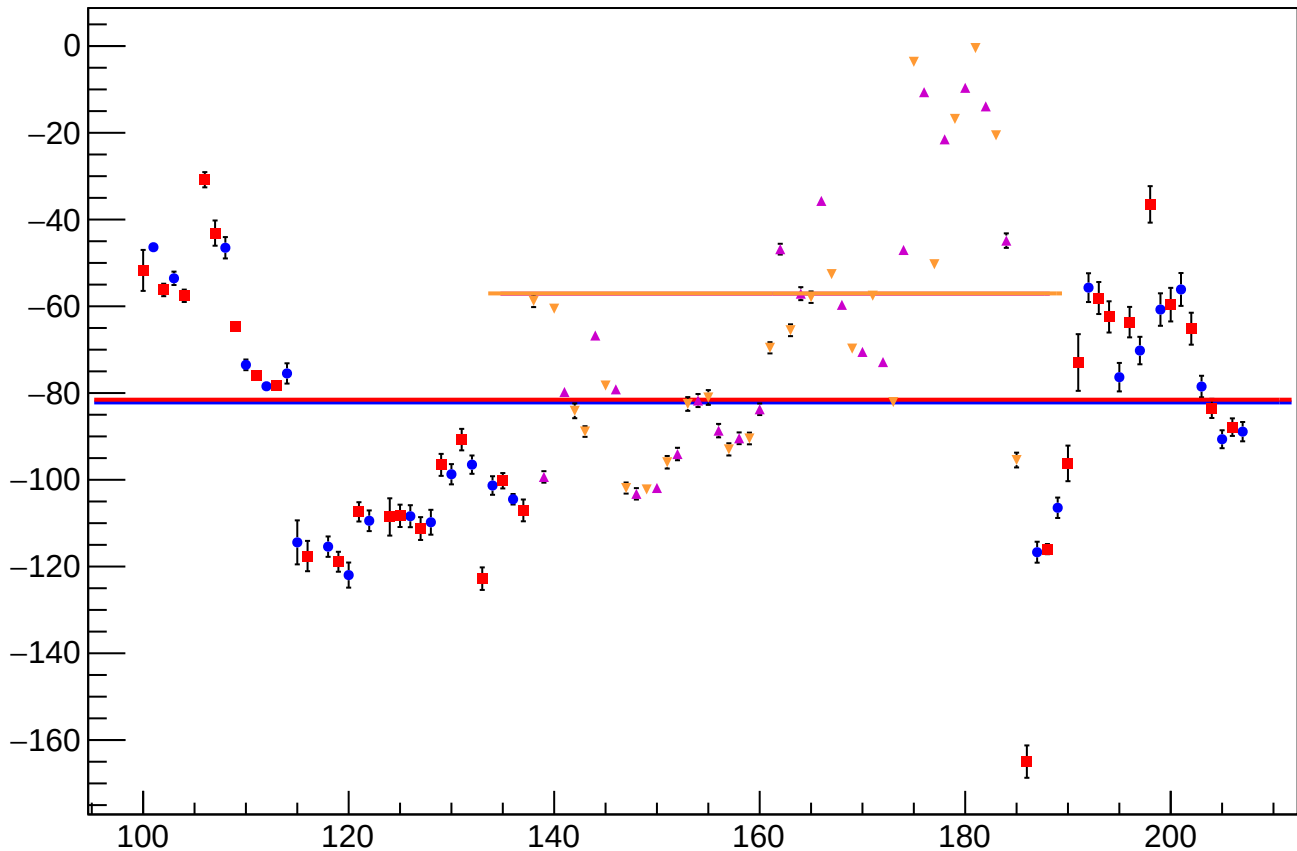
Left In:  $-0.828 \pm 0.183$   $\chi^2/\text{NDF}$ : 6116.6/22

+ sign  $-0.354 \pm 0.162$   $\chi^2/\text{NDF}$ : 12395.8/50

All:  $-0.533 \pm 0.116$   $\chi^2/\text{NDF}$ : 22177.8/104

- sign  $-0.719 \pm 0.166$   $\chi^2/\text{NDF}$ : 9779.6/53

reg\_asym\_sam\_48\_avg\_diff\_bpm4eX\_slope vs Slug



Right In: -82.164 $\pm$ 0.390  $\chi^2$ /NDF: 3376.3/25

Left Out: -57.029 $\pm$ 0.230  $\chi^2$ /NDF:20309.3/24

Right Out: -81.532 $\pm$ 0.365  $\chi^2$ /NDF: 4880.5/30

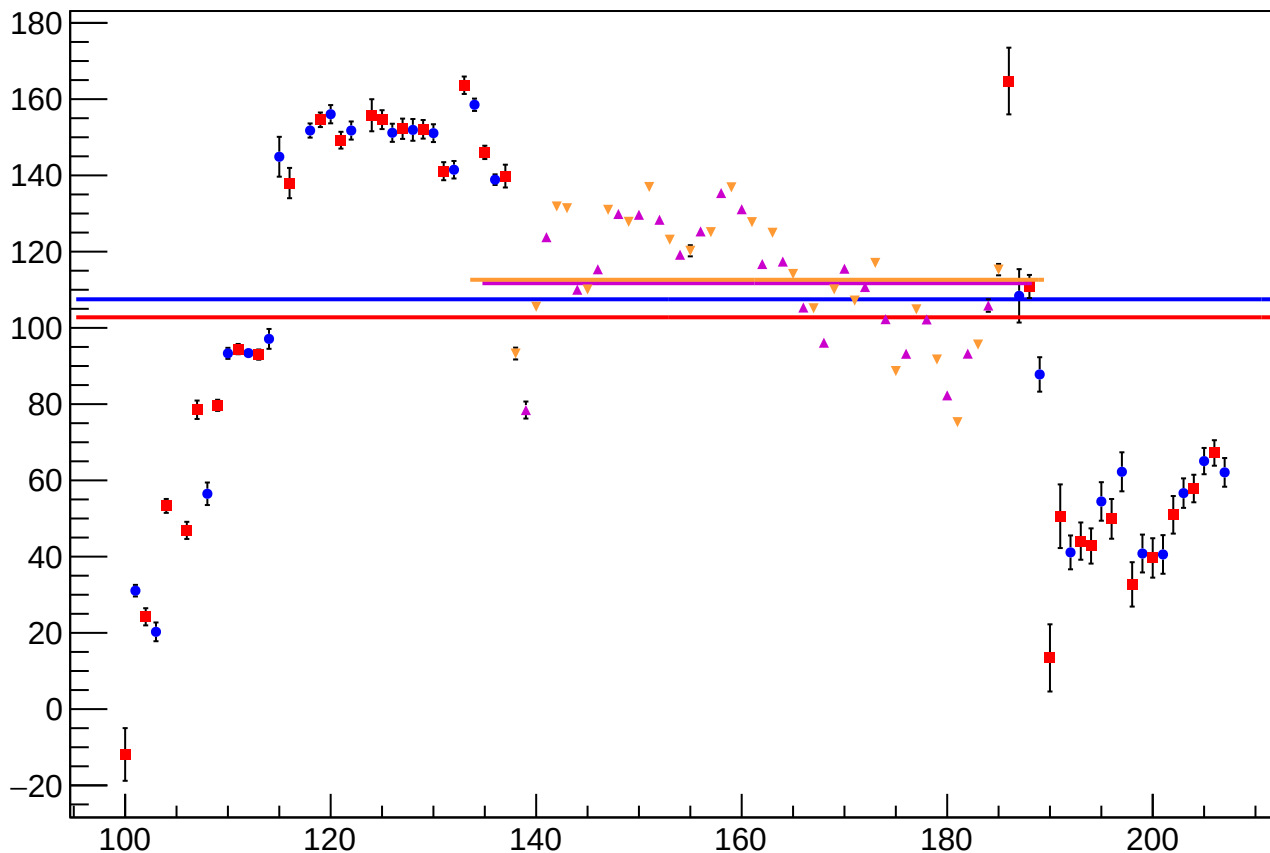
Left In: -57.091 $\pm$ 0.237  $\chi^2$ /NDF:17167.8/22

+ sign -63.511 $\pm$ 0.198  $\chi^2$ /NDF: 26769.1/50

All: -63.919 $\pm$ 0.140  $\chi^2$ /NDF: 51986.6/104

- sign -64.330 $\pm$ 0.198  $\chi^2$ /NDF: 25209.0/53

reg\_asym\_sam\_48\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $107.498 \pm 0.462$   $\chi^2/\text{NDF}: 9593.0/25$

Left Out:  $112.625 \pm 0.200$   $\chi^2/\text{NDF}: 6708.0/24$

Right Out:  $102.777 \pm 0.452$   $\chi^2/\text{NDF}: 8929.2/30$

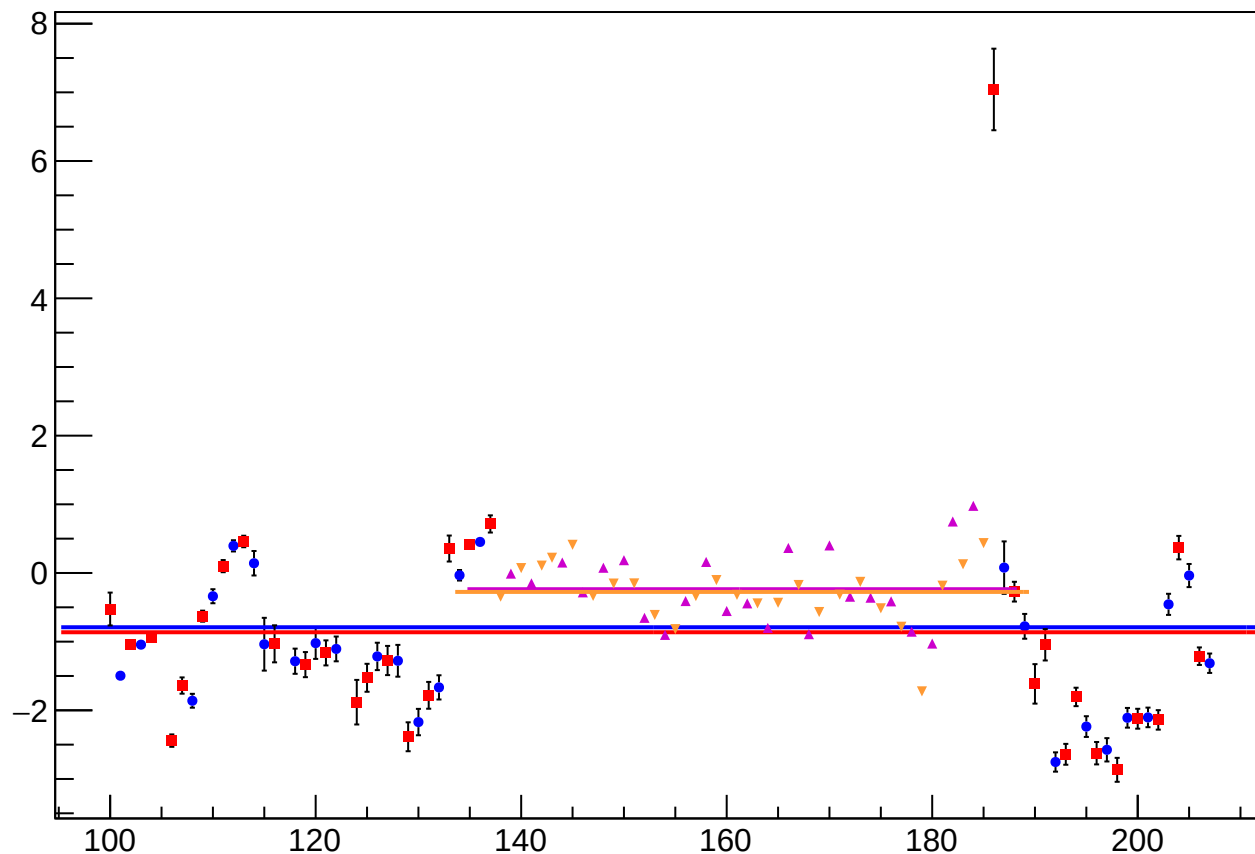
Left In:  $111.720 \pm 0.206$   $\chi^2/\text{NDF}: 4896.8/22$

+ sign  $111.817 \pm 0.183$   $\chi^2/\text{NDF}: 16404.6/50$

All:  $111.016 \pm 0.131$   $\chi^2/\text{NDF}: 30593.9/104$

- sign  $110.180 \pm 0.187$   $\chi^2/\text{NDF}: 14150.4/53$

reg\_asym\_sam\_48\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.790 \pm 0.023$   $\chi^2/\text{NDF}$ : 1781.0/25

Left Out:  $-0.276 \pm 0.009$   $\chi^2/\text{NDF}$ : 2122.4/24

Right Out:  $-0.863 \pm 0.022$   $\chi^2/\text{NDF}$ : 2234.6/30

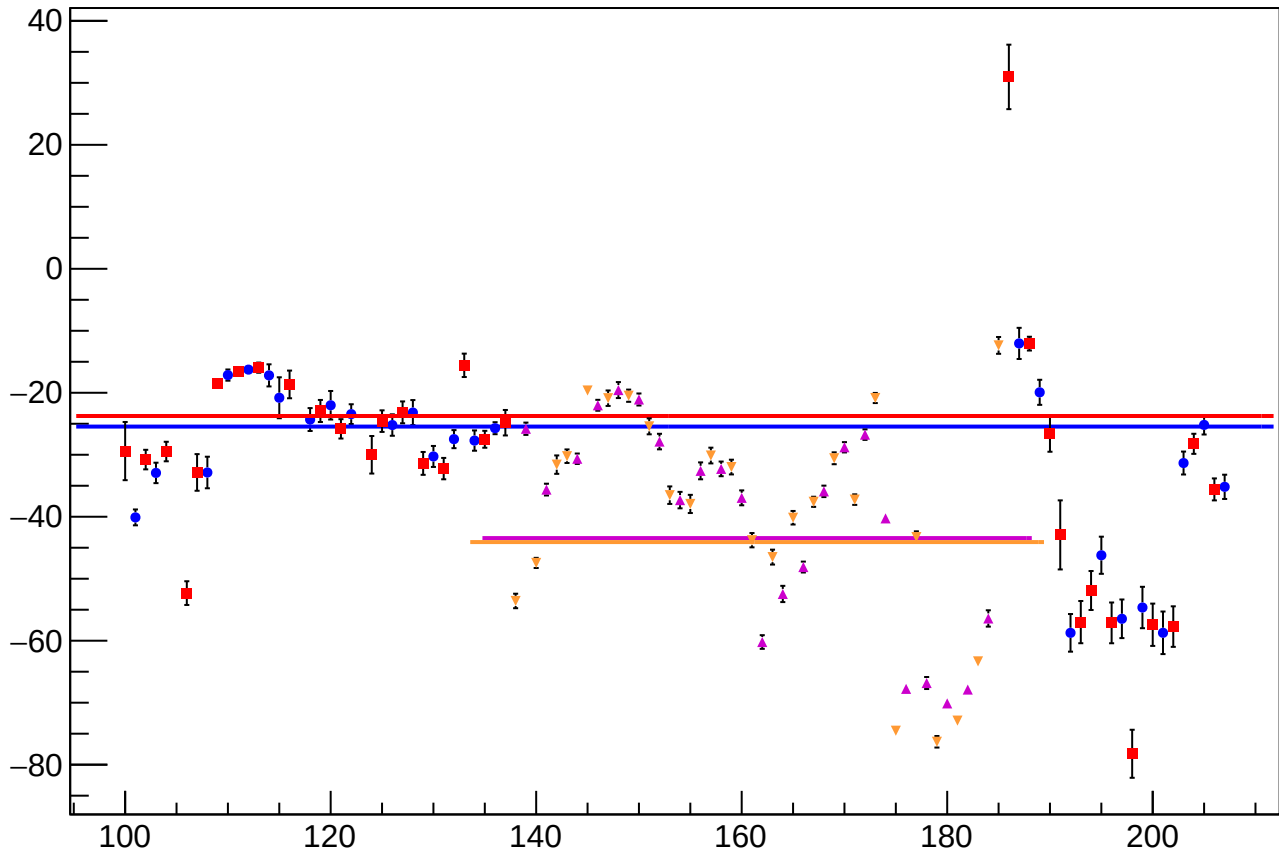
Left In:  $-0.236 \pm 0.009$   $\chi^2/\text{NDF}$ : 2961.3/22

+ sign  $-0.344 \pm 0.008$   $\chi^2/\text{NDF}$ : 4338.6/50

All:  $-0.336 \pm 0.006$   $\chi^2/\text{NDF}$ : 10213.9/104

- sign  $-0.328 \pm 0.008$   $\chi^2/\text{NDF}$ : 5873.5/53

# reg\_asym\_sam\_48\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-25.454 \pm 0.314$   $\chi^2/\text{NDF}: 943.0/25$

Left Out:  $-44.087 \pm 0.193$   $\chi^2/\text{NDF}: 10340.4/24$

Right Out:  $-23.747 \pm 0.290$   $\chi^2/\text{NDF}: 1538.0/30$

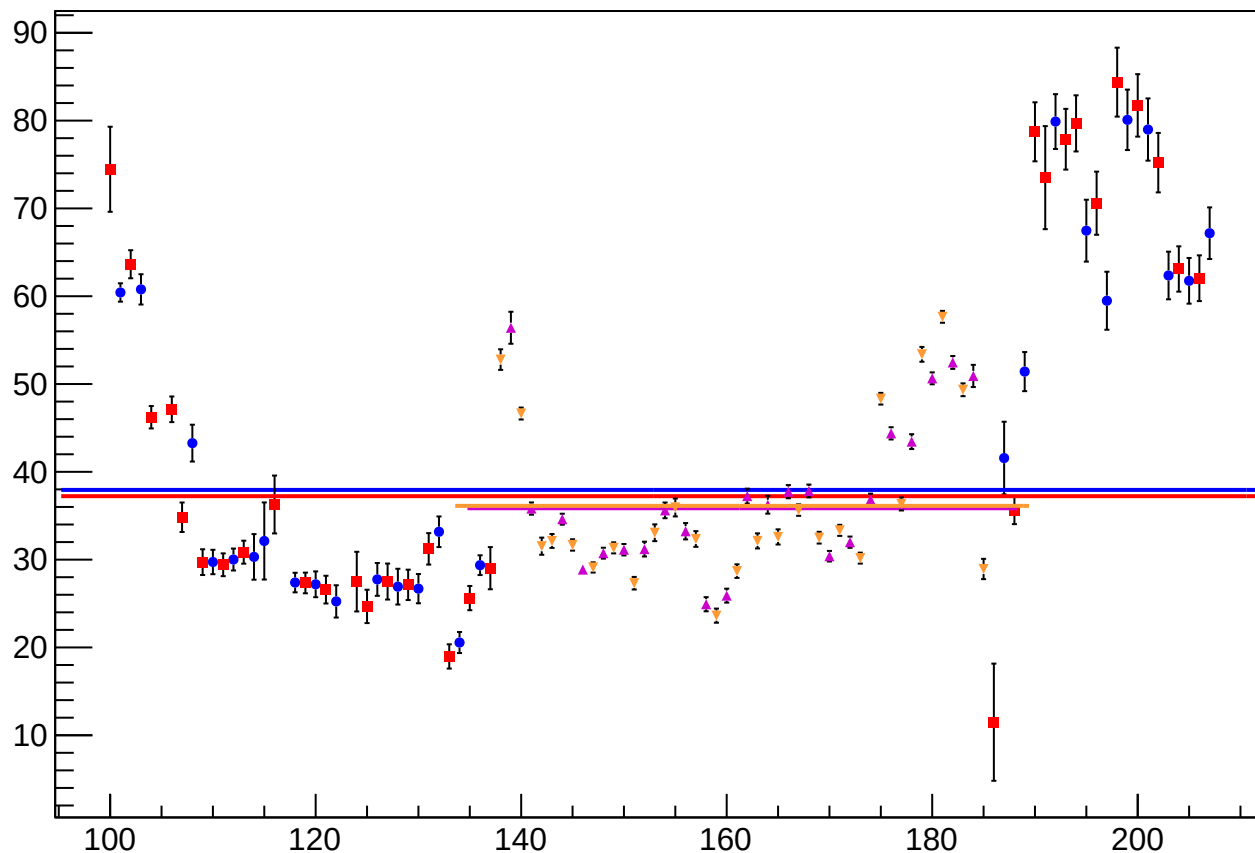
Left In:  $-43.444 \pm 0.199$   $\chi^2/\text{NDF}: 7820.5/22$

+ sign  $-38.987 \pm 0.165$   $\chi^2/\text{NDF}: 13833.9/50$

All:  $-38.068 \pm 0.116$   $\chi^2/\text{NDF}: 26391.5/104$

- sign  $-37.155 \pm 0.164$   $\chi^2/\text{NDF}: 12495.4/53$

reg\_asym\_sam\_48\_dd\_diff\_bpm4aY\_slope vs Slug



Right In: 37.941 $\pm$ 0.349  $\chi^2$ /NDF: 2178.3/25

Left Out: 36.123 $\pm$ 0.150  $\chi^2$ /NDF:3558.5/24

Right Out: 37.227 $\pm$ 0.343  $\chi^2$ /NDF: 2234.3/30

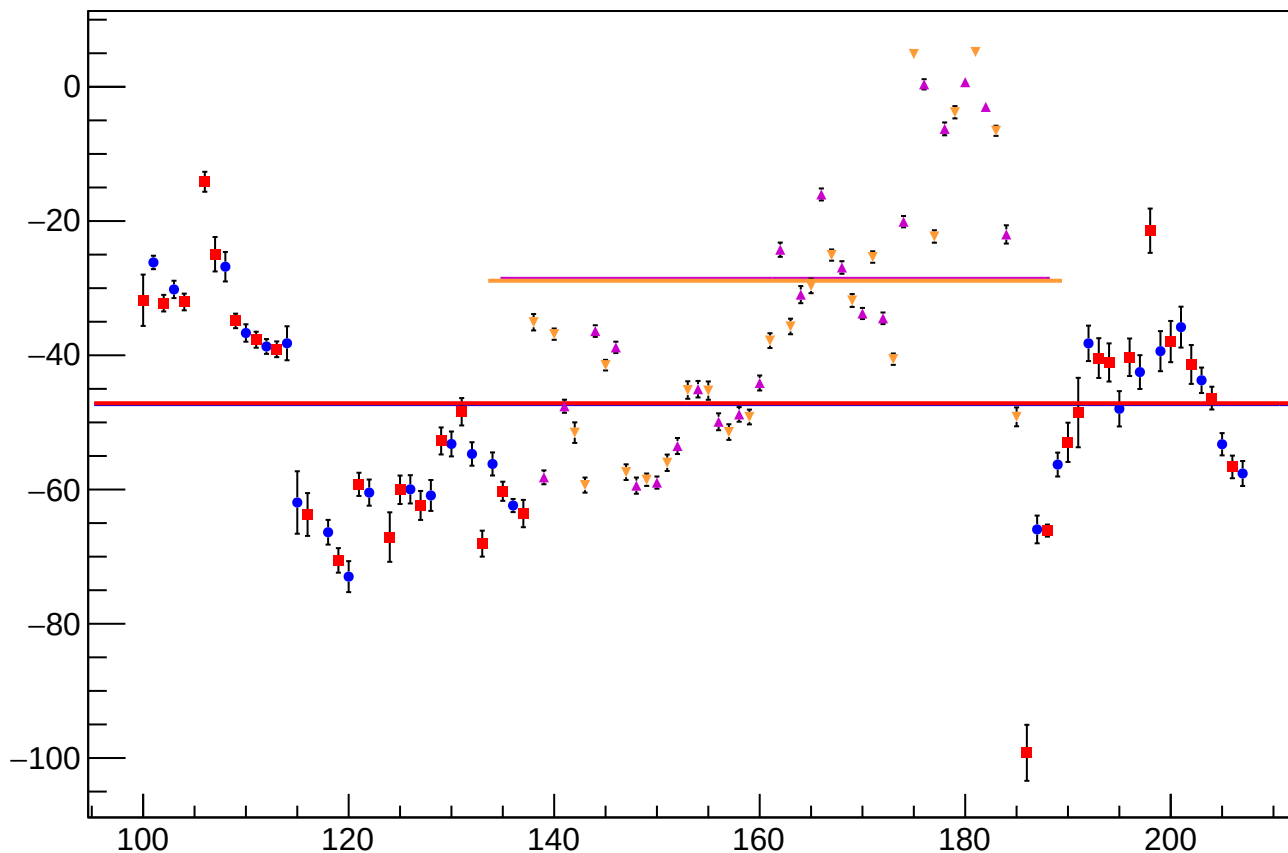
Left In: 35.852 $\pm$ 0.155  $\chi^2$ /NDF:2293.5/22

+ sign 36.406 $\pm$ 0.138  $\chi^2$ /NDF: 5759.7/50

All: 36.250 $\pm$ 0.099  $\chi^2$ /NDF: 10303.5/104

- sign 36.086 $\pm$ 0.141  $\chi^2$ /NDF: 4541.2/53

# reg\_asym\_sam\_48\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-47.272 \pm 0.339$   $\chi^2/\text{NDF}$ : 1689.0/25

Left Out:  $-28.891 \pm 0.193$   $\chi^2/\text{NDF}$ : 11798.4/24

Right Out:  $-47.142 \pm 0.319$   $\chi^2/\text{NDF}$ : 2470.9/30

Left In:  $-28.605 \pm 0.198$   $\chi^2/\text{NDF}$ : 10014.7/22

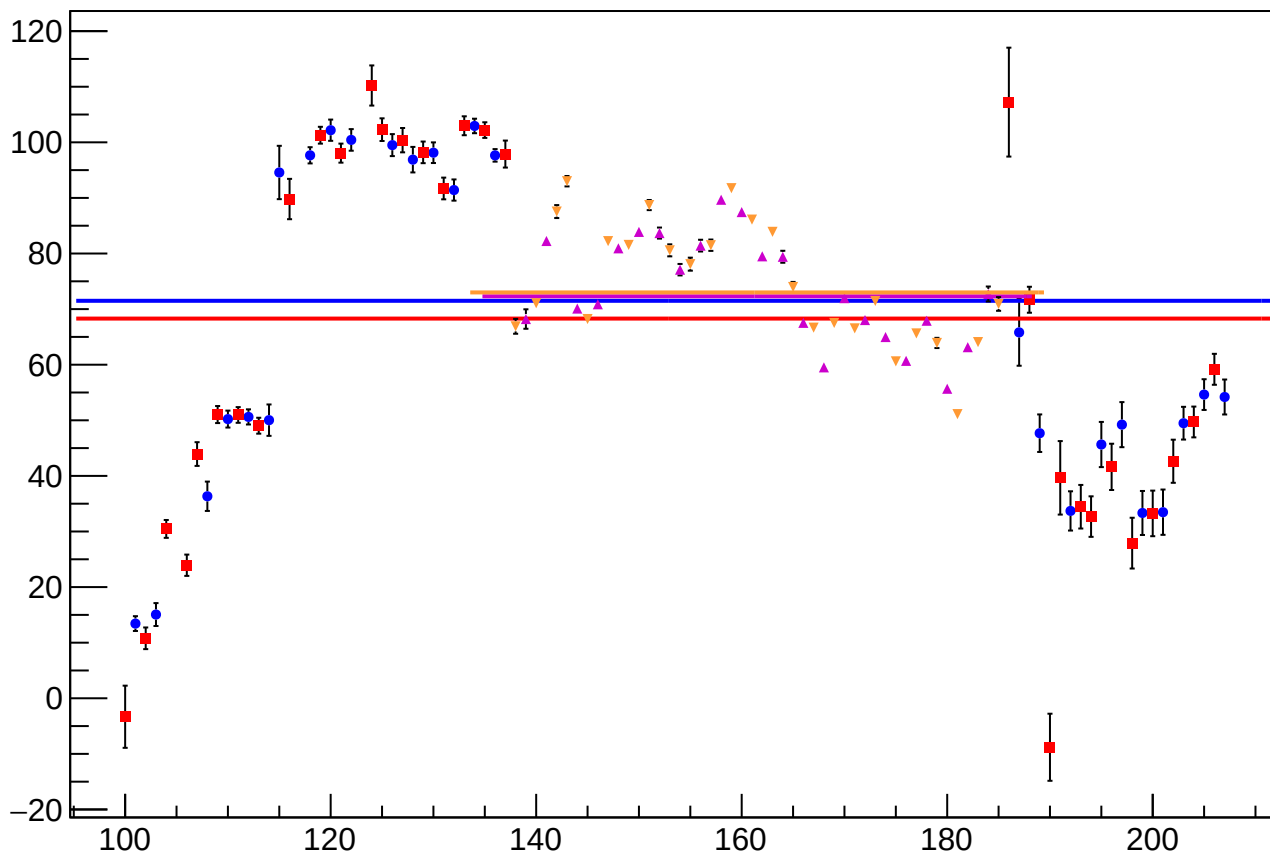
+ sign  $-33.391 \pm 0.168$   $\chi^2/\text{NDF}$ : 15713.7/50

All:  $-33.569 \pm 0.119$   $\chi^2/\text{NDF}$ : 30639.1/104

- sign  $-33.748 \pm 0.168$   $\chi^2/\text{NDF}$ : 14923.1/53



# reg\_asym\_sam\_48\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $71.494 \pm 0.400$   $\chi^2/\text{NDF}$ : 6436.7/25

Left Out:  $73.002 \pm 0.168$   $\chi^2/\text{NDF}$ : 4052.4/24

Right Out:  $68.297 \pm 0.395$   $\chi^2/\text{NDF}$ : 6345.8/30

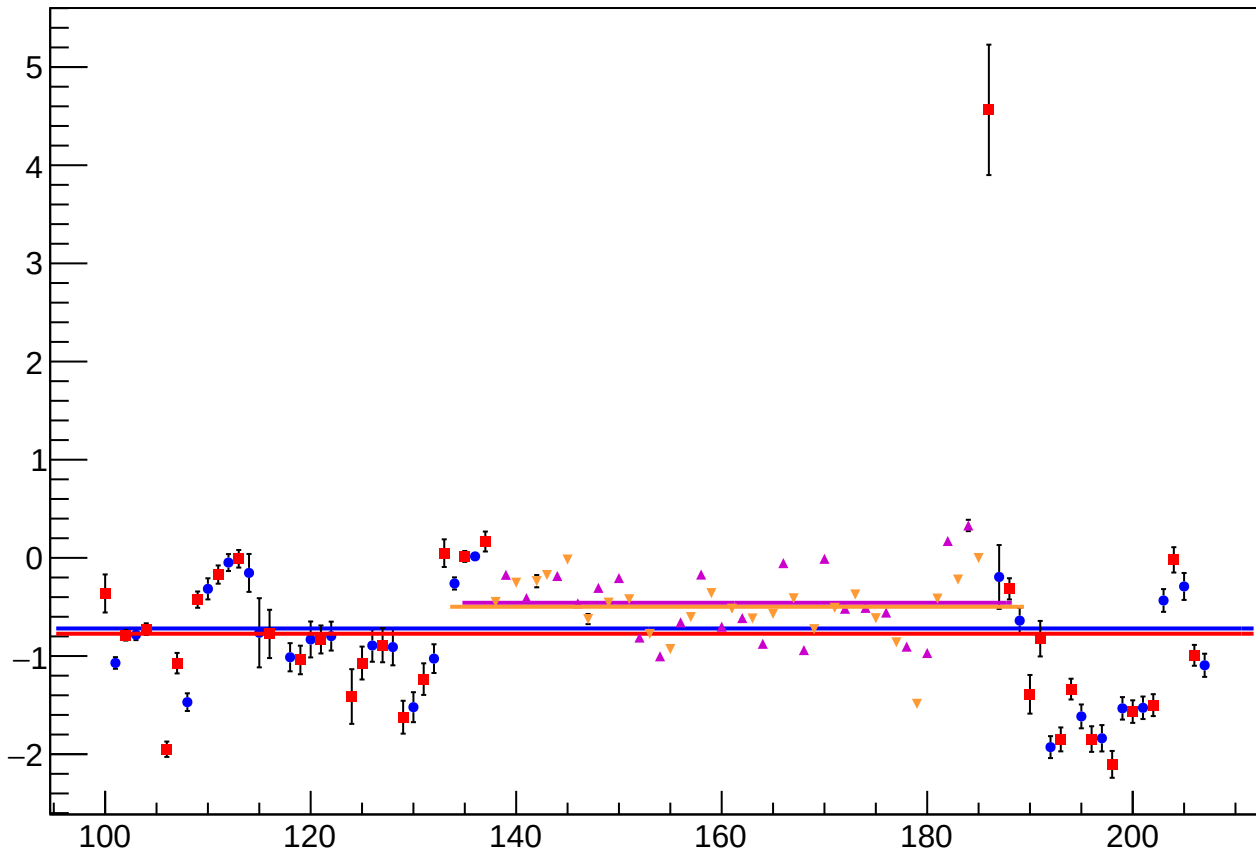
Left In:  $72.302 \pm 0.173$   $\chi^2/\text{NDF}$ : 2912.6/22

+ sign  $72.774 \pm 0.155$   $\chi^2/\text{NDF}$ : 10501.1/50

All:  $72.228 \pm 0.111$   $\chi^2/\text{NDF}$ : 19870.9/104

- sign  $71.656 \pm 0.159$   $\chi^2/\text{NDF}$ : 9344.4/53

# reg\_asym\_sam\_48\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.719 \pm 0.019$   $\chi^2/\text{NDF}$ : 912.4/25

Left Out:  $-0.498 \pm 0.008$   $\chi^2/\text{NDF}$ : 1482.9/24

Right Out:  $-0.773 \pm 0.019$   $\chi^2/\text{NDF}$ : 1228.6/30

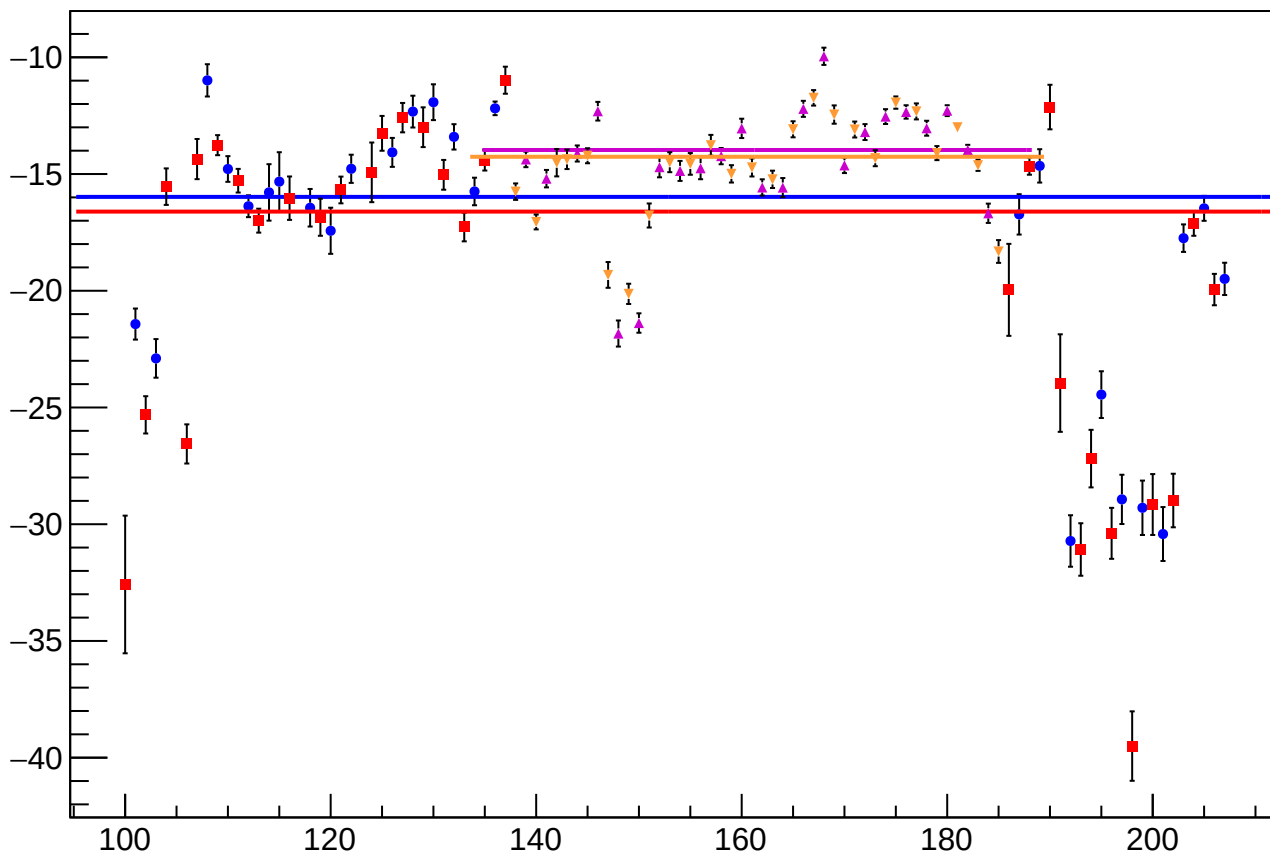
Left In:  $-0.458 \pm 0.008$   $\chi^2/\text{NDF}$ : 2103.1/22

+ sign  $-0.527 \pm 0.007$   $\chi^2/\text{NDF}$ : 2507.9/50

All:  $-0.514 \pm 0.005$   $\chi^2/\text{NDF}$ : 6081.2/104

- sign  $-0.501 \pm 0.007$   $\chi^2/\text{NDF}$ : 3566.8/53

reg\_asym\_sam\_13\_57\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-15.979 \pm 0.128$   $\chi^2/\text{NDF}: 1186.8/25$

Left Out:  $-14.261 \pm 0.070$   $\chi^2/\text{NDF}: 724.0/24$

Right Out:  $-16.609 \pm 0.126$   $\chi^2/\text{NDF}: 1494.7/30$

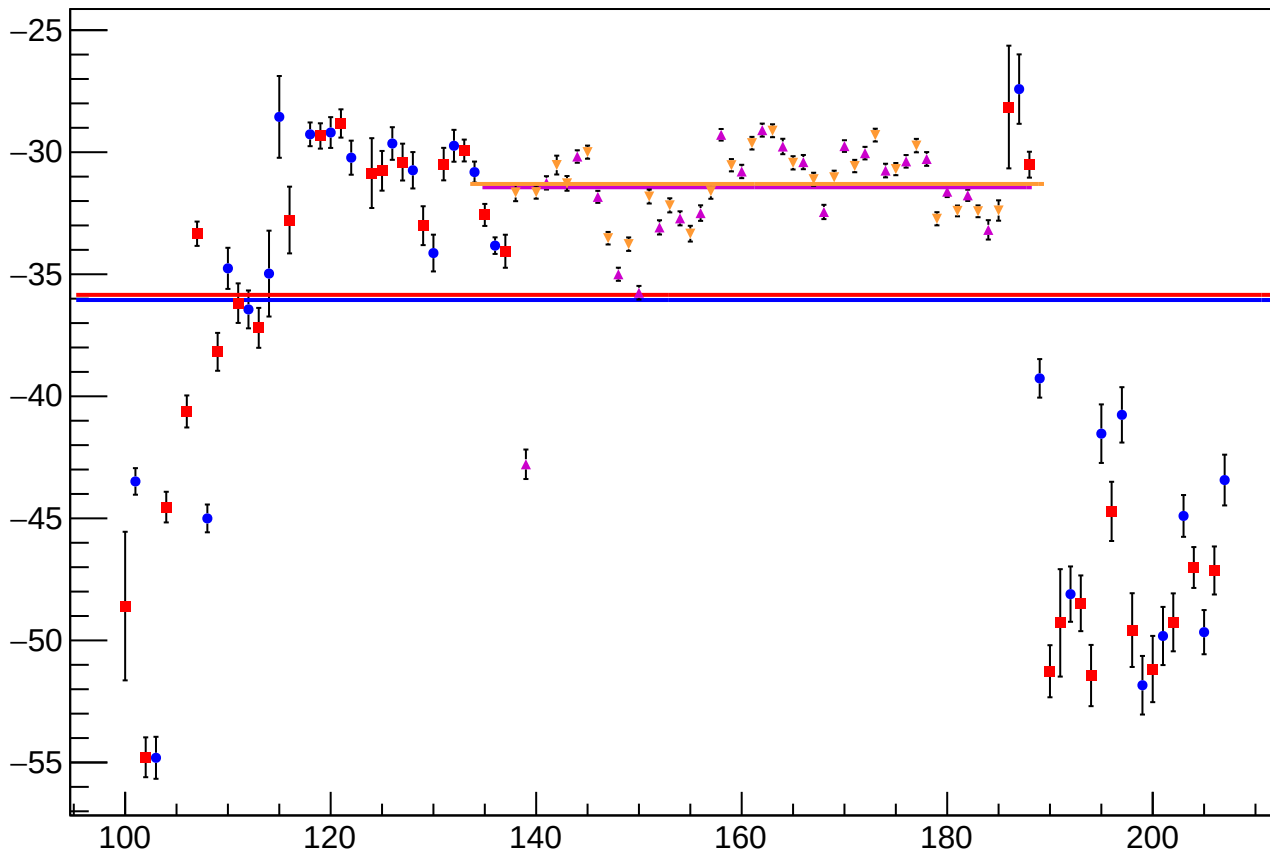
Left In:  $-13.970 \pm 0.072$   $\chi^2/\text{NDF}: 907.7/22$

+ sign  $-14.652 \pm 0.061$   $\chi^2/\text{NDF}: 2049.3/50$

All:  $-14.637 \pm 0.044$   $\chi^2/\text{NDF}: 4784.0/104$

- sign  $-14.621 \pm 0.062$   $\chi^2/\text{NDF}: 2734.6/53$

reg\_asym\_sam\_13\_57\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-36.056 \pm 0.139$   $\chi^2/\text{NDF}$ : 2642.3/25

Left Out:  $-31.301 \pm 0.055$   $\chi^2/\text{NDF}$ : 553.1/24

Right Out:  $-35.844 \pm 0.137$   $\chi^2/\text{NDF}$ : 2897.1/30

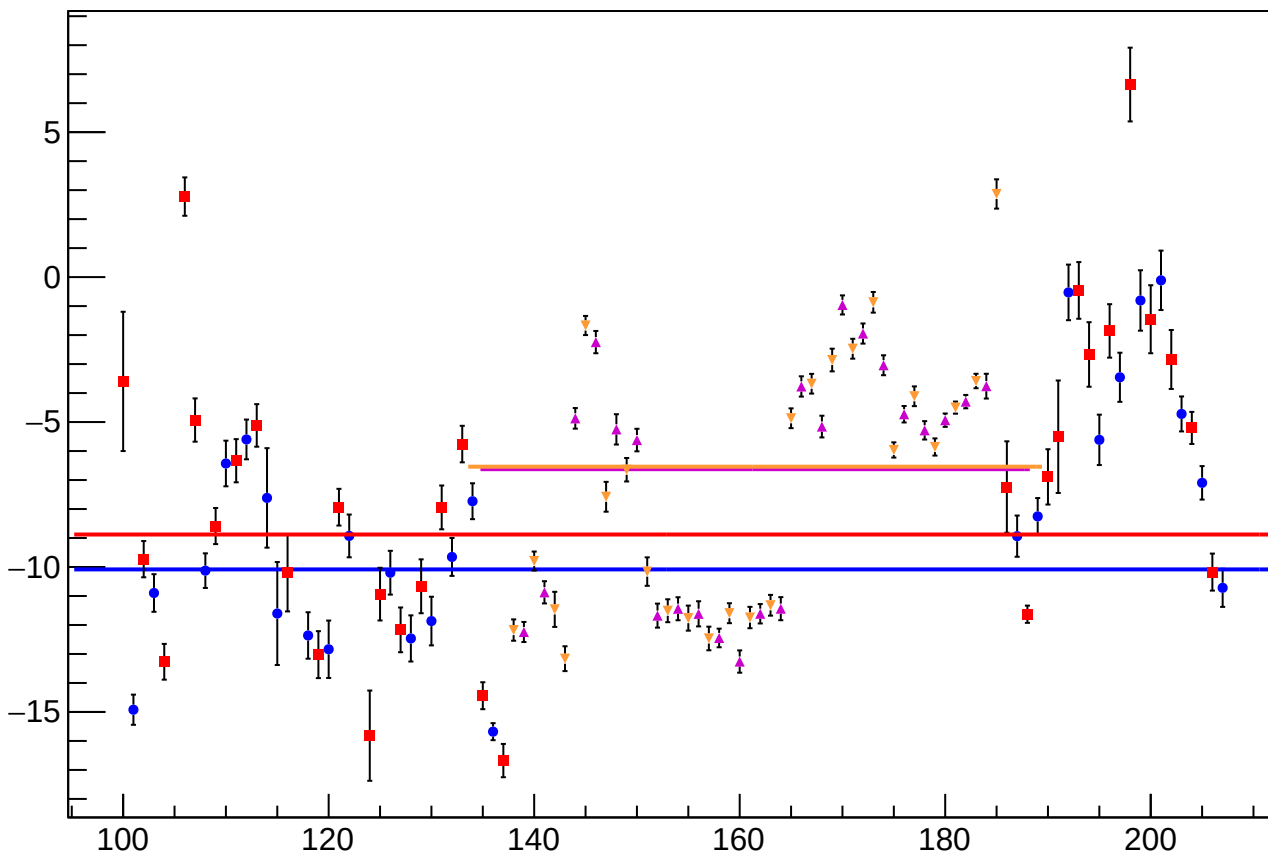
Left In:  $-31.436 \pm 0.057$   $\chi^2/\text{NDF}$ : 1214.8/22

+ sign  $-31.950 \pm 0.051$   $\chi^2/\text{NDF}$ : 4207.2/50

All:  $-32.018 \pm 0.037$   $\chi^2/\text{NDF}$ : 9201.8/104

- sign  $-32.091 \pm 0.053$   $\chi^2/\text{NDF}$ : 4990.9/53

# reg\_asym\_sam\_13\_57\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-10.083 \pm 0.132$   $\chi^2/\text{NDF}$ : 1044.0/25

Left Out:  $-6.540 \pm 0.070$   $\chi^2/\text{NDF}$ : 3242.5/24

Right Out:  $-8.879 \pm 0.128$   $\chi^2/\text{NDF}$ : 1393.2/30

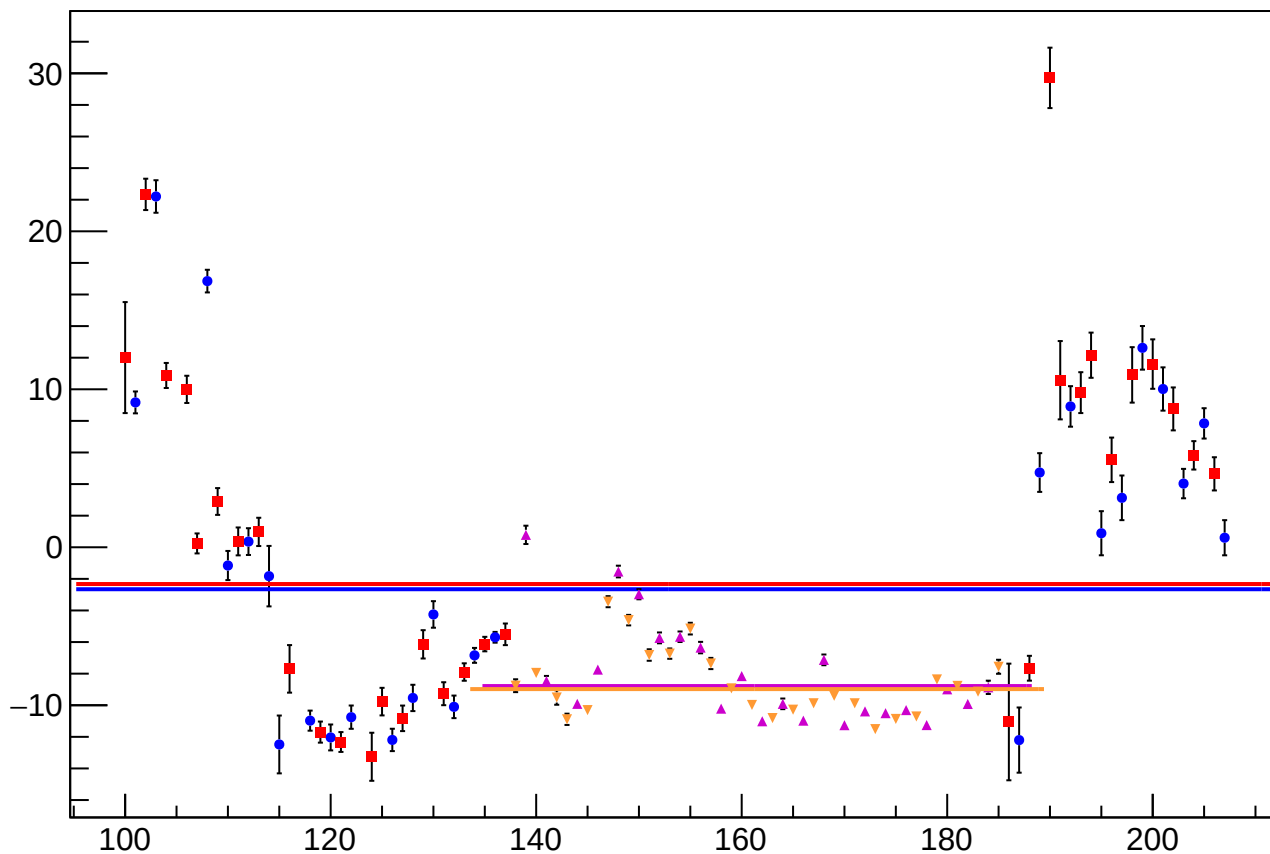
Left In:  $-6.625 \pm 0.071$   $\chi^2/\text{NDF}$ : 2908.0/22

+ sign  $-7.308 \pm 0.062$   $\chi^2/\text{NDF}$ : 4849.2/50

All:  $-7.234 \pm 0.044$   $\chi^2/\text{NDF}$ : 9389.0/104

- sign  $-7.159 \pm 0.062$   $\chi^2/\text{NDF}$ : 4536.9/53

# reg\_asym\_sam\_13\_57\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-2.656 \pm 0.157$   $\chi^2/\text{NDF}$ : 3152.0/25

Left Out:  $-8.977 \pm 0.061$   $\chi^2/\text{NDF}$ : 972.0/24

Right Out:  $-2.327 \pm 0.159$   $\chi^2/\text{NDF}$ : 3104.3/30

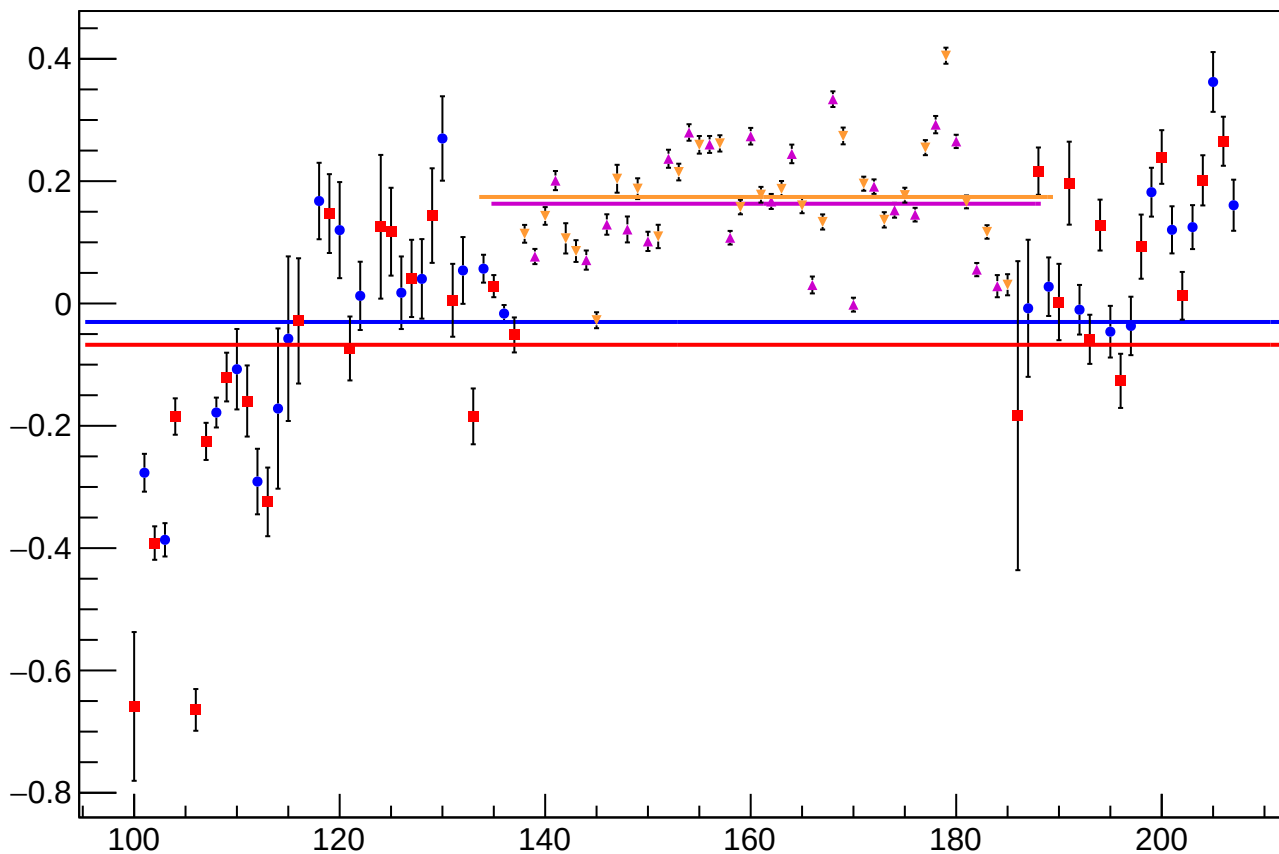
Left In:  $-8.785 \pm 0.063$   $\chi^2/\text{NDF}$ : 1685.0/22

+ sign  $-8.140 \pm 0.057$   $\chi^2/\text{NDF}$ : 5526.0/50

All:  $-8.024 \pm 0.041$   $\chi^2/\text{NDF}$ : 11742.3/104

- sign  $-7.902 \pm 0.059$   $\chi^2/\text{NDF}$ : 6207.9/53

reg\_asym\_sam\_13\_57\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.030 \pm 0.007$   $\chi^2/\text{NDF}$ : 499.7/25

Left Out:  $0.174 \pm 0.003$   $\chi^2/\text{NDF}$ : 922.9/24

Right Out:  $-0.068 \pm 0.008$   $\chi^2/\text{NDF}$ : 874.2/30

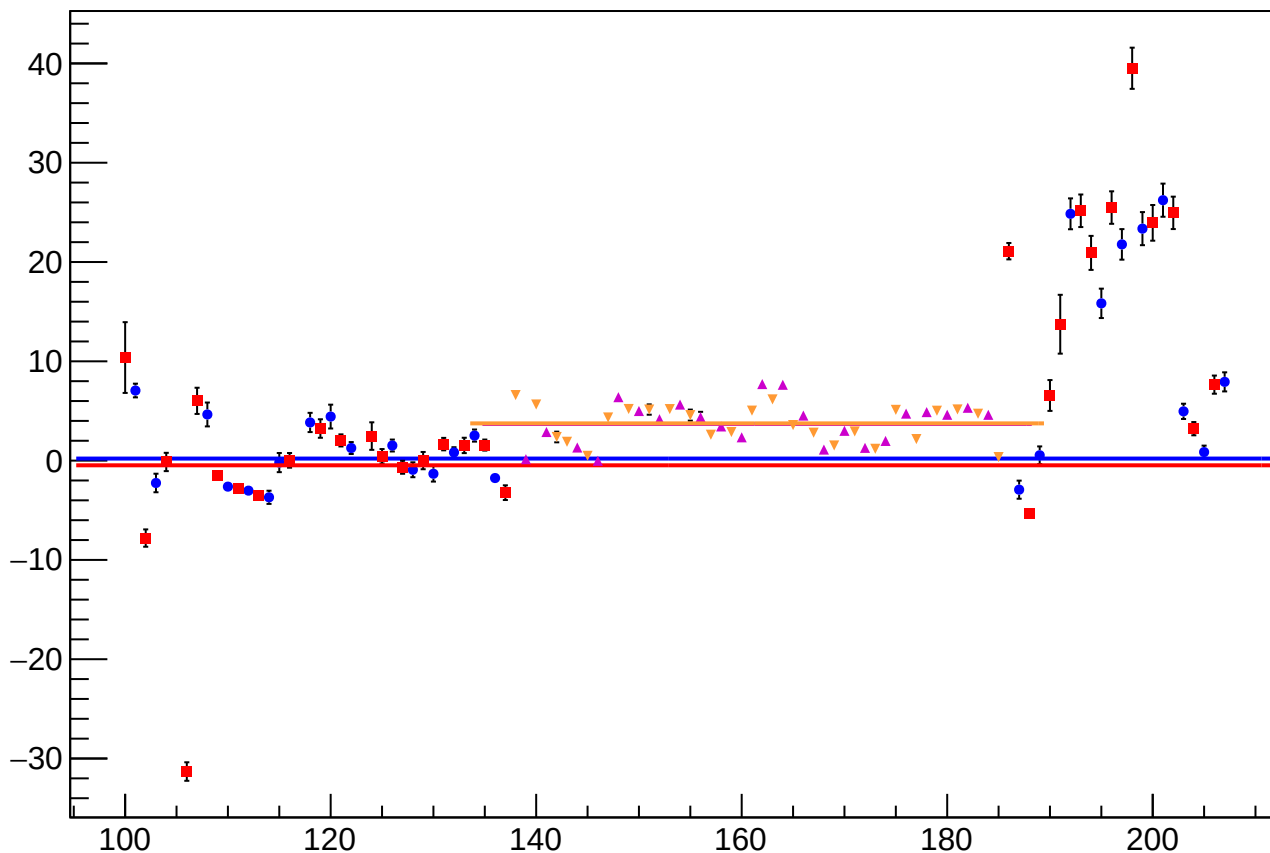
Left In:  $0.163 \pm 0.003$   $\chi^2/\text{NDF}$ : 1195.1/22

+ sign  $0.149 \pm 0.003$   $\chi^2/\text{NDF}$ : 2112.1/50

All:  $0.142 \pm 0.002$   $\chi^2/\text{NDF}$ : 5027.1/104

- sign  $0.135 \pm 0.003$   $\chi^2/\text{NDF}$ : 2900.7/53

reg\_asym\_sam\_15\_37\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $0.207 \pm 0.126$   $\chi^2/\text{NDF}: 1556.1/25$

Left Out:  $3.750 \pm 0.062$   $\chi^2/\text{NDF}: 809.8/24$

Right Out:  $-0.472 \pm 0.118$   $\chi^2/\text{NDF}: 3841.0/30$

Left In:  $3.688 \pm 0.064$   $\chi^2/\text{NDF}: 953.3/22$

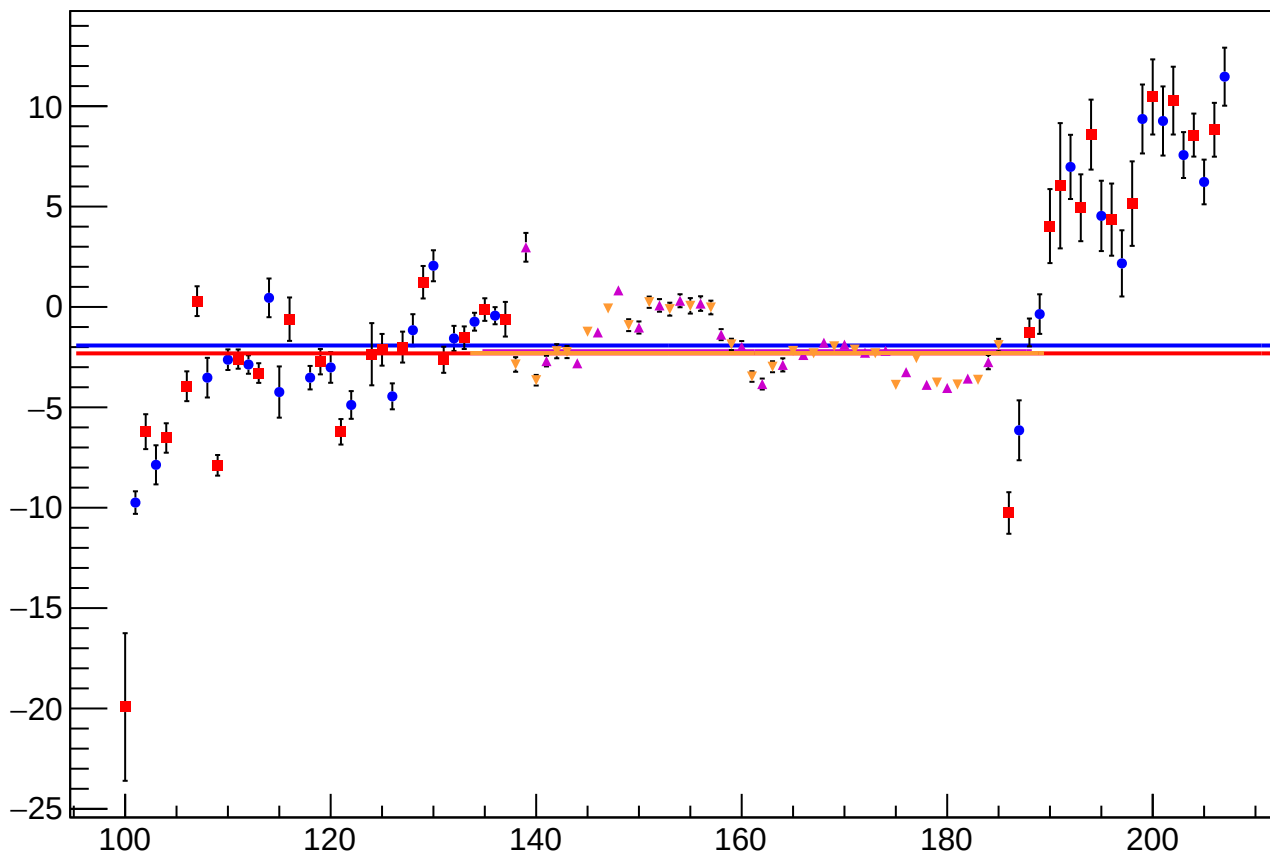
+ sign  $3.058 \pm 0.056$   $\chi^2/\text{NDF}: 3004.5/50$

All:  $2.900 \pm 0.040$   $\chi^2/\text{NDF}: 8780.9/104$

- sign  $2.740 \pm 0.056$   $\chi^2/\text{NDF}: 5760.2/53$



# reg\_asym\_sam\_15\_37\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-1.920 \pm 0.147$   $\chi^2/\text{NDF}$ : 694.2/25

Left Out:  $-2.294 \pm 0.050$   $\chi^2/\text{NDF}$ : 631.5/24

Right Out:  $-2.313 \pm 0.146$   $\chi^2/\text{NDF}$ : 735.3/30

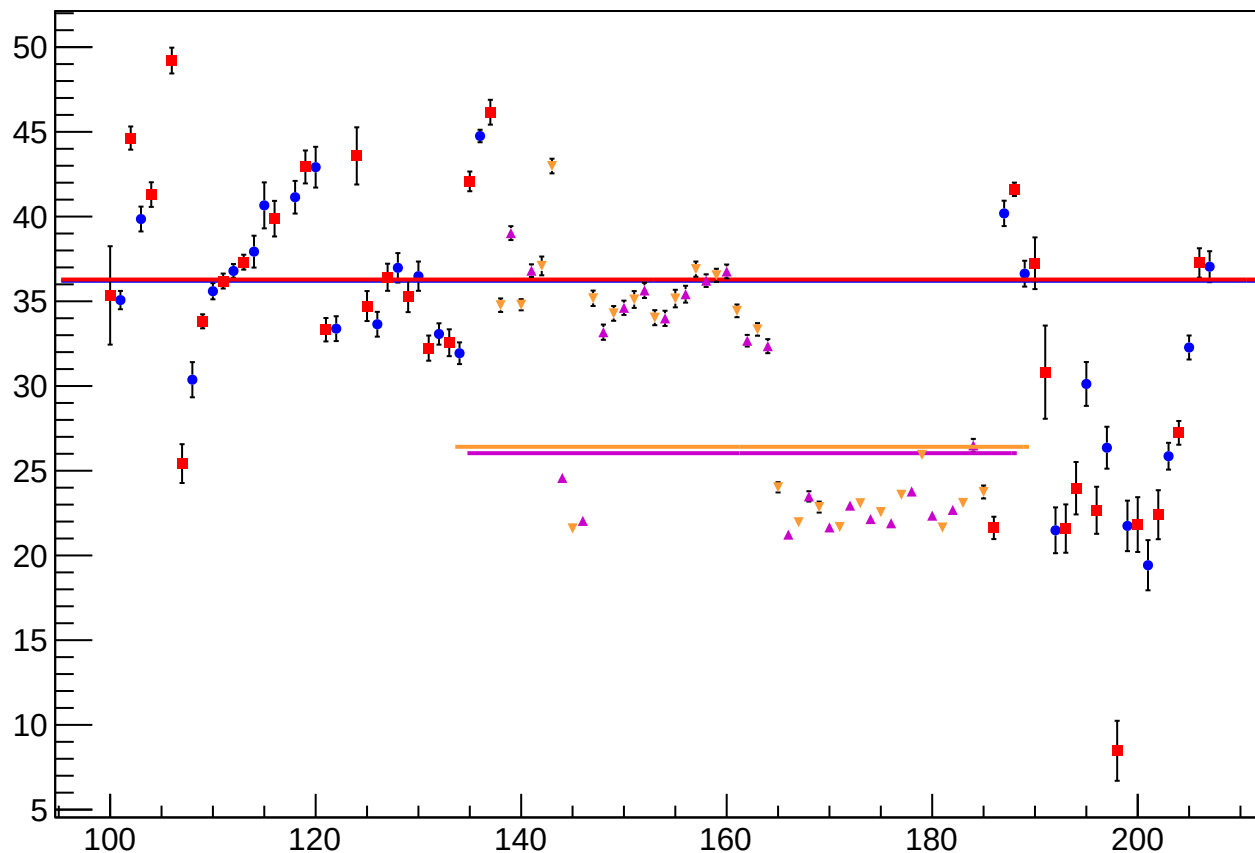
Left In:  $-2.204 \pm 0.051$   $\chi^2/\text{NDF}$ : 724.7/22

+ sign  $-2.256 \pm 0.047$   $\chi^2/\text{NDF}$ : 1331.6/50

All:  $-2.236 \pm 0.034$   $\chi^2/\text{NDF}$ : 2792.4/104

- sign  $-2.216 \pm 0.048$   $\chi^2/\text{NDF}$ : 1460.5/53

# reg\_asym\_sam\_15\_37\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $36.212 \pm 0.142$   $\chi^2/\text{NDF}: 1424.6/25$

Left Out:  $26.411 \pm 0.062$   $\chi^2/\text{NDF}: 9222.2/24$

Right Out:  $36.285 \pm 0.135$   $\chi^2/\text{NDF}: 2578.8/30$

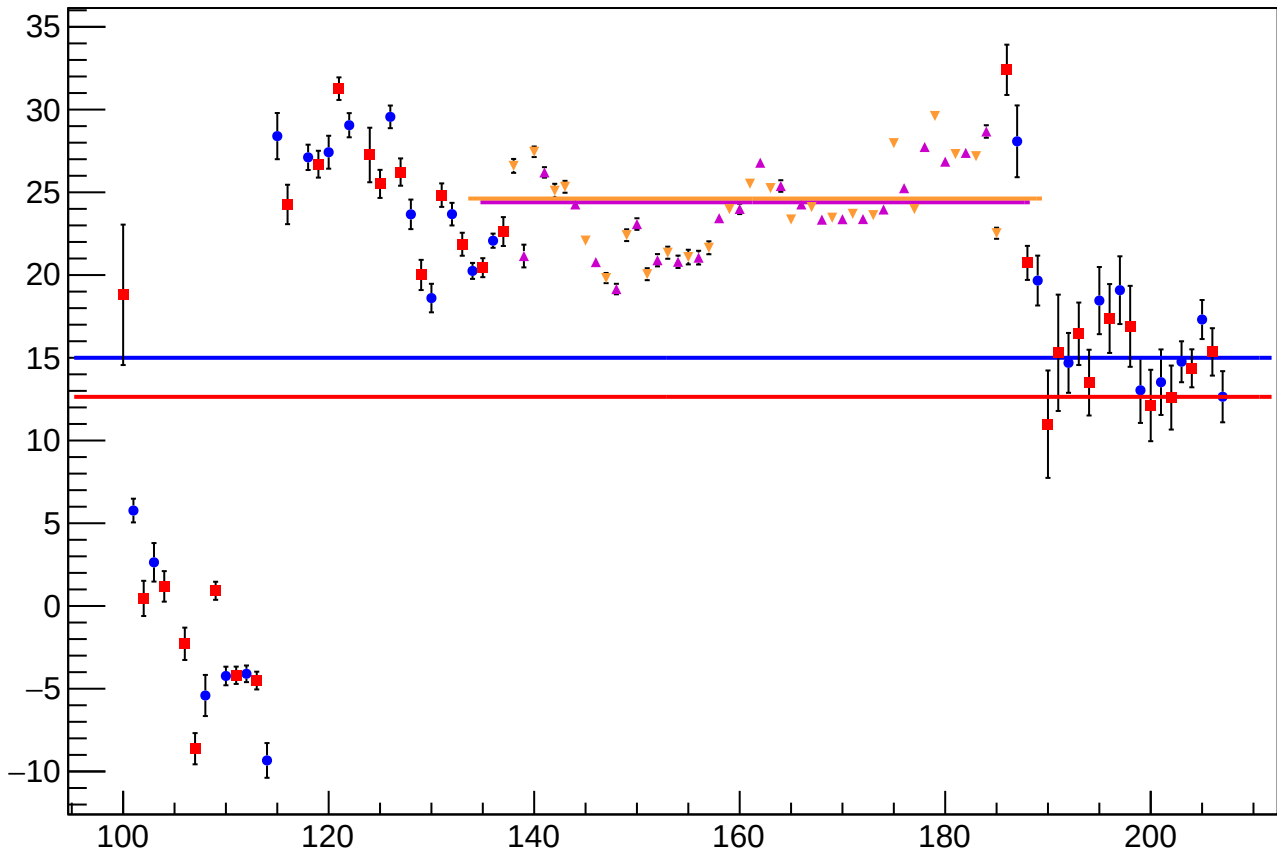
Left In:  $26.036 \pm 0.064$   $\chi^2/\text{NDF}: 7842.9/22$

+ sign  $27.995 \pm 0.057$   $\chi^2/\text{NDF}: 14649.0/50$

All:  $27.949 \pm 0.041$   $\chi^2/\text{NDF}: 29759.3/104$

- sign  $27.902 \pm 0.058$   $\chi^2/\text{NDF}: 15109.0/53$

# reg\_asym\_sam\_15\_37\_dd\_diff\_bpm4eY\_slope vs Slug



Right In: 14.999 $\pm$ 0.165  $\chi^2$ /NDF: 5748.1/25

Left Out: 24.624 $\pm$ 0.055  $\chi^2$ /NDF:1950.7/24

Right Out: 12.639 $\pm$ 0.166  $\chi^2$ /NDF: 6370.7/30

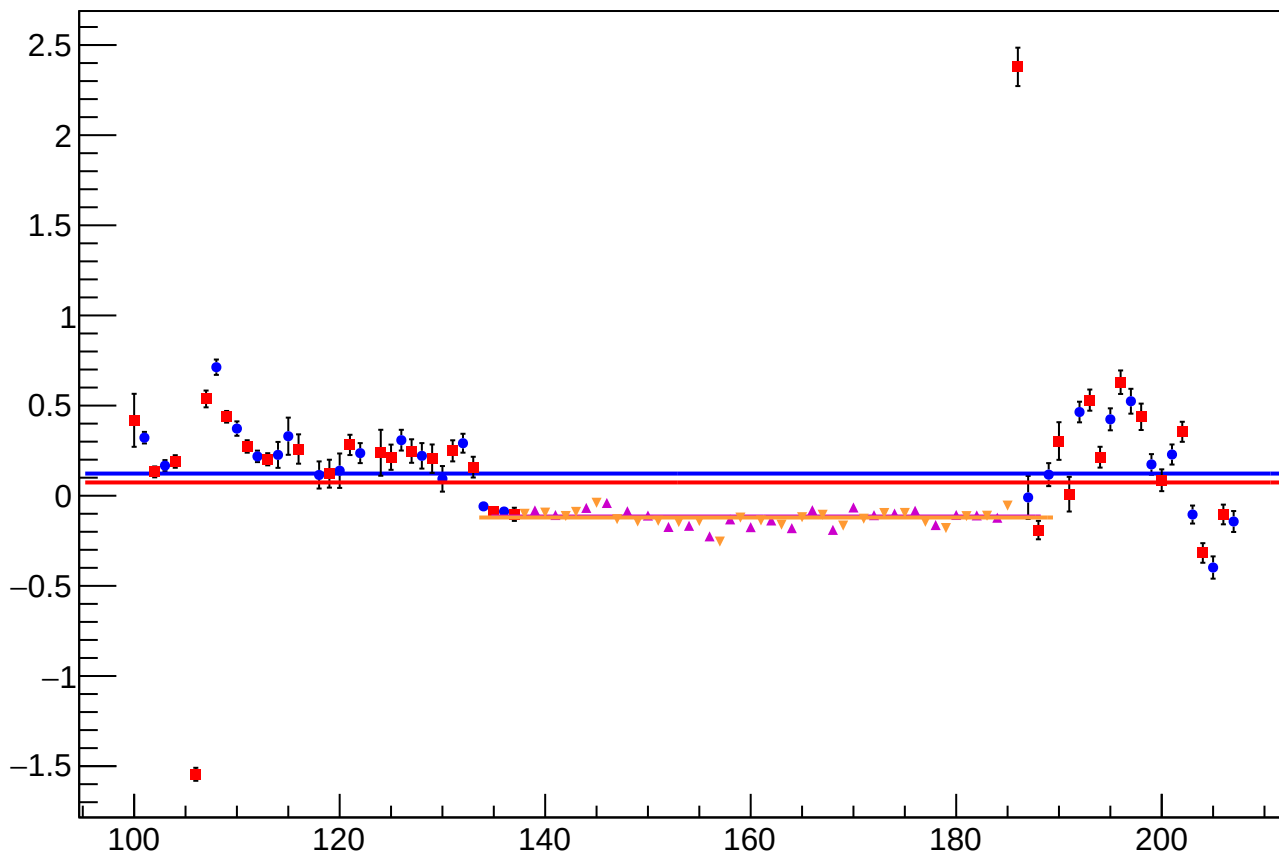
Left In: 24.397 $\pm$ 0.056  $\chi^2$ /NDF:1715.6/22

+ sign 23.654 $\pm$ 0.052  $\chi^2$ /NDF: 10765.8/50

All: 23.423 $\pm$ 0.037  $\chi^2$ /NDF: 23379.2/104

- sign 23.181 $\pm$ 0.053  $\chi^2$ /NDF: 12573.3/53

# reg\_asym\_sam\_15\_37\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $0.123 \pm 0.008$   $\chi^2/\text{NDF}$ : 732.4/25

Left Out:  $-0.121 \pm 0.002$   $\chi^2/\text{NDF}$ : 262.9/24

Right Out:  $0.074 \pm 0.009$   $\chi^2/\text{NDF}$ : 3181.5/30

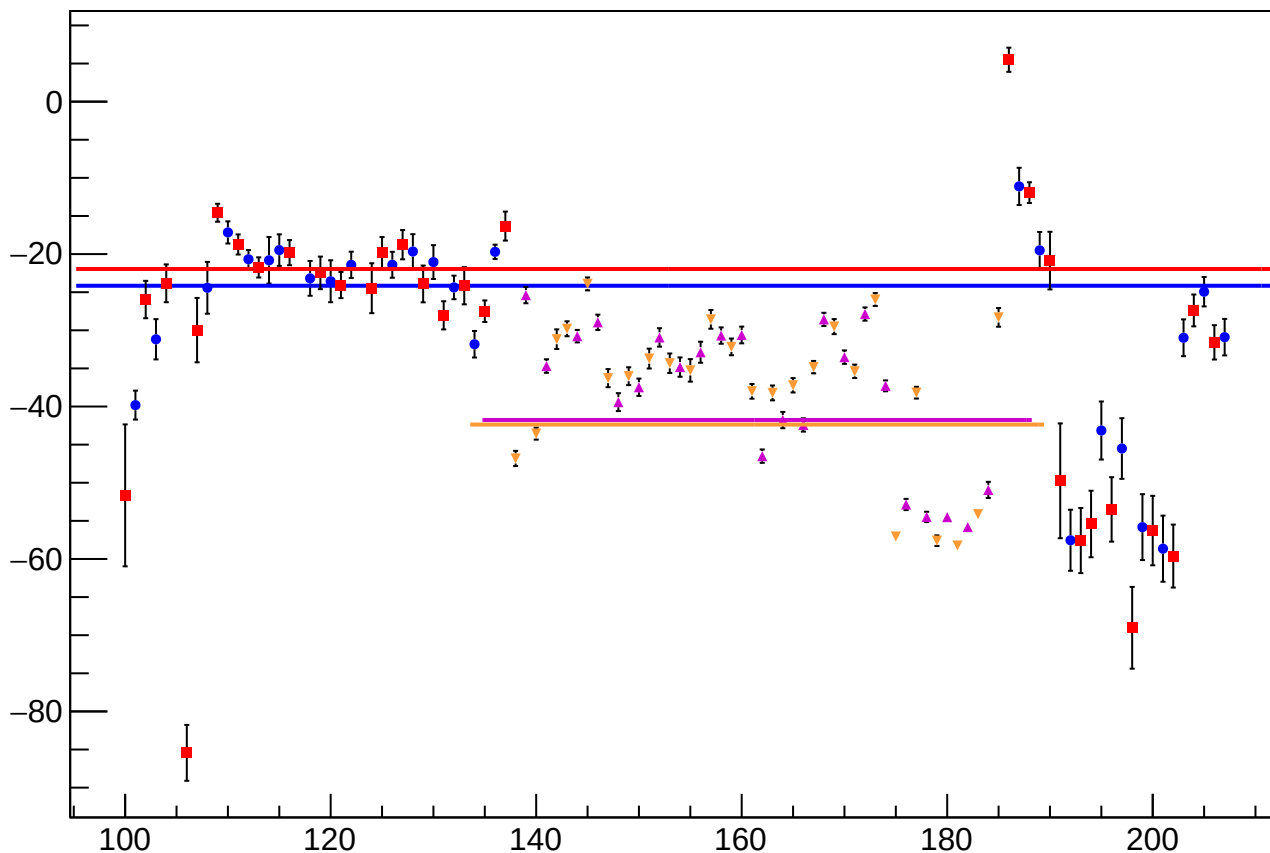
Left In:  $-0.115 \pm 0.003$   $\chi^2/\text{NDF}$ : 290.7/22

+ sign  $-0.102 \pm 0.002$   $\chi^2/\text{NDF}$ : 1760.8/50

All:  $-0.101 \pm 0.002$   $\chi^2/\text{NDF}$ : 5674.7/104

- sign  $-0.101 \pm 0.002$   $\chi^2/\text{NDF}$ : 3913.8/53

# reg\_asym\_sam\_24\_68\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-24.155 \pm 0.391$   $\chi^2/\text{NDF}$ : 454.4/25

Left Out:  $-42.366 \pm 0.175$   $\chi^2/\text{NDF}$ : 4477.3/24

Right Out:  $-21.953 \pm 0.377$   $\chi^2/\text{NDF}$ : 1199.9/30

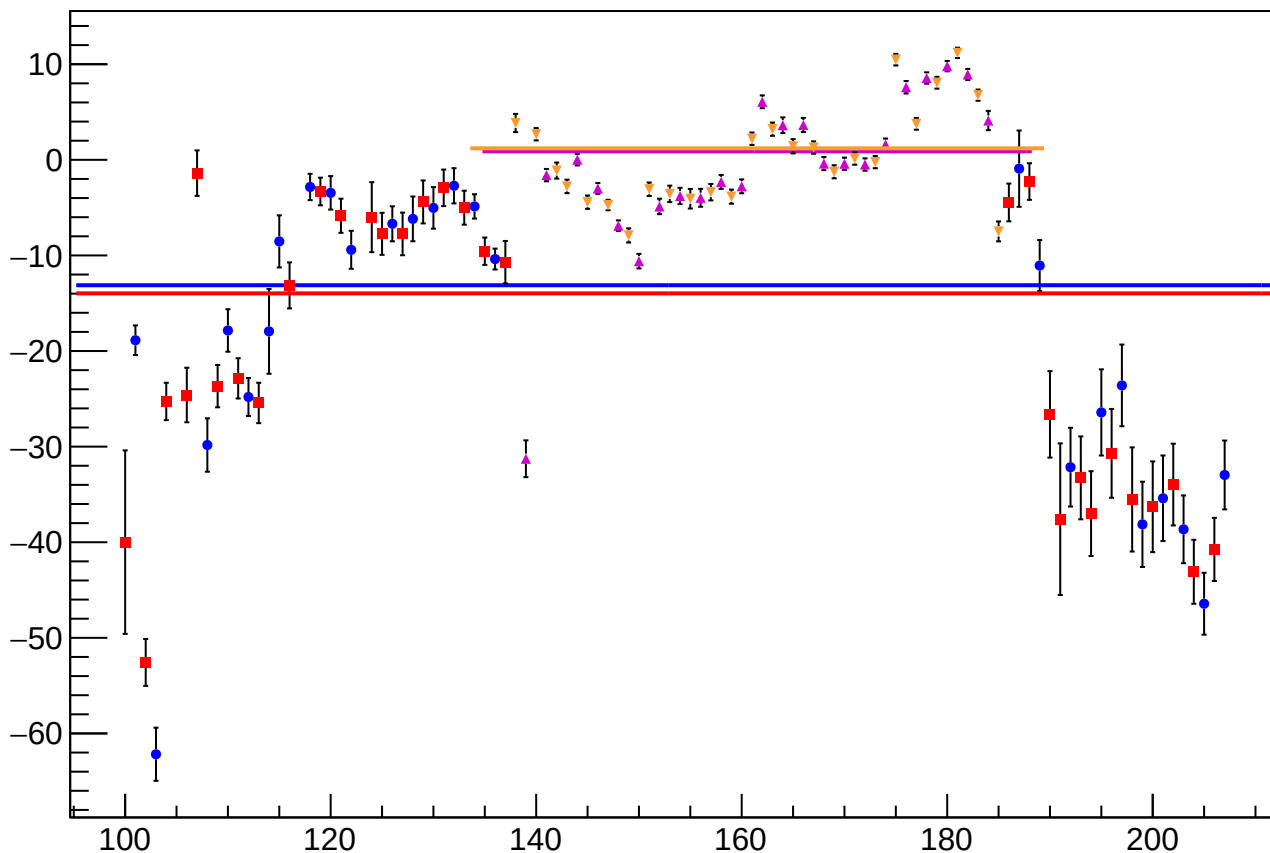
Left In:  $-41.764 \pm 0.182$   $\chi^2/\text{NDF}$ : 3459.2/22

+ sign  $-39.317 \pm 0.160$   $\chi^2/\text{NDF}$ : 6740.6/50

All:  $-38.687 \pm 0.114$   $\chi^2/\text{NDF}$ : 13672.9/104

- sign  $-38.028 \pm 0.164$   $\chi^2/\text{NDF}$ : 6900.5/53

# reg\_asym\_sam\_24\_68\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-13.117 \pm 0.423$   $\chi^2/\text{NDF}$ : 900.0/25

Left Out:  $1.203 \pm 0.138$   $\chi^2/\text{NDF}$ : 1463.6/24

Right Out:  $-13.969 \pm 0.431$   $\chi^2/\text{NDF}$ : 919.3/30

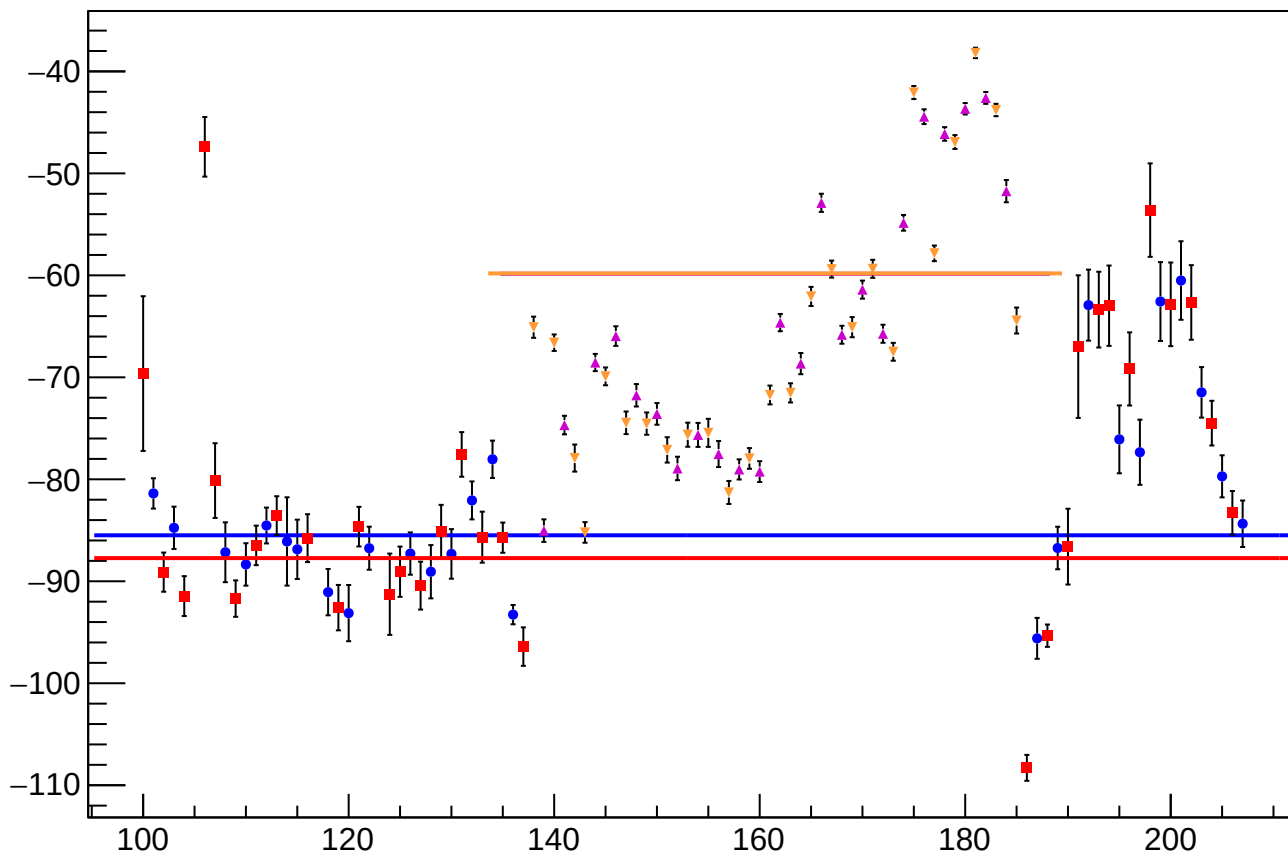
Left In:  $0.889 \pm 0.143$   $\chi^2/\text{NDF}$ : 1763.7/22

+ sign  $-0.176 \pm 0.131$   $\chi^2/\text{NDF}$ : 3398.5/50

All:  $-0.372 \pm 0.094$   $\chi^2/\text{NDF}$ : 7156.0/104

- sign  $-0.582 \pm 0.136$   $\chi^2/\text{NDF}$ : 3752.9/53

# reg\_asym\_sam\_24\_68\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-85.491 \pm 0.415$   $\chi^2/\text{NDF}$ : 314.8/25

Left Out:  $-59.809 \pm 0.175$   $\chi^2/\text{NDF}$ : 6645.1/24

Right Out:  $-87.728 \pm 0.399$   $\chi^2/\text{NDF}$ : 879.9/30

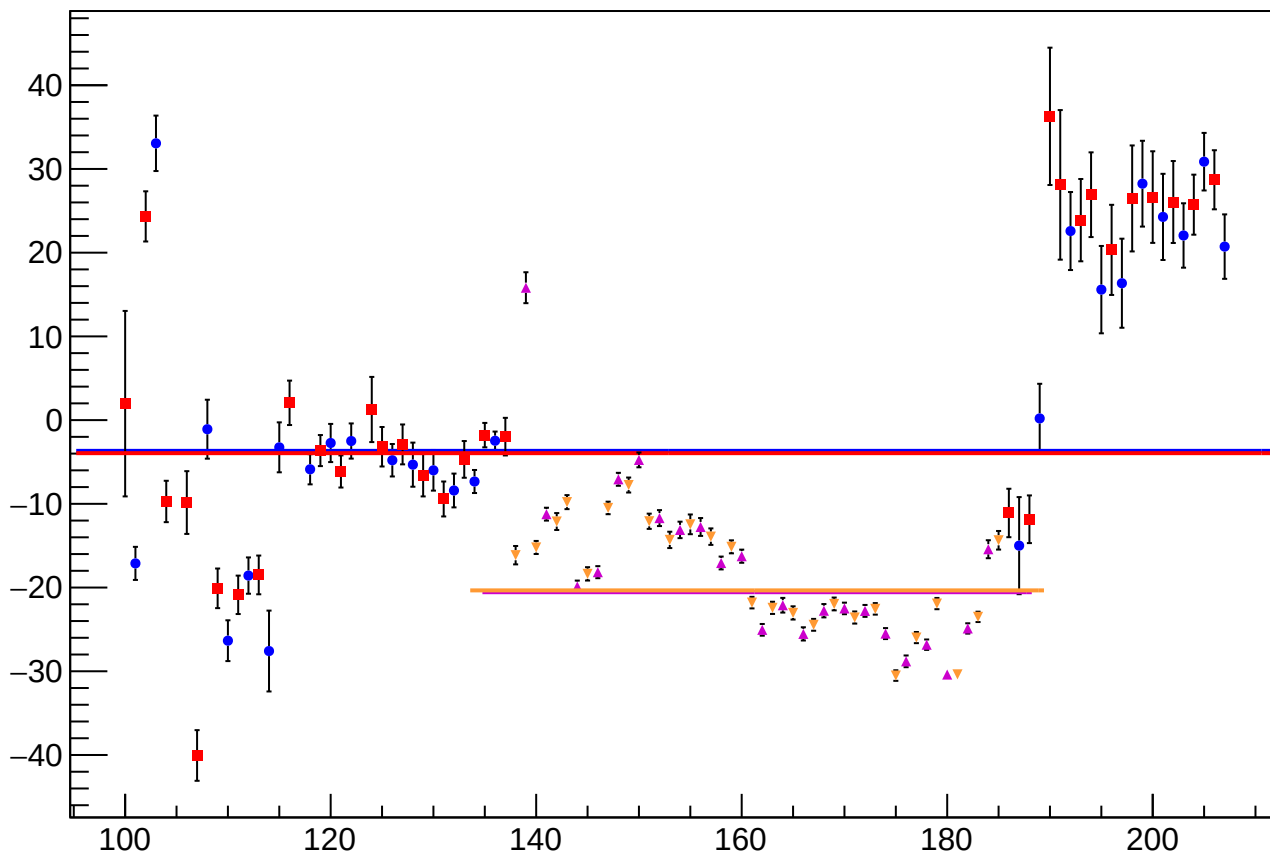
Left In:  $-59.846 \pm 0.181$   $\chi^2/\text{NDF}$ : 5534.1/22

+ sign  $-63.696 \pm 0.161$   $\chi^2/\text{NDF}$ : 10208.6/50

All:  $-64.141 \pm 0.115$   $\chi^2/\text{NDF}$ : 20684.3/104

- sign  $-64.604 \pm 0.165$   $\chi^2/\text{NDF}$ : 10460.3/53

# reg\_asym\_sam\_24\_68\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-3.674 \pm 0.478$   $\chi^2/\text{NDF}$ : 664.0/25

Left Out:  $-20.339 \pm 0.155$   $\chi^2/\text{NDF}$ : 1701.1/24

Right Out:  $-3.947 \pm 0.497$   $\chi^2/\text{NDF}$ : 786.1/30

Left In:  $-20.555 \pm 0.160$   $\chi^2/\text{NDF}$ : 2193.8/22

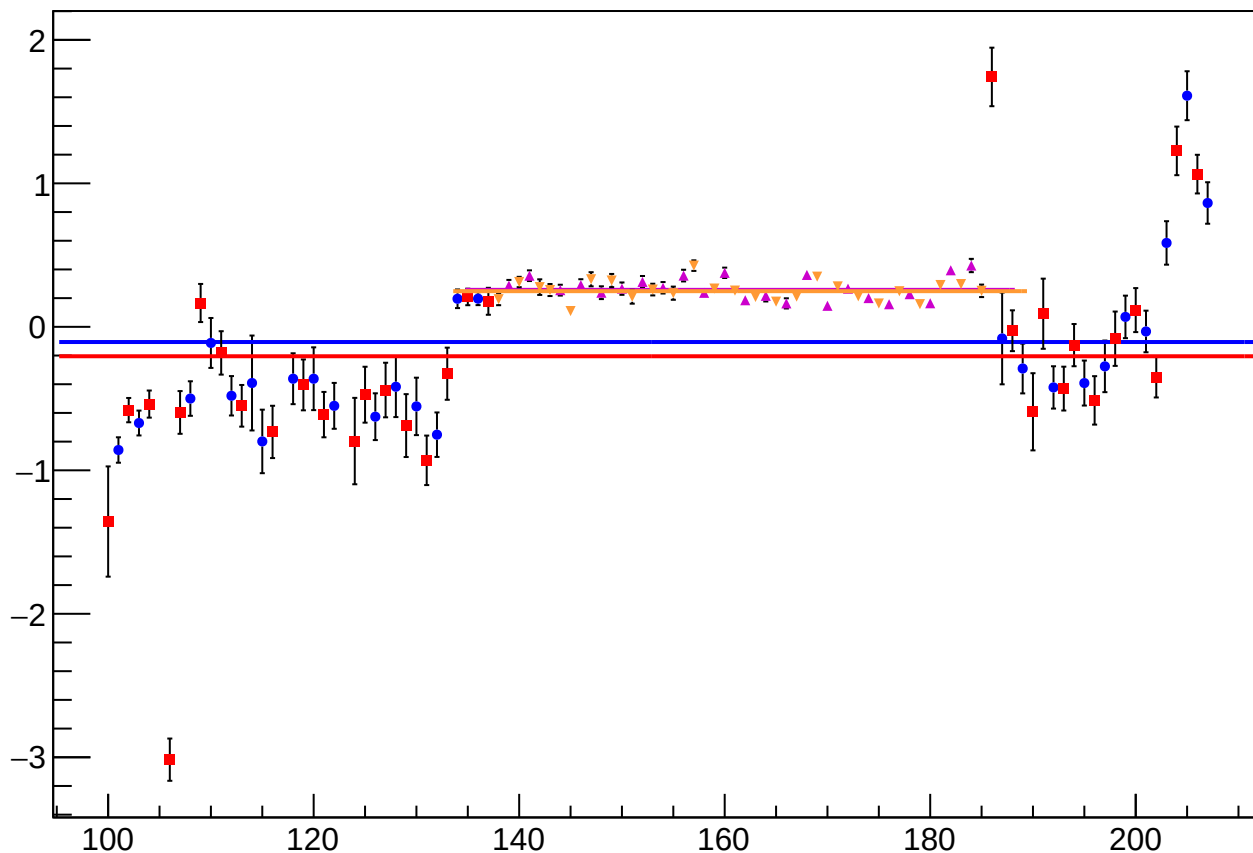
+ sign  $-18.760 \pm 0.147$   $\chi^2/\text{NDF}$ : 3466.0/50

All:  $-18.877 \pm 0.106$   $\chi^2/\text{NDF}$ : 7460.1/104

- sign  $-19.002 \pm 0.152$   $\chi^2/\text{NDF}$ : 3992.8/53



reg\_asym\_sam\_24\_68\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.106 \pm 0.024$   $\chi^2/\text{NDF}: 434.5/25$

Left Out:  $0.249 \pm 0.007$   $\chi^2/\text{NDF}: 93.2/24$

Right Out:  $-0.205 \pm 0.025$   $\chi^2/\text{NDF}: 808.8/30$

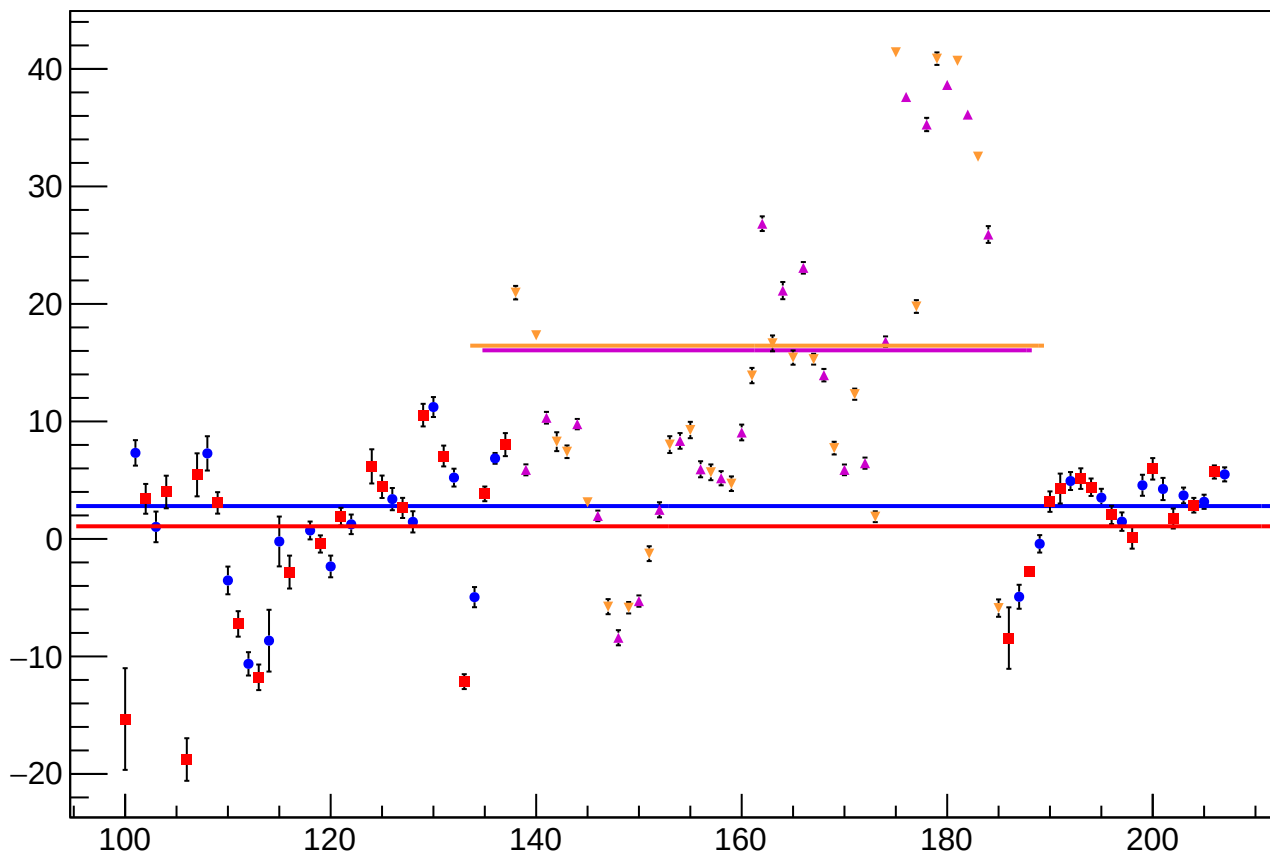
Left In:  $0.258 \pm 0.007$   $\chi^2/\text{NDF}: 134.3/22$

+ sign  $0.221 \pm 0.007$   $\chi^2/\text{NDF}: 733.1/50$

All:  $0.222 \pm 0.005$   $\chi^2/\text{NDF}: 1993.6/104$

- sign  $0.223 \pm 0.007$   $\chi^2/\text{NDF}: 1260.4/53$

# reg\_asym\_sam\_26\_48\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $2.796 \pm 0.162$   $\chi^2/\text{NDF}$ : 690.1/25

Left Out:  $16.449 \pm 0.104$   $\chi^2/\text{NDF}$ : 21400.3/24

Right Out:  $1.075 \pm 0.151$   $\chi^2/\text{NDF}$ : 1319.0/30

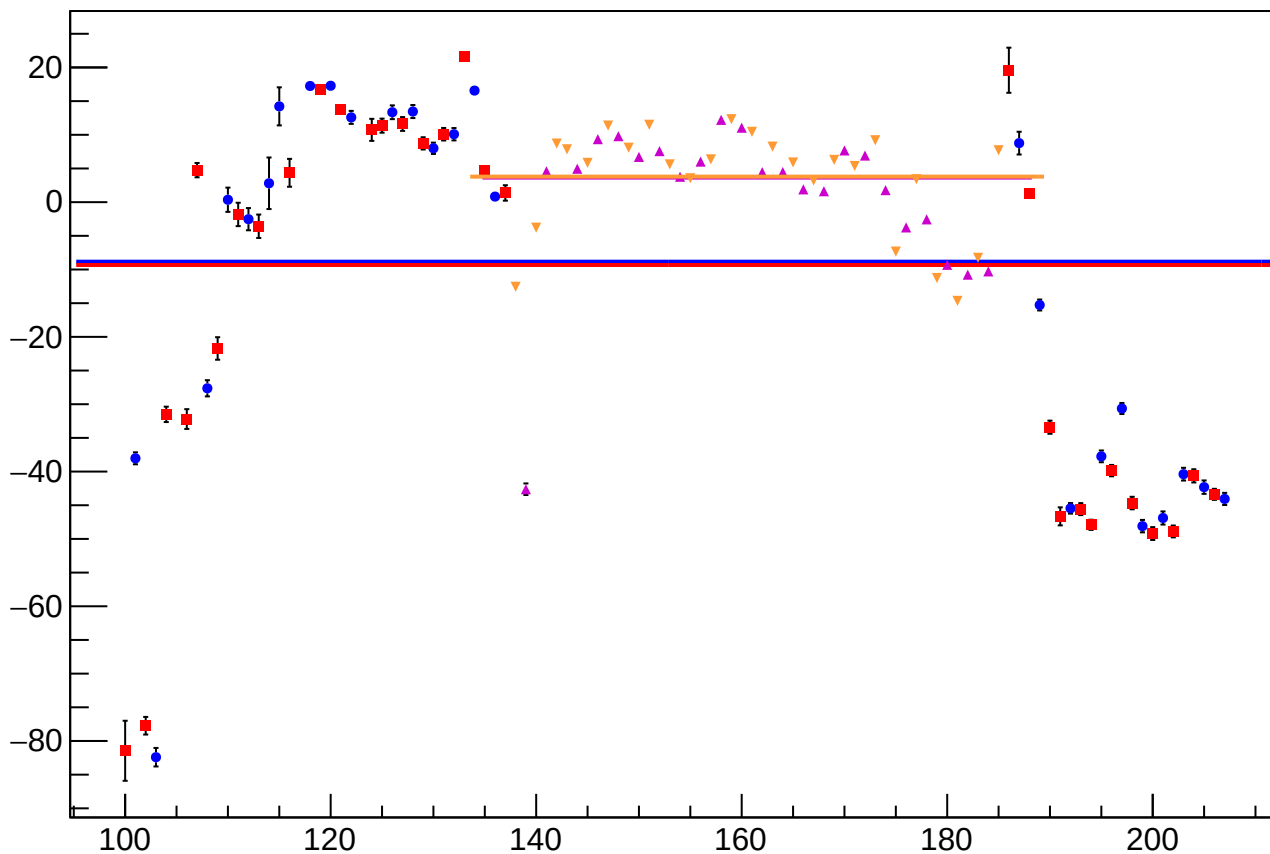
Left In:  $16.051 \pm 0.107$   $\chi^2/\text{NDF}$ : 17625.1/22

+ sign  $12.480 \pm 0.088$   $\chi^2/\text{NDF}$ : 27099.6/50

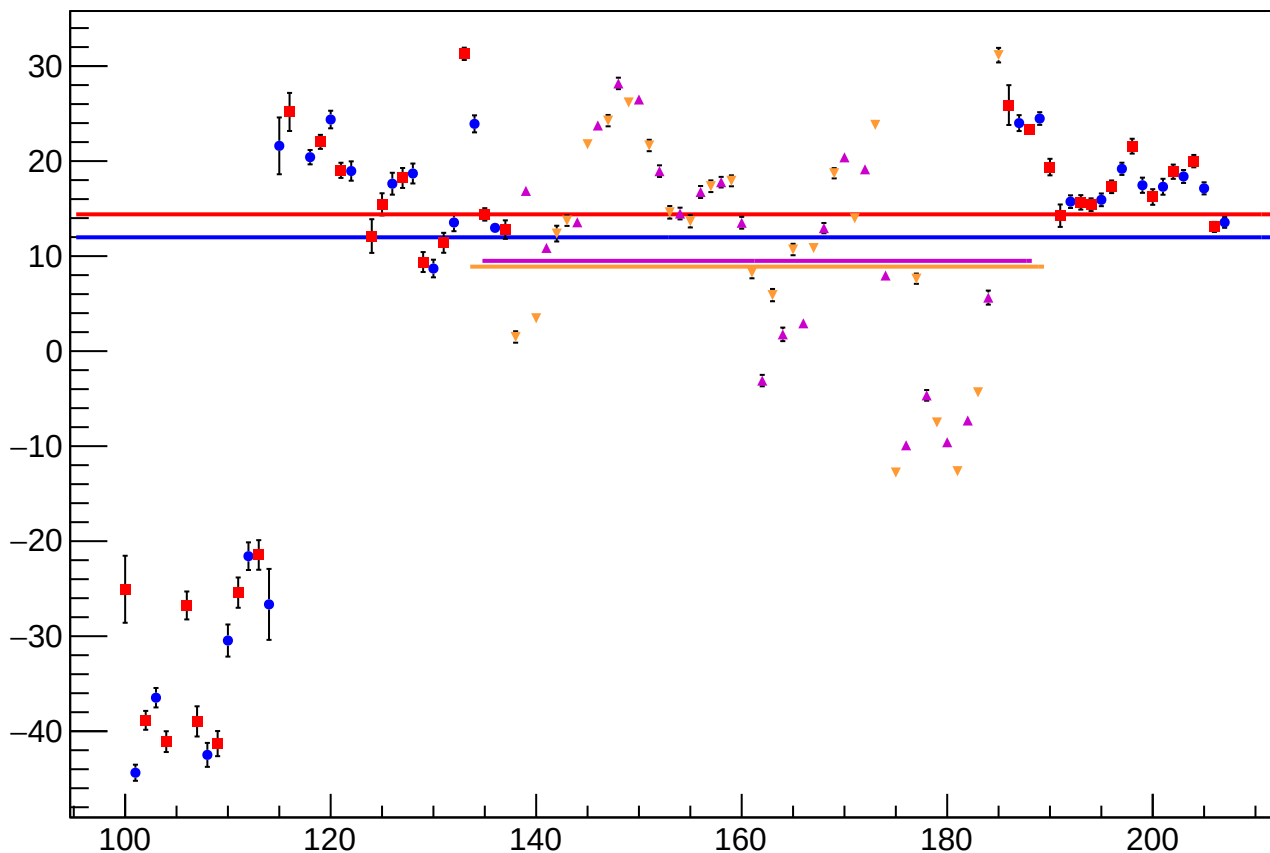
All:  $11.761 \pm 0.062$   $\chi^2/\text{NDF}$ : 52698.2/104

- sign  $11.045 \pm 0.087$   $\chi^2/\text{NDF}$ : 25464.2/53

# reg\_asym\_sam\_26\_48\_dd\_diff\_bpm4aY\_slope vs Slug



# reg\_asym\_sam\_26\_48\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $11.980 \pm 0.160$   $\chi^2/\text{NDF}$ : 11411.3/25

Left Out:  $8.892 \pm 0.104$   $\chi^2/\text{NDF}$ : 15428.1/24

Right Out:  $14.397 \pm 0.145$   $\chi^2/\text{NDF}$ : 12463.0/30

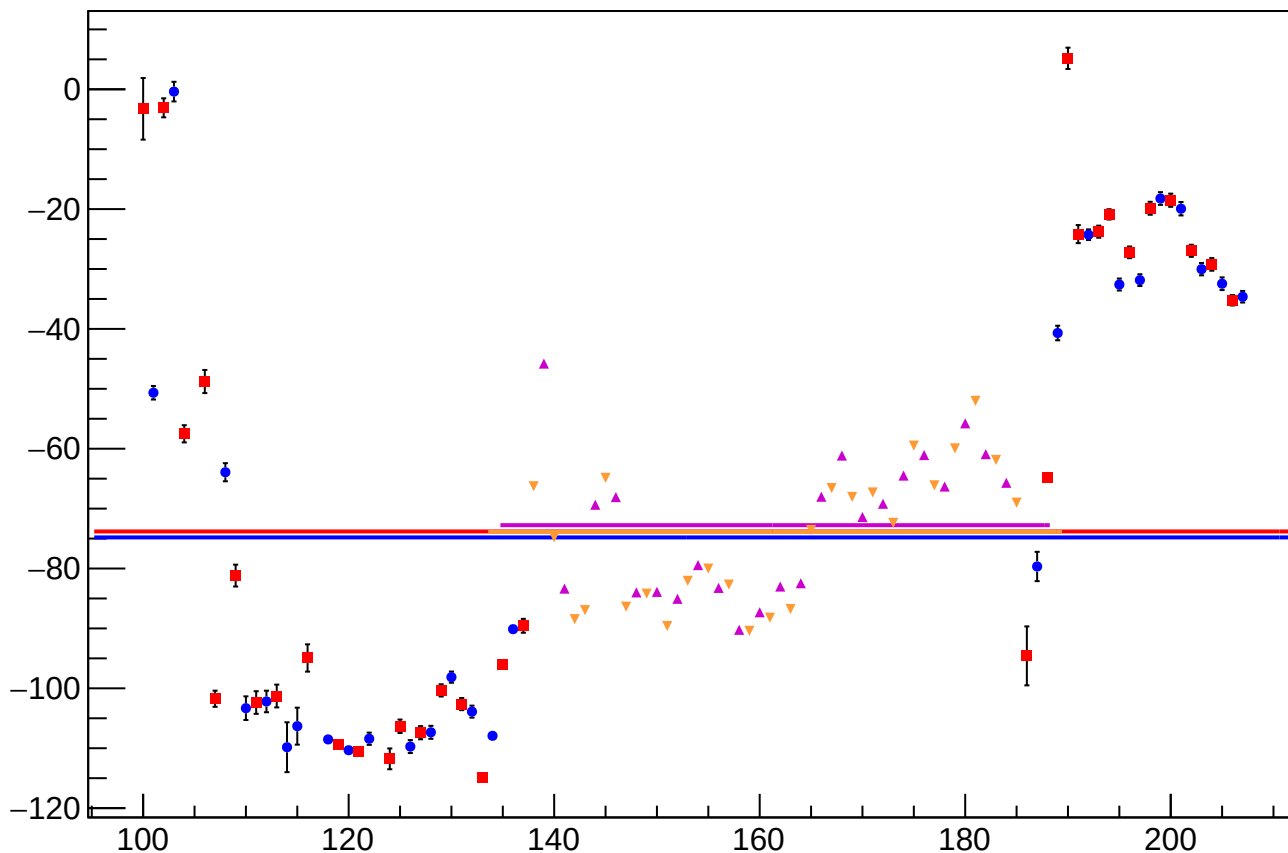
Left In:  $9.500 \pm 0.107$   $\chi^2/\text{NDF}$ : 13040.9/22

+ sign  $9.805 \pm 0.087$   $\chi^2/\text{NDF}$ : 27101.5/50

All:  $10.517 \pm 0.061$   $\chi^2/\text{NDF}$ : 53476.3/104

- sign  $11.211 \pm 0.086$   $\chi^2/\text{NDF}$ : 26242.5/53

# reg\_asym\_sam\_26\_48\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-74.808 \pm 0.197$   $\chi^2/\text{NDF}$ : 34197.1/25

Left Out:  $-73.907 \pm 0.090$   $\chi^2/\text{NDF}$ : 15567.0/24

Right Out:  $-73.814 \pm 0.189$   $\chi^2/\text{NDF}$ : 41942.2/30

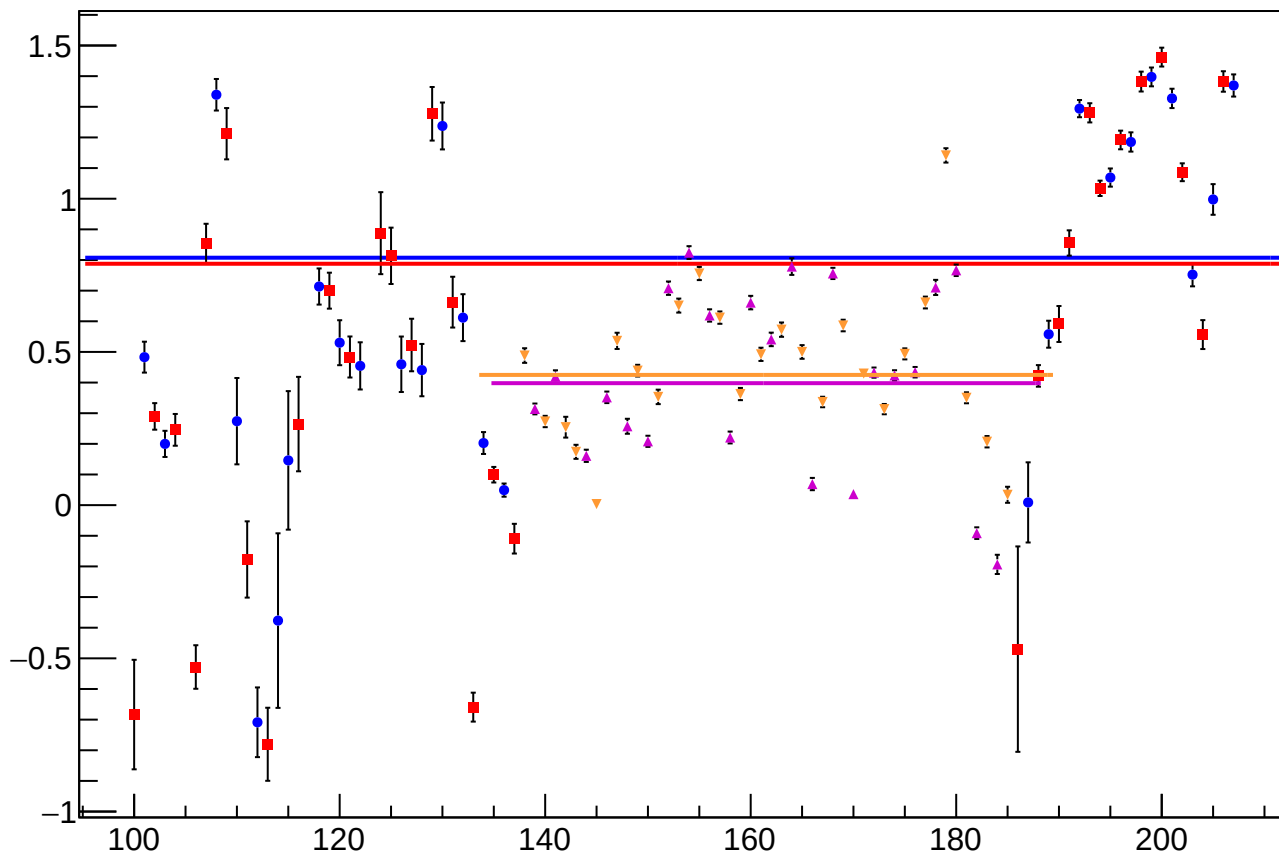
Left In:  $-72.763 \pm 0.093$   $\chi^2/\text{NDF}$ : 12612.6/22

+ sign  $-74.064 \pm 0.082$   $\chi^2/\text{NDF}$ : 49781.4/50

All:  $-73.526 \pm 0.059$   $\chi^2/\text{NDF}$ : 104448.2/104

- sign  $-72.968 \pm 0.084$   $\chi^2/\text{NDF}$ : 54579.6/53

# reg\_asym\_sam\_26\_48\_dd\_diff\_bpm12X\_slope vs Slug



Right In: 0.807 $\pm$ 0.009  $\chi^2$ /NDF: 3699.5/25

Left Out: 0.425 $\pm$ 0.004  $\chi^2$ /NDF:3035.4/24

Right Out: 0.788 $\pm$ 0.008  $\chi^2$ /NDF: 4923.8/30

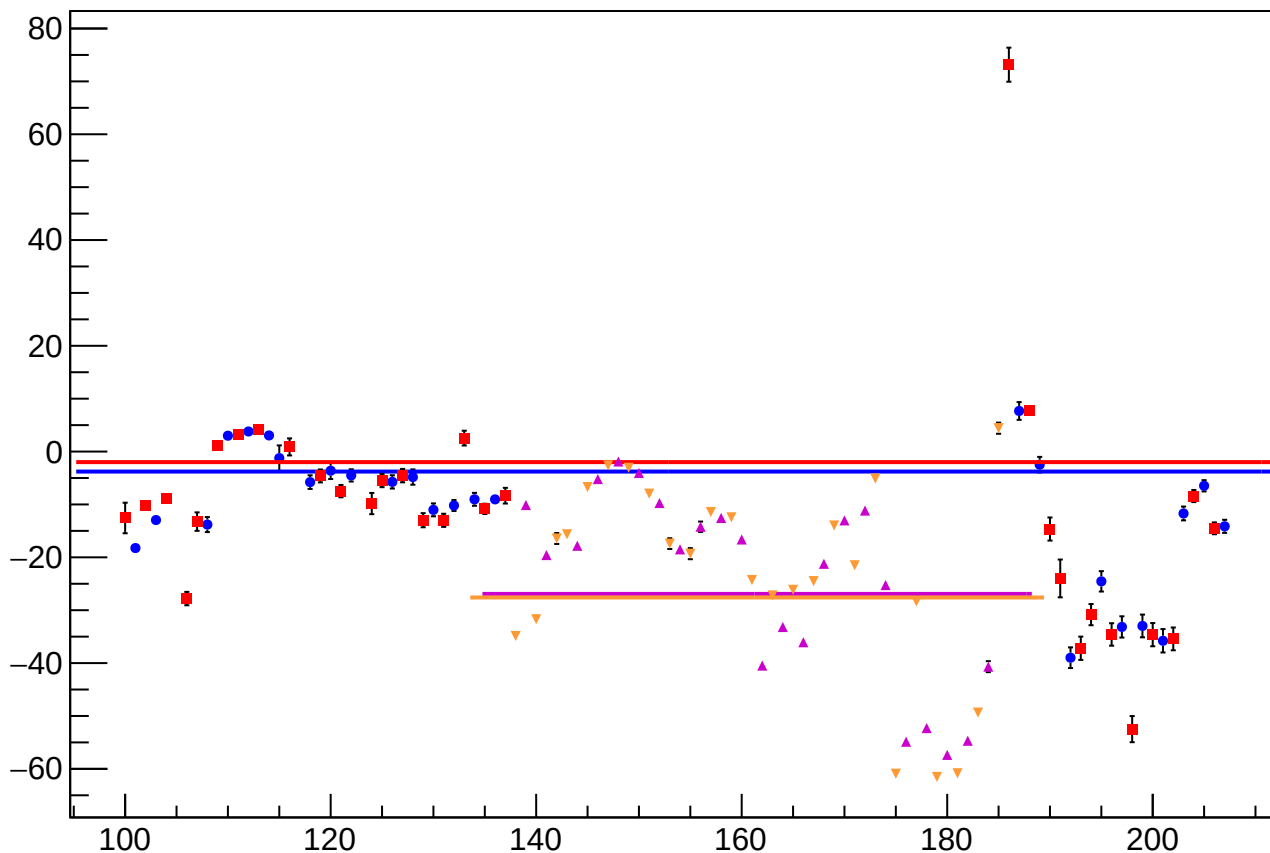
Left In: 0.398 $\pm$ 0.004  $\chi^2$ /NDF:4271.0/22

+ sign 0.495 $\pm$ 0.004  $\chi^2$ /NDF: 8359.2/50

All: 0.486 $\pm$ 0.003  $\chi^2$ /NDF: 19392.3/104

- sign 0.478 $\pm$ 0.004  $\chi^2$ /NDF: 11022.5/53

# reg\_asym\_sam\_1548\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-3.783 \pm 0.179$   $\chi^2/\text{NDF}: 2770.7/25$

Left Out:  $-27.594 \pm 0.144$   $\chi^2/\text{NDF}: 19761.6/24$

Right Out:  $-1.995 \pm 0.159$   $\chi^2/\text{NDF}: 4021.3/30$

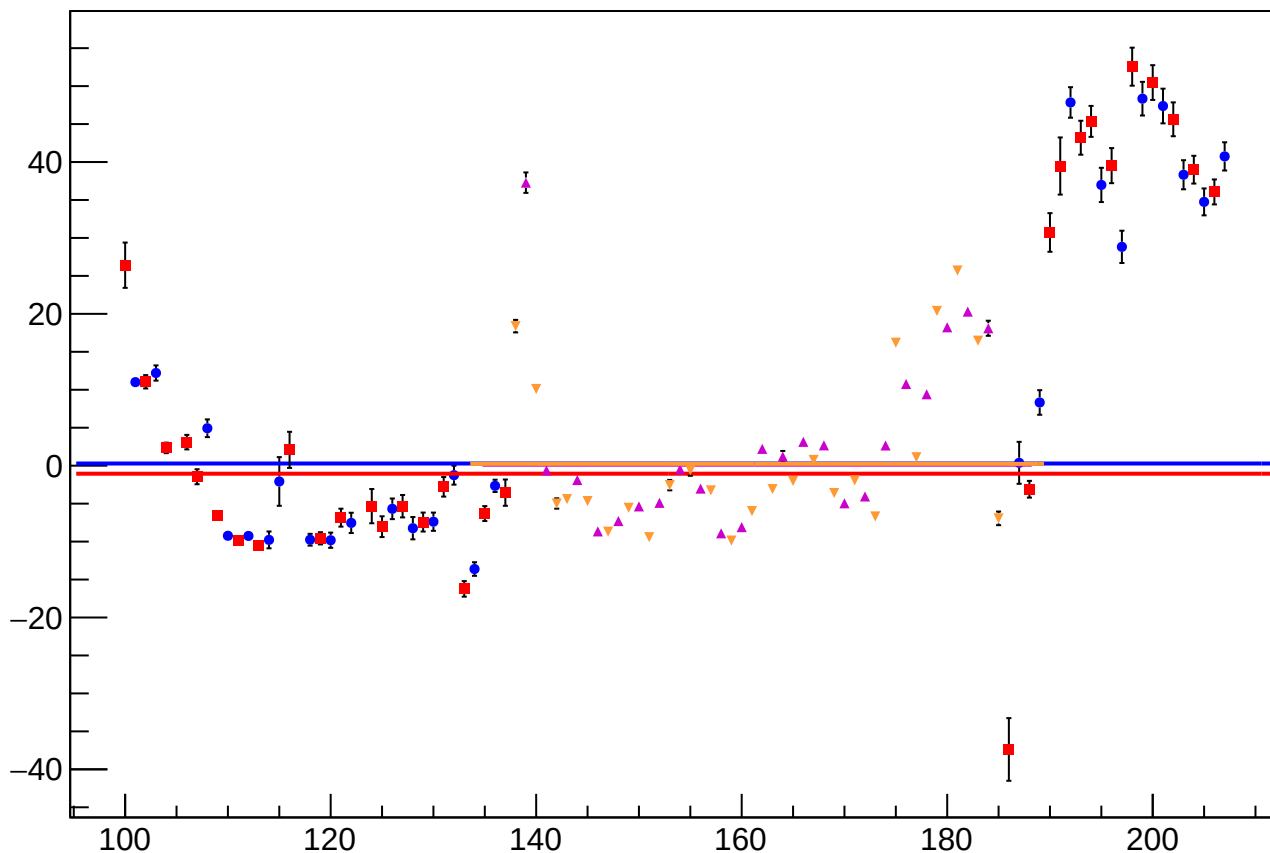
Left In:  $-26.918 \pm 0.149$   $\chi^2/\text{NDF}: 15536.6/22$

+ sign  $-18.203 \pm 0.112$   $\chi^2/\text{NDF}: 33269.4/50$

All:  $-16.698 \pm 0.078$   $\chi^2/\text{NDF}: 66202.4/104$

- sign  $-15.282 \pm 0.109$   $\chi^2/\text{NDF}: 32584.4/53$

reg\_asym\_sam\_1548\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $0.285 \pm 0.213$   $\chi^2/\text{NDF}: 4923.8/25$

Left Out:  $0.238 \pm 0.110$   $\chi^2/\text{NDF}: 8035.6/24$

Right Out:  $-1.058 \pm 0.205$   $\chi^2/\text{NDF}: 5289.6/30$

Left In:  $0.131 \pm 0.114$   $\chi^2/\text{NDF}: 5837.4/22$

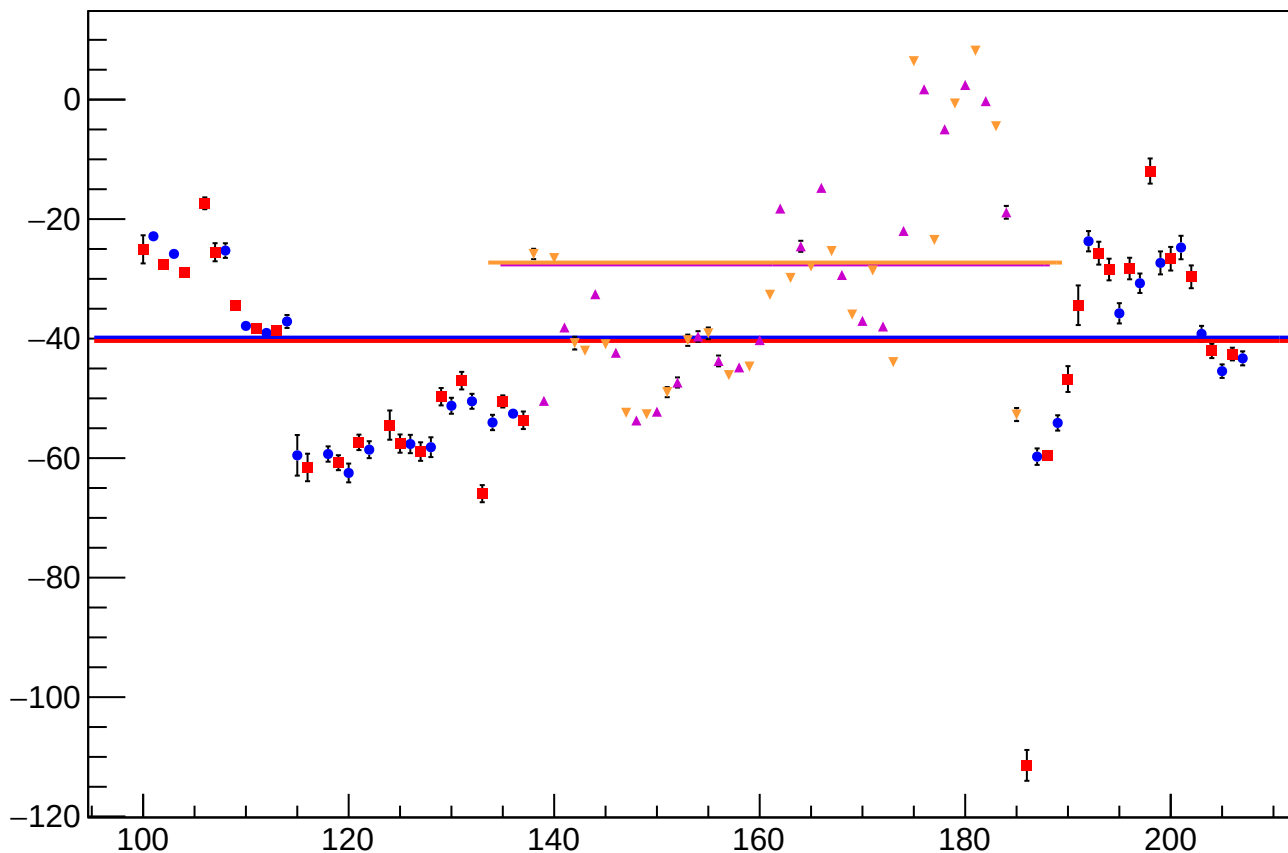
+ sign  $0.248 \pm 0.098$   $\chi^2/\text{NDF}: 12959.5/50$

All:  $0.052 \pm 0.070$   $\chi^2/\text{NDF}: 24120.3/104$

- sign  $-0.152 \pm 0.100$   $\chi^2/\text{NDF}: 11152.7/53$



# reg\_asym\_sam\_1548\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $-39.834 \pm 0.202$   $\chi^2/\text{NDF}: 3554.8/25$

Left Out:  $-27.271 \pm 0.144$   $\chi^2/\text{NDF}: 18526.9/24$

Right Out:  $-40.388 \pm 0.188$   $\chi^2/\text{NDF}: 4975.6/30$

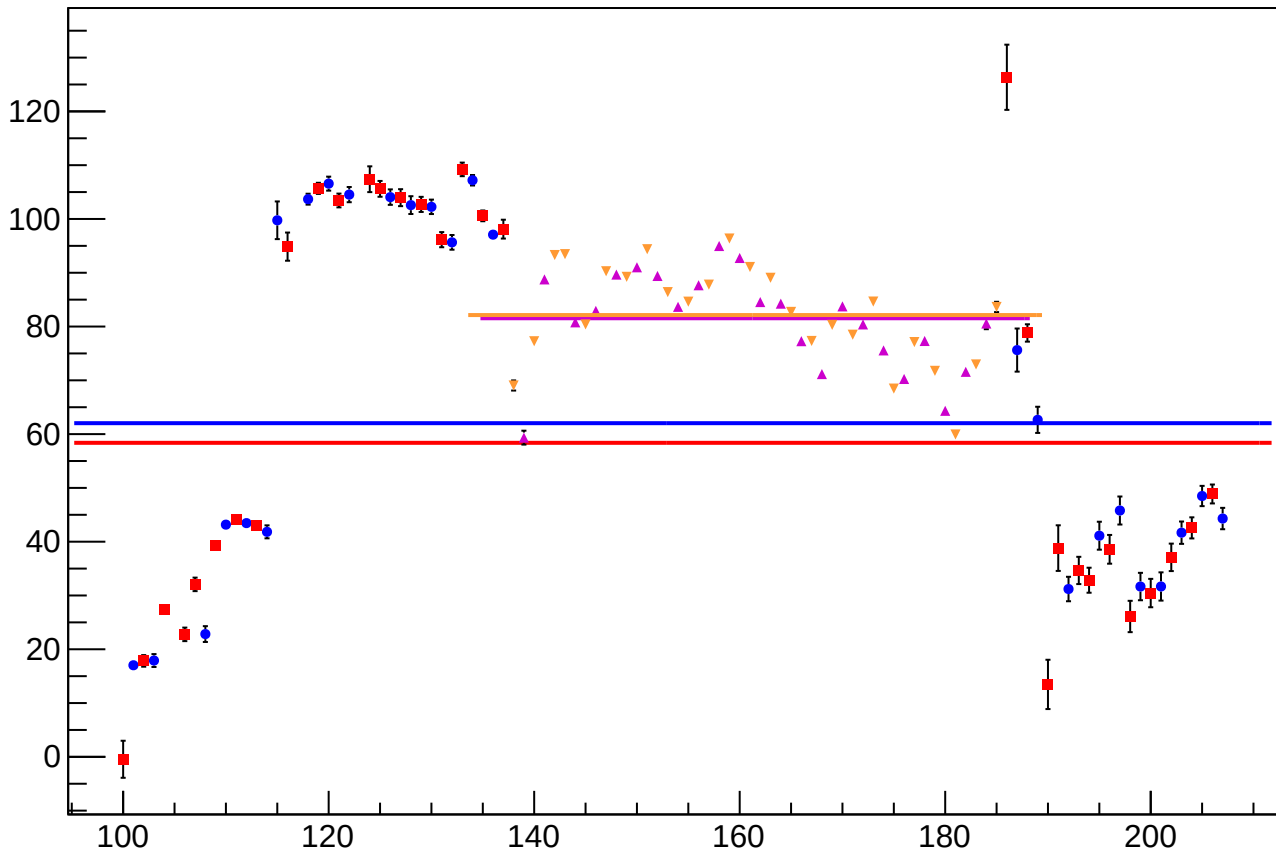
Left In:  $-27.583 \pm 0.148$   $\chi^2/\text{NDF}: 15648.7/22$

+ sign  $-31.495 \pm 0.117$   $\chi^2/\text{NDF}: 24645.1/50$

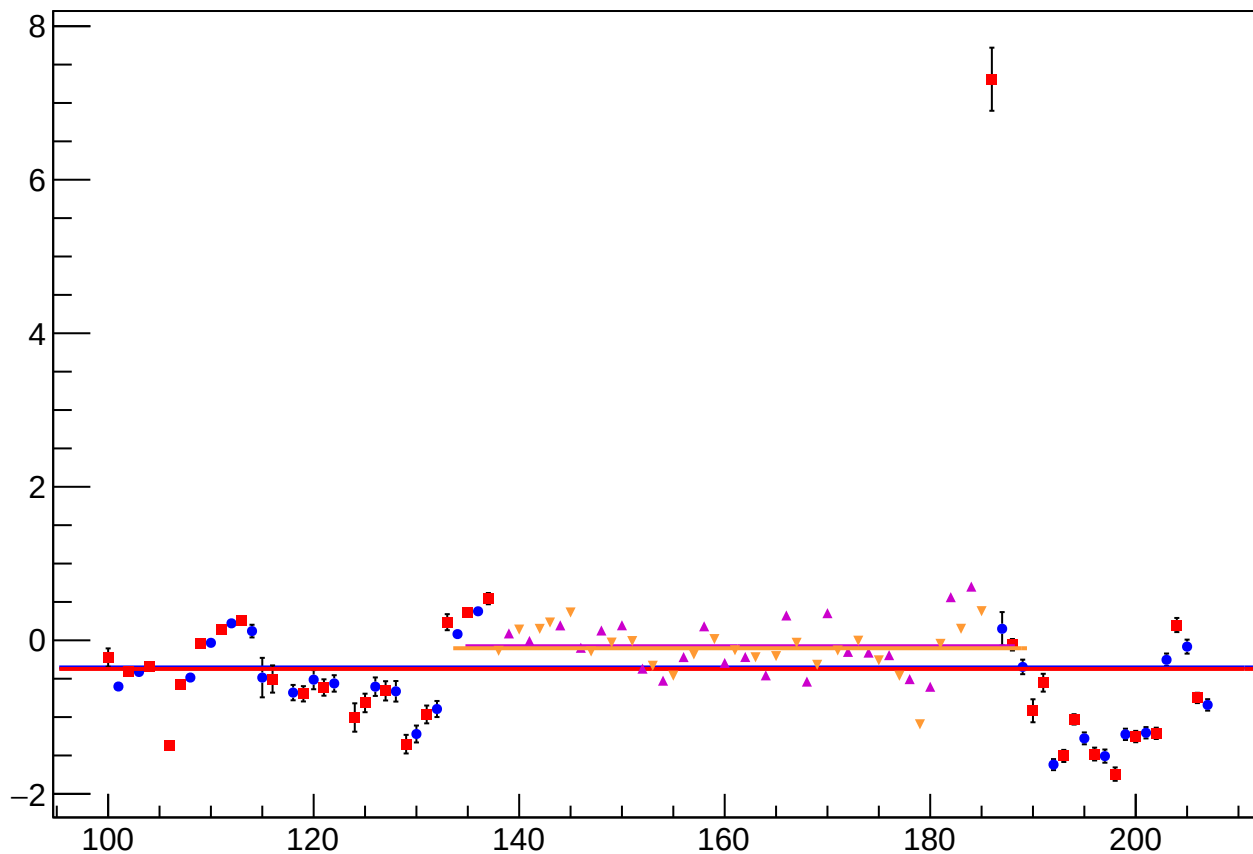
All:  $-32.002 \pm 0.083$   $\chi^2/\text{NDF}: 48173.3/104$

- sign  $-32.500 \pm 0.116$   $\chi^2/\text{NDF}: 23491.1/53$

# reg\_asym\_sam\_1548\_avg\_diff\_bpm4eY\_slope vs Slug



reg\_asym\_sam\_1548\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.353 \pm 0.012$   $\chi^2/\text{NDF}$ : 2027.2/25

Left Out:  $-0.103 \pm 0.006$   $\chi^2/\text{NDF}$ : 2408.2/24

Right Out:  $-0.373 \pm 0.011$   $\chi^2/\text{NDF}$ : 2962.5/30

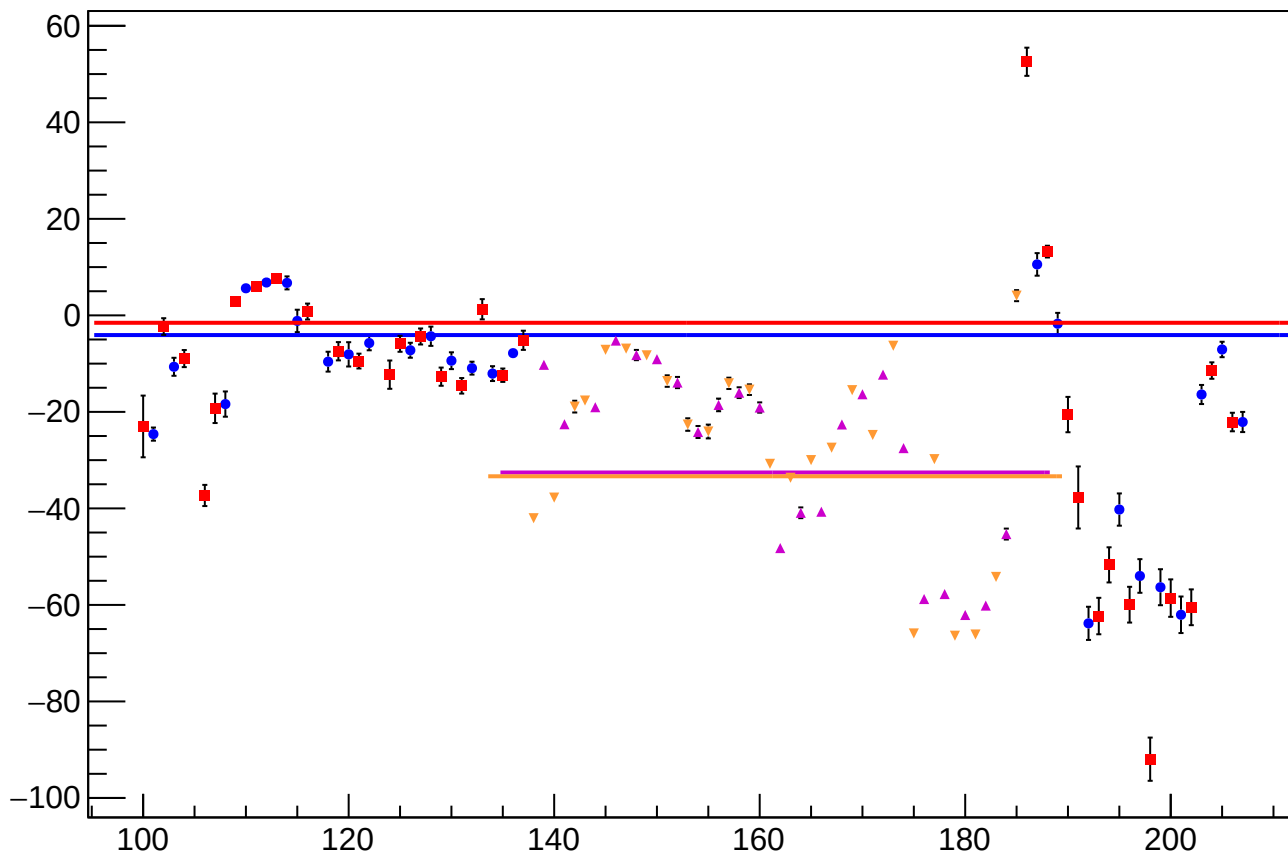
Left In:  $-0.077 \pm 0.006$   $\chi^2/\text{NDF}$ : 3320.8/22

+ sign  $-0.148 \pm 0.005$   $\chi^2/\text{NDF}$ : 4793.8/50

All:  $-0.142 \pm 0.004$   $\chi^2/\text{NDF}$ : 11613.4/104

- sign  $-0.136 \pm 0.005$   $\chi^2/\text{NDF}$ : 6816.8/53

reg\_asym\_sam\_3748\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-4.082 \pm 0.286$   $\chi^2/\text{NDF}$ : 2173.9/25

Left Out:  $-33.346 \pm 0.165$   $\chi^2/\text{NDF}$ : 17989.6/24

Right Out:  $-1.537 \pm 0.263$   $\chi^2/\text{NDF}$ : 3233.4/30

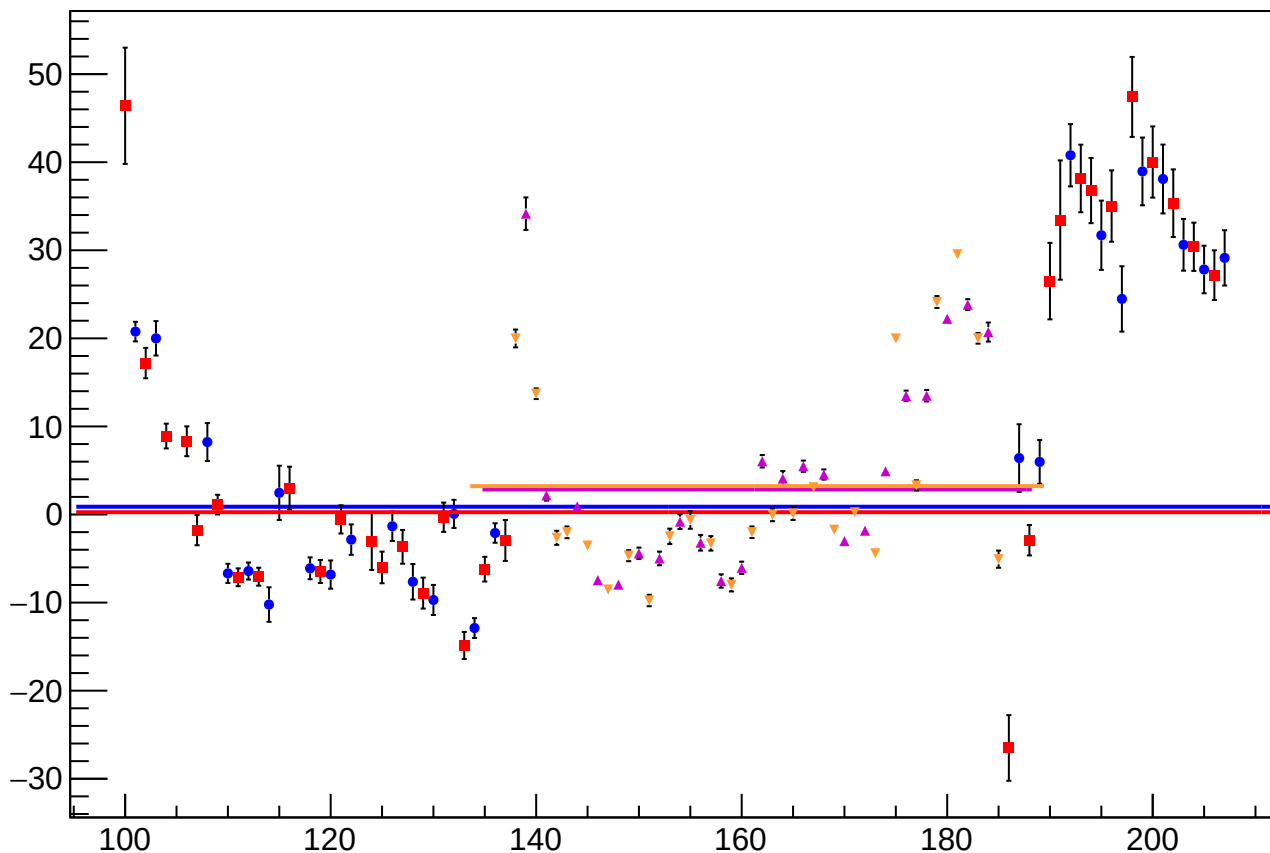
Left In:  $-32.559 \pm 0.169$   $\chi^2/\text{NDF}$ : 13896.0/22

+ sign  $-26.079 \pm 0.143$   $\chi^2/\text{NDF}$ : 28011.9/50

All:  $-24.758 \pm 0.101$   $\chi^2/\text{NDF}$ : 55163.5/104

- sign  $-23.443 \pm 0.142$   $\chi^2/\text{NDF}$ : 26980.6/53

# reg\_asym\_sam\_3748\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $0.883 \pm 0.337$   $\chi^2/\text{NDF}: 1547.2/25$

Left Out:  $3.224 \pm 0.128$   $\chi^2/\text{NDF}: 7675.6/24$

Right Out:  $0.263 \pm 0.333$   $\chi^2/\text{NDF}: 1390.7/30$

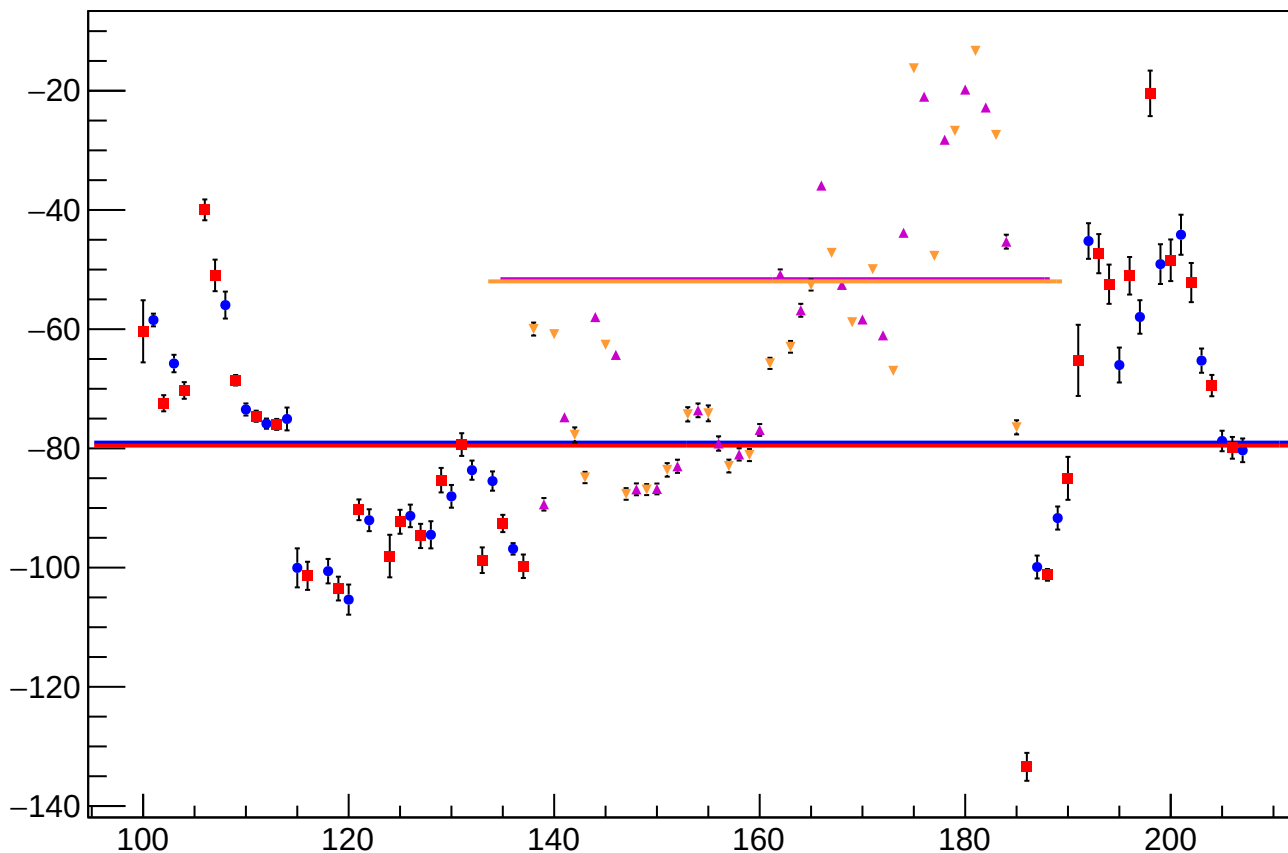
Left In:  $2.845 \pm 0.131$   $\chi^2/\text{NDF}: 5455.5/22$

+ sign  $2.928 \pm 0.120$   $\chi^2/\text{NDF}: 9265.0/50$

All:  $2.717 \pm 0.085$   $\chi^2/\text{NDF}: 16169.7/104$

- sign  $2.497 \pm 0.122$   $\chi^2/\text{NDF}: 6898.4/53$

# reg\_asym\_sam\_3748\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $-79.031 \pm 0.326$   $\chi^2/\text{NDF}$ : 1994.3/25

Left Out:  $-51.982 \pm 0.165$   $\chi^2/\text{NDF}$ : 20887.7/24

Right Out:  $-79.528 \pm 0.309$   $\chi^2/\text{NDF}$ : 3267.8/30

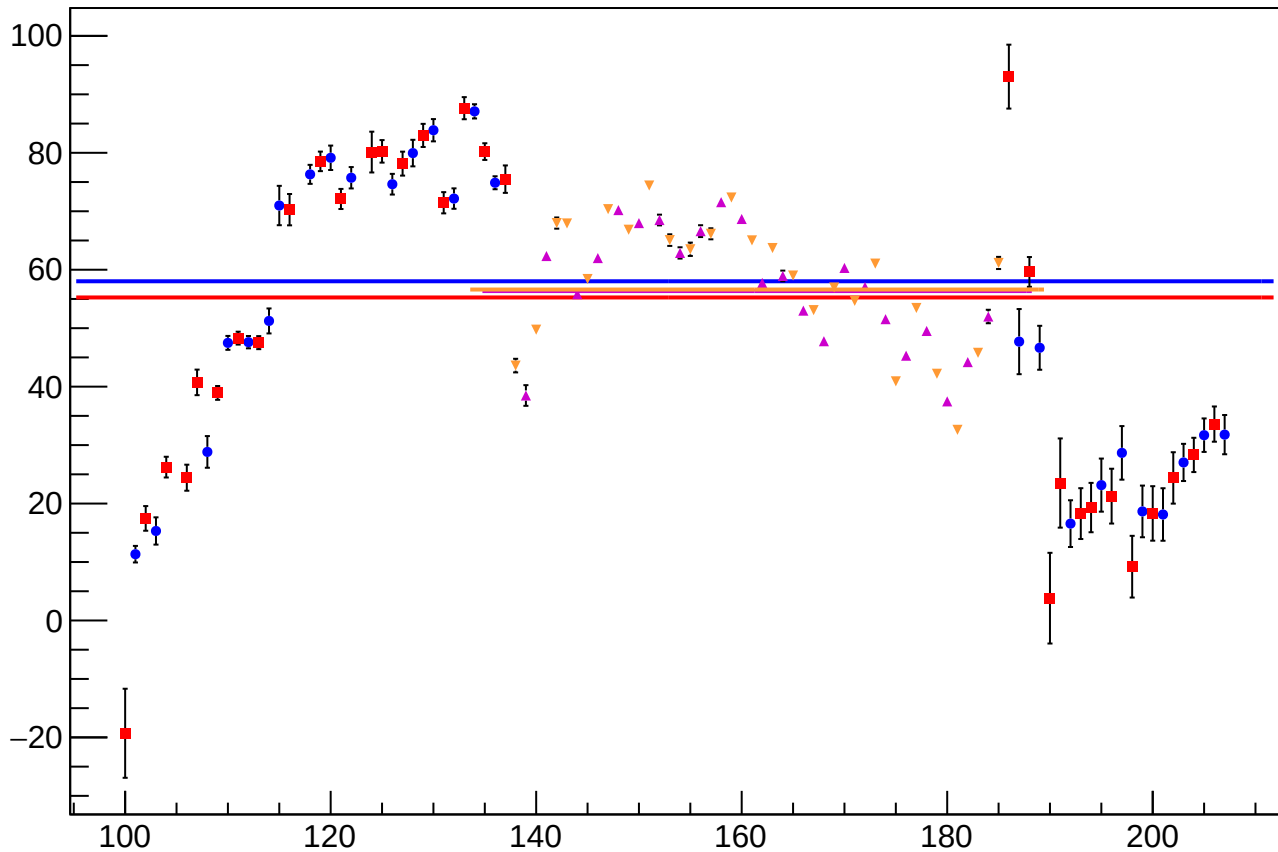
Left In:  $-51.612 \pm 0.169$   $\chi^2/\text{NDF}$ : 17624.2/22

+ sign  $-57.500 \pm 0.147$   $\chi^2/\text{NDF}$ : 28376.5/50

All:  $-57.768 \pm 0.104$   $\chi^2/\text{NDF}$ : 55552.9/104

- sign  $-58.040 \pm 0.148$   $\chi^2/\text{NDF}$ : 27169.7/53

# reg\_asym\_sam\_3748\_avg\_diff\_bpm4eY\_slope vs Slug



Right In: 58.025 $\pm$ 0.381  $\chi^2$ /NDF: 3908.5/25

Left Out: 56.612 $\pm$ 0.144  $\chi^2$ /NDF: 5666.2/24

Right Out: 55.255 $\pm$ 0.378  $\chi^2$ /NDF: 3447.5/30

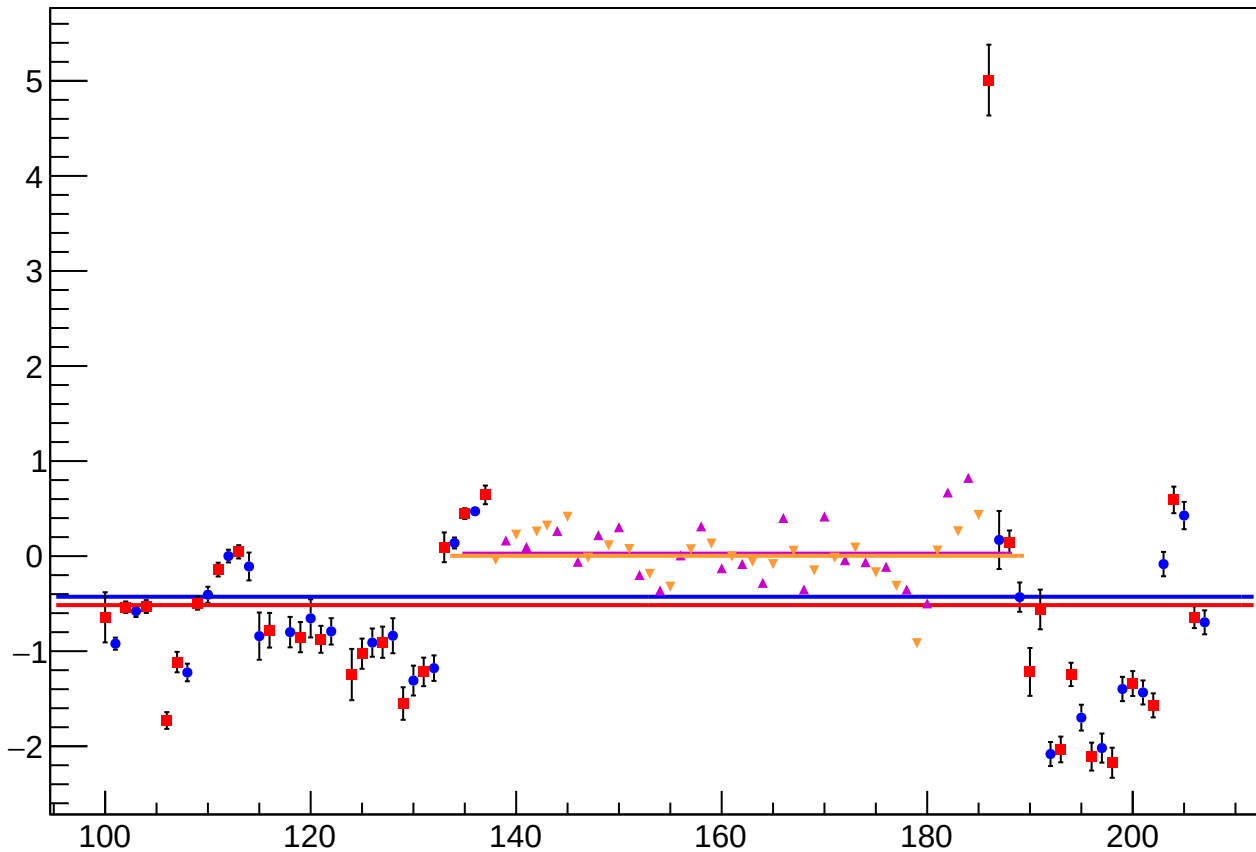
Left In: 56.348 $\pm$ 0.147  $\chi^2$ /NDF: 3968.7/22

+ sign 56.789 $\pm$ 0.135  $\chi^2$ /NDF: 9586.7/50

All: 56.502 $\pm$ 0.096  $\chi^2$ /NDF: 17019.3/104

- sign 56.204 $\pm$ 0.137  $\chi^2$ /NDF: 7423.4/53

reg\_asym\_sam\_3748\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.427 \pm 0.019$   $\chi^2/\text{NDF}$ : 1312.3/25

Left Out:  $0.004 \pm 0.006$   $\chi^2/\text{NDF}$ : 1701.0/24

Right Out:  $-0.515 \pm 0.019$   $\chi^2/\text{NDF}$ : 1672.5/30

Left In:  $0.026 \pm 0.007$   $\chi^2/\text{NDF}$ : 2349.0/22

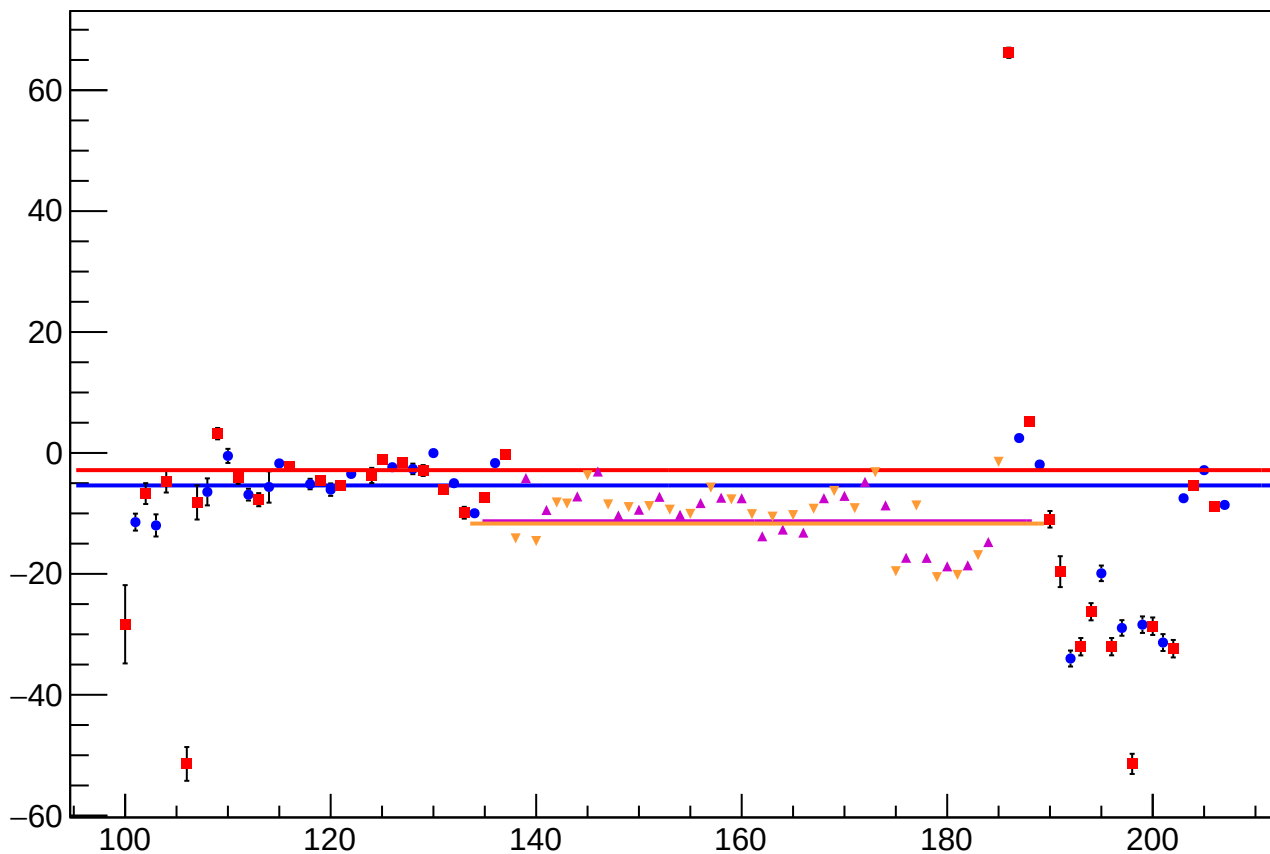
+ sign  $-0.039 \pm 0.006$   $\chi^2/\text{NDF}$ : 3455.5/50

All:  $-0.035 \pm 0.004$   $\chi^2/\text{NDF}$ : 8176.2/104

- sign  $-0.030 \pm 0.006$   $\chi^2/\text{NDF}$ : 4719.5/53



reg\_asym\_sam\_1526\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-5.373 \pm 0.157$   $\chi^2/\text{NDF}: 2039.8/25$

Left Out:  $-11.680 \pm 0.053$   $\chi^2/\text{NDF}: 12602.3/24$

Right Out:  $-2.843 \pm 0.158$   $\chi^2/\text{NDF}: 10497.4/30$

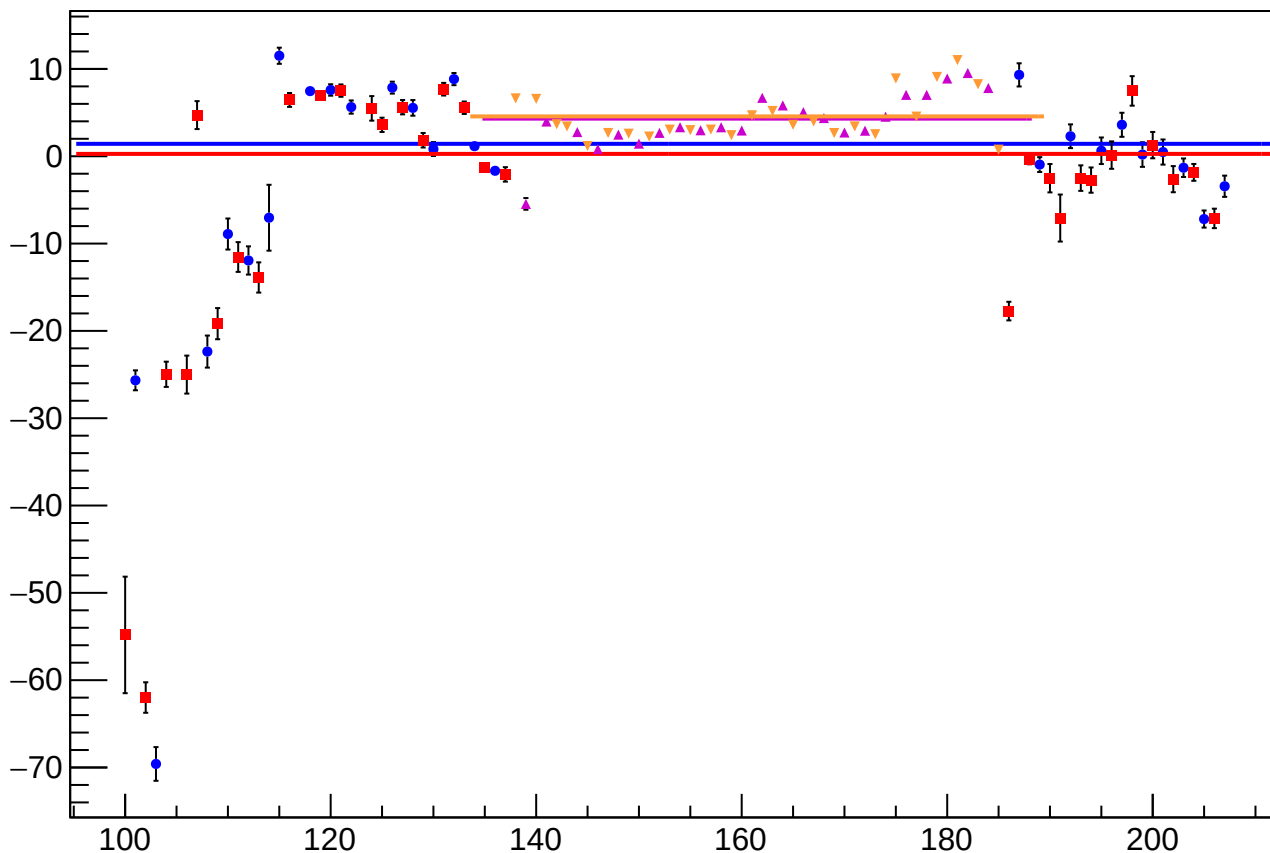
Left In:  $-11.301 \pm 0.054$   $\chi^2/\text{NDF}: 9229.2/22$

+ sign  $-11.042 \pm 0.050$   $\chi^2/\text{NDF}: 16092.9/50$

All:  $-10.737 \pm 0.036$   $\chi^2/\text{NDF}: 38461.8/104$

- sign  $-10.417 \pm 0.051$   $\chi^2/\text{NDF}: 22292.4/53$

# reg\_asym\_sam\_1526\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $1.423 \pm 0.169$   $\chi^2/\text{NDF}$ : 2992.0/25

Left Out:  $4.564 \pm 0.041$   $\chi^2/\text{NDF}$ : 4356.3/24

Right Out:  $0.270 \pm 0.178$   $\chi^2/\text{NDF}$ : 2972.9/30

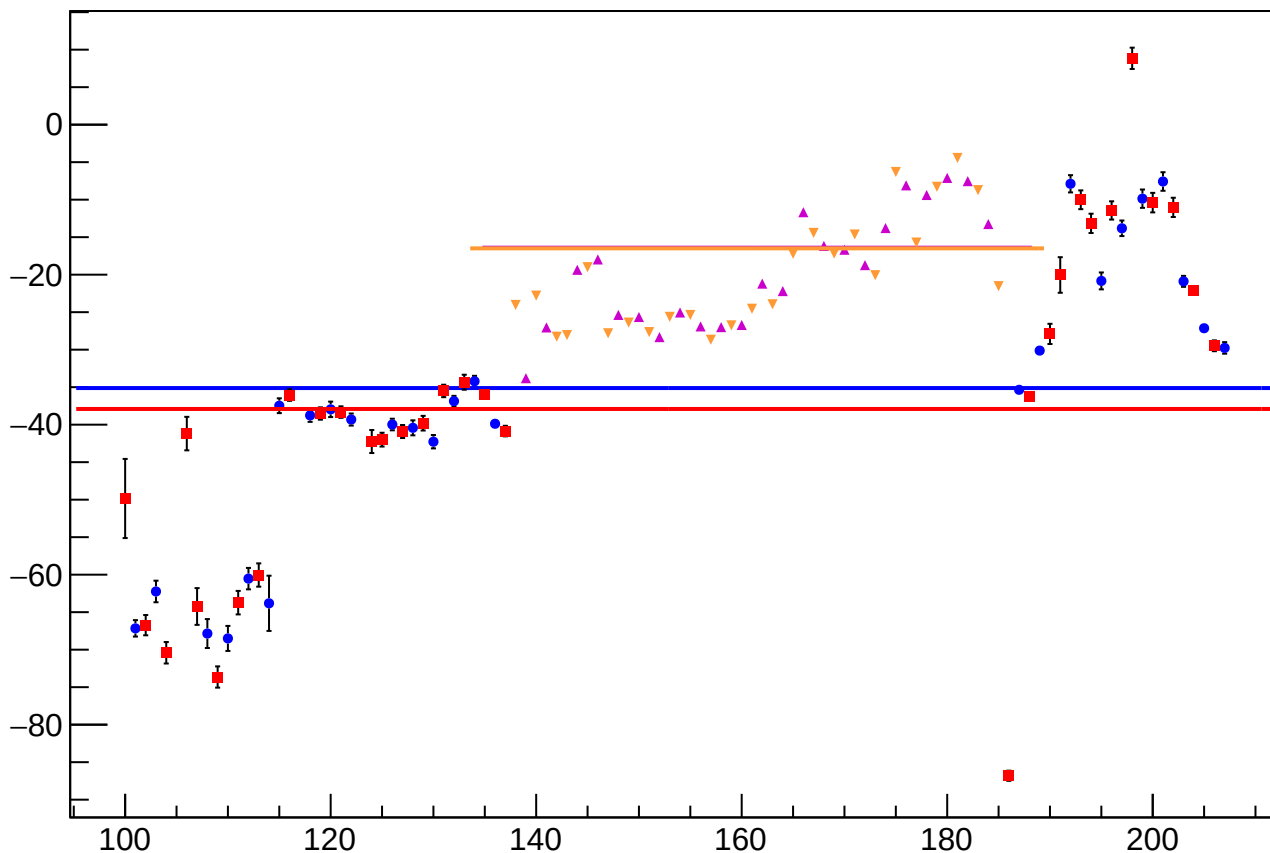
Left In:  $4.308 \pm 0.042$   $\chi^2/\text{NDF}$ : 3609.0/22

+ sign  $4.386 \pm 0.040$   $\chi^2/\text{NDF}$ : 7674.3/50

All:  $4.242 \pm 0.029$   $\chi^2/\text{NDF}$ : 14771.9/104

- sign  $4.093 \pm 0.041$   $\chi^2/\text{NDF}$ : 7071.5/53

# reg\_asym\_sam\_1526\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $-35.118 \pm 0.163$   $\chi^2/\text{NDF}: 5369.9/25$

Left Out:  $-16.492 \pm 0.053$   $\chi^2/\text{NDF}: 21982.6/24$

Right Out:  $-37.906 \pm 0.161$   $\chi^2/\text{NDF}: 11754.7/30$

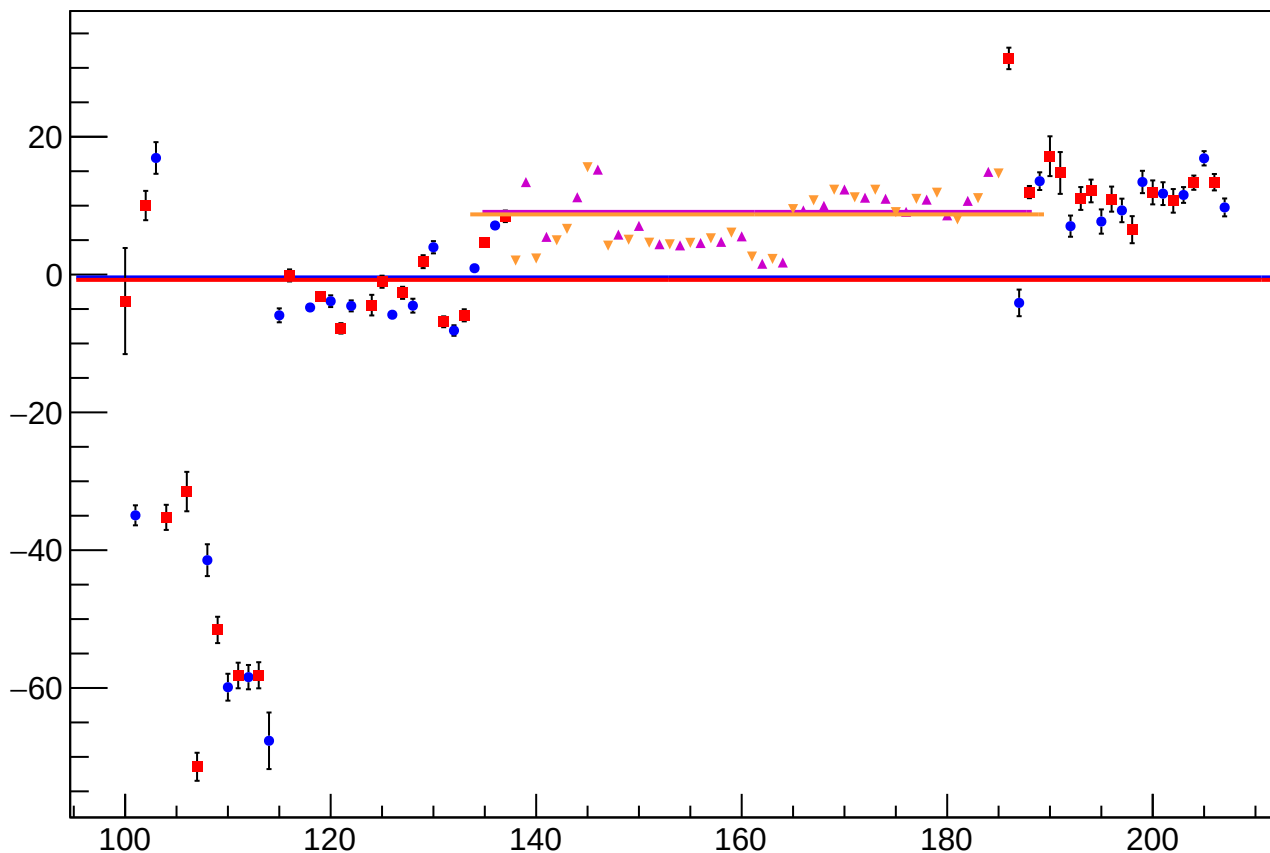
Left In:  $-16.403 \pm 0.054$   $\chi^2/\text{NDF}: 18032.3/22$

+ sign  $-18.263 \pm 0.050$   $\chi^2/\text{NDF}: 39190.9/50$

All:  $-18.416 \pm 0.036$   $\chi^2/\text{NDF}: 85059.7/104$

- sign  $-18.574 \pm 0.051$   $\chi^2/\text{NDF}: 45850.0/53$

# reg\_asym\_sam\_1526\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $-0.413 \pm 0.190$   $\chi^2/\text{NDF}$ : 4643.3/25

Left Out:  $8.735 \pm 0.046$   $\chi^2/\text{NDF}$ : 6875.5/24

Right Out:  $-0.768 \pm 0.204$   $\chi^2/\text{NDF}$ : 6003.5/30

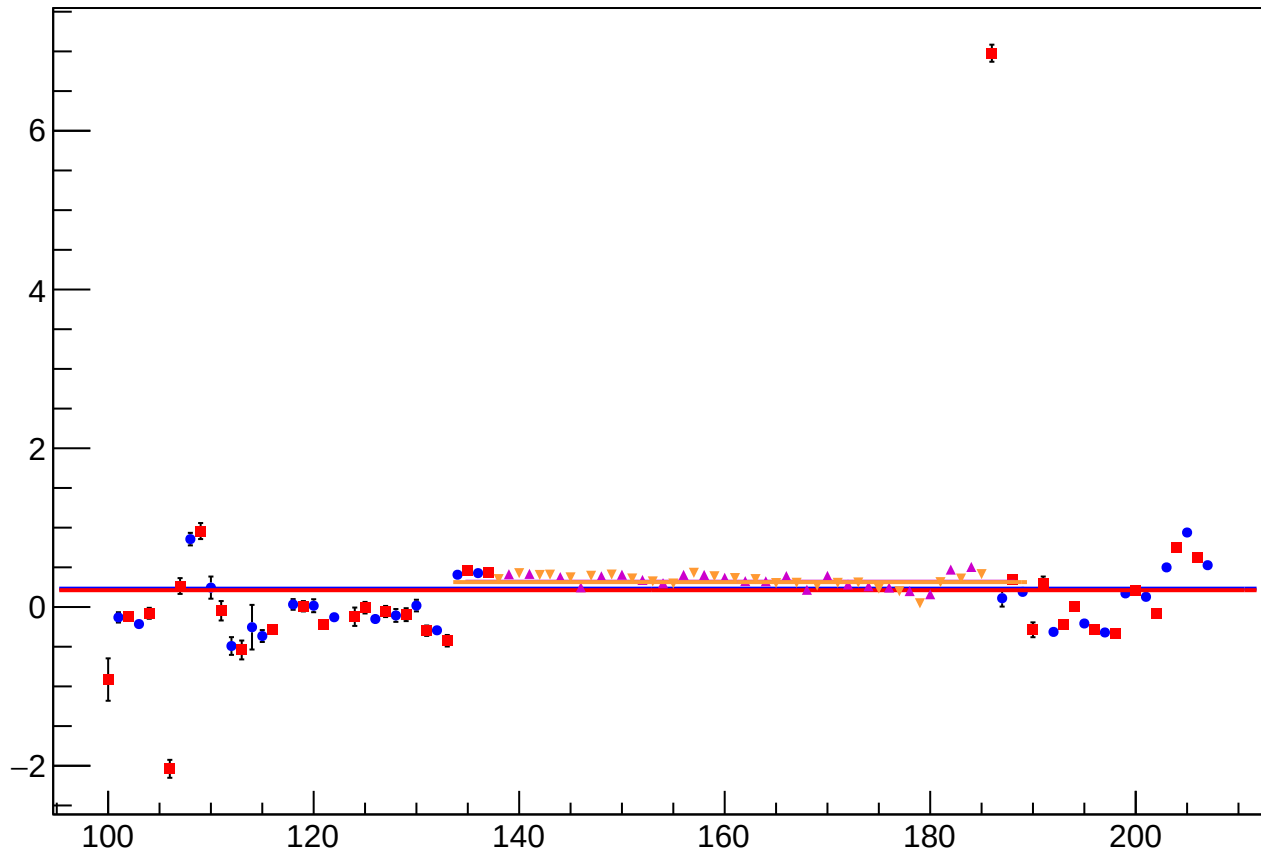
Left In:  $9.096 \pm 0.047$   $\chi^2/\text{NDF}$ : 5739.5/22

+ sign  $8.223 \pm 0.045$   $\chi^2/\text{NDF}$ : 13709.9/50

All:  $8.405 \pm 0.032$   $\chi^2/\text{NDF}$ : 27715.5/104

- sign  $8.595 \pm 0.046$   $\chi^2/\text{NDF}$ : 13972.1/53

reg\_asym\_sam\_1526\_avg\_diff\_bpm12X\_slope vs Slug



Right In: 0.231 $\pm$ 0.009  $\chi^2$ /NDF: 1171.4/25

Left Out: 0.314 $\pm$ 0.002  $\chi^2$ /NDF:1602.1/24

Right Out: 0.212 $\pm$ 0.010  $\chi^2$ /NDF: 5525.8/30

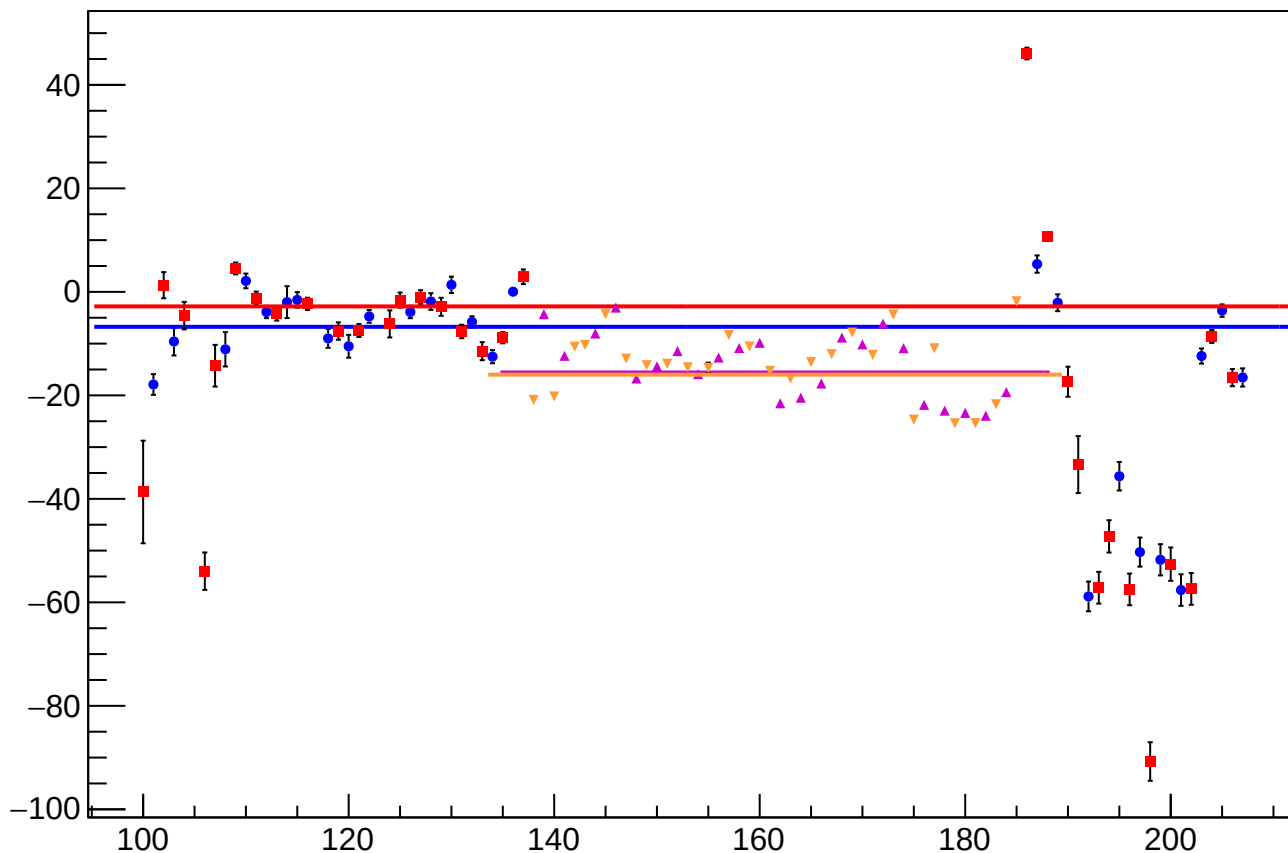
Left In: 0.319 $\pm$ 0.002  $\chi^2$ /NDF:1787.8/22

+ sign 0.310 $\pm$ 0.002  $\chi^2$ /NDF: 2846.6/50

All: 0.312 $\pm$ 0.001  $\chi^2$ /NDF: 10267.6/104

- sign 0.314 $\pm$ 0.002  $\chi^2$ /NDF: 7418.9/53

# reg\_asym\_sam\_3726\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-6.751 \pm 0.299$   $\chi^2/\text{NDF}: 1549.9/25$

Left Out:  $-16.000 \pm 0.099$   $\chi^2/\text{NDF}: 5962.8/24$

Right Out:  $-2.806 \pm 0.294$   $\chi^2/\text{NDF}: 4566.5/30$

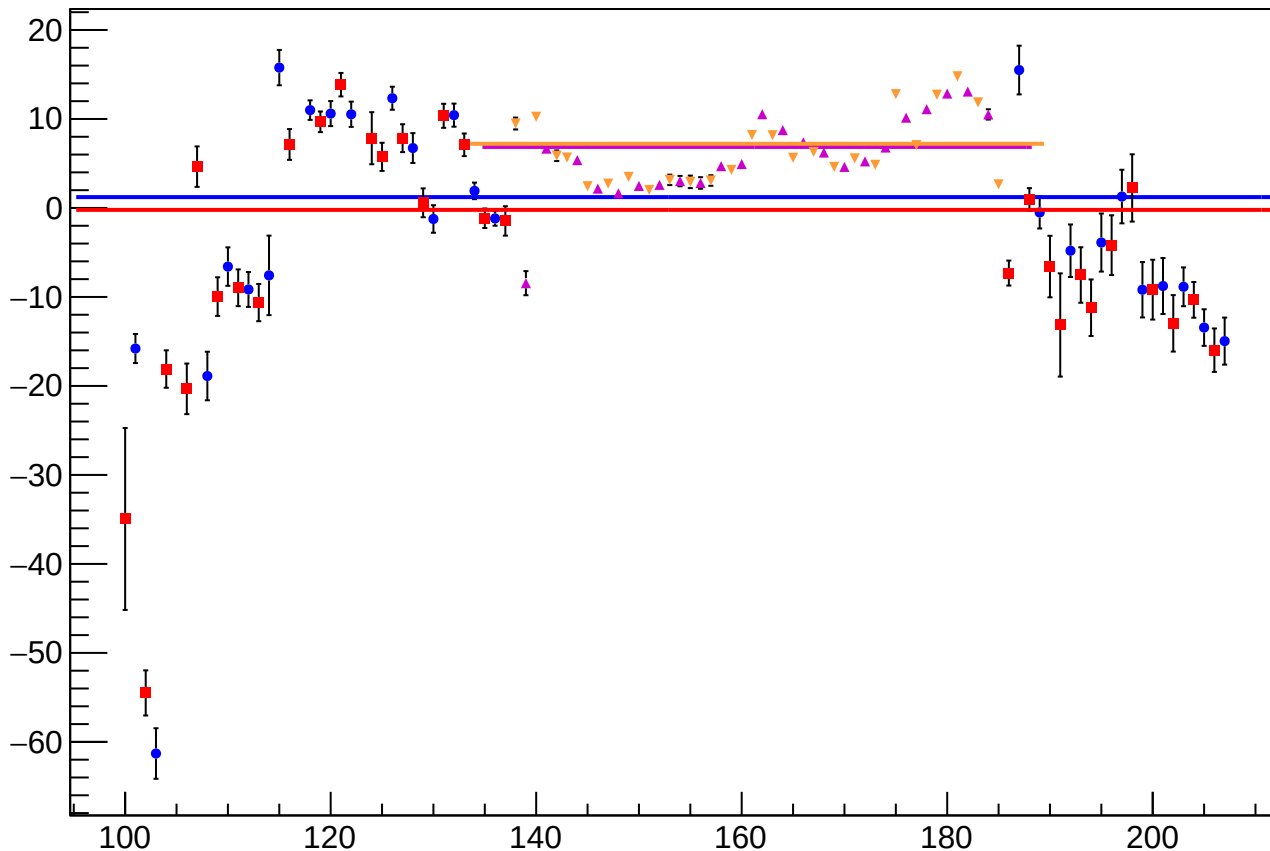
Left In:  $-15.582 \pm 0.102$   $\chi^2/\text{NDF}: 4759.9/22$

+ sign  $-15.081 \pm 0.094$   $\chi^2/\text{NDF}: 8373.3/50$

All:  $-14.653 \pm 0.067$   $\chi^2/\text{NDF}: 19431.2/104$

- sign  $-14.207 \pm 0.096$   $\chi^2/\text{NDF}: 11015.8/53$

# reg\_asym\_sam\_3726\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $1.220 \pm 0.326$   $\chi^2/\text{NDF}$ : 1224.7/25

Left Out:  $7.212 \pm 0.080$   $\chi^2/\text{NDF}$ : 2455.9/24

Right Out:  $-0.216 \pm 0.335$   $\chi^2/\text{NDF}$ : 1153.0/30

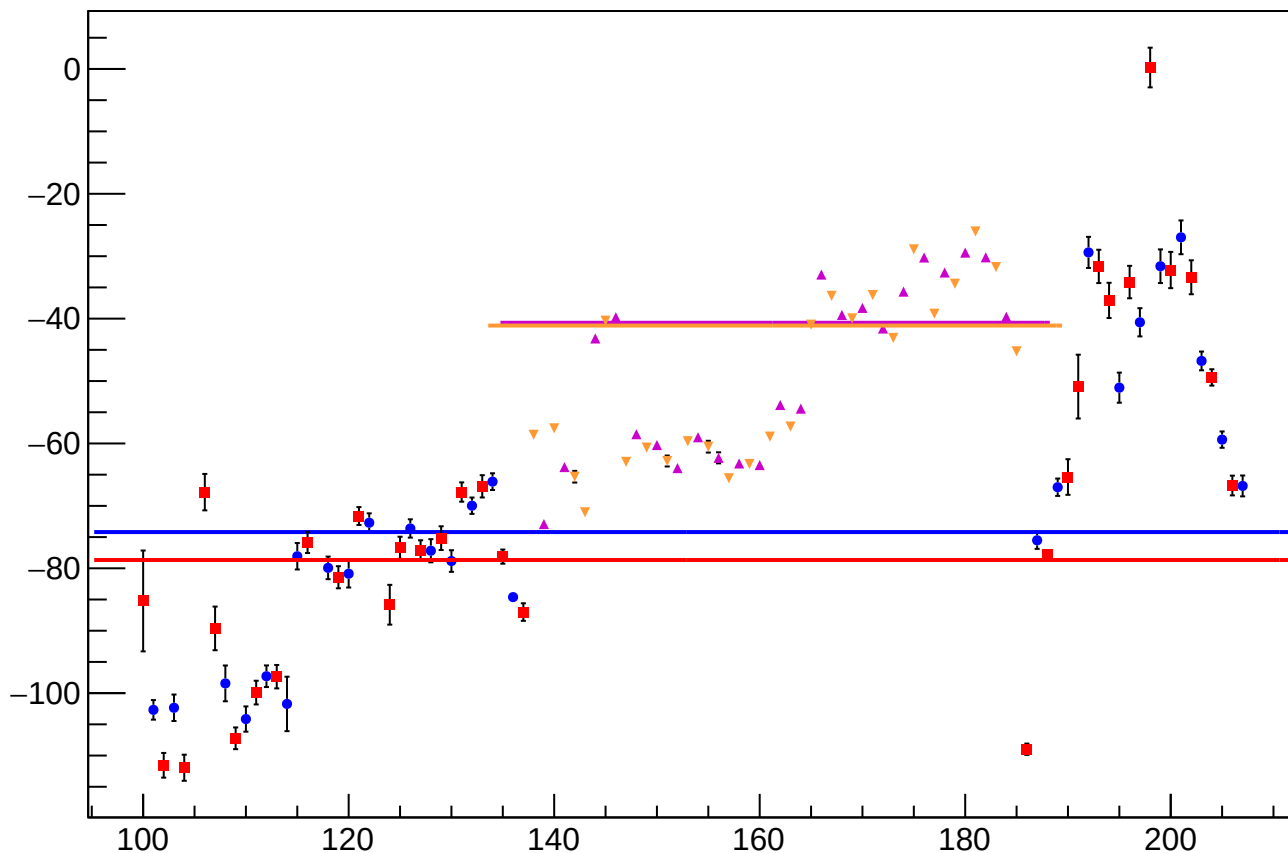
Left In:  $6.856 \pm 0.081$   $\chi^2/\text{NDF}$ : 2156.4/22

+ sign  $6.871 \pm 0.078$   $\chi^2/\text{NDF}$ : 3999.3/50

All:  $6.671 \pm 0.055$   $\chi^2/\text{NDF}$ : 7743.0/104

- sign  $6.465 \pm 0.079$   $\chi^2/\text{NDF}$ : 3730.3/53

# reg\_asym\_sam\_3726\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $-74.194 \pm 0.316$   $\chi^2/\text{NDF}: 3008.5/25$

Left Out:  $-41.111 \pm 0.100$   $\chi^2/\text{NDF}: 16000.8/24$

Right Out:  $-78.669 \pm 0.304$   $\chi^2/\text{NDF}: 4918.8/30$

Left In:  $-40.665 \pm 0.102$   $\chi^2/\text{NDF}: 13541.3/22$

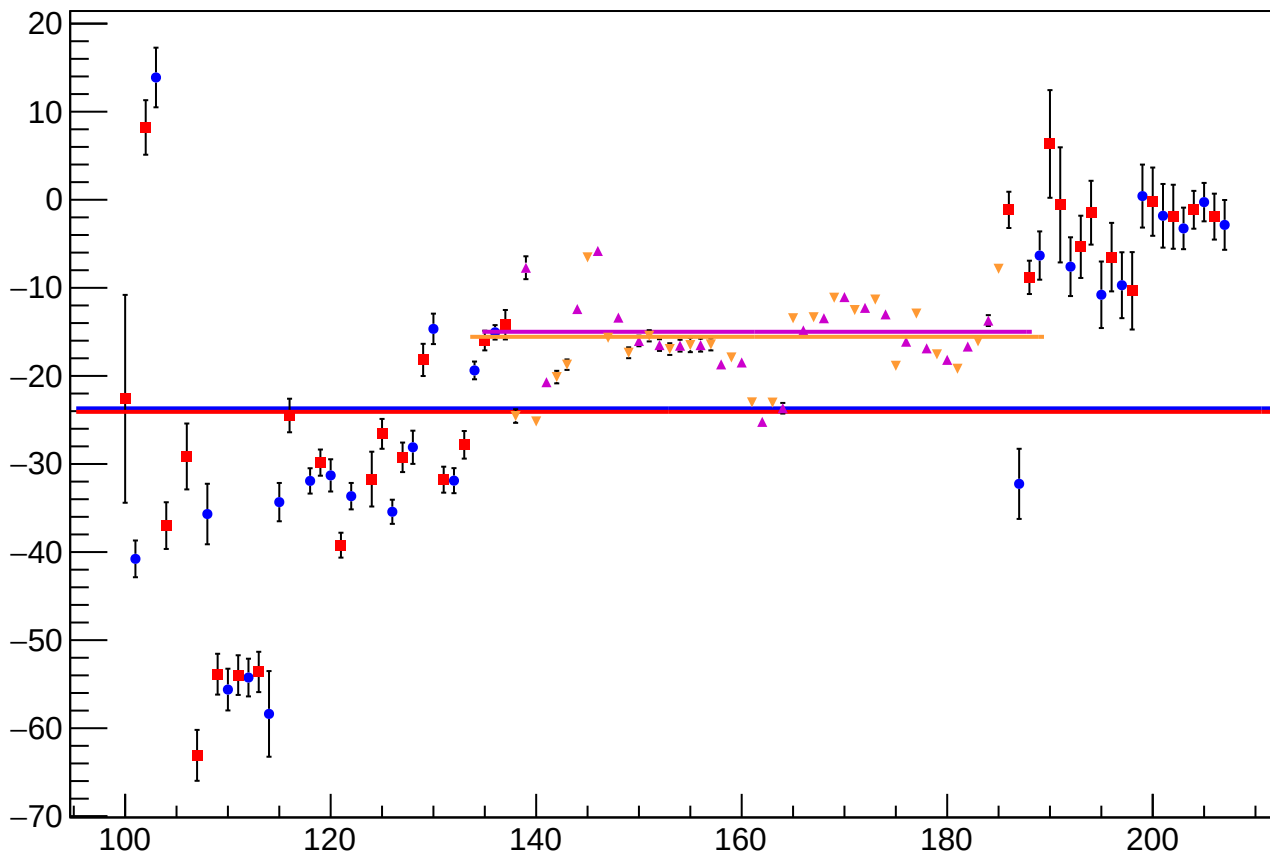
+ sign  $-44.120 \pm 0.095$   $\chi^2/\text{NDF}: 28963.4/50$

All:  $-44.320 \pm 0.068$   $\chi^2/\text{NDF}: 61481.9/104$

- sign  $-44.528 \pm 0.097$   $\chi^2/\text{NDF}: 32509.5/53$



# reg\_asym\_sam\_3726\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $-23.684 \pm 0.365$   $\chi^2/\text{NDF}$ : 1445.7/25

Left Out:  $-15.562 \pm 0.089$   $\chi^2/\text{NDF}$ : 2549.5/24

Right Out:  $-24.079 \pm 0.386$   $\chi^2/\text{NDF}$ : 1688.3/30

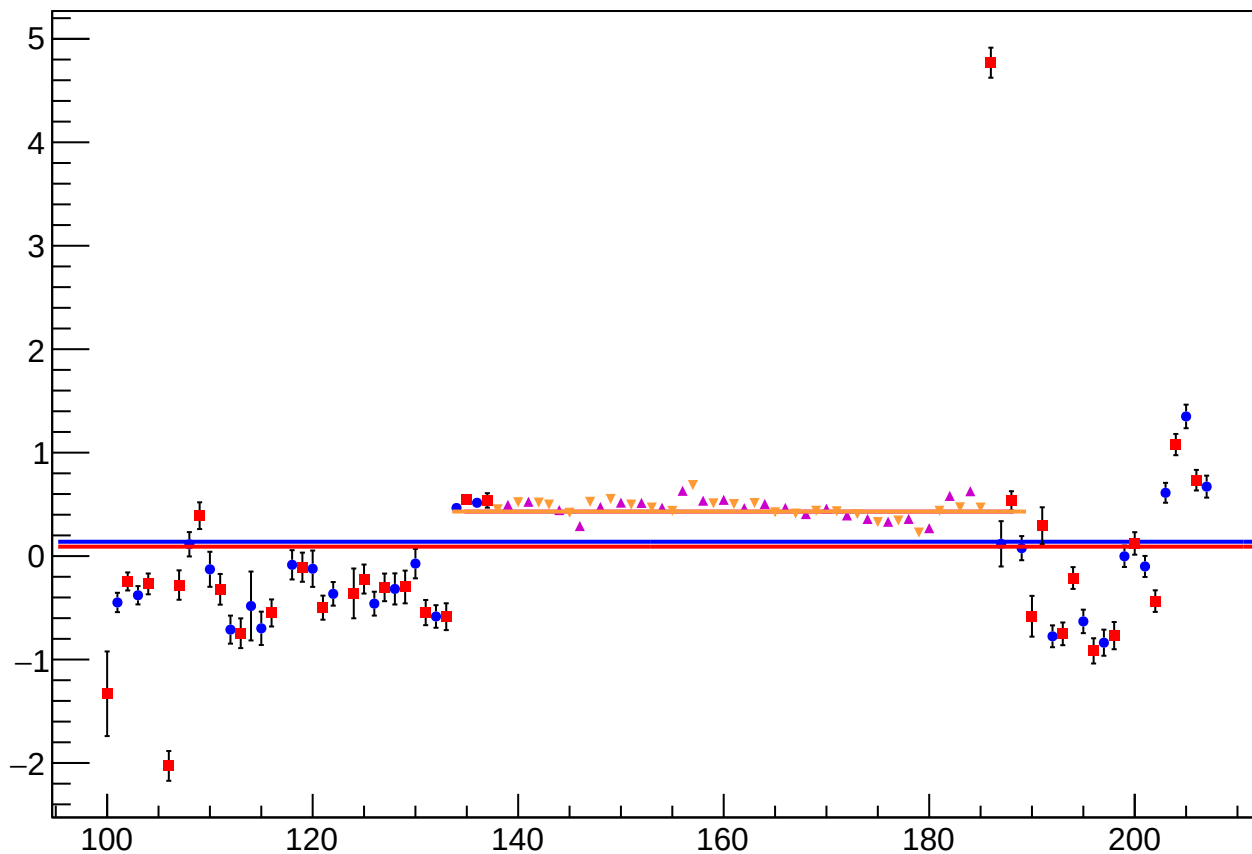
Left In:  $-14.990 \pm 0.090$   $\chi^2/\text{NDF}$ : 2150.9/22

+ sign  $-16.016 \pm 0.086$   $\chi^2/\text{NDF}$ : 4461.6/50

All:  $-15.744 \pm 0.062$   $\chi^2/\text{NDF}$ : 8847.8/104

- sign  $-15.462 \pm 0.088$   $\chi^2/\text{NDF}$ : 4366.0/53

reg\_asym\_sam\_3726\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $0.139 \pm 0.018$   $\chi^2/\text{NDF}: 774.8/25$

Left Out:  $0.431 \pm 0.004$   $\chi^2/\text{NDF}: 418.4/24$

Right Out:  $0.091 \pm 0.020$   $\chi^2/\text{NDF}: 1998.4/30$

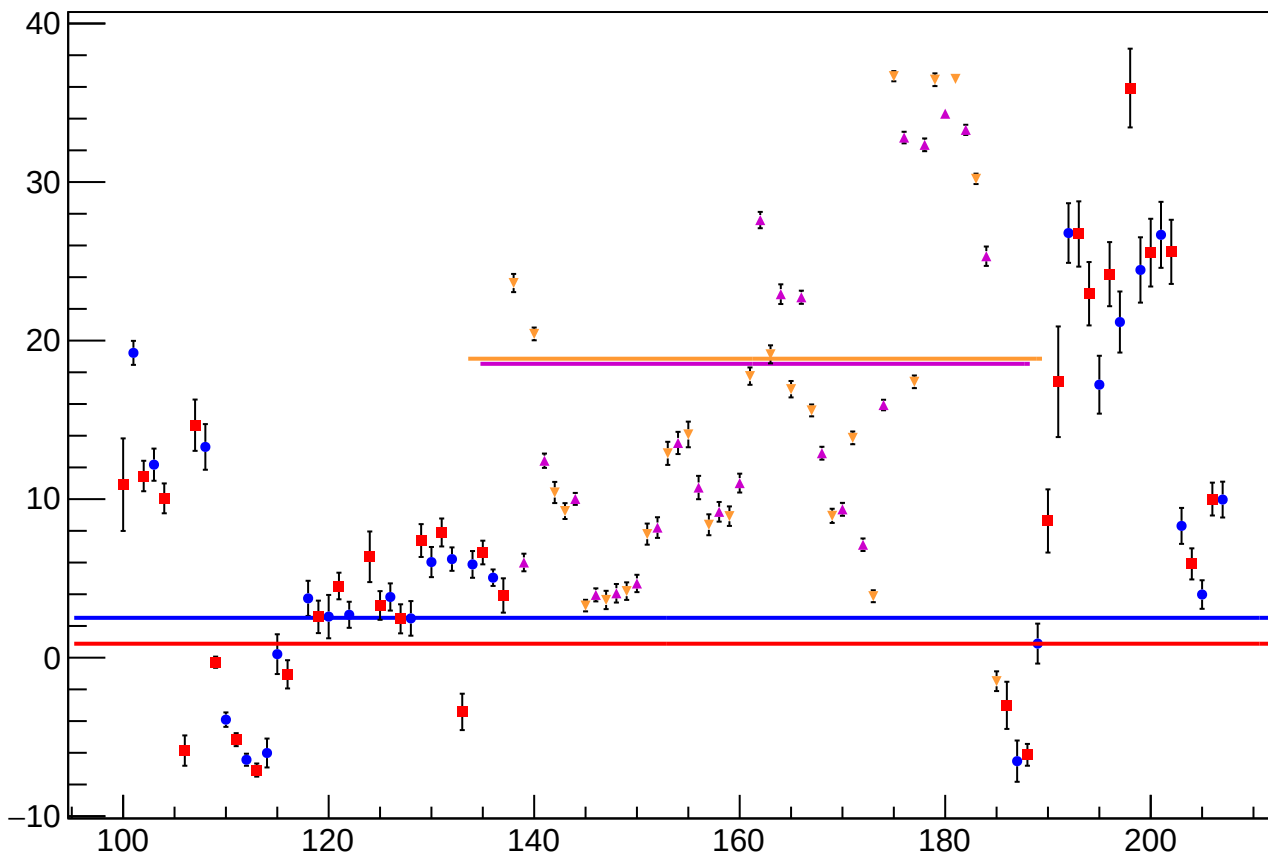
Left In:  $0.430 \pm 0.004$   $\chi^2/\text{NDF}: 583.6/22$

+ sign  $0.418 \pm 0.004$   $\chi^2/\text{NDF}: 1435.2/50$

All:  $0.417 \pm 0.003$   $\chi^2/\text{NDF}: 4300.2/104$

- sign  $0.416 \pm 0.004$   $\chi^2/\text{NDF}: 2865.0/53$

# reg\_asym\_sam\_15\_48\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $2.513 \pm 0.169$   $\chi^2/\text{NDF}$ : 2253.9/25

Left Out:  $18.858 \pm 0.090$   $\chi^2/\text{NDF}$ : 18374.1/24

Right Out:  $0.880 \pm 0.154$   $\chi^2/\text{NDF}$ : 2327.4/30

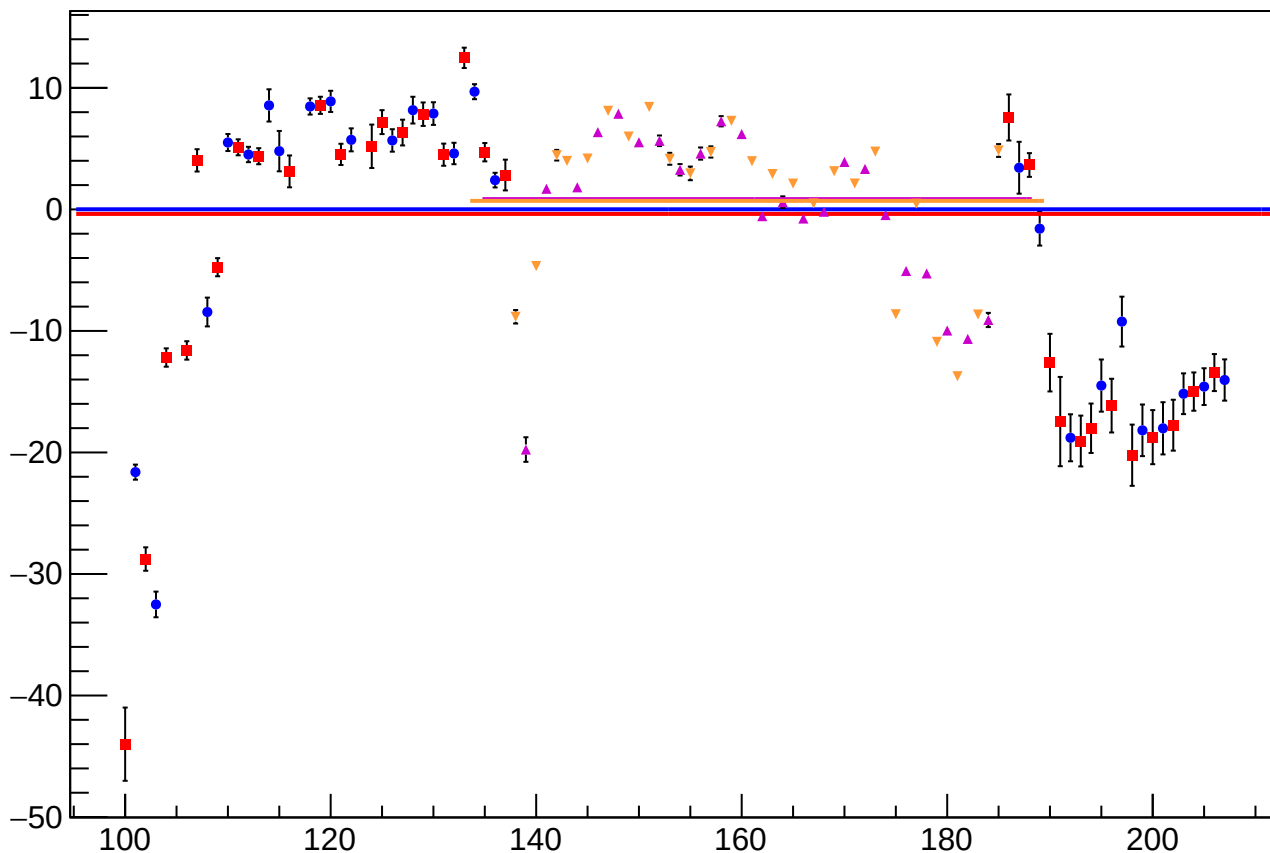
Left In:  $18.535 \pm 0.093$   $\chi^2/\text{NDF}$ : 14066.0/22

+ sign  $15.209 \pm 0.080$   $\chi^2/\text{NDF}$ : 27924.1/50

All:  $14.516 \pm 0.056$   $\chi^2/\text{NDF}$ : 54043.7/104

- sign  $13.821 \pm 0.080$   $\chi^2/\text{NDF}$ : 25968.1/53

reg\_asym\_sam\_15\_48\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $0.009 \pm 0.192$   $\chi^2/\text{NDF}$ : 3682.6/25

Left Out:  $0.702 \pm 0.071$   $\chi^2/\text{NDF}$ : 8237.8/24

Right Out:  $-0.373 \pm 0.188$   $\chi^2/\text{NDF}$ : 3064.1/30

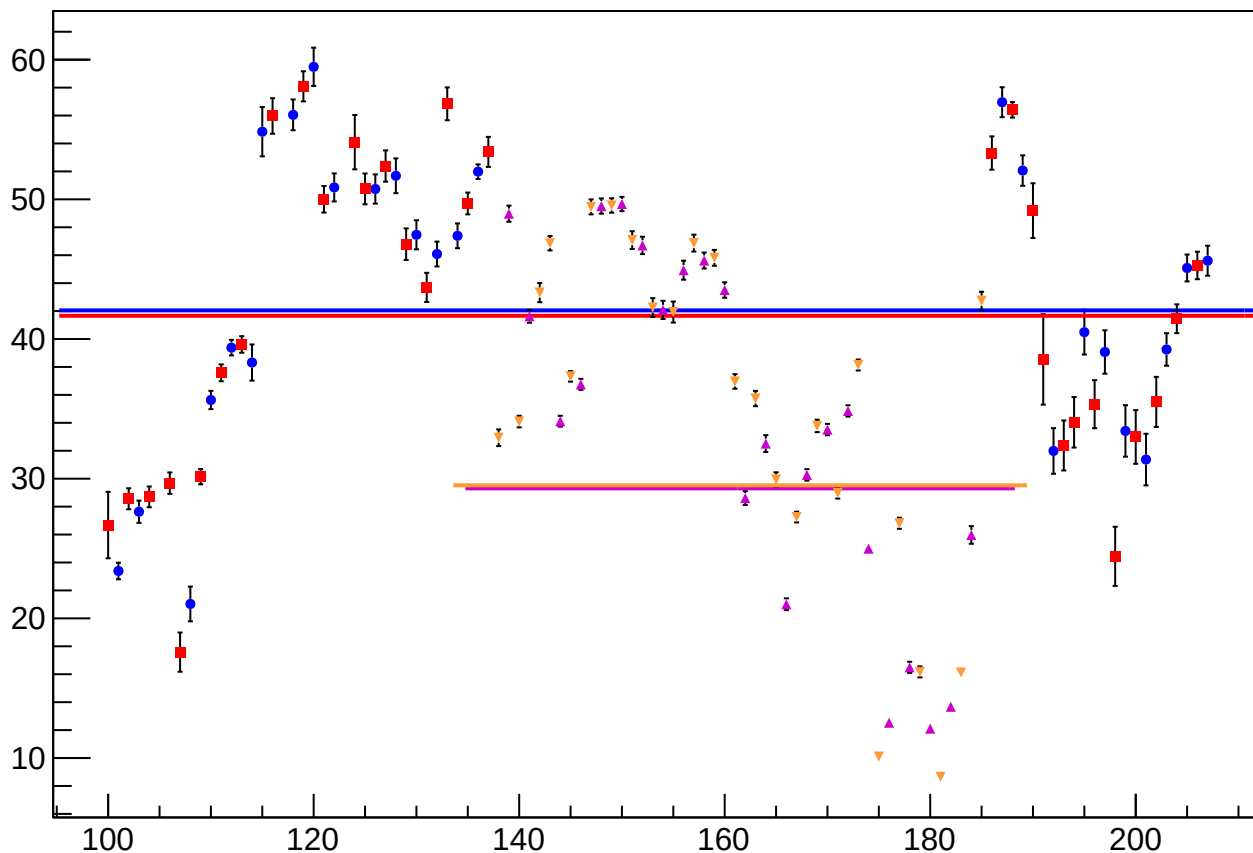
Left In:  $0.847 \pm 0.072$   $\chi^2/\text{NDF}$ : 6045.4/22

+ sign  $0.619 \pm 0.066$   $\chi^2/\text{NDF}$ : 11931.9/50

All:  $0.654 \pm 0.047$   $\chi^2/\text{NDF}$ : 21078.5/104

- sign  $0.690 \pm 0.068$   $\chi^2/\text{NDF}$ : 9146.0/53

# reg\_asym\_sam\_15\_48\_dd\_diff\_bpm4eX\_slope vs Slug



Right In: 42.049 $\pm$ 0.187  $\chi^2$ /NDF: 3158.4/25

Left Out: 29.526 $\pm$ 0.091  $\chi^2$ /NDF:21083.7/24

Right Out: 41.663 $\pm$ 0.176  $\chi^2$ /NDF: 3725.1/30

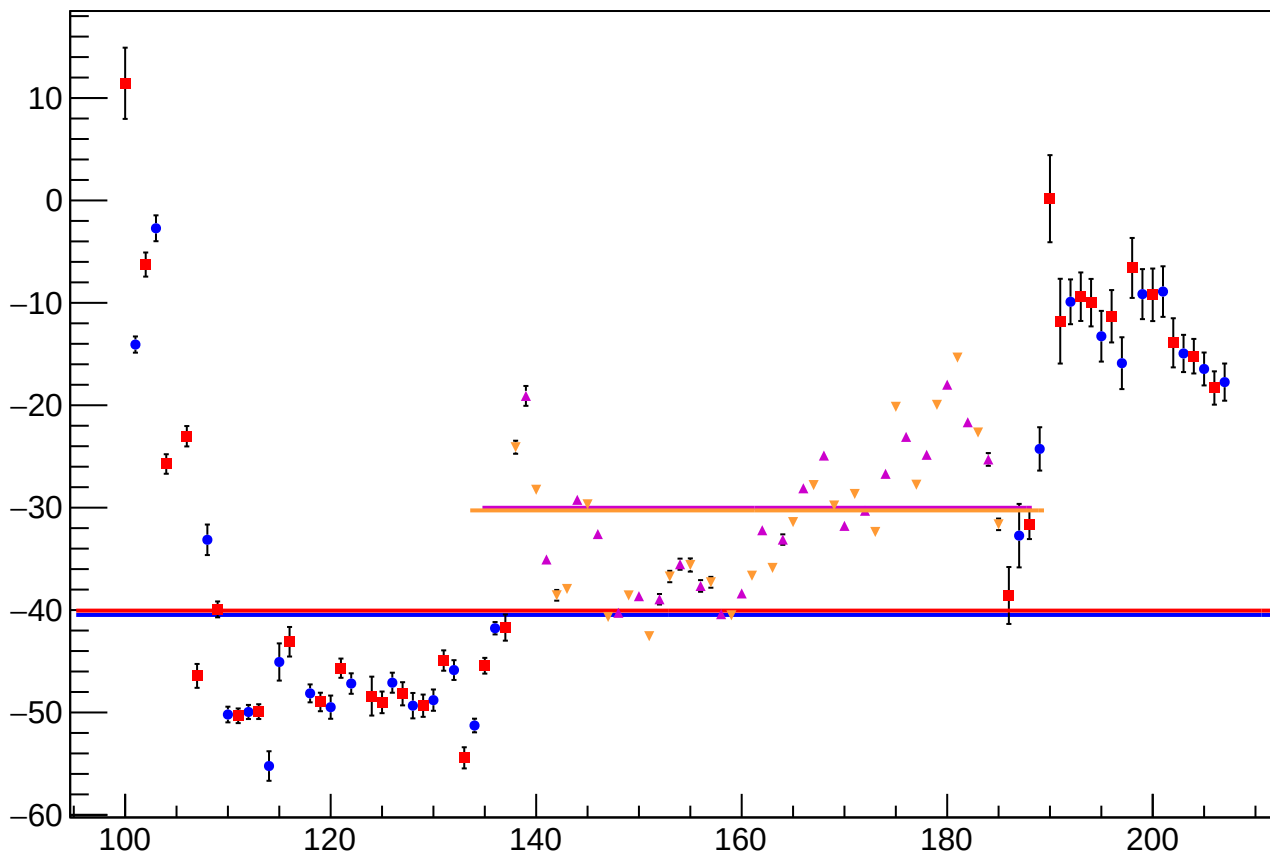
Left In: 29.306 $\pm$ 0.093  $\chi^2$ /NDF:17870.3/22

+ sign 31.913 $\pm$ 0.081  $\chi^2$ /NDF: 27885.1/50

All: 31.961 $\pm$ 0.058  $\chi^2$ /NDF: 53337.8/104

- sign 32.010 $\pm$ 0.082  $\chi^2$ /NDF: 25451.9/53

# reg\_asym\_sam\_15\_48\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-40.474 \pm 0.217$   $\chi^2/\text{NDF}: 4516.5/25$

Left Out:  $-30.268 \pm 0.079$   $\chi^2/\text{NDF}: 8500.0/24$

Right Out:  $-40.053 \pm 0.216$   $\chi^2/\text{NDF}: 4026.9/30$

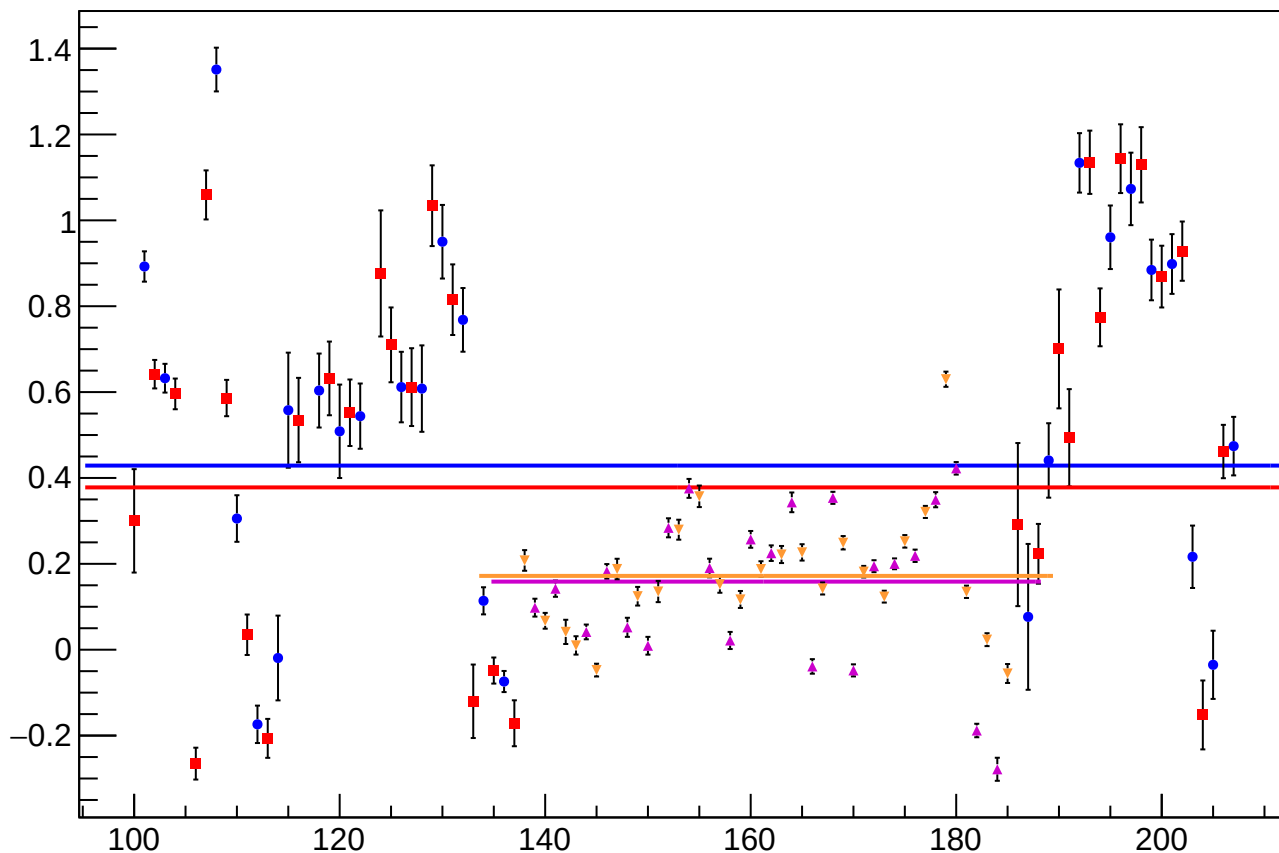
Left In:  $-30.012 \pm 0.081$   $\chi^2/\text{NDF}: 6083.1/22$

+ sign  $-31.467 \pm 0.074$   $\chi^2/\text{NDF}: 14964.9/50$

All:  $-31.366 \pm 0.053$   $\chi^2/\text{NDF}: 26975.1/104$

- sign  $-31.260 \pm 0.076$   $\chi^2/\text{NDF}: 12006.4/53$

# reg\_asym\_sam\_15\_48\_dd\_diff\_bpm12X\_slope vs Slug



Right In: 0.429 $\pm$ 0.011  $\chi^2$ /NDF: 1693.9/25

Left Out: 0.172 $\pm$ 0.004  $\chi^2$ /NDF:1501.3/24

Right Out: 0.378 $\pm$ 0.011  $\chi^2$ /NDF: 1721.6/30

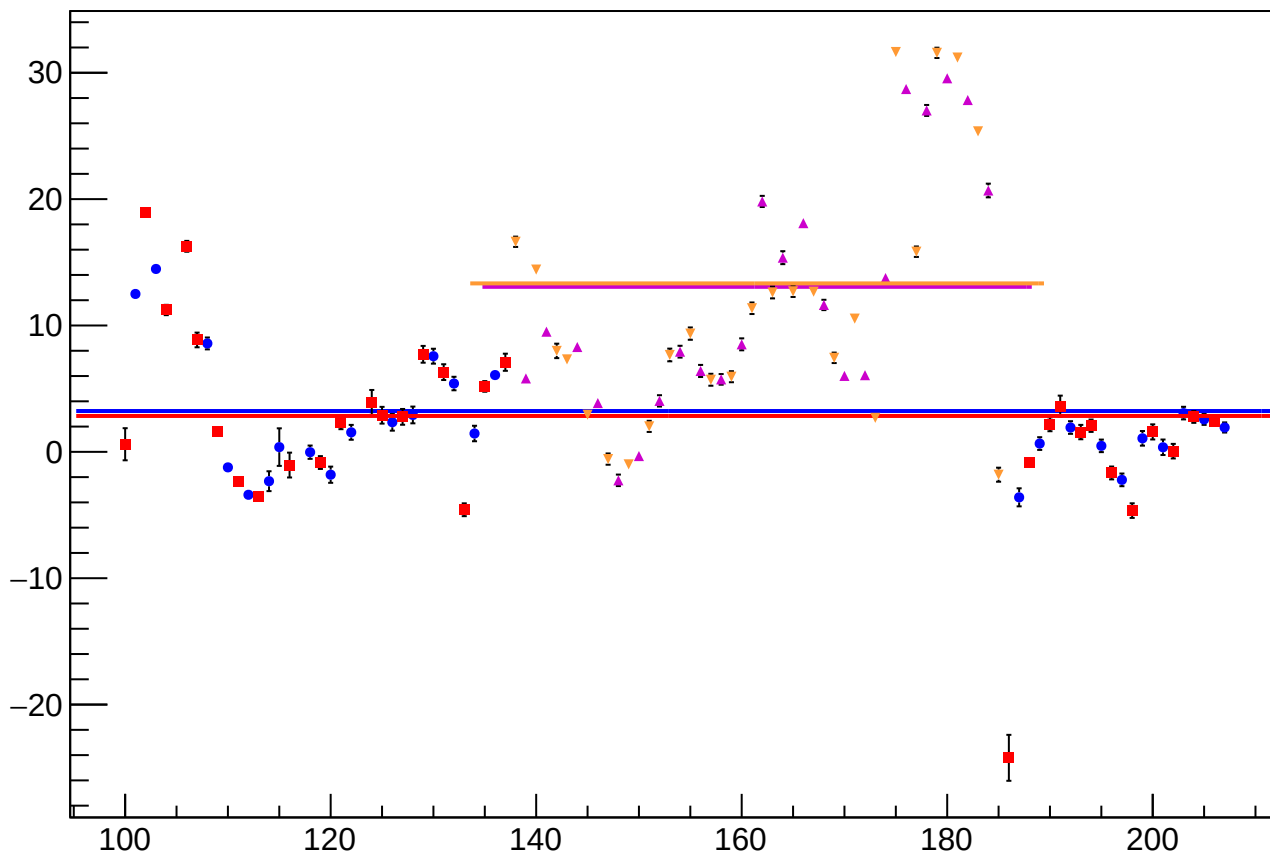
Left In: 0.159 $\pm$ 0.004  $\chi^2$ /NDF:2187.4/22

+ sign 0.197 $\pm$ 0.003  $\chi^2$ /NDF: 3695.7/50

All: 0.189 $\pm$ 0.002  $\chi^2$ /NDF: 7990.6/104

- sign 0.181 $\pm$ 0.003  $\chi^2$ /NDF: 4284.7/53

# reg\_asym\_sam\_37\_48\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $3.232 \pm 0.094$   $\chi^2/\text{NDF}: 3049.9/25$

Left Out:  $13.331 \pm 0.077$   $\chi^2/\text{NDF}: 19432.7/24$

Right Out:  $2.841 \pm 0.086$   $\chi^2/\text{NDF}: 5107.5/30$

Left In:  $13.061 \pm 0.079$   $\chi^2/\text{NDF}: 15559.8/22$

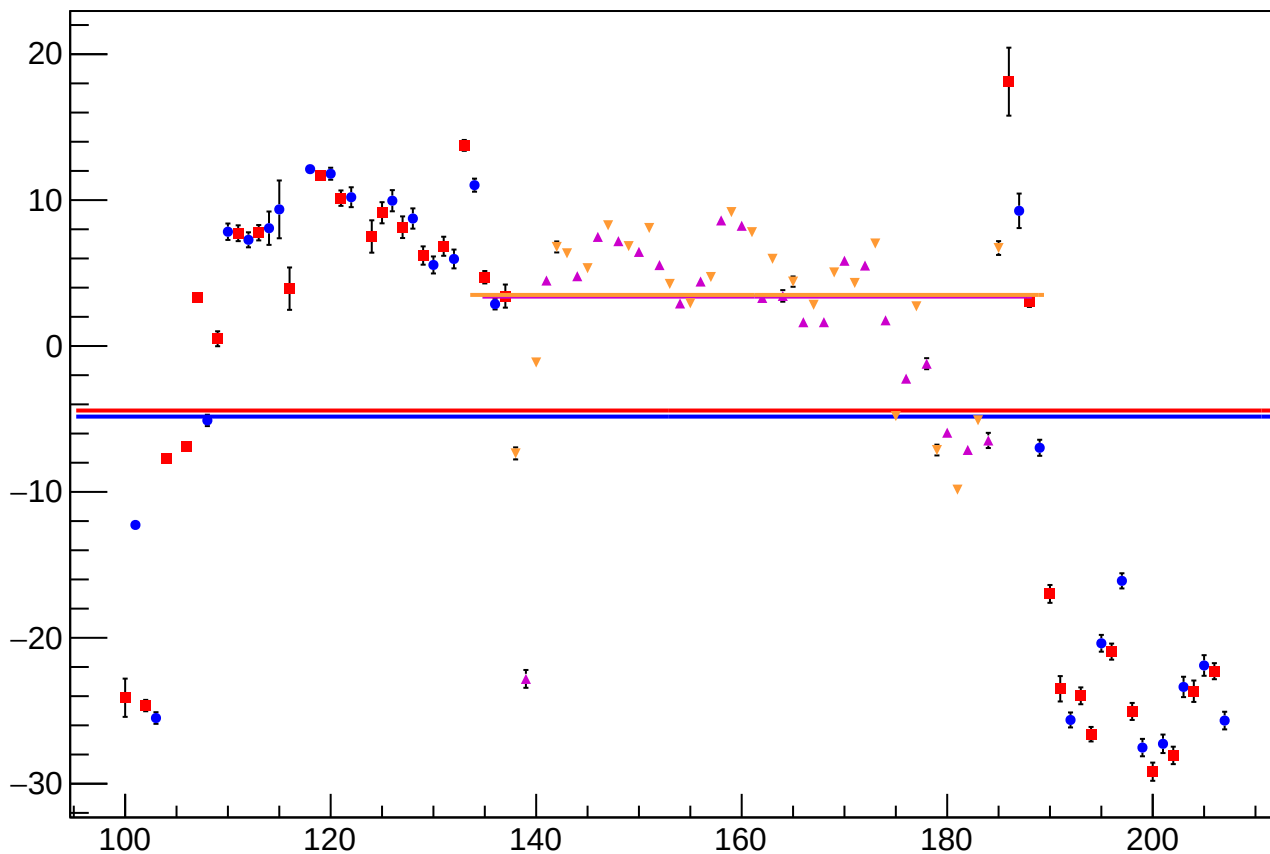
+ sign  $9.310 \pm 0.060$   $\chi^2/\text{NDF}: 29371.7/50$

All:  $8.822 \pm 0.042$   $\chi^2/\text{NDF}: 57814.2/104$

- sign  $8.355 \pm 0.058$   $\chi^2/\text{NDF}: 28311.1/53$



reg\_asym\_sam\_37\_48\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-4.838 \pm 0.099$   $\chi^2/\text{NDF}$ : 20918.6/25

Left Out:  $3.502 \pm 0.059$   $\chi^2/\text{NDF}$ : 7911.7/24

Right Out:  $-4.422 \pm 0.093$   $\chi^2/\text{NDF}$ : 23776.8/30

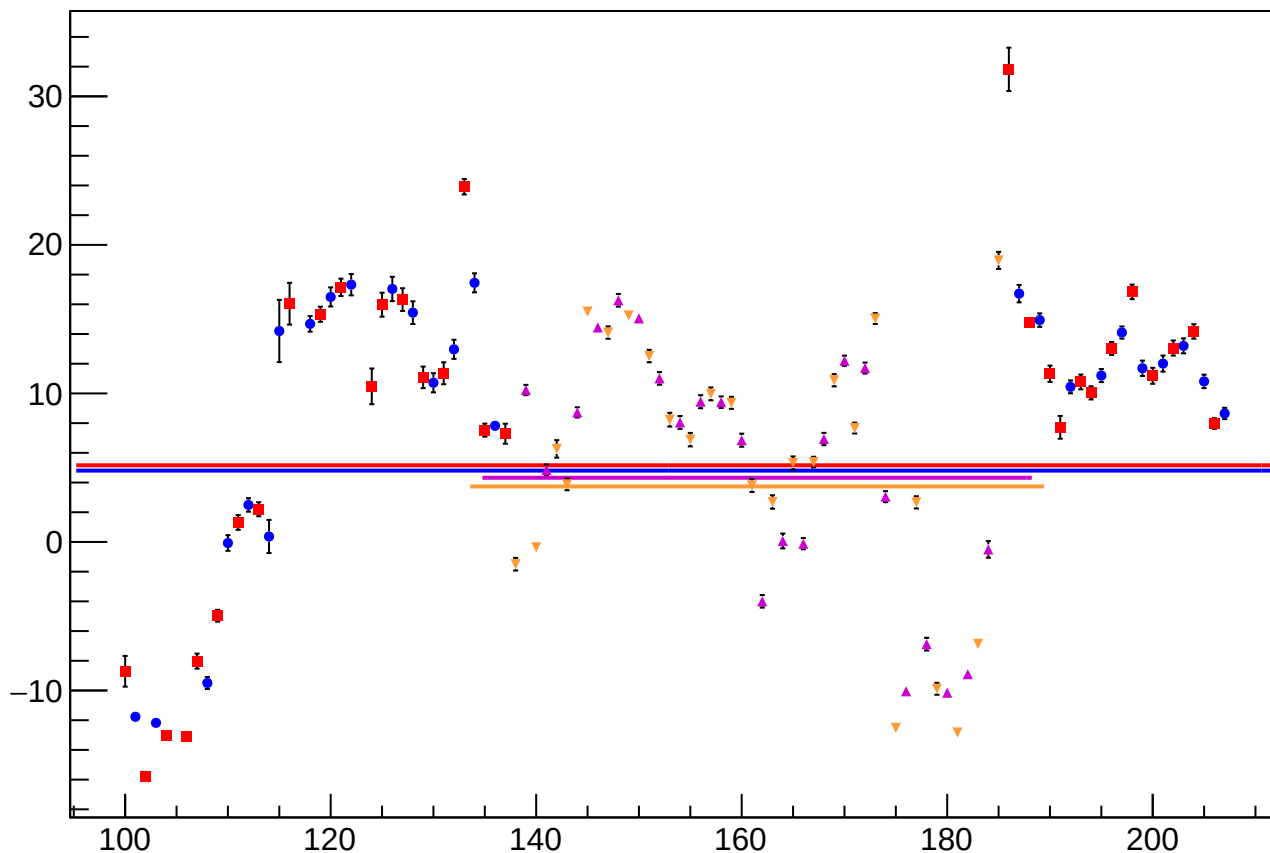
Left In:  $3.385 \pm 0.061$   $\chi^2/\text{NDF}$ : 6707.6/22

+ sign  $1.356 \pm 0.050$   $\chi^2/\text{NDF}$ : 34049.8/50

All:  $1.195 \pm 0.036$   $\chi^2/\text{NDF}$ : 69494.3/104

- sign  $1.030 \pm 0.051$   $\chi^2/\text{NDF}$ : 35423.9/53

reg\_asym\_sam\_37\_48\_dd\_diff\_bpm4eX\_slope vs Slug



Right In: 4.805 $\pm$ 0.092  $\chi^2$ /NDF: 13624.1/25

Left Out: 3.738 $\pm$ 0.076  $\chi^2$ /NDF:15586.7/24

Right Out: 5.162 $\pm$ 0.084  $\chi^2$ /NDF: 19978.0/30

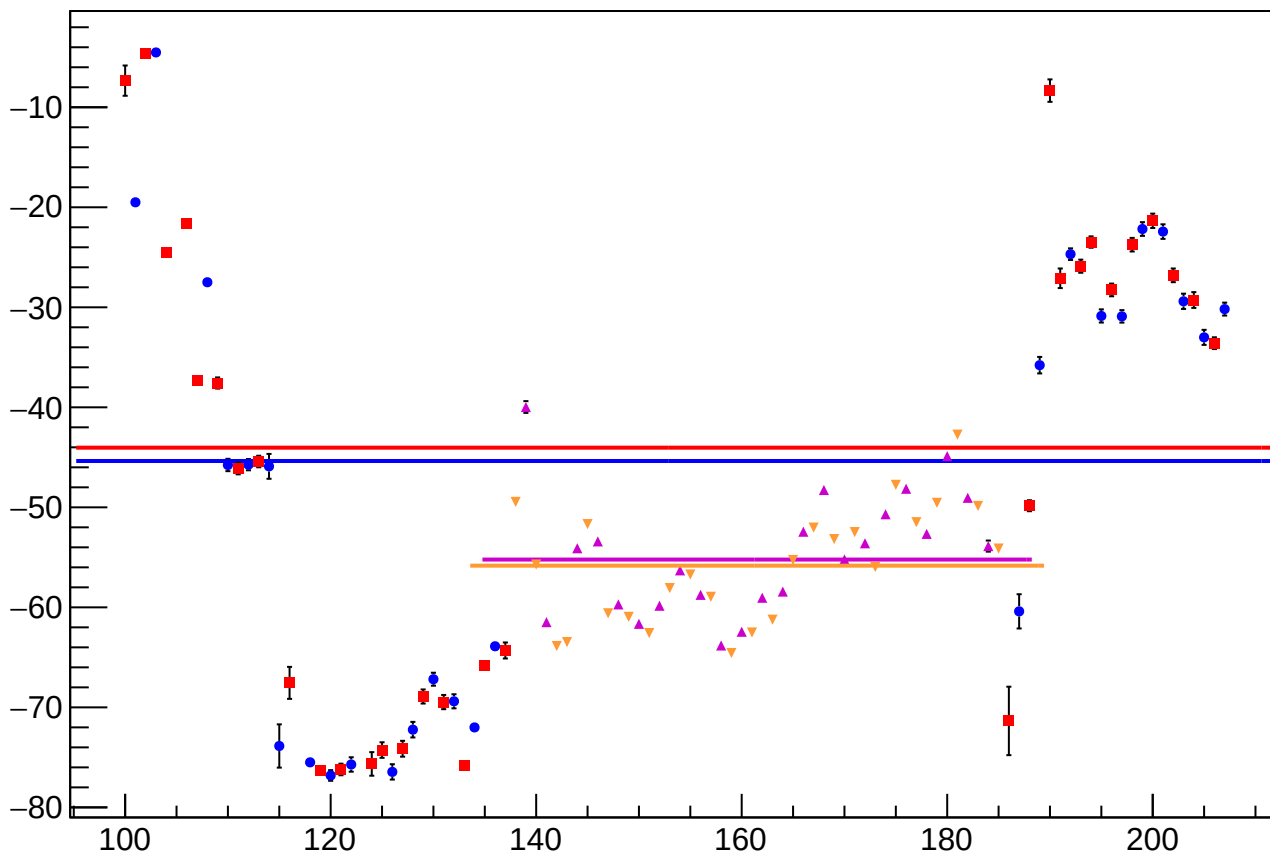
Left In: 4.322 $\pm$ 0.079  $\chi^2$ /NDF:12483.3/22

+ sign 4.171 $\pm$ 0.059  $\chi^2$ /NDF: 29289.9/50

All: 4.450 $\pm$ 0.041  $\chi^2$ /NDF: 61848.1/104

- sign 4.714 $\pm$ 0.057  $\chi^2$ /NDF: 32514.6/53

reg\_asym\_sam\_37\_48\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-45.367 \pm 0.116$   $\chi^2/\text{NDF}$ : 41537.6/25

Left Out:  $-55.832 \pm 0.066$   $\chi^2/\text{NDF}$ : 7592.5/24

Right Out:  $-44.034 \pm 0.110$   $\chi^2/\text{NDF}$ : 43340.3/30

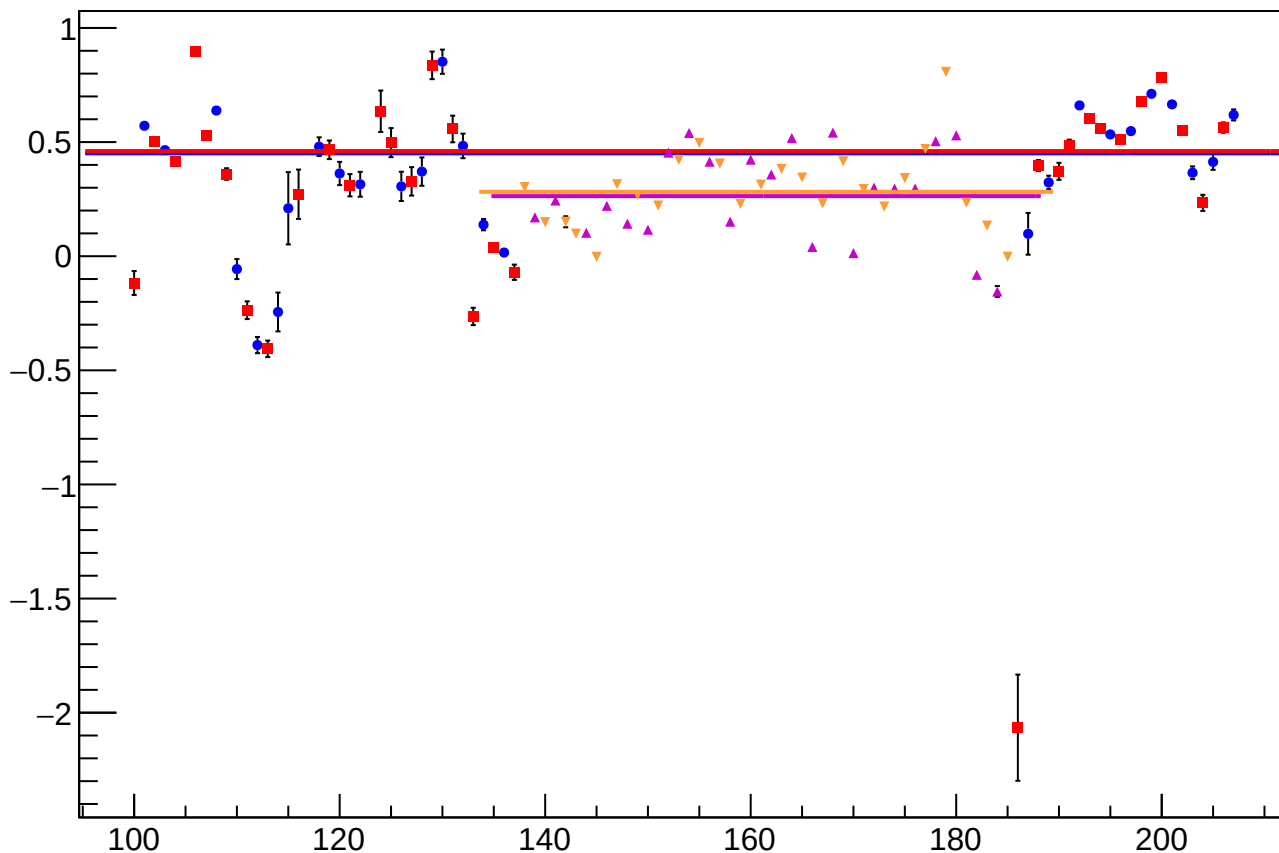
Left In:  $-55.222 \pm 0.069$   $\chi^2/\text{NDF}$ : 6343.0/22

+ sign  $-53.267 \pm 0.058$   $\chi^2/\text{NDF}$ : 55229.8/50

All:  $-52.683 \pm 0.041$   $\chi^2/\text{NDF}$ : 112550.0/104

- sign  $-52.087 \pm 0.058$   $\chi^2/\text{NDF}$ : 57113.1/53

reg\_asym\_sam\_37\_48\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $0.451 \pm 0.005$   $\chi^2/\text{NDF}$ : 2606.4/25

Left Out:  $0.282 \pm 0.003$   $\chi^2/\text{NDF}$ : 2712.4/24

Right Out:  $0.461 \pm 0.004$   $\chi^2/\text{NDF}$ : 3649.7/30

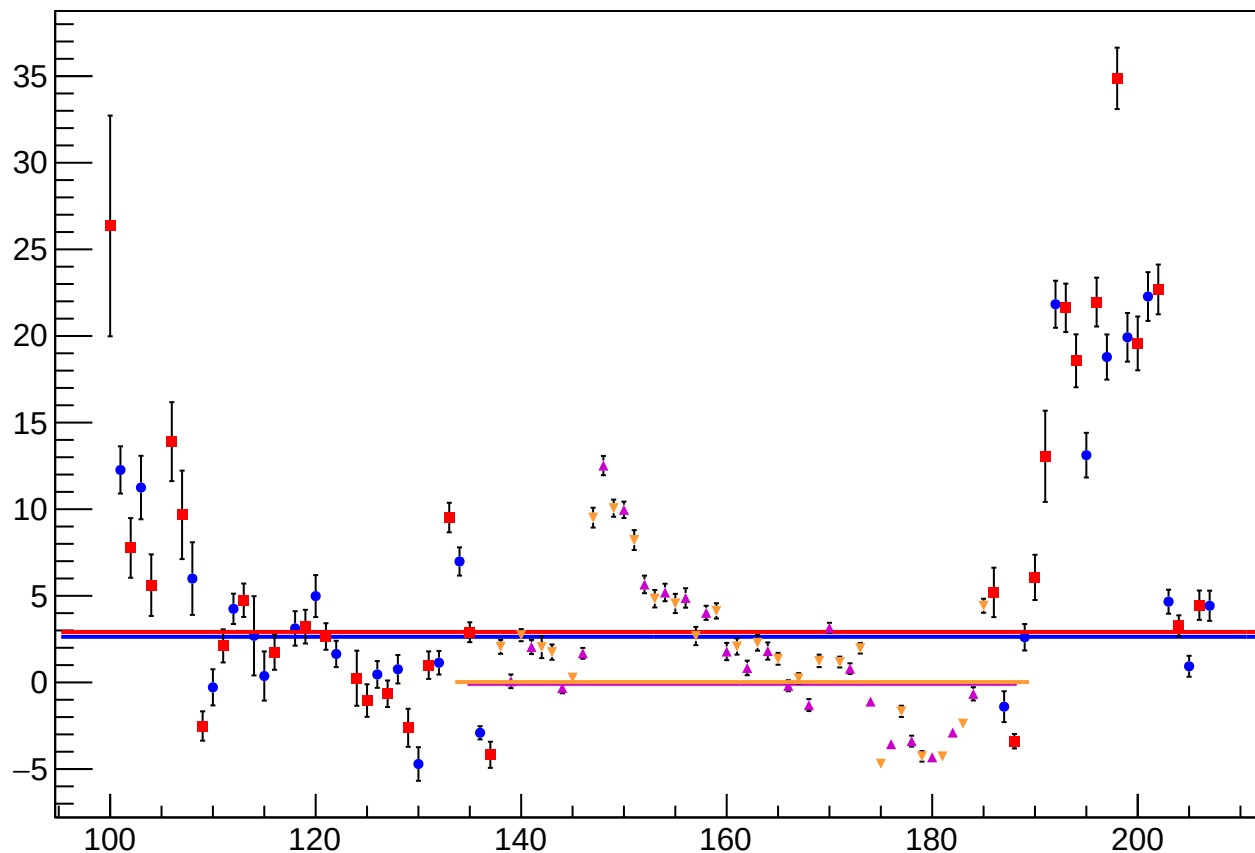
Left In:  $0.263 \pm 0.003$   $\chi^2/\text{NDF}$ : 3835.8/22

+ sign  $0.329 \pm 0.003$   $\chi^2/\text{NDF}$ : 6200.5/50

All:  $0.327 \pm 0.002$   $\chi^2/\text{NDF}$ : 15010.7/104

- sign  $0.325 \pm 0.003$   $\chi^2/\text{NDF}$ : 8809.2/53

# reg\_asym\_sam\_15\_26\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $2.634 \pm 0.171$   $\chi^2/\text{NDF}: 1216.0/25$

Left Out:  $0.022 \pm 0.069$   $\chi^2/\text{NDF}: 2759.3/24$

Right Out:  $2.914 \pm 0.172$   $\chi^2/\text{NDF}: 1671.5/30$

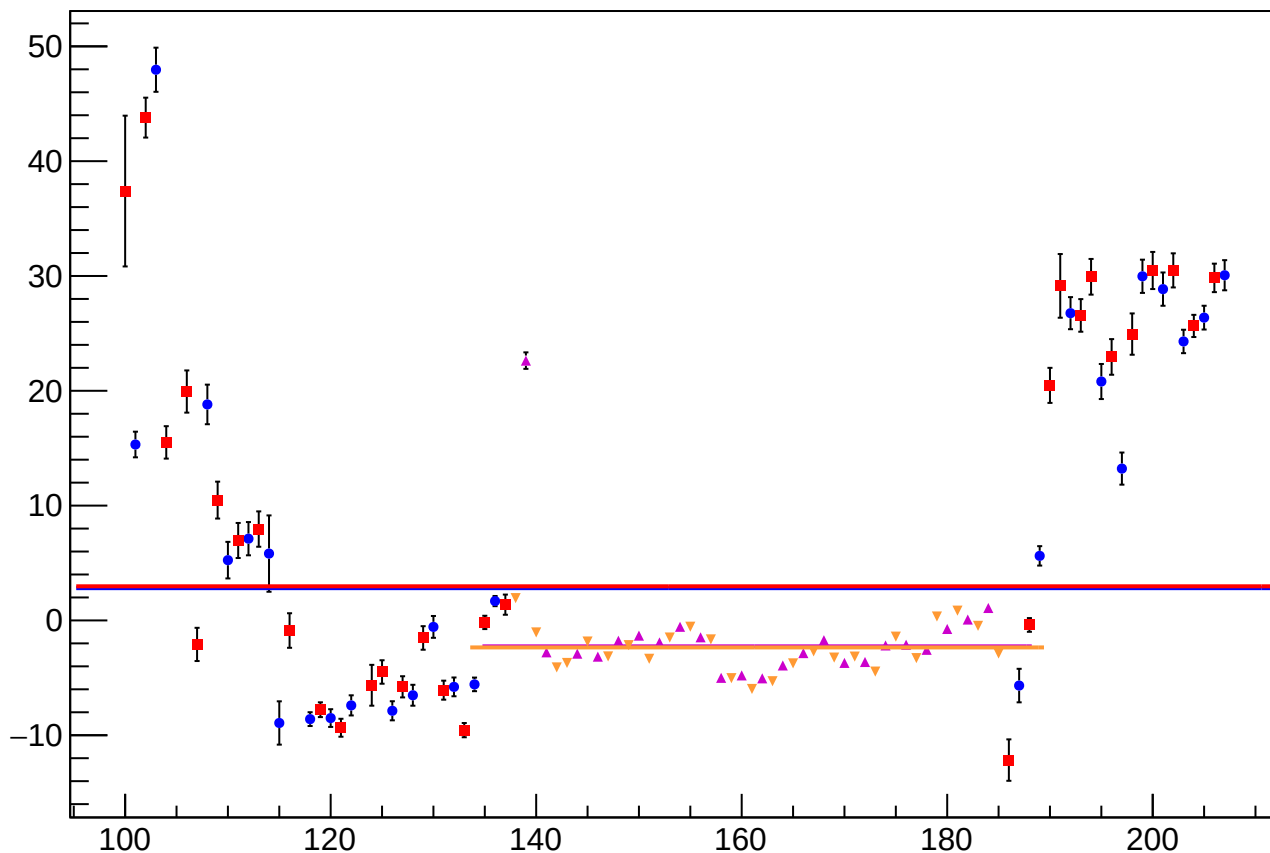
Left In:  $-0.080 \pm 0.071$   $\chi^2/\text{NDF}: 2464.5/22$

+ sign  $0.382 \pm 0.064$   $\chi^2/\text{NDF}: 4175.4/50$

All:  $0.368 \pm 0.046$   $\chi^2/\text{NDF}: 8570.8/104$

- sign  $0.353 \pm 0.065$   $\chi^2/\text{NDF}: 4395.3/53$

# reg\_asym\_sam\_15\_26\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $2.811 \pm 0.188$   $\chi^2/\text{NDF}$ : 4724.8/25

Left Out:  $-2.352 \pm 0.055$   $\chi^2/\text{NDF}$ : 1125.6/24

Right Out:  $2.972 \pm 0.193$   $\chi^2/\text{NDF}$ : 4941.0/30

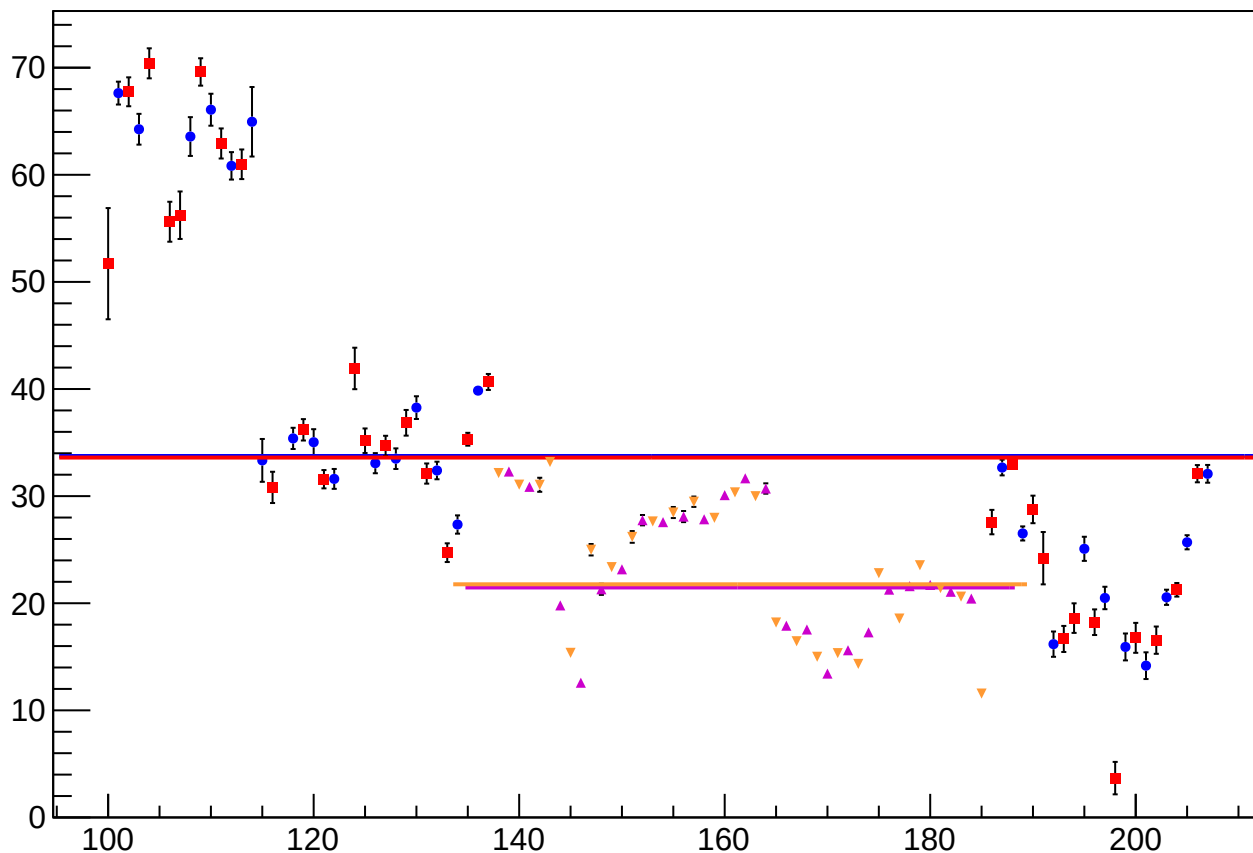
Left In:  $-2.257 \pm 0.056$   $\chi^2/\text{NDF}$ : 1877.2/22

+ sign  $-1.943 \pm 0.053$   $\chi^2/\text{NDF}$ : 6545.6/50

All:  $-1.895 \pm 0.038$   $\chi^2/\text{NDF}$ : 14044.2/104

- sign  $-1.844 \pm 0.054$   $\chi^2/\text{NDF}$ : 7496.9/53

# reg\_asym\_sam\_15\_26\_dd\_diff\_bpm4eX\_slope vs Slug



Right In: 33.746 $\pm$ 0.176  $\chi^2$ /NDF: 4585.0/25

Left Out: 21.768 $\pm$ 0.069  $\chi^2$ /NDF: 6814.2/24

Right Out: 33.602 $\pm$ 0.172  $\chi^2$ /NDF: 5088.6/30

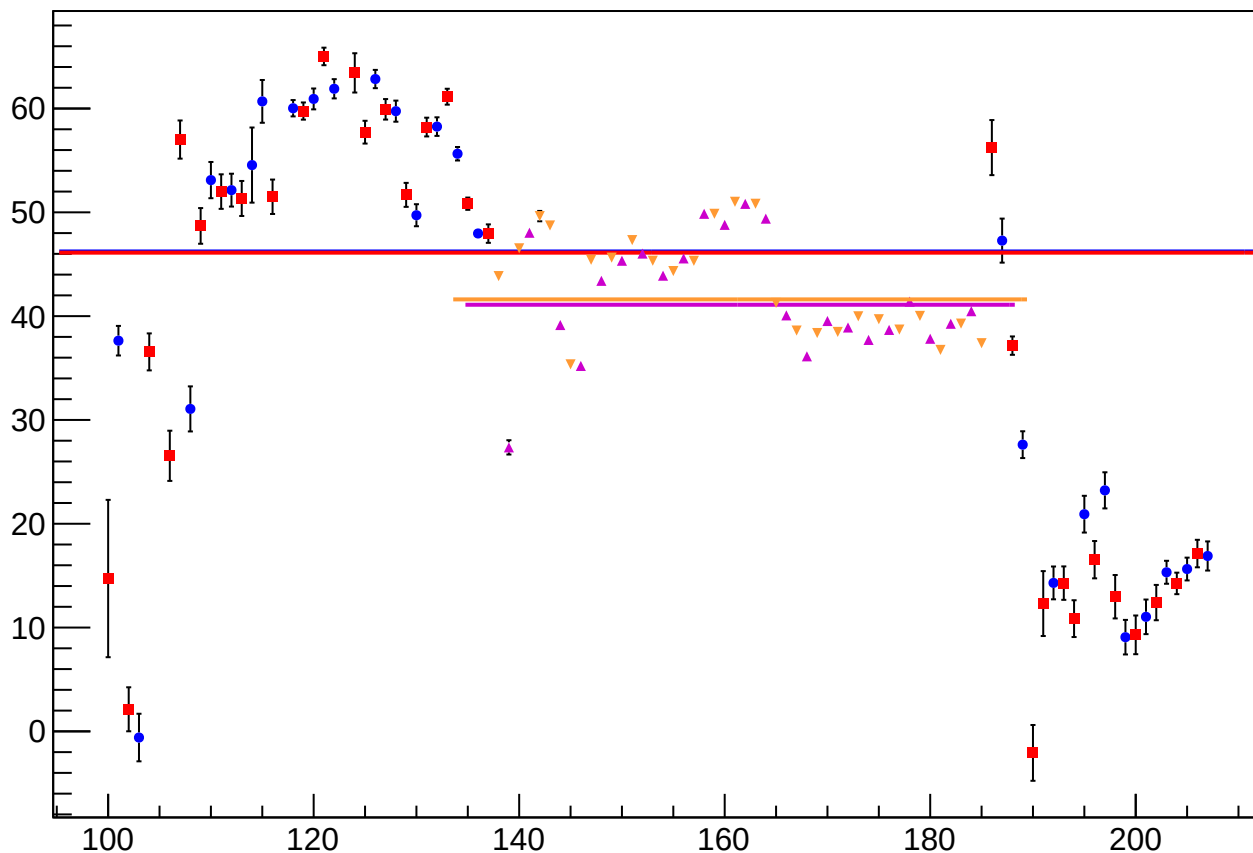
Left In: 21.472 $\pm$ 0.071  $\chi^2$ /NDF: 5787.4/22

+ sign 23.358 $\pm$ 0.064  $\chi^2$ /NDF: 15413.9/50

All: 23.289 $\pm$ 0.046  $\chi^2$ /NDF: 30537.9/104

- sign 23.217 $\pm$ 0.065  $\chi^2$ /NDF: 15121.7/53

# reg\_asym\_sam\_15\_26\_dd\_diff\_bpm4eY\_slope vs Slug



Right In: 46.231 $\pm$ 0.212  $\chi^2$ /NDF: 6277.5/25

Left Out: 41.613 $\pm$ 0.061  $\chi^2$ /NDF: 5776.0/24

Right Out: 46.116 $\pm$ 0.222  $\chi^2$ /NDF: 6501.9/30

Left In: 41.098 $\pm$ 0.063  $\chi^2$ /NDF: 5478.0/22

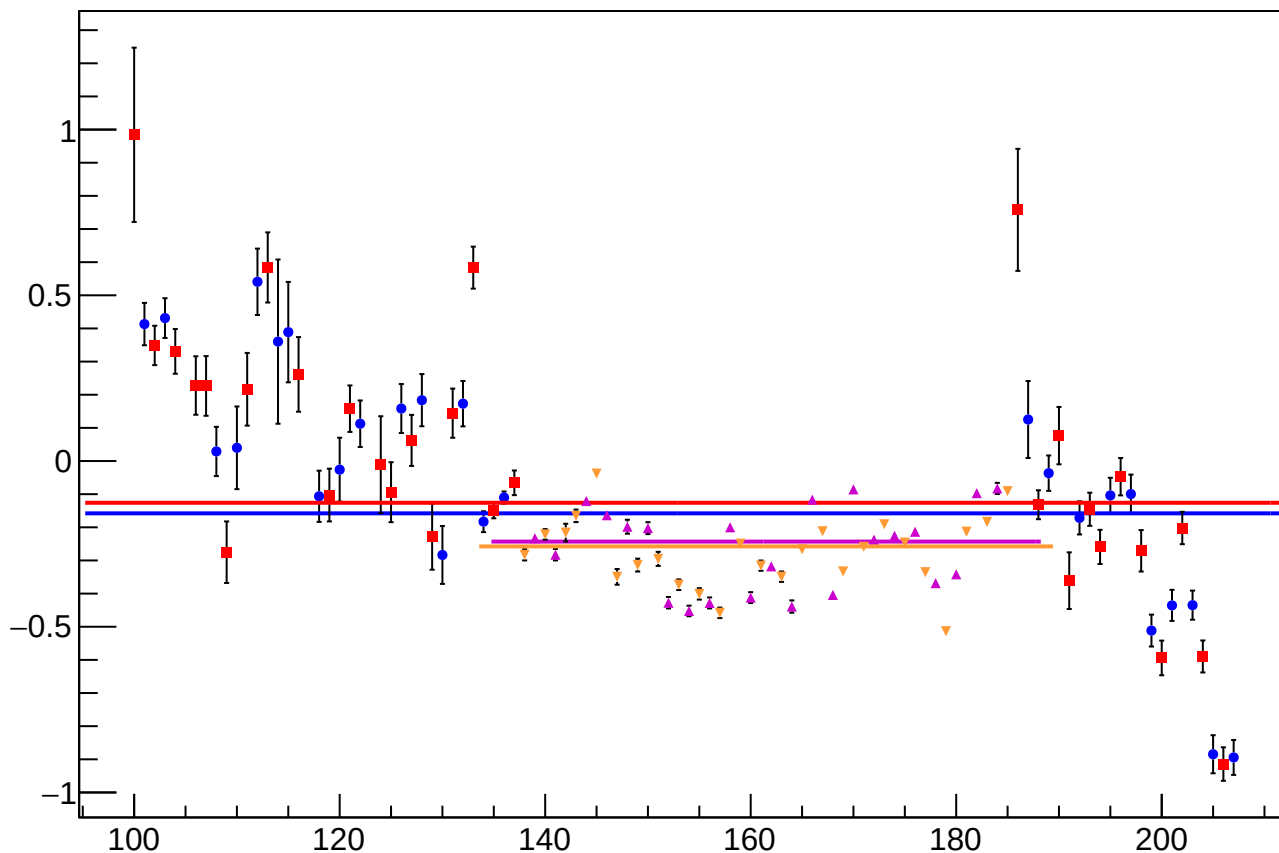
+ sign 41.969 $\pm$ 0.059  $\chi^2$ /NDF: 12491.4/50

All: 41.725 $\pm$ 0.042  $\chi^2$ /NDF: 24979.6/104

- sign 41.468 $\pm$ 0.060  $\chi^2$ /NDF: 12452.8/53



# reg\_asym\_sam\_15\_26\_dd\_diff\_bpm12X\_slope vs Slug



Right In: -0.158±/0.010  $\chi^2/\text{NDF}$ : 835.4/25

Left Out: -0.258±/0.003  $\chi^2/\text{NDF}$ :1515.1/24

Right Out: -0.126±/0.011  $\chi^2/\text{NDF}$ : 863.6/30

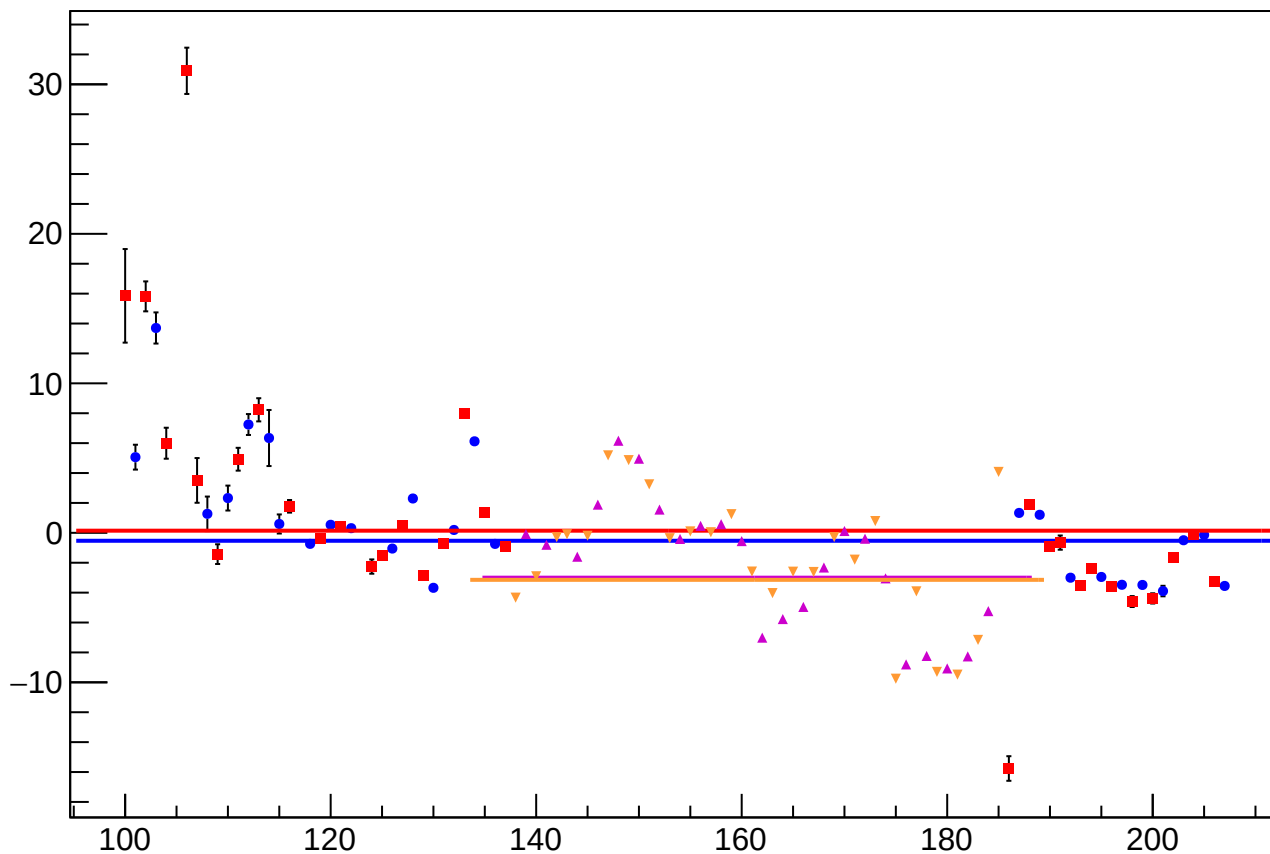
Left In: -0.243±/0.003  $\chi^2/\text{NDF}$ :1811.8/22

+ sign -0.251±/0.003  $\chi^2/\text{NDF}$ : 2440.0/50

All: -0.244±/0.002  $\chi^2/\text{NDF}$ : 5243.8/104

- sign -0.236±/0.003  $\chi^2/\text{NDF}$ : 2787.2/53

reg\_asym\_sam\_37\_26\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-0.531 \pm 0.054$   $\chi^2/\text{NDF}$ : 1966.6/25

Left Out:  $-3.144 \pm 0.028$   $\chi^2/\text{NDF}$ : 25358.6/24

Right Out:  $0.144 \pm 0.052$   $\chi^2/\text{NDF}$ : 4411.0/30

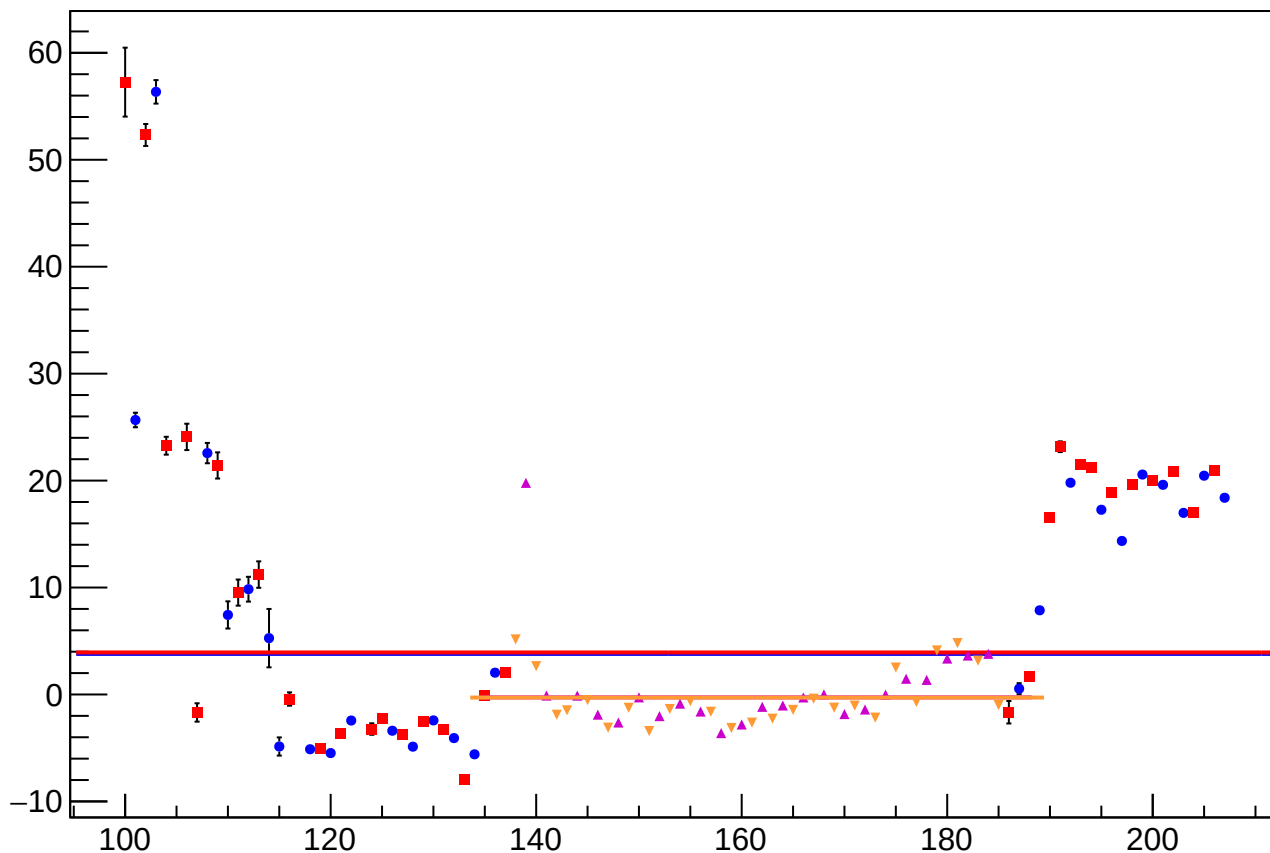
Left In:  $-2.999 \pm 0.028$   $\chi^2/\text{NDF}$ : 22425.0/22

+ sign  $-2.603 \pm 0.025$   $\chi^2/\text{NDF}$ : 29165.2/50

All:  $-2.436 \pm 0.018$   $\chi^2/\text{NDF}$ : 58941.1/104

- sign  $-2.265 \pm 0.025$   $\chi^2/\text{NDF}$ : 29683.3/53

# reg\_asym\_sam\_37\_26\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $3.795 \pm 0.057$   $\chi^2/\text{NDF}: 34354.1/25$

Left Out:  $-0.288 \pm 0.022$   $\chi^2/\text{NDF}: 12198.2/24$

Right Out:  $3.930 \pm 0.055$   $\chi^2/\text{NDF}: 43333.4/30$

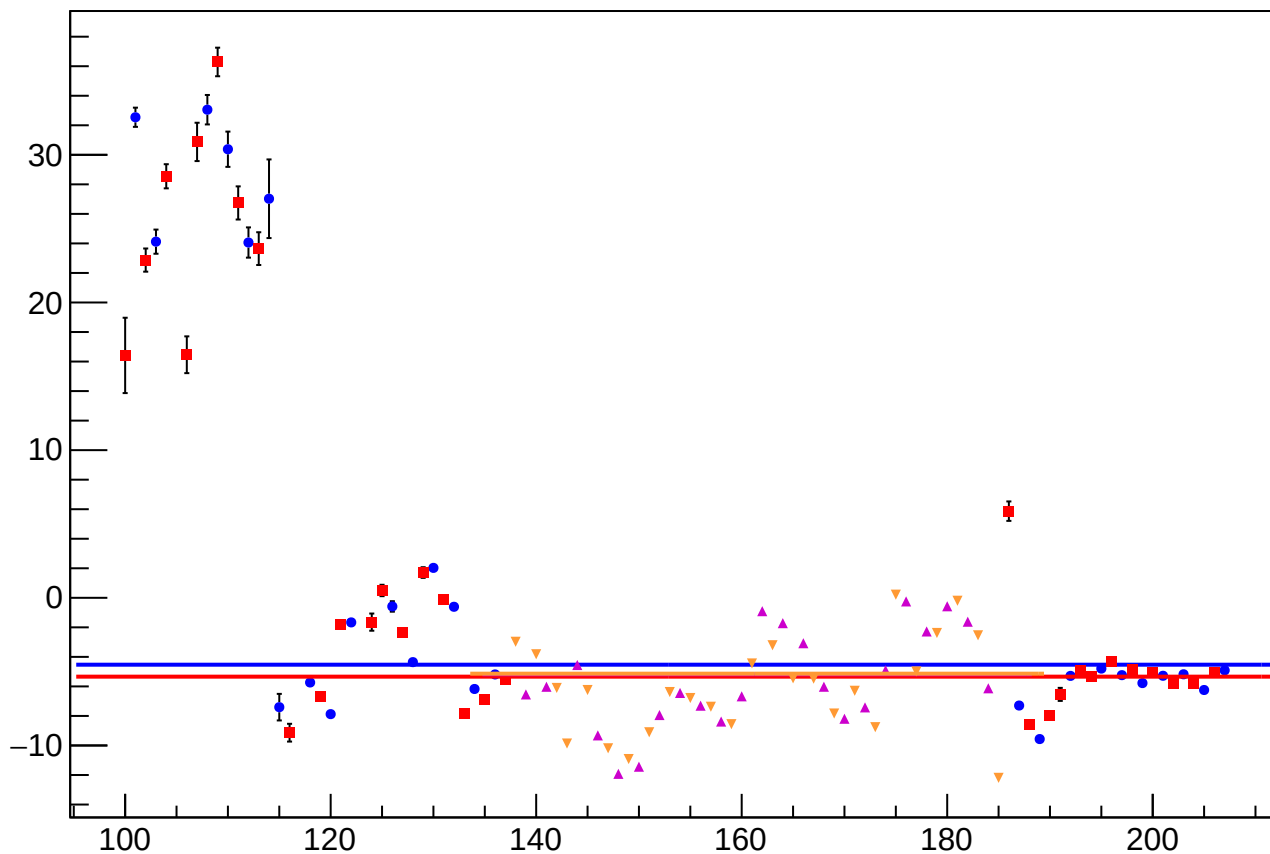
Left In:  $-0.271 \pm 0.022$   $\chi^2/\text{NDF}: 13220.8/22$

+ sign  $0.228 \pm 0.020$   $\chi^2/\text{NDF}: 50977.7/50$

All:  $0.275 \pm 0.015$   $\chi^2/\text{NDF}: 112559.8/104$

- sign  $0.323 \pm 0.021$   $\chi^2/\text{NDF}: 61571.4/53$

reg\_asym\_sam\_37\_26\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-4.530 \pm 0.054$   $\chi^2/\text{NDF}$ : 9517.8/25

Left Out:  $-5.138 \pm 0.028$   $\chi^2/\text{NDF}$ : 14626.0/24

Right Out:  $-5.339 \pm 0.050$   $\chi^2/\text{NDF}$ : 10493.7/30

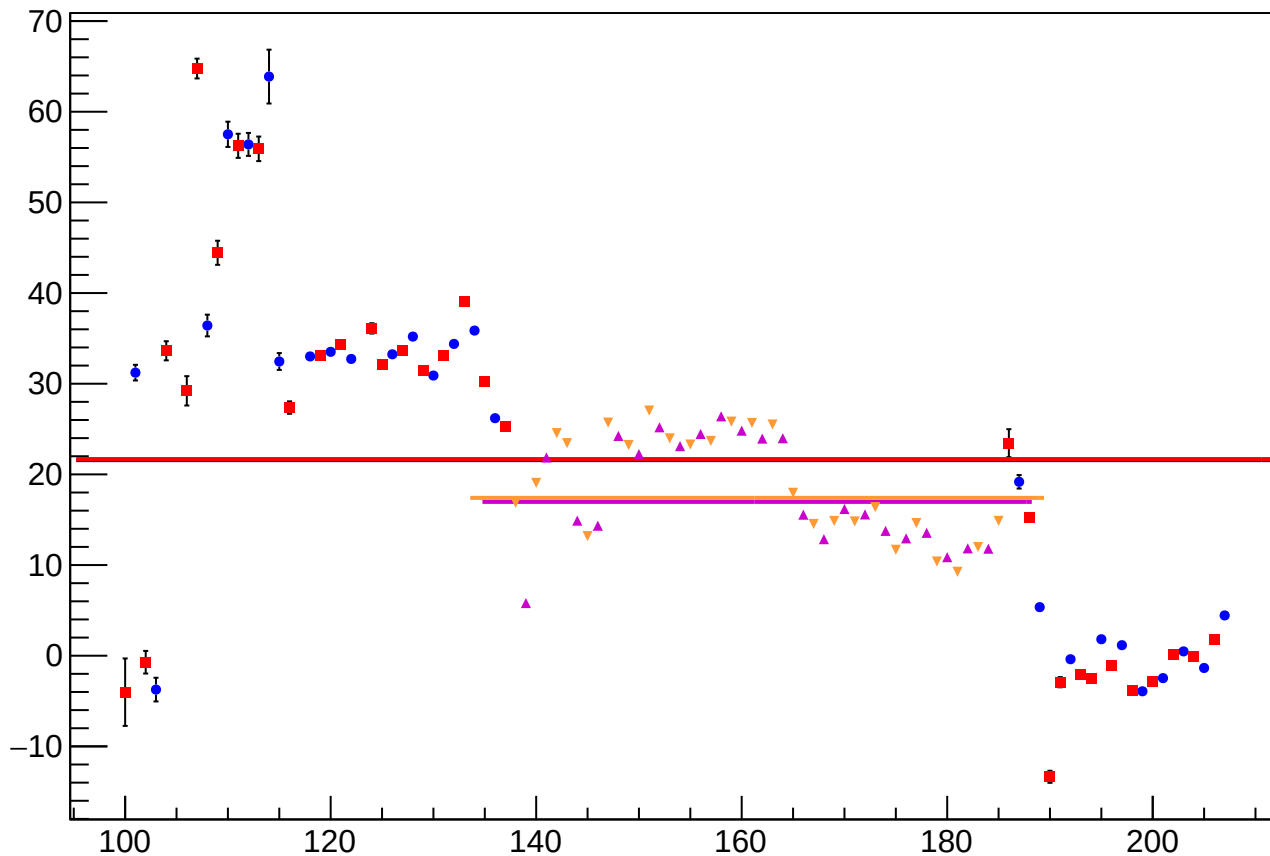
Left In:  $-5.177 \pm 0.028$   $\chi^2/\text{NDF}$ : 13963.7/22

+ sign  $-5.011 \pm 0.025$   $\chi^2/\text{NDF}$ : 24243.6/50

All:  $-5.115 \pm 0.017$   $\chi^2/\text{NDF}$ : 48743.9/104

- sign  $-5.217 \pm 0.025$   $\chi^2/\text{NDF}$ : 24465.5/53

# reg\_asym\_sam\_37\_26\_dd\_diff\_bpm4eY\_slope vs Slug



Right In: 21.572 $\pm$ 0.066  $\chi^2$ /NDF: 53516.6/25

Left Out: 17.409 $\pm$ 0.024  $\chi^2$ /NDF: 50630.8/24

Right Out: 21.690 $\pm$ 0.064  $\chi^2$ /NDF: 67413.1/30

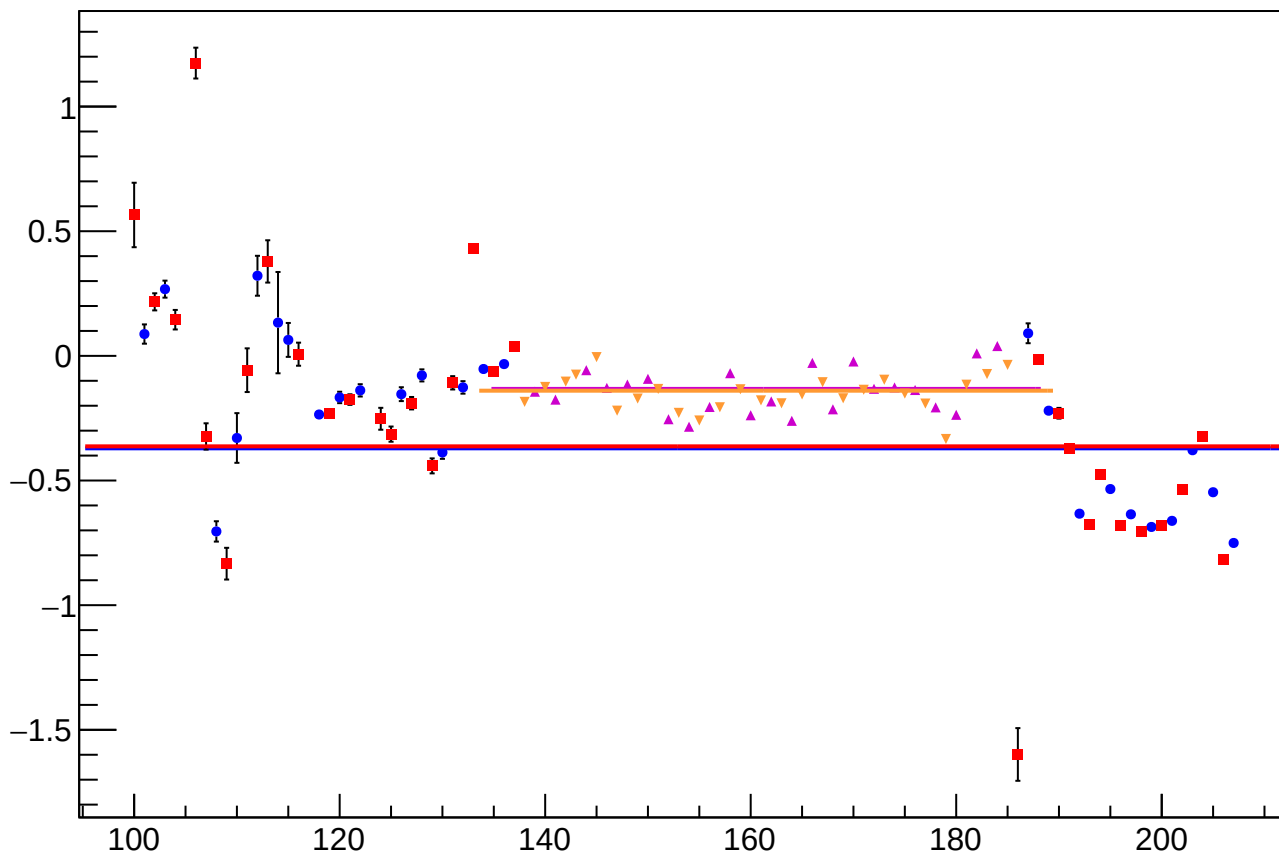
Left In: 16.967 $\pm$ 0.025  $\chi^2$ /NDF: 39939.4/22

+ sign 17.909 $\pm$ 0.023  $\chi^2$ /NDF: 107629.9/50

All: 17.750 $\pm$ 0.016  $\chi^2$ /NDF: 219746.1/104

- sign 17.585 $\pm$ 0.023  $\chi^2$ /NDF: 112018.2/53

reg\_asym\_sam\_37\_26\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.371 \pm 0.003$   $\chi^2/\text{NDF}$ : 8258.4/25

Left Out:  $-0.140 \pm 0.001$   $\chi^2/\text{NDF}$ : 4108.2/24

Right Out:  $-0.363 \pm 0.003$   $\chi^2/\text{NDF}$ : 12738.9/30

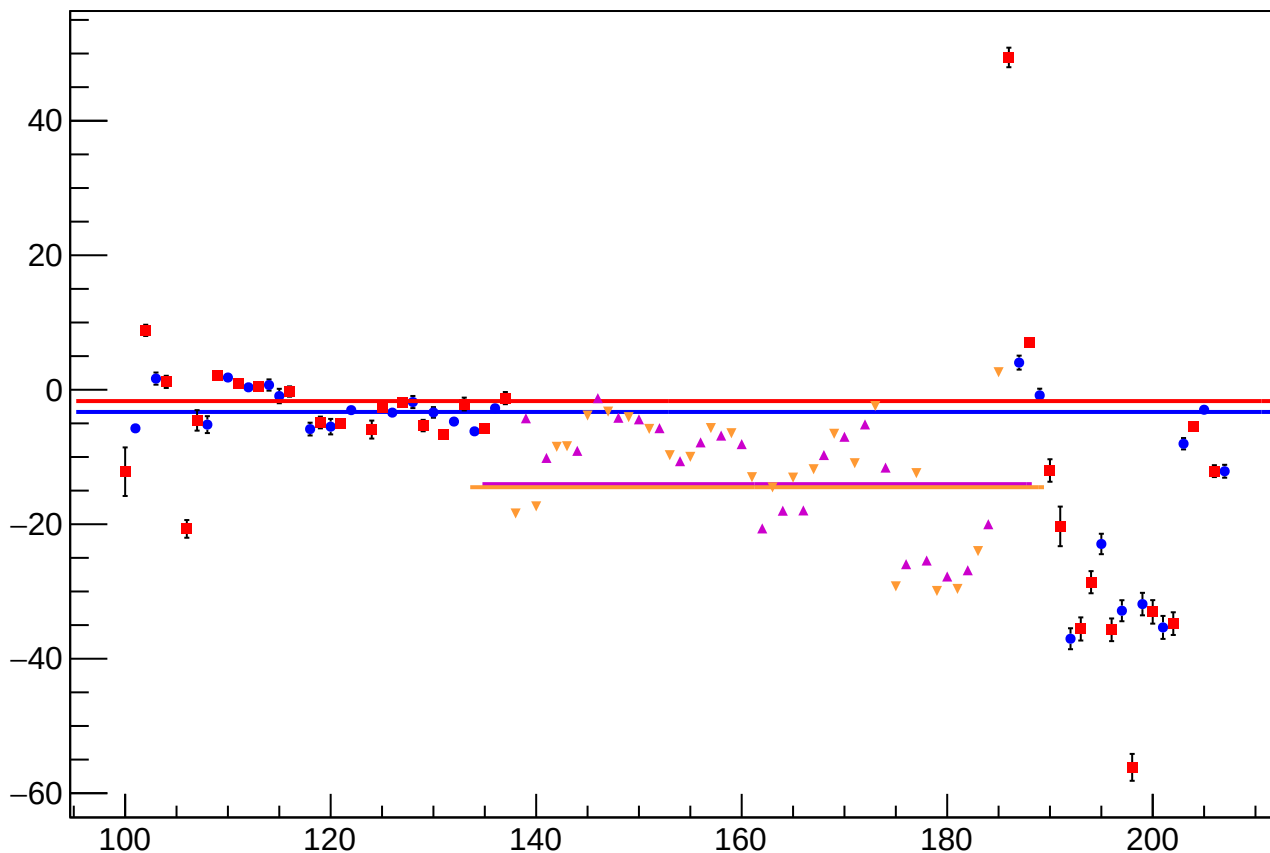
Left In:  $-0.133 \pm 0.001$   $\chi^2/\text{NDF}$ : 5529.7/22

+ sign  $-0.166 \pm 0.001$   $\chi^2/\text{NDF}$ : 17460.4/50

All:  $-0.164 \pm 0.001$   $\chi^2/\text{NDF}$ : 41143.6/104

- sign  $-0.161 \pm 0.001$   $\chi^2/\text{NDF}$ : 23673.8/53

reg\_asym\_sam\_1357\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-3.302 \pm 0.143$   $\chi^2/\text{NDF}$ : 2199.6/25

Left Out:  $-14.494 \pm 0.075$   $\chi^2/\text{NDF}$ : 17232.7/24

Right Out:  $-1.685 \pm 0.135$   $\chi^2/\text{NDF}$ : 5032.7/30

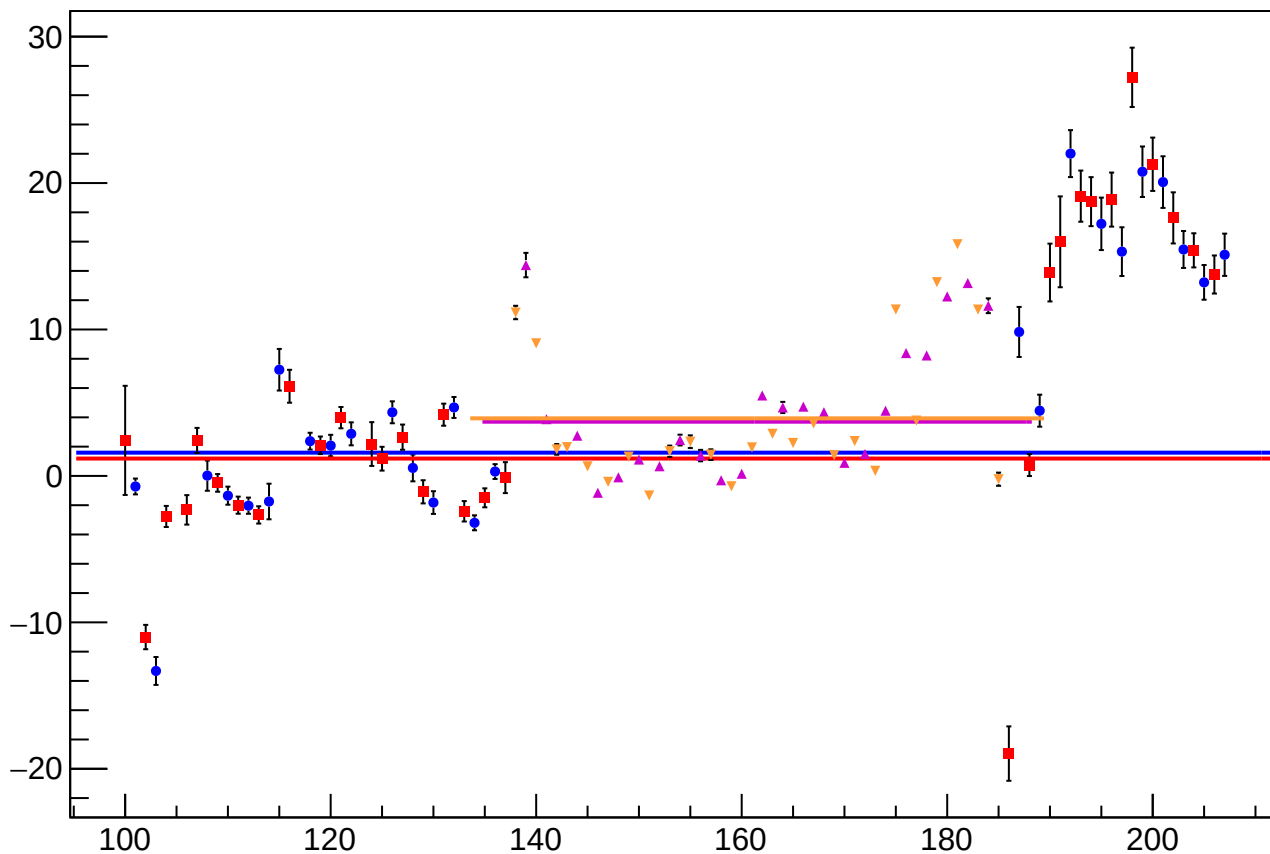
Left In:  $-14.038 \pm 0.077$   $\chi^2/\text{NDF}$ : 13482.5/22

+ sign  $-12.090 \pm 0.066$   $\chi^2/\text{NDF}$ : 24245.9/50

All:  $-11.552 \pm 0.047$   $\chi^2/\text{NDF}$ : 49240.6/104

- sign  $-11.006 \pm 0.067$   $\chi^2/\text{NDF}$ : 24861.9/53

# reg\_asym\_sam\_1357\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $1.588 \pm 0.162$   $\chi^2/\text{NDF}: 1382.0/25$

Left Out:  $3.932 \pm 0.058$   $\chi^2/\text{NDF}: 6979.2/24$

Right Out:  $1.186 \pm 0.163$   $\chi^2/\text{NDF}: 1555.3/30$

Left In:  $3.703 \pm 0.059$   $\chi^2/\text{NDF}: 4788.5/22$

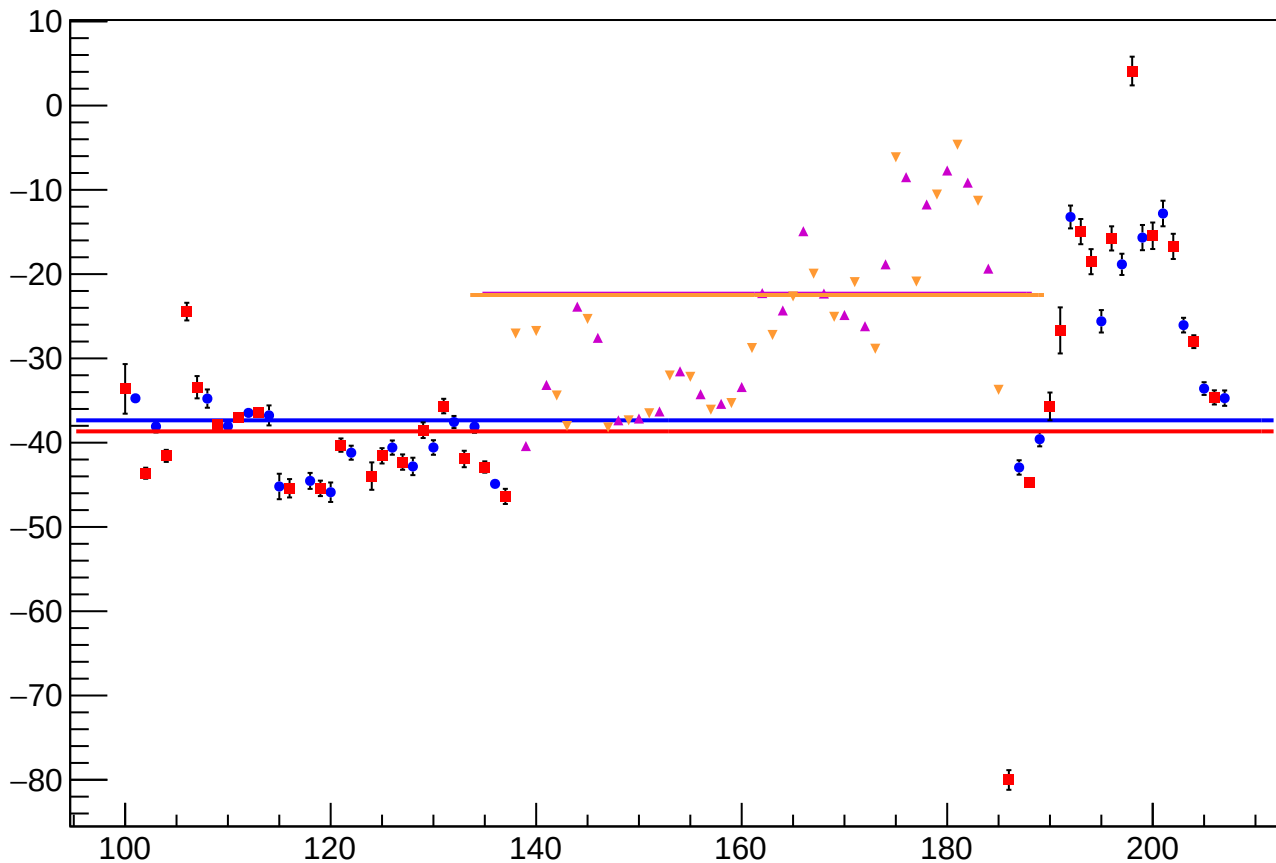
+ sign  $3.666 \pm 0.055$   $\chi^2/\text{NDF}: 8546.9/50$

All:  $3.541 \pm 0.039$   $\chi^2/\text{NDF}: 15111.0/104$

- sign  $3.410 \pm 0.056$   $\chi^2/\text{NDF}: 6553.4/53$



reg\_asym\_sam\_1357\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $-37.349 \pm 0.157$   $\chi^2/\text{NDF}$ : 1882.6/25

Left Out:  $-22.478 \pm 0.075$   $\chi^2/\text{NDF}$ : 20417.4/24

Right Out:  $-38.659 \pm 0.153$   $\chi^2/\text{NDF}$ : 4034.0/30

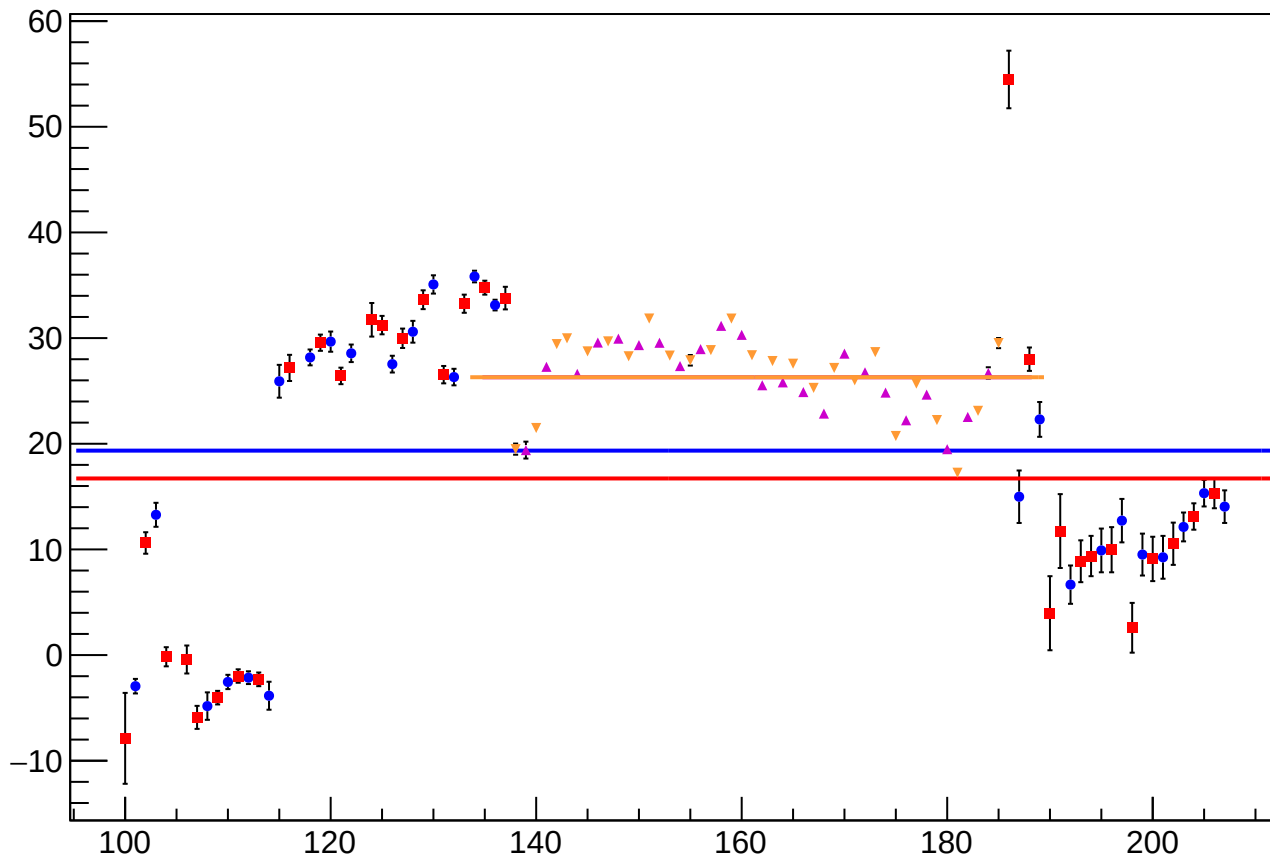
Left In:  $-22.322 \pm 0.077$   $\chi^2/\text{NDF}$ : 17133.3/22

+ sign  $-25.220 \pm 0.068$   $\chi^2/\text{NDF}$ : 29592.7/50

All:  $-25.411 \pm 0.048$   $\chi^2/\text{NDF}$ : 59929.9/104

- sign  $-25.607 \pm 0.068$   $\chi^2/\text{NDF}$ : 30320.9/53

reg\_asym\_sam\_1357\_avg\_diff\_bpm4eY\_slope vs Slug



Right In: 19.349+/-0.183  $\chi^2$ /NDF: 6887.0/25

Left Out: 26.296+/-0.065  $\chi^2$ /NDF:3307.8/24

Right Out: 16.715+/-0.186  $\chi^2$ /NDF: 7158.9/30

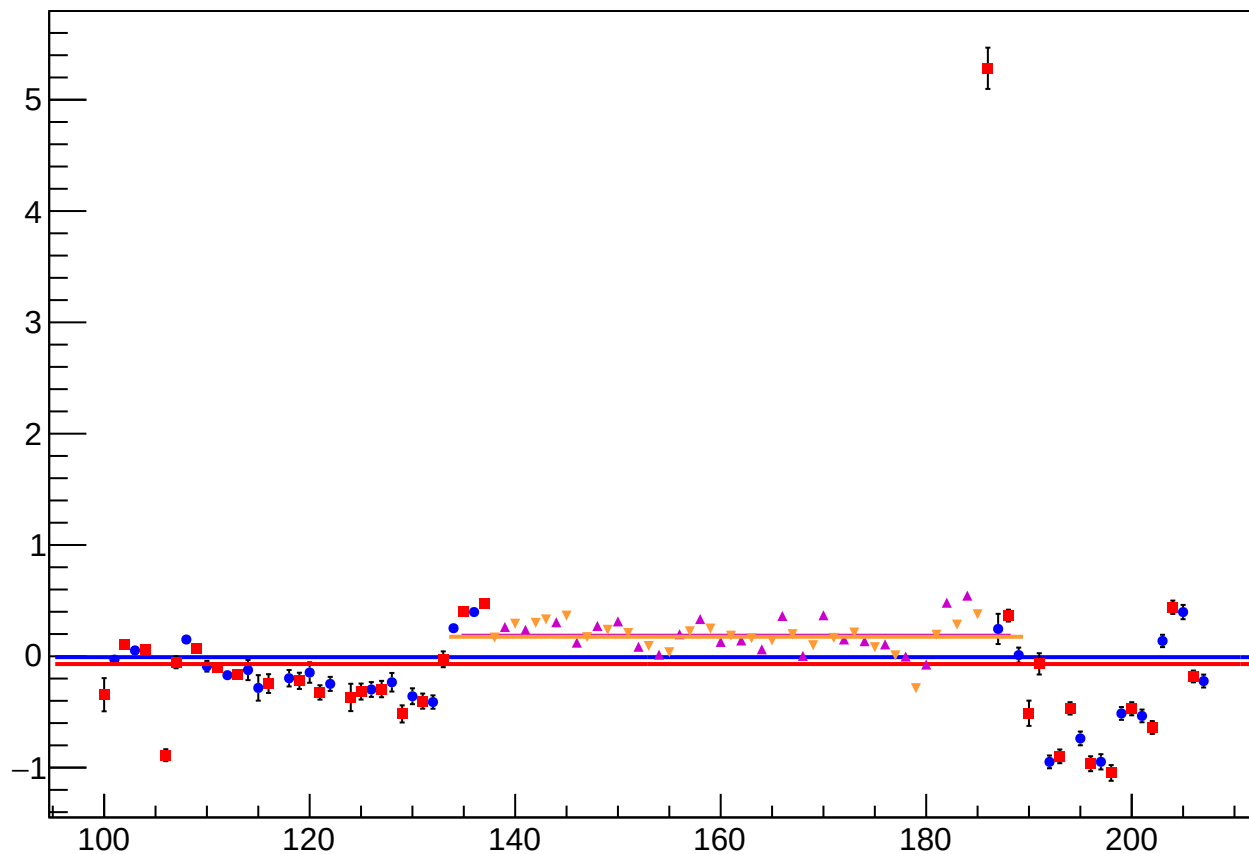
Left In: 26.292+/-0.067  $\chi^2$ /NDF:2185.8/22

+ sign 25.518+/-0.061  $\chi^2$ /NDF: 11470.4/50

All: 25.366+/-0.044  $\chi^2$ /NDF: 23166.5/104

- sign 25.208+/-0.063  $\chi^2$ /NDF: 11683.6/53

reg\_asym\_sam\_1357\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.008 \pm 0.009$   $\chi^2/\text{NDF}$ : 1471.9/25

Left Out:  $0.176 \pm 0.003$   $\chi^2/\text{NDF}$ : 1935.6/24

Right Out:  $-0.070 \pm 0.010$   $\chi^2/\text{NDF}$ : 2629.2/30

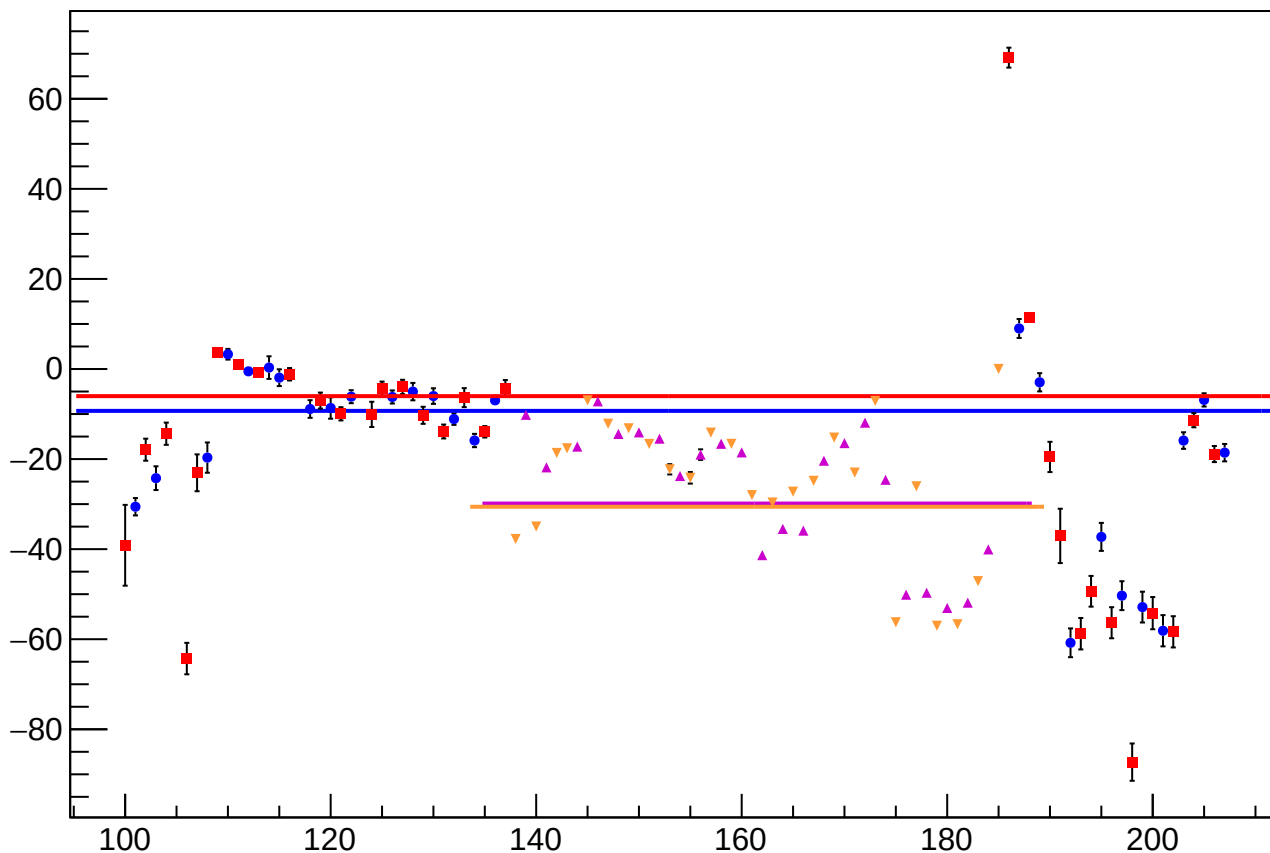
Left In:  $0.185 \pm 0.003$   $\chi^2/\text{NDF}$ : 2538.5/22

+ sign  $0.159 \pm 0.003$   $\chi^2/\text{NDF}$ : 3766.5/50

All:  $0.161 \pm 0.002$   $\chi^2/\text{NDF}$ : 9587.4/104

- sign  $0.162 \pm 0.003$   $\chi^2/\text{NDF}$ : 5820.2/53

reg\_asym\_sam\_2468\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-9.297 \pm 0.332$   $\chi^2/\text{NDF}: 1420.6/25$

Left Out:  $-30.587 \pm 0.142$   $\chi^2/\text{NDF}: 16046.0/24$

Right Out:  $-6.025 \pm 0.322$   $\chi^2/\text{NDF}: 3505.9/30$

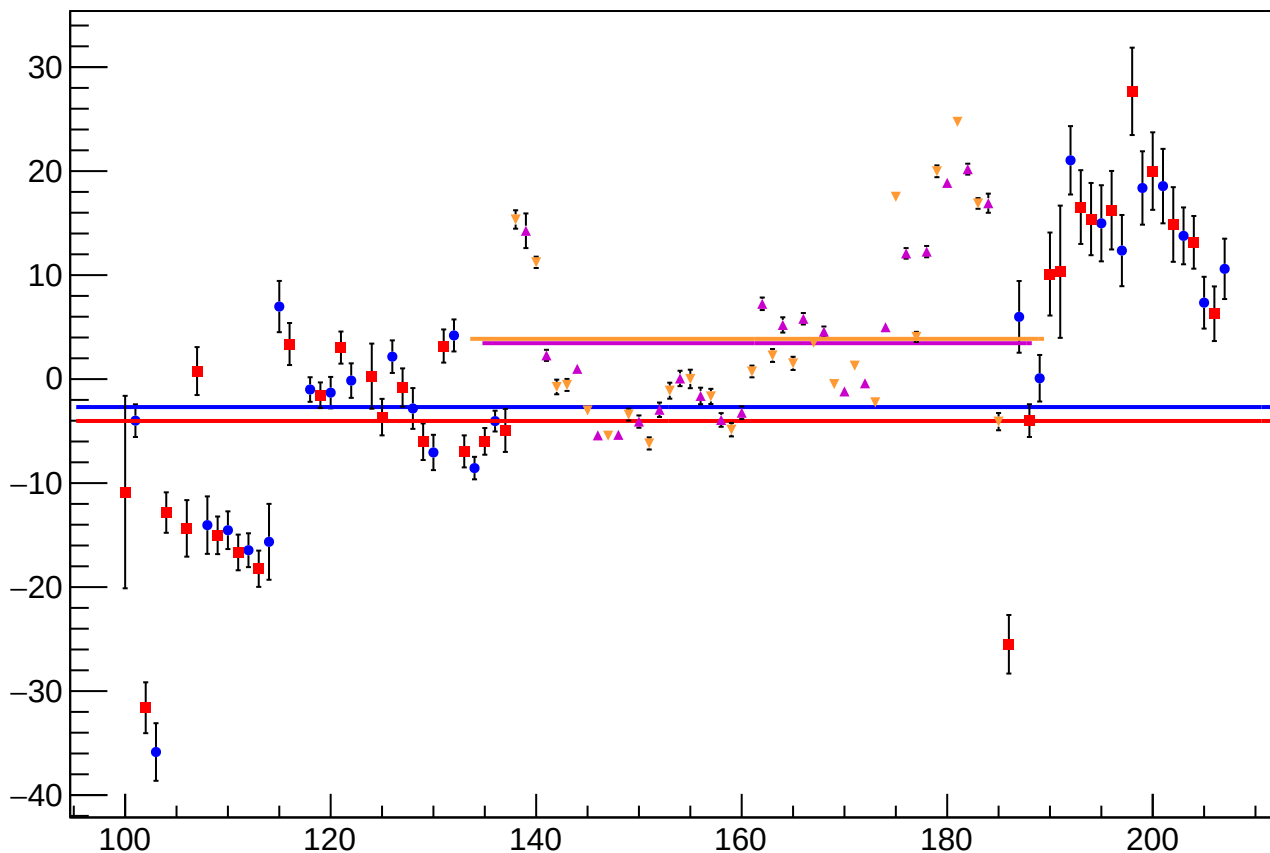
Left In:  $-29.878 \pm 0.146$   $\chi^2/\text{NDF}: 12034.7/22$

+ sign  $-27.297 \pm 0.131$   $\chi^2/\text{NDF}: 20934.3/50$

All:  $-26.560 \pm 0.093$   $\chi^2/\text{NDF}: 41094.6/104$

- sign  $-25.795 \pm 0.133$   $\chi^2/\text{NDF}: 20095.5/53$

# reg\_asym\_sam\_2468\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $-2.688 \pm 0.365$   $\chi^2/\text{NDF}$ : 623.0/25

Left Out:  $3.873 \pm 0.111$   $\chi^2/\text{NDF}$ : 6542.0/24

Right Out:  $-4.026 \pm 0.375$   $\chi^2/\text{NDF}$ : 752.7/30

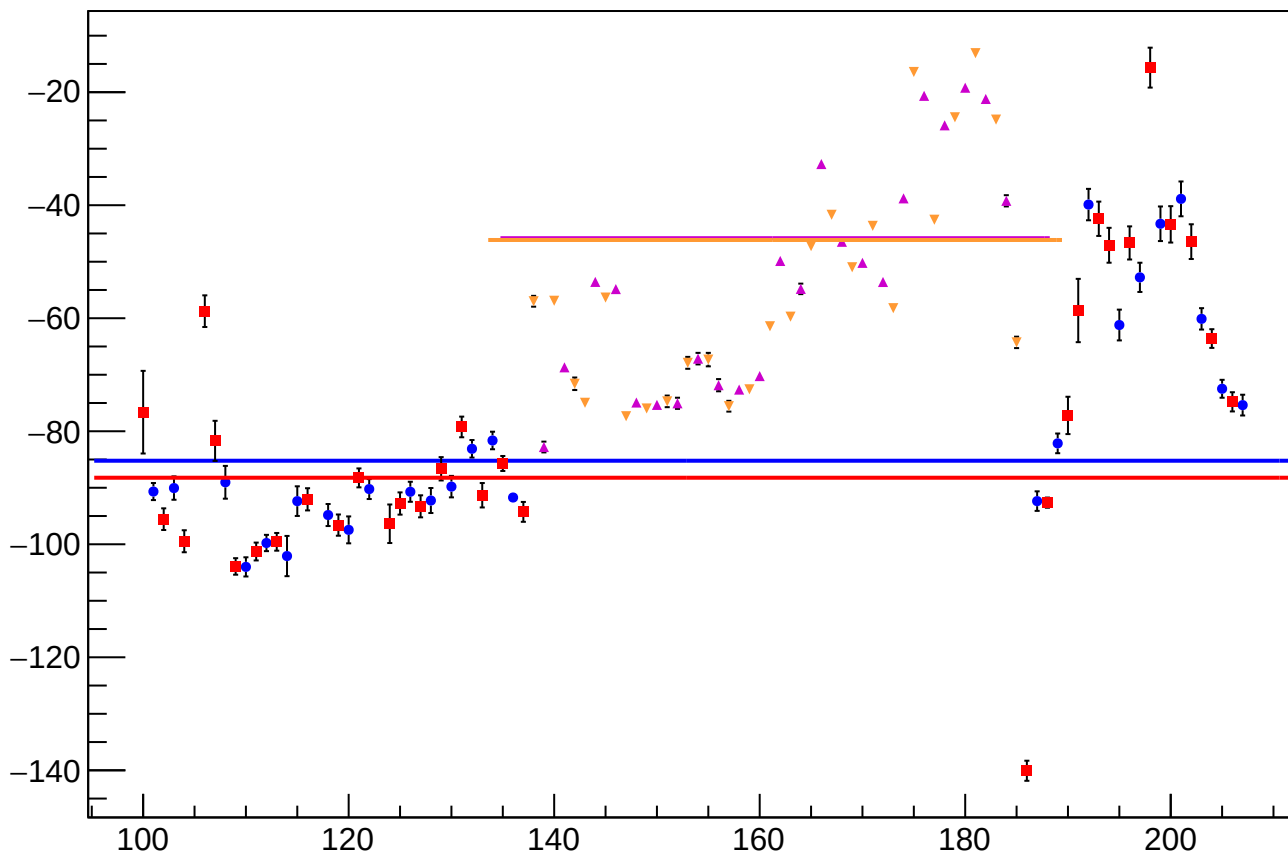
Left In:  $3.453 \pm 0.114$   $\chi^2/\text{NDF}$ : 4693.7/22

+ sign  $3.316 \pm 0.106$   $\chi^2/\text{NDF}$ : 7460.7/50

All:  $3.075 \pm 0.076$   $\chi^2/\text{NDF}$ : 13282.2/104

- sign  $2.823 \pm 0.109$   $\chi^2/\text{NDF}$ : 5811.1/53

# reg\_asym\_sam\_2468\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $-85.217 \pm 0.358$   $\chi^2/\text{NDF}$ : 1626.8/25

Left Out:  $-46.153 \pm 0.142$   $\chi^2/\text{NDF}$ : 21455.9/24

Right Out:  $-88.224 \pm 0.350$   $\chi^2/\text{NDF}$ : 3089.5/30

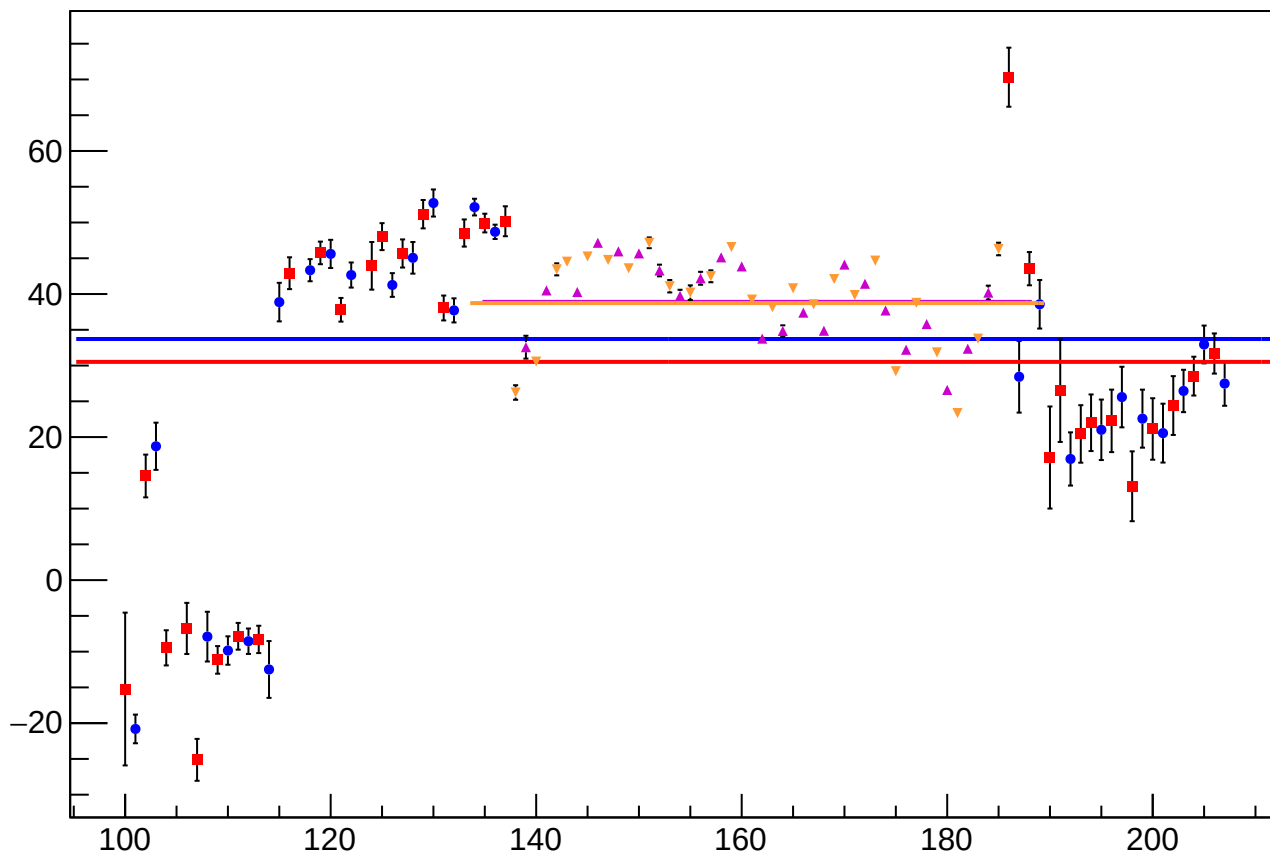
Left In:  $-45.833 \pm 0.146$   $\chi^2/\text{NDF}$ : 17924.6/22

+ sign  $-51.503 \pm 0.132$   $\chi^2/\text{NDF}$ : 33386.8/50

All:  $-51.812 \pm 0.094$   $\chi^2/\text{NDF}$ : 66937.0/104

- sign  $-52.132 \pm 0.135$   $\chi^2/\text{NDF}$ : 33539.1/53

# reg\_asym\_sam\_2468\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $33.713 \pm 0.411$   $\chi^2/\text{NDF}$ : 2878.5/25

Left Out:  $38.730 \pm 0.125$   $\chi^2/\text{NDF}$ : 2781.7/24

Right Out:  $30.515 \pm 0.428$   $\chi^2/\text{NDF}$ : 3074.5/30

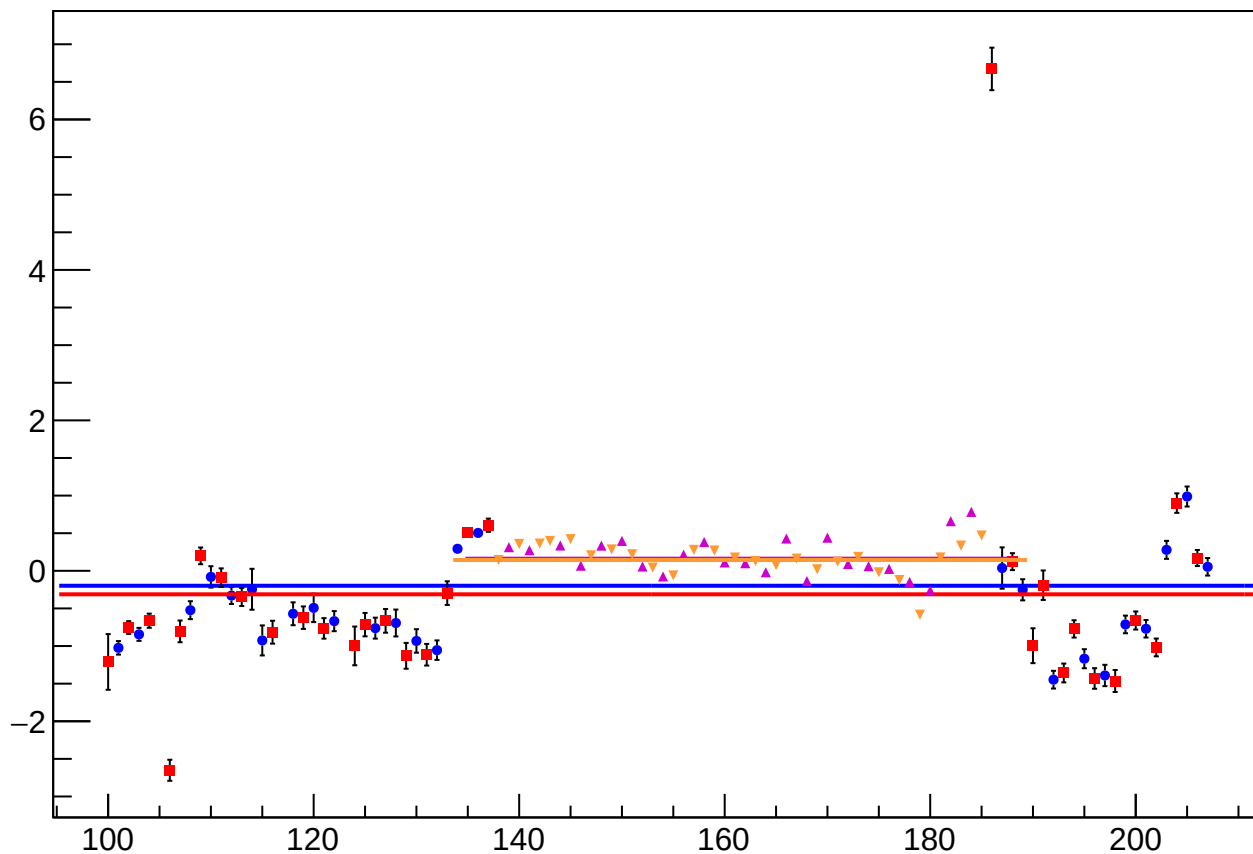
Left In:  $38.905 \pm 0.127$   $\chi^2/\text{NDF}$ : 1971.6/22

+ sign  $38.309 \pm 0.119$   $\chi^2/\text{NDF}$ : 5796.5/50

All:  $38.266 \pm 0.085$   $\chi^2/\text{NDF}$ : 11196.0/104

- sign  $38.221 \pm 0.122$   $\chi^2/\text{NDF}$ : 5399.2/53

reg\_asym\_sam\_2468\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.199 \pm 0.021$   $\chi^2/\text{NDF}$ : 1034.7/25

Left Out:  $0.144 \pm 0.006$   $\chi^2/\text{NDF}$ : 1442.8/24

Right Out:  $-0.312 \pm 0.022$   $\chi^2/\text{NDF}$ : 1827.2/30

Left In:  $0.161 \pm 0.006$   $\chi^2/\text{NDF}$ : 1918.8/22

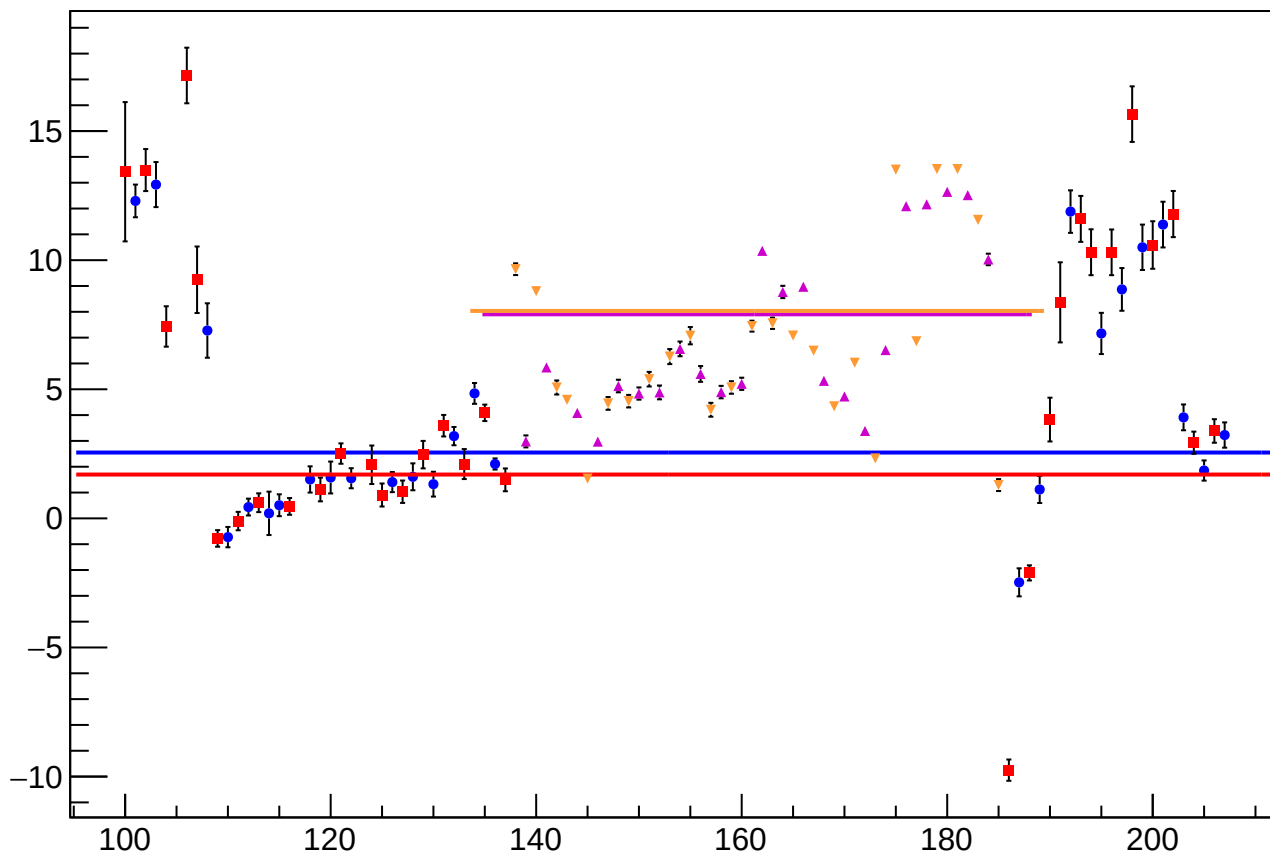
+ sign  $0.121 \pm 0.005$   $\chi^2/\text{NDF}$ : 2731.8/50

All:  $0.126 \pm 0.004$   $\chi^2/\text{NDF}$ : 6921.4/104

- sign  $0.131 \pm 0.006$   $\chi^2/\text{NDF}$ : 4187.7/53



reg\_asym\_sam\_1357\_2468\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $2.550 \pm 0.091$   $\chi^2/\text{NDF}: 1118.7/25$

Left Out:  $8.034 \pm 0.035$   $\chi^2/\text{NDF}: 13924.1/24$

Right Out:  $1.698 \pm 0.089$   $\chi^2/\text{NDF}: 2409.0/30$

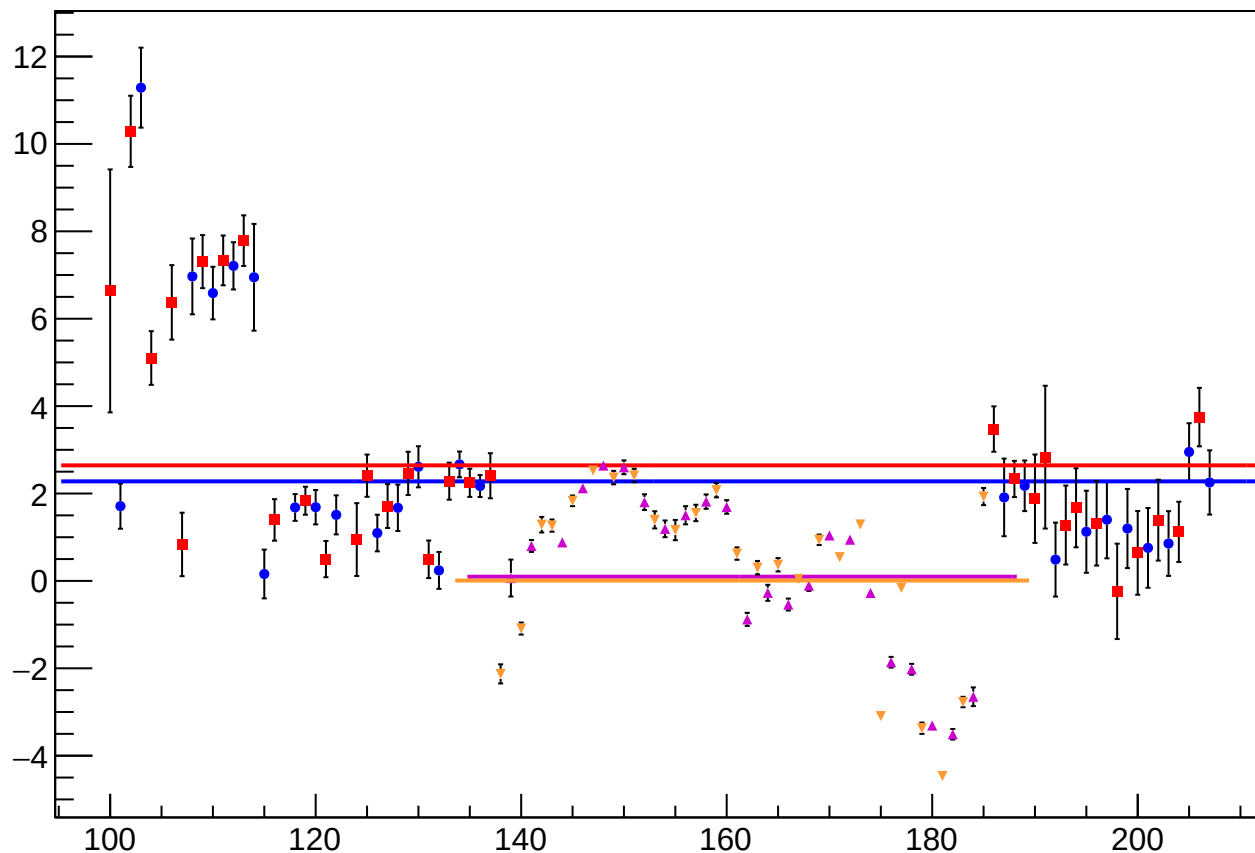
Left In:  $7.903 \pm 0.036$   $\chi^2/\text{NDF}: 10017.8/22$

+ sign  $7.343 \pm 0.032$   $\chi^2/\text{NDF}: 18184.7/50$

All:  $7.193 \pm 0.023$   $\chi^2/\text{NDF}: 34847.8/104$

- sign  $7.037 \pm 0.033$   $\chi^2/\text{NDF}: 16619.6/53$

reg\_asym\_sam\_1357\_2468\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $2.278 \pm 0.099$   $\chi^2/\text{NDF}$ : 351.2/25

Left Out:  $0.009 \pm 0.027$   $\chi^2/\text{NDF}$ : 5761.2/24

Right Out:  $2.644 \pm 0.102$   $\chi^2/\text{NDF}$ : 442.2/30

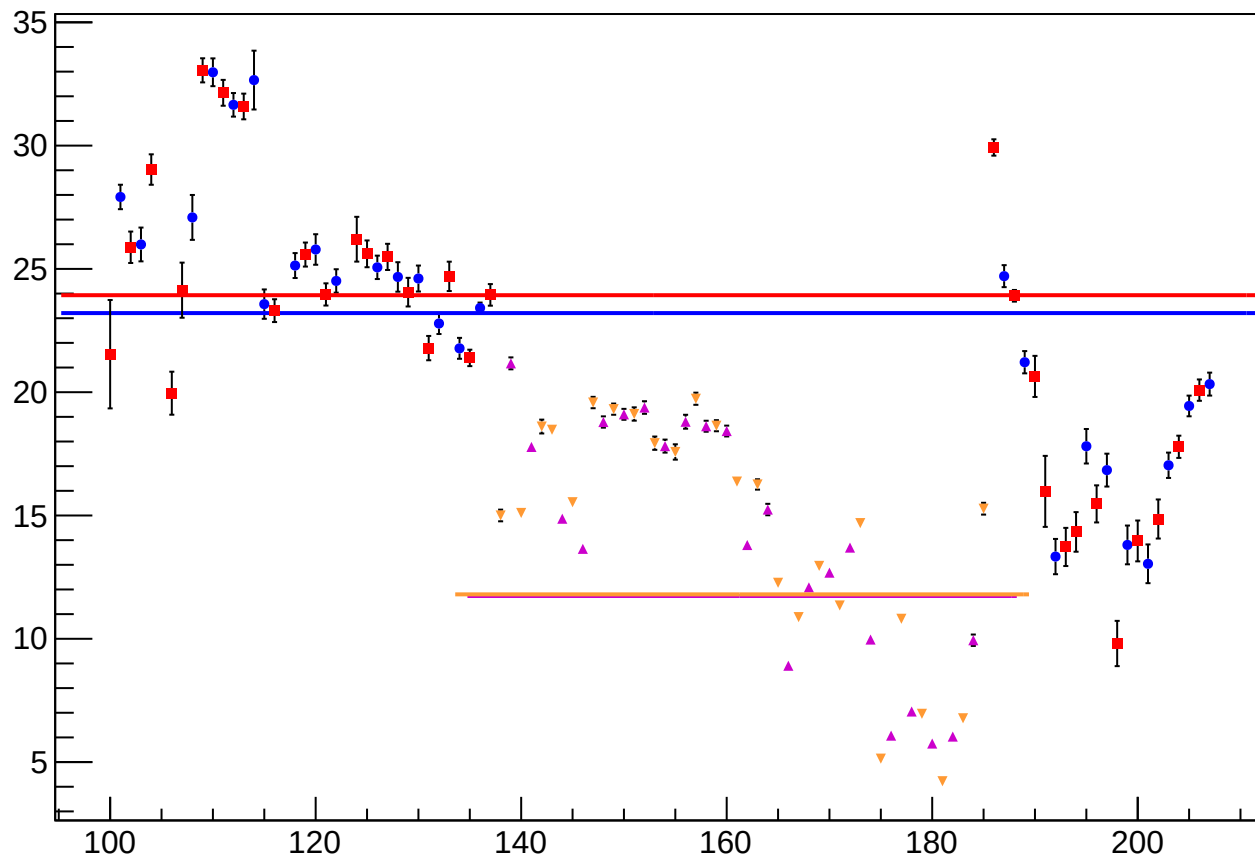
Left In:  $0.096 \pm 0.028$   $\chi^2/\text{NDF}$ : 4433.3/22

+ sign  $0.170 \pm 0.026$   $\chi^2/\text{NDF}$ : 6598.5/50

All:  $0.222 \pm 0.019$   $\chi^2/\text{NDF}$ : 12062.6/104

- sign  $0.276 \pm 0.027$   $\chi^2/\text{NDF}$ : 5456.3/53

reg\_asym\_sam\_1357\_2468\_dd\_diff\_bpm4eX\_slope vs Slug



Right In: 23.208 $\pm$ 0.097  $\chi^2$ /NDF: 1826.7/25

Left Out: 11.802 $\pm$ 0.035  $\chi^2$ /NDF:21479.5/24

Right Out: 23.934 $\pm$ 0.094  $\chi^2$ /NDF: 2619.5/30

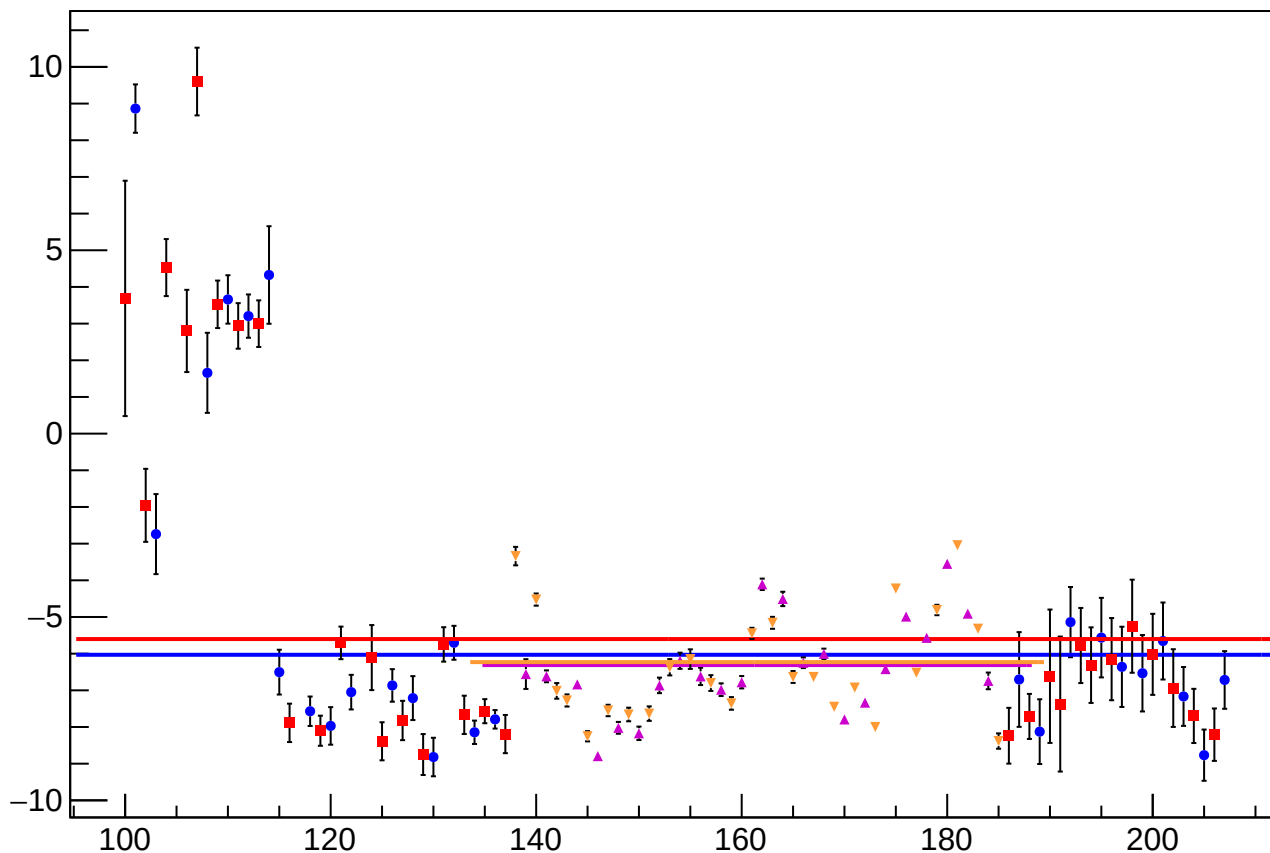
Left In: 11.735 $\pm$ 0.036  $\chi^2$ /NDF:17999.5/22

+ sign 13.101 $\pm$ 0.033  $\chi^2$ /NDF: 35513.7/50

All: 13.191 $\pm$ 0.023  $\chi^2$ /NDF: 70880.1/104

- sign 13.284 $\pm$ 0.033  $\chi^2$ /NDF: 35351.2/53

reg\_asym\_sam\_1357\_2468\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-6.031 \pm 0.112$   $\chi^2/\text{NDF}$ : 1278.6/25

Left Out:  $-6.231 \pm 0.031$   $\chi^2/\text{NDF}$ : 2450.1/24

Right Out:  $-5.602 \pm 0.117$   $\chi^2/\text{NDF}$ : 1349.4/30

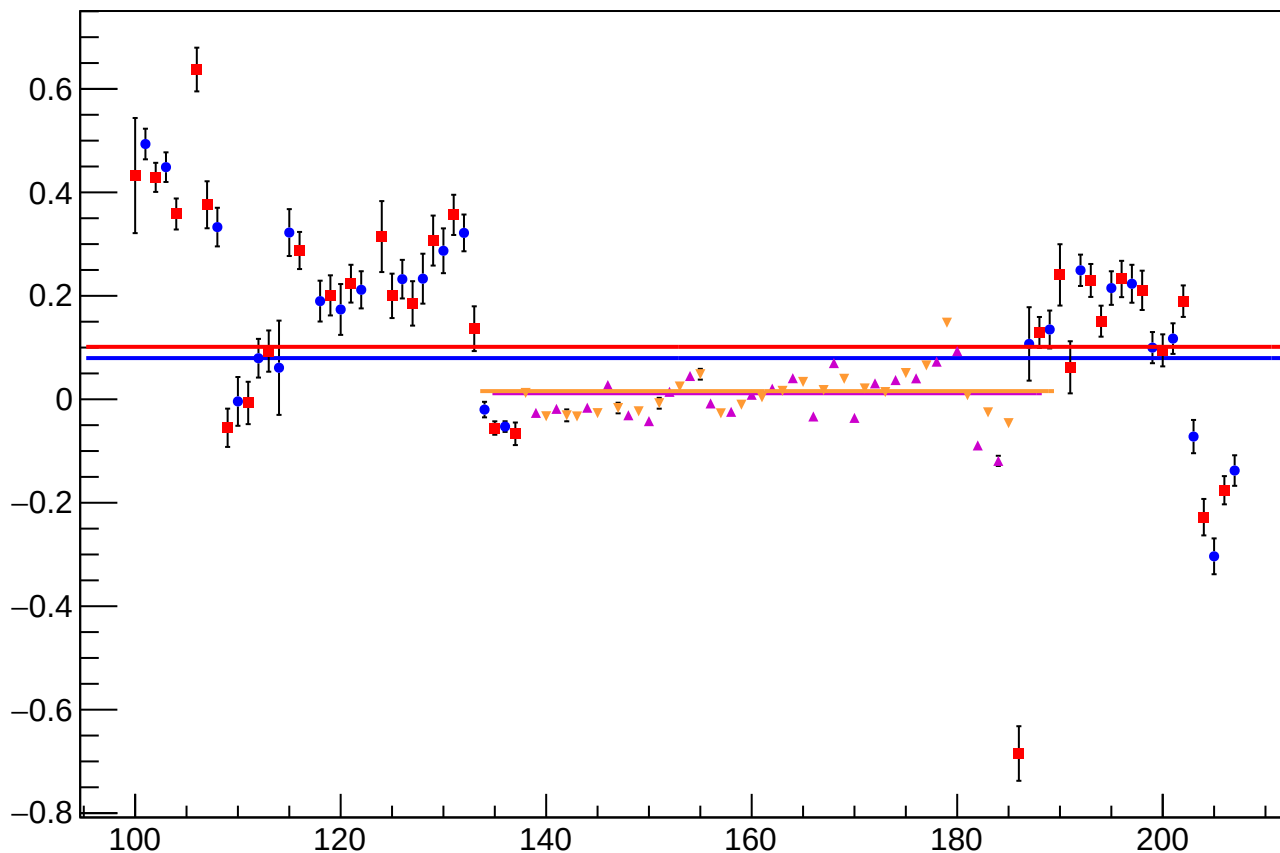
Left In:  $-6.311 \pm 0.031$   $\chi^2/\text{NDF}$ : 2030.2/22

+ sign  $-6.216 \pm 0.030$   $\chi^2/\text{NDF}$ : 3731.6/50

All:  $-6.239 \pm 0.021$   $\chi^2/\text{NDF}$ : 7146.9/104

- sign  $-6.263 \pm 0.030$   $\chi^2/\text{NDF}$ : 3414.1/53

reg\_asym\_sam\_1357\_2468\_dd\_diff\_bpm12X\_slope vs Slug



Right In: 0.080 $\pm$ 0.006  $\chi^2$ /NDF: 1036.9/25

Left Out: 0.016 $\pm$ 0.001  $\chi^2$ /NDF: 933.4/24

Right Out: 0.101 $\pm$ 0.006  $\chi^2$ /NDF: 1240.7/30

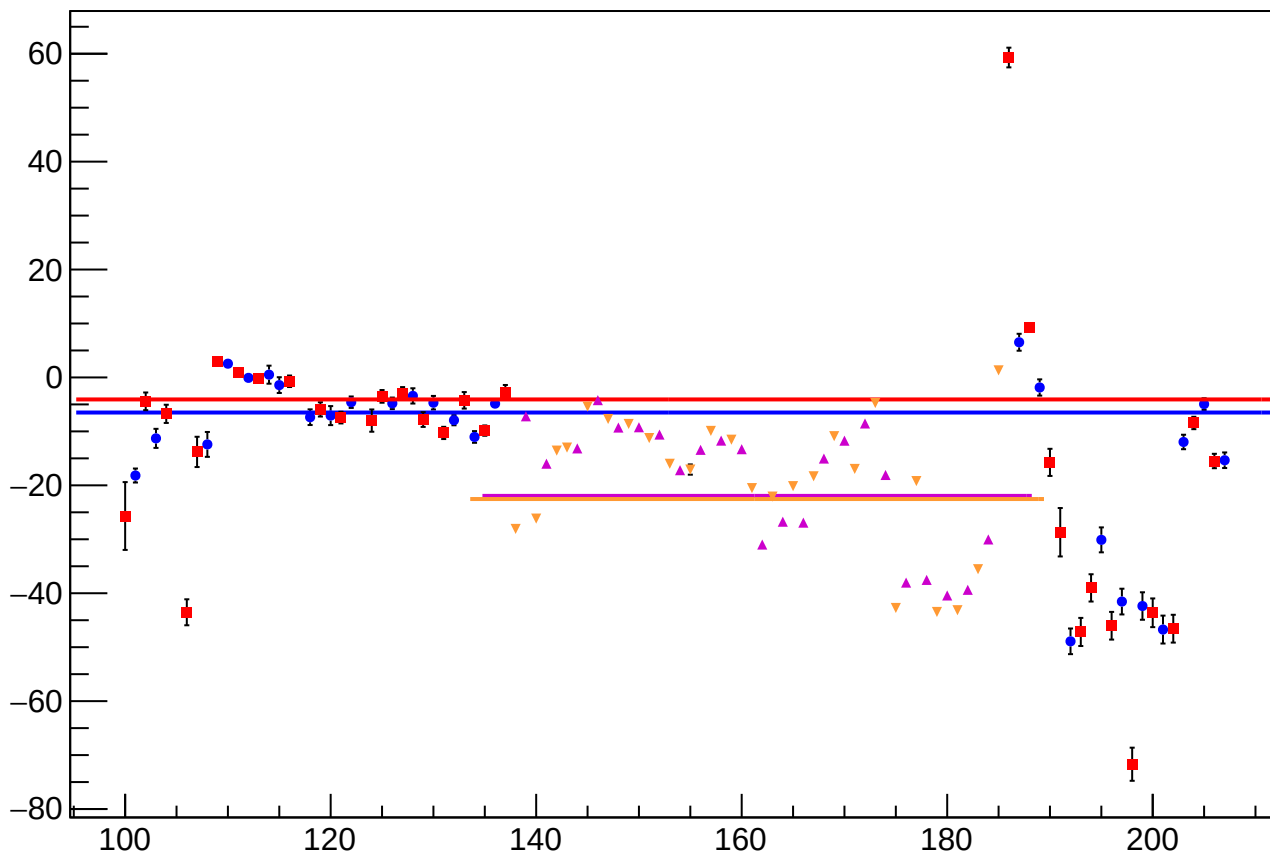
Left In: 0.012 $\pm$ 0.001  $\chi^2$ /NDF: 1297.5/22

+ sign 0.019 $\pm$ 0.001  $\chi^2$ /NDF: 2093.1/50

All: 0.018 $\pm$ 0.001  $\chi^2$ /NDF: 4851.8/104

- sign 0.016 $\pm$ 0.001  $\chi^2$ /NDF: 2756.4/53

reg\_asym\_sam\_12345678\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-6.504 \pm 0.239$   $\chi^2/\text{NDF}: 1602.3/25$

Left Out:  $-22.538 \pm 0.108$   $\chi^2/\text{NDF}: 16540.6/24$

Right Out:  $-4.078 \pm 0.230$   $\chi^2/\text{NDF}: 3907.3/30$

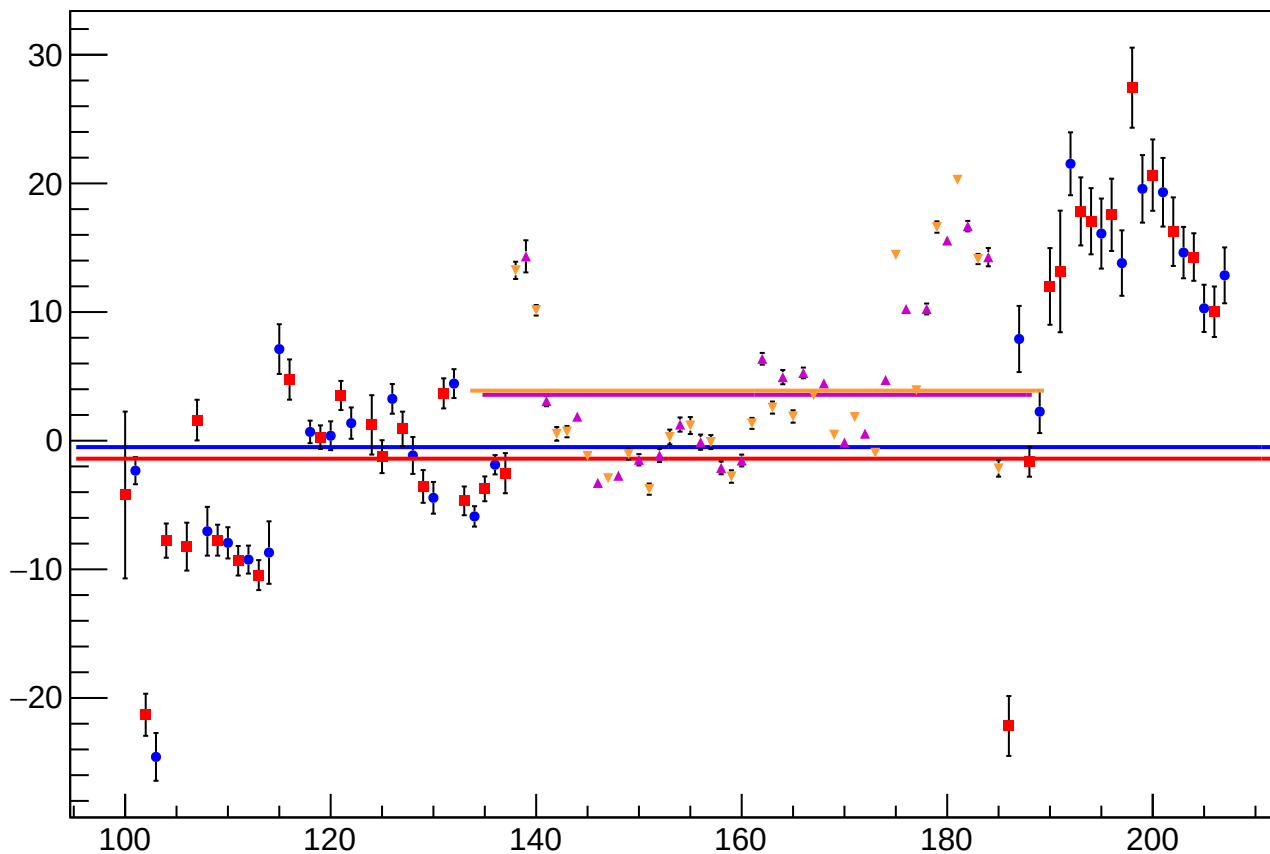
Left In:  $-21.957 \pm 0.111$   $\chi^2/\text{NDF}: 12585.3/22$

+ sign  $-19.821 \pm 0.099$   $\chi^2/\text{NDF}: 21870.0/50$

All:  $-19.209 \pm 0.070$   $\chi^2/\text{NDF}: 43330.4/104$

- sign  $-18.577 \pm 0.100$   $\chi^2/\text{NDF}: 21382.0/53$

reg\_asym\_sam\_12345678\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $-0.499 \pm 0.265$   $\chi^2/\text{NDF}$ : 813.4/25

Left Out:  $3.891 \pm 0.084$   $\chi^2/\text{NDF}$ : 6724.1/24

Right Out:  $-1.398 \pm 0.271$   $\chi^2/\text{NDF}$ : 960.6/30

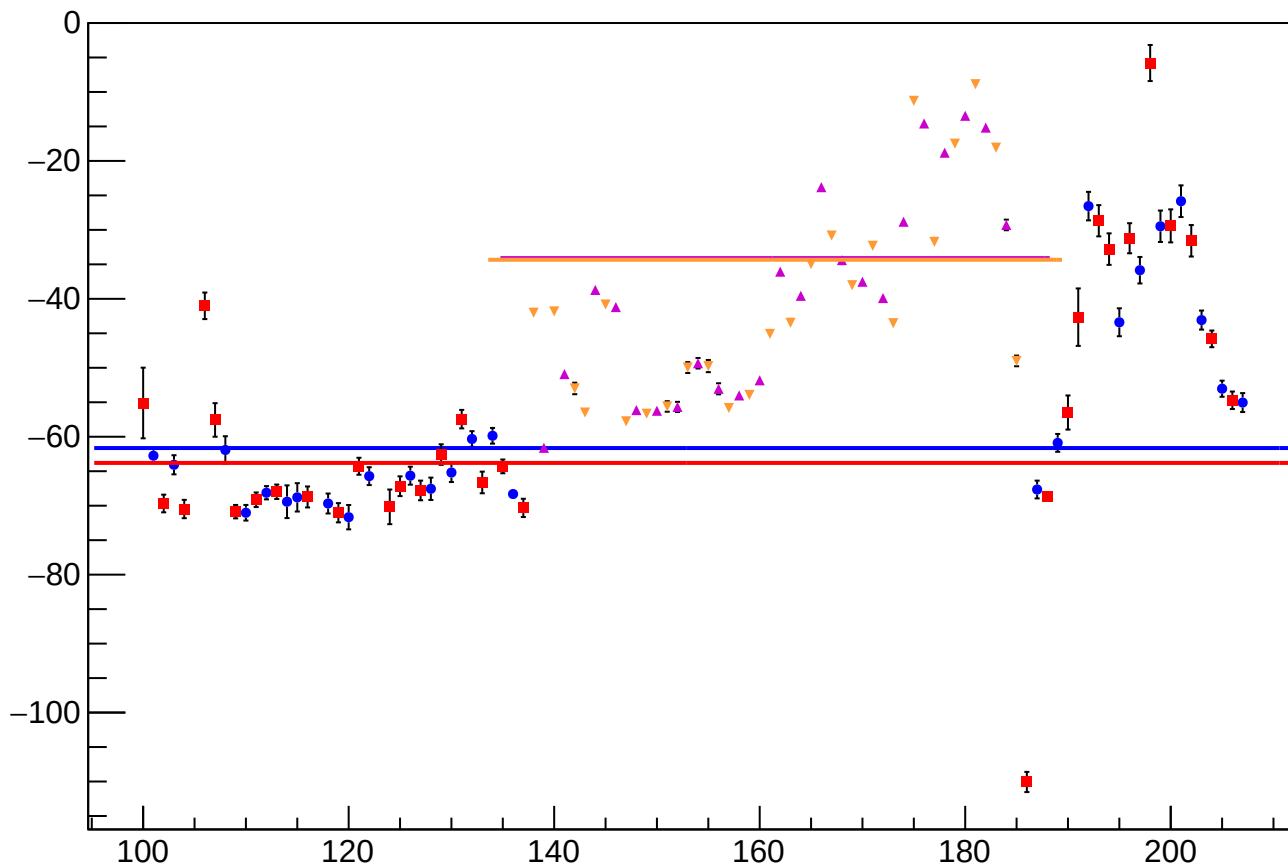
Left In:  $3.565 \pm 0.086$   $\chi^2/\text{NDF}$ : 4739.4/22

+ sign  $3.488 \pm 0.080$   $\chi^2/\text{NDF}$ : 7787.1/50

All:  $3.303 \pm 0.057$   $\chi^2/\text{NDF}$ : 13803.0/104

- sign  $3.109 \pm 0.082$   $\chi^2/\text{NDF}$ : 6005.0/53

reg\_asym\_sam\_12345678\_avg\_diff\_bpm4eX\_slope vs Slug



Right In: -61.639 $\pm$ 0.259  $\chi^2$ /NDF: 1623.1/25

Left Out: -34.334 $\pm$ 0.108  $\chi^2$ /NDF: 21200.8/24

Right Out: -63.797 $\pm$ 0.253  $\chi^2$ /NDF: 3300.6/30

Left In: -34.091 $\pm$ 0.111  $\chi^2$ /NDF: 17726.5/22

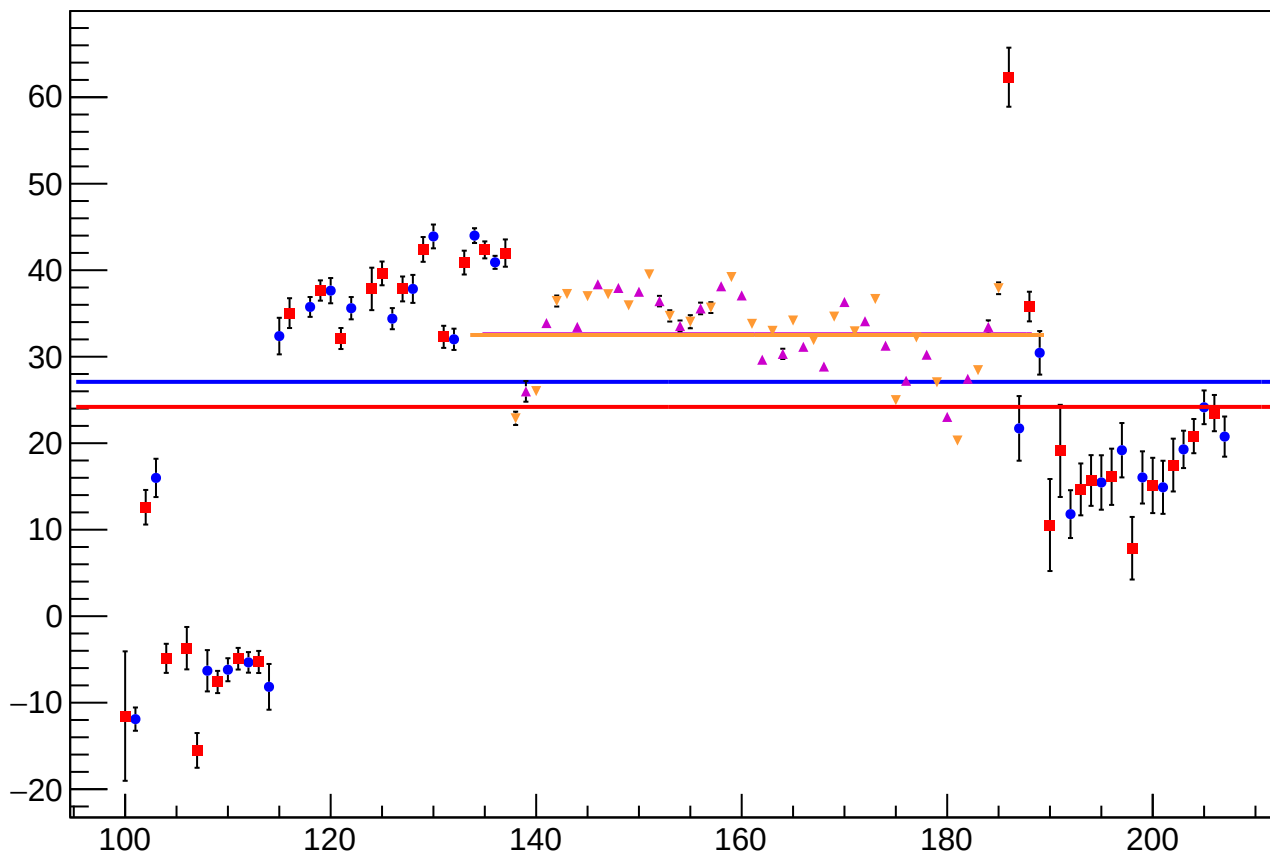
+ sign -38.397 $\pm$ 0.100  $\chi^2$ /NDF: 32288.3/50

All: -38.635 $\pm$ 0.071  $\chi^2$ /NDF: 64888.2/104

- sign -38.882 $\pm$ 0.102  $\chi^2$ /NDF: 32588.3/53



reg\_asym\_sam\_12345678\_avg\_diff\_bpm4eY\_slope vs Slug



Right In: 27.093 $\pm$ 0.299  $\chi^2$ /NDF: 3844.2/25

Left Out: 32.511 $\pm$ 0.095  $\chi^2$ /NDF: 2938.0/24

Right Out: 24.196 $\pm$ 0.309  $\chi^2$ /NDF: 4080.7/30

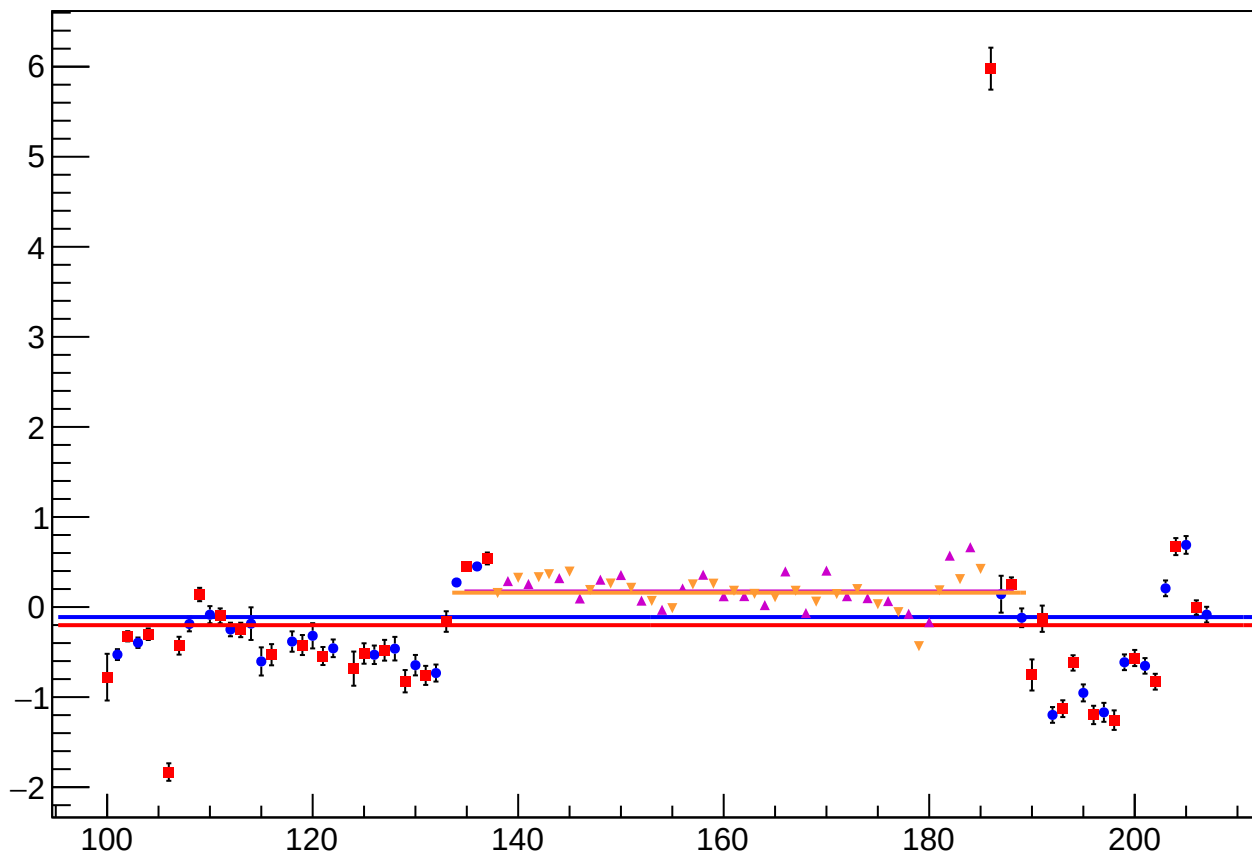
Left In: 32.598 $\pm$ 0.097  $\chi^2$ /NDF: 2012.9/22

+ sign 32.017 $\pm$ 0.090  $\chi^2$ /NDF: 7081.3/50

All: 31.935 $\pm$ 0.064  $\chi^2$ /NDF: 13849.3/104

- sign 31.849 $\pm$ 0.092  $\chi^2$ /NDF: 6766.2/53

reg\_asym\_sam\_12345678\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.111 \pm 0.015$   $\chi^2/\text{NDF}$ : 1110.0/25

Left Out:  $0.160 \pm 0.004$   $\chi^2/\text{NDF}$ : 1613.0/24

Right Out:  $-0.201 \pm 0.016$   $\chi^2/\text{NDF}$ : 2046.3/30

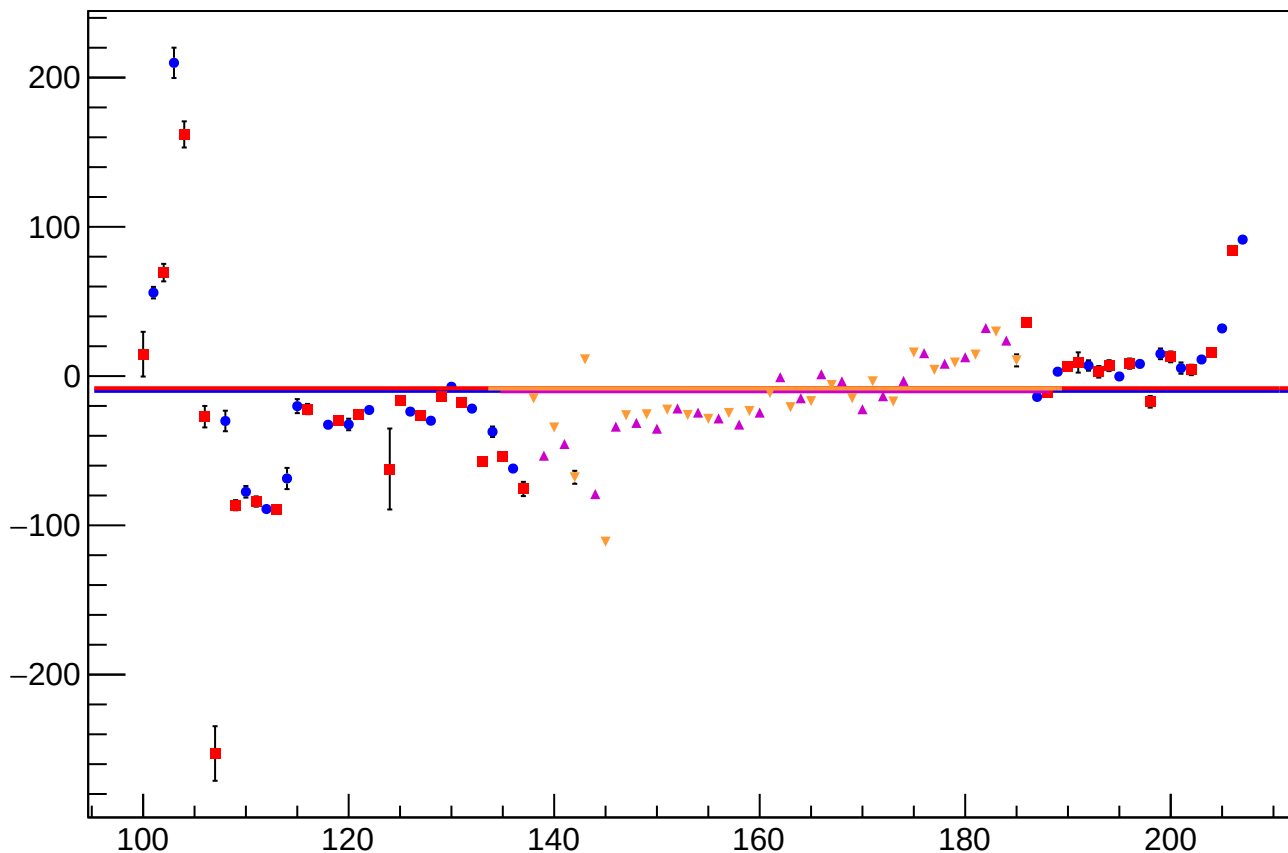
Left In:  $0.173 \pm 0.004$   $\chi^2/\text{NDF}$ : 2129.7/22

+ sign  $0.140 \pm 0.004$   $\chi^2/\text{NDF}$ : 3023.0/50

All:  $0.143 \pm 0.003$   $\chi^2/\text{NDF}$ : 7725.0/104

- sign  $0.147 \pm 0.004$   $\chi^2/\text{NDF}$ : 4700.5/53

# reg\_asym\_atl1\_diff\_bpm1X\_slope vs Slug



Right In:  $-9.895 \pm 0.603$   $\chi^2/\text{NDF}$ : 4322.5/25

Left Out:  $-8.298 \pm 0.514$   $\chi^2/\text{NDF}$ : 2559.6/24

Right Out:  $-8.140 \pm 0.546$   $\chi^2/\text{NDF}$ : 5412.5/30

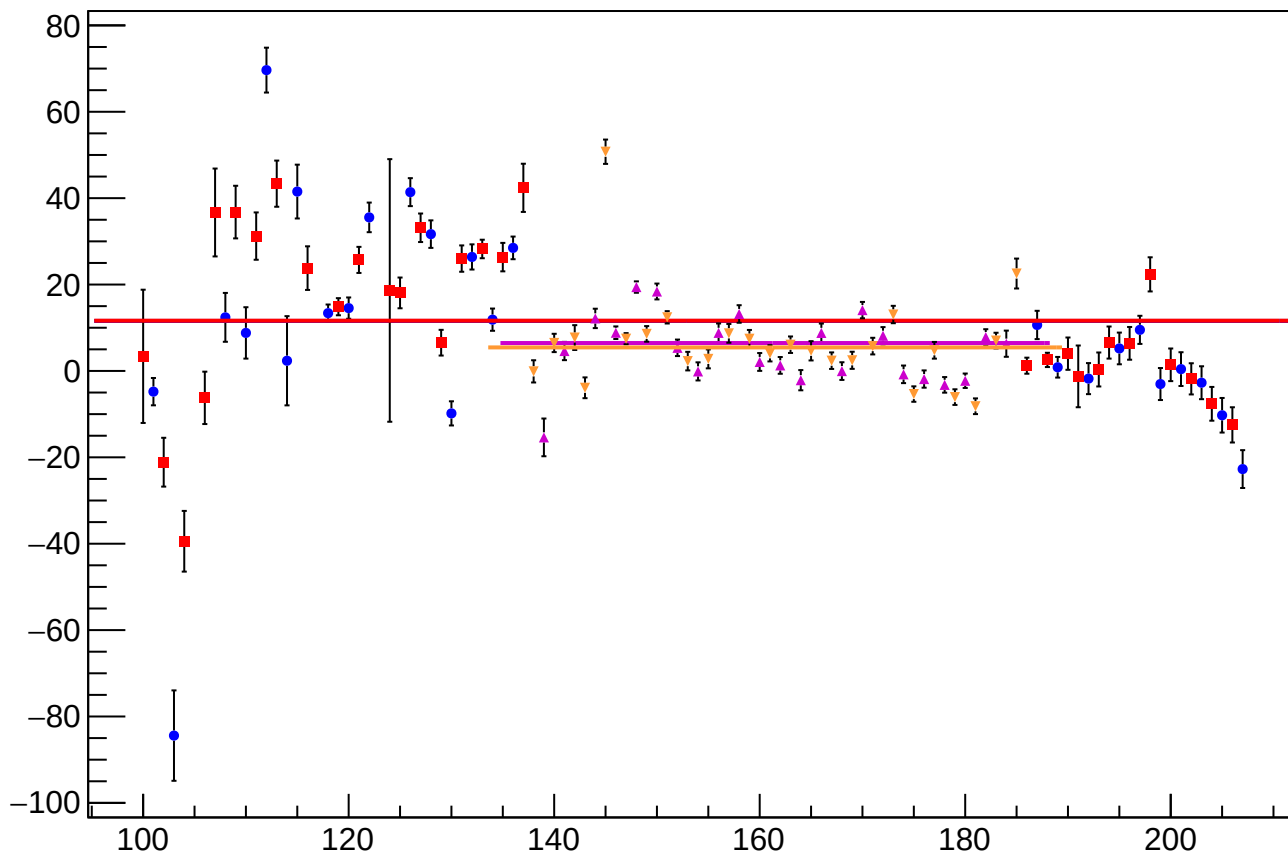
Left In:  $-10.183 \pm 0.526$   $\chi^2/\text{NDF}$ : 2518.4/22

+ sign  $-8.969 \pm 0.391$   $\chi^2/\text{NDF}$ : 6886.1/50

All:  $-9.087 \pm 0.272$   $\chi^2/\text{NDF}$ : 14824.5/104

- sign  $-9.198 \pm 0.379$   $\chi^2/\text{NDF}$ : 7938.1/53

# reg\_asym\_atl1\_diff\_bpm4aY\_slope vs Slug



Right In:  $11.575 \pm 0.657$   $\chi^2/\text{NDF}$ : 728.1/25

Left Out:  $5.445 \pm 0.394$   $\chi^2/\text{NDF}$ : 493.7/24

Right Out:  $11.629 \pm 0.618$   $\chi^2/\text{NDF}$ : 546.8/30

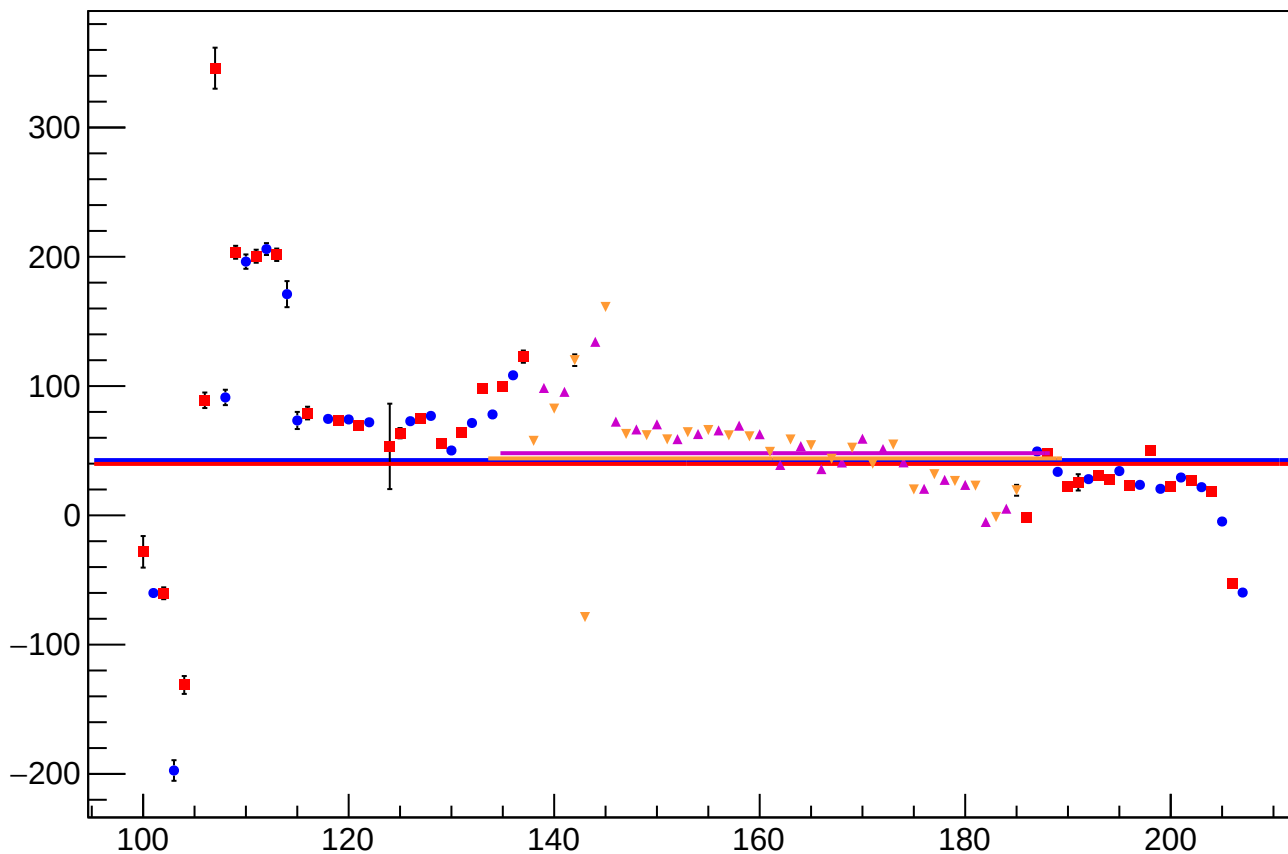
Left In:  $6.461 \pm 0.408$   $\chi^2/\text{NDF}$ : 336.0/22

+ sign  $7.065 \pm 0.338$   $\chi^2/\text{NDF}$ : 1285.8/50

All:  $7.543 \pm 0.240$   $\chi^2/\text{NDF}$ : 2221.3/104

- sign  $8.029 \pm 0.341$   $\chi^2/\text{NDF}$ : 931.5/53

# reg\_asym\_atl1\_diff\_bpm4eX\_slope vs Slug



Right In: 42.742+/-0.593  $\chi^2$ /NDF: 7738.7/25

Left Out: 44.040+/-0.510  $\chi^2$ /NDF: 4563.8/24

Right Out: 39.793+/-0.511  $\chi^2$ /NDF: 8984.2/30

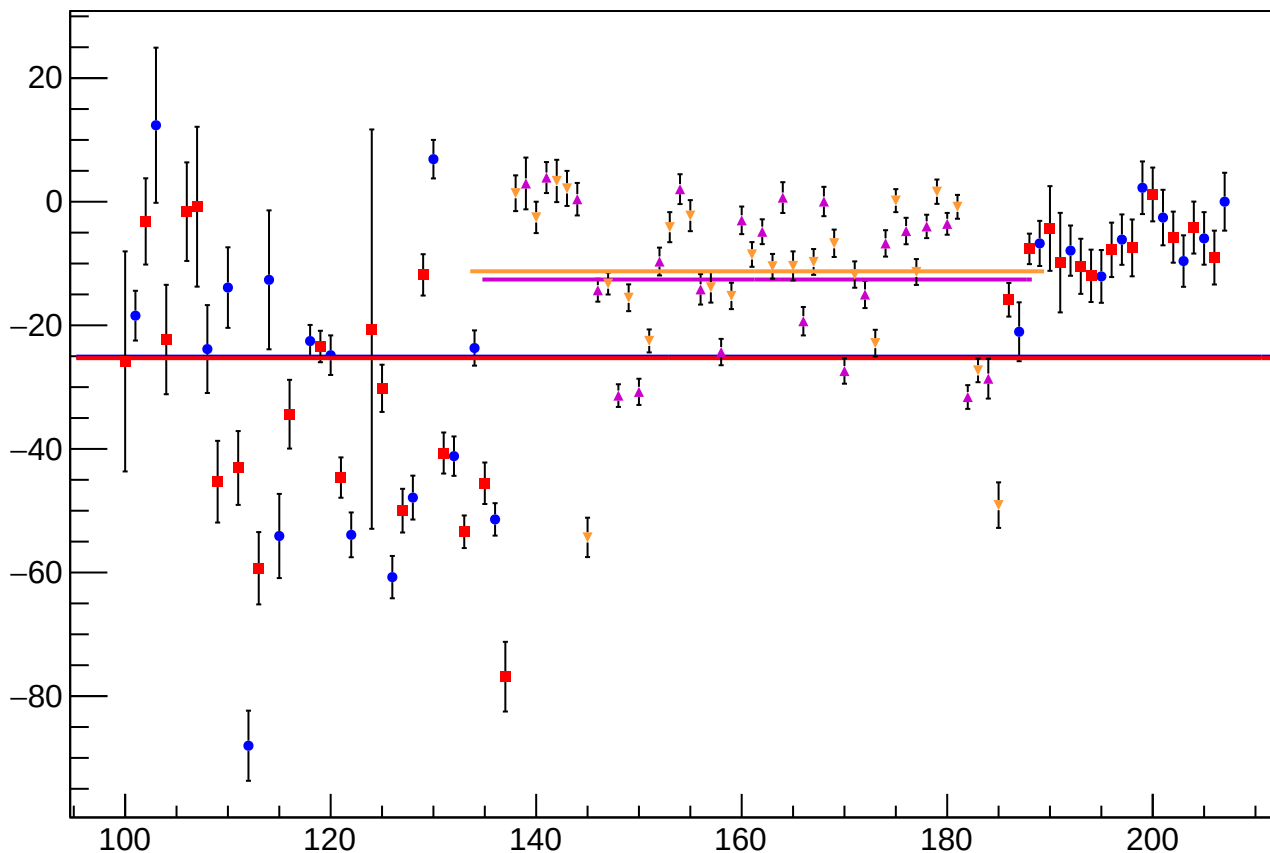
Left In: 48.076+/-0.521  $\chi^2$ /NDF: 3376.5/22

+ sign 43.488+/-0.387  $\chi^2$ /NDF: 12305.3/50

All: 43.680+/-0.265  $\chi^2$ /NDF: 24795.3/104

- sign 43.850+/-0.365  $\chi^2$ /NDF: 12489.6/53

# reg\_asym\_atl1\_diff\_bpm4eY\_slope vs Slug



Right In:  $-25.065 \pm 0.771$   $\chi^2/\text{NDF}$ : 806.1/25

Left Out:  $-11.260 \pm 0.445$   $\chi^2/\text{NDF}$ : 643.3/24

Right Out:  $-25.313 \pm 0.751$   $\chi^2/\text{NDF}$ : 660.9/30

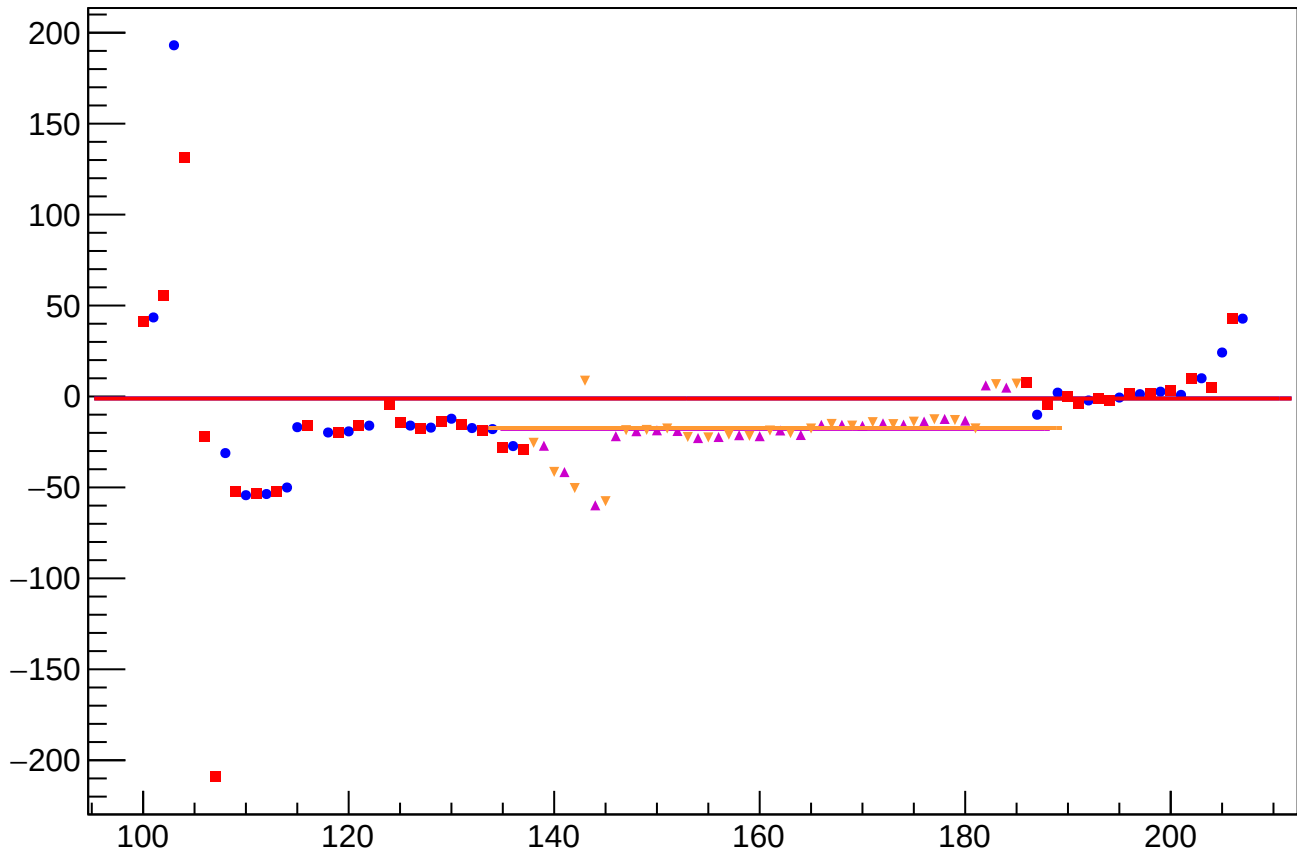
Left In:  $-12.589 \pm 0.459$   $\chi^2/\text{NDF}$ : 671.8/22

+ sign  $-14.711 \pm 0.385$   $\chi^2/\text{NDF}$ : 1690.0/50

All:  $-15.369 \pm 0.275$   $\chi^2/\text{NDF}$ : 3237.9/104

- sign  $-16.049 \pm 0.392$   $\chi^2/\text{NDF}$ : 1541.9/53

# reg\_asym\_atl1\_diff\_bpm12X\_slope vs Slug



Right In:  $-1.063 \pm 0.036$   $\chi^2/\text{NDF}$ : 633930.4/25

Left Out:  $-17.330 \pm 0.020$   $\chi^2/\text{NDF}$ : 347790.9/24

Right Out:  $-1.138 \pm 0.035$   $\chi^2/\text{NDF}$ : 570005.9/30

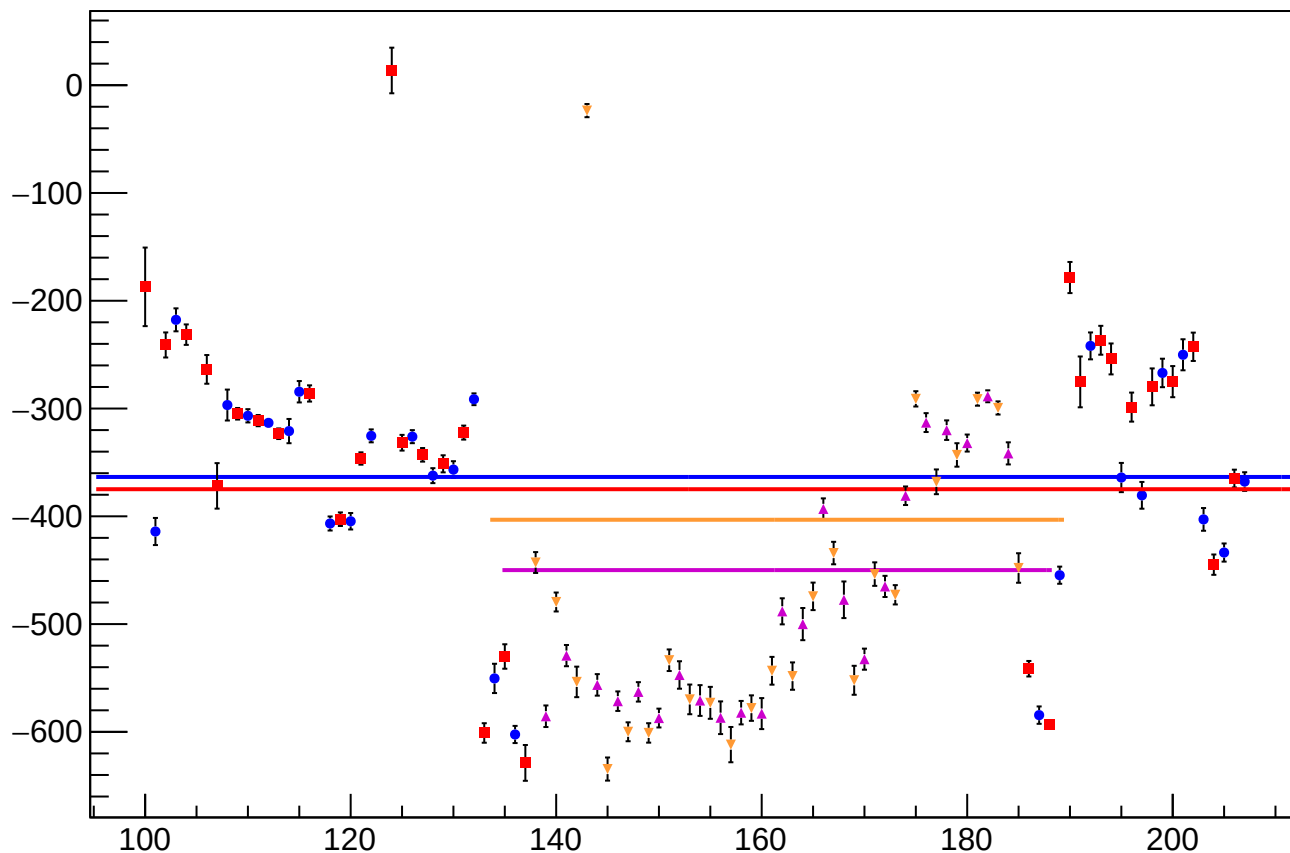
Left In:  $-17.829 \pm 0.020$   $\chi^2/\text{NDF}$ : 267426.0/22

+ sign  $-13.547 \pm 0.017$   $\chi^2/\text{NDF}$ : 1136093.7/50

All:  $-13.600 \pm 0.012$   $\chi^2/\text{NDF}$ : 2142836.7/104

- sign  $-13.654 \pm 0.018$   $\chi^2/\text{NDF}$ : 1006724.5/53

# reg\_asym\_atl2\_diff\_bpm1X\_slope vs Slug



Right In:  $-363.487 \pm 1.587$   $\chi^2/\text{NDF}$ : 3103.4/25

Left Out:  $-403.195 \pm 1.928$   $\chi^2/\text{NDF}$ : 7750.3/24

Right Out:  $-374.859 \pm 1.476$   $\chi^2/\text{NDF}$ : 6349.0/30

Left In:  $-449.912 \pm 2.043$   $\chi^2/\text{NDF}$ : 3218.9/22

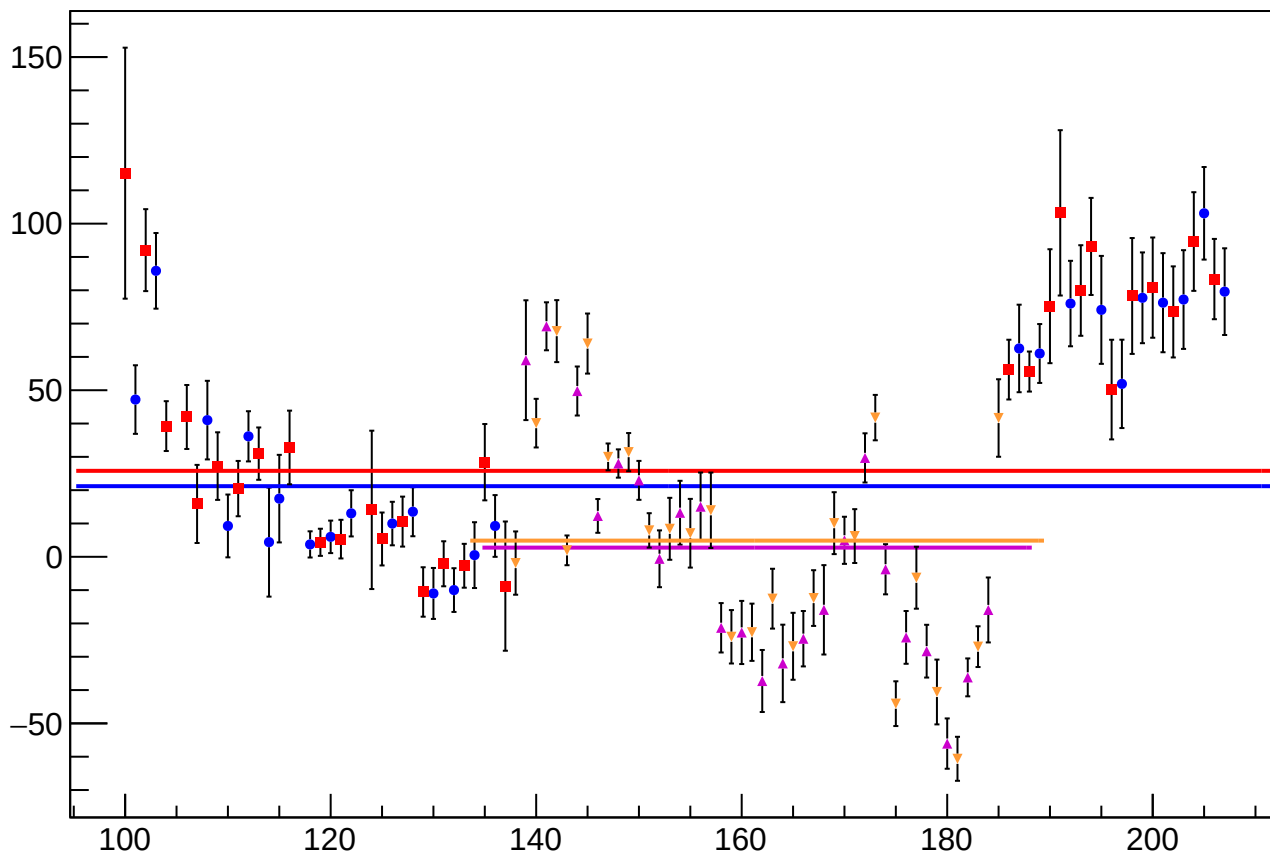
+ sign  $-379.532 \pm 1.225$   $\chi^2/\text{NDF}$ : 11106.5/50

All:  $-390.314 \pm 0.856$   $\chi^2/\text{NDF}$ : 21712.3/104

- sign  $-400.595 \pm 1.196$   $\chi^2/\text{NDF}$ : 10454.5/53



# reg\_asym\_atl2\_diff\_bpm4aY\_slope vs Slug



Right In:  $21.199 \pm 1.680$   $\chi^2/\text{NDF}: 294.2/25$

Left Out:  $4.858 \pm 1.447$   $\chi^2/\text{NDF}: 457.2/24$

Right Out:  $25.803 \pm 1.633$   $\chi^2/\text{NDF}: 330.1/30$

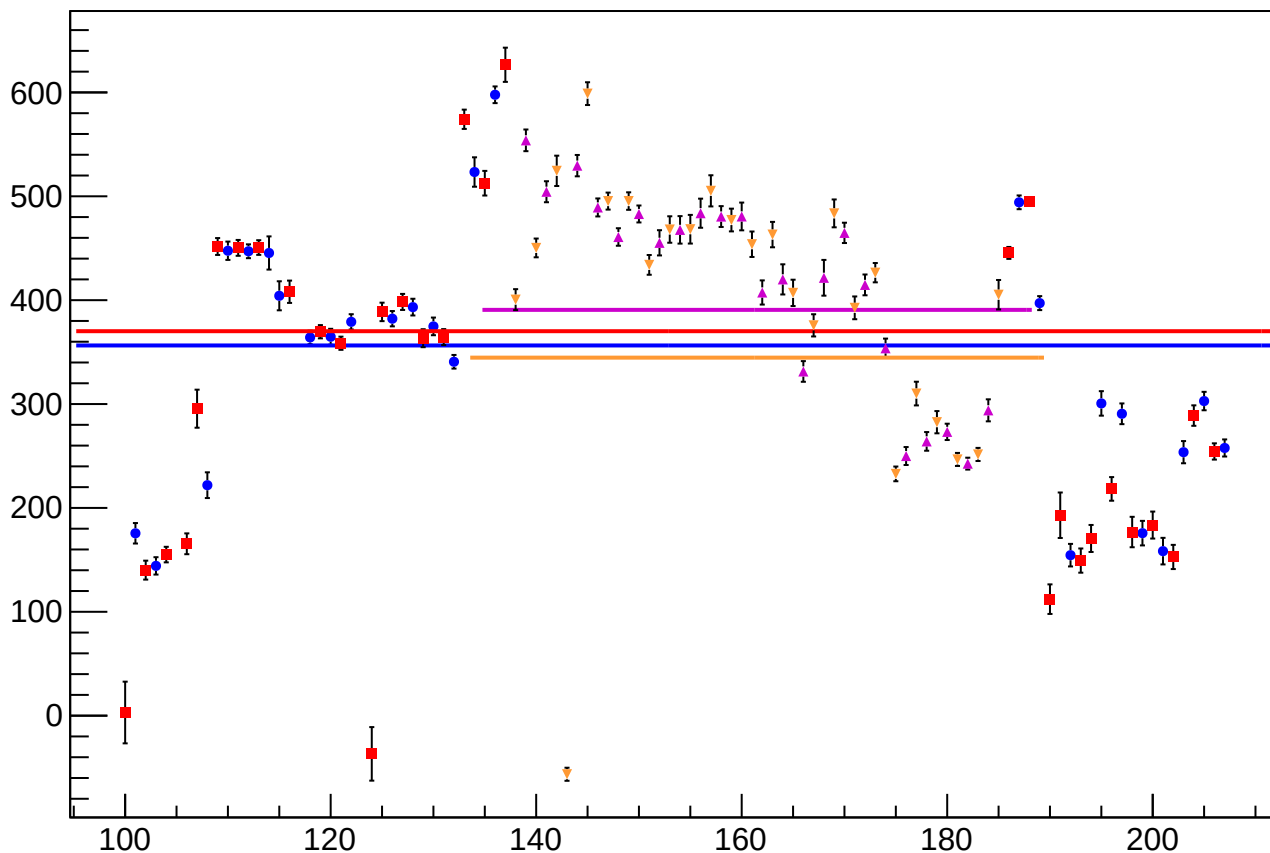
Left In:  $2.756 \pm 1.554$   $\chi^2/\text{NDF}: 399.6/22$

+ sign  $11.816 \pm 1.096$   $\chi^2/\text{NDF}: 805.6/50$

All:  $12.739 \pm 0.785$   $\chi^2/\text{NDF}: 1641.3/104$

- sign  $13.713 \pm 1.126$   $\chi^2/\text{NDF}: 834.2/53$

# reg\_asym\_atl2\_diff\_bpm4eX\_slope vs Slug



Right In: 356.402 $\pm$ 1.699  $\chi^2/\text{NDF}$ : 4157.9/25

Left Out: 344.680 $\pm$ 1.924  $\chi^2/\text{NDF}$ : 7278.2/24

Right Out: 370.135 $\pm$ 1.535  $\chi^2/\text{NDF}$ : 7208.1/30

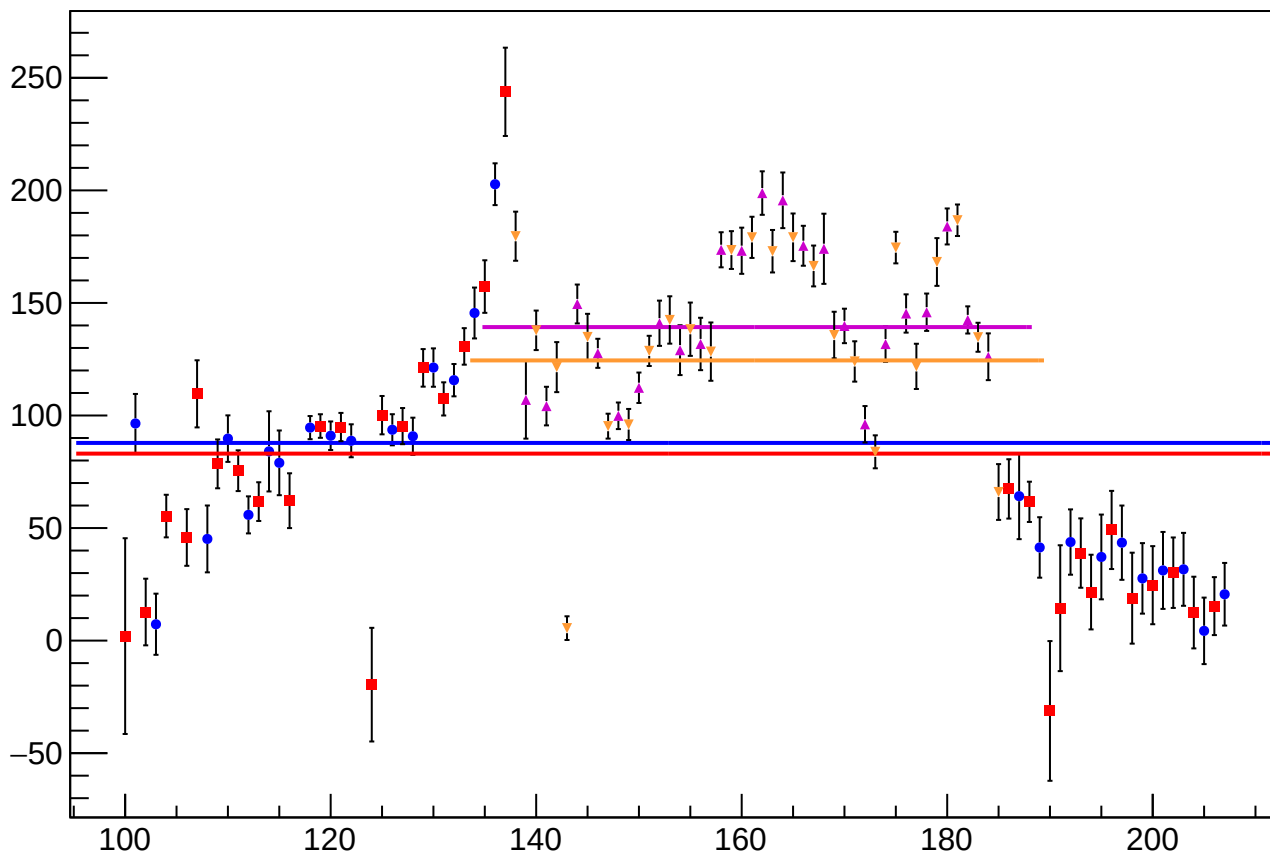
Left In: 390.672 $\pm$ 2.029  $\chi^2/\text{NDF}$ : 2672.8/22

+ sign 351.266 $\pm$ 1.274  $\chi^2/\text{NDF}$ : 11457.0/50

All: 364.958 $\pm$ 0.883  $\chi^2/\text{NDF}$ : 21625.4/104

- sign 377.606 $\pm$ 1.224  $\chi^2/\text{NDF}$ : 9946.1/53

# reg\_asym\_atl2\_diff\_bpm4eY\_slope vs Slug



Right In:  $87.814 \pm 1.968$   $\chi^2/\text{NDF}: 402.3/25$

Left Out:  $124.466 \pm 1.662$   $\chi^2/\text{NDF}: 937.6/24$

Right Out:  $83.064 \pm 1.924$   $\chi^2/\text{NDF}: 395.0/30$

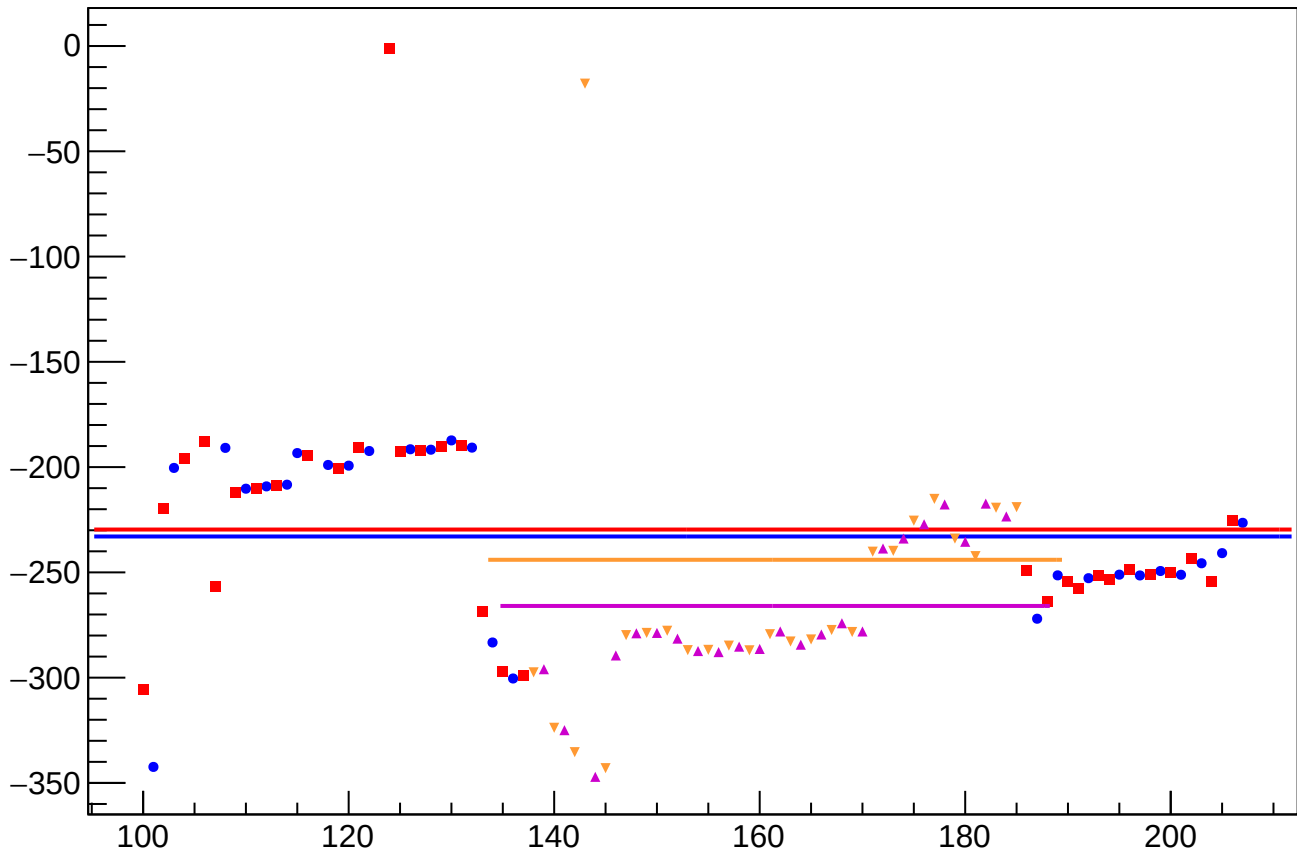
Left In:  $139.274 \pm 1.769$   $\chi^2/\text{NDF}: 260.9/22$

+ sign  $109.213 \pm 1.270$   $\chi^2/\text{NDF}: 1542.3/50$

All:  $111.308 \pm 0.909$   $\chi^2/\text{NDF}: 2666.3/104$

- sign  $113.512 \pm 1.302$   $\chi^2/\text{NDF}: 1118.4/53$

# reg\_asym\_atl2\_diff\_bpm12X\_slope vs Slug



Right In:  $-232.952 \pm 0.109$   $\chi^2/\text{NDF}$ : 135858.9/25

Left Out:  $-244.021 \pm 0.077$   $\chi^2/\text{NDF}$ : 997959.6/24

Right Out:  $-229.650 \pm 0.103$   $\chi^2/\text{NDF}$ : 111276.0/30

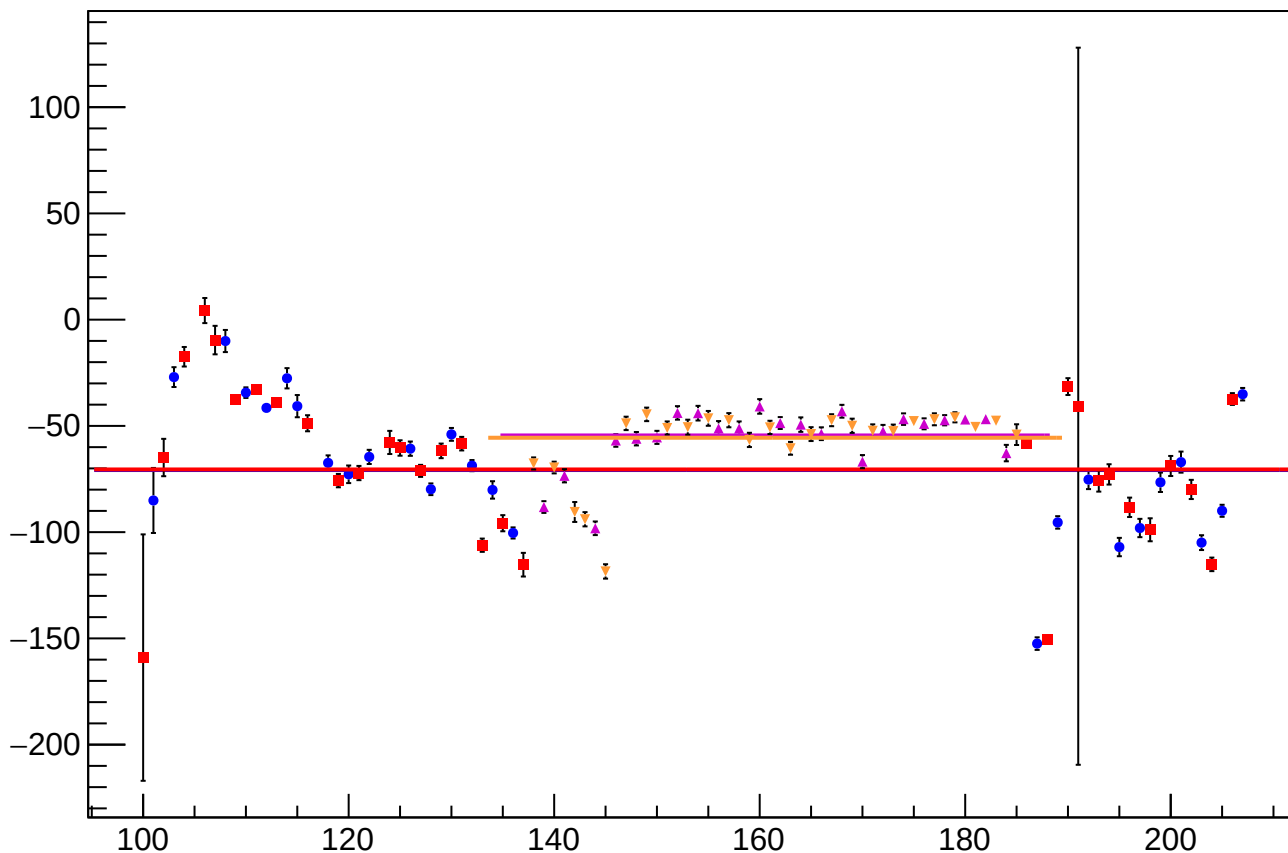
Left In:  $-265.945 \pm 0.081$   $\chi^2/\text{NDF}$ : 169943.2/22

+ sign  $-240.293 \pm 0.063$   $\chi^2/\text{NDF}$ : 1140718.9/50

All:  $-246.195 \pm 0.045$   $\chi^2/\text{NDF}$ : 1516711.1/10

- sign  $-252.183 \pm 0.063$   $\chi^2/\text{NDF}$ : 358297.2/53

# reg\_asym\_atr1\_diff\_bpm1X\_slope vs Slug



Right In:  $-70.765 \pm 0.666$   $\chi^2/\text{NDF}$ : 2164.1/25

Left Out:  $-55.575 \pm 0.590$   $\chi^2/\text{NDF}$ : 686.5/24

Right Out:  $-70.500 \pm 0.597$   $\chi^2/\text{NDF}$ : 4103.0/30

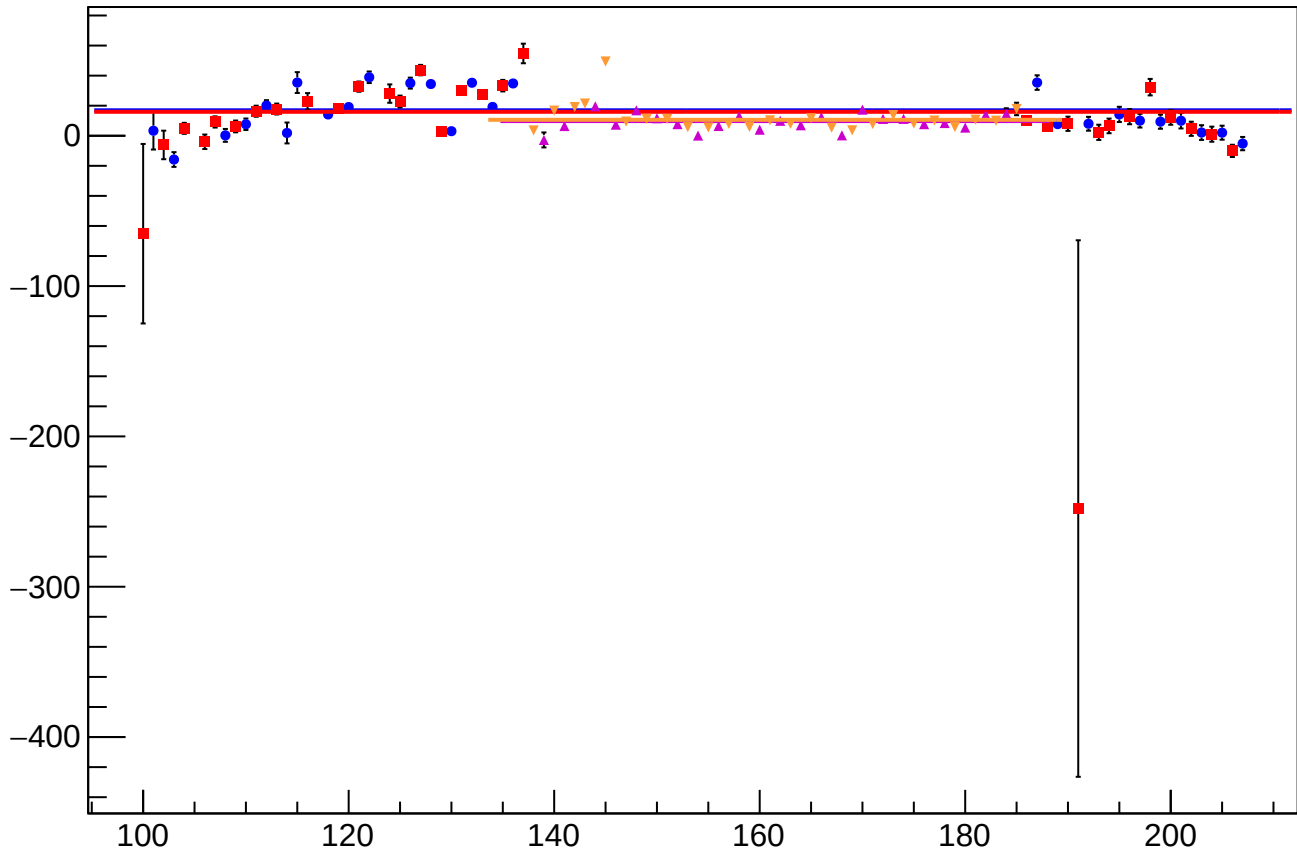
Left In:  $-54.499 \pm 0.606$   $\chi^2/\text{NDF}$ : 500.4/22

+ sign  $-62.252 \pm 0.442$   $\chi^2/\text{NDF}$ : 3141.9/50

All:  $-62.444 \pm 0.306$   $\chi^2/\text{NDF}$ : 8099.4/104

- sign  $-62.622 \pm 0.425$   $\chi^2/\text{NDF}$ : 4957.1/53

# reg\_asym\_atr1\_diff\_bpm4aY\_slope vs Slug



Right In: 16.943 $\pm$ 0.741  $\chi^2$ /NDF: 337.0/25

Left Out: 10.603 $\pm$ 0.449  $\chi^2$ /NDF: 255.2/24

Right Out: 15.939 $\pm$ 0.679  $\chi^2$ /NDF: 361.1/30

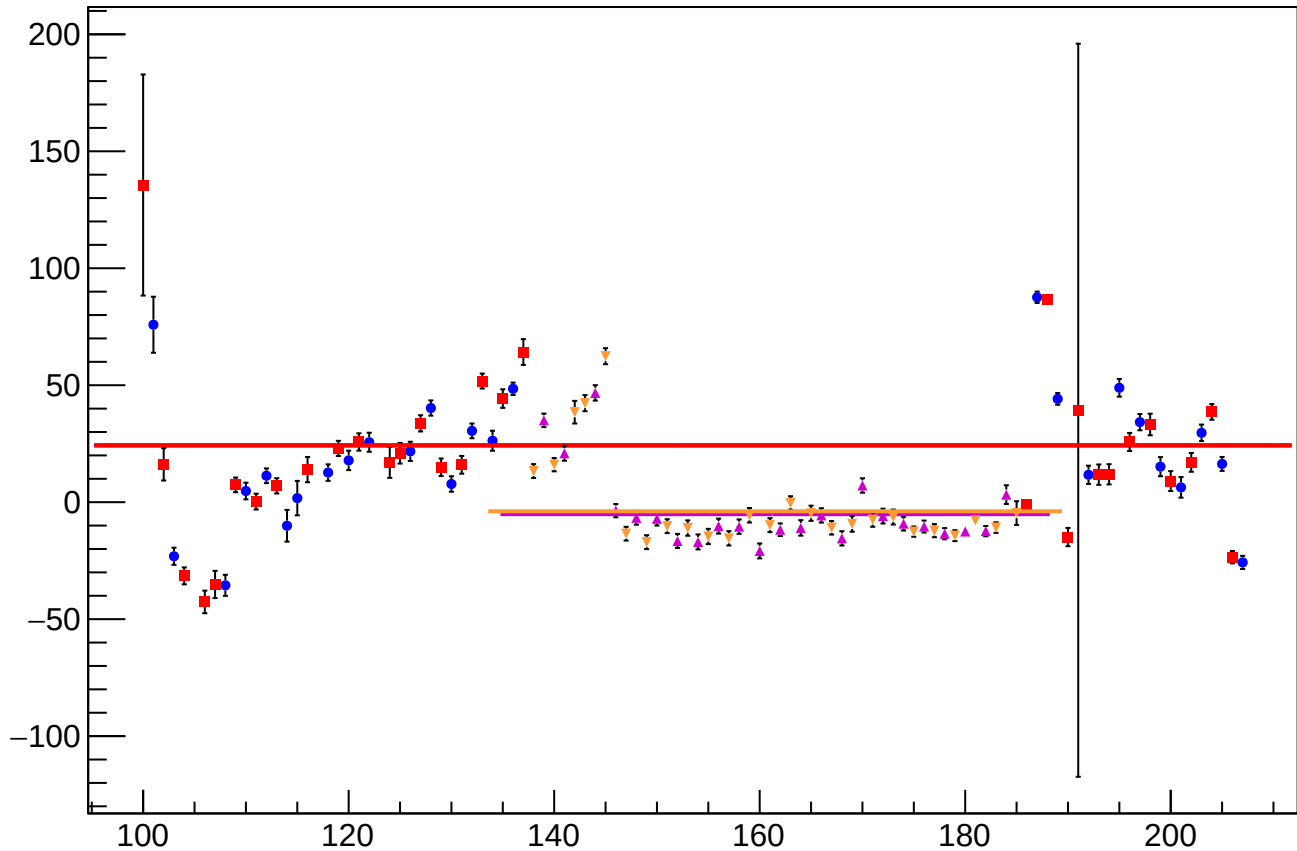
Left In: 9.765 $\pm$ 0.467  $\chi^2$ /NDF: 121.0/22

+ sign 12.309 $\pm$ 0.384  $\chi^2$ /NDF: 645.7/50

All: 12.028 $\pm$ 0.272  $\chi^2$ /NDF: 1185.0/104

- sign 11.747 $\pm$ 0.385  $\chi^2$ /NDF: 538.2/53

# reg\_asym\_atr1\_diff\_bpm4eX\_slope vs Slug



Right In: 24.256 $\pm$ 0.695  $\chi^2$ /NDF: 1748.2/25

Left Out: -3.895 $\pm$ 0.585  $\chi^2$ /NDF: 850.2/24

Right Out: 24.316 $\pm$ 0.598  $\chi^2$ /NDF: 3665.3/30

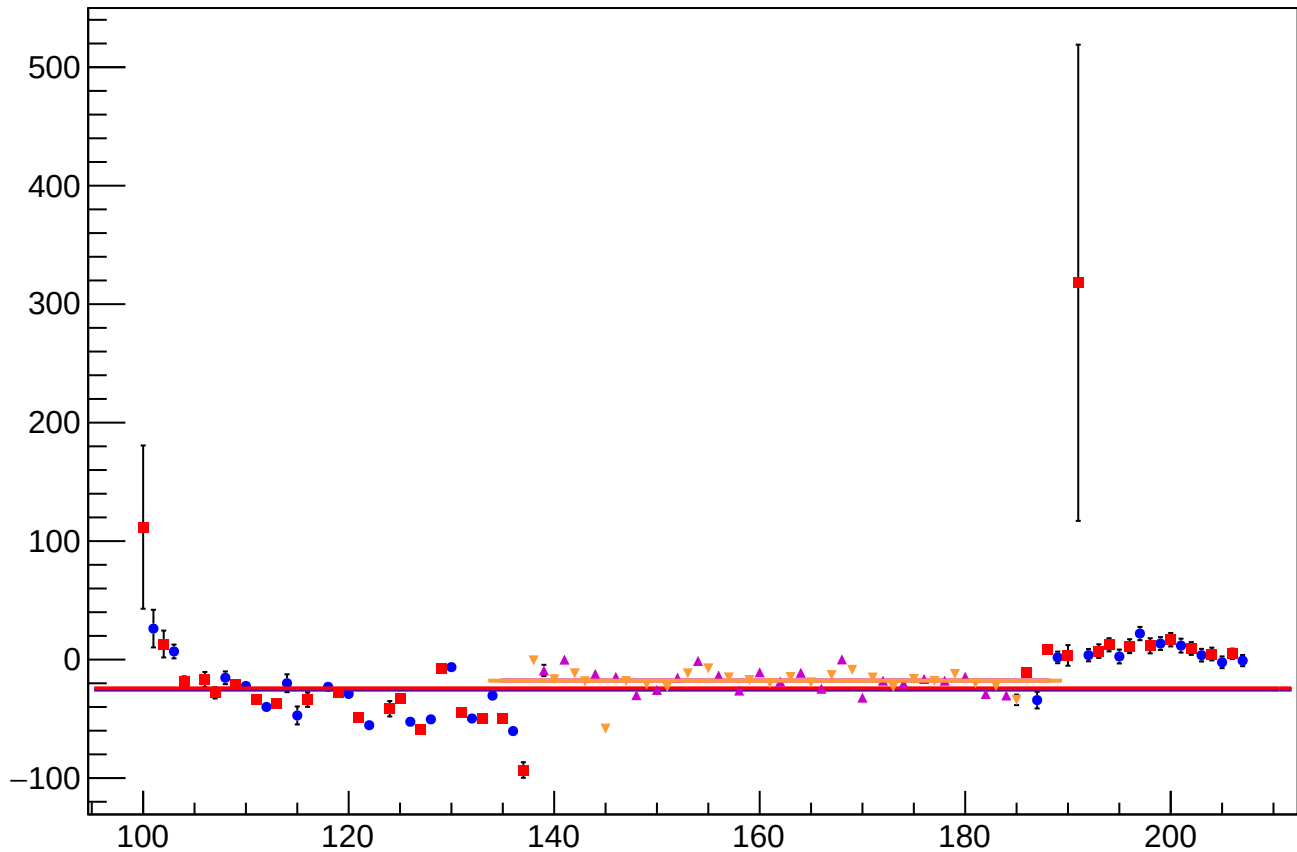
Left In: -5.124 $\pm$ 0.600  $\chi^2$ /NDF: 649.7/22

+ sign 7.782 $\pm$ 0.448  $\chi^2$ /NDF: 3558.7/50

All: 8.754 $\pm$ 0.308  $\chi^2$ /NDF: 9090.3/104

- sign 9.624 $\pm$ 0.424  $\chi^2$ /NDF: 5522.7/53

# reg\_asym\_atr1\_diff\_bpm4eY\_slope vs Slug



Right In:  $-25.316 \pm 0.857$   $\chi^2/\text{NDF}$ : 766.3/25

Left Out:  $-17.776 \pm 0.509$   $\chi^2/\text{NDF}$ : 251.6/24

Right Out:  $-24.293 \pm 0.811$   $\chi^2/\text{NDF}$ : 896.0/30

Left In:  $-17.643 \pm 0.526$   $\chi^2/\text{NDF}$ : 285.9/22

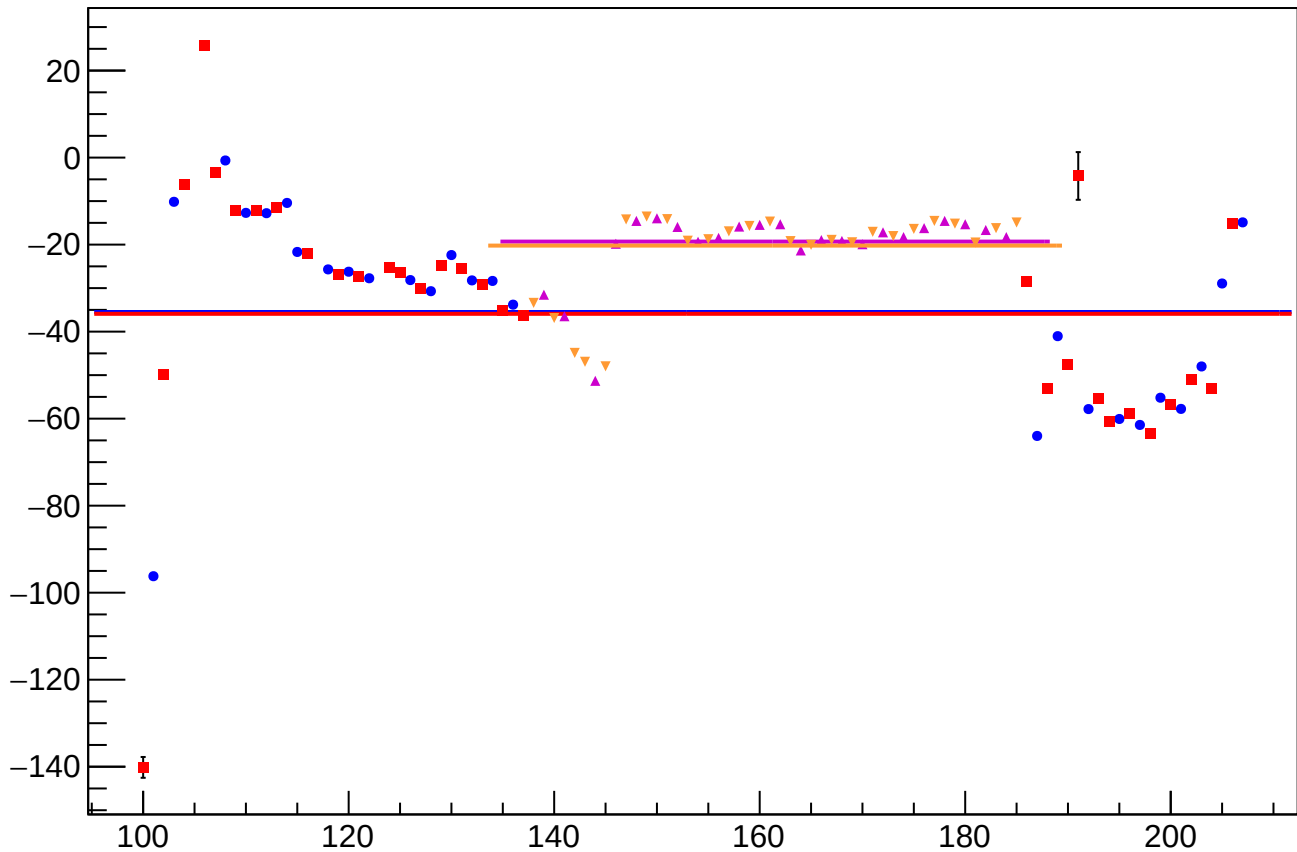
+ sign  $-19.742 \pm 0.437$   $\chi^2/\text{NDF}$ : 1075.1/50

All:  $-19.678 \pm 0.311$   $\chi^2/\text{NDF}$ : 2304.4/104

- sign  $-19.613 \pm 0.441$   $\chi^2/\text{NDF}$ : 1229.3/53



# reg\_asym\_atr1\_diff\_bpm12X\_slope vs Slug



Right In:  $-35.491 \pm 0.042$   $\chi^2/\text{NDF}: 212644.0/25$

Left Out:  $-20.227 \pm 0.023$   $\chi^2/\text{NDF}: 147352.7/24$

Right Out:  $-35.906 \pm 0.040$   $\chi^2/\text{NDF}: 291664.7/30$

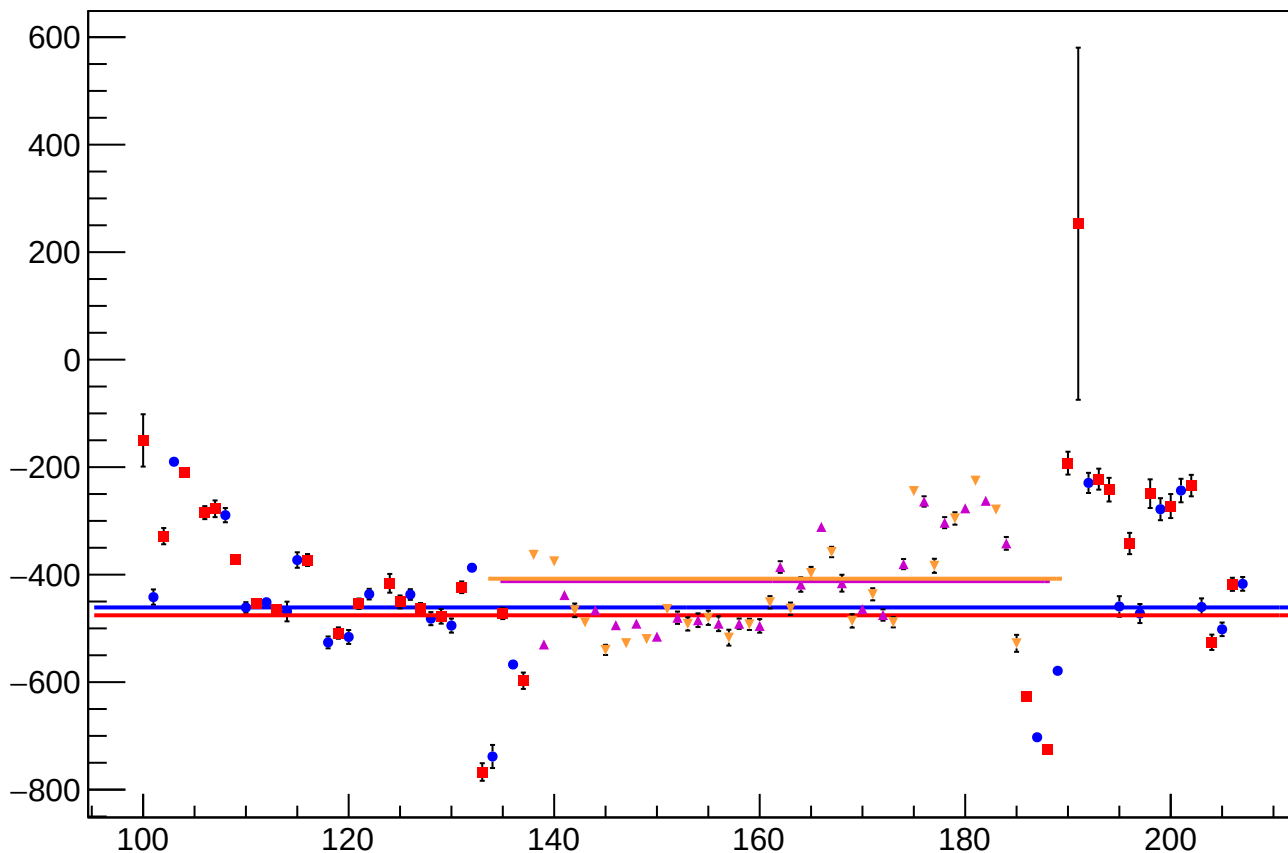
Left In:  $-19.310 \pm 0.023$   $\chi^2/\text{NDF}: 93090.9/22$

+ sign  $-23.757 \pm 0.020$   $\chi^2/\text{NDF}: 463137.1/50$

All:  $-23.595 \pm 0.014$   $\chi^2/\text{NDF}: 974402.8/104$

- sign  $-23.432 \pm 0.020$   $\chi^2/\text{NDF}: 511134.8/53$

# reg\_asym\_atr2\_diff\_bpm1X\_slope vs Slug



Right In:  $-460.994 \pm 2.284$   $\chi^2/\text{NDF}$ : 2828.3/25

Left Out:  $-407.554 \pm 1.951$   $\chi^2/\text{NDF}$ : 2872.6/24

Right Out:  $-475.625 \pm 2.029$   $\chi^2/\text{NDF}$ : 6112.1/30

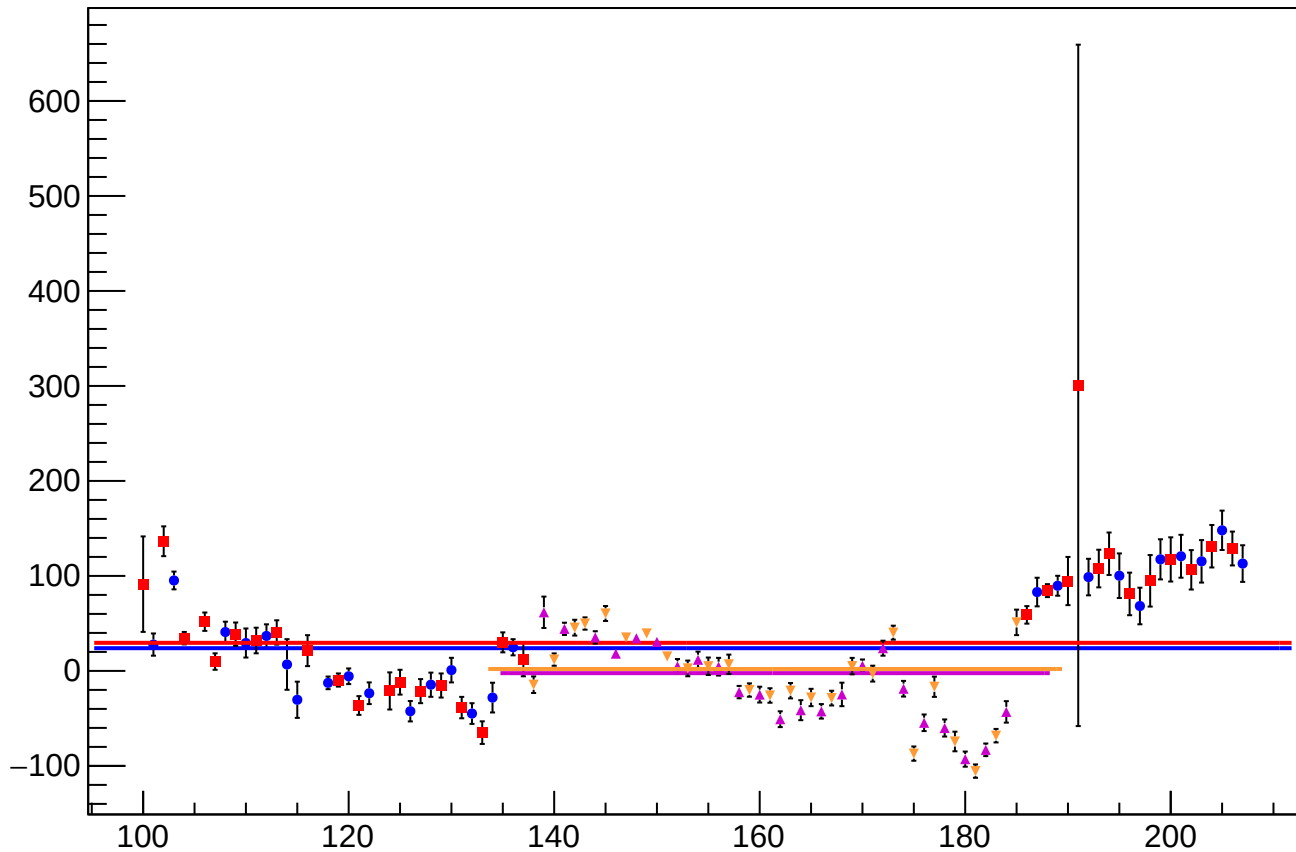
Left In:  $-412.102 \pm 2.008$   $\chi^2/\text{NDF}$ : 2182.3/22

+ sign  $-430.094 \pm 1.484$   $\chi^2/\text{NDF}$ : 6017.3/50

All:  $-437.076 \pm 1.029$   $\chi^2/\text{NDF}$ : 14849.5/104

- sign  $-443.540 \pm 1.427$   $\chi^2/\text{NDF}$ : 8789.5/53

# reg\_asym\_atr2\_diff\_bpm4aY\_slope vs Slug



Right In:  $23.908 \pm 2.452$   $\chi^2/\text{NDF}: 429.7/25$

Left Out:  $2.035 \pm 1.426$   $\chi^2/\text{NDF}: 910.7/24$

Right Out:  $29.565 \pm 2.208$   $\chi^2/\text{NDF}: 489.7/30$

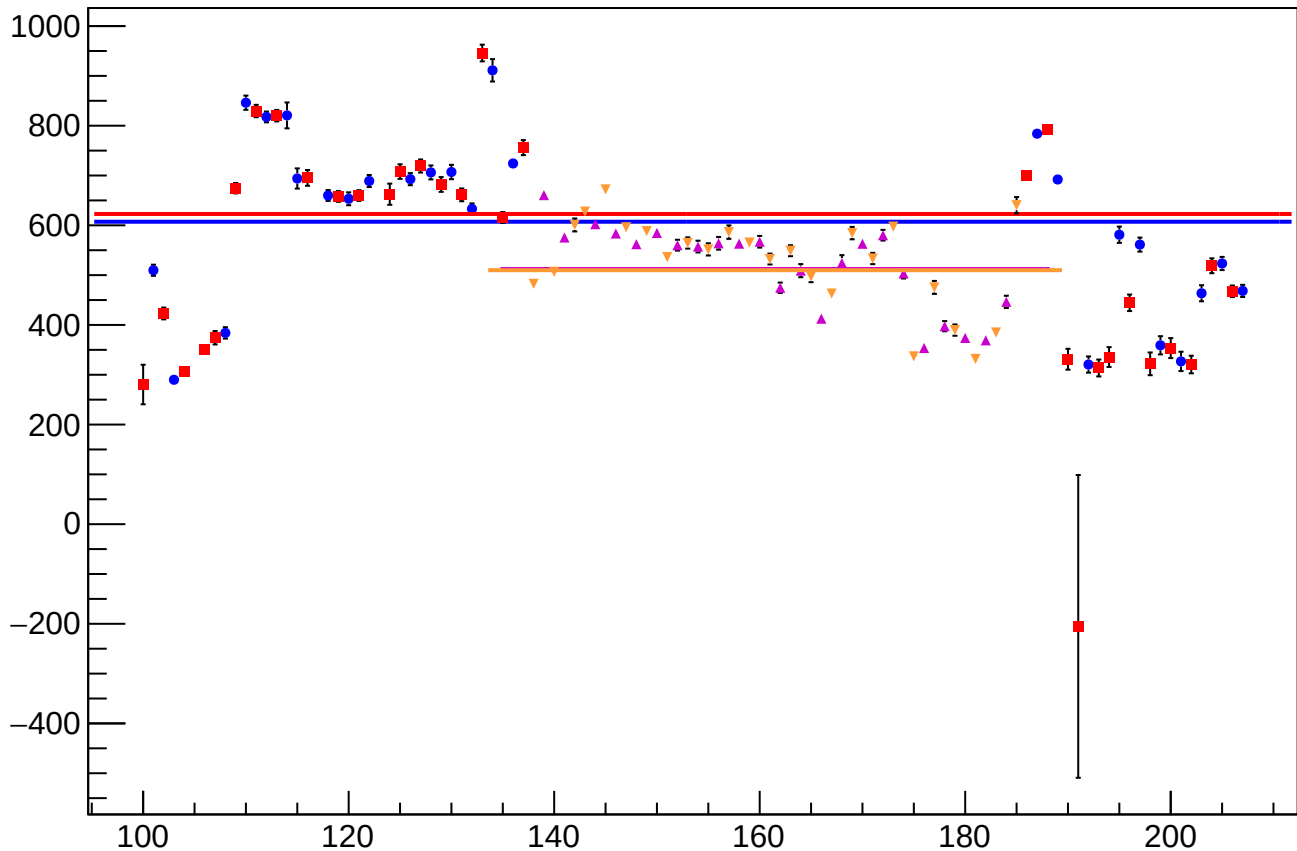
Left In:  $-2.365 \pm 1.482$   $\chi^2/\text{NDF}: 733.4/22$

+ sign  $7.562 \pm 1.233$   $\chi^2/\text{NDF}: 1399.9/50$

All:  $7.558 \pm 0.871$   $\chi^2/\text{NDF}: 2767.1/104$

- sign  $7.554 \pm 1.231$   $\chi^2/\text{NDF}: 1367.2/53$

# reg\_asym\_atr2\_diff\_bpm4eX\_slope vs Slug



Right In: 607.214 $\pm$ 2.308  $\chi^2$ /NDF: 5514.4/25

Left Out: 509.912 $\pm$ 1.936  $\chi^2$ /NDF: 2662.6/24

Right Out: 622.772 $\pm$ 1.981  $\chi^2$ /NDF: 8806.5/30

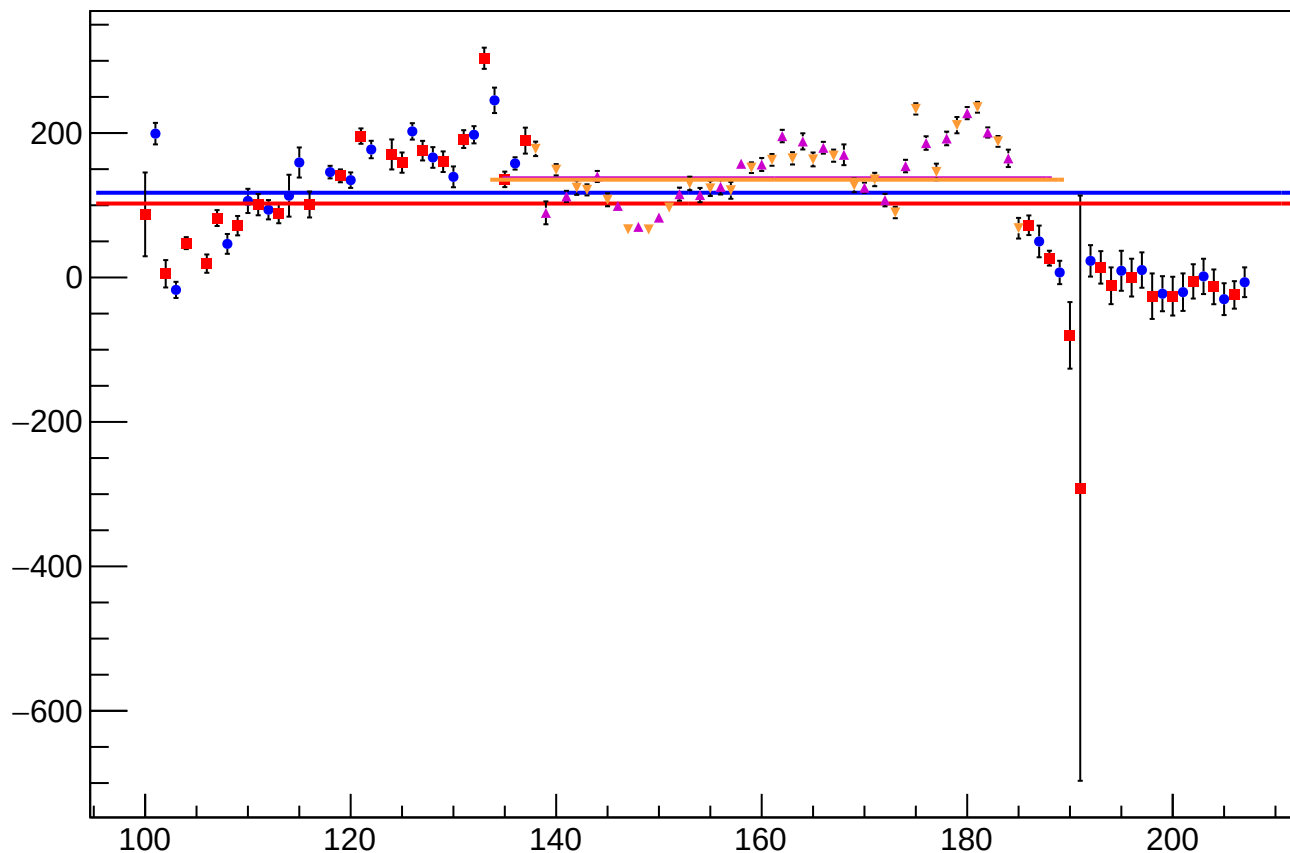
Left In: 512.270 $\pm$ 1.984  $\chi^2$ /NDF: 2087.6/22

+ sign 550.096 $\pm$ 1.483  $\chi^2$ /NDF: 9220.5/50

All: 559.346 $\pm$ 1.019  $\chi^2$ /NDF: 21742.0/104

- sign 567.608 $\pm$ 1.402  $\chi^2$ /NDF: 12447.9/53

# reg\_asym\_atr2\_diff\_bpm4eY\_slope vs Slug



Right In:  $117.326 \pm 2.875$   $\chi^2/\text{NDF}: 712.2/25$

Left Out:  $135.407 \pm 1.649$   $\chi^2/\text{NDF}: 923.2/24$

Right Out:  $102.390 \pm 2.656$   $\chi^2/\text{NDF}: 818.3/30$

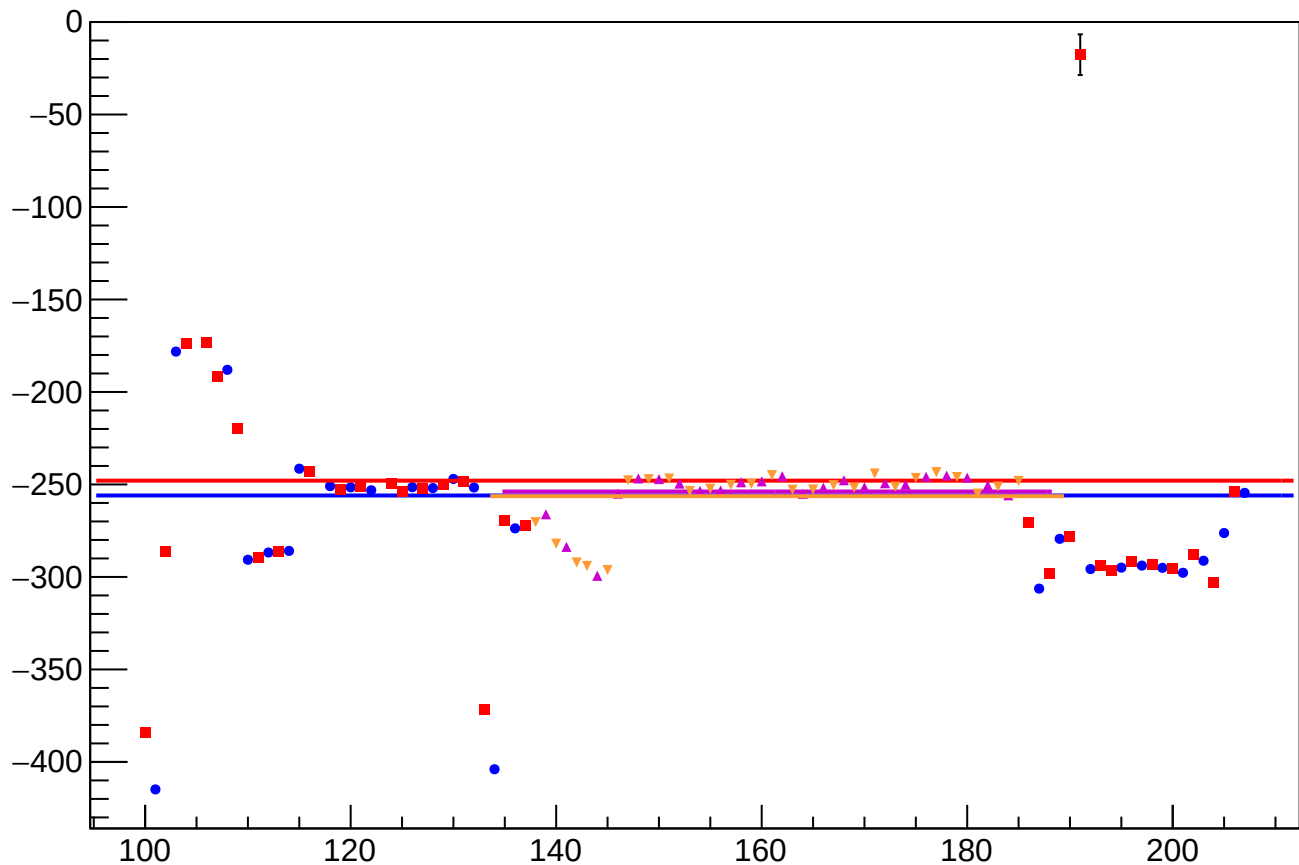
Left In:  $137.374 \pm 1.702$   $\chi^2/\text{NDF}: 706.0/22$

+ sign  $130.933 \pm 1.430$   $\chi^2/\text{NDF}: 1665.1/50$

All:  $129.065 \pm 1.012$   $\chi^2/\text{NDF}: 3315.7/104$

- sign  $127.191 \pm 1.433$   $\chi^2/\text{NDF}: 1647.2/53$

# reg\_asym\_atr2\_diff\_bpm12X\_slope vs Slug



Right In:  $-255.968 \pm 0.138$   $\chi^2/\text{NDF}: 197838.4/25$

Left Out:  $-256.344 \pm 0.077$   $\chi^2/\text{NDF}: 39513.4/24$

Right Out:  $-247.950 \pm 0.131$   $\chi^2/\text{NDF}: 148464.4/30$

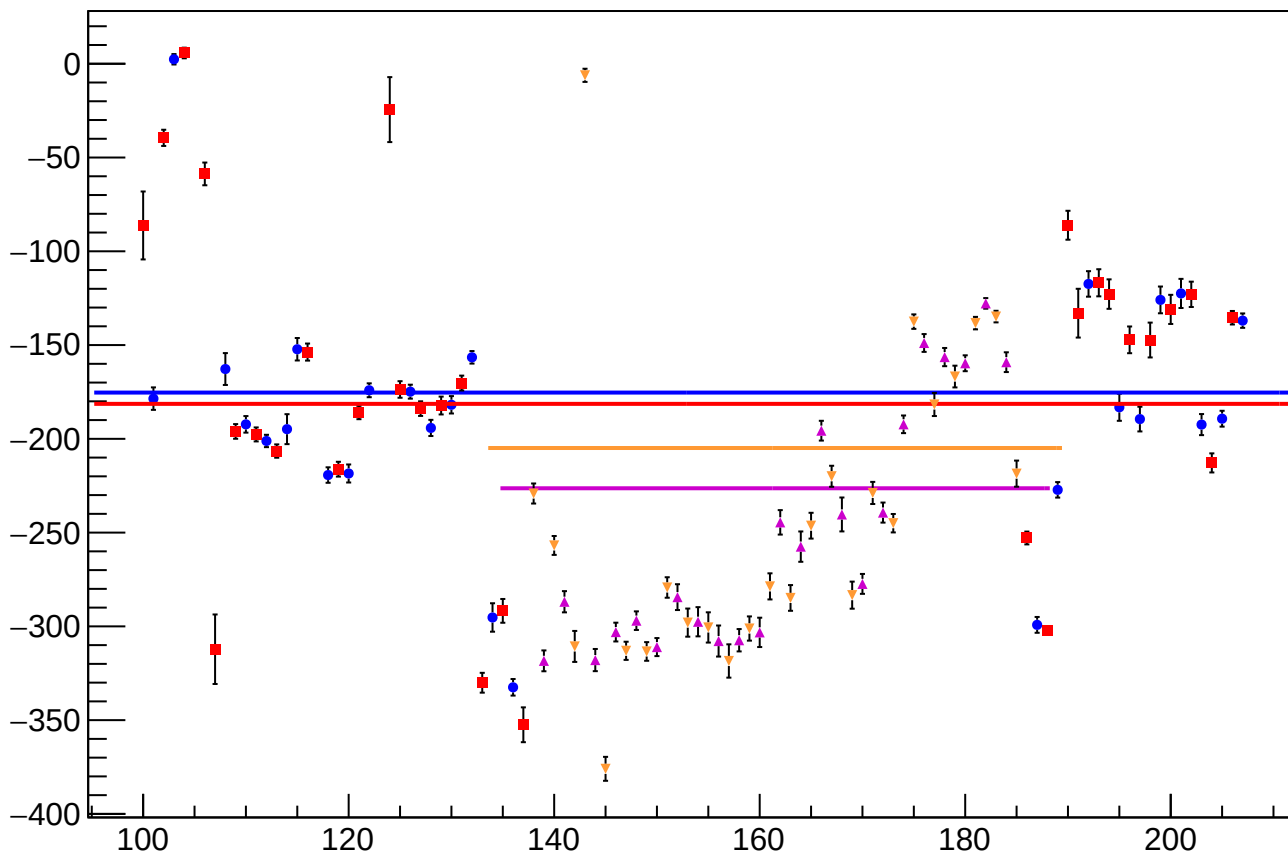
Left In:  $-253.817 \pm 0.078$   $\chi^2/\text{NDF}: 24076.7/22$

+ sign  $-256.254 \pm 0.067$   $\chi^2/\text{NDF}: 237357.5/50$

All:  $-254.263 \pm 0.047$   $\chi^2/\text{NDF}: 413129.0/104$

- sign  $-252.288 \pm 0.067$   $\chi^2/\text{NDF}: 174022.3/53$

# reg\_asym\_atl\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-175.334 \pm 0.900$   $\chi^2/\text{NDF}: 7261.4/25$

Left Out:  $-204.891 \pm 1.052$   $\chi^2/\text{NDF}: 7826.3/24$

Right Out:  $-181.354 \pm 0.832$   $\chi^2/\text{NDF}: 11560.8/30$

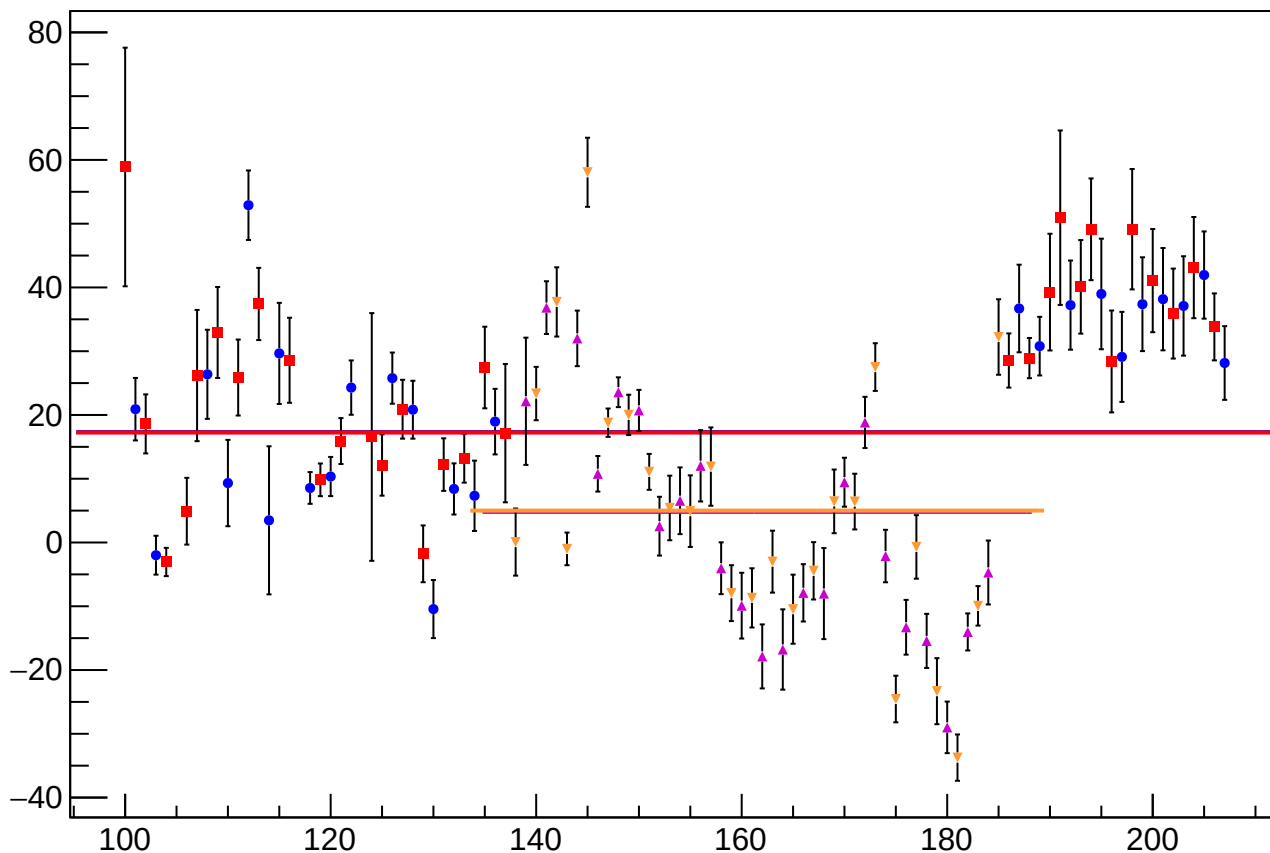
Left In:  $-226.365 \pm 1.105$   $\chi^2/\text{NDF}: 4219.0/22$

+ sign  $-187.827 \pm 0.684$   $\chi^2/\text{NDF}: 15543.5/50$

All:  $-192.875 \pm 0.477$   $\chi^2/\text{NDF}: 32488.1/104$

- sign  $-197.645 \pm 0.665$   $\chi^2/\text{NDF}: 16838.6/53$

# reg\_asym\_atl\_avg\_diff\_bpm4aY\_slope vs Slug



Right In: 17.307 $\pm$ 0.959  $\chi^2$ /NDF: 231.8/25

Left Out: 5.006 $\pm$ 0.793  $\chi^2$ /NDF: 548.5/24

Right Out: 17.255 $\pm$ 0.893  $\chi^2$ /NDF: 259.2/30

Left In: 4.799 $\pm$ 0.846  $\chi^2$ /NDF: 426.3/22

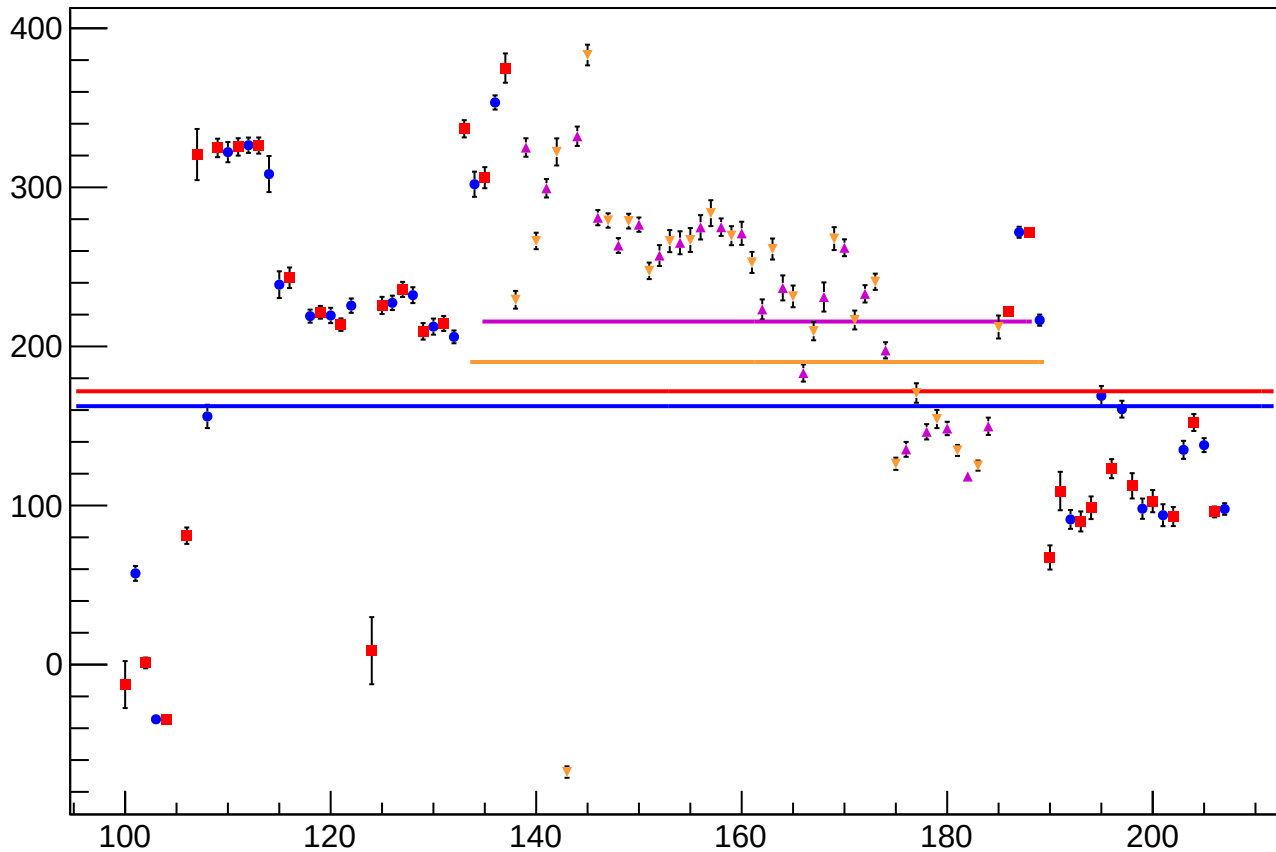
+ sign 10.003 $\pm$ 0.611  $\chi^2$ /NDF: 877.9/50

All: 10.347 $\pm$ 0.433  $\chi^2$ /NDF: 1666.6/104

- sign 10.695 $\pm$ 0.614  $\chi^2$ /NDF: 788.0/53



# reg\_asym\_atl\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $162.459 \pm 0.902$   $\chi^2/\text{NDF}: 15901.6/25$

Left Out:  $190.219 \pm 1.050$   $\chi^2/\text{NDF}: 9384.0/24$

Right Out:  $171.820 \pm 0.808$   $\chi^2/\text{NDF}: 21367.2/30$

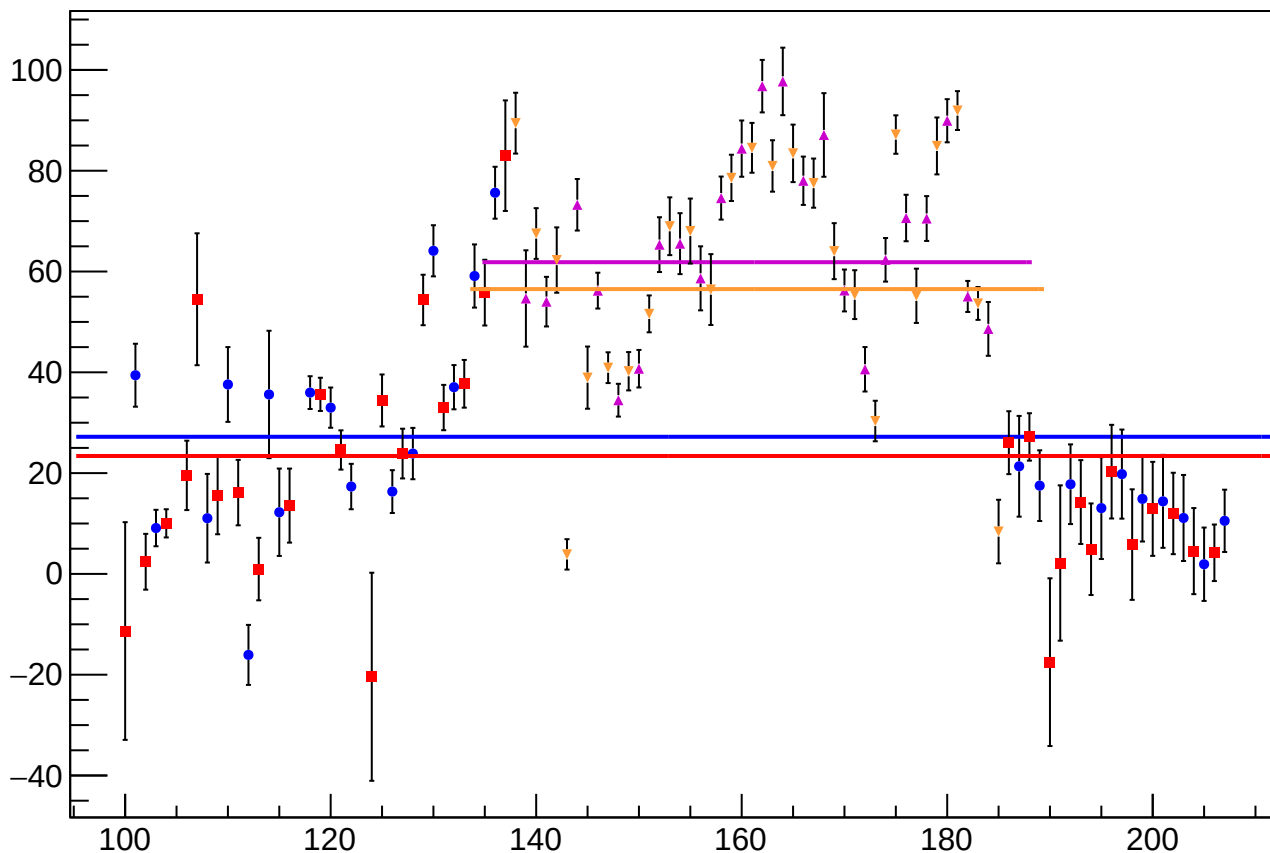
Left In:  $215.649 \pm 1.098$   $\chi^2/\text{NDF}: 3886.0/22$

+ sign  $174.242 \pm 0.684$   $\chi^2/\text{NDF}: 25687.8/50$

All:  $181.046 \pm 0.471$   $\chi^2/\text{NDF}: 52163.2/104$

- sign  $187.202 \pm 0.651$   $\chi^2/\text{NDF}: 26286.9/53$

# reg\_asym\_atl\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $27.209 \pm 1.126$   $\chi^2/\text{NDF}$ : 317.2/25

Left Out:  $56.514 \pm 0.909$   $\chi^2/\text{NDF}$ : 798.9/24

Right Out:  $23.399 \pm 1.068$   $\chi^2/\text{NDF}$ : 228.7/30

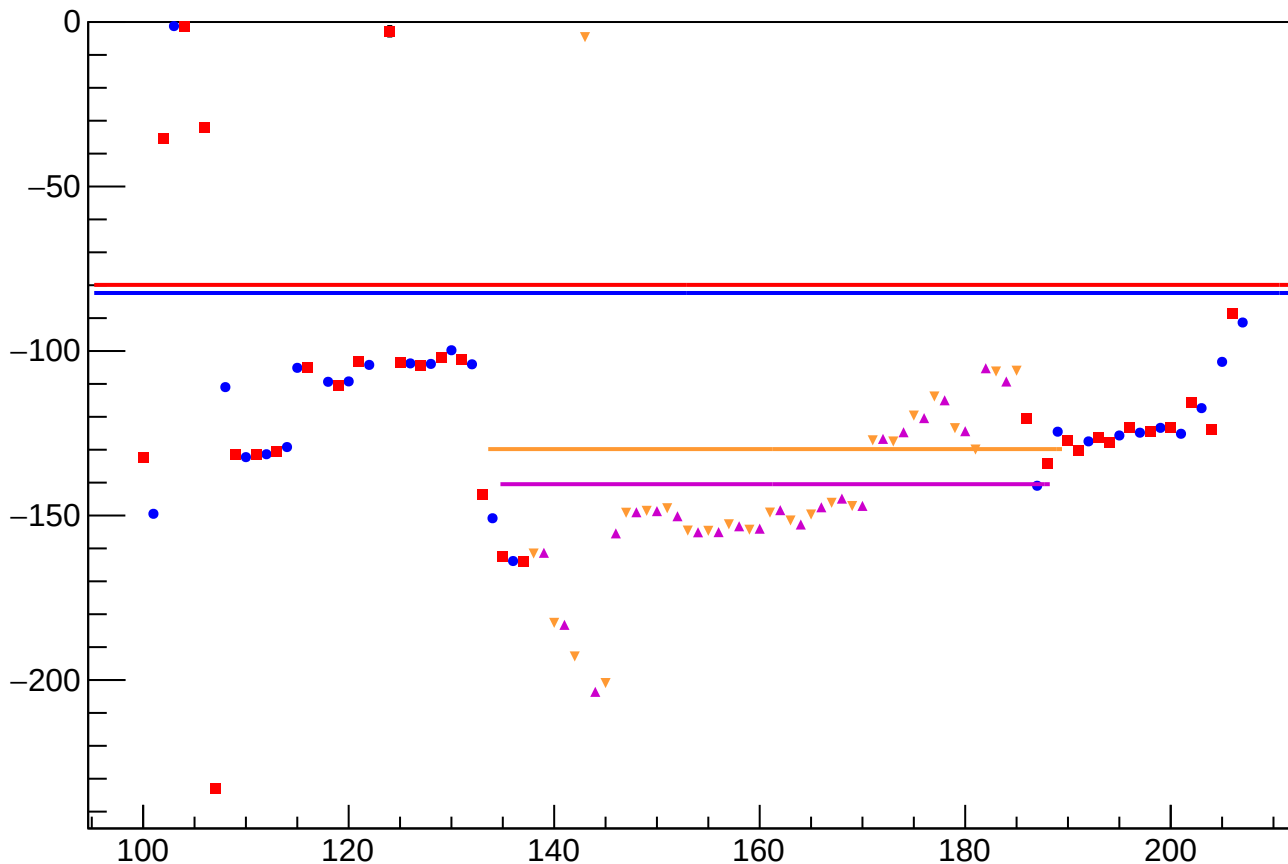
Left In:  $61.850 \pm 0.961$   $\chi^2/\text{NDF}$ : 320.7/22

+ sign  $44.950 \pm 0.707$   $\chi^2/\text{NDF}$ : 1526.2/50

All:  $44.794 \pm 0.503$   $\chi^2/\text{NDF}$ : 2791.8/104

- sign  $44.635 \pm 0.714$   $\chi^2/\text{NDF}$ : 1265.5/53

# reg\_asym\_atl\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-82.361 \pm 0.052$   $\chi^2/\text{NDF}$ : 1296790.7/25

Left Out:  $-129.810 \pm 0.042$   $\chi^2/\text{NDF}$ : 1025155.0/24

Right Out:  $-79.901 \pm 0.050$   $\chi^2/\text{NDF}$ : 1255989.4/30

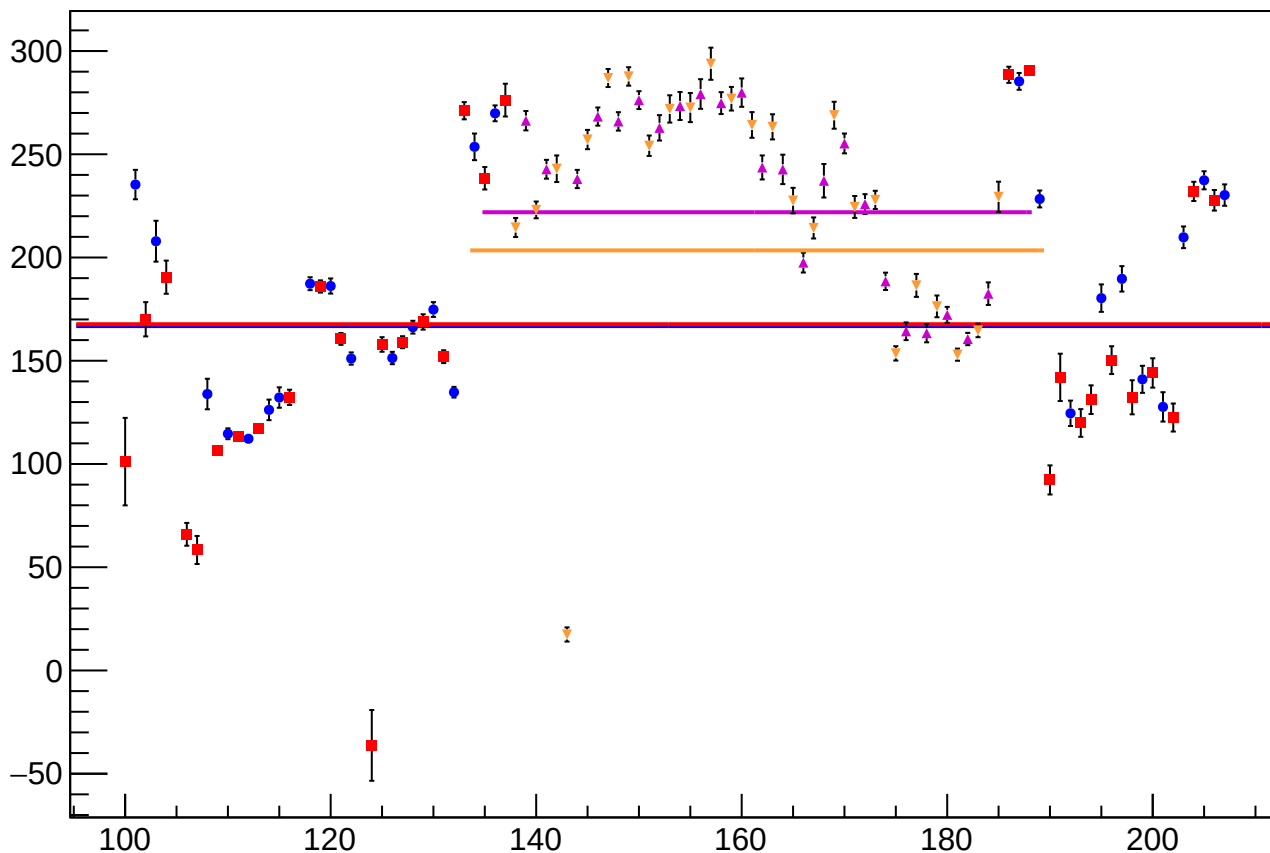
Left In:  $-140.477 \pm 0.044$   $\chi^2/\text{NDF}$ : 254660.0/22

+ sign  $-111.072 \pm 0.033$   $\chi^2/\text{NDF}$ : 2822056.9/50

All:  $-112.611 \pm 0.023$   $\chi^2/\text{NDF}$ : 5173306.9/10

- sign  $-114.155 \pm 0.033$   $\chi^2/\text{NDF}$ : 2346837.7/53

# reg\_asym\_atl\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $166.786 \pm 0.770$   $\chi^2/\text{NDF}$ : 4151.6/25

Left Out:  $203.453 \pm 0.953$   $\chi^2/\text{NDF}$ : 5491.5/24

Right Out:  $167.692 \pm 0.711$   $\chi^2/\text{NDF}$ : 8443.2/30

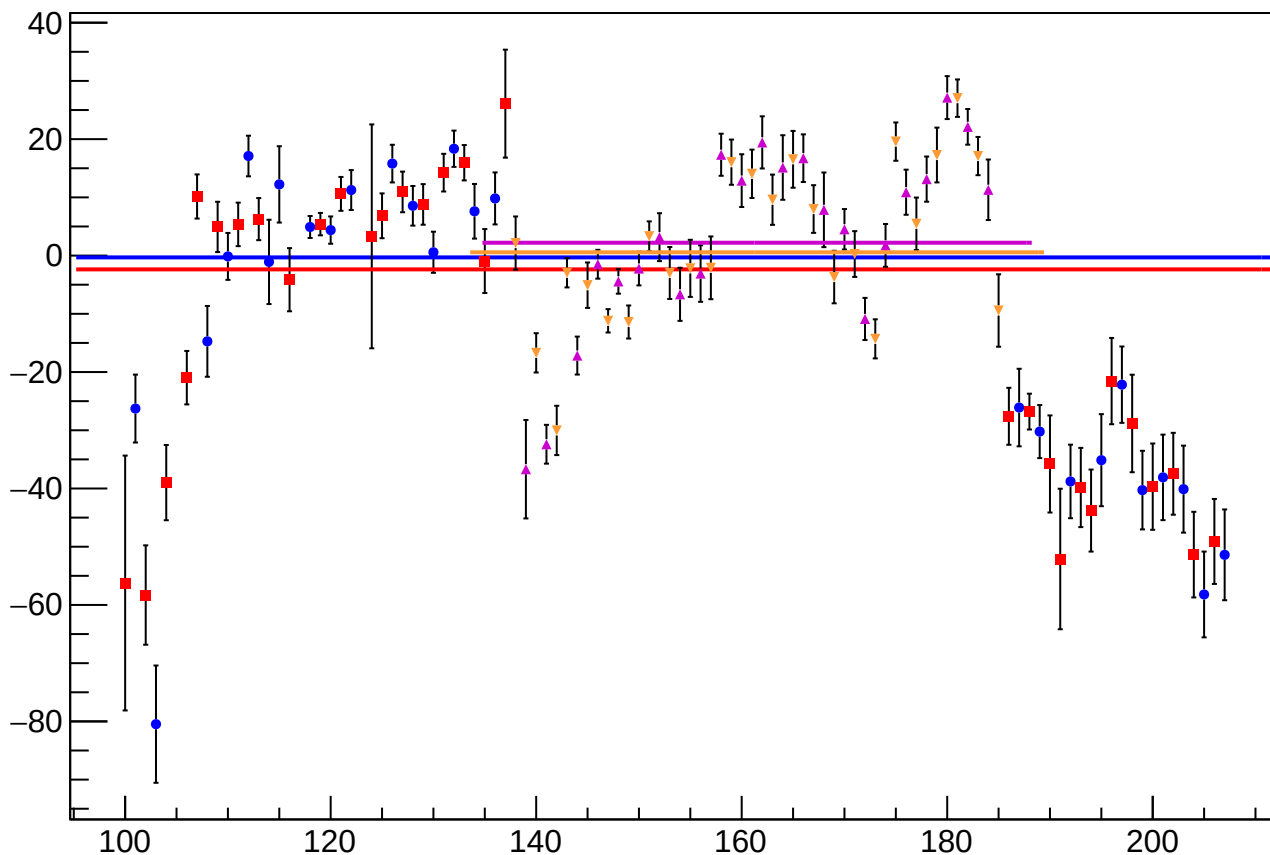
Left In:  $221.923 \pm 1.003$   $\chi^2/\text{NDF}$ : 1986.7/22

+ sign  $181.263 \pm 0.599$   $\chi^2/\text{NDF}$ : 10539.0/50

All:  $183.627 \pm 0.417$   $\chi^2/\text{NDF}$ : 22944.3/104

- sign  $185.847 \pm 0.580$   $\chi^2/\text{NDF}$ : 12375.0/53

# reg\_asym\_atl\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-0.308 \pm 0.819$   $\chi^2/\text{NDF}$ : 536.4/25

Left Out:  $0.568 \pm 0.716$   $\chi^2/\text{NDF}$ : 345.4/24

Right Out:  $-2.367 \pm 0.795$   $\chi^2/\text{NDF}$ : 600.4/30

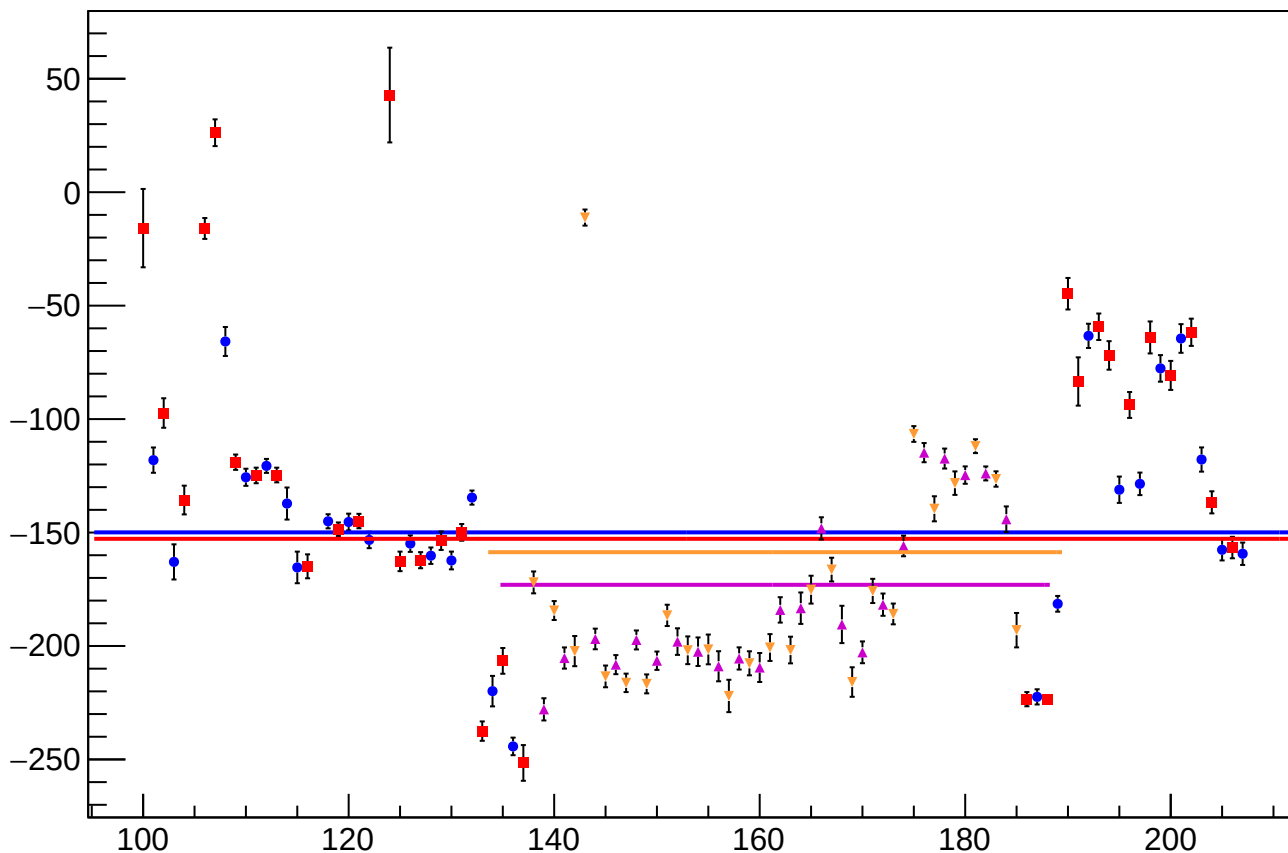
Left In:  $2.210 \pm 0.760$   $\chi^2/\text{NDF}$ : 358.2/22

+ sign  $0.189 \pm 0.539$   $\chi^2/\text{NDF}$ : 882.5/50

All:  $0.108 \pm 0.385$   $\chi^2/\text{NDF}$ : 1858.4/104

- sign  $0.023 \pm 0.549$   $\chi^2/\text{NDF}$ : 975.9/53

# reg\_asym\_atl\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-149.928 \pm 0.844$   $\chi^2/\text{NDF}$ : 2319.3/25

Left Out:  $-158.658 \pm 0.951$   $\chi^2/\text{NDF}$ : 3491.8/24

Right Out:  $-152.768 \pm 0.764$   $\chi^2/\text{NDF}$ : 6414.7/30

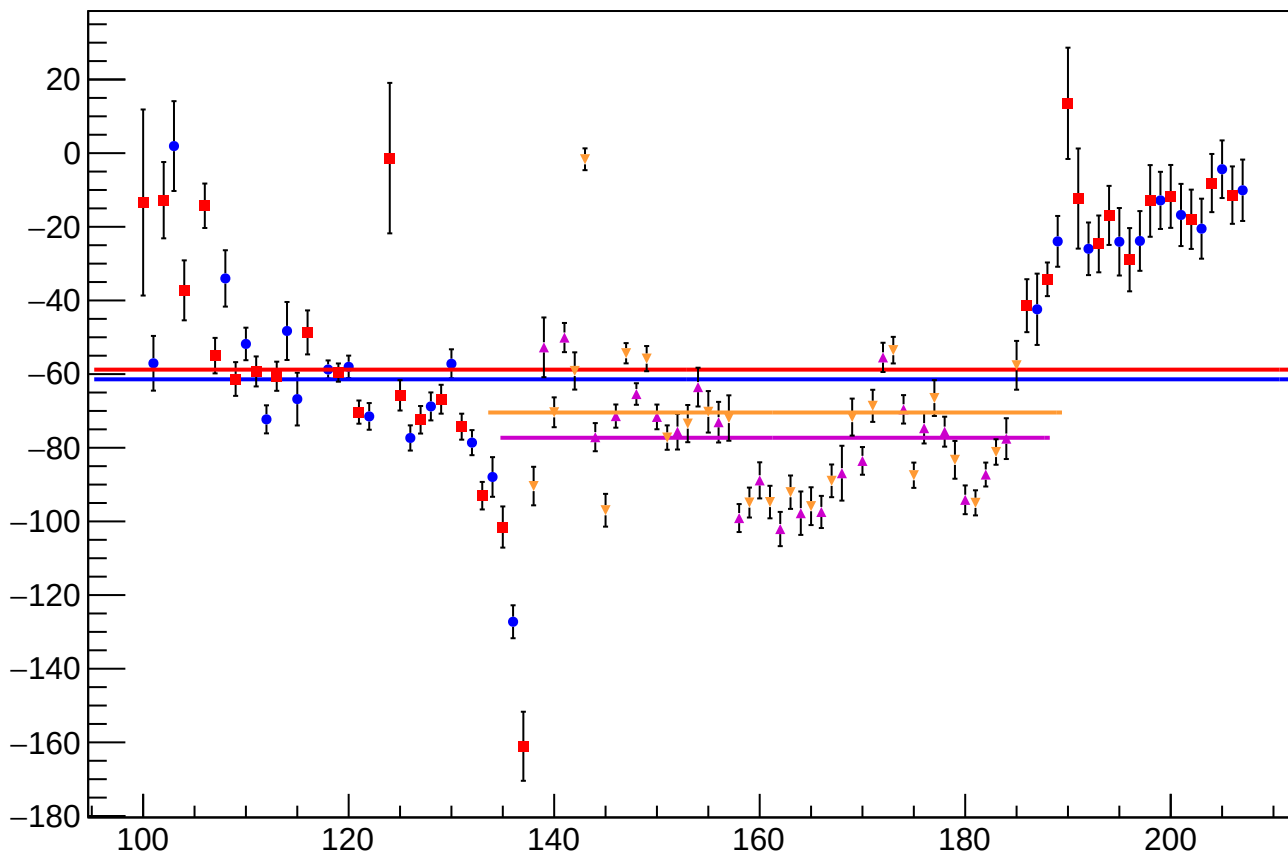
Left In:  $-173.043 \pm 0.996$   $\chi^2/\text{NDF}$ : 1399.9/22

+ sign  $-153.777 \pm 0.631$   $\chi^2/\text{NDF}$ : 5858.2/50

All:  $-157.162 \pm 0.437$   $\chi^2/\text{NDF}$ : 13989.2/104

- sign  $-160.286 \pm 0.606$   $\chi^2/\text{NDF}$ : 8075.6/53

# reg\_asym\_atl\_dd\_diff\_bpm4eY\_slope vs Slug



Right In: -61.417 $\pm$ 0.957  $\chi^2/\text{NDF}$ : 638.9/25

Left Out: -70.427 $\pm$ 0.821  $\chi^2/\text{NDF}$ : 901.6/24

Right Out: -58.784 $\pm$ 0.933  $\chi^2/\text{NDF}$ : 695.1/30

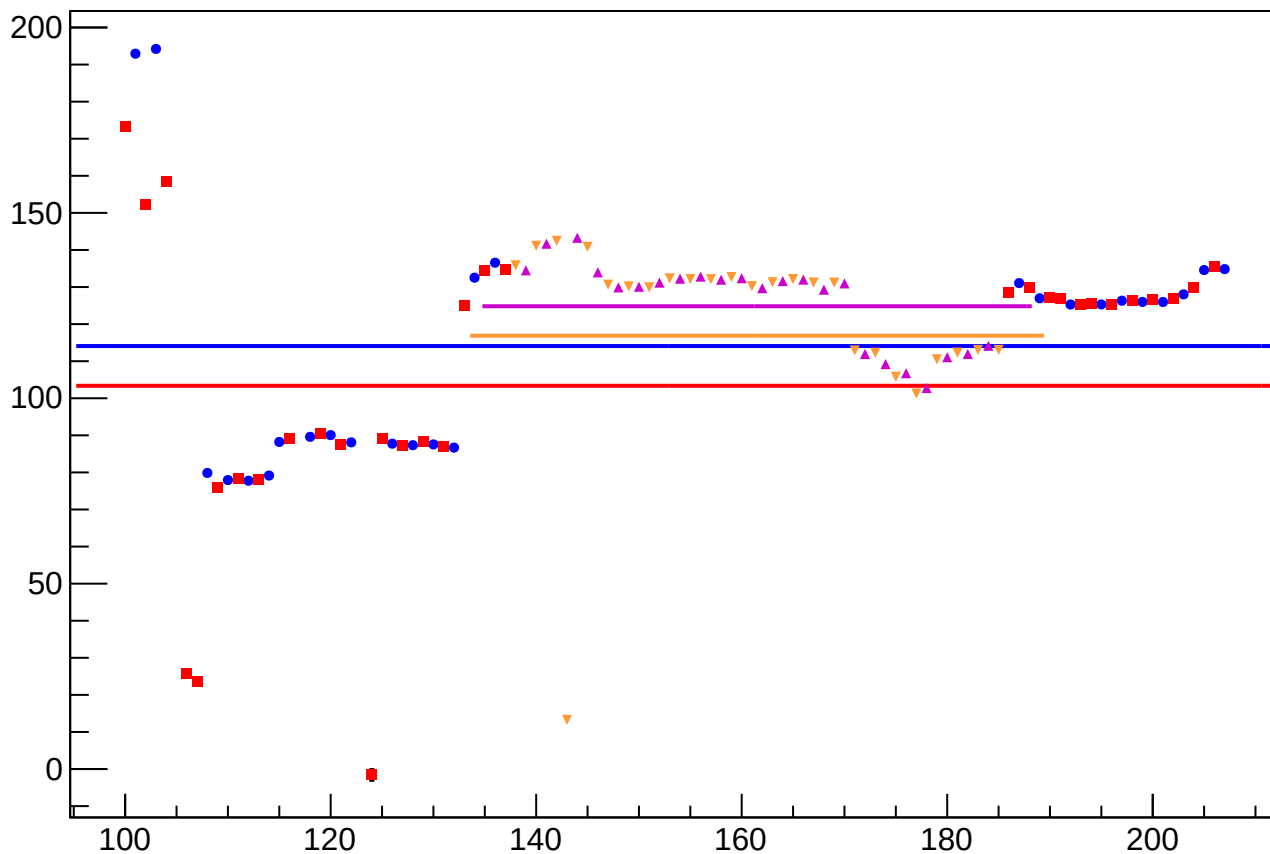
Left In: -77.288 $\pm$ 0.866  $\chi^2/\text{NDF}$ : 254.3/22

+ sign -66.606 $\pm$ 0.623  $\chi^2/\text{NDF}$ : 1591.6/50

All: -67.647 $\pm$ 0.445  $\chi^2/\text{NDF}$ : 2758.0/104

- sign -68.726 $\pm$ 0.635  $\chi^2/\text{NDF}$ : 1160.7/53

# reg\_asym\_atl\_dd\_diff\_bpm12X\_slope vs Slug



Right In: 114.083 $\pm$ 0.055  $\chi^2$ /NDF: 277451.2/25

Left Out: 116.881 $\pm$ 0.038  $\chi^2$ /NDF: 623110.0/24

Right Out: 103.364 $\pm$ 0.051  $\chi^2$ /NDF: 520775.2/30

Left In: 124.819 $\pm$ 0.039  $\chi^2$ /NDF: 88116.2/22

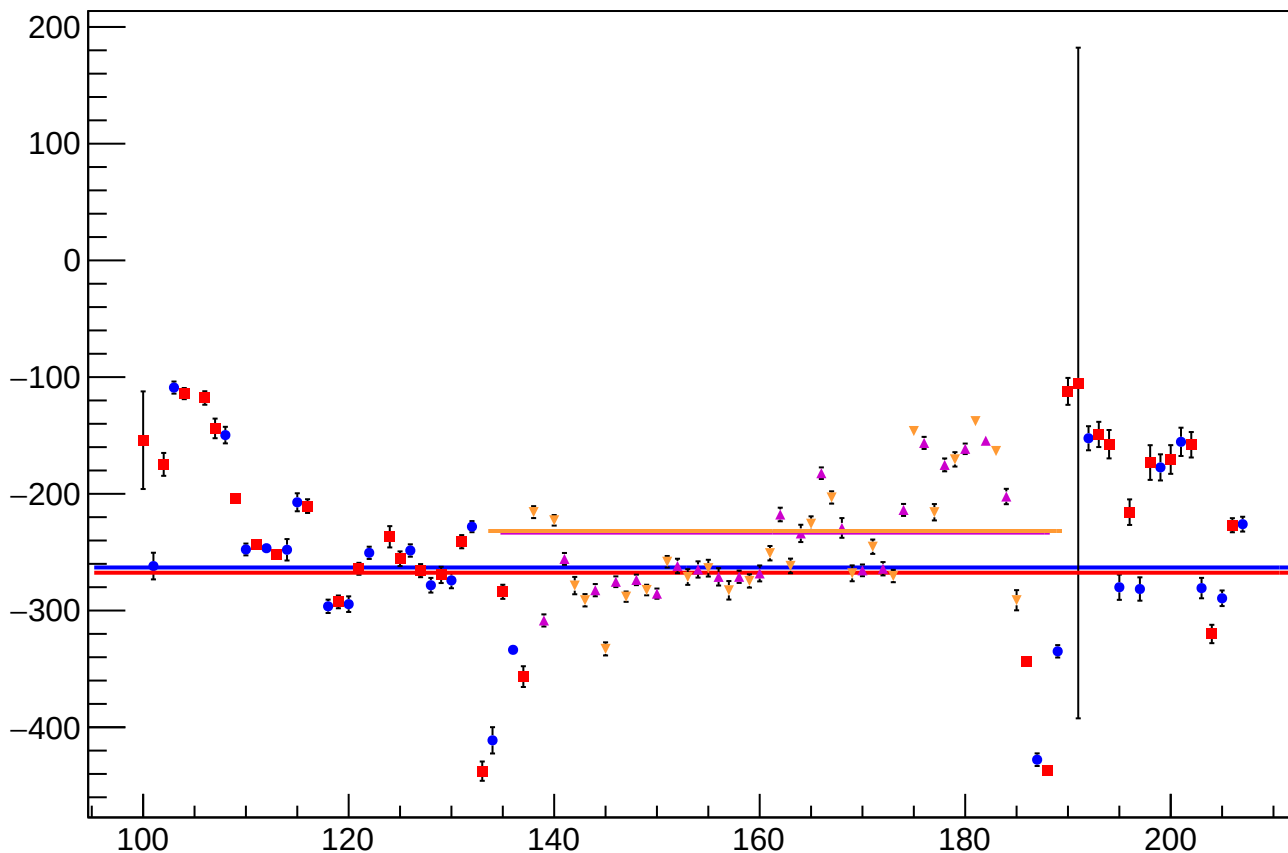
+ sign 115.983 $\pm$ 0.031  $\chi^2$ /NDF: 902291.9/50

All: 116.413 $\pm$ 0.022  $\chi^2$ /NDF: 1622274.5/104

- sign 116.837 $\pm$ 0.031  $\chi^2$ /NDF: 719610.3/53



# reg\_asym\_atr\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-263.103 \pm 1.235$   $\chi^2/\text{NDF}: 3229.9/25$

Left Out:  $-231.847 \pm 1.080$   $\chi^2/\text{NDF}: 2676.6/24$

Right Out:  $-267.597 \pm 1.092$   $\chi^2/\text{NDF}: 7508.3/30$

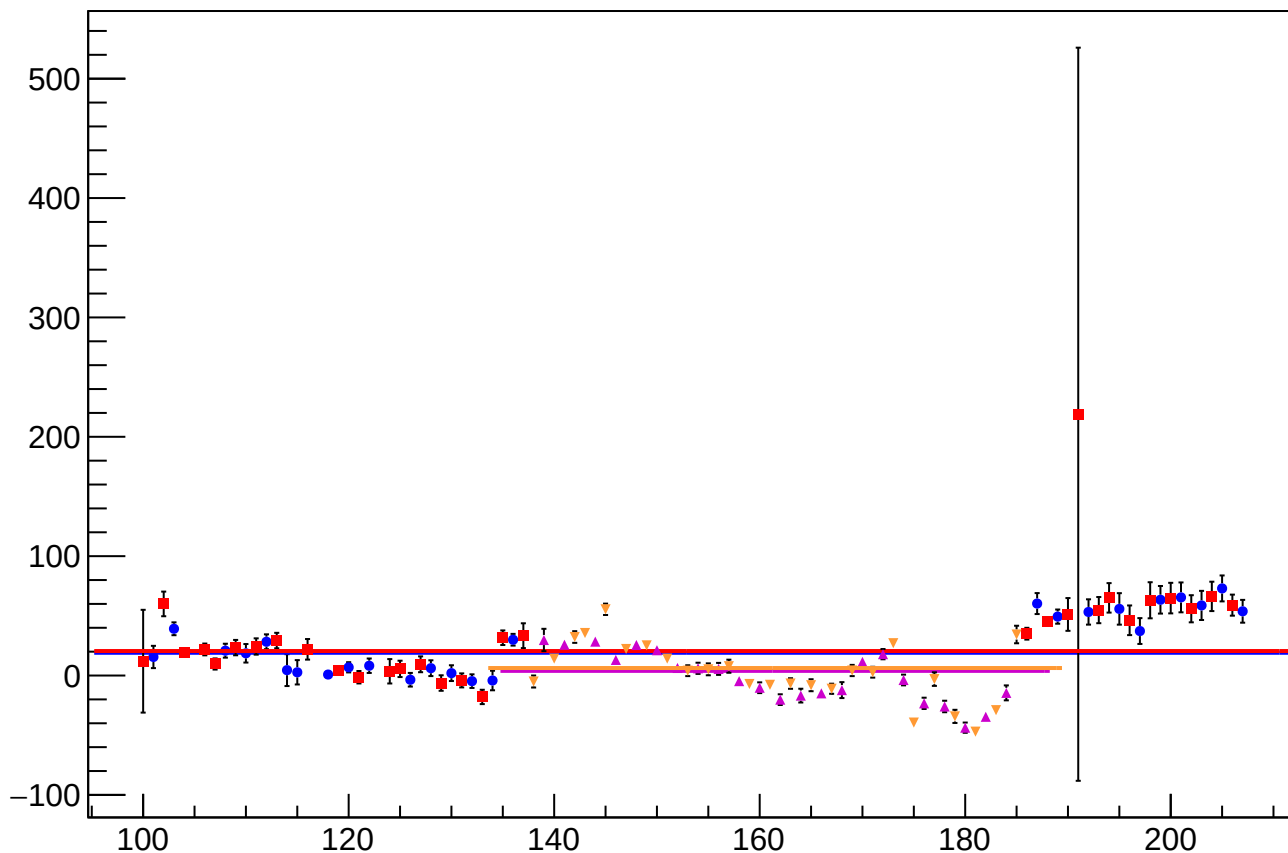
Left In:  $-233.258 \pm 1.108$   $\chi^2/\text{NDF}: 2067.0/22$

+ sign  $-245.398 \pm 0.813$   $\chi^2/\text{NDF}: 6269.5/50$

All:  $-248.148 \pm 0.562$   $\chi^2/\text{NDF}: 16353.9/104$

- sign  $-250.664 \pm 0.778$   $\chi^2/\text{NDF}: 10062.5/53$

# reg\_asym\_atr\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $19.072 \pm 1.328$   $\chi^2/\text{NDF}$ : 261.7/25

Left Out:  $6.288 \pm 0.789$   $\chi^2/\text{NDF}$ : 871.5/24

Right Out:  $20.523 \pm 1.193$   $\chi^2/\text{NDF}$ : 294.7/30

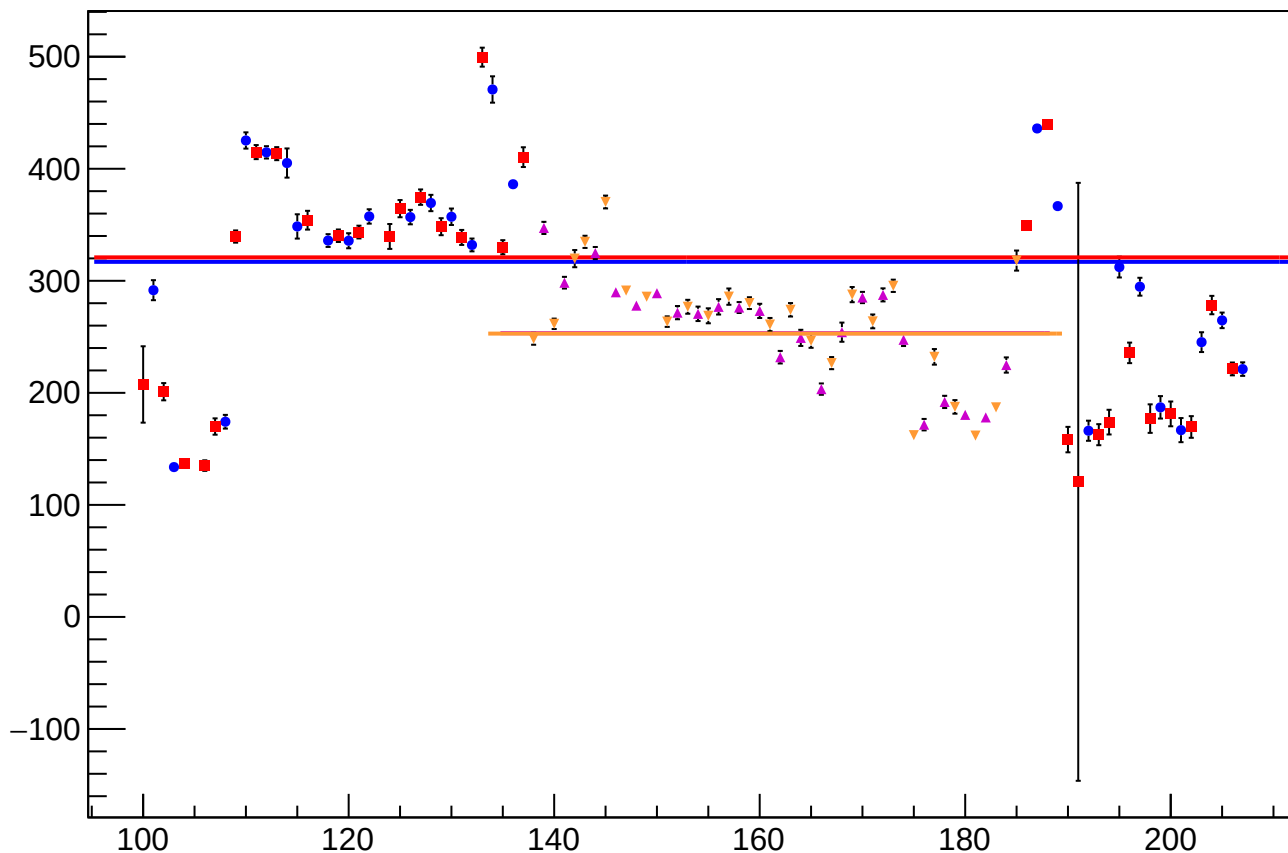
Left In:  $3.906 \pm 0.818$   $\chi^2/\text{NDF}$ : 650.3/22

+ sign  $9.624 \pm 0.678$   $\chi^2/\text{NDF}$ : 1201.6/50

All:  $9.421 \pm 0.478$   $\chi^2/\text{NDF}$ : 2278.8/104

- sign  $9.221 \pm 0.675$   $\chi^2/\text{NDF}$ : 1076.9/53

# reg\_asym\_atr\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $316.923 \pm 1.272$   $\chi^2/\text{NDF}$ : 5664.3/25

Left Out:  $252.886 \pm 1.070$   $\chi^2/\text{NDF}$ : 2579.0/24

Right Out:  $320.919 \pm 1.086$   $\chi^2/\text{NDF}$ : 10091.3/30

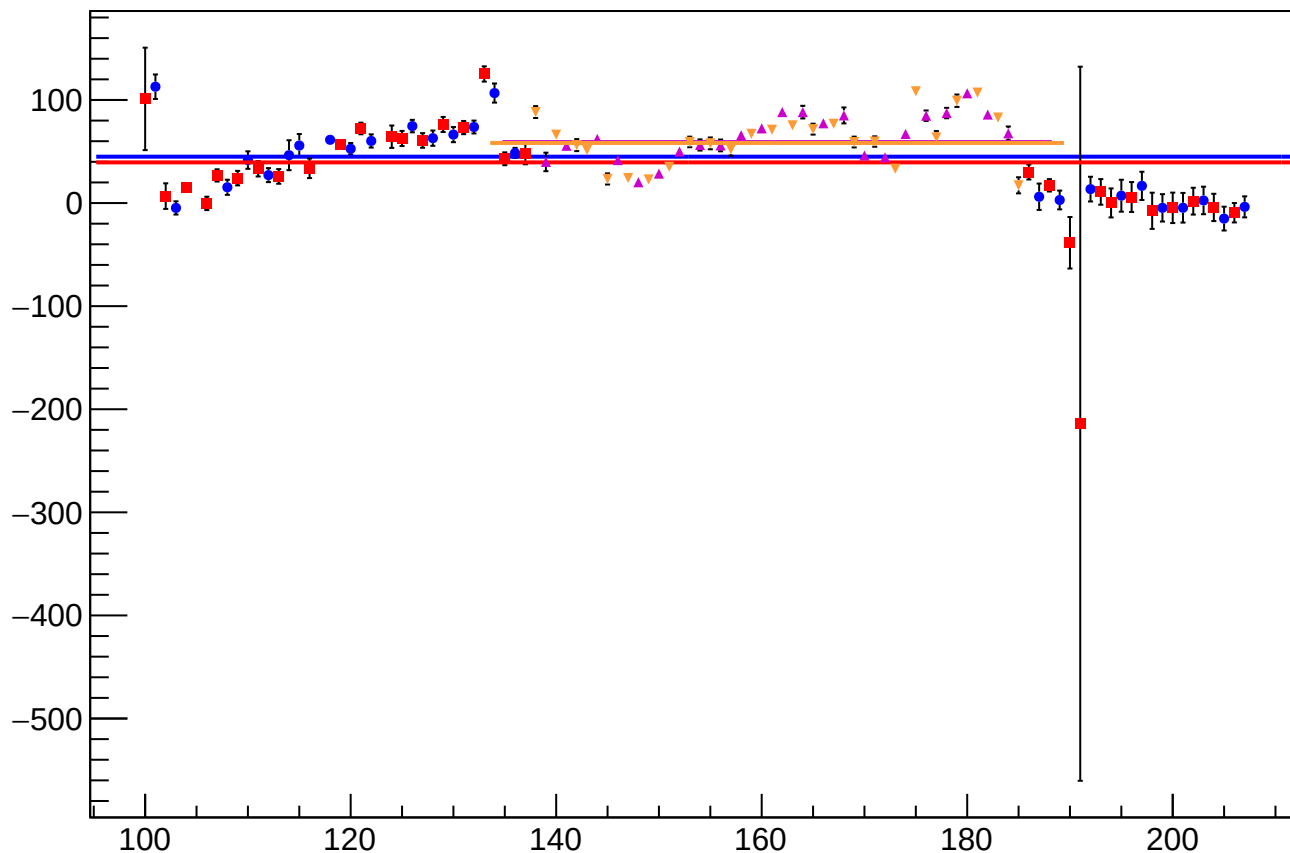
Left In:  $253.248 \pm 1.093$   $\chi^2/\text{NDF}$ : 2059.7/22

+ sign  $279.436 \pm 0.819$   $\chi^2/\text{NDF}$ : 9727.0/50

All:  $283.609 \pm 0.561$   $\chi^2/\text{NDF}$ : 23854.6/104

- sign  $287.304 \pm 0.771$   $\chi^2/\text{NDF}$ : 14078.6/53

# reg\_asym\_atr\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $44.992 \pm 1.554$   $\chi^2/\text{NDF}: 375.5/25$

Left Out:  $58.306 \pm 0.911$   $\chi^2/\text{NDF}: 850.2/24$

Right Out:  $39.451 \pm 1.430$   $\chi^2/\text{NDF}: 452.5/30$

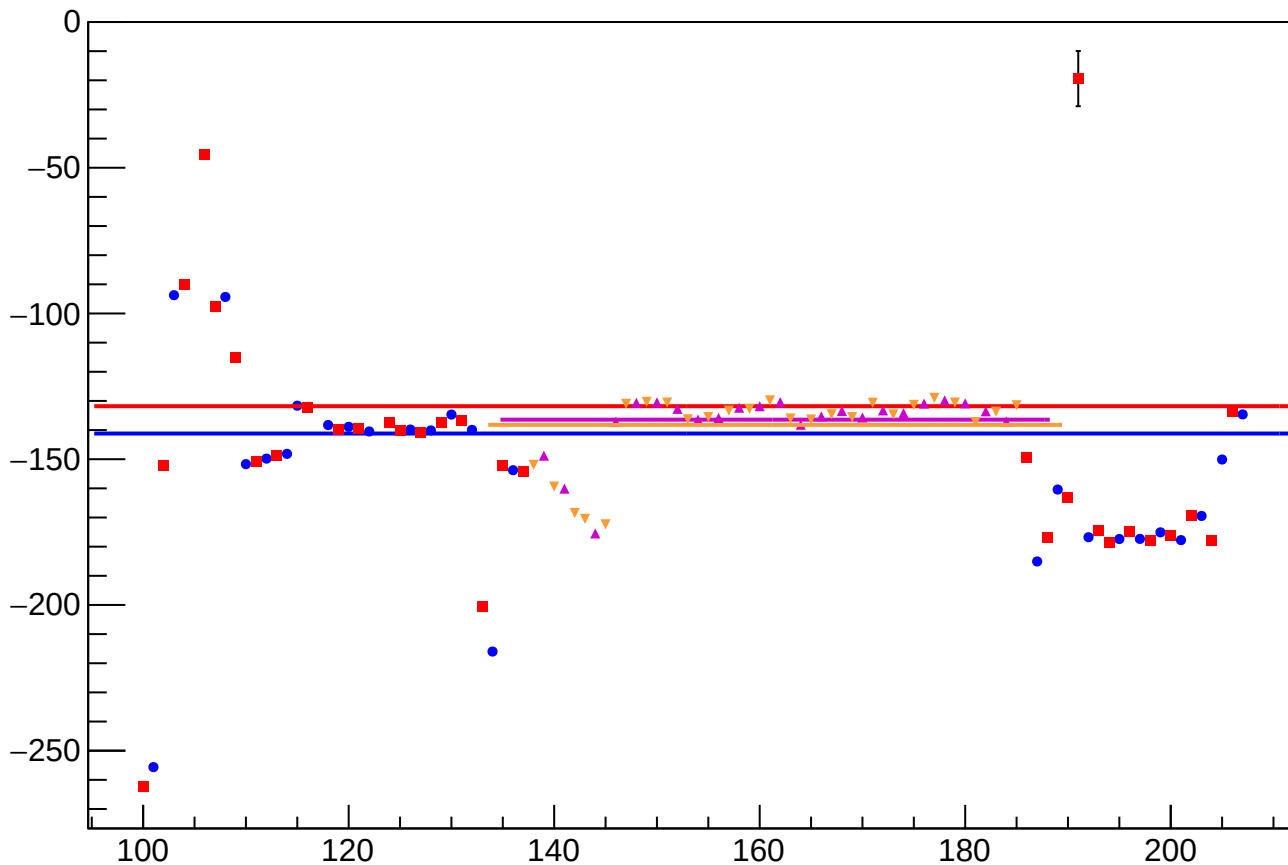
Left In:  $59.151 \pm 0.938$   $\chi^2/\text{NDF}: 632.4/22$

+ sign  $54.897 \pm 0.786$   $\chi^2/\text{NDF}: 1280.4/50$

All:  $54.057 \pm 0.555$   $\chi^2/\text{NDF}: 2500.3/104$

- sign  $53.220 \pm 0.785$   $\chi^2/\text{NDF}: 1217.6/53$

# reg\_asym\_atr\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-141.187 \pm 0.076$   $\chi^2/\text{NDF}: 234773.9/25$

Left Out:  $-138.218 \pm 0.042$   $\chi^2/\text{NDF}: 81828.6/24$

Right Out:  $-131.805 \pm 0.071$   $\chi^2/\text{NDF}: 332768.4/30$

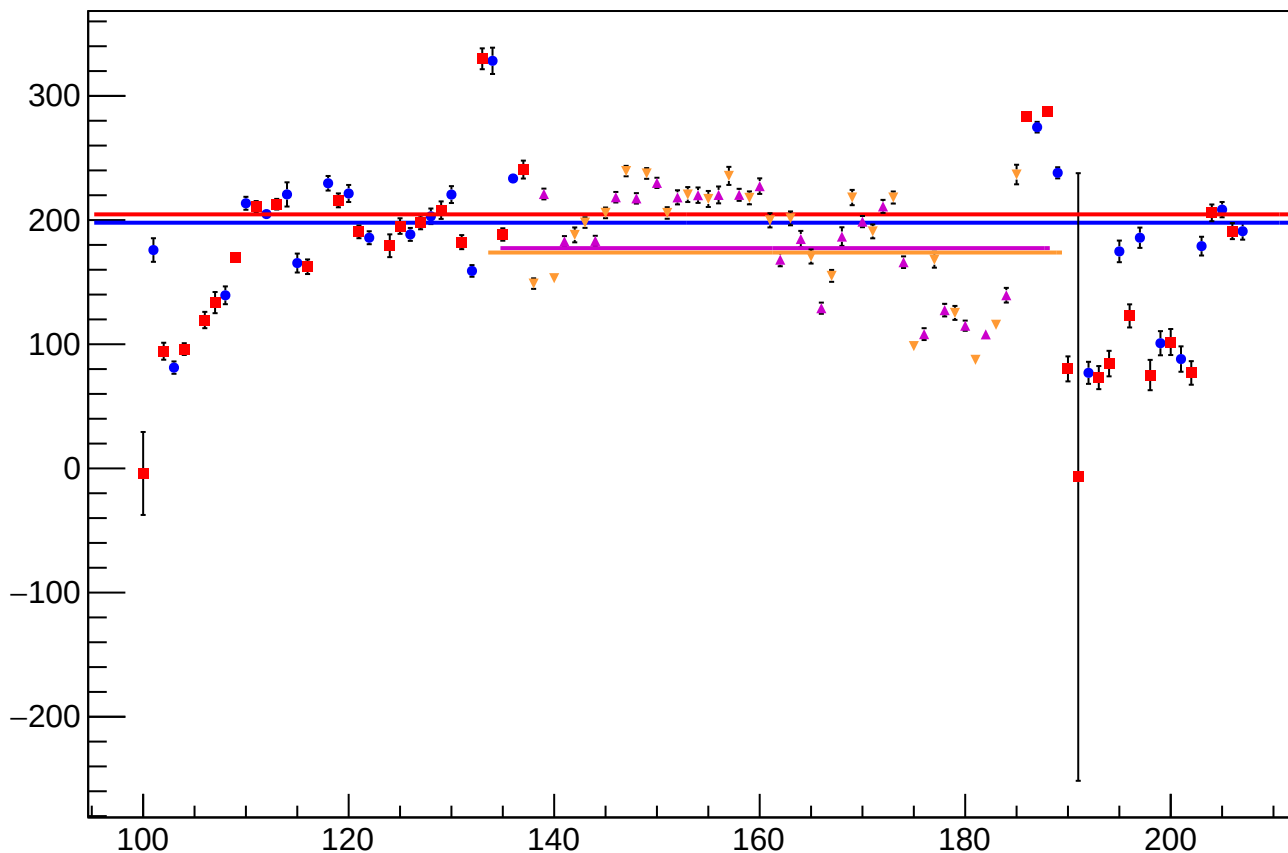
Left In:  $-136.429 \pm 0.043$   $\chi^2/\text{NDF}: 49792.9/22$

+ sign  $-138.920 \pm 0.037$   $\chi^2/\text{NDF}: 317756.6/50$

All:  $-137.043 \pm 0.026$   $\chi^2/\text{NDF}: 708451.1/104$

- sign  $-135.206 \pm 0.037$   $\chi^2/\text{NDF}: 385641.8/53$

# reg\_asym\_atr\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $197.877 \pm 1.166$   $\chi^2/\text{NDF}$ : 1863.3/25

Left Out:  $173.862 \pm 0.962$   $\chi^2/\text{NDF}$ : 2627.6/24

Right Out:  $204.599 \pm 1.026$   $\chi^2/\text{NDF}$ : 4197.8/30

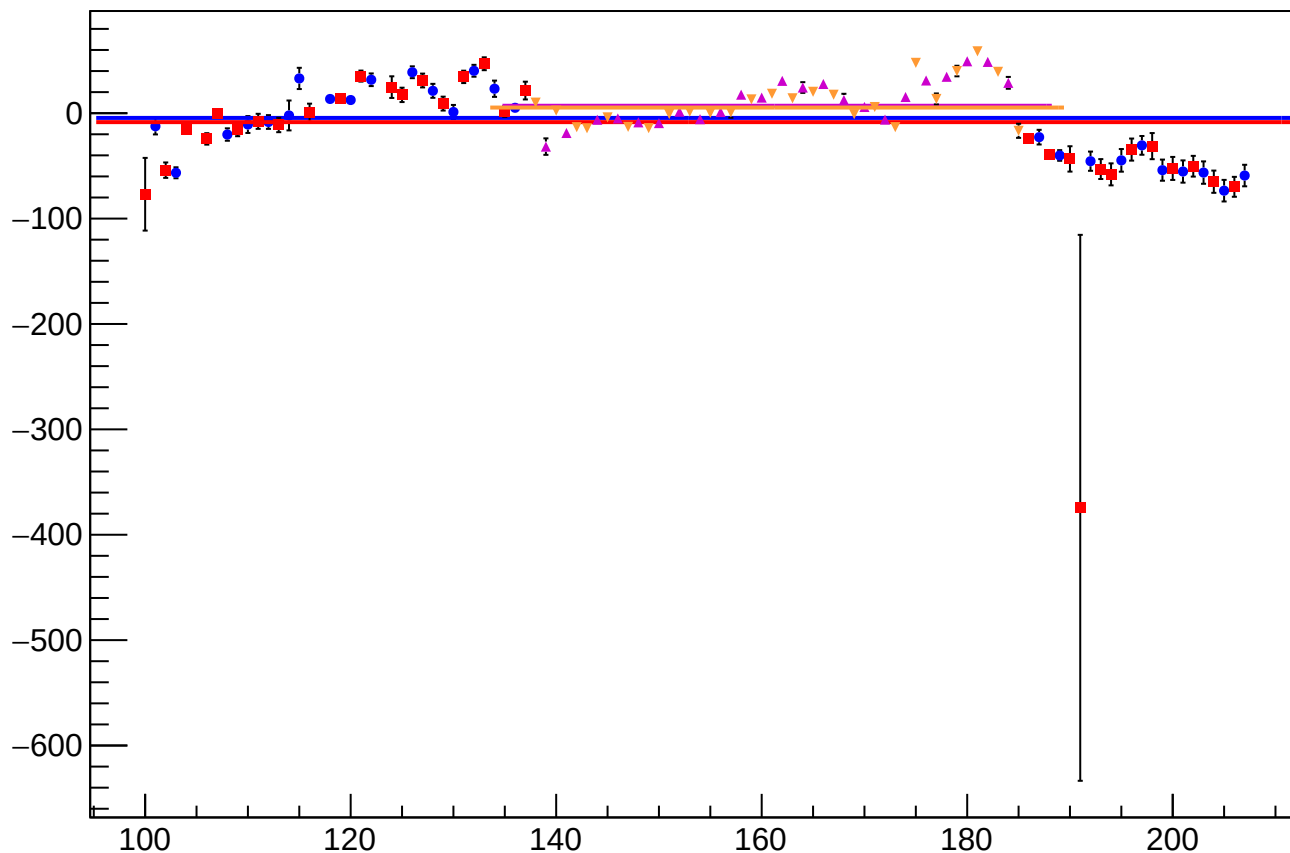
Left In:  $177.403 \pm 0.996$   $\chi^2/\text{NDF}$ : 1963.0/22

+ sign  $183.592 \pm 0.742$   $\chi^2/\text{NDF}$ : 4743.3/50

All:  $187.222 \pm 0.515$   $\chi^2/\text{NDF}$ : 11312.0/104

- sign  $190.588 \pm 0.715$   $\chi^2/\text{NDF}$ : 6522.6/53

# reg\_asym\_atr\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-4.465 \pm 1.269$   $\chi^2/\text{NDF}$ : 601.7/25

Left Out:  $5.363 \pm 0.710$   $\chi^2/\text{NDF}$ : 810.0/24

Right Out:  $-8.467 \pm 1.138$   $\chi^2/\text{NDF}$ : 661.7/30

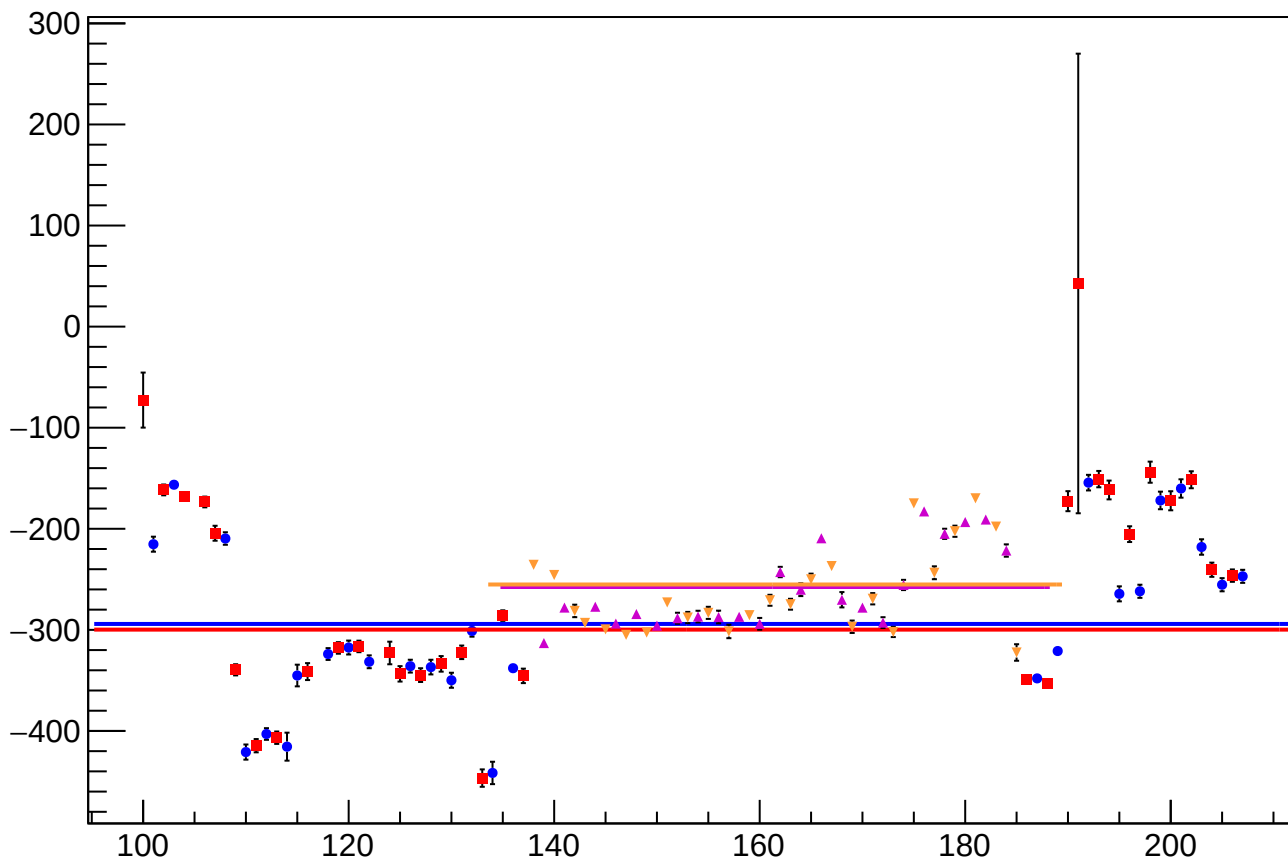
Left In:  $7.061 \pm 0.741$   $\chi^2/\text{NDF}$ : 709.7/22

+ sign  $3.019 \pm 0.620$   $\chi^2/\text{NDF}$ : 1457.3/50

All:  $2.726 \pm 0.439$   $\chi^2/\text{NDF}$ : 2959.9/104

- sign  $2.432 \pm 0.621$   $\chi^2/\text{NDF}$ : 1502.1/53

# reg\_asym\_atr\_dd\_diff\_bpm4eX\_slope vs Slug



Right In: -294.151 $\pm$ 1.172  $\chi^2/\text{NDF}$ : 4078.8/25

Left Out: -255.122 $\pm$ 0.956  $\chi^2/\text{NDF}$ : 2344.8/24

Right Out: -299.763 $\pm$ 0.991  $\chi^2/\text{NDF}$ : 6702.8/30

Left In: -257.600 $\pm$ 0.985  $\chi^2/\text{NDF}$ : 1808.1/22

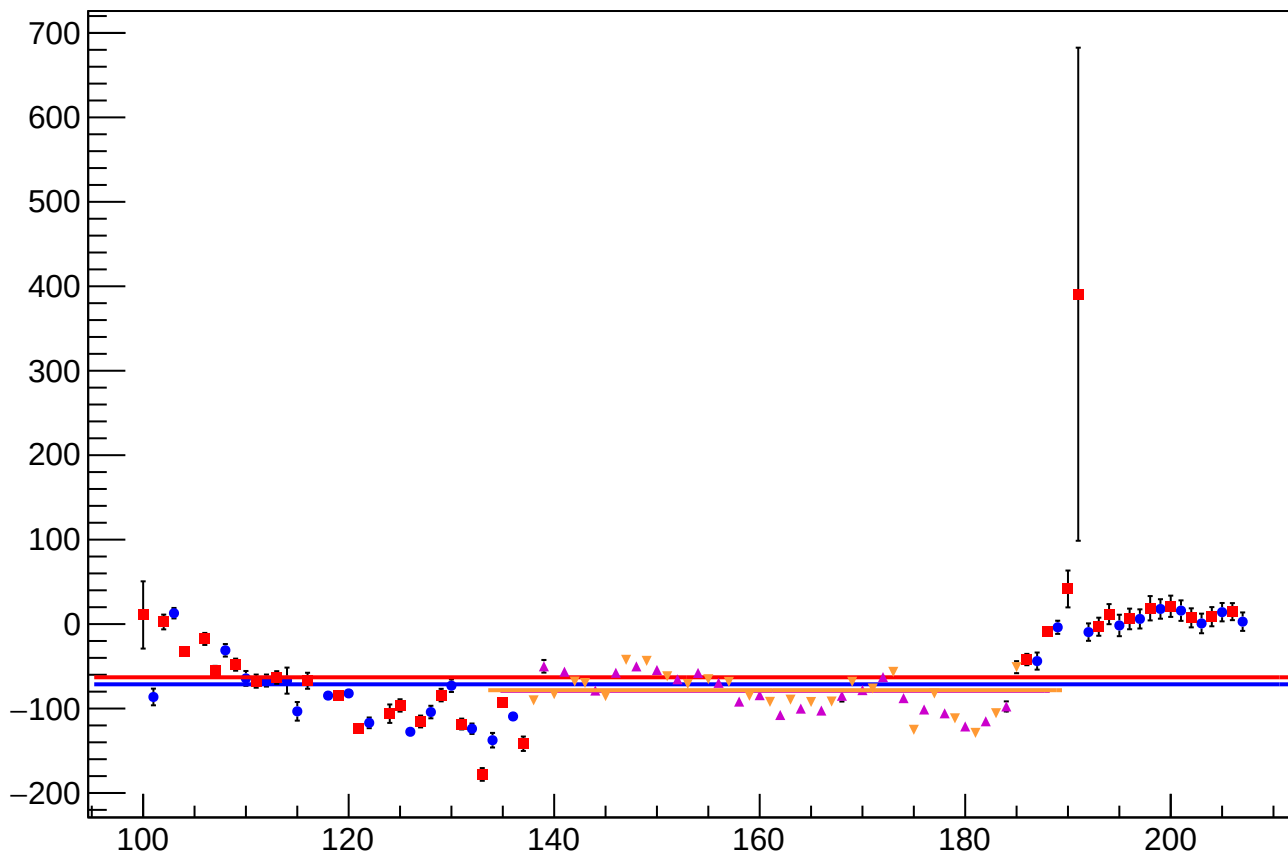
+ sign -270.728 $\pm$ 0.741  $\chi^2/\text{NDF}$ : 7089.7/50

All: -274.868 $\pm$ 0.508  $\chi^2/\text{NDF}$ : 16570.2/104

- sign -278.549 $\pm$ 0.699  $\chi^2/\text{NDF}$ : 9421.5/53



# reg\_asym\_atr\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-71.313 \pm 1.485$   $\chi^2/\text{NDF}: 1068.0/25$

Left Out:  $-78.292 \pm 0.819$   $\chi^2/\text{NDF}: 868.2/24$

Right Out:  $-63.003 \pm 1.370$   $\chi^2/\text{NDF}: 1288.7/30$

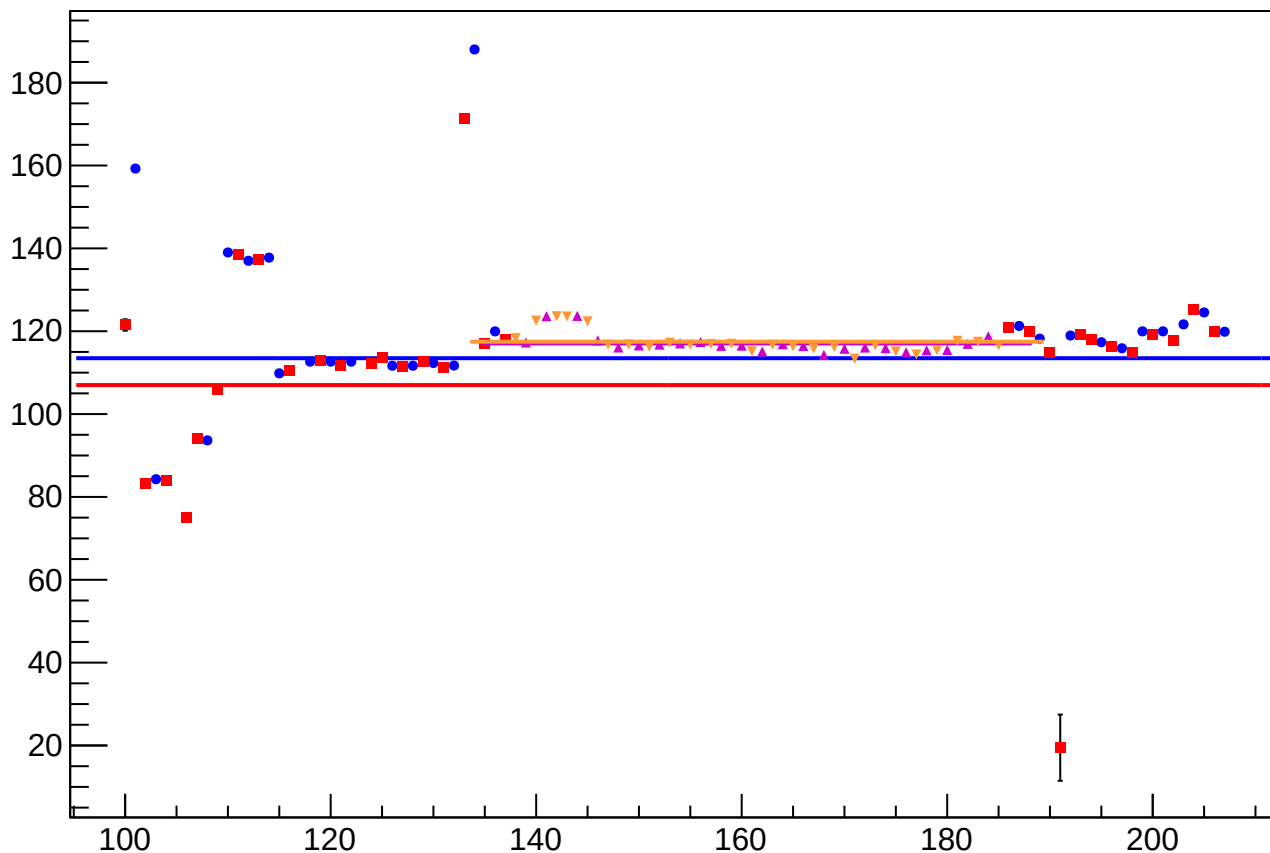
Left In:  $-79.066 \pm 0.849$   $\chi^2/\text{NDF}: 702.6/22$

+ sign  $-76.666 \pm 0.717$   $\chi^2/\text{NDF}: 1953.1/50$

All:  $-75.645 \pm 0.509$   $\chi^2/\text{NDF}: 4047.8/104$

- sign  $-74.610 \pm 0.722$   $\chi^2/\text{NDF}: 2090.7/53$

# reg\_asym\_atr\_dd\_diff\_bpm12X\_slope vs Slug



Right In: 113.485 $\pm$ 0.071  $\chi^2$ /NDF: 87159.1/25

Left Out: 117.477 $\pm$ 0.038  $\chi^2$ /NDF: 4739.3/24

Right Out: 107.001 $\pm$ 0.066  $\chi^2$ /NDF: 79025.3/30

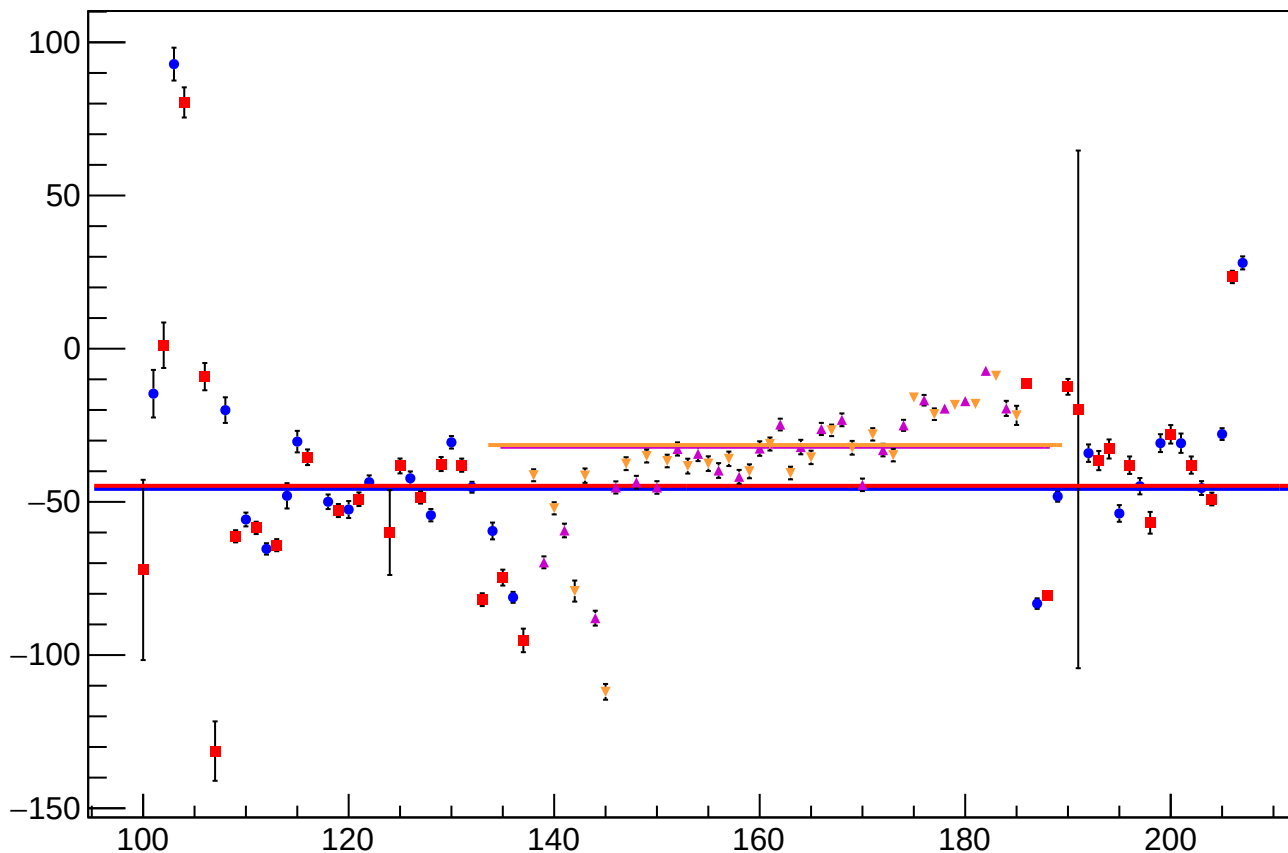
Left In: 117.046 $\pm$ 0.039  $\chi^2$ /NDF: 3343.0/22

+ sign 116.580 $\pm$ 0.033  $\chi^2$ /NDF: 94375.9/50

All: 115.523 $\pm$ 0.024  $\chi^2$ /NDF: 196049.7/104

- sign 114.476 $\pm$ 0.033  $\chi^2$ /NDF: 99687.7/53

# reg\_asym\_at1\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-45.754 \pm 0.463$   $\chi^2/\text{NDF}$ : 3204.4/25

Left Out:  $-31.452 \pm 0.399$   $\chi^2/\text{NDF}$ : 1992.2/24

Right Out:  $-44.762 \pm 0.412$   $\chi^2/\text{NDF}$ : 5386.4/30

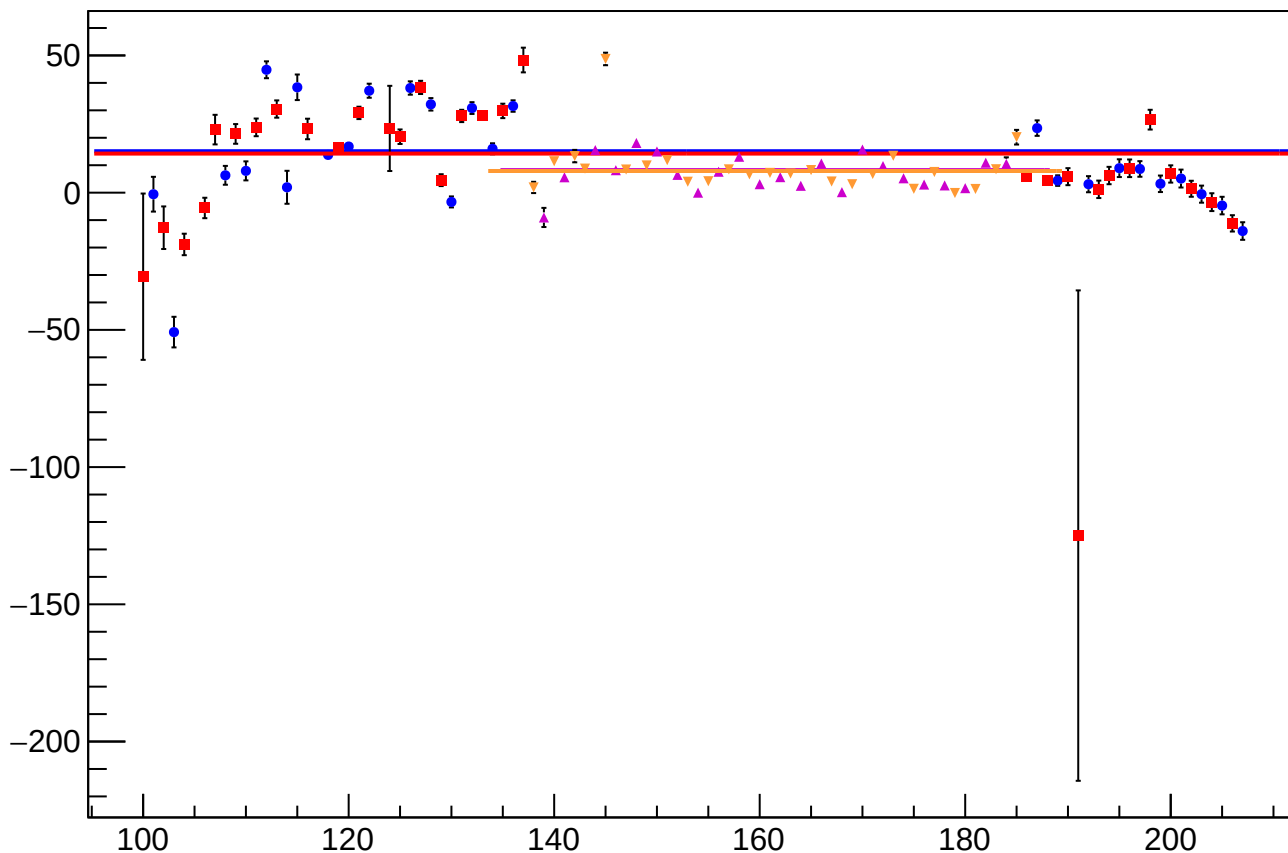
Left In:  $-32.015 \pm 0.409$   $\chi^2/\text{NDF}$ : 1913.4/22

+ sign  $-37.542 \pm 0.302$   $\chi^2/\text{NDF}$ : 5744.0/50

All:  $-37.962 \pm 0.209$   $\chi^2/\text{NDF}$ : 13529.9/104

- sign  $-38.349 \pm 0.290$   $\chi^2/\text{NDF}$ : 7782.2/53

# reg\_asym\_at1\_avg\_diff\_bpm4aY\_slope vs Slug



Right In: 15.104 $\pm$ 0.506  $\chi^2$ /NDF: 938.7/25

Left Out: 7.897 $\pm$ 0.304  $\chi^2$ /NDF: 490.5/24

Right Out: 14.238 $\pm$ 0.466  $\chi^2$ /NDF: 812.8/30

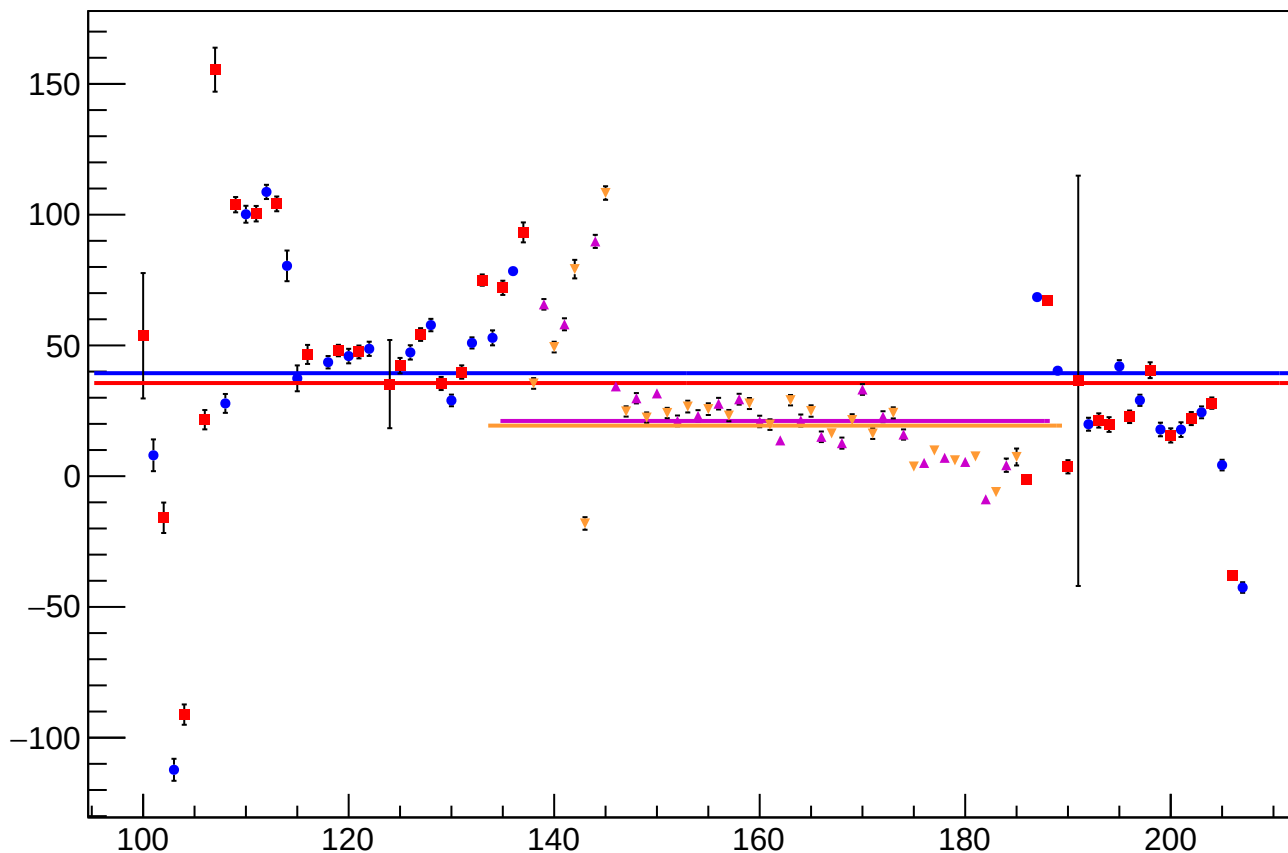
Left In: 8.223 $\pm$ 0.316  $\chi^2$ /NDF: 338.8/22

+ sign 9.807 $\pm$ 0.261  $\chi^2$ /NDF: 1578.4/50

All: 9.960 $\pm$ 0.184  $\chi^2$ /NDF: 2844.9/104

- sign 10.114 $\pm$ 0.261  $\chi^2$ /NDF: 1265.8/53

# reg\_asym\_at1\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $39.387 \pm 0.470$   $\chi^2/\text{NDF}: 5627.7/25$

Left Out:  $19.339 \pm 0.396$   $\chi^2/\text{NDF}: 2682.4/24$

Right Out:  $35.615 \pm 0.394$   $\chi^2/\text{NDF}: 9108.5/30$

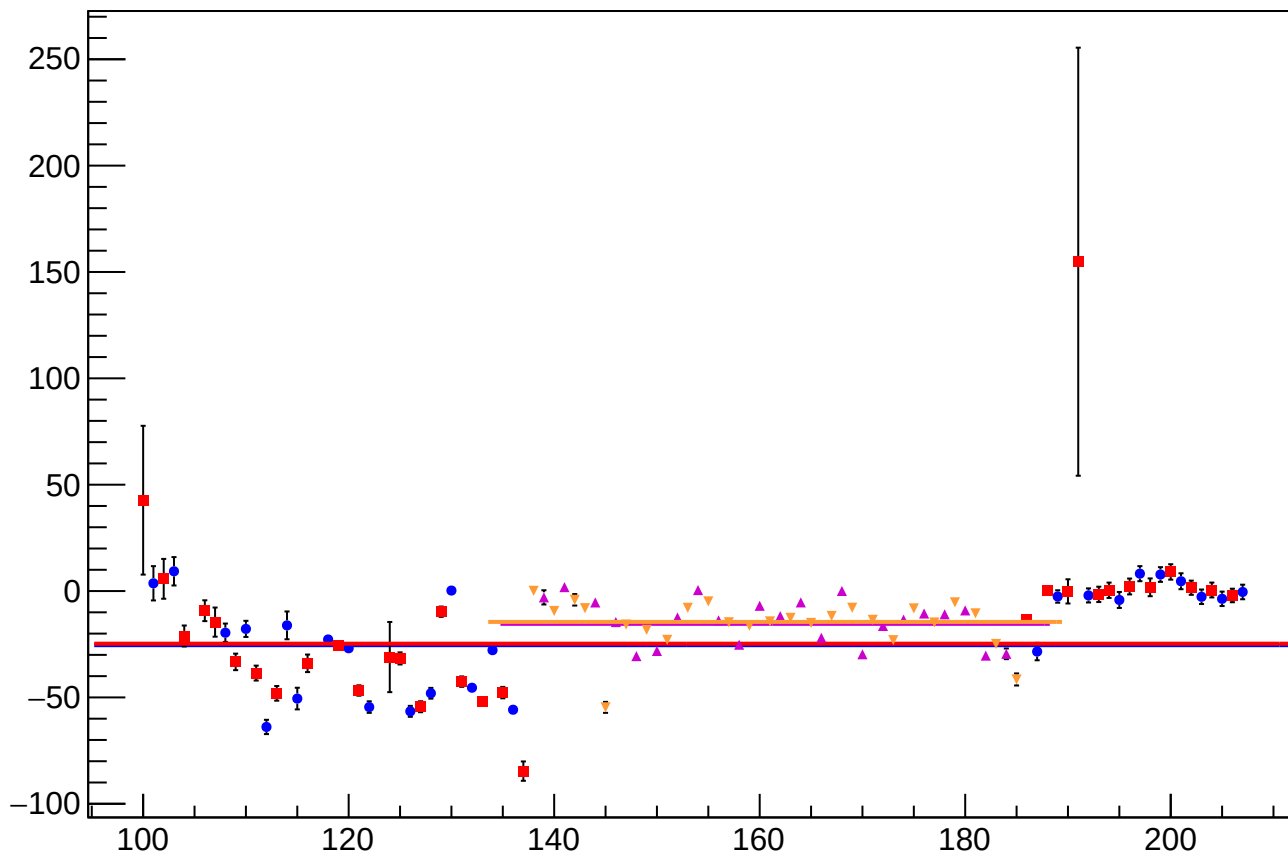
Left In:  $21.124 \pm 0.405$   $\chi^2/\text{NDF}: 2504.8/22$

+ sign  $27.660 \pm 0.303$   $\chi^2/\text{NDF}: 9376.2/50$

All:  $28.143 \pm 0.206$   $\chi^2/\text{NDF}: 21652.2/104$

- sign  $28.563 \pm 0.282$   $\chi^2/\text{NDF}: 12271.2/53$

# reg\_asym\_at1\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $-25.444 \pm 0.590$   $\chi^2/\text{NDF}$ : 1493.0/25

Left Out:  $-14.502 \pm 0.344$   $\chi^2/\text{NDF}$ : 641.0/24

Right Out:  $-24.739 \pm 0.565$   $\chi^2/\text{NDF}$ : 1505.6/30

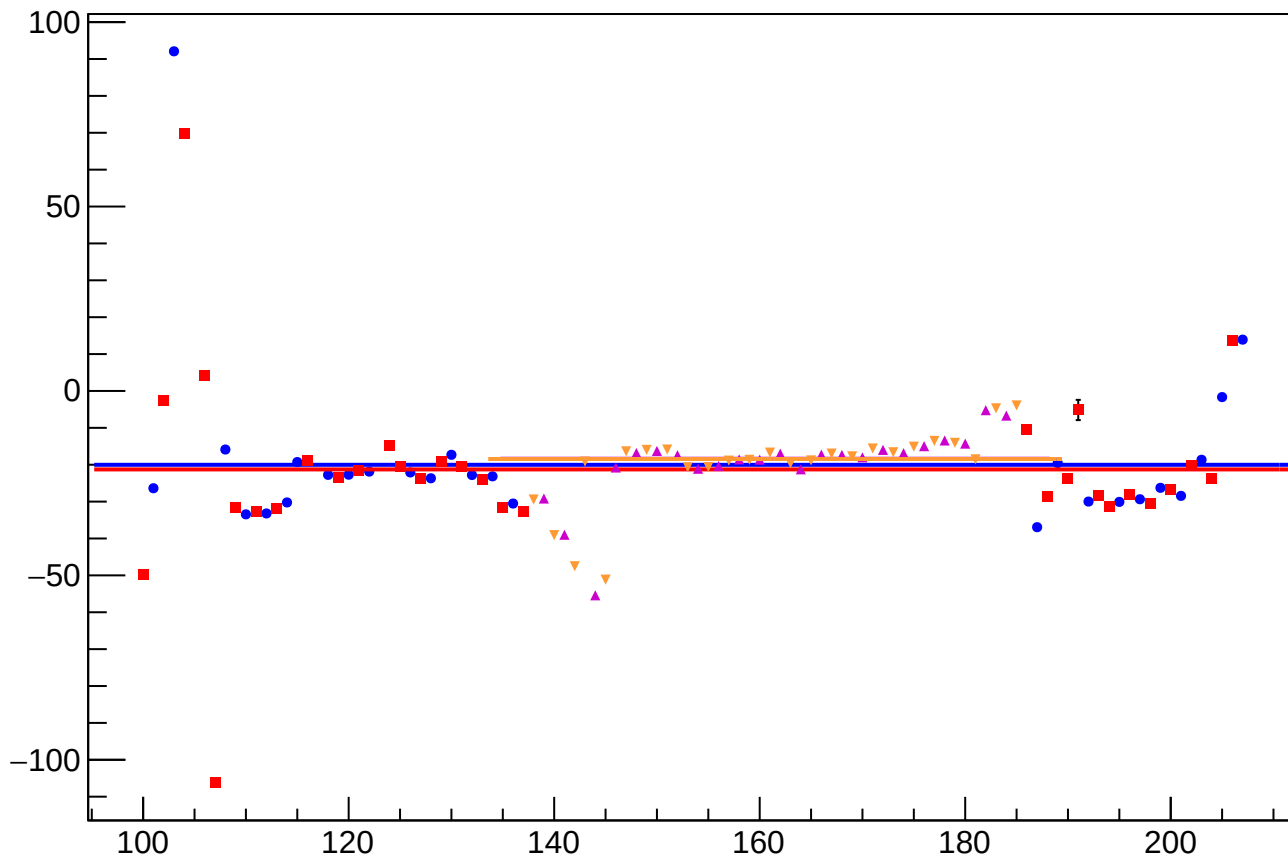
Left In:  $-15.417 \pm 0.355$   $\chi^2/\text{NDF}$ : 798.7/22

+ sign  $-17.276 \pm 0.297$   $\chi^2/\text{NDF}$ : 2390.6/50

All:  $-17.664 \pm 0.211$   $\chi^2/\text{NDF}$ : 4893.6/104

- sign  $-18.061 \pm 0.301$   $\chi^2/\text{NDF}$ : 2499.6/53

# reg\_asym\_at1\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-20.023 \pm 0.029$   $\chi^2/\text{NDF}$ : 549638.4/25

Left Out:  $-18.450 \pm 0.015$   $\chi^2/\text{NDF}$ : 295359.2/24

Right Out:  $-21.274 \pm 0.028$   $\chi^2/\text{NDF}$ : 466225.8/30

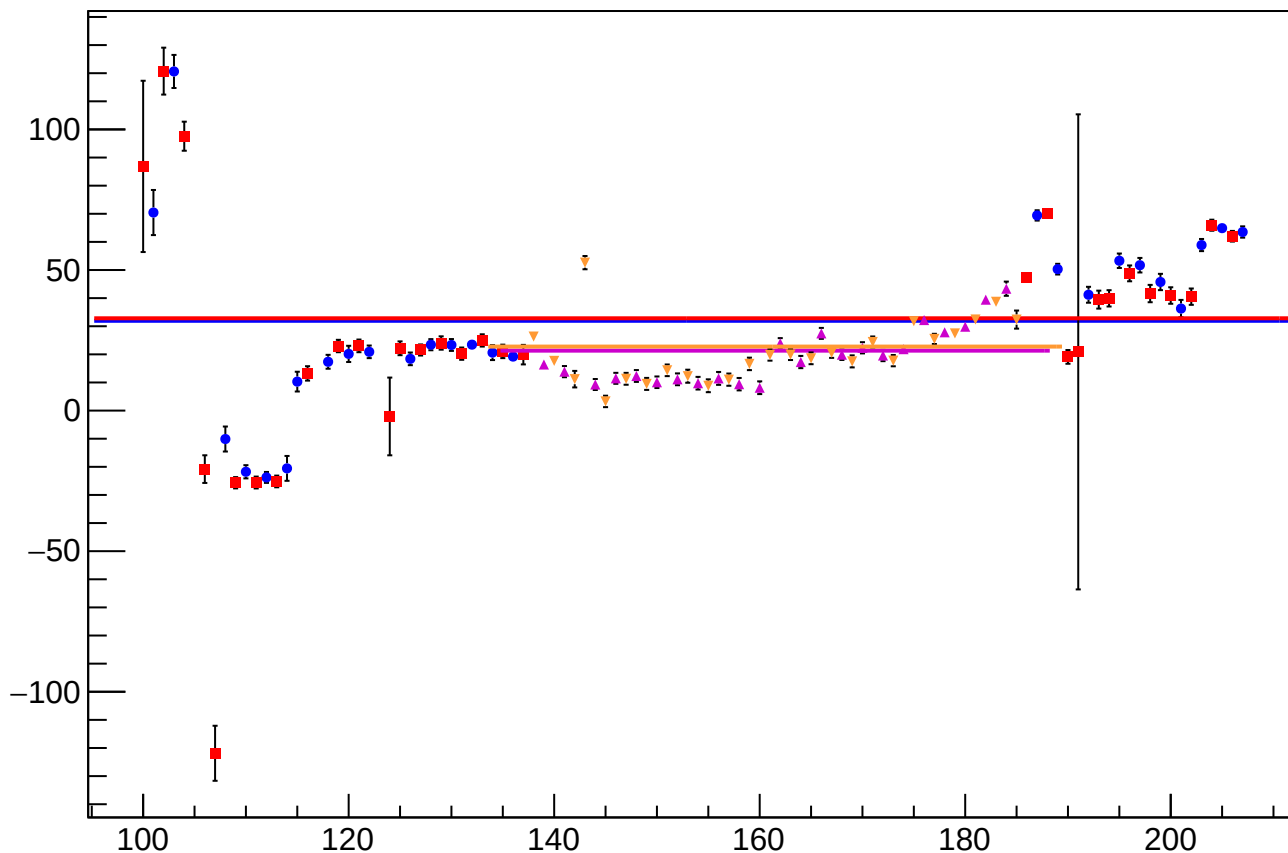
Left In:  $-18.378 \pm 0.016$   $\chi^2/\text{NDF}$ : 250040.9/22

+ sign  $-18.803 \pm 0.014$   $\chi^2/\text{NDF}$ : 847317.1/50

All:  $-18.937 \pm 0.010$   $\chi^2/\text{NDF}$ : 1571887.6/104

- sign  $-19.073 \pm 0.014$   $\chi^2/\text{NDF}$ : 724376.0/53

# reg\_asym\_at1\_dd\_diff\_bpm1X\_slope vs Slug



Right In: 31.943 $\pm$ 0.464  $\chi^2$ /NDF: 3519.9/25

Left Out: 22.766 $\pm$ 0.383  $\chi^2$ /NDF: 722.8/24

Right Out: 32.828 $\pm$ 0.426  $\chi^2$ /NDF: 5230.4/30

Left In: 21.325 $\pm$ 0.393  $\chi^2$ /NDF: 629.9/22

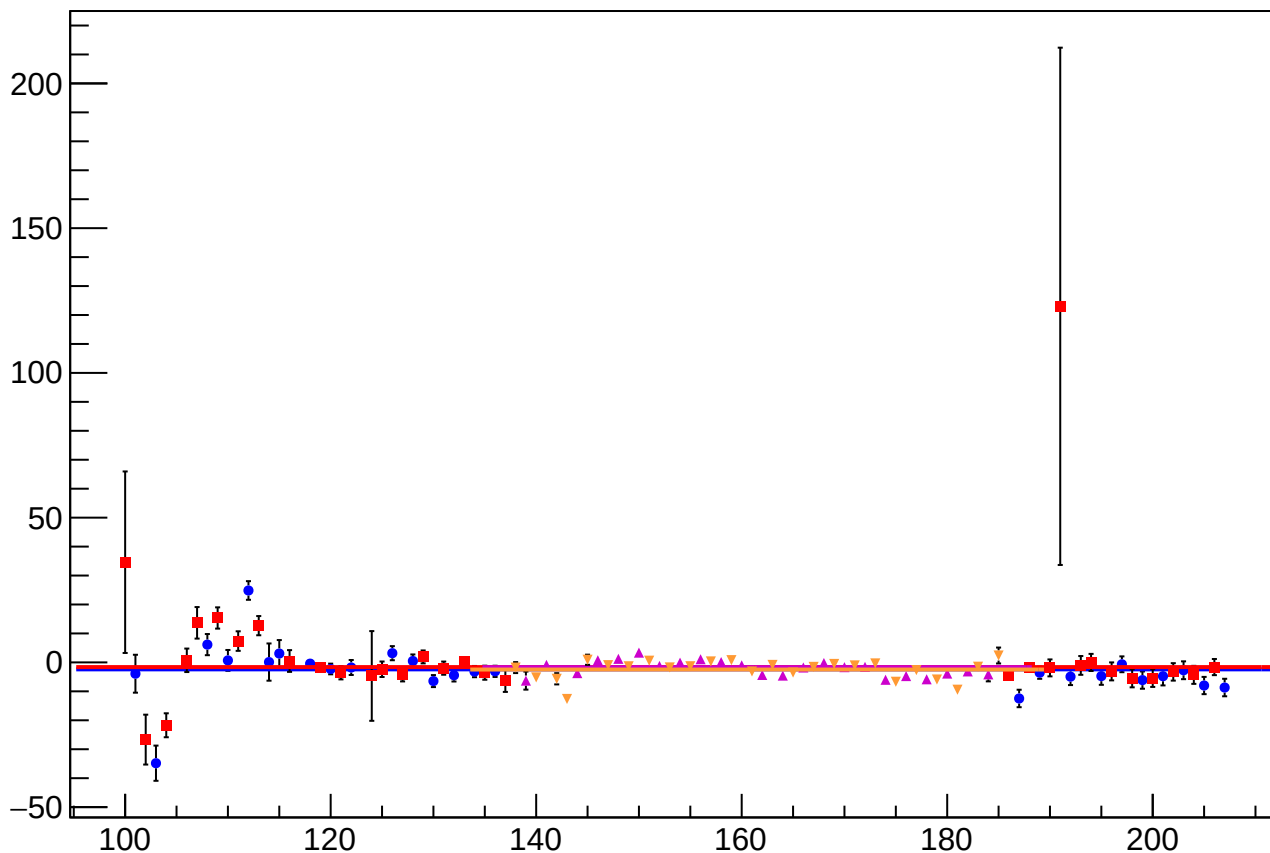
+ sign 26.480 $\pm$ 0.295  $\chi^2$ /NDF: 4475.4/50

All: 26.545 $\pm$ 0.206  $\chi^2$ /NDF: 10729.8/104

- sign 26.607 $\pm$ 0.289  $\chi^2$ /NDF: 6254.2/53



# reg\_asym\_at1\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-2.407 \pm 0.510$   $\chi^2/\text{NDF}$ : 144.7/25

Left Out:  $-2.468 \pm 0.293$   $\chi^2/\text{NDF}$ : 116.7/24

Right Out:  $-1.625 \pm 0.482$   $\chi^2/\text{NDF}$ : 106.4/30

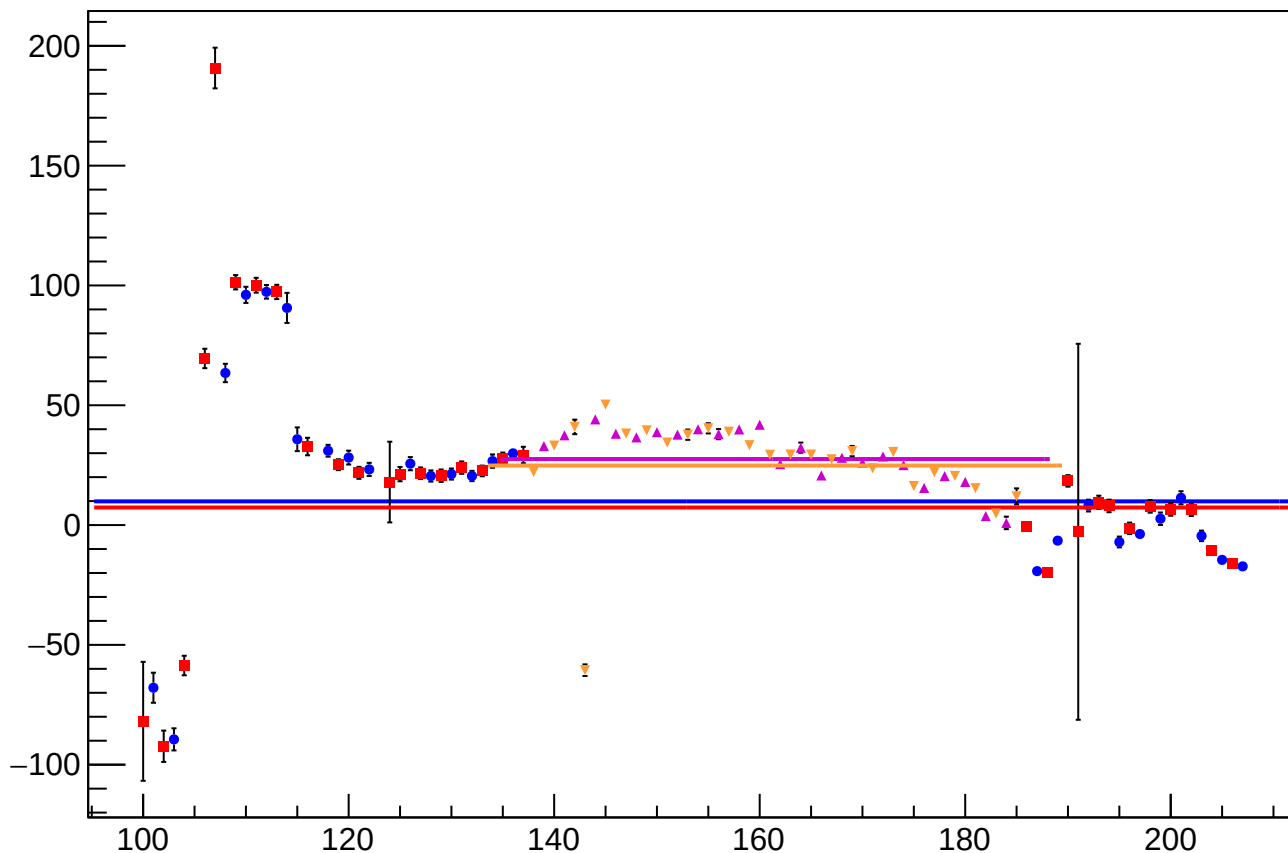
Left In:  $-1.659 \pm 0.304$   $\chi^2/\text{NDF}$ : 70.2/22

+ sign  $-2.453 \pm 0.254$   $\chi^2/\text{NDF}$ : 261.4/50

All:  $-2.056 \pm 0.181$   $\chi^2/\text{NDF}$ : 442.9/104

- sign  $-1.650 \pm 0.257$   $\chi^2/\text{NDF}$ : 176.6/53

# reg\_asym\_at1\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $9.891 \pm 0.472$   $\chi^2/\text{NDF}$ : 4010.6/25

Left Out:  $24.850 \pm 0.380$   $\chi^2/\text{NDF}$ : 2048.7/24

Right Out:  $7.329 \pm 0.414$   $\chi^2/\text{NDF}$ : 5746.2/30

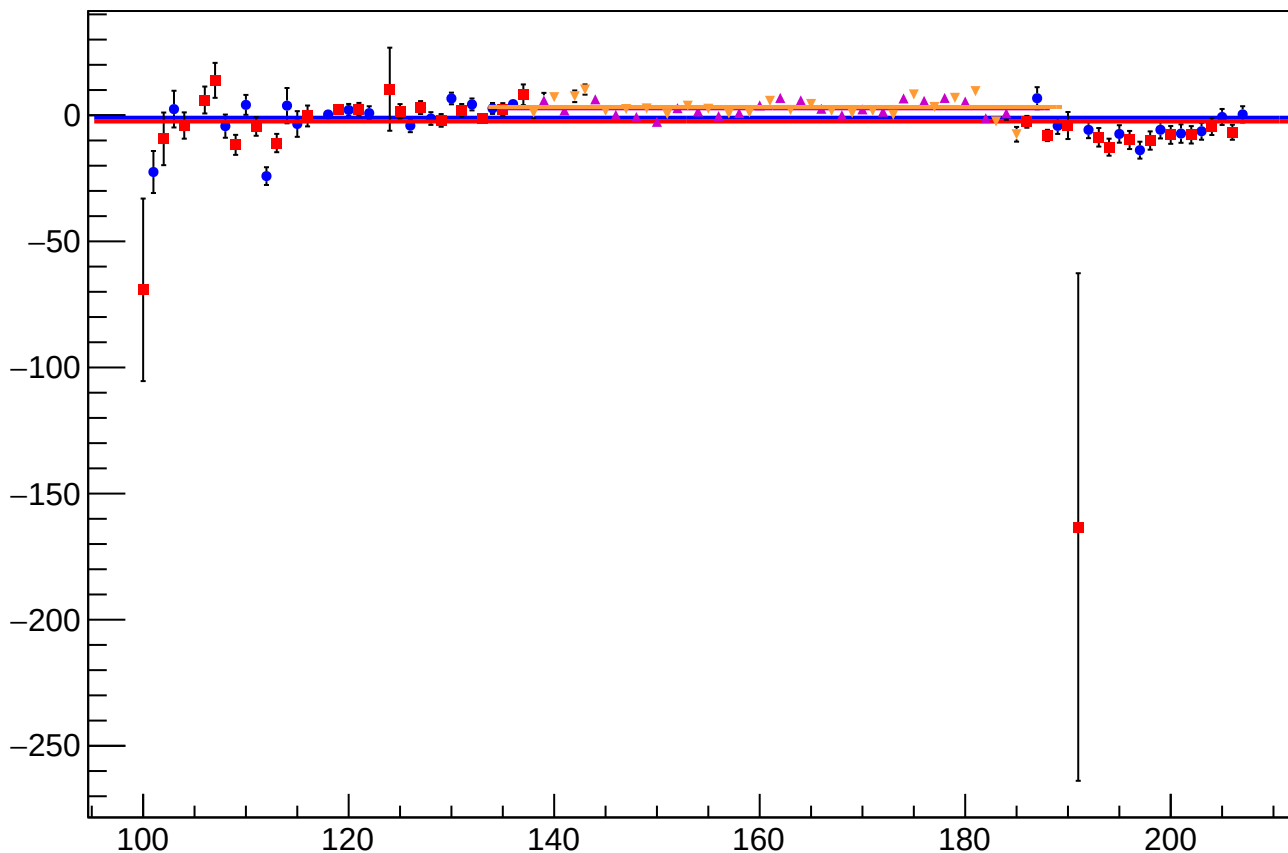
Left In:  $27.551 \pm 0.389$   $\chi^2/\text{NDF}$ : 881.9/22

+ sign  $18.976 \pm 0.296$   $\chi^2/\text{NDF}$ : 6668.5/50

All:  $18.506 \pm 0.205$   $\chi^2/\text{NDF}$ : 14568.7/104

- sign  $18.074 \pm 0.283$   $\chi^2/\text{NDF}$ : 7895.4/53

# reg\_asym\_at1\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-0.971 \pm 0.590$   $\chi^2/\text{NDF}$ : 115.7/25

Left Out:  $3.287 \pm 0.331$   $\chi^2/\text{NDF}$ : 106.3/24

Right Out:  $-2.485 \pm 0.577$   $\chi^2/\text{NDF}$ : 91.2/30

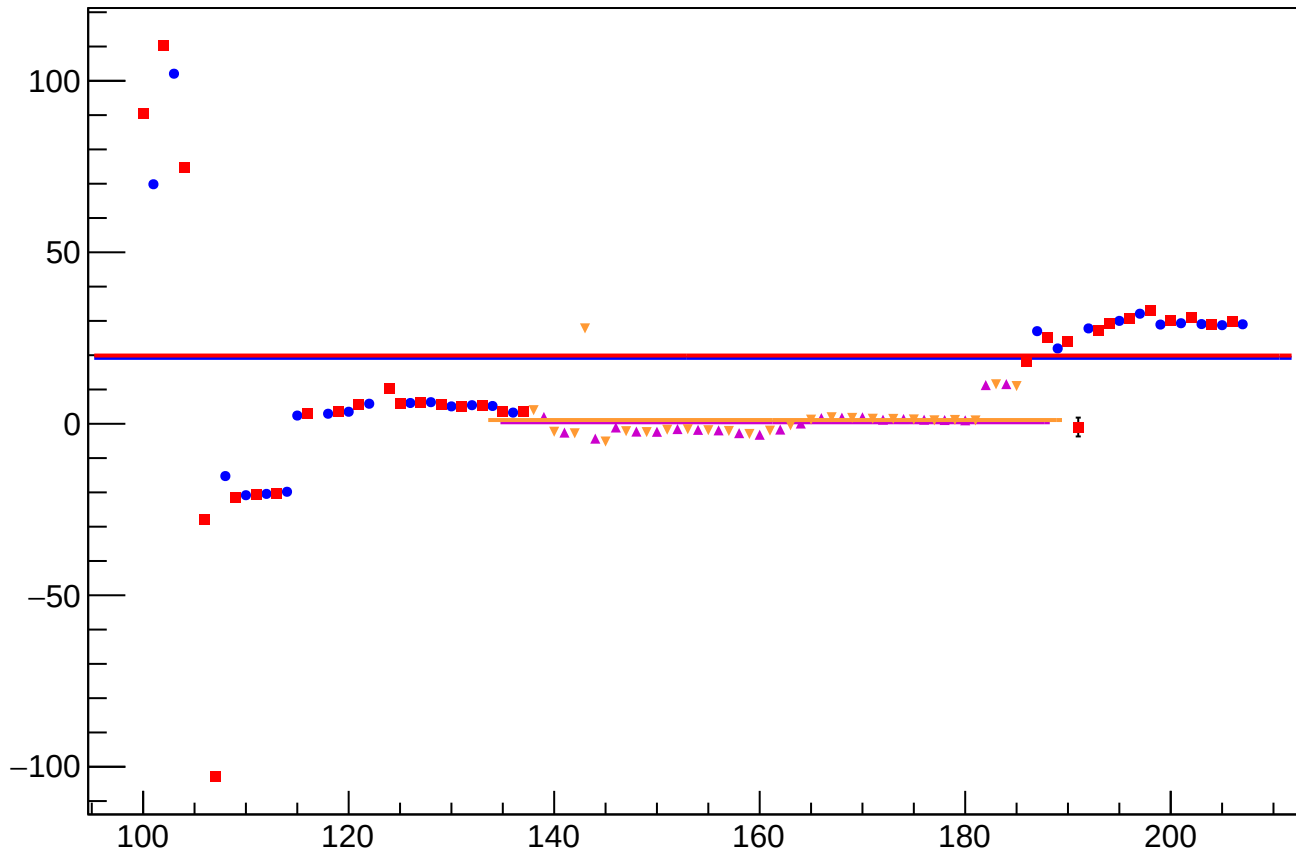
Left In:  $2.730 \pm 0.342$   $\chi^2/\text{NDF}$ : 74.5/22

+ sign  $2.266 \pm 0.289$   $\chi^2/\text{NDF}$ : 261.6/50

All:  $1.829 \pm 0.206$   $\chi^2/\text{NDF}$ : 492.3/104

- sign  $1.375 \pm 0.294$   $\chi^2/\text{NDF}$ : 226.1/53

# reg\_asym\_at1\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $19.229 \pm 0.028$   $\chi^2/\text{NDF}$ : 472729.6/25

Left Out:  $1.094 \pm 0.015$   $\chi^2/\text{NDF}$ : 128801.7/24

Right Out:  $19.902 \pm 0.028$   $\chi^2/\text{NDF}$ : 623644.3/30

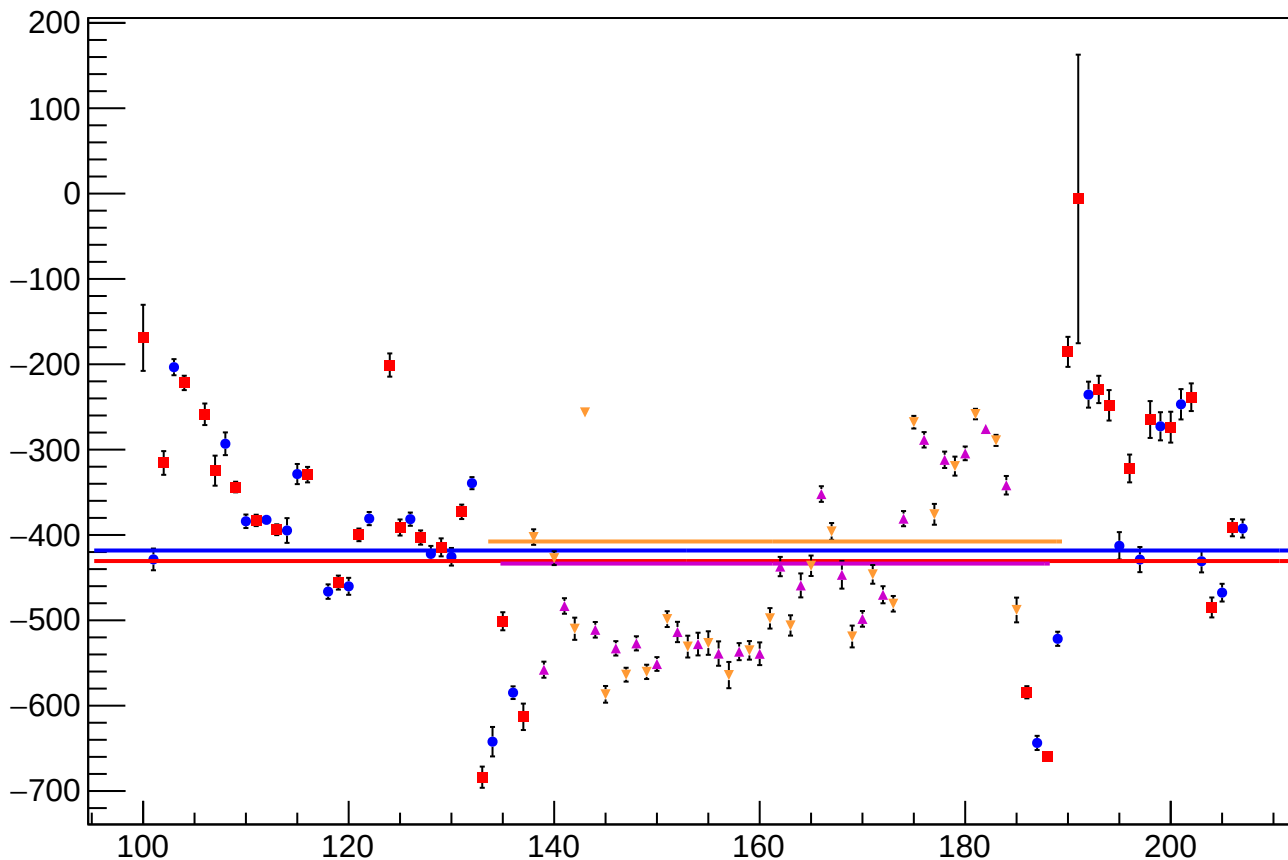
Left In:  $0.443 \pm 0.015$   $\chi^2/\text{NDF}$ : 53446.3/22

+ sign  $5.014 \pm 0.013$   $\chi^2/\text{NDF}$ : 924453.3/50

All:  $4.936 \pm 0.009$   $\chi^2/\text{NDF}$ : 1979010.5/104

- sign  $4.857 \pm 0.013$   $\chi^2/\text{NDF}$ : 1054486.5/53

# reg\_asym\_at2\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-418.187 \pm 1.914$   $\chi^2/\text{NDF}$ : 2854.5/25

Left Out:  $-407.620 \pm 1.868$   $\chi^2/\text{NDF}$ : 4005.6/24

Right Out:  $-430.547 \pm 1.732$   $\chi^2/\text{NDF}$ : 6347.1/30

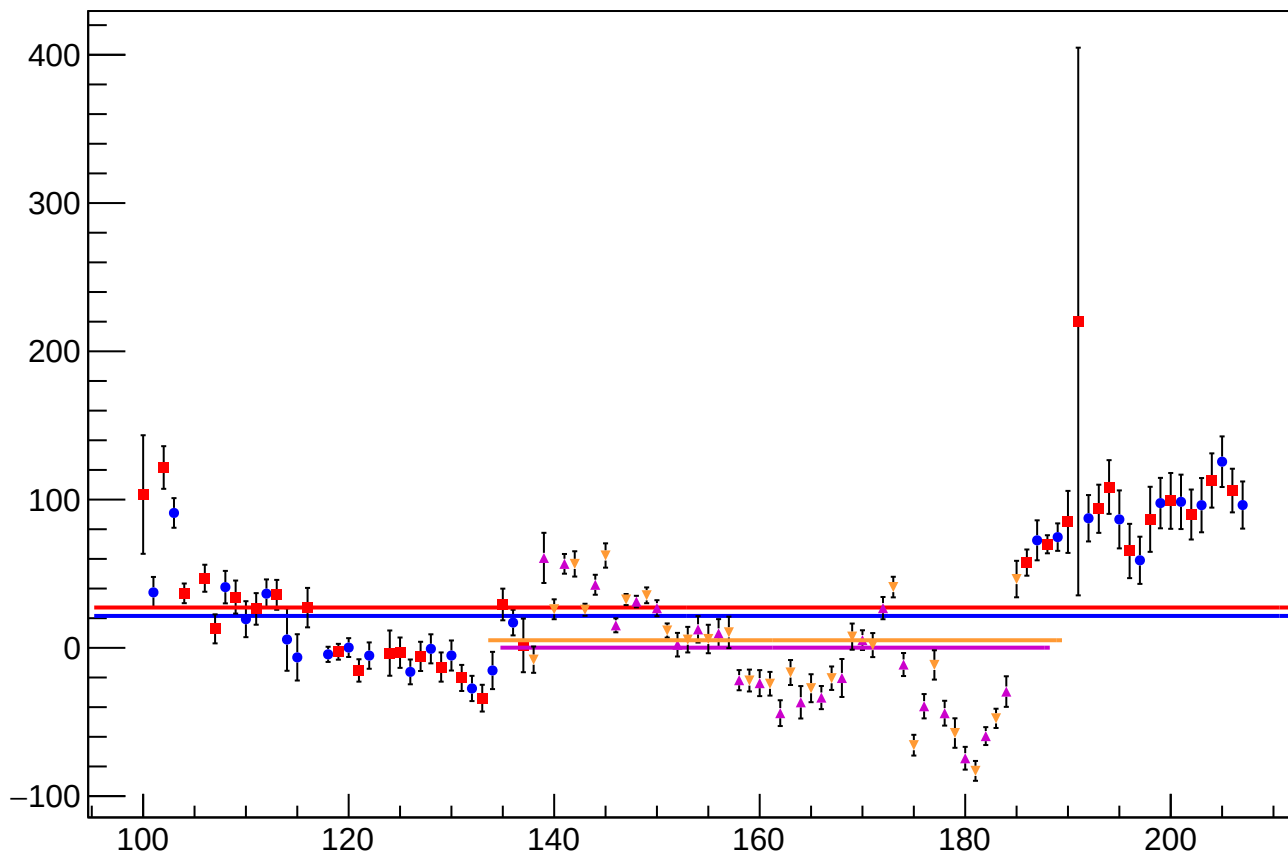
Left In:  $-433.529 \pm 1.993$   $\chi^2/\text{NDF}$ : 2724.5/22

+ sign  $-412.773 \pm 1.337$   $\chi^2/\text{NDF}$ : 6875.7/50

All:  $-422.515 \pm 0.935$   $\chi^2/\text{NDF}$ : 16052.4/104

- sign  $-431.830 \pm 1.307$   $\chi^2/\text{NDF}$ : 9072.9/53

# reg\_asym\_at2\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $21.527 \pm 2.043$   $\chi^2/\text{NDF}: 375.4/25$

Left Out:  $5.125 \pm 1.379$   $\chi^2/\text{NDF}: 689.2/24$

Right Out:  $27.212 \pm 1.907$   $\chi^2/\text{NDF}: 434.7/30$

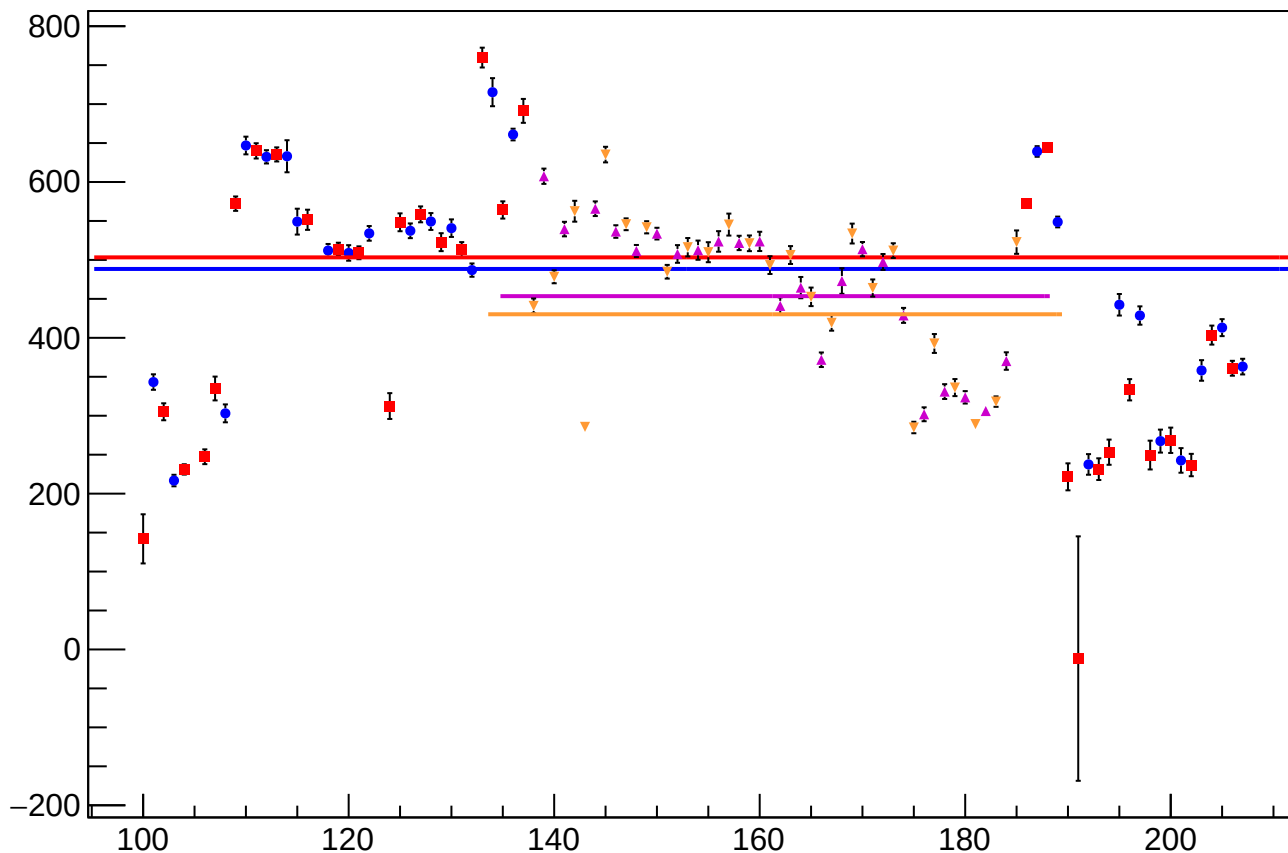
Left In:  $0.124 \pm 1.489$   $\chi^2/\text{NDF}: 568.6/22$

+ sign  $10.258 \pm 1.143$   $\chi^2/\text{NDF}: 1108.9/50$

All:  $10.321 \pm 0.819$   $\chi^2/\text{NDF}: 2237.4/104$

- sign  $10.388 \pm 1.174$   $\chi^2/\text{NDF}: 1128.6/53$

# reg\_asym\_at2\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $488.395 \pm 1.984$   $\chi^2/\text{NDF}$ : 4894.1/25

Left Out:  $430.238 \pm 1.861$   $\chi^2/\text{NDF}$ : 3405.1/24

Right Out:  $503.267 \pm 1.736$   $\chi^2/\text{NDF}$ : 8066.8/30

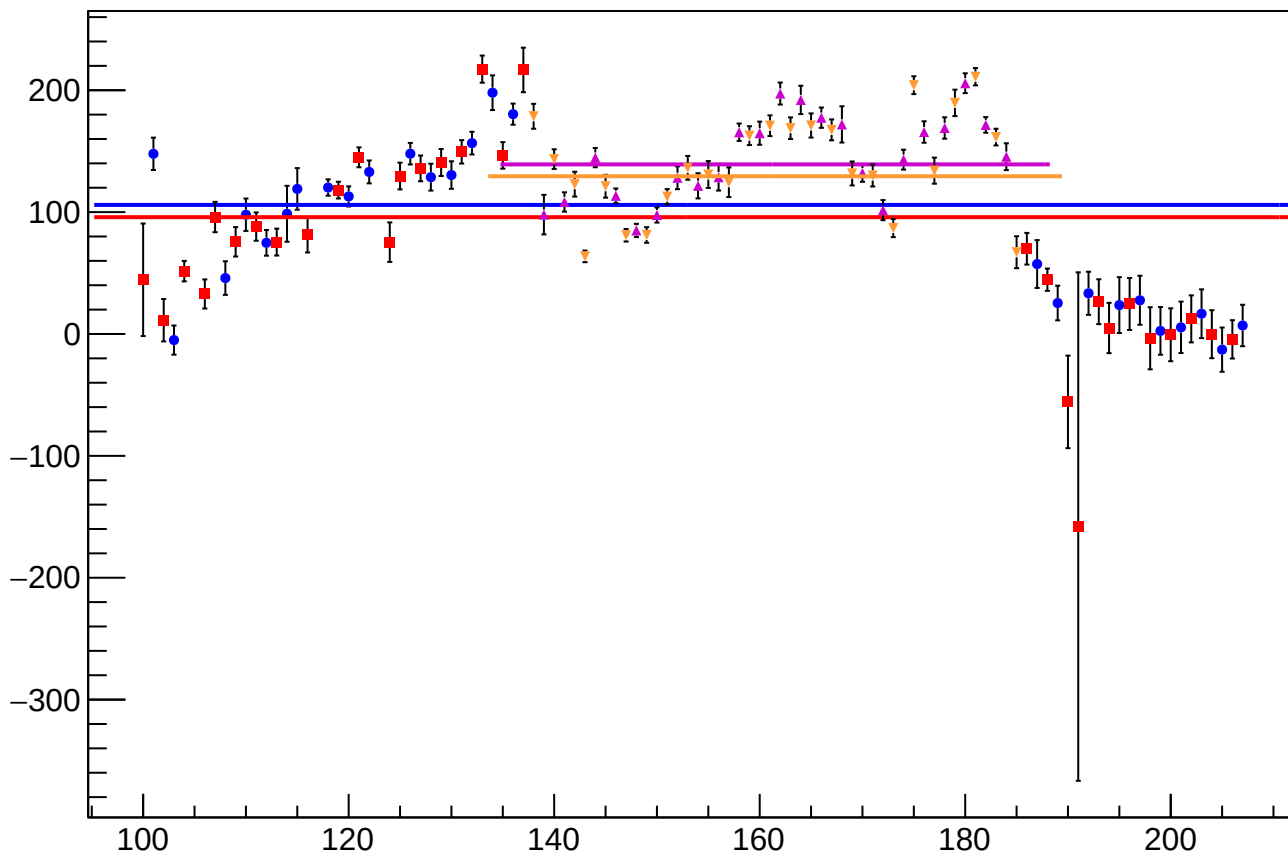
Left In:  $453.496 \pm 1.974$   $\chi^2/\text{NDF}$ : 2419.7/22

+ sign  $457.465 \pm 1.357$   $\chi^2/\text{NDF}$ : 8756.4/50

All:  $469.997 \pm 0.940$   $\chi^2/\text{NDF}$ : 19765.2/104

- sign  $481.558 \pm 1.304$   $\chi^2/\text{NDF}$ : 10845.0/53

# reg\_asym\_at2\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $105.900 \pm 2.398$   $\chi^2/\text{NDF}: 545.6/25$

Left Out:  $129.418 \pm 1.593$   $\chi^2/\text{NDF}: 814.3/24$

Right Out:  $95.841 \pm 2.274$   $\chi^2/\text{NDF}: 608.1/30$

Left In:  $139.163 \pm 1.705$   $\chi^2/\text{NDF}: 434.2/22$

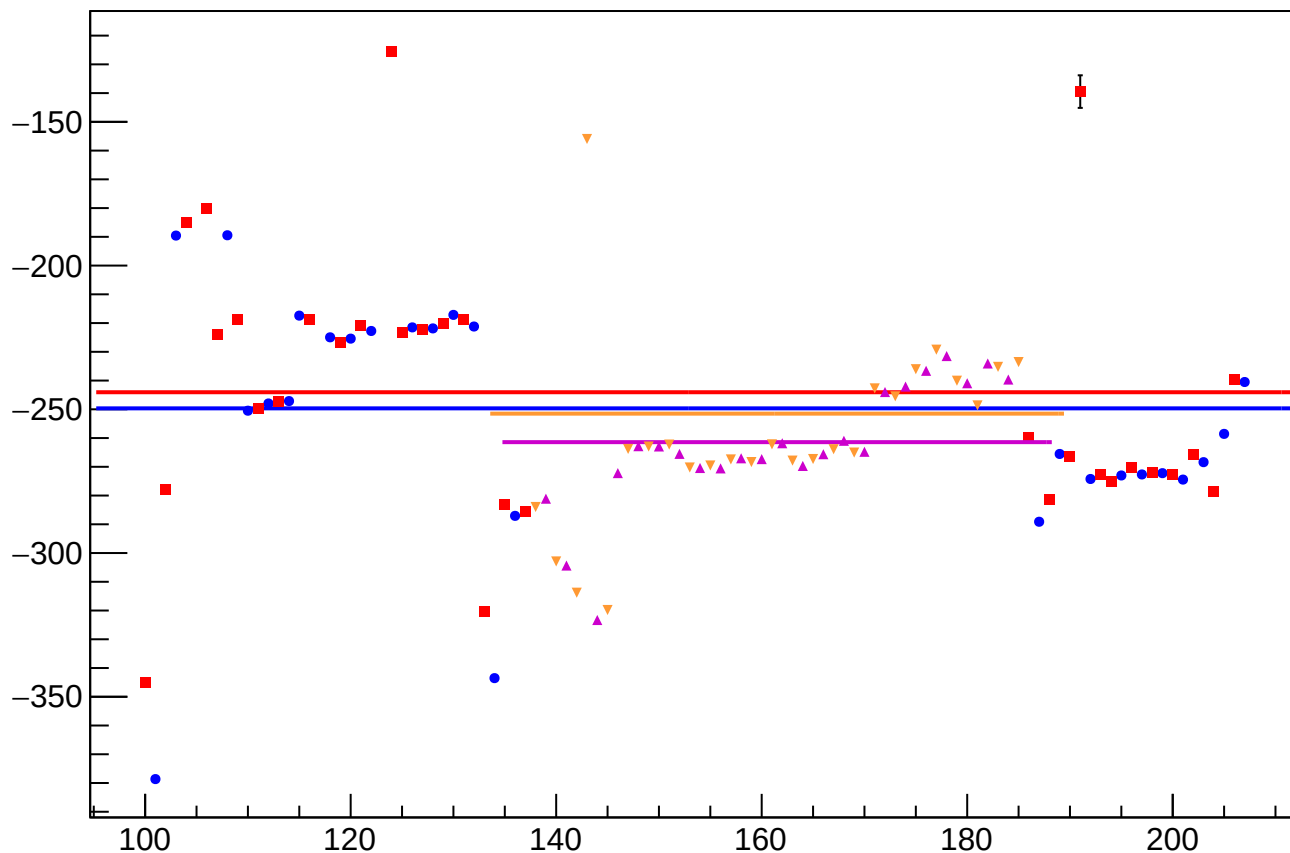
+ sign  $122.221 \pm 1.327$   $\chi^2/\text{NDF}: 1426.6/50$

All:  $122.878 \pm 0.951$   $\chi^2/\text{NDF}: 2701.8/104$

- sign  $123.572 \pm 1.364$   $\chi^2/\text{NDF}: 1274.6/53$



# reg\_asym\_at2\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-249.670 \pm 0.123$   $\chi^2/\text{NDF}: 148236.2/25$

Left Out:  $-251.508 \pm 0.075$   $\chi^2/\text{NDF}: 254924.4/24$

Right Out:  $-244.061 \pm 0.117$   $\chi^2/\text{NDF}: 112531.2/30$

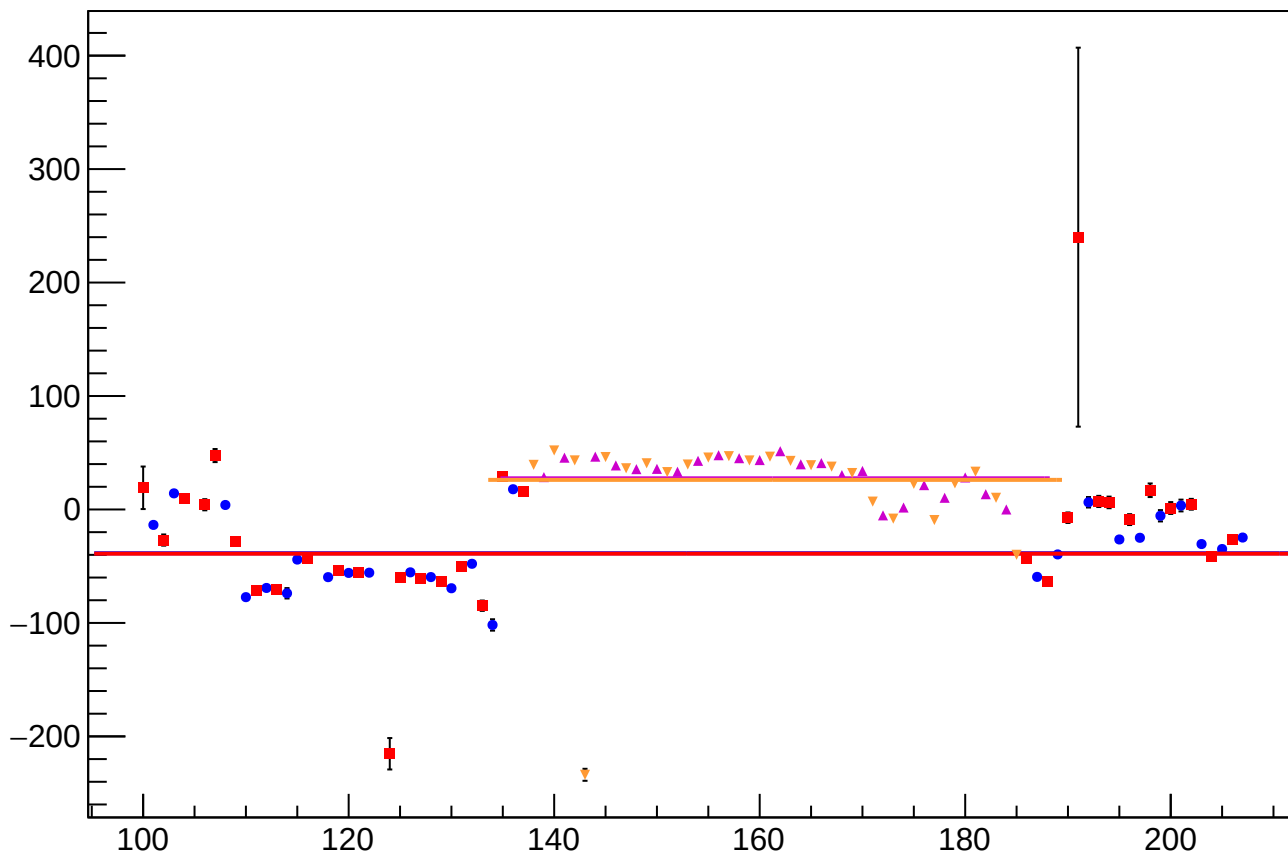
Left In:  $-261.425 \pm 0.078$   $\chi^2/\text{NDF}: 69557.7/22$

+ sign  $-251.014 \pm 0.064$   $\chi^2/\text{NDF}: 403323.9/50$

All:  $-253.524 \pm 0.045$   $\chi^2/\text{NDF}: 603742.9/104$

- sign  $-256.125 \pm 0.065$   $\chi^2/\text{NDF}: 197264.2/53$

# reg\_asym\_at2\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-38.586 \pm 0.602$   $\chi^2/\text{NDF}$ : 2741.0/25

Left Out:  $26.087 \pm 0.390$   $\chi^2/\text{NDF}$ : 4785.1/24

Right Out:  $-38.967 \pm 0.535$   $\chi^2/\text{NDF}$ : 3259.1/30

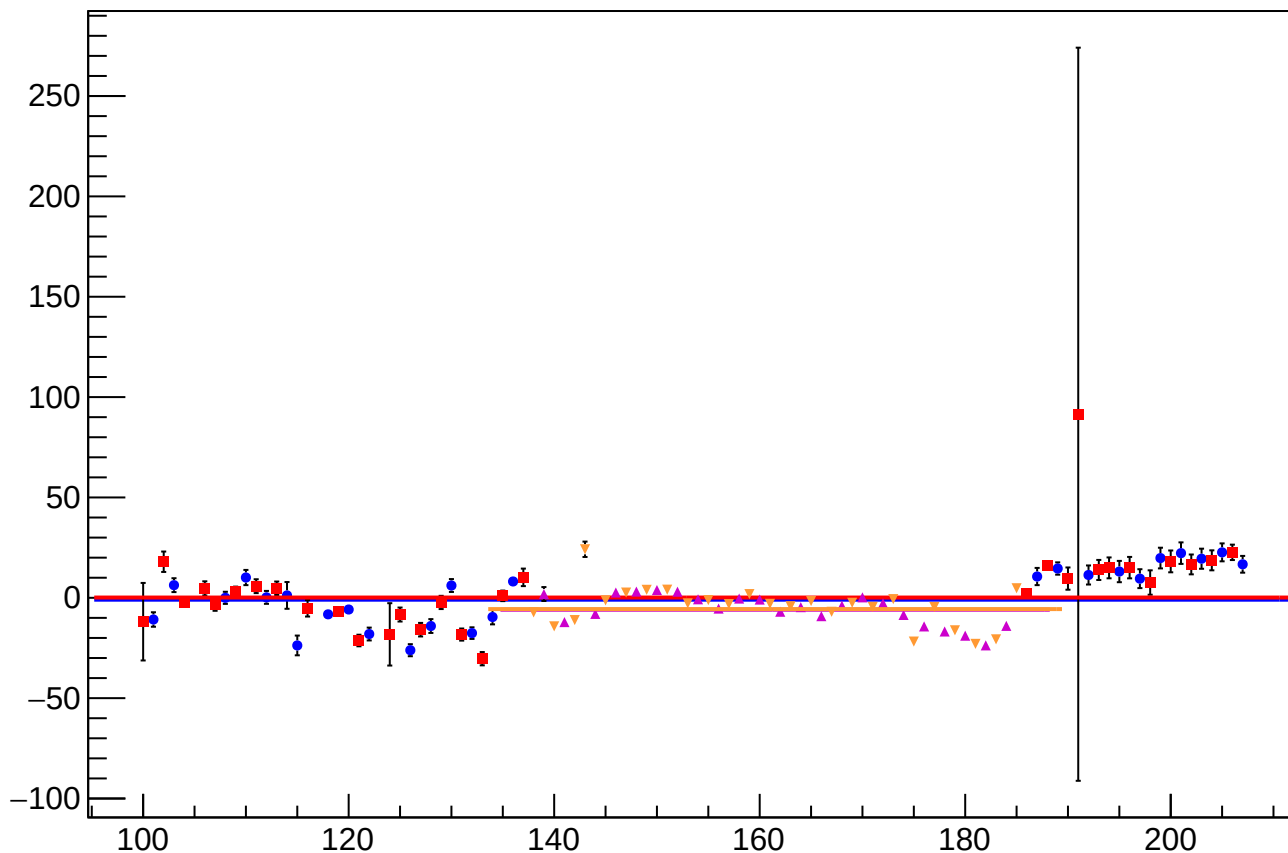
Left In:  $27.466 \pm 0.396$   $\chi^2/\text{NDF}$ : 1608.9/22

+ sign  $6.987 \pm 0.327$   $\chi^2/\text{NDF}$ : 15660.6/50

All:  $5.432 \pm 0.228$   $\chi^2/\text{NDF}$ : 30540.4/104

- sign  $3.962 \pm 0.318$   $\chi^2/\text{NDF}$ : 14835.8/53

# reg\_asym\_at2\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-0.940 \pm 0.664$   $\chi^2/\text{NDF}$ : 385.4/25

Left Out:  $-5.625 \pm 0.302$   $\chi^2/\text{NDF}$ : 893.3/24

Right Out:  $0.128 \pm 0.615$   $\chi^2/\text{NDF}$ : 405.9/30

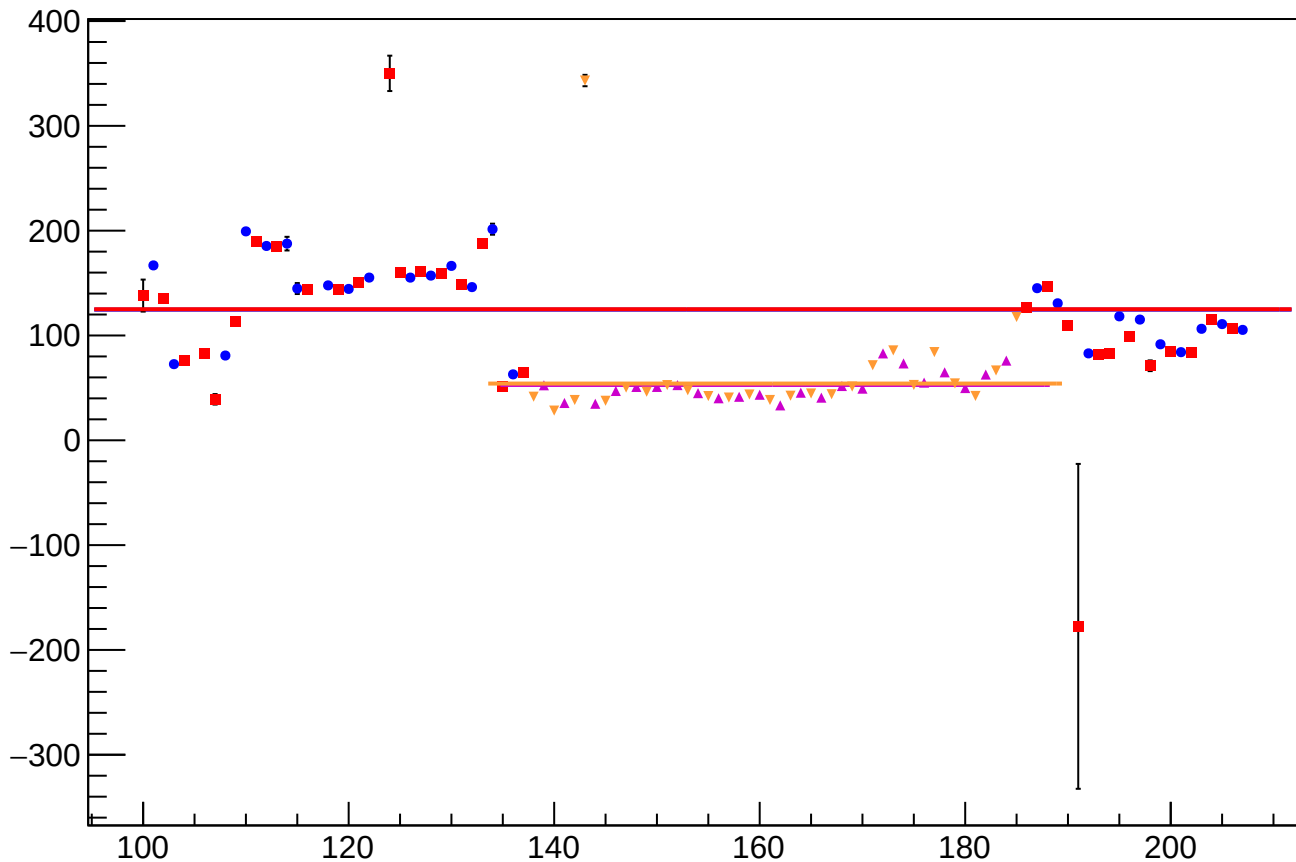
Left In:  $-5.940 \pm 0.309$   $\chi^2/\text{NDF}$ : 712.2/22

+ sign  $-4.822 \pm 0.275$   $\chi^2/\text{NDF}$ : 1320.0/50

All:  $-4.770 \pm 0.195$   $\chi^2/\text{NDF}$ : 2515.8/104

- sign  $-4.717 \pm 0.276$   $\chi^2/\text{NDF}$ : 1195.8/53

# reg\_asym\_at2\_dd\_diff\_bpm4eX\_slope vs Slug



Right In: 124.654 $\pm$ 0.619  $\chi^2$ /NDF: 4112.1/25

Left Out: 54.123 $\pm$ 0.387  $\chi^2$ /NDF: 4591.8/24

Right Out: 125.037 $\pm$ 0.538  $\chi^2$ /NDF: 4418.5/30

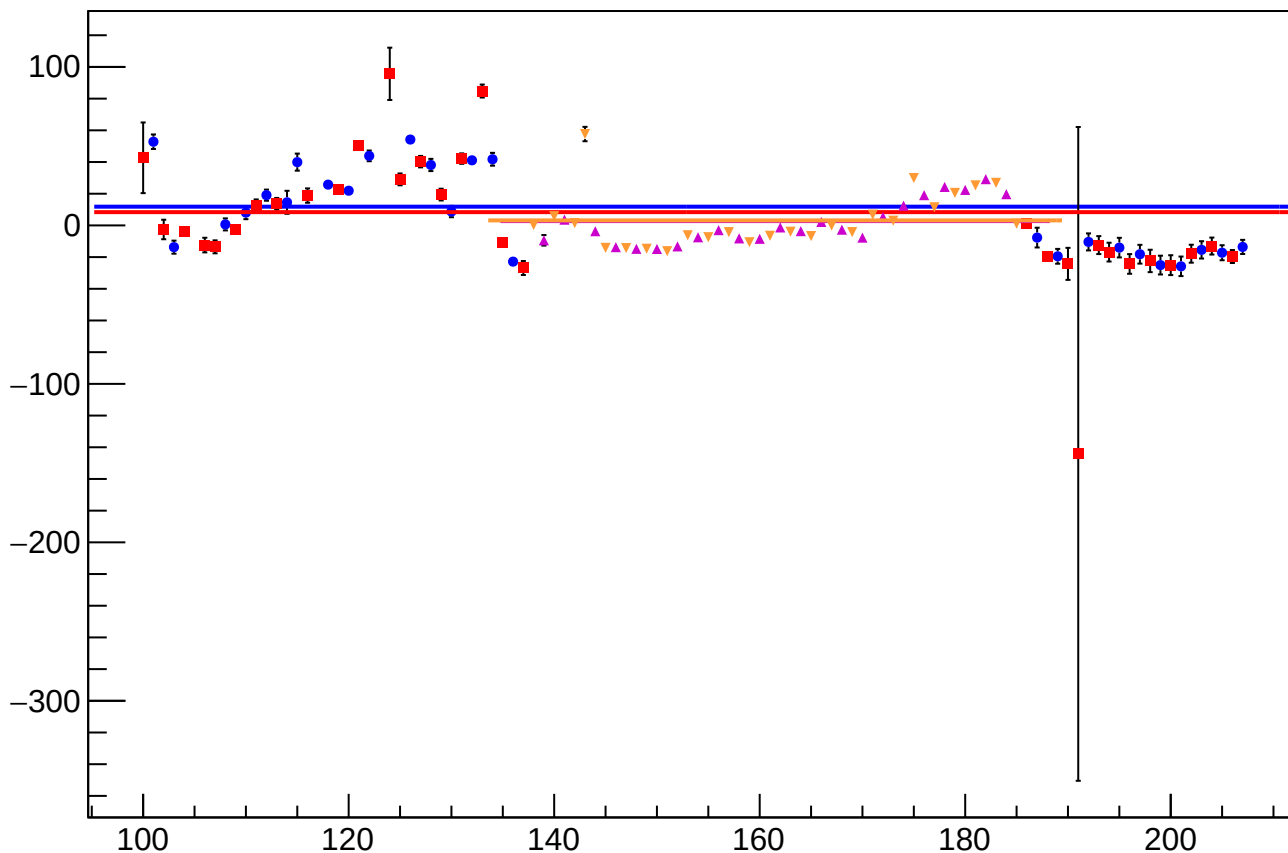
Left In: 52.797 $\pm$ 0.393  $\chi^2$ /NDF: 978.1/22

+ sign 73.963 $\pm$ 0.328  $\chi^2$ /NDF: 18034.1/50

All: 75.997 $\pm$ 0.228  $\chi^2$ /NDF: 35268.0/104

- sign 77.895 $\pm$ 0.317  $\chi^2$ /NDF: 17159.7/53

# reg\_asym\_at2\_dd\_diff\_bpm4eY\_slope vs Slug



Right In: 11.825 $\pm$ 0.768  $\chi^2$ /NDF: 1214.0/25

Left Out: 3.155 $\pm$ 0.340  $\chi^2$ /NDF: 2012.4/24

Right Out: 8.374 $\pm$ 0.730  $\chi^2$ /NDF: 1314.7/30

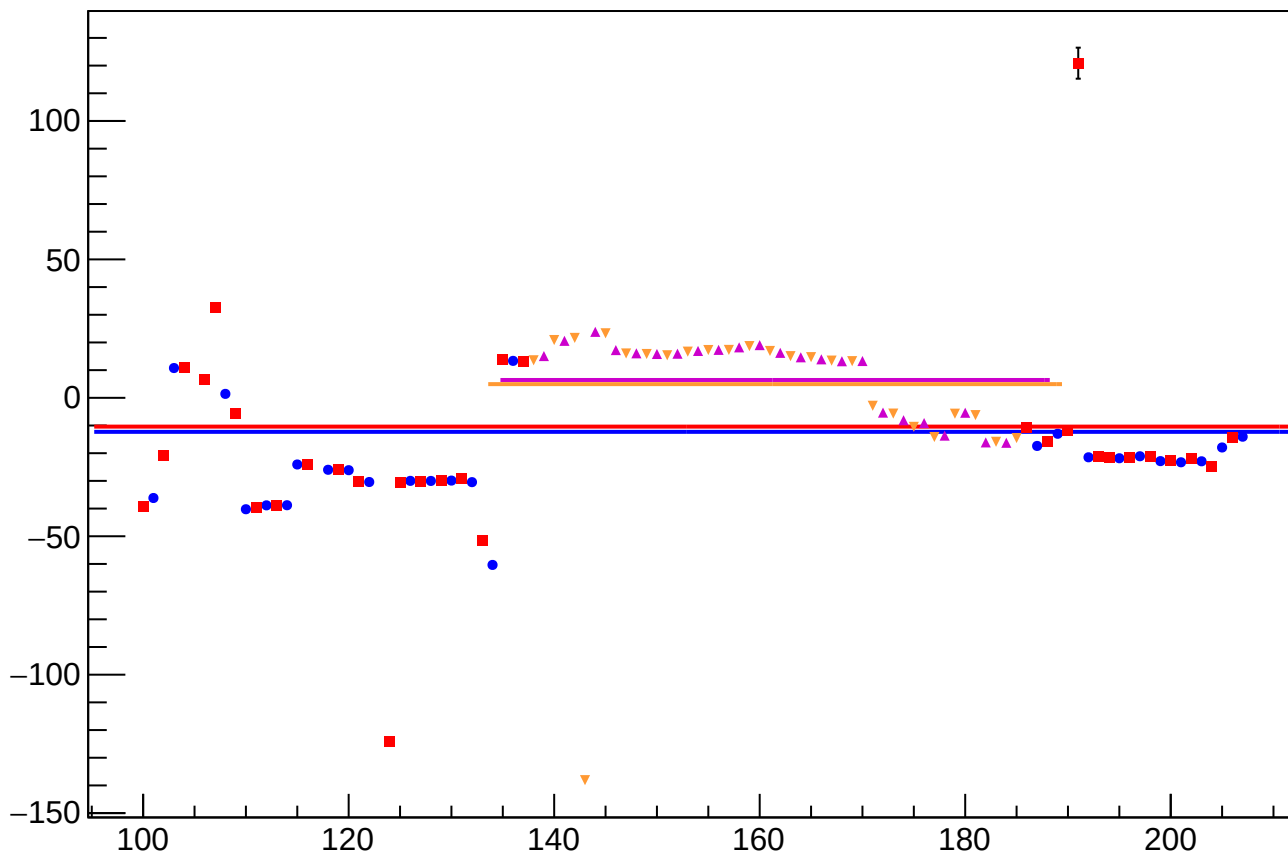
Left In: 2.722 $\pm$ 0.347  $\chi^2$ /NDF: 1735.2/22

+ sign 4.575 $\pm$ 0.311  $\chi^2$ /NDF: 3333.0/50

All: 4.171 $\pm$ 0.221  $\chi^2$ /NDF: 6435.1/104

- sign 3.761 $\pm$ 0.313  $\chi^2$ /NDF: 3098.7/53

# reg\_asym\_at2\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $-12.285 \pm 0.037$   $\chi^2/\text{NDF}: 295422.7/25$

Left Out:  $4.946 \pm 0.015$   $\chi^2/\text{NDF}: 1136506.7/24$

Right Out:  $-10.398 \pm 0.036$   $\chi^2/\text{NDF}: 273879.3/30$

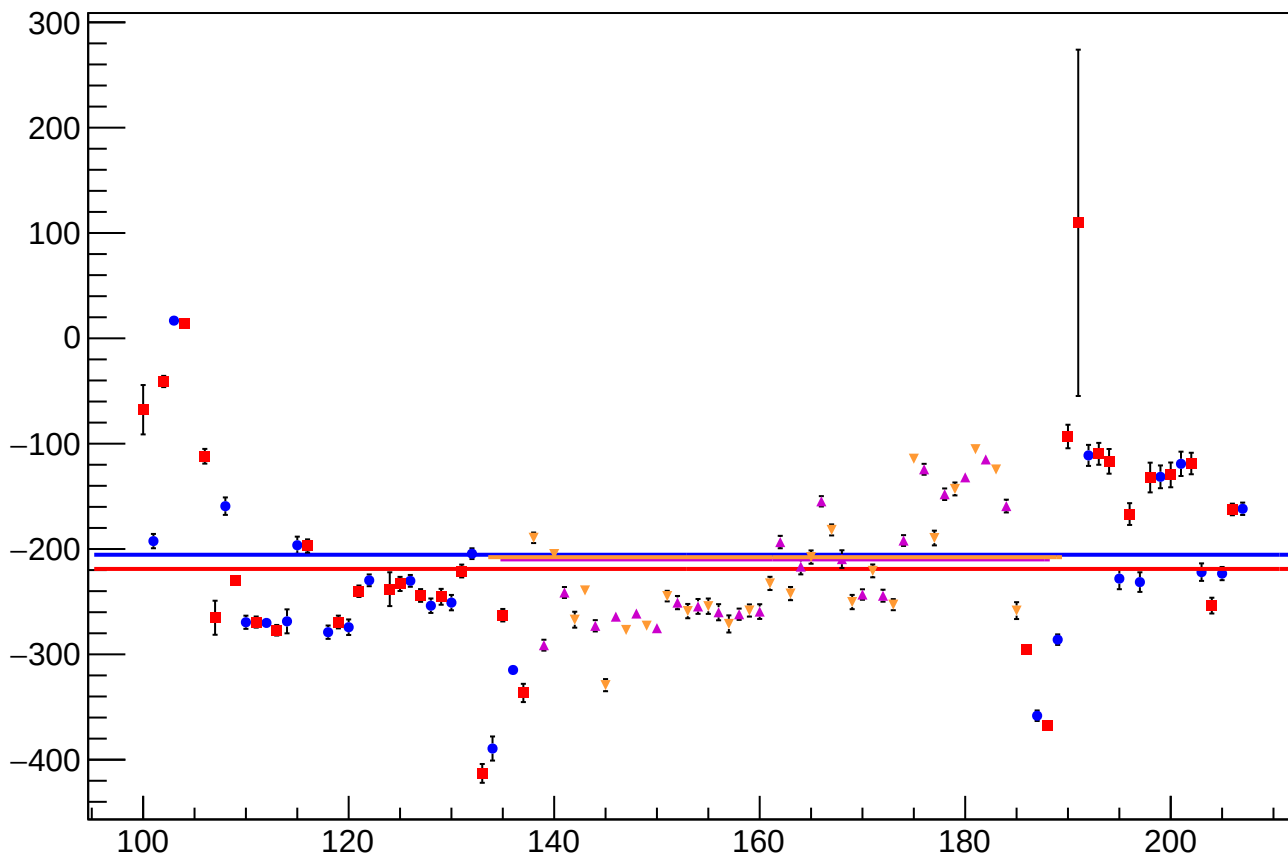
Left In:  $6.444 \pm 0.015$   $\chi^2/\text{NDF}: 729692.1/22$

+ sign  $2.415 \pm 0.014$   $\chi^2/\text{NDF}: 1620227.9/50$

All:  $3.135 \pm 0.010$   $\chi^2/\text{NDF}: 2814074.7/104$

- sign  $3.860 \pm 0.014$   $\chi^2/\text{NDF}: 1188583.3/53$

# reg\_asym\_atl1r2\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-205.444 \pm 1.201$   $\chi^2/\text{NDF}: 8793.0/25$

Left Out:  $-207.745 \pm 1.070$   $\chi^2/\text{NDF}: 3487.2/24$

Right Out:  $-218.913 \pm 1.089$   $\chi^2/\text{NDF}: 12297.3/30$

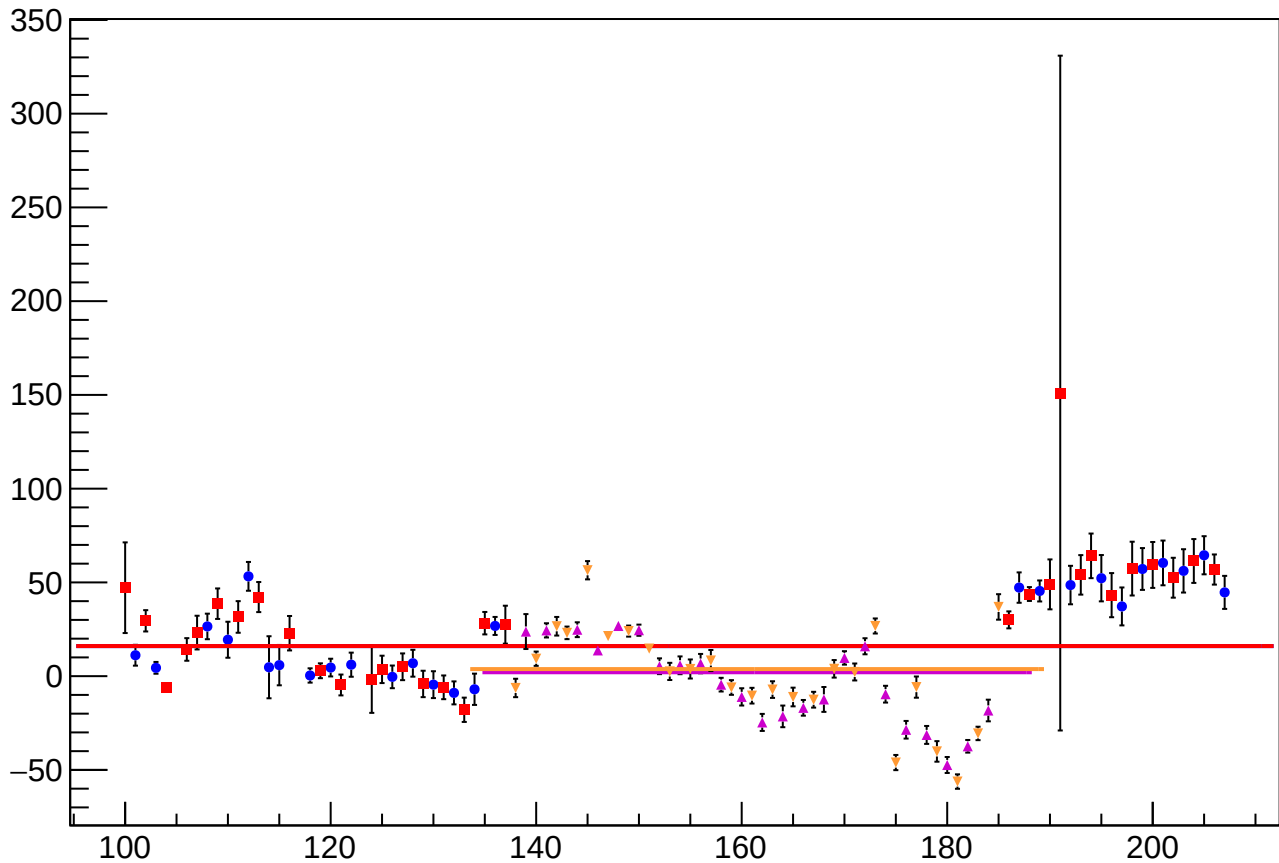
Left In:  $-209.875 \pm 1.101$   $\chi^2/\text{NDF}: 3011.9/22$

+ sign  $-206.727 \pm 0.799$   $\chi^2/\text{NDF}: 12282.2/50$

All:  $-210.704 \pm 0.556$   $\chi^2/\text{NDF}: 27673.5/104$

- sign  $-214.443 \pm 0.774$   $\chi^2/\text{NDF}: 15343.2/53$

# reg\_asym\_atl1r2\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $16.023 \pm 1.289$   $\chi^2/\text{NDF}$ : 251.4/25

Left Out:  $3.770 \pm 0.787$   $\chi^2/\text{NDF}$ : 972.1/24

Right Out:  $16.053 \pm 1.164$   $\chi^2/\text{NDF}$ : 379.3/30

Left In:  $2.079 \pm 0.820$   $\chi^2/\text{NDF}$ : 770.2/22

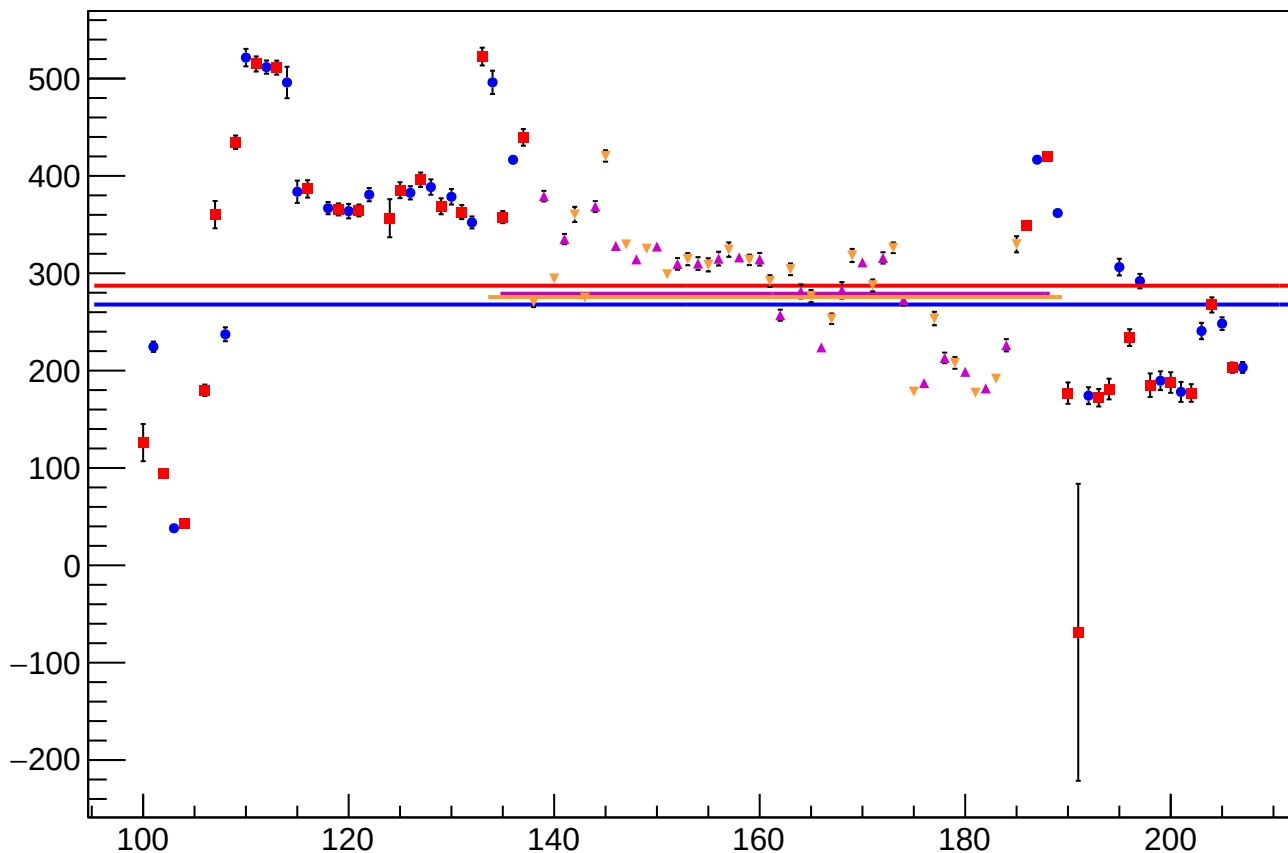
+ sign  $7.098 \pm 0.672$   $\chi^2/\text{NDF}$ : 1289.3/50

All:  $6.907 \pm 0.475$   $\chi^2/\text{NDF}$ : 2535.4/104

- sign  $6.716 \pm 0.670$   $\chi^2/\text{NDF}$ : 1245.9/53



# reg\_asym\_atl1r2\_avg\_diff\_bpm4eX\_slope vs Slug



Right In: 267.855 $\pm$ 1.157  $\chi^2$ /NDF: 17747.6/25

Left Out: 275.536 $\pm$ 1.062  $\chi^2$ /NDF:3323.1/24

Right Out: 287.216 $\pm$ 1.020  $\chi^2$ /NDF: 22158.7/30

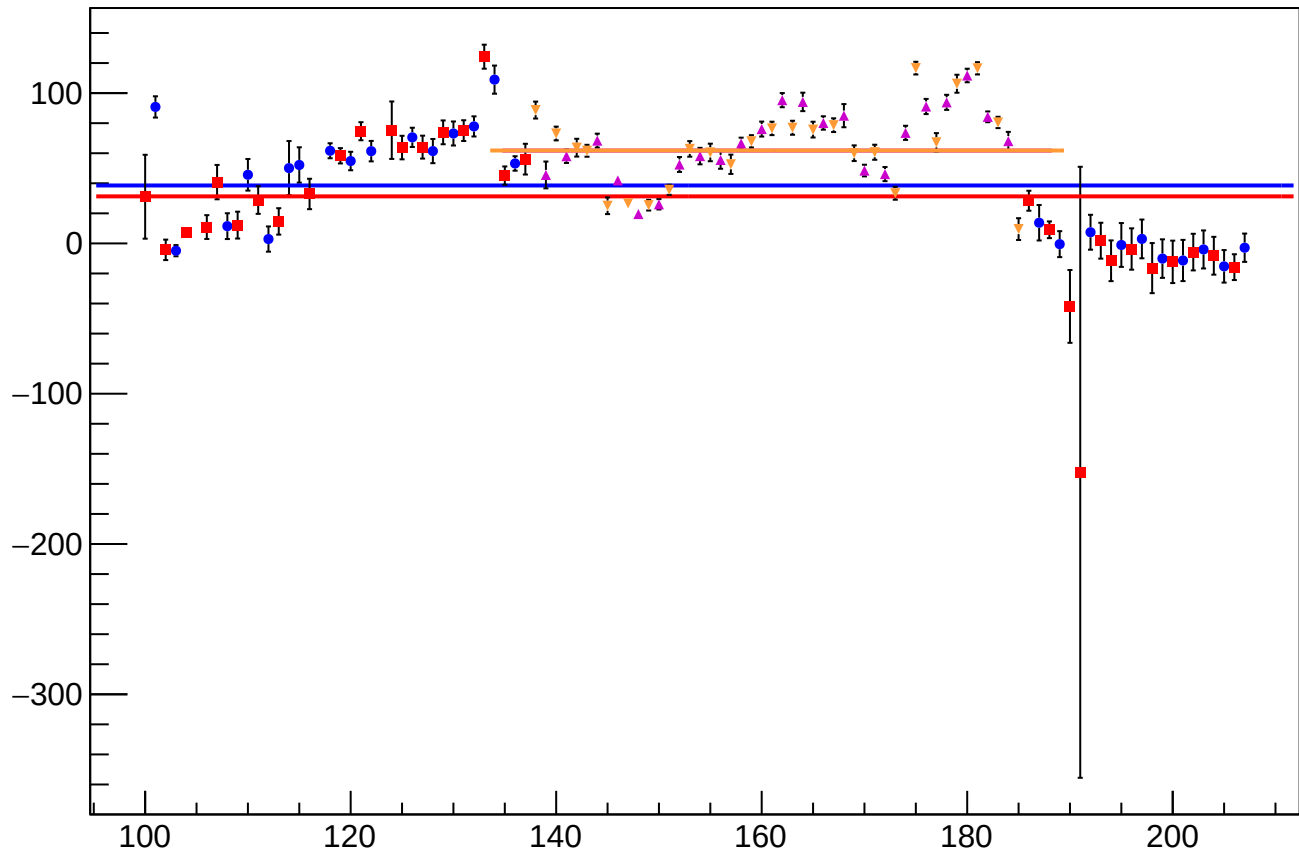
Left In: 278.989 $\pm$ 1.089  $\chi^2$ /NDF:3114.7/22

+ sign 272.023 $\pm$ 0.782  $\chi^2$ /NDF: 21094.7/50

All: 277.979 $\pm$ 0.539  $\chi^2$ /NDF: 46508.9/104

- sign 283.371 $\pm$ 0.744  $\chi^2$ /NDF: 25303.8/53

# reg\_asym\_atl1r2\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $38.551 \pm 1.515$   $\chi^2/\text{NDF}$ : 541.9/25

Left Out:  $61.818 \pm 0.907$   $\chi^2/\text{NDF}$ : 959.5/24

Right Out:  $31.295 \pm 1.411$   $\chi^2/\text{NDF}$ : 556.0/30

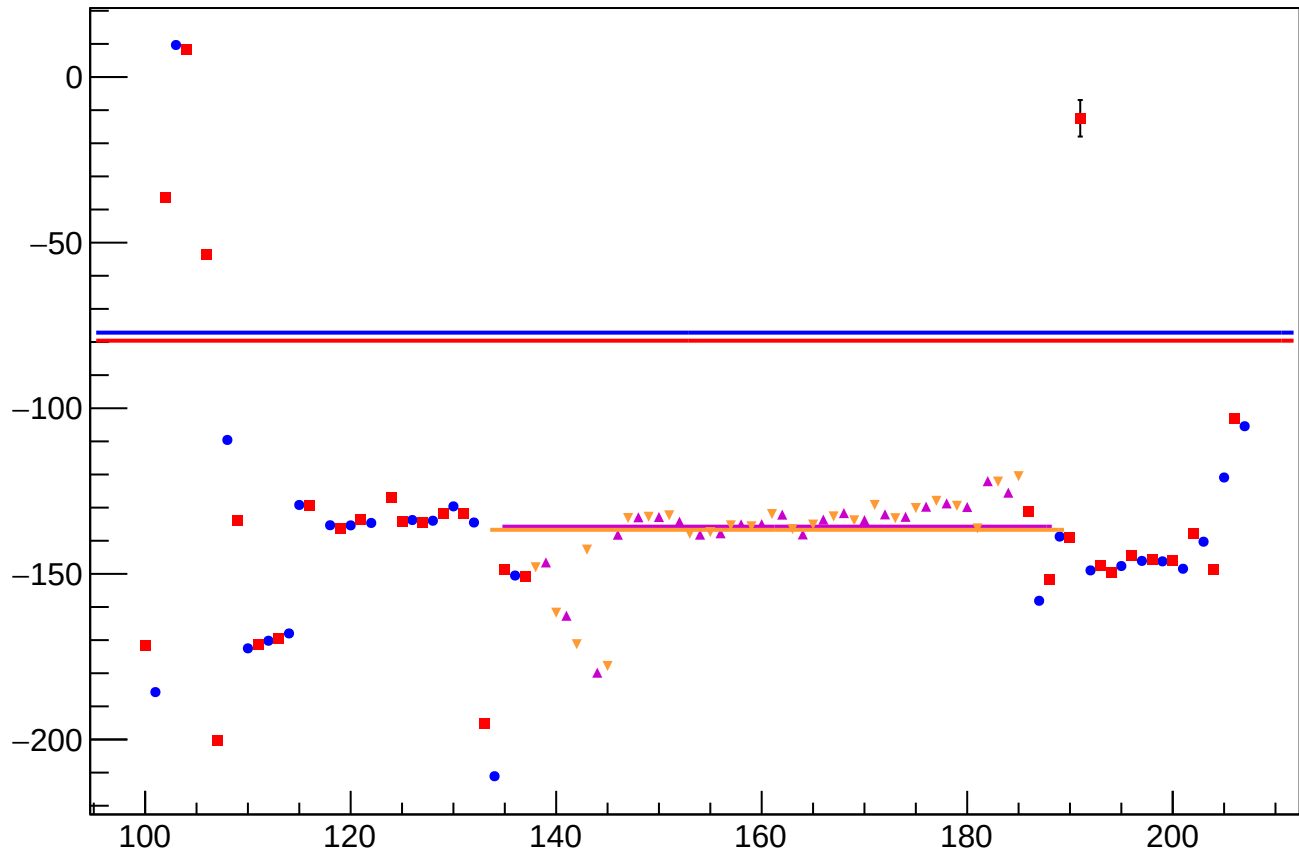
Left In:  $61.763 \pm 0.939$   $\chi^2/\text{NDF}$ : 736.0/22

+ sign  $55.673 \pm 0.778$   $\chi^2/\text{NDF}$ : 1675.0/50

All:  $54.051 \pm 0.552$   $\chi^2/\text{NDF}$ : 3299.0/104

- sign  $52.417 \pm 0.782$   $\chi^2/\text{NDF}$ : 1615.3/53

reg\_asym\_atl1r2\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-77.166 \pm 0.064$   $\chi^2/\text{NDF}$ : 1515381.2/25

Left Out:  $-136.695 \pm 0.042$   $\chi^2/\text{NDF}$ : 79006.9/24

Right Out:  $-79.595 \pm 0.063$   $\chi^2/\text{NDF}$ : 1215779.3/30

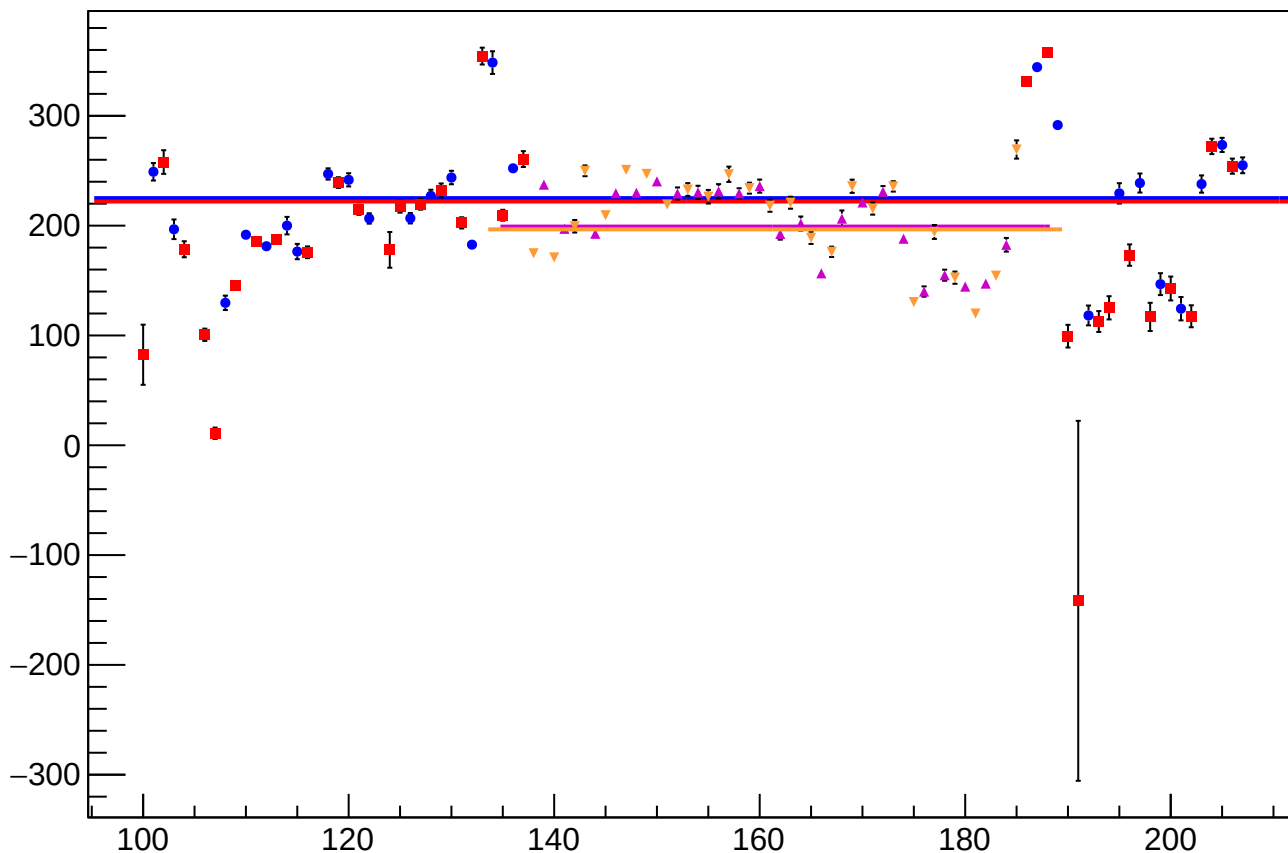
Left In:  $-135.745 \pm 0.043$   $\chi^2/\text{NDF}$ : 63681.9/22

+ sign  $-118.532 \pm 0.035$   $\chi^2/\text{NDF}$ : 2200183.0/50

All:  $-118.357 \pm 0.025$   $\chi^2/\text{NDF}$ : 4018011.2/10

- sign  $-118.180 \pm 0.035$   $\chi^2/\text{NDF}$ : 1817778.6/53

# reg\_asym\_atl1r2\_dd\_diff\_bpm1X\_slope vs Slug



Right In: 225.049 $\pm$ 1.113  $\chi^2$ /NDF: 2181.1/25

Left Out: 196.615 $\pm$ 0.946  $\chi^2$ /NDF: 2075.5/24

Right Out: 221.964 $\pm$ 0.978  $\chi^2$ /NDF: 8165.5/30

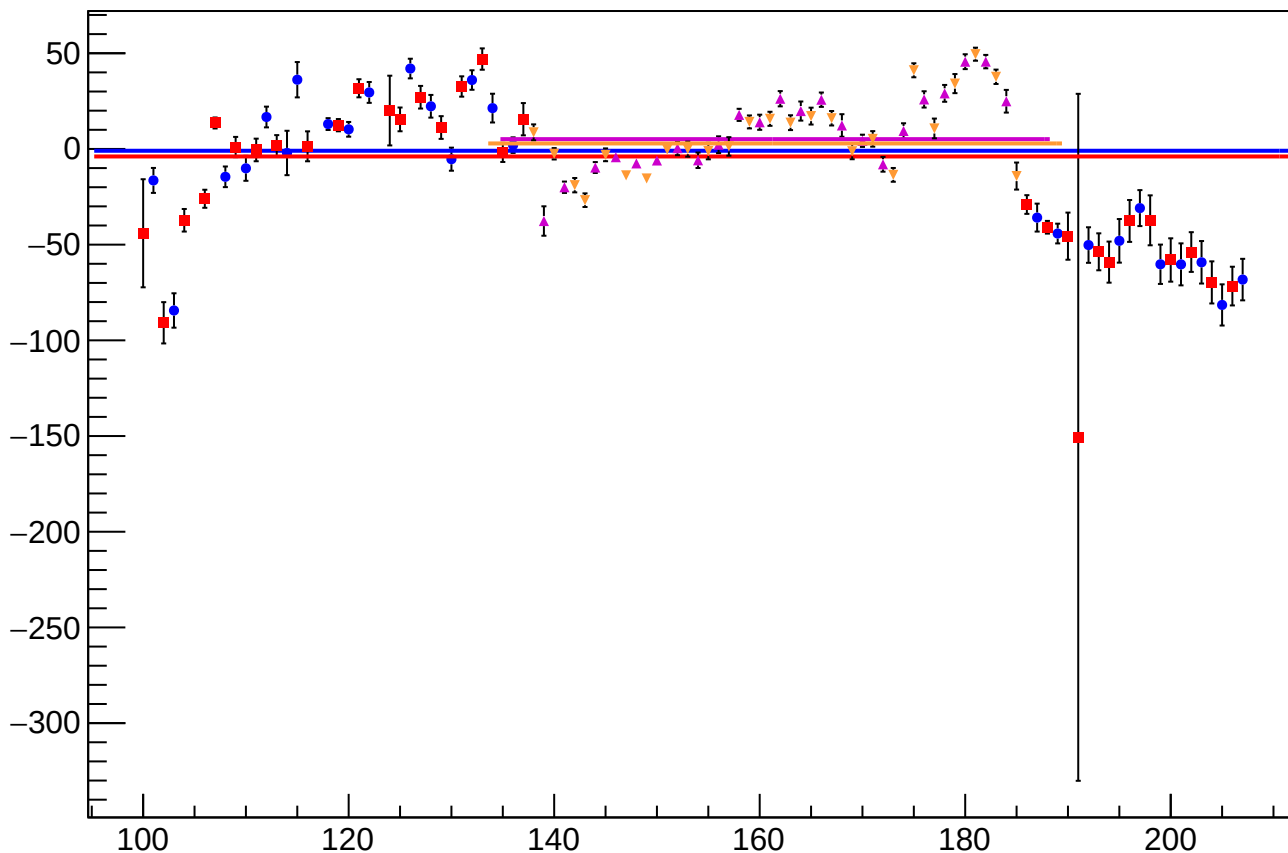
Left In: 199.153 $\pm$ 0.973  $\chi^2$ /NDF: 1294.6/22

+ sign 208.551 $\pm$ 0.721  $\chi^2$ /NDF: 4635.5/50

All: 209.569 $\pm$ 0.498  $\chi^2$ /NDF: 14373.0/104

- sign 210.500 $\pm$ 0.690  $\chi^2$ /NDF: 9733.7/53

# reg\_asym\_atl1r2\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-0.947 \pm 1.201$   $\chi^2/\text{NDF}: 668.1/25$

Left Out:  $2.870 \pm 0.693$   $\chi^2/\text{NDF}: 752.8/24$

Right Out:  $-3.930 \pm 1.069$   $\chi^2/\text{NDF}: 783.5/30$

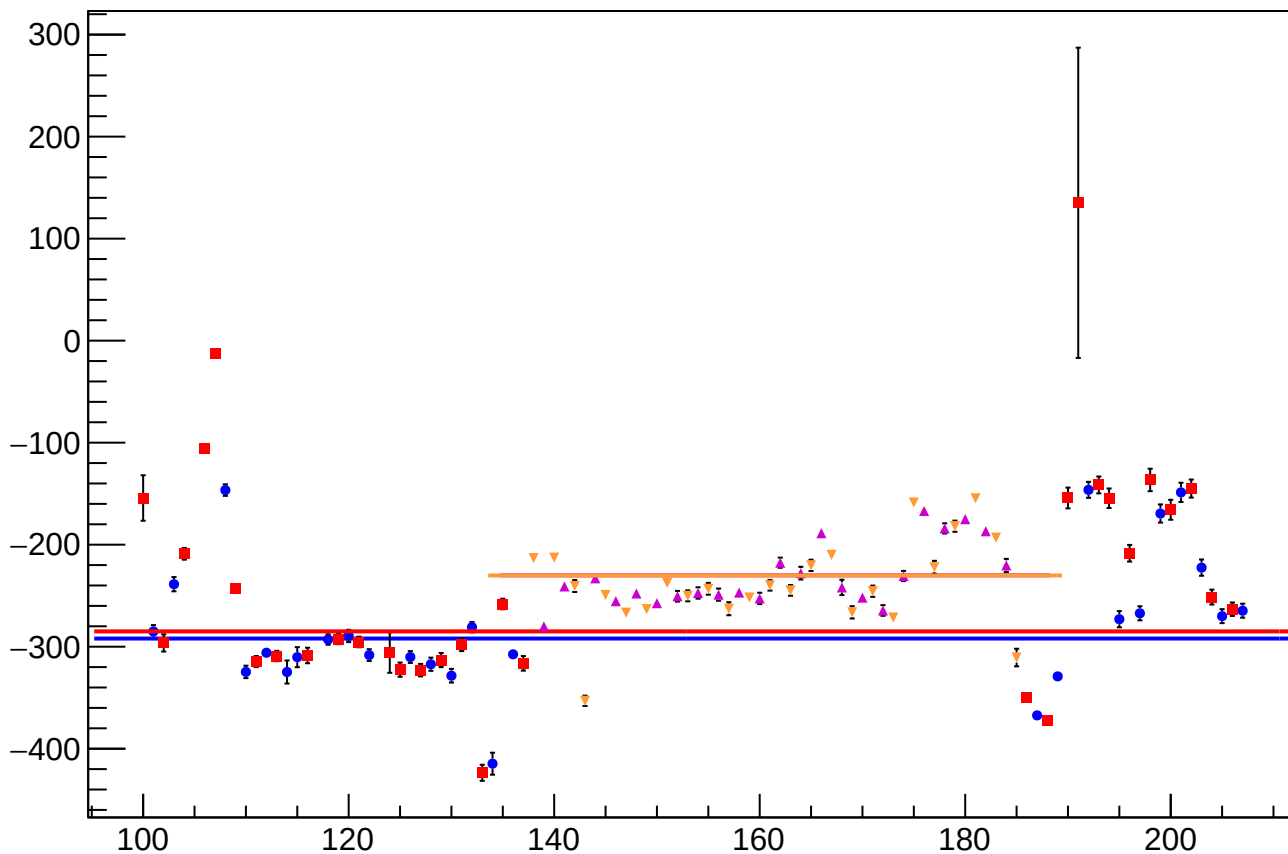
Left In:  $5.126 \pm 0.718$   $\chi^2/\text{NDF}: 628.6/22$

+ sign  $1.917 \pm 0.600$   $\chi^2/\text{NDF}: 1428.4/50$

All:  $2.116 \pm 0.423$   $\chi^2/\text{NDF}: 2890.2/104$

- sign  $2.311 \pm 0.596$   $\chi^2/\text{NDF}: 1461.5/53$

# reg\_asym\_atl1r2\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-292.021 \pm 1.161$   $\chi^2/\text{NDF}: 2378.6/25$

Left Out:  $-230.182 \pm 0.939$   $\chi^2/\text{NDF}: 2181.9/24$

Right Out:  $-284.986 \pm 0.986$   $\chi^2/\text{NDF}: 9918.2/30$

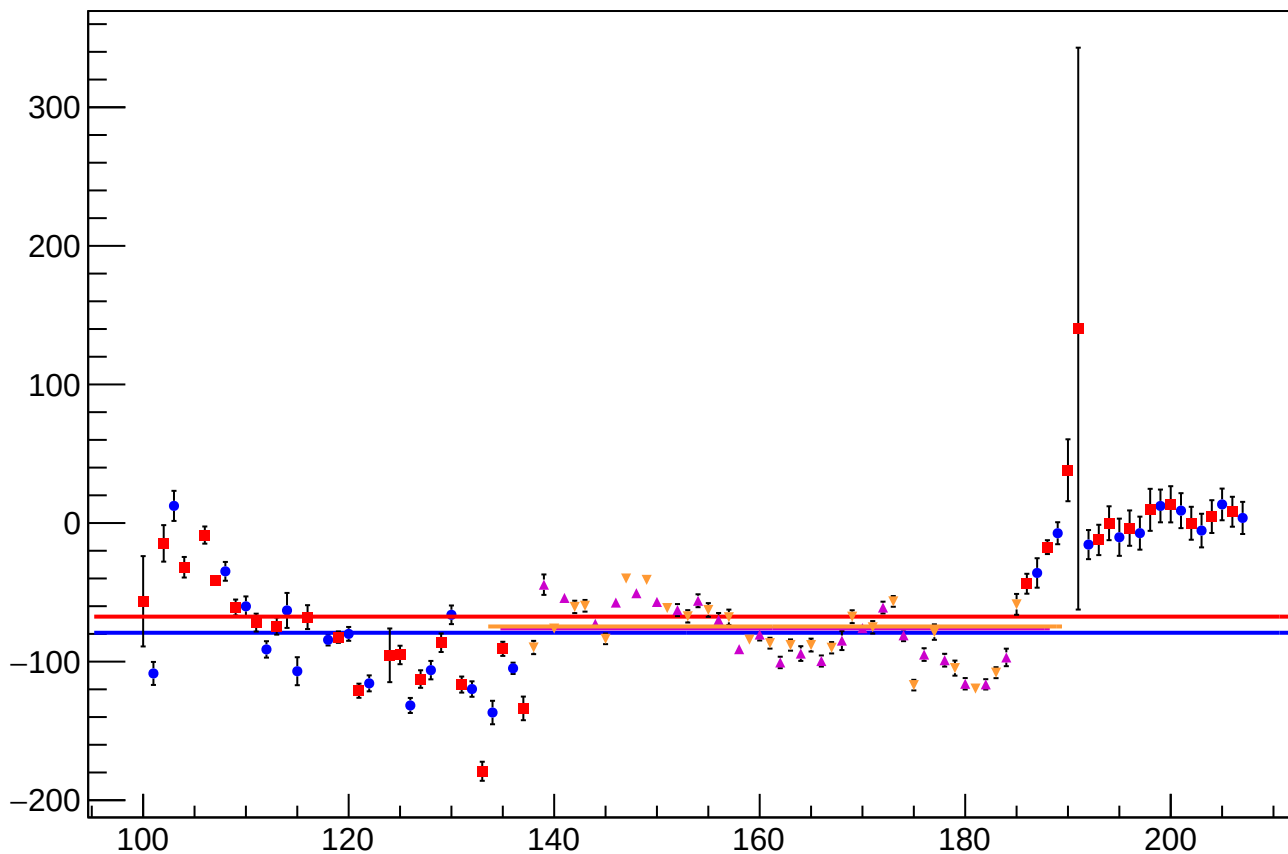
Left In:  $-230.047 \pm 0.961$   $\chi^2/\text{NDF}: 1094.0/22$

+ sign  $-254.630 \pm 0.730$   $\chi^2/\text{NDF}: 6275.2/50$

All:  $-255.788 \pm 0.501$   $\chi^2/\text{NDF}: 18884.8/104$

- sign  $-256.817 \pm 0.688$   $\chi^2/\text{NDF}: 12604.8/53$

# reg\_asym\_atl1r2\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-79.179 \pm 1.405$   $\chi^2/\text{NDF}$ : 900.9/25

Left Out:  $-74.644 \pm 0.801$   $\chi^2/\text{NDF}$ : 831.0/24

Right Out:  $-67.534 \pm 1.282$   $\chi^2/\text{NDF}$ : 1198.2/30

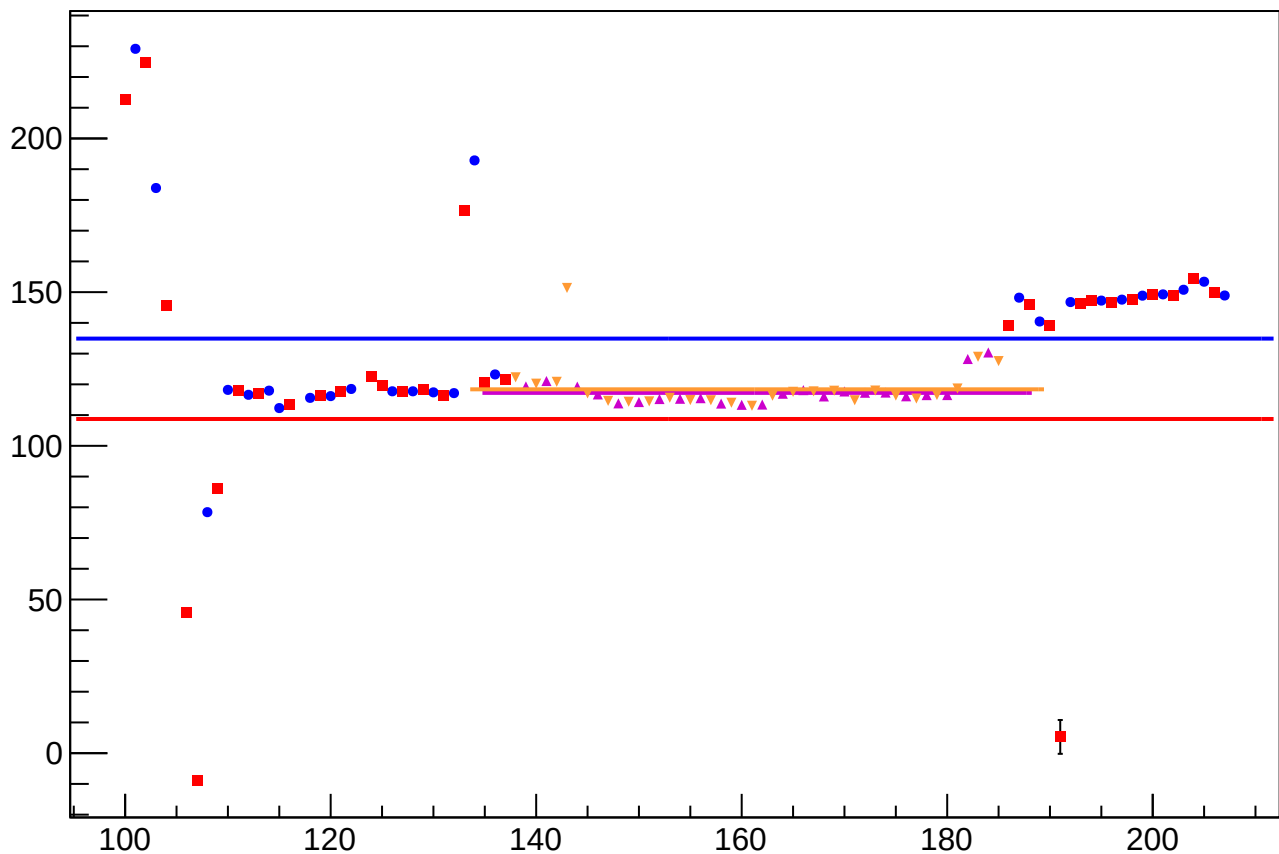
Left In:  $-76.025 \pm 0.824$   $\chi^2/\text{NDF}$ : 646.0/22

+ sign  $-75.756 \pm 0.696$   $\chi^2/\text{NDF}$ : 1739.8/50

All:  $-74.644 \pm 0.491$   $\chi^2/\text{NDF}$ : 3620.2/104

- sign  $-73.541 \pm 0.693$   $\chi^2/\text{NDF}$ : 1875.3/53

# reg\_asym\_atl1r2\_dd\_diff\_bpm12X\_slope vs Slug



Right In: 134.887 $\pm$ 0.073  $\chi^2$ /NDF: 198869.8/25

Left Out: 118.382 $\pm$ 0.037  $\chi^2$ /NDF: 34938.1/24

Right Out: 108.732 $\pm$ 0.066  $\chi^2$ /NDF: 761054.5/30

Left In: 117.225 $\pm$ 0.038  $\chi^2$ /NDF: 10227.9/22

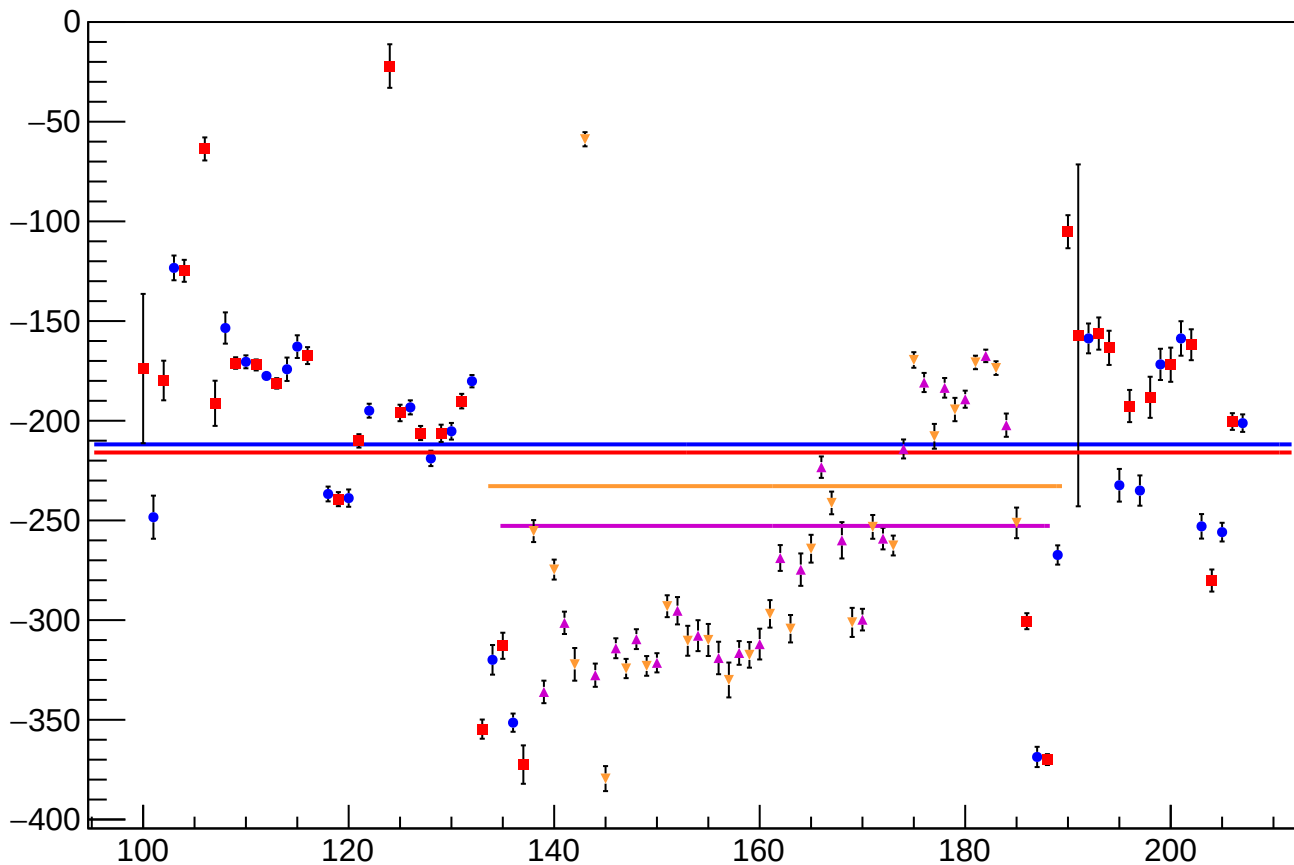
+ sign 121.775 $\pm$ 0.033  $\chi^2$ /NDF: 274105.7/50

All: 118.390 $\pm$ 0.023  $\chi^2$ /NDF: 1078385.3/104

- sign 115.126 $\pm$ 0.033  $\chi^2$ /NDF: 783893.1/53



# reg\_asym\_atr1l2\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-211.859 \pm 0.899$   $\chi^2/\text{NDF}$ : 3485.9/25

Left Out:  $-232.800 \pm 1.072$   $\chi^2/\text{NDF}$ : 5764.0/24

Right Out:  $-215.926 \pm 0.834$   $\chi^2/\text{NDF}$ : 7679.6/30

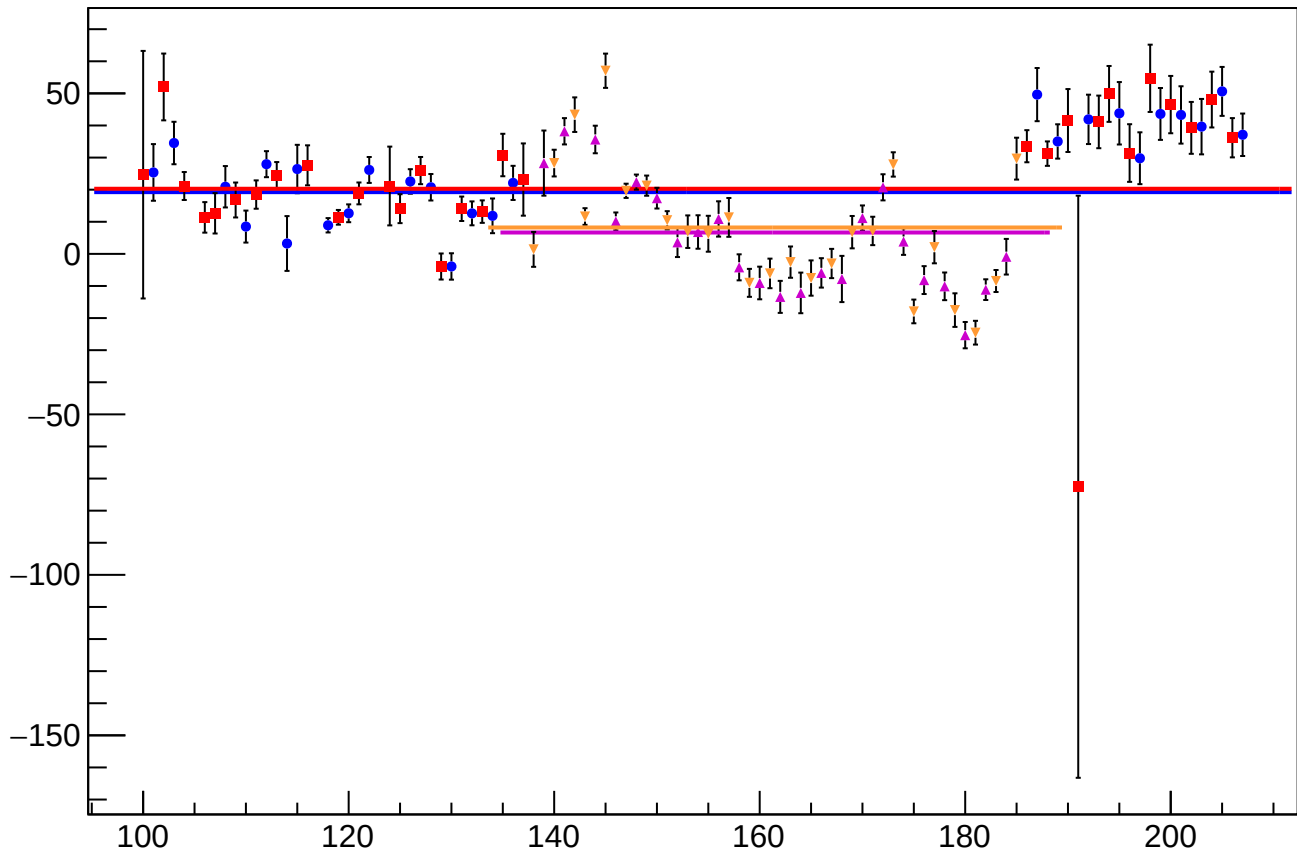
Left In:  $-252.738 \pm 1.131$   $\chi^2/\text{NDF}$ : 2913.9/22

+ sign  $-220.501 \pm 0.689$   $\chi^2/\text{NDF}$ : 9474.0/50

All:  $-224.805 \pm 0.481$   $\chi^2/\text{NDF}$ : 20830.2/104

- sign  $-228.893 \pm 0.671$   $\chi^2/\text{NDF}$ : 11280.0/53

# reg\_asym\_atr1l2\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $19.233 \pm 0.960$   $\chi^2/\text{NDF}: 172.5/25$

Left Out:  $8.222 \pm 0.803$   $\chi^2/\text{NDF}: 457.9/24$

Right Out:  $20.287 \pm 0.926$   $\chi^2/\text{NDF}: 163.7/30$

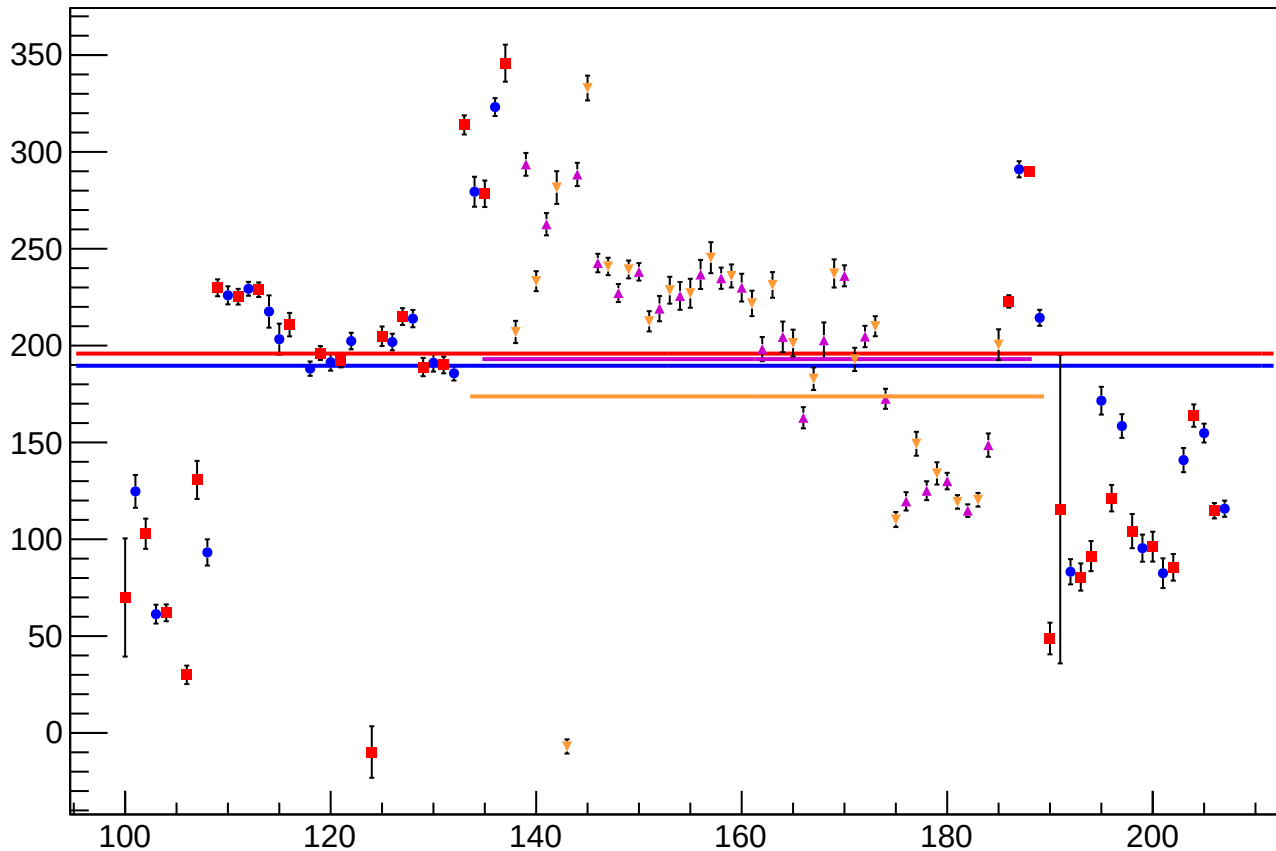
Left In:  $6.657 \pm 0.858$   $\chi^2/\text{NDF}: 354.8/22$

+ sign  $12.753 \pm 0.616$   $\chi^2/\text{NDF}: 707.8/50$

All:  $12.853 \pm 0.440$   $\chi^2/\text{NDF}: 1342.9/104$

- sign  $12.958 \pm 0.629$   $\chi^2/\text{NDF}: 635.1/53$

# reg\_asym\_atr1l2\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $189.586 \pm 0.977$   $\chi^2/\text{NDF}$ : 3898.0/25

Left Out:  $173.752 \pm 1.069$   $\chi^2/\text{NDF}$ : 5260.7/24

Right Out:  $195.866 \pm 0.885$   $\chi^2/\text{NDF}$ : 7549.1/30

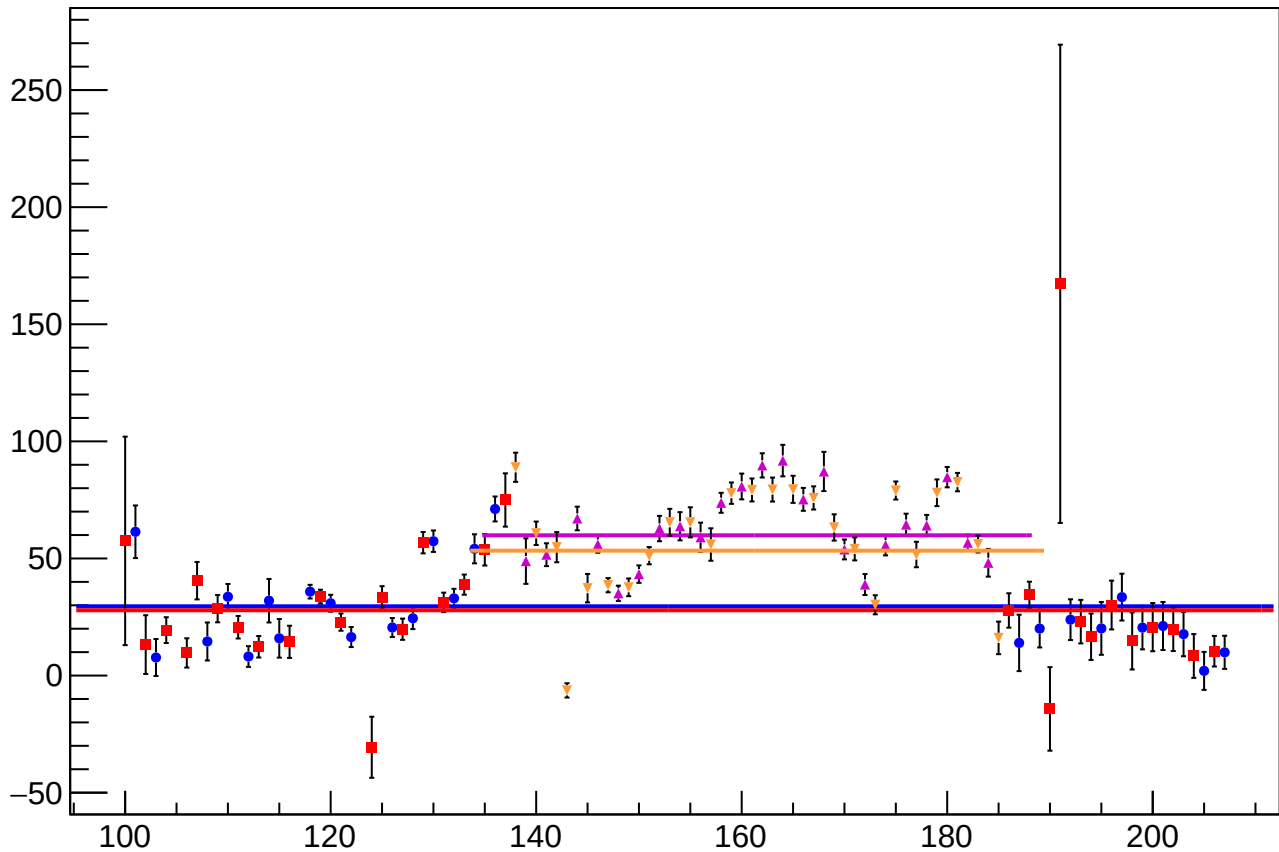
Left In:  $193.026 \pm 1.122$   $\chi^2/\text{NDF}$ : 2512.0/22

+ sign  $182.377 \pm 0.721$   $\chi^2/\text{NDF}$ : 9278.3/50

All:  $188.805 \pm 0.500$   $\chi^2/\text{NDF}$ : 19496.6/104

- sign  $194.776 \pm 0.695$   $\chi^2/\text{NDF}$ : 10065.0/53

# reg\_asym\_atr1l2\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $29.571 \pm 1.120$   $\chi^2/\text{NDF}: 207.1/25$

Left Out:  $53.331 \pm 0.922$   $\chi^2/\text{NDF}: 778.9/24$

Right Out:  $27.885 \pm 1.088$   $\chi^2/\text{NDF}: 166.6/30$

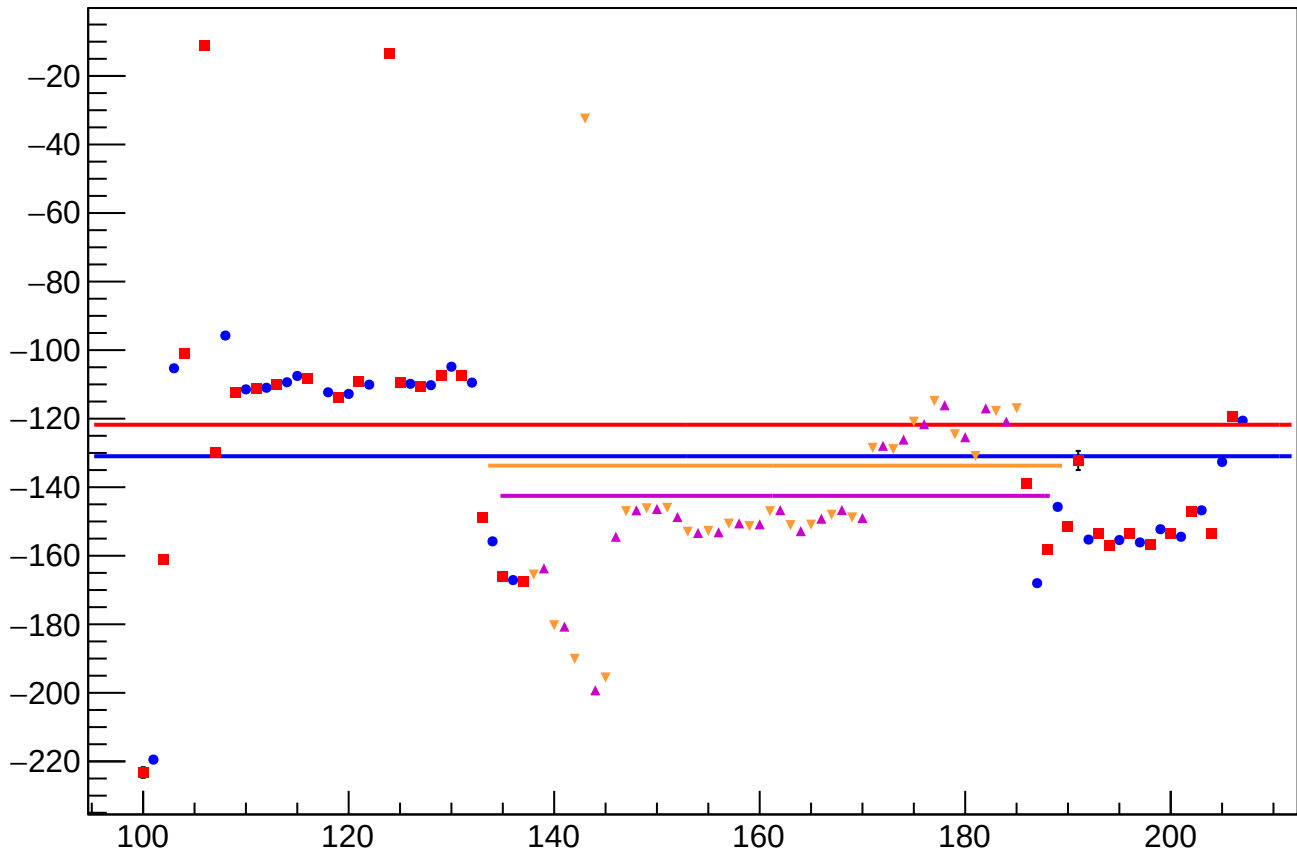
Left In:  $59.887 \pm 0.977$   $\chi^2/\text{NDF}: 251.2/22$

+ sign  $43.742 \pm 0.712$   $\chi^2/\text{NDF}: 1254.2/50$

All:  $44.651 \pm 0.509$   $\chi^2/\text{NDF}: 2154.5/104$

- sign  $45.598 \pm 0.727$   $\chi^2/\text{NDF}: 896.9/53$

reg\_asym\_atr1l2\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-130.961 \pm 0.062$   $\chi^2/\text{NDF}: 174546.1/25$

Left Out:  $-133.709 \pm 0.043$   $\chi^2/\text{NDF}: 675925.6/24$

Right Out:  $-121.775 \pm 0.059$   $\chi^2/\text{NDF}: 495616.6/30$

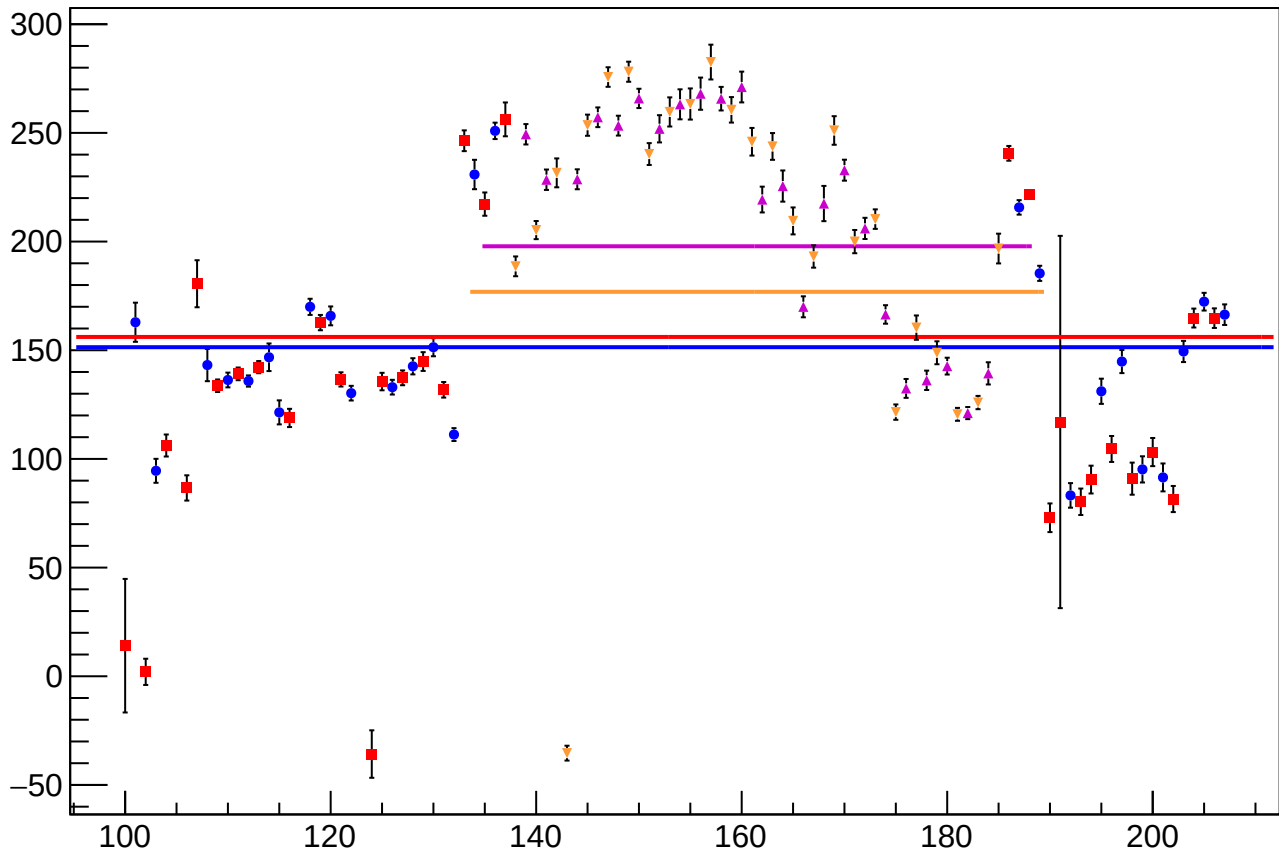
Left In:  $-142.518 \pm 0.044$   $\chi^2/\text{NDF}: 178481.1/22$

+ sign  $-132.829 \pm 0.035$   $\chi^2/\text{NDF}: 851790.3/50$

All:  $-133.908 \pm 0.025$   $\chi^2/\text{NDF}: 1606859.7/10$

- sign  $-134.996 \pm 0.035$   $\chi^2/\text{NDF}: 753194.1/53$

# reg\_asym\_atr1l2\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $151.403 \pm 0.827$   $\chi^2/\text{NDF}$ : 2159.6/25

Left Out:  $176.884 \pm 0.958$   $\chi^2/\text{NDF}$ : 7424.8/24

Right Out:  $156.122 \pm 0.754$   $\chi^2/\text{NDF}$ : 5002.6/30

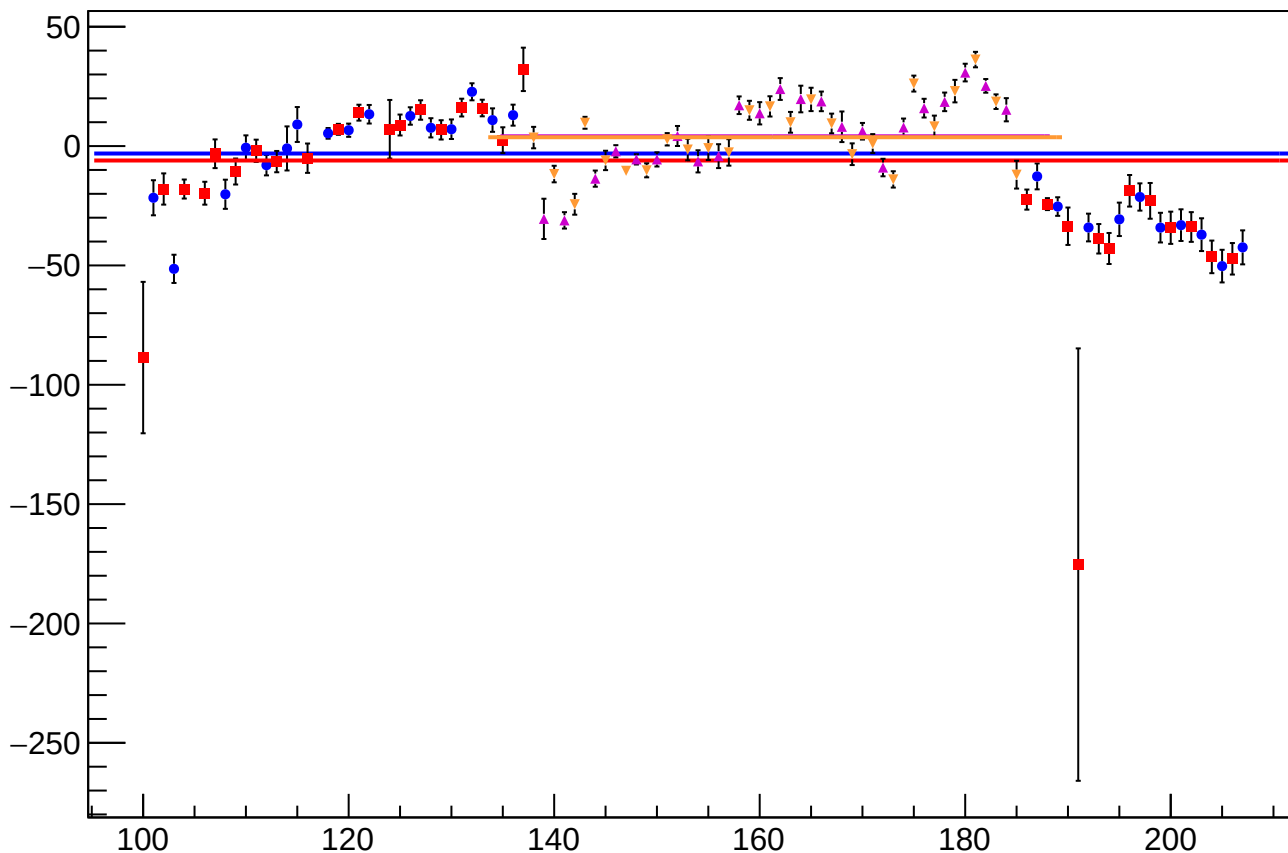
Left In:  $197.829 \pm 1.006$   $\chi^2/\text{NDF}$ : 2968.0/22

+ sign  $162.293 \pm 0.626$   $\chi^2/\text{NDF}$ : 9989.8/50

All:  $166.866 \pm 0.434$   $\chi^2/\text{NDF}$ : 19164.1/104

- sign  $171.110 \pm 0.603$   $\chi^2/\text{NDF}$ : 9071.3/53

# reg\_asym\_atr1l2\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-3.116 \pm 0.894$   $\chi^2/\text{NDF}: 473.6/25$

Left Out:  $3.708 \pm 0.723$   $\chi^2/\text{NDF}: 400.9/24$

Right Out:  $-6.040 \pm 0.848$   $\chi^2/\text{NDF}: 507.5/30$

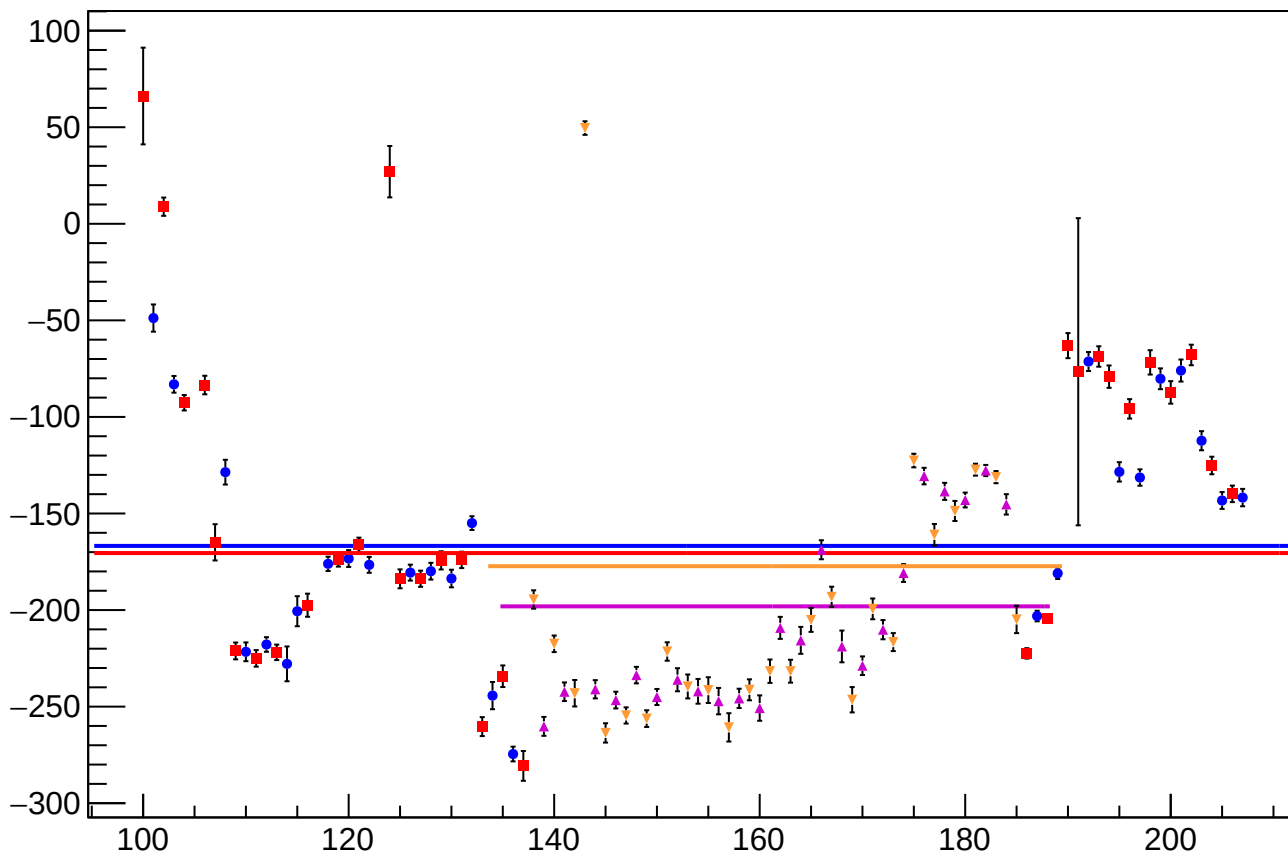
Left In:  $4.102 \pm 0.769$   $\chi^2/\text{NDF}: 398.9/22$

+ sign  $1.008 \pm 0.562$   $\chi^2/\text{NDF}: 909.7/50$

All:  $0.276 \pm 0.400$   $\chi^2/\text{NDF}: 1898.1/104$

- sign  $-0.475 \pm 0.570$   $\chi^2/\text{NDF}: 985.0/53$

# reg\_asym\_atr1l2\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-166.780 \pm 0.862$   $\chi^2/\text{NDF}$ : 3440.3/25

Left Out:  $-177.283 \pm 0.956$   $\chi^2/\text{NDF}$ : 7040.0/24

Right Out:  $-170.487 \pm 0.755$   $\chi^2/\text{NDF}$ : 6648.0/30

Left In:  $-198.088 \pm 1.000$   $\chi^2/\text{NDF}$ : 2386.2/22

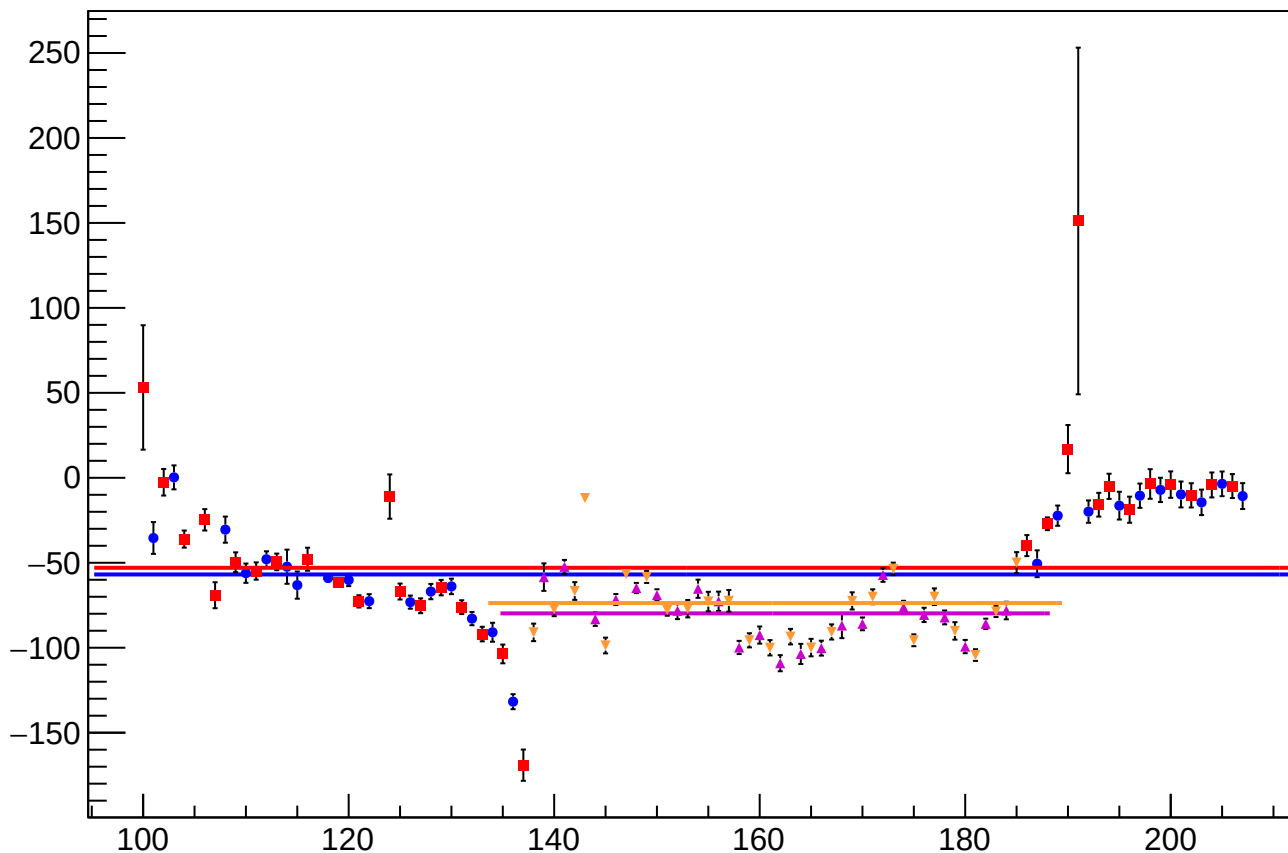
+ sign  $-171.487 \pm 0.640$   $\chi^2/\text{NDF}$ : 10546.9/50

All:  $-176.268 \pm 0.439$   $\chi^2/\text{NDF}$ : 20171.6/104

- sign  $-180.505 \pm 0.602$   $\chi^2/\text{NDF}$ : 9519.5/53



# reg\_asym\_atr1l2\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-56.880 \pm 1.049$   $\chi^2/\text{NDF}: 840.6/25$

Left Out:  $-73.706 \pm 0.829$   $\chi^2/\text{NDF}: 839.6/24$

Right Out:  $-52.956 \pm 1.010$   $\chi^2/\text{NDF}: 905.7/30$

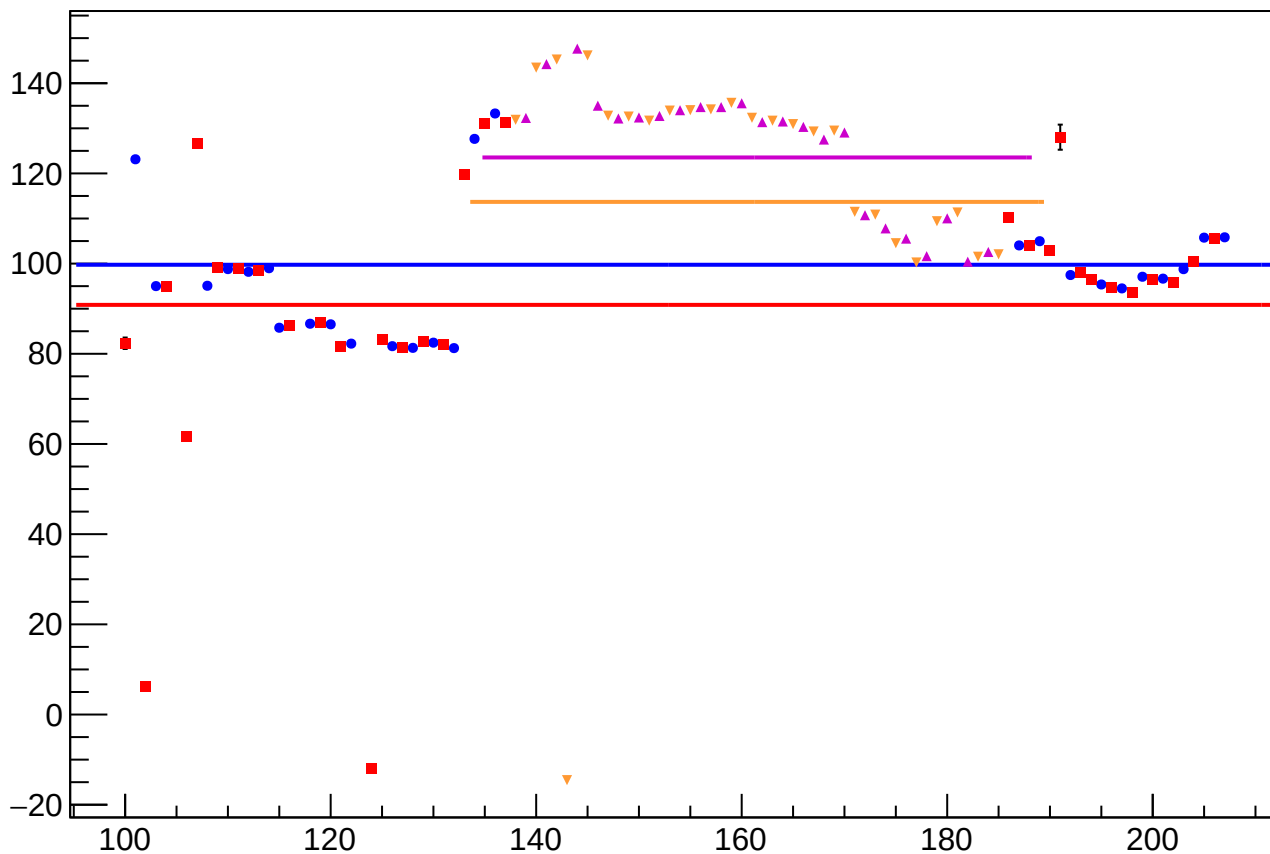
Left In:  $-79.777 \pm 0.874$   $\chi^2/\text{NDF}: 277.1/22$

+ sign  $-67.235 \pm 0.650$   $\chi^2/\text{NDF}: 1838.7/50$

All:  $-67.755 \pm 0.463$   $\chi^2/\text{NDF}: 3426.1/104$

- sign  $-68.292 \pm 0.661$   $\chi^2/\text{NDF}: 1586.1/53$

# reg\_asym\_atr1l2\_dd\_diff\_bpm12X\_slope vs Slug



Right In: 99.743 $\pm$ 0.055  $\chi^2$ /NDF: 70038.7/25

Left Out: 113.687 $\pm$ 0.038  $\chi^2$ /NDF: 963156.9/24

Right Out: 90.847 $\pm$ 0.051  $\chi^2$ /NDF: 287688.3/30

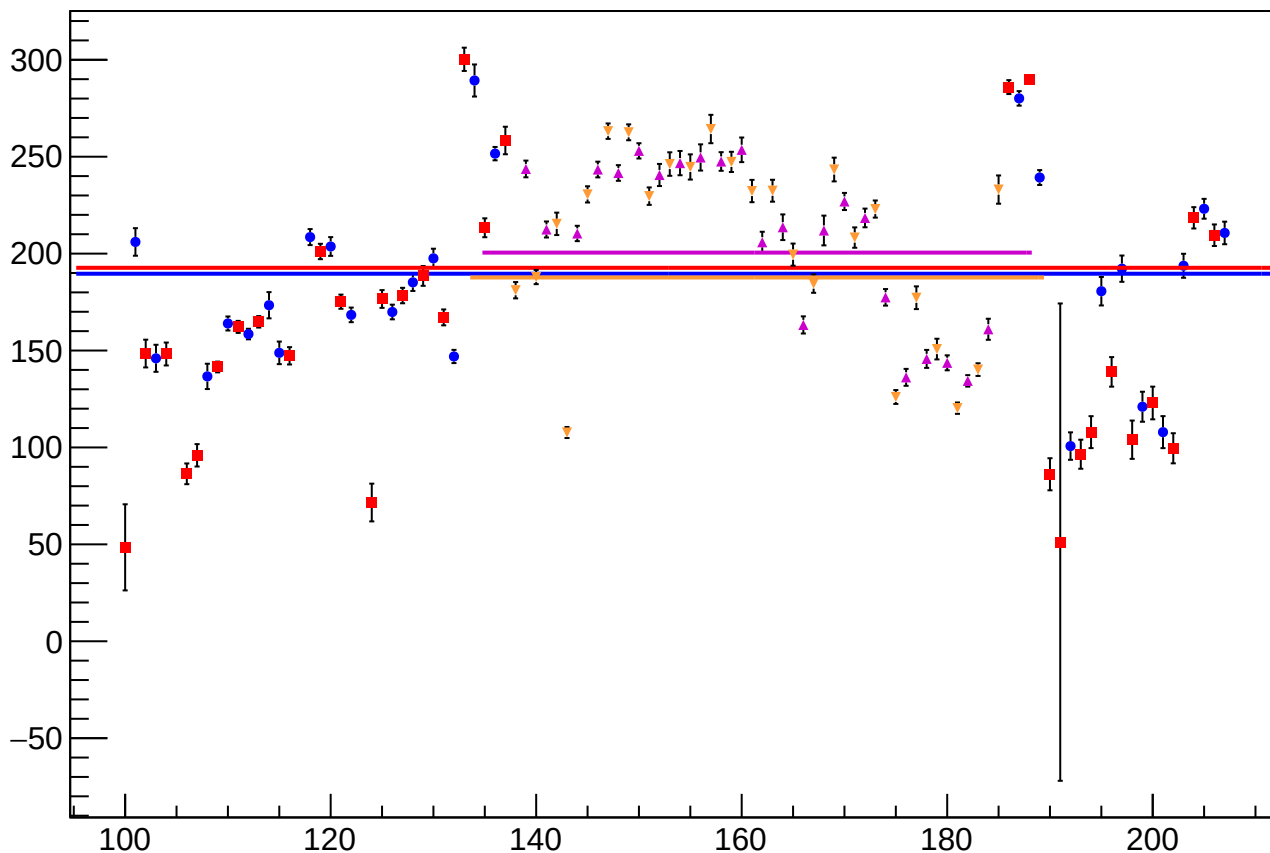
Left In: 123.538 $\pm$ 0.040  $\chi^2$ /NDF: 134613.3/22

+ sign 109.078 $\pm$ 0.031  $\chi^2$ /NDF: 1076874.3/50

All: 110.139 $\pm$ 0.022  $\chi^2$ /NDF: 1758604.4/104

- sign 111.192 $\pm$ 0.031  $\chi^2$ /NDF: 679451.0/53

reg\_asym\_atl\_dd\_atr\_dd\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $189.627 \pm 0.926$   $\chi^2/\text{NDF}$ : 2202.5/25

Left Out:  $187.681 \pm 0.898$   $\chi^2/\text{NDF}$ : 3528.3/24

Right Out:  $192.685 \pm 0.827$   $\chi^2/\text{NDF}$ : 6004.7/30

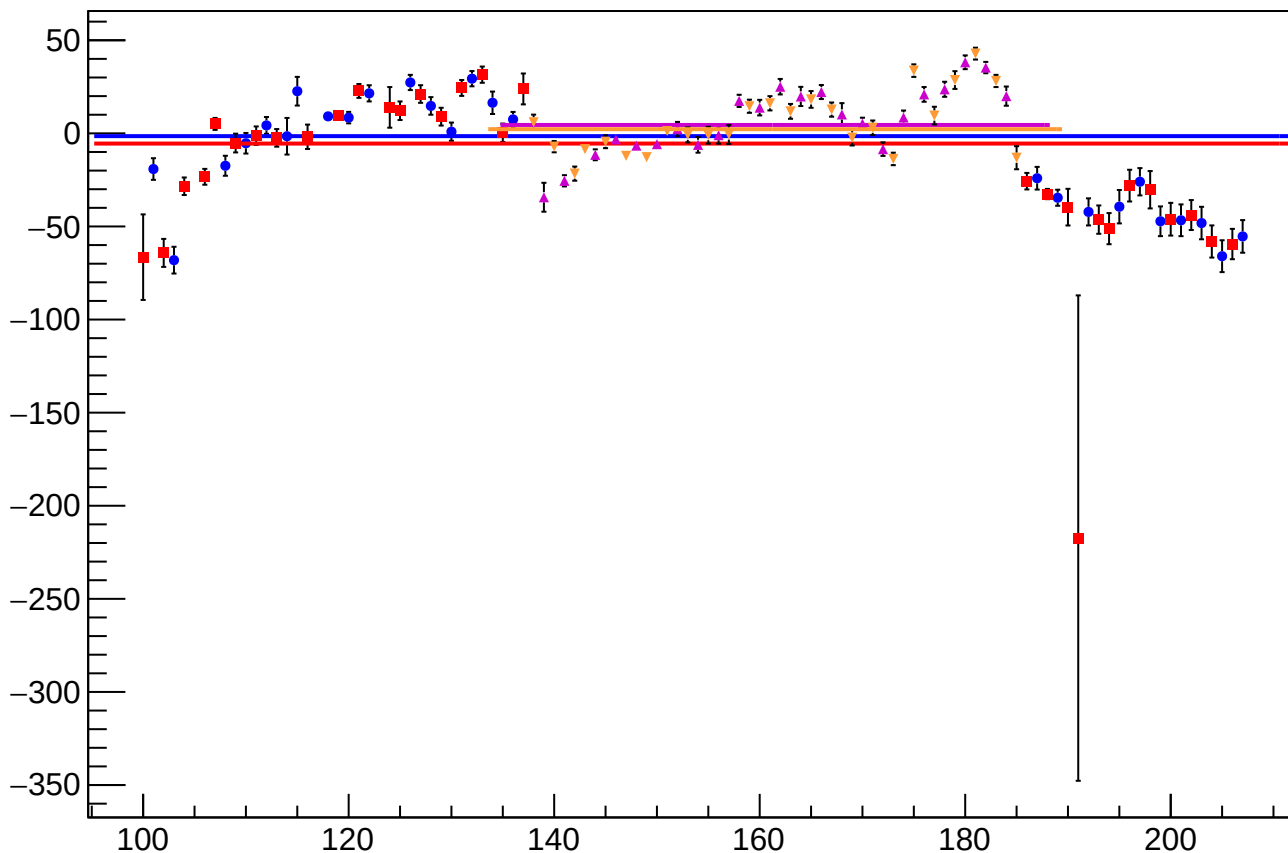
Left In:  $200.521 \pm 0.955$   $\chi^2/\text{NDF}$ : 2111.4/22

+ sign  $188.624 \pm 0.644$   $\chi^2/\text{NDF}$ : 5733.1/50

All:  $192.446 \pm 0.449$   $\chi^2/\text{NDF}$ : 13956.0/104

- sign  $196.041 \pm 0.625$   $\chi^2/\text{NDF}$ : 8154.6/53

reg\_asym\_atl\_dd\_atr\_dd\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $-1.495 \pm 0.997$   $\chi^2/\text{NDF}$ : 621.7/25

Left Out:  $2.245 \pm 0.665$   $\chi^2/\text{NDF}$ : 600.9/24

Right Out:  $-5.482 \pm 0.916$   $\chi^2/\text{NDF}$ : 733.8/30

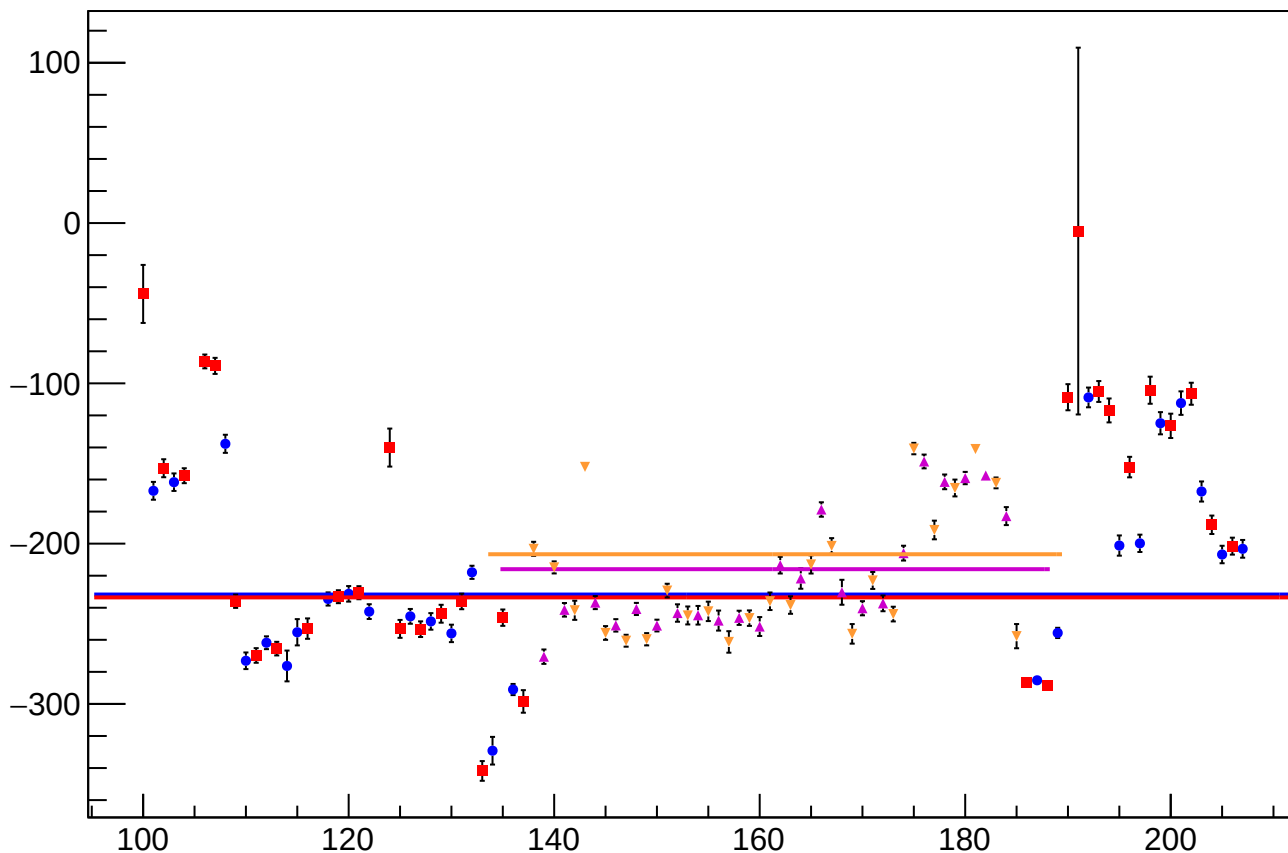
Left In:  $4.513 \pm 0.714$   $\chi^2/\text{NDF}$ : 547.1/22

+ sign  $1.094 \pm 0.553$   $\chi^2/\text{NDF}$ : 1232.3/50

All:  $0.918 \pm 0.395$   $\chi^2/\text{NDF}$ : 2587.4/104

- sign  $0.735 \pm 0.563$   $\chi^2/\text{NDF}$ : 1354.9/53

reg\_asym\_atl\_dd\_atr\_dd\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $-231.760 \pm 0.969$   $\chi^2/\text{NDF}: 2671.4/25$

Left Out:  $-206.617 \pm 0.895$   $\chi^2/\text{NDF}: 2467.8/24$

Right Out:  $-233.542 \pm 0.833$   $\chi^2/\text{NDF}: 6659.3/30$

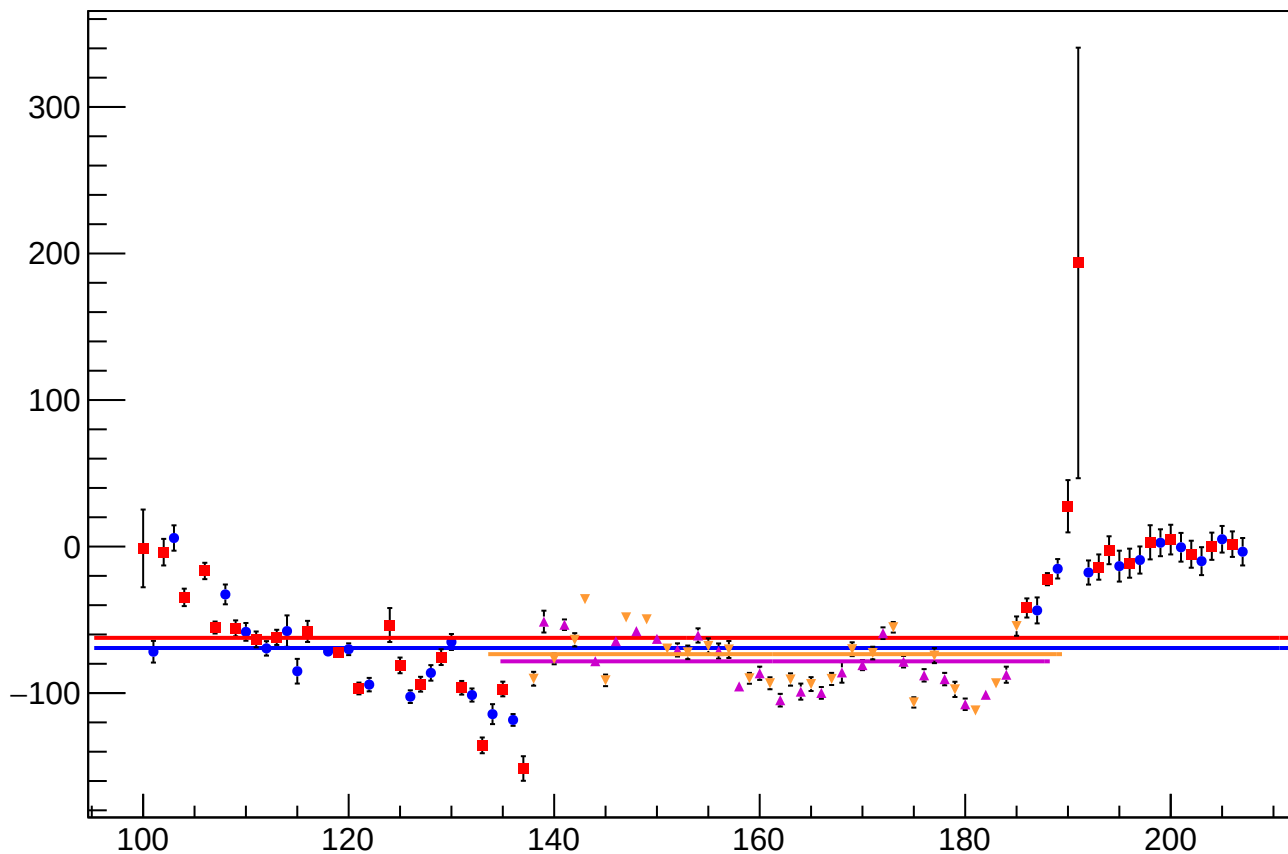
Left In:  $-215.938 \pm 0.946$   $\chi^2/\text{NDF}: 1711.9/22$

+ sign  $-218.187 \pm 0.657$   $\chi^2/\text{NDF}: 5502.6/50$

All:  $-222.212 \pm 0.453$   $\chi^2/\text{NDF}: 14140.2/104$

- sign  $-225.854 \pm 0.625$   $\chi^2/\text{NDF}: 8566.3/53$

reg\_asym\_atl\_dd\_atr\_dd\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $-69.230 \pm 1.169$   $\chi^2/\text{NDF}$ : 906.0/25

Left Out:  $-73.426 \pm 0.767$   $\chi^2/\text{NDF}$ : 836.6/24

Right Out:  $-62.305 \pm 1.095$   $\chi^2/\text{NDF}$ : 1122.0/30

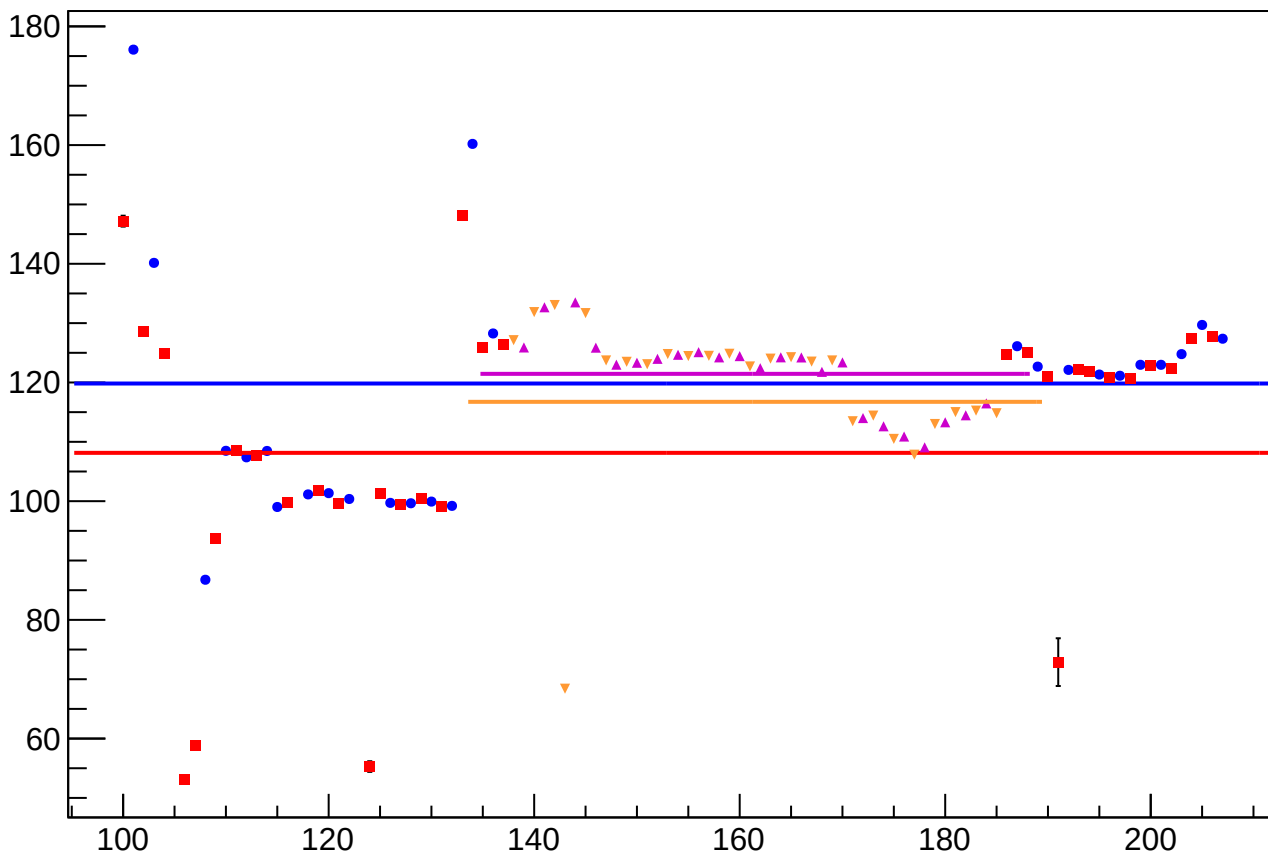
Left In:  $-78.329 \pm 0.817$   $\chi^2/\text{NDF}$ : 443.2/22

+ sign  $-72.164 \pm 0.641$   $\chi^2/\text{NDF}$ : 1751.5/50

All:  $-72.375 \pm 0.458$   $\chi^2/\text{NDF}$ : 3454.5/104

- sign  $-72.596 \pm 0.655$   $\chi^2/\text{NDF}$ : 1702.8/53

reg\_asym\_atl\_dd\_atr\_dd\_avg\_diff\_bpm12X\_slope vs Slug



Right In: 119.826 $\pm$ 0.062  $\chi^2$ /NDF: 97943.9/25

Left Out: 116.740 $\pm$ 0.036  $\chi^2$ /NDF: 203650.9/24

Right Out: 108.143 $\pm$ 0.056  $\chi^2$ /NDF: 207794.2/30

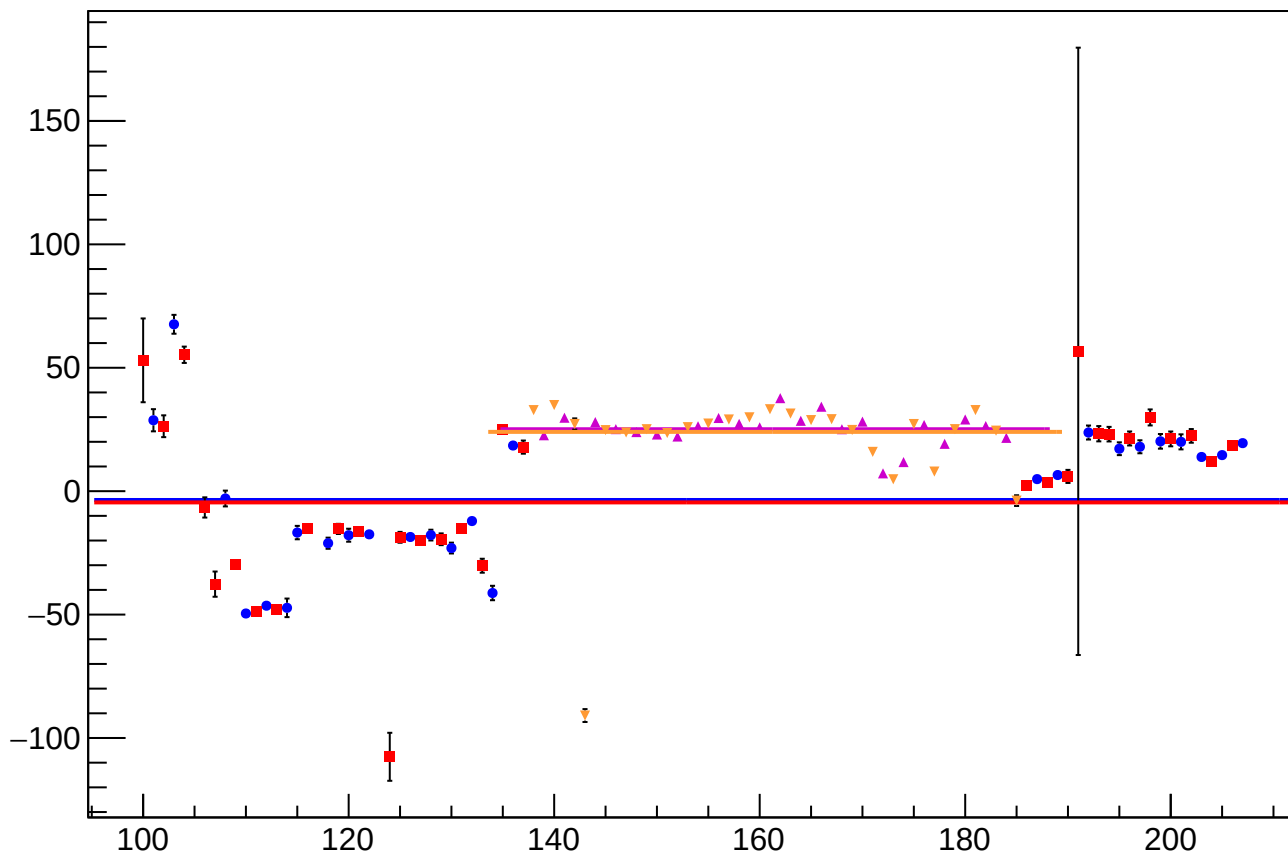
Left In: 121.455 $\pm$ 0.037  $\chi^2$ /NDF: 28796.4/22

+ sign 117.512 $\pm$ 0.031  $\chi^2$ /NDF: 303450.5/50

All: 117.450 $\pm$ 0.022  $\chi^2$ /NDF: 579025.3/104

- sign 117.388 $\pm$ 0.031  $\chi^2$ /NDF: 275566.8/53

reg\_asym\_atl\_dd\_atr\_dd\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-3.572 \pm 0.419$   $\chi^2/\text{NDF}$ : 3423.9/25

Left Out:  $24.025 \pm 0.282$   $\chi^2/\text{NDF}$ : 2802.2/24

Right Out:  $-4.552 \pm 0.387$   $\chi^2/\text{NDF}$ : 3712.6/30

Left In:  $25.089 \pm 0.287$   $\chi^2/\text{NDF}$ : 495.3/22

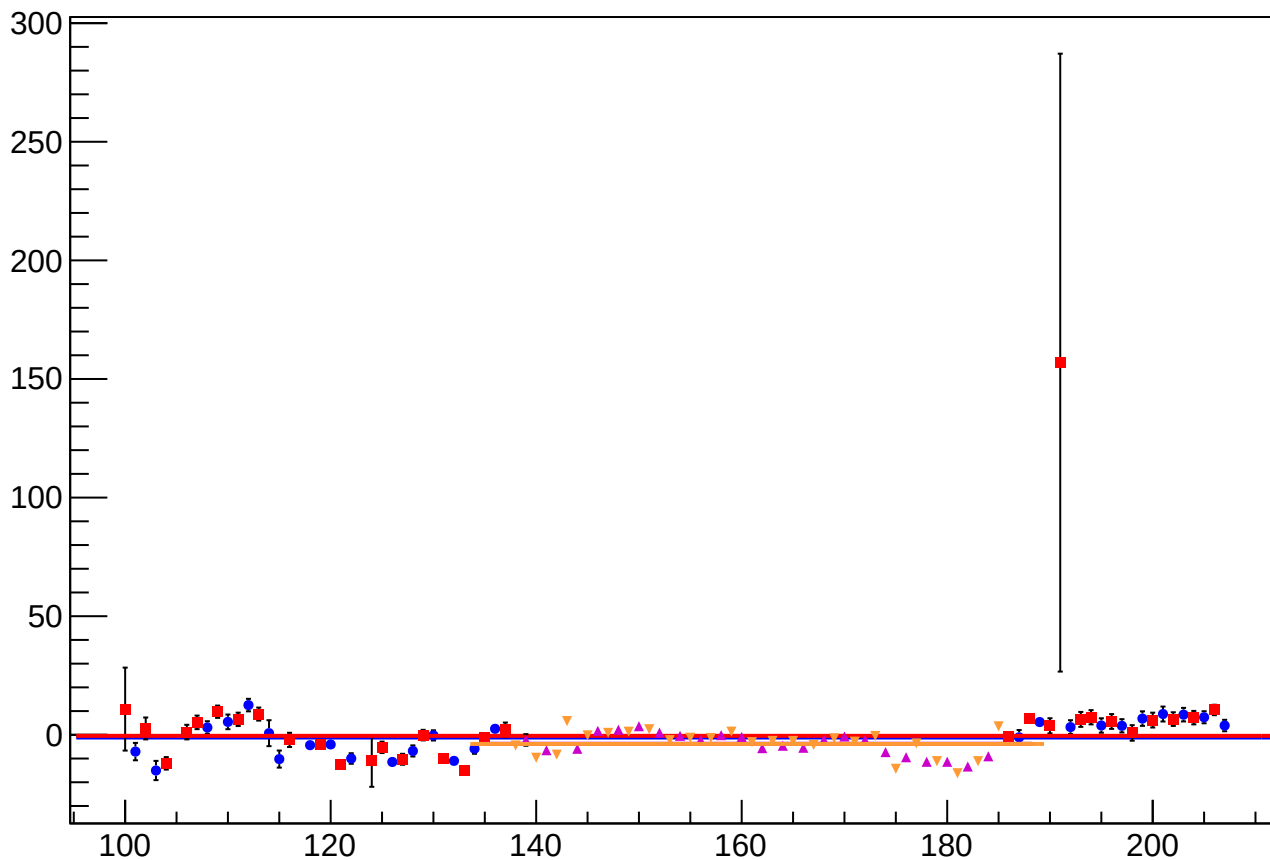
+ sign  $15.427 \pm 0.234$   $\chi^2/\text{NDF}$ : 9209.5/50

All:  $14.991 \pm 0.164$   $\chi^2/\text{NDF}$ : 17204.6/104

- sign  $14.568 \pm 0.231$   $\chi^2/\text{NDF}$ : 7988.2/53



reg\_asym\_atl\_dd\_atr\_dd\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-1.134 \pm 0.465$   $\chi^2/\text{NDF}$ : 206.4/25

Left Out:  $-3.845 \pm 0.218$   $\chi^2/\text{NDF}$ : 649.4/24

Right Out:  $-0.430 \pm 0.444$   $\chi^2/\text{NDF}$ : 282.4/30

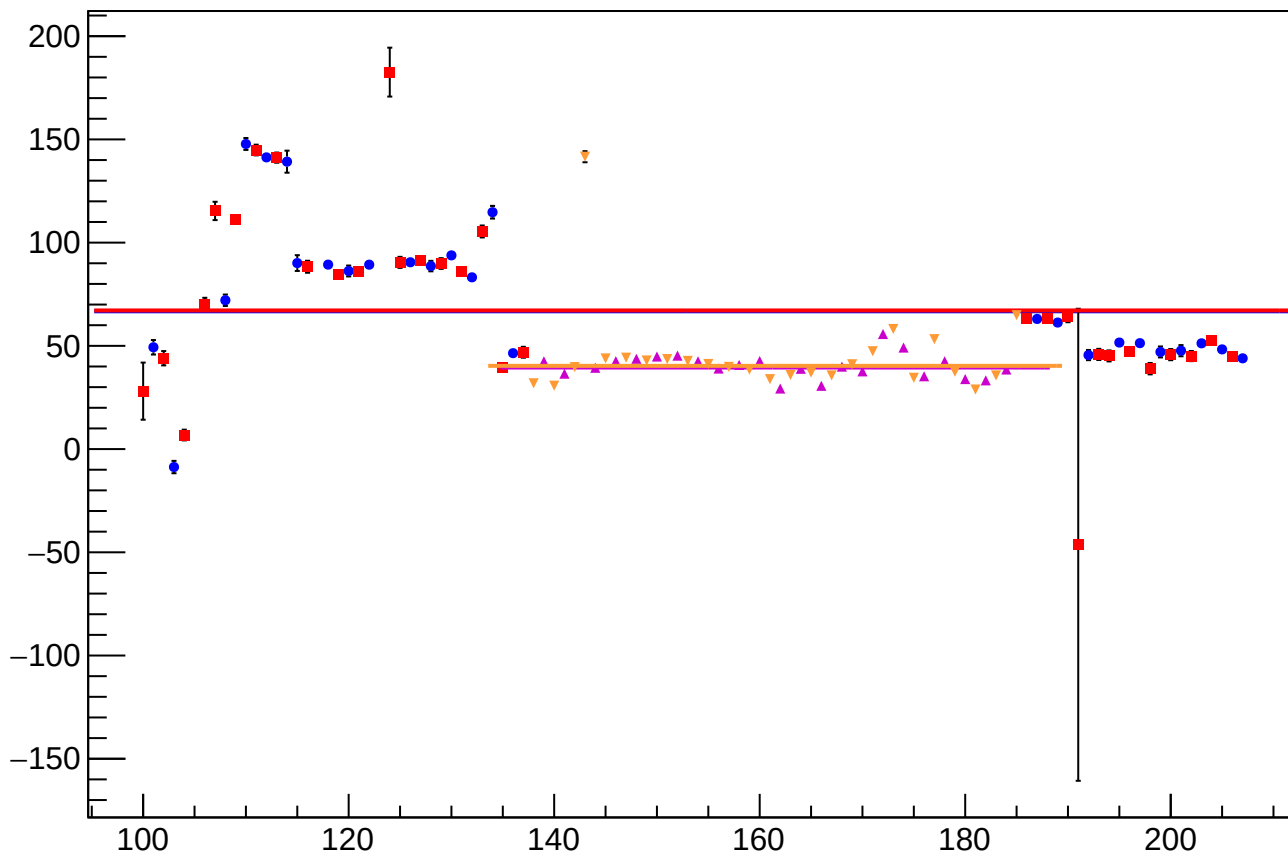
Left In:  $-3.780 \pm 0.224$   $\chi^2/\text{NDF}$ : 509.8/22

+ sign  $-3.358 \pm 0.197$   $\chi^2/\text{NDF}$ : 883.6/50

All:  $-3.232 \pm 0.140$   $\chi^2/\text{NDF}$ : 1722.0/104

- sign  $-3.103 \pm 0.200$   $\chi^2/\text{NDF}$ : 837.6/53

reg\_asym\_atl\_dd\_atr\_dd\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $66.737 \pm 0.430$   $\chi^2/\text{NDF}$ : 4499.3/25

Left Out:  $40.315 \pm 0.280$   $\chi^2/\text{NDF}$ : 2182.8/24

Right Out:  $67.150 \pm 0.383$   $\chi^2/\text{NDF}$ : 4748.8/30

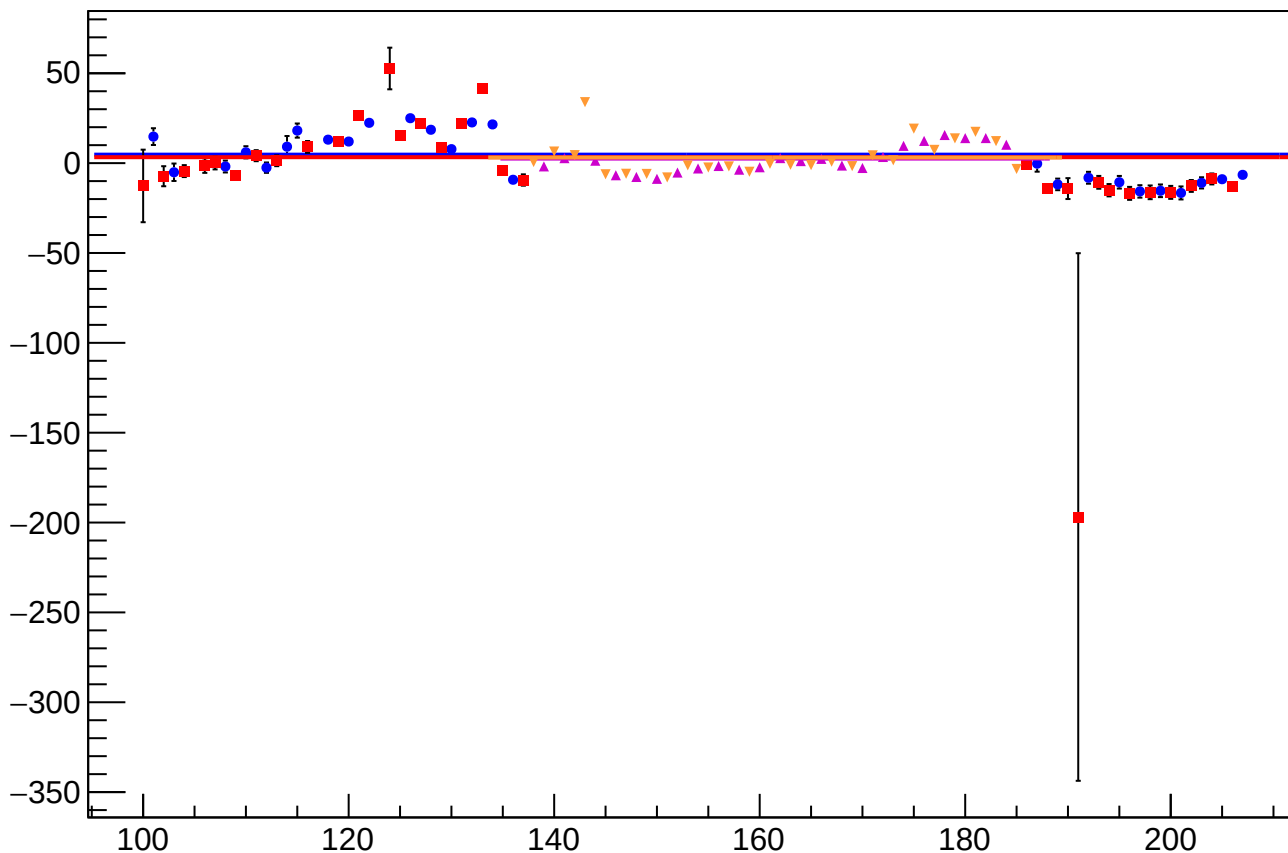
Left In:  $39.504 \pm 0.285$   $\chi^2/\text{NDF}$ : 432.1/22

+ sign  $48.188 \pm 0.235$   $\chi^2/\text{NDF}$ : 9332.4/50

All:  $48.774 \pm 0.164$   $\chi^2/\text{NDF}$ : 17876.5/104

- sign  $49.330 \pm 0.229$   $\chi^2/\text{NDF}$ : 8531.9/53

reg\_asym\_atl\_dd\_atr\_dd\_dd\_diff\_bpm4eY\_slope vs Slug



Right In: 4.719 $\pm$ 0.535  $\chi^2$ /NDF: 674.9/25

Left Out: 3.142 $\pm$ 0.245  $\chi^2$ /NDF:1267.0/24

Right Out: 3.302 $\pm$ 0.525  $\chi^2$ /NDF: 892.1/30

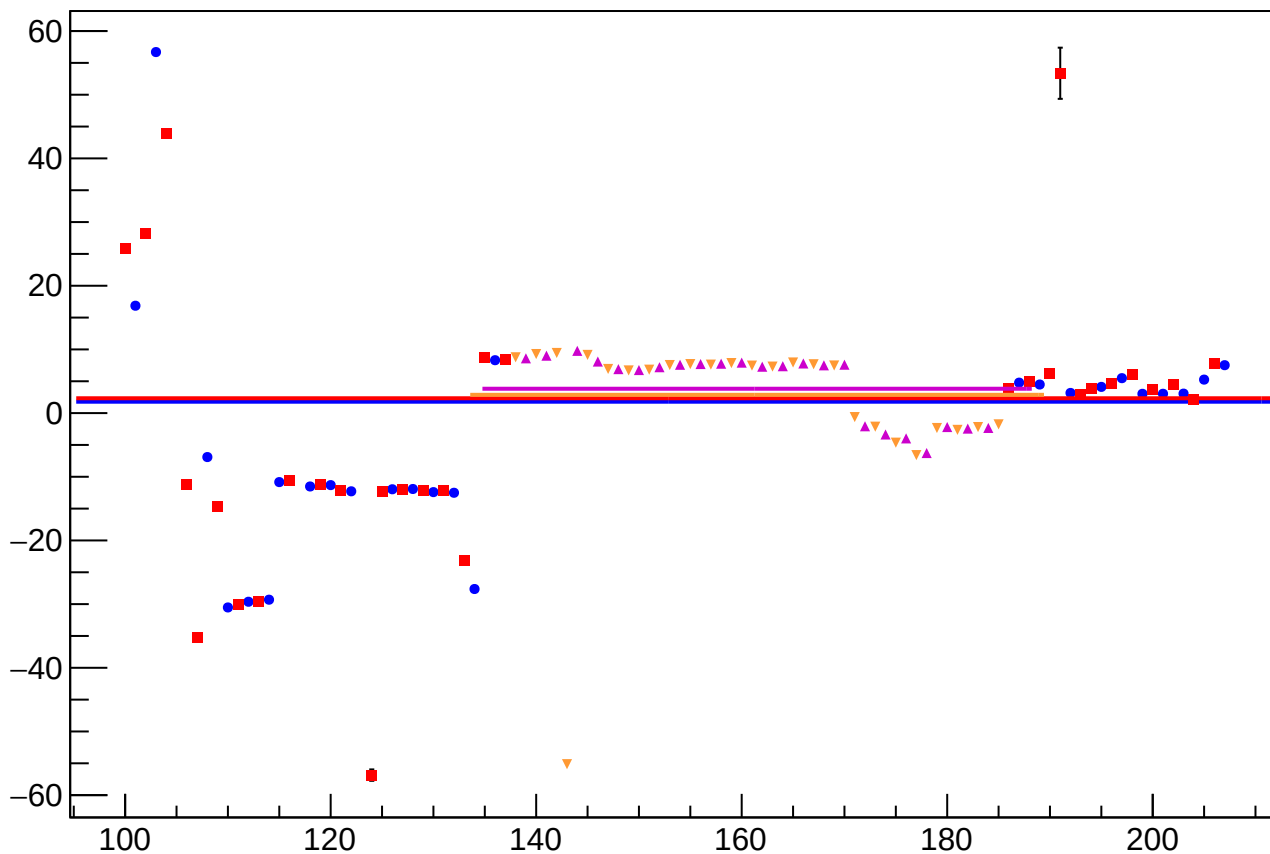
Left In: 2.519 $\pm$ 0.251  $\chi^2$ /NDF:968.2/22

+ sign 3.416 $\pm$ 0.223  $\chi^2$ /NDF: 1949.1/50

All: 3.046 $\pm$ 0.159  $\chi^2$ /NDF: 3816.8/104

- sign 2.665 $\pm$ 0.226  $\chi^2$ /NDF: 1862.1/53

reg\_asym\_atl\_dd\_atr\_dd\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $1.789 \pm 0.025$   $\chi^2/\text{NDF}$ : 379880.1/25

Left Out:  $2.870 \pm 0.011$   $\chi^2/\text{NDF}$ : 512331.0/24

Right Out:  $2.330 \pm 0.025$   $\chi^2/\text{NDF}$ : 330192.9/30

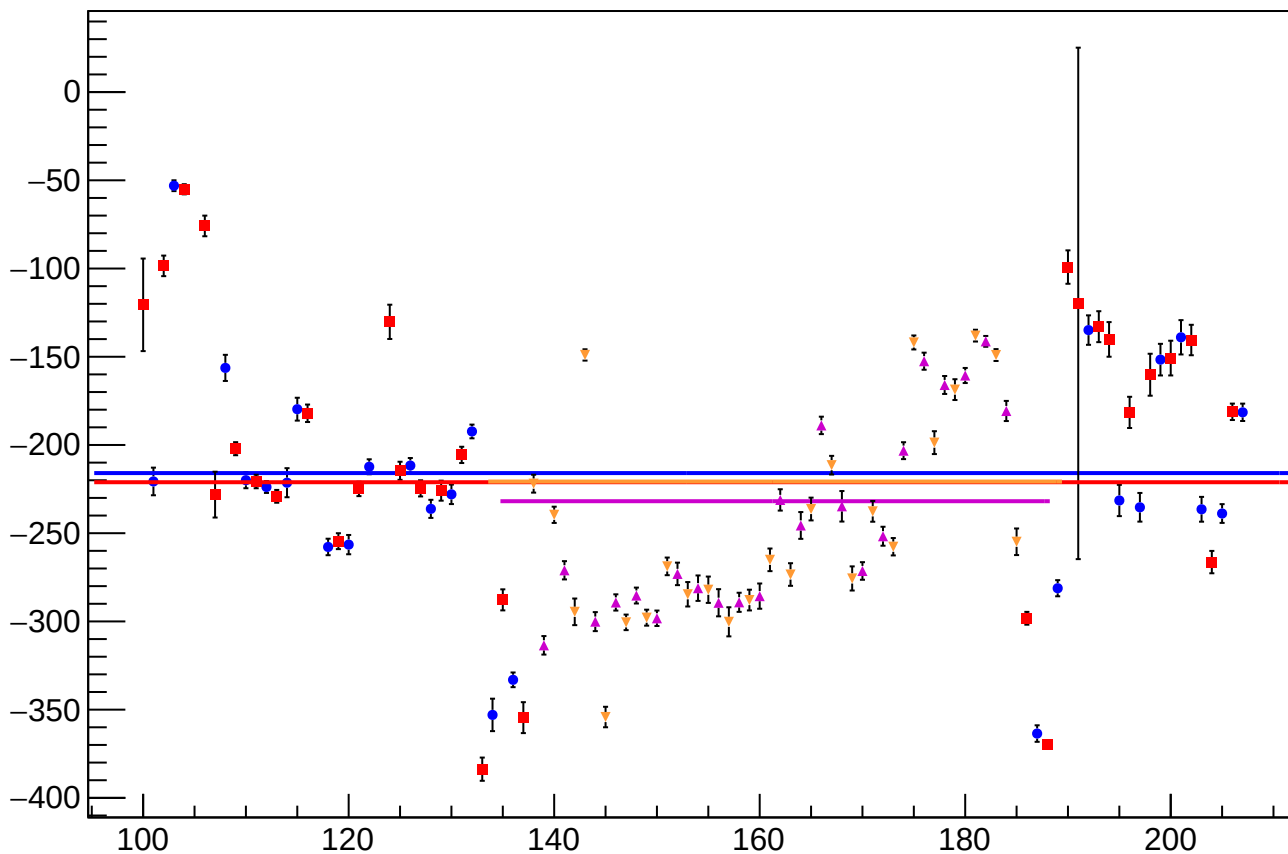
Left In:  $3.825 \pm 0.011$   $\chi^2/\text{NDF}$ : 233224.7/22

+ sign  $2.701 \pm 0.010$   $\chi^2/\text{NDF}$ : 893727.4/50

All:  $3.138 \pm 0.007$   $\chi^2/\text{NDF}$ : 1463893.9/104

- sign  $3.580 \pm 0.010$   $\chi^2/\text{NDF}$ : 566392.1/53

reg\_asym\_atl\_avg\_atr\_avg\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-215.927 \pm 1.016$   $\chi^2/\text{NDF}: 5622.5/25$

Left Out:  $-220.723 \pm 1.018$   $\chi^2/\text{NDF}: 4052.2/24$

Right Out:  $-221.108 \pm 0.921$   $\chi^2/\text{NDF}: 10257.3/30$

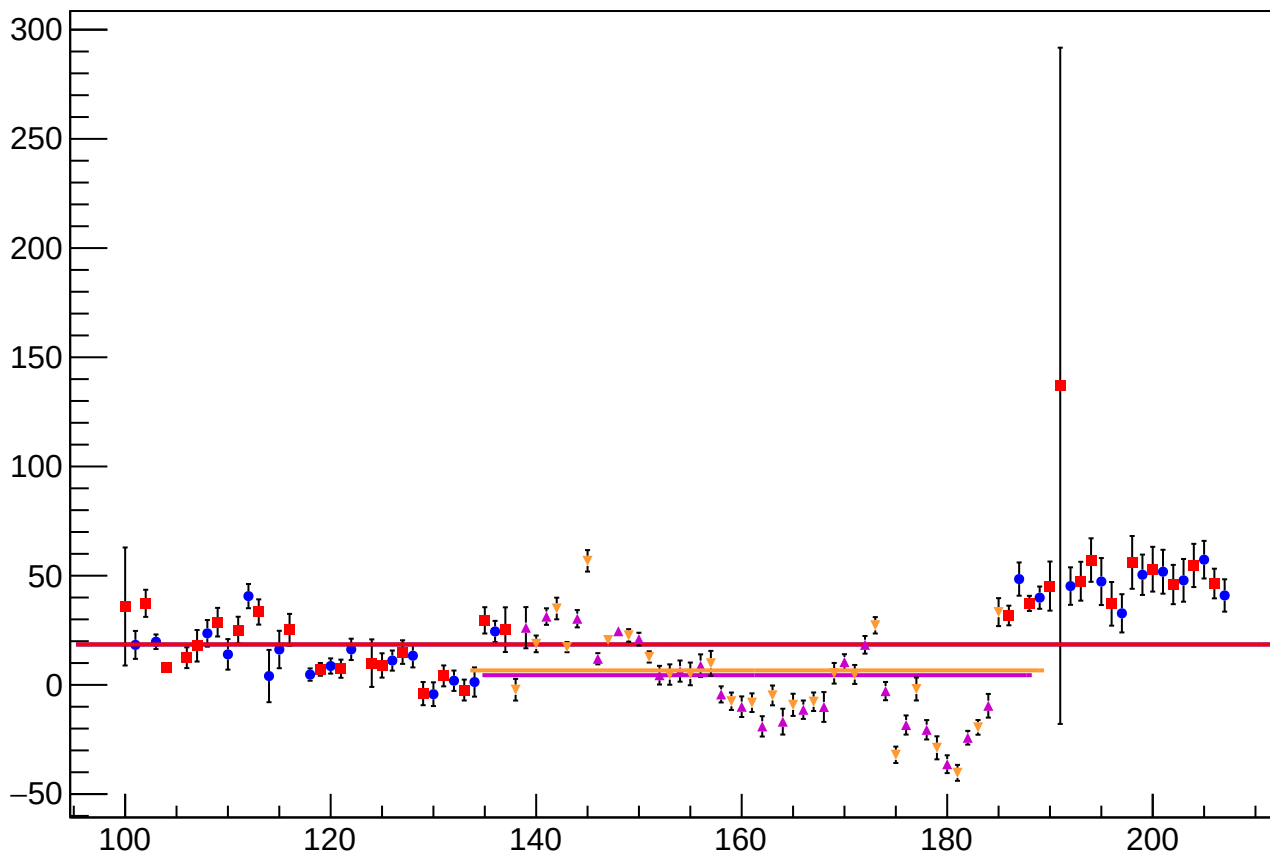
Left In:  $-231.871 \pm 1.077$   $\chi^2/\text{NDF}: 3160.3/22$

+ sign  $-218.321 \pm 0.719$   $\chi^2/\text{NDF}: 9685.9/50$

All:  $-222.088 \pm 0.502$   $\chi^2/\text{NDF}: 23214.6/104$

- sign  $-225.654 \pm 0.700$   $\chi^2/\text{NDF}: 13475.3/53$

reg\_asym\_atl\_avg\_atr\_avg\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $18.498 \pm 1.087$   $\chi^2/\text{NDF}$ : 206.7/25

Left Out:  $6.643 \pm 0.752$   $\chi^2/\text{NDF}$ : 735.0/24

Right Out:  $18.528 \pm 0.986$   $\chi^2/\text{NDF}$ : 254.1/30

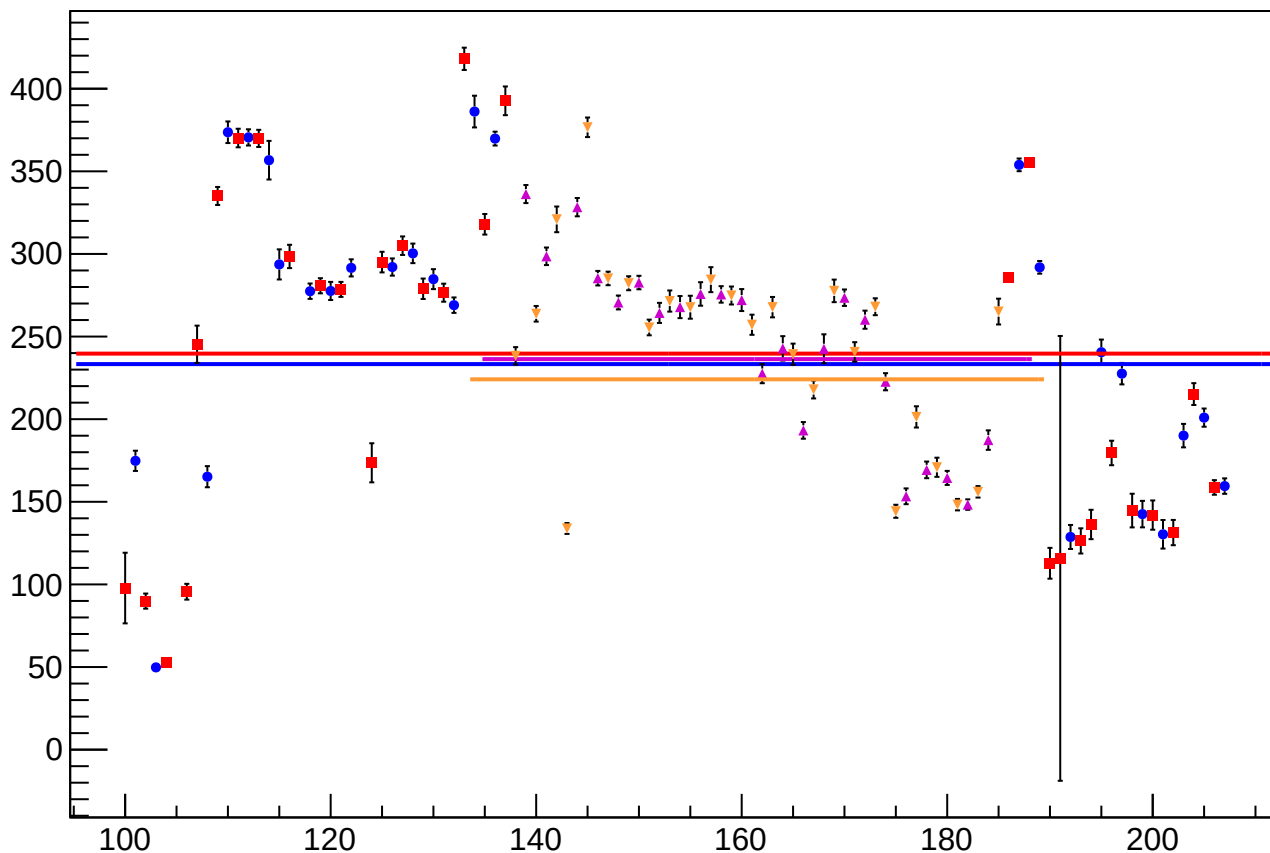
Left In:  $4.447 \pm 0.807$   $\chi^2/\text{NDF}$ : 567.1/22

+ sign  $10.482 \pm 0.619$   $\chi^2/\text{NDF}$ : 1022.1/50

All:  $10.292 \pm 0.439$   $\chi^2/\text{NDF}$ : 1965.6/104

- sign  $10.099 \pm 0.624$   $\chi^2/\text{NDF}$ : 943.3/53

reg\_asym\_atl\_avg\_atr\_avg\_avg\_diff\_bpm4eX\_slope vs Slug



Right In: 233.331 $\pm$ 1.024  $\chi^2/\text{NDF}$ : 11397.6/25

Left Out: 224.123 $\pm$ 1.014  $\chi^2/\text{NDF}$ : 3966.6/24

Right Out: 239.679 $\pm$ 0.898  $\chi^2/\text{NDF}$ : 16967.6/30

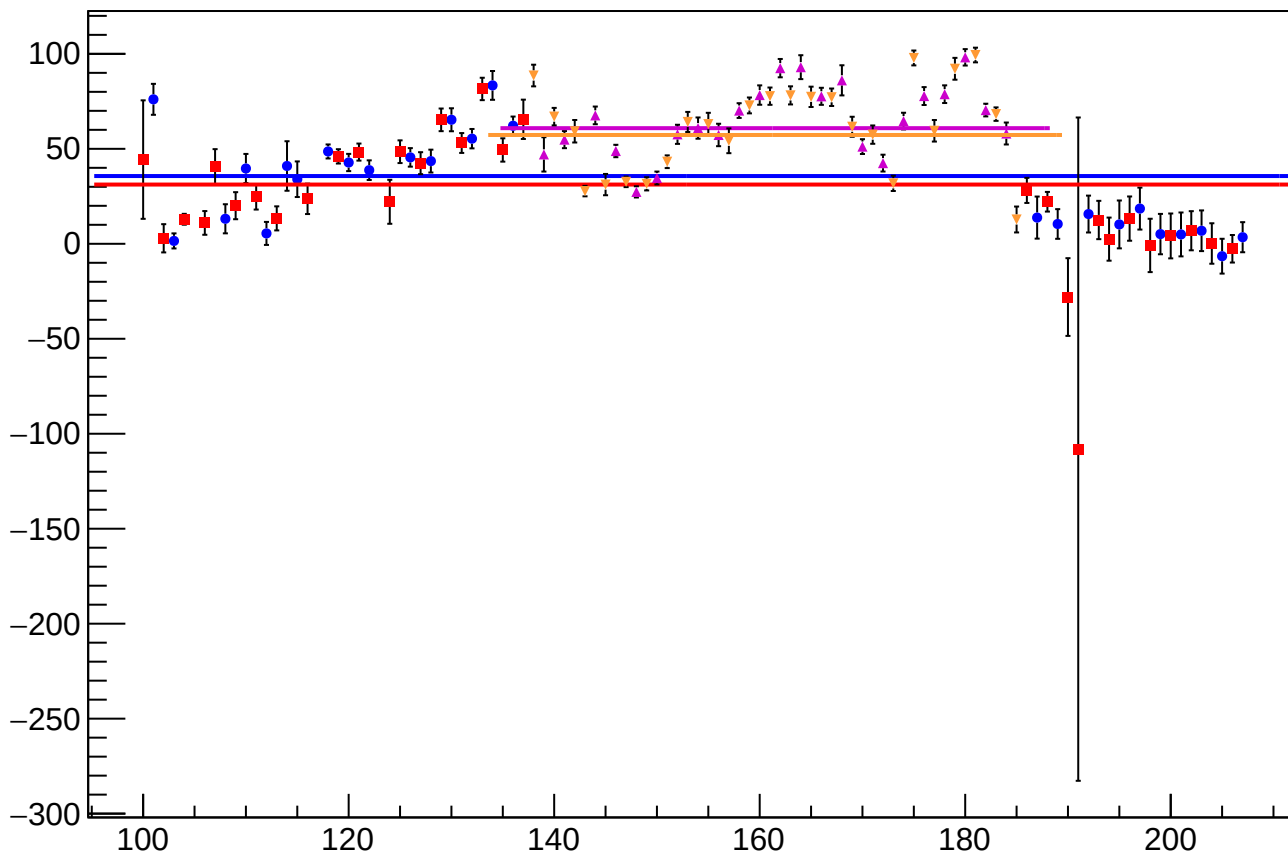
Left In: 236.342 $\pm$ 1.066  $\chi^2/\text{NDF}$ : 2992.9/22

+ sign 228.678 $\pm$ 0.721  $\chi^2/\text{NDF}$ : 15405.0/50

All: 233.716 $\pm$ 0.497  $\chi^2/\text{NDF}$ : 35464.6/104

- sign 238.295 $\pm$ 0.687  $\chi^2/\text{NDF}$ : 19966.3/53

reg\_asym\_atl\_avg\_atr\_avg\_avg\_diff\_bpm4eY\_slope vs Slug



Right In: 35.670 $\pm$ 1.276  $\chi^2$ /NDF: 347.3/25

Left Out: 57.288 $\pm$ 0.868  $\chi^2$ /NDF: 767.9/24

Right Out: 31.190 $\pm$ 1.184  $\chi^2$ /NDF: 335.7/30

Left In: 60.877 $\pm$ 0.923  $\chi^2$ /NDF: 454.7/22

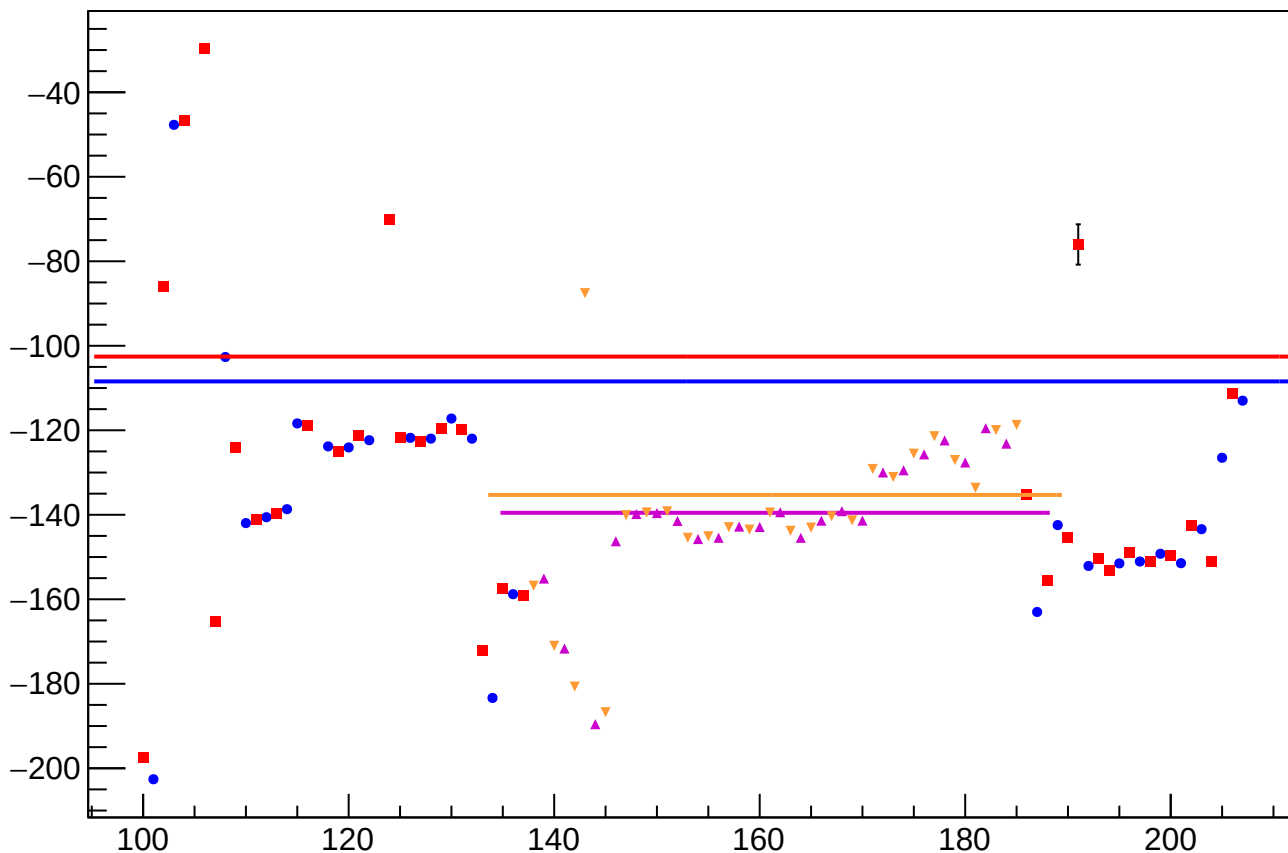
+ sign 50.446 $\pm$ 0.718  $\chi^2$ /NDF: 1311.5/50

All: 50.058 $\pm$ 0.511  $\chi^2$ /NDF: 2493.7/104

- sign 49.658 $\pm$ 0.728  $\chi^2$ /NDF: 1181.7/53



reg\_asym\_atl\_avg\_atr\_avg\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-108.433 \pm 0.059$   $\chi^2/\text{NDF}$ : 662446.7/25

Left Out:  $-135.305 \pm 0.041$   $\chi^2/\text{NDF}$ : 262874.5/24

Right Out:  $-102.553 \pm 0.056$   $\chi^2/\text{NDF}$ : 719498.2/30

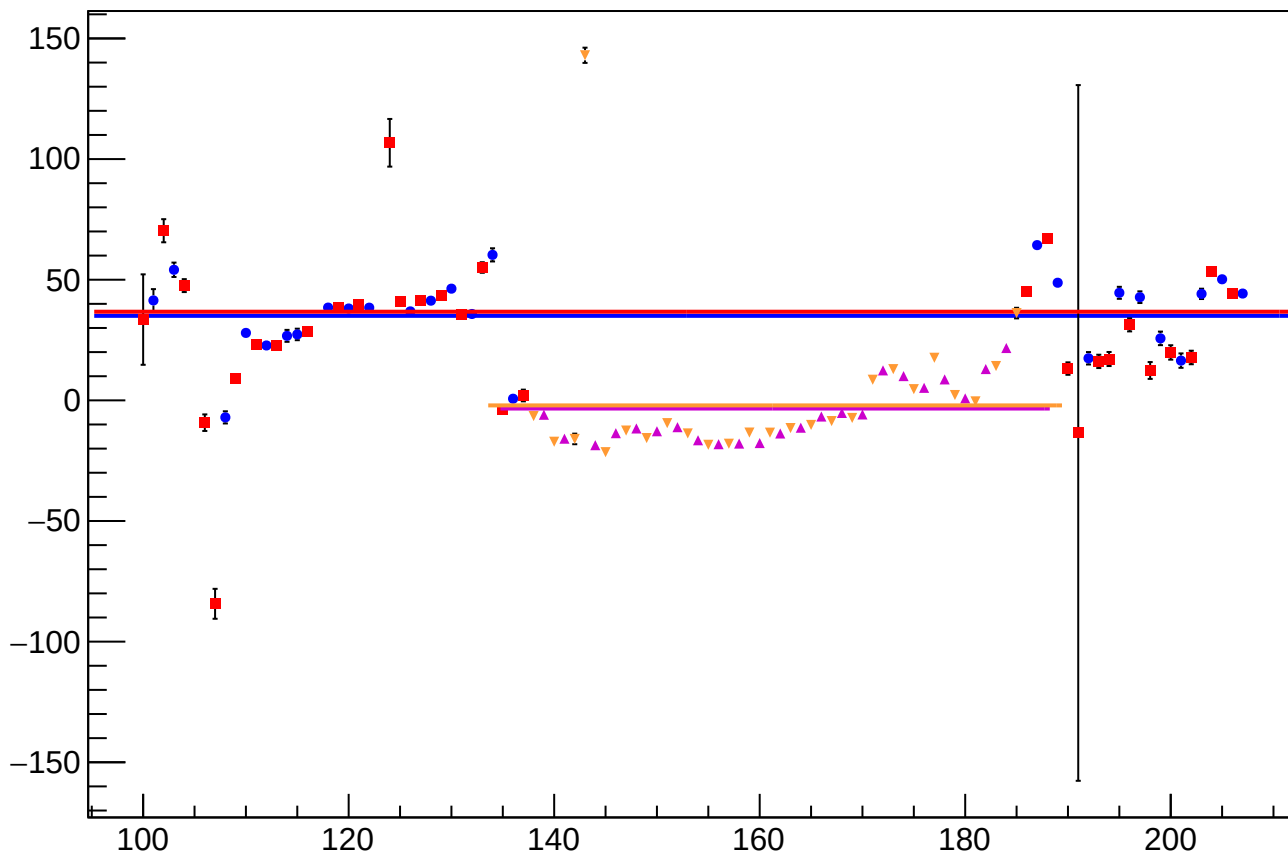
Left In:  $-139.533 \pm 0.042$   $\chi^2/\text{NDF}$ : 114482.7/22

+ sign  $-126.705 \pm 0.033$   $\chi^2/\text{NDF}$ : 1065696.7/50

All:  $-126.505 \pm 0.024$   $\chi^2/\text{NDF}$ : 2175673.7/10

- sign  $-126.302 \pm 0.034$   $\chi^2/\text{NDF}$ : 1109905.3/53

reg\_asym\_atl\_avg\_atr\_avg\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $35.032 \pm 0.347$   $\chi^2/\text{NDF}$ : 2401.3/25

Left Out:  $-2.091 \pm 0.267$   $\chi^2/\text{NDF}$ : 4201.3/24

Right Out:  $36.740 \pm 0.307$   $\chi^2/\text{NDF}$ : 4710.6/30

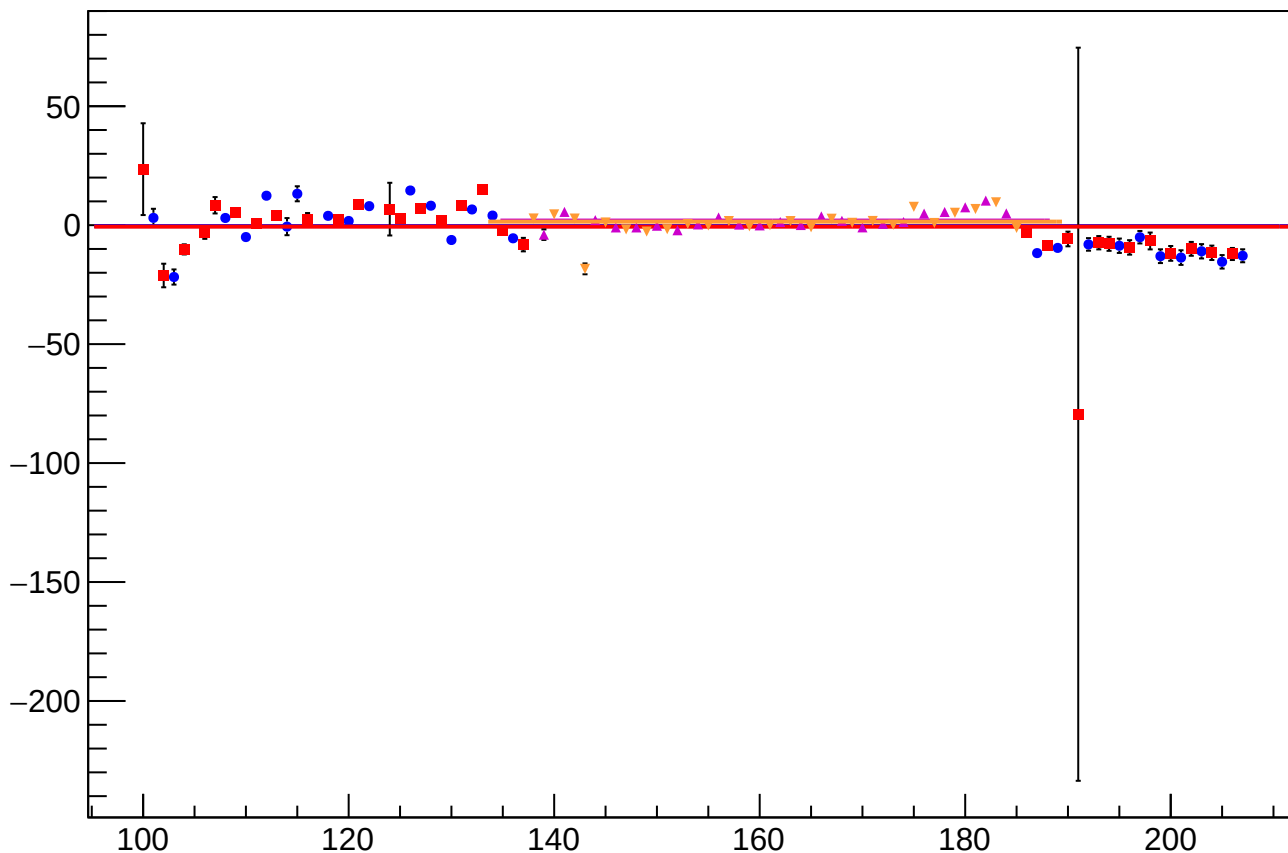
Left In:  $-3.391 \pm 0.271$   $\chi^2/\text{NDF}$ : 1752.8/22

+ sign  $11.686 \pm 0.212$   $\chi^2/\text{NDF}$ : 13789.3/50

All:  $12.983 \pm 0.147$   $\chi^2/\text{NDF}$ : 29907.5/104

- sign  $14.183 \pm 0.203$   $\chi^2/\text{NDF}$ : 16045.8/53

reg\_asym\_atl\_avg\_atr\_avg\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-0.394 \pm 0.384$   $\chi^2/\text{NDF}$ : 489.8/25

Left Out:  $1.489 \pm 0.205$   $\chi^2/\text{NDF}$ : 328.6/24

Right Out:  $-0.616 \pm 0.358$   $\chi^2/\text{NDF}$ : 409.4/30

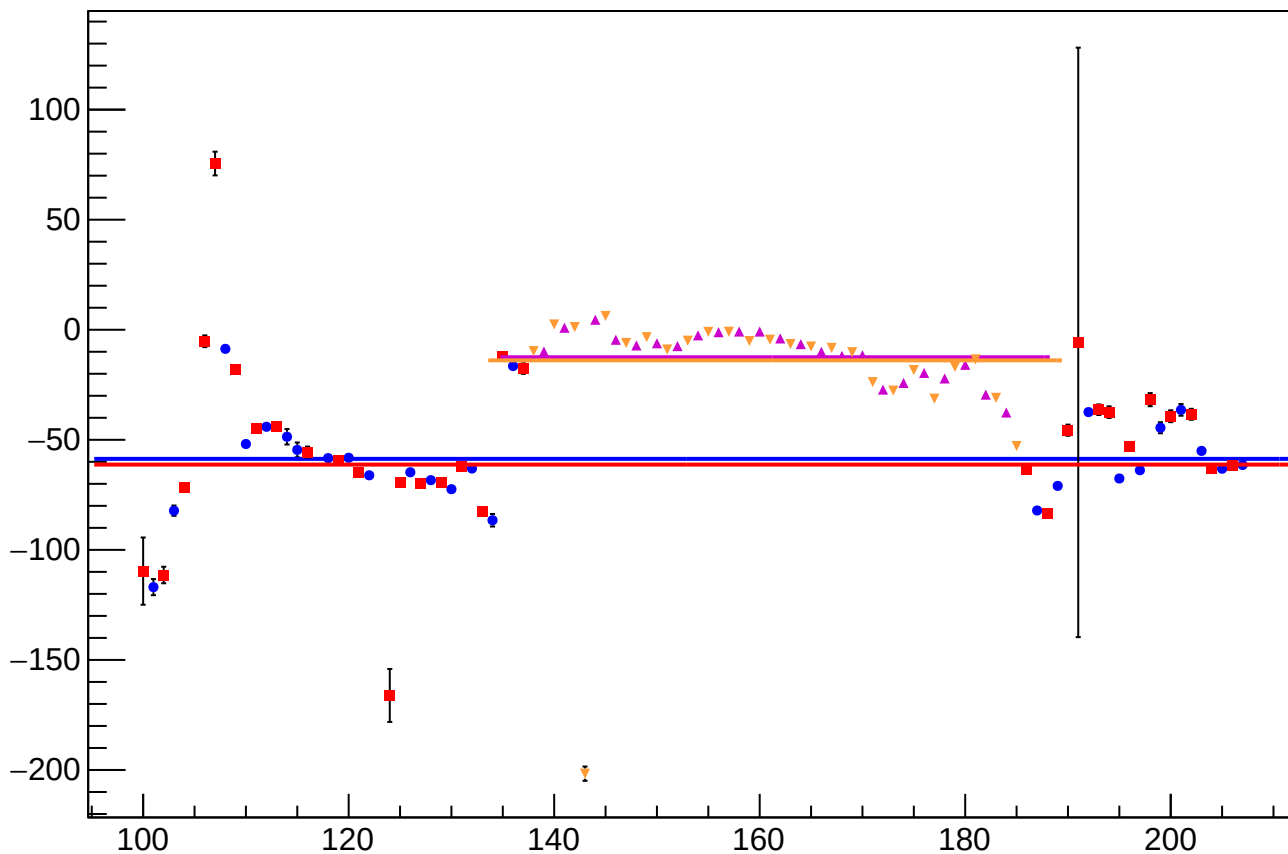
Left In:  $1.933 \pm 0.210$   $\chi^2/\text{NDF}$ : 240.7/22

+ sign  $1.072 \pm 0.181$   $\chi^2/\text{NDF}$ : 837.0/50

All:  $1.175 \pm 0.128$   $\chi^2/\text{NDF}$ : 1525.5/104

- sign  $1.279 \pm 0.181$   $\chi^2/\text{NDF}$ : 687.8/53

reg\_asym\_atl\_avg\_atr\_avg\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-58.660 \pm 0.360$   $\chi^2/\text{NDF}$ : 3336.3/25

Left Out:  $-13.908 \pm 0.265$   $\chi^2/\text{NDF}$ : 5128.3/24

Right Out:  $-61.262 \pm 0.303$   $\chi^2/\text{NDF}$ : 5464.0/30

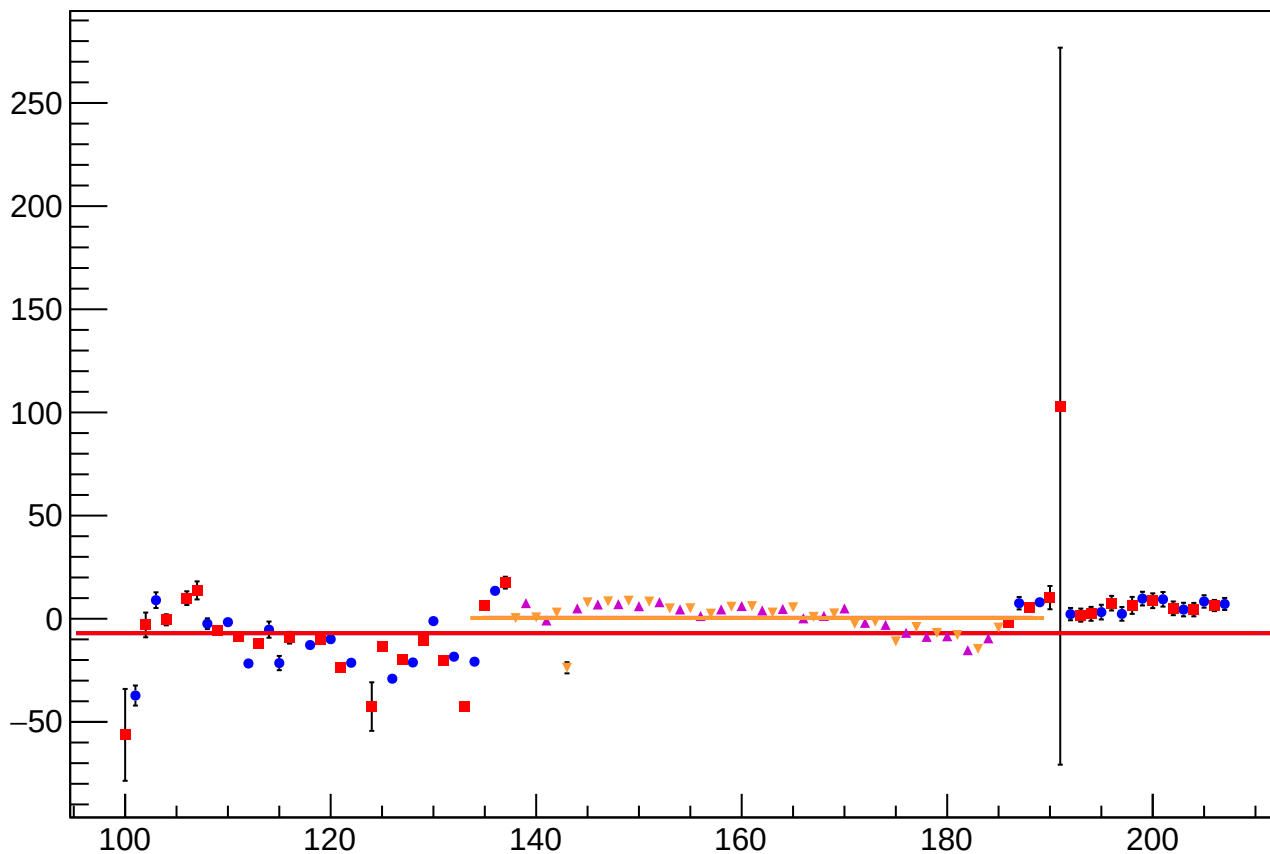
Left In:  $-12.494 \pm 0.269$   $\chi^2/\text{NDF}$ : 1430.3/22

+ sign  $-29.630 \pm 0.213$   $\chi^2/\text{NDF}$ : 18506.0/50

All:  $-31.937 \pm 0.146$   $\chi^2/\text{NDF}$ : 40138.6/104

- sign  $-33.986 \pm 0.201$   $\chi^2/\text{NDF}$ : 21411.5/53

reg\_asym\_atl\_avg\_atr\_avg\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-7.018 \pm 0.448$   $\chi^2/\text{NDF}$ : 918.3/25

Left Out:  $0.345 \pm 0.231$   $\chi^2/\text{NDF}$ : 921.9/24

Right Out:  $-6.959 \pm 0.431$   $\chi^2/\text{NDF}$ : 939.1/30

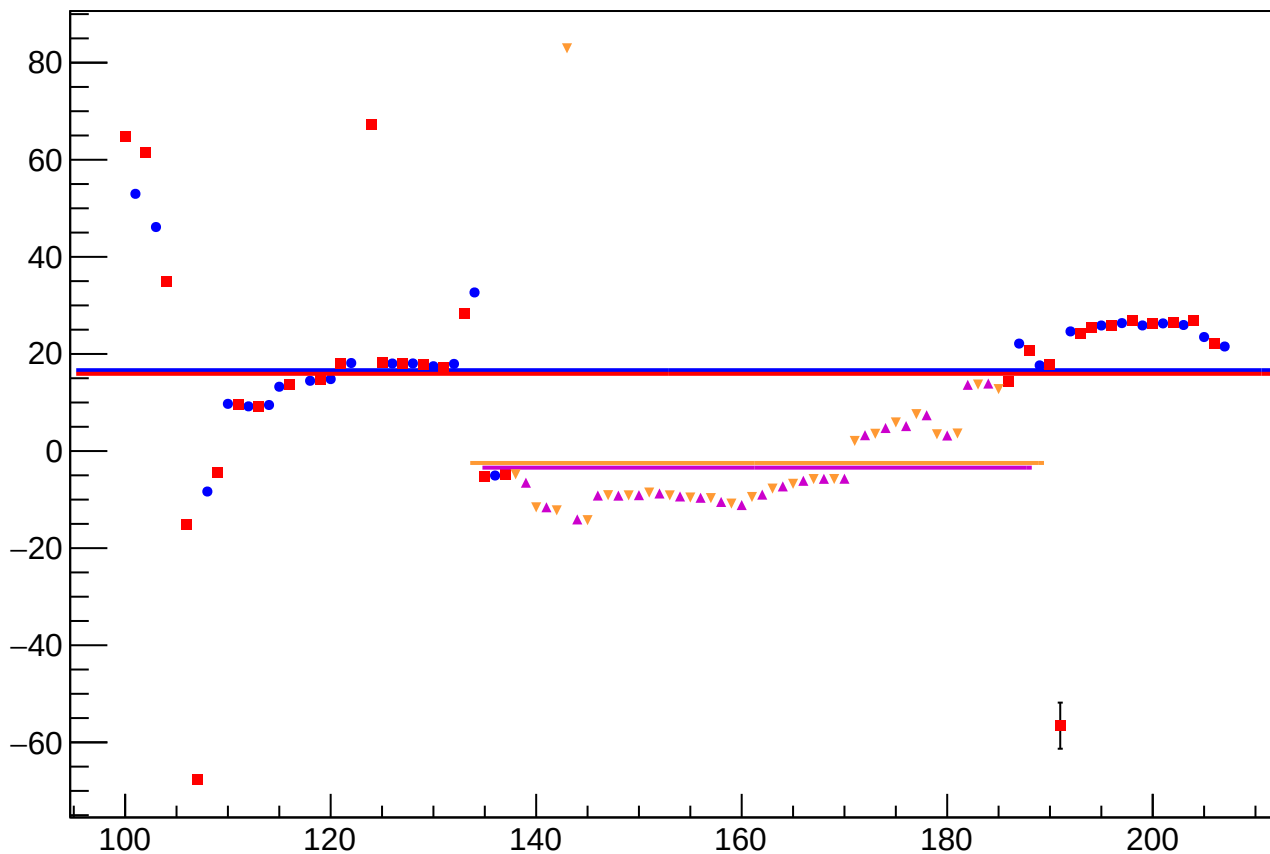
Left In:  $0.433 \pm 0.237$   $\chi^2/\text{NDF}$ : 782.1/22

+ sign  $-1.204 \pm 0.206$   $\chi^2/\text{NDF}$ : 2053.4/50

All:  $-1.241 \pm 0.146$   $\chi^2/\text{NDF}$ : 4000.6/104

- sign  $-1.279 \pm 0.207$   $\chi^2/\text{NDF}$ : 1947.1/53

reg\_asym\_atl\_avg\_atr\_avg\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $16.656 \pm 0.023$   $\chi^2/\text{NDF}: 432760.8/25$

Left Out:  $-2.452 \pm 0.010$   $\chi^2/\text{NDF}: 961833.3/24$

Right Out:  $15.912 \pm 0.022$   $\chi^2/\text{NDF}: 557354.1/30$

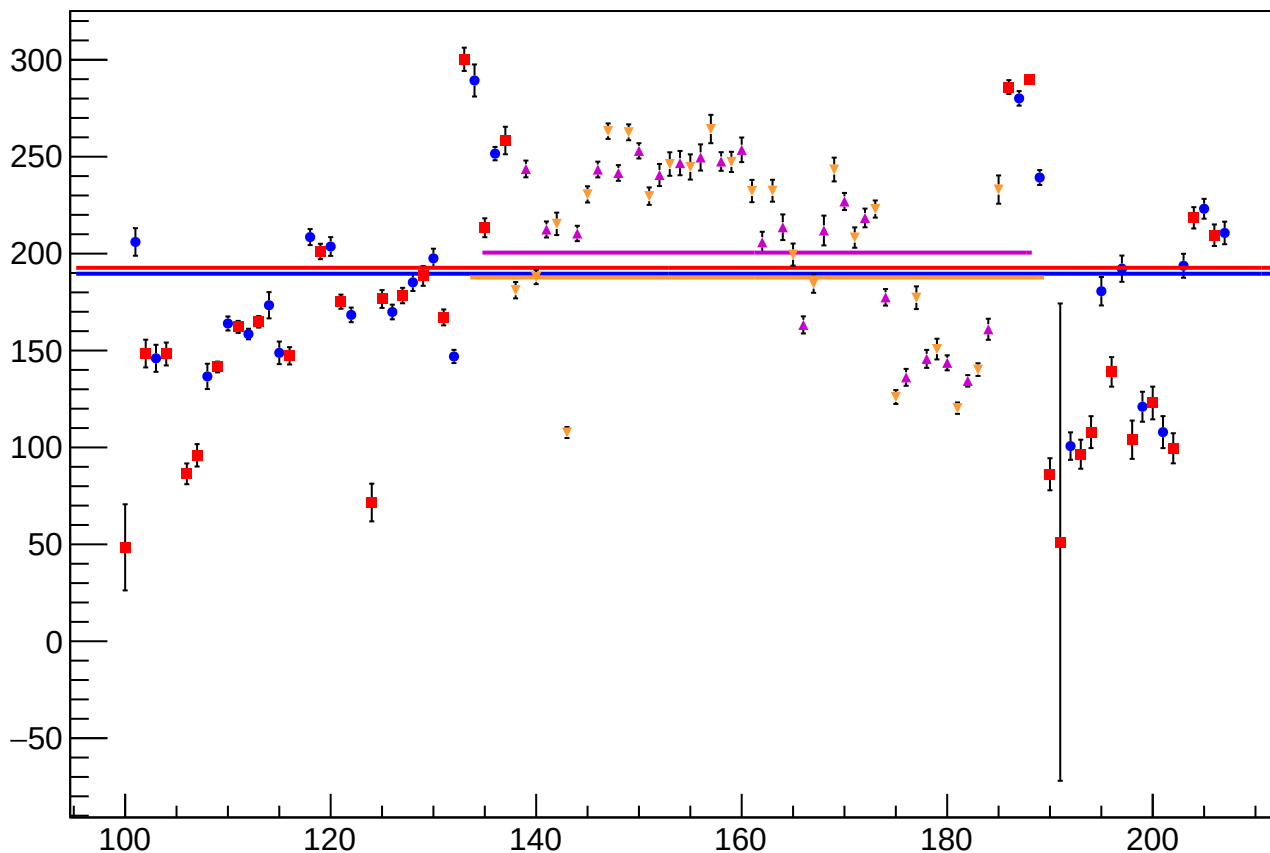
Left In:  $-3.418 \pm 0.010$   $\chi^2/\text{NDF}: 546802.2/22$

+ sign  $0.807 \pm 0.009$   $\chi^2/\text{NDF}: 1975624.6/50$

All:  $0.416 \pm 0.007$   $\chi^2/\text{NDF}: 3693230.9/104$

- sign  $0.022 \pm 0.009$   $\chi^2/\text{NDF}: 1714151.1/53$

reg\_asym\_at1\_avg\_at2\_avg\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $189.627 \pm 0.926$   $\chi^2/\text{NDF}$ : 2202.5/25

Left Out:  $187.681 \pm 0.898$   $\chi^2/\text{NDF}$ : 3528.3/24

Right Out:  $192.685 \pm 0.827$   $\chi^2/\text{NDF}$ : 6004.7/30

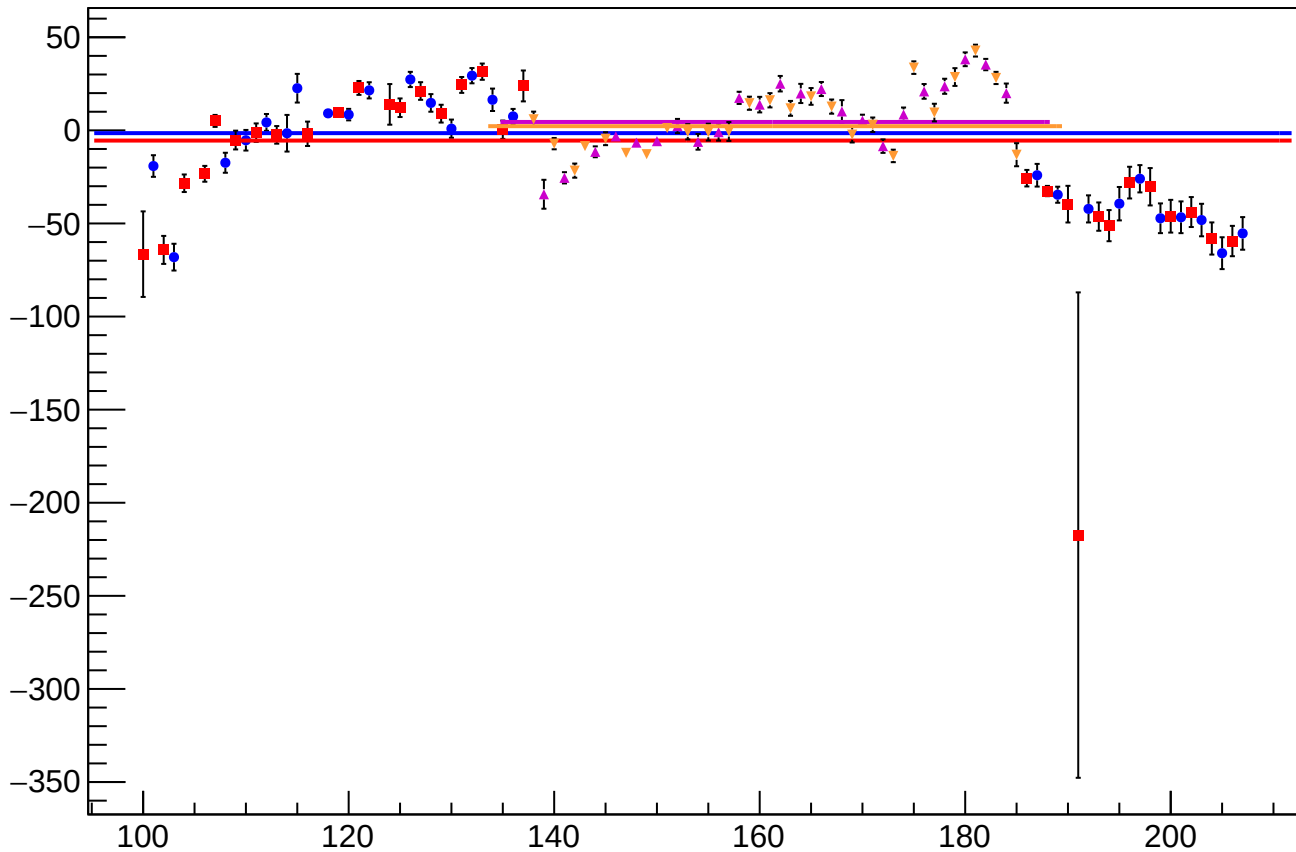
Left In:  $200.521 \pm 0.955$   $\chi^2/\text{NDF}$ : 2111.4/22

+ sign  $188.624 \pm 0.644$   $\chi^2/\text{NDF}$ : 5733.1/50

All:  $192.446 \pm 0.449$   $\chi^2/\text{NDF}$ : 13956.0/104

- sign  $196.041 \pm 0.625$   $\chi^2/\text{NDF}$ : 8154.6/53

reg\_asym\_at1\_avg\_at2\_avg\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-1.495 \pm 0.997$   $\chi^2/\text{NDF}$ : 621.7/25

Left Out:  $2.245 \pm 0.665$   $\chi^2/\text{NDF}$ : 600.9/24

Right Out:  $-5.482 \pm 0.916$   $\chi^2/\text{NDF}$ : 733.8/30

Left In:  $4.513 \pm 0.714$   $\chi^2/\text{NDF}$ : 547.1/22

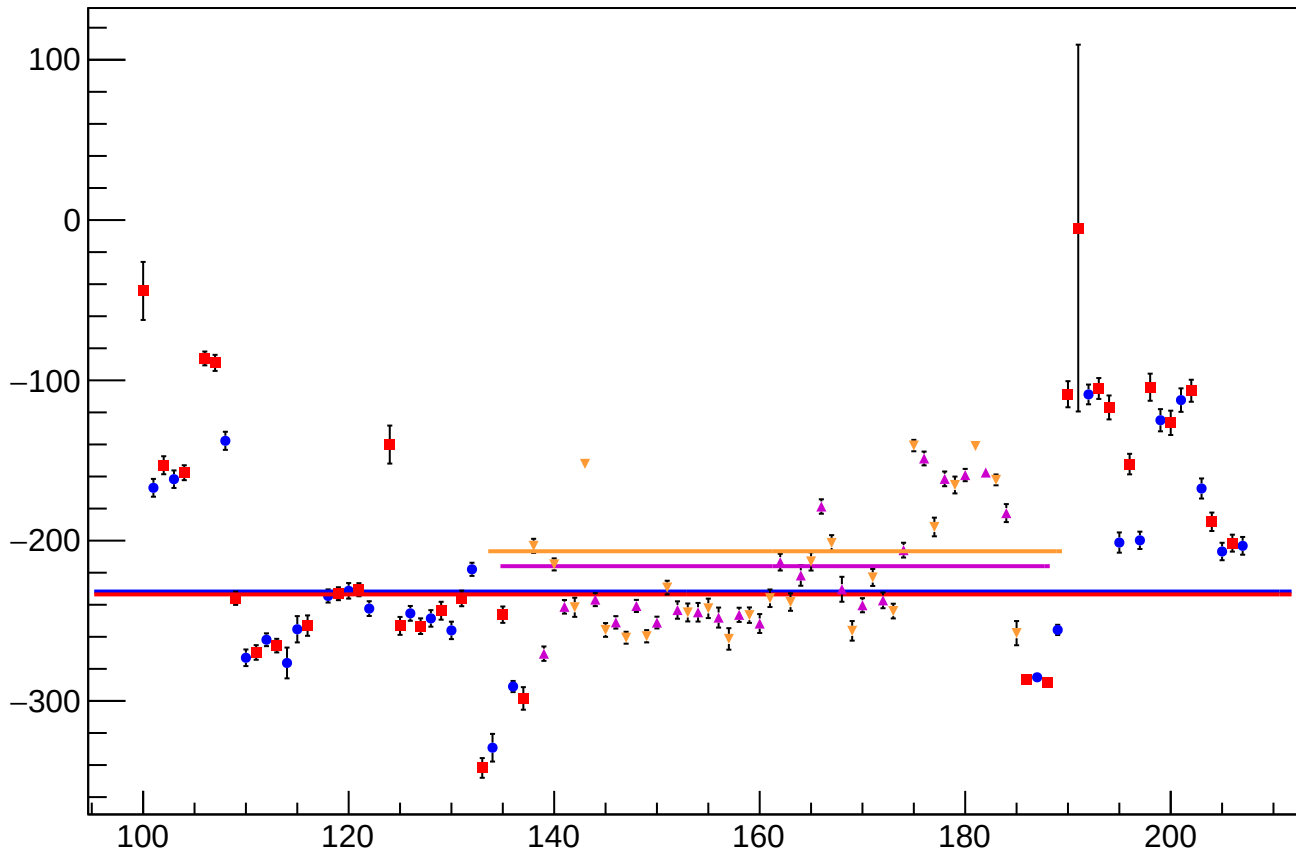
+ sign  $1.094 \pm 0.553$   $\chi^2/\text{NDF}$ : 1232.3/50

All:  $0.918 \pm 0.395$   $\chi^2/\text{NDF}$ : 2587.4/104

- sign  $0.735 \pm 0.563$   $\chi^2/\text{NDF}$ : 1354.9/53



reg\_asym\_at1\_avg\_at2\_avg\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-231.760 \pm 0.969$   $\chi^2/\text{NDF}$ : 2671.4/25

Left Out:  $-206.617 \pm 0.895$   $\chi^2/\text{NDF}$ : 2467.8/24

Right Out:  $-233.542 \pm 0.833$   $\chi^2/\text{NDF}$ : 6659.3/30

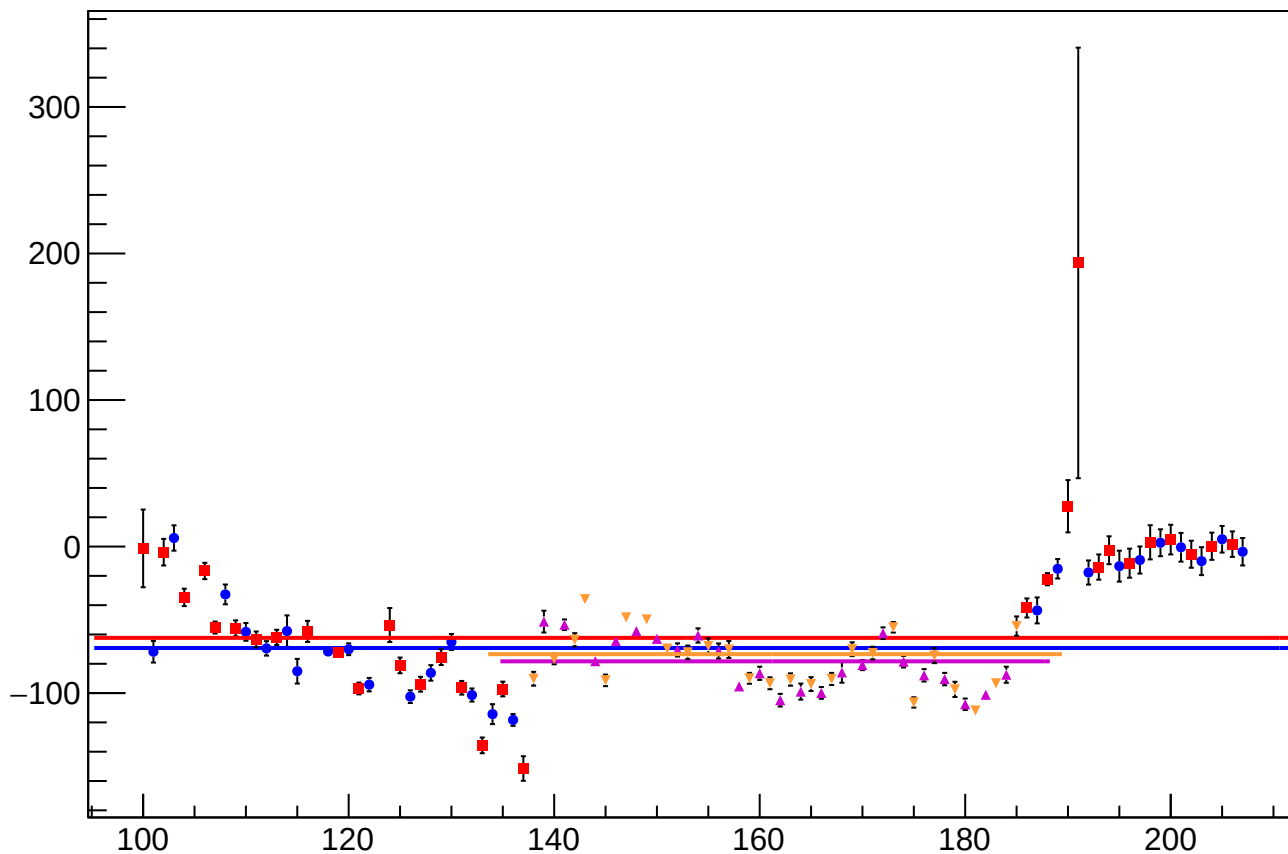
Left In:  $-215.938 \pm 0.946$   $\chi^2/\text{NDF}$ : 1711.9/22

+ sign  $-218.187 \pm 0.657$   $\chi^2/\text{NDF}$ : 5502.6/50

All:  $-222.212 \pm 0.453$   $\chi^2/\text{NDF}$ : 14140.2/104

- sign  $-225.854 \pm 0.625$   $\chi^2/\text{NDF}$ : 8566.3/53

reg\_asym\_at1\_avg\_at2\_avg\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-69.230 \pm 1.169$   $\chi^2/\text{NDF}$ : 906.0/25

Left Out:  $-73.426 \pm 0.767$   $\chi^2/\text{NDF}$ : 836.6/24

Right Out:  $-62.305 \pm 1.095$   $\chi^2/\text{NDF}$ : 1122.0/30

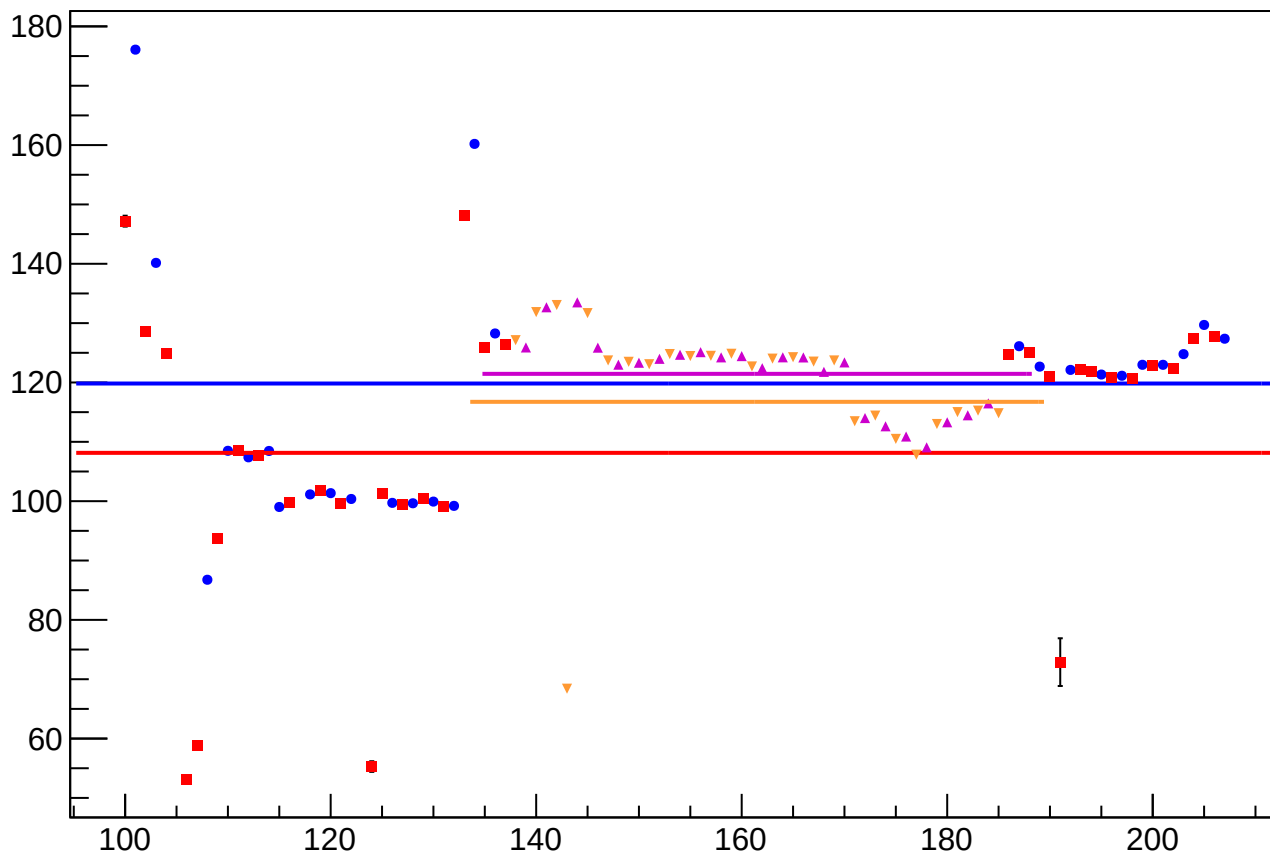
Left In:  $-78.329 \pm 0.817$   $\chi^2/\text{NDF}$ : 443.2/22

+ sign  $-72.164 \pm 0.641$   $\chi^2/\text{NDF}$ : 1751.5/50

All:  $-72.375 \pm 0.458$   $\chi^2/\text{NDF}$ : 3454.5/104

- sign  $-72.596 \pm 0.655$   $\chi^2/\text{NDF}$ : 1702.8/53

reg\_asym\_at1\_avg\_at2\_avg\_dd\_diff\_bpm12X\_slope vs Slug



Right In: 119.826 $\pm$ 0.062  $\chi^2$ /NDF: 97943.9/25

Left Out: 116.740 $\pm$ 0.036  $\chi^2$ /NDF: 203650.9/24

Right Out: 108.143 $\pm$ 0.056  $\chi^2$ /NDF: 207794.2/30

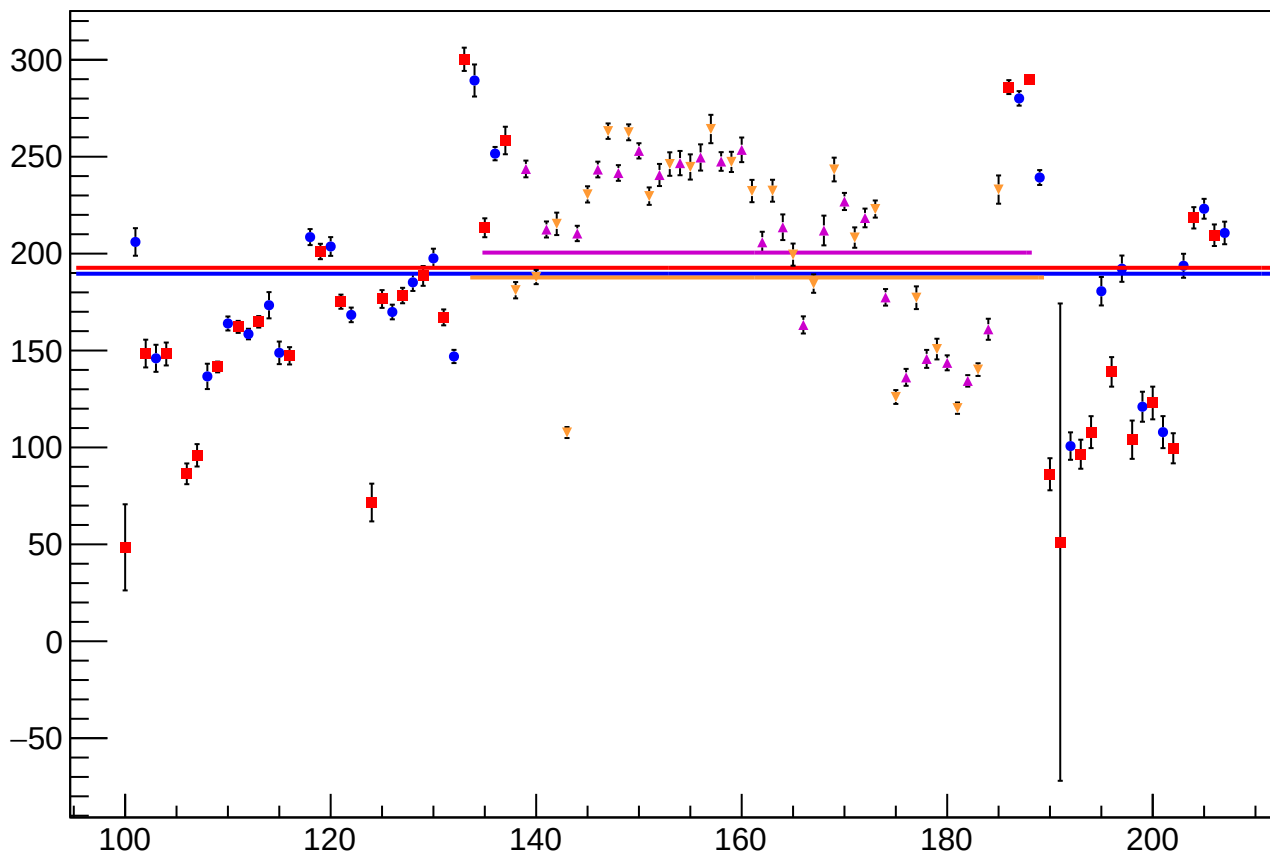
Left In: 121.455 $\pm$ 0.037  $\chi^2$ /NDF: 28796.4/22

+ sign 117.512 $\pm$ 0.031  $\chi^2$ /NDF: 303450.5/50

All: 117.450 $\pm$ 0.022  $\chi^2$ /NDF: 579025.3/104

- sign 117.388 $\pm$ 0.031  $\chi^2$ /NDF: 275566.8/53

reg\_asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $189.627 \pm 0.926$   $\chi^2/\text{NDF}$ : 2202.5/25

Left Out:  $187.681 \pm 0.898$   $\chi^2/\text{NDF}$ : 3528.3/24

Right Out:  $192.685 \pm 0.827$   $\chi^2/\text{NDF}$ : 6004.7/30

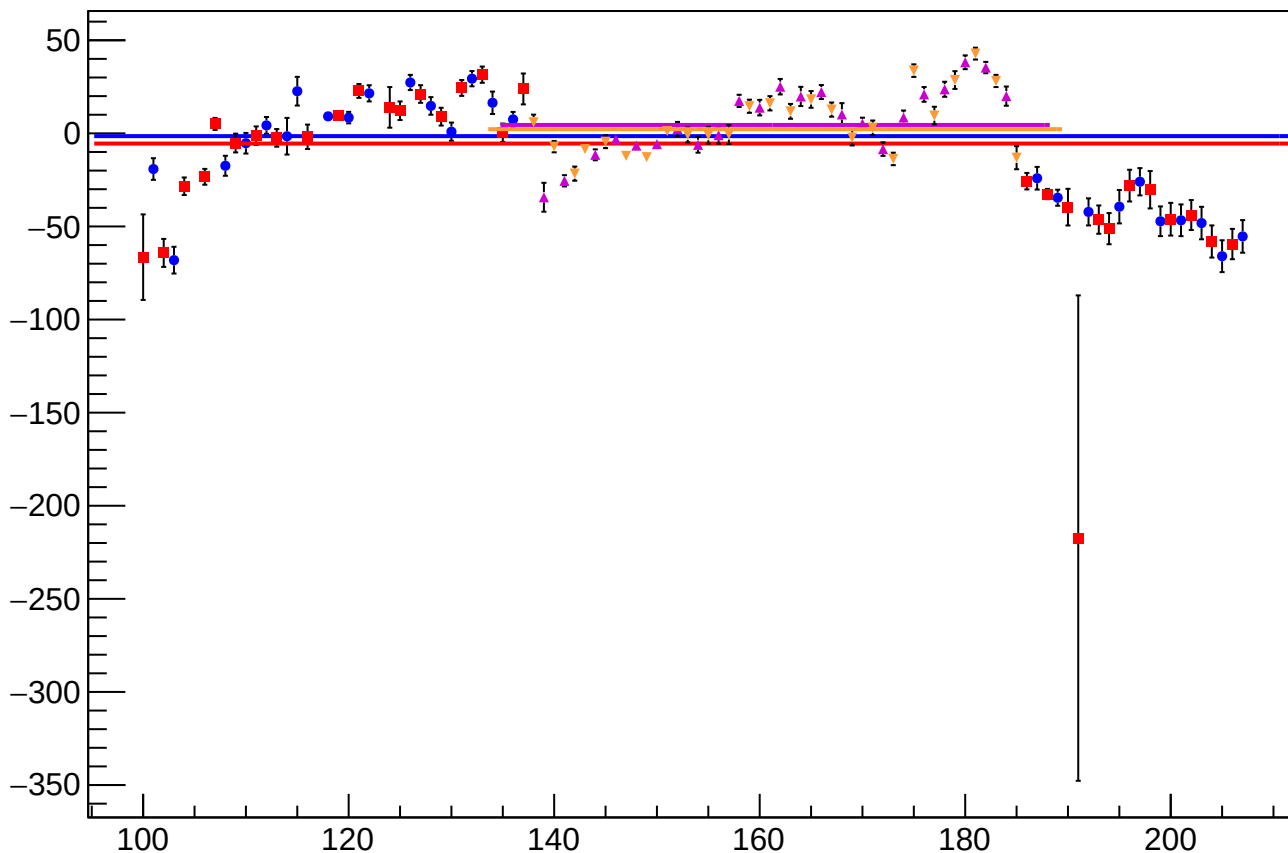
Left In:  $200.521 \pm 0.955$   $\chi^2/\text{NDF}$ : 2111.4/22

+ sign  $188.624 \pm 0.644$   $\chi^2/\text{NDF}$ : 5733.1/50

All:  $192.446 \pm 0.449$   $\chi^2/\text{NDF}$ : 13956.0/104

- sign  $196.041 \pm 0.625$   $\chi^2/\text{NDF}$ : 8154.6/53

reg\_asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-1.495 \pm 0.997$   $\chi^2/\text{NDF}$ : 621.7/25

Left Out:  $2.245 \pm 0.665$   $\chi^2/\text{NDF}$ : 600.9/24

Right Out:  $-5.482 \pm 0.916$   $\chi^2/\text{NDF}$ : 733.8/30

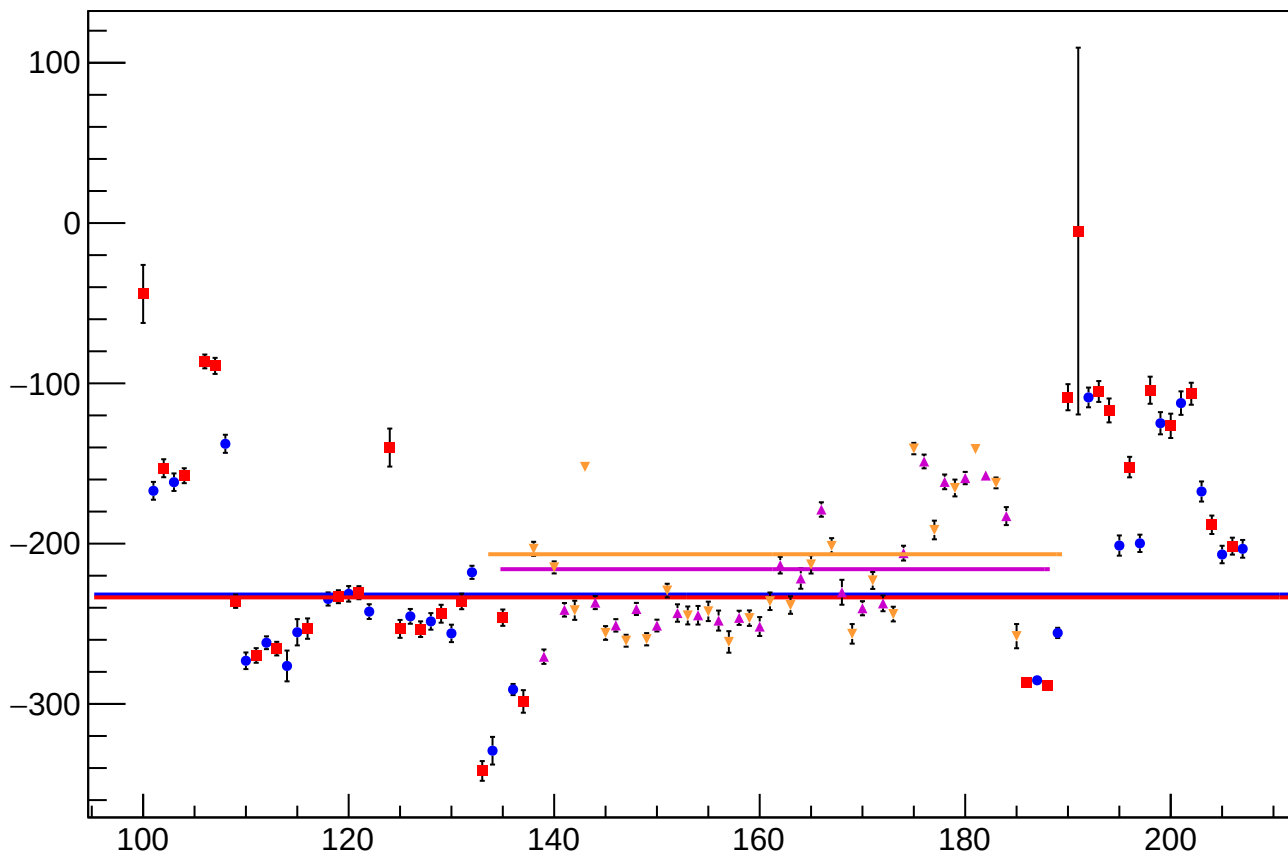
Left In:  $4.513 \pm 0.714$   $\chi^2/\text{NDF}$ : 547.1/22

+ sign  $1.094 \pm 0.553$   $\chi^2/\text{NDF}$ : 1232.3/50

All:  $0.918 \pm 0.395$   $\chi^2/\text{NDF}$ : 2587.4/104

- sign  $0.735 \pm 0.563$   $\chi^2/\text{NDF}$ : 1354.9/53

reg\_asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-231.760 \pm 0.969$   $\chi^2/\text{NDF}: 2671.4/25$

Left Out:  $-206.617 \pm 0.895$   $\chi^2/\text{NDF}: 2467.8/24$

Right Out:  $-233.542 \pm 0.833$   $\chi^2/\text{NDF}: 6659.3/30$

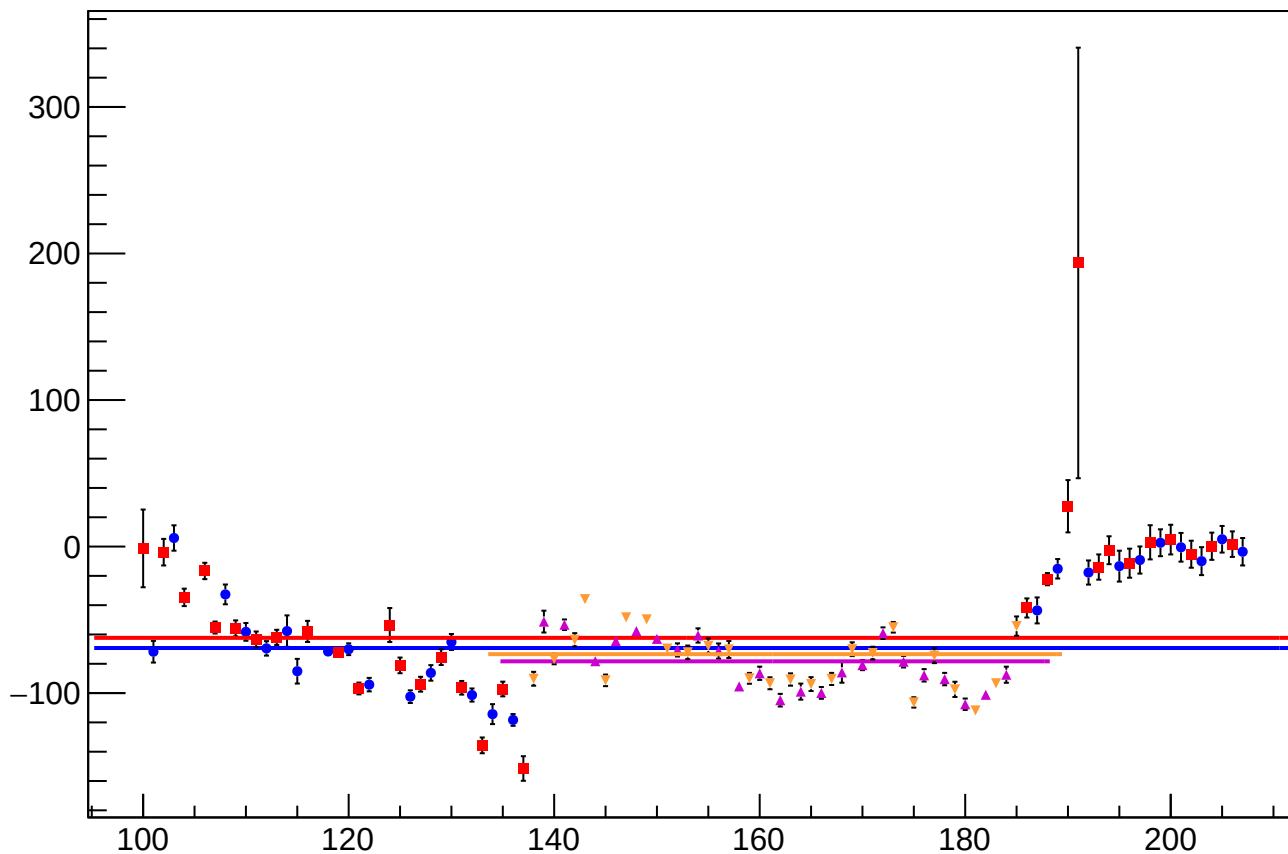
Left In:  $-215.938 \pm 0.946$   $\chi^2/\text{NDF}: 1711.9/22$

+ sign  $-218.187 \pm 0.657$   $\chi^2/\text{NDF}: 5502.6/50$

All:  $-222.212 \pm 0.453$   $\chi^2/\text{NDF}: 14140.2/104$

- sign  $-225.854 \pm 0.625$   $\chi^2/\text{NDF}: 8566.3/53$

reg\_asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-69.230 \pm 1.169$   $\chi^2/\text{NDF}$ : 906.0/25

Left Out:  $-73.426 \pm 0.767$   $\chi^2/\text{NDF}$ : 836.6/24

Right Out:  $-62.305 \pm 1.095$   $\chi^2/\text{NDF}$ : 1122.0/30

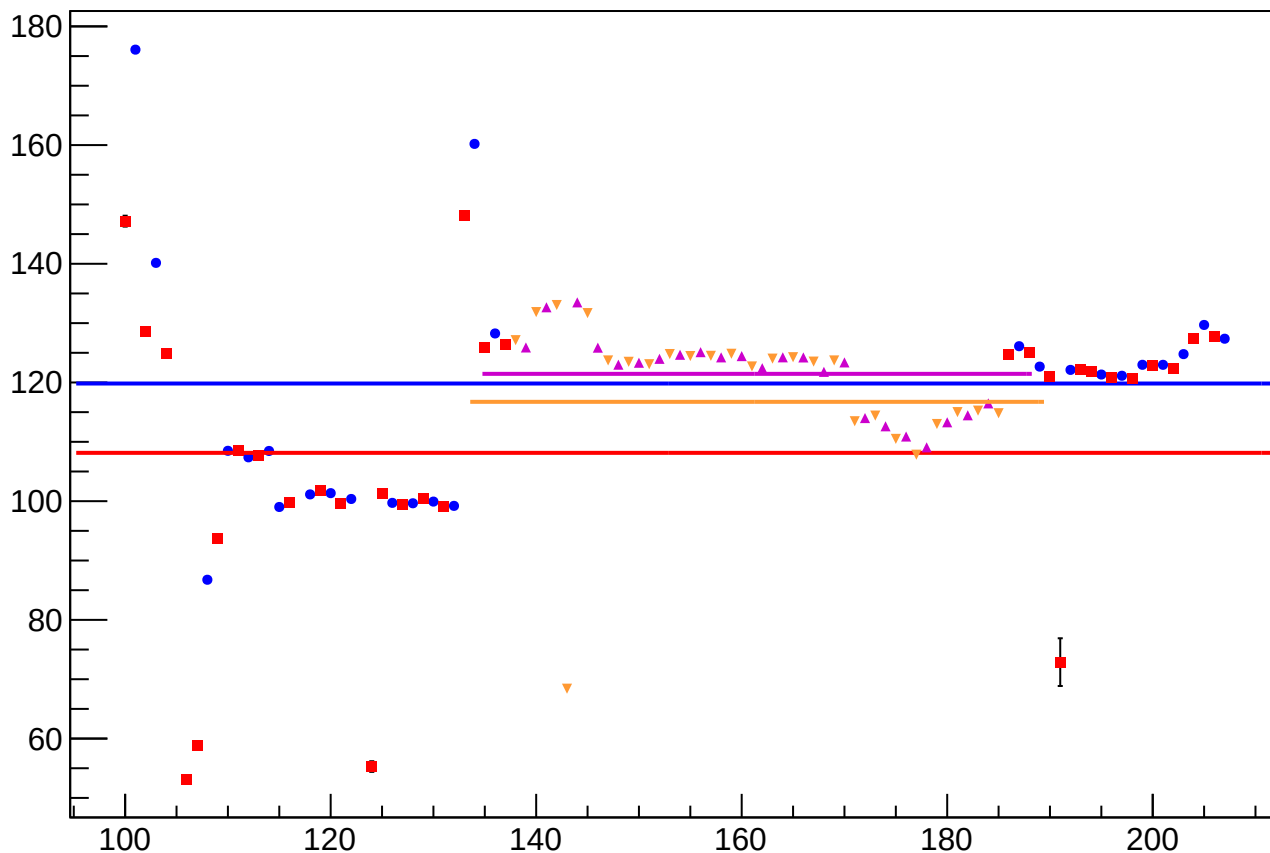
Left In:  $-78.329 \pm 0.817$   $\chi^2/\text{NDF}$ : 443.2/22

+ sign  $-72.164 \pm 0.641$   $\chi^2/\text{NDF}$ : 1751.5/50

All:  $-72.375 \pm 0.458$   $\chi^2/\text{NDF}$ : 3454.5/104

- sign  $-72.596 \pm 0.655$   $\chi^2/\text{NDF}$ : 1702.8/53

reg\_asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_diff\_bpm12X\_slope vs Slug



Right In: 119.826 $\pm$ 0.062  $\chi^2$ /NDF: 97943.9/25

Left Out: 116.740 $\pm$ 0.036  $\chi^2$ /NDF: 203650.9/24

Right Out: 108.143 $\pm$ 0.056  $\chi^2$ /NDF: 207794.2/30

Left In: 121.455 $\pm$ 0.037  $\chi^2$ /NDF: 28796.4/22

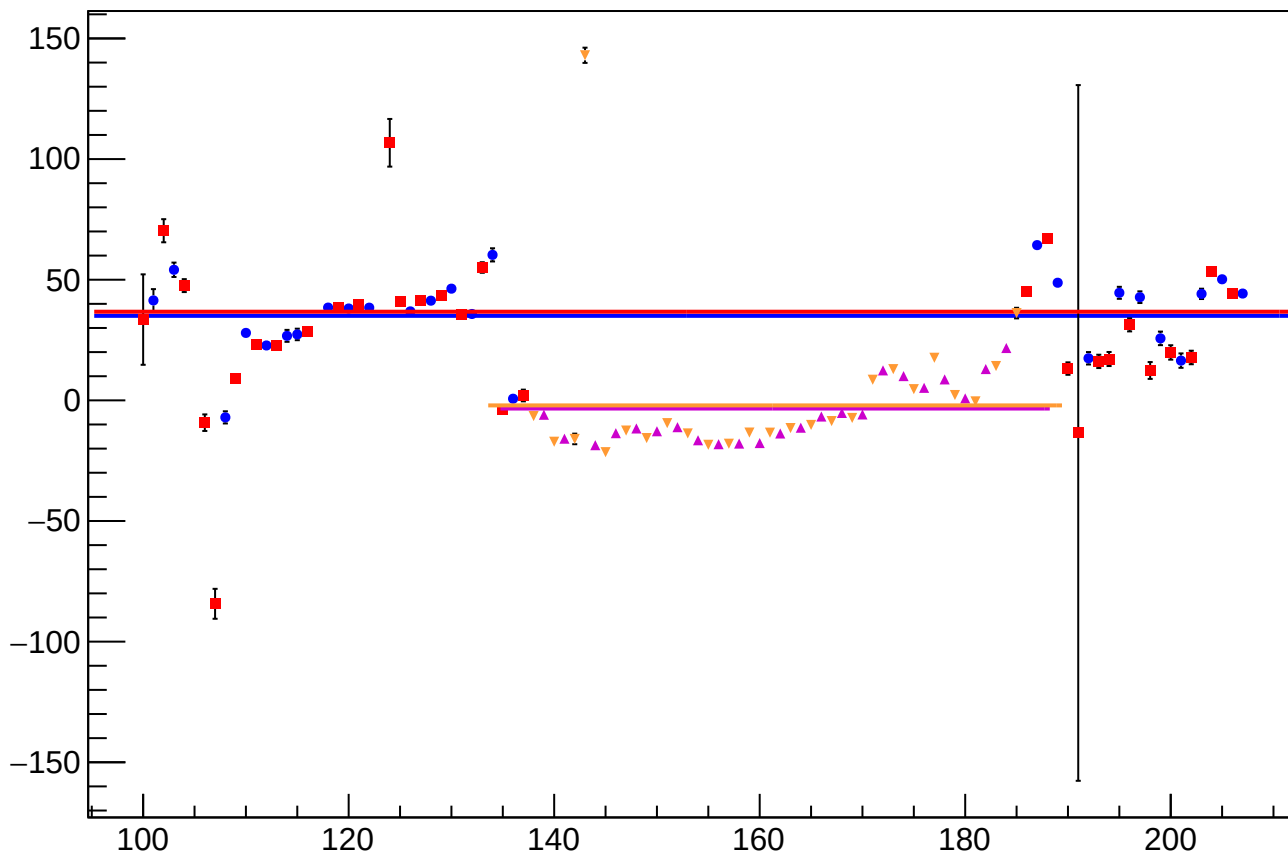
+ sign 117.512 $\pm$ 0.031  $\chi^2$ /NDF: 303450.5/50

All: 117.450 $\pm$ 0.022  $\chi^2$ /NDF: 579025.3/104

- sign 117.388 $\pm$ 0.031  $\chi^2$ /NDF: 275566.8/53



reg\_asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $35.032 \pm 0.347$   $\chi^2/\text{NDF}$ : 2401.3/25

Left Out:  $-2.091 \pm 0.267$   $\chi^2/\text{NDF}$ : 4201.3/24

Right Out:  $36.740 \pm 0.307$   $\chi^2/\text{NDF}$ : 4710.6/30

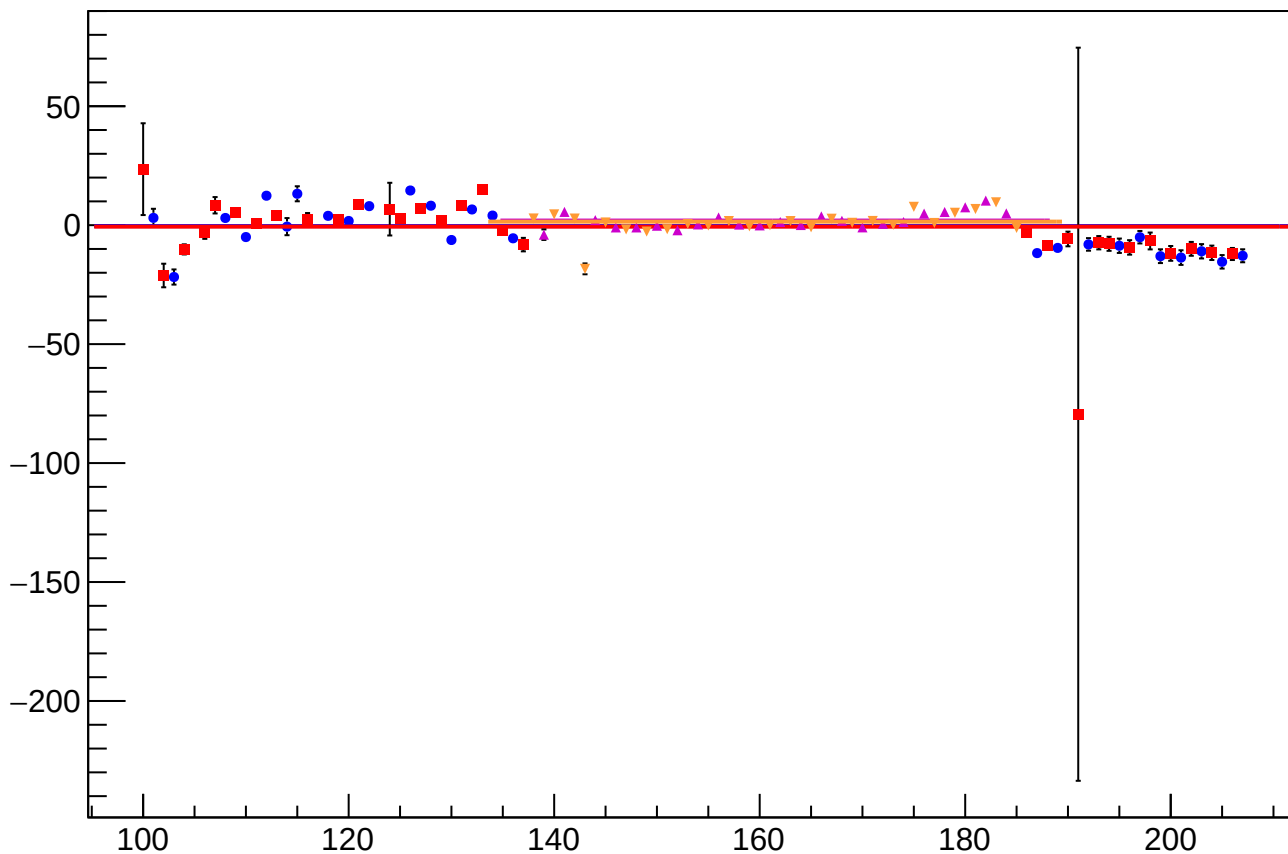
Left In:  $-3.391 \pm 0.271$   $\chi^2/\text{NDF}$ : 1752.8/22

+ sign  $11.686 \pm 0.212$   $\chi^2/\text{NDF}$ : 13789.3/50

All:  $12.983 \pm 0.147$   $\chi^2/\text{NDF}$ : 29907.5/104

- sign  $14.183 \pm 0.203$   $\chi^2/\text{NDF}$ : 16045.8/53

reg\_asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $-0.394 \pm 0.384$   $\chi^2/\text{NDF}$ : 489.8/25

Left Out:  $1.489 \pm 0.205$   $\chi^2/\text{NDF}$ : 328.6/24

Right Out:  $-0.616 \pm 0.358$   $\chi^2/\text{NDF}$ : 409.4/30

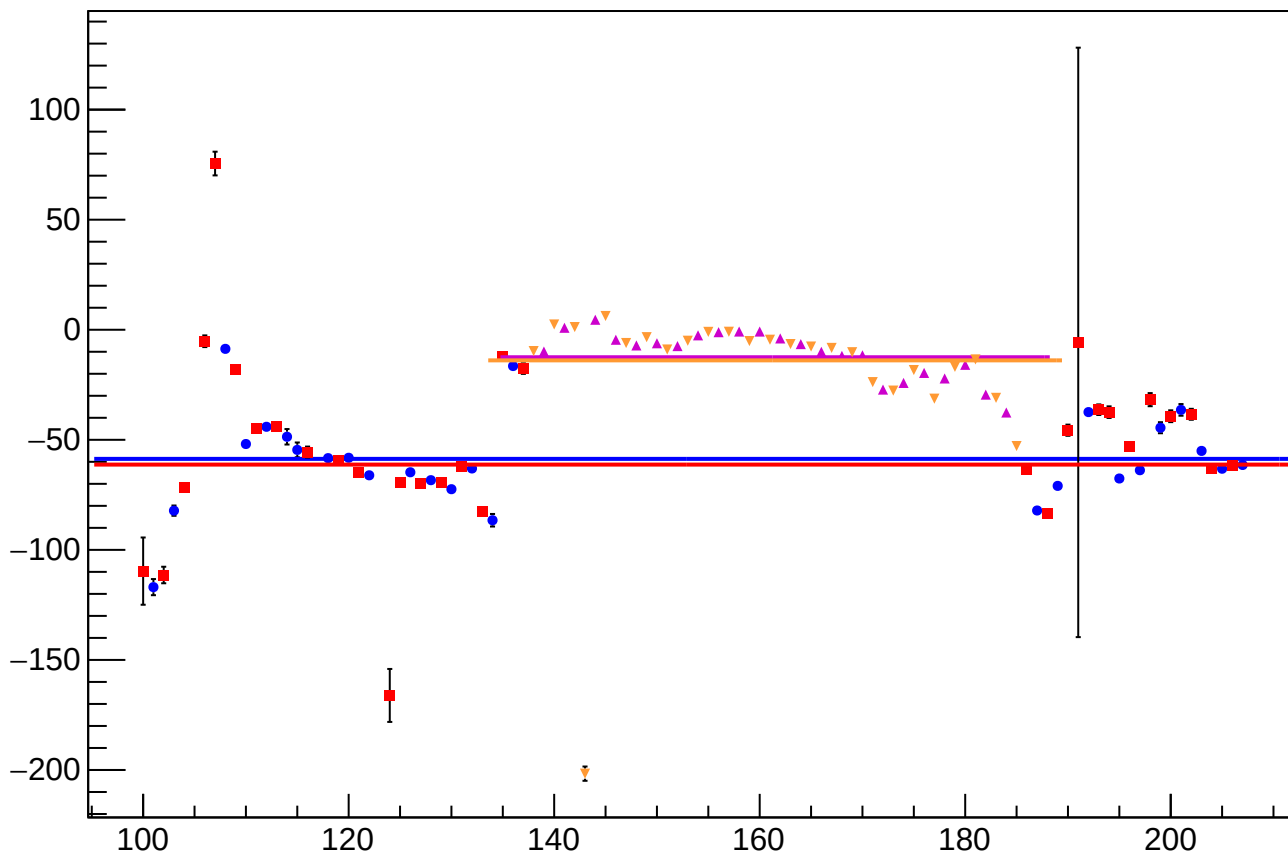
Left In:  $1.933 \pm 0.210$   $\chi^2/\text{NDF}$ : 240.7/22

+ sign  $1.072 \pm 0.181$   $\chi^2/\text{NDF}$ : 837.0/50

All:  $1.175 \pm 0.128$   $\chi^2/\text{NDF}$ : 1525.5/104

- sign  $1.279 \pm 0.181$   $\chi^2/\text{NDF}$ : 687.8/53

reg\_asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $-58.660 \pm 0.360$   $\chi^2/\text{NDF}$ : 3336.3/25

Left Out:  $-13.908 \pm 0.265$   $\chi^2/\text{NDF}$ : 5128.3/24

Right Out:  $-61.262 \pm 0.303$   $\chi^2/\text{NDF}$ : 5464.0/30

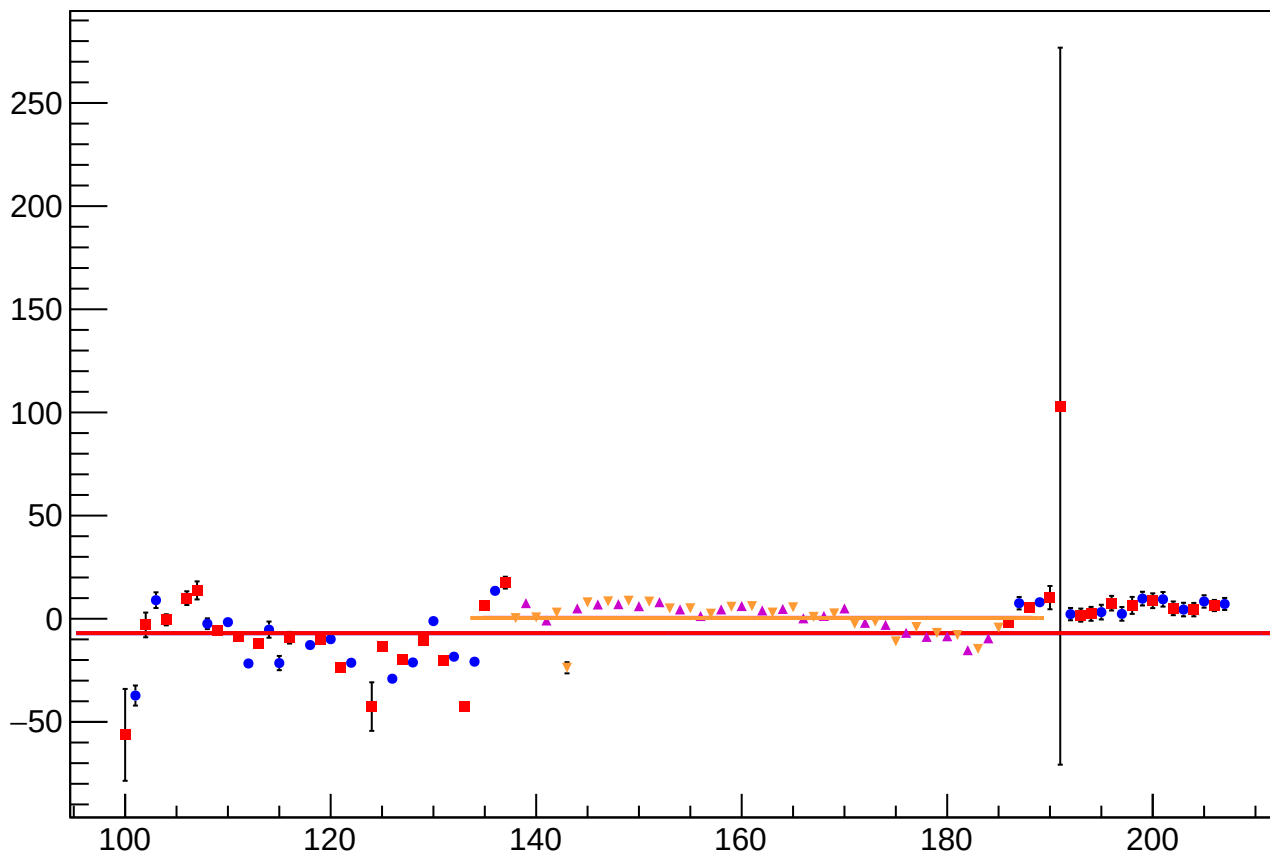
Left In:  $-12.494 \pm 0.269$   $\chi^2/\text{NDF}$ : 1430.3/22

+ sign  $-29.630 \pm 0.213$   $\chi^2/\text{NDF}$ : 18506.0/50

All:  $-31.937 \pm 0.146$   $\chi^2/\text{NDF}$ : 40138.6/104

- sign  $-33.986 \pm 0.201$   $\chi^2/\text{NDF}$ : 21411.5/53

reg\_asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $-7.018 \pm 0.448$   $\chi^2/\text{NDF}$ : 918.3/25

Left Out:  $0.345 \pm 0.231$   $\chi^2/\text{NDF}$ : 921.9/24

Right Out:  $-6.959 \pm 0.431$   $\chi^2/\text{NDF}$ : 939.1/30

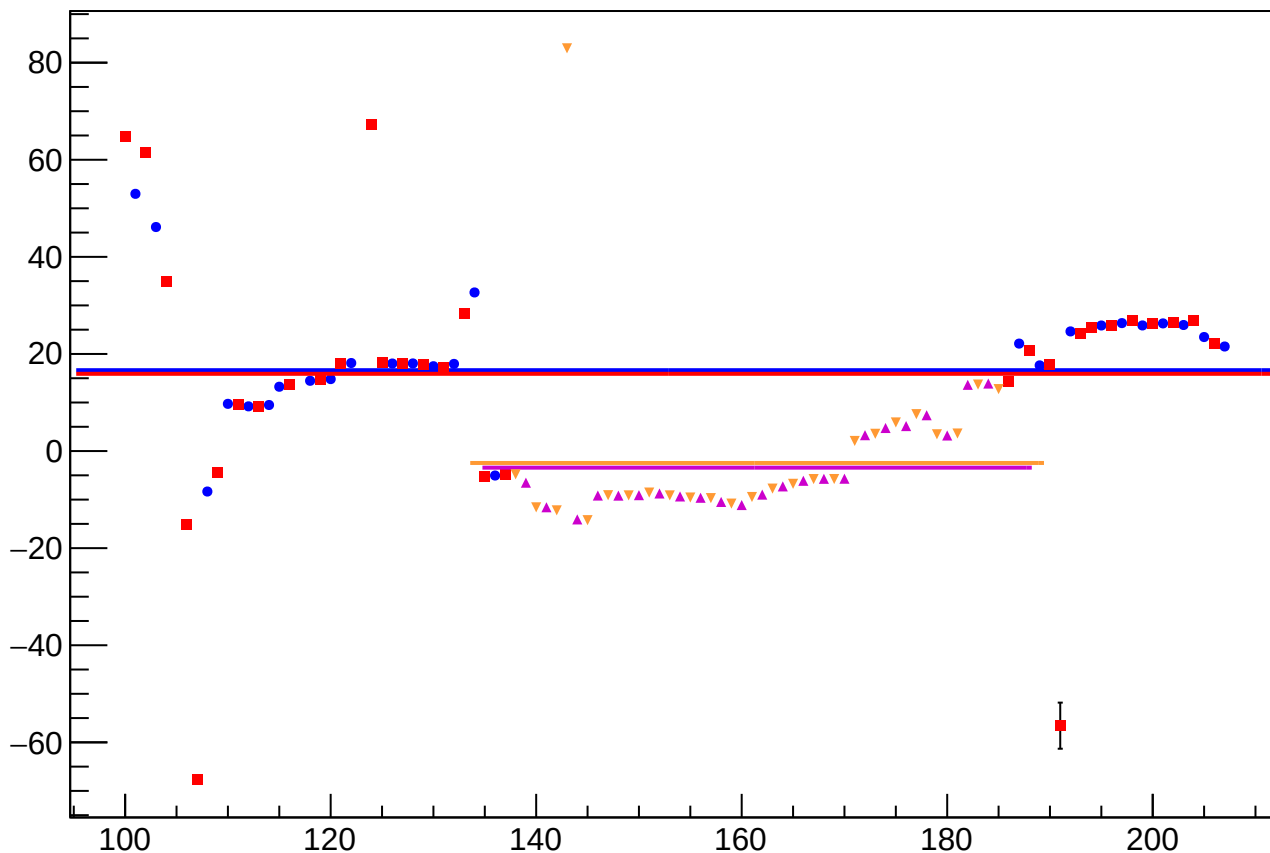
Left In:  $0.433 \pm 0.237$   $\chi^2/\text{NDF}$ : 782.1/22

+ sign  $-1.204 \pm 0.206$   $\chi^2/\text{NDF}$ : 2053.4/50

All:  $-1.241 \pm 0.146$   $\chi^2/\text{NDF}$ : 4000.6/104

- sign  $-1.279 \pm 0.207$   $\chi^2/\text{NDF}$ : 1947.1/53

reg\_asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_diff\_bpm12X\_slope vs Slug



Right In: 16.656+/-0.023  $\chi^2/\text{NDF}$ : 432760.8/25

Left Out: -2.452+/-0.010  $\chi^2/\text{NDF}$ : 961833.3/24

Right Out: 15.912+/-0.022  $\chi^2/\text{NDF}$ : 557354.1/30

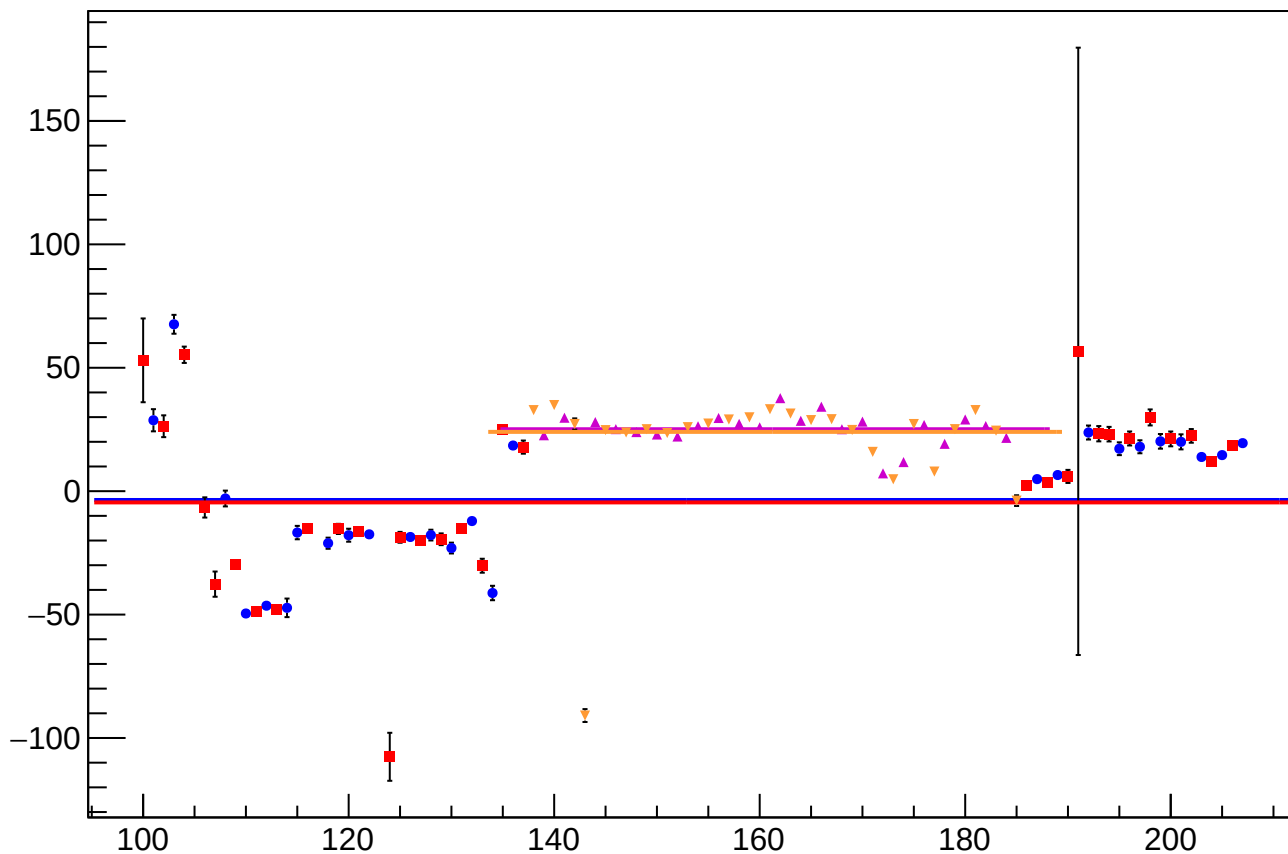
Left In: -3.418+/-0.010  $\chi^2/\text{NDF}$ : 546802.2/22

+ sign 0.807+/-0.009  $\chi^2/\text{NDF}$ : 1975624.6/50

All: 0.416+/-0.007  $\chi^2/\text{NDF}$ : 3693230.9/104

- sign 0.022+/-0.009  $\chi^2/\text{NDF}$ : 1714151.1/53

reg\_asym\_at1\_dd\_at2\_dd\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-3.572 \pm 0.419$   $\chi^2/\text{NDF}$ : 3423.9/25

Left Out:  $24.025 \pm 0.282$   $\chi^2/\text{NDF}$ : 2802.2/24

Right Out:  $-4.552 \pm 0.387$   $\chi^2/\text{NDF}$ : 3712.6/30

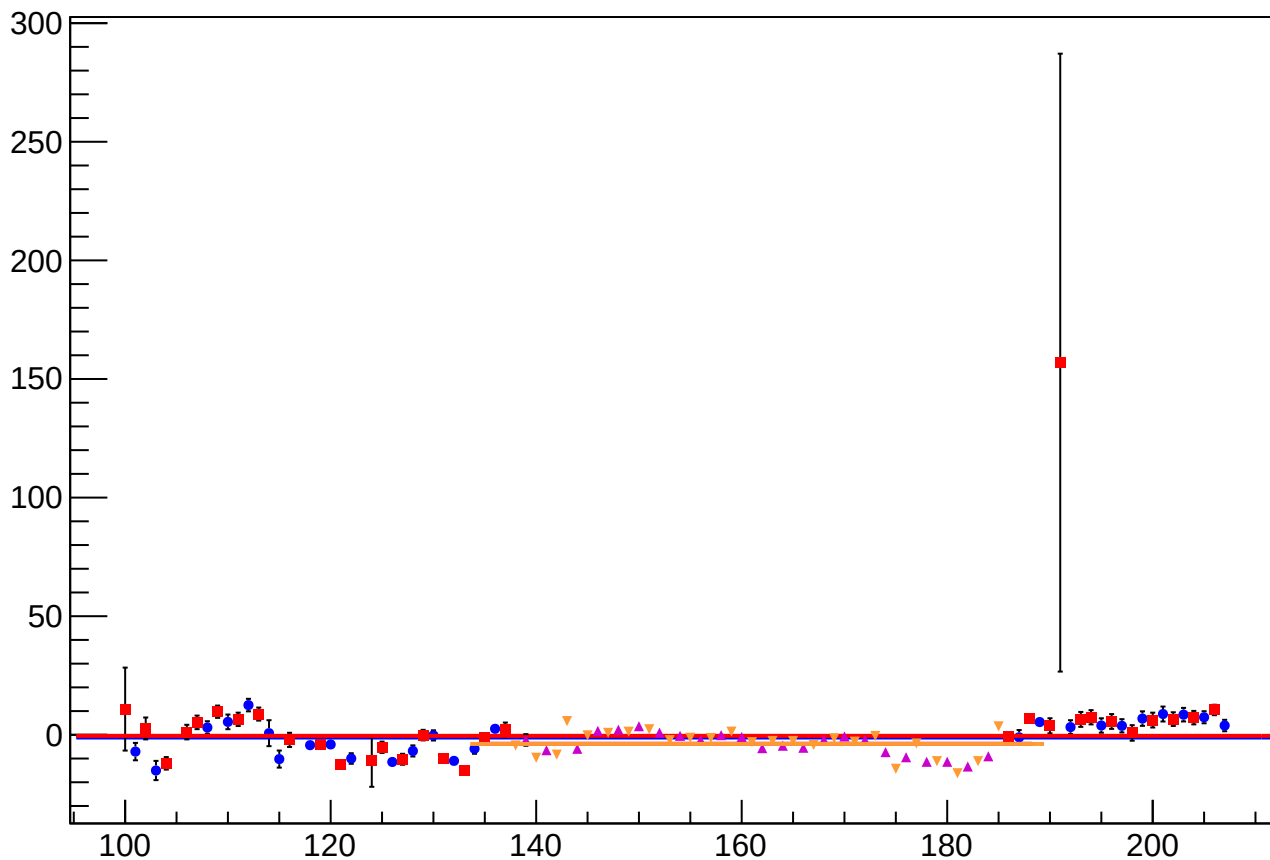
Left In:  $25.089 \pm 0.287$   $\chi^2/\text{NDF}$ : 495.3/22

+ sign  $15.427 \pm 0.234$   $\chi^2/\text{NDF}$ : 9209.5/50

All:  $14.991 \pm 0.164$   $\chi^2/\text{NDF}$ : 17204.6/104

- sign  $14.568 \pm 0.231$   $\chi^2/\text{NDF}$ : 7988.2/53

reg\_asym\_at1\_dd\_at2\_dd\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $-1.134 \pm 0.465$   $\chi^2/\text{NDF}$ : 206.4/25

Left Out:  $-3.845 \pm 0.218$   $\chi^2/\text{NDF}$ : 649.4/24

Right Out:  $-0.430 \pm 0.444$   $\chi^2/\text{NDF}$ : 282.4/30

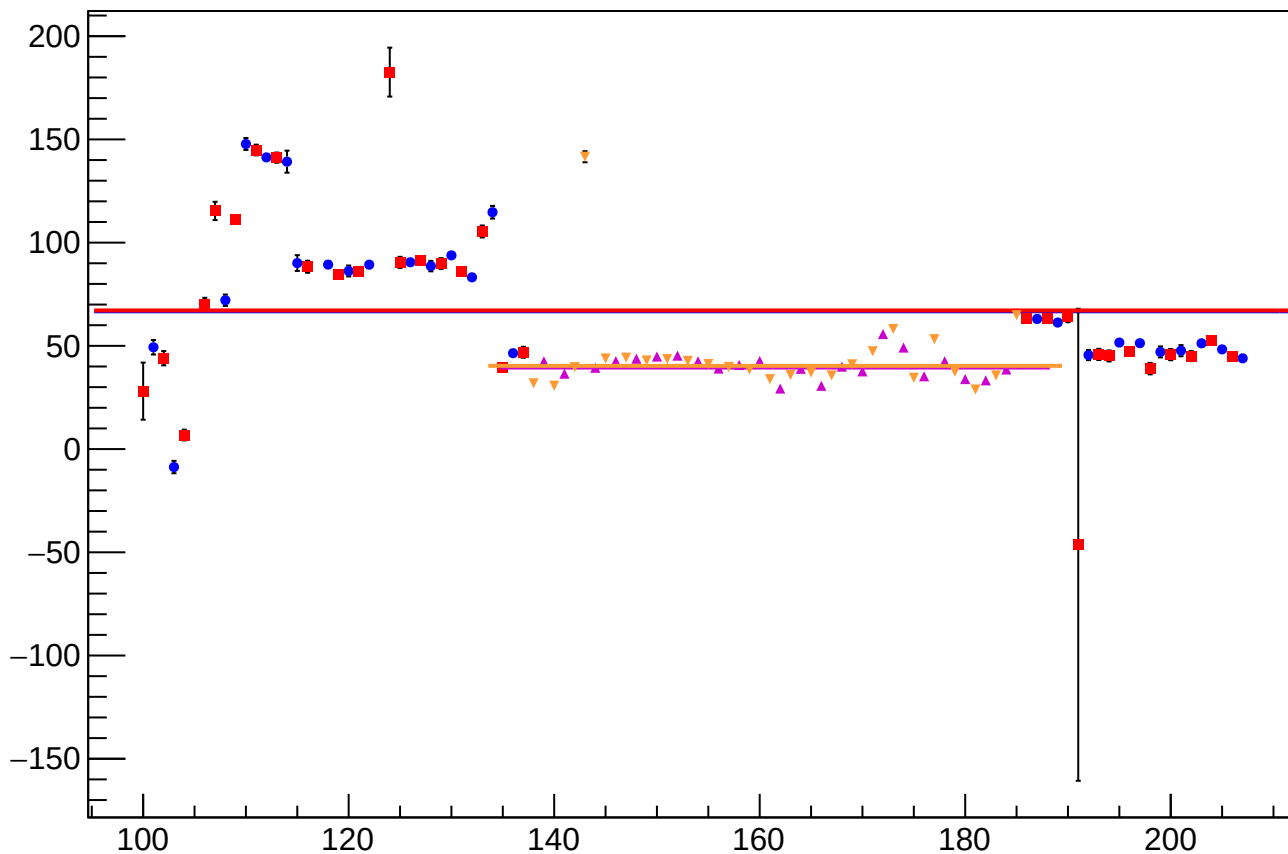
Left In:  $-3.780 \pm 0.224$   $\chi^2/\text{NDF}$ : 509.8/22

+ sign  $-3.358 \pm 0.197$   $\chi^2/\text{NDF}$ : 883.6/50

All:  $-3.232 \pm 0.140$   $\chi^2/\text{NDF}$ : 1722.0/104

- sign  $-3.103 \pm 0.200$   $\chi^2/\text{NDF}$ : 837.6/53

reg\_asym\_at1\_dd\_at2\_dd\_avg\_diff\_bpm4eX\_slope vs Slug



Right In: 66.737 $\pm$ 0.430  $\chi^2$ /NDF: 4499.3/25

Left Out: 40.315 $\pm$ 0.280  $\chi^2$ /NDF: 2182.8/24

Right Out: 67.150 $\pm$ 0.383  $\chi^2$ /NDF: 4748.8/30

Left In: 39.504 $\pm$ 0.285  $\chi^2$ /NDF: 432.1/22

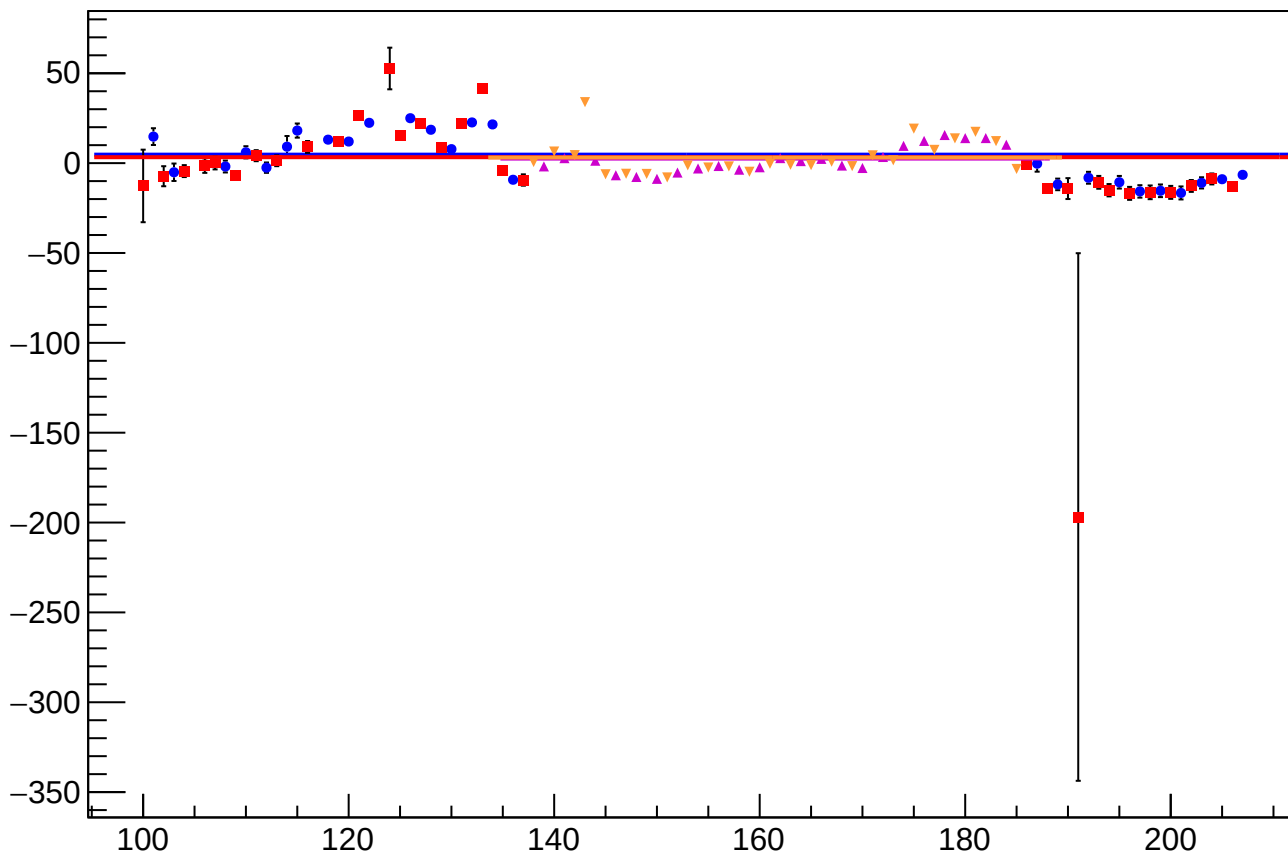
+ sign 48.188 $\pm$ 0.235  $\chi^2$ /NDF: 9332.4/50

All: 48.774 $\pm$ 0.164  $\chi^2$ /NDF: 17876.5/104

- sign 49.330 $\pm$ 0.229  $\chi^2$ /NDF: 8531.9/53



reg\_asym\_at1\_dd\_at2\_dd\_avg\_diff\_bpm4eY\_slope vs Slug



Right In: 4.719 $\pm$ 0.535  $\chi^2$ /NDF: 674.9/25

Left Out: 3.142 $\pm$ 0.245  $\chi^2$ /NDF:1267.0/24

Right Out: 3.302 $\pm$ 0.525  $\chi^2$ /NDF: 892.1/30

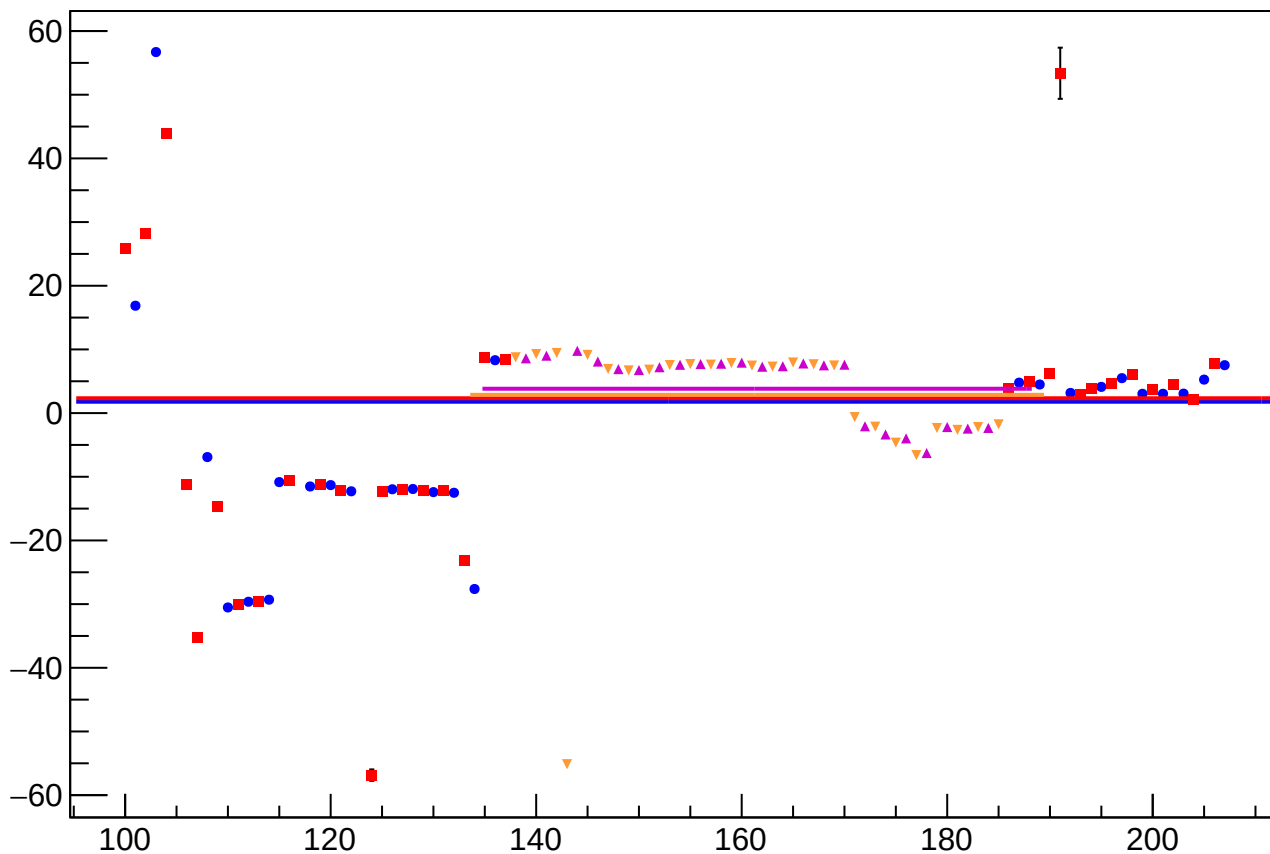
Left In: 2.519 $\pm$ 0.251  $\chi^2$ /NDF:968.2/22

+ sign 3.416 $\pm$ 0.223  $\chi^2$ /NDF: 1949.1/50

All: 3.046 $\pm$ 0.159  $\chi^2$ /NDF: 3816.8/104

- sign 2.665 $\pm$ 0.226  $\chi^2$ /NDF: 1862.1/53

reg\_asym\_at1\_dd\_at2\_dd\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $1.789 \pm 0.025$   $\chi^2/\text{NDF}$ : 379880.1/25

Left Out:  $2.870 \pm 0.011$   $\chi^2/\text{NDF}$ : 512331.0/24

Right Out:  $2.330 \pm 0.025$   $\chi^2/\text{NDF}$ : 330192.9/30

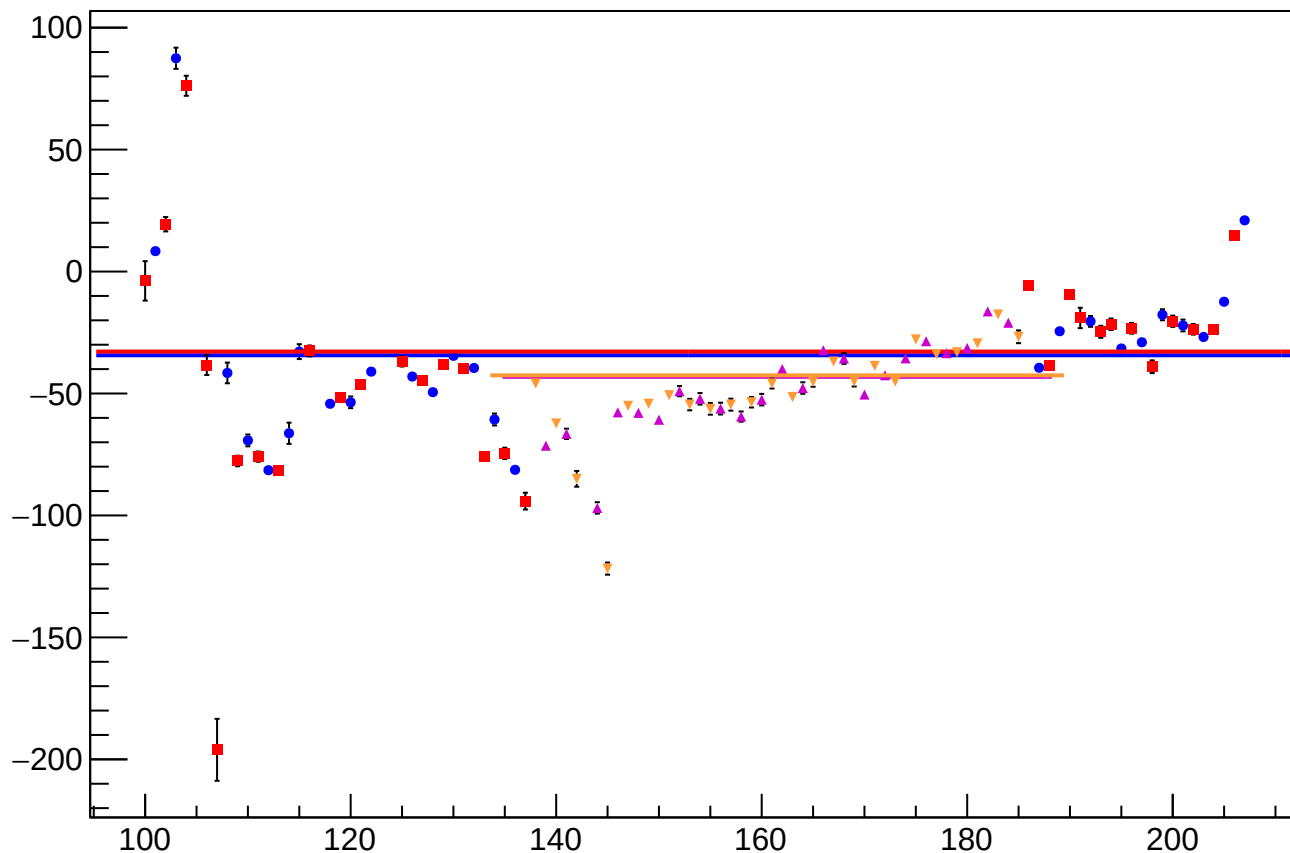
Left In:  $3.825 \pm 0.011$   $\chi^2/\text{NDF}$ : 233224.7/22

+ sign  $2.701 \pm 0.010$   $\chi^2/\text{NDF}$ : 893727.4/50

All:  $3.138 \pm 0.007$   $\chi^2/\text{NDF}$ : 1463893.9/104

- sign  $3.580 \pm 0.010$   $\chi^2/\text{NDF}$ : 566392.1/53

reg\_asym\_usl\_atl1\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-34.331 \pm 0.384$   $\chi^2/\text{NDF}: 4937.5/25$

Left Out:  $-42.560 \pm 0.378$   $\chi^2/\text{NDF}: 2326.4/23$

Right Out:  $-32.803 \pm 0.345$   $\chi^2/\text{NDF}: 6230.5/29$

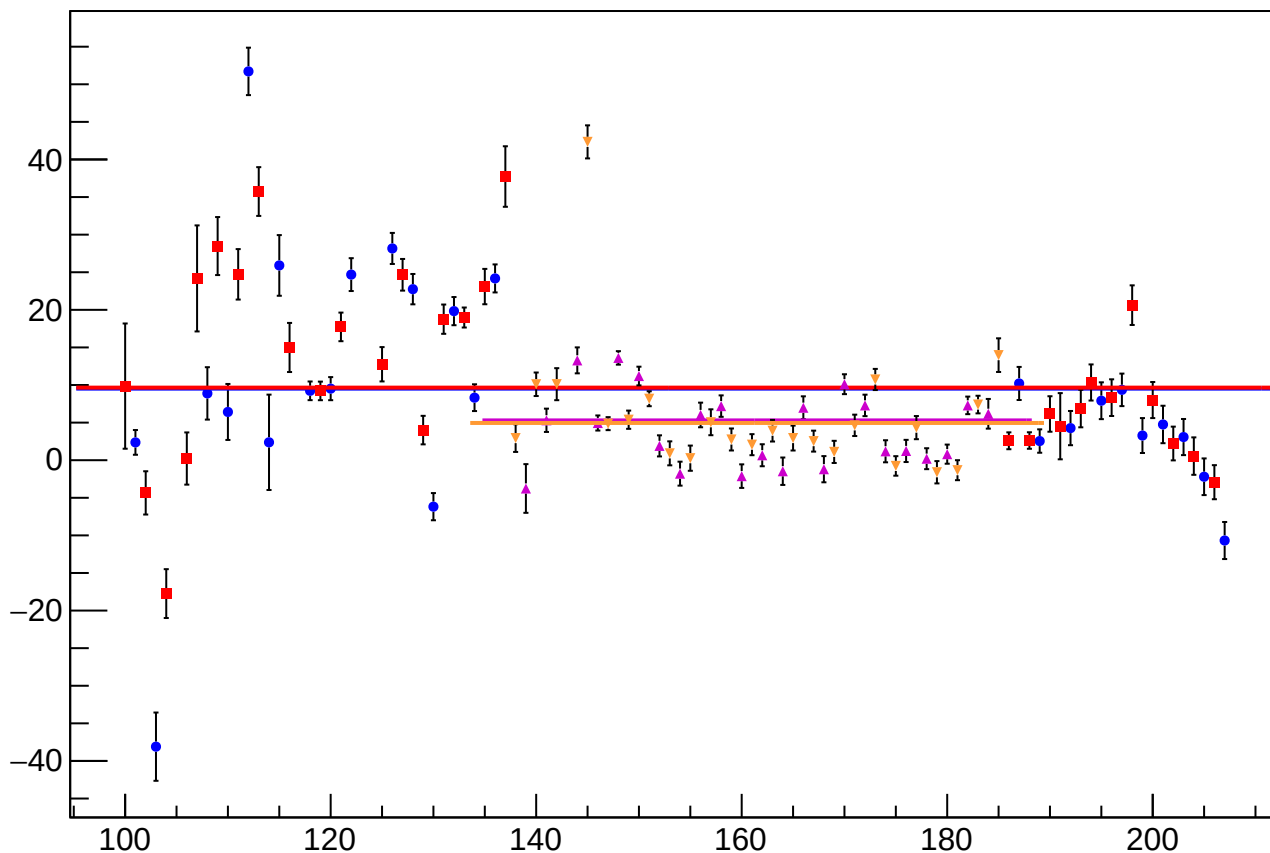
Left In:  $-43.152 \pm 0.382$   $\chi^2/\text{NDF}: 2206.6/22$

+ sign  $-38.510 \pm 0.270$   $\chi^2/\text{NDF}: 7496.8/49$

All:  $-37.953 \pm 0.186$   $\chi^2/\text{NDF}: 16347.4/102$

- sign  $-37.451 \pm 0.256$   $\chi^2/\text{NDF}: 8842.5/52$

# reg\_asym\_usl\_atl1\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $9.523 \pm 0.417$   $\chi^2/\text{NDF}$ : 801.2/25

Left Out:  $4.954 \pm 0.288$   $\chi^2/\text{NDF}$ : 449.1/23

Right Out:  $9.652 \pm 0.389$   $\chi^2/\text{NDF}$ : 608.8/29

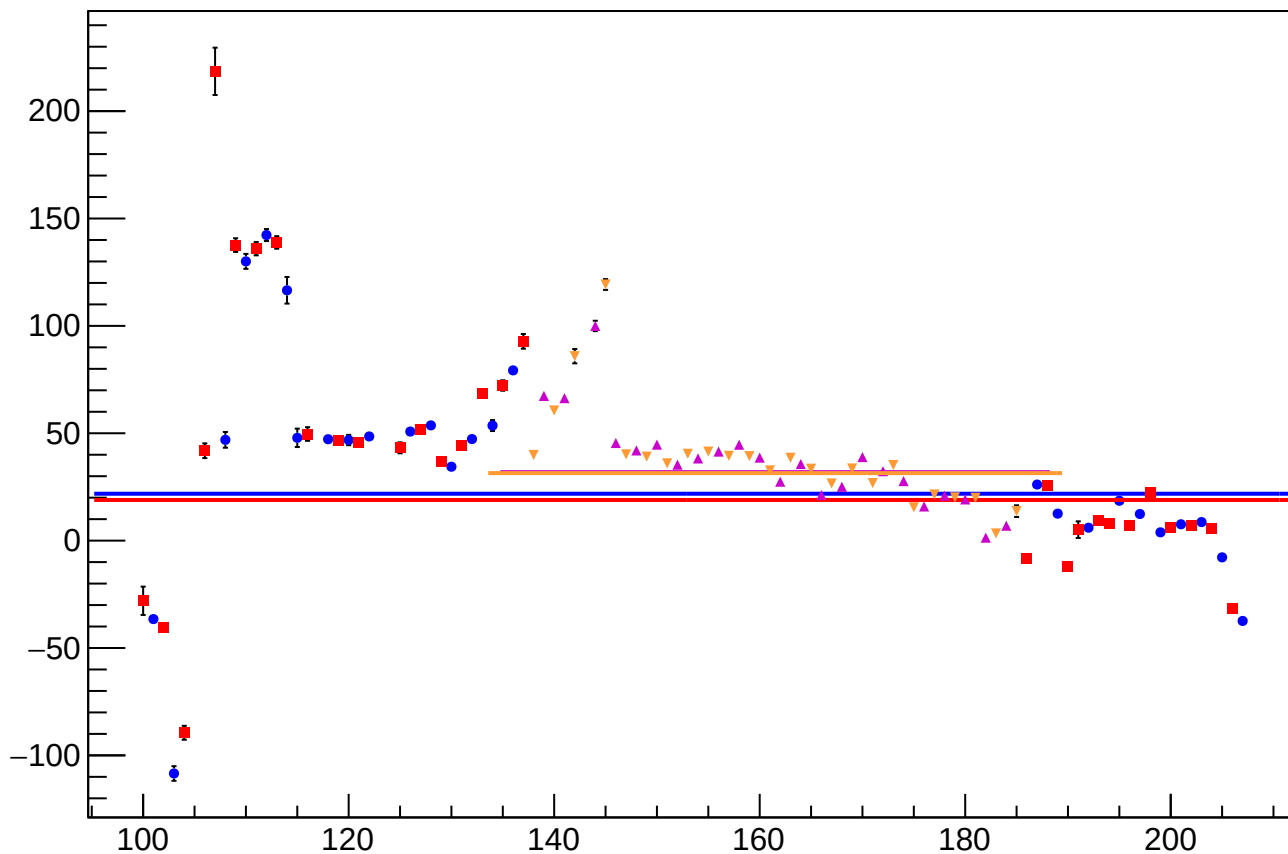
Left In:  $5.292 \pm 0.294$   $\chi^2/\text{NDF}$ : 286.4/22

+ sign  $6.435 \pm 0.237$   $\chi^2/\text{NDF}$ : 1331.6/49

All:  $6.659 \pm 0.167$   $\chi^2/\text{NDF}$ : 2308.5/102

- sign  $6.879 \pm 0.235$   $\chi^2/\text{NDF}$ : 975.1/52

reg\_asym\_usl\_atl1\_avg\_diff\_bpm4eX\_slope vs Slug



Right In: 21.841 $\pm$ 0.377  $\chi^2$ /NDF: 10576.0/25

Left Out: 31.439 $\pm$ 0.376  $\chi^2$ /NDF: 2762.0/23

Right Out: 18.936 $\pm$ 0.322  $\chi^2$ /NDF: 12566.4/29

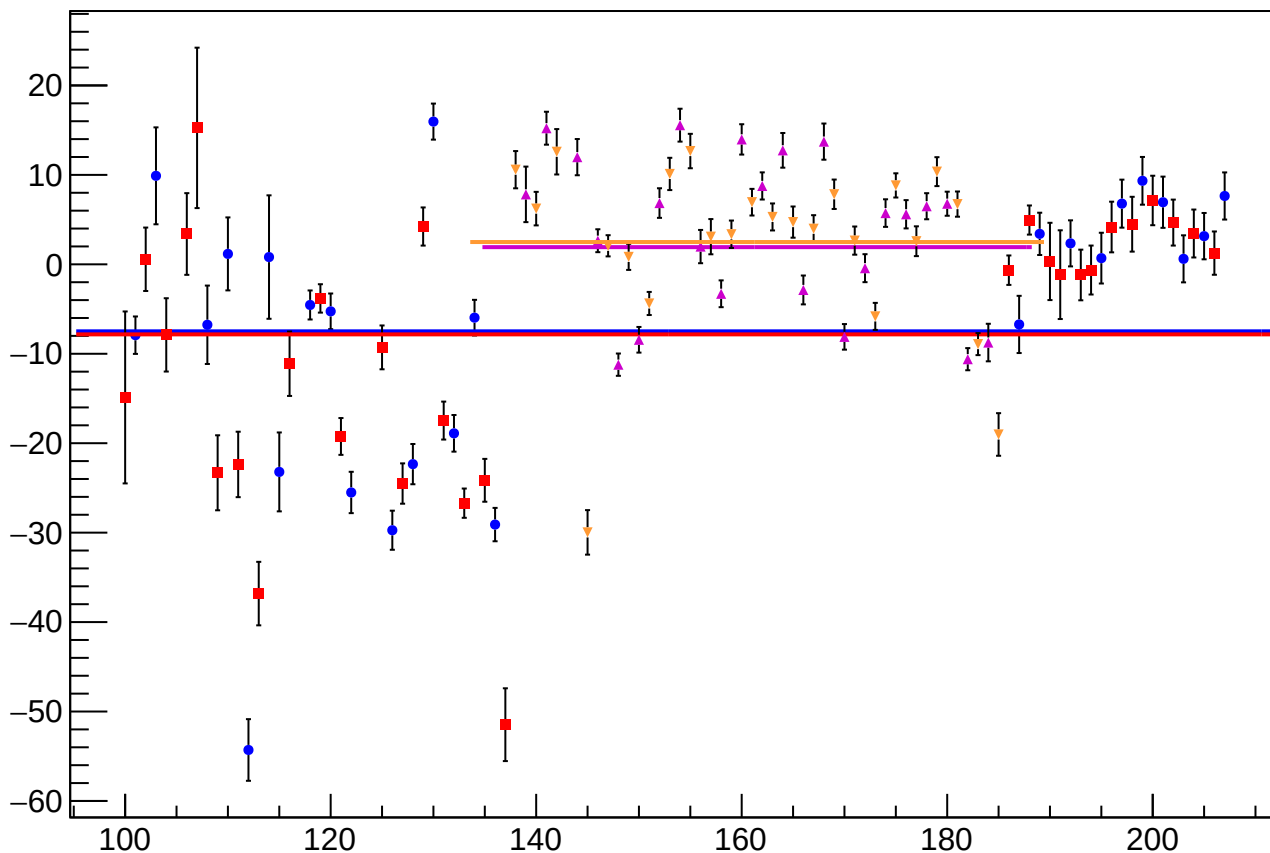
Left In: 31.895 $\pm$ 0.378  $\chi^2$ /NDF: 2767.3/22

+ sign 26.664 $\pm$ 0.266  $\chi^2$ /NDF: 13663.0/49

All: 25.434 $\pm$ 0.180  $\chi^2$ /NDF: 29716.6/102

- sign 24.389 $\pm$ 0.245  $\chi^2$ /NDF: 16014.1/52

reg\_asym\_usl\_atl1\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $-7.491 \pm 0.490$   $\chi^2/\text{NDF}$ : 924.1/25

Left Out:  $2.494 \pm 0.327$   $\chi^2/\text{NDF}$ : 558.7/23

Right Out:  $-7.831 \pm 0.473$   $\chi^2/\text{NDF}$ : 772.3/29

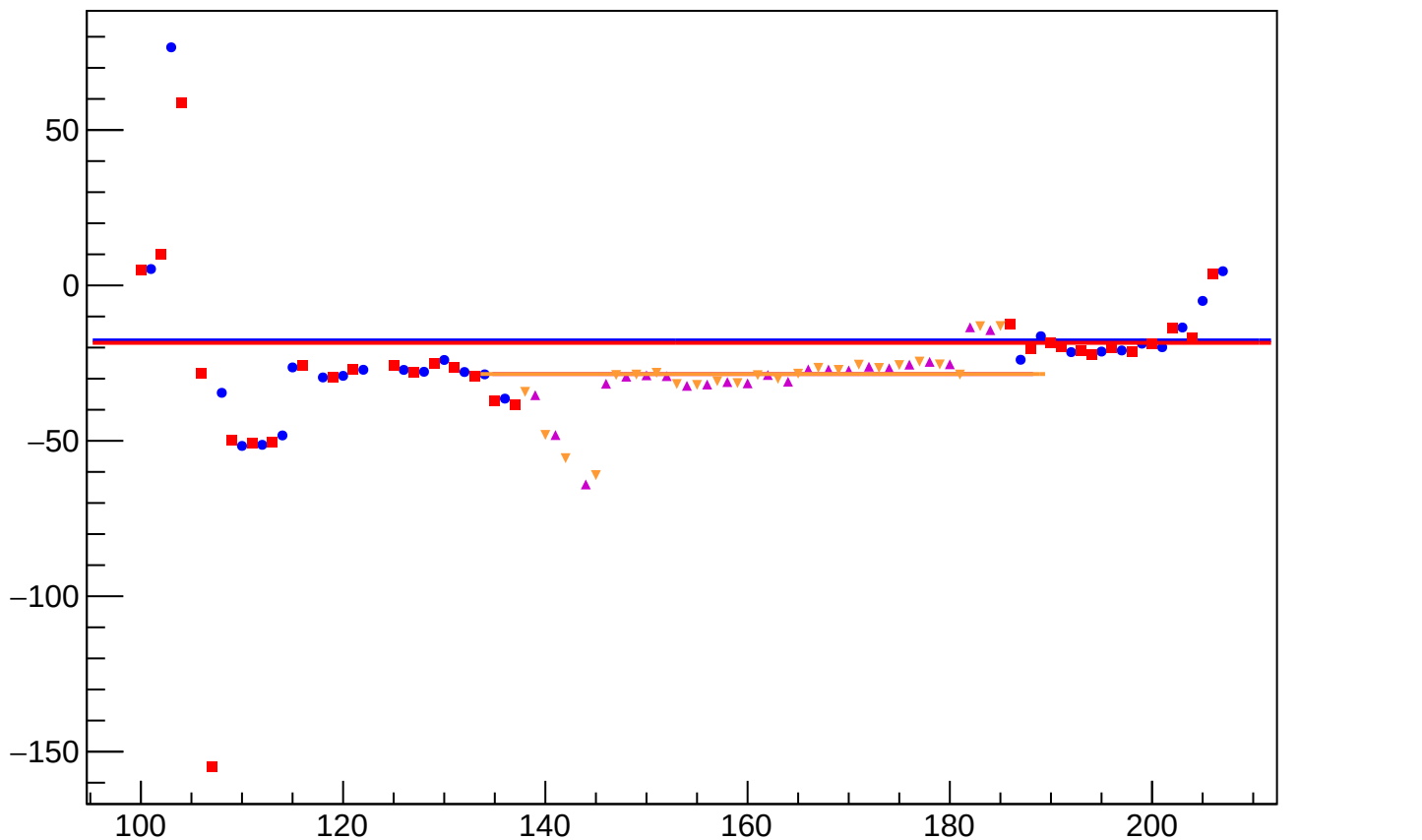
Left In:  $1.921 \pm 0.332$   $\chi^2/\text{NDF}$ : 678.8/22

+ sign  $-0.582 \pm 0.272$   $\chi^2/\text{NDF}$ : 1770.5/49

All:  $-0.939 \pm 0.192$   $\chi^2/\text{NDF}$ : 3509.8/102

- sign  $-1.296 \pm 0.272$   $\chi^2/\text{NDF}$ : 1735.8/52

reg\_asym\_usl\_atl1\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-17.692 \pm 0.023$   $\chi^2/\text{NDF}$ : 720131.1/25

Left Out:  $-28.513 \pm 0.015$   $\chi^2/\text{NDF}$ : 333774.3/23

Right Out:  $-18.473 \pm 0.022$   $\chi^2/\text{NDF}$ : 623150.6/29

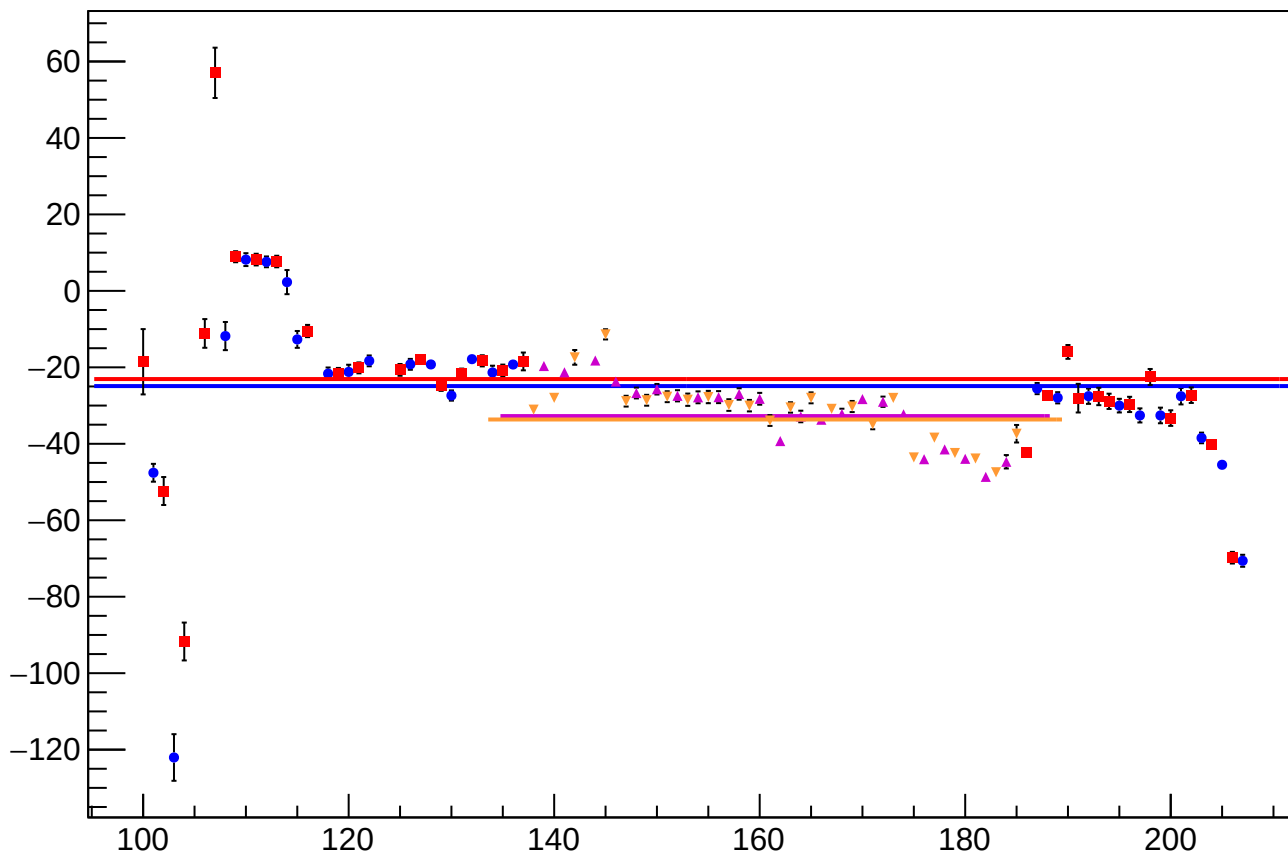
Left In:  $-28.495 \pm 0.015$   $\chi^2/\text{NDF}$ : 287757.4/22

+ sign  $-25.340 \pm 0.012$   $\chi^2/\text{NDF}$ : 1211419.7/49

All:  $-25.358 \pm 0.009$   $\chi^2/\text{NDF}$ : 2264908.3/102

- sign  $-25.375 \pm 0.012$   $\chi^2/\text{NDF}$ : 1053484.4/52

# reg\_asym\_usl\_atl1\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-24.903 \pm 0.316$   $\chi^2/\text{NDF}: 2806.2/25$

Left Out:  $-33.643 \pm 0.265$   $\chi^2/\text{NDF}: 1015.9/23$

Right Out:  $-23.065 \pm 0.303$   $\chi^2/\text{NDF}: 3303.1/29$

Left In:  $-32.750 \pm 0.269$   $\chi^2/\text{NDF}: 1143.5/22$

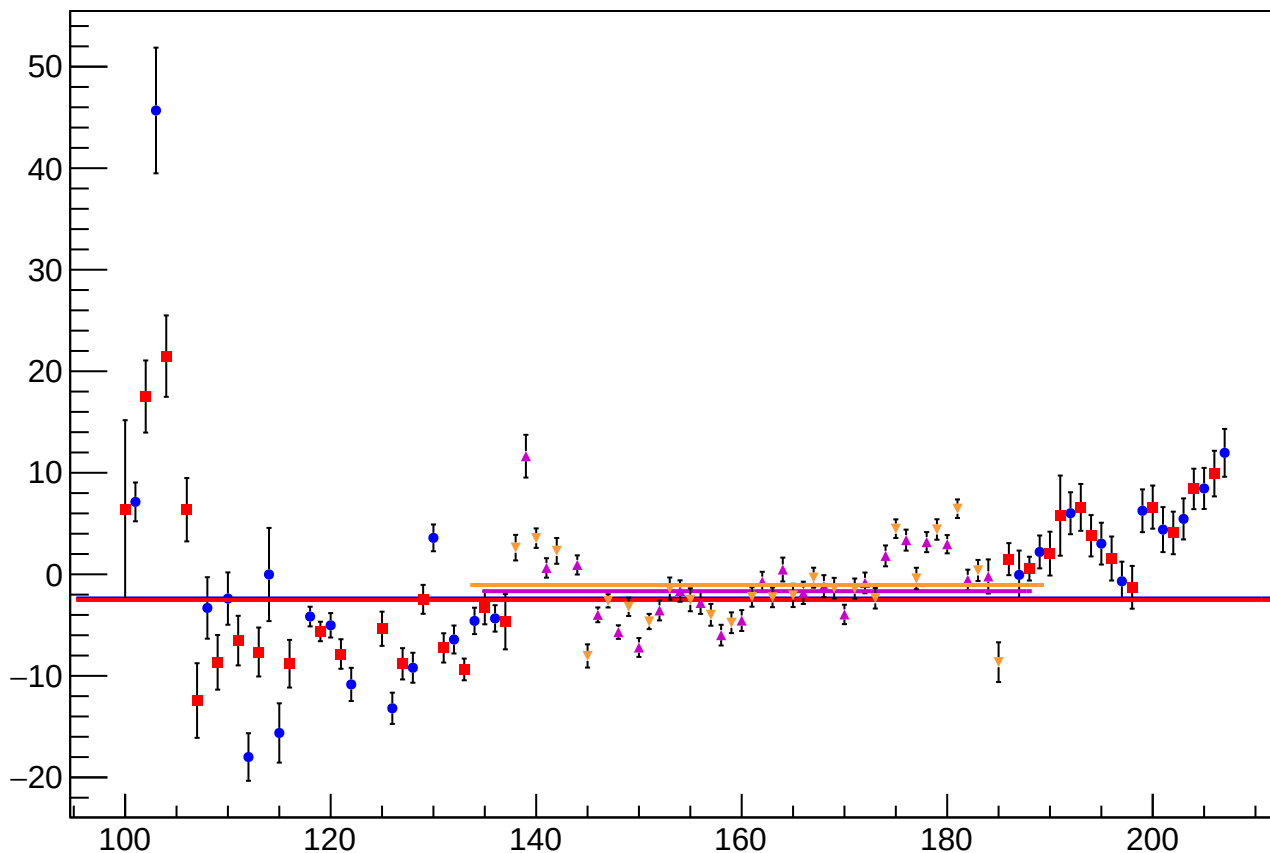
+ sign  $-30.034 \pm 0.203$   $\chi^2/\text{NDF}: 4270.8/49$

All:  $-29.251 \pm 0.143$   $\chi^2/\text{NDF}: 9319.4/102$

- sign  $-28.486 \pm 0.201$   $\chi^2/\text{NDF}: 5019.2/52$



# reg\_asym\_usl\_atl1\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-2.378 \pm 0.341$   $\chi^2/\text{NDF}$ : 430.6/25

Left Out:  $-1.050 \pm 0.203$   $\chi^2/\text{NDF}$ : 289.4/23

Right Out:  $-2.524 \pm 0.336$   $\chi^2/\text{NDF}$ : 340.3/29

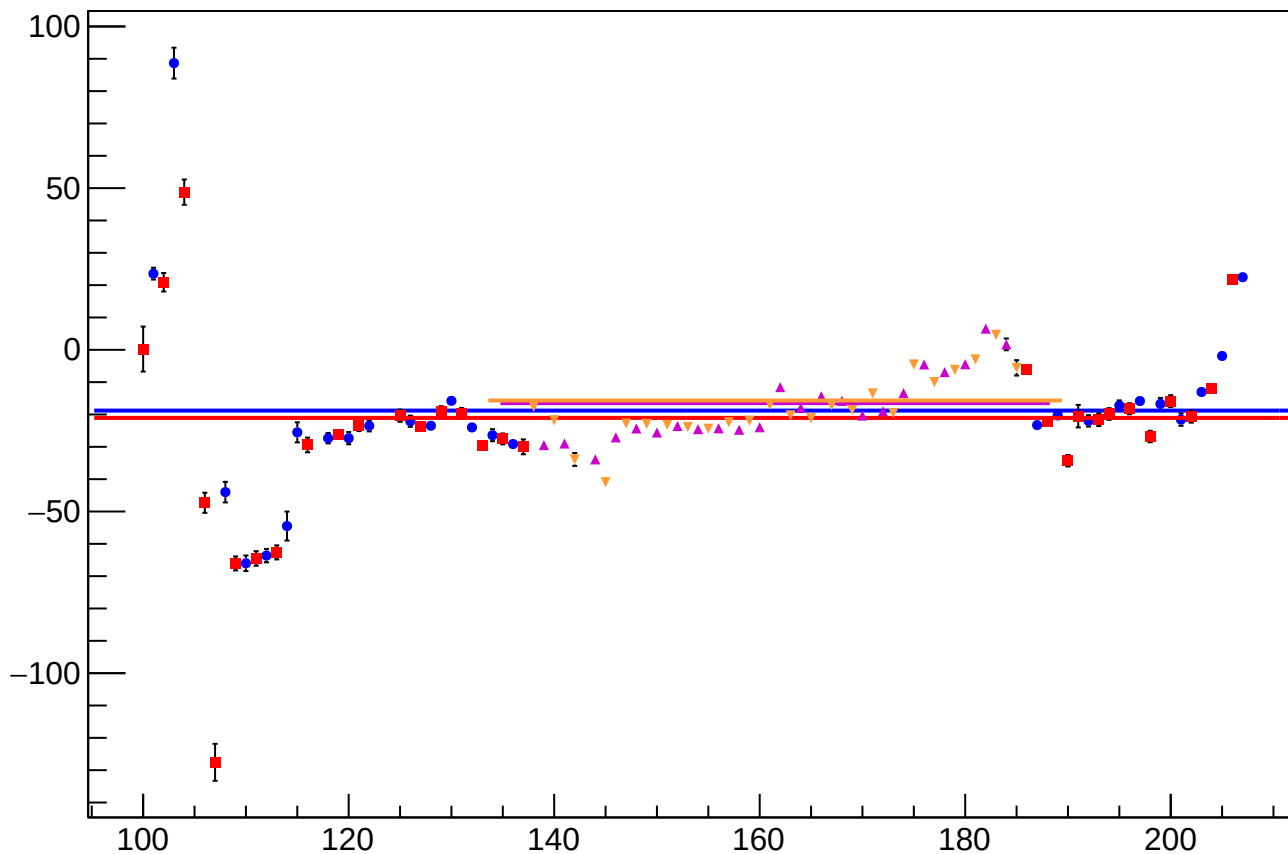
Left In:  $-1.659 \pm 0.207$   $\chi^2/\text{NDF}$ : 264.4/22

+ sign  $-1.397 \pm 0.174$   $\chi^2/\text{NDF}$ : 731.2/49

All:  $-1.644 \pm 0.124$   $\chi^2/\text{NDF}$ : 1344.8/102

- sign  $-1.896 \pm 0.176$   $\chi^2/\text{NDF}$ : 609.5/52

# reg\_asym\_usl\_atl1\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-18.793 \pm 0.325$   $\chi^2/\text{NDF}$ : 3197.0/25

Left Out:  $-15.674 \pm 0.263$   $\chi^2/\text{NDF}$ : 1520.8/23

Right Out:  $-21.059 \pm 0.303$   $\chi^2/\text{NDF}$ : 3454.6/29

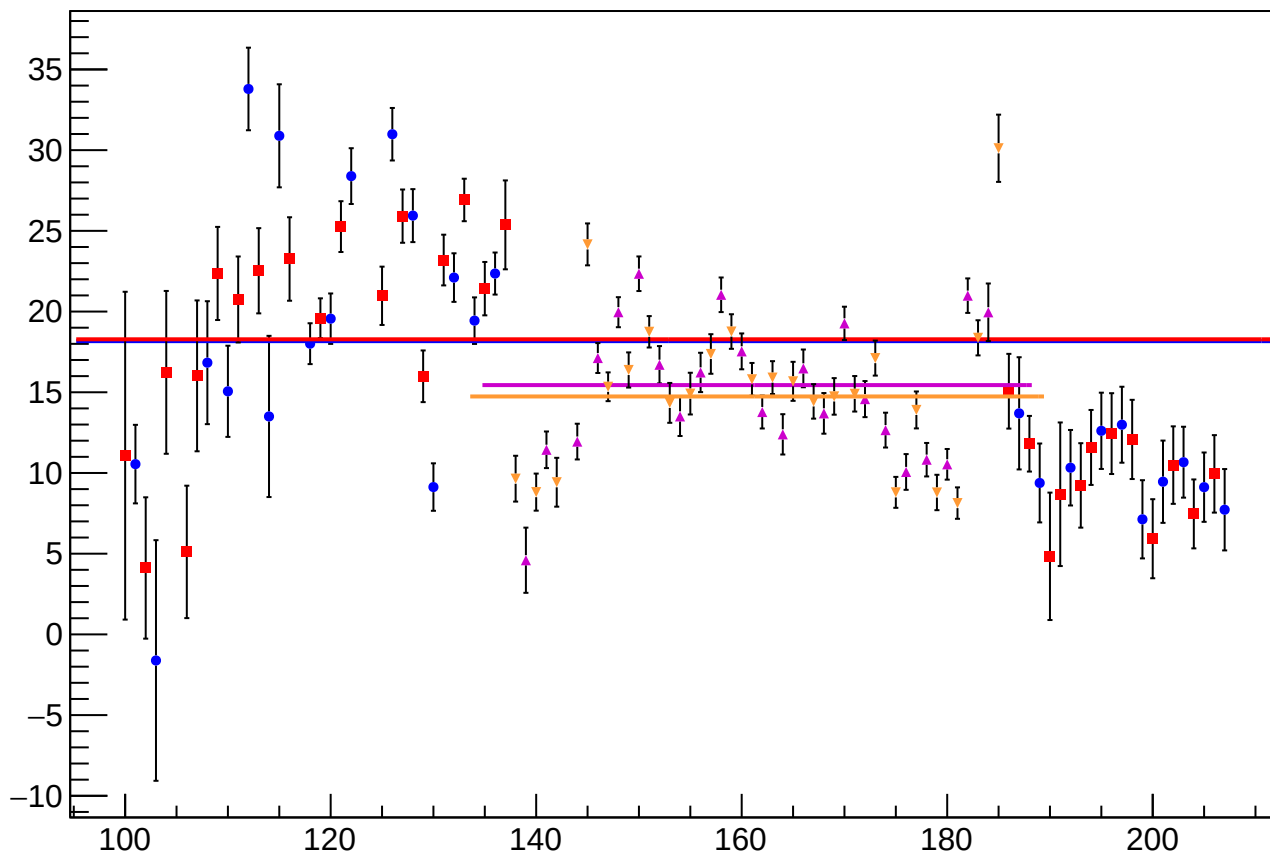
Left In:  $-16.480 \pm 0.266$   $\chi^2/\text{NDF}$ : 1697.7/22

+ sign  $-16.906 \pm 0.205$   $\chi^2/\text{NDF}$ : 4773.3/49

All:  $-17.709 \pm 0.143$   $\chi^2/\text{NDF}$ : 10084.9/102

- sign  $-18.474 \pm 0.200$   $\chi^2/\text{NDF}$ : 5281.5/52

# reg\_asym\_usl\_atl1\_dd\_diff\_bpm4eY\_slope vs Slug



Right In: 18.167 $\pm$ 0.393  $\chi^2$ /NDF: 363.5/25

Left Out: 14.740 $\pm$ 0.229  $\chi^2$ /NDF:331.0/23

Right Out: 18.282 $\pm$ 0.395  $\chi^2$ /NDF: 278.5/29

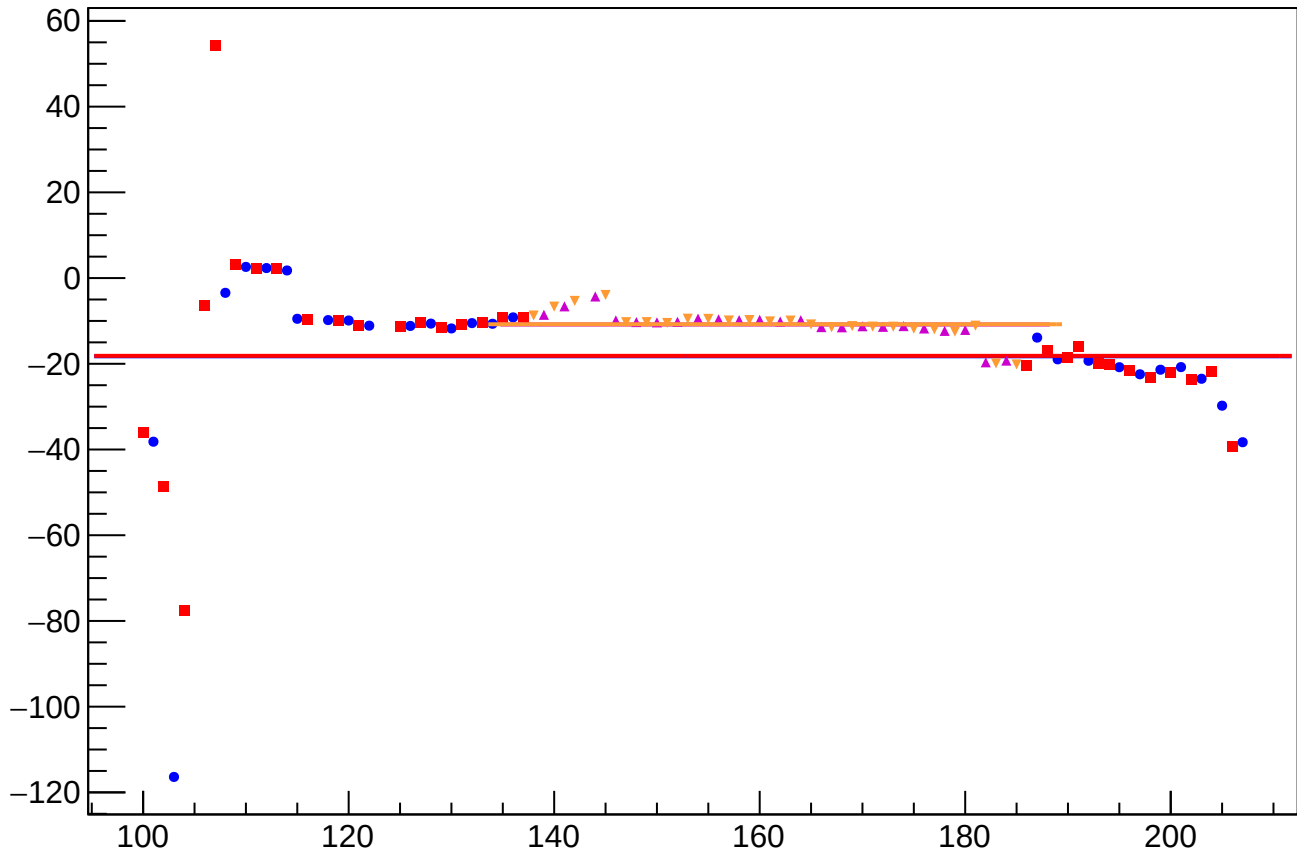
Left In: 15.444 $\pm$ 0.233  $\chi^2$ /NDF:290.4/22

+ sign 15.610 $\pm$ 0.198  $\chi^2$ /NDF: 751.2/49

All: 15.889 $\pm$ 0.141  $\chi^2$ /NDF: 1362.3/102

- sign 16.176 $\pm$ 0.201  $\chi^2$ /NDF: 607.1/52

# reg\_asym\_usl\_atl1\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $-18.255 \pm 0.019$   $\chi^2/\text{NDF}: 445876.3/25$

Left Out:  $-10.778 \pm 0.010$   $\chi^2/\text{NDF}: 84755.9/23$

Right Out:  $-18.148 \pm 0.019$   $\chi^2/\text{NDF}: 432290.4/29$

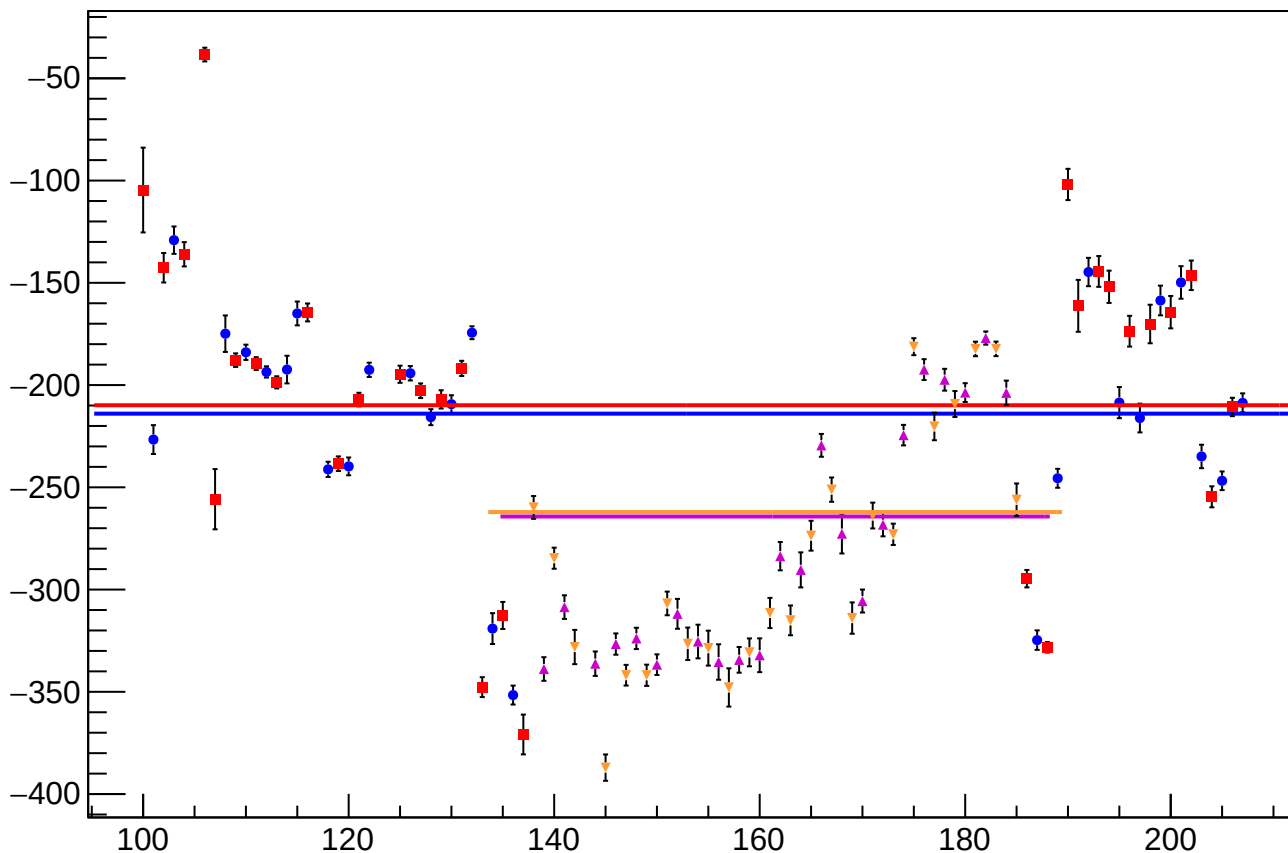
Left In:  $-10.834 \pm 0.010$   $\chi^2/\text{NDF}: 74113.9/22$

+ sign  $-12.418 \pm 0.009$   $\chi^2/\text{NDF}: 646535.9/49$

All:  $-12.448 \pm 0.006$   $\chi^2/\text{NDF}: 1265966.7/102$

- sign  $-12.477 \pm 0.009$   $\chi^2/\text{NDF}: 619409.3/52$

# reg\_asym\_usl\_atl2\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-213.983 \pm 0.918$   $\chi^2/\text{NDF}$ : 2651.3/25

Left Out:  $-262.110 \pm 1.179$   $\chi^2/\text{NDF}$ : 2964.6/23

Right Out:  $-209.865 \pm 0.839$   $\chi^2/\text{NDF}$ : 7620.0/29

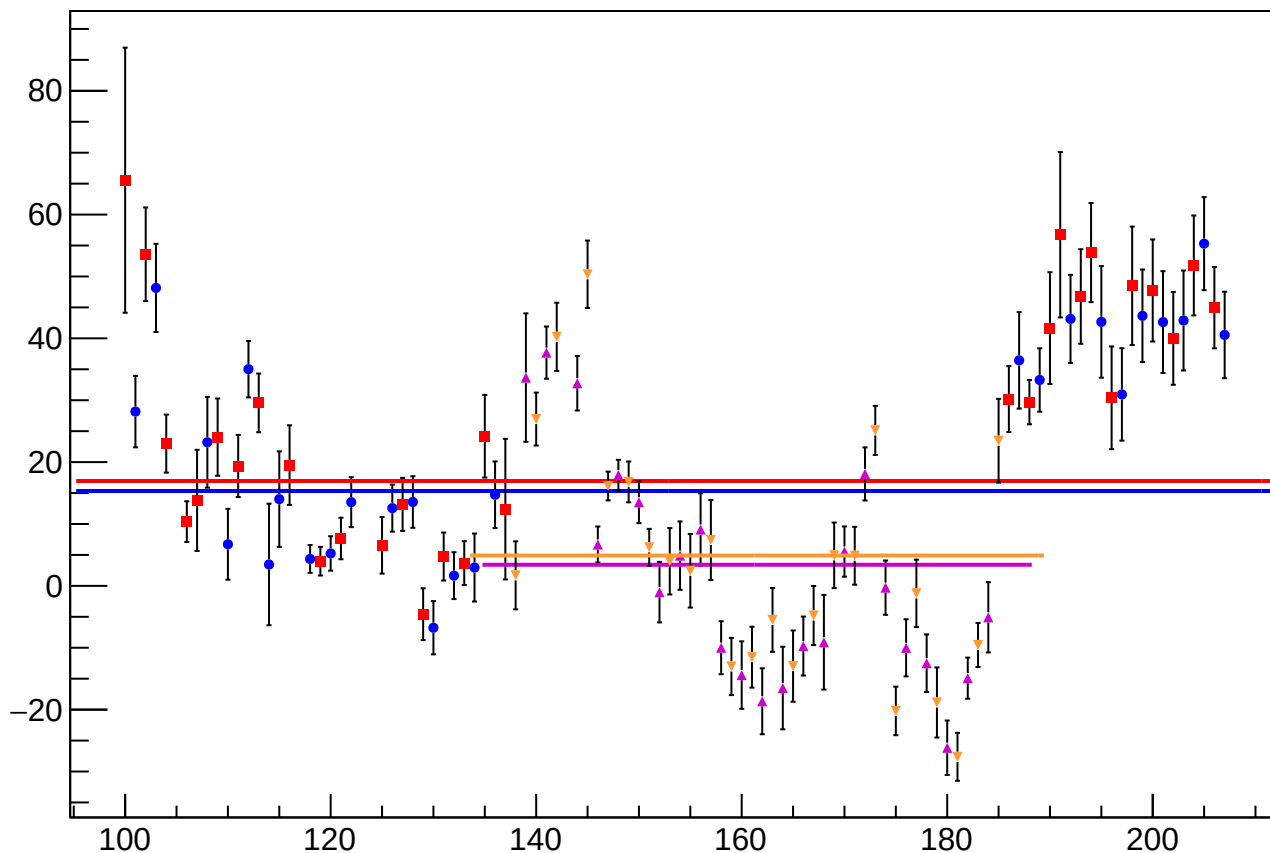
Left In:  $-264.272 \pm 1.186$   $\chi^2/\text{NDF}$ : 2741.9/22

+ sign  $-232.133 \pm 0.724$   $\chi^2/\text{NDF}$ : 6653.2/49

All:  $-229.968 \pm 0.498$   $\chi^2/\text{NDF}$ : 18434.7/102

- sign  $-228.030 \pm 0.685$   $\chi^2/\text{NDF}$ : 11764.6/52

# reg\_asym\_usl\_atl2\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $15.330 \pm 0.966$   $\chi^2/\text{NDF}: 258.8/25$

Left Out:  $4.909 \pm 0.886$   $\chi^2/\text{NDF}: 398.9/23$

Right Out:  $16.948 \pm 0.921$   $\chi^2/\text{NDF}: 285.2/29$

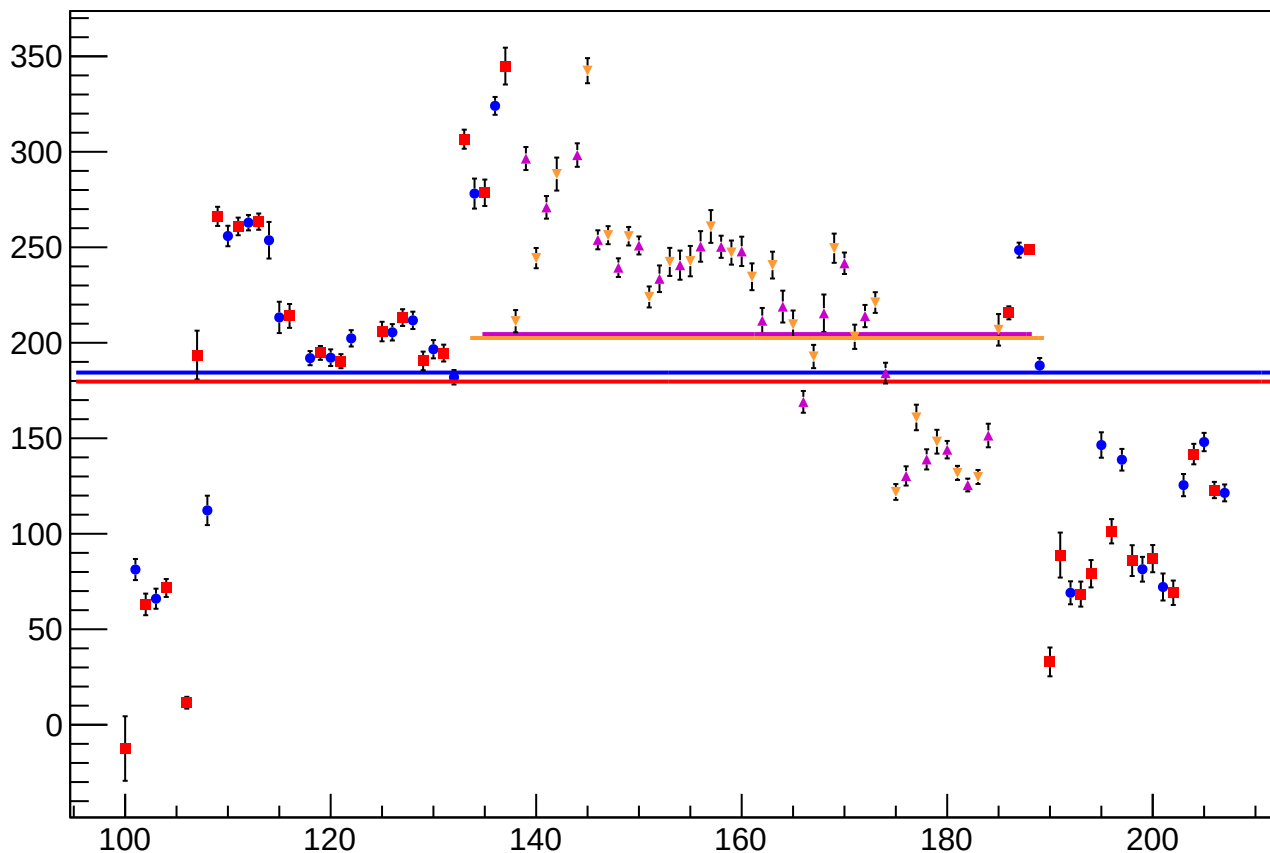
Left In:  $3.409 \pm 0.901$   $\chi^2/\text{NDF}: 333.3/22$

+ sign  $9.672 \pm 0.653$   $\chi^2/\text{NDF}: 721.0/49$

All:  $9.852 \pm 0.459$   $\chi^2/\text{NDF}: 1450.1/102$

- sign  $10.027 \pm 0.644$   $\chi^2/\text{NDF}: 729.0/52$

reg\_asym\_usl\_atl2\_avg\_diff\_bpm4eX\_slope vs Slug



Right In: 184.411 $\pm$ 0.979  $\chi^2$ /NDF: 4289.9/25

Left Out: 202.511 $\pm$ 1.173  $\chi^2$ /NDF:2393.5/23

Right Out: 179.685 $\pm$ 0.868  $\chi^2$ /NDF: 9487.6/29

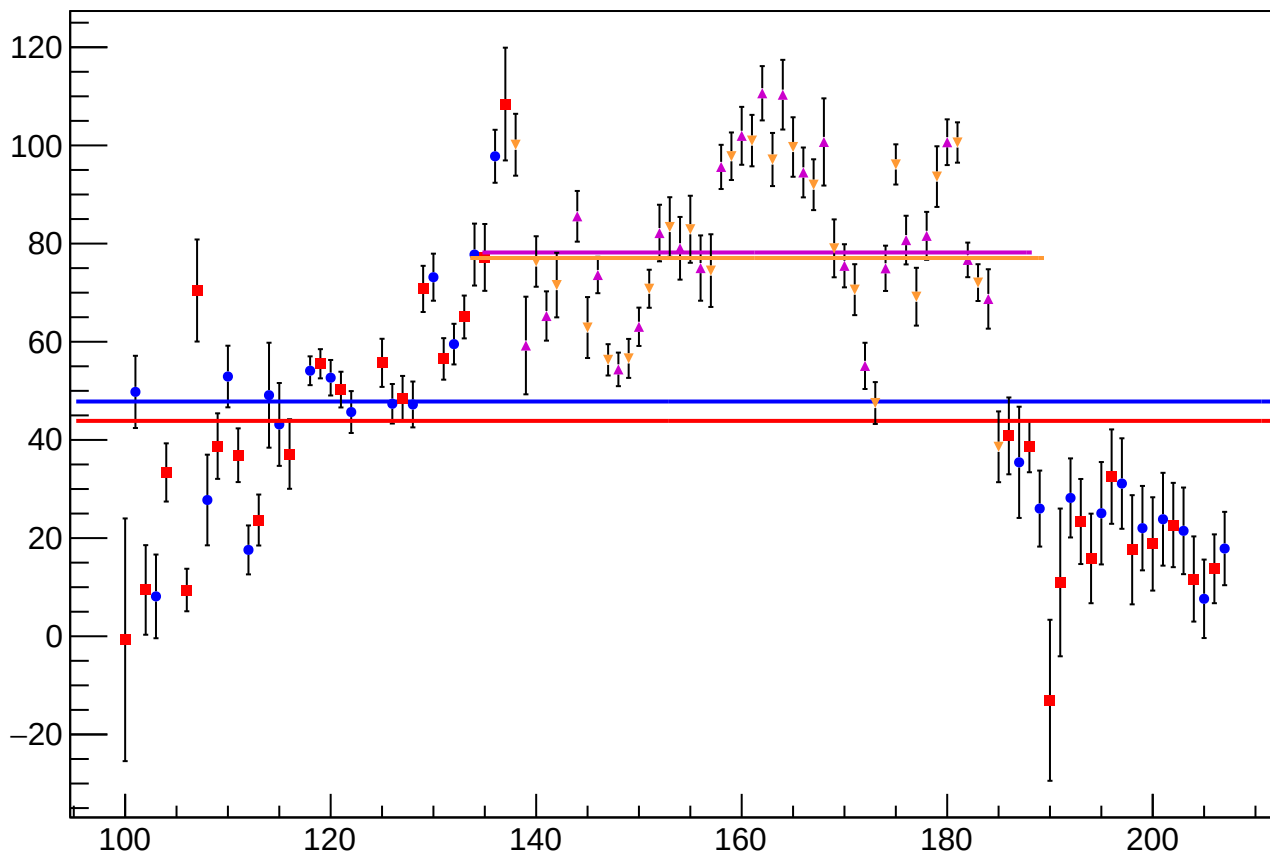
Left In: 204.560 $\pm$ 1.177  $\chi^2$ /NDF:2285.7/22

+ sign 191.842 $\pm$ 0.751  $\chi^2$ /NDF: 6823.8/49

All: 190.018 $\pm$ 0.512  $\chi^2$ /NDF: 18897.4/102

- sign 188.443 $\pm$ 0.698  $\chi^2$ /NDF: 12062.6/52

reg\_asym\_usl\_atl2\_avg\_diff\_bpm4eY\_slope vs Slug



Right In: 47.827 $\pm$ 1.132  $\chi^2$ /NDF: 303.8/25

Left Out: 77.061 $\pm$ 1.015  $\chi^2$ /NDF:311.3/23

Right Out: 43.879 $\pm$ 1.091  $\chi^2$ /NDF: 339.8/29

Left In: 78.189 $\pm$ 1.026  $\chi^2$ /NDF:232.5/22

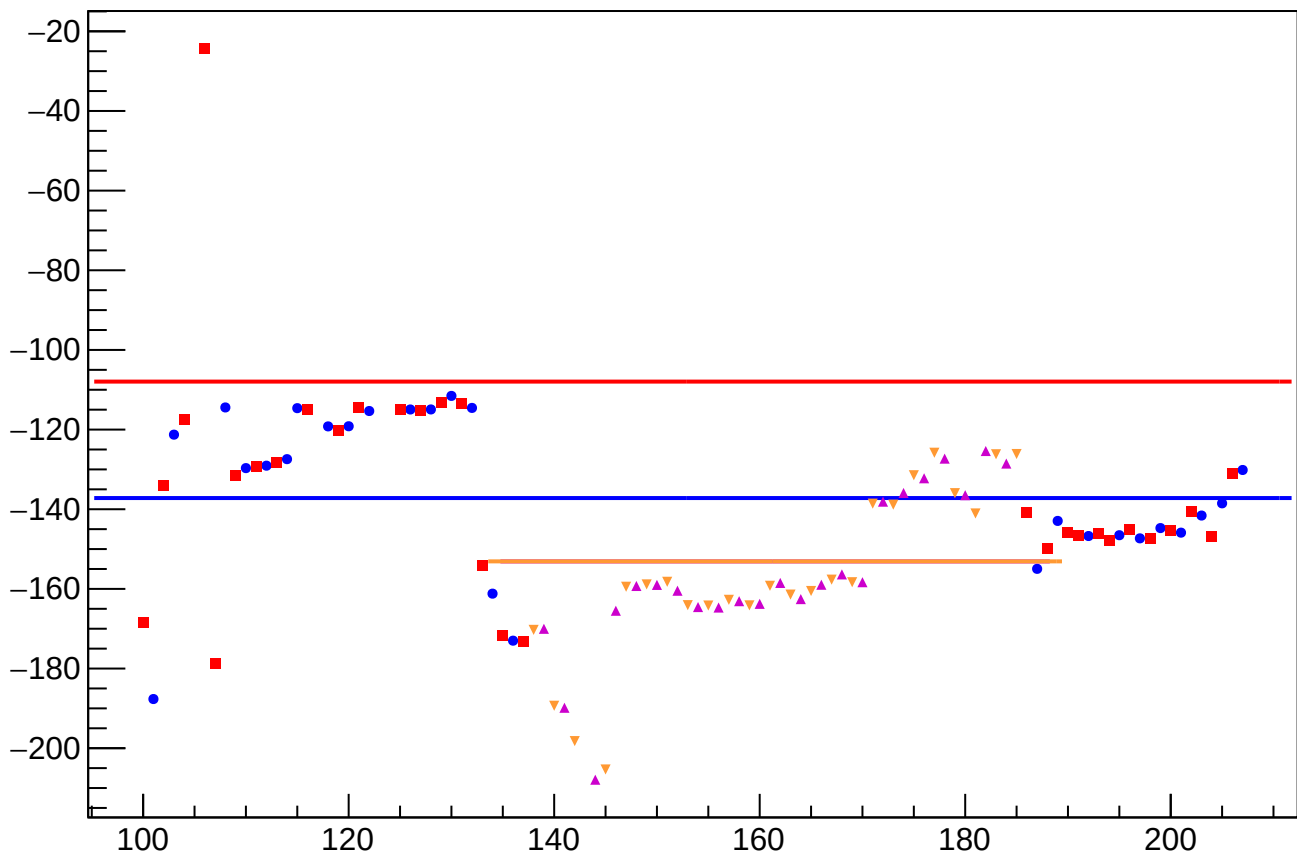
+ sign 64.026 $\pm$ 0.756  $\chi^2$ /NDF: 984.8/49

All: 63.046 $\pm$ 0.531  $\chi^2$ /NDF: 2085.7/102

- sign 62.087 $\pm$ 0.747  $\chi^2$ /NDF: 1097.5/52



reg\_asym\_usl\_atl2\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-137.190 \pm 0.062$   $\chi^2/\text{NDF}$ : 103639.9/25

Left Out:  $-153.090 \pm 0.047$   $\chi^2/\text{NDF}$ : 177552.0/23

Right Out:  $-107.951 \pm 0.052$   $\chi^2/\text{NDF}$ : 985520.7/29

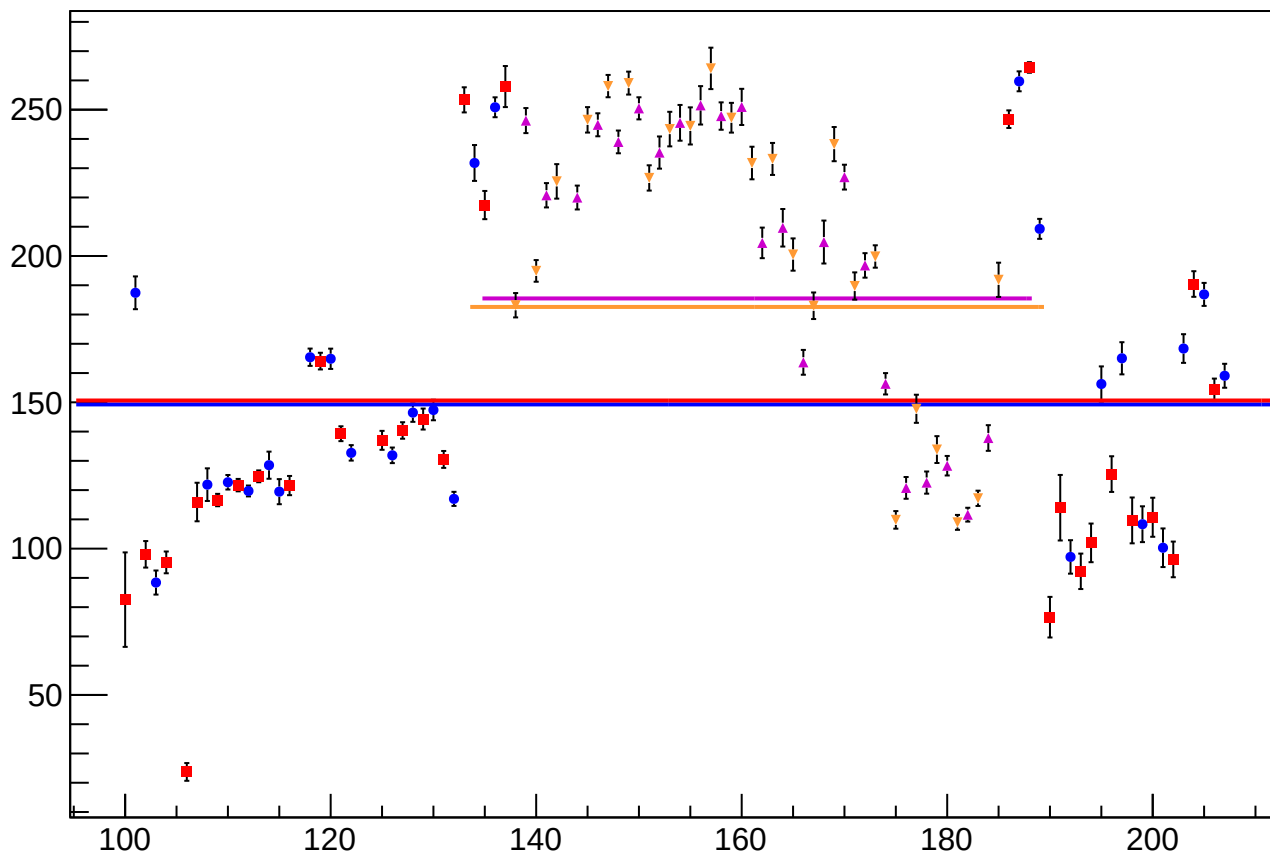
Left In:  $-153.103 \pm 0.047$   $\chi^2/\text{NDF}$ : 166644.2/22

+ sign  $-147.319 \pm 0.037$   $\chi^2/\text{NDF}$ : 322878.3/49

All:  $-139.609 \pm 0.025$   $\chi^2/\text{NDF}$ : 1971653.0/10

- sign  $-132.981 \pm 0.035$   $\chi^2/\text{NDF}$ : 1569944.1/52

# reg\_asym\_usl\_atl2\_dd\_diff\_bpm1X\_slope vs Slug



Right In: 149.279 $\pm$ 0.689  $\chi^2$ /NDF: 3775.1/25

Left Out: 182.591 $\pm$ 0.866  $\chi^2$ /NDF: 4152.3/23

Right Out: 150.620 $\pm$ 0.625  $\chi^2$ /NDF: 9454.9/29

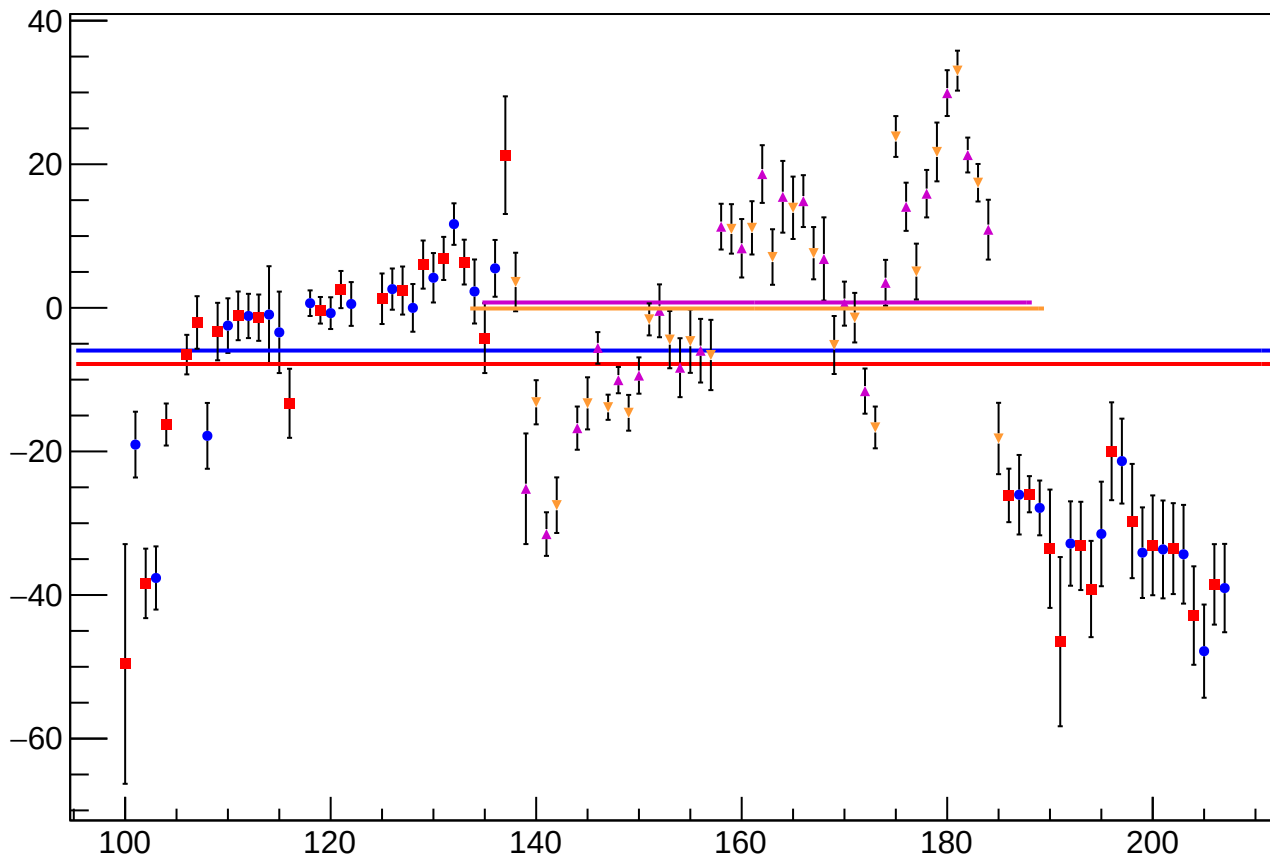
Left In: 185.497 $\pm$ 0.872  $\chi^2$ /NDF: 3822.2/22

+ sign 162.204 $\pm$ 0.539  $\chi^2$ /NDF: 8833.1/49

All: 162.330 $\pm$ 0.370  $\chi^2$ /NDF: 23166.8/102

- sign 162.442 $\pm$ 0.508  $\chi^2$ /NDF: 14333.6/52

reg\_asym\_usl\_atl2\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-5.949 \pm 0.740$   $\chi^2/\text{NDF}: 374.2/25$

Left Out:  $-0.092 \pm 0.655$   $\chi^2/\text{NDF}: 555.3/23$

Right Out:  $-7.821 \pm 0.696$   $\chi^2/\text{NDF}: 422.7/29$

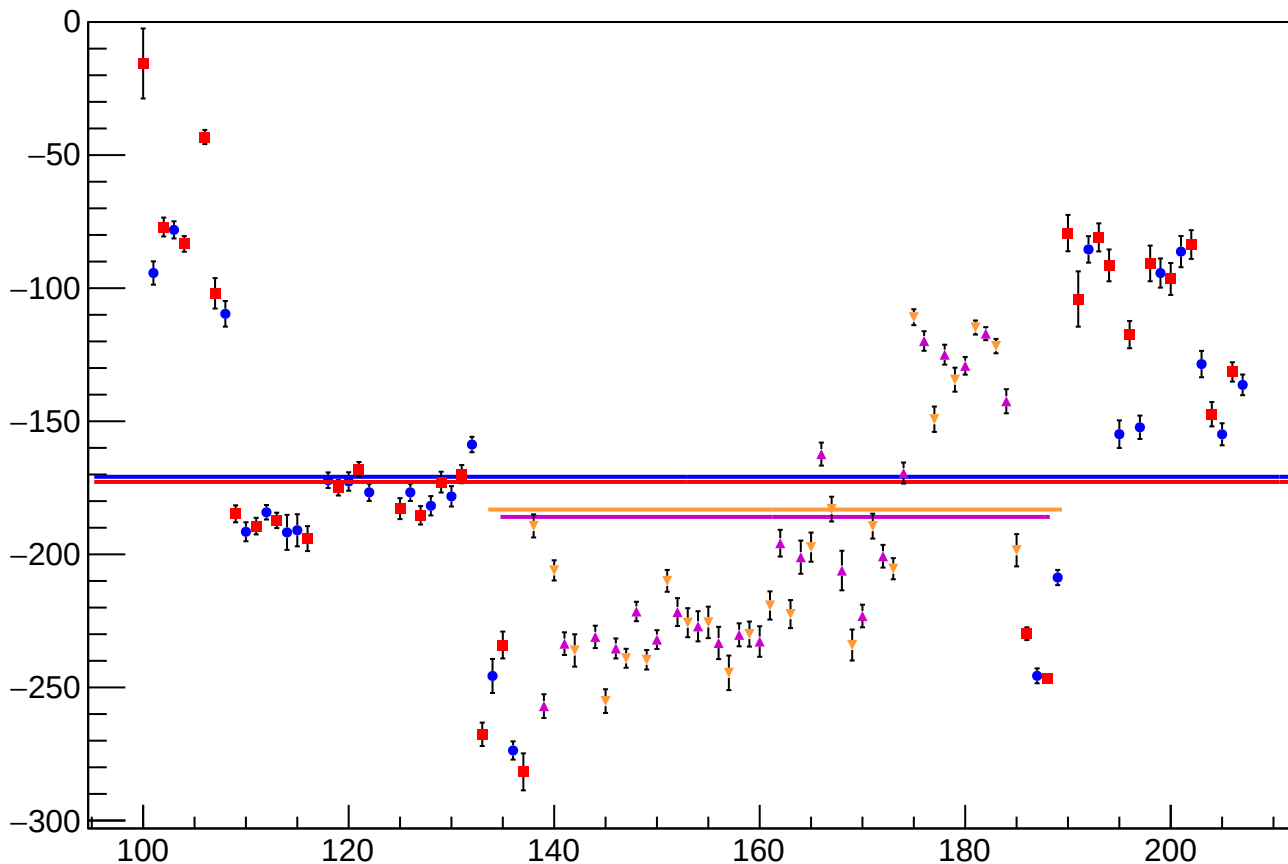
Left In:  $0.747 \pm 0.665$   $\chi^2/\text{NDF}: 497.8/22$

+ sign  $-2.664 \pm 0.490$   $\chi^2/\text{NDF}: 964.7/49$

All:  $-3.011 \pm 0.343$   $\chi^2/\text{NDF}: 1965.4/102$

- sign  $-3.344 \pm 0.481$   $\chi^2/\text{NDF}: 999.7/52$

reg\_asym\_usl\_atl2\_dd\_diff\_bpm4eX\_slope vs Slug



Right In: -170.861+/-0.741  $\chi^2$ /NDF: 4225.7/25

Left Out: -183.175+/-0.862  $\chi^2$ /NDF:3361.2/23

Right Out: -172.800+/-0.648  $\chi^2$ /NDF: 9995.6/29

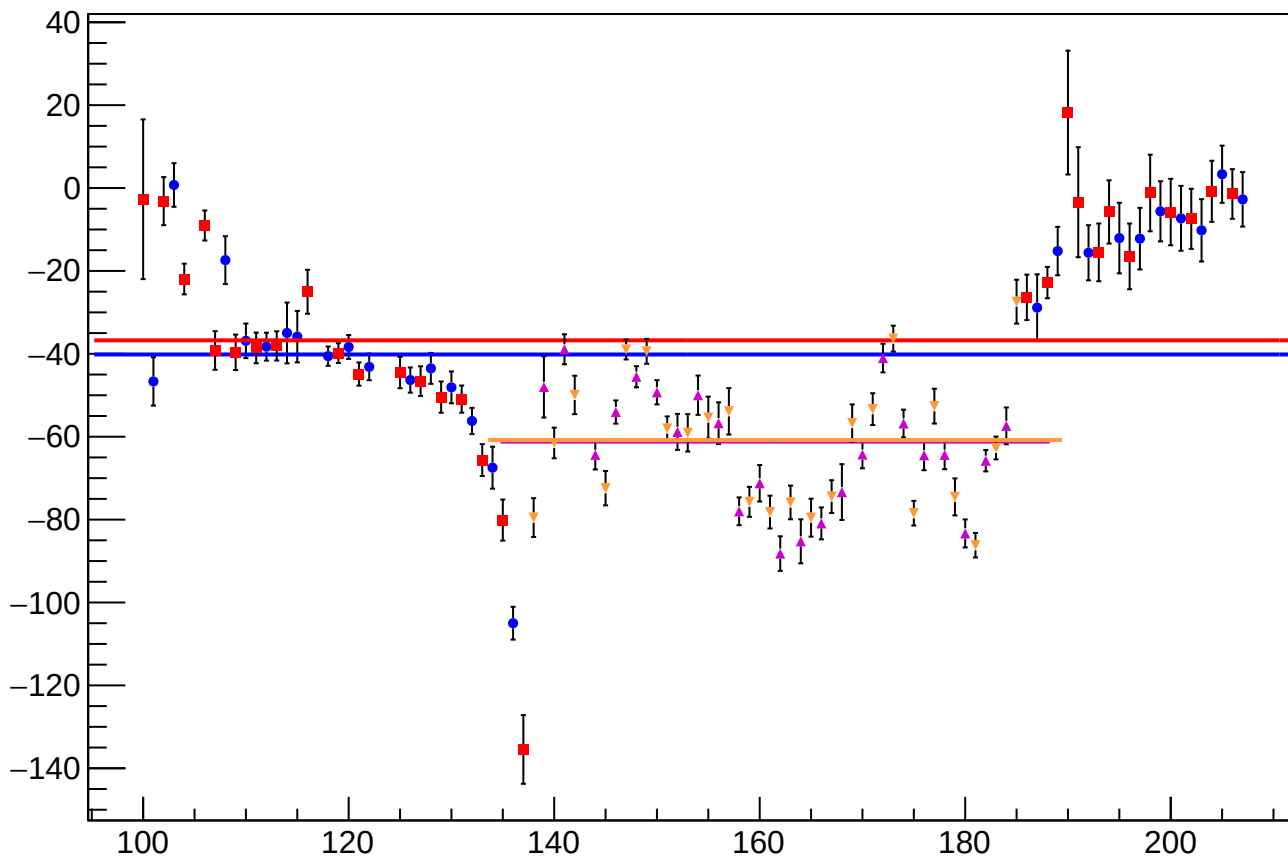
Left In: -185.936+/-0.867  $\chi^2$ /NDF:3181.6/22

+ sign -176.089+/-0.562  $\chi^2$ /NDF: 7704.3/49

All: -176.856+/-0.381  $\chi^2$ /NDF: 21032.1/102

- sign -177.511+/-0.519  $\chi^2$ /NDF: 13324.4/52

reg\_asym\_usl\_atl2\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-40.158 \pm 0.866$   $\chi^2/\text{NDF}$ : 599.2/25

Left Out:  $-60.801 \pm 0.749$   $\chi^2/\text{NDF}$ : 474.0/23

Right Out:  $-36.747 \pm 0.825$   $\chi^2/\text{NDF}$ : 619.4/29

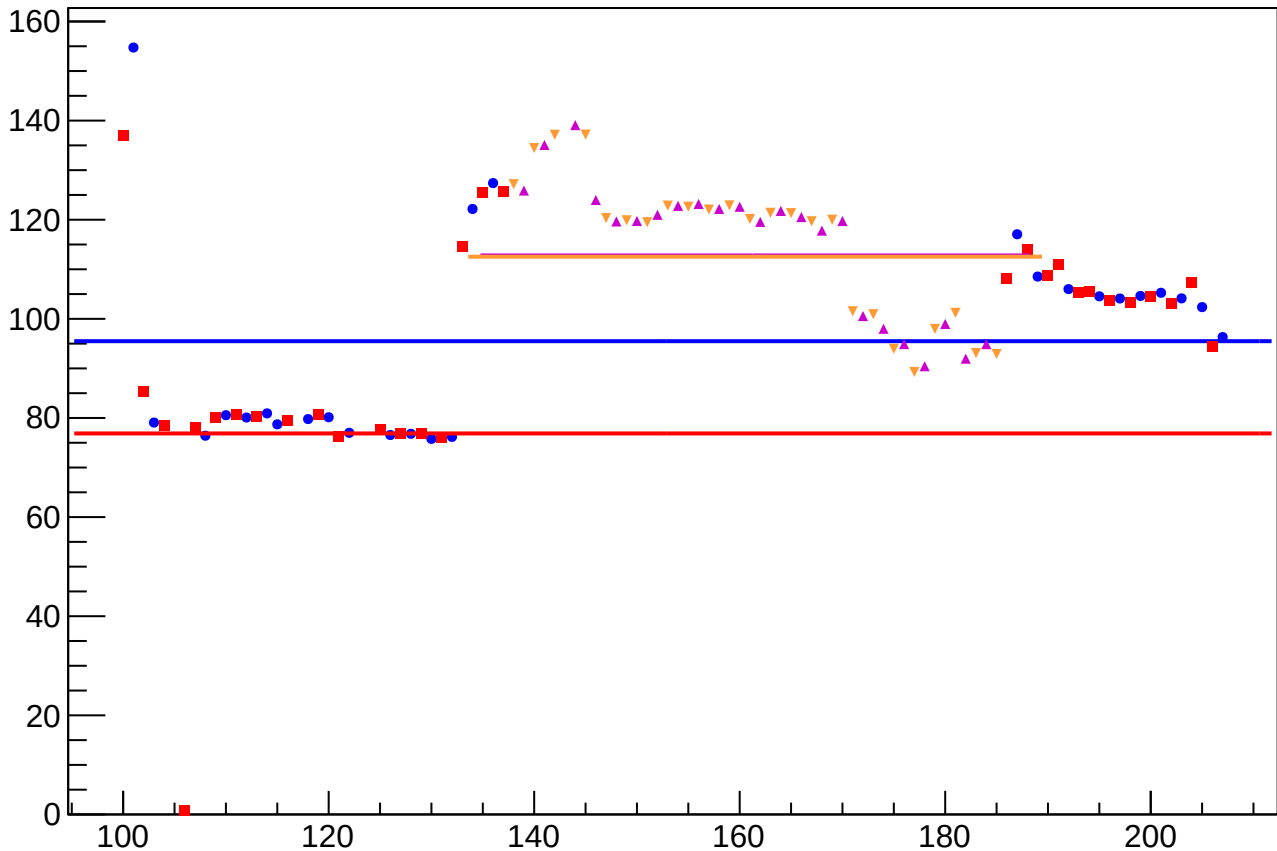
Left In:  $-61.172 \pm 0.757$   $\chi^2/\text{NDF}$ : 316.9/22

+ sign  $-51.967 \pm 0.566$   $\chi^2/\text{NDF}$ : 1398.4/49

All:  $-50.973 \pm 0.397$   $\chi^2/\text{NDF}$ : 2816.8/102

- sign  $-50.010 \pm 0.558$   $\chi^2/\text{NDF}$ : 1412.3/52

# reg\_asym\_usl\_atl2\_dd\_diff\_bpm12X\_slope vs Slug



Right In: 95.494+/-0.047  $\chi^2/\text{NDF}$ : 182638.9/25

Left Out: 112.539+/-0.035  $\chi^2/\text{NDF}$ : 174512.4/23

Right Out: 76.878+/-0.041  $\chi^2/\text{NDF}$ : 883161.0/29

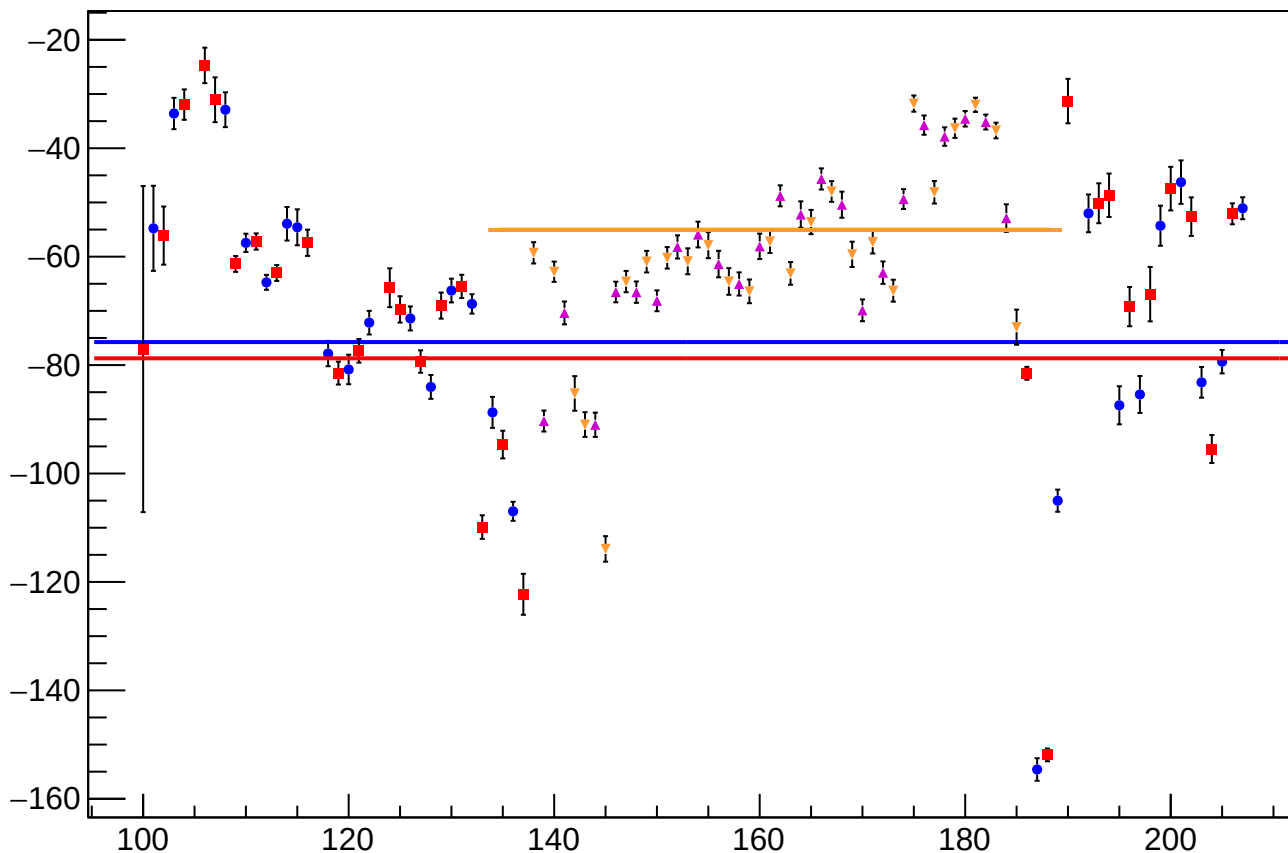
Left In: 112.795+/-0.034  $\chi^2/\text{NDF}$ : 171662.8/22

+ sign 106.606+/-0.028  $\chi^2/\text{NDF}$ : 441701.9/49

All: 102.003+/-0.019  $\chi^2/\text{NDF}$ : 1998994.7/102

- sign 97.905+/-0.026  $\chi^2/\text{NDF}$ : 1505913.0/52

# reg\_asym\_usr\_atr1\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-75.754 \pm 0.464$   $\chi^2/\text{NDF}$ : 3019.5/25

Left Out:  $-55.077 \pm 0.401$   $\chi^2/\text{NDF}$ : 2002.8/24

Right Out:  $-78.754 \pm 0.411$   $\chi^2/\text{NDF}$ : 6163.0/29

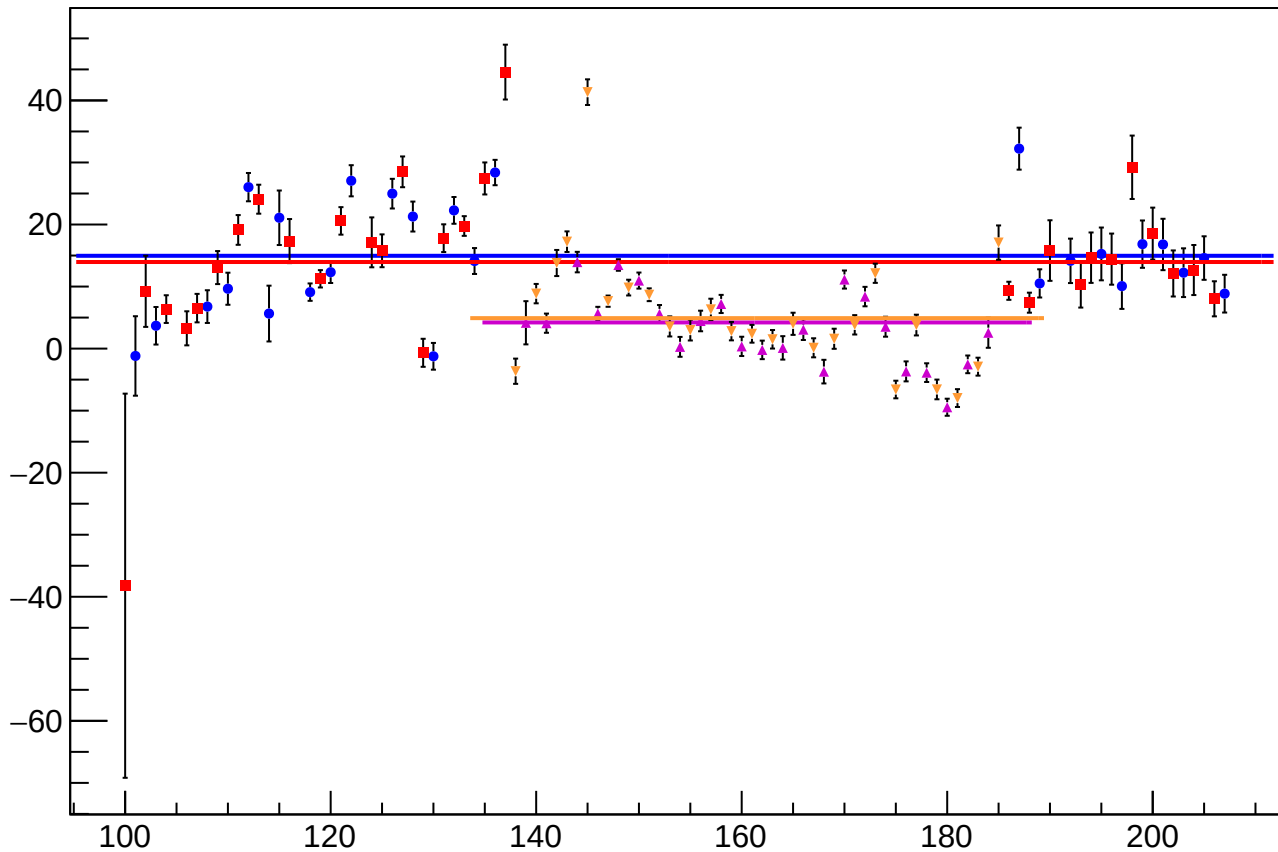
Left In:  $-55.050 \pm 0.410$   $\chi^2/\text{NDF}$ : 1541.8/22

+ sign  $-63.914 \pm 0.303$   $\chi^2/\text{NDF}$ : 6161.1/50

All:  $-65.456 \pm 0.210$   $\chi^2/\text{NDF}$ : 15579.1/103

- sign  $-66.874 \pm 0.291$   $\chi^2/\text{NDF}$ : 9368.3/52

# reg\_asym\_usr\_atr1\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $14.959 \pm 0.511$   $\chi^2/\text{NDF}: 279.2/25$

Left Out:  $4.910 \pm 0.301$   $\chi^2/\text{NDF}: 741.5/24$

Right Out:  $13.957 \pm 0.464$   $\chi^2/\text{NDF}: 289.5/29$

Left In:  $4.215 \pm 0.312$   $\chi^2/\text{NDF}: 415.1/22$

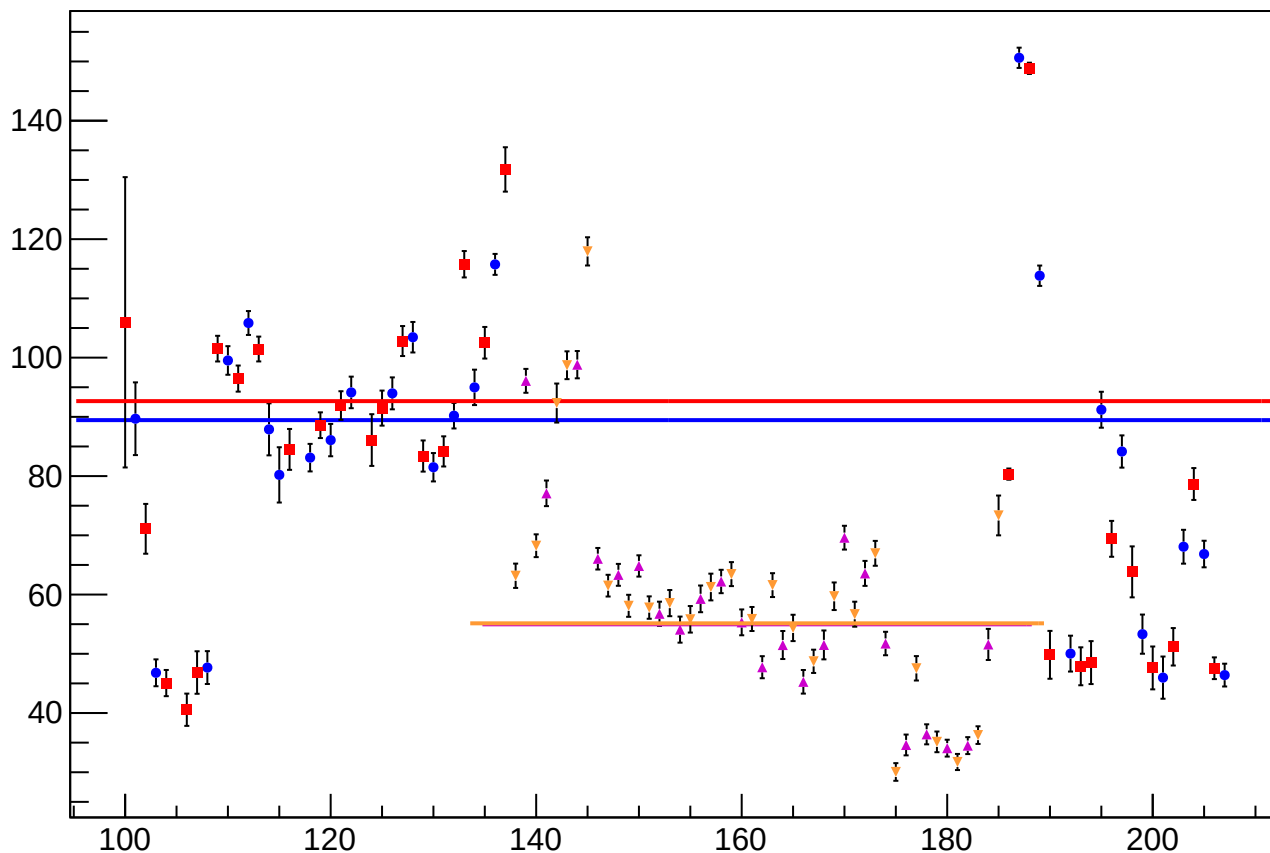
+ sign  $7.505 \pm 0.260$   $\chi^2/\text{NDF}: 1307.8/50$

All:  $7.380 \pm 0.183$   $\chi^2/\text{NDF}: 2316.5/103$

- sign  $7.256 \pm 0.259$   $\chi^2/\text{NDF}: 1008.2/52$



reg\_asym\_usr\_atr1\_avg\_diff\_bpm4eX\_slope vs Slug



Right In: 89.448 $\pm$ 0.486  $\chi^2$ /NDF: 3529.0/25

Left Out: 55.142 $\pm$ 0.397  $\chi^2$ /NDF:2242.4/24

Right Out: 92.657 $\pm$ 0.413  $\chi^2$ /NDF: 6532.9/29

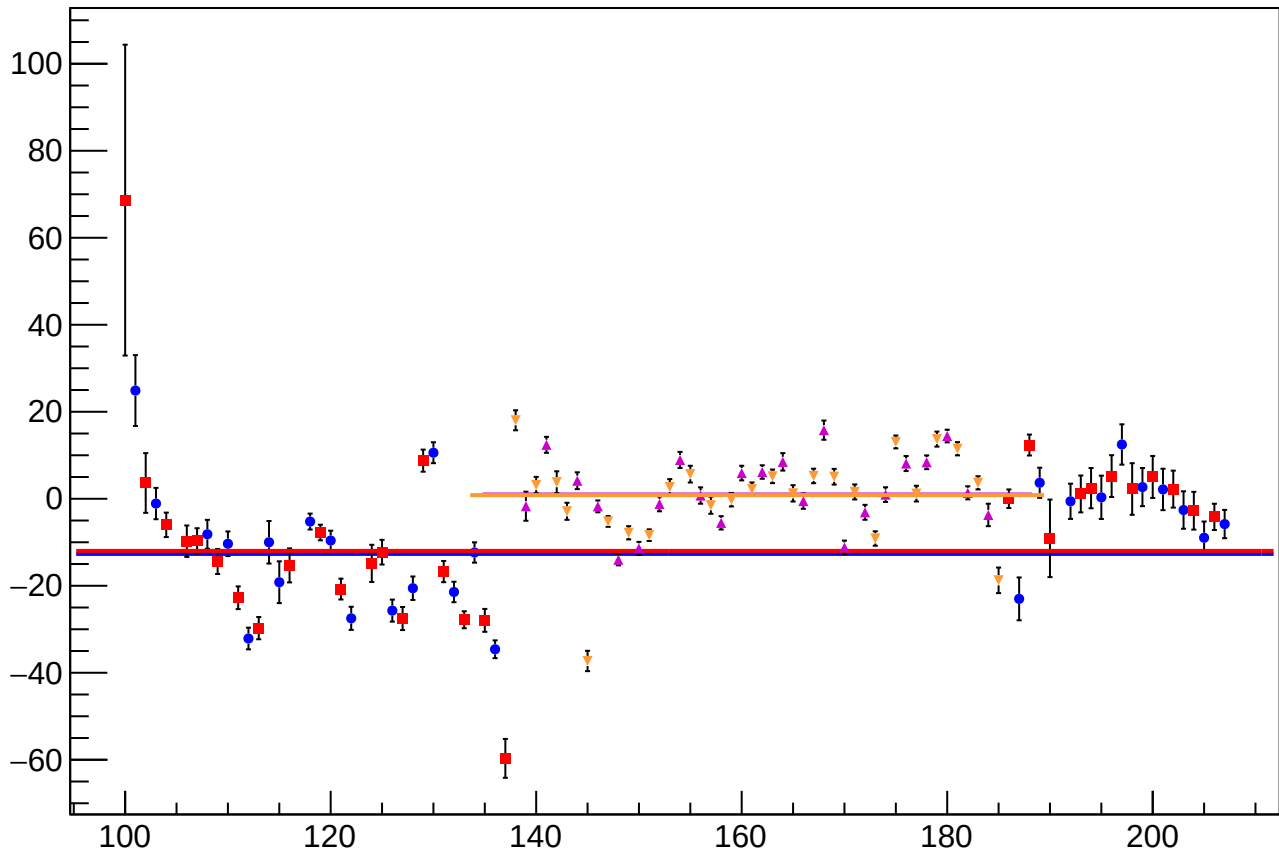
Left In: 54.972 $\pm$ 0.406  $\chi^2$ /NDF:1780.5/22

+ sign 68.863 $\pm$ 0.307  $\chi^2$ /NDF: 8759.3/50

All: 71.308 $\pm$ 0.211  $\chi^2$ /NDF: 21430.6/103

- sign 73.474 $\pm$ 0.289  $\chi^2$ /NDF: 12552.1/52

reg\_asym\_usr\_atr1\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $-12.673 \pm 0.593$   $\chi^2/\text{NDF}$ : 508.7/25

Left Out:  $0.840 \pm 0.343$   $\chi^2/\text{NDF}$ : 717.2/24

Right Out:  $-11.983 \pm 0.554$   $\chi^2/\text{NDF}$ : 629.7/29

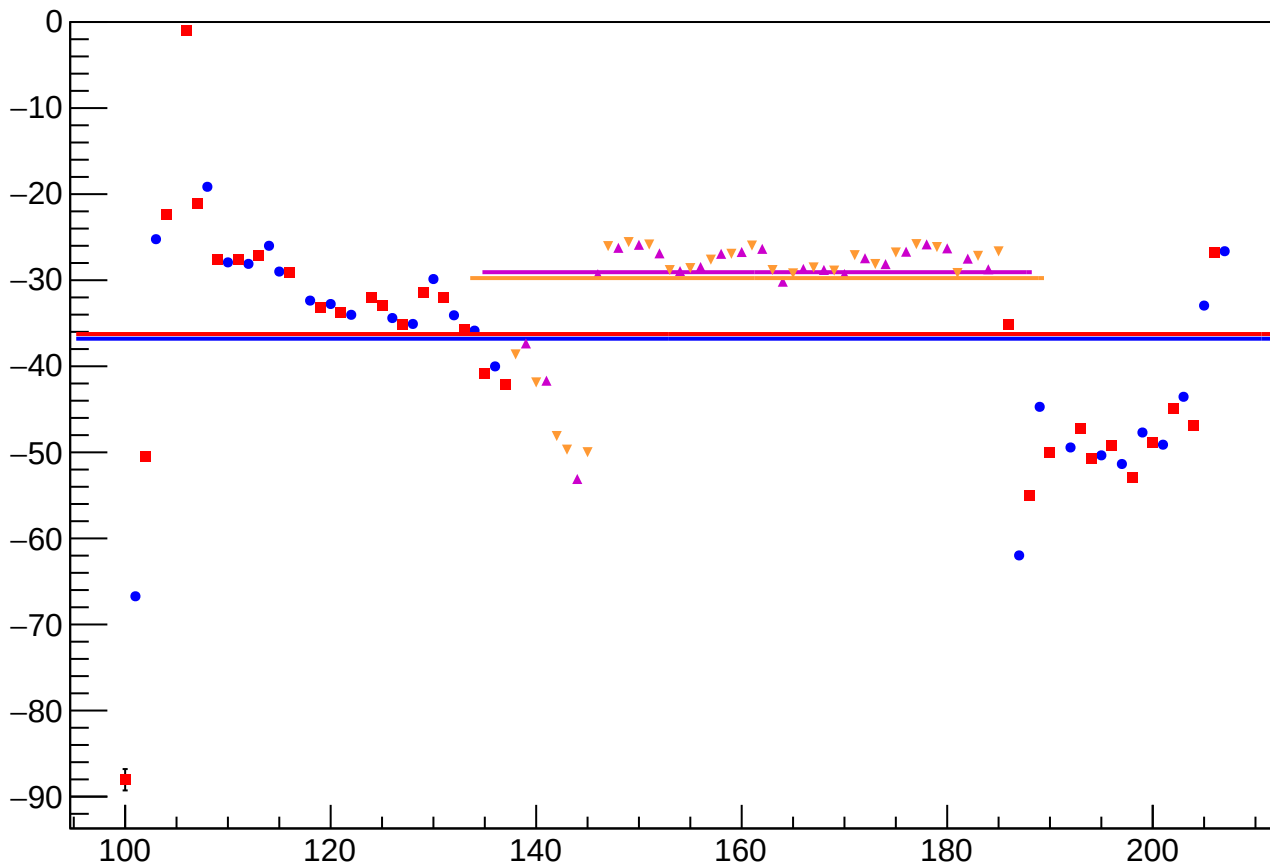
Left In:  $0.980 \pm 0.353$   $\chi^2/\text{NDF}$ : 558.5/22

+ sign  $-2.549 \pm 0.297$   $\chi^2/\text{NDF}$ : 1615.4/50

All:  $-2.656 \pm 0.210$   $\chi^2/\text{NDF}$ : 3192.6/103

- sign  $-2.764 \pm 0.298$   $\chi^2/\text{NDF}$ : 1576.9/52

reg\_asym\_usr\_atr1\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-36.795 \pm 0.030$   $\chi^2/\text{NDF}: 119096.7/25$

Left Out:  $-29.754 \pm 0.016$   $\chi^2/\text{NDF}: 163552.5/24$

Right Out:  $-36.253 \pm 0.029$   $\chi^2/\text{NDF}: 212593.4/29$

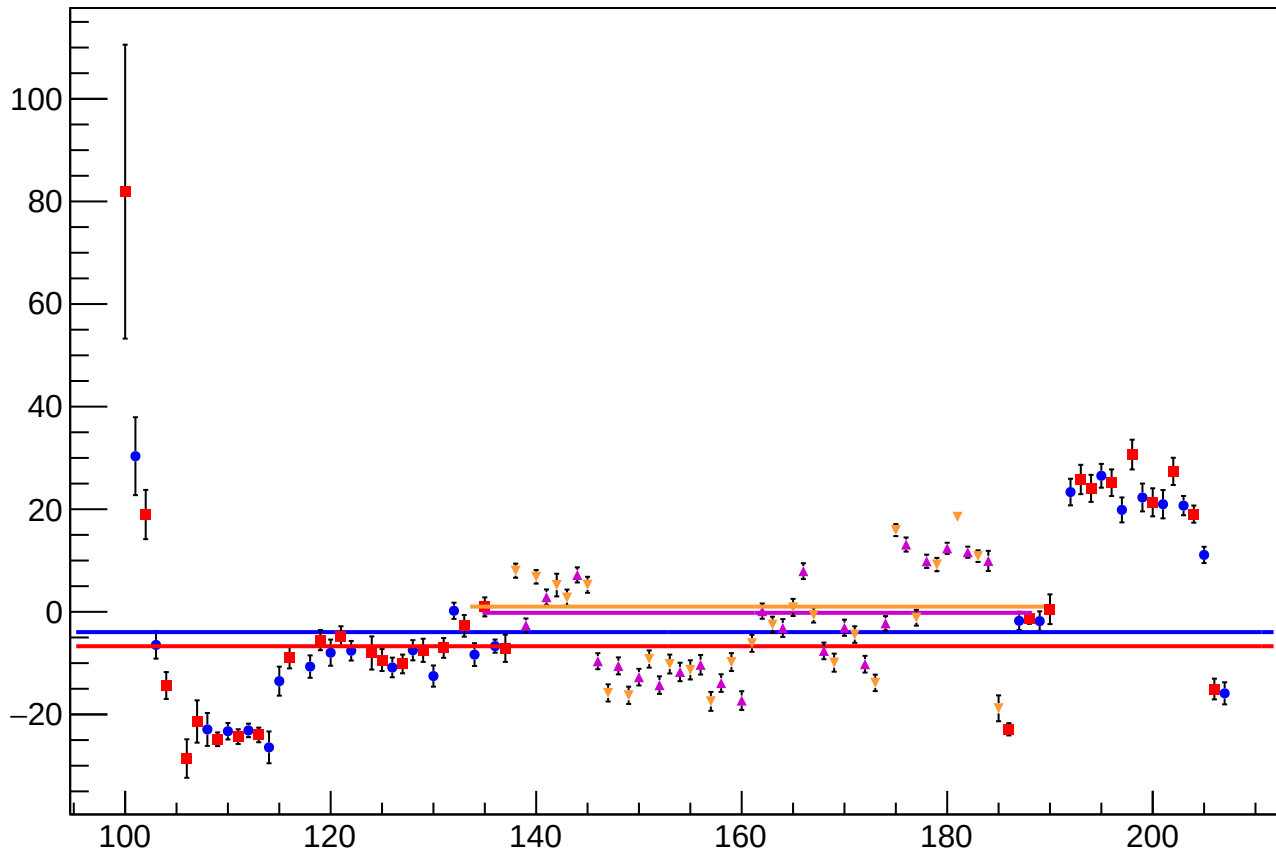
Left In:  $-29.067 \pm 0.016$   $\chi^2/\text{NDF}: 101545.6/22$

+ sign  $-31.273 \pm 0.014$   $\chi^2/\text{NDF}: 326745.2/50$

All:  $-31.004 \pm 0.010$   $\chi^2/\text{NDF}: 689660.4/103$

- sign  $-30.734 \pm 0.014$   $\chi^2/\text{NDF}: 362156.2/52$

# reg\_asym\_usr\_atr1\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-3.955 \pm 0.398$   $\chi^2/\text{NDF}$ : 1387.7/25

Left Out:  $1.015 \pm 0.305$   $\chi^2/\text{NDF}$ : 1335.1/24

Right Out:  $-6.709 \pm 0.364$   $\chi^2/\text{NDF}$ : 1928.0/29

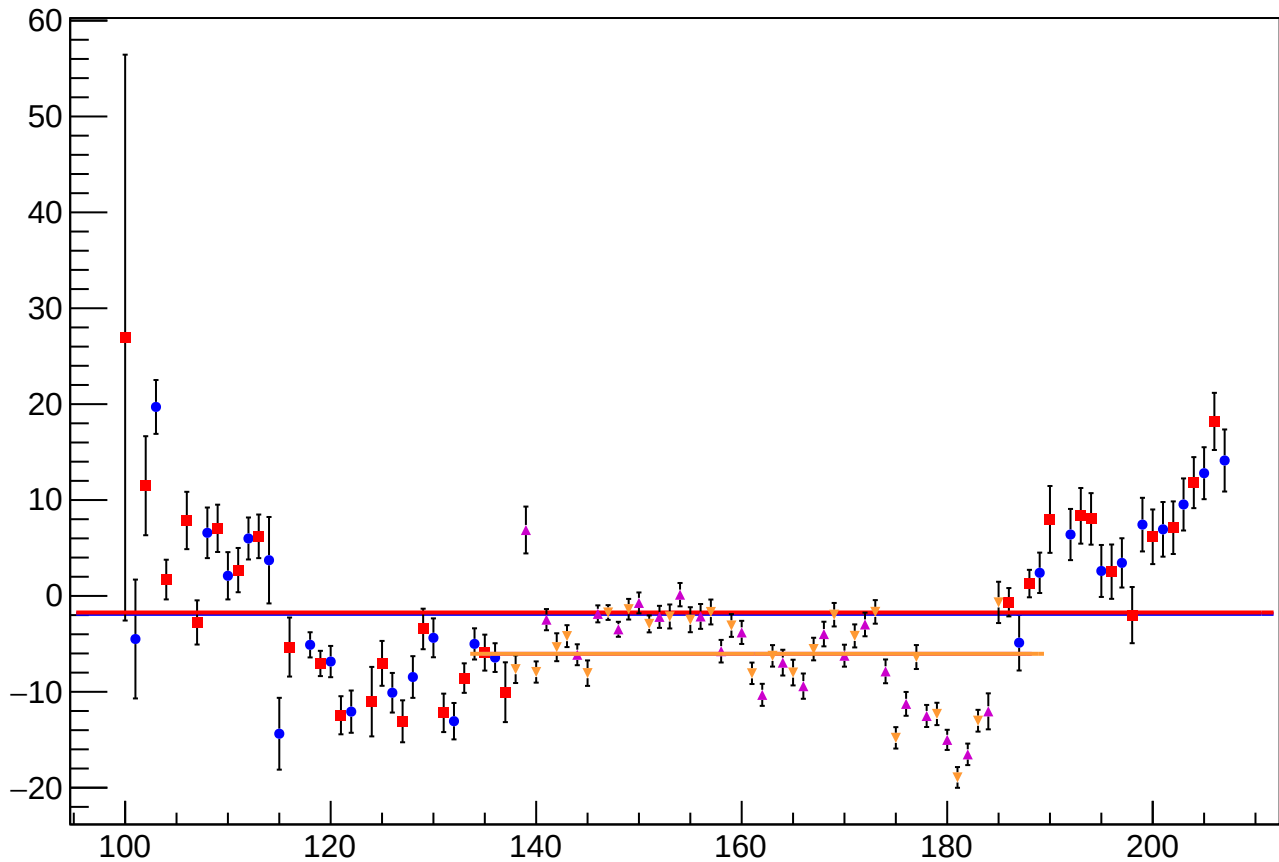
Left In:  $-0.192 \pm 0.315$   $\chi^2/\text{NDF}$ : 982.8/22

+ sign  $-0.822 \pm 0.242$   $\chi^2/\text{NDF}$ : 2821.1/50

All:  $-1.917 \pm 0.170$   $\chi^2/\text{NDF}$ : 5955.5/103

- sign  $-2.976 \pm 0.238$   $\chi^2/\text{NDF}$ : 3094.2/52

reg\_asym\_usr\_atr1\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-1.872 \pm 0.441$   $\chi^2/\text{NDF}$ : 322.6/25

Left Out:  $-6.035 \pm 0.233$   $\chi^2/\text{NDF}$ : 414.9/24

Right Out:  $-1.728 \pm 0.414$   $\chi^2/\text{NDF}$ : 323.4/29

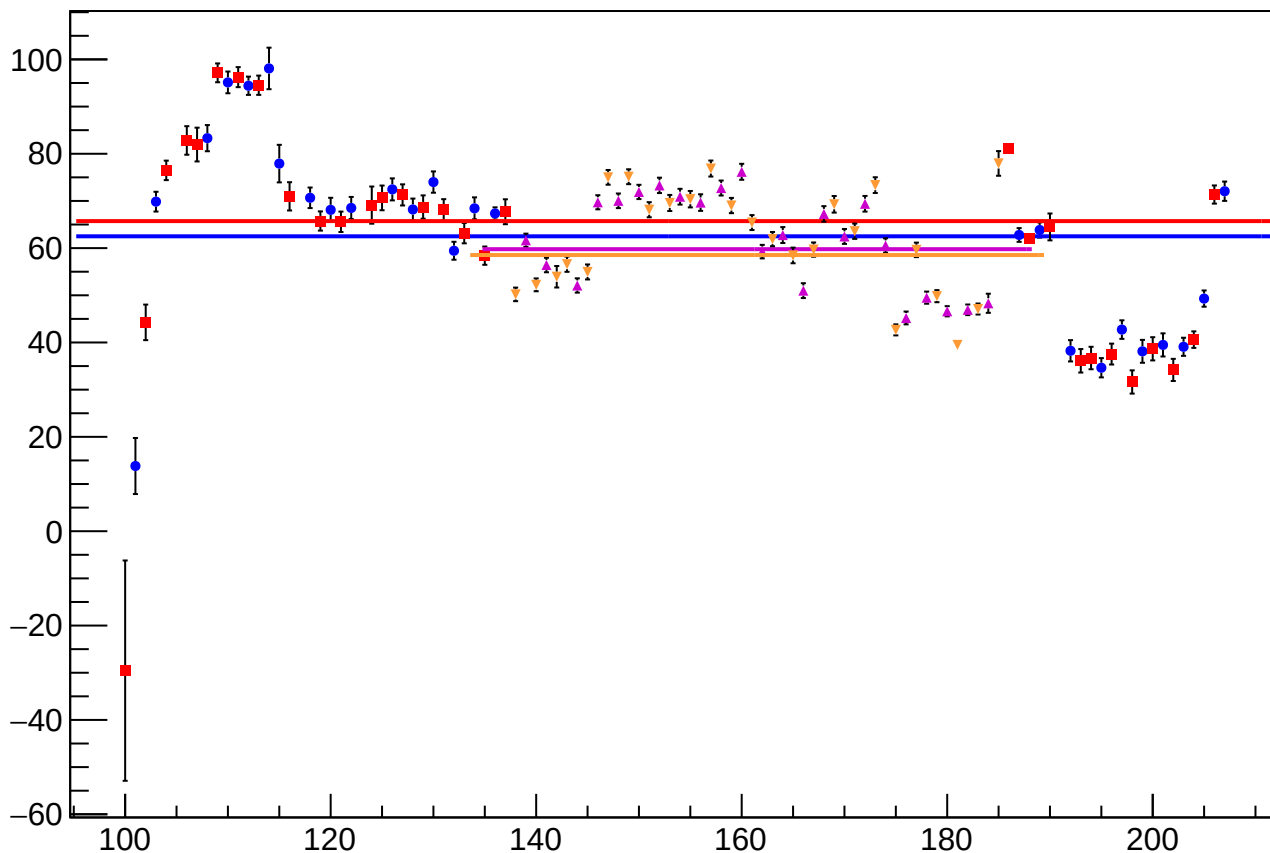
Left In:  $-6.043 \pm 0.243$   $\chi^2/\text{NDF}$ : 396.2/22

+ sign  $-5.126 \pm 0.206$   $\chi^2/\text{NDF}$ : 807.0/50

All:  $-5.034 \pm 0.147$   $\chi^2/\text{NDF}$ : 1607.9/103

- sign  $-4.939 \pm 0.209$   $\chi^2/\text{NDF}$ : 800.5/52

# reg\_asym\_usr\_atr1\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $62.504 \pm 0.413$   $\chi^2/\text{NDF}$ : 1608.9/25

Left Out:  $58.535 \pm 0.303$   $\chi^2/\text{NDF}$ : 1449.2/24

Right Out:  $65.728 \pm 0.365$   $\chi^2/\text{NDF}$ : 2251.2/29

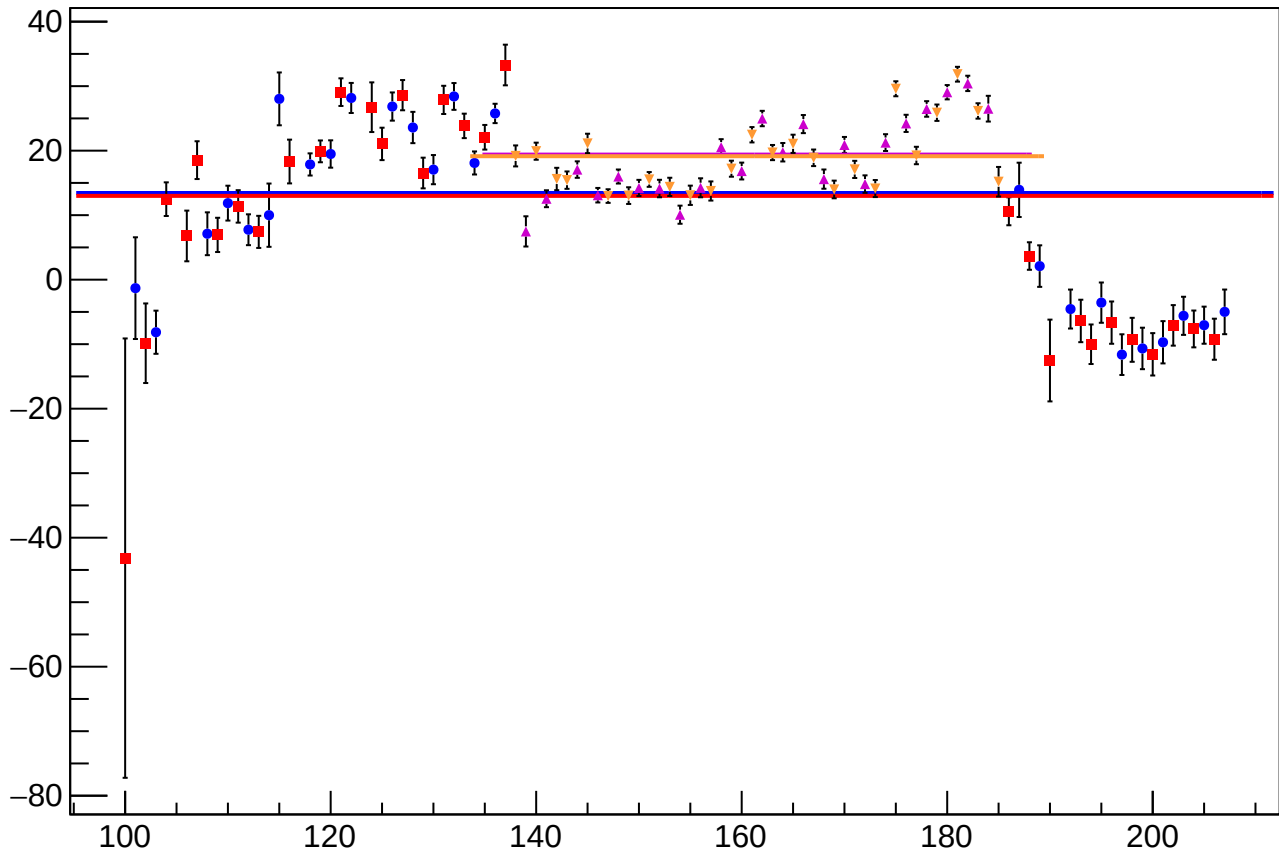
Left In:  $59.777 \pm 0.312$   $\chi^2/\text{NDF}$ : 1070.5/22

+ sign  $59.923 \pm 0.244$   $\chi^2/\text{NDF}$ : 3118.1/50

All:  $61.142 \pm 0.170$   $\chi^2/\text{NDF}$ : 6642.1/103

- sign  $62.289 \pm 0.237$   $\chi^2/\text{NDF}$ : 3475.7/52

reg\_asym\_usr\_atr1\_dd\_diff\_bpm4eY\_slope vs Slug



Right In: 13.436 $\pm$ 0.507  $\chi^2$ /NDF: 674.2/25

Left Out: 19.138 $\pm$ 0.264  $\chi^2$ /NDF: 433.7/24

Right Out: 12.990 $\pm$ 0.490  $\chi^2$ /NDF: 725.6/29

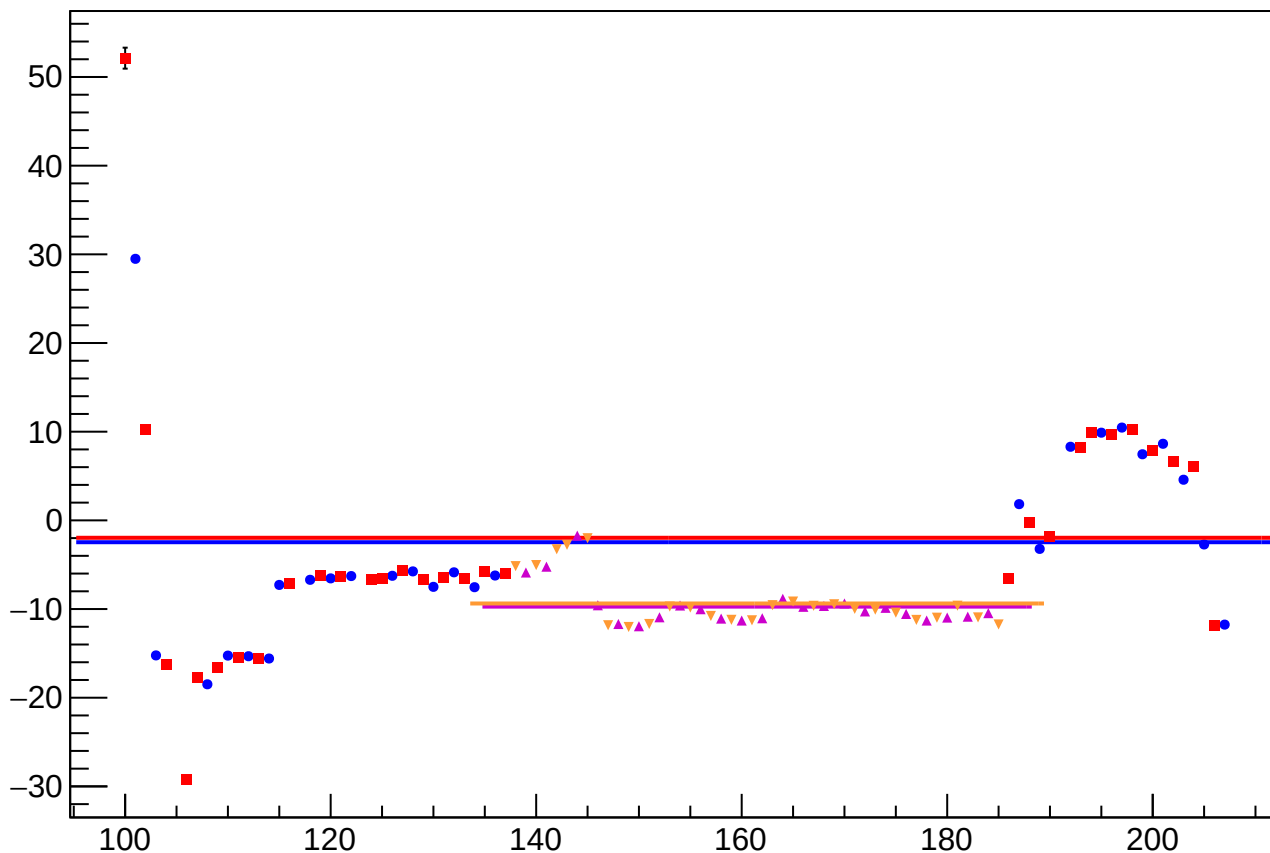
Left In: 19.390 $\pm$ 0.274  $\chi^2$ /NDF: 467.7/22

+ sign 17.921 $\pm$ 0.234  $\chi^2$ /NDF: 1207.5/50

All: 17.895 $\pm$ 0.167  $\chi^2$ /NDF: 2531.0/103

- sign 17.868 $\pm$ 0.239  $\chi^2$ /NDF: 1323.5/52

# reg\_asym\_usr\_atr1\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $-2.464 \pm 0.024$   $\chi^2/\text{NDF}$ : 154576.3/25

Left Out:  $-9.375 \pm 0.012$   $\chi^2/\text{NDF}$ : 49934.3/24

Right Out:  $-1.964 \pm 0.024$   $\chi^2/\text{NDF}$ : 193718.4/29

Left In:  $-9.726 \pm 0.012$   $\chi^2/\text{NDF}$ : 31951.7/22

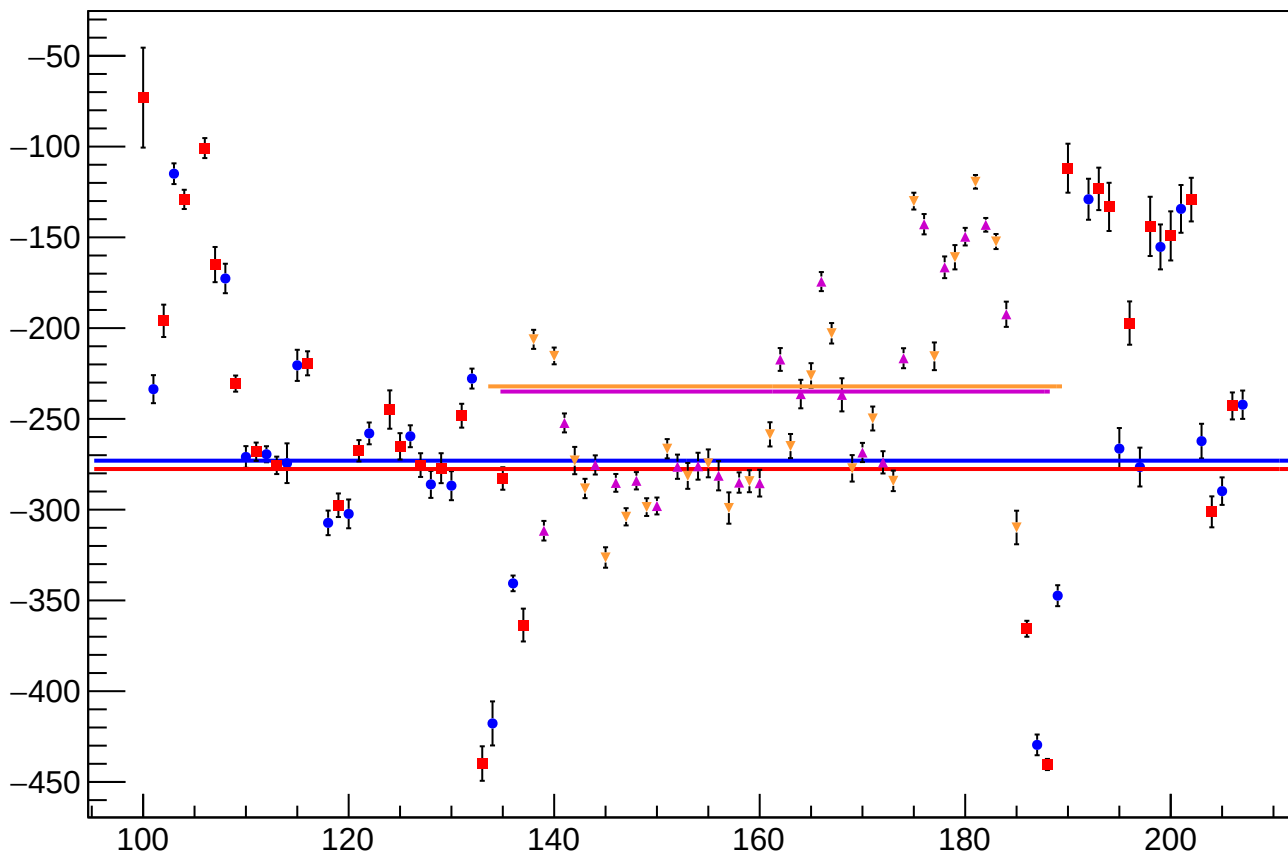
+ sign  $-8.018 \pm 0.011$   $\chi^2/\text{NDF}$ : 270907.0/50

All:  $-8.071 \pm 0.008$   $\chi^2/\text{NDF}$ : 581363.5/103

- sign  $-8.124 \pm 0.011$   $\chi^2/\text{NDF}$ : 310407.6/52



# reg\_asym\_usr\_atr2\_avg\_diff\_bpm1X\_slope vs Slug



Right In: -273.016+/-1.379  $\chi^2$ /NDF: 2800.0/25

Left Out: -232.091+/-1.143  $\chi^2$ /NDF:3269.9/24

Right Out: -277.619+/-1.219  $\chi^2$ /NDF: 6757.9/29

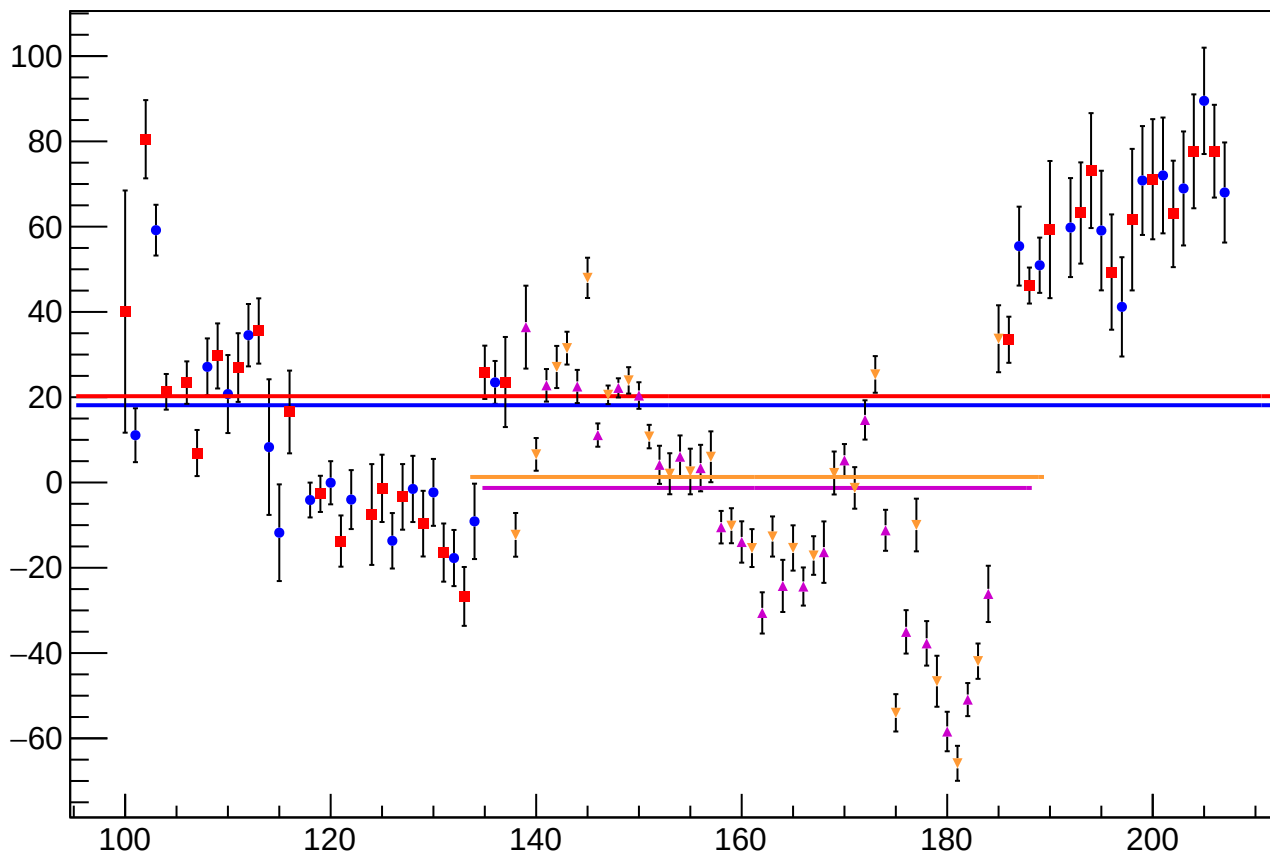
Left In: -234.951+/-1.176  $\chi^2$ /NDF:2470.2/22

+ sign -248.761+/-0.880  $\chi^2$ /NDF: 6592.1/50

All: -252.264+/-0.610  $\chi^2$ /NDF: 16485.1/103

- sign -255.505+/-0.846  $\chi^2$ /NDF: 9862.5/52

reg\_asym\_usr\_atr2\_avg\_diff\_bpm4aY\_slope vs Slug



Right In: 18.121 $\pm$ 1.481  $\chi^2$ /NDF: 358.5/25

Left Out: 1.295 $\pm$ 0.837  $\chi^2$ /NDF:1049.5/24

Right Out: 20.240 $\pm$ 1.332  $\chi^2$ /NDF: 391.5/29

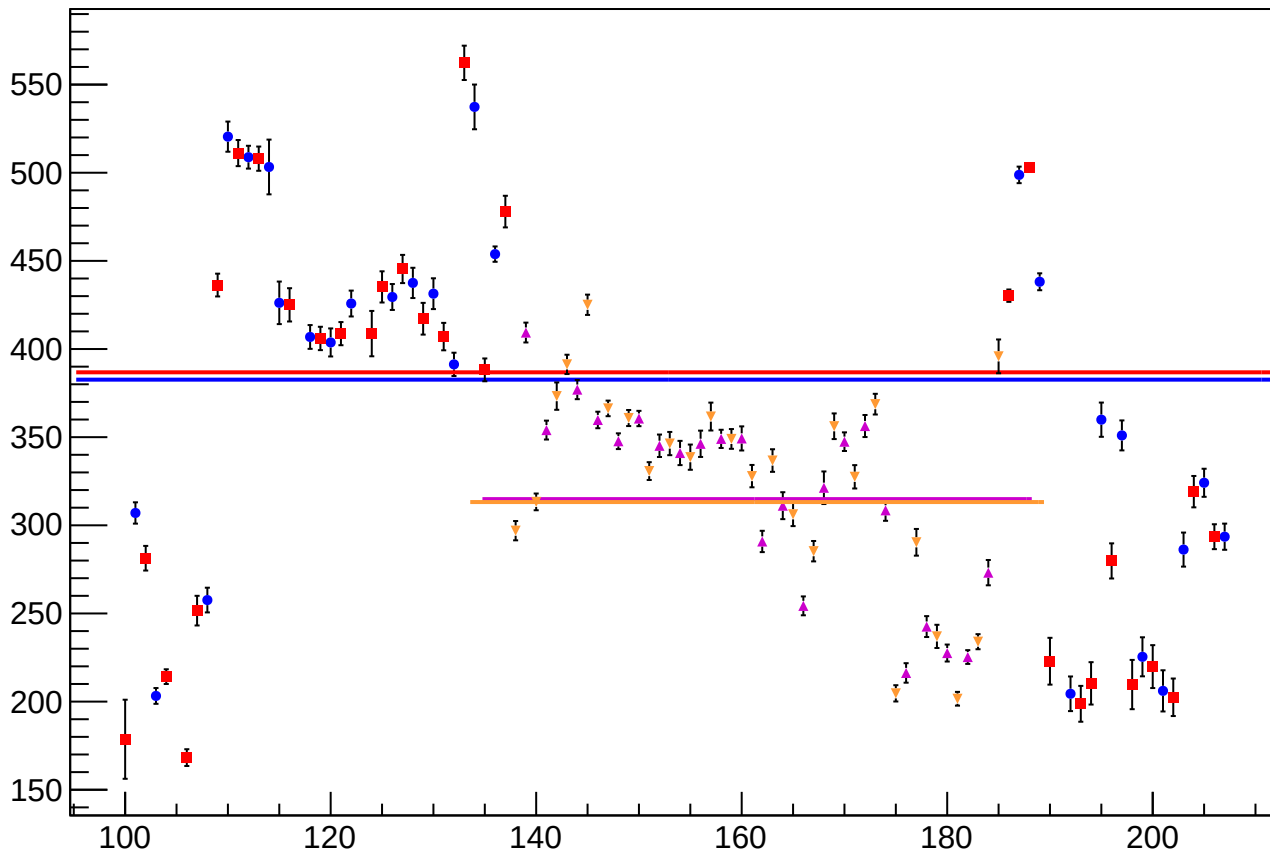
Left In: -1.280 $\pm$ 0.869  $\chi^2$ /NDF:811.2/22

+ sign 5.369 $\pm$ 0.729  $\chi^2$ /NDF: 1505.8/50

All: 5.256 $\pm$ 0.515  $\chi^2$ /NDF: 2891.7/103

- sign 5.144 $\pm$ 0.728  $\chi^2$ /NDF: 1385.8/52

# reg\_asym\_usr\_atr2\_avg\_diff\_bpm4eX\_slope vs Slug



Right In: 382.626 $\pm$ 1.396  $\chi^2$ /NDF: 5199.9/25

Left Out: 313.197 $\pm$ 1.134  $\chi^2$ /NDF:3135.7/24

Right Out: 386.789 $\pm$ 1.194  $\chi^2$ /NDF: 9695.7/29

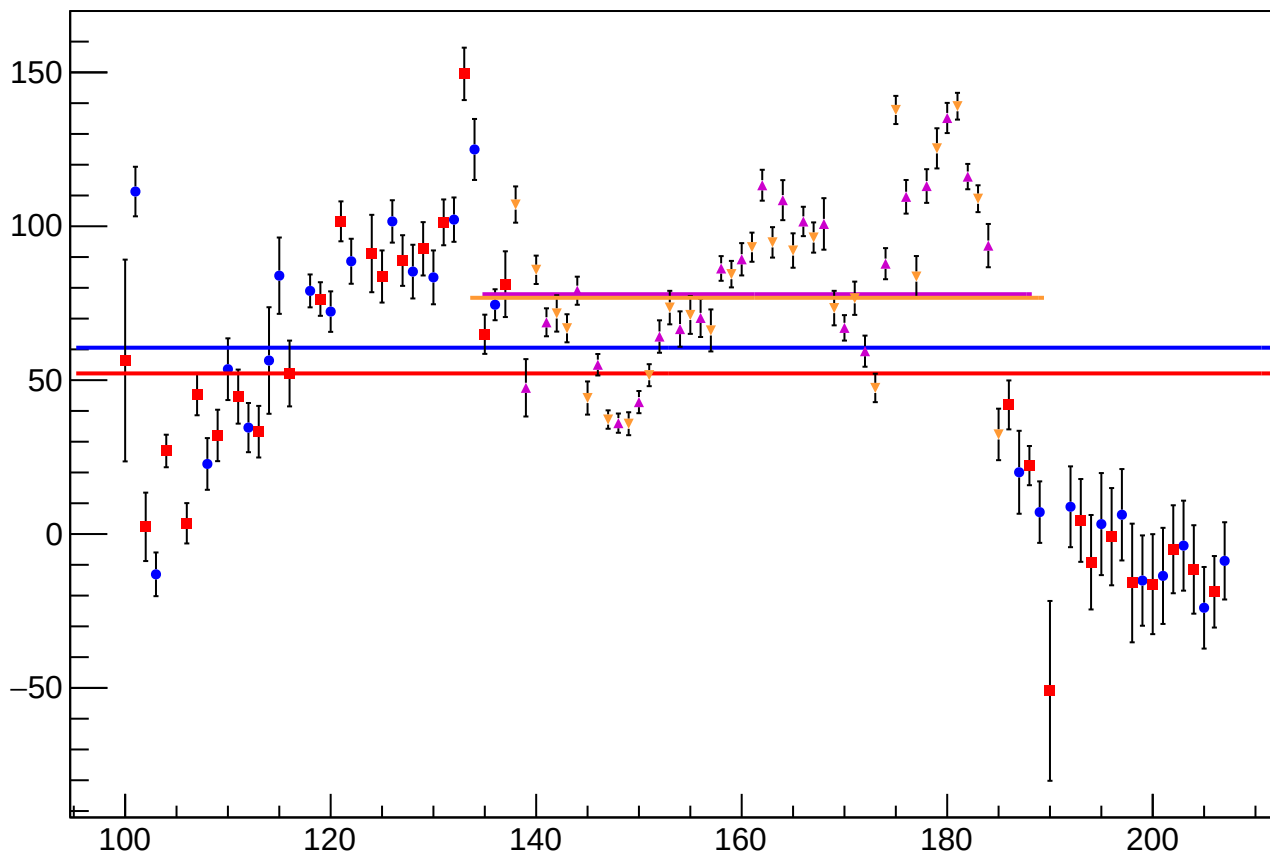
Left In: 314.864 $\pm$ 1.161  $\chi^2$ /NDF:2429.0/22

+ sign 340.804 $\pm$ 0.880  $\chi^2$ /NDF: 9826.3/50

All: 345.565 $\pm$ 0.605  $\chi^2$ /NDF: 23870.9/103

- sign 349.826 $\pm$ 0.833  $\chi^2$ /NDF: 13989.2/52

reg\_asym\_usr\_atr2\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $60.545 \pm 1.733$   $\chi^2/\text{NDF}: 563.6/25$

Left Out:  $76.758 \pm 0.967$   $\chi^2/\text{NDF}: 1035.3/24$

Right Out:  $52.187 \pm 1.602$   $\chi^2/\text{NDF}: 618.2/29$

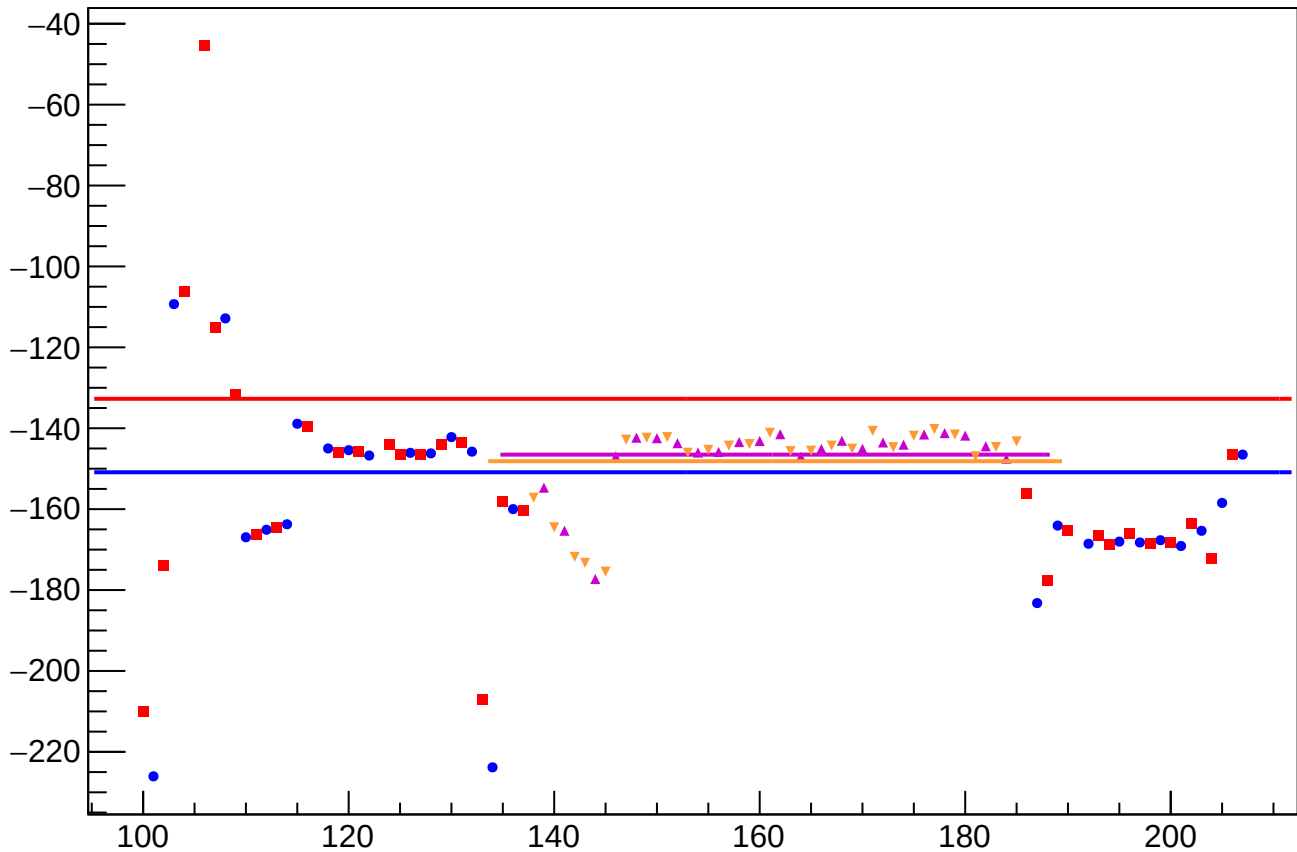
Left In:  $77.923 \pm 0.997$   $\chi^2/\text{NDF}: 783.8/22$

+ sign  $72.912 \pm 0.844$   $\chi^2/\text{NDF}: 1665.7/50$

All:  $71.829 \pm 0.598$   $\chi^2/\text{NDF}: 3257.1/103$

- sign  $70.742 \pm 0.846$   $\chi^2/\text{NDF}: 1588.1/52$

reg\_asym\_usr\_atr2\_avg\_diff\_bpm12X\_slope vs Slug



Right In: -150.882 $\pm$ 0.083  $\chi^2$ /NDF: 146209.9/25

Left Out: -148.148 $\pm$ 0.045  $\chi^2$ /NDF: 48910.2/24

Right Out: -132.718 $\pm$ 0.076  $\chi^2$ /NDF: 348278.8/29

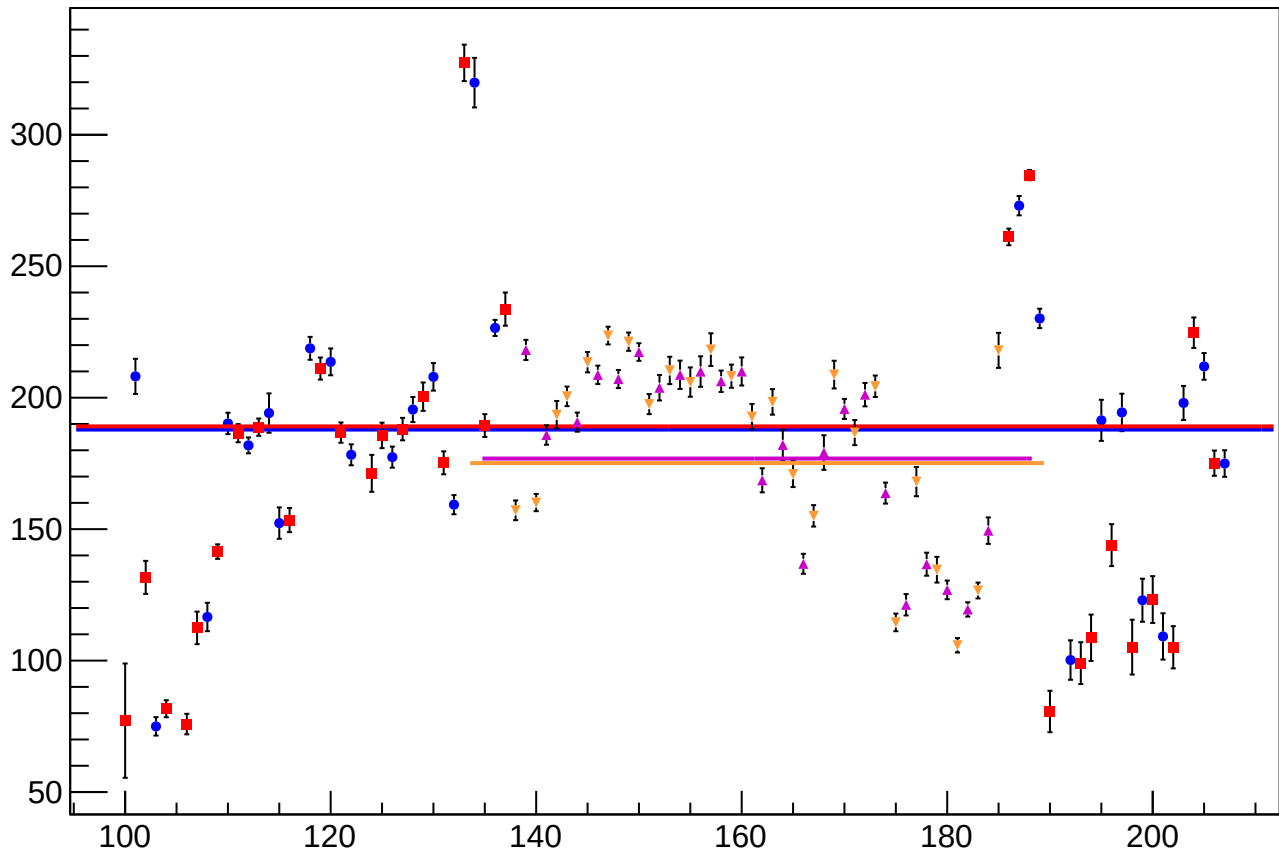
Left In: -146.523 $\pm$ 0.046  $\chi^2$ /NDF: 29172.3/22

+ sign -148.767 $\pm$ 0.040  $\chi^2$ /NDF: 195952.6/50

All: -145.761 $\pm$ 0.028  $\chi^2$ /NDF: 609160.4/103

- sign -142.849 $\pm$ 0.039  $\chi^2$ /NDF: 401892.1/52

# reg\_asym\_usr\_atr2\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $187.881 \pm 0.923$   $\chi^2/\text{NDF}: 2765.4/25$

Left Out:  $175.126 \pm 0.822$   $\chi^2/\text{NDF}: 2295.2/24$

Right Out:  $189.085 \pm 0.807$   $\chi^2/\text{NDF}: 6724.8/29$

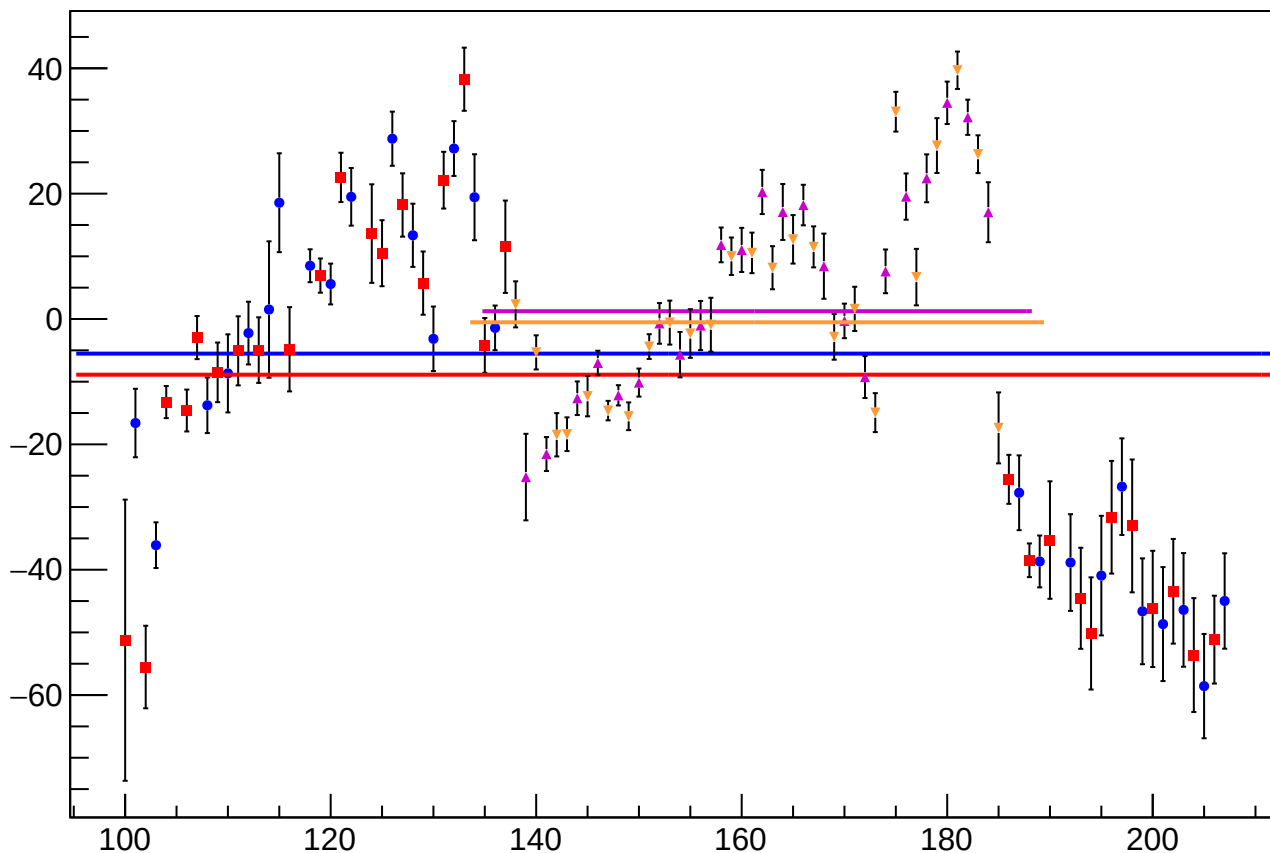
Left In:  $176.862 \pm 0.847$   $\chi^2/\text{NDF}: 1756.1/22$

+ sign  $180.769 \pm 0.614$   $\chi^2/\text{NDF}: 5167.1/50$

All:  $182.082 \pm 0.423$   $\chi^2/\text{NDF}: 13765.9/103$

- sign  $183.270 \pm 0.584$   $\chi^2/\text{NDF}: 8590.1/52$

# reg\_asym\_usr\_atr2\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-5.523 \pm 0.990$   $\chi^2/\text{NDF}: 557.9/25$

Left Out:  $-0.523 \pm 0.601$   $\chi^2/\text{NDF}: 724.5/24$

Right Out:  $-8.886 \pm 0.877$   $\chi^2/\text{NDF}: 657.8/29$

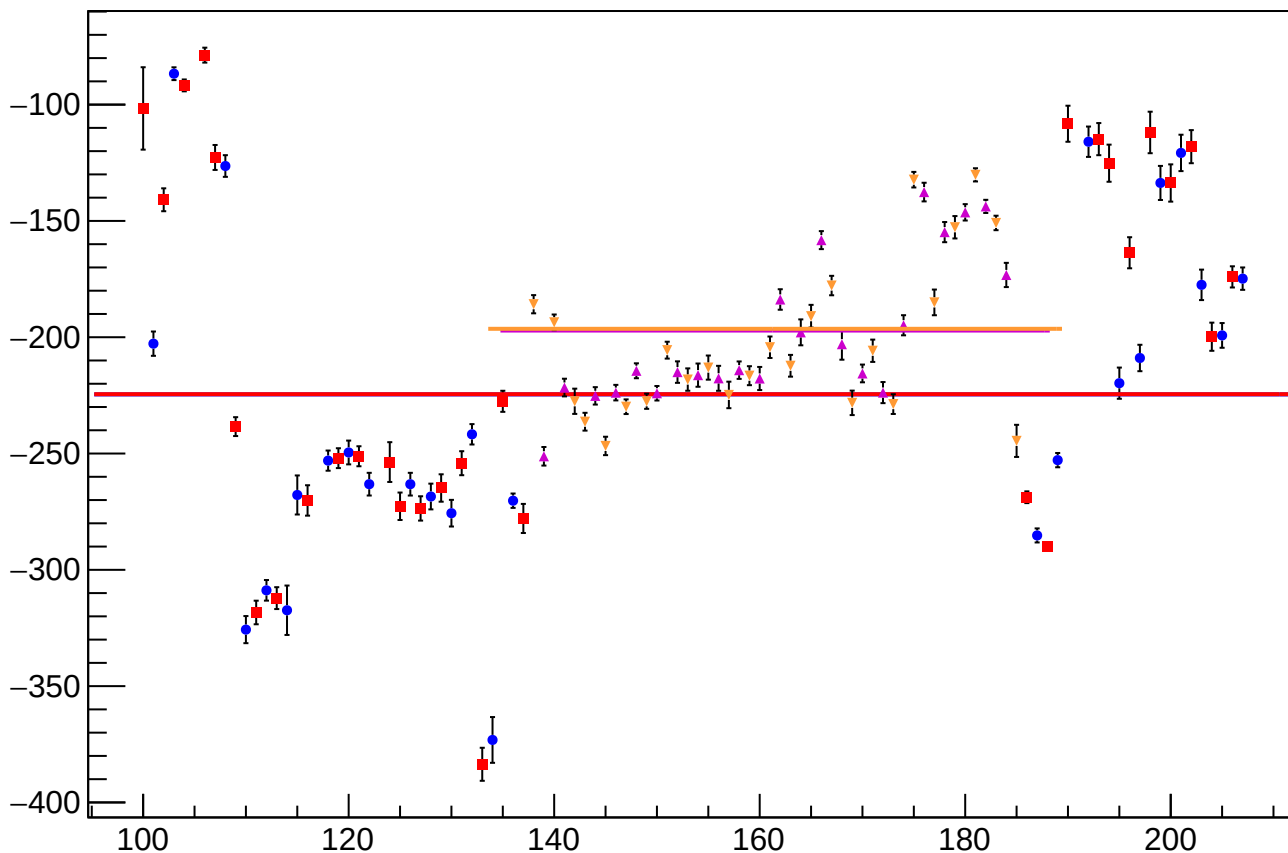
Left In:  $1.244 \pm 0.625$   $\chi^2/\text{NDF}: 620.6/22$

+ sign  $-1.869 \pm 0.514$   $\chi^2/\text{NDF}: 1301.0/50$

All:  $-2.020 \pm 0.362$   $\chi^2/\text{NDF}: 2667.9/103$

- sign  $-2.169 \pm 0.509$   $\chi^2/\text{NDF}: 1366.7/52$

# reg\_asym\_usr\_atr2\_dd\_diff\_bpm4eX\_slope vs Slug



Right In: -224.592+/-0.931  $\chi^2/\text{NDF}$ : 5825.2/25

Left Out: -196.380+/-0.816  $\chi^2/\text{NDF}$ : 1997.7/24

Right Out: -224.492+/-0.787  $\chi^2/\text{NDF}$ : 10552.7/29

Left In: -197.128+/-0.837  $\chi^2/\text{NDF}$ : 1601.5/22

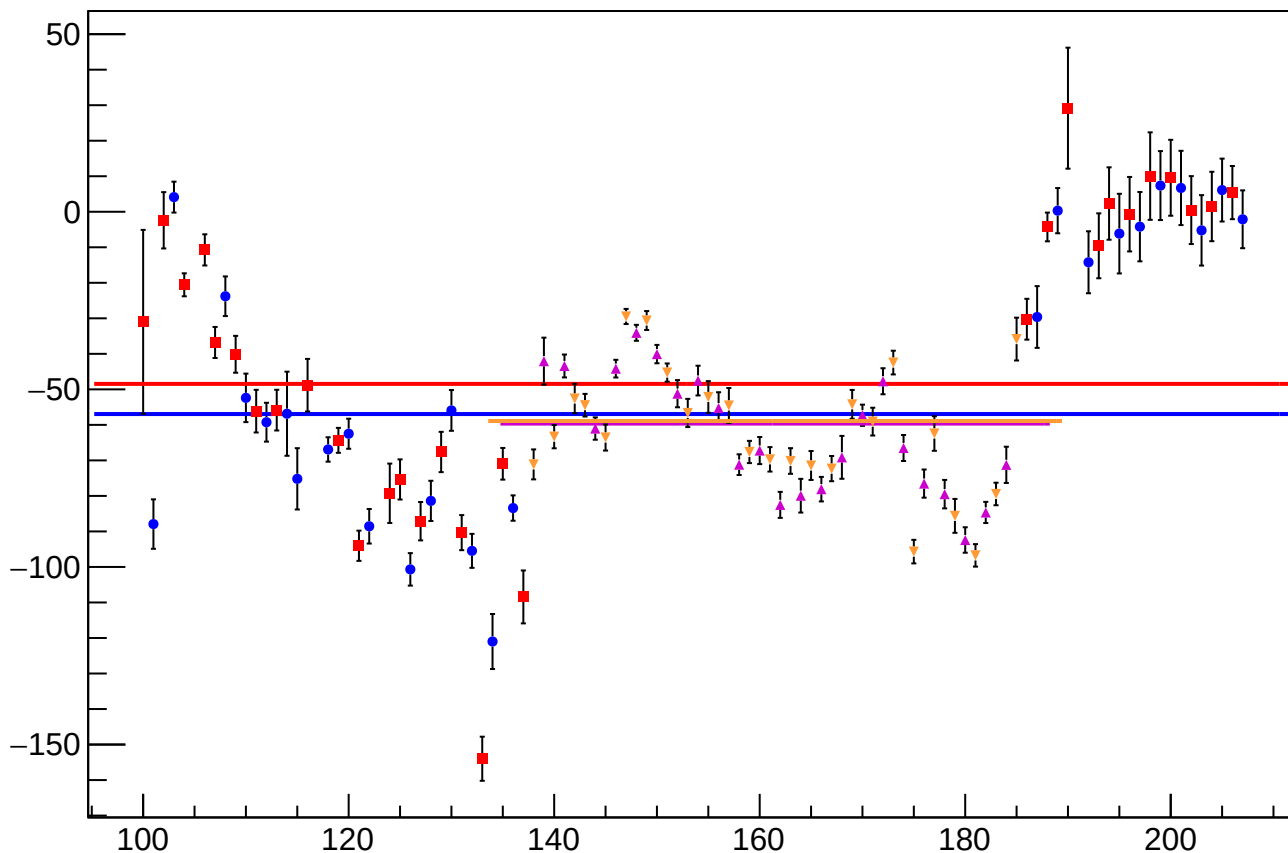
+ sign -208.631+/-0.614  $\chi^2/\text{NDF}$ : 8342.3/50

All: -210.247+/-0.419  $\chi^2/\text{NDF}$ : 21077.2/103

- sign -211.657+/-0.573  $\chi^2/\text{NDF}$ : 12721.9/52



# reg\_asym\_usr\_atr2\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-56.952 \pm 1.163$   $\chi^2/\text{NDF}$ : 976.7/25

Left Out:  $-58.910 \pm 0.695$   $\chi^2/\text{NDF}$ : 782.5/24

Right Out:  $-48.463 \pm 1.058$   $\chi^2/\text{NDF}$ : 1250.5/29

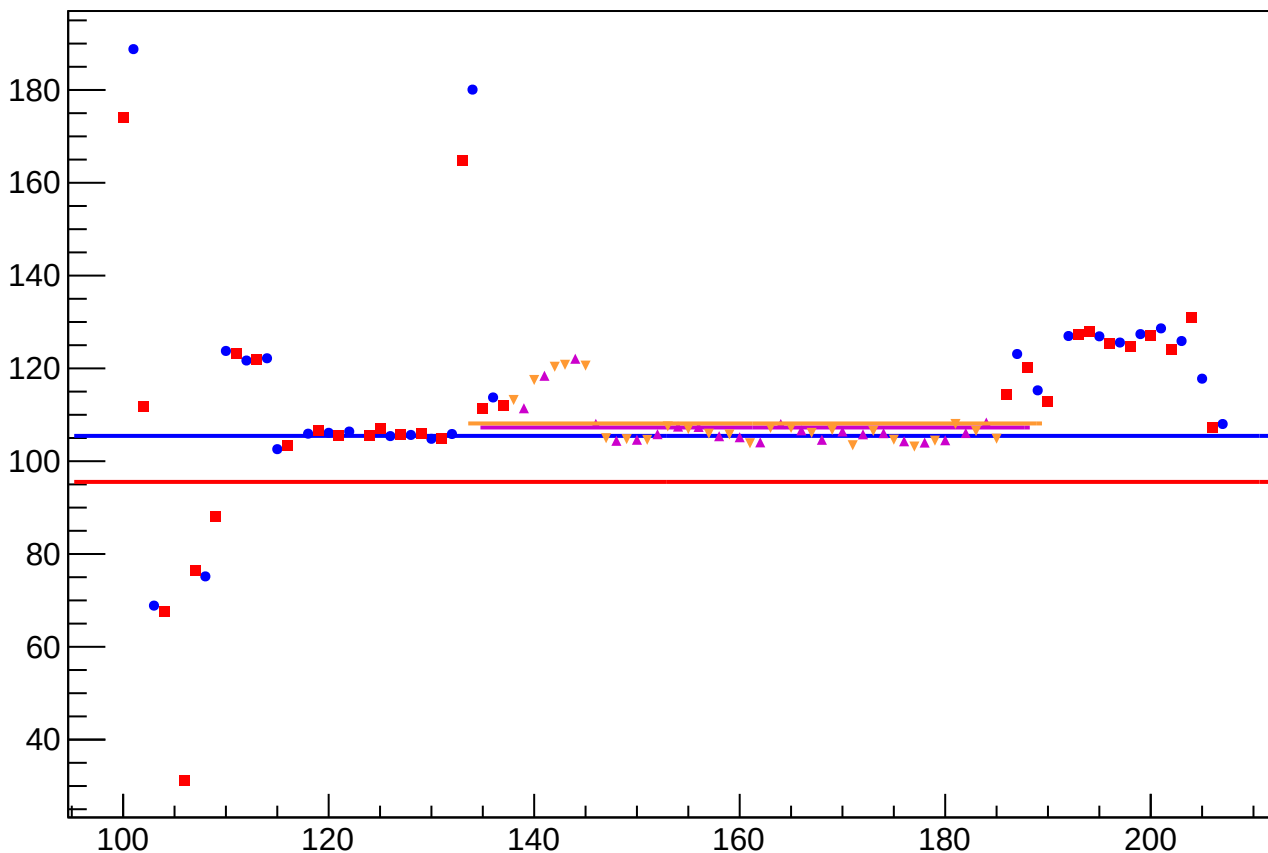
Left In:  $-59.637 \pm 0.718$   $\chi^2/\text{NDF}$ : 597.0/22

+ sign  $-58.395 \pm 0.596$   $\chi^2/\text{NDF}$ : 1761.3/50

All:  $-57.249 \pm 0.421$   $\chi^2/\text{NDF}$ : 3692.5/103

- sign  $-56.112 \pm 0.594$   $\chi^2/\text{NDF}$ : 1923.9/52

# reg\_asym\_usr\_atr2\_dd\_diff\_bpm12X\_slope vs Slug



Right In: 105.454 $\pm$ 0.056  $\chi^2$ /NDF: 272241.0/25

Left Out: 108.136 $\pm$ 0.032  $\chi^2$ /NDF: 26420.1/24

Right Out: 95.538 $\pm$ 0.051  $\chi^2$ /NDF: 387074.8/29

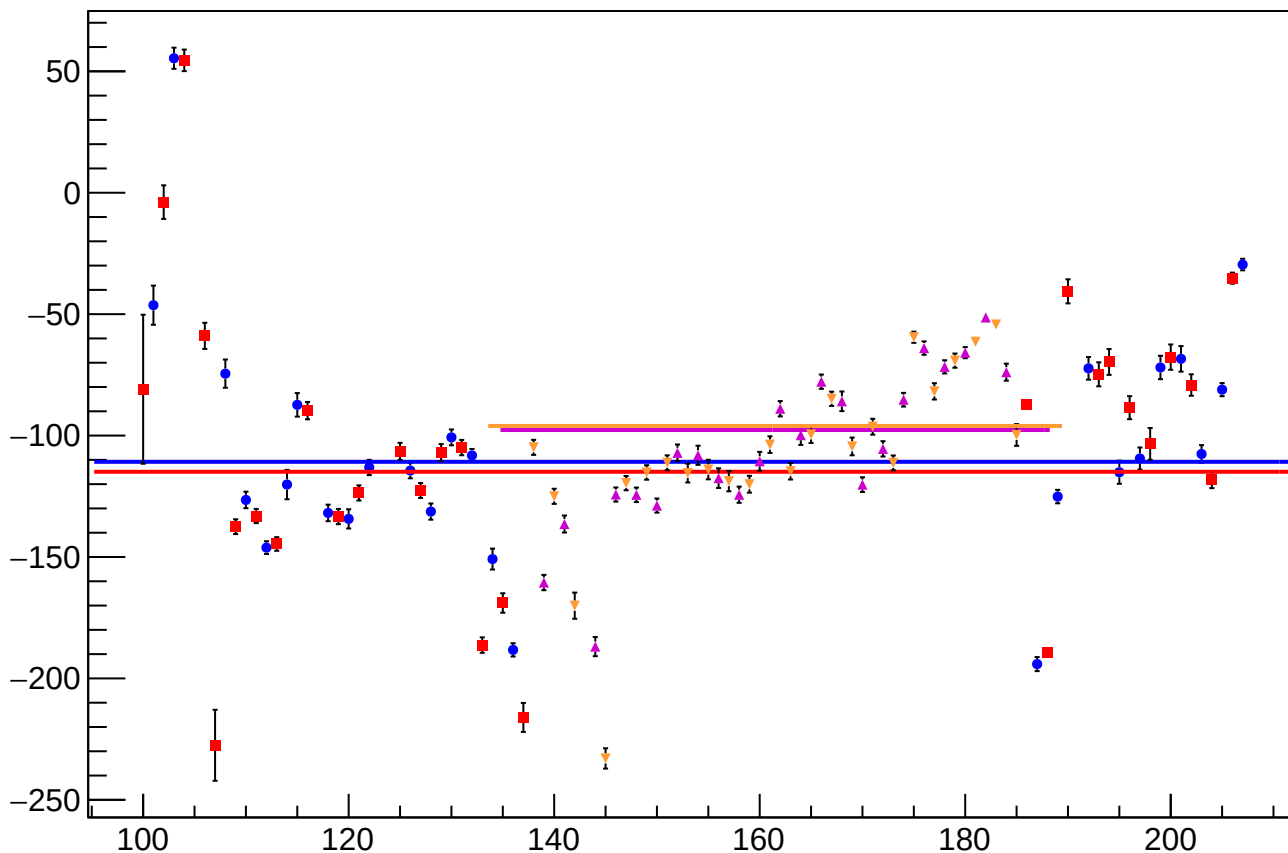
Left In: 107.266 $\pm$ 0.033  $\chi^2$ /NDF: 16879.3/22

+ sign 107.455 $\pm$ 0.028  $\chi^2$ /NDF: 300394.8/50

All: 105.615 $\pm$ 0.020  $\chi^2$ /NDF: 750219.8/103

- sign 103.829 $\pm$ 0.028  $\chi^2$ /NDF: 441333.3/52

reg\_asym\_us\_avg\_at1lr\_avg\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-110.798 \pm 0.687$   $\chi^2/\text{NDF}$ : 5146.3/25

Left Out:  $-96.026 \pm 0.635$   $\chi^2/\text{NDF}$ : 2770.9/23

Right Out:  $-114.900 \pm 0.620$   $\chi^2/\text{NDF}$ : 7311.5/28

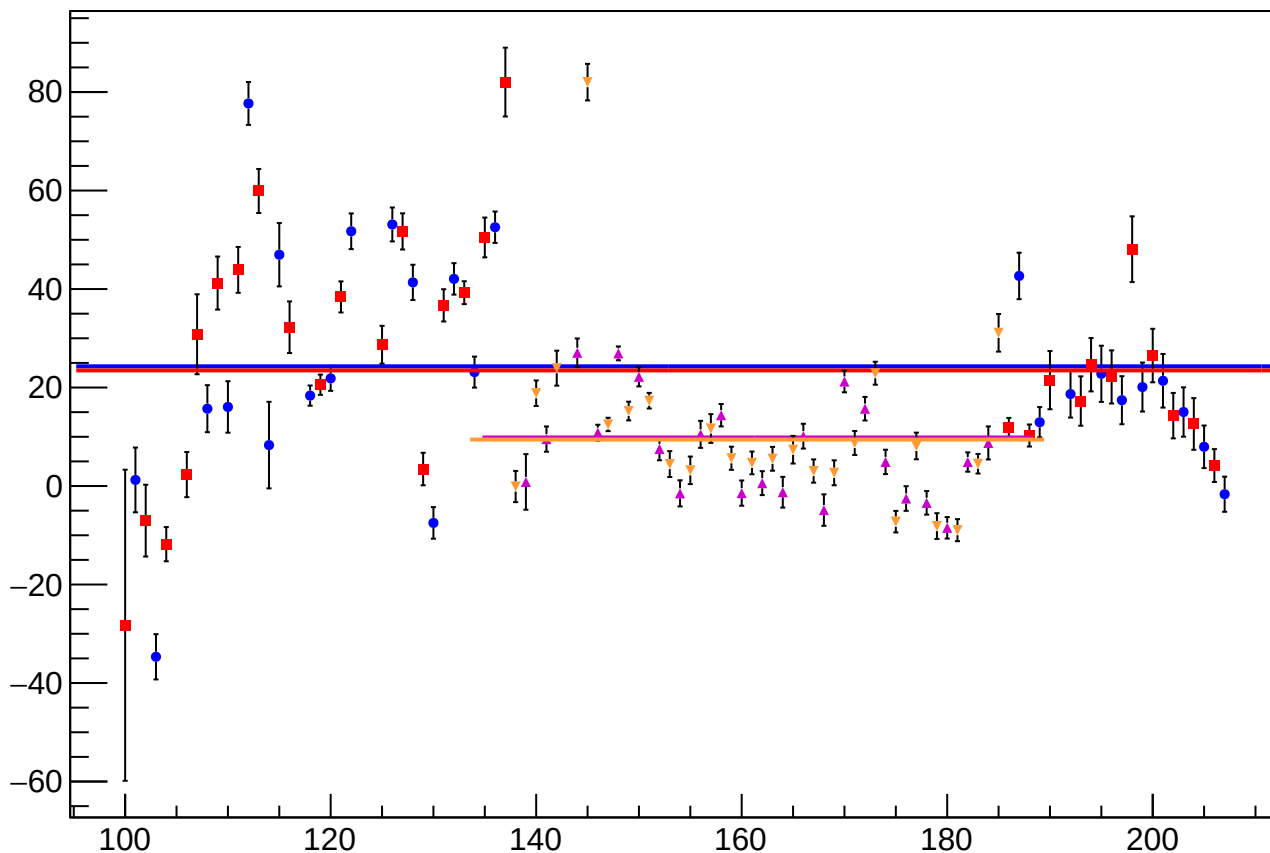
Left In:  $-97.713 \pm 0.639$   $\chi^2/\text{NDF}$ : 2640.9/22

+ sign  $-102.828 \pm 0.466$   $\chi^2/\text{NDF}$ : 8166.5/49

All:  $-104.782 \pm 0.322$   $\chi^2/\text{NDF}$ : 18525.3/101

- sign  $-106.559 \pm 0.445$   $\chi^2/\text{NDF}$ : 10325.2/51

reg\_asym\_us\_avg\_at1lr\_avg\_avg\_diff\_bpm4aY\_slope vs Slug



Right In: 24.310 $\pm$ 0.749  $\chi^2$ /NDF: 819.7/25

Left Out: 9.438 $\pm$ 0.478  $\chi^2$ /NDF: 736.4/23

Right Out: 23.479 $\pm$ 0.695  $\chi^2$ /NDF: 669.3/28

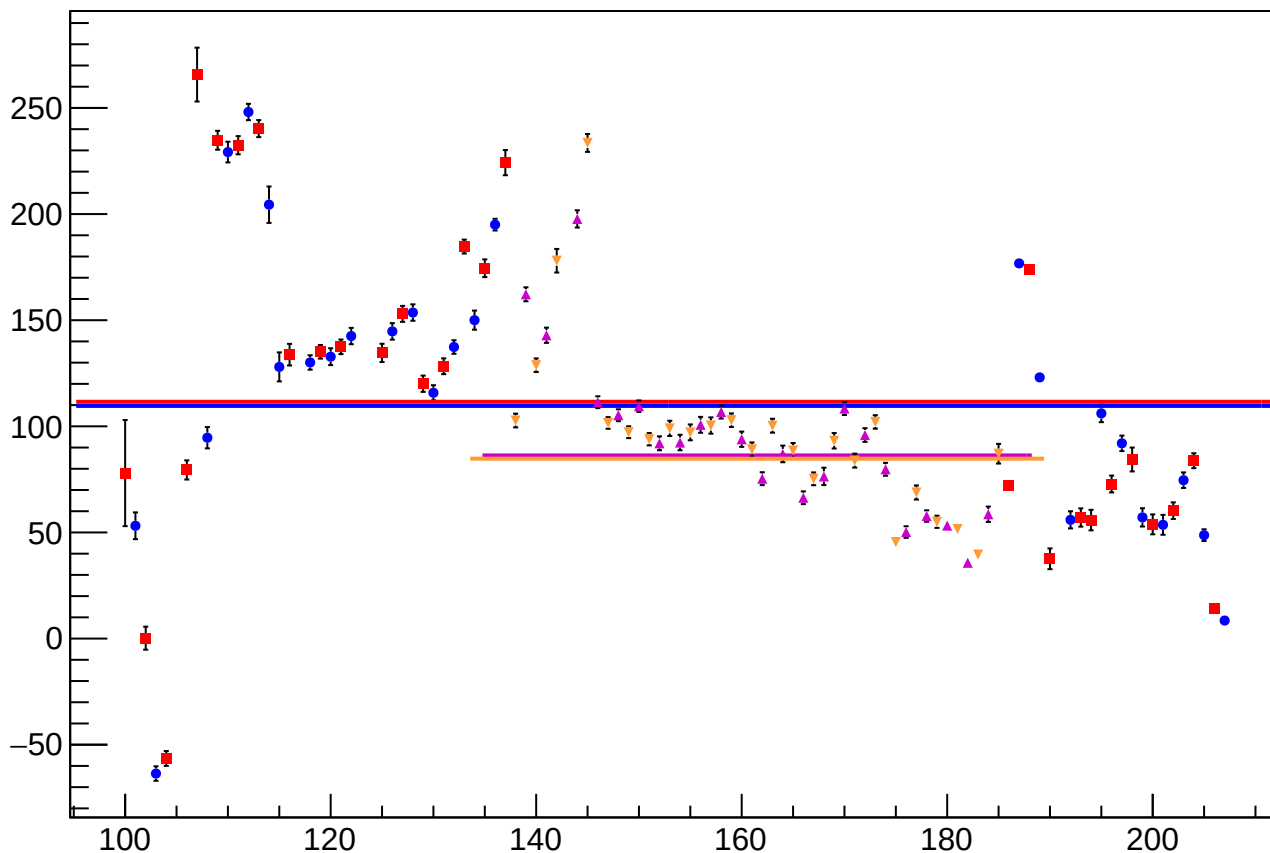
Left In: 9.864 $\pm$ 0.487  $\chi^2$ /NDF: 485.4/22

+ sign 13.740 $\pm$ 0.403  $\chi^2$ /NDF: 1836.1/49

All: 14.045 $\pm$ 0.283  $\chi^2$ /NDF: 3249.4/101

- sign 14.343 $\pm$ 0.399  $\chi^2$ /NDF: 1412.2/51

reg\_asym\_us\_avg\_at1lr\_avg\_avg\_diff\_bpm4eX\_slope vs Slug



Right In: 109.621 $\pm$ 0.698  $\chi^2$ /NDF: 10056.7/25

Left Out: 84.759 $\pm$ 0.629  $\chi^2$ /NDF:3110.5/23

Right Out: 111.565 $\pm$ 0.598  $\chi^2$ /NDF: 13099.4/28

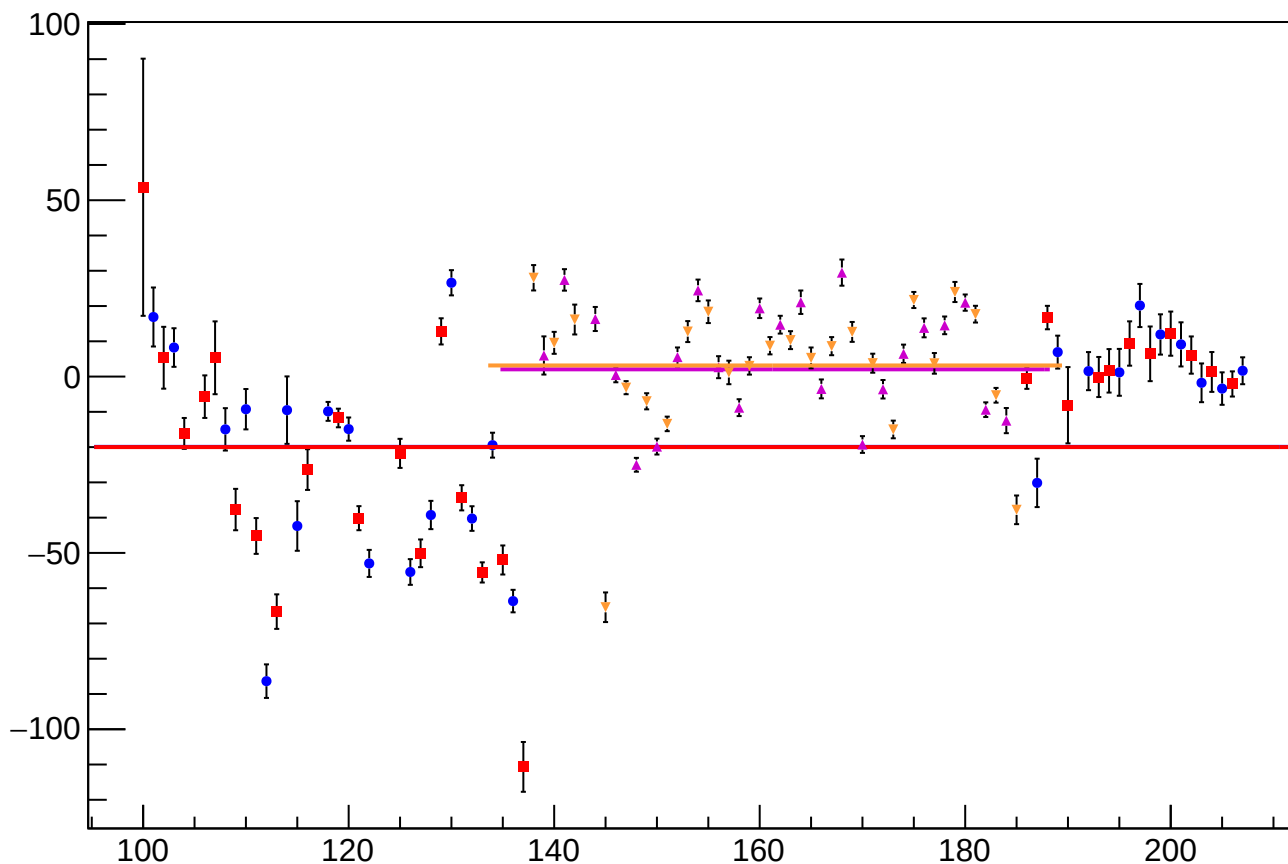
Left In: 86.300 $\pm$ 0.632  $\chi^2$ /NDF:3152.8/22

+ sign 95.911 $\pm$ 0.467  $\chi^2$ /NDF: 13867.6/49

All: 97.905 $\pm$ 0.318  $\chi^2$ /NDF: 30997.3/101

- sign 99.628 $\pm$ 0.434  $\chi^2$ /NDF: 17095.7/51

reg\_asym\_us\_avg\_at1lr\_avg\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $-19.935 \pm 0.873$   $\chi^2/\text{NDF}$ : 1068.9/25

Left Out:  $3.151 \pm 0.544$   $\chi^2/\text{NDF}$ : 813.9/23

Right Out:  $-19.992 \pm 0.836$   $\chi^2/\text{NDF}$ : 1042.2/28

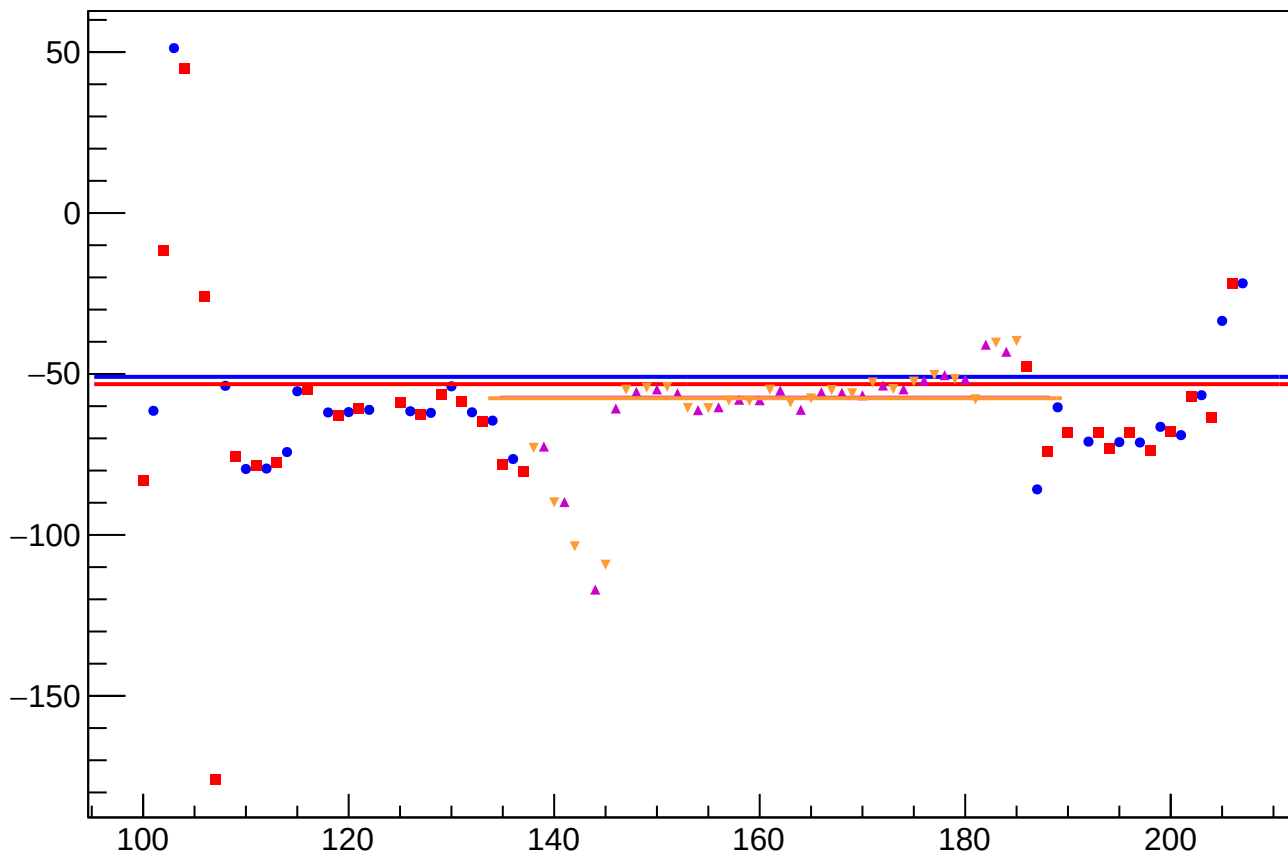
Left In:  $2.050 \pm 0.551$   $\chi^2/\text{NDF}$ : 850.8/22

+ sign  $-3.305 \pm 0.461$   $\chi^2/\text{NDF}$ : 2386.9/49

All:  $-3.964 \pm 0.326$   $\chi^2/\text{NDF}$ : 4768.3/101

- sign  $-4.620 \pm 0.460$   $\chi^2/\text{NDF}$ : 2377.3/51

reg\_asym\_us\_avg\_at1lr\_avg\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-50.891 \pm 0.042$   $\chi^2/\text{NDF}$ : 697153.6/25

Left Out:  $-57.532 \pm 0.025$   $\chi^2/\text{NDF}$ : 267030.7/23

Right Out:  $-53.160 \pm 0.042$   $\chi^2/\text{NDF}$ : 619637.6/28

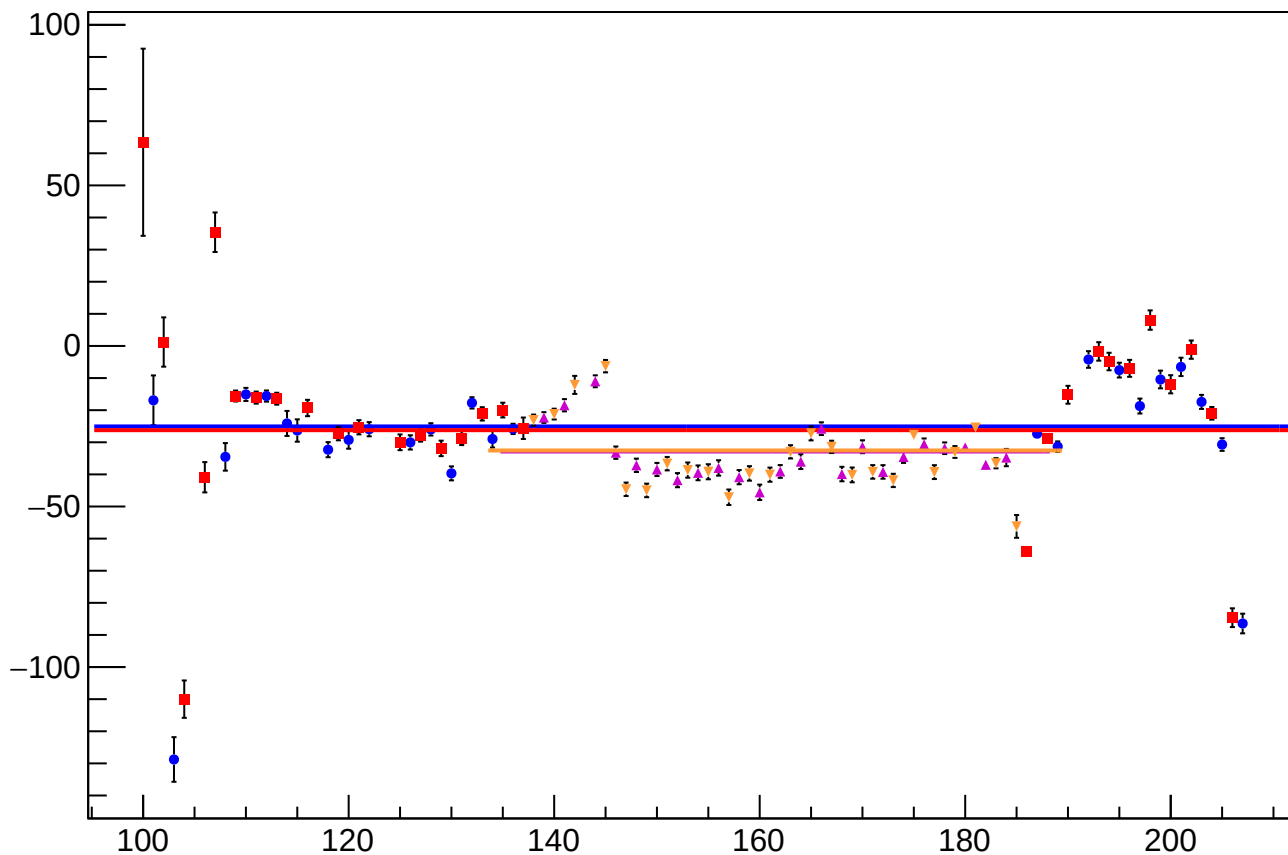
Left In:  $-57.377 \pm 0.025$   $\chi^2/\text{NDF}$ : 227136.8/22

+ sign  $-55.839 \pm 0.021$   $\chi^2/\text{NDF}$ : 982519.4/49

All:  $-56.058 \pm 0.015$   $\chi^2/\text{NDF}$ : 1837077.9/101

- sign  $-56.276 \pm 0.021$   $\chi^2/\text{NDF}$ : 854348.4/51

reg\_asym\_us\_avg\_at1lr\_avg\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-25.065 \pm 0.443$   $\chi^2/\text{NDF}: 1004.5/25$

Left Out:  $-32.549 \pm 0.407$   $\chi^2/\text{NDF}: 603.6/23$

Right Out:  $-26.230 \pm 0.405$   $\chi^2/\text{NDF}: 2027.3/28$

Left In:  $-32.867 \pm 0.411$   $\chi^2/\text{NDF}: 373.2/22$

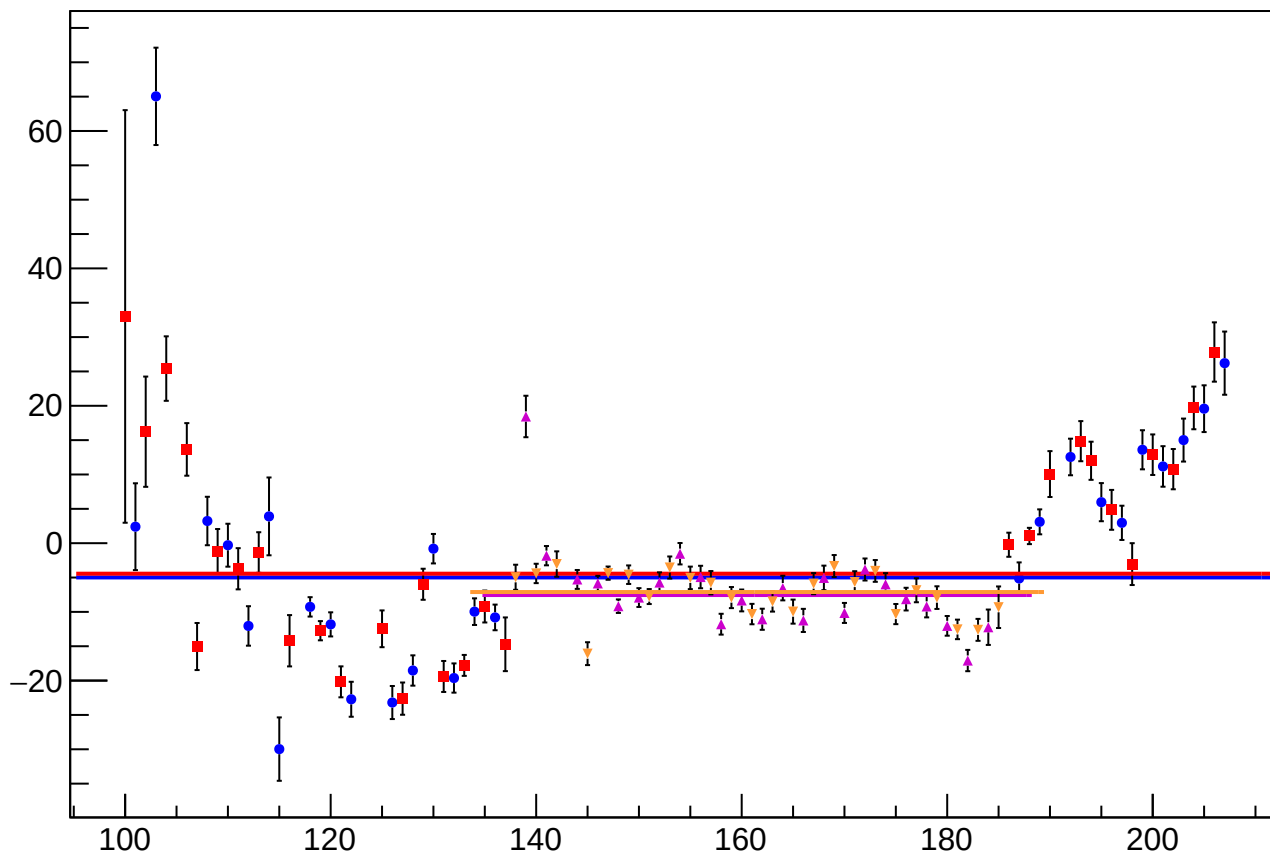
+ sign  $-29.131 \pm 0.300$   $\chi^2/\text{NDF}: 1762.8/49$

All:  $-29.319 \pm 0.208$   $\chi^2/\text{NDF}: 4296.4/101$

- sign  $-29.494 \pm 0.288$   $\chi^2/\text{NDF}: 2532.9/51$



reg\_asym\_us\_avg\_at1lr\_avg\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-4.987 \pm 0.490$   $\chi^2/\text{NDF}$ : 680.5/25

Left Out:  $-7.110 \pm 0.309$   $\chi^2/\text{NDF}$ : 109.5/23

Right Out:  $-4.440 \pm 0.461$   $\chi^2/\text{NDF}$ : 688.0/28

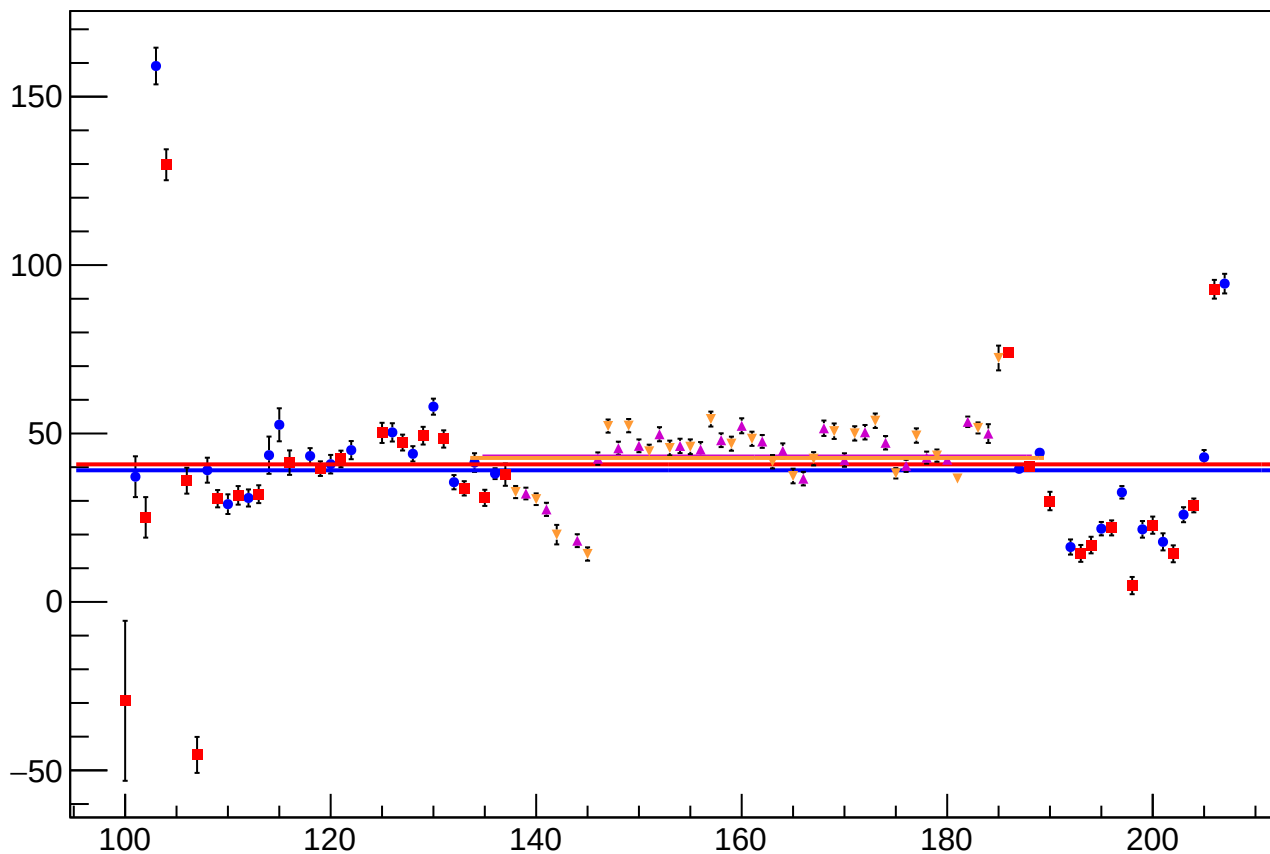
Left In:  $-7.547 \pm 0.315$   $\chi^2/\text{NDF}$ : 199.7/22

+ sign  $-6.504 \pm 0.261$   $\chi^2/\text{NDF}$ : 803.4/49

All:  $-6.531 \pm 0.184$   $\chi^2/\text{NDF}$ : 1722.1/101

- sign  $-6.558 \pm 0.260$   $\chi^2/\text{NDF}$ : 918.7/51

reg\_asym\_us\_avg\_at1lr\_avg\_dd\_diff\_bpm4eX\_slope vs Slug



Right In: 39.075+/-0.446  $\chi^2/\text{NDF}$ : 1339.6/25

Left Out: 42.745+/-0.403  $\chi^2/\text{NDF}$ : 631.5/23

Right Out: 40.838+/-0.390  $\chi^2/\text{NDF}$ : 2663.2/28

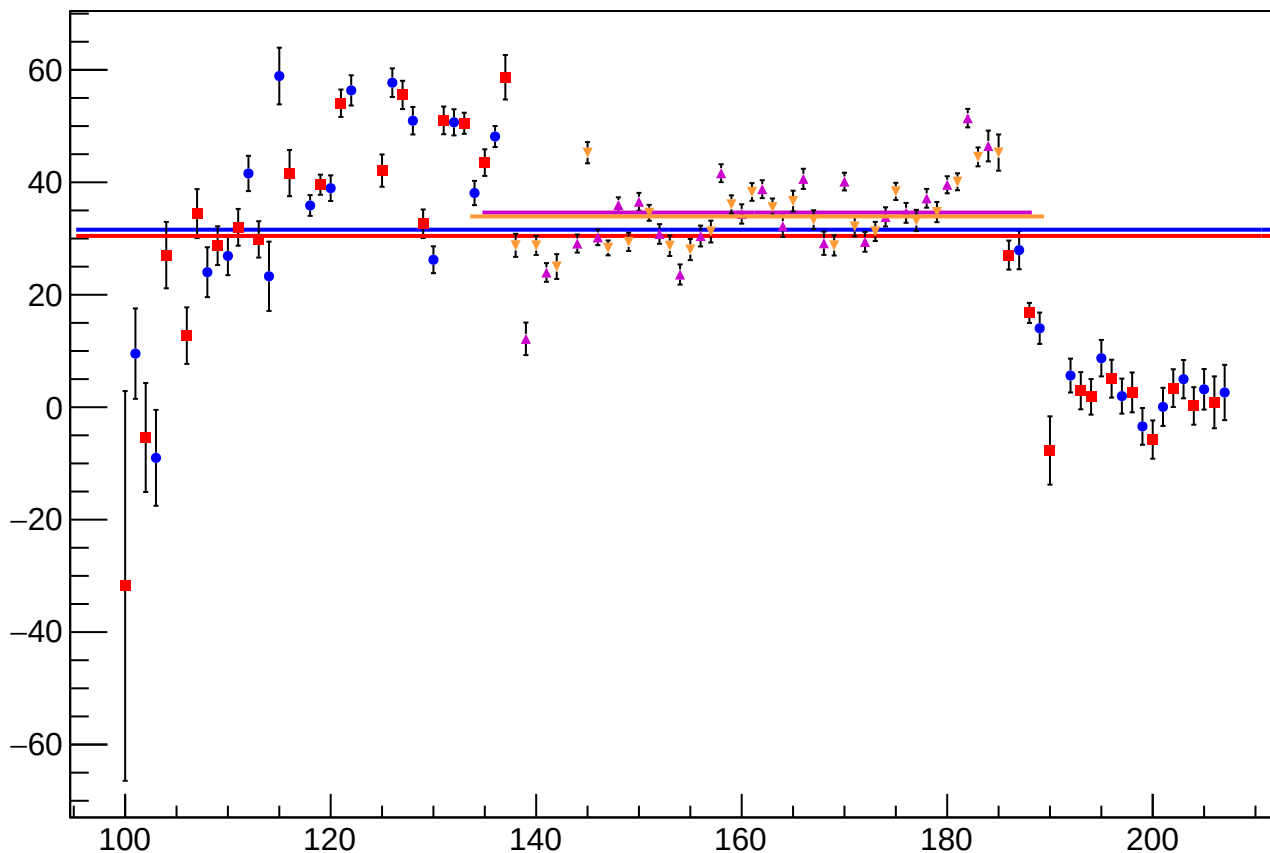
Left In: 43.169+/-0.407  $\chi^2/\text{NDF}$ : 413.0/22

+ sign 41.092+/-0.299  $\chi^2/\text{NDF}$ : 2008.4/49

All: 41.549+/-0.205  $\chi^2/\text{NDF}$ : 5106.2/101

- sign 41.954+/-0.282  $\chi^2/\text{NDF}$ : 3093.3/51

reg\_asym\_us\_avg\_at1lr\_avg\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $31.572 \pm 0.573$   $\chi^2/\text{NDF}: 1118.3/25$

Left Out:  $33.930 \pm 0.351$   $\chi^2/\text{NDF}: 216.5/23$

Right Out:  $30.466 \pm 0.556$   $\chi^2/\text{NDF}: 1211.9/28$

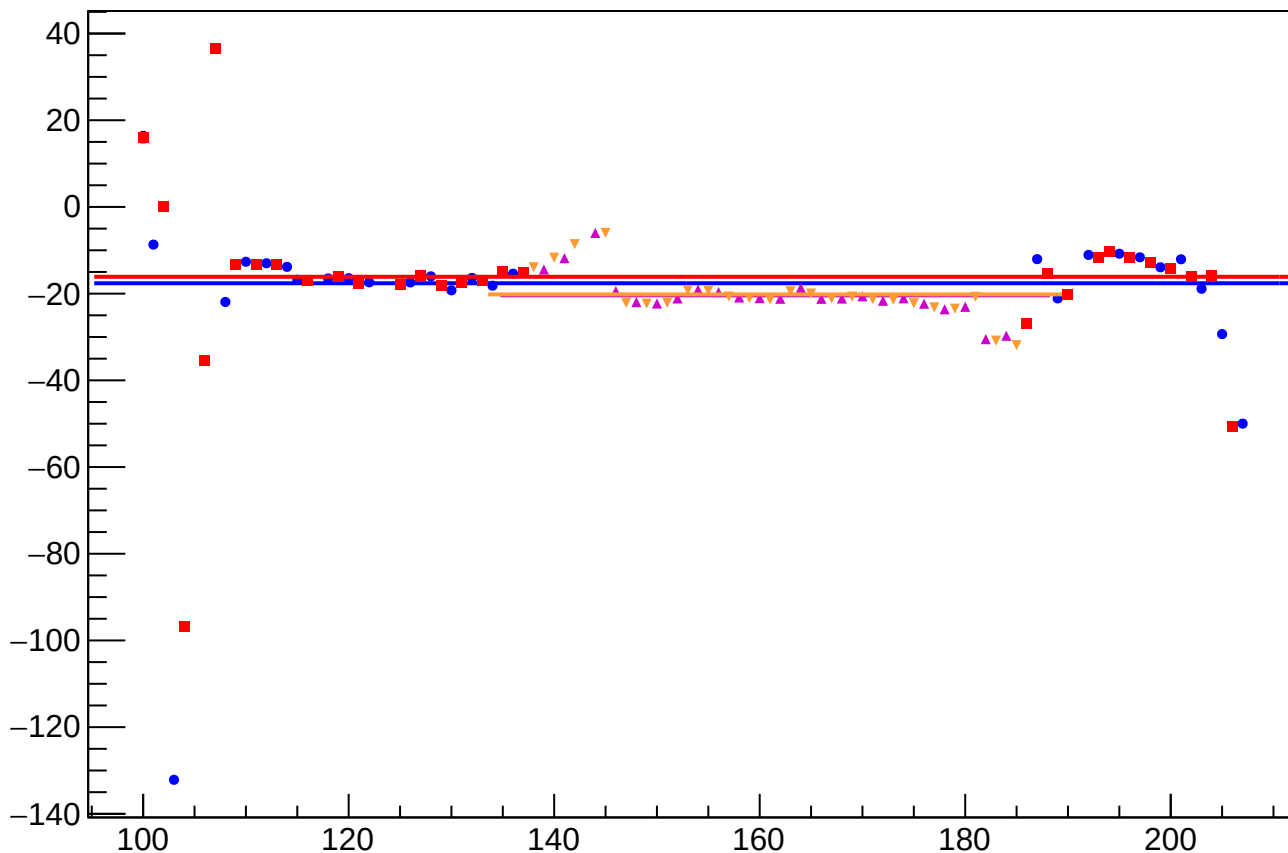
Left In:  $34.623 \pm 0.356$   $\chi^2/\text{NDF}: 376.1/22$

+ sign  $33.287 \pm 0.299$   $\chi^2/\text{NDF}: 1347.2/49$

All:  $33.350 \pm 0.212$   $\chi^2/\text{NDF}: 2974.9/101$

- sign  $33.413 \pm 0.300$   $\chi^2/\text{NDF}: 1627.6/51$

reg\_asym\_us\_avg\_at1lr\_avg\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $-17.604 \pm 0.028$   $\chi^2/\text{NDF}: 303682.7/25$

Left Out:  $-20.174 \pm 0.016$   $\chi^2/\text{NDF}: 99947.2/23$

Right Out:  $-16.109 \pm 0.027$   $\chi^2/\text{NDF}: 256756.7/28$

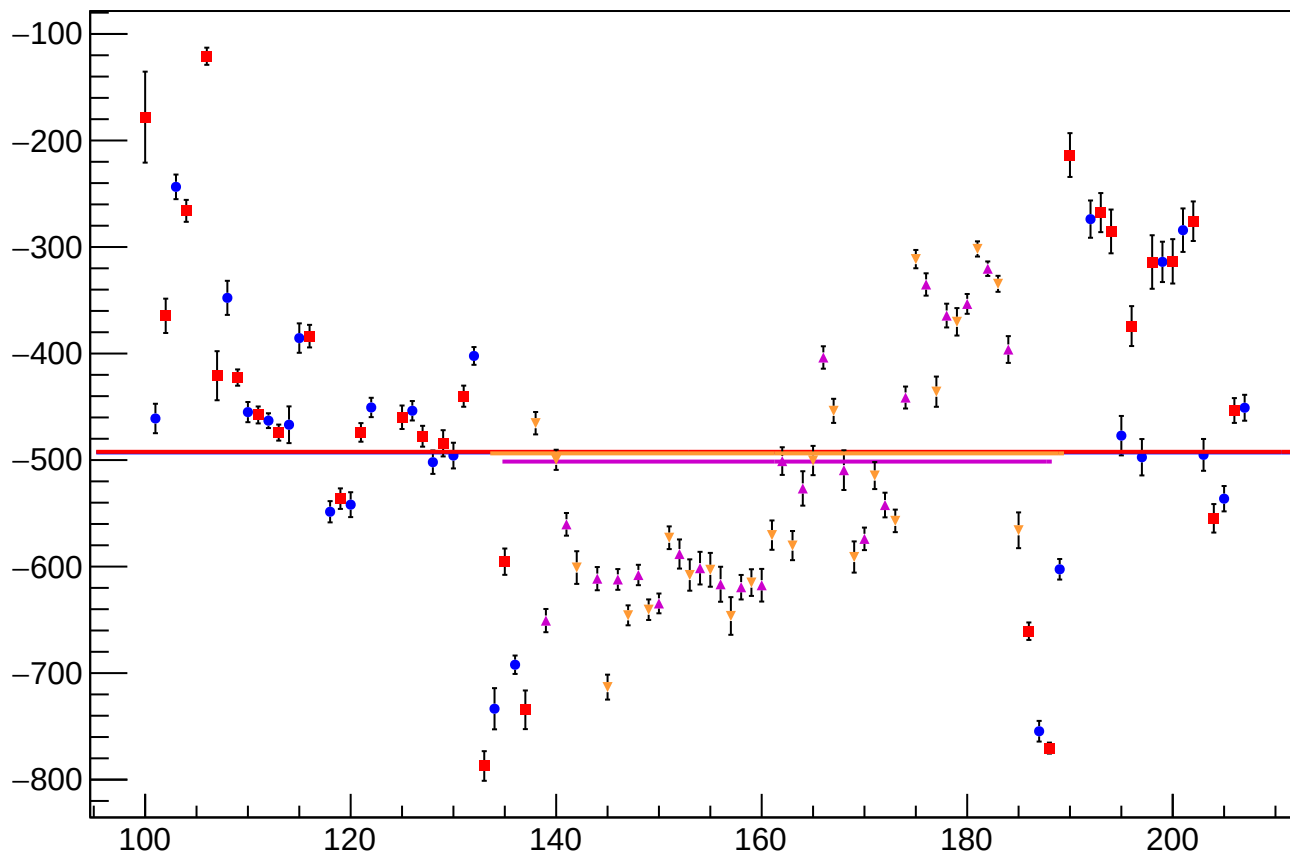
Left In:  $-20.396 \pm 0.016$   $\chi^2/\text{NDF}: 81154.4/22$

+ sign  $-19.547 \pm 0.014$   $\chi^2/\text{NDF}: 410101.8/49$

All:  $-19.427 \pm 0.010$   $\chi^2/\text{NDF}: 766874.3/101$

- sign  $-19.309 \pm 0.014$   $\chi^2/\text{NDF}: 356620.9/51$

reg\_asym\_us\_avg\_at2lr\_avg\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-492.813 \pm 2.243$   $\chi^2/\text{NDF}$ : 2778.3/25

Left Out:  $-493.722 \pm 2.295$   $\chi^2/\text{NDF}$ : 3150.0/23

Right Out:  $-492.250 \pm 2.011$   $\chi^2/\text{NDF}$ : 7802.5/28

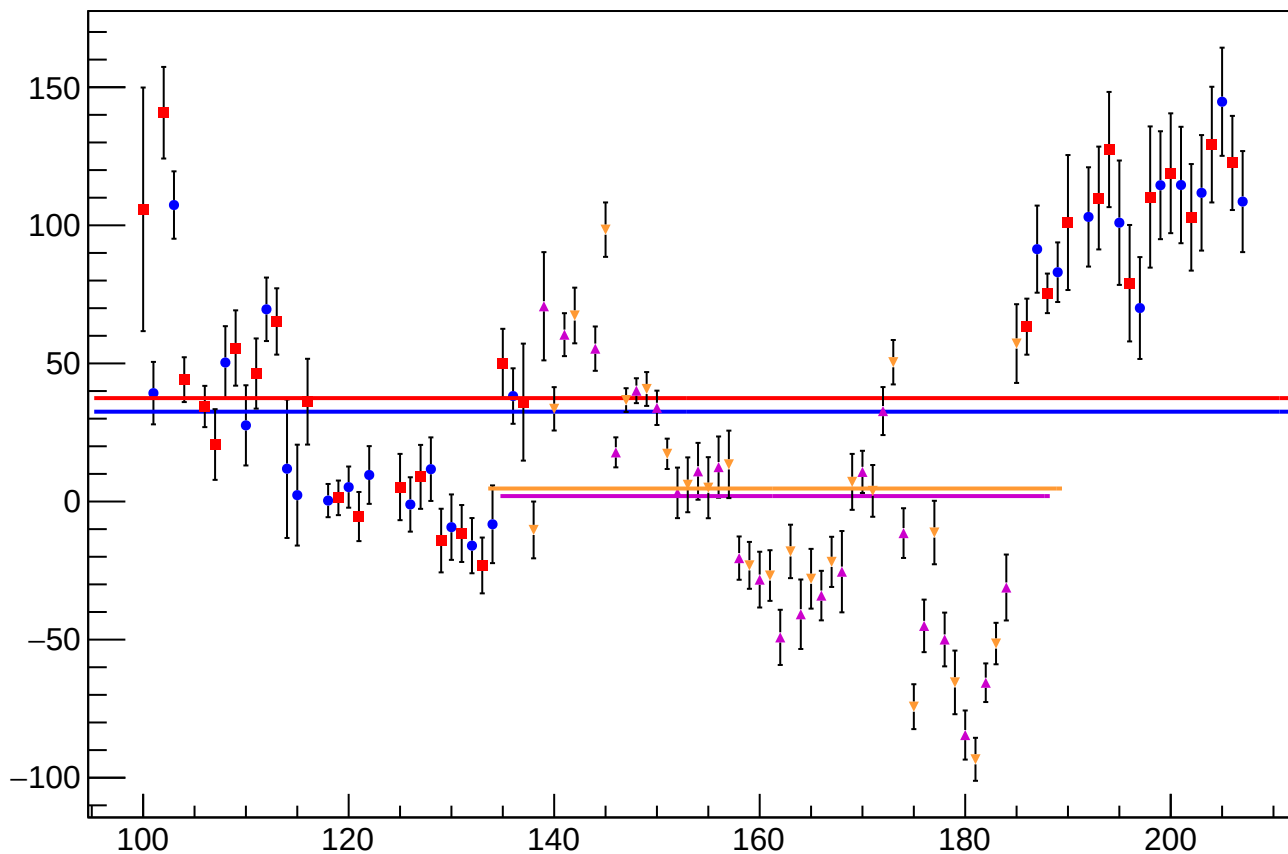
Left In:  $-501.425 \pm 2.306$   $\chi^2/\text{NDF}$ : 2689.3/22

+ sign  $-493.257 \pm 1.604$   $\chi^2/\text{NDF}$ : 5928.3/49

All:  $-494.819 \pm 1.102$   $\chi^2/\text{NDF}$ : 16431.0/101

- sign  $-496.212 \pm 1.516$   $\chi^2/\text{NDF}$ : 10500.8/51

reg\_asym\_us\_avg\_at2lr\_avg\_avg\_diff\_bpm4aY\_slope vs Slug



Right In: 32.523+/-2.388  $\chi^2/\text{NDF}$ : 322.0/25

Left Out: 4.709+/-1.696  $\chi^2/\text{NDF}$ : 680.3/23

Right Out: 37.439+/-2.212  $\chi^2/\text{NDF}$ : 357.7/28

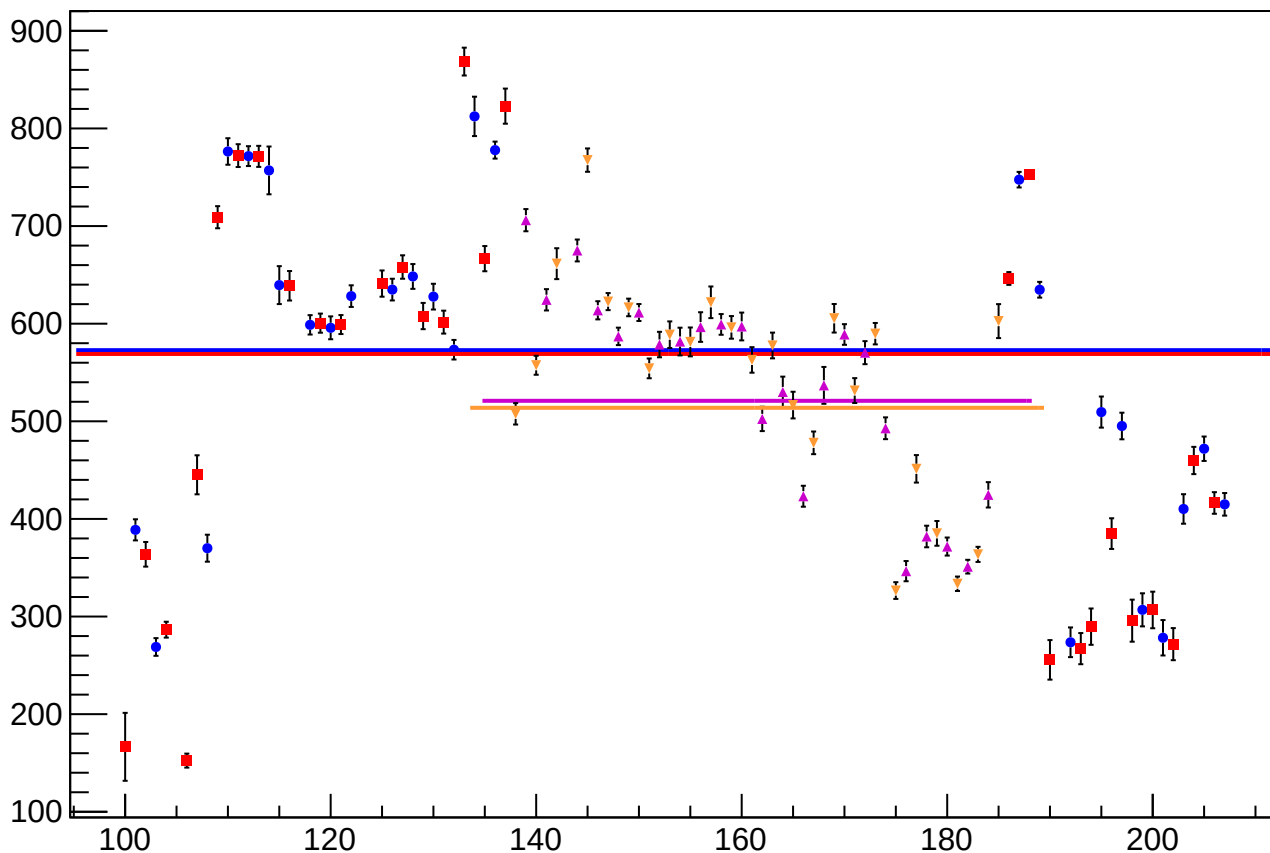
Left In: 1.970+/-1.722  $\chi^2/\text{NDF}$ : 560.8/22

+ sign 14.030+/-1.383  $\chi^2/\text{NDF}$ : 1092.5/49

All: 14.704+/-0.969  $\chi^2/\text{NDF}$ : 2171.6/101

- sign 15.354+/-1.359  $\chi^2/\text{NDF}$ : 1078.6/51

reg\_asym\_us\_avg\_at2lr\_avg\_avg\_diff\_bpm4eX\_slope vs Slug



Right In: 572.867 $\pm$ 2.319  $\chi^2$ /NDF: 4970.8/25

Left Out: 513.833 $\pm$ 2.277  $\chi^2$ /NDF: 2735.5/23

Right Out: 568.991 $\pm$ 2.002  $\chi^2$ /NDF: 10666.9/28

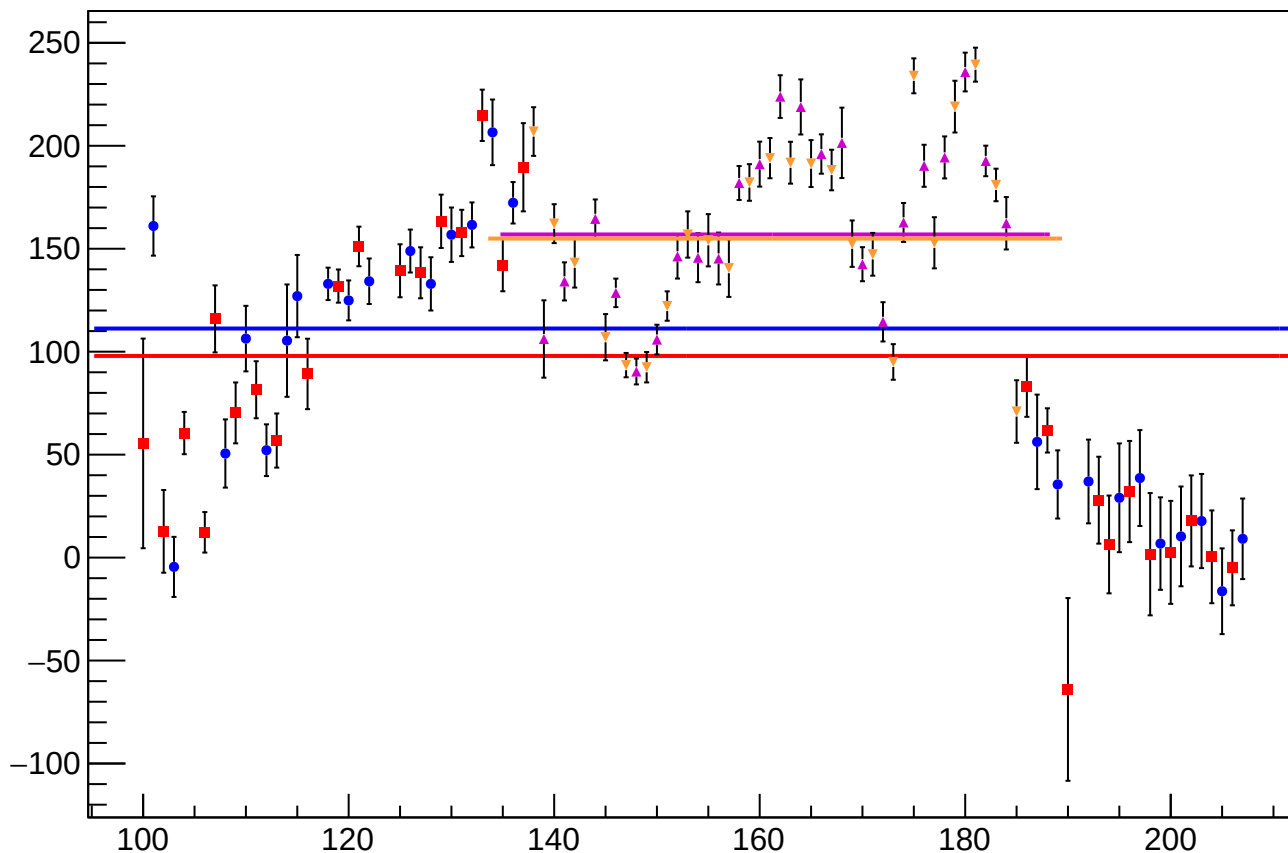
Left In: 520.990 $\pm$ 2.283  $\chi^2$ /NDF: 2442.8/22

+ sign 542.815 $\pm$ 1.625  $\chi^2$ /NDF: 8036.3/49

All: 545.671 $\pm$ 1.104  $\chi^2$ /NDF: 21401.6/101

- sign 548.124 $\pm$ 1.505  $\chi^2$ /NDF: 13359.5/51

reg\_asym\_us\_avg\_at2lr\_avg\_avg\_diff\_bpm4eY\_slope vs Slug



Right In: 111.257 $\pm$ 2.805  $\chi^2$ /NDF: 426.6/25

Left Out: 154.944 $\pm$ 1.953  $\chi^2$ /NDF: 609.0/23

Right Out: 97.939 $\pm$ 2.654  $\chi^2$ /NDF: 512.8/28

Left In: 156.934 $\pm$ 1.971  $\chi^2$ /NDF: 443.2/22

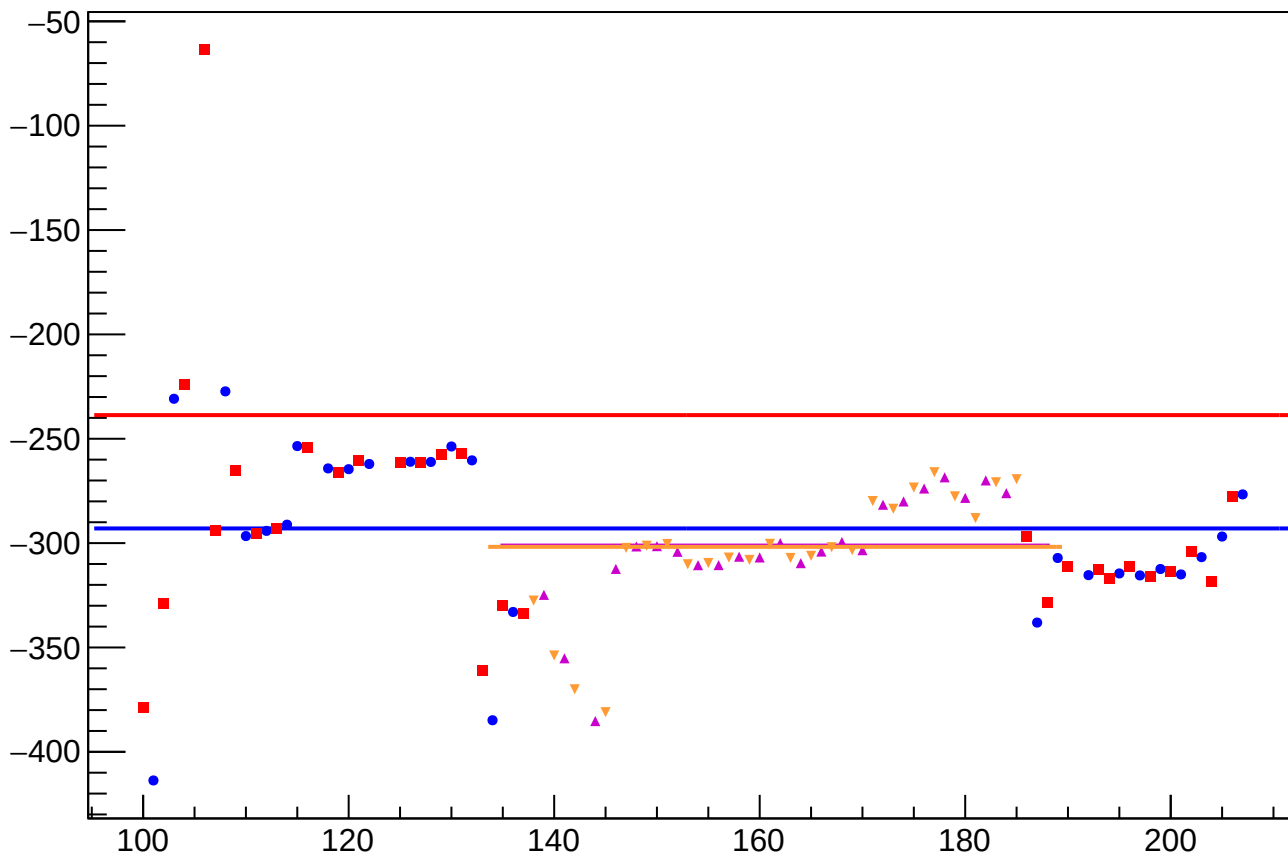
+ sign 140.677 $\pm$ 1.603  $\chi^2$ /NDF: 1199.0/49

All: 138.287 $\pm$ 1.126  $\chi^2$ /NDF: 2477.9/101

- sign 135.957 $\pm$ 1.582  $\chi^2$ /NDF: 1274.5/51



reg\_asym\_us\_avg\_at2lr\_avg\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-292.972 \pm 0.144$   $\chi^2/\text{NDF}: 113510.9/25$

Left Out:  $-301.785 \pm 0.091$   $\chi^2/\text{NDF}: 86719.4/23$

Right Out:  $-238.676 \pm 0.124$   $\chi^2/\text{NDF}: 682996.6/28$

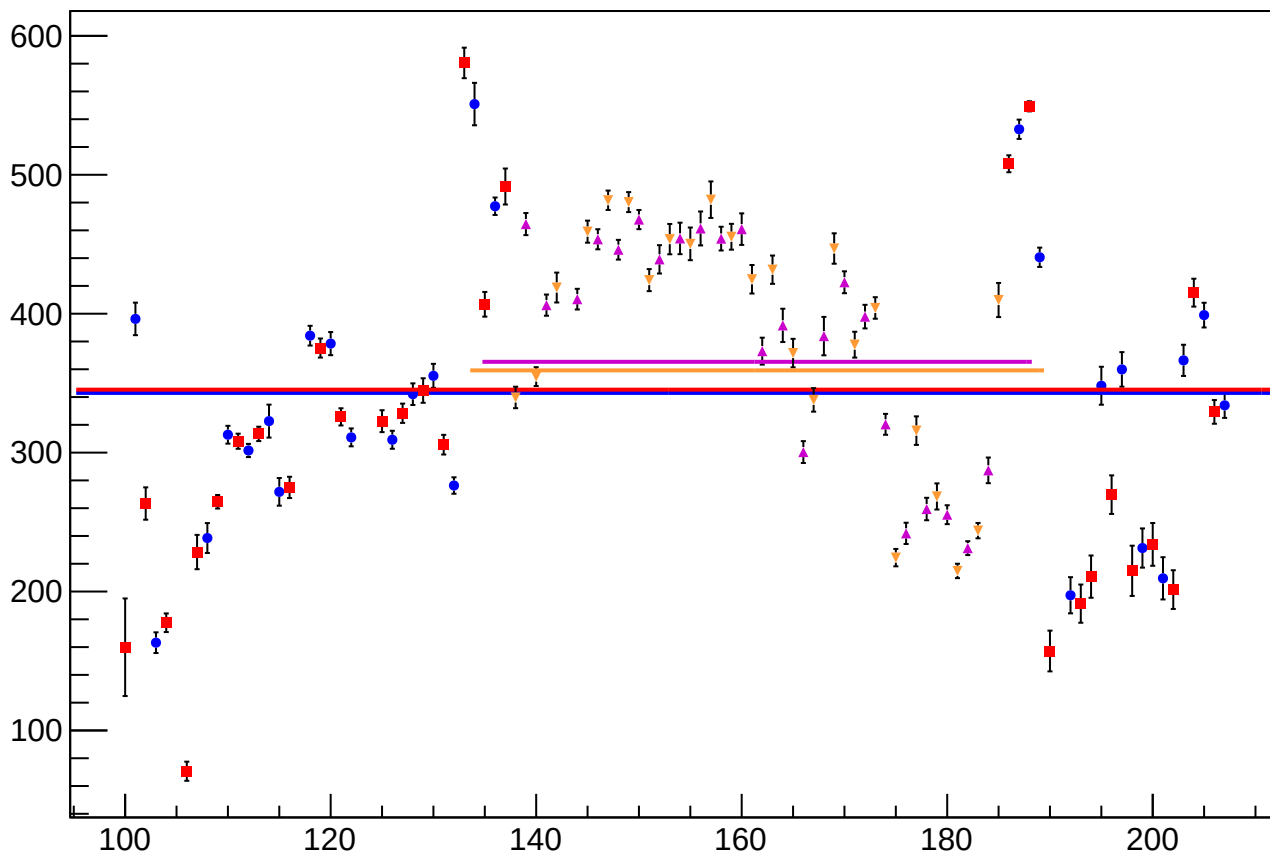
Left In:  $-301.176 \pm 0.090$   $\chi^2/\text{NDF}: 75325.3/22$

+ sign  $-299.273 \pm 0.077$   $\chi^2/\text{NDF}: 202916.9/49$

All:  $-288.997 \pm 0.053$   $\chi^2/\text{NDF}: 1160829.3/10$

- sign  $-279.718 \pm 0.073$   $\chi^2/\text{NDF}: 923814.2/51$

reg\_asym\_us\_avg\_at2lr\_avg\_dd\_diff\_bpm1X\_slope vs Slug



Right In: 342.984 $\pm$ 1.598  $\chi^2$ /NDF: 2983.2/25

Left Out: 359.188 $\pm$ 1.681  $\chi^2$ /NDF: 3187.9/23

Right Out: 345.327 $\pm$ 1.429  $\chi^2$ /NDF: 8029.6/28

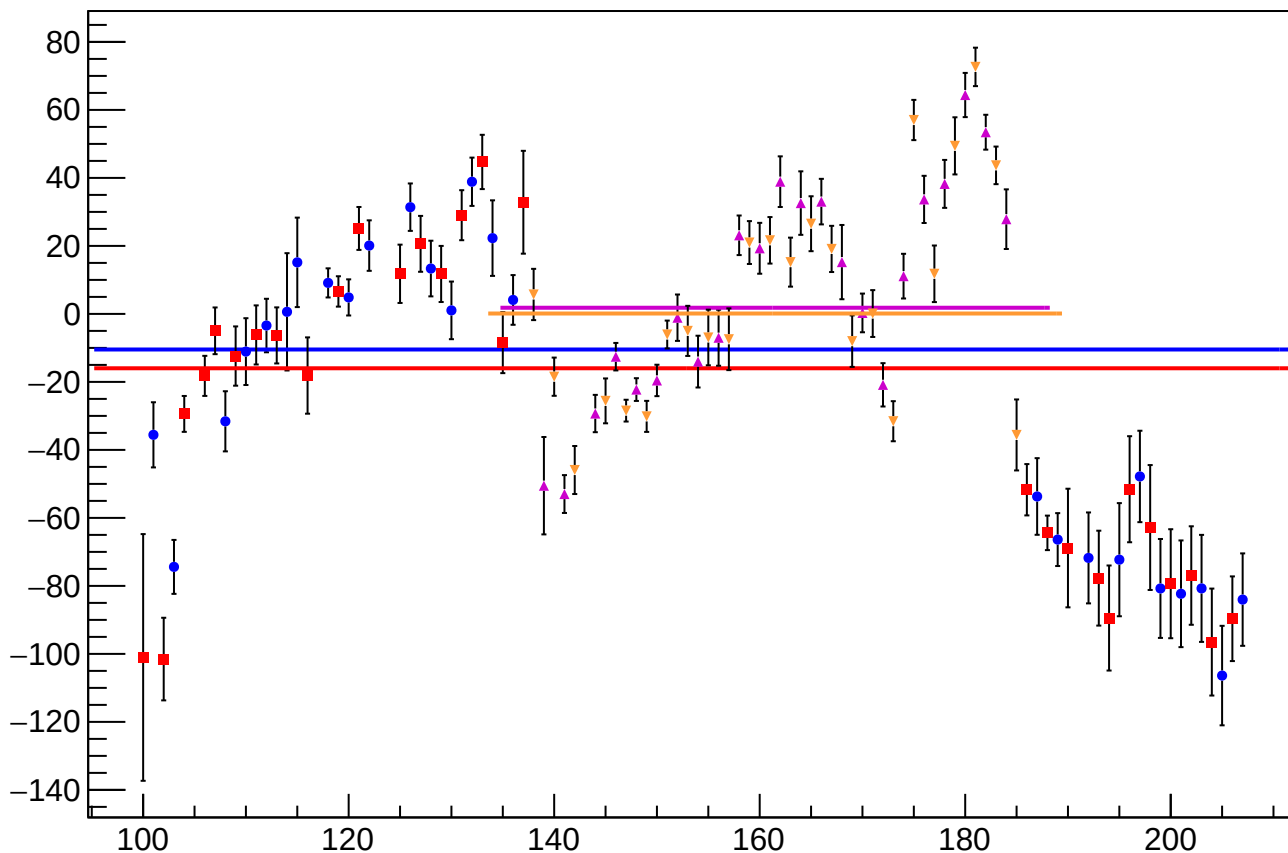
Left In: 365.362 $\pm$ 1.692  $\chi^2$ /NDF: 2739.5/22

+ sign 350.677 $\pm$ 1.158  $\chi^2$ /NDF: 6219.9/49

All: 352.259 $\pm$ 0.794  $\chi^2$ /NDF: 17074.4/101

- sign 353.664 $\pm$ 1.092  $\chi^2$ /NDF: 10850.9/51

reg\_asym\_us\_avg\_at2lr\_avg\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-10.469 \pm 1.712$   $\chi^2/\text{NDF}$ : 481.4/25

Left Out:  $0.114 \pm 1.247$   $\chi^2/\text{NDF}$ : 637.9/23

Right Out:  $-15.992 \pm 1.568$   $\chi^2/\text{NDF}$ : 554.2/28

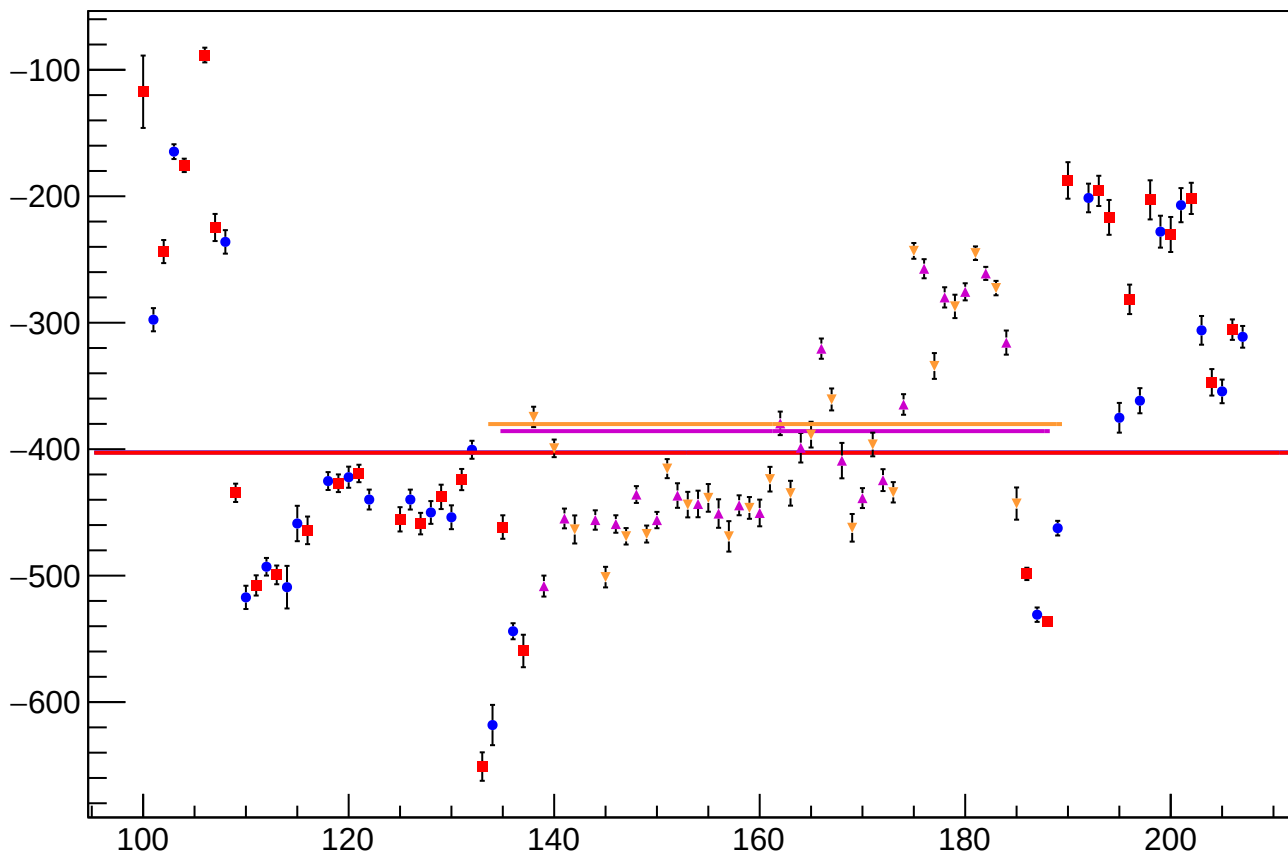
Left In:  $1.812 \pm 1.267$   $\chi^2/\text{NDF}$ : 577.0/22

+ sign  $-3.555 \pm 1.008$   $\chi^2/\text{NDF}$ : 1144.3/49

All:  $-4.407 \pm 0.705$   $\chi^2/\text{NDF}$ : 2354.9/101

- sign  $-5.222 \pm 0.985$   $\chi^2/\text{NDF}$ : 1209.2/51

reg\_asym\_us\_avg\_at2lr\_avg\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-402.584 \pm 1.660$   $\chi^2/\text{NDF}$ : 4852.2/25

Left Out:  $-380.144 \pm 1.670$   $\chi^2/\text{NDF}$ : 2618.6/23

Right Out:  $-402.800 \pm 1.431$   $\chi^2/\text{NDF}$ : 10653.9/28

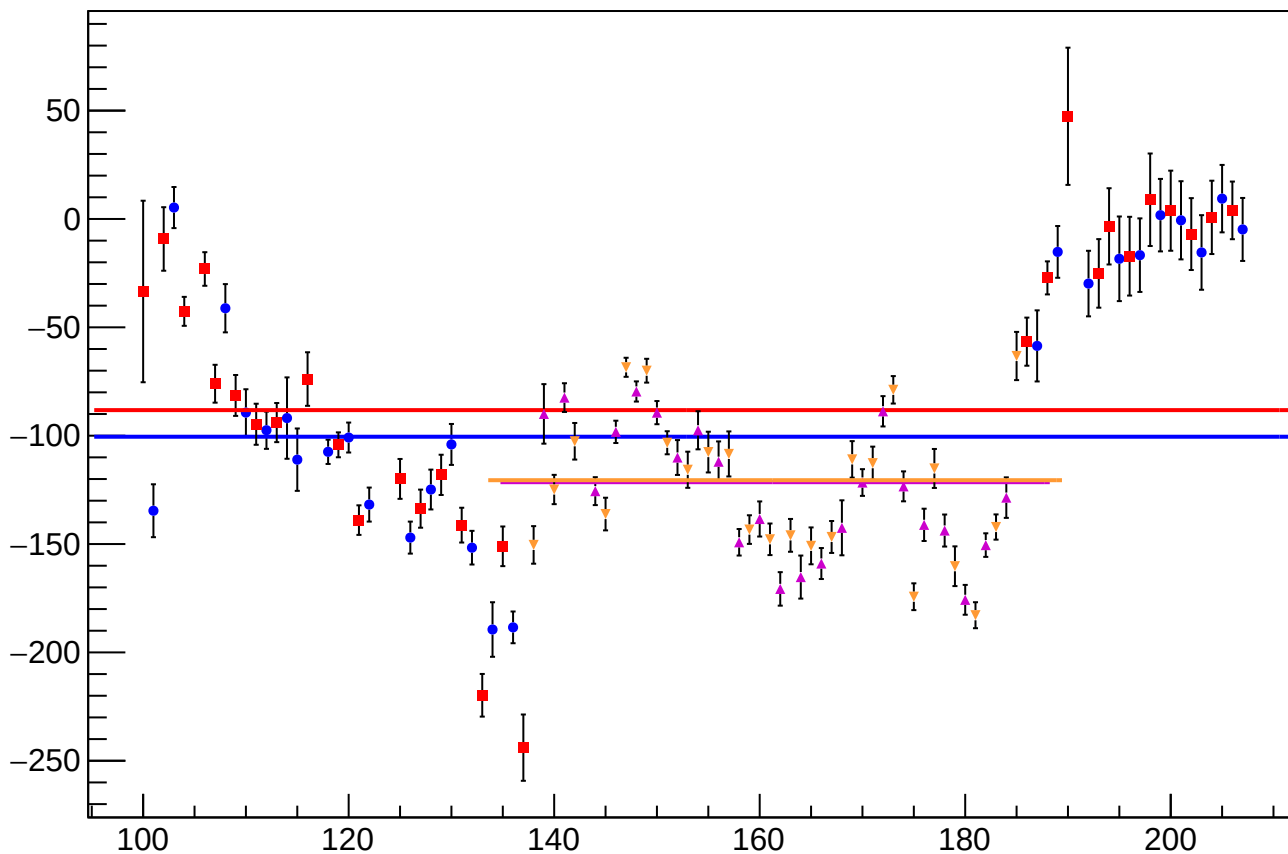
Left In:  $-385.725 \pm 1.677$   $\chi^2/\text{NDF}$ : 2361.2/22

+ sign  $-391.428 \pm 1.177$   $\chi^2/\text{NDF}$ : 7561.6/49

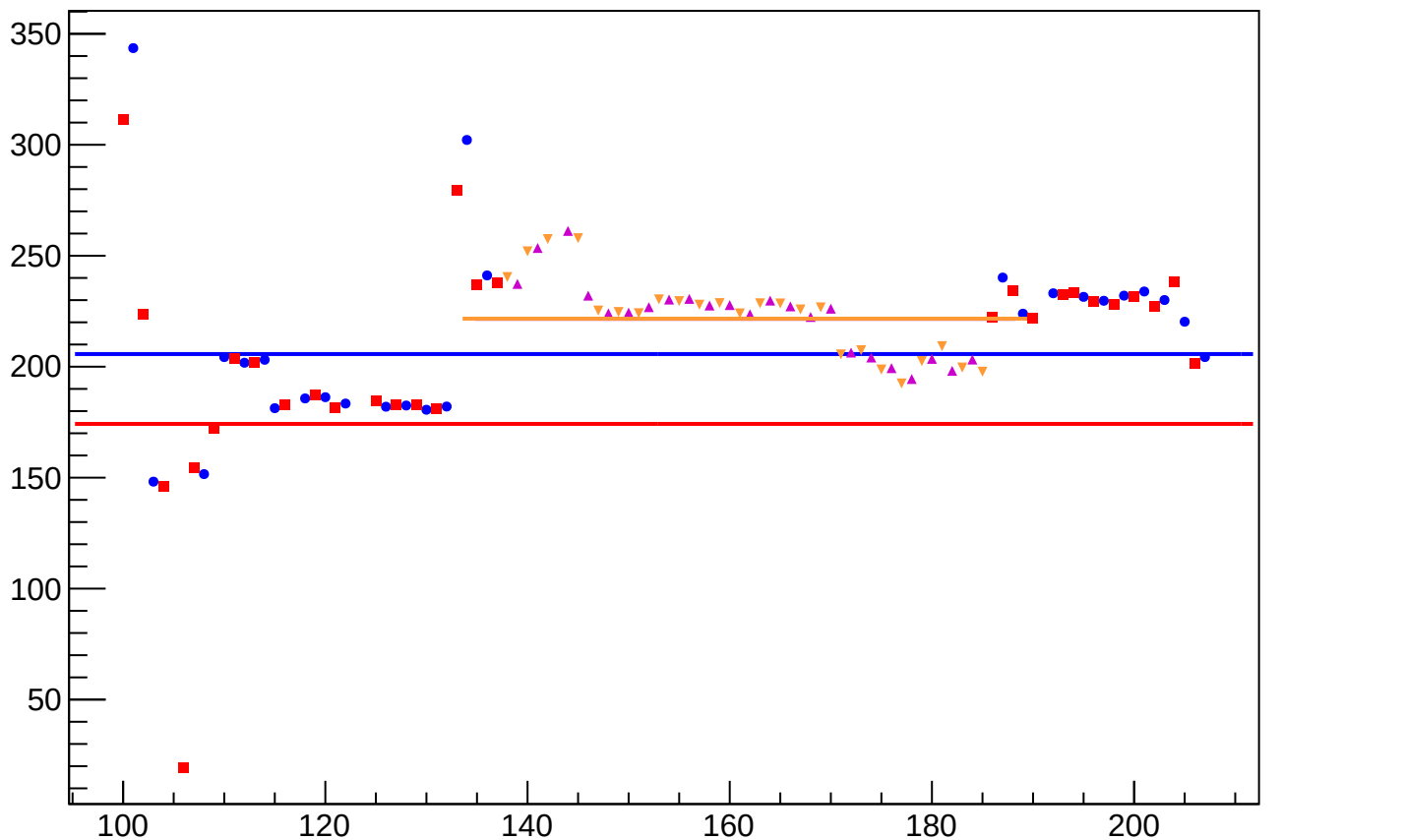
All:  $-393.680 \pm 0.799$   $\chi^2/\text{NDF}$ : 20643.5/101

- sign  $-395.606 \pm 1.088$   $\chi^2/\text{NDF}$ : 13075.1/51

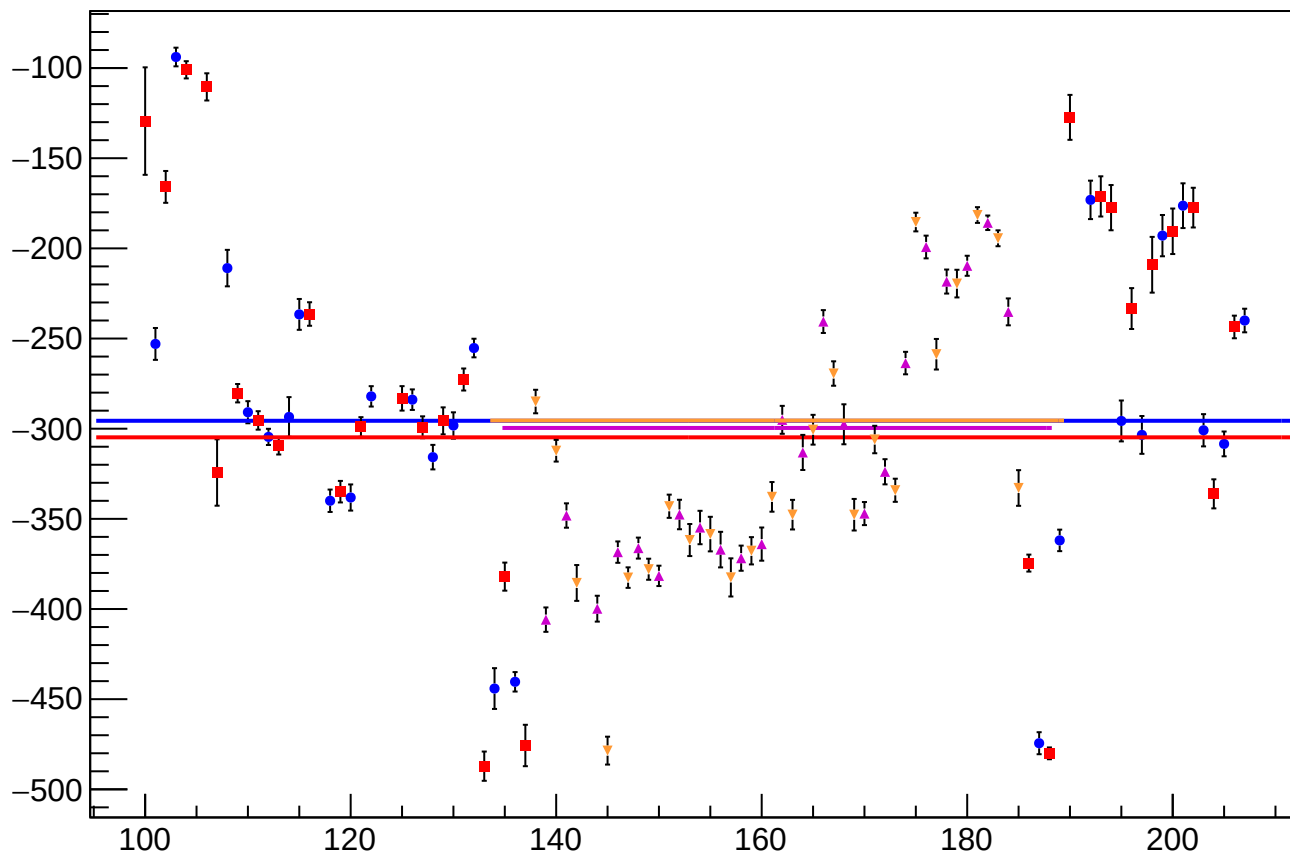
reg\_asym\_us\_avg\_at2lr\_avg\_dd\_diff\_bpm4eY\_slope vs Slug



reg\_asym\_us\_avg\_at2lr\_avg\_dd\_diff\_bpm12X\_slope vs Slug



reg\_asym\_us\_avg\_atlr\_avg\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-295.614 \pm 1.365$   $\chi^2/\text{NDF}$ : 4084.7/25

Left Out:  $-295.464 \pm 1.393$   $\chi^2/\text{NDF}$ : 3346.3/23

Right Out:  $-304.793 \pm 1.248$   $\chi^2/\text{NDF}$ : 7725.4/28

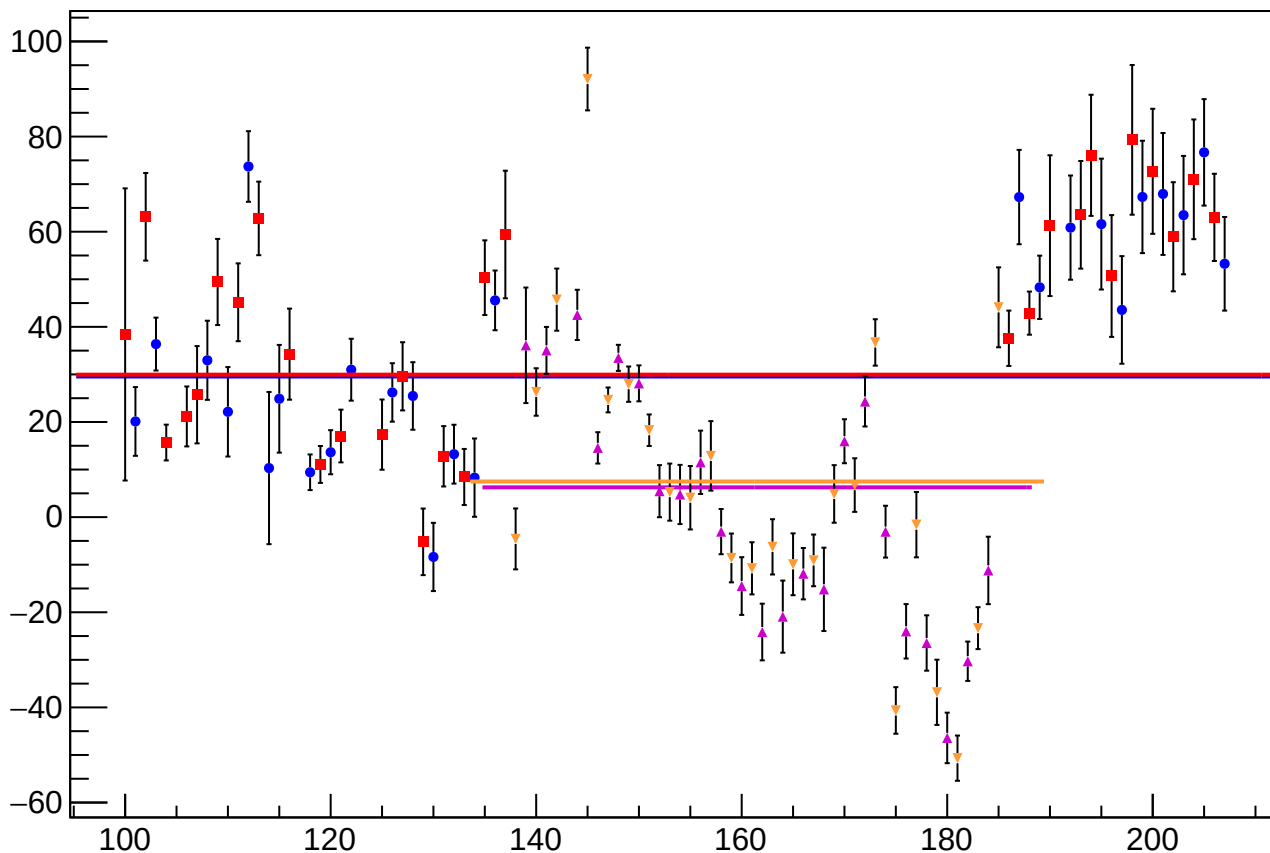
Left In:  $-299.588 \pm 1.397$   $\chi^2/\text{NDF}$ : 2971.7/22

+ sign  $-295.540 \pm 0.975$   $\chi^2/\text{NDF}$ : 7431.0/49

All:  $-299.171 \pm 0.673$   $\chi^2/\text{NDF}$ : 18162.4/101

- sign  $-302.482 \pm 0.931$   $\chi^2/\text{NDF}$ : 10704.8/51

reg\_asym\_us\_avg\_atlr\_avg\_avg\_diff\_bpm4aY\_slope vs Slug



Right In: 29.561 $\pm$ 1.454  $\chi^2$ /NDF: 218.1/25

Left Out: 7.486 $\pm$ 1.030  $\chi^2$ /NDF: 738.5/23

Right Out: 29.951 $\pm$ 1.355  $\chi^2$ /NDF: 234.7/28

Left In: 6.259 $\pm$ 1.045  $\chi^2$ /NDF: 559.4/22

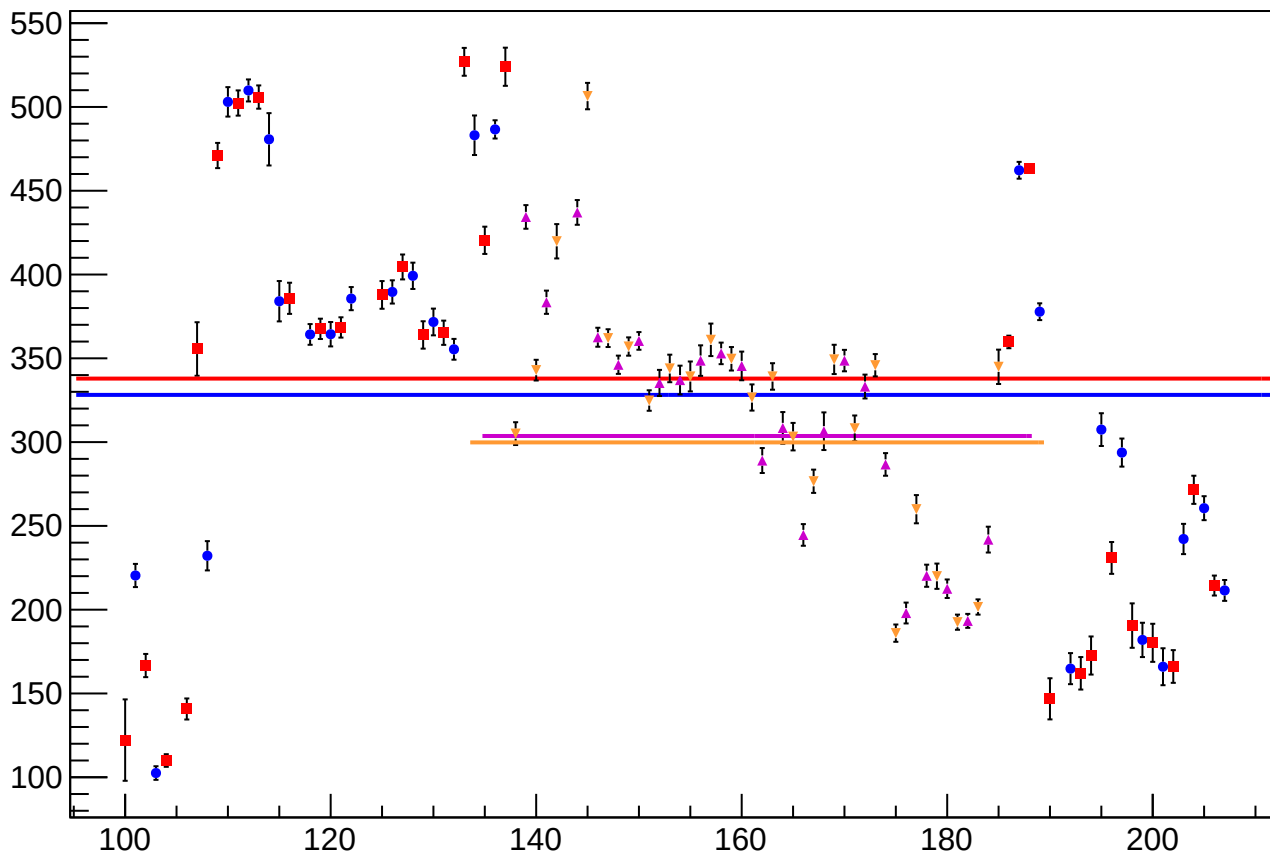
+ sign 14.856 $\pm$ 0.840  $\chi^2$ /NDF: 1110.1/49

All: 14.976 $\pm$ 0.590  $\chi^2$ /NDF: 2095.9/101

- sign 15.092 $\pm$ 0.828  $\chi^2$ /NDF: 985.8/51



reg\_asym\_us\_avg\_atlr\_avg\_avg\_diff\_bpm4eX\_slope vs Slug



Right In: 328.175 $\pm$ 1.389  $\chi^2$ /NDF: 8174.9/25

Left Out: 299.825 $\pm$ 1.381  $\chi^2$ /NDF:3076.1/23

Right Out: 337.905 $\pm$ 1.226  $\chi^2$ /NDF: 12140.9/28

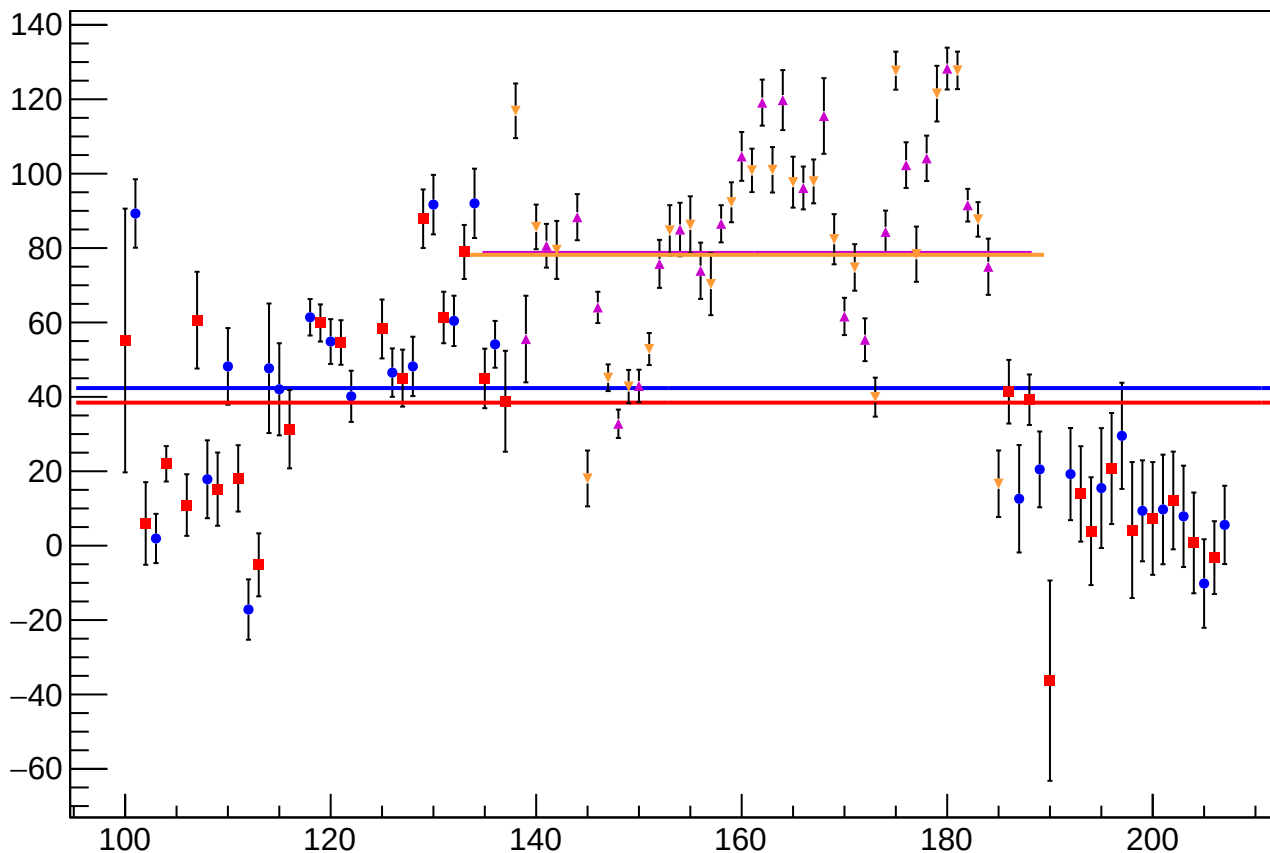
Left In: 303.652 $\pm$ 1.383  $\chi^2$ /NDF:2872.6/22

+ sign 313.922 $\pm$ 0.979  $\chi^2$ /NDF: 11460.5/49

All: 318.669 $\pm$ 0.669  $\chi^2$ /NDF: 26861.8/101

- sign 322.833 $\pm$ 0.917  $\chi^2$ /NDF: 15357.2/51

reg\_asym\_us\_avg\_atlr\_avg\_avg\_diff\_bpm4eY\_slope vs Slug



Right In: 42.362 $\pm$ 1.706  $\chi^2$ /NDF: 285.4/25

Left Out: 78.181 $\pm$ 1.185  $\chi^2$ /NDF:663.3/23

Right Out: 38.449 $\pm$ 1.625  $\chi^2$ /NDF: 243.4/28

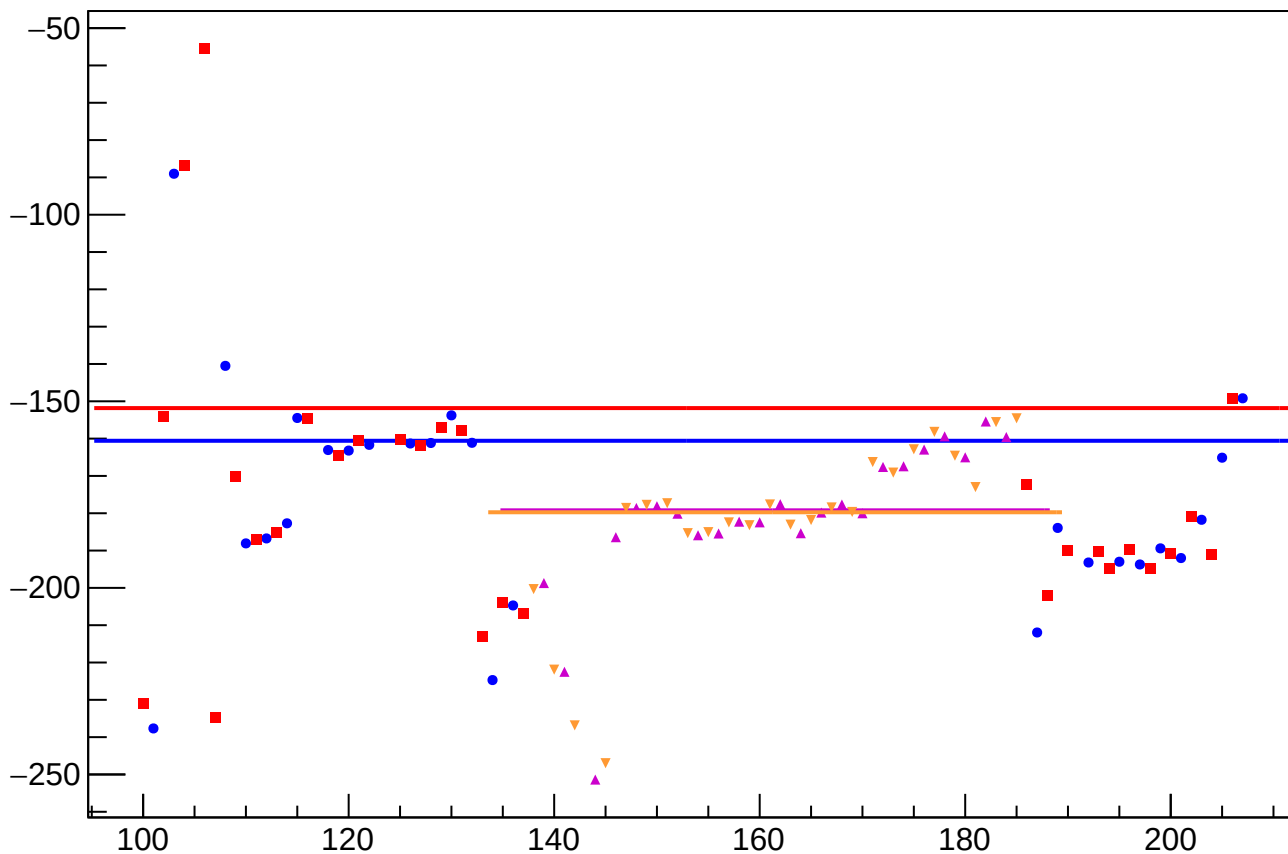
Left In: 78.689 $\pm$ 1.195  $\chi^2$ /NDF:488.6/22

+ sign 66.533 $\pm$ 0.973  $\chi^2$ /NDF: 1246.1/49

All: 65.543 $\pm$ 0.684  $\chi^2$ /NDF: 2378.0/101

- sign 64.573 $\pm$ 0.963  $\chi^2$ /NDF: 1129.9/51

reg\_asym\_us\_avg\_atlr\_avg\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-160.581 \pm 0.083$   $\chi^2/\text{NDF}$ : 304421.2/25

Left Out:  $-179.738 \pm 0.055$   $\chi^2/\text{NDF}$ : 132199.5/23

Right Out:  $-151.820 \pm 0.079$   $\chi^2/\text{NDF}$ : 418161.3/28

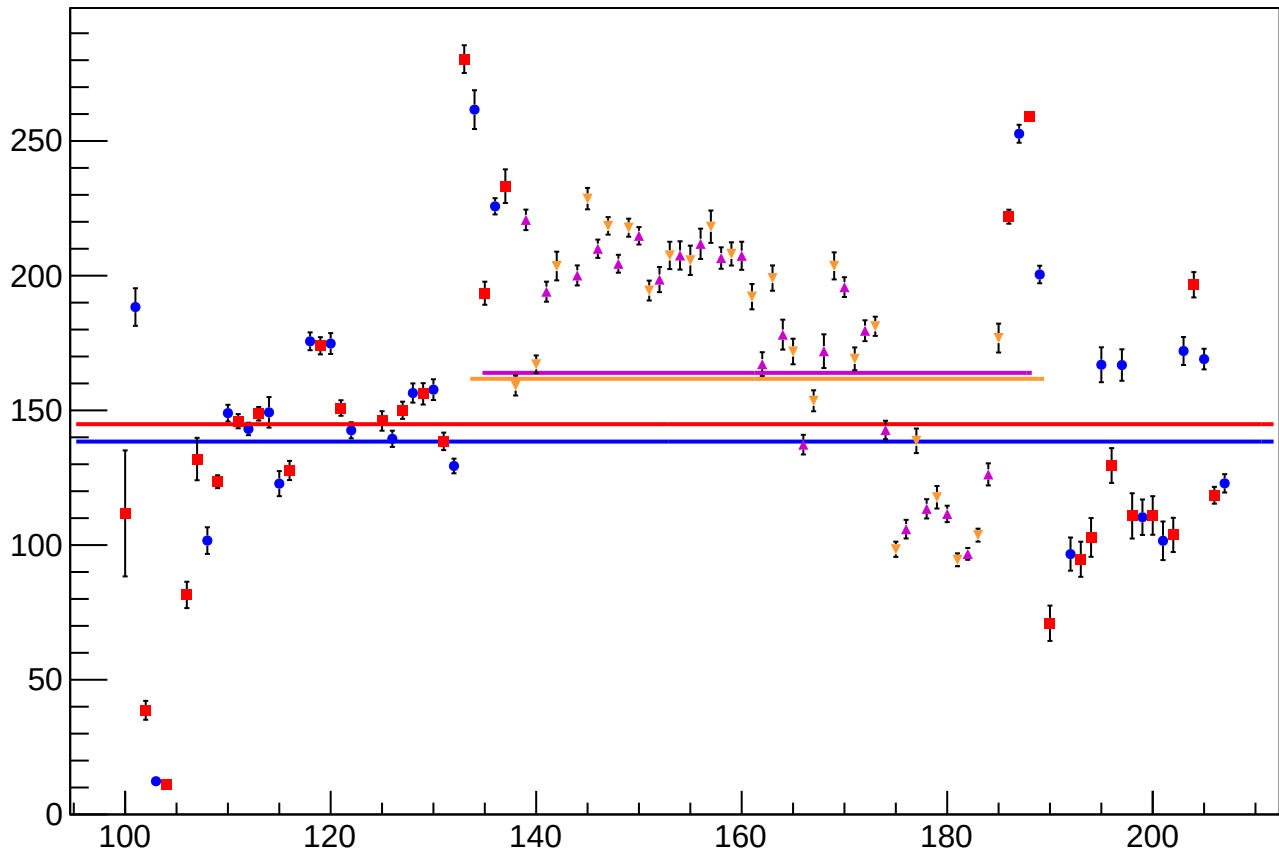
Left In:  $-179.219 \pm 0.055$   $\chi^2/\text{NDF}$ : 113522.5/22

+ sign  $-173.882 \pm 0.046$   $\chi^2/\text{NDF}$ : 473711.0/49

All:  $-172.088 \pm 0.032$   $\chi^2/\text{NDF}$ : 1089993.4/10

- sign  $-170.369 \pm 0.045$   $\chi^2/\text{NDF}$ : 613281.0/51

reg\_asym\_us\_avg\_atlr\_avg\_dd\_diff\_bpm1X\_slope vs Slug



Right In: 138.420 $\pm$ 0.704  $\chi^2$ /NDF: 8162.1/25

Left Out: 161.708 $\pm$ 0.776  $\chi^2$ /NDF:3587.3/23

Right Out: 144.875 $\pm$ 0.641  $\chi^2$ /NDF: 13288.6/28

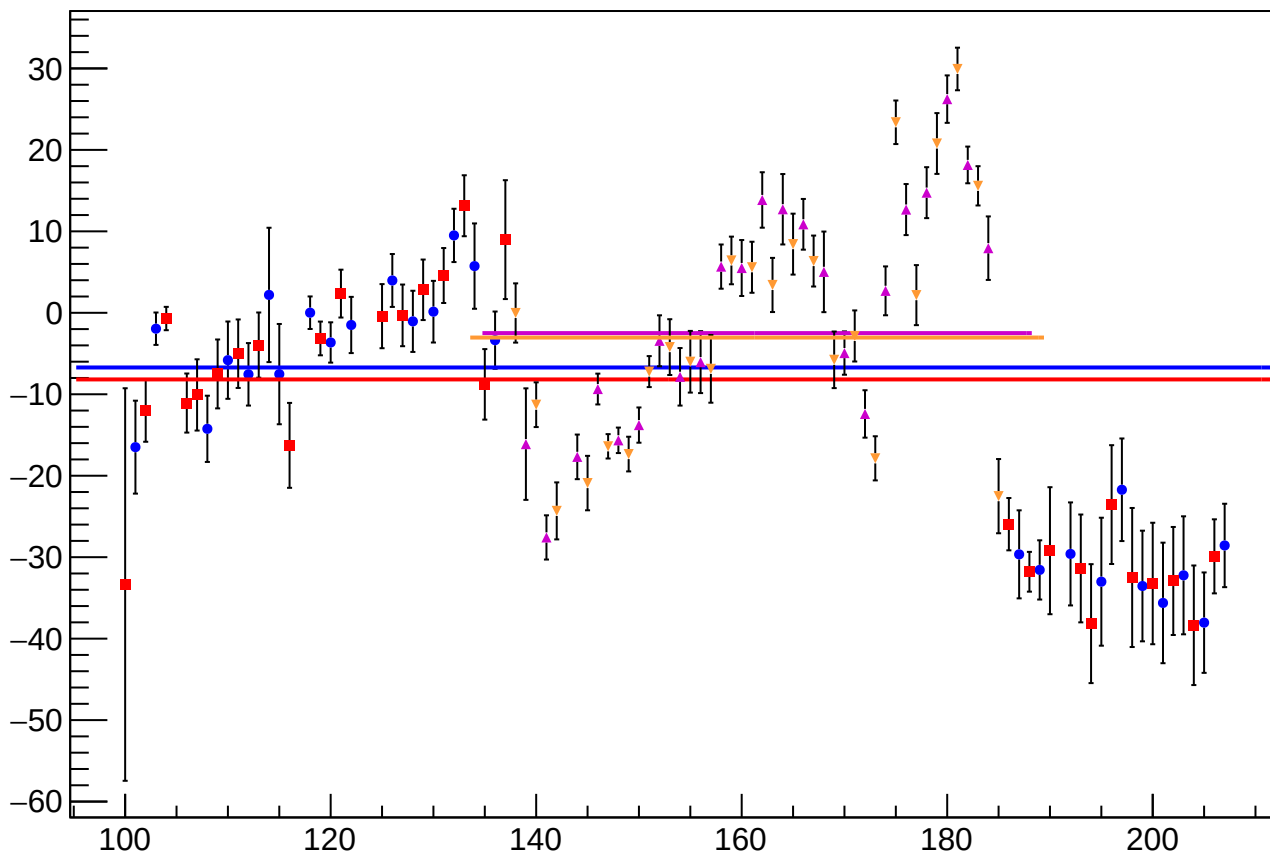
Left In: 163.927 $\pm$ 0.779  $\chi^2$ /NDF:3335.5/22

+ sign 148.926 $\pm$ 0.521  $\chi^2$ /NDF: 12243.4/49

All: 150.837 $\pm$ 0.359  $\chi^2$ /NDF: 29249.7/101

- sign 152.560 $\pm$ 0.495  $\chi^2$ /NDF: 16980.7/51

reg\_asym\_us\_avg\_atlr\_avg\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-6.711 \pm 0.758$   $\chi^2/\text{NDF}: 258.0/25$

Left Out:  $-3.038 \pm 0.578$   $\chi^2/\text{NDF}: 654.5/23$

Right Out:  $-8.178 \pm 0.682$   $\chi^2/\text{NDF}: 360.4/28$

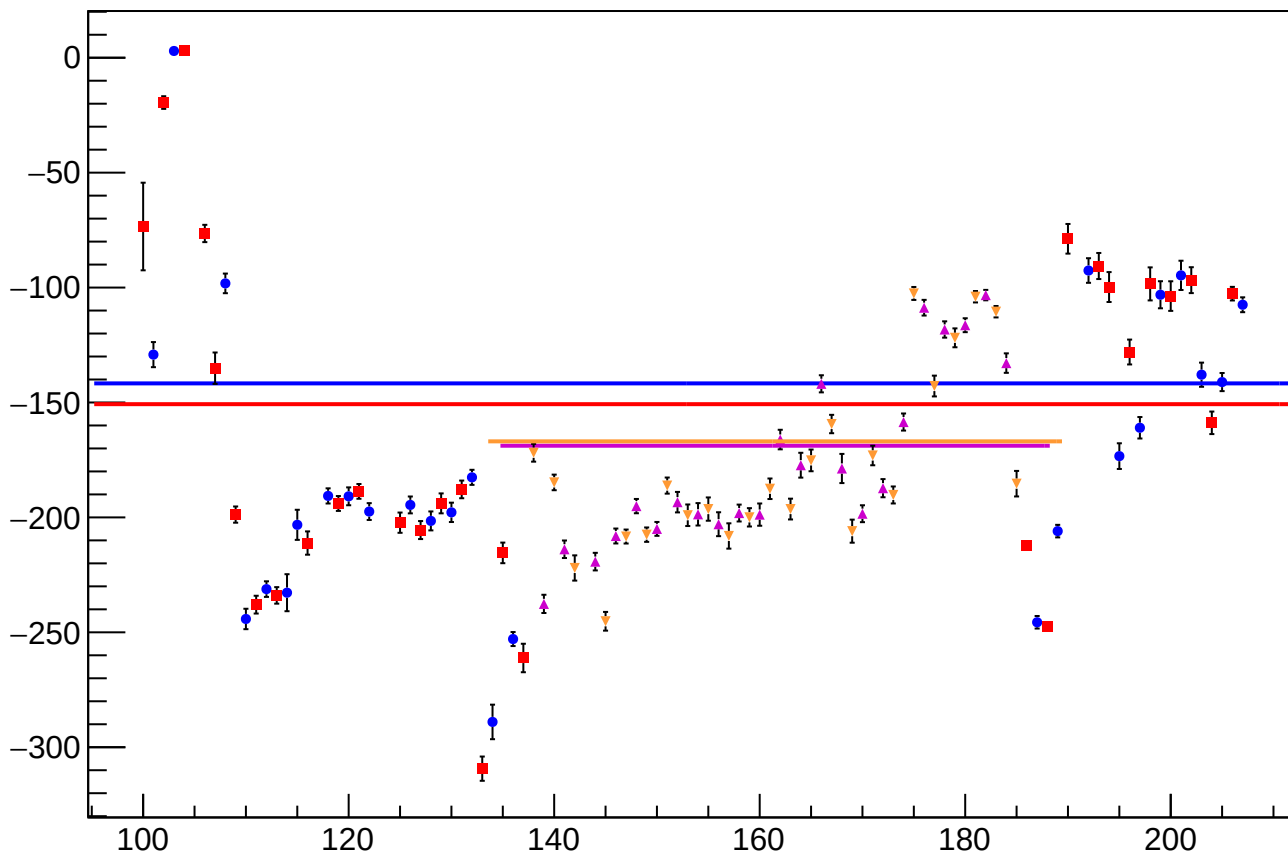
Left In:  $-2.492 \pm 0.587$   $\chi^2/\text{NDF}: 562.9/22$

+ sign  $-4.390 \pm 0.460$   $\chi^2/\text{NDF}: 927.4/49$

All:  $-4.659 \pm 0.320$   $\chi^2/\text{NDF}: 1891.3/101$

- sign  $-4.910 \pm 0.445$   $\chi^2/\text{NDF}: 963.2/51$

reg\_asym\_us\_avg\_atlr\_avg\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-141.690 \pm 0.702$   $\chi^2/\text{NDF}: 17240.7/25$

Left Out:  $-166.912 \pm 0.771$   $\chi^2/\text{NDF}: 3096.2/23$

Right Out:  $-150.733 \pm 0.621$   $\chi^2/\text{NDF}: 24023.4/28$

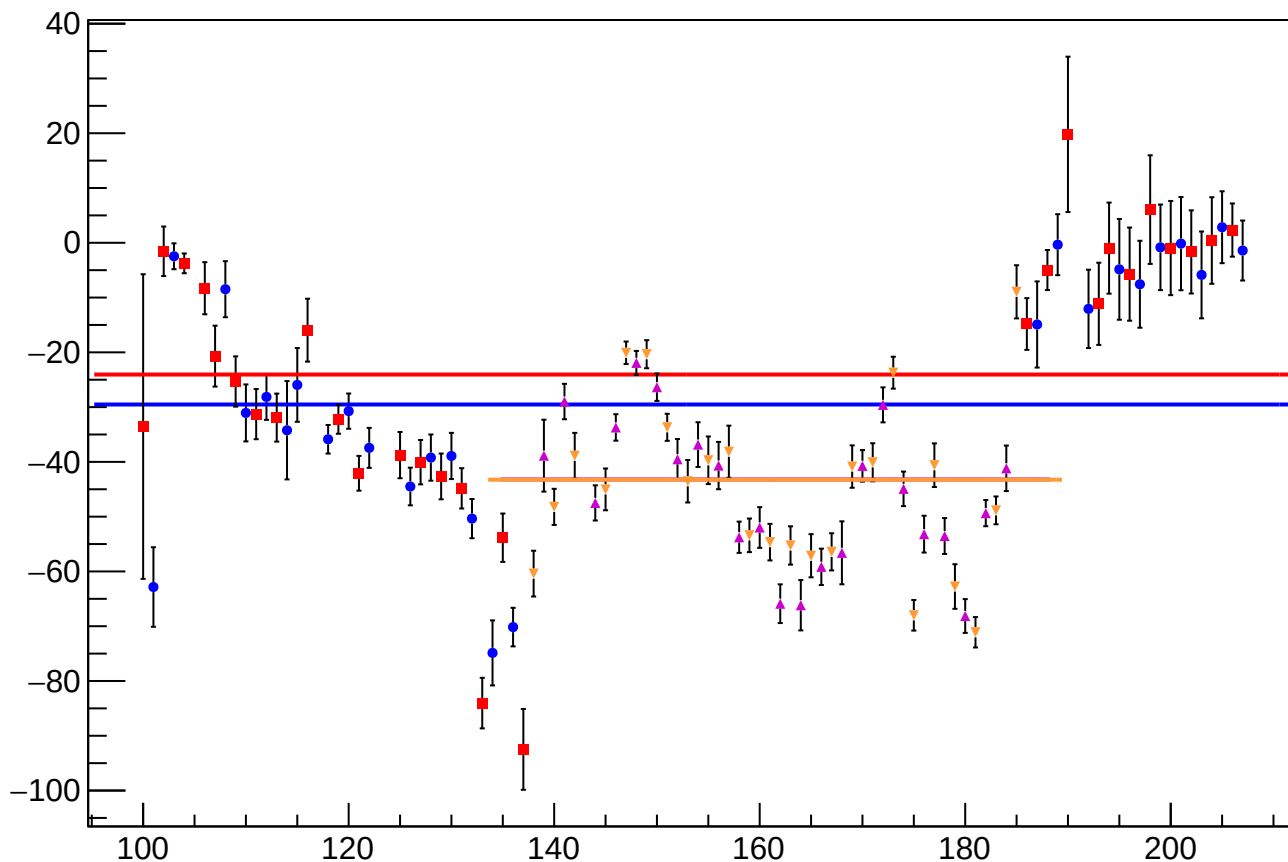
Left In:  $-168.810 \pm 0.772$   $\chi^2/\text{NDF}: 3059.5/22$

+ sign  $-153.134 \pm 0.519$   $\chi^2/\text{NDF}: 20921.8/49$

All:  $-155.649 \pm 0.354$   $\chi^2/\text{NDF}: 48381.1/101$

- sign  $-157.836 \pm 0.484$   $\chi^2/\text{NDF}: 27415.4/51$

reg\_asym\_us\_avg\_atlr\_avg\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-29.523 \pm 0.889$   $\chi^2/\text{NDF}$ : 572.4/25

Left Out:  $-43.251 \pm 0.664$   $\chi^2/\text{NDF}$ : 610.2/23

Right Out:  $-24.053 \pm 0.820$   $\chi^2/\text{NDF}$ : 712.1/28

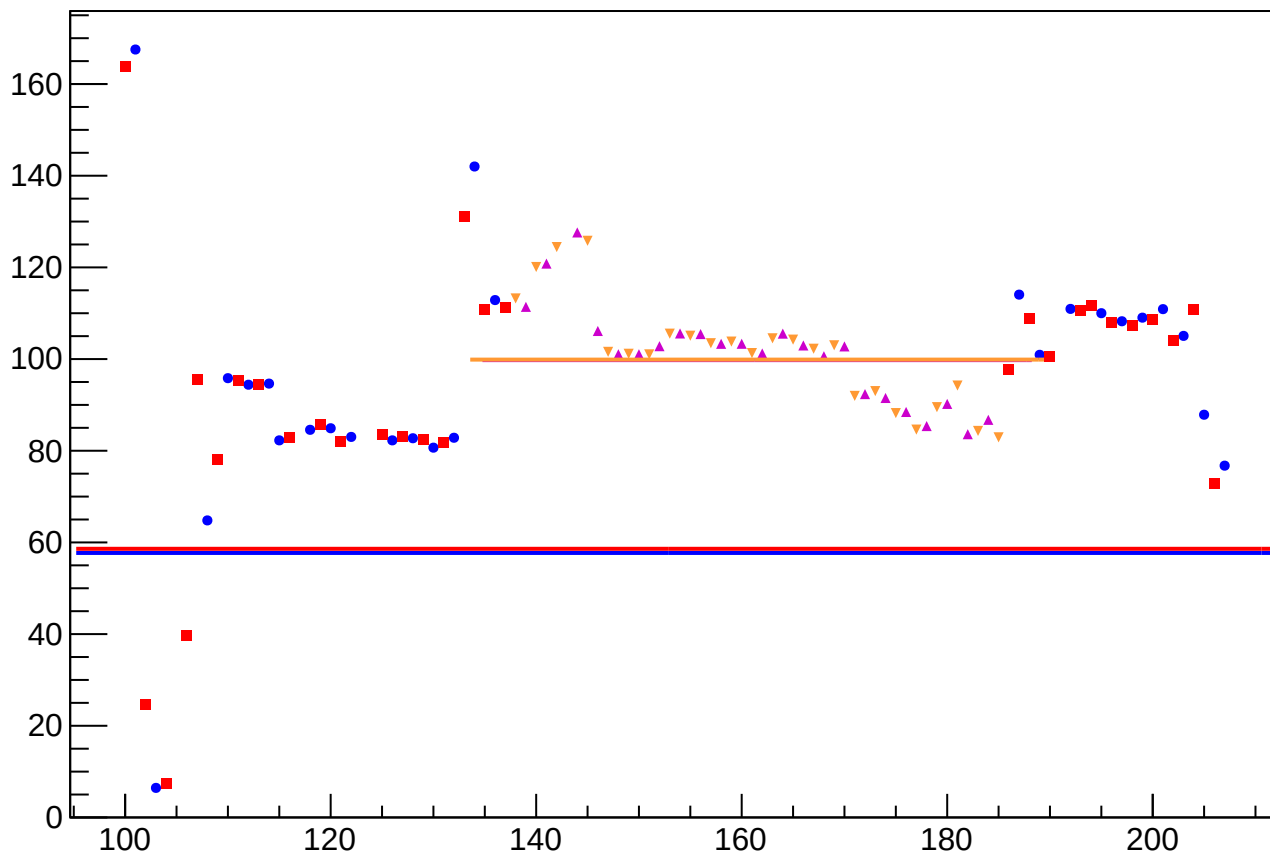
Left In:  $-43.207 \pm 0.670$   $\chi^2/\text{NDF}$ : 405.8/22

+ sign  $-38.333 \pm 0.532$   $\chi^2/\text{NDF}$ : 1335.7/49

All:  $-36.903 \pm 0.371$   $\chi^2/\text{NDF}$ : 2794.7/101

- sign  $-35.543 \pm 0.519$   $\chi^2/\text{NDF}$ : 1444.9/51

reg\_asym\_us\_avg\_atlr\_avg\_dd\_diff\_bpm12X\_slope vs Slug



Right In: 57.705+/-0.039  $\chi^2/\text{NDF}$ : 1491402.7/25

Left Out: 99.881+/-0.031  $\chi^2/\text{NDF}$ :123588.1/23

Right Out: 58.610+/-0.039  $\chi^2/\text{NDF}$ : 1288958.3/28

Left In: 99.769+/-0.031  $\chi^2/\text{NDF}$ :113501.0/22

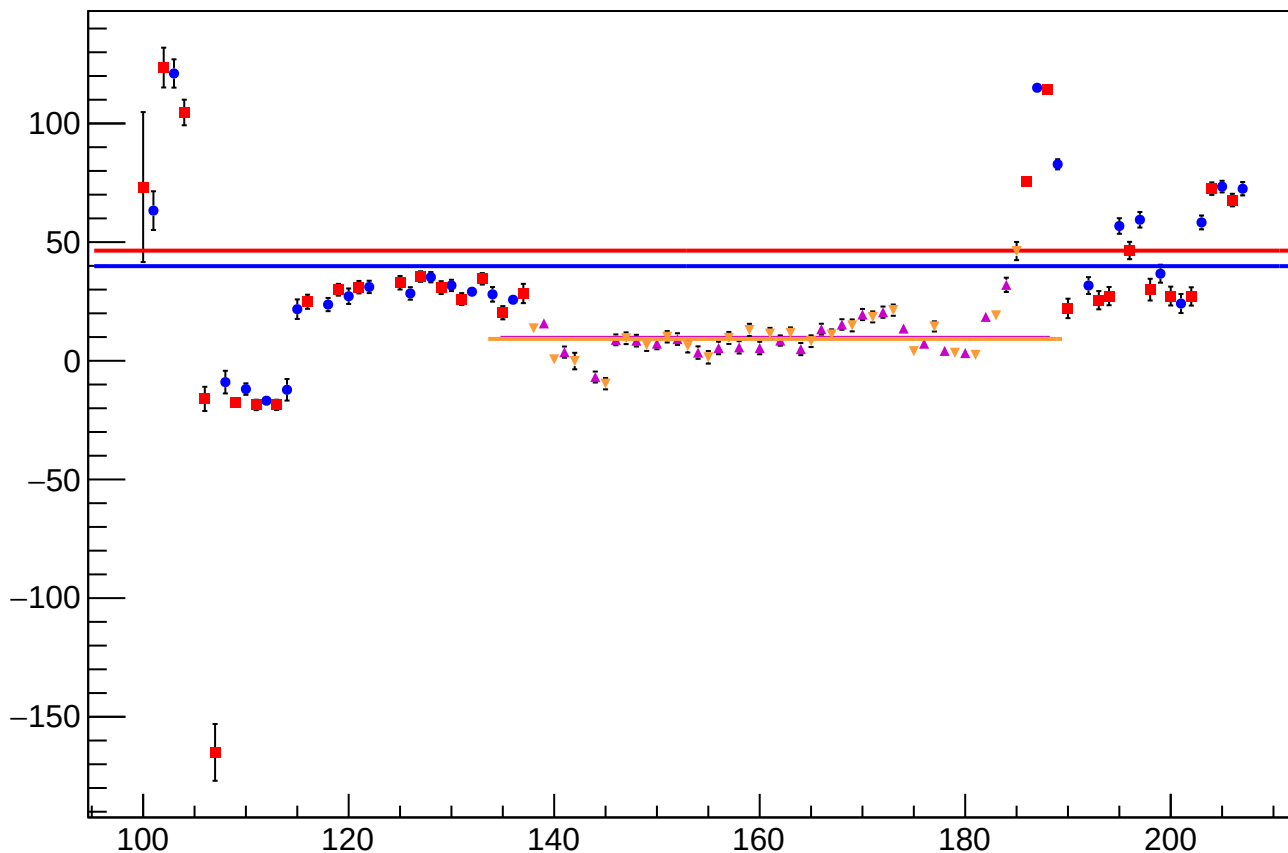
+ sign 83.879+/-0.024  $\chi^2/\text{NDF}$ : 2327928.2/49

All: 83.904+/-0.017  $\chi^2/\text{NDF}$ : 4428908.8/101

- sign 83.928+/-0.024  $\chi^2/\text{NDF}$ : 2100978.6/51



# reg\_asym\_us\_dd\_at1lr\_dd\_avg\_diff\_bpm1X\_slope vs Slug



Right In: 39.875 $\pm$ 0.542  $\chi^2$ /NDF: 4156.8/25

Left Out: 9.228 $\pm$ 0.456  $\chi^2$ /NDF:327.5/23

Right Out: 46.419 $\pm$ 0.488  $\chi^2$ /NDF: 8005.0/28

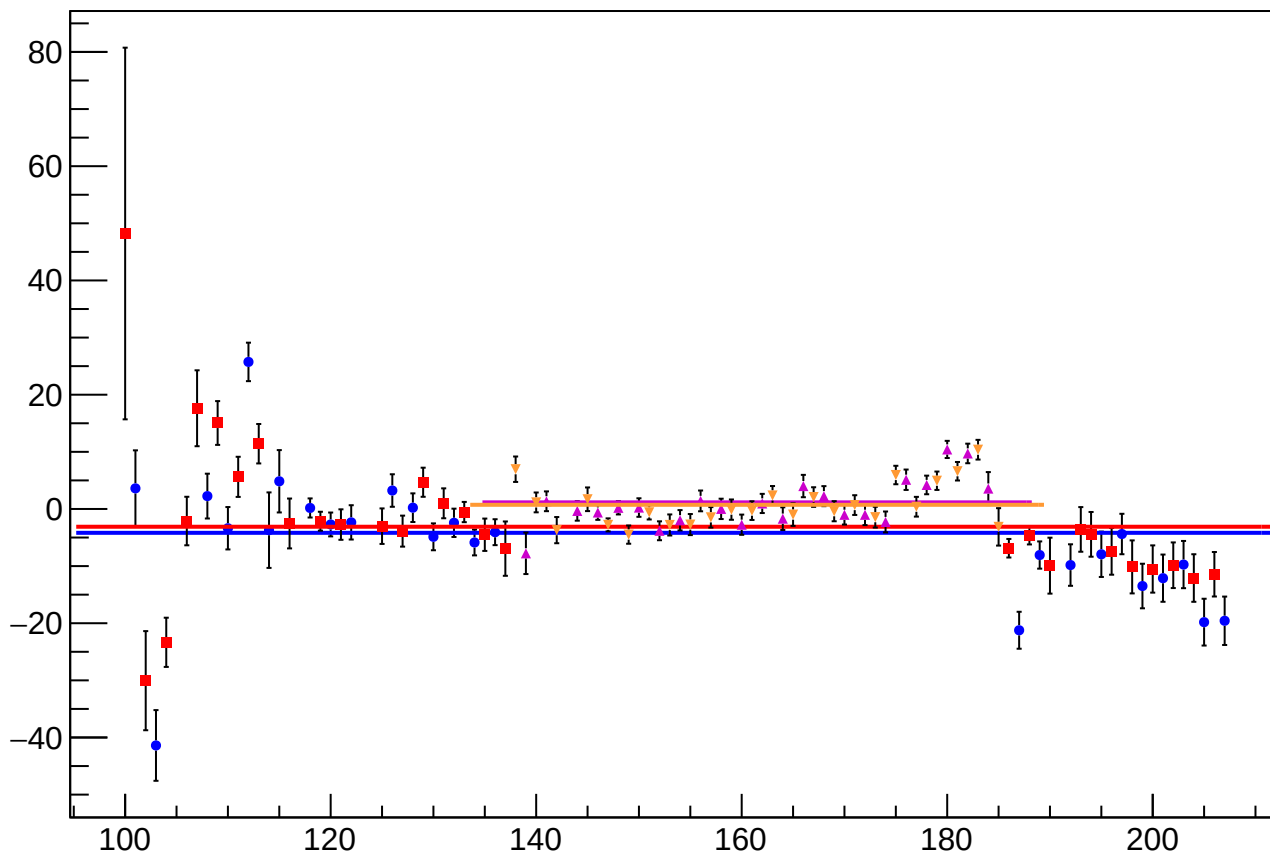
Left In: 9.676 $\pm$ 0.462  $\chi^2$ /NDF:246.7/22

+ sign 21.933 $\pm$ 0.349  $\chi^2$ /NDF: 6353.3/49

All: 24.587 $\pm$ 0.242  $\chi^2$ /NDF: 17700.6/101

- sign 27.040 $\pm$ 0.336  $\chi^2$ /NDF: 11236.1/51

reg\_asym\_us\_dd\_at1lr\_dd\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $-4.175 \pm 0.594$   $\chi^2/\text{NDF}$ : 213.3/25

Left Out:  $0.730 \pm 0.350$   $\chi^2/\text{NDF}$ : 109.7/23

Right Out:  $-3.111 \pm 0.554$   $\chi^2/\text{NDF}$ : 132.6/28

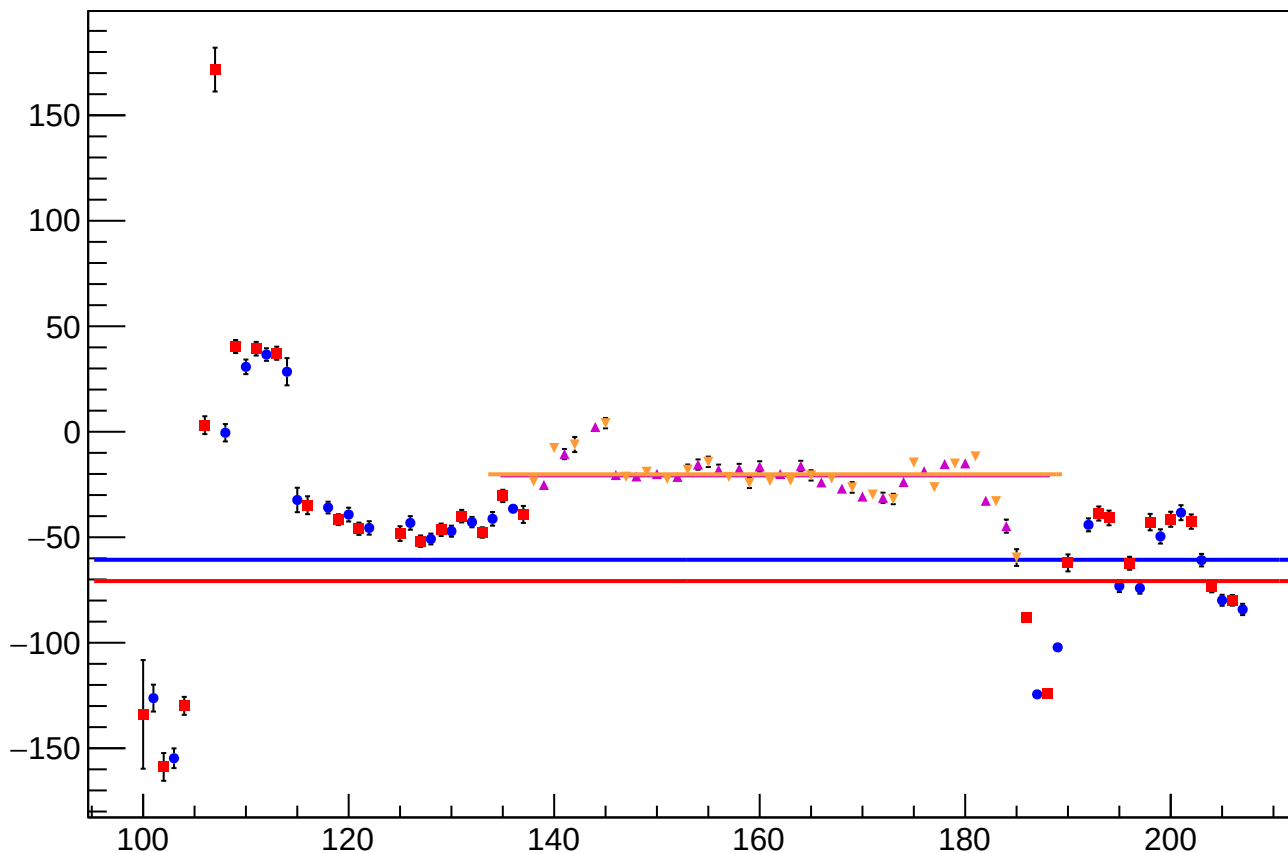
Left In:  $1.156 \pm 0.358$   $\chi^2/\text{NDF}$ : 110.4/22

+ sign  $-0.531 \pm 0.301$   $\chi^2/\text{NDF}$ : 373.7/49

All:  $-0.313 \pm 0.213$   $\chi^2/\text{NDF}$ : 659.6/101

- sign  $-0.097 \pm 0.300$   $\chi^2/\text{NDF}$ : 284.9/51

reg\_asym\_us\_dd\_at1lr\_dd\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $-60.680 \pm 0.555$   $\chi^2/\text{NDF}: 5487.4/25$

Left Out:  $-20.151 \pm 0.452$   $\chi^2/\text{NDF}: 420.3/23$

Right Out:  $-70.760 \pm 0.474$   $\chi^2/\text{NDF}: 9658.8/28$

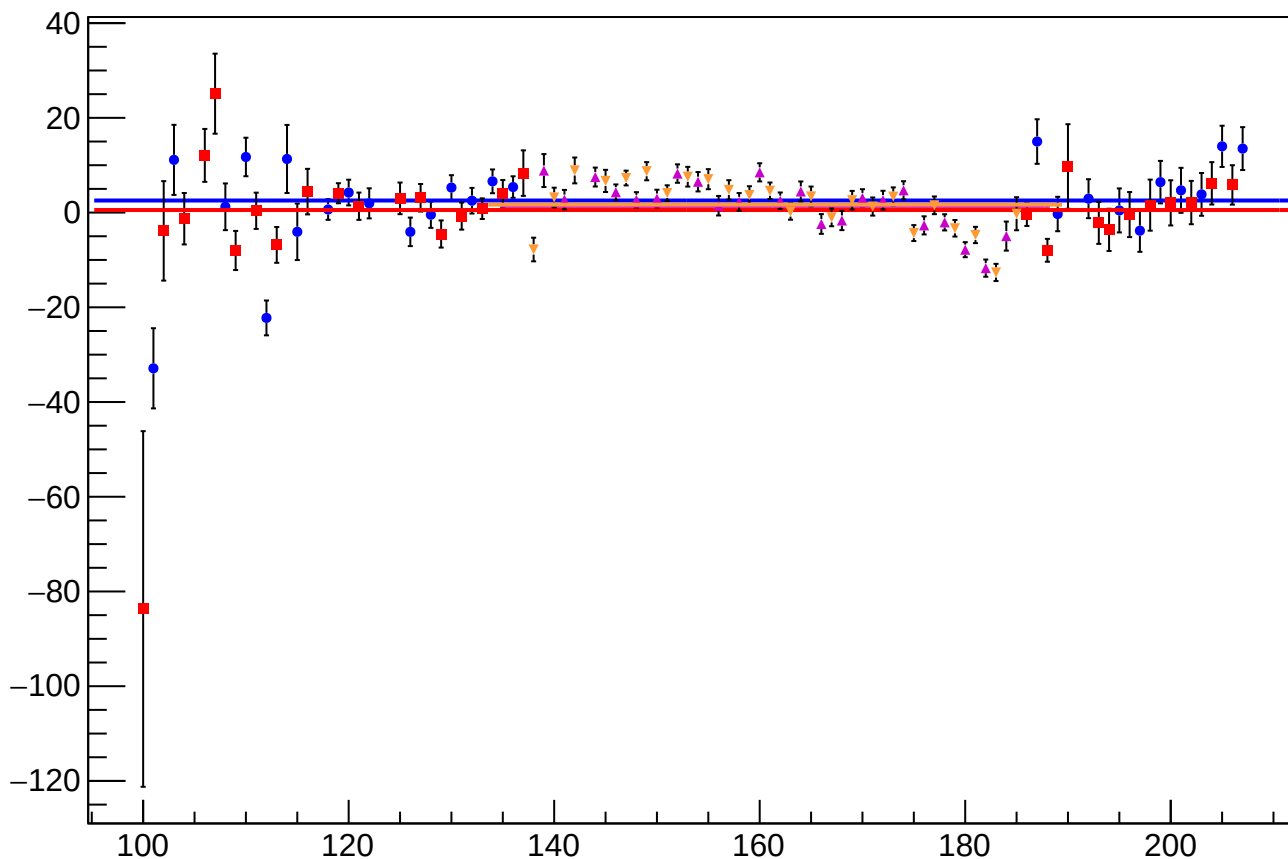
Left In:  $-20.683 \pm 0.458$   $\chi^2/\text{NDF}: 310.5/22$

+ sign  $-36.347 \pm 0.351$   $\chi^2/\text{NDF}: 9114.4/49$

All:  $-40.872 \pm 0.240$   $\chi^2/\text{NDF}: 25178.6/101$

- sign  $-44.861 \pm 0.329$   $\chi^2/\text{NDF}: 15750.7/51$

reg\_asym\_us\_dd\_at1lr\_dd\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $2.547 \pm 0.691$   $\chi^2/\text{NDF}$ : 108.3/25

Left Out:  $1.671 \pm 0.395$   $\chi^2/\text{NDF}$ : 178.0/23

Right Out:  $0.538 \pm 0.668$   $\chi^2/\text{NDF}$ : 56.8/28

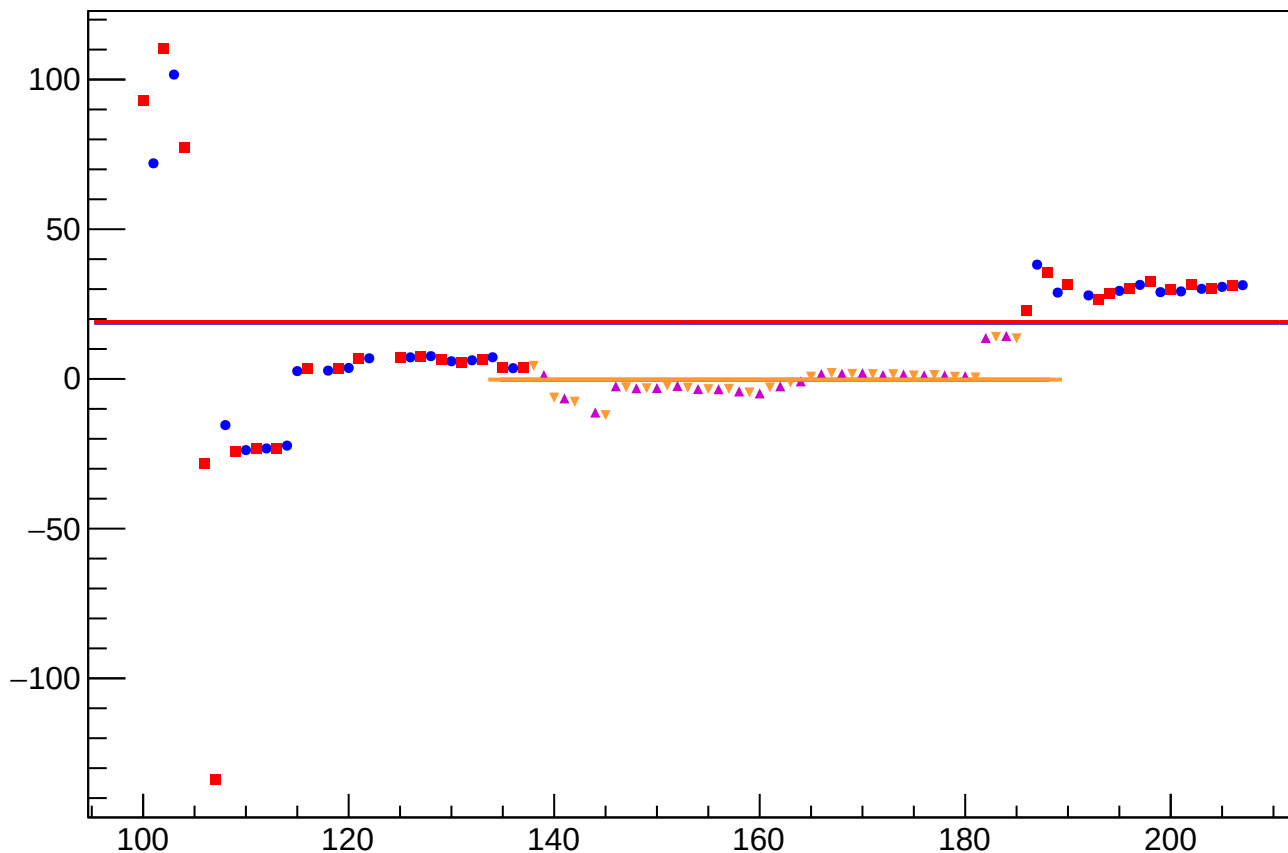
Left In:  $1.428 \pm 0.403$   $\chi^2/\text{NDF}$ : 162.8/22

+ sign  $1.886 \pm 0.343$   $\chi^2/\text{NDF}$ : 287.5/49

All:  $1.541 \pm 0.243$   $\chi^2/\text{NDF}$ : 510.4/101

- sign  $1.191 \pm 0.345$   $\chi^2/\text{NDF}$ : 220.9/51

reg\_asym\_us\_dd\_at1lr\_dd\_avg\_diff\_bpm12X\_slope vs Slug



Right In: 18.769 $\pm$ 0.035  $\chi^2$ /NDF: 413533.2/25

Left Out: -0.229 $\pm$ 0.018  $\chi^2$ /NDF: 80976.2/23

Right Out: 19.000 $\pm$ 0.034  $\chi^2$ /NDF: 588859.9/28

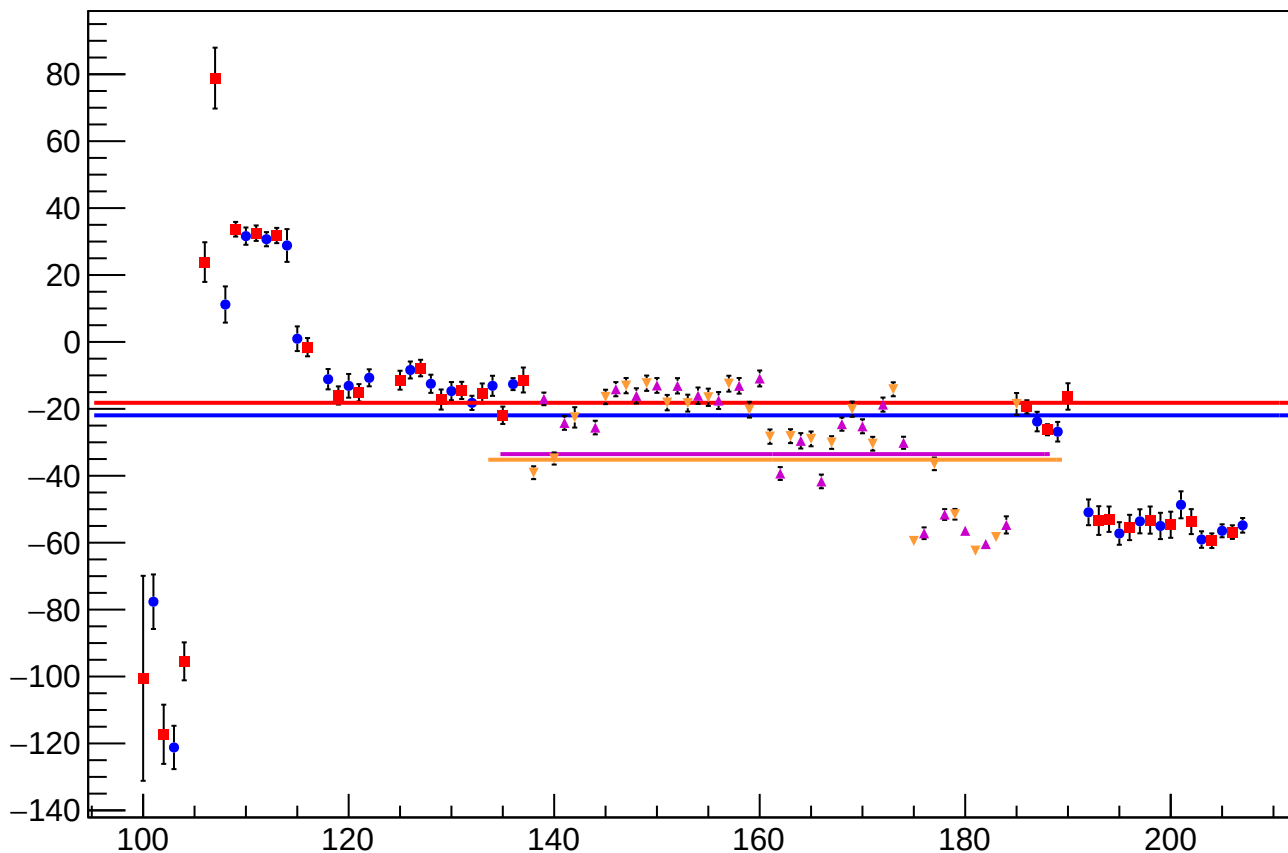
Left In: -0.270 $\pm$ 0.018  $\chi^2$ /NDF: 72783.3/22

+ sign 3.693 $\pm$ 0.016  $\chi^2$ /NDF: 734056.4/49

All: 3.757 $\pm$ 0.011  $\chi^2$ /NDF: 1646291.5/101

- sign 3.821 $\pm$ 0.016  $\chi^2$ /NDF: 912202.0/51

reg\_asym\_us\_dd\_at1lr\_dd\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-21.942 \pm 0.559$   $\chi^2/\text{NDF}$ : 2766.4/25

Left Out:  $-35.201 \pm 0.408$   $\chi^2/\text{NDF}$ : 1850.7/23

Right Out:  $-18.192 \pm 0.534$   $\chi^2/\text{NDF}$ : 3314.3/28

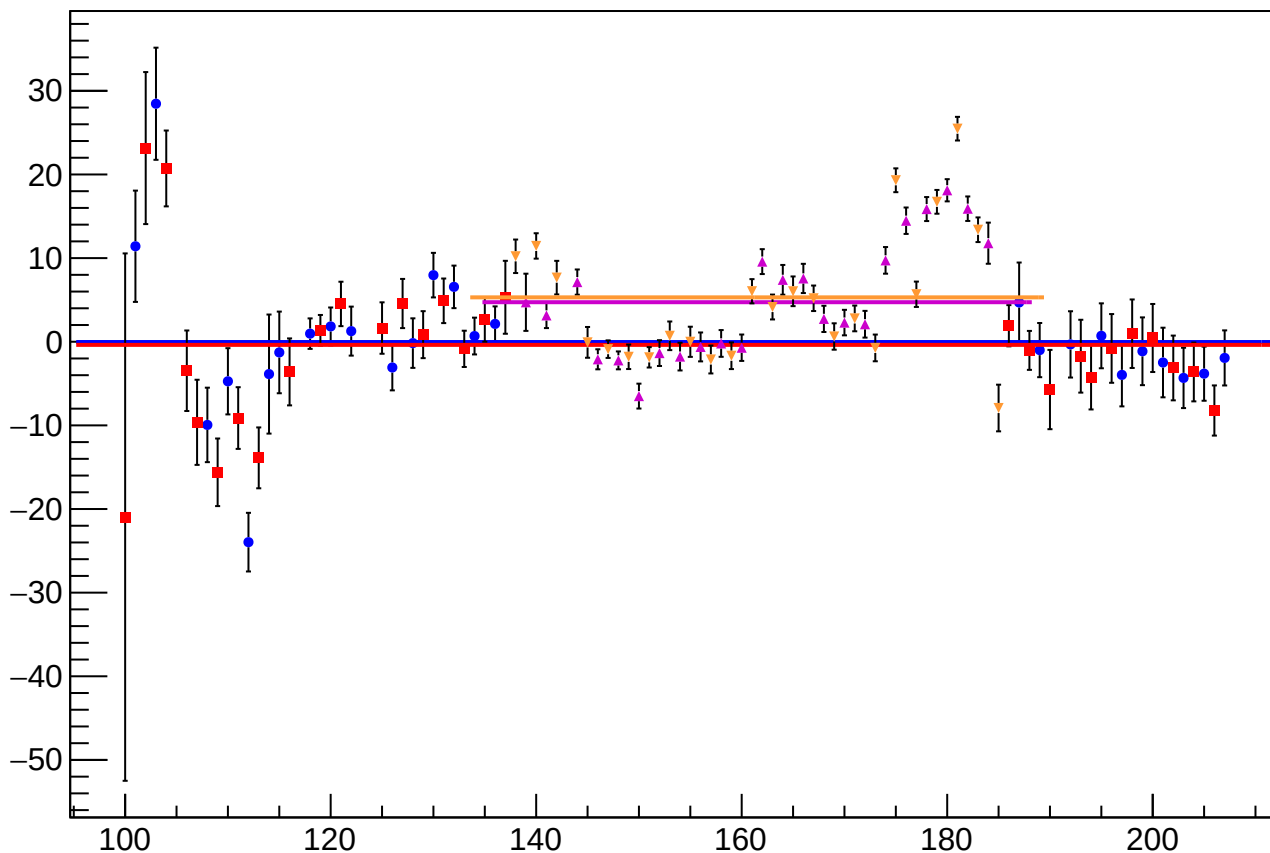
Left In:  $-33.528 \pm 0.414$   $\chi^2/\text{NDF}$ : 1806.1/22

+ sign  $-30.585 \pm 0.330$   $\chi^2/\text{NDF}$ : 4984.5/49

All:  $-29.171 \pm 0.232$   $\chi^2/\text{NDF}$ : 10656.9/101

- sign  $-27.777 \pm 0.327$   $\chi^2/\text{NDF}$ : 5635.8/51

reg\_asym\_us\_dd\_at1lr\_dd\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-0.035 \pm 0.618$   $\chi^2/\text{NDF}$ : 99.4/25

Left Out:  $5.307 \pm 0.315$   $\chi^2/\text{NDF}$ : 624.4/23

Right Out:  $-0.373 \pm 0.608$   $\chi^2/\text{NDF}$ : 93.1/28

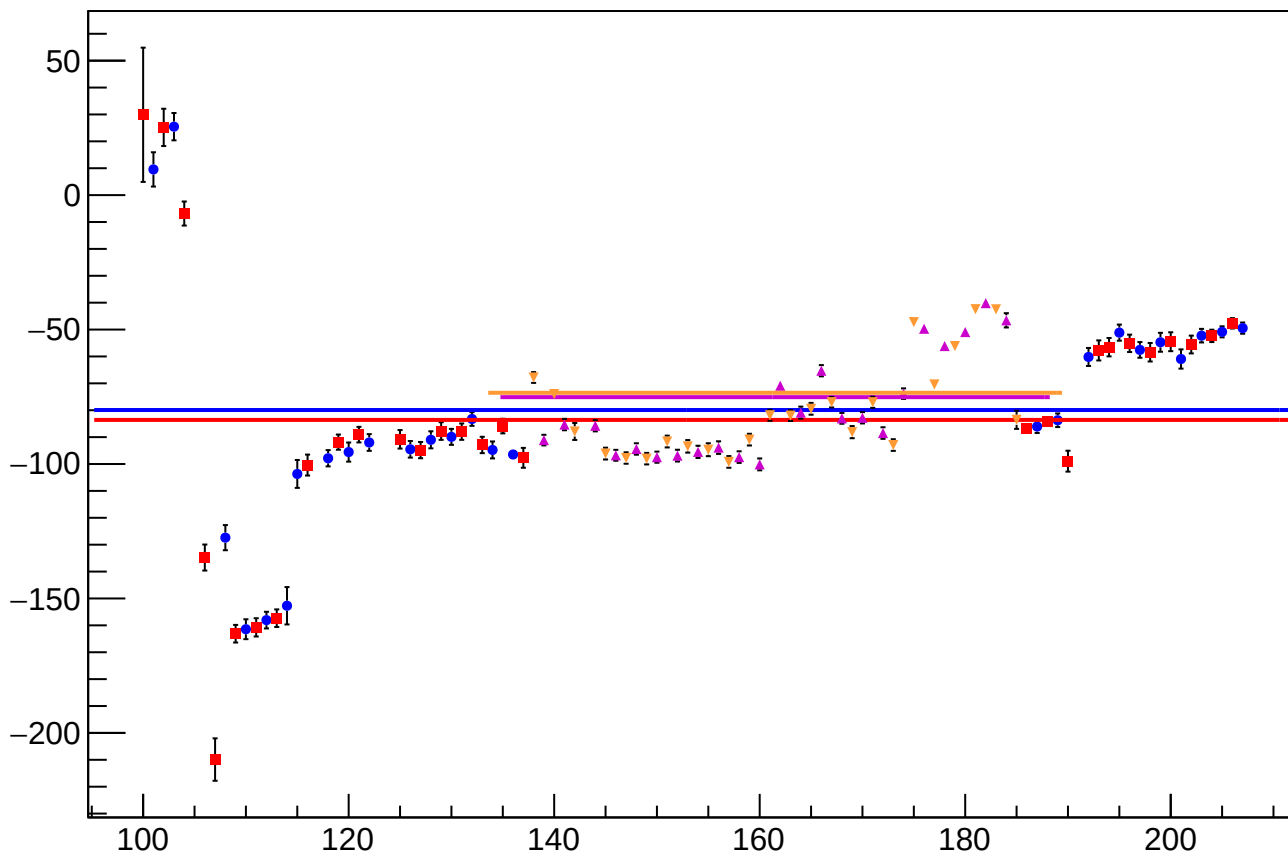
Left In:  $4.727 \pm 0.321$   $\chi^2/\text{NDF}$ : 496.0/22

+ sign  $4.207 \pm 0.281$   $\chi^2/\text{NDF}$ : 783.0/49

All:  $3.914 \pm 0.200$   $\chi^2/\text{NDF}$ : 1429.4/101

- sign  $3.614 \pm 0.284$   $\chi^2/\text{NDF}$ : 644.1/51

reg\_asym\_us\_dd\_at1lr\_dd\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-79.920 \pm 0.583$   $\chi^2/\text{NDF}$ : 3010.2/25

Left Out:  $-73.506 \pm 0.405$   $\chi^2/\text{NDF}$ : 2392.0/23

Right Out:  $-83.600 \pm 0.541$   $\chi^2/\text{NDF}$ : 3548.6/28

Left In:  $-75.133 \pm 0.410$   $\chi^2/\text{NDF}$ : 2361.9/22

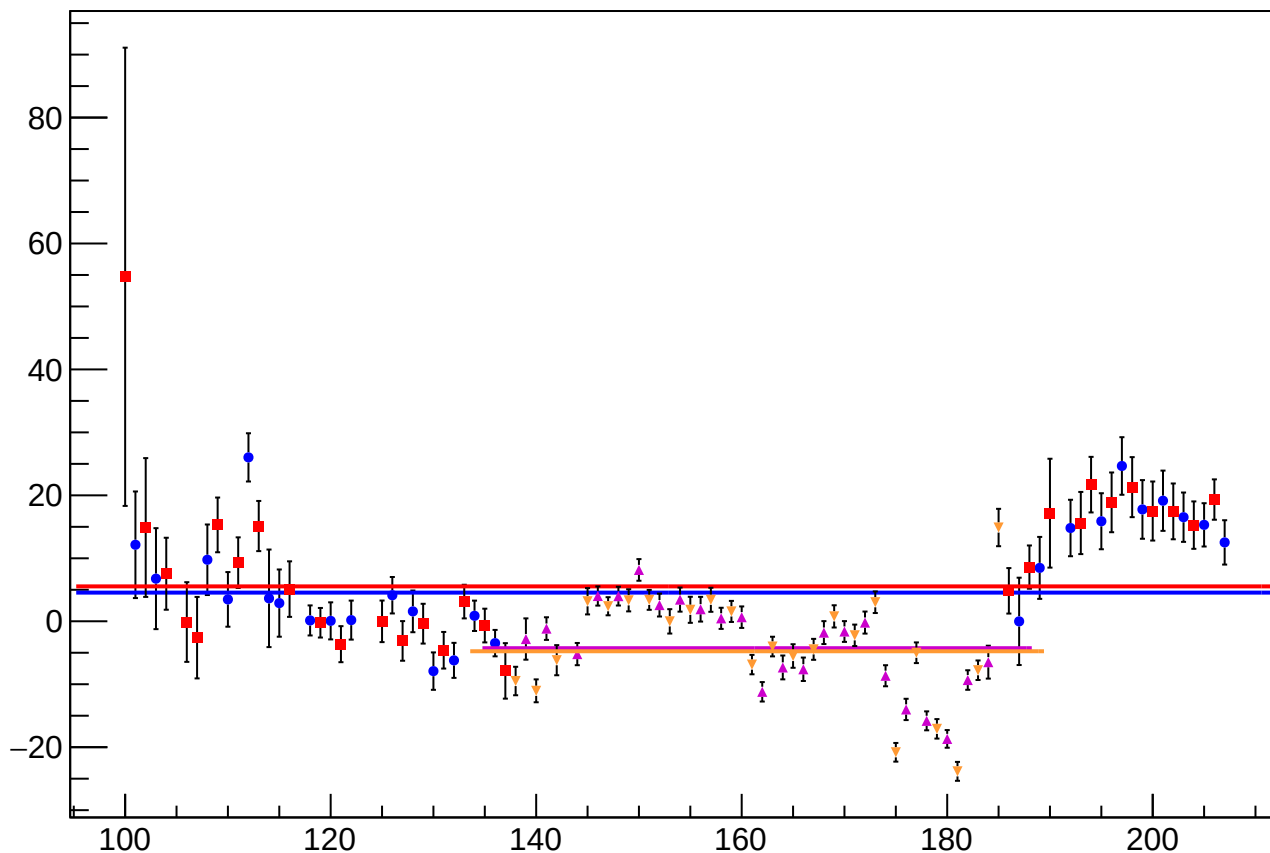
+ sign  $-75.596 \pm 0.333$   $\chi^2/\text{NDF}$ : 5483.8/49

All:  $-76.933 \pm 0.233$   $\chi^2/\text{NDF}$ : 11581.7/101

- sign  $-78.223 \pm 0.327$   $\chi^2/\text{NDF}$ : 6066.1/51



reg\_asym\_us\_dd\_at1lr\_dd\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $4.552 \pm 0.705$   $\chi^2/\text{NDF}$ : 165.2/25

Left Out:  $-4.762 \pm 0.355$   $\chi^2/\text{NDF}$ : 576.9/23

Right Out:  $5.541 \pm 0.710$   $\chi^2/\text{NDF}$ : 152.7/28

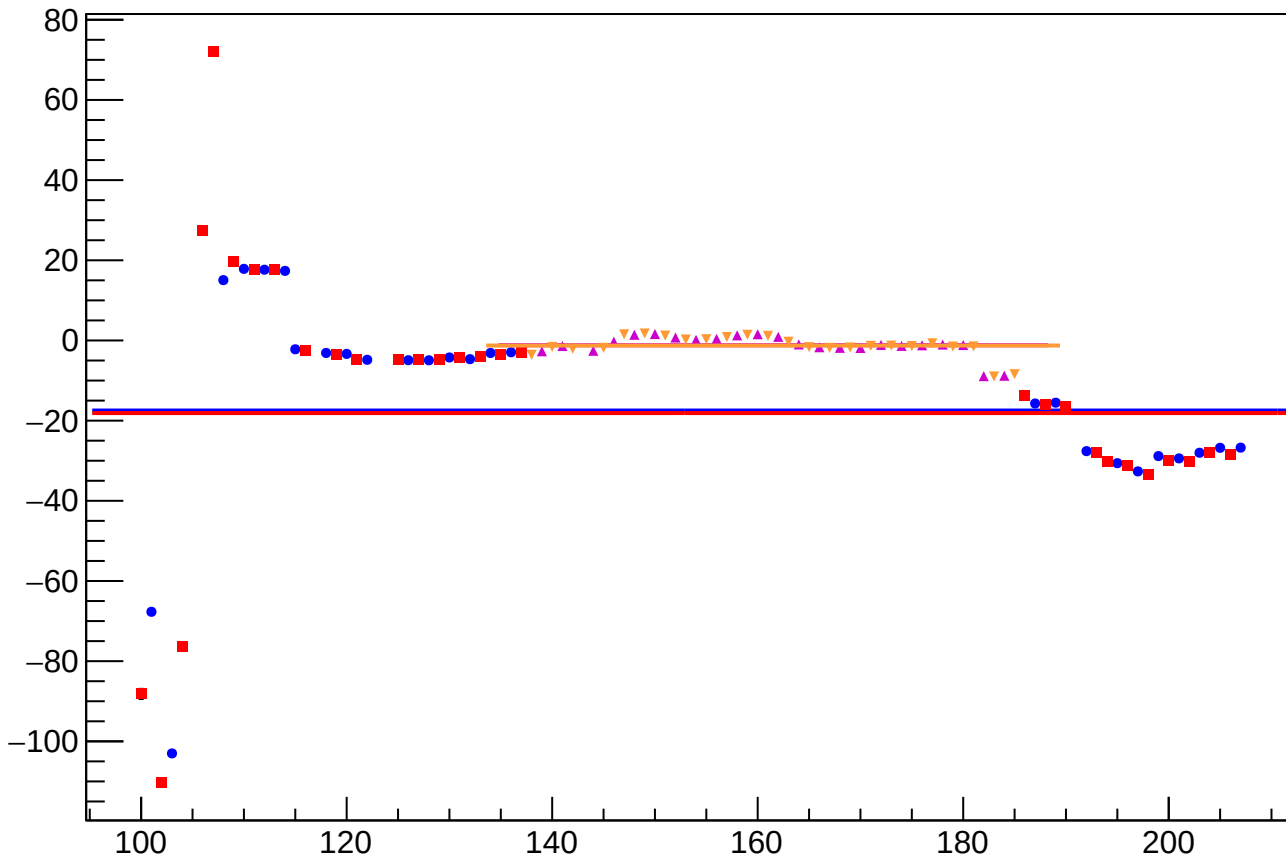
Left In:  $-4.278 \pm 0.361$   $\chi^2/\text{NDF}$ : 424.1/22

+ sign  $-2.879 \pm 0.317$   $\chi^2/\text{NDF}$ : 881.5/49

All:  $-2.575 \pm 0.226$   $\chi^2/\text{NDF}$ : 1612.1/101

- sign  $-2.262 \pm 0.322$   $\chi^2/\text{NDF}$ : 728.8/51

reg\_asym\_us\_dd\_at1lr\_dd\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $-17.478 \pm 0.034$   $\chi^2/\text{NDF}$ : 365668.9/25

Left Out:  $-1.267 \pm 0.016$   $\chi^2/\text{NDF}$ : 25091.1/23

Right Out:  $-18.106 \pm 0.035$   $\chi^2/\text{NDF}$ : 462512.5/28

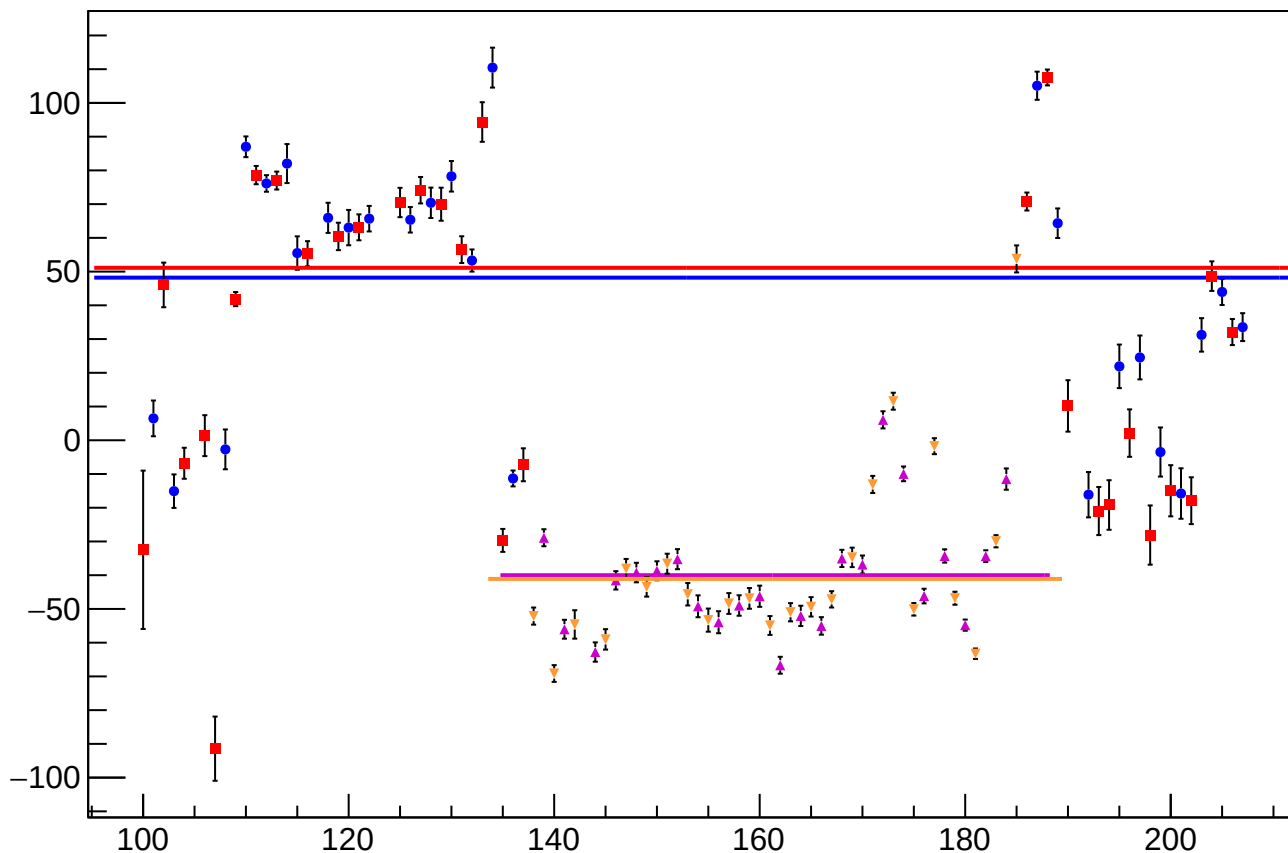
Left In:  $-1.180 \pm 0.016$   $\chi^2/\text{NDF}$ : 24754.1/22

+ sign  $-4.136 \pm 0.014$   $\chi^2/\text{NDF}$ : 575535.4/49

All:  $-4.147 \pm 0.010$   $\chi^2/\text{NDF}$ : 1260901.4/101

- sign  $-4.159 \pm 0.014$   $\chi^2/\text{NDF}$ : 685364.7/51

# reg\_asym\_us\_dd\_at2lr\_dd\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $48.208 \pm 0.829$   $\chi^2/\text{NDF}$ : 1979.5/25

Left Out:  $-41.097 \pm 0.517$   $\chi^2/\text{NDF}$ : 1948.2/23

Right Out:  $51.124 \pm 0.753$   $\chi^2/\text{NDF}$ : 2711.5/28

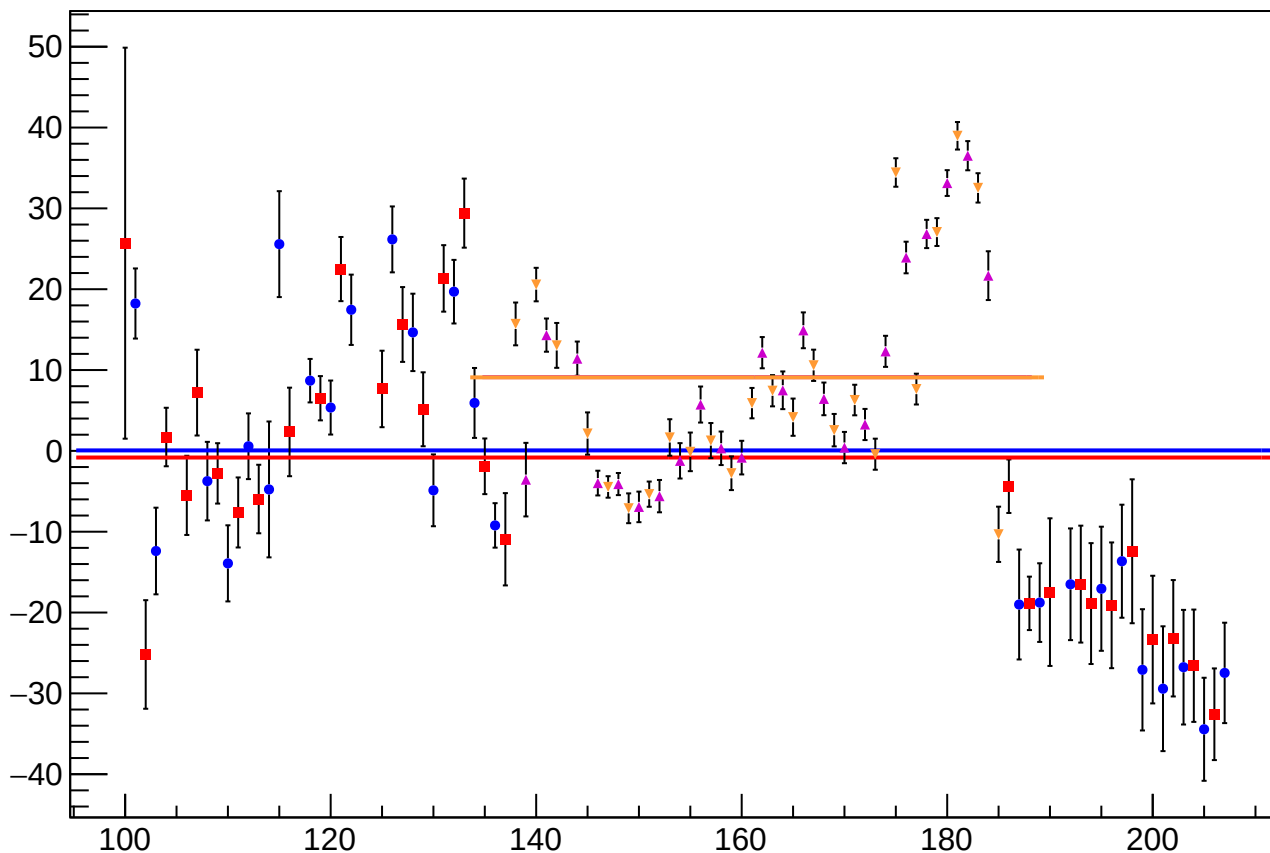
Left In:  $-40.000 \pm 0.524$   $\chi^2/\text{NDF}$ : 1031.8/22

+ sign  $-16.060 \pm 0.439$   $\chi^2/\text{NDF}$ : 12281.4/49

All:  $-13.097 \pm 0.307$   $\chi^2/\text{NDF}$ : 25977.2/101

- sign  $-10.248 \pm 0.430$   $\chi^2/\text{NDF}$ : 13606.4/51

reg\_asym\_us\_dd\_at2lr\_dd\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $0.058 \pm 0.918$   $\chi^2/\text{NDF}$ : 294.7/25

Left Out:  $9.094 \pm 0.401$   $\chi^2/\text{NDF}$ : 1253.7/23

Right Out:  $-0.822 \pm 0.876$   $\chi^2/\text{NDF}$ : 279.1/28

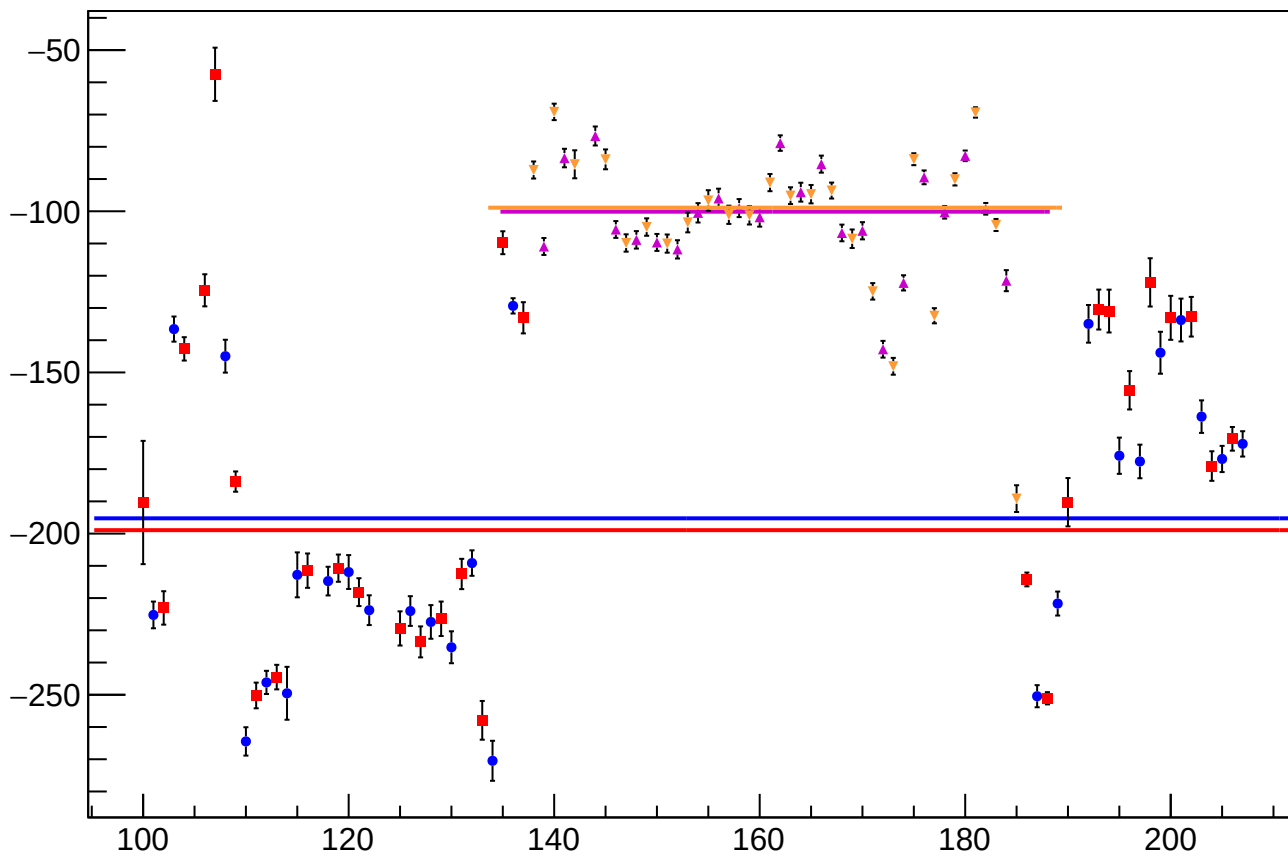
Left In:  $9.121 \pm 0.409$   $\chi^2/\text{NDF}$ : 1051.8/22

+ sign  $7.645 \pm 0.368$   $\chi^2/\text{NDF}$ : 1629.7/49

All:  $7.494 \pm 0.261$   $\chi^2/\text{NDF}$ : 3066.8/101

- sign  $7.340 \pm 0.371$   $\chi^2/\text{NDF}$ : 1436.8/51

reg\_asym\_us\_dd\_at2lr\_dd\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $-195.260 \pm 0.871$   $\chi^2/\text{NDF}$ : 2694.0/25

Left Out:  $-98.883 \pm 0.514$   $\chi^2/\text{NDF}$ : 1824.5/23

Right Out:  $-198.932 \pm 0.781$   $\chi^2/\text{NDF}$ : 3657.5/28

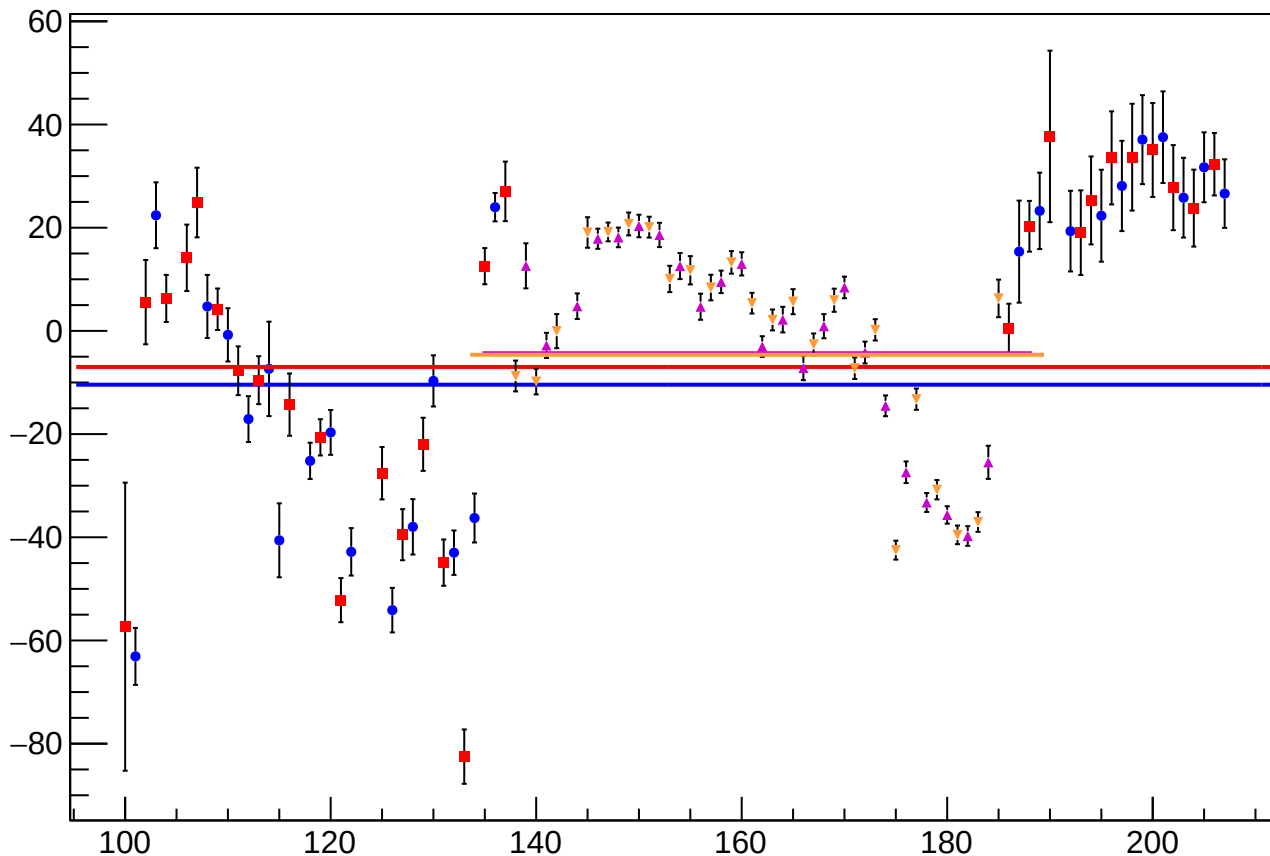
Left In:  $-100.127 \pm 0.520$   $\chi^2/\text{NDF}$ : 823.2/22

+ sign  $-123.784 \pm 0.443$   $\chi^2/\text{NDF}$ : 13597.2/49

All:  $-127.195 \pm 0.310$   $\chi^2/\text{NDF}$ : 29272.8/101

- sign  $-130.455 \pm 0.433$   $\chi^2/\text{NDF}$ : 15559.5/51

reg\_asym\_us\_dd\_at2lr\_dd\_avg\_diff\_bpm4eY\_slope vs Slug



Right In: -10.428+/-1.053  $\chi^2/\text{NDF}$ : 816.8/25

Left Out: -4.618+/-0.451  $\chi^2/\text{NDF}$ : 2078.3/23

Right Out: -6.983+/-1.026  $\chi^2/\text{NDF}$ : 792.8/28

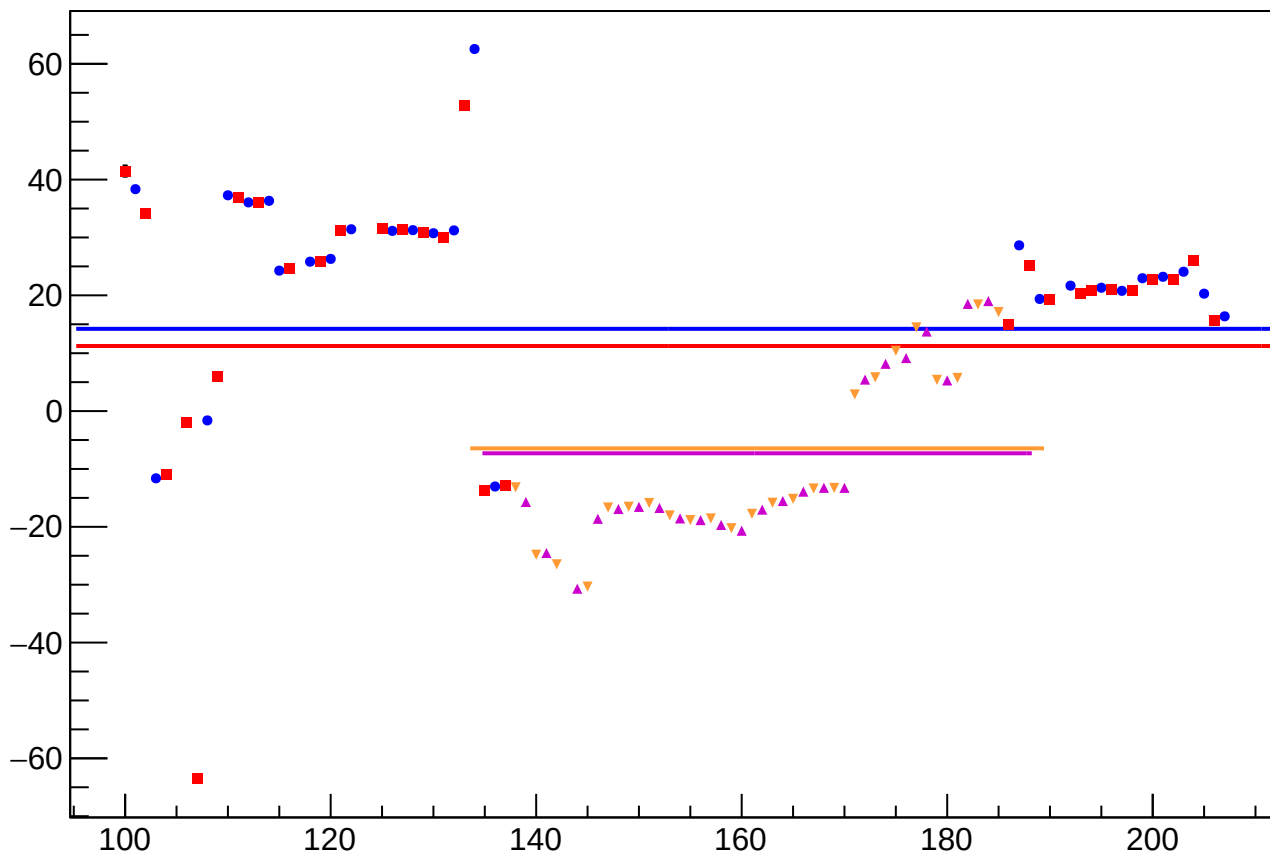
Left In: -4.328+/-0.459  $\chi^2/\text{NDF}$ : 1854.2/22

+ sign -5.520+/-0.415  $\chi^2/\text{NDF}$ : 2920.8/49

All: -5.149+/-0.295  $\chi^2/\text{NDF}$ : 5575.0/101

- sign -4.771+/-0.419  $\chi^2/\text{NDF}$ : 2652.6/51

reg\_asym\_us\_dd\_at2lr\_dd\_avg\_diff\_bpm12X\_slope vs Slug



Right In: 14.214+/-0.052  $\chi^2$ /NDF: 175127.8/25

Left Out: -6.437+/-0.020  $\chi^2$ /NDF: 496714.6/23

Right Out: 11.243+/-0.051  $\chi^2$ /NDF: 177898.6/28

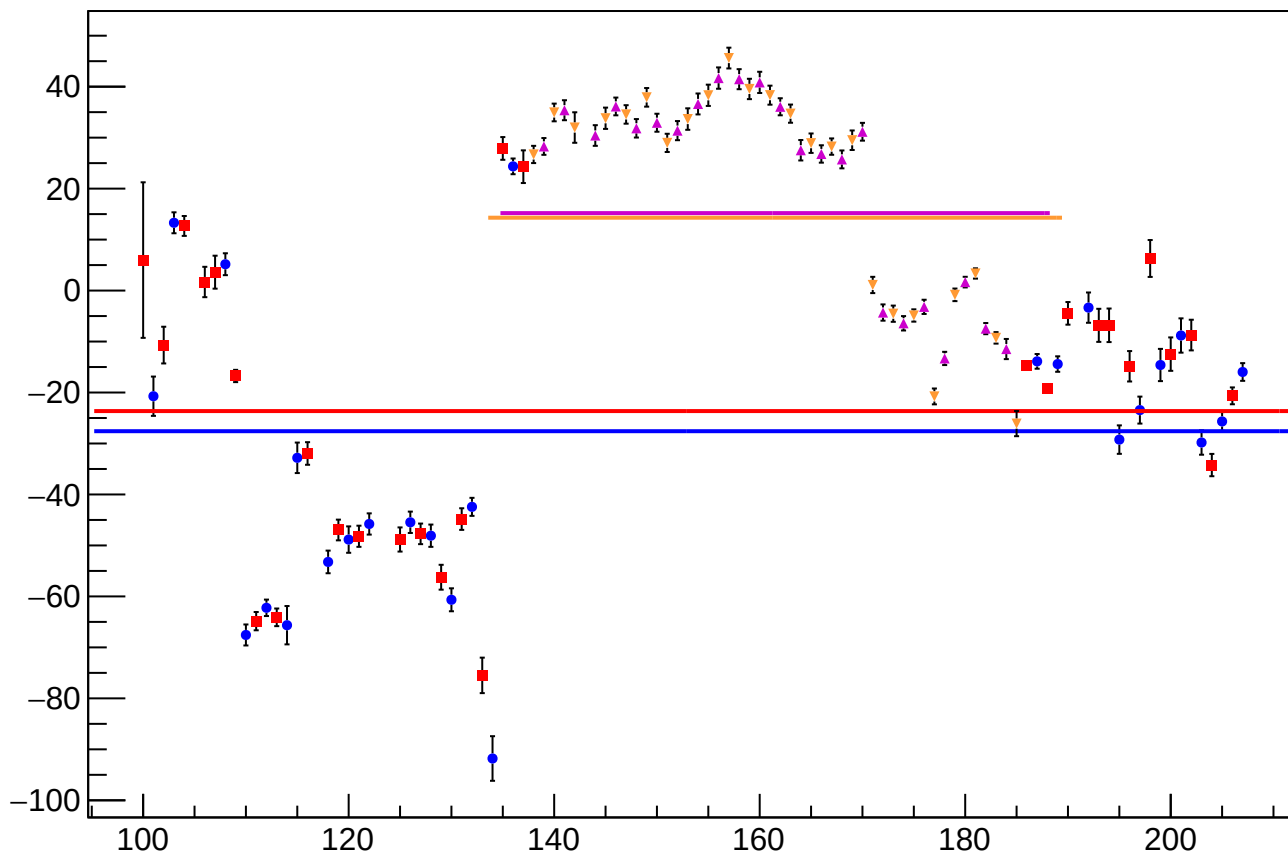
Left In: -7.292+/-0.020  $\chi^2$ /NDF: 488261.5/22

+ sign -3.686+/-0.019  $\chi^2$ /NDF: 811188.5/49

All: -4.203+/-0.013  $\chi^2$ /NDF: 1594395.7/101

- sign -4.723+/-0.019  $\chi^2$ /NDF: 781687.8/51

reg\_asym\_us\_dd\_at2lr\_dd\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-27.588 \pm 0.422$   $\chi^2/\text{NDF}$ : 3980.6/25

Left Out:  $14.295 \pm 0.335$   $\chi^2/\text{NDF}$ : 3726.3/23

Right Out:  $-23.641 \pm 0.361$   $\chi^2/\text{NDF}$ : 3800.2/28

Left In:  $15.194 \pm 0.339$   $\chi^2/\text{NDF}$ : 3406.6/22

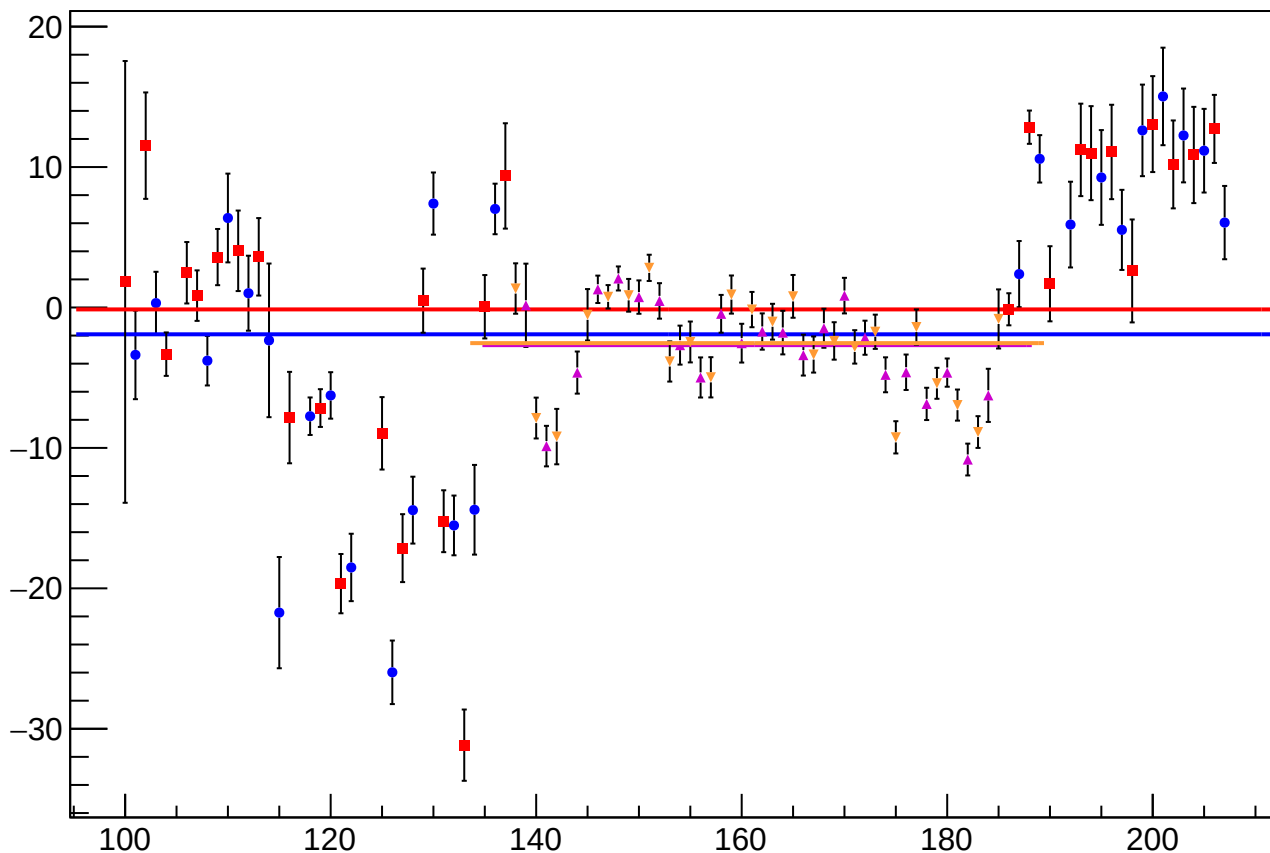
+ sign  $-1.922 \pm 0.262$   $\chi^2/\text{NDF}$ : 13752.0/49

All:  $-2.496 \pm 0.180$   $\chi^2/\text{NDF}$ : 27102.9/101

- sign  $-3.006 \pm 0.247$   $\chi^2/\text{NDF}$ : 13341.9/51



reg\_asym\_us\_dd\_at2lr\_dd\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-1.910 \pm 0.464$   $\chi^2/\text{NDF}$ : 521.2/25

Left Out:  $-2.538 \pm 0.259$   $\chi^2/\text{NDF}$ : 198.4/23

Right Out:  $-0.137 \pm 0.411$   $\chi^2/\text{NDF}$ : 624.6/28

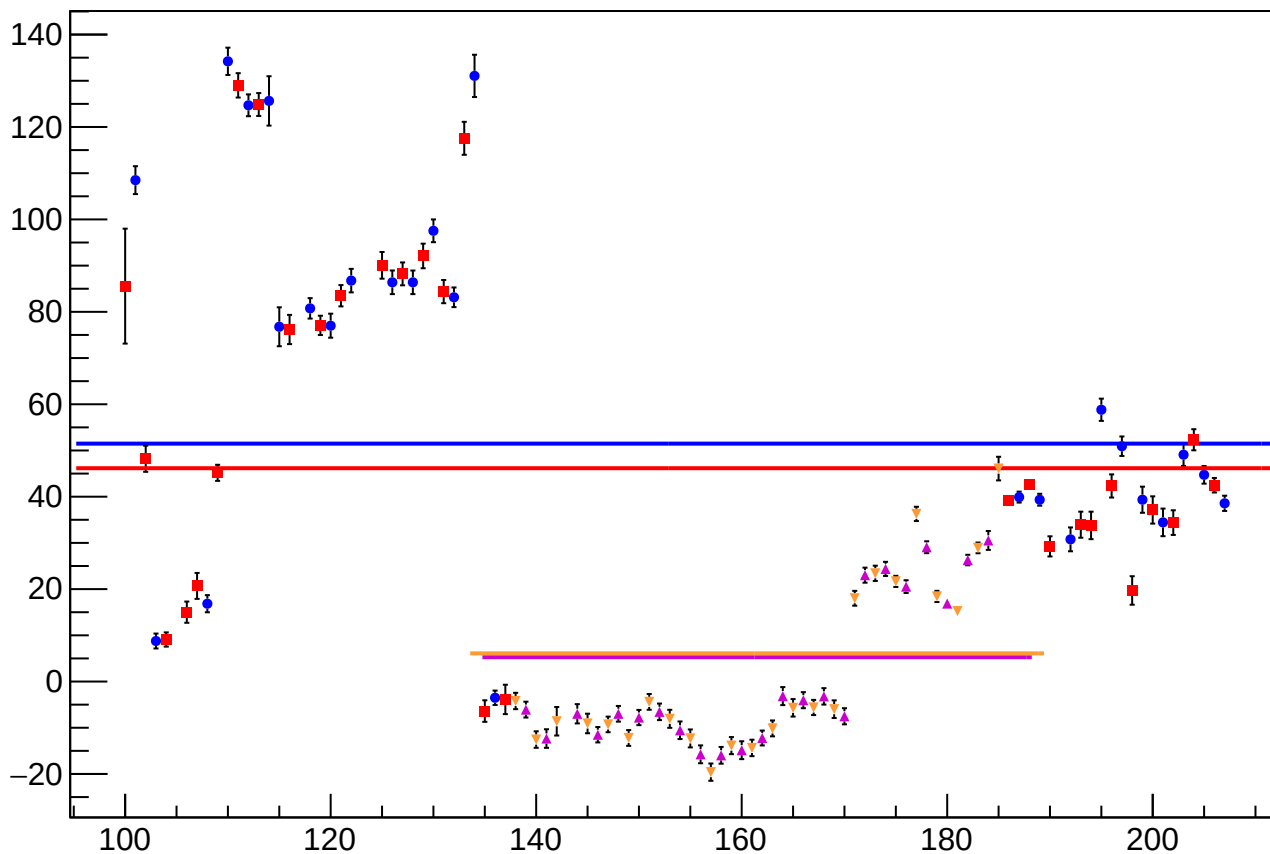
Left In:  $-2.681 \pm 0.265$   $\chi^2/\text{NDF}$ : 182.0/22

+ sign  $-2.389 \pm 0.226$   $\chi^2/\text{NDF}$ : 721.0/49

All:  $-2.158 \pm 0.159$   $\chi^2/\text{NDF}$ : 1556.8/101

- sign  $-1.934 \pm 0.223$   $\chi^2/\text{NDF}$ : 833.8/51

# reg\_asym\_us\_dd\_at2lr\_dd\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $51.482 \pm 0.417$   $\chi^2/\text{NDF}$ : 6728.2/25

Left Out:  $6.095 \pm 0.333$   $\chi^2/\text{NDF}$ : 2773.9/23

Right Out:  $46.163 \pm 0.343$   $\chi^2/\text{NDF}$ : 5958.9/28

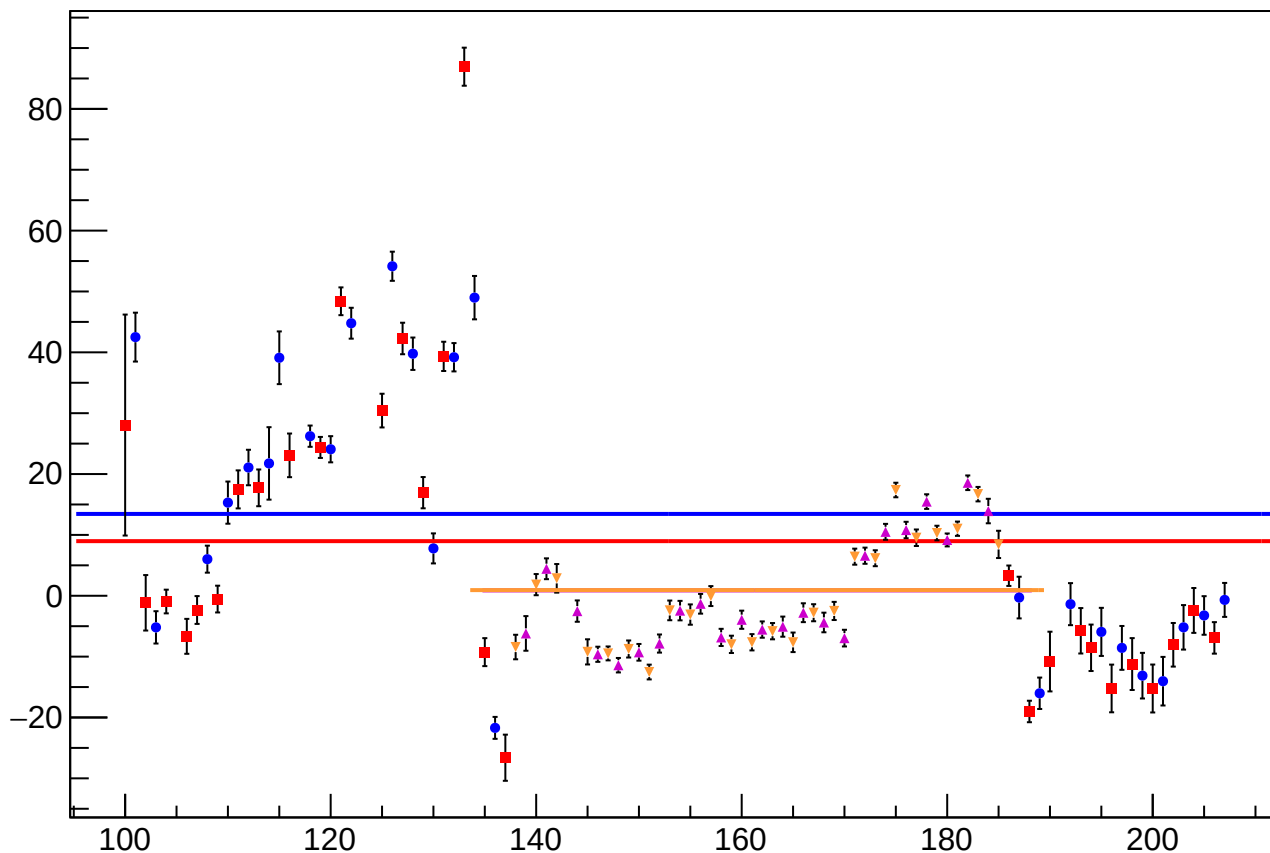
Left In:  $5.269 \pm 0.337$   $\chi^2/\text{NDF}$ : 2451.2/22

+ sign  $23.754 \pm 0.260$   $\chi^2/\text{NDF}$ : 16735.8/49

All:  $24.590 \pm 0.177$   $\chi^2/\text{NDF}$ : 32399.2/101

- sign  $25.304 \pm 0.240$   $\chi^2/\text{NDF}$ : 15644.3/51

reg\_asym\_us\_dd\_at2lr\_dd\_dd\_diff\_bpm4eY\_slope vs Slug



Right In: 13.447 $\pm$ 0.547  $\chi^2/\text{NDF}$ : 1785.4/25

Left Out: 0.929 $\pm$ 0.292  $\chi^2/\text{NDF}$ : 1041.7/23

Right Out: 8.975 $\pm$ 0.502  $\chi^2/\text{NDF}$ : 2165.5/28

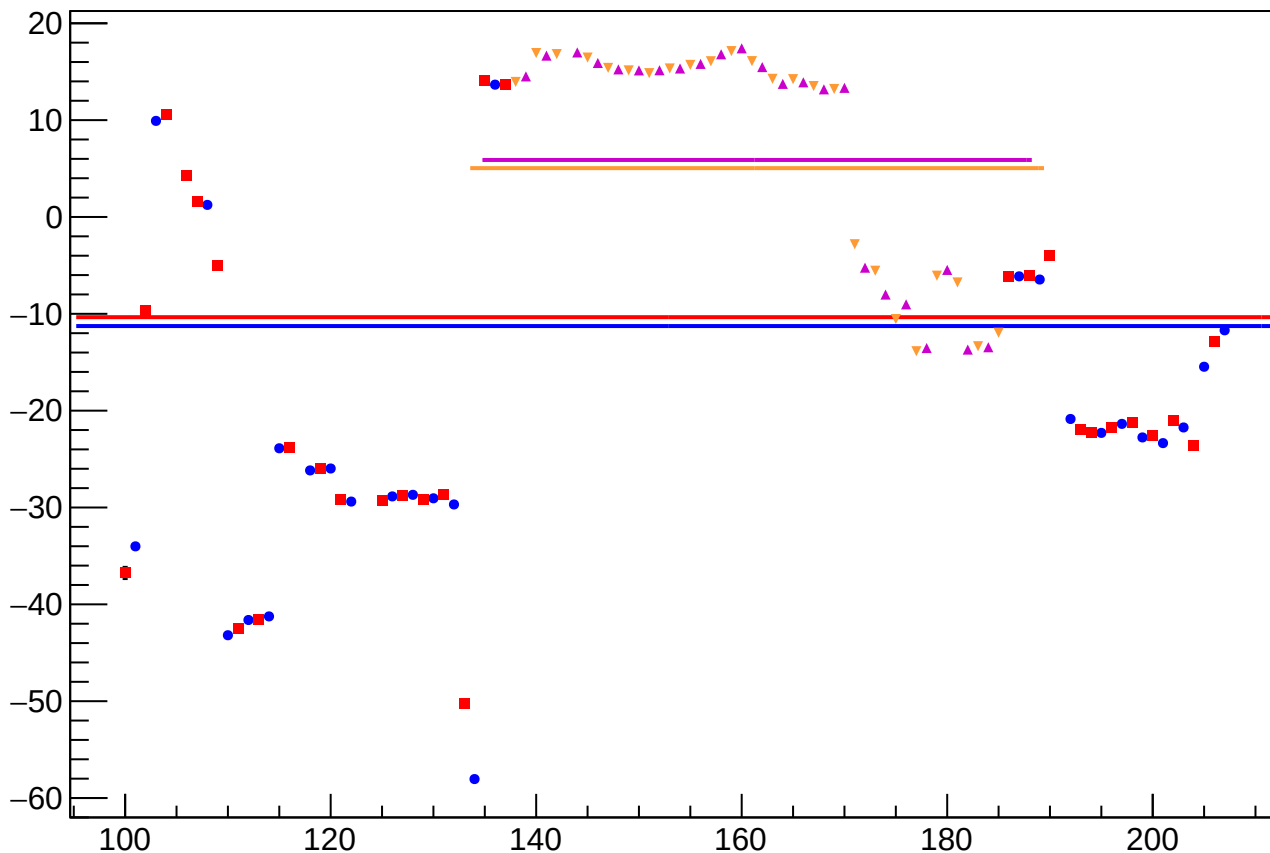
Left In: 0.878 $\pm$ 0.297  $\chi^2/\text{NDF}$ : 1006.0/22

+ sign 3.699 $\pm$ 0.257  $\chi^2/\text{NDF}$ : 3234.3/49

All: 3.336 $\pm$ 0.181  $\chi^2/\text{NDF}$ : 6602.2/101

- sign 2.977 $\pm$ 0.256  $\chi^2/\text{NDF}$ : 3363.9/51

reg\_asym\_us\_dd\_at2lr\_dd\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $-11.264 \pm 0.025$   $\chi^2/\text{NDF}: 487851.0/25$

Left Out:  $5.042 \pm 0.013$   $\chi^2/\text{NDF}: 855564.2/23$

Right Out:  $-10.347 \pm 0.024$   $\chi^2/\text{NDF}: 407371.3/28$

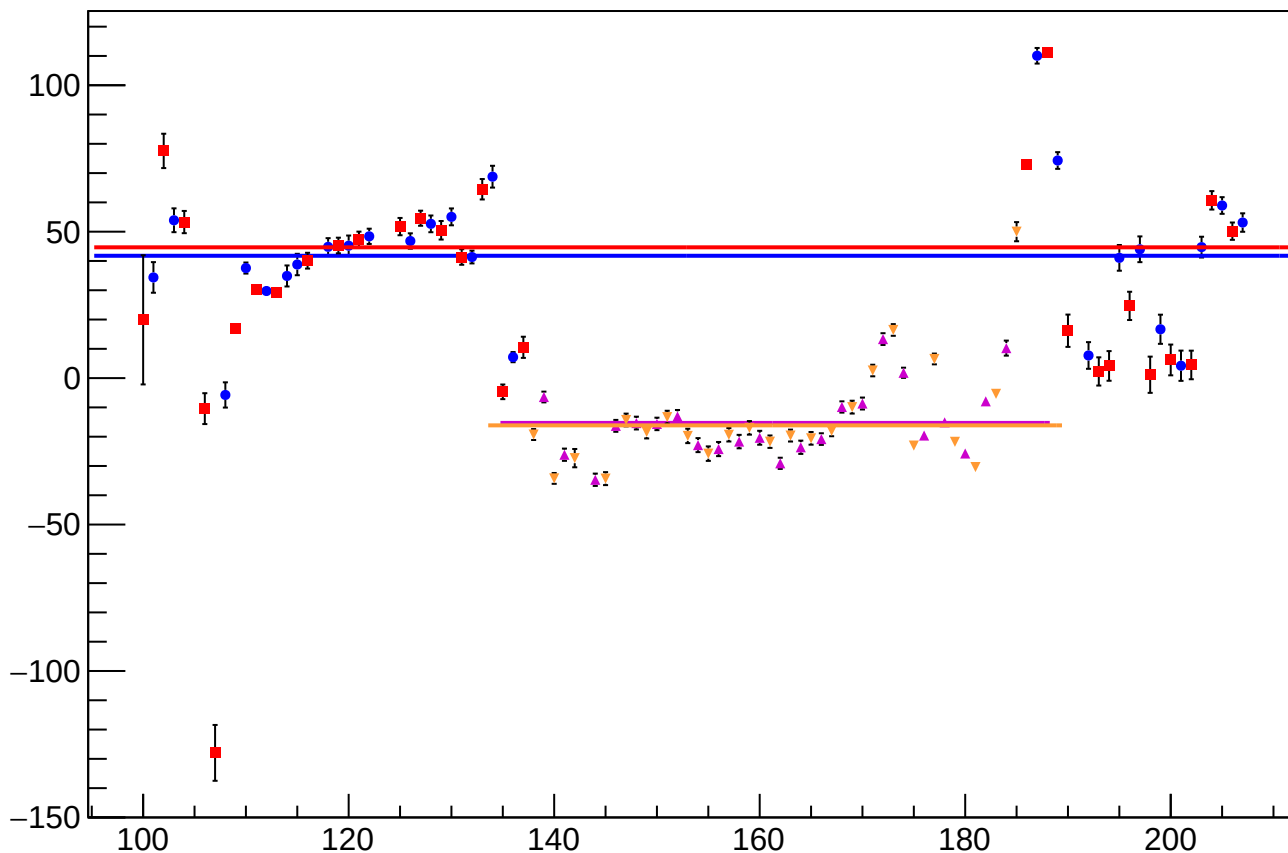
Left In:  $5.886 \pm 0.013$   $\chi^2/\text{NDF}: 846355.0/22$

+ sign  $1.585 \pm 0.012$   $\chi^2/\text{NDF}: 1673802.3/49$

All:  $1.883 \pm 0.008$   $\chi^2/\text{NDF}: 3277017.1/101$

- sign  $2.179 \pm 0.012$   $\chi^2/\text{NDF}: 1601899.3/51$

reg\_asym\_us\_dd\_atlr\_dd\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $41.772 \pm 0.566$   $\chi^2/\text{NDF}: 1667.7/25$

Left Out:  $-16.132 \pm 0.398$   $\chi^2/\text{NDF}: 1364.9/23$

Right Out:  $44.657 \pm 0.515$   $\chi^2/\text{NDF}: 4094.4/28$

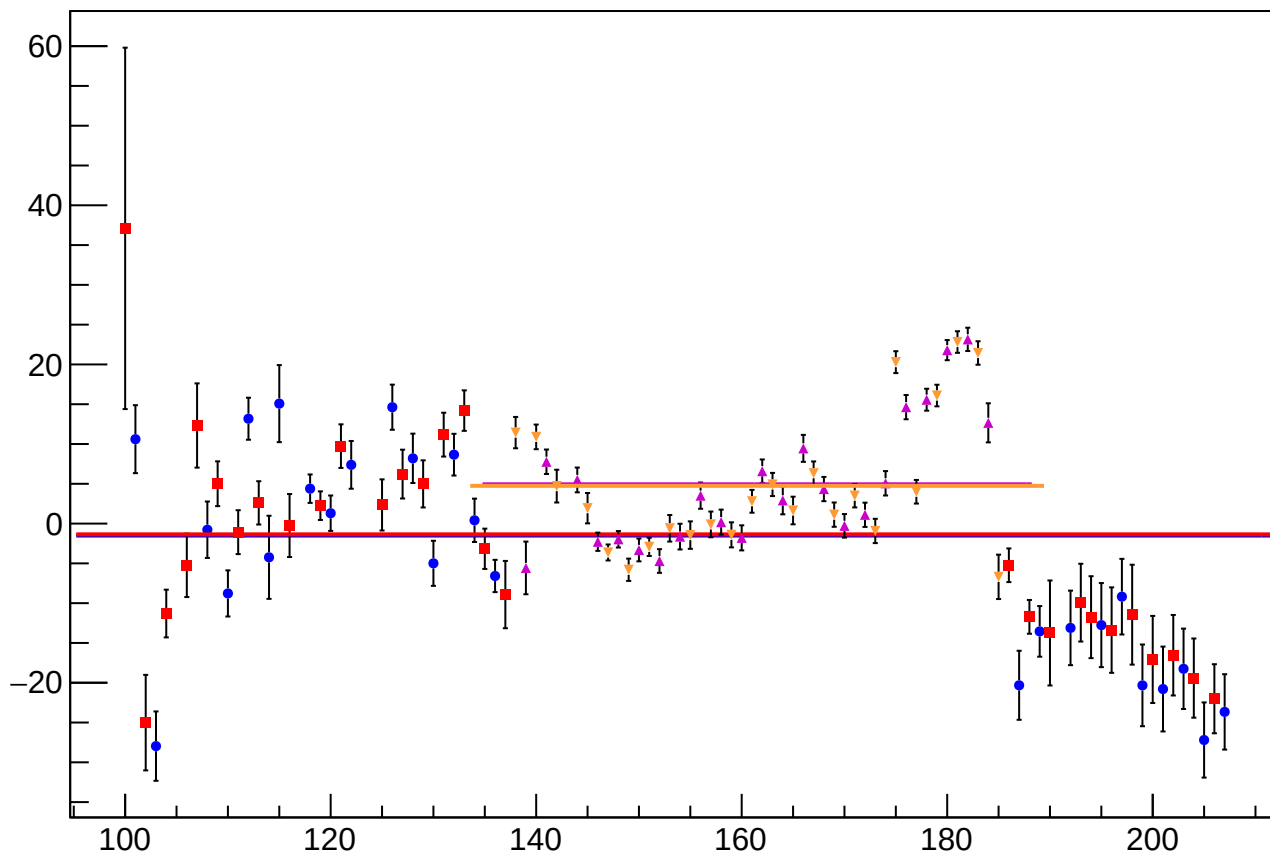
Left In:  $-15.295 \pm 0.403$   $\chi^2/\text{NDF}: 760.9/22$

+ sign  $3.004 \pm 0.326$   $\chi^2/\text{NDF}: 10031.1/49$

All:  $5.301 \pm 0.227$   $\chi^2/\text{NDF}: 23383.8/101$

- sign  $7.485 \pm 0.317$   $\chi^2/\text{NDF}: 13255.6/51$

reg\_asym\_us\_dd\_atlr\_dd\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $-1.501 \pm 0.631$   $\chi^2/\text{NDF}$ : 316.4/25

Left Out:  $4.745 \pm 0.307$   $\chi^2/\text{NDF}$ : 793.8/23

Right Out:  $-1.353 \pm 0.605$   $\chi^2/\text{NDF}$ : 237.2/28

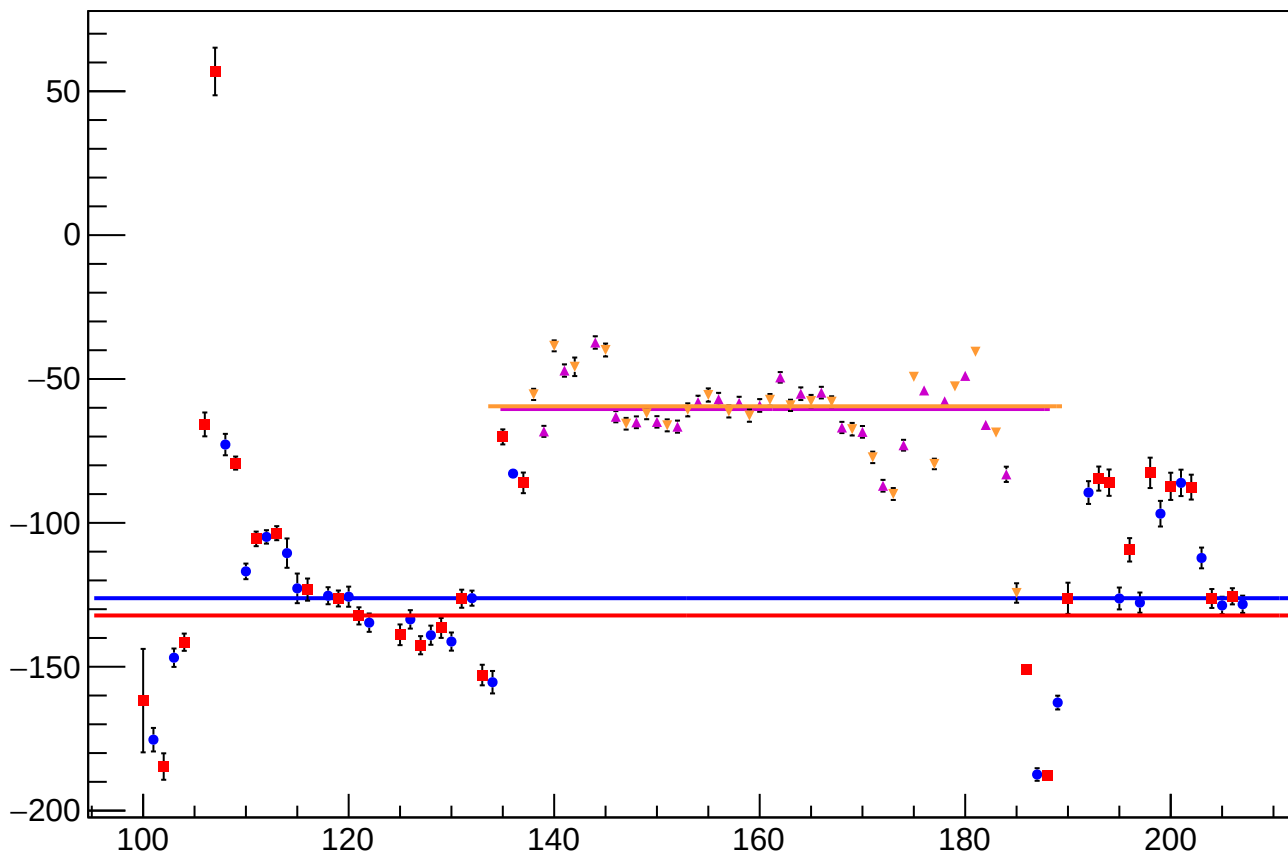
Left In:  $4.935 \pm 0.313$   $\chi^2/\text{NDF}$ : 688.4/22

+ sign  $3.552 \pm 0.276$   $\chi^2/\text{NDF}$ : 1189.4/49

All:  $3.580 \pm 0.196$   $\chi^2/\text{NDF}$ : 2200.2/101

- sign  $3.609 \pm 0.278$   $\chi^2/\text{NDF}$ : 1010.7/51

reg\_asym\_us\_dd\_atlr\_dd\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $-126.179 \pm 0.604$   $\chi^2/\text{NDF}: 2449.0/25$

Left Out:  $-59.480 \pm 0.395$   $\chi^2/\text{NDF}: 1372.3/23$

Right Out:  $-132.181 \pm 0.536$   $\chi^2/\text{NDF}: 5325.2/28$

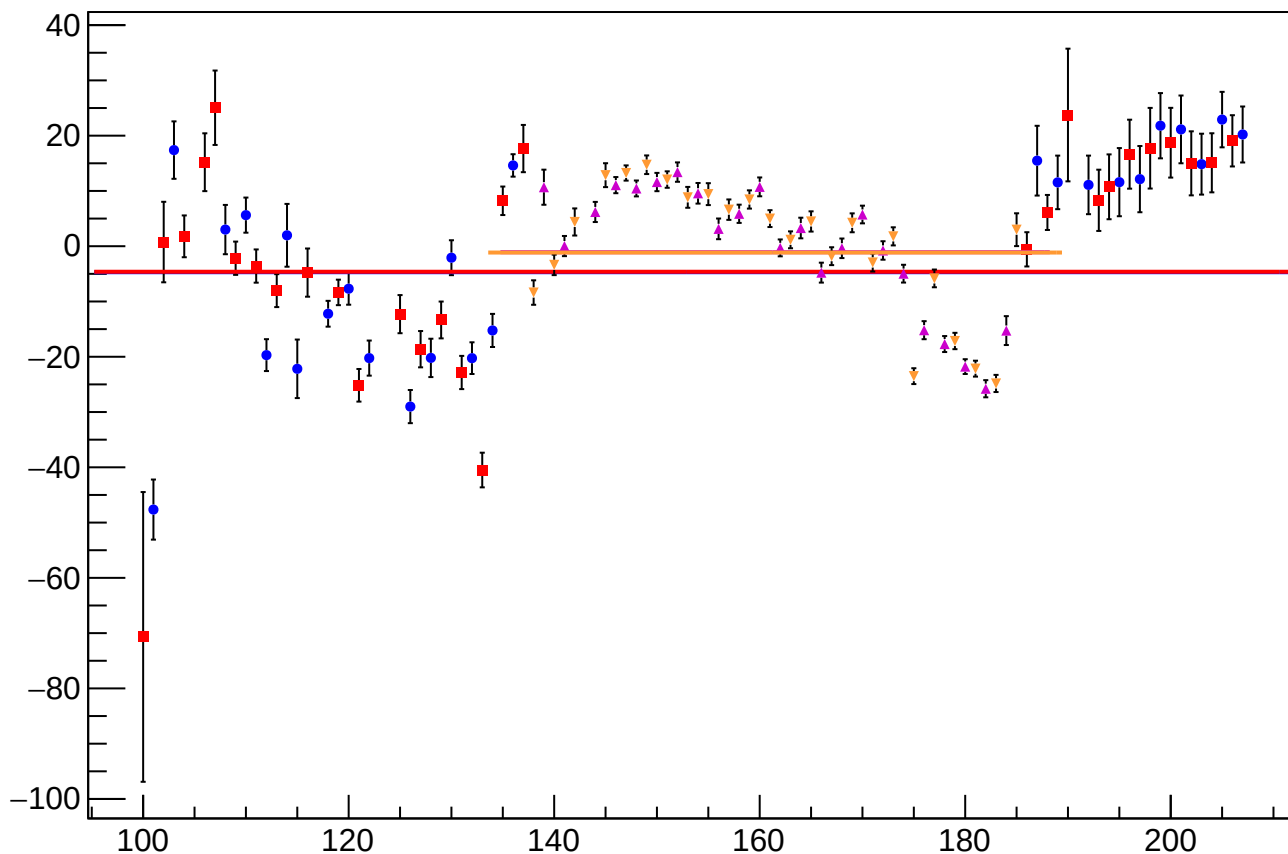
Left In:  $-60.435 \pm 0.400$   $\chi^2/\text{NDF}: 668.3/22$

+ sign  $-79.443 \pm 0.331$   $\chi^2/\text{NDF}: 12358.4/49$

All:  $-82.863 \pm 0.230$   $\chi^2/\text{NDF}: 30084.0/101$

- sign  $-86.073 \pm 0.320$   $\chi^2/\text{NDF}: 17518.2/51$

reg\_asym\_us\_dd\_atlr\_dd\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $-4.704 \pm 0.725$   $\chi^2/\text{NDF}$ : 537.7/25

Left Out:  $-1.144 \pm 0.346$   $\chi^2/\text{NDF}$ : 1303.0/23

Right Out:  $-4.619 \pm 0.711$   $\chi^2/\text{NDF}$ : 463.2/28

Left In:  $-1.082 \pm 0.352$   $\chi^2/\text{NDF}$ : 1157.4/22

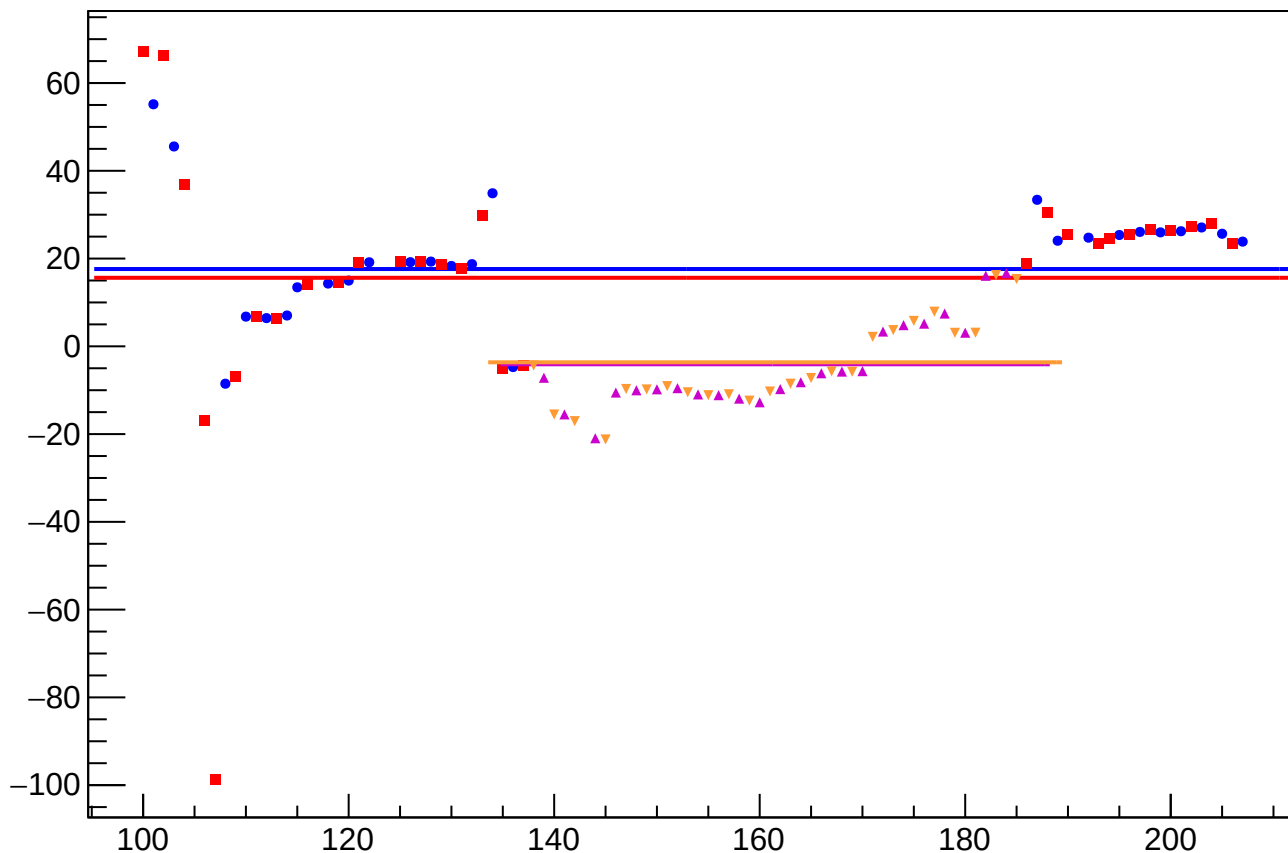
+ sign  $-1.804 \pm 0.312$   $\chi^2/\text{NDF}$ : 1860.3/49

All:  $-1.791 \pm 0.222$   $\chi^2/\text{NDF}$ : 3500.9/101

- sign  $-1.777 \pm 0.315$   $\chi^2/\text{NDF}$ : 1640.5/51



reg\_asym\_us\_dd\_atlr\_dd\_avg\_diff\_bpm12X\_slope vs Slug



Right In: 17.614 $\pm$ 0.037  $\chi^2$ /NDF: 209628.0/25

Left Out: -3.639 $\pm$ 0.015  $\chi^2$ /NDF: 345861.2/23

Right Out: 15.620 $\pm$ 0.037  $\chi^2$ /NDF: 343148.5/28

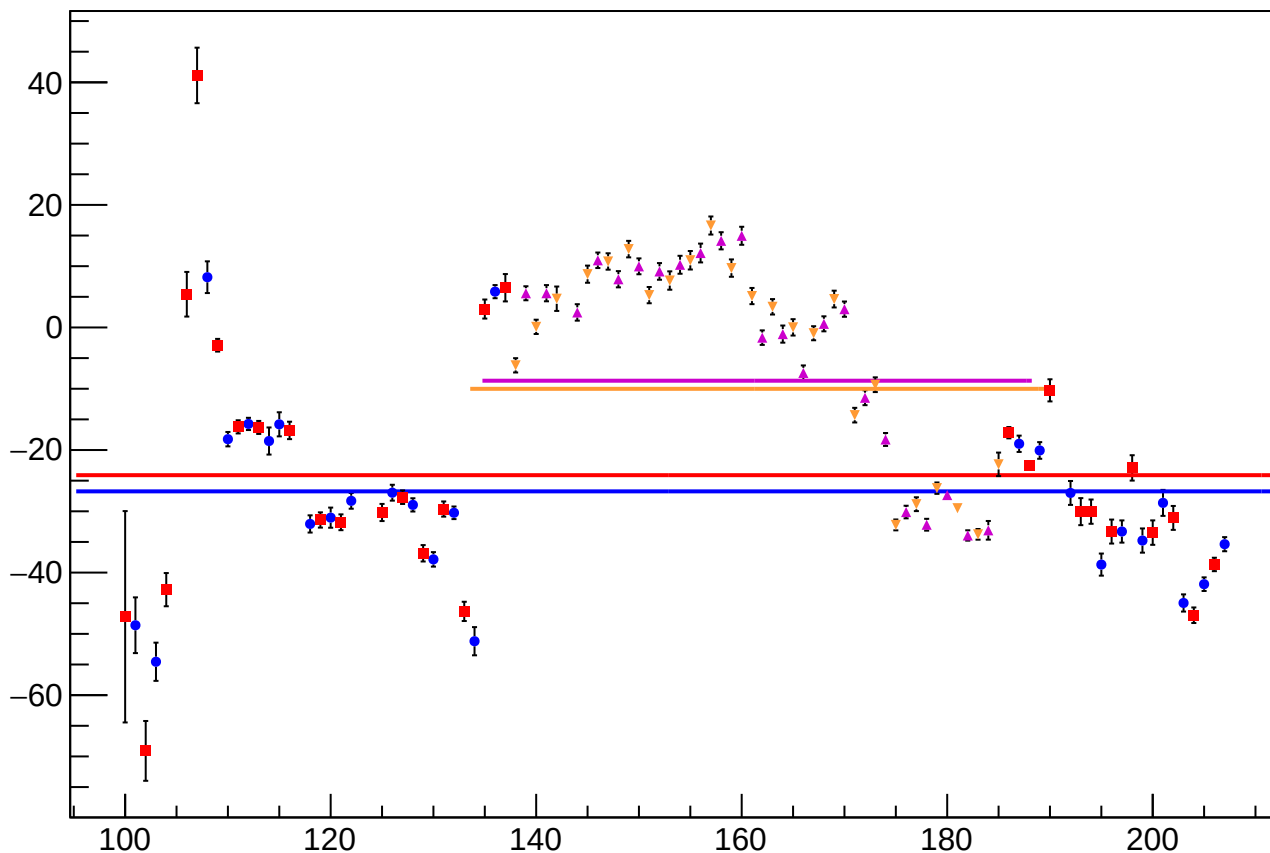
Left In: -4.091 $\pm$ 0.016  $\chi^2$ /NDF: 333287.4/22

+ sign -0.444 $\pm$ 0.014  $\chi^2$ /NDF: 839857.0/49

All: -0.771 $\pm$ 0.010  $\chi^2$ /NDF: 1761826.7/101

- sign -1.099 $\pm$ 0.014  $\chi^2$ /NDF: 920917.2/51

# reg\_asym\_us\_dd\_atlr\_dd\_dd\_diff\_bpm1X\_slope vs Slug



Right In: -26.746 $\pm$ 0.281  $\chi^2/\text{NDF}$ : 2208.2/25

Left Out: -10.013 $\pm$ 0.244  $\chi^2/\text{NDF}$ : 4977.5/23

Right Out: -24.104 $\pm$ 0.264  $\chi^2/\text{NDF}$ : 2557.2/28

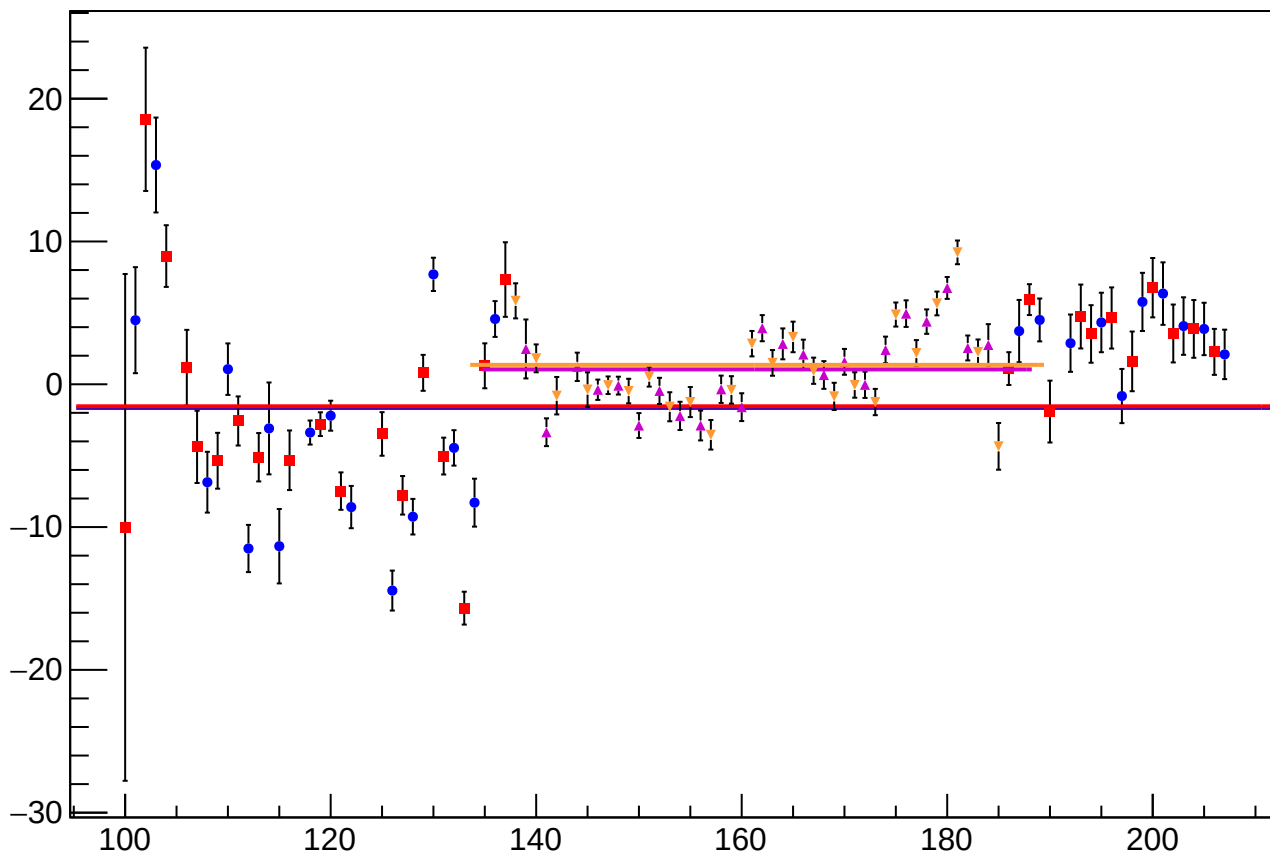
Left In: -8.689 $\pm$ 0.248  $\chi^2/\text{NDF}$ : 5021.6/22

+ sign -17.220 $\pm$ 0.184  $\chi^2/\text{NDF}$ : 9205.8/49

All: -16.553 $\pm$ 0.129  $\chi^2/\text{NDF}$ : 18625.9/101

- sign -15.913 $\pm$ 0.181  $\chi^2/\text{NDF}$ : 9394.4/51

reg\_asym\_us\_dd\_atlr\_dd\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-1.653 \pm 0.311$   $\chi^2/\text{NDF}$ : 428.8/25

Left Out:  $1.361 \pm 0.188$   $\chi^2/\text{NDF}$ : 240.3/23

Right Out:  $-1.543 \pm 0.300$   $\chi^2/\text{NDF}$ : 389.2/28

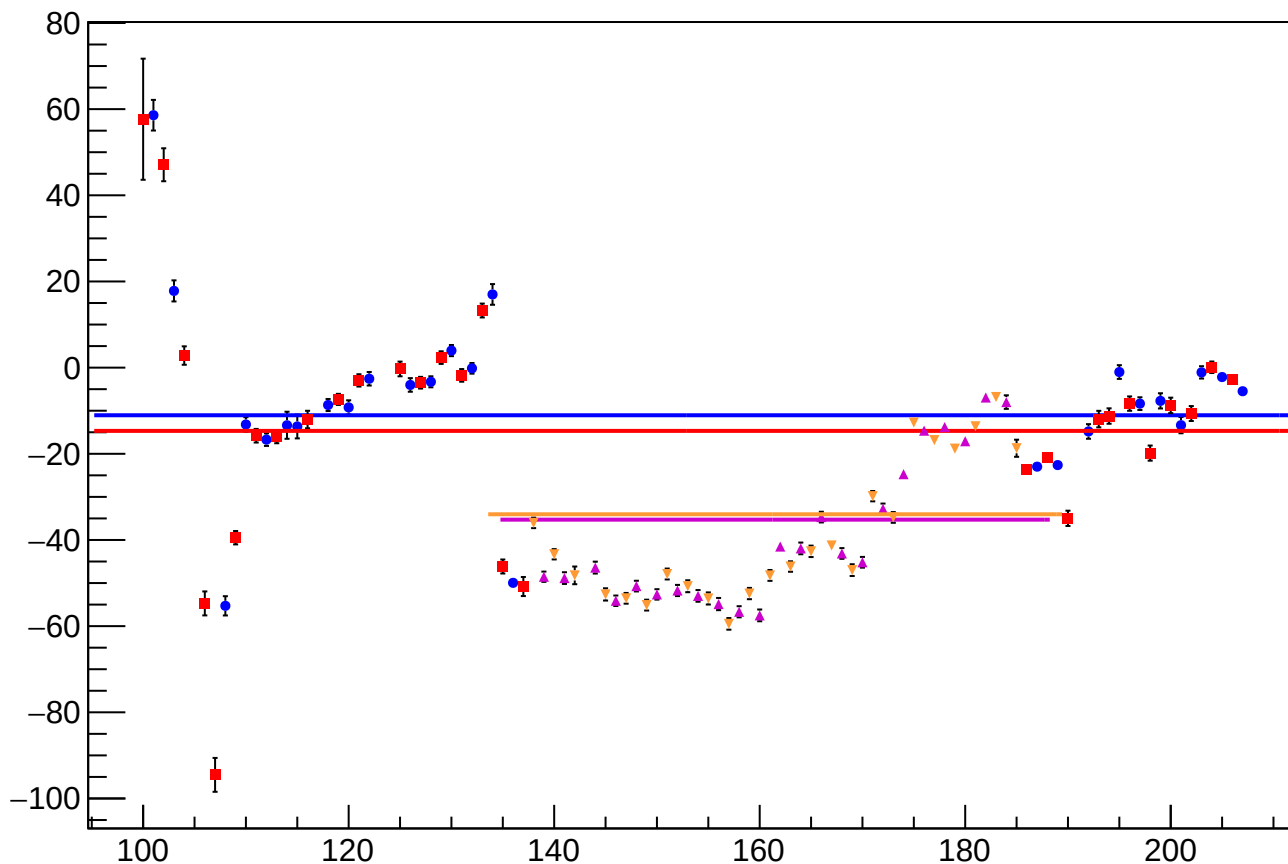
Left In:  $1.041 \pm 0.192$   $\chi^2/\text{NDF}$ : 196.1/22

+ sign  $0.552 \pm 0.161$   $\chi^2/\text{NDF}$ : 737.9/49

All:  $0.421 \pm 0.114$   $\chi^2/\text{NDF}$ : 1377.0/101

- sign  $0.288 \pm 0.162$   $\chi^2/\text{NDF}$ : 637.8/51

reg\_asym\_us\_dd\_atlr\_dd\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-11.052 \pm 0.295$   $\chi^2/\text{NDF}$ : 3063.7/25

Left Out:  $-34.036 \pm 0.243$   $\chi^2/\text{NDF}$ : 4965.7/23

Right Out:  $-14.681 \pm 0.267$   $\chi^2/\text{NDF}$ : 3307.2/28

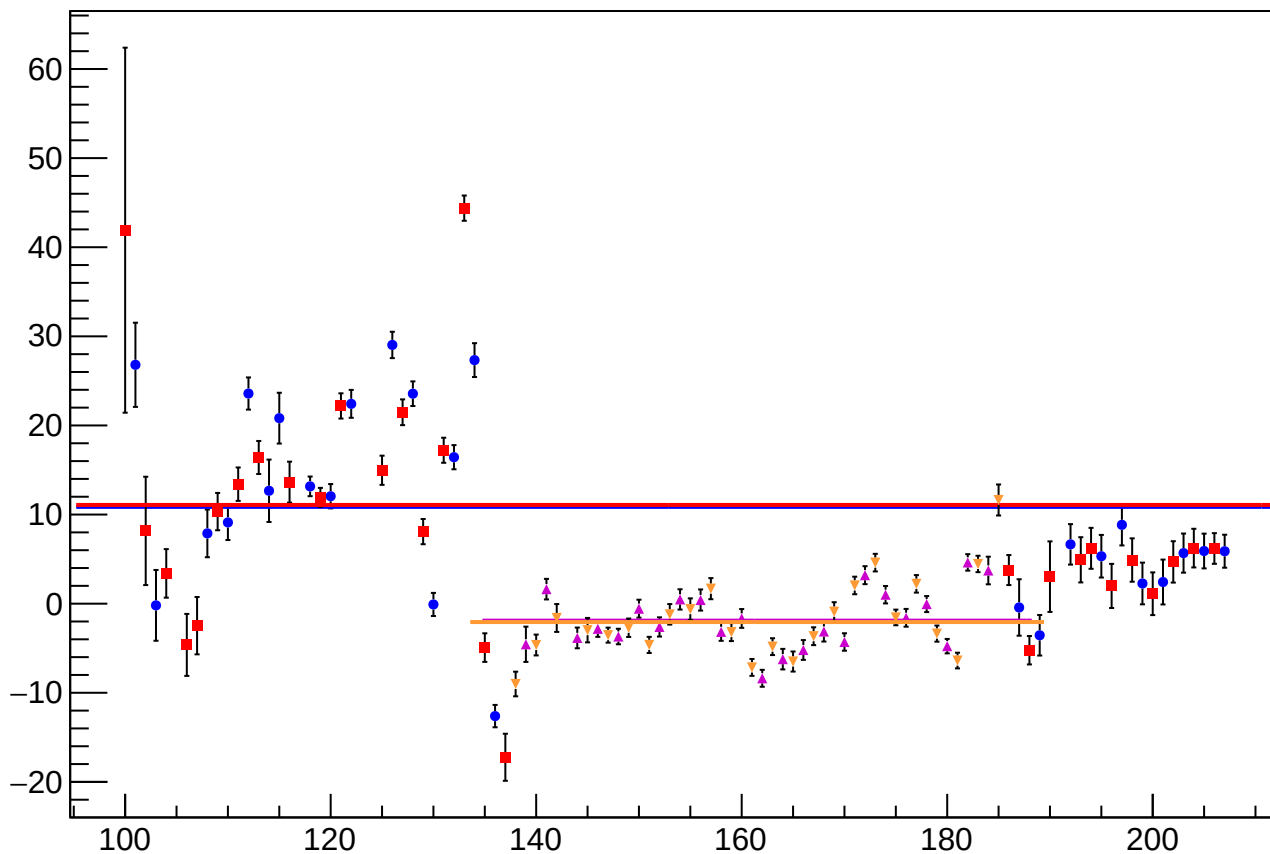
Left In:  $-35.285 \pm 0.245$   $\chi^2/\text{NDF}$ : 4998.0/22

+ sign  $-24.762 \pm 0.187$   $\chi^2/\text{NDF}$ : 11653.0/49

All:  $-25.331 \pm 0.130$   $\chi^2/\text{NDF}$ : 23199.5/101

- sign  $-25.862 \pm 0.181$   $\chi^2/\text{NDF}$ : 11528.6/51

reg\_asym\_us\_dd\_atlr\_dd\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $10.864 \pm 0.359$   $\chi^2/\text{NDF}$ : 997.9/25

Left Out:  $-2.062 \pm 0.212$   $\chi^2/\text{NDF}$ : 332.4/23

Right Out:  $11.080 \pm 0.354$   $\chi^2/\text{NDF}$ : 1166.9/28

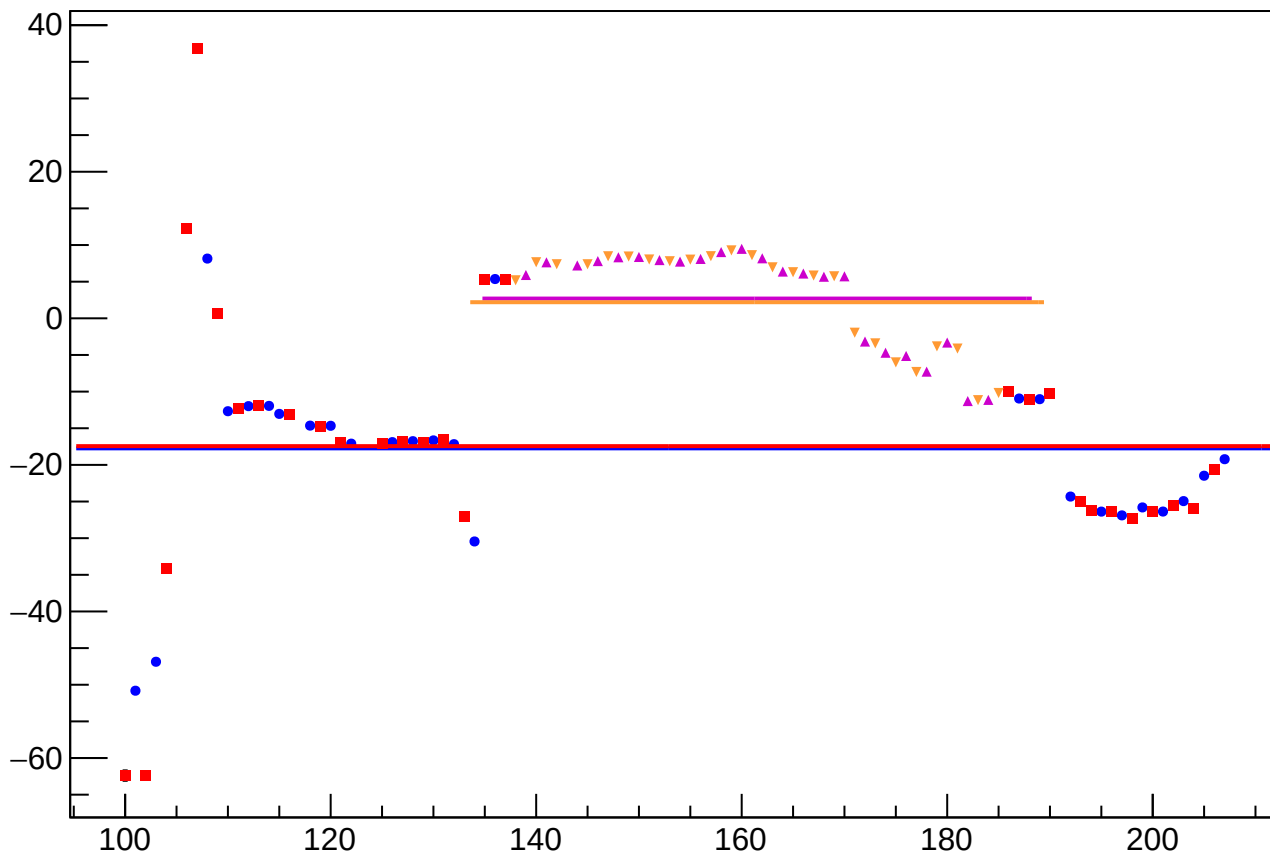
Left In:  $-1.905 \pm 0.216$   $\chi^2/\text{NDF}$ : 222.1/22

+ sign  $1.288 \pm 0.183$   $\chi^2/\text{NDF}$ : 2291.6/49

All:  $1.457 \pm 0.130$   $\chi^2/\text{NDF}$ : 4663.9/101

- sign  $1.628 \pm 0.184$   $\chi^2/\text{NDF}$ : 2370.6/51

reg\_asym\_us\_dd\_atlr\_dd\_dd\_diff\_bpm12X\_slope vs Slug



Right In: -17.743 $\pm$ 0.018  $\chi^2$ /NDF: 498201.9/25

Left Out: 2.198 $\pm$ 0.009  $\chi^2$ /NDF: 508502.1/23

Right Out: -17.443 $\pm$ 0.018  $\chi^2$ /NDF: 583087.2/28

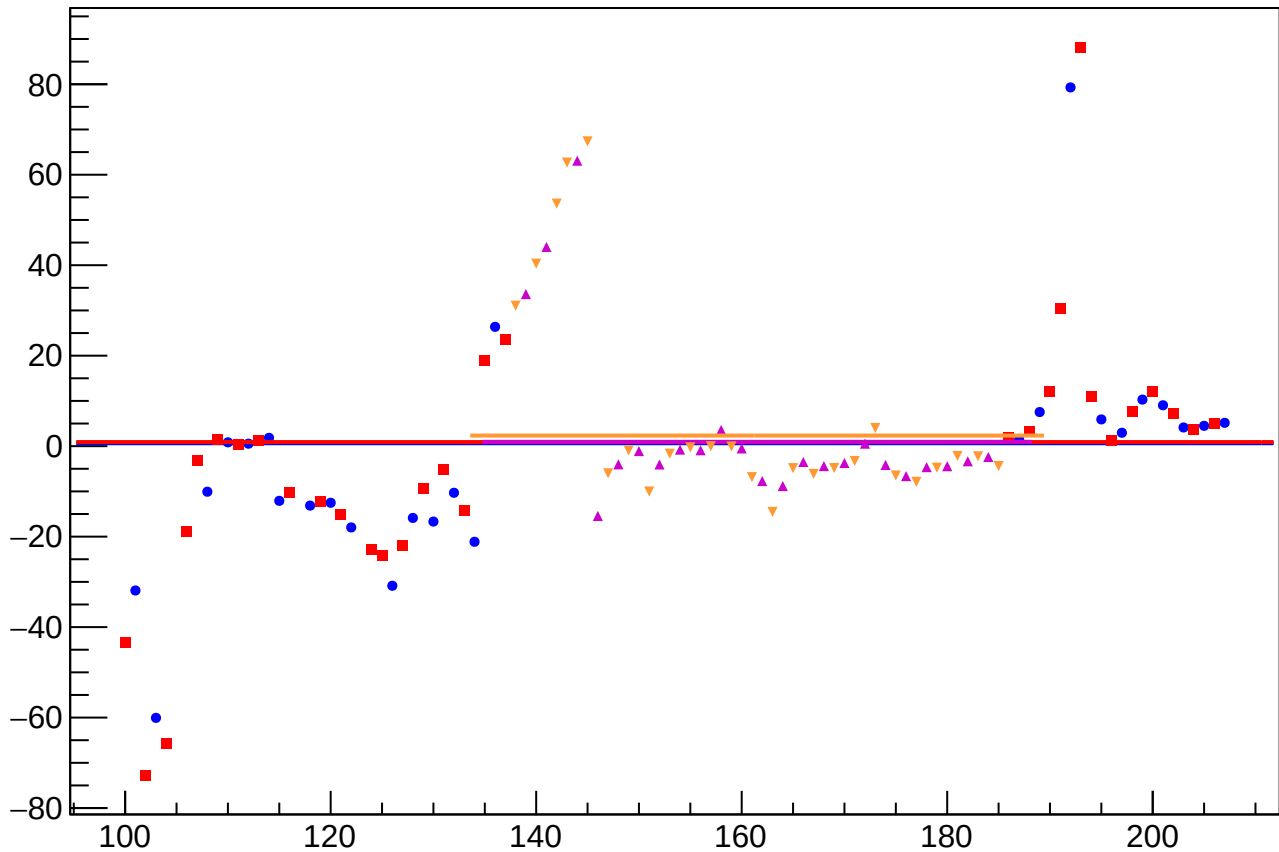
Left In: 2.694 $\pm$ 0.010  $\chi^2$ /NDF: 498824.3/22

+ sign -2.097 $\pm$ 0.008  $\chi^2$ /NDF: 1956746.5/49

All: -1.948 $\pm$ 0.006  $\chi^2$ /NDF: 4030829.5/101

- sign -1.799 $\pm$ 0.008  $\chi^2$ /NDF: 2073455.8/51

reg\_asym\_bcm\_an\_ds3\_diff\_bpm1X\_slope vs Slug



Right In: 0.646 $\pm$ 0.041  $\chi^2$ /NDF: 119398.0/25

Left Out: 2.341 $\pm$ 0.040  $\chi^2$ /NDF:176986.1/24

Right Out: 0.905 $\pm$ 0.036  $\chi^2$ /NDF: 120624.0/30

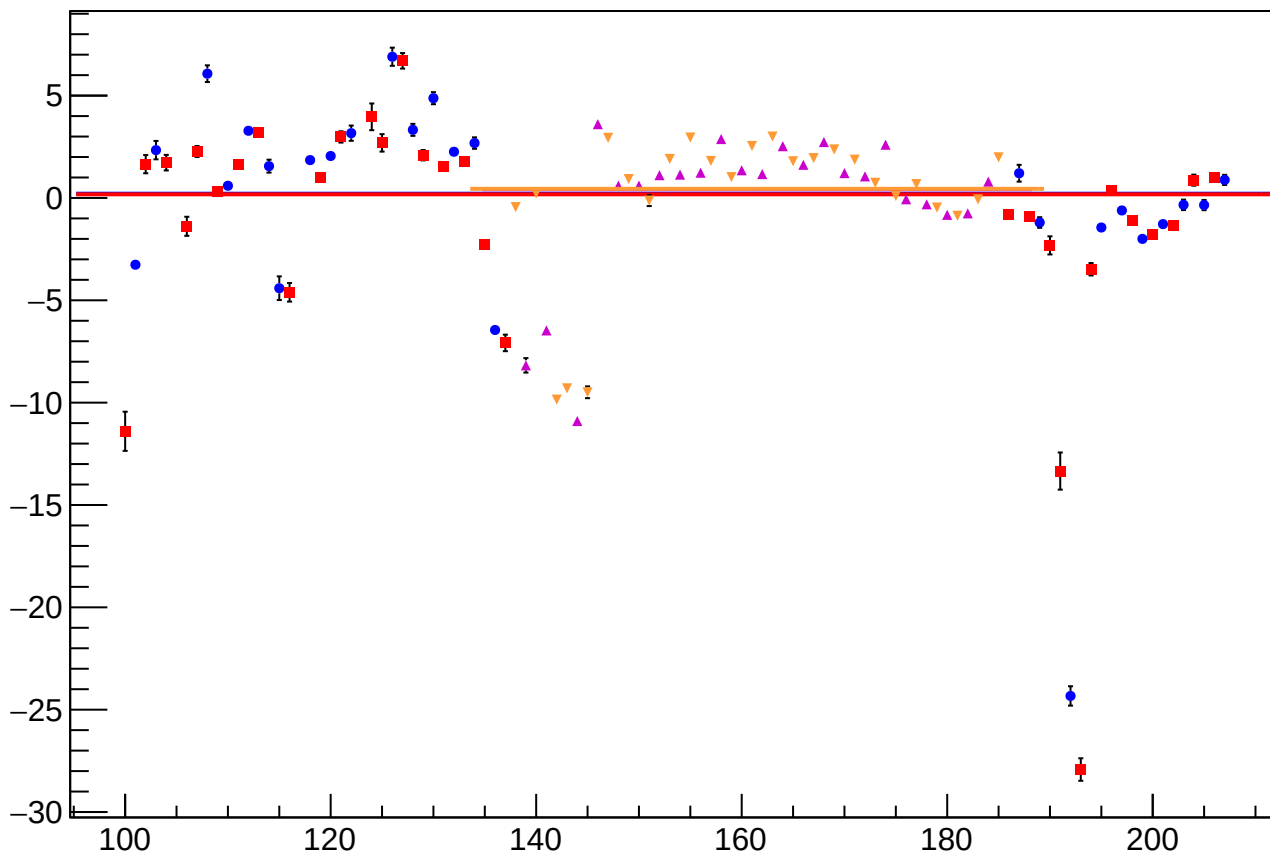
Left In: 0.957 $\pm$ 0.040  $\chi^2$ /NDF:132519.8/22

+ sign 1.505 $\pm$ 0.029  $\chi^2$ /NDF: 297258.6/50

All: 1.196 $\pm$ 0.020  $\chi^2$ /NDF: 550620.6/104

- sign 0.928 $\pm$ 0.027  $\chi^2$ /NDF: 253144.8/53

reg\_asym\_bcm\_an\_ds3\_diff\_bpm4aY\_slope vs Slug



Right In:  $0.207 \pm 0.047$   $\chi^2/\text{NDF}$ : 5833.8/25

Left Out:  $0.446 \pm 0.033$   $\chi^2/\text{NDF}$ : 7044.3/24

Right Out:  $0.178 \pm 0.045$   $\chi^2/\text{NDF}$ : 5090.8/30

Left In:  $0.427 \pm 0.031$   $\chi^2/\text{NDF}$ : 7102.3/22

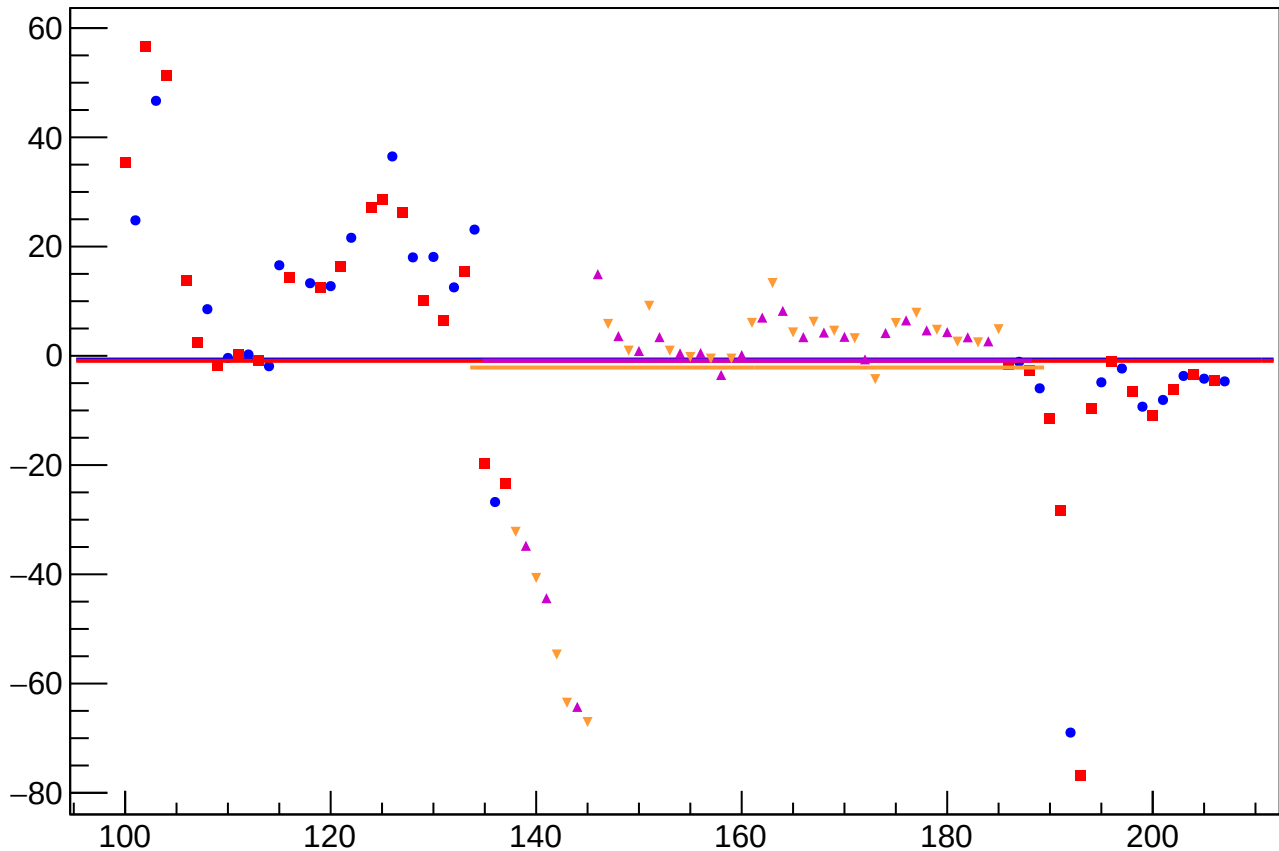
+ sign  $0.369 \pm 0.027$   $\chi^2/\text{NDF}$ : 12895.3/50

All:  $0.356 \pm 0.019$   $\chi^2/\text{NDF}$ : 25109.7/104

- sign  $0.345 \pm 0.026$   $\chi^2/\text{NDF}$ : 12214.0/53



reg\_asym\_bcm\_an\_ds3\_diff\_bpm4eX\_slope vs Slug



Right In:  $-0.679 \pm 0.042$   $\chi^2/\text{NDF}$ : 118238.6/25

Left Out:  $-2.143 \pm 0.040$   $\chi^2/\text{NDF}$ : 171271.2/24

Right Out:  $-0.915 \pm 0.038$   $\chi^2/\text{NDF}$ : 118926.7/30

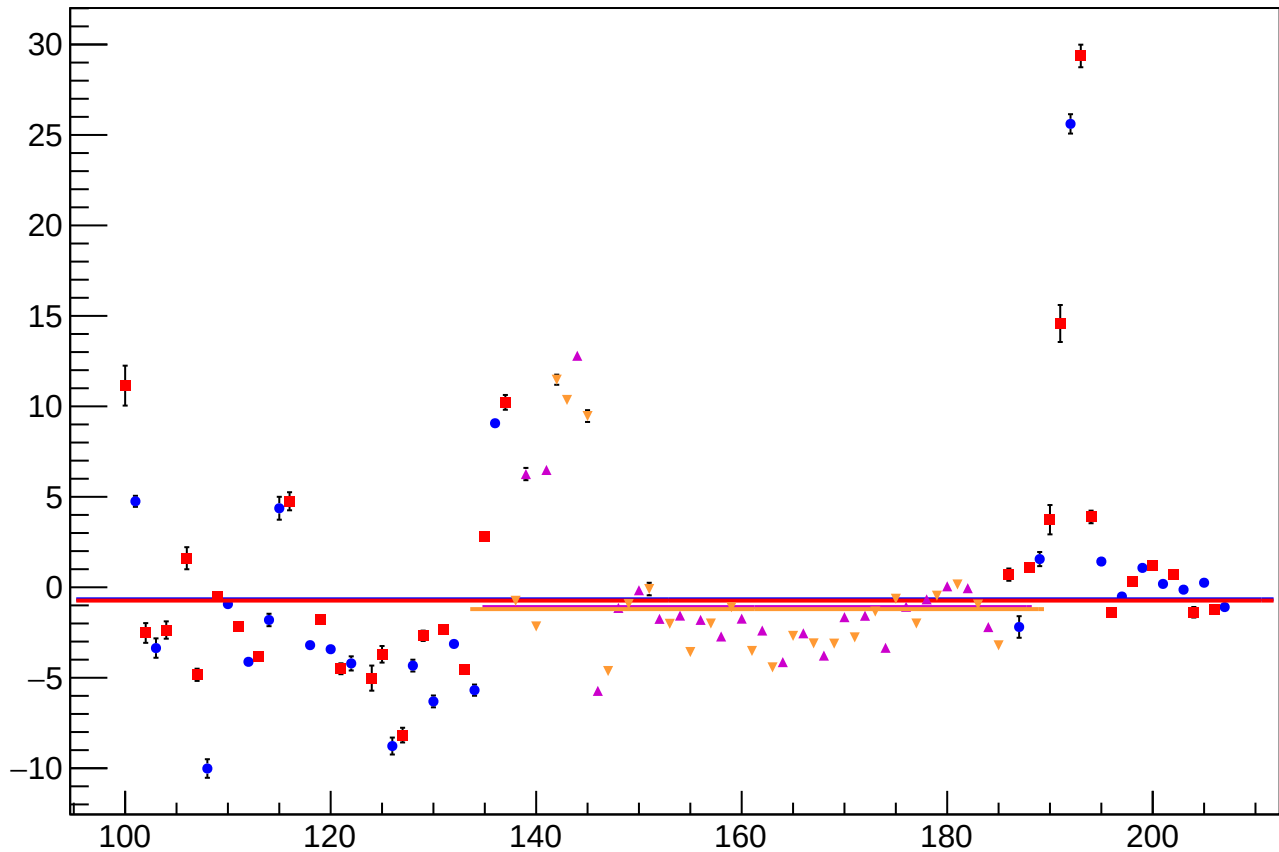
Left In:  $-0.881 \pm 0.039$   $\chi^2/\text{NDF}$ : 129197.8/22

+ sign  $-1.447 \pm 0.029$   $\chi^2/\text{NDF}$ : 290139.0/50

All:  $-1.155 \pm 0.020$   $\chi^2/\text{NDF}$ : 538451.9/104

- sign  $-0.899 \pm 0.027$   $\chi^2/\text{NDF}$ : 248125.0/53

reg\_asym\_bcm\_an\_ds3\_diff\_bpm4eY\_slope vs Slug



Right In:  $-0.665 \pm 0.055$   $\chi^2/\text{NDF}$ : 7323.7/25

Left Out:  $-1.206 \pm 0.036$   $\chi^2/\text{NDF}$ : 7003.0/24

Right Out:  $-0.734 \pm 0.052$   $\chi^2/\text{NDF}$ : 5610.9/30

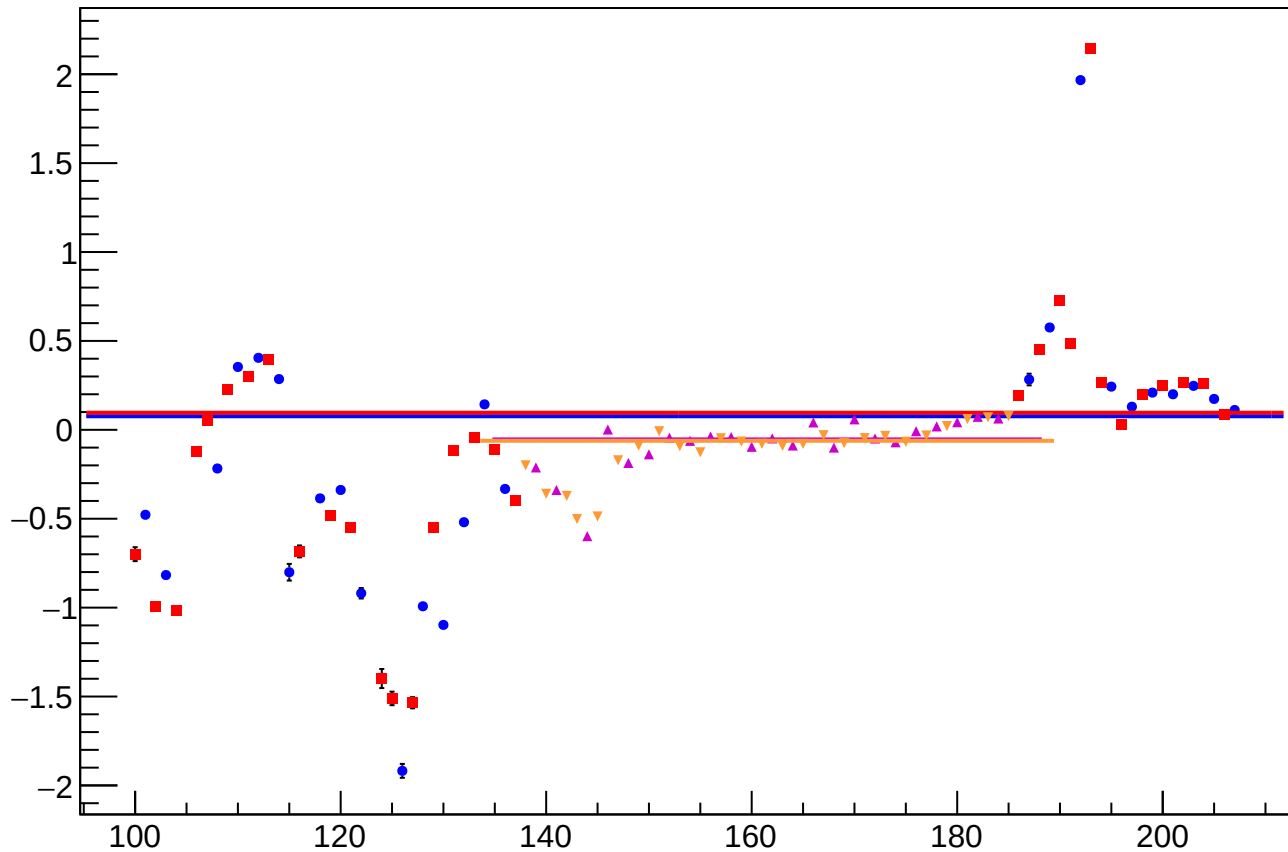
Left In:  $-1.094 \pm 0.035$   $\chi^2/\text{NDF}$ : 7029.2/22

+ sign  $-1.042 \pm 0.030$   $\chi^2/\text{NDF}$ : 14394.2/50

All:  $-1.011 \pm 0.021$   $\chi^2/\text{NDF}$ : 27069.3/104

- sign  $-0.982 \pm 0.029$   $\chi^2/\text{NDF}$ : 12673.1/53

reg\_asym\_bcm\_an\_ds3\_diff\_bpm12X\_slope vs Slug



Right In: 0.076+/-0.002  $\chi^2/\text{NDF}$ : 33999.1/25

Left Out: -0.062+/-0.002  $\chi^2/\text{NDF}$ : 5711.9/24

Right Out: 0.096+/-0.002  $\chi^2/\text{NDF}$ : 34639.8/30

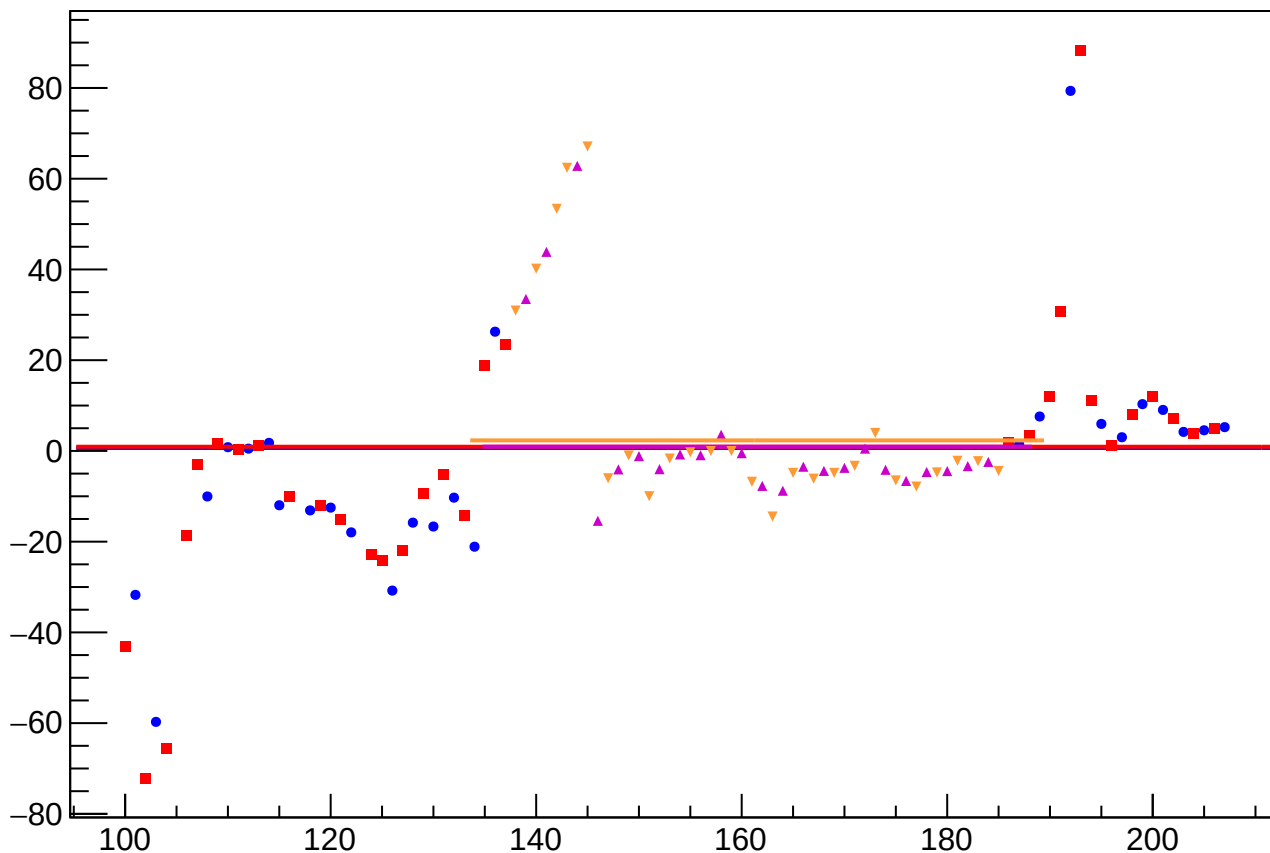
Left In: -0.054+/-0.001  $\chi^2/\text{NDF}$ : 5029.9/22

+ sign -0.021+/-0.001  $\chi^2/\text{NDF}$ : 41950.1/50

All: -0.016+/-0.001  $\chi^2/\text{NDF}$ : 84536.4/104

- sign -0.011+/-0.001  $\chi^2/\text{NDF}$ : 42556.8/53

reg\_asym\_bcm\_an\_ds\_diff\_bpm1X\_slope vs Slug



Right In:  $0.663 \pm 0.041$   $\chi^2/\text{NDF}: 119891.6/25$

Left Out:  $2.318 \pm 0.040$   $\chi^2/\text{NDF}: 176746.3/24$

Right Out:  $0.922 \pm 0.036$   $\chi^2/\text{NDF}: 121171.7/30$

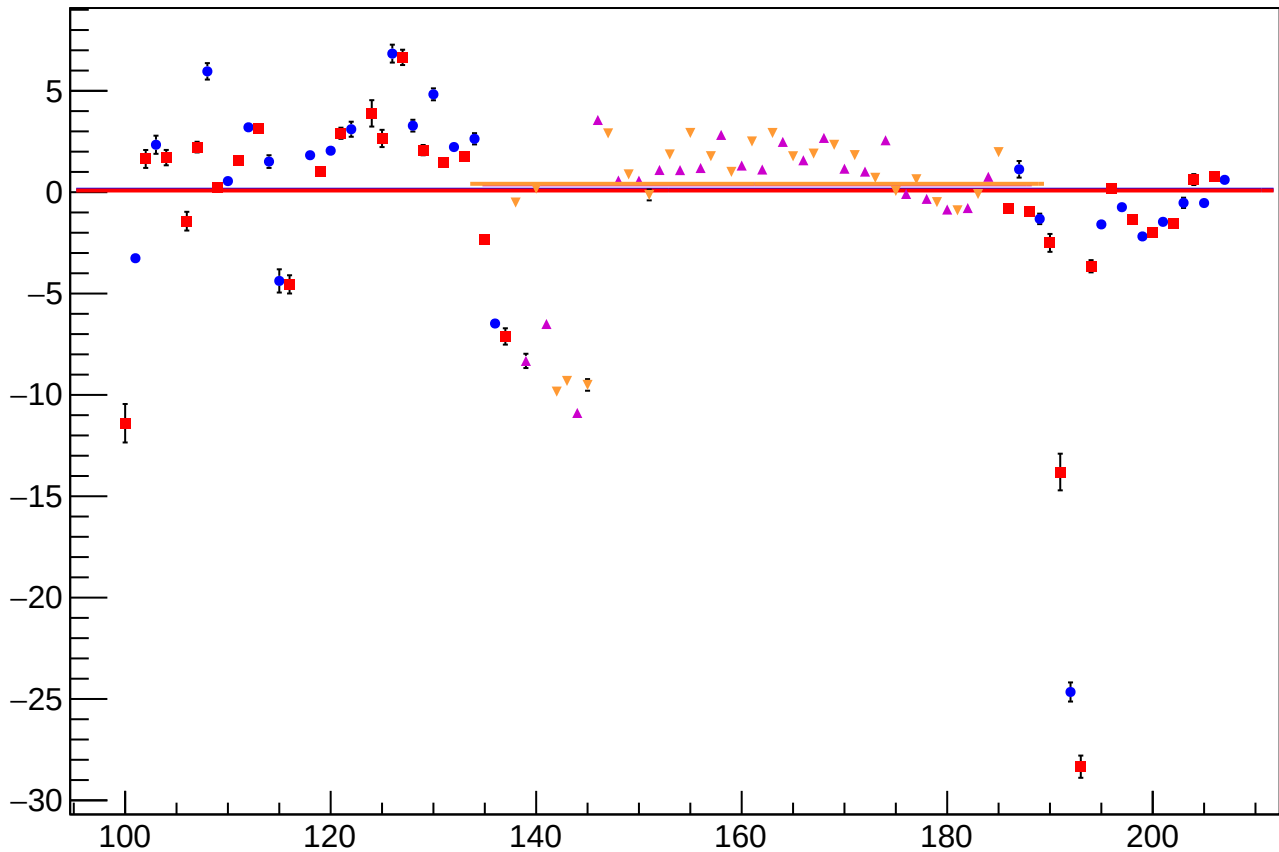
Left In:  $0.935 \pm 0.040$   $\chi^2/\text{NDF}: 132405.3/22$

+ sign  $1.500 \pm 0.029$   $\chi^2/\text{NDF}: 297478.1/50$

All:  $1.193 \pm 0.019$   $\chi^2/\text{NDF}: 551270.7/104$

- sign  $0.928 \pm 0.027$   $\chi^2/\text{NDF}: 253577.1/53$

# reg\_asym\_bcm\_an\_ds\_diff\_bpm4aY\_slope vs Slug



Right In:  $0.122 \pm 0.047$   $\chi^2/\text{NDF}: 5965.8/25$

Left Out:  $0.414 \pm 0.033$   $\chi^2/\text{NDF}: 7047.2/24$

Right Out:  $0.084 \pm 0.044$   $\chi^2/\text{NDF}: 5254.7/30$

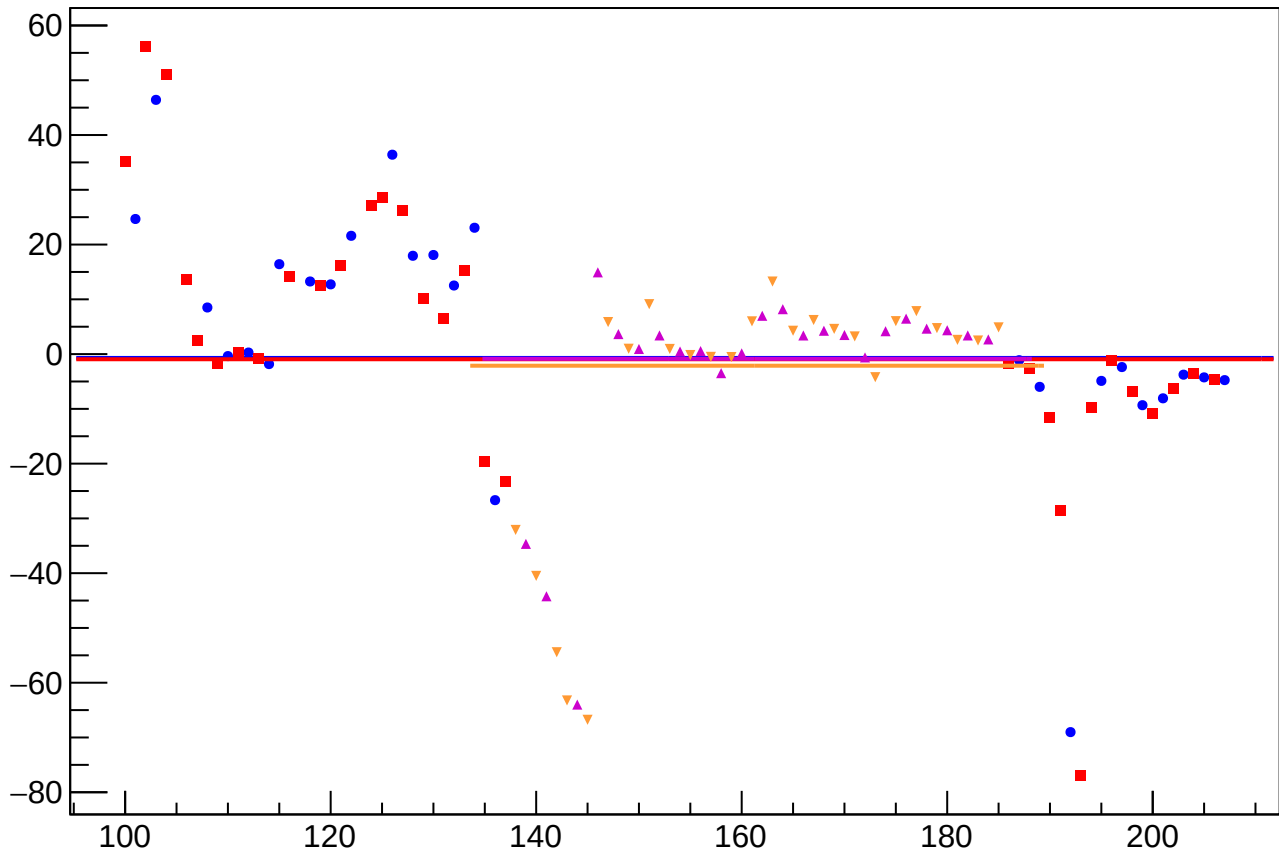
Left In:  $0.389 \pm 0.031$   $\chi^2/\text{NDF}: 7114.2/22$

+ sign  $0.319 \pm 0.027$   $\chi^2/\text{NDF}: 13038.9/50$

All:  $0.303 \pm 0.019$   $\chi^2/\text{NDF}: 25439.8/104$

- sign  $0.288 \pm 0.026$   $\chi^2/\text{NDF}: 12400.3/53$

reg\_asym\_bcm\_an\_ds\_diff\_bpm4eX\_slope vs Slug



Right In:  $-0.702 \pm 0.042$   $\chi^2/\text{NDF}$ : 118701.6/25

Left Out:  $-2.119 \pm 0.040$   $\chi^2/\text{NDF}$ : 171039.7/24

Right Out:  $-0.940 \pm 0.038$   $\chi^2/\text{NDF}$ : 119450.1/30

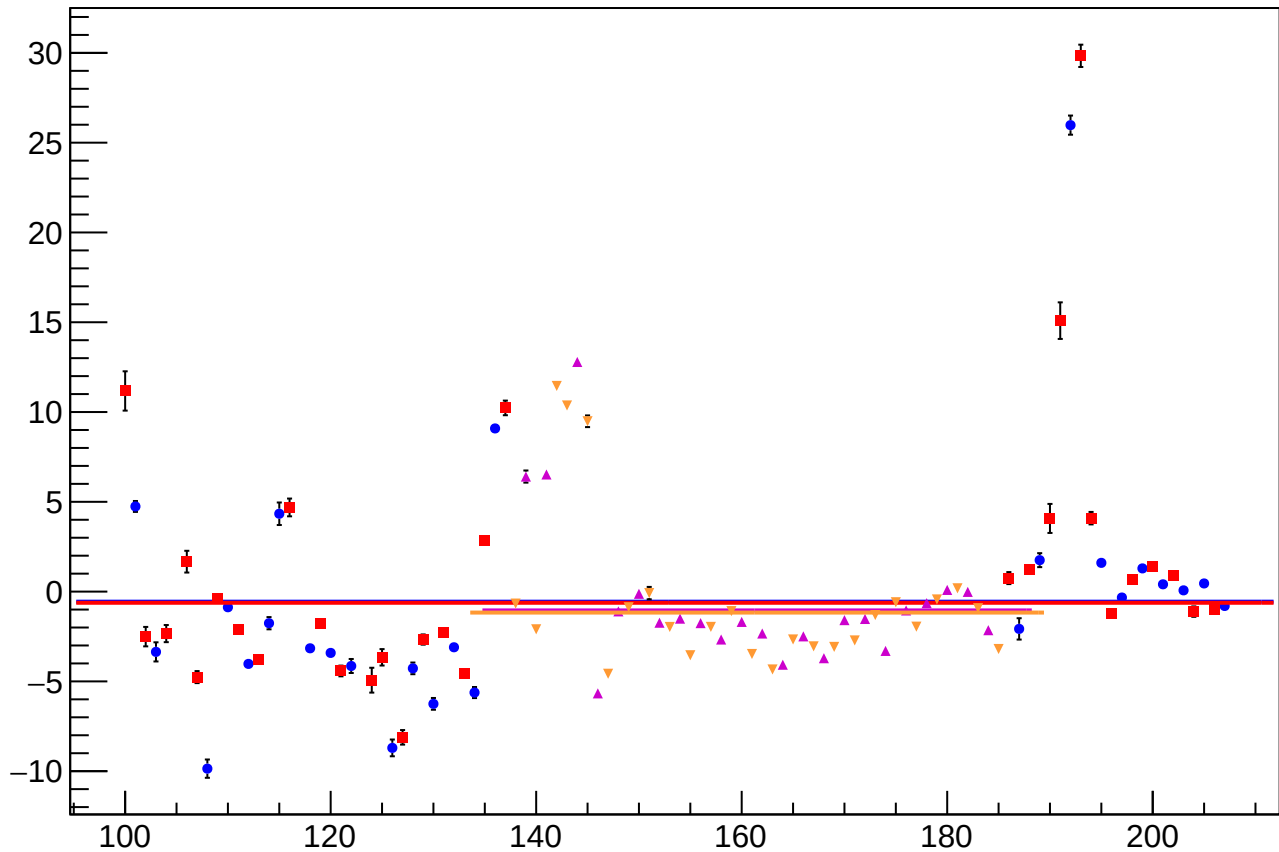
Left In:  $-0.859 \pm 0.039$   $\chi^2/\text{NDF}$ : 129084.9/22

+ sign  $-1.444 \pm 0.029$   $\chi^2/\text{NDF}$ : 290335.7/50

All:  $-1.155 \pm 0.020$   $\chi^2/\text{NDF}$ : 539059.6/104

- sign  $-0.901 \pm 0.027$   $\chi^2/\text{NDF}$ : 248537.2/53

# reg\_asym\_bcm\_an\_ds\_diff\_bpm4eY\_slope vs Slug



Right In:  $-0.561 \pm 0.055$   $\chi^2/\text{NDF}$ : 7439.0/25

Left Out:  $-1.167 \pm 0.036$   $\chi^2/\text{NDF}$ : 7001.4/24

Right Out:  $-0.622 \pm 0.052$   $\chi^2/\text{NDF}$ : 5766.0/30

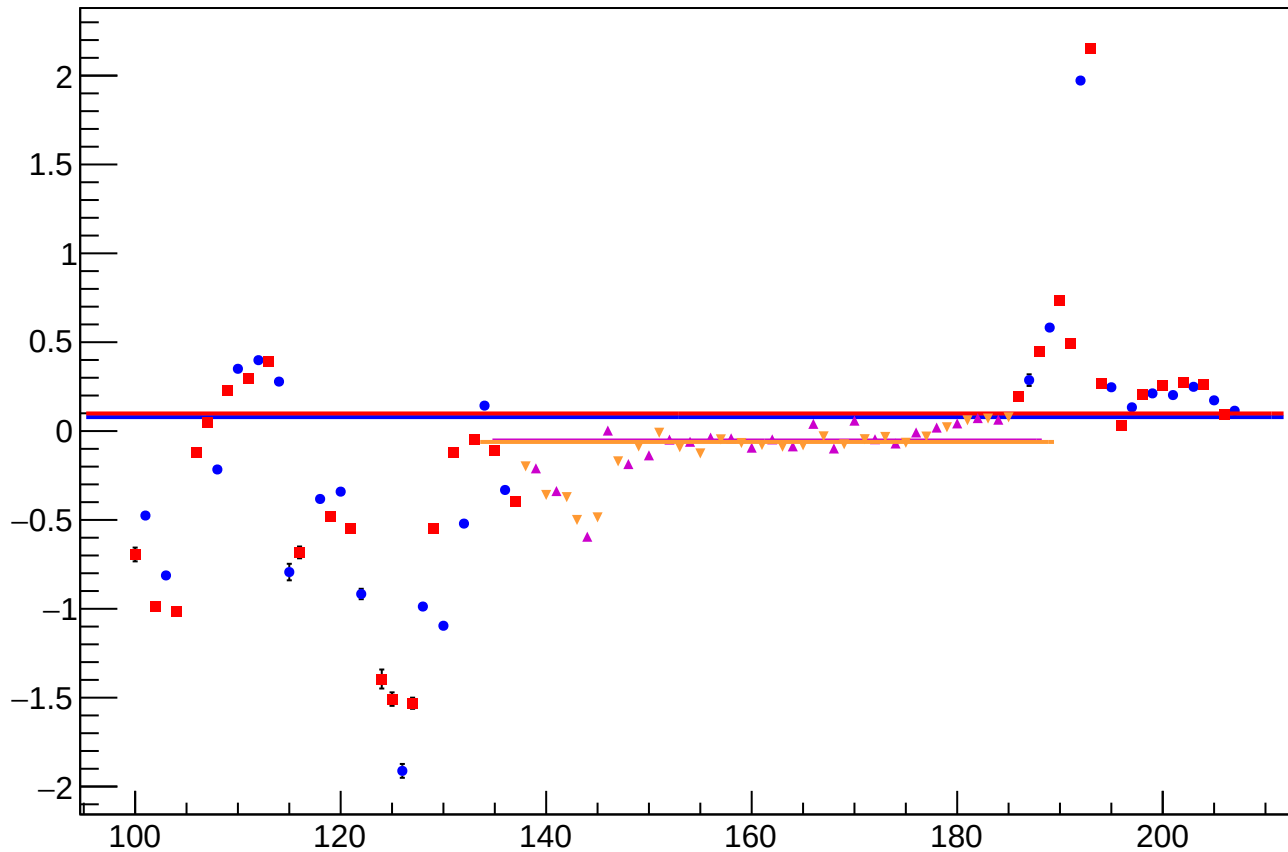
Left In:  $-1.048 \pm 0.035$   $\chi^2/\text{NDF}$ : 7040.7/22

+ sign  $-0.983 \pm 0.030$   $\chi^2/\text{NDF}$ : 14525.9/50

All:  $-0.948 \pm 0.021$   $\chi^2/\text{NDF}$ : 27382.2/104

- sign  $-0.915 \pm 0.029$   $\chi^2/\text{NDF}$ : 12853.7/53

reg\_asym\_bcm\_an\_ds\_diff\_bpm12X\_slope vs Slug



Right In:  $0.079 \pm 0.002$   $\chi^2/\text{NDF}$ : 34269.4/25

Left Out:  $-0.061 \pm 0.002$   $\chi^2/\text{NDF}$ : 5729.4/24

Right Out:  $0.099 \pm 0.002$   $\chi^2/\text{NDF}$ : 34950.1/30

Left In:  $-0.053 \pm 0.001$   $\chi^2/\text{NDF}$ : 5006.2/22

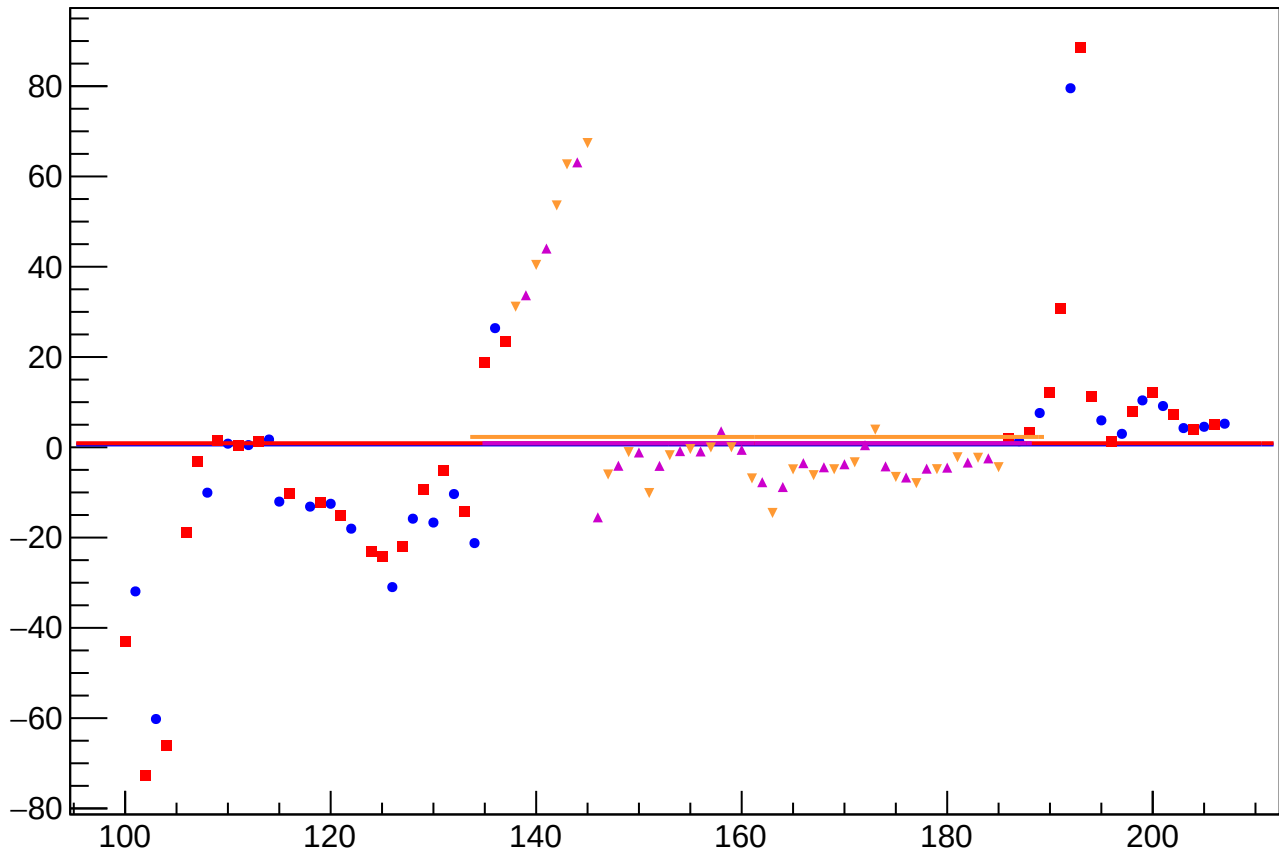
+ sign  $-0.020 \pm 0.001$   $\chi^2/\text{NDF}$ : 42314.9/50

All:  $-0.014 \pm 0.001$   $\chi^2/\text{NDF}$ : 85297.0/104

- sign  $-0.009 \pm 0.001$   $\chi^2/\text{NDF}$ : 42949.5/53



reg\_asym\_bcm\_an\_us\_diff\_bpm1X\_slope vs Slug



Right In:  $0.630 \pm 0.041$   $\chi^2/\text{NDF}: 119930.7/25$

Left Out:  $2.296 \pm 0.040$   $\chi^2/\text{NDF}: 177186.2/24$

Right Out:  $0.901 \pm 0.036$   $\chi^2/\text{NDF}: 121212.5/30$

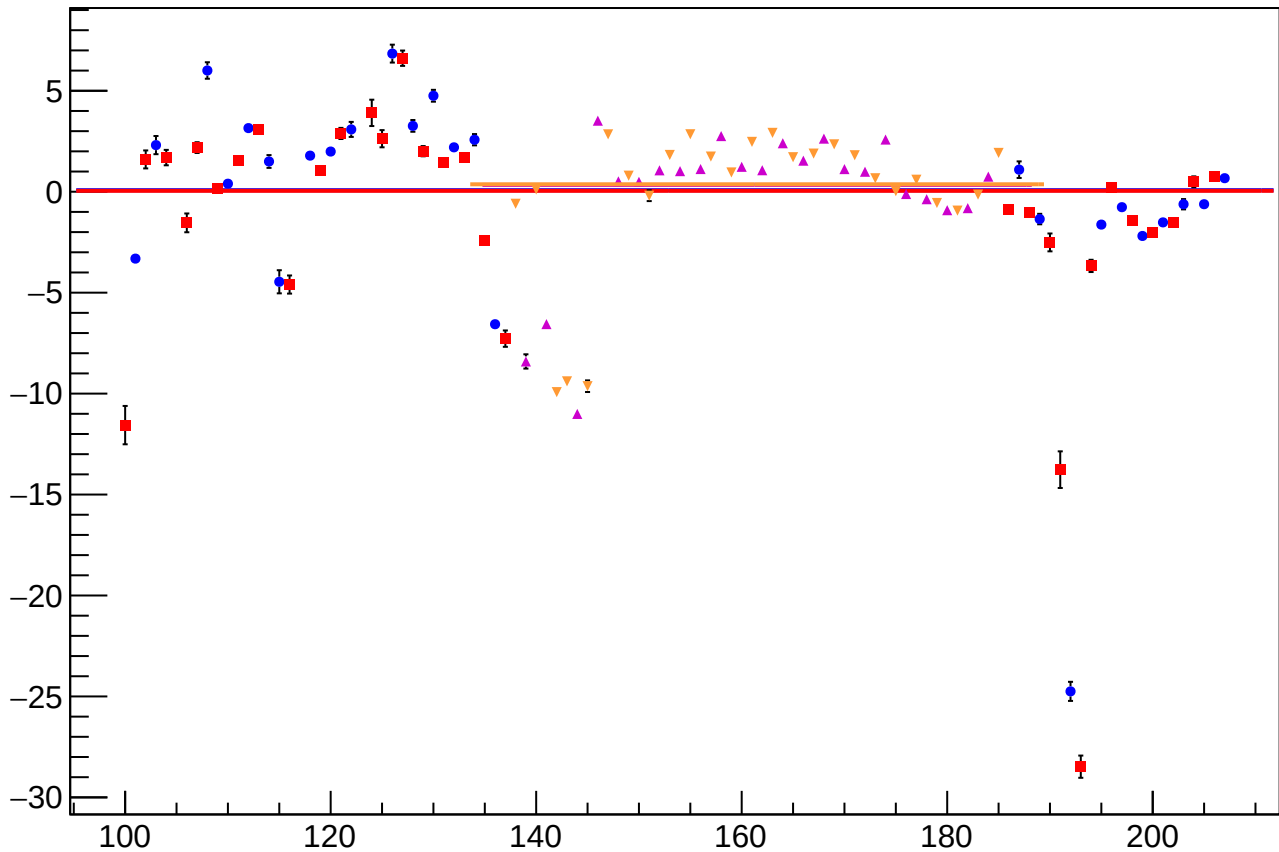
Left In:  $0.912 \pm 0.040$   $\chi^2/\text{NDF}: 132573.8/22$

+ sign  $1.475 \pm 0.029$   $\chi^2/\text{NDF}: 297958.7/50$

All:  $1.170 \pm 0.020$   $\chi^2/\text{NDF}: 551956.1/104$

- sign  $0.906 \pm 0.027$   $\chi^2/\text{NDF}: 253786.3/53$

# reg\_asym\_bcm\_an\_us\_diff\_bpm4aY\_slope vs Slug



Right In:  $0.076 \pm 0.047$   $\chi^2/\text{NDF}: 5953.3/25$

Left Out:  $0.368 \pm 0.033$   $\chi^2/\text{NDF}: 7068.0/24$

Right Out:  $0.045 \pm 0.045$   $\chi^2/\text{NDF}: 5247.6/30$

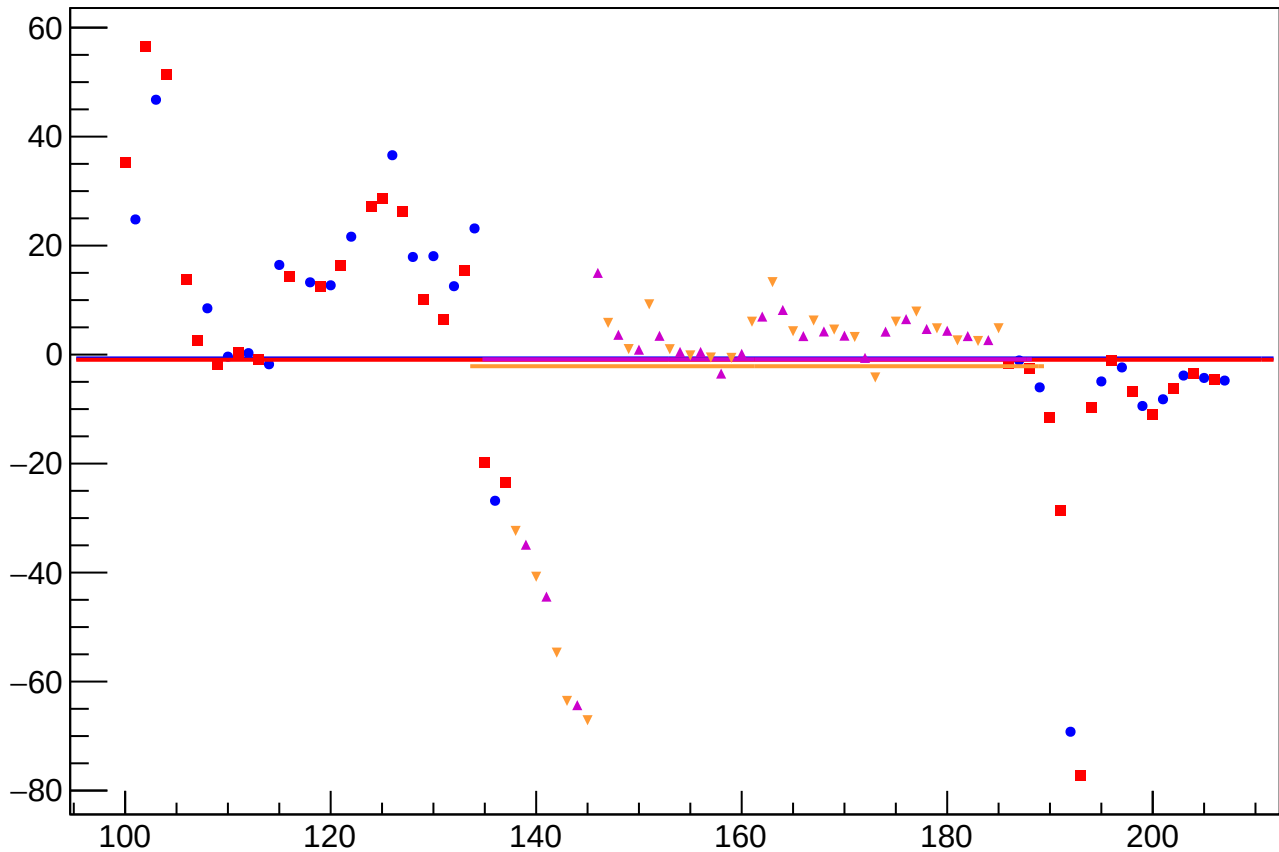
Left In:  $0.337 \pm 0.031$   $\chi^2/\text{NDF}: 7094.3/22$

+ sign  $0.273 \pm 0.027$   $\chi^2/\text{NDF}: 13046.8/50$

All:  $0.256 \pm 0.019$   $\chi^2/\text{NDF}: 25418.0/104$

- sign  $0.240 \pm 0.026$   $\chi^2/\text{NDF}: 12370.4/53$

reg\_asym\_bcm\_an\_us\_diff\_bpm4eX\_slope vs Slug



Right In:  $-0.701 \pm 0.042$   $\chi^2/\text{NDF}$ : 118753.9/25

Left Out:  $-2.133 \pm 0.040$   $\chi^2/\text{NDF}$ : 171466.8/24

Right Out:  $-0.948 \pm 0.038$   $\chi^2/\text{NDF}$ : 119513.6/30

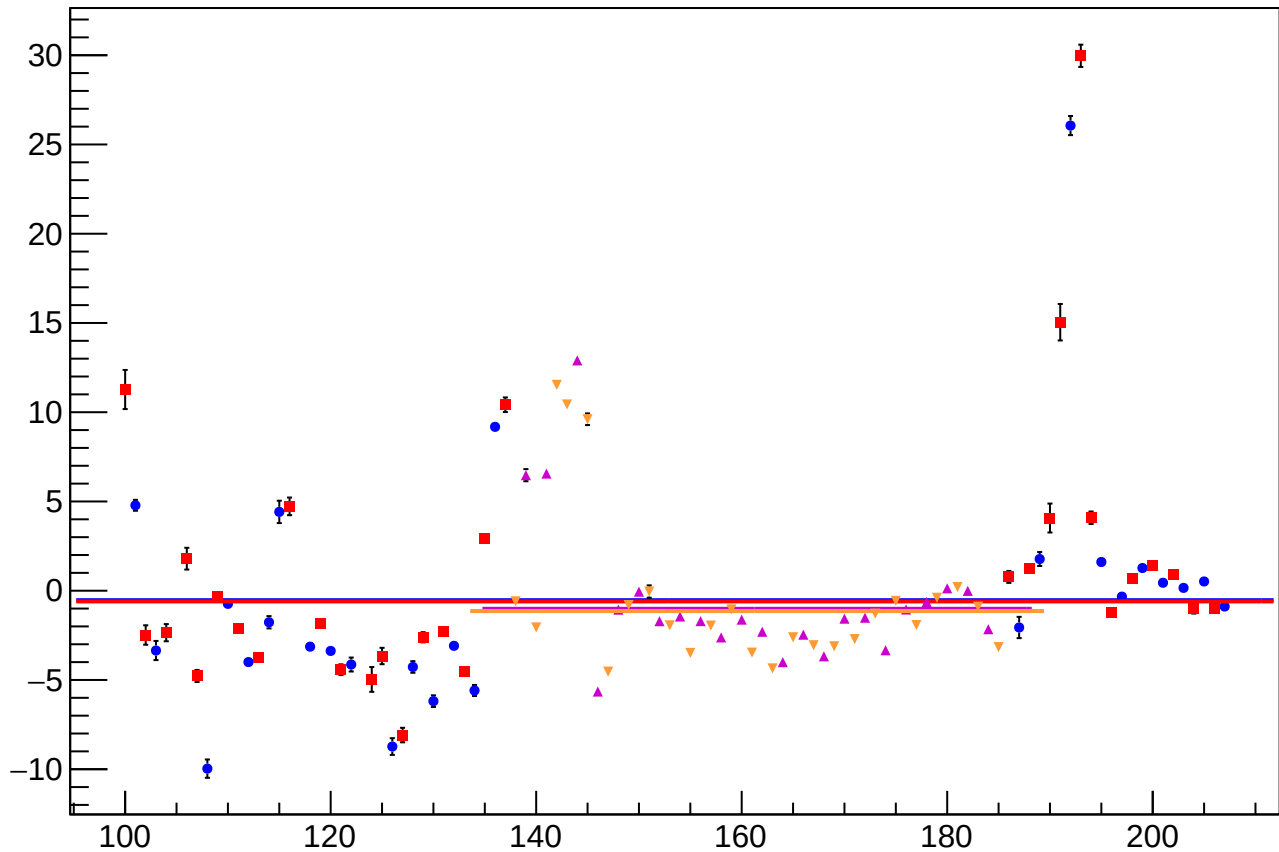
Left In:  $-0.871 \pm 0.039$   $\chi^2/\text{NDF}$ : 129263.4/22

+ sign  $-1.452 \pm 0.029$   $\chi^2/\text{NDF}$ : 290821.5/50

All:  $-1.164 \pm 0.020$   $\chi^2/\text{NDF}$ : 539783.7/104

- sign  $-0.911 \pm 0.027$   $\chi^2/\text{NDF}$ : 248778.9/53

reg\_asym\_bcm\_an\_us\_diff\_bpm4eY\_slope vs Slug



Right In:  $-0.531 \pm 0.055$   $\chi^2/\text{NDF}$ : 7434.2/25

Left Out:  $-1.140 \pm 0.036$   $\chi^2/\text{NDF}$ : 7022.9/24

Right Out:  $-0.600 \pm 0.052$   $\chi^2/\text{NDF}$ : 5770.8/30

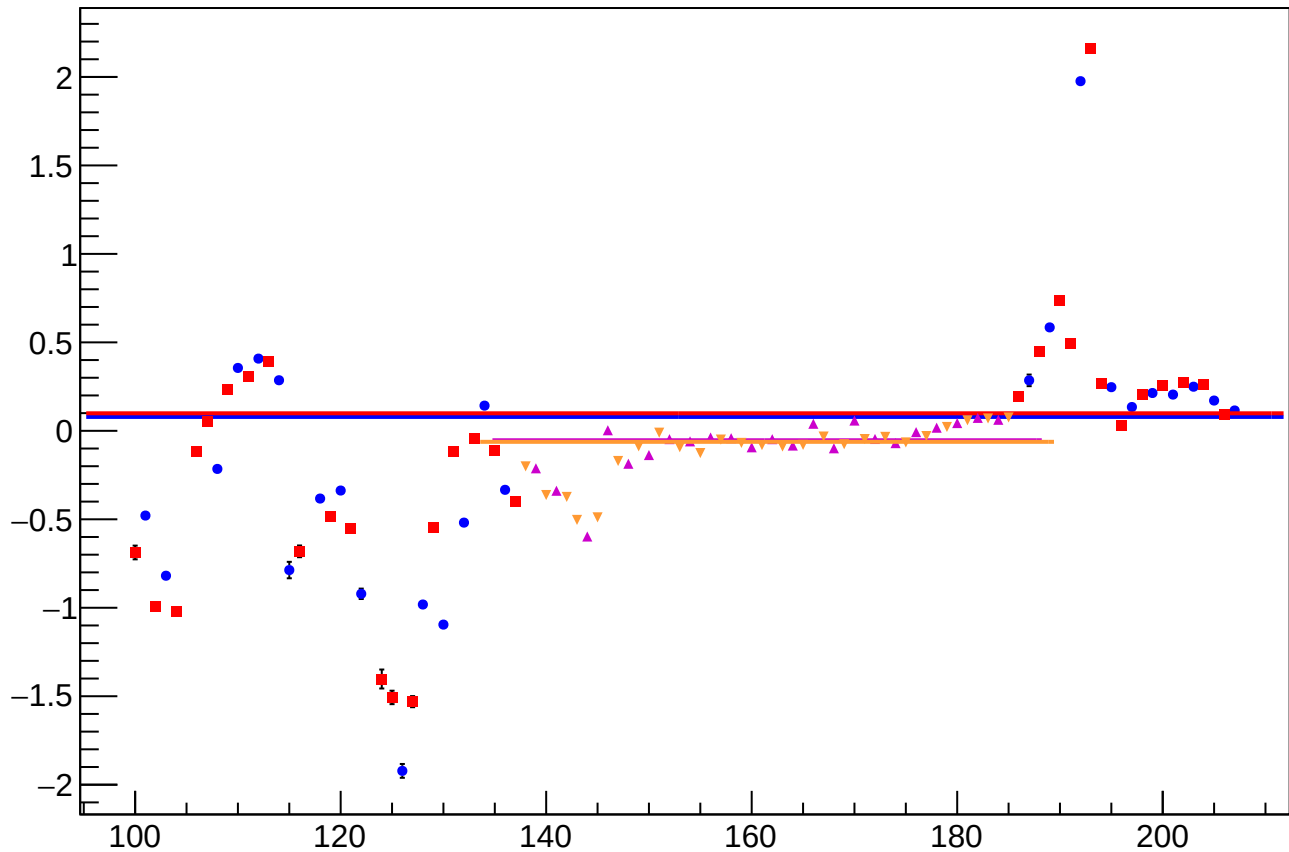
Left In:  $-1.013 \pm 0.035$   $\chi^2/\text{NDF}$ : 7027.2/22

+ sign  $-0.955 \pm 0.030$   $\chi^2/\text{NDF}$ : 14542.3/50

All:  $-0.918 \pm 0.021$   $\chi^2/\text{NDF}$ : 27386.9/104

- sign  $-0.885 \pm 0.029$   $\chi^2/\text{NDF}$ : 12841.8/53

reg\_asym\_bcm\_an\_us\_diff\_bpm12X\_slope vs Slug



Right In:  $0.079 \pm 0.002$   $\chi^2/\text{NDF}$ : 34260.7/25

Left Out:  $-0.062 \pm 0.002$   $\chi^2/\text{NDF}$ : 5736.1/24

Right Out:  $0.099 \pm 0.002$   $\chi^2/\text{NDF}$ : 34913.1/30

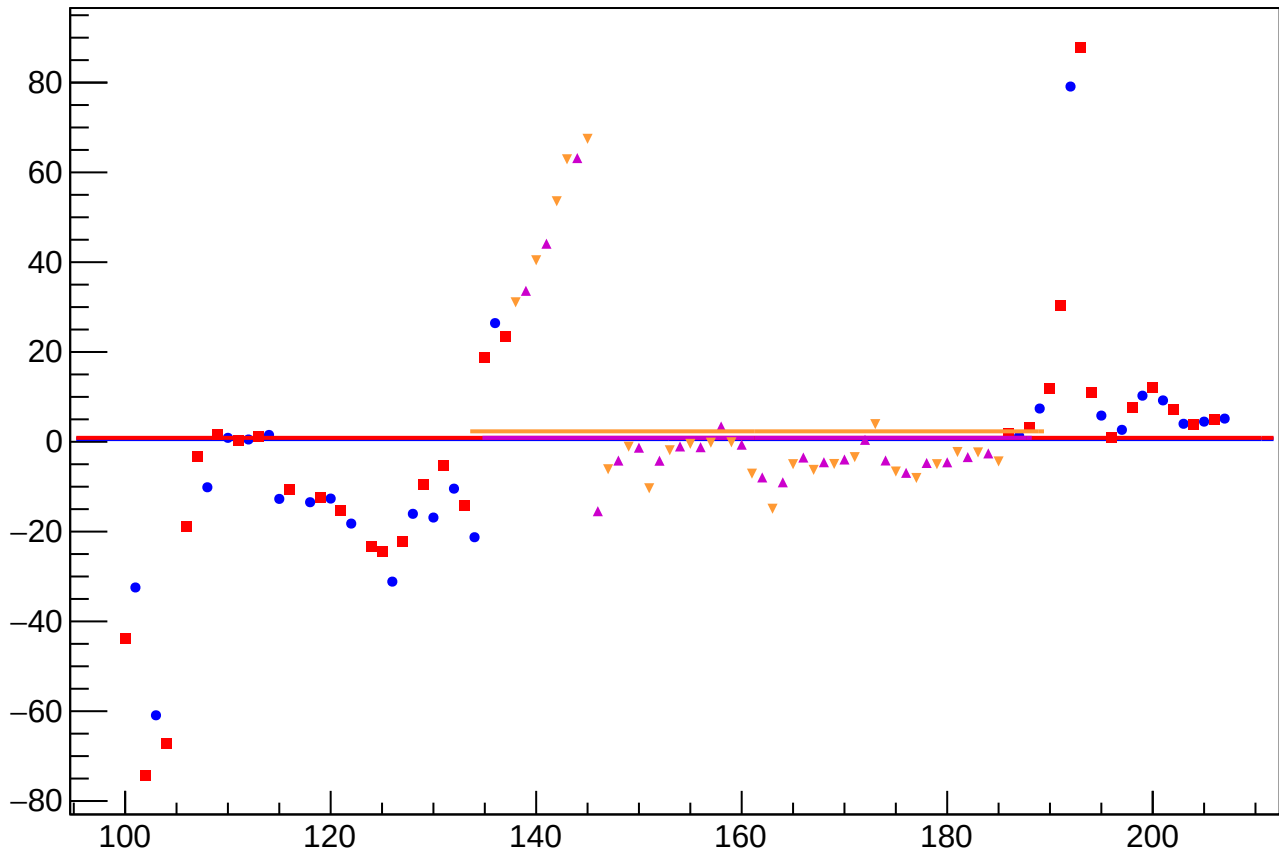
Left In:  $-0.053 \pm 0.001$   $\chi^2/\text{NDF}$ : 4993.7/22

+ sign  $-0.021 \pm 0.001$   $\chi^2/\text{NDF}$ : 42318.5/50

All:  $-0.015 \pm 0.001$   $\chi^2/\text{NDF}$ : 85233.6/104

- sign  $-0.010 \pm 0.001$   $\chi^2/\text{NDF}$ : 42879.8/53

reg\_asym\_bcm\_dg\_ds\_diff\_bpm1X\_slope vs Slug



Right In:  $0.600 \pm 0.041$   $\chi^2/\text{NDF}: 118045.7/25$

Left Out:  $2.329 \pm 0.041$   $\chi^2/\text{NDF}: 174647.6/24$

Right Out:  $0.880 \pm 0.036$   $\chi^2/\text{NDF}: 119573.0/30$

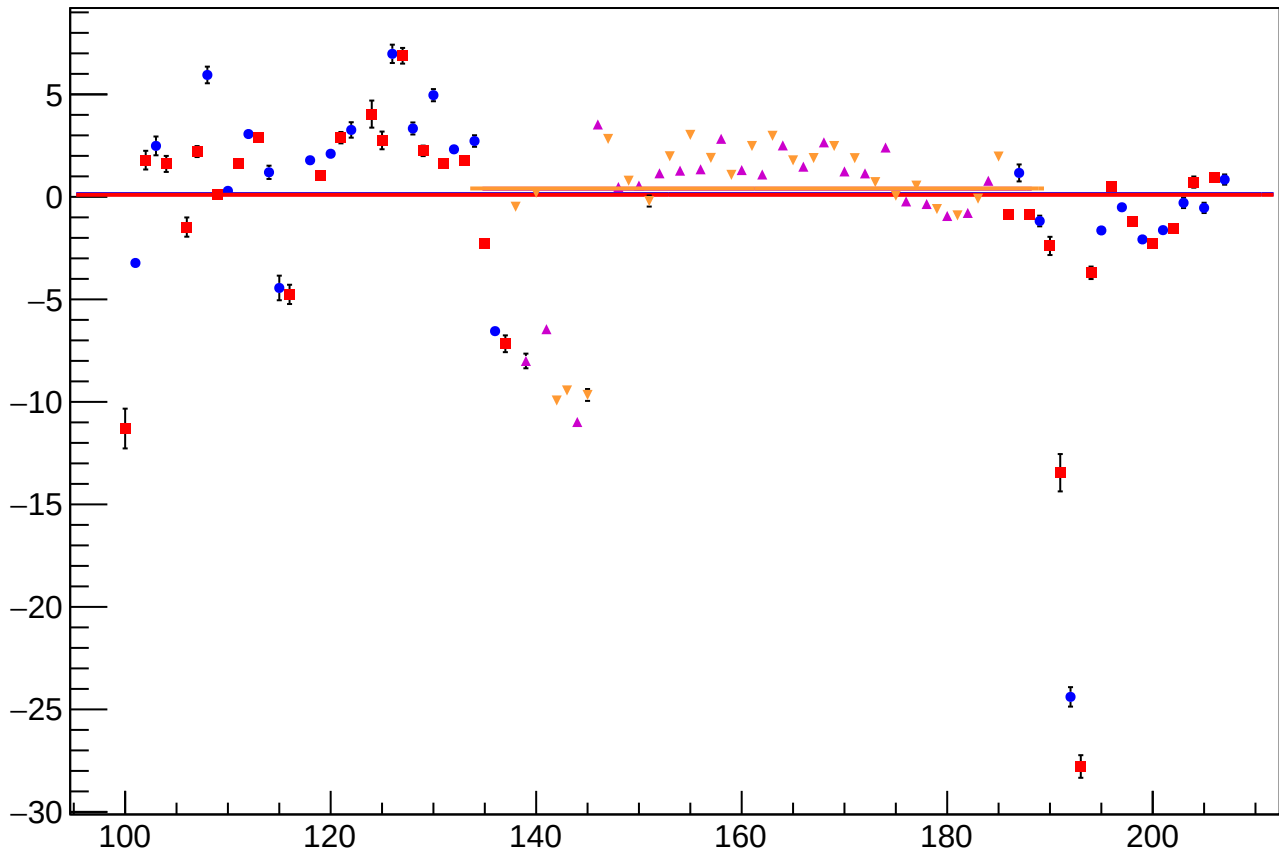
Left In:  $0.887 \pm 0.041$   $\chi^2/\text{NDF}: 130417.3/22$

+ sign  $1.471 \pm 0.029$   $\chi^2/\text{NDF}: 293572.4/50$

All:  $1.156 \pm 0.020$   $\chi^2/\text{NDF}: 543780.3/104$

- sign  $0.883 \pm 0.027$   $\chi^2/\text{NDF}: 249990.2/53$

# reg\_asym\_bcm\_dg\_ds\_diff\_bpm4aY\_slope vs Slug



Right In:  $0.135 \pm 0.048$   $\chi^2/\text{NDF}: 5795.1/25$

Left Out:  $0.410 \pm 0.033$   $\chi^2/\text{NDF}: 7047.9/24$

Right Out:  $0.101 \pm 0.045$   $\chi^2/\text{NDF}: 5057.8/30$

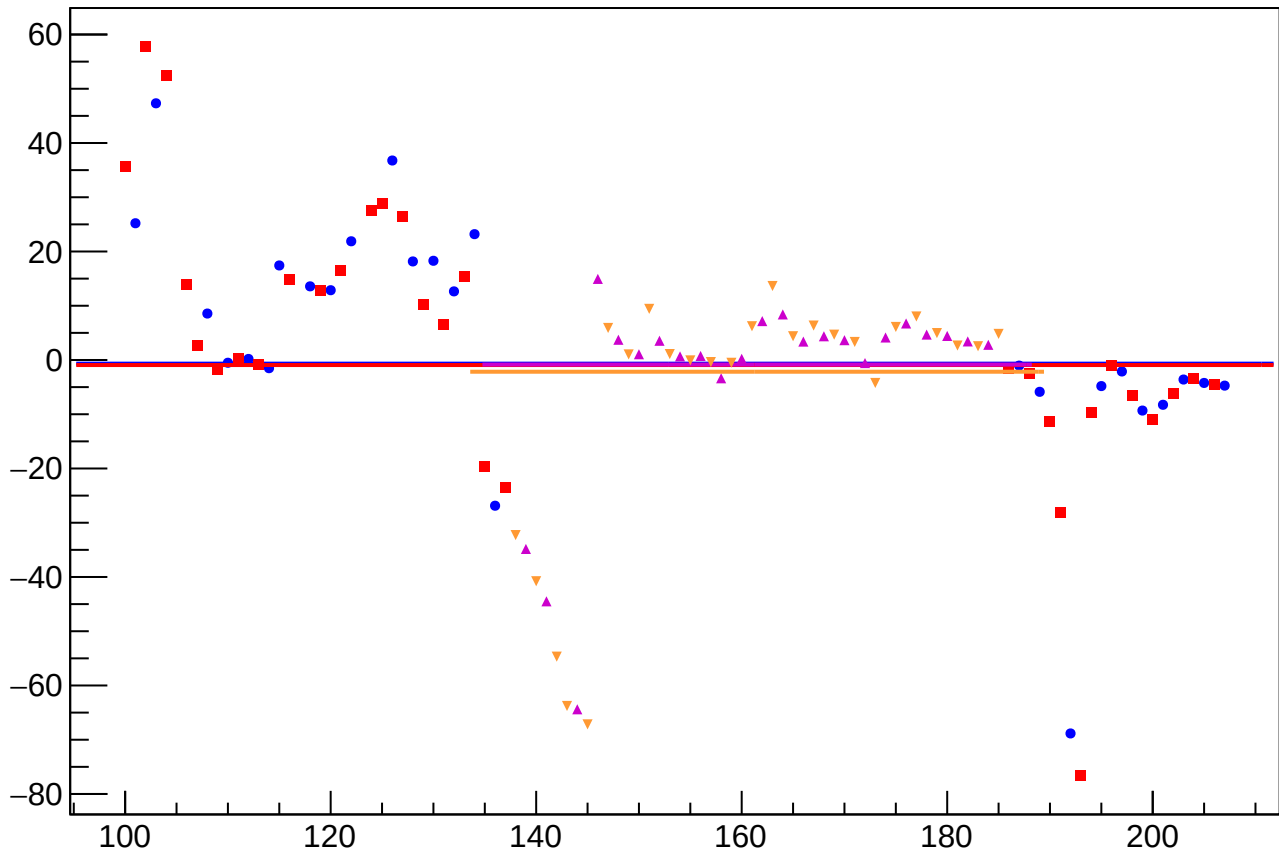
Left In:  $0.396 \pm 0.032$   $\chi^2/\text{NDF}: 6932.0/22$

+ sign  $0.320 \pm 0.027$   $\chi^2/\text{NDF}: 12864.9/50$

All:  $0.308 \pm 0.019$   $\chi^2/\text{NDF}: 24883.3/104$

- sign  $0.298 \pm 0.026$   $\chi^2/\text{NDF}: 12018.0/53$

reg\_asym\_bcm\_dg\_ds\_diff\_bpm4eX\_slope vs Slug



Right In:  $-0.675 \pm 0.043$   $\chi^2/\text{NDF}$ : 116912.7/25

Left Out:  $-2.163 \pm 0.041$   $\chi^2/\text{NDF}$ : 168990.2/24

Right Out:  $-0.930 \pm 0.038$   $\chi^2/\text{NDF}$ : 117884.7/30

Left In:  $-0.843 \pm 0.040$   $\chi^2/\text{NDF}$ : 127135.3/22

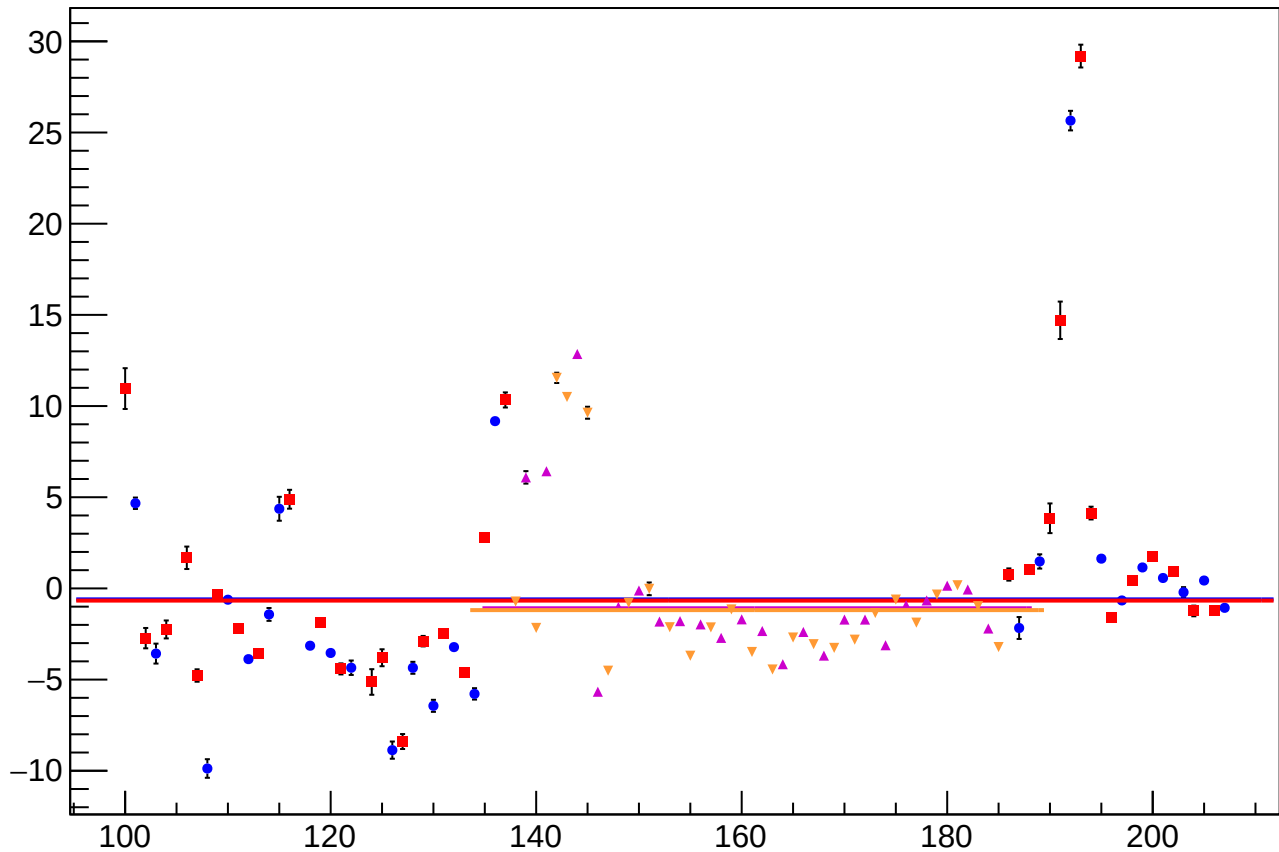
+ sign  $-1.449 \pm 0.030$   $\chi^2/\text{NDF}$ : 286533.3/50

All:  $-1.150 \pm 0.020$   $\chi^2/\text{NDF}$ : 531747.1/104

- sign  $-0.889 \pm 0.028$   $\chi^2/\text{NDF}$ : 245022.5/53



reg\_asym\_bcm\_dg\_ds\_diff\_bpm4eY\_slope vs Slug



Right In:  $-0.601 \pm 0.056$   $\chi^2/\text{NDF}$ : 7273.5/25

Left Out:  $-1.190 \pm 0.037$   $\chi^2/\text{NDF}$ : 6995.9/24

Right Out:  $-0.668 \pm 0.053$   $\chi^2/\text{NDF}$ : 5584.4/30

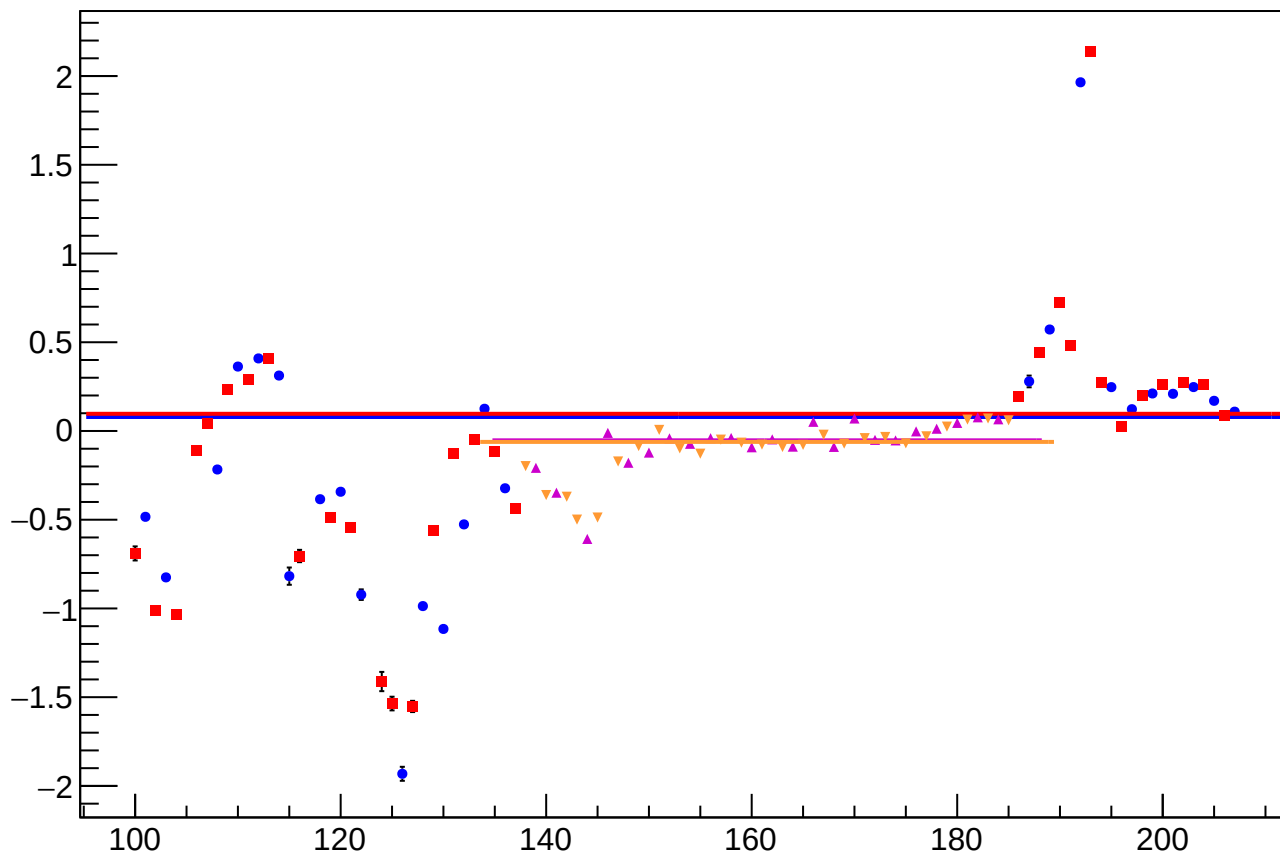
Left In:  $-1.089 \pm 0.036$   $\chi^2/\text{NDF}$ : 6840.8/22

+ sign  $-1.010 \pm 0.031$   $\chi^2/\text{NDF}$ : 14347.0/50

All:  $-0.983 \pm 0.021$   $\chi^2/\text{NDF}$ : 26817.7/104

- sign  $-0.957 \pm 0.029$   $\chi^2/\text{NDF}$ : 12469.1/53

reg\_asym\_bcm\_dg\_ds\_diff\_bpm12X\_slope vs Slug



Right In: 0.079+/-0.002  $\chi^2/\text{NDF}$ : 33533.2/25

Left Out: -0.062+/-0.002  $\chi^2/\text{NDF}$ : 5563.5/24

Right Out: 0.097+/-0.002  $\chi^2/\text{NDF}$ : 34476.5/30

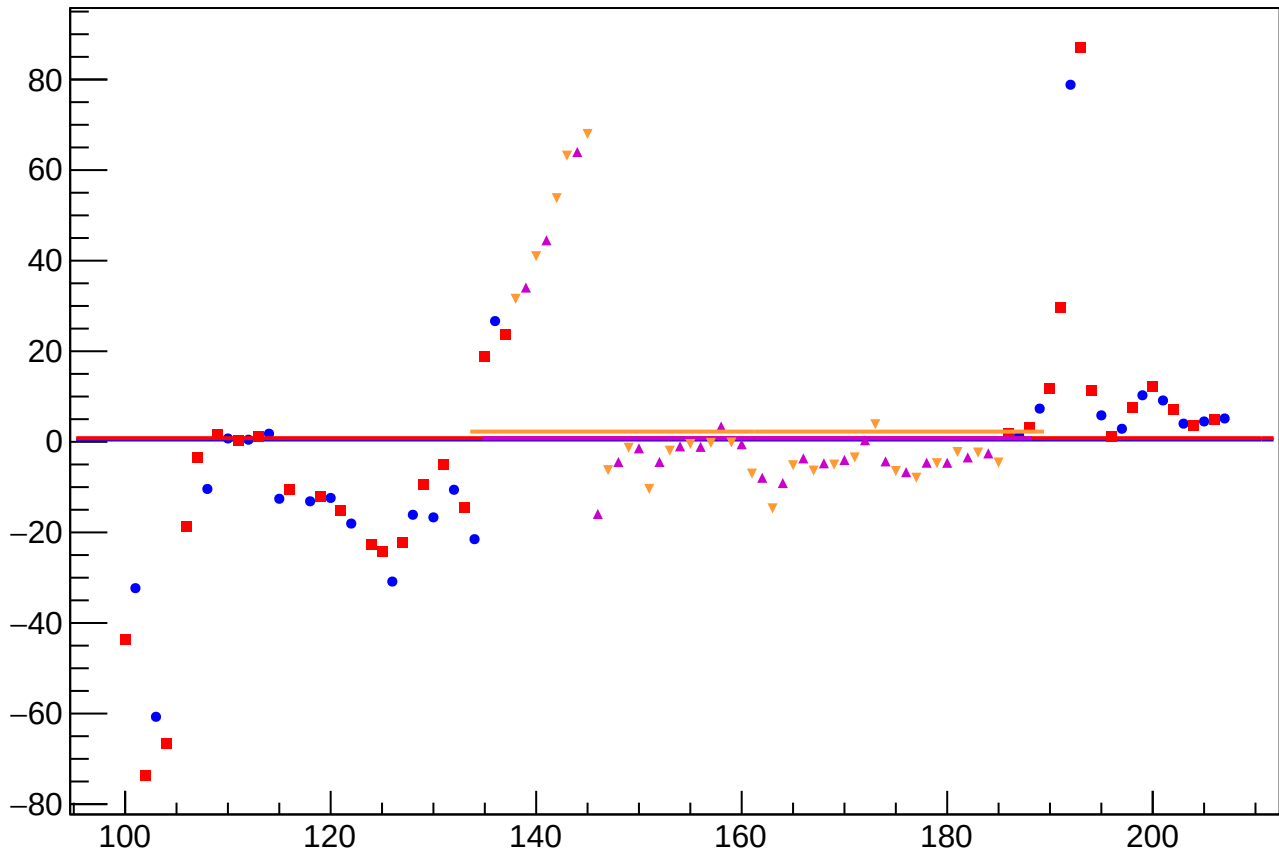
Left In: -0.053+/-0.002  $\chi^2/\text{NDF}$ : 5036.0/22

+ sign -0.020+/-0.001  $\chi^2/\text{NDF}$ : 41352.2/50

All: -0.014+/-0.001  $\chi^2/\text{NDF}$ : 83684.6/104

- sign -0.009+/-0.001  $\chi^2/\text{NDF}$ : 42301.7/53

# reg\_asym\_bcm\_dg\_us\_diff\_bpm1X\_slope vs Slug



Right In:  $0.516 \pm 0.042$   $\chi^2/\text{NDF}: 116344.0/25$

Left Out:  $2.255 \pm 0.041$   $\chi^2/\text{NDF}: 171671.4/24$

Right Out:  $0.805 \pm 0.037$   $\chi^2/\text{NDF}: 117369.5/30$

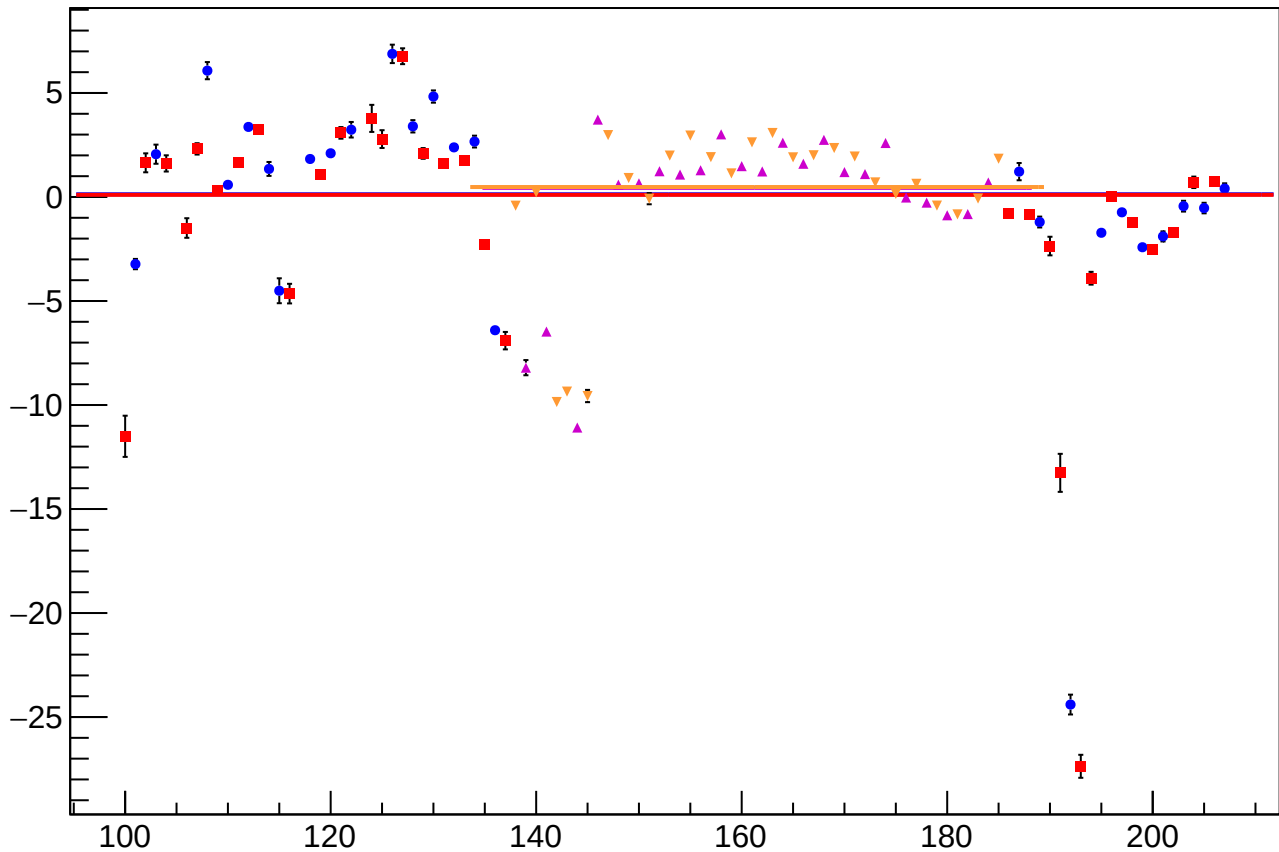
Left In:  $0.794 \pm 0.041$   $\chi^2/\text{NDF}: 128828.3/22$

+ sign  $1.397 \pm 0.030$   $\chi^2/\text{NDF}: 288881.9/50$

All:  $1.078 \pm 0.020$   $\chi^2/\text{NDF}: 535298.0/104$

- sign  $0.800 \pm 0.028$   $\chi^2/\text{NDF}: 246197.9/53$

# reg\_asym\_bcm\_dg\_us\_diff\_bpm4aY\_slope vs Slug



Right In: 0.130 $\pm$ 0.049  $\chi^2$ /NDF: 5779.3/25

Left Out: 0.479 $\pm$ 0.034  $\chi^2$ /NDF: 6808.1/24

Right Out: 0.104 $\pm$ 0.046  $\chi^2$ /NDF: 4972.8/30

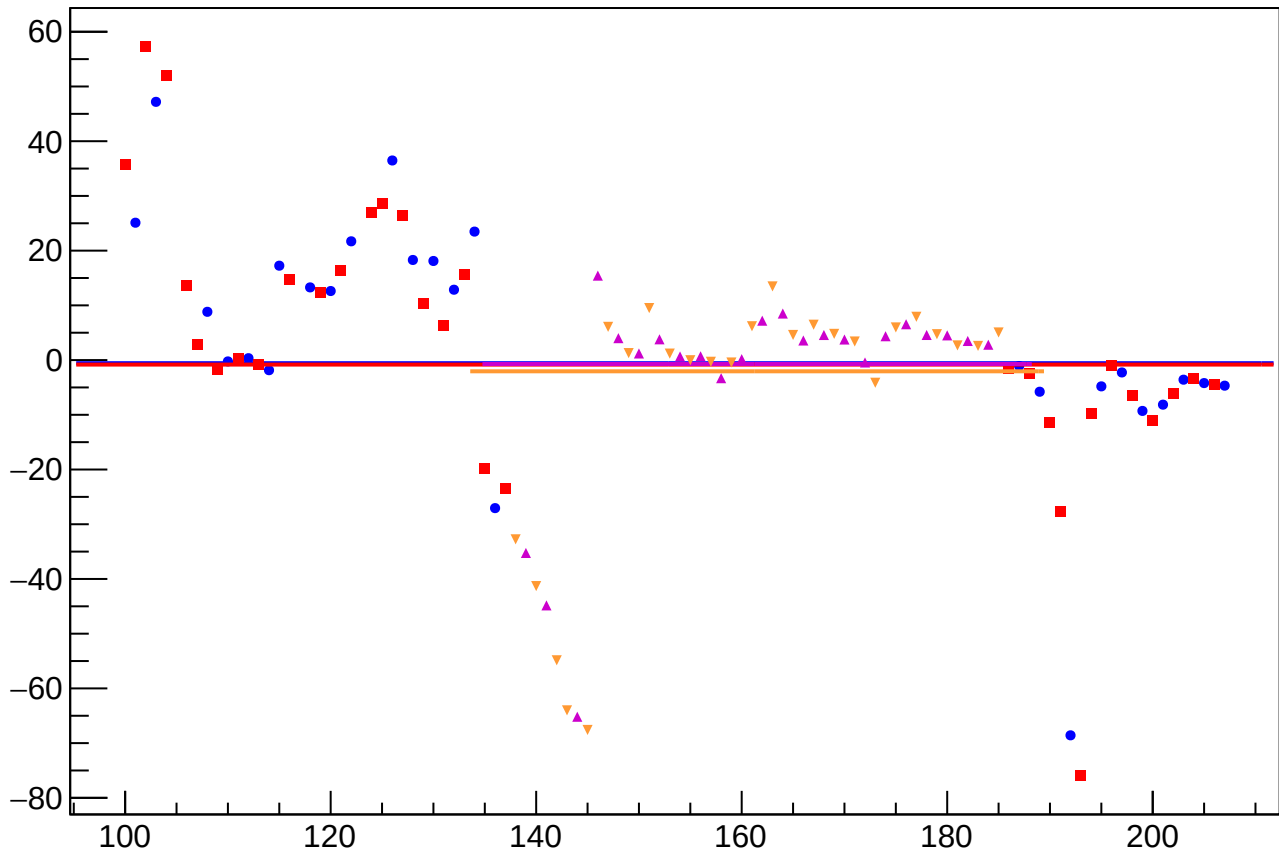
Left In: 0.440 $\pm$ 0.032  $\chi^2$ /NDF: 6893.7/22

+ sign 0.365 $\pm$ 0.028  $\chi^2$ /NDF: 12622.2/50

All: 0.345 $\pm$ 0.019  $\chi^2$ /NDF: 24525.5/104

- sign 0.328 $\pm$ 0.026  $\chi^2$ /NDF: 11902.4/53

reg\_asym\_bcm\_dg\_us\_diff\_bpm4eX\_slope vs Slug



Right In:  $-0.569 \pm 0.043$   $\chi^2/\text{NDF}$ : 115190.2/25

Left Out:  $-2.051 \pm 0.041$   $\chi^2/\text{NDF}$ : 166009.6/24

Right Out:  $-0.822 \pm 0.039$   $\chi^2/\text{NDF}$ : 115712.4/30

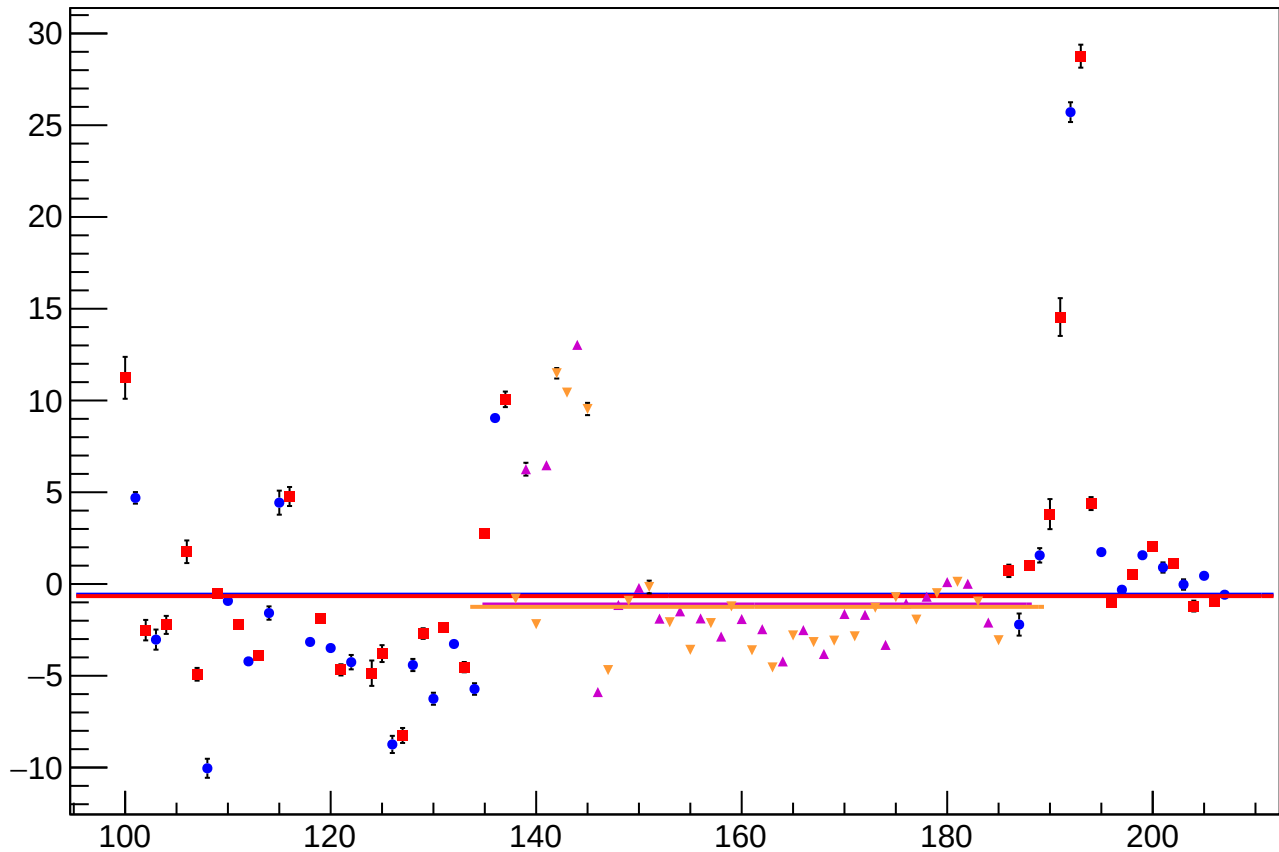
Left In:  $-0.720 \pm 0.041$   $\chi^2/\text{NDF}$ : 125531.3/22

+ sign  $-1.342 \pm 0.030$   $\chi^2/\text{NDF}$ : 281811.1/50

All:  $-1.039 \pm 0.020$   $\chi^2/\text{NDF}$ : 523250.2/104

- sign  $-0.773 \pm 0.028$   $\chi^2/\text{NDF}$ : 241247.0/53

# reg\_asym\_bcm\_dg\_us\_diff\_bpm4eY\_slope vs Slug



Right In:  $-0.580 \pm 0.056$   $\chi^2/\text{NDF}$ : 7168.9/25

Left Out:  $-1.244 \pm 0.037$   $\chi^2/\text{NDF}$ : 6768.7/24

Right Out:  $-0.660 \pm 0.053$   $\chi^2/\text{NDF}$ : 5455.5/30

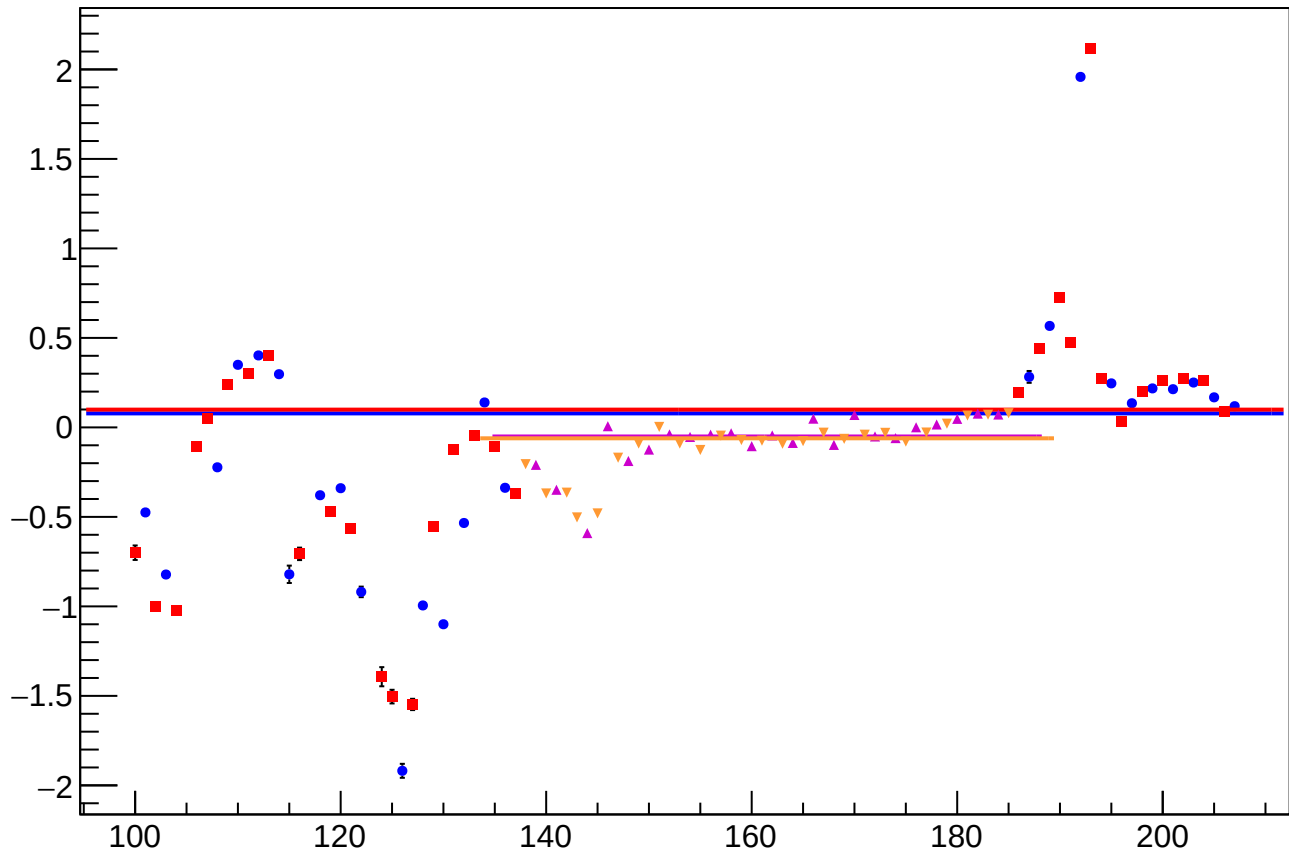
Left In:  $-1.117 \pm 0.036$   $\chi^2/\text{NDF}$ : 6840.3/22

+ sign  $-1.042 \pm 0.031$   $\chi^2/\text{NDF}$ : 14034.0/50

All:  $-1.007 \pm 0.022$   $\chi^2/\text{NDF}$ : 26382.5/104

- sign  $-0.975 \pm 0.030$   $\chi^2/\text{NDF}$ : 12346.1/53

reg\_asym\_bcm\_dg\_us\_diff\_bpm12X\_slope vs Slug



Right In:  $0.078 \pm 0.003$   $\chi^2/\text{NDF}$ : 33196.4/25

Left Out:  $-0.061 \pm 0.002$   $\chi^2/\text{NDF}$ : 5479.8/24

Right Out:  $0.099 \pm 0.002$   $\chi^2/\text{NDF}$ : 33549.4/30

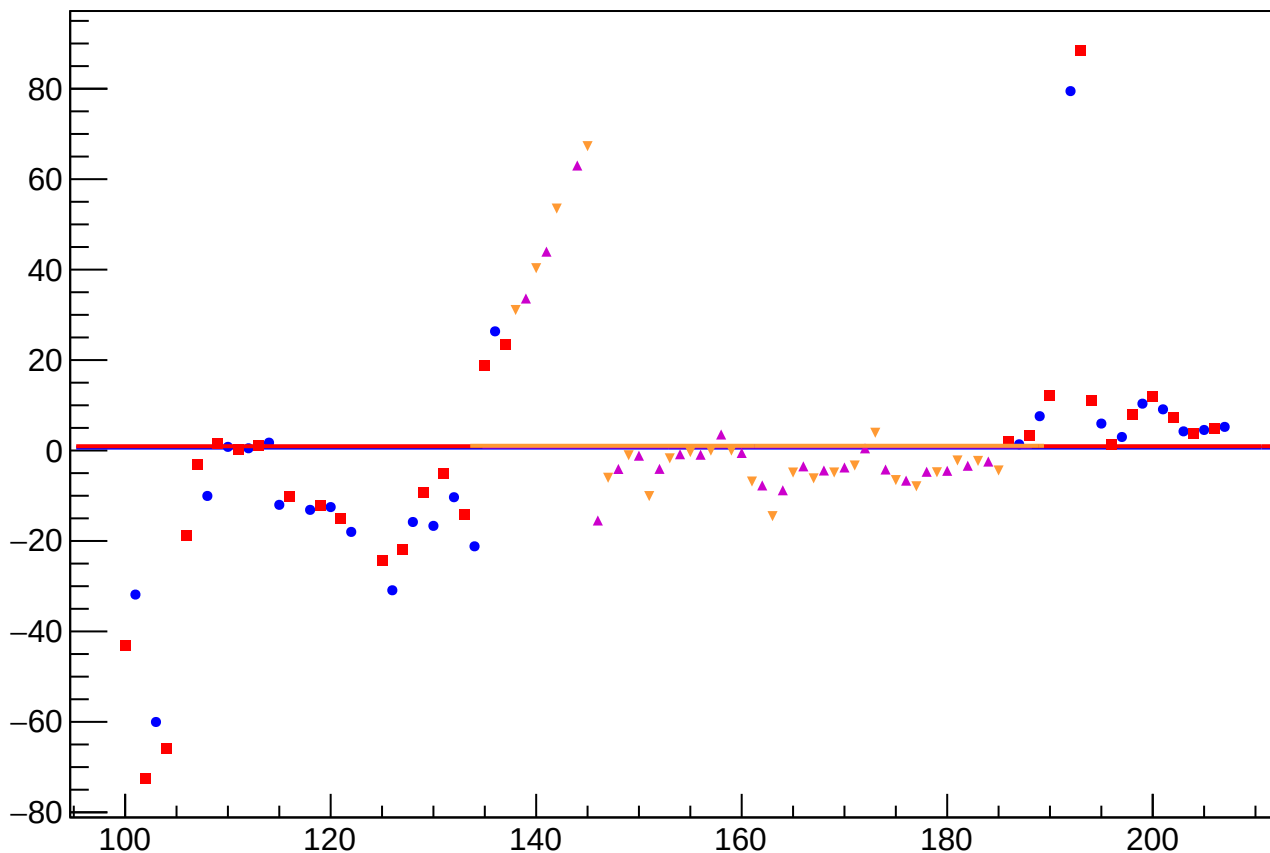
Left In:  $-0.051 \pm 0.002$   $\chi^2/\text{NDF}$ : 4878.7/22

+ sign  $-0.020 \pm 0.001$   $\chi^2/\text{NDF}$ : 40839.4/50

All:  $-0.013 \pm 0.001$   $\chi^2/\text{NDF}$ : 82038.9/104

- sign  $-0.007 \pm 0.001$   $\chi^2/\text{NDF}$ : 41158.3/53

reg\_asym\_bcm\_2an\_us\_an\_ds\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $0.647 \pm 0.041$   $\chi^2/\text{NDF}$ : 120138.6/25

Left Out:  $1.053 \pm 0.041$   $\chi^2/\text{NDF}$ : 131031.0/23

Right Out:  $0.950 \pm 0.036$   $\chi^2/\text{NDF}$ : 118507.9/28

Left In:  $0.913 \pm 0.040$   $\chi^2/\text{NDF}$ : 132807.5/22

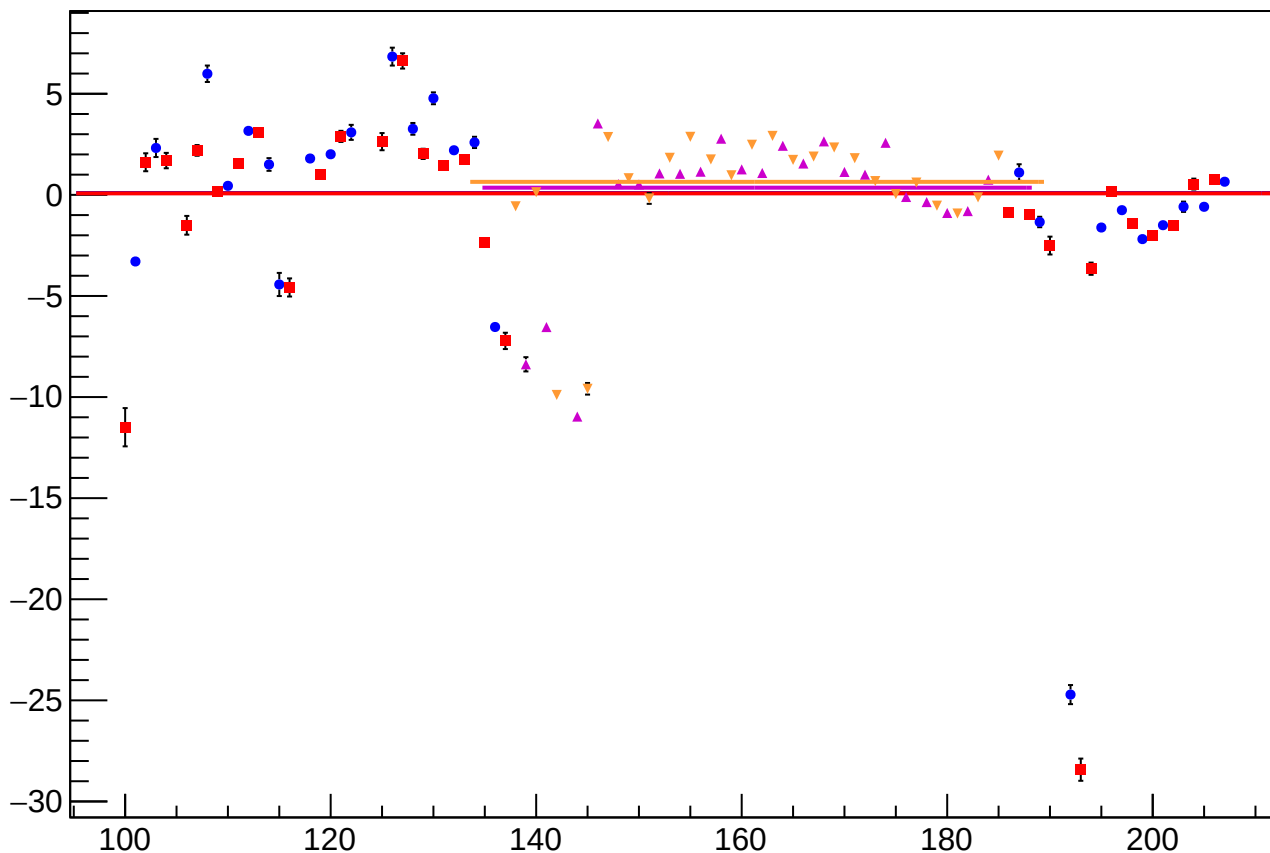
+ sign  $0.851 \pm 0.029$   $\chi^2/\text{NDF}$ : 251219.7/49

All:  $0.895 \pm 0.020$   $\chi^2/\text{NDF}$ : 502540.1/101

- sign  $0.934 \pm 0.027$   $\chi^2/\text{NDF}$ : 251315.9/51



reg\_asym\_bcm\_2an\_us\_an\_ds\_avg\_diff\_bpm4aY\_slope vs Slug



Right In: 0.091 $\pm$ 0.047  $\chi^2$ /NDF: 5968.8/25

Left Out: 0.644 $\pm$ 0.033  $\chi^2$ /NDF: 4711.1/23

Right Out: 0.075 $\pm$ 0.045  $\chi^2$ /NDF: 4991.4/28

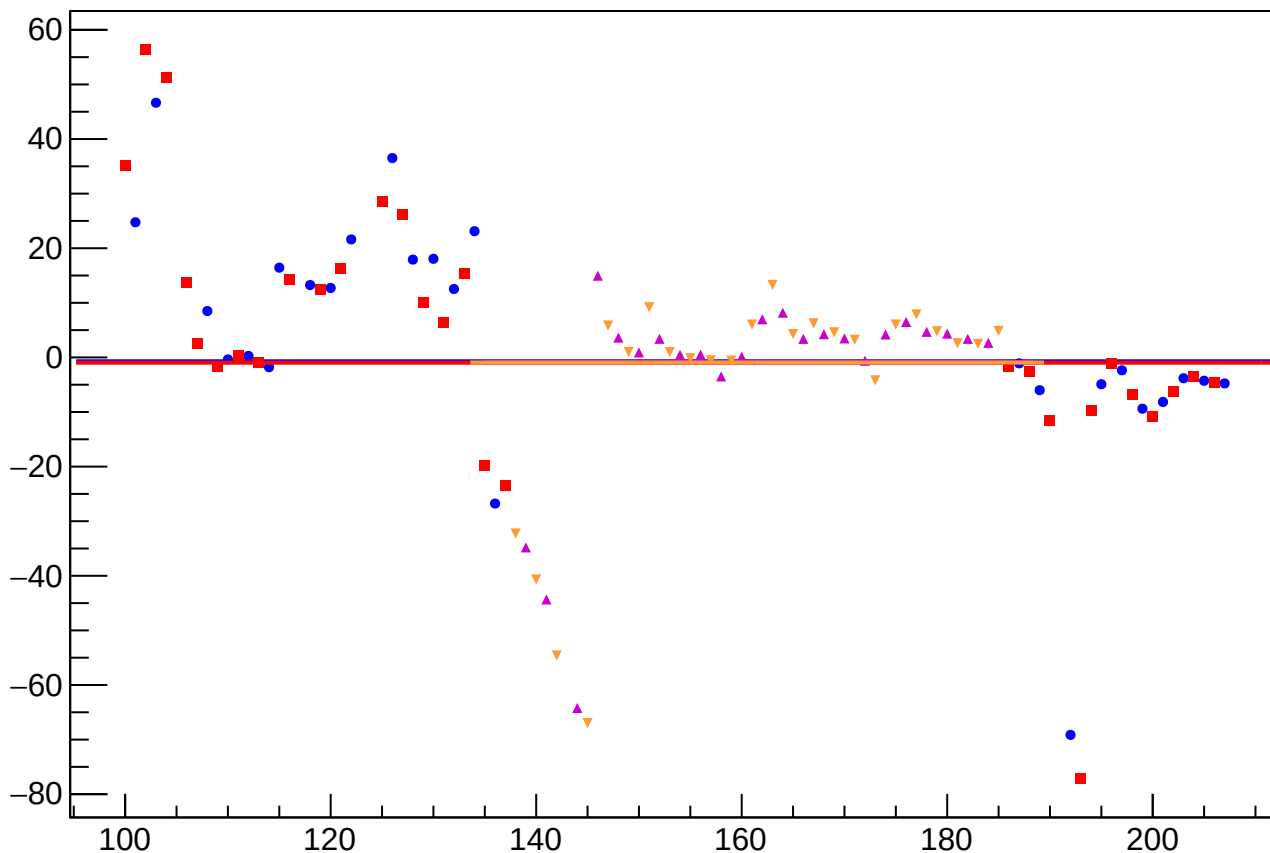
Left In: 0.355 $\pm$ 0.031  $\chi^2$ /NDF: 7117.0/22

+ sign 0.461 $\pm$ 0.027  $\chi^2$ /NDF: 10771.5/49

All: 0.356 $\pm$ 0.019  $\chi^2$ /NDF: 22934.4/101

- sign 0.263 $\pm$ 0.026  $\chi^2$ /NDF: 12134.8/51

reg\_asym\_bcm\_2an\_us\_an\_ds\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $-0.707 \pm 0.042$   $\chi^2/\text{NDF}$ : 118955.0/25

Left Out:  $-0.929 \pm 0.041$   $\chi^2/\text{NDF}$ : 126378.7/23

Right Out:  $-0.967 \pm 0.038$   $\chi^2/\text{NDF}$ : 116911.7/28

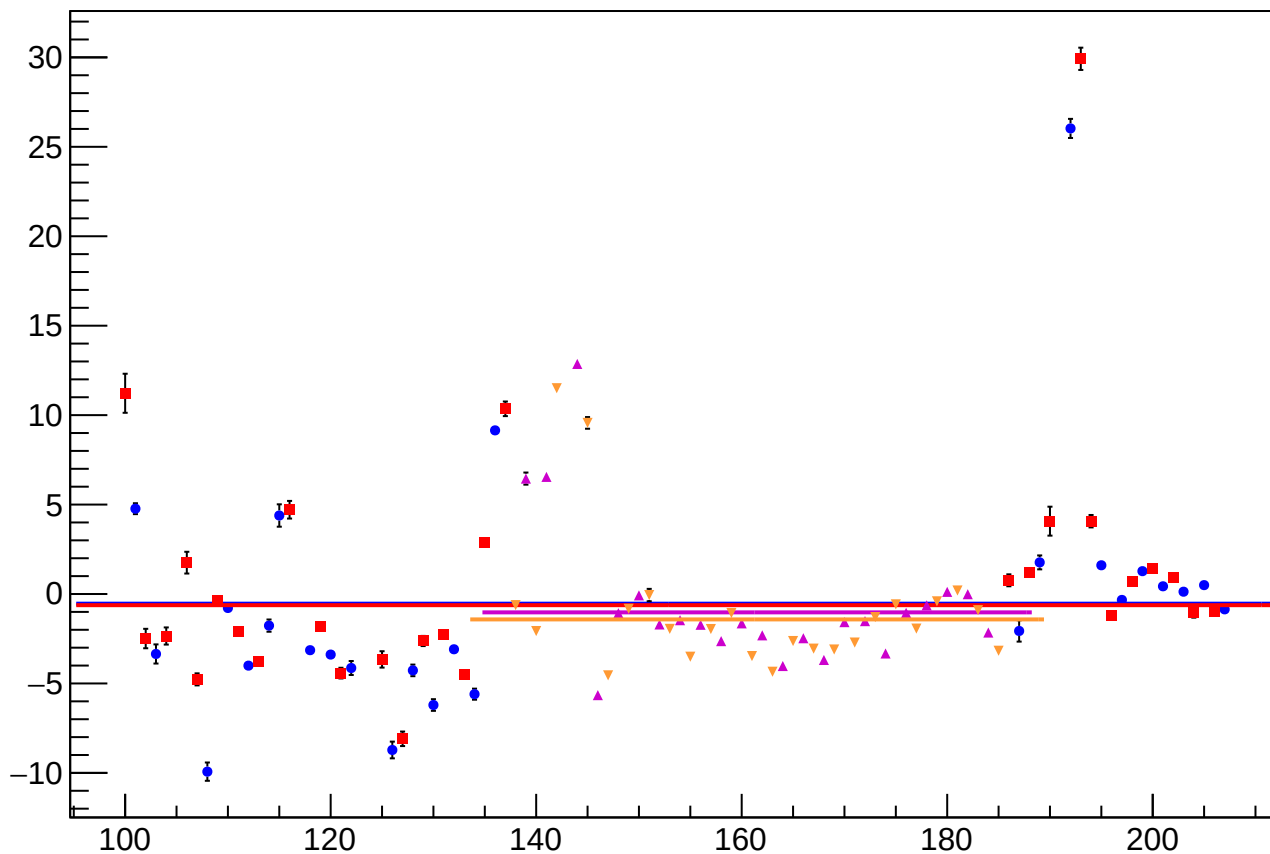
Left In:  $-0.860 \pm 0.039$   $\chi^2/\text{NDF}$ : 129485.0/22

+ sign  $-0.822 \pm 0.029$   $\chi^2/\text{NDF}$ : 245348.1/49

All:  $-0.872 \pm 0.020$   $\chi^2/\text{NDF}$ : 491754.1/101

- sign  $-0.916 \pm 0.027$   $\chi^2/\text{NDF}$ : 246400.5/51

reg\_asym\_bcm\_2an\_us\_an\_ds\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $-0.540 \pm 0.055$   $\chi^2/\text{NDF}$ : 7451.1/25

Left Out:  $-1.420 \pm 0.037$   $\chi^2/\text{NDF}$ : 4642.0/23

Right Out:  $-0.624 \pm 0.052$   $\chi^2/\text{NDF}$ : 5505.4/28

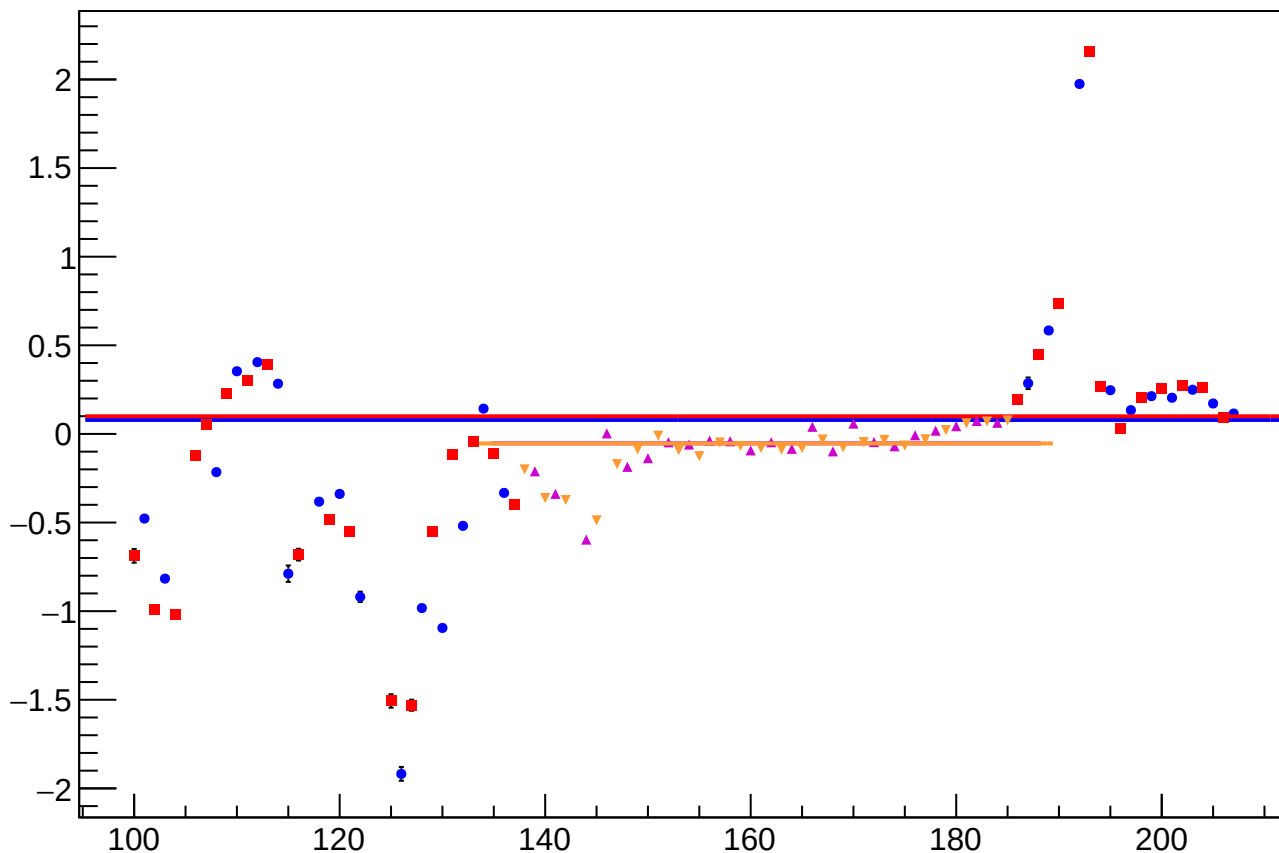
Left In:  $-1.026 \pm 0.035$   $\chi^2/\text{NDF}$ : 7047.1/22

+ sign  $-1.149 \pm 0.030$   $\chi^2/\text{NDF}$ : 12271.0/49

All:  $-1.019 \pm 0.021$   $\chi^2/\text{NDF}$ : 24899.5/101

- sign  $-0.902 \pm 0.029$   $\chi^2/\text{NDF}$ : 12593.9/51

reg\_asym\_bcm\_2an\_us\_an\_ds\_avg\_diff\_bpm12X\_slope vs Slug



Right In: 0.079 $\pm$ 0.002  $\chi^2$ /NDF: 34323.1/25

Left Out: -0.054 $\pm$ 0.002  $\chi^2$ /NDF: 4340.0/23

Right Out: 0.099 $\pm$ 0.002  $\chi^2$ /NDF: 34003.3/28

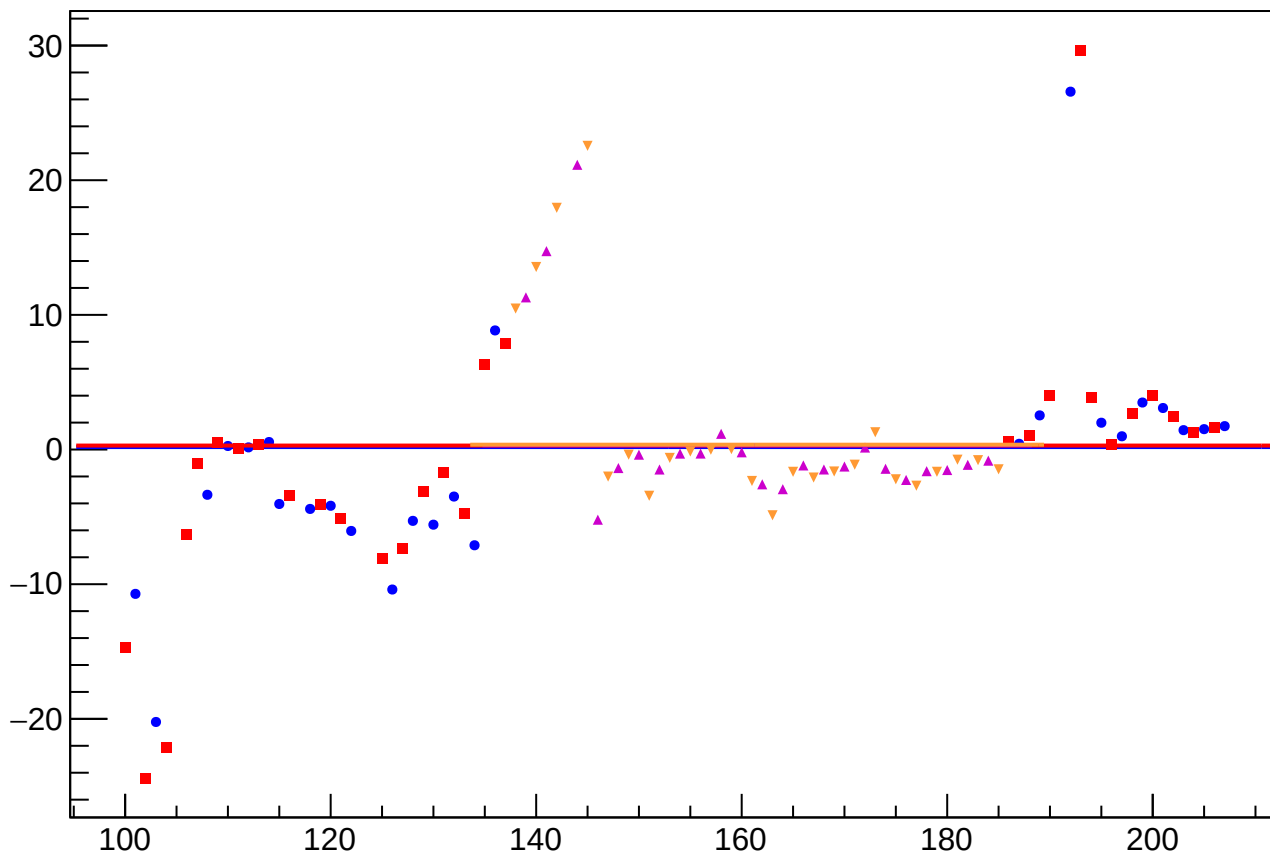
Left In: -0.053 $\pm$ 0.001  $\chi^2$ /NDF: 5009.7/22

+ sign -0.014 $\pm$ 0.001  $\chi^2$ /NDF: 40728.9/49

All: -0.012 $\pm$ 0.001  $\chi^2$ /NDF: 82729.7/101

- sign -0.010 $\pm$ 0.001  $\chi^2$ /NDF: 41995.3/51

reg\_asym\_bcm\_2an\_us\_an\_ds\_dd\_diff\_bpm1X\_slope vs Slug



Right In: 0.184 $\pm$ 0.014  $\chi^2$ /NDF: 118053.3/25

Left Out: 0.359 $\pm$ 0.014  $\chi^2$ /NDF:128829.7/23

Right Out: 0.295 $\pm$ 0.012  $\chi^2$ /NDF: 116673.3/28

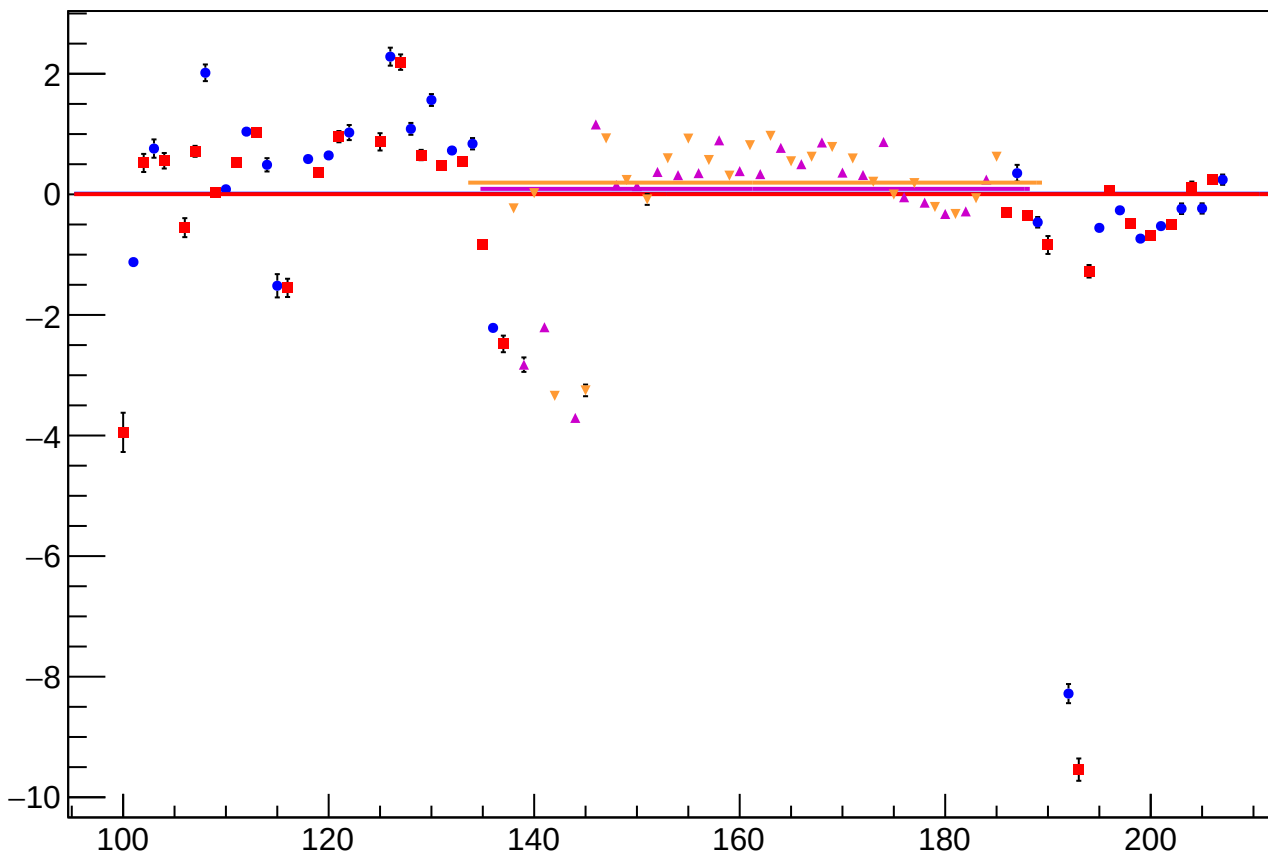
Left In: 0.317 $\pm$ 0.014  $\chi^2$ /NDF:130224.2/22

+ sign 0.272 $\pm$ 0.010  $\chi^2$ /NDF: 246961.9/49

All: 0.290 $\pm$ 0.007  $\chi^2$ /NDF: 493866.9/101

- sign 0.305 $\pm$ 0.009  $\chi^2$ /NDF: 246898.9/51

reg\_asym\_bcm\_2an\_us\_an\_ds\_dd\_diff\_bpm4aY\_slope vs Slug



Right In: 0.010 $\pm$ 0.016  $\chi^2$ /NDF: 5843.6/25

Left Out: 0.194 $\pm$ 0.011  $\chi^2$ /NDF: 4645.0/23

Right Out: 0.003 $\pm$ 0.015  $\chi^2$ /NDF: 4896.6/28

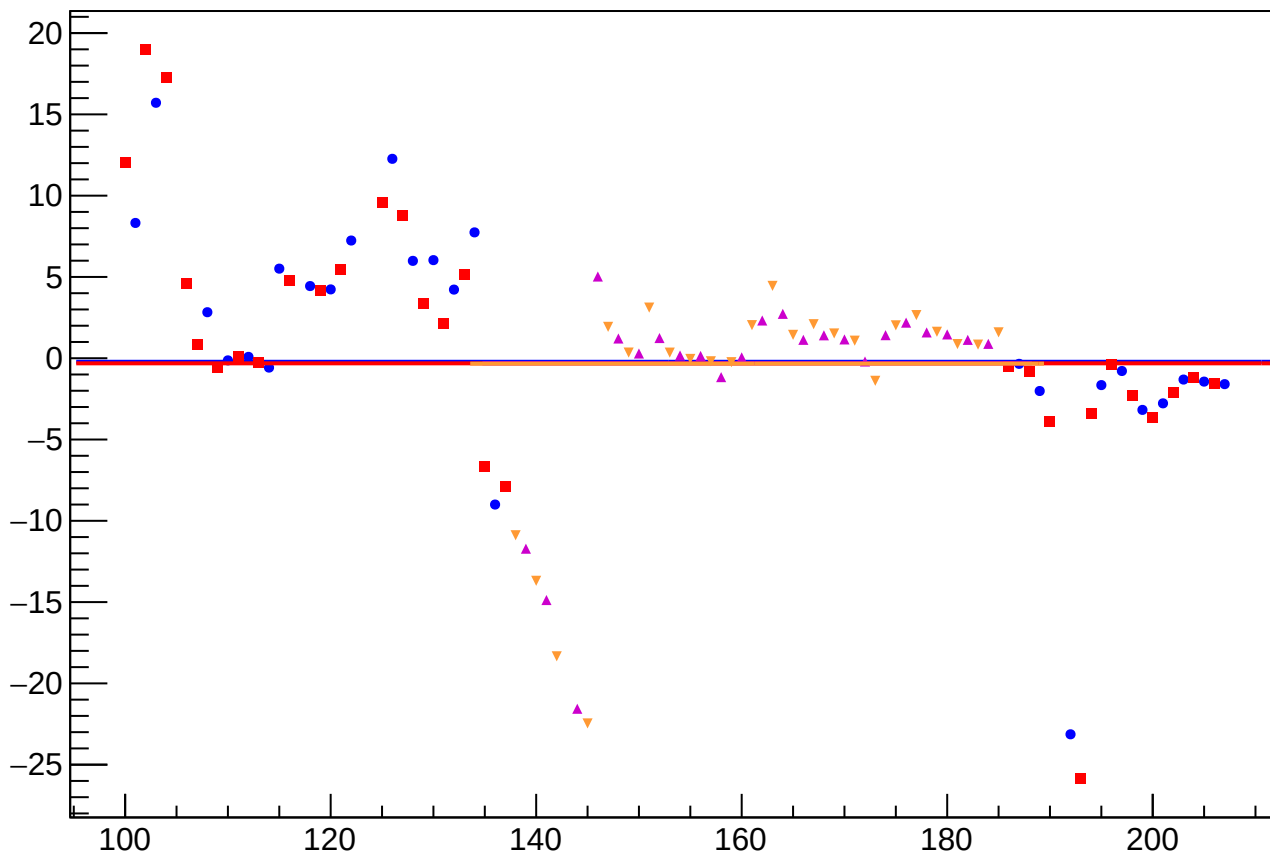
Left In: 0.091 $\pm$ 0.011  $\chi^2$ /NDF: 6936.4/22

+ sign 0.134 $\pm$ 0.009  $\chi^2$ /NDF: 10575.3/49

All: 0.096 $\pm$ 0.006  $\chi^2$ /NDF: 22461.7/101

- sign 0.062 $\pm$ 0.009  $\chi^2$ /NDF: 11855.0/51

reg\_asym\_bcm\_2an\_us\_an\_ds\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-0.218 \pm 0.014$   $\chi^2/\text{NDF}$ : 116910.4/25

Left Out:  $-0.332 \pm 0.014$   $\chi^2/\text{NDF}$ : 124233.4/23

Right Out:  $-0.314 \pm 0.013$   $\chi^2/\text{NDF}$ : 115130.4/28

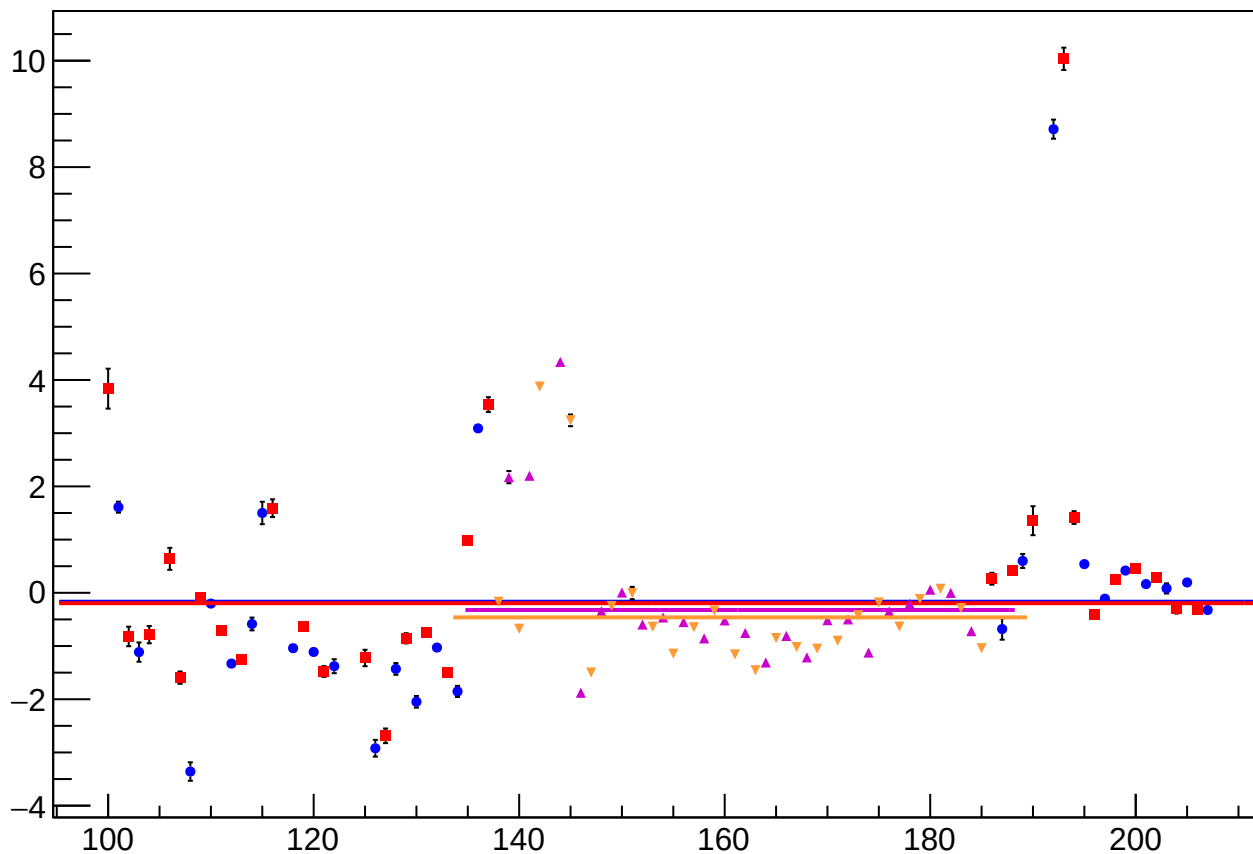
Left In:  $-0.314 \pm 0.013$   $\chi^2/\text{NDF}$ : 126999.2/22

+ sign  $-0.277 \pm 0.010$   $\chi^2/\text{NDF}$ : 241176.5/49

All:  $-0.297 \pm 0.007$   $\chi^2/\text{NDF}$ : 483313.3/101

- sign  $-0.314 \pm 0.009$   $\chi^2/\text{NDF}$ : 242129.7/51

reg\_asym\_bcm\_2an\_us\_an\_ds\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-0.168 \pm 0.019$   $\chi^2/\text{NDF}$ : 7297.0/25

Left Out:  $-0.462 \pm 0.013$   $\chi^2/\text{NDF}$ : 4580.0/23

Right Out:  $-0.195 \pm 0.018$   $\chi^2/\text{NDF}$ : 5409.3/28

Left In:  $-0.323 \pm 0.012$   $\chi^2/\text{NDF}$ : 6881.8/22

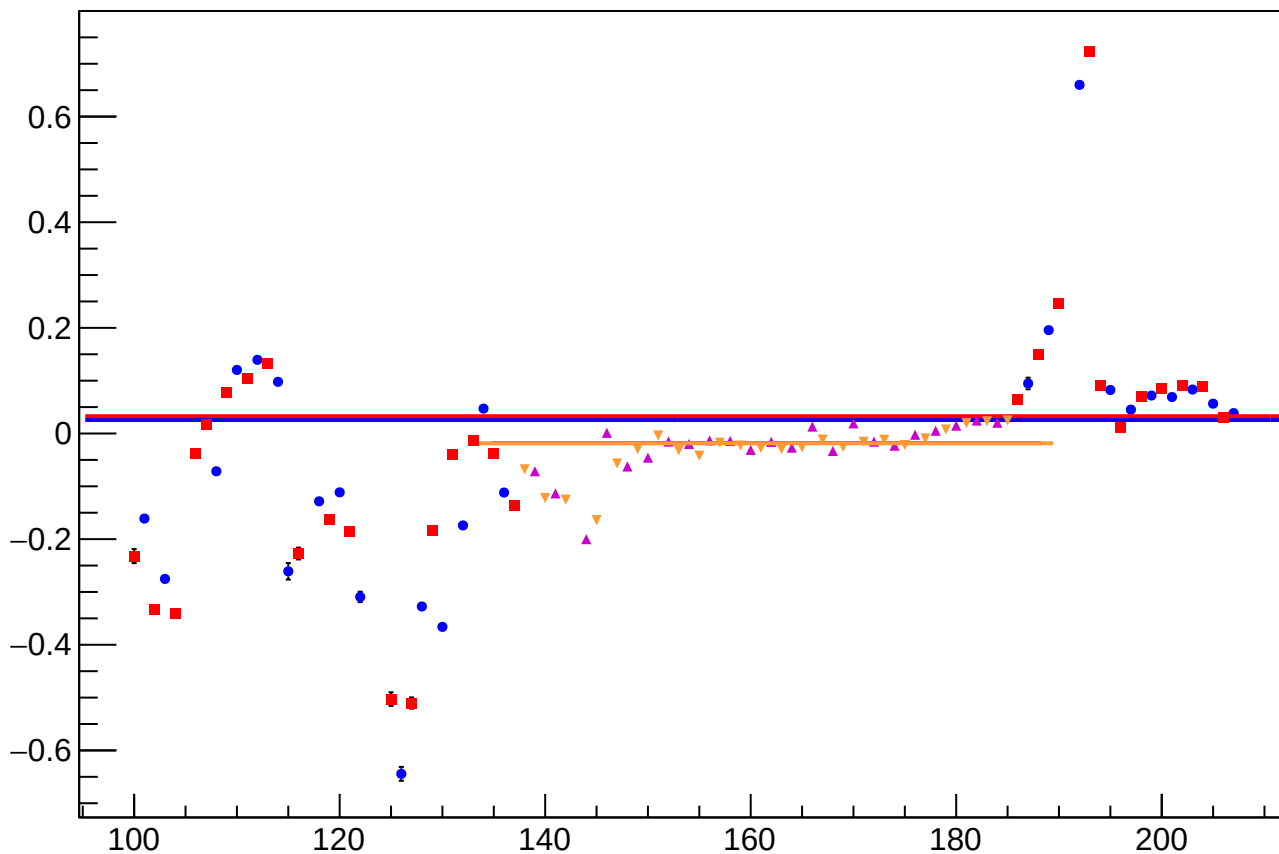
+ sign  $-0.371 \pm 0.010$   $\chi^2/\text{NDF}$ : 12046.3/49

All:  $-0.325 \pm 0.007$   $\chi^2/\text{NDF}$ : 24410.0/101

- sign  $-0.284 \pm 0.010$   $\chi^2/\text{NDF}$ : 12326.5/51



reg\_asym\_bcm\_2an\_us\_an\_ds\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $0.026 \pm 0.001$   $\chi^2/\text{NDF}$ : 33736.1/25

Left Out:  $-0.019 \pm 0.001$   $\chi^2/\text{NDF}$ : 4227.5/23

Right Out:  $0.033 \pm 0.001$   $\chi^2/\text{NDF}$ : 33384.8/28

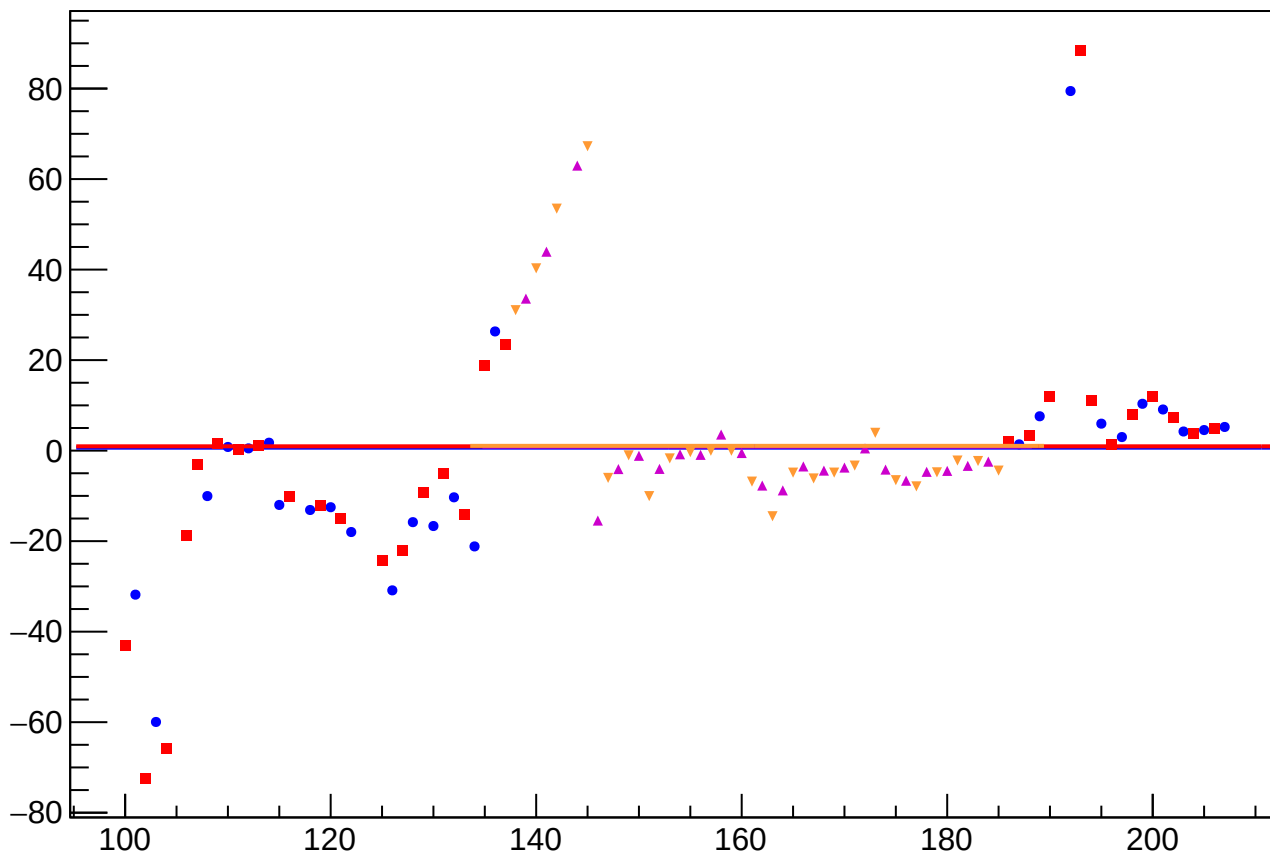
Left In:  $-0.018 \pm 0.001$   $\chi^2/\text{NDF}$ : 4879.3/22

+ sign  $-0.005 \pm 0.000$   $\chi^2/\text{NDF}$ : 39905.4/49

All:  $-0.004 \pm 0.000$   $\chi^2/\text{NDF}$ : 80977.2/101

- sign  $-0.004 \pm 0.000$   $\chi^2/\text{NDF}$ : 41063.1/51

reg\_asym\_bcm\_an\_us\_an\_ds\_avg\_diff\_bpm1X\_slope vs Slug



Right In: 0.653 $\pm$ 0.041  $\chi^2$ /NDF: 120160.1/25

Left Out: 1.058 $\pm$ 0.041  $\chi^2$ /NDF:131010.5/23

Right Out: 0.955 $\pm$ 0.036  $\chi^2$ /NDF: 118525.6/28

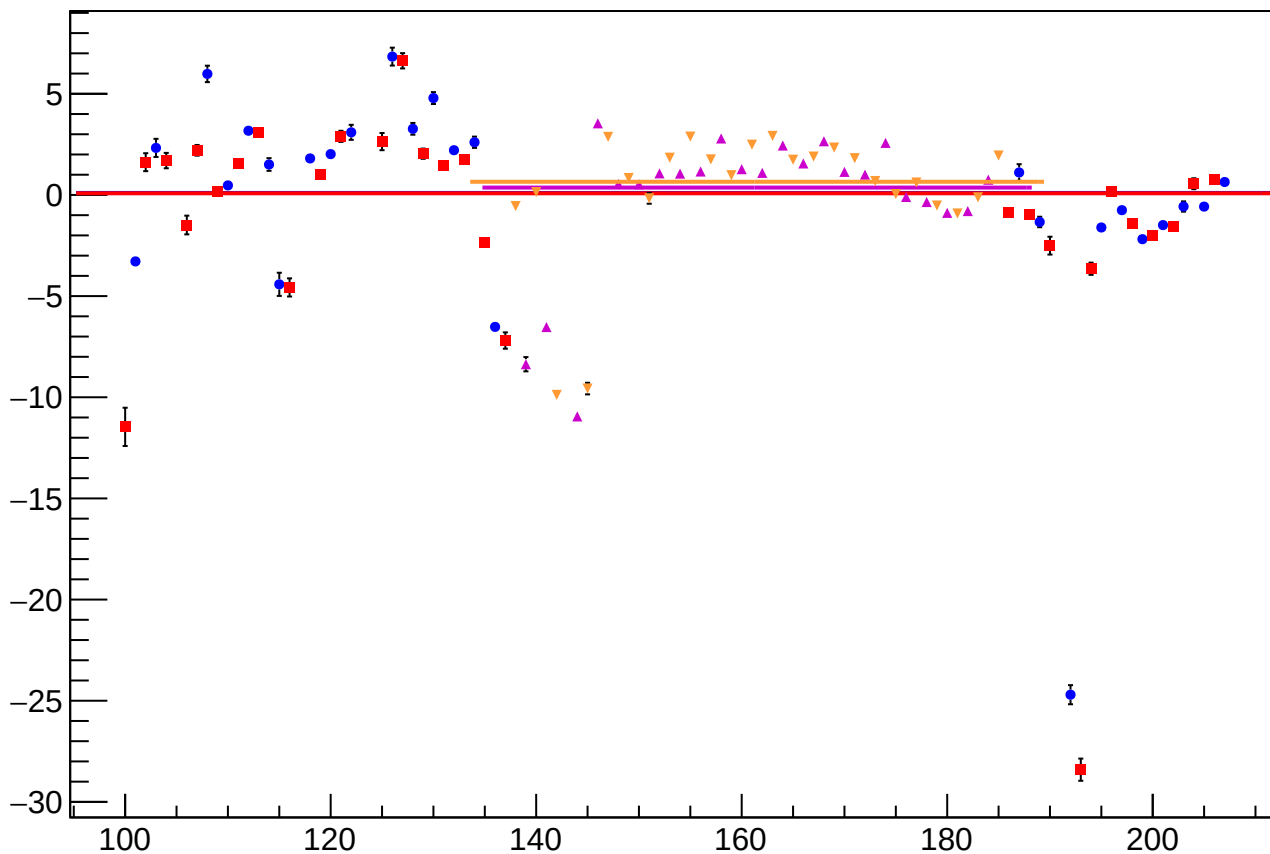
Left In: 0.915 $\pm$ 0.040  $\chi^2$ /NDF:132816.1/22

+ sign 0.856 $\pm$ 0.029  $\chi^2$ /NDF: 251220.4/49

All: 0.900 $\pm$ 0.019  $\chi^2$ /NDF: 502567.0/101

- sign 0.937 $\pm$ 0.027  $\chi^2$ /NDF: 251342.3/51

reg\_asym\_bcm\_an\_us\_an\_ds\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $0.099 \pm 0.047$   $\chi^2/\text{NDF}$ : 5972.3/25

Left Out:  $0.651 \pm 0.033$   $\chi^2/\text{NDF}$ : 4708.8/23

Right Out:  $0.082 \pm 0.045$   $\chi^2/\text{NDF}$ : 4993.2/28

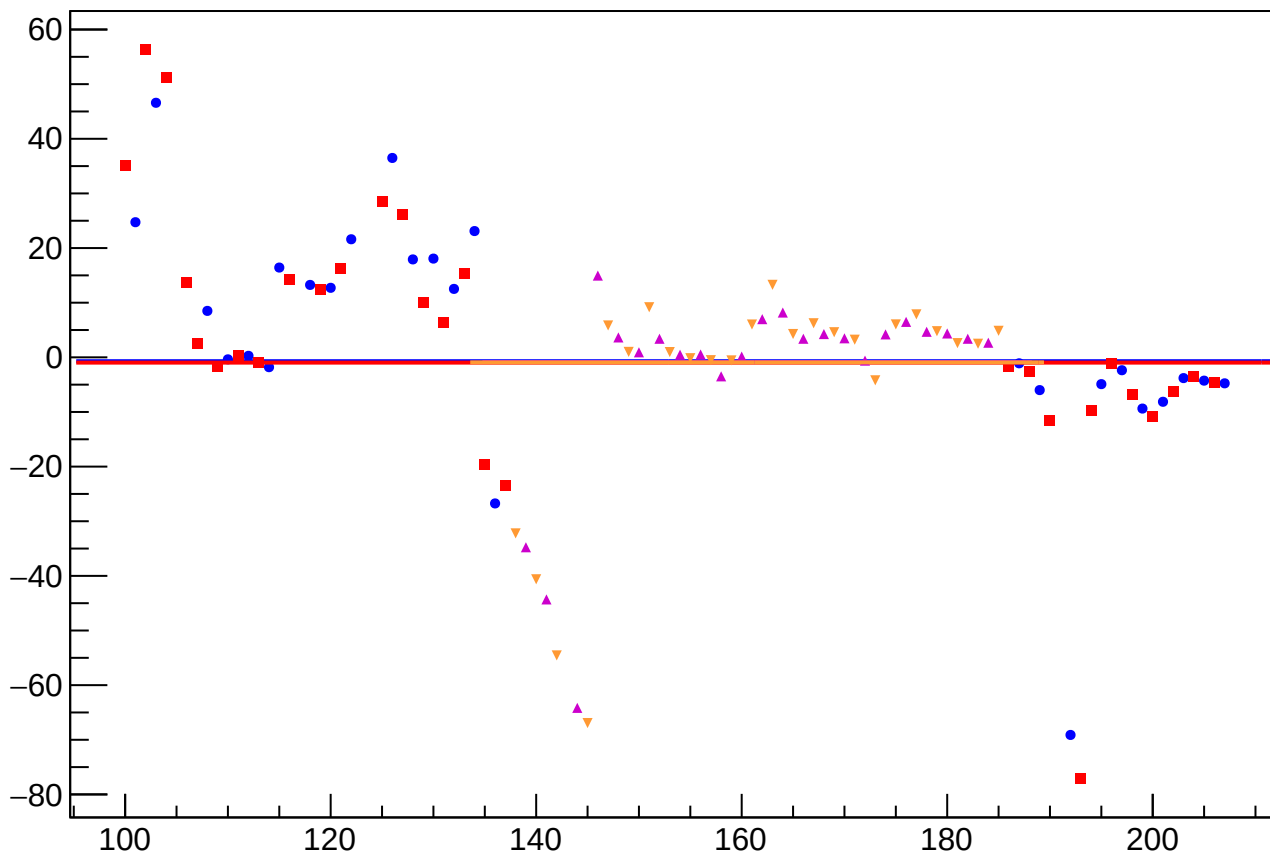
Left In:  $0.364 \pm 0.031$   $\chi^2/\text{NDF}$ : 7122.4/22

+ sign  $0.469 \pm 0.027$   $\chi^2/\text{NDF}$ : 10772.9/49

All:  $0.364 \pm 0.019$   $\chi^2/\text{NDF}$ : 22943.4/101

- sign  $0.271 \pm 0.026$   $\chi^2/\text{NDF}$ : 12142.4/51

reg\_asym\_bcm\_an\_us\_an\_ds\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $-0.708 \pm 0.042$   $\chi^2/\text{NDF}$ : 118974.0/25

Left Out:  $-0.927 \pm 0.041$   $\chi^2/\text{NDF}$ : 126360.1/23

Right Out:  $-0.966 \pm 0.038$   $\chi^2/\text{NDF}$ : 116925.2/28

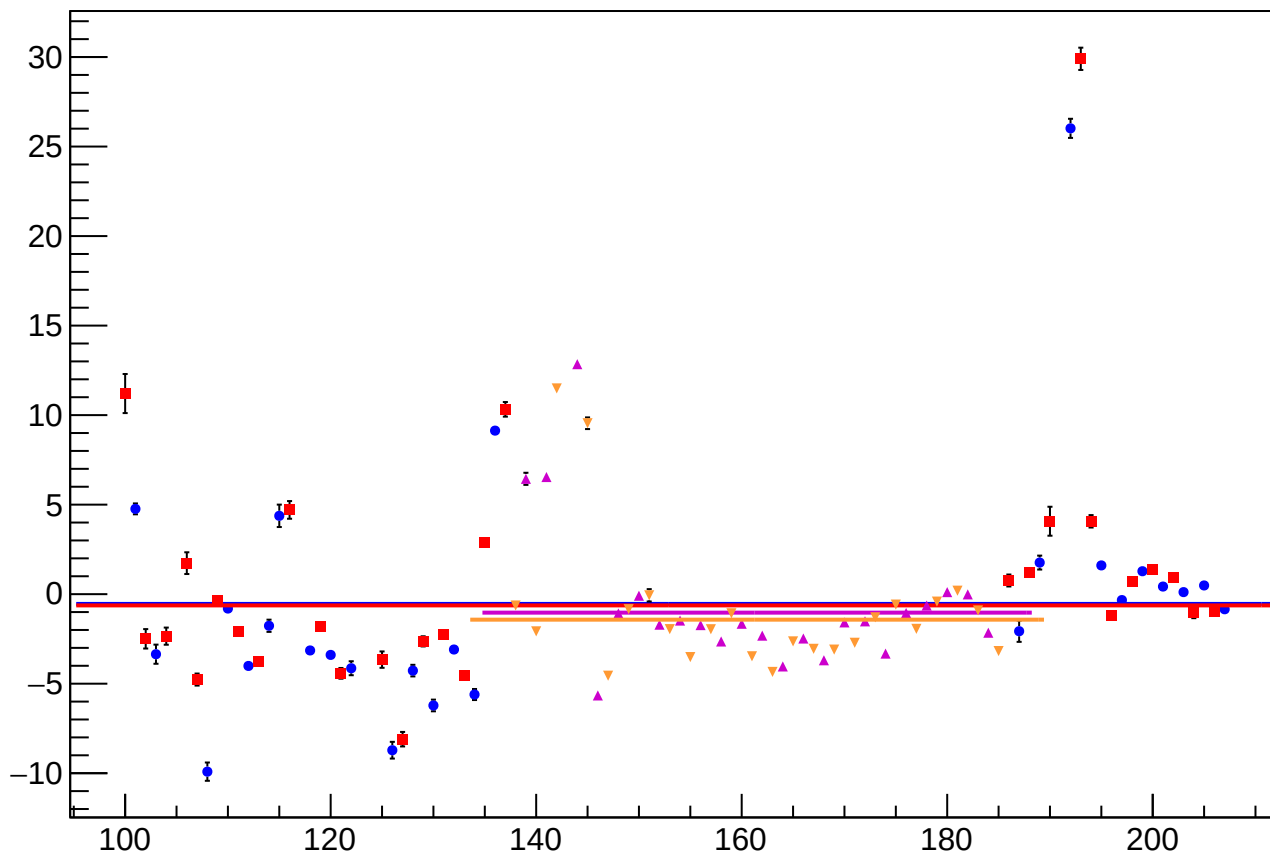
Left In:  $-0.858 \pm 0.039$   $\chi^2/\text{NDF}$ : 129490.8/22

+ sign  $-0.822 \pm 0.029$   $\chi^2/\text{NDF}$ : 245348.1/49

All:  $-0.871 \pm 0.020$   $\chi^2/\text{NDF}$ : 491773.6/101

- sign  $-0.914 \pm 0.027$   $\chi^2/\text{NDF}$ : 246420.0/51

reg\_asym\_bcm\_an\_us\_an\_ds\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $-0.545 \pm 0.055$   $\chi^2/\text{NDF}$ : 7453.9/25

Left Out:  $-1.425 \pm 0.037$   $\chi^2/\text{NDF}$ : 4639.6/23

Right Out:  $-0.628 \pm 0.052$   $\chi^2/\text{NDF}$ : 5505.5/28

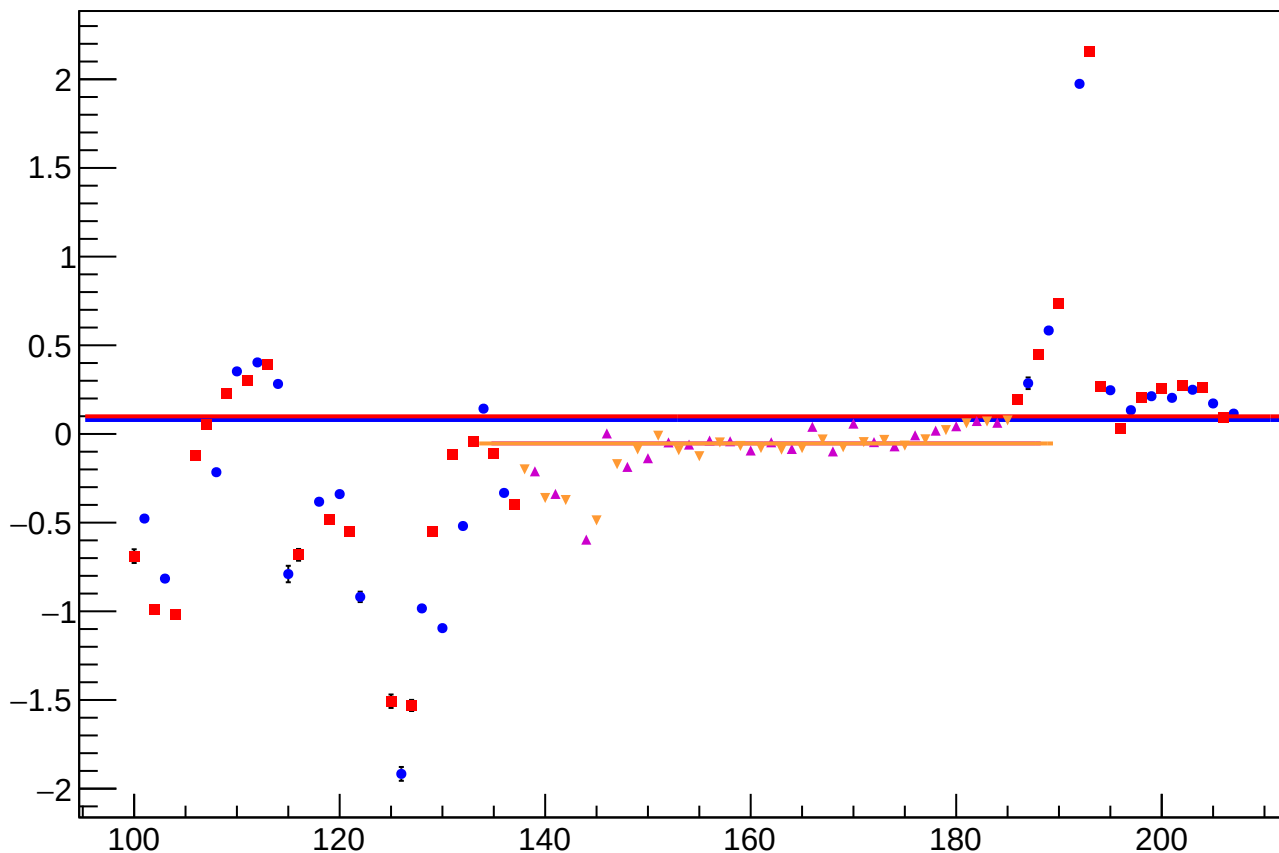
Left In:  $-1.032 \pm 0.035$   $\chi^2/\text{NDF}$ : 7051.3/22

+ sign  $-1.153 \pm 0.030$   $\chi^2/\text{NDF}$ : 12271.5/49

All:  $-1.024 \pm 0.021$   $\chi^2/\text{NDF}$ : 24904.7/101

- sign  $-0.907 \pm 0.029$   $\chi^2/\text{NDF}$ : 12598.7/51

reg\_asym\_bcm\_an\_us\_an\_ds\_avg\_diff\_bpm12X\_slope vs Slug



Right In: 0.079+/-0.002  $\chi^2/\text{NDF}$ : 34332.1/25

Left Out: -0.054+/-0.002  $\chi^2/\text{NDF}$ : 4341.2/23

Right Out: 0.099+/-0.002  $\chi^2/\text{NDF}$ : 34017.1/28

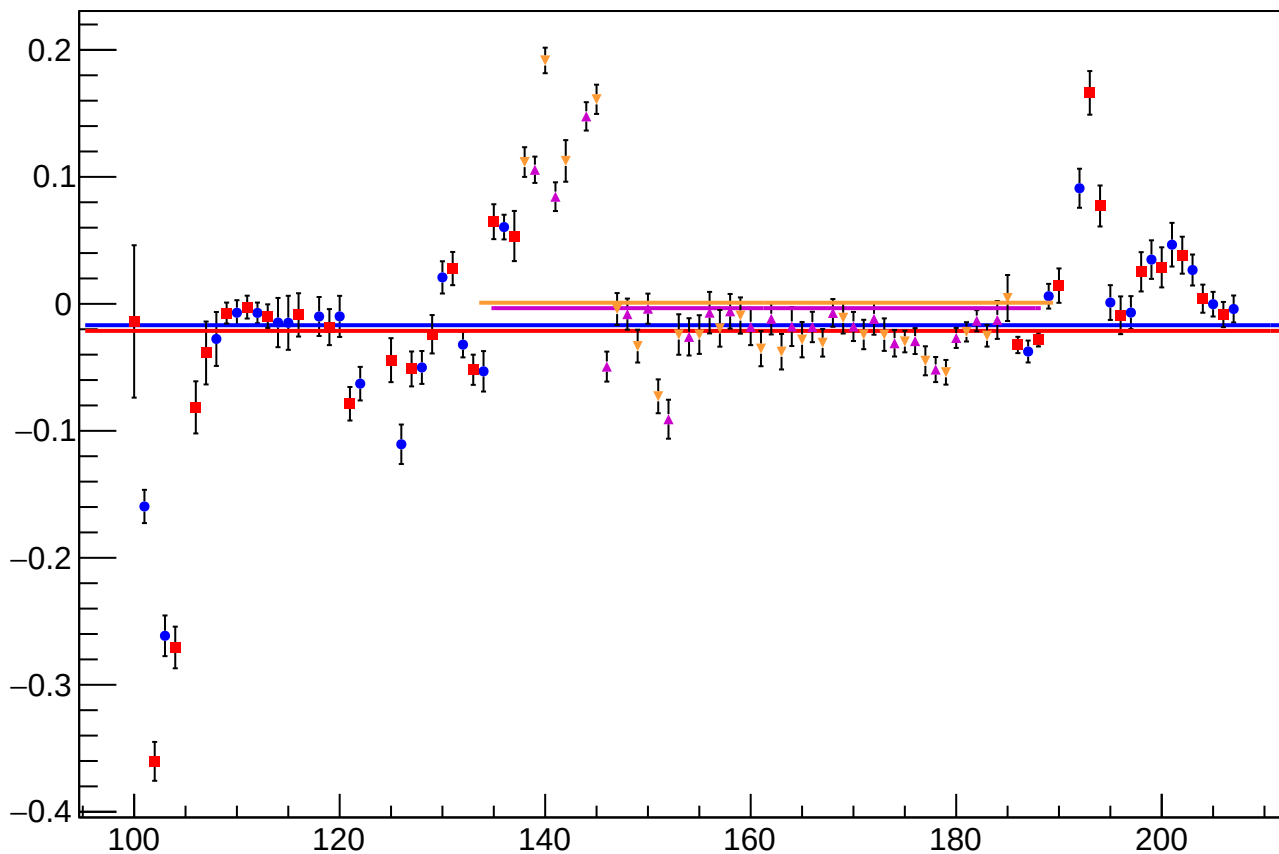
Left In: -0.053+/-0.001  $\chi^2/\text{NDF}$ : 5013.3/22

+ sign -0.014+/-0.001  $\chi^2/\text{NDF}$ : 40740.0/49

All: -0.012+/-0.001  $\chi^2/\text{NDF}$ : 82763.5/101

- sign -0.010+/-0.001  $\chi^2/\text{NDF}$ : 42018.2/51

reg\_asym\_bcm\_an\_us\_an\_ds\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-0.017 \pm 0.002$   $\chi^2/\text{NDF}$ : 594.7/25

Left Out:  $0.001 \pm 0.002$   $\chi^2/\text{NDF}$ : 849.7/23

Right Out:  $-0.021 \pm 0.002$   $\chi^2/\text{NDF}$ : 1050.6/28

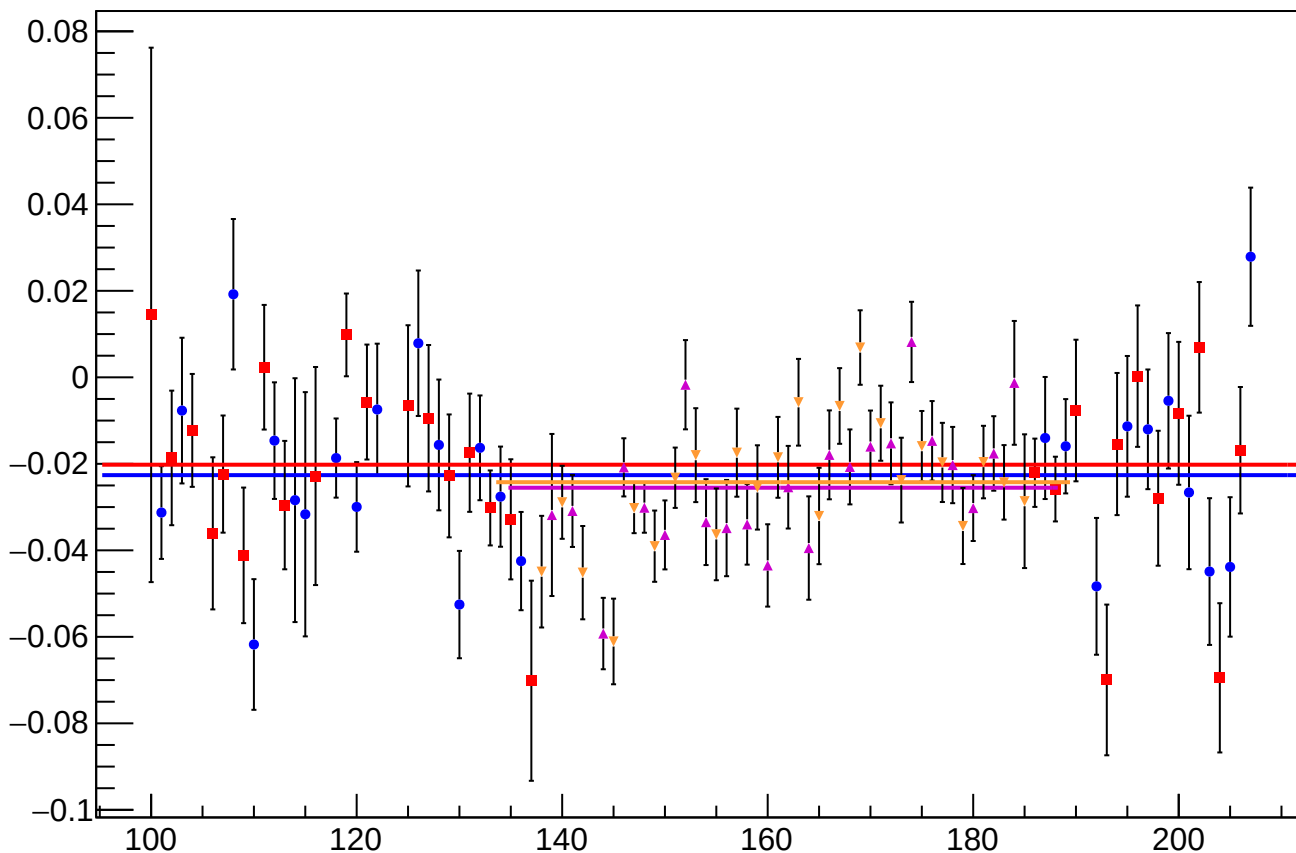
Left In:  $-0.003 \pm 0.002$   $\chi^2/\text{NDF}$ : 457.9/22

+ sign  $-0.008 \pm 0.002$   $\chi^2/\text{NDF}$ : 1471.4/49

All:  $-0.011 \pm 0.001$   $\chi^2/\text{NDF}$ : 3015.0/101

- sign  $-0.013 \pm 0.002$   $\chi^2/\text{NDF}$ : 1538.5/51

reg\_asym\_bcm\_an\_us\_an\_ds\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-0.023 \pm 0.003$   $\chi^2/\text{NDF}: 48.1/25$

Left Out:  $-0.024 \pm 0.002$   $\chi^2/\text{NDF}: 53.7/23$

Right Out:  $-0.020 \pm 0.003$   $\chi^2/\text{NDF}: 48.3/28$

Left In:  $-0.026 \pm 0.002$   $\chi^2/\text{NDF}: 55.0/22$

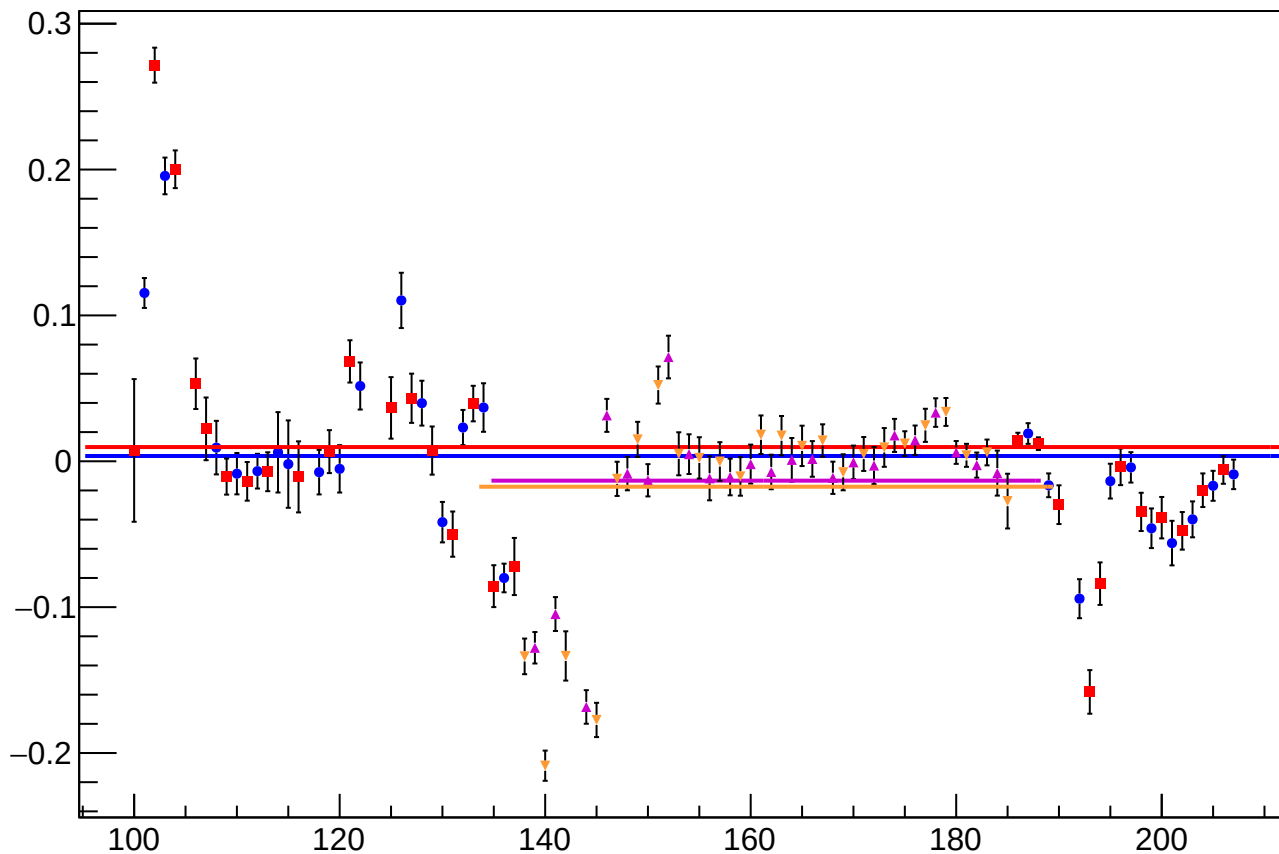
+ sign  $-0.024 \pm 0.002$   $\chi^2/\text{NDF}: 102.1/49$

All:  $-0.024 \pm 0.001$   $\chi^2/\text{NDF}: 208.2/101$

- sign  $-0.024 \pm 0.002$   $\chi^2/\text{NDF}: 106.1/51$



reg\_asym\_bcm\_an\_us\_an\_ds\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $0.004 \pm 0.002$   $\chi^2/\text{NDF}$ : 603.8/25

Left Out:  $-0.017 \pm 0.002$   $\chi^2/\text{NDF}$ : 812.1/23

Right Out:  $0.010 \pm 0.002$   $\chi^2/\text{NDF}$ : 1043.1/28

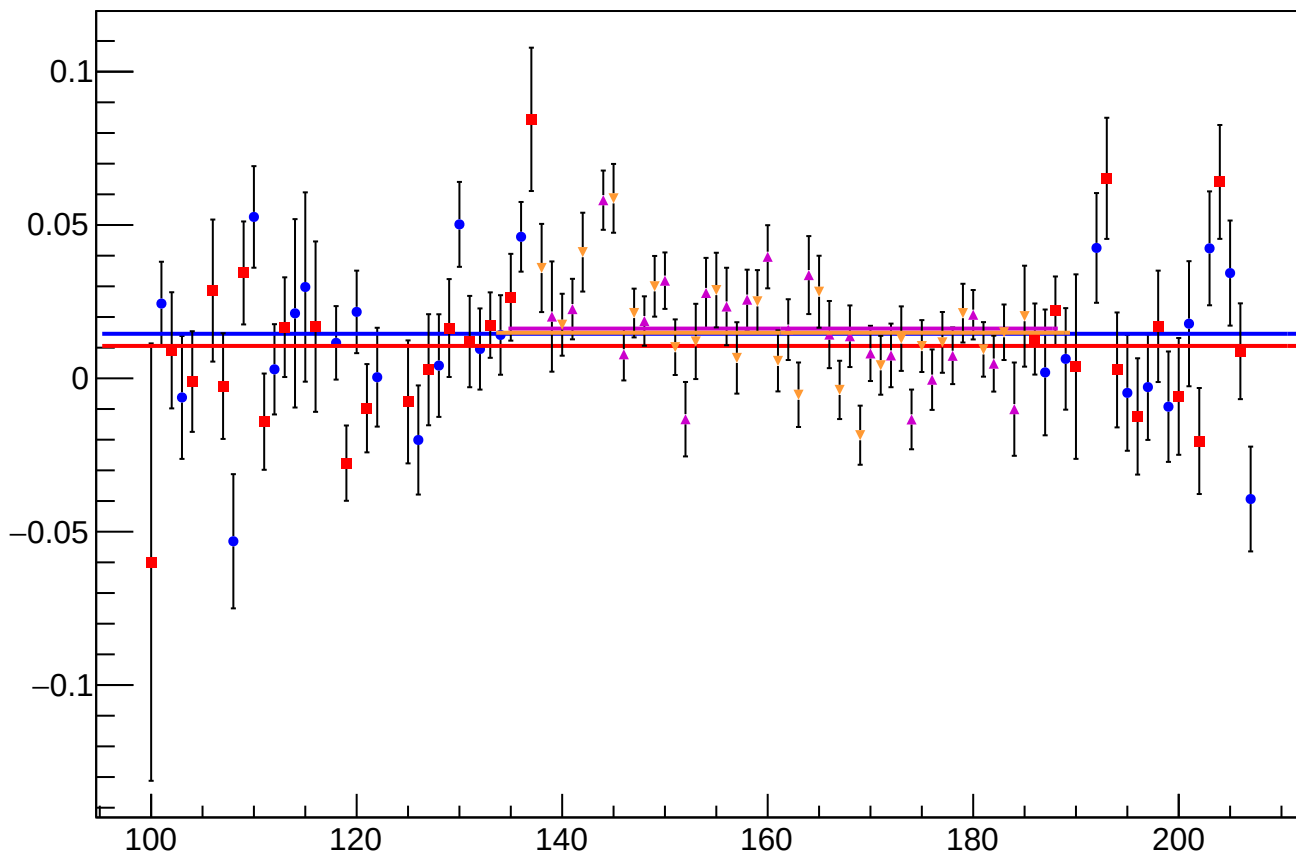
Left In:  $-0.013 \pm 0.002$   $\chi^2/\text{NDF}$ : 458.6/22

+ sign  $-0.007 \pm 0.002$   $\chi^2/\text{NDF}$ : 1454.3/49

All:  $-0.004 \pm 0.001$   $\chi^2/\text{NDF}$ : 3016.5/101

- sign  $-0.000 \pm 0.002$   $\chi^2/\text{NDF}$ : 1553.9/51

reg\_asym\_bcm\_an\_us\_an\_ds\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $0.015 \pm 0.003$   $\chi^2/\text{NDF}$ : 57.6/25

Left Out:  $0.015 \pm 0.002$   $\chi^2/\text{NDF}$ : 52.1/23

Right Out:  $0.011 \pm 0.003$   $\chi^2/\text{NDF}$ : 54.7/28

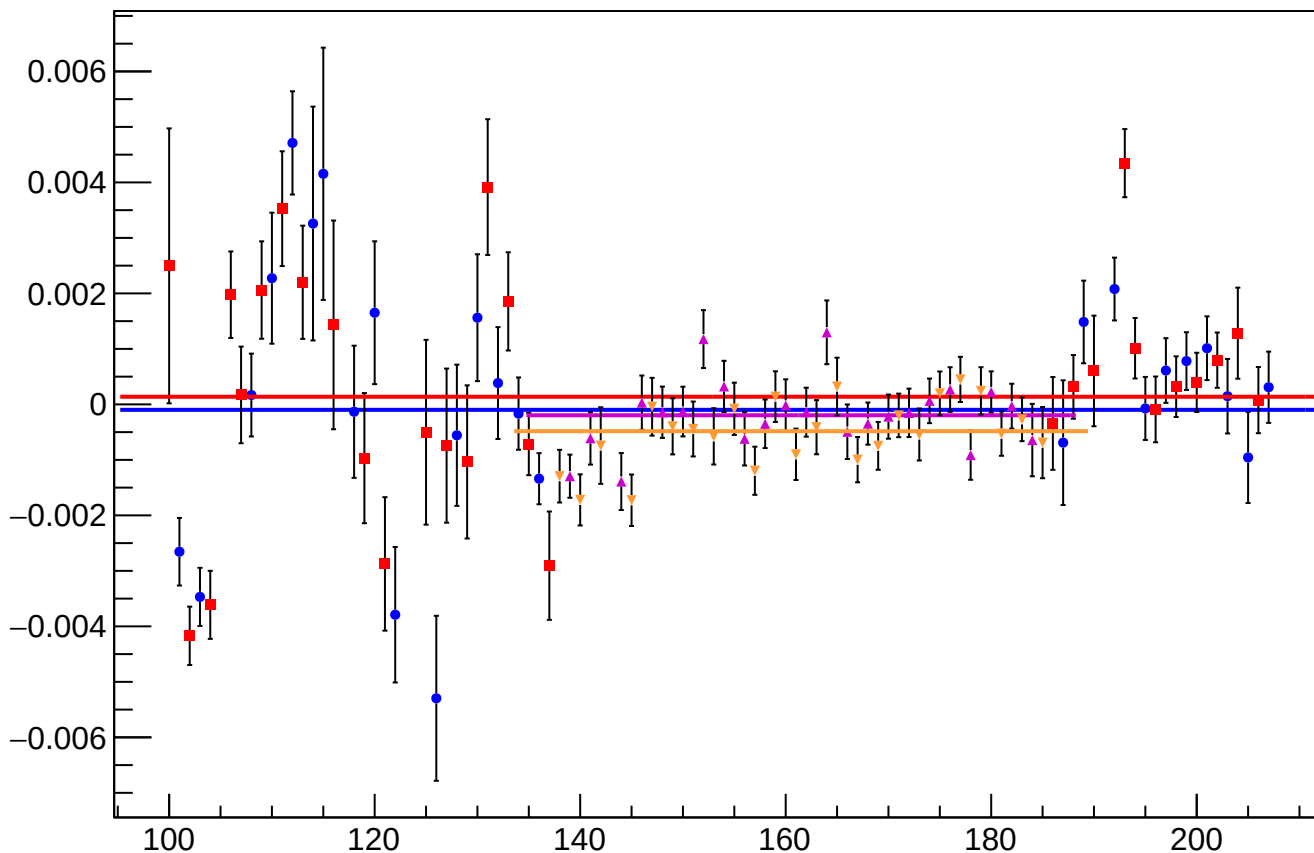
Left In:  $0.016 \pm 0.002$   $\chi^2/\text{NDF}$ : 58.0/22

+ sign  $0.015 \pm 0.002$   $\chi^2/\text{NDF}$ : 109.7/49

All:  $0.015 \pm 0.001$   $\chi^2/\text{NDF}$ : 224.7/101

- sign  $0.014 \pm 0.002$   $\chi^2/\text{NDF}$ : 115.0/51

reg\_asym\_bcm\_an\_us\_an\_ds\_dd\_diff\_bpm12X\_slope vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 158.2/25

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:40.8/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 219.3/28

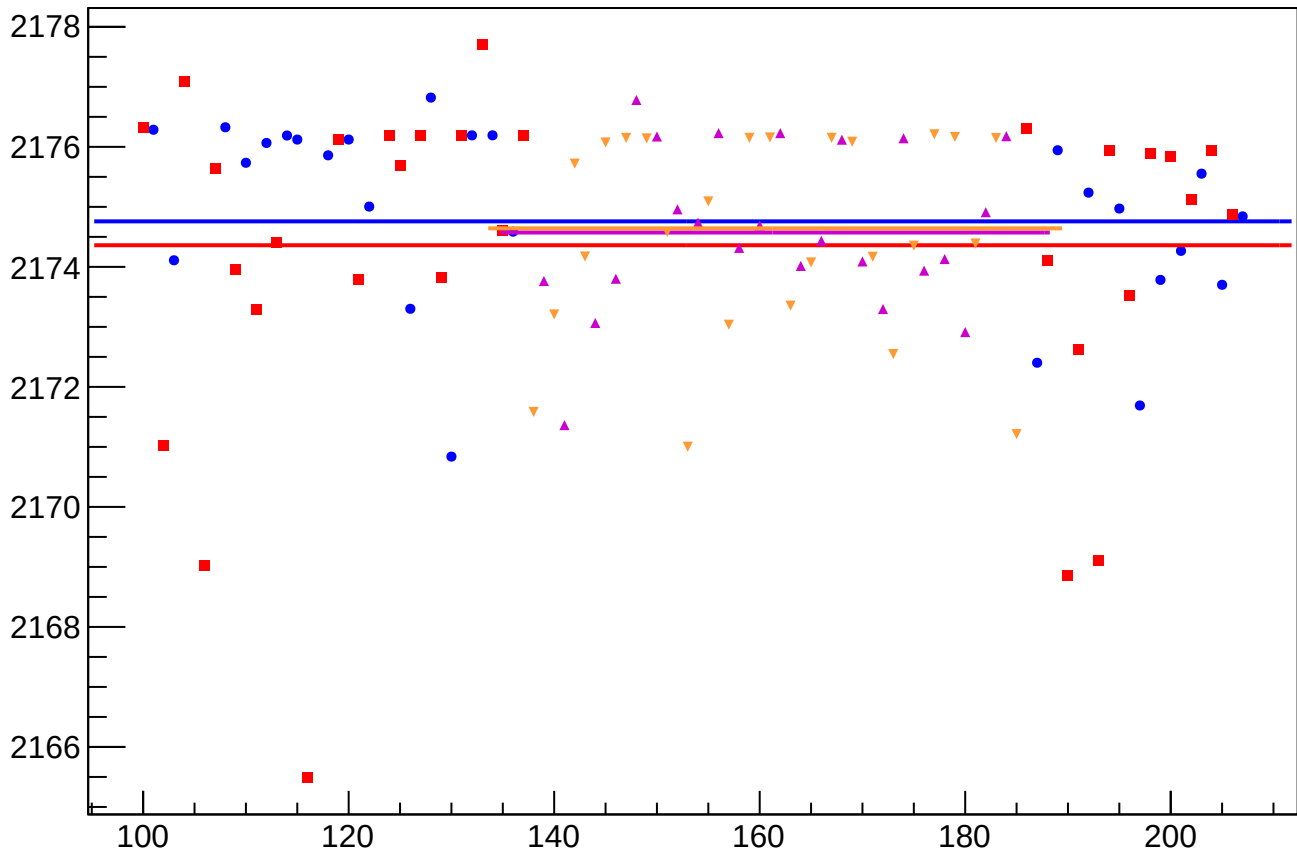
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:37.2/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 204.0/49

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 470.8/101

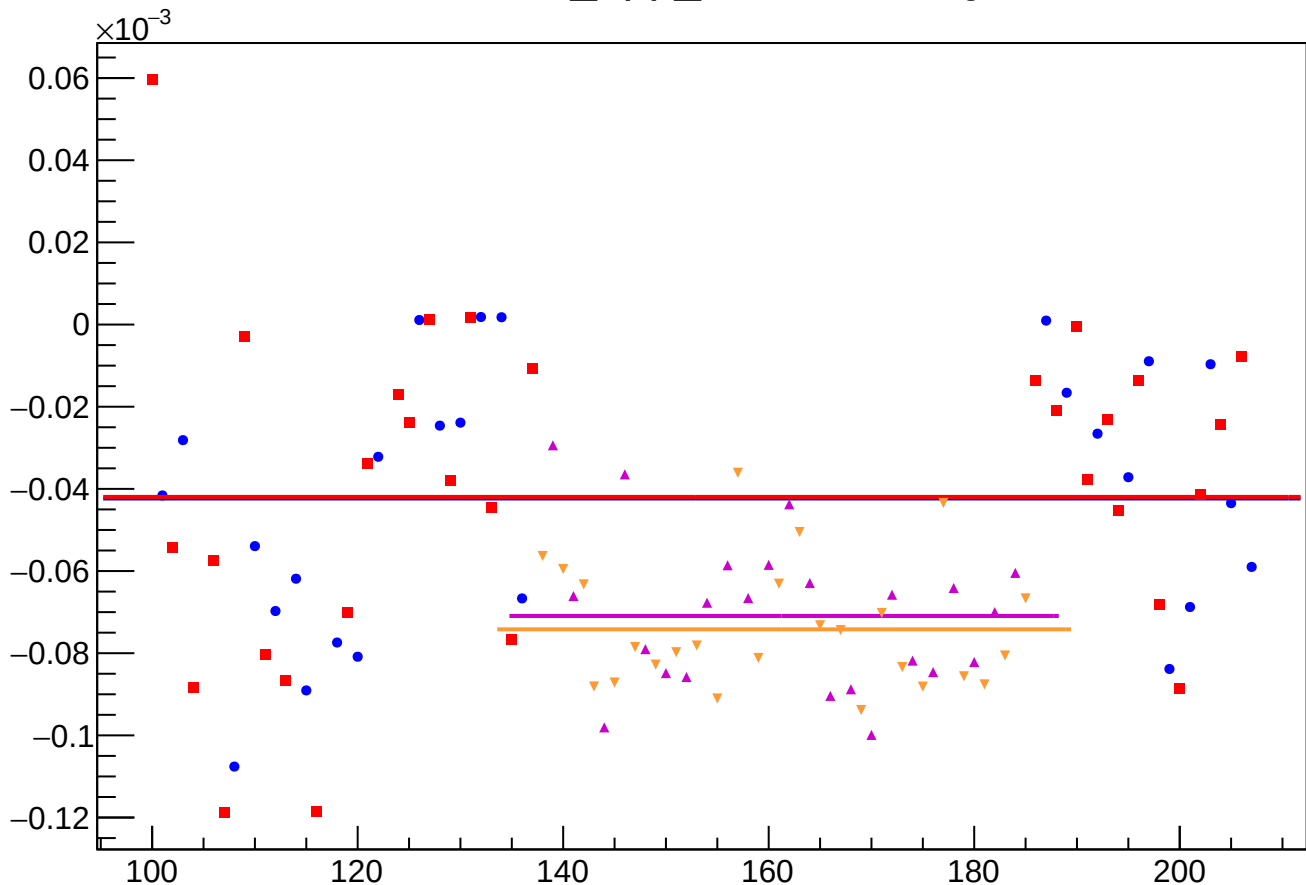
- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 260.5/51

# HALLA\_p\_mean vs Slug



|                             |                                                               |                         |                                      |
|-----------------------------|---------------------------------------------------------------|-------------------------|--------------------------------------|
| Right In: 2174.759+/-0.000  | $\chi^2/\text{NDF}$ : 3191831449324778057858738418614272.0/25 | + sign 2174.693+/-0.000 | $\chi^2/\text{NDF}$ : 84152436213153 |
| Left Out: 2174.643+/-0.000  | $\chi^2/\text{NDF}$ : 5211684446319442157199657598451712.0/24 | All: 2174.582+/-0.000   | $\chi^2/\text{NDF}$ : 21945170060    |
| Right Out: 2174.360+/-0.000 | $\chi^2/\text{NDF}$ : 9972486880778871148858670359511040.0/30 | - sign 2174.473+/-0.000 | $\chi^2/\text{NDF}$ : 13444039669102 |
| Left In: 2174.573+/-0.000   | $\chi^2/\text{NDF}$ : 3431267097793838845728863815729152.0/22 |                         |                                      |

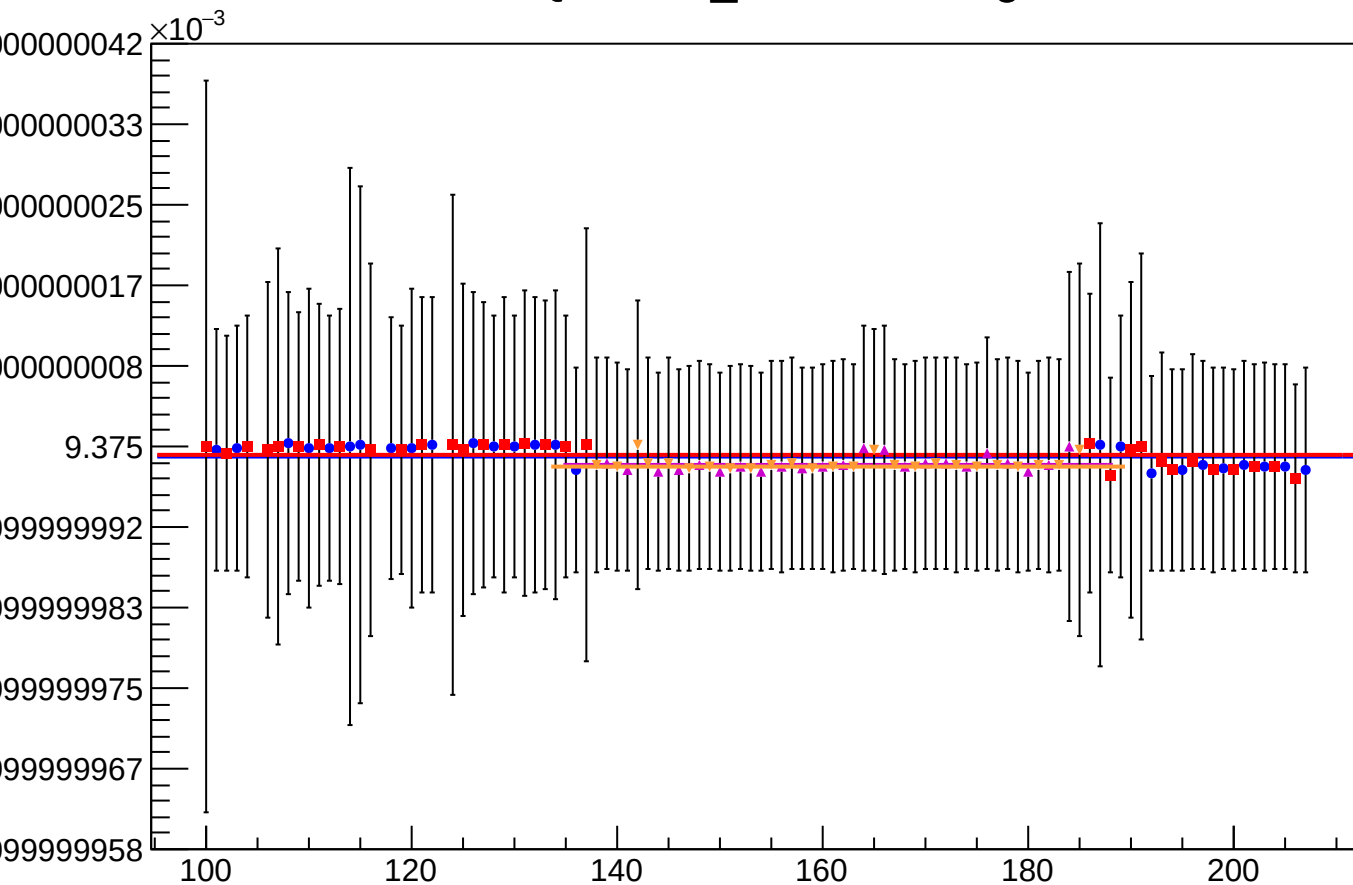
# HALLA\_dpp\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 1250661317274255803547648.0/25  
 Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 471834768551309792509952.0/24  
 Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 1716537958529701938987008.0/30  
 Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 631091526789889368522752.0/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 2606157065424647  
 All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 5721387932784  
 - sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 30982202191371160

# MQ171LM\_mean vs Slug



Right In: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.2/25

Left Out: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.1/24

Right Out: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.3/30

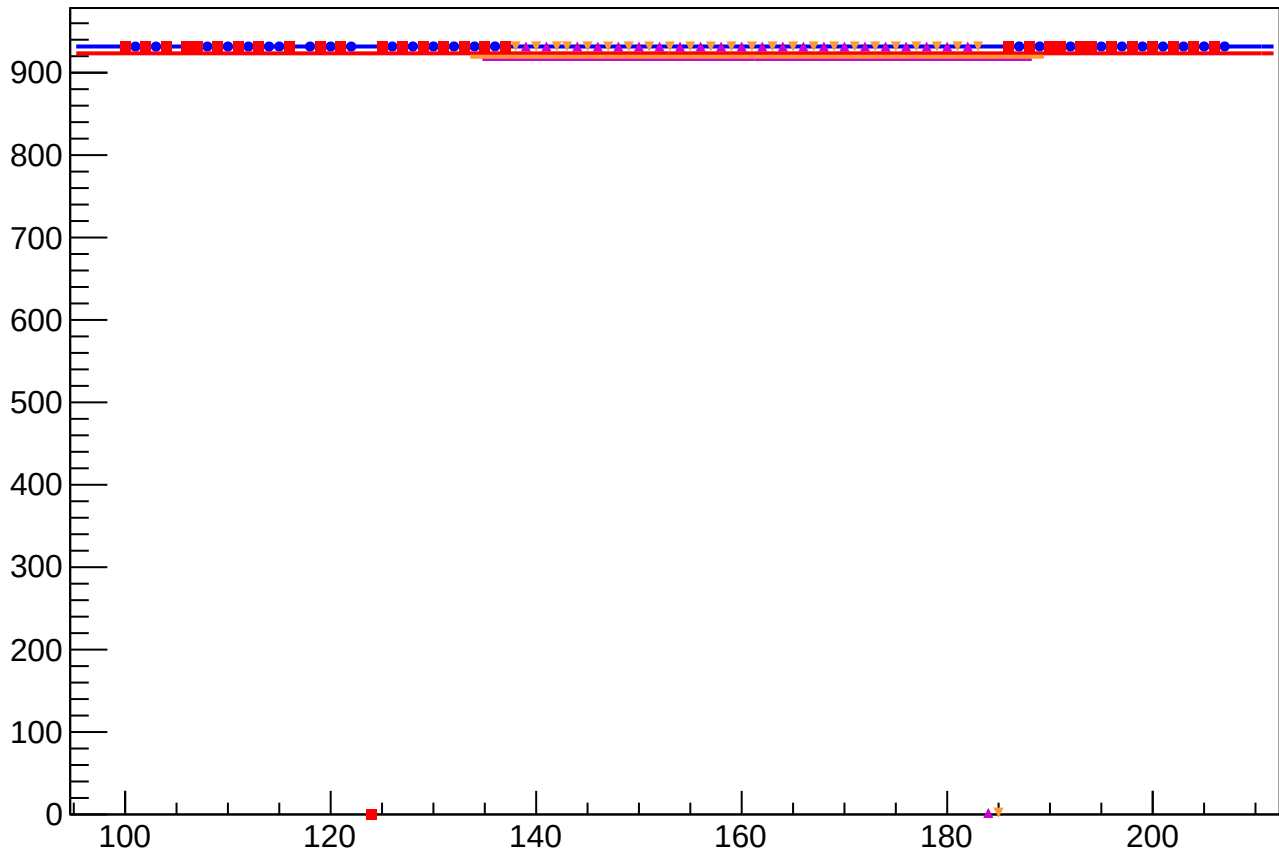
Left In: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.1/22

+ sign 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.3/50

All: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 1.0/104

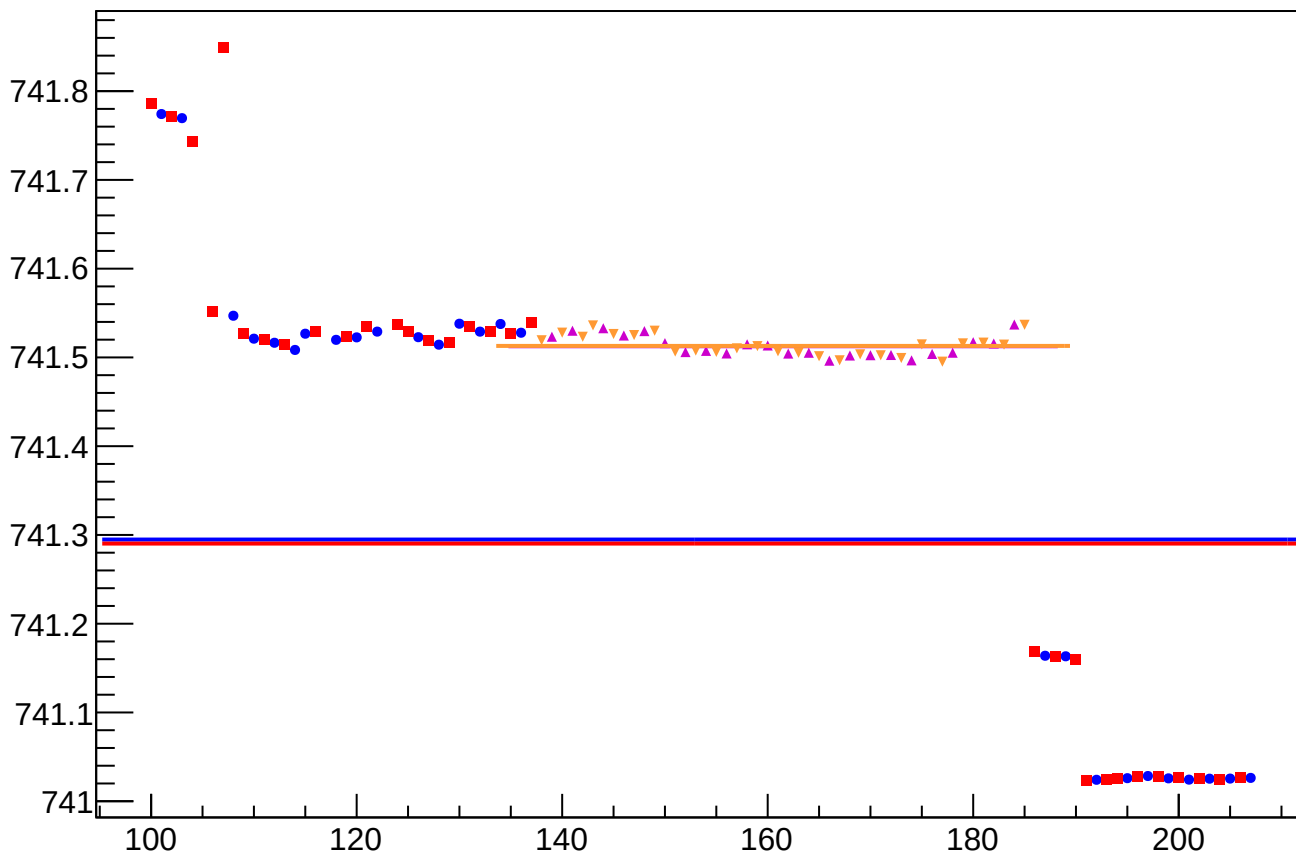
- sign 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.4/53

# HacL\_Q2\_HP3458A\_IOUT\_mean vs Slug



Right In: 931.779 $\pm$ 0.000  $\chi^2$ /NDF: 3390867479147423551991834476544.0/25  
 Left Out: 919.347 $\pm$ 0.000  $\chi^2$ /NDF: 23021123496215280619041526133081243648.0/24  
 Right Out: 923.472 $\pm$ 0.000  $\chi^2$ /NDF: 12906237676792802940043407009458946048.0/30  
 Left In: 916.654 $\pm$ 0.000  $\chi^2$ /NDF: 26369744931183548073785664842185572352.0/22

# HacL\_D1\_HP3458A\_IOUT\_mean vs Slug



Right In: 741.295+/-0.000  $\chi^2/\text{NDF}$ : 115411377949658484325818929512448.0/25

Left Out: 741.513+/-0.000  $\chi^2/\text{NDF}$ : 251976310768126296231889600512.0/24

Right Out: 741.290+/-0.000  $\chi^2/\text{NDF}$ : 124974995824573787591394463842304.0/30

Left In: 741.513+/-0.000  $\chi^2/\text{NDF}$ : 234703983030085423185895882752.0/22

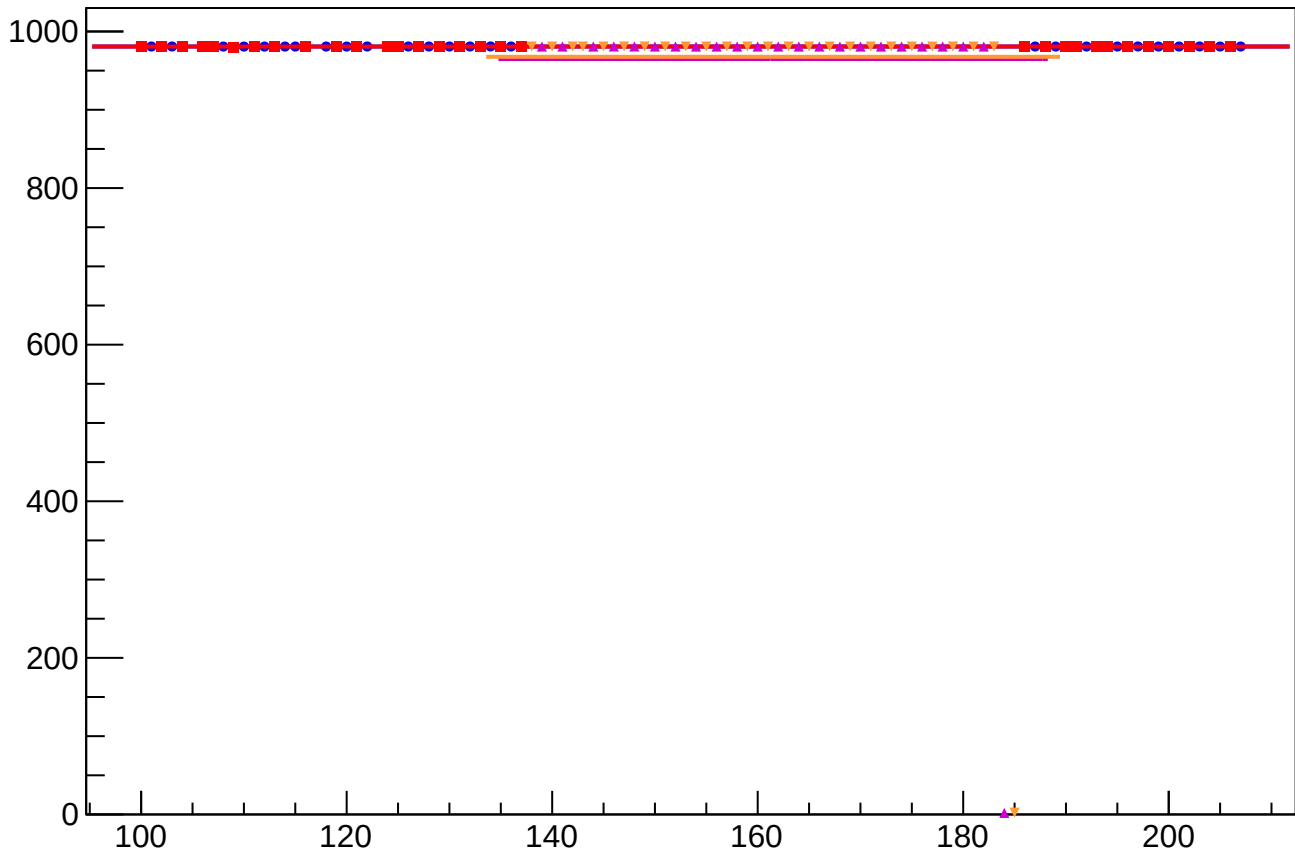
+ sign 741.419+/-0.000  $\chi^2/\text{NDF}$ : 157126188289570

All: 741.414+/-0.000  $\chi^2/\text{NDF}$ : 326681876504

- sign 741.408+/-0.000  $\chi^2/\text{NDF}$ : 169362008119464



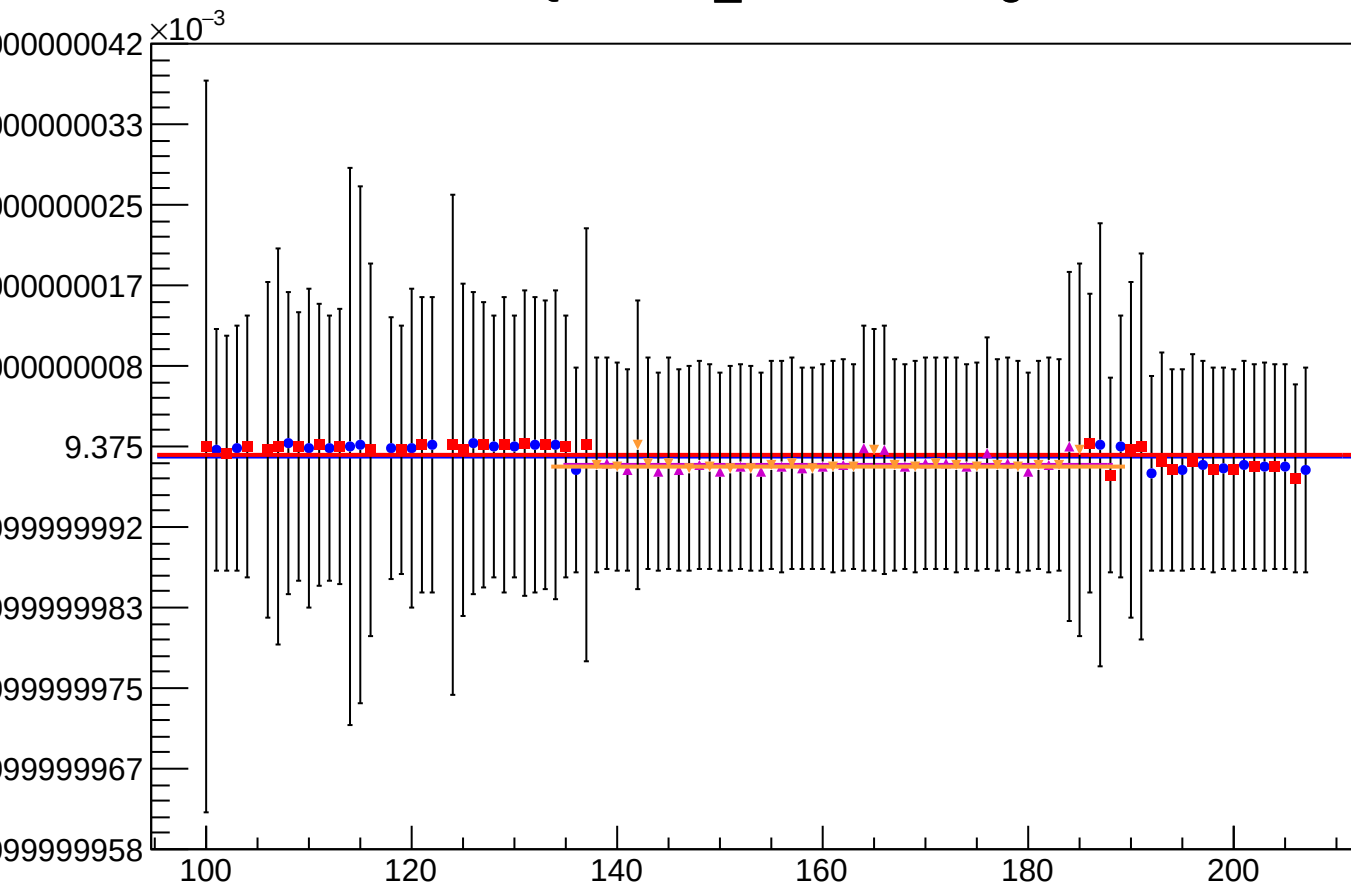
# HacL\_Q3\_HP3458A\_IOUT\_mean vs Slug



Right In: 980.807 $\pm$ 0.000  $\chi^2$ /NDF: 1817314938668436286709413445632.0/25  
Left Out: 967.677 $\pm$ 0.000  $\chi^2$ /NDF: 25505155603279925641541295779633692672.0/24  
Right Out: 980.778 $\pm$ 0.000  $\chi^2$ /NDF: 63404916525812701699900776120320.0/30  
Left In: 964.854 $\pm$ 0.000  $\chi^2$ /NDF: 29215838960103078784112845628245016576.0/22

+ sign 973.345 $\pm$ 0.000  $\chi^2$ /NDF: 256553578768031  
All: 972.829 $\pm$ 0.000  $\chi^2$ /NDF: 55099711871  
- sign 972.319 $\pm$ 0.000  $\chi^2$ /NDF: 294424747428424

# MQ172RM\_mean vs Slug



Right In: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.2/25

Left Out: 0.009 $\pm$ 0.000  $\chi^2$ /NDF:0.1/24

Right Out: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.3/30

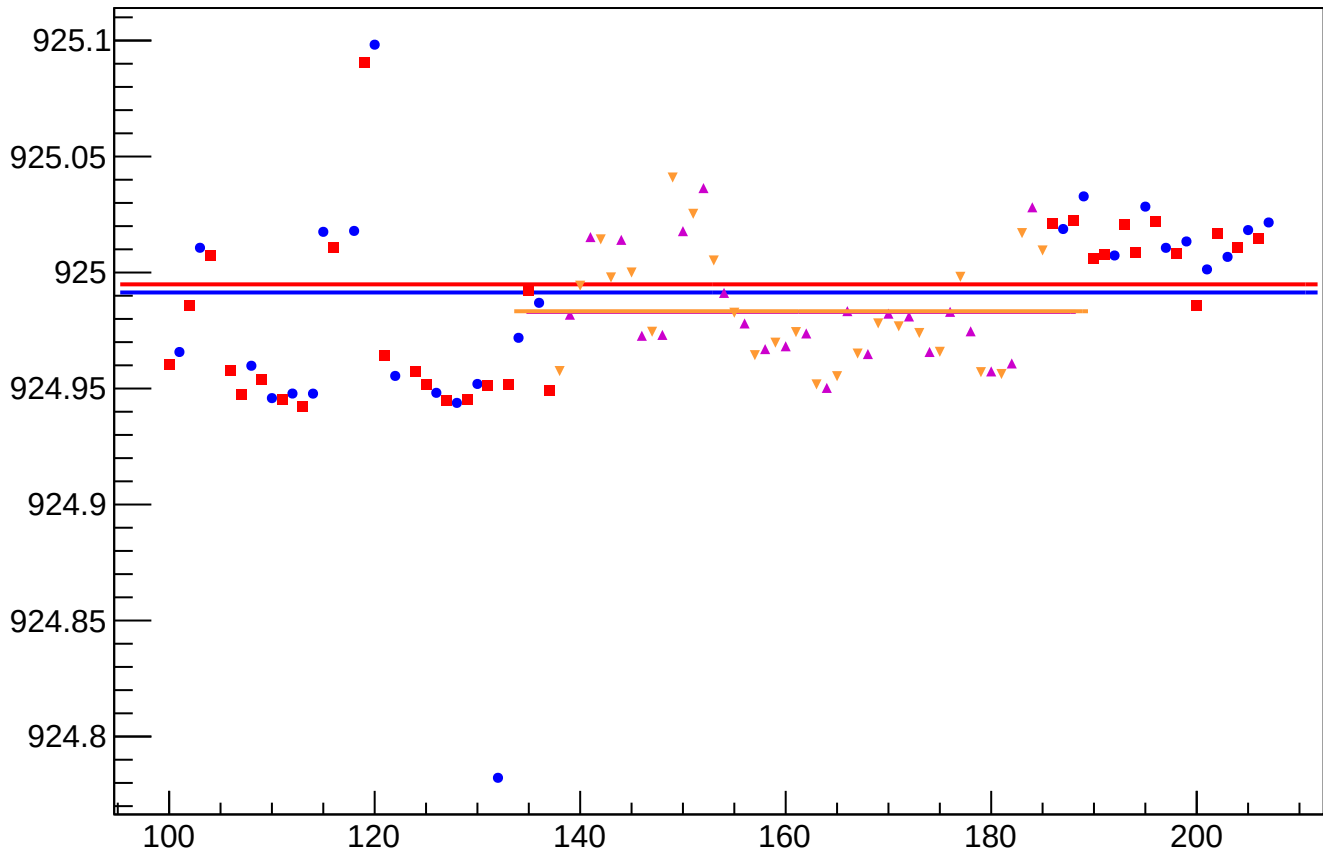
Left In: 0.009 $\pm$ 0.000  $\chi^2$ /NDF:0.1/22

+ sign 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.3/50

All: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 1.0/104

- sign 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.4/53

# HacR\_Q2\_HP3458A\_IOUT\_mean vs Slug



Right In: 924.991 $\pm$ 0.000  $\chi^2$ /NDF: 3522567643183267899675013808128.0/25

Left Out: 924.983 $\pm$ 0.000  $\chi^2$ /NDF: 1161112698344246137667167715328.0/24

Right Out: 924.995 $\pm$ 0.000  $\chi^2$ /NDF: 1948037644358801057108730052608.0/30

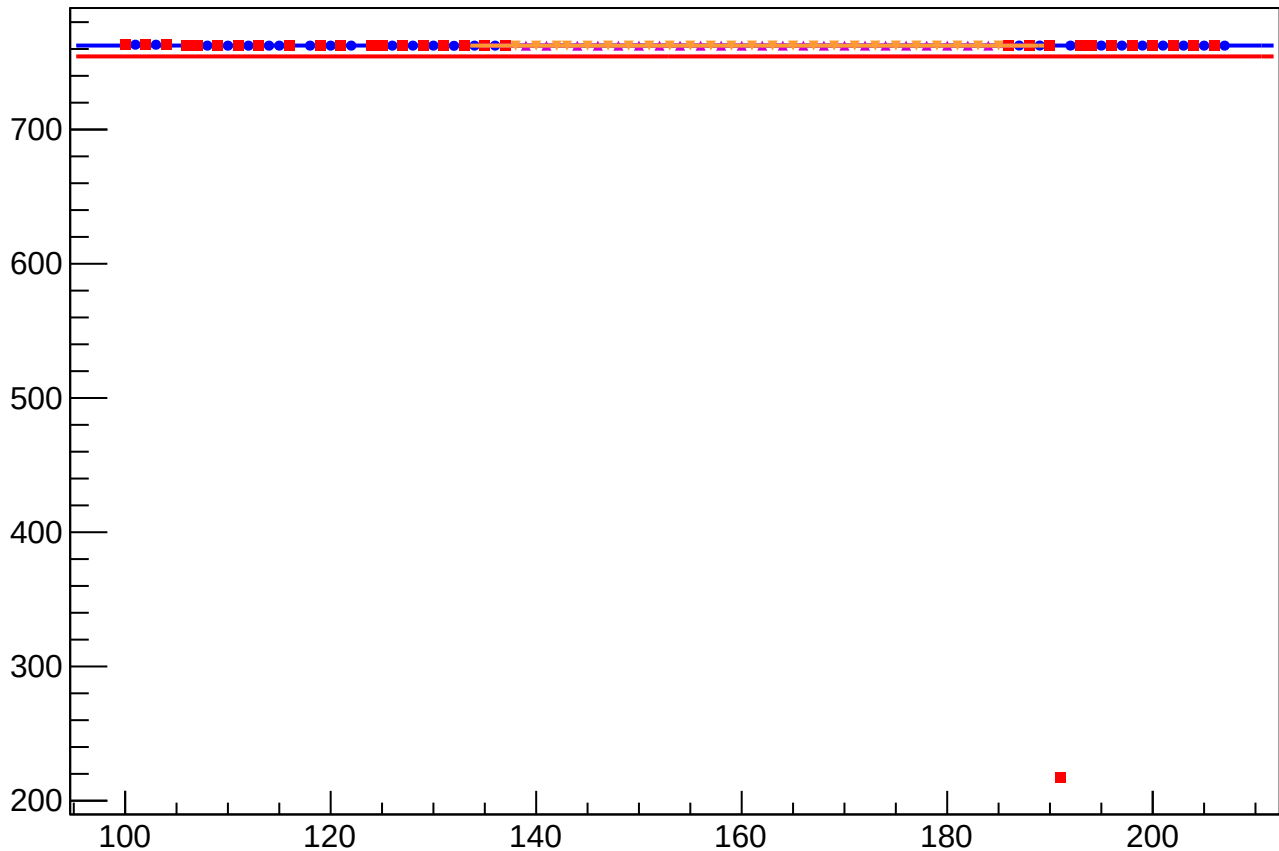
Left In: 924.983 $\pm$ 0.000  $\chi^2$ /NDF: 928270307181587701368348475392.0/22

+ sign 924.987 $\pm$ 0.000  $\chi^2$ /NDF: 474073942564627

All: 924.988 $\pm$ 0.000  $\chi^2$ /NDF: 774912069500

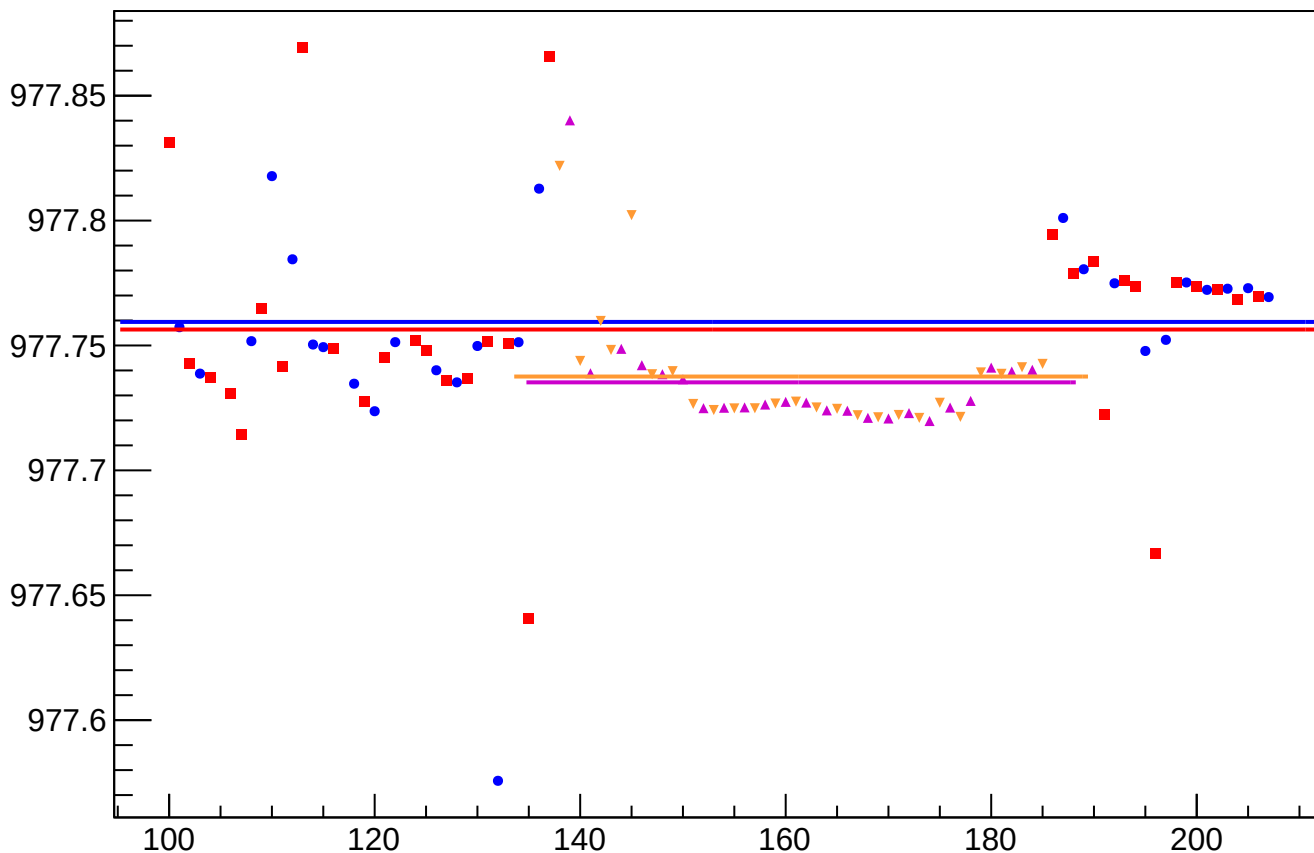
- sign 924.989 $\pm$ 0.000  $\chi^2$ /NDF: 300270940177436

# HacR\_D1\_HP3458A\_IOUT\_mean vs Slug



Right In: 762.566+/-0.000  $\chi^2/\text{NDF}$ : 55310238006194900312245307179008.0/25  
Left Out: 762.518+/-0.000  $\chi^2/\text{NDF}$ : 767703709161817083348479115264.0/24  
Right Out: 754.464+/-0.000  $\chi^2/\text{NDF}$ : 7328772713778409393951803909605425152.0/30  
Left In: 762.519+/-0.000  $\chi^2/\text{NDF}$ : 670647537781259394452119617536.0/22  
All: 760.631+/-0.000  $\chi^2/\text{NDF}$ : 741252331557  
+ sign 762.539+/-0.000  $\chi^2/\text{NDF}$ : 580804503553103  
- sign 758.743+/-0.000  $\chi^2/\text{NDF}$ : 738674485144434

# HacR\_Q3\_HP3458A\_IOUT\_mean vs Slug



Right In: 977.759 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2212008572304379233492438876160.0/25

Left Out: 977.738 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1178407872566336572325000904704.0/24

Right Out: 977.756 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2840155218169489961453940113408.0/30

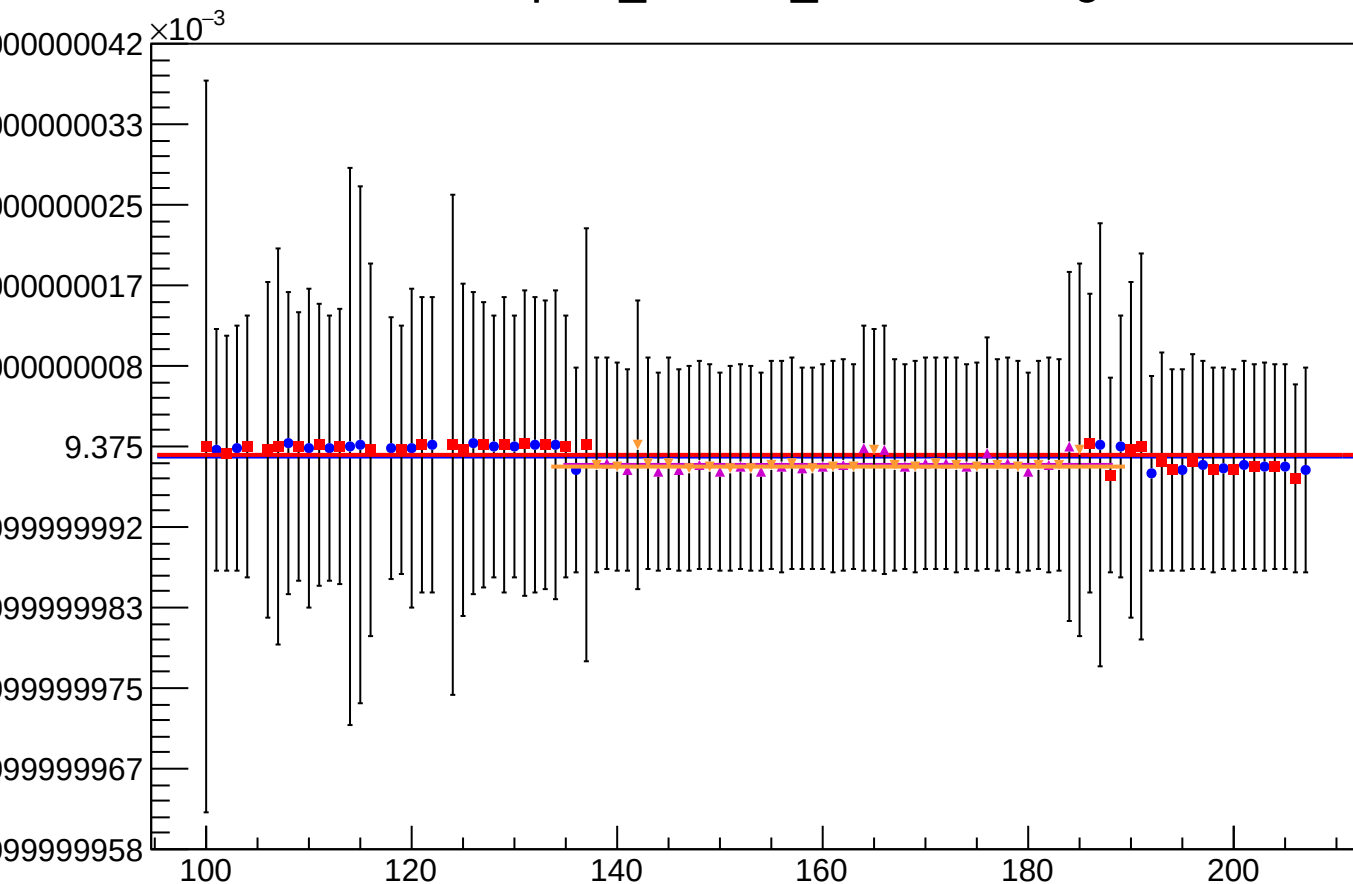
Left In: 977.735 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1096766437605417254627072540672.0/22

+ sign 977.747 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 380686636146096

All: 977.746 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 81497694578

- sign 977.745 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 433678617190075

# hesDipole\_current\_mean vs Slug



Right In: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.2/25

Left Out: 0.009 $\pm$ 0.000  $\chi^2$ /NDF:0.1/24

Right Out: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.3/30

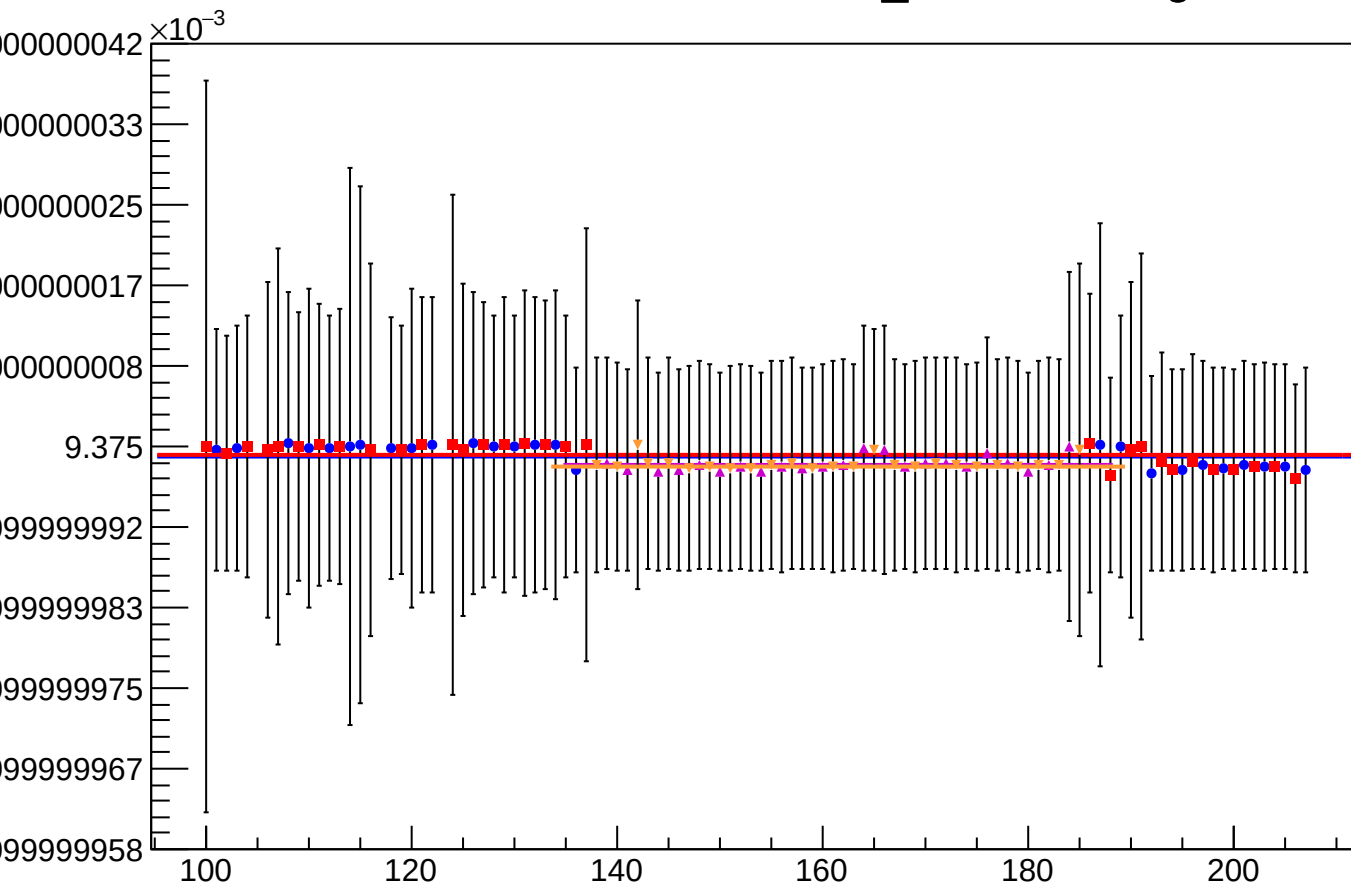
Left In: 0.009 $\pm$ 0.000  $\chi^2$ /NDF:0.1/22

+ sign 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.3/50

All: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 1.0/104

- sign 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.4/53

# MSUPERBIGBITereadcalc\_mean vs Slug



Right In: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.2/25

Left Out: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.1/24

Right Out: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.3/30

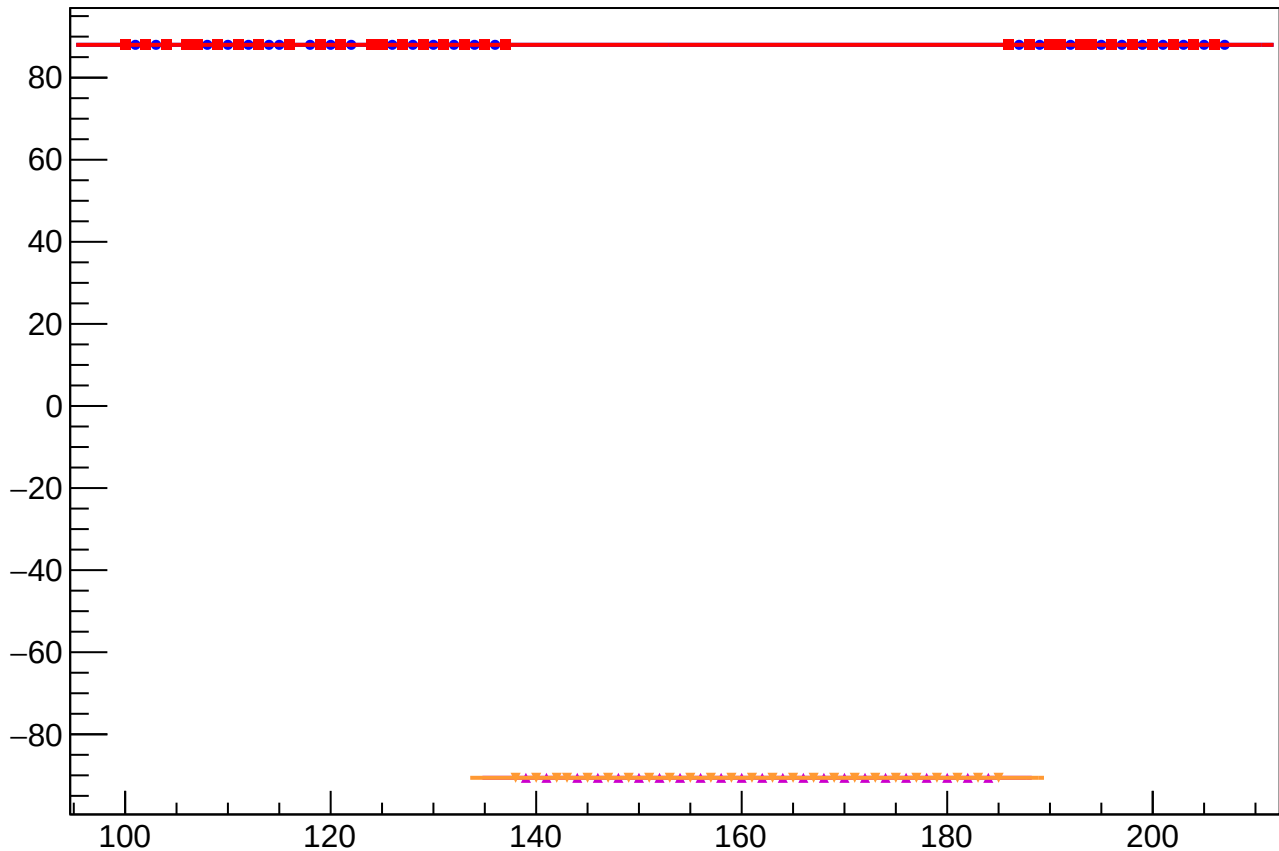
Left In: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.1/22

+ sign 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.3/50

All: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 1.0/104

- sign 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.4/53

# VWienAngle\_mean vs Slug



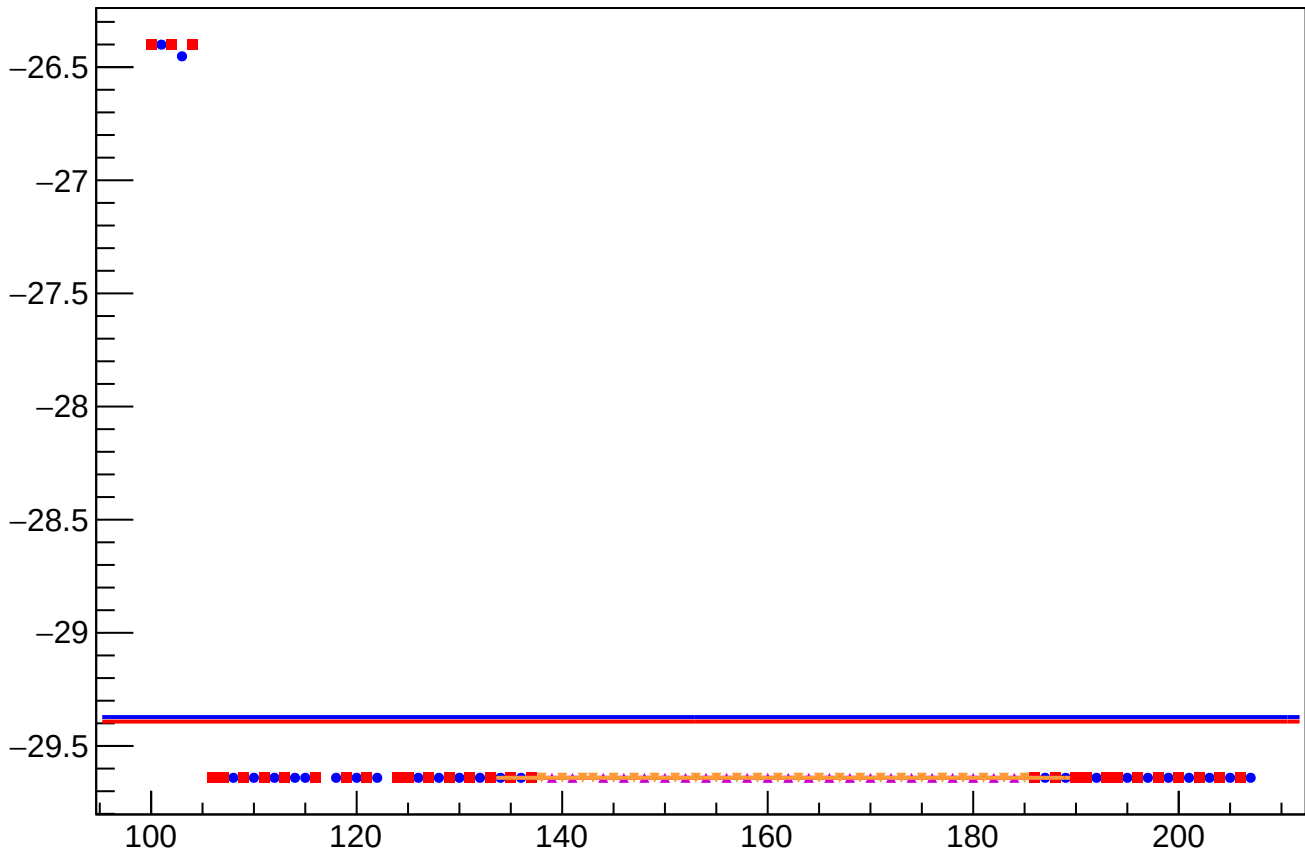
+ sign -13.496 $\pm$ 0.000  $\chi^2$ /NDF: 277891685914502

All: -10.168 $\pm$ 0.000  $\chi^2$ /NDF: 563687785459

- sign -6.874 $\pm$ 0.000  $\chi^2$ /NDF: 28501343229783299

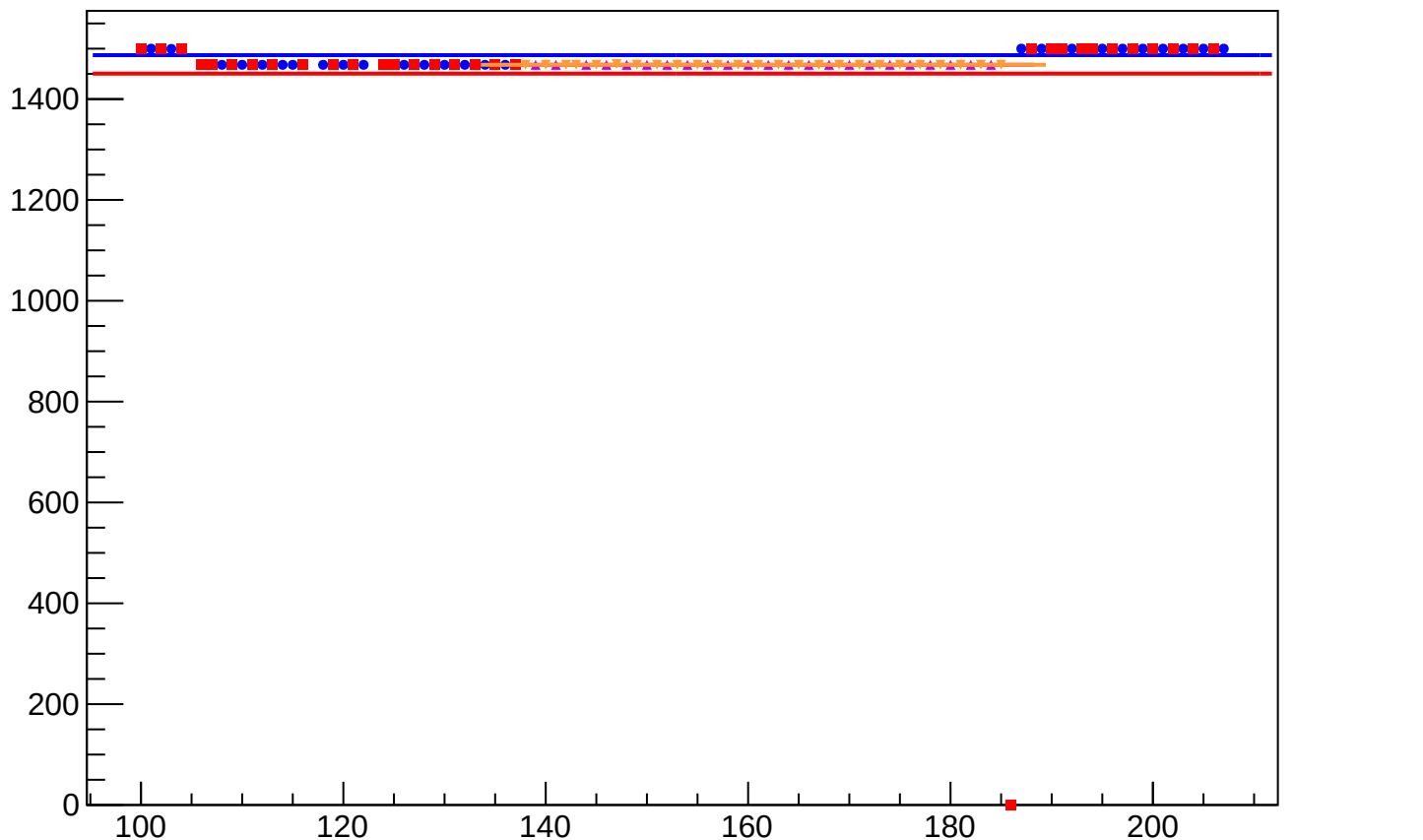


# HWienAngle\_mean vs Slug



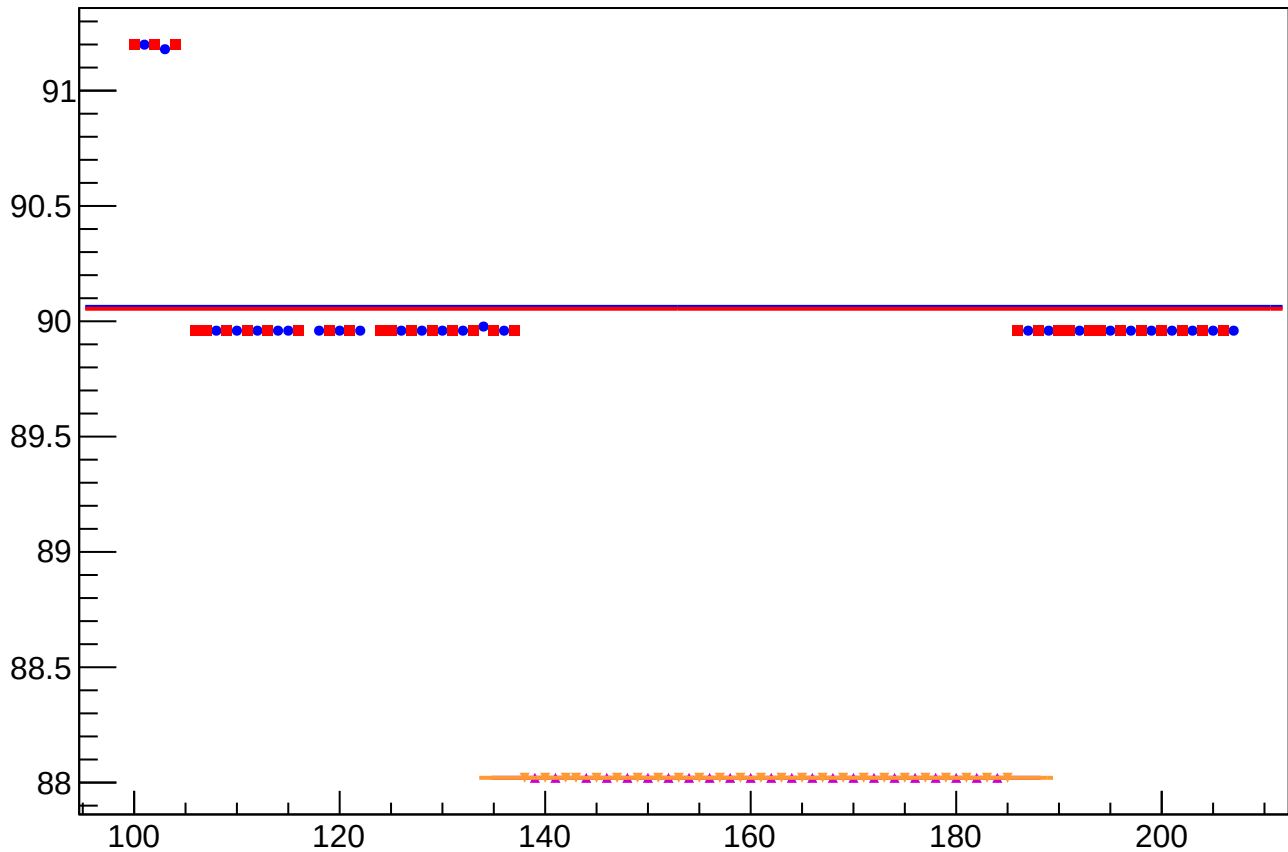
Right In: -29.372+/-0.000  $\chi^2/\text{NDF}$ : 1212416876712332115896826956087296.0/25  
 Left Out: -29.641+/-0.000  $\chi^2/\text{NDF}$ : 409122.2/24  
 Right Out: -29.392+/-0.000  $\chi^2/\text{NDF}$ : 1250331564328184356643395279519744.0/30  
 Left In: -29.641+/-0.000  $\chi^2/\text{NDF}$ : 290780.4/22  
 All: -29.525+/-0.000  $\chi^2/\text{NDF}$ : 258068668998  
 + sign -29.525+/-0.000  $\chi^2/\text{NDF}$ : 127518307103833  
 - sign -29.524+/-0.000  $\chi^2/\text{NDF}$ : 130550295250835

# psub\_pl\_pos\_mean vs Slug



Right In: 1487.175+/-0.000  $\chi^2/\text{NDF}$ : 376408835453837848784147263267012608.0/25  
 Left Out: 1468.051+/-0.000  $\chi^2/\text{NDF}$ : 139558223587677068165594208010240.0/24  
 Right Out: 1450.476+/-0.000  $\chi^2/\text{NDF}$ : 91023492131261079609265213570088435712.0/30  
 Left In: 1467.994+/-0.000  $\chi^2/\text{NDF}$ : 155493808986096753755224539136.0/22

# Phi\_FG\_mean vs Slug



Right In: 90.062 $\pm$ 0.000  $\chi^2$ /NDF: 177454054469126986168442025934848.0/25

Left Out: 88.021 $\pm$ 0.000  $\chi^2$ /NDF: 5113333.3/24

Right Out: 90.054 $\pm$ 0.000  $\chi^2$ /NDF: 183138032818098303988558018379776.0/30

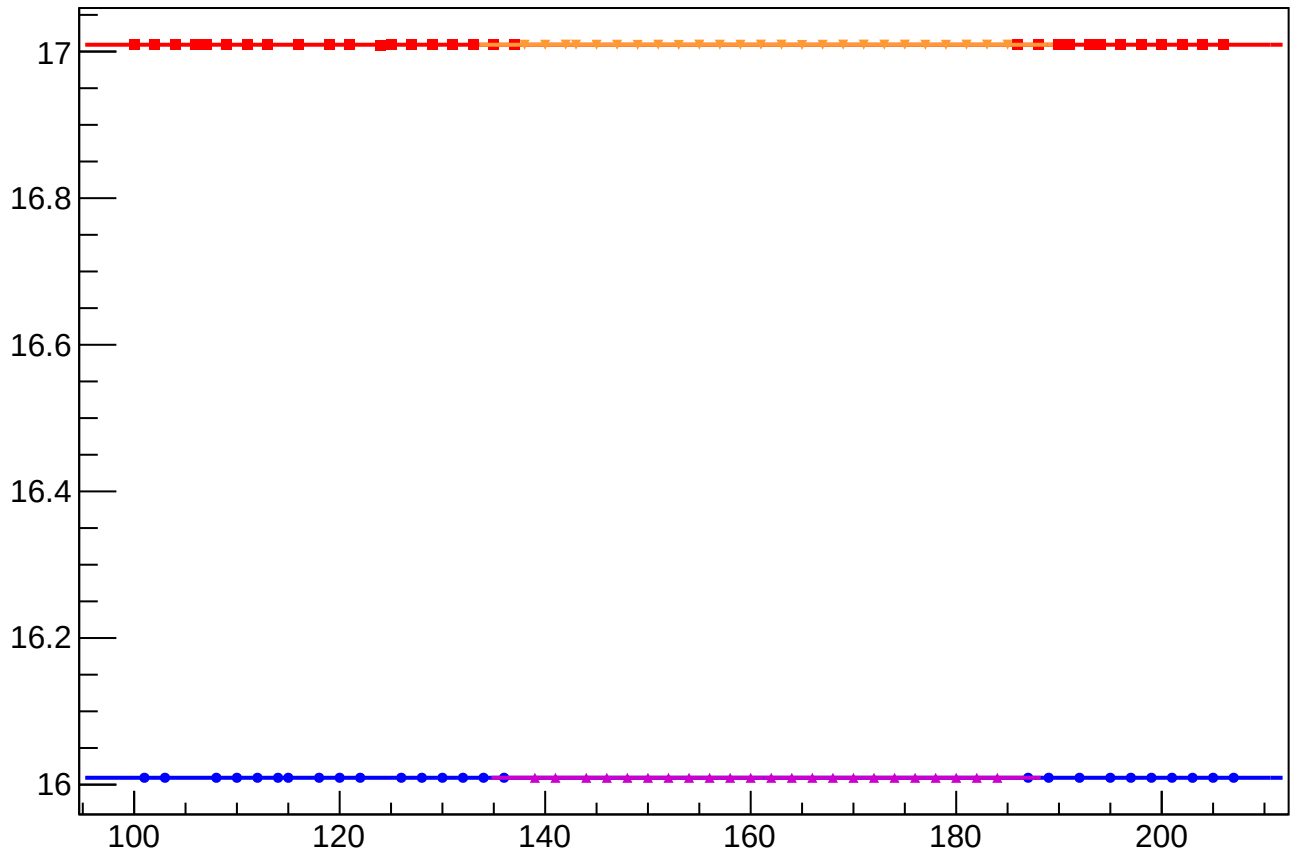
Left In: 88.021 $\pm$ 0.000  $\chi^2$ /NDF: 7159272.4/22

+ sign 88.902 $\pm$ 0.000  $\chi^2$ /NDF: 3809301719387708

All: 88.938 $\pm$ 0.000  $\chi^2$ /NDF: 7697125072225

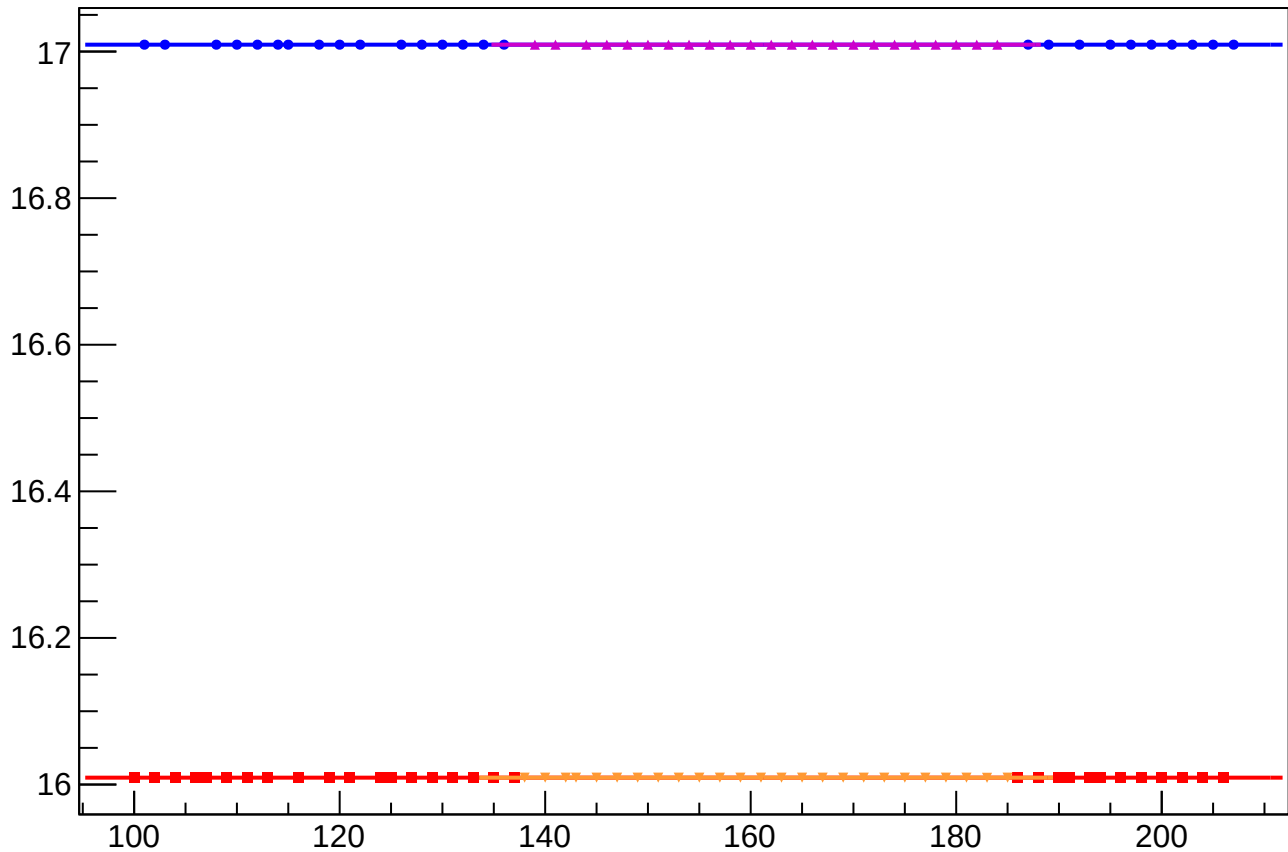
- sign 88.974 $\pm$ 0.000  $\chi^2$ /NDF: 3878593885055074

# IGL1I00DI24\_24M\_mean vs Slug



|                               |                                                |                                                           |
|-------------------------------|------------------------------------------------|-----------------------------------------------------------|
| Right In: 16.009 $\pm$ 0.000  | $\chi^2$ /NDF: 105712000376863369199616.0/25   |                                                           |
| Left Out: 17.009 $\pm$ 0.000  | $\chi^2$ /NDF: 27990345675883689673752576.0/24 | + sign 16.565 $\pm$ 0.000 $\chi^2$ /NDF: 8307081260379694 |
| Right Out: 17.009 $\pm$ 0.000 | $\chi^2$ /NDF: 19686544174090609999478784.0/30 | All: 16.526 $\pm$ 0.000 $\chi^2$ /NDF: 1684624876883      |
| Left In: 16.009 $\pm$ 0.000   | $\chi^2$ /NDF: 124687912167063523688448.0/22   | - sign 16.486 $\pm$ 0.000 $\chi^2$ /NDF: 8432979534613191 |

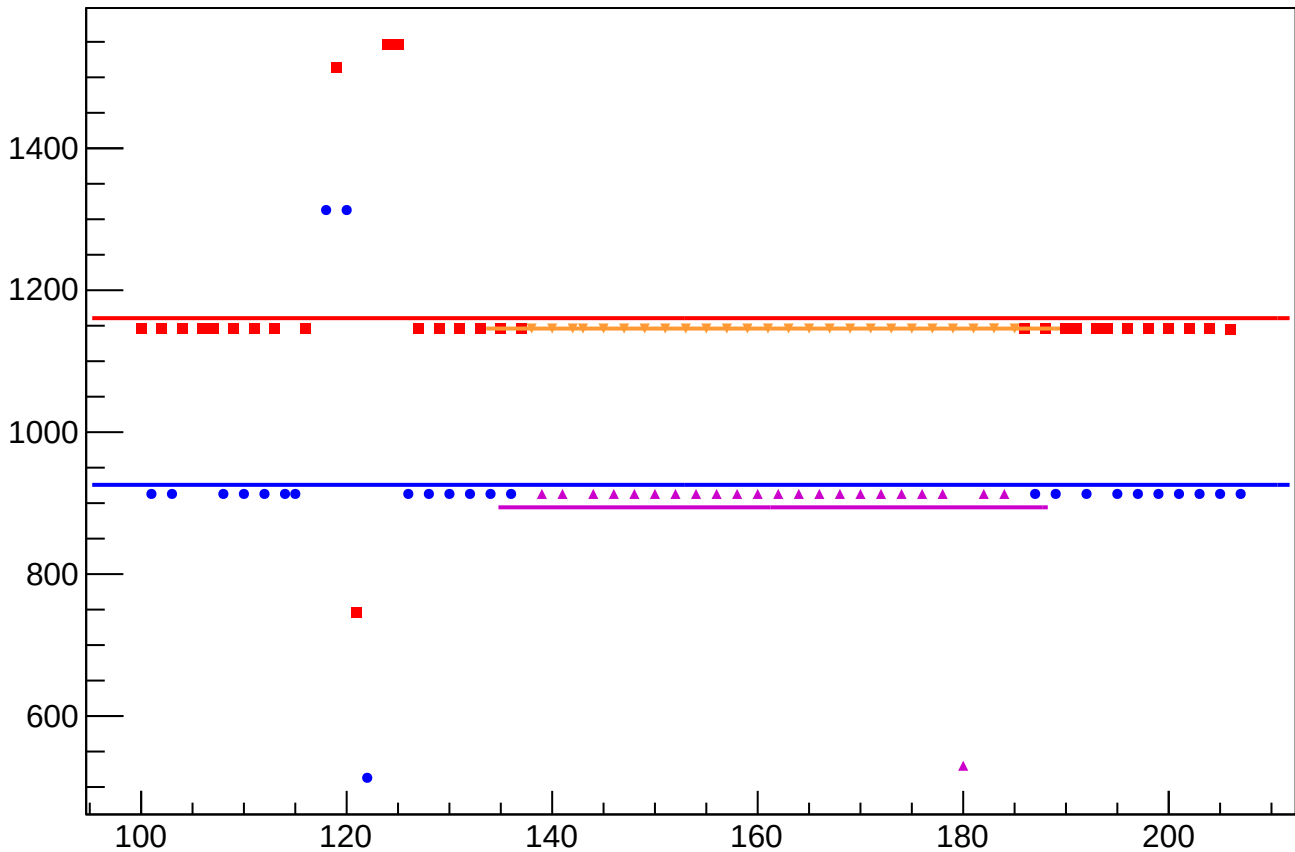
# IGL1I00OD16\_16\_mean vs Slug



Right In: 17.009 $\pm$ 0.000  $\chi^2$ /NDF: 105733803454441822617600.0/25  
 Left Out: 16.009 $\pm$ 0.000  $\chi^2$ /NDF: 2818892758481805649117184.0/24  
 Right Out: 16.009 $\pm$ 0.000  $\chi^2$ /NDF: 651826.3/30  
 Left In: 17.009 $\pm$ 0.000  $\chi^2$ /NDF: 111007104420881566269440.0/22

+ sign 16.439 $\pm$ 0.000  $\chi^2$ /NDF: 8553544554737439  
 All: 16.487 $\pm$ 0.000  $\chi^2$ /NDF: 1753818340525  
 - sign 16.535 $\pm$ 0.000  $\chi^2$ /NDF: 8821564479653462

# RTPAPOSUCNT\_mean vs Slug



Right In: 925.780 +/- 0.000  $\chi^2/\text{NDF}$ : 21350787842804031343303954033715183616.0/25

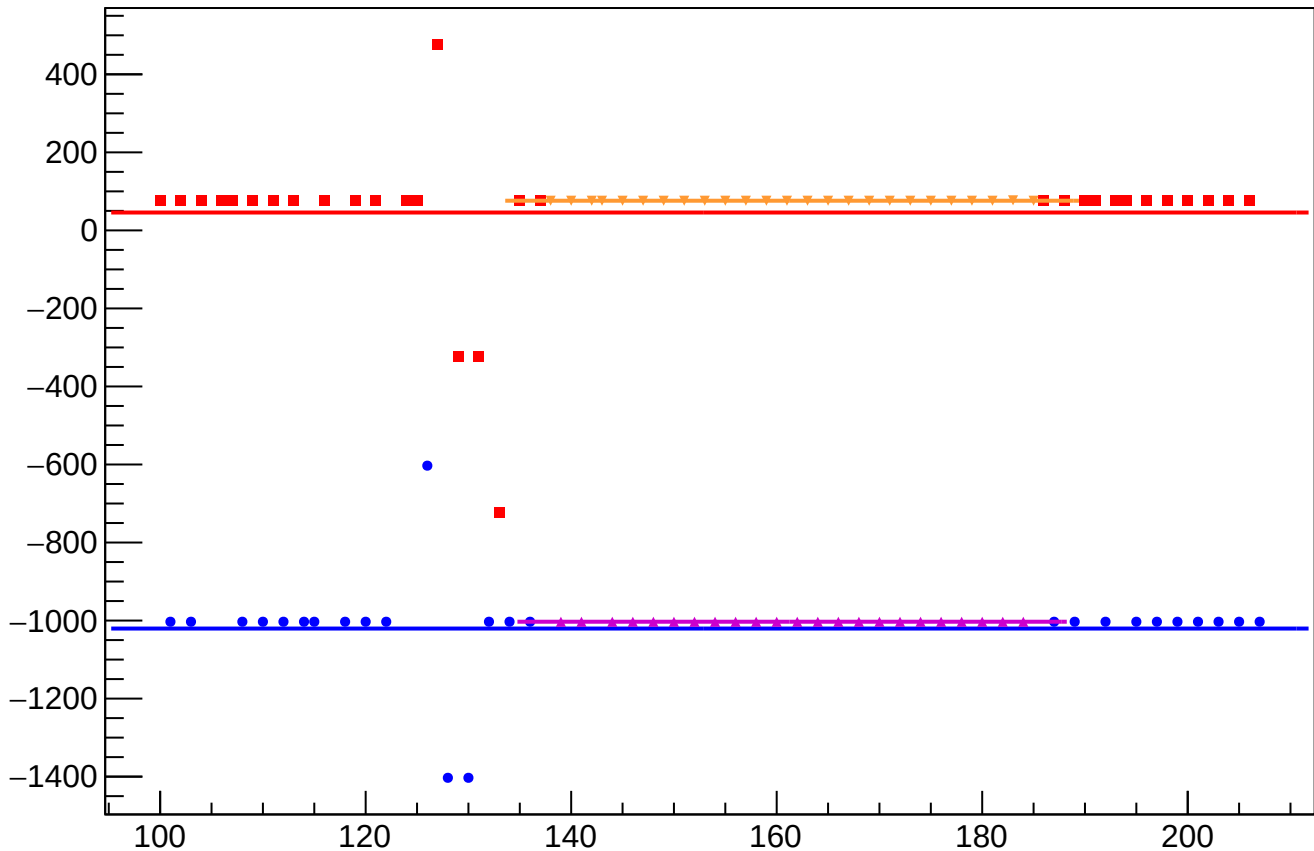
Left Out: 1146.020 +/- 0.000  $\chi^2/\text{NDF}$ : 3703071297941871459906430697472.0/24

Right Out: 1160.638 +/- 0.000  $\chi^2/\text{NDF}$ : 22586765364382528451258555586278588416.0/30

Left In: 894.107 +/- 0.000  $\chi^2/\text{NDF}$ : 13107238299211712783896183802964213760.0/22

All: 1034.914 +/- 0.000  $\chi^2/\text{NDF}$ : 16459057730.0/30

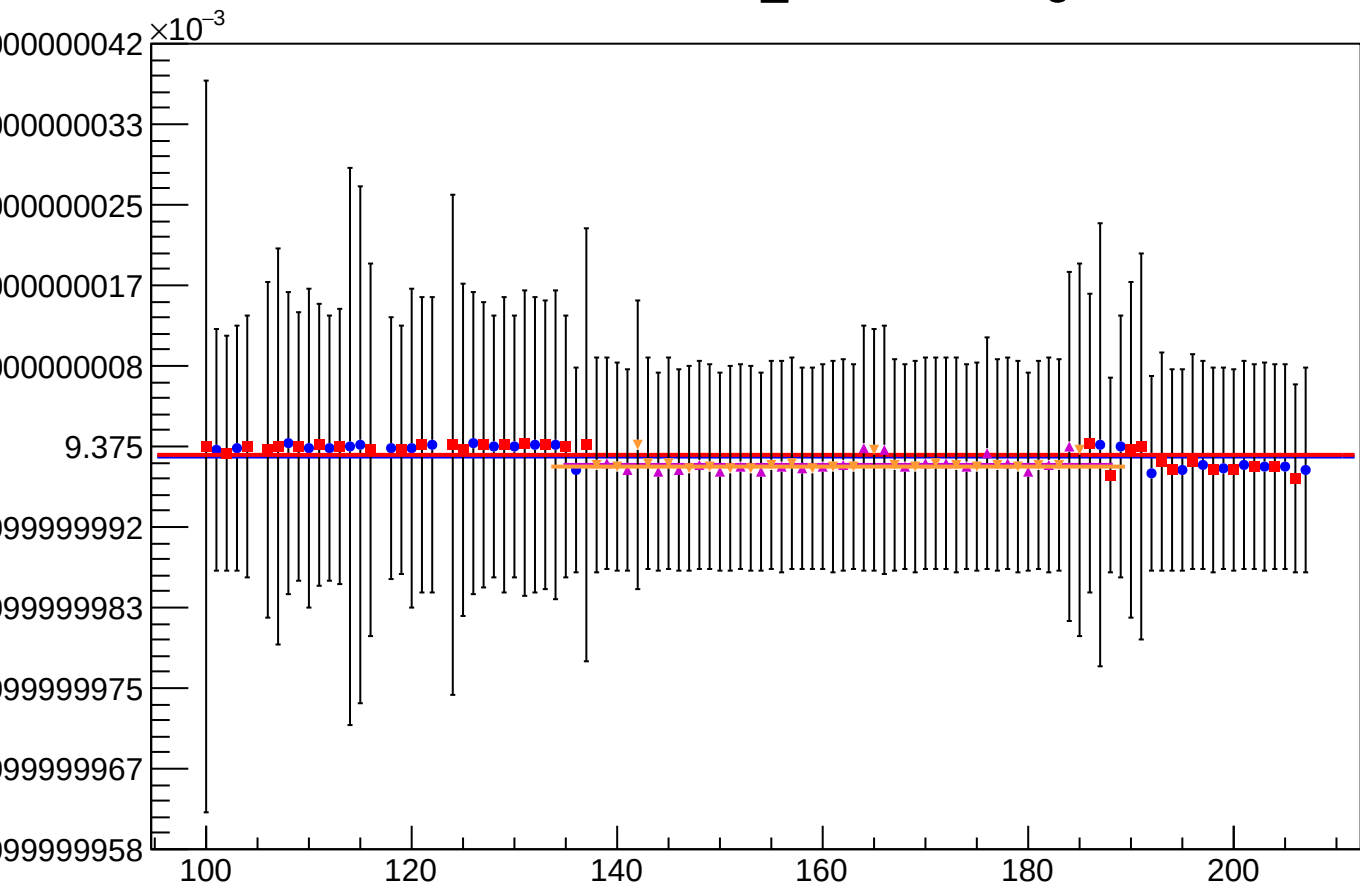
# RTPAPOSVCNT\_mean vs Slug



Right In:  $-1020.471 \pm 0.000$   $\chi^2/\text{NDF}: 23371141775265479398331068607396577280.0/25$   
 Left Out:  $76.053 \pm 0.000$   $\chi^2/\text{NDF}: 81371196294580866514571210260480.0/24$   
 Right Out:  $45.808 \pm 0.000$   $\chi^2/\text{NDF}: 47905507479736857514071241240671682560.0/30$   
 Left In:  $-1002.990 \pm 0.000$   $\chi^2/\text{NDF}: 2951955903348314753097269248.0/22$

+ sign  $-397.327 \pm 0.000$   $\chi^2/\text{NDF}: 10708589936199$   
 All:  $-454.623 \pm 0.000$   $\chi^2/\text{NDF}: 21247938792$   
 - sign  $-511.329 \pm 0.000$   $\chi^2/\text{NDF}: 103074006885390$

# RTPPITA1CNT\_mean vs Slug



Right In: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.2/25

Left Out: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.1/24

Right Out: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.3/30

Left In: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.1/22

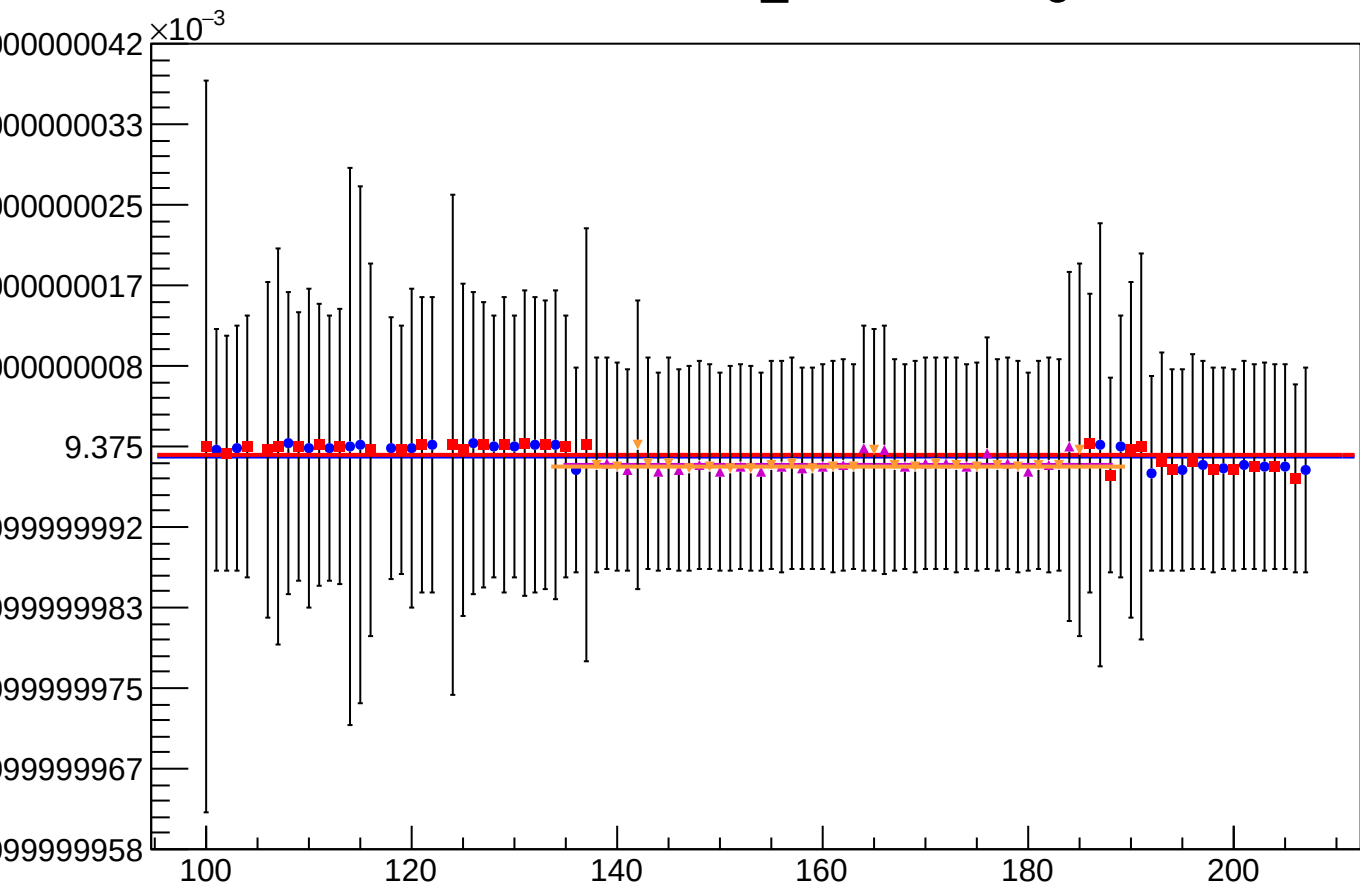
+ sign 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.3/50

All: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 1.0/104

- sign 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.4/53



# RTPPITA2CNT\_mean vs Slug



Right In: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.2/25

Left Out: 0.009 $\pm$ 0.000  $\chi^2$ /NDF:0.1/24

Right Out: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.3/30

Left In: 0.009 $\pm$ 0.000  $\chi^2$ /NDF:0.1/22

+ sign 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.3/50

All: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 1.0/104

- sign 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.4/53