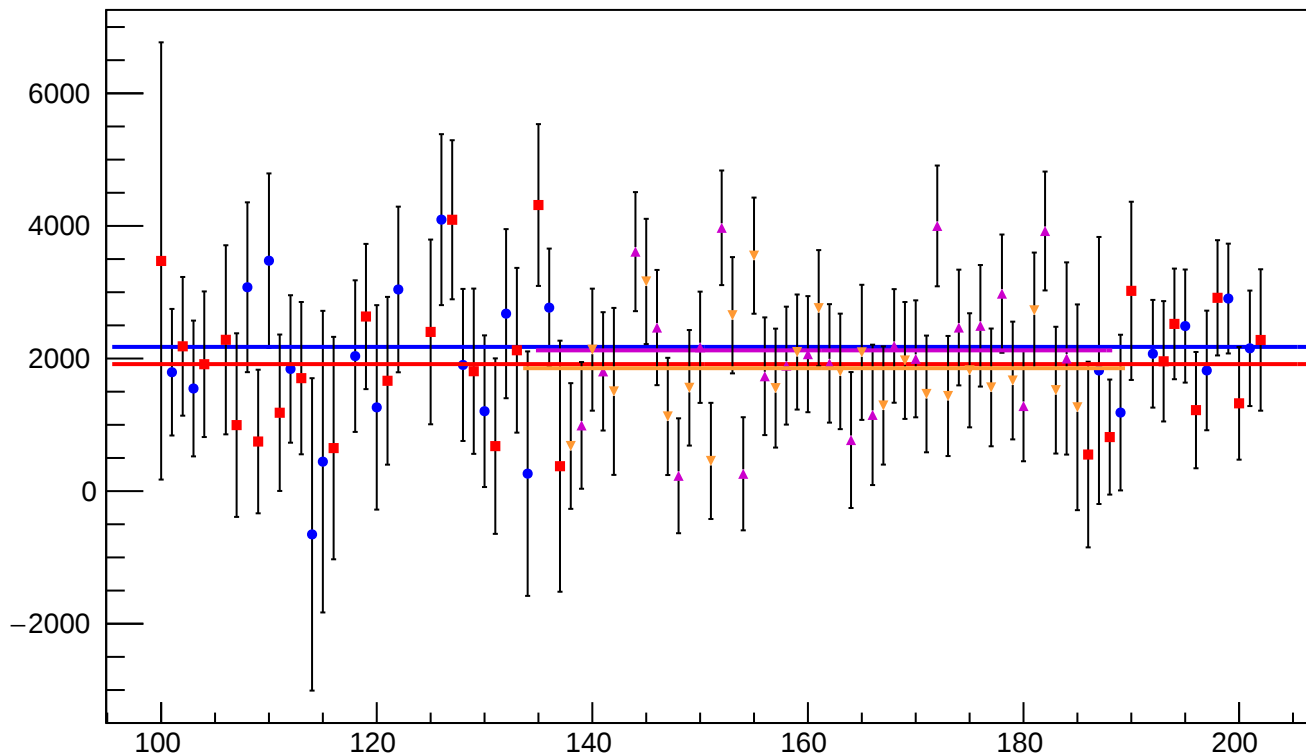


# reg\_asym\_us\_avg\_mean vs Slug, Sign Corrected



Right In: 2175.341+/-233.063

Left Out: 1854.267+/-187.405

Right Out: 1915.738+/-218.503

Left In: 2123.138+/-188.684

$\chi^2/\text{NDF}$ : 11.4/22

$\chi^2/\text{NDF}$ : 15.1/23

$\chi^2/\text{NDF}$ : 18.6/26

$\chi^2/\text{NDF}$ : 32.0/22

Left: 1987.788+/-132.965

Right: 2037.177+/-159.404

In: 2143.807+/-146.649

Out: 1880.320+/-142.251

All: 2008.053+/-102.106

$\chi^2/\text{NDF}$ : 48.1/46

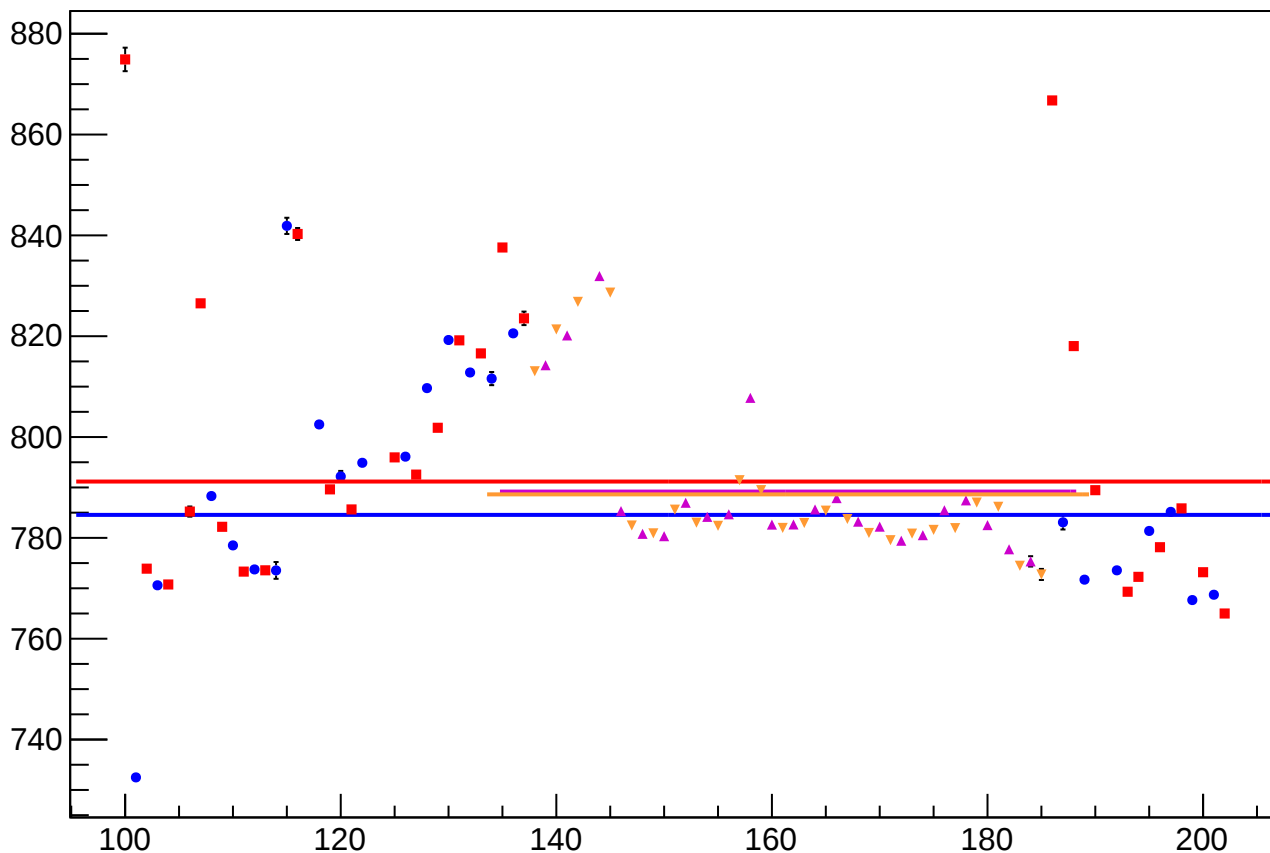
$\chi^2/\text{NDF}$ : 30.7/49

$\chi^2/\text{NDF}$ : 43.5/45

$\chi^2/\text{NDF}$ : 33.7/50

$\chi^2/\text{NDF}$ : 78.9/96

# reg\_asym\_us\_avg\_rms vs Slug, Sign Corrected



Right In: 784.559 $\pm$ 0.165  $\chi^2$ /NDF: 18333.3/22

Left Out: 788.629 $\pm$ 0.133  $\chi^2$ /NDF:11478.1/23

Right Out: 791.173 $\pm$ 0.155  $\chi^2$ /NDF: 24624.6/26

Left In: 789.185 $\pm$ 0.133  $\chi^2$ /NDF:11343.2/22

Left: 788.905 $\pm$ 0.094  $\chi^2$ /NDF: 22830.1/46

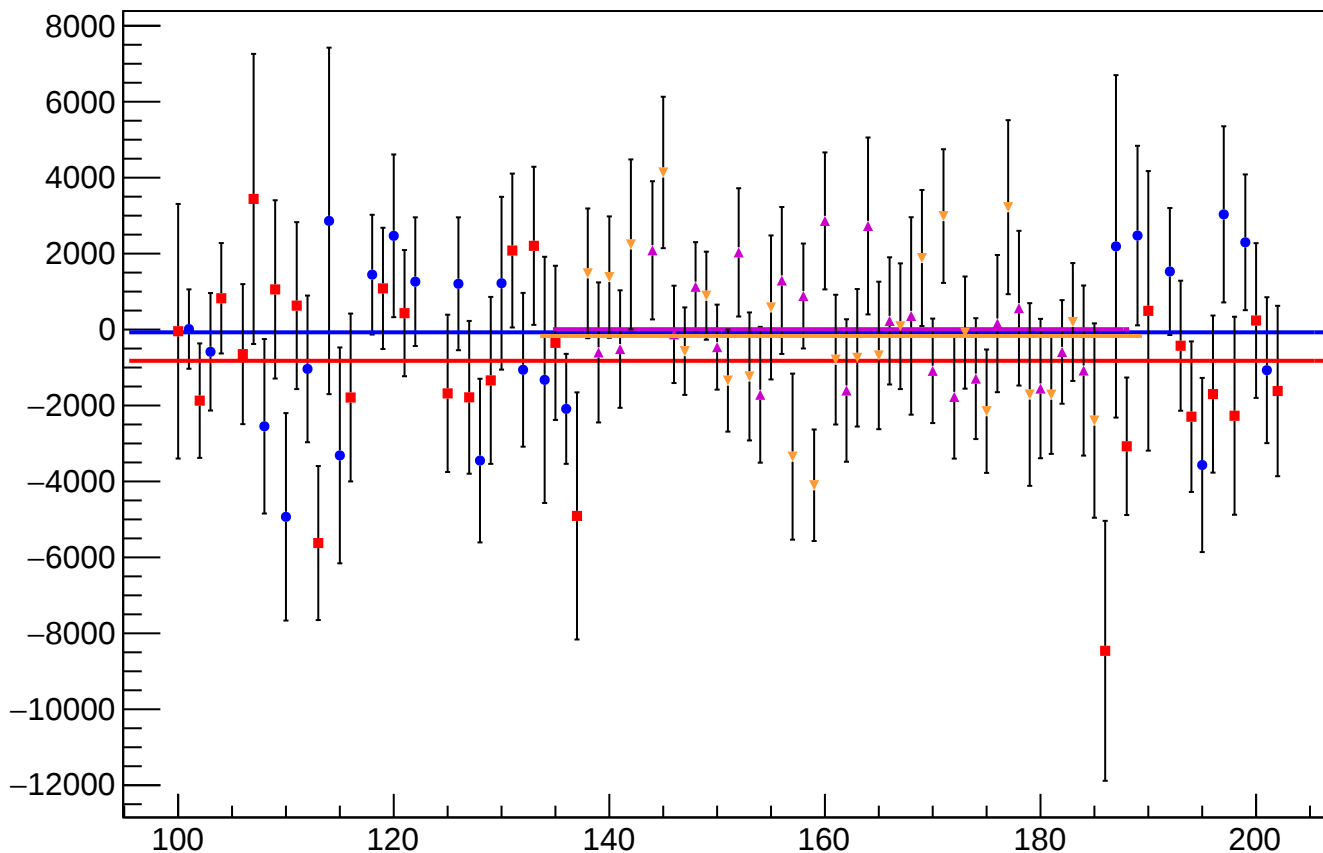
Right: 788.079 $\pm$ 0.113  $\chi^2$ /NDF: 43815.1/49

In: 787.353 $\pm$ 0.104  $\chi^2$ /NDF:30152.4/45

Out: 789.708 $\pm$ 0.101  $\chi^2$ /NDF:36258.9/50

All: 788.566 $\pm$ 0.072  $\chi^2$ /NDF: 66676.8/96

asym\_us\_avg\_correction\_mean vs Slug, Sign Corrected



Right In:  $-72.896 \pm 402.871$   $\chi^2/\text{NDF}$ : 23.5/22

Left Out:  $-169.172 \pm 340.391$   $\chi^2/\text{NDF}$ : 30.0/23

Right Out:  $-822.864 \pm 397.347$   $\chi^2/\text{NDF}$ : 26.3/26

Left In:  $10.093 \pm 337.810$   $\chi^2/\text{NDF}$ : 14.2/22

Left:  $-78.858 \pm 239.775$   $\chi^2/\text{NDF}$ : 44.4/46

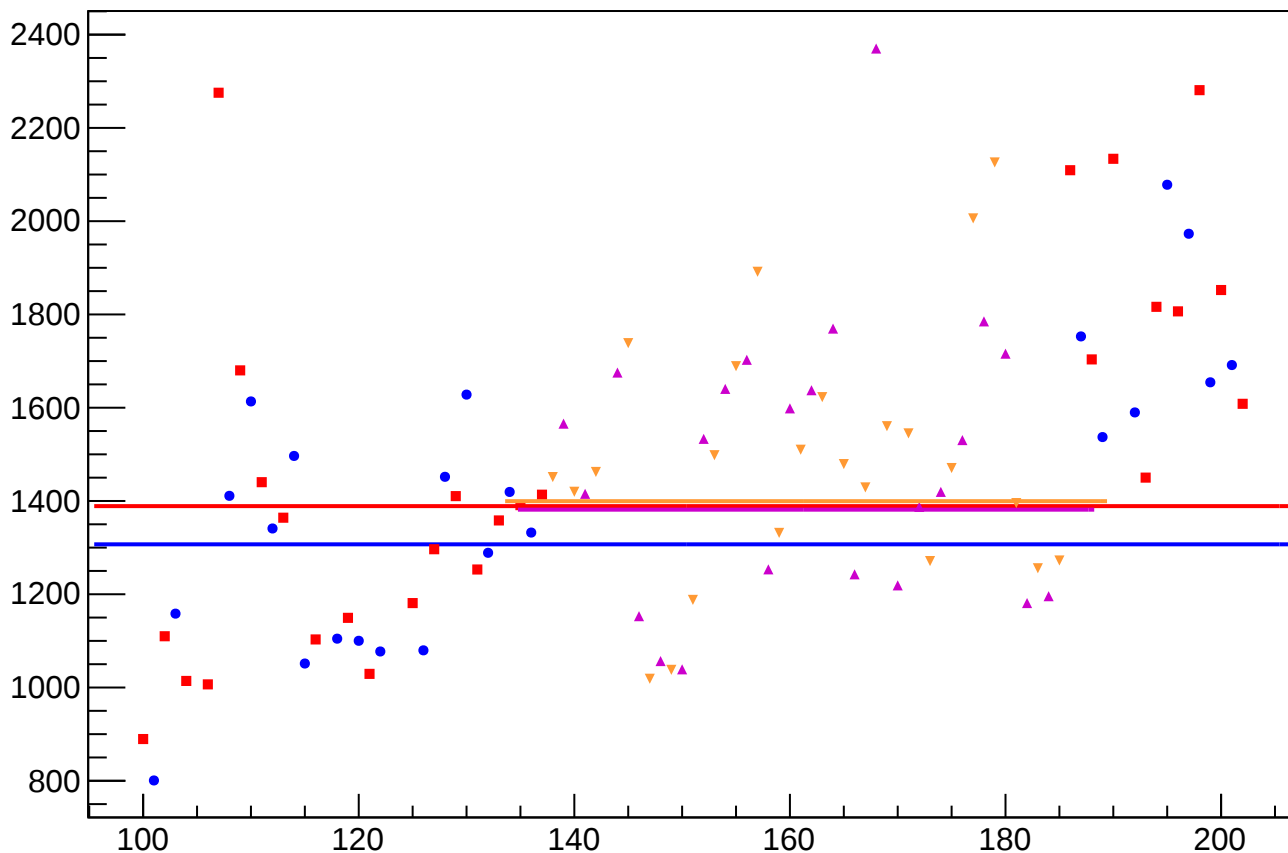
Right:  $-453.057 \pm 282.899$   $\chi^2/\text{NDF}$ : 51.6/49

In:  $-24.168 \pm 258.853$   $\chi^2/\text{NDF}$ : 37.7/45

Out:  $-445.850 \pm 258.506$   $\chi^2/\text{NDF}$ : 57.9/50

All:  $-235.292 \pm 182.914$   $\chi^2/\text{NDF}$ : 96.9/96

asym\_us\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 1307.053+/-0.285  $\chi^2/\text{NDF}$ : 1353716.7/22

Left Out: 1399.587+/-0.241  $\chi^2/\text{NDF}$ : 1119125.1/23

Right Out: 1388.977+/-0.281  $\chi^2/\text{NDF}$ : 1442431.5/26

Left In: 1381.359+/-0.239  $\chi^2/\text{NDF}$ : 1276488.2/22

Left: 1390.403+/-0.170  $\chi^2/\text{NDF}$ : 2398502.8/46

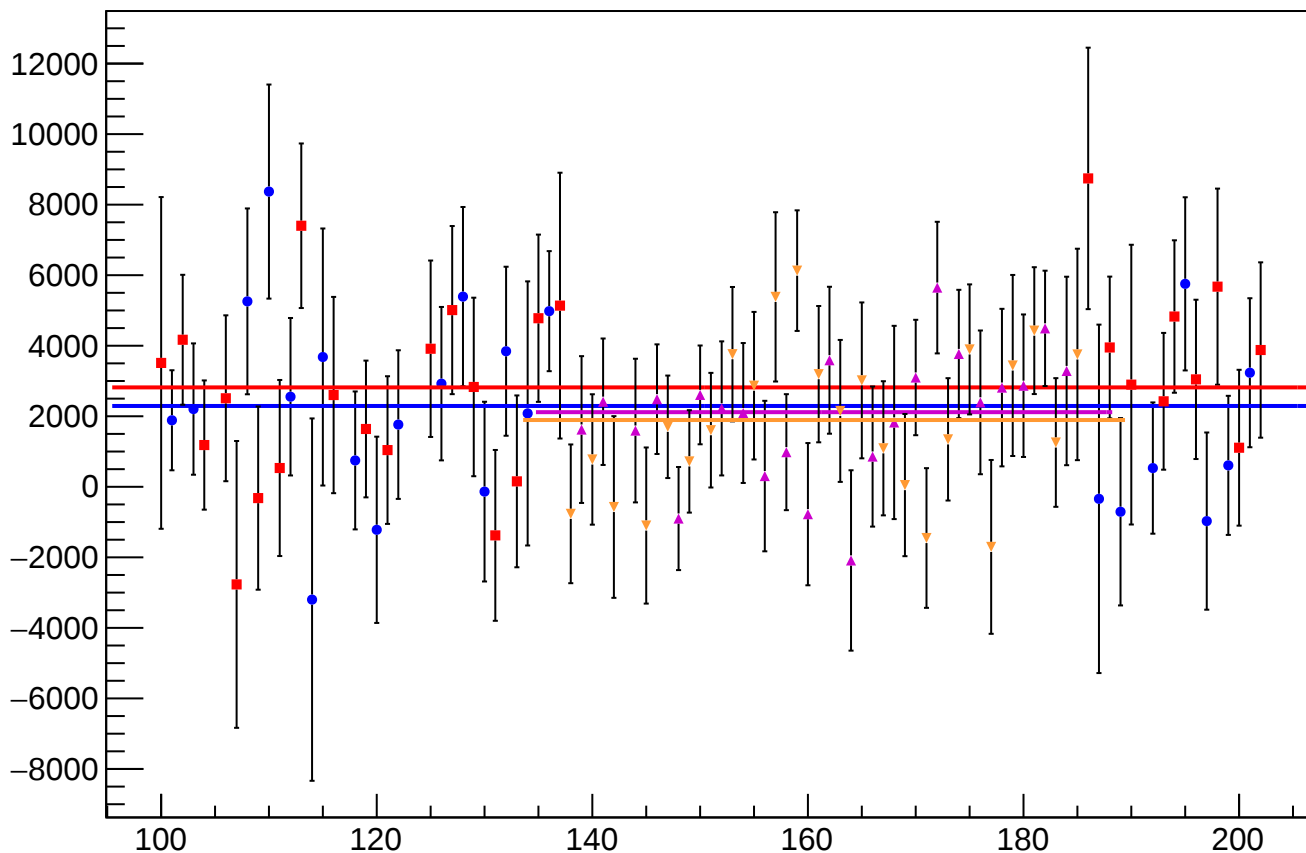
Right: 1348.580+/-0.200  $\chi^2/\text{NDF}$ : 2838070.0/49

In: 1350.683+/-0.183  $\chi^2/\text{NDF}$ : 2670153.6/45

Out: 1395.096+/-0.183  $\chi^2/\text{NDF}$ : 2562379.0/50

All: 1372.919+/-0.129  $\chi^2/\text{NDF}$ : 5262010.7/96

# asym\_us\_avg\_mean vs Slug, Sign Corrected



Right In: 2291.881 $\pm$ 478.353  $\chi^2$ /NDF: 21.6/22

Left Out: 1893.469 $\pm$ 394.877  $\chi^2$ /NDF:25.9/23

Right Out: 2818.452 $\pm$ 464.711  $\chi^2$ /NDF: 22.4/26

Left In: 2116.114 $\pm$ 392.997  $\chi^2$ /NDF:18.8/22

Left: 2005.323 $\pm$ 278.553  $\chi^2$ /NDF: 44.9/46

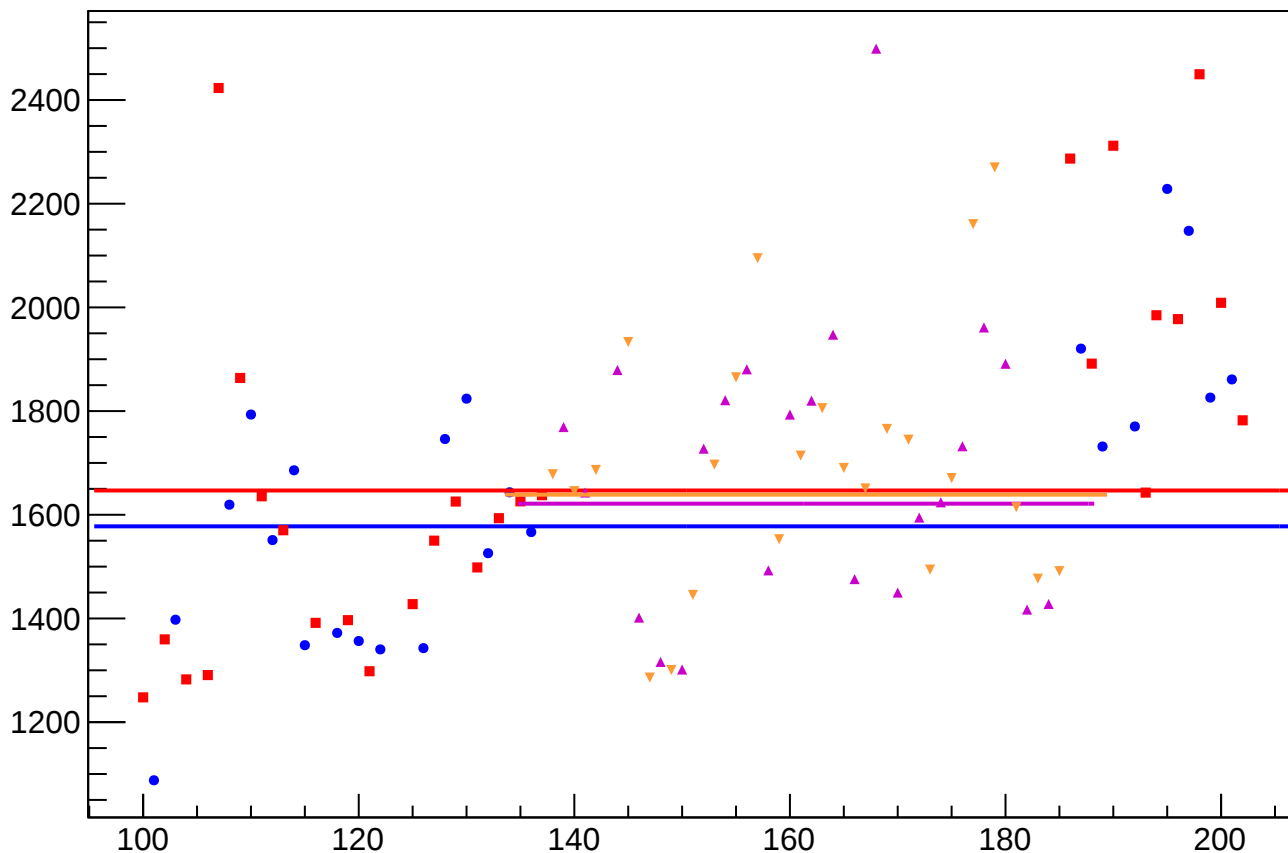
Right: 2562.782 $\pm$ 333.319  $\chi^2$ /NDF: 44.6/49

In: 2186.943 $\pm$ 303.659  $\chi^2$ /NDF:40.4/45

Out: 2281.306 $\pm$ 300.913  $\chi^2$ /NDF:50.7/50

All: 2234.553 $\pm$ 213.742  $\chi^2$ /NDF: 91.2/96

# asym\_us\_avg\_rms vs Slug, Sign Corrected



Right In: 1577.685 $\pm$ 0.338  $\chi^2$ /NDF: 739868.9/22

Left Out: 1638.806 $\pm$ 0.279  $\chi^2$ /NDF: 671906.6/23

Right Out: 1646.834 $\pm$ 0.329  $\chi^2$ /NDF: 873770.2/26

Left In: 1621.417 $\pm$ 0.278  $\chi^2$ /NDF: 775310.1/22

Left: 1630.070 $\pm$ 0.197  $\chi^2$ /NDF: 1449165.3/46

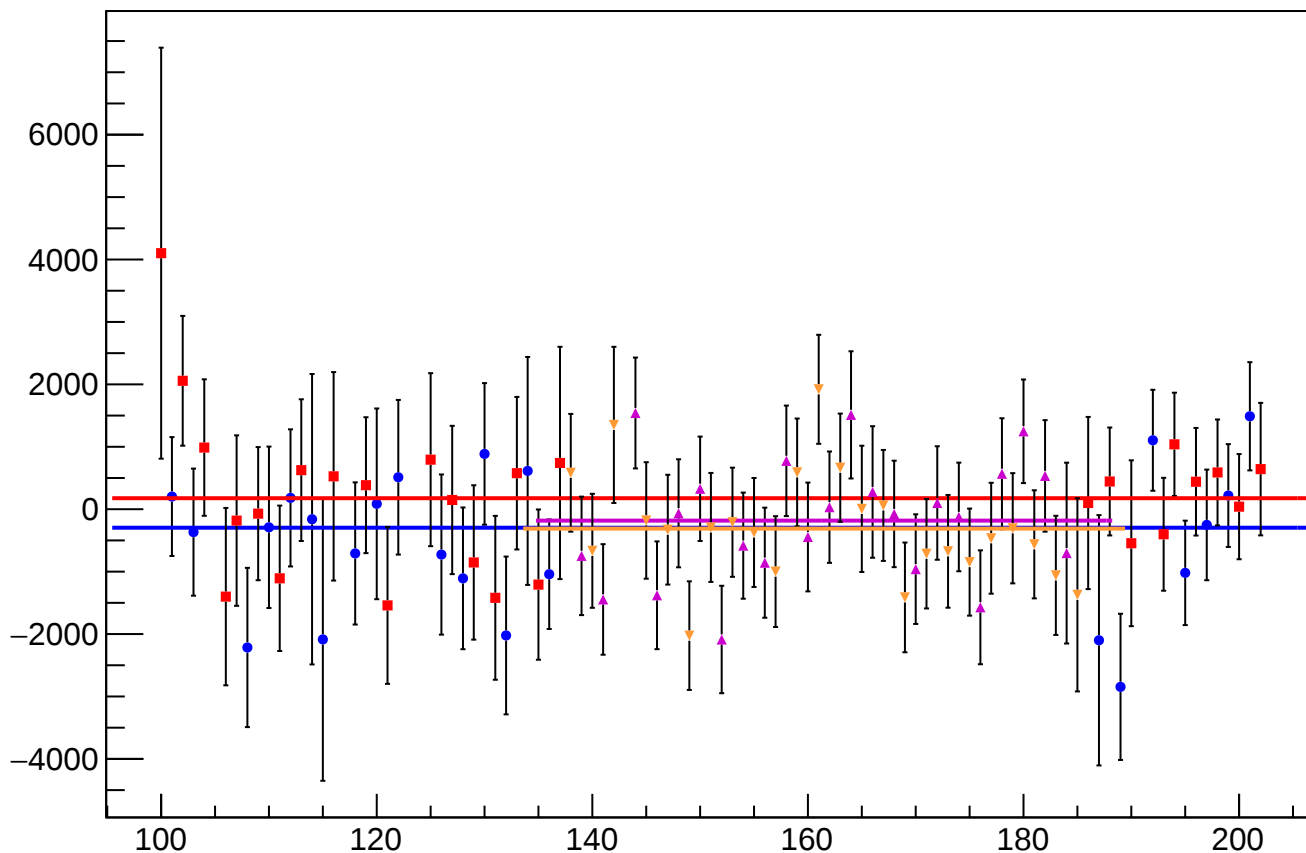
Right: 1613.260 $\pm$ 0.236  $\chi^2$ /NDF: 1635140.5/49

In: 1603.794 $\pm$ 0.215  $\chi^2$ /NDF: 1525158.9/45

Out: 1642.172 $\pm$ 0.213  $\chi^2$ /NDF: 1546023.5/50

All: 1623.158 $\pm$ 0.151  $\chi^2$ /NDF: 3087301.0/96

# reg\_asym\_us\_dd\_mean vs Slug, Sign Corrected



Right In: -296.501 $\pm$ 230.994  $\chi^2$ /NDF: 22.5/22

Left Out: -310.563 $\pm$ 186.538  $\chi^2$ /NDF:20.0/23

Right Out: 176.276 $\pm$ 216.305  $\chi^2$ /NDF: 16.2/26

Left In: -182.895 $\pm$ 187.817  $\chi^2$ /NDF:26.1/22

Left: -247.165 $\pm$ 132.352  $\chi^2$ /NDF: 46.4/46

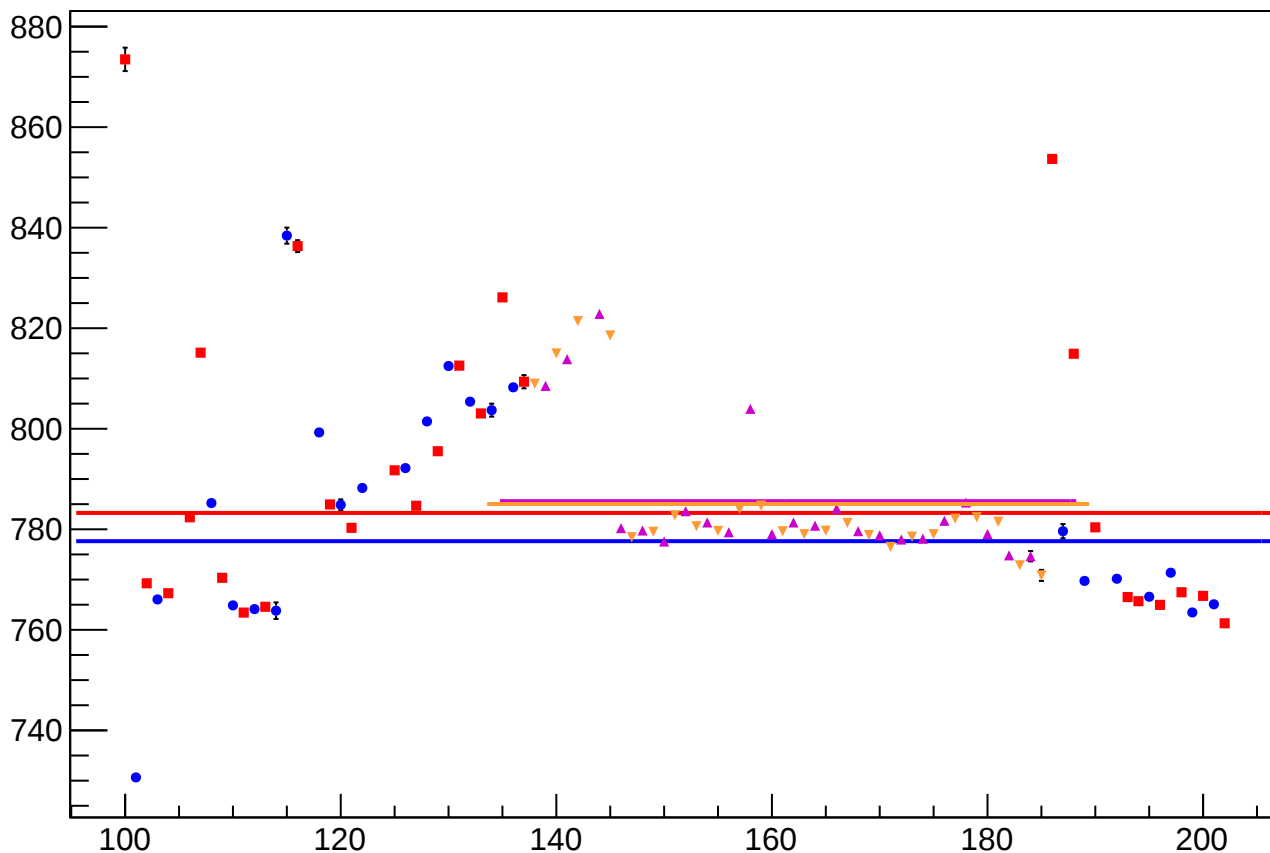
Right: -44.604 $\pm$ 157.889  $\chi^2$ /NDF: 40.9/49

In: -228.109 $\pm$ 145.726  $\chi^2$ /NDF:48.7/45

Out: -102.922 $\pm$ 141.264  $\chi^2$ /NDF:39.2/50

All: -163.570 $\pm$ 101.429  $\chi^2$ /NDF: 88.3/96

# reg\_asym\_us\_dd\_rms vs Slug, Sign Corrected



Right In: 777.639 $\pm$ 0.163  $\chi^2/\text{NDF}$ : 16678.2/22

Left Out: 785.031 $\pm$ 0.132  $\chi^2/\text{NDF}$ : 9367.9/23

Right Out: 783.261 $\pm$ 0.153  $\chi^2/\text{NDF}$ : 24270.1/26

Left In: 785.592 $\pm$ 0.133  $\chi^2/\text{NDF}$ : 9373.7/22

Left: 785.309 $\pm$ 0.094  $\chi^2/\text{NDF}$ : 18750.6/46

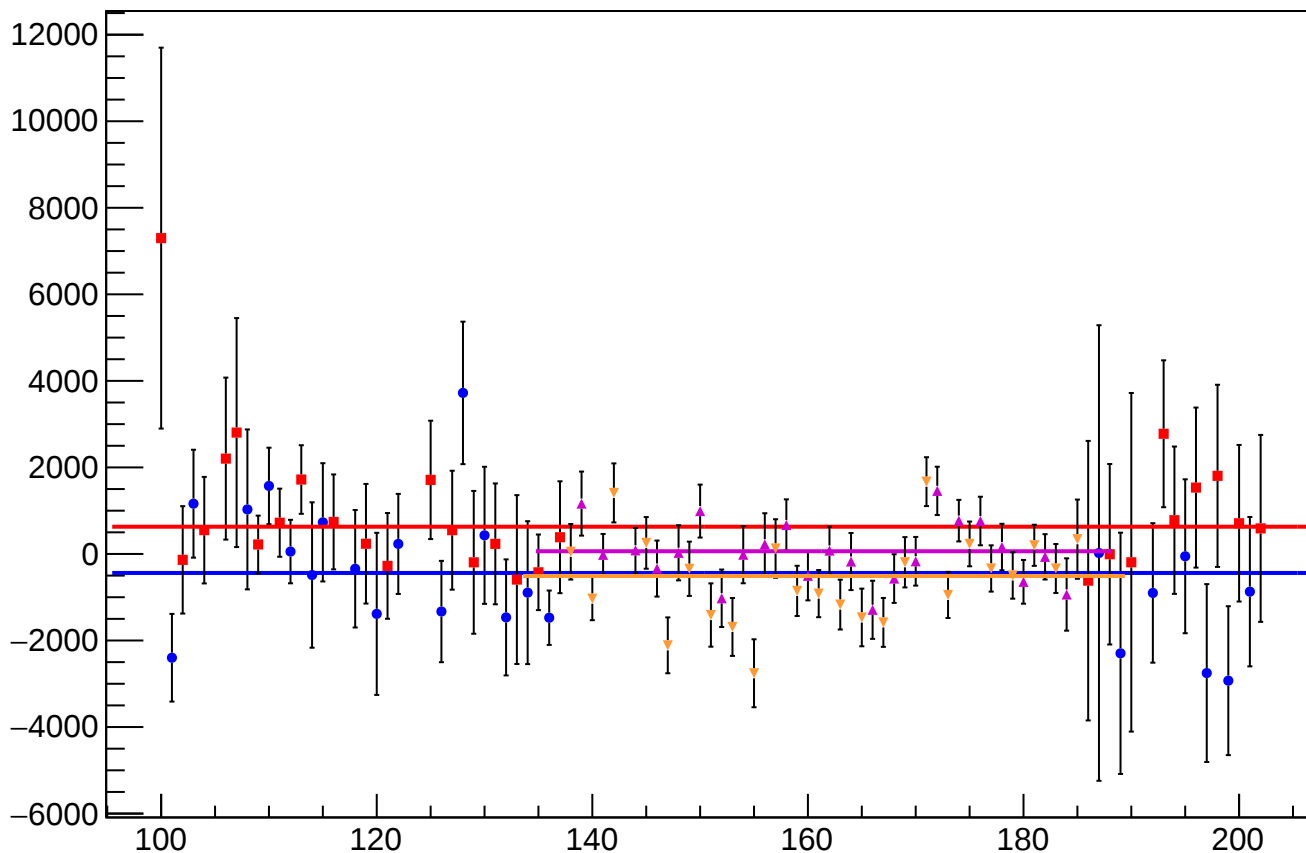
Right: 780.634 $\pm$ 0.112  $\chi^2/\text{NDF}$ : 41579.5/49

In: 782.427 $\pm$ 0.103  $\chi^2/\text{NDF}$ : 27479.3/45

Out: 784.276 $\pm$ 0.100  $\chi^2/\text{NDF}$ : 33714.8/50

All: 783.380 $\pm$ 0.072  $\chi^2/\text{NDF}$ : 61360.2/96

asym\_us\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: -439.074 $\pm$ 264.950  $\chi^2/\text{NDF}$ : 27.6/22

Left Out: -509.311 $\pm$ 121.190  $\chi^2/\text{NDF}$ :60.5/23

Right Out: 629.658 $\pm$ 253.944  $\chi^2/\text{NDF}$ : 12.3/26

Left In: 62.768 $\pm$ 122.045  $\chi^2/\text{NDF}$ :28.8/22

Left: -225.283 $\pm$ 85.995  $\chi^2/\text{NDF}$ : 100.4/46

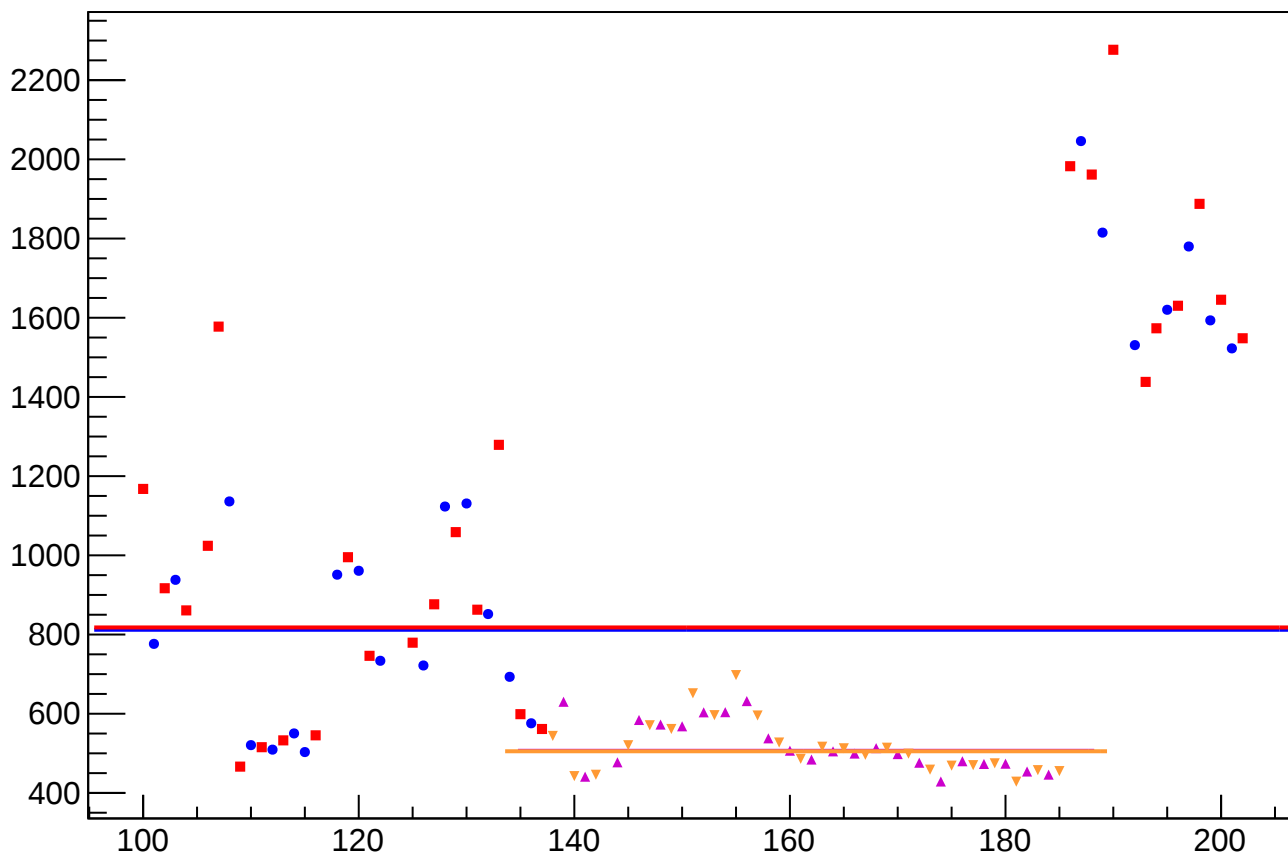
Right: 117.951 $\pm$ 183.333  $\chi^2/\text{NDF}$ : 48.4/49

In: -25.077 $\pm$ 110.850  $\chi^2/\text{NDF}$ :59.4/45

Out: -298.029 $\pm$ 109.374  $\chi^2/\text{NDF}$ :89.2/50

All: -163.383 $\pm$ 77.856  $\chi^2/\text{NDF}$ : 151.6/96

asym\_us\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 812.063+/-0.187  $\chi^2/\text{NDF}$ : 3669410.0/22

Left Out: 505.220+/-0.086  $\chi^2/\text{NDF}$ : 485593.0/23

Right Out: 817.887+/-0.180  $\chi^2/\text{NDF}$ : 5205927.9/26

Left In: 506.380+/-0.086  $\chi^2/\text{NDF}$ : 436294.4/22

Left: 505.796+/-0.061  $\chi^2/\text{NDF}$ : 921978.4/46

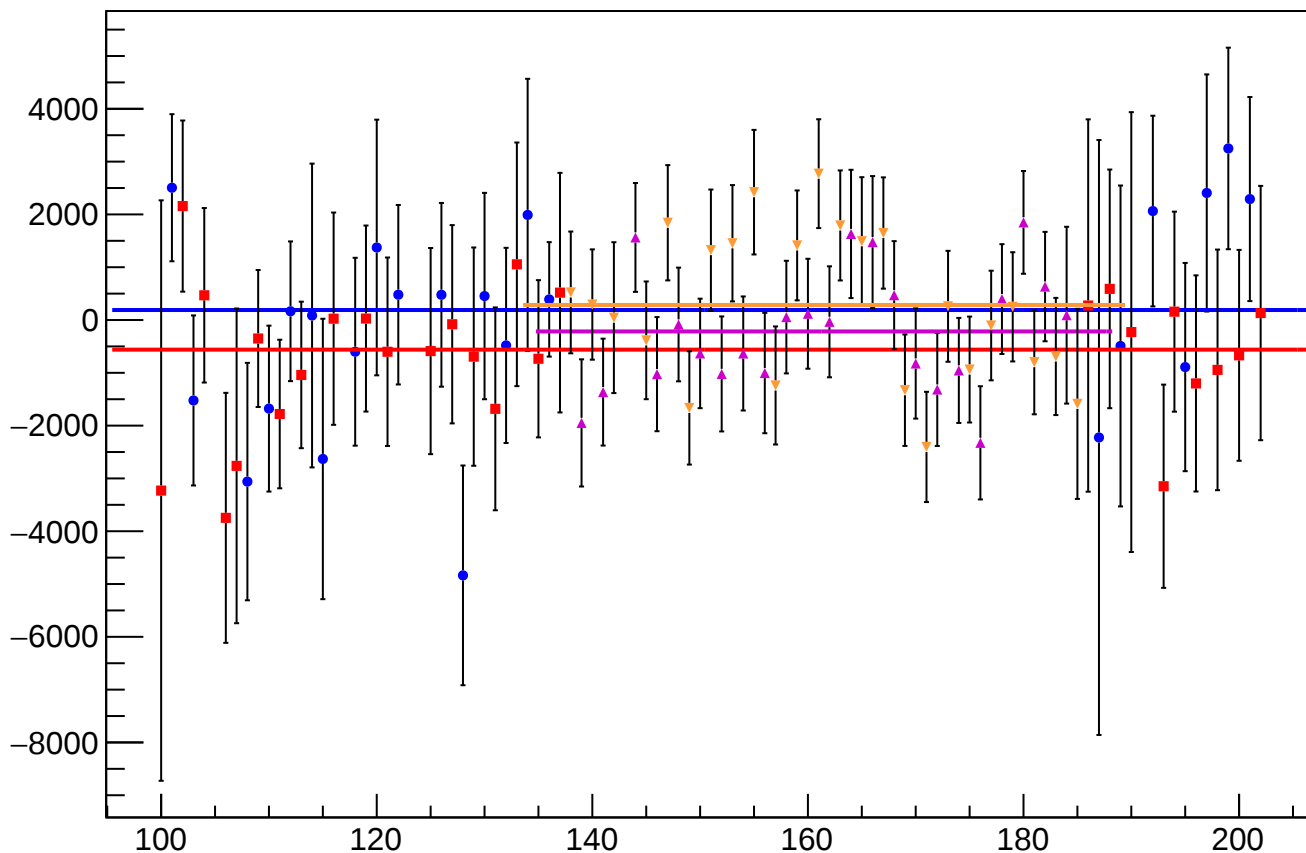
Right: 815.099+/-0.130  $\chi^2/\text{NDF}$ : 8875841.6/49

In: 559.888+/-0.078  $\chi^2/\text{NDF}$ : 6301923.0/45

Out: 563.221+/-0.077  $\chi^2/\text{NDF}$ : 8161026.5/50

All: 561.577+/-0.055  $\chi^2/\text{NDF}$ : 14463865.4/96

# asym\_us\_dd\_mean vs Slug, Sign Corrected



Right In: 189.408 $\pm$ 385.401  $\chi^2/\text{NDF}$ : 21.9/22

Left Out: 285.144 $\pm$ 224.378  $\chi^2/\text{NDF}$ : 38.3/23

Right Out: -561.023 $\pm$ 372.809  $\chi^2/\text{NDF}$ : 10.5/26

Left In: -216.121 $\pm$ 225.600  $\chi^2/\text{NDF}$ : 24.4/22

Left: 35.874 $\pm$ 159.089  $\chi^2/\text{NDF}$ : 65.2/46

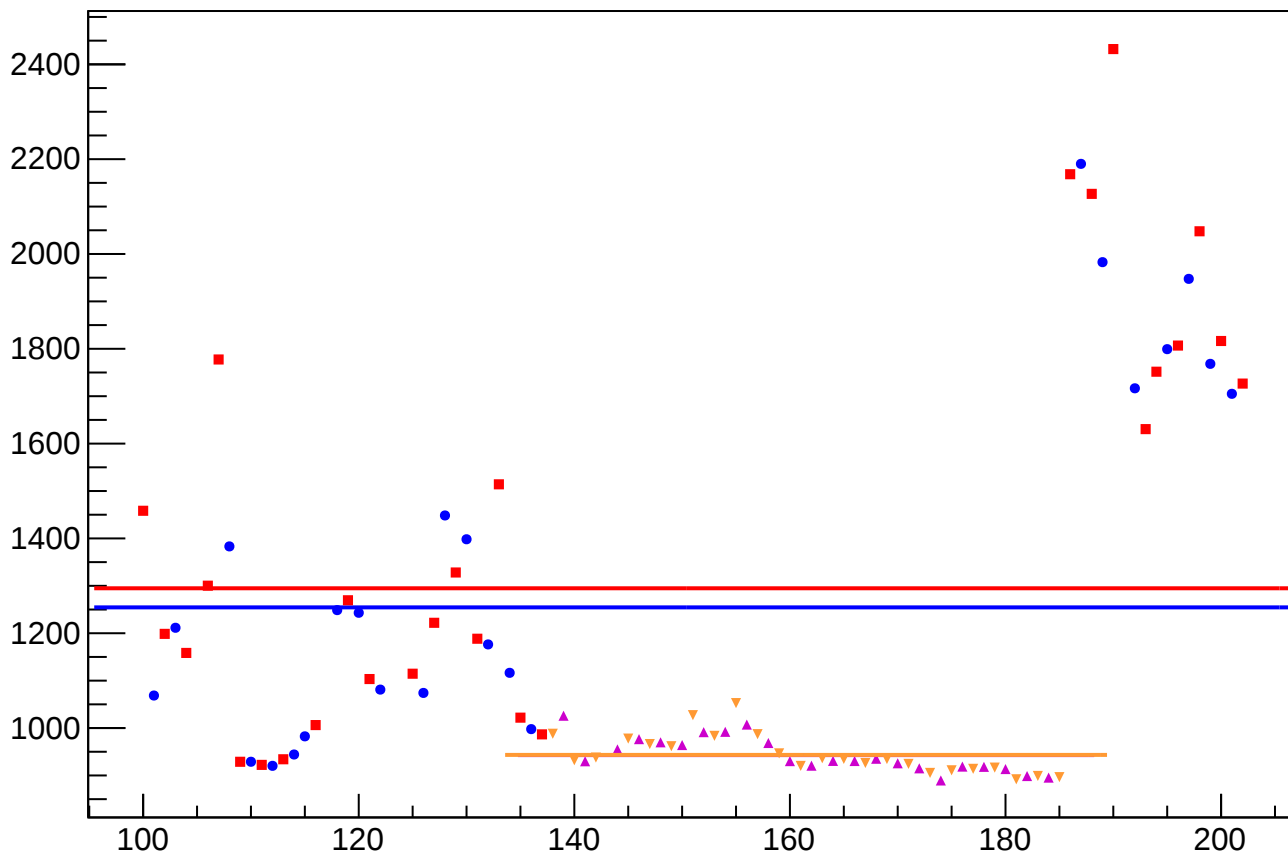
Right: -198.266 $\pm$ 267.957  $\chi^2/\text{NDF}$ : 34.3/49

In: -112.628 $\pm$ 194.696  $\chi^2/\text{NDF}$ : 47.1/45

Out: 60.140 $\pm$ 192.245  $\chi^2/\text{NDF}$ : 52.6/50

All: -25.149 $\pm$ 136.796  $\chi^2/\text{NDF}$ : 100.1/96

# asym\_us\_dd\_rms vs Slug, Sign Corrected



Right In: 1254.551+/-0.273  $\chi^2/\text{NDF}$ : 1391239.7/22

Left Out: 943.351+/-0.159  $\chi^2/\text{NDF}$ : 60365.2/23

Right Out: 1294.829+/-0.264  $\chi^2/\text{NDF}$ : 1987451.6/26

Left In: 942.927+/-0.160  $\chi^2/\text{NDF}$ : 48402.9/22

Left: 943.140+/-0.112  $\chi^2/\text{NDF}$ : 108771.7/46

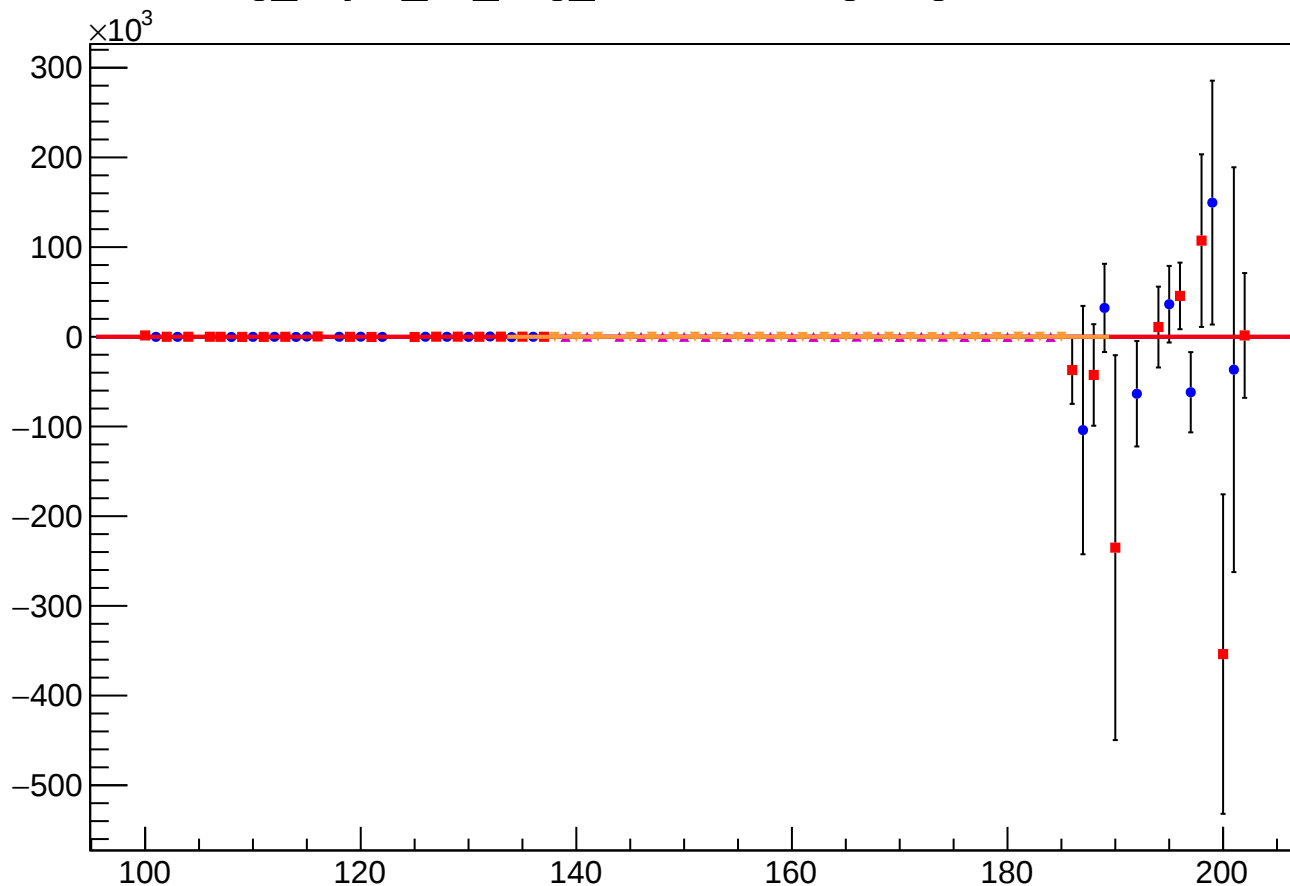
Right: 1275.359+/-0.189  $\chi^2/\text{NDF}$ : 3389976.3/49

In: 1022.455+/-0.138  $\chi^2/\text{NDF}$ : 2413520.2/45

Out: 1036.812+/-0.136  $\chi^2/\text{NDF}$ : 3352795.8/50

All: 1029.725+/-0.097  $\chi^2/\text{NDF}$ : 5771822.9/96

# reg\_asym\_ds\_avg\_mean vs Slug, Sign Corrected



Right In: -15.564+/-30.032  $\chi^2$ /NDF: 22.0/22

Left Out: 3.710+/-21.467  $\chi^2$ /NDF:22.4/23

Right Out: 31.749+/-30.492  $\chi^2$ /NDF: 26.3/25

Left In: -22.931+/-21.584  $\chi^2$ /NDF:22.5/22

Left: -9.538+/-15.221  $\chi^2$ /NDF: 45.7/46

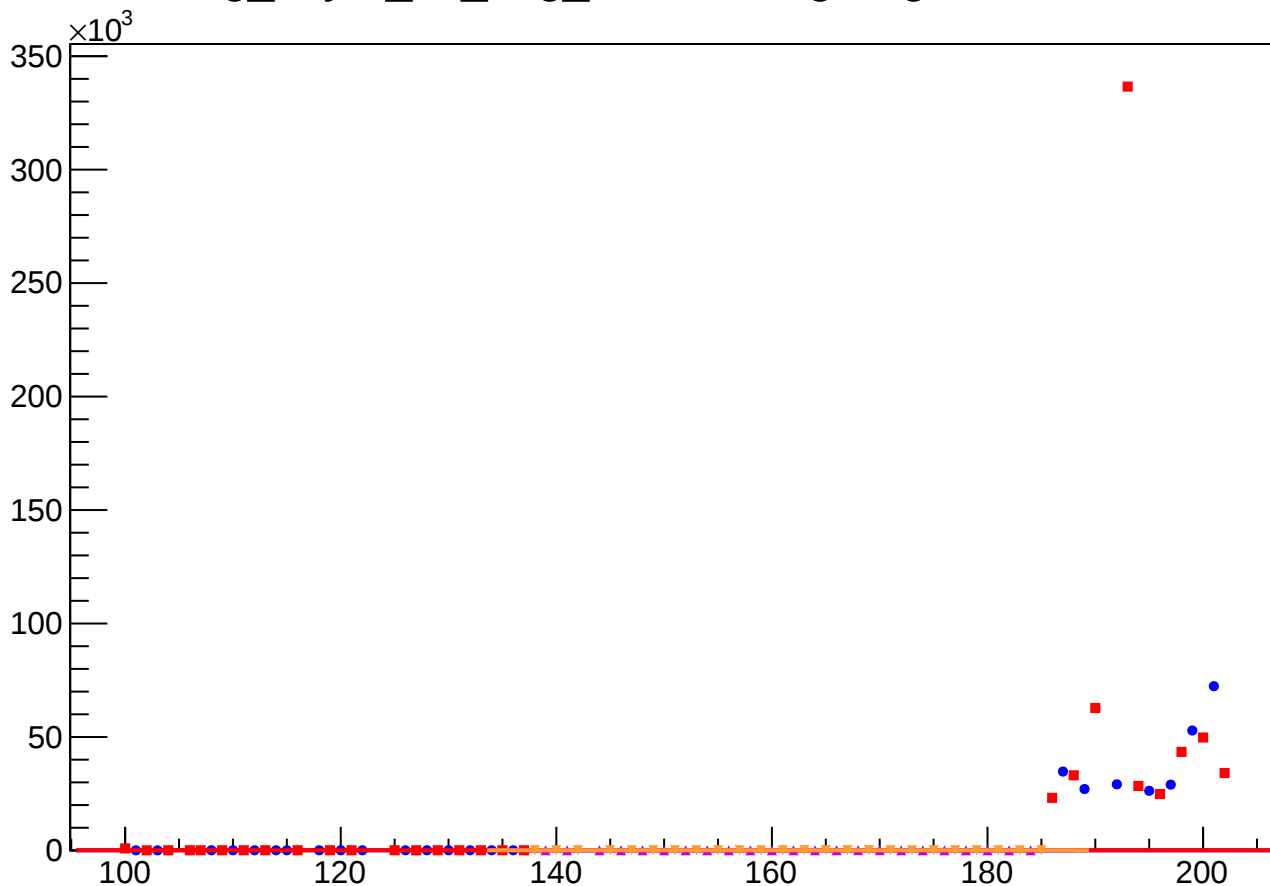
Right: 7.734+/-21.397  $\chi^2$ /NDF: 49.5/48

In: -20.422+/-17.527  $\chi^2$ /NDF:44.5/45

Out: 13.003+/-17.553  $\chi^2$ /NDF:49.3/49

All: -3.735+/-12.403  $\chi^2$ /NDF: 95.6/95

# reg\_asym\_ds\_avg\_rms vs Slug, Sign Corrected



Right In: 76.103 $\pm$ 0.021  $\chi^2$ /NDF: 3830319.3/22

Left Out: 89.692 $\pm$ 0.015  $\chi^2$ /NDF: 466281.5/23

Right Out: 79.440 $\pm$ 0.022  $\chi^2$ /NDF: 4838928.9/26

Left In: 89.596 $\pm$ 0.015  $\chi^2$ /NDF: 508511.1/22

Left: 89.644 $\pm$ 0.011  $\chi^2$ /NDF: 974812.8/46

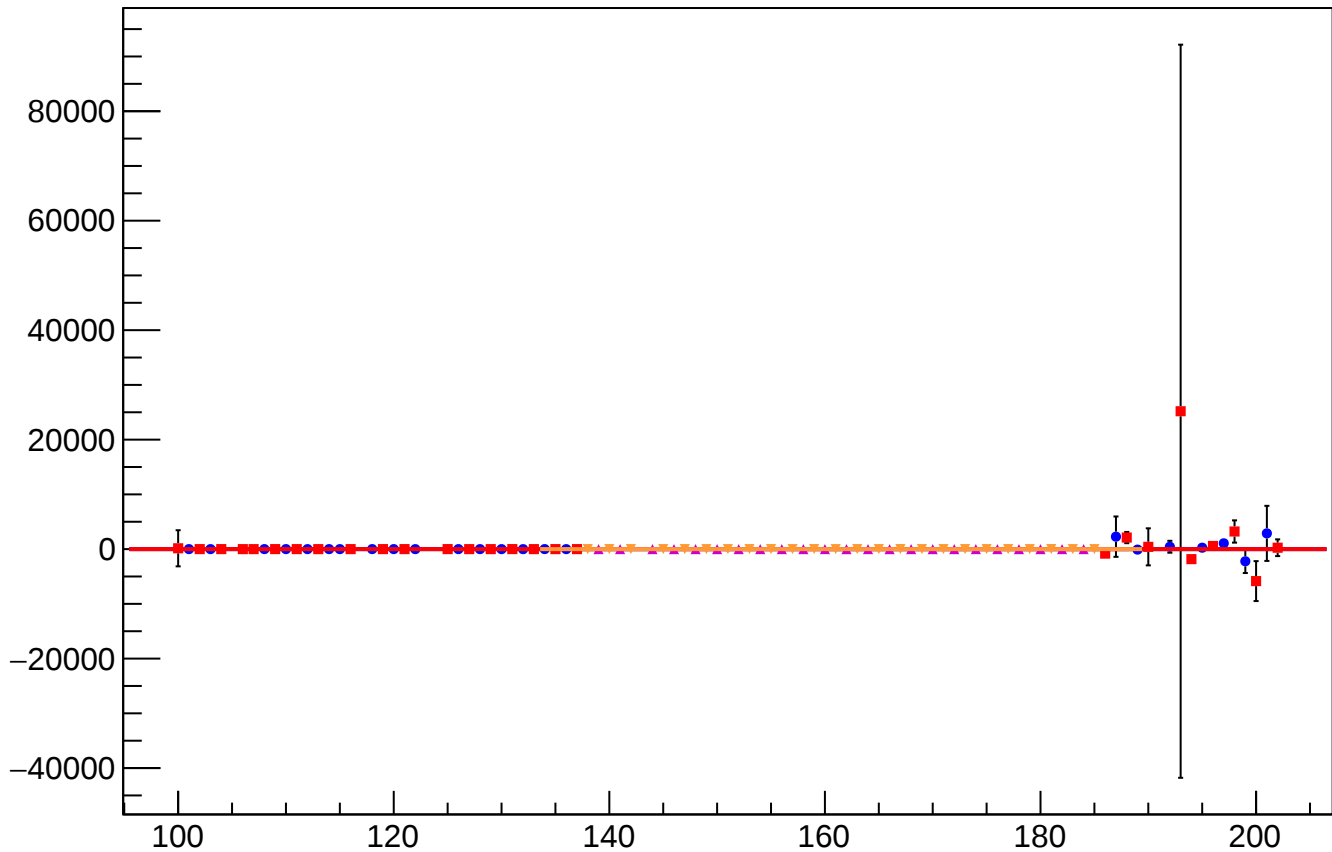
Right: 77.746 $\pm$ 0.015  $\chi^2$ /NDF: 8681404.7/49

In: 85.000 $\pm$ 0.012  $\chi^2$ /NDF: 4605000.1/45

Out: 86.295 $\pm$ 0.012  $\chi^2$ /NDF: 5456375.9/50

All: 85.646 $\pm$ 0.009  $\chi^2$ /NDF: 10066822.7/96

asym\_ds\_avg\_correction\_mean vs Slug, Sign Corrected



Right In:  $-0.289 \pm 0.502$   $\chi^2/\text{NDF}$ : 24.3/22

Left Out:  $0.126 \pm 0.377$   $\chi^2/\text{NDF}$ : 21.3/23

Right Out:  $0.038 \pm 0.525$   $\chi^2/\text{NDF}$ : 25.4/26

Left In:  $-0.519 \pm 0.387$   $\chi^2/\text{NDF}$ : 26.3/22

Left:  $-0.188 \pm 0.270$   $\chi^2/\text{NDF}$ : 49.1/46

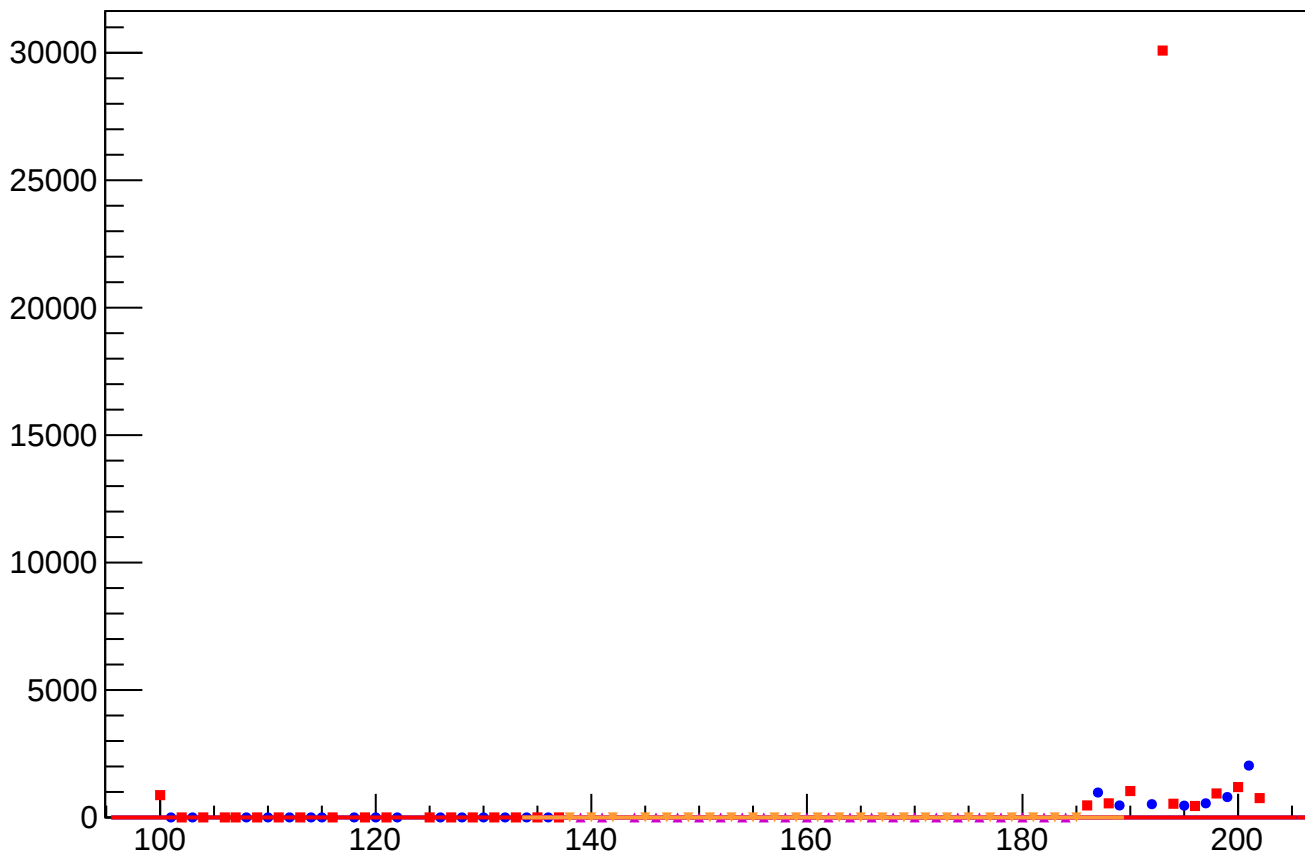
Right:  $-0.133 \pm 0.363$   $\chi^2/\text{NDF}$ : 49.9/49

In:  $-0.433 \pm 0.306$   $\chi^2/\text{NDF}$ : 50.8/45

Out:  $0.096 \pm 0.306$   $\chi^2/\text{NDF}$ : 46.7/50

All:  $-0.168 \pm 0.217$   $\chi^2/\text{NDF}$ : 99.0/96

asym\_ds\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 1.153+/-0.000  $\chi^2/\text{NDF}$ : 3611770.1/22

Left Out: 1.408+/-0.000  $\chi^2/\text{NDF}$ : 987553.0/23

Right Out: 1.260+/-0.000  $\chi^2/\text{NDF}$ : 4995704.3/26

Left In: 1.453+/-0.000  $\chi^2/\text{NDF}$ : 995852.2/22

Left: 1.430+/-0.000  $\chi^2/\text{NDF}$ : 1997169.8/46

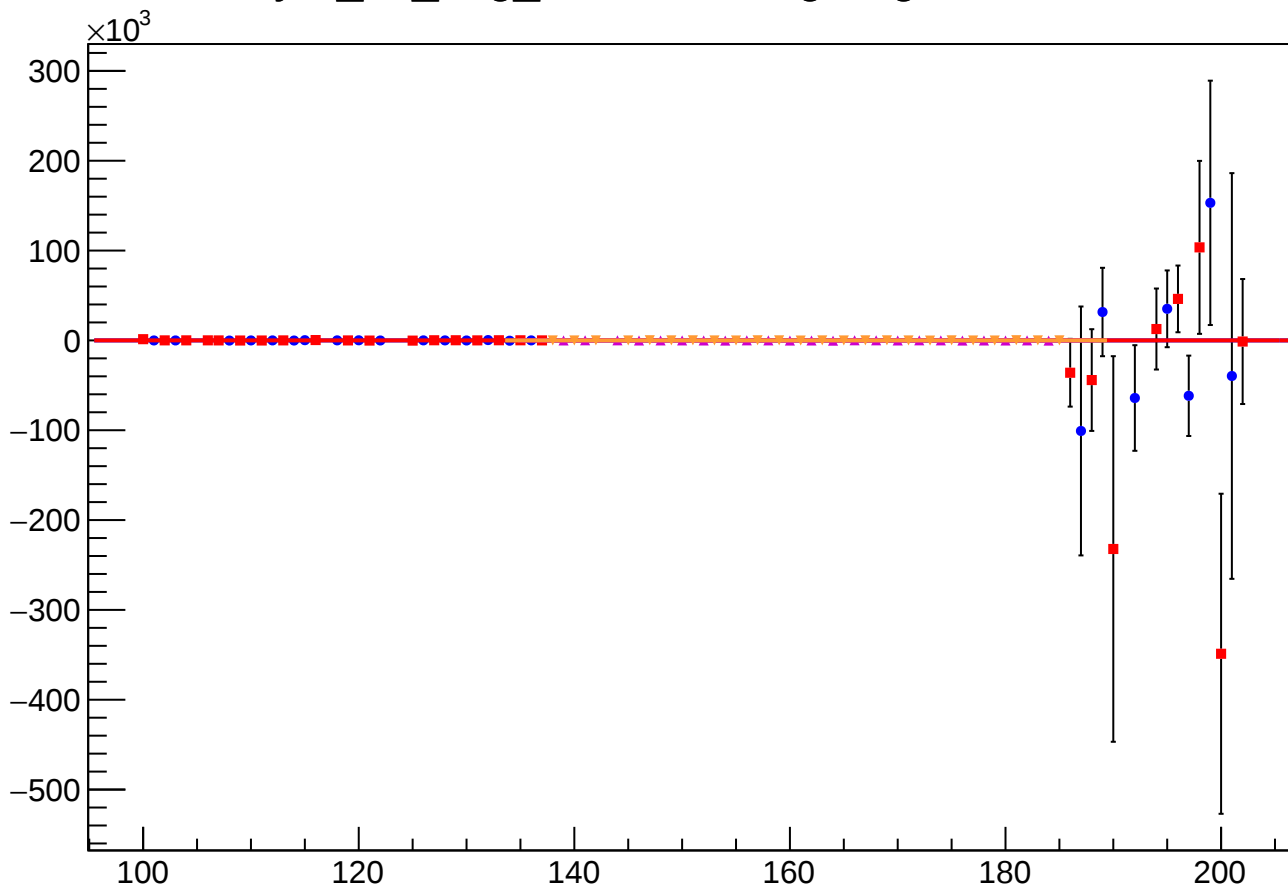
Right: 1.204+/-0.000  $\chi^2/\text{NDF}$ : 8651086.2/49

In: 1.341+/-0.000  $\chi^2/\text{NDF}$ : 5057356.5/45

Out: 1.358+/-0.000  $\chi^2/\text{NDF}$ : 6088655.6/50

All: 1.350+/-0.000  $\chi^2/\text{NDF}$ : 11149016.8/96

# asym\_ds\_avg\_mean vs Slug, Sign Corrected



Right In:  $-14.501 \pm 30.040$   $\chi^2/\text{NDF}: 22.2/22$

Left Out:  $3.497 \pm 21.474$   $\chi^2/\text{NDF}: 22.1/23$

Right Out:  $32.029 \pm 30.500$   $\chi^2/\text{NDF}: 26.1/25$

Left In:  $-22.446 \pm 21.591$   $\chi^2/\text{NDF}: 22.3/22$

Left:  $-9.404 \pm 15.226$   $\chi^2/\text{NDF}: 45.2/46$

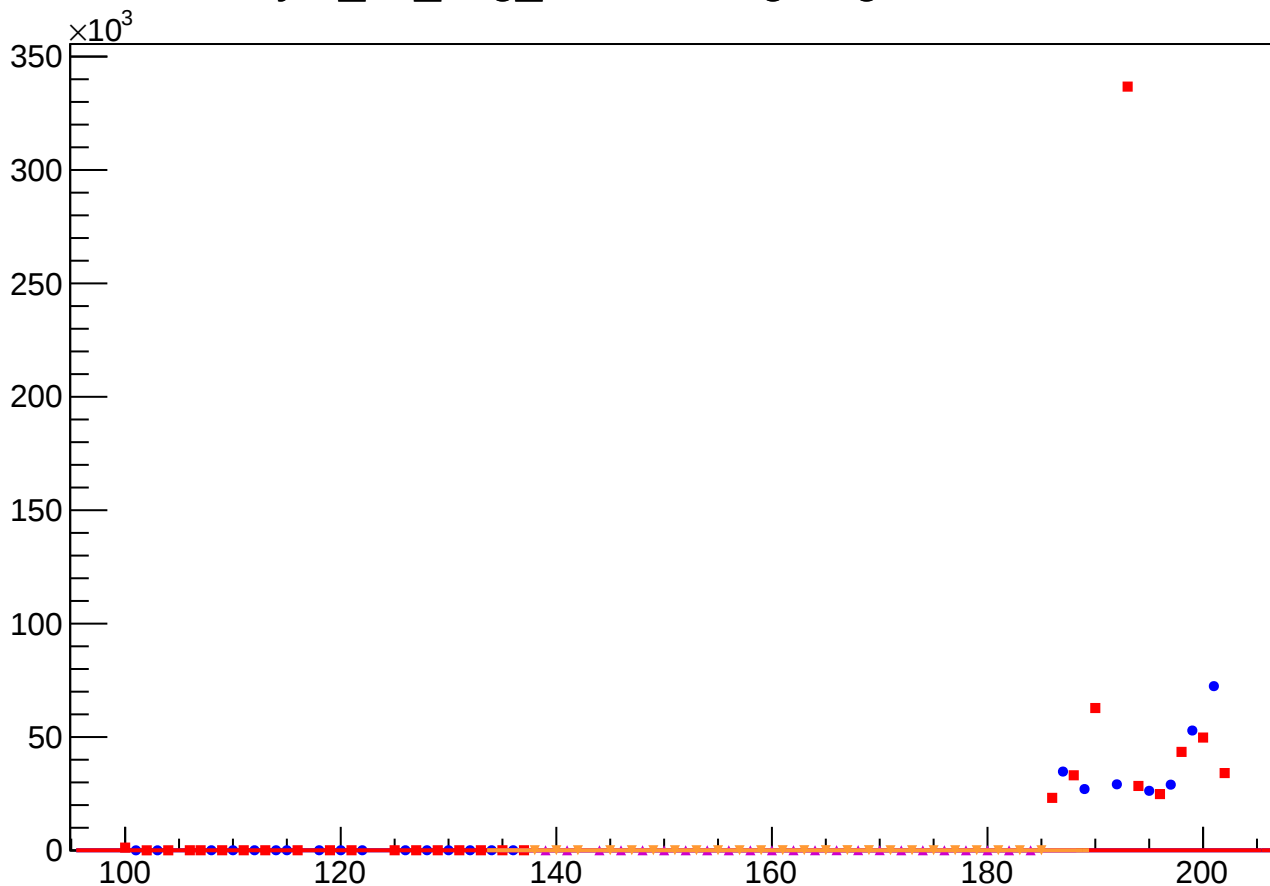
Right:  $8.410 \pm 21.402$   $\chi^2/\text{NDF}: 49.5/48$

In:  $-19.739 \pm 17.532$   $\chi^2/\text{NDF}: 44.6/45$

Out:  $12.953 \pm 17.559$   $\chi^2/\text{NDF}: 48.8/49$

All:  $-3.418 \pm 12.407$   $\chi^2/\text{NDF}: 95.1/95$

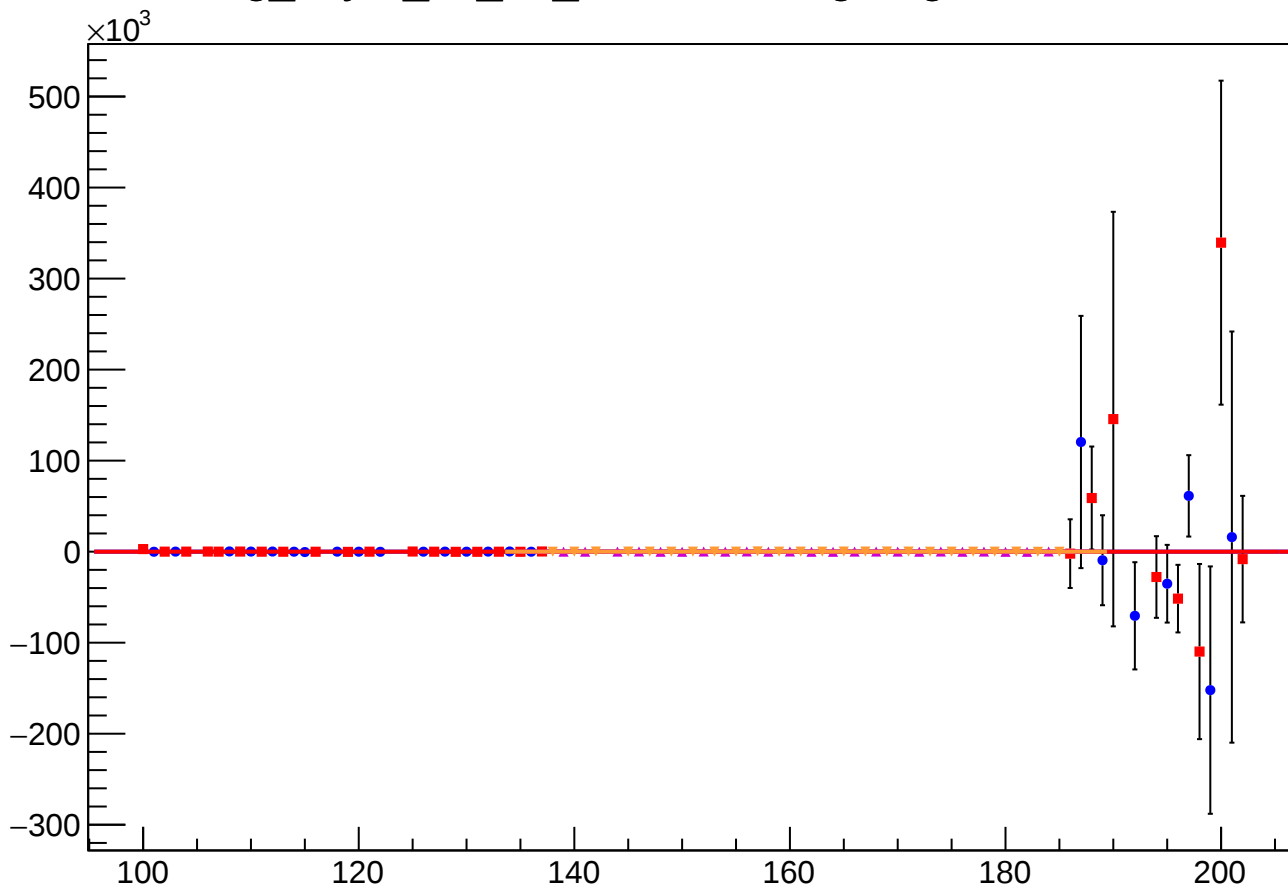
# asym\_ds\_avg\_rms vs Slug, Sign Corrected



Right In: 76.123+/-0.021  $\chi^2/\text{NDF}$ : 3830430.8/22  
 Left Out: 89.719+/-0.015  $\chi^2/\text{NDF}$ : 467023.5/23  
 Right Out: 79.443+/-0.022  $\chi^2/\text{NDF}$ : 4845538.0/26  
 Left In: 89.622+/-0.015  $\chi^2/\text{NDF}$ : 509391.8/22

Left: 89.671+/-0.011  $\chi^2/\text{NDF}$ : 976435.5/46  
 Right: 77.758+/-0.015  $\chi^2/\text{NDF}$ : 8687999.4/49  
 In: 85.024+/-0.012  $\chi^2/\text{NDF}$ : 4606114.5/45  
 Out: 86.313+/-0.012  $\chi^2/\text{NDF}$ : 5464329.2/50  
 All: 85.668+/-0.009  $\chi^2/\text{NDF}$ : 10075844.3/96

# reg\_asym\_ds\_dd\_mean vs Slug, Sign Corrected



Right In:  $8.100 \pm 30.012$   $\chi^2/\text{NDF}$ : 20.1/22

Left Out:  $15.274 \pm 21.472$   $\chi^2/\text{NDF}$ : 17.2/23

Right Out:  $-25.806 \pm 30.473$   $\chi^2/\text{NDF}$ : 21.6/25

Left In:  $43.424 \pm 21.593$   $\chi^2/\text{NDF}$ : 31.4/22

Left:  $29.270 \pm 15.226$   $\chi^2/\text{NDF}$ : 49.5/46

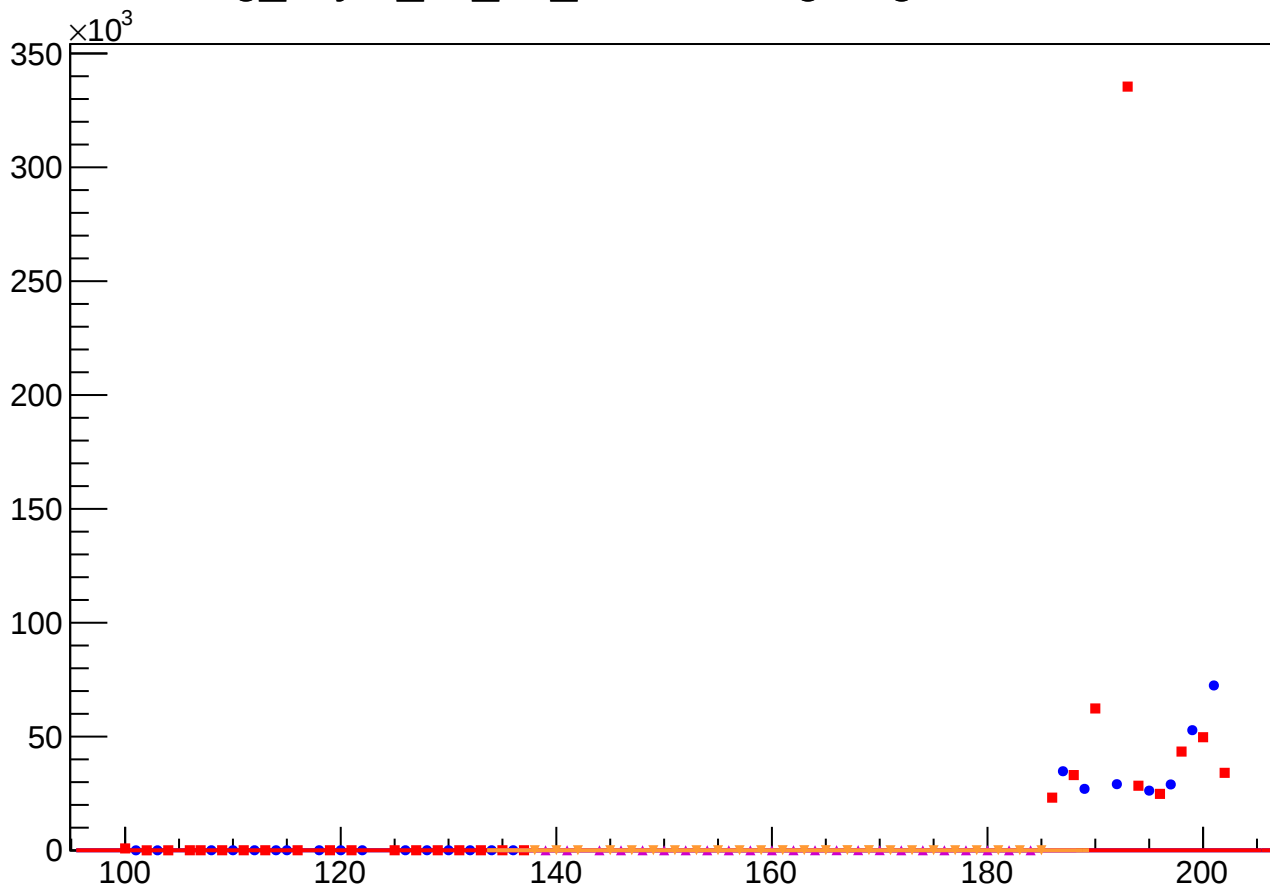
Right:  $-8.595 \pm 21.383$   $\chi^2/\text{NDF}$ : 42.2/48

In:  $31.375 \pm 17.528$   $\chi^2/\text{NDF}$ : 52.4/45

Out:  $1.644 \pm 17.552$   $\chi^2/\text{NDF}$ : 39.9/49

All:  $16.531 \pm 12.403$   $\chi^2/\text{NDF}$ : 93.8/95

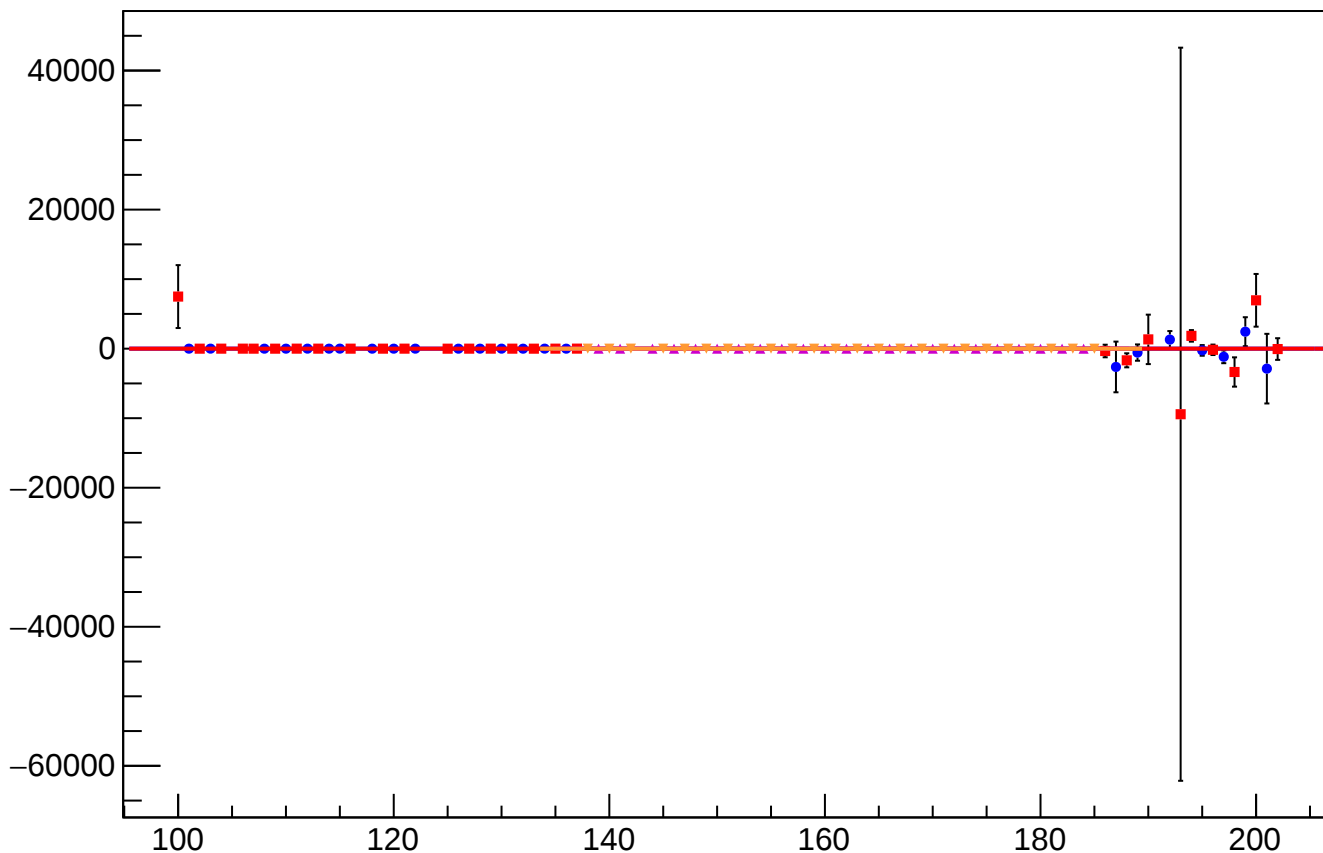
# reg\_asym\_ds\_dd\_rms vs Slug, Sign Corrected



Right In: 76.054 $\pm$ 0.021  $\chi^2$ /NDF: 3829463.0/22  
 Left Out: 89.712 $\pm$ 0.015  $\chi^2$ /NDF:465096.2/23  
 Right Out: 79.392 $\pm$ 0.022  $\chi^2$ /NDF: 4838226.6/26  
 Left In: 89.628 $\pm$ 0.015  $\chi^2$ /NDF:511042.3/22

Left: 89.670 $\pm$ 0.011  $\chi^2$ /NDF: 976153.9/46  
 Right: 77.697 $\pm$ 0.015  $\chi^2$ /NDF: 8679867.1/49  
 In: 84.998 $\pm$ 0.012  $\chi^2$ /NDF:4610059.9/45  
 Out: 86.288 $\pm$ 0.012  $\chi^2$ /NDF:5456617.0/50  
 All: 85.642 $\pm$ 0.009  $\chi^2$ /NDF: 10072085.7/96

asym\_ds\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: 0.892 $\pm$ 0.531  $\chi^2$ /NDF: 17.2/22

Left Out: -0.516 $\pm$ 0.391  $\chi^2$ /NDF:20.7/23

Right Out: 0.348 $\pm$ 0.549  $\chi^2$ /NDF: 27.4/26

Left In: -0.072 $\pm$ 0.390  $\chi^2$ /NDF:20.4/22

Left: -0.293 $\pm$ 0.276  $\chi^2$ /NDF: 41.7/46

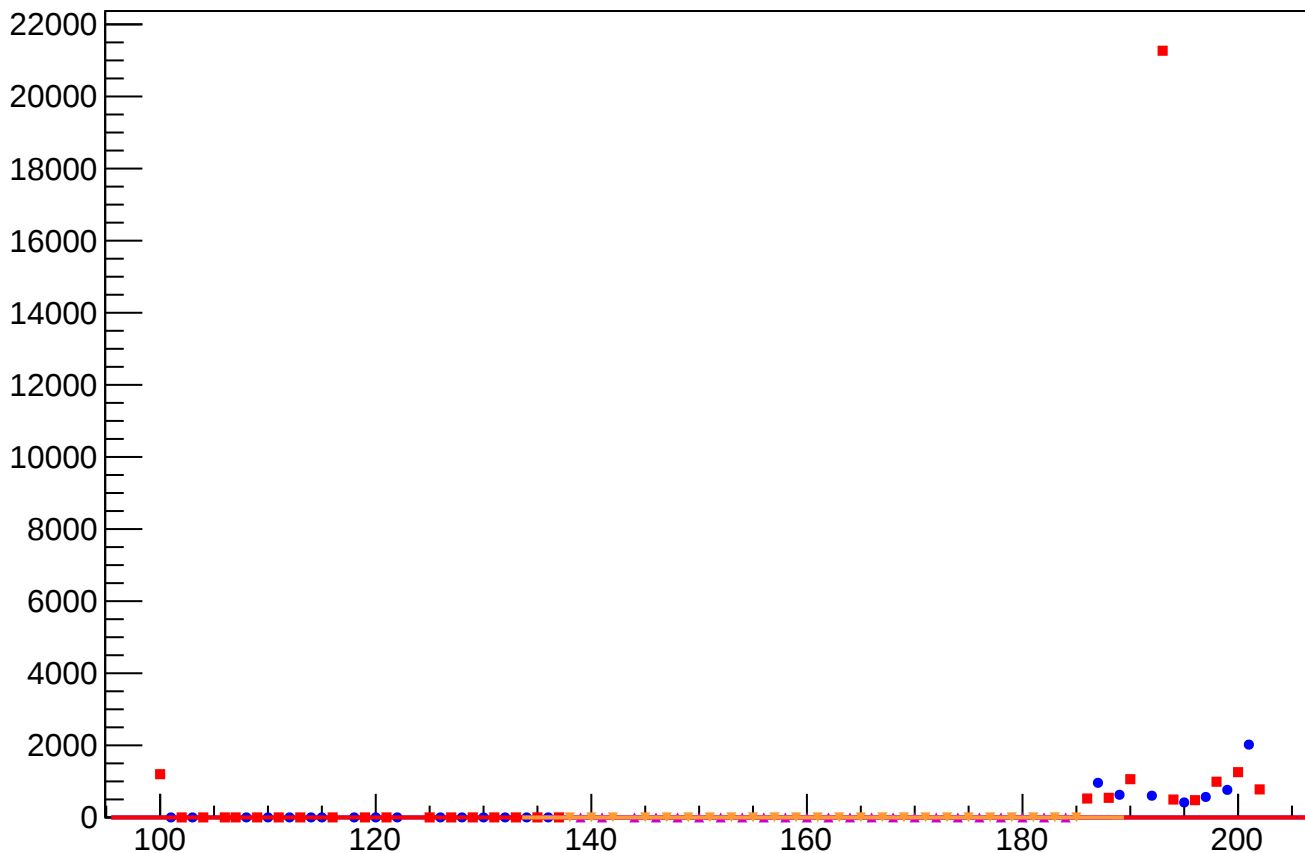
Right: 0.628 $\pm$ 0.382  $\chi^2$ /NDF: 45.1/49

In: 0.266 $\pm$ 0.315  $\chi^2$ /NDF:39.7/45

Out: -0.225 $\pm$ 0.318  $\chi^2$ /NDF:49.7/50

All: 0.023 $\pm$ 0.224  $\chi^2$ /NDF: 90.6/96

# asym\_ds\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 1.234+/-0.000  $\chi^2/\text{NDF}$ : 3752962.5/22

Left Out: 1.470+/-0.000  $\chi^2/\text{NDF}$ :1154842.2/23

Right Out: 1.316+/-0.000  $\chi^2/\text{NDF}$ : 4966930.5/26

Left In: 1.461+/-0.000  $\chi^2/\text{NDF}$ :1048537.6/22

Left: 1.466+/-0.000  $\chi^2/\text{NDF}$ : 2203936.9/46

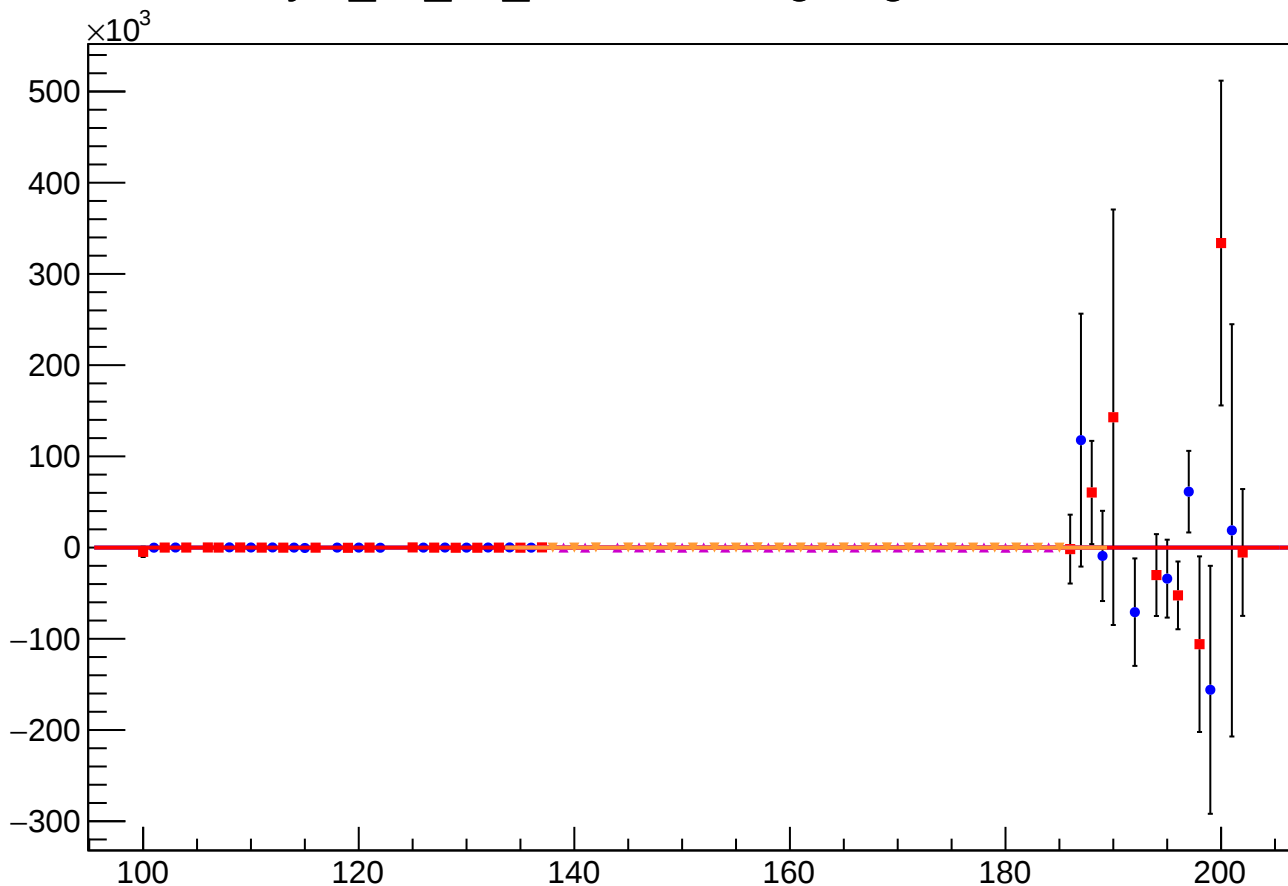
Right: 1.274+/-0.000  $\chi^2/\text{NDF}$ : 8743245.9/49

In: 1.381+/-0.000  $\chi^2/\text{NDF}$ :5039149.0/45

Out: 1.418+/-0.000  $\chi^2/\text{NDF}$ :6226165.6/50

All: 1.400+/-0.000  $\chi^2/\text{NDF}$ : 11279026.0/96

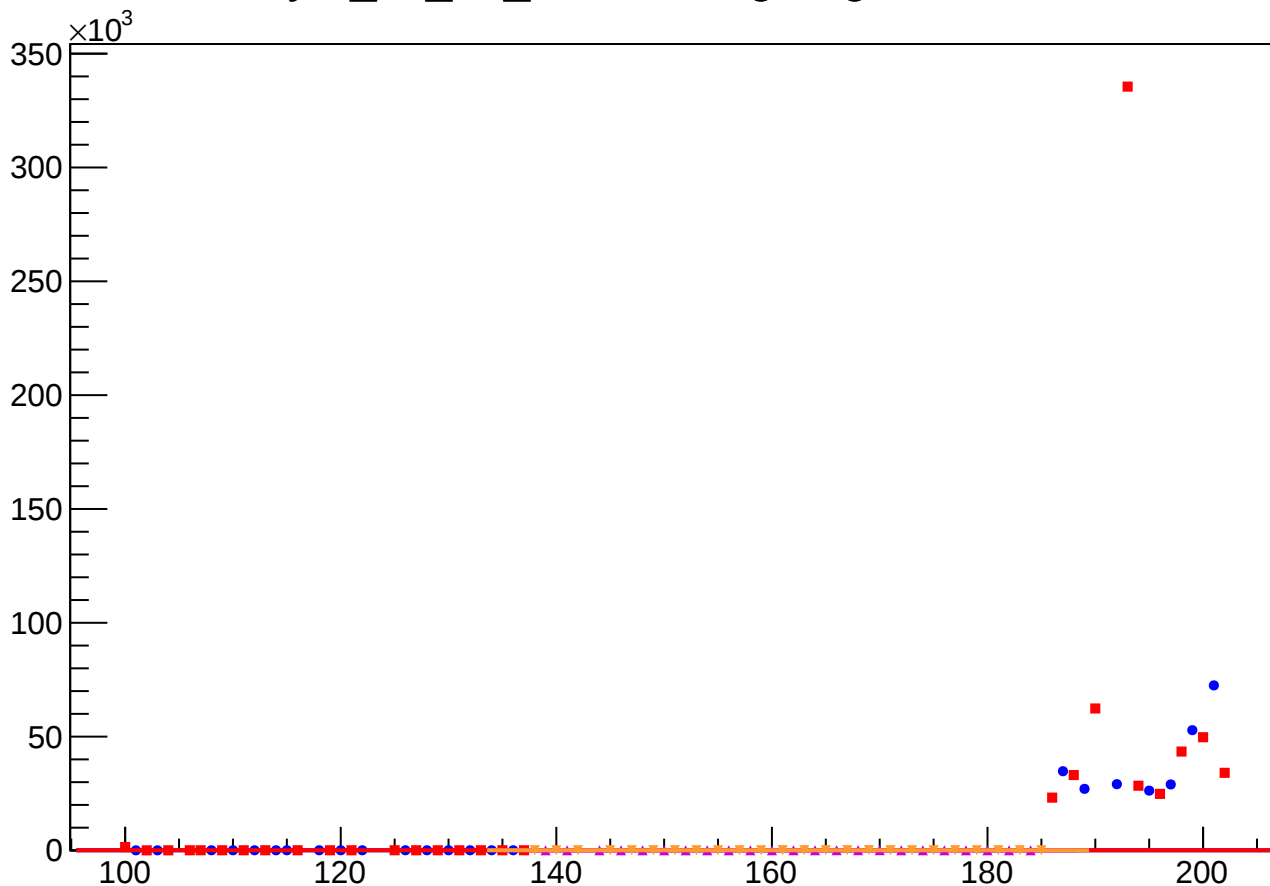
# asym\_ds\_dd\_mean vs Slug, Sign Corrected



Right In:  $7.393 \pm 30.020$   $\chi^2/\text{NDF}: 19.9/22$   
 Left Out:  $15.770 \pm 21.479$   $\chi^2/\text{NDF}: 17.1/23$   
 Right Out:  $-26.416 \pm 30.482$   $\chi^2/\text{NDF}: 21.7/25$   
 Left In:  $43.905 \pm 21.600$   $\chi^2/\text{NDF}: 31.1/22$

Left:  $29.758 \pm 15.231$   $\chi^2/\text{NDF}: 49.0/46$   
 Right:  $-9.253 \pm 21.389$   $\chi^2/\text{NDF}: 42.3/48$   
 In:  $31.450 \pm 17.533$   $\chi^2/\text{NDF}: 52.0/45$   
 Out:  $1.773 \pm 17.558$   $\chi^2/\text{NDF}: 40.0/49$   
 All:  $16.633 \pm 12.407$   $\chi^2/\text{NDF}: 93.5/95$

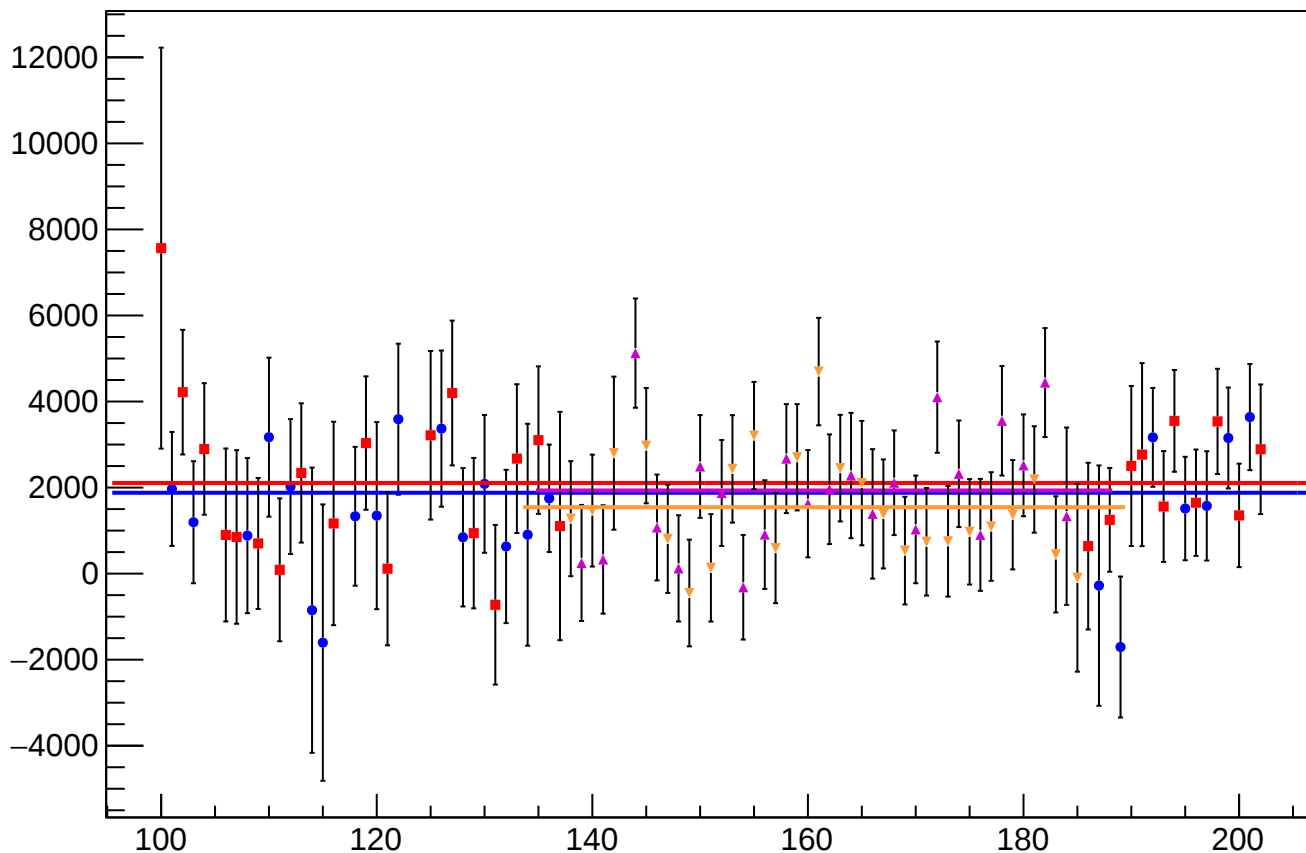
# asym\_ds\_dd\_rms vs Slug, Sign Corrected



Right In: 76.075 $\pm$ 0.021  $\chi^2$ /NDF: 3829610.4/22  
 Left Out: 89.740 $\pm$ 0.015  $\chi^2$ /NDF: 465842.6/23  
 Right Out: 79.388 $\pm$ 0.022  $\chi^2$ /NDF: 4847555.9/26  
 Left In: 89.655 $\pm$ 0.015  $\chi^2$ /NDF: 511848.9/22

Left: 89.697 $\pm$ 0.011  $\chi^2$ /NDF: 977707.1/46  
 Right: 77.706 $\pm$ 0.015  $\chi^2$ /NDF: 8689163.4/49  
 In: 85.022 $\pm$ 0.012  $\chi^2$ /NDF: 4611109.8/45  
 Out: 86.305 $\pm$ 0.012  $\chi^2$ /NDF: 5467519.4/50  
 All: 85.663 $\pm$ 0.009  $\chi^2$ /NDF: 10083974.7/96

# reg\_asym\_usl\_mean vs Slug, Sign Corrected



Right In: 1879.580 $\pm$ 327.464  $\chi^2/\text{NDF}$ : 15.8/22

Left Out: 1544.102 $\pm$ 266.270  $\chi^2/\text{NDF}$ : 20.0/23

Right Out: 2107.137 $\pm$ 304.085  $\chi^2/\text{NDF}$ : 18.9/27

Left In: 1933.000 $\pm$ 268.006  $\chi^2/\text{NDF}$ : 27.0/22

Left: 1737.287 $\pm$ 188.892  $\chi^2/\text{NDF}$ : 48.0/46

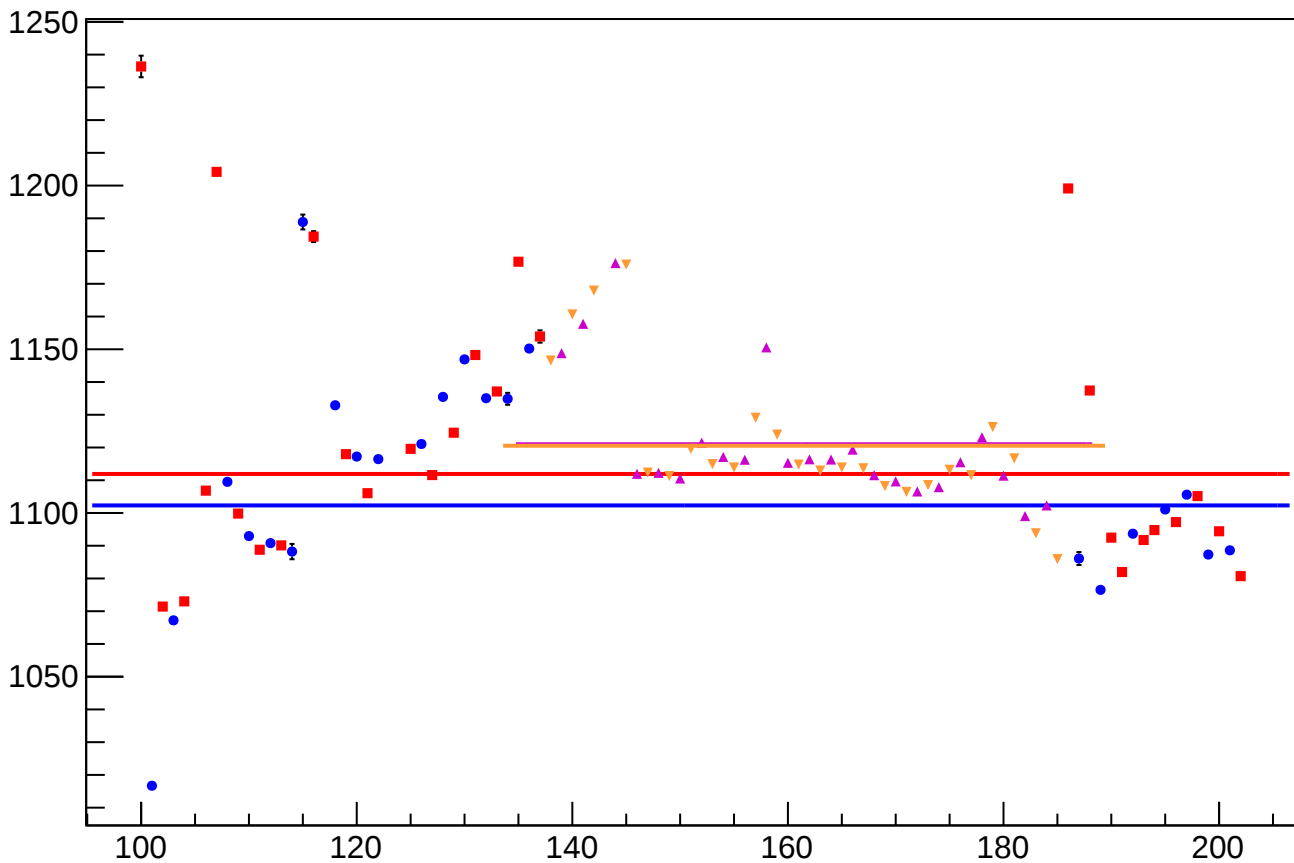
Right: 2001.770 $\pm$ 222.828  $\chi^2/\text{NDF}$ : 35.0/50

In: 1911.571 $\pm$ 207.400  $\chi^2/\text{NDF}$ : 42.8/45

Out: 1788.453 $\pm$ 200.325  $\chi^2/\text{NDF}$ : 40.9/51

All: 1847.876 $\pm$ 144.087  $\chi^2/\text{NDF}$ : 83.8/97

# reg\_asym\_usl\_rms vs Slug, Sign Corrected



Right In: 1102.311 $\pm$ 0.232  $\chi^2$ /NDF: 20018.7/22

Left Out: 1120.543 $\pm$ 0.188  $\chi^2$ /NDF:10252.7/23

Right Out: 1111.918 $\pm$ 0.215  $\chi^2$ /NDF: 24078.3/27

Left In: 1120.991 $\pm$ 0.190  $\chi^2$ /NDF:9641.8/22

Left: 1120.765 $\pm$ 0.134  $\chi^2$ /NDF: 19897.3/46

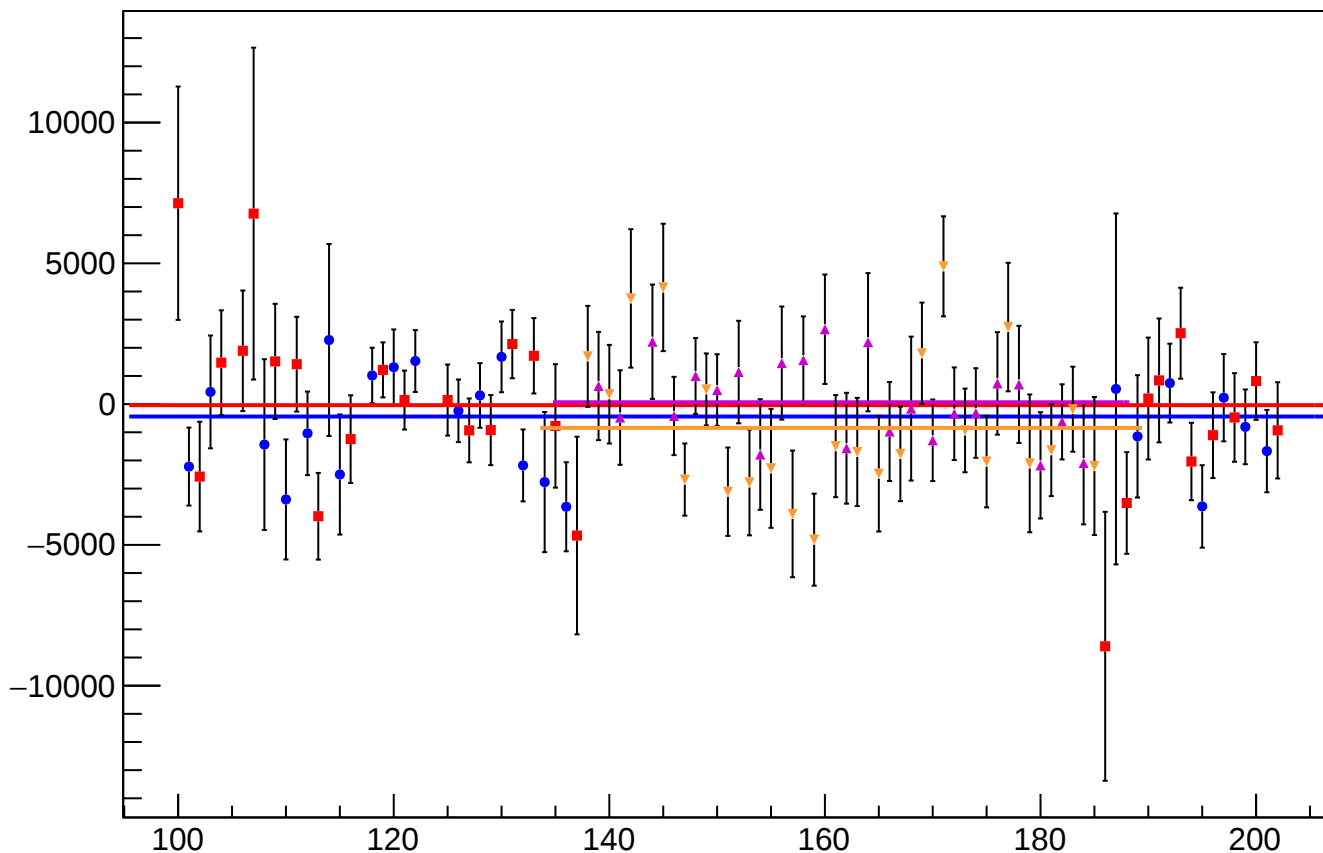
Right: 1107.470 $\pm$ 0.158  $\chi^2$ /NDF: 45021.3/50

In: 1113.498 $\pm$ 0.147  $\chi^2$ /NDF:33557.8/45

Out: 1116.800 $\pm$ 0.142  $\chi^2$ /NDF:35241.7/51

All: 1115.206 $\pm$ 0.102  $\chi^2$ /NDF: 69061.8/97

# asym\_usl\_correction\_mean vs Slug, Sign Corrected



Right In:  $-440.407 \pm 311.315$   $\chi^2/\text{NDF}: 29.4/22$

Left Out:  $-845.009 \pm 361.141$   $\chi^2/\text{NDF}: 43.2/23$

Right Out:  $-37.596 \pm 298.680$   $\chi^2/\text{NDF}: 38.5/27$

Left In:  $65.738 \pm 358.785$   $\chi^2/\text{NDF}: 12.1/22$

Left:  $-386.655 \pm 254.528$   $\chi^2/\text{NDF}: 58.6/46$

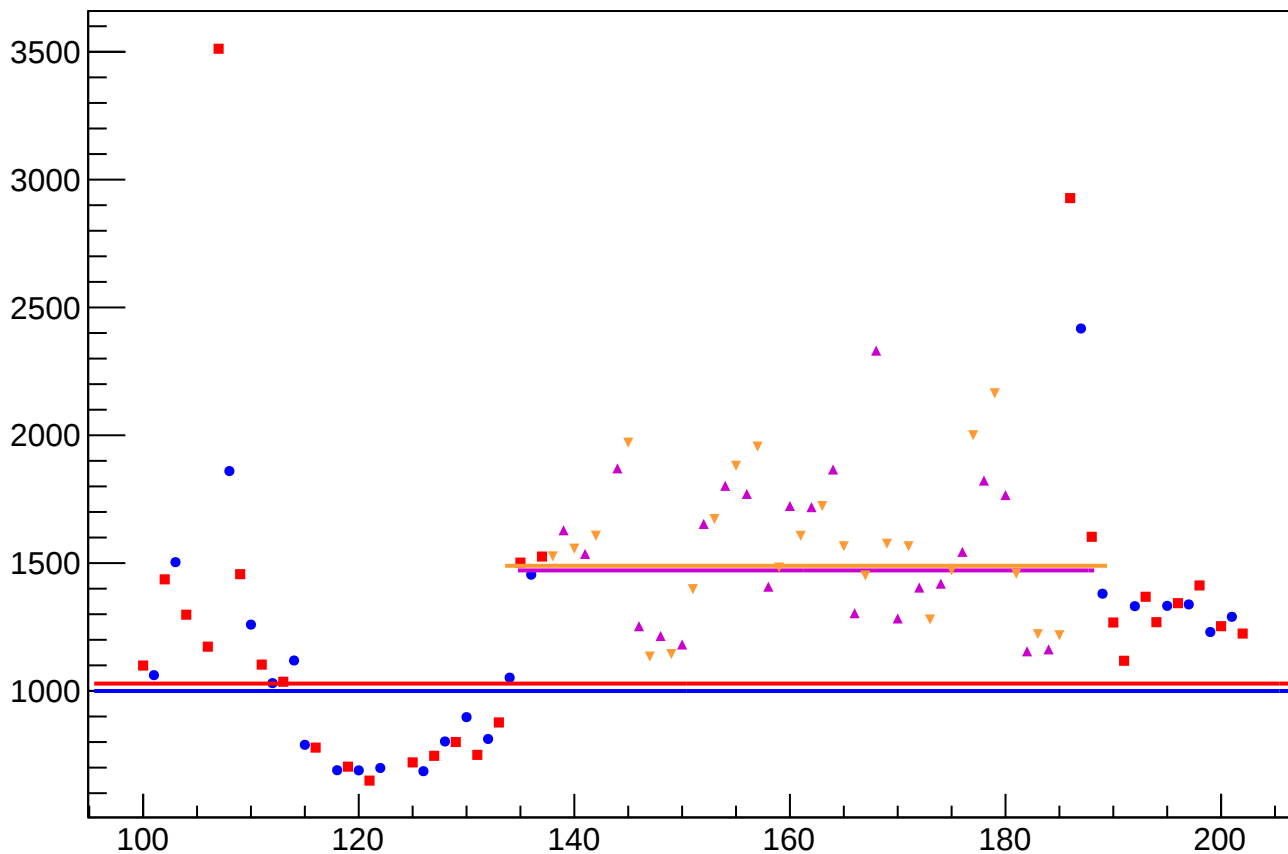
Right:  $-230.662 \pm 215.527$   $\chi^2/\text{NDF}: 68.8/50$

In:  $-223.011 \pm 235.138$   $\chi^2/\text{NDF}: 42.7/45$

Out:  $-365.549 \pm 230.163$   $\chi^2/\text{NDF}: 84.7/51$

All:  $-295.804 \pm 164.480$   $\chi^2/\text{NDF}: 127.6/97$

# asym\_usl\_correction\_rms vs Slug, Sign Corrected



Right In: 999.784+/-0.220  $\chi^2/\text{NDF}$ : 1856403.9/22

Left Out: 1489.507+/-0.255  $\chi^2/\text{NDF}$ : 1009228.3/23

Right Out: 1028.754+/-0.211  $\chi^2/\text{NDF}$ : 2676796.1/27

Left In: 1471.394+/-0.254  $\chi^2/\text{NDF}$ : 1105310.5/22

Left: 1480.391+/-0.180  $\chi^2/\text{NDF}$ : 2117070.9/46

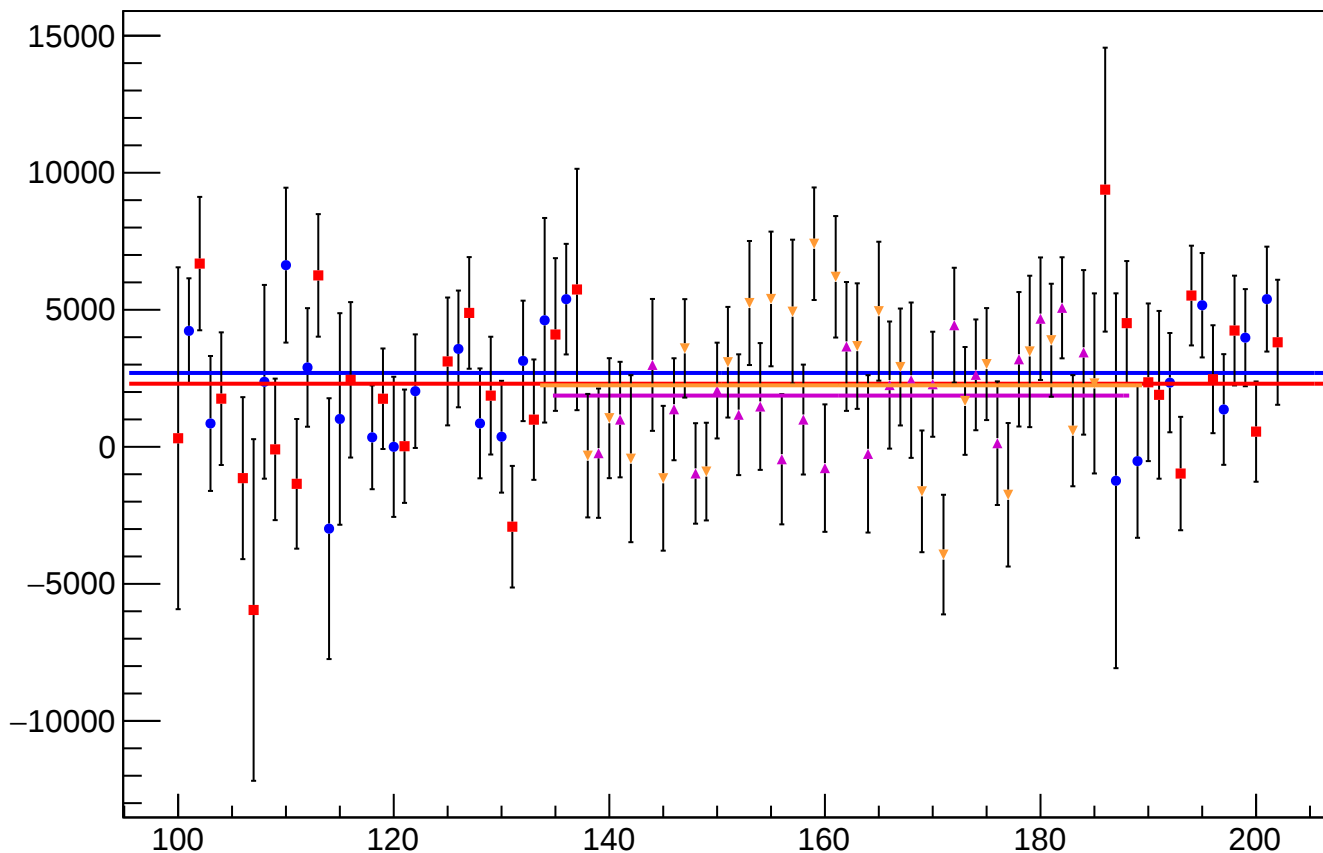
Right: 1014.869+/-0.152  $\chi^2/\text{NDF}$ : 4542218.7/50

In: 1202.346+/-0.166  $\chi^2/\text{NDF}$ : 4933105.6/45

Out: 1215.902+/-0.163  $\chi^2/\text{NDF}$ : 5619190.7/51

All: 1209.269+/-0.116  $\chi^2/\text{NDF}$ : 10555690.9/95

# asym\_usl\_mean vs Slug, Sign Corrected



Right In: 2695.551 $\pm$ 474.987  $\chi^2$ /NDF: 18.2/22

Left Out: 2244.415 $\pm$ 456.474  $\chi^2$ /NDF:38.6/23

Right Out: 2302.969 $\pm$ 450.998  $\chi^2$ /NDF: 33.6/27

Left In: 1869.792 $\pm$ 455.465  $\chi^2$ /NDF:14.9/22

Left: 2056.689 $\pm$ 322.419  $\chi^2$ /NDF: 53.8/46

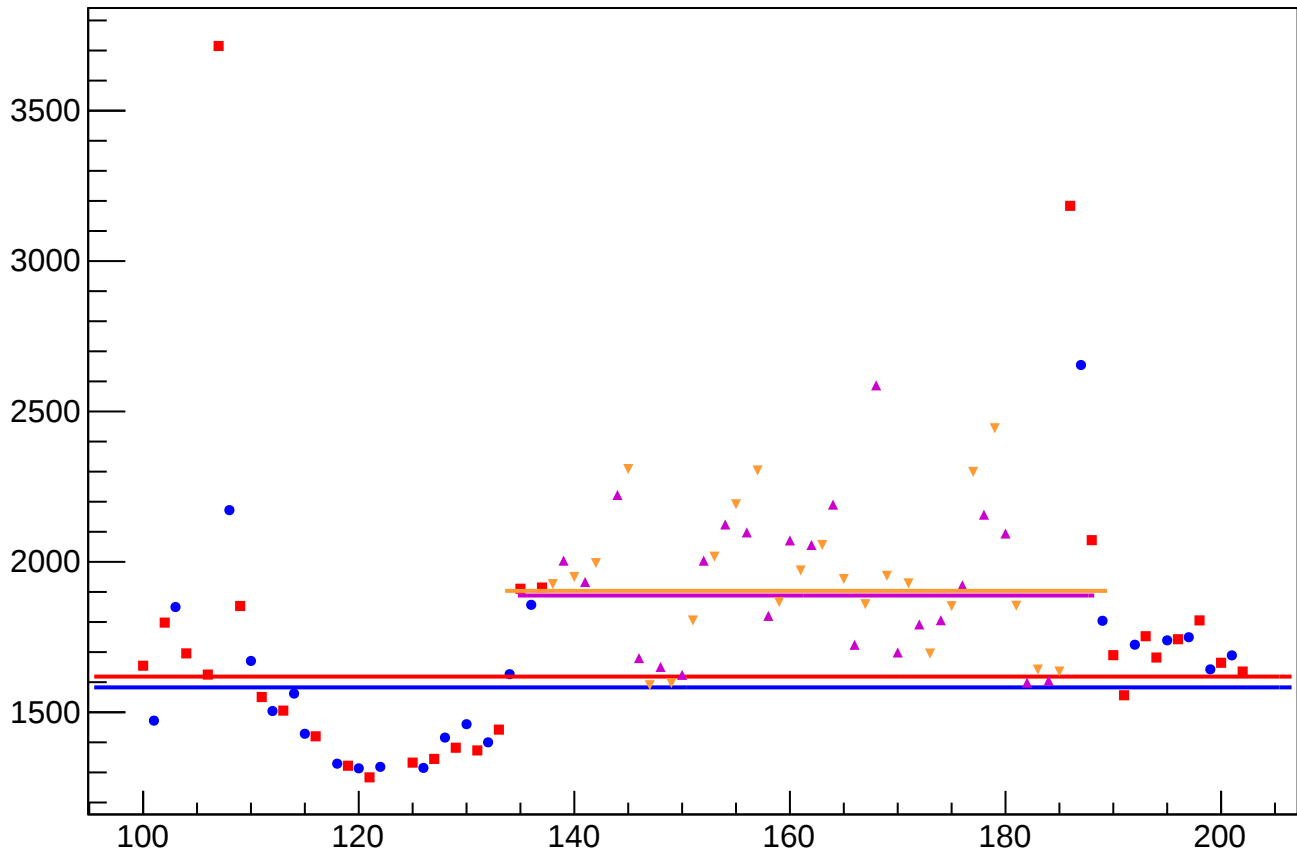
Right: 2489.096 $\pm$ 327.056  $\chi^2$ /NDF: 52.2/50

In: 2265.353 $\pm$ 328.747  $\chi^2$ /NDF:34.7/45

Out: 2274.046 $\pm$ 320.823  $\chi^2$ /NDF:72.2/51

All: 2269.805 $\pm$ 229.606  $\chi^2$ /NDF: 106.9/97

# asym\_usl\_rms vs Slug, Sign Corrected



Right In: 1582.745 $\pm$ 0.336  $\chi^2/NDF$ : 397493.3/22

Left Out: 1903.581 $\pm$ 0.323  $\chi^2/NDF$ : 461788.9/23

Right Out: 1618.577 $\pm$ 0.319  $\chi^2/NDF$ : 838361.4/27

Left In: 1888.121 $\pm$ 0.322  $\chi^2/NDF$ : 504568.6/22

Left: 1895.834 $\pm$ 0.228  $\chi^2/NDF$ : 967507.1/46

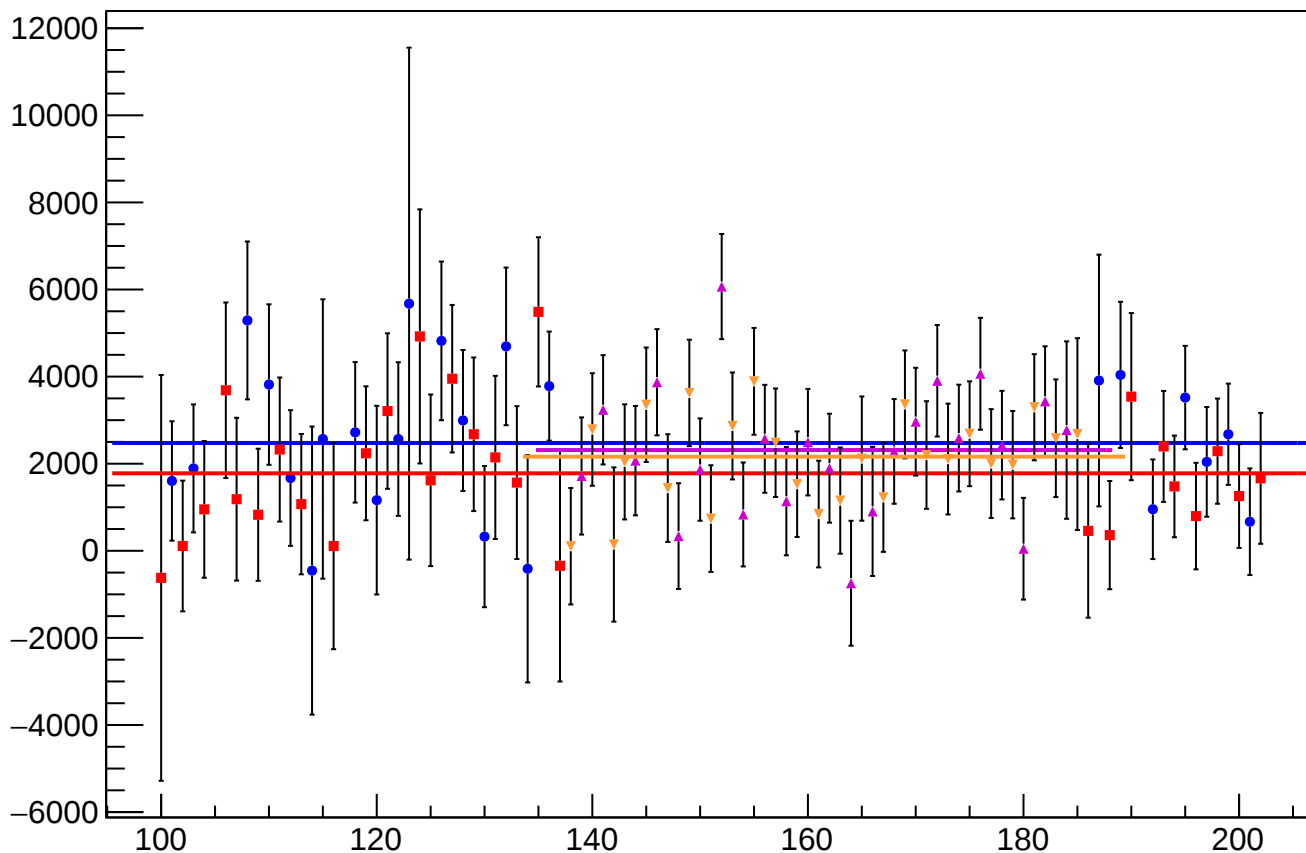
Right: 1601.589 $\pm$ 0.231  $\chi^2/NDF$ : 1241840.3/50

In: 1741.838 $\pm$ 0.232  $\chi^2/NDF$ : 1332738.7/45

Out: 1759.359 $\pm$ 0.227  $\chi^2/NDF$ : 1694677.7/51

All: 1750.812 $\pm$ 0.162  $\chi^2/NDF$ : 3030326.3/97

# reg\_asym\_usr\_mean vs Slug, Sign Corrected



Right In: 2476.498 $\pm$ 328.257  $\chi^2$ /NDF: 18.6/23

Left Out: 2161.427 $\pm$ 257.518  $\chi^2$ /NDF:15.1/24

Right Out: 1779.397 $\pm$ 305.886  $\chi^2$ /NDF: 17.1/27

Left In: 2313.505 $\pm$ 264.429  $\chi^2$ /NDF:31.3/22

Left: 2235.453 $\pm$ 184.488  $\chi^2$ /NDF: 46.5/47

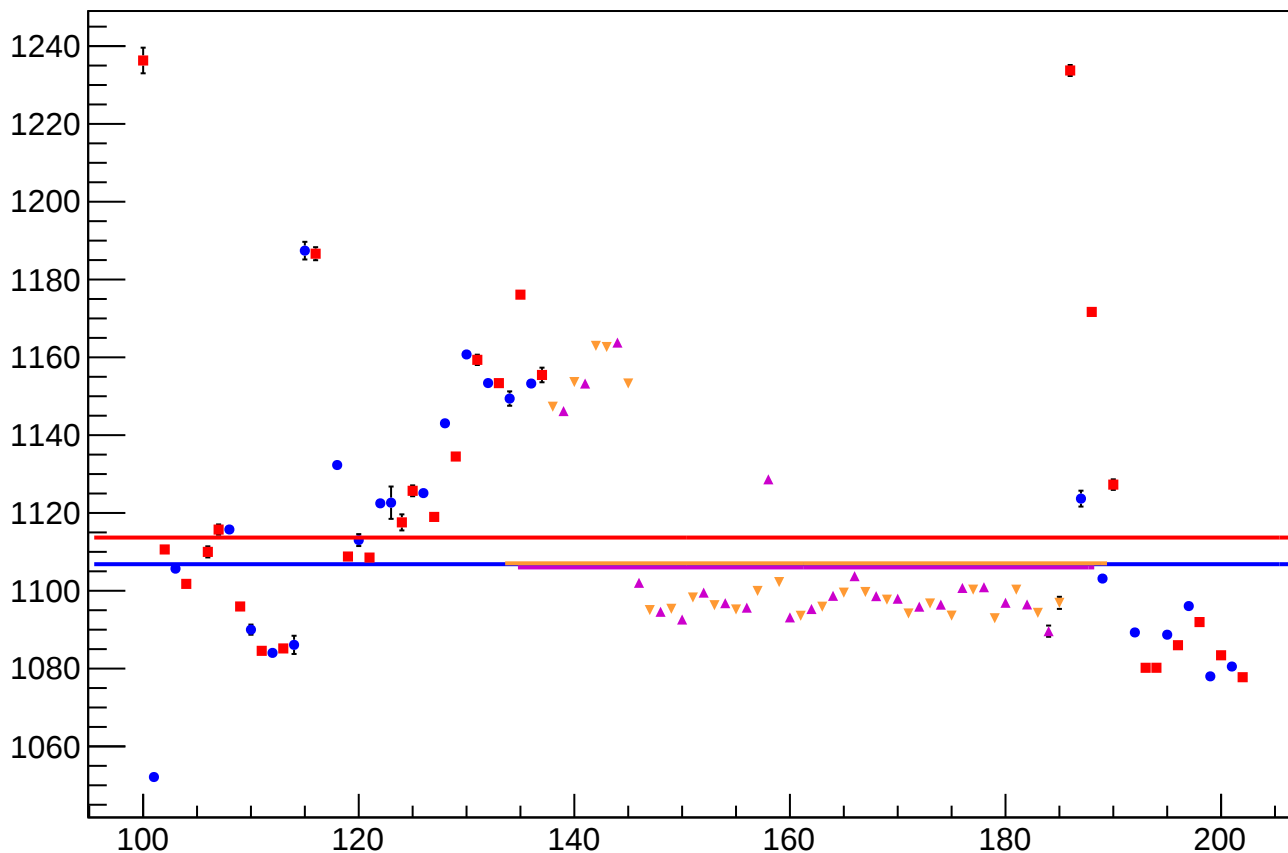
Right: 2103.387 $\pm$ 223.785  $\chi^2$ /NDF: 38.0/51

In: 2377.650 $\pm$ 205.925  $\chi^2$ /NDF:50.0/46

Out: 2002.970 $\pm$ 197.001  $\chi^2$ /NDF:33.1/52

All: 2182.015 $\pm$ 142.351  $\chi^2$ /NDF: 84.8/99

# reg\_asym\_usr\_rms vs Slug, Sign Corrected



Right In: 1106.831 $\pm$ 0.232  $\chi^2$ /NDF: 17189.7/23

Left Out: 1107.057 $\pm$ 0.182  $\chi^2$ /NDF:15175.6/24

Right Out: 1113.679 $\pm$ 0.216  $\chi^2$ /NDF: 29549.0/27

Left In: 1105.997 $\pm$ 0.187  $\chi^2$ /NDF:11551.3/22

Left: 1106.541 $\pm$ 0.130  $\chi^2$ /NDF: 26743.4/47

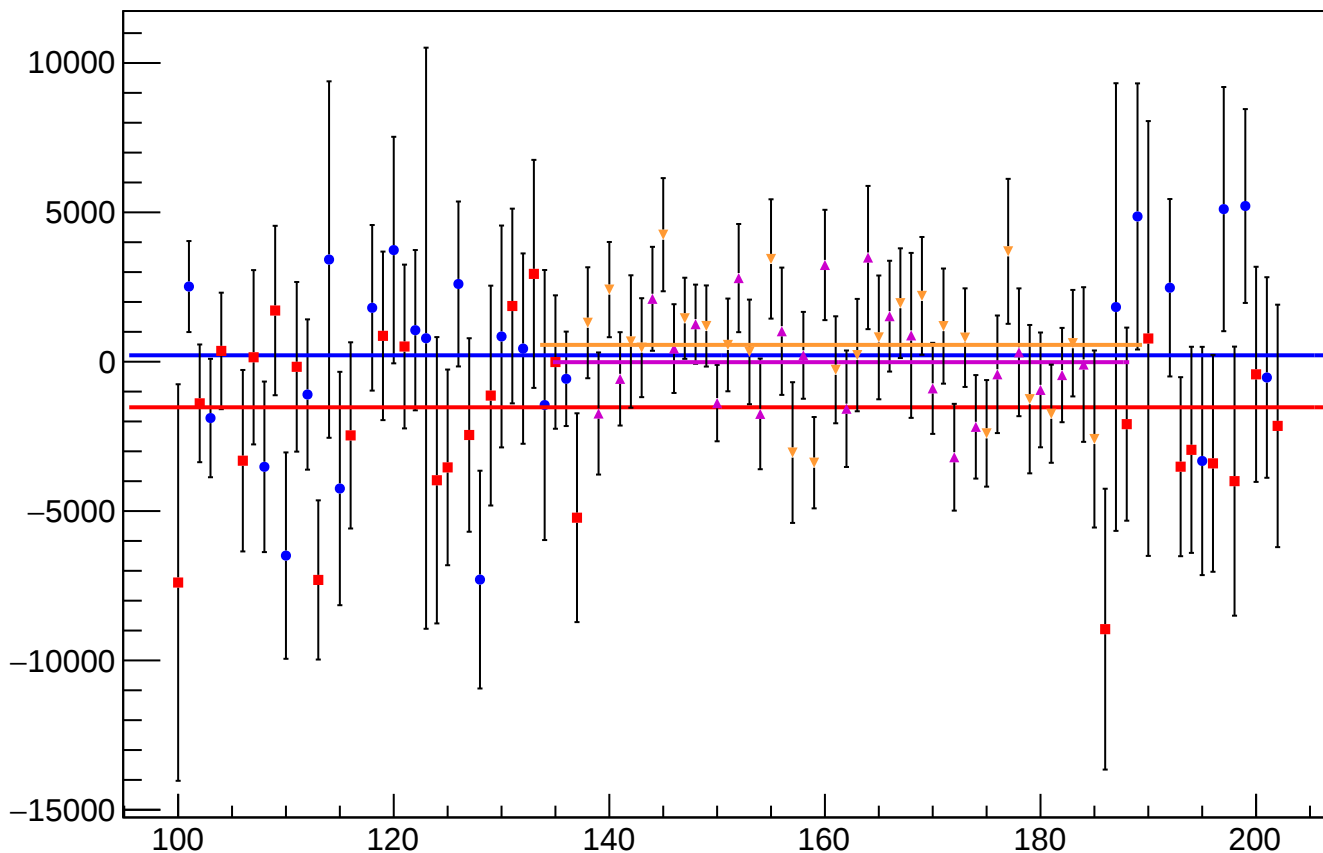
Right: 1110.496 $\pm$ 0.158  $\chi^2$ /NDF: 47204.5/51

In: 1106.325 $\pm$ 0.146  $\chi^2$ /NDF:28748.8/46

Out: 1109.803 $\pm$ 0.139  $\chi^2$ /NDF:45273.2/52

All: 1108.141 $\pm$ 0.101  $\chi^2$ /NDF: 74319.9/99

asym\_usr\_correction\_mean vs Slug, Sign Corrected



Right In: 214.630 $\pm$ 596.240  $\chi^2$ /NDF: 23.9/23

Left Out: 563.282 $\pm$ 360.901  $\chi^2$ /NDF:26.8/24

Right Out: -1525.894 $\pm$ 588.304  $\chi^2$ /NDF: 18.7/27

Left In: -15.520 $\pm$ 366.854  $\chi^2$ /NDF:20.1/22

Left: 278.615 $\pm$ 257.275  $\chi^2$ /NDF: 48.2/47

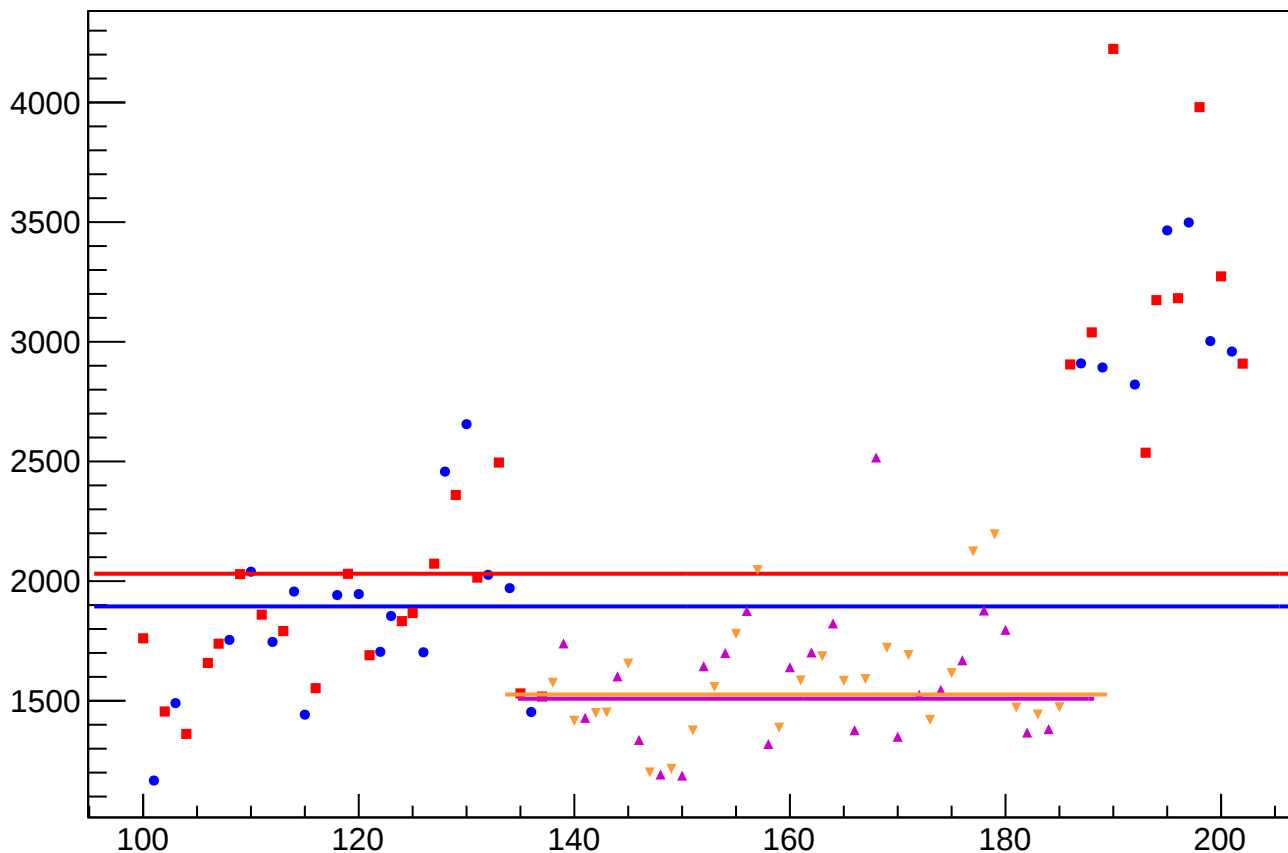
Right: -667.293 $\pm$ 418.771  $\chi^2$ /NDF: 46.9/51

In: 47.681 $\pm$ 312.449  $\chi^2$ /NDF:44.1/46

Out: -7.967 $\pm$ 307.628  $\chi^2$ /NDF:54.6/52

All: 19.425 $\pm$ 219.211  $\chi^2$ /NDF: 98.8/99

# asym\_usr\_correction\_rms vs Slug, Sign Corrected



Right In: 1894.327+/-0.422  $\chi^2/\text{NDF}$ : 2306704.8/23

Left Out: 1526.391+/-0.255  $\chi^2/\text{NDF}$ : 753714.4/24

Right Out: 2030.937+/-0.416  $\chi^2/\text{NDF}$ : 2388397.2/27

Left In: 1508.581+/-0.259  $\chi^2/\text{NDF}$ : 931684.8/22

Left: 1517.632+/-0.182  $\chi^2/\text{NDF}$ : 1687794.7/47

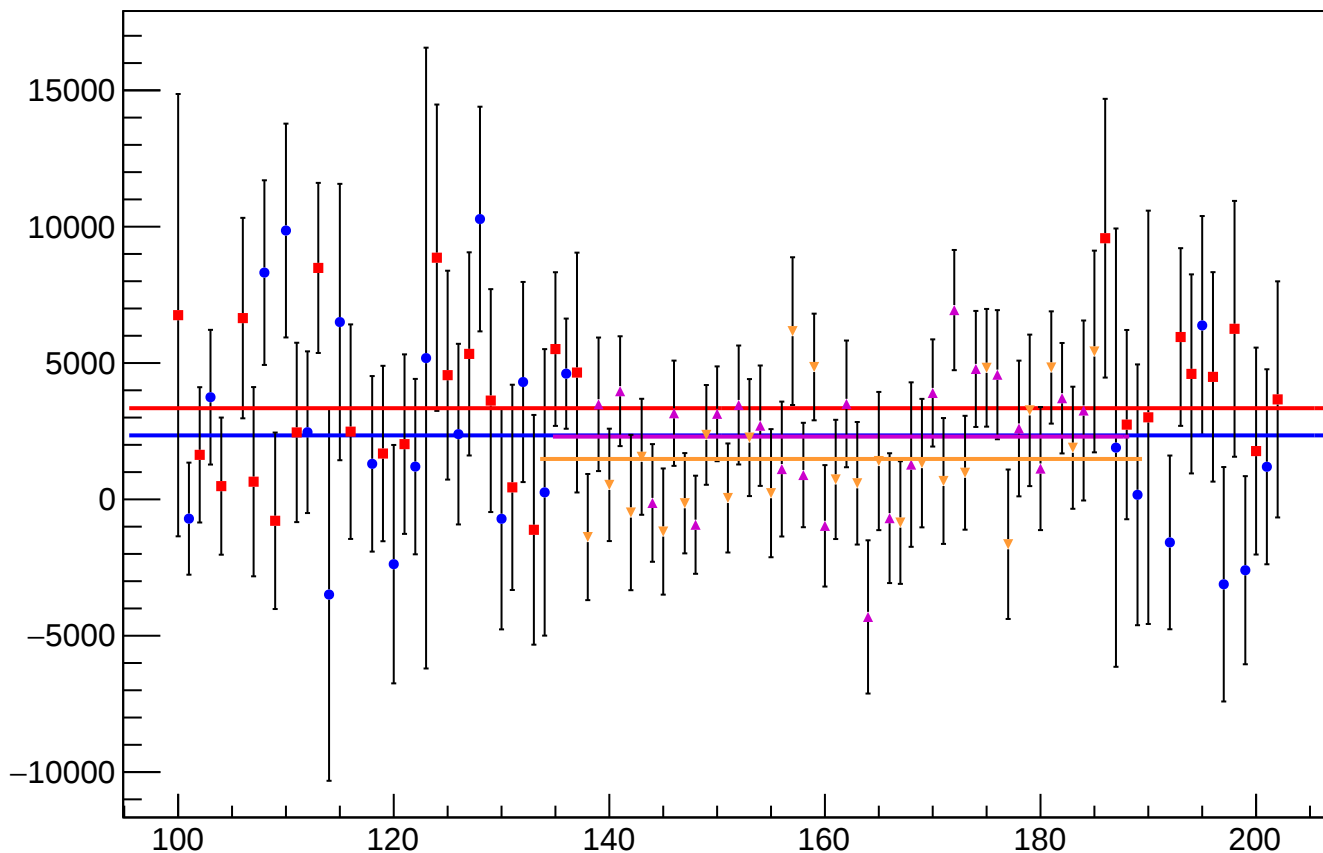
Right: 1963.547+/-0.296  $\chi^2/\text{NDF}$ : 4748301.5/51

In: 1614.511+/-0.221  $\chi^2/\text{NDF}$ : 3845630.2/46

Out: 1664.350+/-0.218  $\chi^2/\text{NDF}$ : 4210932.1/52

All: 1639.818+/-0.155  $\chi^2/\text{NDF}$ : 8082402.5/99

# asym\_usr\_mean vs Slug, Sign Corrected



Right In: 2346.604 $\pm$ 710.090  $\chi^2$ /NDF: 24.7/23

Left Out: 1482.365 $\pm$ 449.983  $\chi^2$ /NDF:20.9/24

Right Out: 3343.954 $\pm$ 687.170  $\chi^2$ /NDF: 14.9/27

Left In: 2301.247 $\pm$ 459.040  $\chi^2$ /NDF:24.8/22

Left: 1883.648 $\pm$ 321.340  $\chi^2$ /NDF: 47.4/47

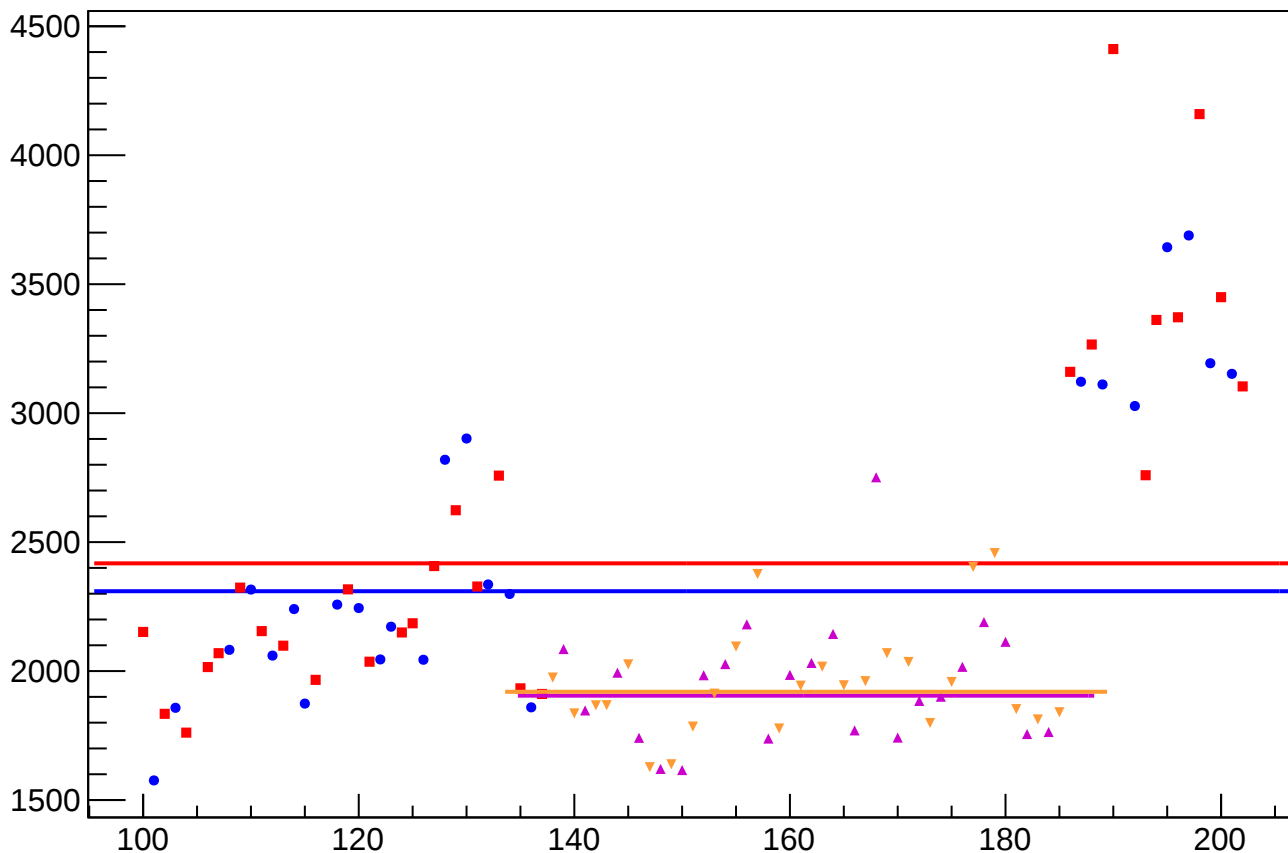
Right: 2861.634 $\pm$ 493.807  $\chi^2$ /NDF: 40.6/51

In: 2314.615 $\pm$ 385.503  $\chi^2$ /NDF:49.5/46

Out: 2041.058 $\pm$ 376.452  $\chi^2$ /NDF:41.0/52

All: 2174.588 $\pm$ 269.334  $\chi^2$ /NDF: 90.7/99

# asym\_usr\_rms vs Slug, Sign Corrected



Right In: 2309.634+/-0.502  $\chi^2/\text{NDF}$ : 1408112.4/23

Left Out: 1919.732+/-0.318  $\chi^2/\text{NDF}$ : 366218.1/24

Right Out: 2417.689+/-0.486  $\chi^2/\text{NDF}$ : 1553840.3/27

Left In: 1904.629+/-0.325  $\chi^2/\text{NDF}$ : 447350.7/22

Left: 1912.331+/-0.227  $\chi^2/\text{NDF}$ : 814672.9/47

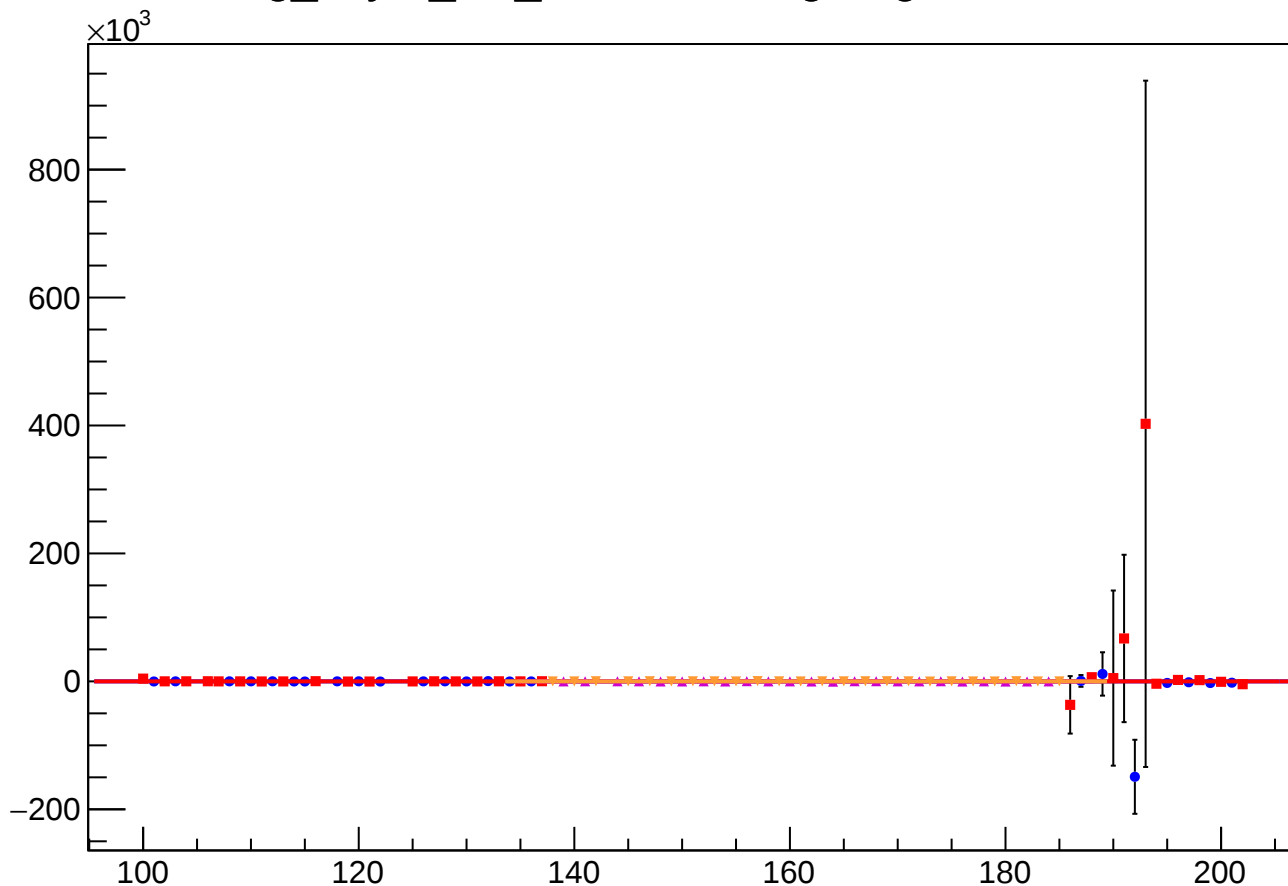
Right: 2365.433+/-0.349  $\chi^2/\text{NDF}$ : 2985868.1/51

In: 2023.997+/-0.273  $\chi^2/\text{NDF}$ : 2314321.9/46

Out: 2069.177+/-0.266  $\chi^2/\text{NDF}$ : 2655098.8/52

All: 2047.123+/-0.190  $\chi^2/\text{NDF}$ : 4983482.1/99

# reg\_asym\_dsl\_mean vs Slug, Sign Corrected



Right In:  $-1.403 \pm 36.766$   $\chi^2/\text{NDF}: 24.3/22$

Left Out:  $12.260 \pm 26.260$   $\chi^2/\text{NDF}: 35.9/23$

Right Out:  $1.712 \pm 36.750$   $\chi^2/\text{NDF}: 18.1/27$

Left In:  $24.786 \pm 26.343$   $\chi^2/\text{NDF}: 36.4/22$

Left:  $18.503 \pm 18.598$   $\chi^2/\text{NDF}: 72.4/46$

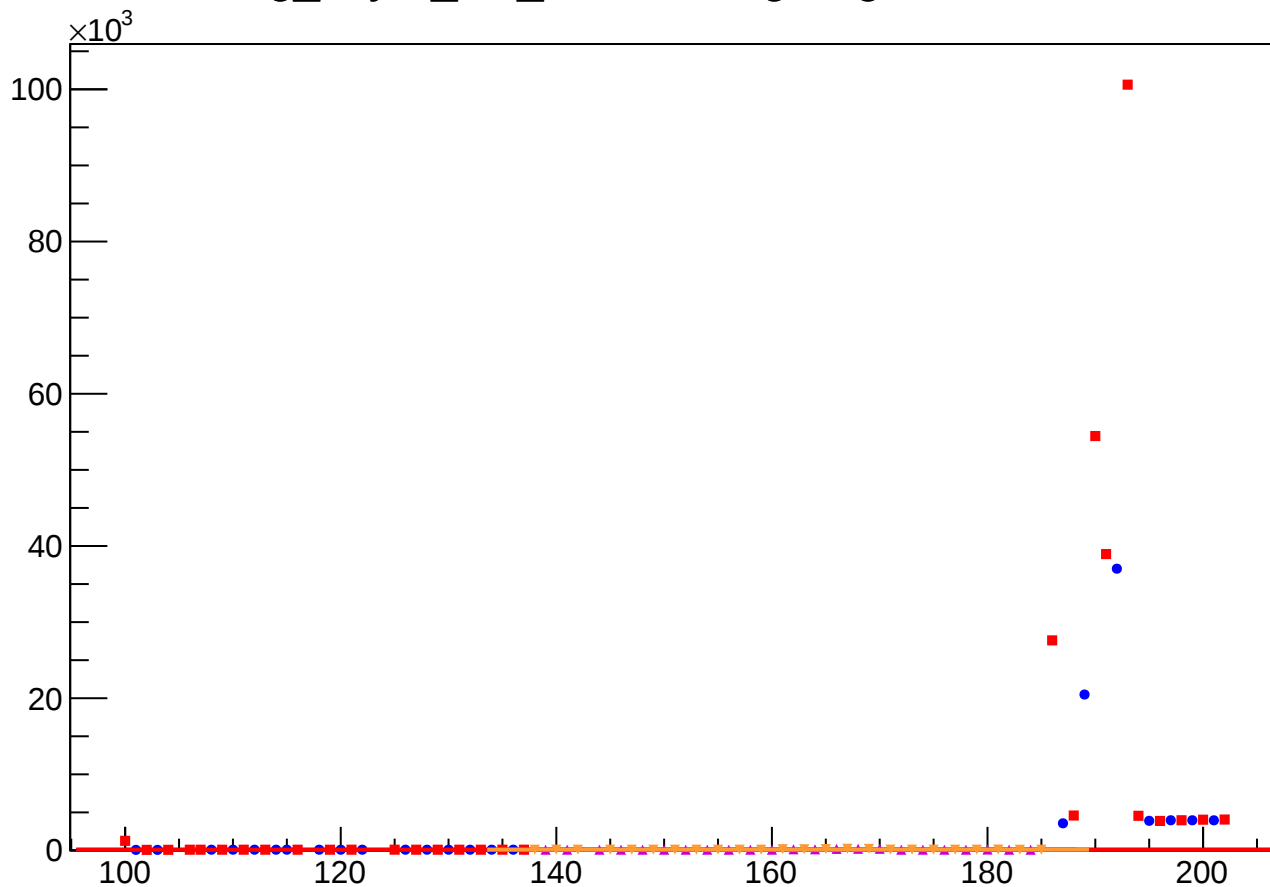
Right:  $0.155 \pm 25.992$   $\chi^2/\text{NDF}: 42.3/50$

In:  $15.902 \pm 21.414$   $\chi^2/\text{NDF}: 61.0/45$

Out:  $8.695 \pm 21.366$   $\chi^2/\text{NDF}: 54.0/51$

All:  $12.290 \pm 15.125$   $\chi^2/\text{NDF}: 115.1/97$

# reg\_asym\_dsl\_rms vs Slug, Sign Corrected



Right In: 95.222 $\pm$ 0.026  $\chi^2$ /NDF: 8144777.8/22

Left Out: 108.059 $\pm$ 0.019  $\chi^2$ /NDF: 1434979.3/23

Right Out: 97.676 $\pm$ 0.026  $\chi^2$ /NDF: 9313471.3/27

Left In: 107.672 $\pm$ 0.019  $\chi^2$ /NDF: 1491034.7/22

Left: 107.867 $\pm$ 0.013  $\chi^2$ /NDF: 2926230.6/46

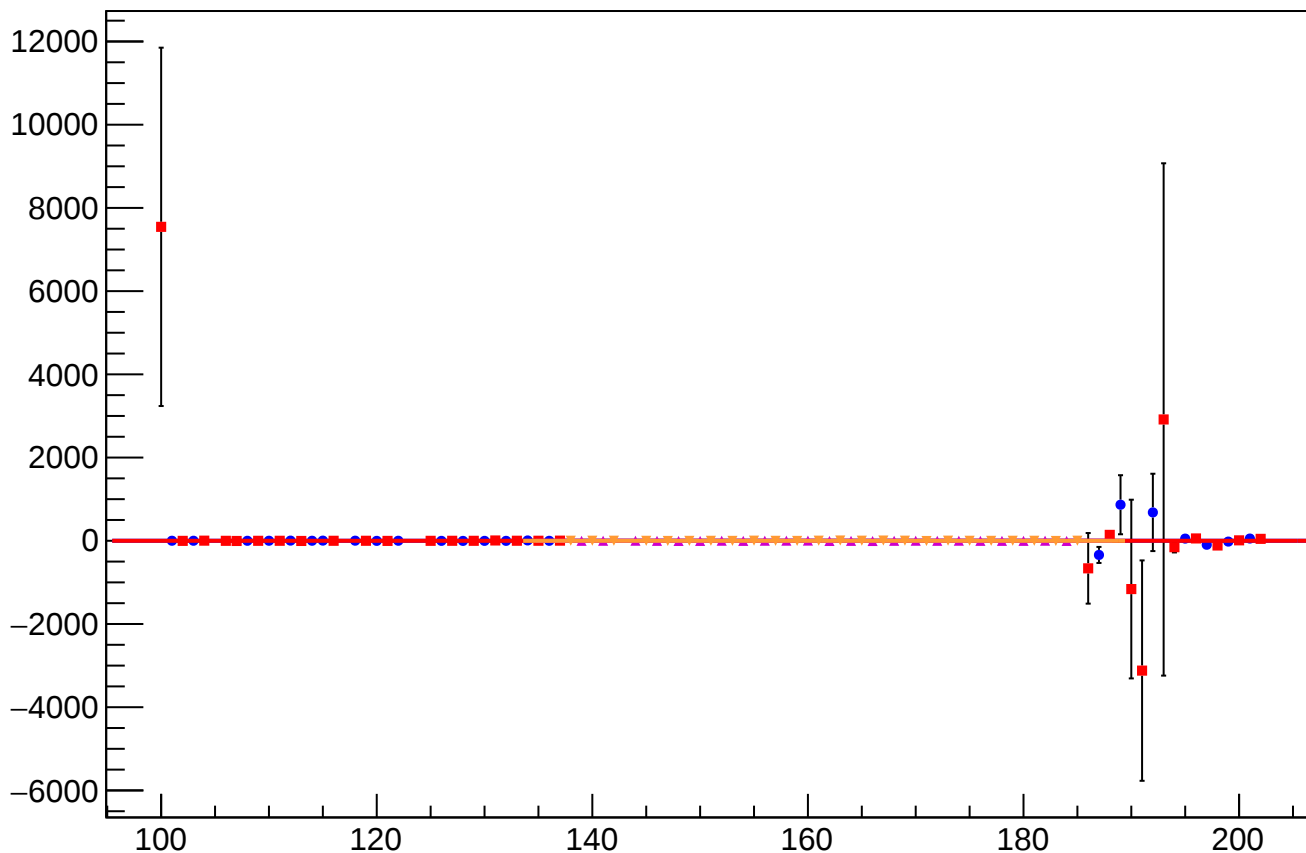
Right: 96.450 $\pm$ 0.018  $\chi^2$ /NDF: 17462706.1/50

In: 103.449 $\pm$ 0.015  $\chi^2$ /NDF: 9787357.4/45

Out: 104.550 $\pm$ 0.015  $\chi^2$ /NDF: 10854142.5/51

All: 104.001 $\pm$ 0.011  $\chi^2$ /NDF: 20644149.2/97

# asym\_dsl\_correction\_mean vs Slug, Sign Corrected



Right In:  $0.387 \pm 0.617$   $\chi^2/\text{NDF}$ : 18.0/22

Left Out:  $-0.534 \pm 0.475$   $\chi^2/\text{NDF}$ : 30.5/23

Right Out:  $-0.344 \pm 0.644$   $\chi^2/\text{NDF}$ : 29.6/27

Left In:  $-0.067 \pm 0.485$   $\chi^2/\text{NDF}$ : 25.0/22

Left:  $-0.306 \pm 0.339$   $\chi^2/\text{NDF}$ : 56.0/46

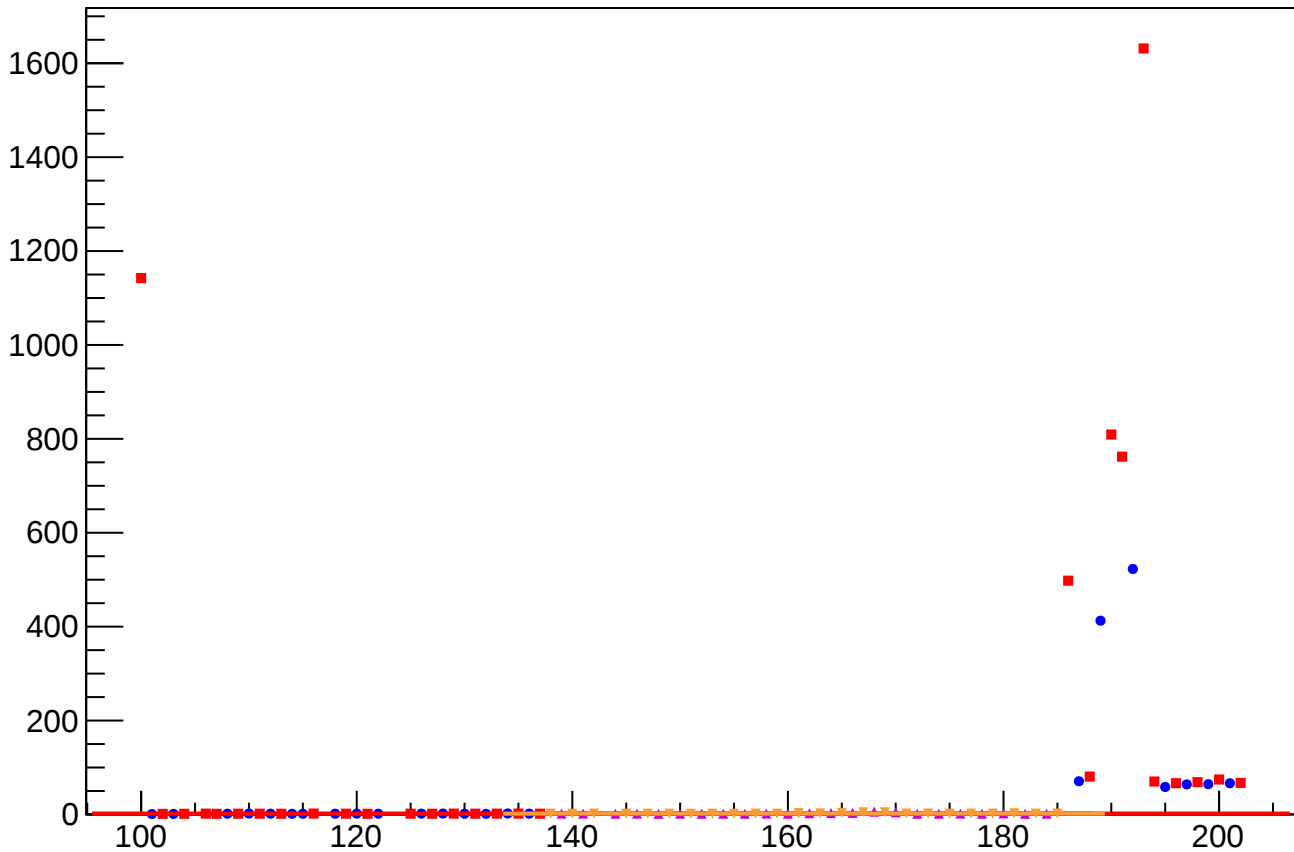
Right:  $0.037 \pm 0.445$   $\chi^2/\text{NDF}$ : 48.3/50

In:  $0.106 \pm 0.381$   $\chi^2/\text{NDF}$ : 43.3/45

Out:  $-0.467 \pm 0.382$   $\chi^2/\text{NDF}$ : 60.2/51

All:  $-0.180 \pm 0.270$   $\chi^2/\text{NDF}$ : 104.7/97

# asym\_dsl\_correction\_rms vs Slug, Sign Corrected



Right In: 1.437+/-0.000  $\chi^2/\text{NDF}$ : 7446956.6/22

Left Out: 1.771+/-0.000  $\chi^2/\text{NDF}$ :1599621.6/23

Right Out: 1.575+/-0.000  $\chi^2/\text{NDF}$ : 8273593.3/27

Left In: 1.802+/-0.000  $\chi^2/\text{NDF}$ :1921298.2/22

Left: 1.787+/-0.000  $\chi^2/\text{NDF}$ : 3525124.6/46

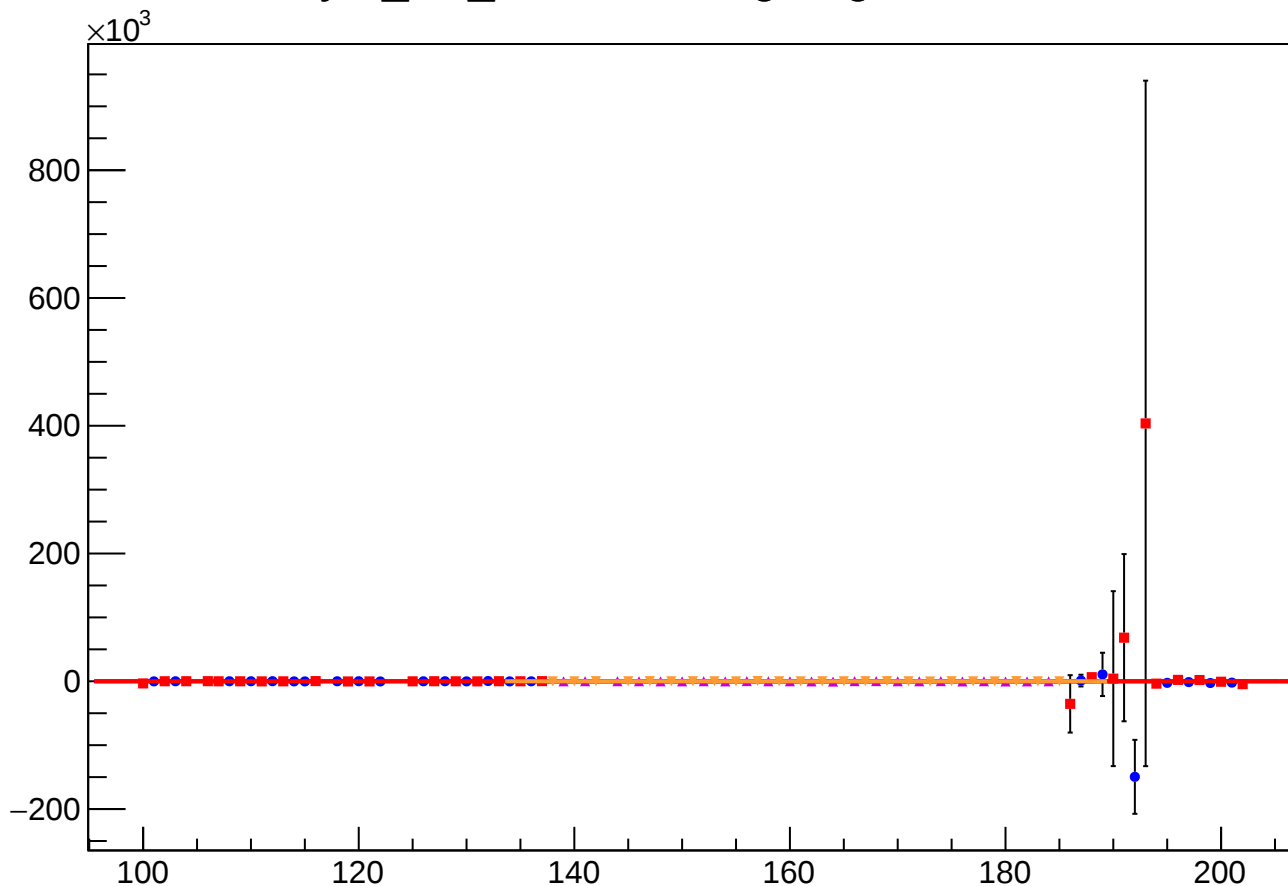
Right: 1.503+/-0.000  $\chi^2/\text{NDF}$ : 15768472.2/50

In: 1.663+/-0.000  $\chi^2/\text{NDF}$ :9801766.4/45

Out: 1.702+/-0.000  $\chi^2/\text{NDF}$ :9993406.7/51

All: 1.683+/-0.000  $\chi^2/\text{NDF}$ : 19805630.9/97

# asym\_dsl\_mean vs Slug, Sign Corrected



Right In:  $-1.106 \pm 36.775$   $\chi^2/\text{NDF}: 24.5/22$

Left Out:  $12.948 \pm 26.268$   $\chi^2/\text{NDF}: 35.7/23$

Right Out:  $1.467 \pm 36.760$   $\chi^2/\text{NDF}: 17.5/27$

Left In:  $25.312 \pm 26.351$   $\chi^2/\text{NDF}: 35.7/22$

Left:  $19.110 \pm 18.604$   $\chi^2/\text{NDF}: 71.6/46$

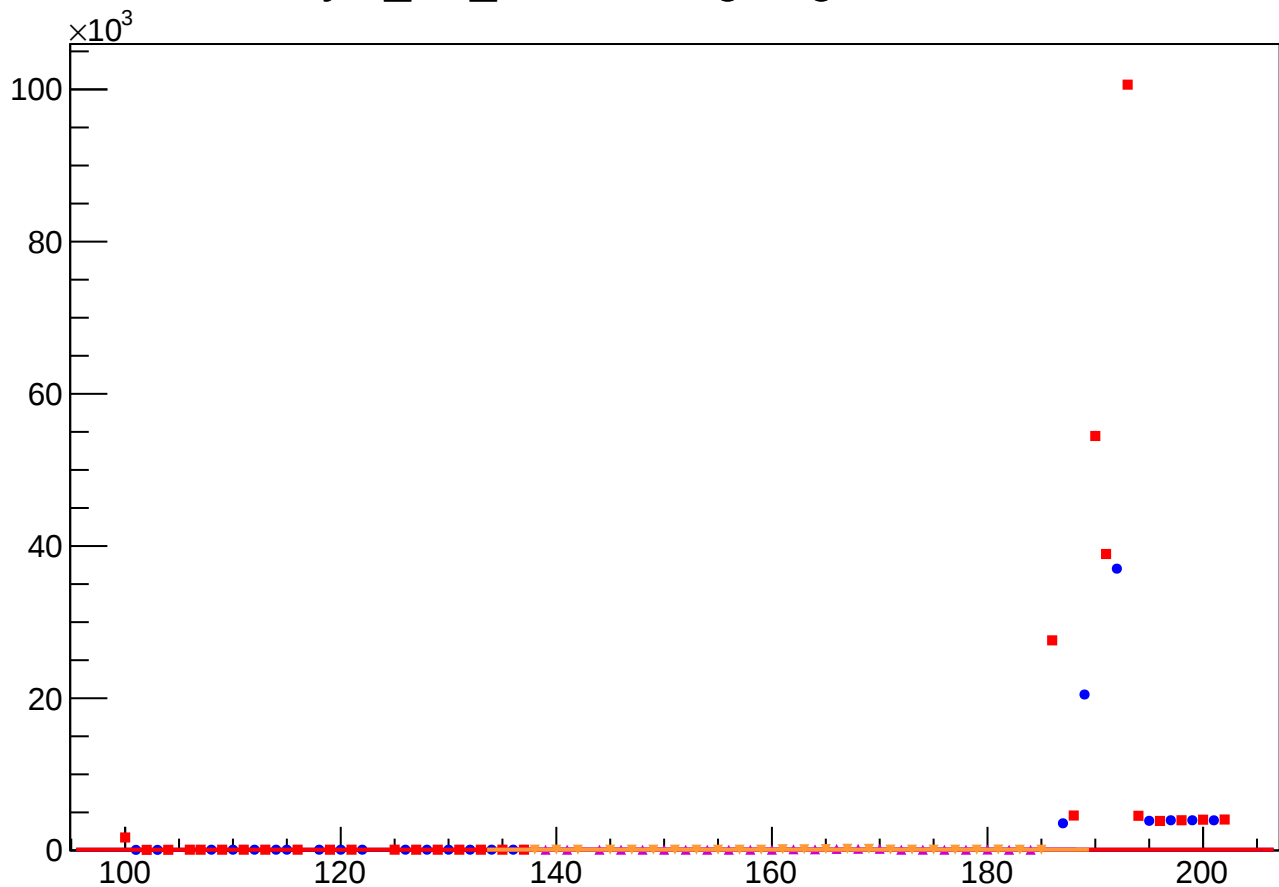
Right:  $0.181 \pm 25.999$   $\chi^2/\text{NDF}: 42.0/50$

In:  $16.349 \pm 21.420$   $\chi^2/\text{NDF}: 60.5/45$

Out:  $9.067 \pm 21.372$   $\chi^2/\text{NDF}: 53.4/51$

All:  $12.700 \pm 15.129$   $\chi^2/\text{NDF}: 113.9/97$

# asym\_dsl\_rms vs Slug, Sign Corrected



Right In: 95.247 $\pm$ 0.026  $\chi^2$ /NDF: 8144770.2/22

Left Out: 108.090 $\pm$ 0.019  $\chi^2$ /NDF: 1436368.7/23

Right Out: 97.685 $\pm$ 0.026  $\chi^2$ /NDF: 9318716.1/27

Left In: 107.703 $\pm$ 0.019  $\chi^2$ /NDF: 1492338.5/22

Left: 107.897 $\pm$ 0.013  $\chi^2$ /NDF: 2928923.7/46

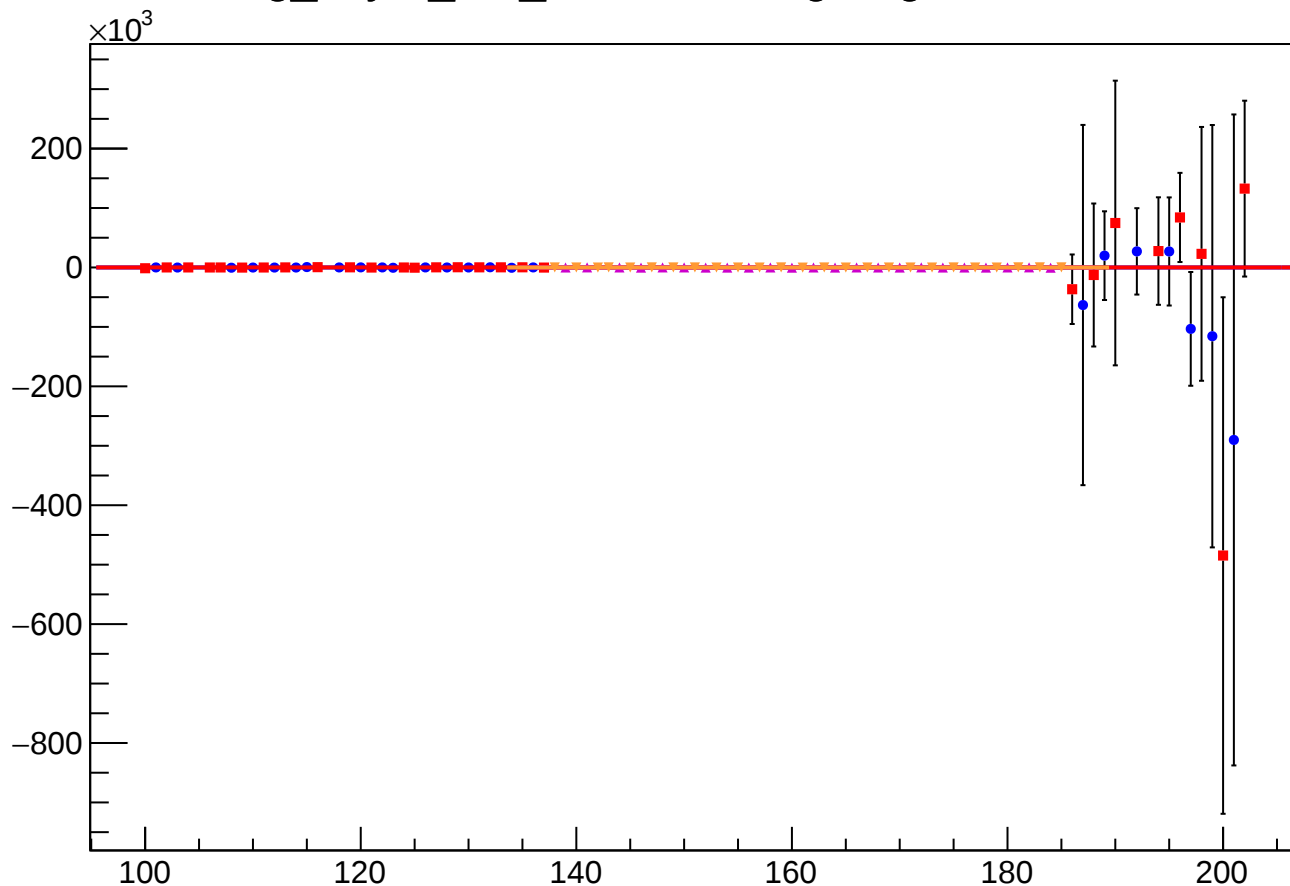
Right: 96.467 $\pm$ 0.018  $\chi^2$ /NDF: 17467885.1/50

In: 103.477 $\pm$ 0.015  $\chi^2$ /NDF: 9788721.3/45

Out: 104.573 $\pm$ 0.015  $\chi^2$ /NDF: 10861157.1/51

All: 104.026 $\pm$ 0.011  $\chi^2$ /NDF: 20652502.1/97

# reg\_asym\_dsr\_mean vs Slug, Sign Corrected



Right In:  $-26.802 \pm 46.841$   $\chi^2/\text{NDF}$ : 16.3/23

Left Out:  $-12.829 \pm 32.063$   $\chi^2/\text{NDF}$ : 12.0/24

Right Out:  $53.411 \pm 47.775$   $\chi^2/\text{NDF}$ : 19.3/26

Left In:  $-65.335 \pm 32.944$   $\chi^2/\text{NDF}$ : 19.3/22

Left:  $-38.371 \pm 22.977$   $\chi^2/\text{NDF}$ : 32.6/47

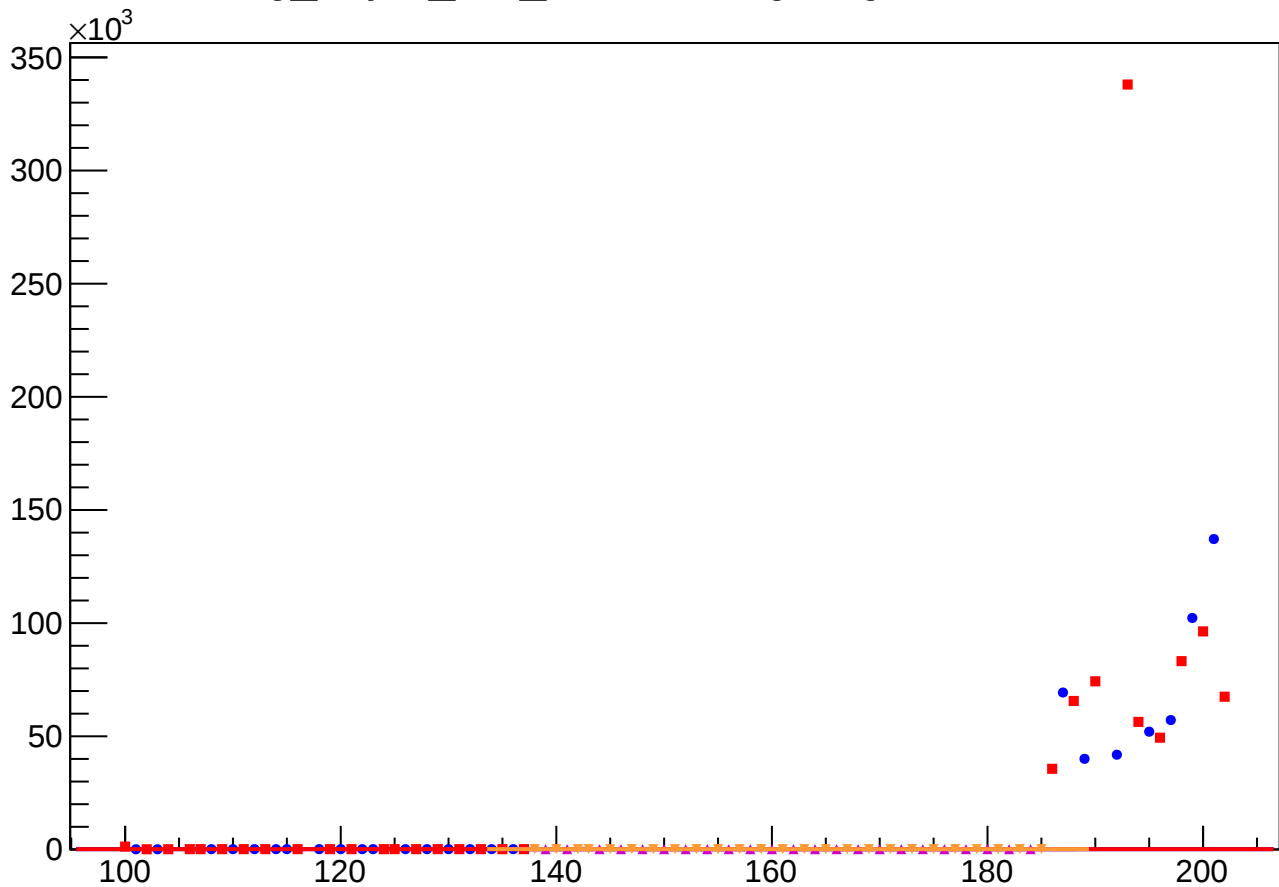
Right:  $12.514 \pm 33.447$   $\chi^2/\text{NDF}$ : 37.1/50

In:  $-52.582 \pm 26.947$   $\chi^2/\text{NDF}$ : 36.1/46

Out:  $7.741 \pm 26.623$   $\chi^2/\text{NDF}$ : 32.6/51

All:  $-22.056 \pm 18.939$   $\chi^2/\text{NDF}$ : 71.2/98

# reg\_asym\_dsr\_rms vs Slug, Sign Corrected



Right In: 117.835 $\pm$ 0.033  $\chi^2$ /NDF: 4190004.8/23

Left Out: 137.856 $\pm$ 0.023  $\chi^2$ /NDF:443.5/24

Right Out: 124.818 $\pm$ 0.034  $\chi^2$ /NDF: 5112293.5/27

Left In: 137.804 $\pm$ 0.023  $\chi^2$ /NDF:460.3/22

Left: 137.831 $\pm$ 0.016  $\chi^2$ /NDF: 906.3/47

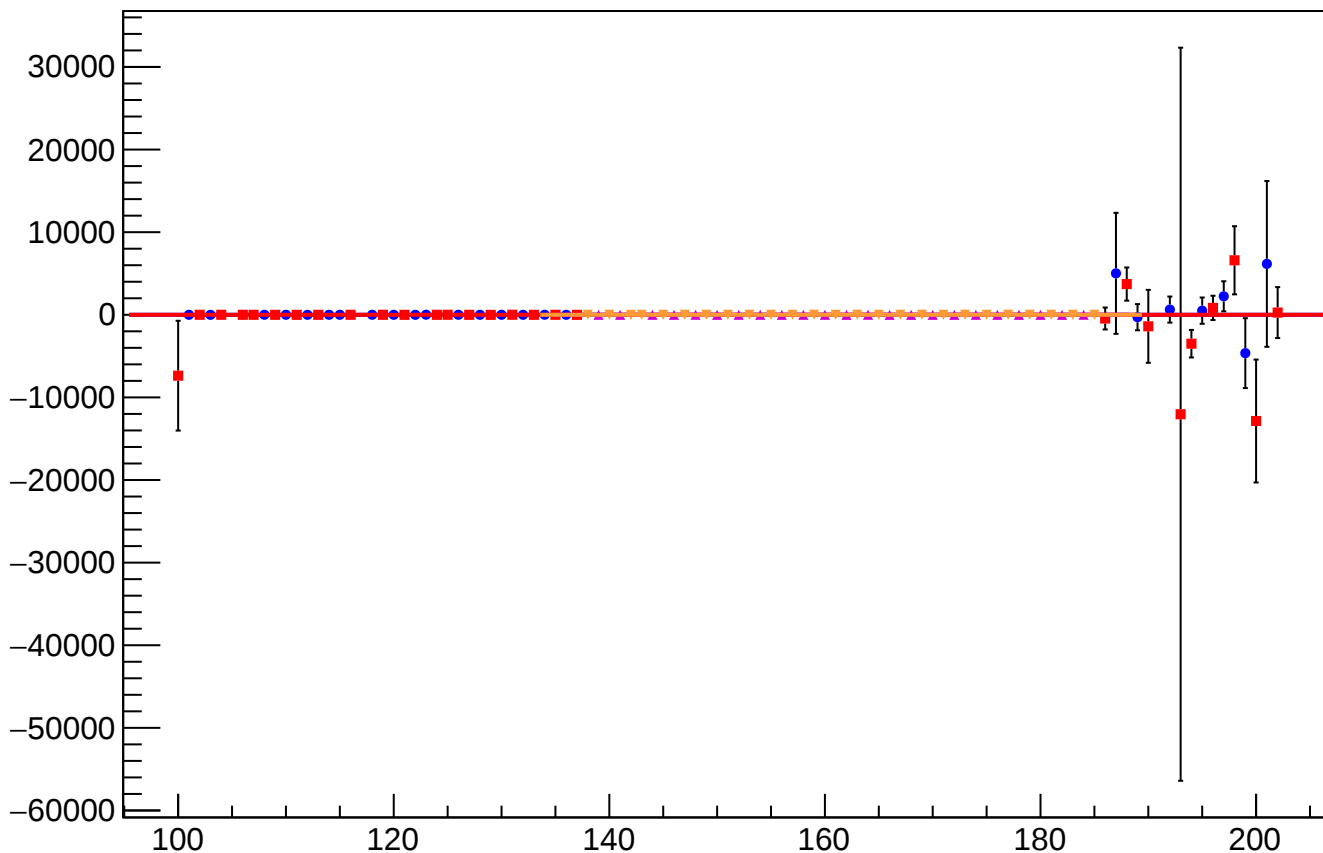
Right: 121.257 $\pm$ 0.024  $\chi^2$ /NDF: 9324084.5/51

In: 131.196 $\pm$ 0.019  $\chi^2$ /NDF:4433672.8/46

Out: 133.807 $\pm$ 0.019  $\chi^2$ /NDF:5215446.5/52

All: 132.517 $\pm$ 0.013  $\chi^2$ /NDF: 9658628.1/99

# asym\_dsr\_correction\_mean vs Slug, Sign Corrected



Right In:  $-0.719 \pm 0.810$   $\chi^2/\text{NDF}$ : 16.1/23

Left Out:  $0.490 \pm 0.572$   $\chi^2/\text{NDF}$ : 29.0/24

Right Out:  $-0.638 \pm 0.852$   $\chi^2/\text{NDF}$ : 28.7/27

Left In:  $0.290 \pm 0.579$   $\chi^2/\text{NDF}$ : 20.7/22

Left:  $0.391 \pm 0.407$   $\chi^2/\text{NDF}$ : 49.7/47

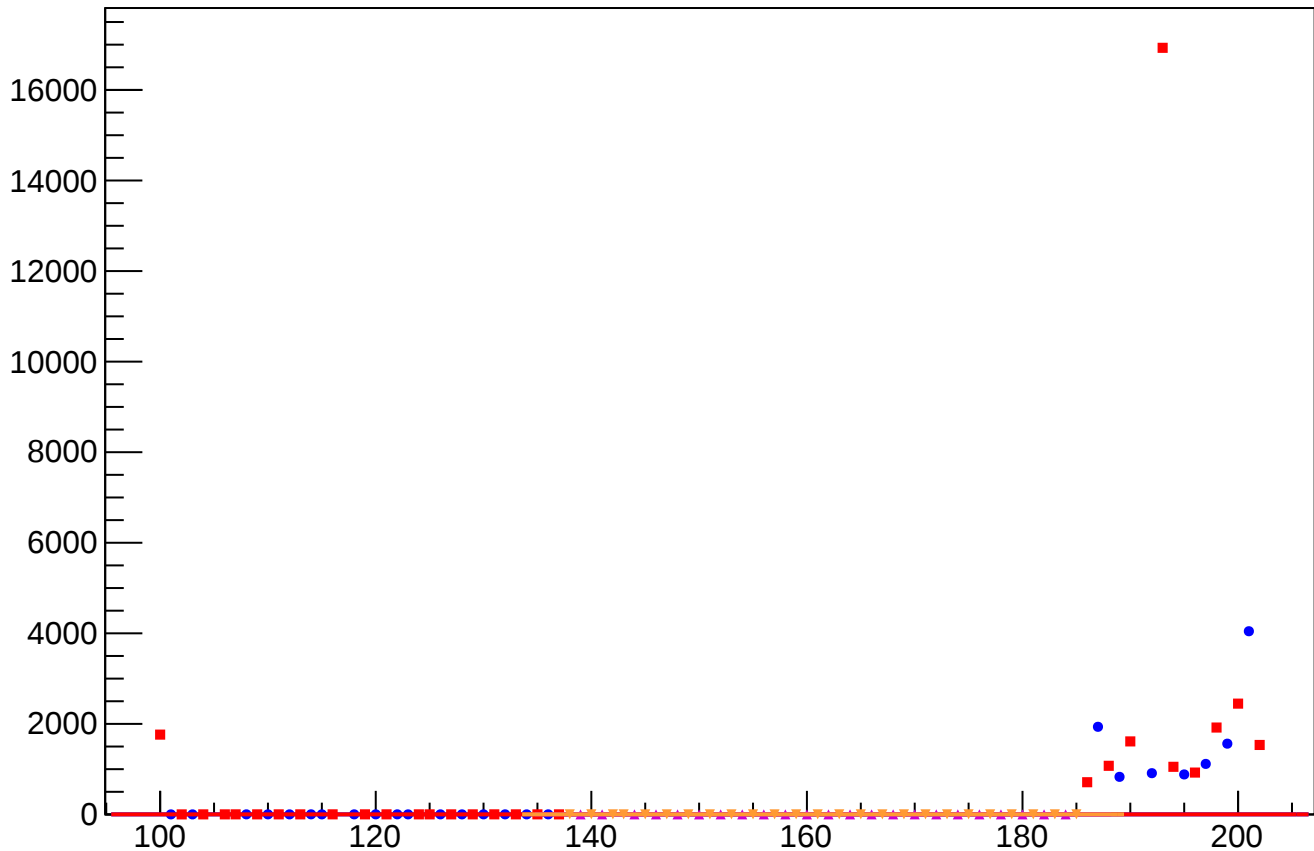
Right:  $-0.680 \pm 0.587$   $\chi^2/\text{NDF}$ : 44.8/51

In:  $-0.051 \pm 0.471$   $\chi^2/\text{NDF}$ : 37.8/46

Out:  $0.139 \pm 0.475$   $\chi^2/\text{NDF}$ : 58.9/52

All:  $0.043 \pm 0.334$   $\chi^2/\text{NDF}$ : 96.7/99

# asym\_dsr\_correction\_rms vs Slug, Sign Corrected



Right In: 1.866 $\pm$ 0.001  $\chi^2$ /NDF: 3800990.1/23

Left Out: 2.262 $\pm$ 0.000  $\chi^2$ /NDF:374973.2/24

Right Out: 2.065 $\pm$ 0.001  $\chi^2$ /NDF: 4956289.5/27

Left In: 2.193 $\pm$ 0.000  $\chi^2$ /NDF:510890.7/22

Left: 2.228 $\pm$ 0.000  $\chi^2$ /NDF: 900243.0/47

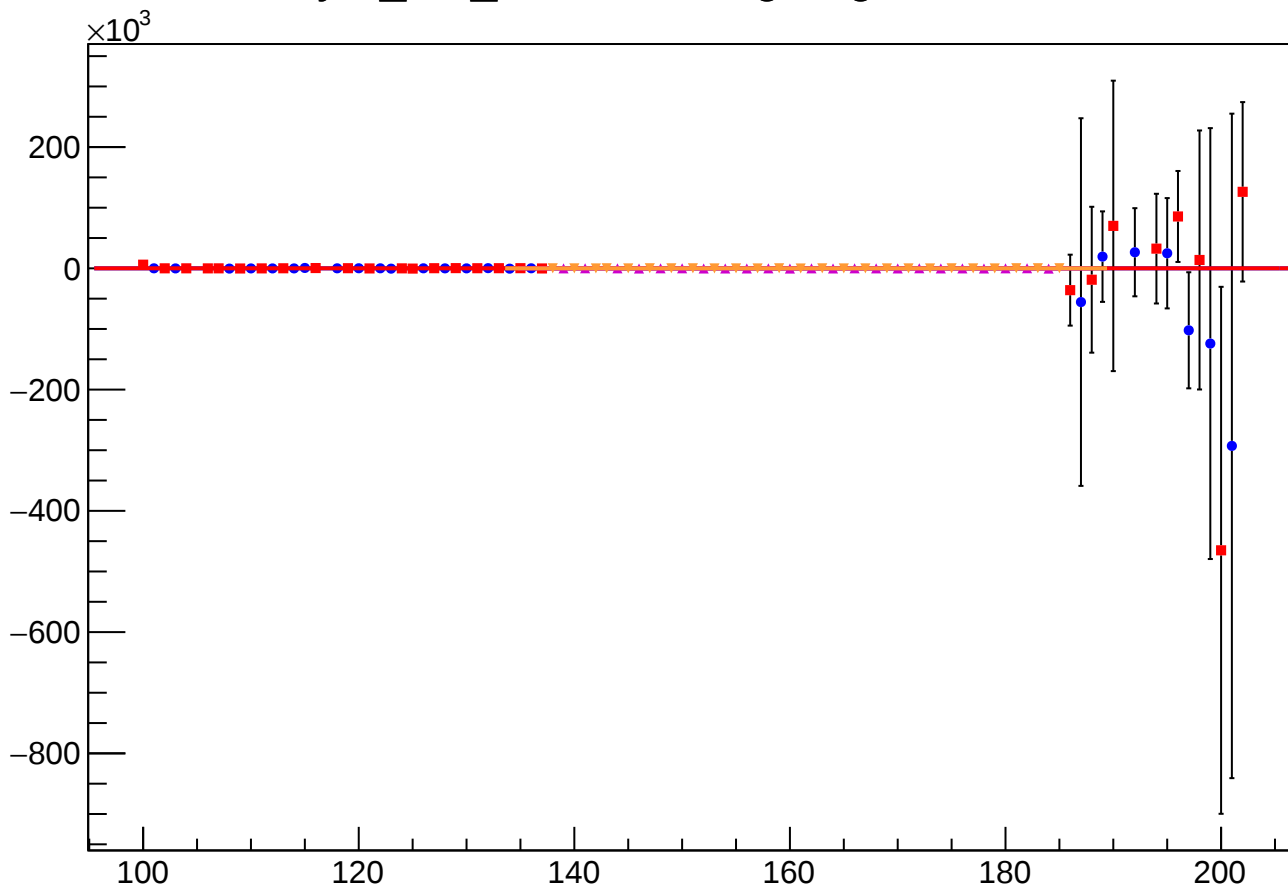
Right: 1.961 $\pm$ 0.000  $\chi^2$ /NDF: 8814352.8/51

In: 2.082 $\pm$ 0.000  $\chi^2$ /NDF:4527087.6/46

Out: 2.201 $\pm$ 0.000  $\chi^2$ /NDF:5404910.1/52

All: 2.141 $\pm$ 0.000  $\chi^2$ /NDF: 9994502.7/99

# asym\_dsr\_mean vs Slug, Sign Corrected



Right In:  $-25.064 \pm 46.854$   $\chi^2/\text{NDF}$ : 16.3/23

Left Out:  $-13.383 \pm 32.072$   $\chi^2/\text{NDF}$ : 11.8/24

Right Out:  $54.313 \pm 47.789$   $\chi^2/\text{NDF}$ : 19.9/26

Left In:  $-65.231 \pm 32.953$   $\chi^2/\text{NDF}$ : 19.4/22

Left:  $-38.605 \pm 22.983$   $\chi^2/\text{NDF}$ : 32.4/47

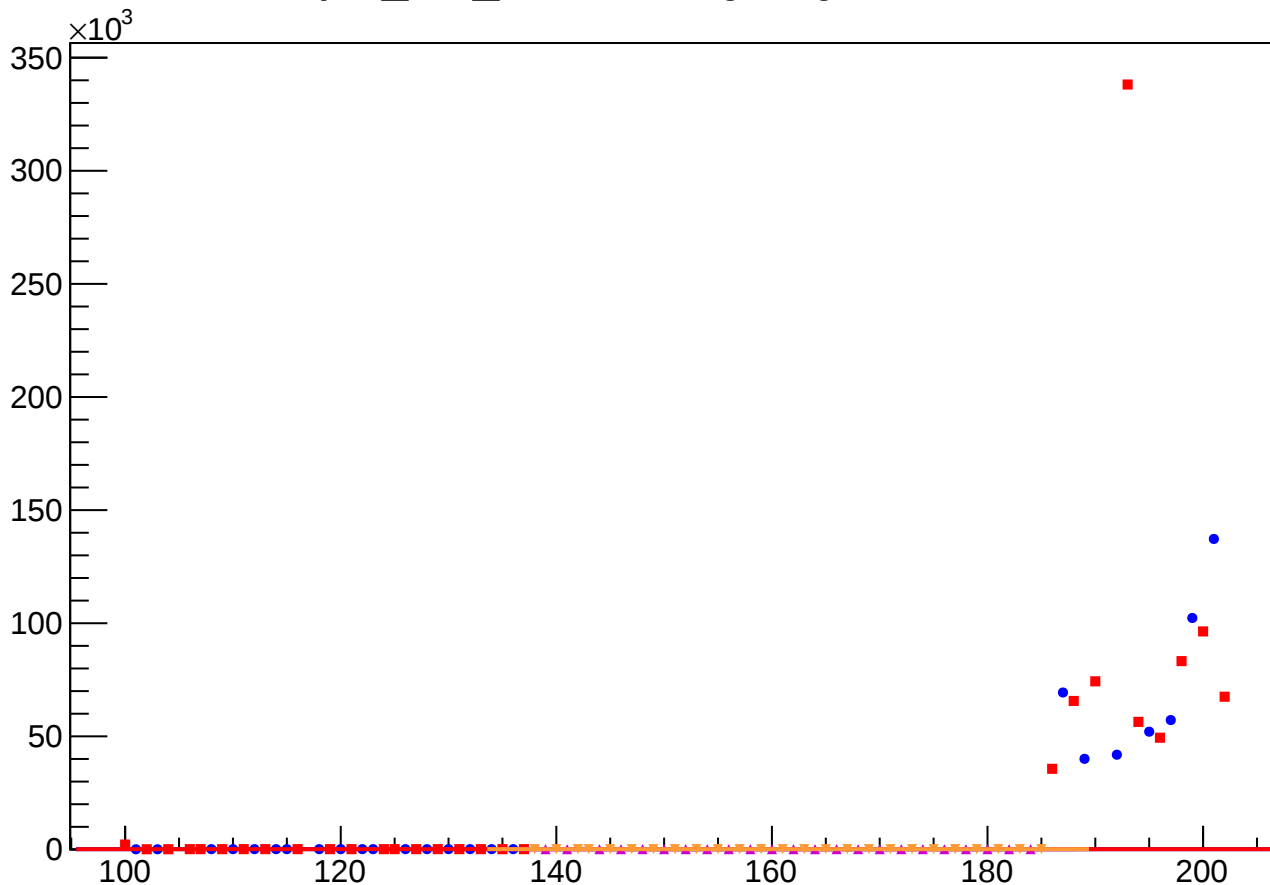
Right:  $13.840 \pm 33.456$   $\chi^2/\text{NDF}$ : 37.6/50

In:  $-51.938 \pm 26.954$   $\chi^2/\text{NDF}$ : 36.2/46

Out:  $7.639 \pm 26.631$   $\chi^2/\text{NDF}$ : 33.0/51

All:  $-21.790 \pm 18.944$   $\chi^2/\text{NDF}$ : 71.7/98

# asym\_dsr\_rms vs Slug, Sign Corrected



Right In: 117.867 $\pm$ 0.033  $\chi^2$ /NDF: 4190132.3/23

Left Out: 137.895 $\pm$ 0.023  $\chi^2$ /NDF:440.9/24

Right Out: 124.807 $\pm$ 0.034  $\chi^2$ /NDF: 5122956.4/27

Left In: 137.843 $\pm$ 0.023  $\chi^2$ /NDF:457.2/22

Left: 137.870 $\pm$ 0.016  $\chi^2$ /NDF: 900.6/47

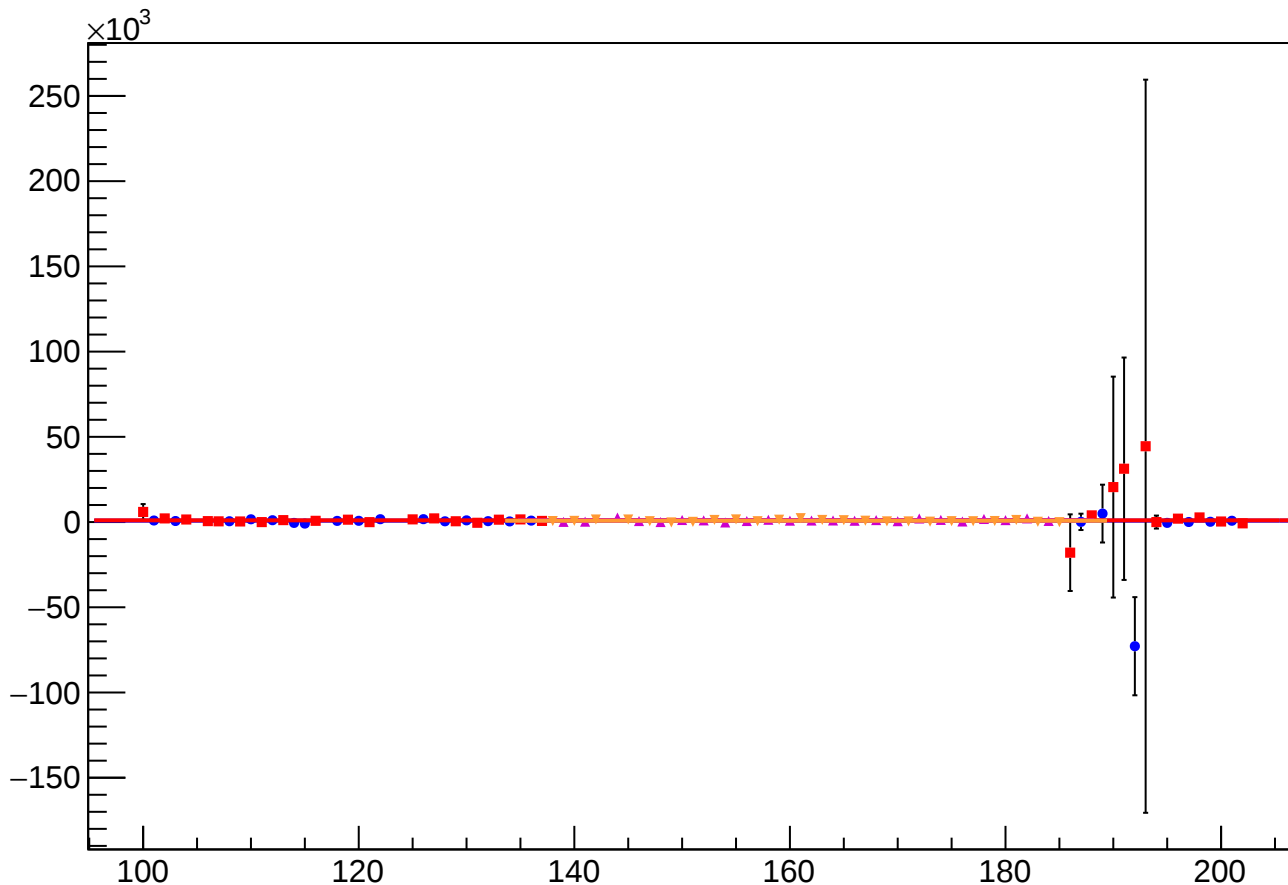
Right: 121.268 $\pm$ 0.024  $\chi^2$ /NDF: 9334596.0/51

In: 131.232 $\pm$ 0.019  $\chi^2$ /NDF:4433835.7/46

Out: 133.831 $\pm$ 0.019  $\chi^2$ /NDF:5226830.6/52

All: 132.547 $\pm$ 0.013  $\chi^2$ /NDF: 9670074.6/99

# reg\_asym\_left\_avg\_mean vs Slug, Sign Corrected



Right In: 816.529 $\pm$ 212.615  $\chi^2$ /NDF: 12.4/22

Left Out: 784.371 $\pm$ 134.054  $\chi^2$ /NDF:19.2/23

Right Out: 1017.370 $\pm$ 209.087  $\chi^2$ /NDF: 17.4/27

Left In: 974.402 $\pm$ 134.932  $\chi^2$ /NDF:27.4/22

Left: 878.766 $\pm$ 95.099  $\chi^2$ /NDF: 47.6/46

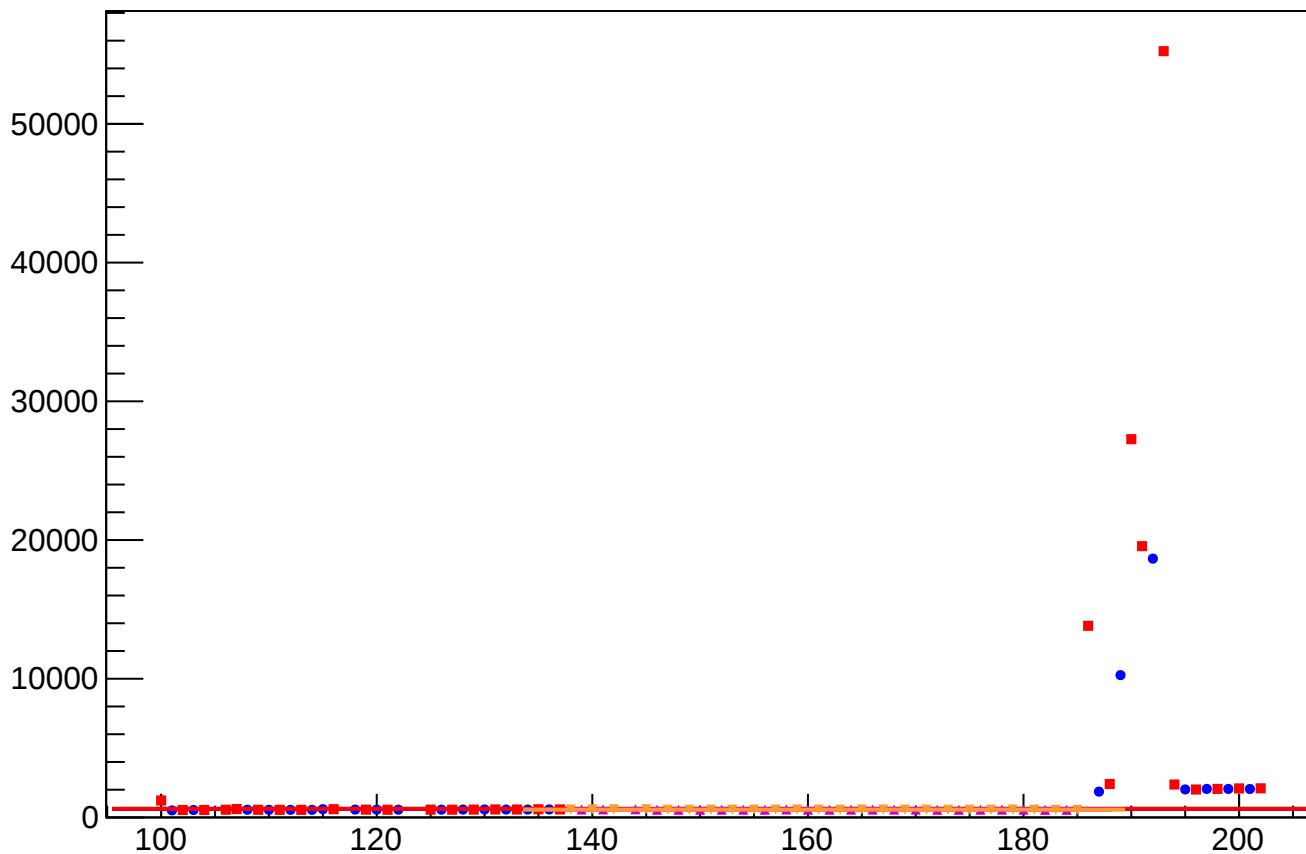
Right: 918.629 $\pm$ 149.079  $\chi^2$ /NDF: 30.3/50

In: 929.074 $\pm$ 113.926  $\chi^2$ /NDF:40.2/45

Out: 852.246 $\pm$ 112.851  $\chi^2$ /NDF:37.5/51

All: 890.296 $\pm$ 80.175  $\chi^2$ /NDF: 78.0/97

# reg\_asym\_left\_avg\_rms vs Slug, Sign Corrected



Right In: 613.906+/-0.150  $\chi^2/\text{NDF}$ : 4896356.6/22

Left Out: 564.143+/-0.095  $\chi^2/\text{NDF}$ : 9594.1/23

Right Out: 625.007+/-0.148  $\chi^2/\text{NDF}$ : 5641446.8/27

Left In: 564.383+/-0.095  $\chi^2/\text{NDF}$ : 9209.5/22

Left: 564.262+/-0.067  $\chi^2/\text{NDF}$ : 18806.8/46

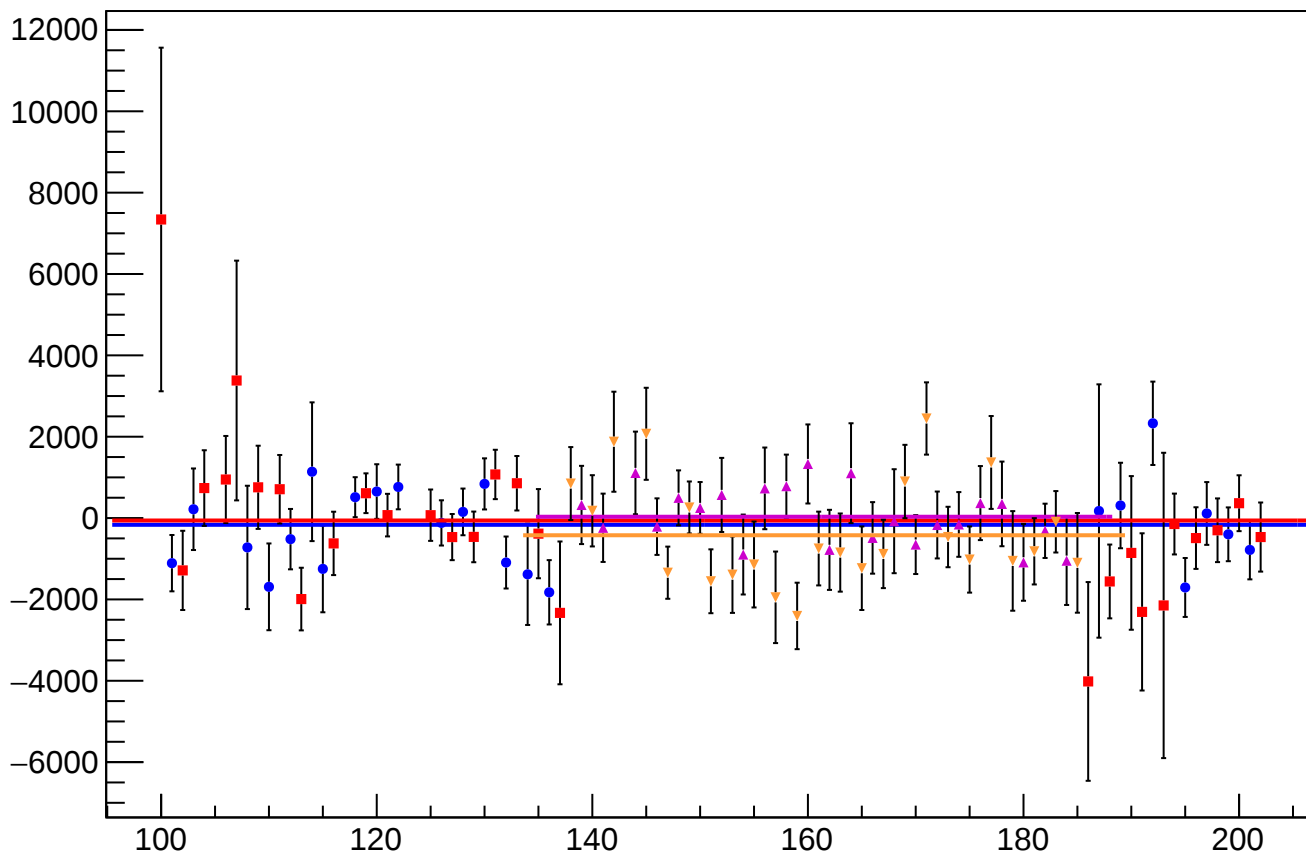
Right: 619.550+/-0.105  $\chi^2/\text{NDF}$ : 10540575.1/50

In: 578.602+/-0.081  $\chi^2/\text{NDF}$ : 4982919.4/45

Out: 581.874+/-0.080  $\chi^2/\text{NDF}$ : 5771142.5/51

All: 580.253+/-0.057  $\chi^2/\text{NDF}$ : 10754894.4/97

asym\_left\_avg\_correction\_mean vs Slug, Sign Corrected



Right In: -165.576+/-157.448  $\chi^2/\text{NDF}$ : 34.3/22

Left Out: -422.681+/-180.610  $\chi^2/\text{NDF}$ : 43.2/23

Right Out: -59.874+/-154.738  $\chi^2/\text{NDF}$ : 34.2/27

Left In: 32.411+/-179.430  $\chi^2/\text{NDF}$ : 12.2/22

Left: -193.644+/-127.291  $\chi^2/\text{NDF}$ : 58.6/46

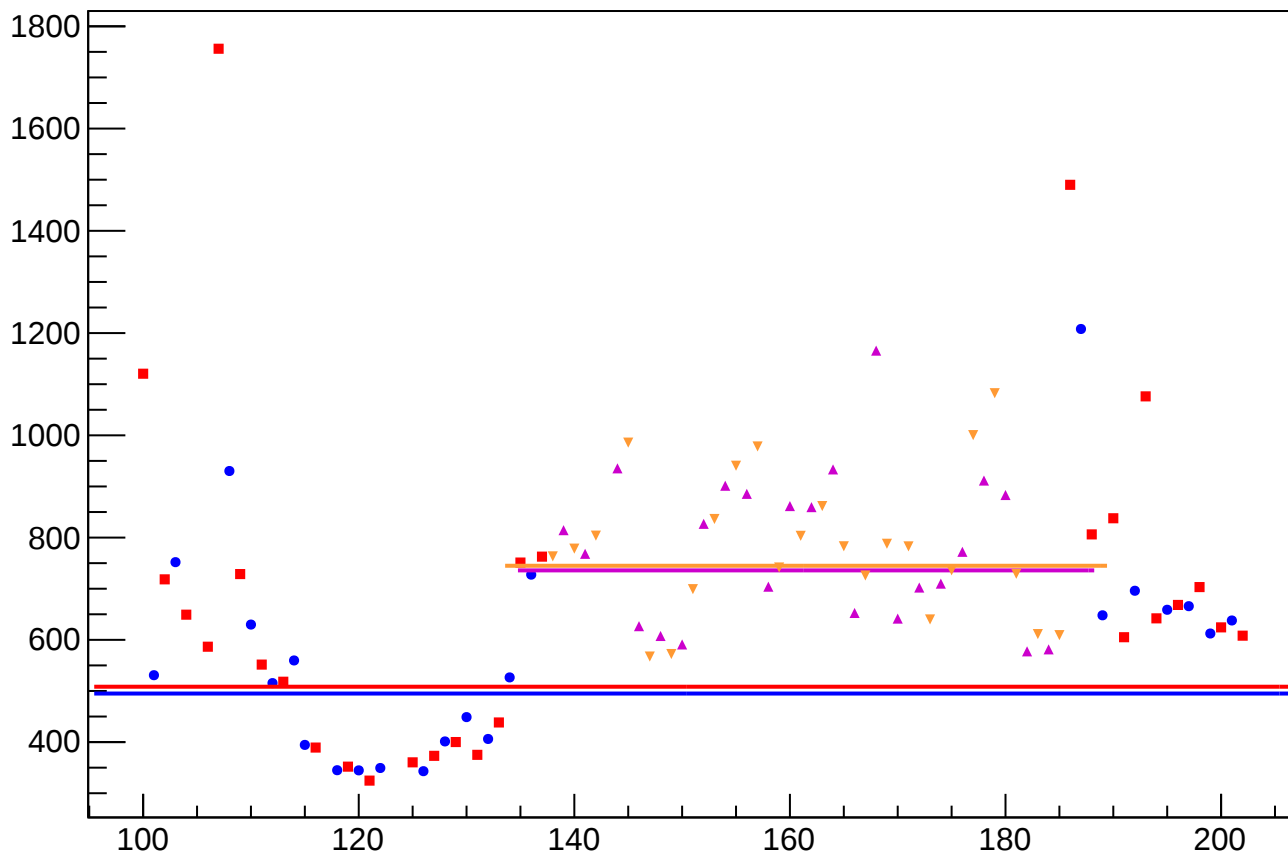
Right: -111.807+/-110.362  $\chi^2/\text{NDF}$ : 68.7/50

In: -79.446+/-118.346  $\chi^2/\text{NDF}$ : 47.1/45

Out: -213.453+/-117.508  $\chi^2/\text{NDF}$ : 79.7/51

All: -146.925+/-83.385  $\chi^2/\text{NDF}$ : 127.5/97

asym\_left\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 494.981+/-0.111  $\chi^2/\text{NDF}$ : 1774282.4/22

Left Out: 744.909+/-0.128  $\chi^2/\text{NDF}$ : 1008847.7/23

Right Out: 508.316+/-0.109  $\chi^2/\text{NDF}$ : 2700565.6/27

Left In: 735.850+/-0.127  $\chi^2/\text{NDF}$ : 1105405.5/22

Left: 740.350+/-0.090  $\chi^2/\text{NDF}$ : 2116785.5/46

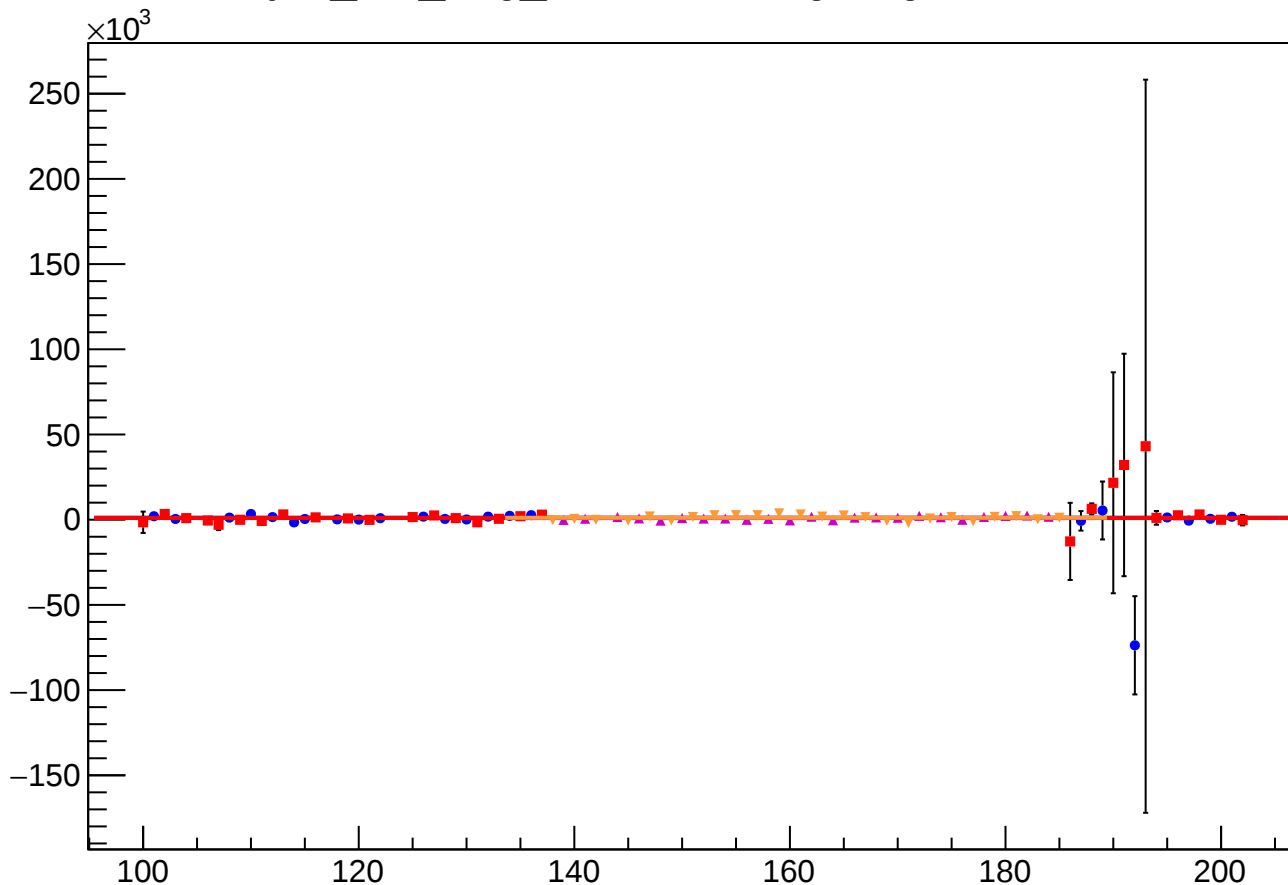
Right: 501.765+/-0.078  $\chi^2/\text{NDF}$ : 4482145.6/50

In: 599.765+/-0.084  $\chi^2/\text{NDF}$ : 4915923.2/45

Out: 608.468+/-0.083  $\chi^2/\text{NDF}$ : 5688641.6/51

All: 604.147+/-0.059  $\chi^2/\text{NDF}$ : 10610010.3/97

# asym\_left\_avg\_mean vs Slug, Sign Corrected



Right In: 1161.209 $\pm$ 287.019  $\chi^2$ /NDF: 19.3/22

Left Out: 1137.936 $\pm$ 228.834  $\chi^2$ /NDF:38.9/23

Right Out: 1012.457 $\pm$ 284.712  $\chi^2$ /NDF: 28.2/27

Left In: 941.702 $\pm$ 228.324  $\chi^2$ /NDF:14.8/22

Left: 1039.600 $\pm$ 161.629  $\chi^2$ /NDF: 54.0/46

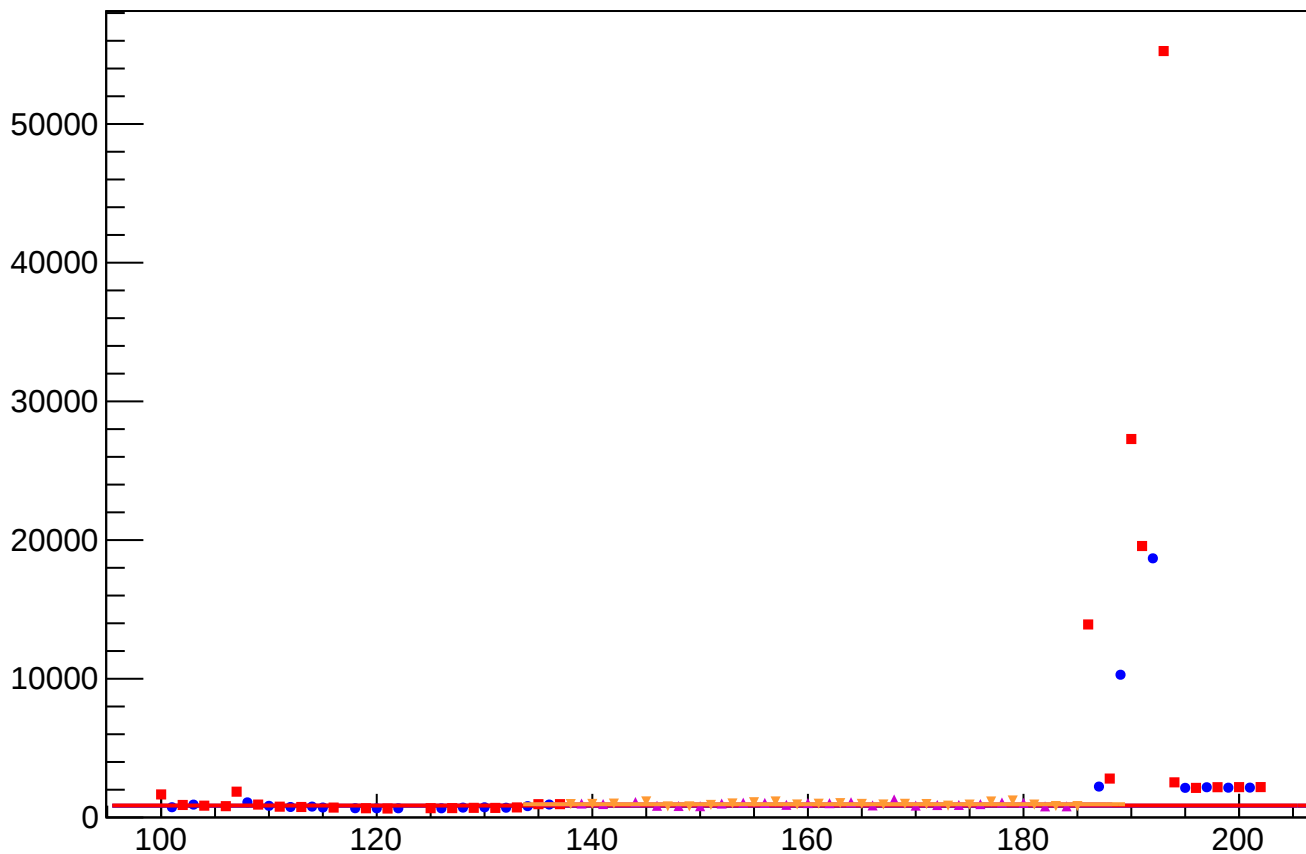
Right: 1086.233 $\pm$ 202.132  $\chi^2$ /NDF: 47.5/50

In: 1026.775 $\pm$ 178.683  $\chi^2$ /NDF:34.4/45

Out: 1088.690 $\pm$ 178.364  $\chi^2$ /NDF:67.2/51

All: 1057.788 $\pm$ 126.235  $\chi^2$ /NDF: 101.6/97

# asym\_left\_avg\_rms vs Slug, Sign Corrected



Right In: 842.385+/-0.203  $\chi^2/\text{NDF}$ : 4326585.3/22

Left Out: 954.333+/-0.162  $\chi^2/\text{NDF}$ : 460147.5/23

Right Out: 861.399+/-0.201  $\chi^2/\text{NDF}$ : 5252688.2/27

Left In: 946.573+/-0.161  $\chi^2/\text{NDF}$ : 501366.9/22

Left: 950.444+/-0.114  $\chi^2/\text{NDF}$ : 962667.1/46

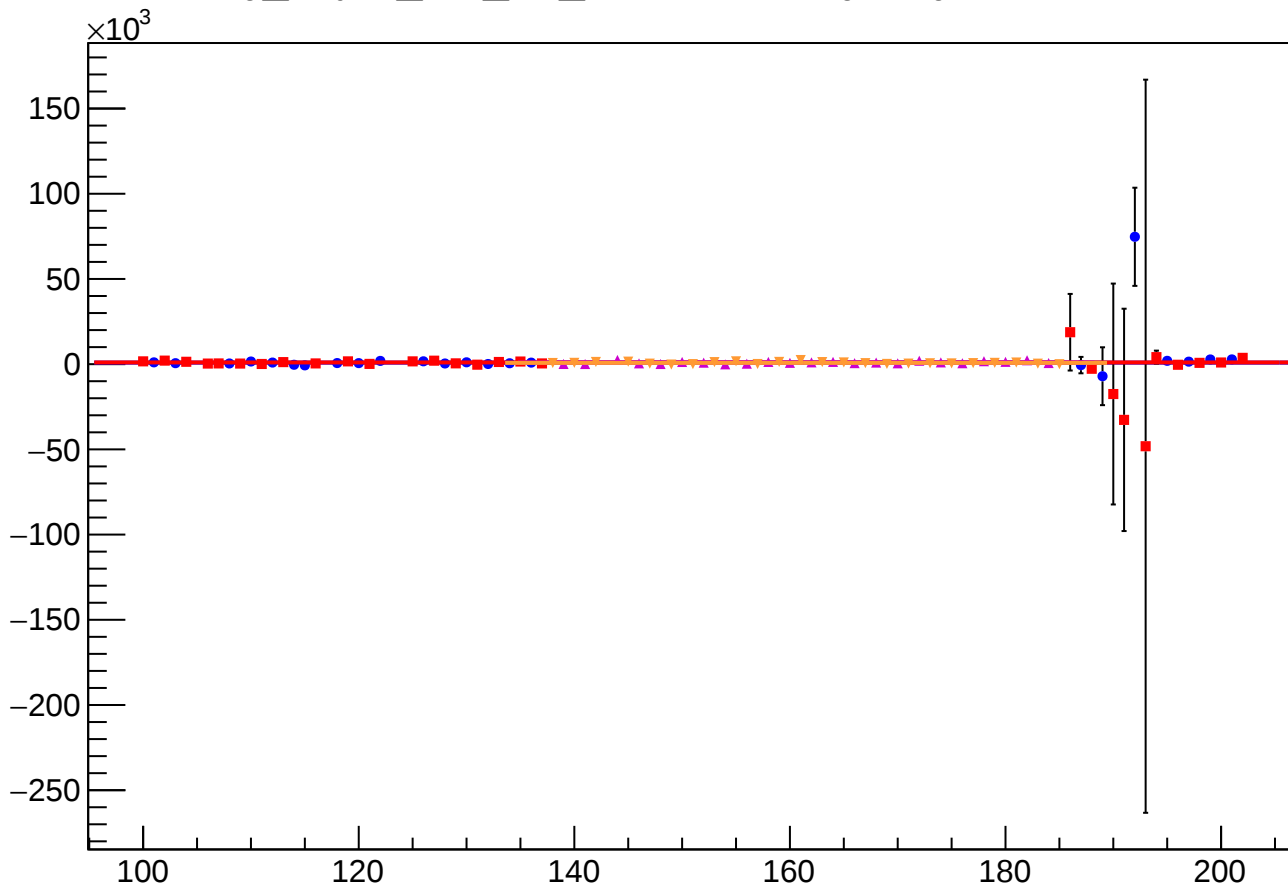
Right: 851.969+/-0.143  $\chi^2/\text{NDF}$ : 9583697.5/50

In: 906.194+/-0.126  $\chi^2/\text{NDF}$ : 4989350.8/45

Out: 917.860+/-0.126  $\chi^2/\text{NDF}$ : 5842296.9/51

All: 912.037+/-0.089  $\chi^2/\text{NDF}$ : 10835918.3/97

# reg\_asym\_left\_dd\_mean vs Slug, Sign Corrected



Right In: 894.472 $\pm$ 212.468  $\chi^2$ /NDF: 14.7/22

Left Out: 757.642 $\pm$ 133.942  $\chi^2$ /NDF:21.0/23

Right Out: 1013.075 $\pm$ 204.349  $\chi^2$ /NDF: 17.0/27

Left In: 958.517 $\pm$ 134.824  $\chi^2$ /NDF:26.8/22

Left: 857.420 $\pm$ 95.022  $\chi^2$ /NDF: 49.0/46

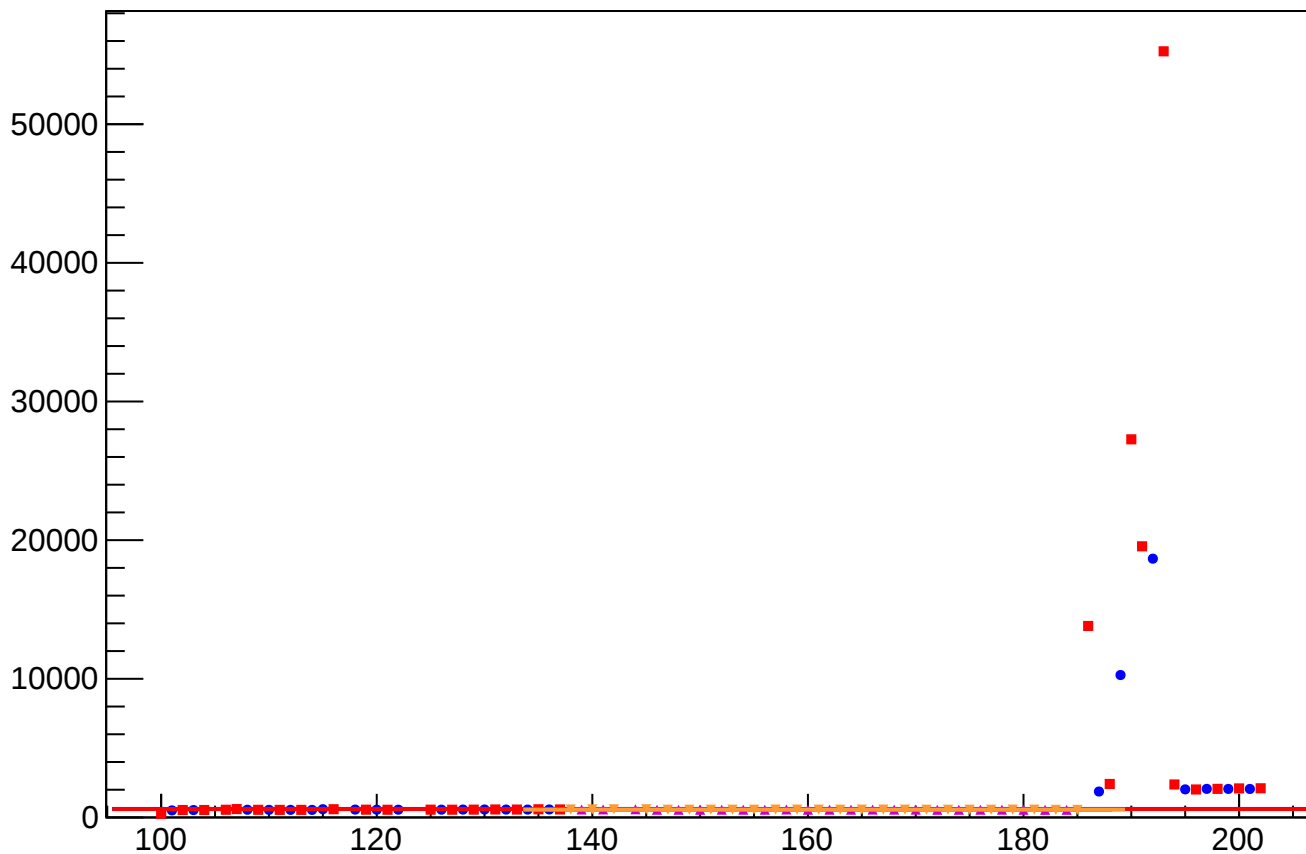
Right: 956.083 $\pm$ 147.283  $\chi^2$ /NDF: 31.8/50

In: 940.131 $\pm$ 113.839  $\chi^2$ /NDF:41.6/45

Out: 834.404 $\pm$ 112.023  $\chi^2$ /NDF:39.1/51

All: 886.417 $\pm$ 79.846  $\chi^2$ /NDF: 81.1/97

# reg\_asym\_left\_dd\_rms vs Slug, Sign Corrected



Right In: 613.356+/-0.150  $\chi^2/\text{NDF}$ : 4903596.2/22

Left Out: 563.675+/-0.095  $\chi^2/\text{NDF}$ : 9542.9/23

Right Out: 606.456+/-0.144  $\chi^2/\text{NDF}$ : 5898125.5/27

Left In: 563.934+/-0.095  $\chi^2/\text{NDF}$ : 9204.6/22

Left: 563.803+/-0.067  $\chi^2/\text{NDF}$ : 18751.3/46

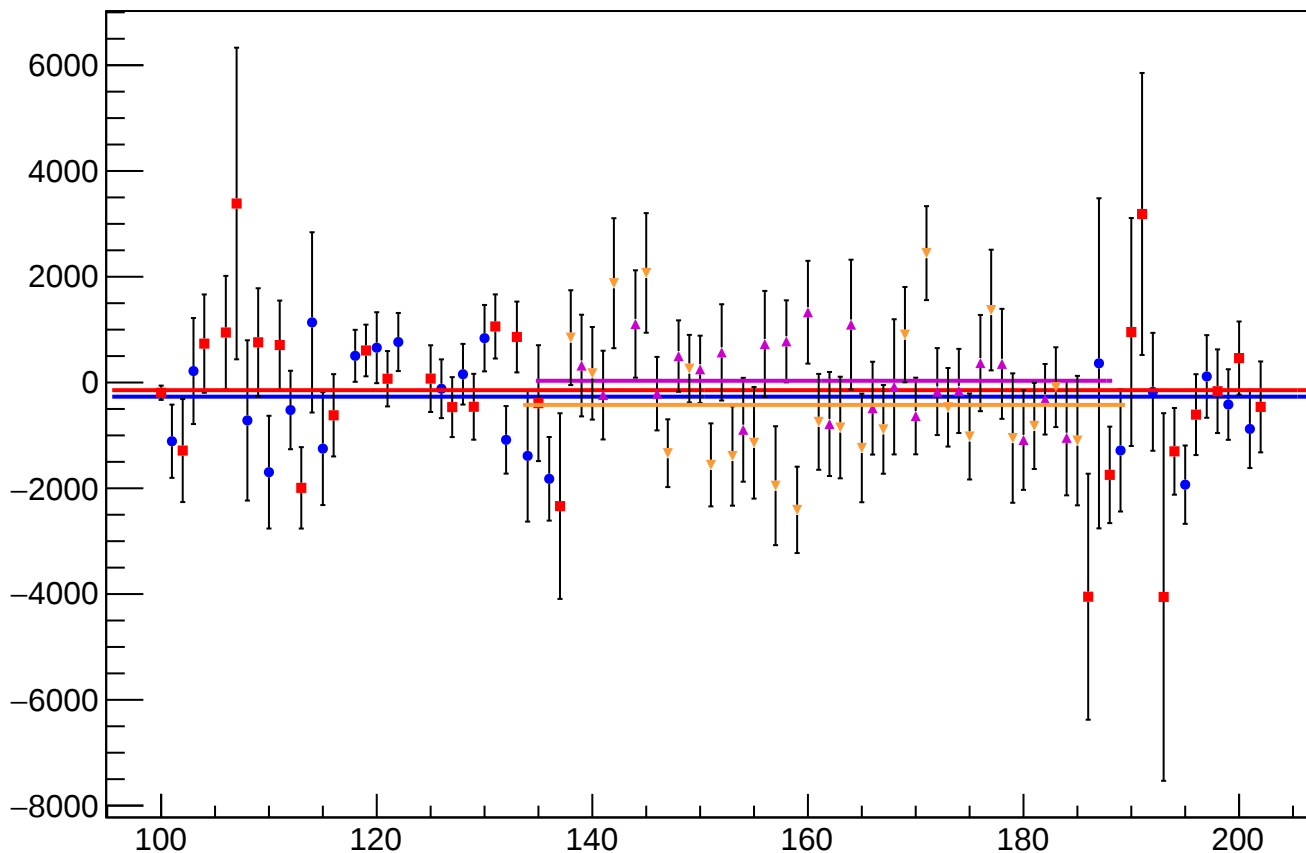
Right: 609.772+/-0.104  $\chi^2/\text{NDF}$ : 10802817.6/50

In: 578.122+/-0.080  $\chi^2/\text{NDF}$ : 4989950.3/45

Out: 576.531+/-0.079  $\chi^2/\text{NDF}$ : 5968983.8/51

All: 577.314+/-0.056  $\chi^2/\text{NDF}$ : 10959132.5/97

asym\_left\_dd\_correction\_mean vs Slug, Sign Corrected



Right In:  $-267.503 \pm 158.471$   $\chi^2/\text{NDF}$ : 30.0/22

Left Out:  $-422.324 \pm 180.531$   $\chi^2/\text{NDF}$ : 43.3/23

Right Out:  $-144.931 \pm 102.044$   $\chi^2/\text{NDF}$ : 36.1/27

Left In:  $33.325 \pm 179.355$   $\chi^2/\text{NDF}$ : 12.1/22

Left:  $-193.010 \pm 127.237$   $\chi^2/\text{NDF}$ : 58.6/46

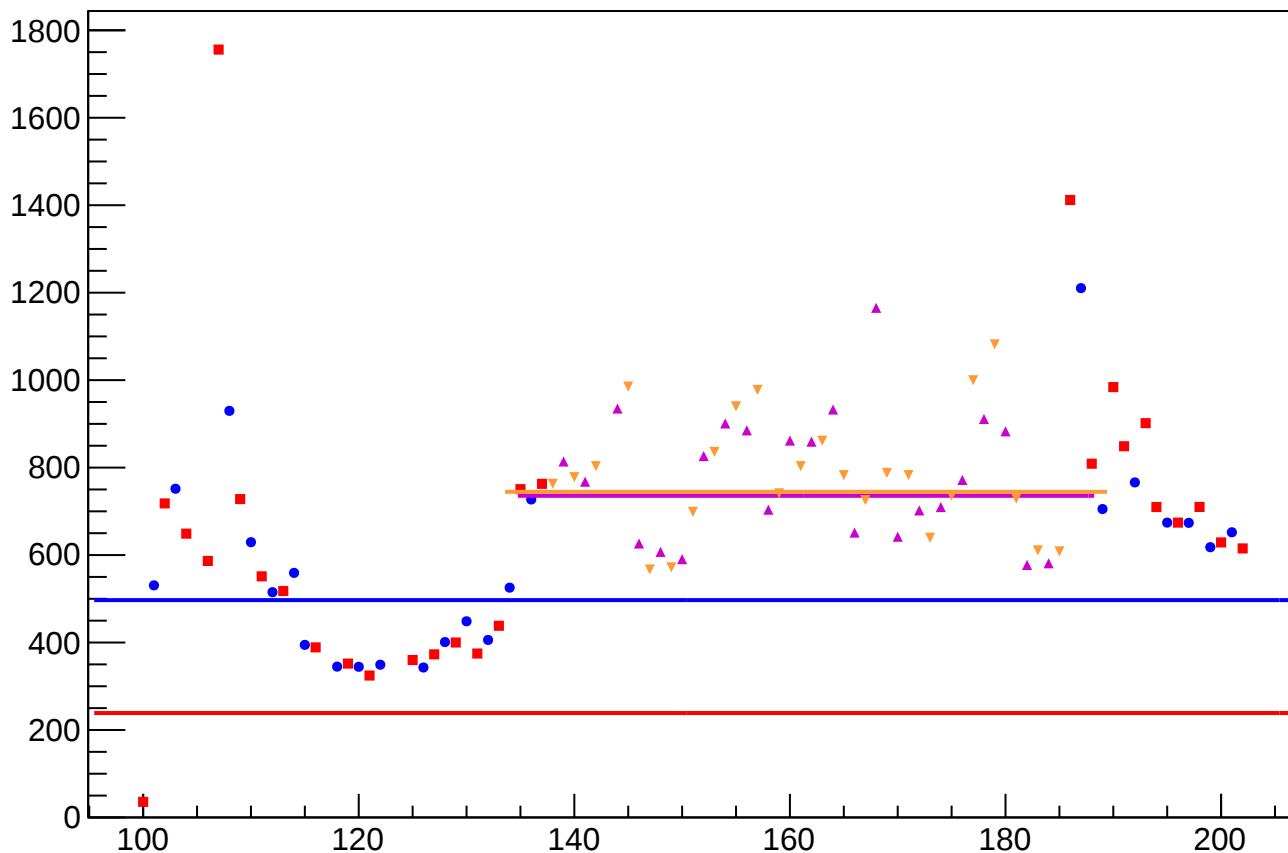
Right:  $-180.858 \pm 85.795$   $\chi^2/\text{NDF}$ : 66.6/50

In:  $-135.615 \pm 118.756$   $\chi^2/\text{NDF}$ : 43.7/45

Out:  $-212.098 \pm 88.835$   $\chi^2/\text{NDF}$ : 81.2/51

All:  $-184.656 \pm 71.135$   $\chi^2/\text{NDF}$ : 125.1/97

asym\_left\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 497.004 $\pm$ 0.112  $\chi^2$ /NDF: 1879483.5/22

Left Out: 744.597 $\pm$ 0.128  $\chi^2$ /NDF: 1009604.0/23

Right Out: 238.818 $\pm$ 0.072  $\chi^2$ /NDF: 13337319.3/27

Left In: 735.543 $\pm$ 0.127  $\chi^2$ /NDF: 1105222.3/22

Left: 740.040 $\pm$ 0.090  $\chi^2$ /NDF: 2117358.1/46

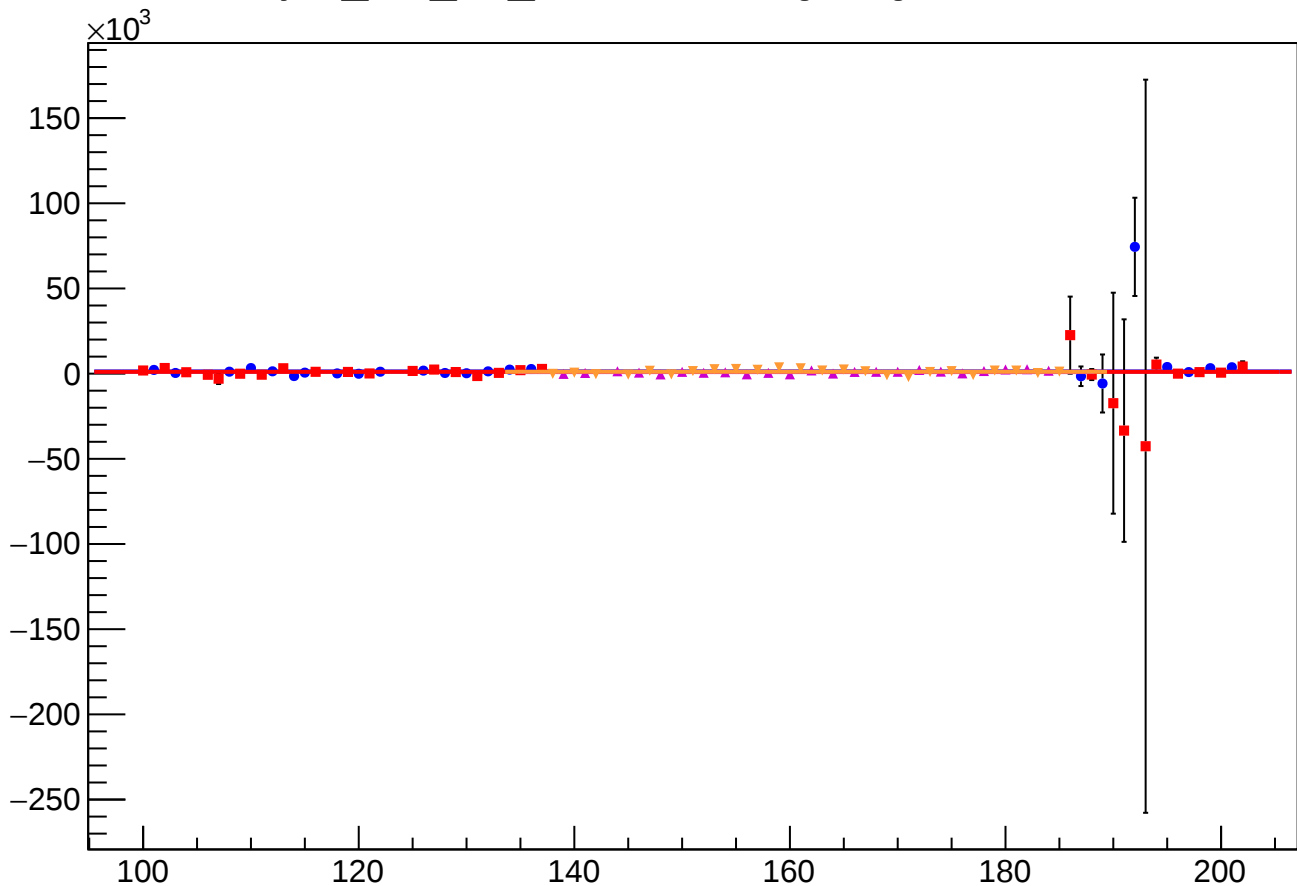
Right: 314.494 $\pm$ 0.061  $\chi^2$ /NDF: 18969535.9/50

In: 601.583 $\pm$ 0.084  $\chi^2$ /NDF: 4971421.5/45

Out: 361.285 $\pm$ 0.063  $\chi^2$ /NDF: 26243916.3/51

All: 447.503 $\pm$ 0.050  $\chi^2$ /NDF: 36465966.7/97

# asym\_left\_dd\_mean vs Slug, Sign Corrected



Right In: 1289.303 $\pm$ 286.884  $\chi^2$ /NDF: 21.6/22

Left Out: 1105.144 $\pm$ 228.700  $\chi^2$ /NDF:38.3/23

Right Out: 1061.813 $\pm$ 273.303  $\chi^2$ /NDF: 26.4/27

Left In: 926.281 $\pm$ 228.196  $\chi^2$ /NDF:15.1/22

Left: 1015.515 $\pm$ 161.537  $\chi^2$ /NDF: 53.7/46

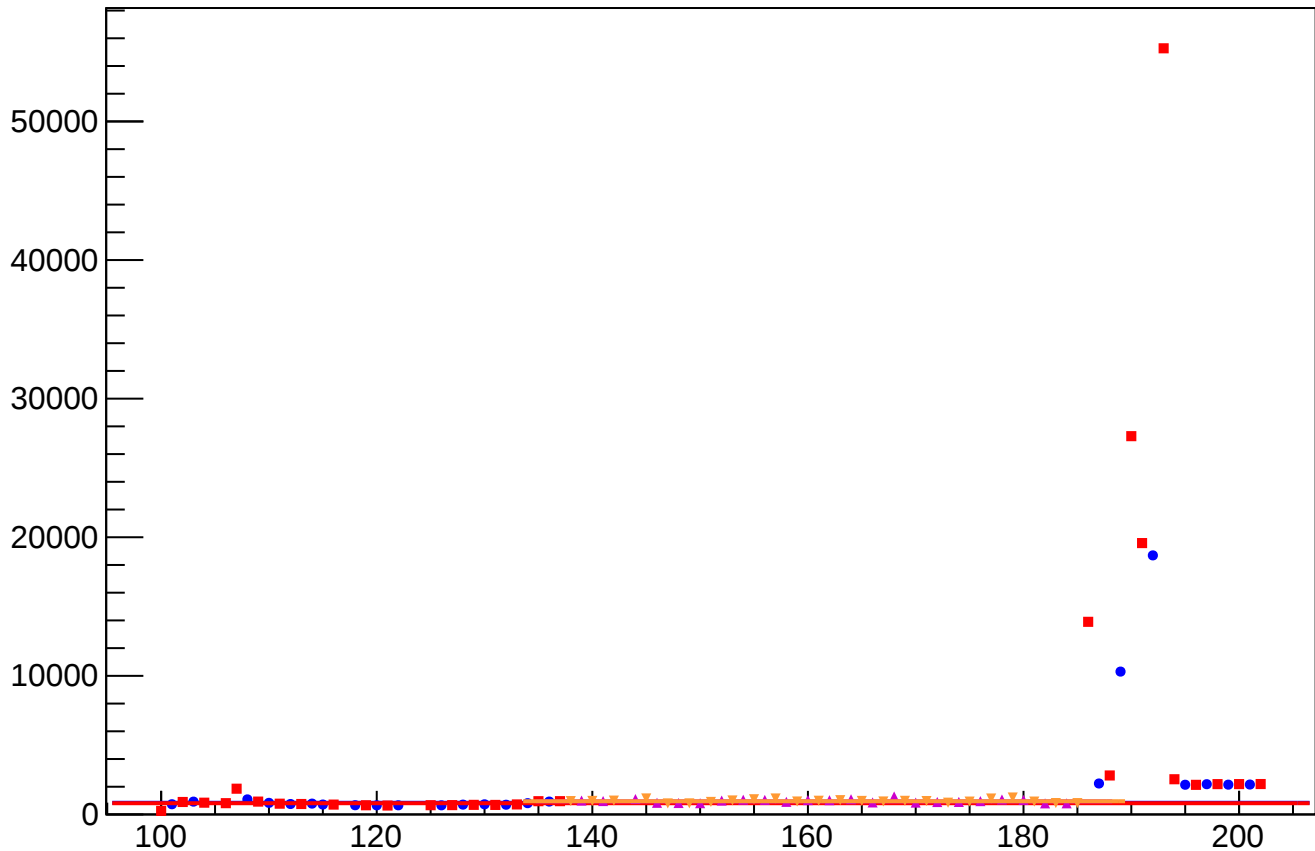
Right: 1170.046 $\pm$ 197.881  $\chi^2$ /NDF: 48.3/50

In: 1066.959 $\pm$ 178.589  $\chi^2$ /NDF:37.7/45

Out: 1087.299 $\pm$ 175.393  $\chi^2$ /NDF:64.6/51

All: 1077.313 $\pm$ 125.136  $\chi^2$ /NDF: 102.3/97

# asym\_left\_dd\_rms vs Slug, Sign Corrected



Right In: 841.703+/-0.203     $\chi^2/\text{NDF}$ : 4338631.1/22

Left Out: 953.781+/-0.162     $\chi^2/\text{NDF}$ : 460211.0/23

Right Out: 811.151+/-0.193     $\chi^2/\text{NDF}$ : 5944176.6/27

Left In: 946.041+/-0.161     $\chi^2/\text{NDF}$ : 501442.7/22

Left: 949.902+/-0.114     $\chi^2/\text{NDF}$ : 962801.6/46

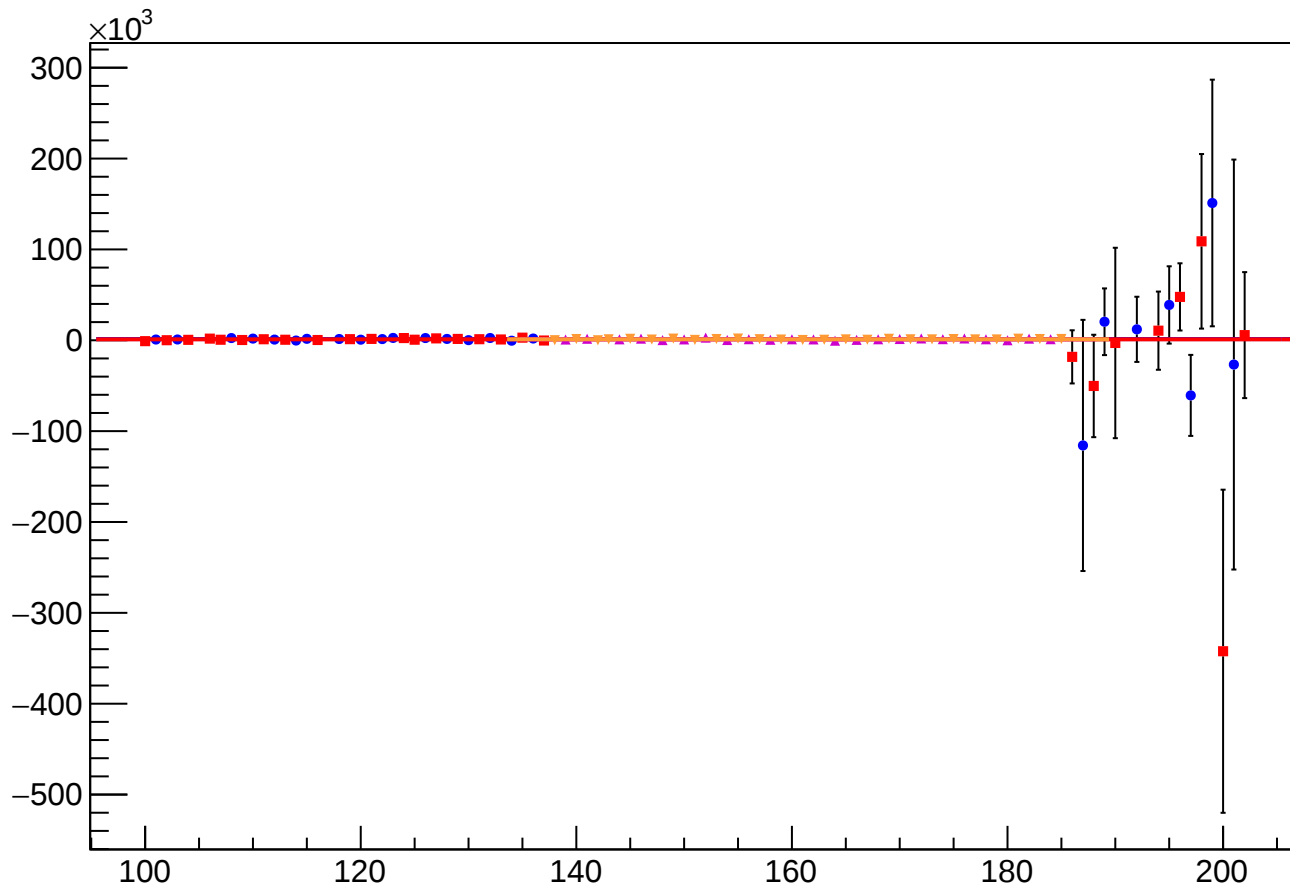
Right: 825.686+/-0.140     $\chi^2/\text{NDF}$ : 10294698.5/50

In: 905.608+/-0.126     $\chi^2/\text{NDF}$ : 5002103.4/45

Out: 895.039+/-0.124     $\chi^2/\text{NDF}$ : 6724760.3/51

All: 900.228+/-0.088     $\chi^2/\text{NDF}$ : 11730428.8/97

# reg\_asym\_right\_avg\_mean vs Slug, Sign Corrected



Right In: 1324.696 $\pm$ 218.586  $\chi^2$ /NDF: 17.8/23

Left Out: 1073.626 $\pm$ 129.690  $\chi^2$ /NDF:15.1/24

Right Out: 1040.591 $\pm$ 212.064  $\chi^2$ /NDF: 21.4/26

Left In: 1123.857 $\pm$ 133.163  $\chi^2$ /NDF:30.0/22

Left: 1098.077 $\pm$ 92.908  $\chi^2$ /NDF: 45.2/47

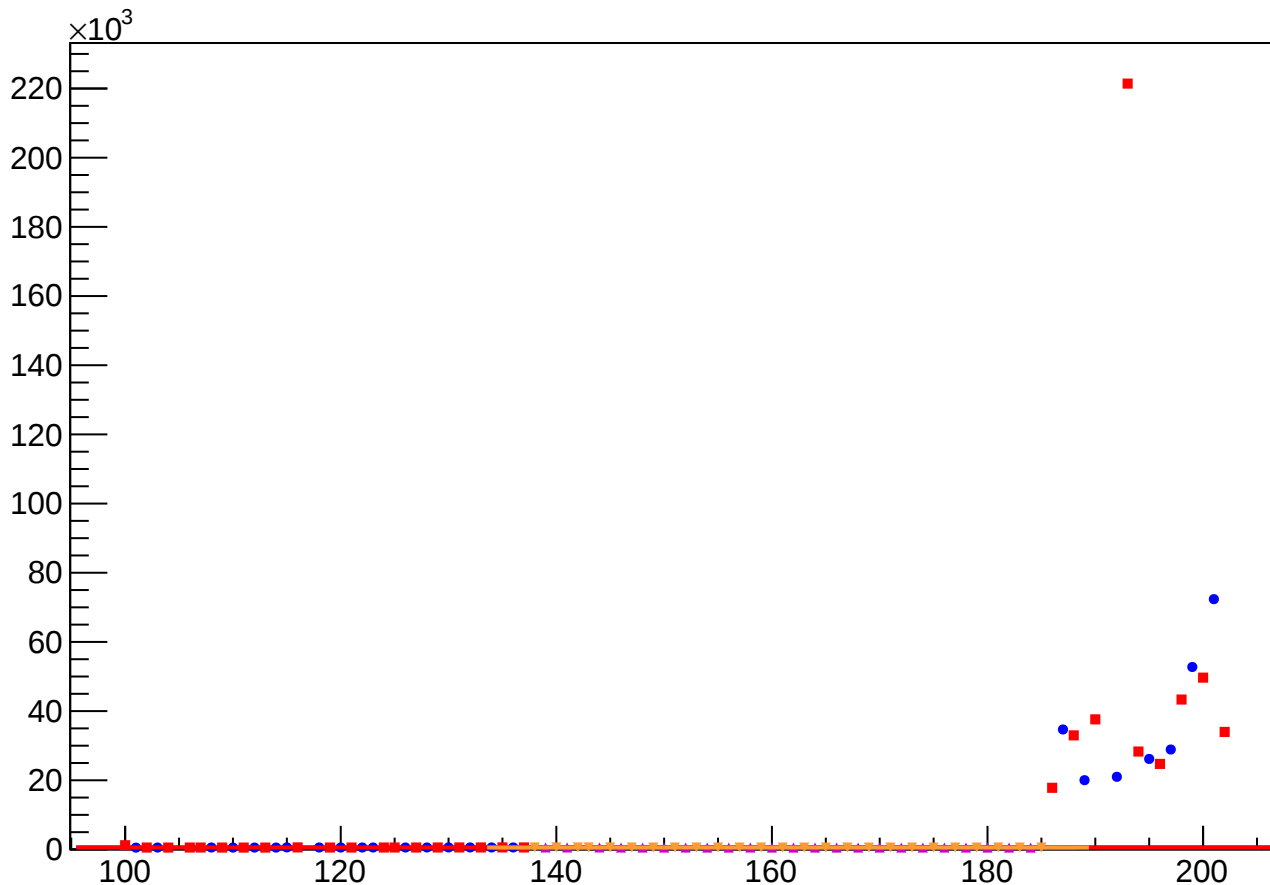
Right: 1178.342 $\pm$ 152.205  $\chi^2$ /NDF: 40.1/50

In: 1178.219 $\pm$ 113.722  $\chi^2$ /NDF:48.4/46

Out: 1064.634 $\pm$ 110.640  $\chi^2$ /NDF:36.5/51

All: 1119.866 $\pm$ 79.302  $\chi^2$ /NDF: 85.5/98

# reg\_asym\_right\_avg\_rms vs Slug, Sign Corrected



Right In: 566.669 $\pm$ 0.155  $\chi^2$ /NDF: 3481462.2/23

Left Out: 557.534 $\pm$ 0.092  $\chi^2$ /NDF:14752.8/24

Right Out: 568.972 $\pm$ 0.150  $\chi^2$ /NDF: 4558999.8/27

Left In: 556.969 $\pm$ 0.094  $\chi^2$ /NDF:11209.7/22

Left: 557.259 $\pm$ 0.066  $\chi^2$ /NDF: 25980.9/47

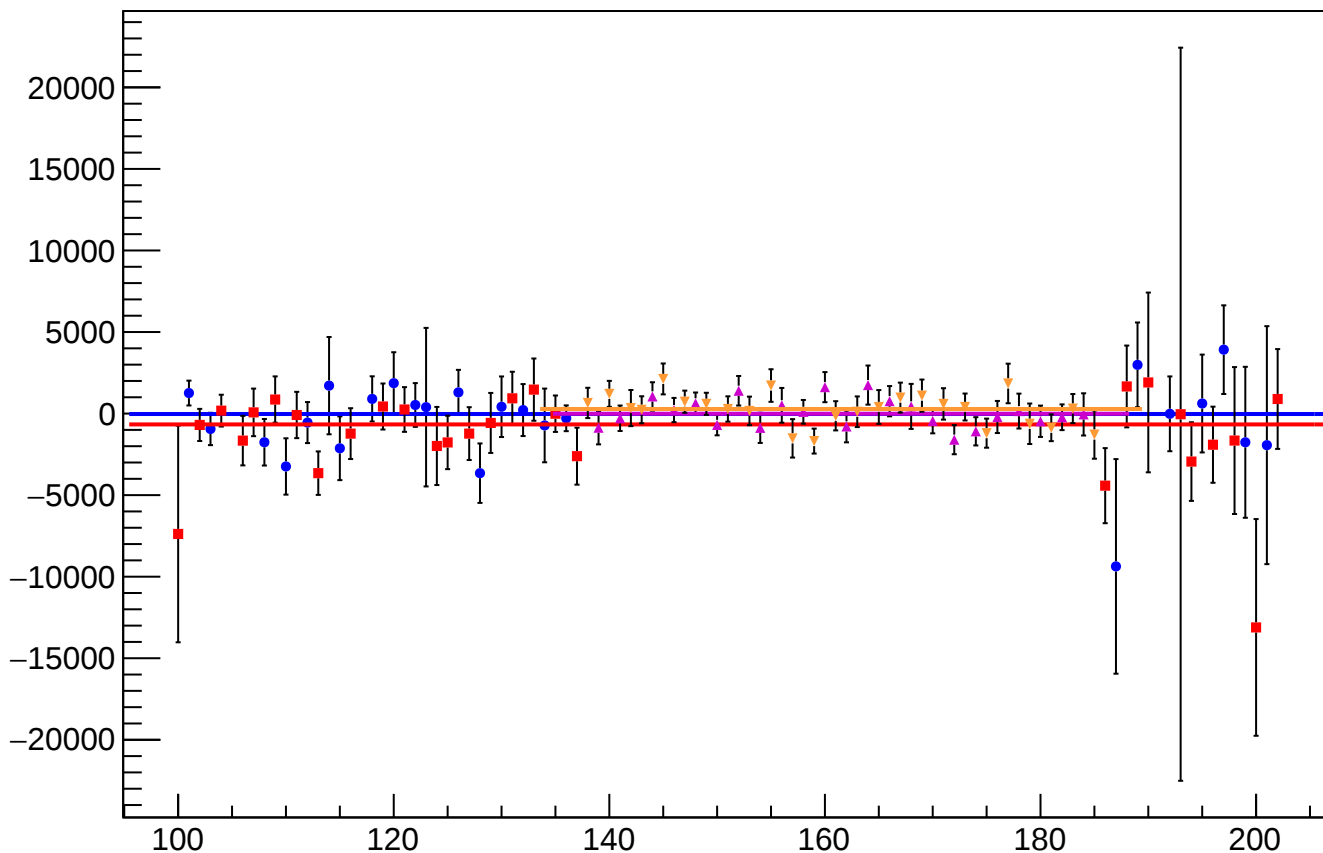
Right: 567.855 $\pm$ 0.108  $\chi^2$ /NDF: 8040576.4/51

In: 559.594 $\pm$ 0.080  $\chi^2$ /NDF:3495544.1/46

Out: 560.648 $\pm$ 0.078  $\chi^2$ /NDF:4577987.2/52

All: 560.135 $\pm$ 0.056  $\chi^2$ /NDF: 8073619.4/99

asym\_right\_avg\_correction\_mean vs Slug, Sign Corrected



Right In:  $-26.993 \pm 316.965$   $\chi^2/\text{NDF}: 22.8/23$

Left Out:  $281.875 \pm 180.423$   $\chi^2/\text{NDF}: 26.7/24$

Right Out:  $-664.618 \pm 317.240$   $\chi^2/\text{NDF}: 23.4/27$

Left In:  $-8.211 \pm 183.382$   $\chi^2/\text{NDF}: 20.2/22$

Left:  $139.190 \pm 128.612$   $\chi^2/\text{NDF}: 48.2/47$

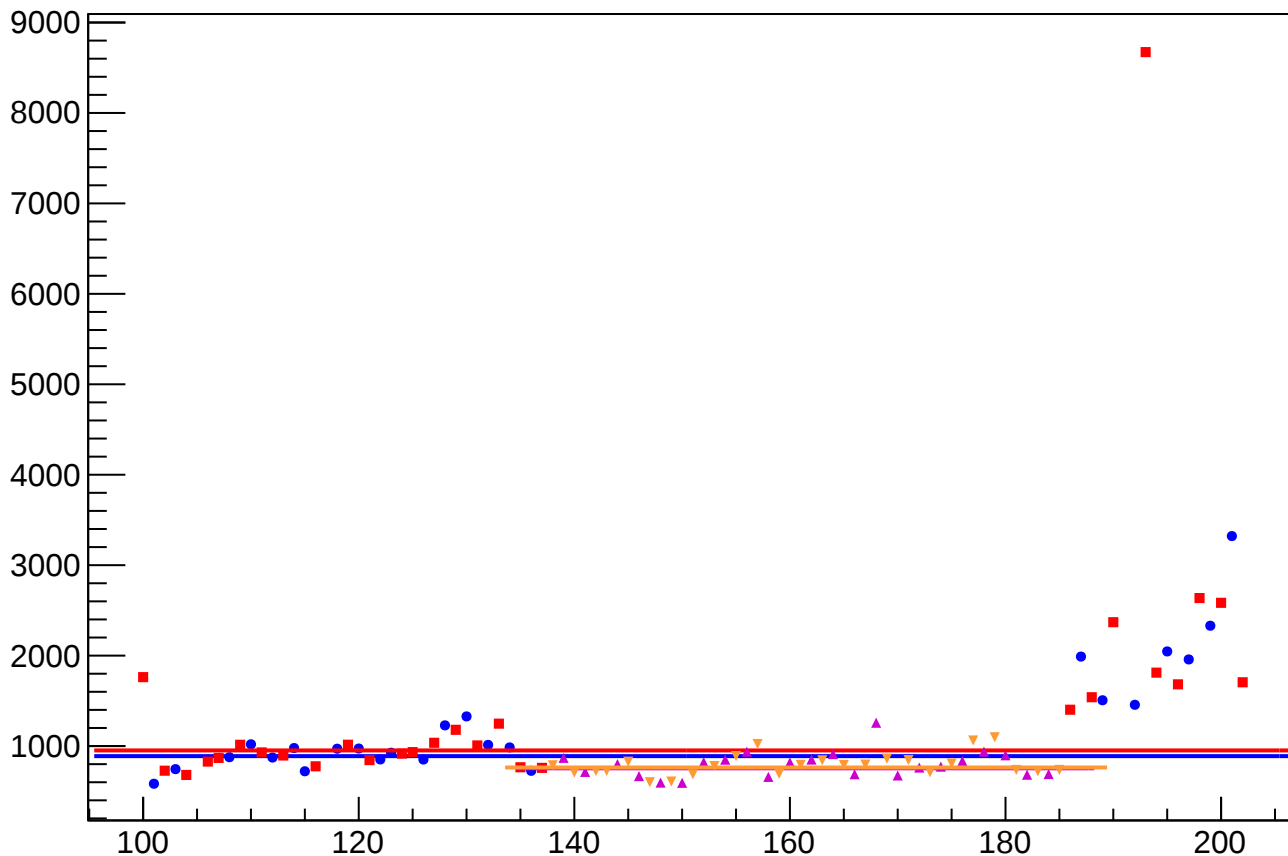
Right:  $-345.528 \pm 224.225$   $\chi^2/\text{NDF}: 48.3/51$

In:  $-12.921 \pm 158.730$   $\chi^2/\text{NDF}: 43.0/46$

Out:  $50.552 \pm 156.834$   $\chi^2/\text{NDF}: 56.9/52$

All:  $19.197 \pm 111.563$   $\chi^2/\text{NDF}: 99.9/99$

asym\_right\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 888.568+/-0.224  $\chi^2/\text{NDF}$ : 2003604.5/23

Left Out: 763.085+/-0.128  $\chi^2/\text{NDF}$ : 753700.1/24

Right Out: 951.816+/-0.224  $\chi^2/\text{NDF}$ : 2053902.1/27

Left In: 754.099+/-0.130  $\chi^2/\text{NDF}$ : 931829.3/22

Left: 758.665+/-0.091  $\chi^2/\text{NDF}$ : 1687969.6/47

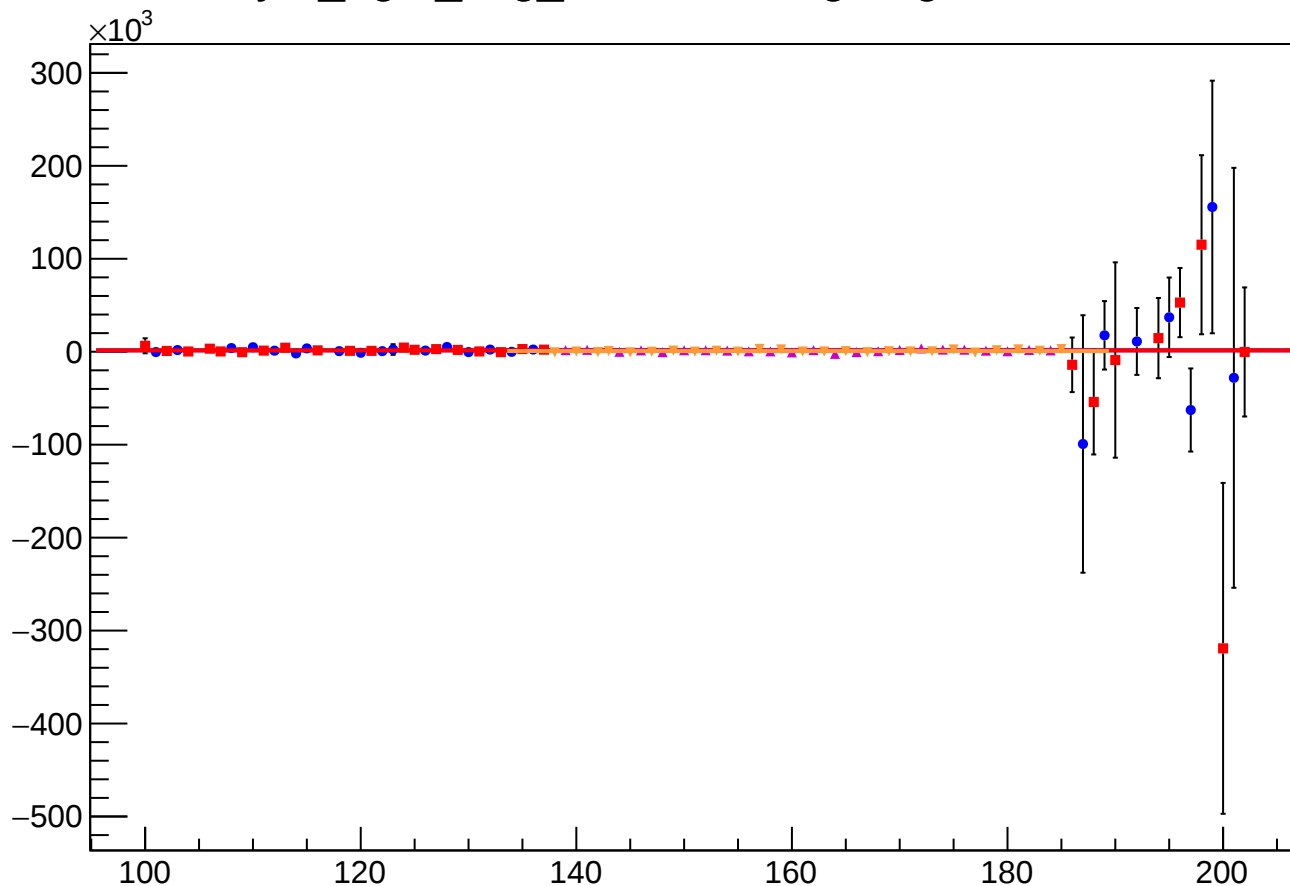
Right: 920.164+/-0.159  $\chi^2/\text{NDF}$ : 4097289.1/51

In: 787.821+/-0.112  $\chi^2/\text{NDF}$ : 3205122.6/46

Out: 809.211+/-0.111  $\chi^2/\text{NDF}$ : 3342453.8/52

All: 798.645+/-0.079  $\chi^2/\text{NDF}$ : 6565952.9/99

# asym\_right\_avg\_mean vs Slug, Sign Corrected



Right In: 1499.451+/-402.579  $\chi^2/\text{NDF}$ : 22.0/23

Left Out: 739.641+/-225.535  $\chi^2/\text{NDF}$ : 21.5/24

Right Out: 1489.282+/-400.616  $\chi^2/\text{NDF}$ : 19.9/26

Left In: 1124.587+/-230.065  $\chi^2/\text{NDF}$ : 25.4/22

Left: 928.287+/-161.055  $\chi^2/\text{NDF}$ : 48.3/47

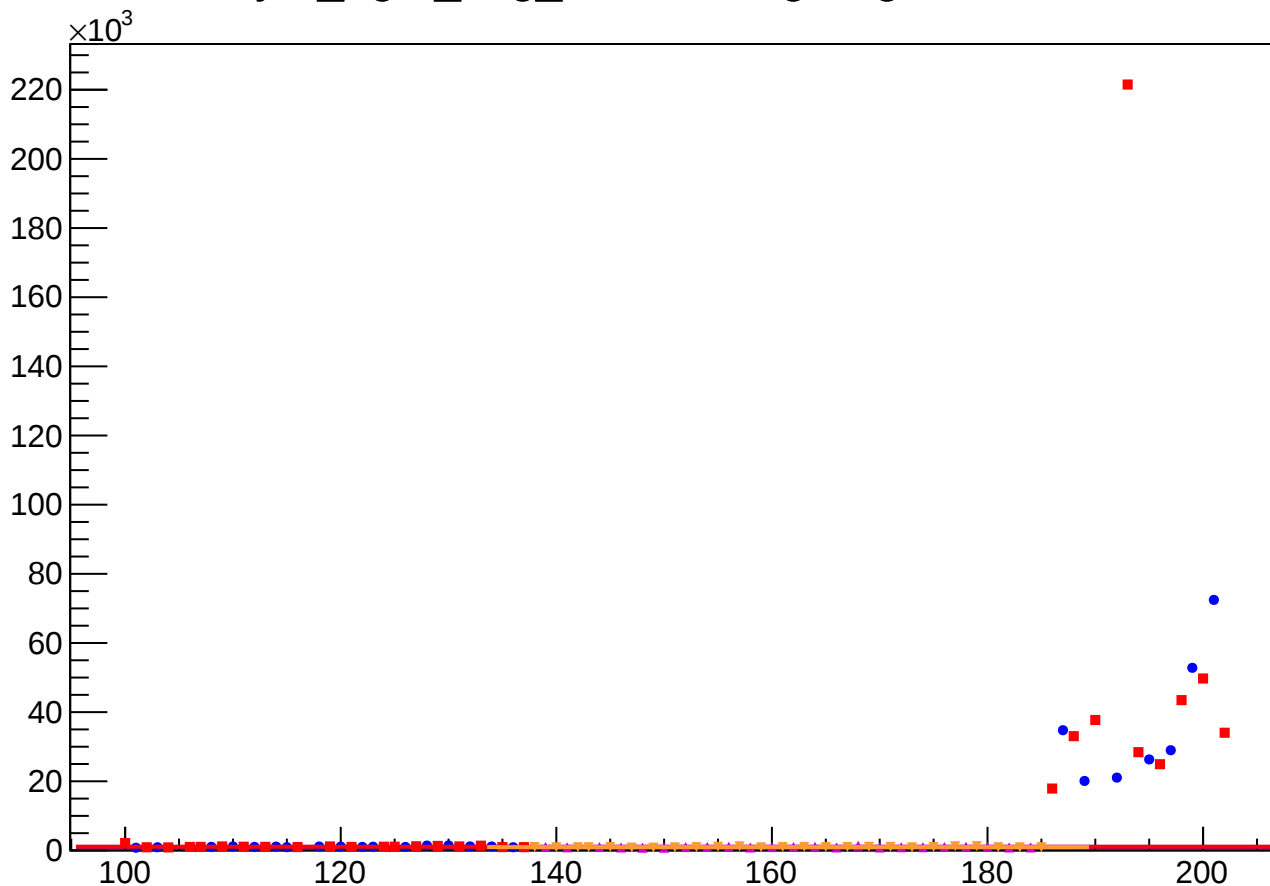
Right: 1494.342+/-283.970  $\chi^2/\text{NDF}$ : 41.9/50

In: 1216.873+/-199.748  $\chi^2/\text{NDF}$ : 48.0/46

Out: 920.051+/-196.531  $\chi^2/\text{NDF}$ : 44.1/51

All: 1066.053+/-140.092  $\chi^2/\text{NDF}$ : 93.2/98

# asym\_right\_avg\_rms vs Slug, Sign Corrected



Right In: 1032.454+/-0.285  $\chi^2/\text{NDF}$ : 3688140.1/23

Left Out: 962.256+/-0.159  $\chi^2/\text{NDF}$ : 362937.6/24

Right Out: 1070.617+/-0.283  $\chi^2/\text{NDF}$ : 4589312.0/27

Left In: 954.643+/-0.163  $\chi^2/\text{NDF}$ : 443395.0/22

Left: 958.525+/-0.114  $\chi^2/\text{NDF}$ : 807449.1/47

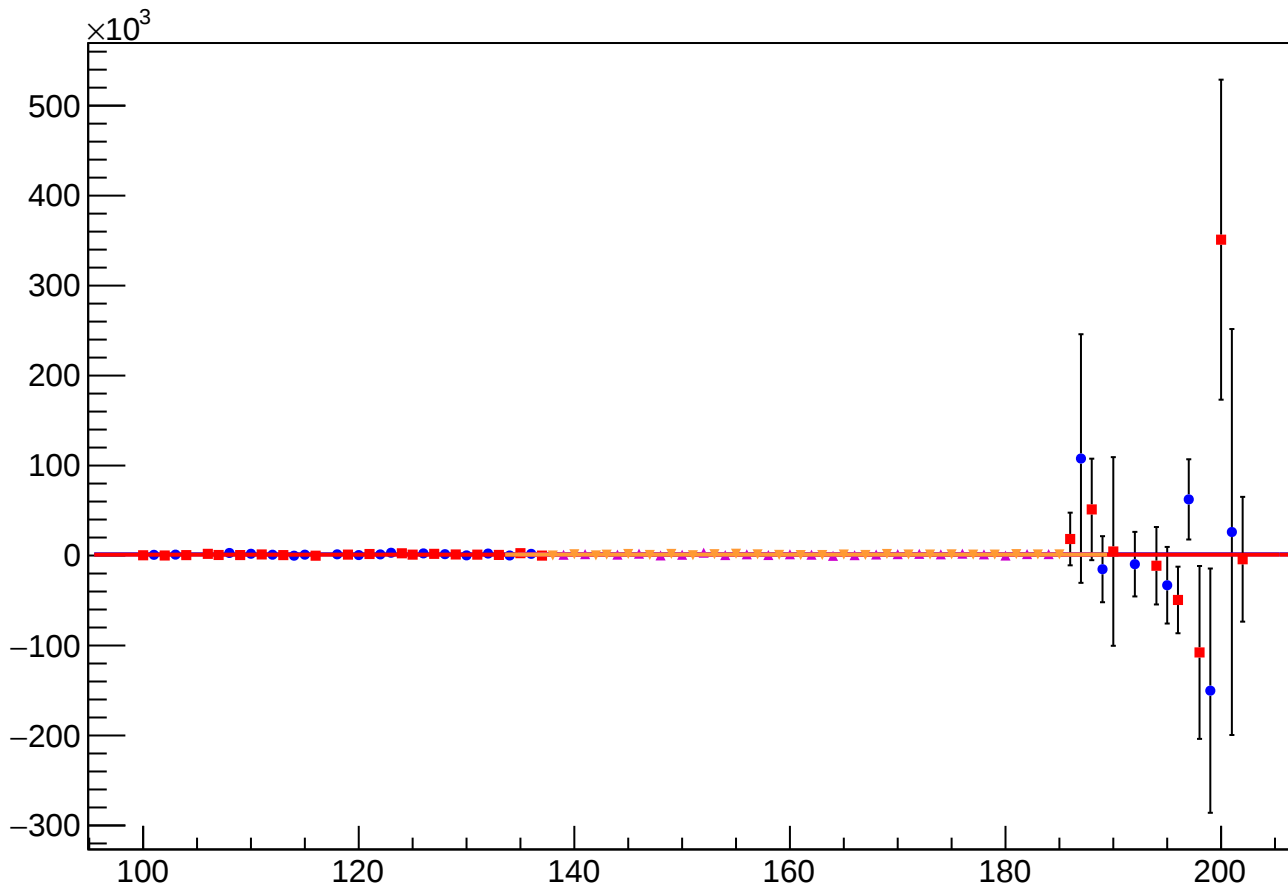
Right: 1051.629+/-0.201  $\chi^2/\text{NDF}$ : 8286482.4/51

In: 973.799+/-0.141  $\chi^2/\text{NDF}$ : 4187856.7/46

Out: 988.334+/-0.139  $\chi^2/\text{NDF}$ : 5063362.4/52

All: 981.185+/-0.099  $\chi^2/\text{NDF}$ : 9256599.9/99

# reg\_asym\_right\_dd\_mean vs Slug, Sign Corrected



Right In: 1344.866 $\pm$ 218.840  $\chi^2$ /NDF: 16.7/23

Left Out: 1087.627 $\pm$ 129.821  $\chi^2$ /NDF:14.9/24

Right Out: 965.058 $\pm$ 208.599  $\chi^2$ /NDF: 20.5/26

Left In: 1189.481 $\pm$ 133.313  $\chi^2$ /NDF:32.2/22

Left: 1137.202 $\pm$ 93.008  $\chi^2$ /NDF: 47.4/47

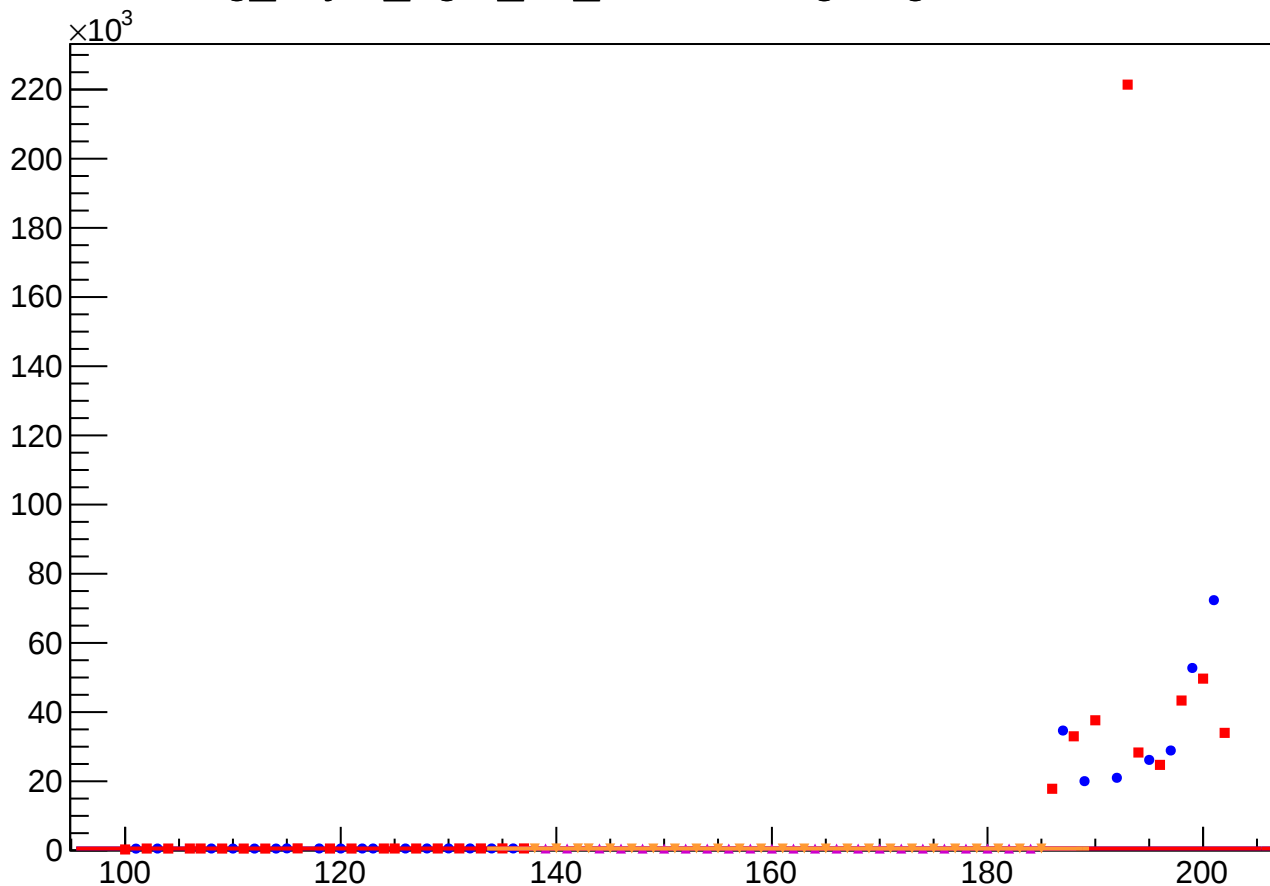
Right: 1145.867 $\pm$ 150.993  $\chi^2$ /NDF: 38.7/50

In: 1231.538 $\pm$ 113.852  $\chi^2$ /NDF:49.2/46

Out: 1053.407 $\pm$ 110.219  $\chi^2$ /NDF:35.7/51

All: 1139.586 $\pm$ 79.190  $\chi^2$ /NDF: 86.1/98

# reg\_asym\_right\_dd\_rms vs Slug, Sign Corrected



Right In: 567.328 $\pm$ 0.155  $\chi^2$ /NDF: 3481545.9/23

Left Out: 558.099 $\pm$ 0.092  $\chi^2$ /NDF: 14785.2/24

Right Out: 557.990 $\pm$ 0.148  $\chi^2$ /NDF: 4645902.4/27

Left In: 557.597 $\pm$ 0.094  $\chi^2$ /NDF: 11276.8/22

Left: 557.854 $\pm$ 0.066  $\chi^2$ /NDF: 26076.6/47

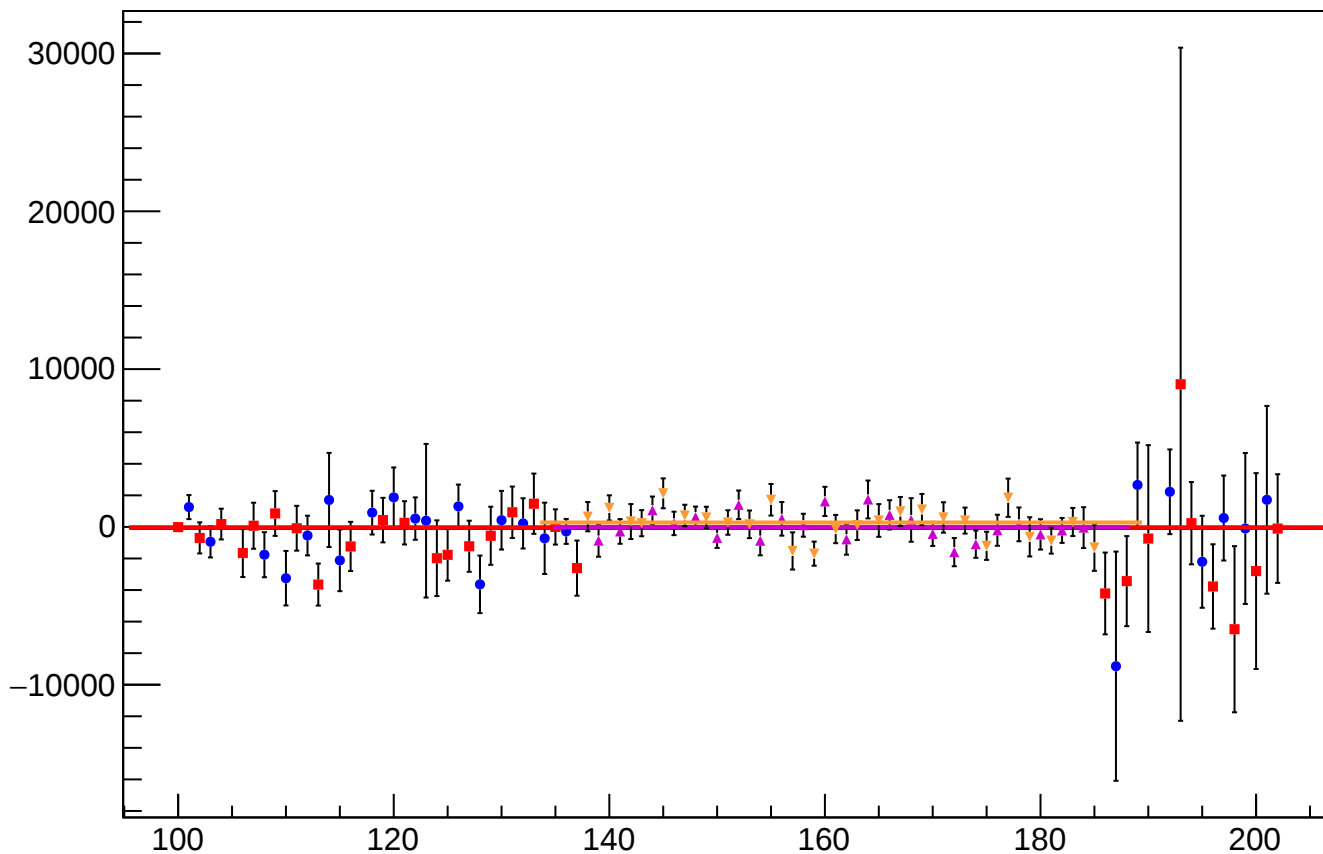
Right: 562.435 $\pm$ 0.107  $\chi^2$ /NDF: 8129356.3/51

In: 560.230 $\pm$ 0.081  $\chi^2$ /NDF: 3495707.2/46

Out: 558.069 $\pm$ 0.078  $\chi^2$ /NDF: 4660688.0/52

All: 559.114 $\pm$ 0.056  $\chi^2$ /NDF: 8156767.4/99

asym\_right\_dd\_correction\_mean vs Slug, Sign Corrected



Right In:  $-58.453 \pm 317.847$   $\chi^2/\text{NDF}$ : 20.9/23

Left Out:  $281.402 \pm 180.478$   $\chi^2/\text{NDF}$ : 26.8/24

Right Out:  $-22.875 \pm 38.933$   $\chi^2/\text{NDF}$ : 23.8/27

Left In:  $-7.306 \pm 183.473$   $\chi^2/\text{NDF}$ : 20.1/22

Left:  $139.424 \pm 128.663$   $\chi^2/\text{NDF}$ : 48.2/47

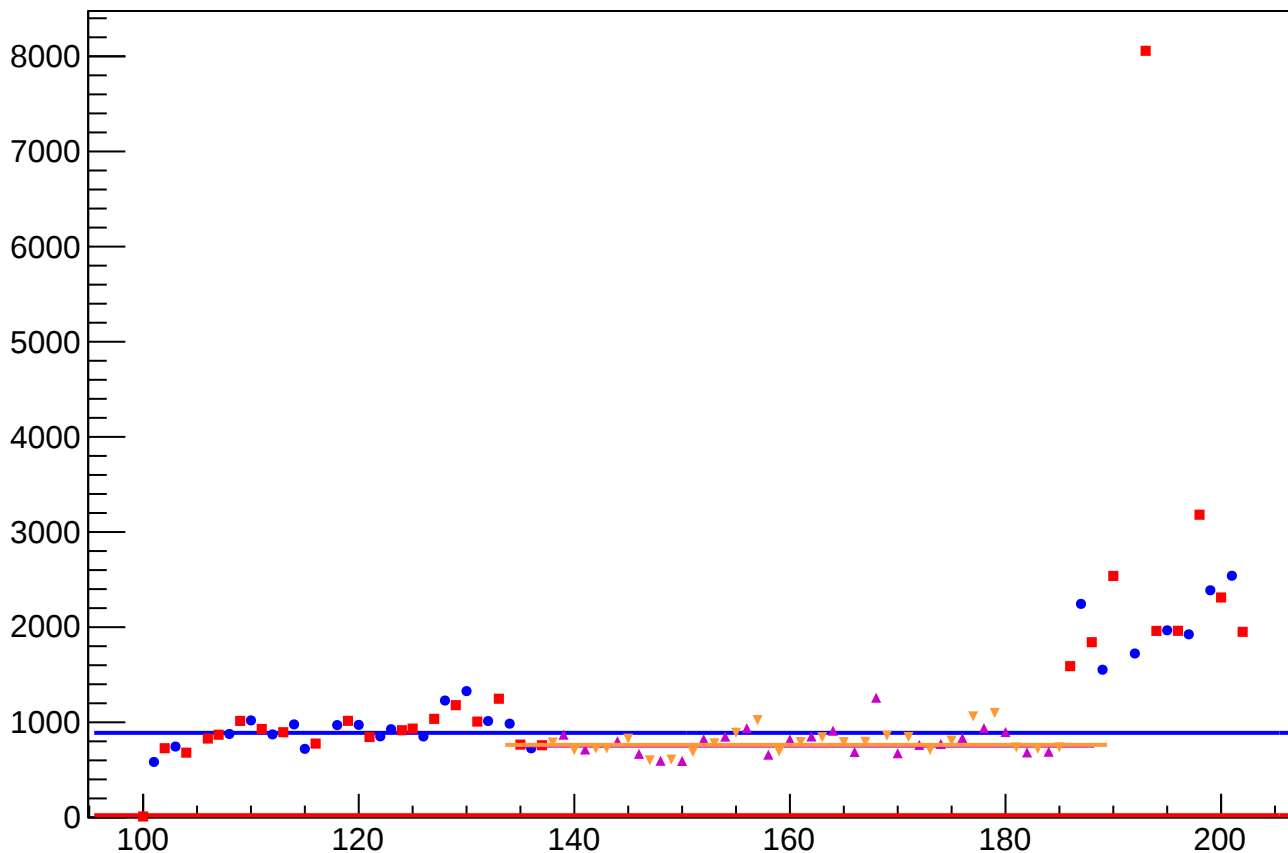
Right:  $-23.401 \pm 38.645$   $\chi^2/\text{NDF}$ : 44.8/51

In:  $-20.089 \pm 158.900$   $\chi^2/\text{NDF}$ : 41.1/46

Out:  $-9.345 \pm 38.058$   $\chi^2/\text{NDF}$ : 53.3/52

All:  $-9.928 \pm 37.011$   $\chi^2/\text{NDF}$ : 94.4/99

asym\_right\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 889.267+/-0.225

$\chi^2/\text{NDF}$ : 1993039.5/23

Left: 758.967+/-0.091

$\chi^2/\text{NDF}$ : 1687616.8/47

Left Out: 763.307+/-0.128

$\chi^2/\text{NDF}$ : 753728.9/24

Right: 36.744+/-0.027

$\chi^2/\text{NDF}$ : 36042685.9/51

Right Out: 23.953+/-0.028

$\chi^2/\text{NDF}$ : 19445539.1/27

In: 788.169+/-0.112

$\chi^2/\text{NDF}$ : 3194337.4/46

Left In: 754.483+/-0.130

$\chi^2/\text{NDF}$ : 931536.8/22

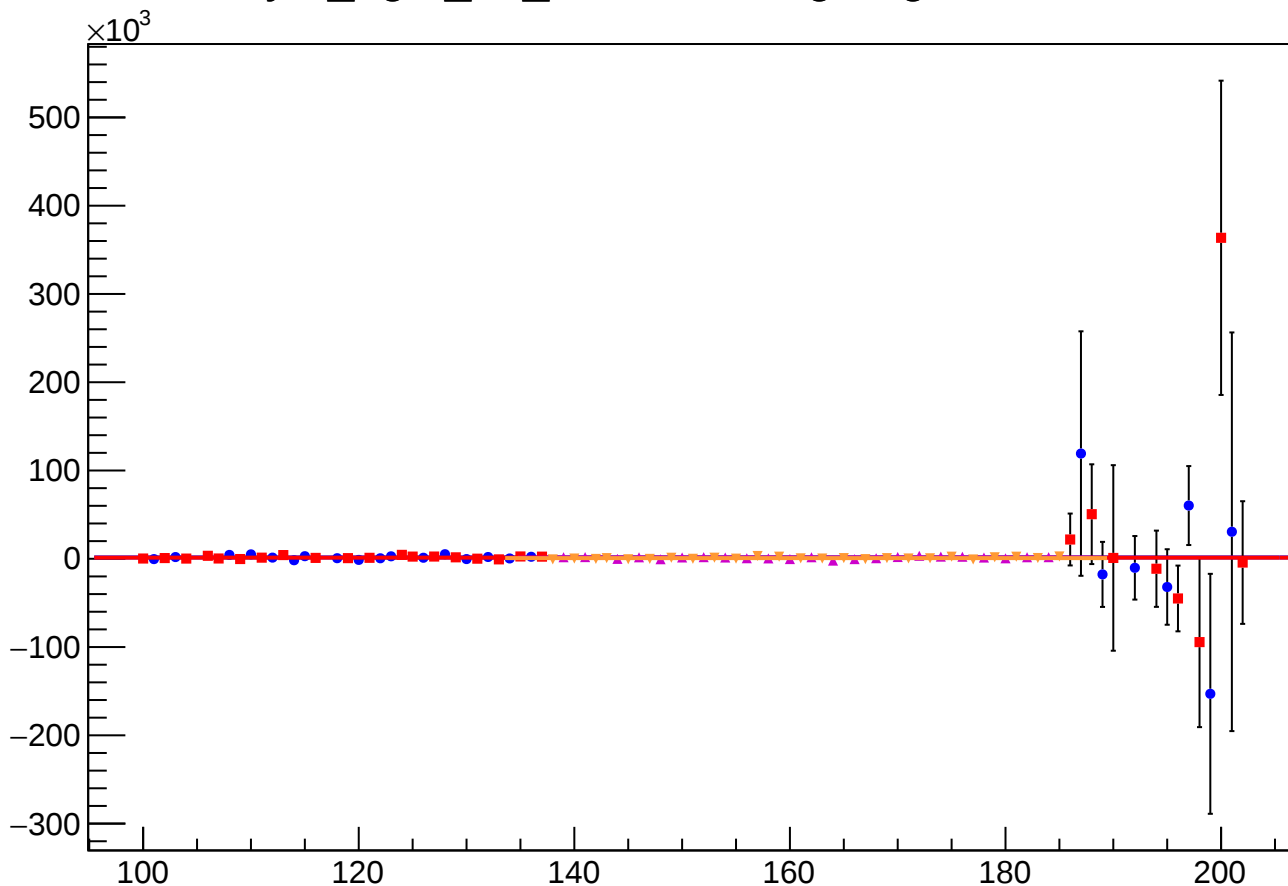
Out: 56.830+/-0.027

$\chi^2/\text{NDF}$ : 52271642.4/52

All: 96.507+/-0.026

$\chi^2/\text{NDF}$ : 95533701.0/99

# asym\_right\_dd\_mean vs Slug, Sign Corrected



Right In: 1517.249 $\pm$ 402.803  $\chi^2/\text{NDF}$ : 22.6/23

Left Out: 742.825 $\pm$ 225.658  $\chi^2/\text{NDF}$ : 20.2/24

Right Out: 1287.405 $\pm$ 376.595  $\chi^2/\text{NDF}$ : 20.4/26

Left In: 1176.288 $\pm$ 230.229  $\chi^2/\text{NDF}$ : 24.2/22

Left: 955.211 $\pm$ 161.156  $\chi^2/\text{NDF}$ : 46.3/47

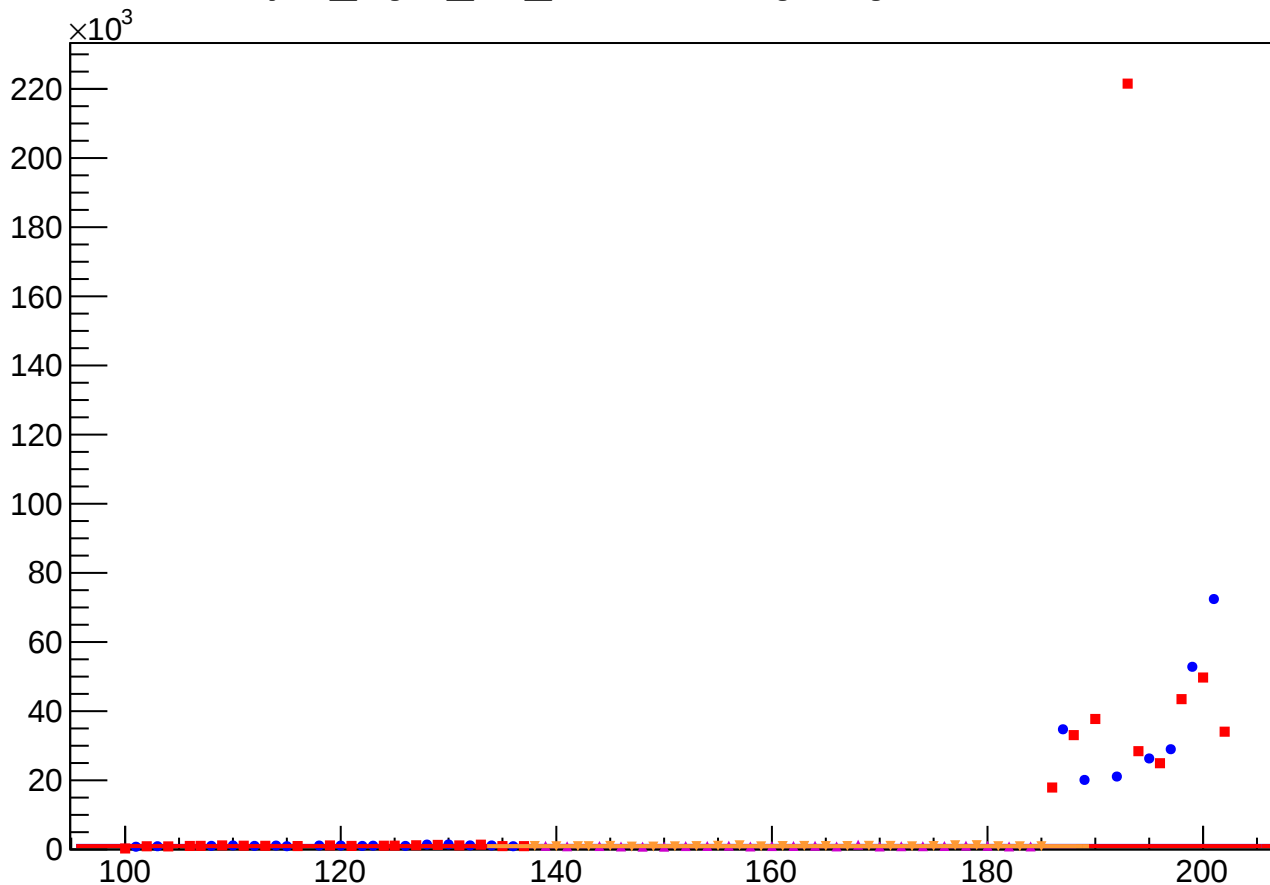
Right: 1394.607 $\pm$ 275.091  $\chi^2/\text{NDF}$ : 43.1/50

In: 1260.248 $\pm$ 199.883  $\chi^2/\text{NDF}$ : 47.3/46

Out: 886.698 $\pm$ 193.568  $\chi^2/\text{NDF}$ : 42.2/51

All: 1067.479 $\pm$ 139.052  $\chi^2/\text{NDF}$ : 91.3/98

# asym\_right\_dd\_rms vs Slug, Sign Corrected



Right In: 1033.033+/-0.285  $\chi^2/\text{NDF}$ : 3688320.6/23

Left Out: 962.776+/-0.160  $\chi^2/\text{NDF}$ : 362837.8/24

Right Out: 975.424+/-0.266  $\chi^2/\text{NDF}$ : 5455512.2/27

Left In: 955.331+/-0.163  $\chi^2/\text{NDF}$ : 443068.5/22

Left: 959.128+/-0.114  $\chi^2/\text{NDF}$ : 806973.3/47

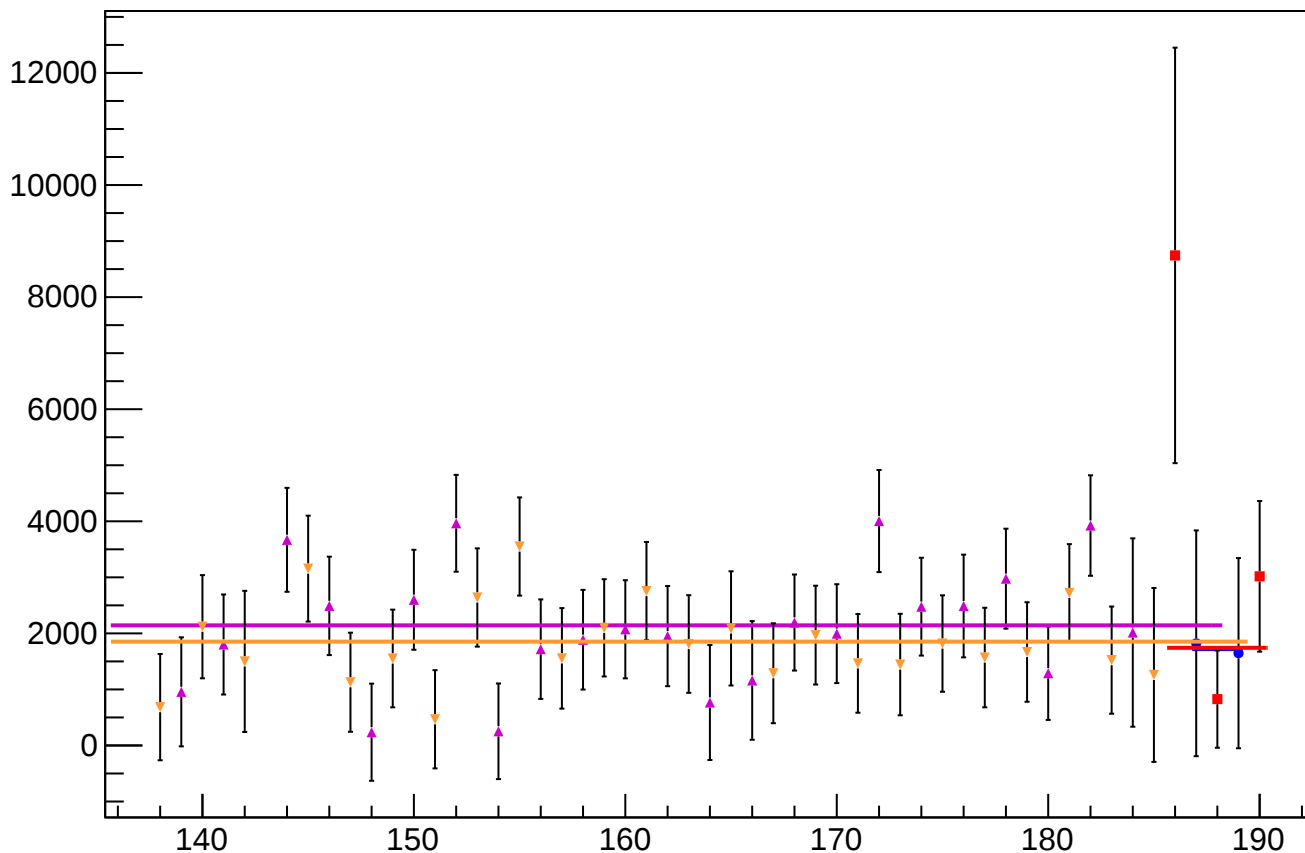
Right: 1002.294+/-0.195  $\chi^2/\text{NDF}$ : 9165662.0/51

In: 974.464+/-0.141  $\chi^2/\text{NDF}$ : 4187487.3/46

Out: 966.118+/-0.137  $\chi^2/\text{NDF}$ : 5820009.8/52

All: 970.157+/-0.098  $\chi^2/\text{NDF}$ : 10009296.8/99

cor\_asym\_us\_avg\_mean vs Slug, Sign Corrected



Right In: 1720.097 $\pm$ 1297.686  $\chi^2$ /NDF: 0.0/1

Left Out: 1852.926 $\pm$ 187.412  $\chi^2$ /NDF:15.0/23

Right Out: 1742.386 $\pm$ 715.276  $\chi^2$ /NDF: 5.6/2

Left In: 2143.254 $\pm$ 190.144  $\chi^2$ /NDF:32.4/22

Left: 1995.990 $\pm$ 133.476  $\chi^2$ /NDF: 48.5/46

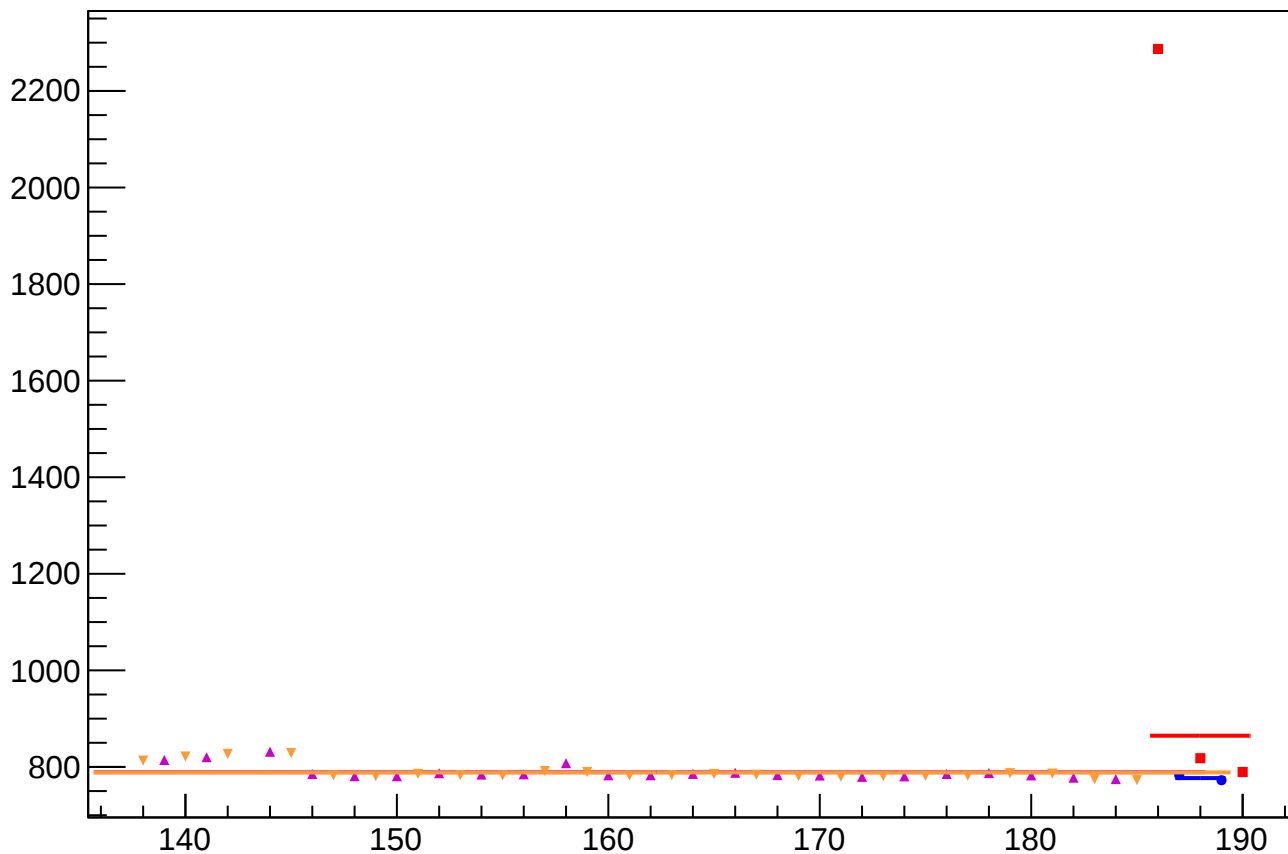
Right: 1737.192 $\pm$ 626.421  $\chi^2$ /NDF: 5.6/4

In: 2134.360 $\pm$ 188.135  $\chi^2$ /NDF:32.5/24

Out: 1845.825 $\pm$ 181.293  $\chi^2$ /NDF:20.6/26

All: 1984.750 $\pm$ 130.545  $\chi^2$ /NDF: 54.3/51

# cor\_asym\_us\_avg\_rms vs Slug, Sign Corrected



Right In: 776.892 $\pm$ 0.918  $\chi^2/\text{NDF}$ : 32.5/1

Left Out: 788.658 $\pm$ 0.133  $\chi^2/\text{NDF}$ : 11499.7/23

Right Out: 864.658 $\pm$ 0.506  $\chi^2/\text{NDF}$ : 306489.7/2

Left In: 789.176 $\pm$ 0.134  $\chi^2/\text{NDF}$ : 10860.4/22

Left: 788.914 $\pm$ 0.094  $\chi^2/\text{NDF}$ : 22367.7/46

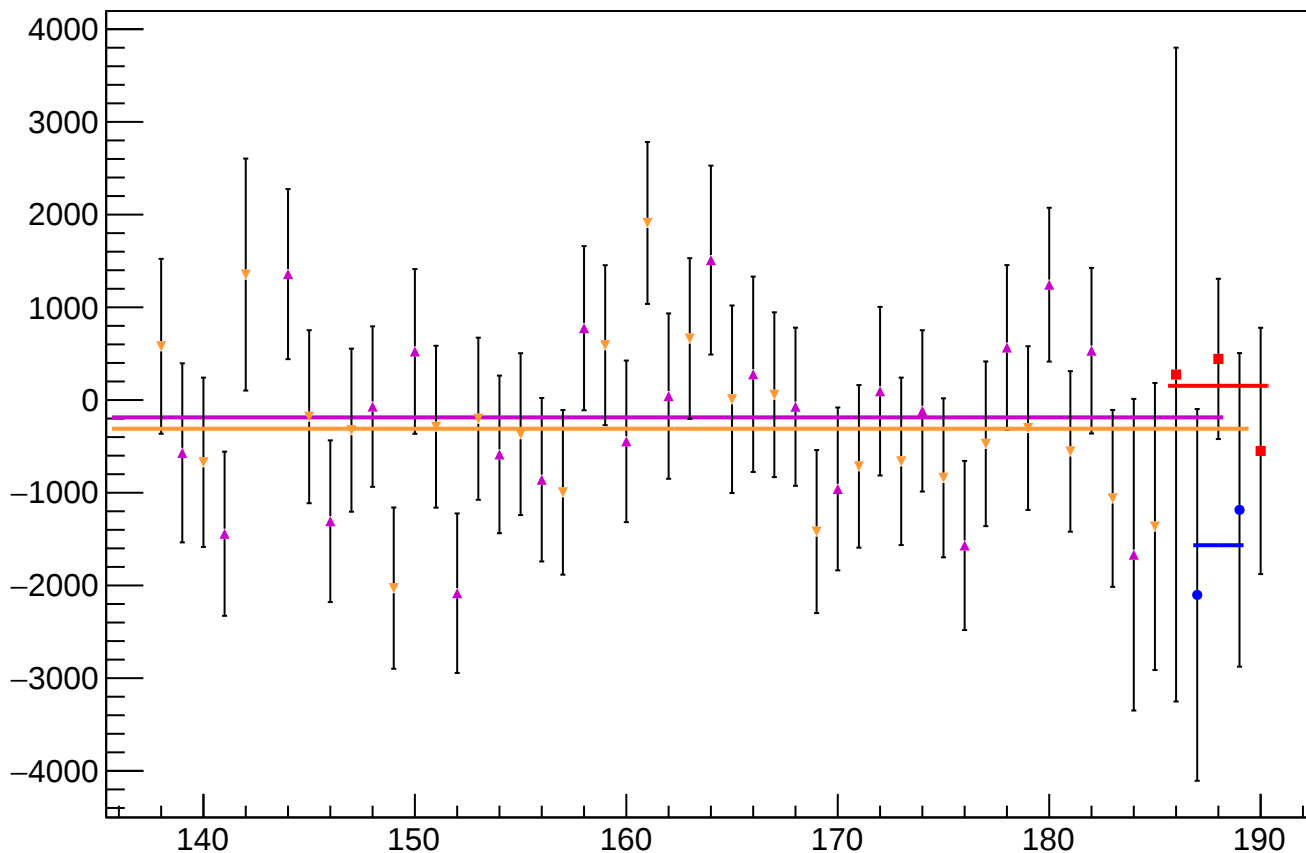
Right: 844.207 $\pm$ 0.443  $\chi^2/\text{NDF}$ : 313539.0/4

In: 788.918 $\pm$ 0.133  $\chi^2/\text{NDF}$ : 11068.4/24

Out: 793.541 $\pm$ 0.128  $\chi^2/\text{NDF}$ : 339118.2/26

All: 791.315 $\pm$ 0.092  $\chi^2/\text{NDF}$ : 350812.6/51

# cor\_asym\_us\_dd\_mean vs Slug, Sign Corrected



Right In: -1566.105 $\pm$ 1292.689  $\chi^2$ /NDF: 0.1/1

Left Out: -309.656 $\pm$ 186.542  $\chi^2$ /NDF:20.0/23

Right Out: 153.360 $\pm$ 709.634  $\chi^2$ /NDF: 0.4/2

Left In: -187.105 $\pm$ 189.265  $\chi^2$ /NDF:25.6/22

Left: -249.268 $\pm$ 132.858  $\chi^2$ /NDF: 45.8/46

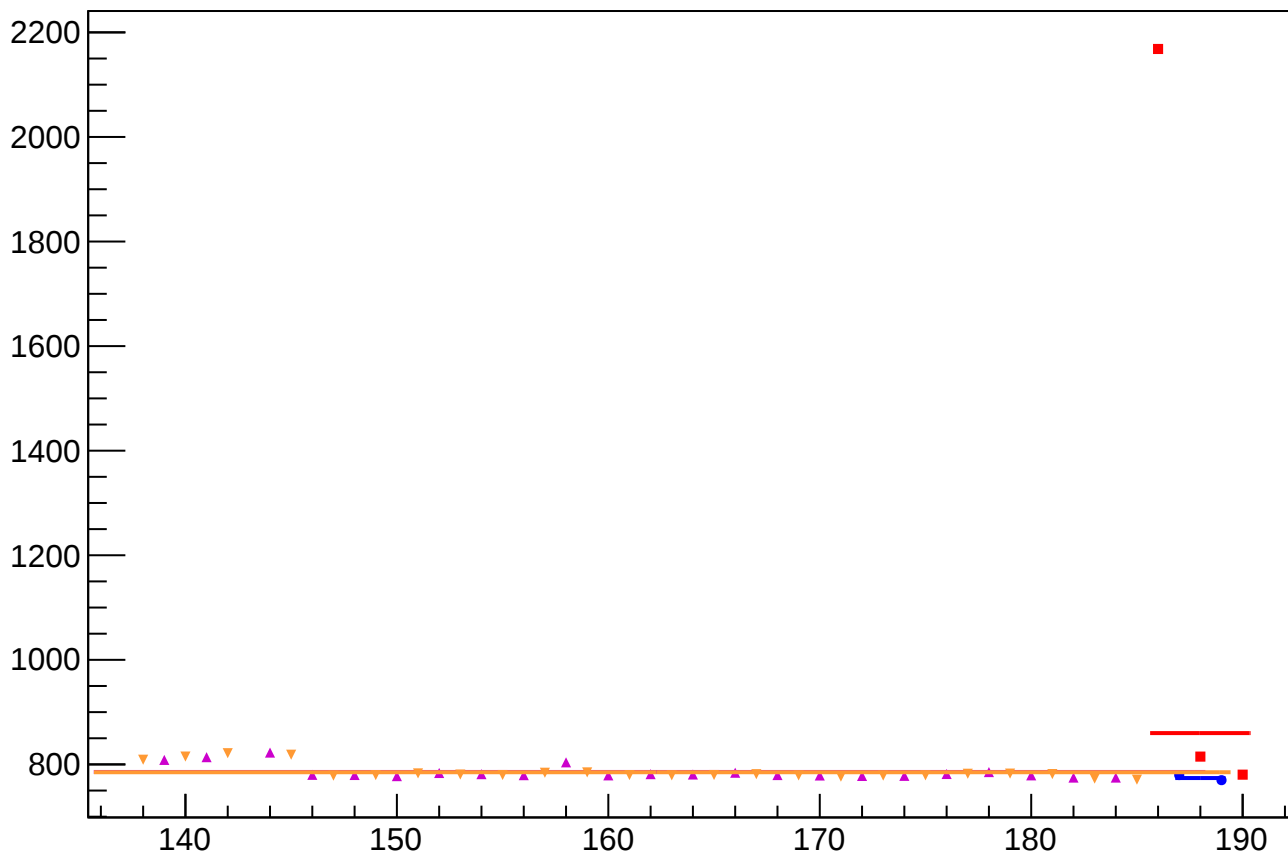
Right: -244.818 $\pm$ 622.066  $\chi^2$ /NDF: 1.9/4

In: -216.045 $\pm$ 187.269  $\chi^2$ /NDF:26.8/24

Out: -279.729 $\pm$ 180.413  $\chi^2$ /NDF:20.8/26

All: -249.074 $\pm$ 129.927  $\chi^2$ /NDF: 47.6/51

# cor\_asym\_us\_dd\_rms vs Slug, Sign Corrected



Right In:  $773.922 \pm 0.914$   $\chi^2/\text{NDF}$ : 27.7/1

Left Out:  $785.050 \pm 0.132$   $\chi^2/\text{NDF}$ : 9365.3/23

Right Out:  $859.900 \pm 0.502$   $\chi^2/\text{NDF}$ : 287948.2/2

Left In:  $785.562 \pm 0.134$   $\chi^2/\text{NDF}$ : 9033.0/22

Left:  $785.302 \pm 0.094$   $\chi^2/\text{NDF}$ : 18405.7/46

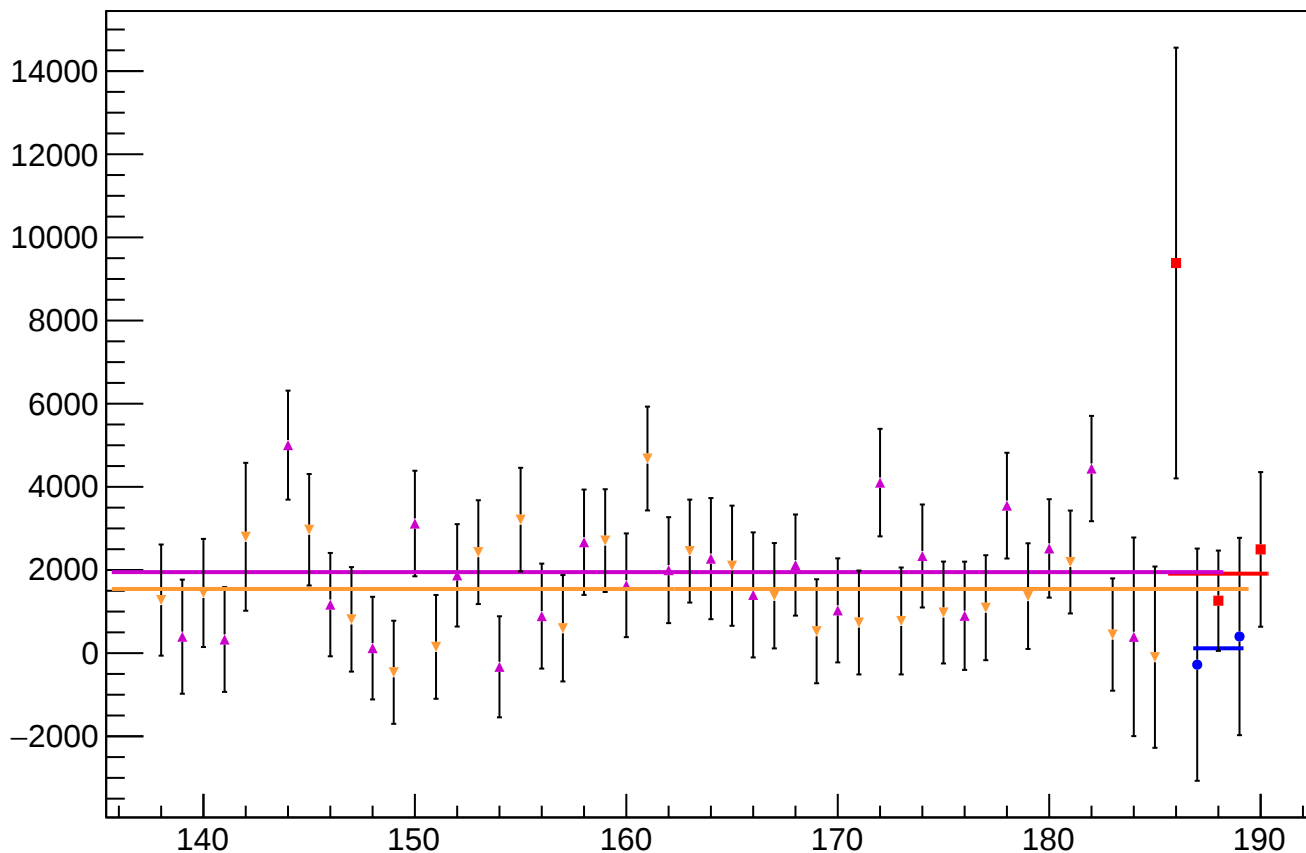
Right:  $839.990 \pm 0.440$   $\chi^2/\text{NDF}$ : 294774.5/4

In:  $785.318 \pm 0.132$   $\chi^2/\text{NDF}$ : 9219.5/24

Out:  $789.888 \pm 0.128$   $\chi^2/\text{NDF}$ : 318126.2/26

All:  $787.688 \pm 0.092$   $\chi^2/\text{NDF}$ : 327963.5/51

# cor\_asym\_usl\_mean vs Slug, Sign Corrected



Right In: 116.401 $\pm$ 1808.672  $\chi^2$ /NDF: 0.0/1

Left Out: 1543.729 $\pm$ 266.278  $\chi^2$ /NDF:19.9/23

Right Out: 1911.693 $\pm$ 993.236  $\chi^2$ /NDF: 2.5/2

Left In: 1949.077 $\pm$ 270.080  $\chi^2$ /NDF:26.8/22

Left: 1743.530 $\pm$ 189.617  $\chi^2$ /NDF: 47.8/46

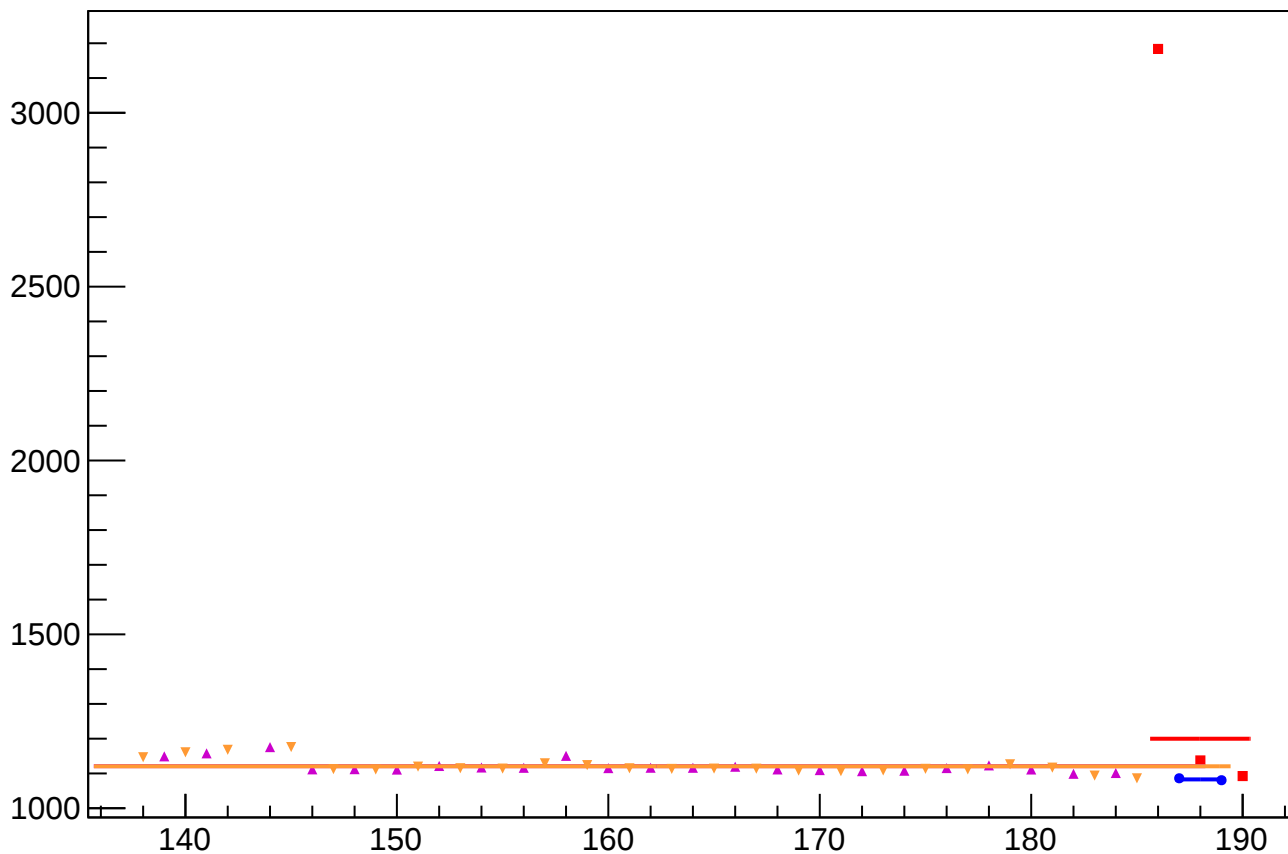
Right: 1495.731 $\pm$ 870.601  $\chi^2$ /NDF: 3.3/4

In: 1909.103 $\pm$ 267.118  $\chi^2$ /NDF:27.8/24

Out: 1568.402 $\pm$ 257.196  $\chi^2$ /NDF:22.5/26

All: 1732.308 $\pm$ 185.274  $\chi^2$ /NDF: 51.2/51

# cor\_asym\_usl\_rms vs Slug, Sign Corrected



Right In: 1082.866+/-1.279  $\chi^2/\text{NDF}$ : 4.6/1

Left Out: 1120.578+/-0.188  $\chi^2/\text{NDF}$ : 10264.0/23

Right Out: 1199.844+/-0.702  $\chi^2/\text{NDF}$ : 305356.1/2

Left In: 1120.977+/-0.191  $\chi^2/\text{NDF}$ : 9259.6/22

Left: 1120.775+/-0.134  $\chi^2/\text{NDF}$ : 19525.9/46

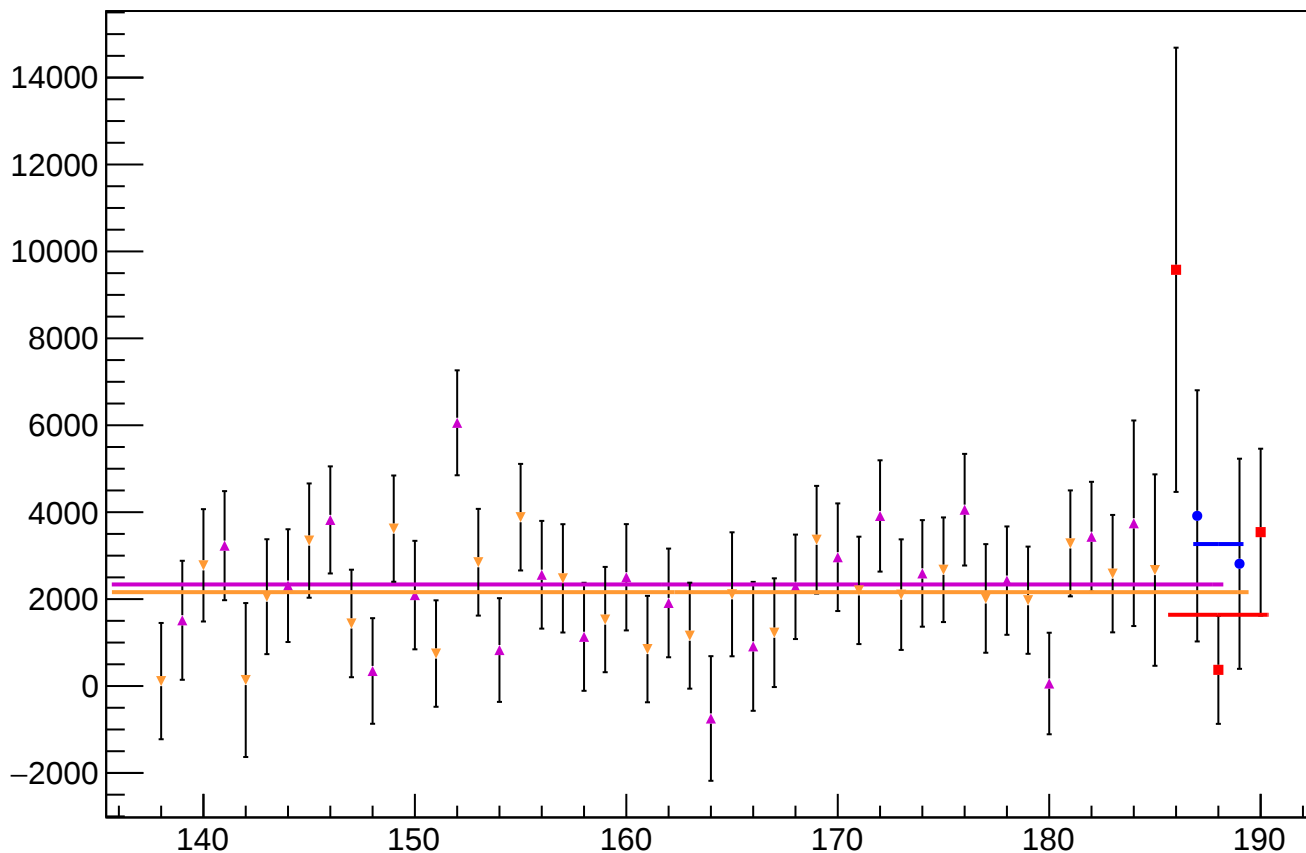
Right: 1172.741+/-0.616  $\chi^2/\text{NDF}$ : 311788.3/4

In: 1120.146+/-0.189  $\chi^2/\text{NDF}$ : 10132.9/24

Out: 1125.893+/-0.182  $\chi^2/\text{NDF}$ : 327503.8/26

All: 1123.129+/-0.131  $\chi^2/\text{NDF}$ : 338117.1/51

# cor\_asym\_usr\_mean vs Slug, Sign Corrected



Right In: 3266.922 $\pm$ 1854.338  $\chi^2$ /NDF: 0.1/1

Left Out: 2159.879 $\pm$ 257.526  $\chi^2$ /NDF:15.0/24

Right Out: 1639.449 $\pm$ 1022.123  $\chi^2$ /NDF: 4.4/2

Left In: 2337.232 $\pm$ 266.468  $\chi^2$ /NDF:31.3/22

Left: 2245.530 $\pm$ 185.179  $\chi^2$ /NDF: 46.5/47

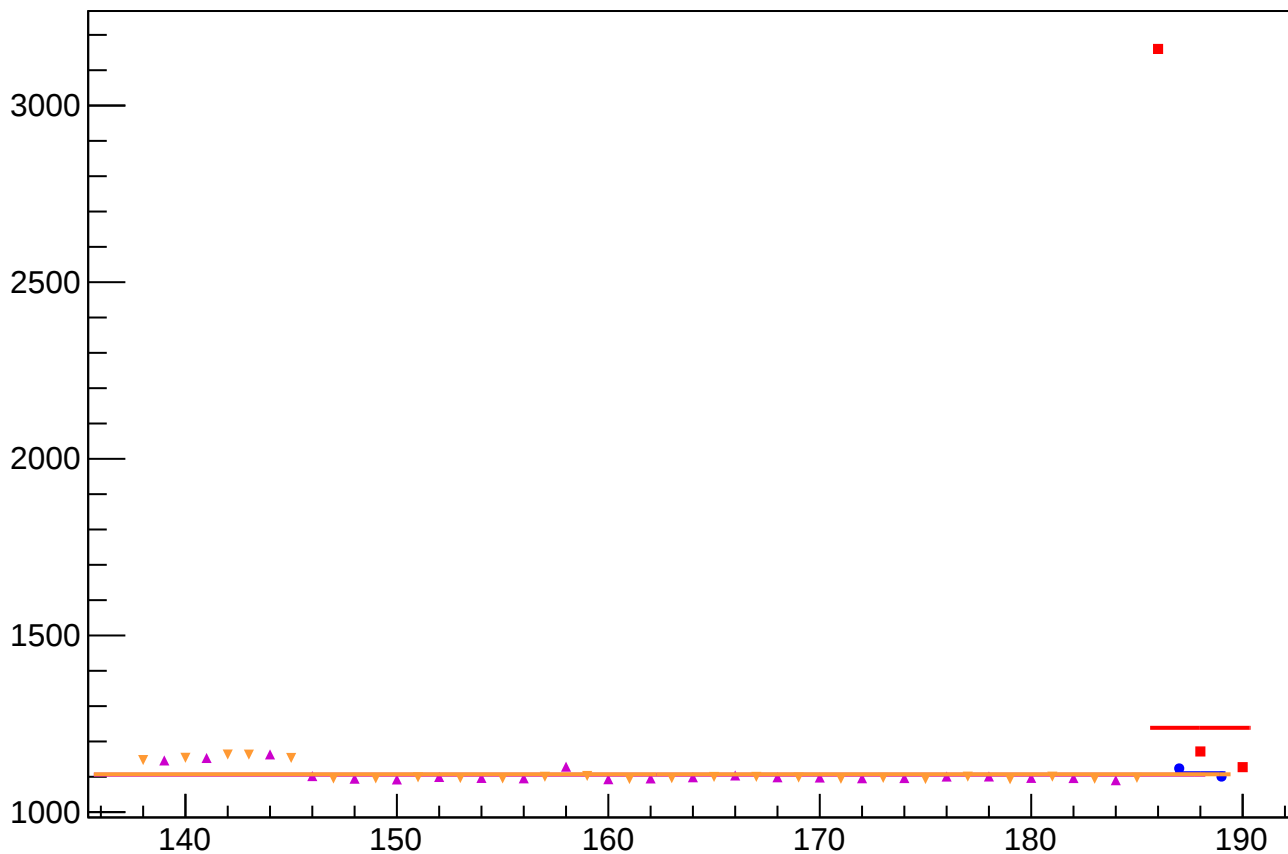
Right: 2018.696 $\pm$ 895.144  $\chi^2$ /NDF: 5.1/4

In: 2356.041 $\pm$ 263.759  $\chi^2$ /NDF:31.6/24

Out: 2128.815 $\pm$ 249.722  $\chi^2$ /NDF:19.6/27

All: 2236.221 $\pm$ 181.339  $\chi^2$ /NDF: 51.7/52

# cor\_asym\_usr\_rms vs Slug, Sign Corrected



Right In: 1110.109+/-1.311  $\chi^2/\text{NDF}$ : 75.3/1

Left Out: 1107.091+/-0.182  $\chi^2/\text{NDF}$ :15185.2/24

Right Out: 1238.637+/-0.723  $\chi^2/\text{NDF}$ : 295245.1/2

Left In: 1105.955+/-0.188  $\chi^2/\text{NDF}$ :11111.3/22

Left: 1106.543+/-0.131  $\chi^2/\text{NDF}$ : 26315.2/47

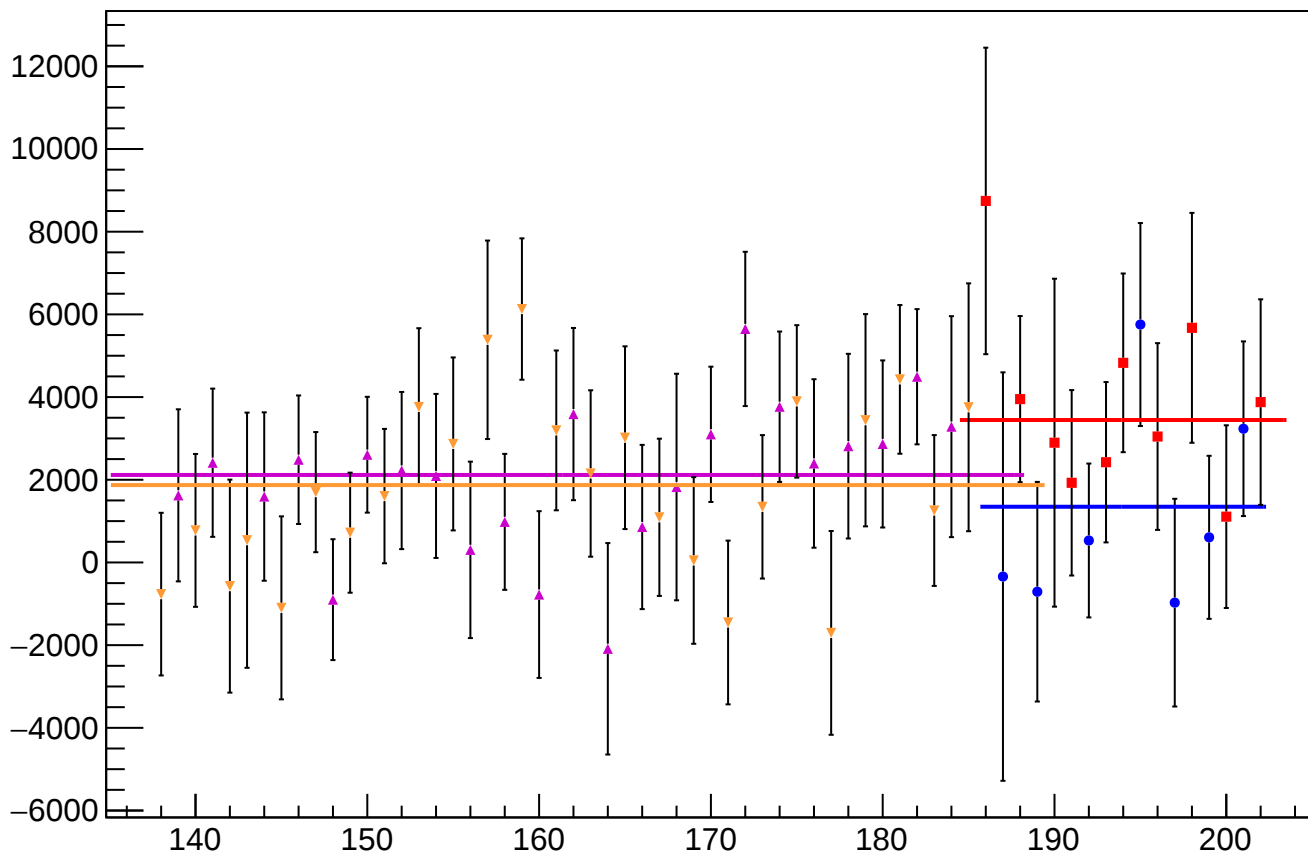
Right: 1208.687+/-0.633  $\chi^2/\text{NDF}$ : 302689.7/4

In: 1106.039+/-0.187  $\chi^2/\text{NDF}$ :11196.4/24

Out: 1114.943+/-0.177  $\chi^2/\text{NDF}$ :341579.9/27

All: 1110.735+/-0.128  $\chi^2/\text{NDF}$ : 353978.0/52

# asym\_us\_agg\_avg\_mean vs Slug, Sign Corrected



Right In: 1347.464+/-884.866  $\chi^2/\text{NDF}$ : 5.9/6

Left Out: 1871.638+/-391.684  $\chi^2/\text{NDF}$ : 26.1/24

Right Out: 3445.241+/-754.833  $\chi^2/\text{NDF}$ : 5.1/9

Left In: 2116.114+/-392.997  $\chi^2/\text{NDF}$ : 18.8/22

Left: 1993.467+/-277.425  $\chi^2/\text{NDF}$ : 45.1/47

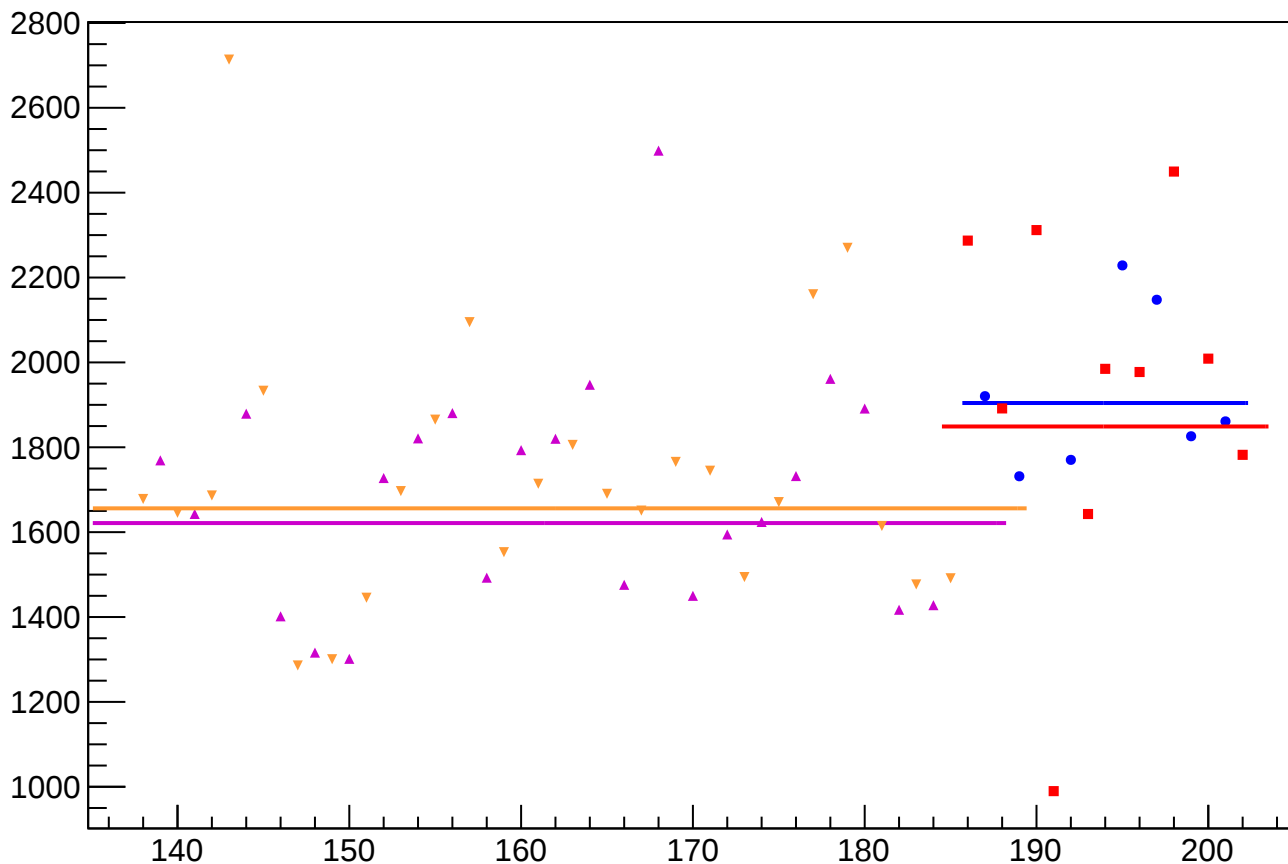
Right: 2561.673+/-574.272  $\chi^2/\text{NDF}$ : 14.3/16

In: 1989.476+/-359.167  $\chi^2/\text{NDF}$ : 25.3/29

Out: 2205.460+/-347.664  $\chi^2/\text{NDF}$ : 34.6/34

All: 2100.981+/-249.803  $\chi^2/\text{NDF}$ : 60.2/64

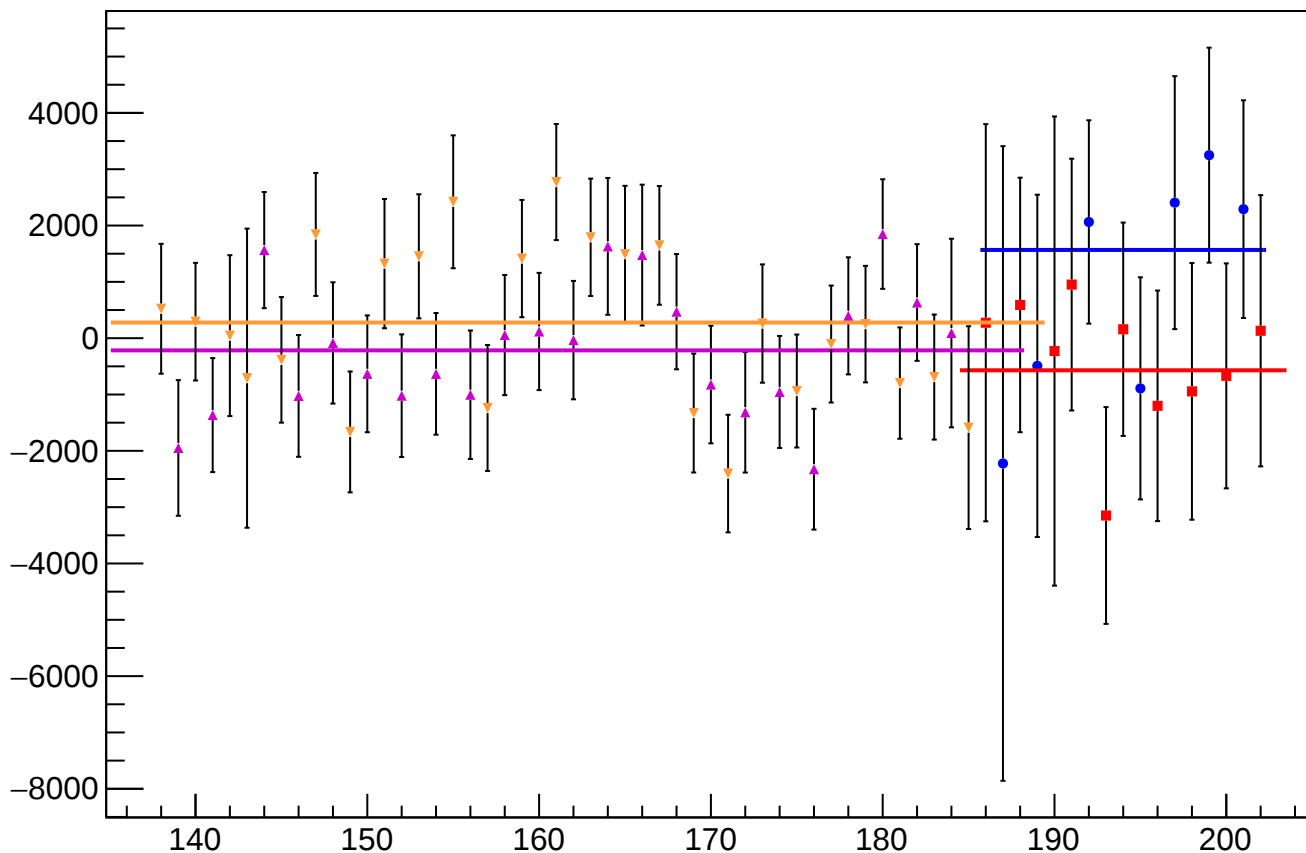
# asym\_us\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 1904.340+/-0.626  $\chi^2/\text{NDF}$ : 76482.7/6  
 Left Out: 1656.119+/-0.277  $\chi^2/\text{NDF}$ : 910573.4/24  
 Right Out: 1849.003+/-0.534  $\chi^2/\text{NDF}$ : 491992.3/9  
 Left In: 1621.417+/-0.278  $\chi^2/\text{NDF}$ : 775310.1/22

Left: 1638.826+/-0.196  $\chi^2/\text{NDF}$ : 1693706.9/47  
 Right: 1872.311+/-0.406  $\chi^2/\text{NDF}$ : 573002.4/16  
 In: 1668.030+/-0.254  $\chi^2/\text{NDF}$ : 1022569.0/29  
 Out: 1697.037+/-0.246  $\chi^2/\text{NDF}$ : 1505455.1/34  
 All: 1683.005+/-0.177  $\chi^2/\text{NDF}$ : 2534759.2/64

# asym\_us\_agg\_dd\_mean vs Slug, Sign Corrected



Right In: 1566.950 $\pm$ 832.111  $\chi^2/\text{NDF}$ : 3.6/6

Left Out: 278.090 $\pm$ 223.581  $\chi^2/\text{NDF}$ :38.4/24

Right Out: -570.120 $\pm$ 718.484  $\chi^2/\text{NDF}$ : 2.9/9

Left In: -216.121 $\pm$ 225.600  $\chi^2/\text{NDF}$ :24.4/22

Left: 33.207 $\pm$ 158.805  $\chi^2/\text{NDF}$ : 65.2/47

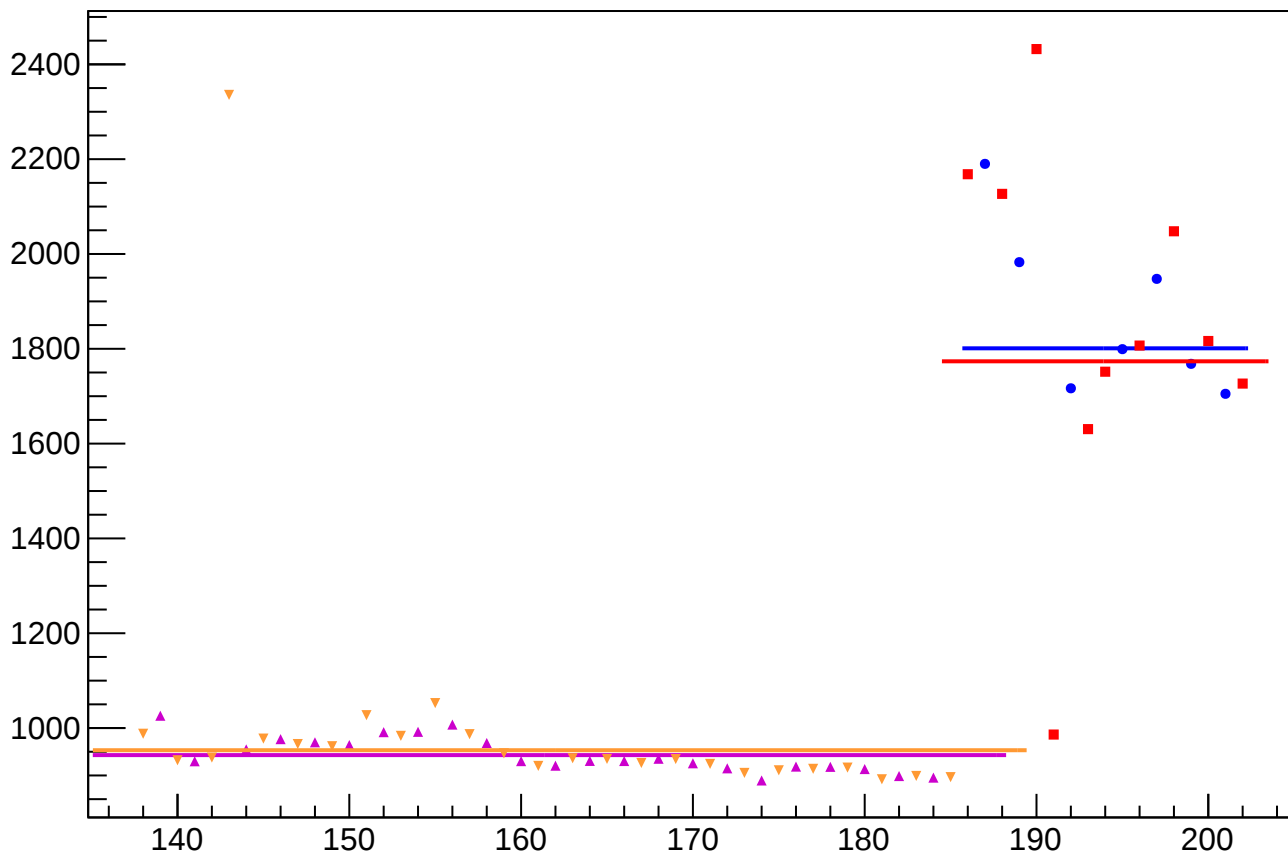
Right: 342.647 $\pm$ 543.816  $\chi^2/\text{NDF}$ : 10.3/16

In: -94.031 $\pm$ 217.740  $\chi^2/\text{NDF}$ :32.3/29

Out: 203.205 $\pm$ 213.483  $\chi^2/\text{NDF}$ :42.6/34

All: 57.521 $\pm$ 152.438  $\chi^2/\text{NDF}$ : 75.9/64

# asym\_us\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 1801.006 $\pm$ 0.588  $\chi^2$ /NDF: 35093.7/6

Left Out: 953.221 $\pm$ 0.158  $\chi^2$ /NDF: 606273.1/24

Right Out: 1773.598 $\pm$ 0.508  $\chi^2$ /NDF: 414575.2/9

Left In: 942.927 $\pm$ 0.160  $\chi^2$ /NDF: 48402.9/22

Left: 948.120 $\pm$ 0.112  $\chi^2$ /NDF: 656777.0/47

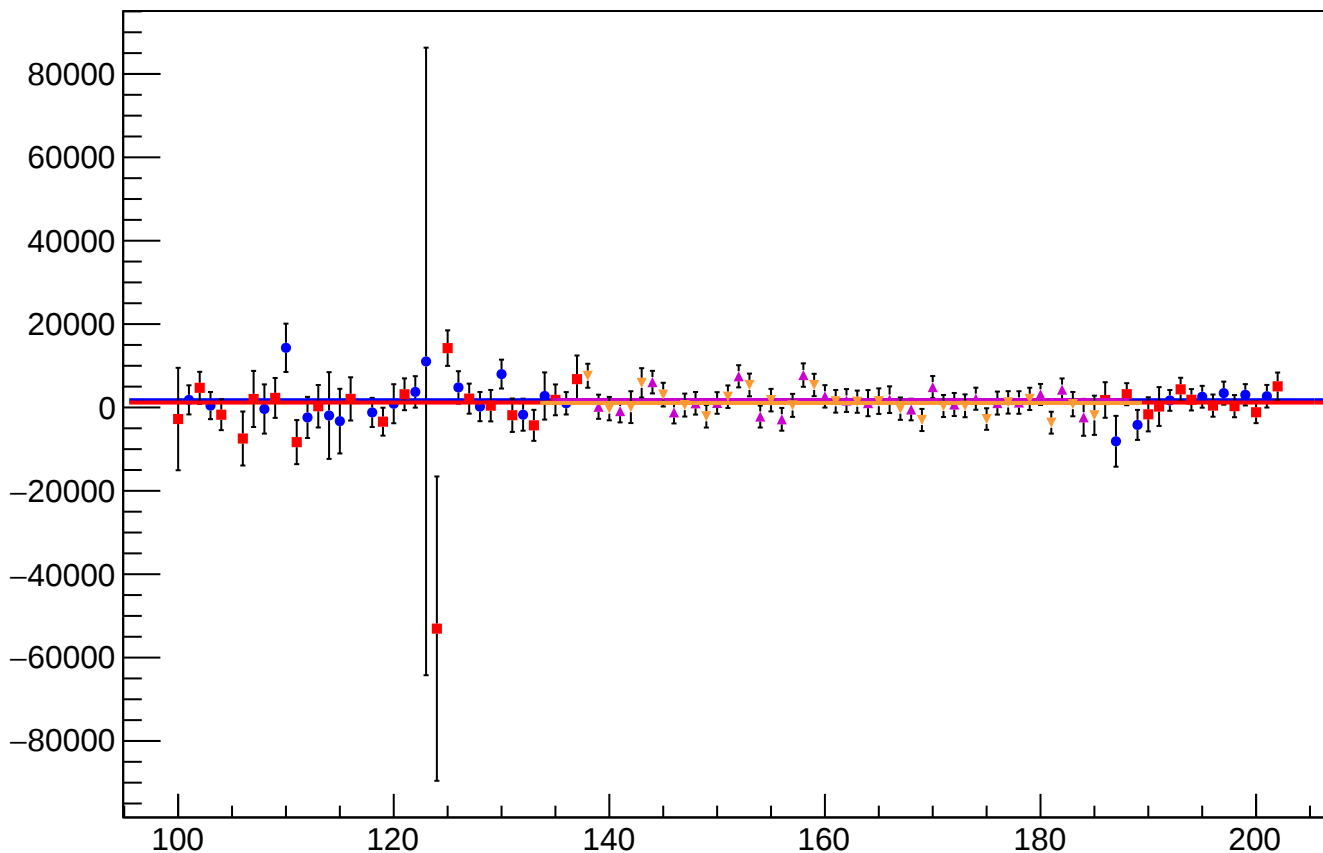
Right: 1785.304 $\pm$ 0.385  $\chi^2$ /NDF: 450912.0/16

In: 1001.681 $\pm$ 0.154  $\chi^2$ /NDF: 2064650.2/29

Out: 1025.649 $\pm$ 0.151  $\chi^2$ /NDF: 3398133.8/34

All: 1013.902 $\pm$ 0.108  $\chi^2$ /NDF: 5475140.2/64

# reg\_asym\_atl1\_mean vs Slug, Sign Corrected



Right In: 1743.985 $\pm$ 745.307  $\chi^2$ /NDF: 18.5/23

Left Out: 1078.054 $\pm$ 564.005  $\chi^2$ /NDF: 23.6/24

Right Out: 1175.914 $\pm$ 697.698  $\chi^2$ /NDF: 29.1/28

Left In: 1777.100 $\pm$ 575.895  $\chi^2$ /NDF: 24.1/22

Left: 1420.287 $\pm$ 402.950  $\chi^2$ /NDF: 48.4/47

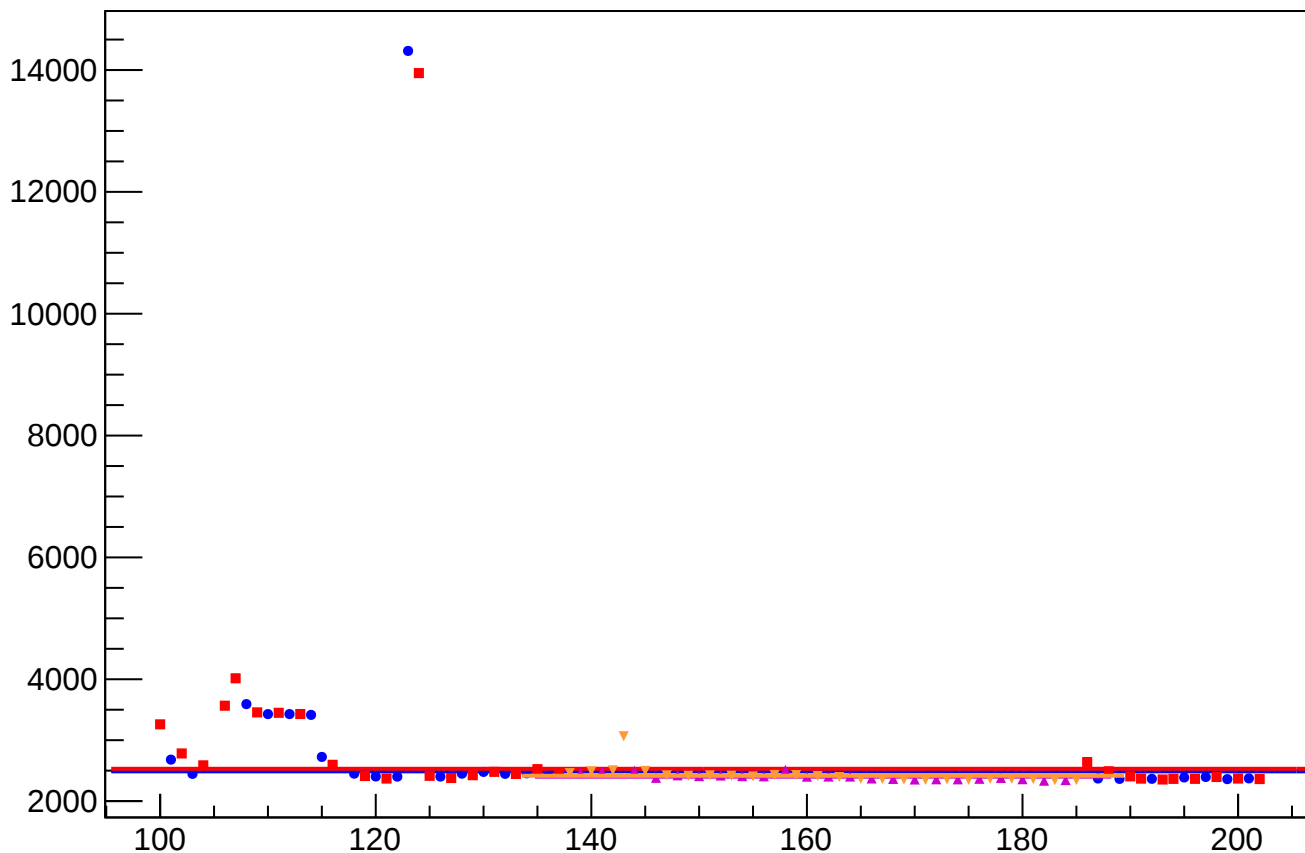
Right: 1441.228 $\pm$ 509.347  $\chi^2$ /NDF: 47.9/52

In: 1764.720 $\pm$ 455.704  $\chi^2$ /NDF: 42.5/46

Out: 1116.730 $\pm$ 438.615  $\chi^2$ /NDF: 52.7/53

All: 1428.348 $\pm$ 316.017  $\chi^2$ /NDF: 96.3/100

# reg\_asym\_atl1\_rms vs Slug, Sign Corrected



Right In: 2488.661 $\pm$ 0.527  $\chi^2$ /NDF: 294218.5/23

Left Out: 2416.019 $\pm$ 0.399  $\chi^2$ /NDF: 82636.1/24

Right Out: 2530.424 $\pm$ 0.493  $\chi^2$ /NDF: 620543.0/28

Left In: 2401.422 $\pm$ 0.407  $\chi^2$ /NDF: 13747.6/22

Left: 2408.873 $\pm$ 0.285  $\chi^2$ /NDF: 97039.6/47

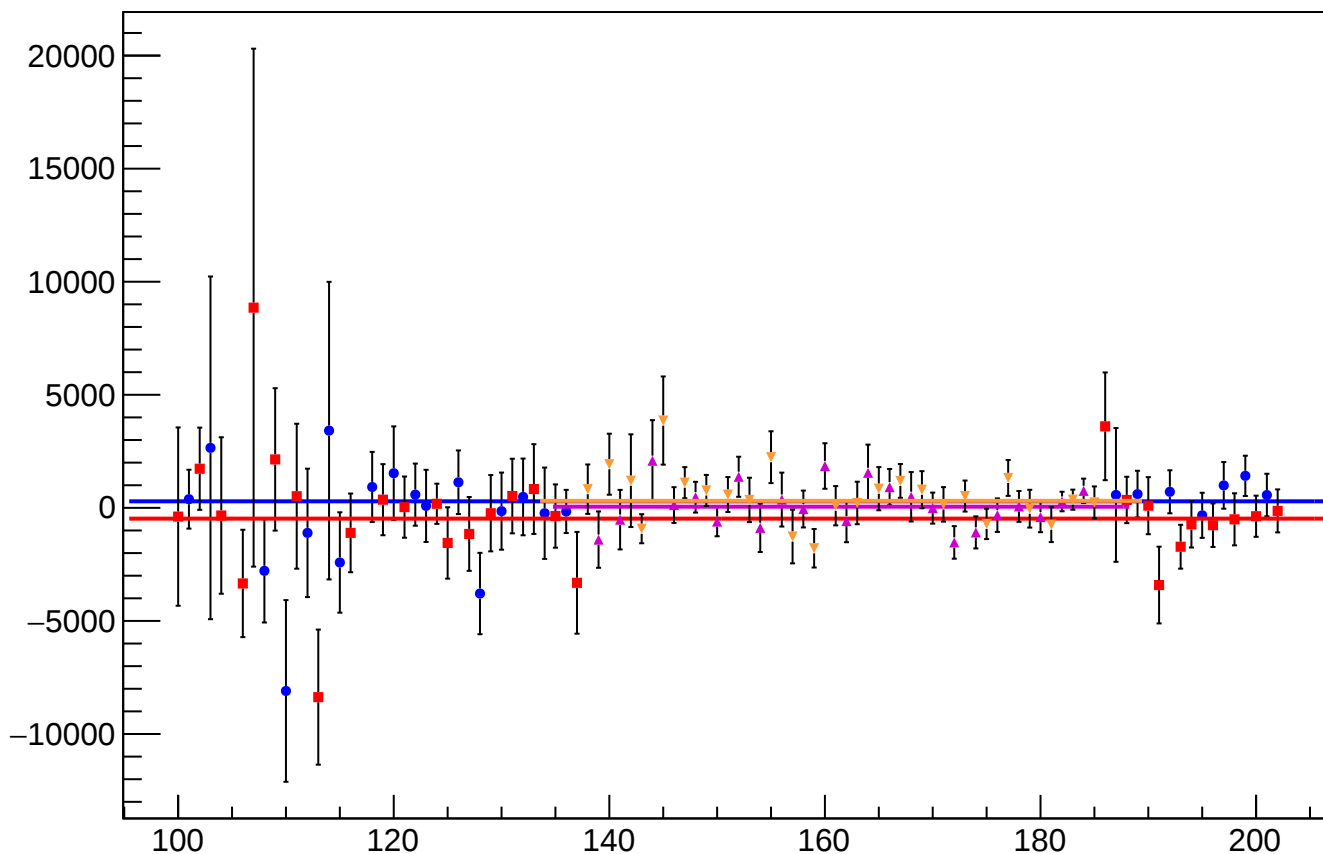
Right: 2510.919 $\pm$ 0.360  $\chi^2$ /NDF: 918108.3/52

In: 2434.036 $\pm$ 0.322  $\chi^2$ /NDF: 325124.1/46

Out: 2461.234 $\pm$ 0.310  $\chi^2$ /NDF: 735701.3/53

All: 2448.154 $\pm$ 0.223  $\chi^2$ /NDF: 1064523.4/100

asym\_atl1\_correction\_mean vs Slug, Sign Corrected



Right In: 289.543+/-287.165  $\chi^2/\text{NDF}$ : 17.5/23

Left Out: 310.873+/-160.650  $\chi^2/\text{NDF}$ : 29.7/24

Right Out: -476.047+/-265.170  $\chi^2/\text{NDF}$ : 24.3/28

Left In: 51.454+/-161.744  $\chi^2/\text{NDF}$ : 23.8/22

Left: 182.044+/-113.982  $\chi^2/\text{NDF}$ : 54.9/47

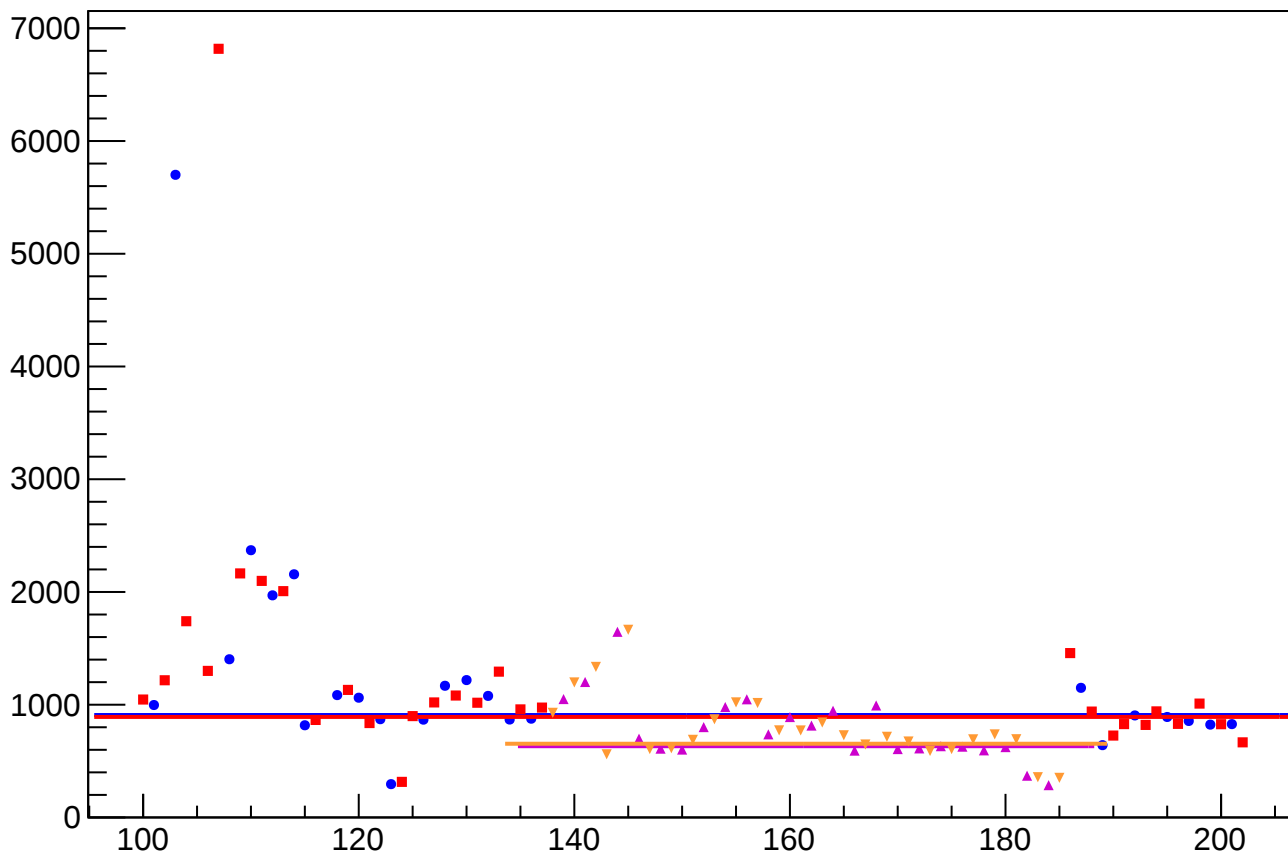
Right: -123.691+/-194.816  $\chi^2/\text{NDF}$ : 45.6/52

In: 108.795+/-140.927  $\chi^2/\text{NDF}$ : 41.9/46

Out: 99.590+/-137.401  $\chi^2/\text{NDF}$ : 60.4/53

All: 104.076+/-98.380  $\chi^2/\text{NDF}$ : 102.3/100

# asym\_atl1\_correction\_rms vs Slug, Sign Corrected



Right In: 908.464 $\pm$ 0.203  $\chi^2$ /NDF: 2175089.1/23

Left Out: 653.803 $\pm$ 0.114  $\chi^2$ /NDF:3254694.4/24

Right Out: 891.776 $\pm$ 0.188  $\chi^2$ /NDF: 3021338.6/28

Left In: 632.053 $\pm$ 0.114  $\chi^2$ /NDF:3942853.4/22

Left: 643.002 $\pm$ 0.081  $\chi^2$ /NDF: 7215752.9/47

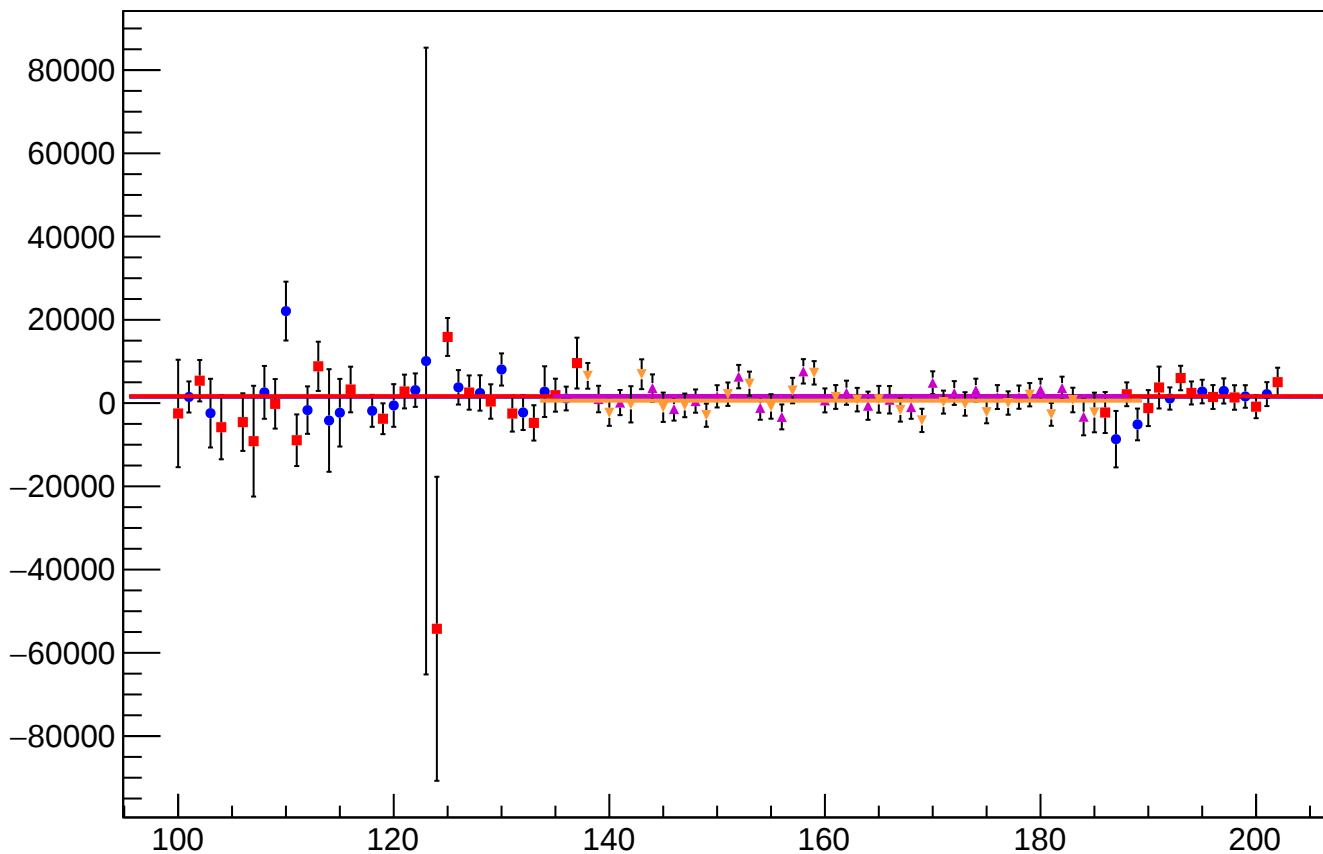
Right: 899.457 $\pm$ 0.138  $\chi^2$ /NDF: 5200073.4/52

In: 698.624 $\pm$ 0.100  $\chi^2$ /NDF:7524681.1/46

Out: 717.697 $\pm$ 0.097  $\chi^2$ /NDF:7454339.5/53

All: 708.402 $\pm$ 0.070  $\chi^2$ /NDF: 14997801.7/100

# asym\_atl1\_mean vs Slug, Sign Corrected



Right In: 1532.189+/-827.459  $\chi^2/\text{NDF}$ : 20.5/23

Left Out: 580.879+/-597.173  $\chi^2/\text{NDF}$ : 25.3/24

Right Out: 1659.170+/-776.748  $\chi^2/\text{NDF}$ : 32.3/28

Left In: 1679.572+/-610.111  $\chi^2/\text{NDF}$ : 18.2/22

Left: 1118.453+/-426.766  $\chi^2/\text{NDF}$ : 45.2/47

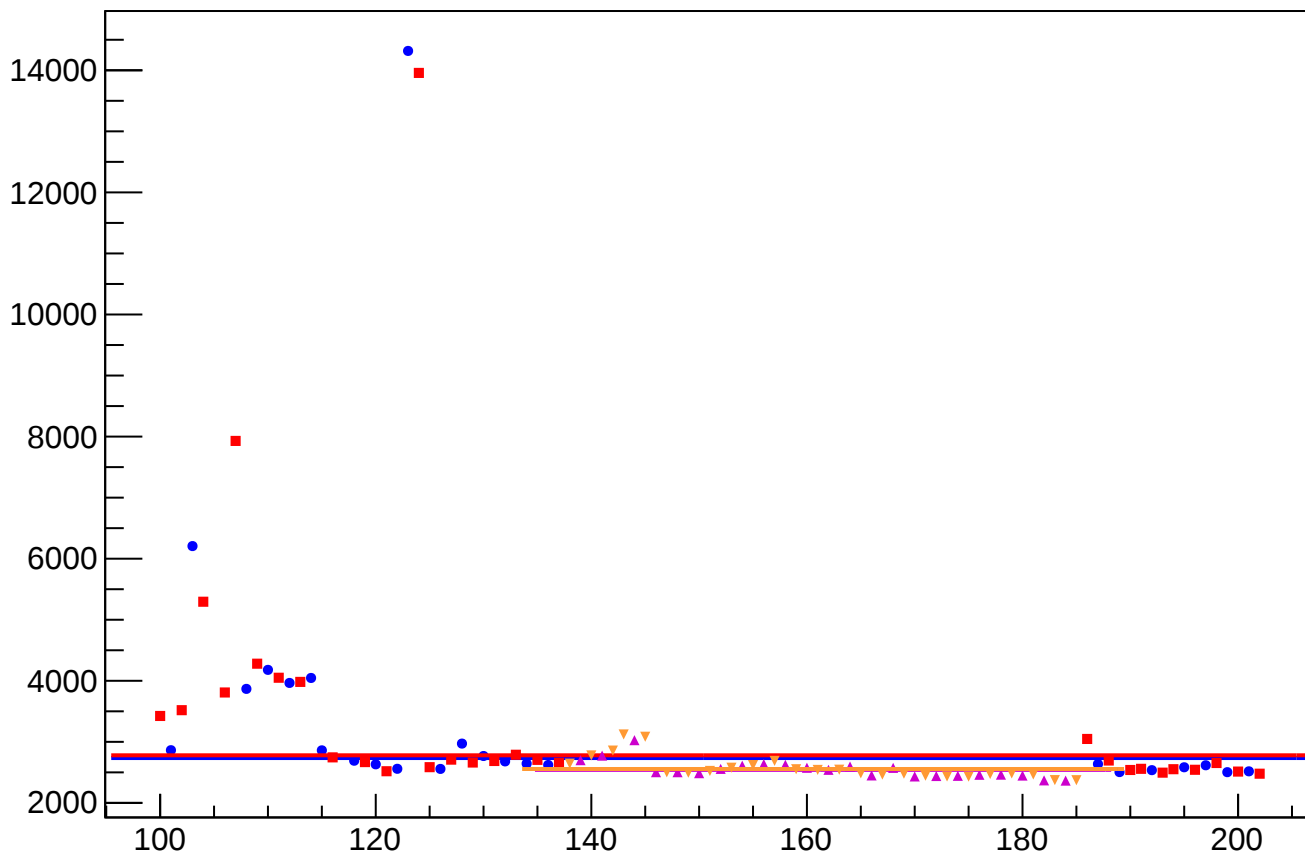
Right: 1599.690+/-566.323  $\chi^2/\text{NDF}$ : 52.8/52

In: 1627.666+/-491.058  $\chi^2/\text{NDF}$ : 38.7/46

Out: 981.457+/-473.430  $\chi^2/\text{NDF}$ : 58.8/53

All: 1292.754+/-340.827  $\chi^2/\text{NDF}$ : 98.4/100

# asym\_atl1\_rms vs Slug, Sign Corrected



Right In: 2734.698+/-0.585  $\chi^2/\text{NDF}$ : 739879.7/23

Left Out: 2555.279+/-0.422  $\chi^2/\text{NDF}$ :154743.6/24

Right Out: 2779.629+/-0.549  $\chi^2/\text{NDF}$ : 1206511.1/28

Left In: 2540.988+/-0.431  $\chi^2/\text{NDF}$ :94756.7/22

Left: 2548.287+/-0.302  $\chi^2/\text{NDF}$ : 250060.8/47

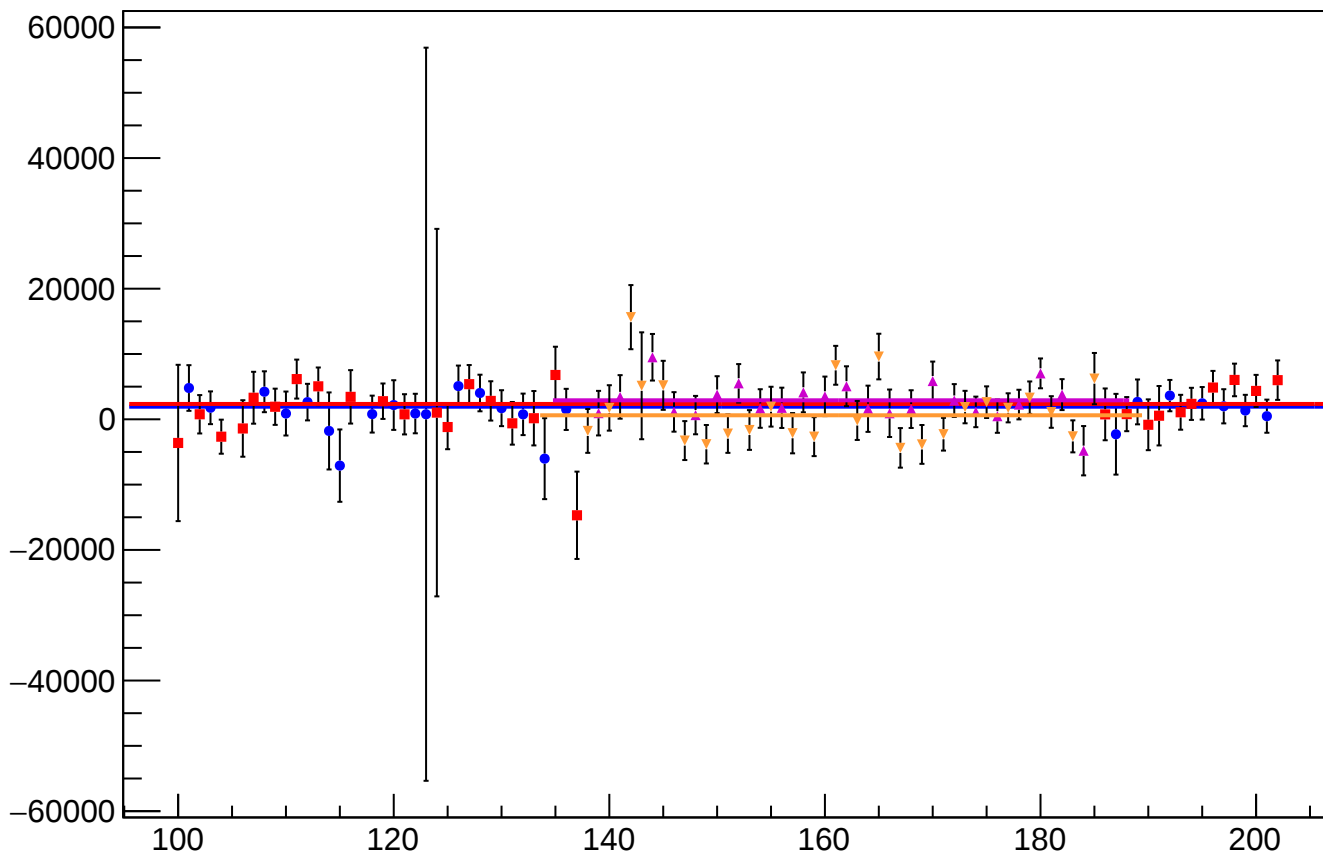
Right: 2758.582+/-0.400  $\chi^2/\text{NDF}$ : 1949525.6/52

In: 2609.210+/-0.347  $\chi^2/\text{NDF}$ :905641.9/46

Out: 2638.624+/-0.335  $\chi^2/\text{NDF}$ :1466120.1/53

All: 2624.454+/-0.241  $\chi^2/\text{NDF}$ : 2375480.9/100

# reg\_asym\_atl2\_mean vs Slug, Sign Corrected



Right In: 1931.868+/-641.253  $\chi^2/\text{NDF}$ : 9.5/23

Left Out: 614.867+/-591.148  $\chi^2/\text{NDF}$ : 45.2/24

Right Out: 2350.062+/-596.318  $\chi^2/\text{NDF}$ : 25.6/28

Left In: 2909.108+/-599.673  $\chi^2/\text{NDF}$ : 17.4/22

Left: 1745.562+/-420.986  $\chi^2/\text{NDF}$ : 70.0/47

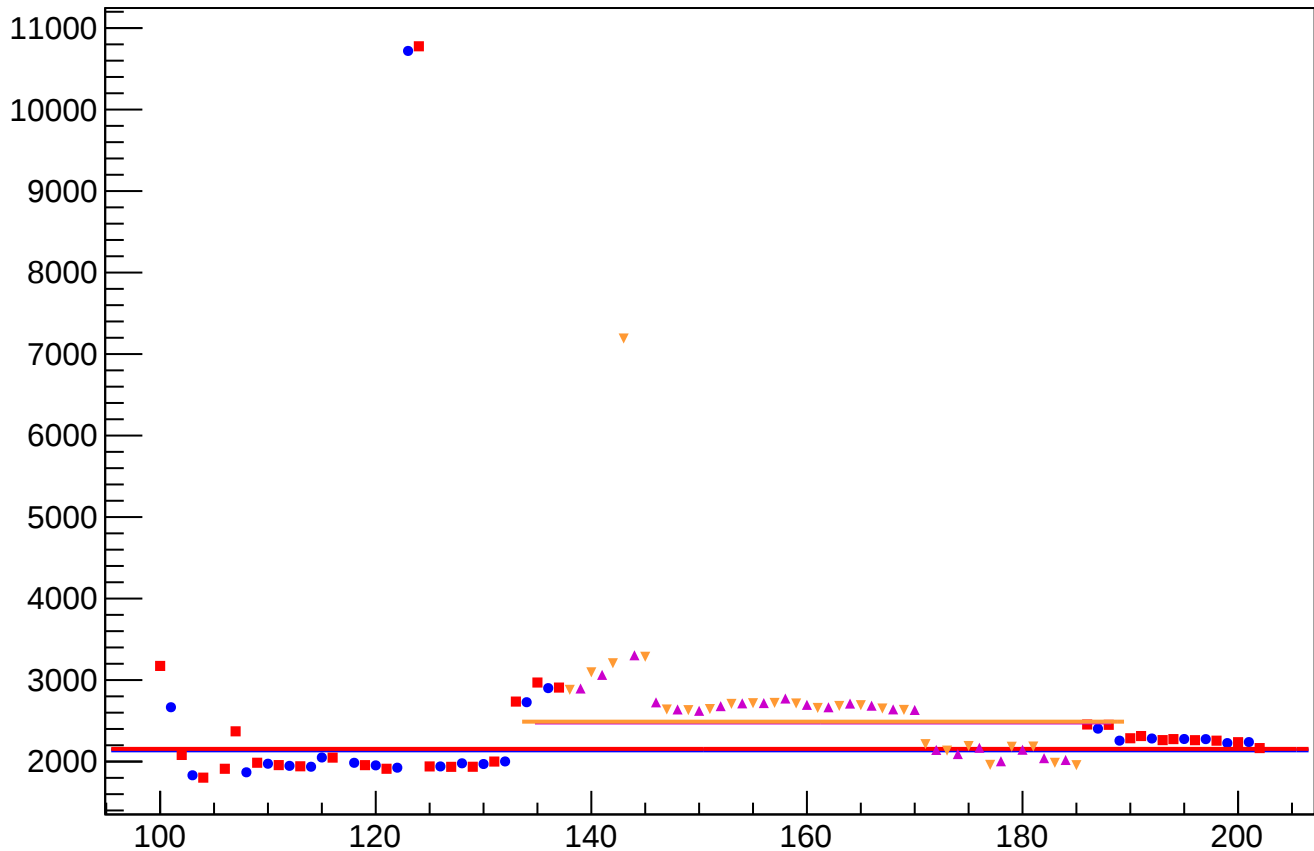
Right: 2156.129+/-436.683  $\chi^2/\text{NDF}$ : 35.3/52

In: 2453.195+/-437.995  $\chi^2/\text{NDF}$ : 28.1/46

Out: 1474.909+/-419.821  $\chi^2/\text{NDF}$ : 75.0/53

All: 1943.334+/-303.080  $\chi^2/\text{NDF}$ : 105.8/100

# reg\_asym\_atl2\_rms vs Slug, Sign Corrected



Right In: 2137.611 $\pm$ 0.453  $\chi^2$ /NDF: 366682.1/23

Left Out: 2489.577 $\pm$ 0.418  $\chi^2$ /NDF:1364203.3/24

Right Out: 2155.579 $\pm$ 0.422  $\chi^2$ /NDF: 532697.0/28

Left In: 2479.348 $\pm$ 0.424  $\chi^2$ /NDF:668398.2/22

Left: 2484.536 $\pm$ 0.298  $\chi^2$ /NDF: 2032896.6/47

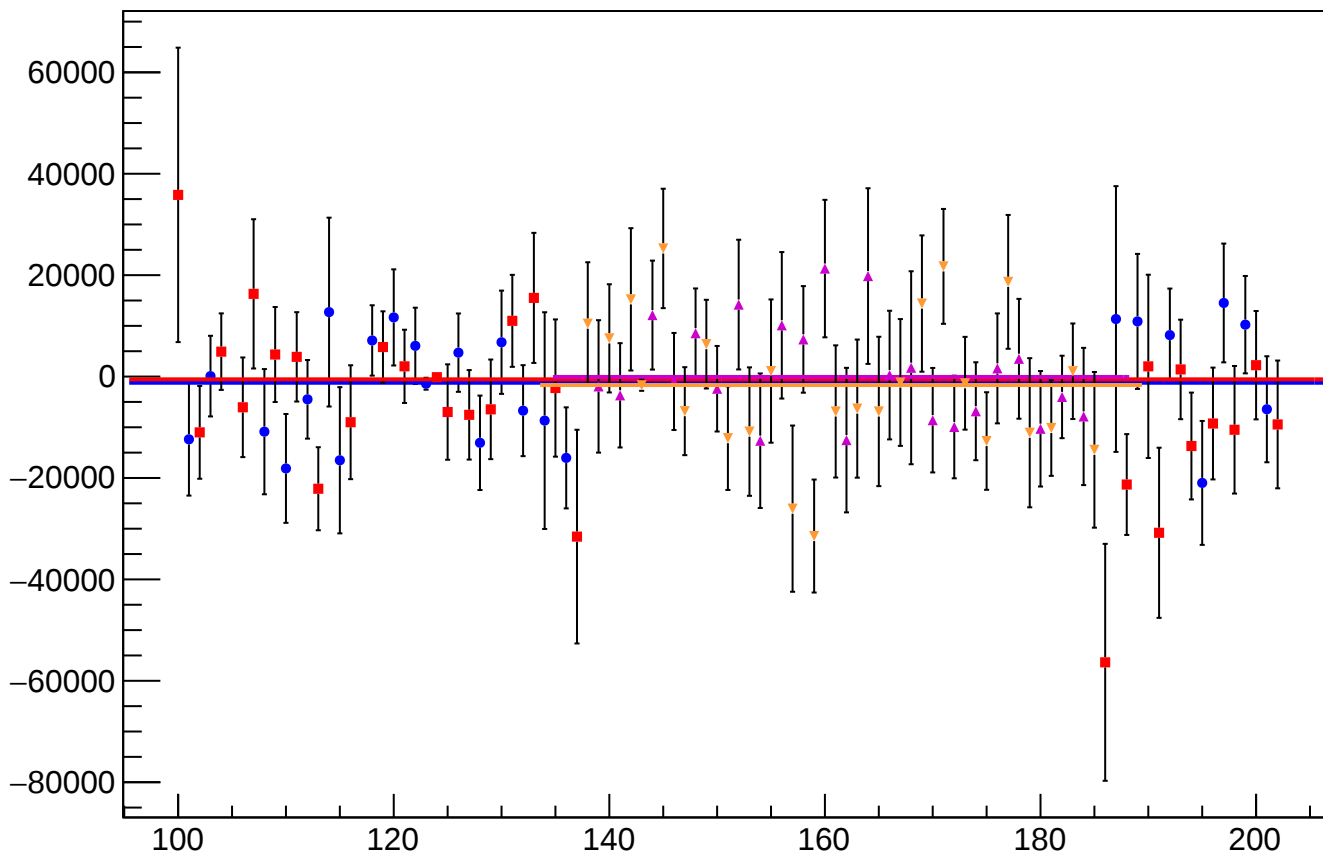
Right: 2147.246 $\pm$ 0.309  $\chi^2$ /NDF: 900221.2/52

In: 2319.917 $\pm$ 0.310  $\chi^2$ /NDF:1338097.2/46

Out: 2324.031 $\pm$ 0.297  $\chi^2$ /NDF:2213345.3/53

All: 2322.061 $\pm$ 0.214  $\chi^2$ /NDF: 3551534.4/10

asym\_atl2\_correction\_mean vs Slug, Sign Corrected



Right In: -1214.734+/-1024.917  $\chi^2/\text{NDF}$ : 24.0/23

Left Out: -1665.417+/-993.060  $\chi^2/\text{NDF}$ : 32.4/24

Right Out: -546.758+/-684.253  $\chi^2/\text{NDF}$ : 37.9/28

Left In: -80.274+/-2331.531  $\chi^2/\text{NDF}$ : 13.8/22

Left: -1422.008+/-913.639  $\chi^2/\text{NDF}$ : 46.6/47

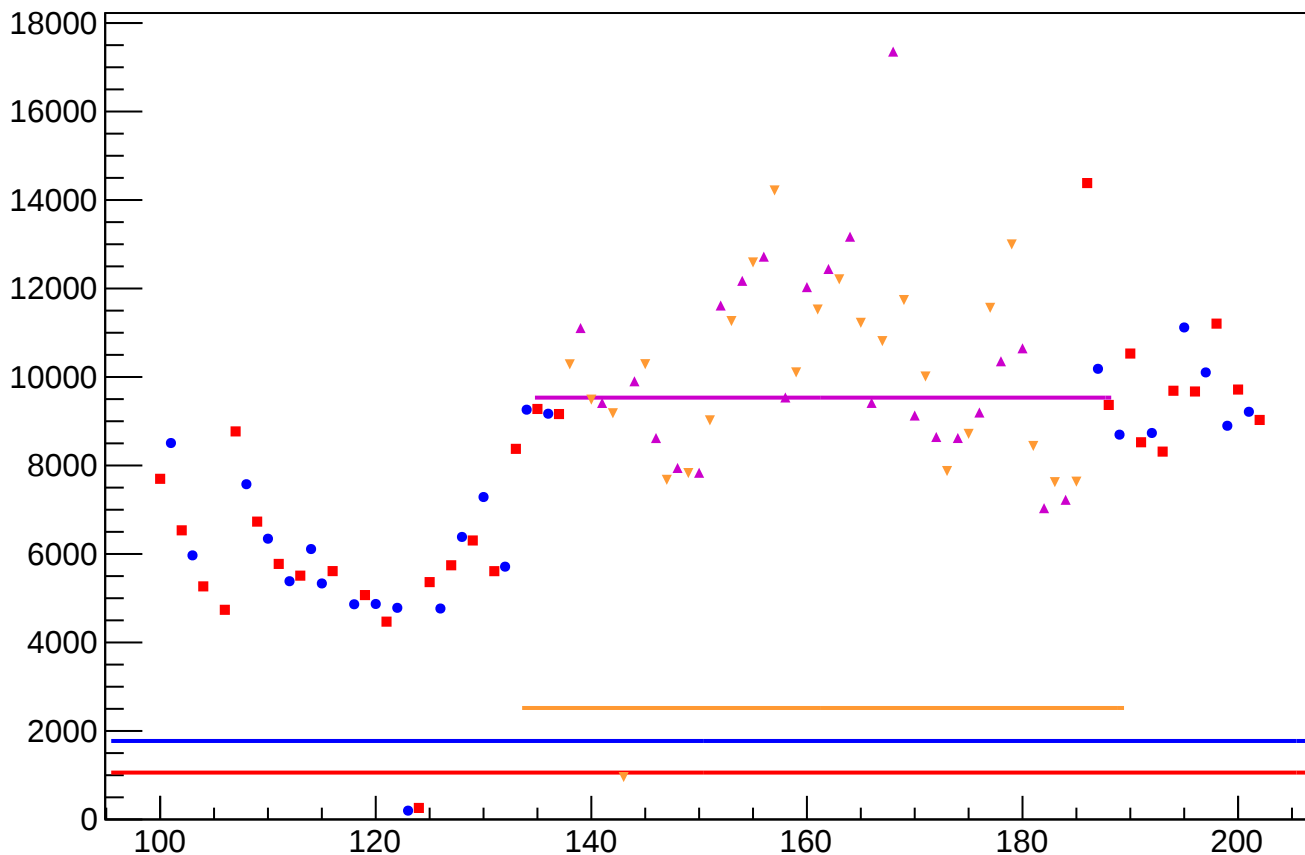
Right: -752.695+/-569.083  $\chi^2/\text{NDF}$ : 62.2/52

In: -1031.014+/-938.264  $\chi^2/\text{NDF}$ : 38.0/46

Out: -906.885+/-563.449  $\chi^2/\text{NDF}$ : 71.2/53

All: -939.785+/-483.042  $\chi^2/\text{NDF}$ : 109.1/100

asym\_atl2\_correction\_rms vs Slug, Sign Corrected



Right In: 1773.776+/-0.725

$\chi^2/\text{NDF}$ : 16579427.8/23

Left Out: 2519.359+/-0.702

$\chi^2/\text{NDF}$ : 23642118.3/24

Right Out: 1059.282+/-0.484

$\chi^2/\text{NDF}$ : 21791094.2/28

Left In: 9533.563+/-1.649

$\chi^2/\text{NDF}$ : 1316640.0/22

Left: 3596.432+/-0.646

$\chi^2/\text{NDF}$ : 40280305.8/47

Right: 1279.561+/-0.402

$\chi^2/\text{NDF}$ : 39042829.3/52

In: 3030.434+/-0.663

$\chi^2/\text{NDF}$ : 36462126.5/46

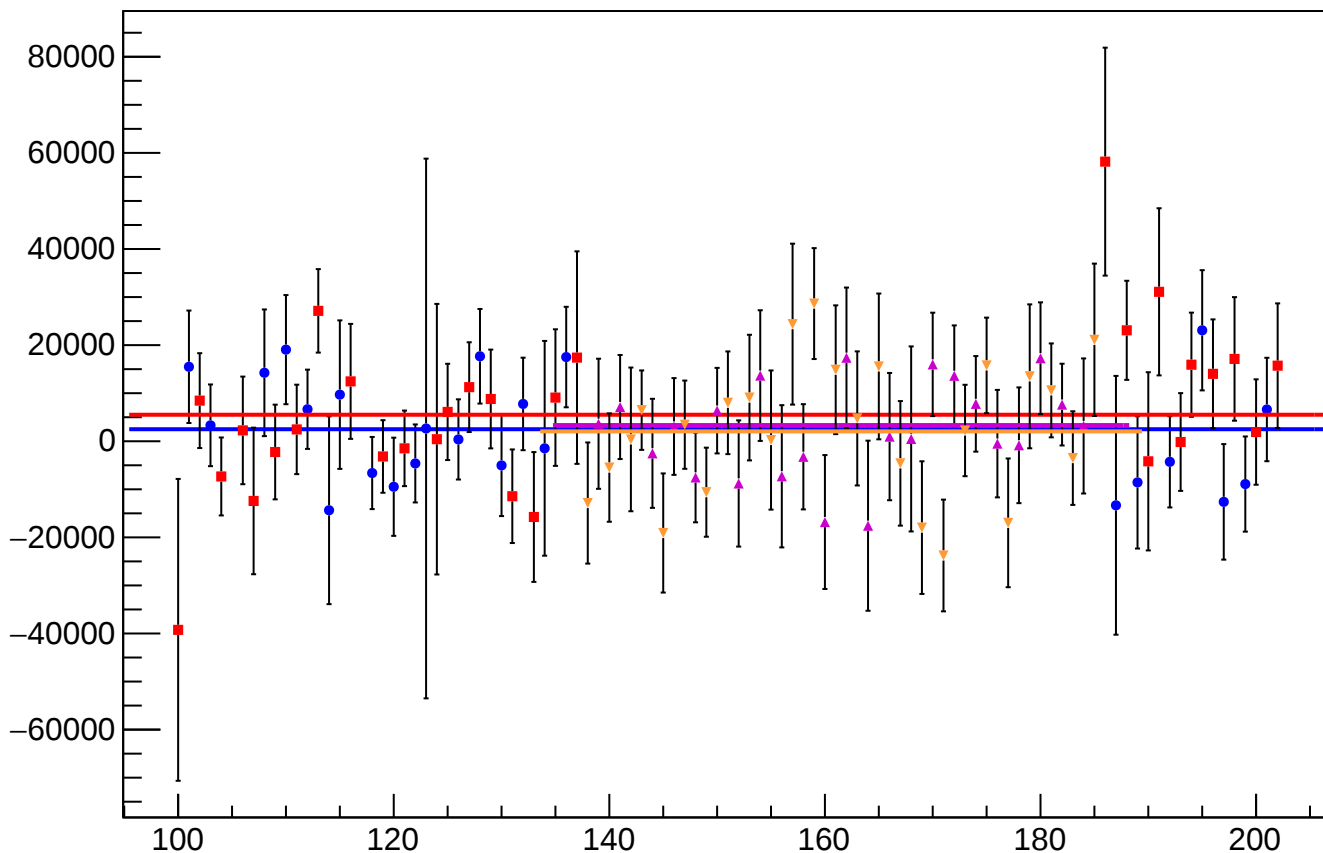
Out: 1529.321+/-0.398

$\chi^2/\text{NDF}$ : 48364823.9/53

All: 1927.184+/-0.342

$\chi^2/\text{NDF}$ : 88589376.0/100

# asym\_atl2\_mean vs Slug, Sign Corrected



Right In: 2503.981+/-2211.159  $\chi^2/\text{NDF}$ : 21.6/23

Left Out: 2055.950+/-2333.494  $\chi^2/\text{NDF}$ : 30.7/24

Right Out: 5517.730+/-2069.545  $\chi^2/\text{NDF}$ : 35.5/28

Left In: 3371.931+/-2423.242  $\chi^2/\text{NDF}$ : 13.1/22

Left: 2689.120+/-1680.862  $\chi^2/\text{NDF}$ : 44.0/47

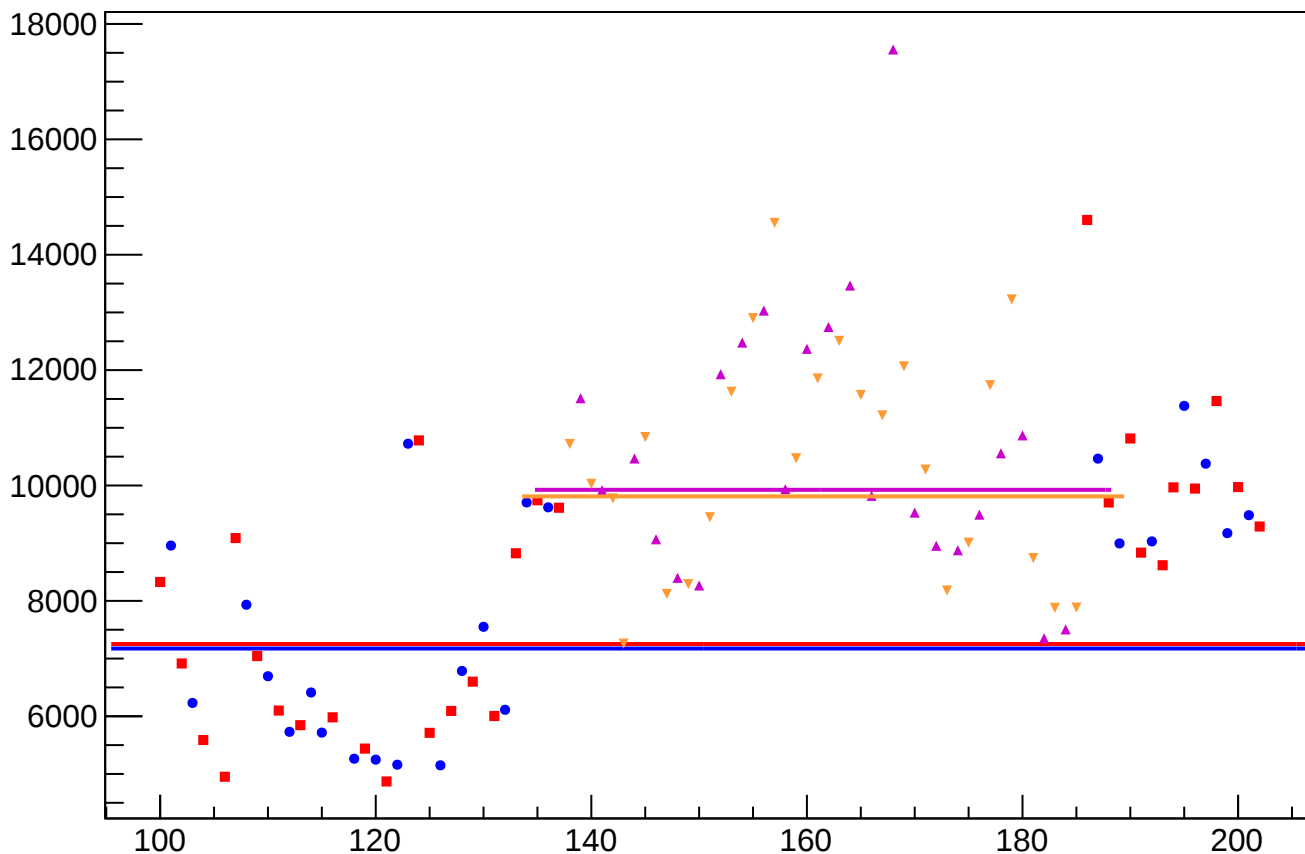
Right: 4110.447+/-1510.975  $\chi^2/\text{NDF}$ : 58.1/52

In: 2898.319+/-1633.368  $\chi^2/\text{NDF}$ : 34.8/46

Out: 3993.620+/-1548.336  $\chi^2/\text{NDF}$ : 67.4/53

All: 3475.221+/-1123.697  $\chi^2/\text{NDF}$ : 102.5/100

# asym\_atl2\_rms vs Slug, Sign Corrected



Right In: 7174.136+/-1.564

$\chi^2/\text{NDF}$ : 1461878.7/23

Left: 9866.039+/-1.189  $\chi^2/\text{NDF}$ : 2427693.8/47

Right: 7216.010+/-1.068  $\chi^2/\text{NDF}$ : 3391213.3/52

Left Out: 9811.053+/-1.650

$\chi^2/\text{NDF}$ : 1213831.0/24

In: 8424.092+/-1.155  $\chi^2/\text{NDF}$ : 4080161.6/46

Out: 8379.012+/-1.095  $\chi^2/\text{NDF}$ : 4487476.1/53

Right Out: 7252.690+/-1.463

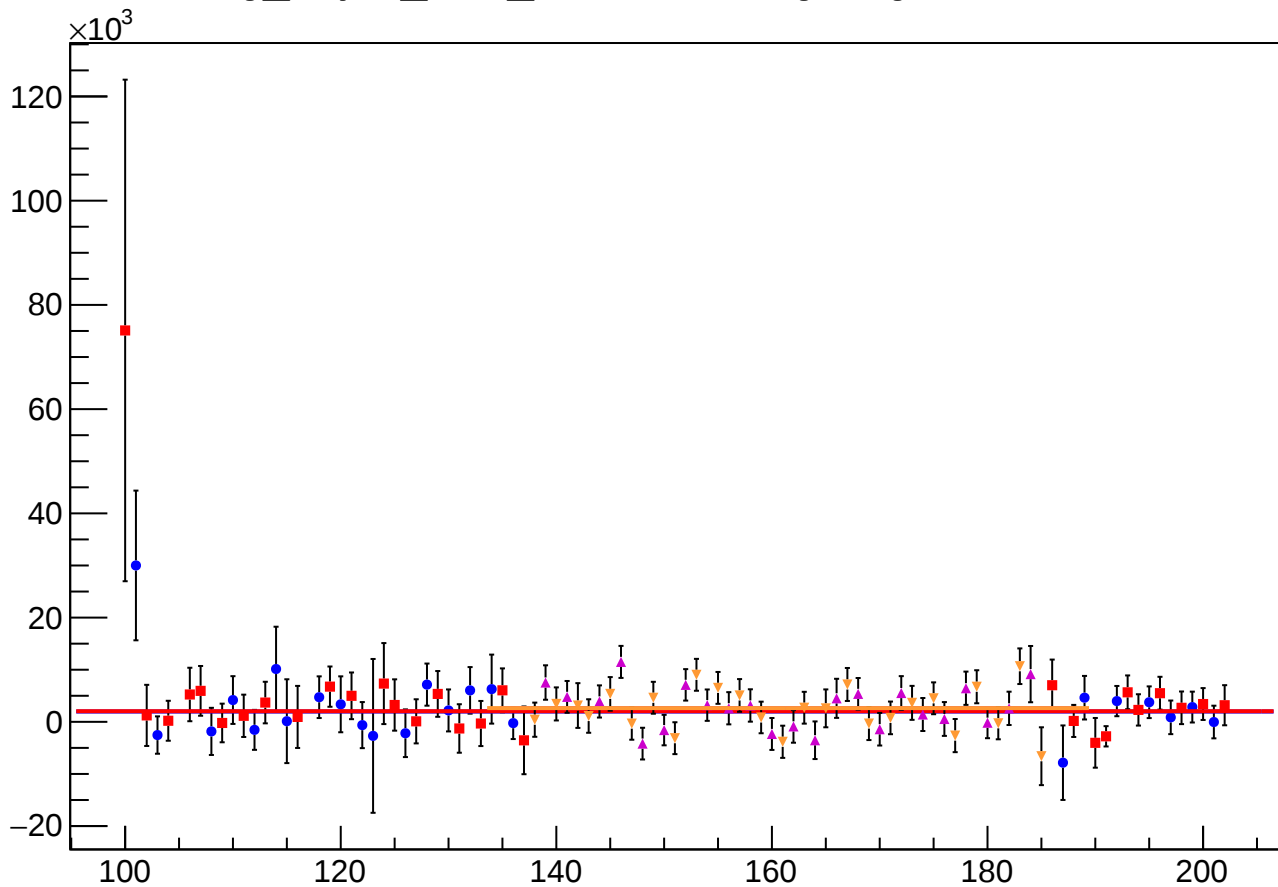
$\chi^2/\text{NDF}$ : 1927989.1/28

Left In: 9925.337+/-1.713

$\chi^2/\text{NDF}$ : 1211554.7/22

All: 8400.348+/-0.795  $\chi^2/\text{NDF}$ : 8568440.2/10

# reg\_asym\_atr1\_mean vs Slug, Sign Corrected



Right In: 1973.562 $\pm$ 846.005  $\chi^2$ /NDF: 17.2/23

Left Out: 2635.833 $\pm$ 646.121  $\chi^2$ /NDF:35.1/24

Right Out: 2037.223 $\pm$ 724.723  $\chi^2$ /NDF: 21.8/28

Left In: 2638.607 $\pm$ 664.569  $\chi^2$ /NDF:35.2/22

Left: 2637.181 $\pm$ 463.261  $\chi^2$ /NDF: 70.3/47

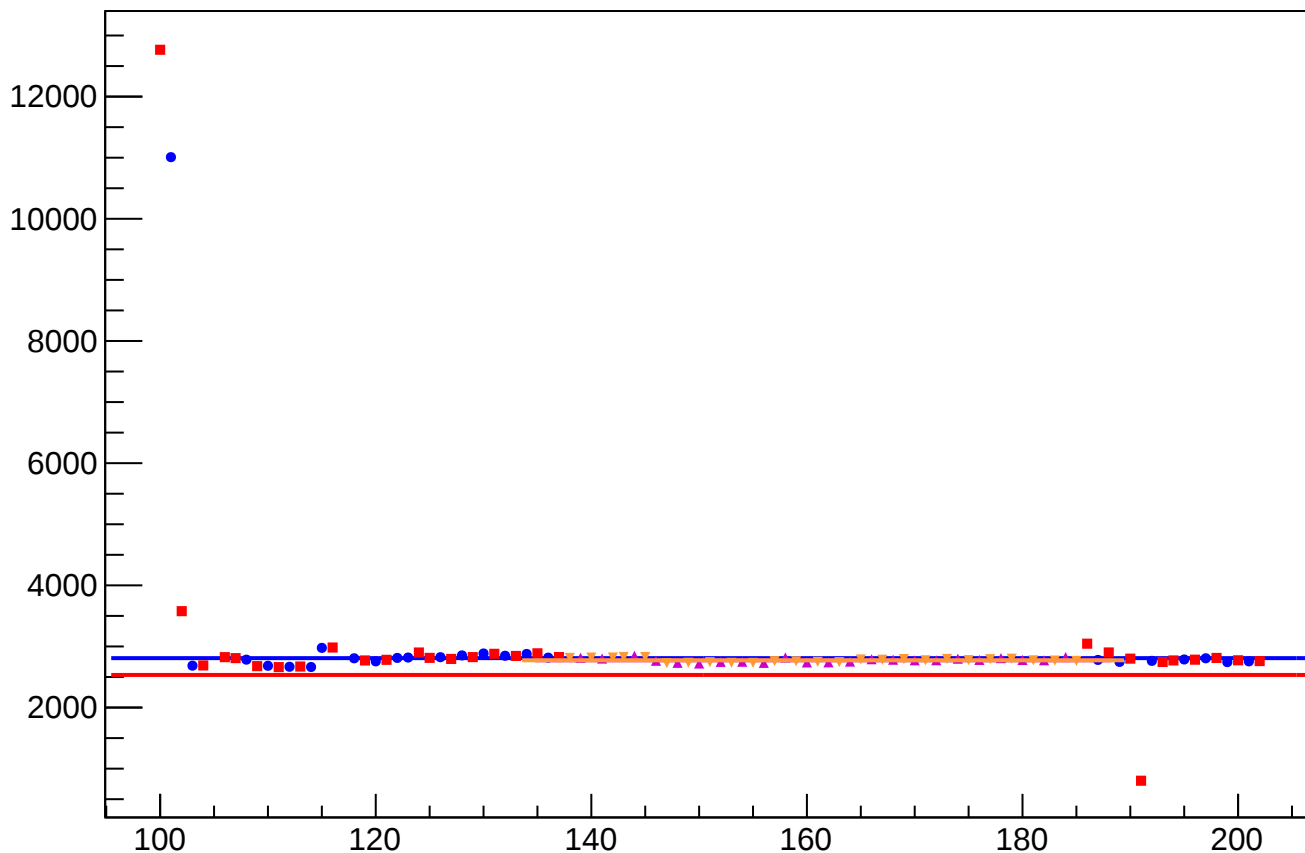
Right: 2010.279 $\pm$ 550.387  $\chi^2$ /NDF: 39.0/52

In: 2384.828 $\pm$ 522.608  $\chi^2$ /NDF:52.8/46

Out: 2370.739 $\pm$ 482.281  $\chi^2$ /NDF:57.3/53

All: 2377.219 $\pm$ 354.424  $\chi^2$ /NDF: 110.1/100

# reg\_asym\_atr1\_rms vs Slug, Sign Corrected



Right In: 2808.762+/-0.598  $\chi^2/\text{NDF}$ : 664238.0/23

Left Out: 2773.713+/-0.457  $\chi^2/\text{NDF}$ : 4616.5/24

Right Out: 2533.704+/-0.512  $\chi^2/\text{NDF}$ : 1974716.2/28

Left In: 2774.036+/-0.470  $\chi^2/\text{NDF}$ : 4985.3/22

Left: 2773.870+/-0.328  $\chi^2/\text{NDF}$ : 9602.0/47

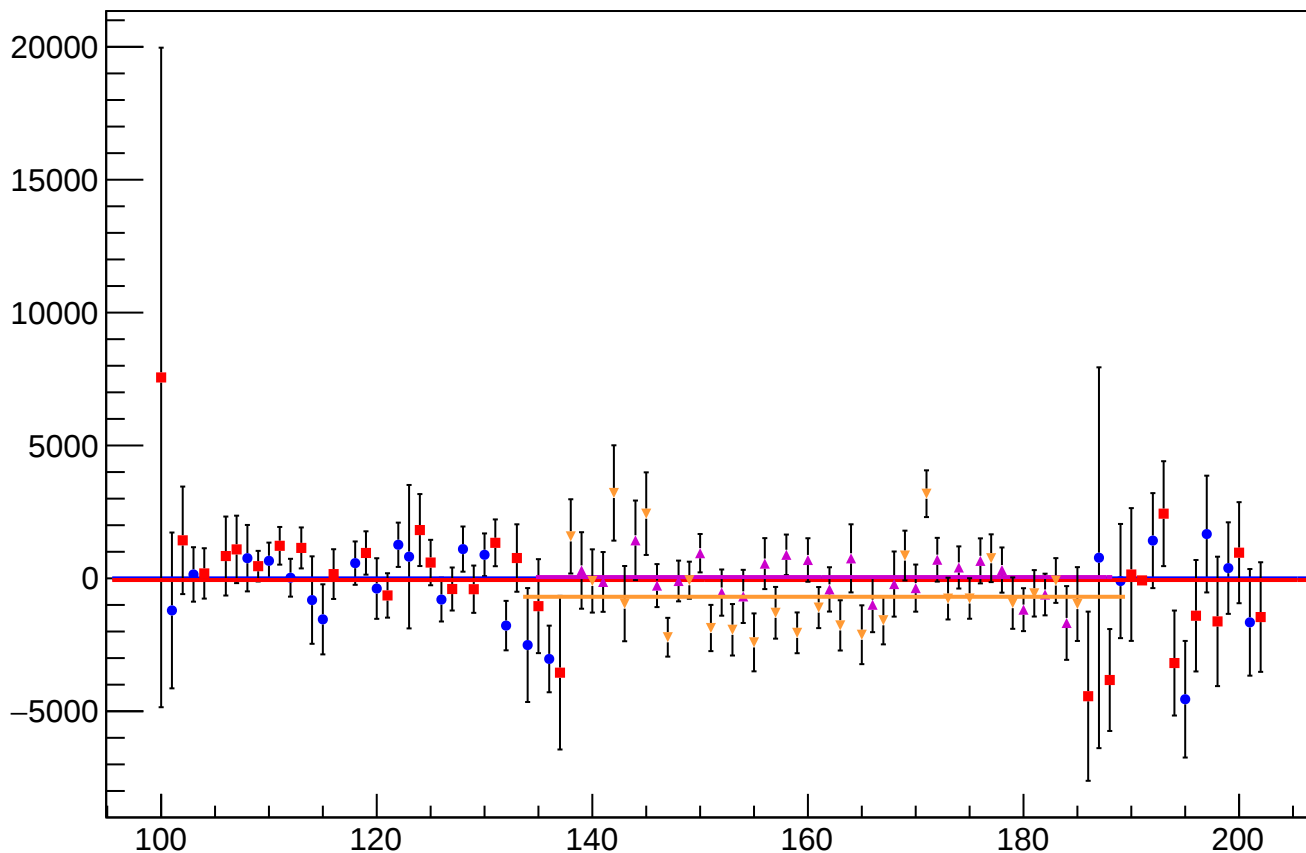
Right: 2650.120+/-0.389  $\chi^2/\text{NDF}$ : 2760888.7/52

In: 2787.287+/-0.370  $\chi^2/\text{NDF}$ : 671307.2/46

Out: 2667.425+/-0.341  $\chi^2/\text{NDF}$ : 2101545.4/53

All: 2722.554+/-0.251  $\chi^2/\text{NDF}$ : 2829671.0/100

# asym\_atr1\_correction\_mean vs Slug, Sign Corrected



Right In:  $-0.242 \pm 232.113$   $\chi^2/\text{NDF}: 27.1/23$

Left Out:  $-692.808 \pm 187.297$   $\chi^2/\text{NDF}: 56.0/24$

Right Out:  $-62.959 \pm 37.887$   $\chi^2/\text{NDF}: 30.0/28$

Left In:  $49.244 \pm 189.190$   $\chi^2/\text{NDF}: 13.6/22$

Left:  $-325.512 \pm 133.103$   $\chi^2/\text{NDF}: 77.4/47$

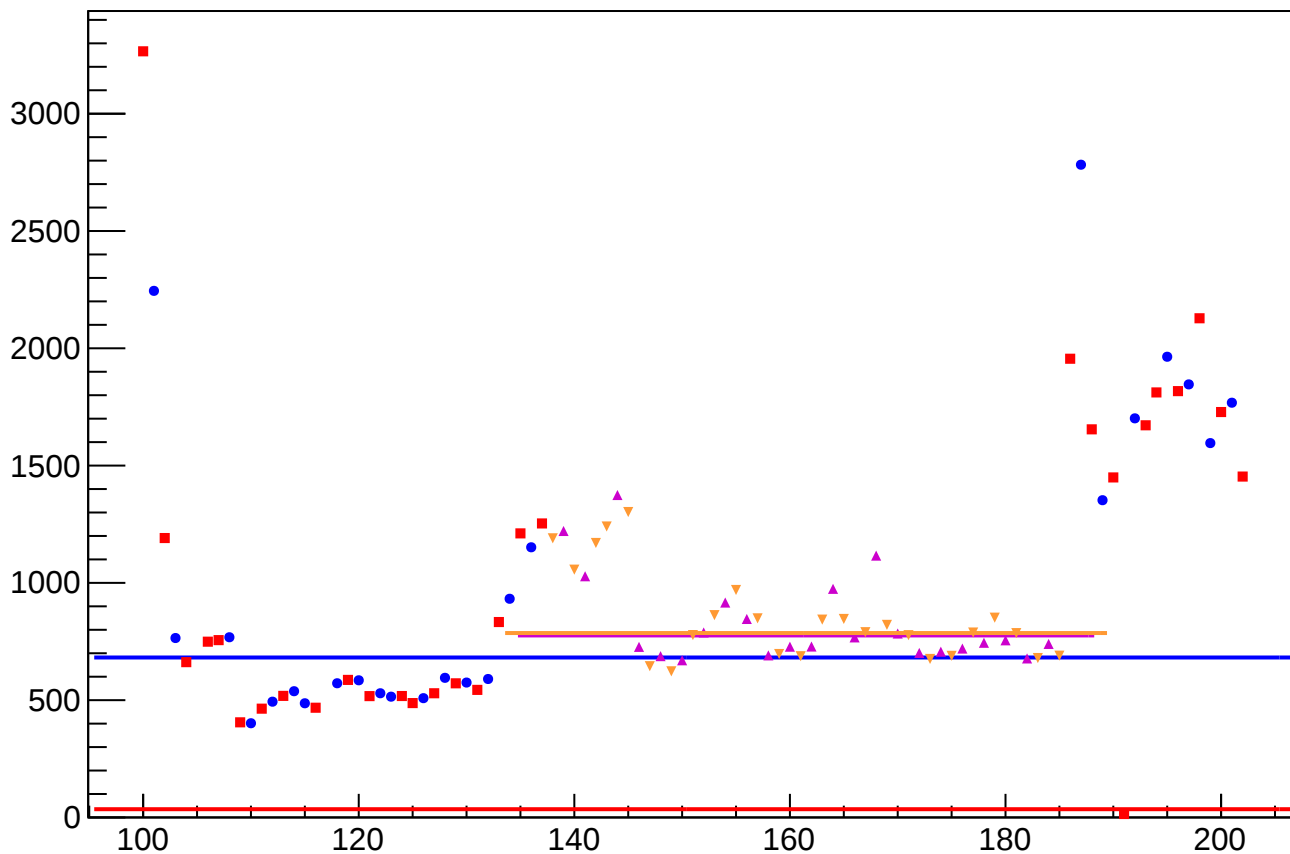
Right:  $-61.331 \pm 37.392$   $\chi^2/\text{NDF}: 57.1/52$

In:  $29.491 \pm 146.648$   $\chi^2/\text{NDF}: 40.7/46$

Out:  $-87.718 \pm 37.135$   $\chi^2/\text{NDF}: 96.8/53$

All:  $-80.655 \pm 35.998$   $\chi^2/\text{NDF}: 138.1/100$

asym\_atr1\_correction\_rms vs Slug, Sign Corrected



Right In: 681.901+/-0.164

$\chi^2/\text{NDF}$ : 5133141.5/23

Left Out: 786.173+/-0.132

$\chi^2/\text{NDF}$ : 1249536.1/24

Right Out: 35.197+/-0.027

$\chi^2/\text{NDF}$ : 23916297.8/28

Left In: 775.930+/-0.134

$\chi^2/\text{NDF}$ : 1056766.5/22

Left: 781.103+/-0.094

$\chi^2/\text{NDF}$ : 2309263.4/47

Right: 51.979+/-0.026

$\chi^2/\text{NDF}$ : 44171880.3/52

In: 738.397+/-0.104

$\chi^2/\text{NDF}$ : 6387111.1/46

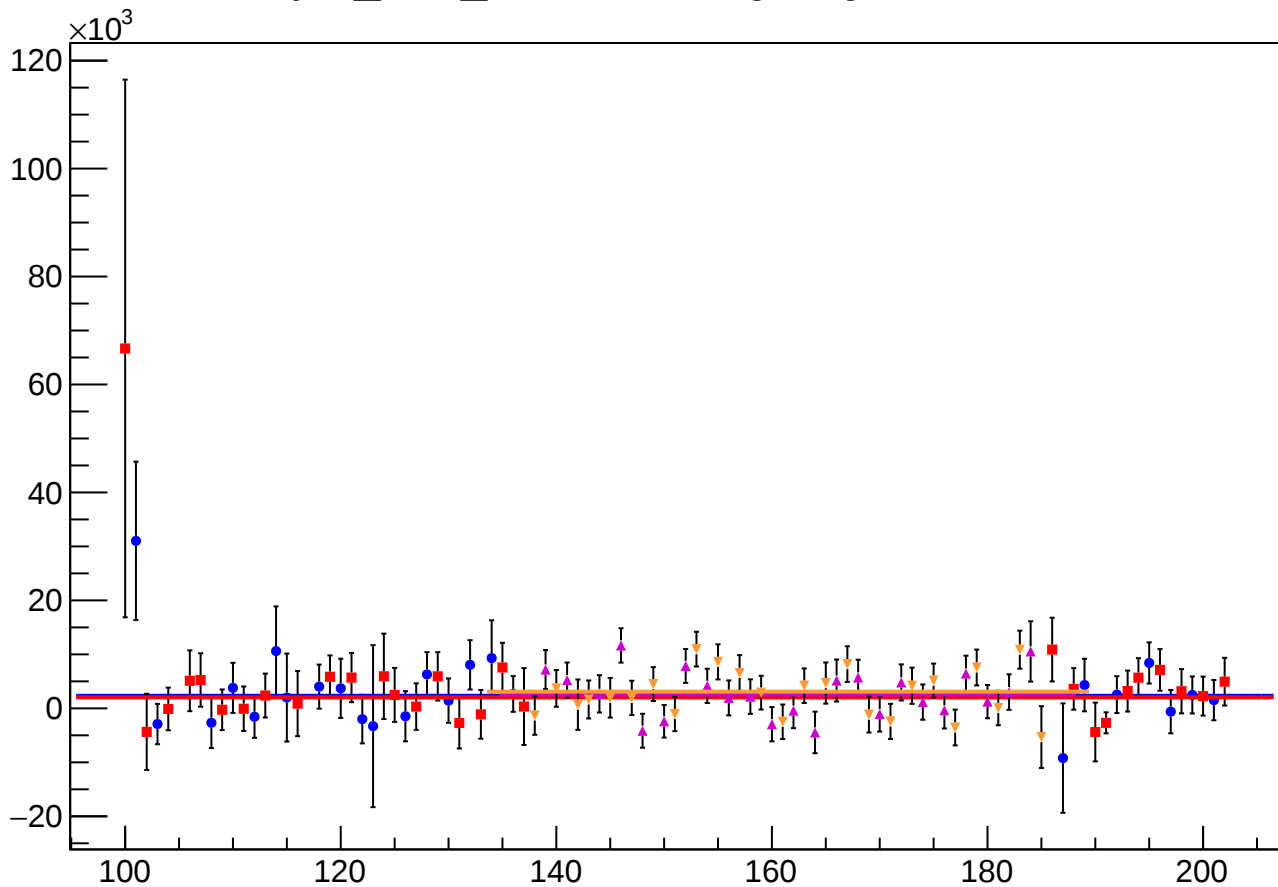
Out: 64.717+/-0.026

$\chi^2/\text{NDF}$ : 56054784.5/53

All: 105.312+/-0.025

$\chi^2/\text{NDF}$ : 102105733.1/100

# asym\_atr1\_mean vs Slug, Sign Corrected



Right In: 2328.388 $\pm$ 928.723  $\chi^2$ /NDF: 19.1/23

Left Out: 3094.826 $\pm$ 678.510  $\chi^2$ /NDF:38.7/24

Right Out: 2033.113 $\pm$ 790.480  $\chi^2$ /NDF: 23.0/28

Left In: 2573.184 $\pm$ 695.795  $\chi^2$ /NDF:35.7/22

Left: 2840.565 $\pm$ 485.775  $\chi^2$ /NDF: 74.6/47

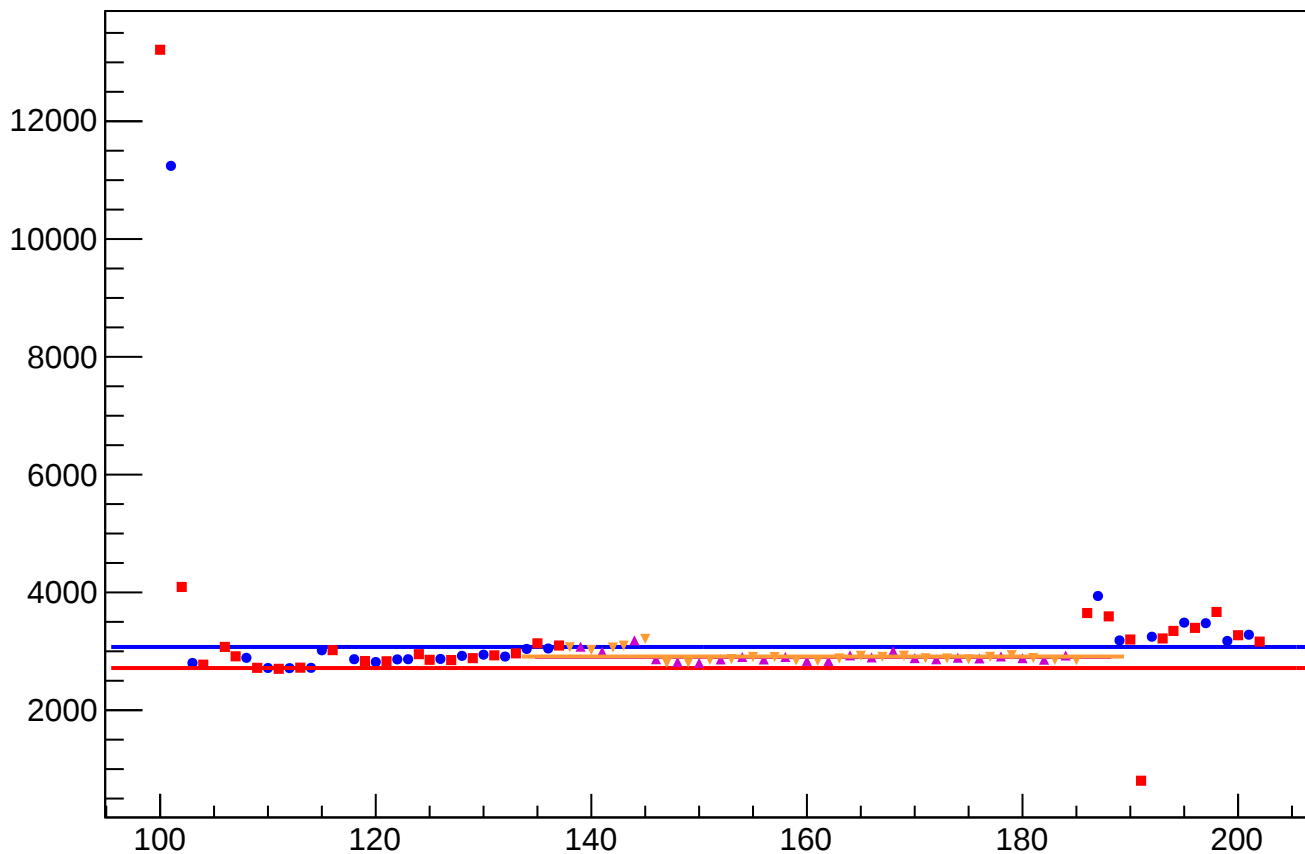
Right: 2157.160 $\pm$ 601.957  $\chi^2$ /NDF: 42.1/52

In: 2485.179 $\pm$ 556.851  $\chi^2$ /NDF:54.8/46

Out: 2644.428 $\pm$ 514.856  $\chi^2$ /NDF:62.7/53

All: 2571.034 $\pm$ 378.034  $\chi^2$ /NDF: 117.6/100

# asym\_atr1\_rms vs Slug, Sign Corrected



Right In: 3073.795+/-0.657  $\chi^2/\text{NDF}$ : 764709.0/23

Left Out: 2911.226+/-0.480  $\chi^2/\text{NDF}$ :36644.3/24

Right Out: 2716.072+/-0.559  $\chi^2/\text{NDF}$ : 2657199.4/28

Left In: 2903.411+/-0.492  $\chi^2/\text{NDF}$ :28838.5/22

Left: 2907.416+/-0.343  $\chi^2/\text{NDF}$ : 65612.1/47

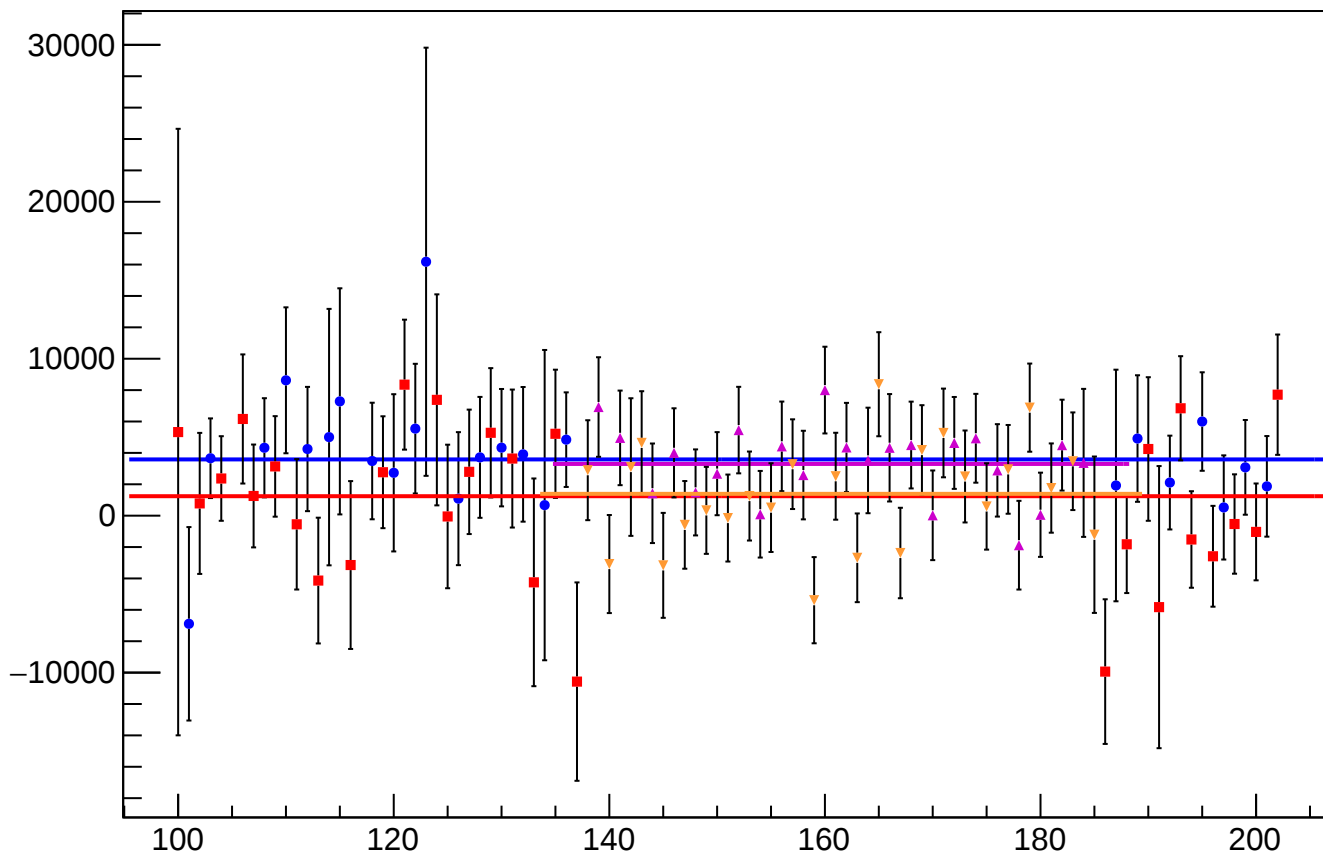
Right: 2866.353+/-0.426  $\chi^2/\text{NDF}$ : 3593976.1/52

In: 2964.665+/-0.394  $\chi^2/\text{NDF}$ :836662.8/46

Out: 2828.438+/-0.364  $\chi^2/\text{NDF}$ :2764031.2/53

All: 2891.221+/-0.267  $\chi^2/\text{NDF}$ : 3665224.6/100

# reg\_asym\_atr2\_mean vs Slug, Sign Corrected



Right In: 3584.222 $\pm$ 799.857  $\chi^2$ /NDF: 8.4/23

Left Out: 1390.275 $\pm$ 596.516  $\chi^2$ /NDF:29.2/24

Right Out: 1240.137 $\pm$ 733.061  $\chi^2$ /NDF: 31.9/28

Left In: 3295.367 $\pm$ 609.991  $\chi^2$ /NDF:14.9/22

Left: 2321.546 $\pm$ 426.485  $\chi^2$ /NDF: 49.0/47

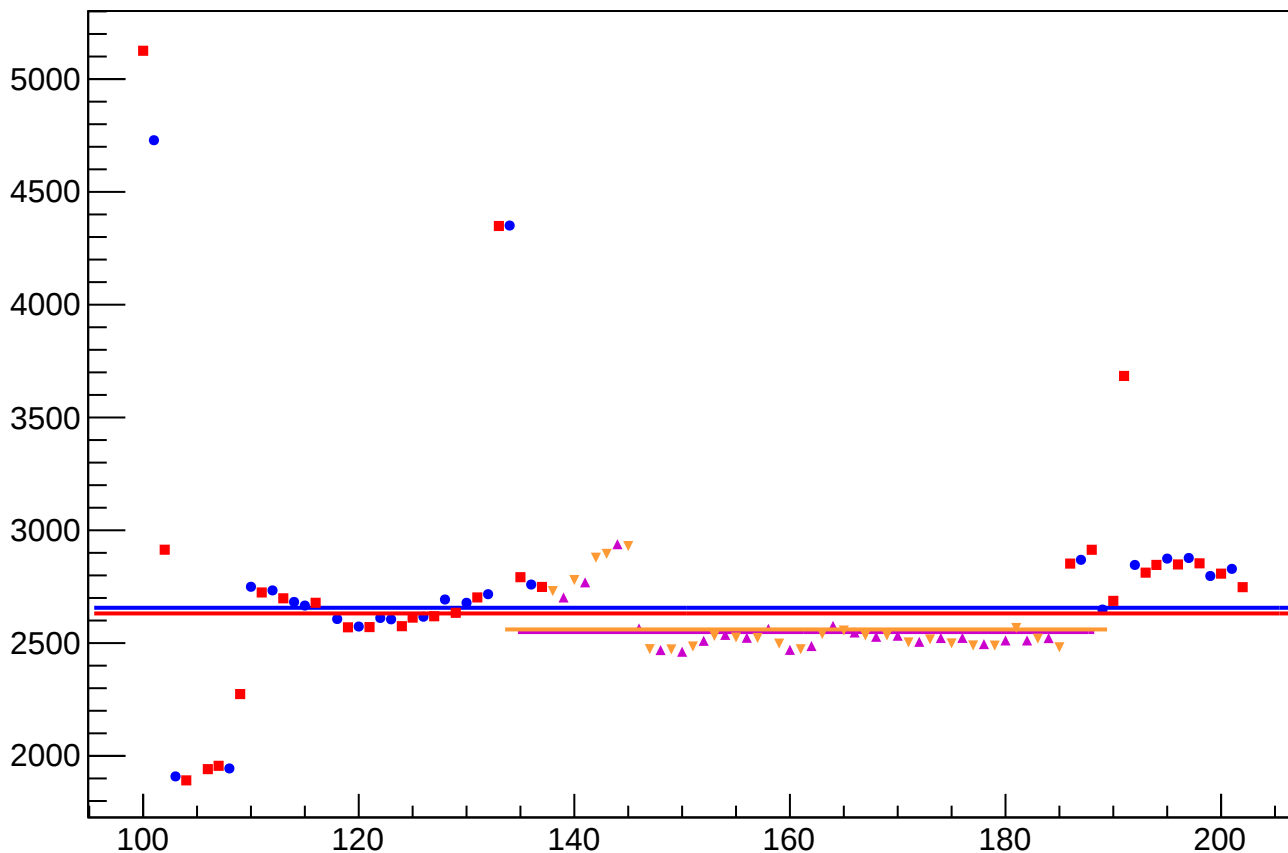
Right: 2310.231 $\pm$ 540.426  $\chi^2$ /NDF: 45.0/52

In: 3401.587 $\pm$ 485.038  $\chi^2$ /NDF:23.3/46

Out: 1330.463 $\pm$ 462.685  $\chi^2$ /NDF:61.1/53

All: 2317.203 $\pm$ 334.791  $\chi^2$ /NDF: 94.0/100

# reg\_asym\_atr2\_rms vs Slug, Sign Corrected



Right In: 2656.520 $\pm$ 0.566  $\chi^2/\text{NDF}$ : 604395.5/23

Left Out: 2560.531 $\pm$ 0.422  $\chi^2/\text{NDF}$ : 86771.4/24

Right Out: 2631.414 $\pm$ 0.518  $\chi^2/\text{NDF}$ : 591960.7/28

Left In: 2548.870 $\pm$ 0.431  $\chi^2/\text{NDF}$ : 55266.2/22

Left: 2554.831 $\pm$ 0.302  $\chi^2/\text{NDF}$ : 142411.2/47

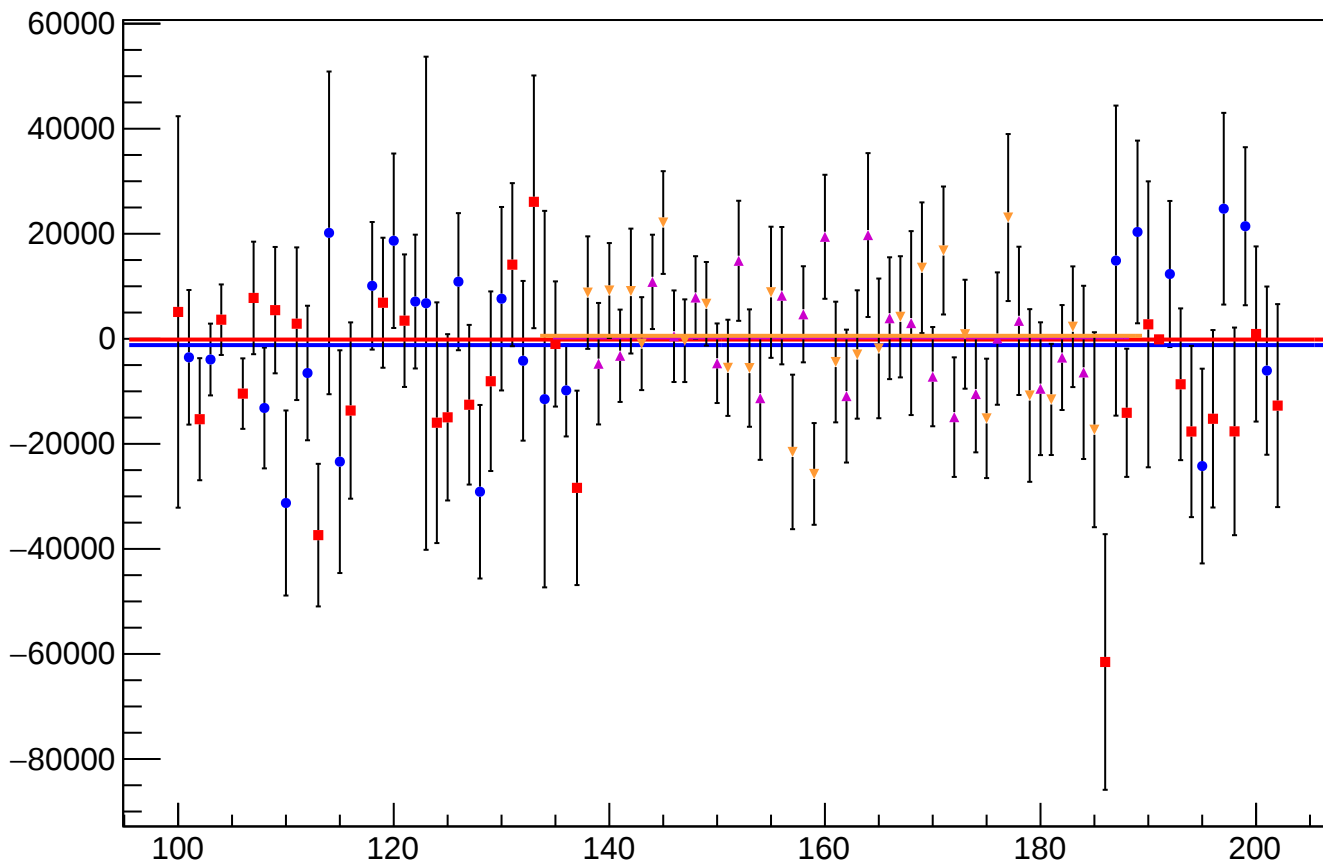
Right: 2642.875 $\pm$ 0.382  $\chi^2/\text{NDF}$ : 1197427.1/52

In: 2588.456 $\pm$ 0.343  $\chi^2/\text{NDF}$ : 682567.2/46

Out: 2588.769 $\pm$ 0.327  $\chi^2/\text{NDF}$ : 689982.3/53

All: 2588.620 $\pm$ 0.237  $\chi^2/\text{NDF}$ : 1372549.9/100

# asym\_atr2\_correction\_mean vs Slug, Sign Corrected



Right In:  $-1197.754 \pm 2893.277$   $\chi^2/\text{NDF}: 22.4/23$

Left Out:  $572.477 \pm 2184.376$   $\chi^2/\text{NDF}: 28.2/24$

Right Out:  $-141.073 \pm 194.981$   $\chi^2/\text{NDF}: 31.6/28$

Left In:  $275.116 \pm 2242.836$   $\chi^2/\text{NDF}: 15.7/22$

Left:  $427.723 \pm 1564.847$   $\chi^2/\text{NDF}: 43.9/47$

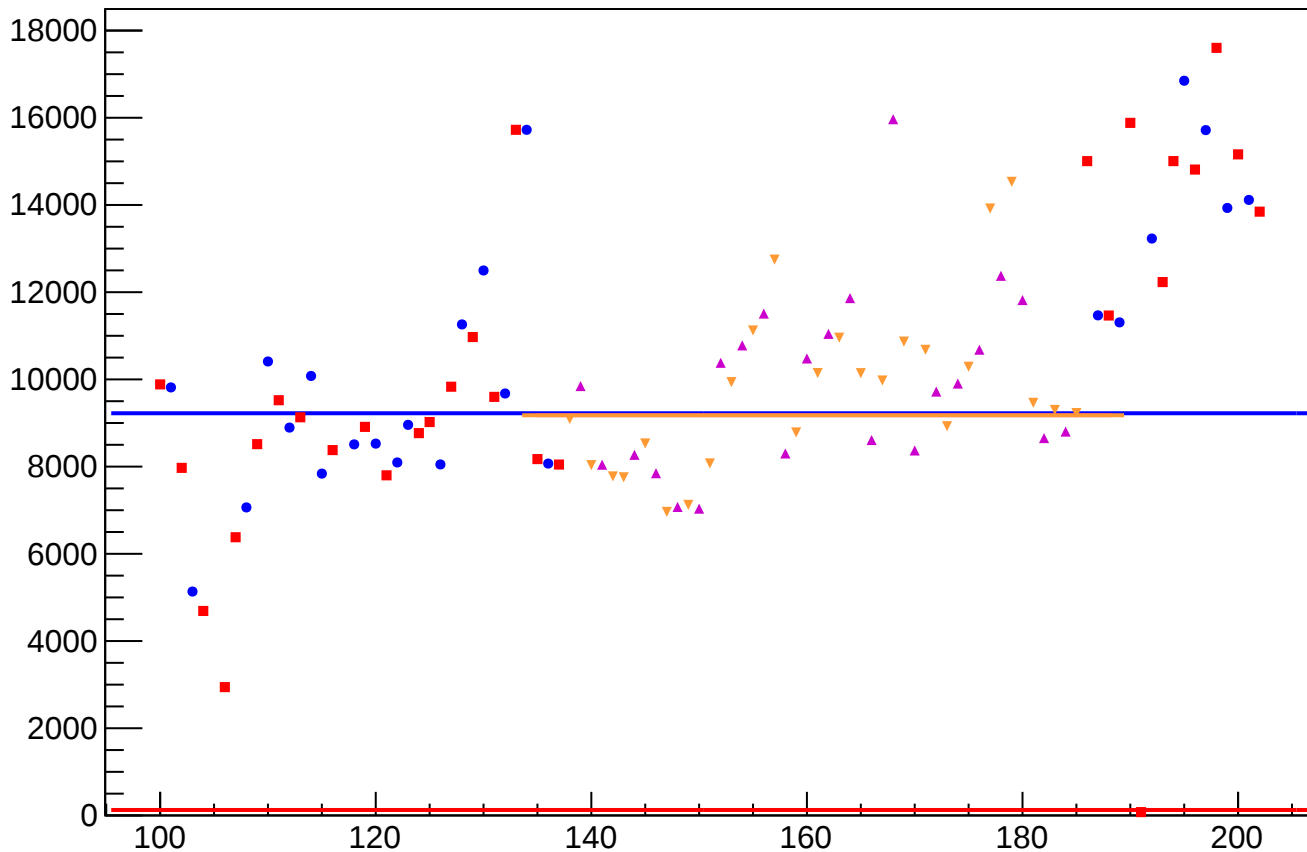
Right:  $-145.850 \pm 194.540$   $\chi^2/\text{NDF}: 54.2/52$

In:  $-277.738 \pm 1772.609$   $\chi^2/\text{NDF}: 38.3/46$

Out:  $-135.433 \pm 194.209$   $\chi^2/\text{NDF}: 59.9/53$

All:  $-137.120 \pm 193.053$   $\chi^2/\text{NDF}: 98.2/100$

# asym\_atr2\_correction\_rms vs Slug, Sign Corrected



Right In: 9223.687+/-2.046

$\chi^2/\text{NDF}$ : 2236967.3/23

Left: 9179.424+/-1.107

$\chi^2/\text{NDF}$ : 2412668.1/47

Left Out: 9177.688+/-1.545

$\chi^2/\text{NDF}$ : 1176195.8/24

Right: 166.758+/-0.138

$\chi^2/\text{NDF}$ : 47301686.4/52

Right Out: 125.626+/-0.138

$\chi^2/\text{NDF}$ : 25377714.3/28

In: 9197.182+/-1.253

$\chi^2/\text{NDF}$ : 3473705.7/46

Out: 197.179+/-0.137

$\chi^2/\text{NDF}$ : 60627949.6/53

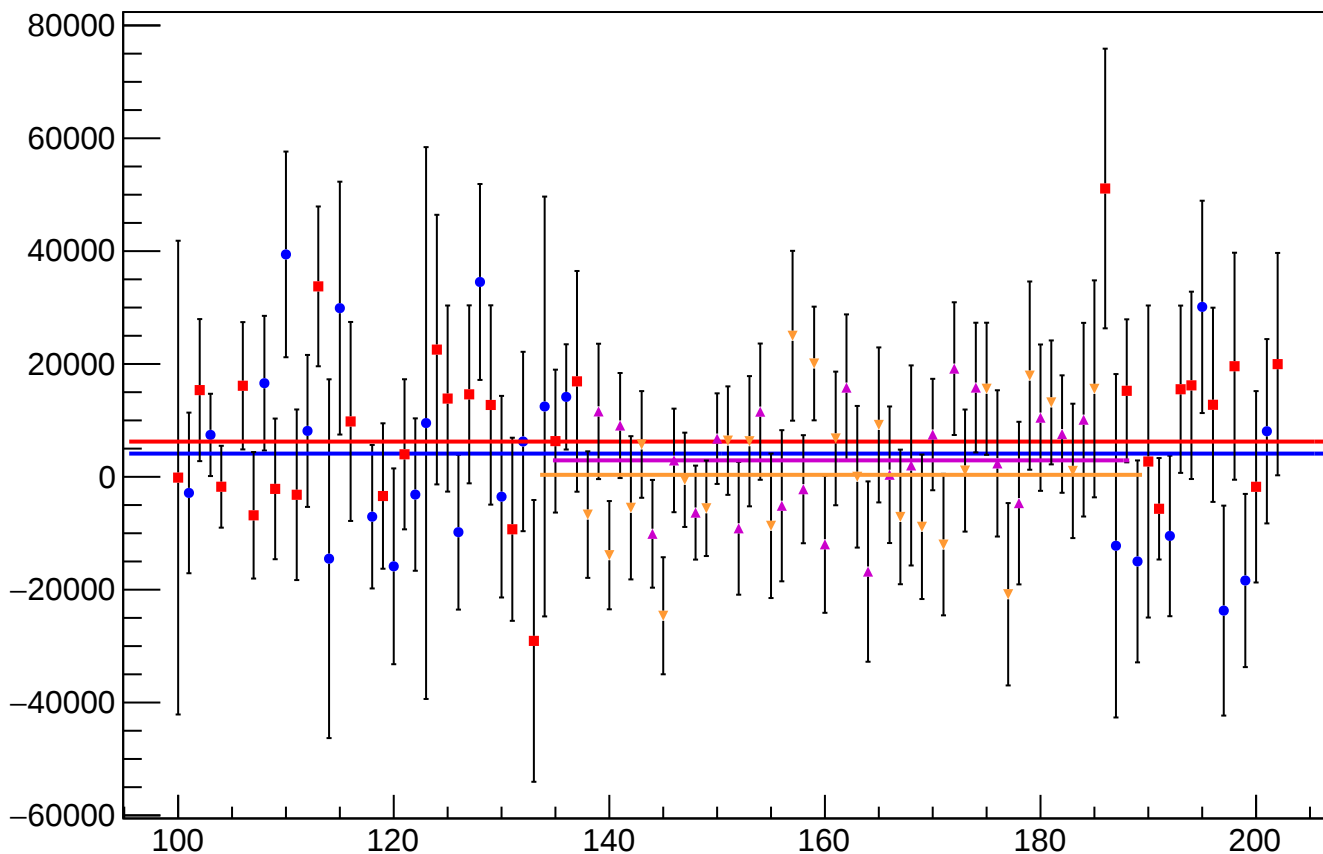
Left In: 9181.254+/-1.586

$\chi^2/\text{NDF}$ : 1236469.7/22

All: 303.930+/-0.137

$\chi^2/\text{NDF}$ : 115047302.5/1

# asym\_atr2\_mean vs Slug, Sign Corrected



Right In: 4118.580 $\pm$ 3036.400  $\chi^2$ /NDF: 23.8/23

Left Out: 355.717 $\pm$ 2281.682  $\chi^2$ /NDF:26.2/24

Right Out: 6247.575 $\pm$ 2663.894  $\chi^2$ /NDF: 21.0/28

Left In: 2918.356 $\pm$ 2338.461  $\chi^2$ /NDF:14.9/22

Left: 1605.548 $\pm$ 1633.097  $\chi^2$ /NDF: 41.8/47

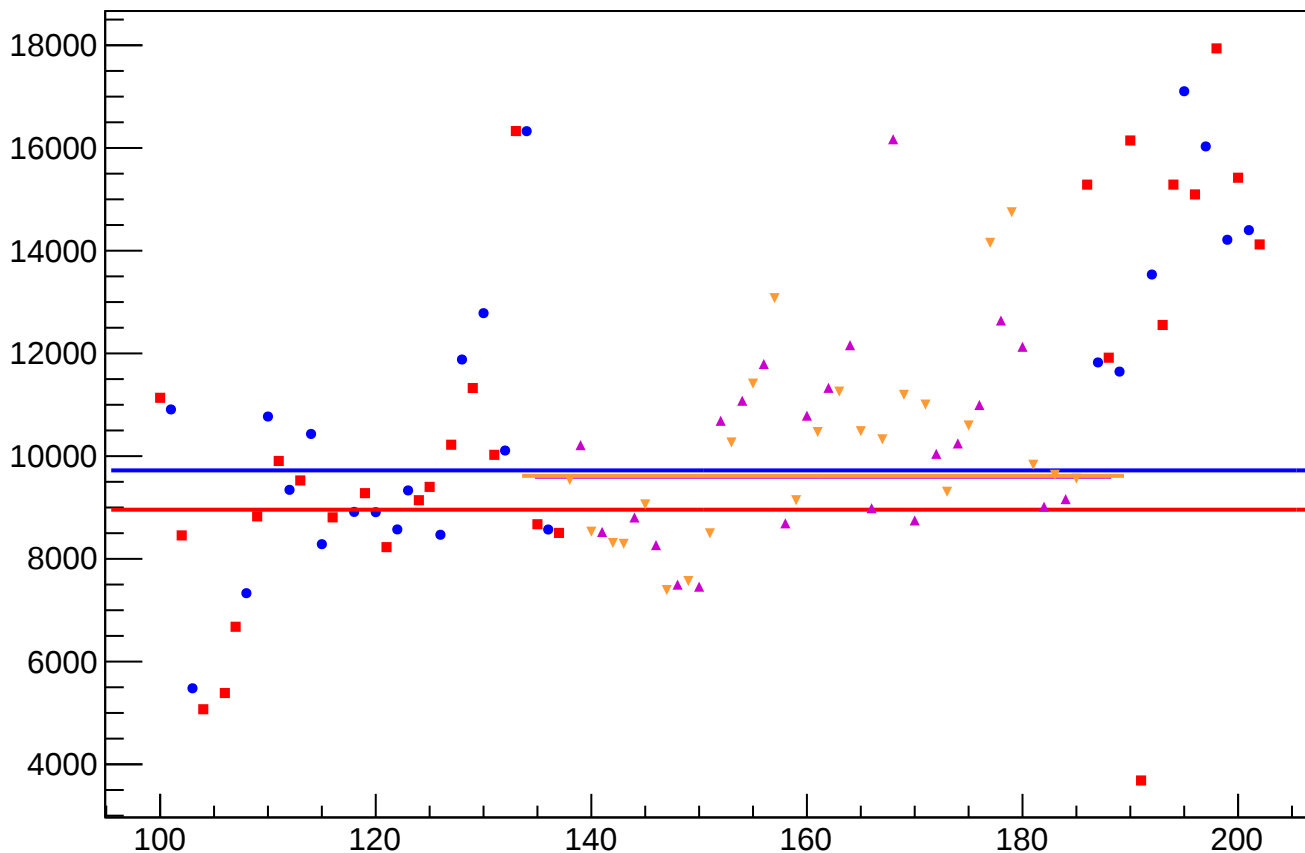
Right: 5321.612 $\pm$ 2002.481  $\chi^2$ /NDF: 45.1/52

In: 3365.200 $\pm$ 1852.704  $\chi^2$ /NDF:38.8/46

Out: 2849.006 $\pm$ 1732.914  $\chi^2$ /NDF:50.1/53

All: 3089.877 $\pm$ 1265.586  $\chi^2$ /NDF: 89.0/100

# asym\_atr2\_rms vs Slug, Sign Corrected



Right In: 9722.519 $\pm$ 2.147  $\chi^2$ /NDF: 2066094.9/23

Left Out: 9616.245 $\pm$ 1.613  $\chi^2$ /NDF: 1011665.6/24

Right Out: 8957.258 $\pm$ 1.884  $\chi^2$ /NDF: 3671804.1/28

Left In: 9598.531 $\pm$ 1.654  $\chi^2$ /NDF: 1082171.6/22

Left: 9607.606 $\pm$ 1.155  $\chi^2$ /NDF: 2093896.0/47

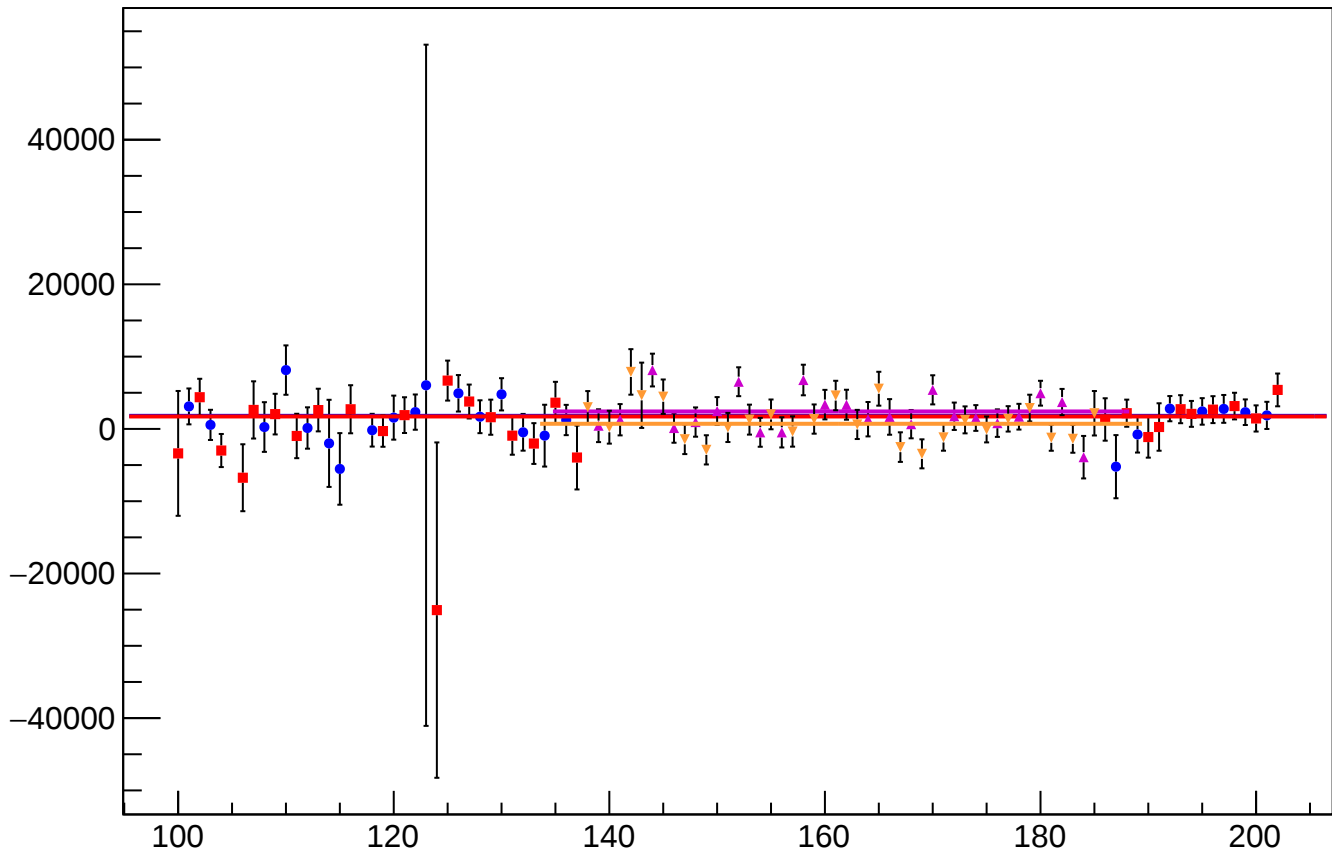
Right: 9290.080 $\pm$ 1.416  $\chi^2$ /NDF: 5809686.2/52

In: 9644.692 $\pm$ 1.310  $\chi^2$ /NDF: 3150359.7/46

Out: 9337.367 $\pm$ 1.225  $\chi^2$ /NDF: 4754070.8/53

All: 9480.772 $\pm$ 0.895  $\chi^2$ /NDF: 7933783.2/100

# reg\_asym\_atl\_avg\_mean vs Slug, Sign Corrected



Right In: 1808.346 $\pm$ 504.798  $\chi^2/\text{NDF}$ : 17.1/23

Left Out: 709.722 $\pm$ 417.377  $\chi^2/\text{NDF}$ : 34.8/24

Right Out: 1721.577 $\pm$ 472.224  $\chi^2/\text{NDF}$ : 26.2/28

Left In: 2414.749 $\pm$ 423.472  $\chi^2/\text{NDF}$ : 34.0/22

Left: 1549.879 $\pm$ 297.262  $\chi^2/\text{NDF}$ : 77.0/47

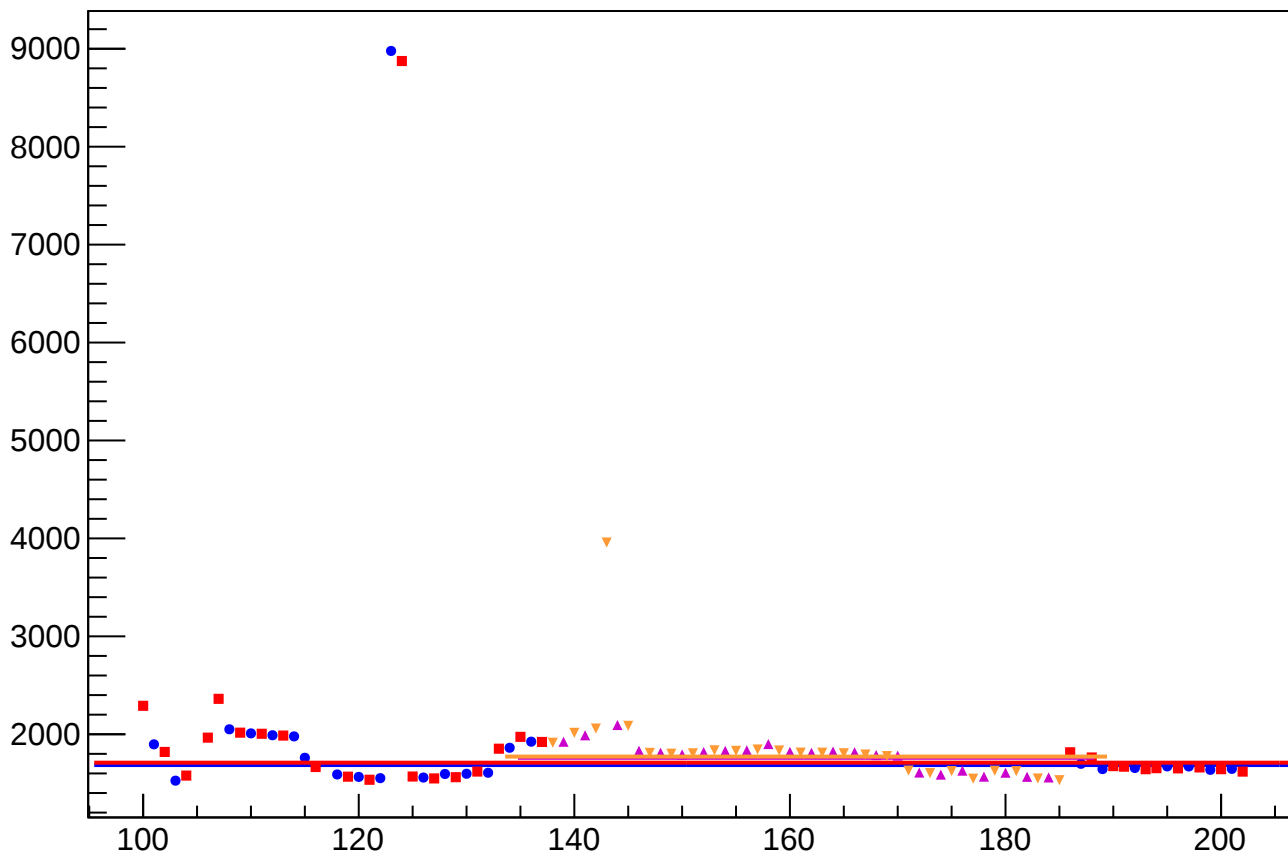
Right: 1762.072 $\pm$ 344.854  $\chi^2/\text{NDF}$ : 43.3/52

In: 2164.270 $\pm$ 324.431  $\chi^2/\text{NDF}$ : 51.9/46

Out: 1153.502 $\pm$ 312.732  $\chi^2/\text{NDF}$ : 63.6/53

All: 1640.334 $\pm$ 225.157  $\chi^2/\text{NDF}$ : 120.5/100

# reg\_asym\_atl\_avg\_rms vs Slug, Sign Corrected



Right In: 1685.541+/-0.357  $\chi^2/\text{NDF}$ : 201790.4/23

Left Out: 1772.046+/-0.295  $\chi^2/\text{NDF}$ : 702472.4/24

Right Out: 1709.848+/-0.333  $\chi^2/\text{NDF}$ : 421284.5/28

Left In: 1759.600+/-0.299  $\chi^2/\text{NDF}$ : 214891.5/22

Left: 1765.913+/-0.210  $\chi^2/\text{NDF}$ : 918240.2/47

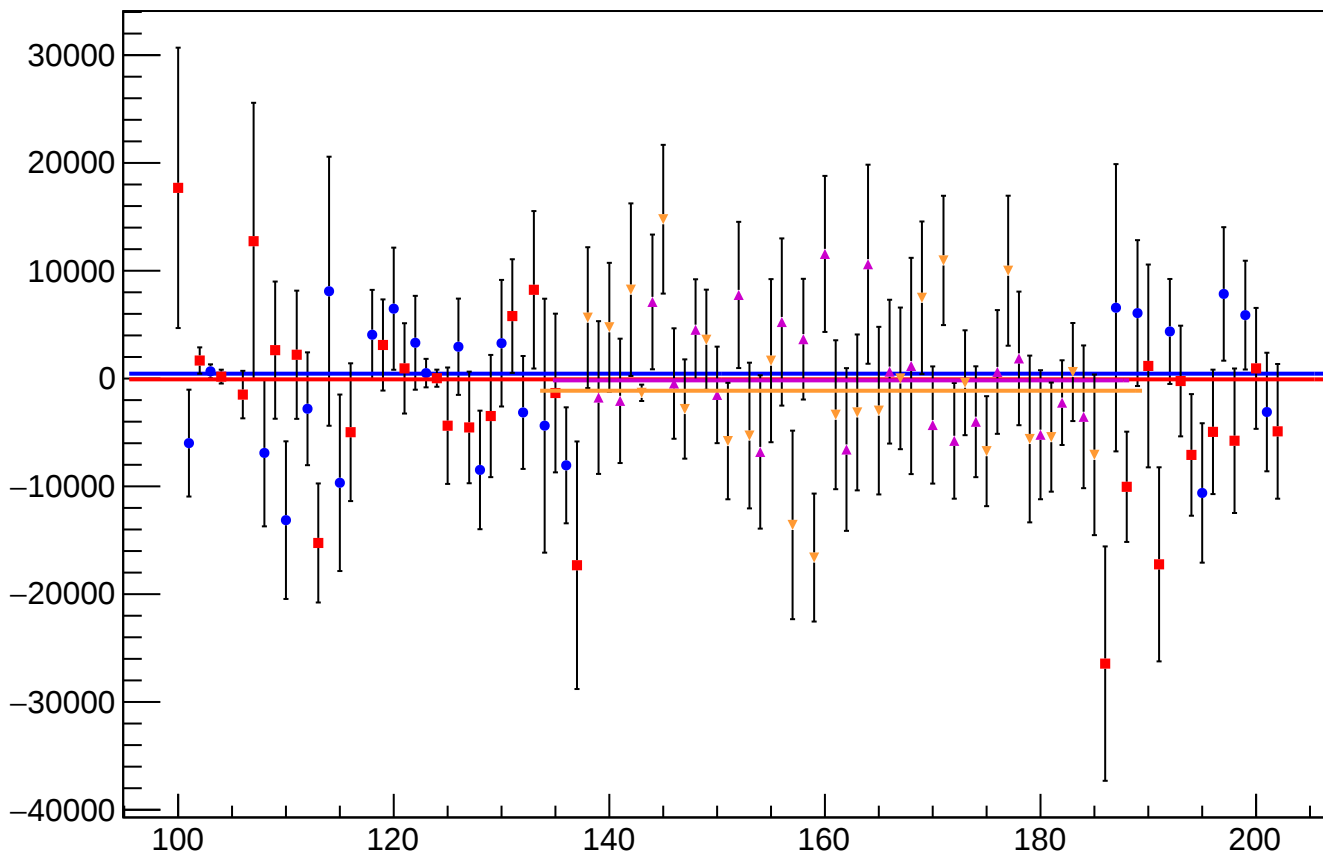
Right: 1698.531+/-0.244  $\chi^2/\text{NDF}$ : 625553.0/52

In: 1729.009+/-0.229  $\chi^2/\text{NDF}$ : 441948.1/46

Out: 1744.699+/-0.221  $\chi^2/\text{NDF}$ : 1143284.6/53

All: 1737.150+/-0.159  $\chi^2/\text{NDF}$ : 1587659.7/100

asym\_atl\_avg\_correction\_mean vs Slug, Sign Corrected



Right In: 451.898 $\pm$ 526.102  $\chi^2$ /NDF: 24.8/23

Left Out: -1129.807 $\pm$ 647.600  $\chi^2$ /NDF:31.5/24

Right Out: -73.677 $\pm$ 423.846  $\chi^2$ /NDF: 38.1/28

Left In: -168.182 $\pm$ 1232.411  $\chi^2$ /NDF:14.2/22

Left: -921.734 $\pm$ 573.272  $\chi^2$ /NDF: 46.1/47

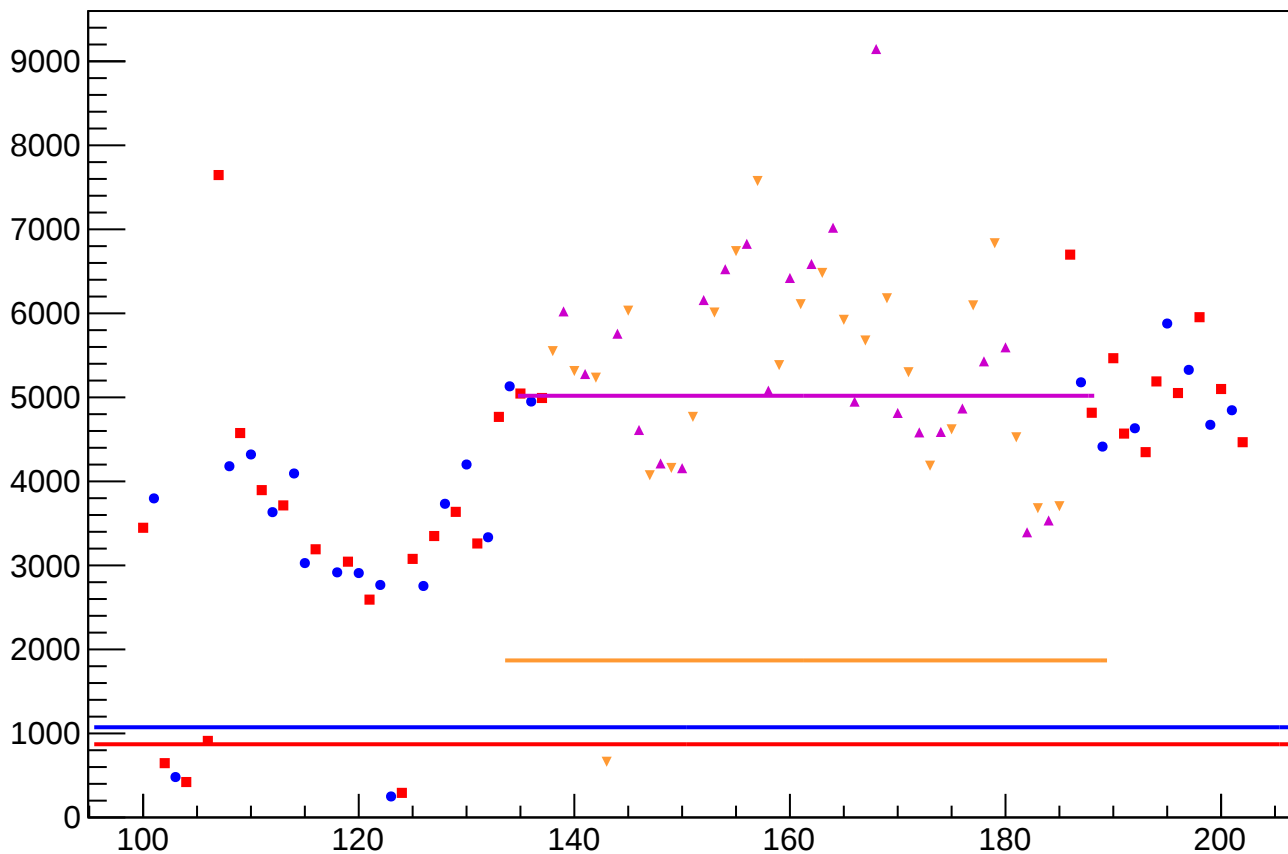
Right: 133.183 $\pm$ 330.059  $\chi^2$ /NDF: 63.5/52

In: 356.317 $\pm$ 483.858  $\chi^2$ /NDF:39.2/46

Out: -390.403 $\pm$ 354.642  $\chi^2$ /NDF:71.5/53

All: -129.447 $\pm$ 286.038  $\chi^2$ /NDF: 112.2/100

asym\_atl\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 1073.596+/-0.372

$\chi^2/\text{NDF}$ : 14198873.1/23

Left: 2550.597+/-0.405

$\chi^2/\text{NDF}$ : 31661059.7/47

Left Out: 1868.983+/-0.458

$\chi^2/\text{NDF}$ : 19852416.6/24

Right: 950.866+/-0.233

$\chi^2/\text{NDF}$ : 31804443.8/52

Right Out: 871.208+/-0.300

$\chi^2/\text{NDF}$ : 17426086.3/28

In: 1681.771+/-0.342

$\chi^2/\text{NDF}$ : 33106882.1/46

Left In: 5019.114+/-0.871

$\chi^2/\text{NDF}$ : 1569031.9/22

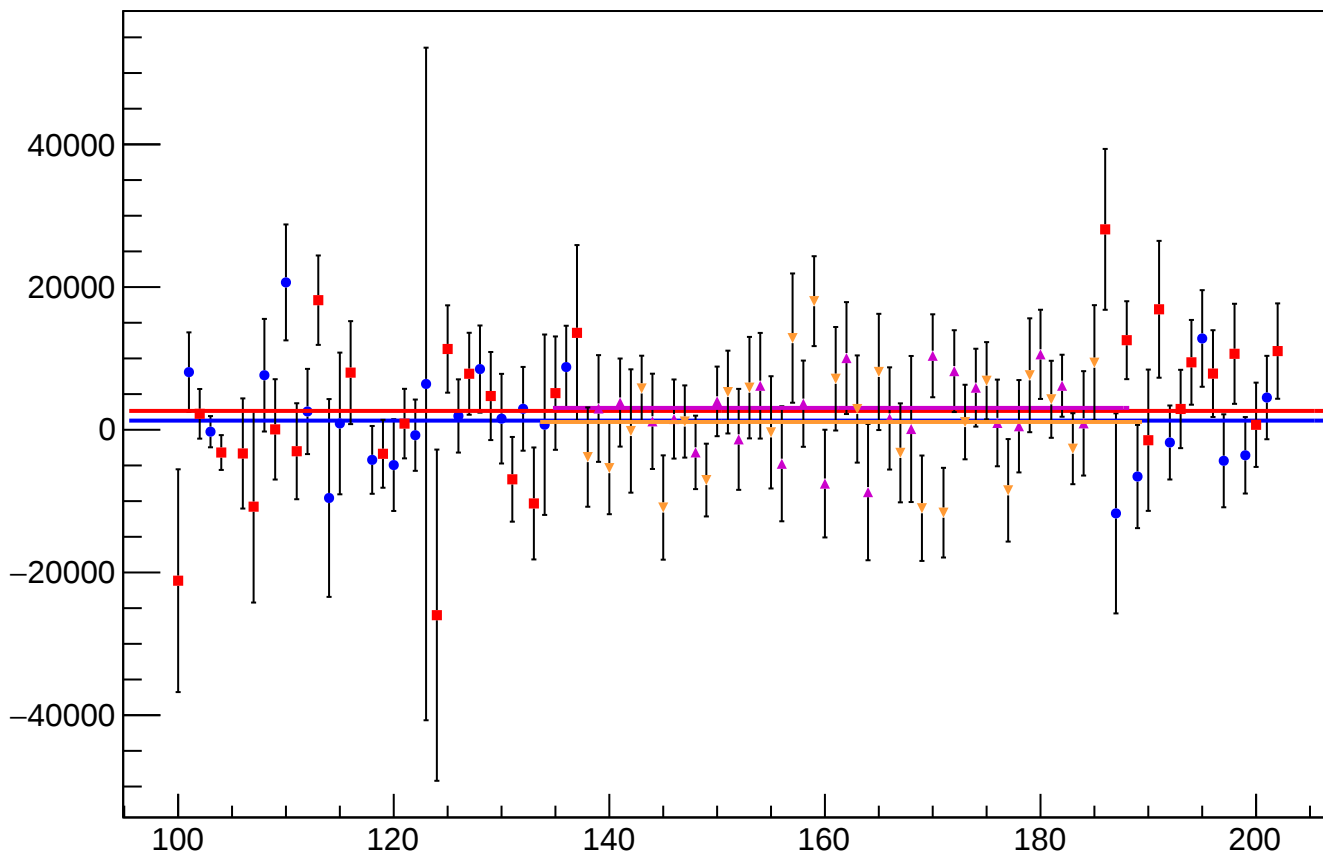
Out: 1170.434+/-0.251

$\chi^2/\text{NDF}$ : 40602389.3/53

All: 1349.131+/-0.202

$\chi^2/\text{NDF}$ : 75162306.0/100

# asym\_atl\_avg\_mean vs Slug, Sign Corrected



Right In: 1284.958+/-1154.181  $\chi^2/\text{NDF}$ : 21.8/23

Left Out: 1094.317+/-1273.113  $\chi^2/\text{NDF}$ : 32.0/24

Right Out: 2643.921+/-1101.075  $\chi^2/\text{NDF}$ : 45.4/28

Left In: 3064.775+/-1318.173  $\chi^2/\text{NDF}$ : 12.6/22

Left: 2045.291+/-915.742  $\chi^2/\text{NDF}$ : 45.7/47

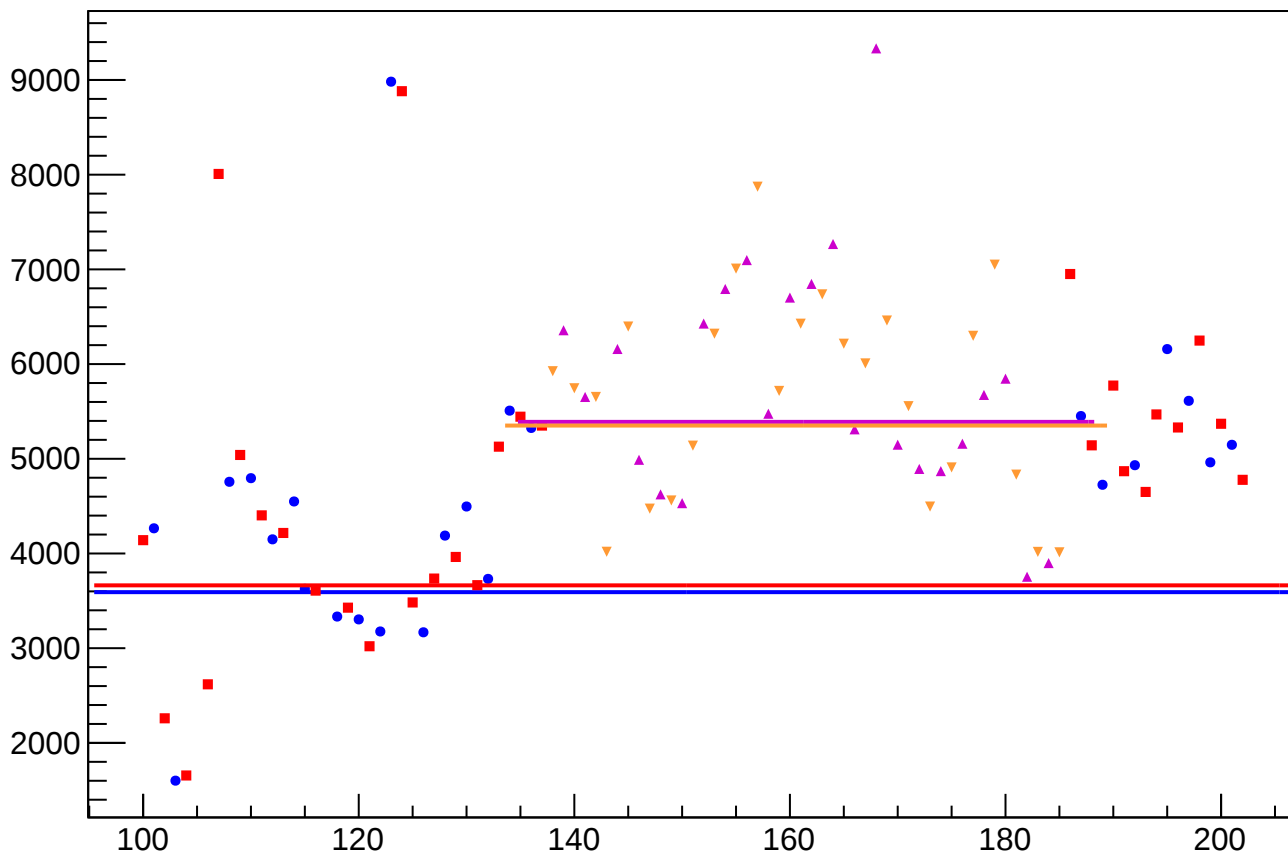
Right: 1996.422+/-796.691  $\chi^2/\text{NDF}$ : 67.9/52

In: 2057.328+/-868.355  $\chi^2/\text{NDF}$ : 35.4/46

Out: 1980.819+/-832.811  $\chi^2/\text{NDF}$ : 78.2/53

All: 2017.476+/-601.059  $\chi^2/\text{NDF}$ : 113.6/100

# asym\_atl\_avg\_rms vs Slug, Sign Corrected



Right In: 3591.787 $\pm$ 0.816  $\chi^2$ /NDF: 3119186.1/23

Left Out: 5350.804 $\pm$ 0.900  $\chi^2$ /NDF:1241497.9/24

Right Out: 3663.522 $\pm$ 0.770  $\chi^2$ /NDF: 3770527.2/28

Left In: 5389.724 $\pm$ 0.932  $\chi^2$ /NDF:1309863.0/22

Left: 5369.587 $\pm$ 0.648  $\chi^2$ /NDF: 2552263.0/47

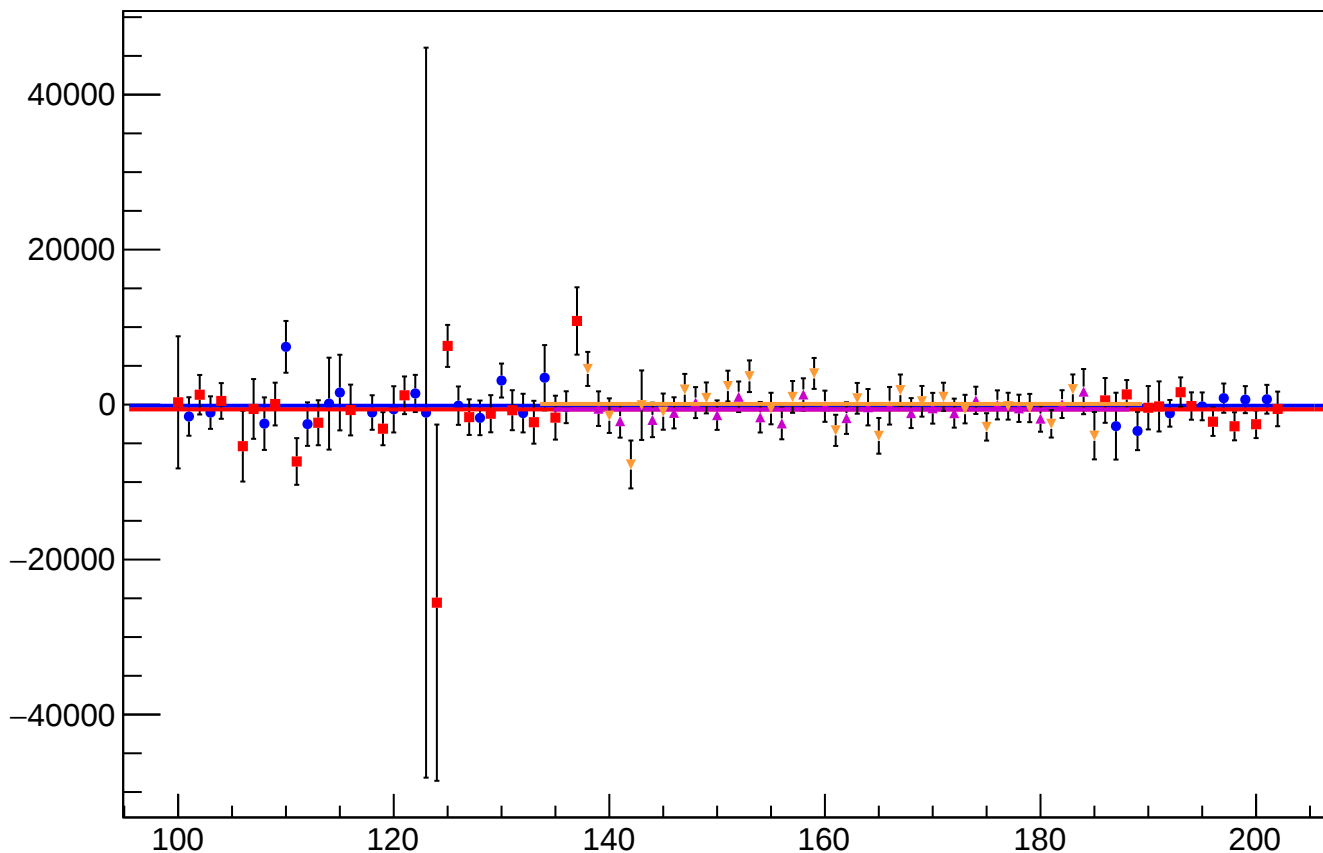
Right: 3629.726 $\pm$ 0.560  $\chi^2$ /NDF: 6893799.3/52

In: 4372.017 $\pm$ 0.614  $\chi^2$ /NDF:6535164.2/46

Out: 4376.690 $\pm$ 0.585  $\chi^2$ /NDF:7040146.9/53

All: 4374.465 $\pm$ 0.424  $\chi^2$ /NDF: 13575341.5/100

# reg\_asym\_atl\_dd\_mean vs Slug, Sign Corrected



Right In: -148.354 $\pm$ 497.639  $\chi^2$ /NDF: 14.3/23

Left Out: 86.214 $\pm$ 411.530  $\chi^2$ /NDF:36.0/24

Right Out: -623.129 $\pm$ 465.311  $\chi^2$ /NDF: 33.2/28

Left In: -640.235 $\pm$ 417.645  $\chi^2$ /NDF:6.2/22

Left: -271.653 $\pm$ 293.134  $\chi^2$ /NDF: 43.7/47

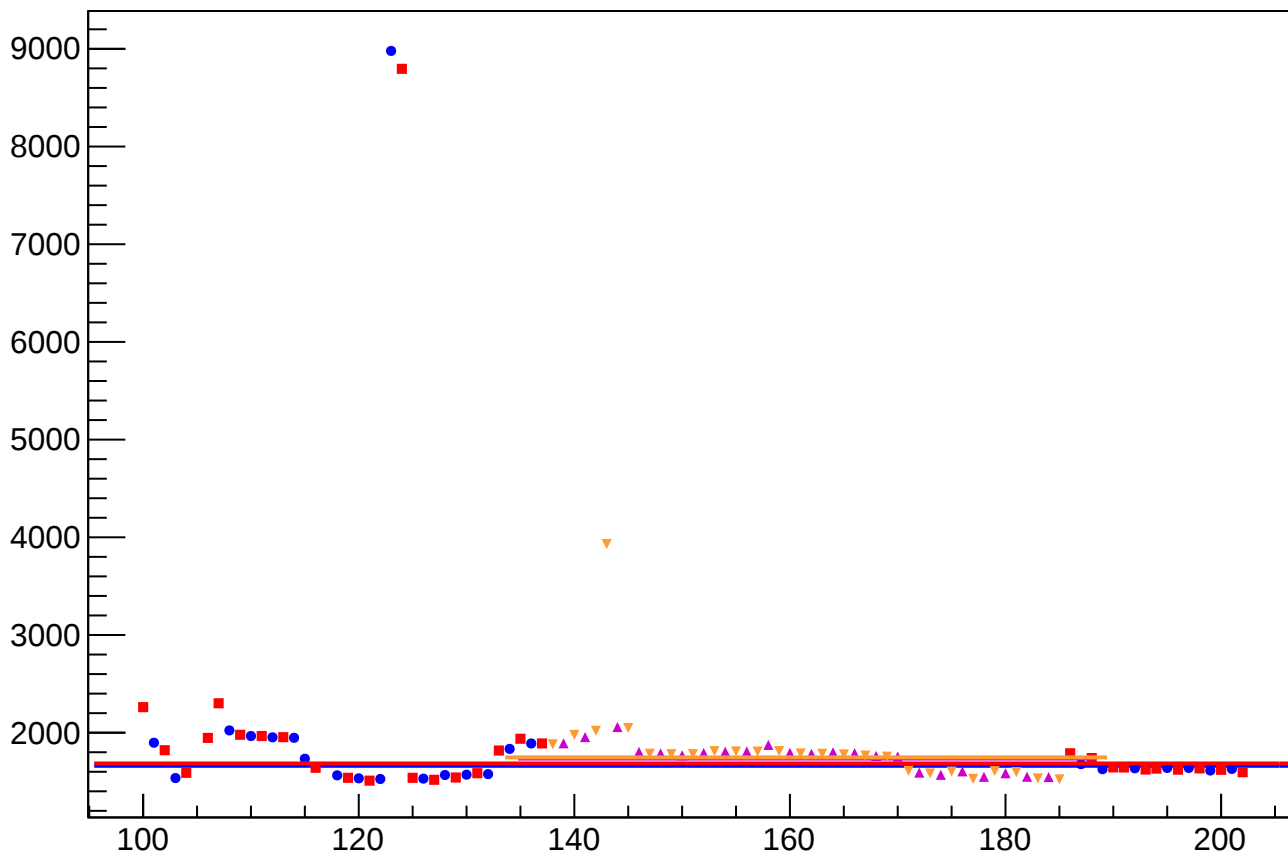
Right: -401.662 $\pm$ 339.879  $\chi^2$ /NDF: 47.9/52

In: -436.958 $\pm$ 319.910  $\chi^2$ /NDF:21.0/46

Out: -225.113 $\pm$ 308.265  $\chi^2$ /NDF:70.5/53

All: -327.109 $\pm$ 221.979  $\chi^2$ /NDF: 91.7/100

# reg\_asym\_atl\_dd\_rms vs Slug, Sign Corrected



Right In: 1661.678+/-0.352  $\chi^2/\text{NDF}$ : 200095.5/23

Left Out: 1747.320+/-0.291  $\chi^2/\text{NDF}$ : 698192.3/24

Right Out: 1685.090+/-0.328  $\chi^2/\text{NDF}$ : 418001.1/28

Left In: 1735.540+/-0.295  $\chi^2/\text{NDF}$ : 206766.6/22

Left: 1741.517+/-0.207  $\chi^2/\text{NDF}$ : 905766.2/47

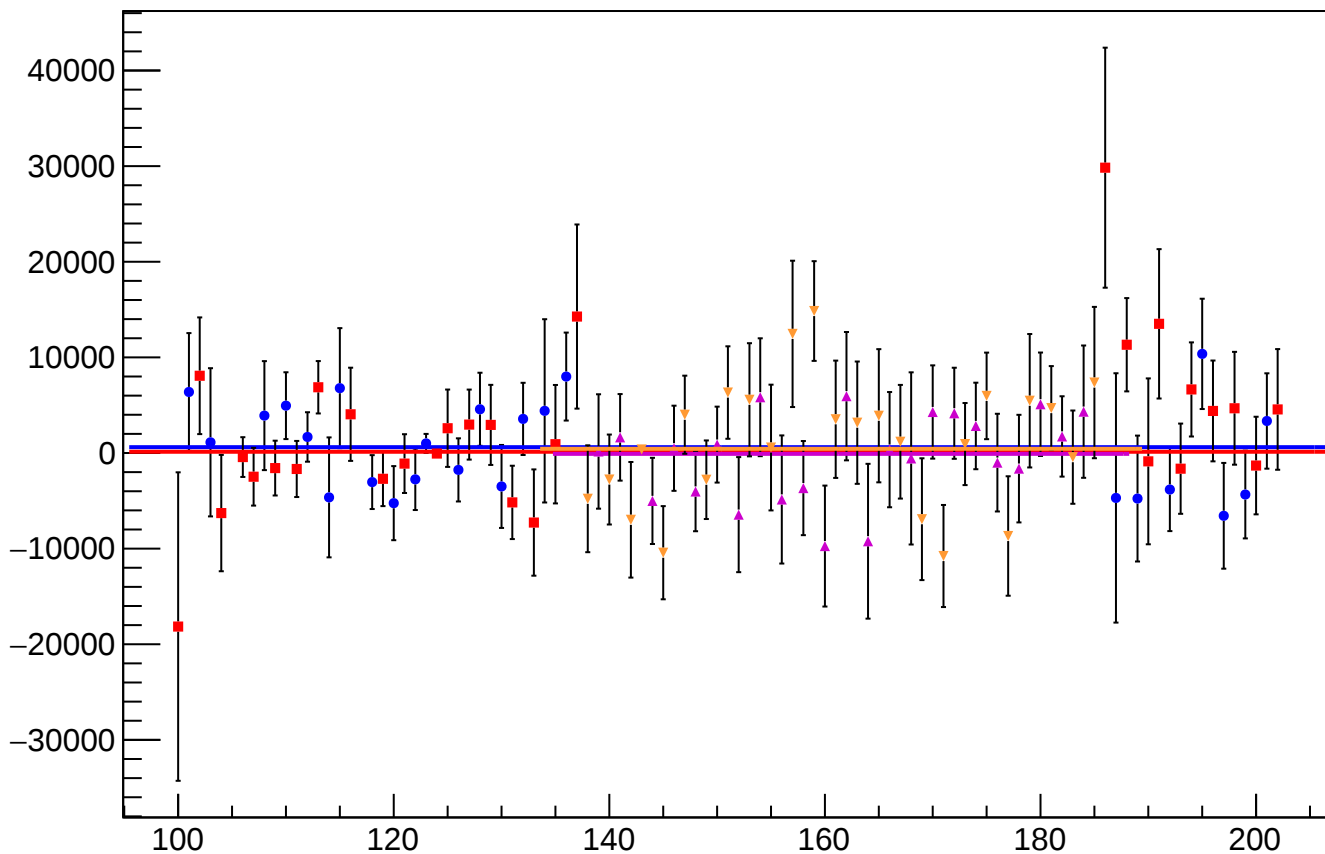
Right: 1674.194+/-0.240  $\chi^2/\text{NDF}$ : 620463.2/52

In: 1705.016+/-0.226  $\chi^2/\text{NDF}$ : 432714.0/46

Out: 1719.942+/-0.218  $\chi^2/\text{NDF}$ : 1136313.8/53

All: 1712.762+/-0.157  $\chi^2/\text{NDF}$ : 1571287.4/100

asym\_atl\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: 610.243+/-669.063  $\chi^2/\text{NDF}$ : 23.5/23

Left Out: 442.187+/-440.335  $\chi^2/\text{NDF}$ :33.9/24

Right Out: 130.483+/-350.817  $\chi^2/\text{NDF}$ : 38.5/28

Left In: -88.508+/-1094.838  $\chi^2/\text{NDF}$ :13.4/22

Left: 368.296+/-408.531  $\chi^2/\text{NDF}$ : 47.5/47

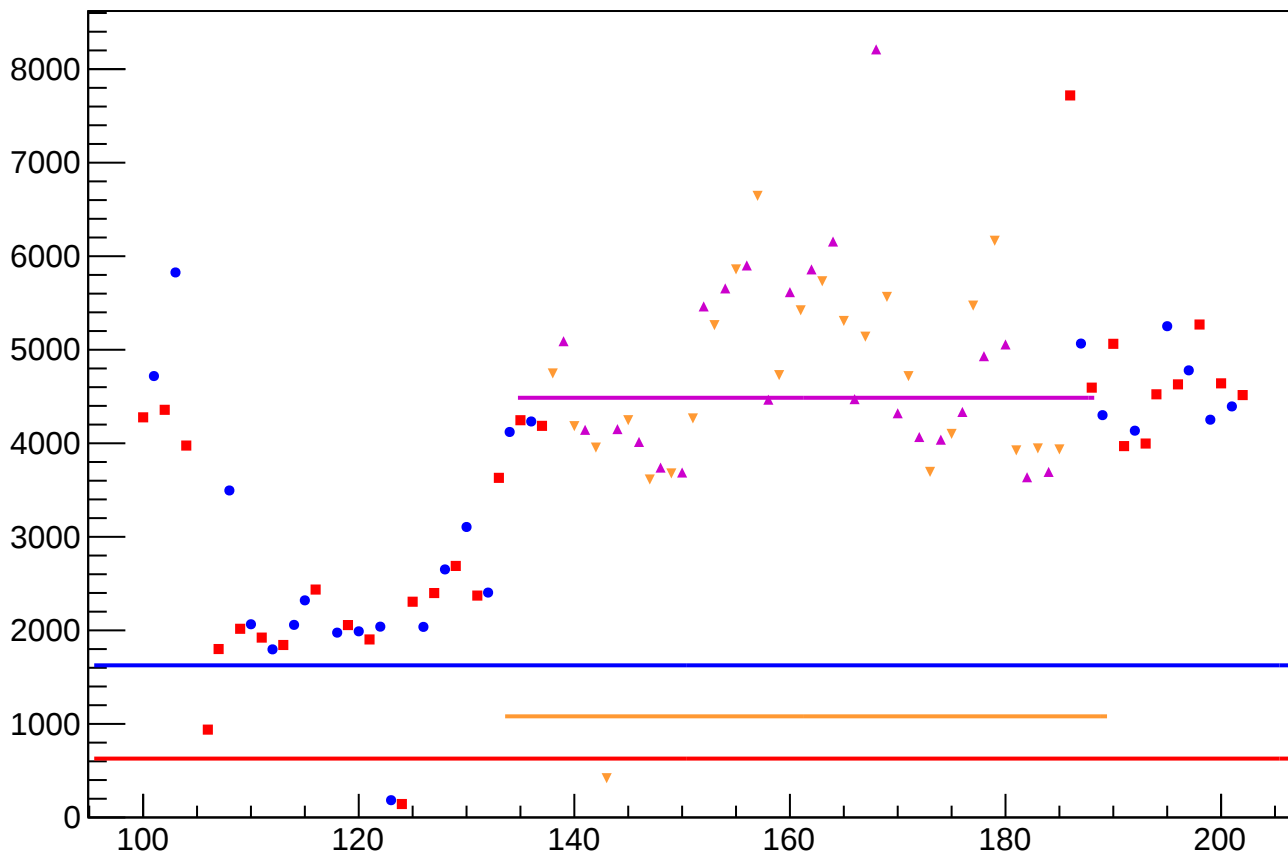
Right: 233.941+/-310.697  $\chi^2/\text{NDF}$ : 62.5/52

In: 420.247+/-570.901  $\chi^2/\text{NDF}$ :37.3/46

Out: 251.512+/-274.382  $\chi^2/\text{NDF}$ :72.7/53

All: 283.175+/-247.303  $\chi^2/\text{NDF}$ : 110.1/100

# asym\_atl\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 1626.282 $\pm$ 0.473

$\chi^2/\text{NDF}$ : 10796420.6/23

Left: 1555.179 $\pm$ 0.289

$\chi^2/\text{NDF}$ : 42294704.7/47

Left Out: 1081.004 $\pm$ 0.311

$\chi^2/\text{NDF}$ : 24456244.2/24

Right: 844.304 $\pm$ 0.220

$\chi^2/\text{NDF}$ : 34247262.0/52

Right Out: 629.312 $\pm$ 0.248

$\chi^2/\text{NDF}$ : 19967689.4/28

In: 2404.016 $\pm$ 0.404

$\chi^2/\text{NDF}$ : 21916873.2/46

Out: 804.696 $\pm$ 0.194

$\chi^2/\text{NDF}$ : 45711293.7/53

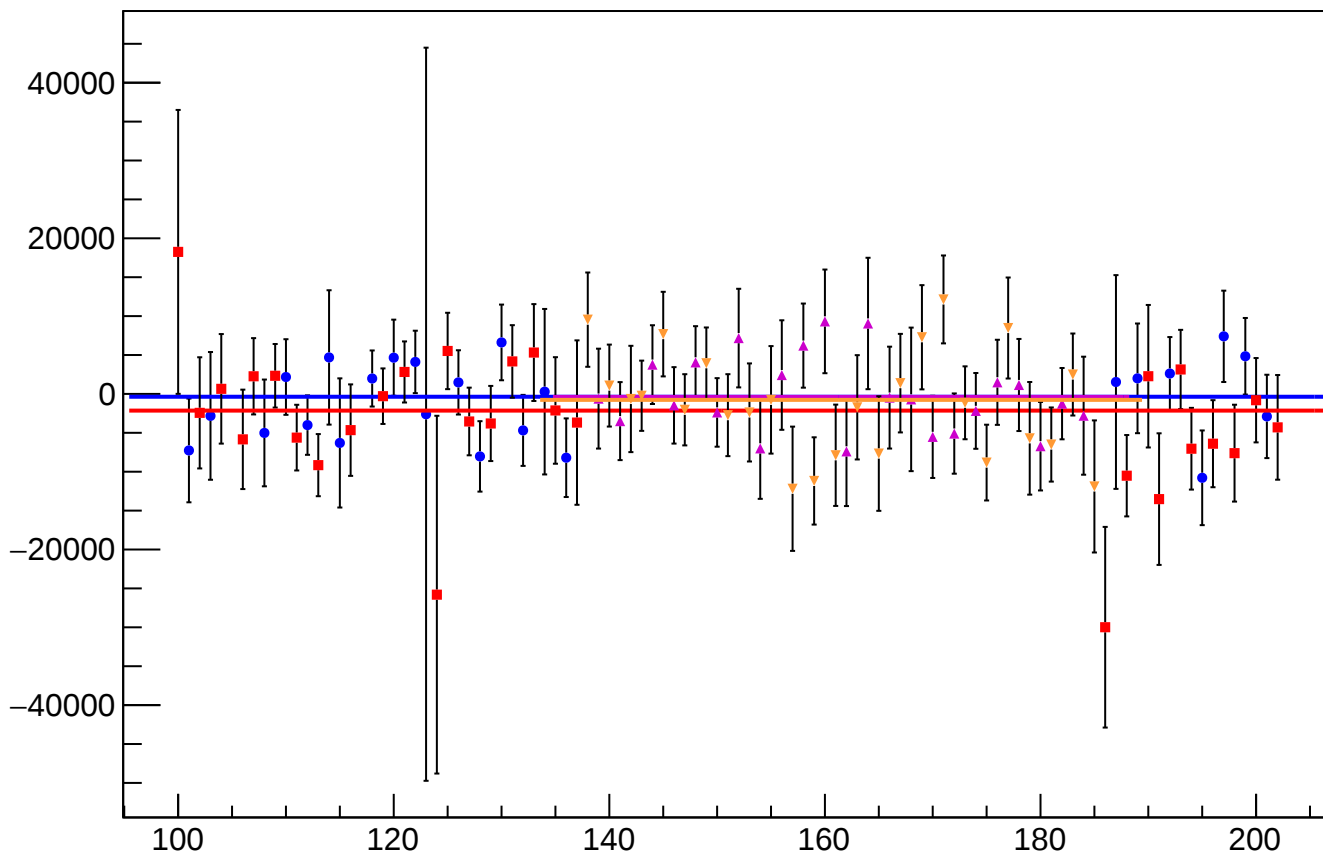
Left In: 4486.570 $\pm$ 0.774

$\chi^2/\text{NDF}$ : 1181598.1/22

All: 1104.801 $\pm$ 0.175

$\chi^2/\text{NDF}$ : 80378613.7/100

# asym\_atl\_dd\_mean vs Slug, Sign Corrected



Right In:  $-363.867 \pm 1099.311$   $\chi^2/\text{NDF}$ : 21.4/23

Left Out:  $-766.008 \pm 1147.372$   $\chi^2/\text{NDF}$ : 29.9/24

Right Out:  $-2145.174 \pm 1021.470$   $\chi^2/\text{NDF}$ : 29.3/28

Left In:  $-388.944 \pm 1186.300$   $\chi^2/\text{NDF}$ : 14.2/22

Left:  $-583.764 \pm 824.733$   $\chi^2/\text{NDF}$ : 44.2/47

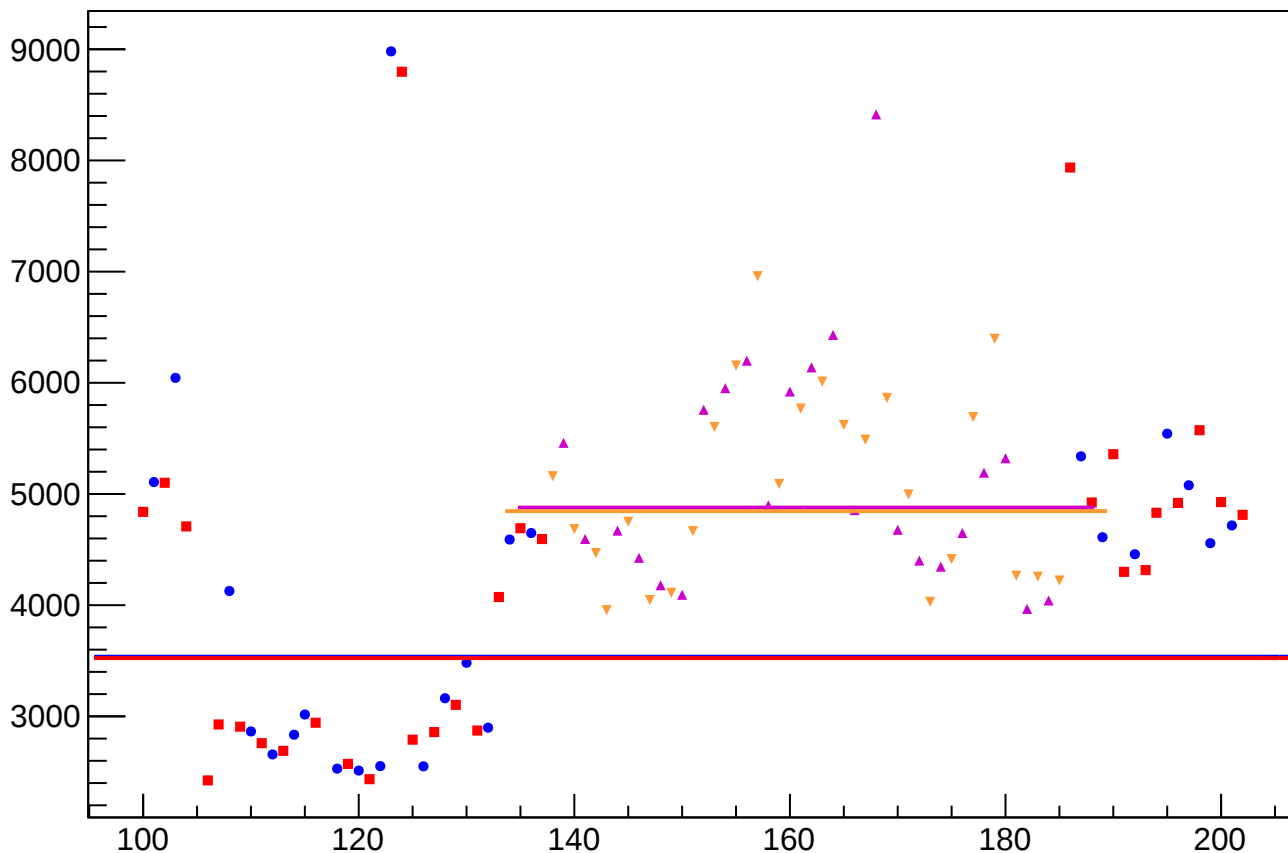
Right:  $-1319.814 \pm 748.295$   $\chi^2/\text{NDF}$ : 52.1/52

In:  $-375.452 \pm 806.331$   $\chi^2/\text{NDF}$ : 35.5/46

Out:  $-1535.383 \pm 762.933$   $\chi^2/\text{NDF}$ : 60.1/53

All:  $-987.471 \pm 554.182$   $\chi^2/\text{NDF}$ : 96.7/100

# asym\_atl\_dd\_rms vs Slug, Sign Corrected



Right In: 3536.184+/-0.777  $\chi^2/\text{NDF}$ : 1848974.5/23

Left Out: 4845.779+/-0.811  $\chi^2/\text{NDF}$ : 909173.9/24

Right Out: 3523.850+/-0.716  $\chi^2/\text{NDF}$ : 2351572.0/28

Left In: 4877.456+/-0.839  $\chi^2/\text{NDF}$ : 958623.2/22

Left: 4861.089+/-0.583  $\chi^2/\text{NDF}$ : 1868533.9/47

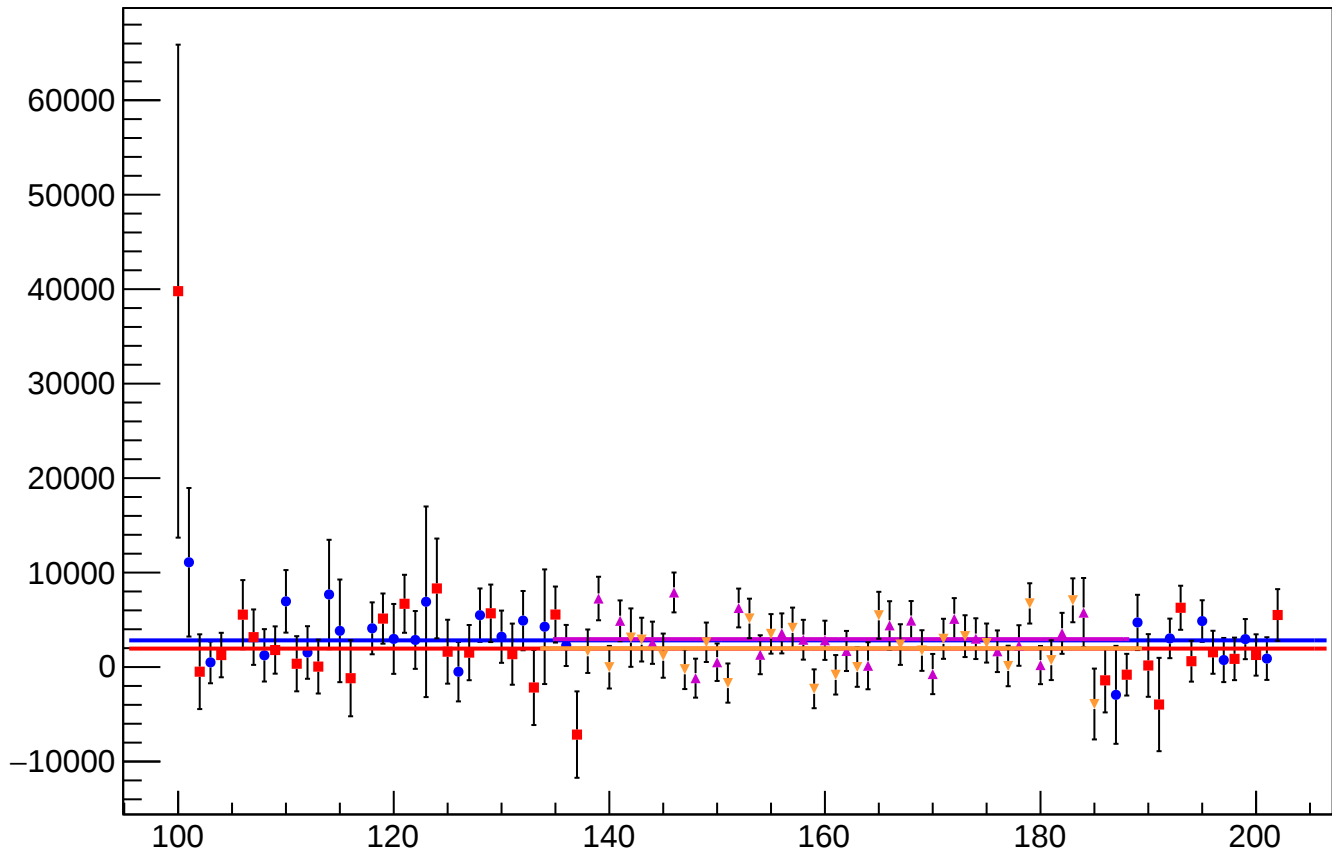
Right: 3529.508+/-0.526  $\chi^2/\text{NDF}$ : 4200682.8/52

In: 4155.843+/-0.570  $\chi^2/\text{NDF}$ : 4183101.9/46

Out: 4102.310+/-0.537  $\chi^2/\text{NDF}$ : 4753859.2/53

All: 4127.459+/-0.391  $\chi^2/\text{NDF}$ : 8941635.3/100

# reg\_asym\_atr\_avg\_mean vs Slug, Sign Corrected



Right In: 2824.851 $\pm$ 593.041  $\chi^2$ /NDF: 12.1/23

Left Out: 1985.469 $\pm$ 443.190  $\chi^2$ /NDF:32.4/24

Right Out: 1953.736 $\pm$ 544.760  $\chi^2$ /NDF: 28.6/28

Left In: 2955.900 $\pm$ 454.551  $\chi^2$ /NDF:28.4/22

Left: 2458.406 $\pm$ 317.323  $\chi^2$ /NDF: 63.2/47

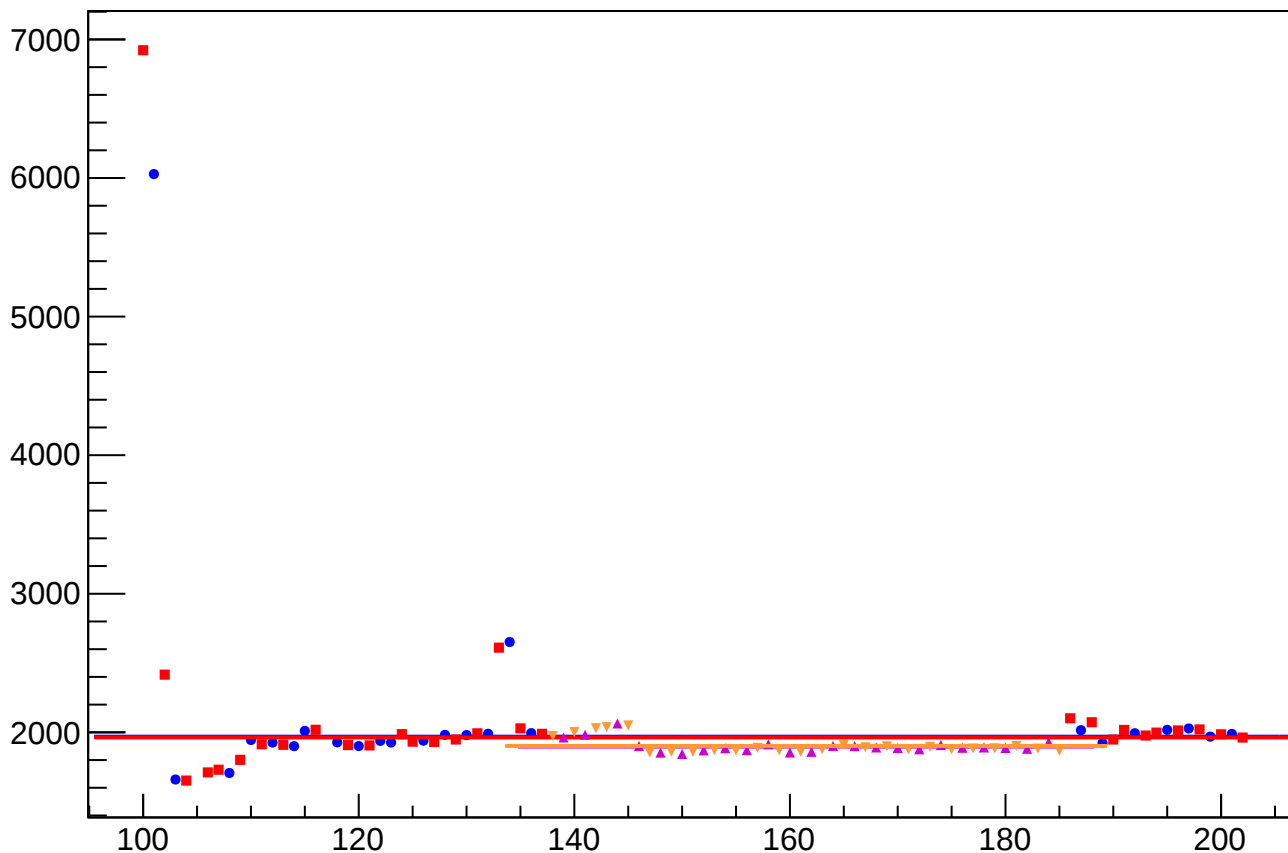
Right: 2352.396 $\pm$ 401.188  $\chi^2$ /NDF: 41.8/52

In: 2907.403 $\pm$ 360.768  $\chi^2$ /NDF:40.5/46

Out: 1972.831 $\pm$ 343.789  $\chi^2$ /NDF:61.0/53

All: 2417.608 $\pm$ 248.882  $\chi^2$ /NDF: 105.0/100

# reg\_asym\_atr\_avg\_rms vs Slug, Sign Corrected



Right In: 1968.480+/-0.419  $\chi^2/\text{NDF}$ : 621685.9/23

Left Out: 1901.884+/-0.313  $\chi^2/\text{NDF}$ : 30446.9/24

Right Out: 1963.096+/-0.385  $\chi^2/\text{NDF}$ : 234748.1/28

Left In: 1897.456+/-0.321  $\chi^2/\text{NDF}$ : 21180.1/22

Left: 1899.726+/-0.224  $\chi^2/\text{NDF}$ : 51724.3/47

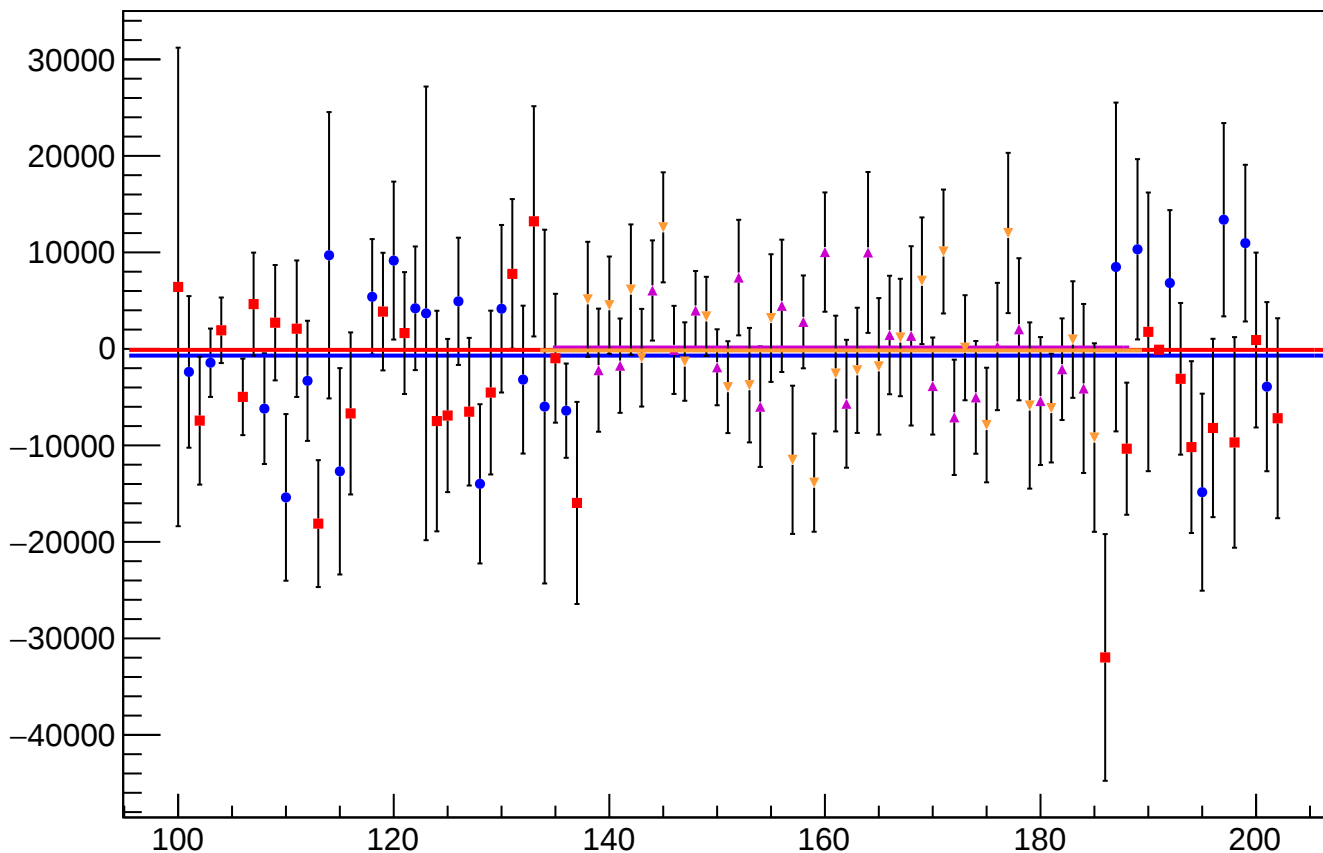
Right: 1965.557+/-0.283  $\chi^2/\text{NDF}$ : 856523.5/52

In: 1923.740+/-0.255  $\chi^2/\text{NDF}$ : 660936.1/46

Out: 1926.300+/-0.243  $\chi^2/\text{NDF}$ : 280413.2/53

All: 1925.082+/-0.176  $\chi^2/\text{NDF}$ : 941402.1/100

asym\_atr\_avg\_correction\_mean vs Slug, Sign Corrected



Right In: -695.851+/-1506.032  $\chi^2/\text{NDF}$ : 22.9/23

Left Out: -157.539+/-1165.844  $\chi^2/\text{NDF}$ : 29.5/24

Right Out: -102.883+/-109.578  $\chi^2/\text{NDF}$ : 31.5/28

Left In: 139.000+/-1190.889  $\chi^2/\text{NDF}$ : 14.7/22

Left: -12.420+/-833.090  $\chi^2/\text{NDF}$ : 44.2/47

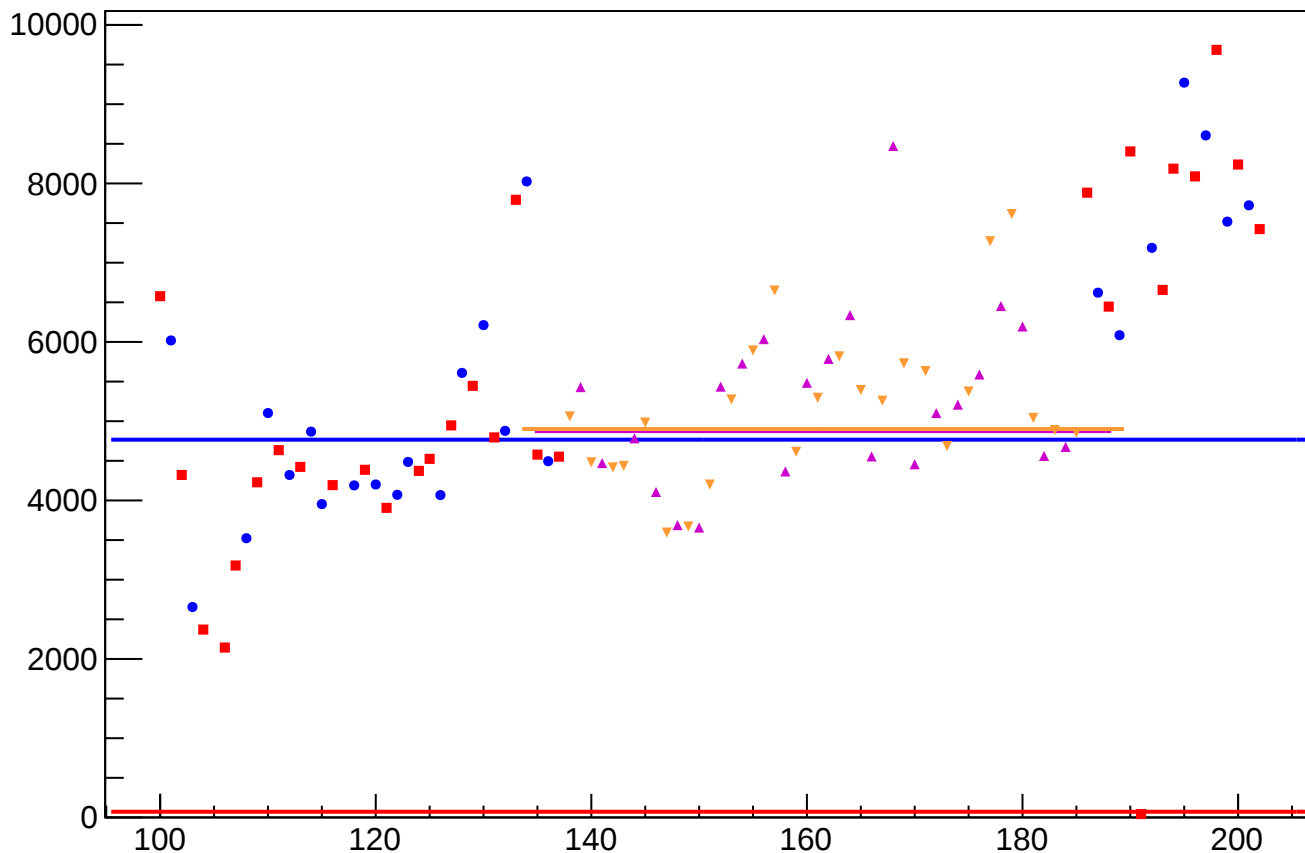
Right: -106.005+/-109.290  $\chi^2/\text{NDF}$ : 54.6/52

In: -182.185+/-934.130  $\chi^2/\text{NDF}$ : 37.8/46

Out: -103.361+/-109.098  $\chi^2/\text{NDF}$ : 61.0/53

All: -104.422+/-108.361  $\chi^2/\text{NDF}$ : 98.8/100

asym\_atr\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 4766.777+/-1.065  $\chi^2/\text{NDF}$ : 2509896.8/23

Left Out: 4901.357+/-0.824  $\chi^2/\text{NDF}$ : 1136916.0/24

Right Out: 72.330+/-0.077  $\chi^2/\text{NDF}$ : 25420721.9/28

Left In: 4875.112+/-0.842  $\chi^2/\text{NDF}$ : 1229198.0/22

Left: 4888.513+/-0.589  $\chi^2/\text{NDF}$ : 2366610.1/47

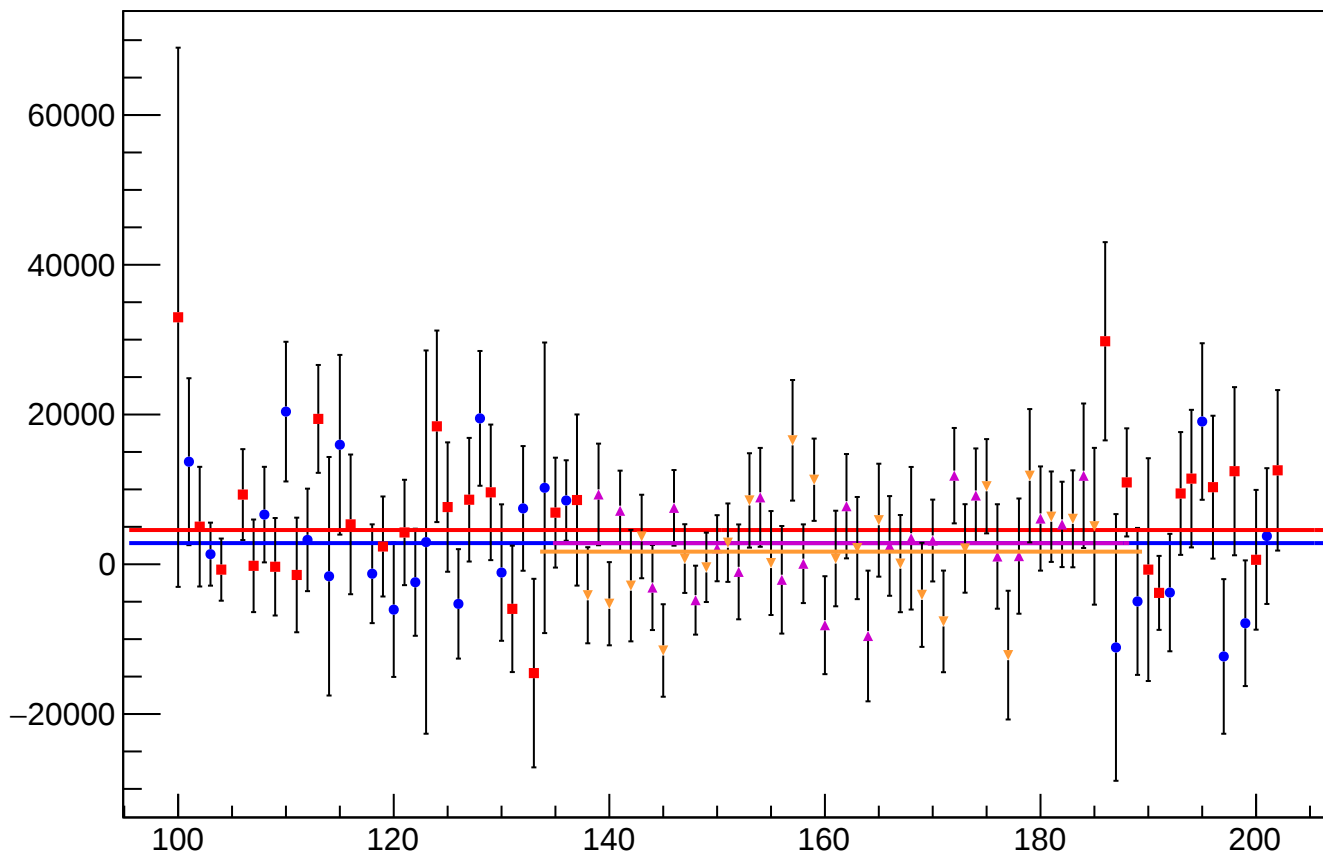
Right: 97.052+/-0.077  $\chi^2/\text{NDF}$ : 47260871.9/52

In: 4833.433+/-0.661  $\chi^2/\text{NDF}$ : 3745462.4/46

Out: 114.618+/-0.077  $\chi^2/\text{NDF}$ : 60570889.5/53

All: 178.116+/-0.077  $\chi^2/\text{NDF}$ : 114666143.2/100

# asym\_atr\_avg\_mean vs Slug, Sign Corrected



Right In: 2827.474+/-1669.574  $\chi^2/\text{NDF}$ : 22.7/23

Left Out: 1686.531+/-1261.650  $\chi^2/\text{NDF}$ : 25.4/24

Right Out: 4571.938+/-1457.226  $\chi^2/\text{NDF}$ : 24.8/28

Left In: 2824.078+/-1288.414  $\chi^2/\text{NDF}$ : 18.0/22

Left: 2243.367+/-901.435  $\chi^2/\text{NDF}$ : 43.8/47

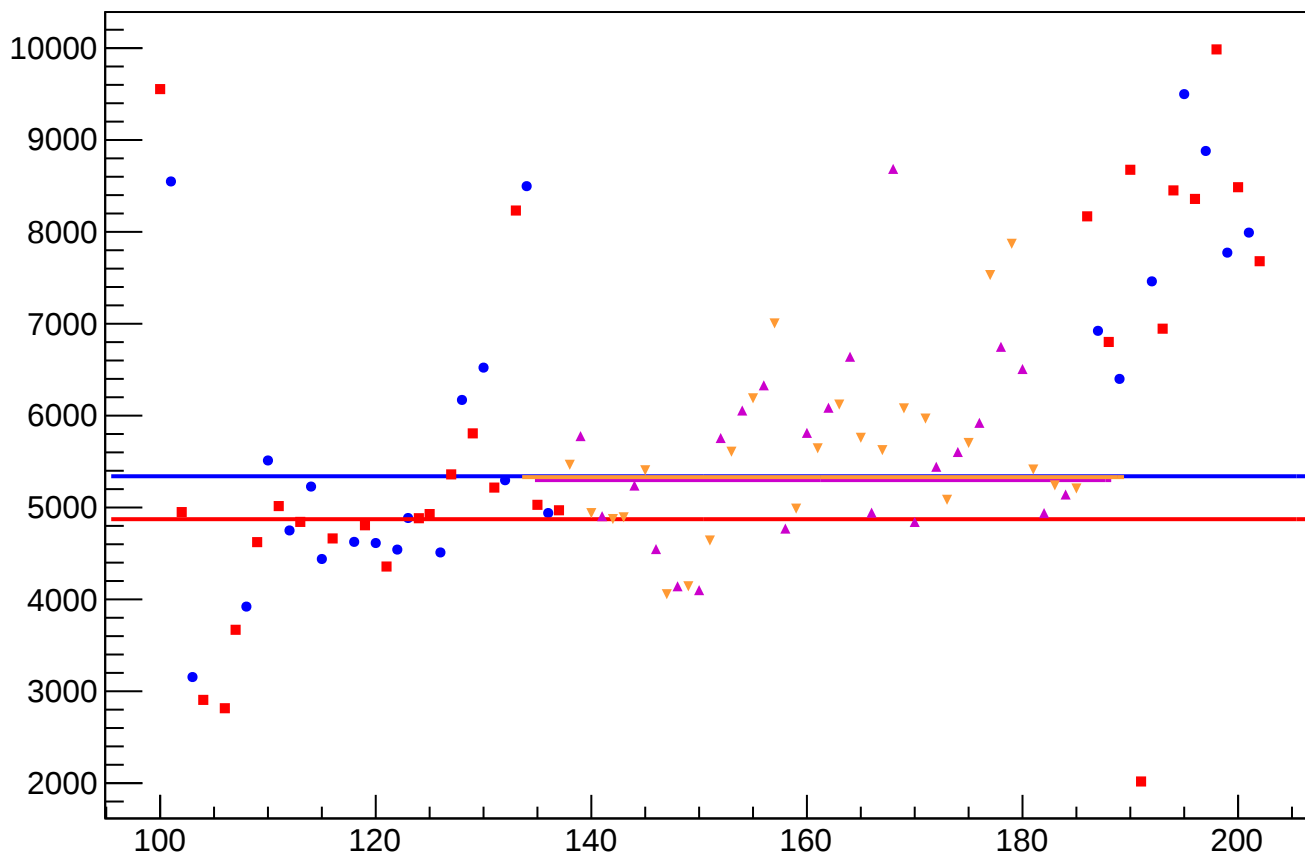
Right: 3817.632+/-1097.863  $\chi^2/\text{NDF}$ : 48.2/52

In: 2825.346+/-1020.008  $\chi^2/\text{NDF}$ : 40.7/46

Out: 2922.748+/-953.830  $\chi^2/\text{NDF}$ : 52.5/53

All: 2877.309+/-696.681  $\chi^2/\text{NDF}$ : 93.2/100

# asym\_atr\_avg\_rms vs Slug, Sign Corrected



Right In: 5340.146 $\pm$ 1.181  $\chi^2$ /NDF: 2109698.6/23

Left Out: 5330.725 $\pm$ 0.892  $\chi^2$ /NDF: 868061.7/24

Right Out: 4872.912 $\pm$ 1.026  $\chi^2$ /NDF: 3627166.1/28

Left In: 5298.329 $\pm$ 0.911  $\chi^2$ /NDF: 956021.6/22

Left: 5314.867 $\pm$ 0.637  $\chi^2$ /NDF: 1824728.8/47

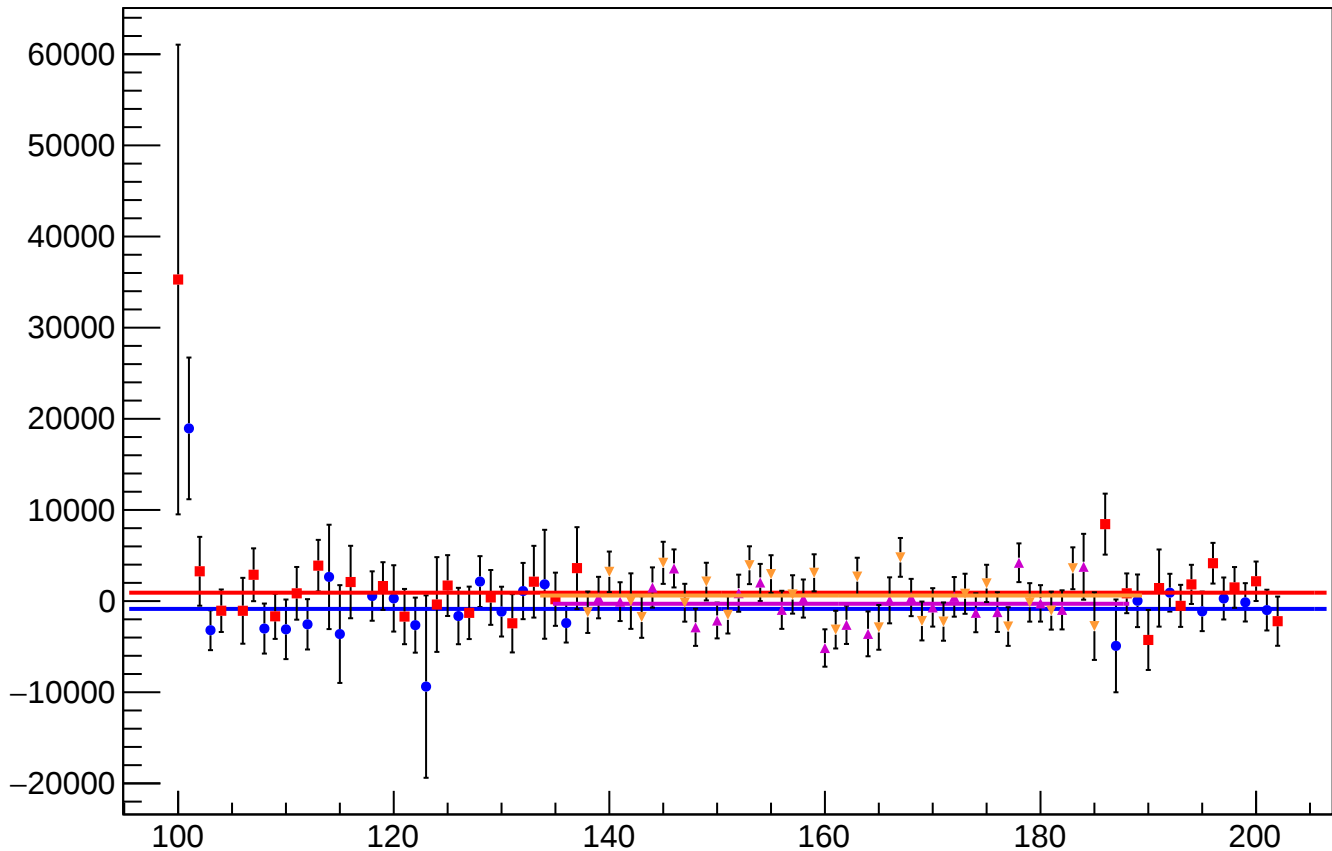
Right: 5073.995 $\pm$ 0.774  $\chi^2$ /NDF: 5826088.8/52

In: 5313.937 $\pm$ 0.721  $\chi^2$ /NDF: 3066506.6/46

Out: 5133.652 $\pm$ 0.673  $\chi^2$ /NDF: 4608589.8/53

All: 5217.597 $\pm$ 0.492  $\chi^2$ /NDF: 7708484.3/100

# reg\_asym\_atr\_dd\_mean vs Slug, Sign Corrected



Right In: -857.000+/-585.515  $\chi^2/\text{NDF}$ : 15.4/23

Left Out: 612.314+/-438.264  $\chi^2/\text{NDF}$ : 32.7/24

Right Out: 922.431+/-537.030  $\chi^2/\text{NDF}$ : 21.1/28

Left In: -293.009+/-449.575  $\chi^2/\text{NDF}$ : 23.6/22

Left: 171.185+/-313.822  $\chi^2/\text{NDF}$ : 58.4/47

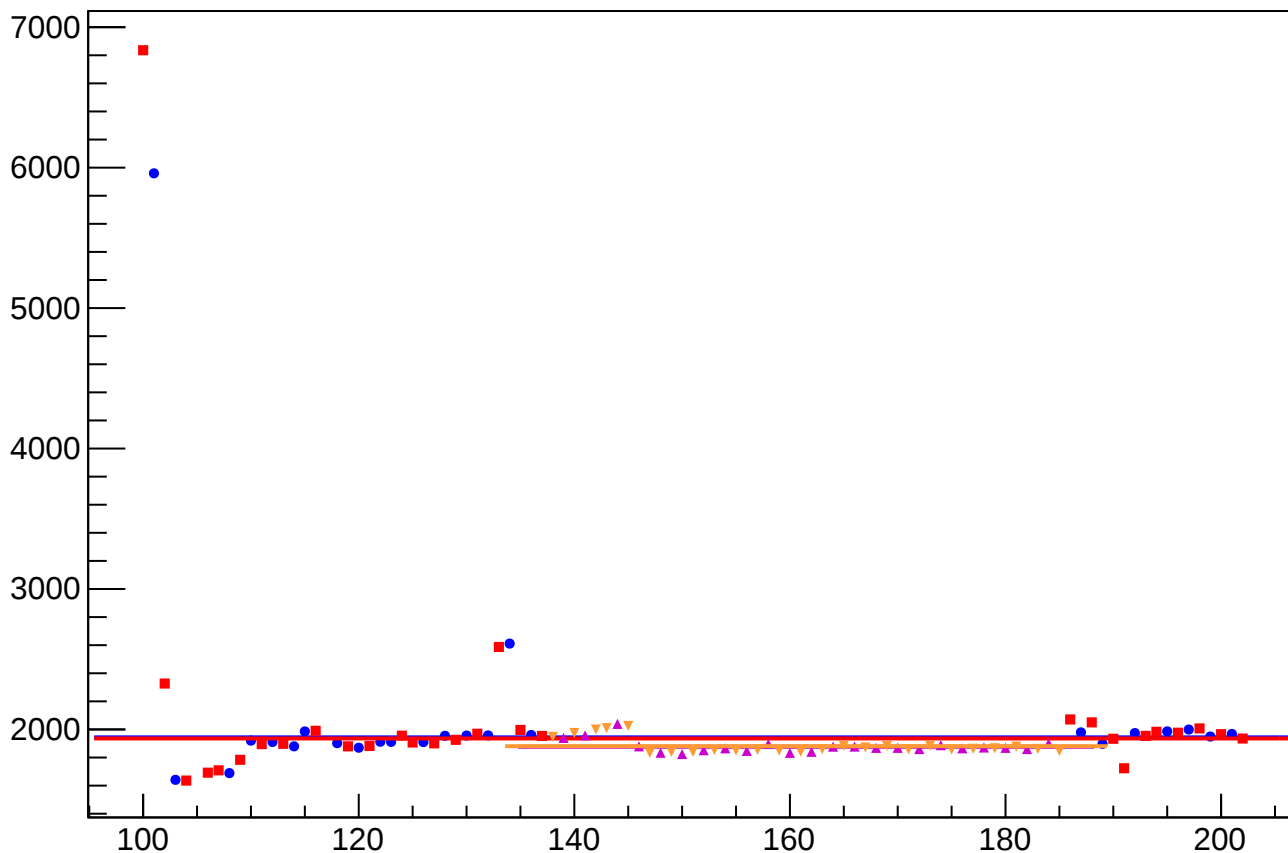
Right: 109.431+/-395.770  $\chi^2/\text{NDF}$ : 41.5/52

In: -502.190+/-356.586  $\chi^2/\text{NDF}$ : 39.6/46

Out: 736.287+/-339.546  $\chi^2/\text{NDF}$ : 54.0/53

All: 147.346+/-245.898  $\chi^2/\text{NDF}$ : 99.9/100

# reg\_asym\_atr\_dd\_rms vs Slug, Sign Corrected



Right In: 1943.582 $\pm$ 0.414  $\chi^2$ /NDF: 620105.1/23

Left Out: 1880.808 $\pm$ 0.310  $\chi^2$ /NDF: 28655.5/24

Right Out: 1935.804 $\pm$ 0.379  $\chi^2$ /NDF: 233773.7/28

Left In: 1876.685 $\pm$ 0.318  $\chi^2$ /NDF: 20499.7/22

Left: 1878.799 $\pm$ 0.222  $\chi^2$ /NDF: 49241.5/47

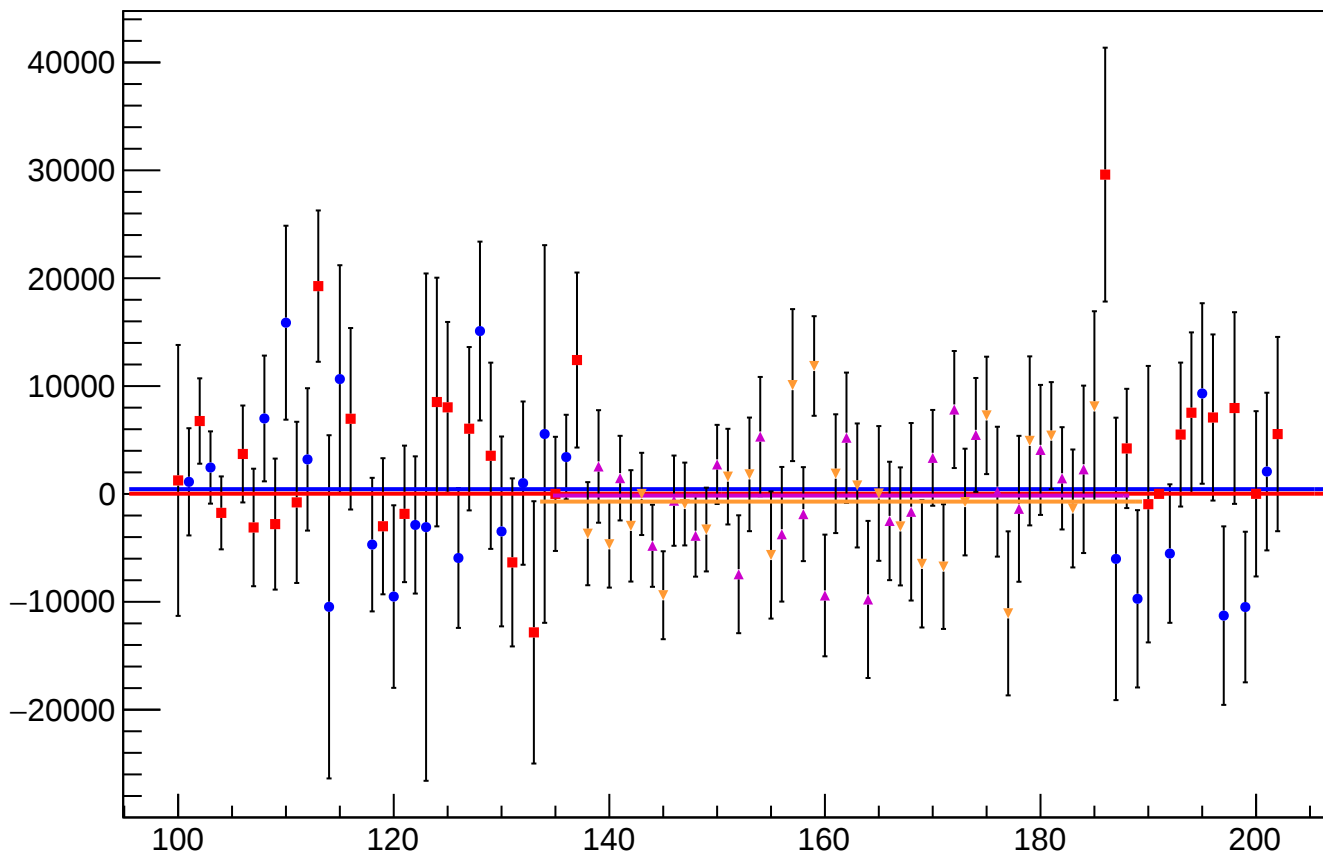
Right: 1939.353 $\pm$ 0.280  $\chi^2$ /NDF: 854070.7/52

In: 1901.497 $\pm$ 0.252  $\chi^2$ /NDF: 657029.5/46

Out: 1902.826 $\pm$ 0.240  $\chi^2$ /NDF: 275037.3/53

All: 1902.194 $\pm$ 0.174  $\chi^2$ /NDF: 932081.4/100

asym\_atr\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: 444.453+/-1381.500  $\chi^2/\text{NDF}$ : 21.8/23

Left Out: -707.785+/-1017.719  $\chi^2/\text{NDF}$ :27.1/24

Right Out: 22.901+/-85.810  $\chi^2/\text{NDF}$ : 30.1/28

Left In: -150.495+/-1053.655  $\chi^2/\text{NDF}$ :16.9/22

Left: -438.806+/-732.011  $\chi^2/\text{NDF}$ : 44.2/47

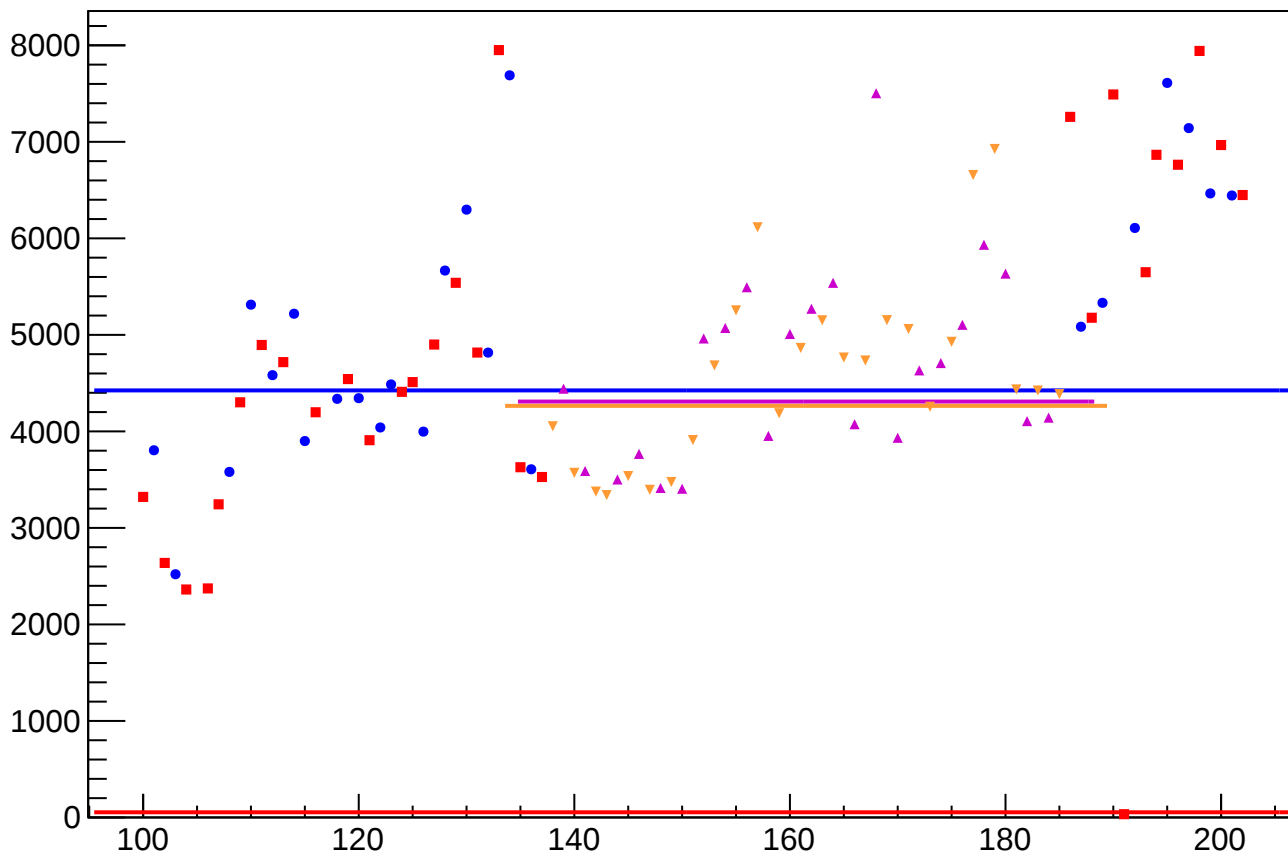
Right: 24.521+/-85.645  $\chi^2/\text{NDF}$ : 51.9/52

In: 68.307+/-837.794  $\chi^2/\text{NDF}$ :38.8/46

Out: 17.743+/-85.506  $\chi^2/\text{NDF}$ :57.7/53

All: 18.264+/-85.064  $\chi^2/\text{NDF}$ : 96.5/100

asym\_atr\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 4424.580+/-0.977  $\chi^2/\text{NDF}$ : 2060270.8/23

Left Out: 4264.433+/-0.720  $\chi^2/\text{NDF}$ : 1354900.8/24

Right Out: 53.489+/-0.061  $\chi^2/\text{NDF}$ : 25559736.0/28

Left In: 4309.034+/-0.745  $\chi^2/\text{NDF}$ : 1305133.3/22

Left: 4285.960+/-0.518  $\chi^2/\text{NDF}$ : 2661888.1/47

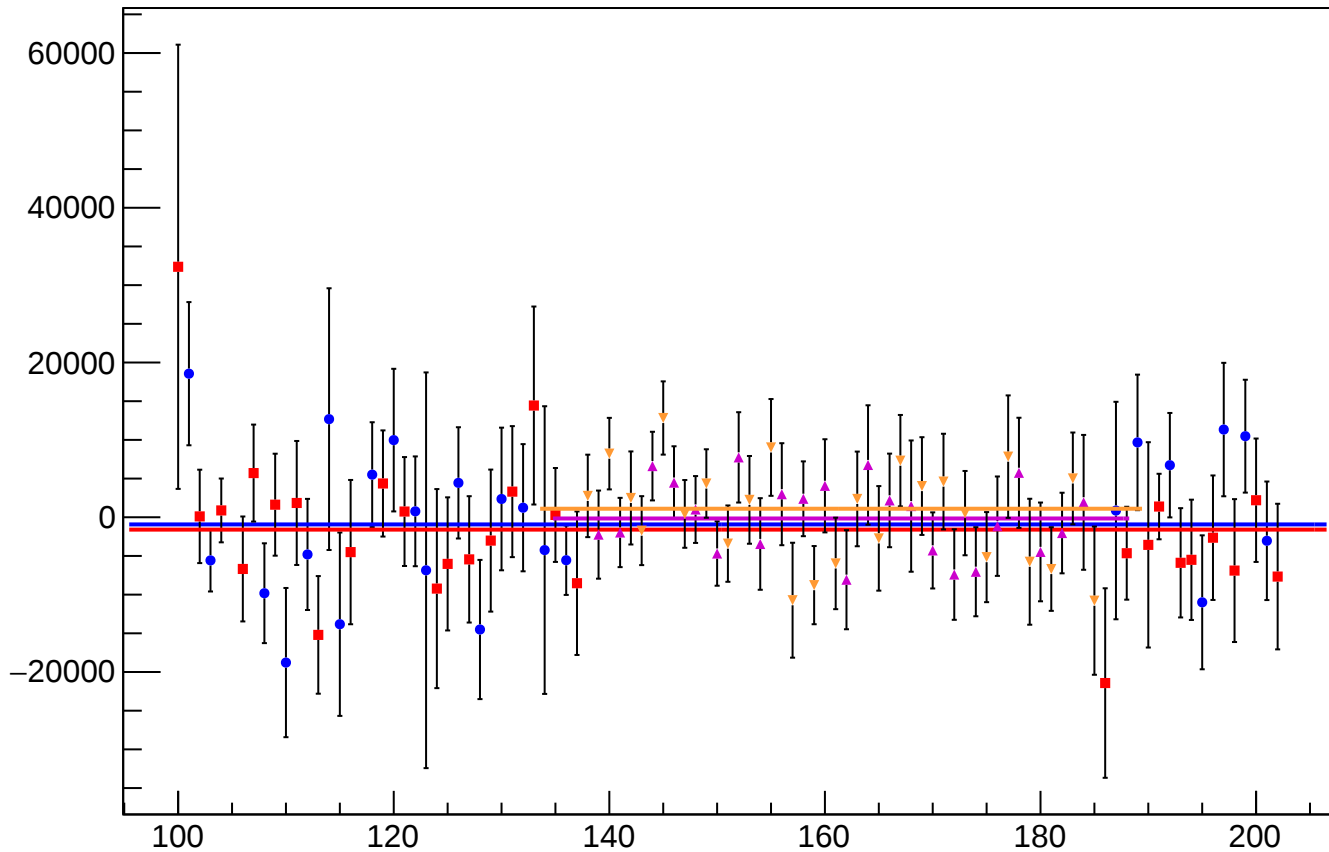
Right: 70.288+/-0.061  $\chi^2/\text{NDF}$ : 47565068.9/52

In: 4351.528+/-0.592  $\chi^2/\text{NDF}$ : 3374249.5/46

Out: 83.214+/-0.060  $\chi^2/\text{NDF}$ : 60912895.8/53

All: 127.217+/-0.060  $\chi^2/\text{NDF}$ : 115664046.0/53

# asym\_atr\_dd\_mean vs Slug, Sign Corrected



Right In:  $-926.621 \pm 1567.889$   $\chi^2/\text{NDF}$ : 28.4/23

Left Out:  $1102.204 \pm 1126.663$   $\chi^2/\text{NDF}$ : 28.6/24

Right Out:  $-1597.467 \pm 1366.560$   $\chi^2/\text{NDF}$ : 16.8/28

Left In:  $-158.683 \pm 1161.507$   $\chi^2/\text{NDF}$ : 15.5/22

Left:  $490.957 \pm 808.709$   $\chi^2/\text{NDF}$ : 44.7/47

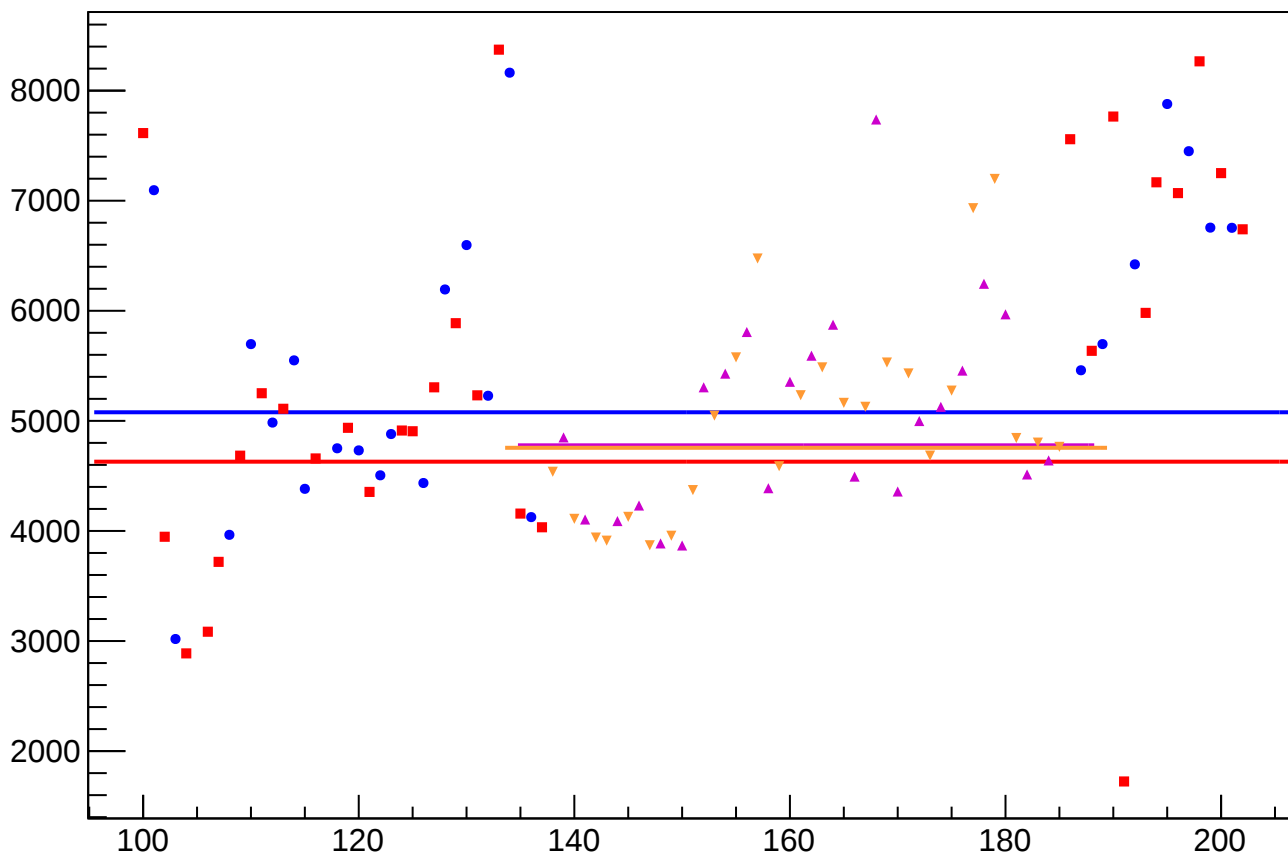
Right:  $-1307.854 \pm 1030.179$   $\chi^2/\text{NDF}$ : 45.3/52

In:  $-430.793 \pm 933.307$   $\chi^2/\text{NDF}$ : 44.1/46

Out:  $9.747 \pm 869.312$   $\chi^2/\text{NDF}$ : 47.7/53

All:  $-194.903 \pm 636.118$   $\chi^2/\text{NDF}$ : 91.9/100

# asym\_atr\_dd\_rms vs Slug, Sign Corrected



Right In: 5078.104+/-1.109  $\chi^2/\text{NDF}$ : 1617110.2/23

Left Out: 4755.383+/-0.797  $\chi^2/\text{NDF}$ : 953328.0/24

Right Out: 4629.295+/-0.963  $\chi^2/\text{NDF}$ : 3173388.2/28

Left In: 4777.831+/-0.821  $\chi^2/\text{NDF}$ : 950291.2/22

Left: 4766.265+/-0.572  $\chi^2/\text{NDF}$ : 1904004.1/47

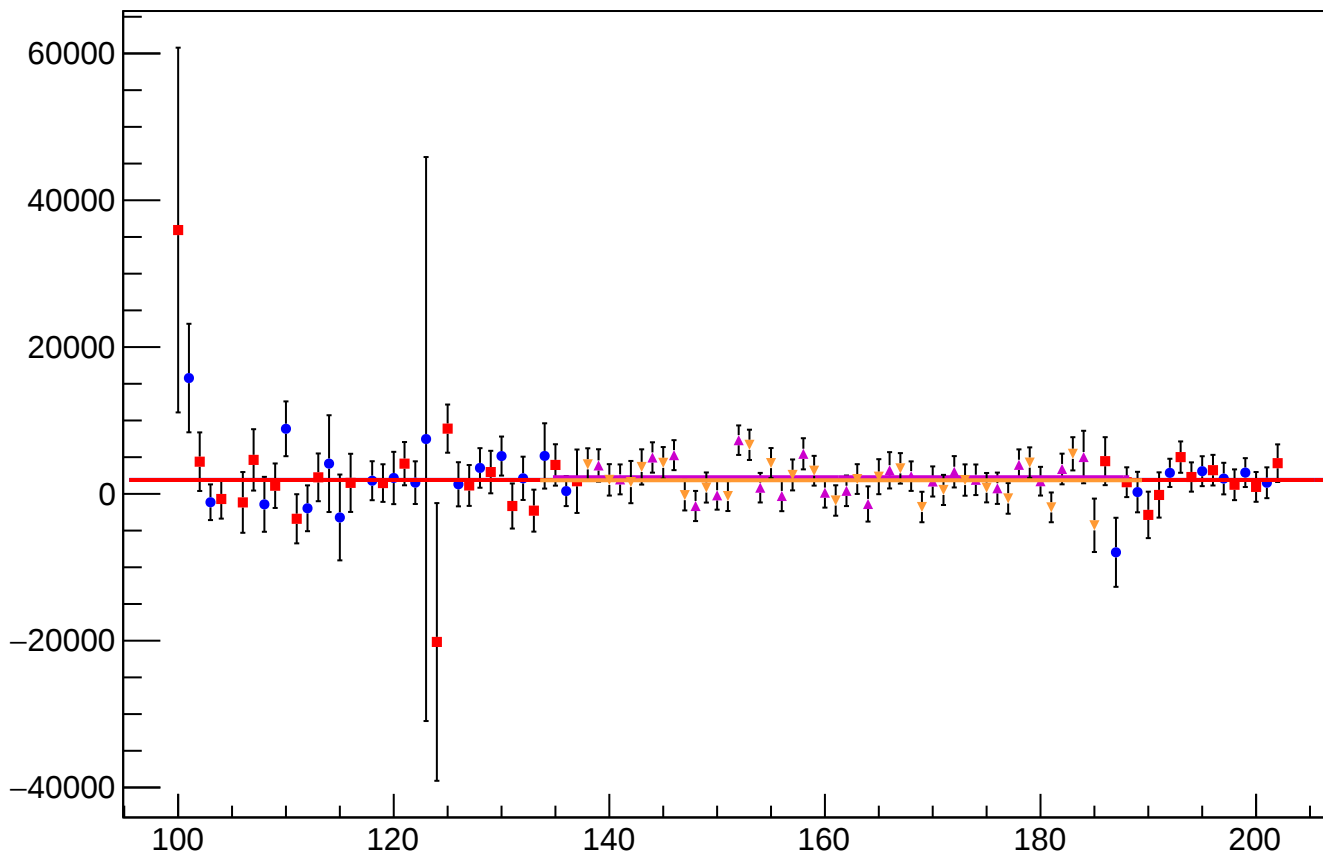
Right: 4822.250+/-0.727  $\chi^2/\text{NDF}$ : 4883921.2/52

In: 4884.229+/-0.660  $\chi^2/\text{NDF}$ : 2614764.1/46

Out: 4704.138+/-0.614  $\chi^2/\text{NDF}$ : 4136896.6/53

All: 4787.666+/-0.449  $\chi^2/\text{NDF}$ : 6791589.2/100

# reg\_asym\_at1\_avg\_mean vs Slug, Sign Corrected



Right In: 1905.497+/-576.490  $\chi^2/\text{NDF}$ : 20.5/23

Left Out: 1856.570+/-430.977  $\chi^2/\text{NDF}$ :30.0/24

Right Out: 1891.774+/-529.996  $\chi^2/\text{NDF}$ : 24.5/28

Left In: 2268.464+/-441.710  $\chi^2/\text{NDF}$ :26.9/22

Left: 2057.452+/-308.471  $\chi^2/\text{NDF}$ : 57.3/47

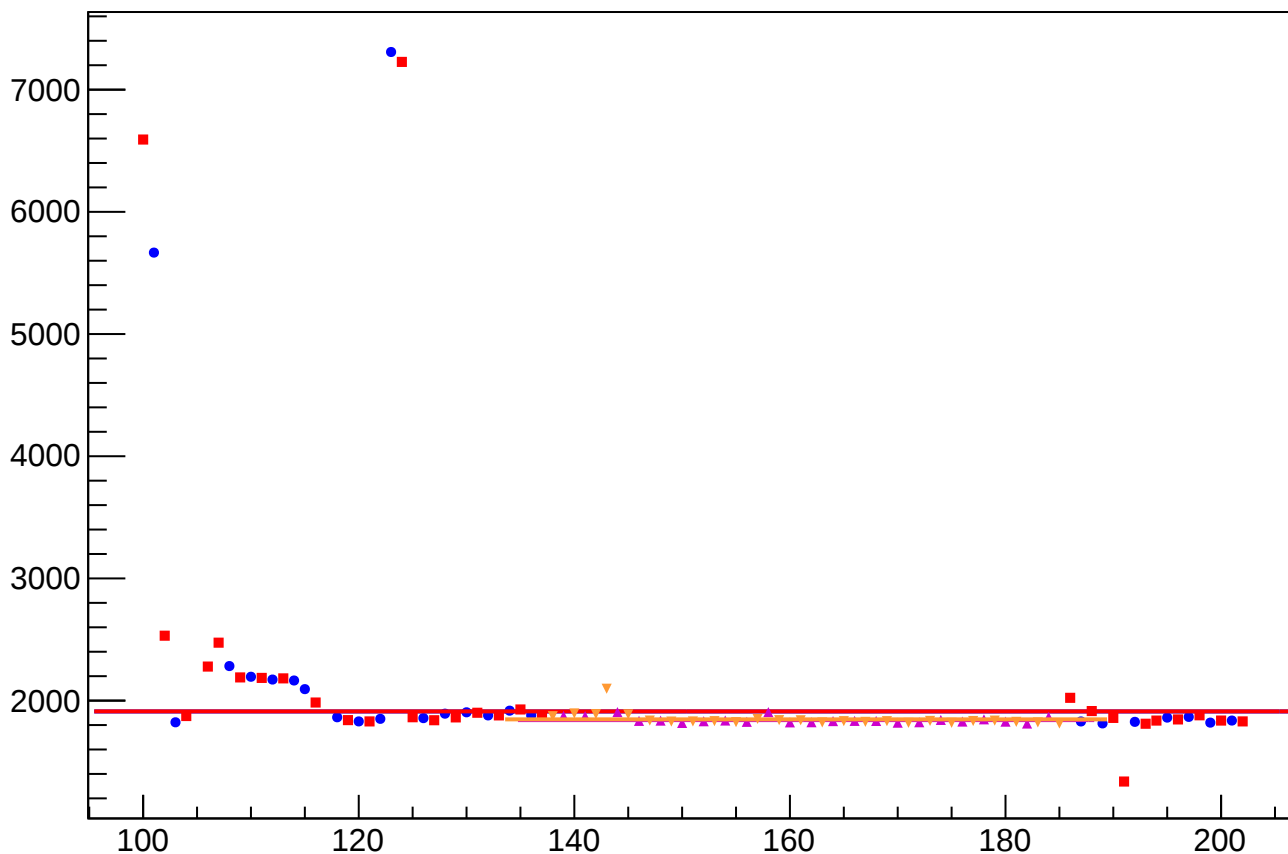
Right: 1898.060+/-390.167  $\chi^2/\text{NDF}$ : 45.0/52

In: 2134.199+/-350.622  $\chi^2/\text{NDF}$ :47.6/46

Out: 1870.583+/-334.377  $\chi^2/\text{NDF}$ :54.5/53

All: 1996.143+/-241.980  $\chi^2/\text{NDF}$ : 102.4/100

# reg\_asym\_at1\_avg\_rms vs Slug, Sign Corrected



Right In: 1911.090+/-0.408  $\chi^2/\text{NDF}$ : 628491.6/23

Left Out: 1846.602+/-0.305  $\chi^2/\text{NDF}$ : 27302.8/24

Right Out: 1912.038+/-0.375  $\chi^2/\text{NDF}$ : 466779.0/28

Left In: 1840.541+/-0.312  $\chi^2/\text{NDF}$ : 6740.2/22

Left: 1843.646+/-0.218  $\chi^2/\text{NDF}$ : 34235.8/47

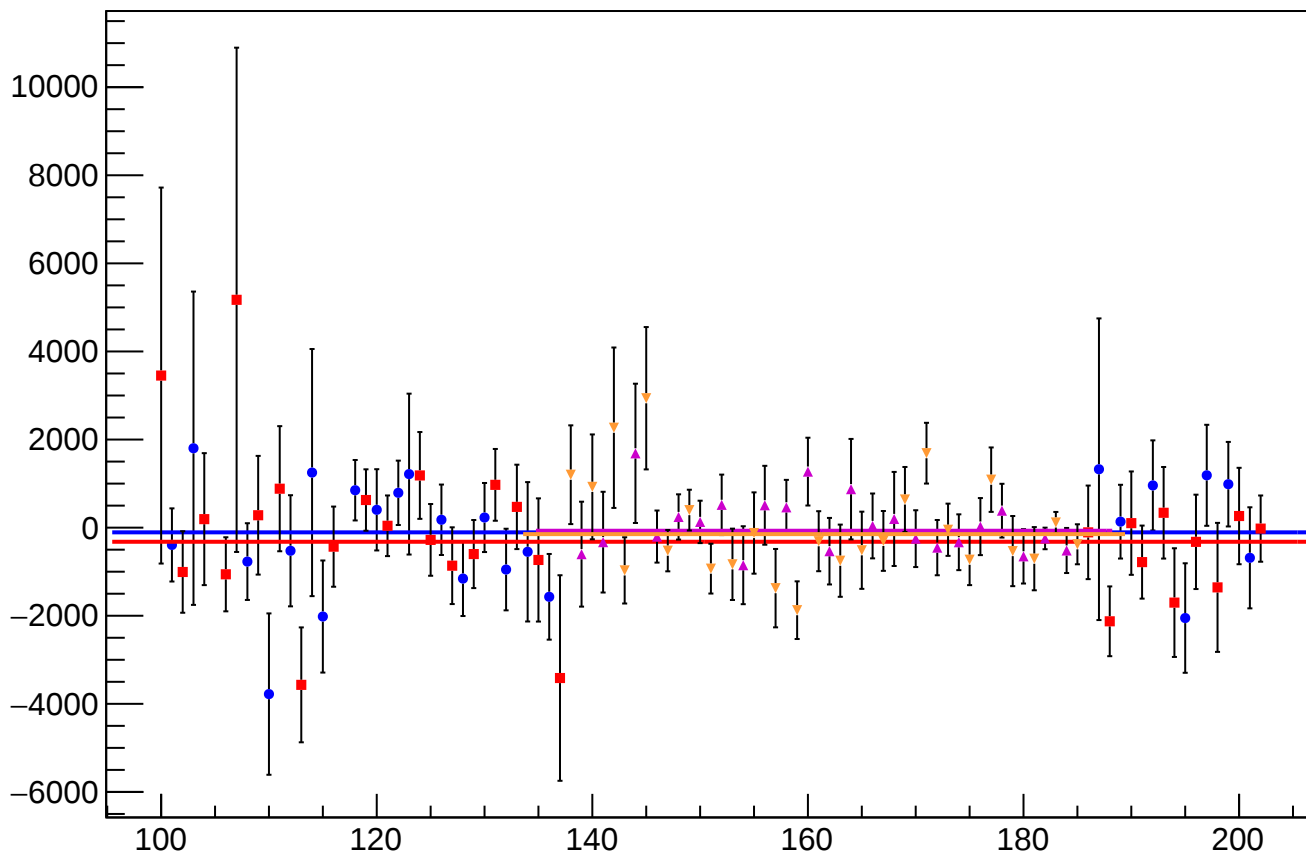
Right: 1911.604+/-0.276  $\chi^2/\text{NDF}$ : 1095273.5/52

In: 1866.638+/-0.248  $\chi^2/\text{NDF}$ : 654104.0/46

Out: 1872.648+/-0.236  $\chi^2/\text{NDF}$ : 512433.9/53

All: 1869.786+/-0.171  $\chi^2/\text{NDF}$ : 1166845.7/100

asym\_at1\_avg\_correction\_mean vs Slug, Sign Corrected



Right In:  $-106.736 \pm 208.933$   $\chi^2/\text{NDF}: 23.5/23$

Left Out:  $-146.999 \pm 121.984$   $\chi^2/\text{NDF}: 37.7/24$

Right Out:  $-320.539 \pm 185.289$   $\chi^2/\text{NDF}: 28.6/28$

Left In:  $-70.340 \pm 126.373$   $\chi^2/\text{NDF}: 12.3/22$

Left:  $-110.024 \pm 87.766$   $\chi^2/\text{NDF}: 50.1/47$

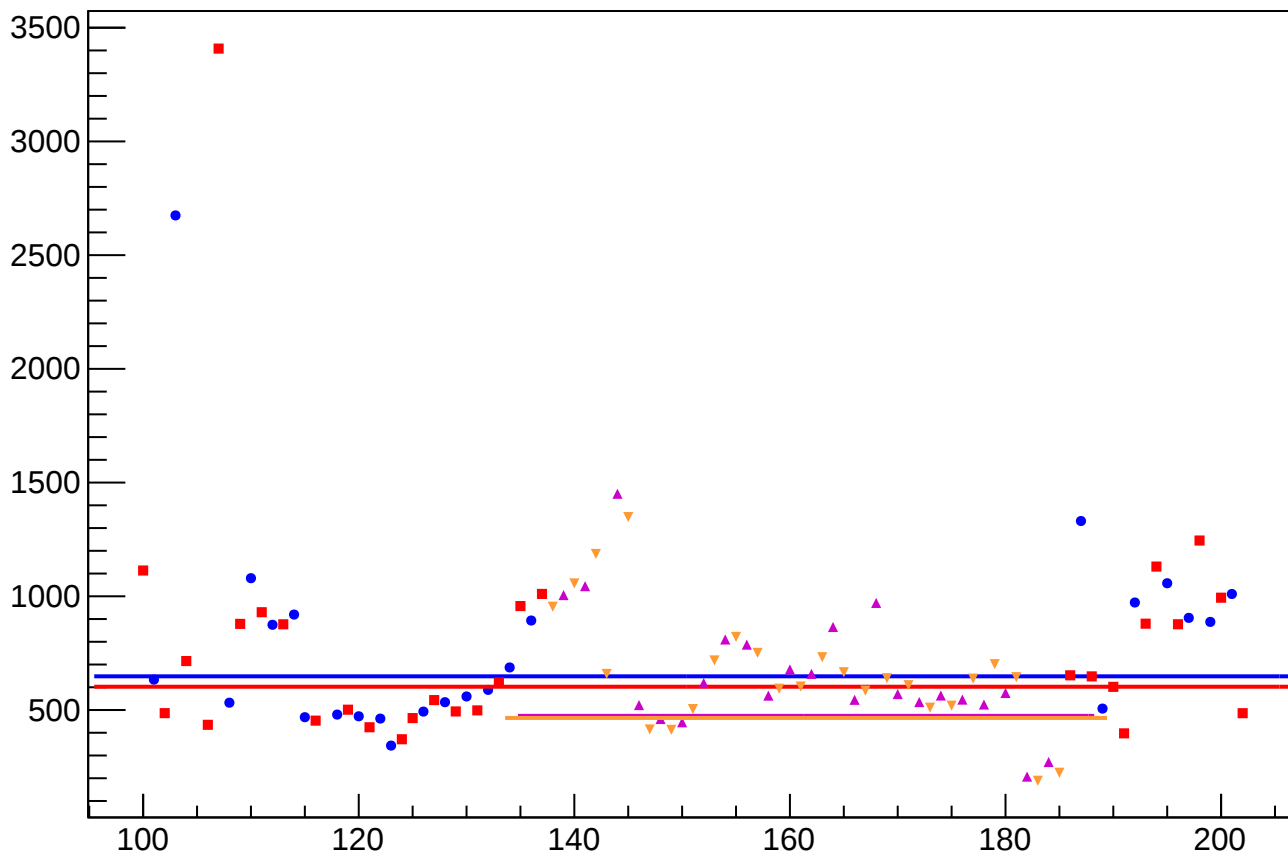
Right:  $-226.415 \pm 138.628$   $\chi^2/\text{NDF}: 52.7/52$

In:  $-80.089 \pm 108.132$   $\chi^2/\text{NDF}: 35.8/46$

Out:  $-199.472 \pm 101.886$   $\chi^2/\text{NDF}: 66.9/53$

All:  $-143.327 \pm 74.154$   $\chi^2/\text{NDF}: 103.3/100$

asym\_at1\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 648.138 $\pm$ 0.148  $\chi^2$ /NDF: 2549637.0/23

Left Out: 465.080 $\pm$ 0.086  $\chi^2$ /NDF: 7086137.6/24

Right Out: 602.393 $\pm$ 0.131  $\chi^2$ /NDF: 3041823.1/28

Left In: 474.263 $\pm$ 0.089  $\chi^2$ /NDF: 6173100.1/22

Left: 469.509 $\pm$ 0.062  $\chi^2$ /NDF: 13264703.6/47

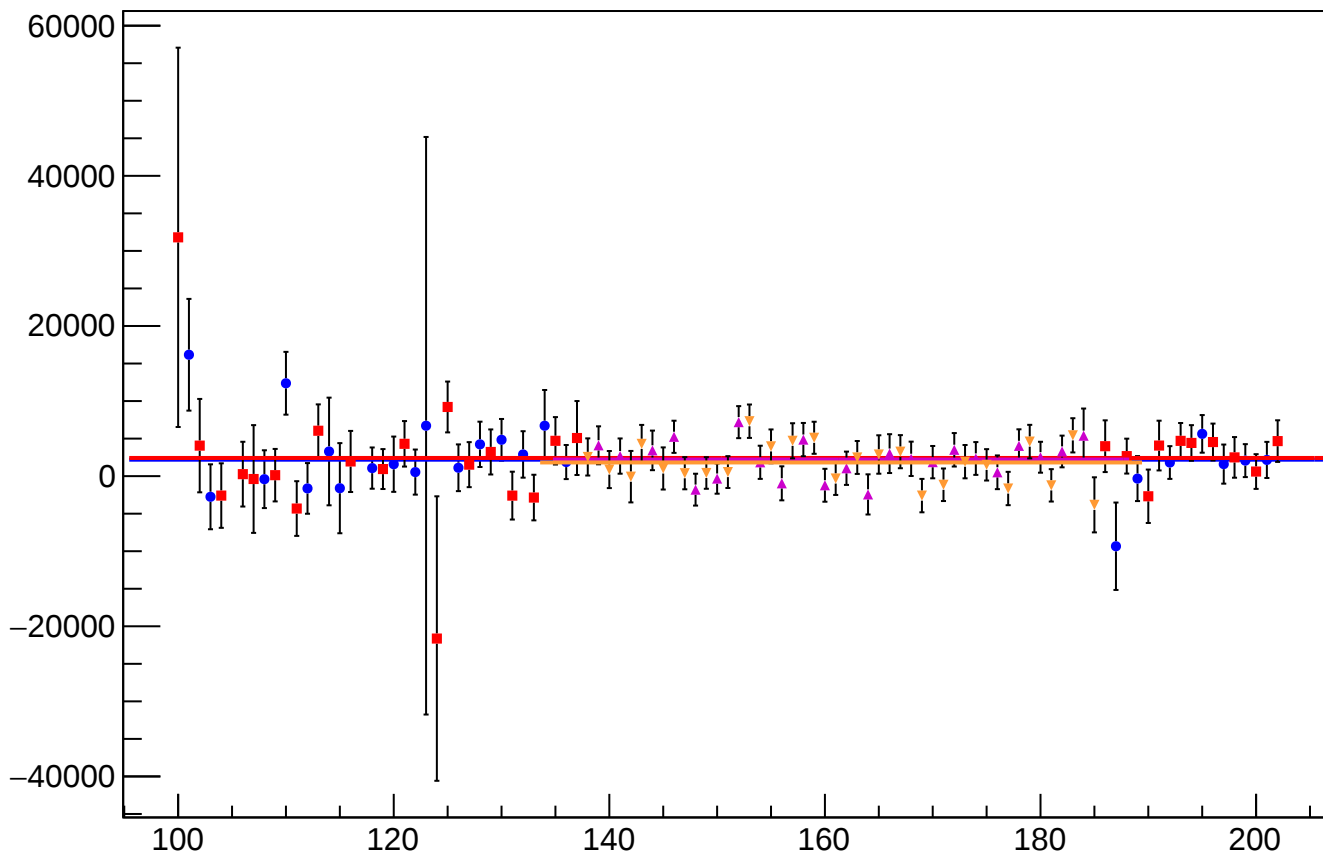
Right: 622.531 $\pm$ 0.098  $\chi^2$ /NDF: 5645126.8/52

In: 520.835 $\pm$ 0.076  $\chi^2$ /NDF: 9736855.5/46

Out: 506.599 $\pm$ 0.072  $\chi^2$ /NDF: 10894222.9/53

All: 513.294 $\pm$ 0.052  $\chi^2$ /NDF: 20649441.6/100

# asym\_at1\_avg\_mean vs Slug, Sign Corrected



Right In: 2191.319+/-649.194  $\chi^2/\text{NDF}$ : 22.5/23

Left Out: 1824.066+/-462.694  $\chi^2/\text{NDF}$ : 32.1/24

Right Out: 2421.006+/-600.009  $\chi^2/\text{NDF}$ : 27.1/28

Left In: 2208.114+/-474.050  $\chi^2/\text{NDF}$ : 25.3/22

Left: 2011.435+/-331.116  $\chi^2/\text{NDF}$ : 57.8/47

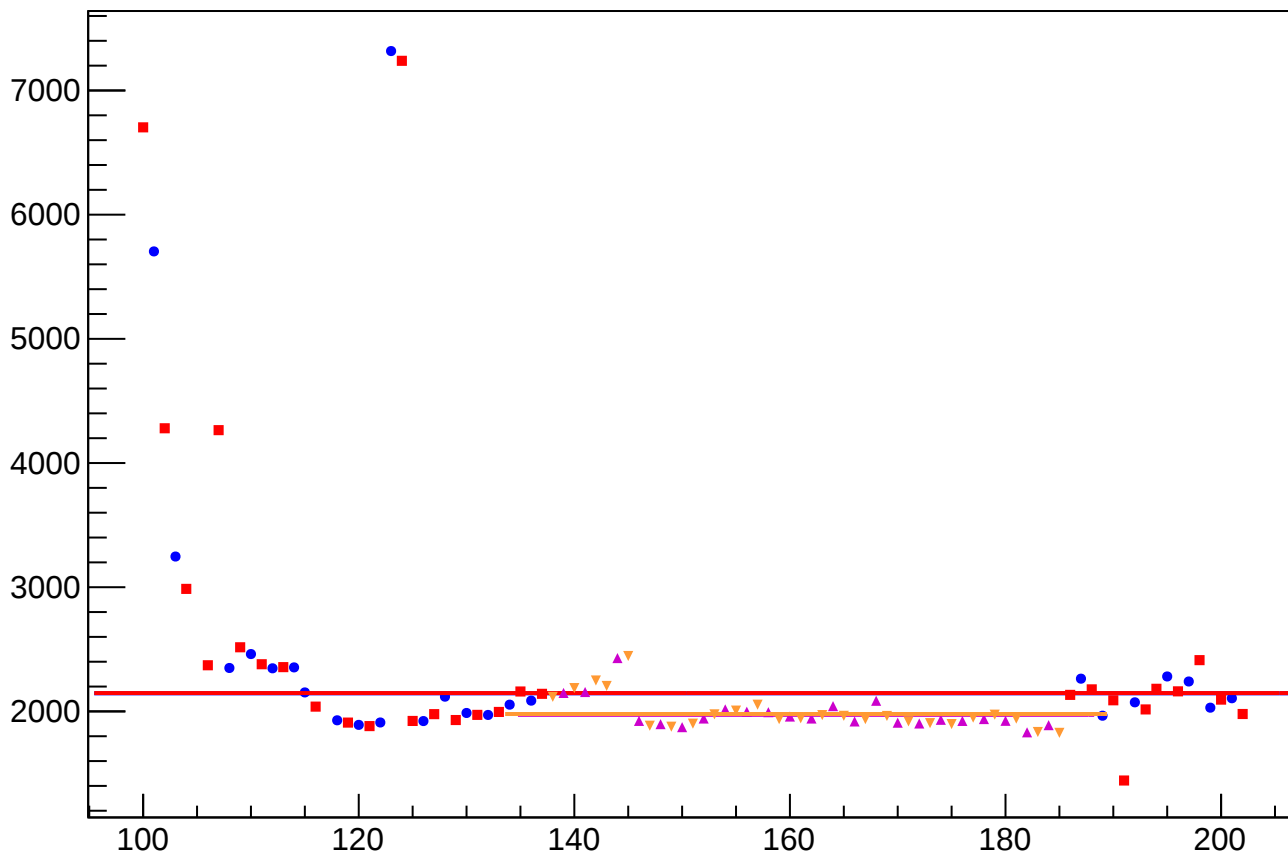
Right: 2315.192+/-440.634  $\chi^2/\text{NDF}$ : 49.6/52

In: 2202.273+/-382.845  $\chi^2/\text{NDF}$ : 47.8/46

Out: 2046.670+/-366.403  $\chi^2/\text{NDF}$ : 59.8/53

All: 2121.058+/-264.708  $\chi^2/\text{NDF}$ : 107.7/100

# asym\_at1\_avg\_rms vs Slug, Sign Corrected



Right In: 2145.416 $\pm$ 0.459  $\chi^2$ /NDF: 733782.7/23

Left Out: 1978.997 $\pm$ 0.327  $\chi^2$ /NDF:139299.8/24

Right Out: 2147.670 $\pm$ 0.424  $\chi^2$ /NDF: 932868.6/28

Left In: 1972.166 $\pm$ 0.335  $\chi^2$ /NDF:116452.5/22

Left: 1975.665 $\pm$ 0.234  $\chi^2$ /NDF: 255965.0/47

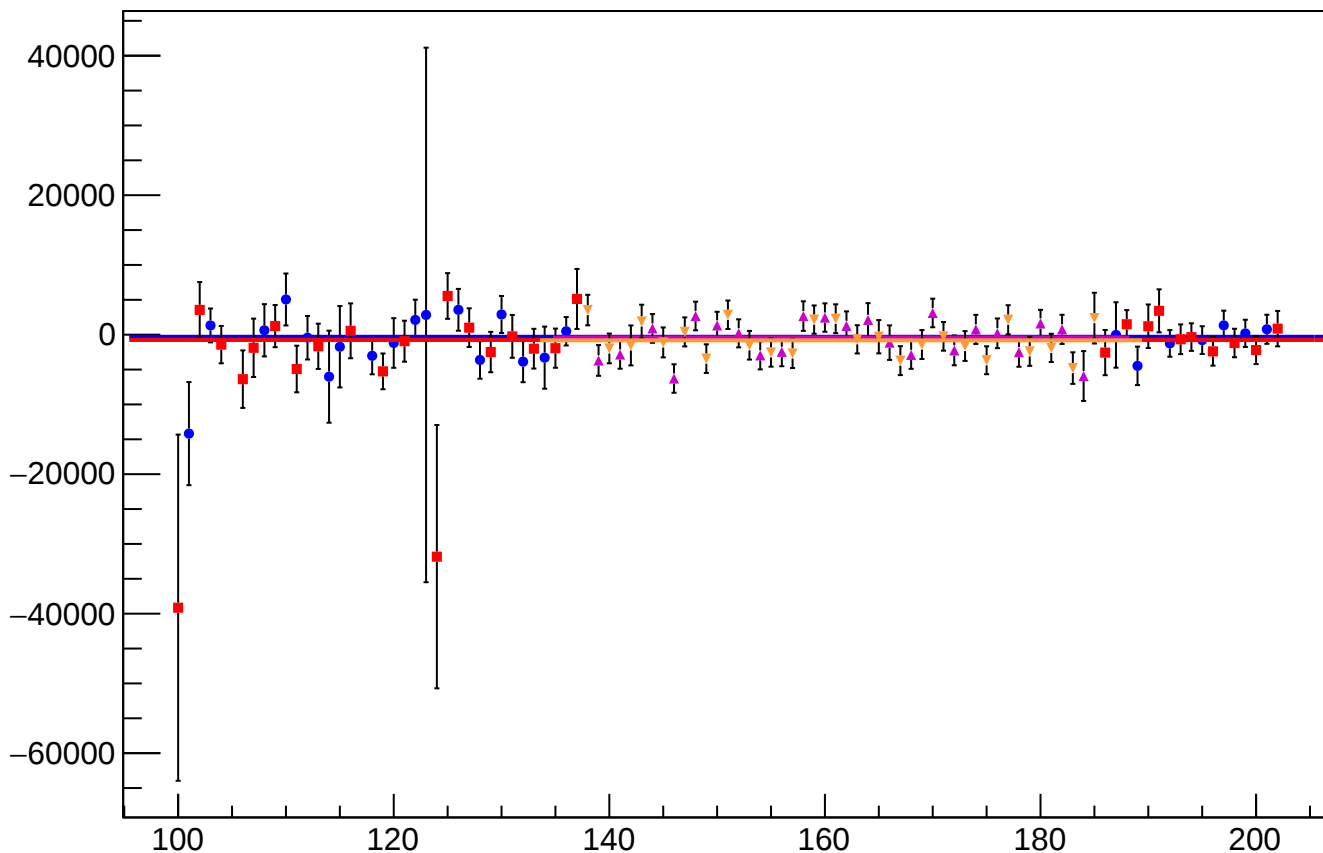
Right: 2146.632 $\pm$ 0.312  $\chi^2$ /NDF: 1666664.3/52

In: 2032.418 $\pm$ 0.271  $\chi^2$ /NDF:943136.6/46

Out: 2041.897 $\pm$ 0.259  $\chi^2$ /NDF:1171283.1/53

All: 2037.365 $\pm$ 0.187  $\chi^2$ /NDF: 2115059.7/100

# reg\_asym\_at1\_dd\_mean vs Slug, Sign Corrected



Right In: -300.642 $\pm$ 573.055  $\chi^2$ /NDF: 19.0/23

Left Out: -808.436 $\pm$ 430.304  $\chi^2$ /NDF: 27.9/24

Right Out: -757.154 $\pm$ 526.538  $\chi^2$ /NDF: 25.7/28

Left In: -398.797 $\pm$ 441.246  $\chi^2$ /NDF: 34.4/22

Left: -608.759 $\pm$ 308.066  $\chi^2$ /NDF: 62.8/47

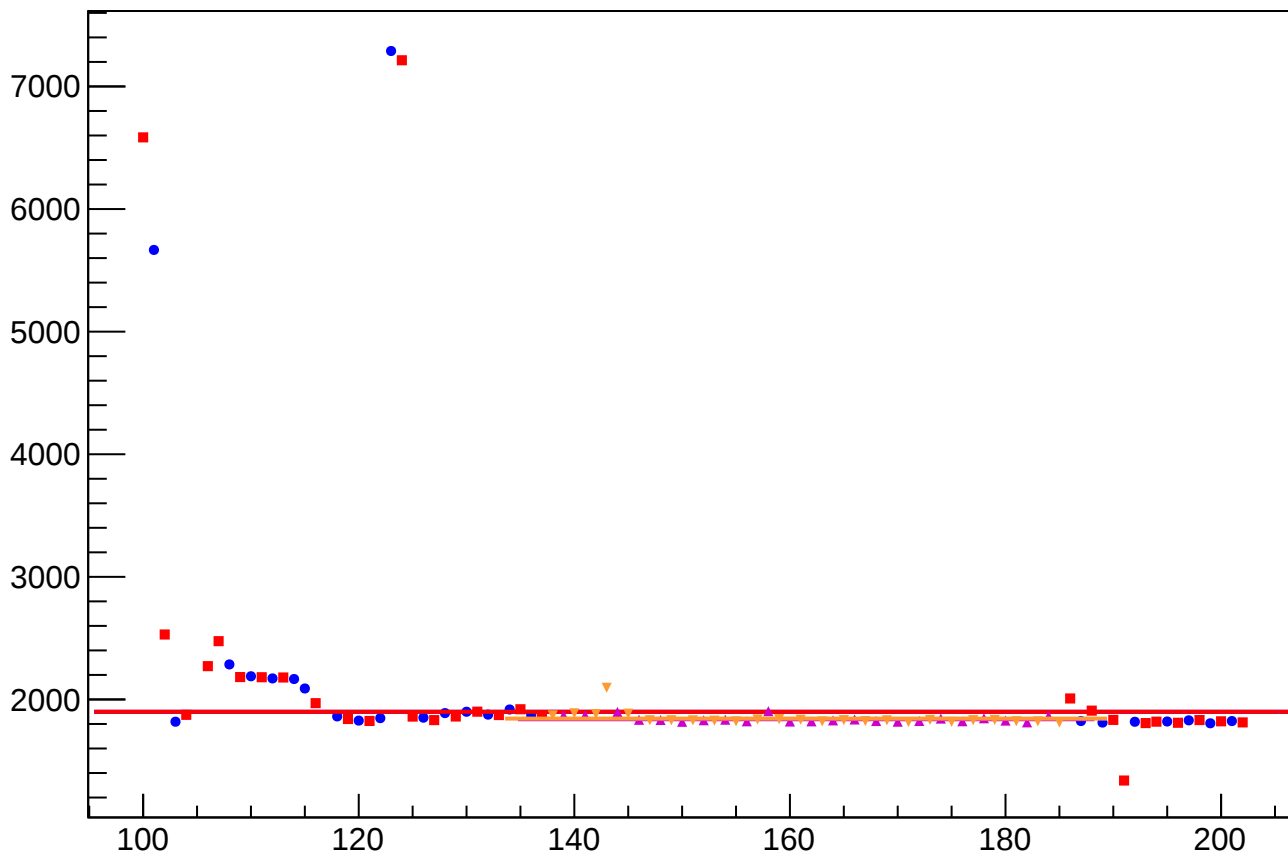
Right: -548.176 $\pm$ 387.722  $\chi^2$ /NDF: 45.0/52

In: -362.263 $\pm$ 349.614  $\chi^2$ /NDF: 53.4/46

Out: -787.901 $\pm$ 333.192  $\chi^2$ /NDF: 53.6/53

All: -585.313 $\pm$ 241.199  $\chi^2$ /NDF: 107.8/100

# reg\_asym\_at1\_dd\_rms vs Slug, Sign Corrected



Right In: 1899.328+/-0.405  $\chi^2/\text{NDF}$ : 636951.9/23

Left Out: 1843.747+/-0.304  $\chi^2/\text{NDF}$ : 26867.4/24

Right Out: 1899.339+/-0.372  $\chi^2/\text{NDF}$ : 473558.9/28

Left In: 1838.611+/-0.312  $\chi^2/\text{NDF}$ : 6335.1/22

Left: 1841.243+/-0.218  $\chi^2/\text{NDF}$ : 33341.4/47

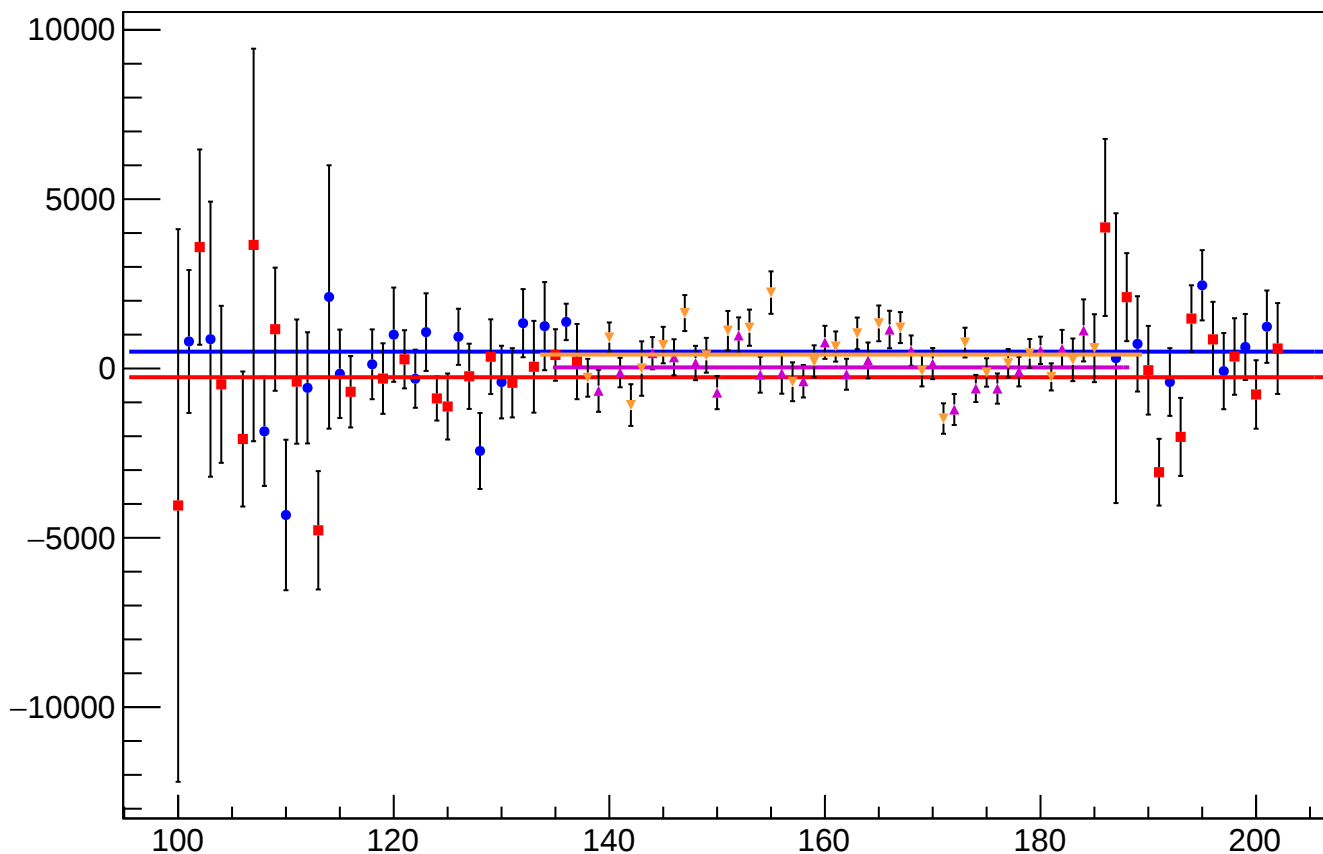
Right: 1899.334+/-0.274  $\chi^2/\text{NDF}$ : 1110510.8/52

In: 1861.211+/-0.247  $\chi^2/\text{NDF}$ : 657382.5/46

Out: 1866.008+/-0.236  $\chi^2/\text{NDF}$ : 513793.3/53

All: 1863.724+/-0.171  $\chi^2/\text{NDF}$ : 1171373.1/100

asym\_at1\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: 497.309+/-230.433  $\chi^2/\text{NDF}$ : 25.8/23

Left Out: 411.072+/-100.456  $\chi^2/\text{NDF}$ : 61.2/24

Right Out: -257.788+/-216.631  $\chi^2/\text{NDF}$ : 35.8/28

Left In: 32.456+/-102.403  $\chi^2/\text{NDF}$ : 32.7/22

Left: 225.398+/-71.712  $\chi^2/\text{NDF}$ : 100.9/47

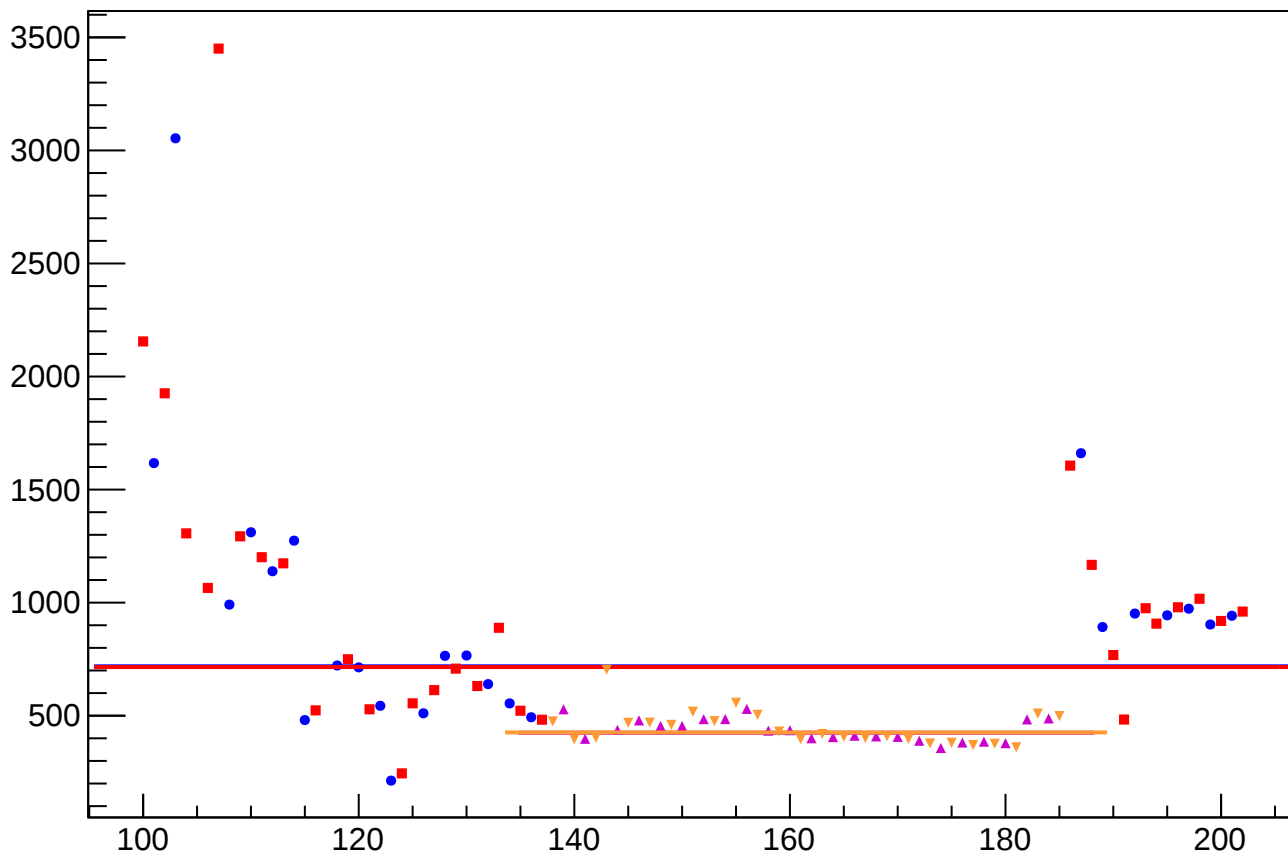
Right: 96.471+/-157.835  $\chi^2/\text{NDF}$ : 67.3/52

In: 109.119+/-93.579  $\chi^2/\text{NDF}$ : 61.9/46

Out: 292.698+/-91.134  $\chi^2/\text{NDF}$ : 104.9/53

All: 203.338+/-65.289  $\chi^2/\text{NDF}$ : 168.7/100

asym\_at1\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 718.332 $\pm$ 0.163  $\chi^2$ /NDF: 3054917.0/23

Left Out: 426.027 $\pm$ 0.071  $\chi^2$ /NDF: 733072.9/24

Right Out: 715.212 $\pm$ 0.153  $\chi^2$ /NDF: 4241334.9/28

Left In: 424.639 $\pm$ 0.072  $\chi^2$ /NDF: 391611.2/22

Left: 425.346 $\pm$ 0.051  $\chi^2$ /NDF: 1124871.5/47

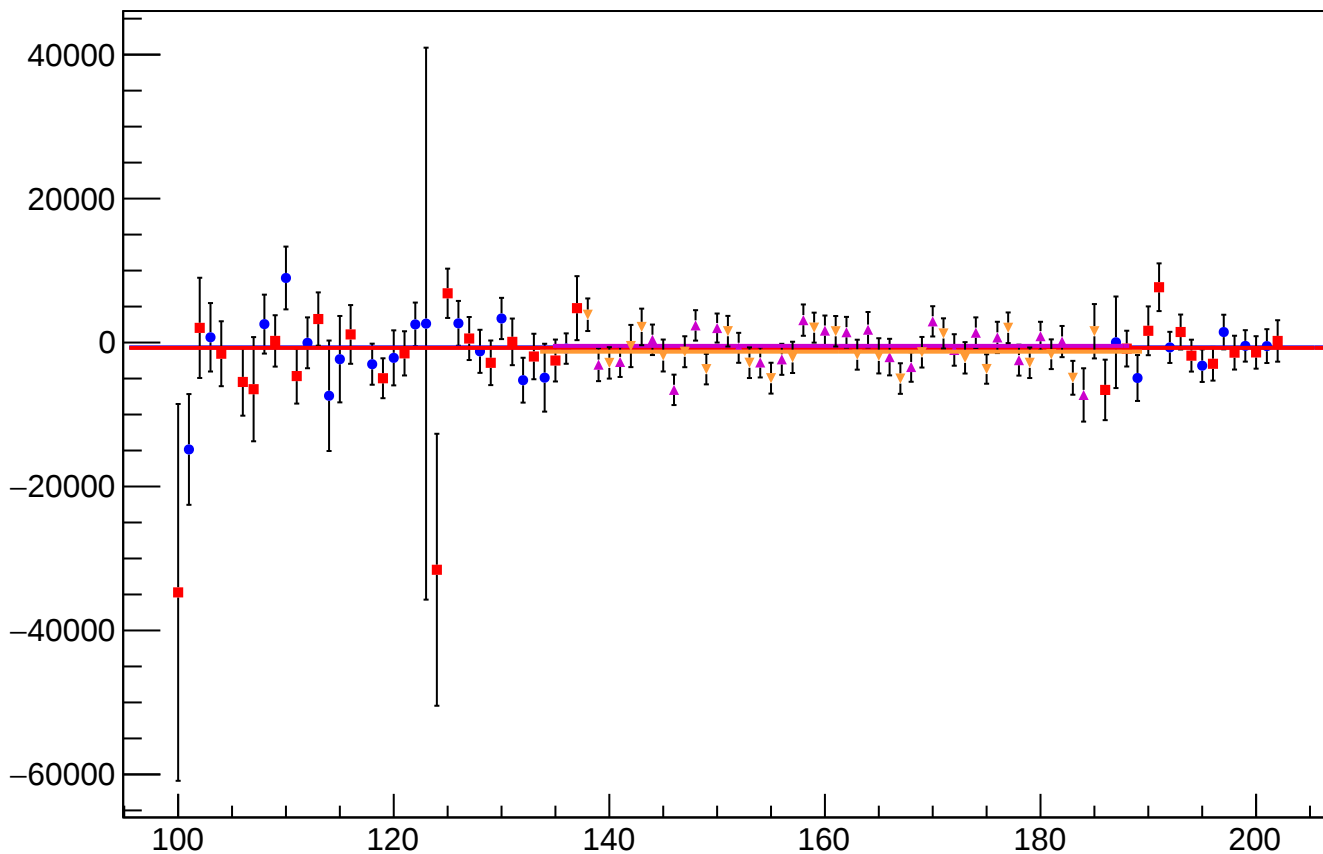
Right: 716.676 $\pm$ 0.112  $\chi^2$ /NDF: 7296446.6/52

In: 473.074 $\pm$ 0.066  $\chi^2$ /NDF: 6159587.7/46

Out: 477.207 $\pm$ 0.064  $\chi^2$ /NDF: 7907663.0/53

All: 475.195 $\pm$ 0.046  $\chi^2$ /NDF: 14069253.0/100

# asym\_at1\_dd\_mean vs Slug, Sign Corrected



Right In: -671.811+/-644.928  $\chi^2/\text{NDF}$ : 21.8/23

Left Out: -1267.885+/-443.219  $\chi^2/\text{NDF}$ : 30.8/24

Right Out: -741.855+/-600.655  $\chi^2/\text{NDF}$ : 29.8/28

Left In: -462.599+/-453.947  $\chi^2/\text{NDF}$ : 32.6/22

Left: -874.870+/-317.128  $\chi^2/\text{NDF}$ : 65.0/47

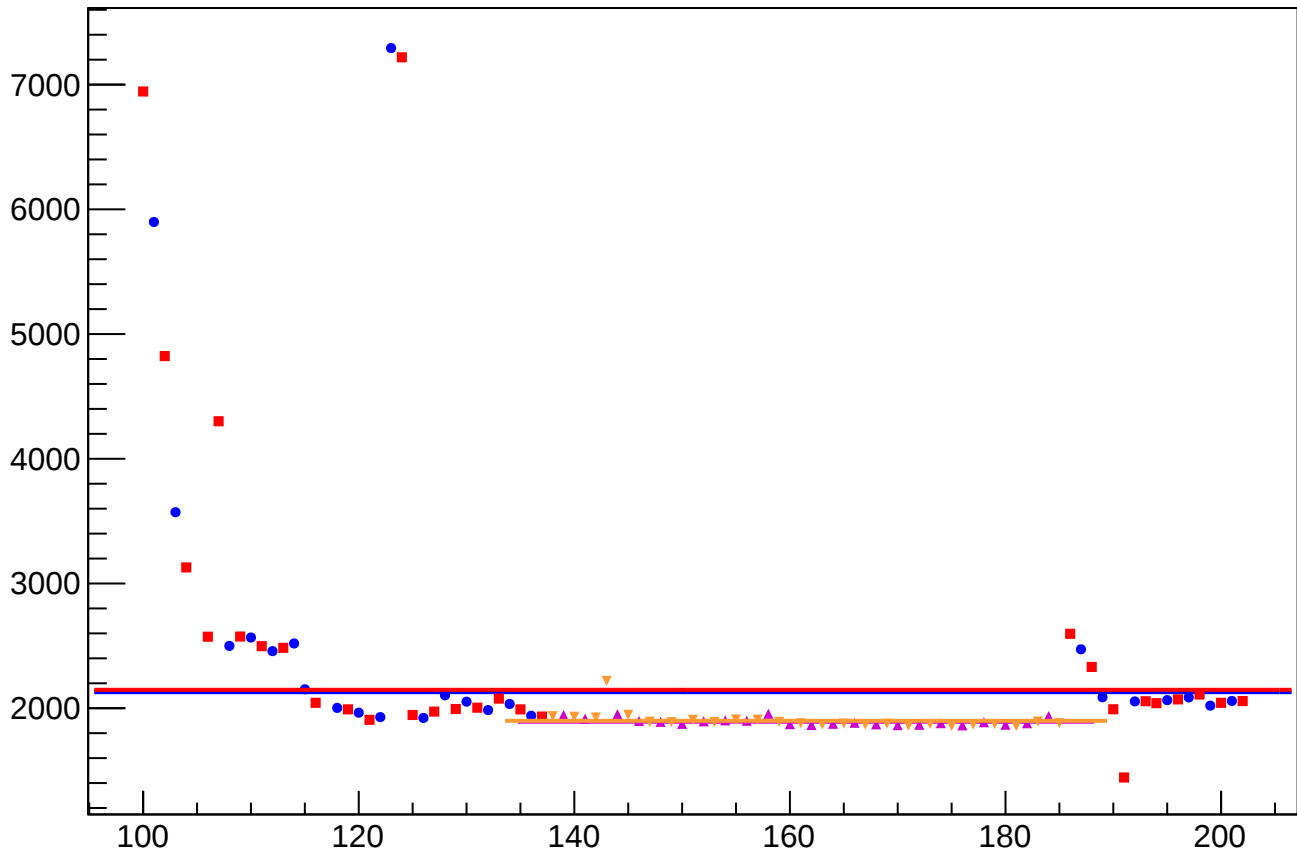
Right: -709.320+/-439.546  $\chi^2/\text{NDF}$ : 51.6/52

In: -531.911+/-371.211  $\chi^2/\text{NDF}$ : 54.4/46

Out: -1082.441+/-356.637  $\chi^2/\text{NDF}$ : 61.1/53

All: -818.195+/-257.178  $\chi^2/\text{NDF}$ : 116.7/100

# asym\_at1\_dd\_rms vs Slug, Sign Corrected



Right In: 2128.712+/-0.456  $\chi^2/\text{NDF}$ : 824980.2/23

Left Out: 1898.962+/-0.313  $\chi^2/\text{NDF}$ : 38680.4/24

Right Out: 2147.637+/-0.425  $\chi^2/\text{NDF}$ : 1055543.2/28

Left In: 1891.693+/-0.321  $\chi^2/\text{NDF}$ : 7420.7/22

Left: 1895.414+/-0.224  $\chi^2/\text{NDF}$ : 46363.6/47

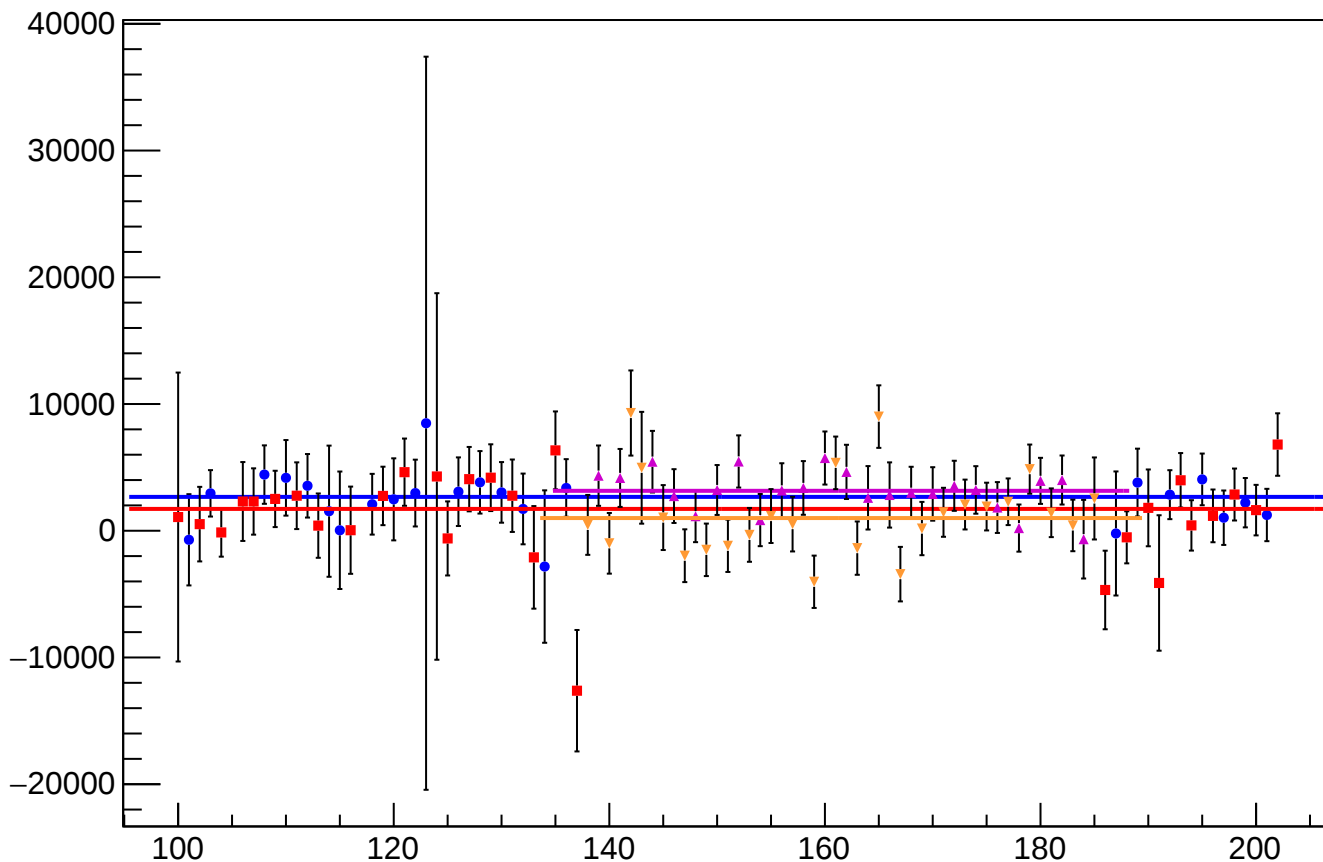
Right: 2138.847+/-0.311  $\chi^2/\text{NDF}$ : 1881445.7/52

In: 1970.217+/-0.262  $\chi^2/\text{NDF}$ : 1013038.8/46

Out: 1986.629+/-0.252  $\chi^2/\text{NDF}$ : 1316177.9/53

All: 1978.751+/-0.182  $\chi^2/\text{NDF}$ : 2331249.5/10

# reg\_asym\_at2\_avg\_mean vs Slug, Sign Corrected



Right In: 2671.477 $\pm$ 529.707  $\chi^2$ /NDF: 5.8/23

Left Out: 1001.263 $\pm$ 435.247  $\chi^2$ /NDF:44.6/24

Right Out: 1723.066 $\pm$ 490.468  $\chi^2$ /NDF: 30.8/28

Left In: 3150.437 $\pm$ 441.145  $\chi^2$ /NDF:11.8/22

Left: 2061.387 $\pm$ 309.830  $\chi^2$ /NDF: 68.5/47

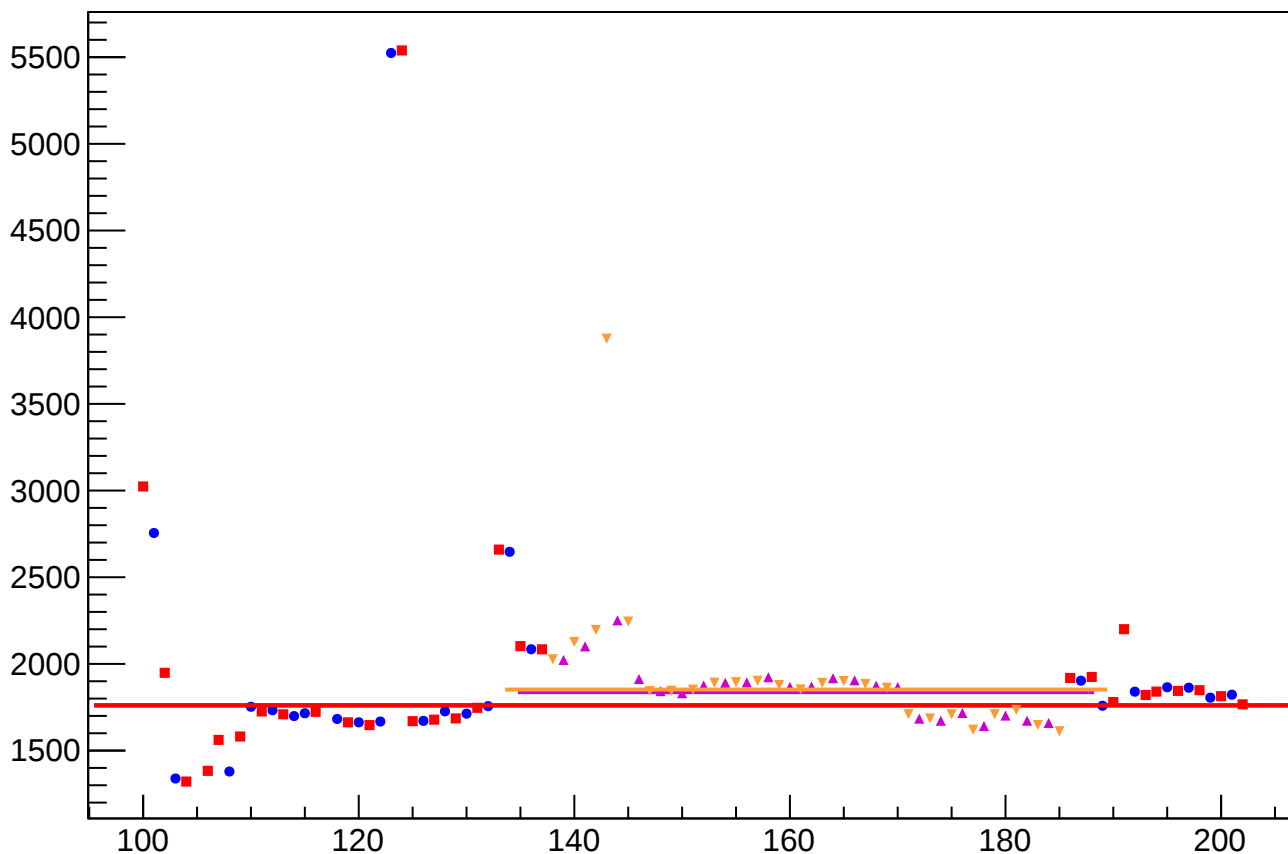
Right: 2160.847 $\pm$ 359.887  $\chi^2$ /NDF: 38.3/52

In: 2954.287 $\pm$ 338.984  $\chi^2$ /NDF:18.1/46

Out: 1319.260 $\pm$ 325.546  $\chi^2$ /NDF:76.7/53

All: 2103.724 $\pm$ 234.803  $\chi^2$ /NDF: 106.9/100

# reg\_asym\_at2\_avg\_rms vs Slug, Sign Corrected



Right In: 1760.303+/-0.375  $\chi^2/\text{NDF}$ : 459577.4/23

Left Out: 1851.959+/-0.308  $\chi^2/\text{NDF}$ : 648954.2/24

Right Out: 1761.672+/-0.347  $\chi^2/\text{NDF}$ : 520526.8/28

Left In: 1837.151+/-0.312  $\chi^2/\text{NDF}$ : 200514.0/22

Left: 1844.654+/-0.219  $\chi^2/\text{NDF}$ : 850610.1/47

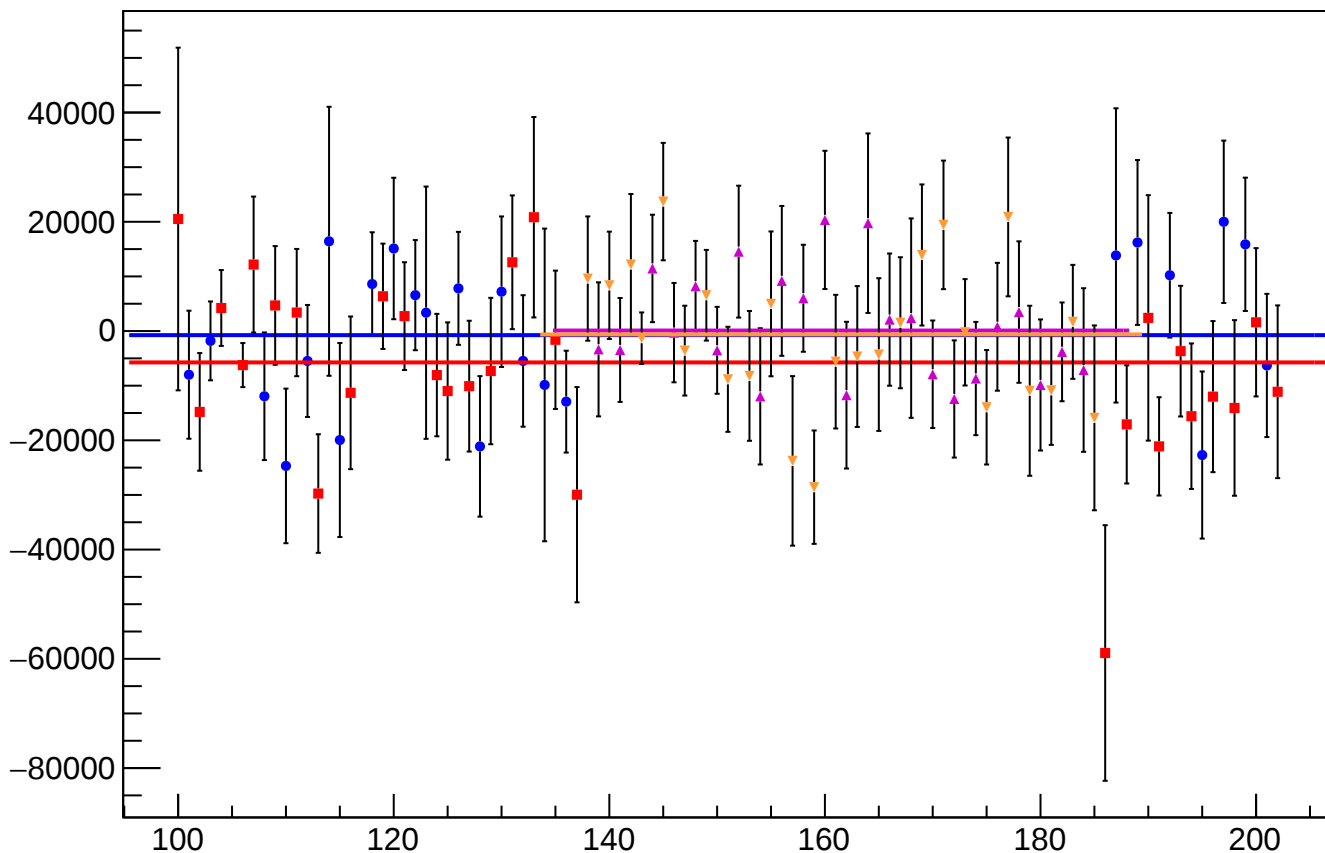
Right: 1761.040+/-0.254  $\chi^2/\text{NDF}$ : 980111.4/52

In: 1805.679+/-0.240  $\chi^2/\text{NDF}$ : 684946.6/46

Out: 1812.182+/-0.230  $\chi^2/\text{NDF}$ : 1207395.8/53

All: 1809.062+/-0.166  $\chi^2/\text{NDF}$ : 1892725.3/100

asym\_at2\_avg\_correction\_mean vs Slug, Sign Corrected



Right In:  $-748.266 \pm 2523.295$   $\chi^2/\text{NDF}$ : 23.1/23

Left Out:  $-619.372 \pm 2069.686$   $\chi^2/\text{NDF}$ : 30.1/24

Right Out:  $-5741.984 \pm 2000.122$   $\chi^2/\text{NDF}$ : 31.6/28

Left In:  $93.334 \pm 2293.826$   $\chi^2/\text{NDF}$ : 14.6/22

Left:  $-299.532 \pm 1536.638$   $\chi^2/\text{NDF}$ : 44.8/47

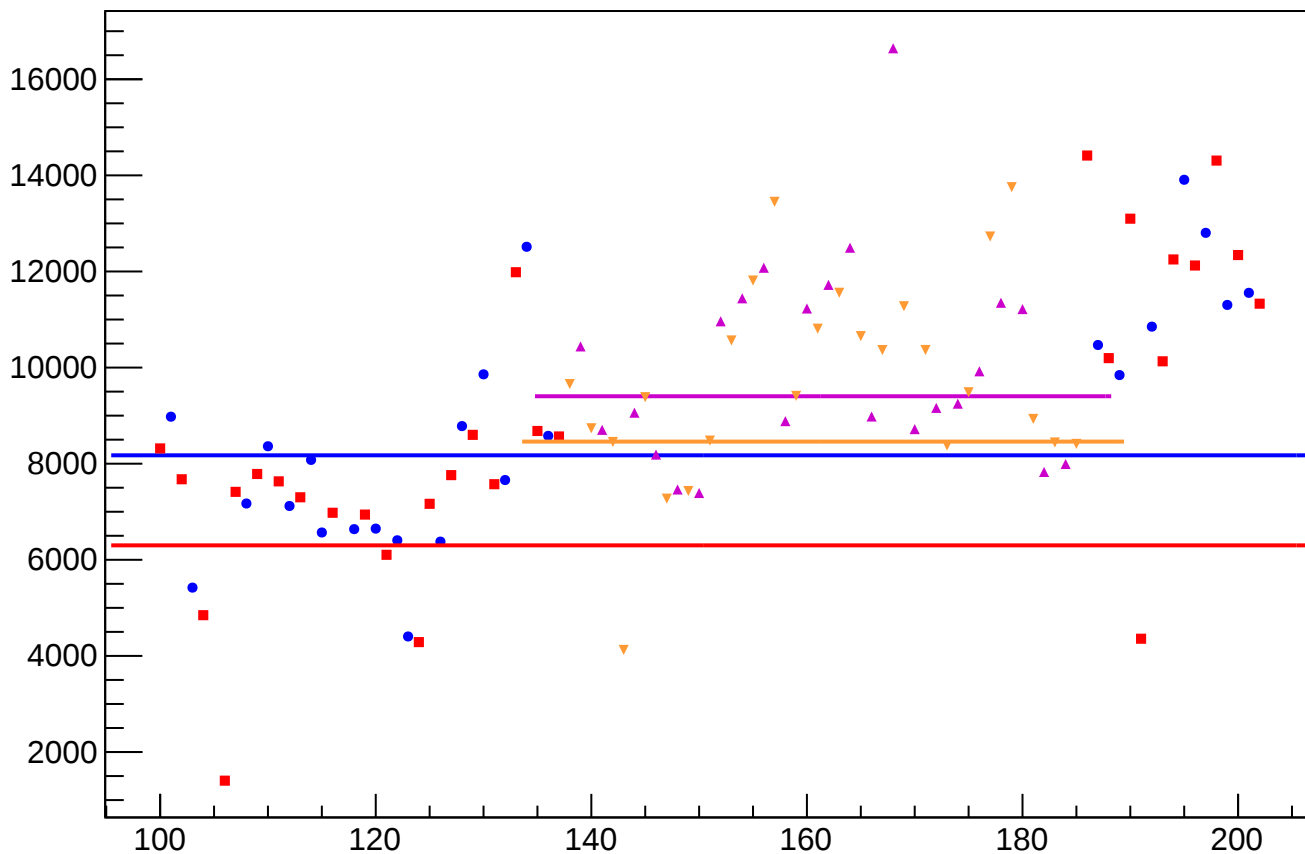
Right:  $-3815.069 \pm 1567.427$   $\chi^2/\text{NDF}$ : 57.1/52

In:  $-287.466 \pm 1697.320$   $\chi^2/\text{NDF}$ : 37.8/46

Out:  $-3268.212 \pm 1438.264$   $\chi^2/\text{NDF}$ : 64.9/53

All:  $-2022.433 \pm 1097.291$   $\chi^2/\text{NDF}$ : 104.4/100

asym\_at2\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 8174.408 $\pm$ 1.784  $\chi^2$ /NDF: 1585482.9/23

Left Out: 8459.960 $\pm$ 1.463  $\chi^2$ /NDF: 3087200.5/24

Right Out: 6300.625 $\pm$ 1.414  $\chi^2$ /NDF: 6490926.2/28

Left In: 9403.481 $\pm$ 1.622  $\chi^2$ /NDF: 1142646.9/22

Left: 8883.382 $\pm$ 1.087  $\chi^2$ /NDF: 4416376.4/47

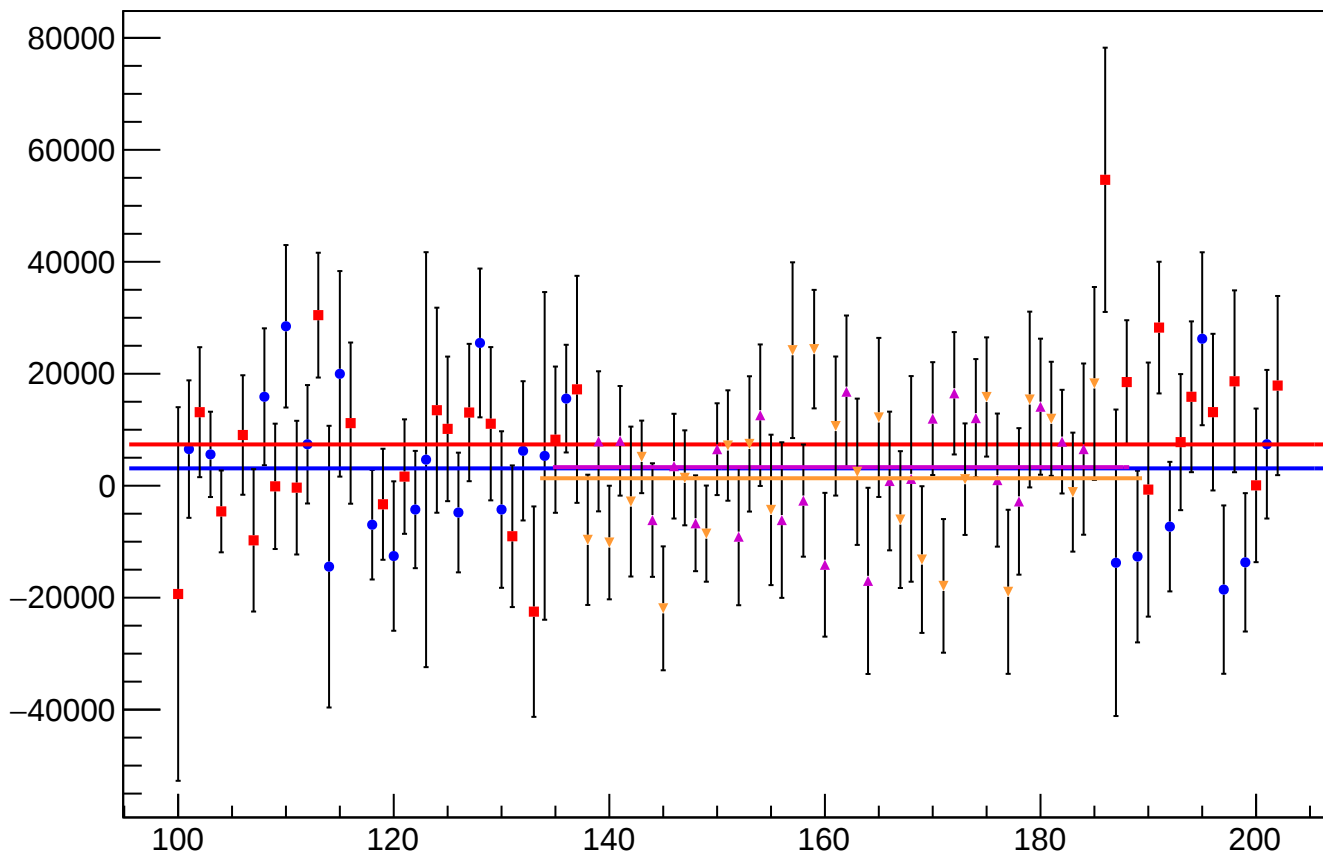
Right: 7023.658 $\pm$ 1.108  $\chi^2$ /NDF: 8753729.1/52

In: 8847.360 $\pm$ 1.200  $\chi^2$ /NDF: 2987939.9/46

Out: 7343.395 $\pm$ 1.017  $\chi^2$ /NDF: 10703833.3/53

All: 7971.965 $\pm$ 0.776  $\chi^2$ /NDF: 14605770.0/100

# asym\_at2\_avg\_mean vs Slug, Sign Corrected



Right In: 3098.328+/-2612.414  $\chi^2/\text{NDF}$ : 22.7/23

Left Out: 1332.828+/-2213.733  $\chi^2/\text{NDF}$ : 28.0/24

Right Out: 7375.057+/-2373.739  $\chi^2/\text{NDF}$ : 27.1/28

Left In: 3316.909+/-2344.543  $\chi^2/\text{NDF}$ : 13.7/22

Left: 2267.978+/-1609.604  $\chi^2/\text{NDF}$ : 42.2/47

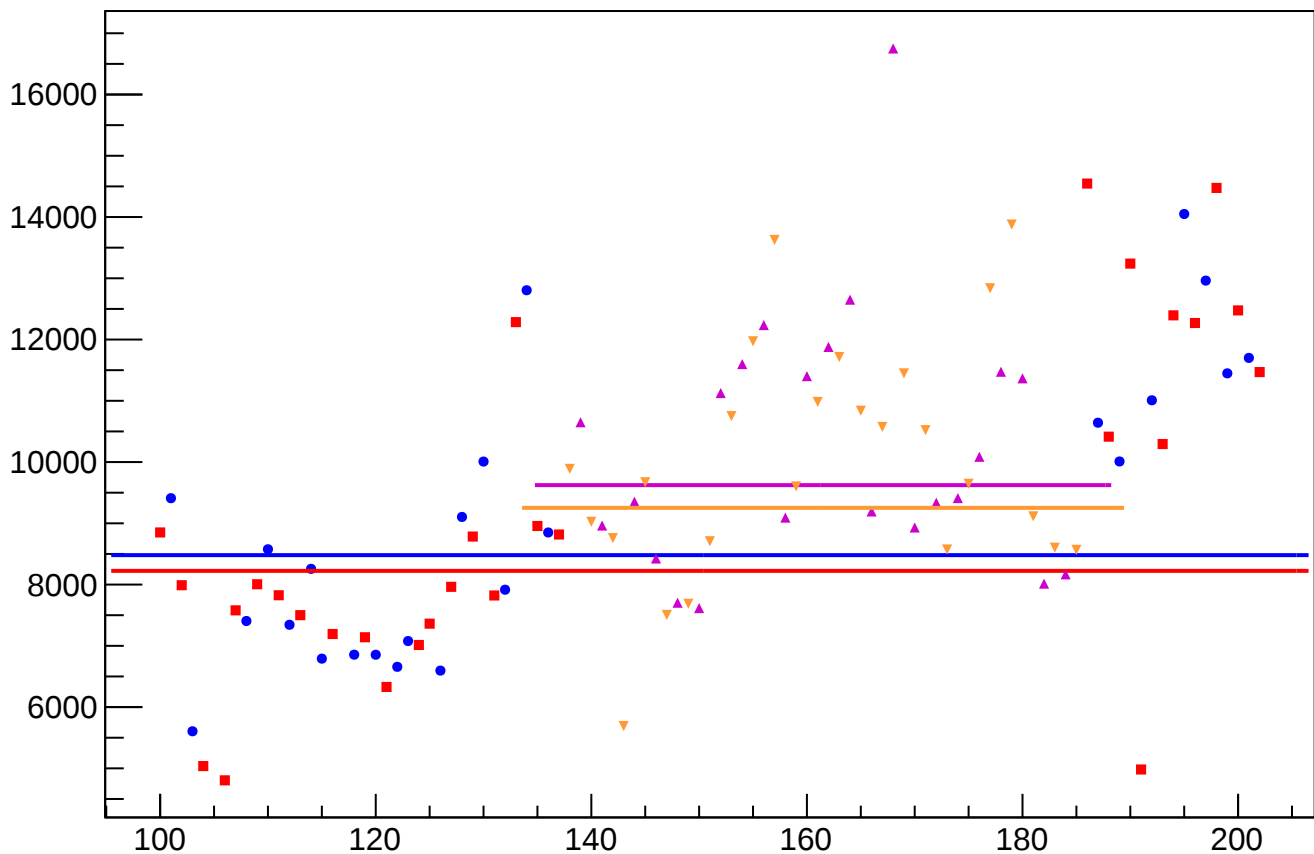
Right: 5440.942+/-1756.820  $\chi^2/\text{NDF}$ : 51.2/52

In: 3219.396+/-1744.885  $\chi^2/\text{NDF}$ : 36.4/46

Out: 4143.453+/-1618.959  $\chi^2/\text{NDF}$ : 58.6/53

All: 3715.968+/-1186.800  $\chi^2/\text{NDF}$ : 95.2/100

# asym\_at2\_avg\_rms vs Slug, Sign Corrected



Right In: 8480.679 $\pm$ 1.847  $\chi^2$ /NDF: 1439853.9/23

Left Out: 9252.712 $\pm$ 1.565  $\chi^2$ /NDF:1597668.9/24

Right Out: 8223.932 $\pm$ 1.678  $\chi^2$ /NDF: 2291769.2/28

Left In: 9623.485 $\pm$ 1.658  $\chi^2$ /NDF:1069924.0/22

Left: 9427.467 $\pm$ 1.138  $\chi^2$ /NDF: 2694036.4/47

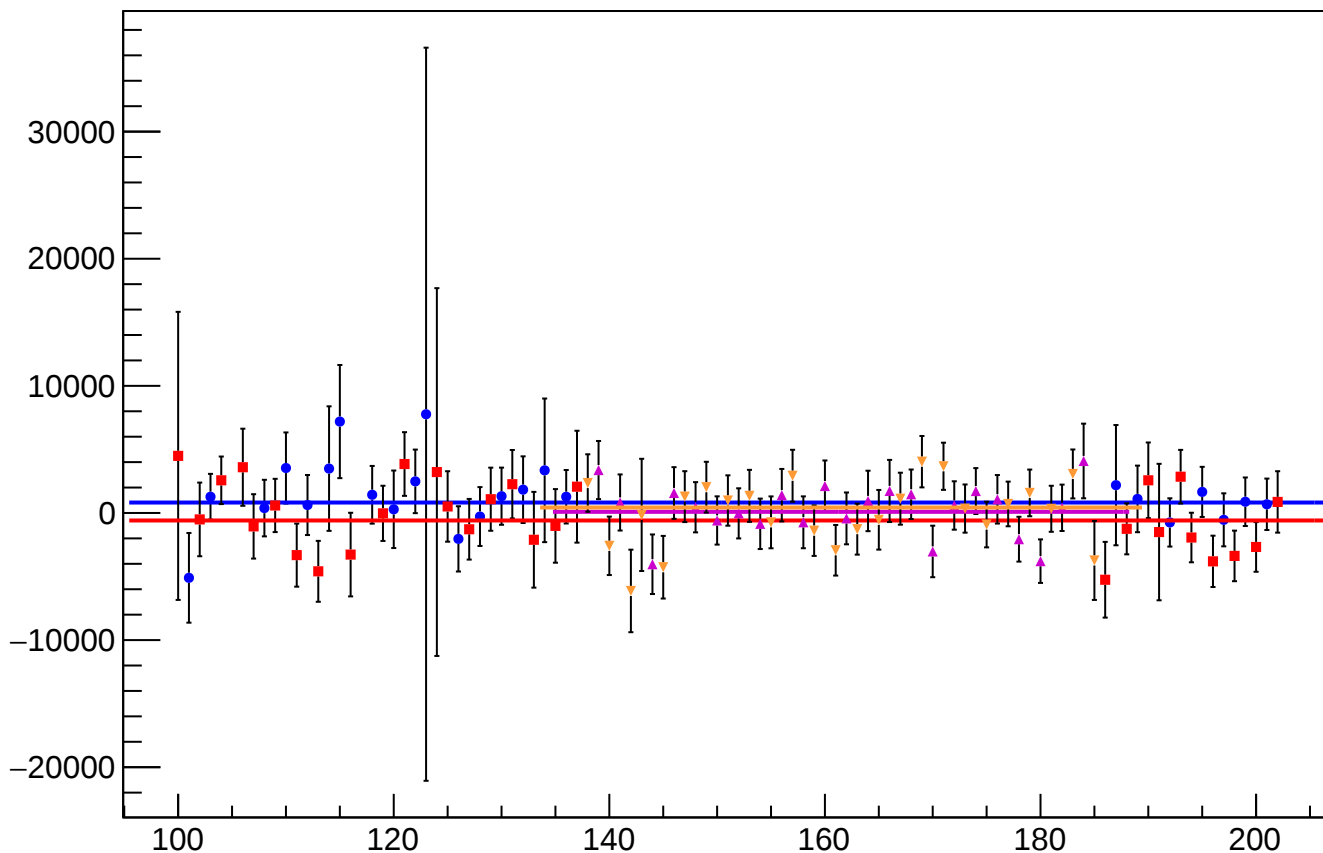
Right: 8340.034 $\pm$ 1.242  $\chi^2$ /NDF: 3742205.7/52

In: 9113.648 $\pm$ 1.234  $\chi^2$ /NDF:2721769.4/46

Out: 8774.113 $\pm$ 1.145  $\chi^2$ /NDF:4090381.8/53

All: 8931.181 $\pm$ 0.839  $\chi^2$ /NDF: 6852849.0/100

reg\_asym\_at2\_dd\_mean vs Slug, Sign Corrected



Right In:  $821.092 \pm 508.596$   $\chi^2/\text{NDF}: 10.1/23$

Left Out:  $429.447 \pm 416.378$   $\chi^2/\text{NDF}: 28.7/24$

Right Out:  $-591.208 \pm 472.093$   $\chi^2/\text{NDF}: 28.5/28$

Left In:  $88.373 \pm 421.957$   $\chi^2/\text{NDF}: 21.0/22$

Left:  $261.180 \pm 296.376$   $\chi^2/\text{NDF}: 50.0/47$

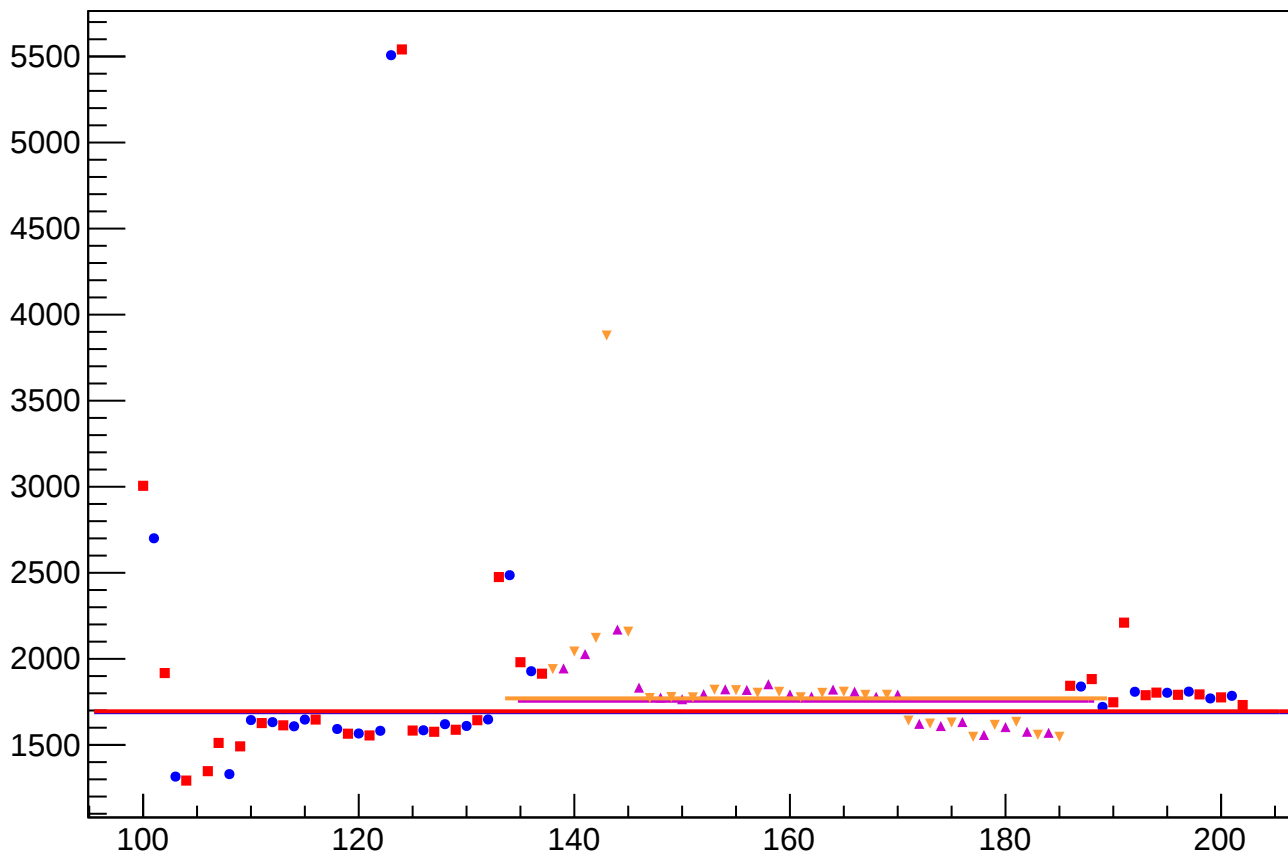
Right:  $62.447 \pm 346.006$   $\chi^2/\text{NDF}: 42.7/52$

In:  $387.099 \pm 324.744$   $\chi^2/\text{NDF}: 32.3/46$

Out:  $-17.127 \pm 312.273$   $\chi^2/\text{NDF}: 59.8/53$

All:  $177.076 \pm 225.090$   $\chi^2/\text{NDF}: 92.9/100$

# reg\_asym\_at2\_dd\_rms vs Slug, Sign Corrected



Right In: 1690.136 $\pm$ 0.360  $\chi^2$ /NDF: 455654.0/23

Left Out: 1770.384 $\pm$ 0.294  $\chi^2$ /NDF: 699536.9/24

Right Out: 1695.346 $\pm$ 0.334  $\chi^2$ /NDF: 533551.0/28

Left In: 1756.623 $\pm$ 0.298  $\chi^2$ /NDF: 223077.6/22

Left: 1763.595 $\pm$ 0.210  $\chi^2$ /NDF: 923692.1/47

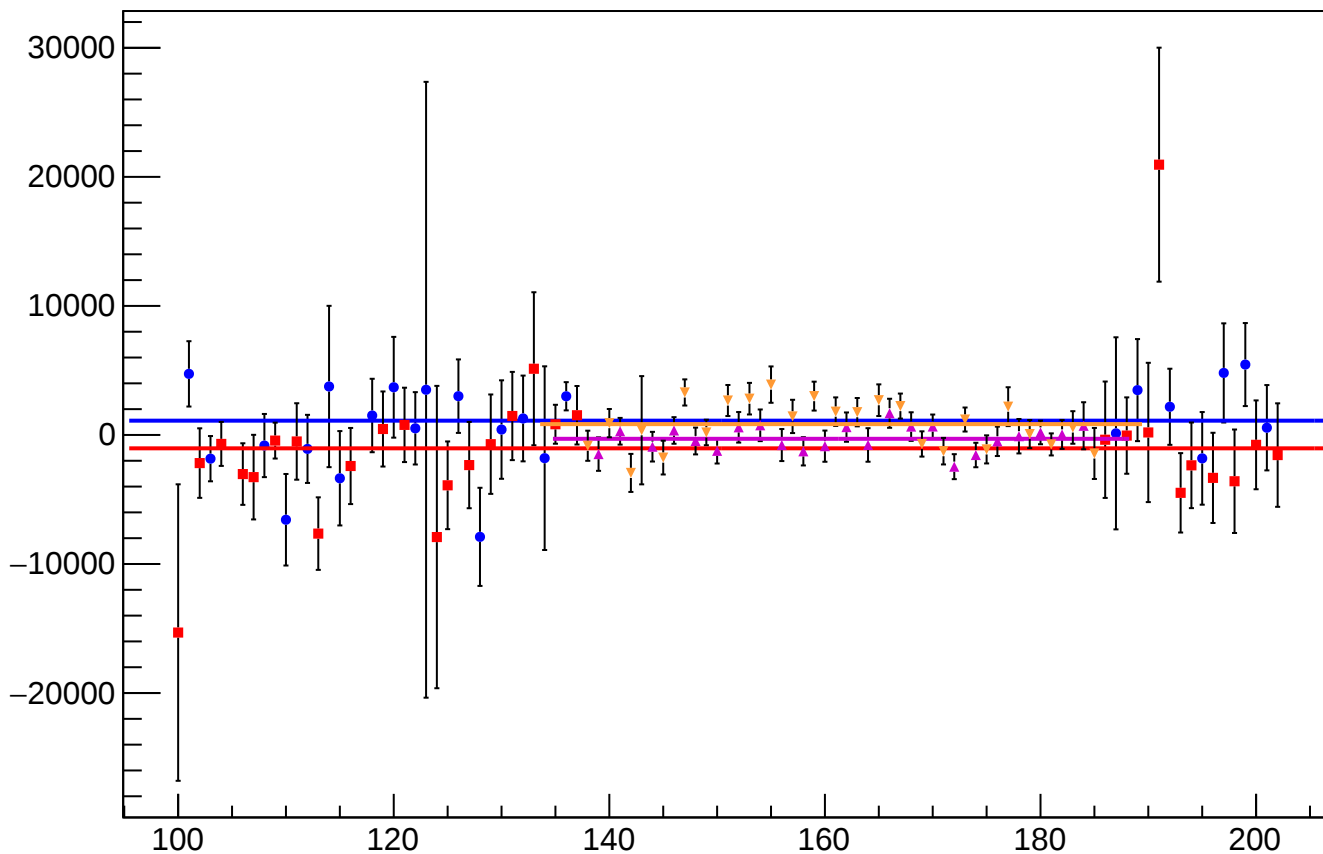
Right: 1692.935 $\pm$ 0.245  $\chi^2$ /NDF: 989317.7/52

In: 1729.517 $\pm$ 0.230  $\chi^2$ /NDF: 698975.8/46

Out: 1737.552 $\pm$ 0.221  $\chi^2$ /NDF: 1261508.6/53

All: 1733.692 $\pm$ 0.159  $\chi^2$ /NDF: 1961120.5/100

asym\_at2\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: 1107.303+/-574.687  $\chi^2/\text{NDF}$ : 26.2/23

Left Out: 839.344+/-230.465  $\chi^2/\text{NDF}$ : 54.4/24

Right Out: -1036.956+/-529.616  $\chi^2/\text{NDF}$ : 23.5/28

Left In: -298.801+/-231.400  $\chi^2/\text{NDF}$ : 18.3/22

Left: 272.574+/-163.293  $\chi^2/\text{NDF}$ : 84.9/47

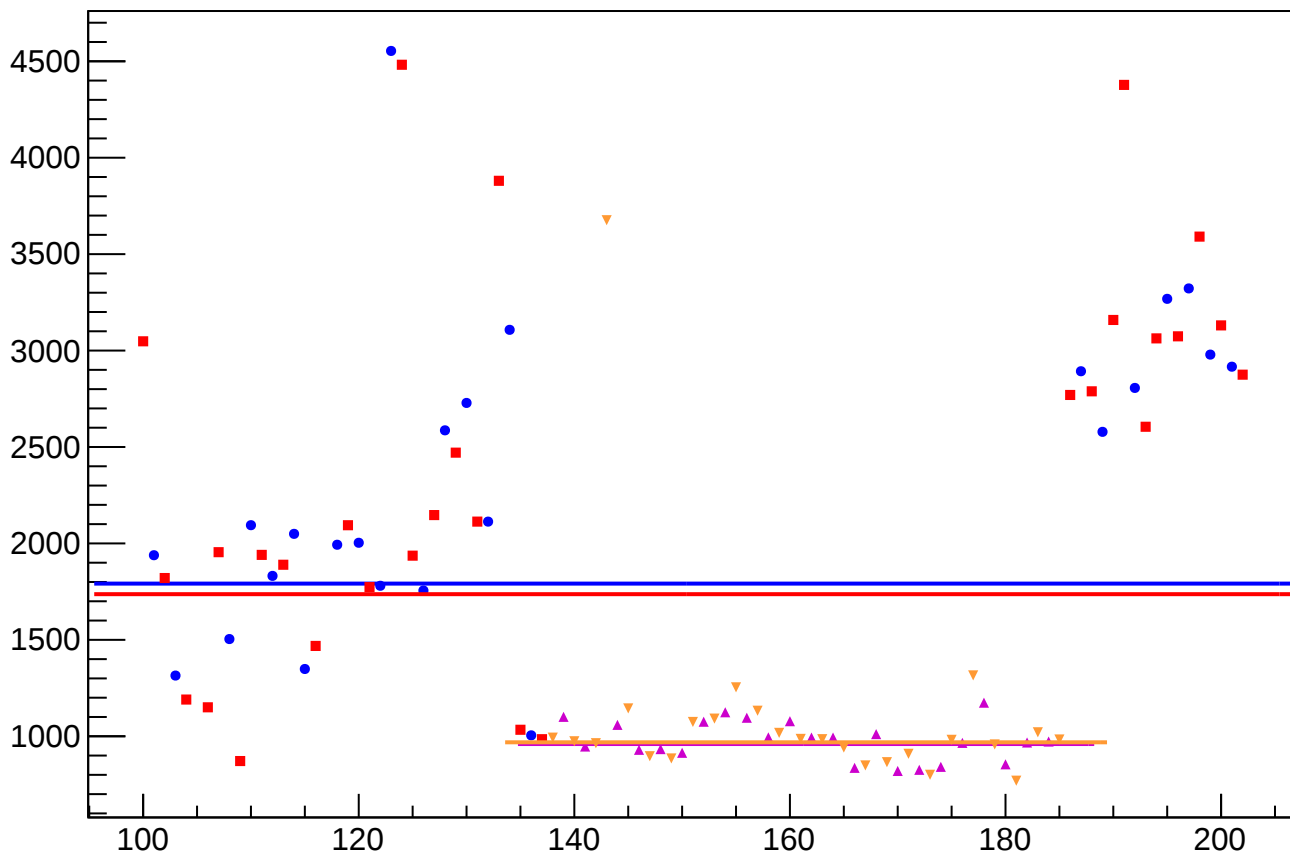
Right: -52.197+/-389.456  $\chi^2/\text{NDF}$ : 57.3/52

In: -102.635+/-214.652  $\chi^2/\text{NDF}$ : 49.7/46

Out: 540.615+/-211.324  $\chi^2/\text{NDF}$ : 88.5/53

All: 224.016+/-150.591  $\chi^2/\text{NDF}$ : 142.8/100

asym\_at2\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 1791.651 $\pm$ 0.406  $\chi^2/\text{NDF}$ : 3123261.1/23

Left Out: 968.712 $\pm$ 0.163  $\chi^2/\text{NDF}$ : 1393696.6/24

Right Out: 1736.831 $\pm$ 0.374  $\chi^2/\text{NDF}$ : 4714016.2/28

Left In: 959.805 $\pm$ 0.164  $\chi^2/\text{NDF}$ : 371210.5/22

Left: 964.276 $\pm$ 0.115  $\chi^2/\text{NDF}$ : 1766394.7/47

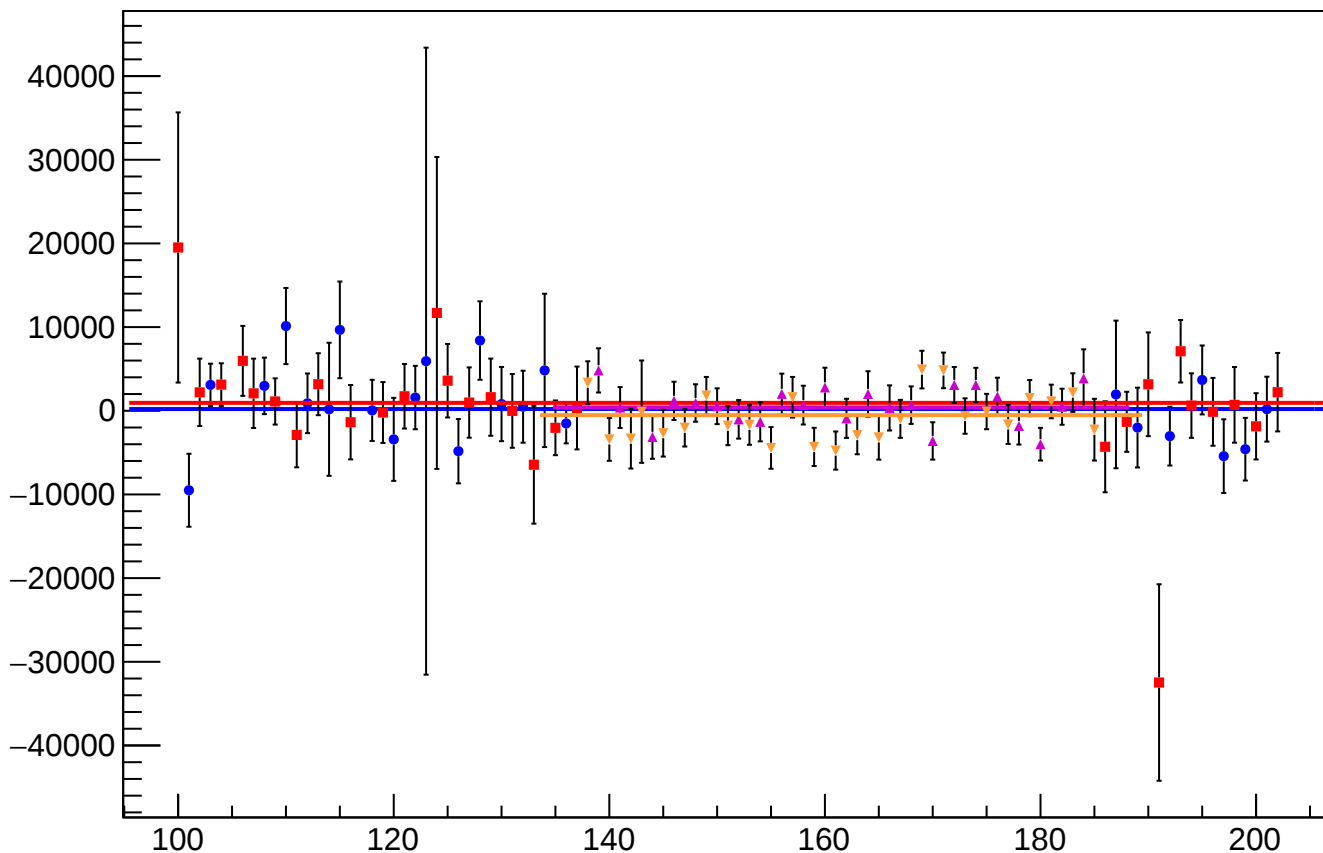
Right: 1762.007 $\pm$ 0.275  $\chi^2/\text{NDF}$ : 7847118.5/52

In: 1075.856 $\pm$ 0.152  $\chi^2/\text{NDF}$ : 7100247.5/46

Out: 1091.005 $\pm$ 0.149  $\chi^2/\text{NDF}$ : 9644843.8/53

All: 1083.549 $\pm$ 0.106  $\chi^2/\text{NDF}$ : 16750150.0/100

# asym\_at2\_dd\_mean vs Slug, Sign Corrected



Right In: 206.835 $\pm$ 831.066  $\chi^2$ /NDF: 25.8/23

Left Out: -517.719 $\pm$ 481.486  $\chi^2$ /NDF:34.0/24

Right Out: 945.572 $\pm$ 774.784  $\chi^2$ /NDF: 21.1/28

Left In: 397.398 $\pm$ 485.048  $\chi^2$ /NDF:21.8/22

Left: -63.533 $\pm$ 341.714  $\chi^2$ /NDF: 57.7/47

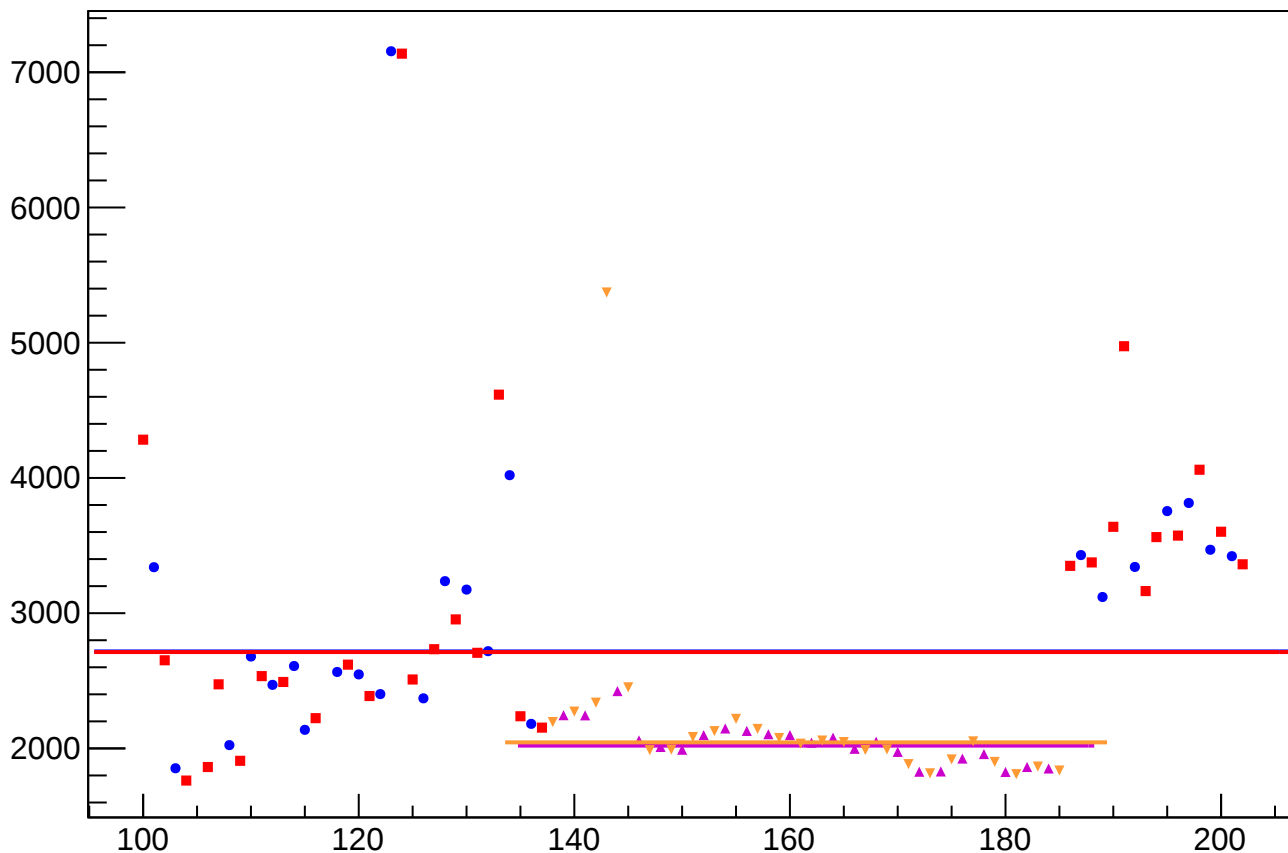
Right: 602.063 $\pm$ 566.708  $\chi^2$ /NDF: 47.3/52

In: 348.978 $\pm$ 418.917  $\chi^2$ /NDF:47.6/46

Out: -110.046 $\pm$ 408.951  $\chi^2$ /NDF:57.7/53

All: 113.941 $\pm$ 292.632  $\chi^2$ /NDF: 105.9/100

# asym\_at2\_dd\_rms vs Slug, Sign Corrected



Right In: 2717.108+/-0.588  $\chi^2/\text{NDF}$ : 1128325.3/23

Left Out: 2044.722+/-0.340  $\chi^2/\text{NDF}$ : 788703.5/24

Right Out: 2712.587+/-0.548  $\chi^2/\text{NDF}$ : 1691419.0/28

Left In: 2020.802+/-0.343  $\chi^2/\text{NDF}$ : 173502.0/22

Left: 2032.850+/-0.242  $\chi^2/\text{NDF}$ : 964655.5/47

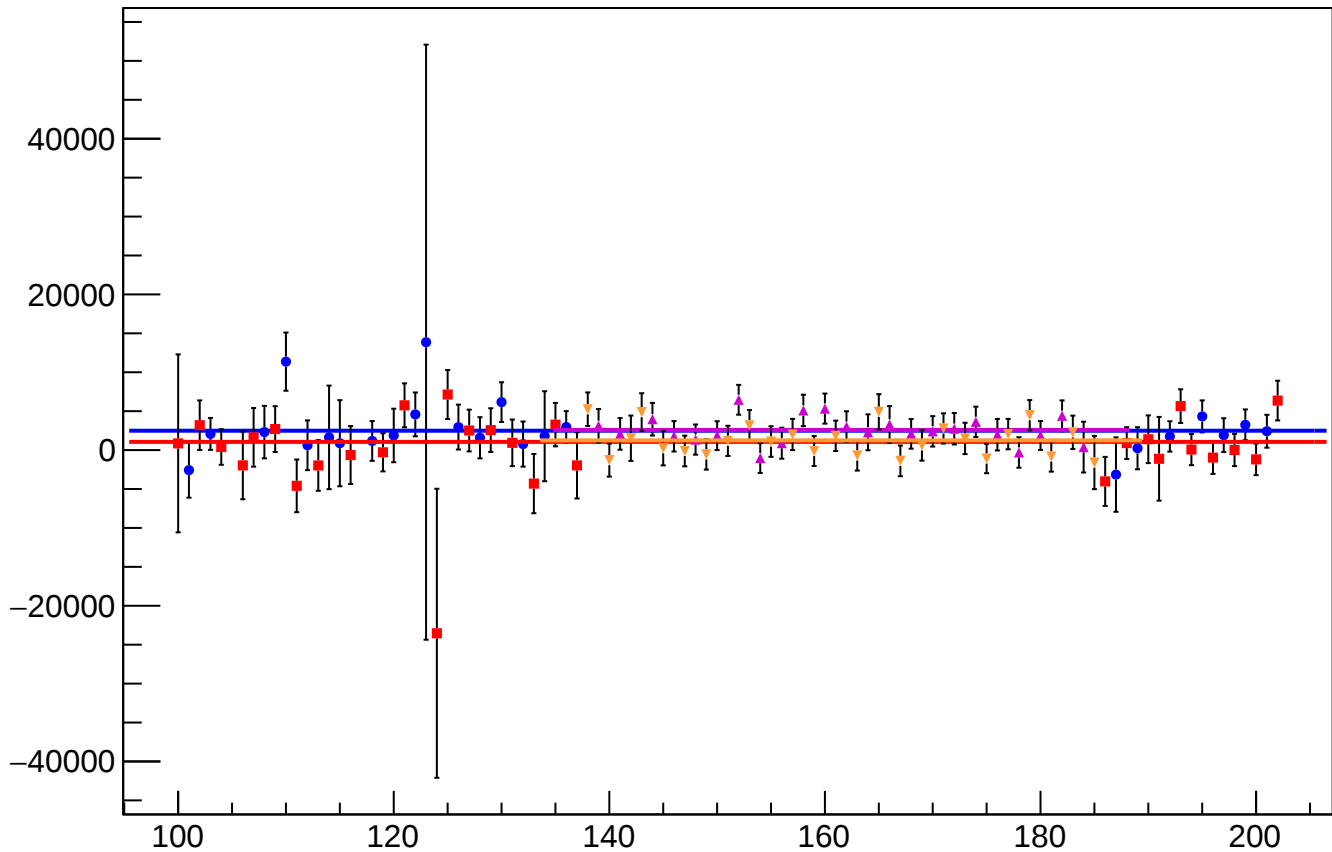
Right: 2714.689+/-0.401  $\chi^2/\text{NDF}$ : 2819776.0/52

In: 2197.726+/-0.296  $\chi^2/\text{NDF}$ : 2349071.3/46

Out: 2230.791+/-0.289  $\chi^2/\text{NDF}$ : 3552193.7/53

All: 2214.656+/-0.207  $\chi^2/\text{NDF}$ : 5907644.9/100

reg\_asym\_atl1r2\_avg\_mean vs Slug, Sign Corrected



Right In: 2490.389+/-561.456  $\chi^2/\text{NDF}$ : 15.0/23

Left Out: 1249.917+/-412.486  $\chi^2/\text{NDF}$ : 23.0/24

Right Out: 1056.834+/-525.524  $\chi^2/\text{NDF}$ : 31.8/28

Left In: 2586.937+/-421.510  $\chi^2/\text{NDF}$ : 17.5/22

Left: 1903.961+/-294.810  $\chi^2/\text{NDF}$ : 45.6/47

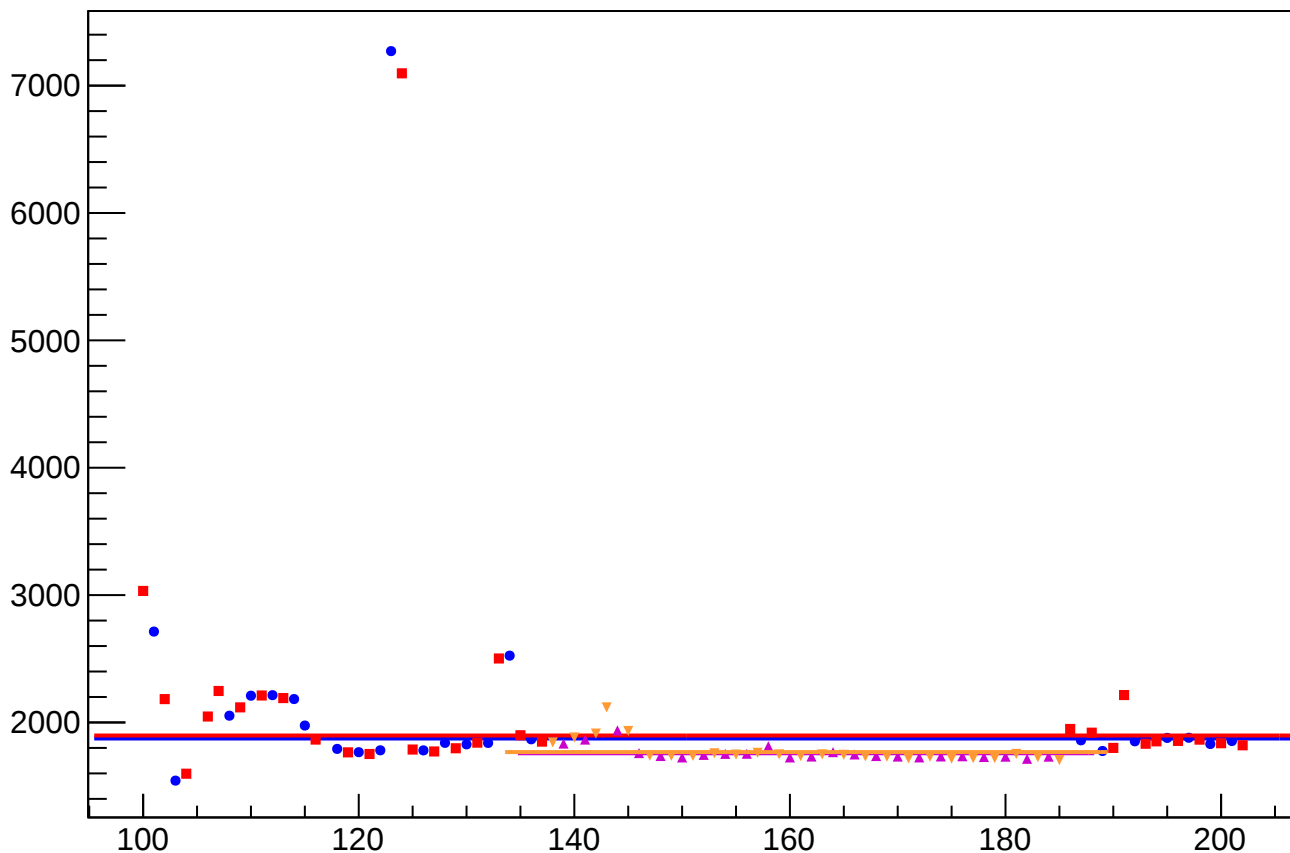
Right: 1726.274+/-383.676  $\chi^2/\text{NDF}$ : 50.2/52

In: 2552.136+/-337.088  $\chi^2/\text{NDF}$ : 32.5/46

Out: 1176.311+/-324.473  $\chi^2/\text{NDF}$ : 54.8/53

All: 1837.998+/-233.769  $\chi^2/\text{NDF}$ : 96.0/100

# reg\_asym\_atl1r2\_avg\_rms vs Slug, Sign Corrected



Right In: 1874.052+/-0.397  $\chi^2/\text{NDF}$ : 293000.9/23

Left Out: 1767.517+/-0.292  $\chi^2/\text{NDF}$ : 77674.7/24

Right Out: 1897.521+/-0.371  $\chi^2/\text{NDF}$ : 381445.0/28

Left In: 1758.076+/-0.298  $\chi^2/\text{NDF}$ : 29806.0/22

Left: 1762.899+/-0.208  $\chi^2/\text{NDF}$ : 107993.2/47

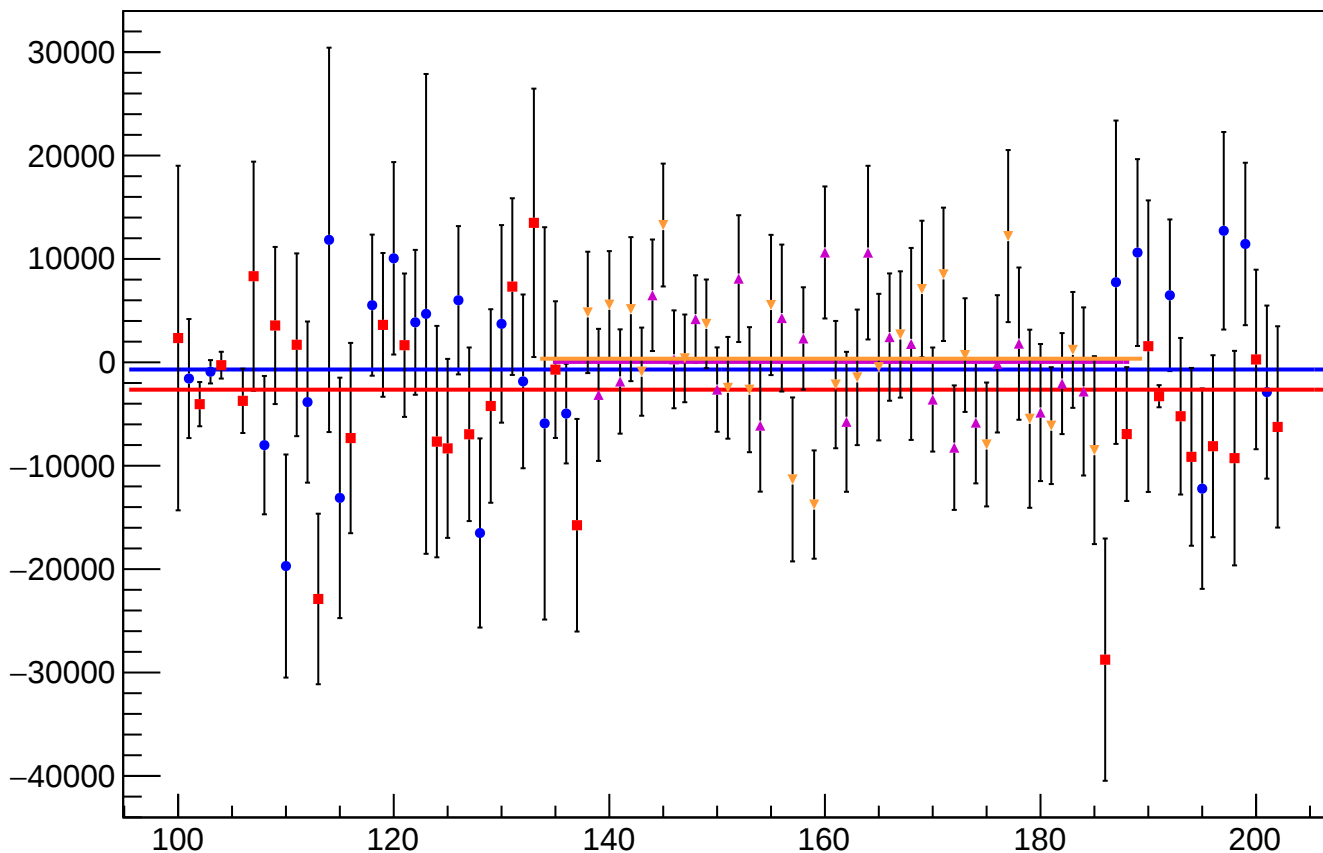
Right: 1886.571+/-0.271  $\chi^2/\text{NDF}$ : 676309.9/52

In: 1799.880+/-0.238  $\chi^2/\text{NDF}$ : 377382.8/46

Out: 1817.125+/-0.229  $\chi^2/\text{NDF}$ : 534930.0/53

All: 1808.834+/-0.165  $\chi^2/\text{NDF}$ : 915030.6/100

asym\_atl1r2\_avg\_correction\_mean vs Slug, Sign Corrected



Right In:  $-693.268 \pm 946.102$   $\chi^2/\text{NDF}$ : 22.4/23

Left Out:  $351.227 \pm 1170.051$   $\chi^2/\text{NDF}$ : 27.8/24

Right Out:  $-2643.995 \pm 687.881$   $\chi^2/\text{NDF}$ : 26.5/28

Left In:  $40.618 \pm 1207.491$   $\chi^2/\text{NDF}$ : 16.0/22

Left:  $200.813 \pm 840.276$   $\chi^2/\text{NDF}$ : 43.9/47

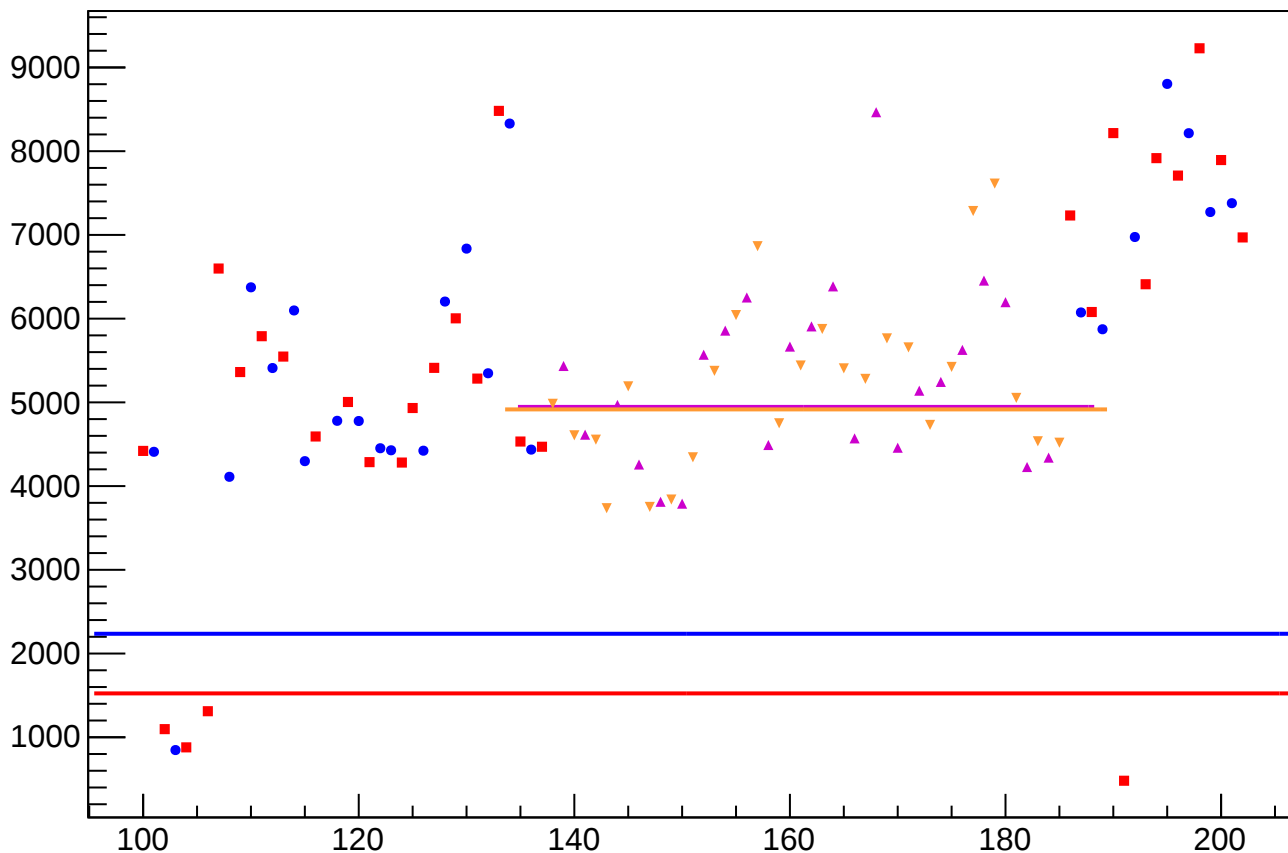
Right:  $-1969.397 \pm 556.368$   $\chi^2/\text{NDF}$ : 51.6/52

In:  $-414.107 \pm 744.728$   $\chi^2/\text{NDF}$ : 38.6/46

Out:  $-1874.654 \pm 592.993$   $\chi^2/\text{NDF}$ : 59.2/53

All:  $-1307.942 \pm 463.896$   $\chi^2/\text{NDF}$ : 100.1/100

asym\_atl1r2\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 2236.144+/-0.669

$\chi^2/\text{NDF}$ : 11372215.5/23

Left: 4930.370+/-0.594

$\chi^2/\text{NDF}$ : 2375402.9/47

Left Out: 4915.865+/-0.827

$\chi^2/\text{NDF}$ : 1186479.7/24

Right: 1770.206+/-0.393

$\chi^2/\text{NDF}$ : 28080919.4/52

Right Out: 1523.898+/-0.486

$\chi^2/\text{NDF}$ : 15967200.7/28

In: 3266.872+/-0.527

$\chi^2/\text{NDF}$ : 18800945.4/46

Out: 2395.145+/-0.419

$\chi^2/\text{NDF}$ : 29644657.7/53

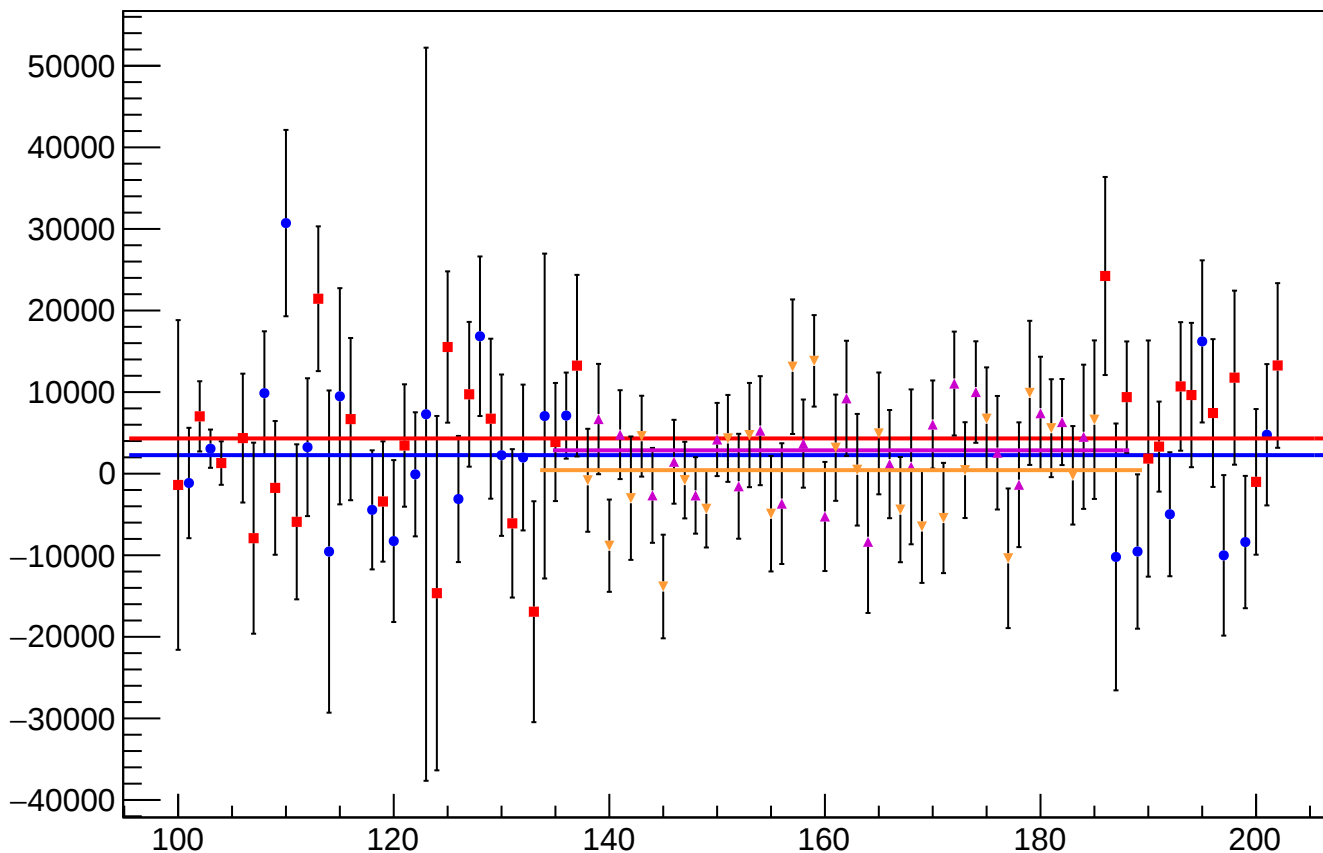
Left In: 4945.817+/-0.854

$\chi^2/\text{NDF}$ : 1188288.6/22

All: 2733.387+/-0.328

$\chi^2/\text{NDF}$ : 50122621.3/1

# asym\_atl1r2\_avg\_mean vs Slug, Sign Corrected



Right In: 2270.947+/-1462.803  $\chi^2/\text{NDF}$ : 22.3/23

Left Out: 430.860+/-1258.273  $\chi^2/\text{NDF}$ : 27.1/24

Right Out: 4319.908+/-1380.403  $\chi^2/\text{NDF}$ : 22.6/28

Left In: 2860.252+/-1292.328  $\chi^2/\text{NDF}$ : 12.9/22

Left: 1613.125+/-901.533  $\chi^2/\text{NDF}$ : 41.8/47

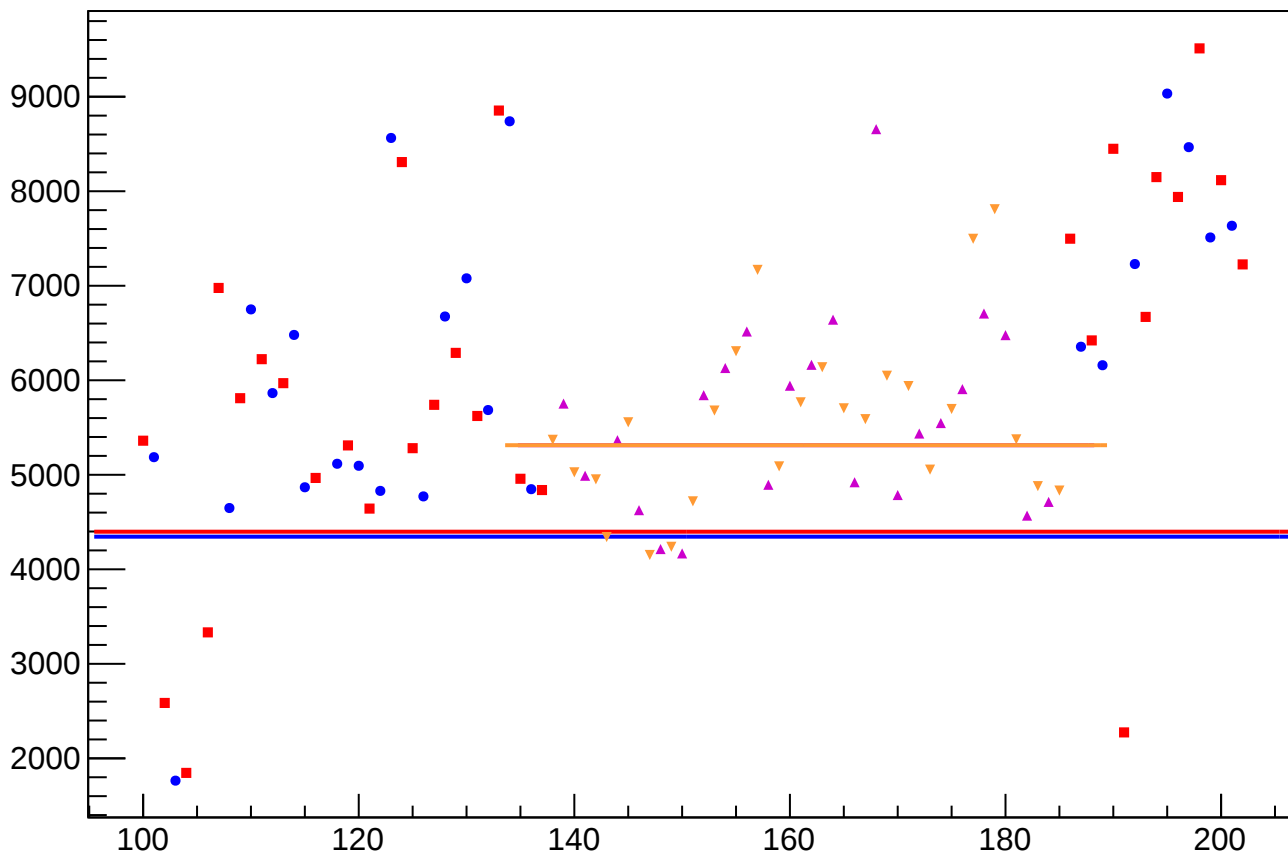
Right: 3354.759+/-1003.959  $\chi^2/\text{NDF}$ : 45.9/52

In: 2601.924+/-968.504  $\chi^2/\text{NDF}$ : 35.3/46

Out: 2195.766+/-929.919  $\chi^2/\text{NDF}$ : 54.0/53

All: 2390.593+/-670.778  $\chi^2/\text{NDF}$ : 89.4/100

# asym\_atl1r2\_avg\_rms vs Slug, Sign Corrected



Right In: 4345.344+/-1.034  $\chi^2/\text{NDF}$ : 4910384.7/23

Left Out: 5313.008+/-0.890  $\chi^2/\text{NDF}$ : 894369.8/24

Right Out: 4398.012+/-0.971  $\chi^2/\text{NDF}$ : 5594666.0/28

Left In: 5312.861+/-0.914  $\chi^2/\text{NDF}$ : 957400.7/22

Left: 5312.937+/-0.637  $\chi^2/\text{NDF}$ : 1851770.5/47

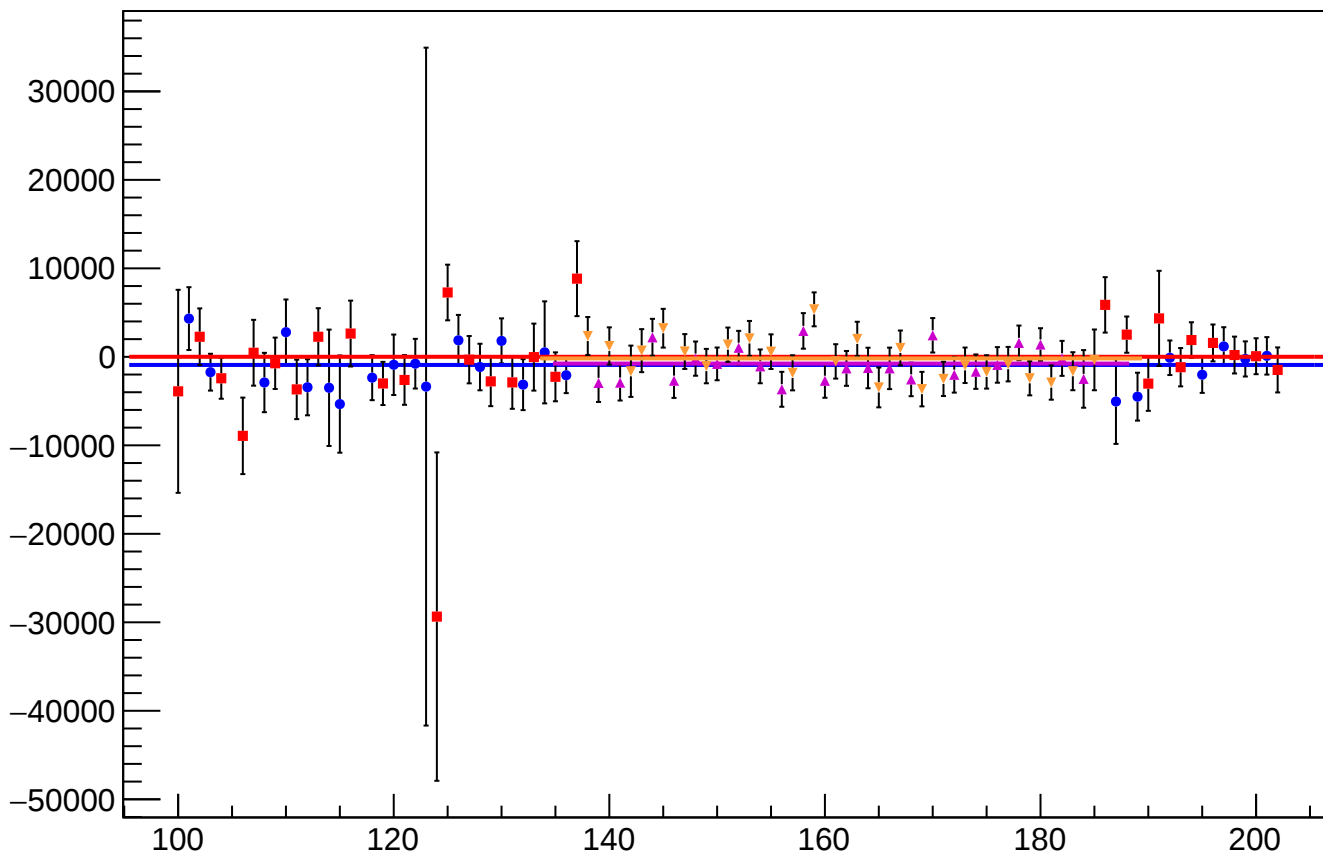
Right: 4373.332+/-0.708  $\chi^2/\text{NDF}$ : 10506428.5/52

In: 4888.739+/-0.685  $\chi^2/\text{NDF}$ : 6359183.6/46

Out: 4895.532+/-0.656  $\chi^2/\text{NDF}$ : 6971574.0/53

All: 4892.281+/-0.474  $\chi^2/\text{NDF}$ : 13330808.8/100

# reg\_asym\_atl1r2\_dd\_mean vs Slug, Sign Corrected



Right In:  $-915.219 \pm 560.599$   $\chi^2/\text{NDF}: 12.8/23$

Left Out:  $-179.794 \pm 410.976$   $\chi^2/\text{NDF}: 29.3/24$

Right Out:  $6.666 \pm 525.014$   $\chi^2/\text{NDF}: 34.2/28$

Left In:  $-759.753 \pm 419.905$   $\chi^2/\text{NDF}: 20.3/22$

Left:  $-463.542 \pm 293.710$   $\chi^2/\text{NDF}: 50.5/47$

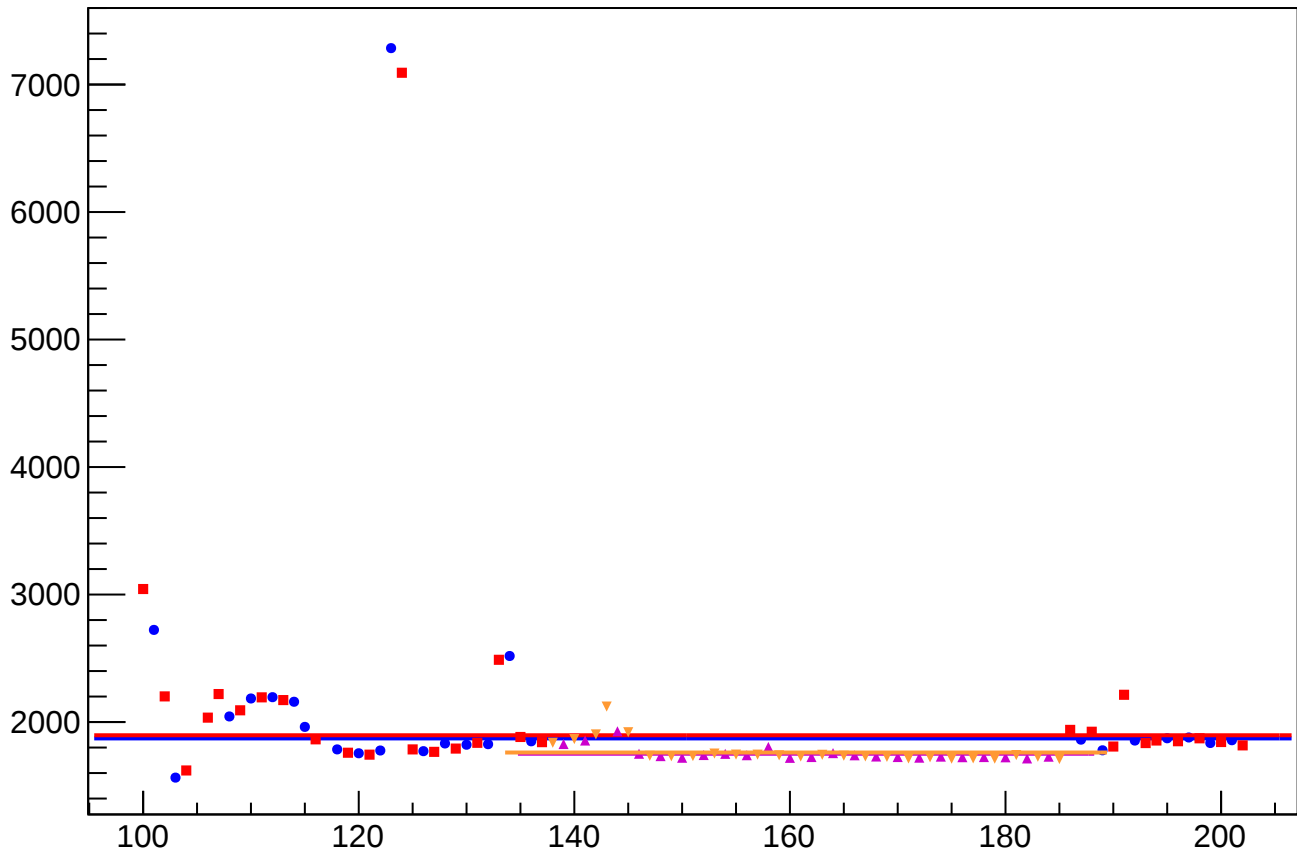
Right:  $-424.091 \pm 383.204$   $\chi^2/\text{NDF}: 48.4/52$

In:  $-815.628 \pm 336.080$   $\chi^2/\text{NDF}: 33.1/46$

Out:  $-108.949 \pm 323.617$   $\chi^2/\text{NDF}: 63.5/53$

All:  $-448.943 \pm 233.113$   $\chi^2/\text{NDF}: 98.9/100$

# reg\_asym\_atl1r2\_dd\_rms vs Slug, Sign Corrected



Right In: 1871.604+/-0.396  $\chi^2/\text{NDF}$ : 283325.3/23

Left Out: 1761.091+/-0.291  $\chi^2/\text{NDF}$ : 77468.5/24

Right Out: 1896.374+/-0.371  $\chi^2/\text{NDF}$ : 368902.2/28

Left In: 1751.418+/-0.297  $\chi^2/\text{NDF}$ : 28578.7/22

Left: 1756.358+/-0.208  $\chi^2/\text{NDF}$ : 106589.3/47

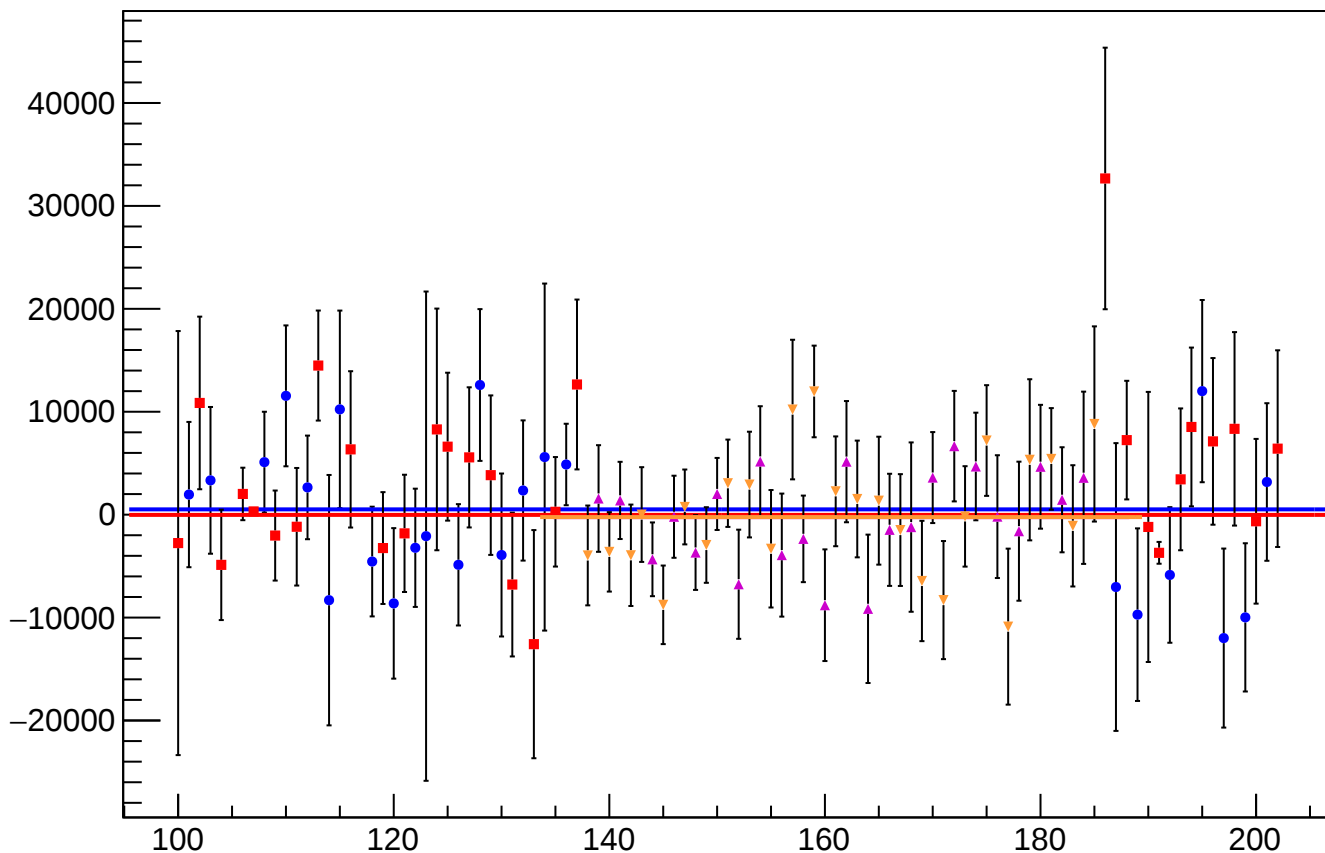
Right: 1884.810+/-0.271  $\chi^2/\text{NDF}$ : 654309.3/52

In: 1794.613+/-0.238  $\chi^2/\text{NDF}$ : 370790.7/46

Out: 1812.542+/-0.229  $\chi^2/\text{NDF}$ : 528790.8/53

All: 1803.919+/-0.165  $\chi^2/\text{NDF}$ : 902535.7/100

asym\_atl1r2\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: 513.913 $\pm$ 1410.560  $\chi^2$ /NDF: 22.2/23

Left Out: -235.806 $\pm$ 1005.144  $\chi^2$ /NDF:28.9/24

Right Out: -21.913 $\pm$ 412.386  $\chi^2$ /NDF: 43.1/28

Left In: -239.224 $\pm$ 1028.883  $\chi^2$ /NDF:15.3/22

Left: -237.475 $\pm$ 718.990  $\chi^2$ /NDF: 44.2/47

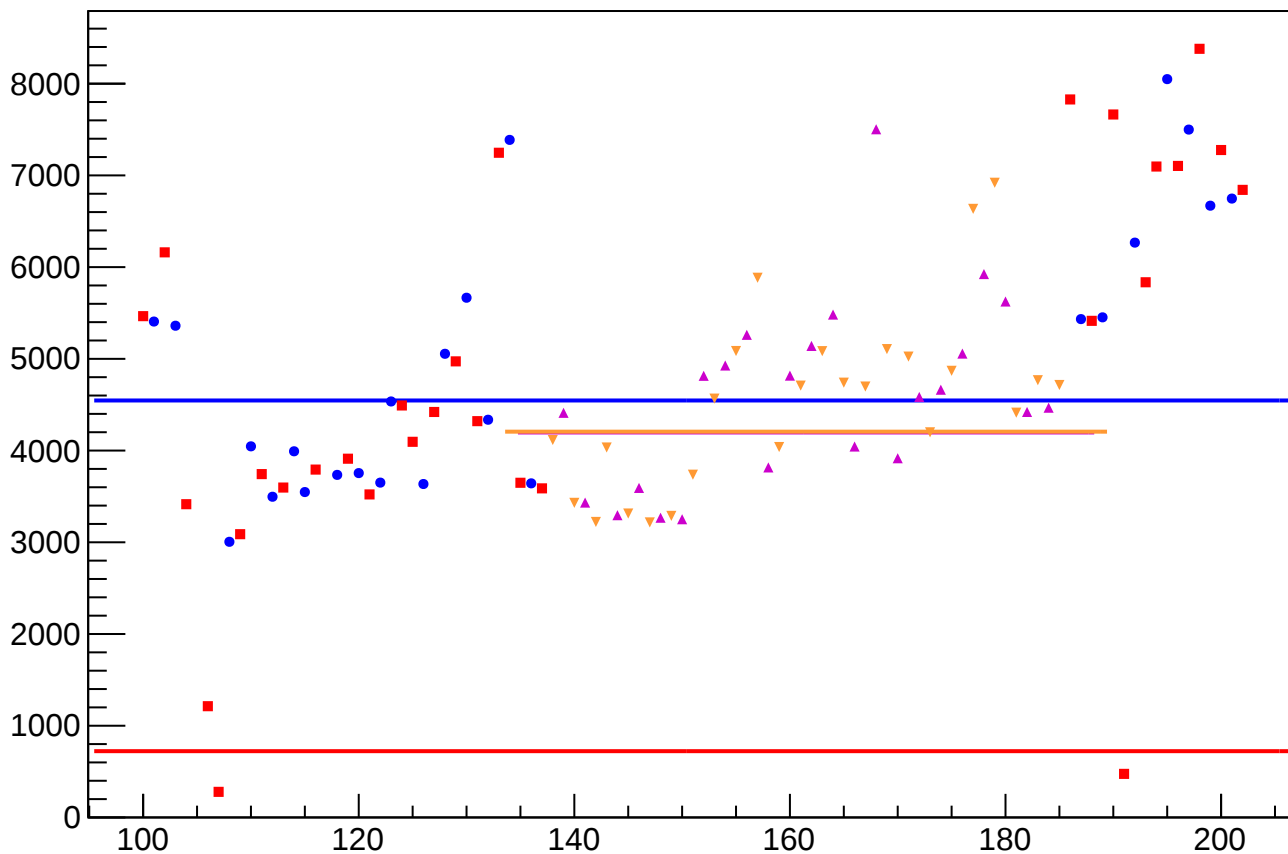
Right: 20.280 $\pm$ 395.818  $\chi^2$ /NDF: 65.5/52

In: 22.324 $\pm$ 831.247  $\chi^2$ /NDF:37.7/46

Out: -52.729 $\pm$ 381.524  $\chi^2$ /NDF:72.0/53

All: -39.669 $\pm$ 346.746  $\chi^2$ /NDF: 109.7/100

asym\_atl1r2\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 4546.099+/-0.997  $\chi^2/\text{NDF}$ : 1806963.8/23

Left Out: 4206.076+/-0.711  $\chi^2/\text{NDF}$ : 1442269.3/24

Right Out: 722.665+/-0.292  $\chi^2/\text{NDF}$ : 2016680.8/28

Left In: 4197.267+/-0.728  $\chi^2/\text{NDF}$ : 1471012.9/22

Left: 4201.775+/-0.508  $\chi^2/\text{NDF}$ : 2913357.2/47

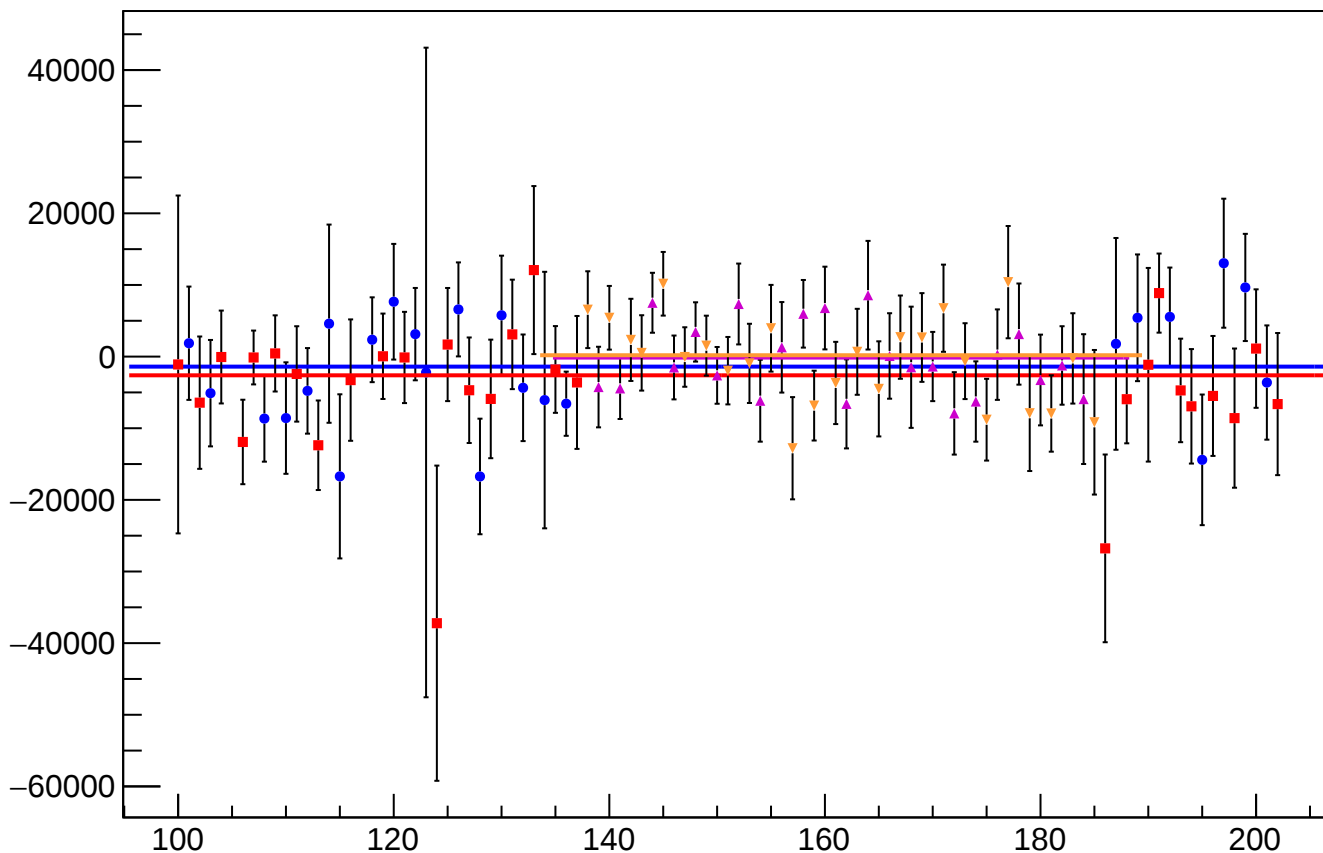
Right: 1023.730+/-0.280  $\chi^2/\text{NDF}$ : 35511047.6/52

In: 4318.409+/-0.588  $\chi^2/\text{NDF}$ : 3357814.0/46

Out: 1224.537+/-0.270  $\chi^2/\text{NDF}$ : 42168758.4/53

All: 1762.886+/-0.245  $\chi^2/\text{NDF}$ : 68411615.3/100

# asym\_atl1r2\_dd\_mean vs Slug, Sign Corrected



Right In: -1399.011 $\pm$ 1565.481  $\chi^2$ /NDF: 23.1/23

Left Out: 189.721 $\pm$ 1106.851  $\chi^2$ /NDF:25.0/24

Right Out: -2612.324 $\pm$ 1340.446  $\chi^2$ /NDF: 20.8/28

Left In: -137.477 $\pm$ 1129.656  $\chi^2$ /NDF:18.6/22

Left: 29.458 $\pm$ 790.601  $\chi^2$ /NDF: 43.6/47

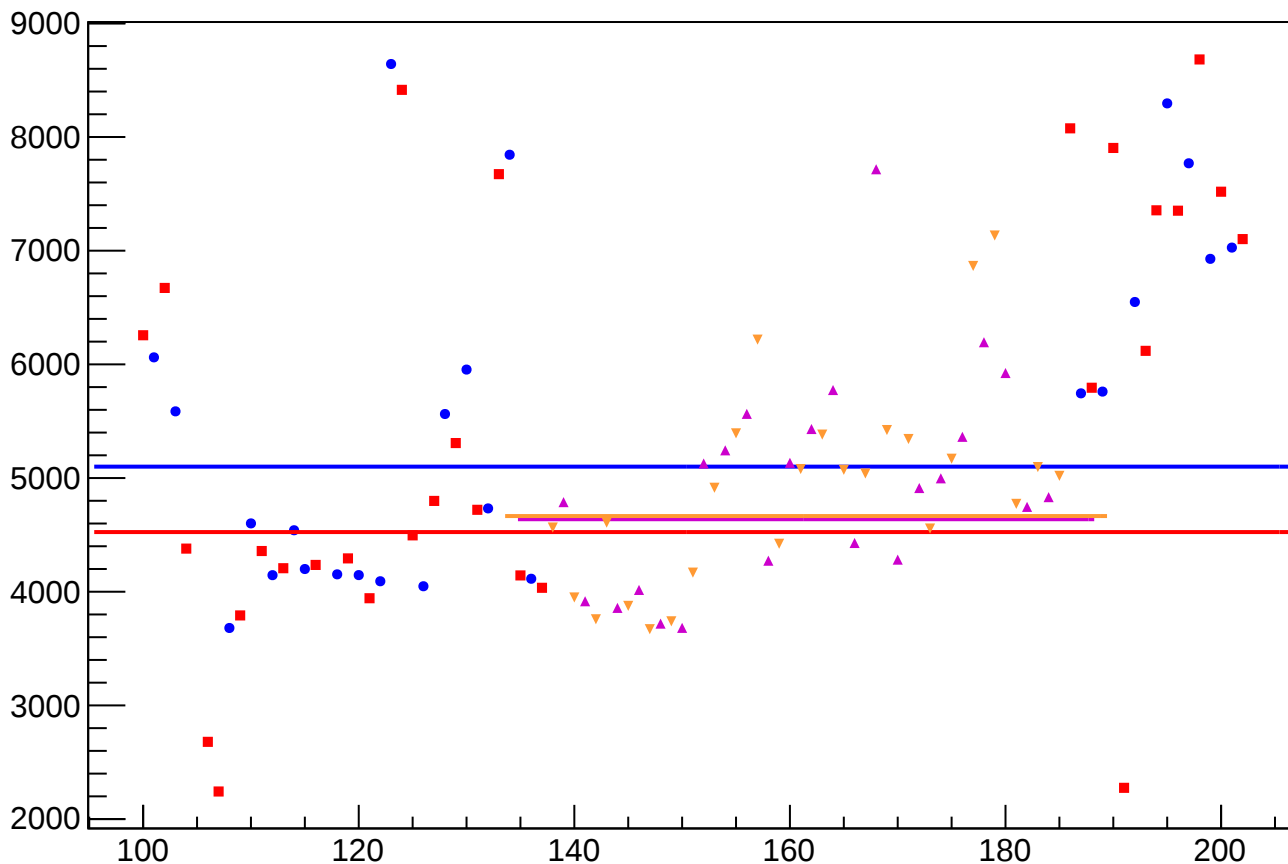
Right: -2099.066 $\pm$ 1018.190  $\chi^2$ /NDF: 44.3/52

In: -569.442 $\pm$ 916.058  $\chi^2$ /NDF:42.1/46

Out: -946.261 $\pm$ 853.488  $\chi^2$ /NDF:48.4/53

All: -771.159 $\pm$ 624.456  $\chi^2$ /NDF: 90.6/100

# asym\_atl1r2\_dd\_rms vs Slug, Sign Corrected



Right In: 5100.340+/-1.107  $\chi^2/\text{NDF}$ : 1353503.9/23

Left Out: 4665.620+/-0.783  $\chi^2/\text{NDF}$ : 1017235.0/24

Right Out: 4524.788+/-0.943  $\chi^2/\text{NDF}$ : 3426415.1/28

Left In: 4637.777+/-0.799  $\chi^2/\text{NDF}$ : 1065217.2/22

Left: 4651.983+/-0.559  $\chi^2/\text{NDF}$ : 2083072.1/47

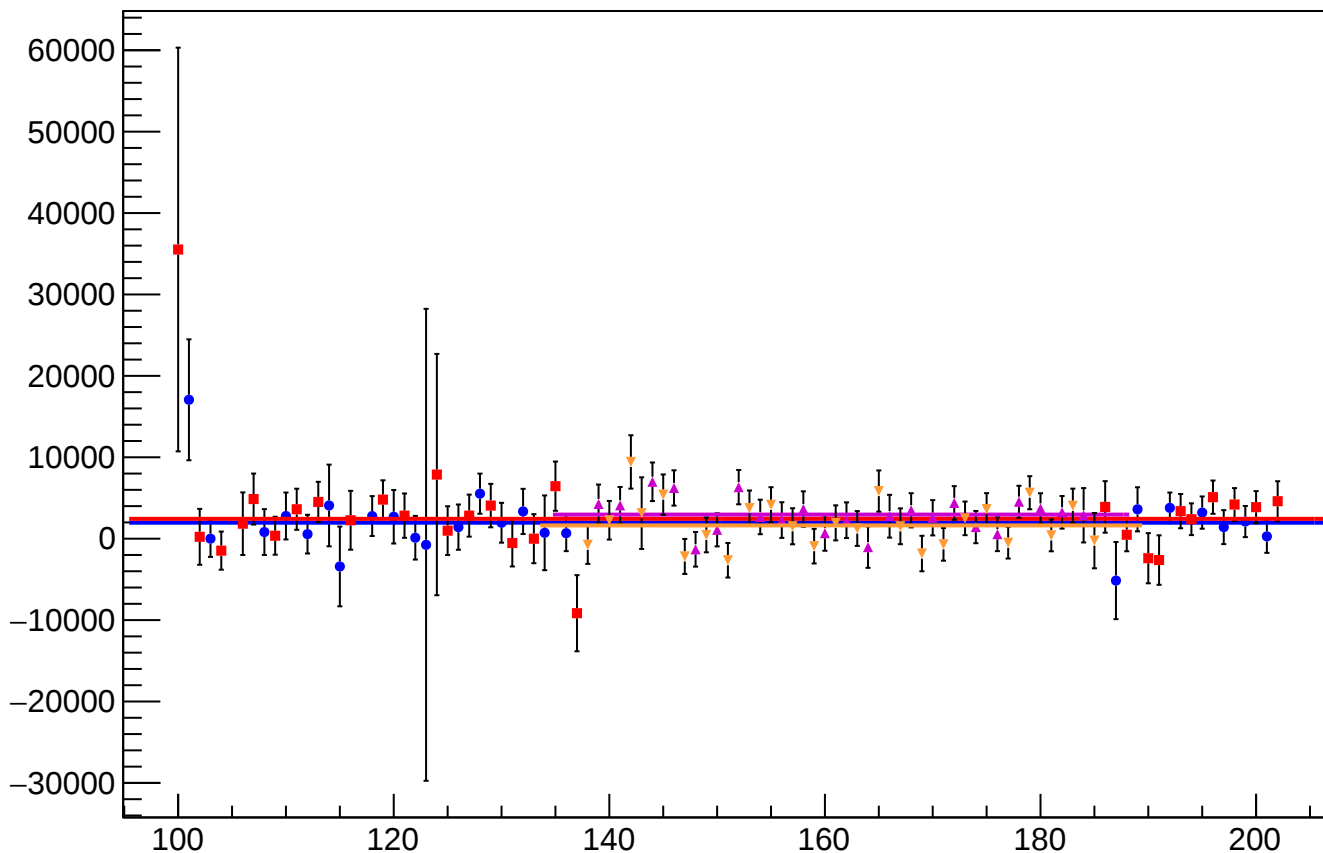
Right: 4766.953+/-0.718  $\chi^2/\text{NDF}$ : 4936510.4/52

In: 4796.165+/-0.648  $\chi^2/\text{NDF}$ : 2533544.0/46

Out: 4608.209+/-0.602  $\chi^2/\text{NDF}$ : 4456849.4/53

All: 4695.372+/-0.441  $\chi^2/\text{NDF}$ : 7035544.5/100

reg\_asym\_atr1l2\_avg\_mean vs Slug, Sign Corrected



Right In: 1964.809+/-539.987  $\chi^2/\text{NDF}$ : 15.0/23

Left Out: 1630.035+/-447.063  $\chi^2/\text{NDF}$ : 35.4/24

Right Out: 2440.587+/-495.159  $\chi^2/\text{NDF}$ : 29.1/28

Left In: 2958.620+/-453.688  $\chi^2/\text{NDF}$ : 20.4/22

Left: 2284.557+/-318.438  $\chi^2/\text{NDF}$ : 60.2/47

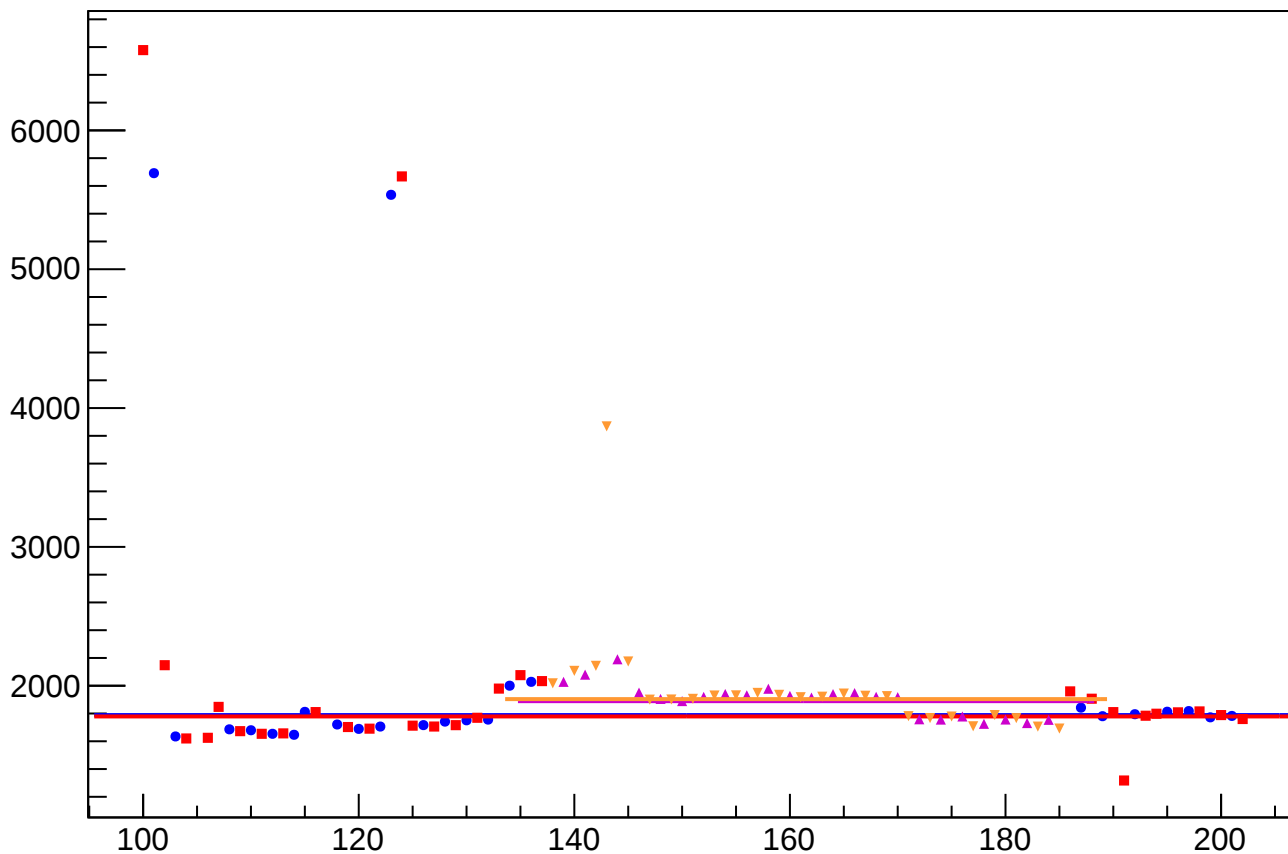
Right: 2223.263+/-364.951  $\chi^2/\text{NDF}$ : 44.5/52

In: 2547.379+/-347.360  $\chi^2/\text{NDF}$ : 37.4/46

Out: 1994.044+/-331.826  $\chi^2/\text{NDF}$ : 66.0/53

All: 2258.063+/-239.940  $\chi^2/\text{NDF}$ : 104.7/100

reg\_asym\_atr1l2\_avg\_rms vs Slug, Sign Corrected



Right In: 1788.579+/-0.382  $\chi^2/\text{NDF}$ : 645870.6/23

Left Out: 1903.618+/-0.316  $\chi^2/\text{NDF}$ : 541575.7/24

Right Out: 1778.842+/-0.349  $\chi^2/\text{NDF}$ : 368717.3/28

Left In: 1888.927+/-0.321  $\chi^2/\text{NDF}$ : 126417.2/22

Left: 1896.381+/-0.225  $\chi^2/\text{NDF}$ : 669056.9/47

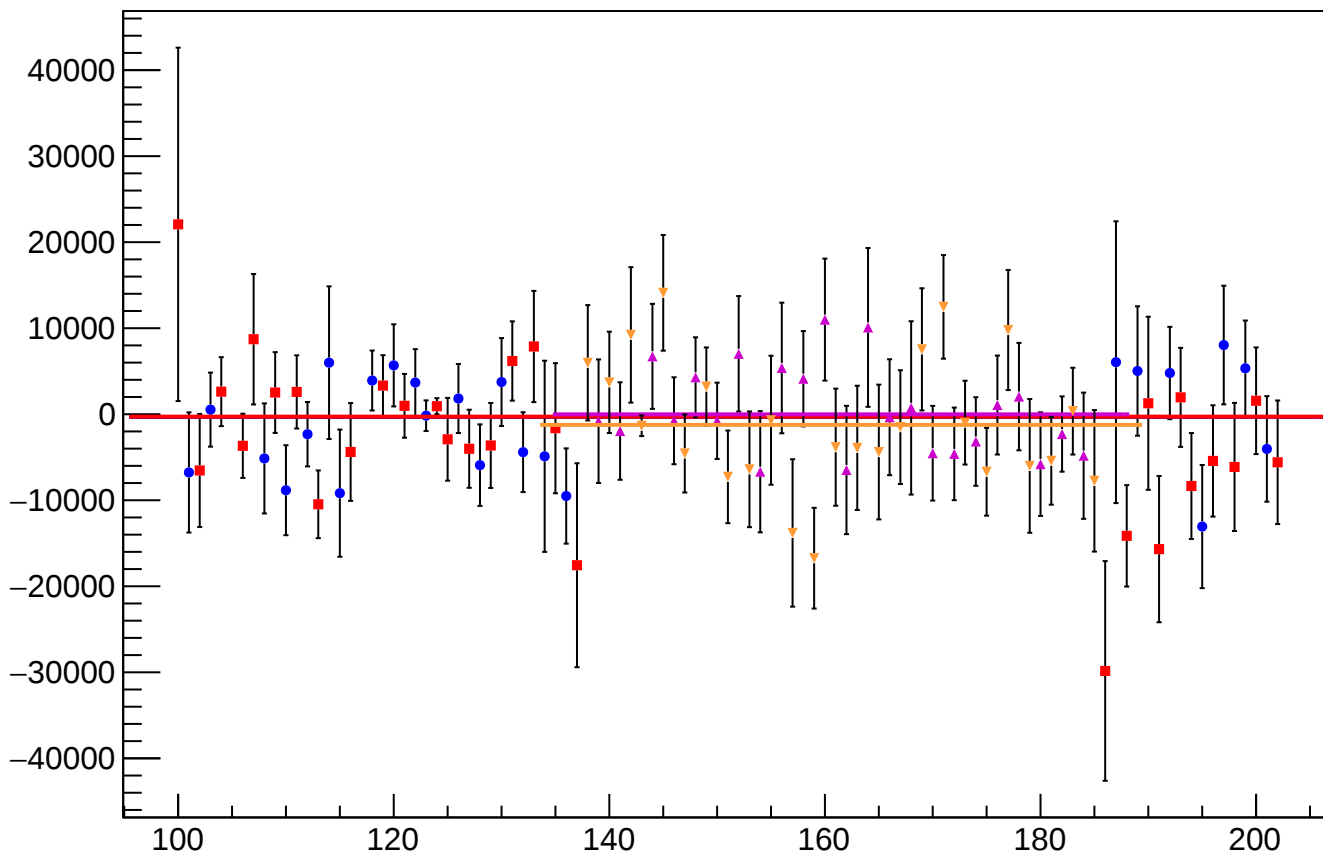
Right: 1783.272+/-0.258  $\chi^2/\text{NDF}$ : 1014942.3/52

In: 1847.403+/-0.246  $\chi^2/\text{NDF}$ : 812775.8/46

Out: 1847.360+/-0.234  $\chi^2/\text{NDF}$ : 980537.3/53

All: 1847.380+/-0.170  $\chi^2/\text{NDF}$ : 1793313.1/100

asym\_atr1l2\_avg\_correction\_mean vs Slug, Sign Corrected



Right In:  $-314.664 \pm 939.025$   $\chi^2/\text{NDF}: 24.1/23$

Left Out:  $-1239.833 \pm 865.201$   $\chi^2/\text{NDF}: 33.9/24$

Right Out:  $-287.073 \pm 689.996$   $\chi^2/\text{NDF}: 40.8/28$

Left In:  $-15.863 \pm 1243.317$   $\chi^2/\text{NDF}: 13.2/22$

Left:  $-840.501 \pm 710.172$   $\chi^2/\text{NDF}: 47.8/47$

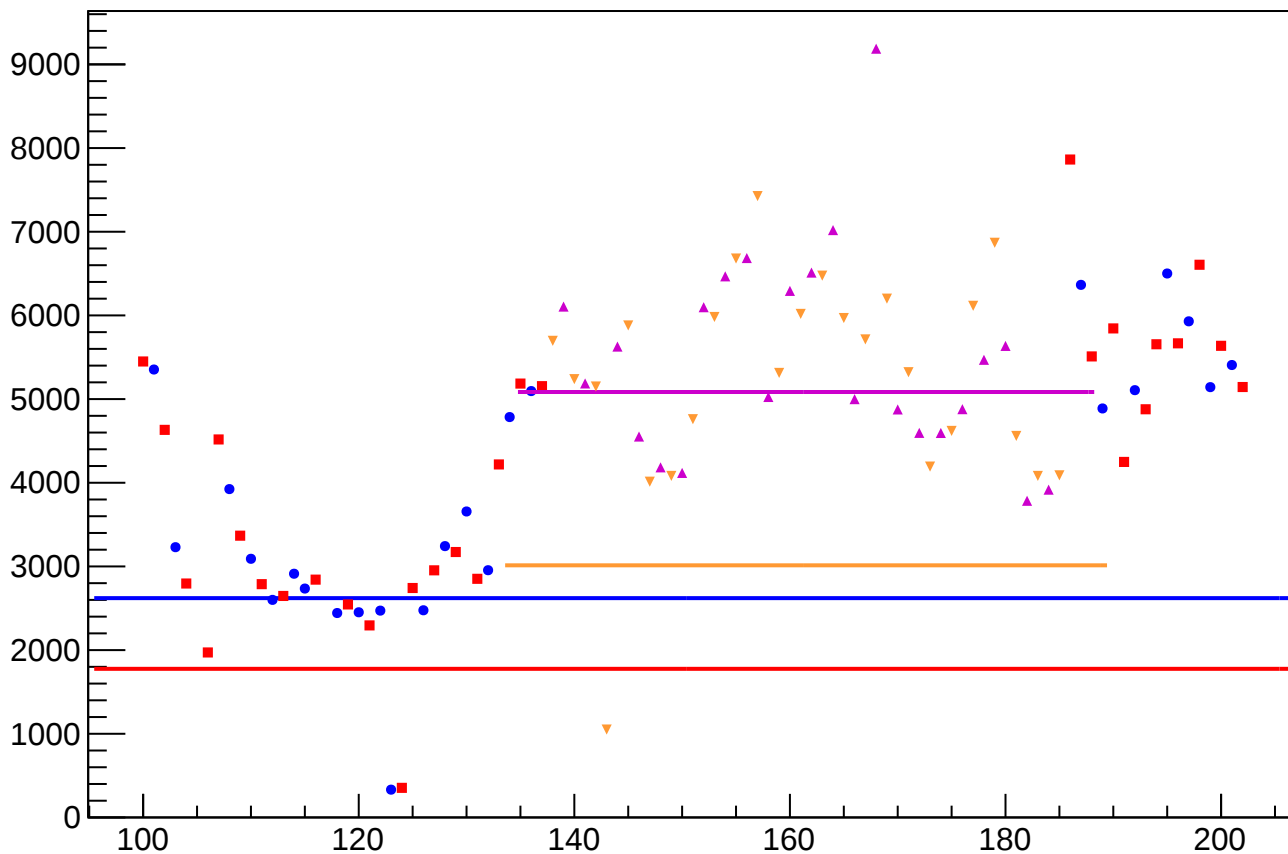
Right:  $-296.747 \pm 556.027$   $\chi^2/\text{NDF}: 64.9/52$

In:  $-206.132 \pm 749.325$   $\chi^2/\text{NDF}: 37.4/46$

Out:  $-657.462 \pm 539.454$   $\chi^2/\text{NDF}: 75.5/53$

All:  $-503.395 \pm 437.802$   $\chi^2/\text{NDF}: 113.1/100$

asym\_atr1l2\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 2621.182 $\pm$ 0.664

$\chi^2$ /NDF: 6965172.0/23

Left: 3689.075 $\pm$ 0.502

$\chi^2$ /NDF: 17314385.8/47

Left Out: 3013.268 $\pm$ 0.612

$\chi^2$ /NDF: 12270753.9/24

Right: 2072.525 $\pm$ 0.393

$\chi^2$ /NDF: 21372952.2/52

Right Out: 1776.288 $\pm$ 0.488

$\chi^2$ /NDF: 13356353.6/28

In: 3515.974 $\pm$ 0.530

$\chi^2$ /NDF: 13268458.4/46

Out: 2257.169 $\pm$ 0.381

$\chi^2$ /NDF: 28125941.0/53

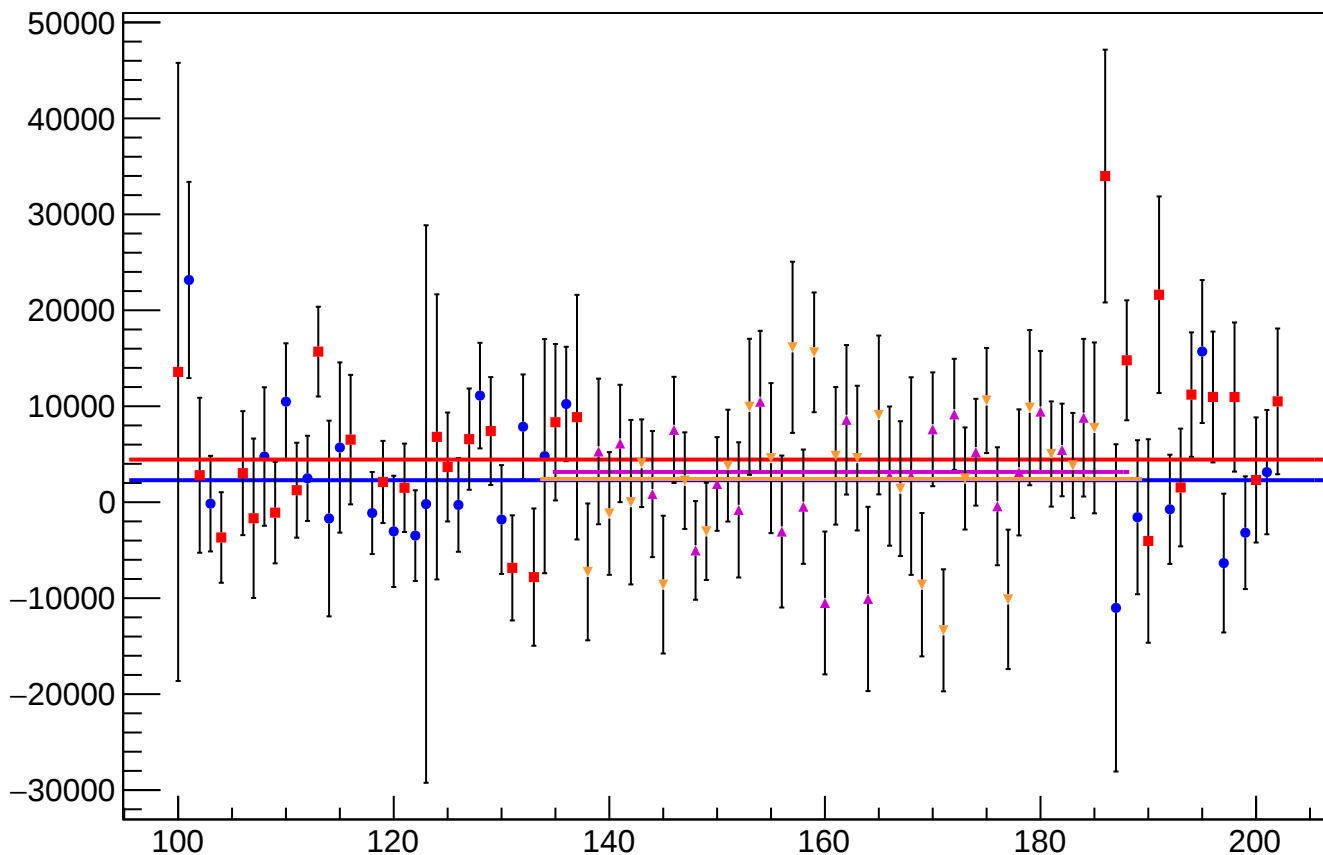
Left In: 5084.645 $\pm$ 0.879

$\chi^2$ /NDF: 1303587.7/22

All: 2686.878 $\pm$ 0.310

$\chi^2$ /NDF: 45111919.7/100

# asym\_atr1l2\_avg\_mean vs Slug, Sign Corrected



Right In: 2291.705+/-1276.172  $\chi^2/\text{NDF}$ : 22.5/23

Left Out: 2417.210+/-1286.482  $\chi^2/\text{NDF}$ : 29.9/24

Right Out: 4443.142+/-1193.562  $\chi^2/\text{NDF}$ : 34.7/28

Left In: 3153.449+/-1337.378  $\chi^2/\text{NDF}$ : 15.5/22

Left: 2771.054+/-927.151  $\chi^2/\text{NDF}$ : 45.5/47

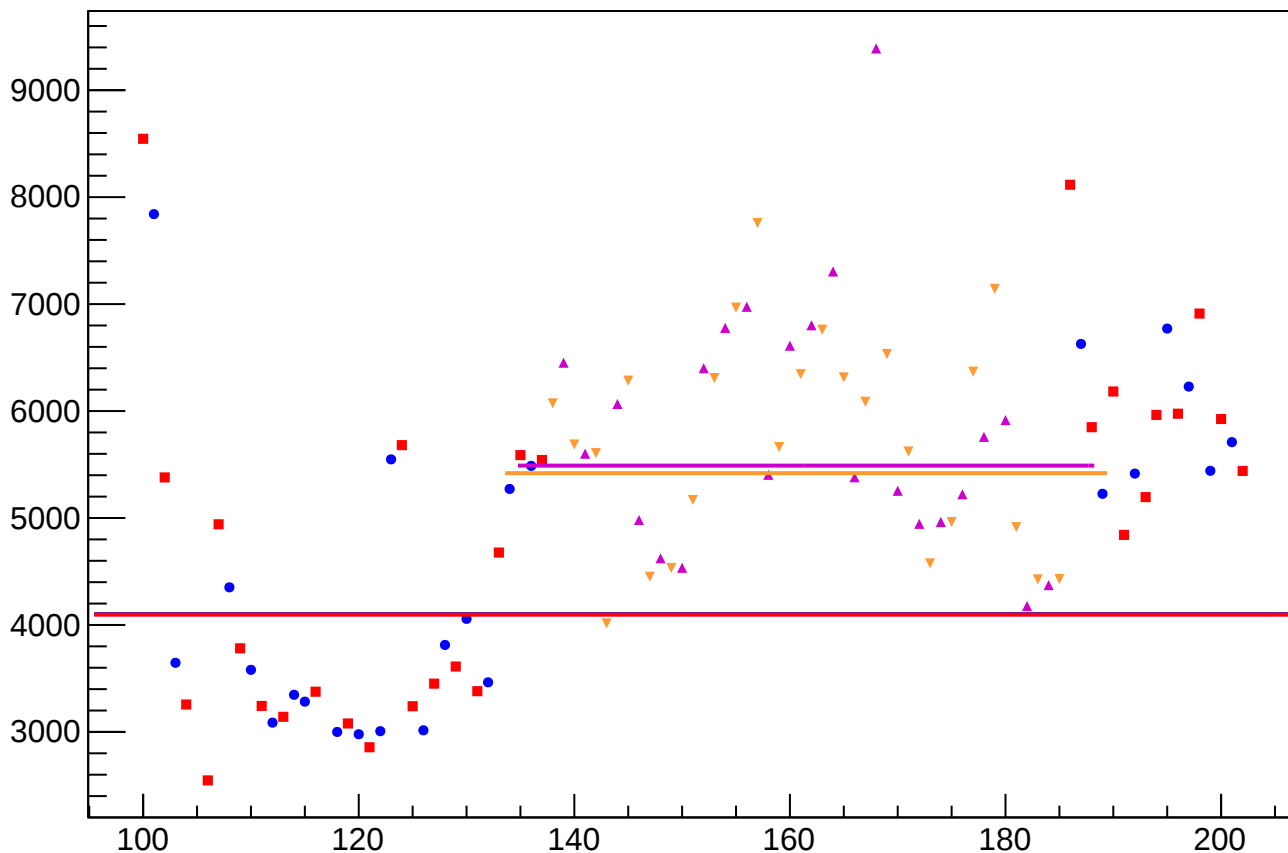
Right: 3439.307+/-871.718  $\chi^2/\text{NDF}$ : 58.7/52

In: 2702.407+/-923.270  $\chi^2/\text{NDF}$ : 38.2/46

Out: 3505.975+/-874.983  $\chi^2/\text{NDF}$ : 65.9/53

All: 3125.753+/-635.091  $\chi^2/\text{NDF}$ : 104.5/100

# asym\_atr1l2\_avg\_rms vs Slug, Sign Corrected



Right In: 4100.897 $\pm$ 0.902  $\chi^2$ /NDF: 1859461.7/23

Left Out: 5419.305 $\pm$ 0.910  $\chi^2$ /NDF: 1109972.1/24

Right Out: 4096.860 $\pm$ 0.835  $\chi^2$ /NDF: 2339220.7/28

Left In: 5489.885 $\pm$ 0.946  $\chi^2$ /NDF: 1064353.3/22

Left: 5453.227 $\pm$ 0.656  $\chi^2$ /NDF: 2177218.7/47

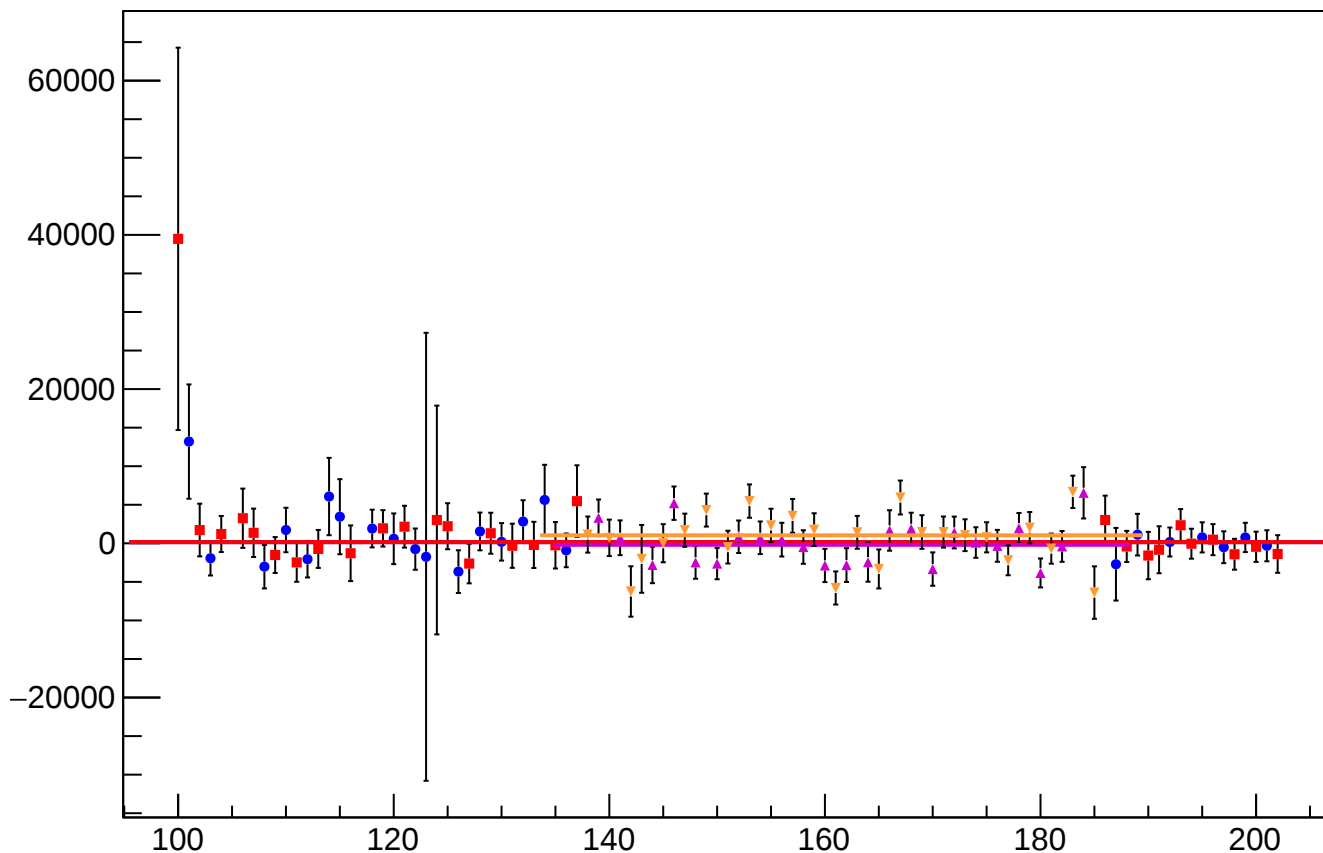
Right: 4098.723 $\pm$ 0.613  $\chi^2$ /NDF: 4198693.1/52

In: 4762.878 $\pm$ 0.653  $\chi^2$ /NDF: 4052984.3/46

Out: 4701.693 $\pm$ 0.615  $\chi^2$ /NDF: 4595998.2/53

All: 4730.470 $\pm$ 0.448  $\chi^2$ /NDF: 8653634.7/100

# reg\_asym\_atr1l2\_dd\_mean vs Slug, Sign Corrected



Right In: 151.539+/-537.395  $\chi^2/\text{NDF}$ : 14.6/23

Left Out: 1041.262+/-446.249  $\chi^2/\text{NDF}$ :48.6/24

Right Out: 155.279+/-492.963  $\chi^2/\text{NDF}$ : 13.6/28

Left In: -191.966+/-453.055  $\chi^2/\text{NDF}$ :30.0/22

Left: 433.980+/-317.925  $\chi^2/\text{NDF}$ : 82.3/47

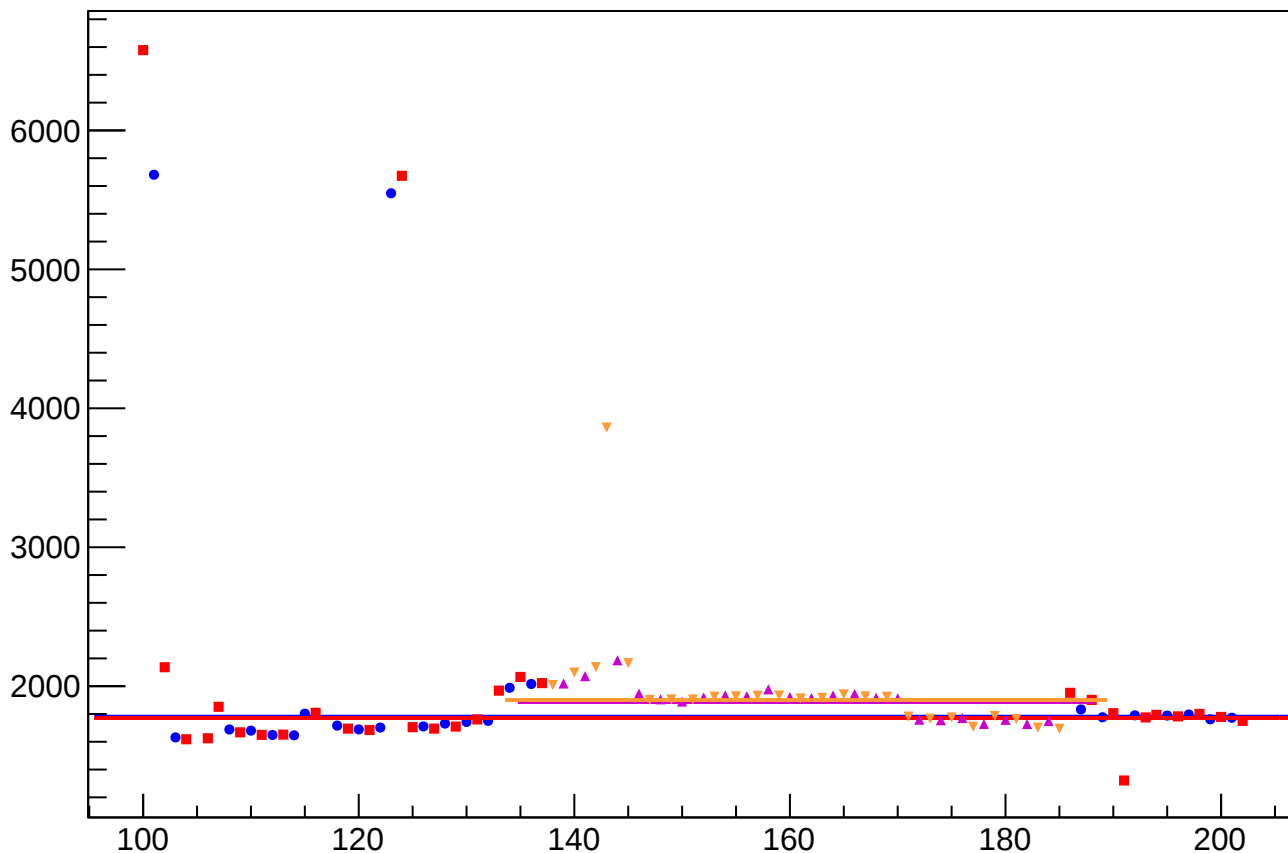
Right: 153.570+/-363.272  $\chi^2/\text{NDF}$ : 28.2/52

In: -49.253+/-346.384  $\chi^2/\text{NDF}$ :44.8/46

Out: 642.228+/-330.831  $\chi^2/\text{NDF}$ :63.9/53

All: 312.359+/-239.242  $\chi^2/\text{NDF}$ : 110.8/100

# reg\_asym\_atr1l2\_dd\_rms vs Slug, Sign Corrected



Right In: 1780.102+/-0.380  $\chi^2/\text{NDF}$ : 643684.1/23

Left Out: 1900.295+/-0.316  $\chi^2/\text{NDF}$ : 537892.5/24

Right Out: 1771.182+/-0.347  $\chi^2/\text{NDF}$ : 365407.8/28

Left In: 1886.378+/-0.320  $\chi^2/\text{NDF}$ : 123520.6/22

Left: 1893.441+/-0.225  $\chi^2/\text{NDF}$ : 662371.1/47

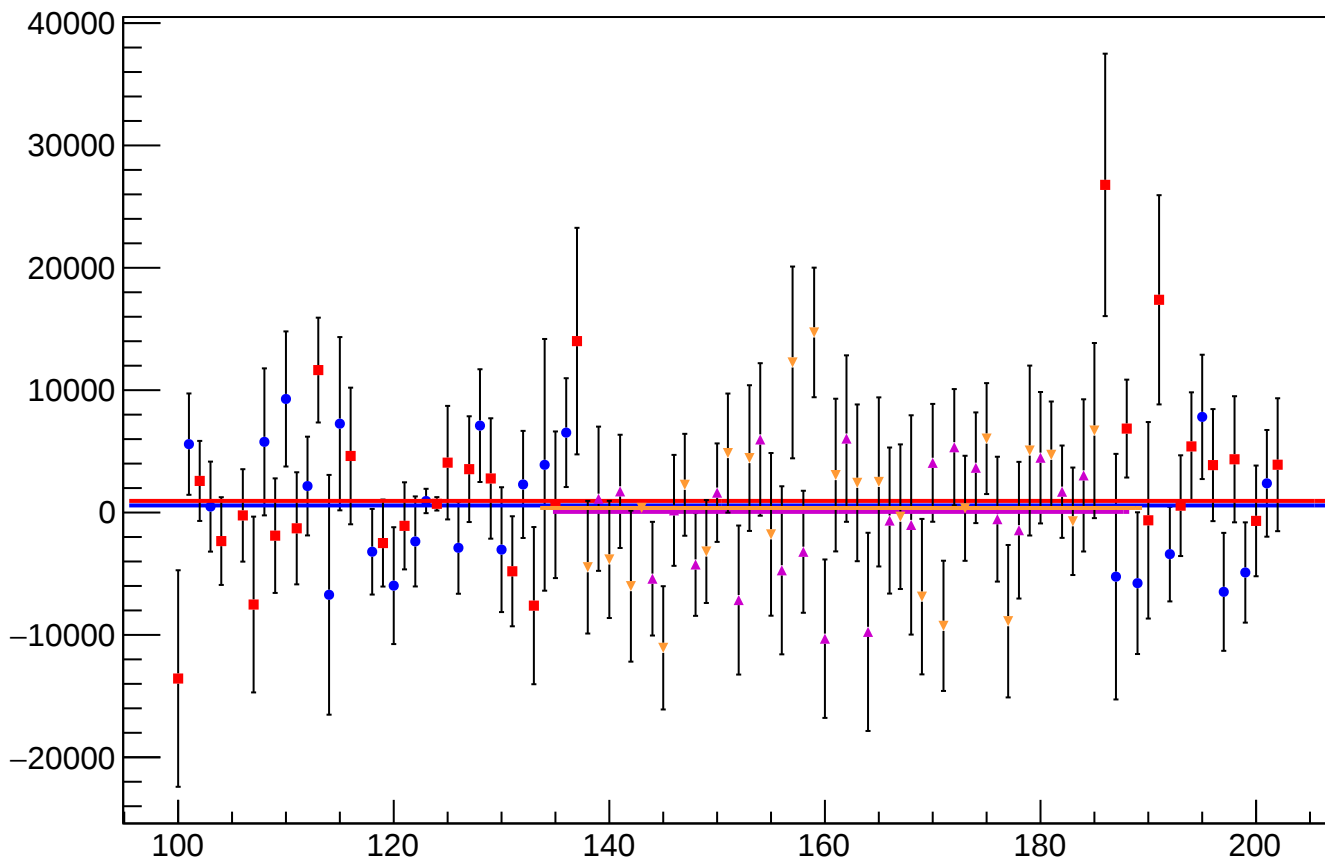
Right: 1775.242+/-0.256  $\chi^2/\text{NDF}$ : 1009392.1/52

In: 1842.224+/-0.245  $\chi^2/\text{NDF}$ : 812927.0/46

Out: 1841.916+/-0.234  $\chi^2/\text{NDF}$ : 979001.2/53

All: 1842.062+/-0.169  $\chi^2/\text{NDF}$ : 1791929.0/100

asym\_atr1l2\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: 579.805+/-696.261  $\chi^2/\text{NDF}$ : 24.3/23

Left Out: 373.277+/-382.071  $\chi^2/\text{NDF}$ : 30.8/24

Right Out: 950.569+/-467.621  $\chi^2/\text{NDF}$ : 34.4/28

Left In: 53.099+/-1089.888  $\chi^2/\text{NDF}$ : 14.5/22

Left: 338.236+/-360.558  $\chi^2/\text{NDF}$ : 45.4/47

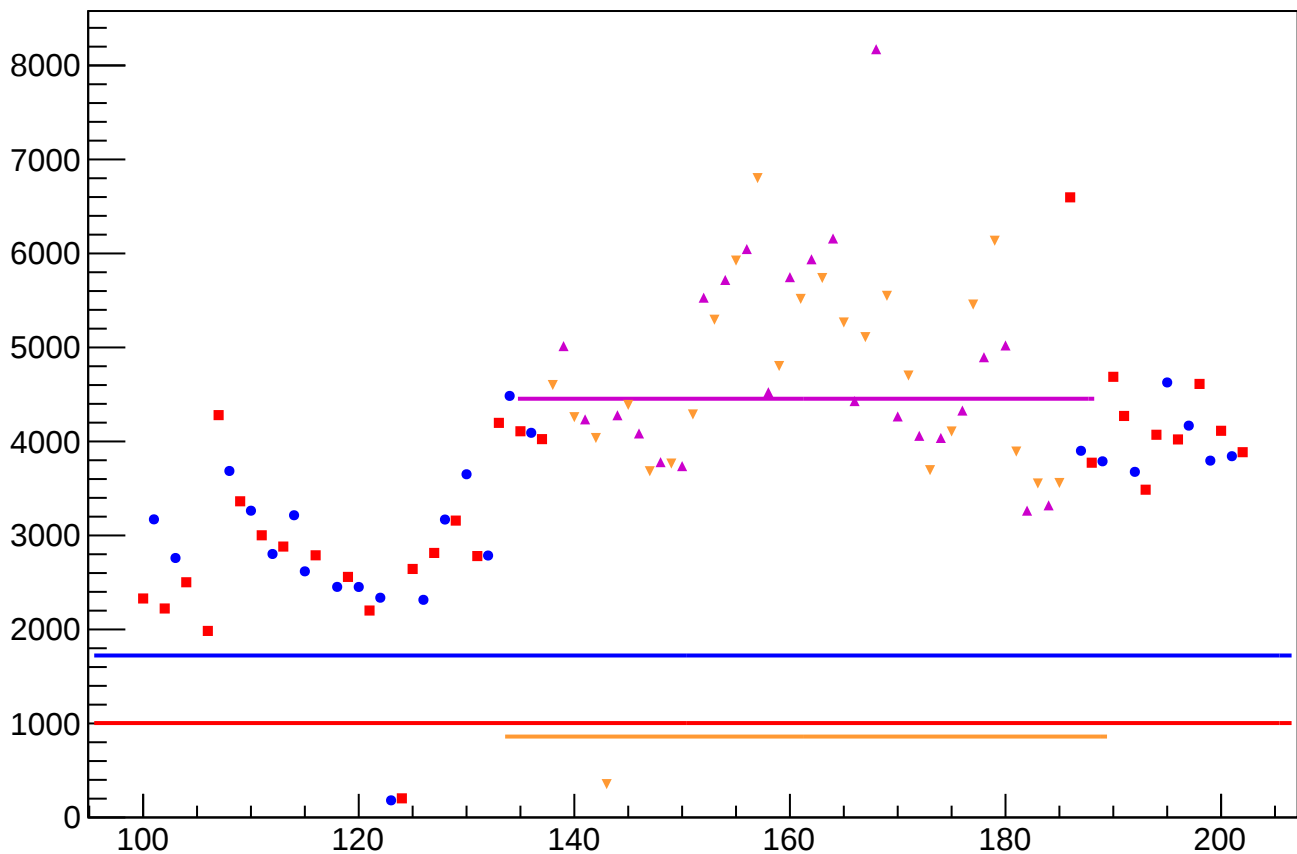
Right: 835.316+/-388.195  $\chi^2/\text{NDF}$ : 58.8/52

In: 427.150+/-586.750  $\chi^2/\text{NDF}$ : 39.0/46

Out: 604.383+/-295.870  $\chi^2/\text{NDF}$ : 66.1/53

All: 568.454+/-264.184  $\chi^2/\text{NDF}$ : 105.1/100

asym\_atr1l2\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 1722.921 $\pm$ 0.492  $\chi^2$ /NDF: 10353723.4/23

Left Out: 860.545 $\pm$ 0.270  $\chi^2$ /NDF: 26340106.5/24

Right Out: 1004.135 $\pm$ 0.331  $\chi^2$ /NDF: 17380958.1/28

Left In: 4454.402 $\pm$ 0.771  $\chi^2$ /NDF: 1349758.1/22

Left: 1253.867 $\pm$ 0.255  $\chi^2$ /NDF: 47056303.3/47

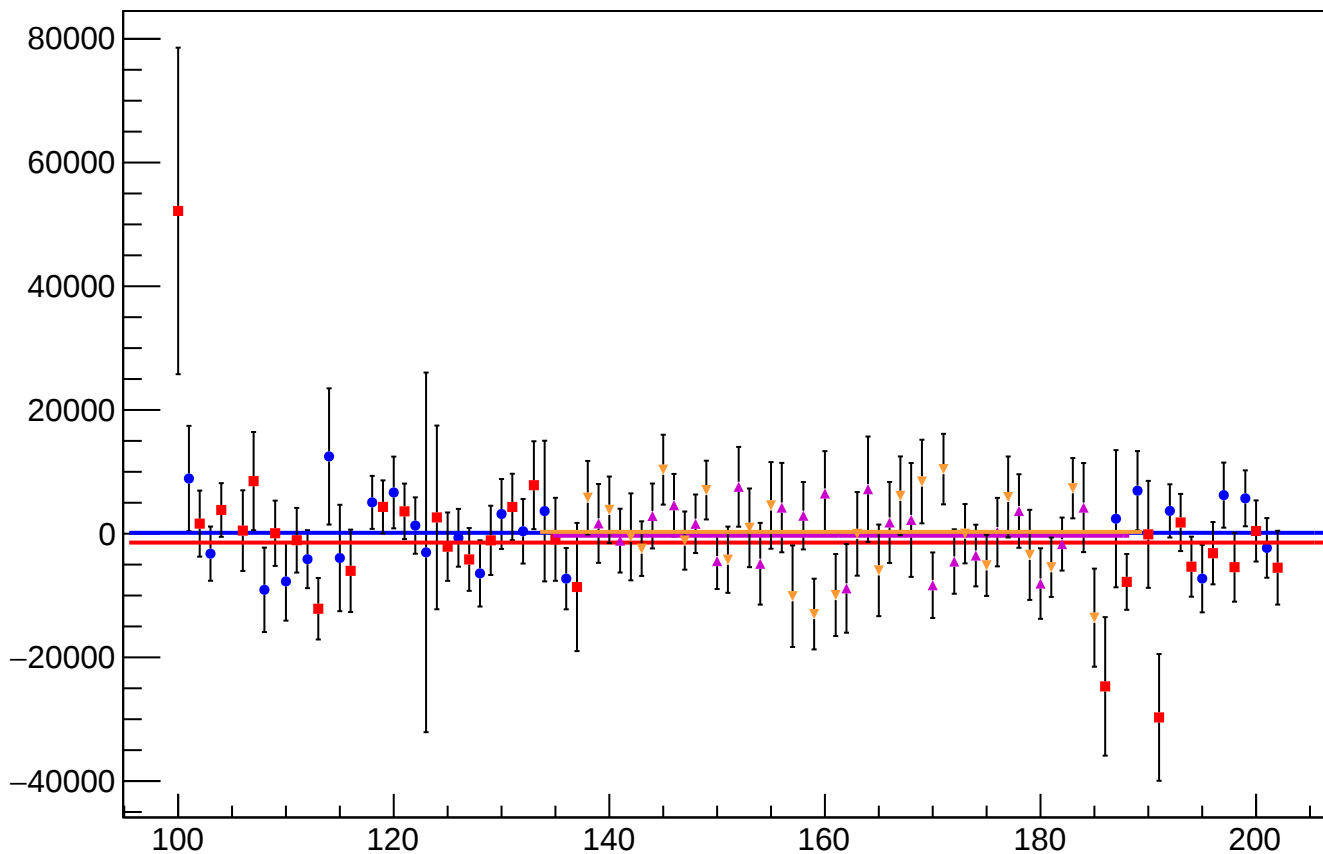
Right: 1227.572 $\pm$ 0.274  $\chi^2$ /NDF: 29203597.2/52

In: 2514.585 $\pm$ 0.415  $\chi^2$ /NDF: 20624722.8/46

Out: 918.028 $\pm$ 0.209  $\chi^2$ /NDF: 43834148.8/53

All: 1241.689 $\pm$ 0.187  $\chi^2$ /NDF: 76264827.2/102

# asym\_atr1l2\_dd\_mean vs Slug, Sign Corrected



Right In:  $138.077 \pm 1148.387$   $\chi^2/\text{NDF}$ : 20.9/23

Left Out:  $288.508 \pm 1155.419$   $\chi^2/\text{NDF}$ : 32.4/24

Right Out:  $-1441.367 \pm 1070.608$   $\chi^2/\text{NDF}$ : 35.9/28

Left In:  $-332.488 \pm 1196.011$   $\chi^2/\text{NDF}$ : 14.7/22

Left:  $-11.273 \pm 830.984$   $\chi^2/\text{NDF}$ : 47.2/47

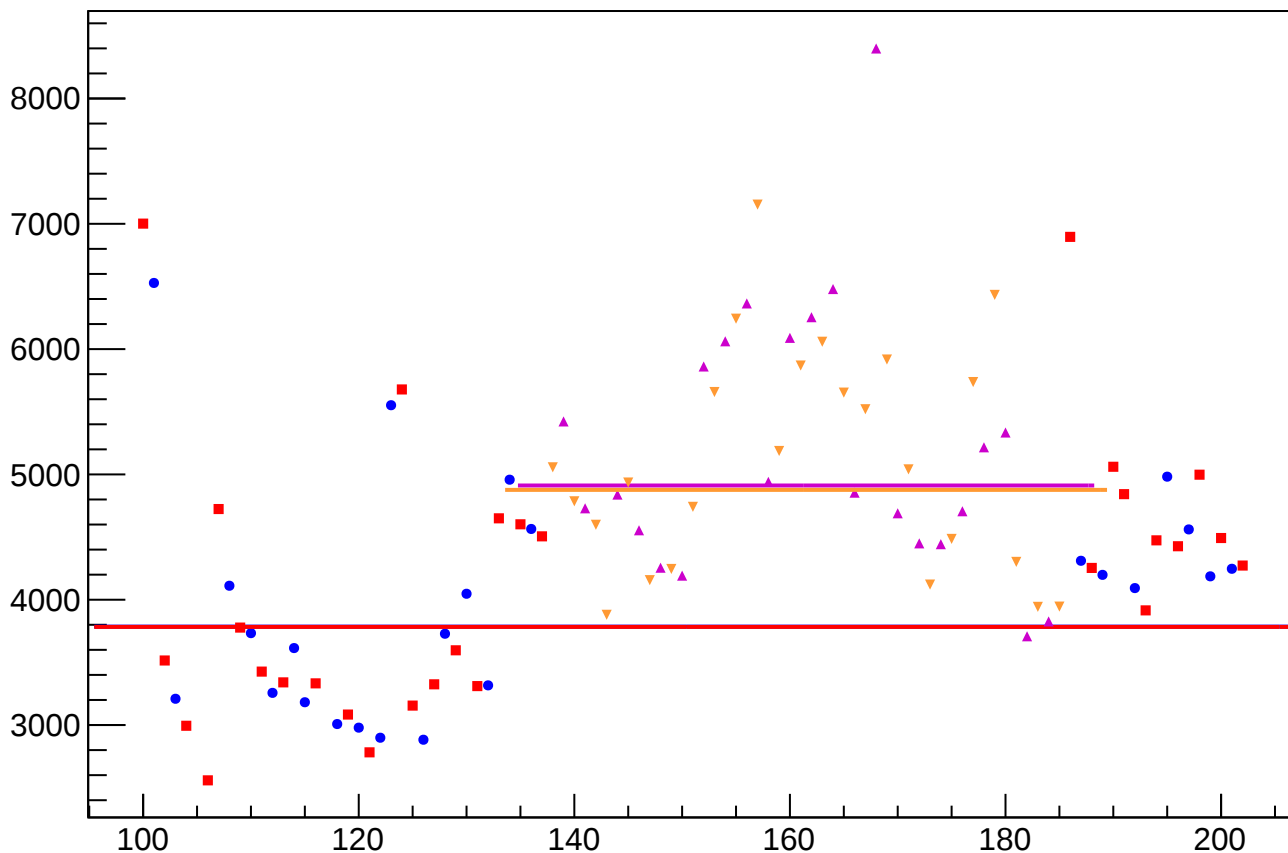
Right:  $-706.939 \pm 783.088$   $\chi^2/\text{NDF}$ : 57.8/52

In:  $-87.650 \pm 828.357$   $\chi^2/\text{NDF}$ : 35.7/46

Out:  $-642.242 \pm 785.307$   $\chi^2/\text{NDF}$ : 69.5/53

All:  $-379.731 \pm 569.908$   $\chi^2/\text{NDF}$ : 105.4/100

# asym\_atr1l2\_dd\_rms vs Slug, Sign Corrected



Right In: 3785.301+/-0.812  $\chi^2/\text{NDF}$ : 832547.4/23

Left Out: 4876.564+/-0.817  $\chi^2/\text{NDF}$ : 972528.1/24

Right Out: 3783.108+/-0.751  $\chi^2/\text{NDF}$ : 1058656.9/28

Left In: 4911.546+/-0.846  $\chi^2/\text{NDF}$ : 1043164.6/22

Left: 4893.451+/-0.588  $\chi^2/\text{NDF}$ : 2016577.8/47

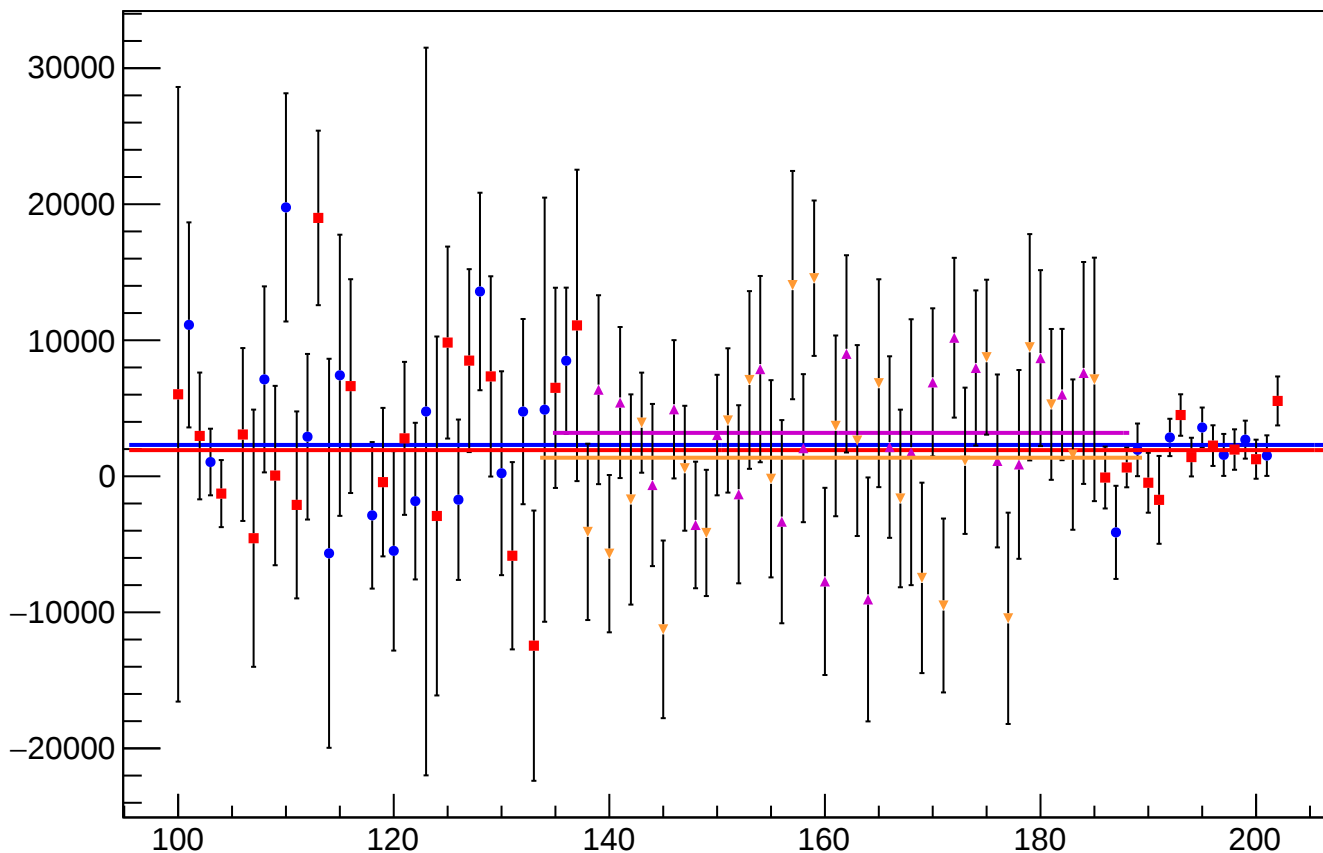
Right: 3784.118+/-0.551  $\chi^2/\text{NDF}$ : 1891208.2/52

In: 4325.553+/-0.586  $\chi^2/\text{NDF}$ : 2798464.4/46

Out: 4283.627+/-0.553  $\chi^2/\text{NDF}$ : 3002501.2/53

All: 4303.377+/-0.402  $\chi^2/\text{NDF}$ : 5803675.6/100

reg\_asym\_atl\_avg\_atr\_avg\_avg\_mean vs Slug, Sign Corrected



Right In: 2305.390+/-558.698  $\chi^2/\text{NDF}$ : 19.1/23

Left Out: 1365.082+/-1206.268  $\chi^2/\text{NDF}$ : 28.0/24

Right Out: 1923.486+/-493.426  $\chi^2/\text{NDF}$ : 28.9/28

Left In: 3191.160+/-1270.021  $\chi^2/\text{NDF}$ : 14.0/22

Left: 2231.138+/-874.630  $\chi^2/\text{NDF}$ : 43.0/47

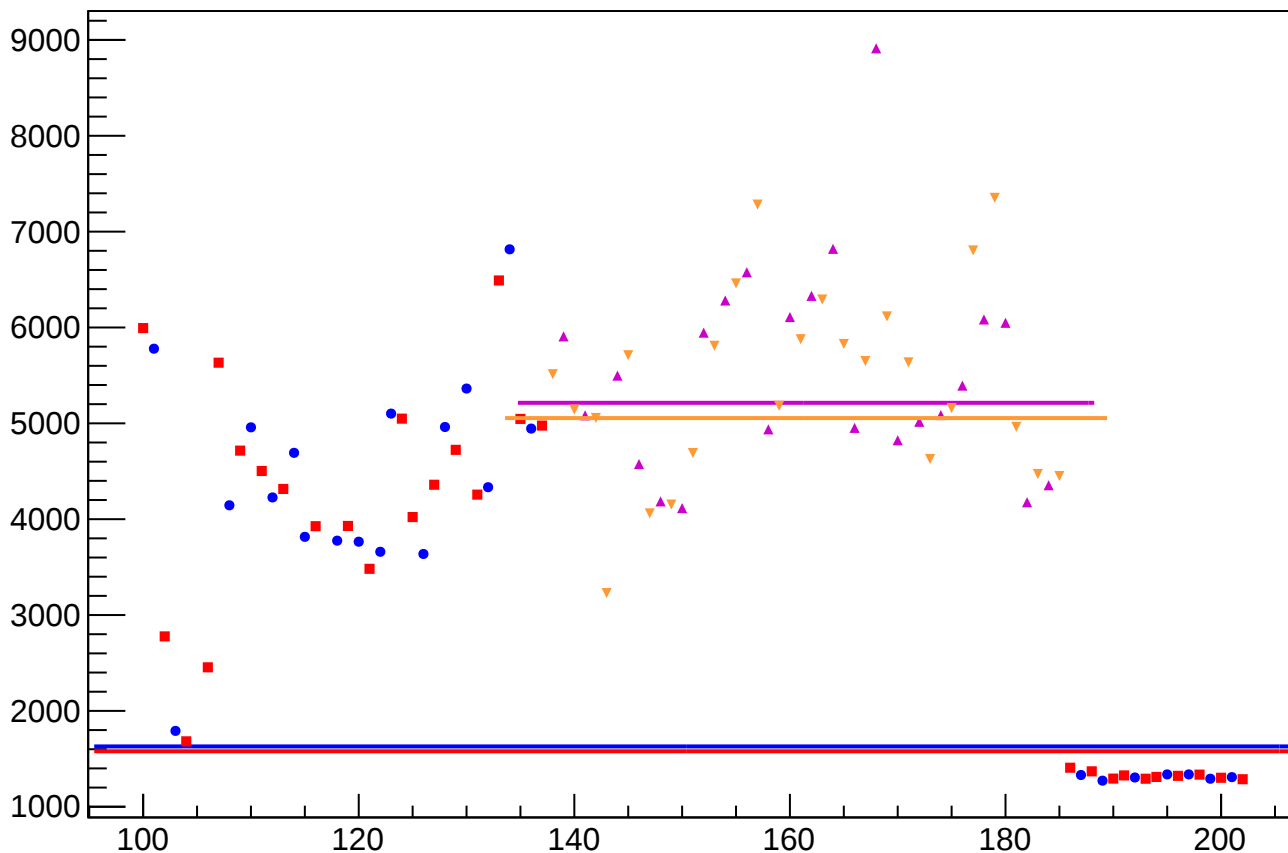
Right: 2090.836+/-369.839  $\chi^2/\text{NDF}$ : 48.3/52

In: 2449.013+/-511.401  $\chi^2/\text{NDF}$ : 33.5/46

Out: 1843.444+/-456.695  $\chi^2/\text{NDF}$ : 57.1/53

All: 2112.118+/-340.637  $\chi^2/\text{NDF}$ : 91.4/100

reg\_asym\_atl\_avg\_atr\_avg\_avg\_rms vs Slug, Sign Corrected



Right In: 1629.348 $\pm$ 0.395  $\chi^2$ /NDF: 5519785.1/23

Left Out: 5054.711 $\pm$ 0.853  $\chi^2$ /NDF:1437224.7/24

Right Out: 1578.663 $\pm$ 0.348  $\chi^2$ /NDF: 5566944.9/28

Left In: 5214.120 $\pm$ 0.898  $\chi^2$ /NDF:1052501.5/22

Left: 5130.314 $\pm$ 0.618  $\chi^2$ /NDF: 2506291.2/47

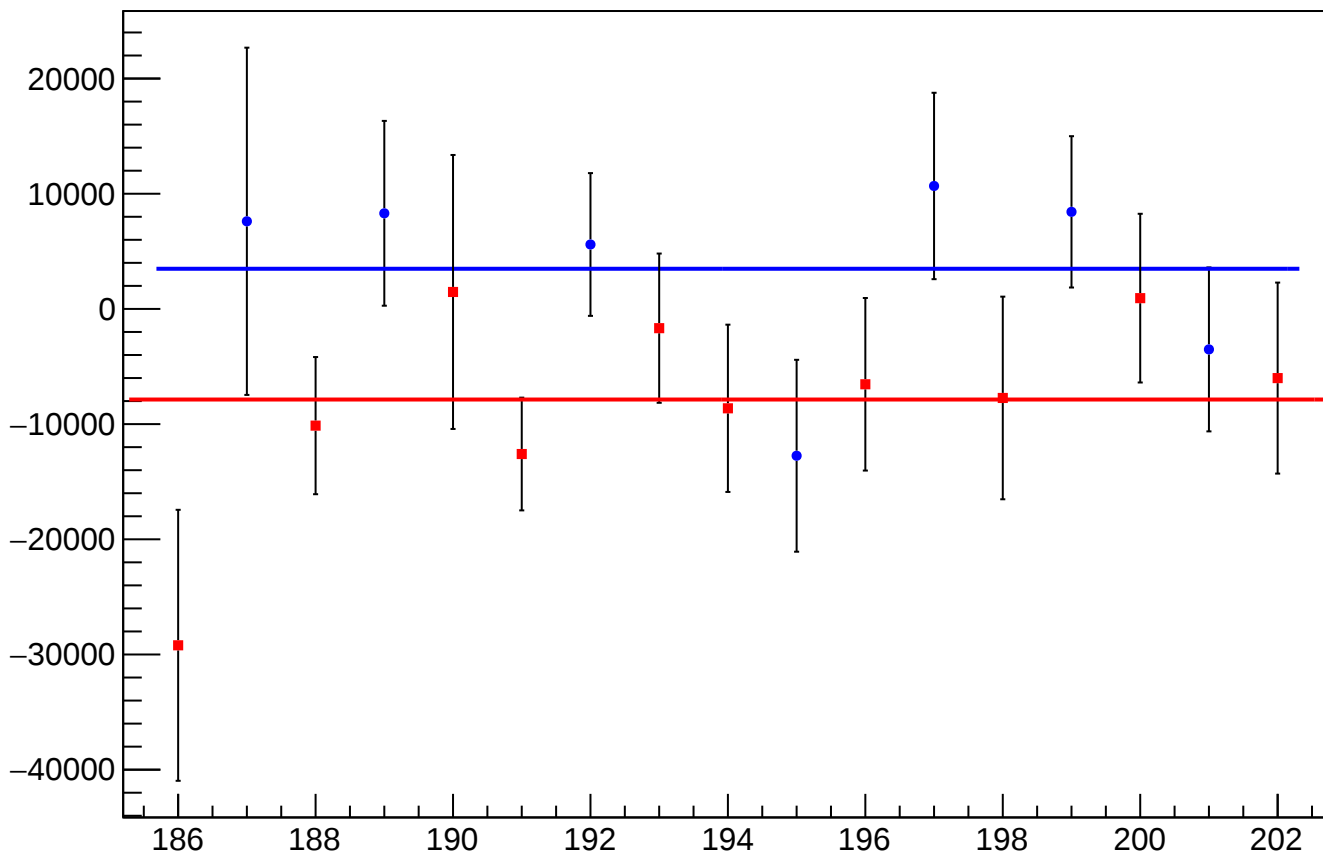
Right: 1600.844 $\pm$ 0.261  $\chi^2$ /NDF: 11095986.9/52

In: 2210.594 $\pm$ 0.362  $\chi^2$ /NDF:19922890.6/46

Out: 2075.911 $\pm$ 0.323  $\chi^2$ /NDF:21236294.1/53

All: 2135.599 $\pm$ 0.241  $\chi^2$ /NDF: 41236427.1/1

asym\_atl\_avg\_atr\_avg\_avg\_correction\_mean vs Slug, Sign Corrected



Right In: 3486.469+/-2903.939  $\chi^2/\text{NDF}$ : 6.7/6

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Right Out: -7864.916+/-2288.163  $\chi^2/\text{NDF}$ : 7.4/9

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

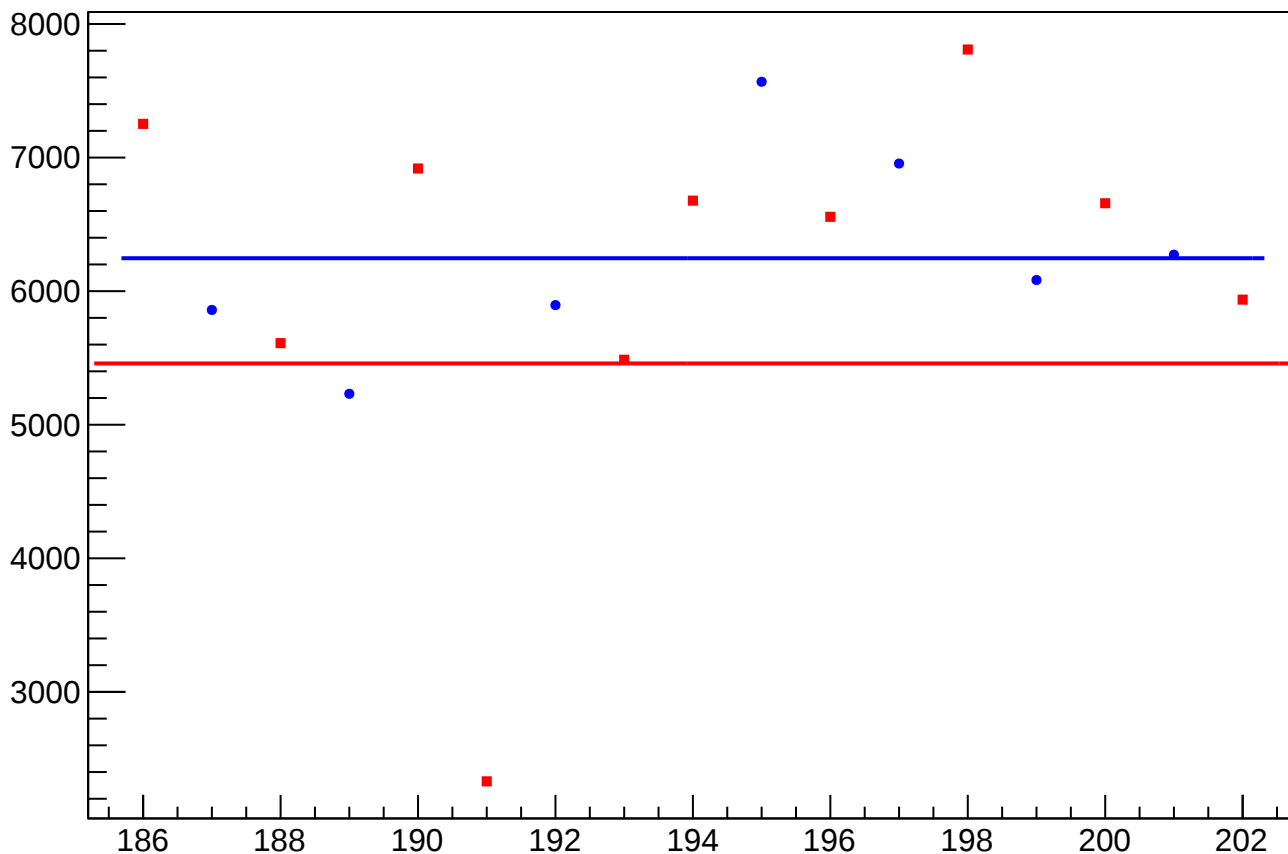
Right: -3516.807+/-1797.270  $\chi^2/\text{NDF}$ : 23.5/16

In: 3486.469+/-2903.939  $\chi^2/\text{NDF}$ : 6.7/6

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

All: -3516.807+/-1797.270  $\chi^2/\text{NDF}$ : 23.5/16

asym\_atl\_avg\_atr\_avg\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 6246.534+/-2.053  $\chi^2/\text{NDF}$ : 106663.7/6

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Right Out: 5458.797+/-1.618  $\chi^2/\text{NDF}$ : 1197589.0/9

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

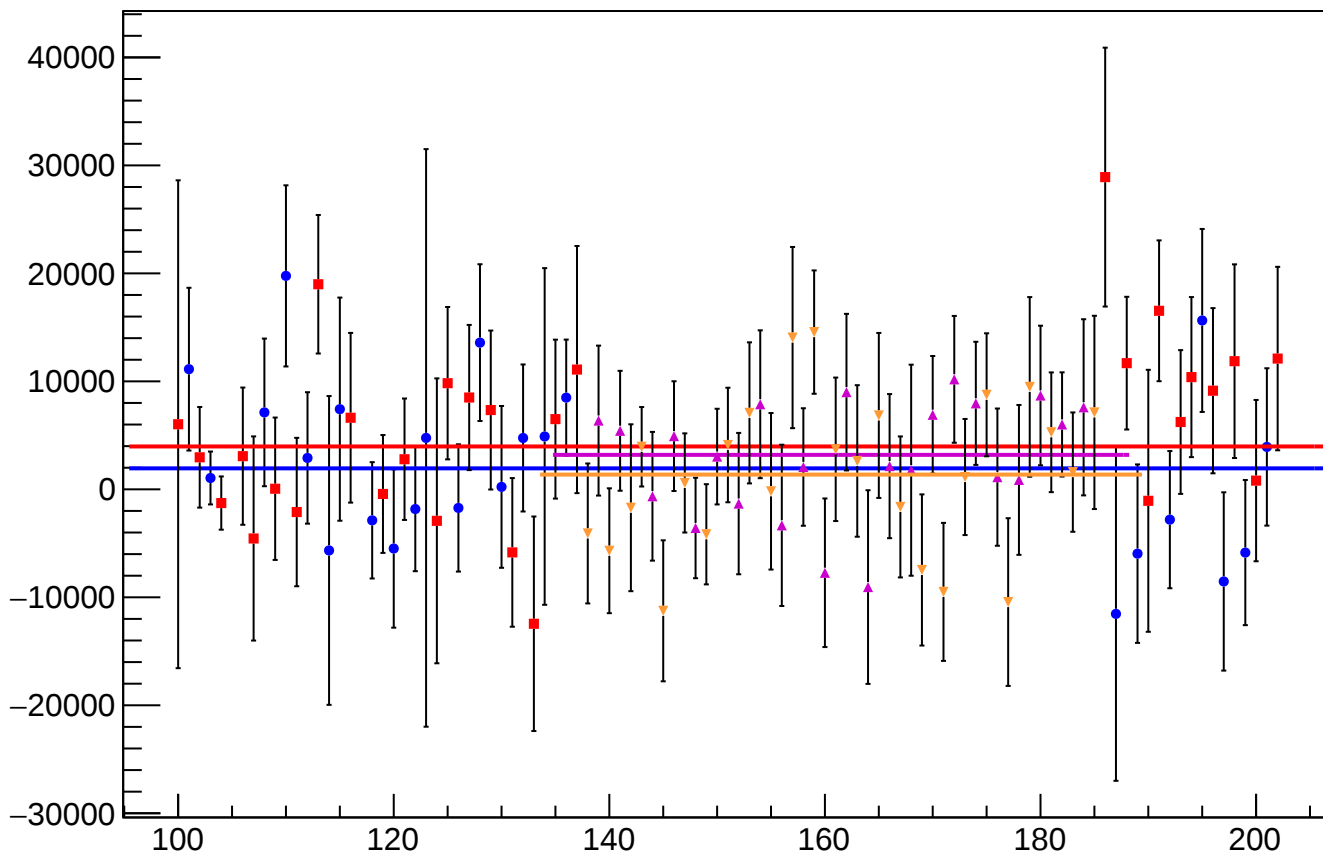
Right: 5760.537+/-1.271  $\chi^2/\text{NDF}$ : 1395049.5/16

In: 6246.534+/-2.053  $\chi^2/\text{NDF}$ : 106663.7/6

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

All: 5760.537+/-1.271  $\chi^2/\text{NDF}$ : 1395049.5/16

asym\_atl\_avg\_atr\_avg\_avg\_mean vs Slug, Sign Corrected



Right In: 1942.257+/-1307.523  $\chi^2/\text{NDF}$ : 22.1/23

Left Out: 1365.082+/-1206.268  $\chi^2/\text{NDF}$ : 28.0/24

Right Out: 3970.366+/-1205.650  $\chi^2/\text{NDF}$ : 32.7/28

Left In: 3191.160+/-1270.021  $\chi^2/\text{NDF}$ : 14.0/22

Left: 2231.138+/-874.630  $\chi^2/\text{NDF}$ : 43.0/47

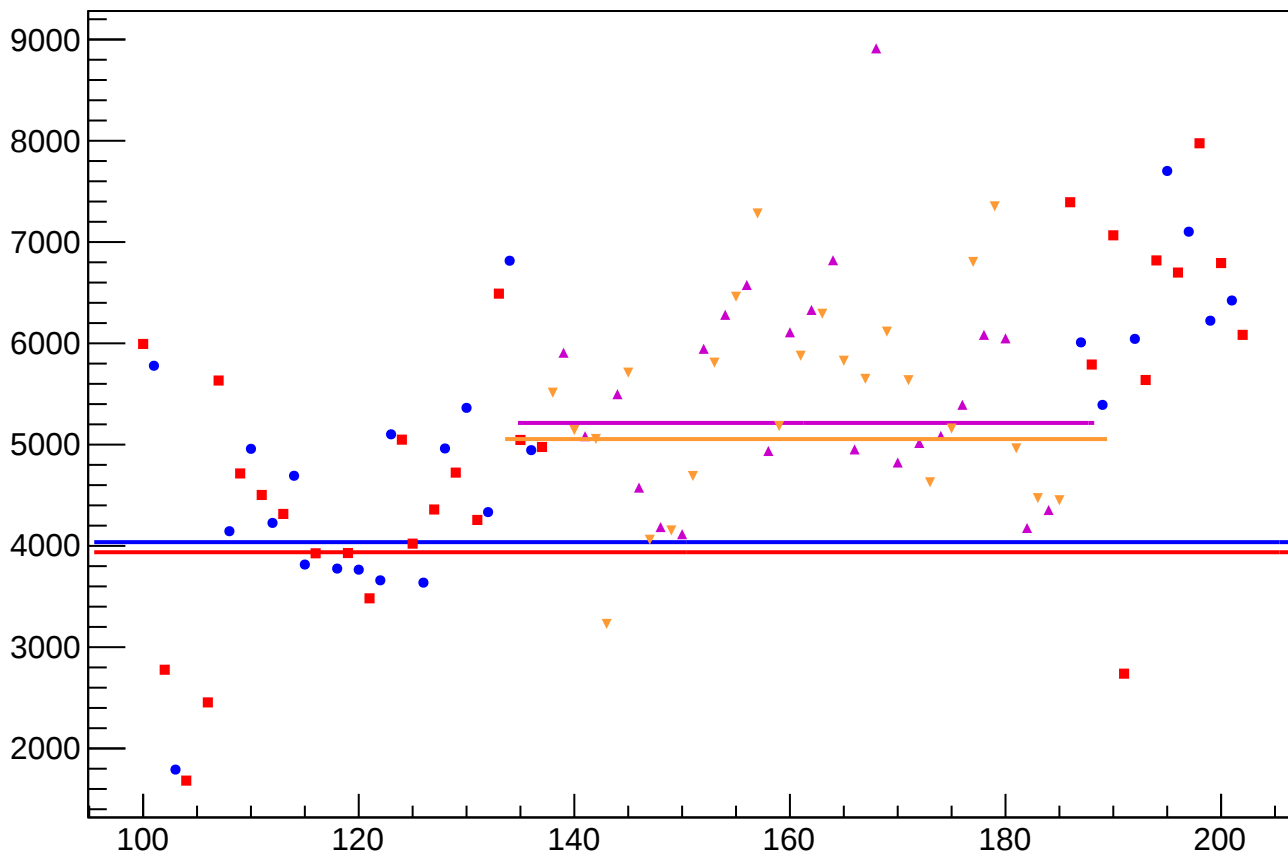
Right: 3038.388+/-886.353  $\chi^2/\text{NDF}$ : 56.2/52

In: 2584.875+/-911.010  $\chi^2/\text{NDF}$ : 36.6/46

Out: 2668.392+/-852.741  $\chi^2/\text{NDF}$ : 63.0/53

All: 2629.390+/-622.560  $\chi^2/\text{NDF}$ : 99.6/100

asym\_atl\_avg\_atr\_avg\_avg\_rms vs Slug, Sign Corrected



Right In: 4037.013+/-0.925  $\chi^2/\text{NDF}$ : 3430476.5/23

Left Out: 5054.711+/-0.853  $\chi^2/\text{NDF}$ :1437224.7/24

Right Out: 3937.348+/-0.847  $\chi^2/\text{NDF}$ : 4402086.4/28

Left In: 5214.120+/-0.898  $\chi^2/\text{NDF}$ :1052501.5/22

Left: 5130.314+/-0.618  $\chi^2/\text{NDF}$ : 2506291.2/47

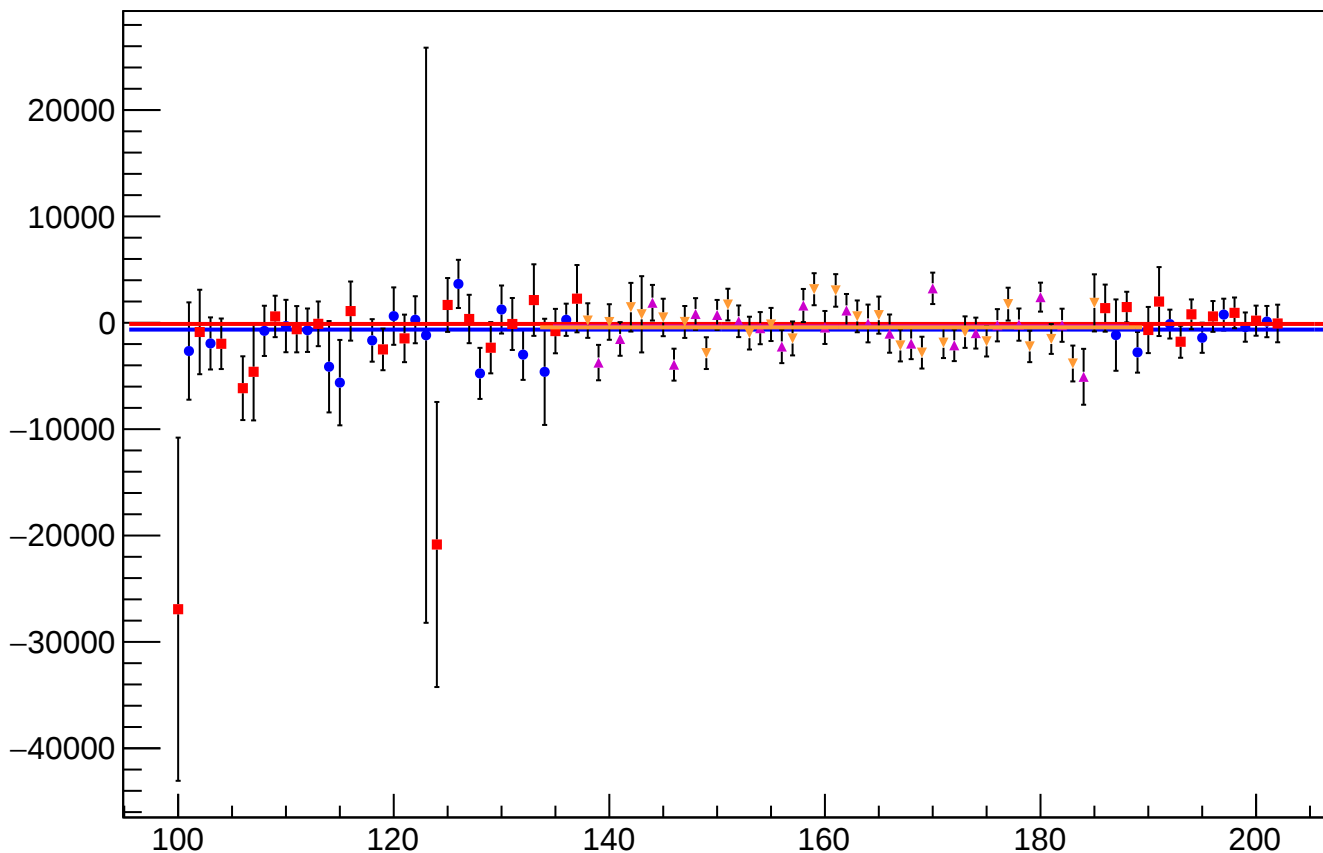
Right: 3982.801+/-0.624  $\chi^2/\text{NDF}$ : 7838883.8/52

In: 4642.677+/-0.644  $\chi^2/\text{NDF}$ :5317036.9/46

Out: 4491.829+/-0.601  $\chi^2/\text{NDF}$ :6703790.4/53

All: 4562.012+/-0.439  $\chi^2/\text{NDF}$ : 12050150.9/100

reg\_asym\_atl\_avg\_atr\_avg\_dd\_mean vs Slug, Sign Corrected



Right In: -639.539+/-423.735  $\chi^2/\text{NDF}$ : 15.5/23

Left Out: -431.715+/-320.540  $\chi^2/\text{NDF}$ : 33.1/24

Right Out: -107.913+/-391.315  $\chi^2/\text{NDF}$ : 20.2/28

Left In: -343.737+/-324.368  $\chi^2/\text{NDF}$ : 33.8/22

Left: -388.248+/-227.997  $\chi^2/\text{NDF}$ : 66.9/47

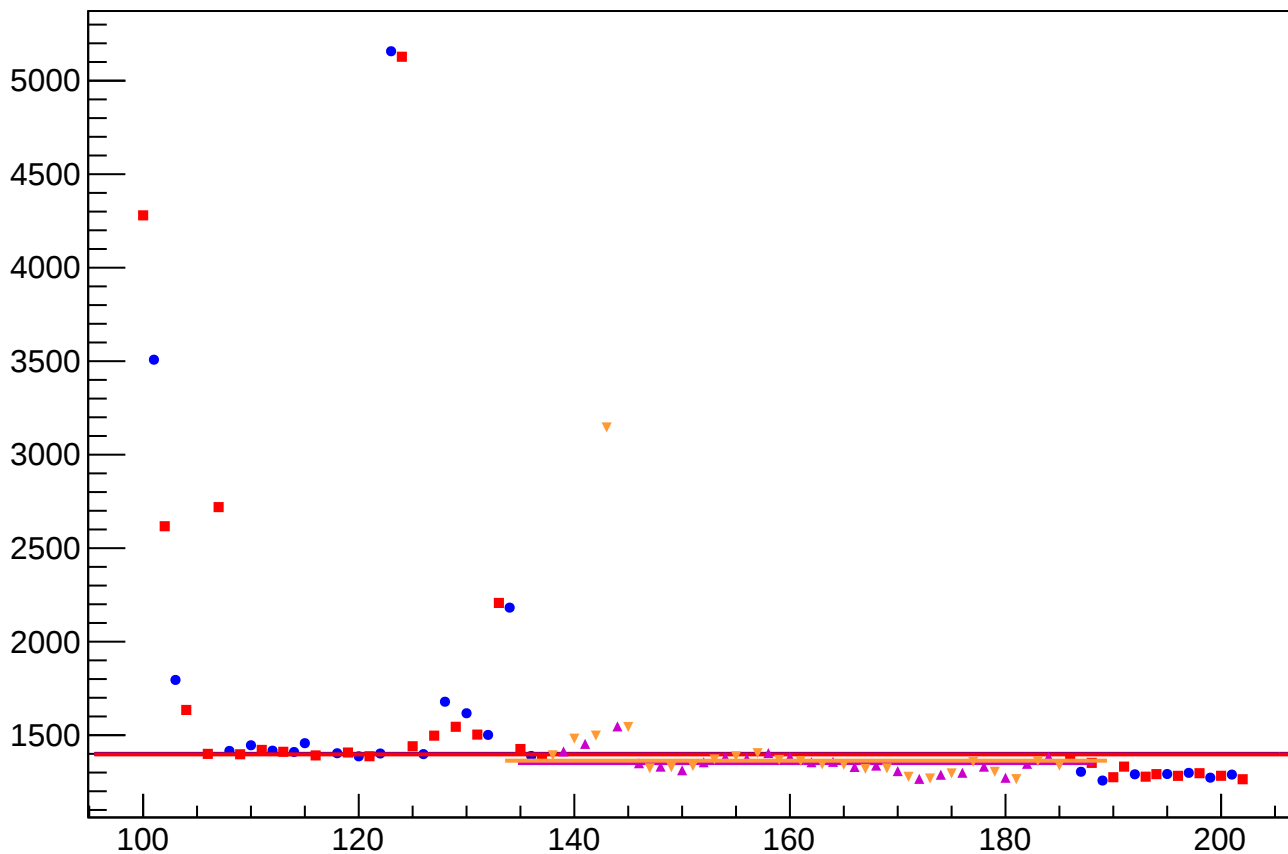
Right: -352.613+/-287.480  $\chi^2/\text{NDF}$ : 36.5/52

In: -453.030+/-257.566  $\chi^2/\text{NDF}$ : 49.5/46

Out: -301.692+/-247.968  $\chi^2/\text{NDF}$ : 53.7/53

All: -374.489+/-178.637  $\chi^2/\text{NDF}$ : 103.4/100

reg\_asym\_atl\_avg\_atr\_avg\_dd\_rms vs Slug, Sign Corrected



Right In: 1400.044+/-0.300  $\chi^2/\text{NDF}$ : 690208.2/23

Left Out: 1363.561+/-0.227  $\chi^2/\text{NDF}$ : 575226.6/24

Right Out: 1397.177+/-0.277  $\chi^2/\text{NDF}$ : 807939.5/28

Left In: 1350.909+/-0.229  $\chi^2/\text{NDF}$ : 67144.5/22

Left: 1357.310+/-0.161  $\chi^2/\text{NDF}$ : 643910.7/47

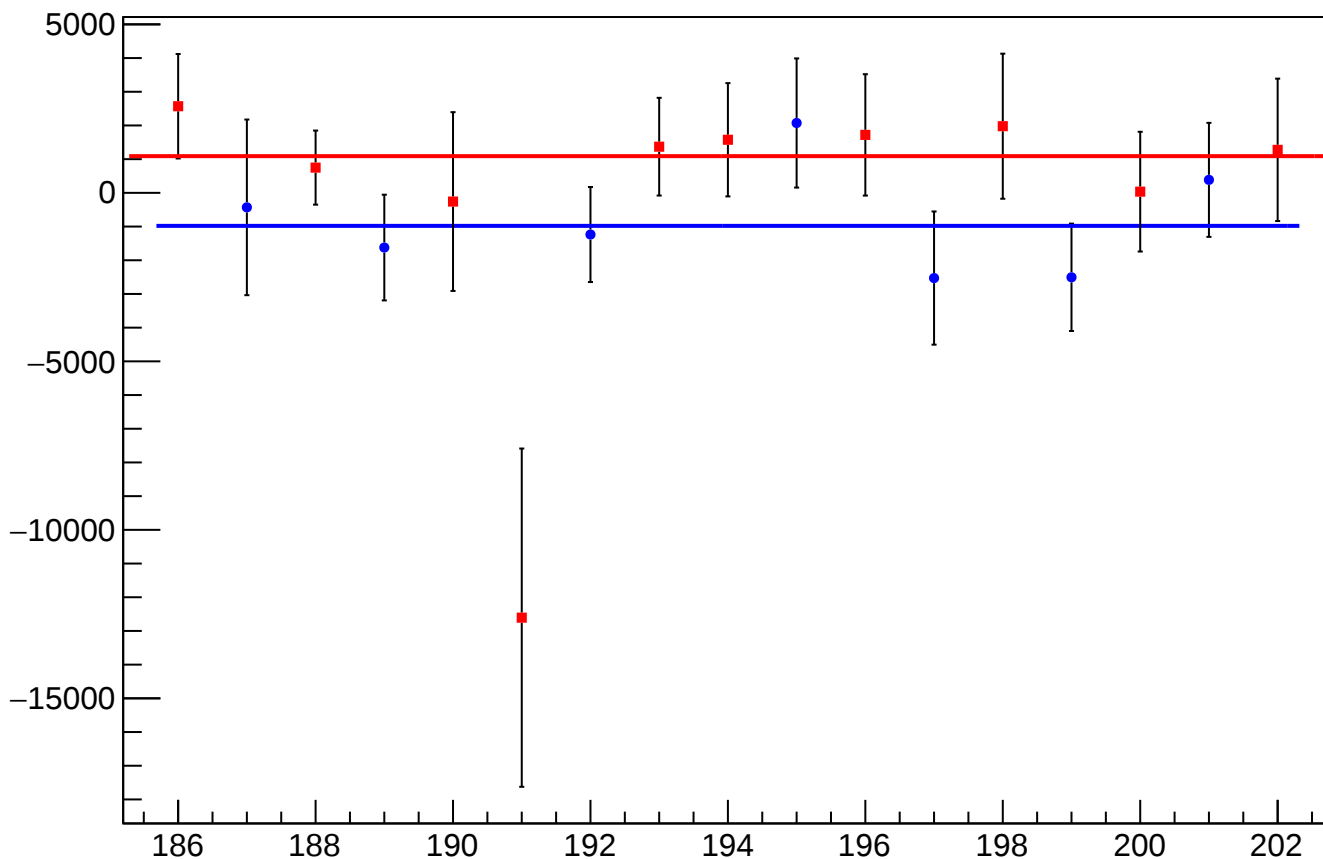
Right: 1398.497+/-0.203  $\chi^2/\text{NDF}$ : 1498197.1/52

In: 1369.063+/-0.182  $\chi^2/\text{NDF}$ : 774309.1/46

Out: 1377.060+/-0.175  $\chi^2/\text{NDF}$ : 1391999.0/53

All: 1373.213+/-0.126  $\chi^2/\text{NDF}$ : 2167308.6/100

asym\_atl\_avg\_atr\_avg\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: -979.490+/-655.342  $\chi^2/\text{NDF}$ : 5.0/6

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Right Out: 1089.366+/-548.872  $\chi^2/\text{NDF}$ : 9.5/9

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

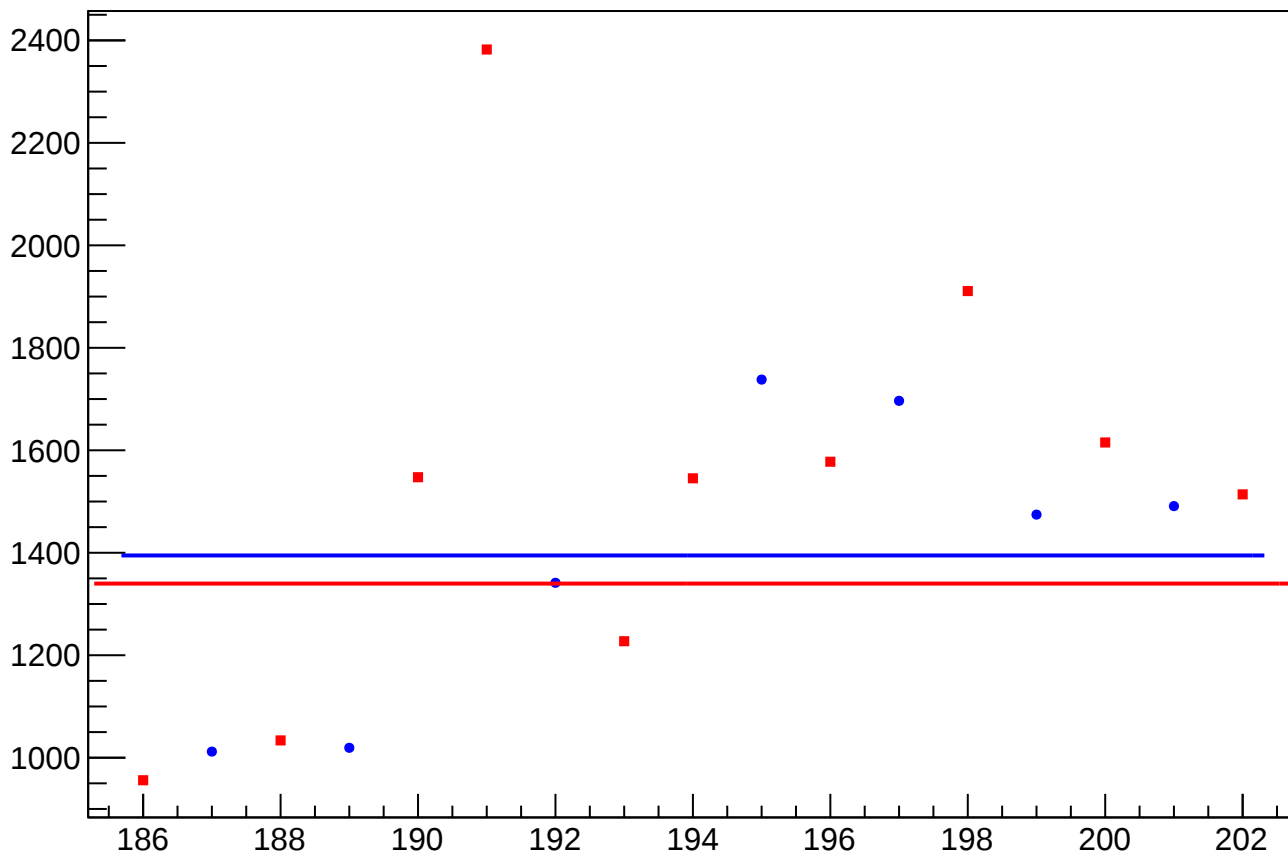
Right: 236.437+/-420.784  $\chi^2/\text{NDF}$ : 20.3/16

In: -979.490+/-655.342  $\chi^2/\text{NDF}$ : 5.0/6

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

All: 236.437+/-420.784  $\chi^2/\text{NDF}$ : 20.3/16

asym\_atl\_avg\_atr\_avg\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 1394.752 $\pm$ 0.463  $\chi^2$ /NDF: 282840.6/6

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Right Out: 1339.845 $\pm$ 0.388  $\chi^2$ /NDF: 655281.9/9

Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Left: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

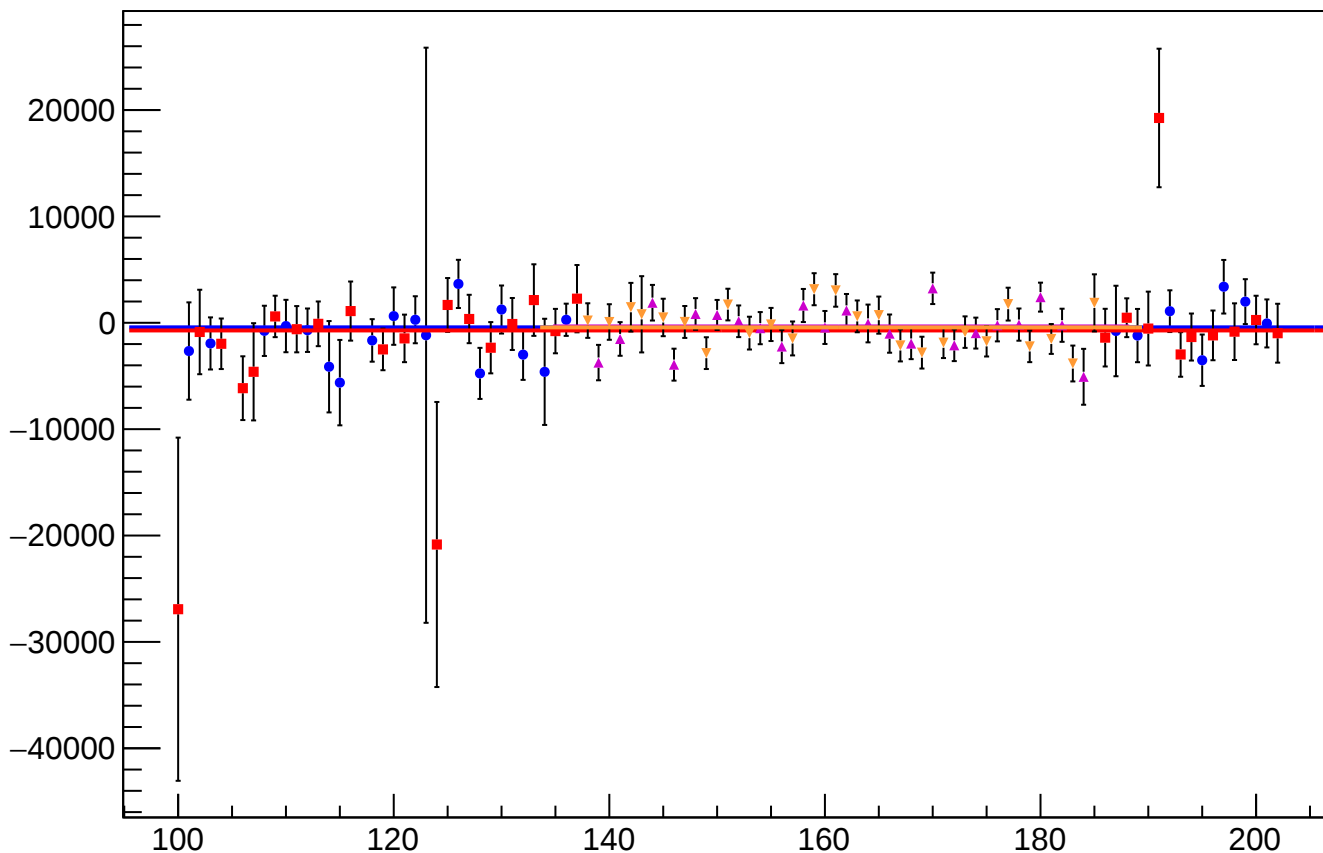
Right: 1362.481 $\pm$ 0.298  $\chi^2$ /NDF: 946373.9/16

In: 1394.752 $\pm$ 0.463  $\chi^2$ /NDF: 282840.6/6

Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

All: 1362.481 $\pm$ 0.298  $\chi^2$ /NDF: 946373.9/16

asym\_atl\_avg\_atr\_avg\_dd\_mean vs Slug, Sign Corrected



Right In: -429.604 $\pm$ 503.071  $\chi^2$ /NDF: 18.8/23

Left Out: -431.715 $\pm$ 320.540  $\chi^2$ /NDF:33.1/24

Right Out: -718.576 $\pm$ 475.039  $\chi^2$ /NDF: 25.7/28

Left In: -343.737 $\pm$ 324.368  $\chi^2$ /NDF:33.8/22

Left: -388.248 $\pm$ 227.997  $\chi^2$ /NDF: 66.9/47

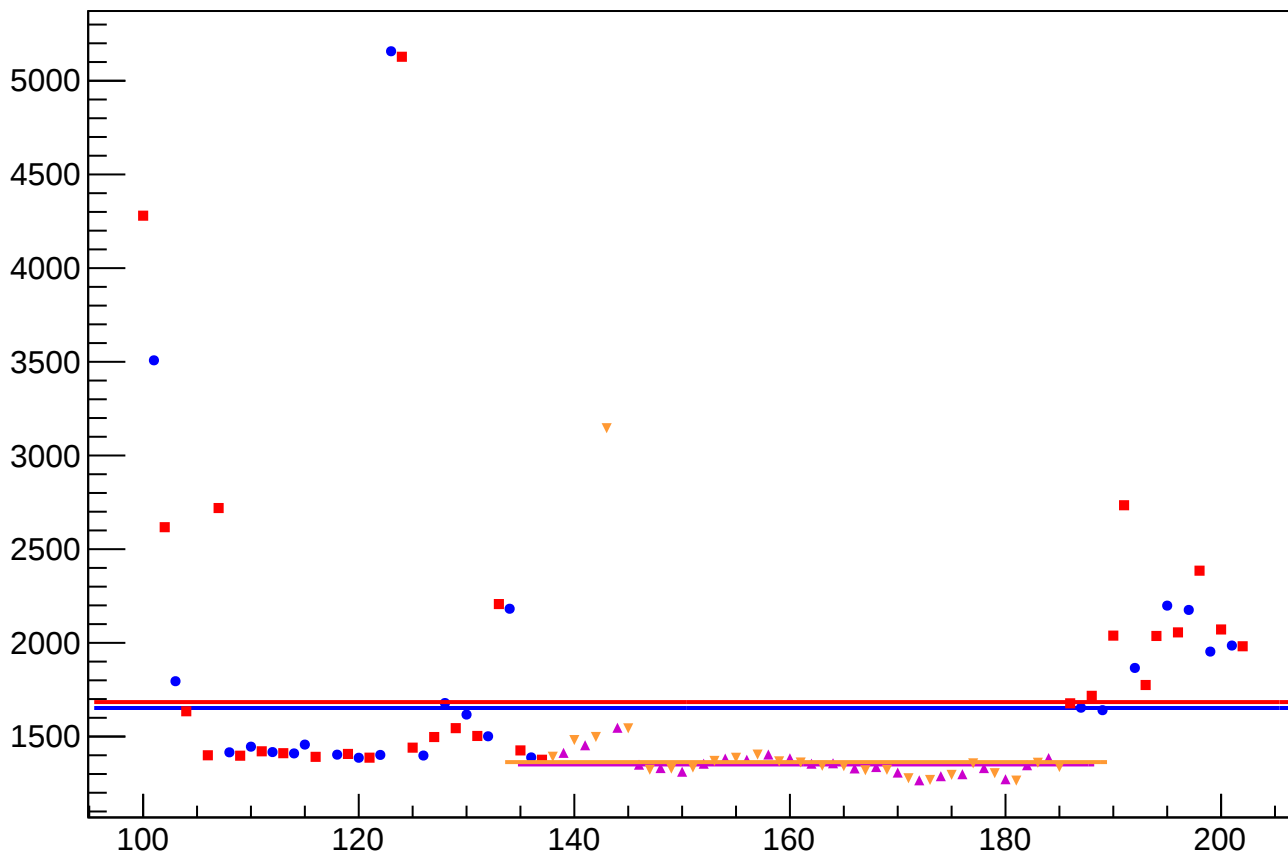
Right: -582.365 $\pm$ 345.388  $\chi^2$ /NDF: 44.7/52

In: -368.952 $\pm$ 272.614  $\chi^2$ /NDF:52.6/46

Out: -521.462 $\pm$ 265.708  $\chi^2$ /NDF:59.0/53

All: -447.163 $\pm$ 190.278  $\chi^2$ /NDF: 111.8/100

asym\_atl\_avg\_atr\_avg\_dd\_rms vs Slug, Sign Corrected



Right In: 1652.327+/-0.356  $\chi^2/\text{NDF}$ : 931313.5/23

Left Out: 1363.561+/-0.227  $\chi^2/\text{NDF}$ : 575226.6/24

Right Out: 1683.917+/-0.336  $\chi^2/\text{NDF}$ : 1165602.6/28

Left In: 1350.909+/-0.229  $\chi^2/\text{NDF}$ : 67144.5/22

Left: 1357.310+/-0.161  $\chi^2/\text{NDF}$ : 643910.7/47

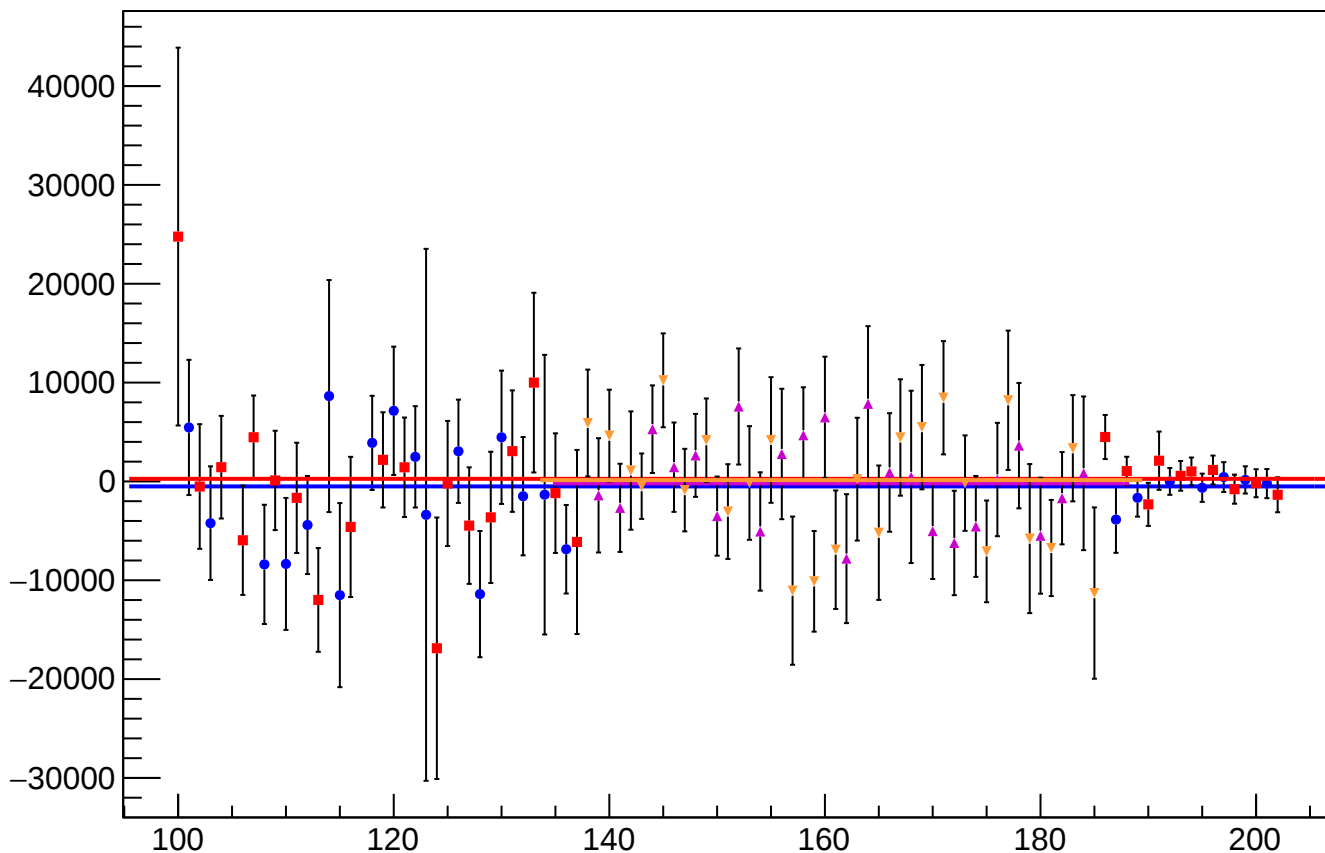
Right: 1669.026+/-0.244  $\chi^2/\text{NDF}$ : 2101085.0/52

In: 1439.422+/-0.193  $\chi^2/\text{NDF}$ : 1505598.9/46

Out: 1463.788+/-0.188  $\chi^2/\text{NDF}$ : 2365833.1/53

All: 1451.918+/-0.135  $\chi^2/\text{NDF}$ : 3879626.0/100

reg\_asym\_atl\_dd\_atr\_dd\_avg\_mean vs Slug, Sign Corrected



Right In:  $-503.688 \pm 554.398$   $\chi^2/\text{NDF}: 17.6/23$

Left Out:  $132.142 \pm 1065.543$   $\chi^2/\text{NDF}: 28.1/24$

Right Out:  $261.708 \pm 486.227$   $\chi^2/\text{NDF}: 22.6/28$

Left In:  $-200.182 \pm 1123.499$   $\chi^2/\text{NDF}: 14.7/22$

Left:  $-25.227 \pm 773.130$   $\chi^2/\text{NDF}: 42.9/47$

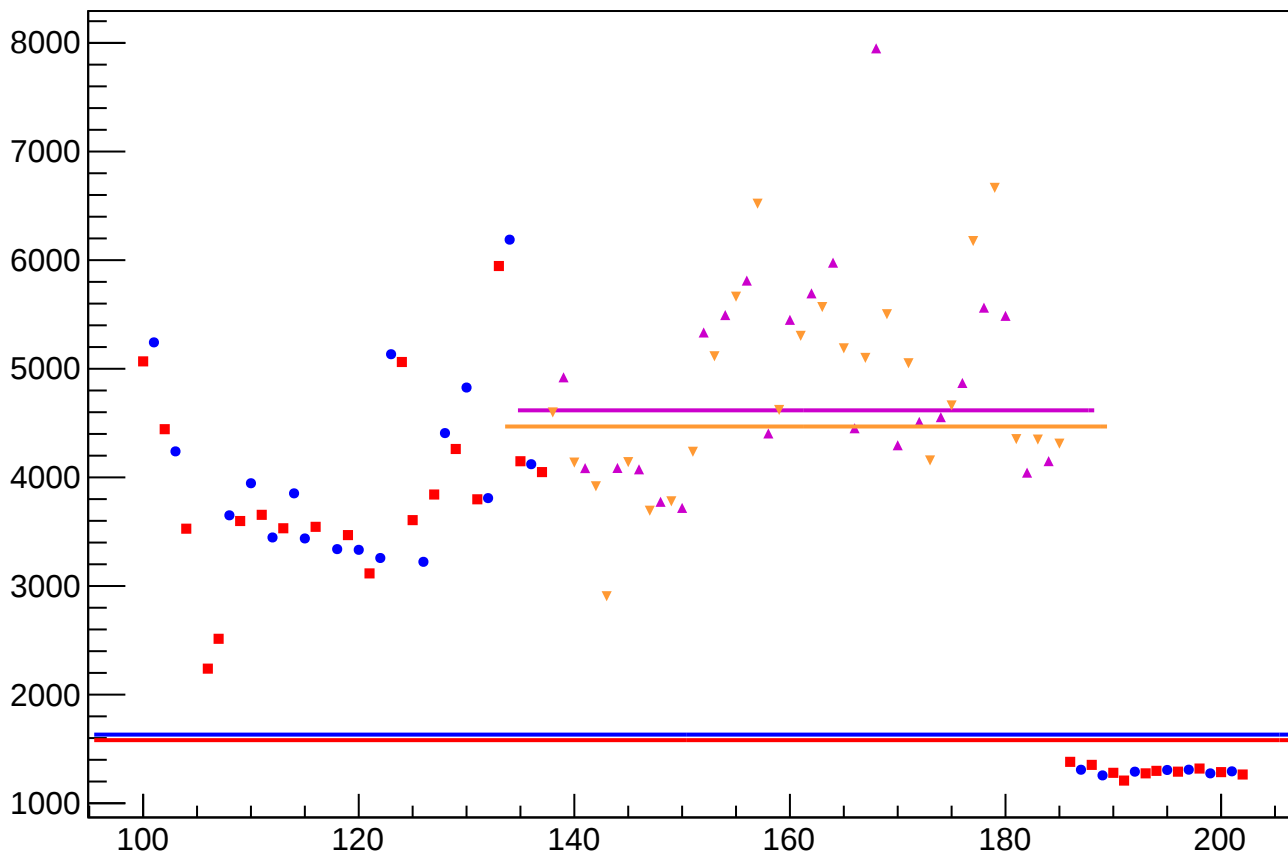
Right:  $-71.063 \pm 365.554$   $\chi^2/\text{NDF}: 41.3/52$

In:  $-444.256 \pm 497.163$   $\chi^2/\text{NDF}: 32.4/46$

Out:  $239.379 \pm 442.349$   $\chi^2/\text{NDF}: 50.7/53$

All:  $-62.688 \pm 330.475$   $\chi^2/\text{NDF}: 84.2/100$

reg\_asym\_atl\_dd\_atr\_dd\_avg\_rms vs Slug, Sign Corrected



Right In: 1631.924 $\pm$ 0.392  $\chi^2$ /NDF: 5237119.4/23

Left Out: 4468.520 $\pm$ 0.753  $\chi^2$ /NDF:1380601.0/24

Right Out: 1580.861 $\pm$ 0.343  $\chi^2$ /NDF: 5193433.2/28

Left In: 4617.293 $\pm$ 0.794  $\chi^2$ /NDF:999599.8/22

Left: 4538.970 $\pm$ 0.547  $\chi^2$ /NDF: 2398663.8/47

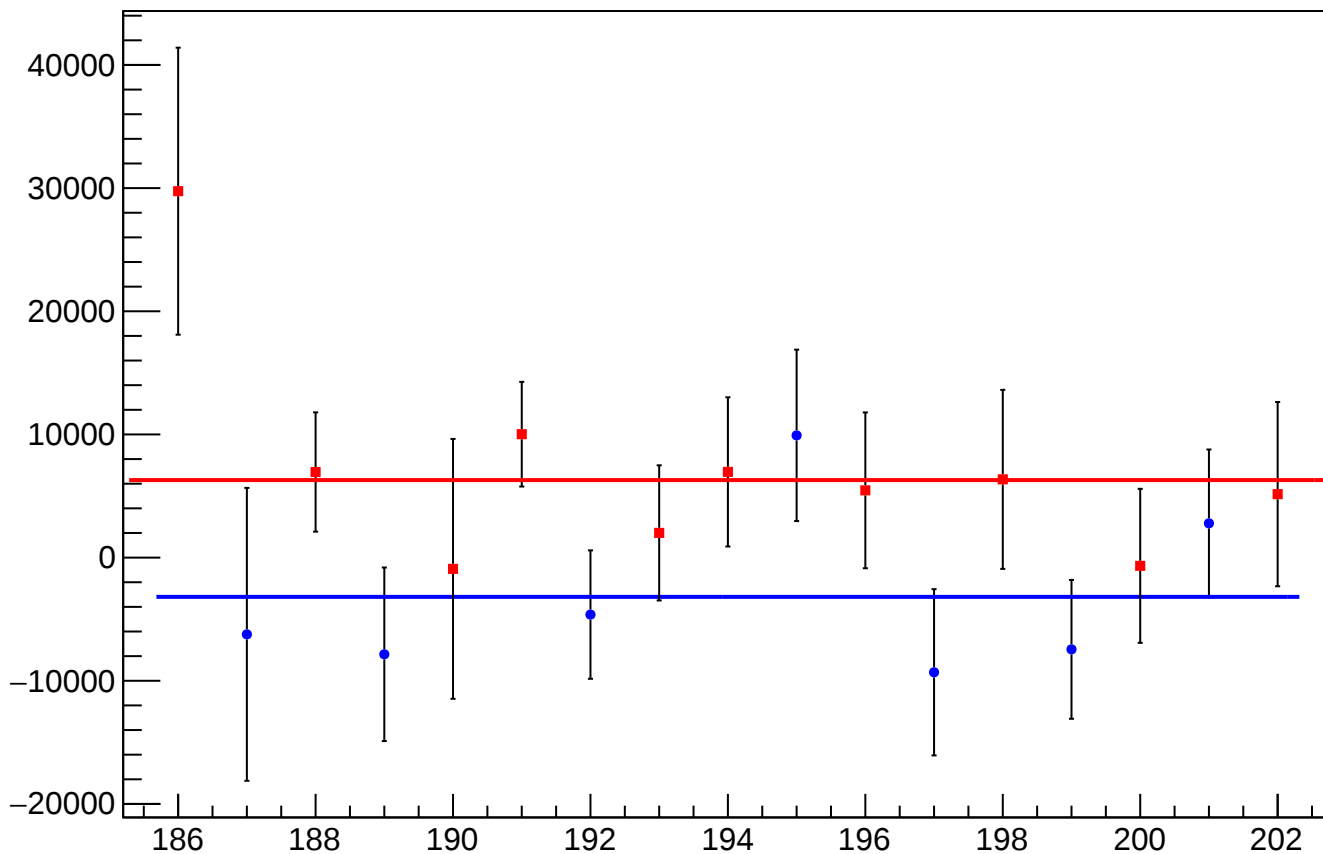
Right: 1603.033 $\pm$ 0.258  $\chi^2$ /NDF: 10440152.1/52

In: 2216.509 $\pm$ 0.352  $\chi^2$ /NDF:17592981.2/46

Out: 2077.580 $\pm$ 0.312  $\chi^2$ /NDF:18735967.3/53

All: 2138.902 $\pm$ 0.234  $\chi^2$ /NDF: 36416191.8/100

asym\_atl\_dd\_atr\_dd\_avg\_correction\_mean vs Slug, Sign Corrected



Right In: -3187.390+/-2455.304  $\chi^2/\text{NDF}$ : 6.5/6

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Right Out: 6294.134+/-1952.945  $\chi^2/\text{NDF}$ : 7.2/9

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

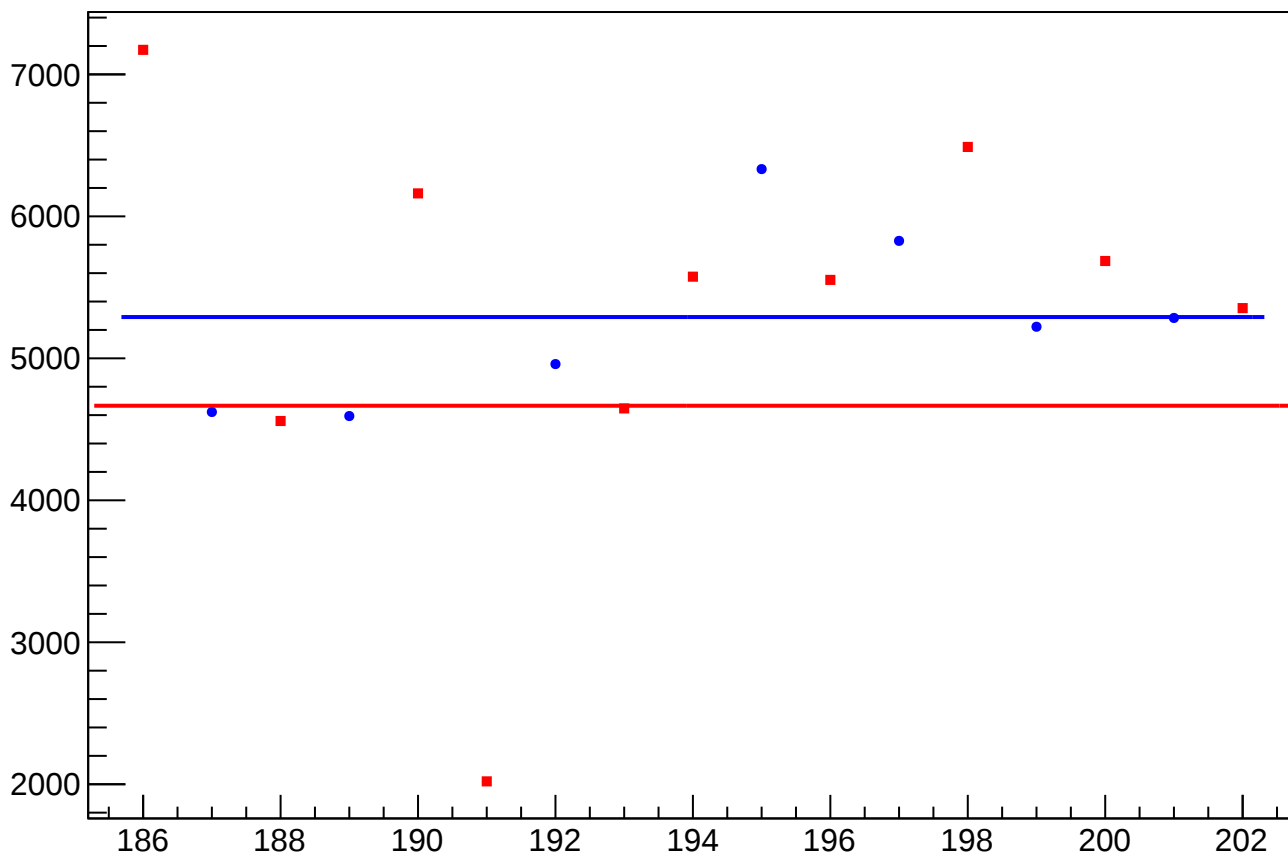
Right: 2620.023+/-1528.418  $\chi^2/\text{NDF}$ : 22.9/16

In: -3187.390+/-2455.304  $\chi^2/\text{NDF}$ : 6.5/6

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

All: 2620.023+/-1528.418  $\chi^2/\text{NDF}$ : 22.9/16

asym\_atl\_dd\_atr\_dd\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 5290.811+/-1.736  $\chi^2/\text{NDF}$ : 91761.9/6

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Right Out: 4666.123+/-1.381  $\chi^2/\text{NDF}$ : 1189146.7/9

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

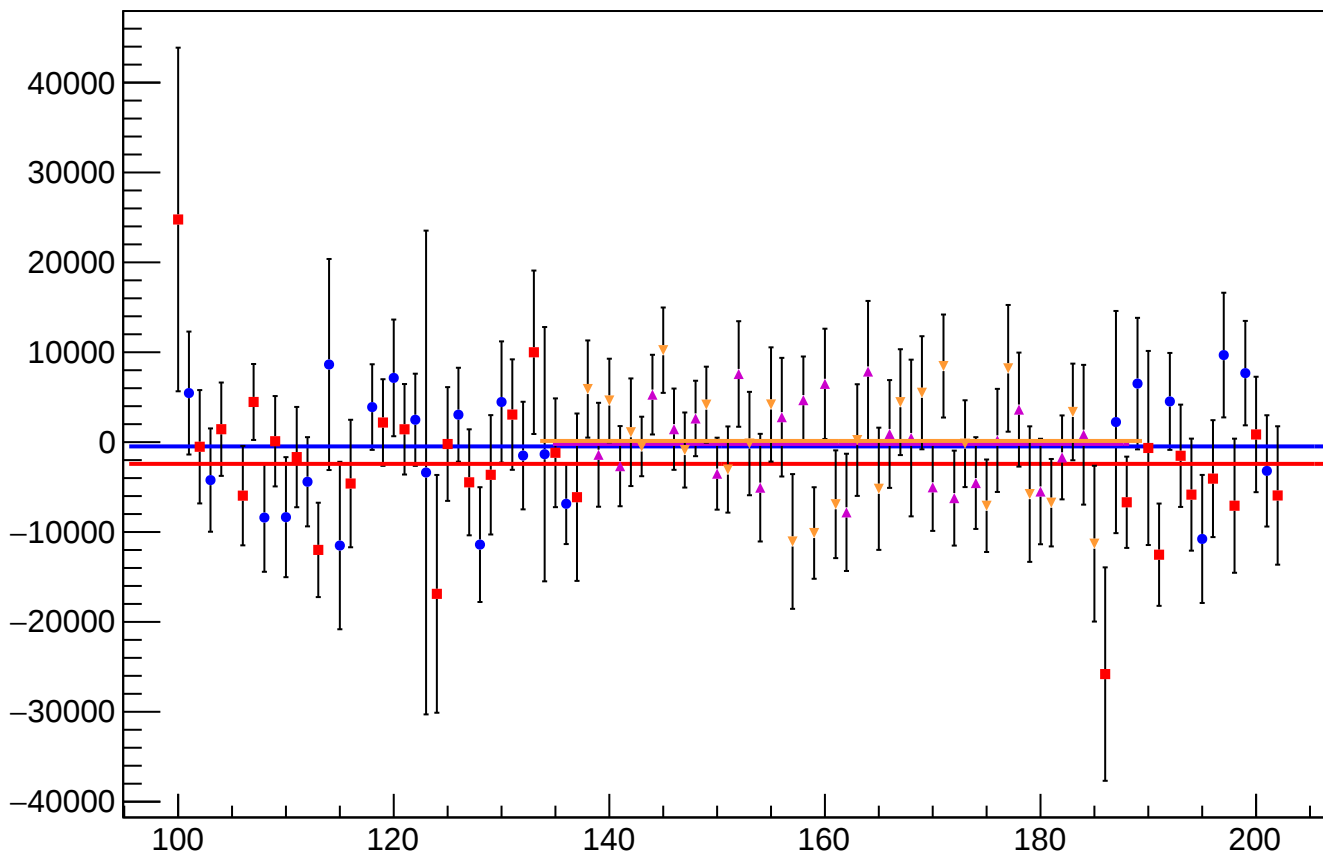
Right: 4908.191+/-1.081  $\chi^2/\text{NDF}$ : 1360204.5/16

In: 5290.811+/-1.736  $\chi^2/\text{NDF}$ : 91761.9/6

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

All: 4908.191+/-1.081  $\chi^2/\text{NDF}$ : 1360204.5/16

asym\_atl\_dd\_atr\_dd\_avg\_mean vs Slug, Sign Corrected



Right In:  $-476.369 \pm 1301.896$   $\chi^2/\text{NDF}: 23.7/23$

Left Out:  $132.142 \pm 1065.543$   $\chi^2/\text{NDF}: 28.1/24$

Right Out:  $-2418.862 \pm 1155.935$   $\chi^2/\text{NDF}: 24.3/28$

Left In:  $-200.182 \pm 1123.499$   $\chi^2/\text{NDF}: 14.7/22$

Left:  $-25.227 \pm 773.130$   $\chi^2/\text{NDF}: 42.9/47$

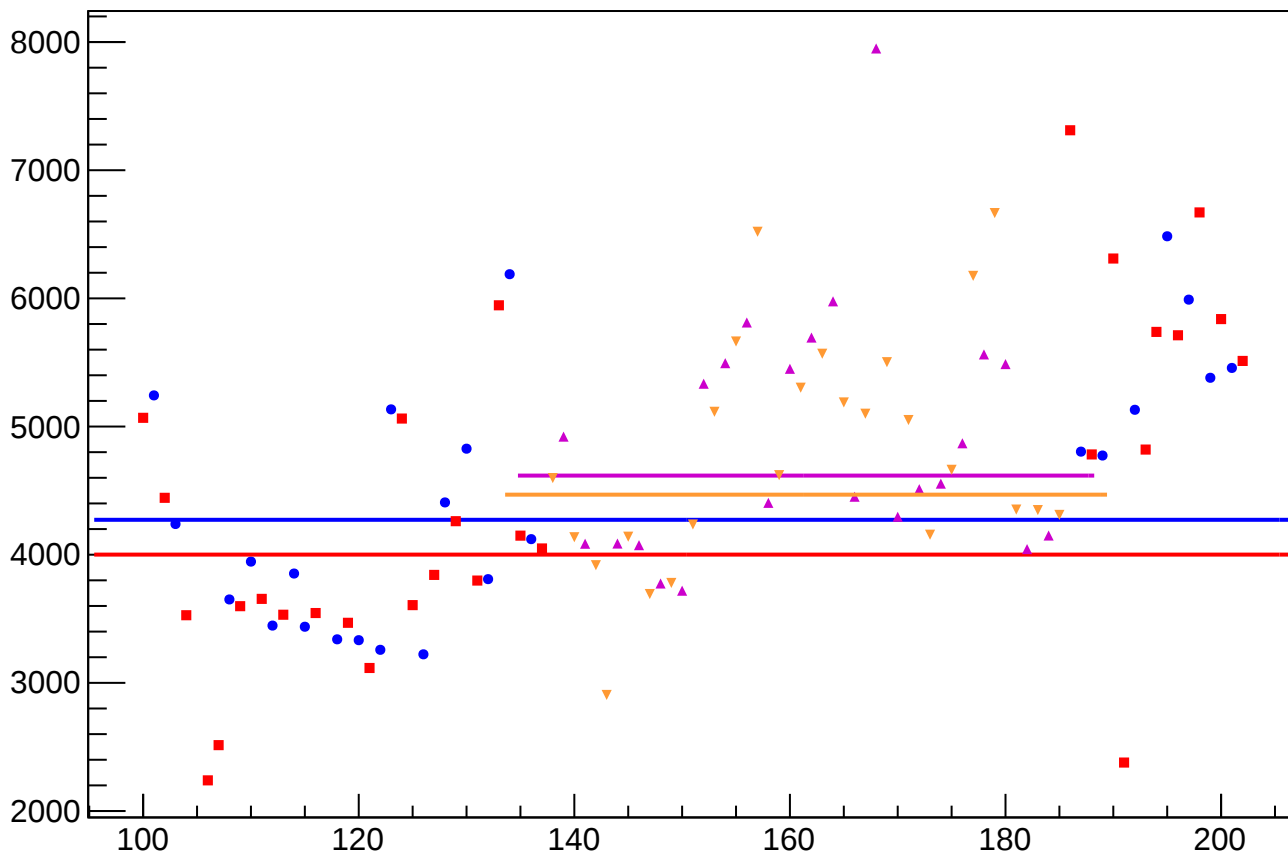
Right:  $-1562.568 \pm 864.387$   $\chi^2/\text{NDF}: 49.2/52$

In:  $-318.070 \pm 850.570$   $\chi^2/\text{NDF}: 38.5/46$

Out:  $-1039.731 \pm 783.462$   $\chi^2/\text{NDF}: 55.0/53$

All:  $-708.488 \pm 576.257$   $\chi^2/\text{NDF}: 93.9/100$

asym\_atl\_dd\_atr\_dd\_avg\_rms vs Slug, Sign Corrected



Right In: 4272.321 $\pm$ 0.921  $\chi^2/\text{NDF}$ : 1010862.2/23

Left Out: 4468.520 $\pm$ 0.753  $\chi^2/\text{NDF}$ : 1380601.0/24

Right Out: 4000.752 $\pm$ 0.812  $\chi^2/\text{NDF}$ : 2084108.0/28

Left In: 4617.293 $\pm$ 0.794  $\chi^2/\text{NDF}$ : 999599.8/22

Left: 4538.970 $\pm$ 0.547  $\chi^2/\text{NDF}$ : 2398663.8/47

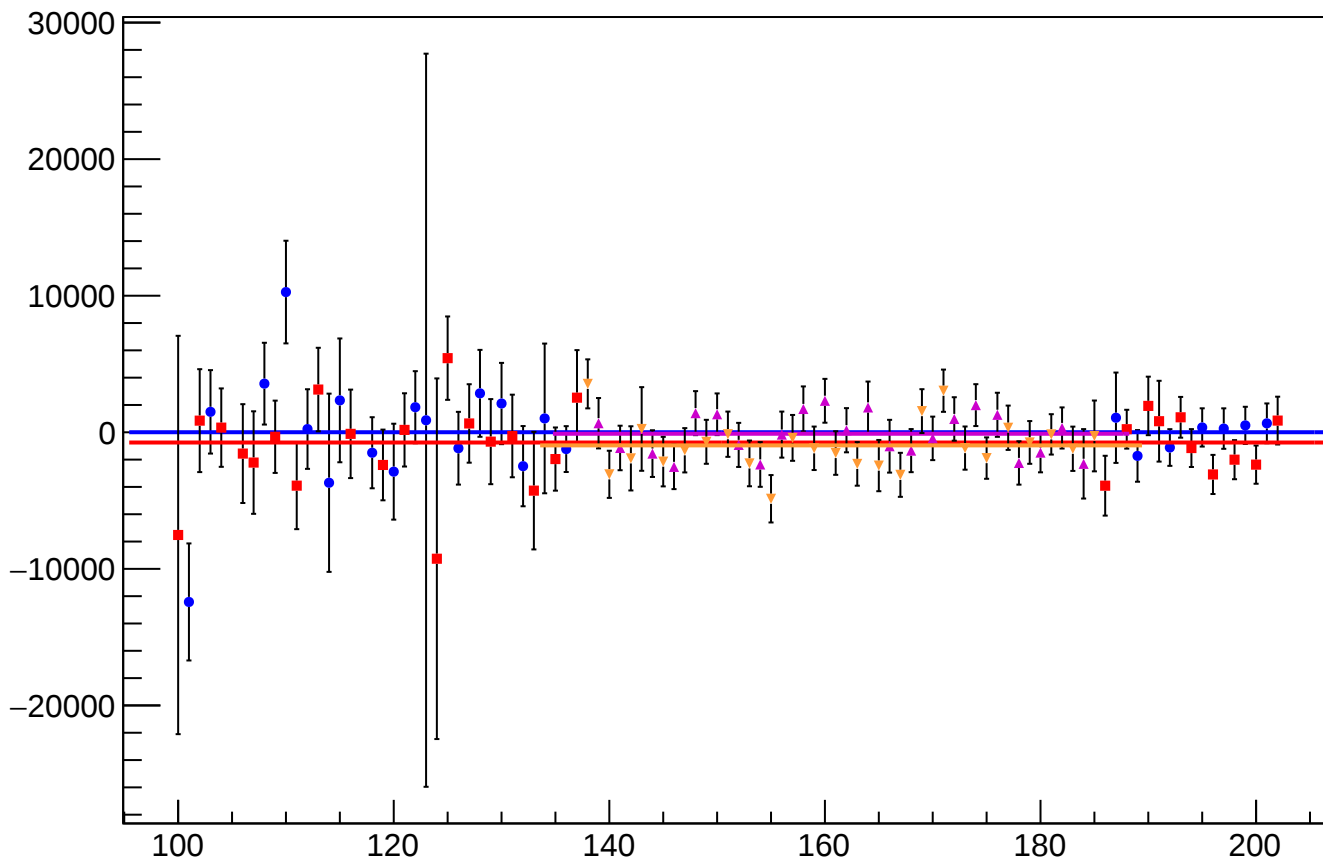
Right: 4119.608 $\pm$ 0.609  $\chi^2/\text{NDF}$ : 3143908.9/52

In: 4470.041 $\pm$ 0.601  $\chi^2/\text{NDF}$ : 2090949.5/46

Out: 4252.142 $\pm$ 0.552  $\chi^2/\text{NDF}$ : 3643000.3/53

All: 4351.838 $\pm$ 0.407  $\chi^2/\text{NDF}$ : 5805153.6/10

reg\_asym\_atl\_dd\_atr\_dd\_dd\_mean vs Slug, Sign Corrected



Right In:  $4.757 \pm 462.931$   $\chi^2/\text{NDF}: 24.5/23$

Left Out:  $-958.410 \pm 339.496$   $\chi^2/\text{NDF}: 28.5/24$

Right Out:  $-748.671 \pm 420.224$   $\chi^2/\text{NDF}: 22.2/28$

Left In:  $-107.512 \pm 343.663$   $\chi^2/\text{NDF}: 19.5/22$

Left:  $-538.150 \pm 241.520$   $\chi^2/\text{NDF}: 51.1/47$

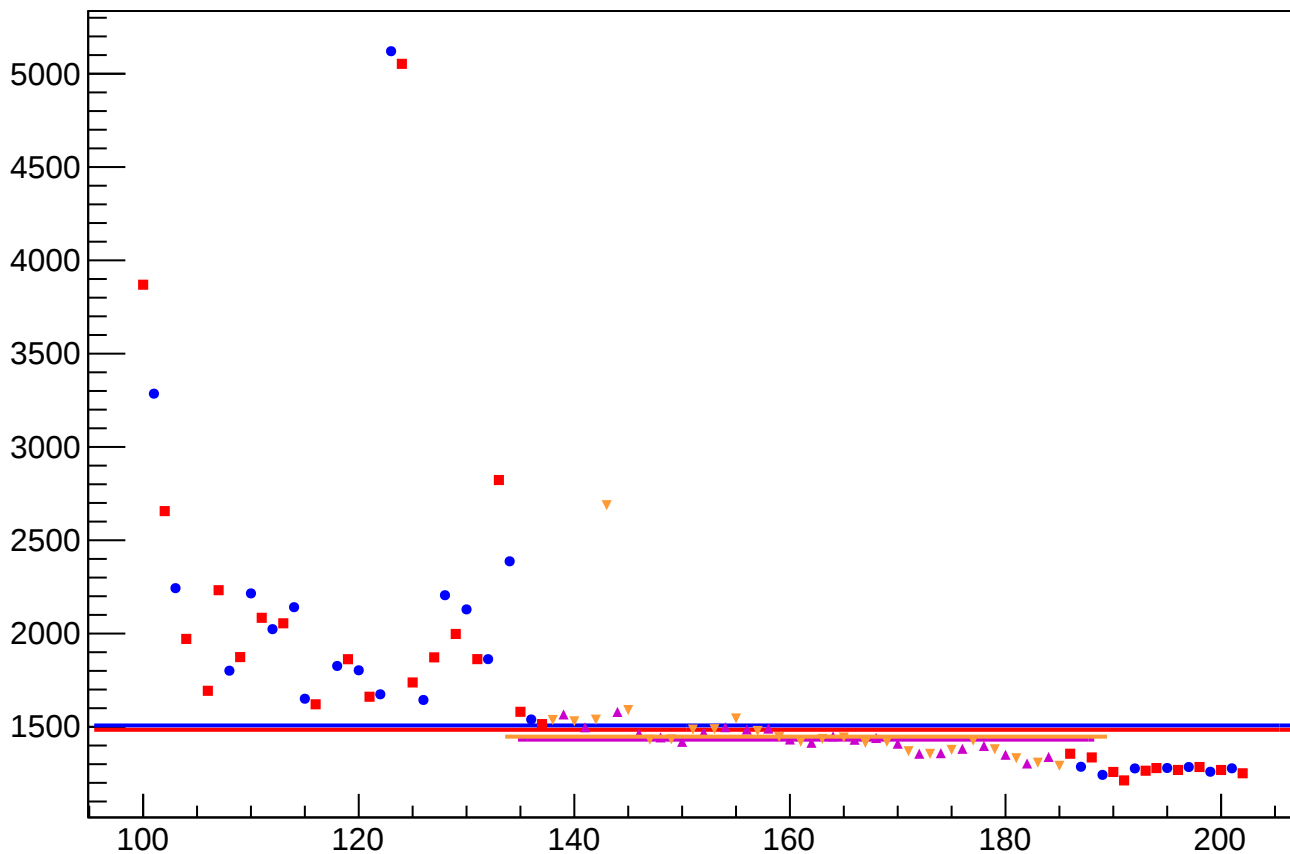
Right:  $-408.305 \pm 311.149$   $\chi^2/\text{NDF}: 48.1/52$

In:  $-67.623 \pm 275.938$   $\chi^2/\text{NDF}: 44.0/46$

Out:  $-875.579 \pm 264.082$   $\chi^2/\text{NDF}: 50.8/53$

All:  $-489.331 \pm 190.788$   $\chi^2/\text{NDF}: 99.3/100$

reg\_asym\_atl\_dd\_atr\_dd\_dd\_rms vs Slug, Sign Corrected



Right In: 1507.482+/-0.327  $\chi^2/\text{NDF}$ : 1314240.6/23

Left Out: 1447.554+/-0.240  $\chi^2/\text{NDF}$ : 419254.7/24

Right Out: 1484.297+/-0.297  $\chi^2/\text{NDF}$ : 1430308.5/28

Left In: 1431.456+/-0.243  $\chi^2/\text{NDF}$ : 75130.4/22

Left: 1439.603+/-0.171  $\chi^2/\text{NDF}$ : 496606.4/47

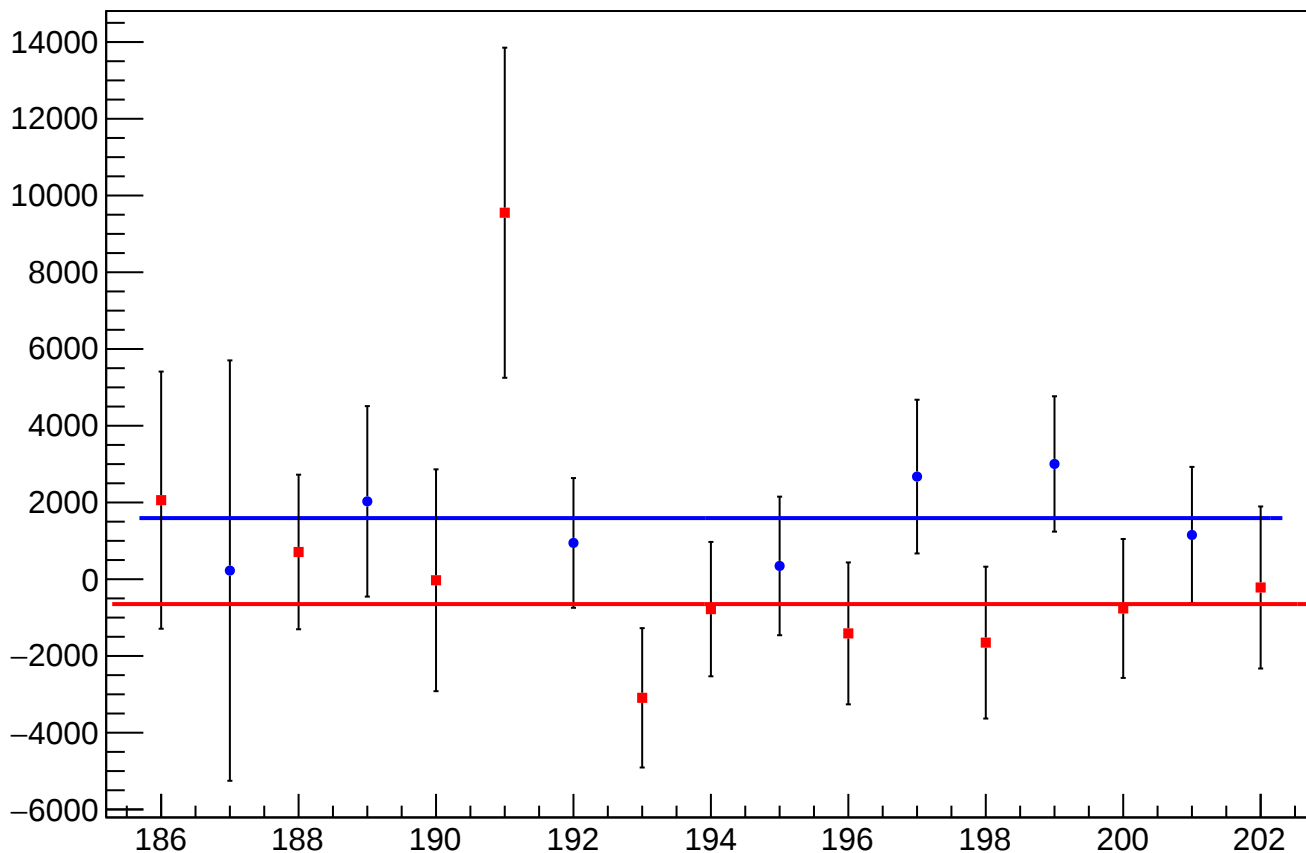
Right: 1494.771+/-0.220  $\chi^2/\text{NDF}$ : 2747299.6/52

In: 1458.468+/-0.195  $\chi^2/\text{NDF}$ : 1424148.1/46

Out: 1462.065+/-0.187  $\chi^2/\text{NDF}$ : 1858814.5/53

All: 1460.345+/-0.135  $\chi^2/\text{NDF}$ : 3283140.0/100

asym\_atl\_dd\_atr\_dd\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: 1592.919+/-757.937  $\chi^2/\text{NDF}$ : 1.7/6

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Right Out: -648.055+/-671.784  $\chi^2/\text{NDF}$ : 9.1/9

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

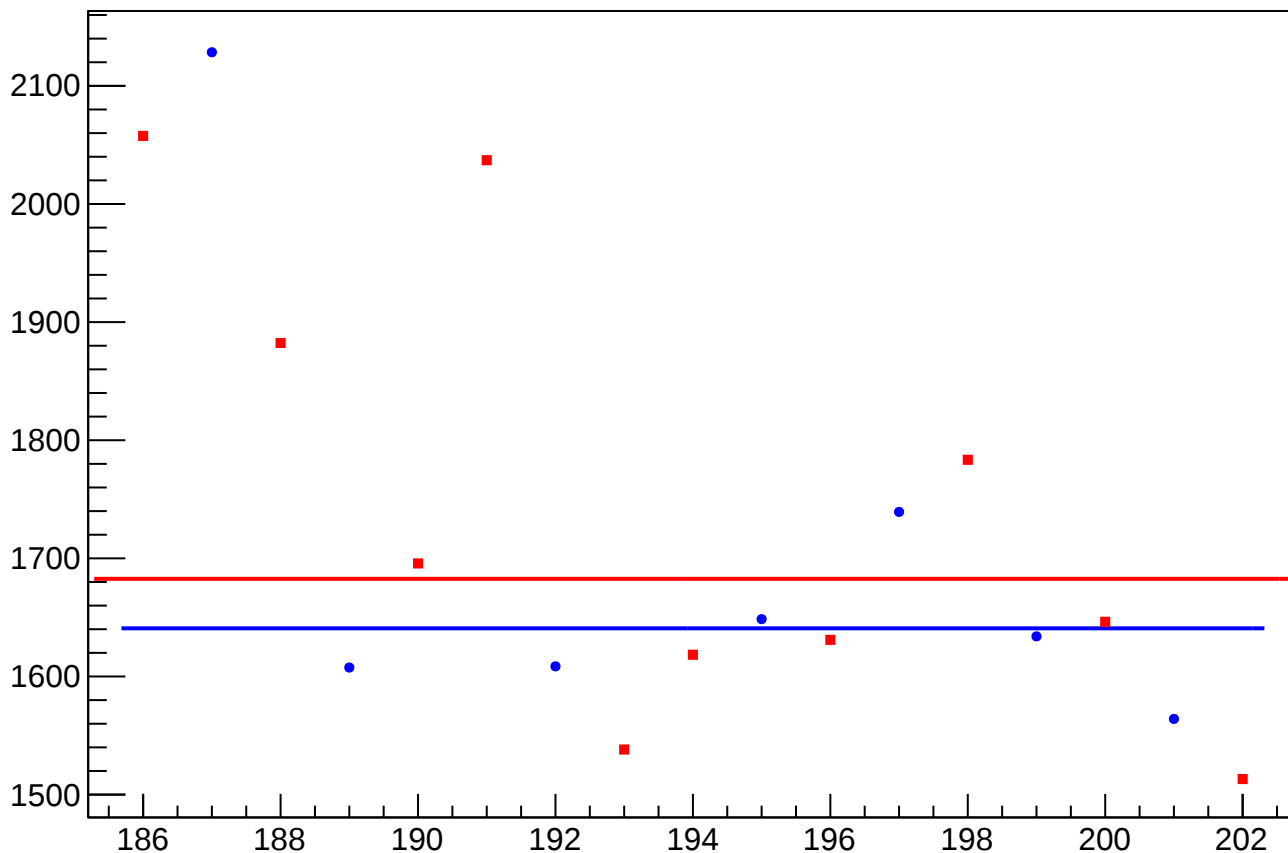
Right: 337.882+/-502.735  $\chi^2/\text{NDF}$ : 15.7/16

In: 1592.919+/-757.937  $\chi^2/\text{NDF}$ : 1.7/6

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

All: 337.882+/-502.735  $\chi^2/\text{NDF}$ : 15.7/16

asym\_atl\_dd\_atr\_dd\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 1640.766 $\pm$ 0.536  $\chi^2$ /NDF: 25581.4/6

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:0.0/0

Right Out: 1682.685 $\pm$ 0.475  $\chi^2$ /NDF: 94109.6/9

Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:0.0/0

Left: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

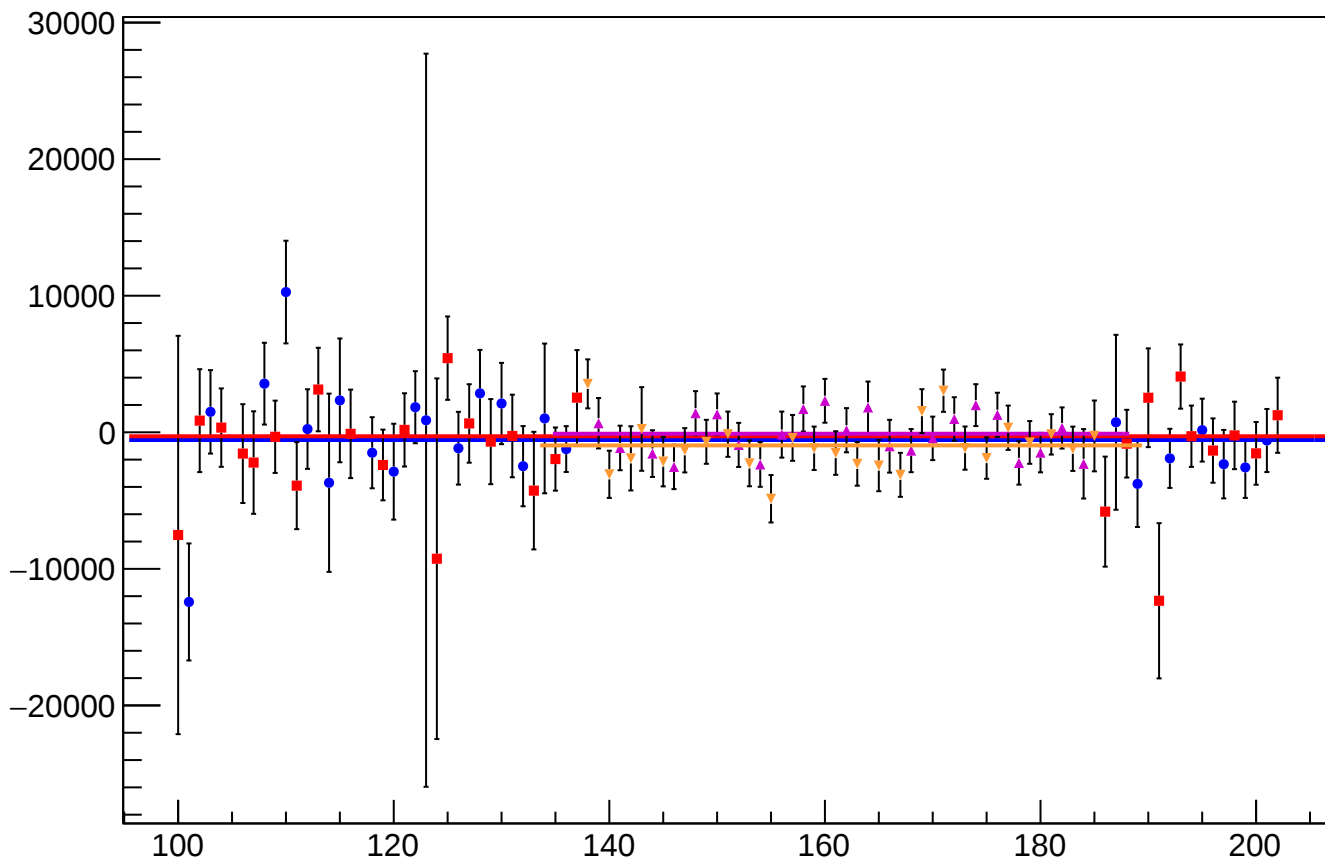
Right: 1664.242 $\pm$ 0.355  $\chi^2$ /NDF: 123117.2/16

In: 1640.766 $\pm$ 0.536  $\chi^2$ /NDF:25581.4/6

Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:0.0/0

All: 1664.242 $\pm$ 0.355  $\chi^2$ /NDF: 123117.2/16

asym\_atl\_dd\_atr\_dd\_dd\_mean vs Slug, Sign Corrected



Right In: -563.927+/-593.569  $\chi^2/\text{NDF}$ : 26.0/23

Left Out: -958.410+/-339.496  $\chi^2/\text{NDF}$ : 28.5/24

Right Out: -291.347+/-557.087  $\chi^2/\text{NDF}$ : 21.4/28

Left In: -107.512+/-343.663  $\chi^2/\text{NDF}$ : 19.5/22

Left: -538.150+/-241.520  $\chi^2/\text{NDF}$ : 51.1/47

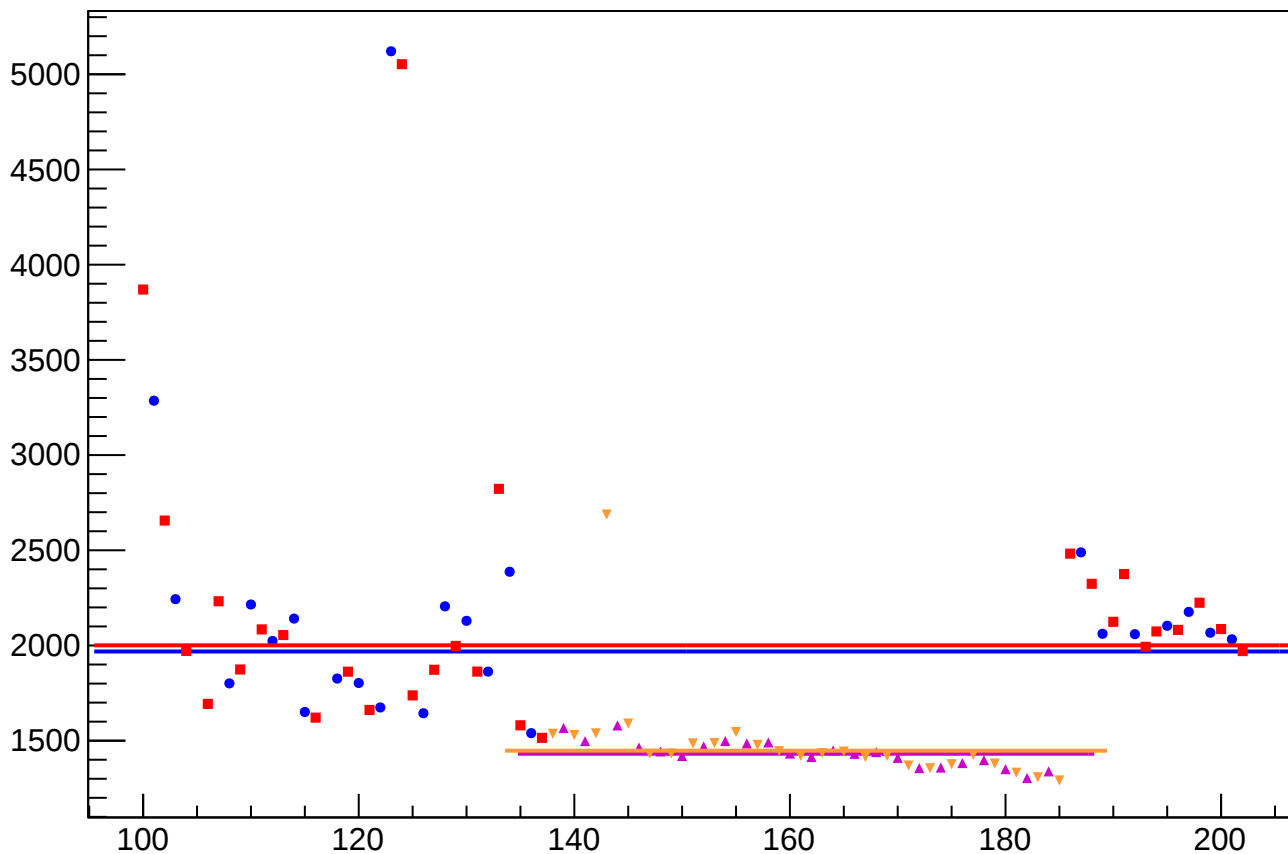
Right: -419.004+/-406.205  $\chi^2/\text{NDF}$ : 47.5/52

In: -222.098+/-297.411  $\chi^2/\text{NDF}$ : 45.9/46

Out: -777.763+/-289.905  $\chi^2/\text{NDF}$ : 51.0/53

All: -507.031+/-207.597  $\chi^2/\text{NDF}$ : 98.7/100

asym\_atl\_dd\_atr\_dd\_dd\_rms vs Slug, Sign Corrected



Right In: 1968.515 $\pm$ 0.420  $\chi^2$ /NDF: 530729.9/23

Left Out: 1447.554 $\pm$ 0.240  $\chi^2$ /NDF: 419254.7/24

Right Out: 2000.875 $\pm$ 0.394  $\chi^2$ /NDF: 592680.3/28

Left In: 1431.456 $\pm$ 0.243  $\chi^2$ /NDF: 75130.4/22

Left: 1439.603 $\pm$ 0.171  $\chi^2$ /NDF: 496606.4/47

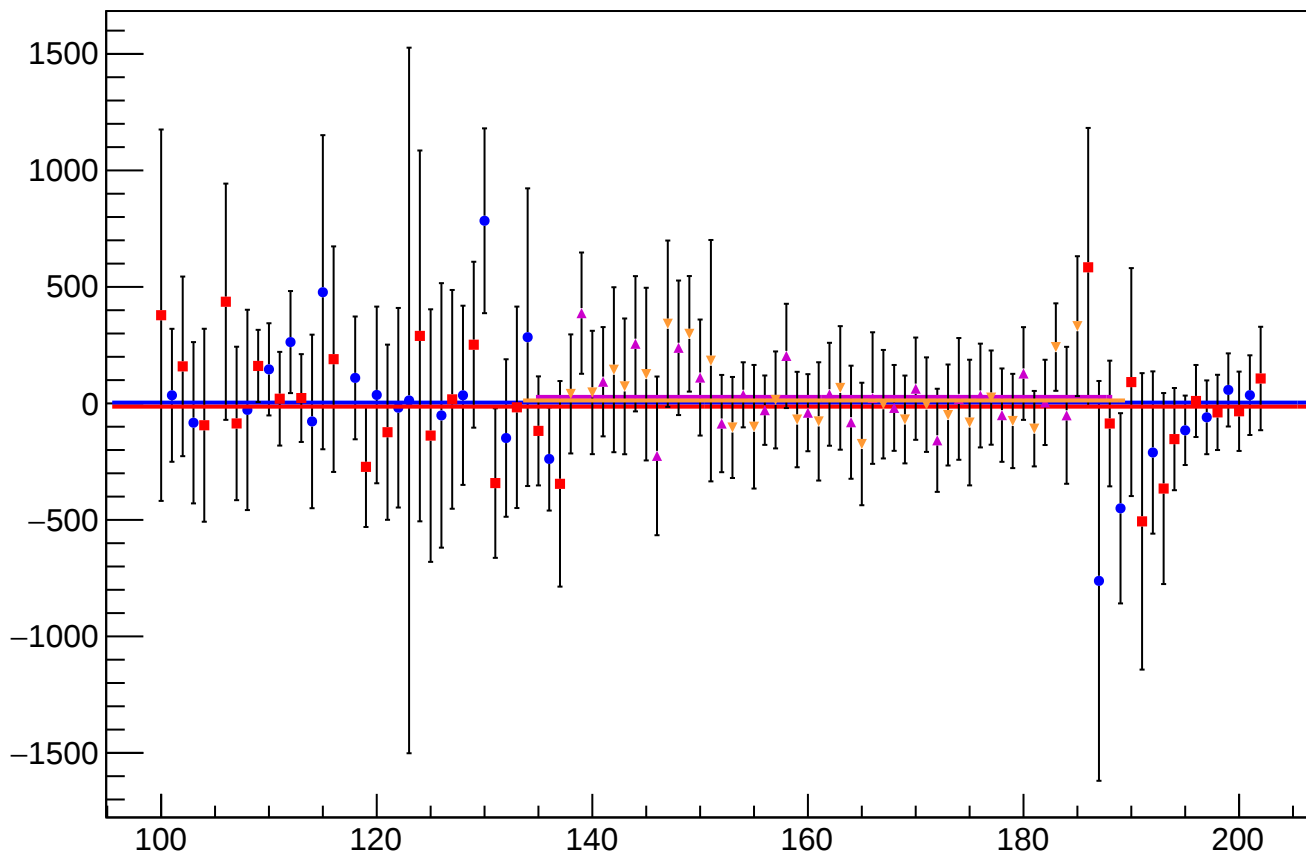
Right: 1985.720 $\pm$ 0.287  $\chi^2$ /NDF: 1126570.7/52

In: 1566.289 $\pm$ 0.210  $\chi^2$ /NDF: 1832126.2/46

Out: 1597.401 $\pm$ 0.205  $\chi^2$ /NDF: 2450679.2/53

All: 1582.242 $\pm$ 0.147  $\chi^2$ /NDF: 4294028.4/100

asym\_bcm\_an\_us\_bcm\_an\_ds\_agg\_avg\_mean vs Slug, Sign Corrected



Right In: 3.426 $\pm$ 54.866  $\chi^2$ /NDF: 11.6/23

Left Out: 12.618 $\pm$ 47.486  $\chi^2$ /NDF:7.7/24

Right Out: -13.896 $\pm$ 50.709  $\chi^2$ /NDF: 9.7/28

Left In: 27.921 $\pm$ 44.523  $\chi^2$ /NDF:6.5/22

Left: 20.762 $\pm$ 32.480  $\chi^2$ /NDF: 14.3/47

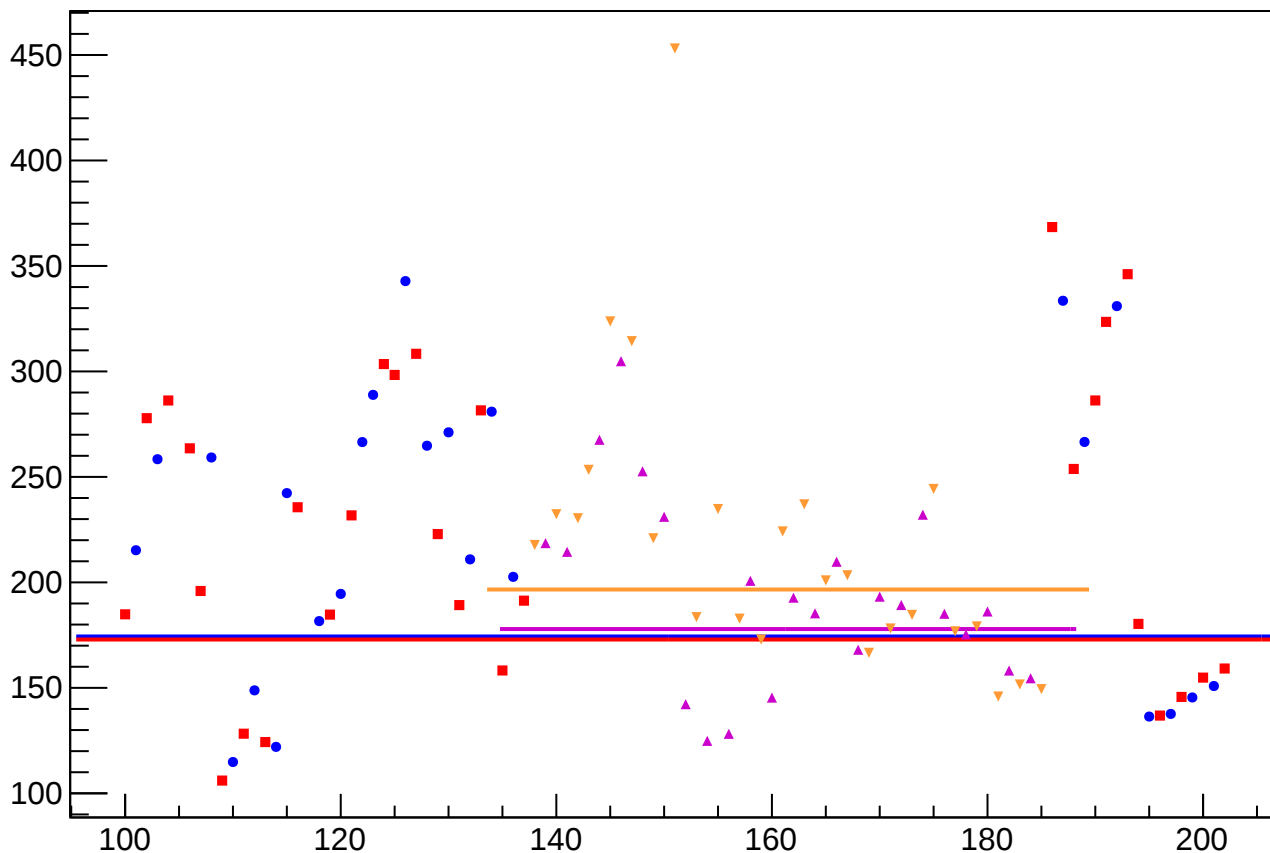
Right: -5.916 $\pm$ 37.240  $\chi^2$ /NDF: 21.3/52

In: 18.195 $\pm$ 34.572  $\chi^2$ /NDF:18.2/46

Out: 0.231 $\pm$ 34.661  $\chi^2$ /NDF:17.5/53

All: 9.236 $\pm$ 24.478  $\chi^2$ /NDF: 35.9/100

asym\_bcm\_an\_us\_bcm\_an\_ds\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 174.349 $\pm$ 0.039  $\chi^2/\text{NDF}$ : 2051538.9/23

Left Out: 196.620 $\pm$ 0.034  $\chi^2/\text{NDF}$ :1793507.9/24

Right Out: 172.911 $\pm$ 0.036  $\chi^2/\text{NDF}$ : 2739951.9/28

Left In: 177.878 $\pm$ 0.031  $\chi^2/\text{NDF}$ :1644086.7/22

Left: 186.646 $\pm$ 0.023  $\chi^2/\text{NDF}$ : 3603390.3/47

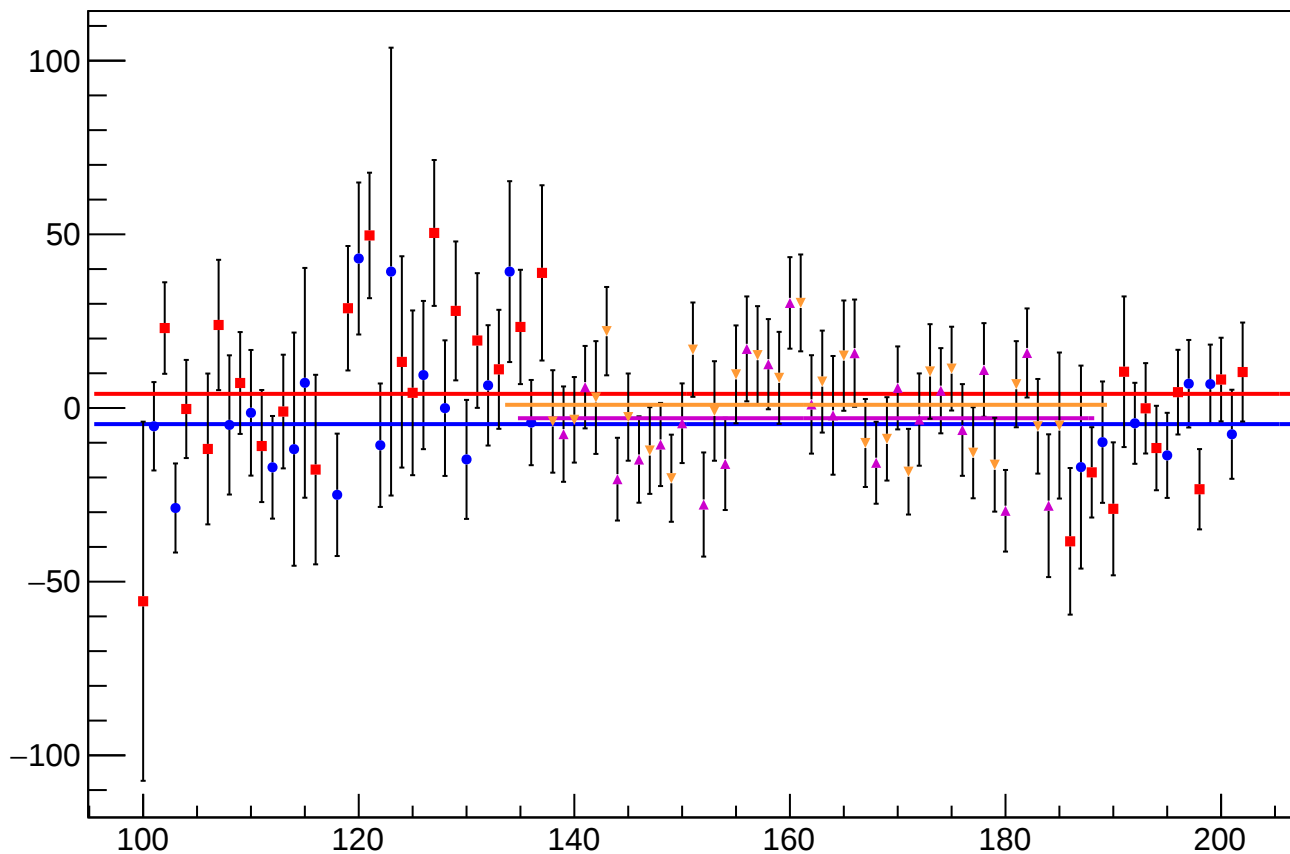
Right: 173.574 $\pm$ 0.026  $\chi^2/\text{NDF}$ : 4792231.7/52

In: 176.477 $\pm$ 0.024  $\chi^2/\text{NDF}$ :3700613.3/46

Out: 185.543 $\pm$ 0.025  $\chi^2/\text{NDF}$ :4766386.0/53

All: 180.998 $\pm$ 0.017  $\chi^2/\text{NDF}$ : 8535591.2/100

asym\_bcm\_an\_us\_bcm\_an\_ds\_agg\_dd\_mean vs Slug, Sign Corrected



Right In:  $-4.640 \pm 3.312$   $\chi^2/\text{NDF}$ : 18.0/23

Left Out:  $0.920 \pm 2.696$   $\chi^2/\text{NDF}$ : 24.0/24

Right Out:  $4.072 \pm 3.064$   $\chi^2/\text{NDF}$ : 43.4/28

Left In:  $-2.941 \pm 2.745$   $\chi^2/\text{NDF}$ : 31.0/22

Left:  $-0.976 \pm 1.923$   $\chi^2/\text{NDF}$ : 56.0/47

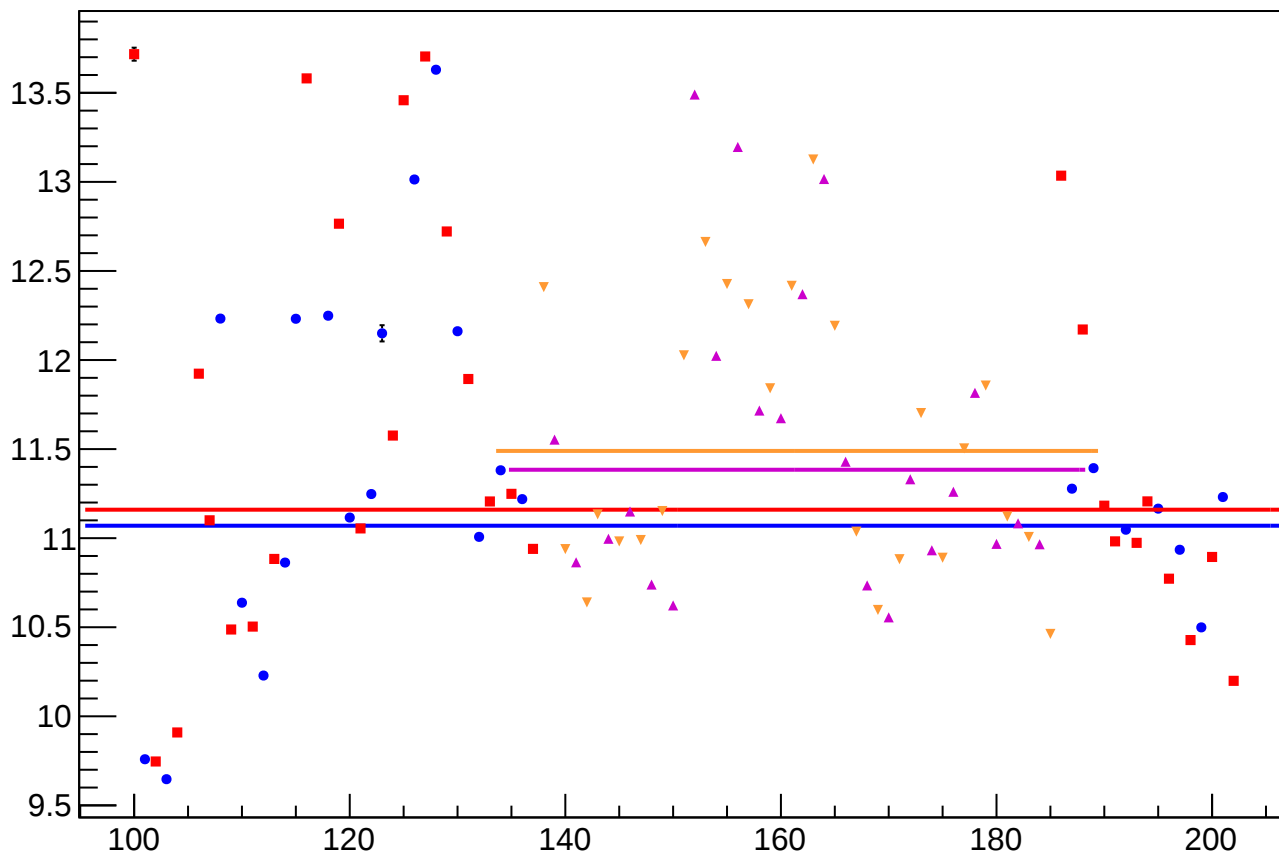
Right:  $0.055 \pm 2.249$   $\chi^2/\text{NDF}$ : 65.1/52

In:  $-3.633 \pm 2.113$   $\chi^2/\text{NDF}$ : 49.2/46

Out:  $2.296 \pm 2.024$   $\chi^2/\text{NDF}$ : 67.9/53

All:  $-0.541 \pm 1.462$   $\chi^2/\text{NDF}$ : 121.2/100

asym\_bcm\_an\_us\_bcm\_an\_ds\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 11.070 $\pm$ 0.002  $\chi^2$ /NDF: 138699.3/23

Left Out: 11.490 $\pm$ 0.002  $\chi^2$ /NDF:132399.1/24

Right Out: 11.160 $\pm$ 0.002  $\chi^2$ /NDF: 198385.7/28

Left In: 11.384 $\pm$ 0.002  $\chi^2$ /NDF:149799.6/22

Left: 11.438 $\pm$ 0.001  $\chi^2$ /NDF: 283707.5/47

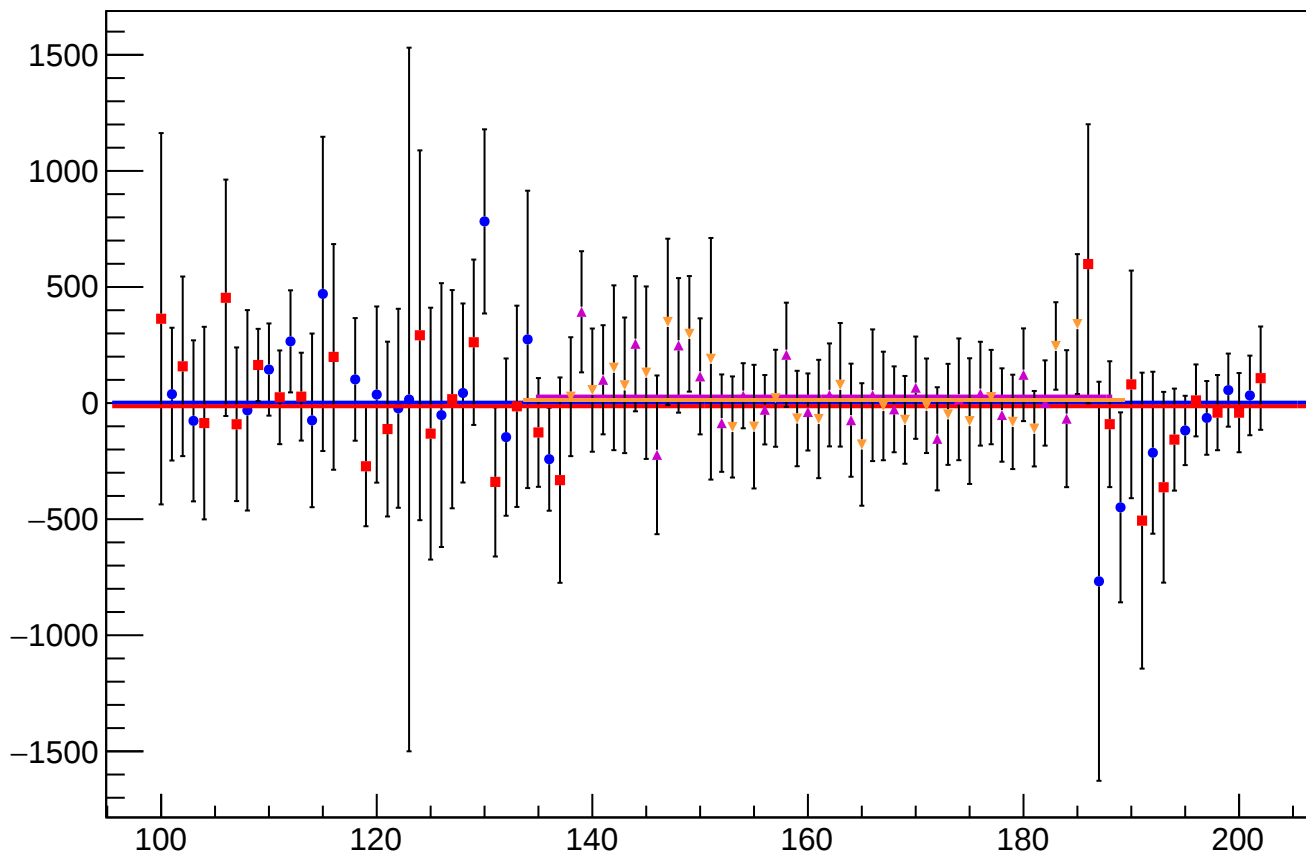
Right: 11.118 $\pm$ 0.002  $\chi^2$ /NDF: 337880.2/52

In: 11.256 $\pm$ 0.001  $\chi^2$ /NDF:299170.9/46

Out: 11.346 $\pm$ 0.001  $\chi^2$ /NDF:343855.9/53

All: 11.303 $\pm$ 0.001  $\chi^2$ /NDF: 644903.2/100

asym\_bcm\_an\_us\_bcm\_an\_ds3\_agg\_avg\_mean vs Slug, Sign Corrected



Right In:  $1.841 \pm 55.008$   $\chi^2/\text{NDF}: 11.5/23$

Left Out:  $13.323 \pm 47.662$   $\chi^2/\text{NDF}: 7.9/24$

Right Out:  $-13.651 \pm 50.849$   $\chi^2/\text{NDF}: 9.8/28$

Left In:  $28.050 \pm 44.681$   $\chi^2/\text{NDF}: 6.6/22$

Left:  $21.161 \pm 32.597$   $\chi^2/\text{NDF}: 14.6/47$

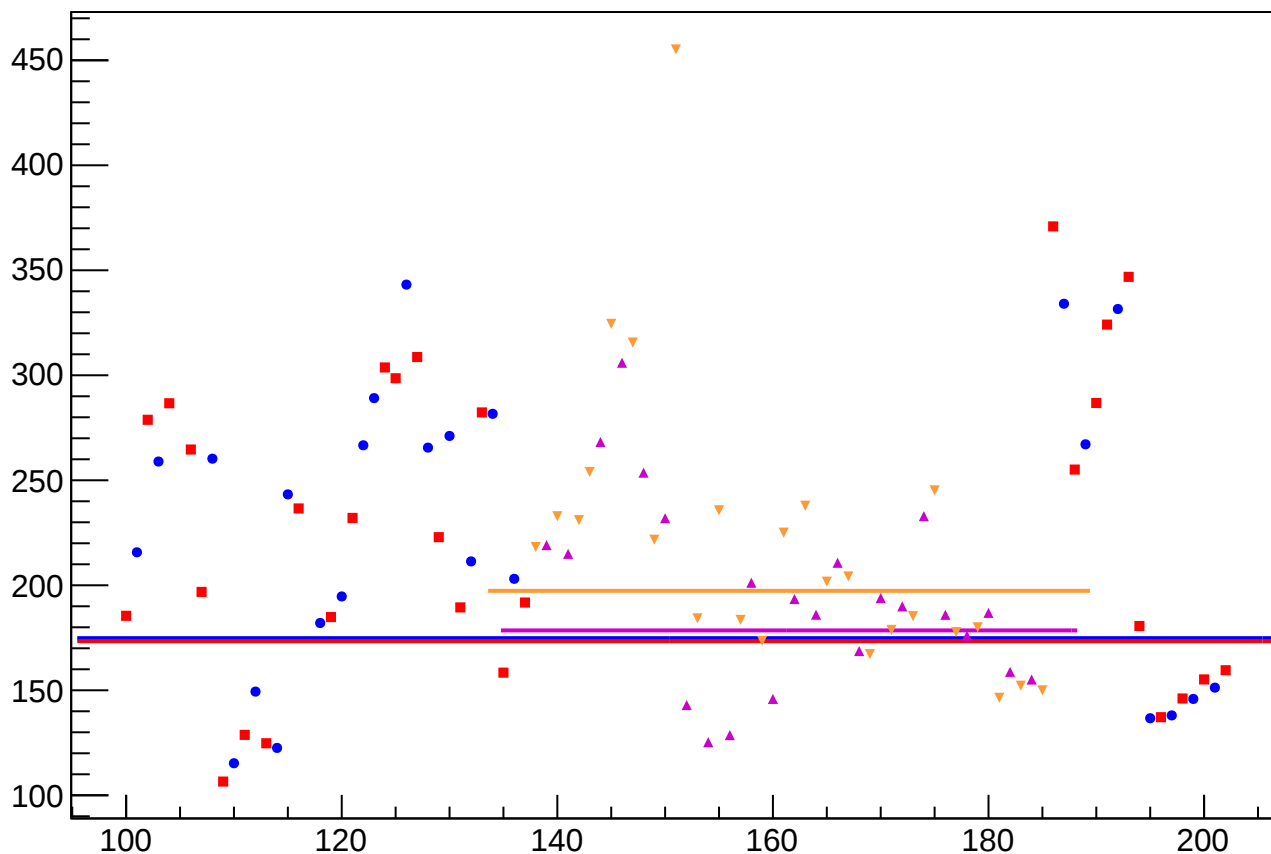
Right:  $-6.513 \pm 37.339$   $\chi^2/\text{NDF}: 21.4/52$

In:  $17.632 \pm 34.682$   $\chi^2/\text{NDF}: 18.3/46$

Out:  $0.707 \pm 34.774$   $\chi^2/\text{NDF}: 17.9/53$

All:  $9.192 \pm 24.556$   $\chi^2/\text{NDF}: 36.3/100$

asym\_bcm\_an\_us\_bcm\_an\_ds3\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 174.822 $\pm$ 0.039  $\chi^2$ /NDF: 2046182.7/23

Left Out: 197.355 $\pm$ 0.034  $\chi^2$ /NDF:1790824.5/24

Right Out: 173.401 $\pm$ 0.036  $\chi^2$ /NDF: 2735896.7/28

Left In: 178.512 $\pm$ 0.032  $\chi^2$ /NDF:1642304.1/22

Left: 187.326 $\pm$ 0.023  $\chi^2$ /NDF: 3599509.2/47

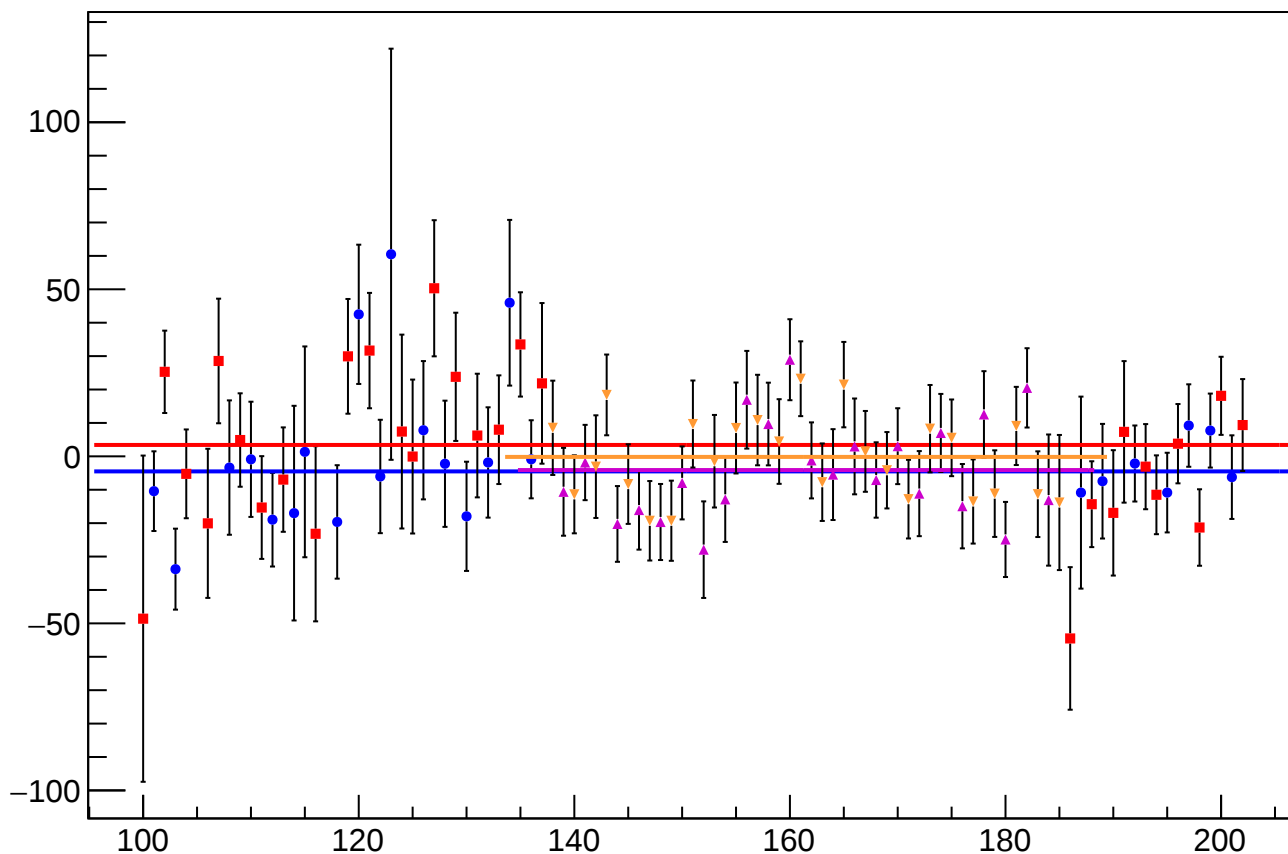
Right: 174.056 $\pm$ 0.026  $\chi^2$ /NDF: 4782798.6/52

In: 177.045 $\pm$ 0.025  $\chi^2$ /NDF:3693909.4/46

Out: 186.152 $\pm$ 0.025  $\chi^2$ /NDF:4762978.4/53

All: 181.587 $\pm$ 0.017  $\chi^2$ /NDF: 8525659.4/100

asym\_bcm\_an\_us\_bcm\_an\_ds3\_agg\_dd\_mean vs Slug, Sign Corrected



Right In:  $-4.508 \pm 3.191$   $\chi^2/\text{NDF}: 22.6/23$

Left Out:  $-0.170 \pm 2.520$   $\chi^2/\text{NDF}: 24.4/24$

Right Out:  $3.410 \pm 2.963$   $\chi^2/\text{NDF}: 45.3/28$

Left In:  $-4.107 \pm 2.577$   $\chi^2/\text{NDF}: 31.5/22$

Left:  $-2.095 \pm 1.802$   $\chi^2/\text{NDF}: 57.1/47$

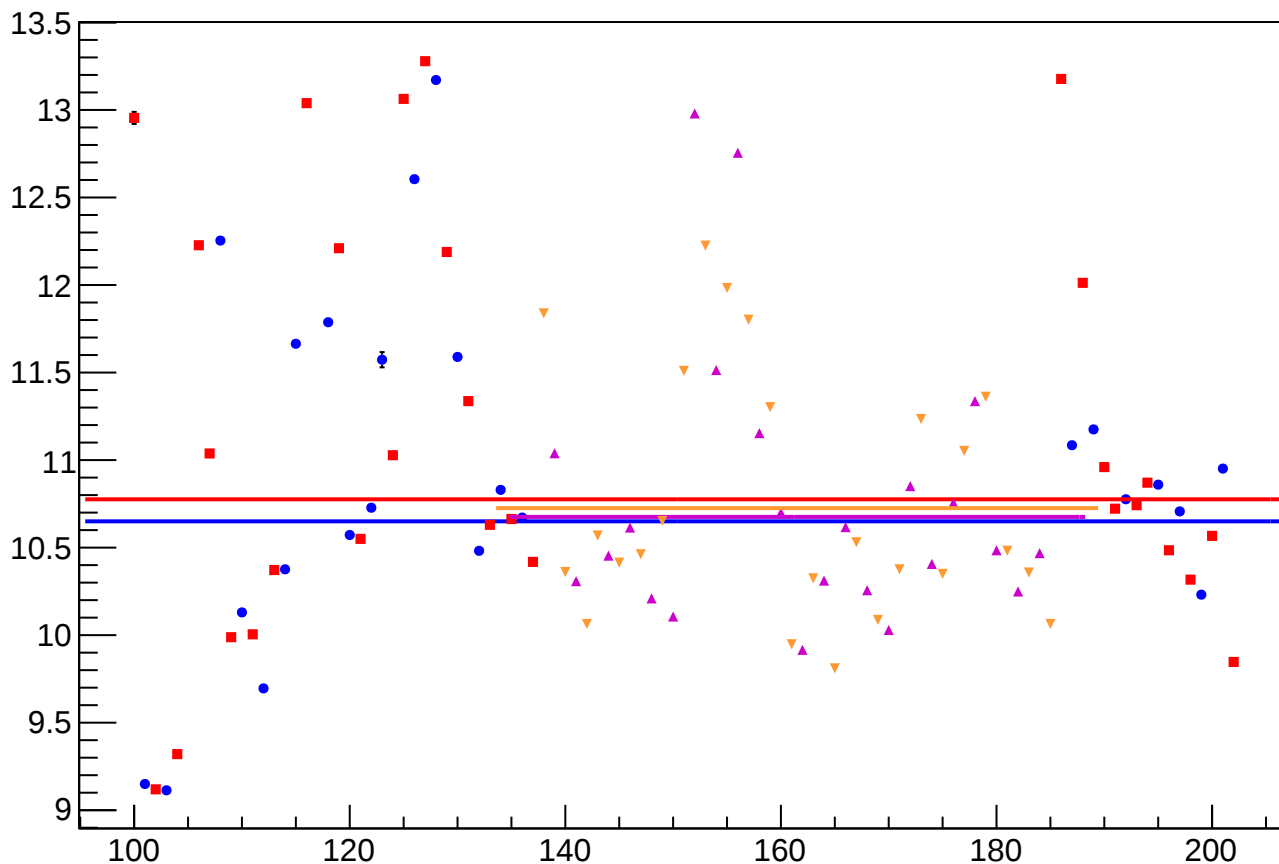
Right:  $-0.256 \pm 2.171$   $\chi^2/\text{NDF}: 71.2/52$

In:  $-4.265 \pm 2.005$   $\chi^2/\text{NDF}: 54.1/46$

Out:  $1.333 \pm 1.920$   $\chi^2/\text{NDF}: 70.5/53$

All:  $-1.345 \pm 1.387$   $\chi^2/\text{NDF}: 128.7/100$

asym\_bcm\_an\_us\_bcm\_an\_ds3\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 10.650 $\pm$ 0.002  $\chi^2$ /NDF: 166940.2/23

Left Out: 10.725 $\pm$ 0.002  $\chi^2$ /NDF:132170.8/24

Right Out: 10.776 $\pm$ 0.002  $\chi^2$ /NDF: 236643.4/28

Left In: 10.675 $\pm$ 0.002  $\chi^2$ /NDF:145938.2/22

Left: 10.701 $\pm$ 0.001  $\chi^2$ /NDF: 278494.3/47

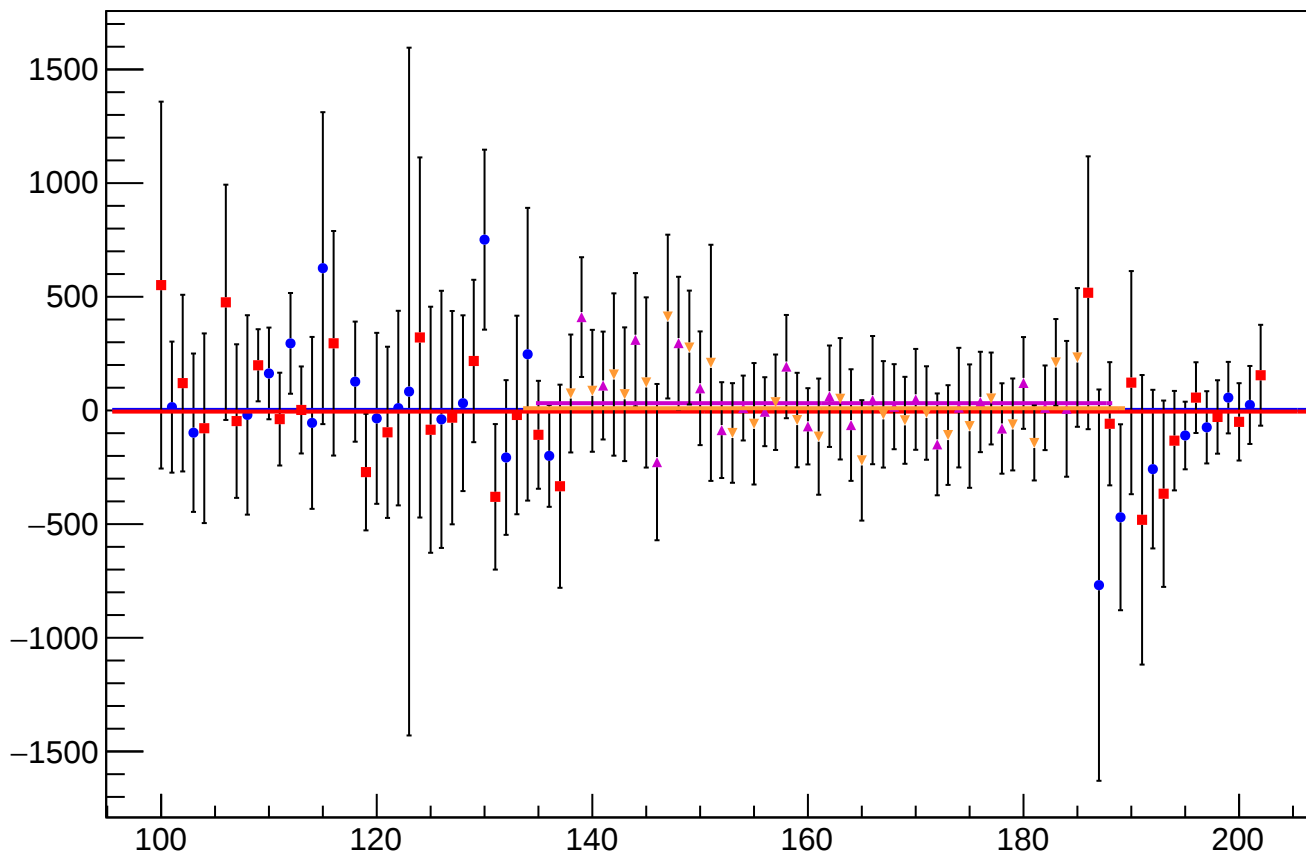
Right: 10.718 $\pm$ 0.002  $\chi^2$ /NDF: 405257.4/52

In: 10.665 $\pm$ 0.001  $\chi^2$ /NDF:312954.7/46

Out: 10.747 $\pm$ 0.001  $\chi^2$ /NDF:369152.7/53

All: 10.708 $\pm$ 0.001  $\chi^2$ /NDF: 683822.1/100

asym\_bcm\_dg\_us\_bcm\_an\_ds\_agg\_avg\_mean vs Slug, Sign Corrected



Right In: 2.484 $\pm$ 55.152  $\chi^2$ /NDF: 12.1/23

Left Out: 9.801 $\pm$ 47.979  $\chi^2$ /NDF: 7.5/24

Right Out: -5.059 $\pm$ 51.077  $\chi^2$ /NDF: 10.7/28

Left In: 31.989 $\pm$ 45.038  $\chi^2$ /NDF: 7.2/22

Left: 21.596 $\pm$ 32.837  $\chi^2$ /NDF: 14.8/47

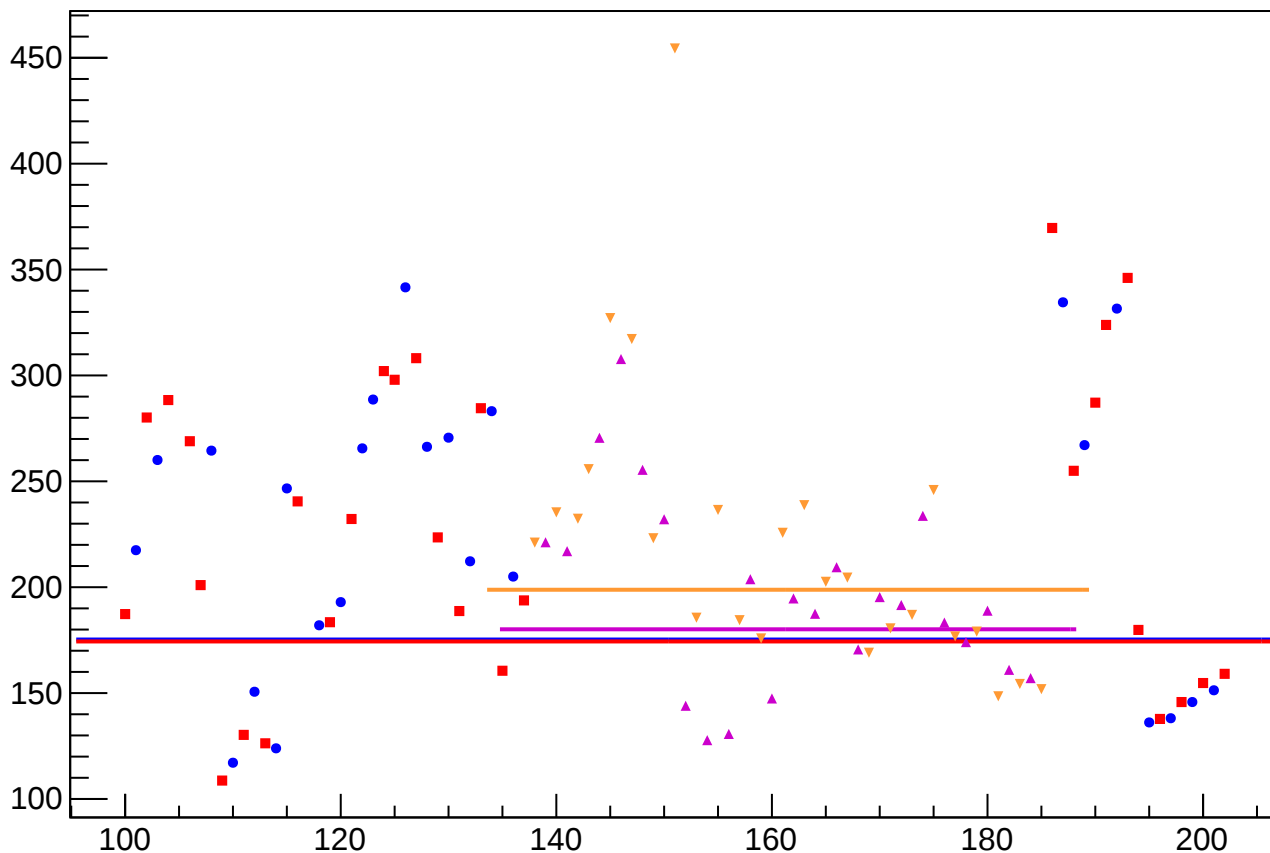
Right: -1.577 $\pm$ 37.475  $\chi^2$ /NDF: 22.8/52

In: 20.185 $\pm$ 34.884  $\chi^2$ /NDF: 19.5/46

Out: 2.835 $\pm$ 34.970  $\chi^2$ /NDF: 18.3/53

All: 11.531 $\pm$ 24.697  $\chi^2$ /NDF: 37.8/100

asym\_bcm\_dg\_us\_bcm\_an\_ds\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 175.294 $\pm$ 0.039  $\chi^2$ /NDF: 2042236.7/23

Left Out: 198.800 $\pm$ 0.034  $\chi^2$ /NDF:1763119.1/24

Right Out: 174.381 $\pm$ 0.036  $\chi^2$ /NDF: 2689916.6/28

Left In: 180.123 $\pm$ 0.032  $\chi^2$ /NDF:1593842.6/22

Left: 188.872 $\pm$ 0.023  $\chi^2$ /NDF: 3518071.9/47

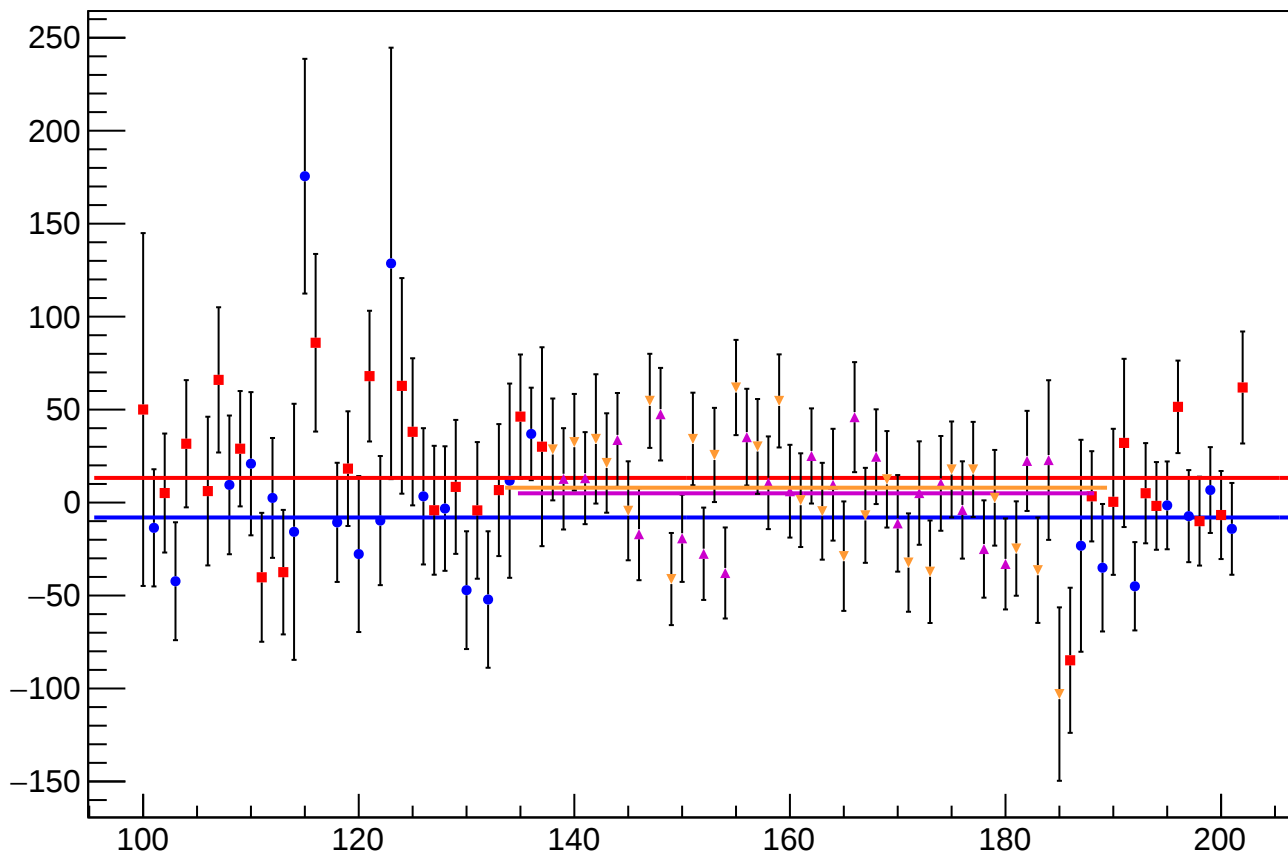
Right: 174.803 $\pm$ 0.026  $\chi^2$ /NDF: 4732447.9/52

In: 178.191 $\pm$ 0.025  $\chi^2$ /NDF:3645279.3/46

Out: 187.354 $\pm$ 0.025  $\chi^2$ /NDF:4695879.0/53

All: 182.761 $\pm$ 0.017  $\chi^2$ /NDF: 8409981.7/100

asym\_bcm\_dg\_us\_bcm\_an\_ds\_agg\_dd\_mean vs Slug, Sign Corrected



Right In:  $-8.018 \pm 6.668$   $\chi^2/\text{NDF}: 22.3/23$

Left Out:  $7.990 \pm 5.327$   $\chi^2/\text{NDF}: 37.4/24$

Right Out:  $13.256 \pm 6.141$   $\chi^2/\text{NDF}: 28.7/28$

Left In:  $4.973 \pm 5.444$   $\chi^2/\text{NDF}: 20.5/22$

Left:  $6.514 \pm 3.808$   $\chi^2/\text{NDF}: 58.0/47$

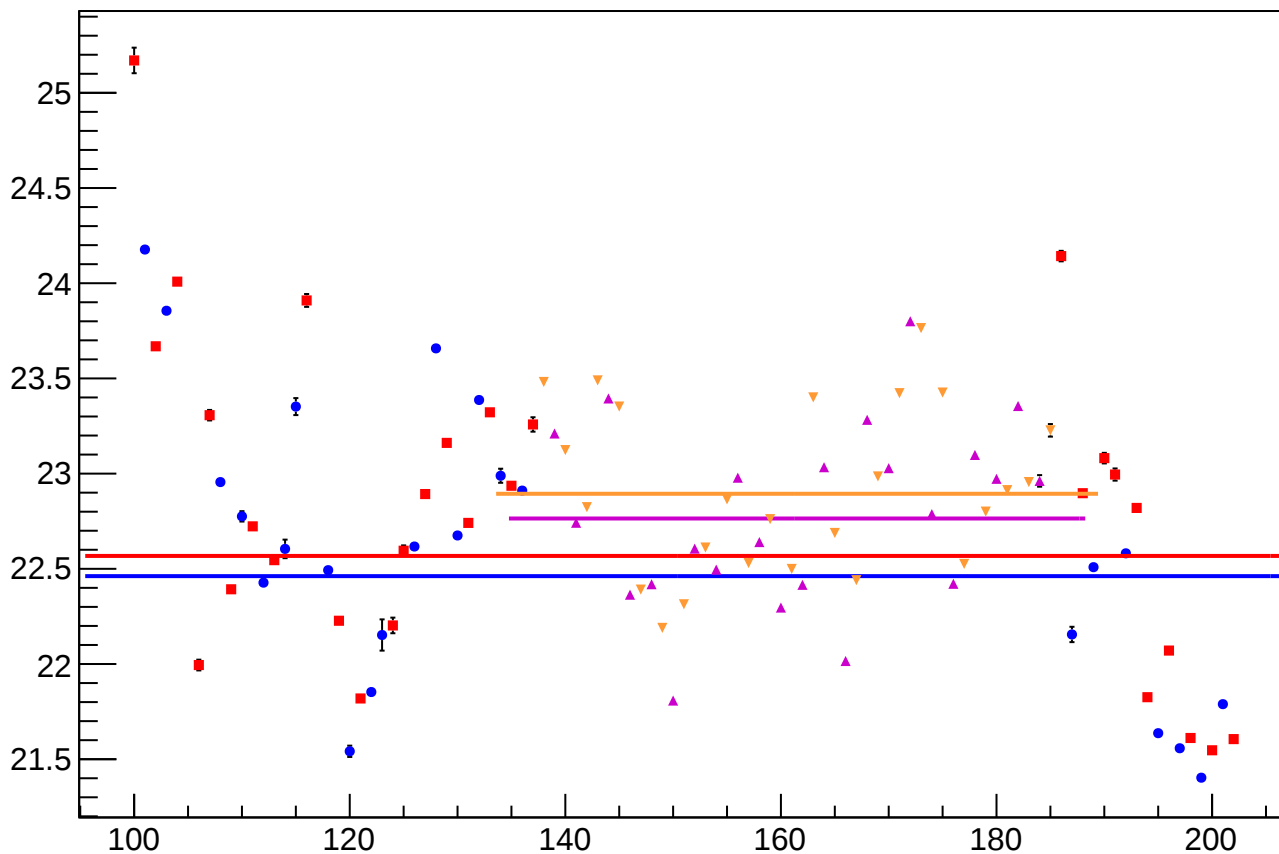
Right:  $3.494 \pm 4.517$   $\chi^2/\text{NDF}: 56.5/52$

In:  $-0.223 \pm 4.217$   $\chi^2/\text{NDF}: 45.1/46$

Out:  $10.251 \pm 4.024$   $\chi^2/\text{NDF}: 66.5/53$

All:  $5.259 \pm 2.911$   $\chi^2/\text{NDF}: 114.8/100$

asym\_bcm\_dg\_us\_bcm\_an\_ds\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 22.462 $\pm$ 0.005  $\chi^2$ /NDF: 27988.9/23

Left Out: 22.894 $\pm$ 0.004  $\chi^2$ /NDF:13070.5/24

Right Out: 22.568 $\pm$ 0.004  $\chi^2$ /NDF: 29757.9/28

Left In: 22.764 $\pm$ 0.004  $\chi^2$ /NDF:14665.7/22

Left: 22.831 $\pm$ 0.003  $\chi^2$ /NDF: 28317.3/47

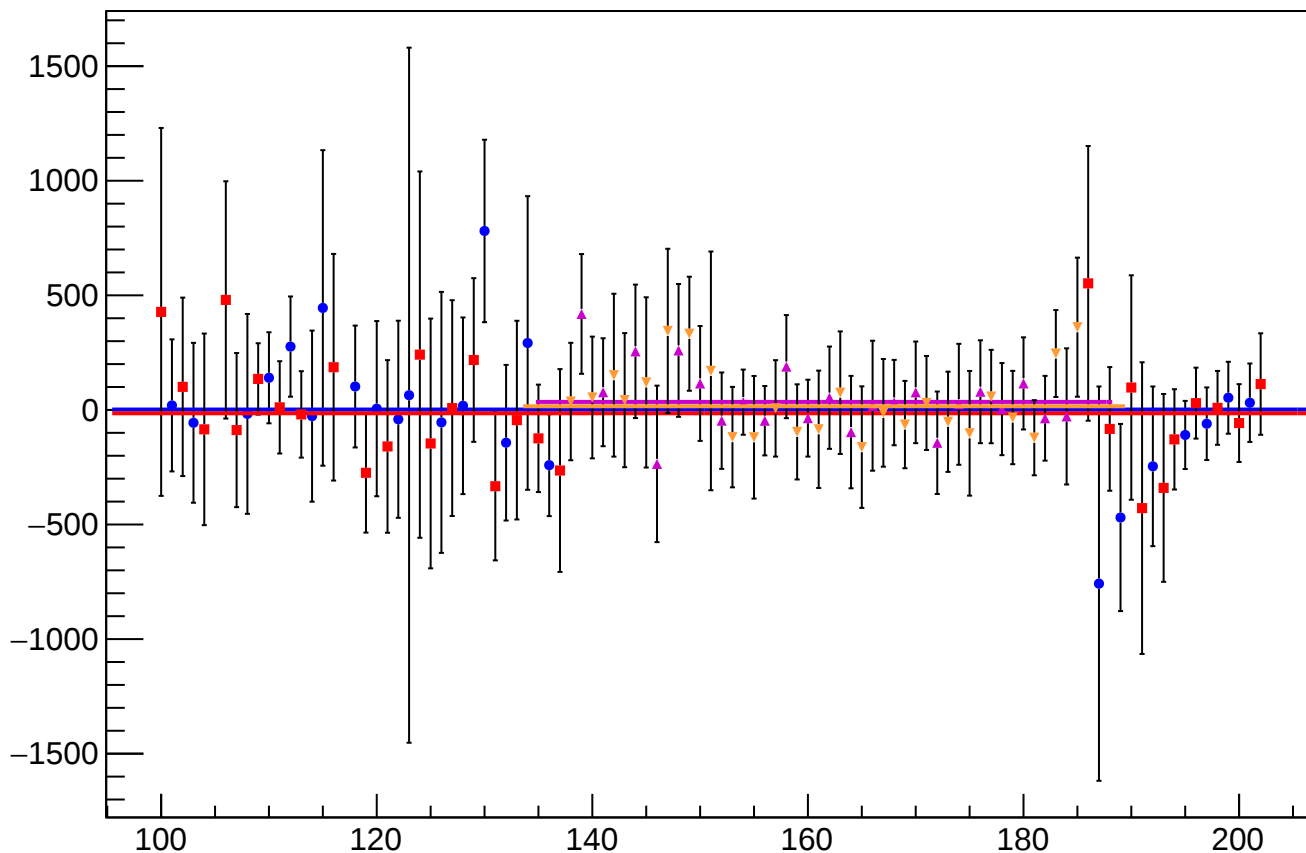
Right: 22.519 $\pm$ 0.003  $\chi^2$ /NDF: 58021.0/52

In: 22.643 $\pm$ 0.003  $\chi^2$ /NDF:45128.0/46

Out: 22.754 $\pm$ 0.003  $\chi^2$ /NDF:46053.1/53

All: 22.701 $\pm$ 0.002  $\chi^2$ /NDF: 91903.3/100

asym\_bcm\_dg\_ds\_bcm\_an\_ds\_agg\_avg\_mean vs Slug, Sign Corrected



Right In: 1.687 $\pm$ 54.984  $\chi^2$ /NDF: 11.6/23

Left Out: 15.904 $\pm$ 47.898  $\chi^2$ /NDF:8.4/24

Right Out: -14.714 $\pm$ 50.826  $\chi^2$ /NDF: 8.6/28

Left In: 34.919 $\pm$ 44.971  $\chi^2$ /NDF:6.6/22

Left: 26.010 $\pm$ 32.785  $\chi^2$ /NDF: 15.1/47

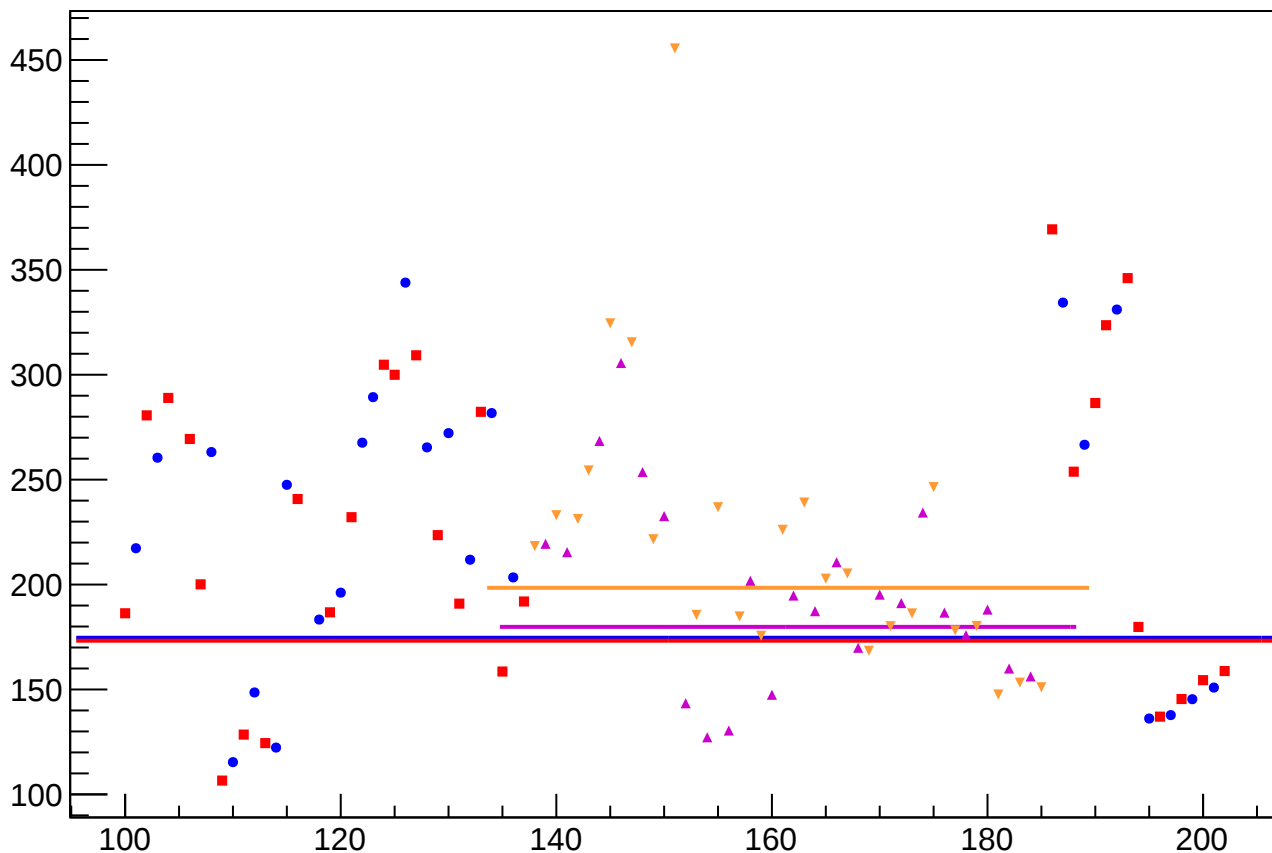
Right: -7.157 $\pm$ 37.323  $\chi^2$ /NDF: 20.2/52

In: 21.599 $\pm$ 34.810  $\chi^2$ /NDF:18.4/46

Out: 1.502 $\pm$ 34.858  $\chi^2$ /NDF:17.2/53

All: 11.564 $\pm$ 24.632  $\chi^2$ /NDF: 35.7/100

asym\_bcm\_dg\_ds\_bcm\_an\_ds\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 174.642 $\pm$ 0.039  $\chi^2$ /NDF: 2073716.2/23

Left Out: 198.450 $\pm$ 0.034  $\chi^2$ /NDF:1761433.9/24

Right Out: 173.252 $\pm$ 0.036  $\chi^2$ /NDF: 2761810.0/28

Left In: 179.839 $\pm$ 0.032  $\chi^2$ /NDF:1588834.3/22

Left: 188.558 $\pm$ 0.023  $\chi^2$ /NDF: 3510745.5/47

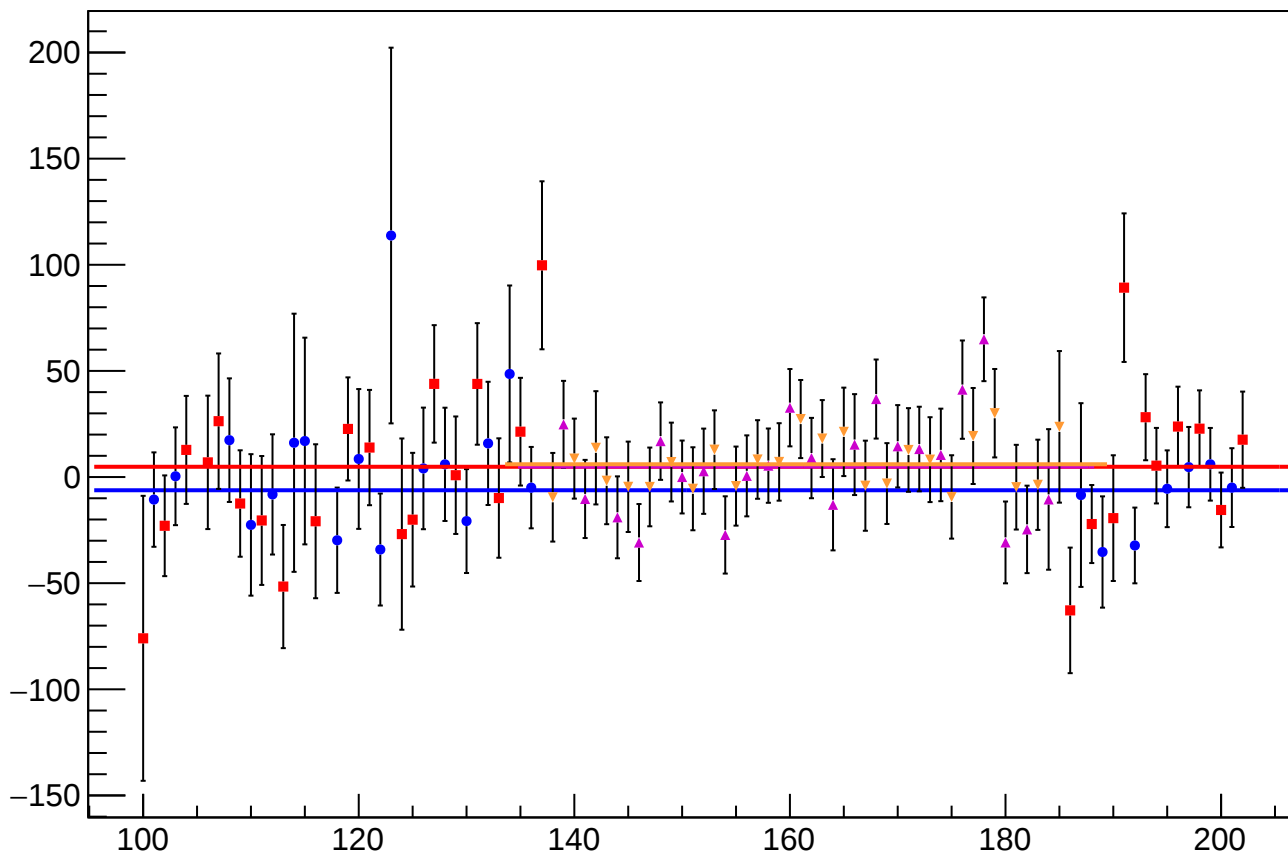
Right: 173.892 $\pm$ 0.026  $\chi^2$ /NDF: 4836215.3/52

In: 177.756 $\pm$ 0.025  $\chi^2$ /NDF:3673257.2/46

Out: 186.598 $\pm$ 0.025  $\chi^2$ /NDF:4783590.2/53

All: 182.171 $\pm$ 0.017  $\chi^2$ /NDF: 8521271.2/100

asym\_bcm\_dg\_ds\_bcm\_an\_ds\_agg\_dd\_mean vs Slug, Sign Corrected



Right In:  $-6.226 \pm 5.122$   $\chi^2/\text{NDF}$ : 12.7/23

Left Out:  $6.020 \pm 4.017$   $\chi^2/\text{NDF}$ : 8.1/24

Right Out:  $4.839 \pm 4.729$   $\chi^2/\text{NDF}$ : 39.8/28

Left In:  $4.943 \pm 4.108$   $\chi^2/\text{NDF}$ : 34.8/22

Left:  $5.494 \pm 2.872$   $\chi^2/\text{NDF}$ : 43.0/47

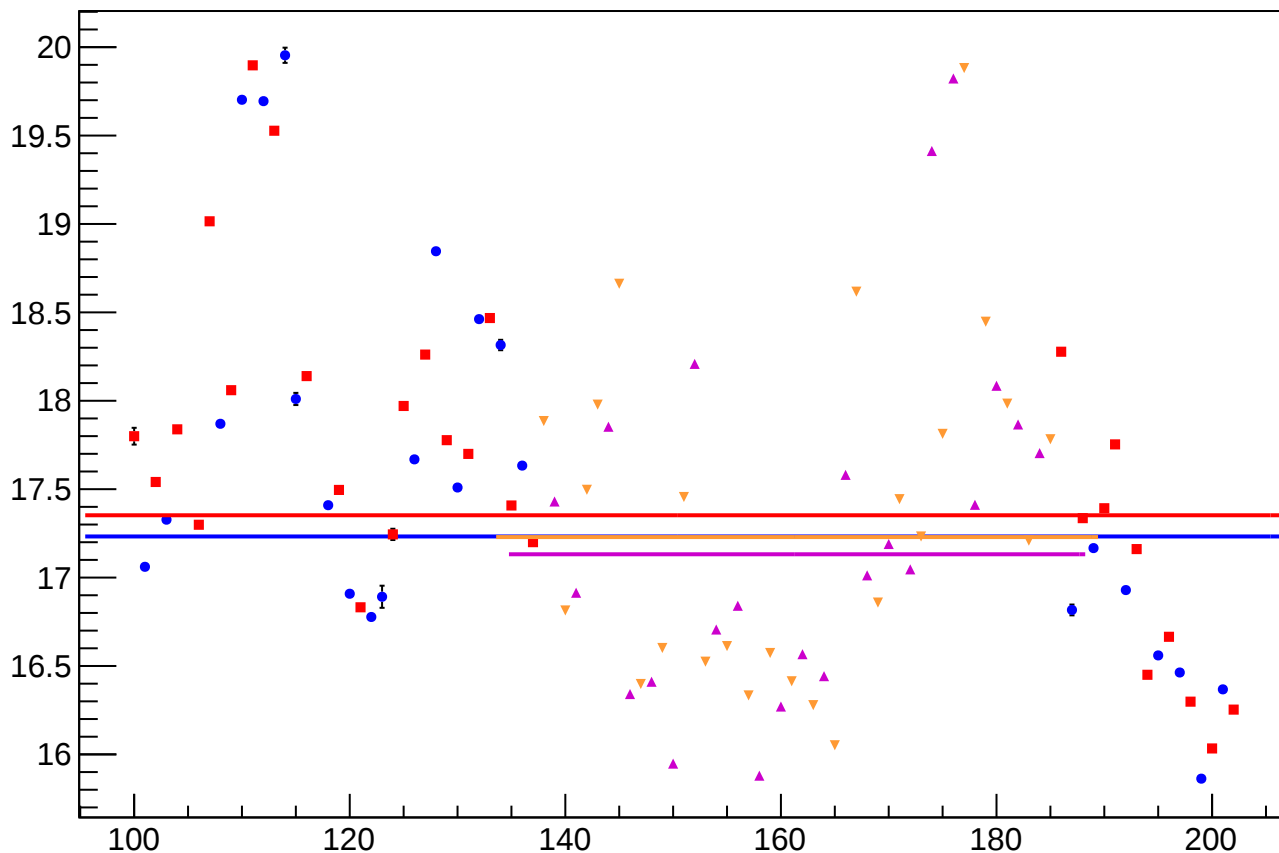
Right:  $-0.252 \pm 3.475$   $\chi^2/\text{NDF}$ : 54.9/52

In:  $0.572 \pm 3.204$   $\chi^2/\text{NDF}$ : 50.4/46

Out:  $5.525 \pm 3.062$   $\chi^2/\text{NDF}$ : 48.0/53

All:  $3.161 \pm 2.214$   $\chi^2/\text{NDF}$ : 99.6/100

asym\_bcm\_dg\_ds\_bcm\_an\_ds\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 17.233 $\pm$ 0.004  $\chi^2$ /NDF: 70491.9/23

Left Out: 17.229 $\pm$ 0.003  $\chi^2$ /NDF:98624.7/24

Right Out: 17.352 $\pm$ 0.003  $\chi^2$ /NDF: 74846.3/28

Left In: 17.132 $\pm$ 0.003  $\chi^2$ /NDF:103997.3/22

Left: 17.182 $\pm$ 0.002  $\chi^2$ /NDF: 203195.4/47

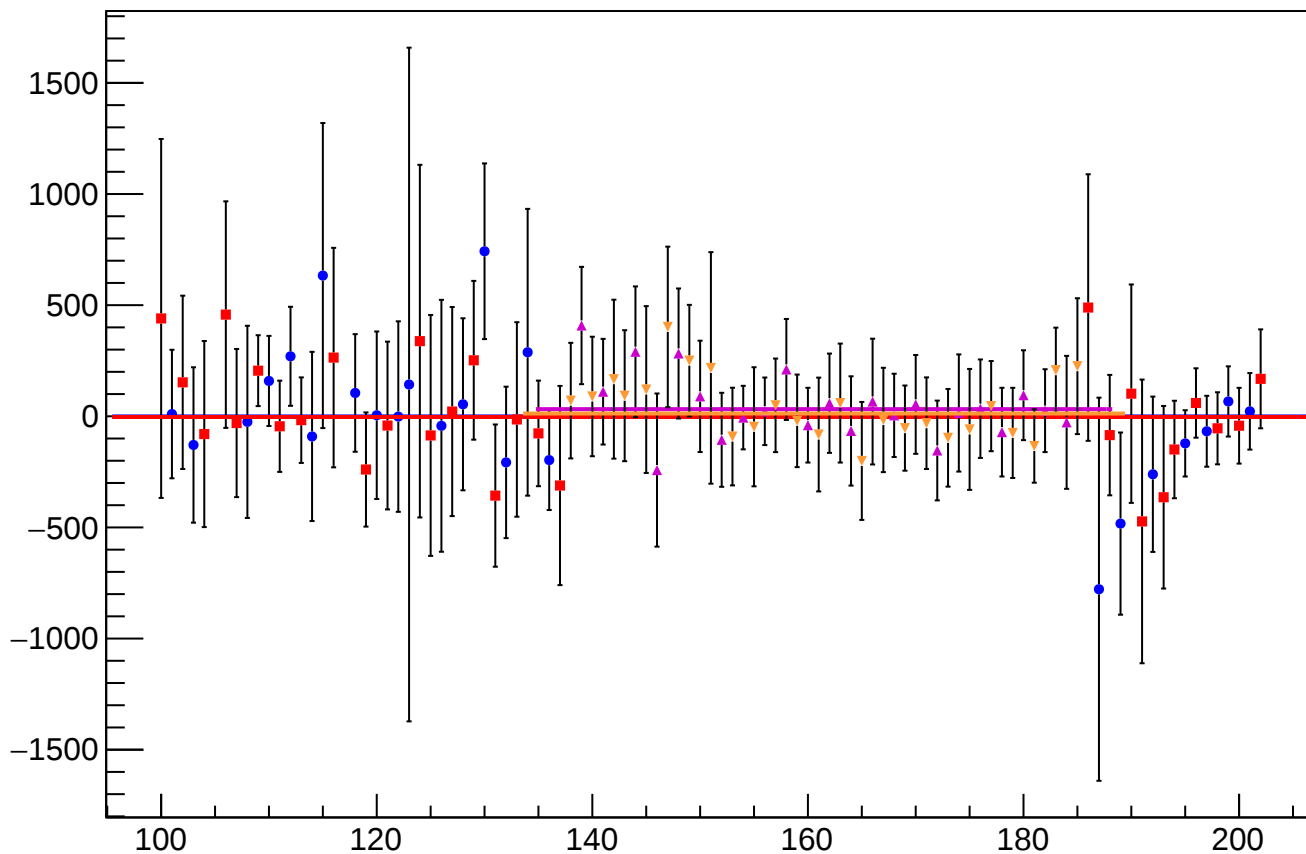
Right: 17.297 $\pm$ 0.002  $\chi^2$ /NDF: 145929.2/52

In: 17.171 $\pm$ 0.002  $\chi^2$ /NDF:174960.3/46

Out: 17.281 $\pm$ 0.002  $\chi^2$ /NDF:174261.0/53

All: 17.229 $\pm$ 0.002  $\chi^2$ /NDF: 350443.1/100

asym\_bcm\_dg\_us\_bcm\_an\_us\_agg\_avg\_mean vs Slug, Sign Corrected



Right In:  $-0.681 \pm 55.315$   $\chi^2/\text{NDF}: 12.0/23$

Left Out:  $12.474 \pm 48.086$   $\chi^2/\text{NDF}: 6.8/24$

Right Out:  $-3.138 \pm 51.201$   $\chi^2/\text{NDF}: 10.2/28$

Left In:  $32.159 \pm 45.131$   $\chi^2/\text{NDF}: 6.9/22$

Left:  $22.940 \pm 32.908$   $\chi^2/\text{NDF}: 13.9/47$

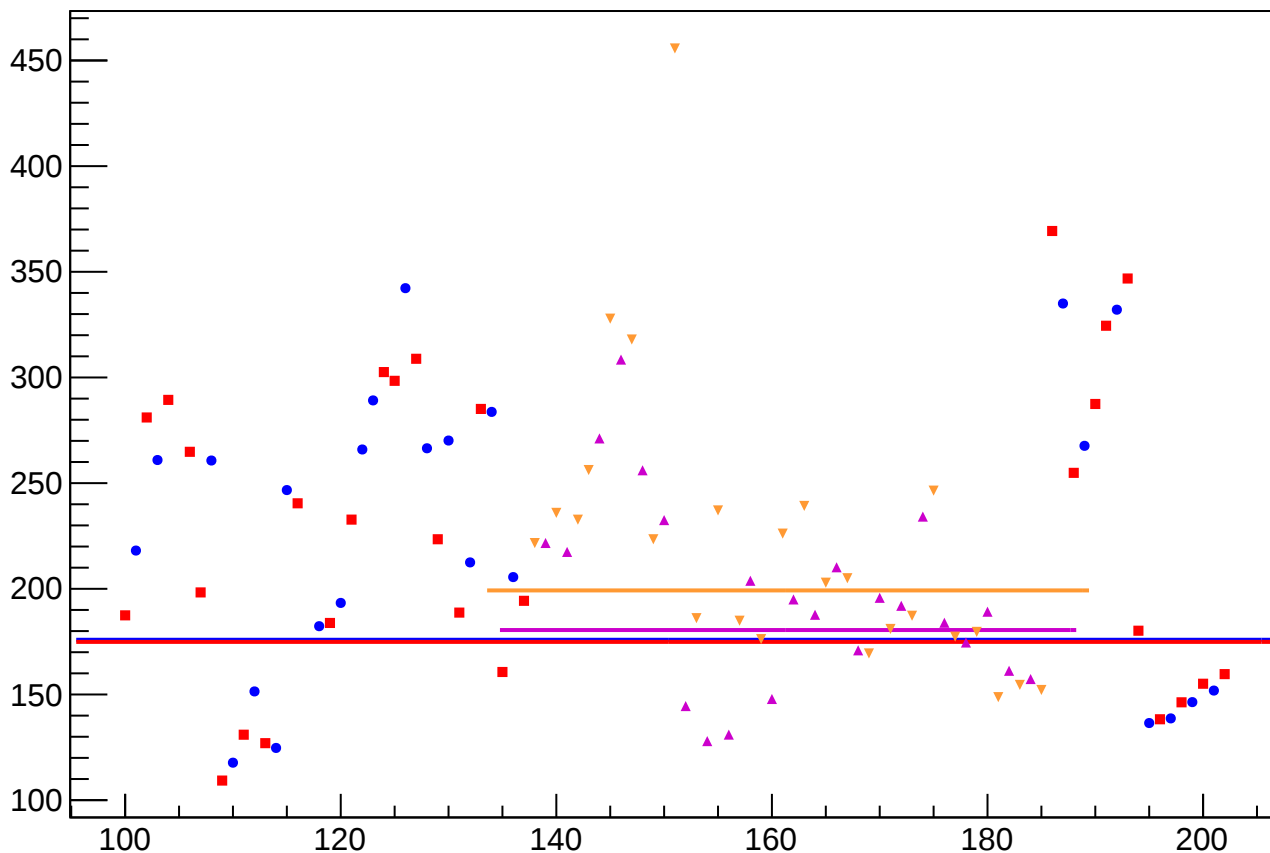
Right:  $-2.004 \pm 37.575$   $\chi^2/\text{NDF}: 22.2/52$

In:  $19.035 \pm 34.969$   $\chi^2/\text{NDF}: 19.2/46$

Out:  $5.157 \pm 35.052$   $\chi^2/\text{NDF}: 17.1/53$

All:  $12.113 \pm 24.756$   $\chi^2/\text{NDF}: 36.3/100$

asym\_bcm\_dg\_us\_bcm\_an\_us\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 175.888 $\pm$ 0.039  $\chi^2$ /NDF: 2023948.3/23

Left Out: 199.241 $\pm$ 0.034  $\chi^2$ /NDF:1764097.7/24

Right Out: 174.890 $\pm$ 0.036  $\chi^2$ /NDF: 2665958.2/28

Left In: 180.494 $\pm$ 0.032  $\chi^2$ /NDF:1593784.1/22

Left: 189.274 $\pm$ 0.023  $\chi^2$ /NDF: 3519511.1/47

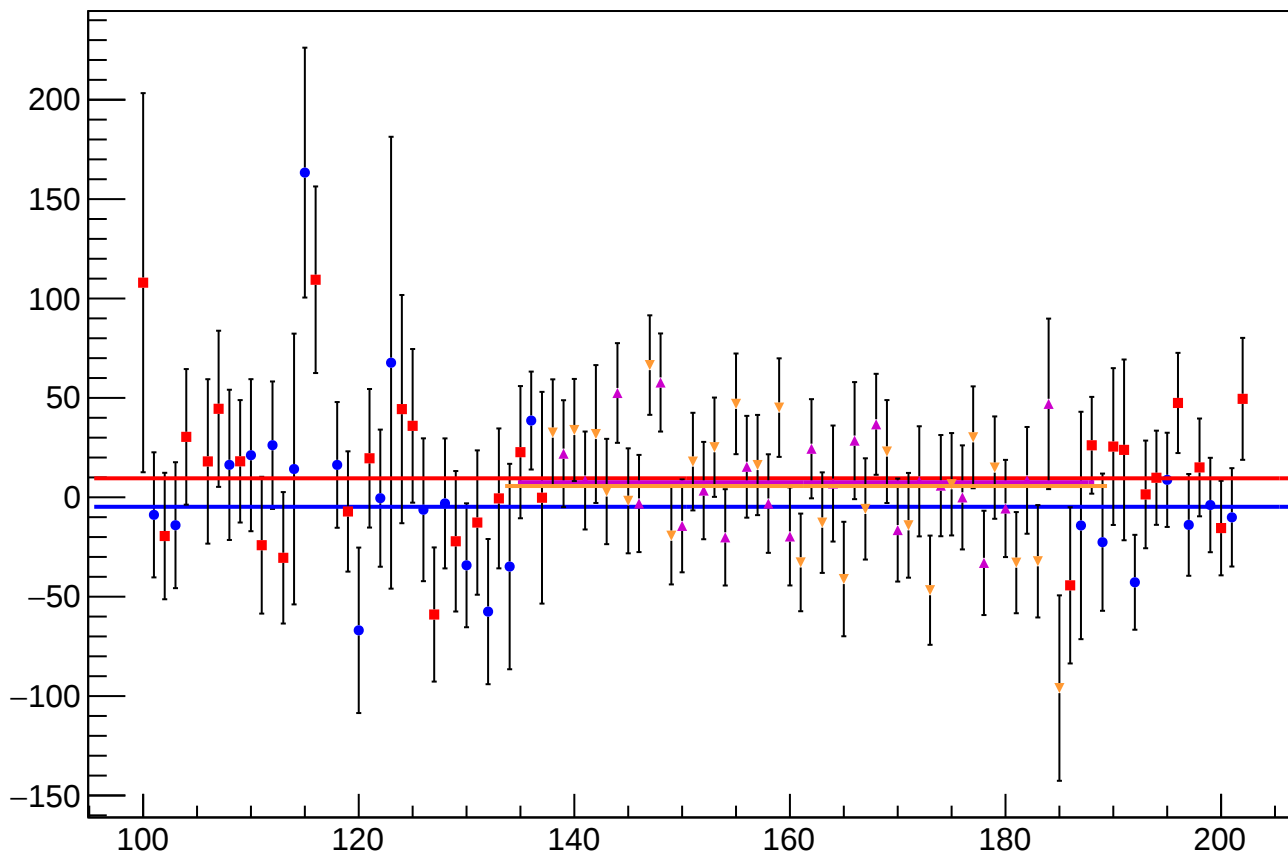
Right: 175.350 $\pm$ 0.027  $\chi^2$ /NDF: 4690257.4/52

In: 178.653 $\pm$ 0.025  $\chi^2$ /NDF:3626056.5/46

Out: 187.829 $\pm$ 0.025  $\chi^2$ /NDF:4670439.2/53

All: 183.230 $\pm$ 0.018  $\chi^2$ /NDF: 8365183.2/100

asym\_bcm\_dg\_us\_bcm\_an\_us\_agg\_dd\_mean vs Slug, Sign Corrected



Right In:  $-4.777 \pm 6.674$   $\chi^2/\text{NDF}$ : 21.9/23

Left Out:  $5.673 \pm 5.278$   $\chi^2/\text{NDF}$ : 36.4/24

Right Out:  $9.553 \pm 6.141$   $\chi^2/\text{NDF}$ : 24.7/28

Left In:  $7.594 \pm 5.402$   $\chi^2/\text{NDF}$ : 18.3/22

Left:  $6.611 \pm 3.775$   $\chi^2/\text{NDF}$ : 54.8/47

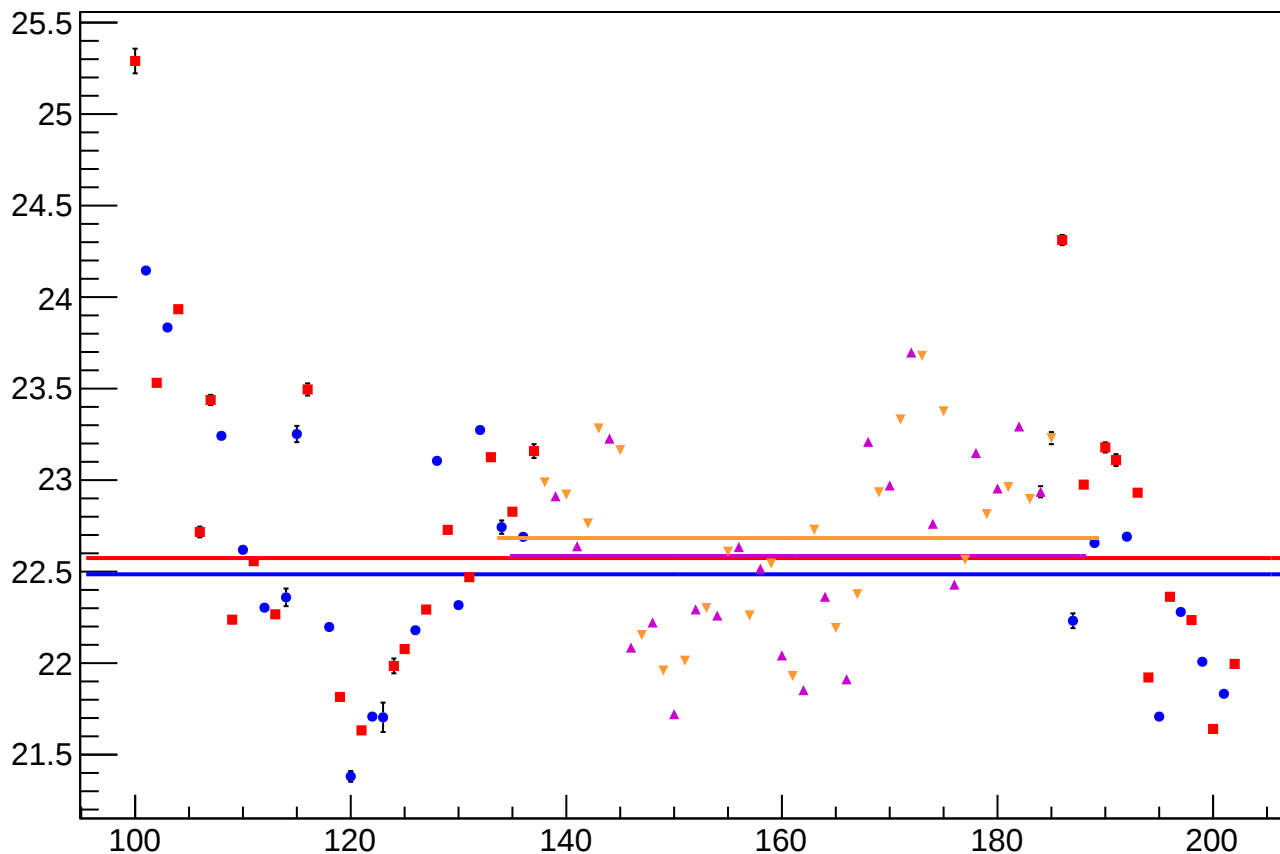
Right:  $2.982 \pm 4.519$   $\chi^2/\text{NDF}$ : 49.1/52

In:  $2.697 \pm 4.199$   $\chi^2/\text{NDF}$ : 42.3/46

Out:  $7.322 \pm 4.003$   $\chi^2/\text{NDF}$ : 61.4/53

All:  $5.120 \pm 2.897$   $\chi^2/\text{NDF}$ : 104.3/100

asym\_bcm\_dg\_us\_bcm\_an\_us\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 22.485 $\pm$ 0.005  $\chi^2$ /NDF: 19833.9/23

Left Out: 22.683 $\pm$ 0.004  $\chi^2$ /NDF:16318.1/24

Right Out: 22.574 $\pm$ 0.004  $\chi^2$ /NDF: 24468.2/28

Left In: 22.585 $\pm$ 0.004  $\chi^2$ /NDF:18087.5/22

Left: 22.635 $\pm$ 0.003  $\chi^2$ /NDF: 34743.7/47

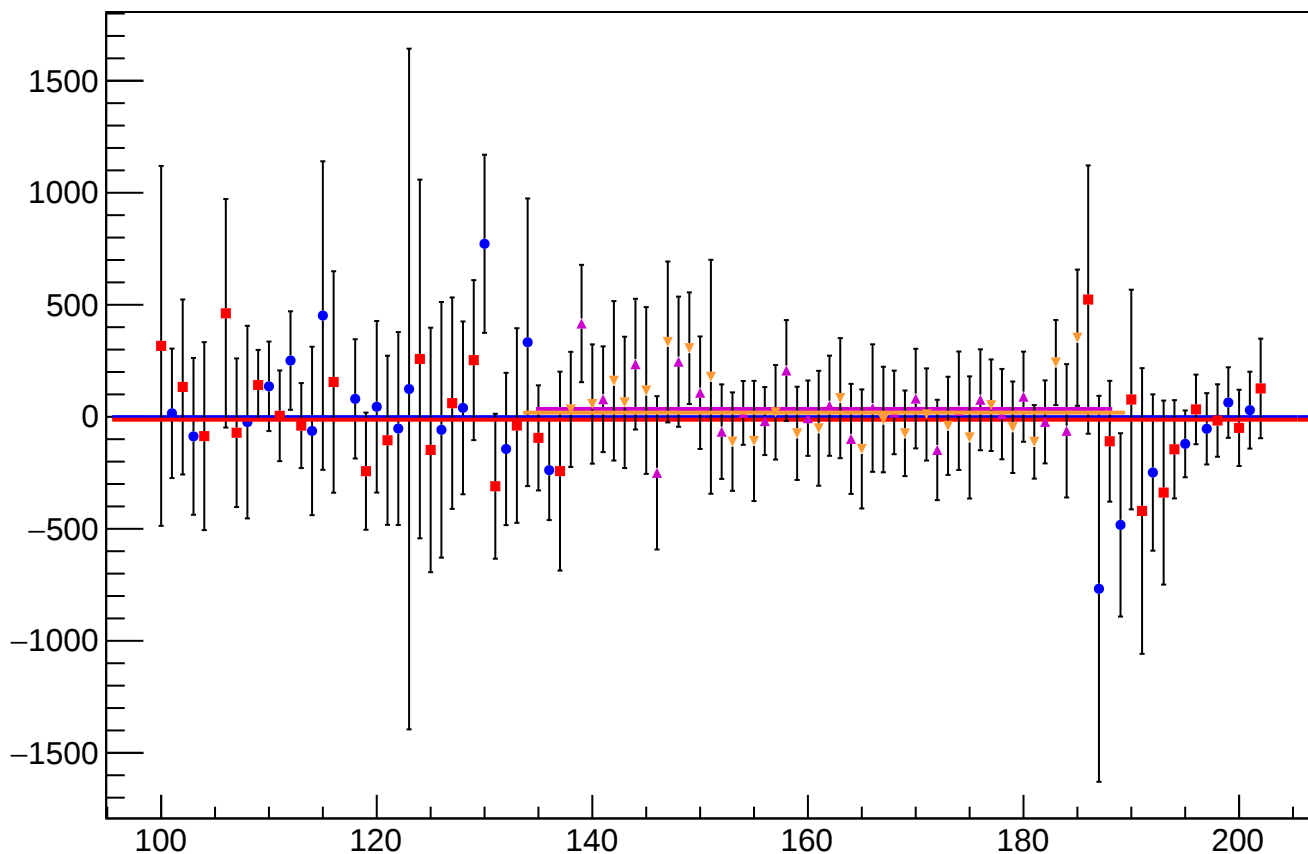
Right: 22.533 $\pm$ 0.003  $\chi^2$ /NDF: 44493.7/52

In: 22.546 $\pm$ 0.003  $\chi^2$ /NDF:38192.2/46

Out: 22.637 $\pm$ 0.003  $\chi^2$ /NDF:41150.6/53

All: 22.594 $\pm$ 0.002  $\chi^2$ /NDF: 79838.1/100

asym\_bcm\_dg\_ds\_bcm\_an\_us\_agg\_avg\_mean vs Slug, Sign Corrected



Right In:  $-1.552 \pm 55.148$   $\chi^2/\text{NDF}: 11.5/23$

Left Out:  $18.633 \pm 48.006$   $\chi^2/\text{NDF}: 7.6/24$

Right Out:  $-12.853 \pm 50.952$   $\chi^2/\text{NDF}: 8.1/28$

Left In:  $35.046 \pm 45.063$   $\chi^2/\text{NDF}: 6.3/22$

Left:  $27.358 \pm 32.855$   $\chi^2/\text{NDF}: 13.9/47$

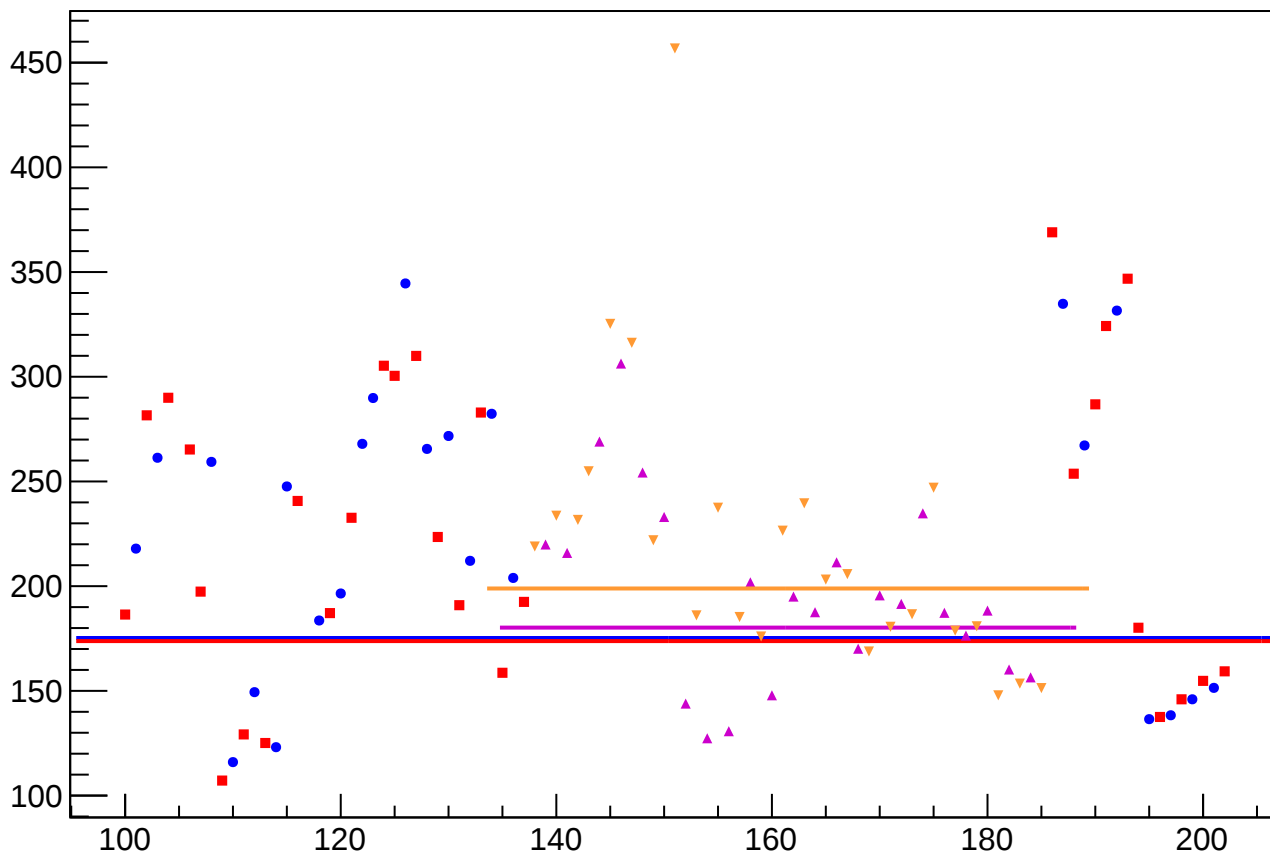
Right:  $-7.649 \pm 37.424$   $\chi^2/\text{NDF}: 19.6/52$

In:  $20.393 \pm 34.895$   $\chi^2/\text{NDF}: 18.0/46$

Out:  $3.826 \pm 34.940$   $\chi^2/\text{NDF}: 15.9/53$

All:  $12.121 \pm 24.691$   $\chi^2/\text{NDF}: 34.0/100$

asym\_bcm\_dg\_ds\_bcm\_an\_us\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 175.243 $\pm$ 0.039  $\chi^2$ /NDF: 2054812.7/23

Left Out: 198.891 $\pm$ 0.034  $\chi^2$ /NDF:1762454.6/24

Right Out: 173.770 $\pm$ 0.036  $\chi^2$ /NDF: 2736867.0/28

Left In: 180.207 $\pm$ 0.032  $\chi^2$ /NDF:1589005.4/22

Left: 188.959 $\pm$ 0.023  $\chi^2$ /NDF: 3512499.2/47

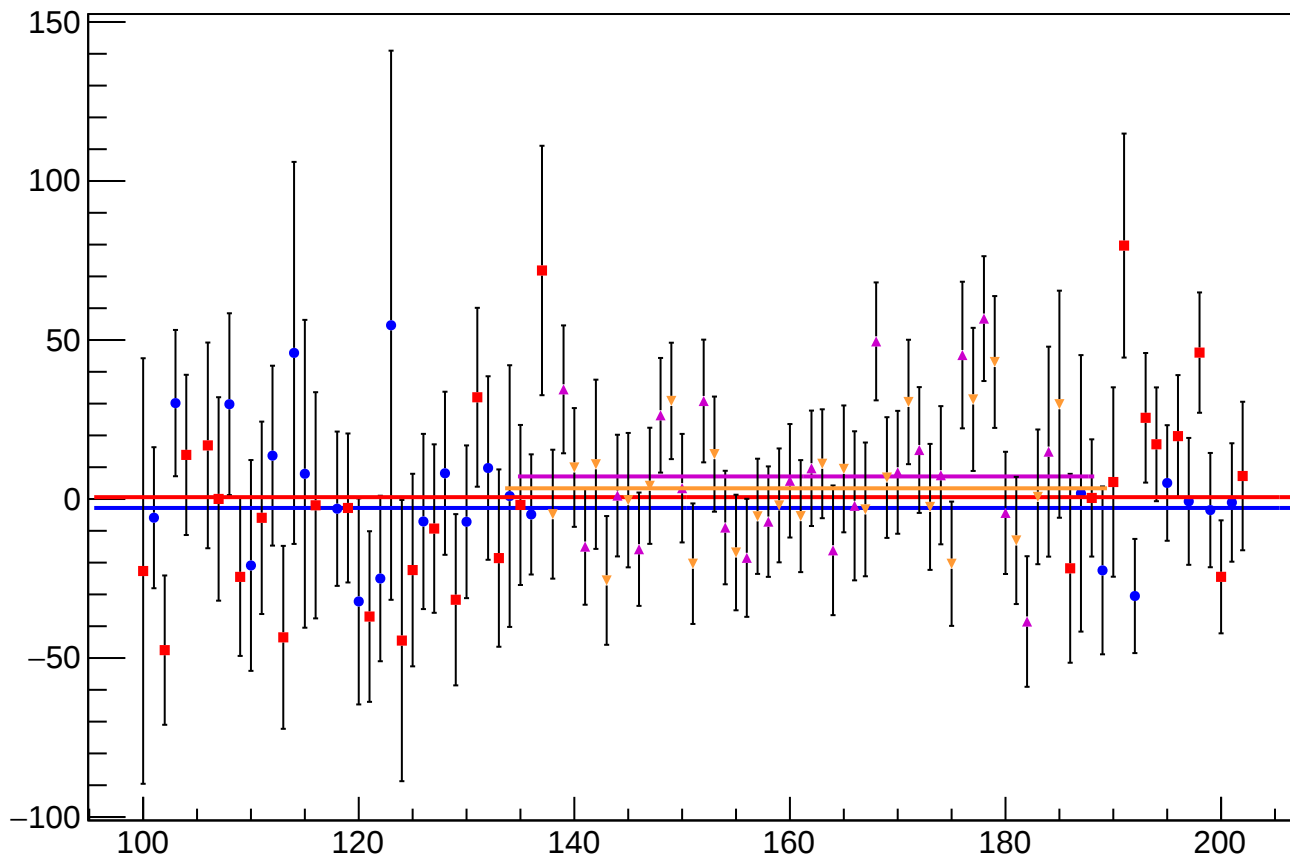
Right: 174.449 $\pm$ 0.026  $\chi^2$ /NDF: 4792449.5/52

In: 178.220 $\pm$ 0.025  $\chi^2$ /NDF:3653534.6/46

Out: 187.078 $\pm$ 0.025  $\chi^2$ /NDF:4756848.9/53

All: 182.643 $\pm$ 0.017  $\chi^2$ /NDF: 8474738.1/100

asym\_bcm\_dg\_ds\_bcm\_an\_us\_agg\_dd\_mean vs Slug, Sign Corrected



Right In: -2.812 $\pm$ 5.128  $\chi^2$ /NDF: 10.3/23

Left Out: 3.372 $\pm$ 3.947  $\chi^2$ /NDF:18.8/24

Right Out: 0.584 $\pm$ 4.729  $\chi^2$ /NDF: 35.3/28

Left In: 7.099 $\pm$ 4.047  $\chi^2$ /NDF:32.5/22

Left: 5.189 $\pm$ 2.826  $\chi^2$ /NDF: 51.8/47

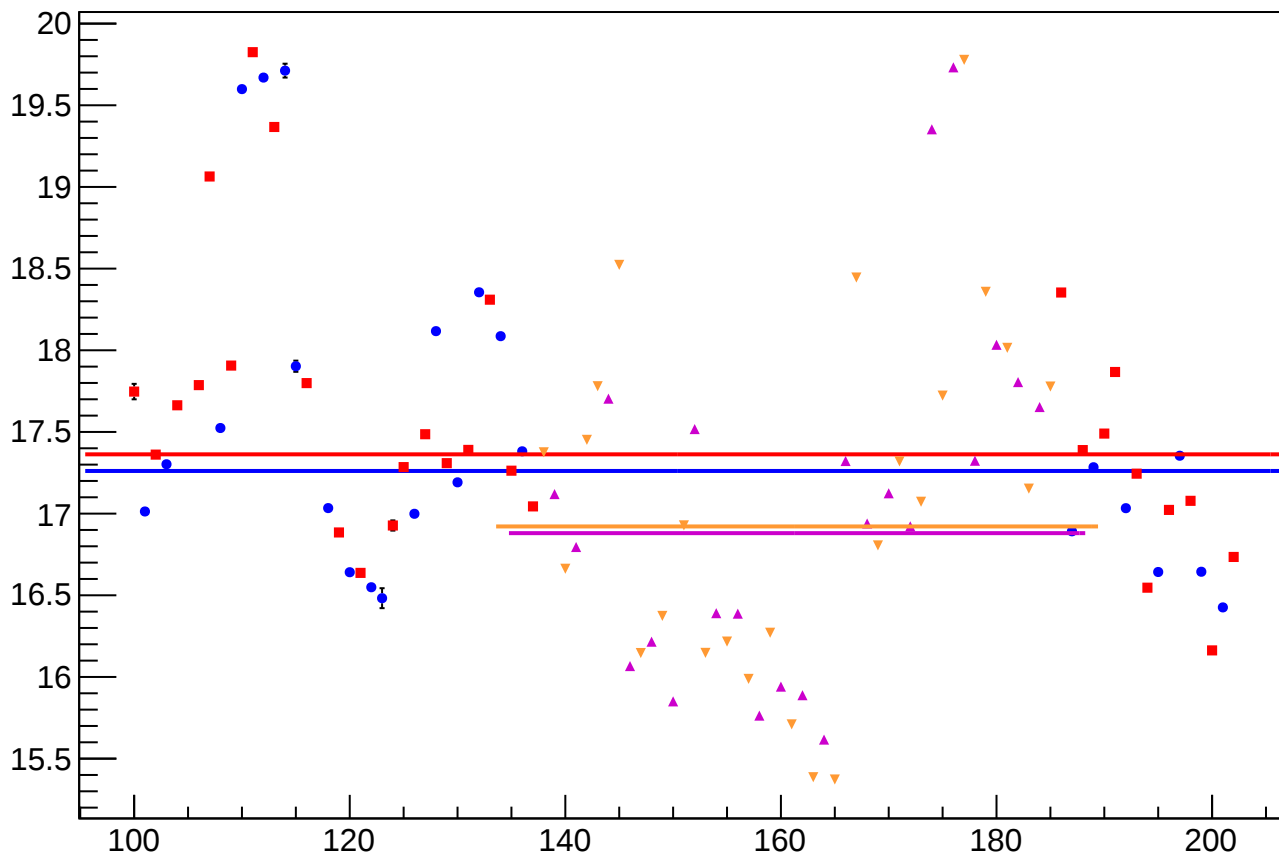
Right: -0.977 $\pm$ 3.476  $\chi^2$ /NDF: 45.9/52

In: 3.294 $\pm$ 3.177  $\chi^2$ /NDF:45.1/46

Out: 2.227 $\pm$ 3.030  $\chi^2$ /NDF:54.3/53

All: 2.736 $\pm$ 2.193  $\chi^2$ /NDF: 99.5/100

asym\_bcm\_dg\_ds\_bcm\_an\_us\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 17.261+/-0.004  $\chi^2/\text{NDF}$ : 46521.5/23

Left Out: 16.921+/-0.003  $\chi^2/\text{NDF}$ :138990.4/24

Right Out: 17.363+/-0.003  $\chi^2/\text{NDF}$ : 54158.2/28

Left In: 16.880+/-0.003  $\chi^2/\text{NDF}$ :121736.1/22

Left: 16.901+/-0.002  $\chi^2/\text{NDF}$ : 260831.8/47

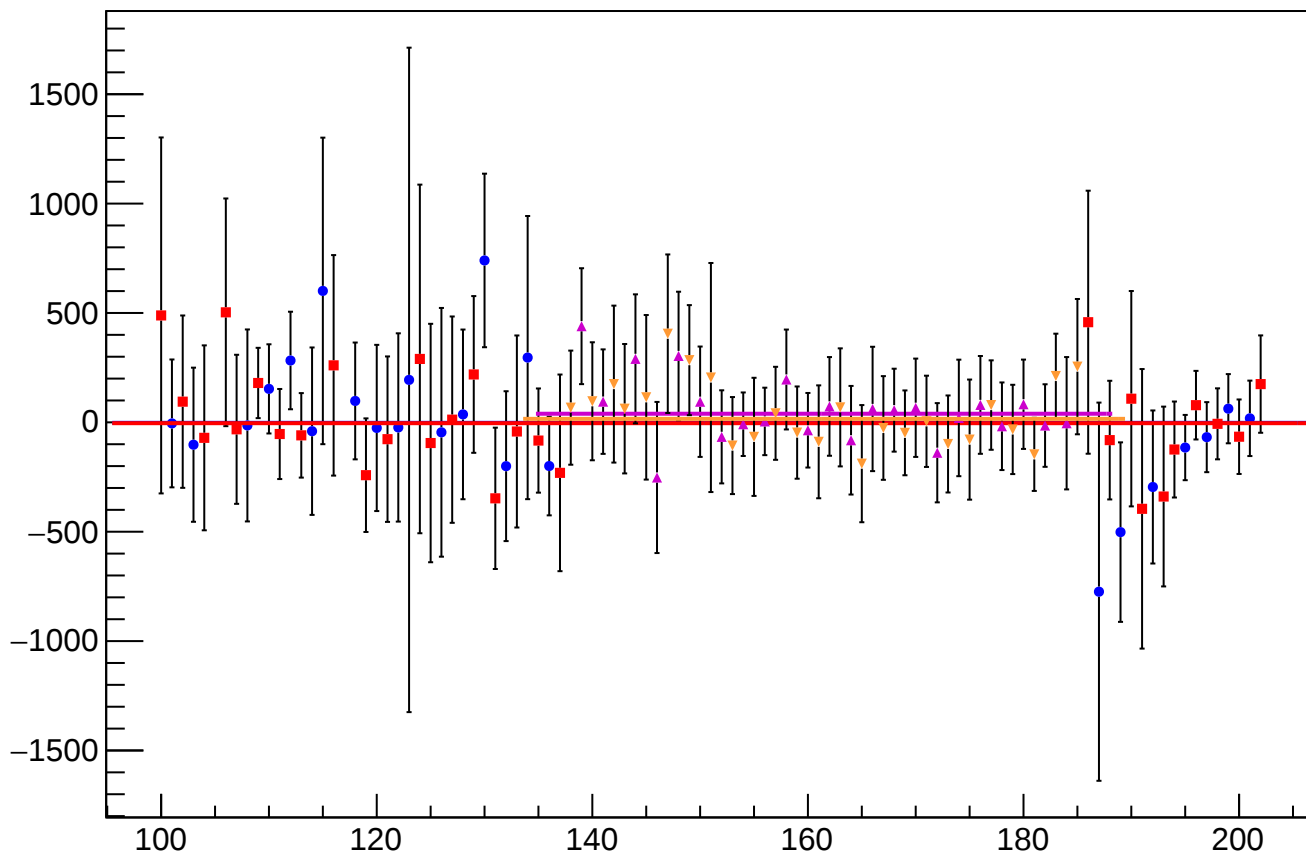
Right: 17.316+/-0.002  $\chi^2/\text{NDF}$ : 101105.7/52

In: 17.027+/-0.002  $\chi^2/\text{NDF}$ :175049.7/46

Out: 17.103+/-0.002  $\chi^2/\text{NDF}$ :203422.3/53

All: 17.066+/-0.002  $\chi^2/\text{NDF}$ : 379073.6/100

asym\_bcm\_dg\_us\_bcm\_dg\_ds\_agg\_avg\_mean vs Slug, Sign Corrected



Right In:  $-2.304 \pm 55.517$   $\chi^2/\text{NDF}: 11.9/23$

Left Out:  $15.970 \pm 48.503$   $\chi^2/\text{NDF}: 7.4/24$

Right Out:  $-3.844 \pm 51.413$   $\chi^2/\text{NDF}: 9.2/28$

Left In:  $39.377 \pm 45.571$   $\chi^2/\text{NDF}: 6.9/22$

Left:  $28.402 \pm 33.212$   $\chi^2/\text{NDF}: 14.4/47$

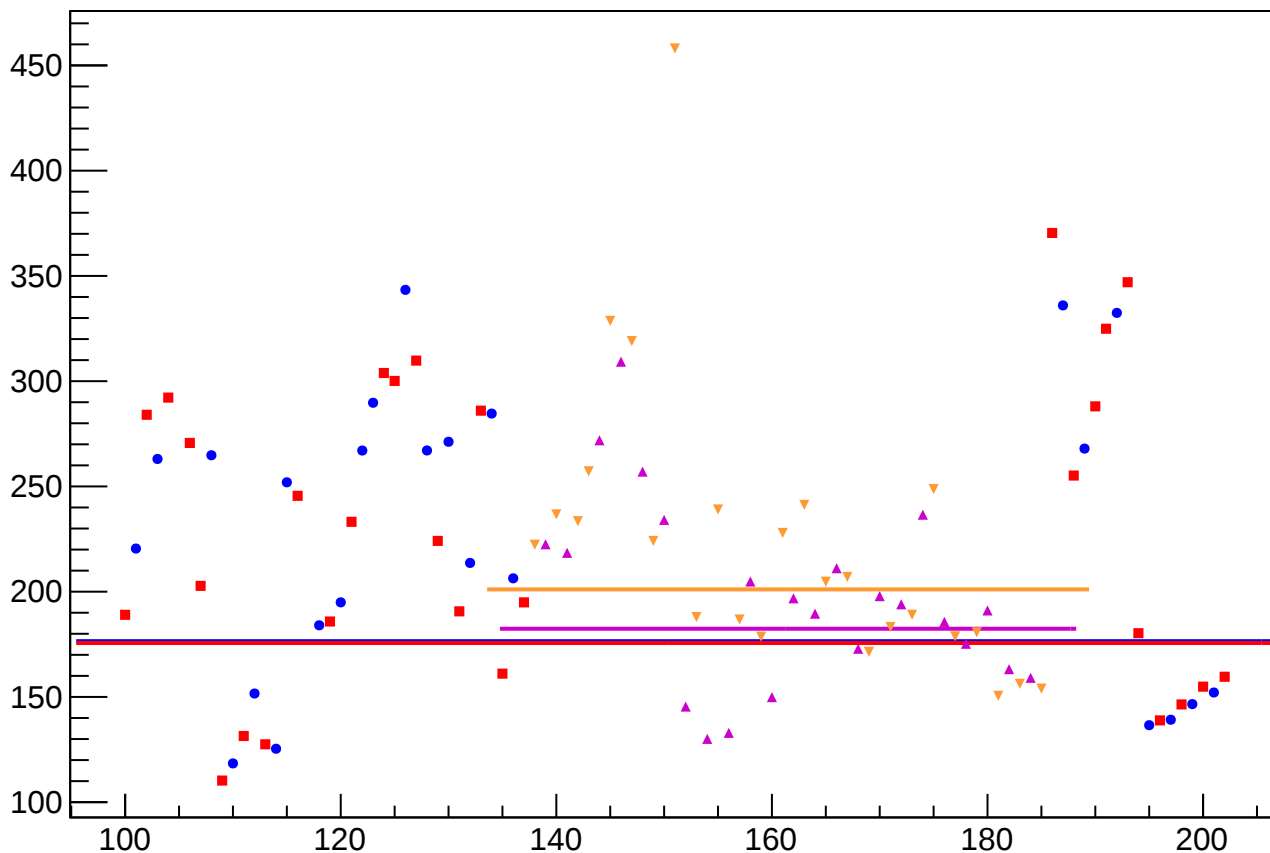
Right:  $-3.133 \pm 37.722$   $\chi^2/\text{NDF}: 21.1/52$

In:  $22.598 \pm 35.224$   $\chi^2/\text{NDF}: 19.2/46$

Out:  $6.639 \pm 35.281$   $\chi^2/\text{NDF}: 16.6/53$

All:  $14.632 \pm 24.927$   $\chi^2/\text{NDF}: 35.9/100$

asym\_bcm\_dg\_us\_bcm\_dg\_ds\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 176.489 $\pm$ 0.039  $\chi^2$ /NDF: 2037320.5/23

Left Out: 201.091 $\pm$ 0.034  $\chi^2$ /NDF:1731069.1/24

Right Out: 175.619 $\pm$ 0.036  $\chi^2$ /NDF: 2673992.7/28

Left In: 182.396 $\pm$ 0.032  $\chi^2$ /NDF:1548907.7/22

Left: 191.161 $\pm$ 0.023  $\chi^2$ /NDF: 3437793.2/47

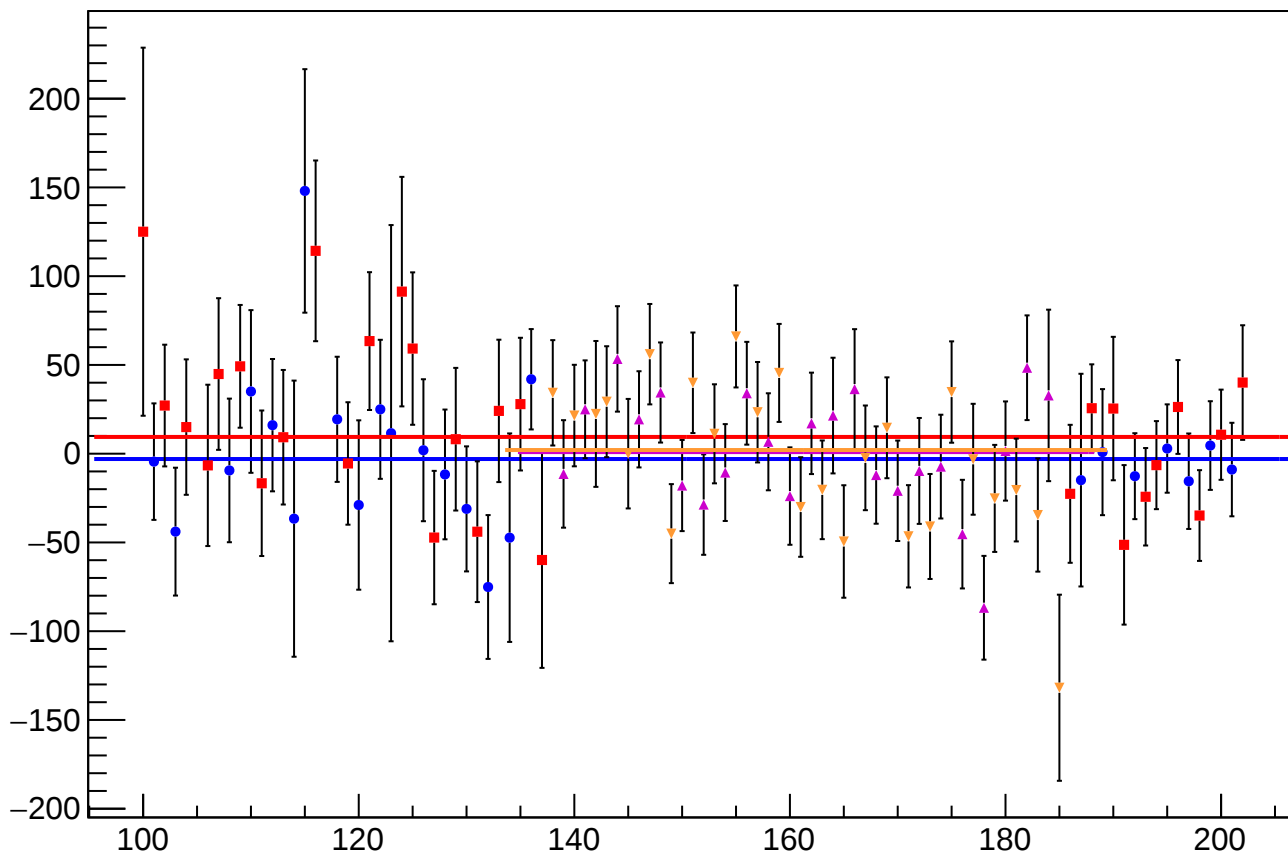
Right: 176.021 $\pm$ 0.027  $\chi^2$ /NDF: 4711577.9/52

In: 180.018 $\pm$ 0.025  $\chi^2$ /NDF:3599754.6/46

Out: 189.096 $\pm$ 0.025  $\chi^2$ /NDF:4664815.0/53

All: 184.550 $\pm$ 0.018  $\chi^2$ /NDF: 8330880.6/100

asym\_bcm\_dg\_us\_bcm\_dg\_ds\_agg\_dd\_mean vs Slug, Sign Corrected



Right In:  $-3.004 \pm 7.254$   $\chi^2/\text{NDF}$ : 16.1/23

Left Out:  $2.054 \pm 5.970$   $\chi^2/\text{NDF}$ : 39.4/24

Right Out:  $9.438 \pm 6.613$   $\chi^2/\text{NDF}$ : 28.5/28

Left In:  $0.900 \pm 6.069$   $\chi^2/\text{NDF}$ : 27.1/22

Left:  $1.487 \pm 4.256$   $\chi^2/\text{NDF}$ : 66.5/47

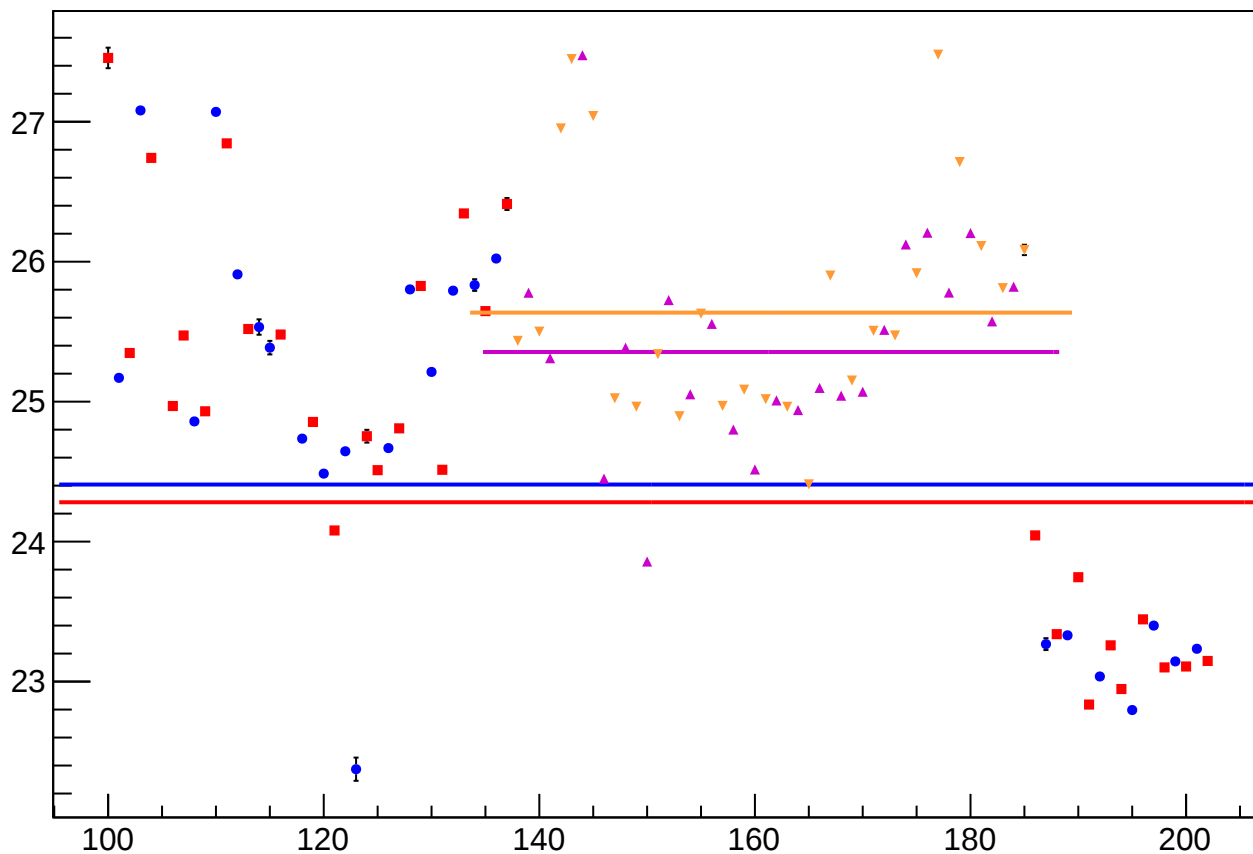
Right:  $3.790 \pm 4.887$   $\chi^2/\text{NDF}$ : 46.2/52

In:  $-0.708 \pm 4.655$   $\chi^2/\text{NDF}$ : 43.4/46

Out:  $5.369 \pm 4.432$   $\chi^2/\text{NDF}$ : 68.6/53

All:  $2.480 \pm 3.210$   $\chi^2/\text{NDF}$ : 112.9/100

asym\_bcm\_dg\_us\_bcm\_dg\_ds\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 24.408 $\pm$ 0.005  $\chi^2/\text{NDF}$ : 67367.8/23

Left Out: 25.636 $\pm$ 0.004  $\chi^2/\text{NDF}$ : 35130.7/24

Right Out: 24.281 $\pm$ 0.005  $\chi^2/\text{NDF}$ : 67500.6/28

Left In: 25.355 $\pm$ 0.004  $\chi^2/\text{NDF}$ : 29766.2/22

Left: 25.498 $\pm$ 0.003  $\chi^2/\text{NDF}$ : 67081.3/47

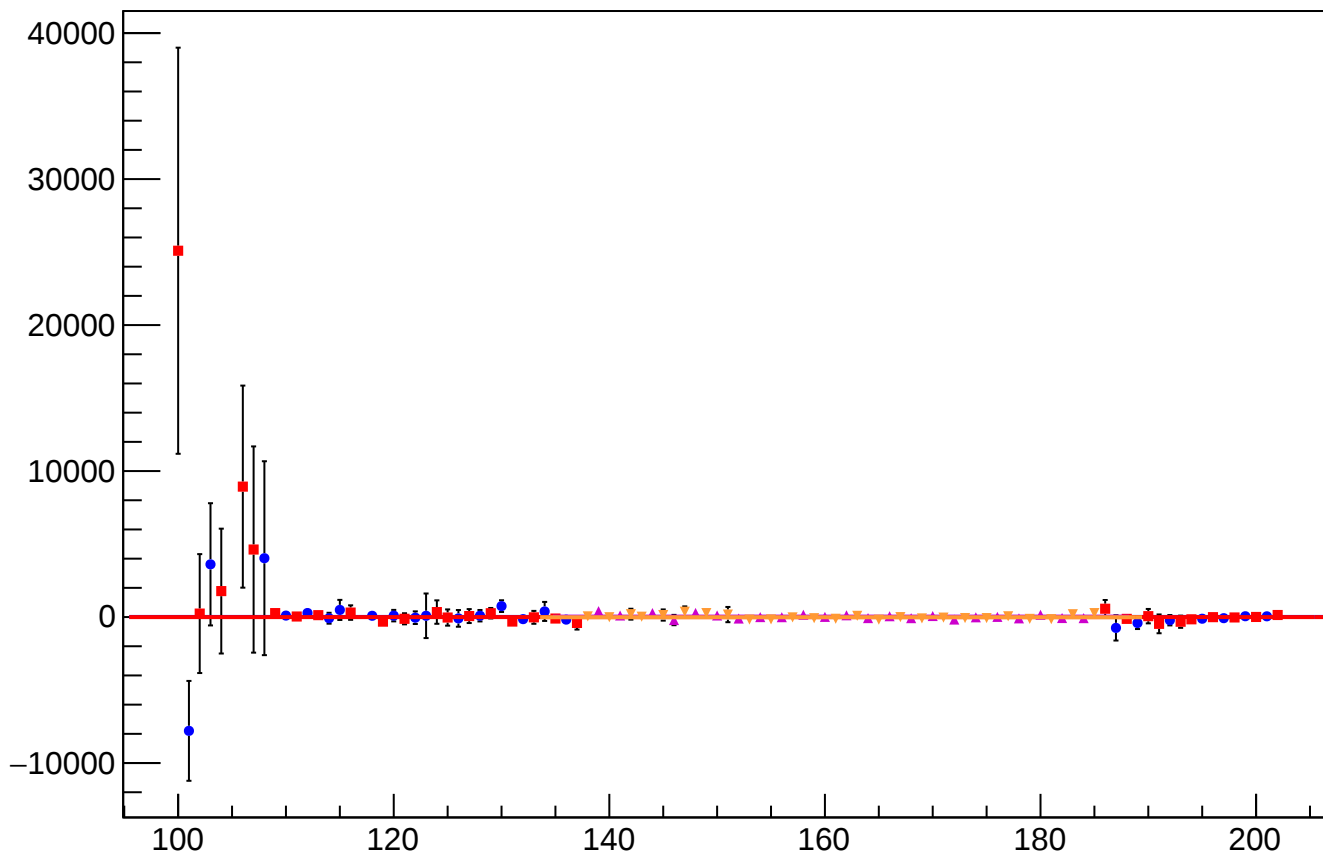
Right: 24.339 $\pm$ 0.003  $\chi^2/\text{NDF}$ : 135201.7/52

In: 24.965 $\pm$ 0.003  $\chi^2/\text{NDF}$ : 117180.9/46

Out: 25.028 $\pm$ 0.003  $\chi^2/\text{NDF}$ : 148892.2/53

All: 24.998 $\pm$ 0.002  $\chi^2/\text{NDF}$ : 266264.4/100

asym\_bcm\_cav4cQ\_bcm\_an\_us\_agg\_avg\_mean vs Slug, Sign Corrected



Right In: 7.655+/-58.748  $\chi^2/\text{NDF}$ : 16.6/23

Left Out: -12.820+/-48.216  $\chi^2/\text{NDF}$ : 7.9/24

Right Out: -3.566+/-55.359  $\chi^2/\text{NDF}$ : 15.2/28

Left In: 26.836+/-45.876  $\chi^2/\text{NDF}$ : 7.5/22

Left: 7.994+/-33.236  $\chi^2/\text{NDF}$ : 15.7/47

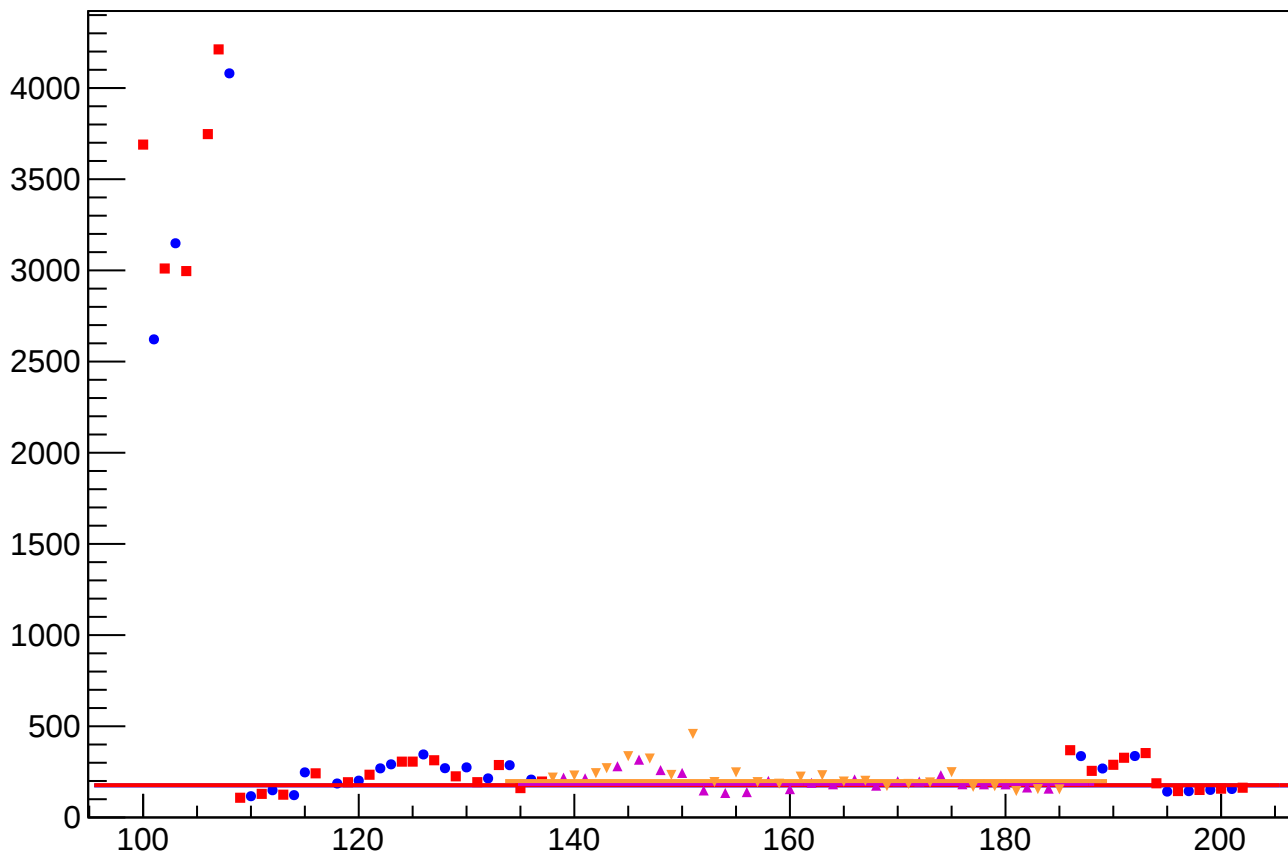
Right: 1.712+/-40.290  $\chi^2/\text{NDF}$ : 31.8/52

In: 19.570+/-36.158  $\chi^2/\text{NDF}$ : 24.1/46

Out: -8.828+/-36.359  $\chi^2/\text{NDF}$ : 23.0/53

All: 5.450+/-25.638  $\chi^2/\text{NDF}$ : 47.5/100

asym\_bcm\_cav4cQ\_bcm\_an\_us\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 175.623+/-0.042  $\chi^2/\text{NDF}$ : 4462818.6/23

Left Out: 199.536+/-0.034  $\chi^2/\text{NDF}$ :1880548.8/24

Right Out: 176.964+/-0.039  $\chi^2/\text{NDF}$ : 5307518.4/28

Left In: 184.031+/-0.032  $\chi^2/\text{NDF}$ :1423454.3/22

Left: 191.398+/-0.024  $\chi^2/\text{NDF}$ : 3412539.0/47

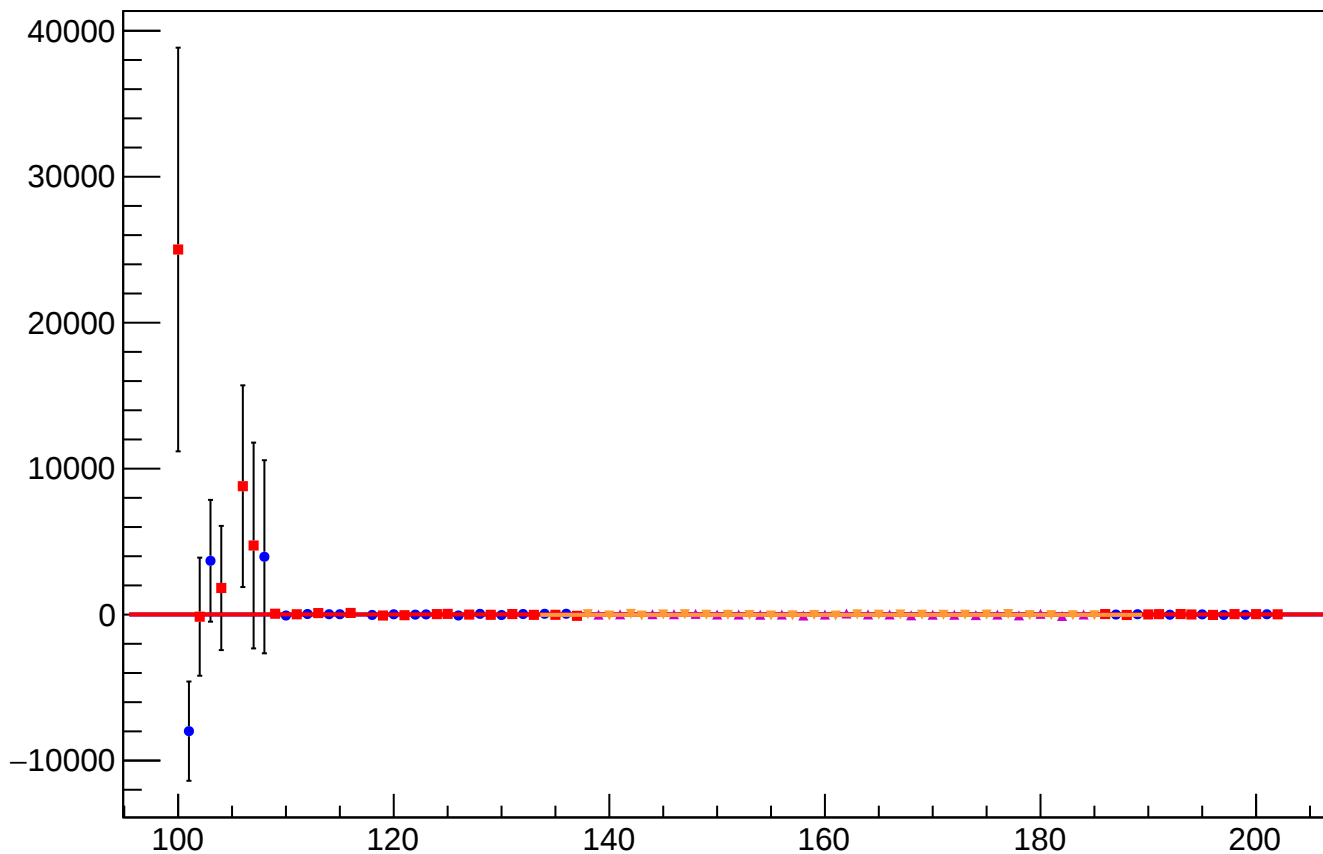
Right: 176.333+/-0.028  $\chi^2/\text{NDF}$ : 9770888.6/52

In: 180.846+/-0.026  $\chi^2/\text{NDF}$ :5911722.6/46

Out: 189.799+/-0.026  $\chi^2/\text{NDF}$ :7377132.2/53

All: 185.298+/-0.018  $\chi^2/\text{NDF}$ : 13349818.9/100

asym\_bcm\_cav4cQ\_bcm\_an\_us\_agg\_dd\_mean vs Slug, Sign Corrected



Right In: 6.598+/-8.811  $\chi^2/\text{NDF}$ : 21.2/23

Left Out: -17.580+/-6.694  $\chi^2/\text{NDF}$ : 22.3/24

Right Out: 12.968+/-8.168  $\chi^2/\text{NDF}$ : 29.1/28

Left In: 1.038+/-6.880  $\chi^2/\text{NDF}$ : 32.4/22

Left: -8.527+/-4.798  $\chi^2/\text{NDF}$ : 58.5/47

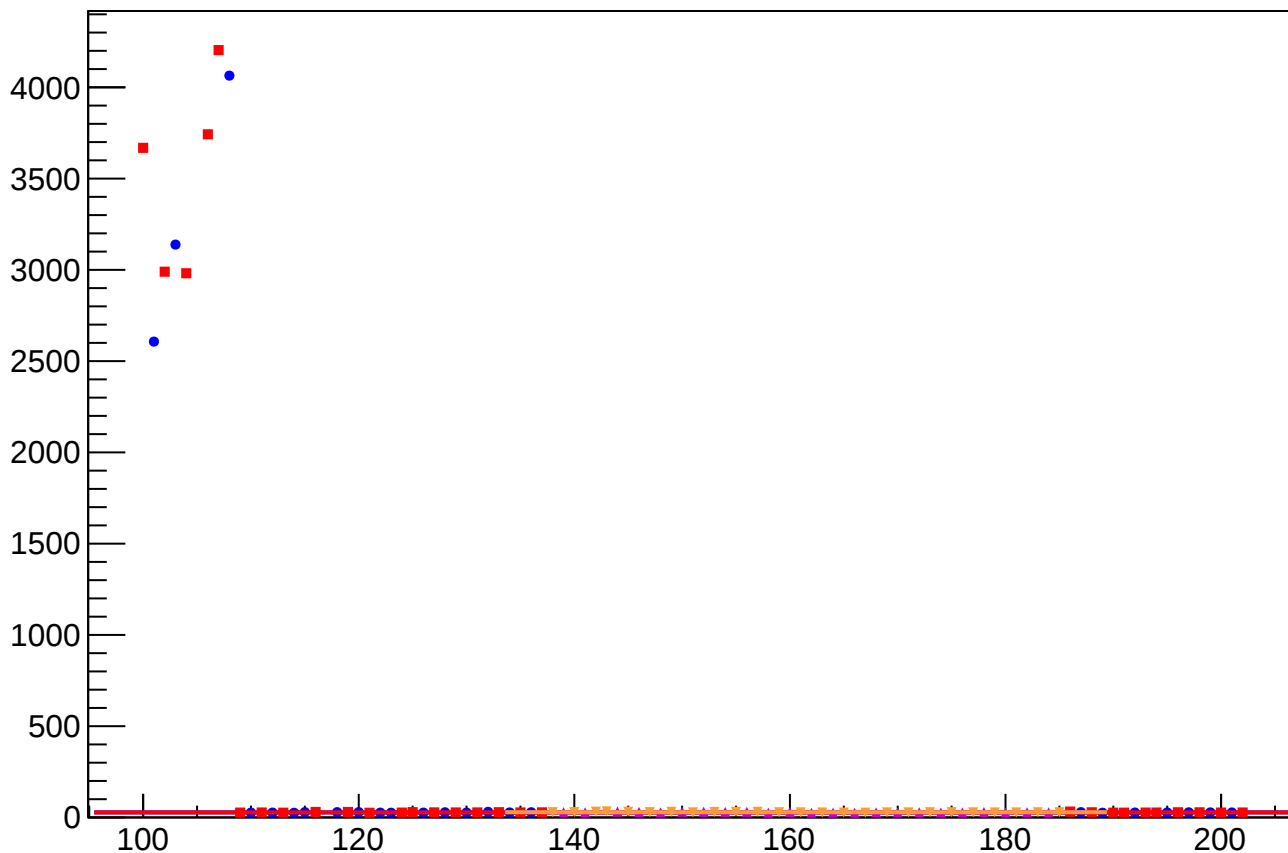
Right: 10.024+/-5.990  $\chi^2/\text{NDF}$ : 50.6/52

In: 3.144+/-5.423  $\chi^2/\text{NDF}$ : 53.9/46

Out: -5.308+/-5.177  $\chi^2/\text{NDF}$ : 59.8/53

All: -1.278+/-3.745  $\chi^2/\text{NDF}$ : 114.9/100

asym\_bcm\_cav4cQ\_bcm\_an\_us\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 27.630 $\pm$ 0.006  $\chi^2$ /NDF: 3034896.8/23

Left Out: 28.691 $\pm$ 0.005  $\chi^2$ /NDF: 110483.8/24

Right Out: 27.649 $\pm$ 0.006  $\chi^2$ /NDF: 3502554.1/28

Left In: 28.673 $\pm$ 0.005  $\chi^2$ /NDF: 124751.4/22

Left: 28.682 $\pm$ 0.003  $\chi^2$ /NDF: 235242.3/47

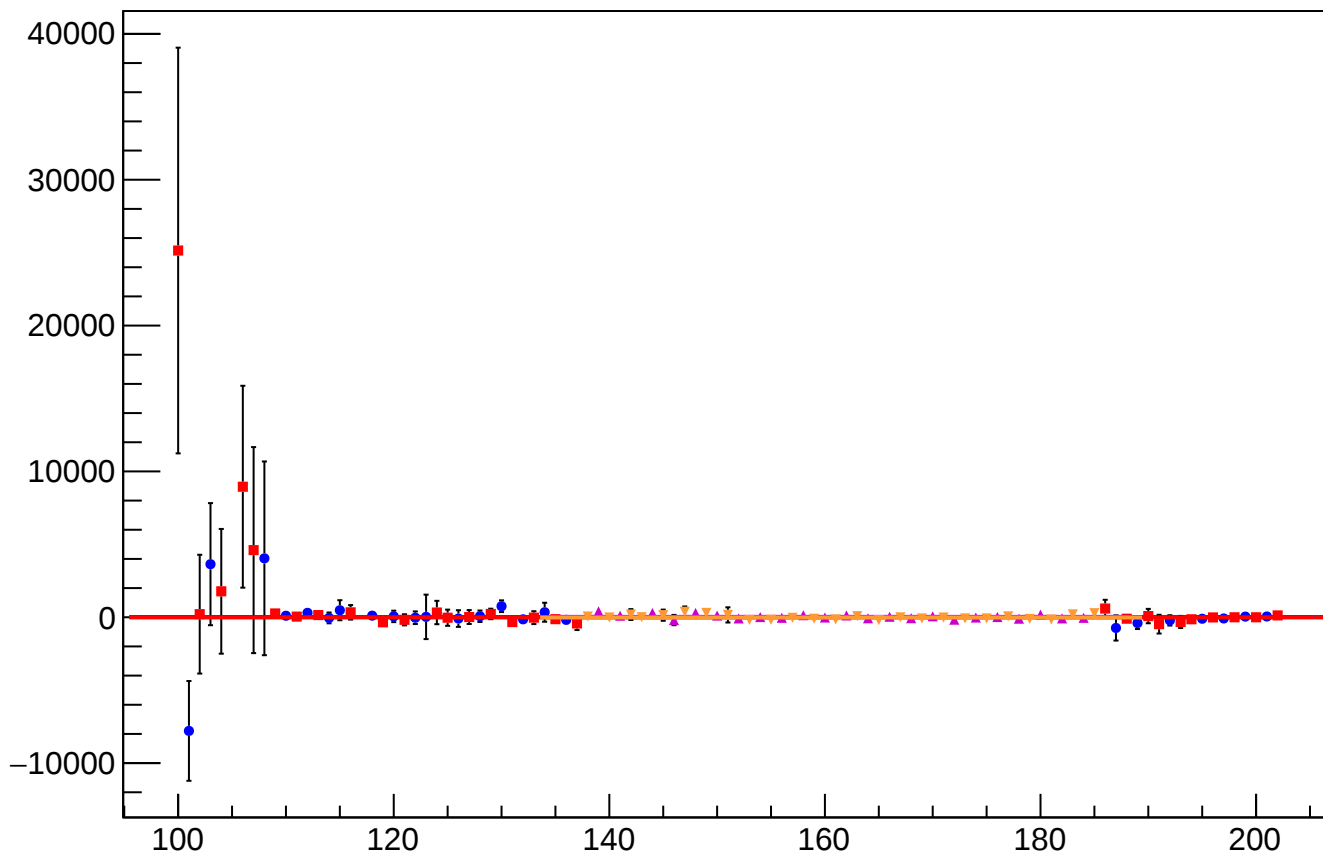
Right: 27.641 $\pm$ 0.004  $\chi^2$ /NDF: 6537455.8/52

In: 28.278 $\pm$ 0.004  $\chi^2$ /NDF: 3177034.3/46

Out: 28.272 $\pm$ 0.004  $\chi^2$ /NDF: 3632485.2/53

All: 28.275 $\pm$ 0.003  $\chi^2$ /NDF: 6809520.6/100

asym\_bcm\_cav4cQ\_bcm\_an\_ds\_agg\_avg\_mean vs Slug, Sign Corrected



Right In: 10.290+/-58.562  $\chi^2/\text{NDF}$ : 16.7/23

Left Out: -15.483+/-48.109  $\chi^2/\text{NDF}$ : 8.7/24

Right Out: -4.922+/-55.202  $\chi^2/\text{NDF}$ : 15.8/28

Left In: 27.009+/-45.785  $\chi^2/\text{NDF}$ : 7.8/22

Left: 6.815+/-33.166  $\chi^2/\text{NDF}$ : 16.9/47

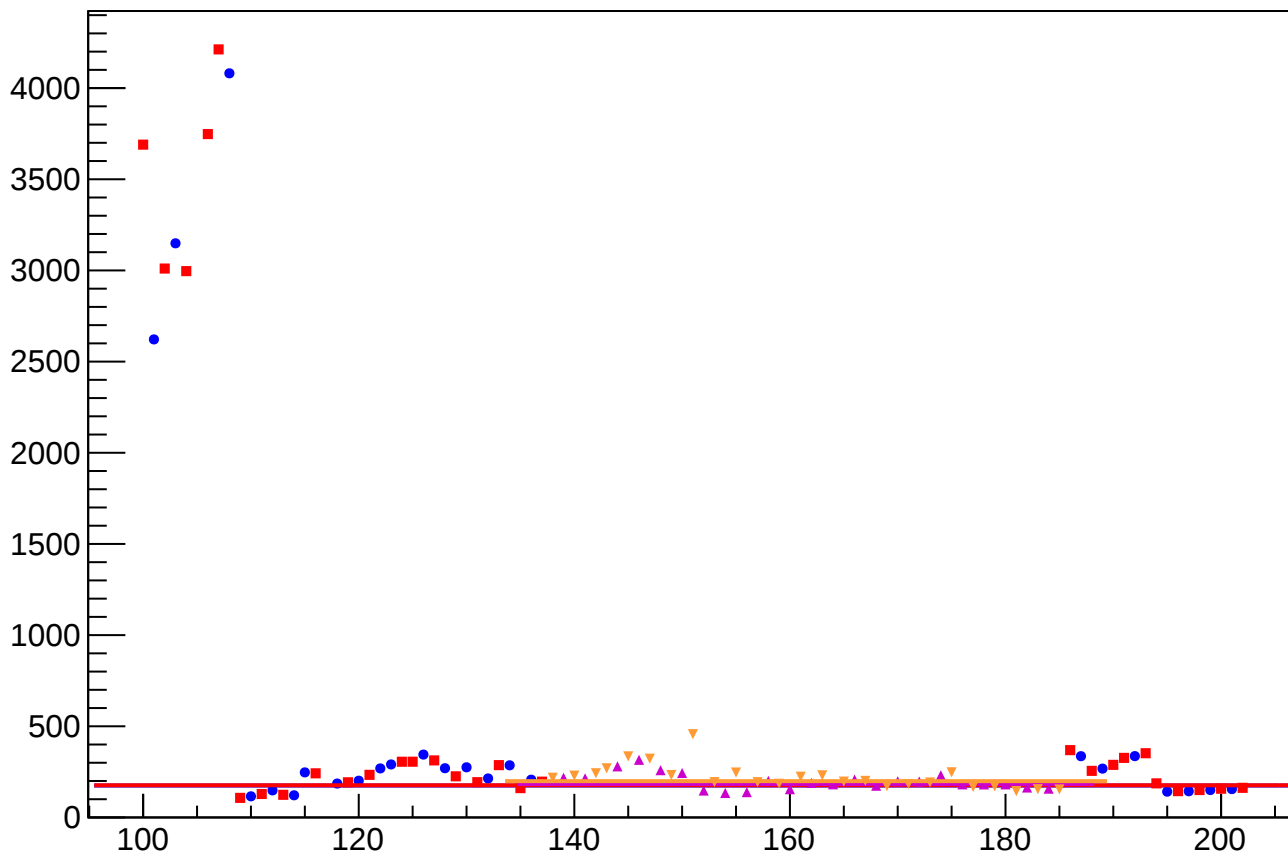
Right: 2.235+/-40.169  $\chi^2/\text{NDF}$ : 32.5/52

In: 20.667+/-36.070  $\chi^2/\text{NDF}$ : 24.6/46

Out: -10.924+/-36.268  $\chi^2/\text{NDF}$ : 24.5/53

All: 4.958+/-25.575  $\chi^2/\text{NDF}$ : 49.4/100

asym\_bcm\_cav4cQ\_bcm\_an\_ds\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 175.004 $\pm$ 0.041  $\chi^2$ /NDF: 4476361.2/23

Left Out: 199.094 $\pm$ 0.034  $\chi^2$ /NDF:1880343.4/24

Right Out: 176.390 $\pm$ 0.039  $\chi^2$ /NDF: 5325027.2/28

Left In: 183.667 $\pm$ 0.032  $\chi^2$ /NDF:1422895.7/22

Left: 190.999 $\pm$ 0.023  $\chi^2$ /NDF: 3411149.8/47

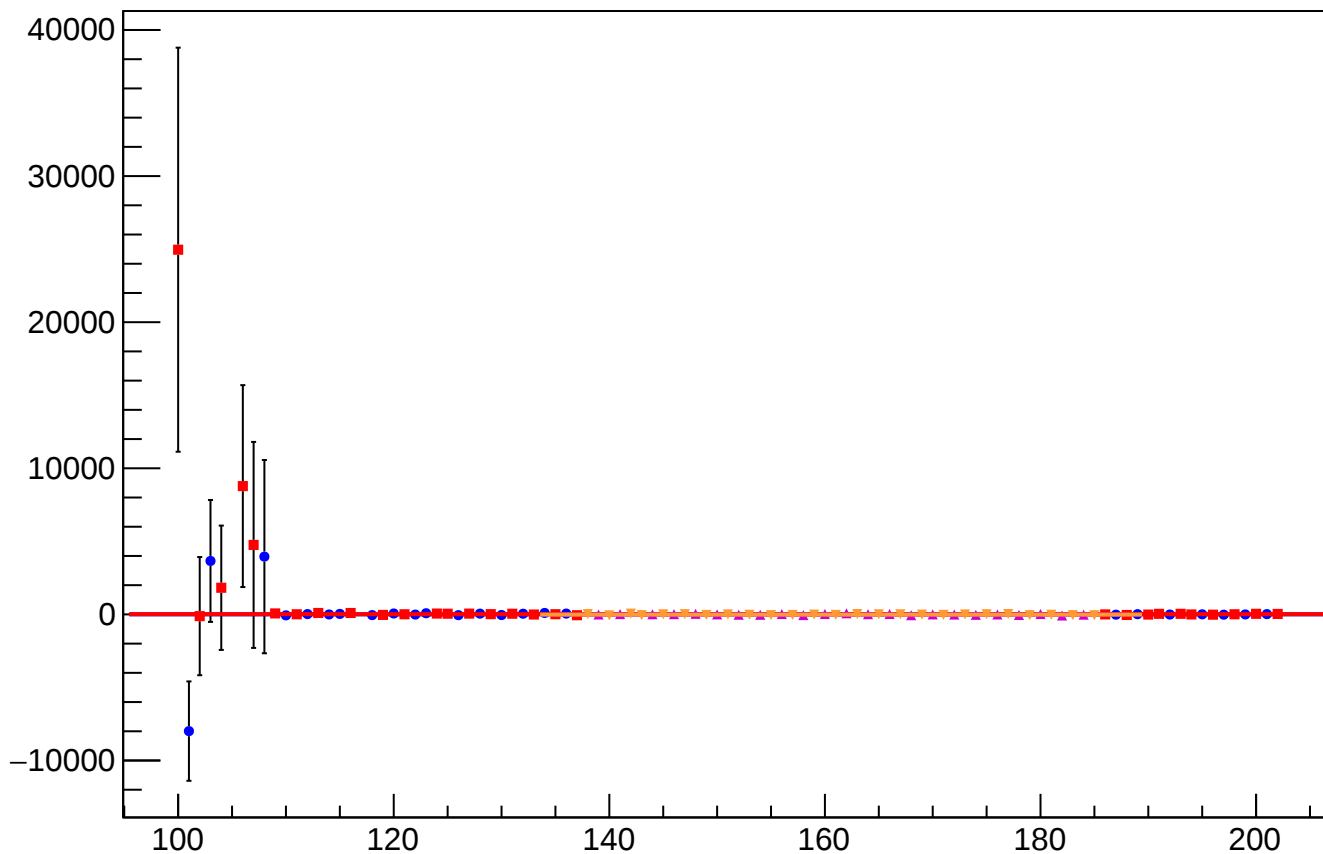
Right: 175.738 $\pm$ 0.028  $\chi^2$ /NDF: 9801981.4/52

In: 180.381 $\pm$ 0.026  $\chi^2$ /NDF:5926418.2/46

Out: 189.294 $\pm$ 0.026  $\chi^2$ /NDF:7397641.9/53

All: 184.813 $\pm$ 0.018  $\chi^2$ /NDF: 13384779.4/100

asym\_bcm\_cav4cQ\_bcm\_an\_ds\_agg\_dd\_mean vs Slug, Sign Corrected



Right In: 3.838+/-8.816  $\chi^2/\text{NDF}$ : 24.2/23

Left Out: -15.006+/-6.723  $\chi^2/\text{NDF}$ : 17.5/24

Right Out: 16.378+/-8.173  $\chi^2/\text{NDF}$ : 24.7/28

Left In: -0.702+/-6.909  $\chi^2/\text{NDF}$ : 26.4/22

Left: -8.049+/-4.819  $\chi^2/\text{NDF}$ : 46.0/47

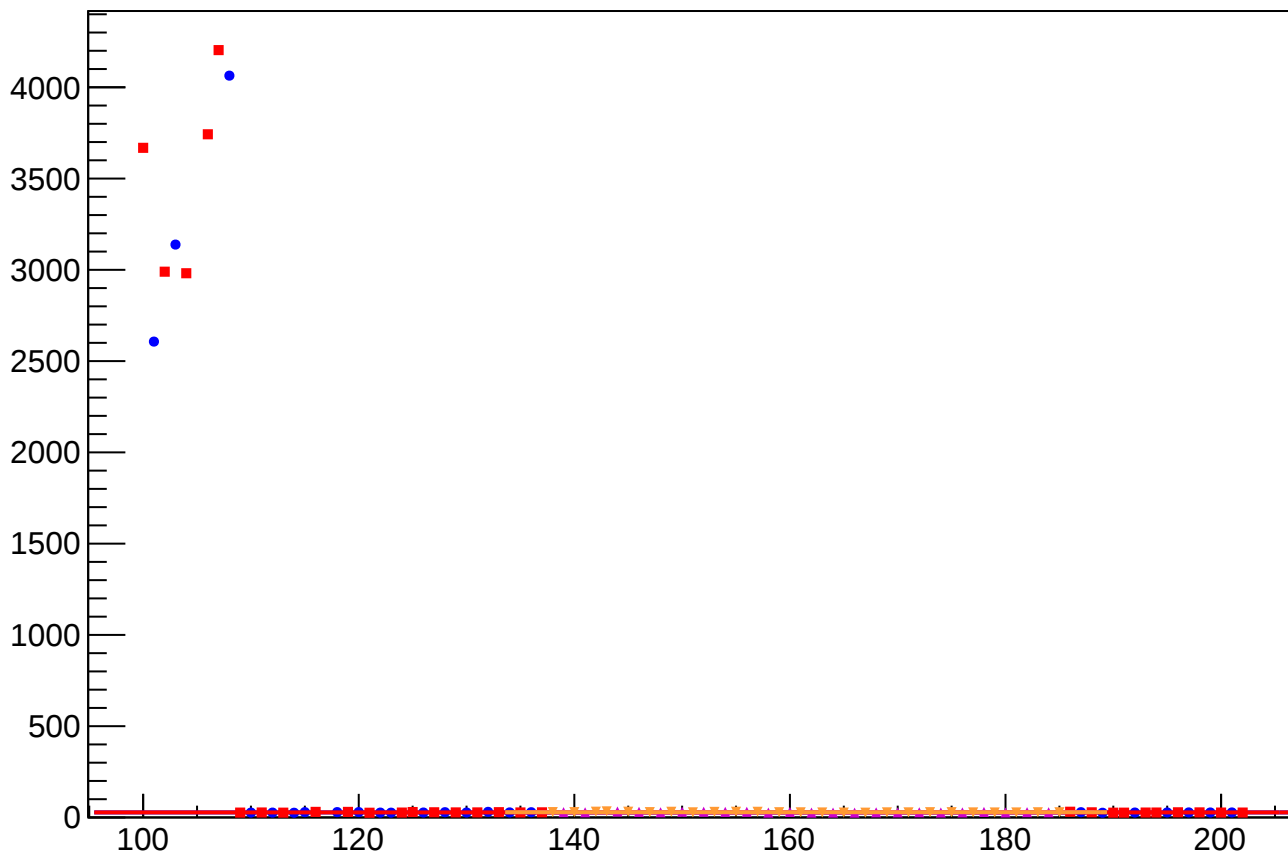
Right: 10.581+/-5.994  $\chi^2/\text{NDF}$ : 50.0/52

In: 1.025+/-5.438  $\chi^2/\text{NDF}$ : 50.7/46

Out: -2.340+/-5.192  $\chi^2/\text{NDF}$ : 51.0/53

All: -0.735+/-3.755  $\chi^2/\text{NDF}$ : 101.9/100

asym\_bcm\_cav4cQ\_bcm\_an\_ds\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 27.641 $\pm$ 0.006  $\chi^2$ /NDF: 3037186.4/23

Left Out: 28.813 $\pm$ 0.005  $\chi^2$ /NDF:121973.8/24

Right Out: 27.666 $\pm$ 0.006  $\chi^2$ /NDF: 3500804.0/28

Left In: 28.792 $\pm$ 0.005  $\chi^2$ /NDF:129393.1/22

Left: 28.803 $\pm$ 0.003  $\chi^2$ /NDF: 251375.8/47

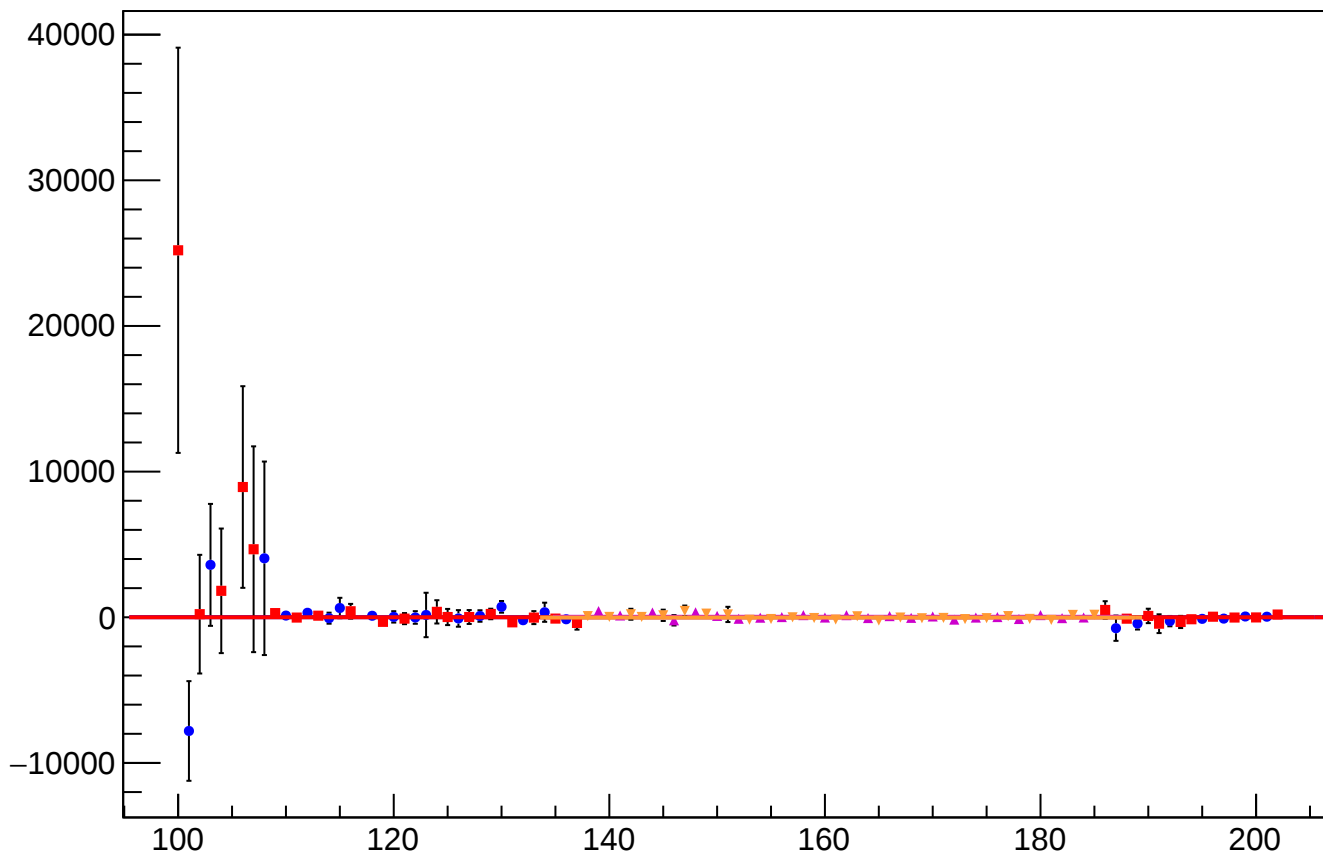
Right: 27.654 $\pm$ 0.004  $\chi^2$ /NDF: 6537999.0/52

In: 28.354 $\pm$ 0.004  $\chi^2$ /NDF:3187718.2/46

Out: 28.350 $\pm$ 0.004  $\chi^2$ /NDF:3646258.6/53

All: 28.352 $\pm$ 0.003  $\chi^2$ /NDF: 6833977.5/100

asym\_bcm\_cav4cQ\_bcm\_dg\_us\_agg\_avg\_mean vs Slug, Sign Corrected



Right In: 8.063+/-59.018  $\chi^2/\text{NDF}$ : 17.1/23

Left Out: -15.548+/-48.688  $\chi^2/\text{NDF}$ : 8.0/24

Right Out: 0.842+/-55.663  $\chi^2/\text{NDF}$ : 15.3/28

Left In: 31.170+/-46.359  $\chi^2/\text{NDF}$ : 8.2/22

Left: 8.955+/-33.574  $\chi^2/\text{NDF}$ : 16.6/47

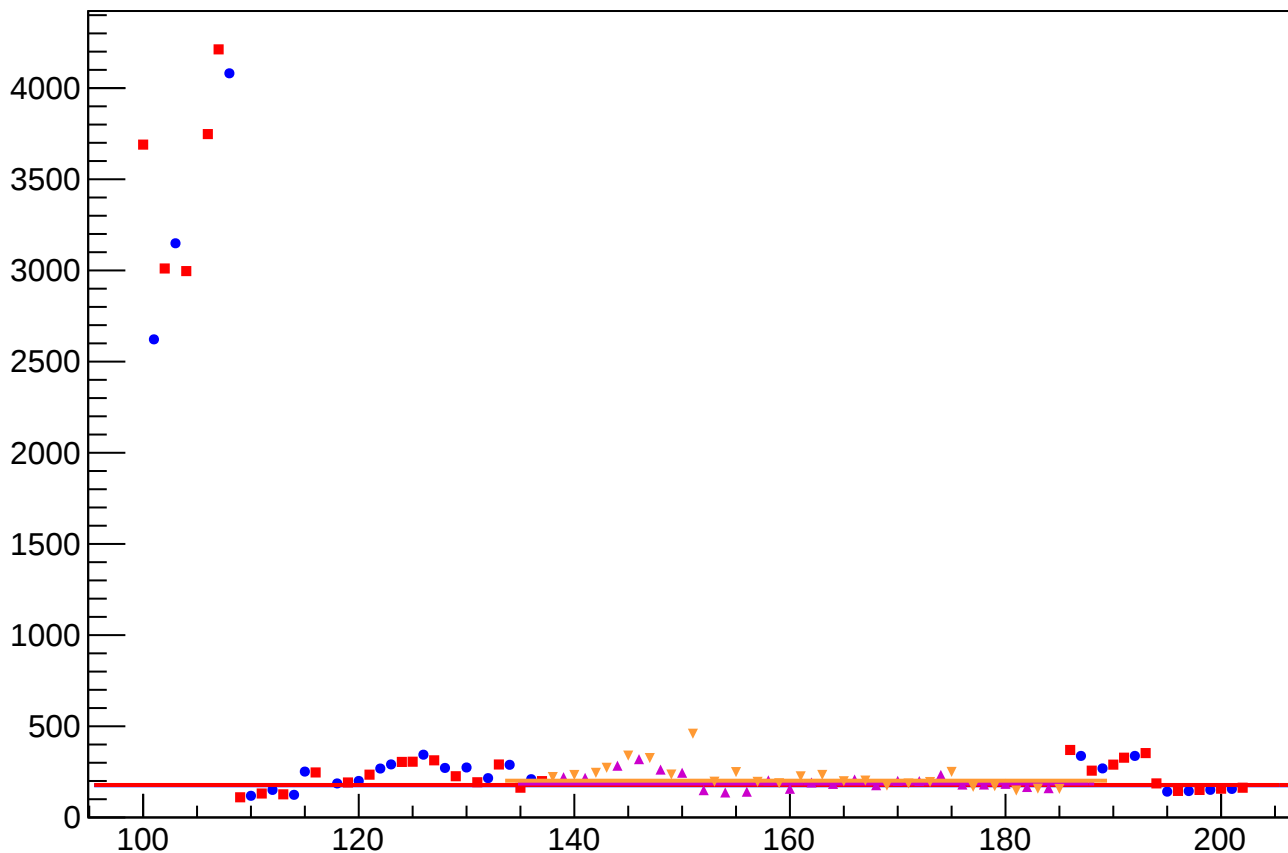
Right: 4.242+/-40.494  $\chi^2/\text{NDF}$ : 32.5/52

In: 22.353+/-36.457  $\chi^2/\text{NDF}$ : 25.4/46

Out: -8.443+/-36.647  $\chi^2/\text{NDF}$ : 23.4/53

All: 7.035+/-25.846  $\chi^2/\text{NDF}$ : 49.1/100

asym\_bcm\_cav4cQ\_bcm\_dg\_us\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 176.523+/-0.042  $\chi^2/\text{NDF}$ : 4442560.3/23

Left Out: 201.600+/-0.034  $\chi^2/\text{NDF}$ : 1857453.2/24

Right Out: 178.153+/-0.039  $\chi^2/\text{NDF}$ : 5262480.3/28

Left In: 186.107+/-0.033  $\chi^2/\text{NDF}$ : 1391327.2/22

Left: 193.474+/-0.024  $\chi^2/\text{NDF}$ : 3354998.7/47

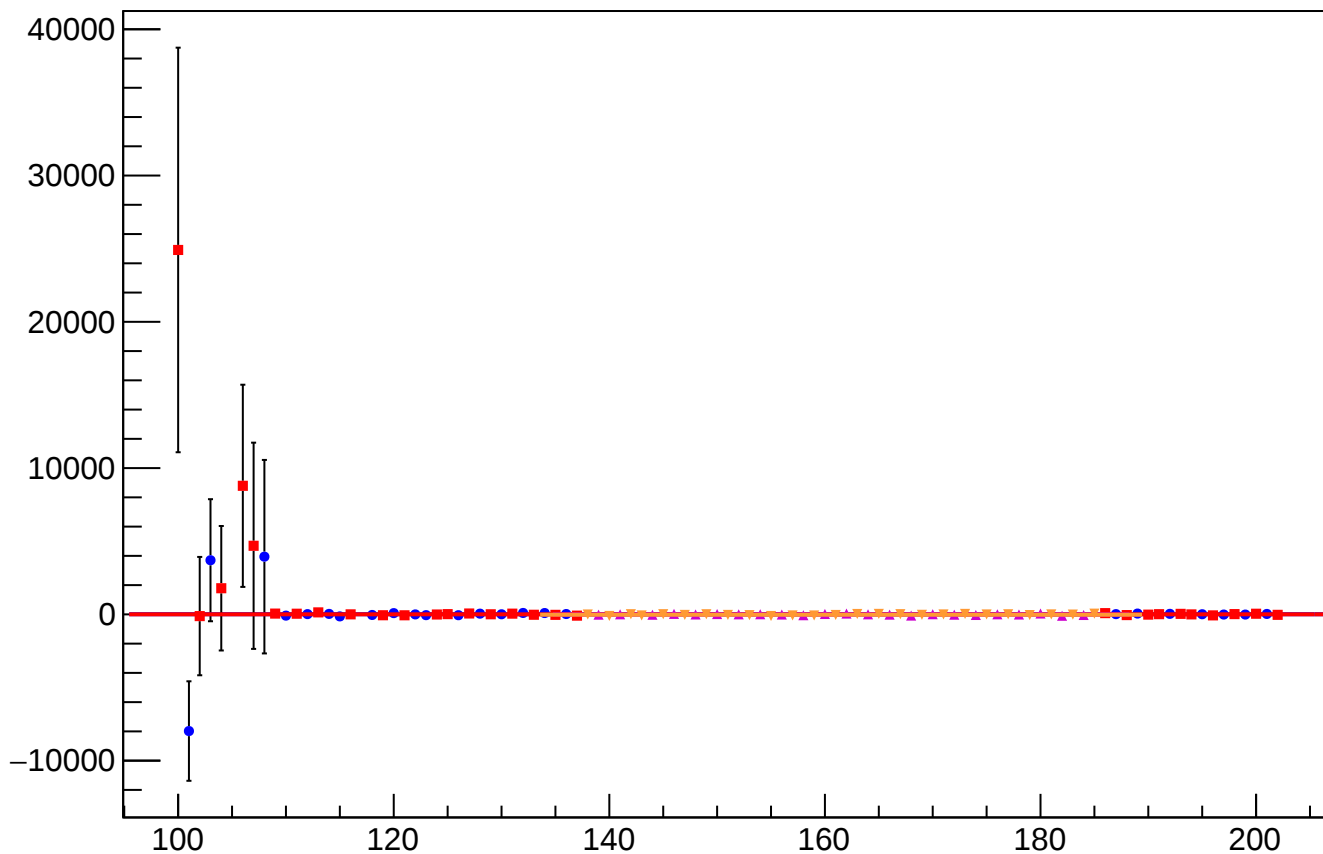
Right: 177.386+/-0.029  $\chi^2/\text{NDF}$ : 9705847.9/52

In: 182.450+/-0.026  $\chi^2/\text{NDF}$ : 5866500.5/46

Out: 191.437+/-0.026  $\chi^2/\text{NDF}$ : 7320980.9/53

All: 186.920+/-0.018  $\chi^2/\text{NDF}$ : 13247929.7/100

asym\_bcm\_cav4cQ\_bcm\_dg\_us\_agg\_dd\_mean vs Slug, Sign Corrected



Right In: 11.072 $\pm$ 10.743  $\chi^2$ /NDF: 22.6/23

Left Out: -23.360 $\pm$ 8.064  $\chi^2$ /NDF:25.8/24

Right Out: 4.298 $\pm$ 9.949  $\chi^2$ /NDF: 31.9/28

Left In: -6.001 $\pm$ 8.309  $\chi^2$ /NDF:21.1/22

Left: -14.939 $\pm$ 5.787  $\chi^2$ /NDF: 49.2/47

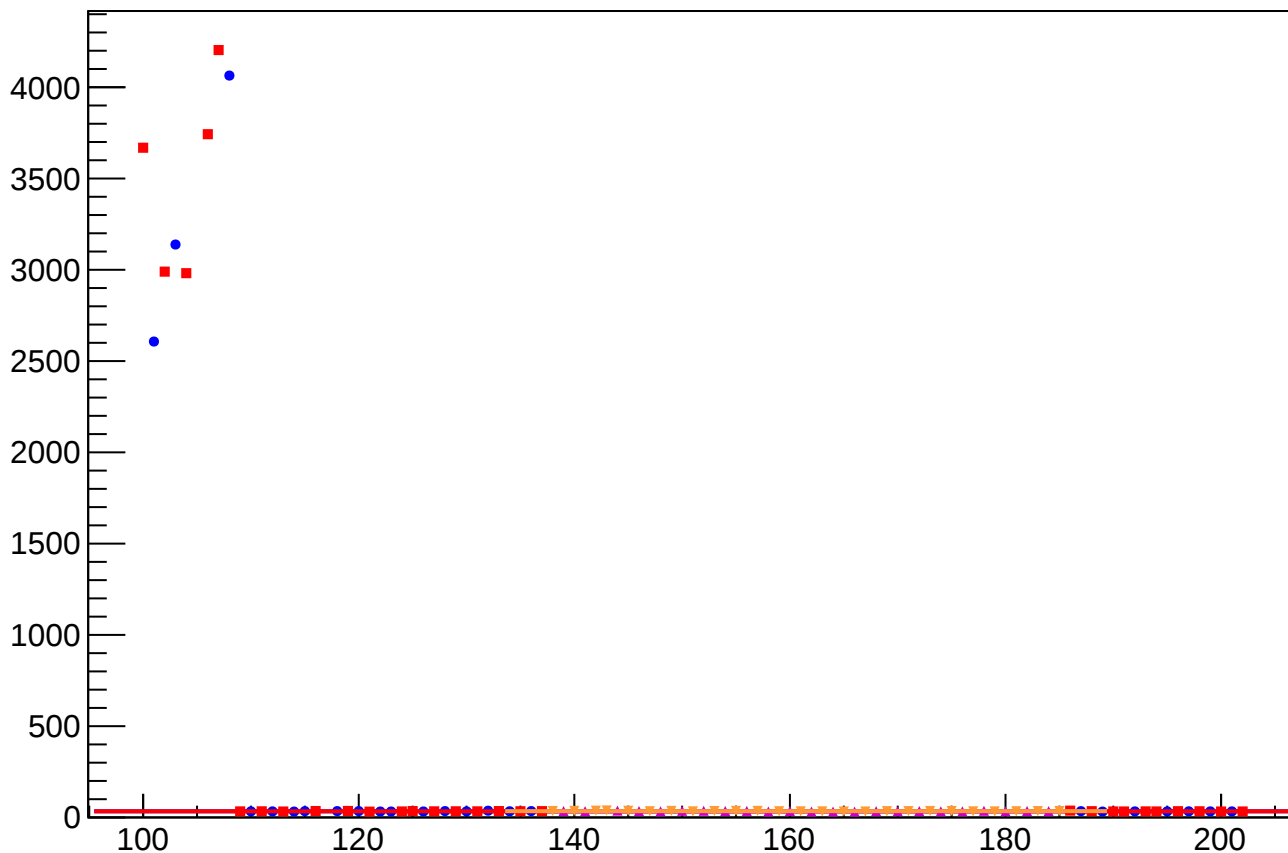
Right: 7.425 $\pm$ 7.300  $\chi^2$ /NDF: 54.7/52

In: 0.389 $\pm$ 6.572  $\chi^2$ /NDF:45.3/46

Out: -12.394 $\pm$ 6.265  $\chi^2$ /NDF:62.4/53

All: -6.309 $\pm$ 4.535  $\chi^2$ /NDF: 109.7/100

asym\_bcm\_cav4cQ\_bcm\_dg\_us\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 33.711+/-0.008  $\chi^2/\text{NDF}$ : 3012030.7/23

Left Out: 34.614+/-0.006  $\chi^2/\text{NDF}$ : 57946.1/24

Right Out: 33.728+/-0.007  $\chi^2/\text{NDF}$ : 3465808.5/28

Left In: 34.685+/-0.006  $\chi^2/\text{NDF}$ : 60315.2/22

Left: 34.649+/-0.004  $\chi^2/\text{NDF}$ : 118335.7/47

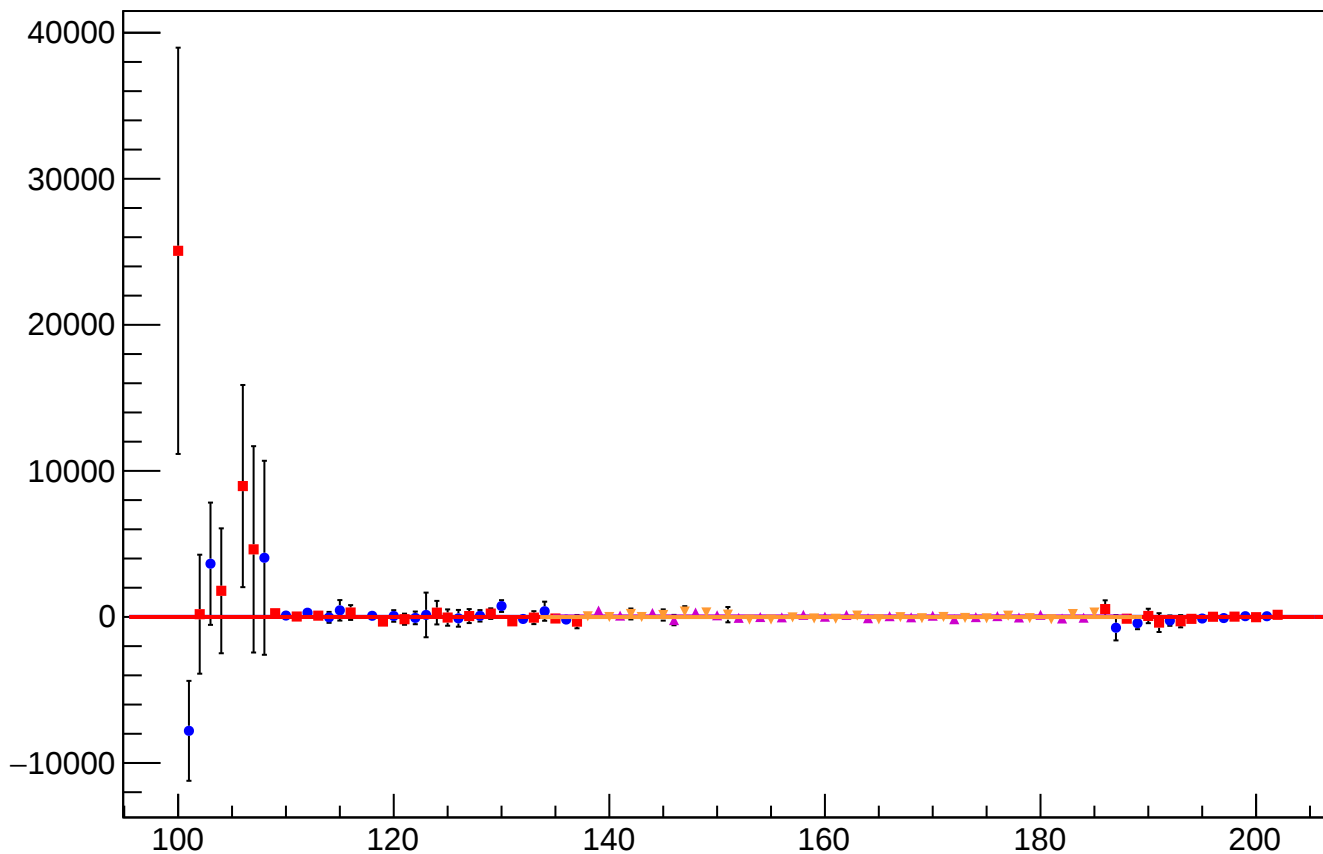
Right: 33.720+/-0.005  $\chi^2/\text{NDF}$ : 6477841.7/52

In: 34.321+/-0.005  $\chi^2/\text{NDF}$ : 3082627.5/46

Out: 34.263+/-0.004  $\chi^2/\text{NDF}$ : 3533340.1/53

All: 34.290+/-0.003  $\chi^2/\text{NDF}$ : 6616048.5/100

asym\_bcm\_cav4cQ\_bcm\_dg\_ds\_agg\_avg\_mean vs Slug, Sign Corrected



Right In:  $5.452 \pm 58.829$   $\chi^2/\text{NDF}$ : 16.7/23

Left Out:  $-8.916 \pm 48.615$   $\chi^2/\text{NDF}$ : 8.6/24

Right Out:  $-2.672 \pm 55.426$   $\chi^2/\text{NDF}$ : 13.8/28

Left In:  $34.127 \pm 46.296$   $\chi^2/\text{NDF}$ : 7.4/22

Left:  $13.656 \pm 33.526$   $\chi^2/\text{NDF}$ : 16.5/47

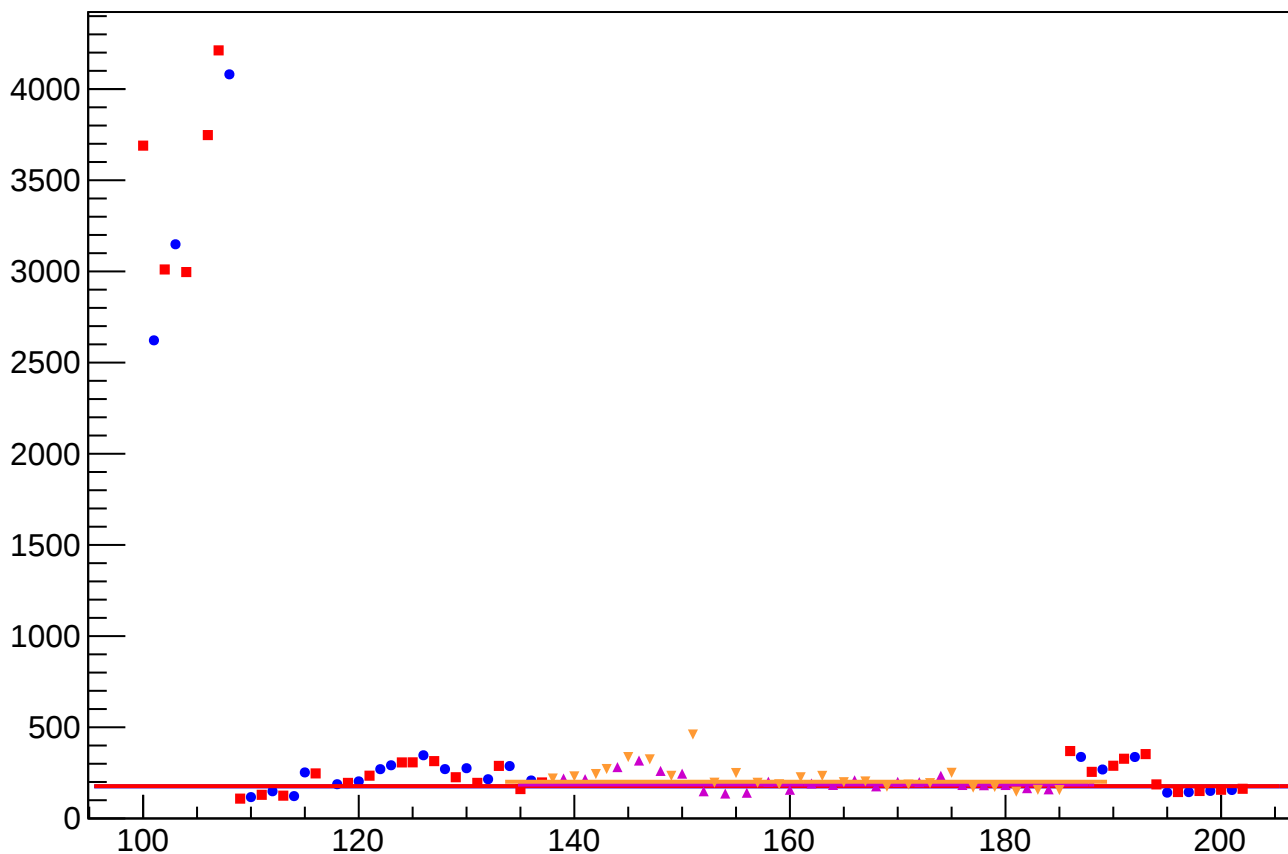
Right:  $1.148 \pm 40.342$   $\chi^2/\text{NDF}$ : 30.4/52

In:  $23.160 \pm 36.382$   $\chi^2/\text{NDF}$ : 24.2/46

Out:  $-6.201 \pm 36.548$   $\chi^2/\text{NDF}$ : 22.4/53

All:  $8.546 \pm 25.784$   $\chi^2/\text{NDF}$ : 47.0/100

asym\_bcm\_cav4cQ\_bcm\_dg\_ds\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 175.828+/-0.042  $\chi^2/\text{NDF}$ : 4472570.5/23

Left Out: 201.296+/-0.034  $\chi^2/\text{NDF}$ : 1851134.1/24

Right Out: 177.171+/-0.039  $\chi^2/\text{NDF}$ : 5313017.3/28

Left In: 185.854+/-0.033  $\chi^2/\text{NDF}$ : 1381771.9/22

Left: 193.198+/-0.024  $\chi^2/\text{NDF}$ : 3338733.9/47

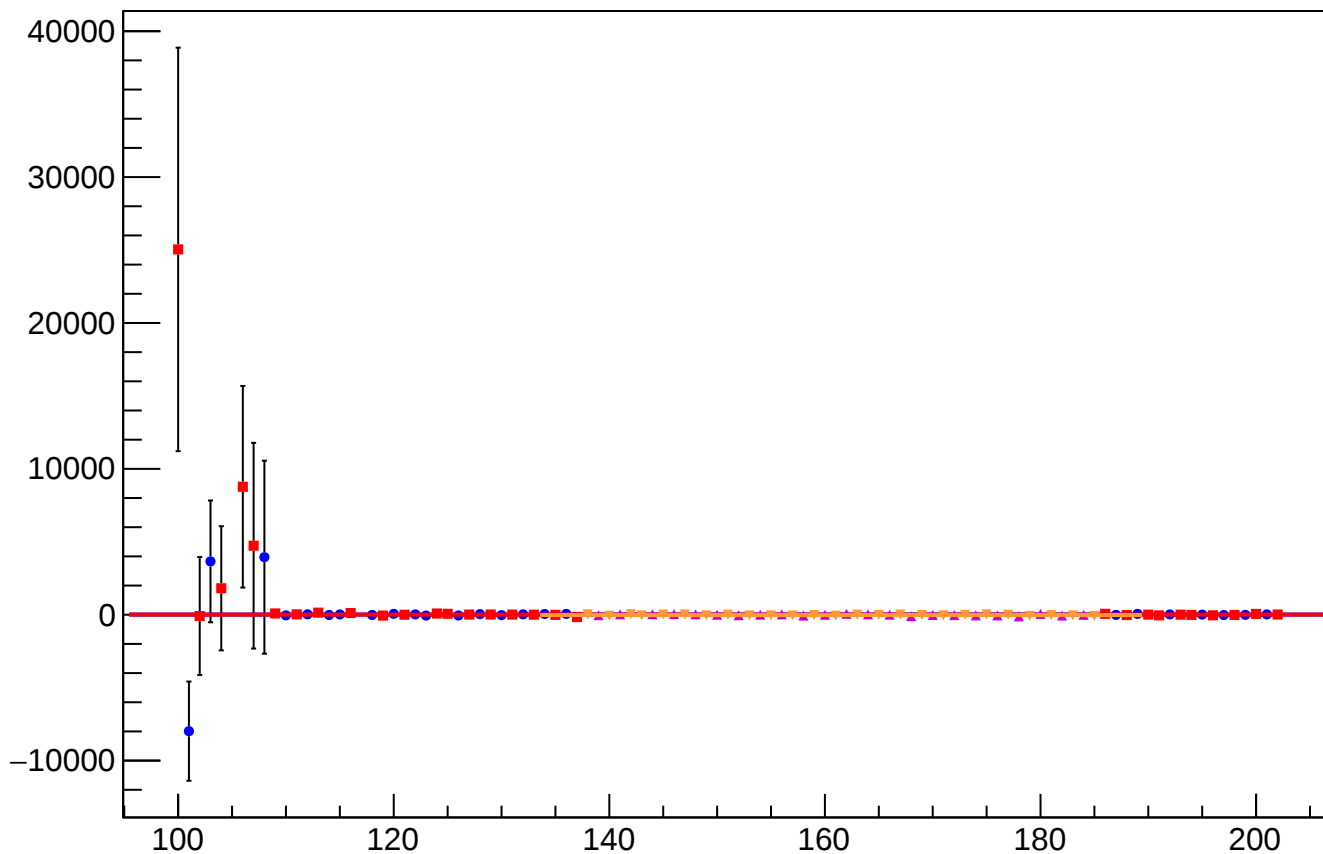
Right: 176.539+/-0.029  $\chi^2/\text{NDF}$ : 9786140.3/52

In: 182.019+/-0.026  $\chi^2/\text{NDF}$ : 5890215.4/46

Out: 190.806+/-0.026  $\chi^2/\text{NDF}$ : 7378308.0/53

All: 186.393+/-0.018  $\chi^2/\text{NDF}$ : 13326590.9/100

asym\_bcm\_cav4cQ\_bcm\_dg\_ds\_agg\_dd\_mean vs Slug, Sign Corrected



Right In: 11.340+/-9.743  $\chi^2/\text{NDF}$ : 17.3/23

Left Out: -22.879+/-7.340  $\chi^2/\text{NDF}$ : 18.8/24

Right Out: 9.721+/-9.023  $\chi^2/\text{NDF}$ : 36.6/28

Left In: -5.943+/-7.550  $\chi^2/\text{NDF}$ : 38.3/22

Left: -14.649+/-5.263  $\chi^2/\text{NDF}$ : 59.7/47

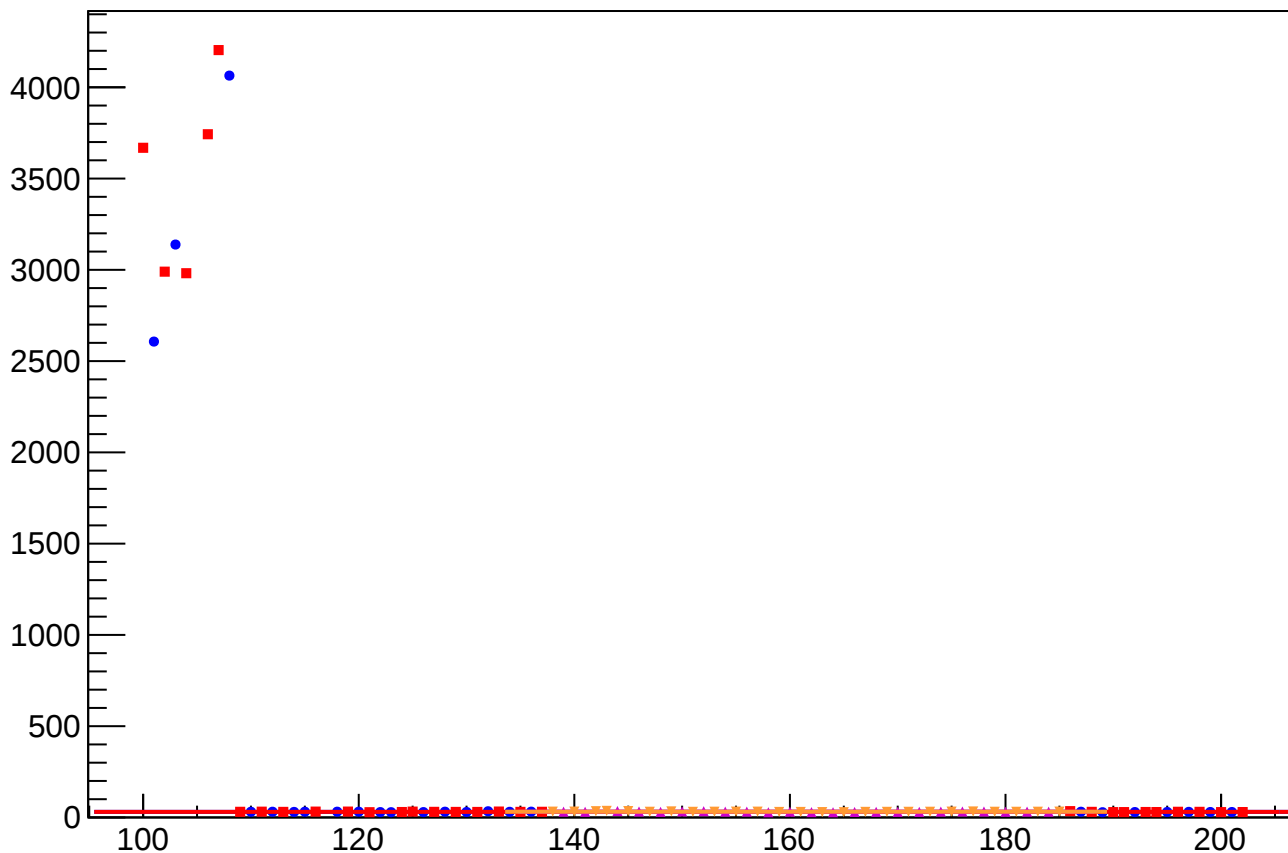
Right: 10.469+/-6.620  $\chi^2/\text{NDF}$ : 53.8/52

In: 0.541+/-5.968  $\chi^2/\text{NDF}$ : 57.6/46

Out: -9.896+/-5.694  $\chi^2/\text{NDF}$ : 63.2/53

All: -4.922+/-4.120  $\chi^2/\text{NDF}$ : 122.3/100

asym\_bcm\_cav4cQ\_bcm\_dg\_ds\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 30.562 $\pm$ 0.007  $\chi^2$ /NDF: 3025770.5/23

Left Out: 31.482 $\pm$ 0.005  $\chi^2$ /NDF:82437.2/24

Right Out: 30.560 $\pm$ 0.006  $\chi^2$ /NDF: 3480777.5/28

Left In: 31.484 $\pm$ 0.005  $\chi^2$ /NDF:87981.1/22

Left: 31.483 $\pm$ 0.004  $\chi^2$ /NDF: 170418.5/47

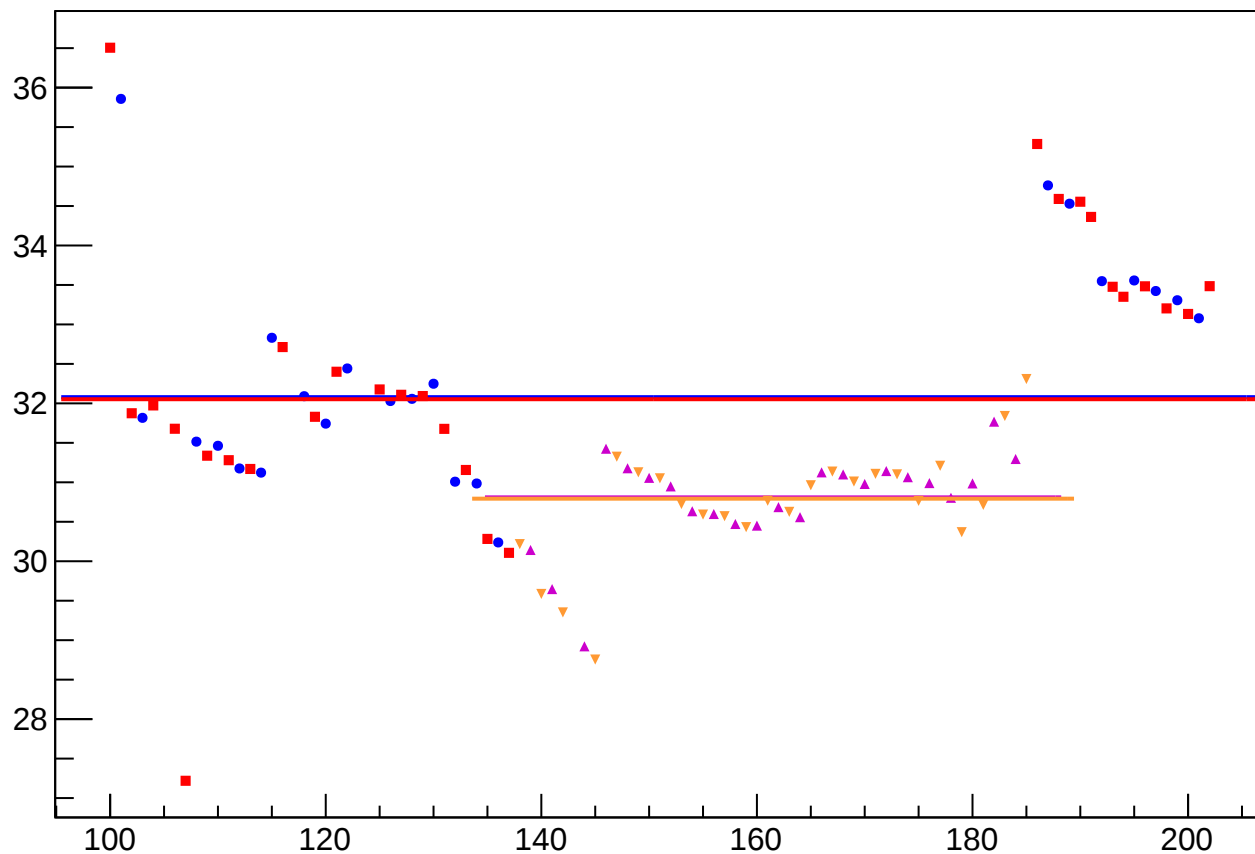
Right: 30.561 $\pm$ 0.005  $\chi^2$ /NDF: 6506548.0/52

In: 31.138 $\pm$ 0.004  $\chi^2$ /NDF:3124959.0/46

Out: 31.115 $\pm$ 0.004  $\chi^2$ /NDF:3575762.8/53

All: 31.126 $\pm$ 0.003  $\chi^2$ /NDF: 6700737.9/100

# yield\_usl\_mean vs Slug, Sign Corrected



Right In: 32.079+/-0.000

$\chi^2/\text{NDF}$ : 2132605215.2/22

Left: 30.801+/-0.000

$\chi^2/\text{NDF}$ : 1829591088.1/46

Left Out: 30.793+/-0.000

$\chi^2/\text{NDF}$ : 1007261340.7/23

Right: 32.066+/-0.000

$\chi^2/\text{NDF}$ : 4165014293.4/50

Right Out: 32.053+/-0.000

$\chi^2/\text{NDF}$ : 2031907179.4/27

In: 31.258+/-0.000

$\chi^2/\text{NDF}$ : 4472437095.4/45

Out: 31.233+/-0.000

$\chi^2/\text{NDF}$ : 4568559972.8/51

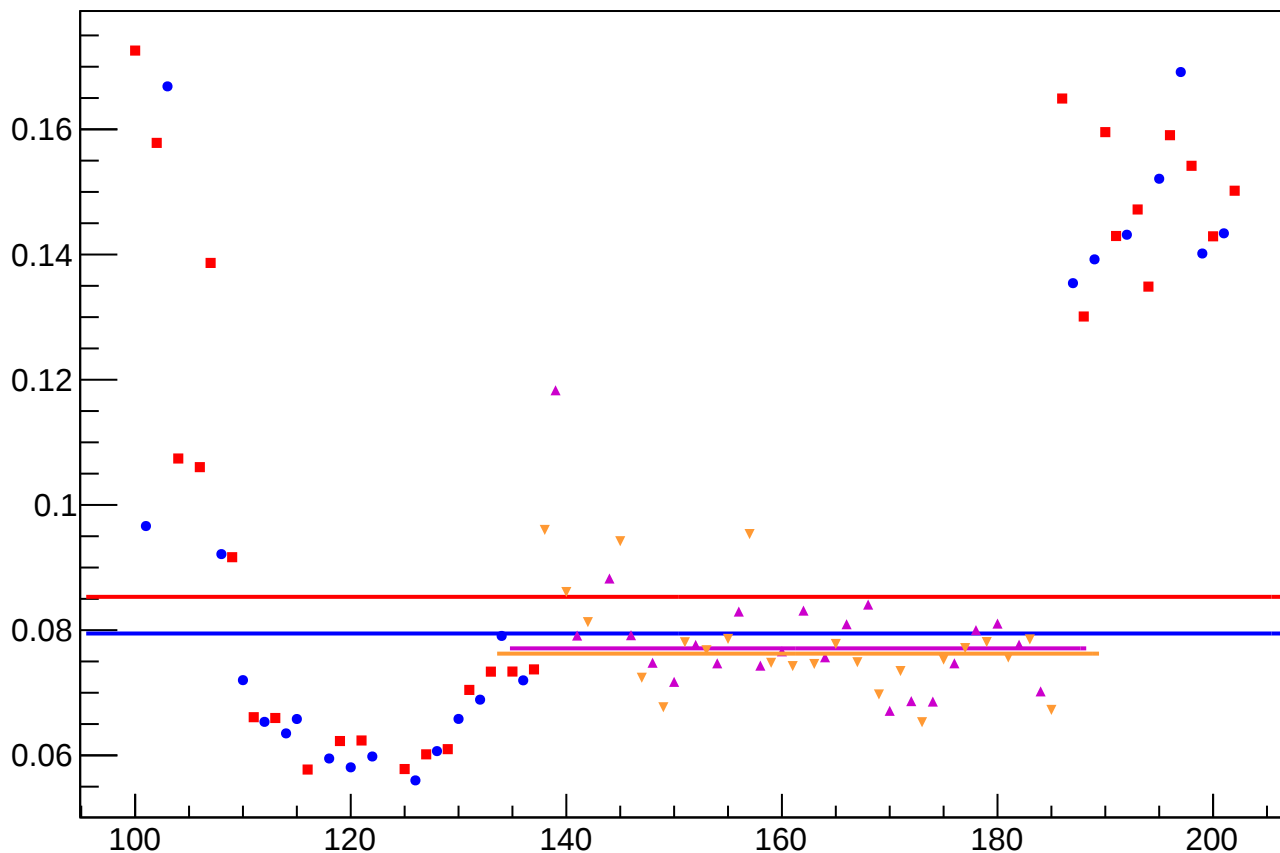
Left In: 30.809+/-0.000

$\chi^2/\text{NDF}$ : 821961762.3/22

All: 31.245+/-0.000

$\chi^2/\text{NDF}$ : 9042318004.2/95

# yield\_usl\_rms vs Slug, Sign Corrected



Right In: 0.079+/-0.000  $\chi^2/\text{NDF}$ : 2898424.5/22

Left Out: 0.076+/-0.000  $\chi^2/\text{NDF}$ :277876.5/23

Right Out: 0.085+/-0.000  $\chi^2/\text{NDF}$ : 3527921.6/27

Left In: 0.077+/-0.000  $\chi^2/\text{NDF}$ :325844.3/22

Left: 0.077+/-0.000  $\chi^2/\text{NDF}$ : 605642.6/46

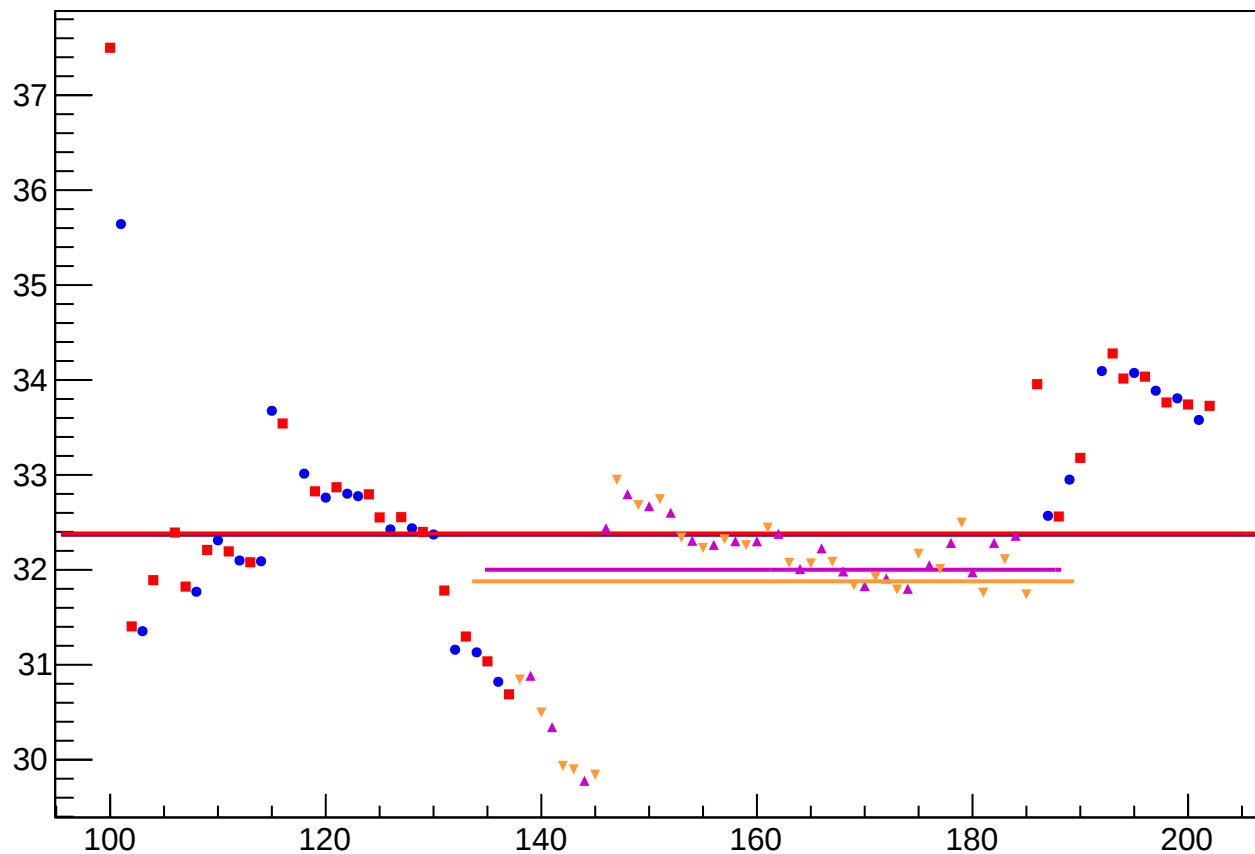
Right: 0.082+/-0.000  $\chi^2/\text{NDF}$ : 6476689.8/50

In: 0.078+/-0.000  $\chi^2/\text{NDF}$ :3234886.7/45

Out: 0.079+/-0.000  $\chi^2/\text{NDF}$ :3964393.5/51

All: 0.079+/-0.000  $\chi^2/\text{NDF}$ : 7208517.4/97

# yield\_usr\_mean vs Slug, Sign Corrected



Right In: 32.370+/-0.000  $\chi^2/\text{NDF}$ : 1228844603.9/23

Left Out: 31.879+/-0.000  $\chi^2/\text{NDF}$ : 1976281391.1/24

Right Out: 32.383+/-0.000  $\chi^2/\text{NDF}$ : 752769140.0/27

Left In: 32.001+/-0.000  $\chi^2/\text{NDF}$ : 1411110671.9/22

Left: 31.939+/-0.000  $\chi^2/\text{NDF}$ : 3408370857.8/47

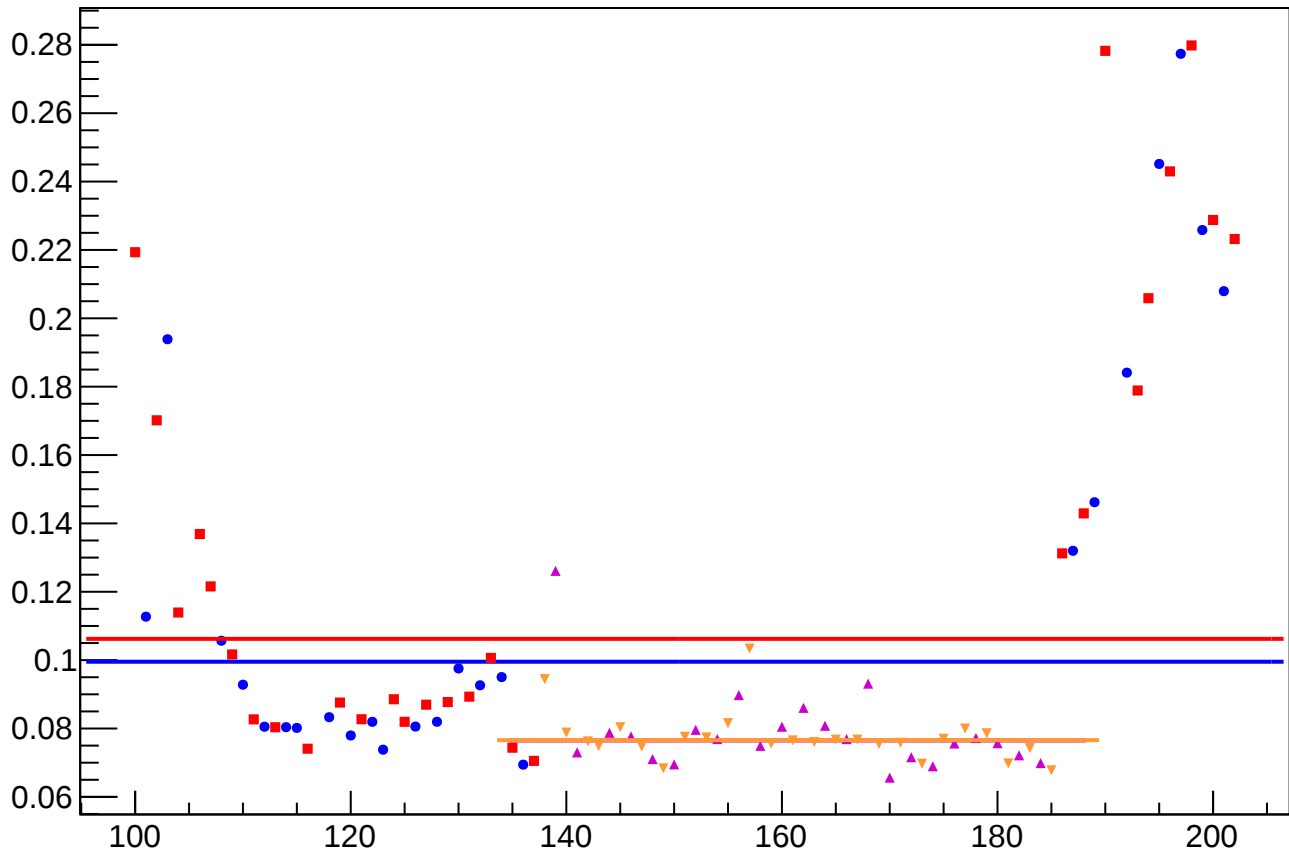
Right: 32.377+/-0.000  $\chi^2/\text{NDF}$ : 1981694677.7/51

In: 32.092+/-0.000  $\chi^2/\text{NDF}$ : 2731503470.2/46

Out: 32.001+/-0.000  $\chi^2/\text{NDF}$ : 2906094812.5/52

All: 32.045+/-0.000  $\chi^2/\text{NDF}$ : 5652820508.3/95

# yield\_usr\_rms vs Slug, Sign Corrected



Right In: 0.100+/-0.000  $\chi^2/\text{NDF}$ : 3384911.6/23

Left Out: 0.077+/-0.000  $\chi^2/\text{NDF}$ :209648.5/24

Right Out: 0.106+/-0.000  $\chi^2/\text{NDF}$ : 3778483.7/27

Left In: 0.076+/-0.000  $\chi^2/\text{NDF}$ :432563.3/22

Left: 0.077+/-0.000  $\chi^2/\text{NDF}$ : 642235.6/47

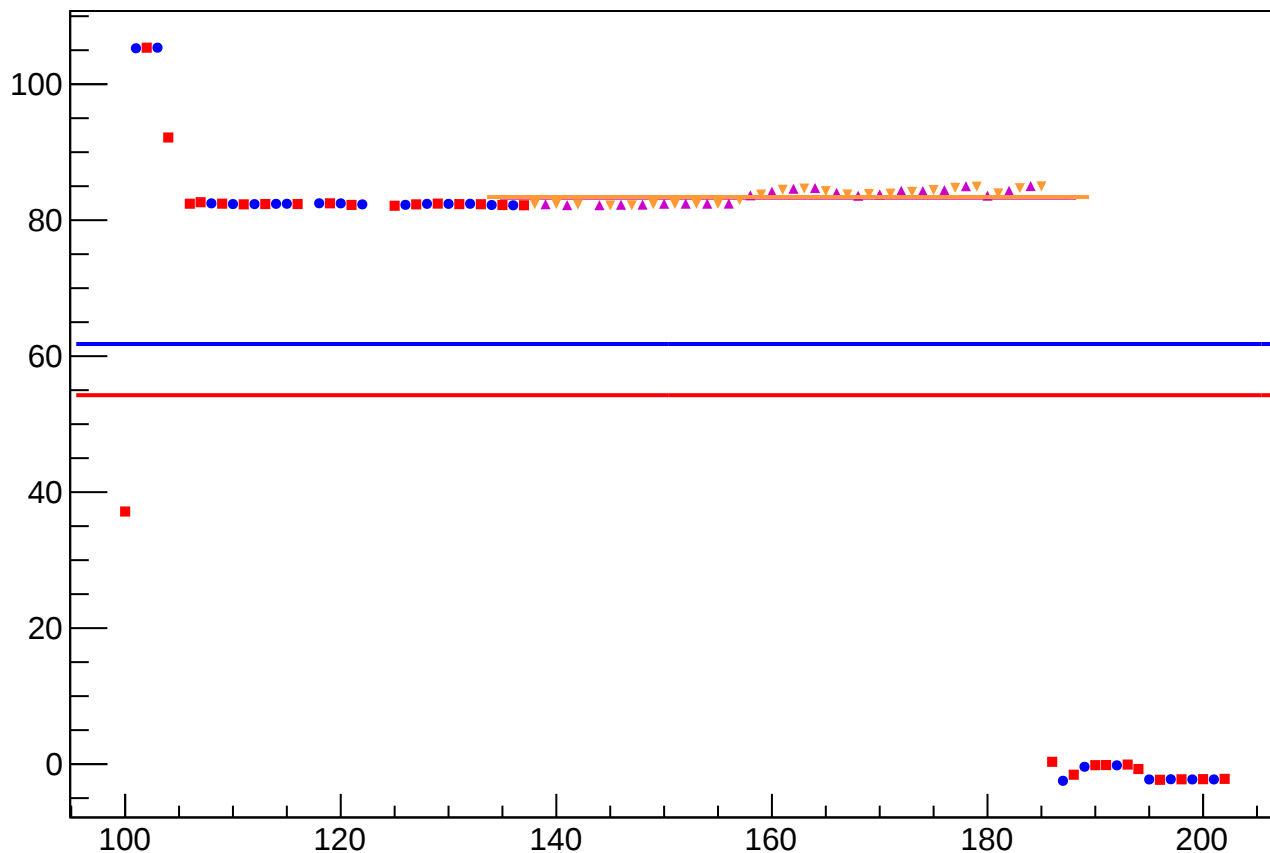
Right: 0.103+/-0.000  $\chi^2/\text{NDF}$ : 7203959.9/51

In: 0.082+/-0.000  $\chi^2/\text{NDF}$ :4532374.8/46

Out: 0.084+/-0.000  $\chi^2/\text{NDF}$ :5211744.1/52

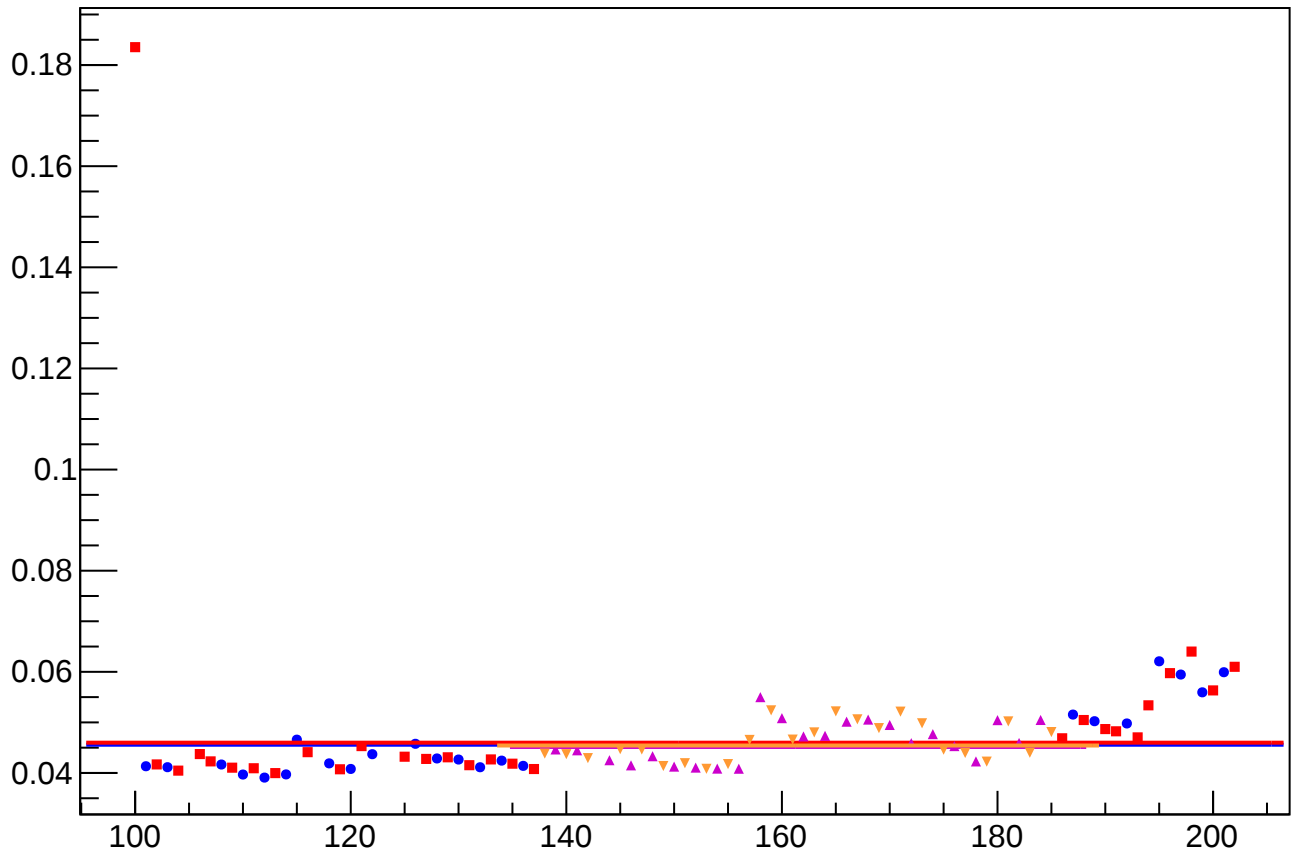
All: 0.083+/-0.000  $\chi^2/\text{NDF}$ : 9753853.1/99

# yield\_dsl\_mean vs Slug, Sign Corrected



|                           |                                           |                       |                                           |
|---------------------------|-------------------------------------------|-----------------------|-------------------------------------------|
| Right In: 61.785+/-0.000  | $\chi^2/\text{NDF}$ : 8457236306293.3/22  | Left: 83.355+/-0.000  | $\chi^2/\text{NDF}$ : 17213898269.1/46    |
| Left Out: 83.402+/-0.000  | $\chi^2/\text{NDF}$ : 8756634444.3/23     | Right: 57.749+/-0.000 | $\chi^2/\text{NDF}$ : 19063955517318.4/23 |
| Right Out: 54.262+/-0.000 | $\chi^2/\text{NDF}$ : 10448107472530.4/27 | In: 75.006+/-0.000    | $\chi^2/\text{NDF}$ : 9952243878895.8/45  |
| Left In: 83.309+/-0.000   | $\chi^2/\text{NDF}$ : 8421247810.9/22     | Out: 71.110+/-0.000   | $\chi^2/\text{NDF}$ : 13425171440155.0/5  |
|                           |                                           | All: 73.003+/-0.000   | $\chi^2/\text{NDF}$ : 2348313866241.0/100 |

# yield\_dsl\_rms vs Slug, Sign Corrected



Right In: 0.046+/-0.000  $\chi^2/\text{NDF}$ : 489293.6/22

Left Out: 0.045+/-0.000  $\chi^2/\text{NDF}$ : 206685.9/23

Right Out: 0.046+/-0.000  $\chi^2/\text{NDF}$ : 584602.3/27

Left In: 0.045+/-0.000  $\chi^2/\text{NDF}$ : 242885.4/22

Left: 0.045+/-0.000  $\chi^2/\text{NDF}$ : 450258.5/46

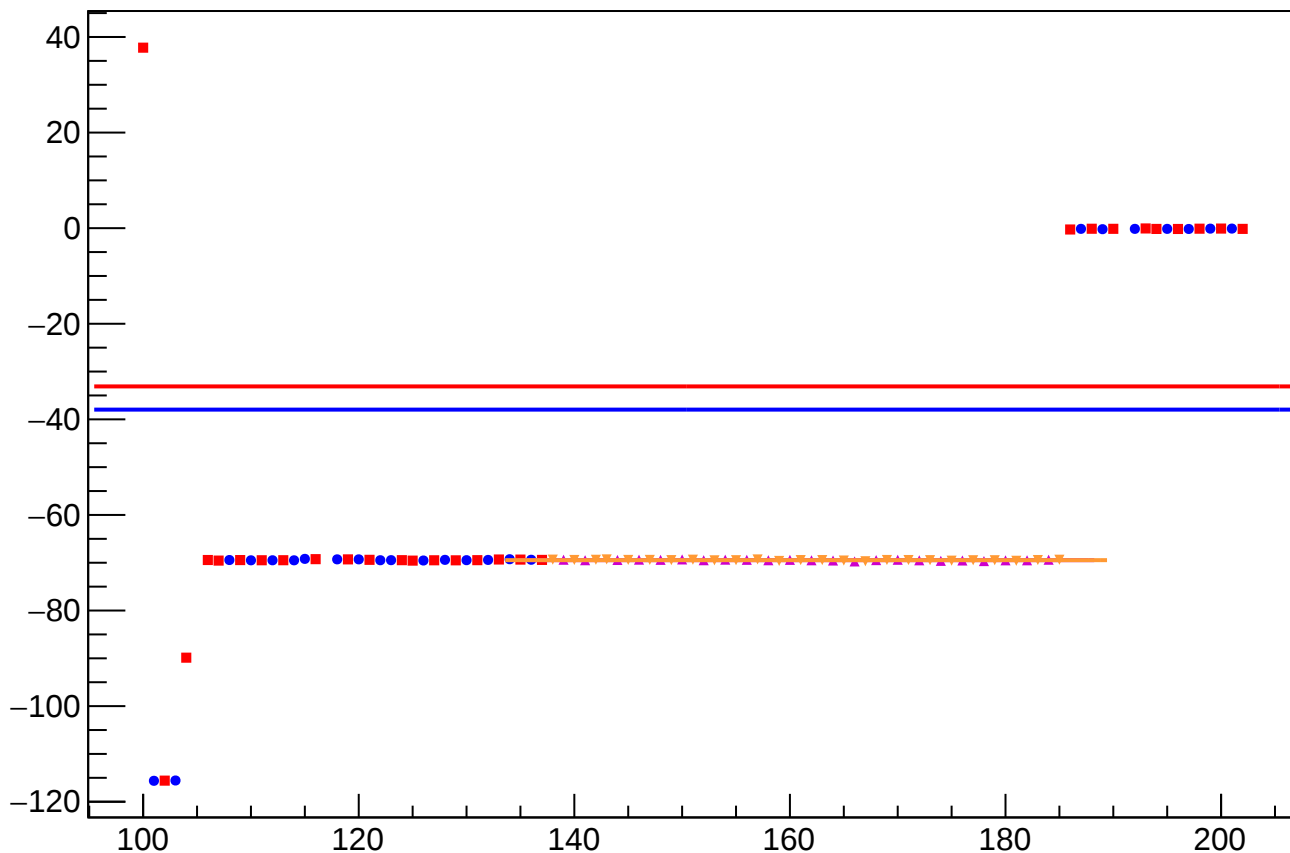
Right: 0.046+/-0.000  $\chi^2/\text{NDF}$ : 1074808.3/50

In: 0.045+/-0.000  $\chi^2/\text{NDF}$ : 733442.4/45

Out: 0.046+/-0.000  $\chi^2/\text{NDF}$ : 793476.4/51

All: 0.045+/-0.000  $\chi^2/\text{NDF}$ : 1528649.6/97

# yield\_dsr\_mean vs Slug, Sign Corrected



Right In: -37.963+/-0.000

$\chi^2/\text{NDF}$ : 6313471125396.6/23

Left: -69.460+/-0.000

$\chi^2/\text{NDF}$ : 102399164.0/47

Left Out: -69.461+/-0.000

$\chi^2/\text{NDF}$ : 49572401.9/24

Right: -35.329+/-0.000

$\chi^2/\text{NDF}$ : 13027617528580.6

Right Out: -33.109+/-0.000

$\chi^2/\text{NDF}$ : 6664503874427.4/27

In: -56.355+/-0.000

$\chi^2/\text{NDF}$ : 8562631403545.2/46

Out: -53.420+/-0.000

$\chi^2/\text{NDF}$ : 10064346232214.7/47

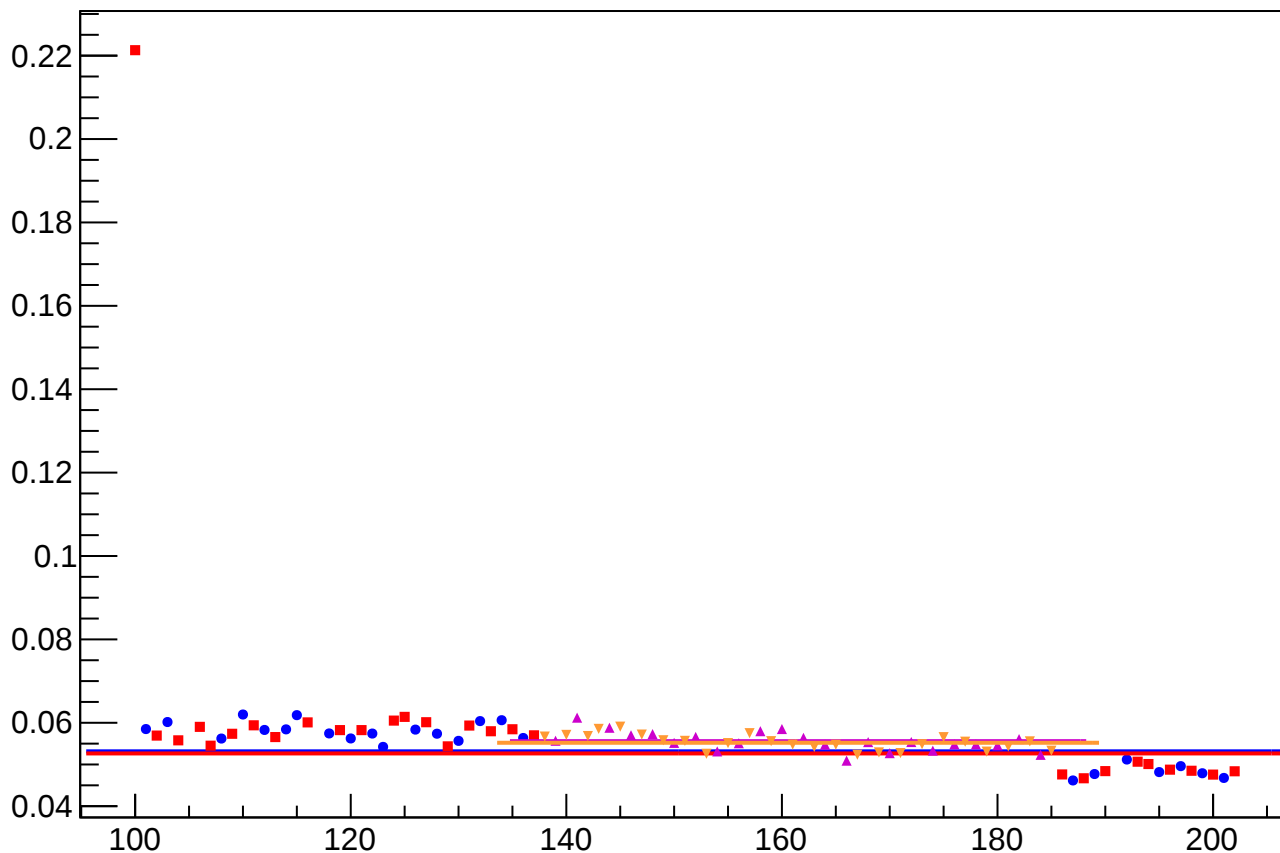
Left In: -69.458+/-0.000

$\chi^2/\text{NDF}$ : 52798704.3/22

All: -54.806+/-0.000

$\chi^2/\text{NDF}$ : 186694038005

# yield\_dsr\_rms vs Slug, Sign Corrected



Right In: 0.053+/-0.000  $\chi^2/\text{NDF}$ : 195677.2/23

Left Out: 0.055+/-0.000  $\chi^2/\text{NDF}$ : 38761.8/24

Right Out: 0.053+/-0.000  $\chi^2/\text{NDF}$ : 295827.1/27

Left In: 0.056+/-0.000  $\chi^2/\text{NDF}$ : 52190.5/22

Left: 0.055+/-0.000  $\chi^2/\text{NDF}$ : 91784.6/47

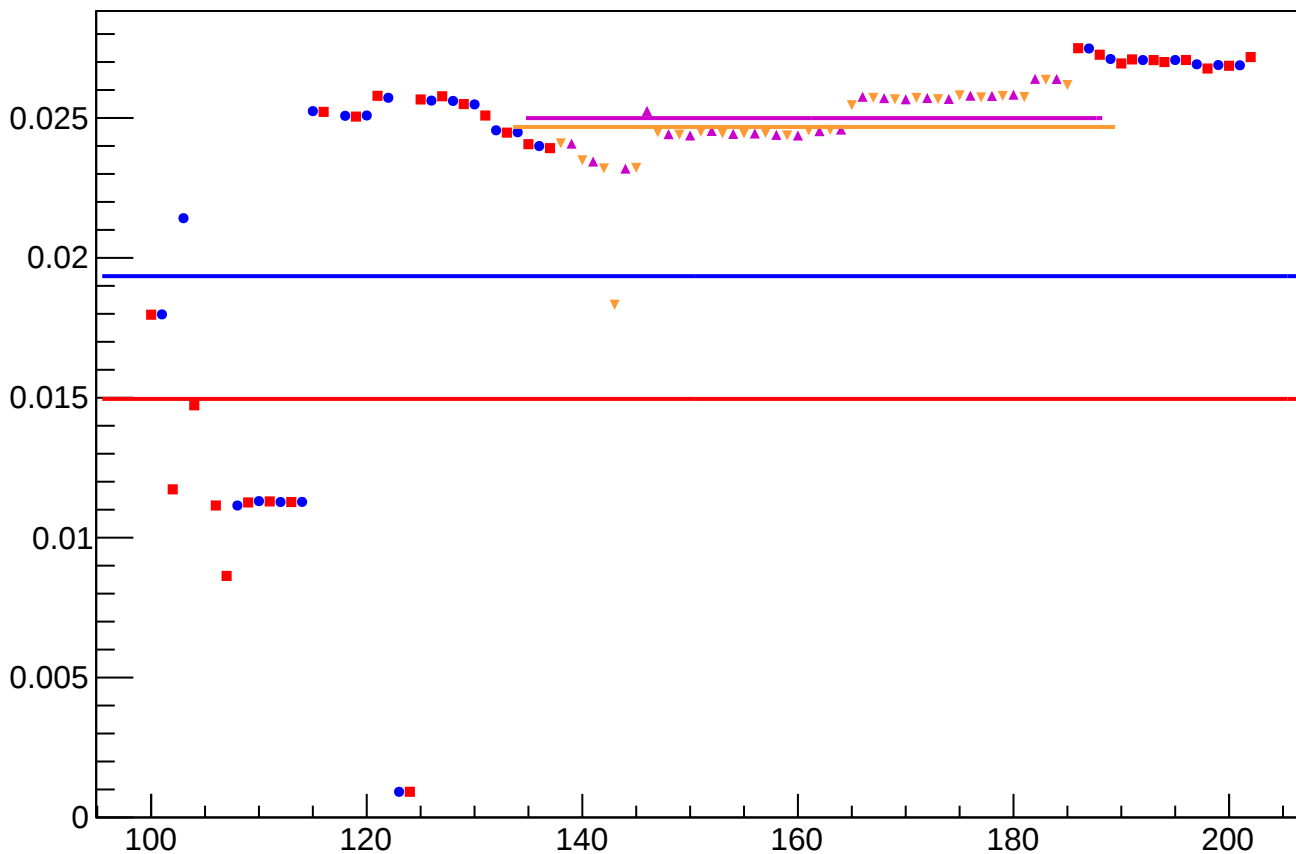
Right: 0.053+/-0.000  $\chi^2/\text{NDF}$ : 492588.9/51

In: 0.055+/-0.000  $\chi^2/\text{NDF}$ : 274835.3/46

Out: 0.054+/-0.000  $\chi^2/\text{NDF}$ : 368352.9/52

All: 0.054+/-0.000  $\chi^2/\text{NDF}$ : 645652.8/99

# yield\_atl1\_mean vs Slug, Sign Corrected



Right In: 0.019+/-0.000

$\chi^2/\text{NDF}$ : 167338508109.5/23

Left: 0.025+/-0.000

$\chi^2/\text{NDF}$ : 12284812437.7/47

Left Out: 0.025+/-0.000

$\chi^2/\text{NDF}$ : 9641065555.8/24

Right: 0.017+/-0.000

$\chi^2/\text{NDF}$ : 563759307194.2/52

Right Out: 0.015+/-0.000

$\chi^2/\text{NDF}$ : 371534636918.8/28

In: 0.023+/-0.000

$\chi^2/\text{NDF}$ : 213134988223.6/46

Out: 0.020+/-0.000

$\chi^2/\text{NDF}$ : 541365567170.1/53

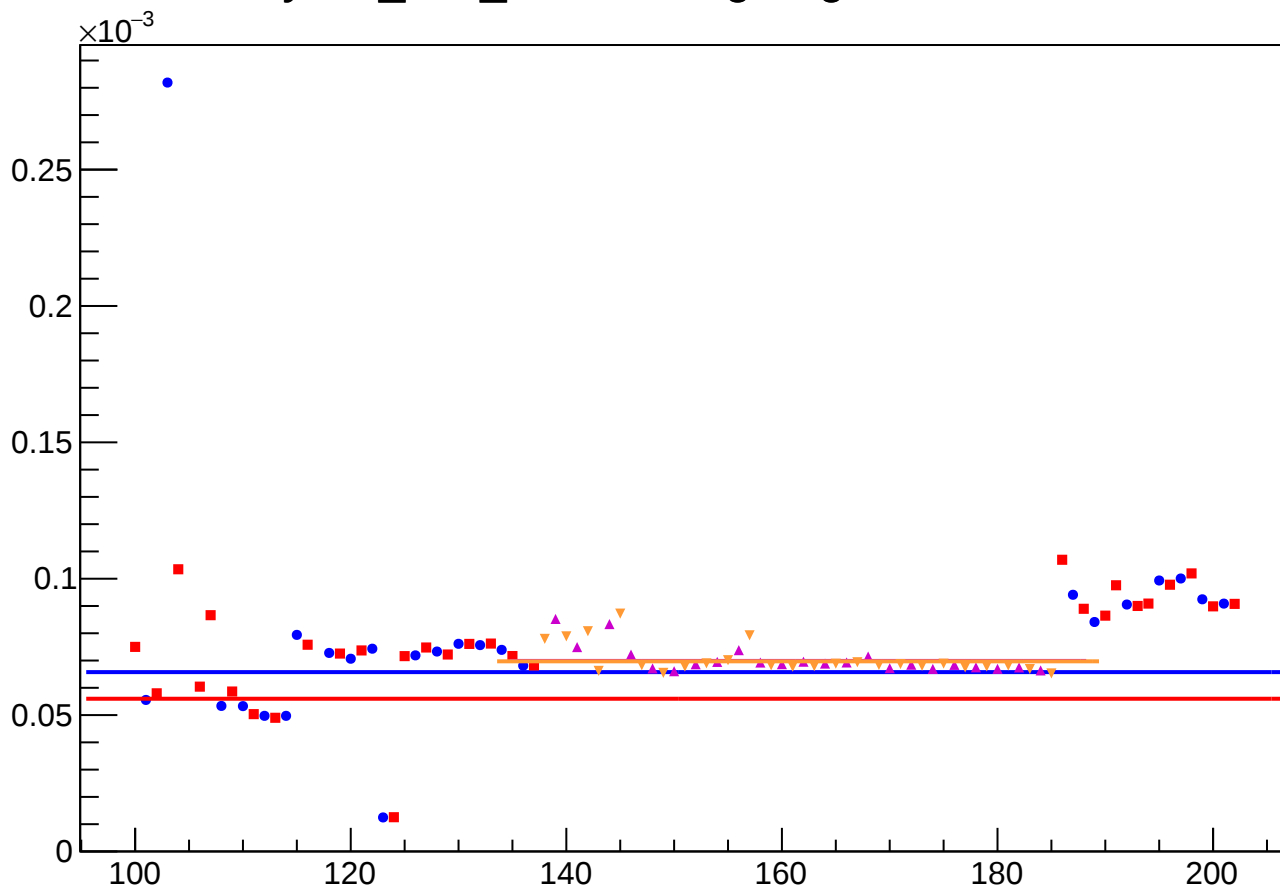
Left In: 0.025+/-0.000

$\chi^2/\text{NDF}$ : 2462473687.7/22

All: 0.021+/-0.000

$\chi^2/\text{NDF}$ : 775095330049.8

# yield\_atl1\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3072293.3/23

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :158125.0/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6212826.4/28

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :129289.8/22

Left: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 287487.6/47

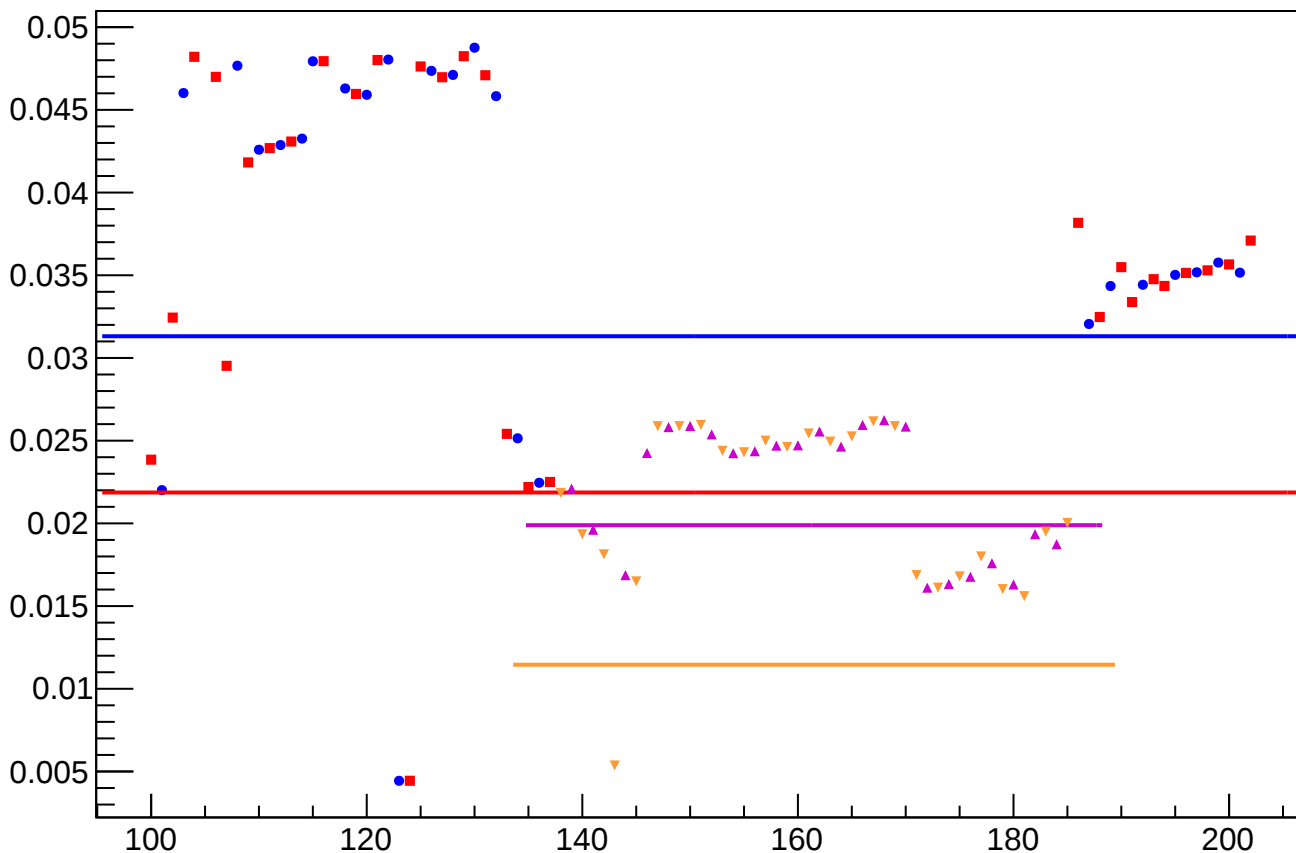
Right: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9531707.1/52

In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :3247264.8/46

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :7009685.0/53

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10401711.8/100

# yield\_atl2\_mean vs Slug, Sign Corrected



Right In: 0.031+/-0.000

$\chi^2/\text{NDF}$ : 21261204173.5/23

Left: 0.014+/-0.000

$\chi^2/\text{NDF}$ : 59527747529.2/47

Left Out: 0.011+/-0.000

$\chi^2/\text{NDF}$ : 40294472965.0/24

Right: 0.025+/-0.000

$\chi^2/\text{NDF}$ : 68903328843.6/52

Right Out: 0.022+/-0.000

$\chi^2/\text{NDF}$ : 43050578279.5/28

In: 0.022+/-0.000

$\chi^2/\text{NDF}$ : 34168301062.4/46

Out: 0.013+/-0.000

$\chi^2/\text{NDF}$ : 95652291049.7/53

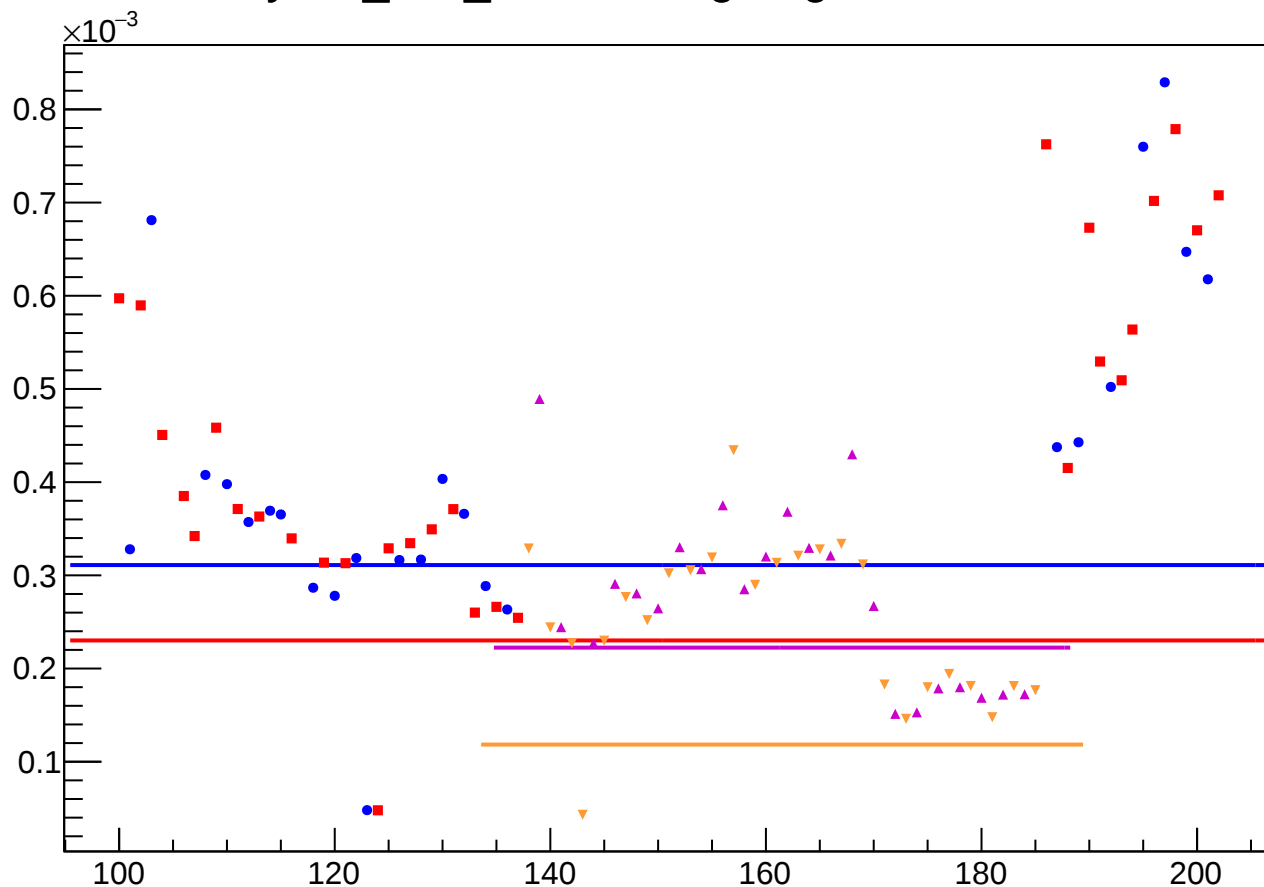
Left In: 0.020+/-0.000

$\chi^2/\text{NDF}$ : 4458790813.3/22

All: 0.016+/-0.000

$\chi^2/\text{NDF}$ : 152428639485.5

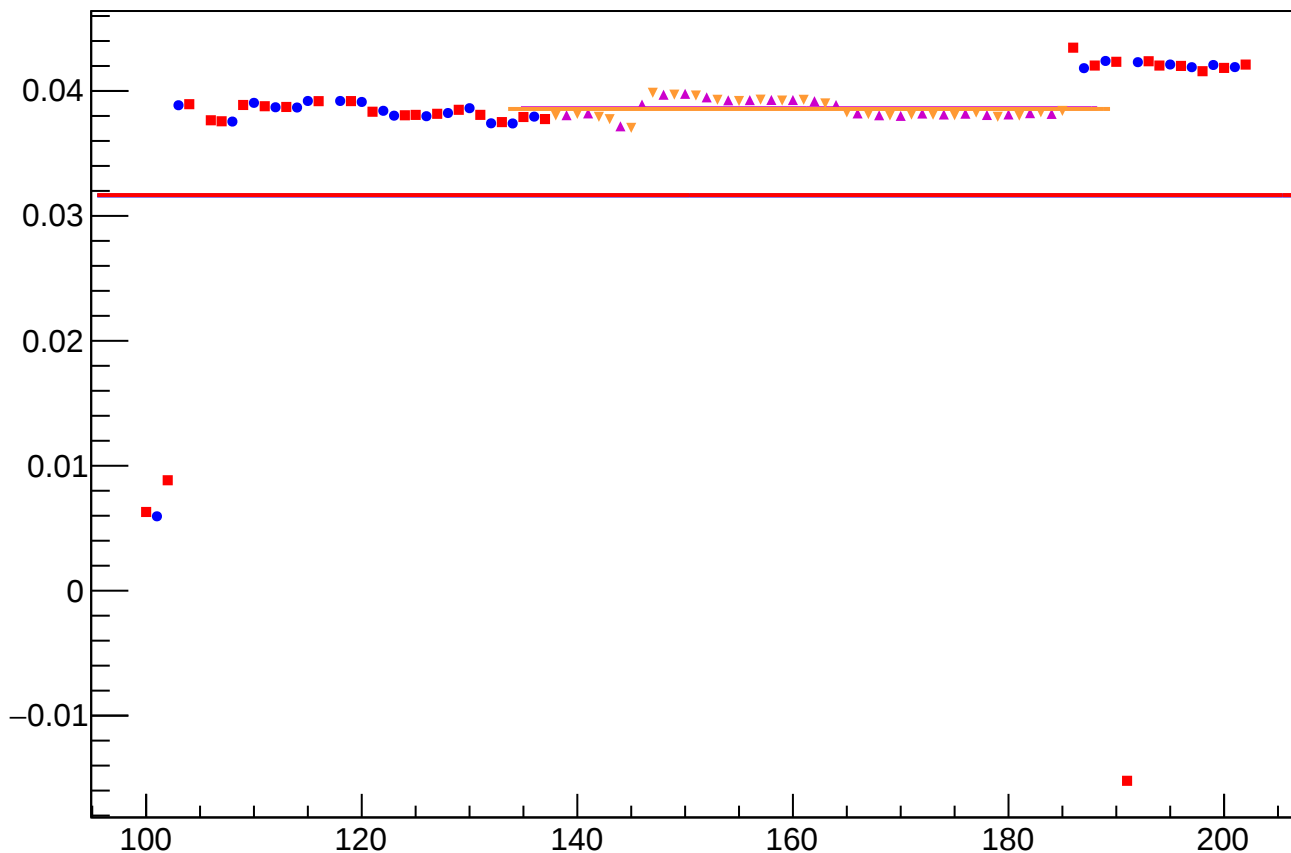
# yield\_atl2\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4955074.1/23  
 Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :13563132.9/24  
 Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10622581.4/28  
 Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :3281119.0/22

Left: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 21336583.8/47  
 Right: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 16250813.3/52  
 In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :9252511.4/46  
 Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :27019990.9/53  
 All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 42119090.4/100

# yield\_atr1\_mean vs Slug, Sign Corrected



Right In: 0.032+/-0.000

$\chi^2/\text{NDF}$ : 107709194469.1/23

Left: 0.039+/-0.000

$\chi^2/\text{NDF}$ : 1007039623.8/47

Left Out: 0.039+/-0.000

$\chi^2/\text{NDF}$ : 539468437.3/24

Right: 0.032+/-0.000

$\chi^2/\text{NDF}$ : 283105963848.7/52

Right Out: 0.032+/-0.000

$\chi^2/\text{NDF}$ : 175396500634.6/28

In: 0.036+/-0.000

$\chi^2/\text{NDF}$ : 125689030581.9/46

Out: 0.036+/-0.000

$\chi^2/\text{NDF}$ : 194271281545.2/53

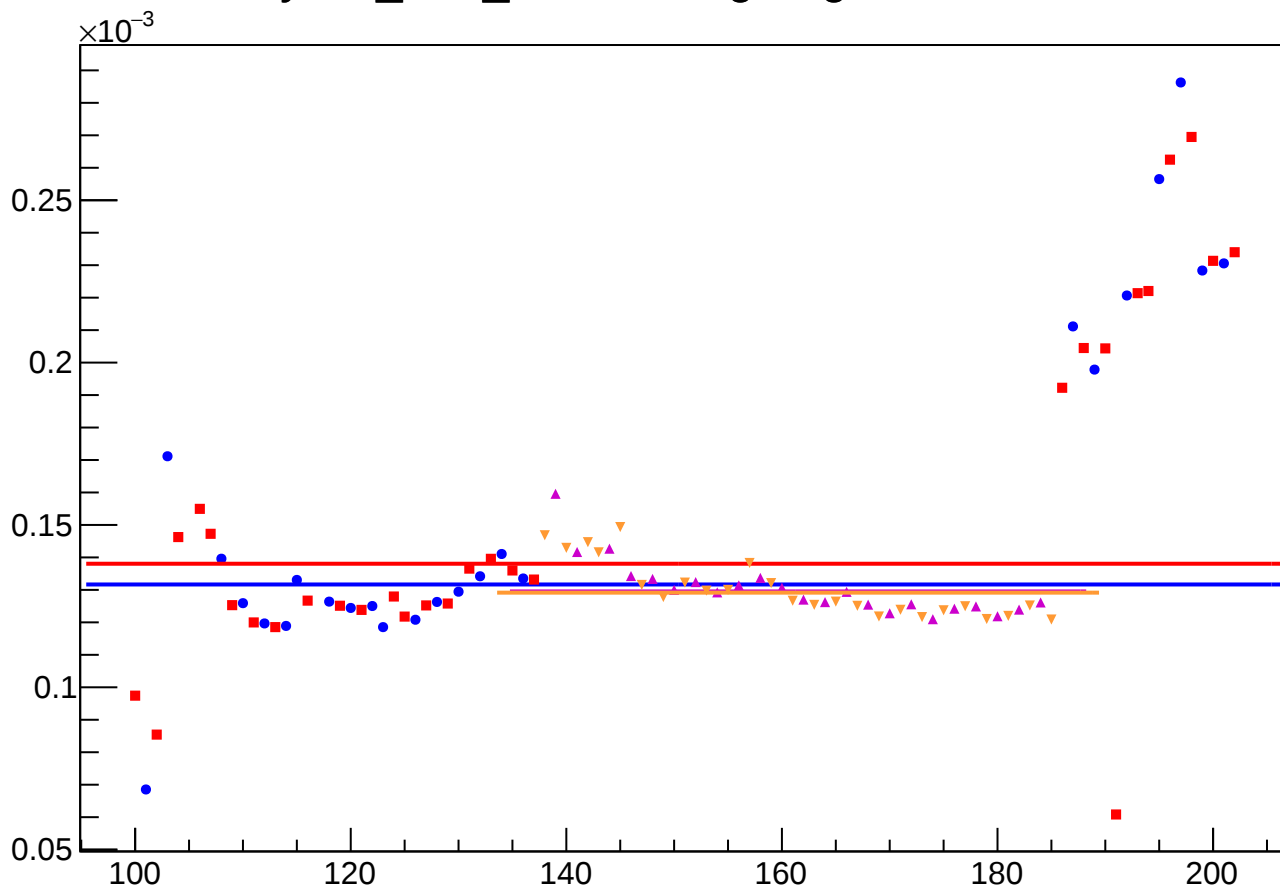
Left In: 0.039+/-0.000

$\chi^2/\text{NDF}$ : 465745982.6/22

All: 0.036+/-0.000

$\chi^2/\text{NDF}$ : 319962979971.7

# yield\_atr1\_rms vs Slug, Sign Corrected



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 2876359.3/23

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 130321.6/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 2926976.5/28

Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 114763.2/22

Left:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 245235.2/47

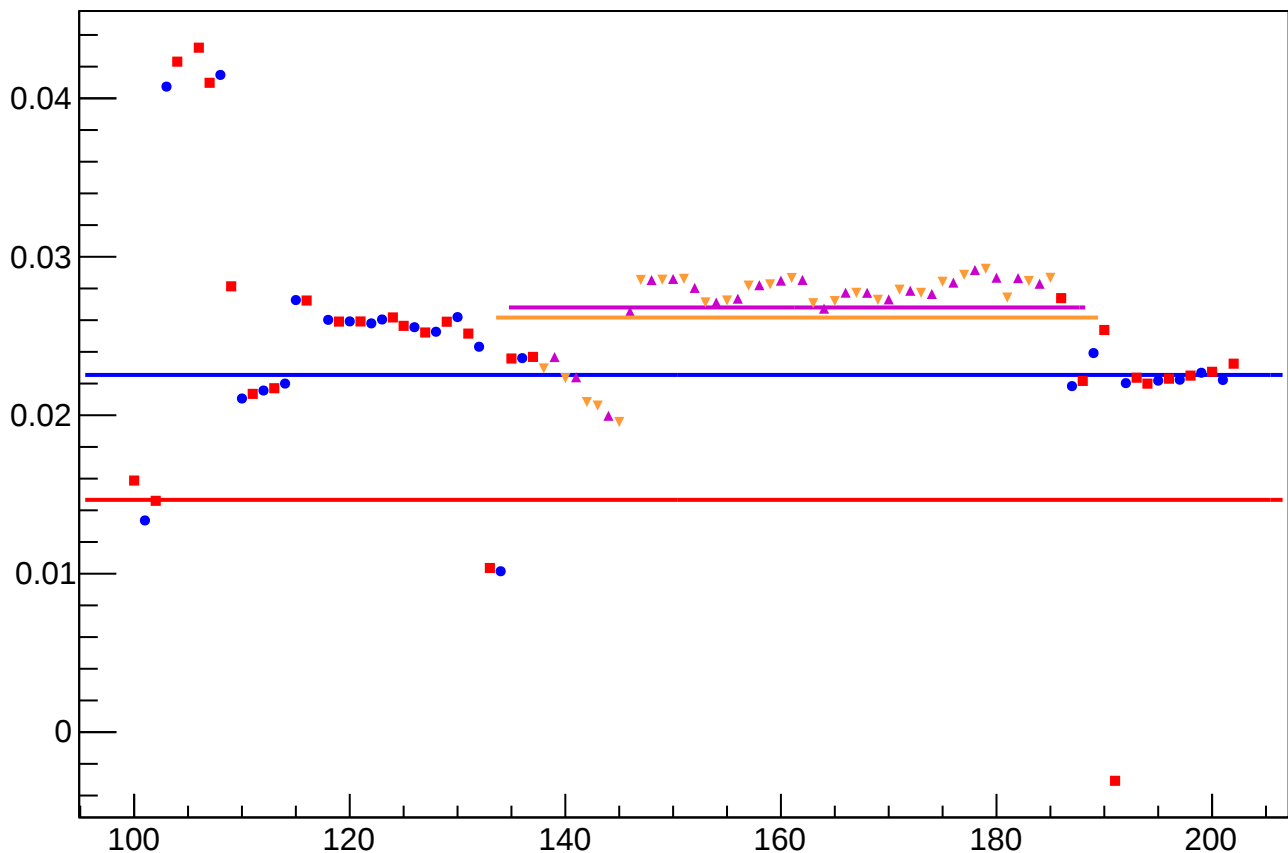
Right:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 5826849.1/52

In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 2994403.7/46

Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 3118442.2/53

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 6119649.9/100

# yield\_atr2\_mean vs Slug, Sign Corrected



Right In: 0.023+/-0.000  $\chi^2/\text{NDF}$ : 4244420589.7/23

Left Out: 0.026+/-0.000  $\chi^2/\text{NDF}$ : 2056710635.1/24

Right Out: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 30947317831.9/28

Left In: 0.027+/-0.000  $\chi^2/\text{NDF}$ : 1332033607.7/22

Left: 0.026+/-0.000  $\chi^2/\text{NDF}$ : 3427924441.4/47

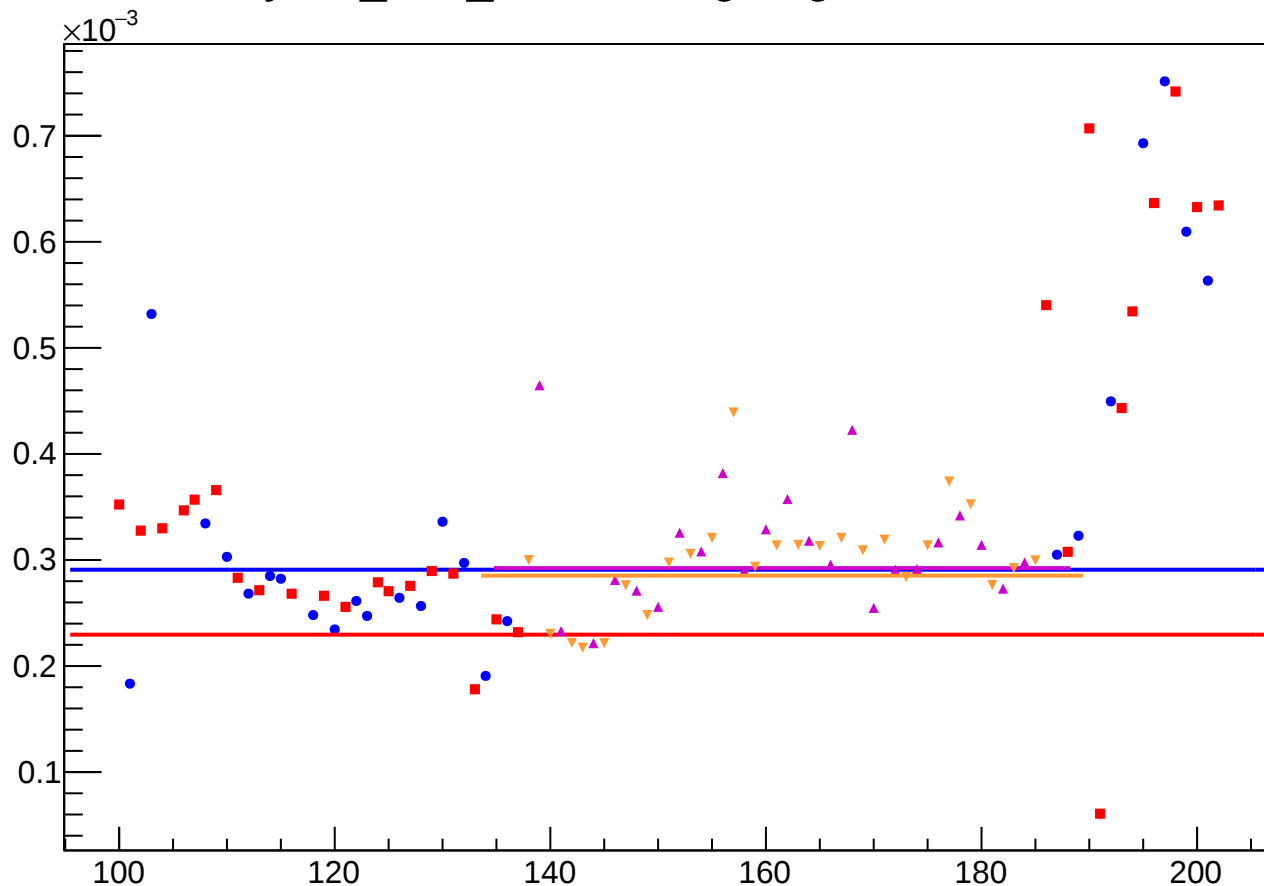
Right: 0.018+/-0.000  $\chi^2/\text{NDF}$ : 39181514153.4/52

In: 0.025+/-0.000  $\chi^2/\text{NDF}$ : 6800880746.9/46

Out: 0.021+/-0.000  $\chi^2/\text{NDF}$ : 44871572323.0/53

All: 0.023+/-0.000  $\chi^2/\text{NDF}$ : 54527168737.6/100

# yield\_atr2\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2953462.1/23

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :813464.1/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7634121.2/28

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :898772.9/22

Left: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1721873.2/47

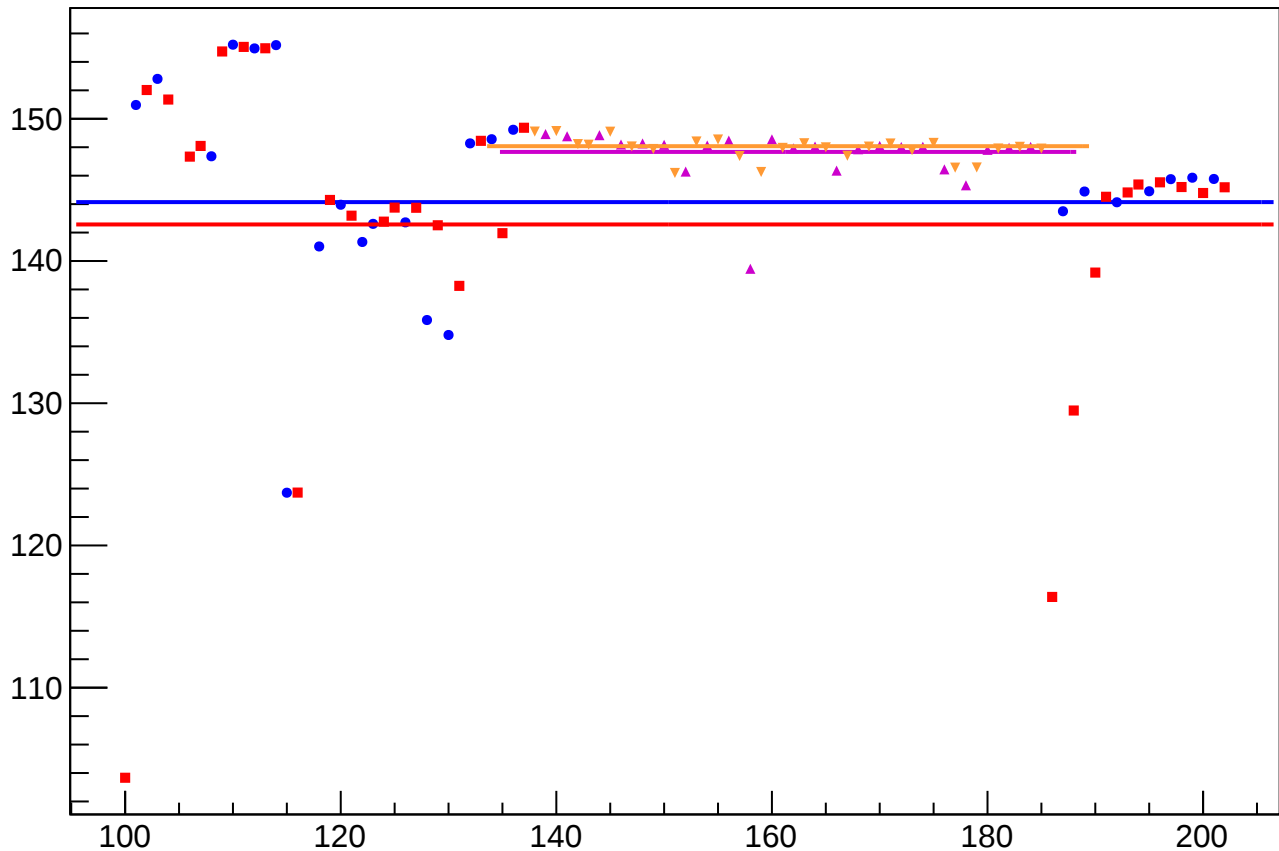
Right: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11069170.1/52

In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :3852539.2/46

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :9003538.8/53

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13172958.7/100

# yield\_bcm\_an\_ds\_mean vs Slug, Sign Corrected



Right In: 144.141 $\pm$ 0.000  $\chi^2$ /NDF: 3479655473.3/23

Left Out: 148.073 $\pm$ 0.000  $\chi^2$ /NDF: 65614067.4/24

Right Out: 142.570 $\pm$ 0.000  $\chi^2$ /NDF: 7377607658.4/28

Left In: 147.670 $\pm$ 0.000  $\chi^2$ /NDF: 345222604.4/22

Left: 147.879 $\pm$ 0.000  $\chi^2$ /NDF: 418091602.5/47

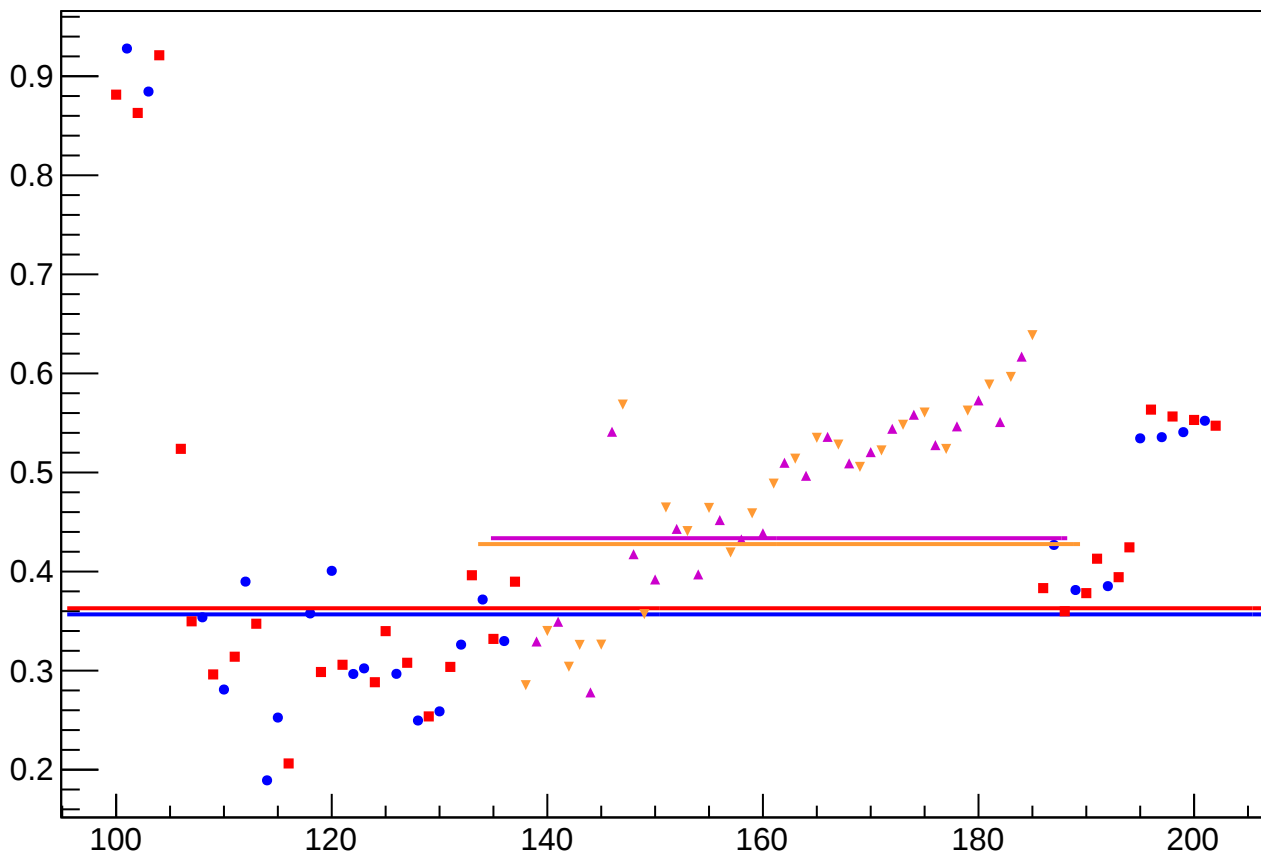
Right: 143.294 $\pm$ 0.000  $\chi^2$ /NDF: 10957111582.8/52

In: 146.030 $\pm$ 0.000  $\chi^2$ /NDF: 4325284310.3/46

Out: 145.399 $\pm$ 0.000  $\chi^2$ /NDF: 8808735488.4/53

All: 145.697 $\pm$ 0.000  $\chi^2$ /NDF: 13168037825.0/100

# yield\_bcm\_an\_ds\_rms vs Slug, Sign Corrected



Right In: 0.357 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2163418.7/23

Left Out: 0.428 $\pm$ 0.000  $\chi^2/\text{NDF}$ :1896808.7/24

Right Out: 0.363 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2152637.3/28

Left In: 0.434 $\pm$ 0.000  $\chi^2/\text{NDF}$ :1496343.5/22

Left: 0.431 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 3396308.8/47

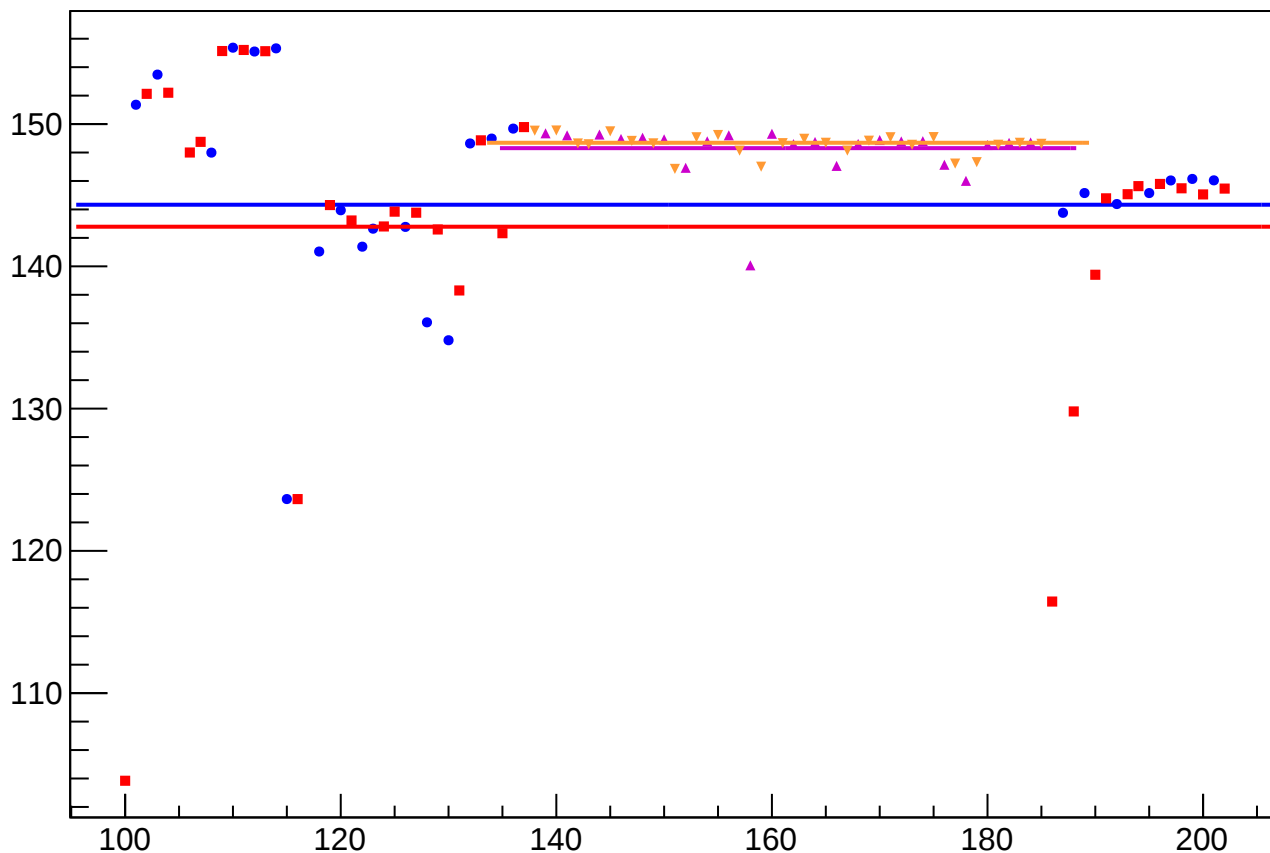
Right: 0.360 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 4319152.5/52

In: 0.398 $\pm$ 0.000  $\chi^2/\text{NDF}$ :4134904.6/46

Out: 0.396 $\pm$ 0.000  $\chi^2/\text{NDF}$ :4427804.5/53

All: 0.397 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 8563191.9/100

# yield\_bcm\_an\_ds3\_mean vs Slug, Sign Corrected



Right In: 144.331 $\pm$ 0.000  $\chi^2$ /NDF: 3527473916.7/23

Left Out: 148.686 $\pm$ 0.000  $\chi^2$ /NDF: 52218185.1/24

Right Out: 142.786 $\pm$ 0.000  $\chi^2$ /NDF: 7324753920.2/28

Left In: 148.307 $\pm$ 0.000  $\chi^2$ /NDF: 333585558.2/22

Left: 148.504 $\pm$ 0.000  $\chi^2$ /NDF: 392094013.2/47

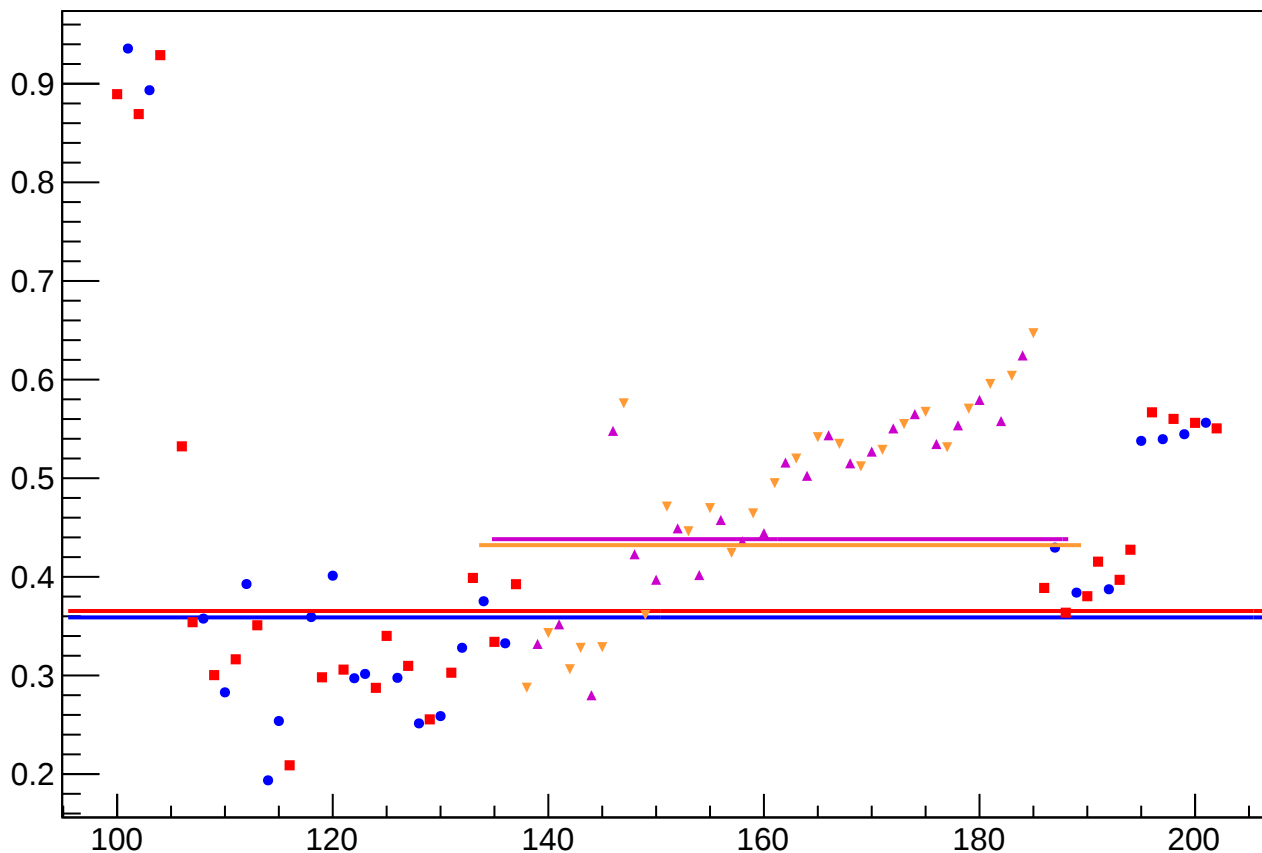
Right: 143.499 $\pm$ 0.000  $\chi^2$ /NDF: 10947596778.8/52

In: 146.450 $\pm$ 0.000  $\chi^2$ /NDF: 4486046890.4/46

Out: 145.807 $\pm$ 0.000  $\chi^2$ /NDF: 8920174433.3/53

All: 146.111 $\pm$ 0.000  $\chi^2$ /NDF: 13440863455.0

# yield\_bcm\_an\_ds3\_rms vs Slug, Sign Corrected



Right In: 0.359 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2168836.8/23

Left Out: 0.432 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1929031.5/24

Right Out: 0.365 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2156209.7/28

Left In: 0.438 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1521893.6/22

Left: 0.435 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 3454164.8/47

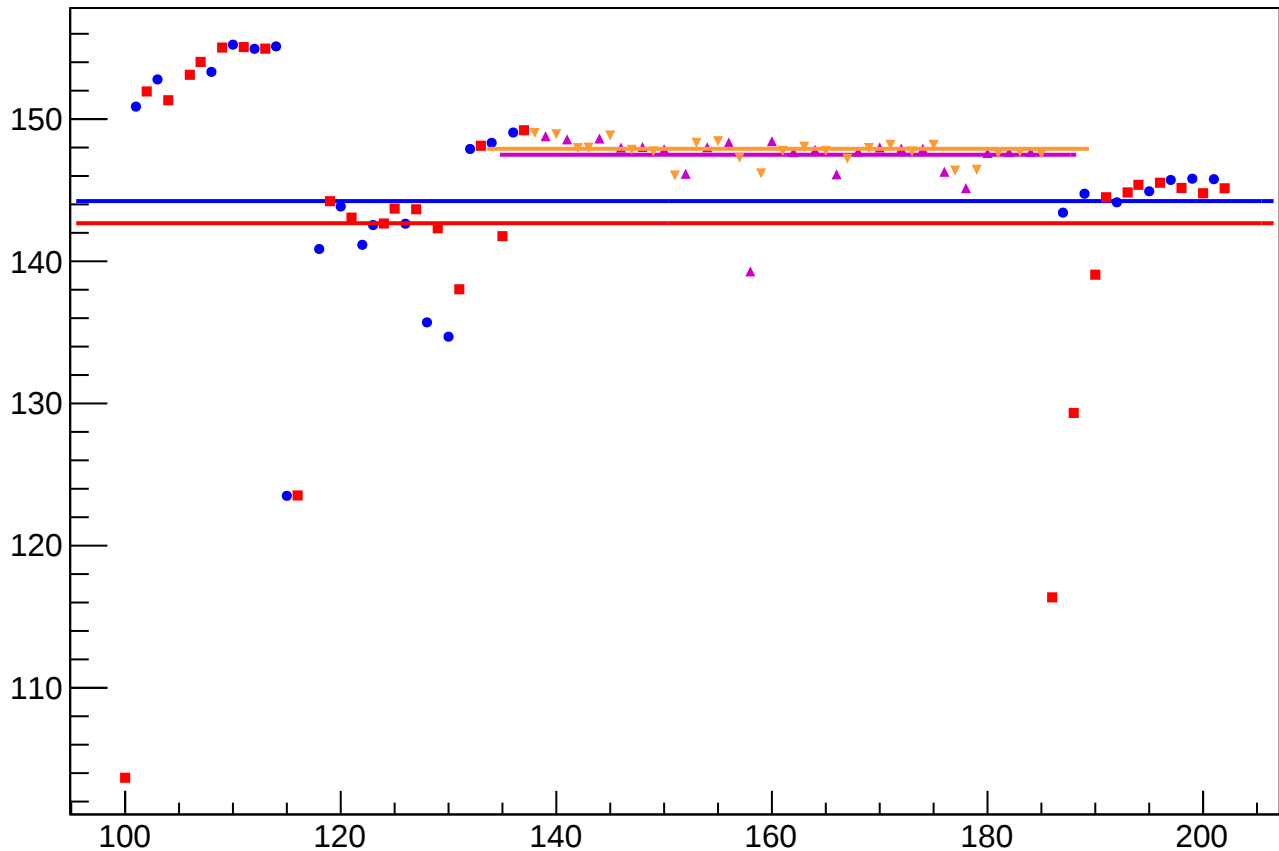
Right: 0.362 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 4328425.0/52

In: 0.401 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 4188296.2/46

Out: 0.400 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 4480246.7/53

All: 0.400 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 8668970.0/100

# yield\_bcm\_an\_us\_mean vs Slug, Sign Corrected



Right In: 144.234 $\pm$ 0.000  $\chi^2$ /NDF: 3687987792.0/23

Left Out: 147.911 $\pm$ 0.000  $\chi^2$ /NDF: 64412407.9/24

Right Out: 142.678 $\pm$ 0.000  $\chi^2$ /NDF: 7758883907.8/28

Left In: 147.493 $\pm$ 0.000  $\chi^2$ /NDF: 343978473.2/22

Left: 147.709 $\pm$ 0.000  $\chi^2$ /NDF: 416149781.4/47

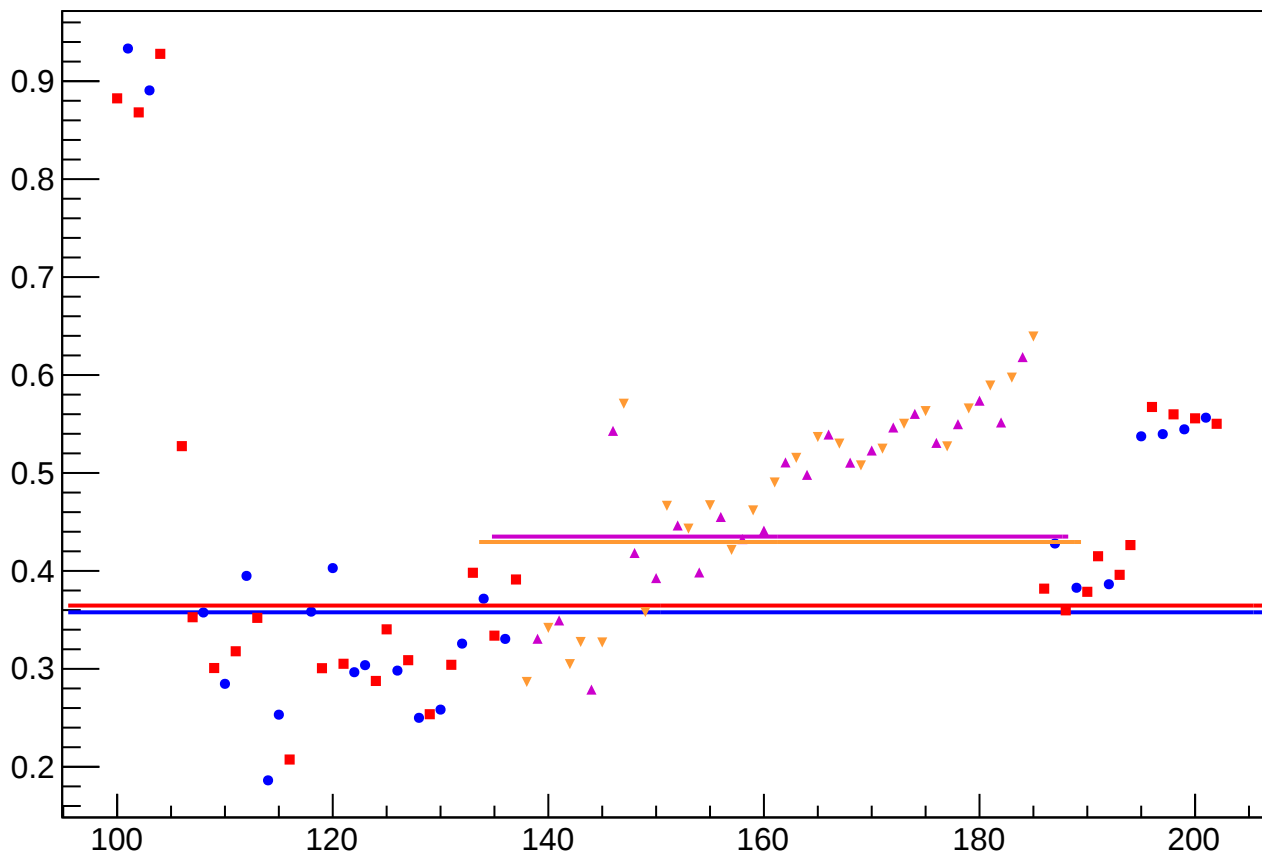
Right: 143.396 $\pm$ 0.000  $\chi^2$ /NDF: 11544064451.9/52

In: 145.979 $\pm$ 0.000  $\chi^2$ /NDF: 4455896441.9/46

Out: 145.369 $\pm$ 0.000  $\chi^2$ /NDF: 9047646945.7/53

All: 145.657 $\pm$ 0.000  $\chi^2$ /NDF: 13535052121.0

# yield\_bcm\_an\_us\_rms vs Slug, Sign Corrected



Right In: 0.358 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2191236.6/23

Left Out: 0.430 $\pm$ 0.000  $\chi^2/\text{NDF}$ :1895701.4/24

Right Out: 0.365 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2157014.7/28

Left In: 0.435 $\pm$ 0.000  $\chi^2/\text{NDF}$ :1502712.5/22

Left: 0.432 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 3401133.5/47

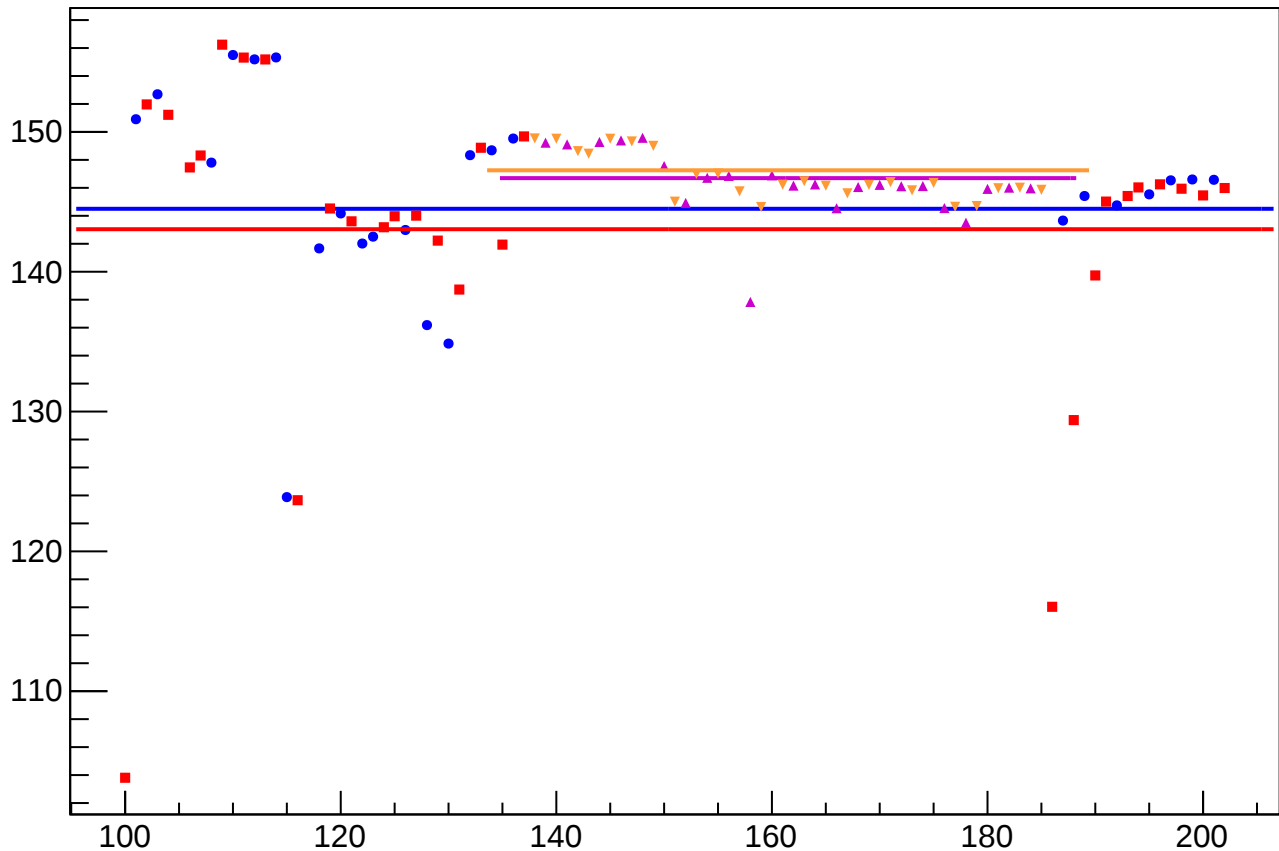
Right: 0.361 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 4352056.9/52

In: 0.399 $\pm$ 0.000  $\chi^2/\text{NDF}$ :4170923.1/46

Out: 0.398 $\pm$ 0.000  $\chi^2/\text{NDF}$ :4429123.3/53

All: 0.399 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 8600266.4/100

# yield\_bcm\_dg\_us\_mean vs Slug, Sign Corrected



Right In: 144.502 $\pm$ 0.000  $\chi^2/NDF$ : 3207583180.1/23

Left Out: 147.255 $\pm$ 0.000  $\chi^2/NDF$ : 262138049.8/24

Right Out: 143.042 $\pm$ 0.000  $\chi^2/NDF$ : 7087717591.7/28

Left In: 146.695 $\pm$ 0.000  $\chi^2/NDF$ : 557896803.1/22

Left: 146.984 $\pm$ 0.000  $\chi^2/NDF$ : 833217060.4/47

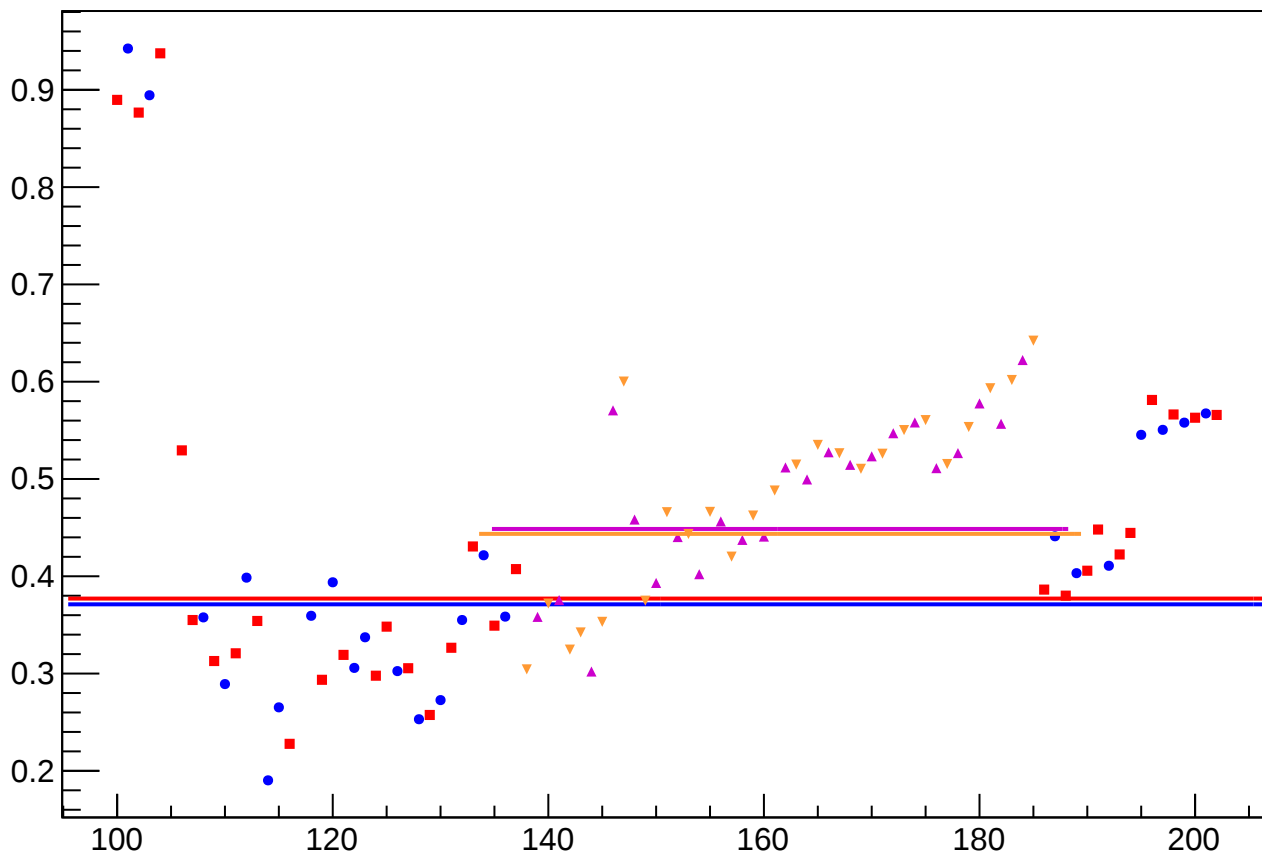
Right: 143.714 $\pm$ 0.000  $\chi^2/NDF$ : 10374934153.1/52

In: 145.689 $\pm$ 0.000  $\chi^2/NDF$ : 3945571450.1/46

Out: 145.223 $\pm$ 0.000  $\chi^2/NDF$ : 8095378877.3/53

All: 145.443 $\pm$ 0.000  $\chi^2/NDF$ : 12058224574.0

# yield\_bcm\_dg\_us\_rms vs Slug, Sign Corrected



Right In: 0.371+/-0.000  $\chi^2/\text{NDF}$ : 2138867.7/23

Left Out: 0.444+/-0.000  $\chi^2/\text{NDF}$ :1483434.7/24

Right Out: 0.377+/-0.000  $\chi^2/\text{NDF}$ : 2107920.6/28

Left In: 0.449+/-0.000  $\chi^2/\text{NDF}$ :1132620.8/22

Left: 0.446+/-0.000  $\chi^2/\text{NDF}$ : 2618207.6/47

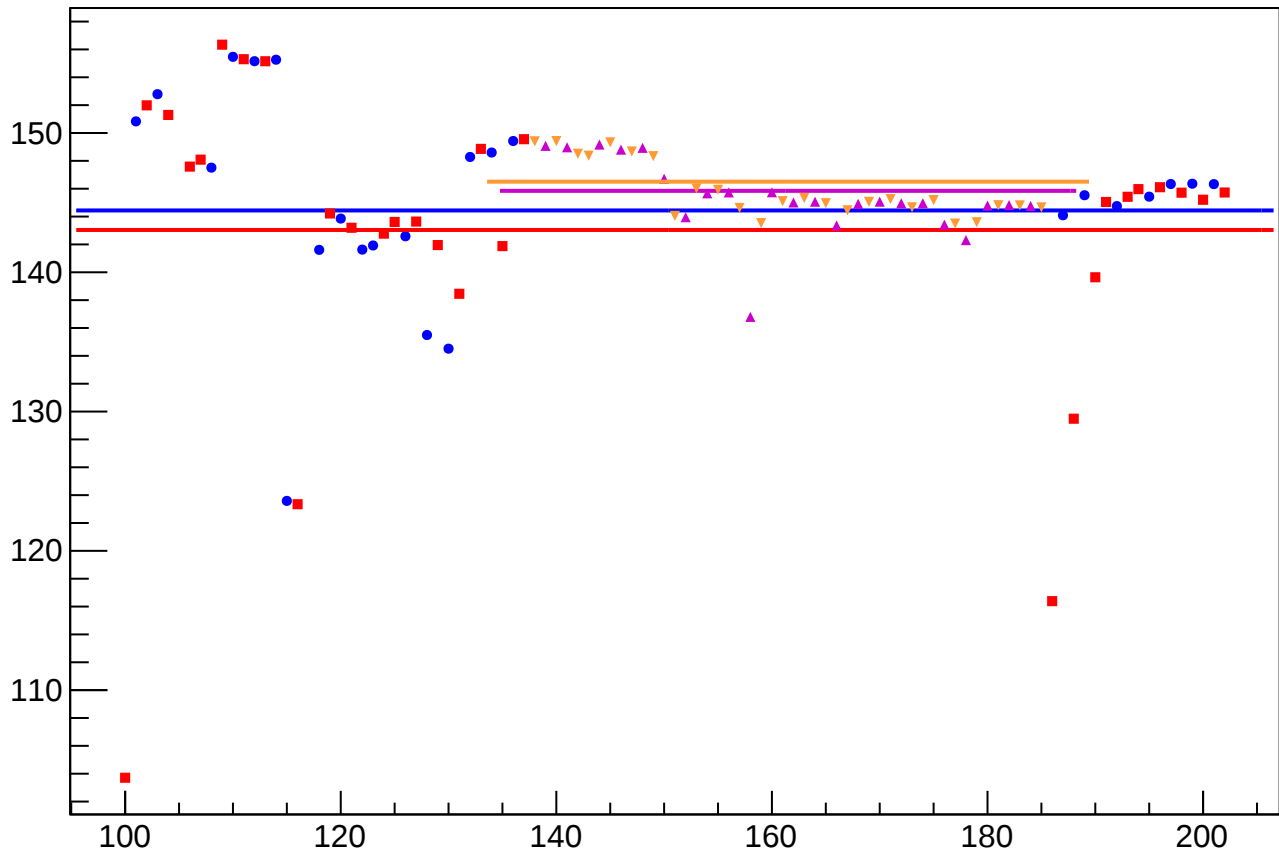
Right: 0.374+/-0.000  $\chi^2/\text{NDF}$ : 4249398.9/52

In: 0.413+/-0.000  $\chi^2/\text{NDF}$ :3720975.8/46

Out: 0.412+/-0.000  $\chi^2/\text{NDF}$ :3962978.2/53

All: 0.412+/-0.000  $\chi^2/\text{NDF}$ : 7684352.9/100

# yield\_bcm\_dg\_ds\_mean vs Slug, Sign Corrected



Right In:  $144.439 \pm 0.000$   $\chi^2/\text{NDF}: 3321654659.7/23$

Left Out:  $146.505 \pm 0.000$   $\chi^2/\text{NDF}: 401688176.3/24$

Right Out:  $143.037 \pm 0.000$   $\chi^2/\text{NDF}: 7049268435.6/28$

Left In:  $145.847 \pm 0.000$   $\chi^2/\text{NDF}: 694764545.6/22$

Left:  $146.187 \pm 0.000$   $\chi^2/\text{NDF}: 1114638549.0/47$

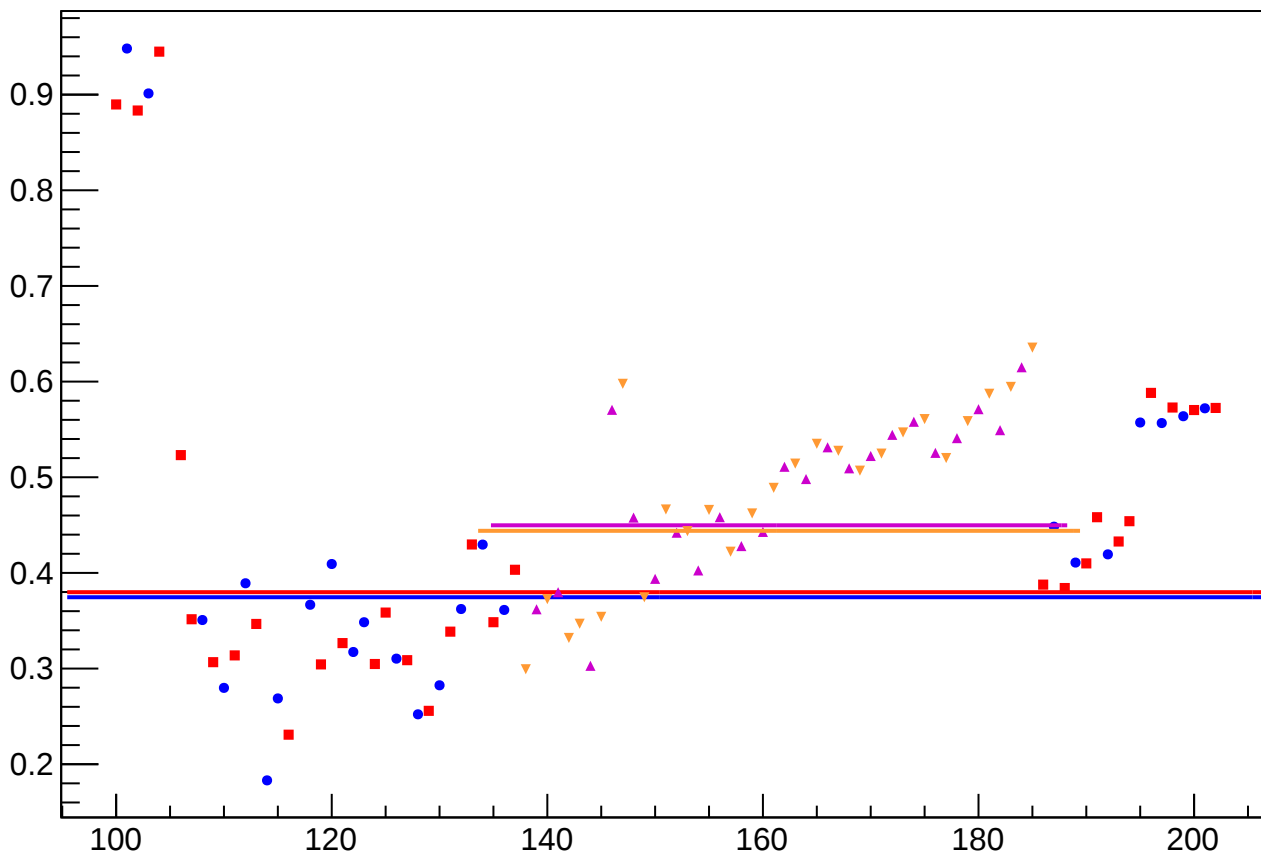
Right:  $143.681 \pm 0.000$   $\chi^2/\text{NDF}: 10442769012.0/52$

In:  $145.207 \pm 0.000$   $\chi^2/\text{NDF}: 4089514619.9/46$

Out:  $144.847 \pm 0.000$   $\chi^2/\text{NDF}: 7950642404.0/53$

All:  $145.017 \pm 0.000$   $\chi^2/\text{NDF}: 12050360749.0/100$

# yield\_bcm\_dg\_ds\_rms vs Slug, Sign Corrected



Right In: 0.375+/-0.000  $\chi^2/\text{NDF}$ : 2175479.8/23

Left Out: 0.444+/-0.000  $\chi^2/\text{NDF}$ :1463293.5/24

Right Out: 0.380+/-0.000  $\chi^2/\text{NDF}$ : 2129484.0/28

Left In: 0.450+/-0.000  $\chi^2/\text{NDF}$ :1105405.0/22

Left: 0.447+/-0.000  $\chi^2/\text{NDF}$ : 2571486.5/47

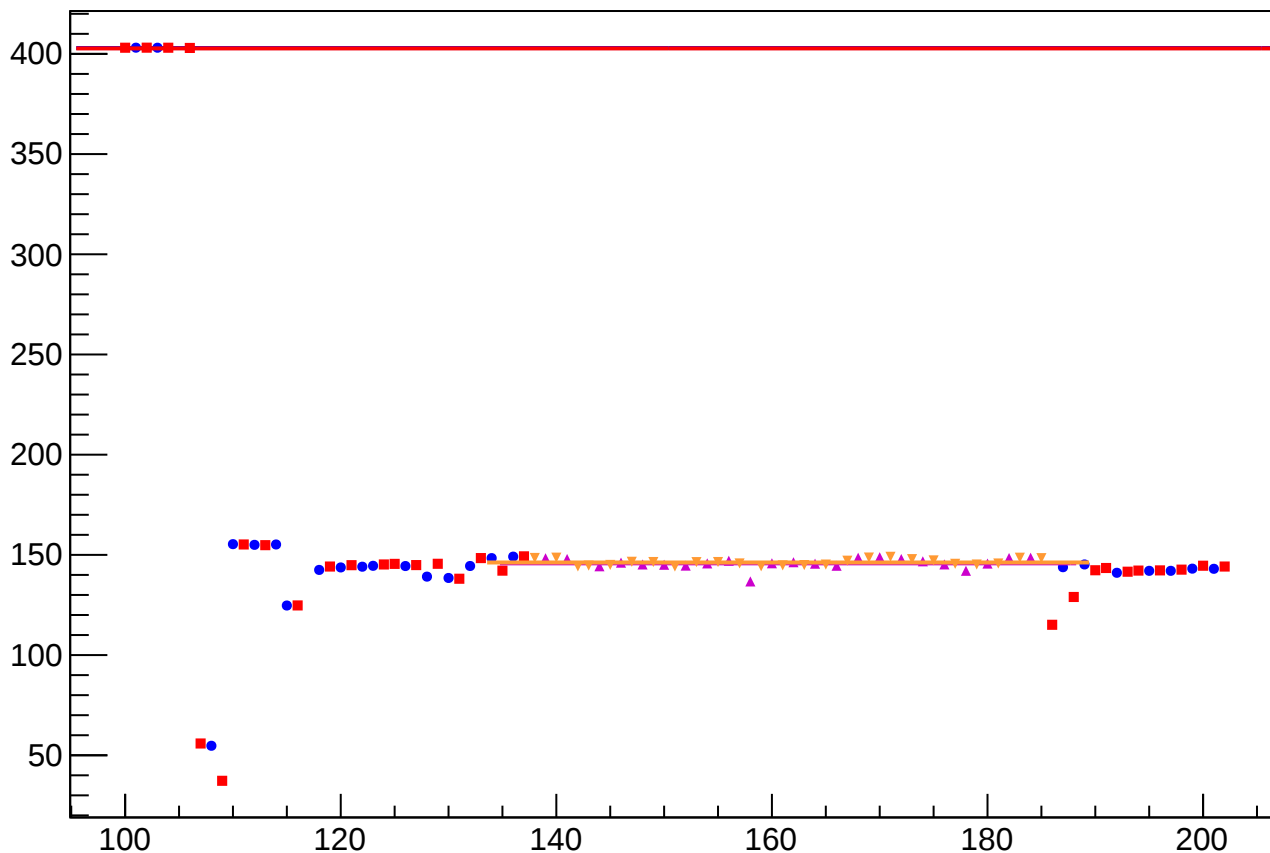
Right: 0.377+/-0.000  $\chi^2/\text{NDF}$ : 4307000.5/52

In: 0.416+/-0.000  $\chi^2/\text{NDF}$ :3698051.1/46

Out: 0.413+/-0.000  $\chi^2/\text{NDF}$ :3934863.8/53

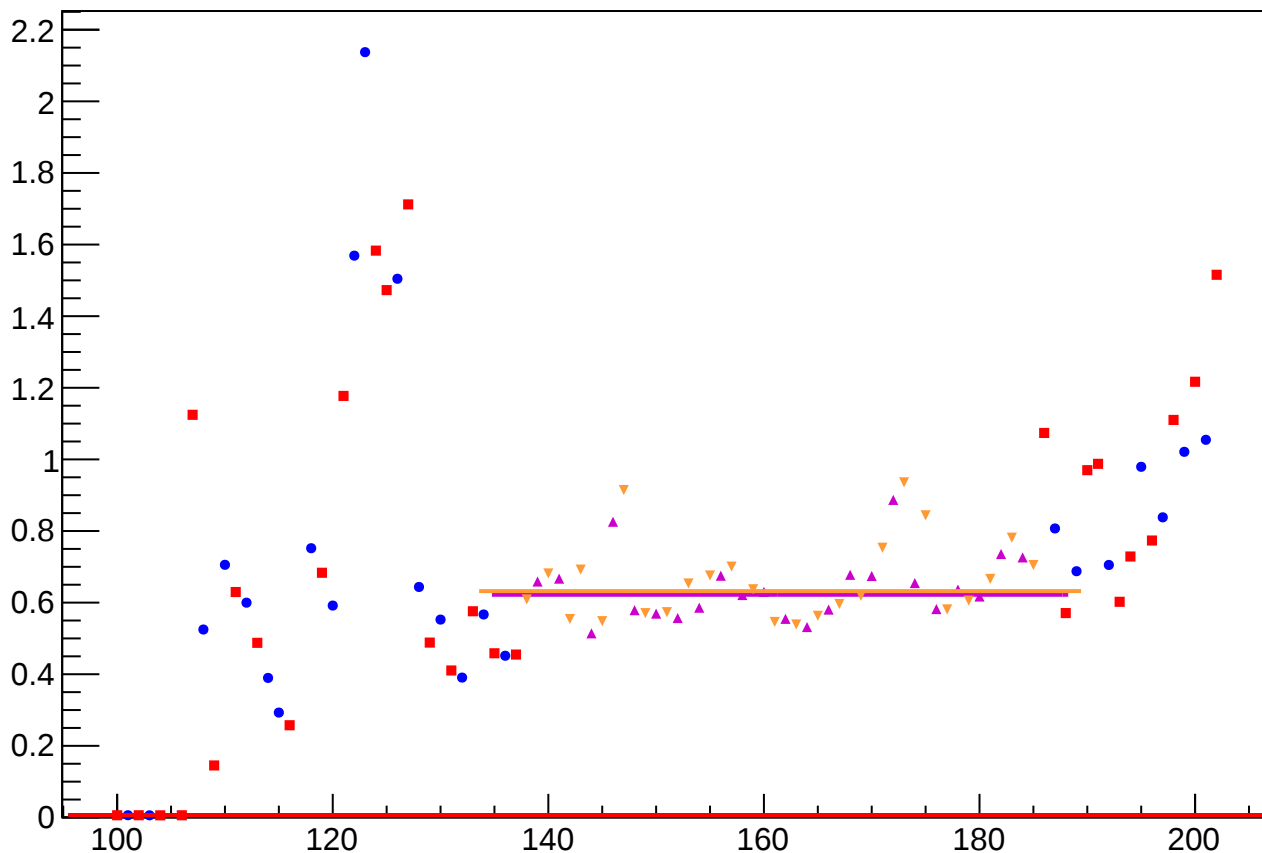
All: 0.414+/-0.000  $\chi^2/\text{NDF}$ : 7633727.2/100

# yield\_cav4bQ\_mean vs Slug, Sign Corrected



|                            |                                          |                        |                                          |
|----------------------------|------------------------------------------|------------------------|------------------------------------------|
| Right In: 402.917+/-0.000  | $\chi^2/\text{NDF}$ : 1426188433079.6/23 | Left: 145.990+/-0.000  | $\chi^2/\text{NDF}$ : 297342055.1/47     |
| Left Out: 146.205+/-0.000  | $\chi^2/\text{NDF}$ : 86658381.3/24      | Right: 402.821+/-0.000 | $\chi^2/\text{NDF}$ : 5118398339203.6    |
| Right Out: 402.736+/-0.000 | $\chi^2/\text{NDF}$ : 3691668375271.1/28 | In: 402.623+/-0.000    | $\chi^2/\text{NDF}$ : 3775474029465.4/40 |
| Left In: 145.773+/-0.000   | $\chi^2/\text{NDF}$ : 207332354.9/22     | Out: 402.474+/-0.000   | $\chi^2/\text{NDF}$ : 6059886721664.5/50 |
|                            |                                          | All: 402.544+/-0.000   | $\chi^2/\text{NDF}$ : 983573061320       |

# yield\_cav4bQ\_rms vs Slug, Sign Corrected



Right In: 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 16169998.2/23

Left Out: 0.632 $\pm$ 0.000  $\chi^2$ /NDF:614155.9/24

Right Out: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 19563285.1/28

Left In: 0.622 $\pm$ 0.000  $\chi^2$ /NDF:404479.0/22

Left: 0.627 $\pm$ 0.000  $\chi^2$ /NDF: 1022337.9/47

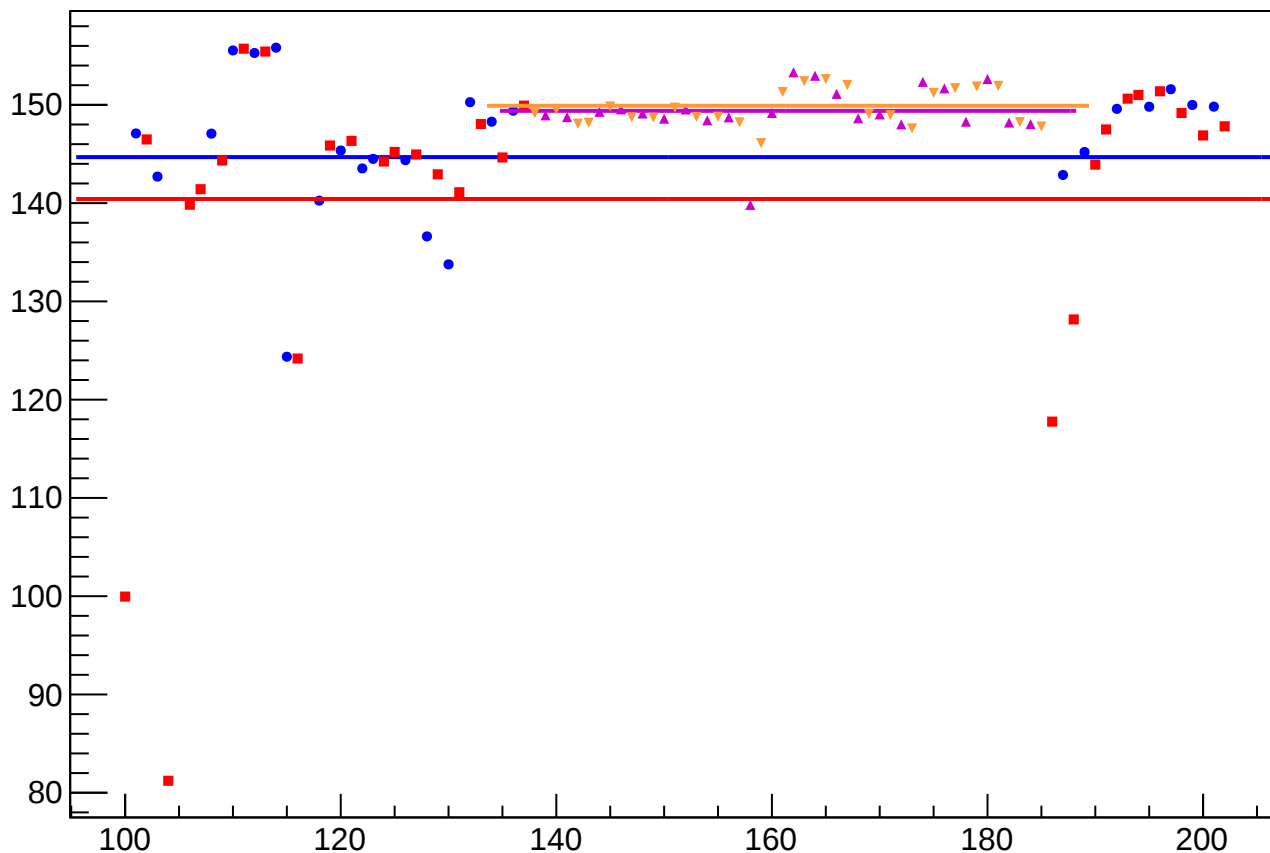
Right: 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 35733327.9/52

In: 0.007 $\pm$ 0.000  $\chi^2$ /NDF:43489115.7/46

Out: 0.007 $\pm$ 0.000  $\chi^2$ /NDF:48345600.6/53

All: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 91834740.1/100

# yield\_cav4cQ\_mean vs Slug, Sign Corrected



Right In: 144.682+/-0.000

$\chi^2/\text{NDF}$ : 1241030751.1/23

Left: 149.657+/-0.000

$\chi^2/\text{NDF}$ : 606930259.3/47

Right: 142.206+/-0.000

$\chi^2/\text{NDF}$ : 4470917508.6/52

Left Out: 149.906+/-0.000

$\chi^2/\text{NDF}$ : 163261802.4/24

In: 148.150+/-0.000

$\chi^2/\text{NDF}$ : 1956248382.0/46

Right Out: 140.422+/-0.000

$\chi^2/\text{NDF}$ : 3050167845.8/28

Out: 146.899+/-0.000

$\chi^2/\text{NDF}$ : 4665570348.7/53

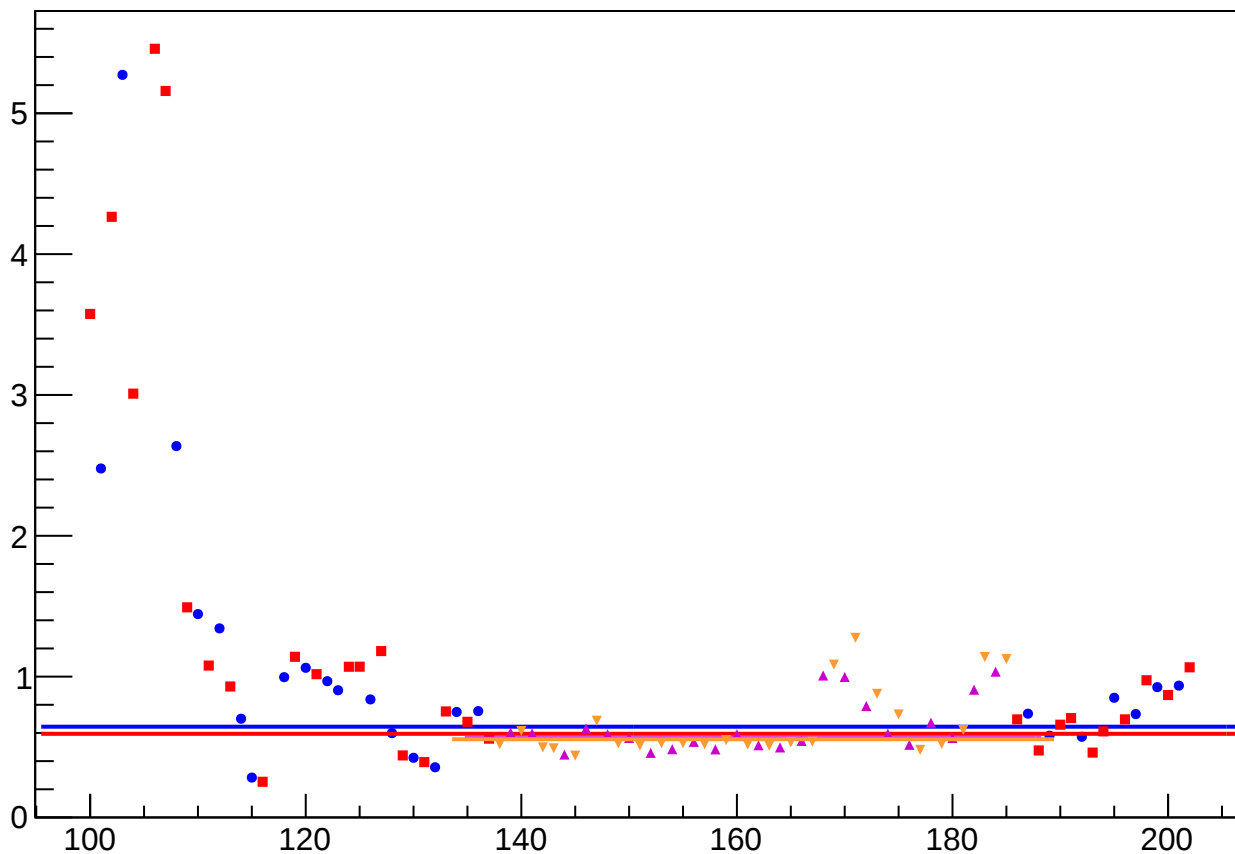
Left In: 149.391+/-0.000

$\chi^2/\text{NDF}$ : 437129920.4/22

All: 147.480+/-0.000

$\chi^2/\text{NDF}$ : 6675943925.6

# yield\_cav4cQ\_rms vs Slug, Sign Corrected



Right In: 0.644 $\pm$ 0.000  $\chi^2$ /NDF: 3932549.4/23

Left Out: 0.555 $\pm$ 0.000  $\chi^2$ /NDF:1773380.1/24

Right Out: 0.594 $\pm$ 0.000  $\chi^2$ /NDF: 5449045.6/28

Left In: 0.562 $\pm$ 0.000  $\chi^2$ /NDF:1311075.2/22

Left: 0.559 $\pm$ 0.000  $\chi^2$ /NDF: 3086646.6/47

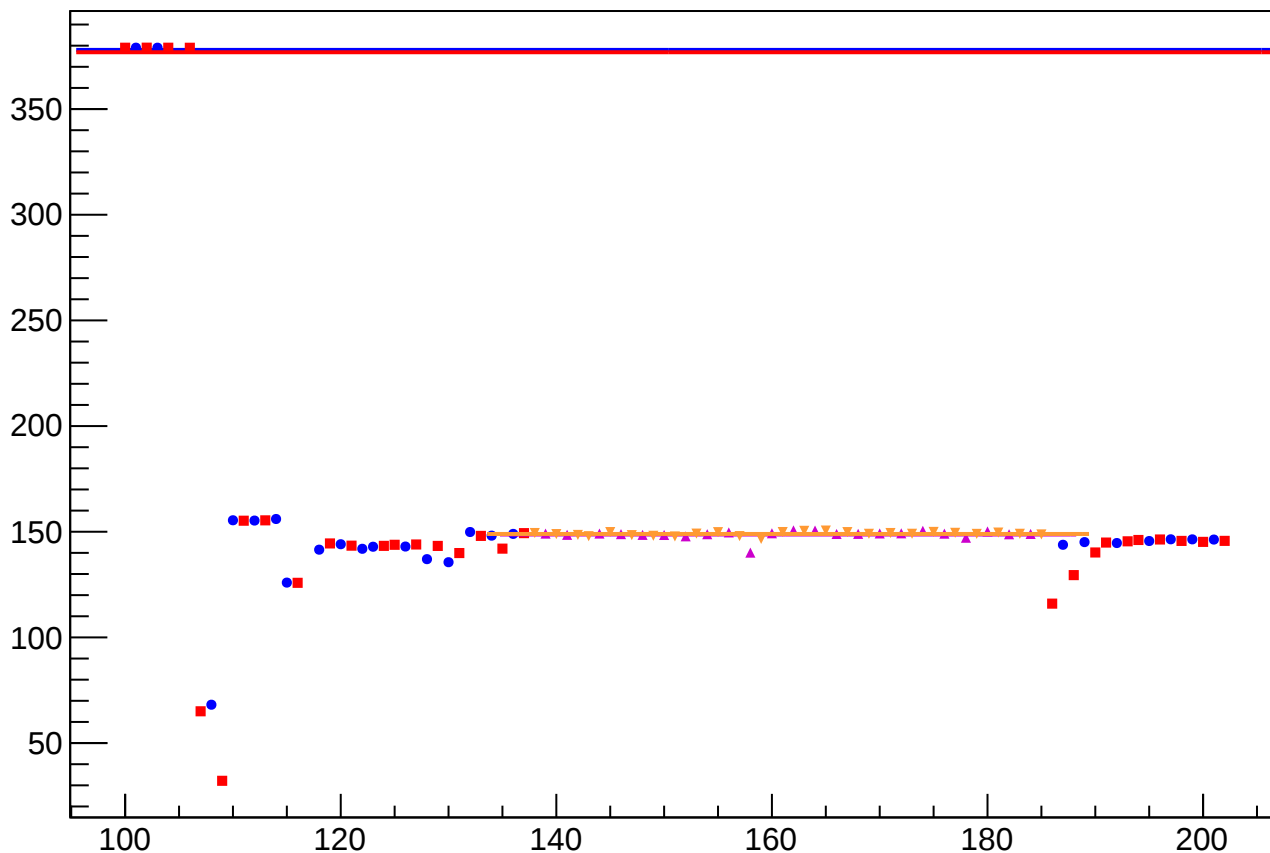
Right: 0.615 $\pm$ 0.000  $\chi^2$ /NDF: 9432091.0/52

In: 0.584 $\pm$ 0.000  $\chi^2$ /NDF:5413770.8/46

Out: 0.568 $\pm$ 0.000  $\chi^2$ /NDF:7270338.6/53

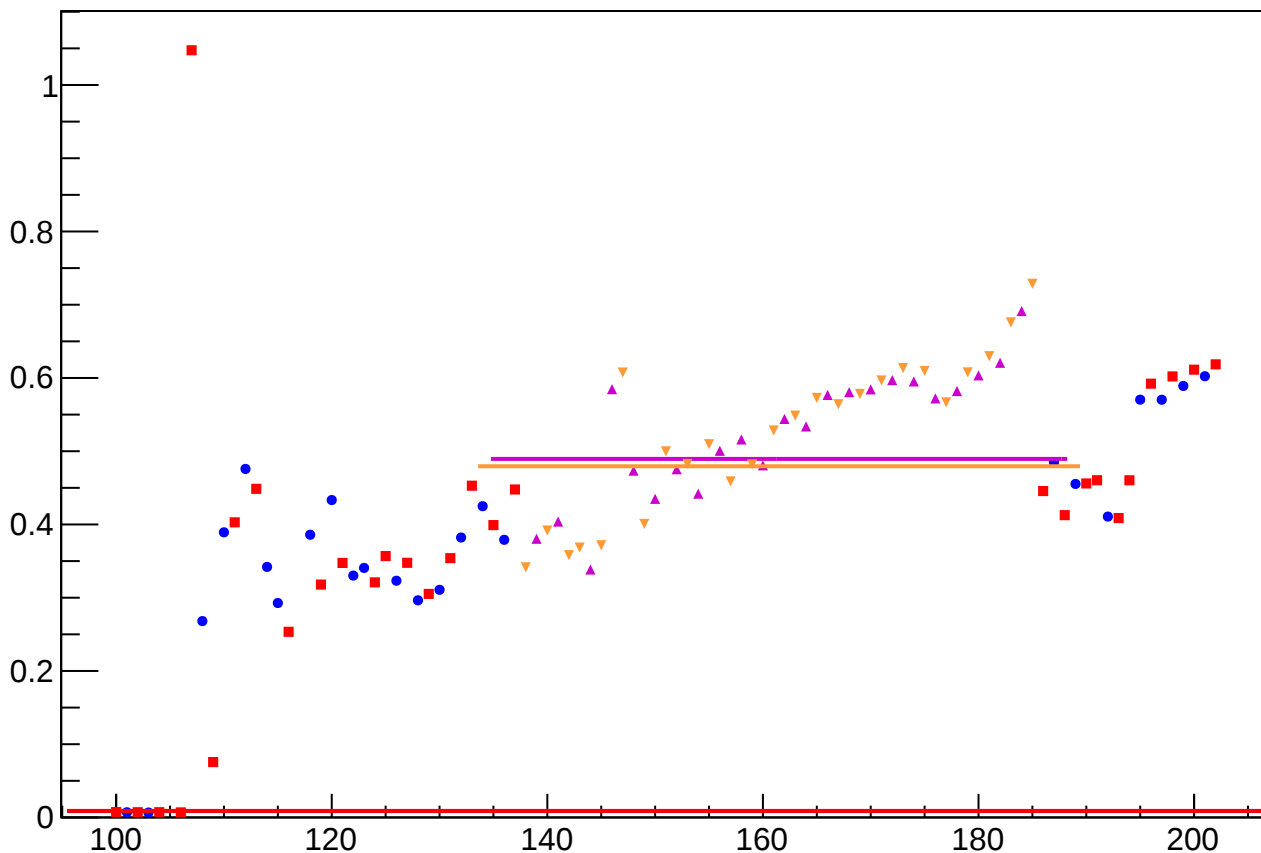
All: 0.575 $\pm$ 0.000  $\chi^2$ /NDF: 12702204.4/100

# yield\_cav4dQ\_mean vs Slug, Sign Corrected



|                                |                                   |                            |                                   |
|--------------------------------|-----------------------------------|----------------------------|-----------------------------------|
| Right In: 377.998 $\pm$ 0.000  | $\chi^2$ /NDF: 3388697130449.4/23 | Left: 148.820 $\pm$ 0.000  | $\chi^2$ /NDF: 320306424.2/47     |
| Left Out: 148.946 $\pm$ 0.000  | $\chi^2$ /NDF: 63974844.7/24      | Right: 377.408 $\pm$ 0.000 | $\chi^2$ /NDF: 13113280439853.0   |
| Right Out: 376.891 $\pm$ 0.000 | $\chi^2$ /NDF: 9715871027851.4/28 | In: 376.819 $\pm$ 0.000    | $\chi^2$ /NDF: 6993925655006.0/40 |
| Left In: 148.683 $\pm$ 0.000   | $\chi^2$ /NDF: 253848207.3/22     | Out: 375.774 $\pm$ 0.000   | $\chi^2$ /NDF: 13586520235950.4   |
|                                |                                   | All: 376.263 $\pm$ 0.000   | $\chi^2$ /NDF: 205882403360.0     |

# yield\_cav4dQ\_rms vs Slug, Sign Corrected



Right In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 18397133.5/23

Left Out: 0.479+/-0.000  $\chi^2/\text{NDF}$ :1518765.9/24

Right Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 21391151.4/28

Left In: 0.490+/-0.000  $\chi^2/\text{NDF}$ :1090532.3/22

Left: 0.484+/-0.000  $\chi^2/\text{NDF}$ : 2616511.3/47

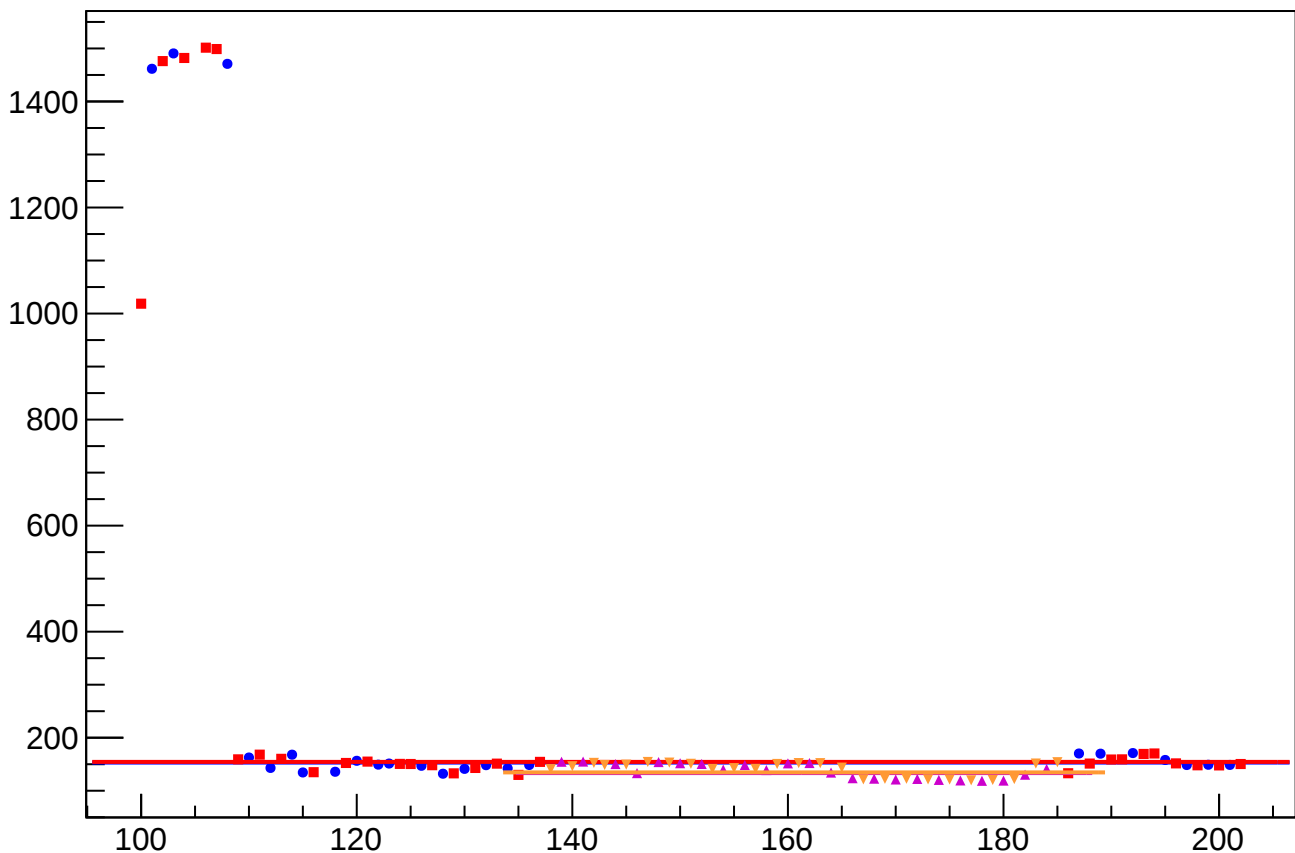
Right: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 39788846.2/52

In: 0.011+/-0.000  $\chi^2/\text{NDF}$ :51179497.7/46

Out: 0.011+/-0.000  $\chi^2/\text{NDF}$ :55898008.5/53

All: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 107077520.4/100

# yield\_bcm0l02\_mean vs Slug, Sign Corrected



Right In: 153.145+/-0.000

$\chi^2/\text{NDF}$ : 25515931481.5/23

Left: 133.958+/-0.000

$\chi^2/\text{NDF}$ : 8759337937.7/47

Right: 153.840+/-0.000

$\chi^2/\text{NDF}$ : 60368046150.7/52

Left Out: 134.585+/-0.000

$\chi^2/\text{NDF}$ : 4387324151.1/24

In: 140.720+/-0.000

$\chi^2/\text{NDF}$ : 33242100141.7/46

Right Out: 154.398+/-0.000

$\chi^2/\text{NDF}$ : 34840198646.0/28

Out: 142.860+/-0.000

$\chi^2/\text{NDF}$ : 43119833220.7/53

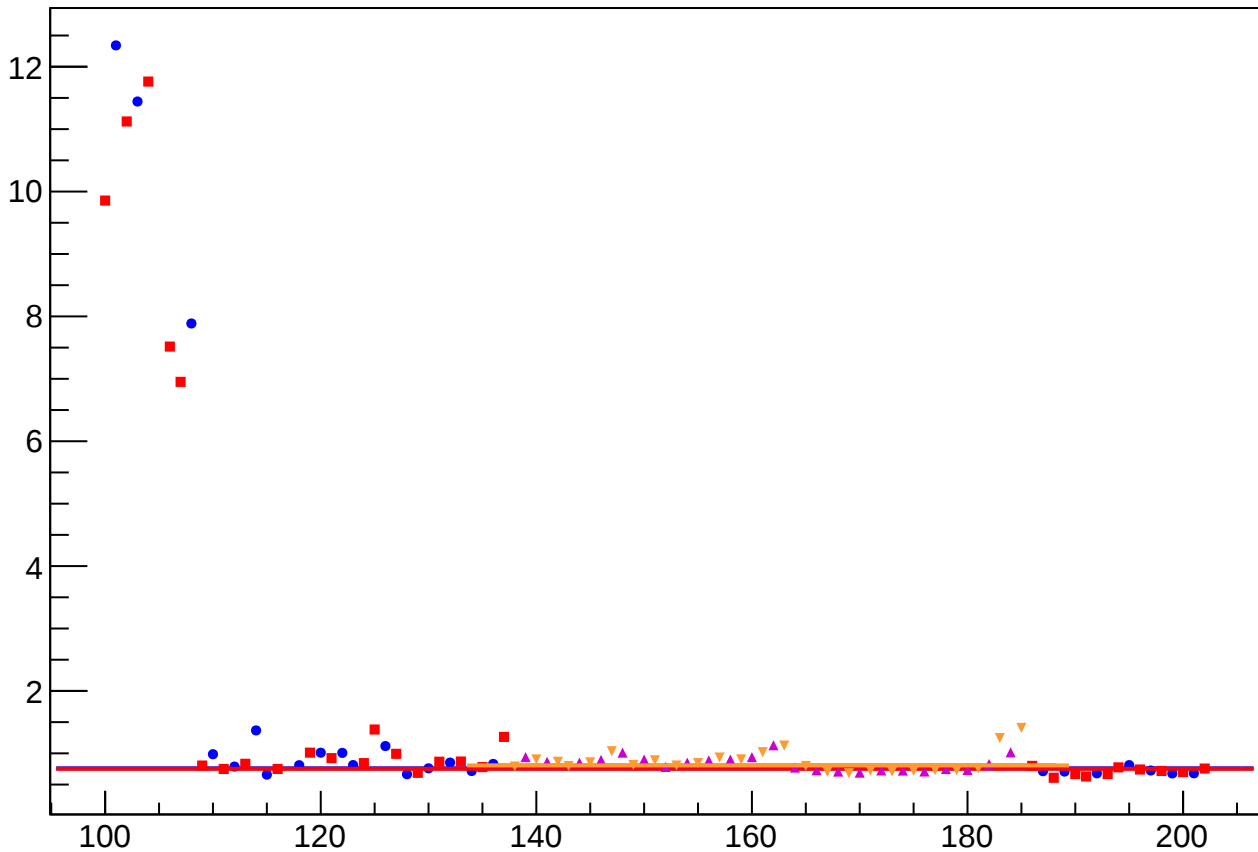
Left In: 133.309+/-0.000

$\chi^2/\text{NDF}$ : 4353039408.6/22

All: 141.847+/-0.000

$\chi^2/\text{NDF}$ : 76450293646.0/100

# yield\_bcm0l02\_rms vs Slug, Sign Corrected



Right In: 0.760 $\pm$ 0.000  $\chi^2$ /NDF: 2828372.4/23

Left Out: 0.807 $\pm$ 0.000  $\chi^2$ /NDF:704181.3/24

Right Out: 0.753 $\pm$ 0.000  $\chi^2$ /NDF: 3140536.9/28

Left In: 0.805 $\pm$ 0.000  $\chi^2$ /NDF:479689.4/22

Left: 0.806 $\pm$ 0.000  $\chi^2$ /NDF: 1183976.9/47

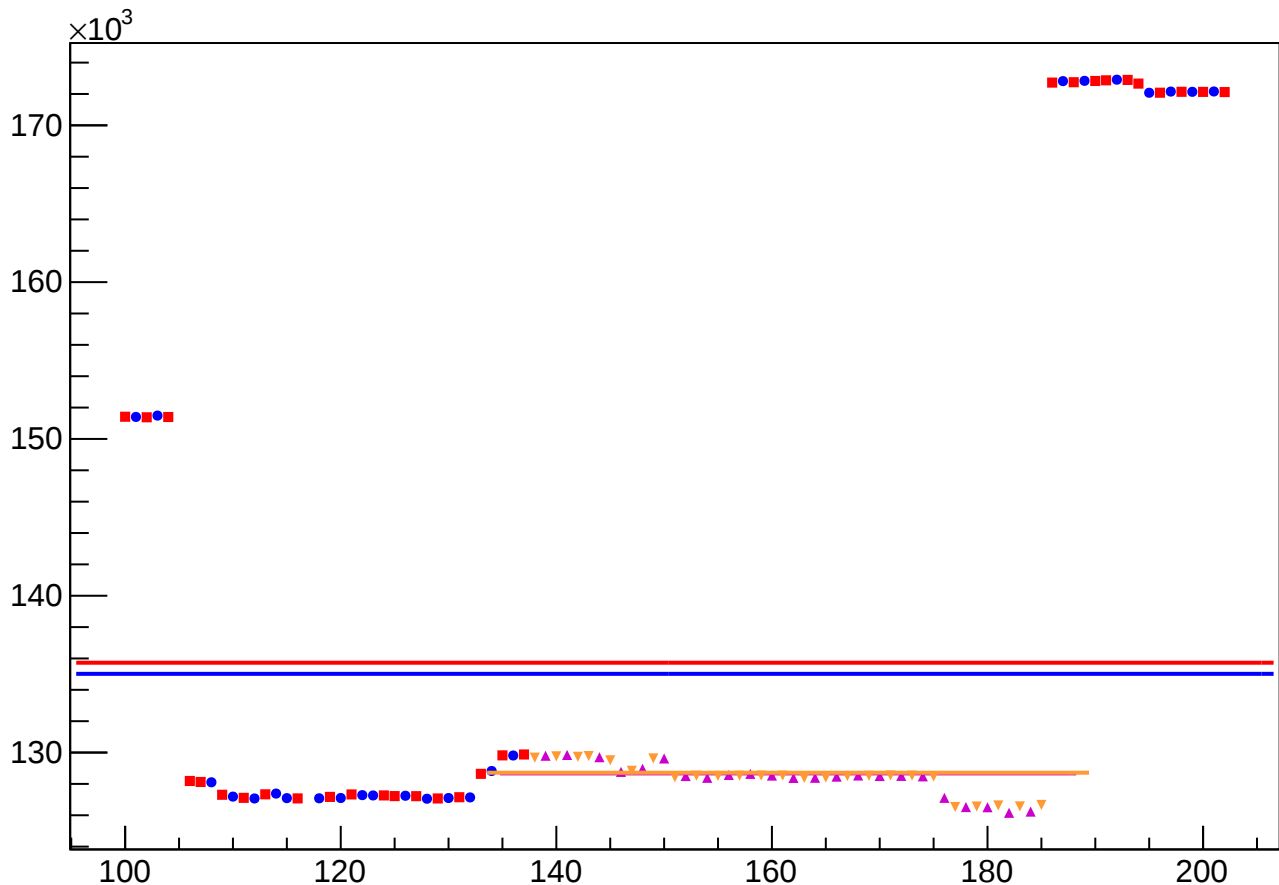
Right: 0.756 $\pm$ 0.000  $\chi^2$ /NDF: 5969695.6/52

In: 0.788 $\pm$ 0.000  $\chi^2$ /NDF:3342059.8/46

Out: 0.784 $\pm$ 0.000  $\chi^2$ /NDF:3902242.8/53

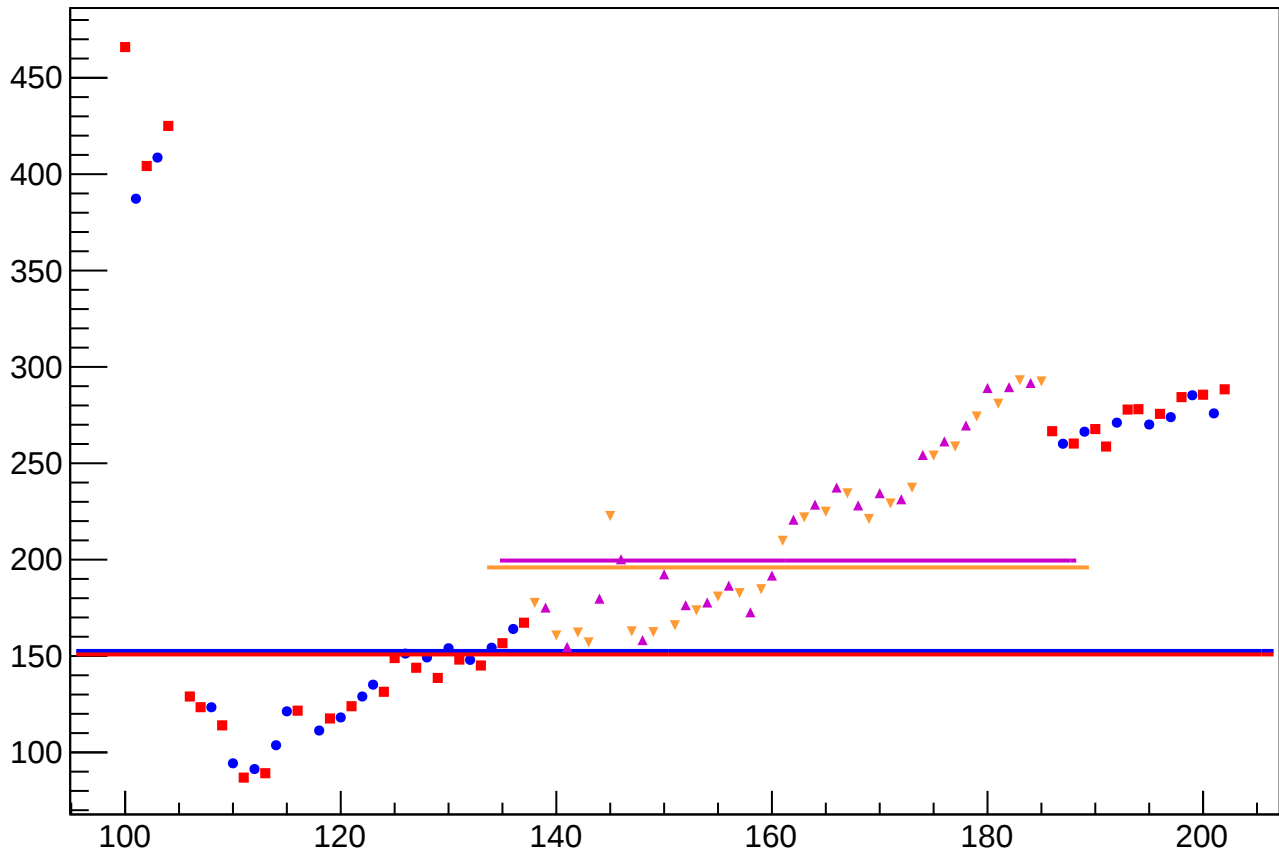
All: 0.786 $\pm$ 0.000  $\chi^2$ /NDF: 7244838.4/100

# yield\_bpm2i01WS\_mean vs Slug, Sign Corrected



Right In: 135019.360 $\pm$ 0.050  $\chi^2$ /NDF: 108234833939.0/23  
 Left Out: 128713.791 $\pm$ 0.047  $\chi^2$ /NDF: 348293942.5/24  
 Right Out: 135729.218 $\pm$ 0.046  $\chi^2$ /NDF: 140718639691.6/28  
 Left In: 128670.094 $\pm$ 0.049  $\chi^2$ /NDF: 334875494.0/22  
 Left: 128692.941 $\pm$ 0.034  $\chi^2$ /NDF: 683588051.4/47  
 Right: 135406.638 $\pm$ 0.034  $\chi^2$ /NDF: 249062822314  
 In: 131760.898 $\pm$ 0.035  $\chi^2$ /NDF: 116798878605.7  
 Out: 132289.102 $\pm$ 0.033  $\chi^2$ /NDF: 152591731920.  
 All: 132043.056 $\pm$ 0.024  $\chi^2$ /NDF: 269512387

# yield\_bpm2i01WS\_rms vs Slug, Sign Corrected



Right In: 152.622 $\pm$ 0.035  $\chi^2$ /NDF: 3672068.3/23

Left Out: 195.964 $\pm$ 0.033  $\chi^2$ /NDF: 1316091.7/24

Right Out: 150.818 $\pm$ 0.032  $\chi^2$ /NDF: 4677390.9/28

Left In: 199.531 $\pm$ 0.035  $\chi^2$ /NDF: 1175342.5/22

Left: 197.666 $\pm$ 0.024  $\chi^2$ /NDF: 2497014.2/47

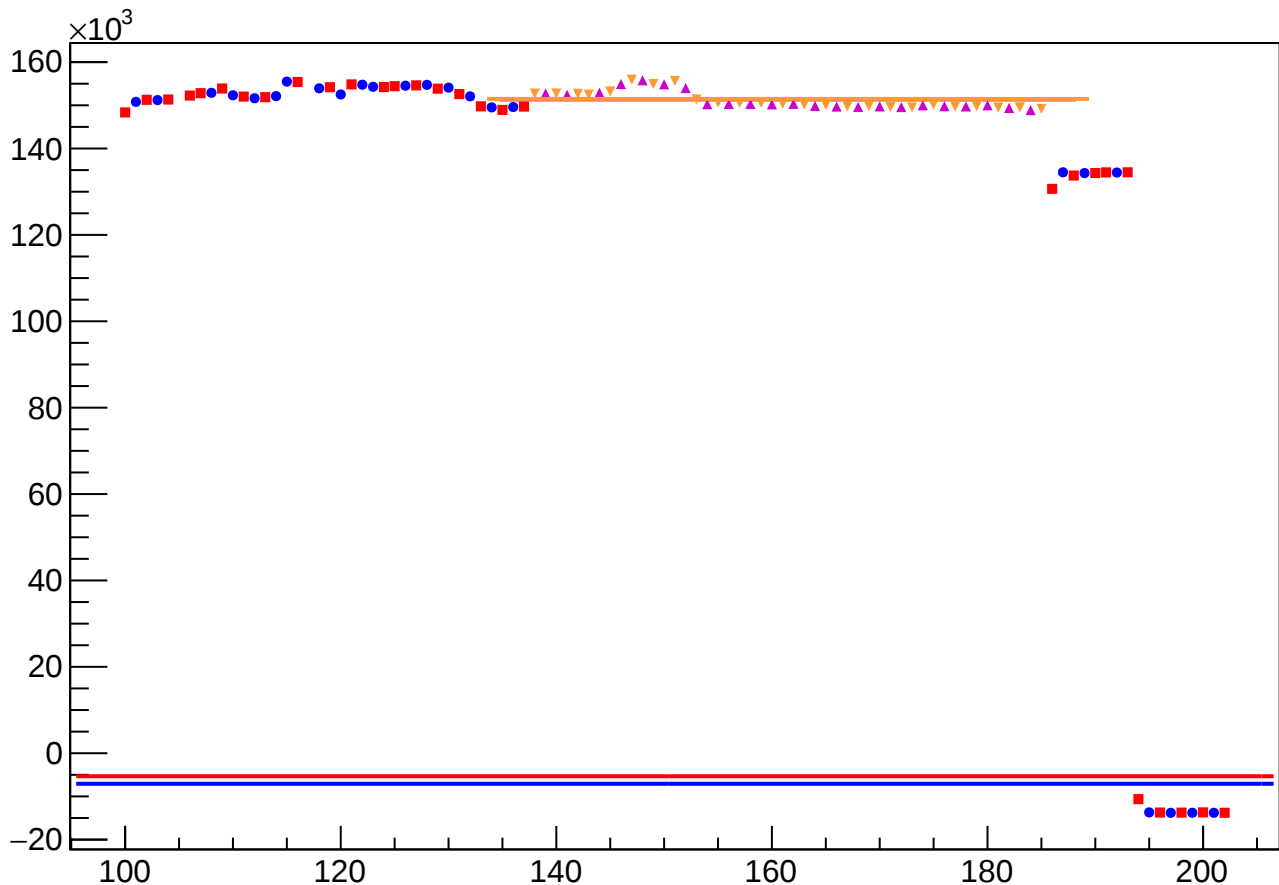
Right: 151.638 $\pm$ 0.024  $\chi^2$ /NDF: 8350871.3/52

In: 176.696 $\pm$ 0.025  $\chi^2$ /NDF: 5745784.3/46

Out: 172.956 $\pm$ 0.023  $\chi^2$ /NDF: 6948013.2/53

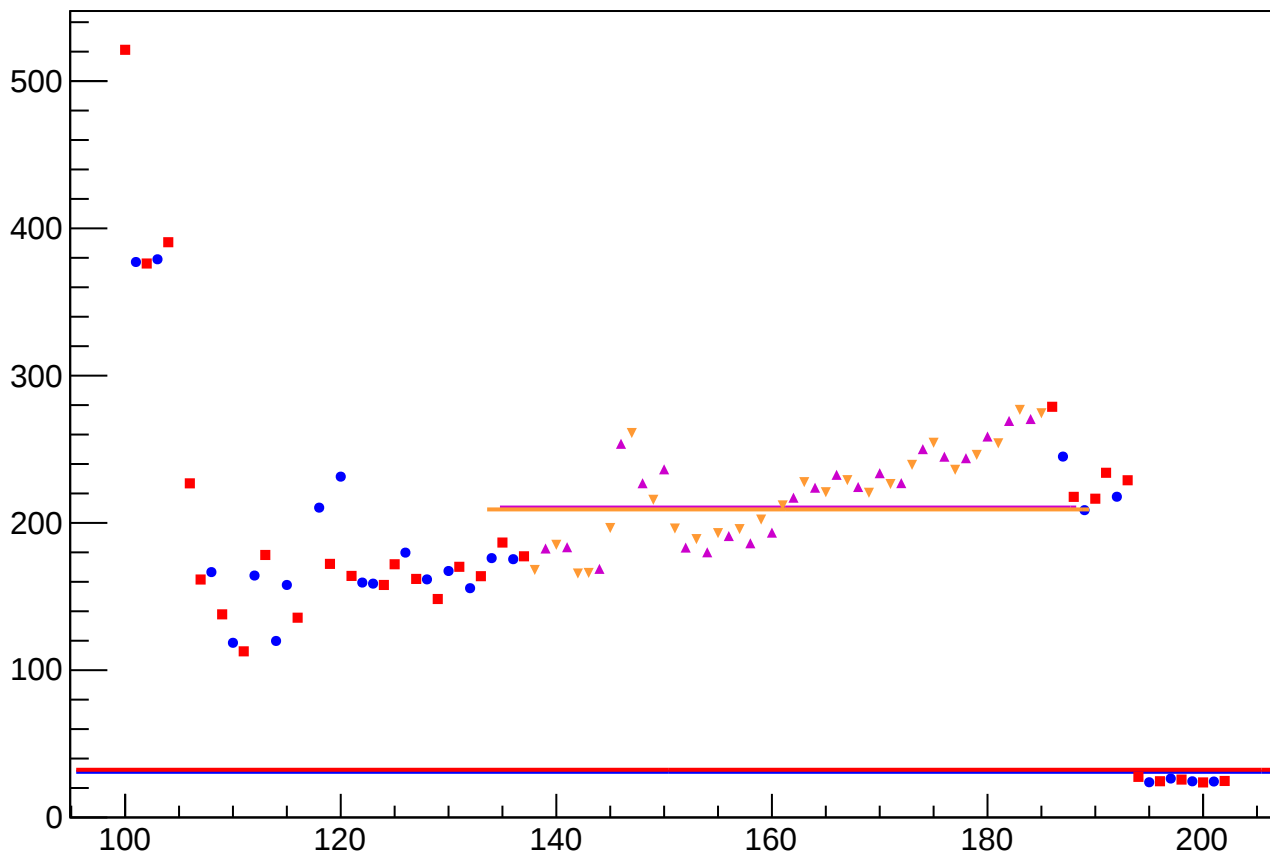
All: 174.698 $\pm$ 0.017  $\chi^2$ /NDF: 12706007.2/100

# yield\_bpm0i07WS\_mean vs Slug, Sign Corrected



Right In: -7072.437 $\pm$ 0.014  $\chi^2$ /NDF: 5728915391104.3/23  
 Left Out: 151480.339 $\pm$ 0.049  $\chi^2$ /NDF: 1483692735.3/24  
 Right Out: -5332.305 $\pm$ 0.013  $\chi^2$ /NDF: 7002334190174.8/28  
 Left In: 151362.440 $\pm$ 0.051  $\chi^2$ /NDF: 1426782789.9/22  
 Left: 151423.440 $\pm$ 0.036  $\chi^2$ /NDF: 2913216467.1/23  
 Right: -6192.551 $\pm$ 0.010  $\chi^2$ /NDF: 1273958366632.0/24  
 In: 3295.069 $\pm$ 0.013  $\chi^2$ /NDF: 14671099353277.0/28  
 Out: 5389.148 $\pm$ 0.013  $\chi^2$ /NDF: 16364078218696.0/28  
 All: 4355.572 $\pm$ 0.009  $\chi^2$ /NDF: 31048111962.0/28

# yield\_bpm0i07WS\_rms vs Slug, Sign Corrected



Right In: 30.997 $\pm$ 0.010  $\chi^2$ /NDF: 11137874.8/23

Left Out: 209.156 $\pm$ 0.035  $\chi^2$ /NDF: 710094.9/24

Right Out: 32.379 $\pm$ 0.009  $\chi^2$ /NDF: 13159690.3/28

Left In: 210.431 $\pm$ 0.036  $\chi^2$ /NDF: 684015.0/22

Left: 209.771 $\pm$ 0.025  $\chi^2$ /NDF: 1394750.9/47

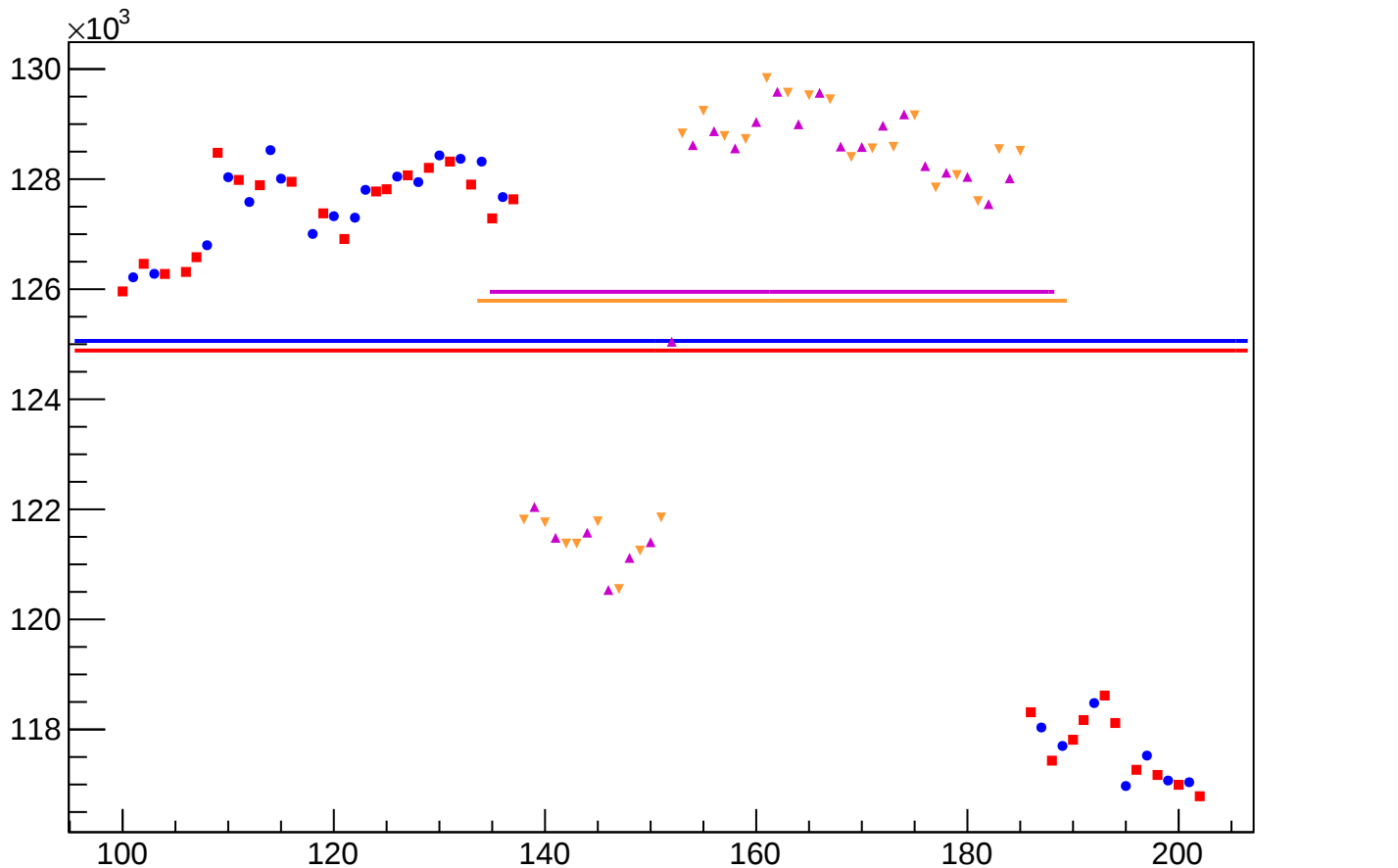
Right: 31.696 $\pm$ 0.007  $\chi^2$ /NDF: 24308083.0/52

In: 42.738 $\pm$ 0.009  $\chi^2$ /NDF: 34757575.2/46

Out: 44.465 $\pm$ 0.009  $\chi^2$ /NDF: 37660386.6/53

All: 43.613 $\pm$ 0.007  $\chi^2$ /NDF: 72435558.1/100

yield\_bpm0l01WS\_mean vs Slug, Sign Corrected



Right In: 125060.036 $\pm$ 0.050

$\chi^2$ /NDF: 8097984773.7/23

Left: 125870.001 $\pm$ 0.031

$\chi^2$ /NDF: 12592819321.6/23

Right: 124965.556 $\pm$ 0.034

$\chi^2$ /NDF: 17944626424.1/23

Left Out: 125790.126 $\pm$ 0.044

$\chi^2$ /NDF: 6744310079.8/24

In: 125558.734 $\pm$ 0.033

$\chi^2$ /NDF: 14115923501.4/24

Right Out: 124885.426 $\pm$ 0.046

$\chi^2$ /NDF: 9840112480.9/28

Out: 125361.124 $\pm$ 0.032

$\chi^2$ /NDF: 16785252012.1/28

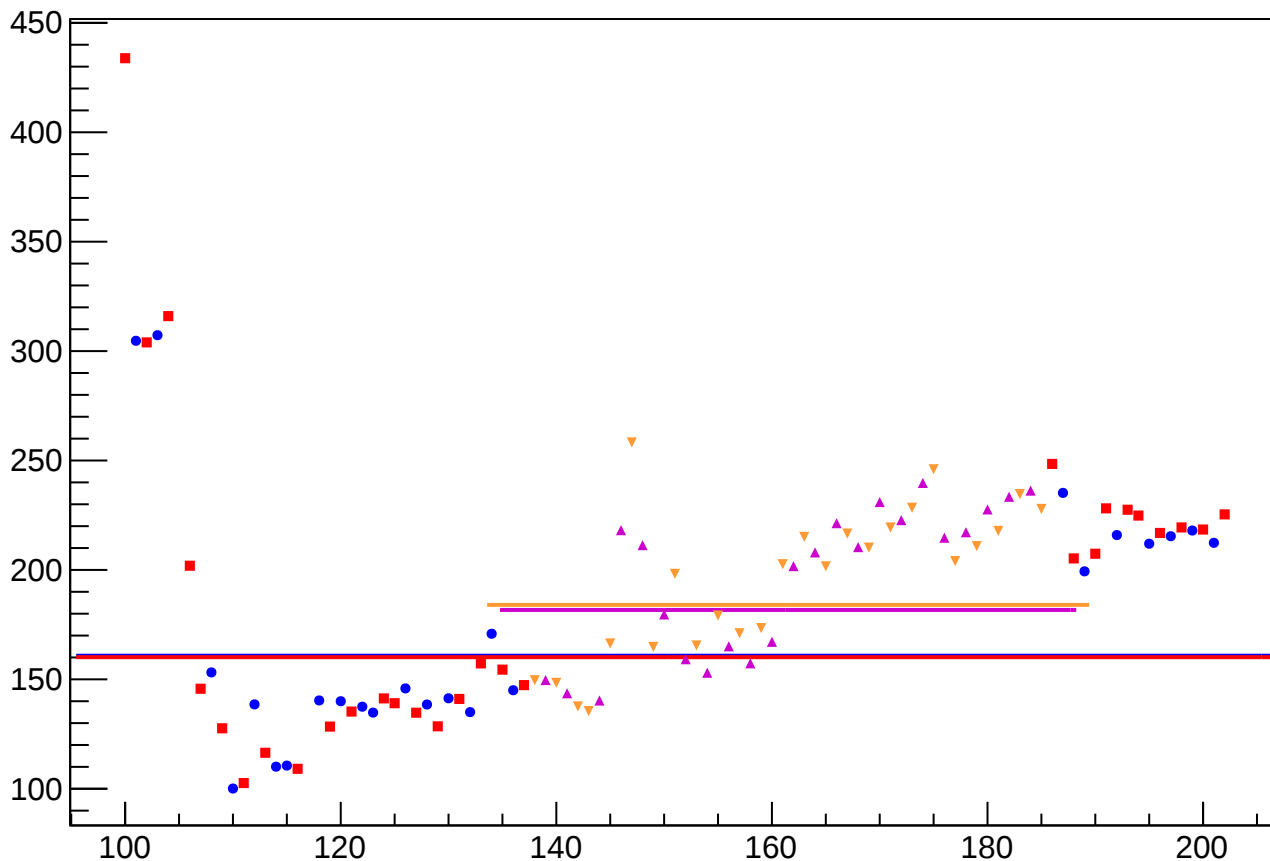
Left In: 125952.447 $\pm$ 0.045

$\chi^2$ /NDF: 5841800367.5/22

All: 125455.359 $\pm$ 0.023

$\chi^2$ /NDF: 309195013.1/23

# yield\_bpm0l01WS\_rms vs Slug, Sign Corrected



Right In: 160.797 $\pm$ 0.036  $\chi^2$ /NDF: 1619082.2/23

Left Out: 184.029 $\pm$ 0.031  $\chi^2$ /NDF: 1126592.5/24

Right Out: 160.122 $\pm$ 0.033  $\chi^2$ /NDF: 2268267.8/28

Left In: 181.714 $\pm$ 0.032  $\chi^2$ /NDF: 1116142.0/22

Left: 182.890 $\pm$ 0.022  $\chi^2$ /NDF: 2245464.4/47

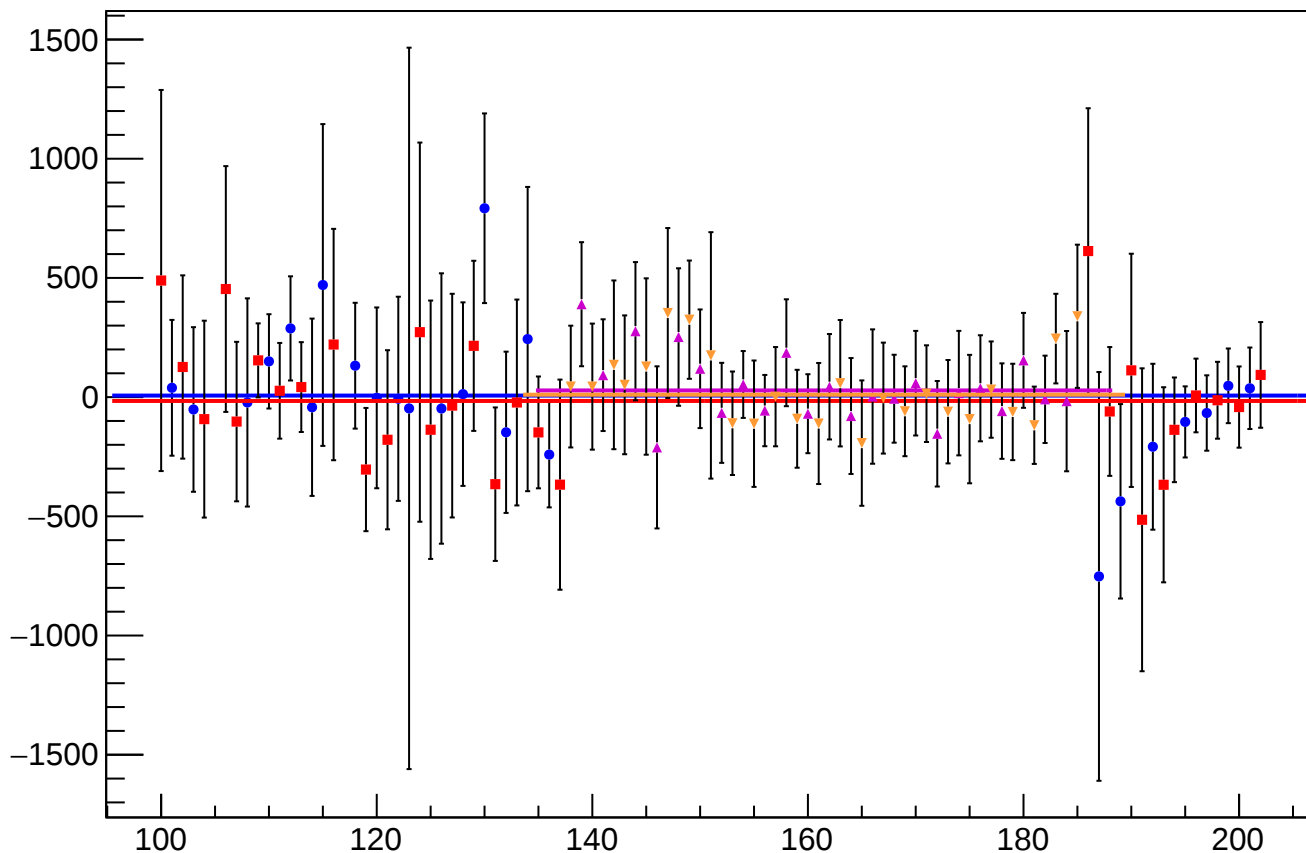
Right: 160.432 $\pm$ 0.024  $\chi^2$ /NDF: 3887544.7/52

In: 172.486 $\pm$ 0.024  $\chi^2$ /NDF: 2928763.1/46

Out: 172.693 $\pm$ 0.023  $\chi^2$ /NDF: 3675335.9/53

All: 172.594 $\pm$ 0.016  $\chi^2$ /NDF: 6604139.2/100

# asym\_bcm\_an\_ds\_mean vs Slug, Sign Corrected



Right In: 6.532 $\pm$ 54.840  $\chi^2$ /NDF: 11.7/23

Left Out: 10.078 $\pm$ 47.488  $\chi^2$ /NDF:8.5/24

Right Out: -15.980 $\pm$ 50.734  $\chi^2$ /NDF: 10.4/28

Left In: 28.050 $\pm$ 44.573  $\chi^2$ /NDF:7.0/22

Left: 19.632 $\pm$ 32.499  $\chi^2$ /NDF: 15.5/47

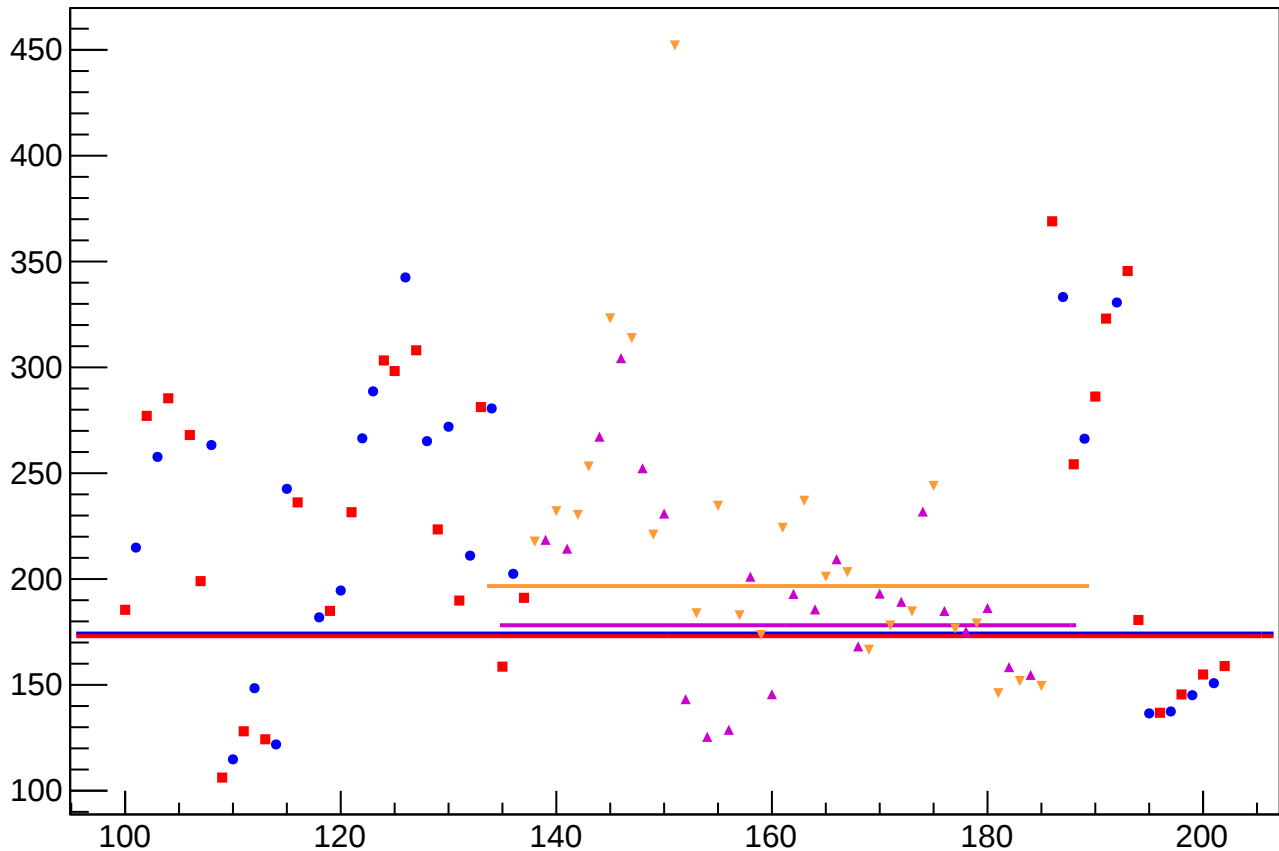
Right: -5.599 $\pm$ 37.242  $\chi^2$ /NDF: 22.1/52

In: 19.490 $\pm$ 34.589  $\chi^2$ /NDF:18.7/46

Out: -2.091 $\pm$ 34.670  $\chi^2$ /NDF:18.9/53

All: 8.725 $\pm$ 24.487  $\chi^2$ /NDF: 37.9/100

# asym\_bcm\_an\_ds\_rms vs Slug, Sign Corrected



Right In:  $174.245 \pm 0.039$   $\chi^2/\text{NDF}$ : 2059099.9/23

Left Out:  $196.682 \pm 0.034$   $\chi^2/\text{NDF}$ : 1782715.7/24

Right Out:  $173.002 \pm 0.036$   $\chi^2/\text{NDF}$ : 2745077.8/28

Left In:  $178.166 \pm 0.032$   $\chi^2/\text{NDF}$ : 1618967.9/22

Left:  $186.838 \pm 0.023$   $\chi^2/\text{NDF}$ : 3563331.3/47

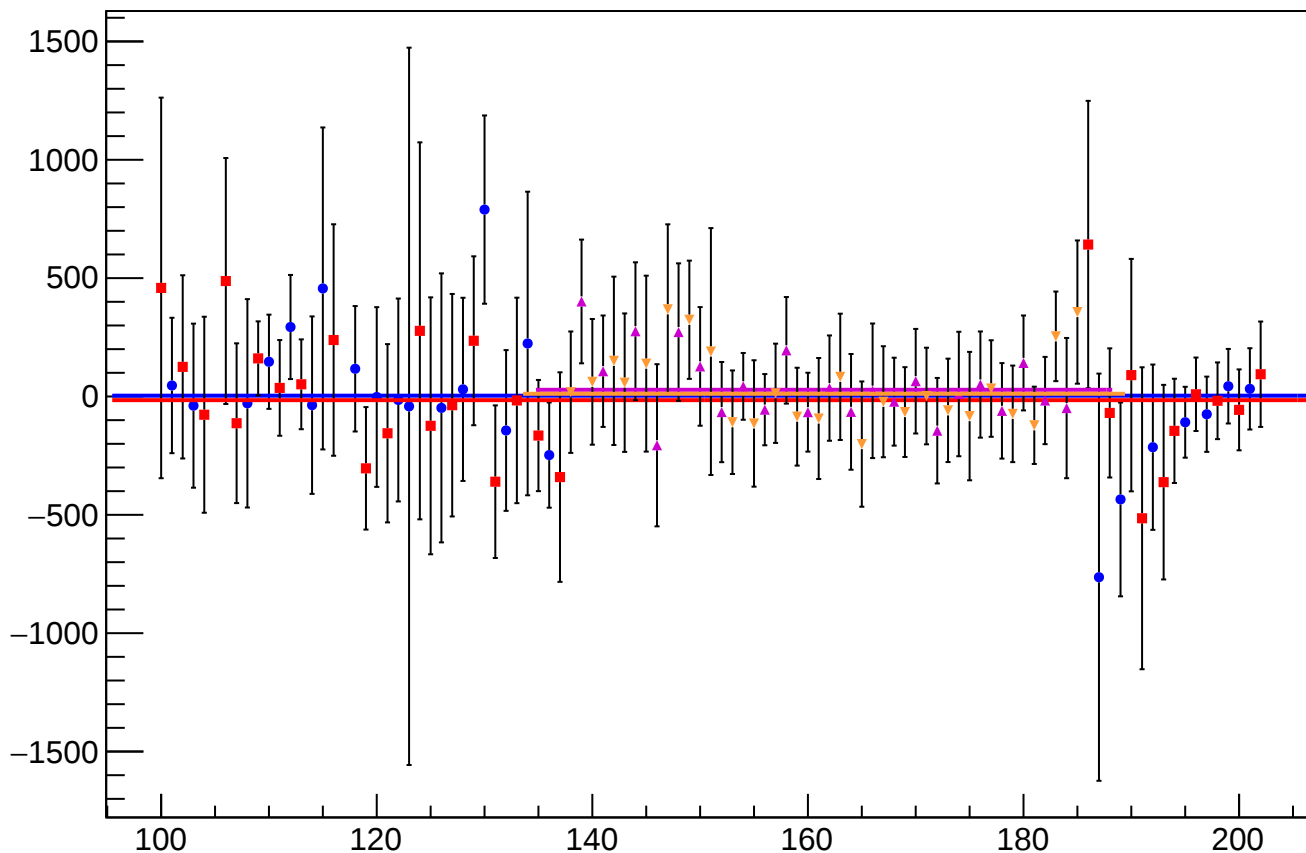
Right:  $173.575 \pm 0.026$   $\chi^2/\text{NDF}$ : 4804731.5/52

In:  $176.606 \pm 0.024$   $\chi^2/\text{NDF}$ : 3684223.9/46

Out:  $185.623 \pm 0.025$   $\chi^2/\text{NDF}$ : 4760027.7/53

All:  $181.104 \pm 0.017$   $\chi^2/\text{NDF}$ : 8512059.2/100

# asym\_bcm\_an\_ds3\_mean vs Slug, Sign Corrected



Right In:  $3.396 \pm 55.106$   $\chi^2/\text{NDF}$ : 11.7/23

Left Out:  $11.479 \pm 47.819$   $\chi^2/\text{NDF}$ : 8.8/24

Right Out:  $-15.515 \pm 50.993$   $\chi^2/\text{NDF}$ : 10.6/28

Left In:  $28.280 \pm 44.863$   $\chi^2/\text{NDF}$ : 7.1/22

Left:  $20.415 \pm 32.718$   $\chi^2/\text{NDF}$ : 16.0/47

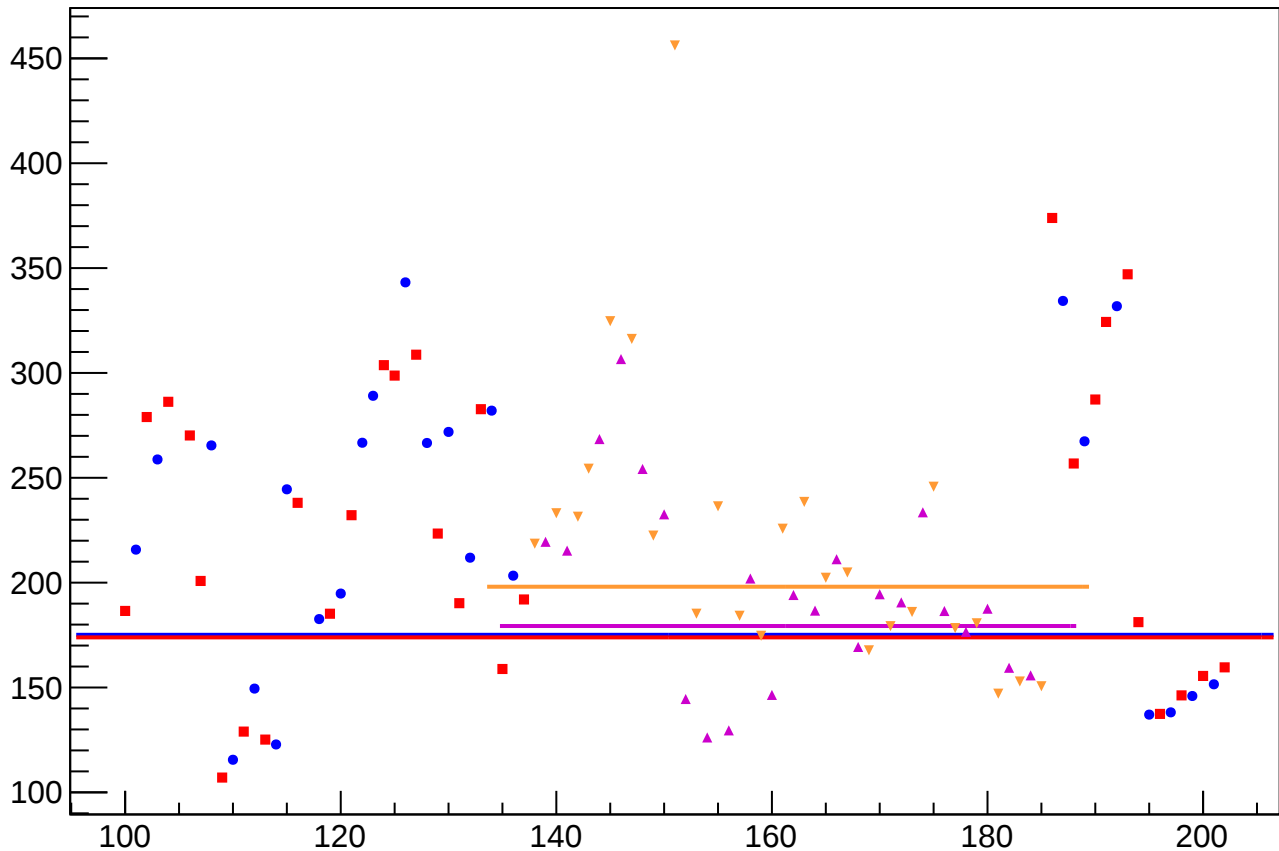
Right:  $-6.791 \pm 37.427$   $\chi^2/\text{NDF}$ : 22.4/52

In:  $18.361 \pm 34.791$   $\chi^2/\text{NDF}$ : 18.9/46

Out:  $-1.152 \pm 34.881$   $\chi^2/\text{NDF}$ : 19.6/53

All:  $8.630 \pm 24.633$   $\chi^2/\text{NDF}$ : 38.7/100

# asym\_bcm\_an\_ds3\_rms vs Slug, Sign Corrected



Right In: 175.128+/-0.039  $\chi^2/\text{NDF}$ : 2049673.9/23

Left Out: 198.059+/-0.034  $\chi^2/\text{NDF}$ :1778526.5/24

Right Out: 173.901+/-0.036  $\chi^2/\text{NDF}$ : 2739754.6/28

Left In: 179.324+/-0.032  $\chi^2/\text{NDF}$ :1618266.2/22

Left: 188.094+/-0.023  $\chi^2/\text{NDF}$ : 3560073.1/47

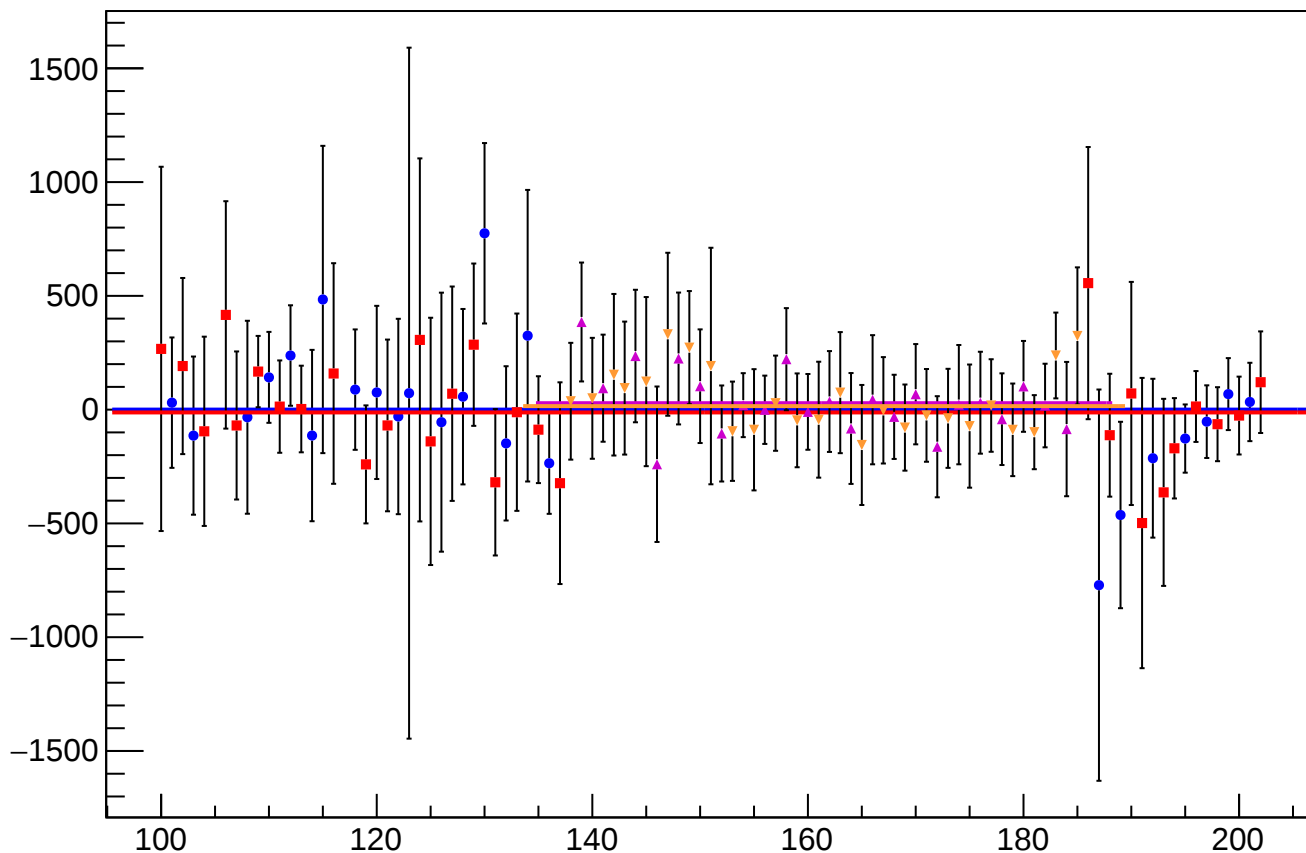
Right: 174.467+/-0.026  $\chi^2/\text{NDF}$ : 4789962.7/52

In: 177.651+/-0.025  $\chi^2/\text{NDF}$ :3674914.7/46

Out: 186.755+/-0.025  $\chi^2/\text{NDF}$ :4757132.5/53

All: 182.191+/-0.017  $\chi^2/\text{NDF}$ : 8500338.2/100

# asym\_bcm\_an\_us\_mean vs Slug, Sign Corrected



Right In:  $0.177 \pm 55.182$   $\chi^2/\text{NDF}: 11.5/23$

Left Out:  $15.437 \pm 47.695$   $\chi^2/\text{NDF}: 7.0/24$

Right Out:  $-12.291 \pm 50.985$   $\chi^2/\text{NDF}: 9.3/28$

Left In:  $28.277 \pm 44.743$   $\chi^2/\text{NDF}: 6.4/22$

Left:  $22.267 \pm 32.632$   $\chi^2/\text{NDF}: 13.4/47$

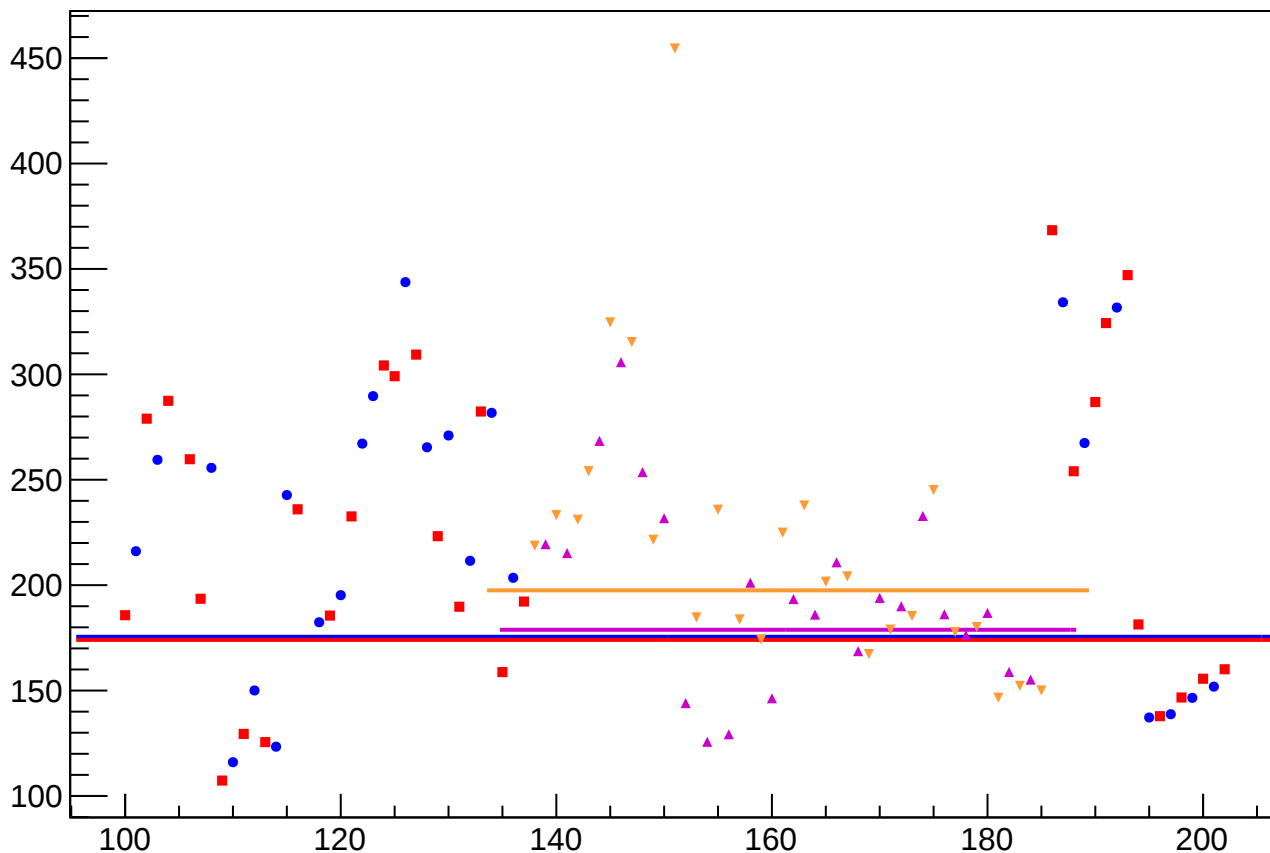
Right:  $-6.549 \pm 37.448$   $\chi^2/\text{NDF}: 20.8/52$

In:  $17.131 \pm 34.754$   $\chi^2/\text{NDF}: 18.0/46$

Out:  $2.497 \pm 34.830$   $\chi^2/\text{NDF}: 16.4/53$

All:  $9.830 \pm 24.602$   $\chi^2/\text{NDF}: 34.5/100$

# asym\_bcm\_an\_us\_rms vs Slug, Sign Corrected



Right In: 175.502 $\pm$ 0.039  $\chi^2$ /NDF: 2018722.1/23

Left Out: 197.527 $\pm$ 0.034  $\chi^2$ /NDF:1784225.5/24

Right Out: 174.033 $\pm$ 0.036  $\chi^2$ /NDF: 2695595.6/28

Left In: 178.836 $\pm$ 0.032  $\chi^2$ /NDF:1622266.9/22

Left: 187.585 $\pm$ 0.023  $\chi^2$ /NDF: 3569877.1/47

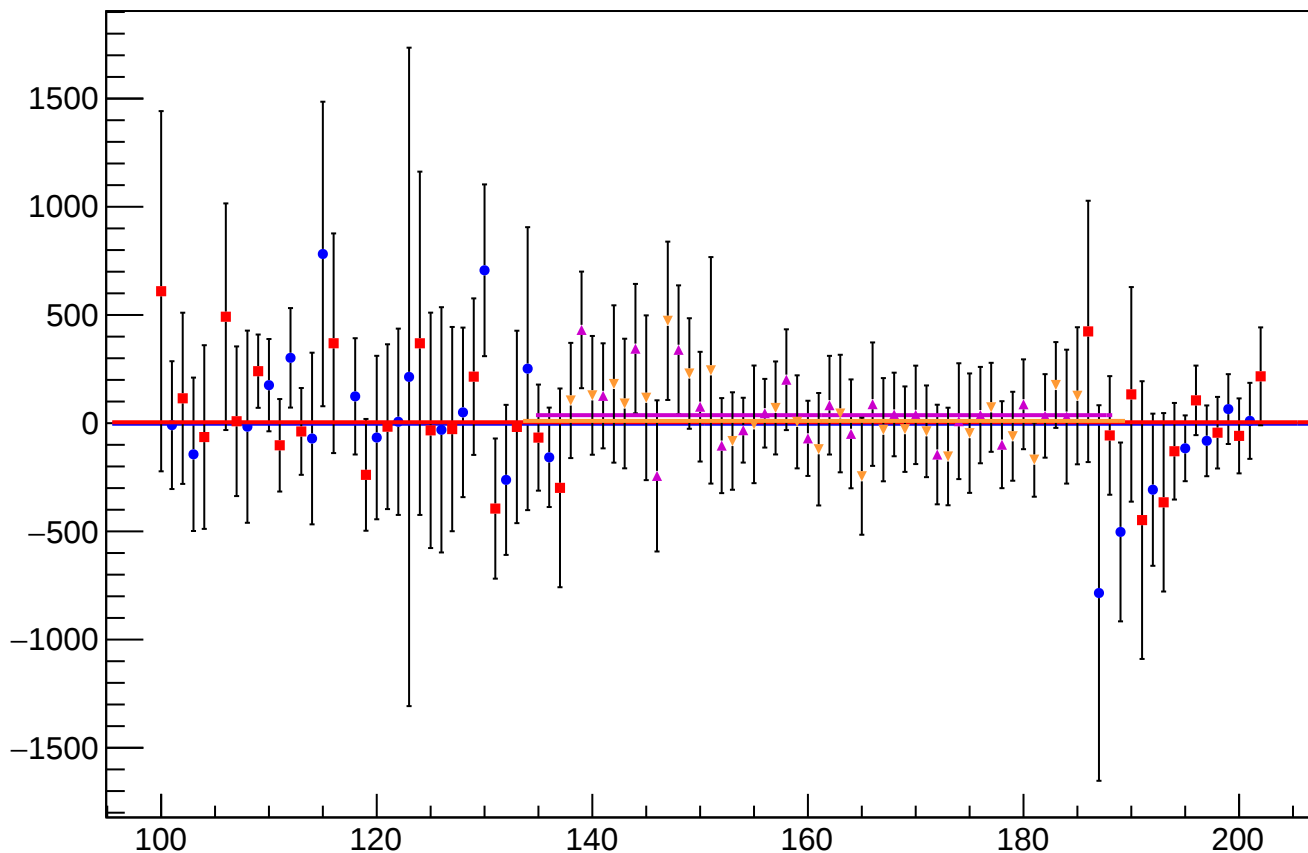
Right: 174.709 $\pm$ 0.026  $\chi^2$ /NDF: 4715082.2/52

In: 177.513 $\pm$ 0.025  $\chi^2$ /NDF:3645393.5/46

Out: 186.563 $\pm$ 0.025  $\chi^2$ /NDF:4706312.3/53

All: 182.028 $\pm$ 0.017  $\chi^2$ /NDF: 8419356.3/100

# asym\_bcm\_dg\_us\_mean vs Slug, Sign Corrected



Right In: -2.568+/-56.539  $\chi^2/\text{NDF}$ : 12.5/23

Left Out: 10.534+/-49.197  $\chi^2/\text{NDF}$ : 7.5/24

Right Out: 4.265+/-52.521  $\chi^2/\text{NDF}$ : 11.5/28

Left In: 37.000+/-46.358  $\chi^2/\text{NDF}$ : 7.9/22

Left: 24.553+/-33.739  $\chi^2/\text{NDF}$ : 15.5/47

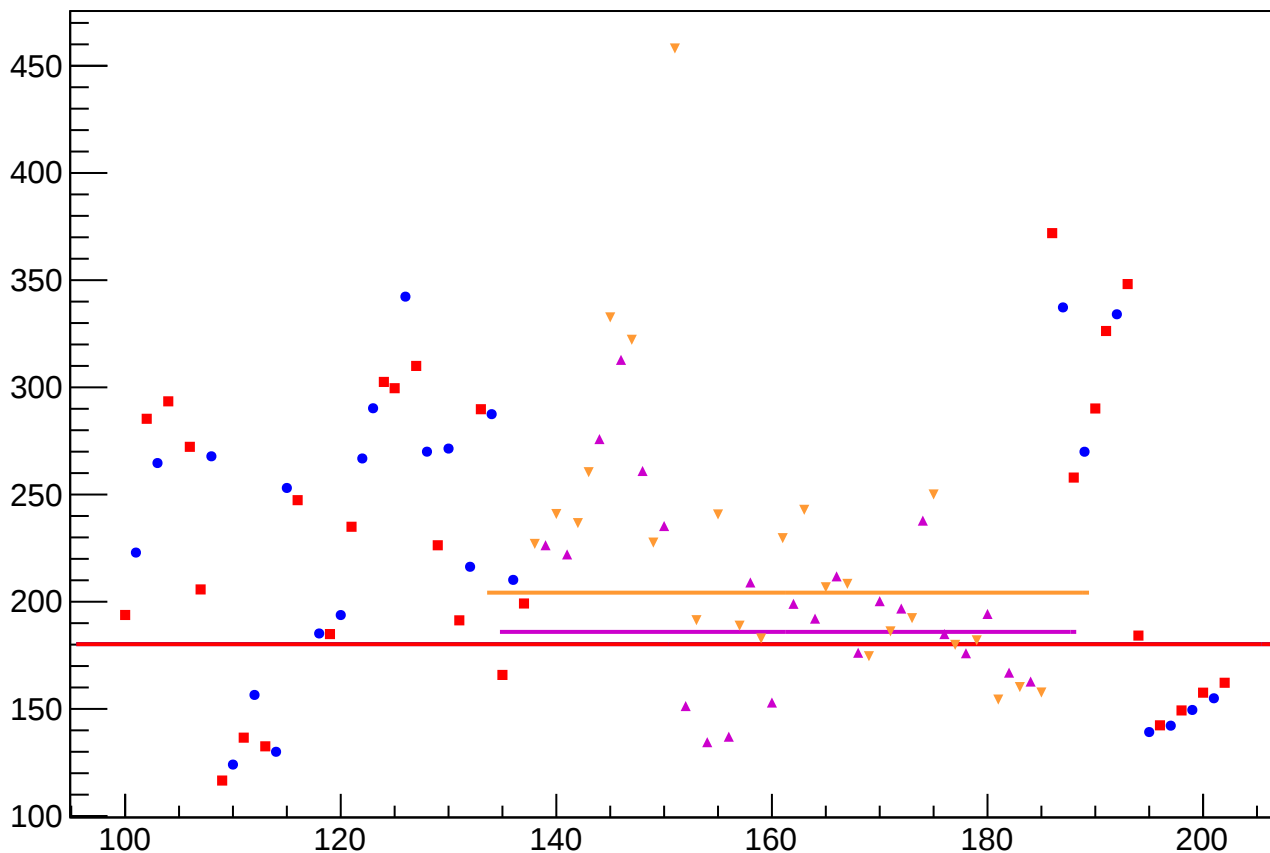
Right: 1.100+/-38.480  $\chi^2/\text{NDF}$ : 24.0/52

In: 21.093+/-35.848  $\chi^2/\text{NDF}$ : 20.7/46

Out: 7.604+/-35.905  $\chi^2/\text{NDF}$ : 19.0/53

All: 14.359+/-25.369  $\chi^2/\text{NDF}$ : 39.8/100

# asym\_bcm\_dg\_us\_rms vs Slug, Sign Corrected



Right In: 180.230 $\pm$ 0.040  $\chi^2/\text{NDF}$ : 1936080.5/23

Left Out: 204.236 $\pm$ 0.035  $\chi^2/\text{NDF}$ : 1675666.0/24

Right Out: 180.191 $\pm$ 0.037  $\chi^2/\text{NDF}$ : 2499081.7/28

Left In: 185.931 $\pm$ 0.033  $\chi^2/\text{NDF}$ : 1460065.0/22

Left: 194.540 $\pm$ 0.024  $\chi^2/\text{NDF}$ : 3282383.3/47

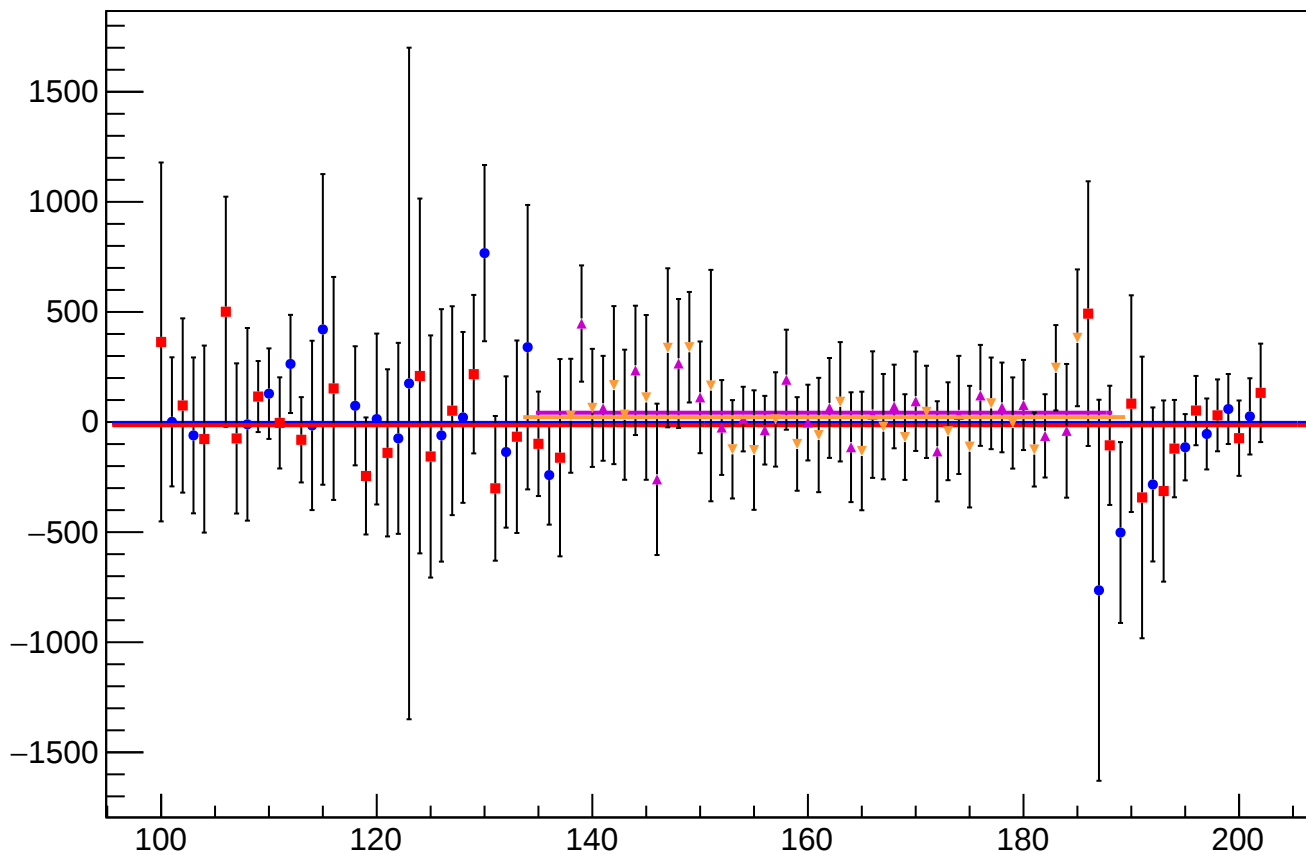
Right: 180.209 $\pm$ 0.027  $\chi^2/\text{NDF}$ : 4435162.7/52

In: 183.639 $\pm$ 0.025  $\chi^2/\text{NDF}$ : 3408309.1/46

Out: 192.999 $\pm$ 0.025  $\chi^2/\text{NDF}$ : 4398025.4/53

All: 188.311 $\pm$ 0.018  $\chi^2/\text{NDF}$ : 7874389.2/100

# asym\_bcm\_dg\_ds\_mean vs Slug, Sign Corrected



Right In:  $-3.821 \pm 55.820$   $\chi^2/\text{NDF}: 11.3/23$

Left Out:  $22.189 \pm 48.738$   $\chi^2/\text{NDF}: 8.4/24$

Right Out:  $-14.172 \pm 51.654$   $\chi^2/\text{NDF}: 7.3/28$

Left In:  $42.446 \pm 45.861$   $\chi^2/\text{NDF}: 6.7/22$

Left:  $32.933 \pm 33.399$   $\chi^2/\text{NDF}: 15.2/47$

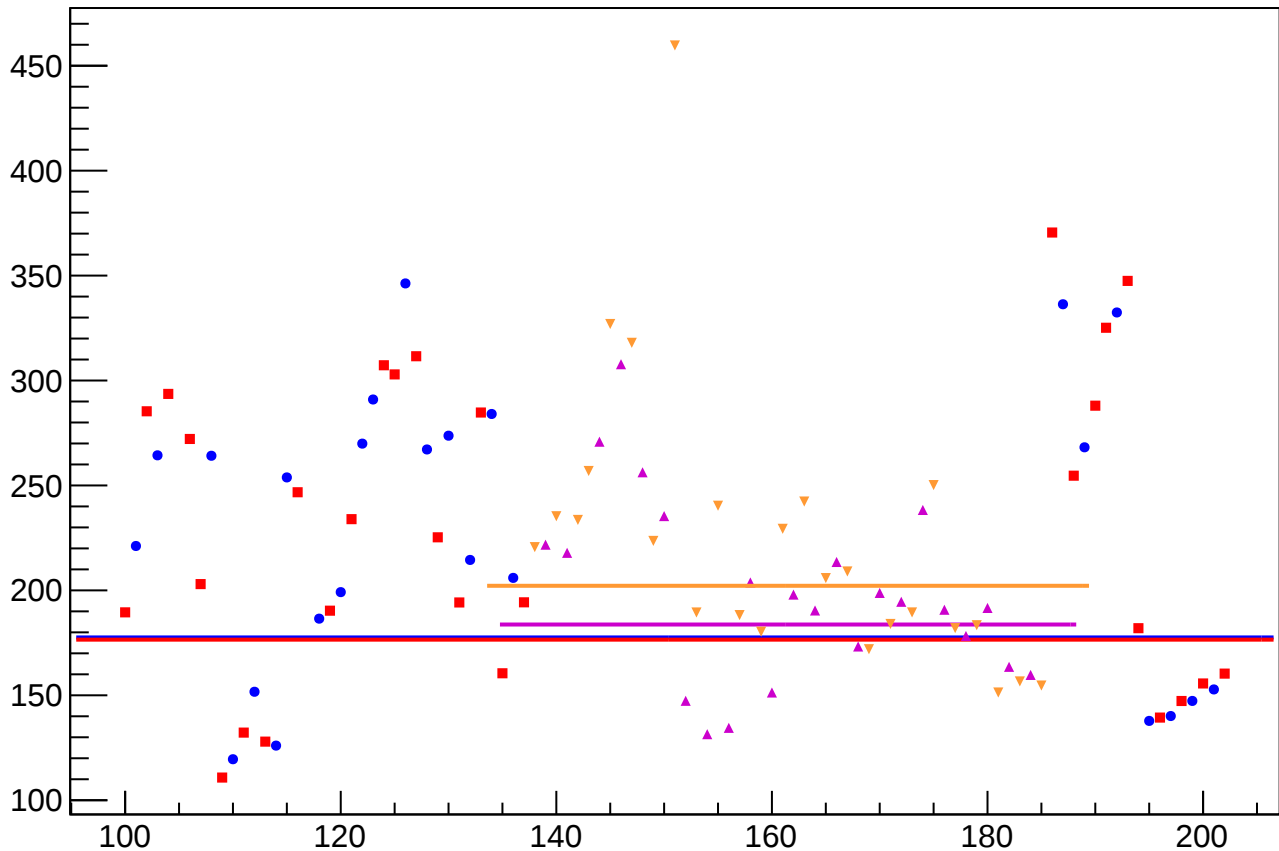
Right:  $-9.397 \pm 37.912$   $\chi^2/\text{NDF}: 18.7/52$

In:  $23.801 \pm 35.435$   $\chi^2/\text{NDF}: 18.5/46$

Out:  $5.063 \pm 35.449$   $\chi^2/\text{NDF}: 15.9/53$

All:  $14.436 \pm 25.061$   $\chi^2/\text{NDF}: 34.6/100$

# asym\_bcm\_dg\_ds\_rms vs Slug, Sign Corrected



Right In: 177.574 $\pm$ 0.039  $\chi^2$ /NDF: 2020308.1/23

Left Out: 202.186 $\pm$ 0.034  $\chi^2$ /NDF:1696571.9/24

Right Out: 176.518 $\pm$ 0.037  $\chi^2$ /NDF: 2667355.7/28

Left In: 183.732 $\pm$ 0.032  $\chi^2$ /NDF:1495930.4/22

Left: 192.398 $\pm$ 0.024  $\chi^2$ /NDF: 3344580.1/47

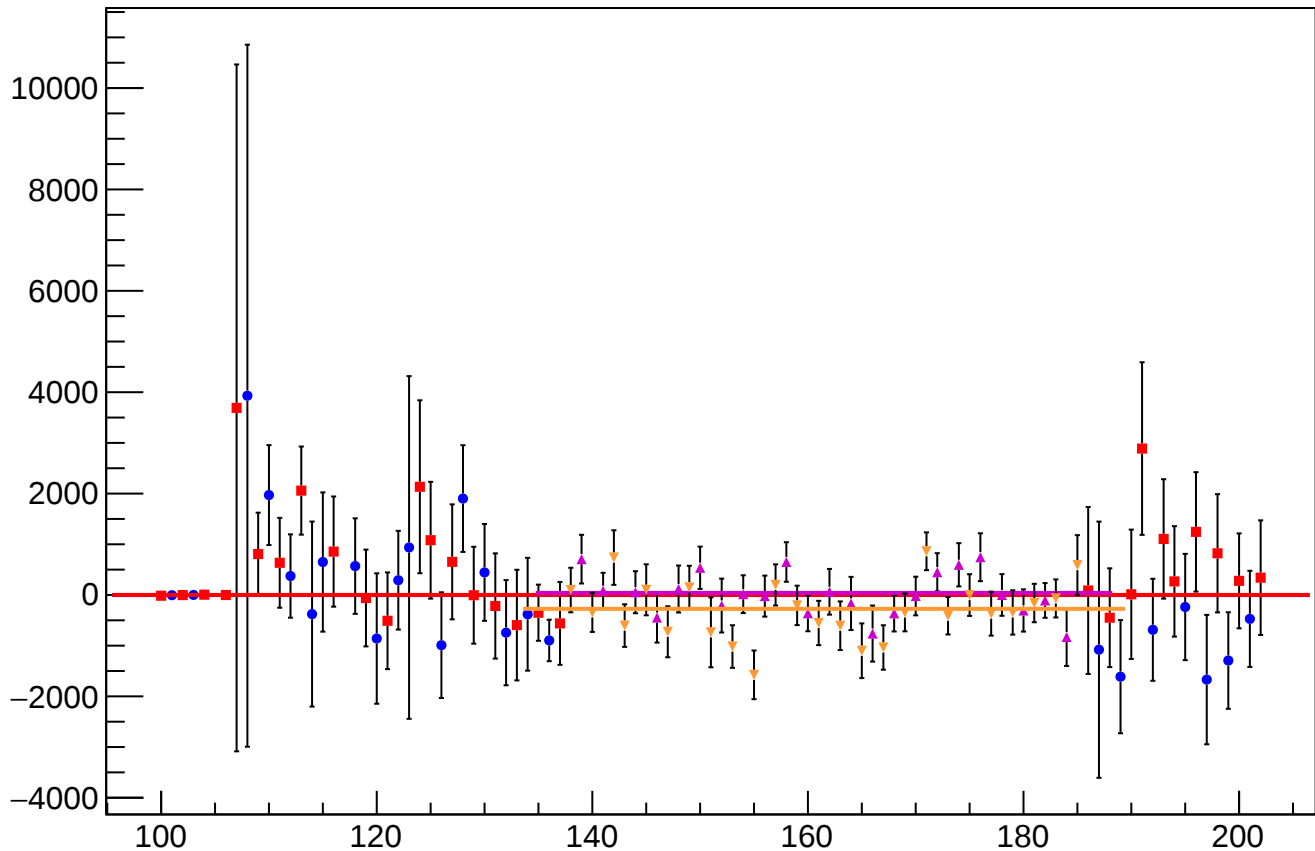
Right: 177.005 $\pm$ 0.027  $\chi^2$ /NDF: 4688049.0/52

In: 181.251 $\pm$ 0.025  $\chi^2$ /NDF:3530771.1/46

Out: 190.097 $\pm$ 0.025  $\chi^2$ /NDF:4625185.4/53

All: 185.672 $\pm$ 0.018  $\chi^2$ /NDF: 8218258.7/100

# asym\_cav4bQ\_mean vs Slug, Sign Corrected



Right In:  $-1.556 \pm 2.251$   $\chi^2/\text{NDF}$ : 23.5/23

Left Out:  $-273.664 \pm 86.869$   $\chi^2/\text{NDF}$ : 38.3/24

Right Out:  $0.747 \pm 2.111$   $\chi^2/\text{NDF}$ : 24.0/28

Left In:  $40.480 \pm 87.470$   $\chi^2/\text{NDF}$ : 20.2/22

Left:  $-117.675 \pm 61.637$   $\chi^2/\text{NDF}$ : 65.0/47

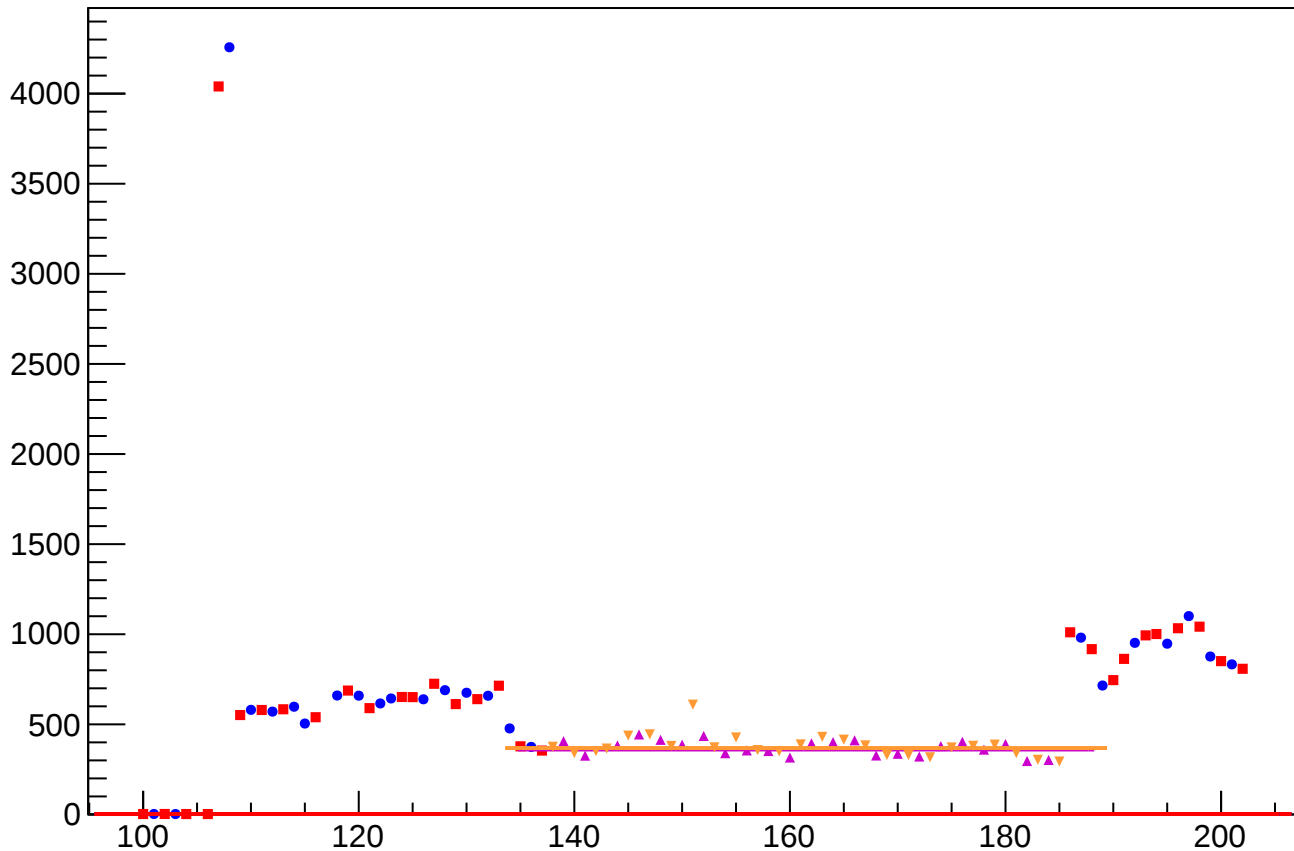
Right:  $-0.330 \pm 1.540$   $\chi^2/\text{NDF}$ : 48.1/52

In:  $-1.528 \pm 2.251$   $\chi^2/\text{NDF}$ : 43.9/46

Out:  $0.585 \pm 2.110$   $\chi^2/\text{NDF}$ : 72.3/53

All:  $-0.403 \pm 1.540$   $\chi^2/\text{NDF}$ : 116.7/100

# asym\_cav4bQ\_rms vs Slug, Sign Corrected



Right In: 2.482+/-0.002  $\chi^2/\text{NDF}$ : 19889112.0/23

Left Out: 368.500+/-0.061  $\chi^2/\text{NDF}$ : 623011.6/24

Right Out: 2.467+/-0.001  $\chi^2/\text{NDF}$ : 23674059.6/28

Left In: 360.571+/-0.062  $\chi^2/\text{NDF}$ : 421995.5/22

Left: 364.563+/-0.044  $\chi^2/\text{NDF}$ : 1053279.8/47

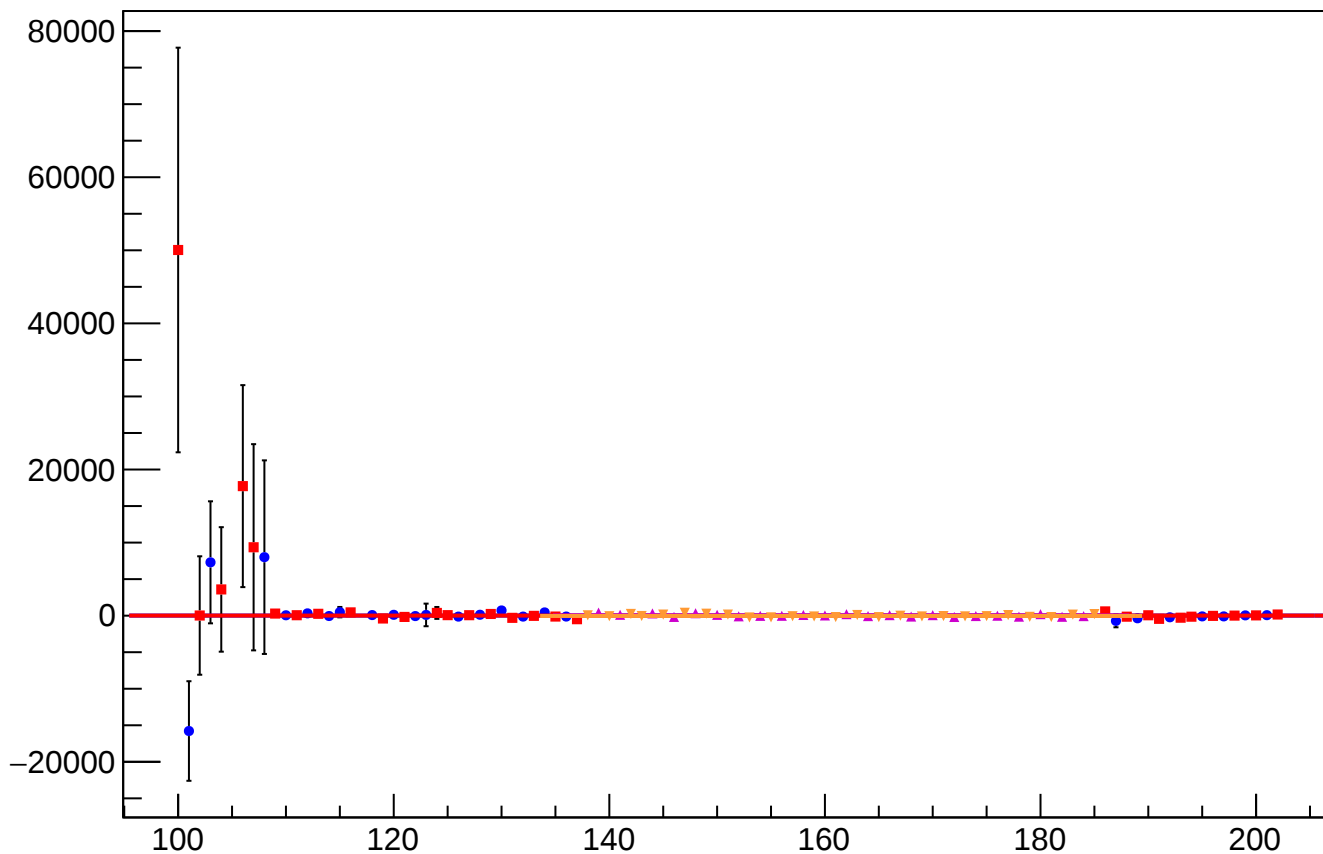
Right: 2.474+/-0.001  $\chi^2/\text{NDF}$ : 43563219.2/52

In: 2.719+/-0.002  $\chi^2/\text{NDF}$ : 53808290.7/46

Out: 2.683+/-0.001  $\chi^2/\text{NDF}$ : 59785164.9/53

All: 2.700+/-0.001  $\chi^2/\text{NDF}$ : 113593729.4/100

# asym\_cav4cQ\_mean vs Slug, Sign Corrected



Right In: 13.819+/-61.659  $\chi^2/\text{NDF}$ : 15.8/23

Left Out: -39.036+/-49.576  $\chi^2/\text{NDF}$ : 9.1/24

Right Out: 12.456+/-58.035  $\chi^2/\text{NDF}$ : 17.2/28

Left In: 28.062+/-48.032  $\chi^2/\text{NDF}$ : 9.6/22

Left: -4.426+/-34.497  $\chi^2/\text{NDF}$ : 19.7/47

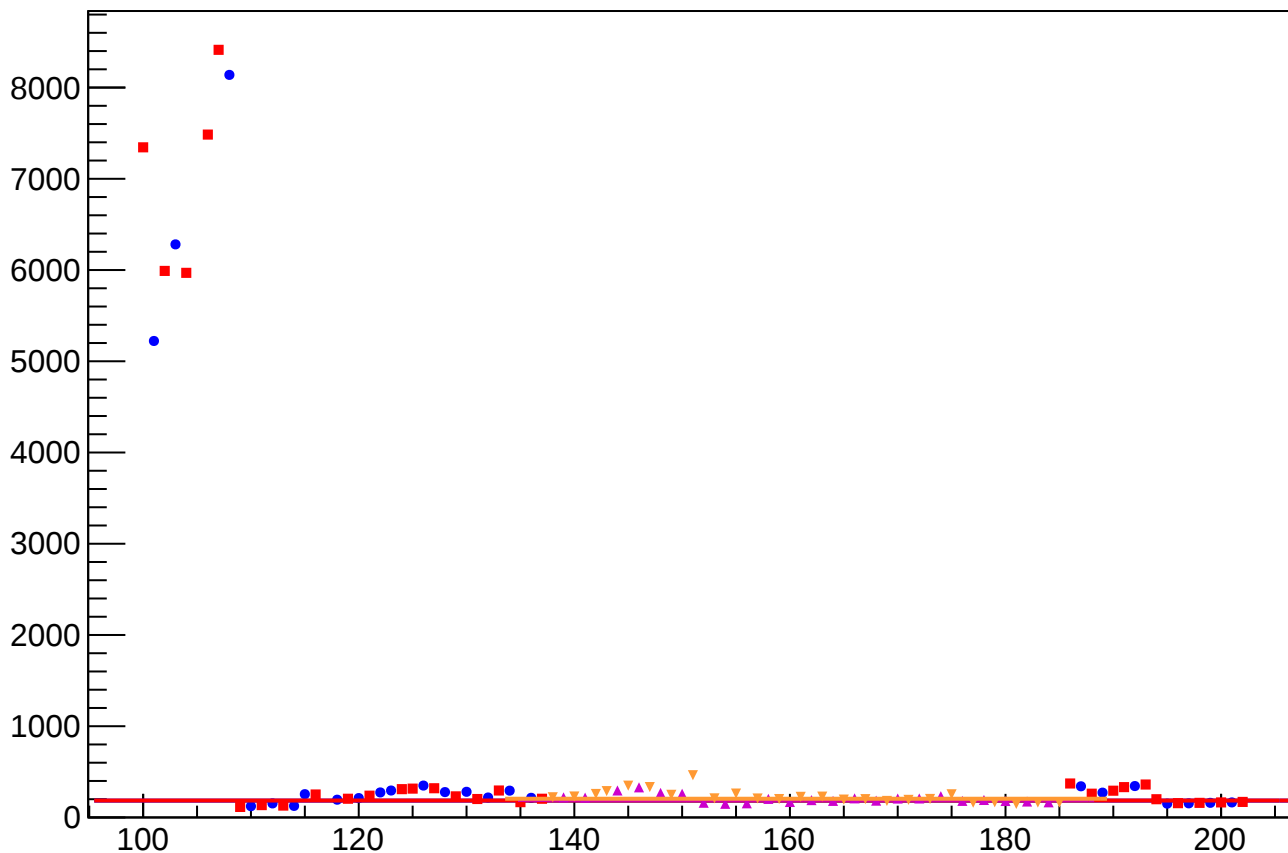
Right: 13.097+/-42.260  $\chi^2/\text{NDF}$ : 33.0/52

In: 22.683+/-37.892  $\chi^2/\text{NDF}$ : 25.4/46

Out: -17.312+/-37.695  $\chi^2/\text{NDF}$ : 26.8/53

All: 2.581+/-26.724  $\chi^2/\text{NDF}$ : 52.8/100

# asym\_cav4cQ\_rms vs Slug, Sign Corrected



Right In: 184.306 $\pm$ 0.044  $\chi^2/\text{NDF}$ : 4479994.8/23

Left Out: 205.114 $\pm$ 0.035  $\chi^2/\text{NDF}$ :1957484.4/24

Right Out: 185.597 $\pm$ 0.041  $\chi^2/\text{NDF}$ : 5330232.3/28

Left In: 193.616 $\pm$ 0.034  $\chi^2/\text{NDF}$ :1179471.1/22

Left: 199.183 $\pm$ 0.024  $\chi^2/\text{NDF}$ : 3192443.5/47

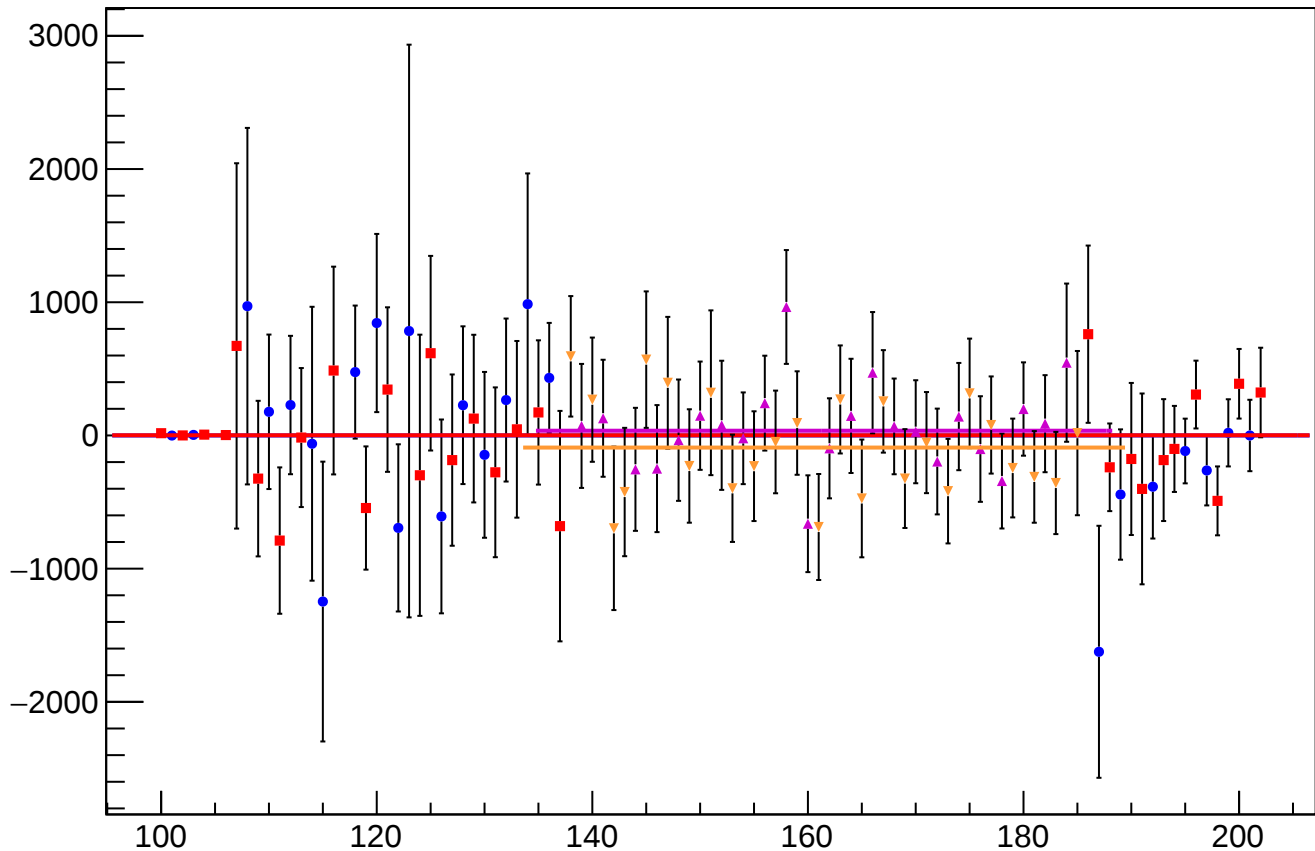
Right: 184.990 $\pm$ 0.030  $\chi^2/\text{NDF}$ : 9810692.0/52

In: 190.100 $\pm$ 0.027  $\chi^2/\text{NDF}$ :5687845.1/46

Out: 196.880 $\pm$ 0.027  $\chi^2/\text{NDF}$ :7418485.0/53

All: 193.508 $\pm$ 0.019  $\chi^2/\text{NDF}$ : 13138512.8/100

# asym\_cav4dQ\_mean vs Slug, Sign Corrected



Right In:  $-0.176 \pm 1.736$   $\chi^2/\text{NDF}$ : 16.1/23

Left Out:  $-90.945 \pm 84.079$   $\chi^2/\text{NDF}$ : 16.4/24

Right Out:  $1.328 \pm 1.622$   $\chi^2/\text{NDF}$ : 20.0/28

Left In:  $35.488 \pm 84.382$   $\chi^2/\text{NDF}$ : 13.4/22

Left:  $-27.956 \pm 59.560$   $\chi^2/\text{NDF}$ : 31.0/47

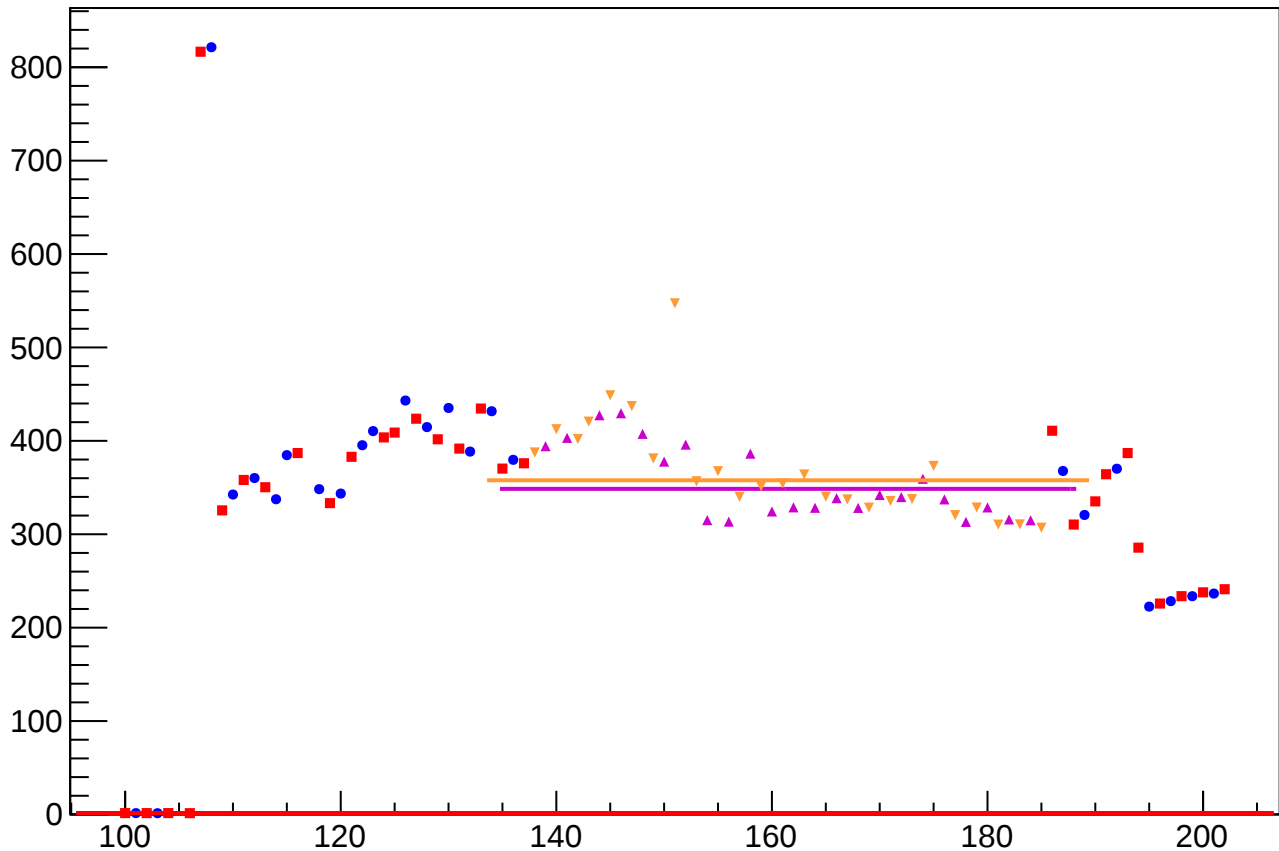
Right:  $0.627 \pm 1.185$   $\chi^2/\text{NDF}$ : 36.5/52

In:  $-0.161 \pm 1.736$   $\chi^2/\text{NDF}$ : 29.7/46

Out:  $1.294 \pm 1.622$   $\chi^2/\text{NDF}$ : 37.6/53

All:  $0.616 \pm 1.185$   $\chi^2/\text{NDF}$ : 67.7/100

# asym\_cav4dQ\_rms vs Slug, Sign Corrected



Right In: 1.507 $\pm$ 0.001  $\chi^2$ /NDF: 20105066.4/23

Left Out: 357.804 $\pm$ 0.059  $\chi^2$ /NDF: 547036.5/24

Right Out: 1.510 $\pm$ 0.001  $\chi^2$ /NDF: 23333591.4/28

Left In: 348.611 $\pm$ 0.060  $\chi^2$ /NDF: 362511.2/22

Left: 353.224 $\pm$ 0.042  $\chi^2$ /NDF: 921460.0/47

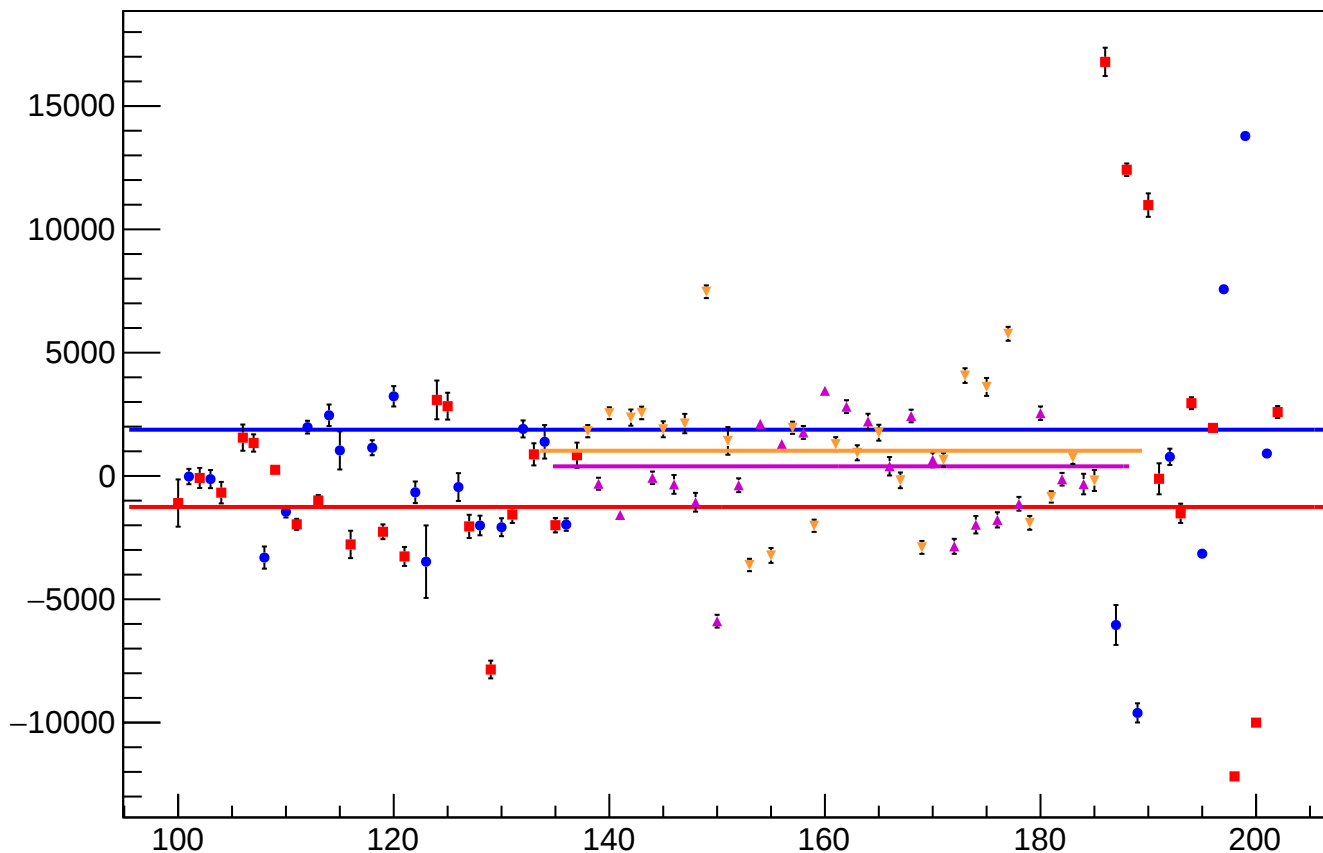
Right: 1.509 $\pm$ 0.001  $\chi^2$ /NDF: 43438662.6/52

In: 1.654 $\pm$ 0.001  $\chi^2$ /NDF: 54294532.5/46

Out: 1.643 $\pm$ 0.001  $\chi^2$ /NDF: 59782269.9/53

All: 1.648 $\pm$ 0.001  $\chi^2$ /NDF: 114076842.5/100

# asym\_bcm0l02\_mean vs Slug, Sign Corrected



Right In: 1876.296 $\pm$ 61.370  $\chi^2$ /NDF: 8121.8/23

Left Out: 1023.439 $\pm$ 57.338  $\chi^2$ /NDF:2309.4/24

Right Out: -1256.939 $\pm$ 56.149  $\chi^2$ /NDF: 11893.5/28

Left In: 390.237 $\pm$ 54.931  $\chi^2$ /NDF:1584.9/22

Left: 693.270 $\pm$ 39.666  $\chi^2$ /NDF: 3957.9/47

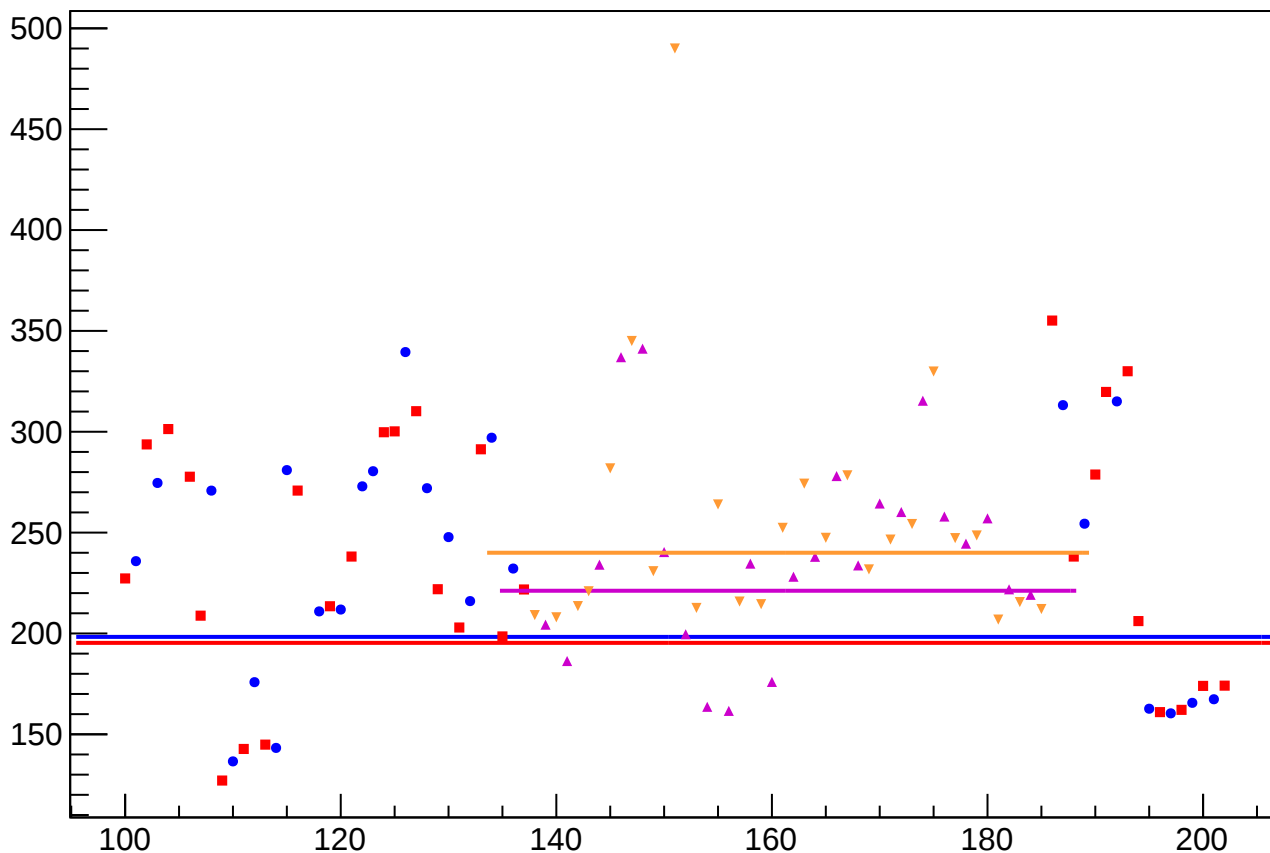
Right: 170.765 $\pm$ 41.426  $\chi^2$ /NDF: 21434.2/52

In: 1051.246 $\pm$ 40.930  $\chi^2$ /NDF:10032.3/46

Out: -140.633 $\pm$ 40.117  $\chi^2$ /NDF:15010.3/53

All: 443.356 $\pm$ 28.650  $\chi^2$ /NDF: 25475.1/100

# asym\_bcm0l02\_rms vs Slug, Sign Corrected



Right In: 198.296 $\pm$ 0.043  $\chi^2/\text{NDF}$ : 1375054.1/23

Left Out: 240.019 $\pm$ 0.041  $\chi^2/\text{NDF}$ :1002427.9/24

Right Out: 195.335 $\pm$ 0.040  $\chi^2/\text{NDF}$ : 1961708.2/28

Left In: 221.173 $\pm$ 0.039  $\chi^2/\text{NDF}$ :1342517.8/22

Left: 230.192 $\pm$ 0.028  $\chi^2/\text{NDF}$ : 2457612.6/47

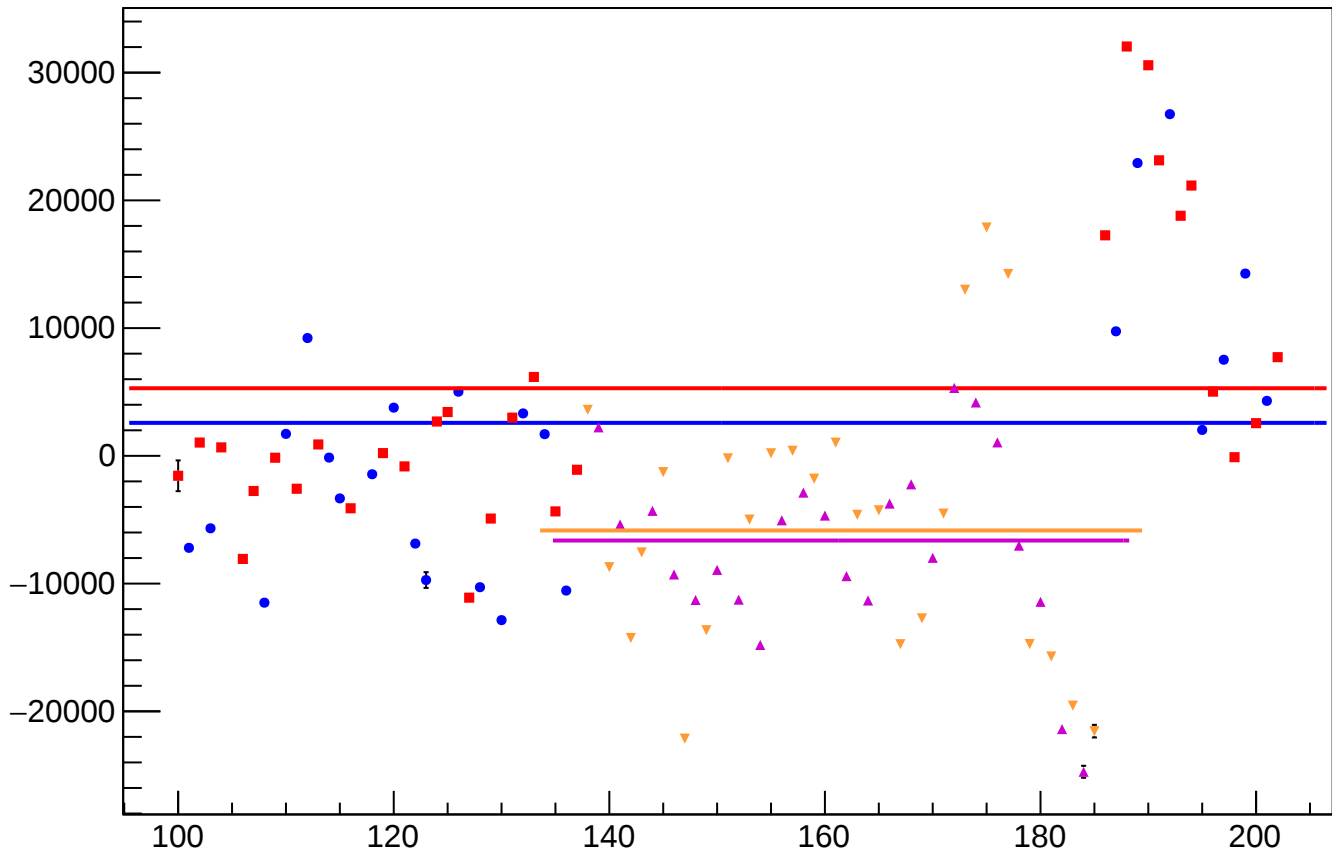
Right: 196.684 $\pm$ 0.029  $\chi^2/\text{NDF}$ : 3339297.6/52

In: 210.997 $\pm$ 0.029  $\chi^2/\text{NDF}$ :2871861.9/46

Out: 217.209 $\pm$ 0.028  $\chi^2/\text{NDF}$ :3584188.5/53

All: 214.165 $\pm$ 0.020  $\chi^2/\text{NDF}$ : 6479545.4/100

# asym\_bpm2i01WS\_mean vs Slug, Sign Corrected



Right In: 2583.208 $\pm$ 39.113  $\chi^2$ /NDF: 77248.4/23

Left Out: -5841.615 $\pm$ 35.848  $\chi^2$ /NDF:63397.3/24

Right Out: 5292.225 $\pm$ 35.800  $\chi^2$ /NDF: 101427.4/28

Left In: -6628.388 $\pm$ 37.160  $\chi^2$ /NDF:21738.0/22

Left: -6220.862 $\pm$ 25.800  $\chi^2$ /NDF: 85367.5/47

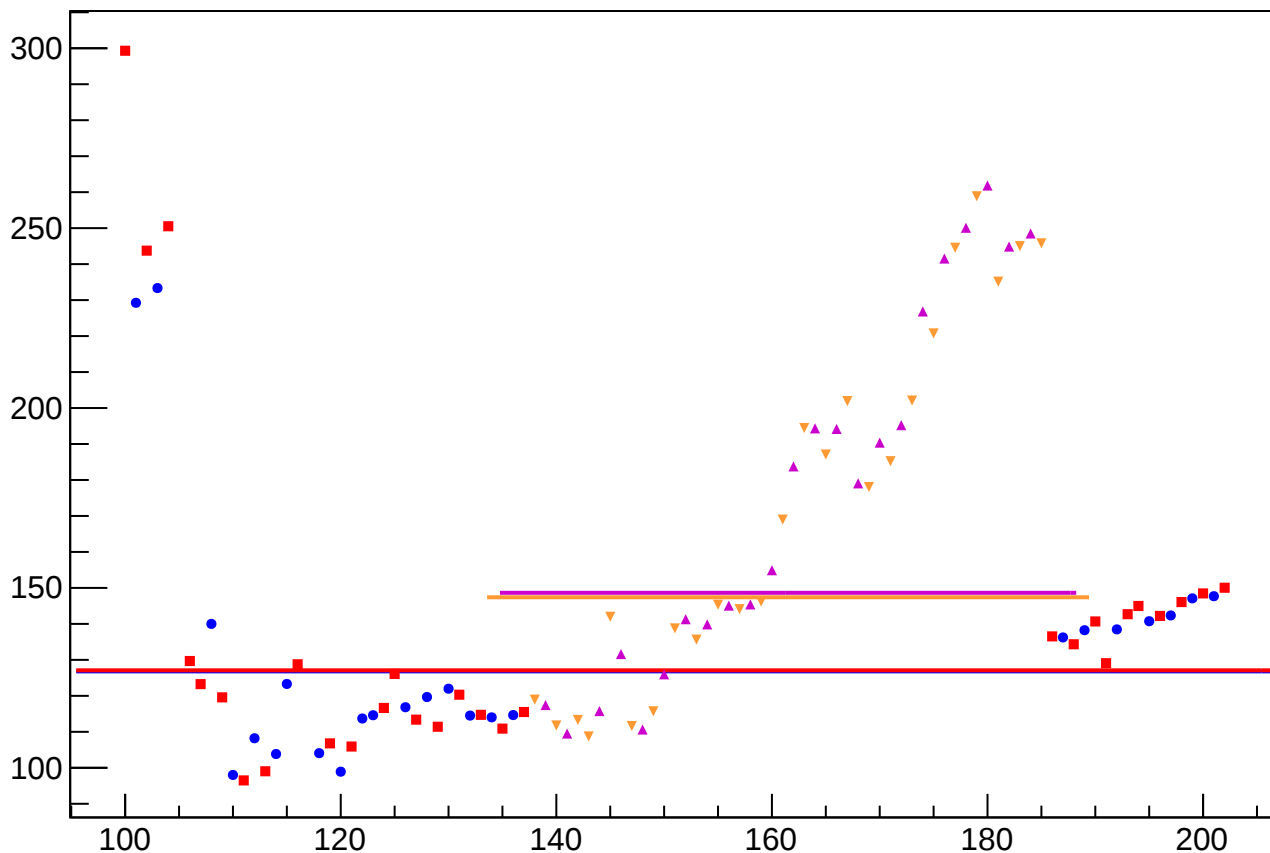
Right: 4057.322 $\pm$ 26.408  $\chi^2$ /NDF: 181286.1/52

In: -2258.339 $\pm$ 26.940  $\chi^2$ /NDF:128138.3/46

Out: -267.216 $\pm$ 25.331  $\chi^2$ /NDF:213121.9/53

All: -1201.538 $\pm$ 18.454  $\chi^2$ /NDF: 344159.5/1

# asym\_bpm2i01WS\_rms vs Slug, Sign Corrected



Right In: 126.803+/-0.028  $\chi^2/\text{NDF}$ : 816529.2/23

Left Out: 147.396+/-0.025  $\chi^2/\text{NDF}$ : 2517097.1/24

Right Out: 127.094+/-0.025  $\chi^2/\text{NDF}$ : 947574.5/28

Left In: 148.642+/-0.026  $\chi^2/\text{NDF}$ : 2415531.9/22

Left: 147.997+/-0.018  $\chi^2/\text{NDF}$ : 4933793.6/47

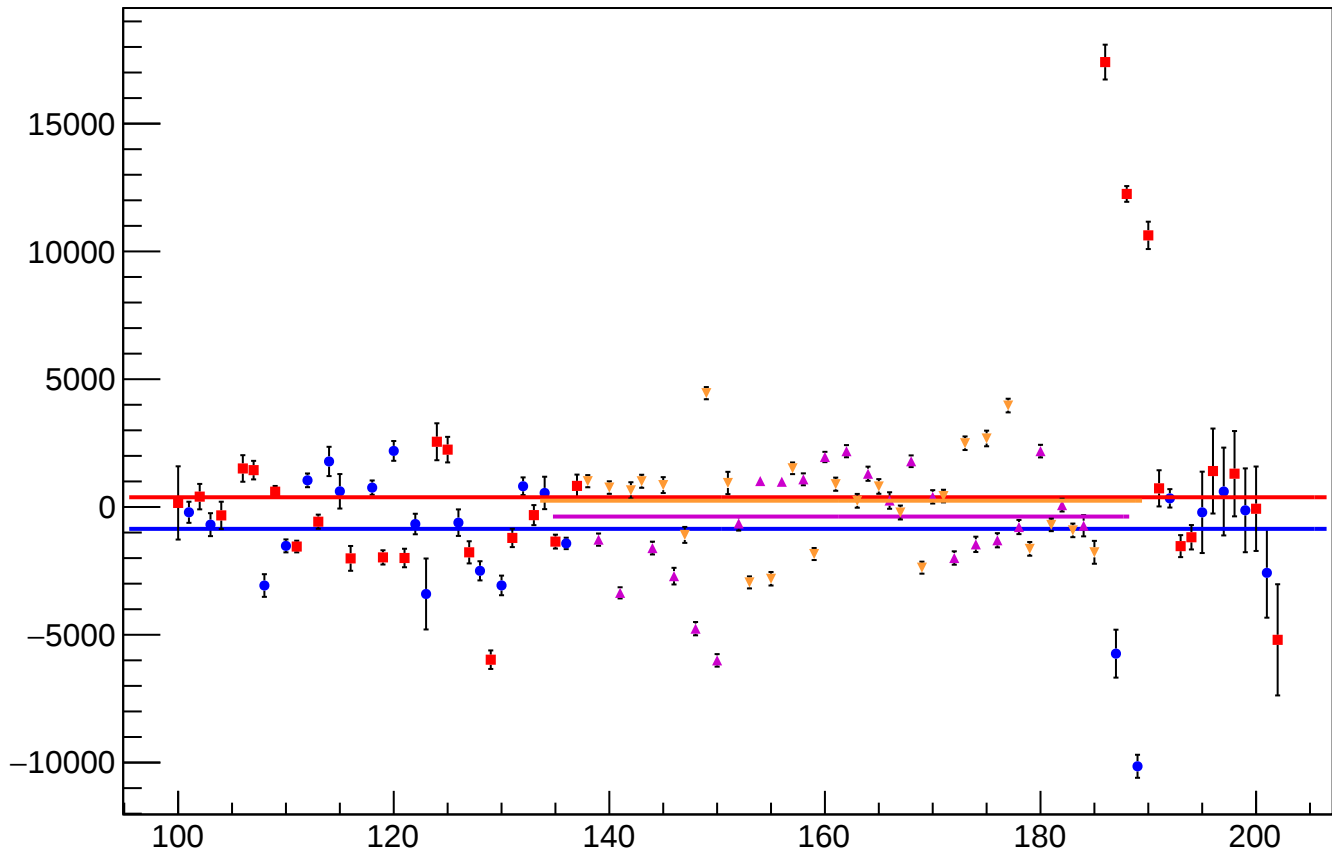
Right: 126.961+/-0.019  $\chi^2/\text{NDF}$ : 1764164.0/52

In: 138.281+/-0.019  $\chi^2/\text{NDF}$ : 3559791.2/46

Out: 137.231+/-0.018  $\chi^2/\text{NDF}$ : 3785851.4/53

All: 137.724+/-0.013  $\chi^2/\text{NDF}$ : 7347254.5/100

# asym\_bpm0i07WS\_mean vs Slug, Sign Corrected



Right In:  $-855.807 \pm 84.424$   $\chi^2/\text{NDF}: 761.4/23$

Left Out:  $246.120 \pm 53.492$   $\chi^2/\text{NDF}: 1354.8/24$

Right Out:  $380.854 \pm 75.163$   $\chi^2/\text{NDF}: 3167.4/28$

Left In:  $-374.465 \pm 51.892$   $\chi^2/\text{NDF}: 1798.3/22$

Left:  $-73.589 \pm 37.246$   $\chi^2/\text{NDF}: 3222.4/47$

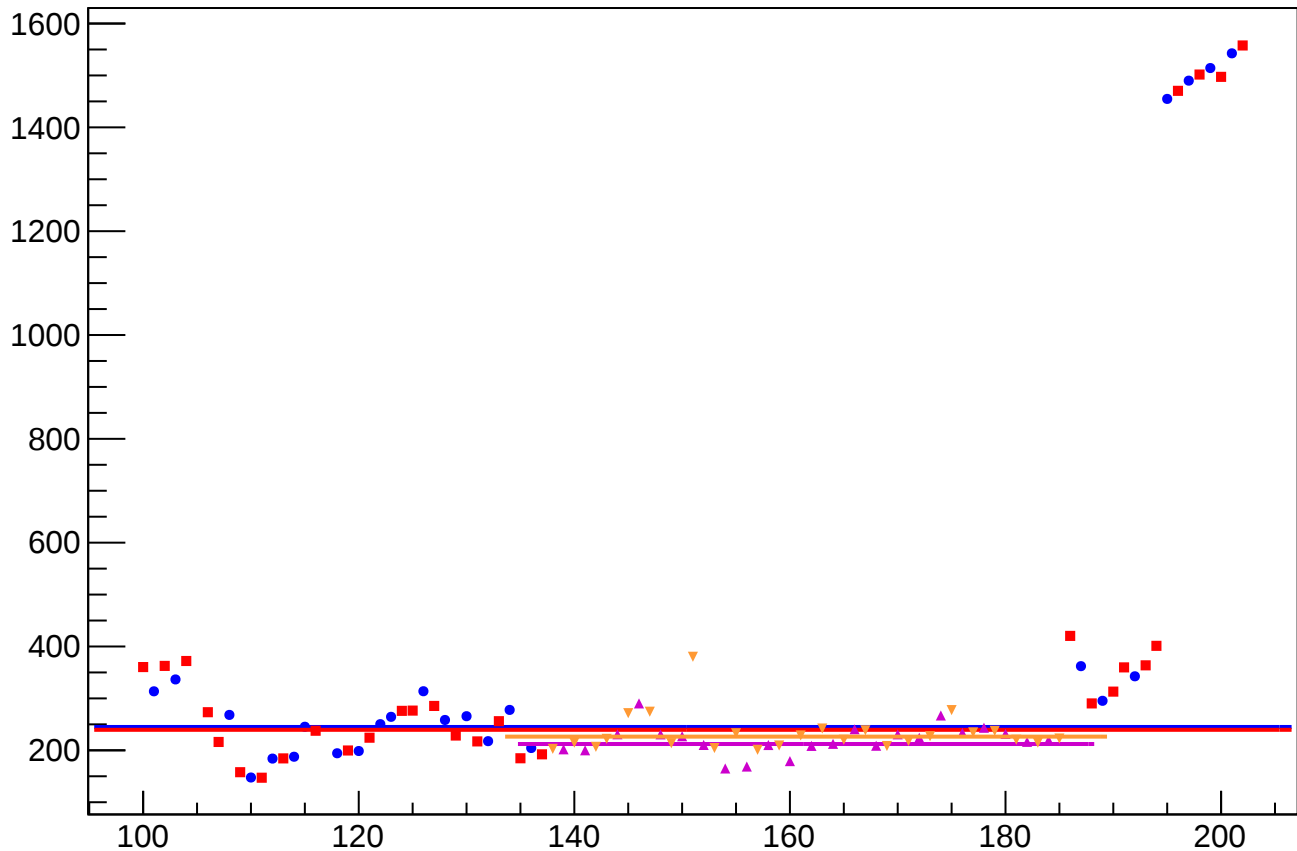
Right:  $-165.954 \pm 56.138$   $\chi^2/\text{NDF}: 4048.5/52$

In:  $-506.454 \pm 44.209$   $\chi^2/\text{NDF}: 2583.3/46$

Out:  $291.418 \pm 43.582$   $\chi^2/\text{NDF}: 4524.4/53$

All:  $-101.820 \pm 31.036$   $\chi^2/\text{NDF}: 7272.9/100$

# asym\_bpm0i07WS\_rms vs Slug, Sign Corrected



Right In: 244.965 $\pm$ 0.060  $\chi^2$ /NDF: 5482817.8/23

Left Out: 226.376 $\pm$ 0.038  $\chi^2$ /NDF: 521770.1/24

Right Out: 239.484 $\pm$ 0.053  $\chi^2$ /NDF: 5966918.9/28

Left In: 212.145 $\pm$ 0.037  $\chi^2$ /NDF: 591698.6/22

Left: 219.044 $\pm$ 0.026  $\chi^2$ /NDF: 1186390.8/47

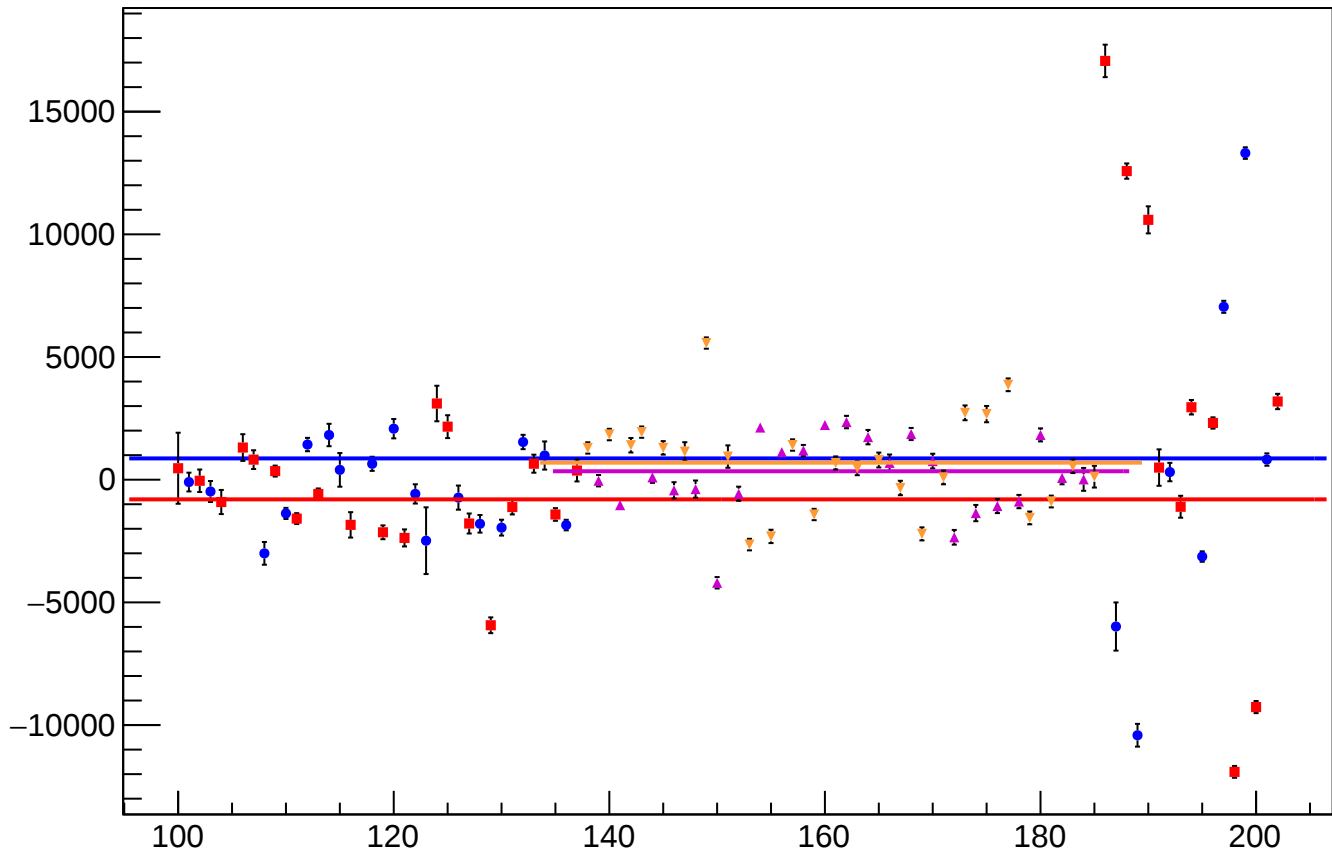
Right: 241.907 $\pm$ 0.040  $\chi^2$ /NDF: 11454439.2/52

In: 221.145 $\pm$ 0.031  $\chi^2$ /NDF: 6293891.3/46

Out: 230.783 $\pm$ 0.031  $\chi^2$ /NDF: 6529067.6/53

All: 226.032 $\pm$ 0.022  $\chi^2$ /NDF: 12871167.2/10

# asym\_bpm0l01WS\_mean vs Slug, Sign Corrected



Right In: 867.582 $\pm$ 66.592  $\chi^2/\text{NDF}$ : 4952.7/23

Left Out: 694.326 $\pm$ 54.246  $\chi^2/\text{NDF}$ :1422.1/24

Right Out: -801.488 $\pm$ 61.716  $\chi^2/\text{NDF}$ : 7281.2/28

Left In: 344.578 $\pm$ 52.954  $\chi^2/\text{NDF}$ :985.0/22

Left: 515.236 $\pm$ 37.893  $\chi^2/\text{NDF}$ : 2428.4/47

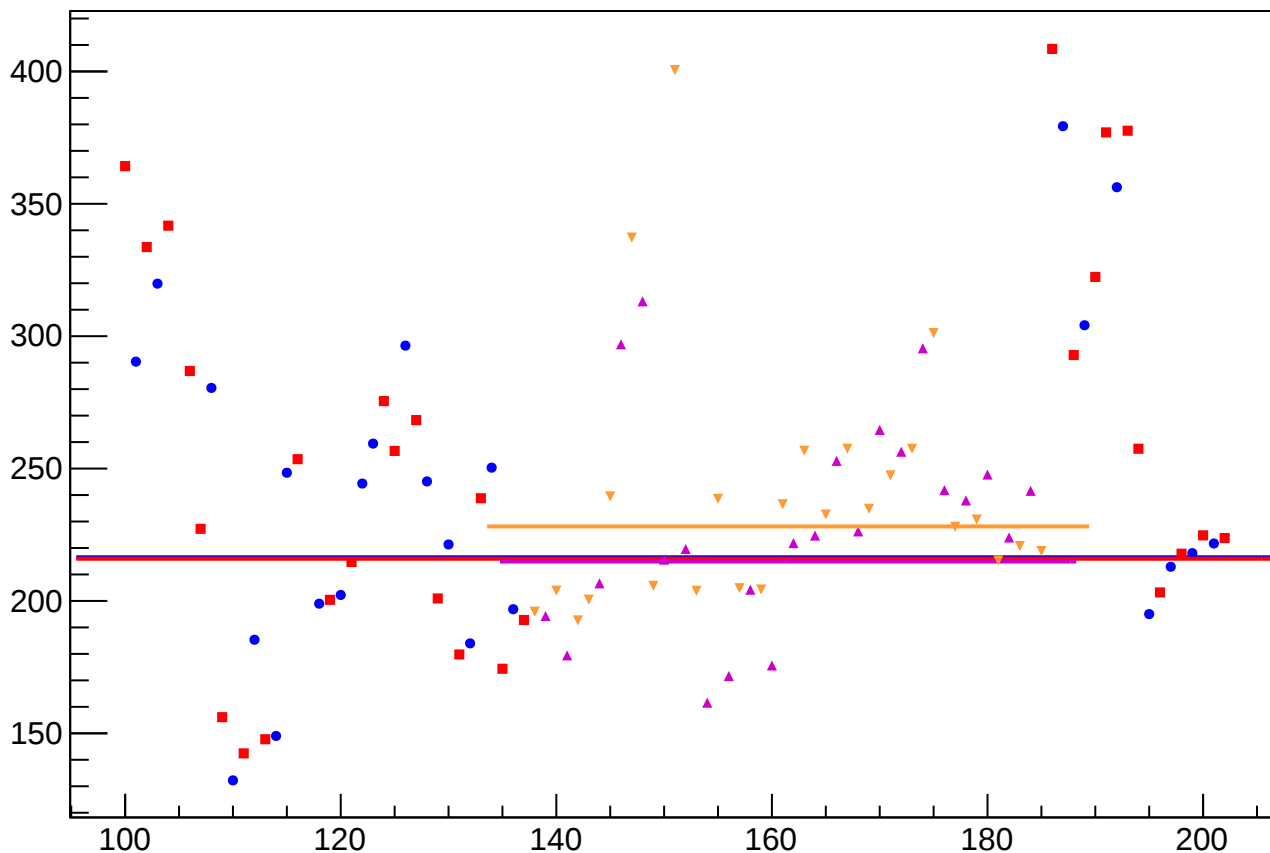
Right: -30.298 $\pm$ 45.265  $\chi^2/\text{NDF}$ : 12571.9/52

In: 547.181 $\pm$ 41.447  $\chi^2/\text{NDF}$ :5975.5/46

Out: 42.366 $\pm$ 40.744  $\chi^2/\text{NDF}$ :9034.7/53

All: 290.457 $\pm$ 29.056  $\chi^2/\text{NDF}$ : 15085.7/100

# asym\_bpm0l01WS\_rms vs Slug, Sign Corrected



Right In: 216.499 $\pm$ 0.047  $\chi^2$ /NDF: 1143808.7/23

Left Out: 228.144 $\pm$ 0.038  $\chi^2$ /NDF:828399.3/24

Right Out: 215.947 $\pm$ 0.044  $\chi^2$ /NDF: 1817820.5/28

Left In: 214.878 $\pm$ 0.037  $\chi^2$ /NDF:1037509.6/22

Left: 221.351 $\pm$ 0.027  $\chi^2$ /NDF: 1927151.4/47

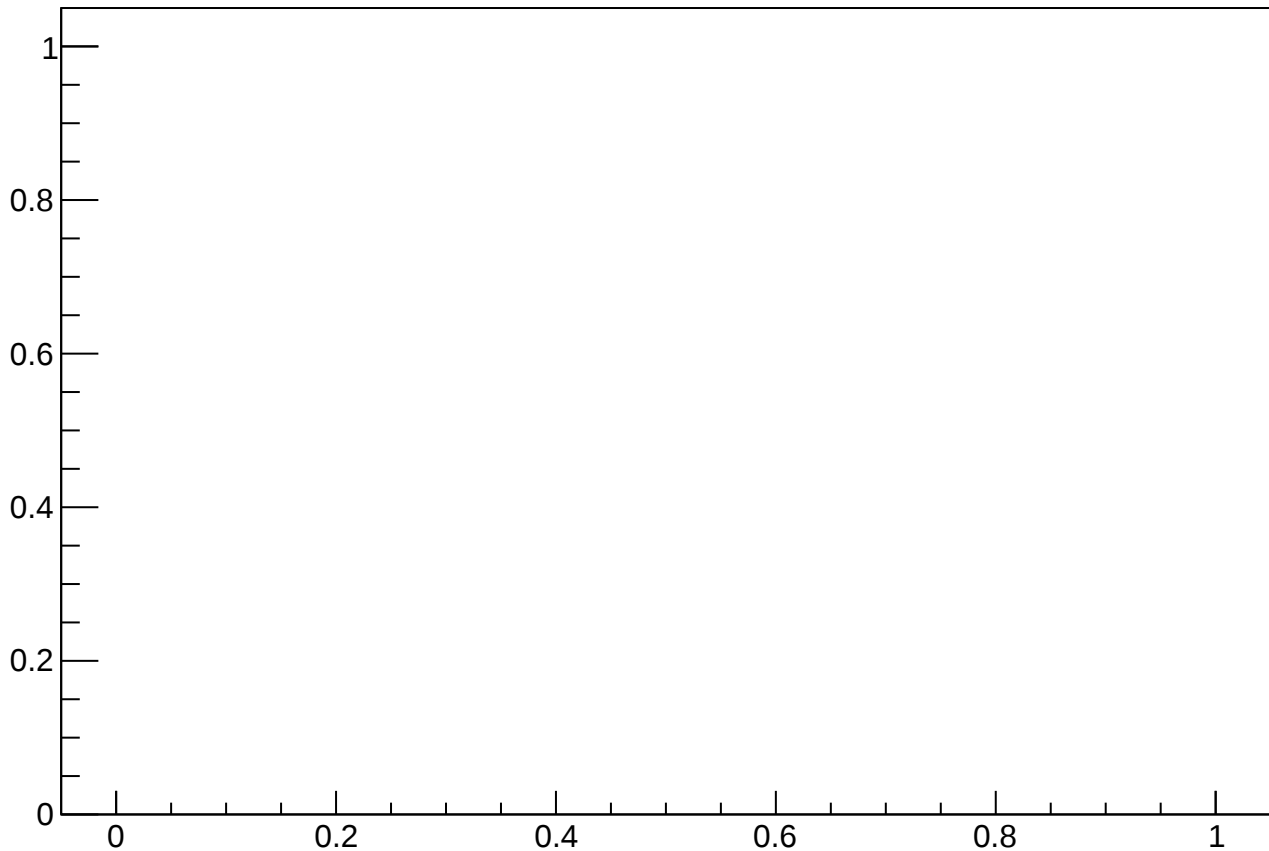
Right: 216.202 $\pm$ 0.032  $\chi^2$ /NDF: 2961703.1/52

In: 215.506 $\pm$ 0.029  $\chi^2$ /NDF:2182044.4/46

Out: 222.828 $\pm$ 0.029  $\chi^2$ /NDF:2690284.2/53

All: 219.230 $\pm$ 0.021  $\chi^2$ /NDF: 4904068.4/100

# bcm\_an\_us\_ds\_dd\_mean vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Right: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

# bcm\_an\_us\_ds\_dd\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Right: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

bcm\_dg\_us\_dg\_ds\_dd\_mean vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

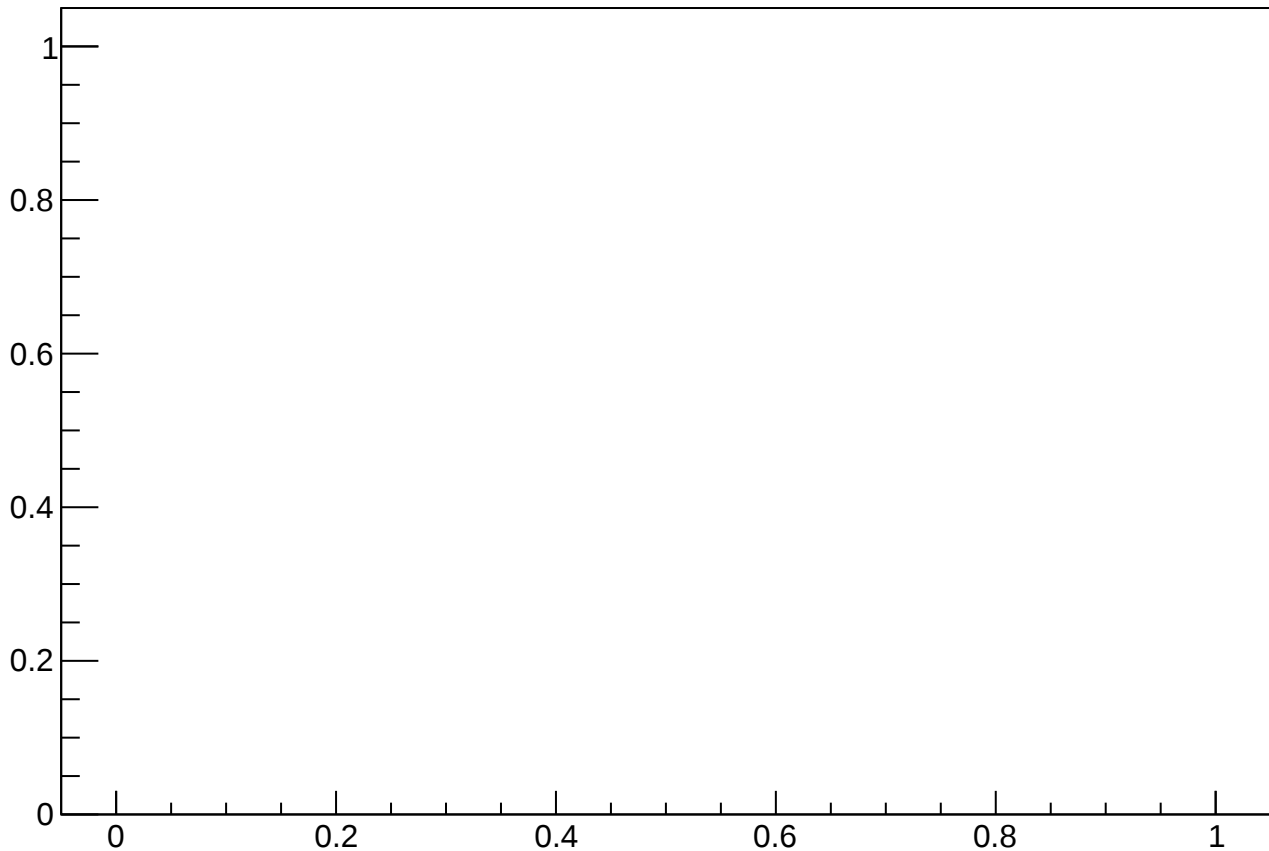
Right: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

bcm\_dg\_us\_dg\_ds\_dd\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

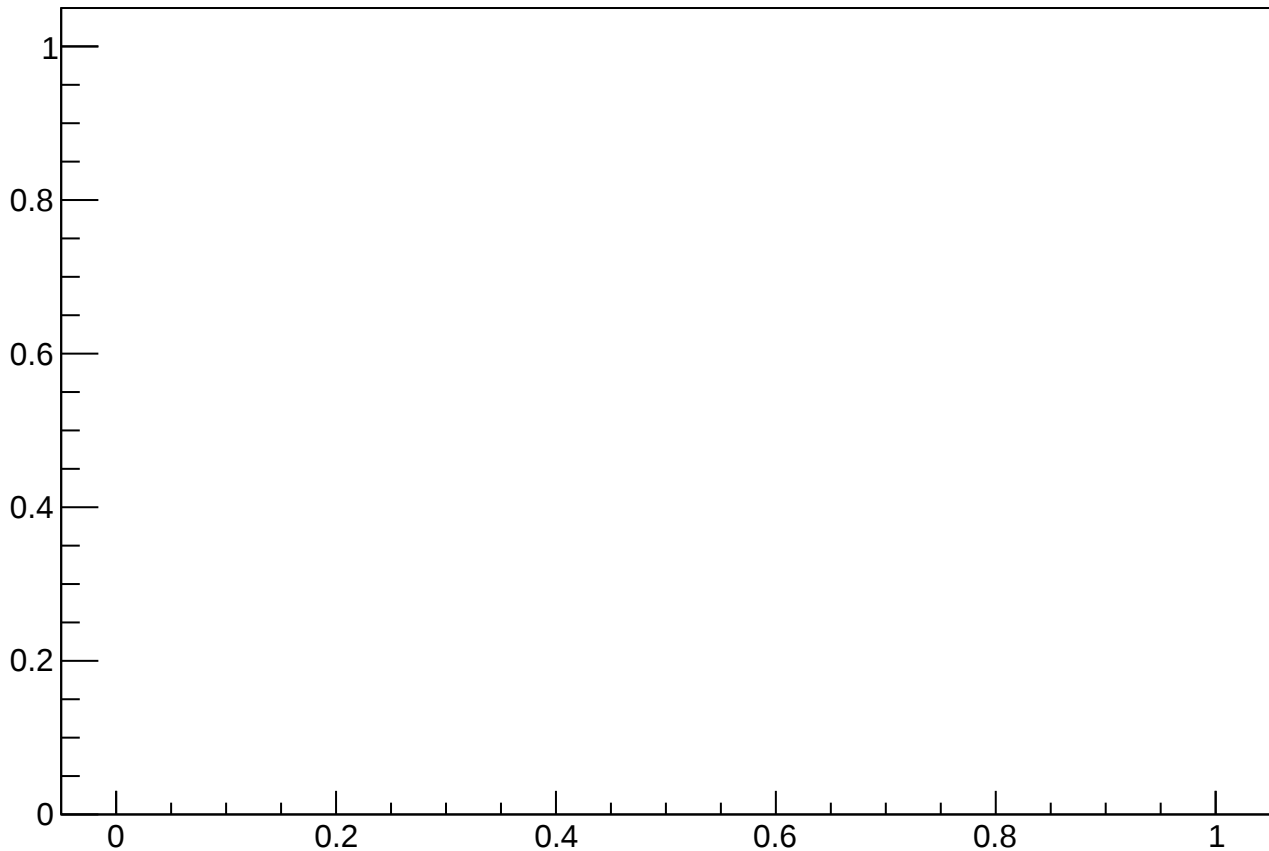
Right: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

# bcm\_dg\_us\_ds\_dd\_mean vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

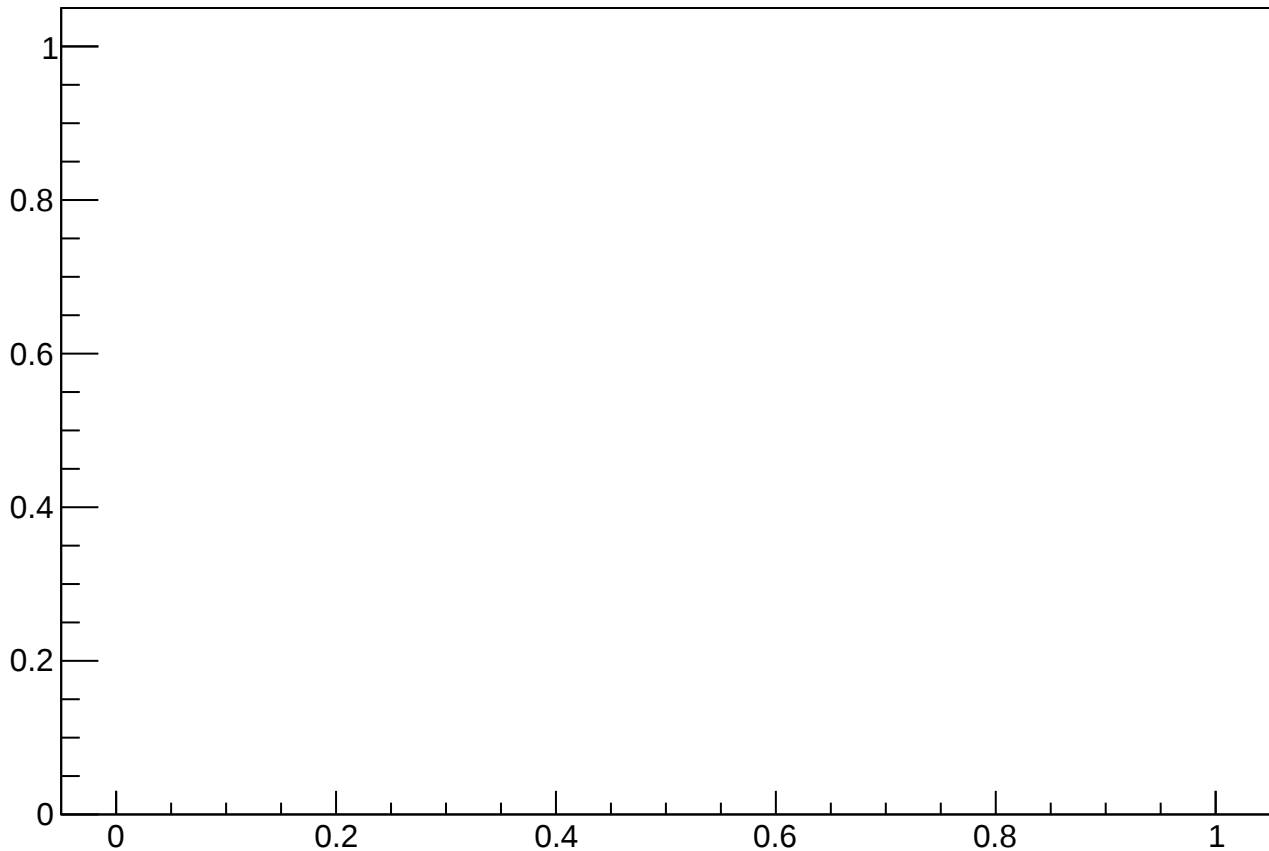
Right: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

# bcm\_dg\_us\_ds\_dd\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Right: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

bcm\_dg\_ds\_ds\_dd\_mean vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

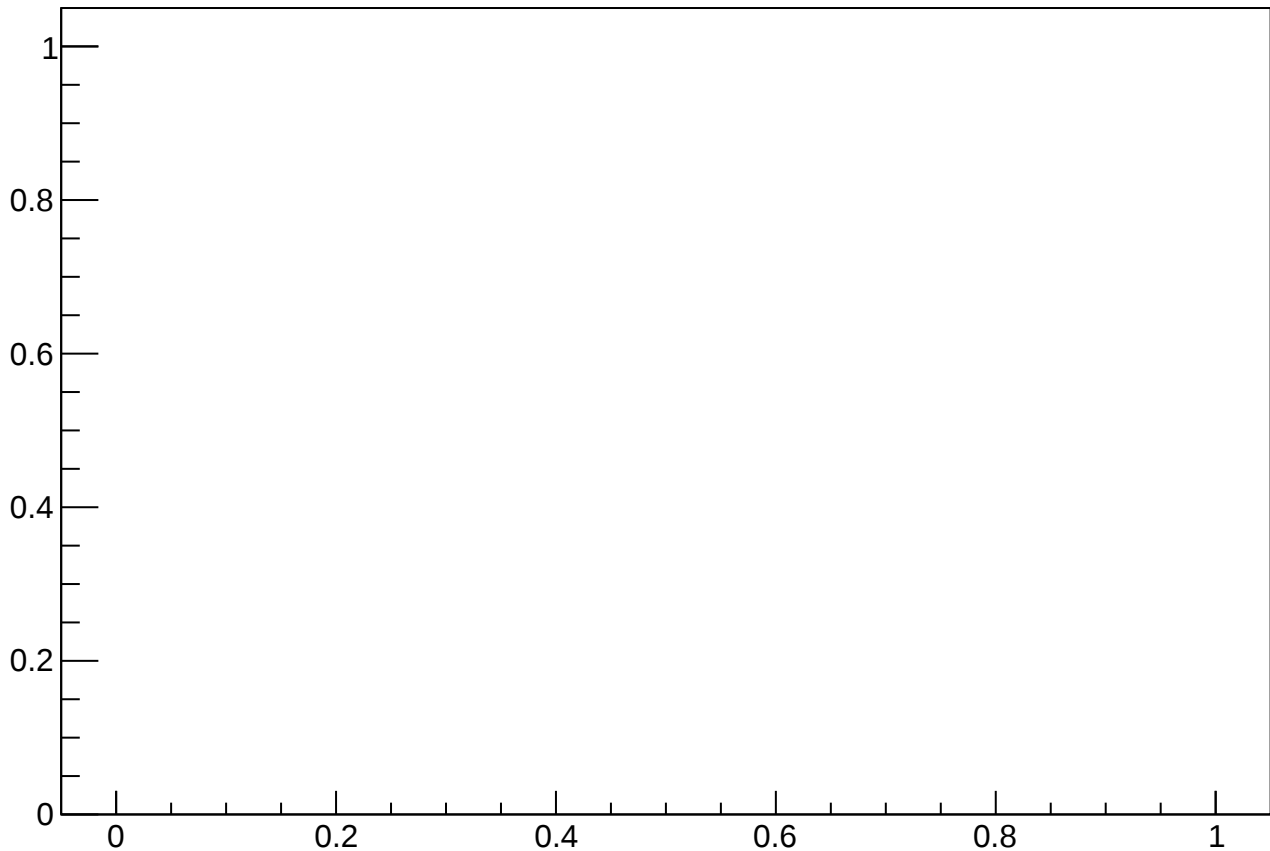
Right: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

# bcm\_dg\_ds\_ds\_dd\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000     $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 0.000+/-0.000     $\chi^2/\text{NDF}$ : 0.0/0

Right Out: 0.000+/-0.000     $\chi^2/\text{NDF}$ : 0.0/0

Left In: 0.000+/-0.000     $\chi^2/\text{NDF}$ : 0.0/0

Left: 0.000+/-0.000     $\chi^2/\text{NDF}$ : 0.0/0

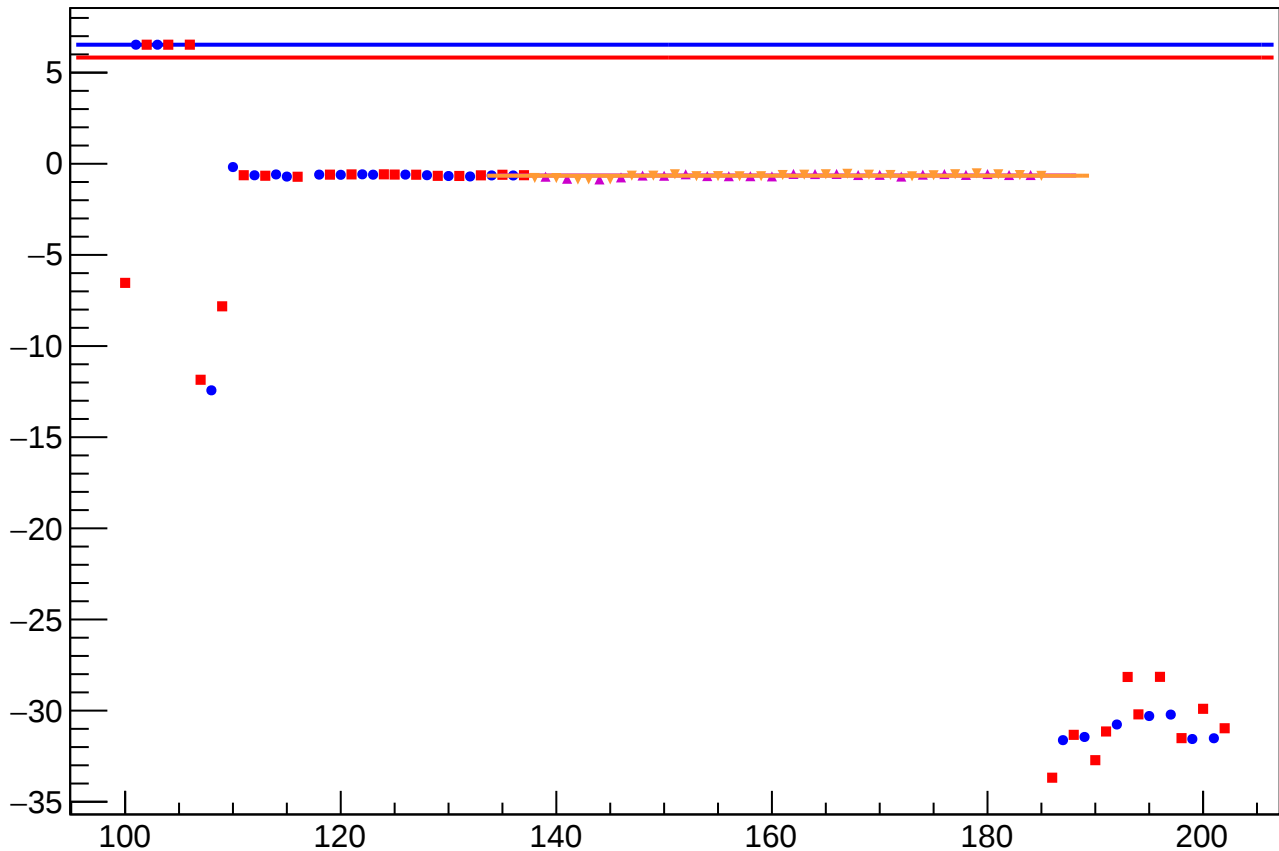
Right: 0.000+/-0.000     $\chi^2/\text{NDF}$ : 0.0/0

In: 0.000+/-0.000     $\chi^2/\text{NDF}$ : 0.0/0

Out: 0.000+/-0.000     $\chi^2/\text{NDF}$ : 0.0/0

All: 0.000+/-0.000     $\chi^2/\text{NDF}$ : 0.0/0

# yield\_cav4bX\_mean vs Slug, Sign Corrected



Right In: 6.532+/-0.000  $\chi^2/\text{NDF}$ : 127909937043.8/23

Left Out: -0.654+/-0.000  $\chi^2/\text{NDF}$ : 179069954.8/24

Right Out: 5.827+/-0.000  $\chi^2/\text{NDF}$ : 755962326189231.8/28

Left In: -0.643+/-0.000  $\chi^2/\text{NDF}$ : 123743747.1/22

Left: -0.649+/-0.000  $\chi^2/\text{NDF}$ : 303800919.5/47

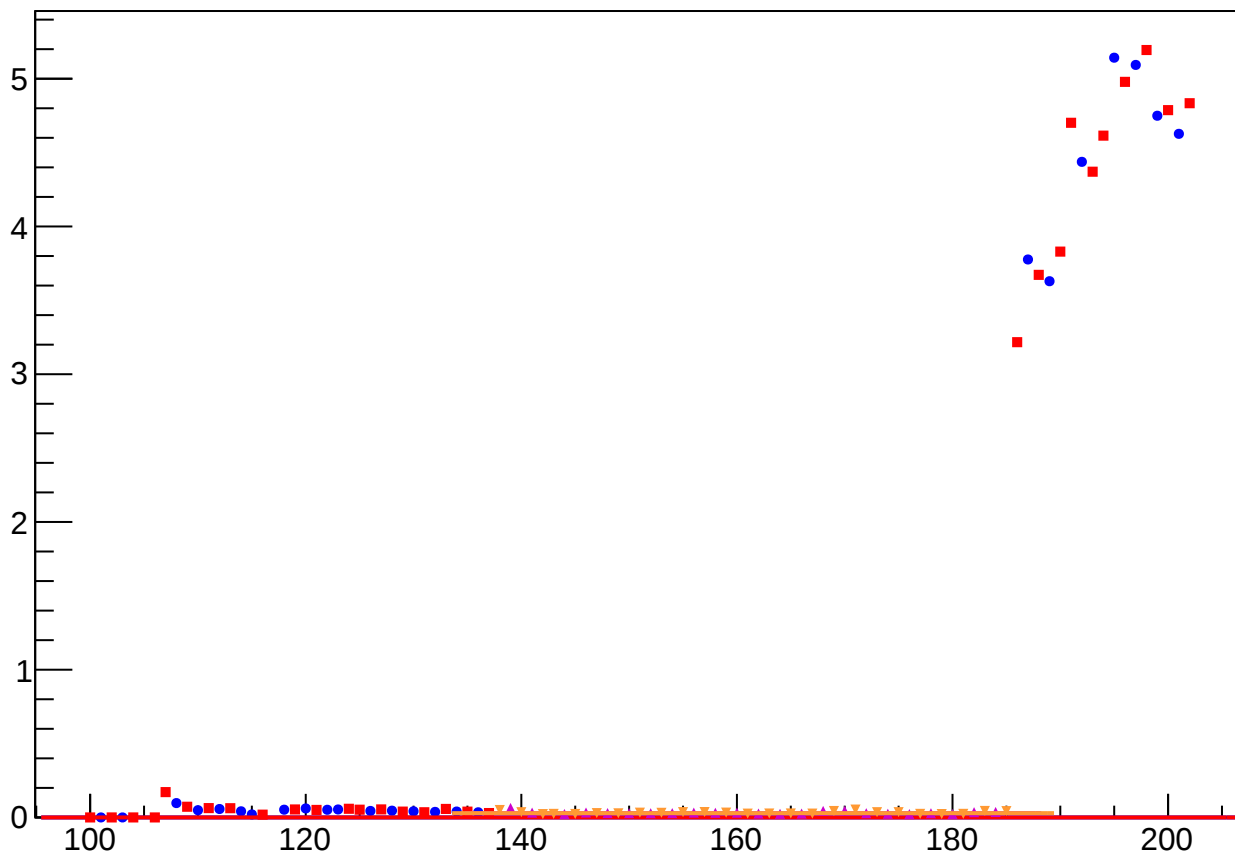
Right: 6.155+/-0.000  $\chi^2/\text{NDF}$ : 776094200606692.2/46

In: 6.530+/-0.000  $\chi^2/\text{NDF}$ : 962028523021.9/46

Out: 5.826+/-0.000  $\chi^2/\text{NDF}$ : 756673343077511.5/46

All: 6.153+/-0.000  $\chi^2/\text{NDF}$ : 7776276324846/46

# yield\_cav4bX\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 18046545.7/23

Left Out: 0.029+/-0.000  $\chi^2/\text{NDF}$ :1484308.2/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 21757392.6/28

Left In: 0.029+/-0.000  $\chi^2/\text{NDF}$ :1206492.9/22

Left: 0.029+/-0.000  $\chi^2/\text{NDF}$ : 2691219.2/47

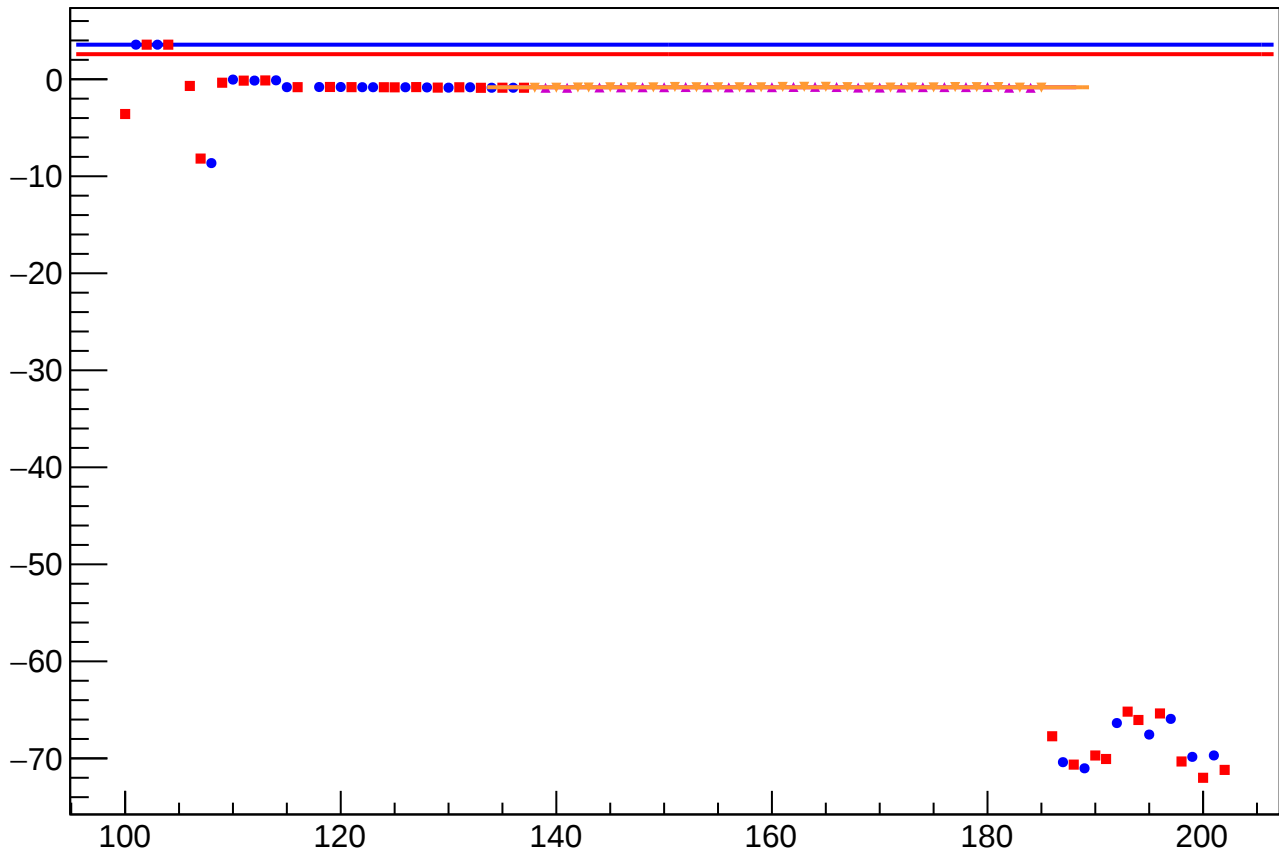
Right: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 39804185.7/52

In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :46224346.5/46

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :51725426.3/53

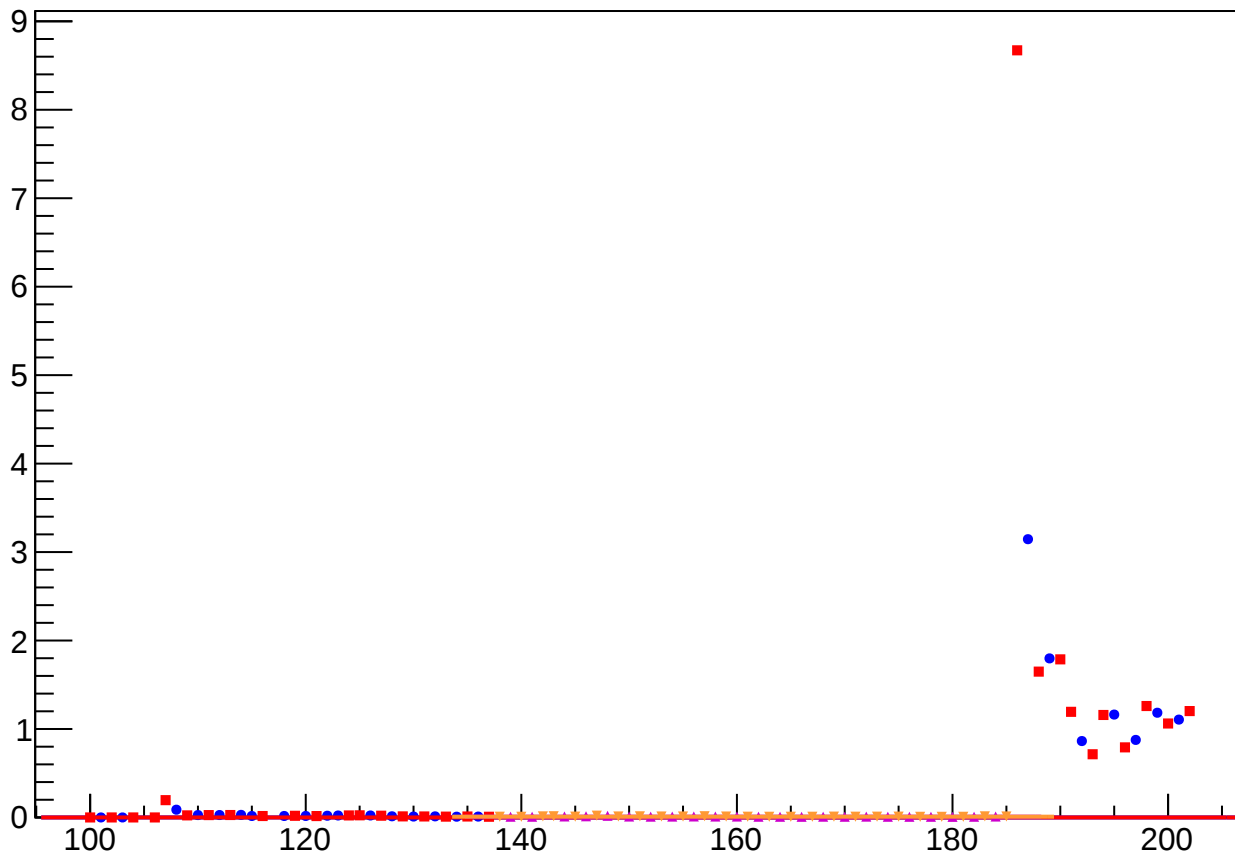
All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 97950198.1/100

# yield\_cav4bY\_mean vs Slug, Sign Corrected



Right In: 3.563+/-0.000  $\chi^2/\text{NDF}$ : 496589994136.5/23  
 Left Out: -0.827+/-0.000  $\chi^2/\text{NDF}$ : 170052639.9/24  
 Right Out: 2.583+/-0.000  $\chi^2/\text{NDF}$ : 1253523840927745.8/28  
 Left In: -0.827+/-0.000  $\chi^2/\text{NDF}$ : 174130375.4/22  
 All: 3.038+/-0.000  $\chi^2/\text{NDF}$ : 13880161471023

# yield\_cav4bY\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 17090911.6/23

Left Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 1455379.3/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 20417798.8/28

Left In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 1042123.1/22

Left: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 2503441.1/47

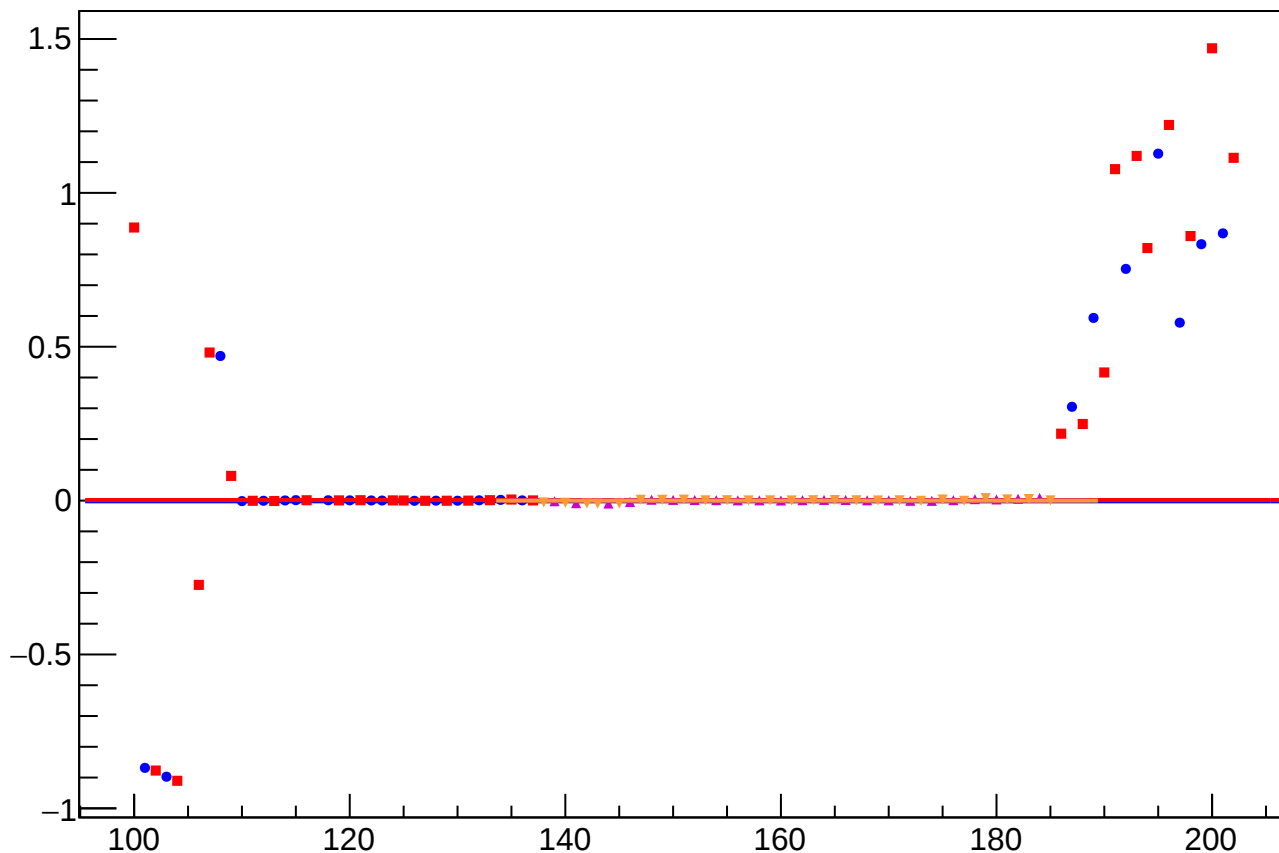
Right: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 37508983.3/52

In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 46888064.0/46

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 51935933.3/53

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 98824773.9/100

# yield\_cav4cX\_mean vs Slug, Sign Corrected



Right In: -0.002+/-0.000

$\chi^2/\text{NDF}$ : 9795891611.1/23

Left Out: -0.000+/-0.000

$\chi^2/\text{NDF}$ : 151559332.0/24

Right Out: 0.002+/-0.000

$\chi^2/\text{NDF}$ : 3043203135.5/28

Left In: 0.001+/-0.000

$\chi^2/\text{NDF}$ : 101468517.6/22

Left: 0.000+/-0.000

$\chi^2/\text{NDF}$ : 254489625.0/47

Right: -0.000+/-0.000

$\chi^2/\text{NDF}$ : 12853243153.2/52

In: -0.000+/-0.000

$\chi^2/\text{NDF}$ : 9908802347.7/46

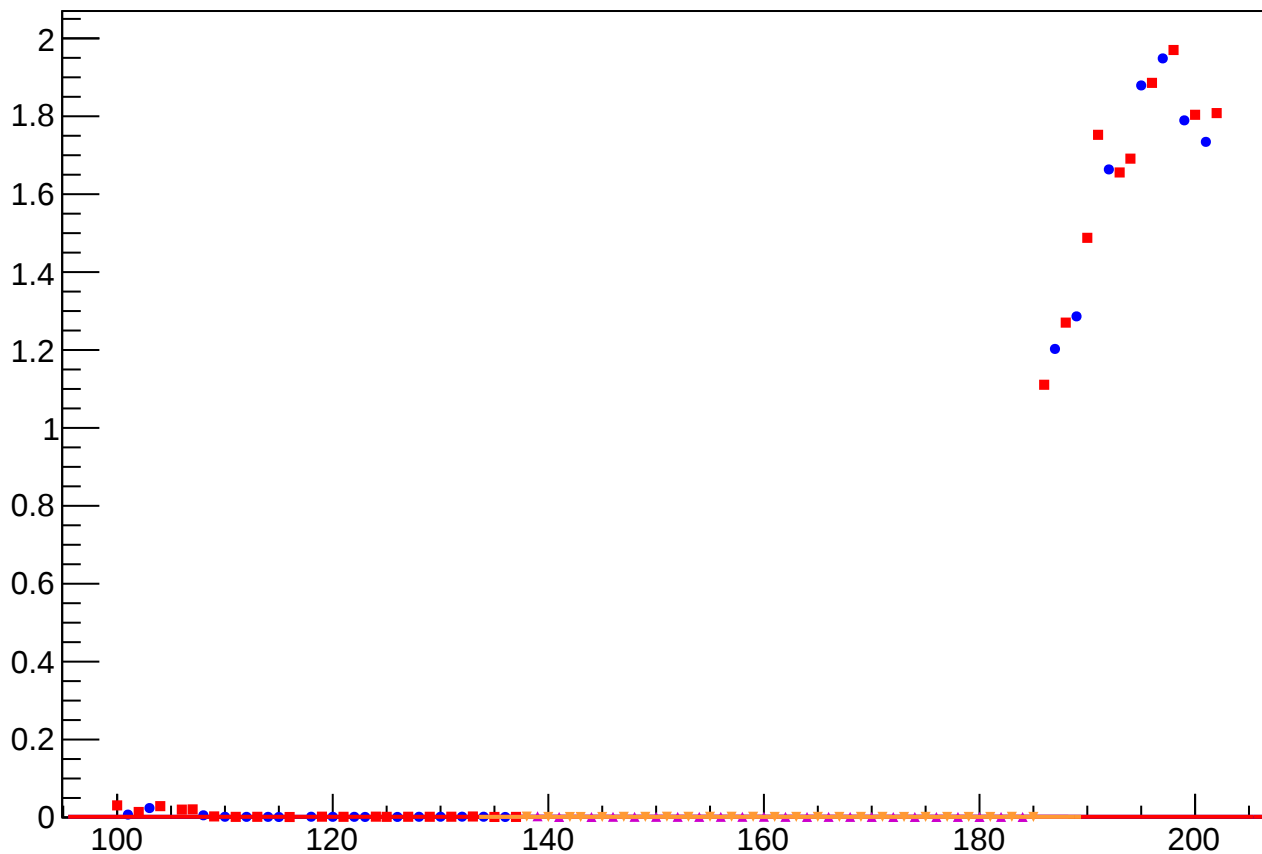
Out: 0.000+/-0.000

$\chi^2/\text{NDF}$ : 3199439306.6/53

All: 0.000+/-0.000

$\chi^2/\text{NDF}$ : 13108613240.8/100

# yield\_cav4cX\_rms vs Slug, Sign Corrected



Right In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 11080671.9/23

Left Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ :539040.4/24

Right Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 15425735.7/28

Left In: 0.001+/-0.000  $\chi^2/\text{NDF}$ :659543.3/22

Left: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 1201689.9/47

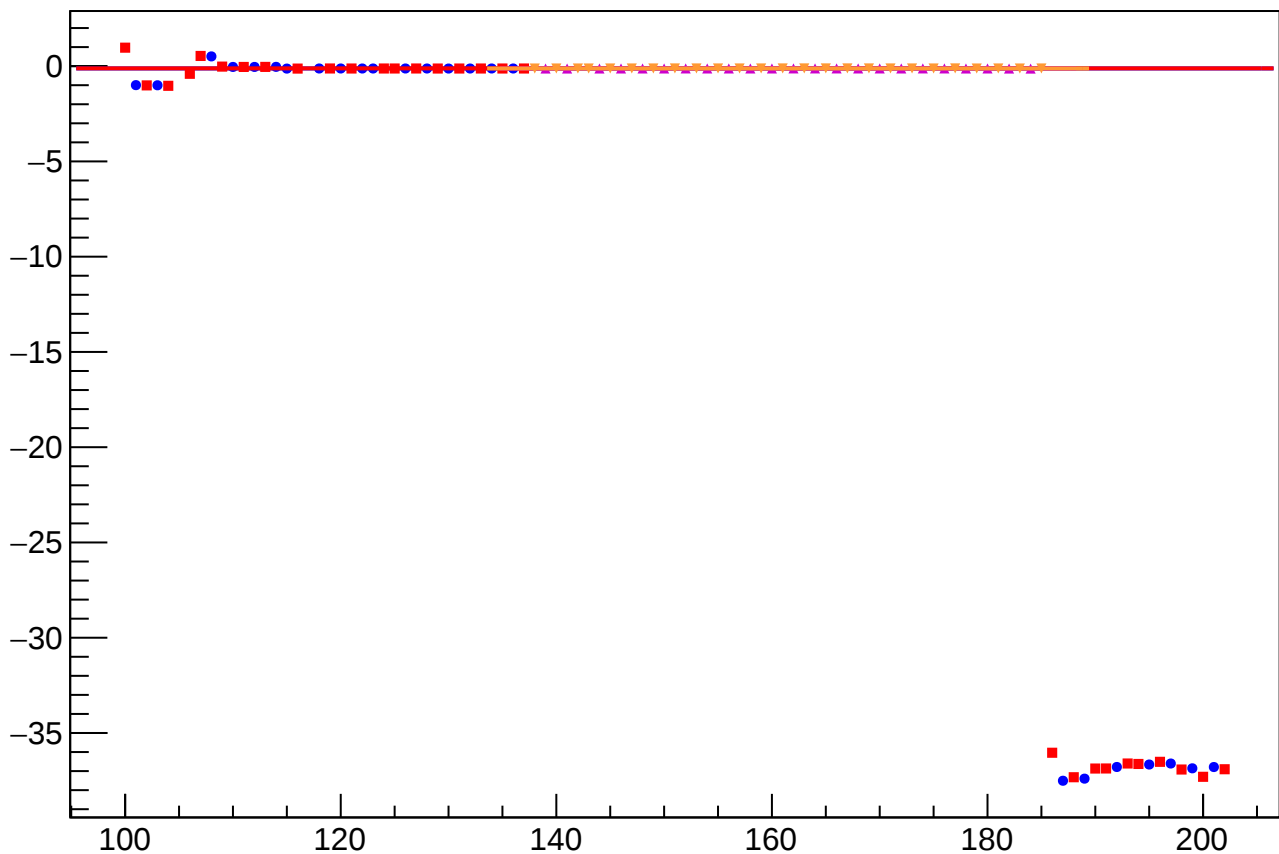
Right: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 26514437.3/52

In: 0.002+/-0.000  $\chi^2/\text{NDF}$ :11792388.6/46

Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ :16100587.4/53

All: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 27893596.1/100

# yield\_cav4cY\_mean vs Slug, Sign Corrected



Right In: -0.121+/-0.000  $\chi^2/\text{NDF}$ : 41862751096.5/23

Left Out: -0.121+/-0.000  $\chi^2/\text{NDF}$ : 58329026.8/24

Right Out: -0.116+/-0.000  $\chi^2/\text{NDF}$ : 53046335701.1/28

Left In: -0.121+/-0.000  $\chi^2/\text{NDF}$ : 53134323.3/22

Left: -0.121+/-0.000  $\chi^2/\text{NDF}$ : 111705307.2/47

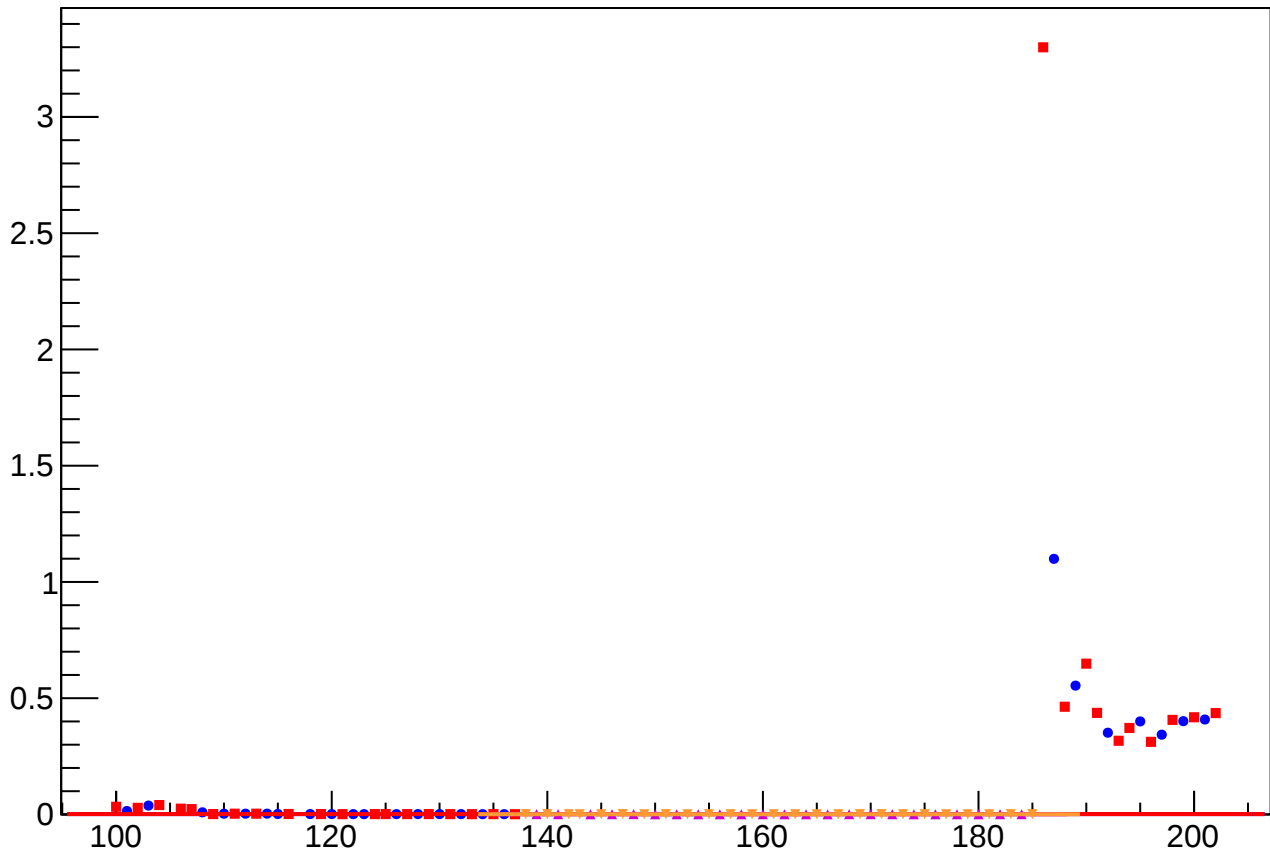
Right: -0.118+/-0.000  $\chi^2/\text{NDF}$ : 94930266523.9/52

In: -0.121+/-0.000  $\chi^2/\text{NDF}$ : 41915889929.8/46

Out: -0.121+/-0.000  $\chi^2/\text{NDF}$ : 53146732906.9/53

All: -0.121+/-0.000  $\chi^2/\text{NDF}$ : 95063494288.8/100

# yield\_cav4cY\_rms vs Slug, Sign Corrected



Right In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 11574151.2/23

Left Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ :1362851.8/24

Right Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 15430361.2/28

Left In: 0.001+/-0.000  $\chi^2/\text{NDF}$ :972588.0/22

Left: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 2336494.2/47

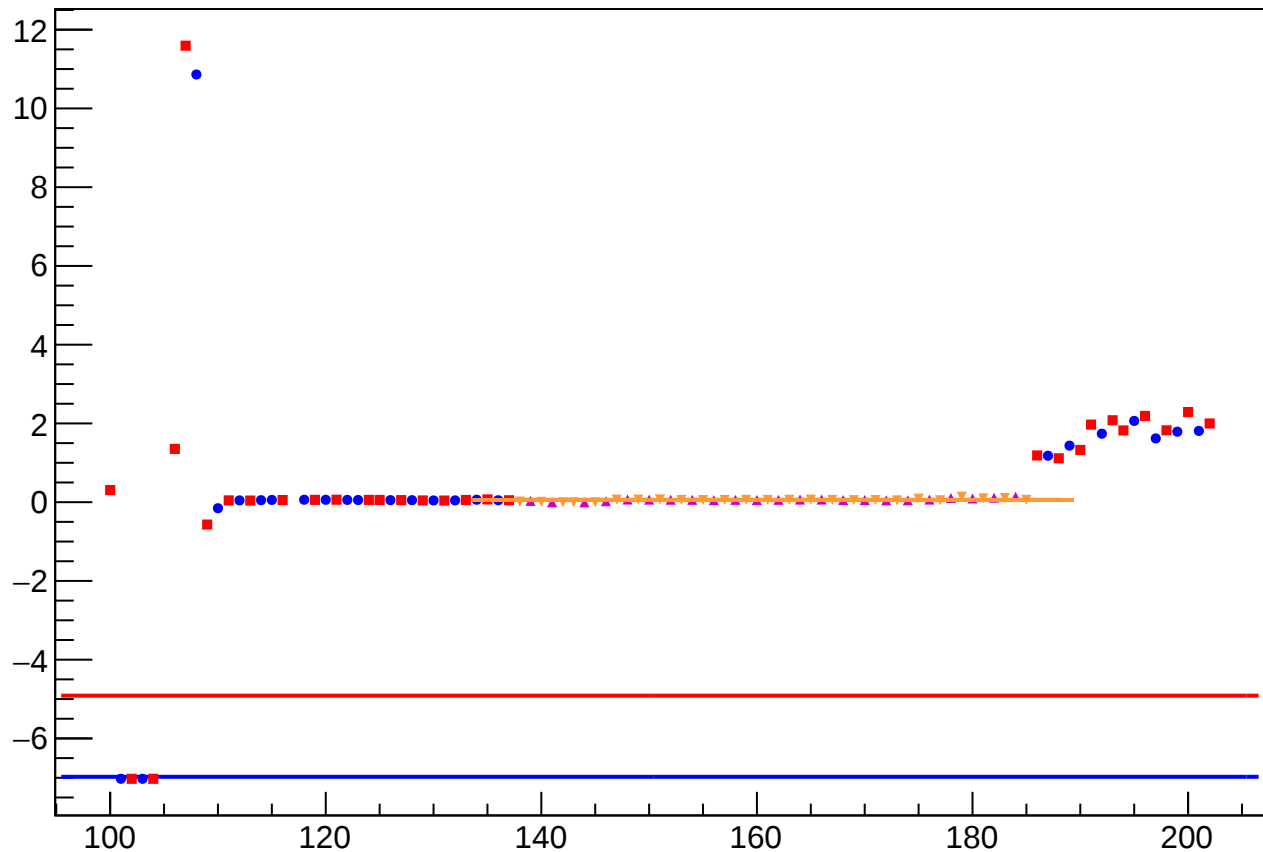
Right: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 27004535.6/52

In: 0.001+/-0.000  $\chi^2/\text{NDF}$ :13687034.9/46

Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ :17964568.9/53

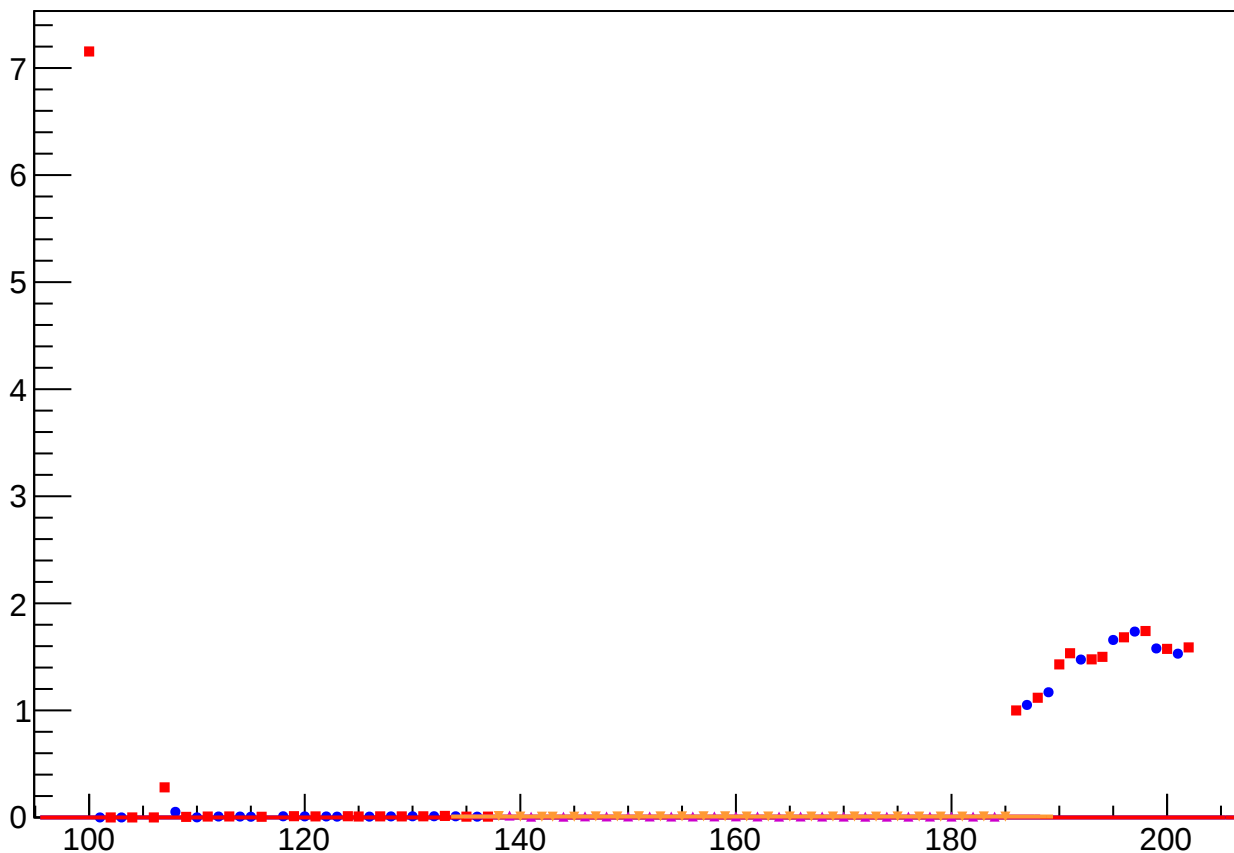
All: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 31653686.8/100

# yield\_cav4dX\_mean vs Slug, Sign Corrected



Right In:  $-6.975 \pm 0.000$   $\chi^2/\text{NDF}: 8762602875417.2/23$  Left:  $0.057 \pm 0.000$   $\chi^2/\text{NDF}: 423872259.5/47$   
 Left Out:  $0.055 \pm 0.000$   $\chi^2/\text{NDF}: 243733184.3/24$  Right:  $-5.900 \pm 0.000$   $\chi^2/\text{NDF}: 430303486007100.8$   
 Right Out:  $-4.914 \pm 0.000$   $\chi^2/\text{NDF}: 365348667981216.5/28$  In:  $-6.925 \pm 0.000$   $\chi^2/\text{NDF}: 17605130056726.7/46$   
 Left In:  $0.059 \pm 0.000$   $\chi^2/\text{NDF}: 178713649.9/22$  Out:  $-4.879 \pm 0.000$   $\chi^2/\text{NDF}: 370175354753643.4/$   
 All:  $-5.858 \pm 0.000$   $\chi^2/\text{NDF}: 4435814503347$

# yield\_cav4dX\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 17404134.1/23

Left Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 513737.0/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 21182461.2/28

Left In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 636557.9/22

Left: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 1154784.9/47

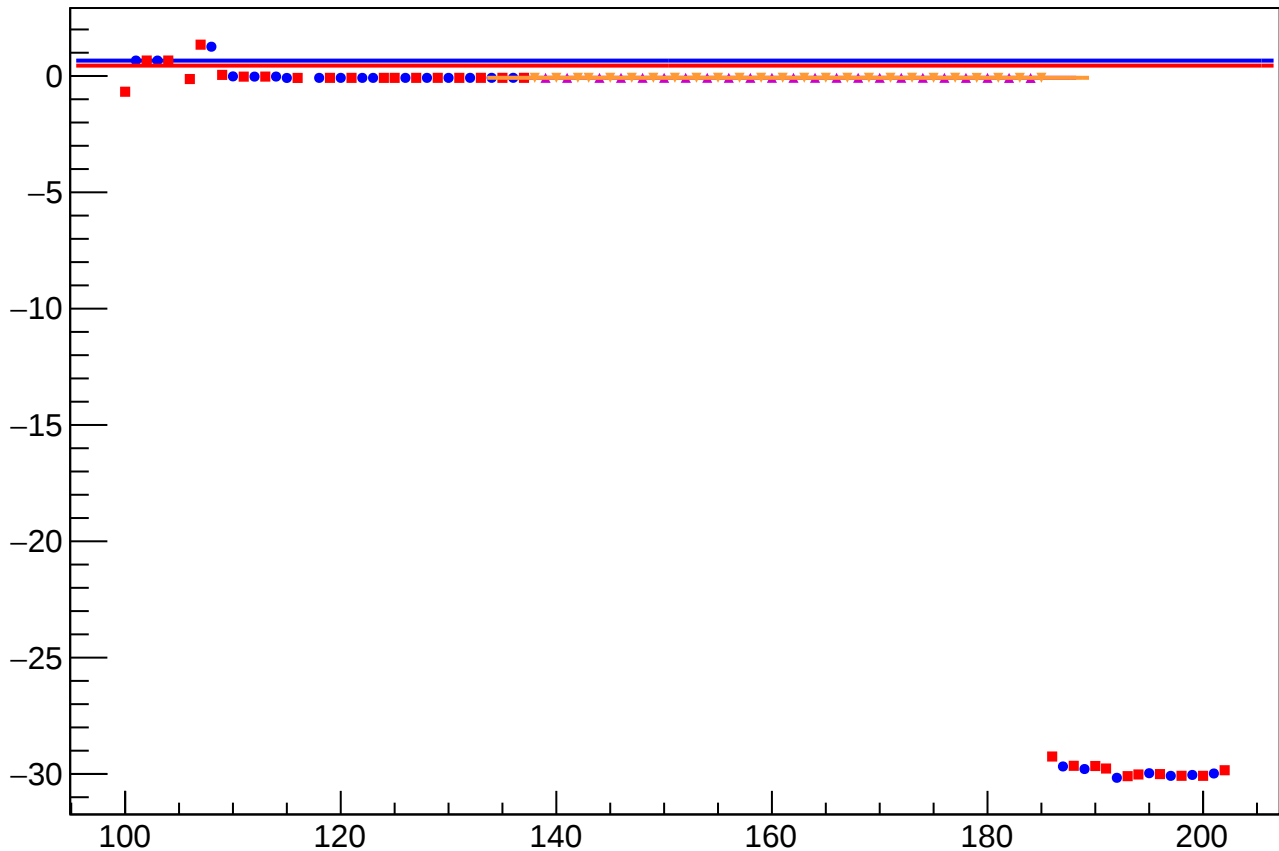
Right: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 38586897.1/52

In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 45041024.3/46

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 50210536.3/53

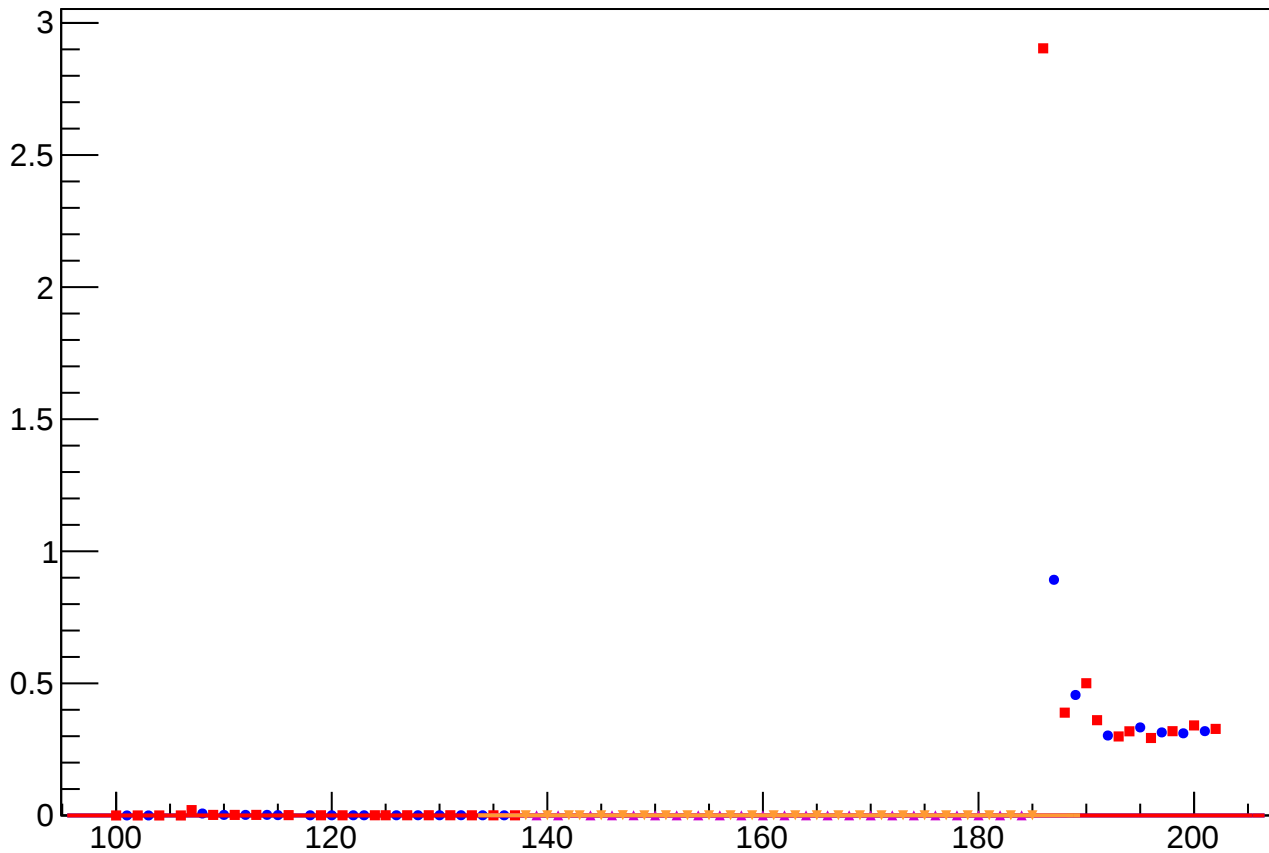
All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 95252044.6/100

# yield\_cav4dY\_mean vs Slug, Sign Corrected



|                          |                                            |                      |                                           |
|--------------------------|--------------------------------------------|----------------------|-------------------------------------------|
| Right In: 0.661+/-0.000  | $\chi^2/\text{NDF}$ : 5624808586623.6/23   | Left: -0.078+/-0.000 | $\chi^2/\text{NDF}$ : 267788024.6/47      |
| Left Out: -0.078+/-0.000 | $\chi^2/\text{NDF}$ : 156525648.0/24       | Right: 0.549+/-0.000 | $\chi^2/\text{NDF}$ : 474019529790816.9   |
| Right Out: 0.446+/-0.000 | $\chi^2/\text{NDF}$ : 405465470071843.5/28 | In: 0.647+/-0.000    | $\chi^2/\text{NDF}$ : 33884762208947.3/46 |
| Left In: -0.077+/-0.000  | $\chi^2/\text{NDF}$ : 111221084.5/22       | Out: 0.436+/-0.000   | $\chi^2/\text{NDF}$ : 420660044600846.2/5 |
|                          |                                            | All: 0.537+/-0.000   | $\chi^2/\text{NDF}$ : 51606951764298      |

# yield\_cav4dY\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 18859301.5/23

Left Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 466355.6/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 21693020.4/28

Left In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 355587.5/22

Left: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 822908.9/47

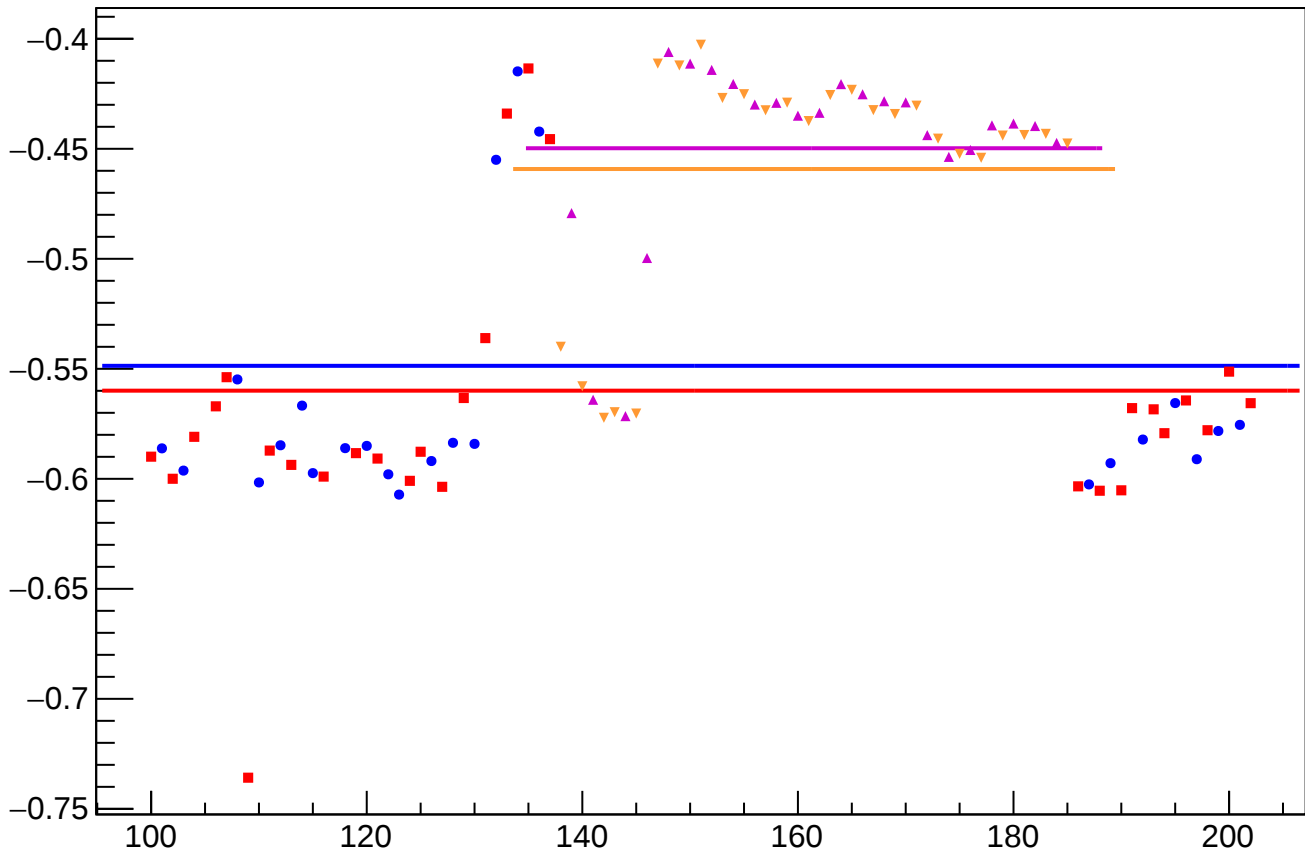
Right: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 40552328.1/52

In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 49837756.6/46

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 54406890.5/53

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 104245044.6/100

# yield\_bpm4aX\_mean vs Slug, Sign Corrected



Right In: -0.549 $\pm$ 0.000  $\chi^2$ /NDF: 47695168.8/23

Left Out: -0.459 $\pm$ 0.000  $\chi^2$ /NDF: 113808762.6/24

Right Out: -0.560 $\pm$ 0.000  $\chi^2$ /NDF: 65300169.5/28

Left In: -0.450 $\pm$ 0.000  $\chi^2$ /NDF: 76151485.7/22

Left: -0.455 $\pm$ 0.000  $\chi^2$ /NDF: 191688333.2/47

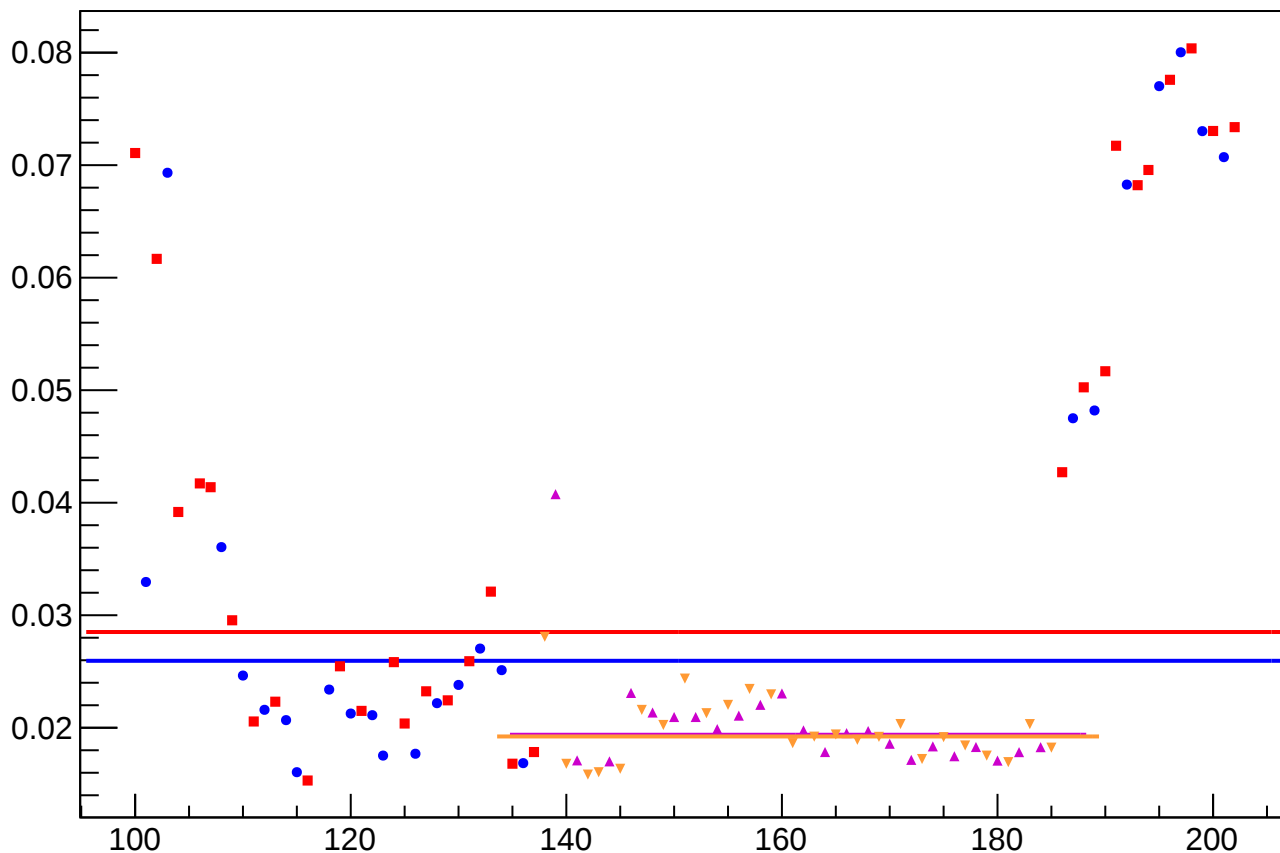
Right: -0.554 $\pm$ 0.000  $\chi^2$ /NDF: 113719011.2/52

In: -0.473 $\pm$ 0.000  $\chi^2$ /NDF: 209117039.4/46

Out: -0.481 $\pm$ 0.000  $\chi^2$ /NDF: 268949586.7/53

All: -0.477 $\pm$ 0.000  $\chi^2$ /NDF: 479899154.9/100

# yield\_bpm4aX\_rms vs Slug, Sign Corrected



Right In: 0.026+/-0.000  $\chi^2/\text{NDF}$ : 4887562.9/23

Left Out: 0.019+/-0.000  $\chi^2/\text{NDF}$ : 501253.7/24

Right Out: 0.029+/-0.000  $\chi^2/\text{NDF}$ : 5731057.0/28

Left In: 0.019+/-0.000  $\chi^2/\text{NDF}$ : 656155.9/22

Left: 0.019+/-0.000  $\chi^2/\text{NDF}$ : 1158298.6/47

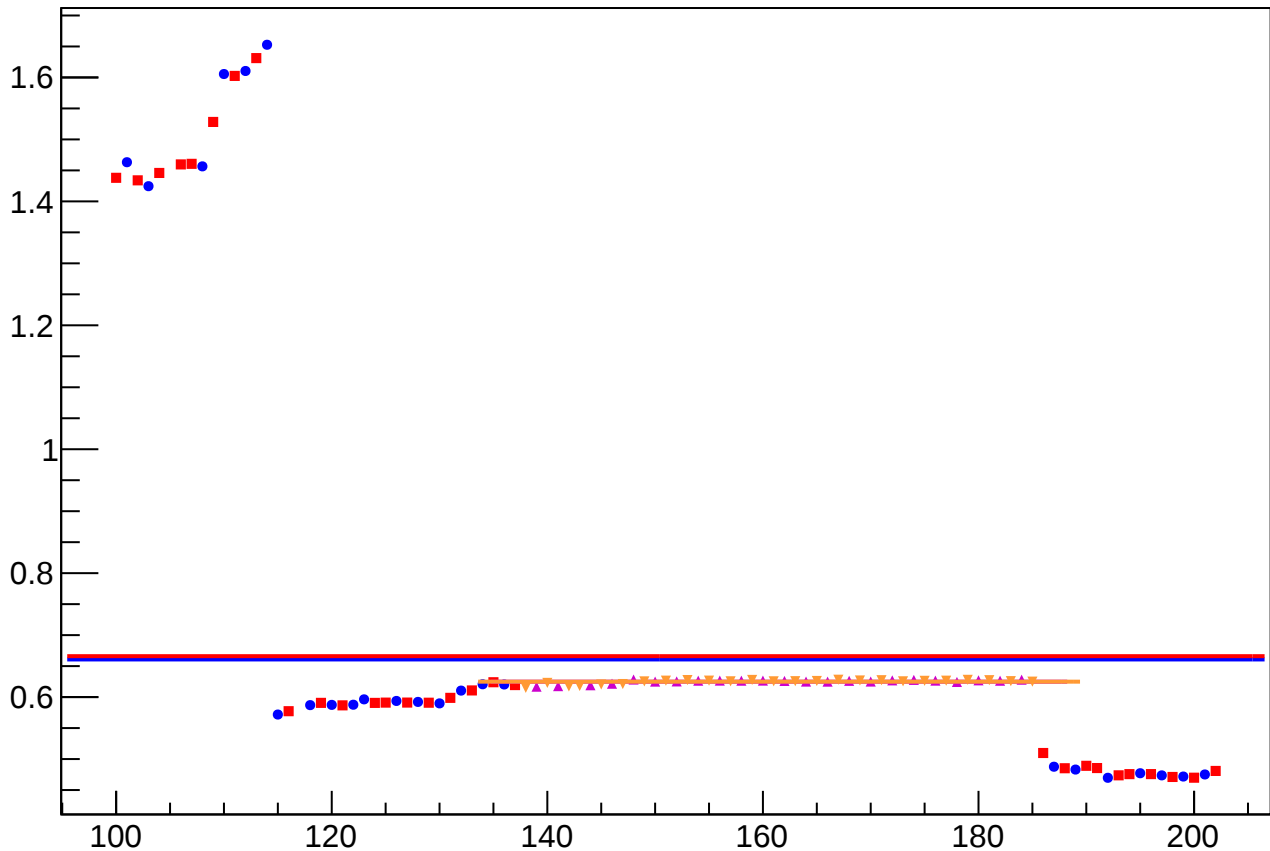
Right: 0.027+/-0.000  $\chi^2/\text{NDF}$ : 10693040.4/52

In: 0.021+/-0.000  $\chi^2/\text{NDF}$ : 6296962.8/46

Out: 0.021+/-0.000  $\chi^2/\text{NDF}$ : 7758153.4/53

All: 0.021+/-0.000  $\chi^2/\text{NDF}$ : 14061564.3/100

# yield\_bpm4aY\_mean vs Slug, Sign Corrected



Right In: 0.661 $\pm$ 0.000  $\chi^2$ /NDF: 4727898173.0/23

Left Out: 0.625 $\pm$ 0.000  $\chi^2$ /NDF:1442225.6/24

Right Out: 0.666 $\pm$ 0.000  $\chi^2$ /NDF: 5830718144.2/28

Left In: 0.625 $\pm$ 0.000  $\chi^2$ /NDF:1135039.4/22

Left: 0.625 $\pm$ 0.000  $\chi^2$ /NDF: 2577573.3/47

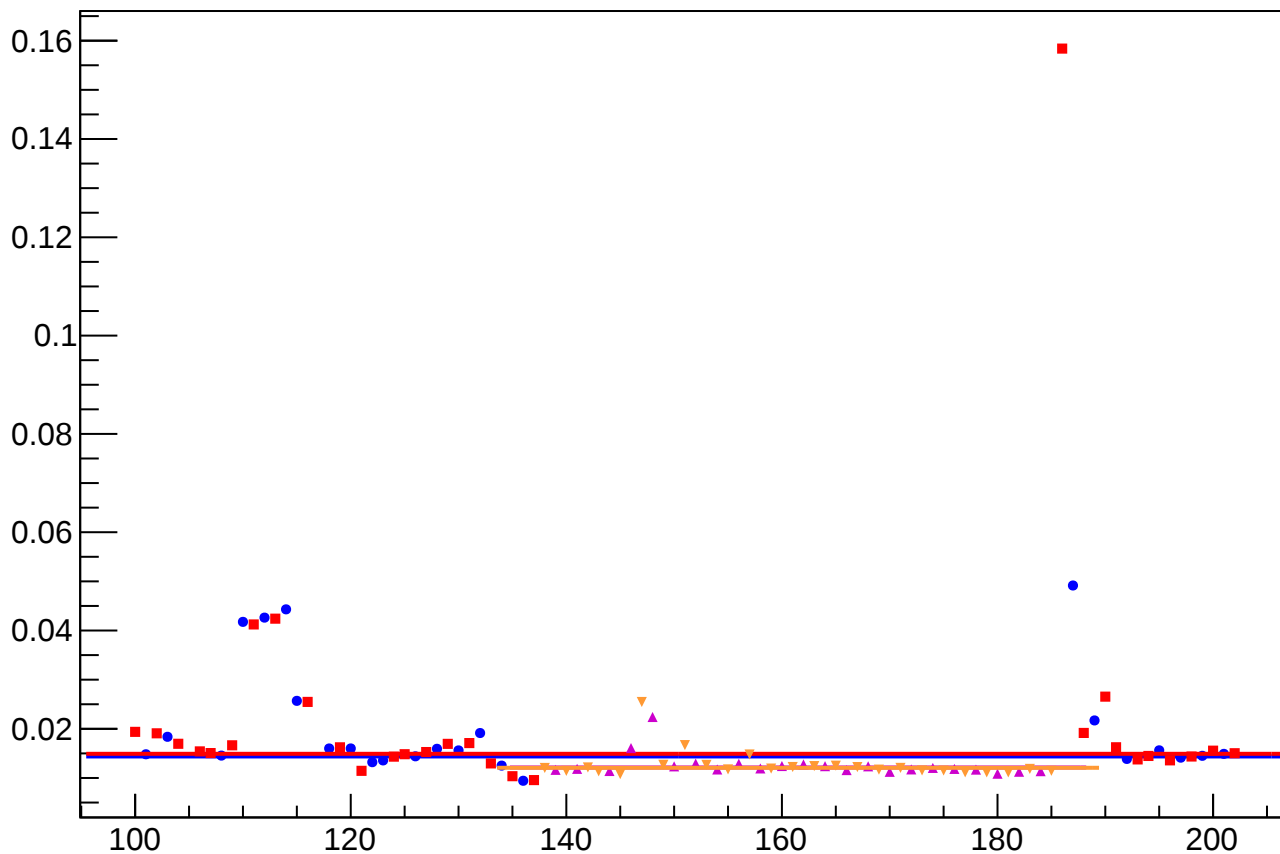
Right: 0.663 $\pm$ 0.000  $\chi^2$ /NDF: 10559318452.3/52

In: 0.635 $\pm$ 0.000  $\chi^2$ /NDF:4772729365.1/46

Out: 0.637 $\pm$ 0.000  $\chi^2$ /NDF:5894111804.9/53

All: 0.636 $\pm$ 0.000  $\chi^2$ /NDF: 10667123803.3/100

# yield\_bpm4aY\_rms vs Slug, Sign Corrected



Right In: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 1641752.5/23

Left Out: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 657433.9/24

Right Out: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 2072092.0/28

Left In: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 488249.4/22

Left: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 1146144.5/47

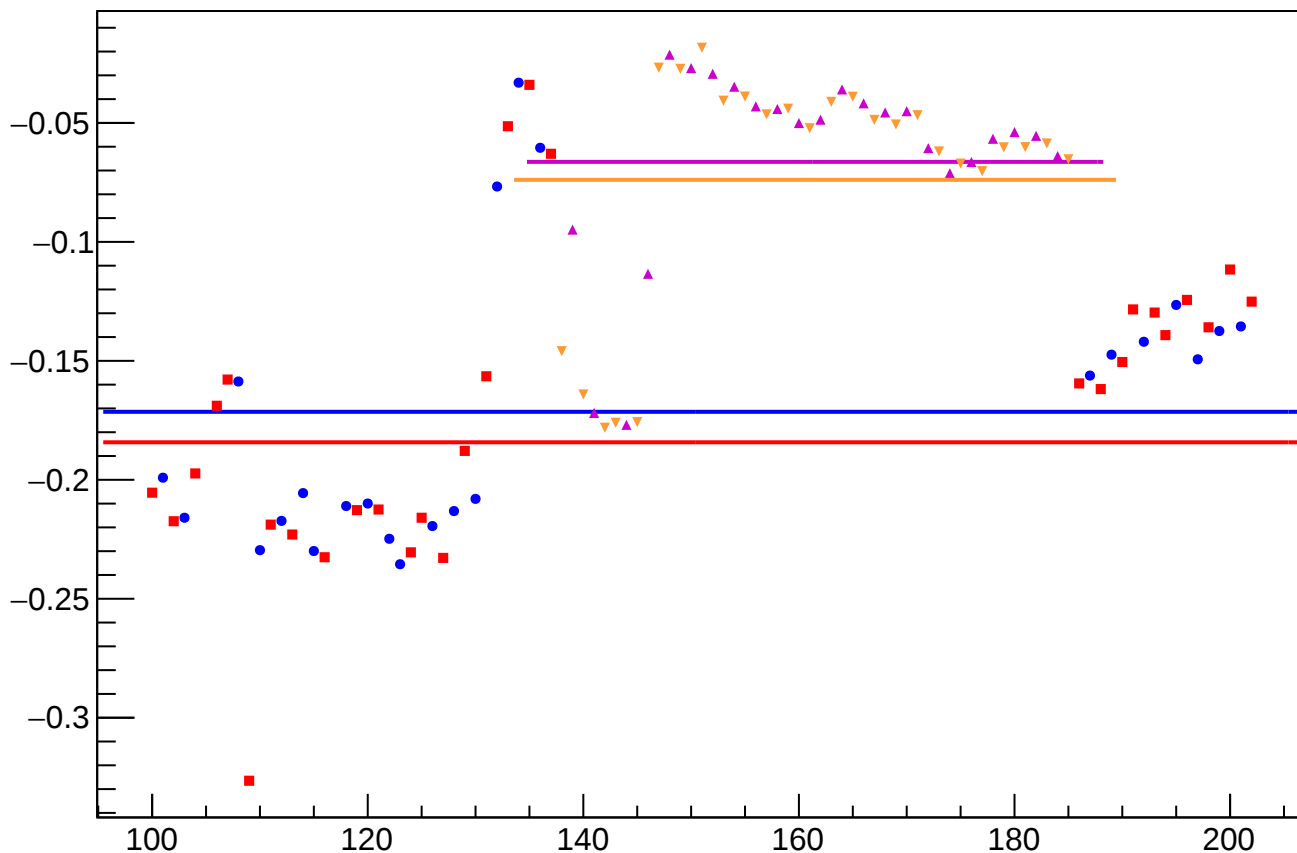
Right: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 3728426.1/52

In: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 2470662.2/46

Out: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 3321836.6/53

All: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 5795366.0/100

# yield\_bpm4eX\_mean vs Slug, Sign Corrected



Right In: -0.171+/-0.000  $\chi^2/\text{NDF}$ : 67944933.7/23

Left Out: -0.074+/-0.000  $\chi^2/\text{NDF}$ : 107858881.3/24

Right Out: -0.184+/-0.000  $\chi^2/\text{NDF}$ : 85178085.2/28

Left In: -0.066+/-0.000  $\chi^2/\text{NDF}$ : 76283954.4/22

Left: -0.070+/-0.000  $\chi^2/\text{NDF}$ : 185261776.8/47

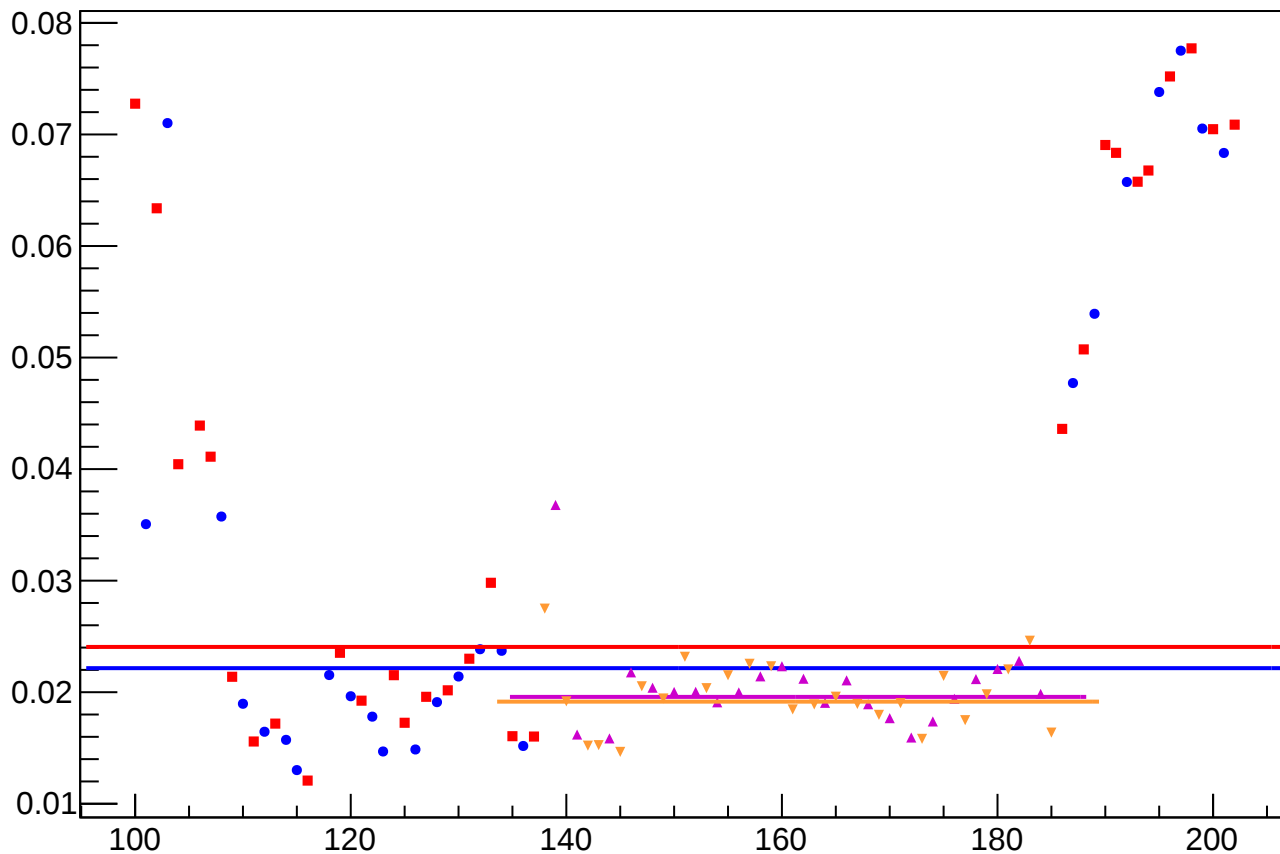
Right: -0.178+/-0.000  $\chi^2/\text{NDF}$ : 154344806.4/52

In: -0.096+/-0.000  $\chi^2/\text{NDF}$ : 261552570.2/46

Out: -0.103+/-0.000  $\chi^2/\text{NDF}$ : 326353189.6/53

All: -0.100+/-0.000  $\chi^2/\text{NDF}$ : 589254128.6/100

# yield\_bpm4eX\_rms vs Slug, Sign Corrected



Right In: 0.022 $\pm$ 0.000  $\chi^2$ /NDF: 5687567.1/23

Left Out: 0.019 $\pm$ 0.000  $\chi^2$ /NDF: 641027.3/24

Right Out: 0.024 $\pm$ 0.000  $\chi^2$ /NDF: 6955635.3/28

Left In: 0.020 $\pm$ 0.000  $\chi^2$ /NDF: 651328.7/22

Left: 0.019 $\pm$ 0.000  $\chi^2$ /NDF: 1299461.3/47

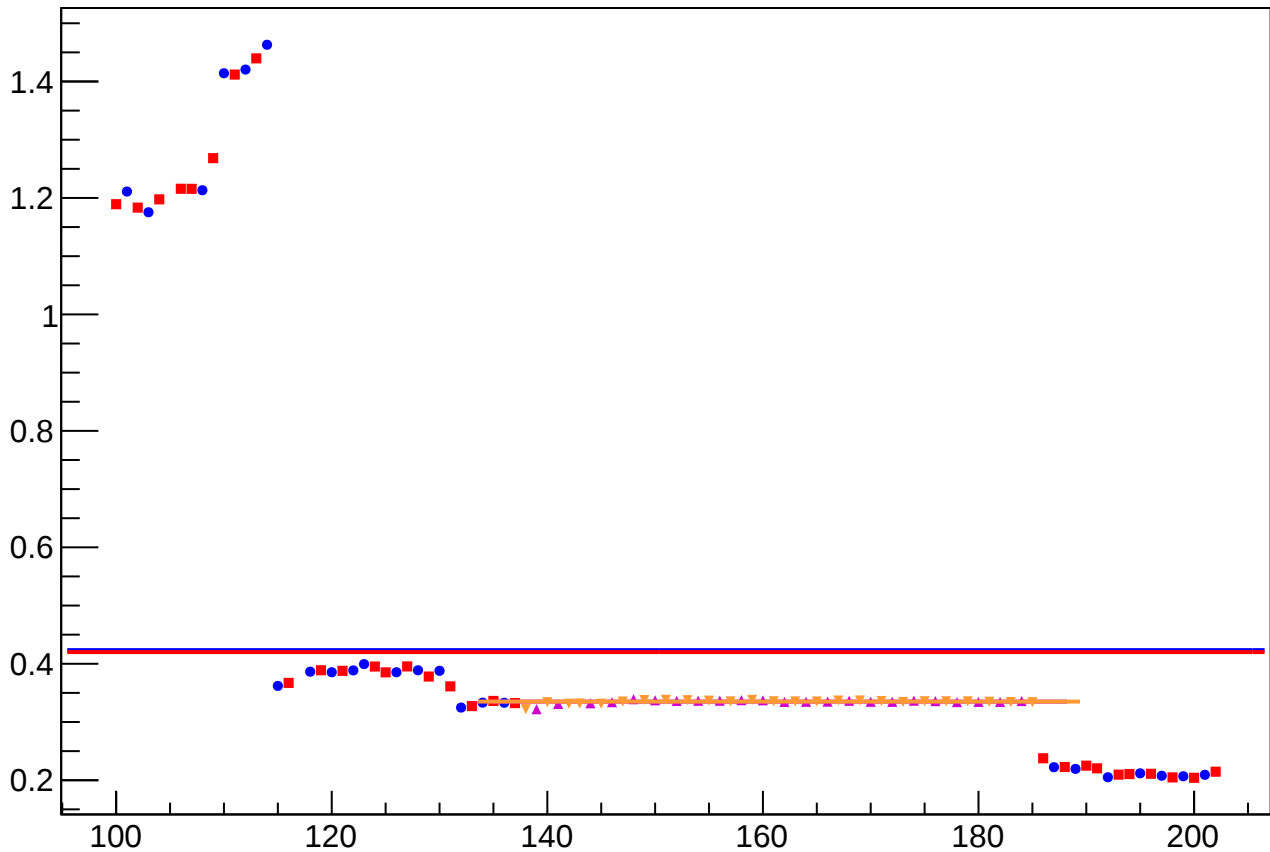
Right: 0.023 $\pm$ 0.000  $\chi^2$ /NDF: 12697099.1/52

In: 0.020 $\pm$ 0.000  $\chi^2$ /NDF: 6479928.5/46

Out: 0.020 $\pm$ 0.000  $\chi^2$ /NDF: 8123580.3/53

All: 0.020 $\pm$ 0.000  $\chi^2$ /NDF: 14604678.5/100

# yield\_bpm4eY\_mean vs Slug, Sign Corrected



Right In: 0.423+/-0.000  $\chi^2/\text{NDF}$ : 6960181336.6/23

Left Out: 0.335+/-0.000  $\chi^2/\text{NDF}$ :1153956.7/24

Right Out: 0.420+/-0.000  $\chi^2/\text{NDF}$ : 8221547899.1/28

Left In: 0.335+/-0.000  $\chi^2/\text{NDF}$ :1198302.8/22

Left: 0.335+/-0.000  $\chi^2/\text{NDF}$ : 2352818.7/47

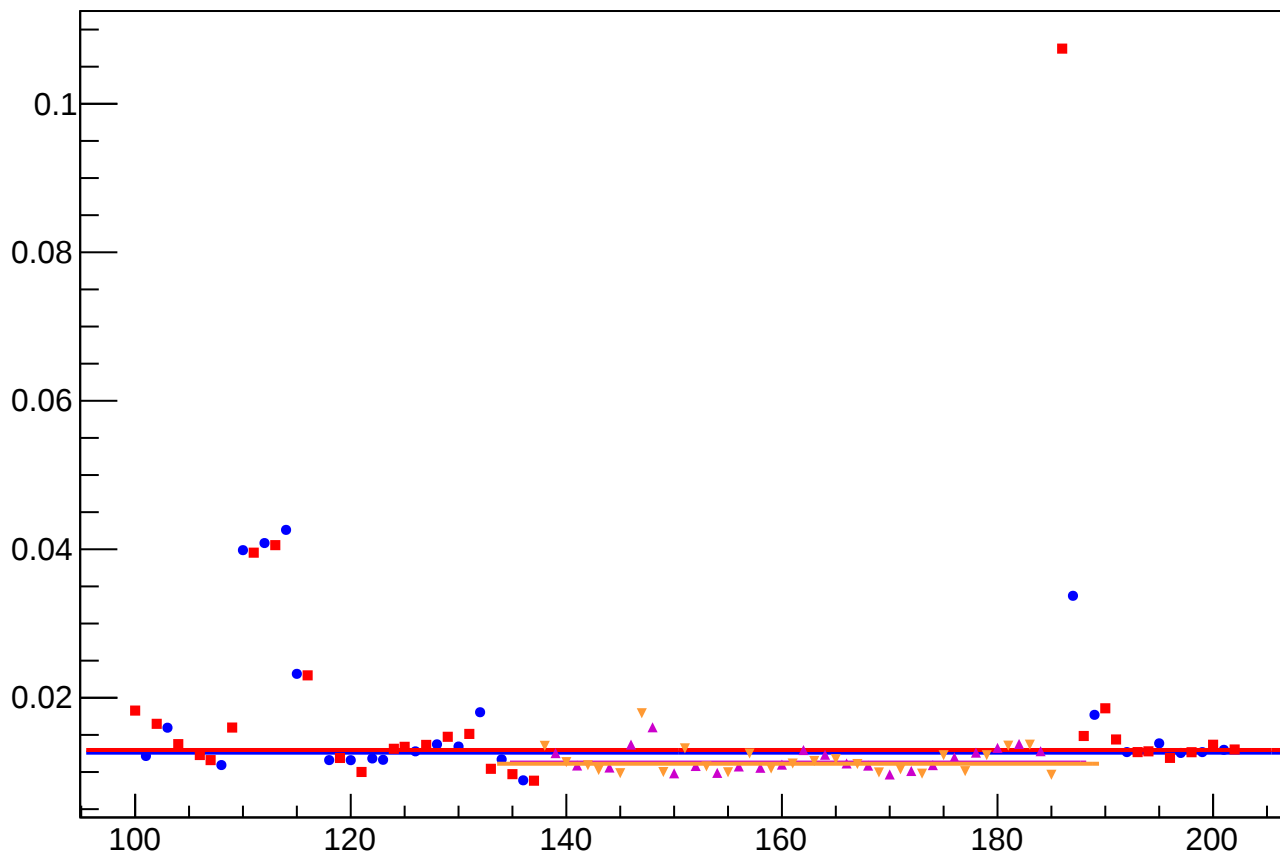
Right: 0.422+/-0.000  $\chi^2/\text{NDF}$ : 15182092951.9/52

In: 0.364+/-0.000  $\chi^2/\text{NDF}$ :7293640182.4/46

Out: 0.363+/-0.000  $\chi^2/\text{NDF}$ :8559256453.9/53

All: 0.363+/-0.000  $\chi^2/\text{NDF}$ : 15852946254.4/100

# yield\_bpm4eY\_rms vs Slug, Sign Corrected



Right In: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 1510258.8/23

Left Out: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 608235.7/24

Right Out: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 1933347.1/28

Left In: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 502226.7/22

Left: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 1113859.9/47

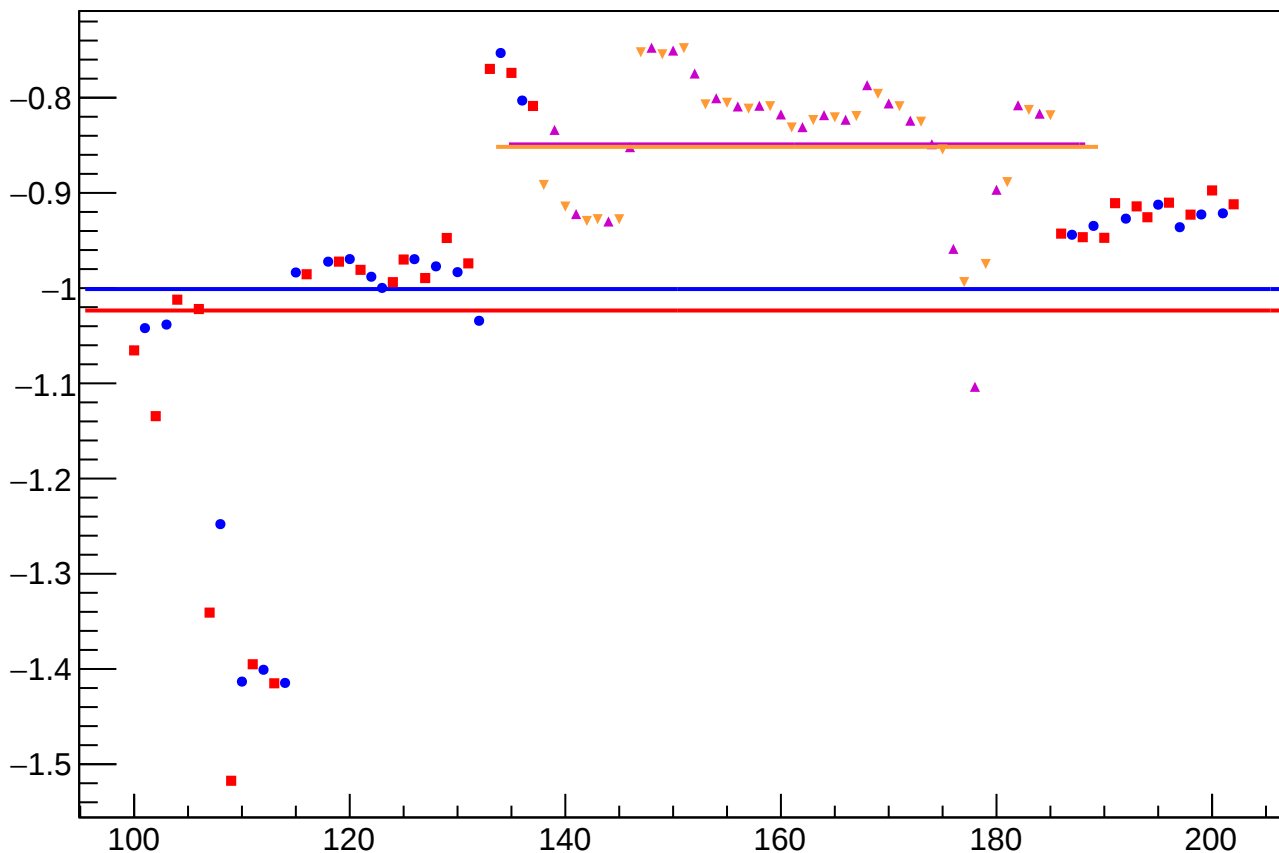
Right: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 3452179.5/52

In: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 2163497.2/46

Out: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 2860833.8/53

All: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 5024391.2/100

# yield\_bpm4acX\_mean vs Slug, Sign Corrected



Right In:  $-1.001 \pm 0.000$   $\chi^2/\text{NDF}$ : 399438367.9/23

Left Out:  $-0.852 \pm 0.000$   $\chi^2/\text{NDF}$ : 189276591.7/24

Right Out:  $-1.024 \pm 0.000$   $\chi^2/\text{NDF}$ : 552137128.0/28

Left In:  $-0.849 \pm 0.000$   $\chi^2/\text{NDF}$ : 256438306.8/22

Left:  $-0.850 \pm 0.000$   $\chi^2/\text{NDF}$ : 445849768.4/47

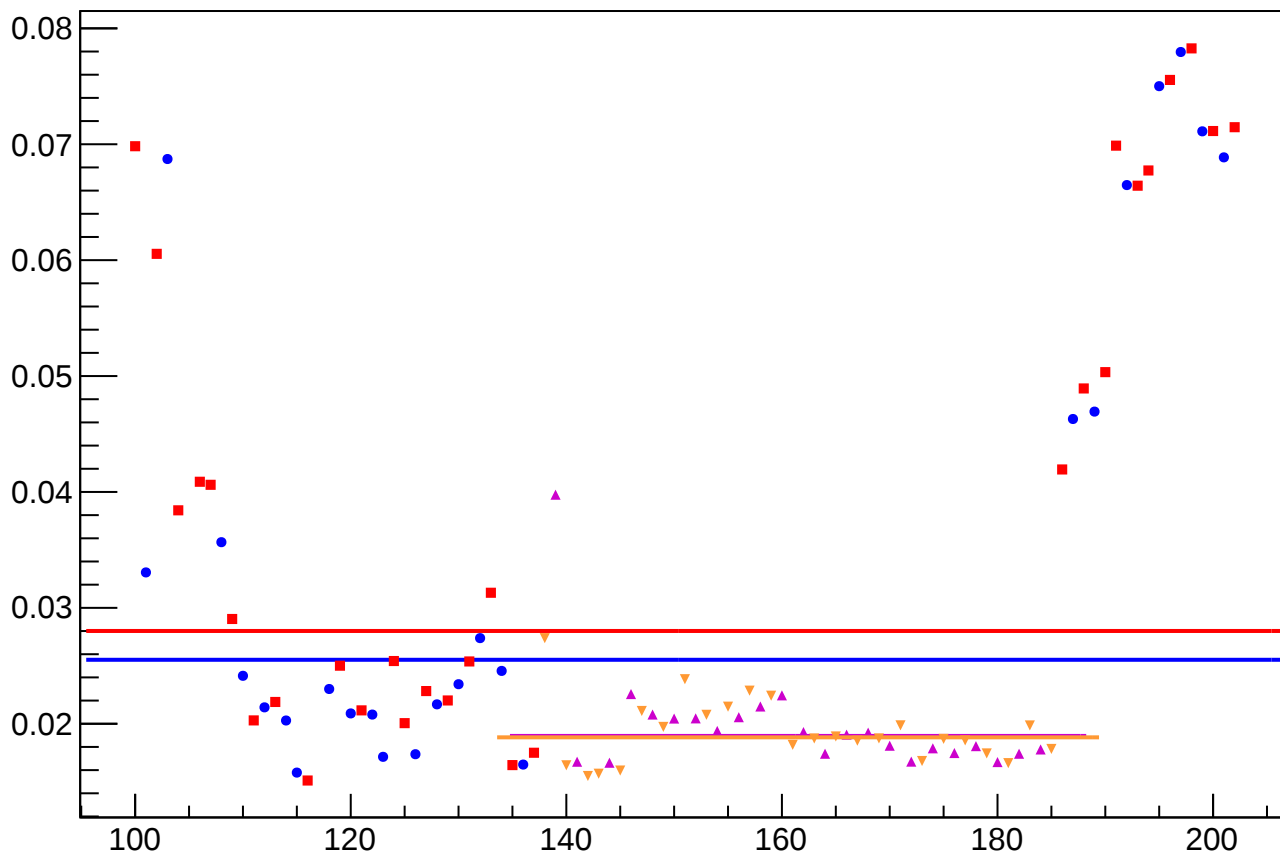
Right:  $-1.012 \pm 0.000$   $\chi^2/\text{NDF}$ : 954561736.9/52

In:  $-0.884 \pm 0.000$   $\chi^2/\text{NDF}$ : 864723151.3/46

Out:  $-0.889 \pm 0.000$   $\chi^2/\text{NDF}$ : 1012971919.9/53

All:  $-0.887 \pm 0.000$   $\chi^2/\text{NDF}$ : 1878384497.3/100

# yield\_bpm4acX\_rms vs Slug, Sign Corrected



Right In: 0.026+/-0.000  $\chi^2/\text{NDF}$ : 4873801.4/23

Left Out: 0.019+/-0.000  $\chi^2/\text{NDF}$ : 490084.5/24

Right Out: 0.028+/-0.000  $\chi^2/\text{NDF}$ : 5680671.7/28

Left In: 0.019+/-0.000  $\chi^2/\text{NDF}$ : 645048.1/22

Left: 0.019+/-0.000  $\chi^2/\text{NDF}$ : 1135735.6/47

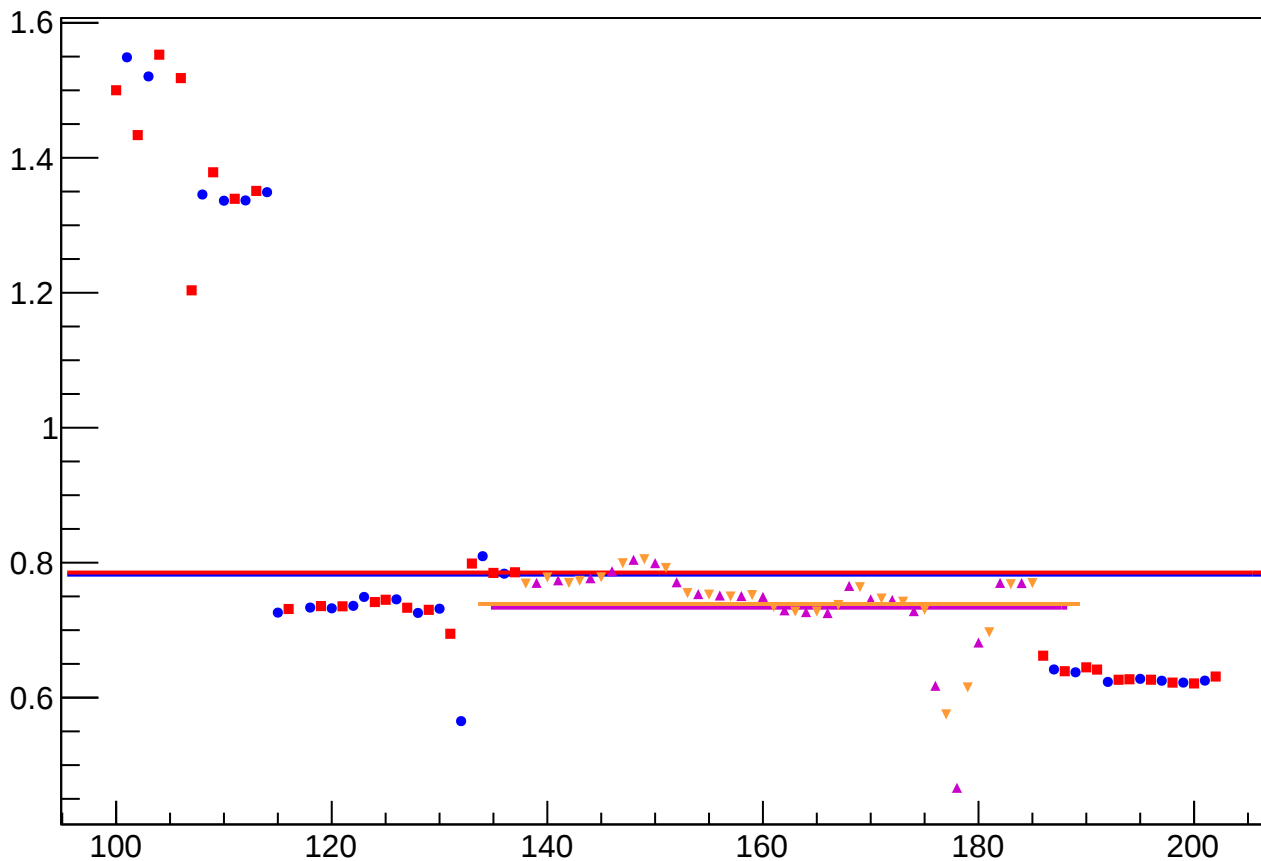
Right: 0.027+/-0.000  $\chi^2/\text{NDF}$ : 10627235.5/52

In: 0.020+/-0.000  $\chi^2/\text{NDF}$ : 6299906.7/46

Out: 0.021+/-0.000  $\chi^2/\text{NDF}$ : 7719516.1/53

All: 0.021+/-0.000  $\chi^2/\text{NDF}$ : 14026623.0/100

# yield\_bpm4acY\_mean vs Slug, Sign Corrected



Right In: 0.782 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 3234838451.5/23

Left Out: 0.739 $\pm$ 0.000  $\chi^2/\text{NDF}$ :333086309.0/24

Right Out: 0.785 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 3608459995.8/28

Left In: 0.733 $\pm$ 0.000  $\chi^2/\text{NDF}$ :570264411.7/22

Left: 0.736 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 905100069.4/47

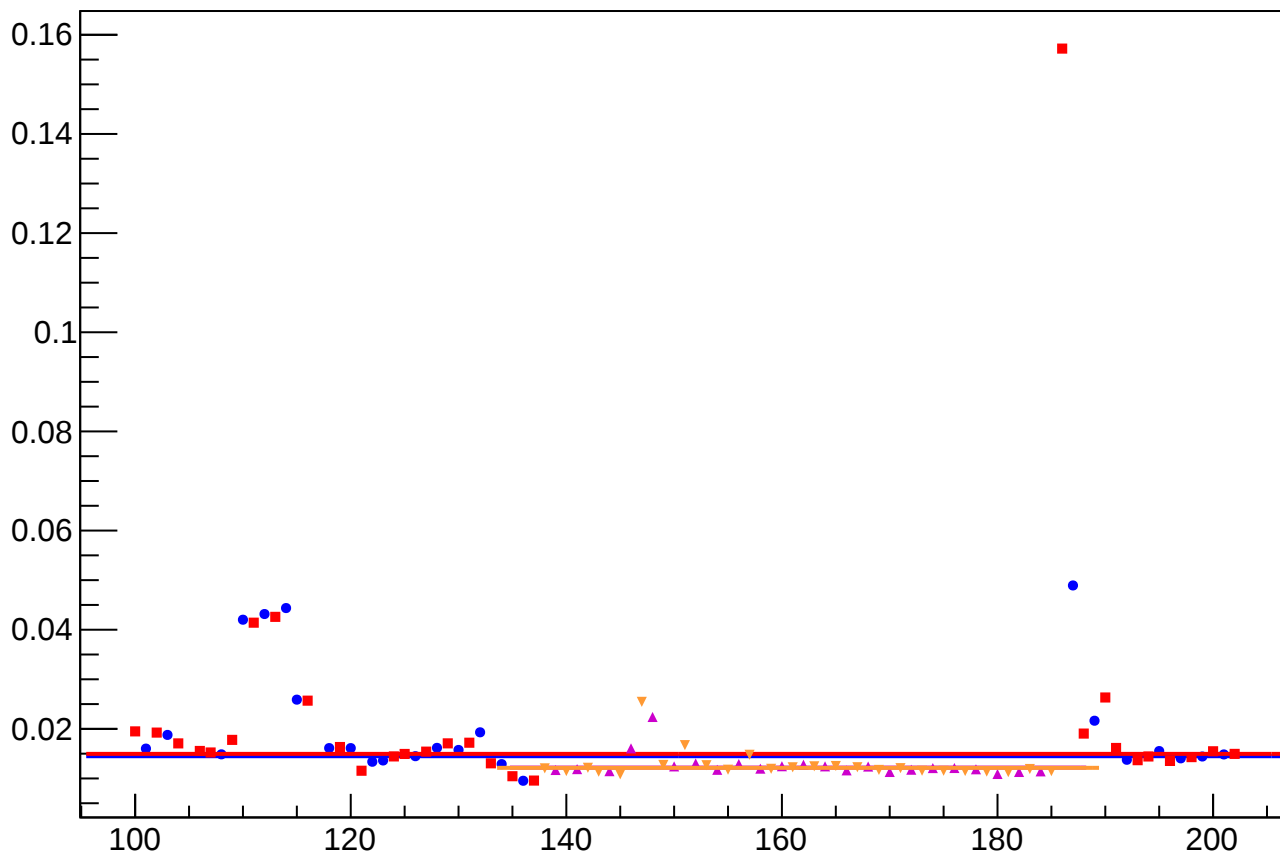
Right: 0.784 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 6843538518.4/52

In: 0.748 $\pm$ 0.000  $\chi^2/\text{NDF}$ :3885026625.8/46

Out: 0.753 $\pm$ 0.000  $\chi^2/\text{NDF}$ :4020265846.5/53

All: 0.750 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7907507842.0/10

# yield\_bpm4acY\_rms vs Slug, Sign Corrected



Right In: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 1641911.0/23

Left Out: 0.012+/-0.000  $\chi^2/\text{NDF}$ :638211.9/24

Right Out: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 2075706.5/28

Left In: 0.012+/-0.000  $\chi^2/\text{NDF}$ :481639.6/22

Left: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 1120132.0/47

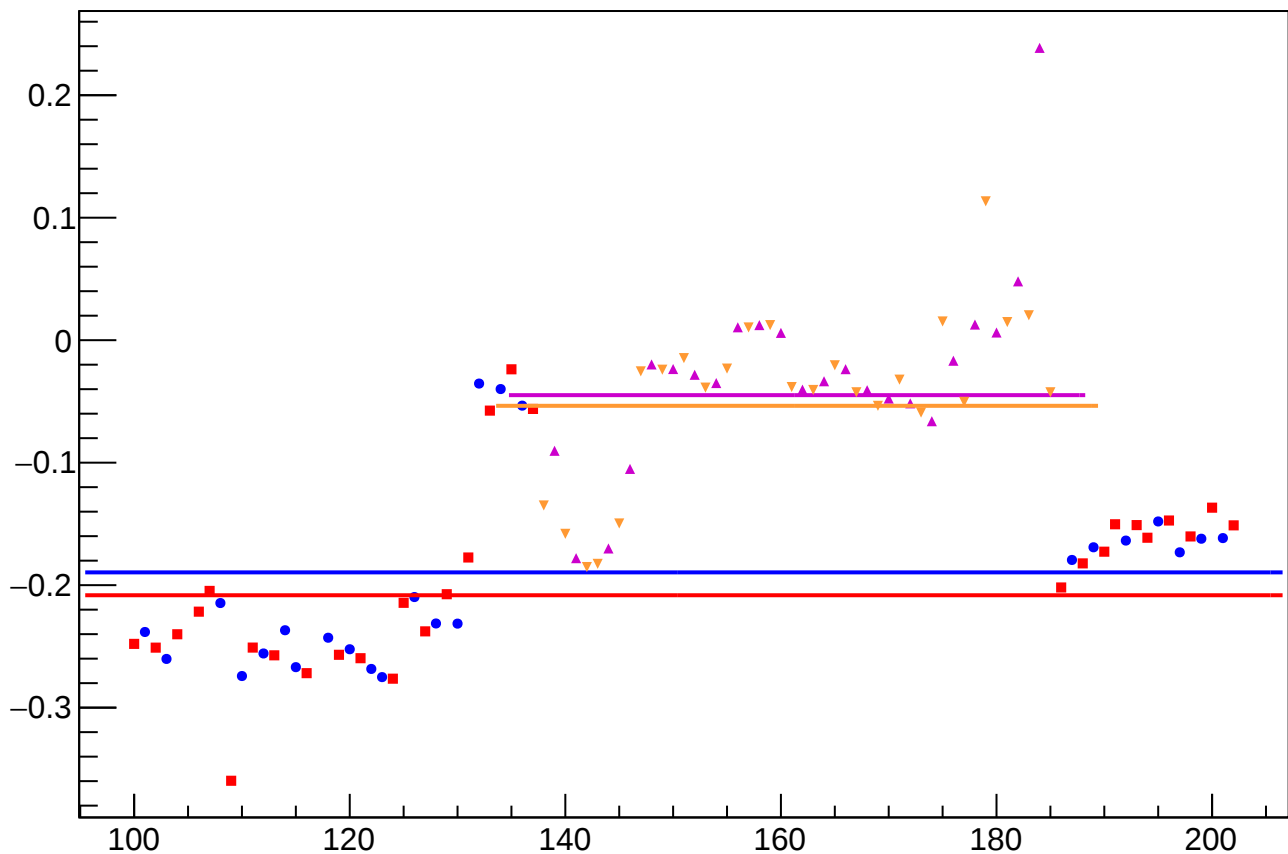
Right: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 3728592.1/52

In: 0.013+/-0.000  $\chi^2/\text{NDF}$ :2475402.1/46

Out: 0.013+/-0.000  $\chi^2/\text{NDF}$ :3289469.5/53

All: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 5767559.8/100

# yield\_bpm4ecX\_mean vs Slug, Sign Corrected



Right In: -0.190 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 106736207.6/23

Left Out: -0.054 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 167879648.0/24

Right Out: -0.208 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 113276194.6/28

Left In: -0.045 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 127324000.1/22

Left: -0.049 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 296677486.5/47

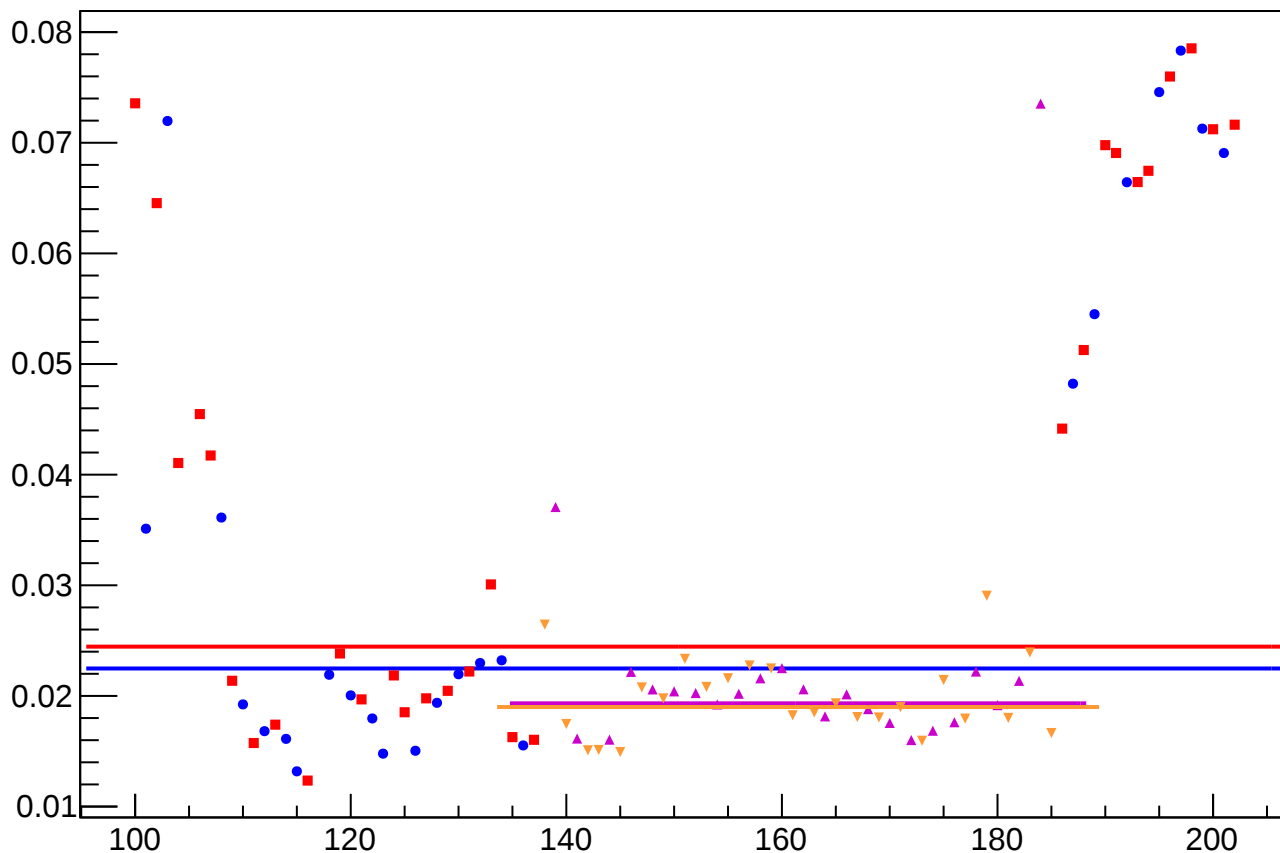
Right: -0.199 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 222529609.1/52

In: -0.085 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 452135772.3/46

Out: -0.094 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 536058754.6/53

All: -0.090 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 990323462.1/100

# yield\_bpm4ecX\_rms vs Slug, Sign Corrected



Right In: 0.022+/-0.000  $\chi^2/\text{NDF}$ : 5643296.3/23

Left Out: 0.019+/-0.000  $\chi^2/\text{NDF}$ : 699267.5/24

Right Out: 0.024+/-0.000  $\chi^2/\text{NDF}$ : 6916411.8/28

Left In: 0.019+/-0.000  $\chi^2/\text{NDF}$ : 892810.7/22

Left: 0.019+/-0.000  $\chi^2/\text{NDF}$ : 1596405.3/47

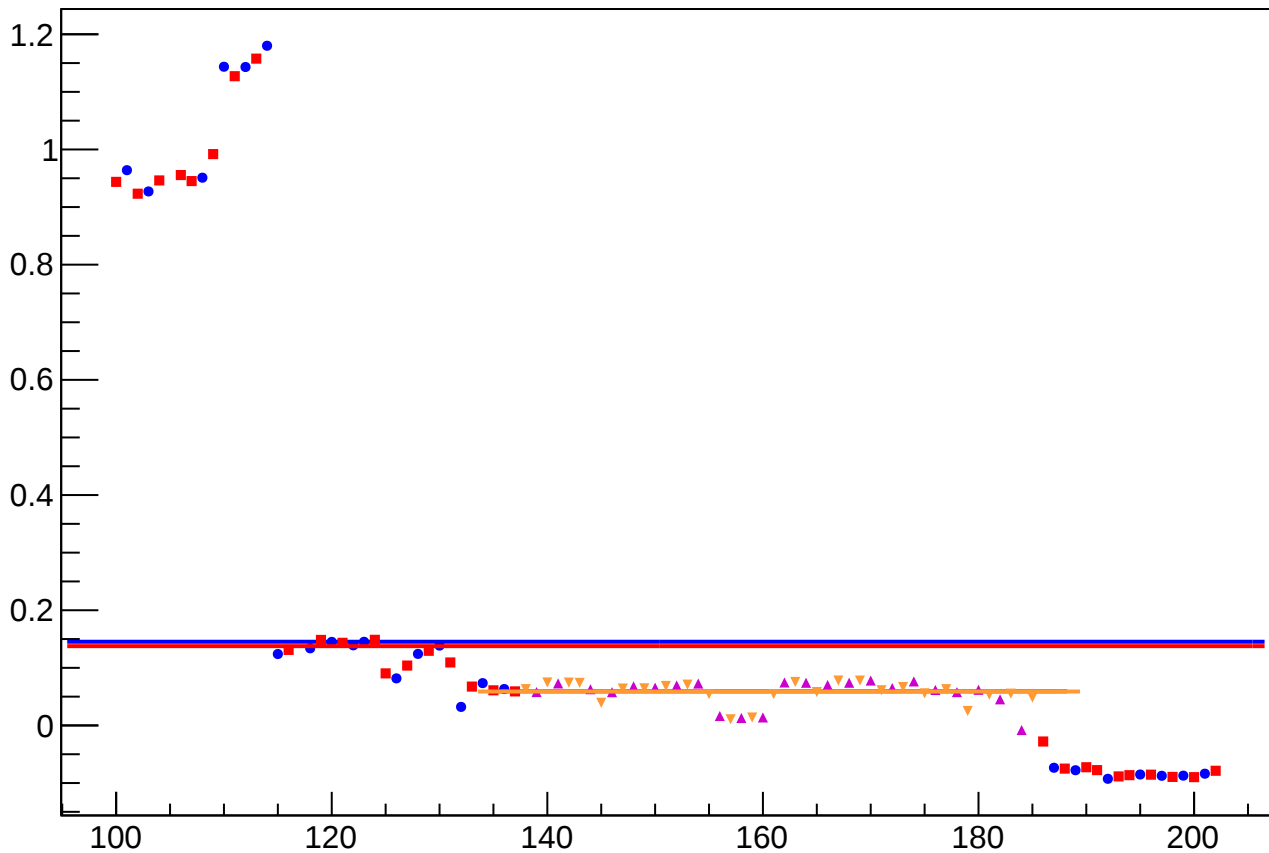
Right: 0.023+/-0.000  $\chi^2/\text{NDF}$ : 12616057.3/52

In: 0.020+/-0.000  $\chi^2/\text{NDF}$ : 6742875.1/46

Out: 0.020+/-0.000  $\chi^2/\text{NDF}$ : 8250824.8/53

All: 0.020+/-0.000  $\chi^2/\text{NDF}$ : 14996294.6/100

# yield\_bpm4ecY\_mean vs Slug, Sign Corrected



Right In: 0.145 $\pm$ 0.000  $\chi^2$ /NDF: 7476479578.1/23

Left Out: 0.059 $\pm$ 0.000  $\chi^2$ /NDF: 46902918.4/24

Right Out: 0.138 $\pm$ 0.000  $\chi^2$ /NDF: 8644569229.2/28

Left In: 0.059 $\pm$ 0.000  $\chi^2$ /NDF: 58640898.5/22

Left: 0.059 $\pm$ 0.000  $\chi^2$ /NDF: 105549886.8/47

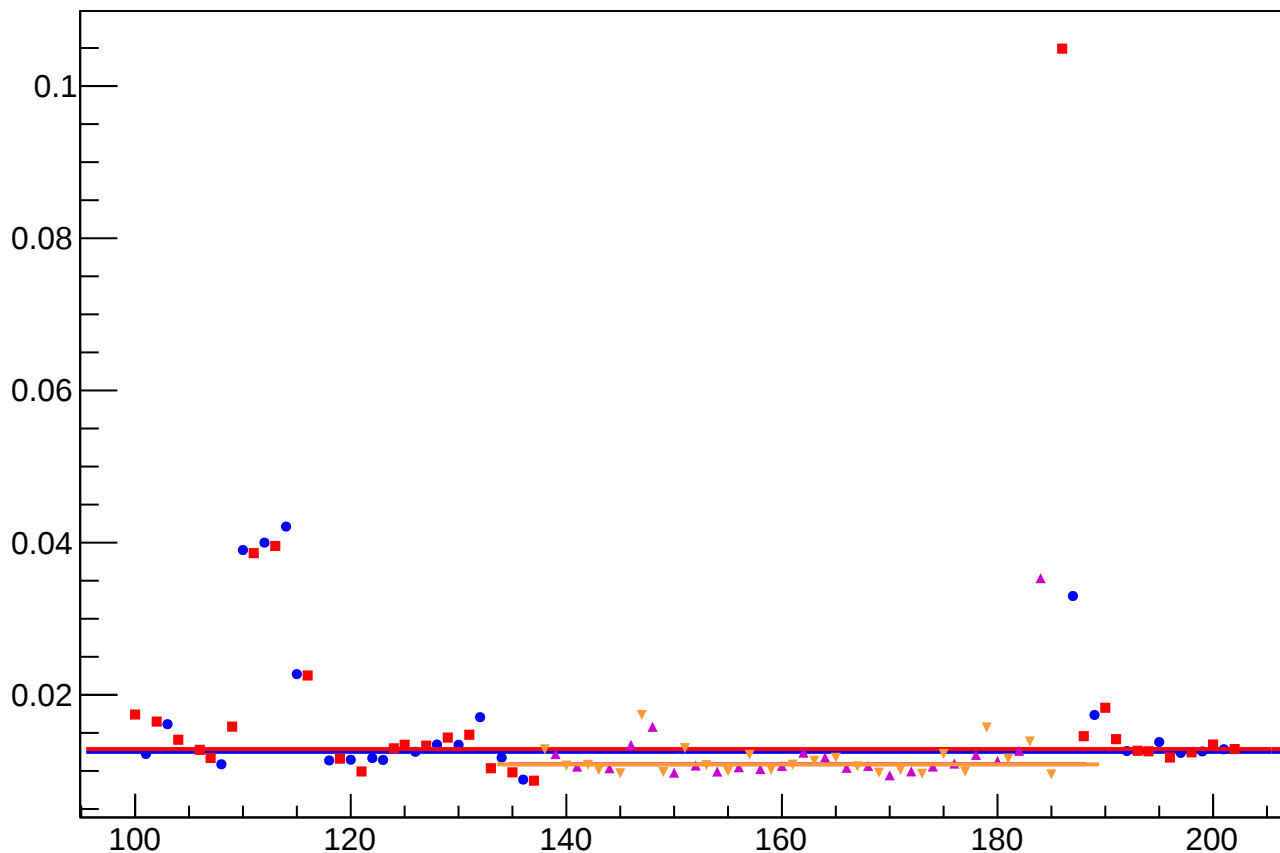
Right: 0.141 $\pm$ 0.000  $\chi^2$ /NDF: 16123016942.6/52

In: 0.087 $\pm$ 0.000  $\chi^2$ /NDF: 7858461338.8/46

Out: 0.085 $\pm$ 0.000  $\chi^2$ /NDF: 8984726649.6/53

All: 0.086 $\pm$ 0.000  $\chi^2$ /NDF: 16843558354.0/100

# yield\_bpm4ecY\_rms vs Slug, Sign Corrected



Right In: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 1477123.9/23

Left Out: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 605519.3/24

Right Out: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 1891135.1/28

Left In: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 529867.3/22

Left: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 1135492.7/47

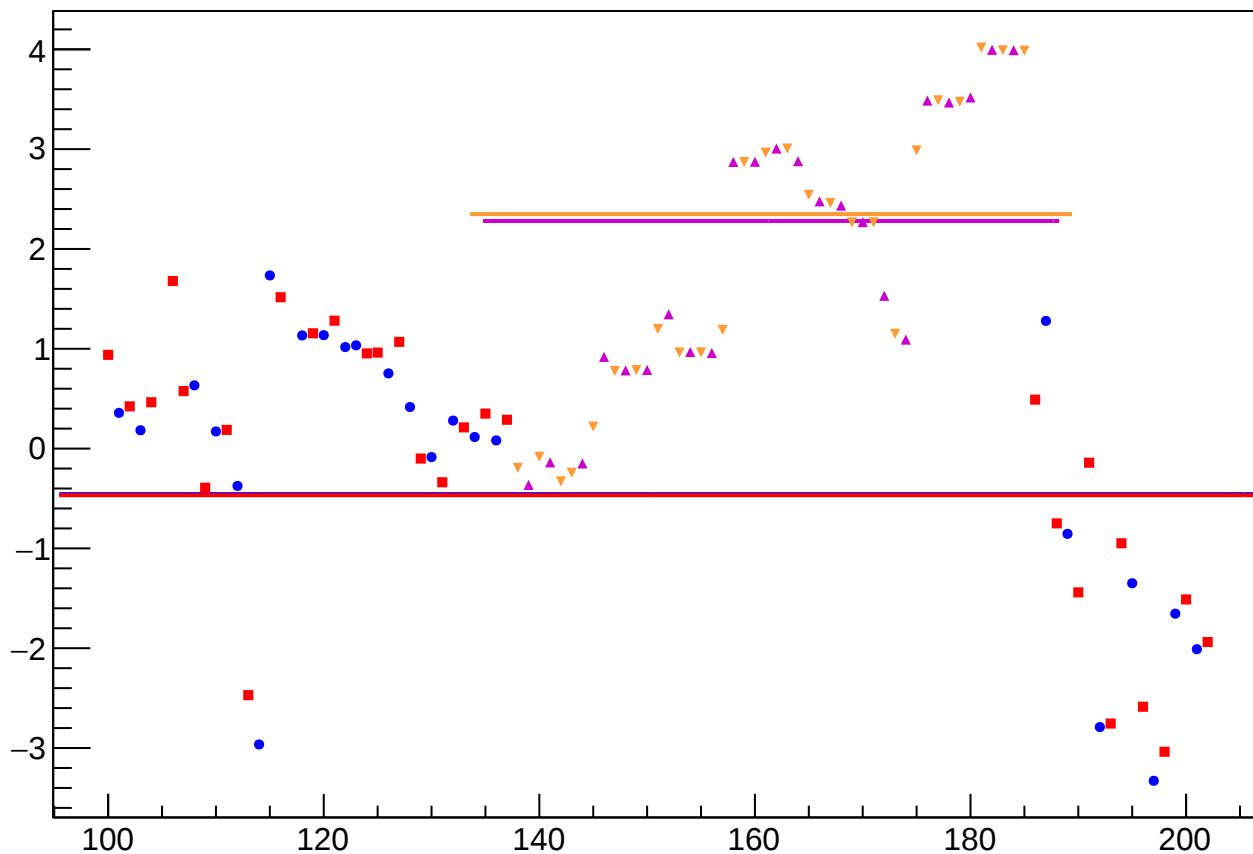
Right: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 3377221.3/52

In: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 2235096.8/46

Out: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 2879007.4/53

All: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 5116937.5/100

# yield\_bpm1X\_mean vs Slug, Sign Corrected



Right In:  $-0.456 \pm 0.000$   $\chi^2/\text{NDF}: 4820759930.3/23$

Left Out:  $2.349 \pm 0.000$   $\chi^2/\text{NDF}: 63600066268.3/24$

Right Out:  $-0.467 \pm 0.000$   $\chi^2/\text{NDF}: 5769032231.2/28$

Left In:  $2.280 \pm 0.000$   $\chi^2/\text{NDF}: 61444254541.3/22$

Left:  $2.314 \pm 0.000$   $\chi^2/\text{NDF}: 125168787170.9/47$

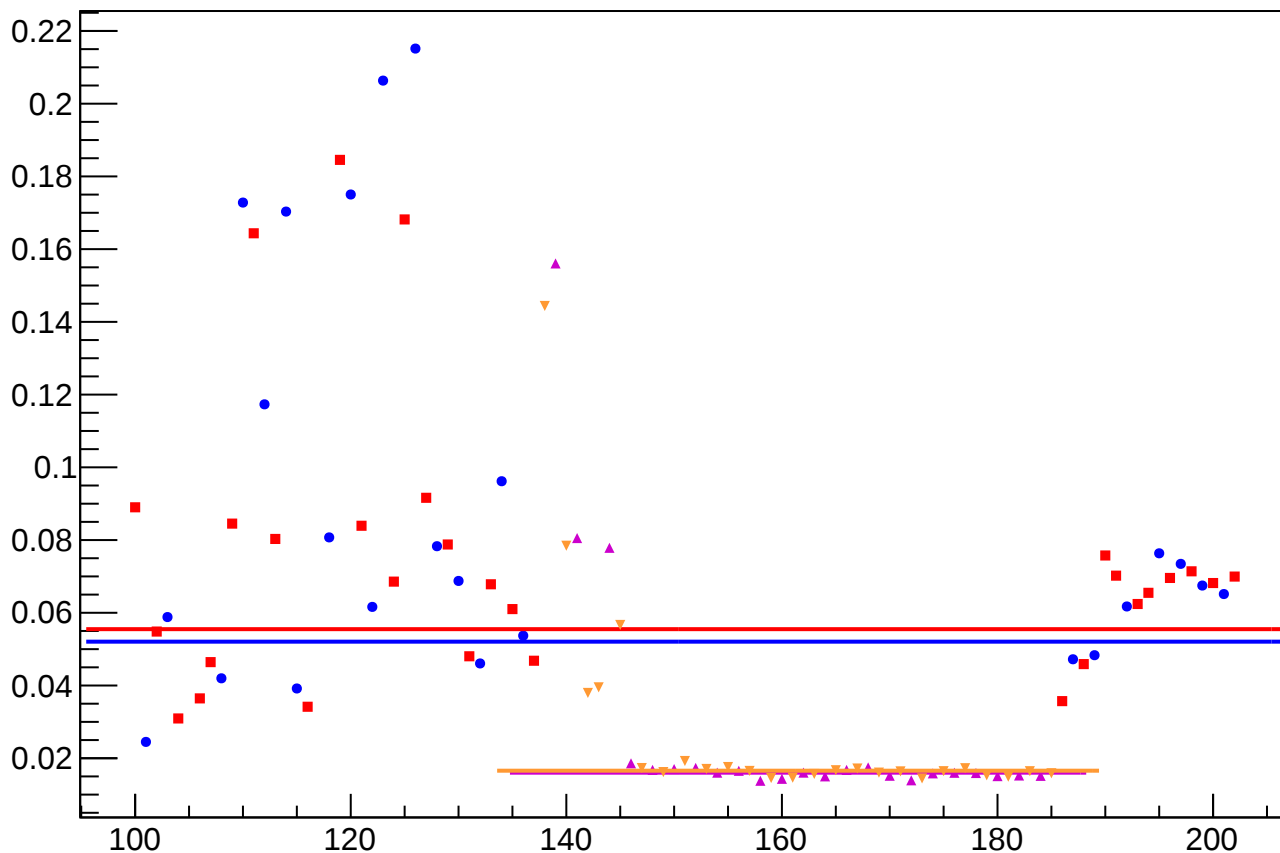
Right:  $-0.462 \pm 0.000$   $\chi^2/\text{NDF}: 10589977167.7/52$

In:  $2.140 \pm 0.000$   $\chi^2/\text{NDF}: 86297257873.2/46$

Out:  $2.184 \pm 0.000$   $\chi^2/\text{NDF}: 93159375109.6/53$

All:  $2.162 \pm 0.000$   $\chi^2/\text{NDF}: 179510524022.0$

# yield\_bpm1X\_rms vs Slug, Sign Corrected



Right In: 0.052+/-0.000  $\chi^2/\text{NDF}$ : 3431461.1/23

Left Out: 0.017+/-0.000  $\chi^2/\text{NDF}$ :2623615.6/24

Right Out: 0.055+/-0.000  $\chi^2/\text{NDF}$ : 2836329.3/28

Left In: 0.016+/-0.000  $\chi^2/\text{NDF}$ :2463853.3/22

Left: 0.016+/-0.000  $\chi^2/\text{NDF}$ : 5102815.6/47

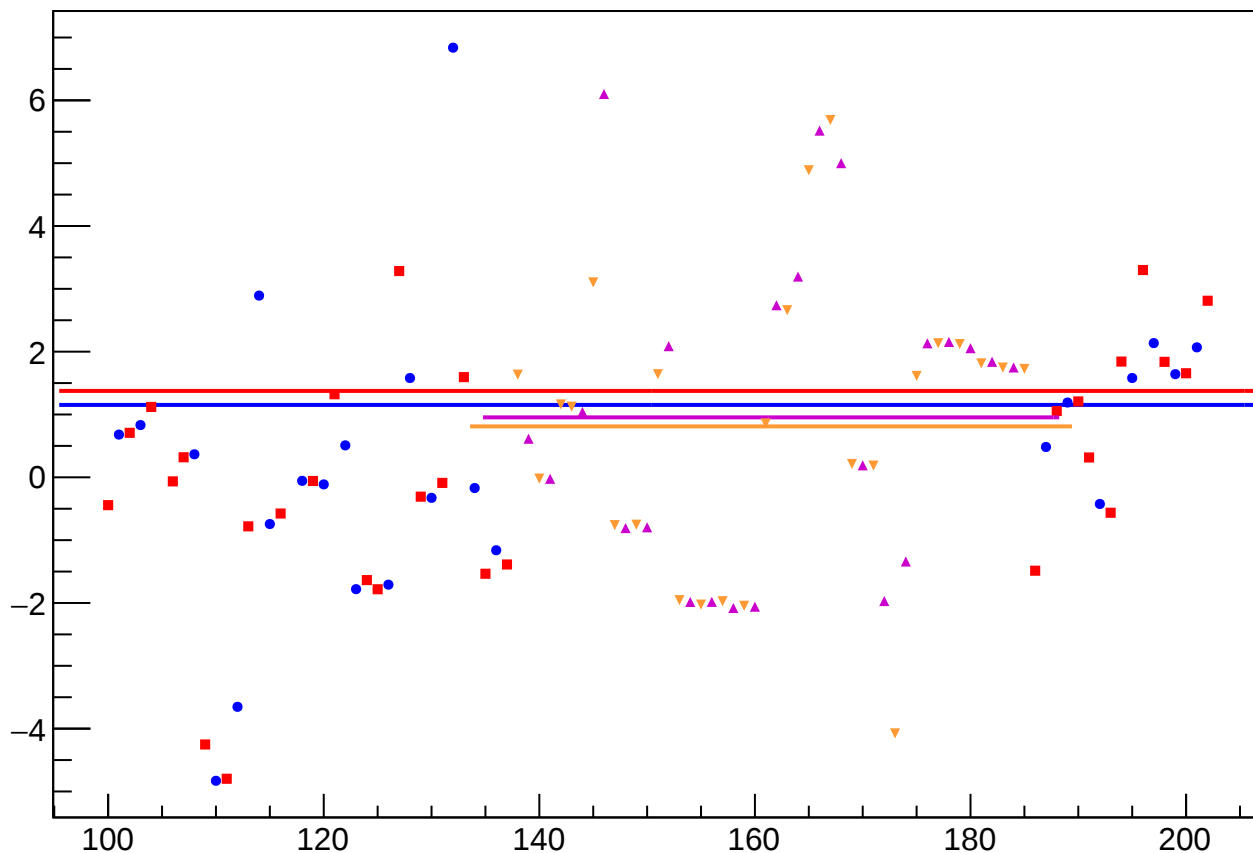
Right: 0.054+/-0.000  $\chi^2/\text{NDF}$ : 6303170.7/52

In: 0.018+/-0.000  $\chi^2/\text{NDF}$ :12841507.3/46

Out: 0.019+/-0.000  $\chi^2/\text{NDF}$ :14545045.5/53

All: 0.018+/-0.000  $\chi^2/\text{NDF}$ : 27439262.3/100

# yield\_bpm1Y\_mean vs Slug, Sign Corrected



Right In: 1.153+/-0.000

$\chi^2/\text{NDF}$ : 21137056650.5/23

Left: 0.883+/-0.000  $\chi^2/\text{NDF}$ : 1083260277372.9/47

Right: 1.273+/-0.000  $\chi^2/\text{NDF}$ : 47832255390.5/52

Left Out: 0.810+/-0.000

$\chi^2/\text{NDF}$ : 507583198570.2/24

In: 0.983+/-0.000  $\chi^2/\text{NDF}$ : 596413249088.6/46

Right Out: 1.375+/-0.000  $\chi^2/\text{NDF}$ : 26310648476.0/28

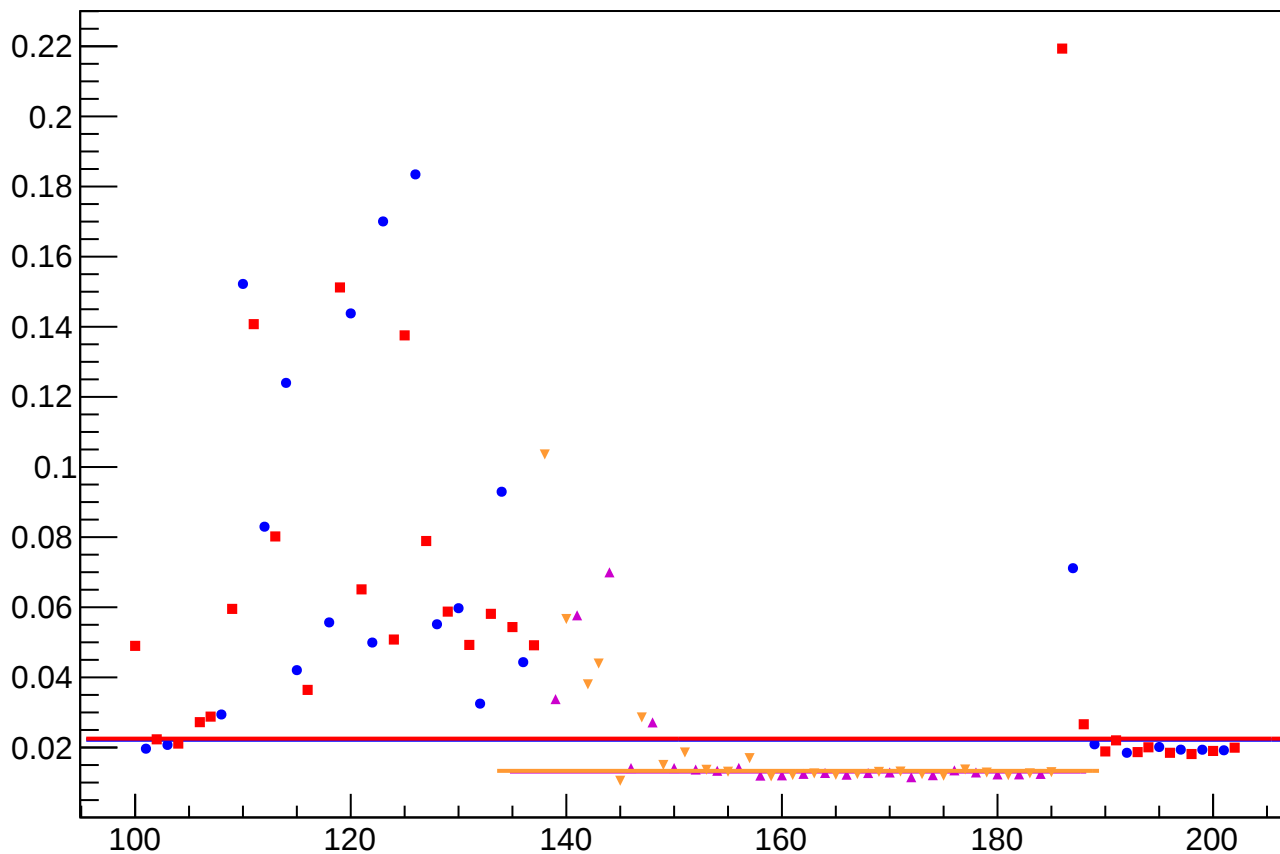
Out: 0.903+/-0.000  $\chi^2/\text{NDF}$ : 538371929124.8/53

Left In: 0.954+/-0.000

$\chi^2/\text{NDF}$ : 574792794608.3/22

All: 0.943+/-0.000  $\chi^2/\text{NDF}$ : 1135102406847.0

# yield\_bpm1Y\_rms vs Slug, Sign Corrected



Right In: 0.022+/-0.000  $\chi^2/\text{NDF}$ : 3671349.0/23

Left Out: 0.013+/-0.000  $\chi^2/\text{NDF}$ :2829070.5/24

Right Out: 0.023+/-0.000  $\chi^2/\text{NDF}$ : 4774320.4/28

Left In: 0.013+/-0.000  $\chi^2/\text{NDF}$ :1968206.9/22

Left: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 4800890.3/47

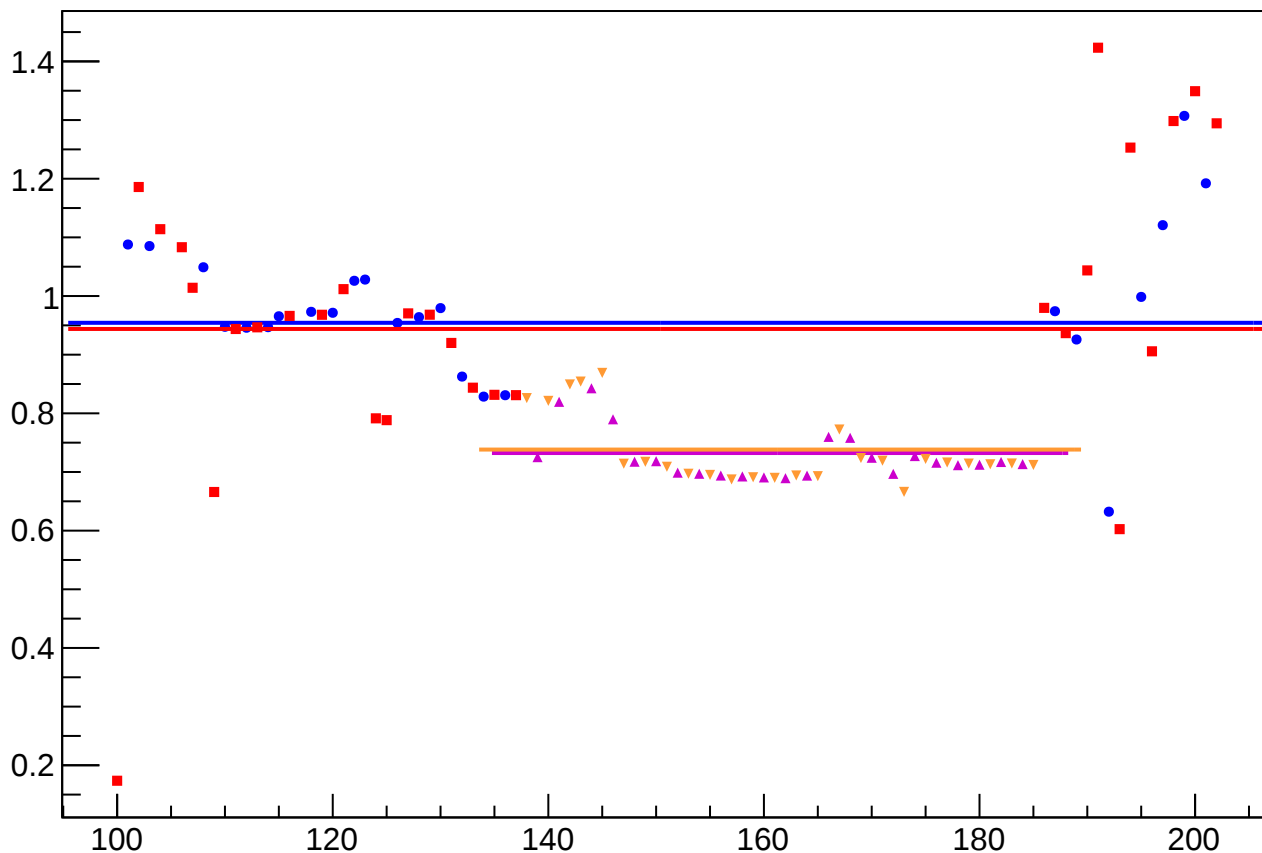
Right: 0.022+/-0.000  $\chi^2/\text{NDF}$ : 8447266.1/52

In: 0.014+/-0.000  $\chi^2/\text{NDF}$ :7665095.9/46

Out: 0.015+/-0.000  $\chi^2/\text{NDF}$ :9972383.1/53

All: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 17655041.1/100

# yield\_bpm11X\_mean vs Slug, Sign Corrected



Right In: 0.954 $\pm$ 0.000  $\chi^2$ /NDF: 452809741.9/23

Left Out: 0.738 $\pm$ 0.000  $\chi^2$ /NDF:310610047.7/24

Right Out: 0.944 $\pm$ 0.000  $\chi^2$ /NDF: 896343763.4/28

Left In: 0.732 $\pm$ 0.000  $\chi^2$ /NDF:170806298.1/22

Left: 0.735 $\pm$ 0.000  $\chi^2$ /NDF: 482865670.9/47

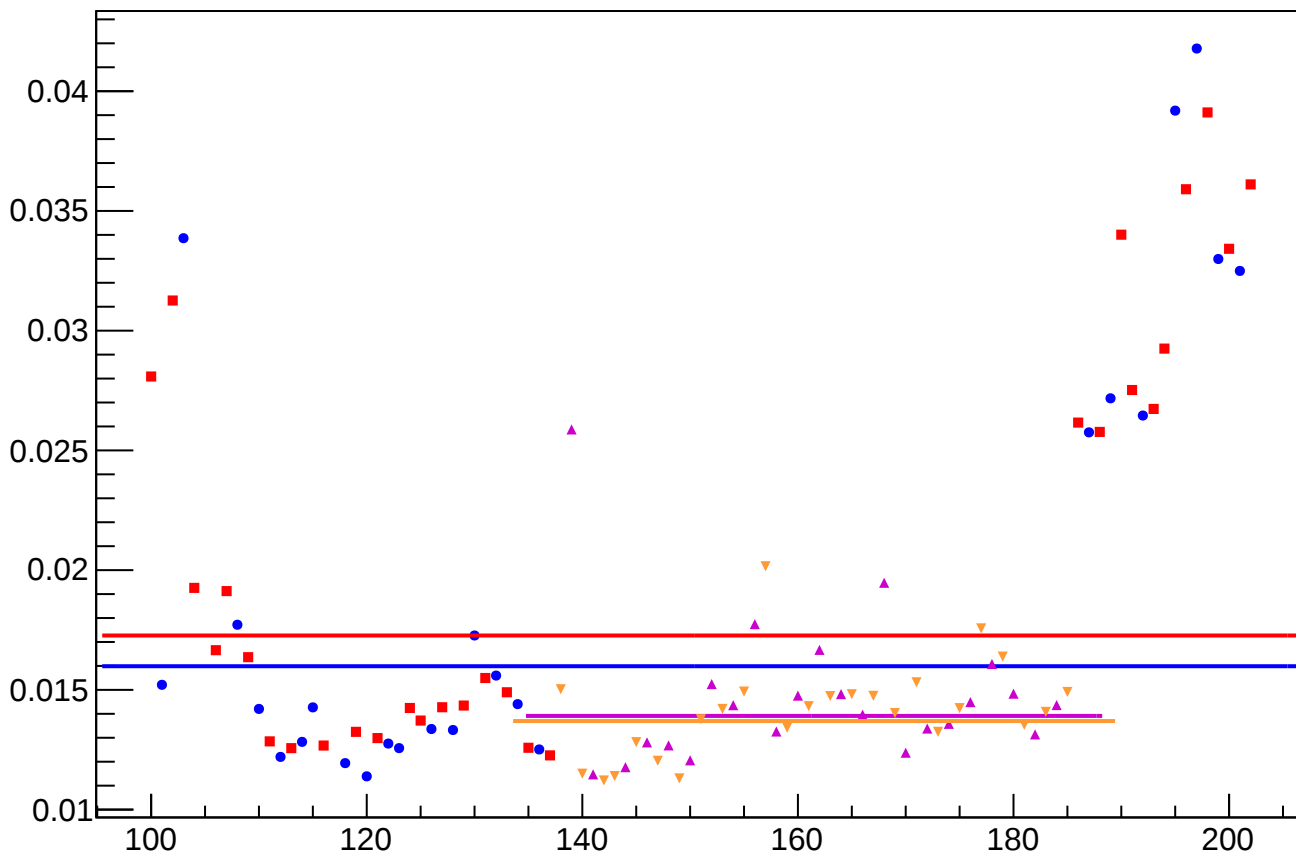
Right: 0.949 $\pm$ 0.000  $\chi^2$ /NDF: 1351083411.6/52

In: 0.799 $\pm$ 0.000  $\chi^2$ /NDF:1817161615.3/46

Out: 0.798 $\pm$ 0.000  $\chi^2$ /NDF:2275939717.7/53

All: 0.799 $\pm$ 0.000  $\chi^2$ /NDF: 4093146361.9/100

# yield\_bpm11X\_rms vs Slug, Sign Corrected



Right In: 0.016+/-0.000  $\chi^2/\text{NDF}$ : 3165706.4/23

Left Out: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 530851.9/24

Right Out: 0.017+/-0.000  $\chi^2/\text{NDF}$ : 3424799.8/28

Left In: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 794558.0/22

Left: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 1329255.3/47

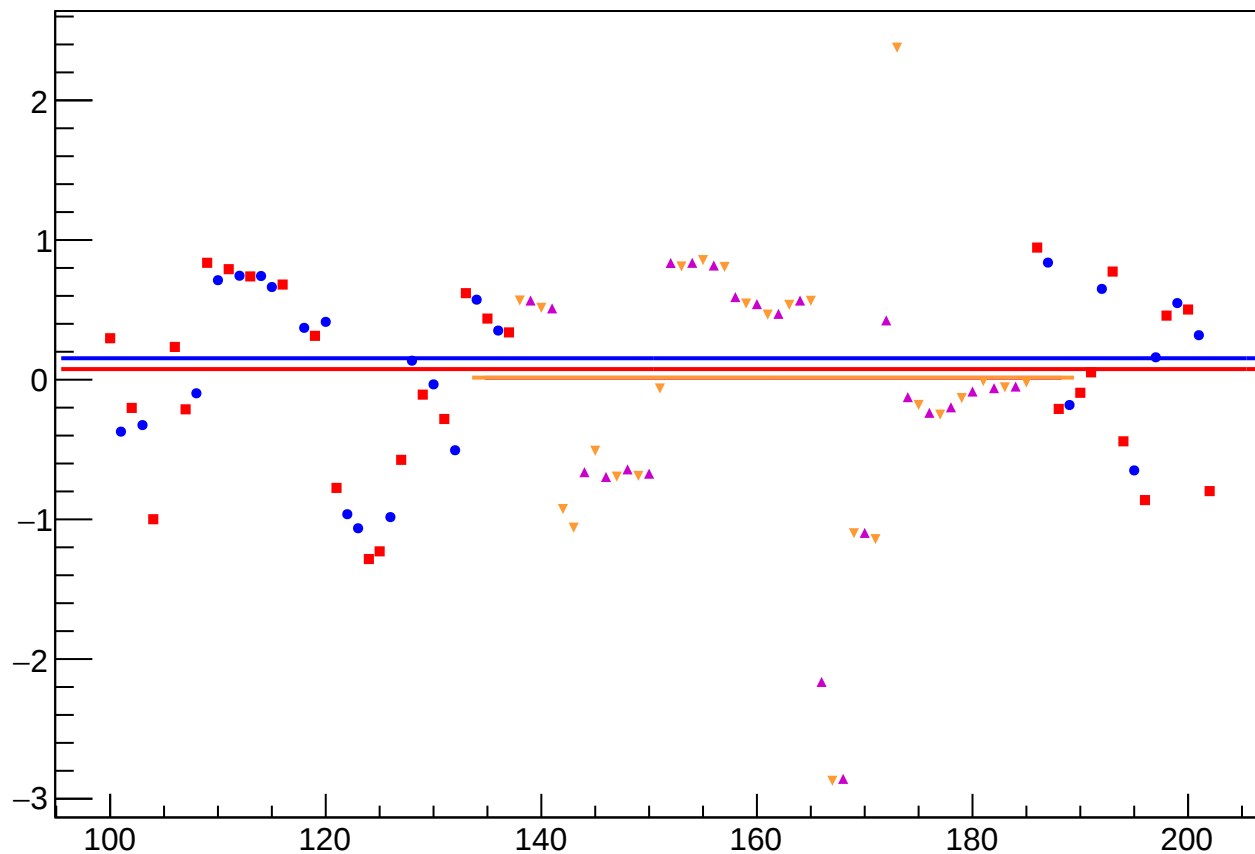
Right: 0.017+/-0.000  $\chi^2/\text{NDF}$ : 6648395.8/52

In: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 4168742.9/46

Out: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 4600873.9/53

All: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 8774568.5/100

# yield\_bpm11Y\_mean vs Slug, Sign Corrected



Right In: 0.154+/-0.000  $\chi^2/\text{NDF}$ : 13571704454.0/23

Left Out: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 96087835995.8/24

Right Out: 0.076+/-0.000  $\chi^2/\text{NDF}$ : 26883211417.2/28

Left In: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 79445696658.6/22

Left: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 175533691121.4/47

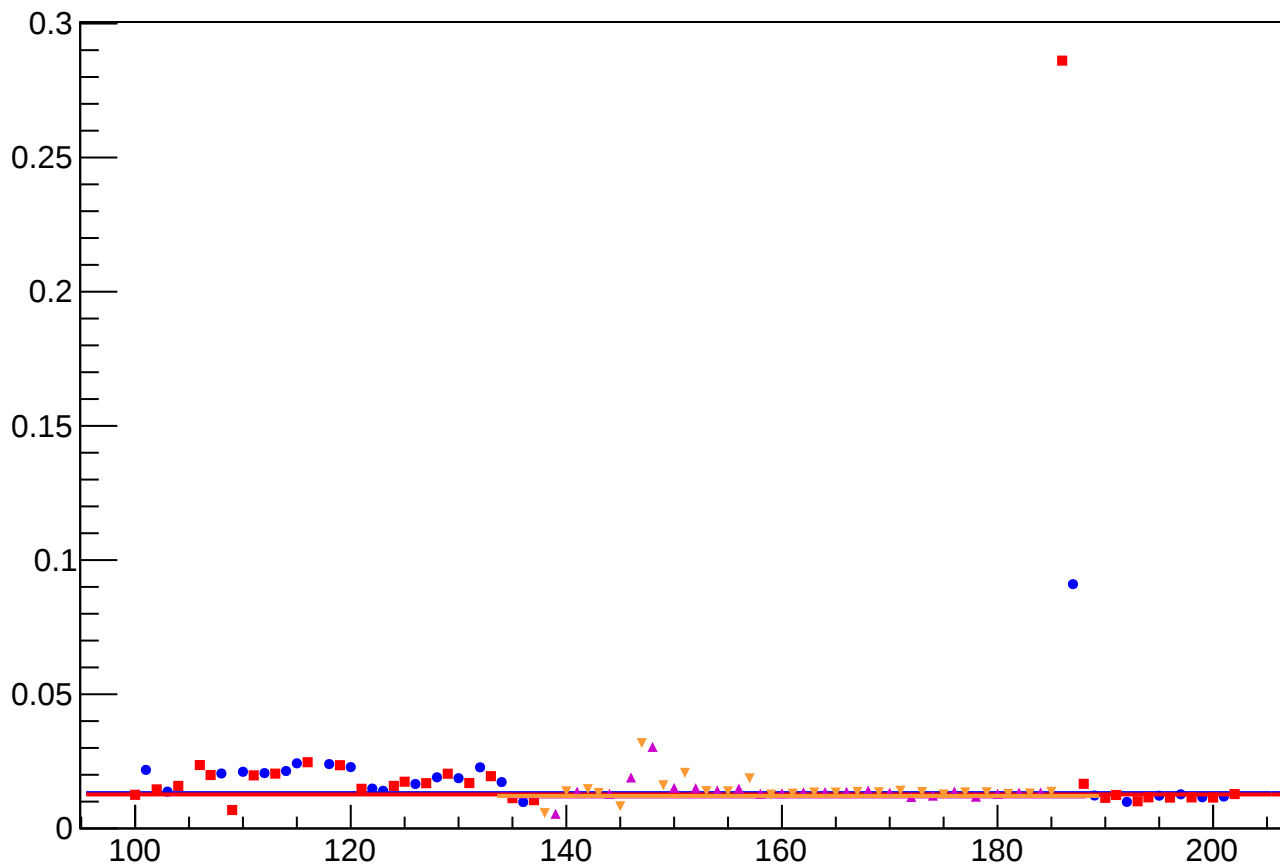
Right: 0.111+/-0.000  $\chi^2/\text{NDF}$ : 40637163520.2/52

In: 0.061+/-0.000  $\chi^2/\text{NDF}$ : 93730504731.0/46

Out: 0.038+/-0.000  $\chi^2/\text{NDF}$ : 123128146211.0/53

All: 0.049+/-0.000  $\chi^2/\text{NDF}$ : 216901431017.8

# yield\_bpm11Y\_rms vs Slug, Sign Corrected



Right In: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 1833257.6/23

Left Out: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 3107648.9/24

Right Out: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 2518764.6/28

Left In: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 3105948.8/22

Left: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 6217411.2/47

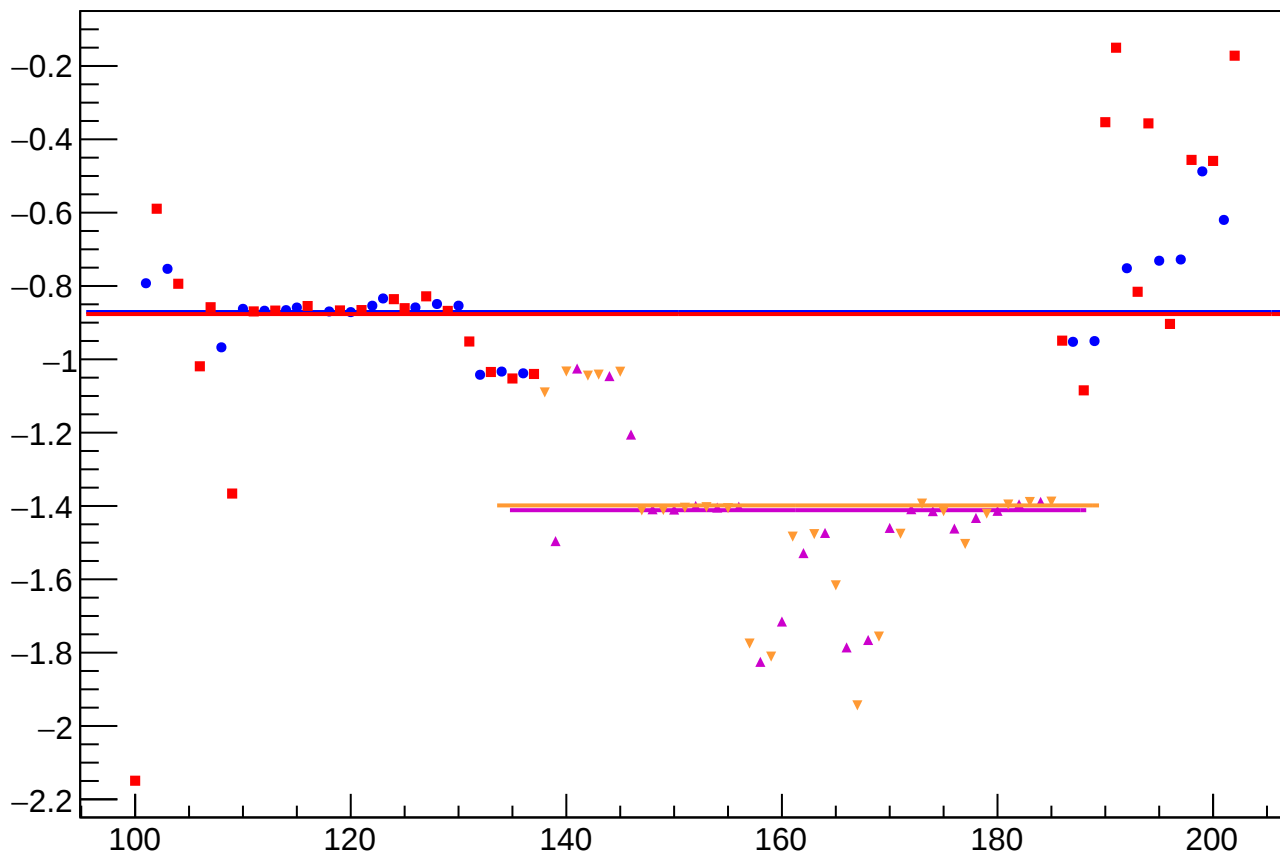
Right: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 4366786.8/52

In: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 5050481.9/46

Out: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 5652652.8/53

All: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 10703194.8/100

# yield\_bpm12X\_mean vs Slug, Sign Corrected



Right In: -0.871+/-0.000  $\chi^2/\text{NDF}$ : 77522873.9/23

Left Out: -1.398+/-0.000  $\chi^2/\text{NDF}$ : 734579404.3/24

Right Out: -0.877+/-0.000  $\chi^2/\text{NDF}$ : 316806006.7/28

Left In: -1.412+/-0.000  $\chi^2/\text{NDF}$ : 512629872.4/22

Left: -1.405+/-0.000  $\chi^2/\text{NDF}$ : 1248268857.1/47

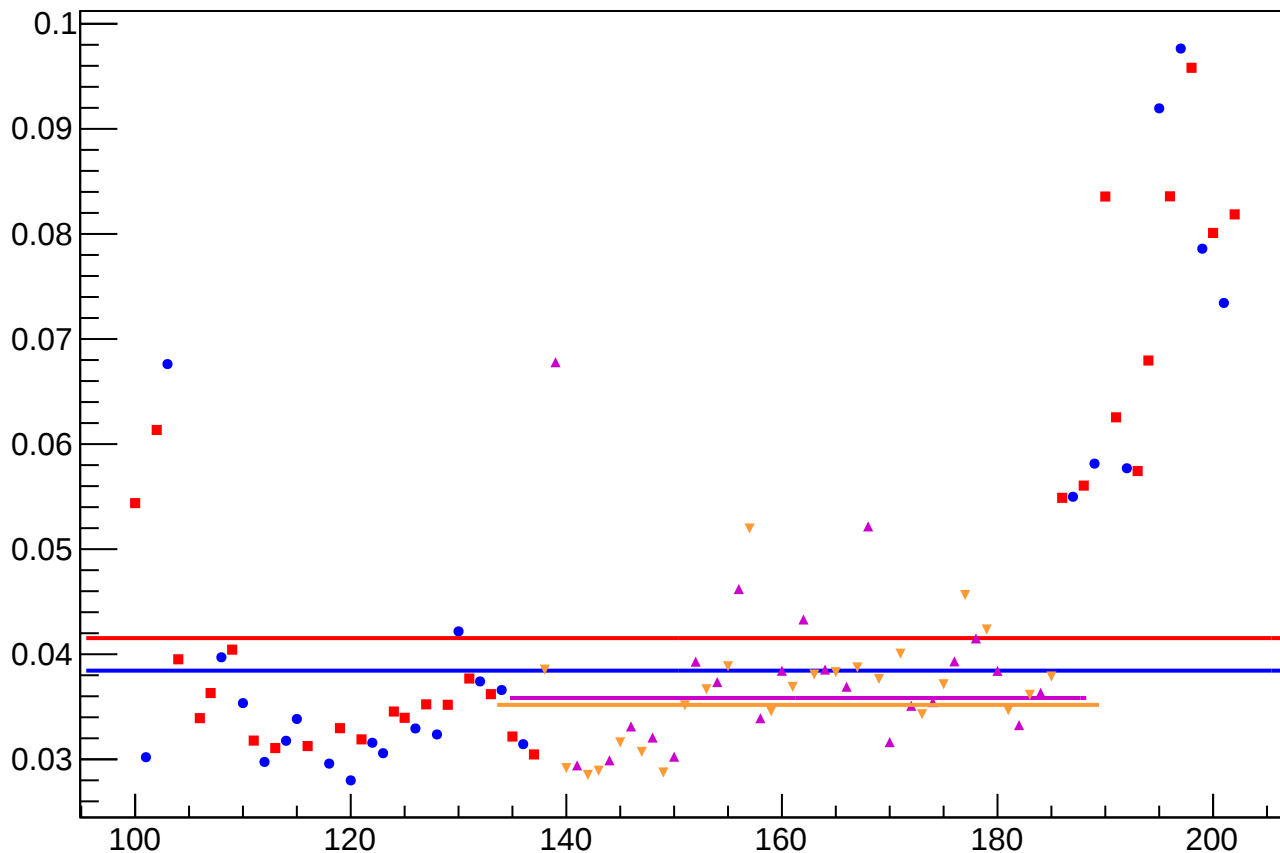
Right: -0.874+/-0.000  $\chi^2/\text{NDF}$ : 394426122.8/52

In: -1.229+/-0.000  $\chi^2/\text{NDF}$ : 1773622584.8/46

Out: -1.228+/-0.000  $\chi^2/\text{NDF}$ : 2207112699.5/53

All: -1.228+/-0.000  $\chi^2/\text{NDF}$ : 3980740959.1/1

# yield\_bpm12X\_rms vs Slug, Sign Corrected



Right In: 0.038 $\pm$ 0.000  $\chi^2$ /NDF: 2793342.5/23

Left Out: 0.035 $\pm$ 0.000  $\chi^2$ /NDF:597886.0/24

Right Out: 0.042 $\pm$ 0.000  $\chi^2$ /NDF: 2906877.9/28

Left In: 0.036 $\pm$ 0.000  $\chi^2$ /NDF:890993.5/22

Left: 0.035 $\pm$ 0.000  $\chi^2$ /NDF: 1494255.9/47

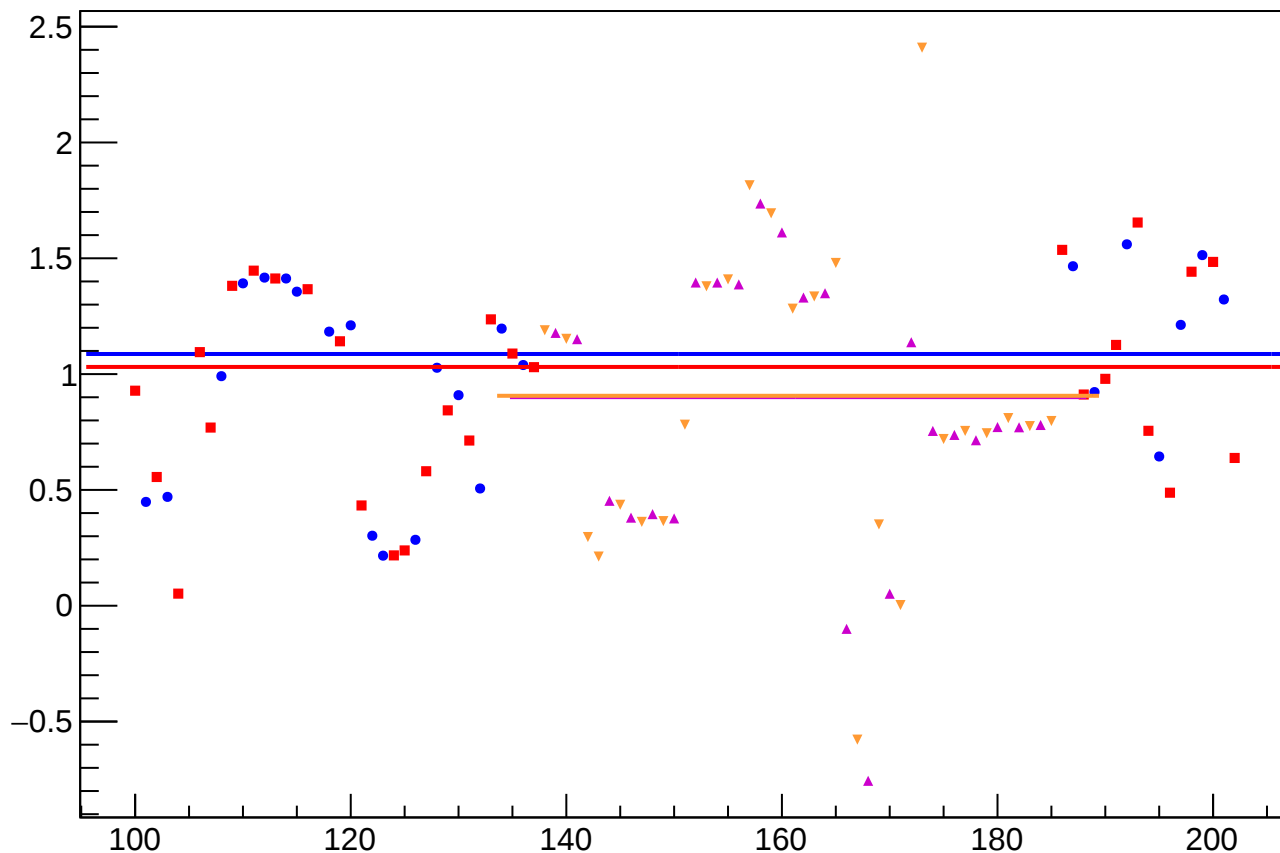
Right: 0.040 $\pm$ 0.000  $\chi^2$ /NDF: 5759794.9/52

In: 0.037 $\pm$ 0.000  $\chi^2$ /NDF:3739178.9/46

Out: 0.037 $\pm$ 0.000  $\chi^2$ /NDF:3847603.5/53

All: 0.037 $\pm$ 0.000  $\chi^2$ /NDF: 7592230.2/100

# yield\_bpm12Y\_mean vs Slug, Sign Corrected



Right In: 1.087+/-0.000

$\chi^2/\text{NDF}$ : 17876340965.3/23

Left Out: 0.906+/-0.000

$\chi^2/\text{NDF}$ : 84108410196.2/24

Right Out: 1.031+/-0.000

$\chi^2/\text{NDF}$ : 24885840242.0/28

Left In: 0.901+/-0.000

$\chi^2/\text{NDF}$ : 66932223067.8/22

Left: 0.904+/-0.000

$\chi^2/\text{NDF}$ : 151044220035.9/47

Right: 1.057+/-0.000

$\chi^2/\text{NDF}$ : 42956114945.9/52

In: 0.967+/-0.000

$\chi^2/\text{NDF}$ : 87397242800.8/46

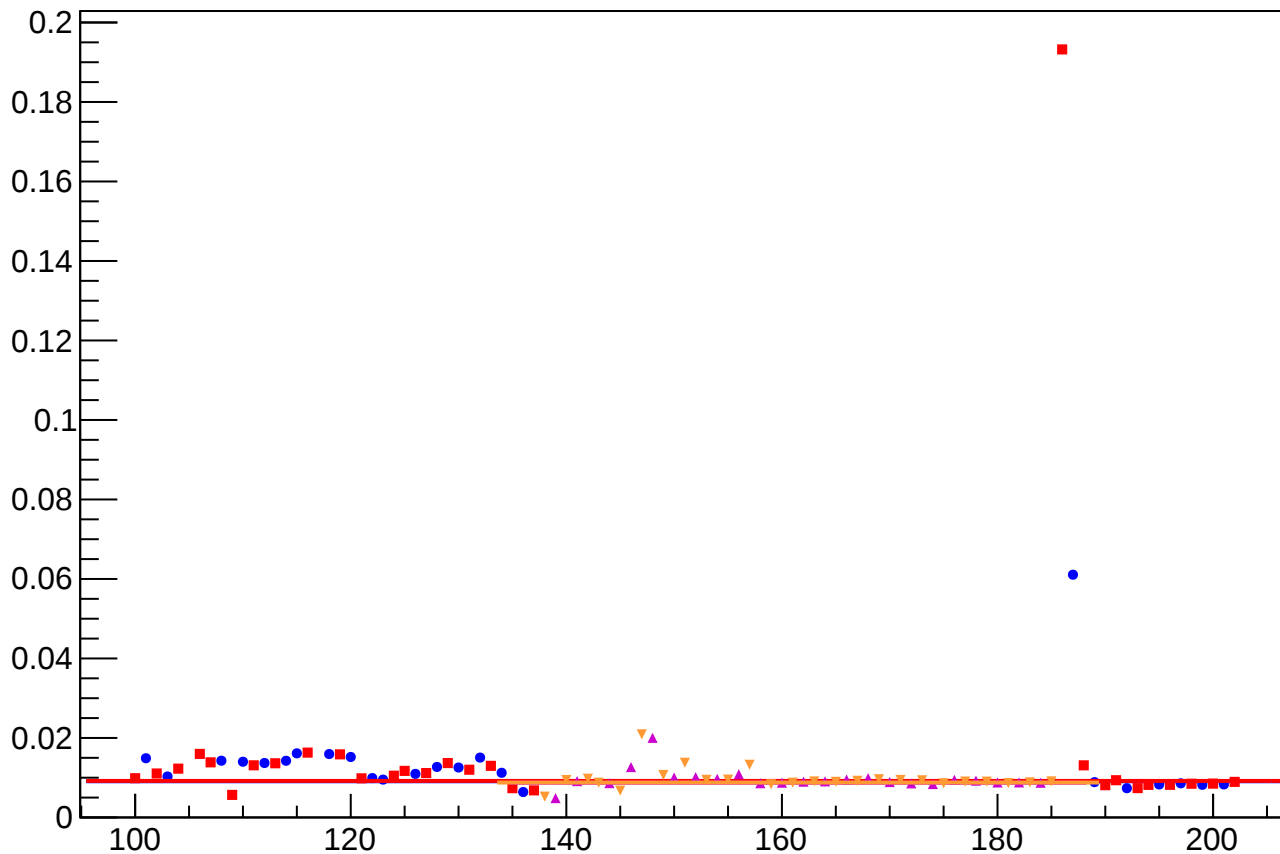
Out: 0.953+/-0.000

$\chi^2/\text{NDF}$ : 110277746521.1/53

All: 0.960+/-0.000

$\chi^2/\text{NDF}$ : 197708153606.4

# yield\_bpm12Y\_rms vs Slug, Sign Corrected



Right In: 0.009+/-0.000  $\chi^2/NDF$ : 1708083.3/23

Left Out: 0.009+/-0.000  $\chi^2/NDF$ :1698526.2/24

Right Out: 0.009+/-0.000  $\chi^2/NDF$ : 2183112.5/28

Left In: 0.009+/-0.000  $\chi^2/NDF$ :1669983.7/22

Left: 0.009+/-0.000  $\chi^2/NDF$ : 3369008.8/47

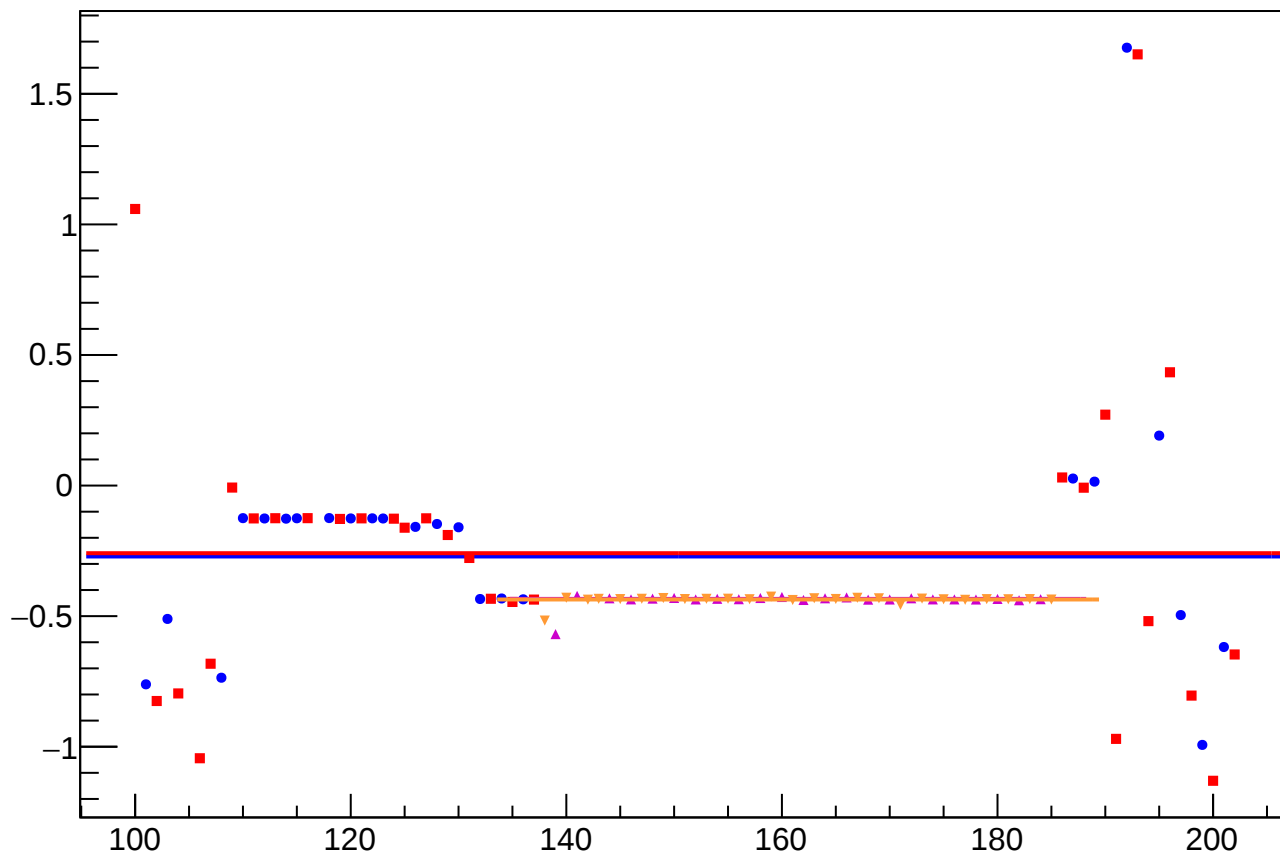
Right: 0.009+/-0.000  $\chi^2/NDF$ : 3892025.6/52

In: 0.009+/-0.000  $\chi^2/NDF$ :3398791.7/46

Out: 0.009+/-0.000  $\chi^2/NDF$ :3908912.8/53

All: 0.009+/-0.000  $\chi^2/NDF$ : 7309264.1/100

# yield\_bpm16X\_mean vs Slug, Sign Corrected



Right In: -0.272+/-0.000  $\chi^2/\text{NDF}$ : 2020784747.1/23

Left Out: -0.436+/-0.000  $\chi^2/\text{NDF}$ : 28776503.9/24

Right Out: -0.259+/-0.000  $\chi^2/\text{NDF}$ : 2045726318.3/28

Left In: -0.434+/-0.000  $\chi^2/\text{NDF}$ : 20164730.3/22

Left: -0.435+/-0.000  $\chi^2/\text{NDF}$ : 49321098.5/47

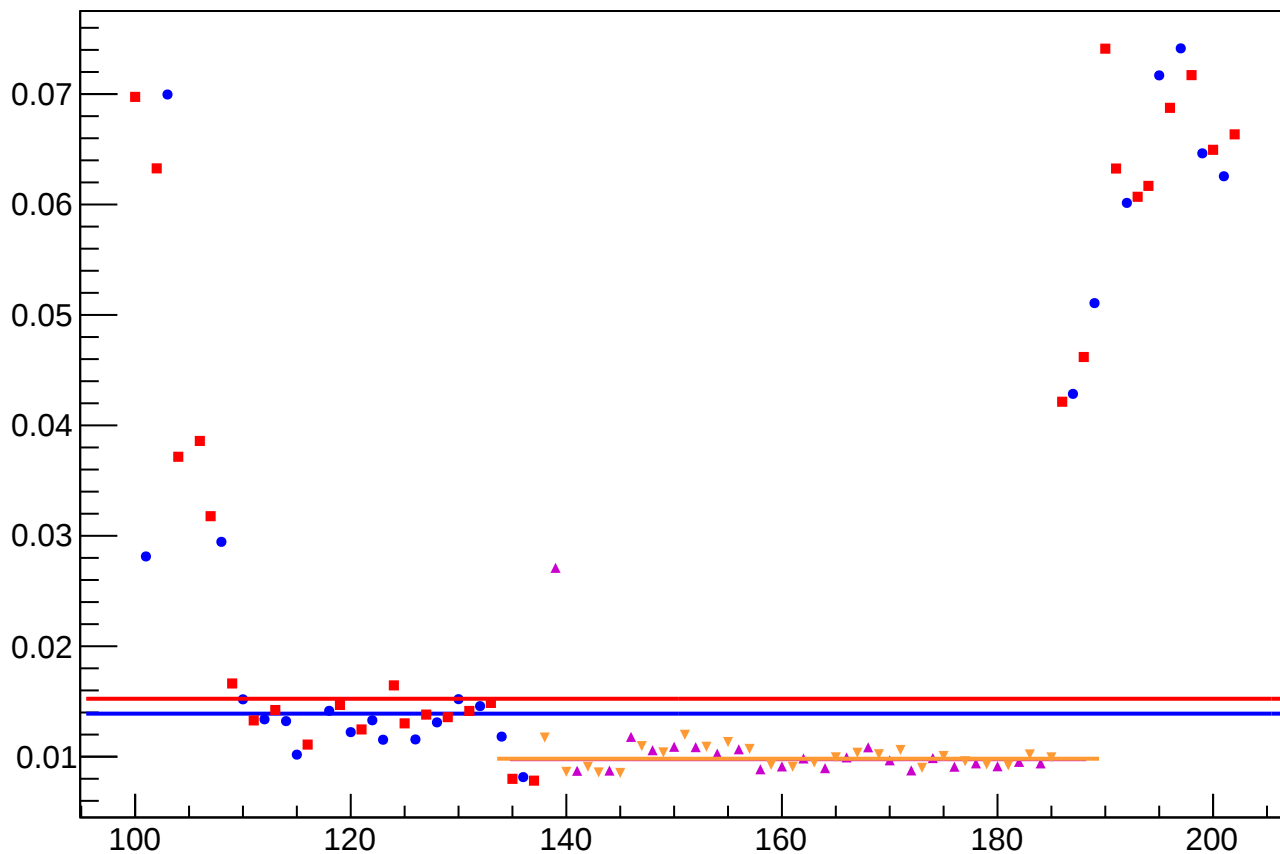
Right: -0.265+/-0.000  $\chi^2/\text{NDF}$ : 4069029030.6/52

In: -0.405+/-0.000  $\chi^2/\text{NDF}$ : 2751865597.3/46

Out: -0.407+/-0.000  $\chi^2/\text{NDF}$ : 2902932781.1/53

All: -0.406+/-0.000  $\chi^2/\text{NDF}$ : 5655167899.1/100

# yield\_bpm16X\_rms vs Slug, Sign Corrected



Right In: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 7414498.3/23

Left Out: 0.010+/-0.000  $\chi^2/\text{NDF}$ : 271172.3/24

Right Out: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 9207953.3/28

Left In: 0.010+/-0.000  $\chi^2/\text{NDF}$ : 786577.8/22

Left: 0.010+/-0.000  $\chi^2/\text{NDF}$ : 1058038.1/47

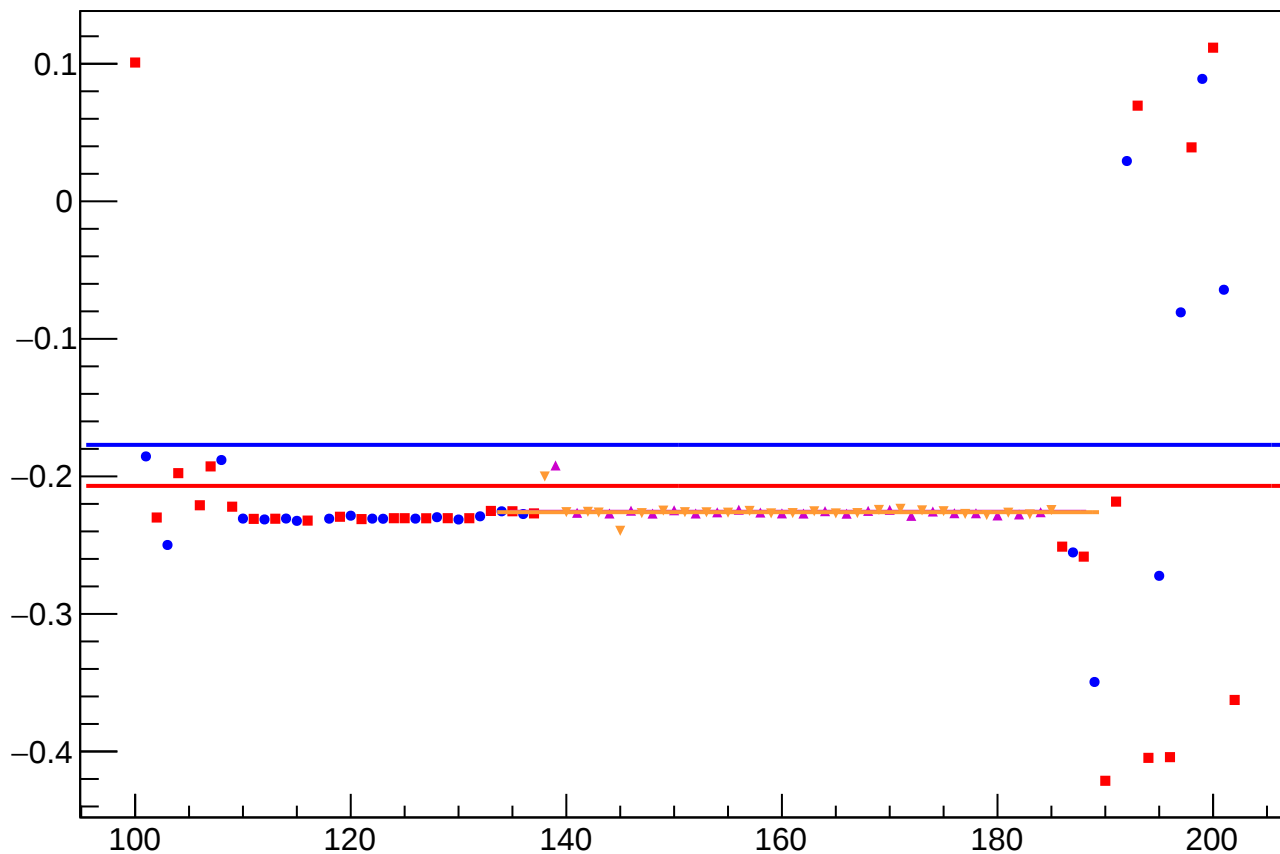
Right: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 16680774.0/52

In: 0.010+/-0.000  $\chi^2/\text{NDF}$ : 9116738.9/46

Out: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 11034342.5/53

All: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 20158651.1/100

# yield\_bpm16Y\_mean vs Slug, Sign Corrected



Right In: -0.177+/-0.000  $\chi^2/\text{NDF}$ : 4457287872.7/23

Left Out: -0.226+/-0.000  $\chi^2/\text{NDF}$ : 21207366.3/24

Right Out: -0.207+/-0.000  $\chi^2/\text{NDF}$ : 7872237529.5/28

Left In: -0.226+/-0.000  $\chi^2/\text{NDF}$ : 13717302.5/22

Left: -0.226+/-0.000  $\chi^2/\text{NDF}$ : 34951372.2/47

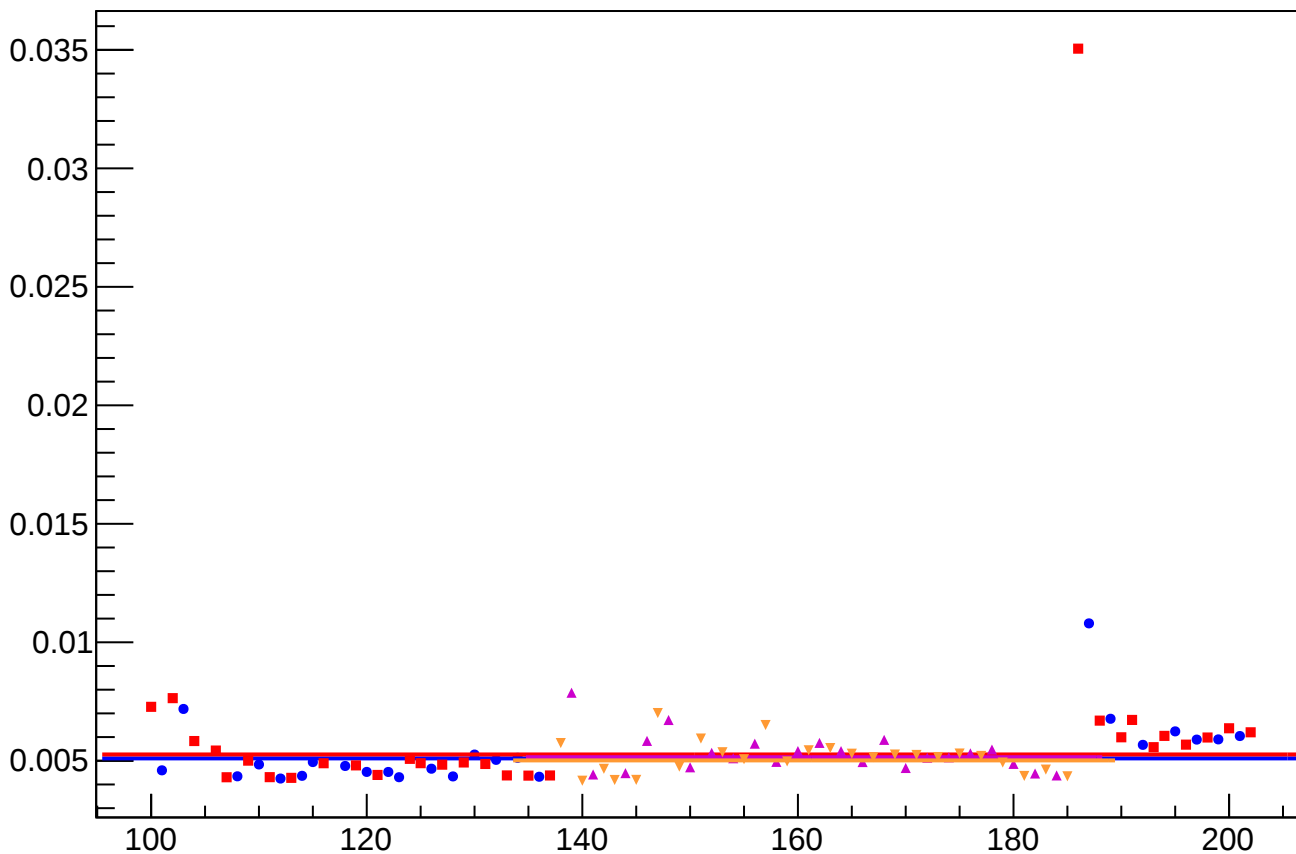
Right: -0.193+/-0.000  $\chi^2/\text{NDF}$ : 12512946522.6/52

In: -0.207+/-0.000  $\chi^2/\text{NDF}$ : 5040554633.9/46

Out: -0.219+/-0.000  $\chi^2/\text{NDF}$ : 7990335496.3/53

All: -0.213+/-0.000  $\chi^2/\text{NDF}$ : 13105206090.6/100

# yield\_bpm16Y\_rms vs Slug, Sign Corrected



Right In: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 565500.9/23

Left Out: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 532623.0/24

Right Out: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 1130606.7/28

Left In: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 504040.6/22

Left: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 1048260.0/47

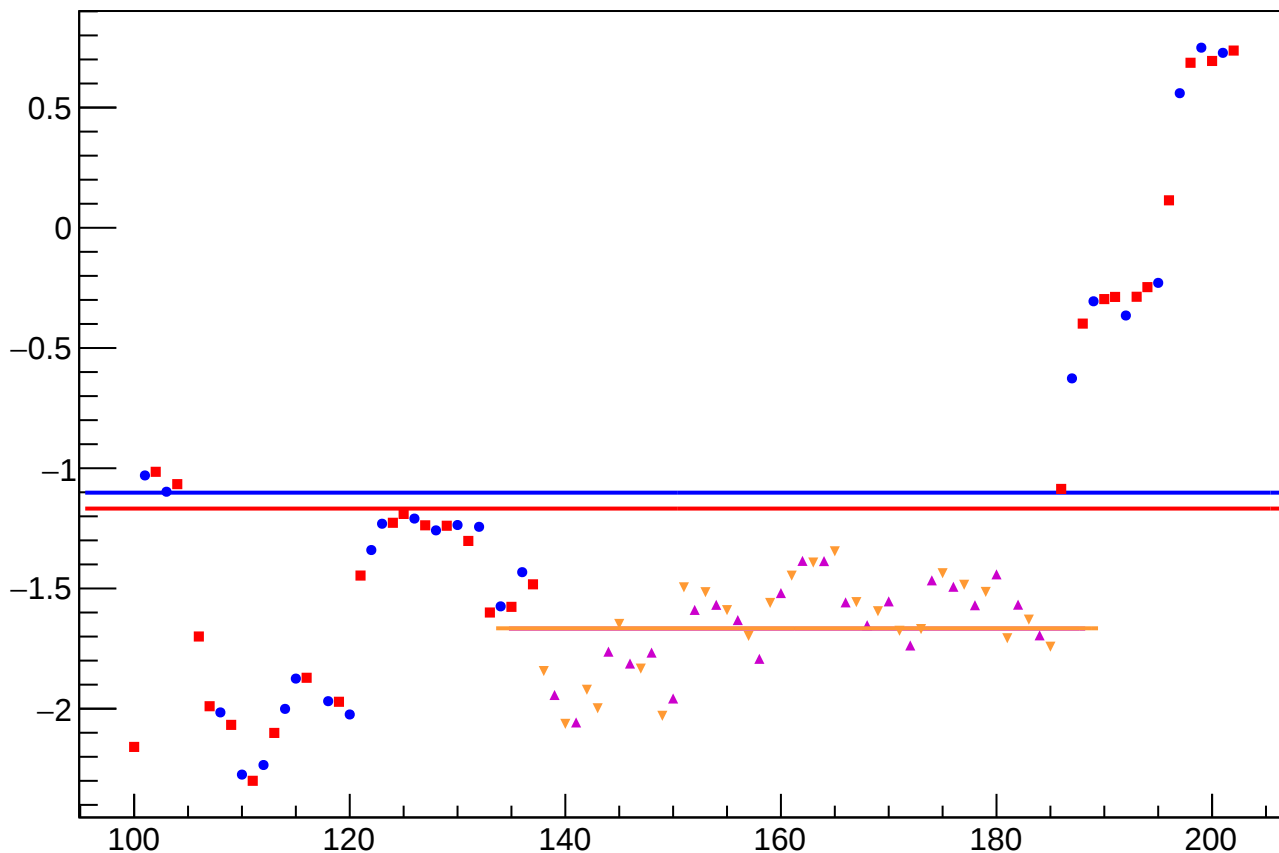
Right: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 1707514.5/52

In: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 1070710.0/46

Out: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 1696542.7/53

All: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 2767575.6/100

# yield\_bpm0l01X\_mean vs Slug, Sign Corrected



Right In: -1.102+/-0.000

$\chi^2/\text{NDF}$ : 124108531773.2/23

Left: -1.666+/-0.000

$\chi^2/\text{NDF}$ : 32983827631.4/47

Left Out: -1.666+/-0.000

$\chi^2/\text{NDF}$ : 18368038680.8/24

Right: -1.138+/-0.000

$\chi^2/\text{NDF}$ : 285156071231.0/52

Right Out: -1.168+/-0.000

$\chi^2/\text{NDF}$ : 160609192096.3/28

In: -1.495+/-0.000

$\chi^2/\text{NDF}$ : 179003969074.5/46

Out: -1.498+/-0.000

$\chi^2/\text{NDF}$ : 215768368551.9/53

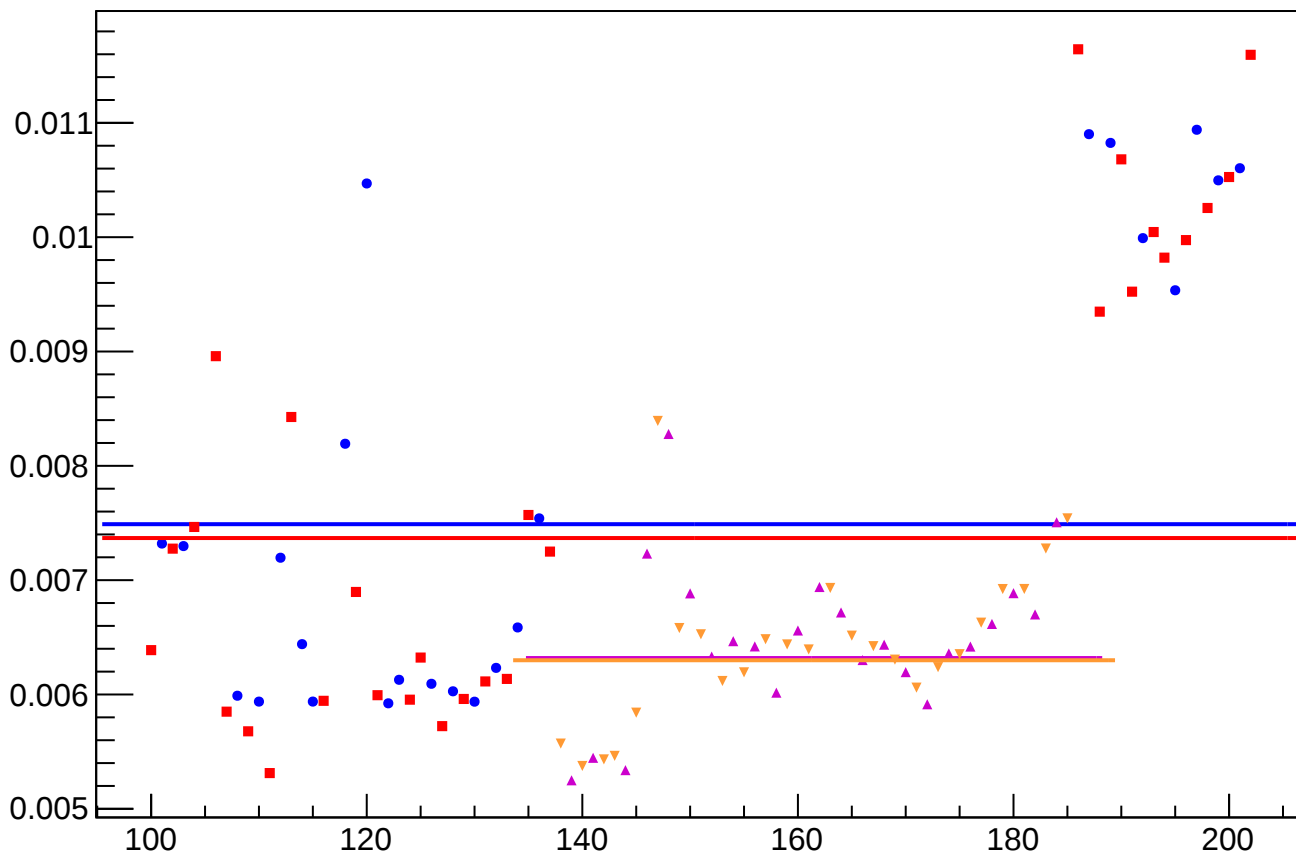
Left In: -1.667+/-0.000

$\chi^2/\text{NDF}$ : 14615453869.3/22

All: -1.497+/-0.000

$\chi^2/\text{NDF}$ : 394776540386.2

# yield\_bpm0l01X\_rms vs Slug, Sign Corrected



Right In: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 1118686.0/23

Left Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ :312811.2/24

Right Out: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 1545285.6/28

Left In: 0.006+/-0.000  $\chi^2/\text{NDF}$ :334332.4/22

Left: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 647302.7/47

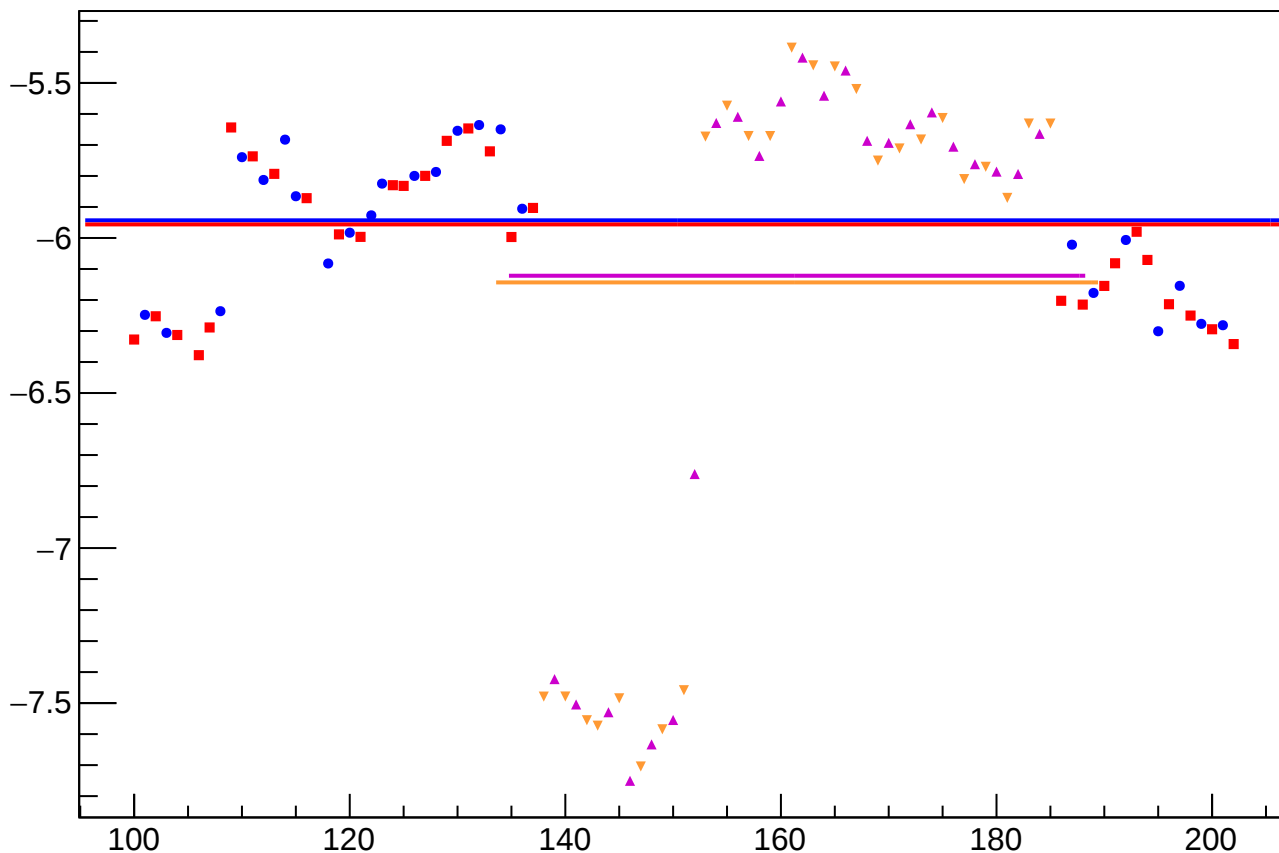
Right: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 2666912.5/52

In: 0.007+/-0.000  $\chi^2/\text{NDF}$ :1798514.9/46

Out: 0.007+/-0.000  $\chi^2/\text{NDF}$ :2197189.7/53

All: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 3995881.6/100

# yield\_bpm0l01Y\_mean vs Slug, Sign Corrected



Right In: -5.943+/-0.000  $\chi^2/\text{NDF}$ : 13324541342.2/23

Left Out: -6.143+/-0.000  $\chi^2/\text{NDF}$ : 185721259239.3/24

Right Out: -5.956+/-0.000  $\chi^2/\text{NDF}$ : 15337420391.5/28

Left In: -6.122+/-0.000  $\chi^2/\text{NDF}$ : 159909473006.6/22

Left: -6.133+/-0.000  $\chi^2/\text{NDF}$ : 345689393988.1/47

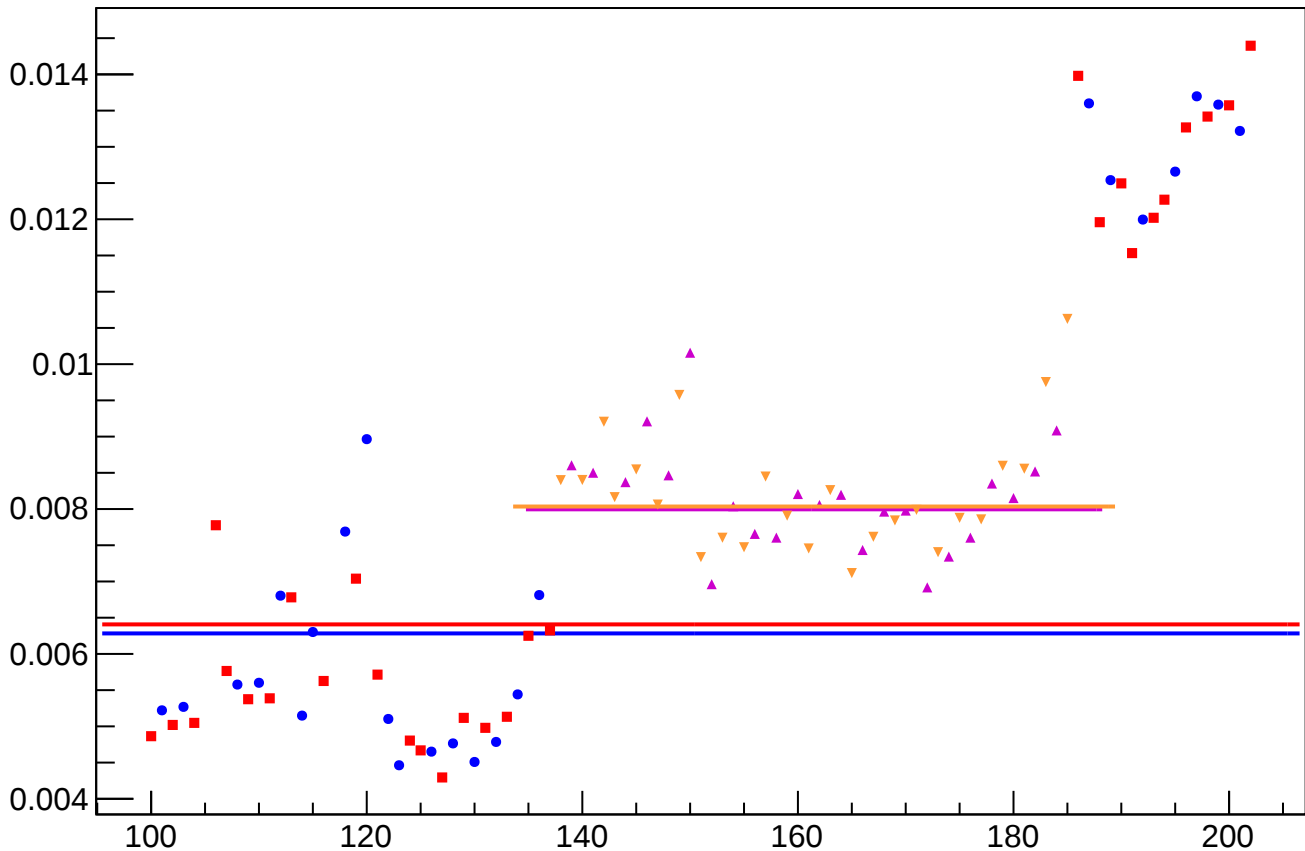
Right: -5.950+/-0.000  $\chi^2/\text{NDF}$ : 28683076752.5/52

In: -6.036+/-0.000  $\chi^2/\text{NDF}$ : 177038082287.6/46

Out: -6.049+/-0.000  $\chi^2/\text{NDF}$ : 205589069580.7/53

All: -6.043+/-0.000  $\chi^2/\text{NDF}$ : 382669410436.3

# yield\_bpm0l01Y\_rms vs Slug, Sign Corrected



Right In: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 3087011.5/23

Left Out: 0.008+/-0.000  $\chi^2/\text{NDF}$ :205976.0/24

Right Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 3851658.1/28

Left In: 0.008+/-0.000  $\chi^2/\text{NDF}$ :220203.0/22

Left: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 426558.9/47

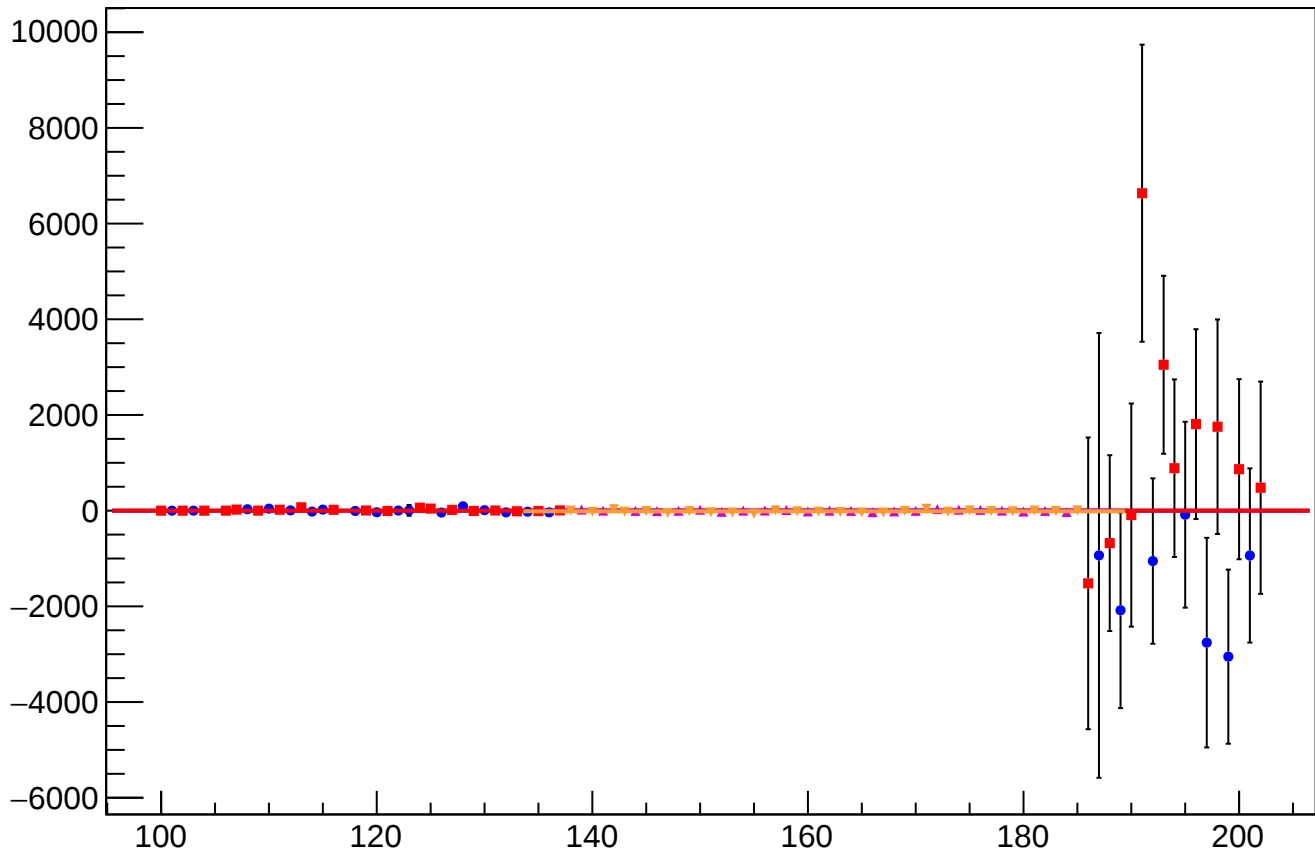
Right: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 6942445.4/52

In: 0.007+/-0.000  $\chi^2/\text{NDF}$ :4006356.2/46

Out: 0.007+/-0.000  $\chi^2/\text{NDF}$ :4743318.9/53

All: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 8750501.9/100

# diff\_cav4bX\_mean vs Slug, Sign Corrected



Right In:  $0.013 \pm 0.017$   $\chi^2/\text{NDF}: 22.4/23$

Left Out:  $-13.472 \pm 2.796$   $\chi^2/\text{NDF}: 58.5/24$

Right Out:  $-0.003 \pm 0.016$   $\chi^2/\text{NDF}: 24.5/28$

Left In:  $0.489 \pm 2.905$   $\chi^2/\text{NDF}: 28.7/22$

Left:  $-6.758 \pm 2.015$   $\chi^2/\text{NDF}: 99.2/47$

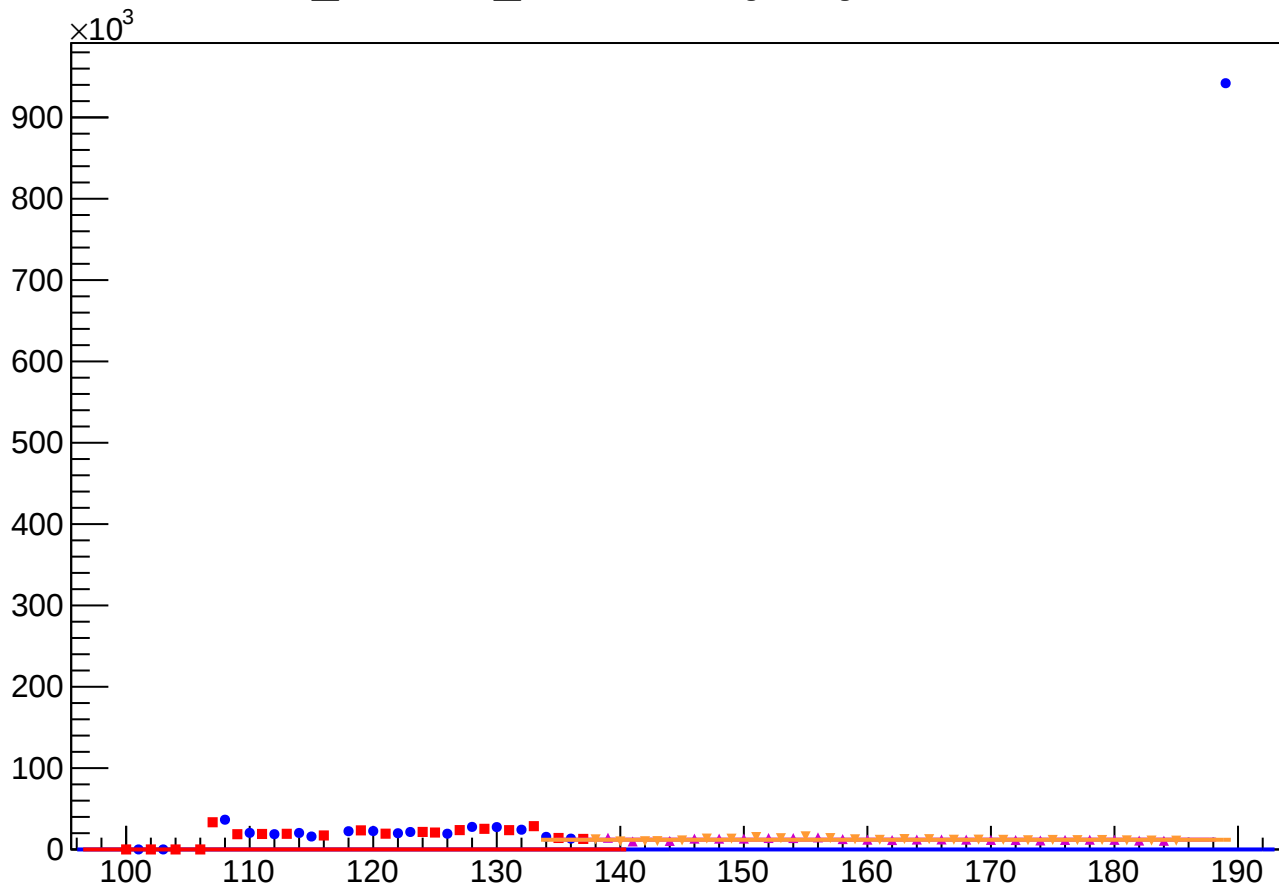
Right:  $0.004 \pm 0.012$   $\chi^2/\text{NDF}: 47.4/52$

In:  $0.013 \pm 0.017$   $\chi^2/\text{NDF}: 51.1/46$

Out:  $-0.004 \pm 0.016$   $\chi^2/\text{NDF}: 106.2/53$

All:  $0.004 \pm 0.012$   $\chi^2/\text{NDF}: 157.8/100$

# diff\_cav4bX\_rms vs Slug, Sign Corrected



Right In: 18.640 $\pm$ 0.012  $\chi^2$ /NDF: 10982766.4/17

Left Out: 11909.835 $\pm$ 1.977  $\chi^2$ /NDF: 475310.2/24

Right Out: 18.311 $\pm$ 0.011  $\chi^2$ /NDF: 11056055.0/18

Left In: 12064.321 $\pm$ 2.054  $\chi^2$ /NDF: 372586.0/22

Left: 11984.125 $\pm$ 1.425  $\chi^2$ /NDF: 850831.6/47

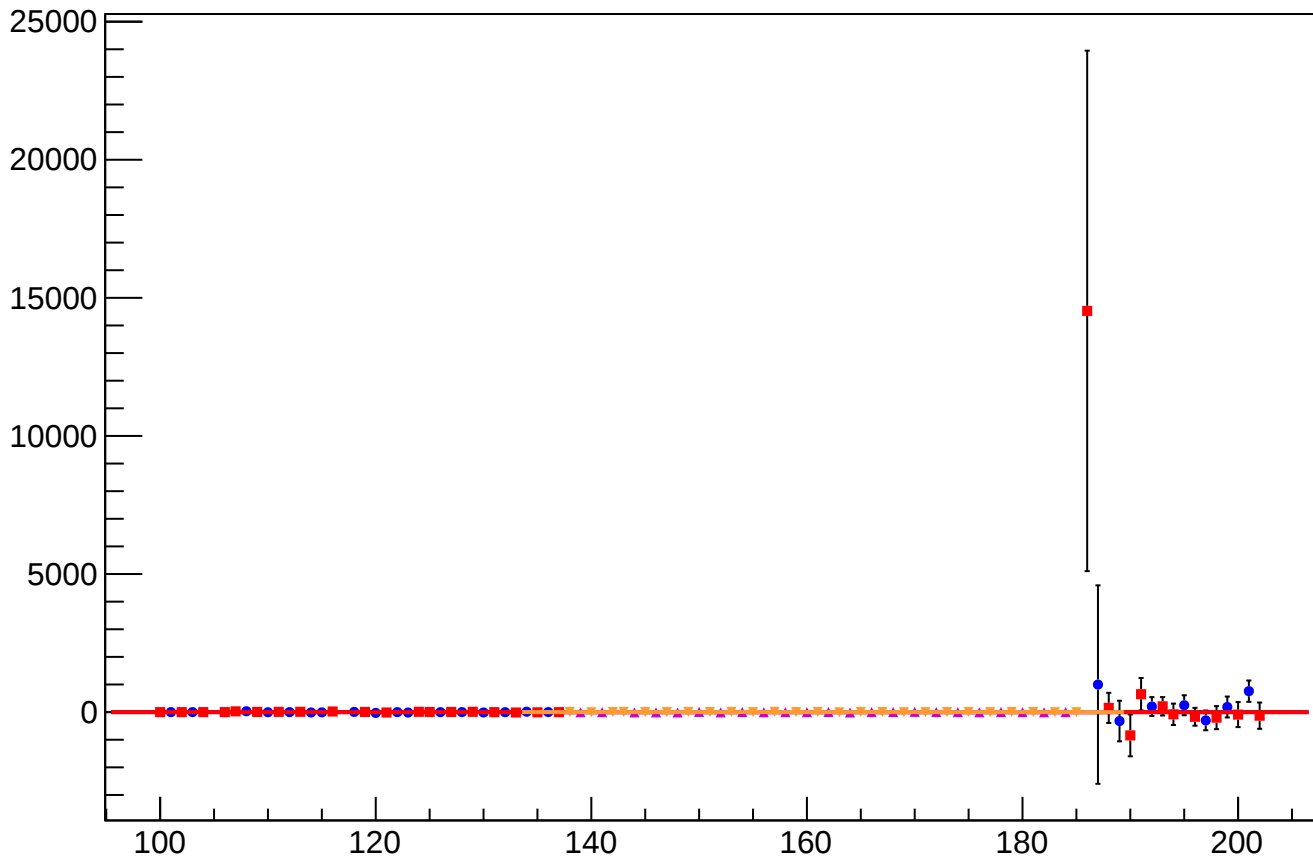
Right: 18.463 $\pm$ 0.008  $\chi^2$ /NDF: 22039209.8/36

In: 19.069 $\pm$ 0.012  $\chi^2$ /NDF: 45733258.4/40

Out: 18.704 $\pm$ 0.011  $\chi^2$ /NDF: 47698495.9/43

All: 18.873 $\pm$ 0.008  $\chi^2$ /NDF: 93432232.0/84

# diff\_cav4bY\_mean vs Slug, Sign Corrected



Right In:  $0.001 \pm 0.009$   $\chi^2/\text{NDF}$ : 20.5/23

Left Out:  $1.675 \pm 1.021$   $\chi^2/\text{NDF}$ : 17.9/24

Right Out:  $-0.014 \pm 0.009$   $\chi^2/\text{NDF}$ : 24.6/28

Left In:  $-0.843 \pm 1.043$   $\chi^2/\text{NDF}$ : 35.7/22

Left:  $0.443 \pm 0.730$   $\chi^2/\text{NDF}$ : 56.5/47

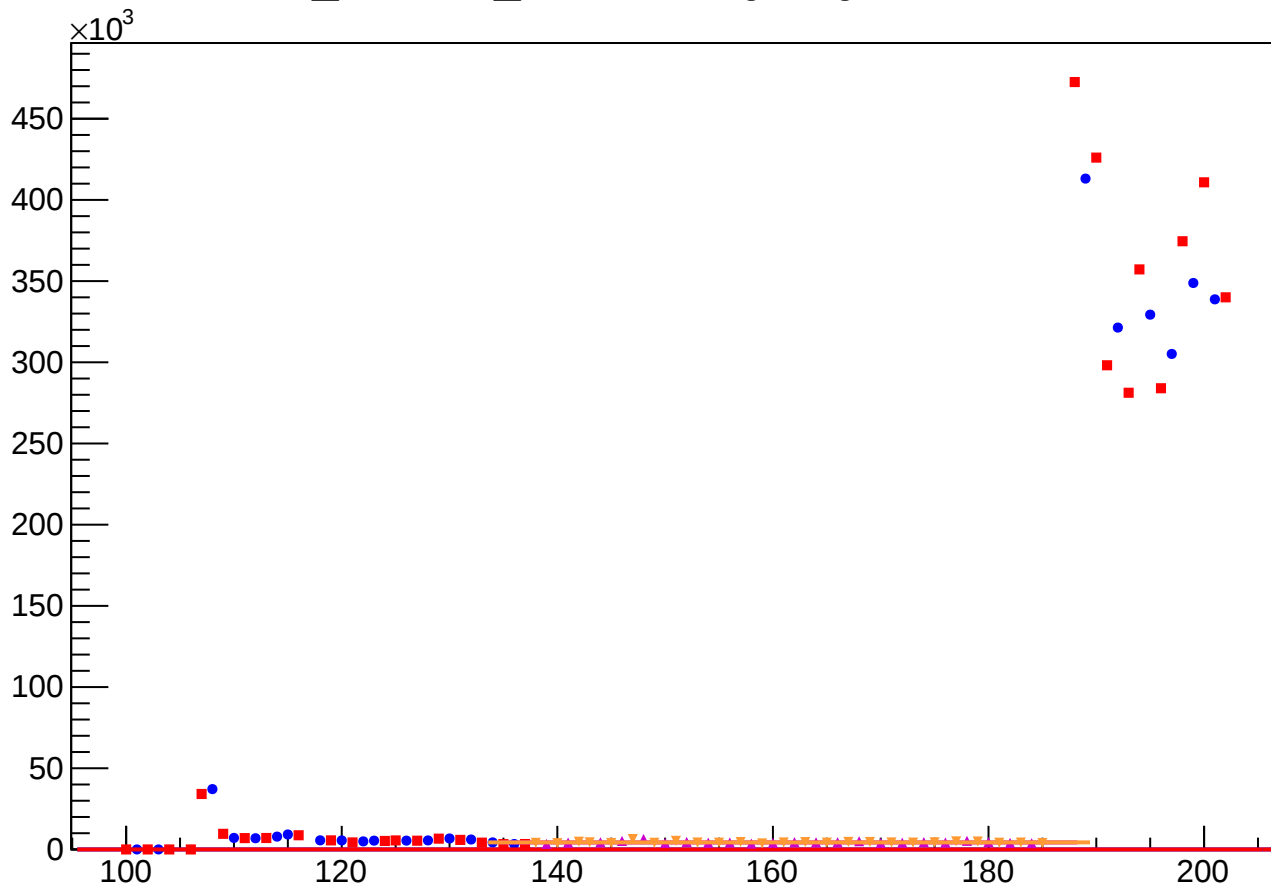
Right:  $-0.007 \pm 0.006$   $\chi^2/\text{NDF}$ : 46.5/52

In:  $0.001 \pm 0.009$   $\chi^2/\text{NDF}$ : 56.8/46

Out:  $-0.014 \pm 0.009$   $\chi^2/\text{NDF}$ : 45.2/53

All:  $-0.007 \pm 0.006$   $\chi^2/\text{NDF}$ : 103.4/100

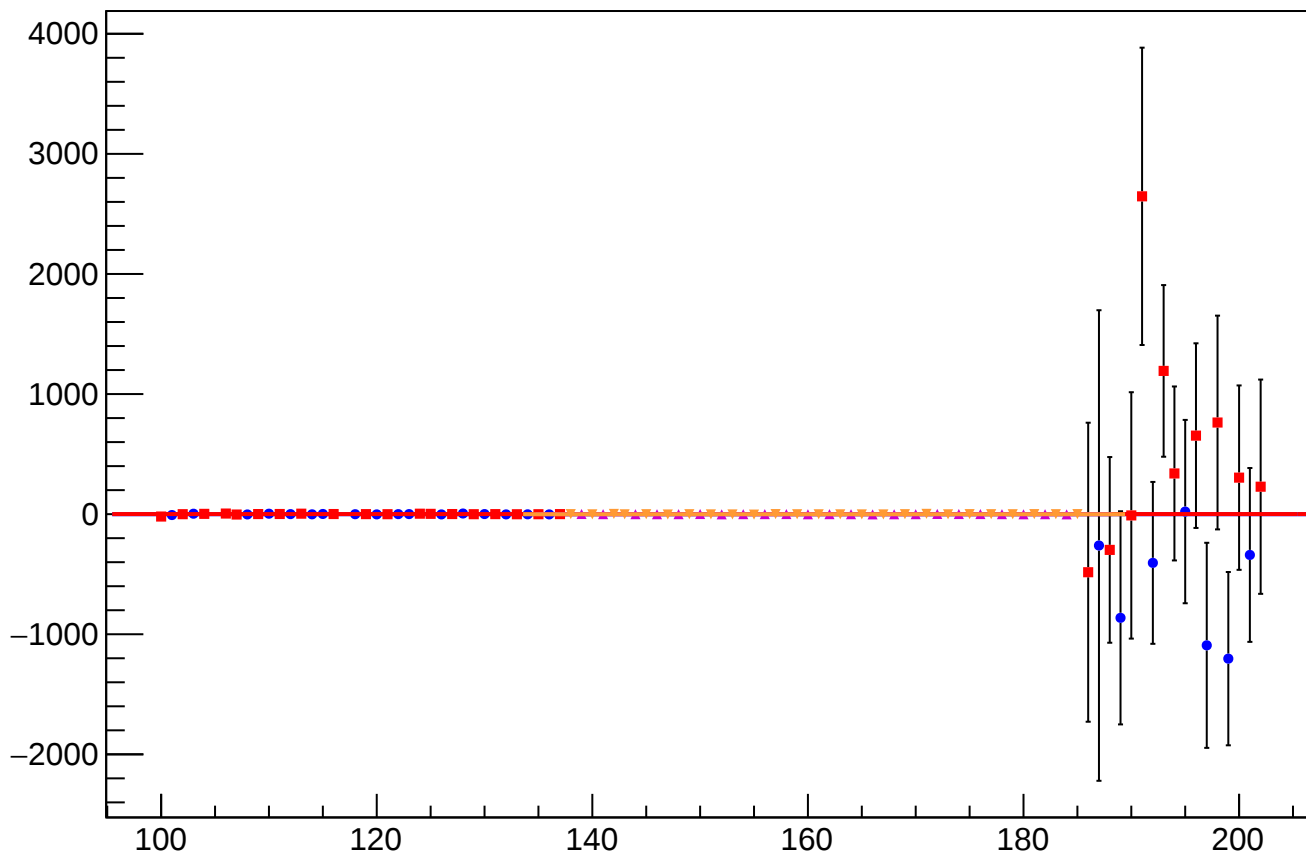
# diff\_cav4bY\_rms vs Slug, Sign Corrected



Right In: 9.939+/-0.007     $\chi^2/\text{NDF}$ : 19667558.7/22  
 Left Out: 4350.545+/-0.722     $\chi^2/\text{NDF}$ :384749.0/24  
 Right Out: 9.855+/-0.006     $\chi^2/\text{NDF}$ : 22674710.2/27  
 Left In: 4314.568+/-0.738     $\chi^2/\text{NDF}$ :534594.3/22

Left: 4332.940+/-0.516     $\chi^2/\text{NDF}$ : 920558.3/47  
 Right: 9.894+/-0.004     $\chi^2/\text{NDF}$ : 42342356.6/50  
 In: 10.274+/-0.007     $\chi^2/\text{NDF}$ :54263573.7/45  
 Out: 10.167+/-0.006     $\chi^2/\text{NDF}$ :59204422.8/52  
 All: 10.217+/-0.004     $\chi^2/\text{NDF}$ : 113468140.2/98

# diff\_cav4cX\_mean vs Slug, Sign Corrected



Right In:  $-0.703 \pm 0.485$   $\chi^2/\text{NDF}$ : 28.4/23

Left Out:  $-0.774 \pm 0.164$   $\chi^2/\text{NDF}$ : 58.4/24

Right Out:  $0.762 \pm 0.502$   $\chi^2/\text{NDF}$ : 21.3/28

Left In:  $0.020 \pm 0.170$   $\chi^2/\text{NDF}$ : 29.2/22

Left:  $-0.391 \pm 0.118$   $\chi^2/\text{NDF}$ : 98.9/47

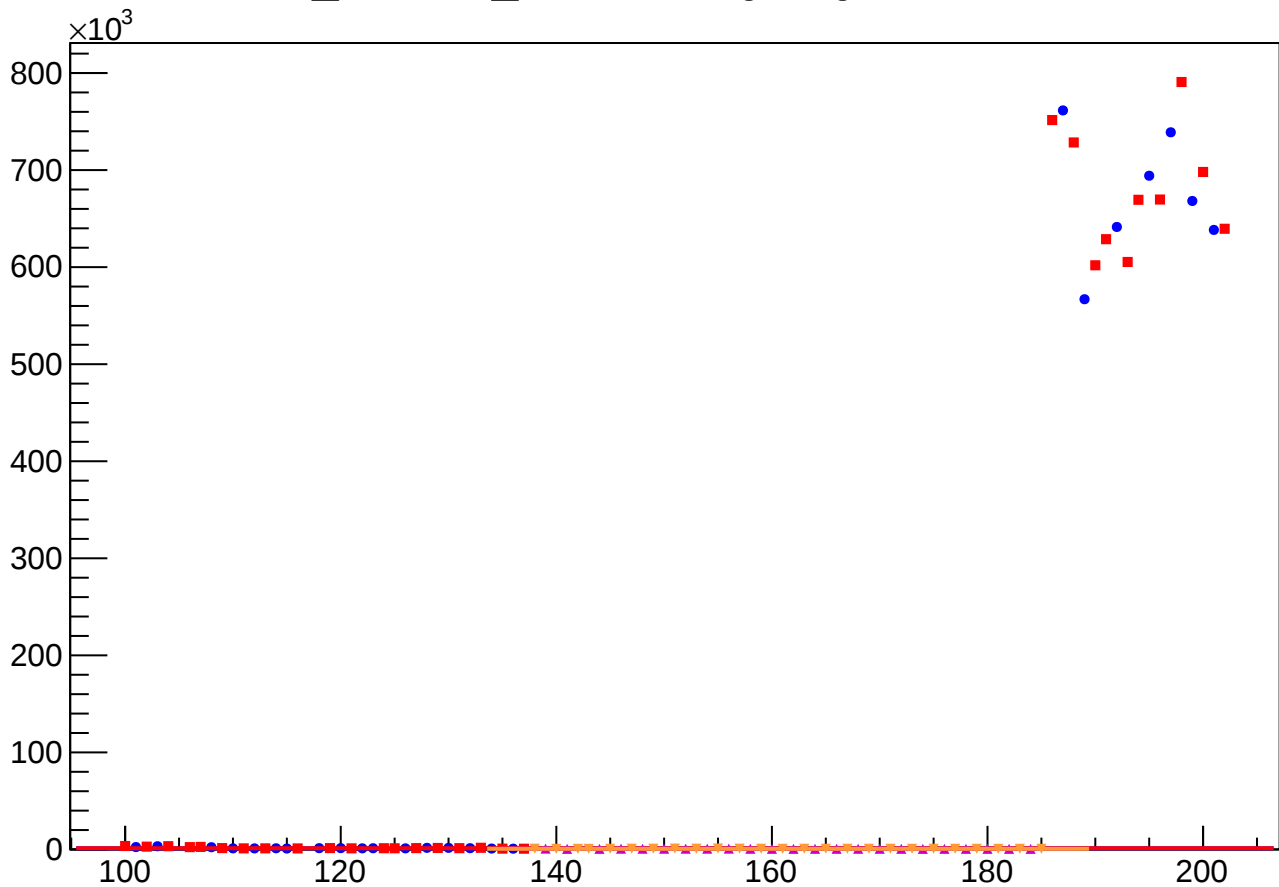
Right:  $0.004 \pm 0.349$   $\chi^2/\text{NDF}$ : 54.2/52

In:  $-0.059 \pm 0.161$   $\chi^2/\text{NDF}$ : 59.7/46

Out:  $-0.626 \pm 0.156$   $\chi^2/\text{NDF}$ : 88.1/53

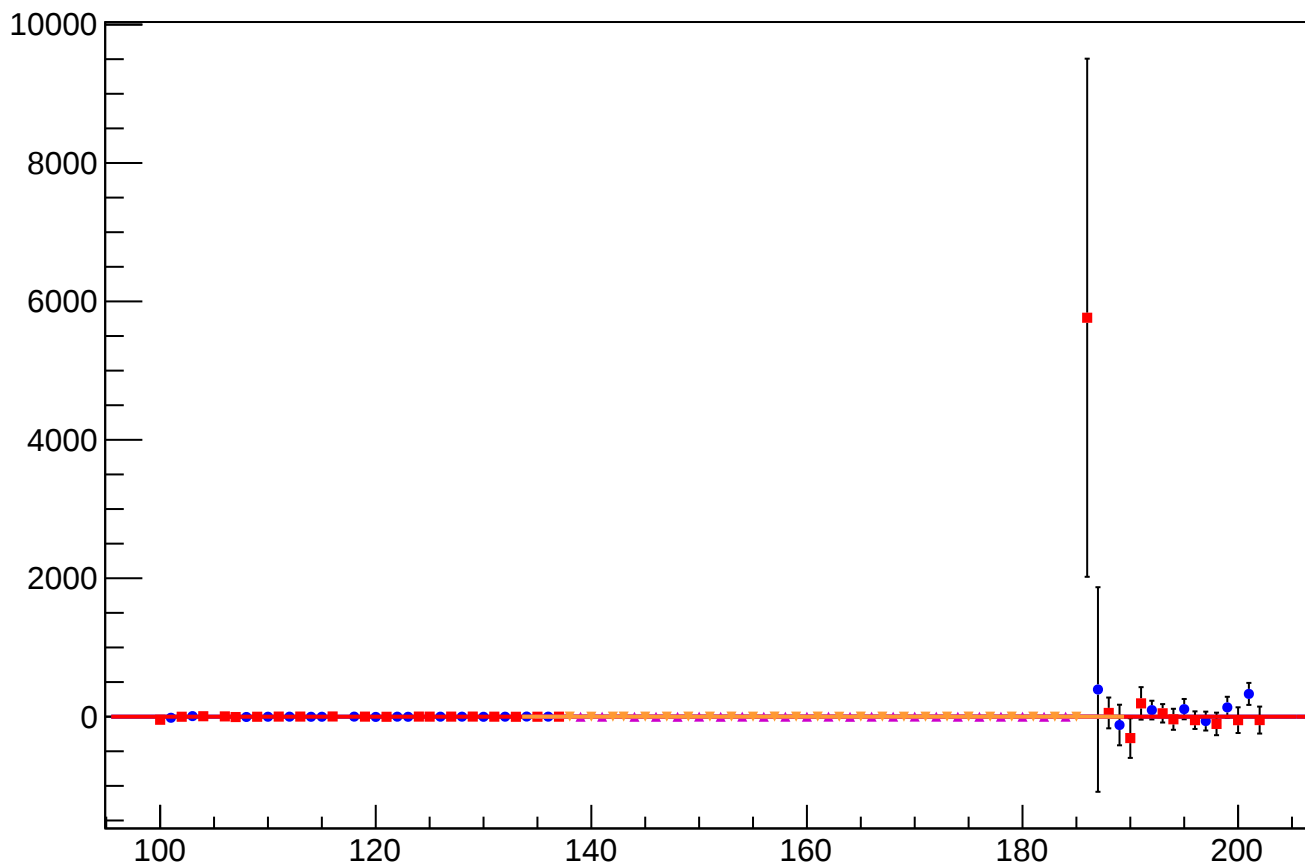
All:  $-0.350 \pm 0.112$   $\chi^2/\text{NDF}$ : 154.2/100

# diff\_cav4cX\_rms vs Slug, Sign Corrected



|                                 |                              |                             |                              |
|---------------------------------|------------------------------|-----------------------------|------------------------------|
| Right In: 1165.863 $\pm$ 0.343  | $\chi^2$ /NDF: 10897458.3/23 | Left: 703.766 $\pm$ 0.084   | $\chi^2$ /NDF: 732052.1/47   |
| Left Out: 700.797 $\pm$ 0.116   | $\chi^2$ /NDF: 392521.4/24   | Right: 1207.243 $\pm$ 0.247 | $\chi^2$ /NDF: 25065520.8/52 |
| Right Out: 1251.589 $\pm$ 0.355 | $\chi^2$ /NDF: 14137902.7/28 | In: 757.225 $\pm$ 0.114     | $\chi^2$ /NDF: 12830014.6/46 |
| Left In: 706.950 $\pm$ 0.120    | $\chi^2$ /NDF: 338177.1/22   | Out: 754.072 $\pm$ 0.110    | $\chi^2$ /NDF: 16704409.2/53 |
|                                 |                              | All: 755.605 $\pm$ 0.079    | $\chi^2$ /NDF: 29534820.3/10 |

# diff\_cav4cY\_mean vs Slug, Sign Corrected



Right In:  $-0.058 \pm 0.271$   $\chi^2/\text{NDF}$ : 27.5/23

Left Out:  $0.236 \pm 0.122$   $\chi^2/\text{NDF}$ : 17.6/24

Right Out:  $-0.245 \pm 0.265$   $\chi^2/\text{NDF}$ : 25.9/28

Left In:  $-0.115 \pm 0.125$   $\chi^2/\text{NDF}$ : 35.0/22

Left:  $0.065 \pm 0.088$   $\chi^2/\text{NDF}$ : 56.6/47

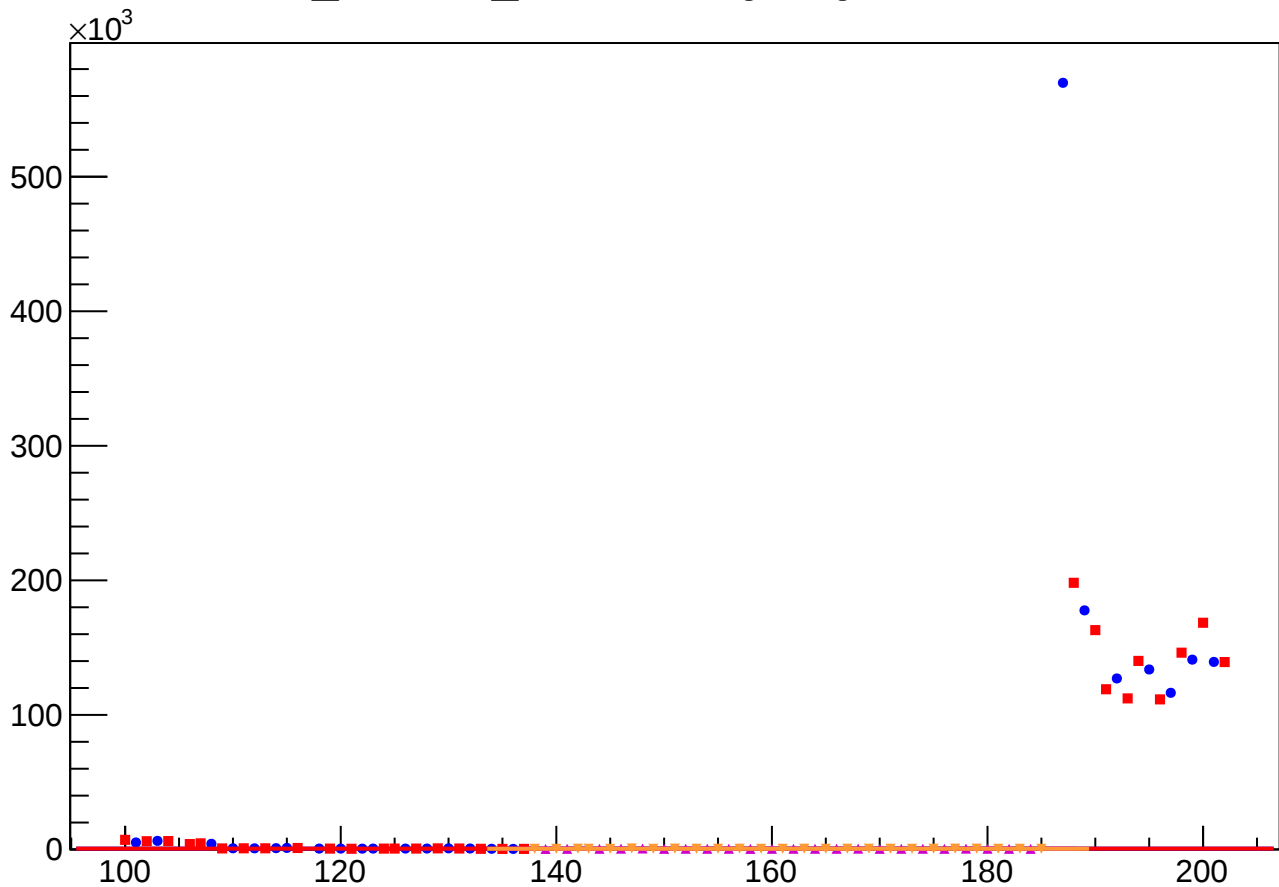
Right:  $-0.154 \pm 0.189$   $\chi^2/\text{NDF}$ : 53.6/52

In:  $-0.105 \pm 0.114$   $\chi^2/\text{NDF}$ : 62.5/46

Out:  $0.151 \pm 0.111$   $\chi^2/\text{NDF}$ : 46.2/53

All:  $0.026 \pm 0.080$   $\chi^2/\text{NDF}$ : 111.3/100

# diff\_cav4cY\_rms vs Slug, Sign Corrected



Right In: 611.018+/-0.191  $\chi^2/\text{NDF}$ : 12221168.0/23

Left Out: 522.416+/-0.087  $\chi^2/\text{NDF}$ : 331573.1/24

Right Out: 602.618+/-0.187  $\chi^2/\text{NDF}$ : 15150357.4/27

Left In: 519.909+/-0.089  $\chi^2/\text{NDF}$ : 444746.3/22

Left: 521.193+/-0.062  $\chi^2/\text{NDF}$ : 776728.3/47

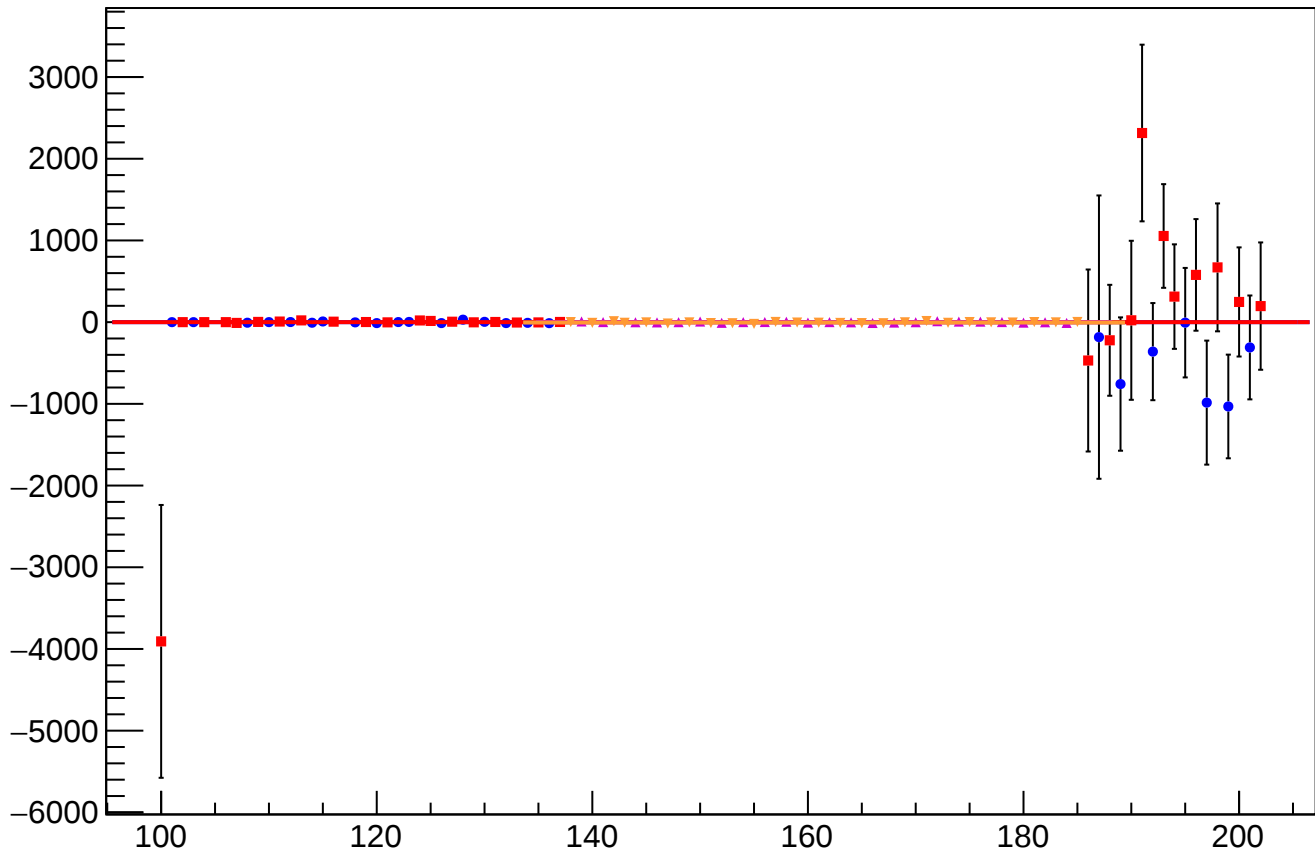
Right: 606.728+/-0.134  $\chi^2/\text{NDF}$ : 27372509.9/51

In: 536.039+/-0.081  $\chi^2/\text{NDF}$ : 12852547.3/46

Out: 536.547+/-0.079  $\chi^2/\text{NDF}$ : 15633020.4/52

All: 536.299+/-0.056  $\chi^2/\text{NDF}$ : 28485588.1/99

# diff\_cav4dX\_mean vs Slug, Sign Corrected



Right In: -0.022 $\pm$ 0.021  $\chi^2$ /NDF: 21.4/23

Left Out: -4.474 $\pm$ 0.956  $\chi^2$ /NDF: 58.2/24

Right Out: 0.027 $\pm$ 0.020  $\chi^2$ /NDF: 26.3/28

Left In: 0.193 $\pm$ 0.990  $\chi^2$ /NDF: 29.2/22

Left: -2.224 $\pm$ 0.688  $\chi^2$ /NDF: 99.0/47

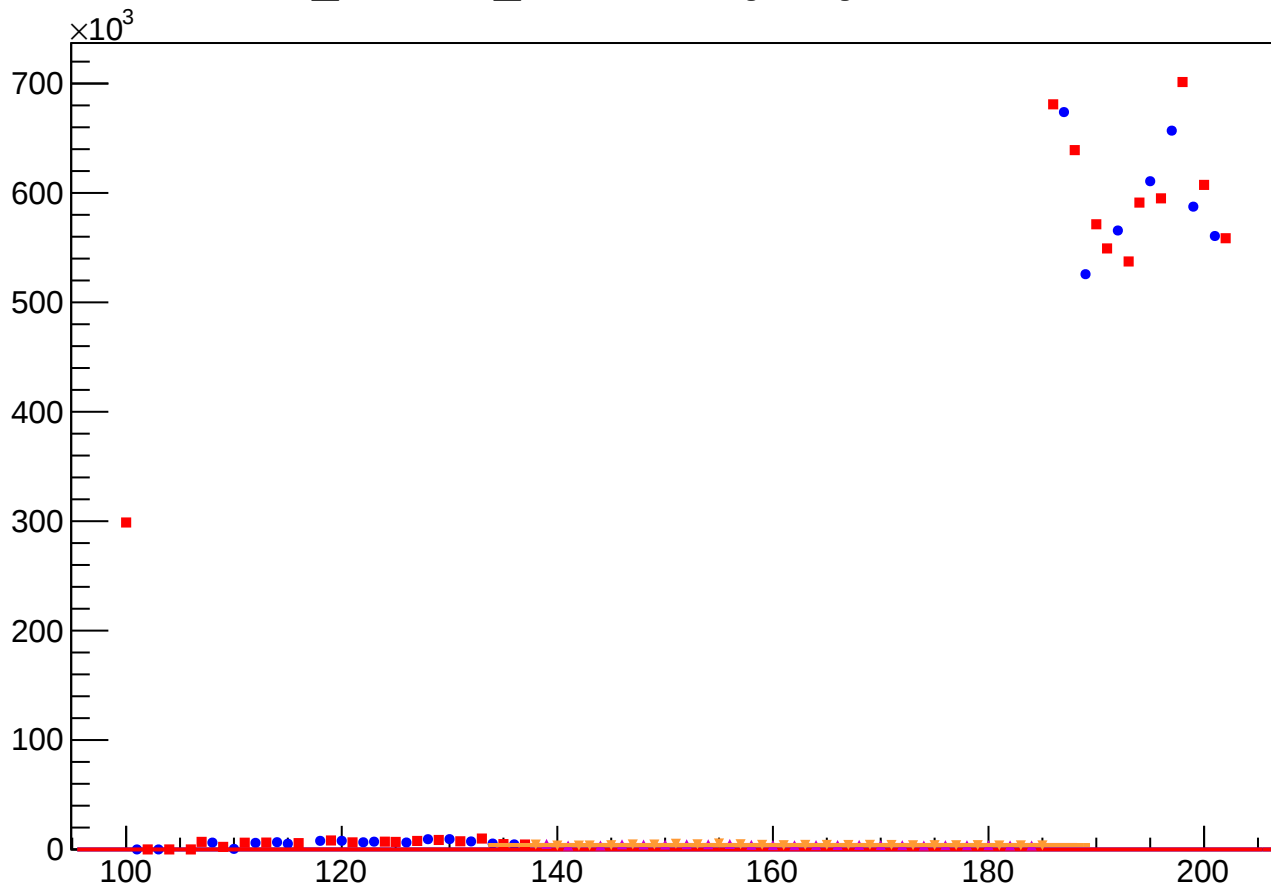
Right: 0.004 $\pm$ 0.014  $\chi^2$ /NDF: 50.6/52

In: -0.022 $\pm$ 0.021  $\chi^2$ /NDF: 50.7/46

Out: 0.025 $\pm$ 0.020  $\chi^2$ /NDF: 106.7/53

All: 0.003 $\pm$ 0.014  $\chi^2$ /NDF: 160.1/100

# diff\_cav4dX\_rms vs Slug, Sign Corrected



Right In: 17.339+/-0.015  $\chi^2$ /NDF: 19688675.0/23

Left Out: 4074.257+/-0.676  $\chi^2$ /NDF: 416916.0/24

Right Out: 17.271+/-0.014  $\chi^2$ /NDF: 23411231.2/28

Left In: 4113.744+/-0.700  $\chi^2$ /NDF: 354965.8/22

Left: 4093.298+/-0.486  $\chi^2$ /NDF: 773528.6/47

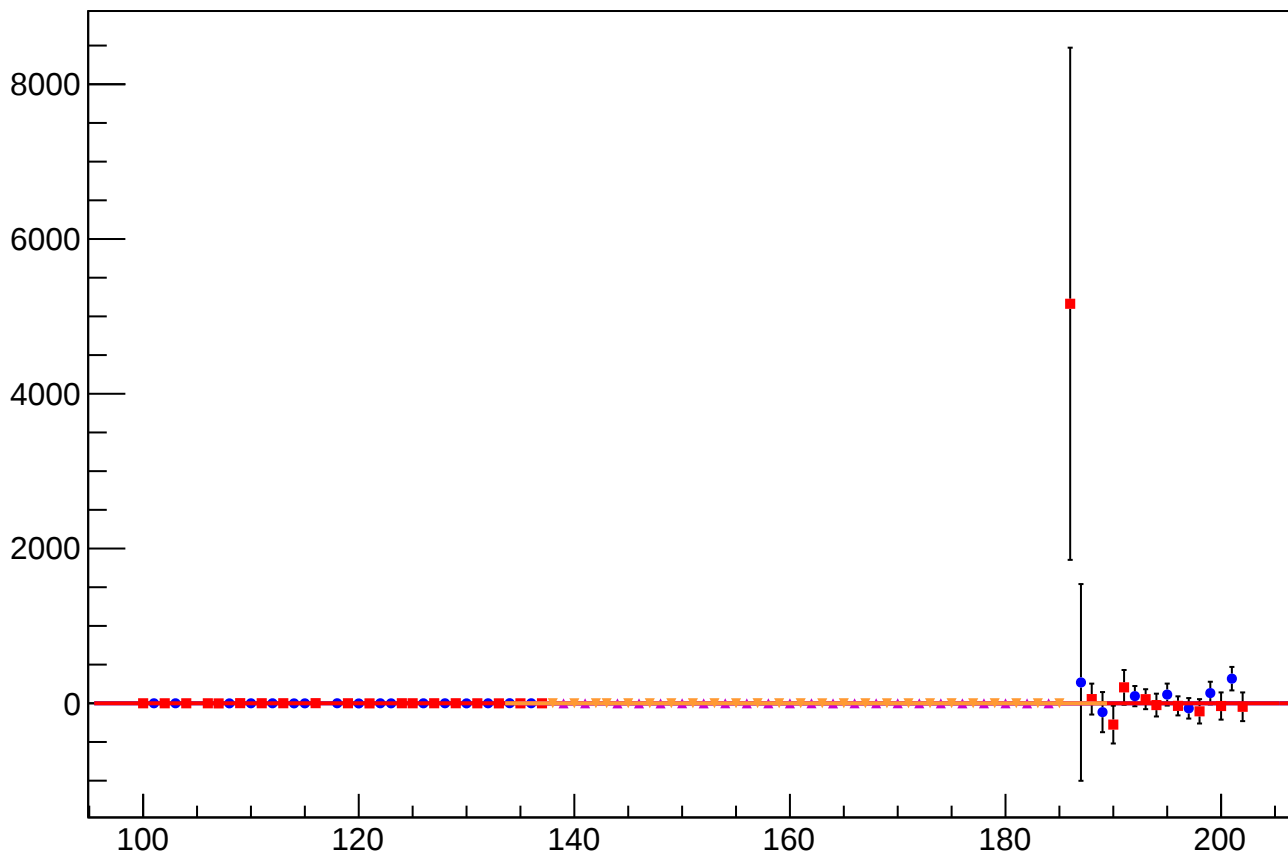
Right: 17.303+/-0.010  $\chi^2$ /NDF: 43099917.3/52

In: 19.145+/-0.015  $\chi^2$ /NDF: 54257865.9/46

Out: 19.008+/-0.014  $\chi^2$ /NDF: 59864154.0/53

All: 19.073+/-0.010  $\chi^2$ /NDF: 114122065.2/100

# diff\_cav4dY\_mean vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.002  $\chi^2$ /NDF: 22.2/23

Left Out: 0.151 $\pm$ 0.076  $\chi^2$ /NDF:16.8/24

Right Out: -0.001 $\pm$ 0.002  $\chi^2$ /NDF: 23.5/28

Left In: -0.075 $\pm$ 0.078  $\chi^2$ /NDF:34.8/22

Left: 0.041 $\pm$ 0.055  $\chi^2$ /NDF: 55.8/47

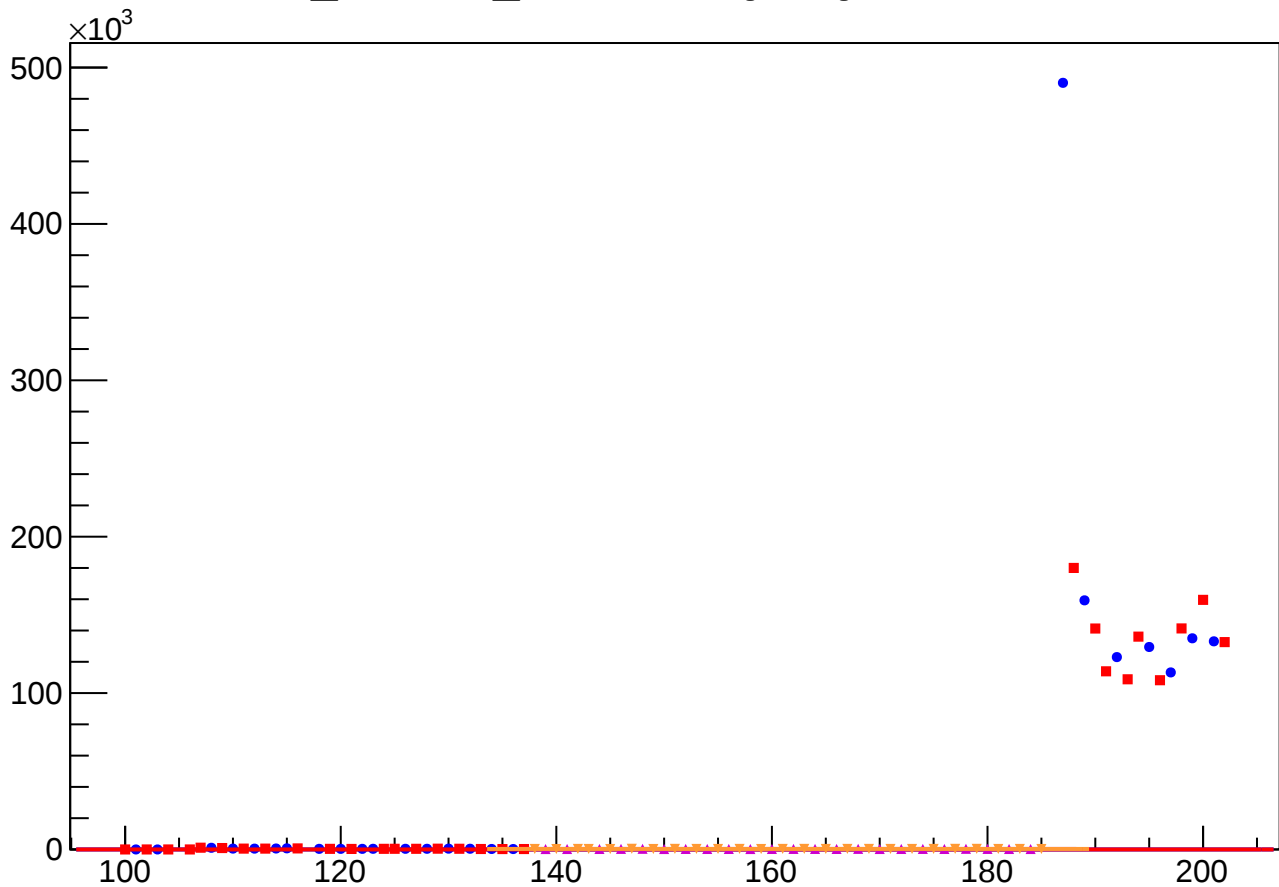
Right: -0.000 $\pm$ 0.001  $\chi^2$ /NDF: 45.8/52

In: 0.000 $\pm$ 0.002  $\chi^2$ /NDF:57.9/46

Out: -0.001 $\pm$ 0.002  $\chi^2$ /NDF:44.2/53

All: -0.000 $\pm$ 0.001  $\chi^2$ /NDF: 102.2/100

# diff\_cav4dY\_rms vs Slug, Sign Corrected



Right In: 1.698 $\pm$ 0.001  $\chi^2$ /NDF: 20056161.3/23

Left Out: 325.469 $\pm$ 0.054  $\chi^2$ /NDF: 350046.8/24

Right Out: 1.728 $\pm$ 0.001  $\chi^2$ /NDF: 22450268.2/27

Left In: 325.201 $\pm$ 0.055  $\chi^2$ /NDF: 428069.7/22

Left: 325.339 $\pm$ 0.039  $\chi^2$ /NDF: 778128.6/47

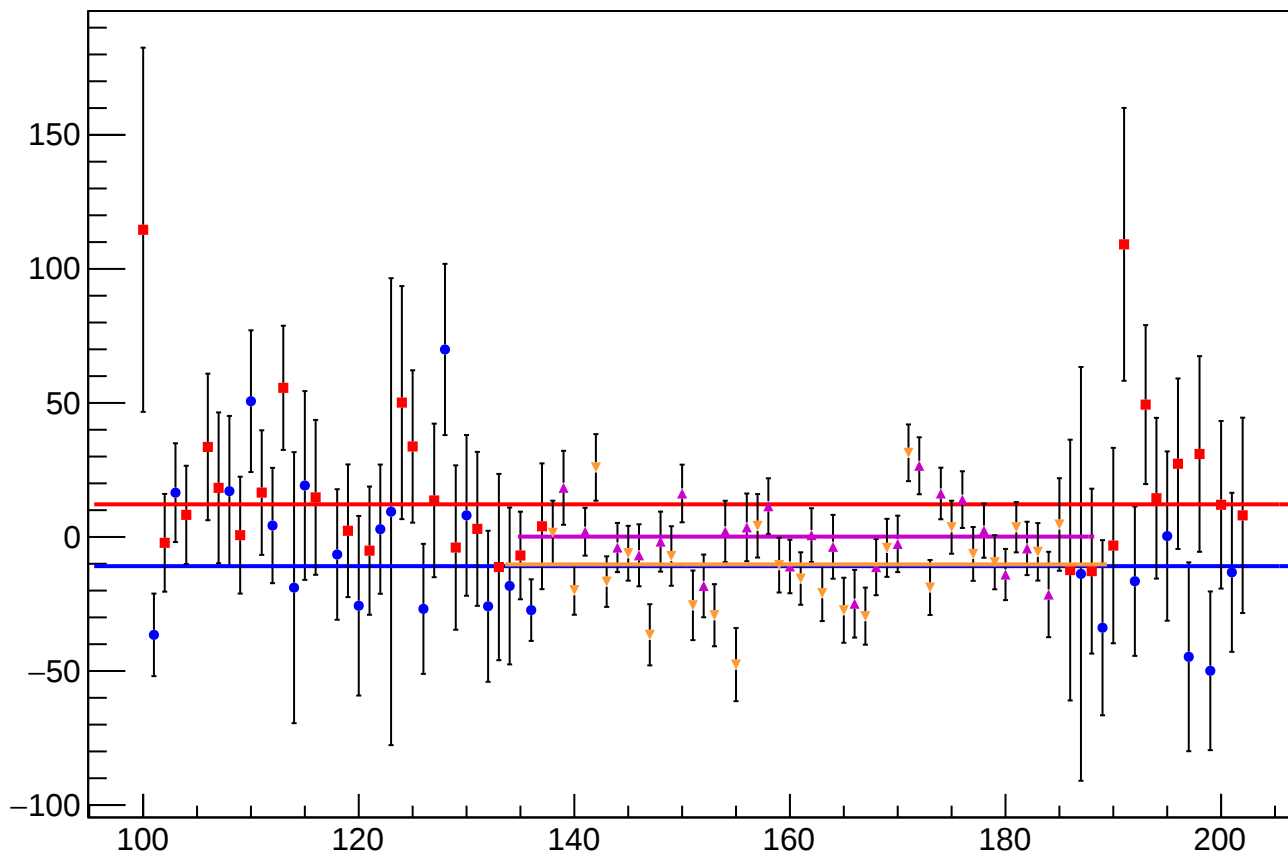
Right: 1.714 $\pm$ 0.001  $\chi^2$ /NDF: 42506656.7/51

In: 1.914 $\pm$ 0.001  $\chi^2$ /NDF: 54459597.2/46

Out: 1.937 $\pm$ 0.001  $\chi^2$ /NDF: 58758085.4/52

All: 1.926 $\pm$ 0.001  $\chi^2$ /NDF: 113217820.7/99

# diff\_bpm4aX\_mean vs Slug, Sign Corrected



Right In:  $-10.889 \pm 5.134$   $\chi^2/\text{NDF}: 26.2/23$

Left Out:  $-10.235 \pm 2.167$   $\chi^2/\text{NDF}: 58.0/24$

Right Out:  $12.173 \pm 5.048$   $\chi^2/\text{NDF}: 18.6/28$

Left In:  $0.130 \pm 2.242$   $\chi^2/\text{NDF}: 29.8/22$

Left:  $-5.230 \pm 1.558$   $\chi^2/\text{NDF}: 98.9/47$

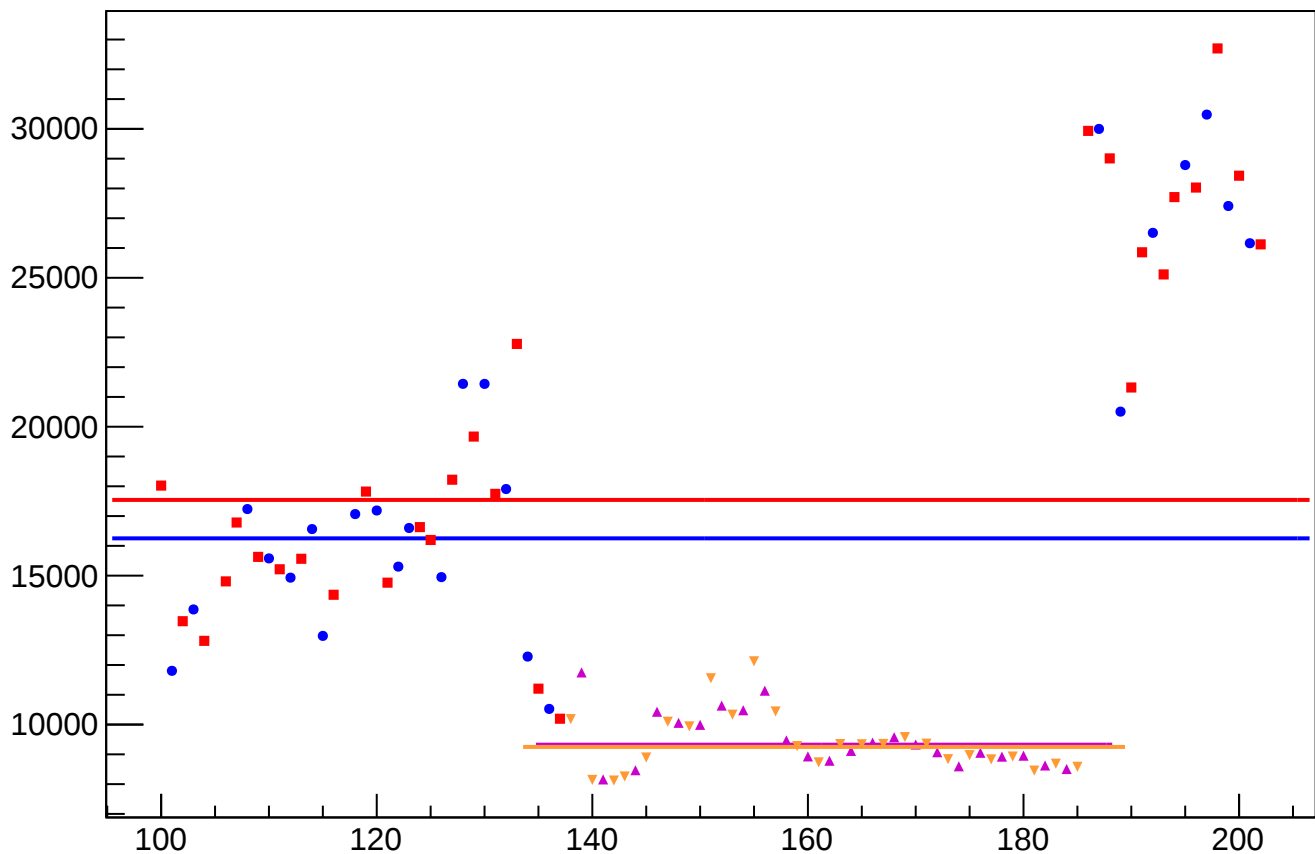
Right:  $0.838 \pm 3.600$   $\chi^2/\text{NDF}: 55.1/52$

In:  $-1.635 \pm 2.055$   $\chi^2/\text{NDF}: 59.9/46$

Out:  $-6.749 \pm 1.991$   $\chi^2/\text{NDF}: 93.2/53$

All:  $-4.273 \pm 1.430$   $\chi^2/\text{NDF}: 156.3/100$

# diff\_bpm4aX\_rms vs Slug, Sign Corrected



Right In: 16251.948 $\pm$ 3.631  $\chi^2$ /NDF: 2412574.5/23

Left Out: 9249.358 $\pm$ 1.532  $\chi^2$ /NDF: 332003.4/24

Right Out: 17542.498 $\pm$ 3.569  $\chi^2$ /NDF: 2673810.8/28

Left In: 9325.112 $\pm$ 1.585  $\chi^2$ /NDF: 280927.7/22

Left: 9285.937 $\pm$ 1.102  $\chi^2$ /NDF: 614111.7/47

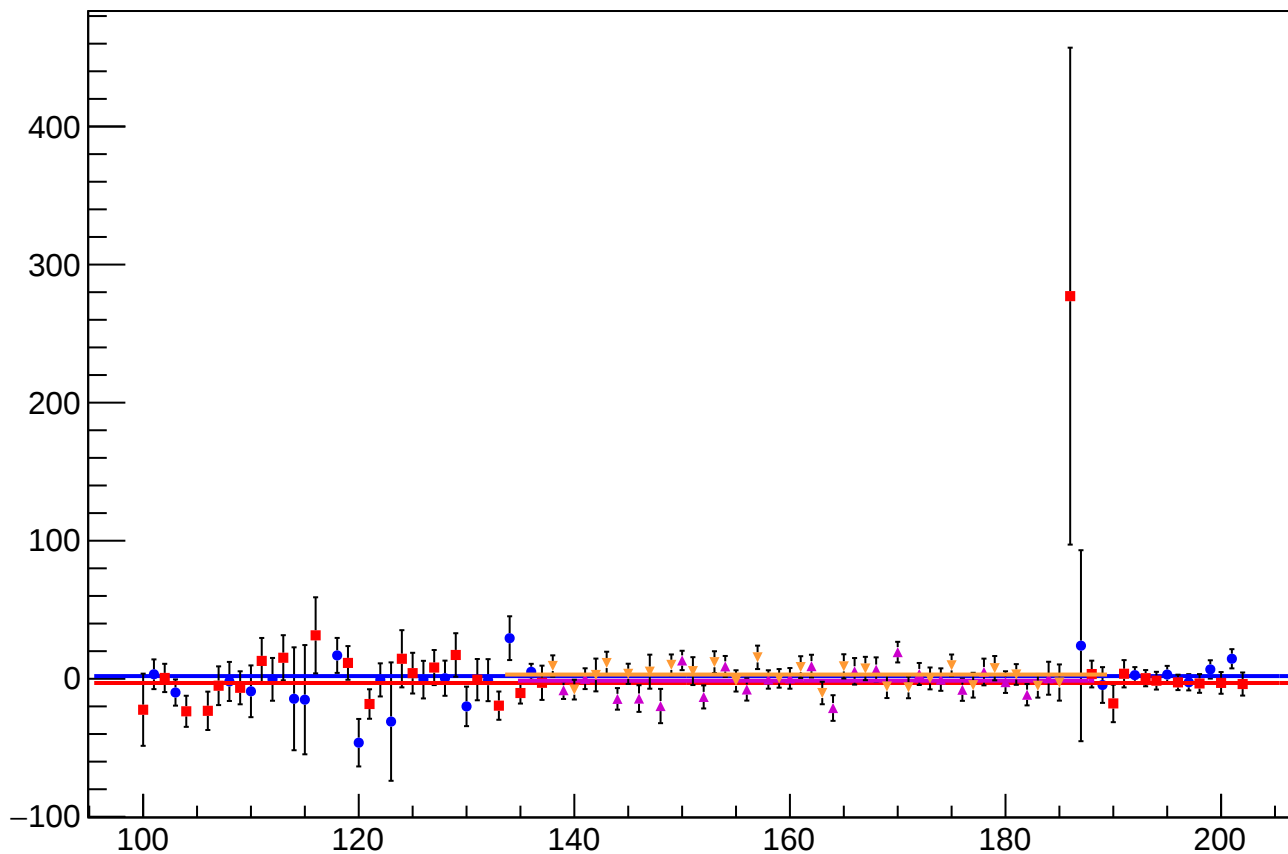
Right: 16908.203 $\pm$ 2.545  $\chi^2$ /NDF: 5150637.0/52

In: 10434.519 $\pm$ 1.453  $\chi^2$ /NDF: 5750562.5/46

Out: 10539.524 $\pm$ 1.408  $\chi^2$ /NDF: 7564291.0/53

All: 10488.678 $\pm$ 1.011  $\chi^2$ /NDF: 13317547.2/100

# diff\_bpm4aY\_mean vs Slug, Sign Corrected



Right In:  $1.955 \pm 2.050$   $\chi^2/\text{NDF}: 22.8/23$

Left Out:  $3.062 \pm 1.659$   $\chi^2/\text{NDF}: 18.3/24$

Right Out:  $-3.043 \pm 1.893$   $\chi^2/\text{NDF}: 25.2/28$

Left In:  $-1.394 \pm 1.693$   $\chi^2/\text{NDF}: 35.4/22$

Left:  $0.879 \pm 1.185$   $\chi^2/\text{NDF}: 57.2/47$

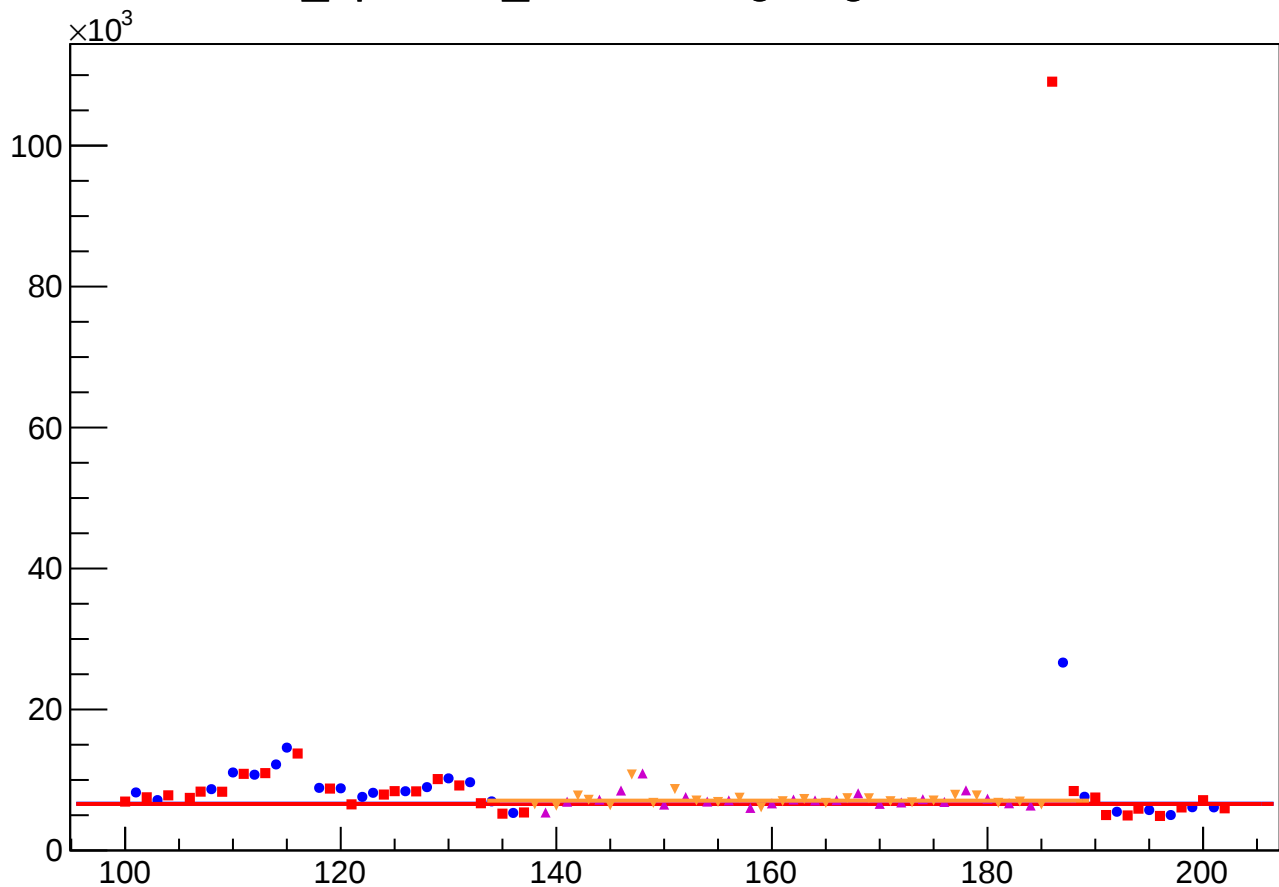
Right:  $-0.743 \pm 1.391$   $\chi^2/\text{NDF}: 51.3/52$

In:  $-0.036 \pm 1.305$   $\chi^2/\text{NDF}: 59.8/46$

Out:  $0.410 \pm 1.248$   $\chi^2/\text{NDF}: 49.4/53$

All:  $0.197 \pm 0.902$   $\chi^2/\text{NDF}: 109.2/100$

# diff\_bpm4aY\_rms vs Slug, Sign Corrected



Right In:  $6630.914 \pm 1.449$   $\chi^2/\text{NDF}: 1462675.9/23$

Left Out:  $7066.826 \pm 1.173$   $\chi^2/\text{NDF}: 387449.8/24$

Right Out:  $6598.988 \pm 1.338$   $\chi^2/\text{NDF}: 2092284.4/28$

Left In:  $7000.532 \pm 1.197$   $\chi^2/\text{NDF}: 550029.3/22$

Left:  $7034.358 \pm 0.838$   $\chi^2/\text{NDF}: 939043.5/47$

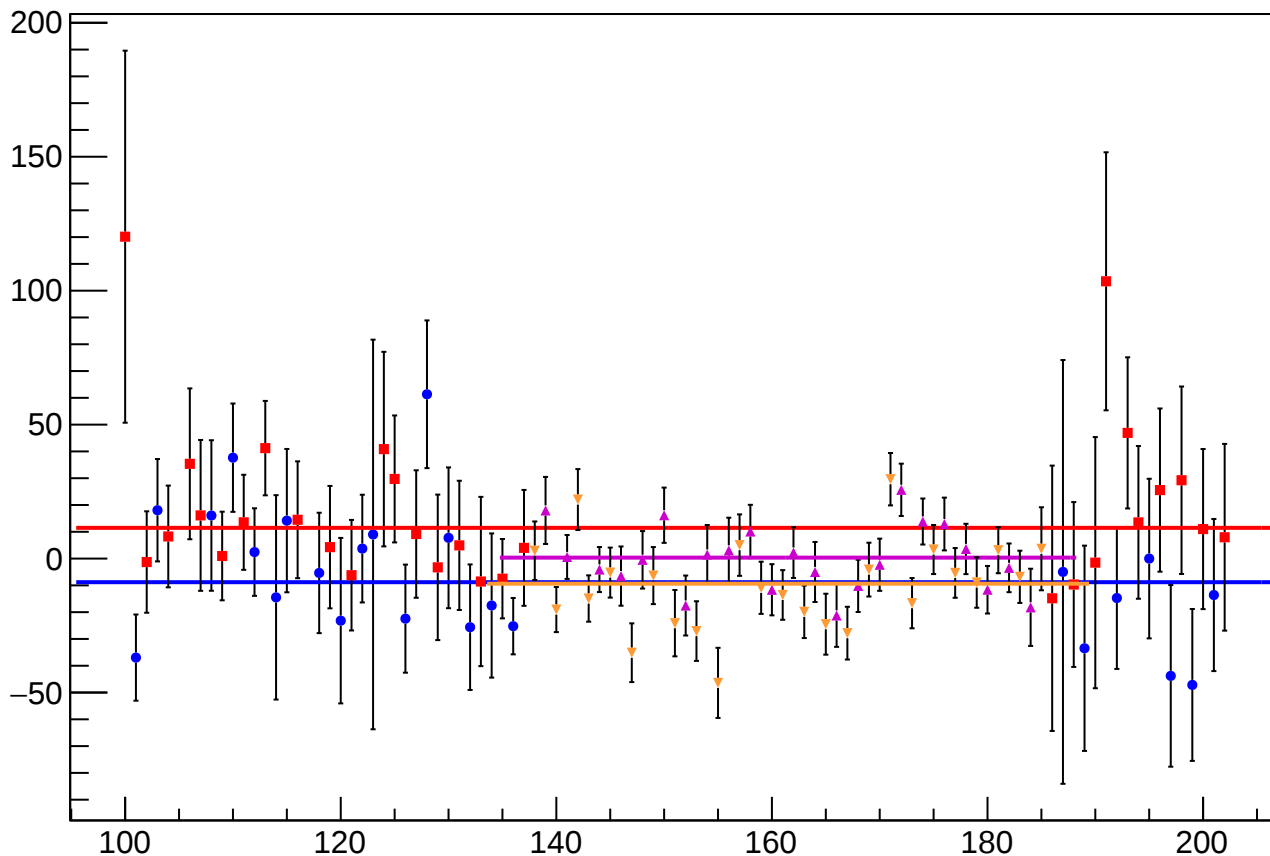
Right:  $6613.682 \pm 0.983$   $\chi^2/\text{NDF}: 3555222.1/52$

In:  $6850.619 \pm 0.923$   $\chi^2/\text{NDF}: 2051360.9/46$

Out:  $6863.599 \pm 0.882$   $\chi^2/\text{NDF}: 2548837.6/53$

All:  $6857.403 \pm 0.638$   $\chi^2/\text{NDF}: 4600301.9/100$

# diff\_bpm4eX\_mean vs Slug, Sign Corrected



Right In: -8.816 $\pm$ 4.661  $\chi^2/\text{NDF}$ : 26.9/23

Left Out: -9.376 $\pm$ 2.018  $\chi^2/\text{NDF}$ : 58.4/24

Right Out: 11.475 $\pm$ 4.542  $\chi^2/\text{NDF}$ : 18.1/28

Left In: 0.353 $\pm$ 2.092  $\chi^2/\text{NDF}$ : 29.6/22

Left: -4.688 $\pm$ 1.452  $\chi^2/\text{NDF}$ : 99.3/47

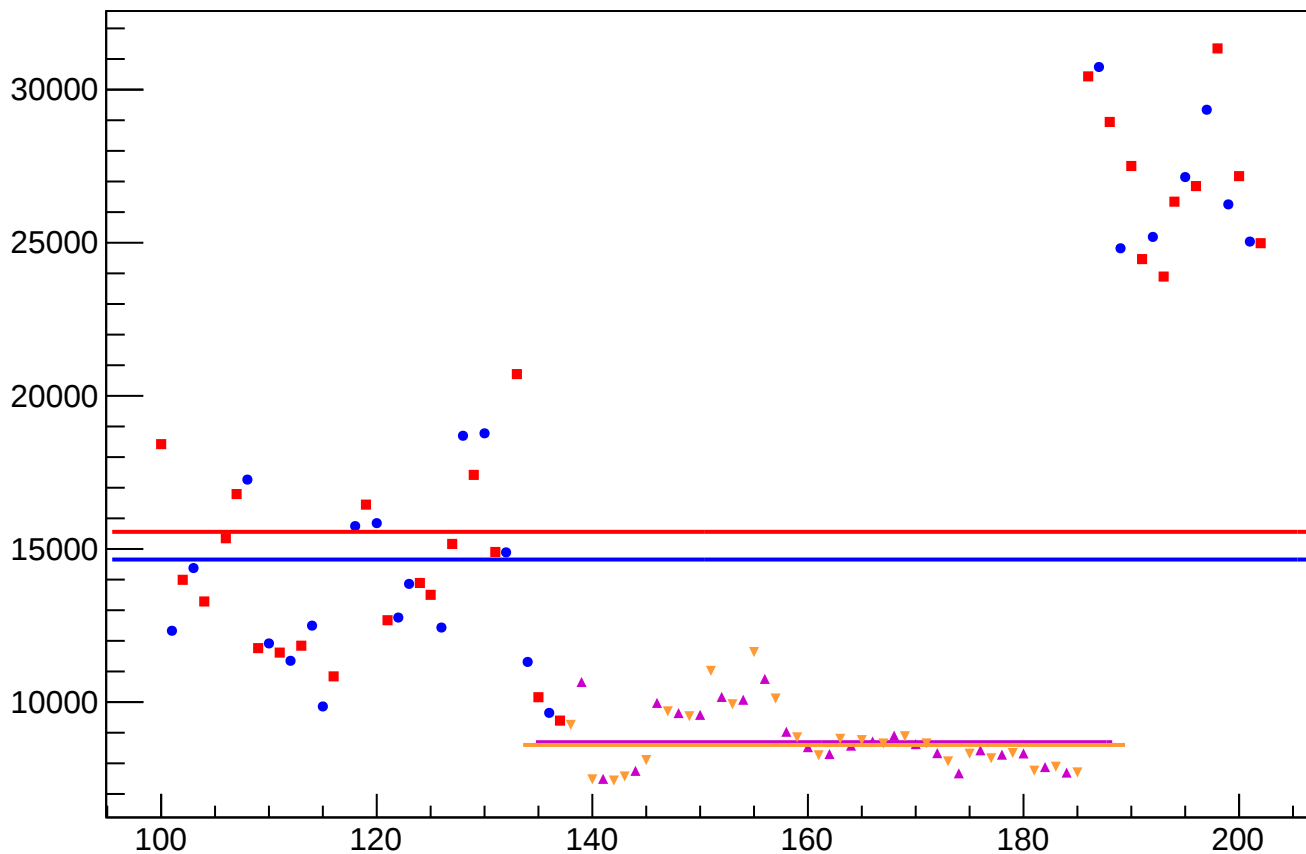
Right: 1.590 $\pm$ 3.253  $\chi^2/\text{NDF}$ : 54.7/52

In: -1.185 $\pm$ 1.909  $\chi^2/\text{NDF}$ : 59.8/46

Out: -5.940 $\pm$ 1.844  $\chi^2/\text{NDF}$ : 94.2/53

All: -3.644 $\pm$ 1.326  $\chi^2/\text{NDF}$ : 157.1/100

# diff\_bpm4eX\_rms vs Slug, Sign Corrected



Right In: 14655.229 $\pm$ 3.296  $\chi^2$ /NDF: 2744111.0/23

Left Out: 8600.457 $\pm$ 1.427  $\chi^2$ /NDF: 438229.4/24

Right Out: 15559.996 $\pm$ 3.212  $\chi^2$ /NDF: 3339397.5/28

Left In: 8690.209 $\pm$ 1.479  $\chi^2$ /NDF: 370834.1/22

Left: 8643.707 $\pm$ 1.027  $\chi^2$ /NDF: 810970.4/47

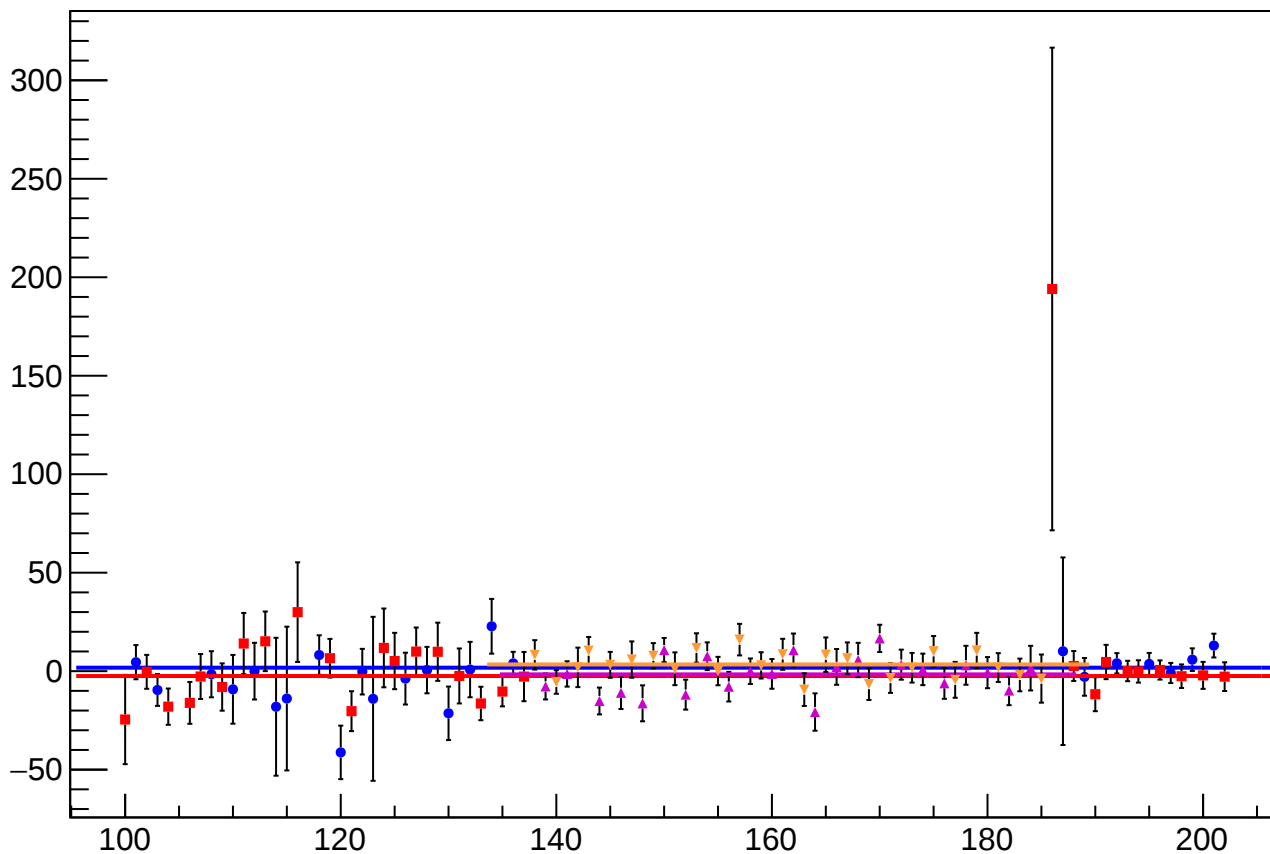
Right: 15119.254 $\pm$ 2.300  $\chi^2$ /NDF: 6122164.0/52

In: 9690.667 $\pm$ 1.350  $\chi^2$ /NDF: 5841576.4/46

Out: 9747.452 $\pm$ 1.304  $\chi^2$ /NDF: 7698984.4/53

All: 9720.039 $\pm$ 0.938  $\chi^2$ /NDF: 13541476.4/100

# diff\_bpm4eY\_mean vs Slug, Sign Corrected



Right In: 1.769 $\pm$ 1.815     $\chi^2/\text{NDF}$ : 24.0/23

Left Out: 3.406 $\pm$ 1.550     $\chi^2/\text{NDF}$ : 16.8/24

Right Out: -2.467 $\pm$ 1.655     $\chi^2/\text{NDF}$ : 25.8/28

Left In: -1.627 $\pm$ 1.599     $\chi^2/\text{NDF}$ : 33.5/22

Left: 0.967 $\pm$ 1.113     $\chi^2/\text{NDF}$ : 55.4/47

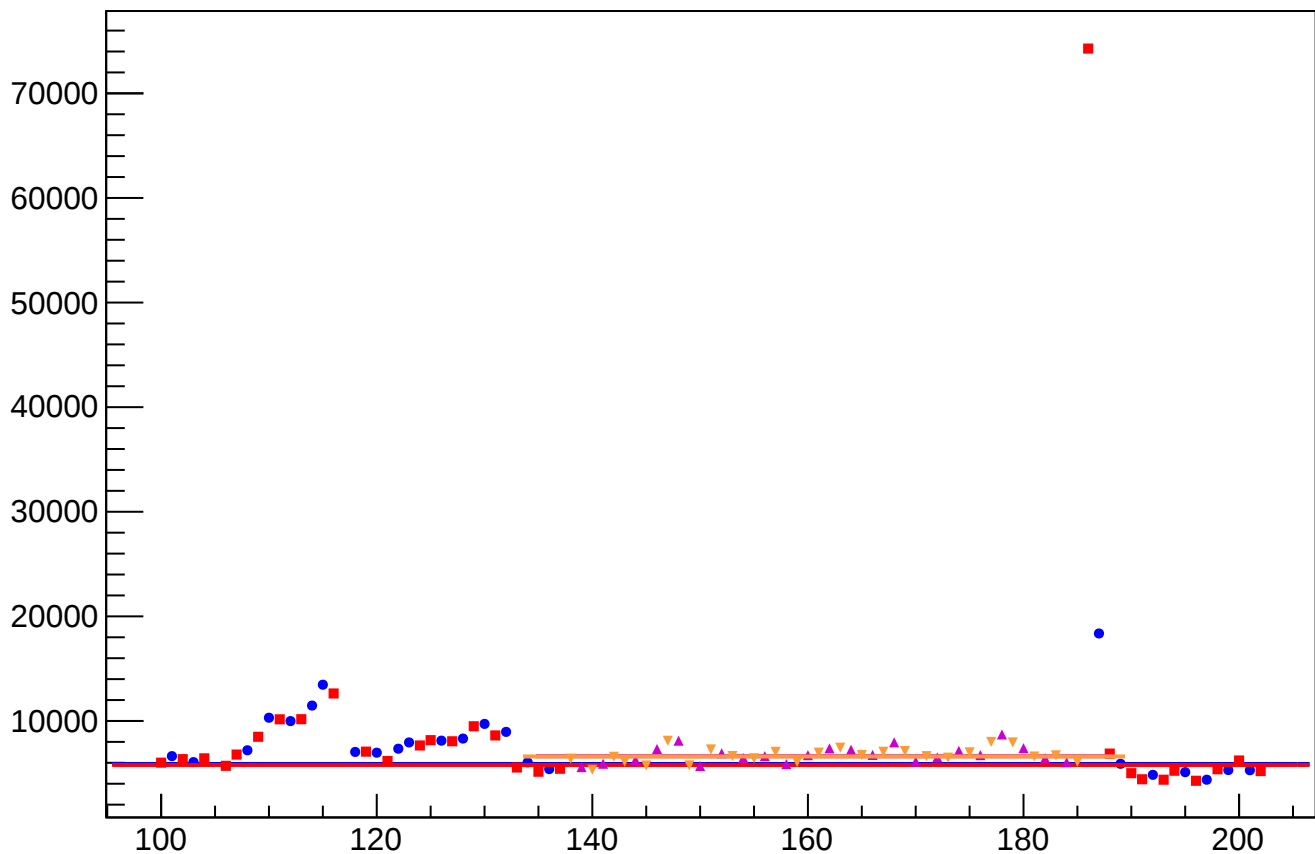
Right: -0.544 $\pm$ 1.223     $\chi^2/\text{NDF}$ : 52.8/52

In: -0.143 $\pm$ 1.200     $\chi^2/\text{NDF}$ : 59.5/46

Out: 0.661 $\pm$ 1.132     $\chi^2/\text{NDF}$ : 49.3/53

All: 0.283 $\pm$ 0.823     $\chi^2/\text{NDF}$ : 109.0/100

# diff\_bpm4eY\_rms vs Slug, Sign Corrected



Right In: 5887.254+/-1.283  $\chi^2/\text{NDF}$ : 1425467.8/23

Left Out: 6607.100+/-1.096  $\chi^2/\text{NDF}$ : 398416.1/24

Right Out: 5794.402+/-1.170  $\chi^2/\text{NDF}$ : 2128537.9/28

Left In: 6628.653+/-1.131  $\chi^2/\text{NDF}$ : 430282.2/22

Left: 6617.543+/-0.787  $\chi^2/\text{NDF}$ : 828885.6/47

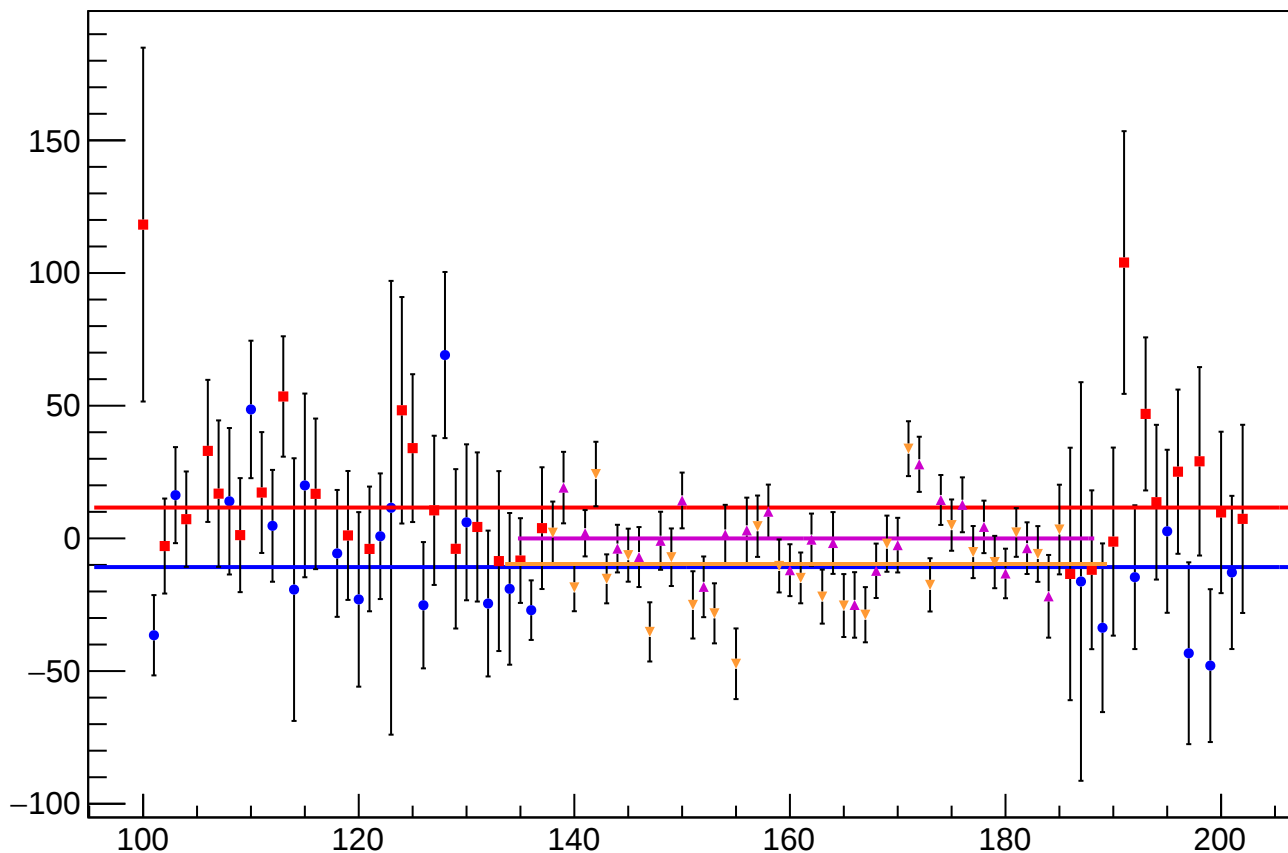
Right: 5836.566+/-0.865  $\chi^2/\text{NDF}$ : 3556863.7/52

In: 6304.606+/-0.848  $\chi^2/\text{NDF}$ : 2043653.8/46

Out: 6227.274+/-0.800  $\chi^2/\text{NDF}$ : 2783776.0/53

All: 6263.678+/-0.582  $\chi^2/\text{NDF}$ : 4831827.3/100

# diff\_bpm4acX\_mean vs Slug, Sign Corrected



Right In:  $-10.812 \pm 5.026$   $\chi^2/\text{NDF}: 26.0/23$

Left Out:  $-9.649 \pm 2.118$   $\chi^2/\text{NDF}: 59.8/24$

Right Out:  $11.622 \pm 4.941$   $\chi^2/\text{NDF}: 18.5/28$

Left In:  $-0.019 \pm 2.192$   $\chi^2/\text{NDF}: 30.6/22$

Left:  $-4.999 \pm 1.523$   $\chi^2/\text{NDF}: 100.4/47$

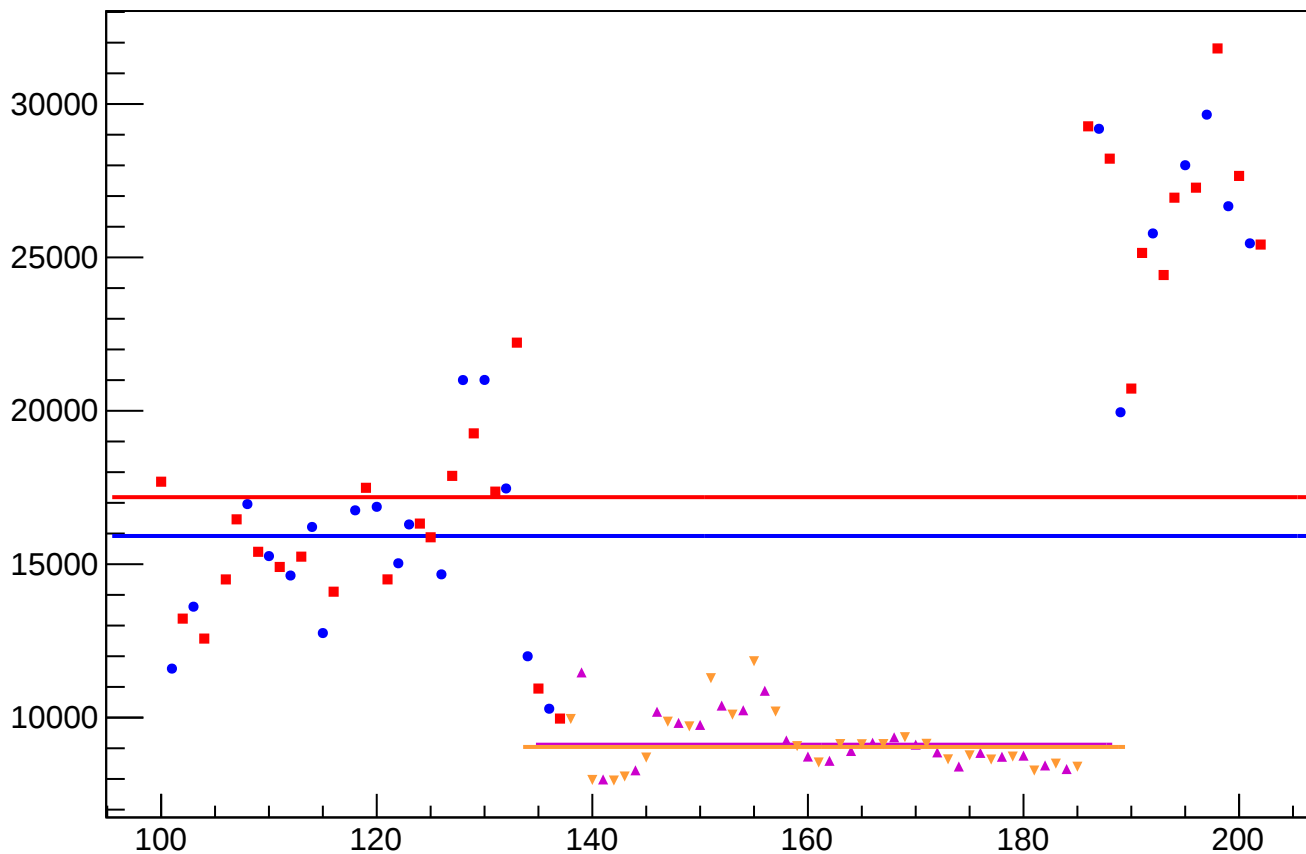
Right:  $0.596 \pm 3.523$   $\chi^2/\text{NDF}: 54.6/52$

In:  $-1.744 \pm 2.009$   $\chi^2/\text{NDF}: 60.5/46$

Out:  $-6.346 \pm 1.947$   $\chi^2/\text{NDF}: 94.0/53$

All:  $-4.118 \pm 1.398$   $\chi^2/\text{NDF}: 157.2/100$

# diff\_bpm4acX\_rms vs Slug, Sign Corrected



Right In: 15919.965 $\pm$ 3.554  $\chi^2$ /NDF: 2383749.3/23

Left Out: 9043.485 $\pm$ 1.498  $\chi^2$ /NDF:328192.2/24

Right Out: 17185.151 $\pm$ 3.494  $\chi^2$ /NDF: 2632652.6/28

Left In: 9116.921 $\pm$ 1.550  $\chi^2$ /NDF:277594.8/22

Left: 9078.947 $\pm$ 1.077  $\chi^2$ /NDF: 606947.8/47

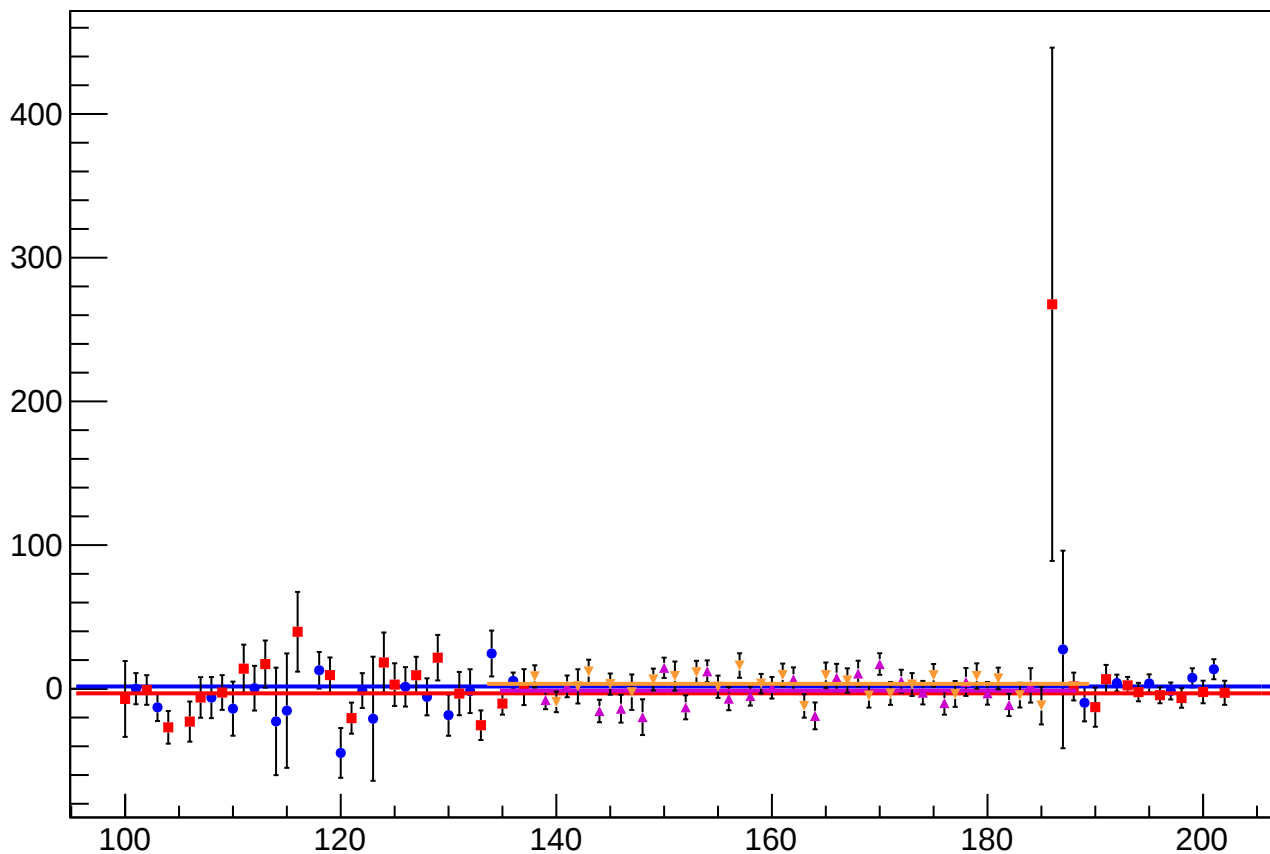
Right: 16563.369 $\pm$ 2.491  $\chi^2$ /NDF: 5080852.7/52

In: 10204.142 $\pm$ 1.421  $\chi^2$ /NDF:5740078.6/46

Out: 10307.599 $\pm$ 1.377  $\chi^2$ /NDF:7548423.6/53

All: 10257.501 $\pm$ 0.989  $\chi^2$ /NDF: 13291237.1

# diff\_bpm4acY\_mean vs Slug, Sign Corrected



Right In:  $1.627 \pm 2.059$   $\chi^2/\text{NDF}: 22.2/23$

Left Out:  $3.439 \pm 1.666$   $\chi^2/\text{NDF}: 18.9/24$

Right Out:  $-3.168 \pm 1.901$   $\chi^2/\text{NDF}: 30.5/28$

Left In:  $-1.291 \pm 1.701$   $\chi^2/\text{NDF}: 36.5/22$

Left:  $1.123 \pm 1.190$   $\chi^2/\text{NDF}: 59.4/47$

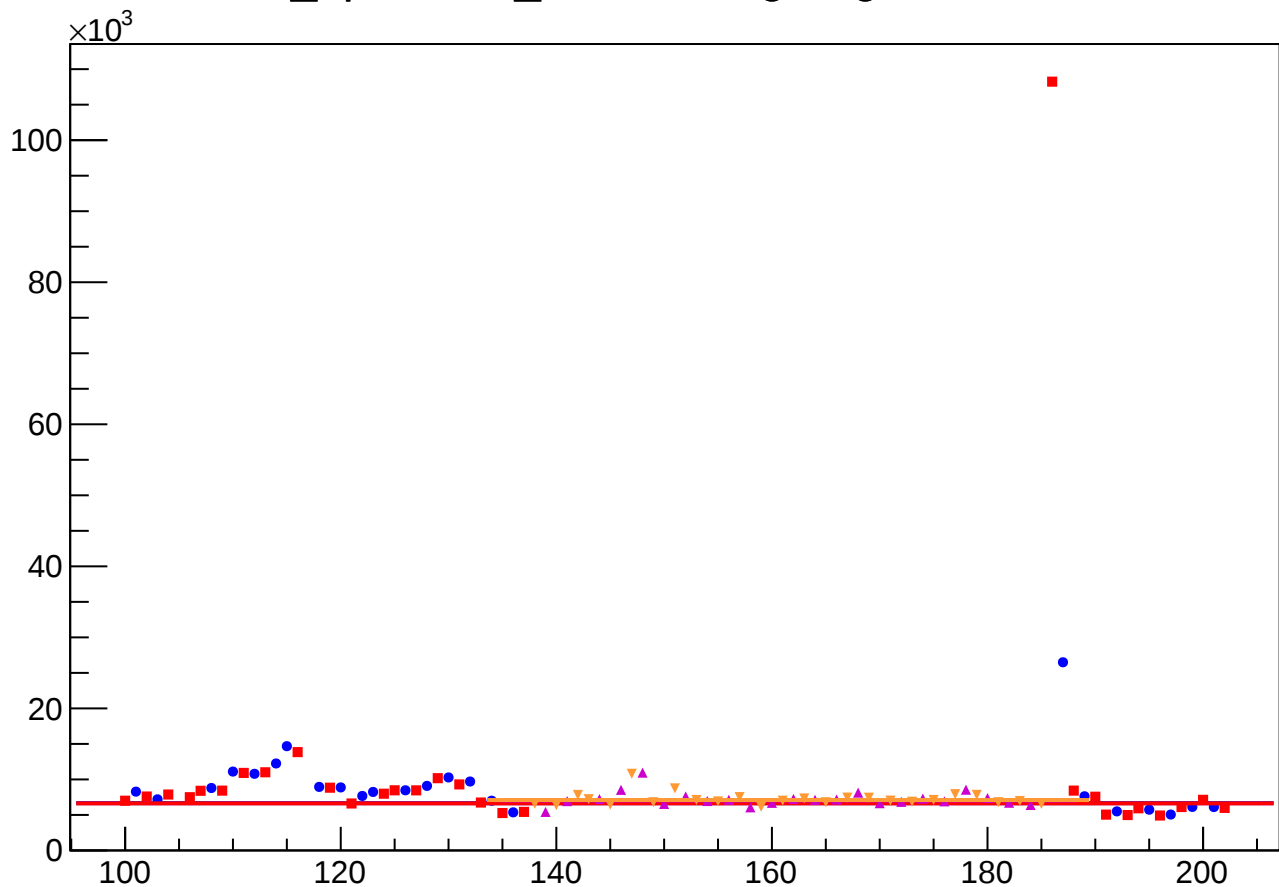
Right:  $-0.960 \pm 1.397$   $\chi^2/\text{NDF}: 55.6/52$

In:  $-0.107 \pm 1.311$   $\chi^2/\text{NDF}: 59.9/46$

Out:  $0.570 \pm 1.253$   $\chi^2/\text{NDF}: 56.3/53$

All:  $0.247 \pm 0.906$   $\chi^2/\text{NDF}: 116.3/100$

# diff\_bpm4acY\_rms vs Slug, Sign Corrected



Right In: 6659.267 $\pm$ 1.456  $\chi^2/\text{NDF}$ : 1470990.6/23

Left Out: 7098.726 $\pm$ 1.178  $\chi^2/\text{NDF}$ : 382550.4/24

Right Out: 6629.843 $\pm$ 1.345  $\chi^2/\text{NDF}$ : 2096404.6/28

Left In: 7033.702 $\pm$ 1.203  $\chi^2/\text{NDF}$ : 541035.5/22

Left: 7066.886 $\pm$ 0.842  $\chi^2/\text{NDF}$ : 925077.6/47

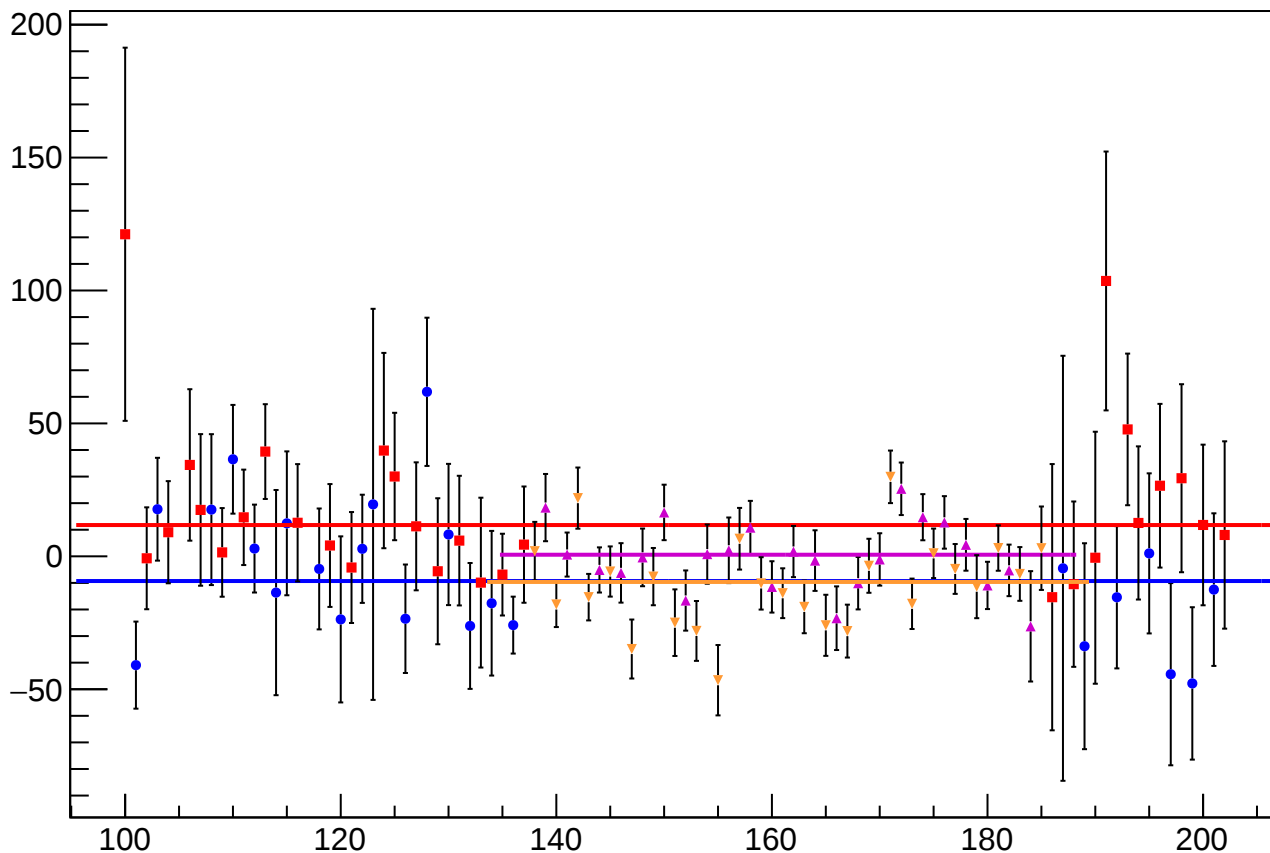
Right: 6643.389 $\pm$ 0.988  $\chi^2/\text{NDF}$ : 3567615.7/52

In: 6881.795 $\pm$ 0.927  $\chi^2/\text{NDF}$ : 2051347.8/46

Out: 6895.086 $\pm$ 0.886  $\chi^2/\text{NDF}$ : 2547751.1/53

All: 6888.742 $\pm$ 0.641  $\chi^2/\text{NDF}$ : 4599206.3/100

# diff\_bpm4ecX\_mean vs Slug, Sign Corrected



Right In:  $-9.294 \pm 4.722$   $\chi^2/\text{NDF}: 27.4/23$

Left Out:  $-9.640 \pm 2.057$   $\chi^2/\text{NDF}: 57.6/24$

Right Out:  $11.766 \pm 4.604$   $\chi^2/\text{NDF}: 17.2/28$

Left In:  $0.599 \pm 2.135$   $\chi^2/\text{NDF}: 29.7/22$

Left:  $-4.710 \pm 1.481$   $\chi^2/\text{NDF}: 99.2/47$

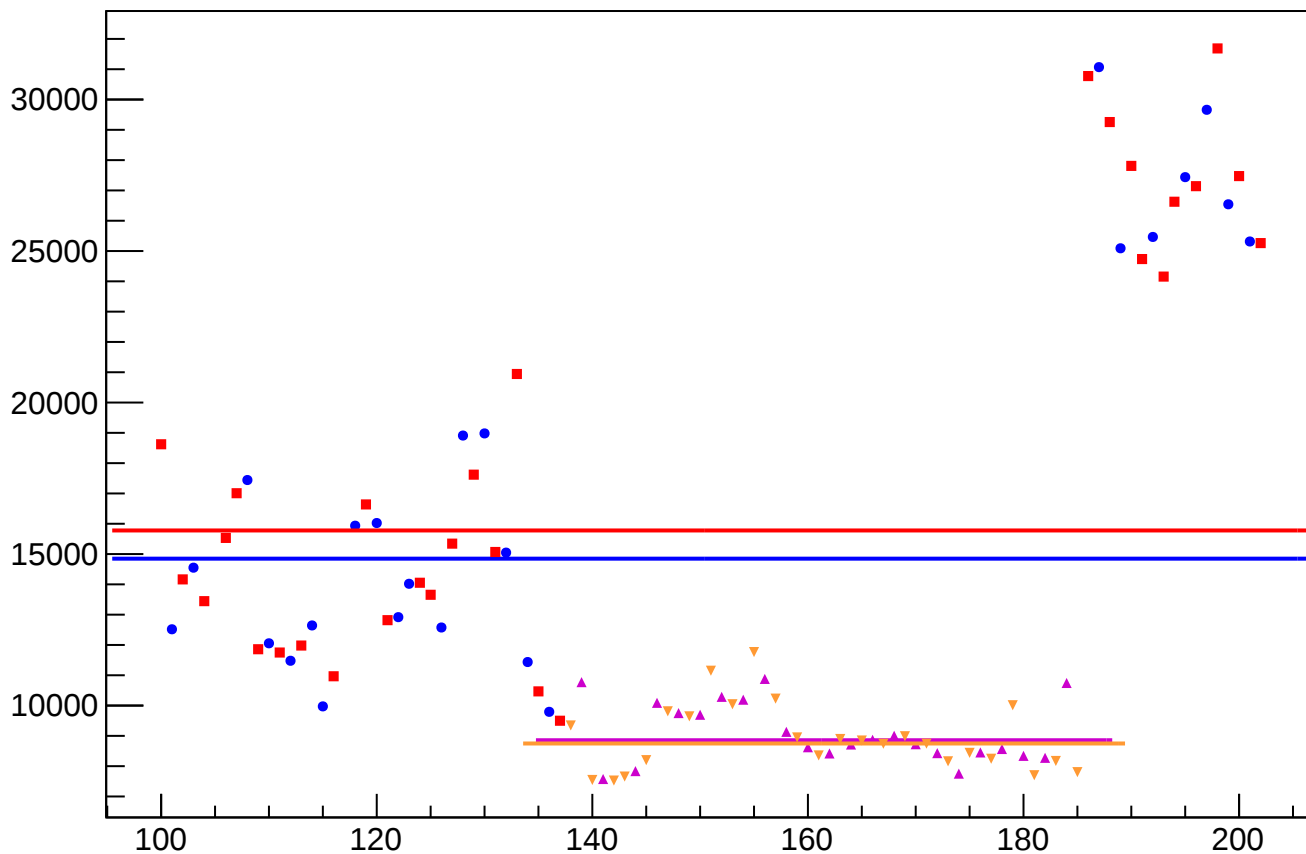
Right:  $1.501 \pm 3.296$   $\chi^2/\text{NDF}: 54.9/52$

In:  $-1.080 \pm 1.945$   $\chi^2/\text{NDF}: 60.7/46$

Out:  $-6.078 \pm 1.878$   $\chi^2/\text{NDF}: 92.9/53$

All:  $-3.667 \pm 1.351$   $\chi^2/\text{NDF}: 157.0/100$

# diff\_bpm4ecX\_rms vs Slug, Sign Corrected



Right In: 14848.067 $\pm$ 3.339  $\chi^2/\text{NDF}$ : 2727449.4/23

Left Out: 8748.407 $\pm$ 1.455  $\chi^2/\text{NDF}$ : 463394.1/24

Right Out: 15778.685 $\pm$ 3.256  $\chi^2/\text{NDF}$ : 3307372.5/28

Left In: 8855.591 $\pm$ 1.510  $\chi^2/\text{NDF}$ : 367542.7/22

Left: 8800.011 $\pm$ 1.048  $\chi^2/\text{NDF}$ : 833550.6/47

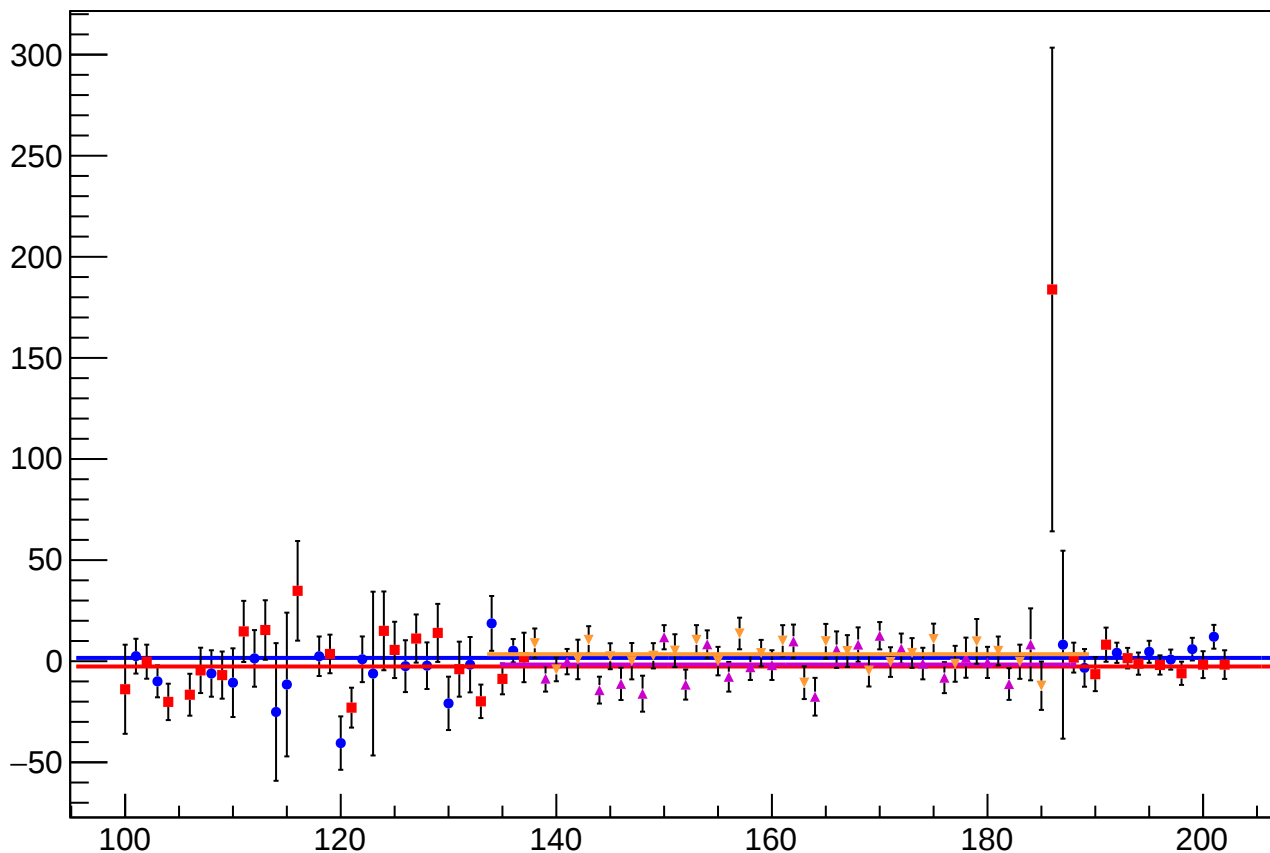
Right: 15325.084 $\pm$ 2.331  $\chi^2/\text{NDF}$ : 6074647.6/52

In: 9872.885 $\pm$ 1.376  $\chi^2/\text{NDF}$ : 5769686.2/46

Out: 9918.409 $\pm$ 1.328  $\chi^2/\text{NDF}$ : 7657723.2/53

All: 9896.446 $\pm$ 0.955  $\chi^2/\text{NDF}$ : 13427976.3/100

# diff\_bpm4ecY\_mean vs Slug, Sign Corrected



Right In:  $1.635 \pm 1.770$   $\chi^2/\text{NDF}$ : 23.9/23

Left Out:  $3.473 \pm 1.524$   $\chi^2/\text{NDF}$ : 15.8/24

Right Out:  $-2.618 \pm 1.614$   $\chi^2/\text{NDF}$ : 30.6/28

Left In:  $-1.638 \pm 1.578$   $\chi^2/\text{NDF}$ : 33.7/22

Left:  $1.006 \pm 1.096$   $\chi^2/\text{NDF}$ : 54.9/47

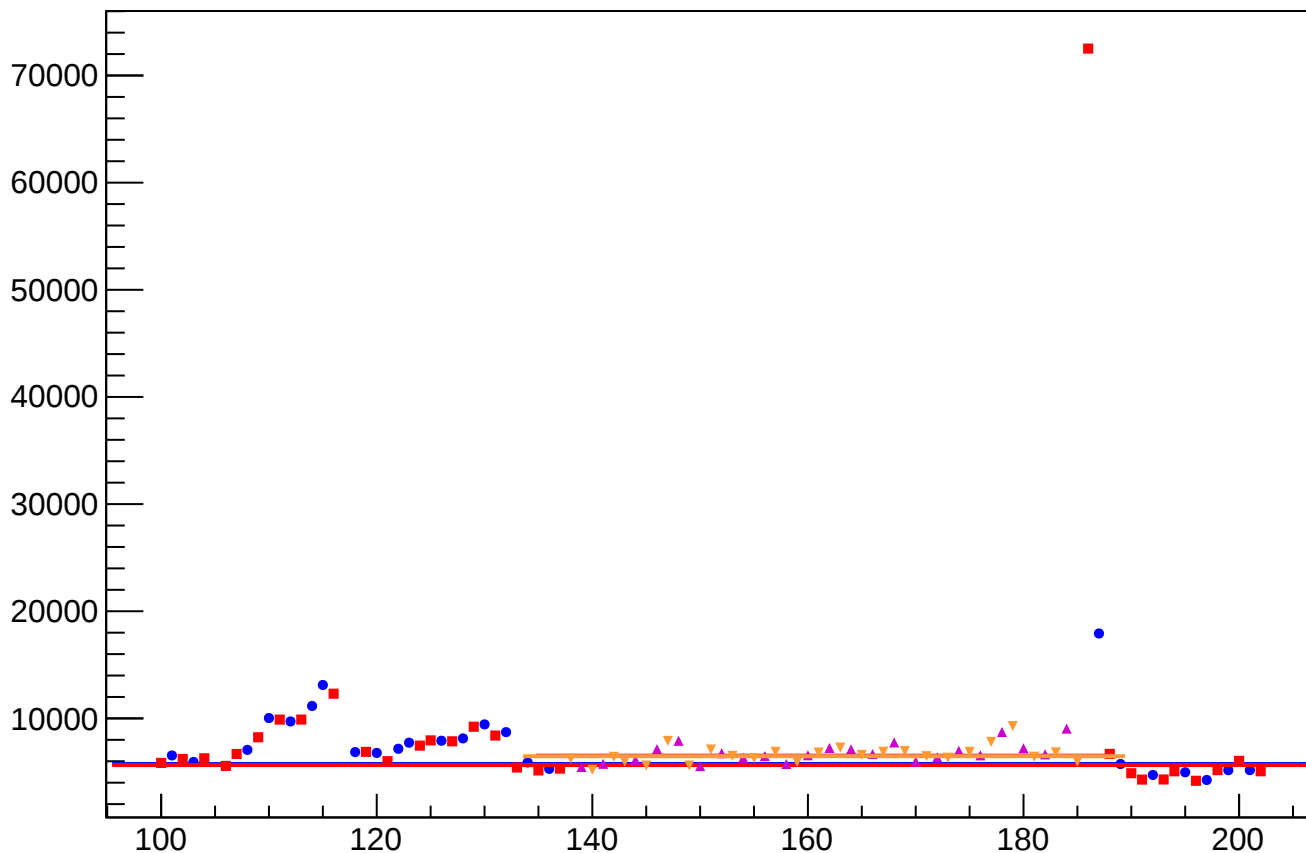
Right:  $-0.687 \pm 1.193$   $\chi^2/\text{NDF}$ : 57.7/52

In:  $-0.189 \pm 1.178$   $\chi^2/\text{NDF}$ : 59.5/46

Out:  $0.601 \pm 1.108$   $\chi^2/\text{NDF}$ : 53.9/53

All:  $0.230 \pm 0.807$   $\chi^2/\text{NDF}$ : 113.7/100

# diff\_bpm4ecY\_rms vs Slug, Sign Corrected



Right In: 5738.221+/-1.252  $\chi^2/\text{NDF}$ : 1433888.2/23

Left Out: 6471.976+/-1.078  $\chi^2/\text{NDF}$ : 490282.9/24

Right Out: 5646.566+/-1.141  $\chi^2/\text{NDF}$ : 2119462.2/28

Left In: 6521.975+/-1.116  $\chi^2/\text{NDF}$ : 480034.7/22

Left: 6496.112+/-0.775  $\chi^2/\text{NDF}$ : 971356.4/47

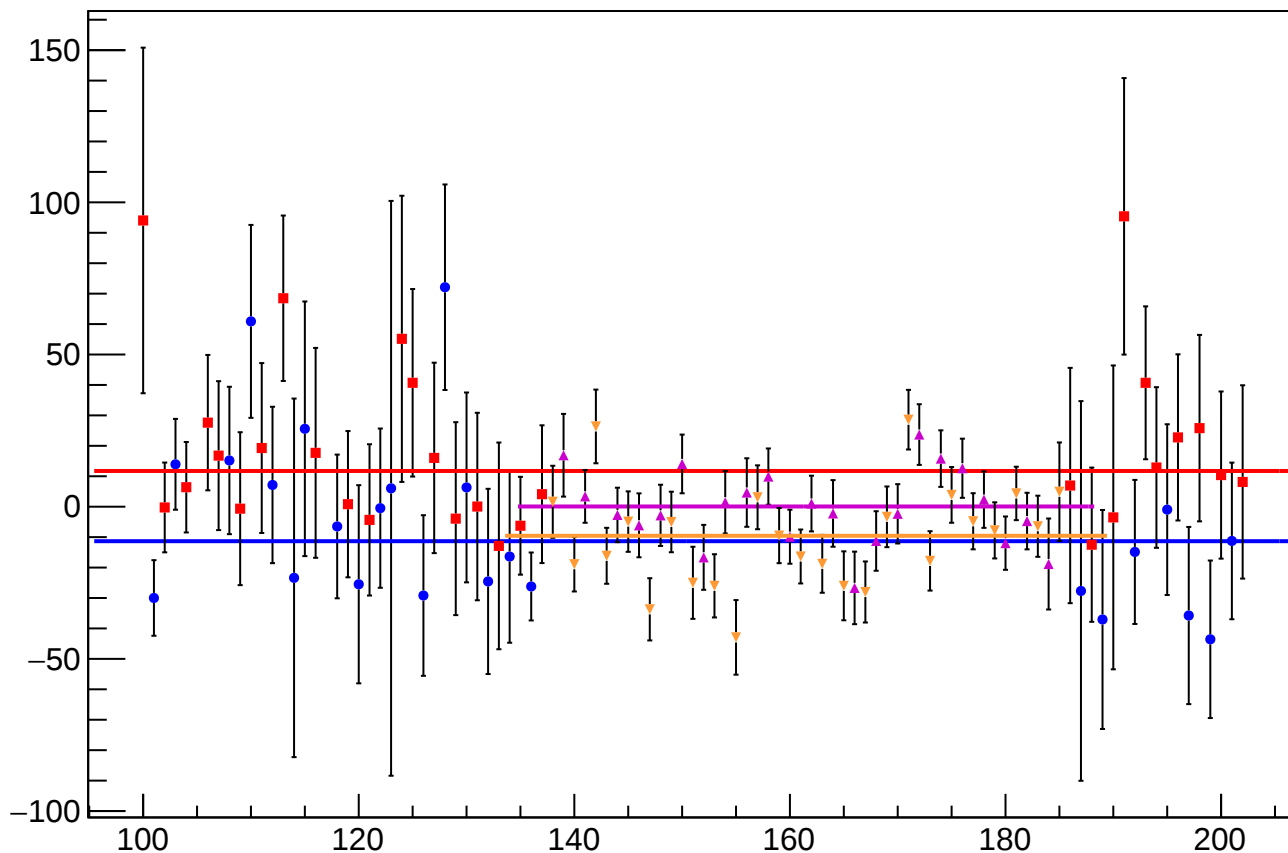
Right: 5688.166+/-0.843  $\chi^2/\text{NDF}$ : 3556278.7/52

In: 6174.959+/-0.833  $\chi^2/\text{NDF}$ : 2132403.3/46

Out: 6082.776+/-0.784  $\chi^2/\text{NDF}$ : 2886268.9/53

All: 6126.057+/-0.571  $\chi^2/\text{NDF}$ : 5025170.7/100

# diff\_bpm1X\_mean vs Slug, Sign Corrected



Right In:  $-11.333 \pm 4.861$   $\chi^2/\text{NDF}$ : 25.2/23

Left Out:  $-9.554 \pm 2.012$   $\chi^2/\text{NDF}$ : 59.5/24

Right Out:  $11.738 \pm 4.786$   $\chi^2/\text{NDF}$ : 18.9/28

Left In:  $0.072 \pm 2.073$   $\chi^2/\text{NDF}$ : 29.8/22

Left:  $-4.885 \pm 1.444$   $\chi^2/\text{NDF}$ : 100.5/47

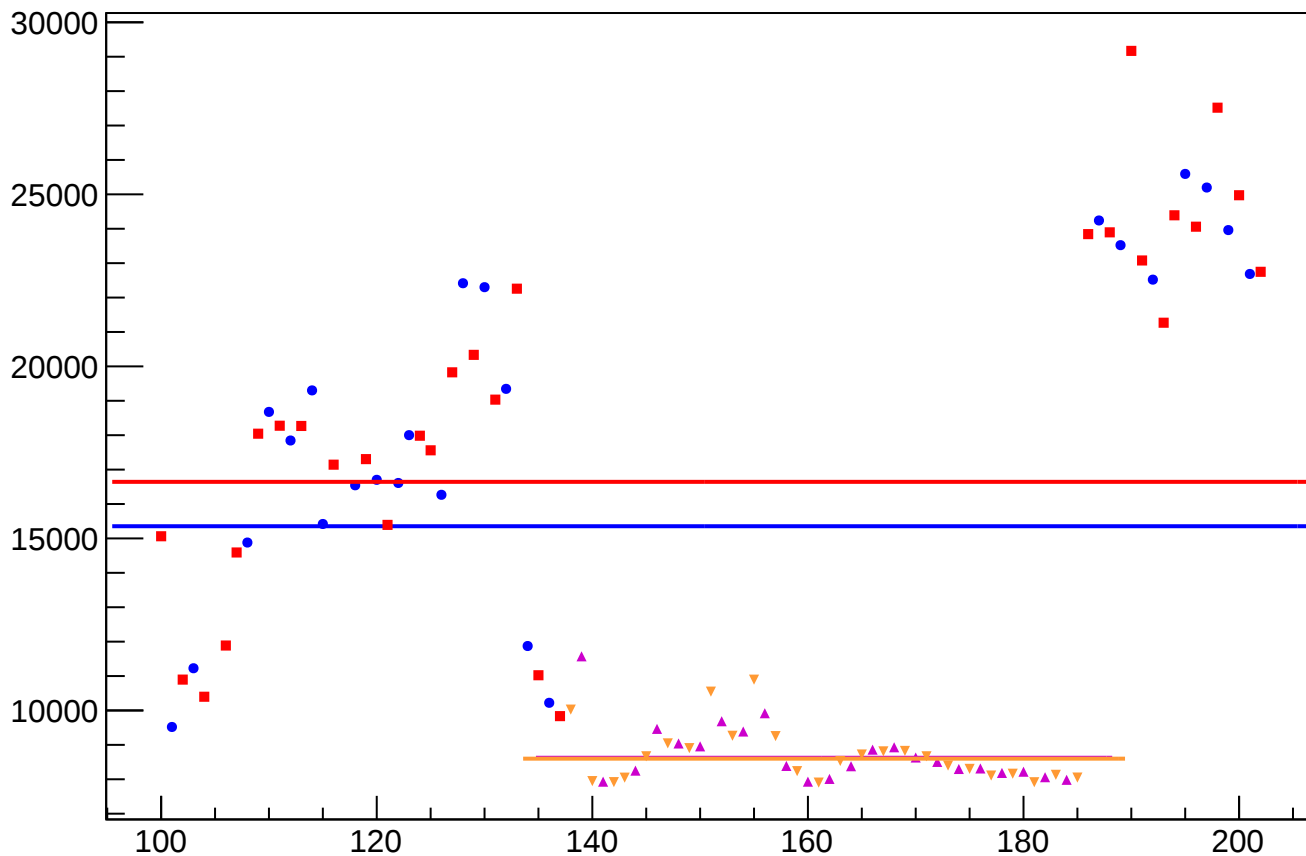
Right:  $0.382 \pm 3.410$   $\chi^2/\text{NDF}$ : 55.6/52

In:  $-1.683 \pm 1.907$   $\chi^2/\text{NDF}$ : 59.6/46

Out:  $-6.356 \pm 1.855$   $\chi^2/\text{NDF}$ : 95.3/53

All:  $-4.084 \pm 1.329$   $\chi^2/\text{NDF}$ : 158.0/100

# diff\_bpm1X\_rms vs Slug, Sign Corrected



Right In: 15354.254+/-3.437  $\chi^2/\text{NDF}$ : 2542172.0/23

Left Out: 8598.983+/-1.423  $\chi^2/\text{NDF}$ : 249070.5/24

Right Out: 16644.246+/-3.384  $\chi^2/\text{NDF}$ : 2631414.2/28

Left In: 8625.233+/-1.466  $\chi^2/\text{NDF}$ : 237310.9/22

Left: 8611.717+/-1.021  $\chi^2/\text{NDF}$ : 486546.6/47

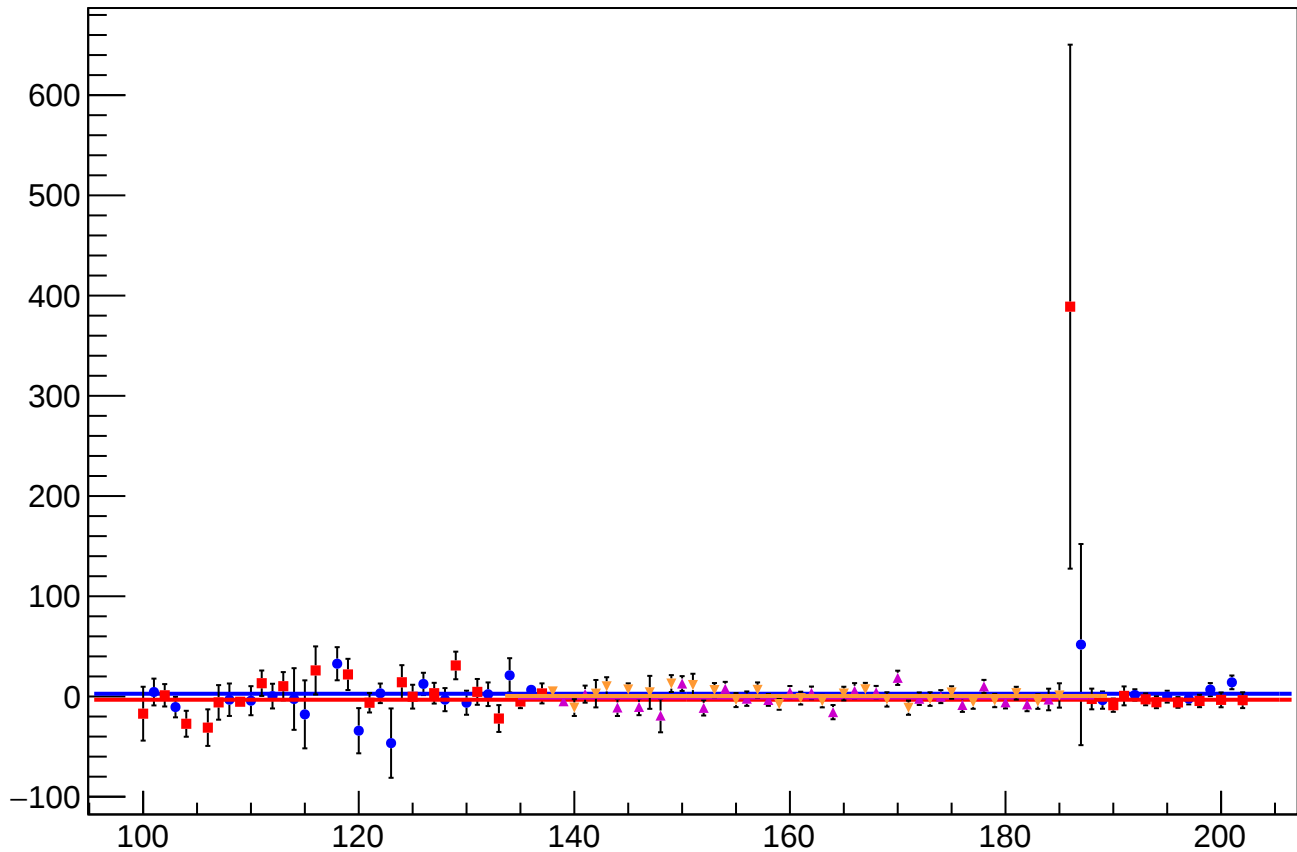
Right: 16009.289+/-2.411  $\chi^2/\text{NDF}$ : 5245118.3/52

In: 9660.605+/-1.348  $\chi^2/\text{NDF}$ : 6022817.2/46

Out: 9807.238+/-1.311  $\chi^2/\text{NDF}$ : 7684190.0/53

All: 9735.951+/-0.940  $\chi^2/\text{NDF}$ : 13713085.7/100

# diff\_bpm1Y\_mean vs Slug, Sign Corrected



Right In: 2.728 $\pm$ 1.892  $\chi^2/\text{NDF}$ : 18.9/23

Left Out: 0.528 $\pm$ 1.418  $\chi^2/\text{NDF}$ : 19.5/24

Right Out: -3.235 $\pm$ 1.660  $\chi^2/\text{NDF}$ : 27.3/28

Left In: -1.050 $\pm$ 1.396  $\chi^2/\text{NDF}$ : 32.5/22

Left: -0.273 $\pm$ 0.995  $\chi^2/\text{NDF}$ : 52.6/47

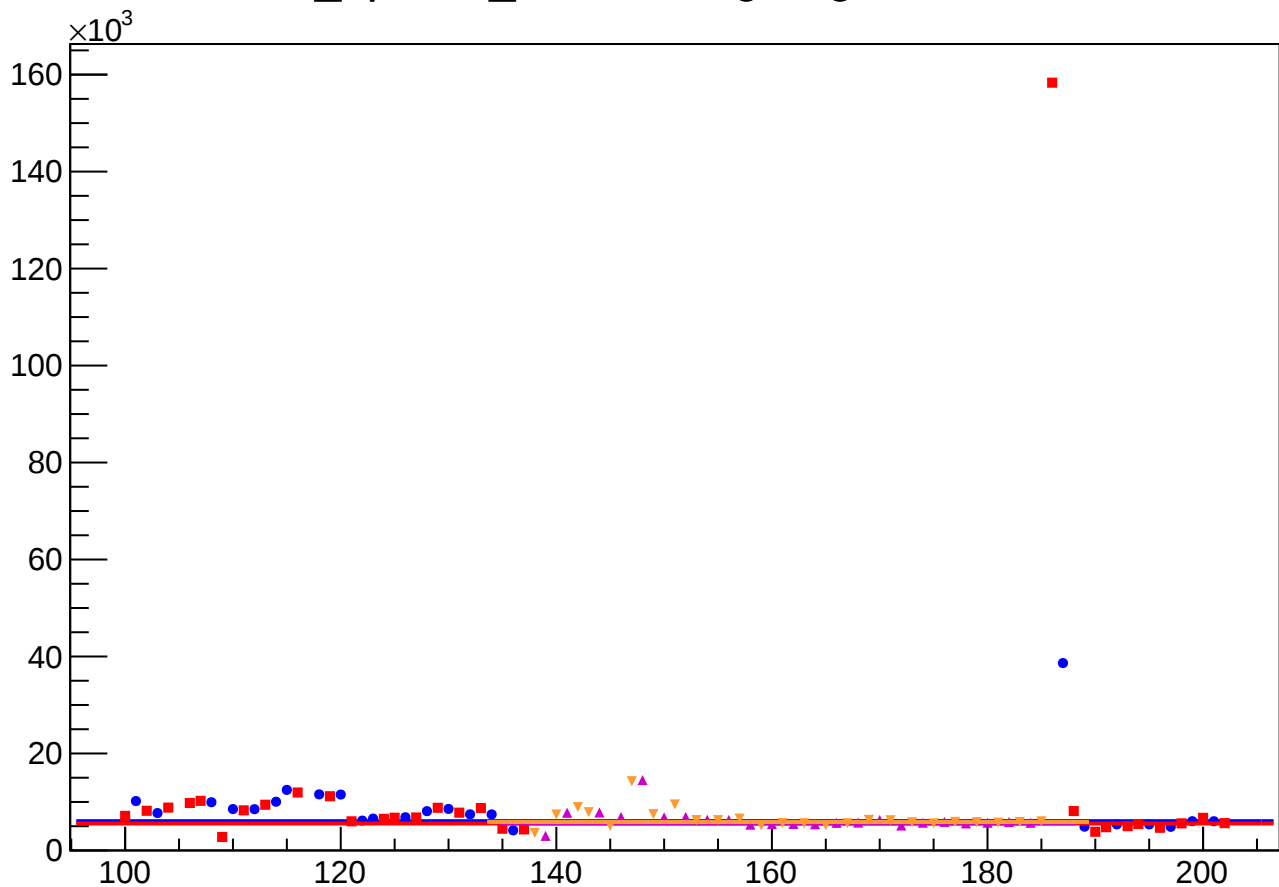
Right: -0.641 $\pm$ 1.248  $\chi^2/\text{NDF}$ : 51.8/52

In: 0.282 $\pm$ 1.123  $\chi^2/\text{NDF}$ : 54.1/46

Out: -1.059 $\pm$ 1.078  $\chi^2/\text{NDF}$ : 49.7/53

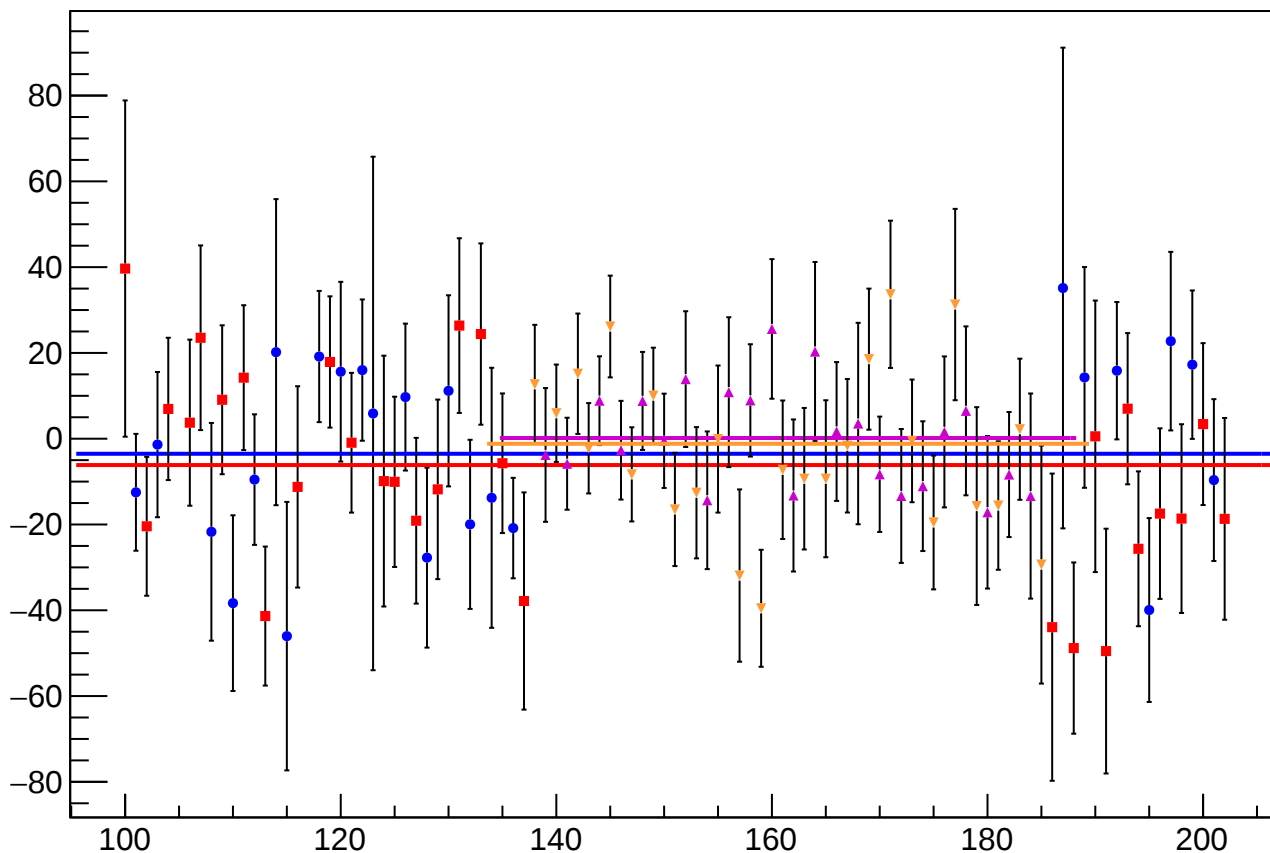
All: -0.416 $\pm$ 0.778  $\chi^2/\text{NDF}$ : 104.5/100

# diff\_bpm1Y\_rms vs Slug, Sign Corrected



|                             |                                    |                         |                                    |
|-----------------------------|------------------------------------|-------------------------|------------------------------------|
| Right In: 6036.994+/-1.338  | $\chi^2/\text{NDF}$ : 1886278.7/23 | Left: 5713.698+/-0.703  | $\chi^2/\text{NDF}$ : 3895130.2/47 |
| Left Out: 5860.605+/-1.002  | $\chi^2/\text{NDF}$ : 1690049.2/24 | Right: 5768.272+/-0.882 | $\chi^2/\text{NDF}$ : 5343268.0/52 |
| Right Out: 5561.308+/-1.174 | $\chi^2/\text{NDF}$ : 3385535.8/28 | In: 5735.461+/-0.794    | $\chi^2/\text{NDF}$ : 4127555.6/46 |
| Left In: 5571.330+/-0.987   | $\chi^2/\text{NDF}$ : 2162788.3/22 | Out: 5734.384+/-0.762   | $\chi^2/\text{NDF}$ : 5113181.5/53 |
|                             |                                    | All: 5734.901+/-0.550   | $\chi^2/\text{NDF}$ : 9240738.1/10 |

# diff\_bpm11X\_mean vs Slug, Sign Corrected



Right In: -3.512 $\pm$ 3.938  $\chi^2/\text{NDF}$ : 24.6/23

Left Out: -1.182 $\pm$ 2.939  $\chi^2/\text{NDF}$ : 33.7/24

Right Out: -6.142 $\pm$ 3.699  $\chi^2/\text{NDF}$ : 32.2/28

Left In: 0.157 $\pm$ 3.058  $\chi^2/\text{NDF}$ : 11.5/22

Left: -0.539 $\pm$ 2.119  $\chi^2/\text{NDF}$ : 45.3/47

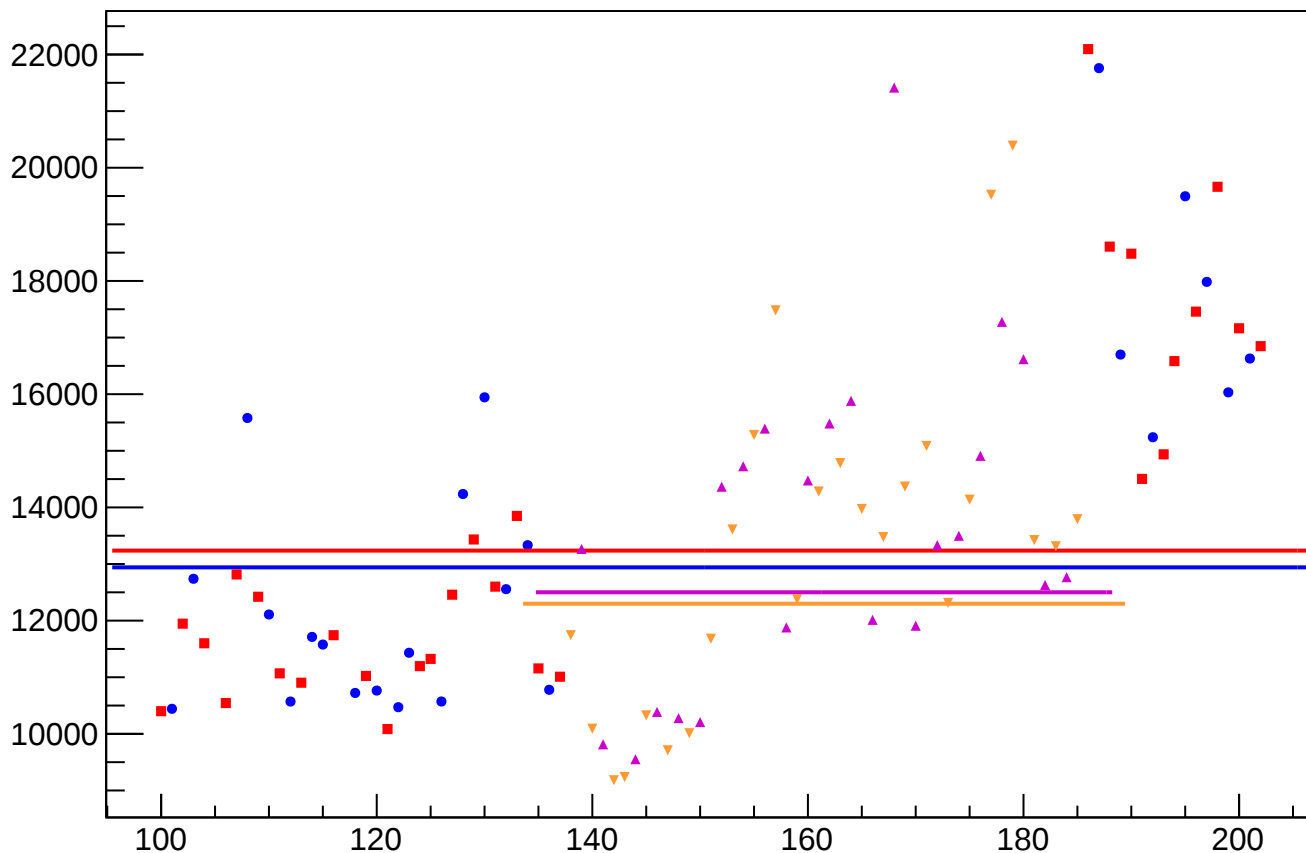
Right: -4.909 $\pm$ 2.696  $\chi^2/\text{NDF}$ : 57.0/52

In: -1.223 $\pm$ 2.415  $\chi^2/\text{NDF}$ : 36.6/46

Out: -3.101 $\pm$ 2.301  $\chi^2/\text{NDF}$ : 67.0/53

All: -2.208 $\pm$ 1.666  $\chi^2/\text{NDF}$ : 103.9/100

# diff\_bpm11X\_rms vs Slug, Sign Corrected



Right In: 12941.231 $\pm$ 2.785

$\chi^2/\text{NDF}$ : 986799.7/23

Left: 12395.720 $\pm$ 1.498  $\chi^2/\text{NDF}$ : 2868458.0/47

Left Out: 12298.676 $\pm$ 2.078

$\chi^2/\text{NDF}$ : 1506026.8/24

Right: 13098.336 $\pm$ 1.907  $\chi^2/\text{NDF}$ : 2169985.5/52

Right Out: 13236.934 $\pm$ 2.616

$\chi^2/\text{NDF}$ : 1177195.6/28

In: 12666.458 $\pm$ 1.708  $\chi^2/\text{NDF}$ : 2360293.5/46

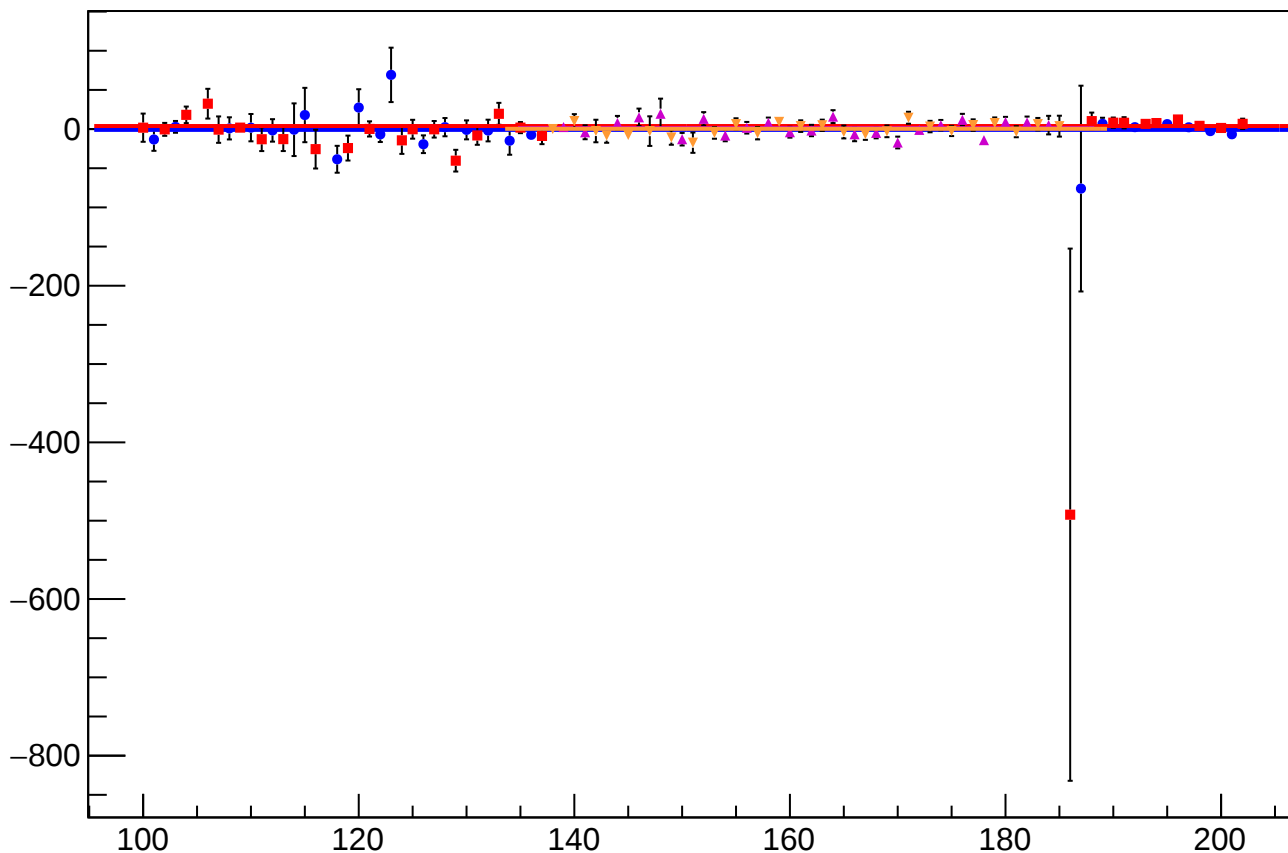
Out: 12661.732 $\pm$ 1.627  $\chi^2/\text{NDF}$ : 2762103.2/53

Left In: 12500.795 $\pm$ 2.162

$\chi^2/\text{NDF}$ : 1357889.1/22

All: 12663.980 $\pm$ 1.178  $\chi^2/\text{NDF}$ : 5122400.7/100

# diff\_bpm11Y\_mean vs Slug, Sign Corrected



Right In:  $-1.032 \pm 1.699$   $\chi^2/\text{NDF}$ : 22.8/23

Left Out:  $0.353 \pm 1.433$   $\chi^2/\text{NDF}$ : 19.1/24

Right Out:  $3.889 \pm 1.499$   $\chi^2/\text{NDF}$ : 34.4/28

Left In:  $1.165 \pm 1.371$   $\chi^2/\text{NDF}$ : 33.6/22

Left:  $0.777 \pm 0.991$   $\chi^2/\text{NDF}$ : 52.9/47

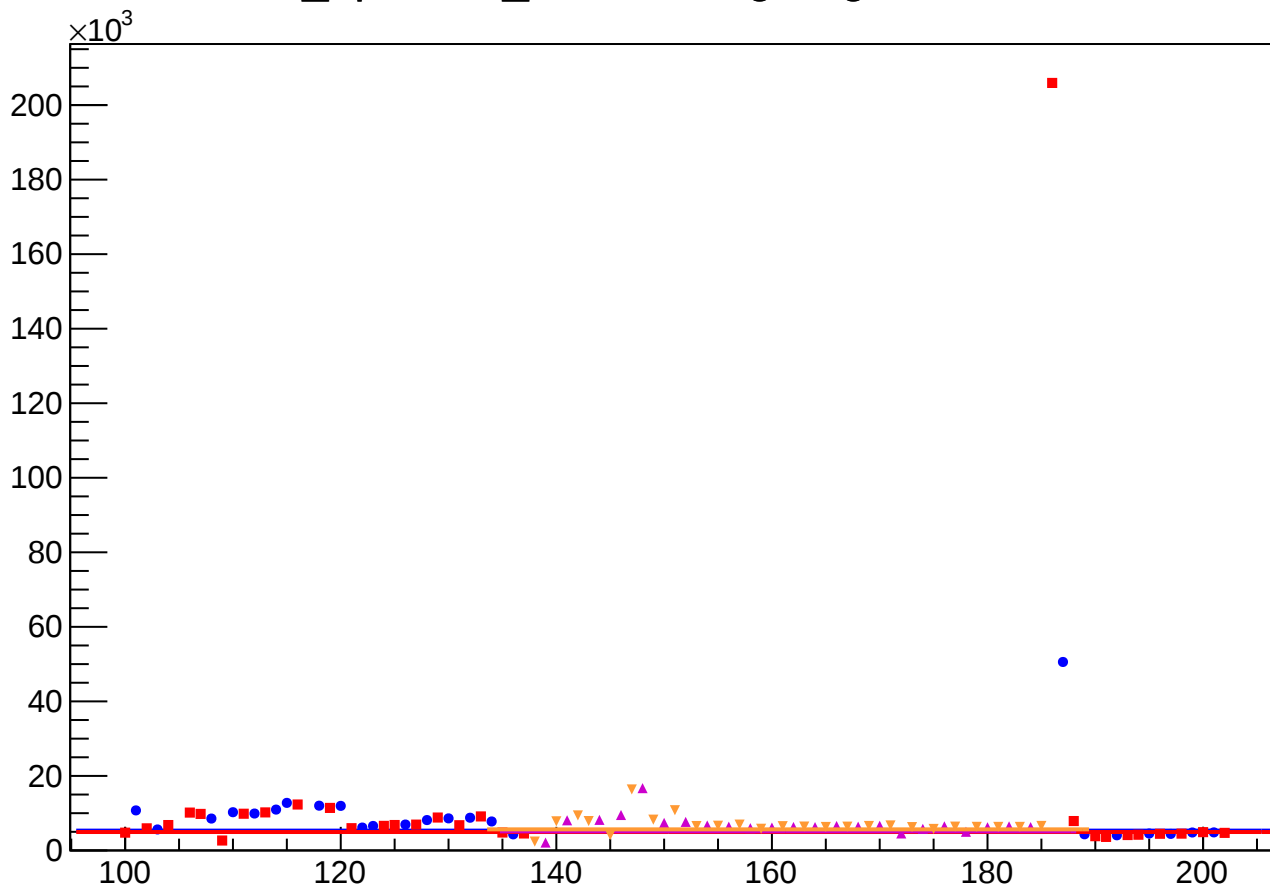
Right:  $1.735 \pm 1.124$   $\chi^2/\text{NDF}$ : 61.9/52

In:  $0.298 \pm 1.067$   $\chi^2/\text{NDF}$ : 57.4/46

Out:  $2.042 \pm 1.036$   $\chi^2/\text{NDF}$ : 56.4/53

All:  $1.196 \pm 0.743$   $\chi^2/\text{NDF}$ : 115.2/100

# diff\_bpm11Y\_rms vs Slug, Sign Corrected



Right In: 5320.621 $\pm$ 1.201  $\chi^2/\text{NDF}$ : 2521976.8/23

Left Out: 5659.441 $\pm$ 1.014  $\chi^2/\text{NDF}$ : 4128583.6/24

Right Out: 4948.220 $\pm$ 1.060  $\chi^2/\text{NDF}$ : 3495950.3/28

Left In: 5137.772 $\pm$ 0.970  $\chi^2/\text{NDF}$ : 5495609.7/22

Left: 5387.078 $\pm$ 0.701  $\chi^2/\text{NDF}$ : 9762498.7/47

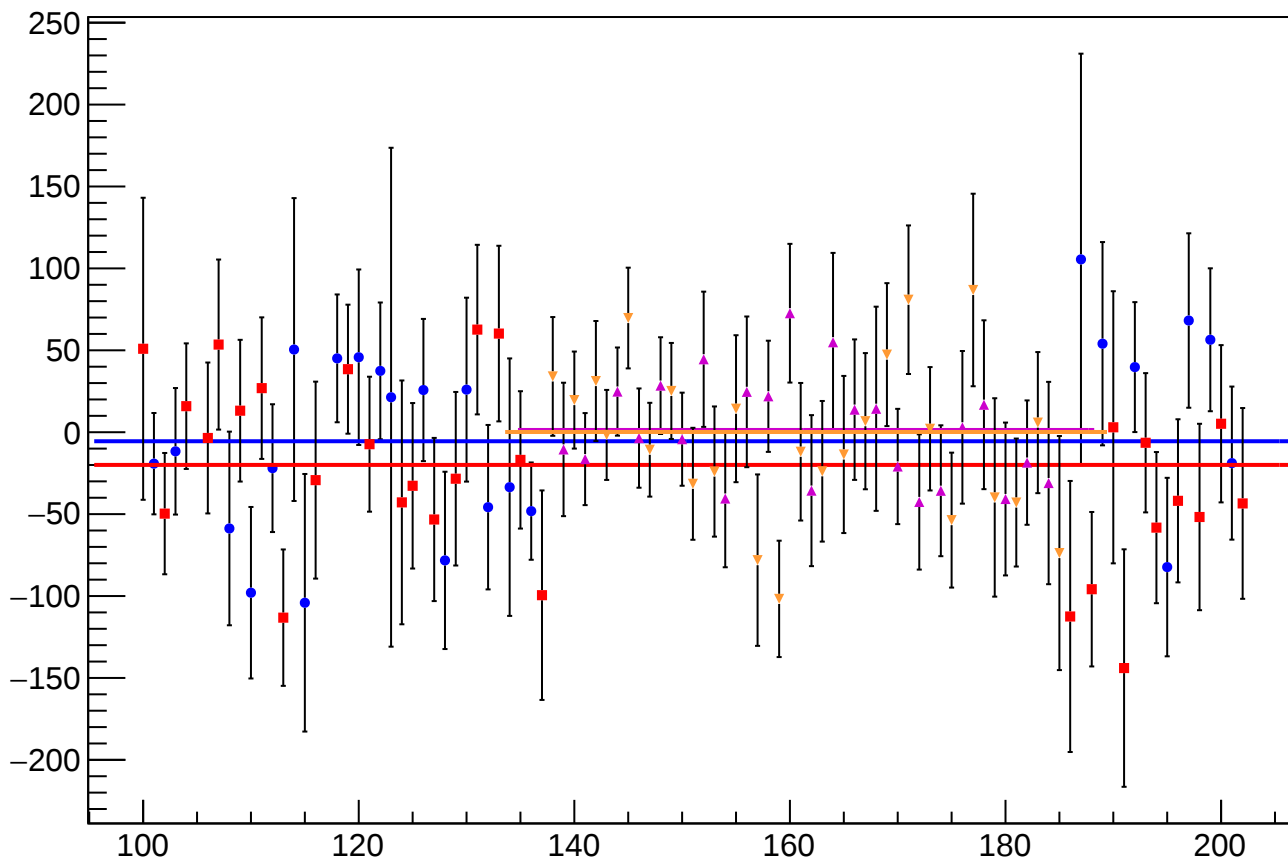
Right: 5111.237 $\pm$ 0.795  $\chi^2/\text{NDF}$ : 6071951.1/52

In: 5209.905 $\pm$ 0.755  $\chi^2/\text{NDF}$ : 8031612.6/46

Out: 5319.767 $\pm$ 0.733  $\chi^2/\text{NDF}$ : 7859693.2/53

All: 5266.460 $\pm$ 0.526  $\chi^2/\text{NDF}$ : 15902218.1/100

# diff\_bpm12X\_mean vs Slug, Sign Corrected



Right In:  $-5.505 \pm 9.787$   $\chi^2/\text{NDF}$ : 24.4/23

Left Out:  $0.143 \pm 7.683$   $\chi^2/\text{NDF}$ : 31.3/24

Right Out:  $-19.957 \pm 9.209$   $\chi^2/\text{NDF}$ : 28.9/28

Left In:  $1.374 \pm 7.990$   $\chi^2/\text{NDF}$ : 13.3/22

Left:  $0.734 \pm 5.538$   $\chi^2/\text{NDF}$ : 44.6/47

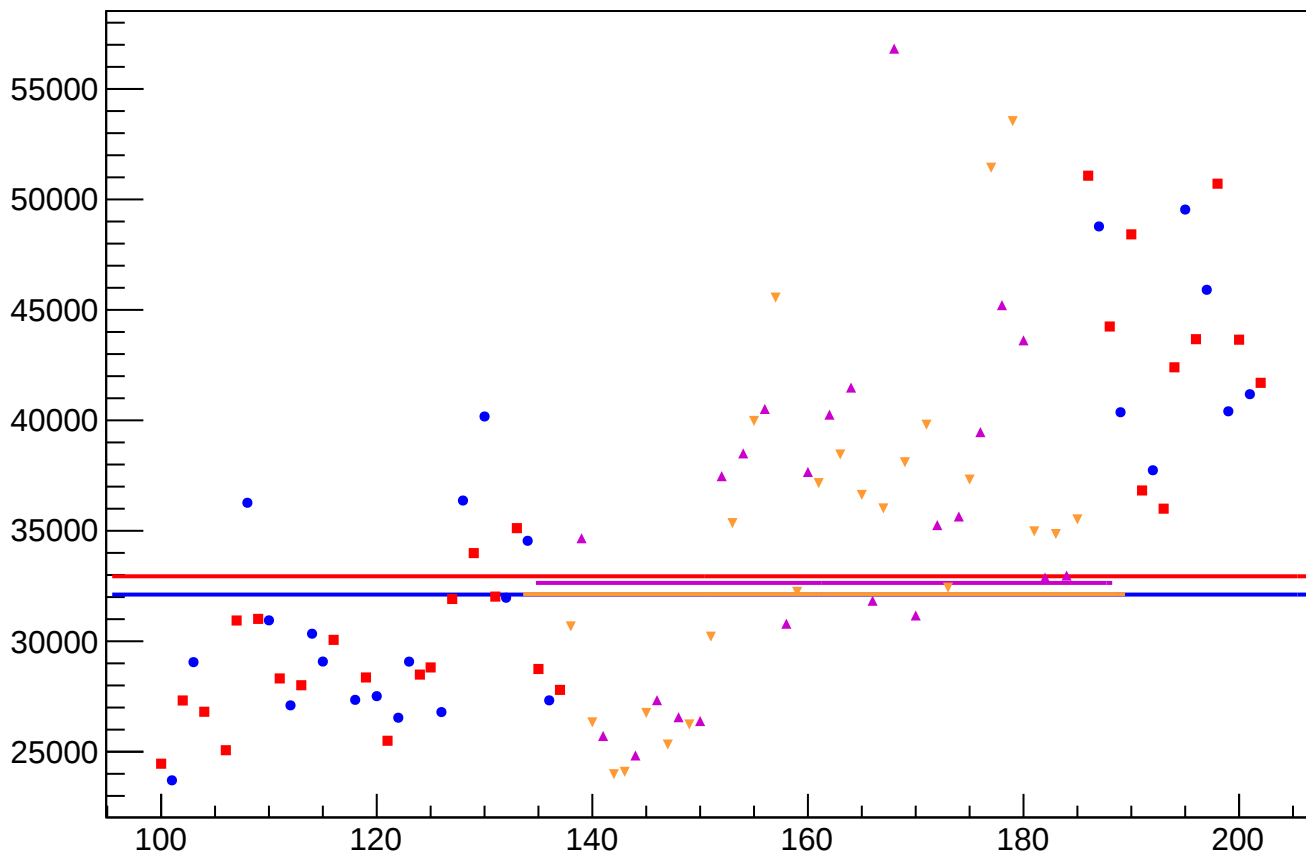
Right:  $-13.170 \pm 6.707$   $\chi^2/\text{NDF}$ : 54.5/52

In:  $-1.377 \pm 6.189$   $\chi^2/\text{NDF}$ : 38.0/46

Out:  $-8.106 \pm 5.900$   $\chi^2/\text{NDF}$ : 63.0/53

All:  $-4.903 \pm 4.270$   $\chi^2/\text{NDF}$ : 101.6/100

# diff\_bpm12X\_rms vs Slug, Sign Corrected



Right In: 32113.538 $\pm$ 6.921  $\chi^2/\text{NDF}$ : 1024145.8/23

Left Out: 32132.314 $\pm$ 5.433  $\chi^2/\text{NDF}$ : 1540079.4/24

Right Out: 32941.178 $\pm$ 6.512  $\chi^2/\text{NDF}$ : 1200192.8/28

Left In: 32641.162 $\pm$ 5.650  $\chi^2/\text{NDF}$ : 1402162.4/22

Left: 32376.774 $\pm$ 3.916  $\chi^2/\text{NDF}$ : 2946456.2/47

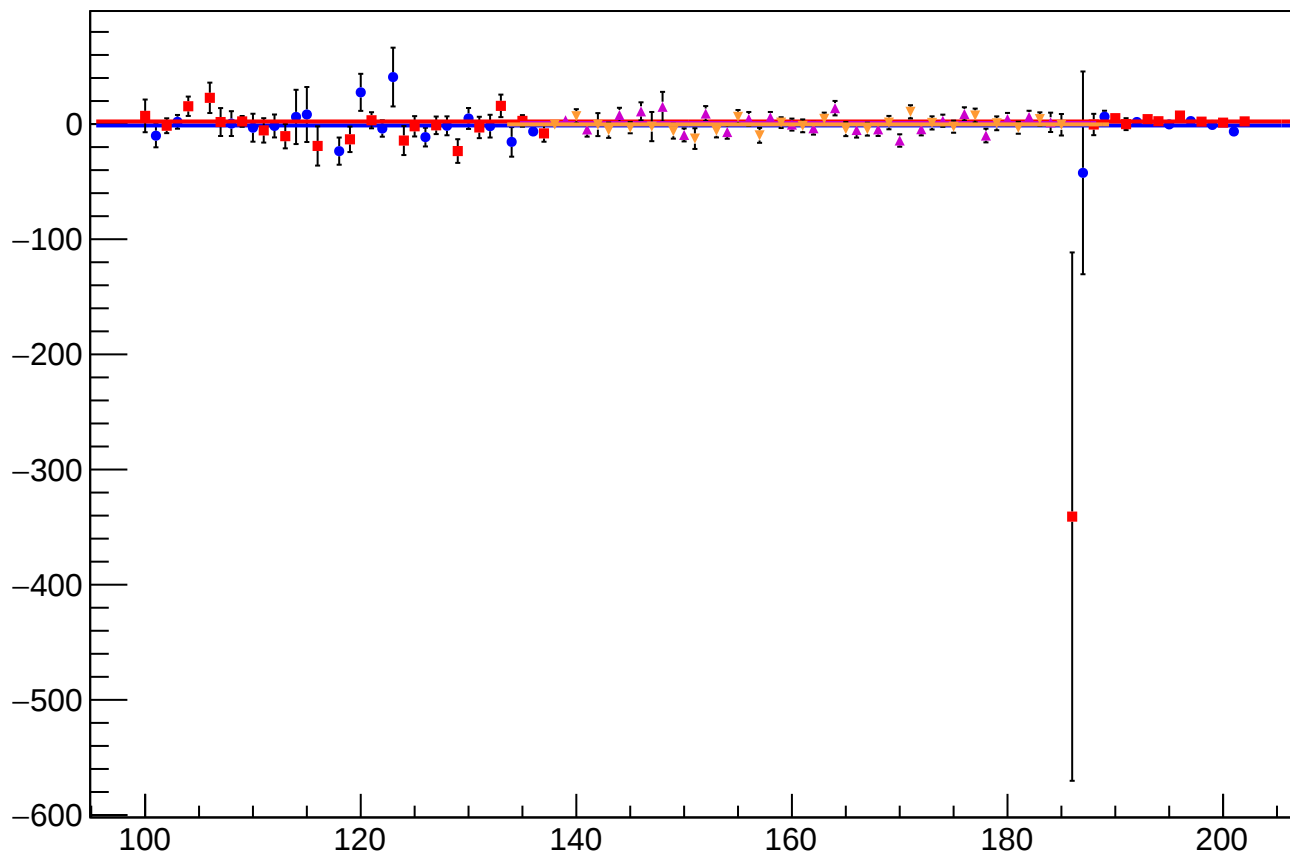
Right: 32552.515 $\pm$ 4.742  $\chi^2/\text{NDF}$ : 2231924.6/52

In: 32430.138 $\pm$ 4.377  $\chi^2/\text{NDF}$ : 2429796.1/46

Out: 32464.274 $\pm$ 4.172  $\chi^2/\text{NDF}$ : 2749369.3/53

All: 32448.024 $\pm$ 3.020  $\chi^2/\text{NDF}$ : 5179197.2/100

# diff\_bpm12Y\_mean vs Slug, Sign Corrected



Right In:  $-1.211 \pm 1.174$   $\chi^2/\text{NDF}$ : 23.4/23

Left Out:  $-0.312 \pm 1.172$   $\chi^2/\text{NDF}$ : 17.6/24

Right Out:  $2.243 \pm 1.078$   $\chi^2/\text{NDF}$ : 29.6/28

Left In:  $0.908 \pm 1.142$   $\chi^2/\text{NDF}$ : 36.2/22

Left:  $0.313 \pm 0.818$   $\chi^2/\text{NDF}$ : 54.4/47

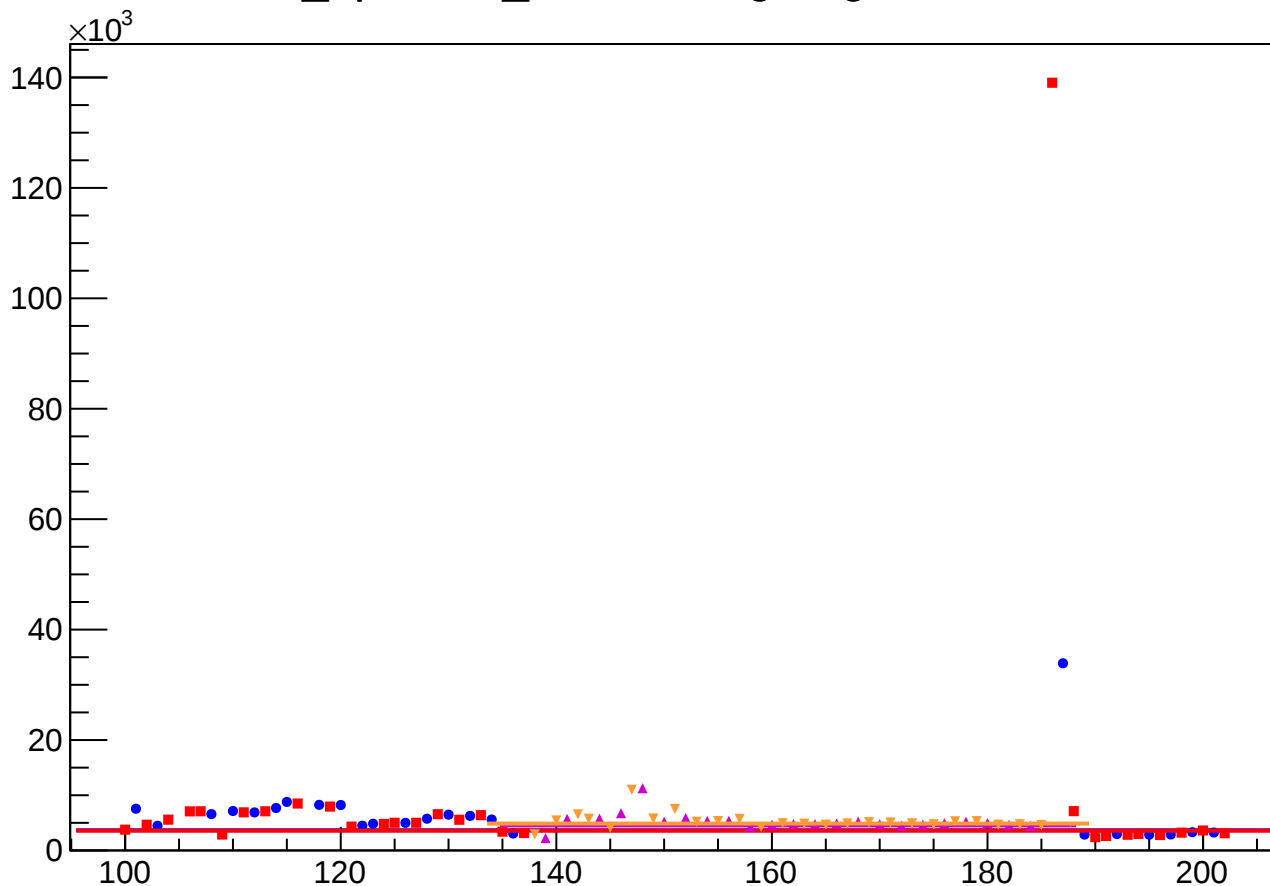
Right:  $0.664 \pm 0.794$   $\chi^2/\text{NDF}$ : 57.6/52

In:  $-0.122 \pm 0.819$   $\chi^2/\text{NDF}$ : 61.2/46

Out:  $1.072 \pm 0.793$   $\chi^2/\text{NDF}$ : 49.8/53

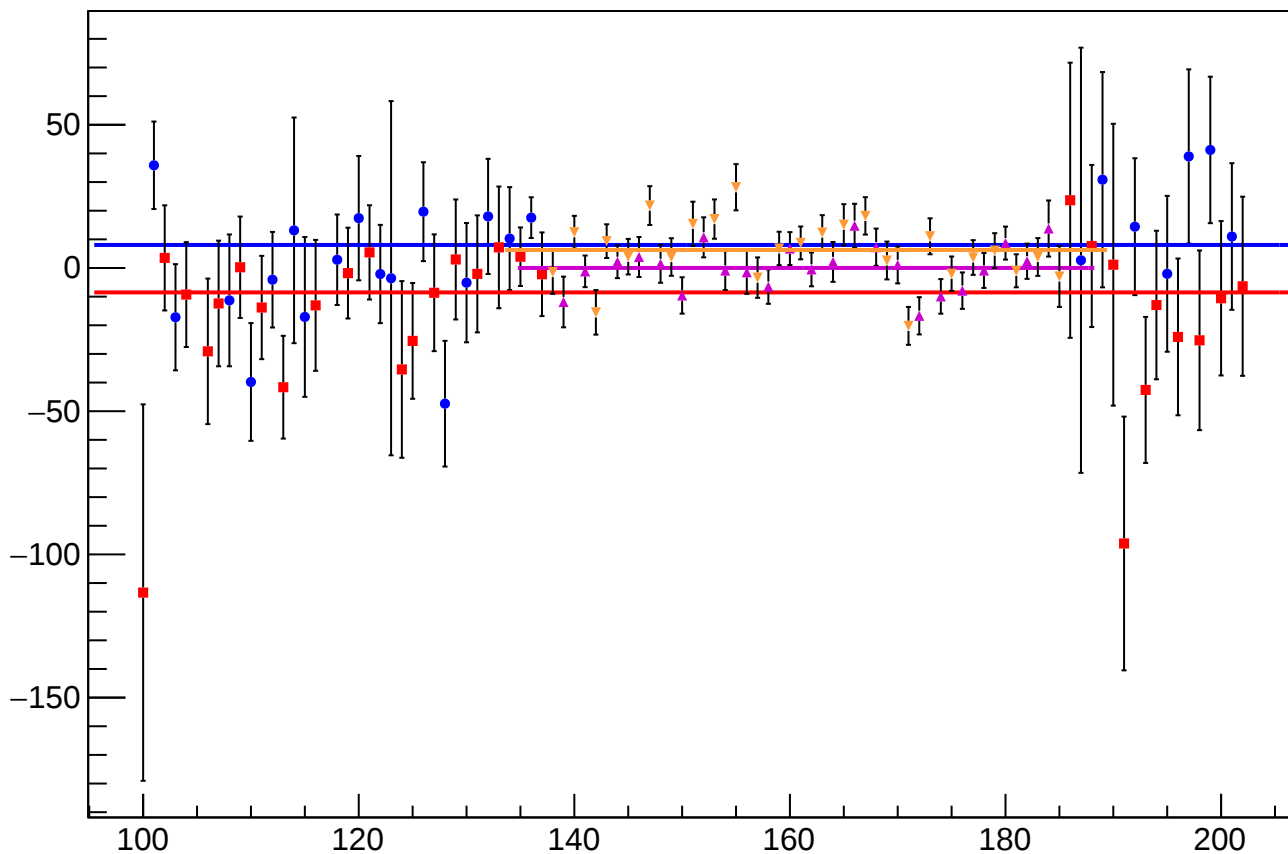
All:  $0.494 \pm 0.570$   $\chi^2/\text{NDF}$ : 112.1/100

# diff\_bpm12Y\_rms vs Slug, Sign Corrected



|                                 |                                    |                             |                                      |
|---------------------------------|------------------------------------|-----------------------------|--------------------------------------|
| Right In: 3654.532 $\pm$ 0.830  | $\chi^2/\text{NDF}$ : 2789390.6/23 | Left: 4702.320 $\pm$ 0.578  | $\chi^2/\text{NDF}$ : 4223993.0/47   |
| Left Out: 4868.567 $\pm$ 0.829  | $\chi^2/\text{NDF}$ : 1511151.0/24 | Right: 3617.020 $\pm$ 0.561 | $\chi^2/\text{NDF}$ : 6351247.8/52   |
| Right Out: 3585.416 $\pm$ 0.762 | $\chi^2/\text{NDF}$ : 3558094.7/28 | In: 4111.638 $\pm$ 0.579    | $\chi^2/\text{NDF}$ : 6013955.6/46   |
| Left In: 4544.337 $\pm$ 0.808   | $\chi^2/\text{NDF}$ : 2634314.4/22 | Out: 4173.378 $\pm$ 0.561   | $\chi^2/\text{NDF}$ : 6368796.4/53   |
|                                 |                                    | All: 4143.485 $\pm$ 0.403   | $\chi^2/\text{NDF}$ : 12388619.8/100 |

# diff\_bpm16X\_mean vs Slug, Sign Corrected



Right In:  $8.044 \pm 3.836$   $\chi^2/\text{NDF}$ : 25.9/23

Left Out:  $6.296 \pm 1.310$   $\chi^2/\text{NDF}$ : 56.5/24

Right Out:  $-8.527 \pm 3.886$   $\chi^2/\text{NDF}$ : 19.6/28

Left In:  $0.020 \pm 1.353$   $\chi^2/\text{NDF}$ : 29.9/22

Left:  $3.259 \pm 0.941$   $\chi^2/\text{NDF}$ : 97.5/47

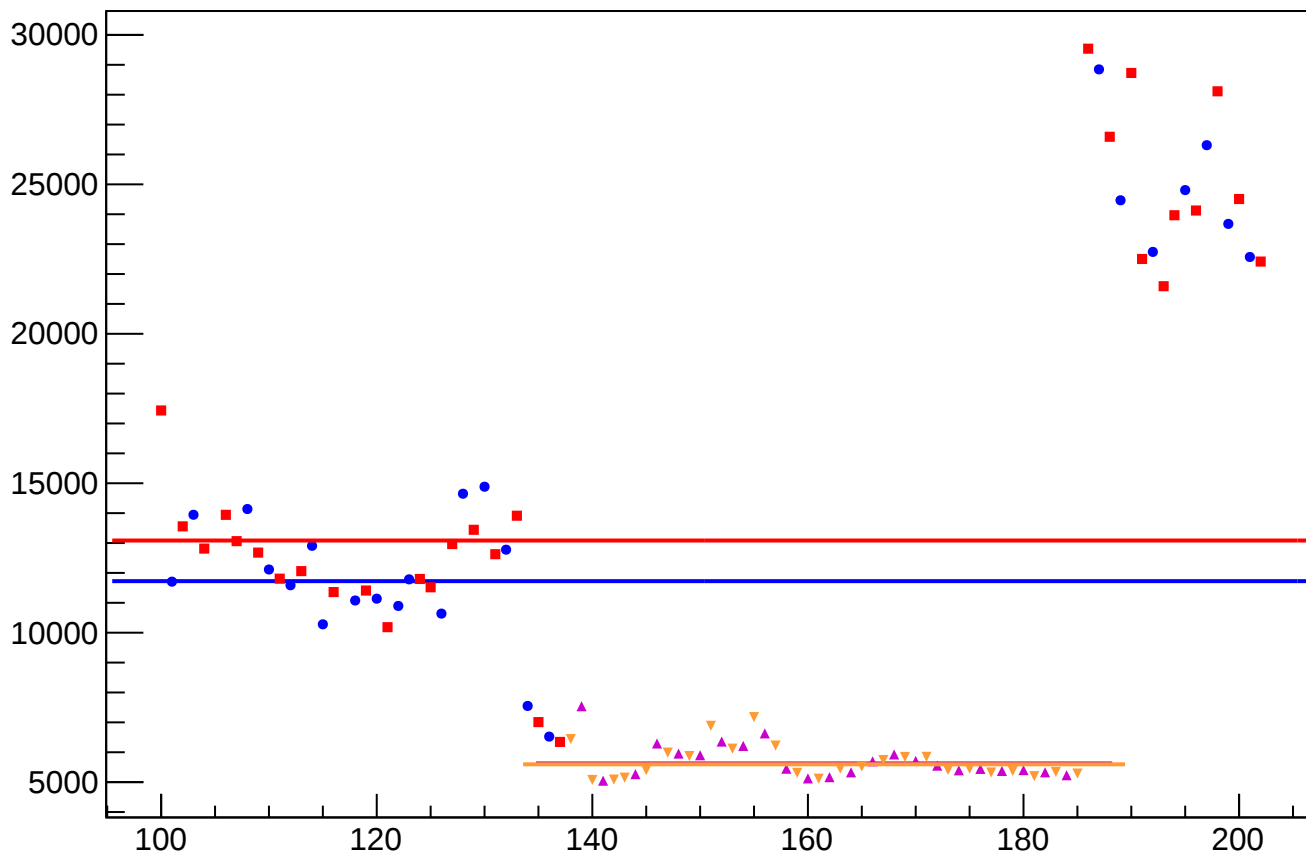
Right:  $-0.134 \pm 2.730$   $\chi^2/\text{NDF}$ : 54.7/52

In:  $0.908 \pm 1.276$   $\chi^2/\text{NDF}$ : 59.7/46

Out:  $4.783 \pm 1.242$   $\chi^2/\text{NDF}$ : 89.2/53

All:  $2.899 \pm 0.890$   $\chi^2/\text{NDF}$ : 153.6/100

# diff\_bpm16X\_rms vs Slug, Sign Corrected



Right In: 11724.621 +/- 2.713  $\chi^2/\text{NDF}$ : 3820570.4/23

Left Out: 5596.370 +/- 0.926  $\chi^2/\text{NDF}$ : 283998.1/24

Right Out: 13084.255 +/- 2.748  $\chi^2/\text{NDF}$ : 4158444.5/28

Left In: 5627.283 +/- 0.957  $\chi^2/\text{NDF}$ : 279318.7/22

Left: 5611.329 +/- 0.666  $\chi^2/\text{NDF}$ : 563855.6/47

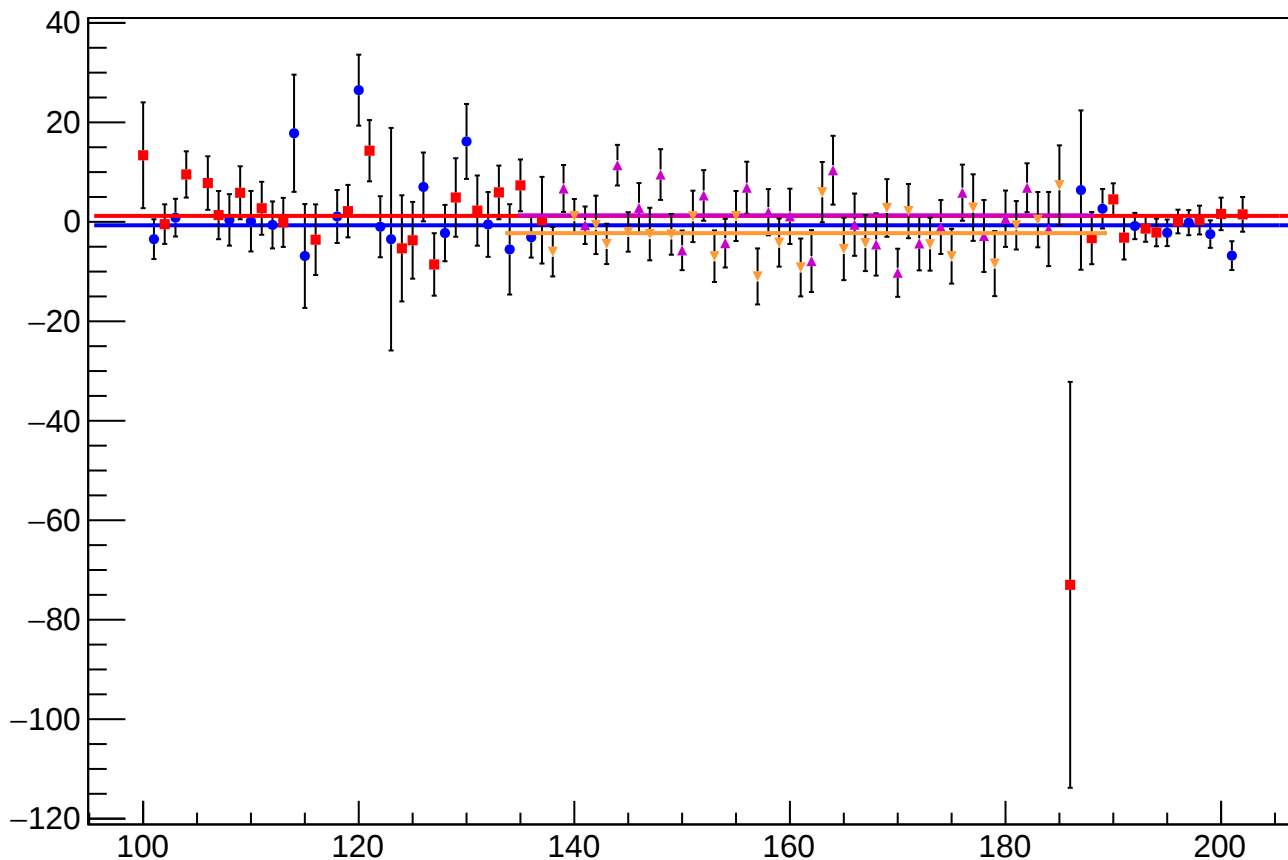
Right: 12395.591 +/- 1.931  $\chi^2/\text{NDF}$ : 8103000.2/52

In: 6301.933 +/- 0.902  $\chi^2/\text{NDF}$ : 8593551.2/46

Out: 6360.532 +/- 0.878  $\chi^2/\text{NDF}$ : 11109138.1/53

All: 6332.035 +/- 0.629  $\chi^2/\text{NDF}$ : 19704855.9/1

# diff\_bpm16Y\_mean vs Slug, Sign Corrected



Right In:  $-0.693 \pm 0.889$   $\chi^2/\text{NDF}$ : 31.2/23

Left Out:  $-2.268 \pm 1.029$   $\chi^2/\text{NDF}$ : 15.4/24

Right Out:  $1.196 \pm 0.820$   $\chi^2/\text{NDF}$ : 26.5/28

Left In:  $1.305 \pm 1.077$   $\chi^2/\text{NDF}$ : 30.8/22

Left:  $-0.562 \pm 0.744$   $\chi^2/\text{NDF}$ : 51.9/47

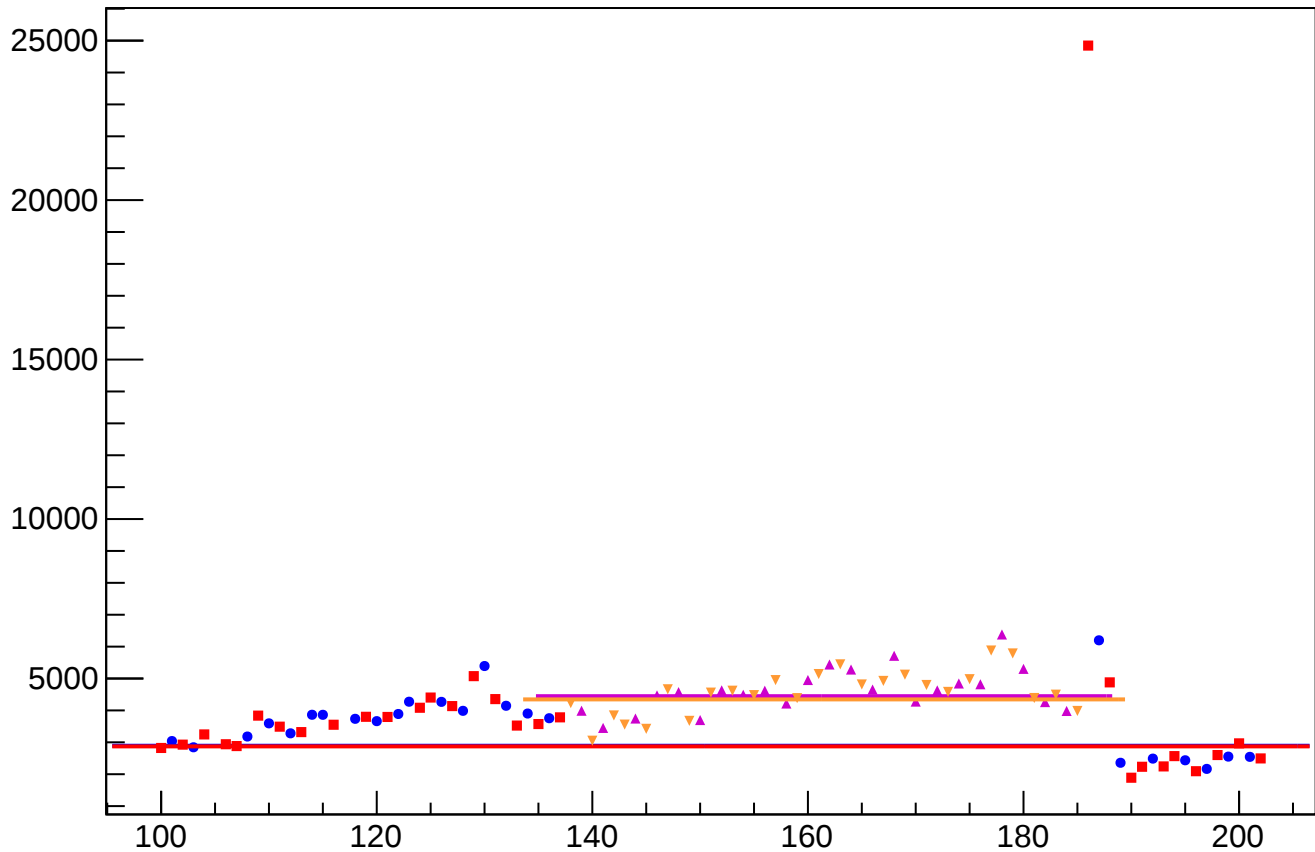
Right:  $0.328 \pm 0.603$   $\chi^2/\text{NDF}$ : 60.2/52

In:  $0.116 \pm 0.686$   $\chi^2/\text{NDF}$ : 64.1/46

Out:  $-0.148 \pm 0.641$   $\chi^2/\text{NDF}$ : 48.8/53

All:  $-0.024 \pm 0.468$   $\chi^2/\text{NDF}$ : 112.9/100

# diff\_bpm16Y\_rms vs Slug, Sign Corrected



Right In: 2892.191+/-0.629  $\chi^2/\text{NDF}$ : 1227250.4/23

Left Out: 4345.381+/-0.728  $\chi^2/\text{NDF}$ : 1000636.1/24

Right Out: 2872.171+/-0.580  $\chi^2/\text{NDF}$ : 2257458.4/28

Left In: 4446.181+/-0.762  $\chi^2/\text{NDF}$ : 702797.6/22

Left: 4393.504+/-0.526  $\chi^2/\text{NDF}$ : 1712588.4/47

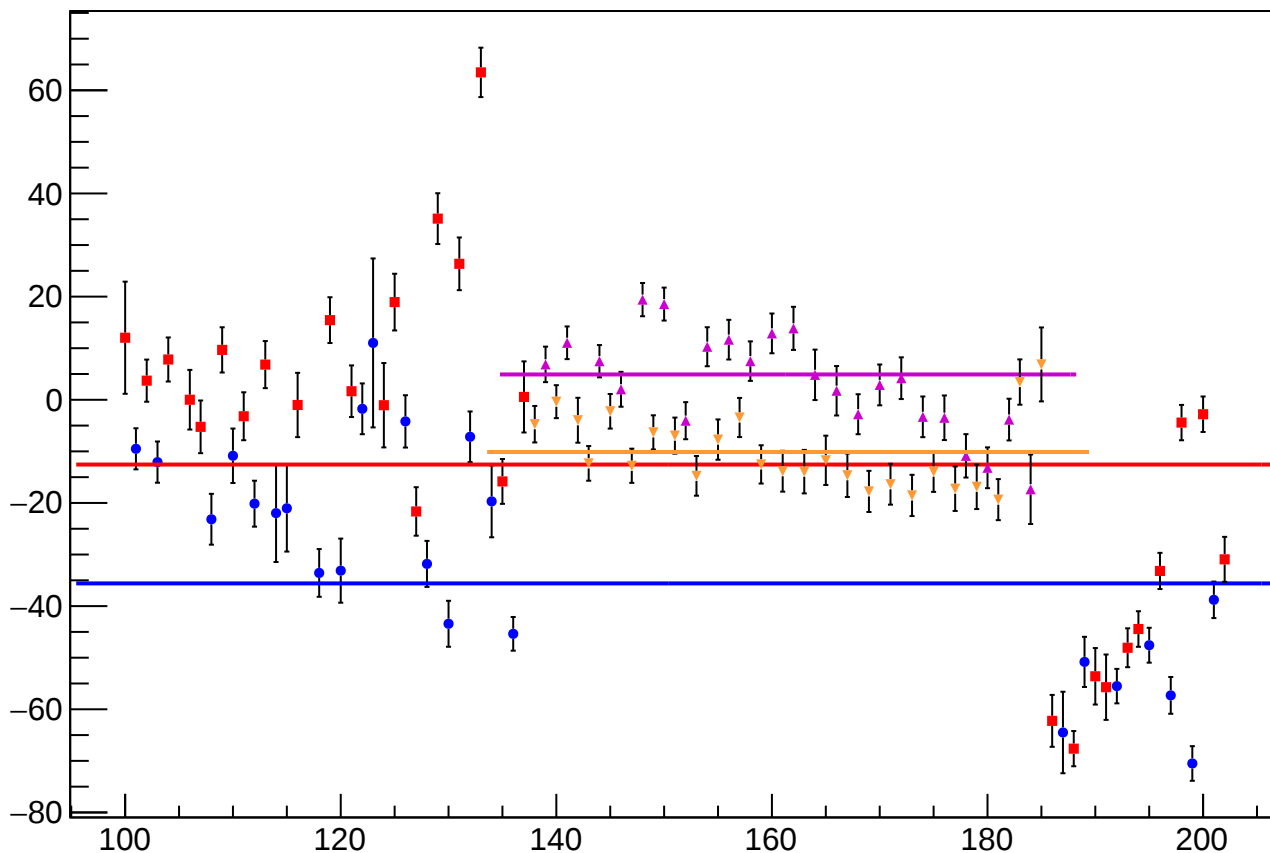
Right: 2881.370+/-0.426  $\chi^2/\text{NDF}$ : 3485257.3/52

In: 3521.760+/-0.485  $\chi^2/\text{NDF}$ : 4406749.1/46

Out: 3443.670+/-0.453  $\chi^2/\text{NDF}$ : 5765143.0/53

All: 3480.106+/-0.331  $\chi^2/\text{NDF}$ : 10185734.4/100

# diff\_bpm0l01X\_mean vs Slug, Sign Corrected



Right In: -35.595±/0.923  $\chi^2/\text{NDF}$ : 485.7/23

Left Out: -10.125±/0.775  $\chi^2/\text{NDF}$ : 67.9/24

Right Out: -12.553±/0.849  $\chi^2/\text{NDF}$ : 1296.5/28

Left In: 4.911±/0.797  $\chi^2/\text{NDF}$ : 127.9/22

Left: -2.814±/0.556  $\chi^2/\text{NDF}$ : 378.7/47

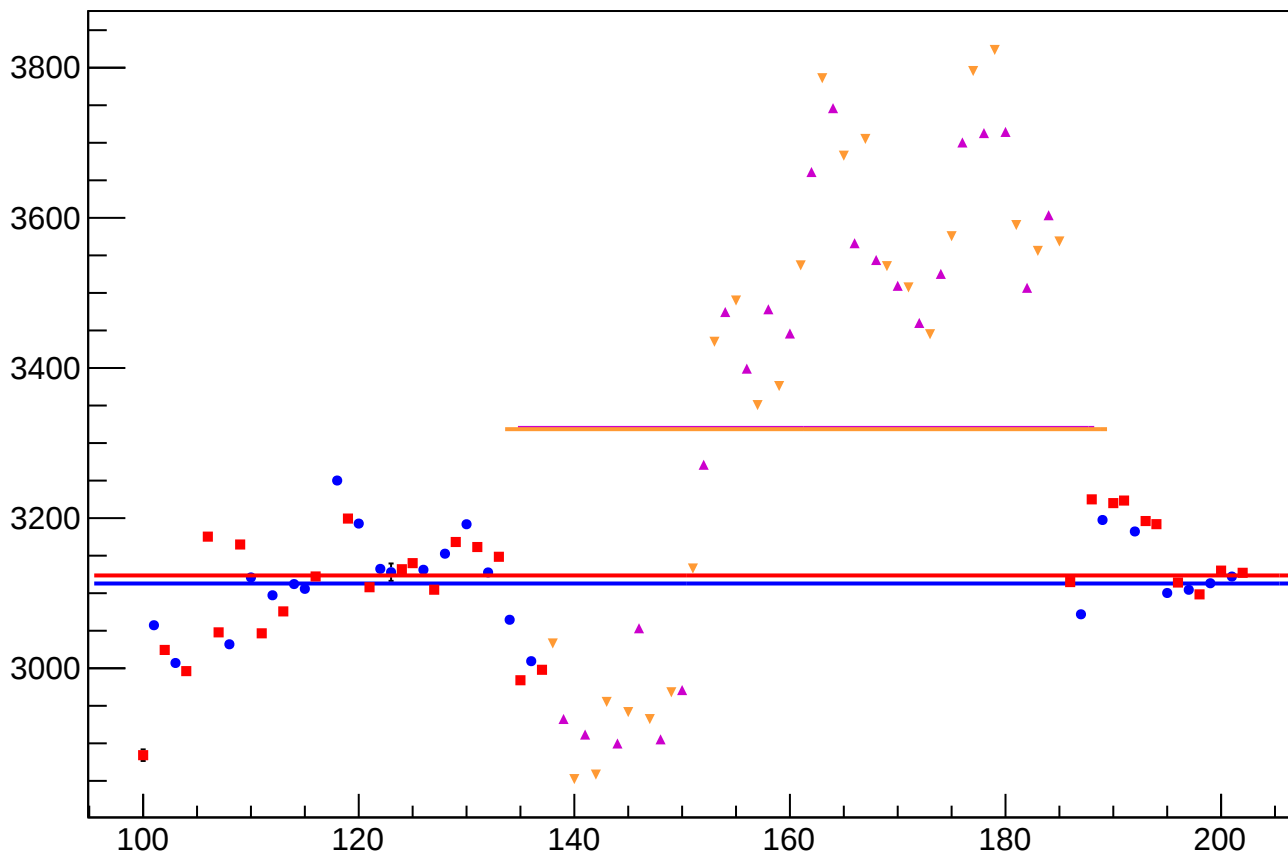
Right: -23.119±/0.625  $\chi^2/\text{NDF}$ : 2119.7/52

In: -12.394±/0.603  $\chi^2/\text{NDF}$ : 1716.9/46

Out: -11.229±/0.573  $\chi^2/\text{NDF}$ : 1368.9/53

All: -11.781±/0.415  $\chi^2/\text{NDF}$ : 3087.7/100

# diff\_bpm0l01X\_rms vs Slug, Sign Corrected



Right In: 3112.921 $\pm$ 0.653  $\chi^2$ /NDF: 8989.3/23

Left Out: 3318.506 $\pm$ 0.548  $\chi^2$ /NDF:337694.2/24

Right Out: 3123.645 $\pm$ 0.601  $\chi^2$ /NDF: 13728.4/28

Left In: 3320.170 $\pm$ 0.564  $\chi^2$ /NDF:287634.9/22

Left: 3319.315 $\pm$ 0.393  $\chi^2$ /NDF: 625333.6/47

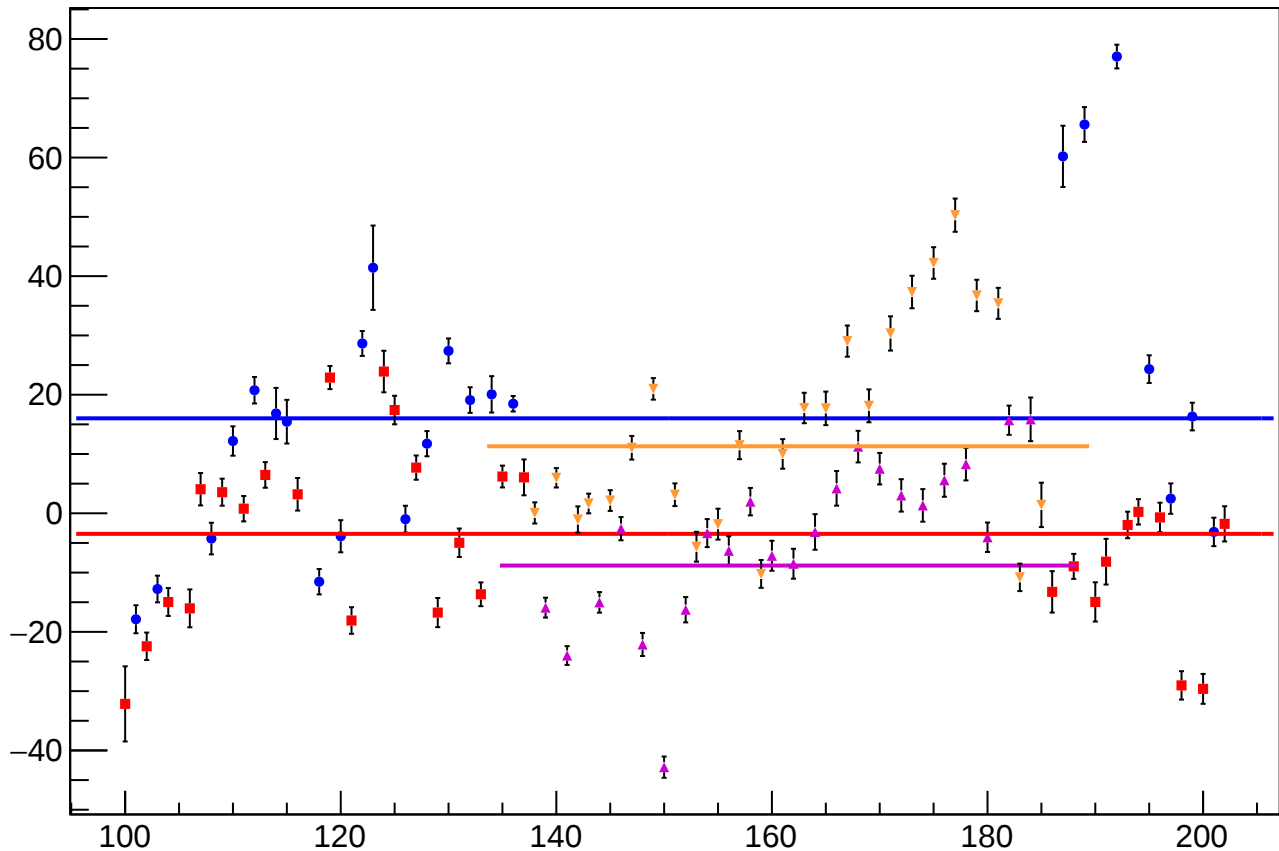
Right: 3118.727 $\pm$ 0.442  $\chi^2$ /NDF: 22863.9/52

In: 3231.628 $\pm$ 0.427  $\chi^2$ /NDF:354383.1/46

Out: 3229.923 $\pm$ 0.405  $\chi^2$ /NDF:408832.6/53

All: 3230.731 $\pm$ 0.294  $\chi^2$ /NDF: 763224.1/100

# diff\_bpm0l01Y\_mean vs Slug, Sign Corrected



Right In: 16.020 $\pm$ 0.485  $\chi^2/\text{NDF}$ : 2190.3/23

Left Out: 11.305 $\pm$ 0.454  $\chi^2/\text{NDF}$ :1144.3/24

Right Out: -3.468 $\pm$ 0.455  $\chi^2/\text{NDF}$ : 915.1/28

Left In: -8.815 $\pm$ 0.475  $\chi^2/\text{NDF}$ :942.2/22

Left: 1.711 $\pm$ 0.328  $\chi^2/\text{NDF}$ : 3023.6/47

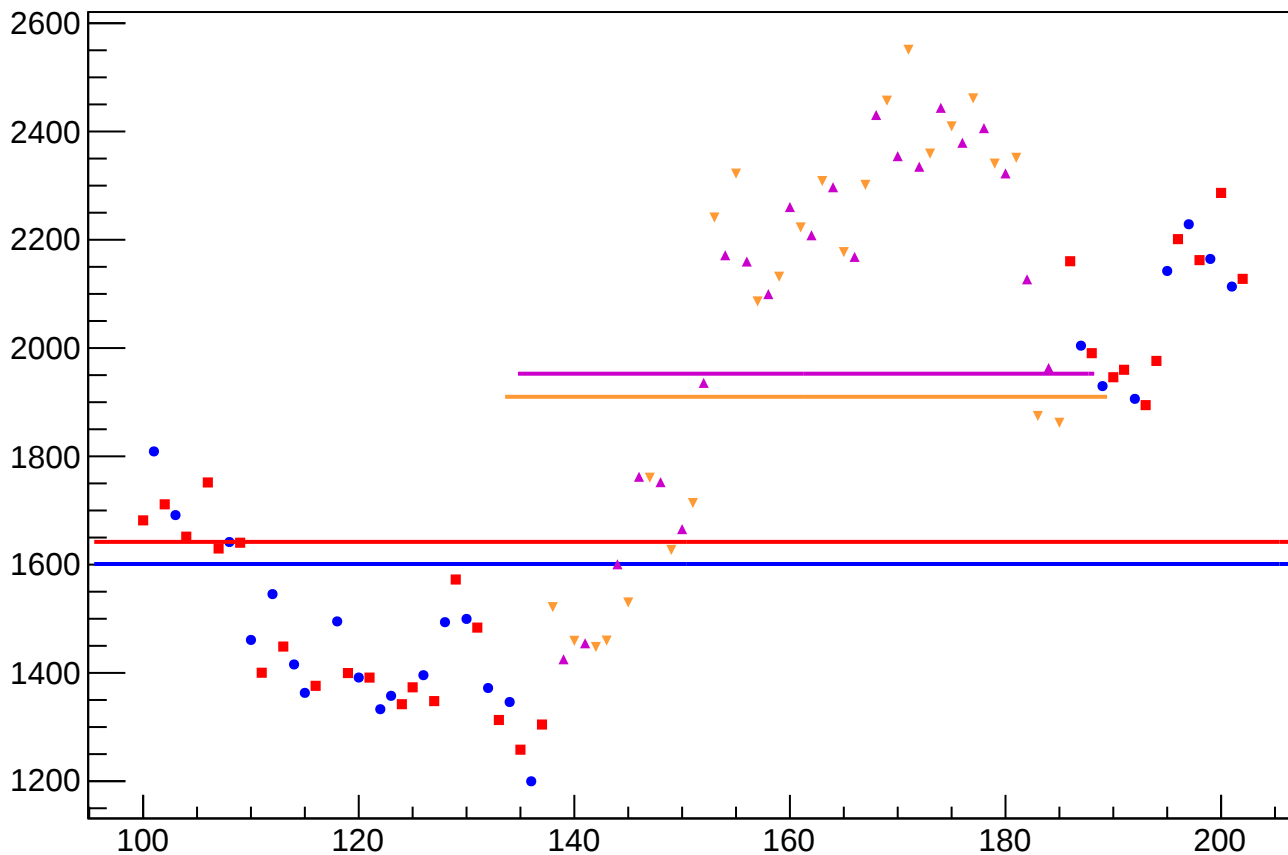
Right: 5.666 $\pm$ 0.332  $\chi^2/\text{NDF}$ : 3963.6/52

In: 3.356 $\pm$ 0.339  $\chi^2/\text{NDF}$ :4470.1/46

Out: 3.944 $\pm$ 0.321  $\chi^2/\text{NDF}$ :2587.3/53

All: 3.666 $\pm$ 0.233  $\chi^2/\text{NDF}$ : 7059.0/100

# diff\_bpm0l01Y\_rms vs Slug, Sign Corrected



Right In: 1601.156 $\pm$ 0.343  $\chi^2$ /NDF: 859941.2/23

Left Out: 1909.963 $\pm$ 0.321  $\chi^2$ /NDF:1399467.7/24

Right Out: 1642.006 $\pm$ 0.322  $\chi^2$ /NDF: 961348.2/28

Left In: 1952.637 $\pm$ 0.336  $\chi^2$ /NDF:1065333.8/22

Left: 1930.313 $\pm$ 0.232  $\chi^2$ /NDF: 2473233.3/47

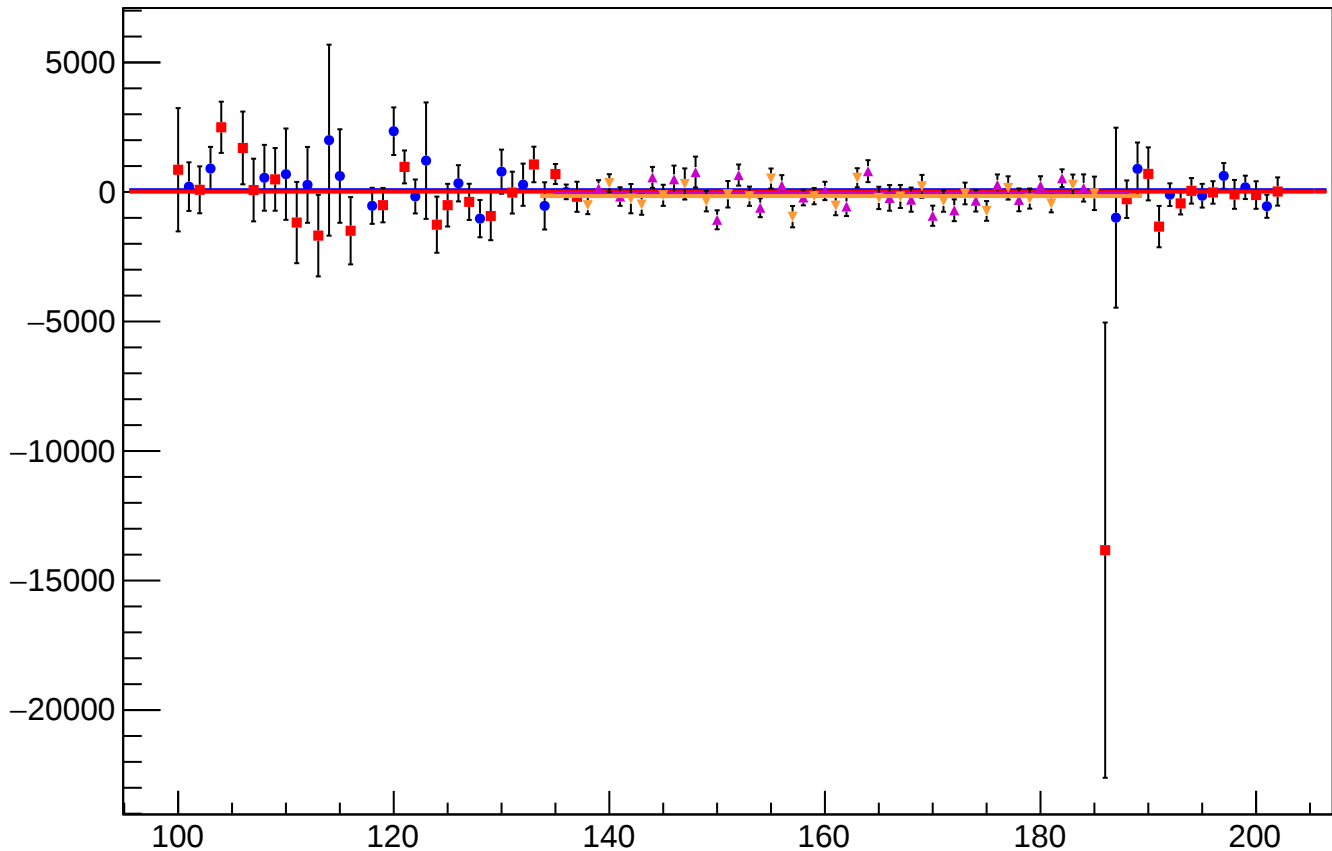
Right: 1622.859 $\pm$ 0.235  $\chi^2$ /NDF: 1828831.1/52

In: 1780.378 $\pm$ 0.240  $\chi^2$ /NDF:2461138.7/46

Out: 1776.448 $\pm$ 0.227  $\chi^2$ /NDF:2708193.2/53

All: 1778.306 $\pm$ 0.165  $\chi^2$ /NDF: 5169473.3/100

# asym\_sam1\_mean vs Slug, Sign Corrected



Right In:  $68.925 \pm 133.984$   $\chi^2/\text{NDF}$ : 17.0/23

Left Out:  $-157.242 \pm 80.796$   $\chi^2/\text{NDF}$ : 22.0/24

Right Out:  $12.925 \pm 130.488$   $\chi^2/\text{NDF}$ : 29.9/28

Left In:  $-58.934 \pm 82.584$   $\chi^2/\text{NDF}$ : 38.5/22

Left:  $-109.164 \pm 57.753$   $\chi^2/\text{NDF}$ : 61.3/47

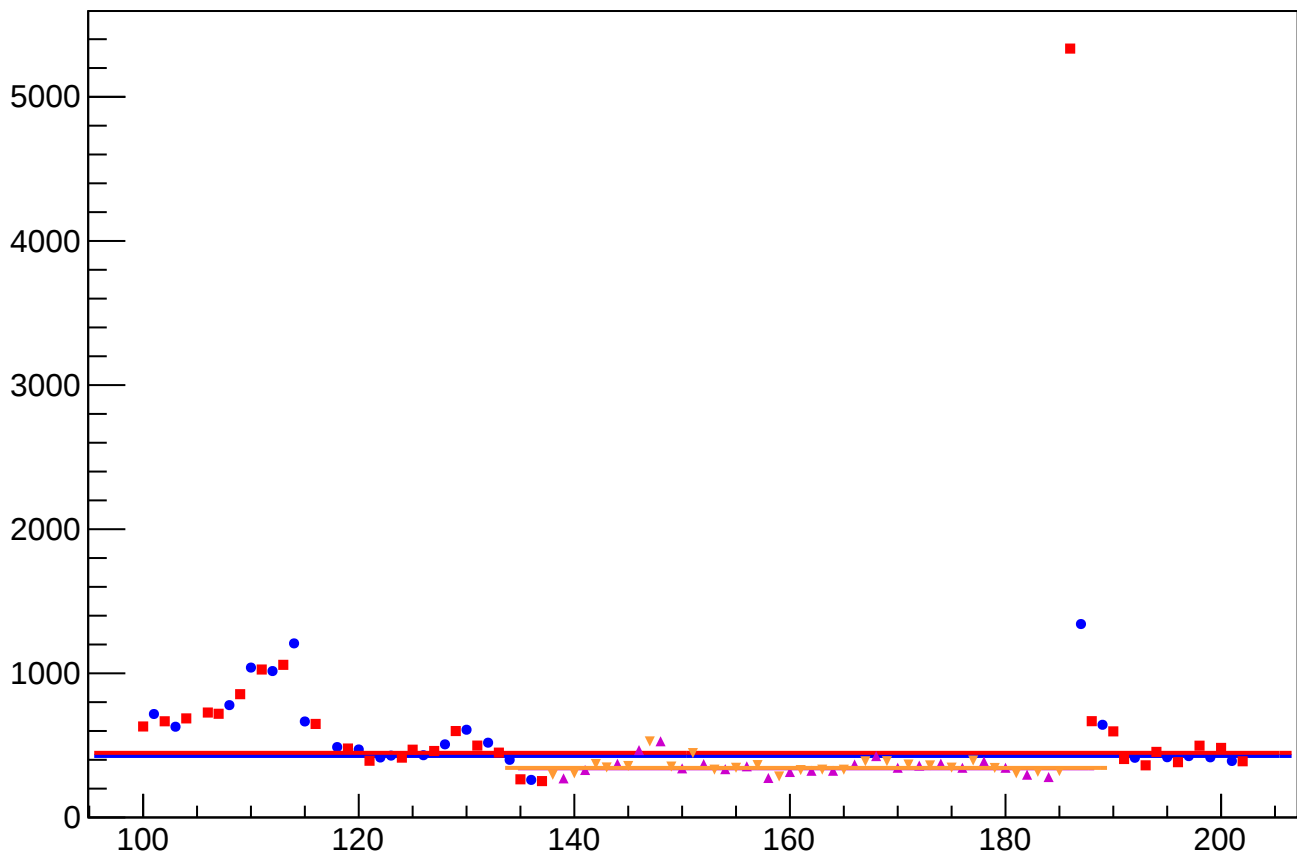
Right:  $40.185 \pm 93.480$   $\chi^2/\text{NDF}$ : 47.0/52

In:  $-23.732 \pm 70.303$   $\chi^2/\text{NDF}$ : 56.3/46

Out:  $-110.082 \pm 68.694$   $\chi^2/\text{NDF}$ : 53.1/53

All:  $-67.906 \pm 49.133$   $\chi^2/\text{NDF}$ : 110.2/100

# asym\_sam1\_rms vs Slug, Sign Corrected



Right In: 426.744+/-0.095     $\chi^2/\text{NDF}$ : 2252101.1/23

Left Out: 343.807+/-0.057     $\chi^2/\text{NDF}$ : 539431.0/24

Right Out: 448.399+/-0.092     $\chi^2/\text{NDF}$ : 3058665.7/28

Left In: 340.876+/-0.058     $\chi^2/\text{NDF}$ : 724672.0/22

Left: 342.374+/-0.041     $\chi^2/\text{NDF}$ : 1265389.7/47

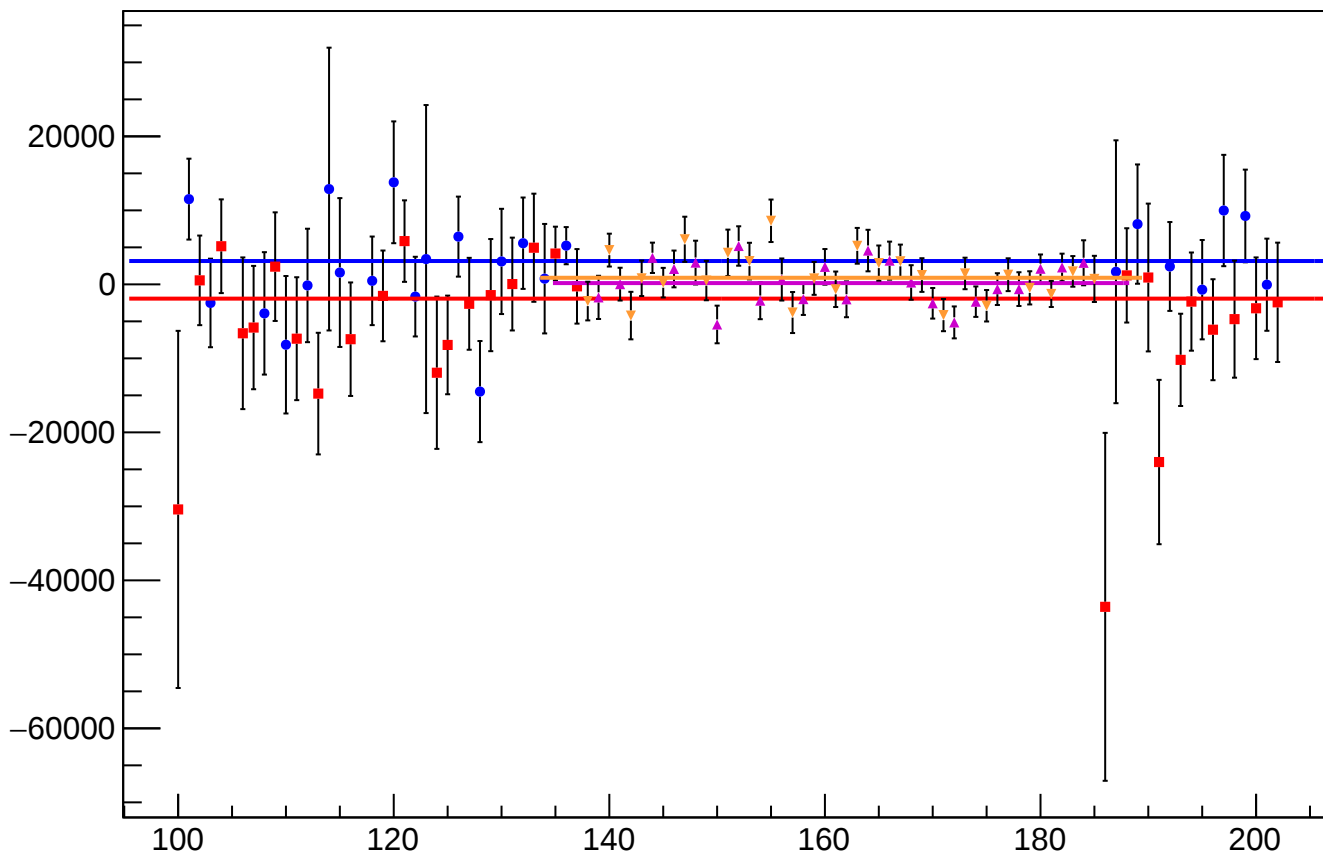
Right: 437.857+/-0.066     $\chi^2/\text{NDF}$ : 5337579.6/52

In: 364.517+/-0.050     $\chi^2/\text{NDF}$ : 3572065.3/46

Out: 372.793+/-0.049     $\chi^2/\text{NDF}$ : 4526943.4/53

All: 368.751+/-0.035     $\chi^2/\text{NDF}$ : 8113186.4/100

# asym\_sam2\_mean vs Slug, Sign Corrected



Right In: 3154.475+/-1277.697  $\chi^2/\text{NDF}$ : 19.3/23

Left Out: 890.395+/-473.262  $\chi^2/\text{NDF}$ : 38.0/24

Right Out: -1927.989+/-1286.611  $\chi^2/\text{NDF}$ : 24.4/28

Left In: 172.391+/-488.067  $\chi^2/\text{NDF}$ : 33.2/22

Left: 542.448+/-339.760  $\chi^2/\text{NDF}$ : 72.3/47

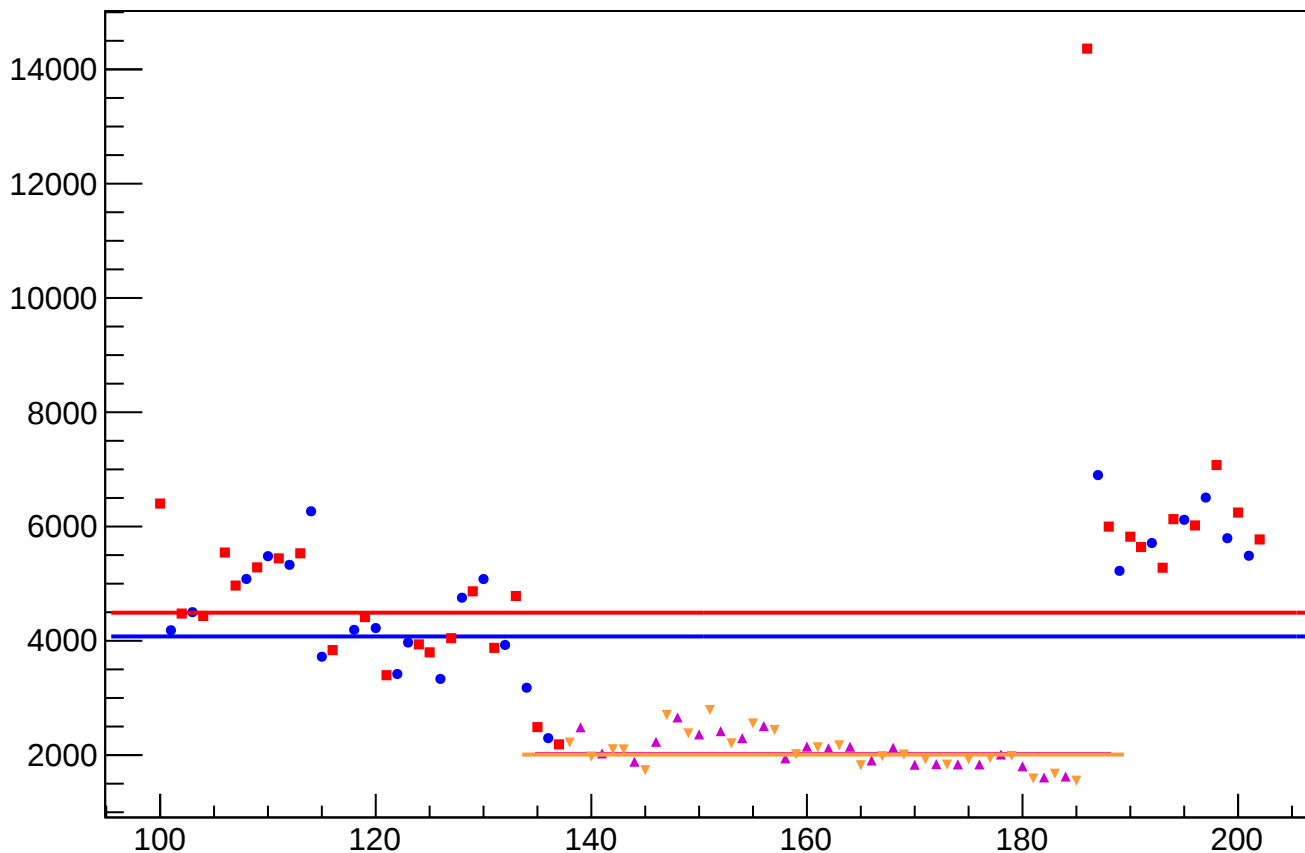
Right: 630.909+/-906.603  $\chi^2/\text{NDF}$ : 51.6/52

In: 552.117+/-455.935  $\chi^2/\text{NDF}$ : 57.3/46

Out: 554.505+/-444.166  $\chi^2/\text{NDF}$ : 66.6/53

All: 553.342+/-318.152  $\chi^2/\text{NDF}$ : 123.9/100

# asym\_sam2\_rms vs Slug, Sign Corrected



Right In: 4076.375+/-0.903  $\chi^2/\text{NDF}$ : 2218203.4/23

Left Out: 2009.631+/-0.335  $\chi^2/\text{NDF}$ : 709977.6/24

Right Out: 4492.240+/-0.910  $\chi^2/\text{NDF}$ : 2477170.8/28

Left In: 2020.365+/-0.345  $\chi^2/\text{NDF}$ : 573483.0/22

Left: 2014.833+/-0.240  $\chi^2/\text{NDF}$ : 1283959.2/47

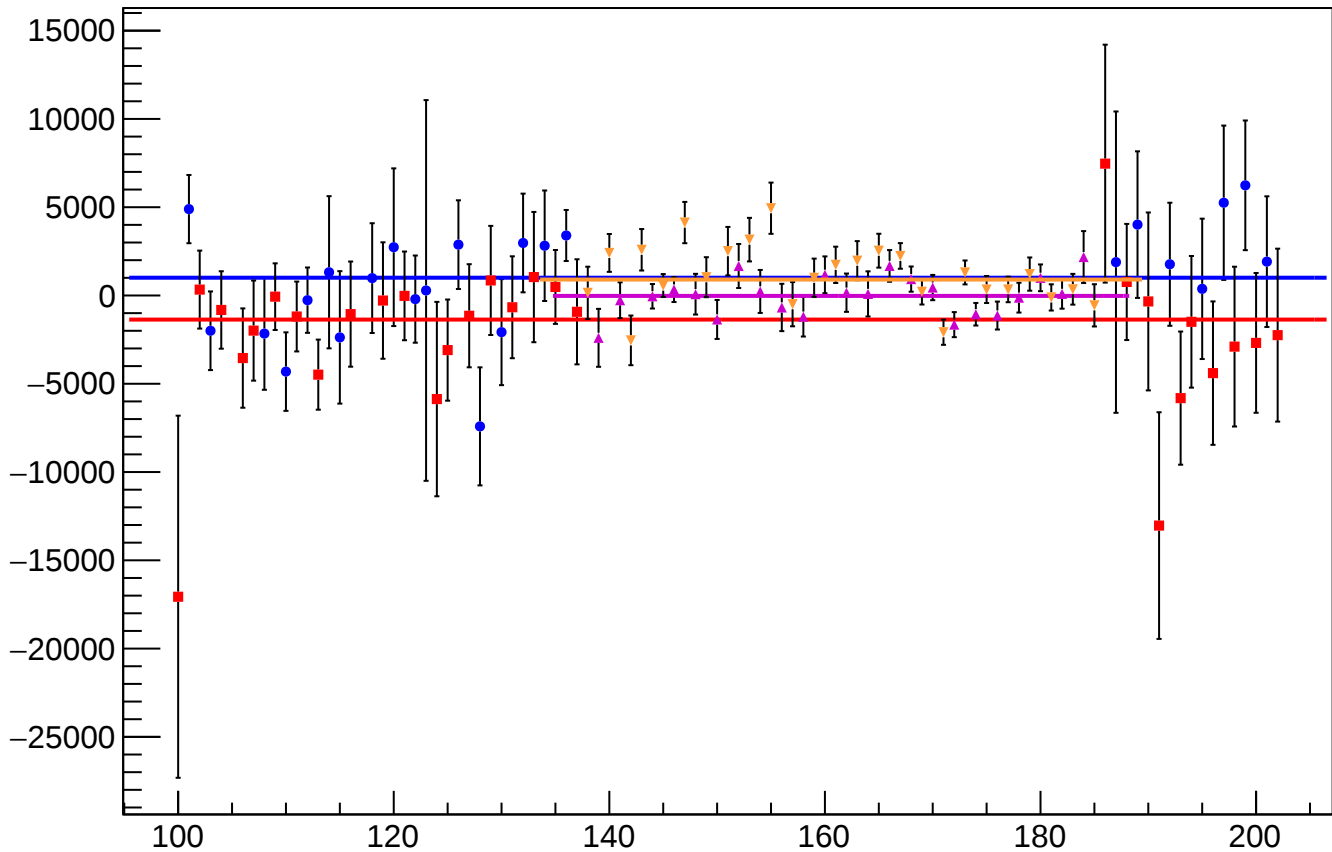
Right: 4282.862+/-0.641  $\chi^2/\text{NDF}$ : 4800574.9/52

In: 2282.169+/-0.322  $\chi^2/\text{NDF}$ : 7310991.3/46

Out: 2305.504+/-0.314  $\chi^2/\text{NDF}$ : 9746186.8/53

All: 2294.142+/-0.225  $\chi^2/\text{NDF}$ : 17059866.0/100

# asym\_sam3\_mean vs Slug, Sign Corrected



Right In: 1006.829+/-577.599  $\chi^2/\text{NDF}$ : 29.4/23

Left Out: 902.091+/-185.850  $\chi^2/\text{NDF}$ : 63.5/24

Right Out: -1364.348+/-552.727  $\chi^2/\text{NDF}$ : 17.5/28

Left In: -23.529+/-188.137  $\chi^2/\text{NDF}$ : 28.2/22

Left: 444.940+/-132.217  $\chi^2/\text{NDF}$ : 104.0/47

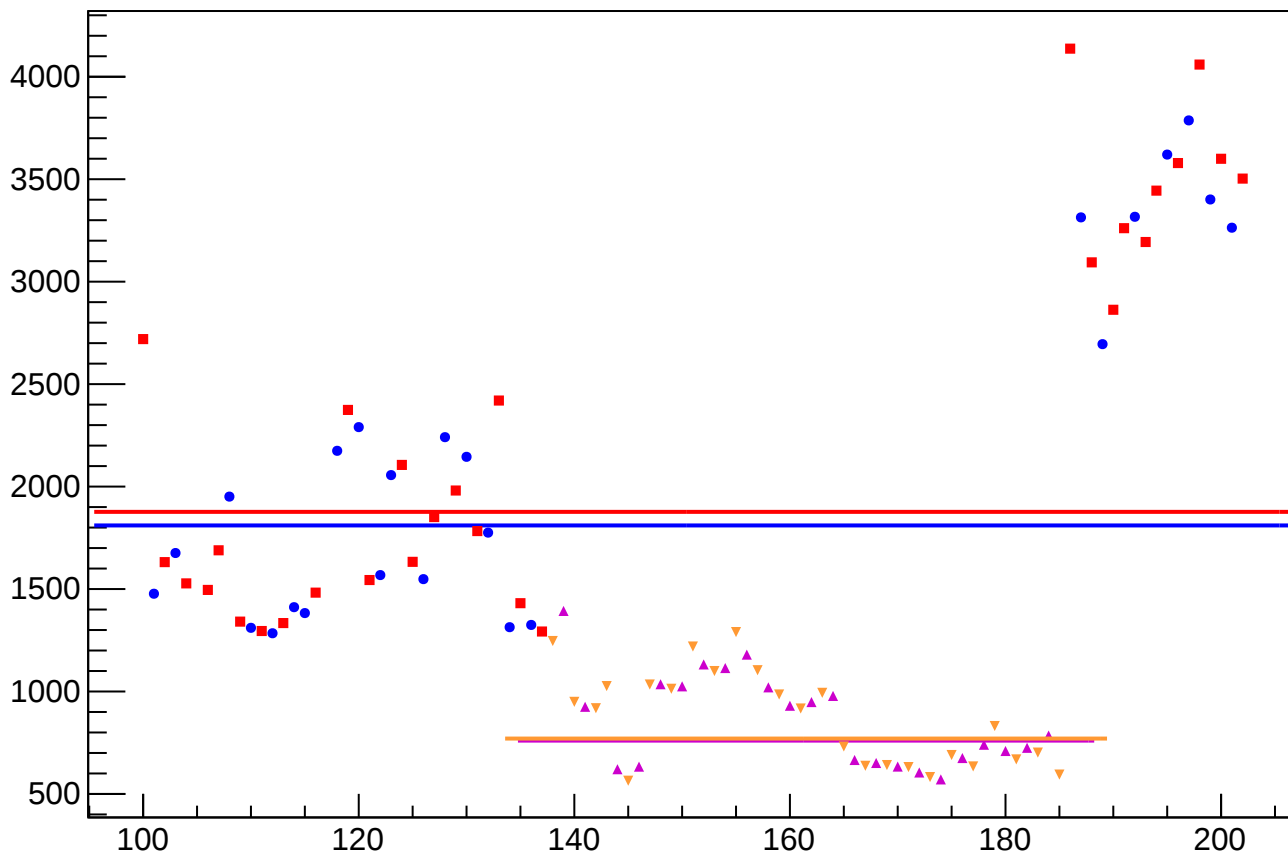
Right: -230.910+/-399.341  $\chi^2/\text{NDF}$ : 55.7/52

In: 75.301+/-178.886  $\chi^2/\text{NDF}$ : 60.5/46

Out: 671.878+/-176.159  $\chi^2/\text{NDF}$ : 96.2/53

All: 378.173+/-125.516  $\chi^2/\text{NDF}$ : 162.3/100

# asym\_sam3\_rms vs Slug, Sign Corrected



Right In: 1810.370+/-0.408  $\chi^2/\text{NDF}$ : 2837074.3/23

Left Out: 770.320+/-0.131  $\chi^2/\text{NDF}$ : 2287655.1/24

Right Out: 1876.659+/-0.391  $\chi^2/\text{NDF}$ : 3649180.0/28

Left In: 760.352+/-0.133  $\chi^2/\text{NDF}$ : 1986749.8/22

Left: 765.397+/-0.093  $\chi^2/\text{NDF}$ : 4277246.5/47

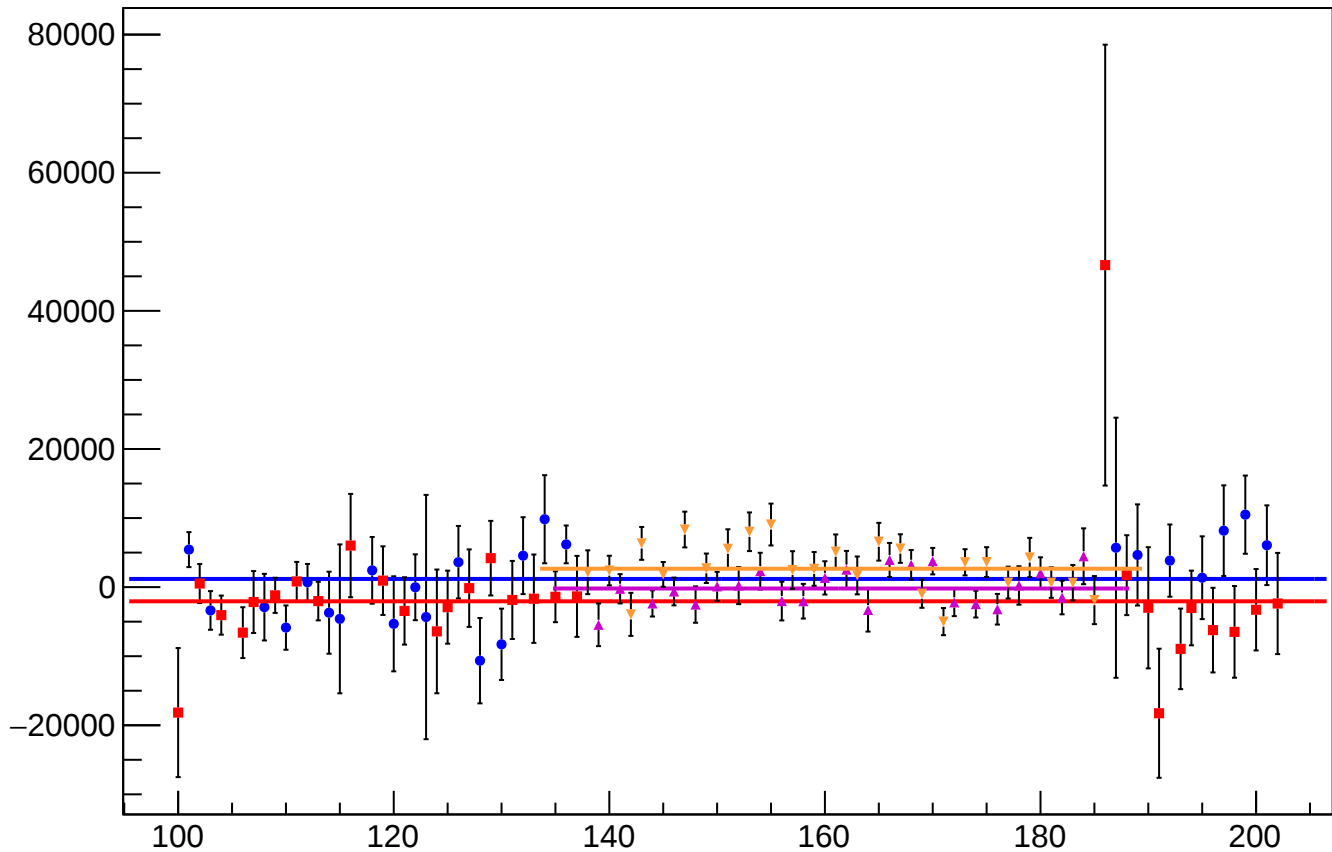
Right: 1844.972+/-0.282  $\chi^2/\text{NDF}$ : 6500005.2/52

In: 861.068+/-0.126  $\chi^2/\text{NDF}$ : 10799373.3/46

Out: 882.696+/-0.125  $\chi^2/\text{NDF}$ : 13135743.4/53

All: 872.048+/-0.089  $\chi^2/\text{NDF}$ : 23949959.4/100

# asym\_sam4\_mean vs Slug, Sign Corrected



Right In: 1186.644+/-922.836  $\chi^2/\text{NDF}$ : 31.0/23

Left Out: 2665.587+/-479.773  $\chi^2/\text{NDF}$ : 49.2/24

Right Out: -2051.409+/-850.489  $\chi^2/\text{NDF}$ : 18.5/28

Left In: -199.371+/-492.082  $\chi^2/\text{NDF}$ : 25.8/22

Left: 1269.388+/-343.520  $\chi^2/\text{NDF}$ : 92.4/47

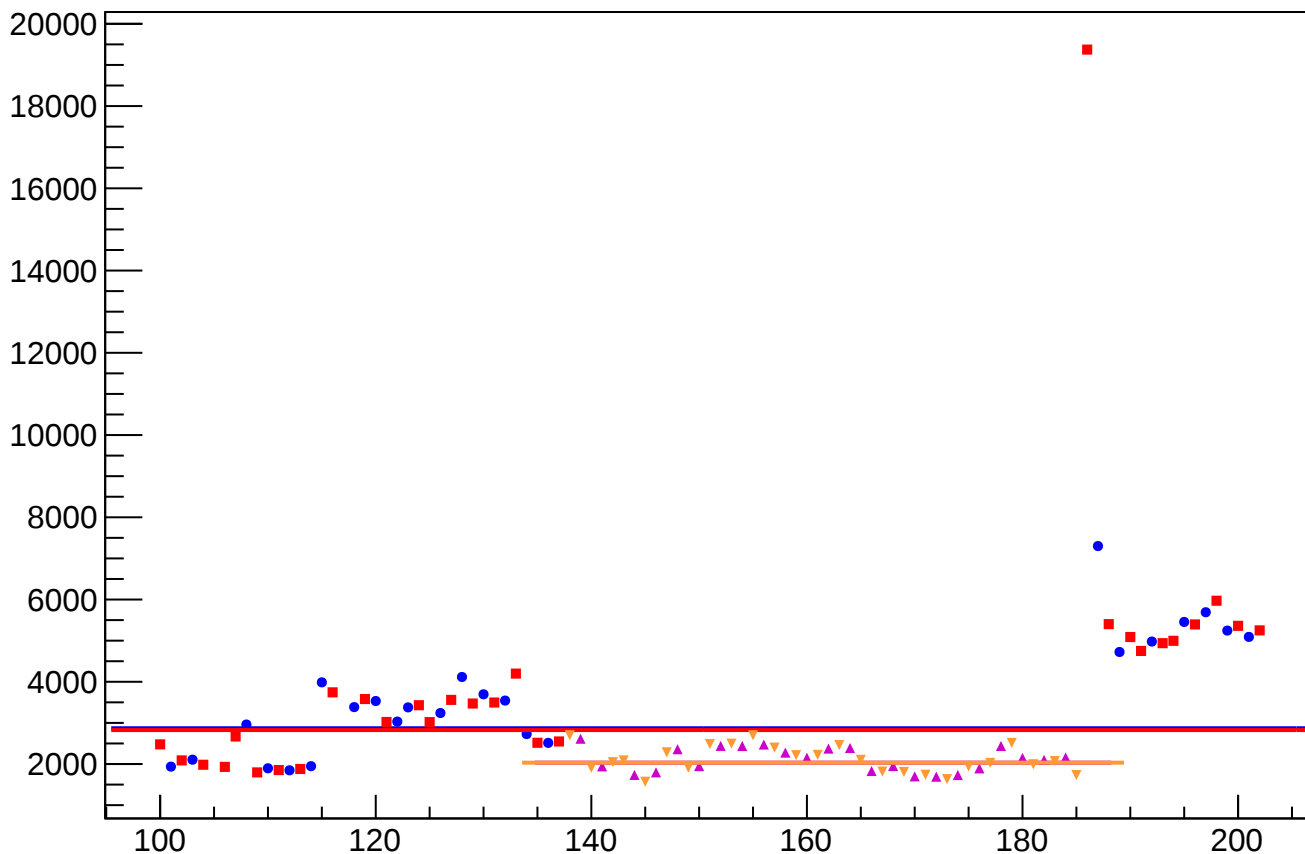
Right: -564.267+/-625.401  $\chi^2/\text{NDF}$ : 56.2/52

In: 107.472+/-434.209  $\chi^2/\text{NDF}$ : 58.5/46

Out: 1526.885+/-417.870  $\chi^2/\text{NDF}$ : 91.1/53

All: 844.386+/-301.089  $\chi^2/\text{NDF}$ : 155.2/100

# asym\_sam4\_rms vs Slug, Sign Corrected



Right In: 2870.104+/-0.653  $\chi^2/\text{NDF}$ : 3176958.6/23

Left Out: 2033.337+/-0.339  $\chi^2/\text{NDF}$ : 824062.2/24

Right Out: 2825.876+/-0.601  $\chi^2/\text{NDF}$ : 4651323.3/28

Left In: 2032.655+/-0.348  $\chi^2/\text{NDF}$ : 652763.7/22

Left: 2033.004+/-0.243  $\chi^2/\text{NDF}$ : 1476827.9/47

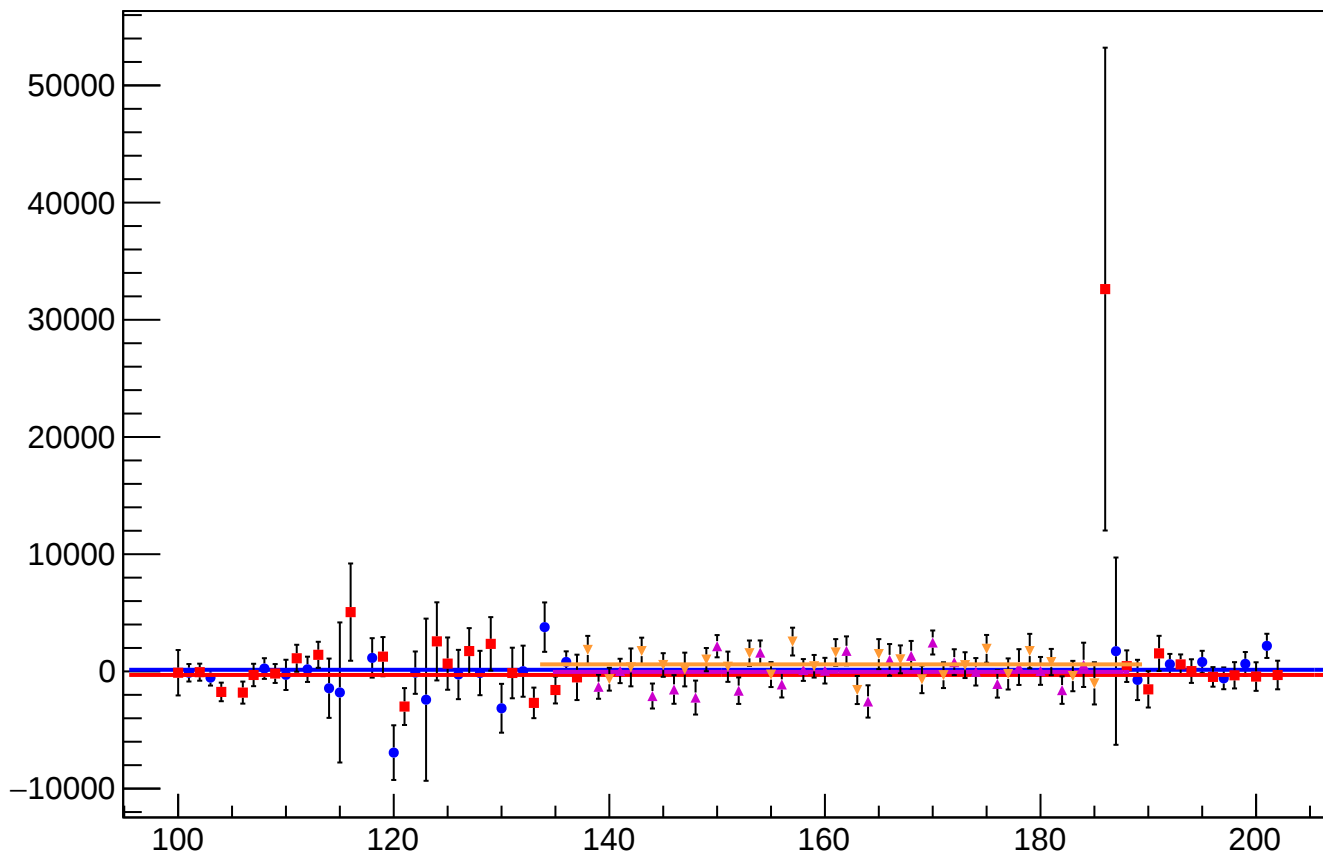
Right: 2846.189+/-0.442  $\chi^2/\text{NDF}$ : 7830765.9/52

In: 2218.054+/-0.307  $\chi^2/\text{NDF}$ : 5112114.8/46

Out: 2224.659+/-0.295  $\chi^2/\text{NDF}$ : 6792866.6/53

All: 2221.483+/-0.213  $\chi^2/\text{NDF}$ : 11905221.7/100

# asym\_sam5\_mean vs Slug, Sign Corrected



Right In: 137.323+/-250.032  $\chi^2/\text{NDF}$ : 23.3/23

Left Out: 600.005+/-234.968  $\chi^2/\text{NDF}$ :18.5/24

Right Out: -301.283+/-224.607  $\chi^2/\text{NDF}$ : 29.7/28

Left In: -41.559+/-240.807  $\chi^2/\text{NDF}$ :36.4/22

Left: 287.096+/-168.174  $\chi^2/\text{NDF}$ : 58.5/47

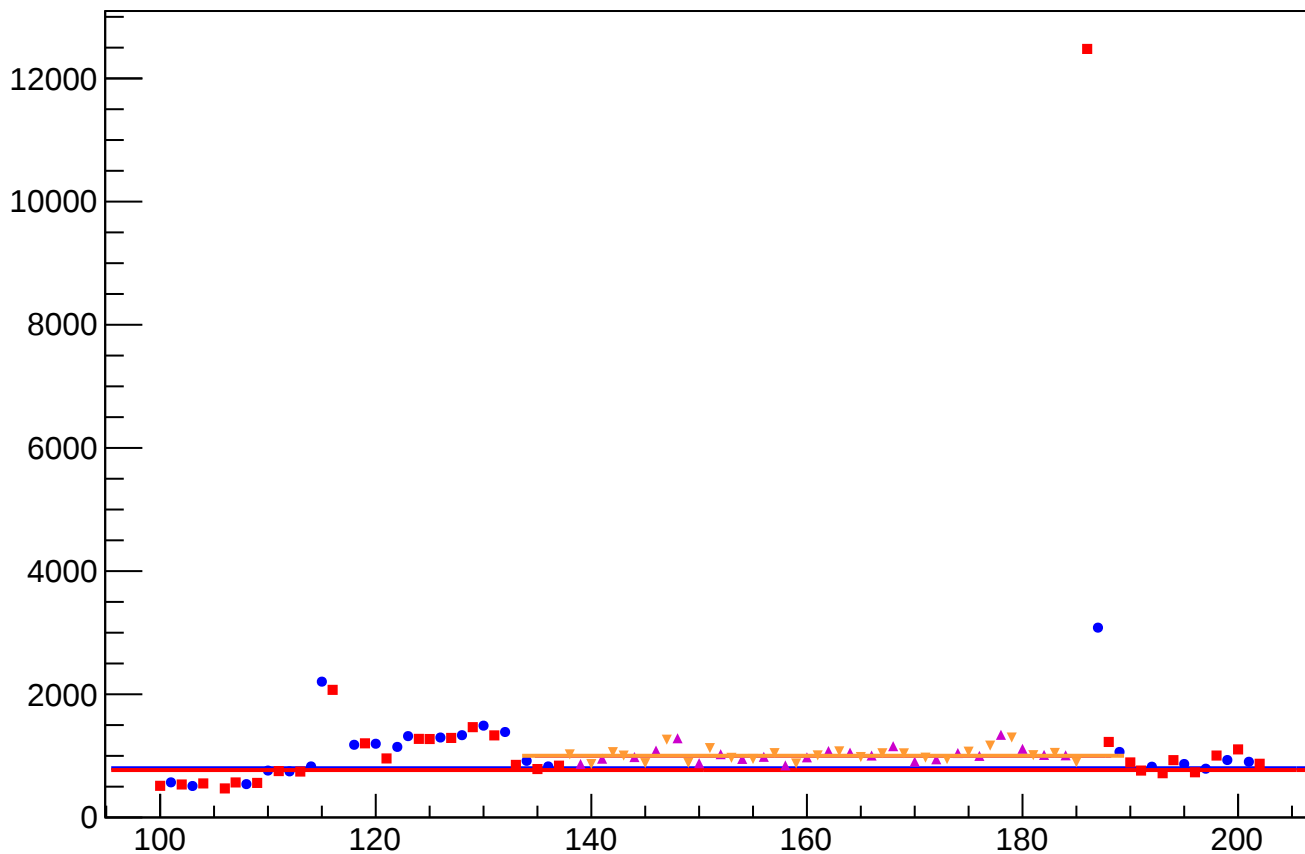
Right: -105.407+/-167.089  $\chi^2/\text{NDF}$ : 54.7/52

In: 44.521+/-173.446  $\chi^2/\text{NDF}$ :60.0/46

Out: 129.052+/-162.360  $\chi^2/\text{NDF}$ :55.9/53

All: 89.574+/-118.531  $\chi^2/\text{NDF}$ : 116.0/100

# asym\_sam5\_rms vs Slug, Sign Corrected



Right In: 799.022+/-0.177  $\chi^2/\text{NDF}$ : 2008603.5/23

Left Out: 1001.472+/-0.166  $\chi^2/\text{NDF}$ : 370299.3/24

Right Out: 769.698+/-0.159  $\chi^2/\text{NDF}$ : 3006895.3/28

Left In: 998.050+/-0.170  $\chi^2/\text{NDF}$ : 404656.2/22

Left: 999.803+/-0.119  $\chi^2/\text{NDF}$ : 775162.3/47

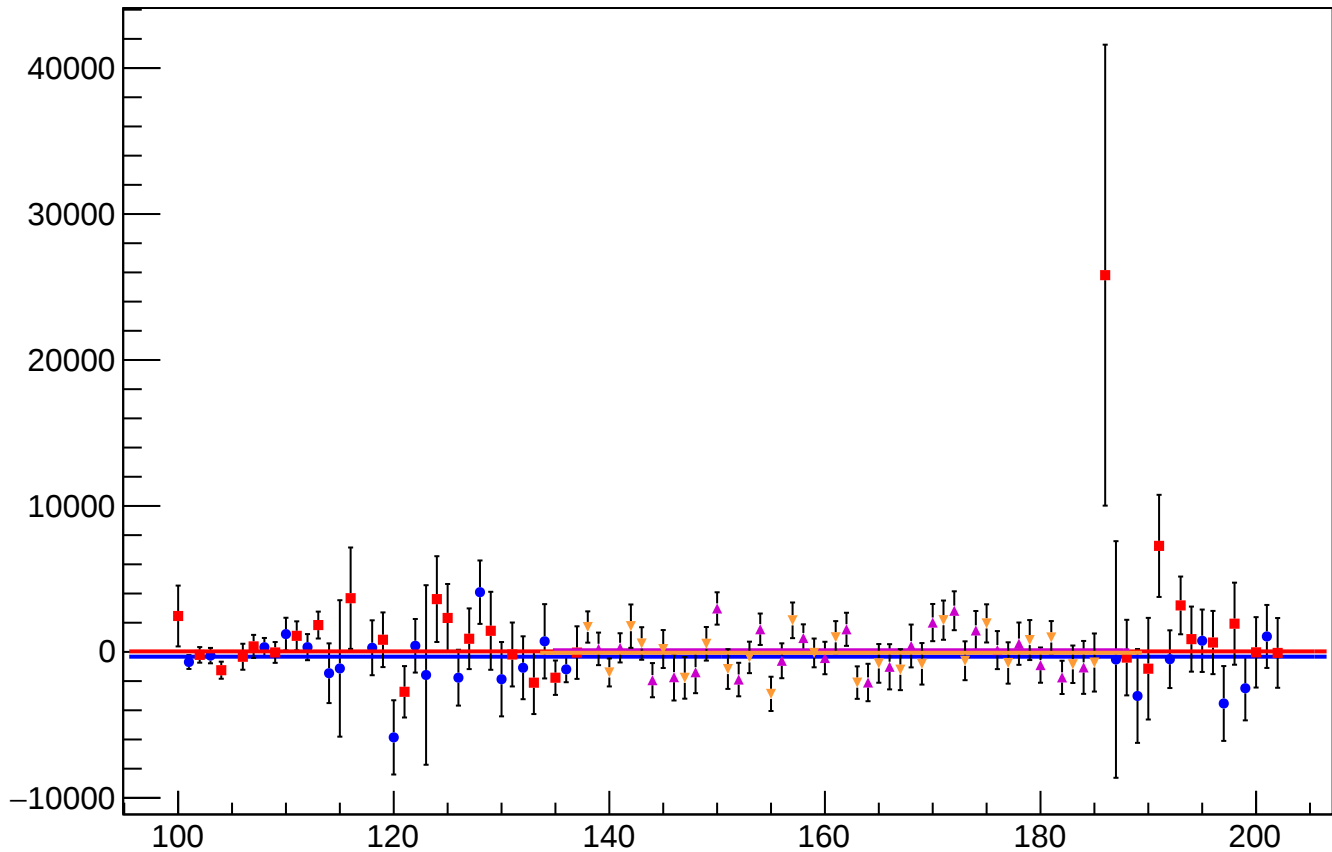
Right: 782.794+/-0.118  $\chi^2/\text{NDF}$ : 5030722.9/52

In: 902.275+/-0.123  $\chi^2/\text{NDF}$ : 3070703.0/46

Out: 880.362+/-0.115  $\chi^2/\text{NDF}$ : 4394041.5/53

All: 890.596+/-0.084  $\chi^2/\text{NDF}$ : 7481758.6/100

# asym\_sam6\_mean vs Slug, Sign Corrected



Right In:  $-327.442 \pm 242.019$   $\chi^2/\text{NDF}$ : 19.7/23

Left Out:  $-59.827 \pm 246.503$   $\chi^2/\text{NDF}$ : 31.0/24

Right Out:  $34.484 \pm 235.982$   $\chi^2/\text{NDF}$ : 32.1/28

Left In:  $112.398 \pm 255.409$   $\chi^2/\text{NDF}$ : 34.9/22

Left:  $23.230 \pm 177.369$   $\chi^2/\text{NDF}$ : 66.1/47

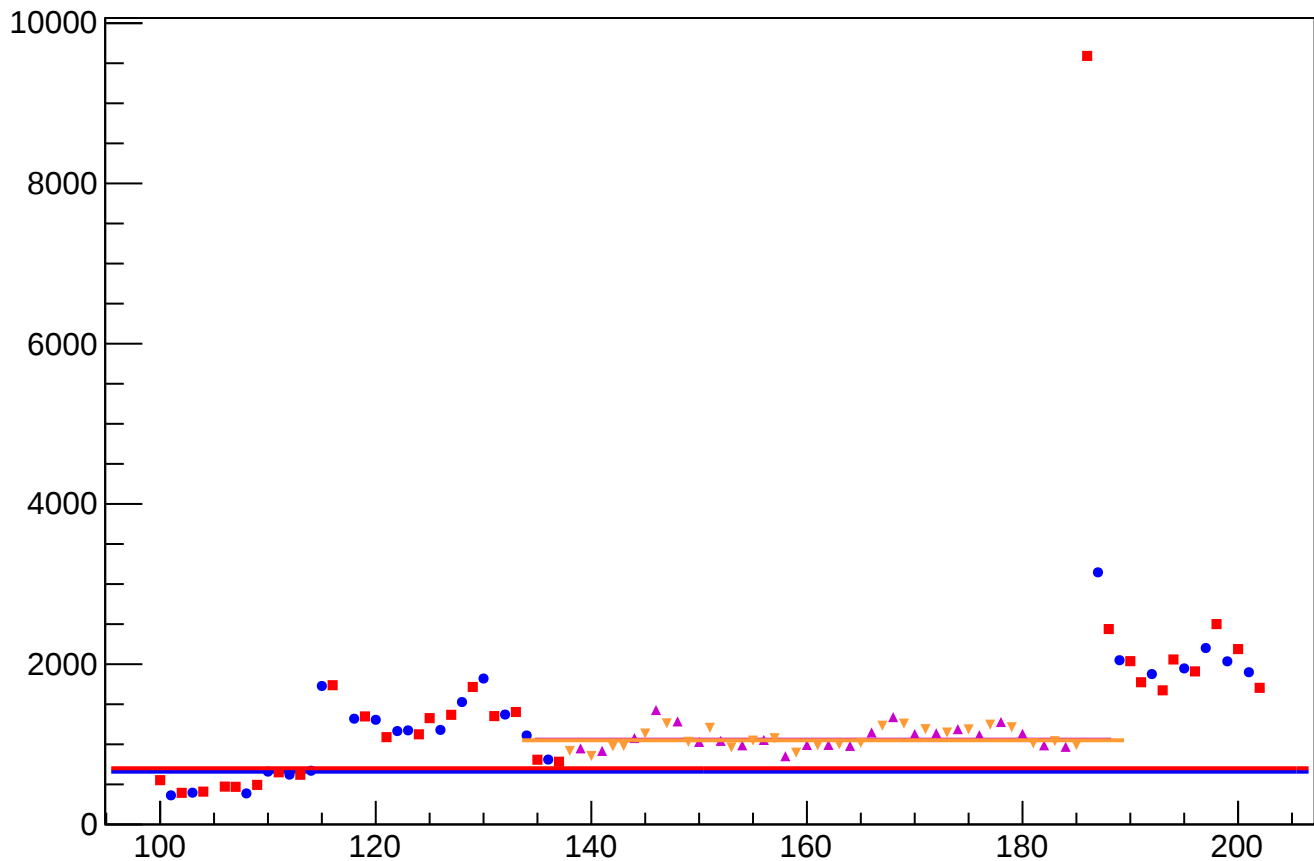
Right:  $-141.909 \pm 168.958$   $\chi^2/\text{NDF}$ : 52.9/52

In:  $-119.354 \pm 175.676$   $\chi^2/\text{NDF}$ : 56.2/46

Out:  $-10.616 \pm 170.463$   $\chi^2/\text{NDF}$ : 63.1/53

All:  $-63.348 \pm 122.337$   $\chi^2/\text{NDF}$ : 119.5/100

# asym\_sam6\_rms vs Slug, Sign Corrected



Right In: 658.812 $\pm$ 0.171  $\chi^2$ /NDF: 7731071.8/23

Left Out: 1050.649 $\pm$ 0.174  $\chi^2$ /NDF: 483144.2/24

Right Out: 701.429 $\pm$ 0.167  $\chi^2$ /NDF: 9064370.4/28

Left In: 1058.097 $\pm$ 0.181  $\chi^2$ /NDF: 528574.7/22

Left: 1054.241 $\pm$ 0.125  $\chi^2$ /NDF: 1012599.4/47

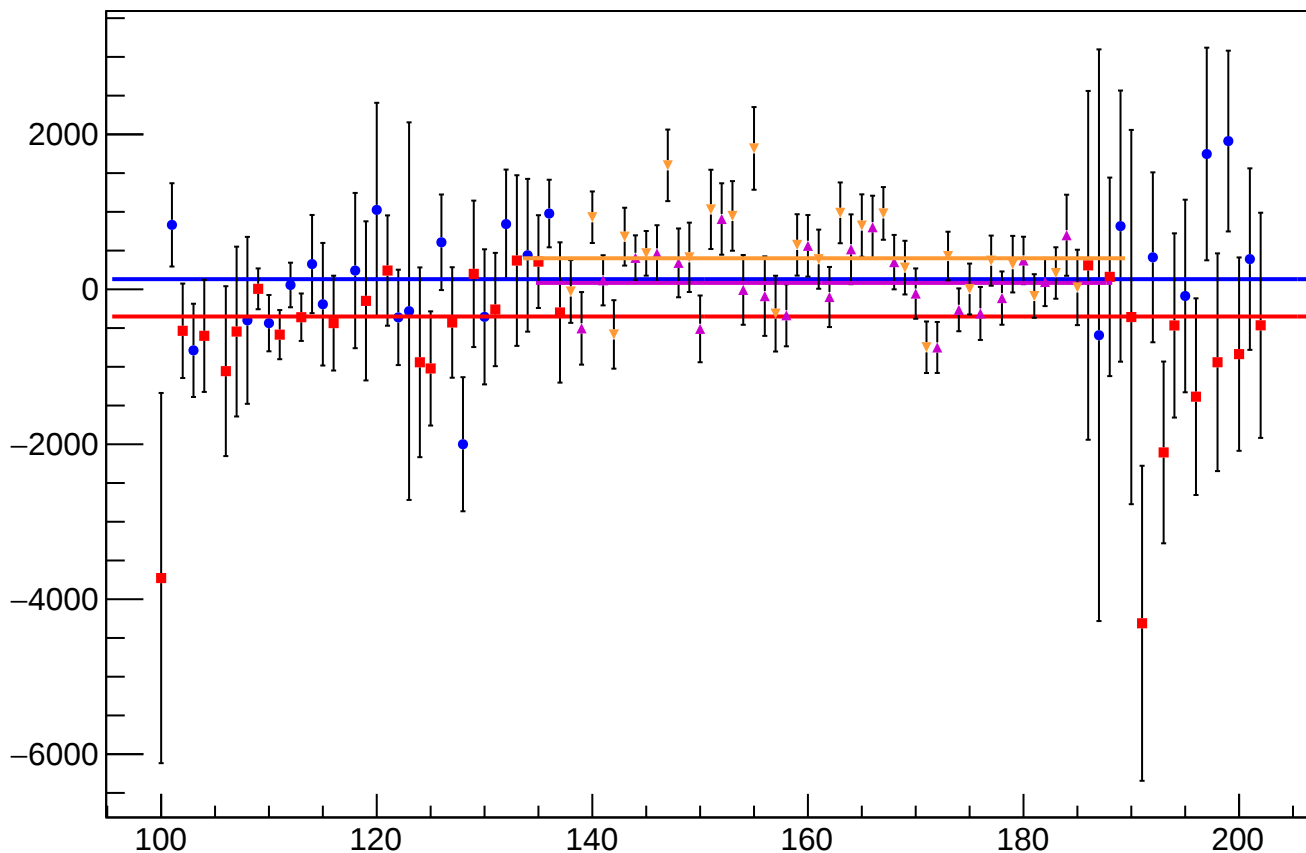
Right: 680.659 $\pm$ 0.119  $\chi^2$ /NDF: 16827233.9/52

In: 847.713 $\pm$ 0.124  $\chi^2$ /NDF: 10835088.8/46

Out: 868.428 $\pm$ 0.121  $\chi^2$ /NDF: 11642030.8/53

All: 858.382 $\pm$ 0.087  $\chi^2$ /NDF: 22491441.4/100

# asym\_sam7\_mean vs Slug, Sign Corrected



Right In: 131.202 $\pm$ 137.893  $\chi^2$ /NDF: 24.1/23

Left Out: 400.988 $\pm$ 74.546  $\chi^2$ /NDF:52.1/24

Right Out: -350.807 $\pm$ 124.768  $\chi^2$ /NDF: 16.3/28

Left In: 82.890 $\pm$ 76.904  $\chi^2$ /NDF:29.0/22

Left: 246.889 $\pm$ 53.526  $\chi^2$ /NDF: 89.9/47

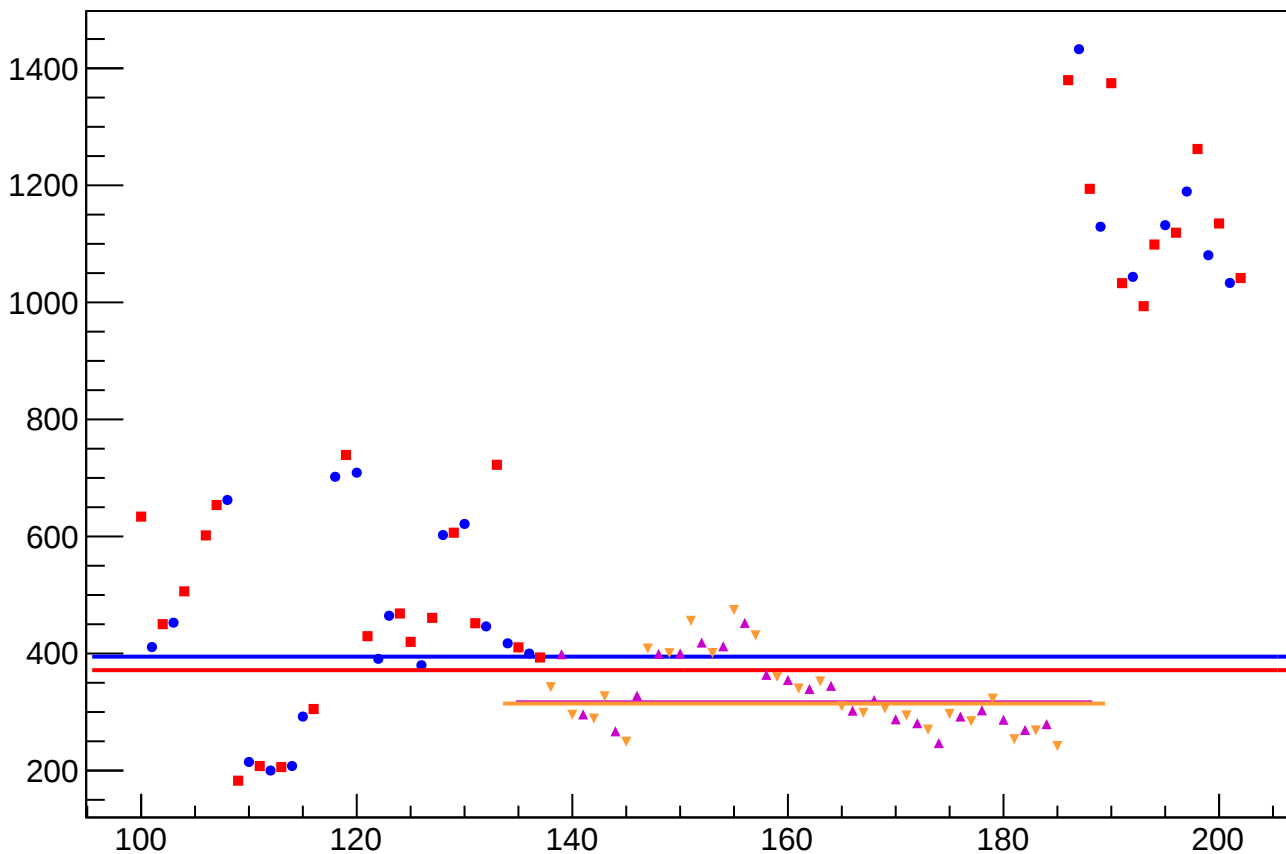
Right: -133.828 $\pm$ 92.518  $\chi^2$ /NDF: 47.1/52

In: 94.351 $\pm$ 67.165  $\chi^2$ /NDF:53.1/46

Out: 203.213 $\pm$ 63.994  $\chi^2$ /NDF:95.2/53

All: 151.413 $\pm$ 46.331  $\chi^2$ /NDF: 149.7/100

# asym\_sam7\_rms vs Slug, Sign Corrected



Right In: 394.626 $\pm$ 0.098  $\chi^2/\text{NDF}$ : 6183723.0/23

Left Out: 314.538 $\pm$ 0.053  $\chi^2/\text{NDF}$ : 1112445.6/24

Right Out: 371.535 $\pm$ 0.088  $\chi^2/\text{NDF}$ : 8962327.4/28

Left In: 316.647 $\pm$ 0.054  $\chi^2/\text{NDF}$ : 920874.0/22

Left: 315.560 $\pm$ 0.038  $\chi^2/\text{NDF}$ : 2034094.8/47

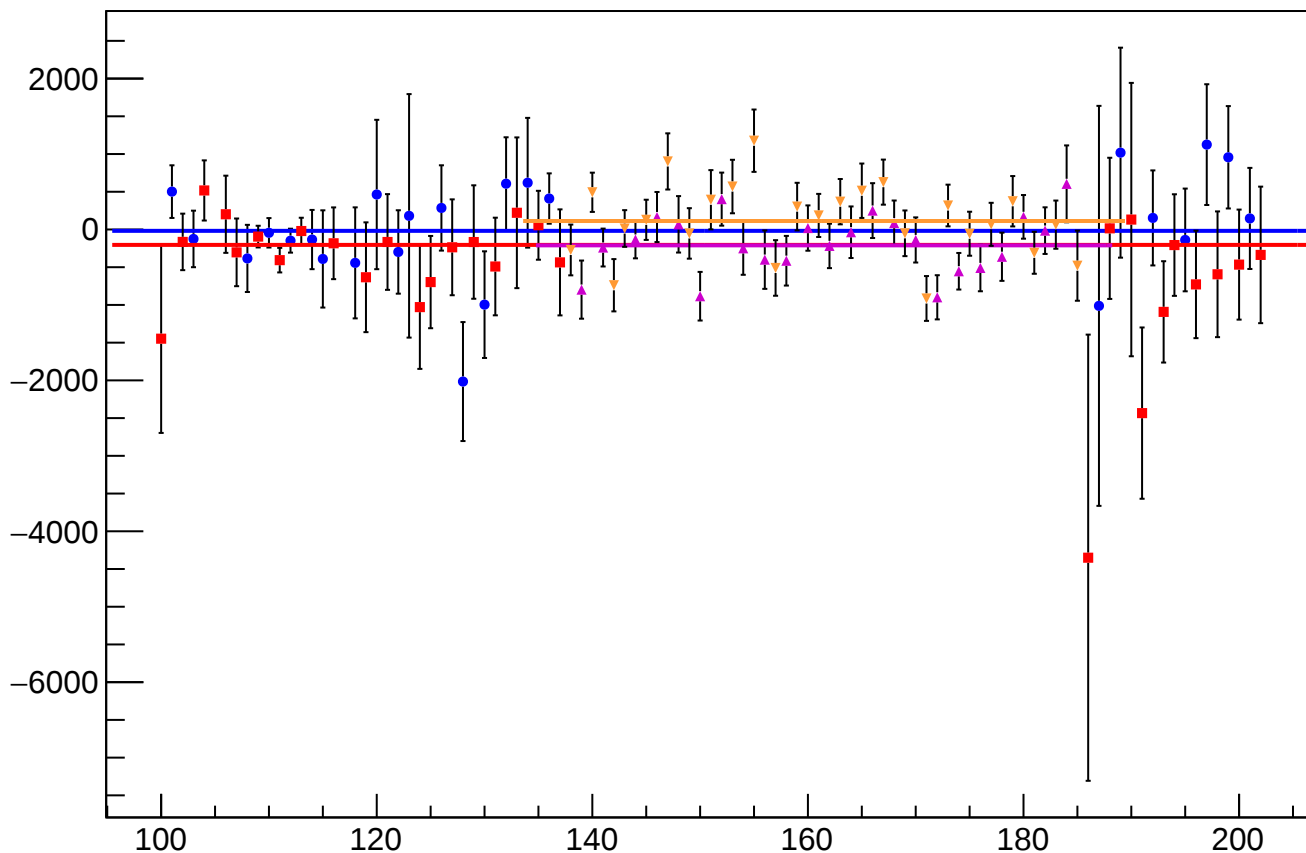
Right: 381.929 $\pm$ 0.065  $\chi^2/\text{NDF}$ : 15176886.6/52

In: 335.147 $\pm$ 0.047  $\chi^2/\text{NDF}$ : 7592442.5/46

Out: 329.532 $\pm$ 0.045  $\chi^2/\text{NDF}$ : 10382343.9/53

All: 332.204 $\pm$ 0.033  $\chi^2/\text{NDF}$ : 17982112.0/100

# asym\_sam8\_mean vs Slug, Sign Corrected



Right In:  $-18.084 \pm 86.752$   $\chi^2/\text{NDF}$ : 21.7/23

Left Out:  $112.242 \pm 62.643$   $\chi^2/\text{NDF}$ : 49.1/24

Right Out:  $-204.297 \pm 74.109$   $\chi^2/\text{NDF}$ : 19.6/28

Left In:  $-210.453 \pm 65.510$   $\chi^2/\text{NDF}$ : 29.2/22

Left:  $-41.890 \pm 45.275$   $\chi^2/\text{NDF}$ : 91.0/47

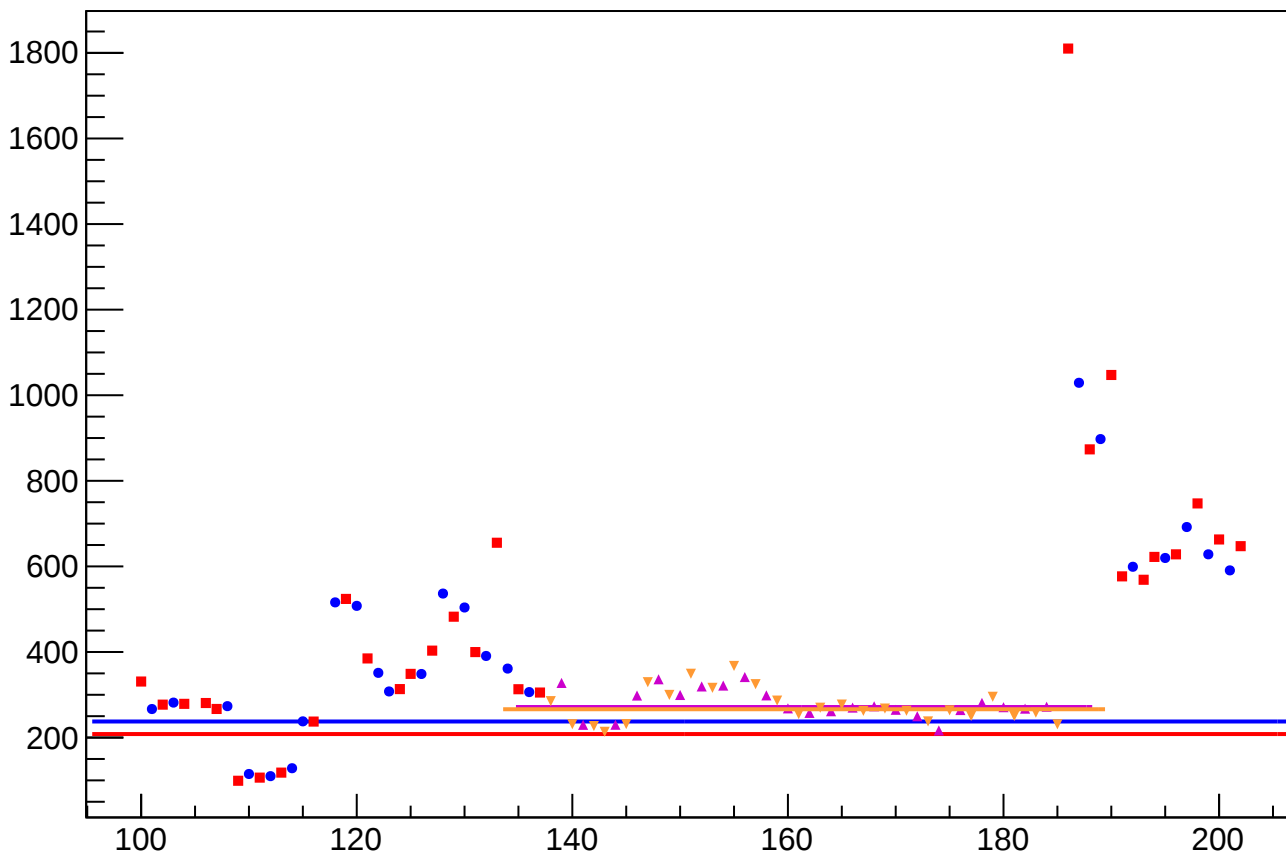
Right:  $-125.737 \pm 56.348$   $\chi^2/\text{NDF}$ : 44.0/52

In:  $-140.593 \pm 52.279$   $\chi^2/\text{NDF}$ : 54.0/46

Out:  $-19.674 \pm 47.841$   $\chi^2/\text{NDF}$ : 79.4/53

All:  $-74.785 \pm 35.294$   $\chi^2/\text{NDF}$ : 136.3/100

# asym\_sam8\_rms vs Slug, Sign Corrected



Right In: 237.585+/-0.061  $\chi^2/\text{NDF}$ : 7501559.4/23

Left Out: 266.207+/-0.044  $\chi^2/\text{NDF}$ : 649629.9/24

Right Out: 208.238+/-0.052  $\chi^2/\text{NDF}$ : 10889377.5/28

Left In: 271.415+/-0.046  $\chi^2/\text{NDF}$ : 521877.7/22

Left: 268.695+/-0.032  $\chi^2/\text{NDF}$ : 1178109.8/47

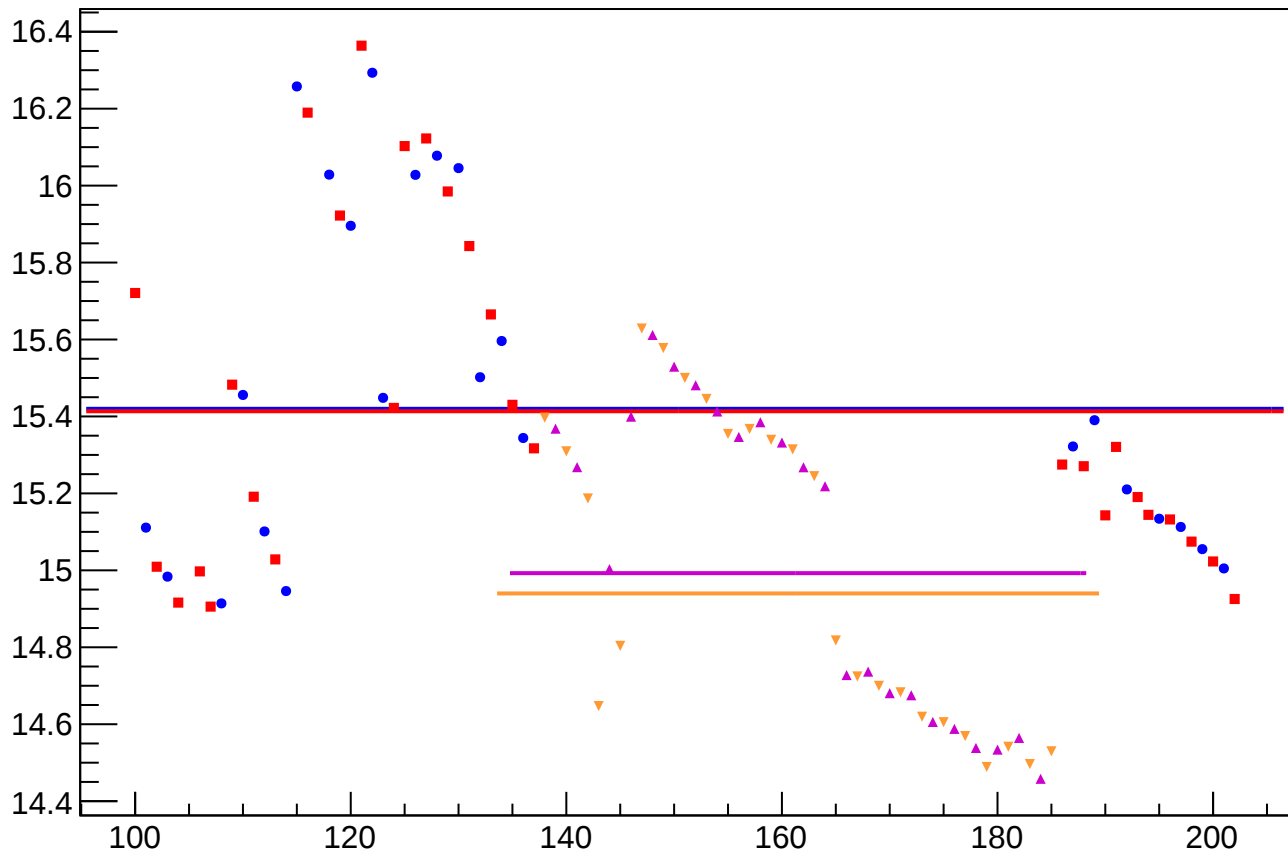
Right: 220.619+/-0.040  $\chi^2/\text{NDF}$ : 18523254.0/52

In: 259.129+/-0.037  $\chi^2/\text{NDF}$ : 8217127.7/46

Out: 242.049+/-0.034  $\chi^2/\text{NDF}$ : 12252763.5/53

All: 249.833+/-0.025  $\chi^2/\text{NDF}$ : 20586081.7/10

# yield\_sam1\_mean vs Slug, Sign Corrected



Right In: 15.420 $\pm$ 0.000  $\chi^2$ /NDF: 9629316597.0/23

Left Out: 14.940 $\pm$ 0.000  $\chi^2$ /NDF: 24199653913.9/24

Right Out: 15.413 $\pm$ 0.000  $\chi^2$ /NDF: 10252771799.4/28

Left In: 14.993 $\pm$ 0.000  $\chi^2$ /NDF: 22023159634.7/22

Left: 14.965 $\pm$ 0.000  $\chi^2$ /NDF: 46444749587.5/47

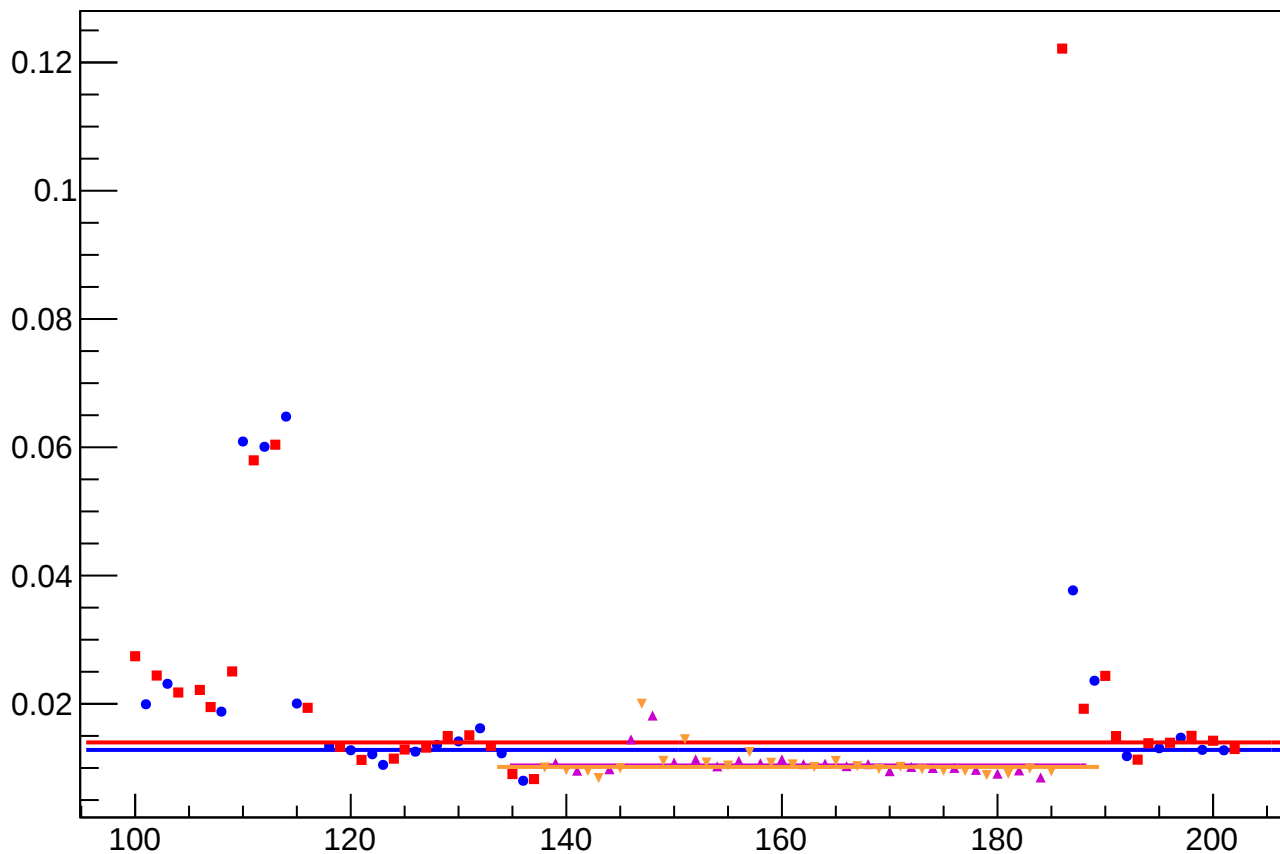
Right: 15.417 $\pm$ 0.000  $\chi^2$ /NDF: 19883236921.4/52

In: 15.111 $\pm$ 0.000  $\chi^2$ /NDF: 39331001463.9/46

Out: 15.061 $\pm$ 0.000  $\chi^2$ /NDF: 44008239763.5/53

All: 15.085 $\pm$ 0.000  $\chi^2$ /NDF: 83613974328.5

# yield\_sam1\_rms vs Slug, Sign Corrected



Right In: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 2483954.7/23

Left Out: 0.010+/-0.000  $\chi^2/\text{NDF}$ : 717351.4/24

Right Out: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 2987574.4/28

Left In: 0.010+/-0.000  $\chi^2/\text{NDF}$ : 544268.8/22

Left: 0.010+/-0.000  $\chi^2/\text{NDF}$ : 1270343.0/47

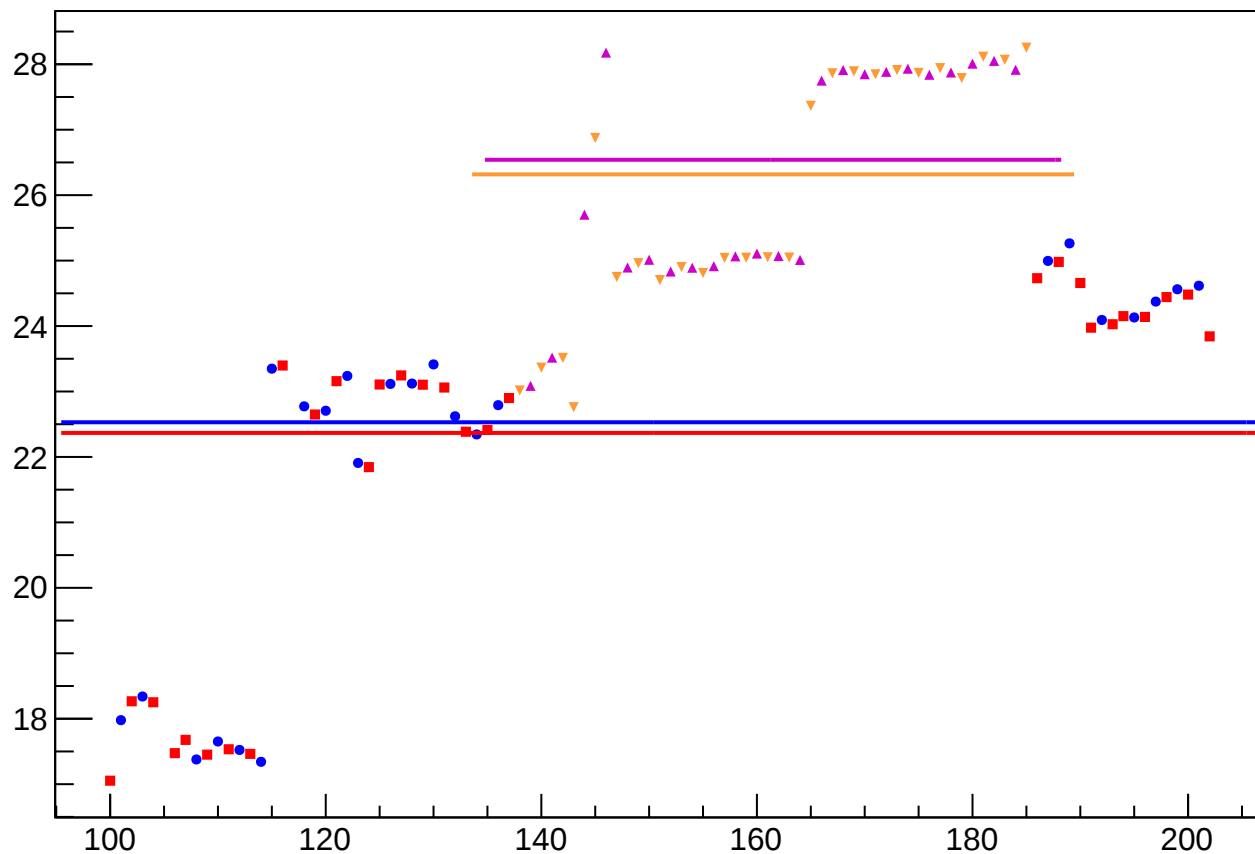
Right: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 5550212.2/52

In: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 3520782.1/46

Out: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 4949022.9/53

All: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 8470872.4/100

# yield\_sam2\_mean vs Slug, Sign Corrected



Right In: 22.530+/-0.000

$\chi^2/\text{NDF}$ : 1103752754.0/23

Left: 26.424+/-0.000

$\chi^2/\text{NDF}$ : 8058273722.3/47

Left Out: 26.318+/-0.000

$\chi^2/\text{NDF}$ : 4715403741.0/24

Right: 22.451+/-0.000

$\chi^2/\text{NDF}$ : 2429439226.9/52

Right Out: 22.367+/-0.000

$\chi^2/\text{NDF}$ : 1321221279.4/28

In: 25.688+/-0.000

$\chi^2/\text{NDF}$ : 8839365474.7/46

Out: 25.573+/-0.000

$\chi^2/\text{NDF}$ : 10182804808.1/53

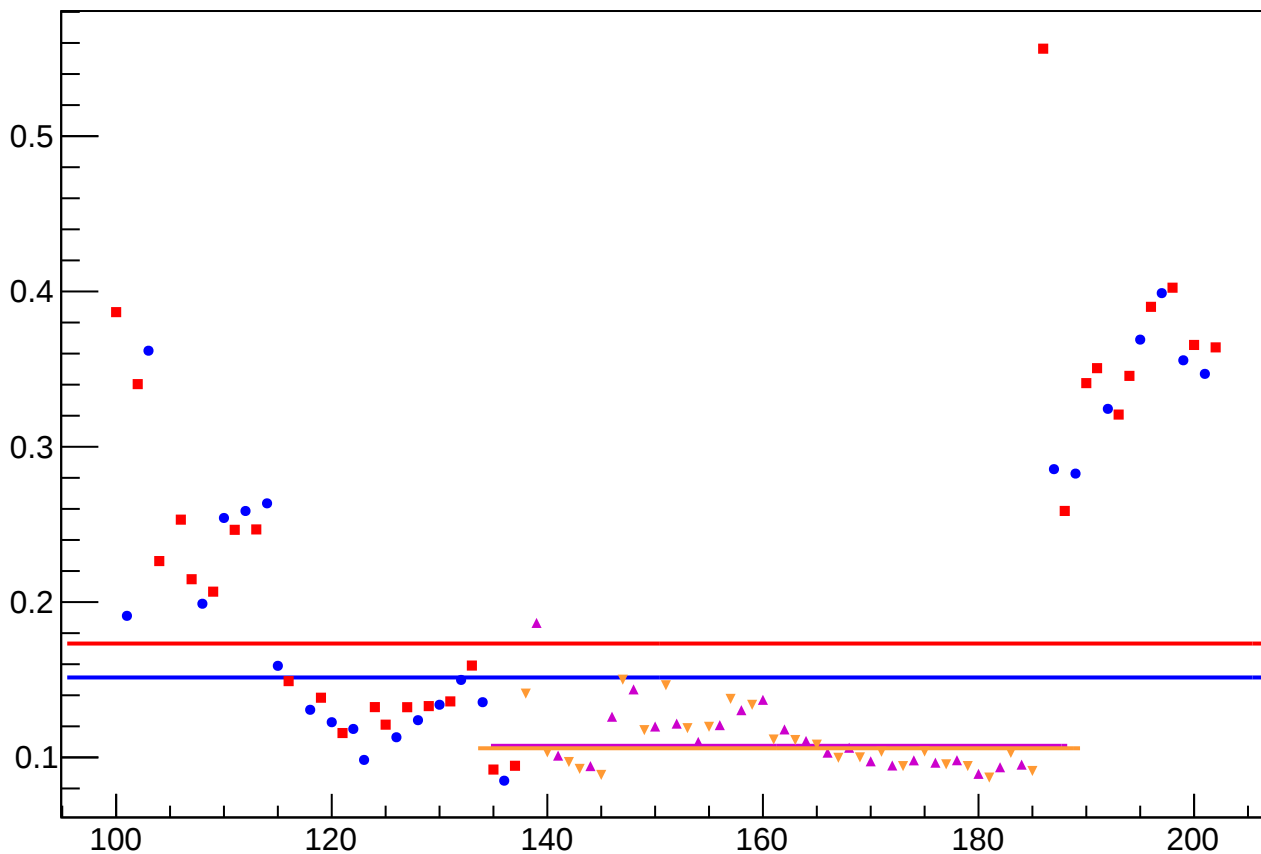
Left In: 26.540+/-0.000

$\chi^2/\text{NDF}$ : 3309392772.6/22

All: 25.629+/-0.000

$\chi^2/\text{NDF}$ : 19033327999.7

# yield\_sam2\_rms vs Slug, Sign Corrected



Right In: 0.151+/-0.000  $\chi^2/\text{NDF}$ : 4769648.4/23

Left Out: 0.106+/-0.000  $\chi^2/\text{NDF}$ : 732883.8/24

Right Out: 0.173+/-0.000  $\chi^2/\text{NDF}$ : 5274557.2/28

Left In: 0.107+/-0.000  $\chi^2/\text{NDF}$ : 771132.0/22

Left: 0.107+/-0.000  $\chi^2/\text{NDF}$ : 1507414.2/47

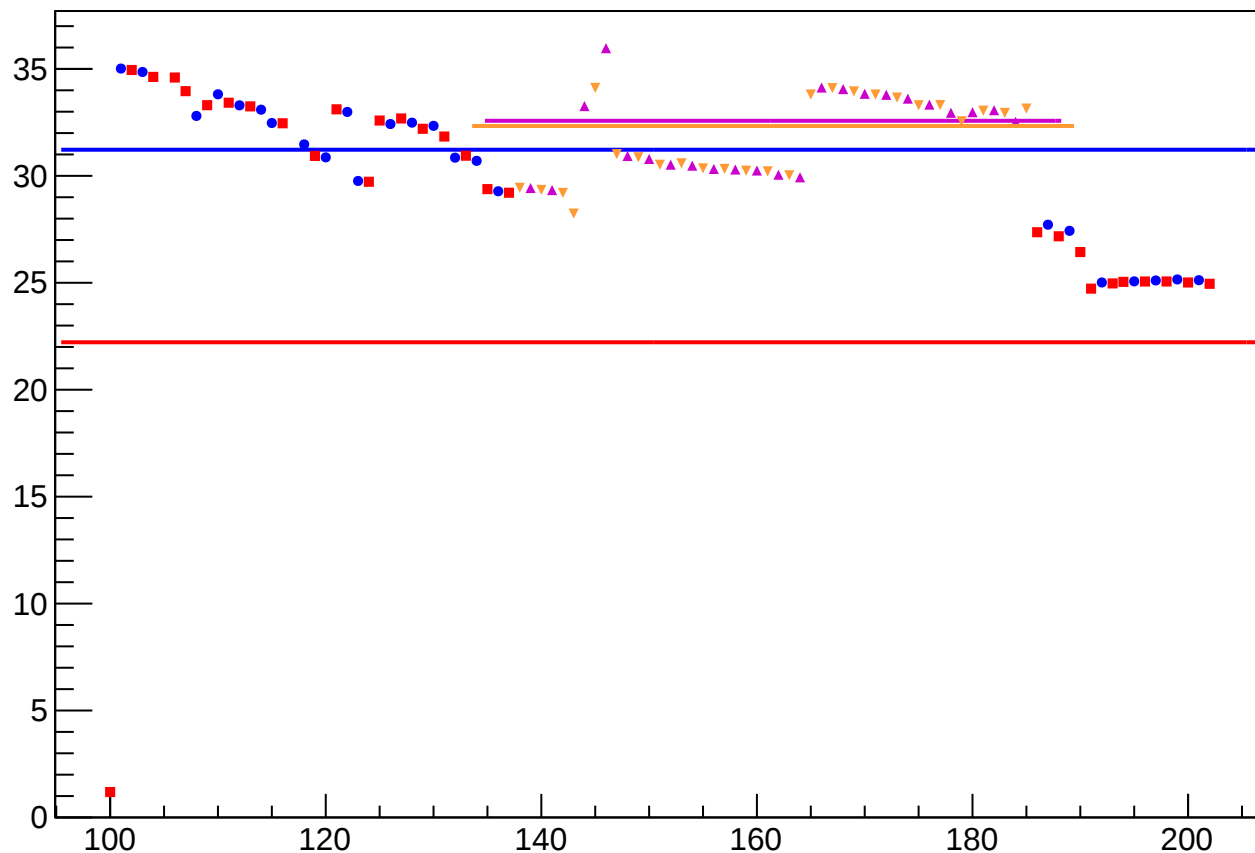
Right: 0.162+/-0.000  $\chi^2/\text{NDF}$ : 10205451.1/52

In: 0.117+/-0.000  $\chi^2/\text{NDF}$ : 6606329.3/46

Out: 0.119+/-0.000  $\chi^2/\text{NDF}$ : 8423299.1/53

All: 0.118+/-0.000  $\chi^2/\text{NDF}$ : 15034917.4/100

# yield\_sam3\_mean vs Slug, Sign Corrected



Right In: 31.222+/-0.000

$\chi^2/\text{NDF}$ : 4838261229.8/23

Left: 32.450+/-0.000  $\chi^2/\text{NDF}$ : 24766521375.8/47

Right: 25.854+/-0.000  $\chi^2/\text{NDF}$ : 274443753640.1/52

Left Out: 32.331+/-0.000

$\chi^2/\text{NDF}$ : 12850475096.2/24

In: 32.345+/-0.000  $\chi^2/\text{NDF}$ : 17852083191.5/46

Right Out: 22.219+/-0.000

$\chi^2/\text{NDF}$ : 230906039157.4/28

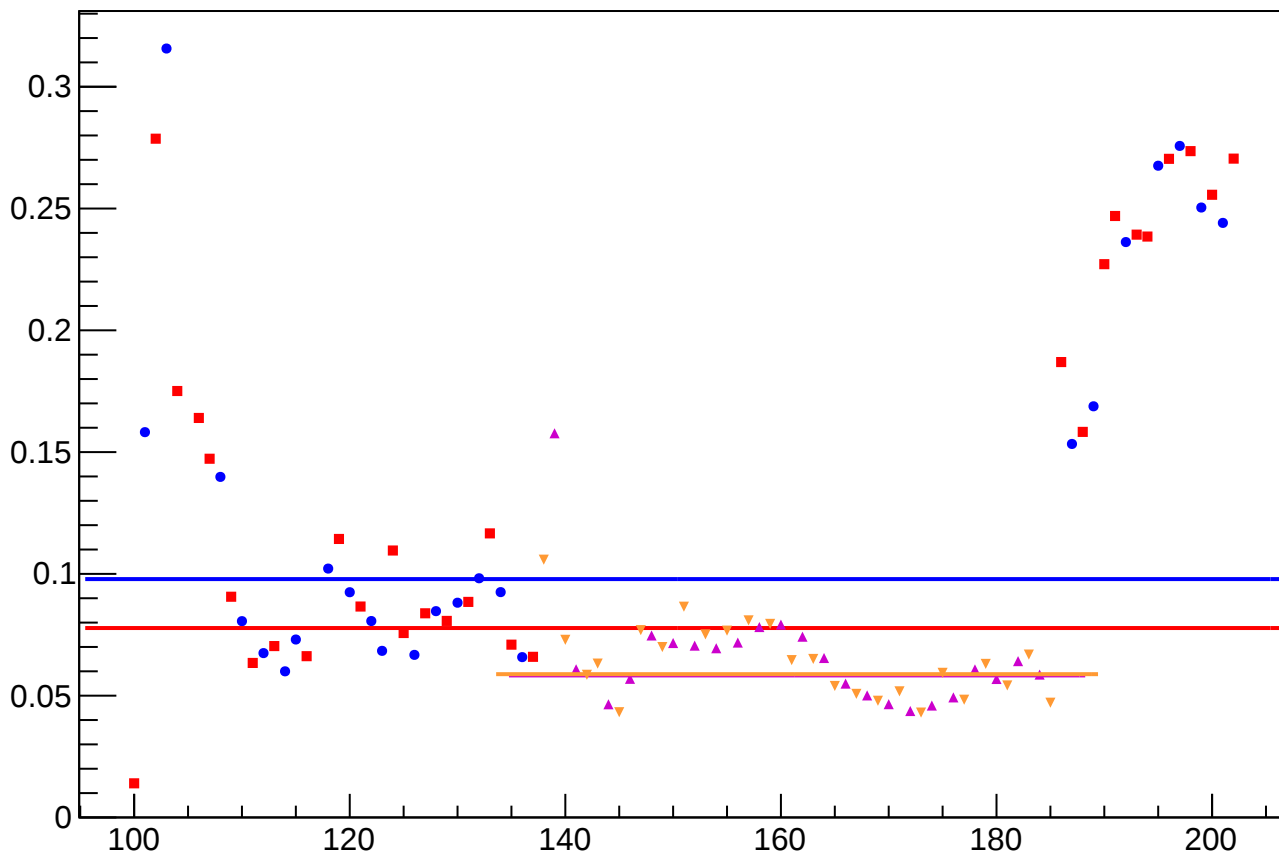
Out: 30.066+/-0.000  $\chi^2/\text{NDF}$ : 337580695392.1/53

Left In: 32.574+/-0.000

$\chi^2/\text{NDF}$ : 11797772603.7/22

All: 31.142+/-0.000  $\chi^2/\text{NDF}$ : 368372011433.

# yield\_sam3\_rms vs Slug, Sign Corrected



Right In: 0.098 $\pm$ 0.000  $\chi^2$ /NDF: 4737873.4/23

Left Out: 0.059 $\pm$ 0.000  $\chi^2$ /NDF:1402605.2/24

Right Out: 0.078 $\pm$ 0.000  $\chi^2$ /NDF: 9679788.3/28

Left In: 0.058 $\pm$ 0.000  $\chi^2$ /NDF:1525476.4/22

Left: 0.059 $\pm$ 0.000  $\chi^2$ /NDF: 2929140.7/47

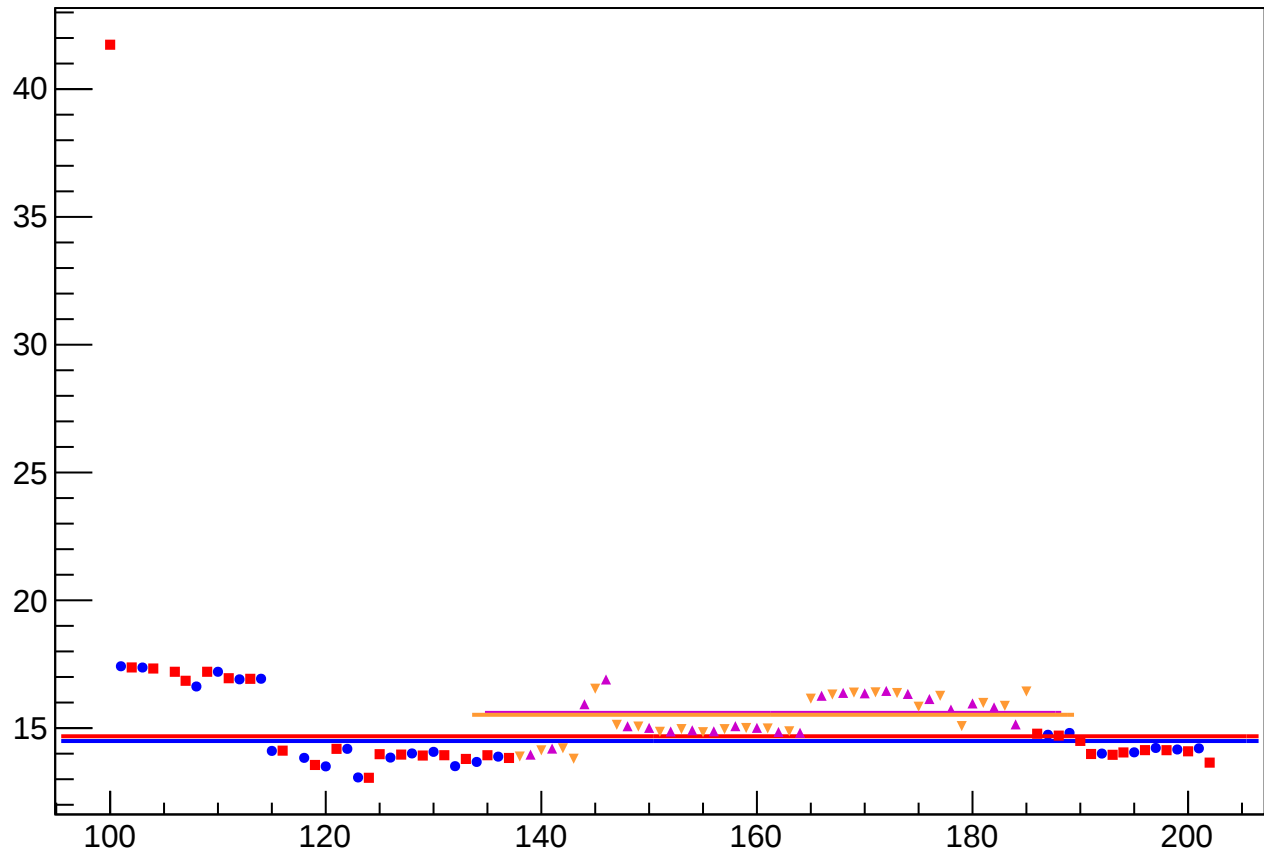
Right: 0.086 $\pm$ 0.000  $\chi^2$ /NDF: 14803234.1/52

In: 0.065 $\pm$ 0.000  $\chi^2$ /NDF:8343714.6/46

Out: 0.063 $\pm$ 0.000  $\chi^2$ /NDF:11740808.8/53

All: 0.064 $\pm$ 0.000  $\chi^2$ /NDF: 20103530.4/100

# yield\_sam4\_mean vs Slug, Sign Corrected



Right In: 14.494+/-0.000

$\chi^2/\text{NDF}$ : 1499994865.5/23

Left Out: 15.521+/-0.000

$\chi^2/\text{NDF}$ : 2591377740.5/24

Right Out: 14.680+/-0.000

$\chi^2/\text{NDF}$ : 1953260601.4/28

Left In: 15.595+/-0.000

$\chi^2/\text{NDF}$ : 1908733580.5/22

Left: 15.557+/-0.000

$\chi^2/\text{NDF}$ : 4510008259.4/47

Right: 14.586+/-0.000

$\chi^2/\text{NDF}$ : 3469761489.1/52

In: 15.355+/-0.000

$\chi^2/\text{NDF}$ : 4318026052.2/46

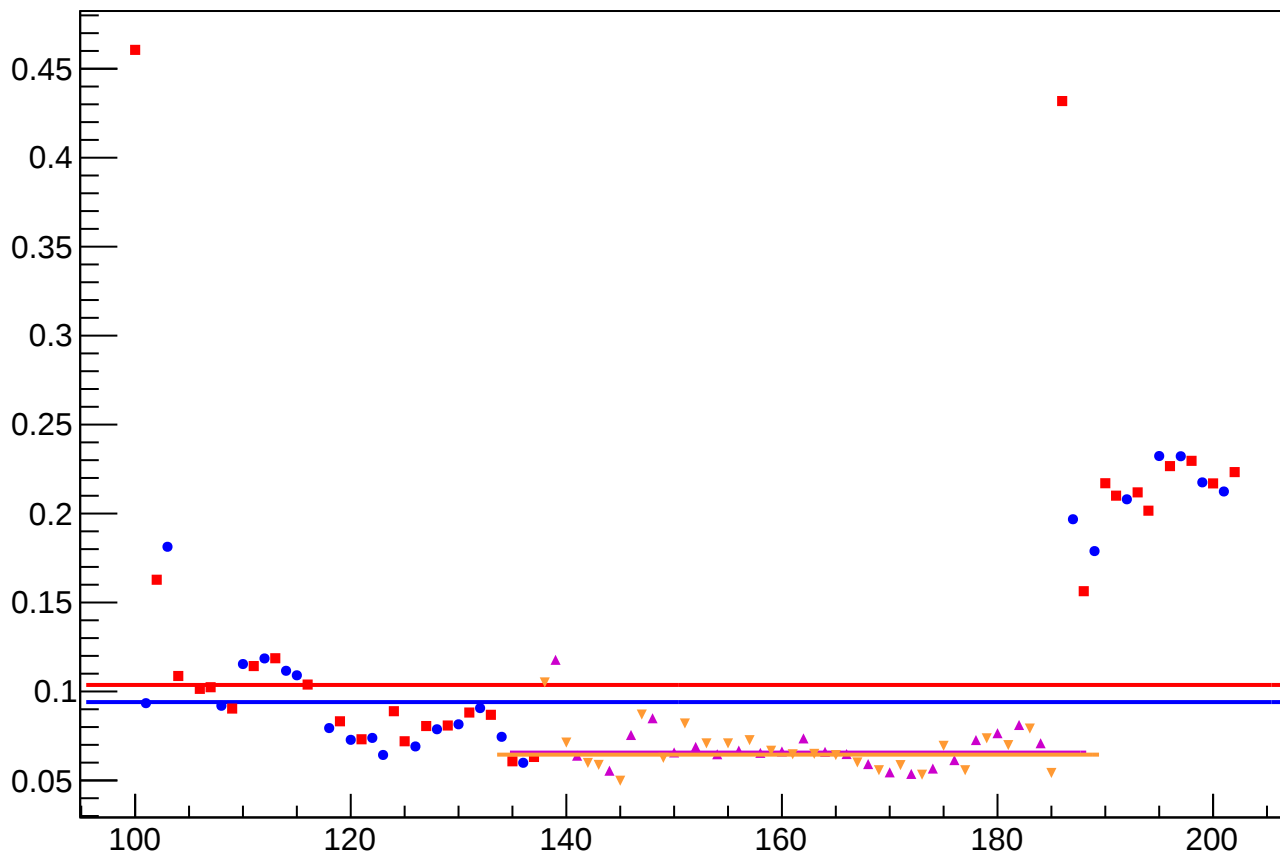
Out: 15.352+/-0.000

$\chi^2/\text{NDF}$ : 5077612299.6/53

All: 15.354+/-0.000

$\chi^2/\text{NDF}$ : 9395661269.1/101

# yield\_sam4\_rms vs Slug, Sign Corrected



Right In: 0.094+/-0.000  $\chi^2/\text{NDF}$ : 4009011.9/23

Left Out: 0.064+/-0.000  $\chi^2/\text{NDF}$ : 761552.3/24

Right Out: 0.104+/-0.000  $\chi^2/\text{NDF}$ : 4608485.1/28

Left In: 0.066+/-0.000  $\chi^2/\text{NDF}$ : 714703.1/22

Left: 0.065+/-0.000  $\chi^2/\text{NDF}$ : 1481007.6/47

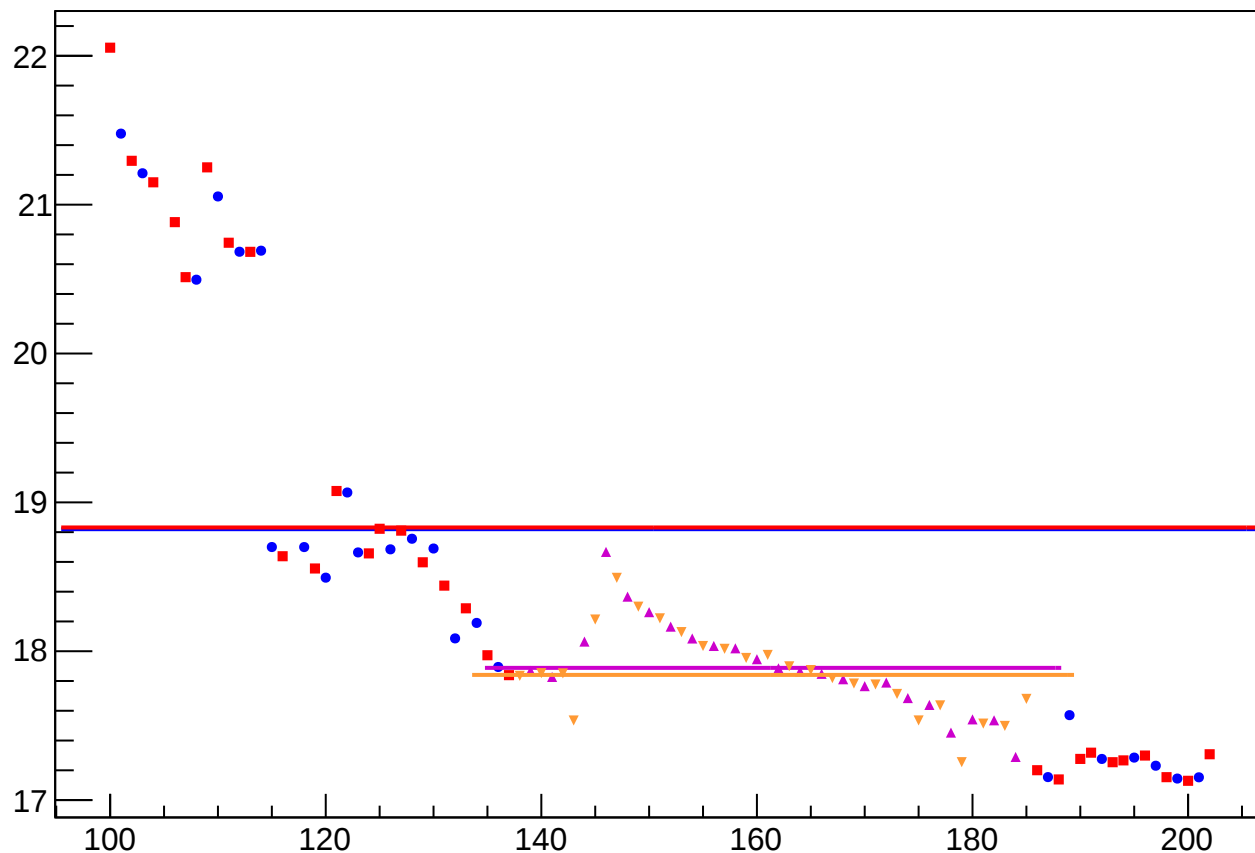
Right: 0.099+/-0.000  $\chi^2/\text{NDF}$ : 8705711.3/52

In: 0.072+/-0.000  $\chi^2/\text{NDF}$ : 5932085.6/46

Out: 0.072+/-0.000  $\chi^2/\text{NDF}$ : 7683771.4/53

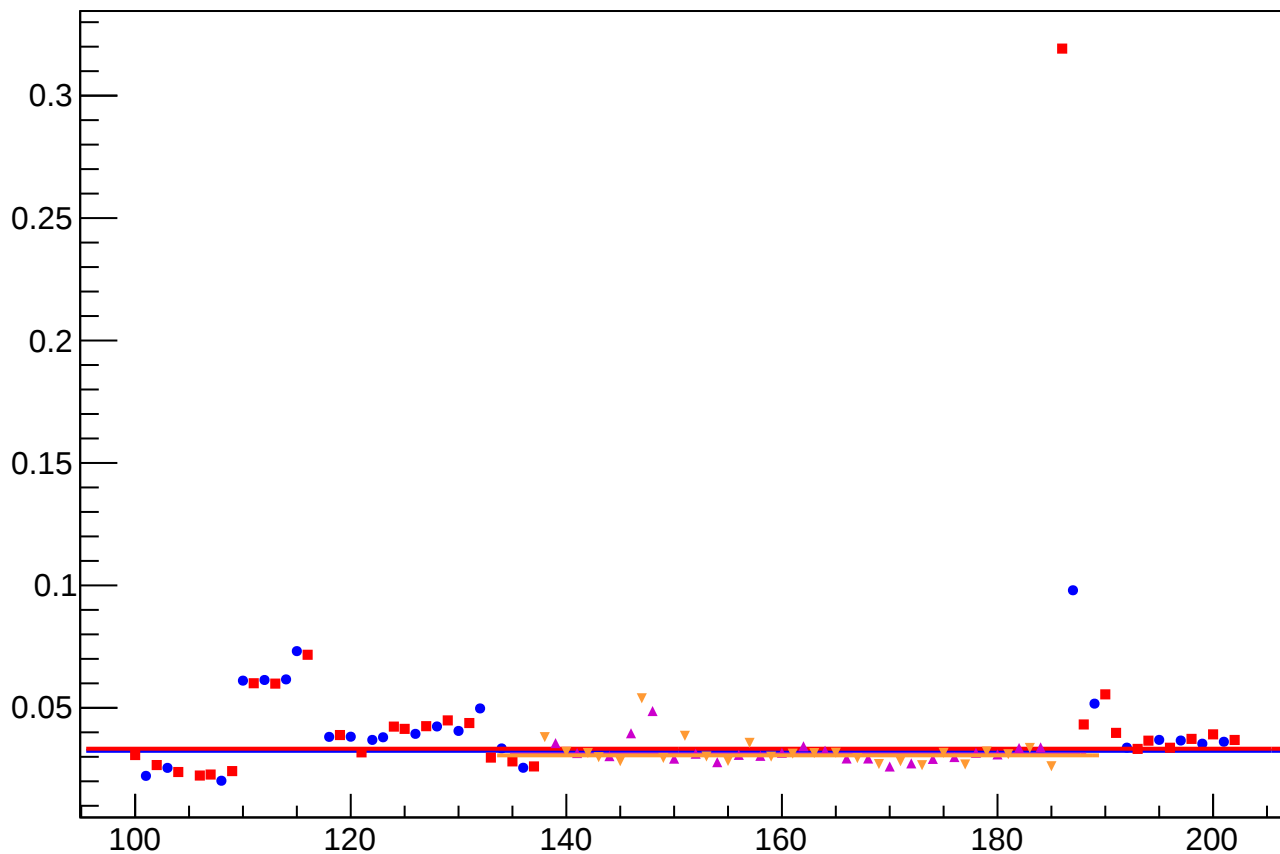
All: 0.072+/-0.000  $\chi^2/\text{NDF}$ : 13617151.7/100

# yield\_sam5\_mean vs Slug, Sign Corrected



|                           |                                        |                       |                                        |
|---------------------------|----------------------------------------|-----------------------|----------------------------------------|
| Right In: 18.820+/-0.000  | $\chi^2/\text{NDF}$ : 25137460260.4/23 | Left: 17.864+/-0.000  | $\chi^2/\text{NDF}$ : 2506375288.6/47  |
| Left Out: 17.841+/-0.000  | $\chi^2/\text{NDF}$ : 1283287989.7/24  | Right: 18.826+/-0.000 | $\chi^2/\text{NDF}$ : 53786944631.0/52 |
| Right Out: 18.831+/-0.000 | $\chi^2/\text{NDF}$ : 28648829211.4/28 | In: 18.216+/-0.000    | $\chi^2/\text{NDF}$ : 31634432346.4/46 |
| Left In: 17.888+/-0.000   | $\chi^2/\text{NDF}$ : 1203002311.3/22  | Out: 18.196+/-0.000   | $\chi^2/\text{NDF}$ : 36476553524.4/53 |
|                           |                                        | All: 18.205+/-0.000   | $\chi^2/\text{NDF}$ : 68116558275.7    |

# yield\_sam5\_rms vs Slug, Sign Corrected



Right In: 0.032 $\pm$ 0.000  $\chi^2$ /NDF: 1690004.8/23

Left Out: 0.031 $\pm$ 0.000  $\chi^2$ /NDF:590475.6/24

Right Out: 0.033 $\pm$ 0.000  $\chi^2$ /NDF: 2131242.4/28

Left In: 0.031 $\pm$ 0.000  $\chi^2$ /NDF:453524.6/22

Left: 0.031 $\pm$ 0.000  $\chi^2$ /NDF: 1045553.8/47

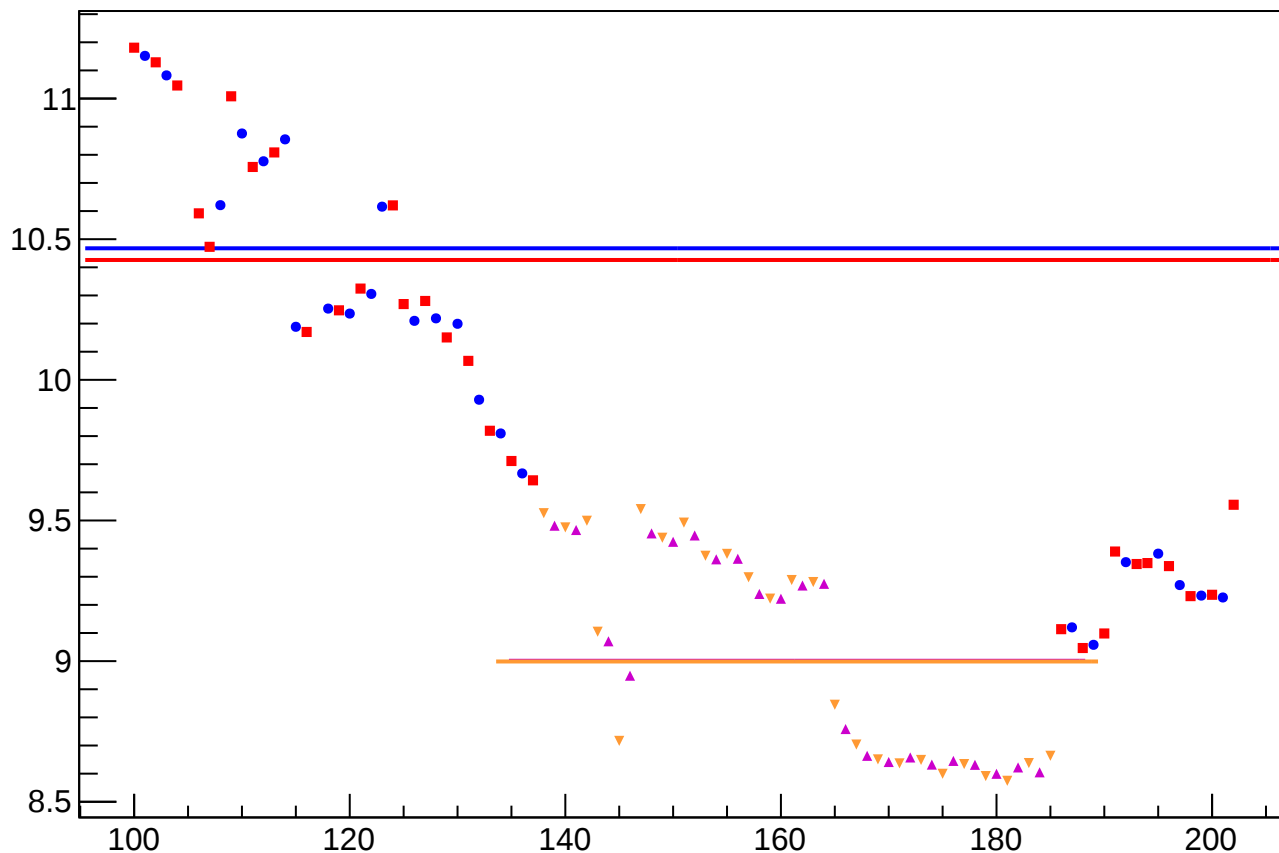
Right: 0.033 $\pm$ 0.000  $\chi^2$ /NDF: 3828441.4/52

In: 0.031 $\pm$ 0.000  $\chi^2$ /NDF:2172941.6/46

Out: 0.032 $\pm$ 0.000  $\chi^2$ /NDF:2819017.7/53

All: 0.032 $\pm$ 0.000  $\chi^2$ /NDF: 4992410.0/100

# yield\_sam6\_mean vs Slug, Sign Corrected



Right In: 10.468 $\pm$ 0.000  $\chi^2$ /NDF: 11409612730.6/23

Left Out: 8.999 $\pm$ 0.000  $\chi^2$ /NDF: 6392583736.5/24

Right Out: 10.426 $\pm$ 0.000  $\chi^2$ /NDF: 10847584041.6/28

Left In: 9.001 $\pm$ 0.000  $\chi^2$ /NDF: 5314536205.4/22

Left: 9.000 $\pm$ 0.000  $\chi^2$ /NDF: 11707260677.5/47

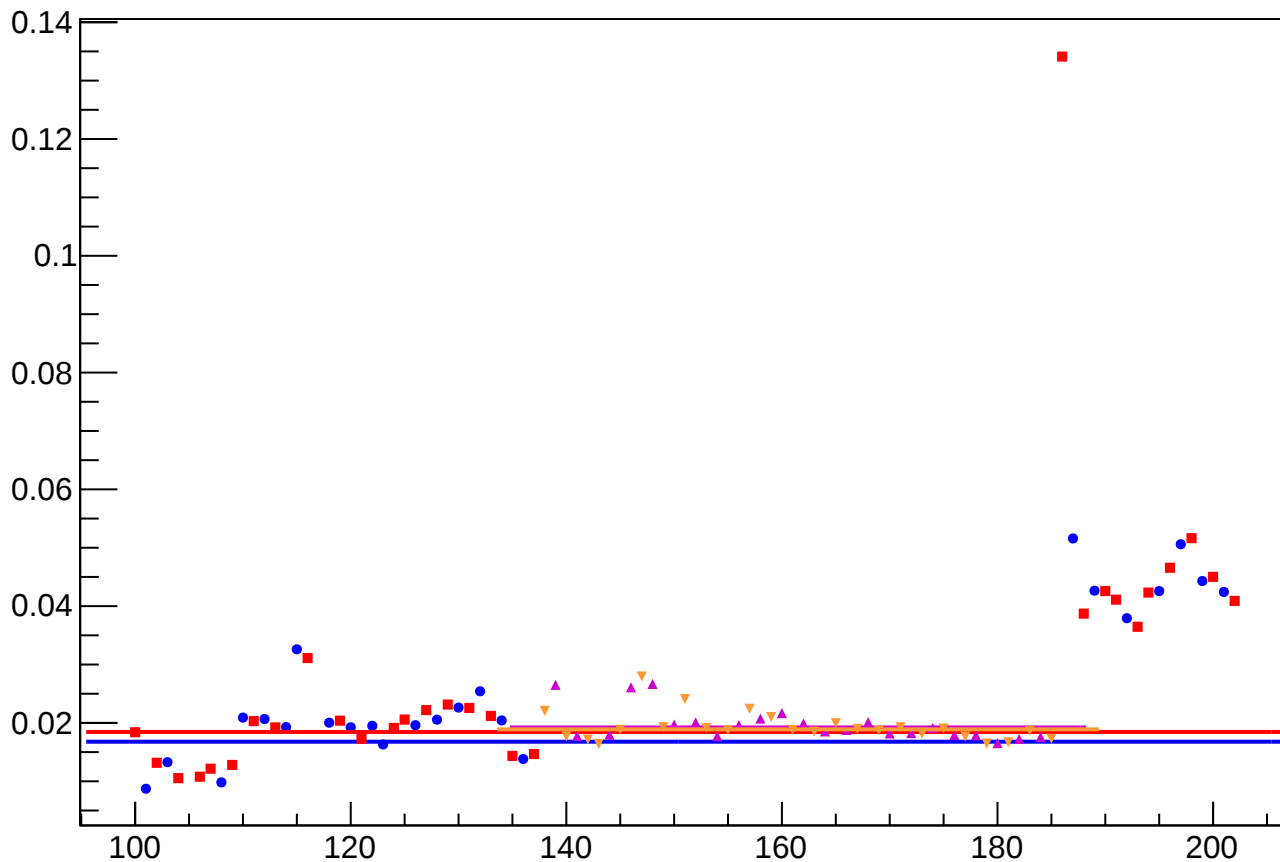
Right: 10.447 $\pm$ 0.000  $\chi^2$ /NDF: 22281830093.6/52

In: 9.588 $\pm$ 0.000  $\chi^2$ /NDF: 53531471636.3/46

Out: 9.538 $\pm$ 0.000  $\chi^2$ /NDF: 53405794290.0/53

All: 9.562 $\pm$ 0.000  $\chi^2$ /NDF: 107027293419.8

# yield\_sam6\_rms vs Slug, Sign Corrected



Right In: 0.017 $\pm$ 0.000  $\chi^2$ /NDF: 5179870.6/23

Left Out: 0.019 $\pm$ 0.000  $\chi^2$ /NDF:428169.5/24

Right Out: 0.018 $\pm$ 0.000  $\chi^2$ /NDF: 5857257.7/28

Left In: 0.019 $\pm$ 0.000  $\chi^2$ /NDF:481824.0/22

Left: 0.019 $\pm$ 0.000  $\chi^2$ /NDF: 914799.6/47

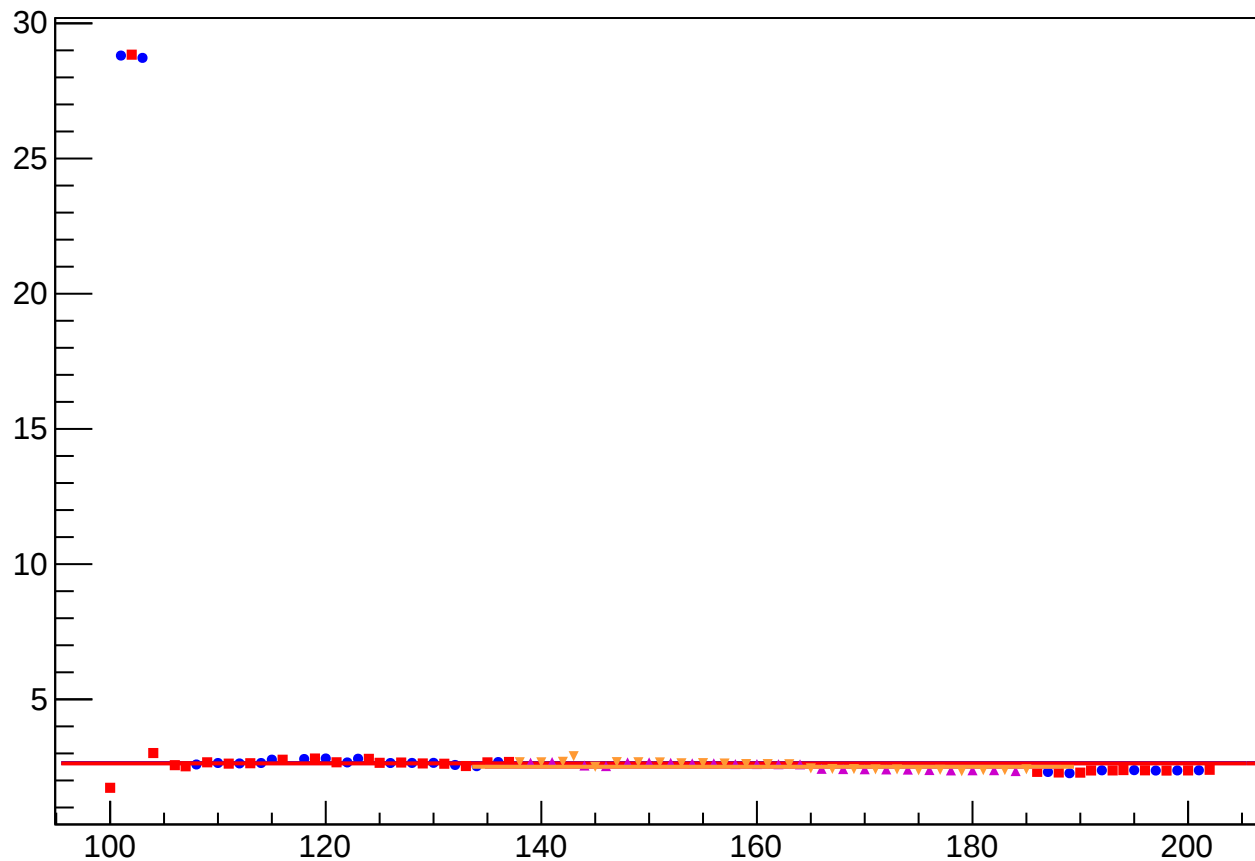
Right: 0.018 $\pm$ 0.000  $\chi^2$ /NDF: 11116646.7/52

In: 0.018 $\pm$ 0.000  $\chi^2$ /NDF:5865978.4/46

Out: 0.019 $\pm$ 0.000  $\chi^2$ /NDF:6292478.8/53

All: 0.018 $\pm$ 0.000  $\chi^2$ /NDF: 12175417.5/100

# yield\_sam7\_mean vs Slug, Sign Corrected



Right In: 2.643 $\pm$ 0.000  $\chi^2$ /NDF: 171944872052.9/23

Left Out: 2.507 $\pm$ 0.000  $\chi^2$ /NDF: 64277969186.7/24

Right Out: 2.632 $\pm$ 0.000  $\chi^2$ /NDF: 83486674302.9/28

Left In: 2.505 $\pm$ 0.000  $\chi^2$ /NDF: 42893630742.5/22

Left: 2.506 $\pm$ 0.000  $\chi^2$ /NDF: 107174595641.7/47

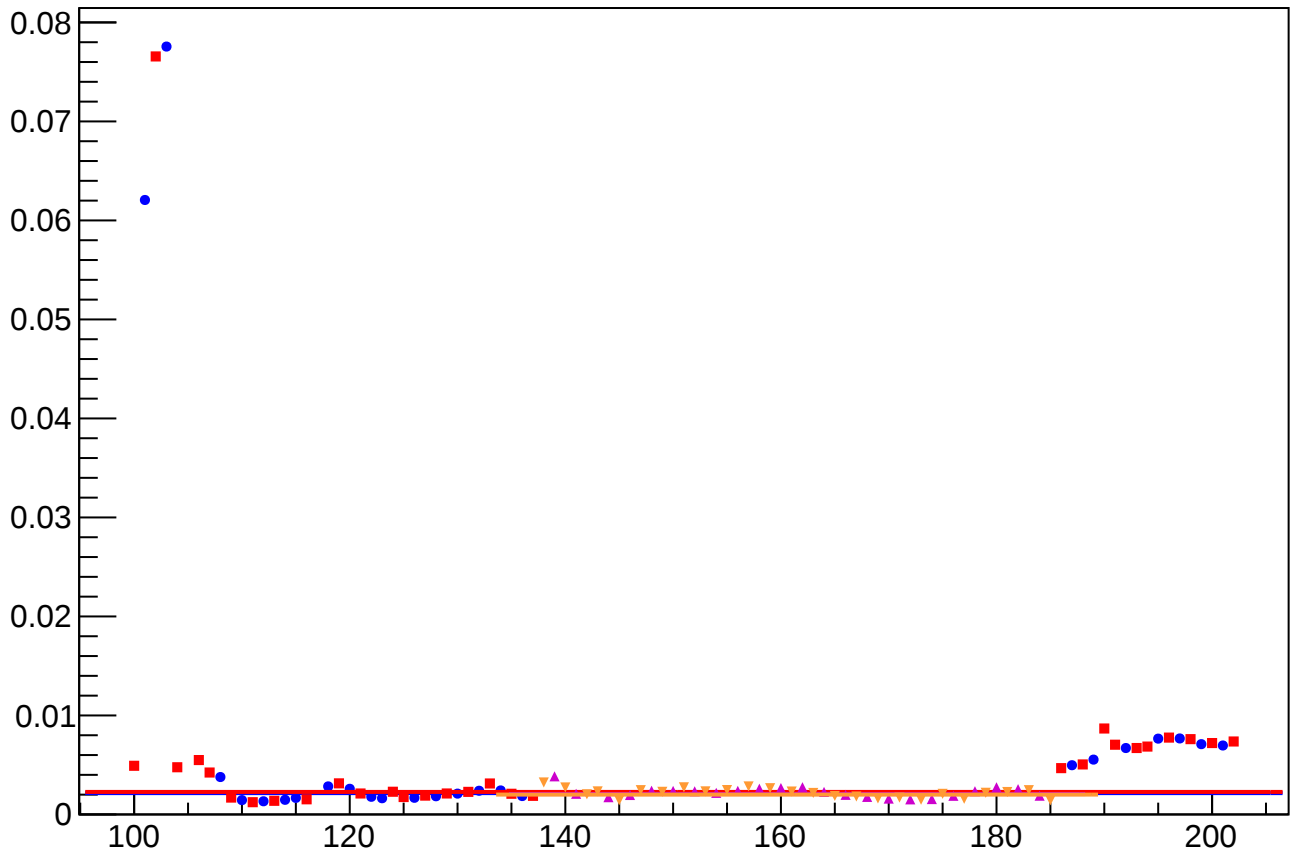
Right: 2.637 $\pm$ 0.000  $\chi^2$ /NDF: 255526210157.9/52

In: 2.547 $\pm$ 0.000  $\chi^2$ /NDF: 233886229143.1/46

Out: 2.544 $\pm$ 0.000  $\chi^2$ /NDF: 164834321599.1/53

All: 2.546 $\pm$ 0.000  $\chi^2$ /NDF: 398746495725.8

# yield\_sam7\_rms vs Slug, Sign Corrected



Right In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 7322102.6/23

Left Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ :1469103.5/24

Right Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 8293332.4/28

Left In: 0.002+/-0.000  $\chi^2/\text{NDF}$ :1303230.9/22

Left: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 2781893.0/47

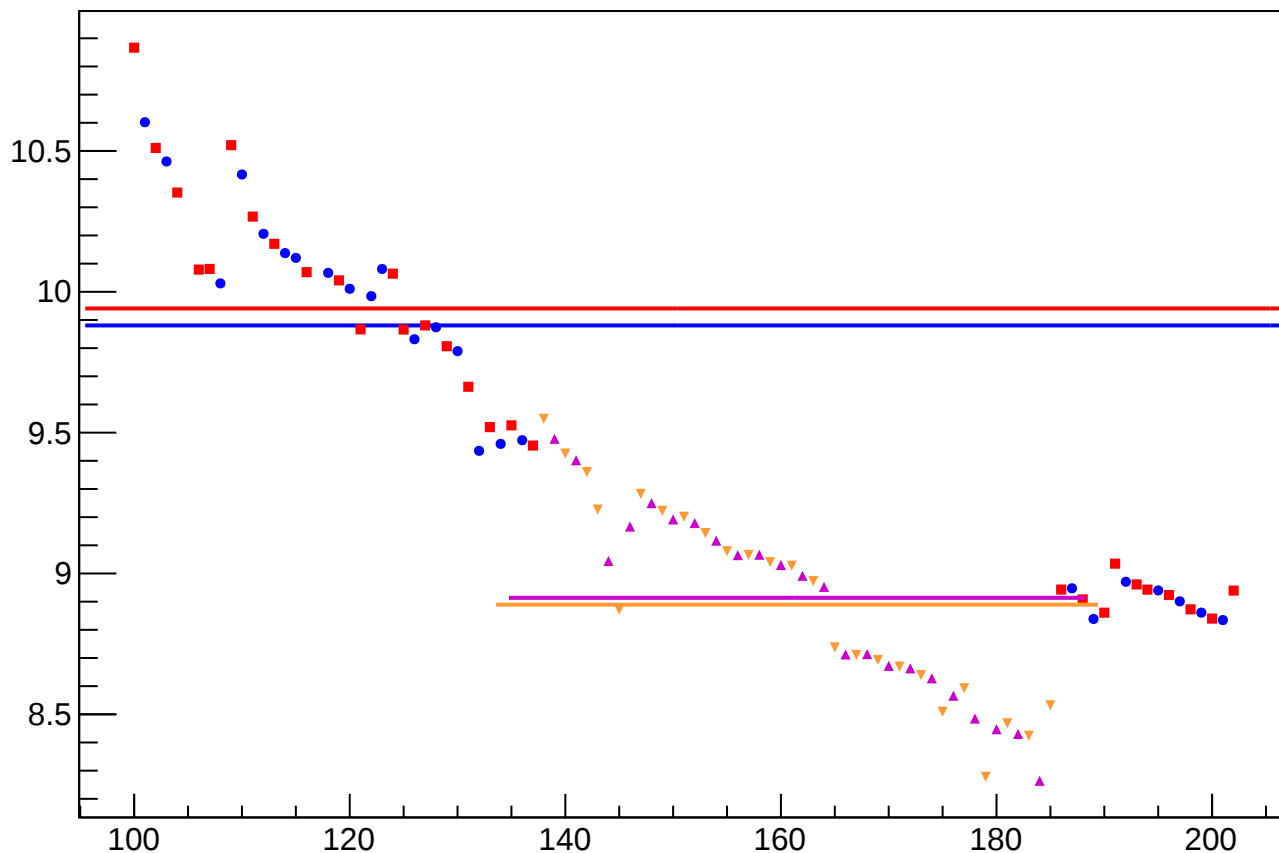
Right: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 15637393.5/52

In: 0.002+/-0.000  $\chi^2/\text{NDF}$ :8643700.5/46

Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ :9920469.2/53

All: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 18564178.3/100

# yield\_sam8\_mean vs Slug, Sign Corrected



Right In: 9.881 $\pm$ 0.000  $\chi^2$ /NDF: 40352644975.8/23

Left Out: 8.889 $\pm$ 0.000  $\chi^2$ /NDF: 34704694045.9/24

Right Out: 9.941 $\pm$ 0.000  $\chi^2$ /NDF: 46009042672.7/28

Left In: 8.914 $\pm$ 0.000  $\chi^2$ /NDF: 28497227562.7/22

Left: 8.901 $\pm$ 0.000  $\chi^2$ /NDF: 63312247922.6/47

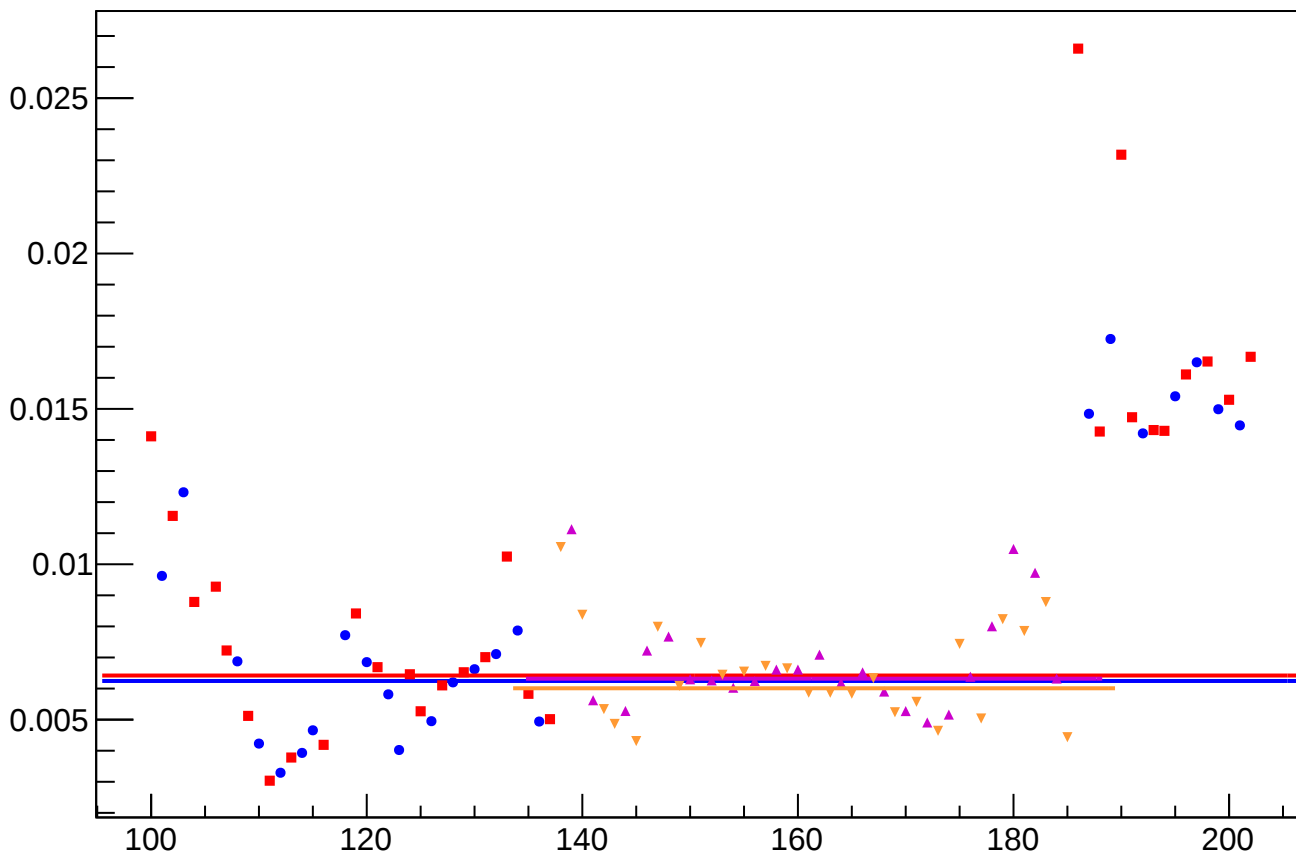
Right: 9.912 $\pm$ 0.000  $\chi^2$ /NDF: 86740988797.7/52

In: 9.268 $\pm$ 0.000  $\chi^2$ /NDF: 188025484497.4/46

Out: 9.257 $\pm$ 0.000  $\chi^2$ /NDF: 236560104266.8/53

All: 9.262 $\pm$ 0.000  $\chi^2$ /NDF: 424615923850.9

# yield\_sam8\_rms vs Slug, Sign Corrected



Right In: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 4794628.6/23

Left Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ :1312525.9/24

Right Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 6688391.7/28

Left In: 0.006+/-0.000  $\chi^2/\text{NDF}$ :1087051.3/22

Left: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 2435218.5/47

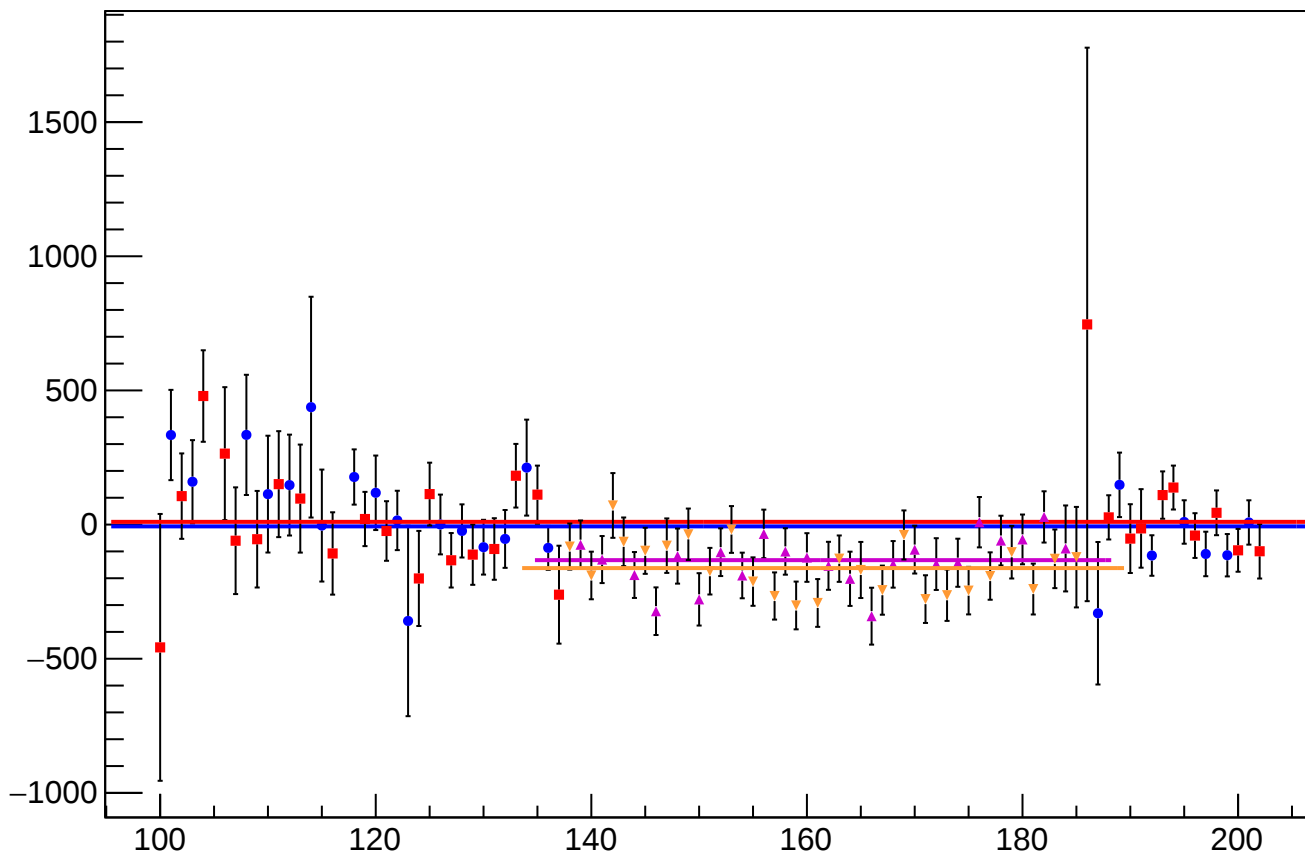
Right: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 11489444.2/52

In: 0.006+/-0.000  $\chi^2/\text{NDF}$ :5883073.0/46

Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ :8048415.6/53

All: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 13942605.8/100

# reg\_asym\_sam1\_mean vs Slug, Sign Corrected



Right In:  $-6.723 \pm 23.442$   $\chi^2/\text{NDF}$ : 26.7/23

Left Out:  $-162.161 \pm 18.745$   $\chi^2/\text{NDF}$ : 25.7/24

Right Out:  $10.202 \pm 22.141$   $\chi^2/\text{NDF}$ : 30.8/28

Left In:  $-132.557 \pm 19.403$   $\chi^2/\text{NDF}$ : 20.7/22

Left:  $-147.870 \pm 13.481$   $\chi^2/\text{NDF}$ : 47.6/47

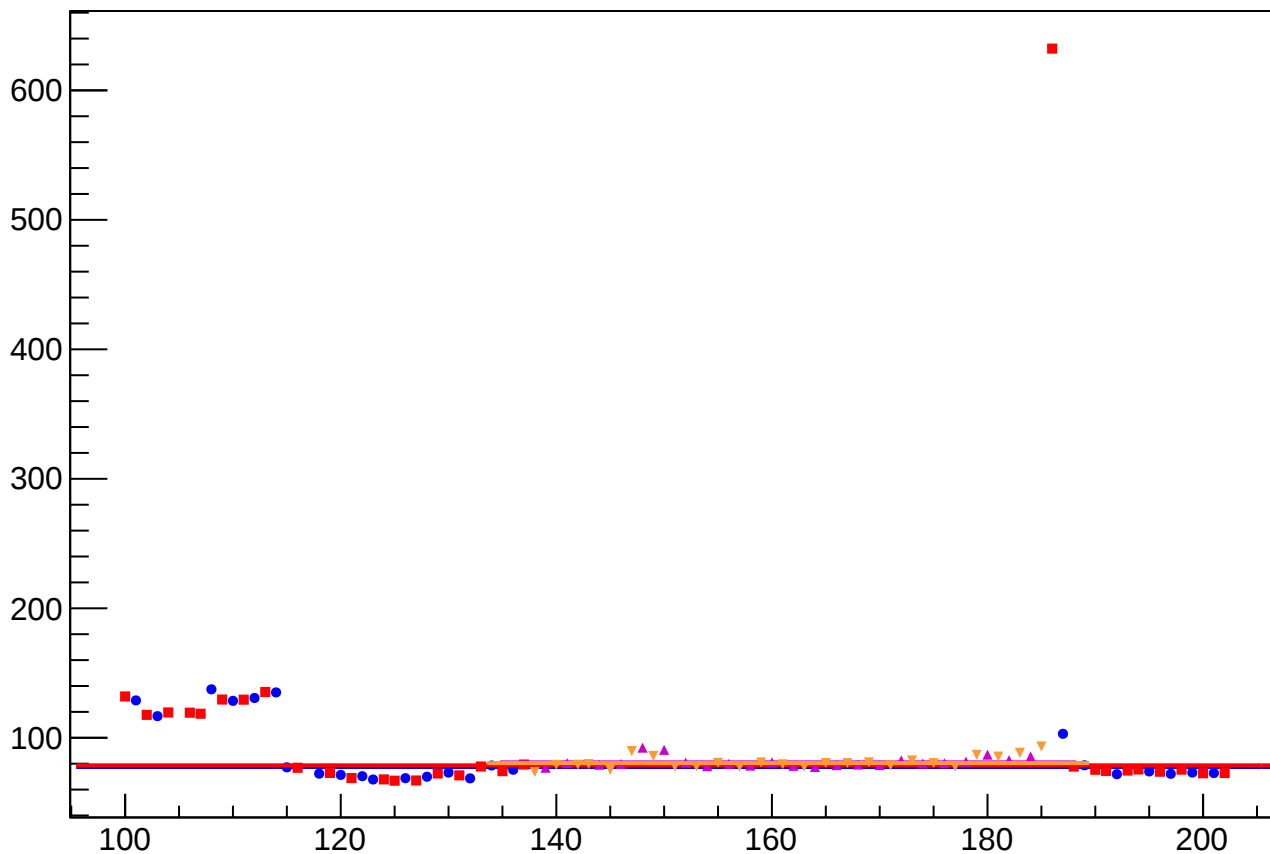
Right:  $2.223 \pm 16.096$   $\chi^2/\text{NDF}$ : 57.8/52

In:  $-81.398 \pm 14.947$   $\chi^2/\text{NDF}$ : 64.5/46

Out:  $-90.198 \pm 14.306$   $\chi^2/\text{NDF}$ : 91.8/53

All:  $-85.991 \pm 10.335$   $\chi^2/\text{NDF}$ : 156.5/100

# reg\_asym\_sam1\_rms vs Slug, Sign Corrected



Right In: 77.445 $\pm$ 0.017  $\chi^2$ /NDF: 882823.2/23

Left Out: 80.459 $\pm$ 0.013  $\chi^2$ /NDF: 89942.2/24

Right Out: 78.746 $\pm$ 0.016  $\chi^2$ /NDF: 1553331.4/28

Left In: 81.014 $\pm$ 0.014  $\chi^2$ /NDF: 72250.2/22

Left: 80.727 $\pm$ 0.010  $\chi^2$ /NDF: 163039.2/47

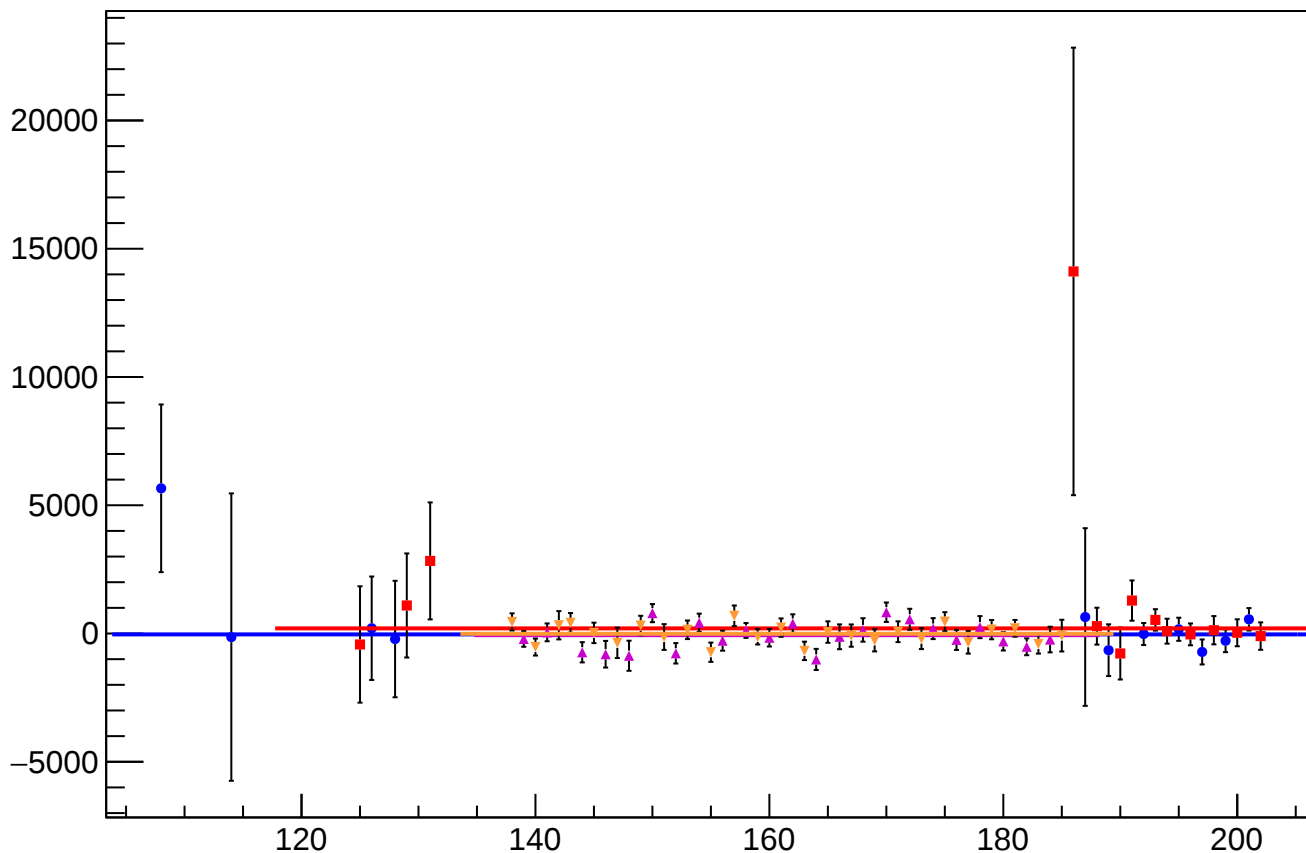
Right: 78.133 $\pm$ 0.011  $\chi^2$ /NDF: 2439411.4/52

In: 79.563 $\pm$ 0.011  $\chi^2$ /NDF: 982577.6/46

Out: 79.744 $\pm$ 0.010  $\chi^2$ /NDF: 1650240.9/53

All: 79.657 $\pm$ 0.007  $\chi^2$ /NDF: 2632971.3/100

asym\_sam1\_correction\_mean vs Slug, Sign Corrected



Right In:  $-34.168 \pm 194.494$   $\chi^2/\text{NDF}: 7.7/10$

Left Out:  $-10.486 \pm 78.391$   $\chi^2/\text{NDF}: 22.5/24$

Right Out:  $200.023 \pm 179.462$   $\chi^2/\text{NDF}: 8.4/12$

Left In:  $-64.591 \pm 80.047$   $\chi^2/\text{NDF}: 37.4/22$

Left:  $-36.973 \pm 56.007$   $\chi^2/\text{NDF}: 60.2/47$

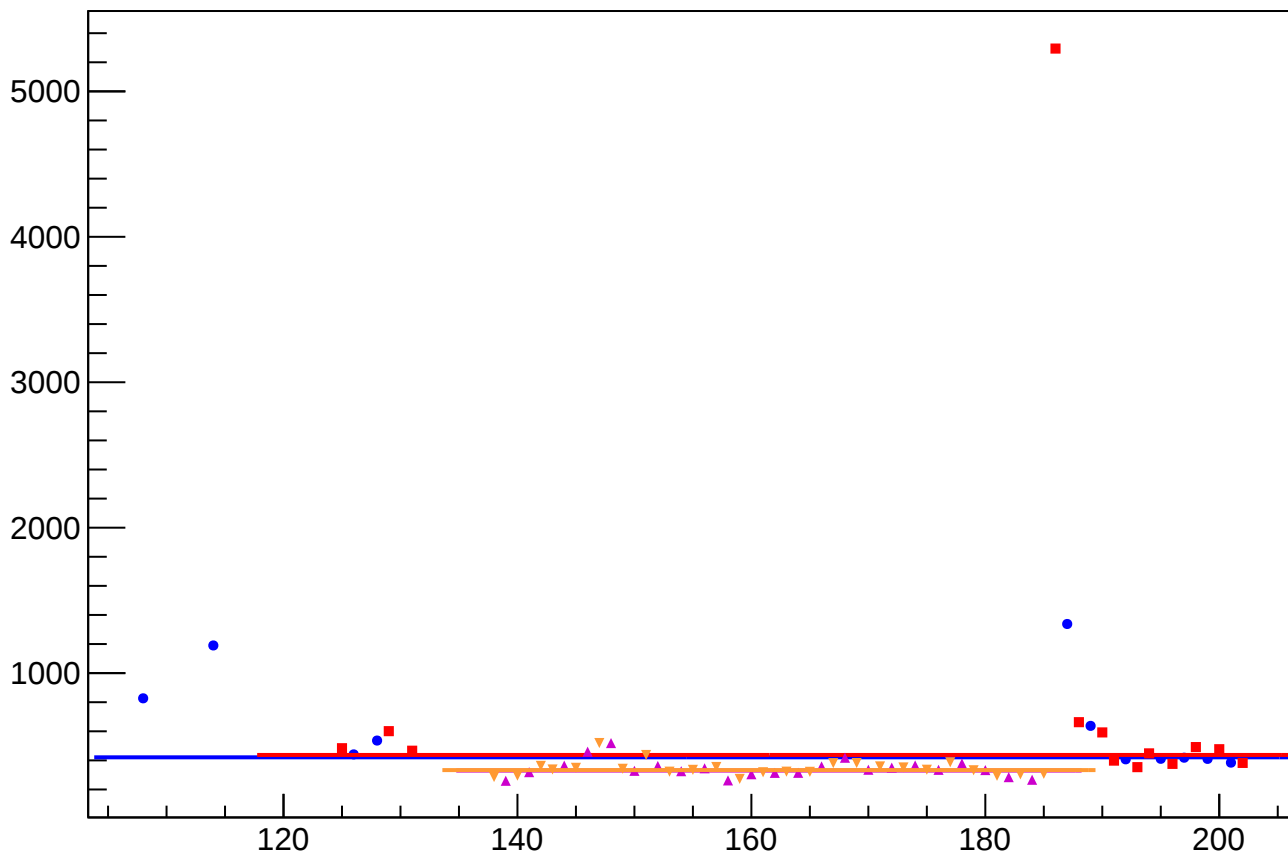
Right:  $92.325 \pm 131.893$   $\chi^2/\text{NDF}: 16.9/23$

In:  $-60.184 \pm 74.023$   $\chi^2/\text{NDF}: 45.2/33$

Out:  $23.244 \pm 71.837$   $\chi^2/\text{NDF}: 32.1/37$

All:  $-17.220 \pm 51.552$   $\chi^2/\text{NDF}: 77.9/71$

# asym\_sam1\_correction\_rms vs Slug, Sign Corrected



Right In: 421.071+/-0.138     $\chi^2/\text{NDF}$ : 324105.2/10

Left Out: 333.233+/-0.055     $\chi^2/\text{NDF}$ : 592122.2/24

Right Out: 437.380+/-0.127     $\chi^2/\text{NDF}$ : 1056649.2/12

Left In: 329.985+/-0.057     $\chi^2/\text{NDF}$ : 795969.0/22

Left: 331.643+/-0.040     $\chi^2/\text{NDF}$ : 1389771.8/47

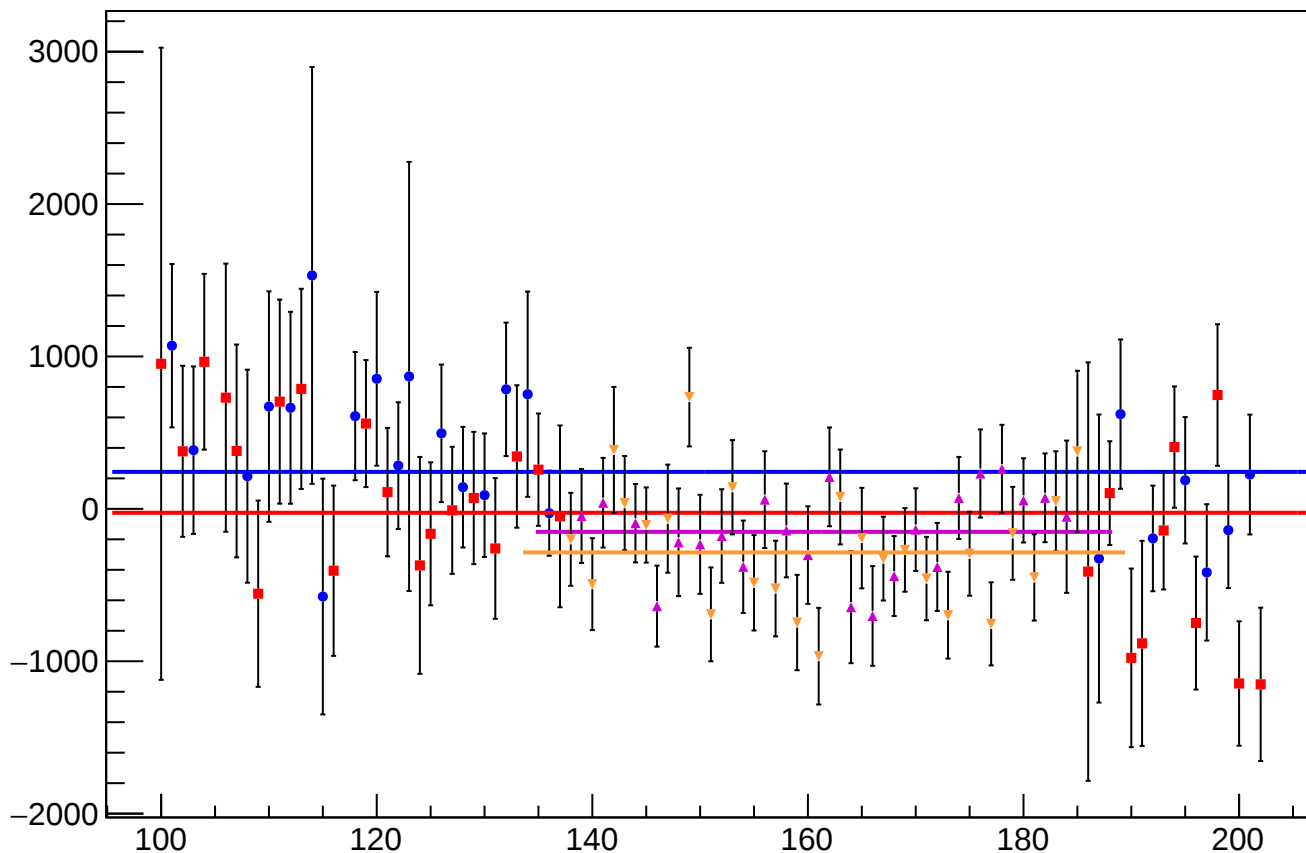
Right: 429.880+/-0.093     $\chi^2/\text{NDF}$ : 1388351.0/23

In: 343.179+/-0.052     $\chi^2/\text{NDF}$ : 1495182.6/33

Out: 349.921+/-0.051     $\chi^2/\text{NDF}$ : 2214410.5/37

All: 346.651+/-0.036     $\chi^2/\text{NDF}$ : 3718136.5/71

# reg\_asym\_sam2\_mean vs Slug, Sign Corrected



Right In: 242.648 $\pm$ 97.225  $\chi^2$ /NDF: 16.7/23

Left Out: -286.030 $\pm$ 61.095  $\chi^2$ /NDF:36.6/24

Right Out: -25.624 $\pm$ 92.959  $\chi^2$ /NDF: 36.4/28

Left In: -150.920 $\pm$ 62.818  $\chi^2$ /NDF:18.7/22

Left: -220.353 $\pm$ 43.797  $\chi^2$ /NDF: 57.6/47

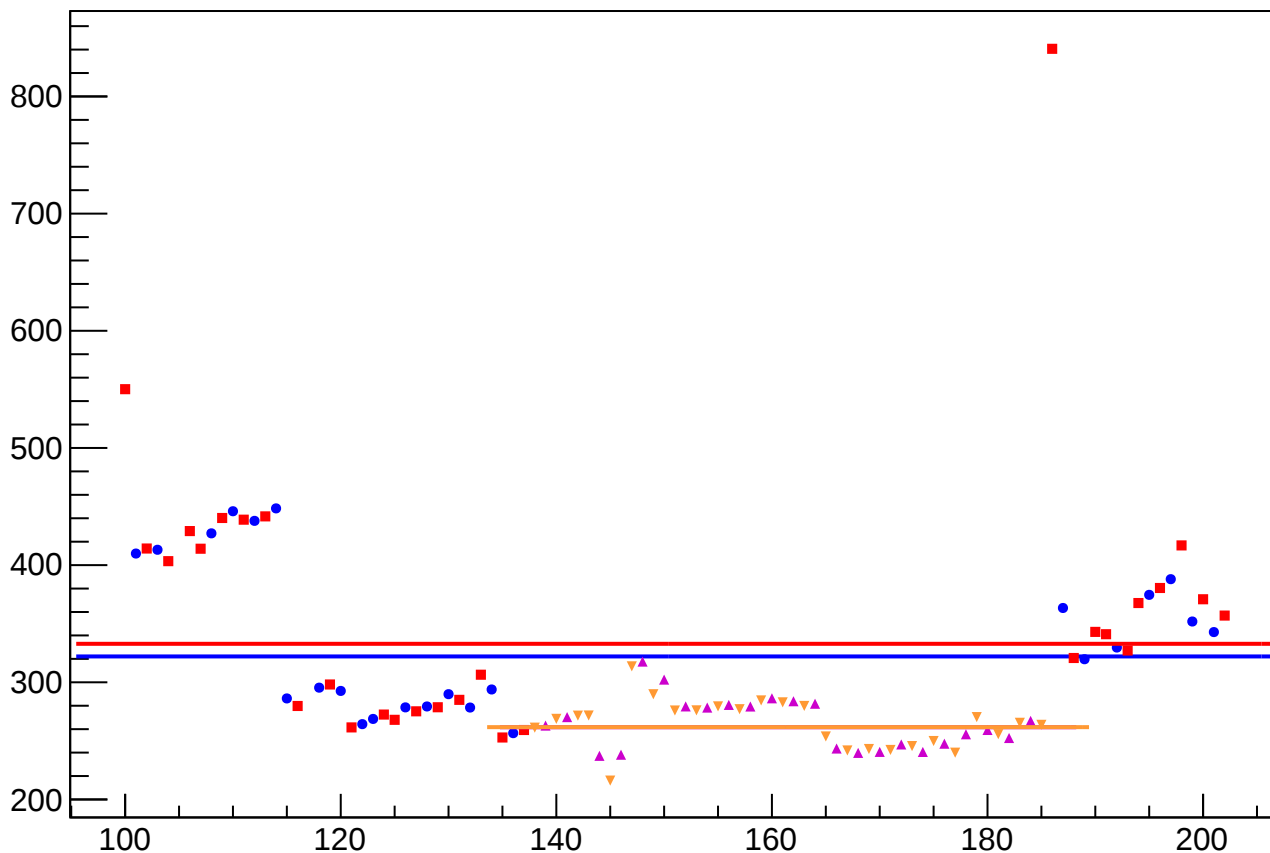
Right: 102.497 $\pm$ 67.189  $\chi^2$ /NDF: 57.1/52

In: -35.010 $\pm$ 52.763  $\chi^2$ /NDF:46.9/46

Out: -207.479 $\pm$ 51.055  $\chi^2$ /NDF:78.5/53

All: -124.081 $\pm$ 36.690  $\chi^2$ /NDF: 130.9/100

# reg\_asym\_sam2\_rms vs Slug, Sign Corrected



Right In: 322.069+/-0.069  $\chi^2/\text{NDF}$ : 637503.7/23

Left Out: 261.722+/-0.043  $\chi^2/\text{NDF}$ : 233222.6/24

Right Out: 332.848+/-0.066  $\chi^2/\text{NDF}$ : 1079217.4/28

Left In: 261.637+/-0.044  $\chi^2/\text{NDF}$ : 228241.3/22

Left: 261.680+/-0.031  $\chi^2/\text{NDF}$ : 461465.7/47

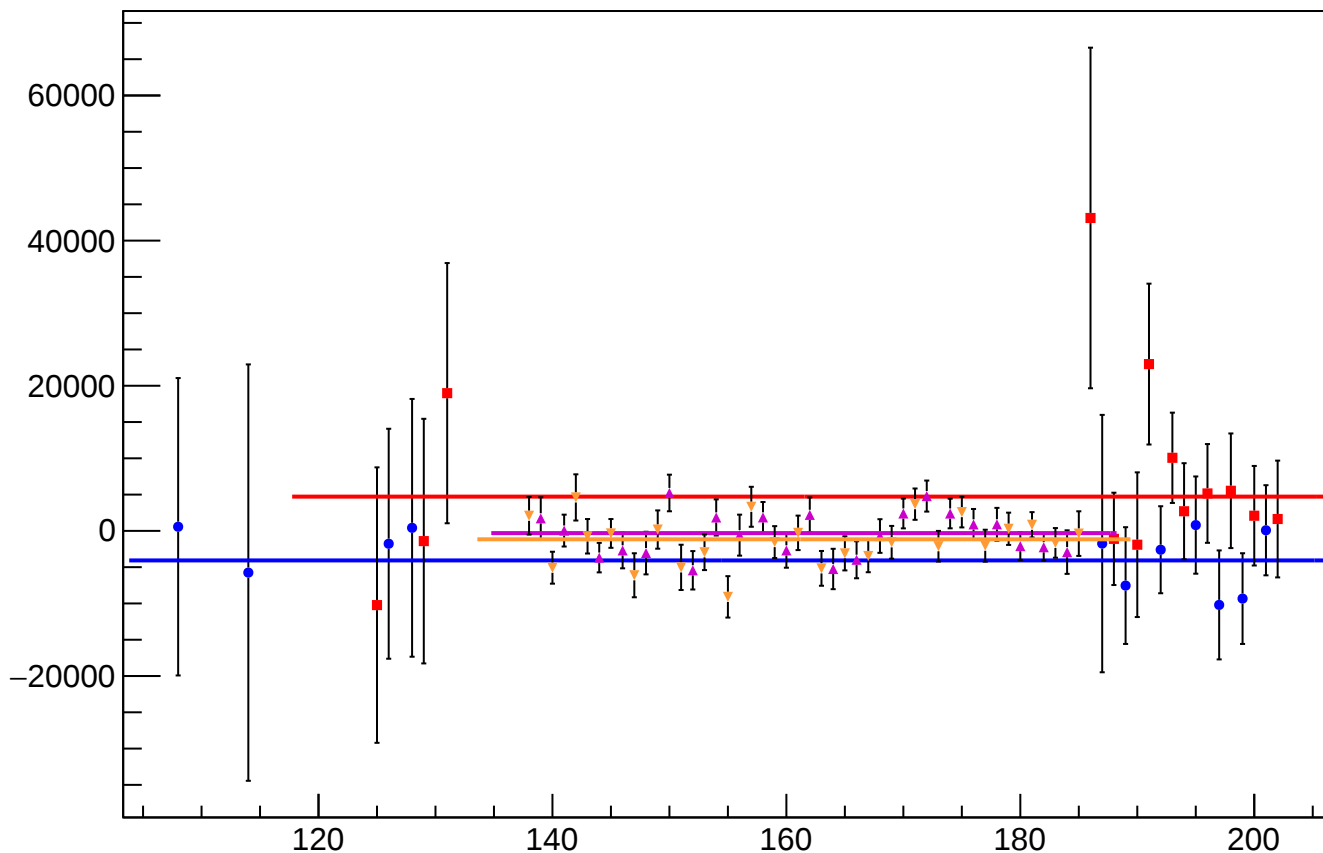
Right: 327.700+/-0.048  $\chi^2/\text{NDF}$ : 1729562.7/52

In: 279.435+/-0.037  $\chi^2/\text{NDF}$ : 1410887.3/46

Out: 283.177+/-0.036  $\chi^2/\text{NDF}$ : 2130121.3/53

All: 281.367+/-0.026  $\chi^2/\text{NDF}$ : 3546203.9/100

asym\_sam2\_correction\_mean vs Slug, Sign Corrected



Right In:  $-4070.375 \pm 2592.925$   $\chi^2/\text{NDF}: 2.8/10$

Left Out:  $-1161.443 \pm 469.036$   $\chi^2/\text{NDF}: 38.8/24$

Right Out:  $4722.456 \pm 2376.379$   $\chi^2/\text{NDF}: 9.2/12$

Left In:  $-304.366 \pm 483.778$   $\chi^2/\text{NDF}: 35.4/22$

Left:  $-746.162 \pm 336.750$   $\chi^2/\text{NDF}: 75.7/47$

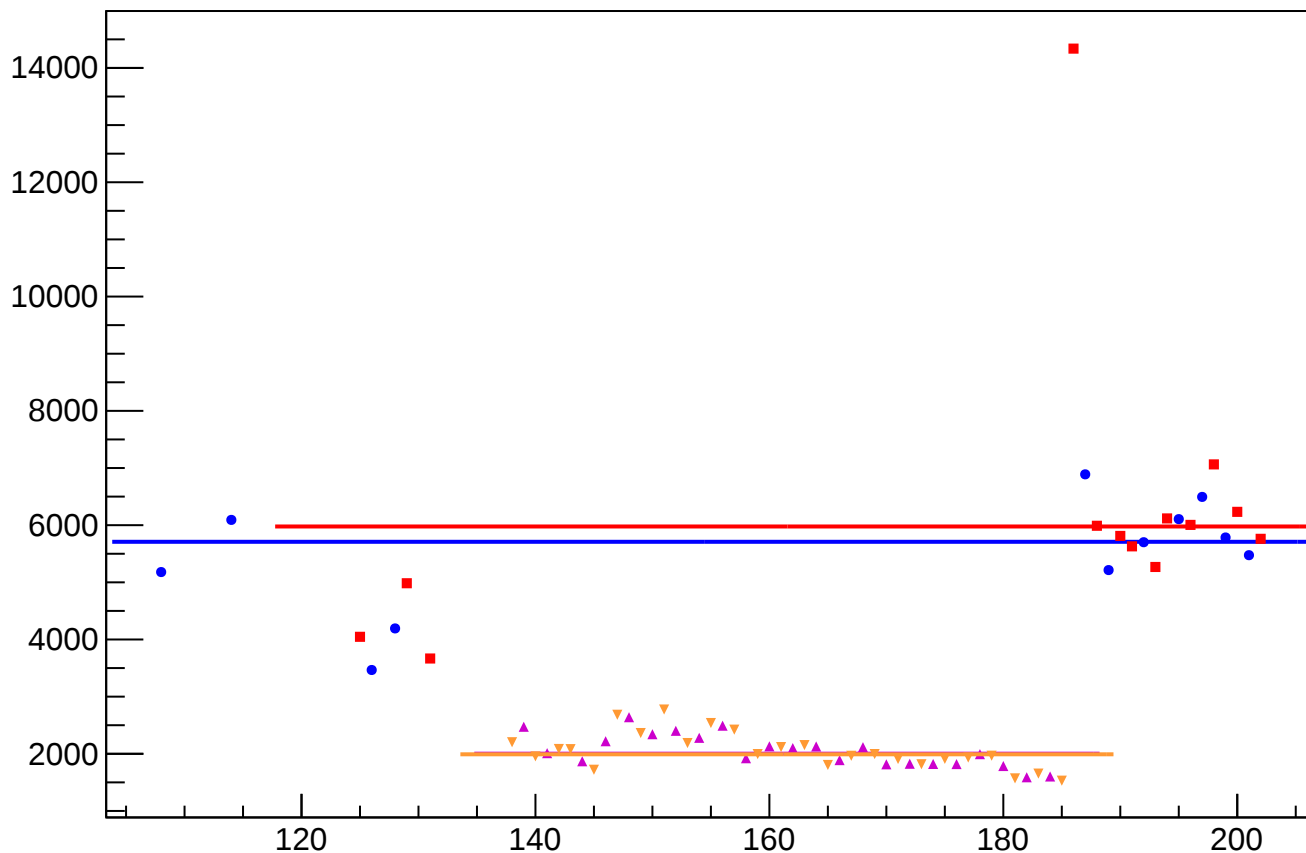
Right:  $708.477 \pm 1751.916$   $\chi^2/\text{NDF}: 18.2/23$

In:  $-431.053 \pm 475.572$   $\chi^2/\text{NDF}: 40.2/33$

Out:  $-940.820 \pm 460.159$   $\chi^2/\text{NDF}: 53.9/37$

All:  $-694.331 \pm 330.696$   $\chi^2/\text{NDF}: 94.6/71$

# asym\_sam2\_correction\_rms vs Slug, Sign Corrected



Right In: 5709.278+/-1.833  $\chi^2/\text{NDF}$ : 104779.5/10

Left Out: 1991.105+/-0.332  $\chi^2/\text{NDF}$ : 726310.6/24

Right Out: 5977.175+/-1.680  $\chi^2/\text{NDF}$ : 386134.5/12

Left In: 2002.154+/-0.342  $\chi^2/\text{NDF}$ : 585947.4/22

Left: 1996.458+/-0.238  $\chi^2/\text{NDF}$ : 1312795.7/47

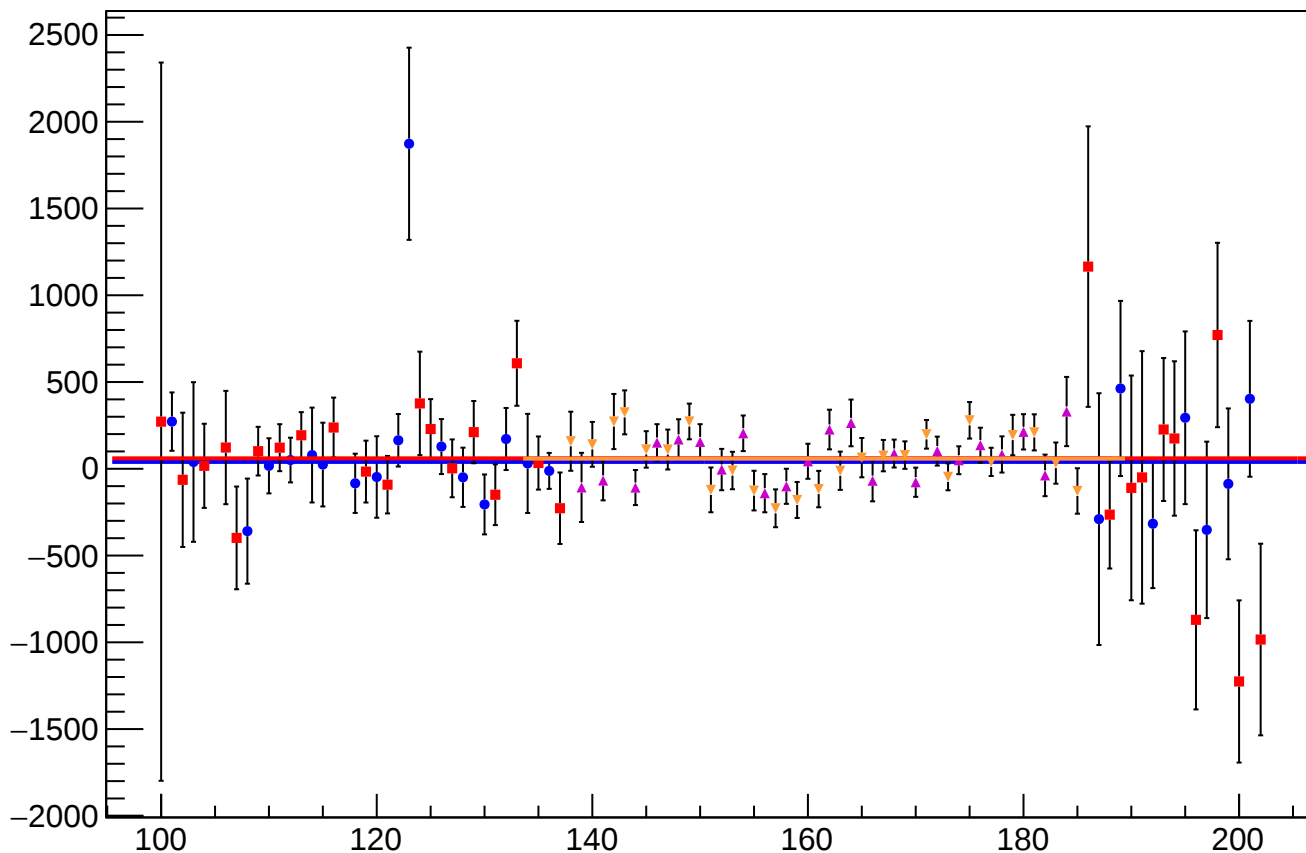
Right: 5854.878+/-1.239  $\chi^2/\text{NDF}$ : 502517.2/23

In: 2126.860+/-0.336  $\chi^2/\text{NDF}$ : 4641329.9/33

Out: 2140.566+/-0.325  $\chi^2/\text{NDF}$ : 6528597.2/37

All: 2133.939+/-0.234  $\chi^2/\text{NDF}$ : 11170785.1/71

# reg\_asym\_sam3\_mean vs Slug, Sign Corrected



Right In: 39.711 $\pm$ 42.390  $\chi^2$ /NDF: 22.8/23

Left Out: 58.983 $\pm$ 21.137  $\chi^2$ /NDF:46.9/24

Right Out: 60.225 $\pm$ 41.601  $\chi^2$ /NDF: 36.8/28

Left In: 59.235 $\pm$ 21.921  $\chi^2$ /NDF:29.4/22

Left: 59.104 $\pm$ 15.216  $\chi^2$ /NDF: 76.3/47

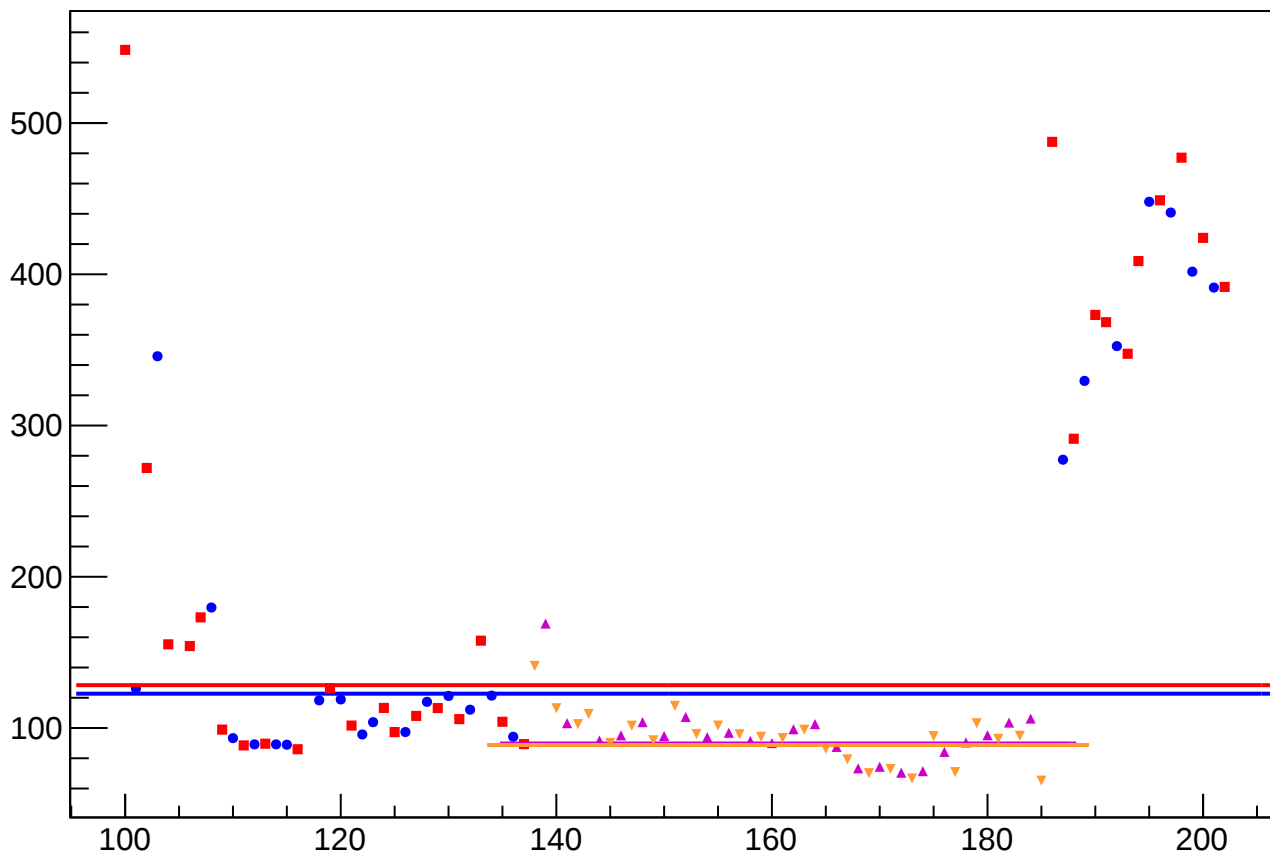
Right: 50.161 $\pm$ 29.691  $\chi^2$ /NDF: 59.7/52

In: 55.115 $\pm$ 19.472  $\chi^2$ /NDF:52.4/46

Out: 59.238 $\pm$ 18.844  $\chi^2$ /NDF:83.7/53

All: 57.244 $\pm$ 13.541  $\chi^2$ /NDF: 136.1/100

# reg\_asym\_sam3\_rms vs Slug, Sign Corrected



Right In: 122.704 $\pm$ 0.030  $\chi^2$ /NDF: 5465730.1/23

Left Out: 88.748 $\pm$ 0.015  $\chi^2$ /NDF:1079338.8/24

Right Out: 128.320 $\pm$ 0.029  $\chi^2$ /NDF: 7039929.7/28

Left In: 89.766 $\pm$ 0.016  $\chi^2$ /NDF:885818.0/22

Left: 89.238 $\pm$ 0.011  $\chi^2$ /NDF: 1967390.0/47

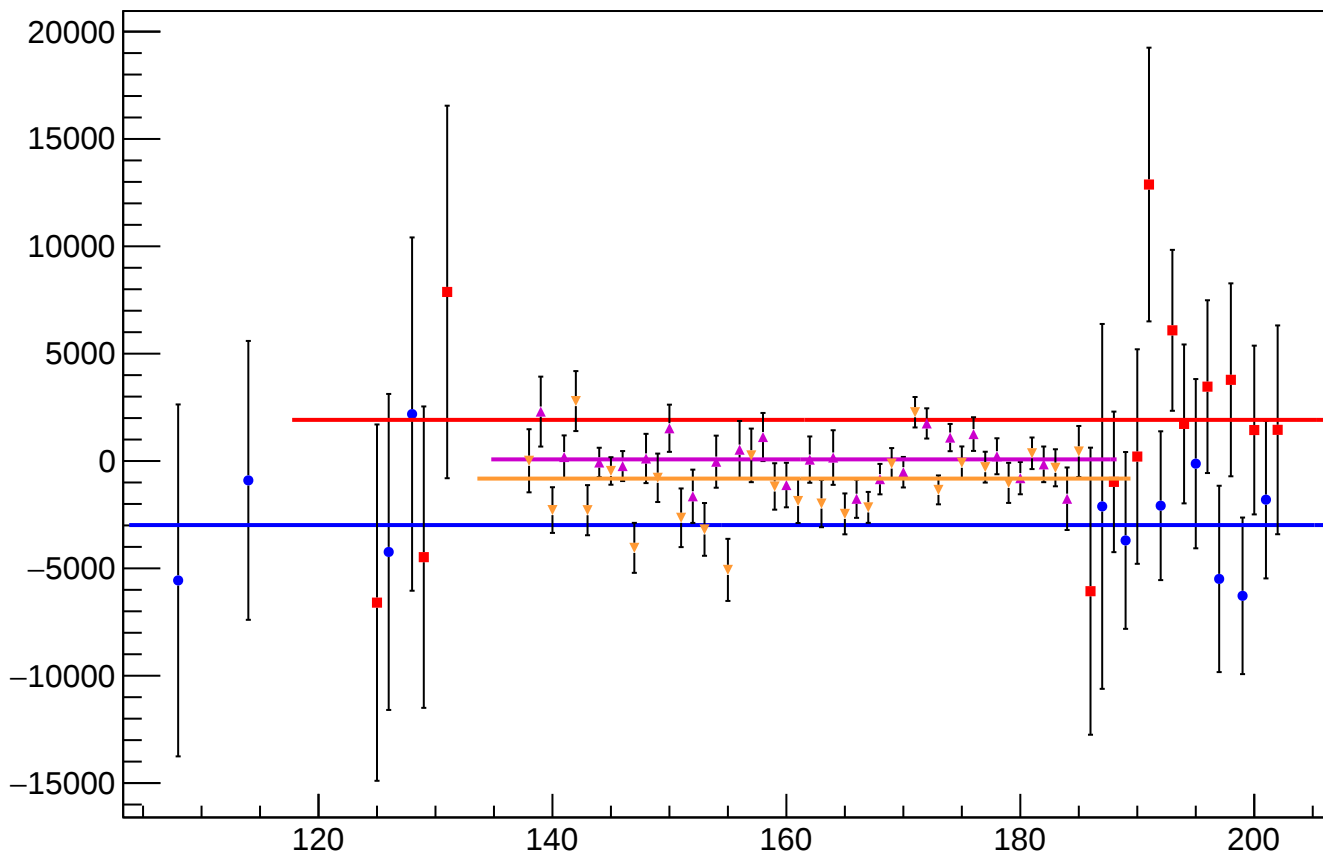
Right: 125.565 $\pm$ 0.021  $\chi^2$ /NDF: 12523540.3/52

In: 96.716 $\pm$ 0.014  $\chi^2$ /NDF:7304333.6/46

Out: 96.868 $\pm$ 0.013  $\chi^2$ /NDF:9557603.2/53

All: 96.794 $\pm$ 0.010  $\chi^2$ /NDF: 16861999.9/100

asym\_sam3\_correction\_mean vs Slug, Sign Corrected



Right In:  $-2983.243 \pm 1421.393$   $\chi^2/\text{NDF}: 2.5/10$

Left Out:  $-818.877 \pm 184.464$   $\chi^2/\text{NDF}: 68.2/24$

Right Out:  $1916.047 \pm 1300.733$   $\chi^2/\text{NDF}: 9.2/12$

Left In:  $76.204 \pm 186.651$   $\chi^2/\text{NDF}: 28.3/22$

Left:  $-376.610 \pm 131.202$   $\chi^2/\text{NDF}: 108.1/47$

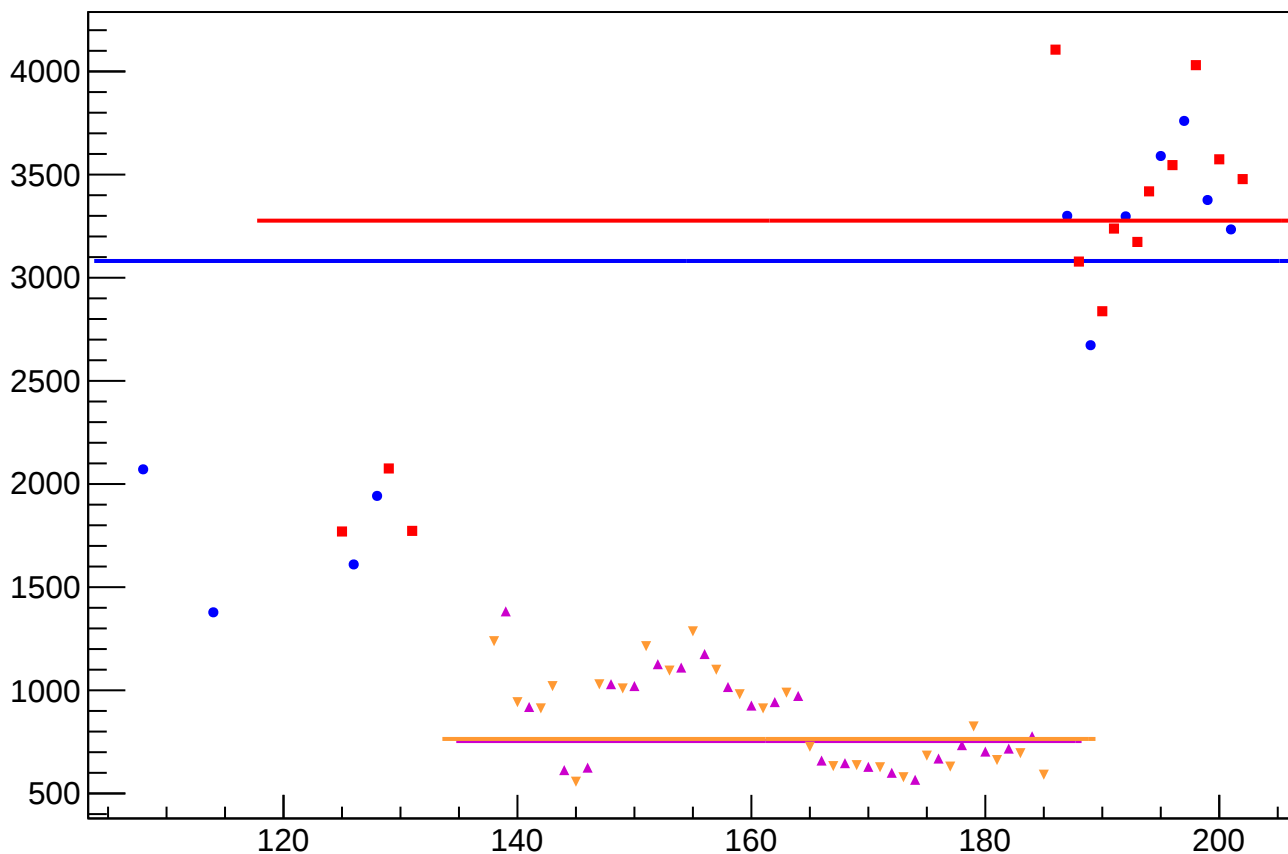
Right:  $-316.861 \pm 959.584$   $\chi^2/\text{NDF}: 18.2/23$

In:  $24.342 \pm 185.062$   $\chi^2/\text{NDF}: 35.3/33$

Out:  $-764.957 \pm 182.637$   $\chi^2/\text{NDF}: 81.8/37$

All:  $-375.514 \pm 129.993$   $\chi^2/\text{NDF}: 126.3/71$

asym\_sam3\_correction\_rms vs Slug, Sign Corrected



Right In: 3081.230+/-1.005  $\chi^2/\text{NDF}$ : 413839.3/10

Left Out: 764.280+/-0.130  $\chi^2/\text{NDF}$ : 2315985.8/24

Right Out: 3276.752+/-0.920  $\chi^2/\text{NDF}$ : 322825.4/12

Left In: 754.027+/-0.132  $\chi^2/\text{NDF}$ : 2013386.7/22

Left: 759.214+/-0.093  $\chi^2/\text{NDF}$ : 4332425.4/47

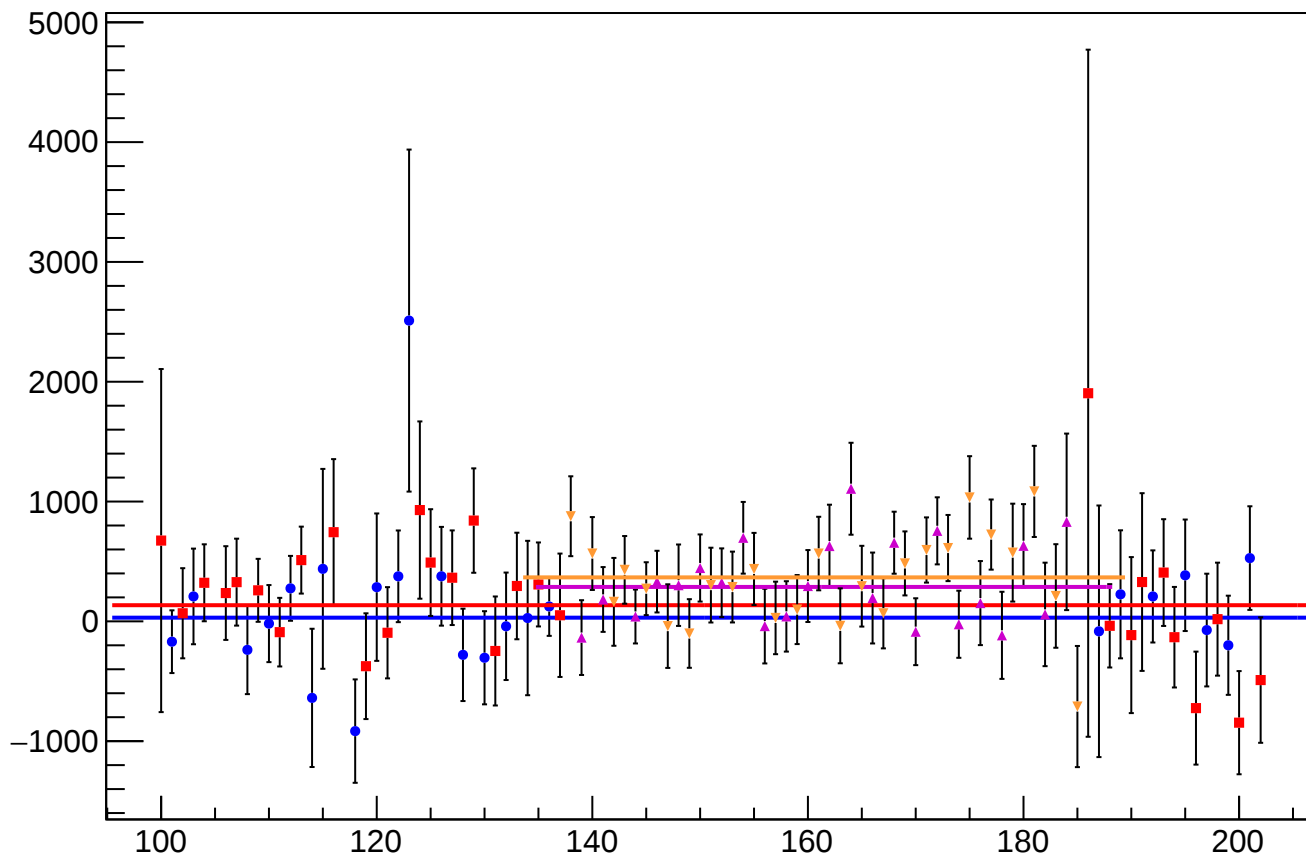
Right: 3187.641+/-0.679  $\chi^2/\text{NDF}$ : 757260.6/23

In: 793.476+/-0.131  $\chi^2/\text{NDF}$ : 7697651.9/33

Out: 813.813+/-0.129  $\chi^2/\text{NDF}$ : 9953711.6/37

All: 803.779+/-0.092  $\chi^2/\text{NDF}$ : 17663599.4/73

# reg\_asym\_sam4\_mean vs Slug, Sign Corrected



Right In: 30.712 $\pm$ 82.767  $\chi^2$ /NDF: 17.4/23

Left Out: 367.028 $\pm$ 61.943  $\chi^2$ /NDF:28.2/24

Right Out: 134.733 $\pm$ 77.323  $\chi^2$ /NDF: 23.7/28

Left In: 287.246 $\pm$ 64.141  $\chi^2$ /NDF:23.9/22

Left: 328.527 $\pm$ 44.557  $\chi^2$ /NDF: 52.9/47

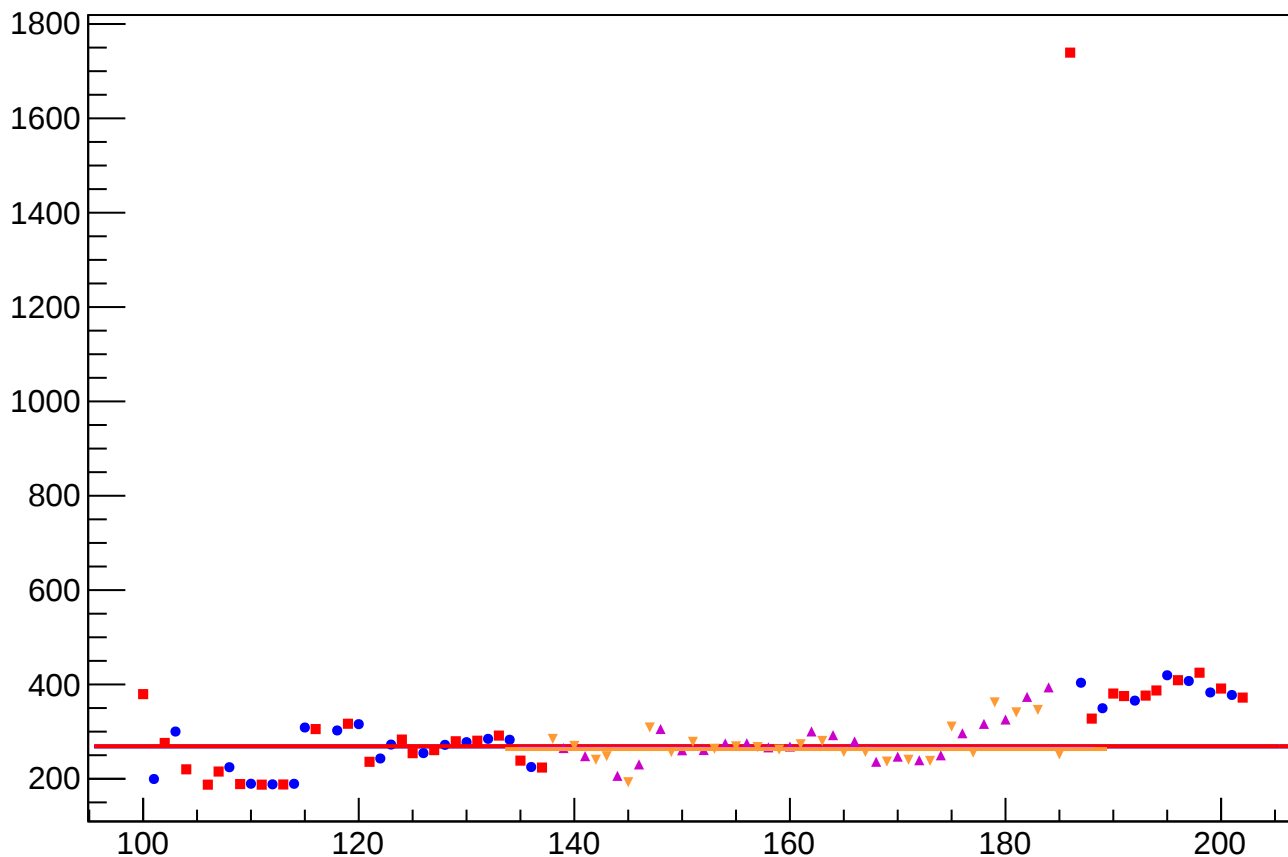
Right: 86.256 $\pm$ 56.502  $\chi^2$ /NDF: 42.0/52

In: 190.990 $\pm$ 50.699  $\chi^2$ /NDF:47.3/46

Out: 276.224 $\pm$ 48.344  $\chi^2$ /NDF:57.4/53

All: 235.633 $\pm$ 34.987  $\chi^2$ /NDF: 106.2/100

# reg\_asym\_sam4\_rms vs Slug, Sign Corrected



Right In: 268.547 $\pm$ 0.059  $\chi^2$ /NDF: 1493398.3/23

Left Out: 263.103 $\pm$ 0.044  $\chi^2$ /NDF: 642226.0/24

Right Out: 269.130 $\pm$ 0.055  $\chi^2$ /NDF: 2384560.9/28

Left In: 264.923 $\pm$ 0.045  $\chi^2$ /NDF: 609024.7/22

Left: 263.981 $\pm$ 0.032  $\chi^2$ /NDF: 1252084.1/47

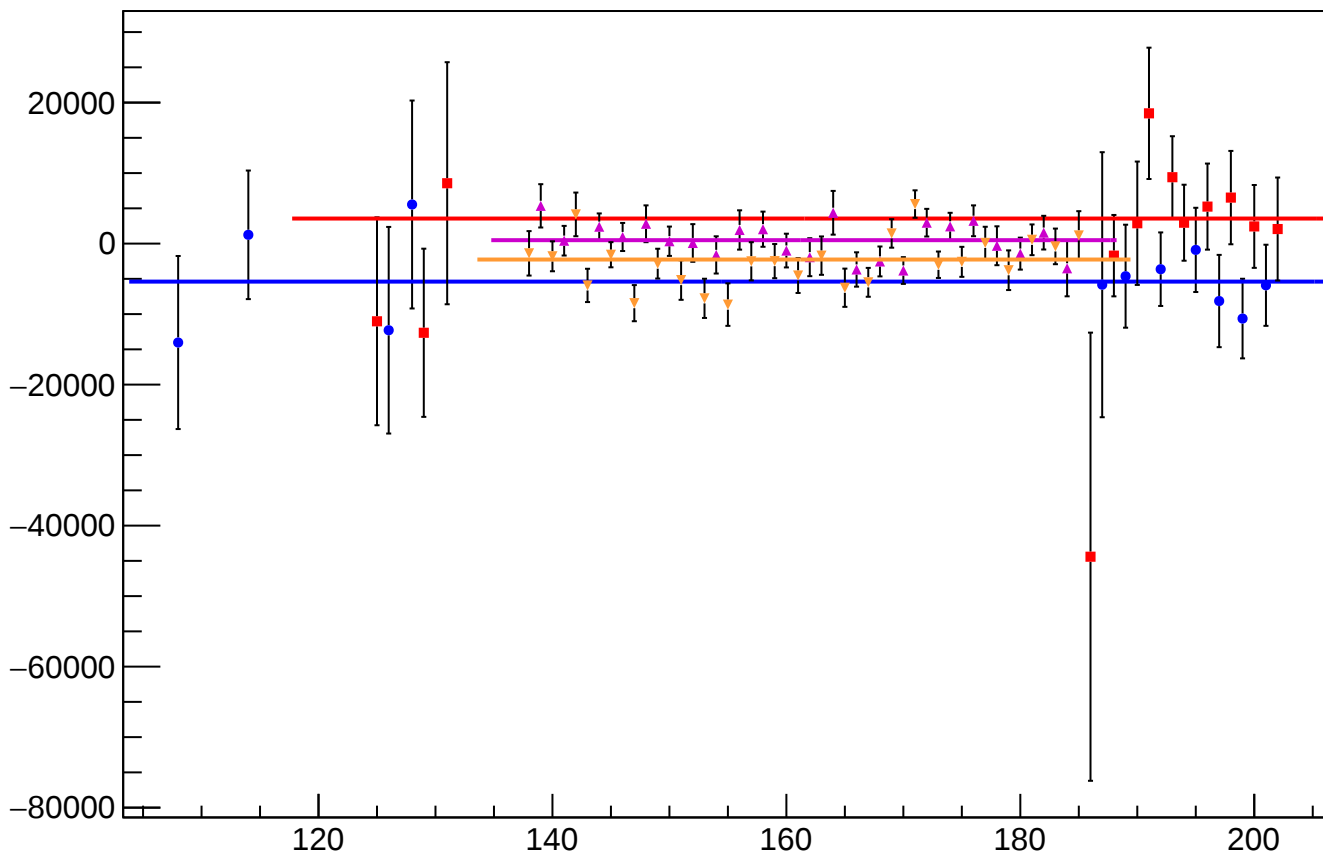
Right: 268.859 $\pm$ 0.040  $\chi^2$ /NDF: 3878012.2/52

In: 266.283 $\pm$ 0.036  $\chi^2$ /NDF: 2104818.9/46

Out: 265.459 $\pm$ 0.034  $\chi^2$ /NDF: 3034189.3/53

All: 265.851 $\pm$ 0.025  $\chi^2$ /NDF: 5139284.8/100

asym\_sam4\_correction\_mean vs Slug, Sign Corrected



Right In: -5391.327 $\pm$ 2240.417  $\chi^2$ /NDF: 3.5/10

Left Out: -2260.196 $\pm$ 475.336  $\chi^2$ /NDF:52.3/24

Right Out: 3553.361 $\pm$ 2076.203  $\chi^2$ /NDF: 10.0/12

Left In: 485.590 $\pm$ 487.465  $\chi^2$ /NDF:24.8/22

Left: -921.890 $\pm$ 340.321  $\chi^2$ /NDF: 93.4/47

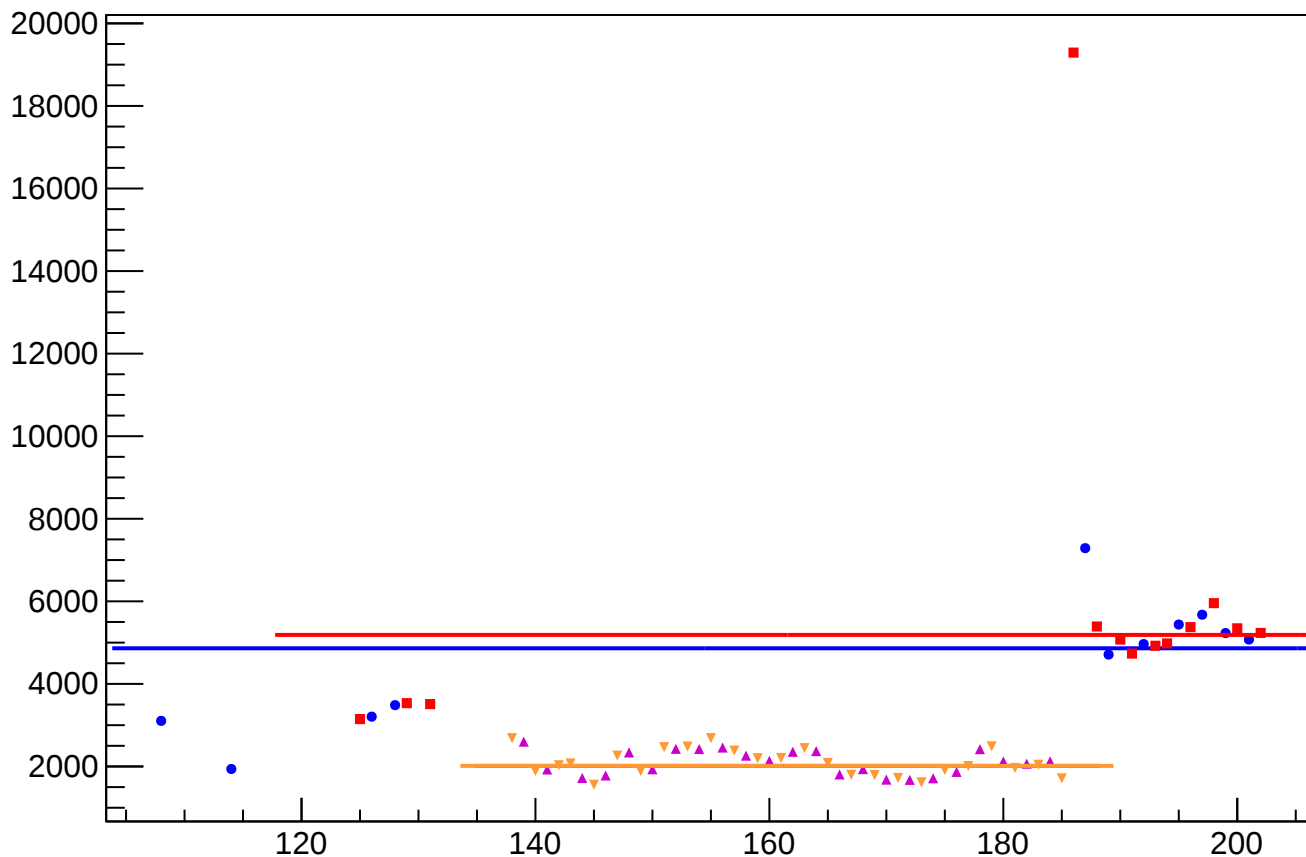
Right: -579.199 $\pm$ 1522.845  $\chi^2$ /NDF: 22.1/23

In: 219.951 $\pm$ 476.321  $\chi^2$ /NDF:34.9/33

Out: -1970.652 $\pm$ 463.347  $\chi^2$ /NDF:69.8/37

All: -905.590 $\pm$ 332.128  $\chi^2$ /NDF: 115.5/71

# asym\_sam4\_correction\_rms vs Slug, Sign Corrected



Right In: 4862.432+/-1.584  $\chi^2/\text{NDF}$ : 385259.1/10

Left Out: 2014.106+/-0.336  $\chi^2/\text{NDF}$ : 835656.9/24

Right Out: 5186.577+/-1.468  $\chi^2/\text{NDF}$ : 534664.1/12

Left In: 2013.245+/-0.345  $\chi^2/\text{NDF}$ : 662077.8/22

Left: 2013.686+/-0.241  $\chi^2/\text{NDF}$ : 1497737.9/47

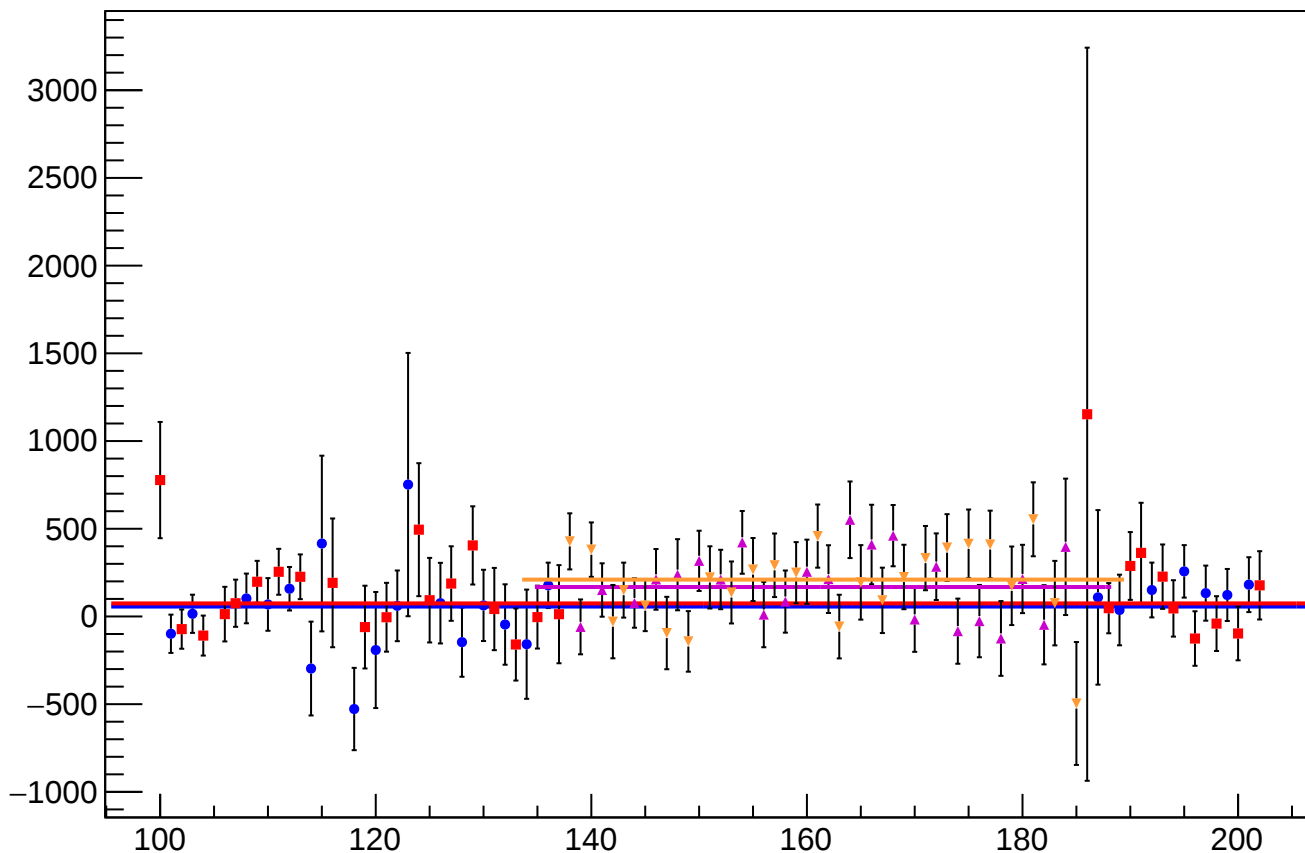
Right: 5036.818+/-1.077  $\chi^2/\text{NDF}$ : 942446.0/23

In: 2142.030+/-0.337  $\chi^2/\text{NDF}$ : 4135686.3/33

Out: 2172.111+/-0.328  $\chi^2/\text{NDF}$ : 5807411.9/37

All: 2157.486+/-0.235  $\chi^2/\text{NDF}$ : 9947196.7/71

# reg\_asym\_sam5\_mean vs Slug, Sign Corrected



Right In: 56.488 $\pm$ 35.389  $\chi^2$ /NDF: 18.7/23

Left Out: 210.086 $\pm$ 37.093  $\chi^2$ /NDF:27.5/24

Right Out: 74.428 $\pm$ 32.204  $\chi^2$ /NDF: 26.2/28

Left In: 167.822 $\pm$ 38.718  $\chi^2$ /NDF:21.1/22

Left: 189.859 $\pm$ 26.785  $\chi^2$ /NDF: 49.3/47

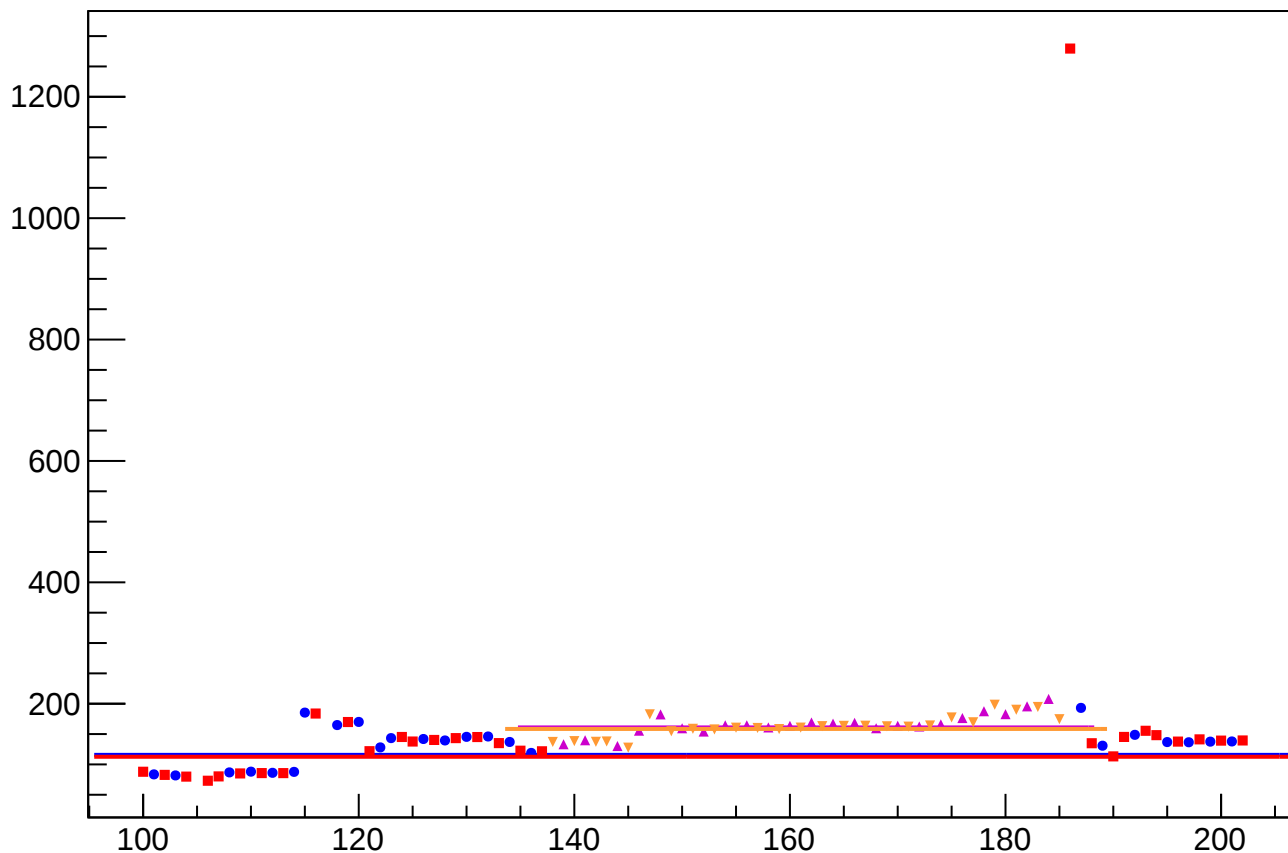
Right: 66.302 $\pm$ 23.818  $\chi^2$ /NDF: 45.0/52

In: 107.165 $\pm$ 26.122  $\chi^2$ /NDF:44.3/46

Out: 132.732 $\pm$ 24.318  $\chi^2$ /NDF:61.4/53

All: 120.862 $\pm$ 17.799  $\chi^2$ /NDF: 106.2/100

# reg\_asym\_sam5\_rms vs Slug, Sign Corrected



Right In: 115.729 $\pm$ 0.025  $\chi^2$ /NDF: 1294327.9/23

Left Out: 158.440 $\pm$ 0.026  $\chi^2$ /NDF: 434300.9/24

Right Out: 112.608 $\pm$ 0.023  $\chi^2$ /NDF: 2342079.2/28

Left In: 160.947 $\pm$ 0.027  $\chi^2$ /NDF: 379713.4/22

Left: 159.640 $\pm$ 0.019  $\chi^2$ /NDF: 818385.9/47

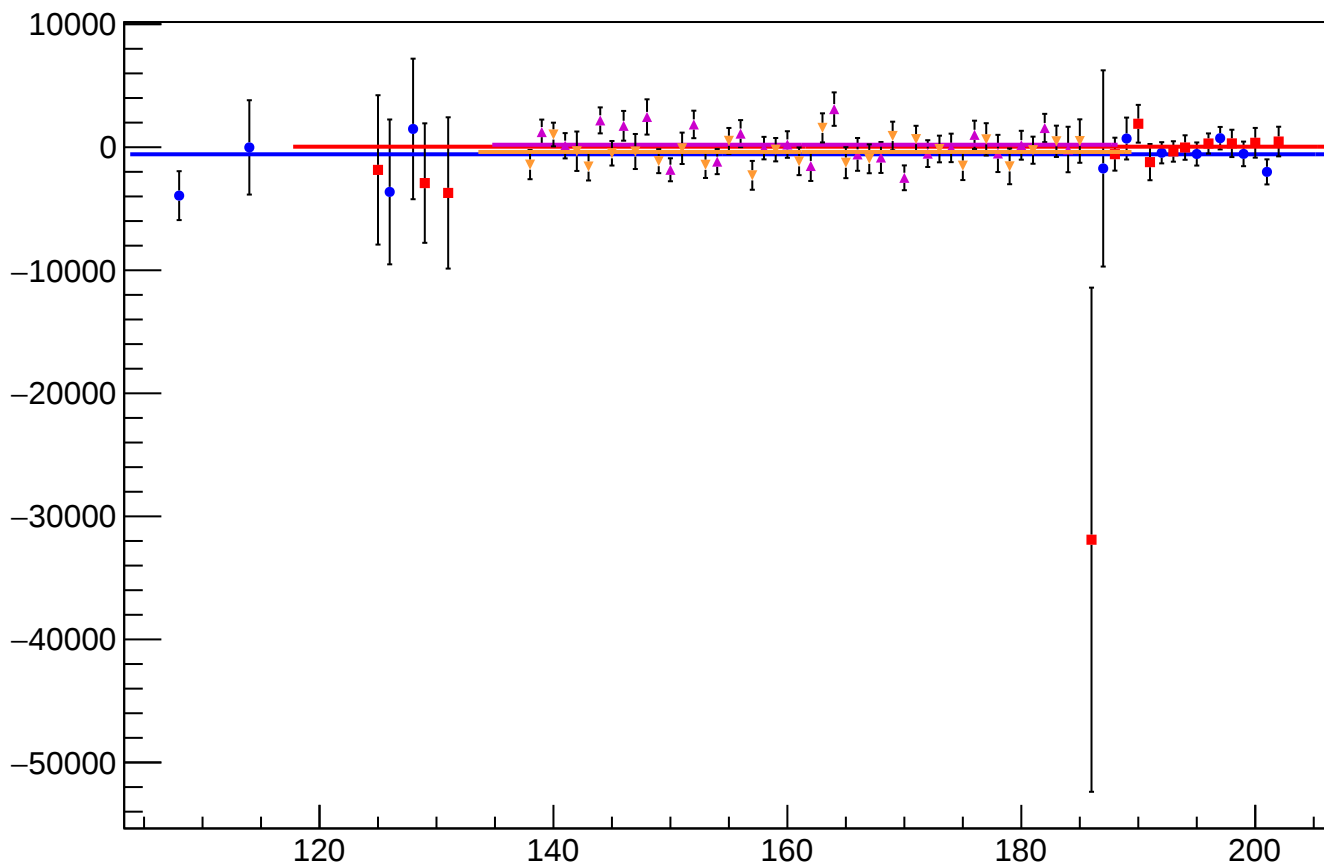
Right: 114.022 $\pm$ 0.017  $\chi^2$ /NDF: 3644912.9/52

In: 136.311 $\pm$ 0.018  $\chi^2$ /NDF: 3160302.1/46

Out: 132.306 $\pm$ 0.017  $\chi^2$ /NDF: 4517424.9/53

All: 134.166 $\pm$ 0.013  $\chi^2$ /NDF: 7702912.4/100

asym\_sam5\_correction\_mean vs Slug, Sign Corrected



Right In: -573.571+/-395.742  $\chi^2/\text{NDF}$ : 7.9/10

Left Out: -385.018+/-231.833  $\chi^2/\text{NDF}$ :18.1/24

Right Out: 43.154+/-360.870  $\chi^2/\text{NDF}$ : 6.3/12

Left In: 202.234+/-237.460  $\chi^2/\text{NDF}$ :35.5/22

Left: -98.432+/-165.884  $\chi^2/\text{NDF}$ : 56.7/47

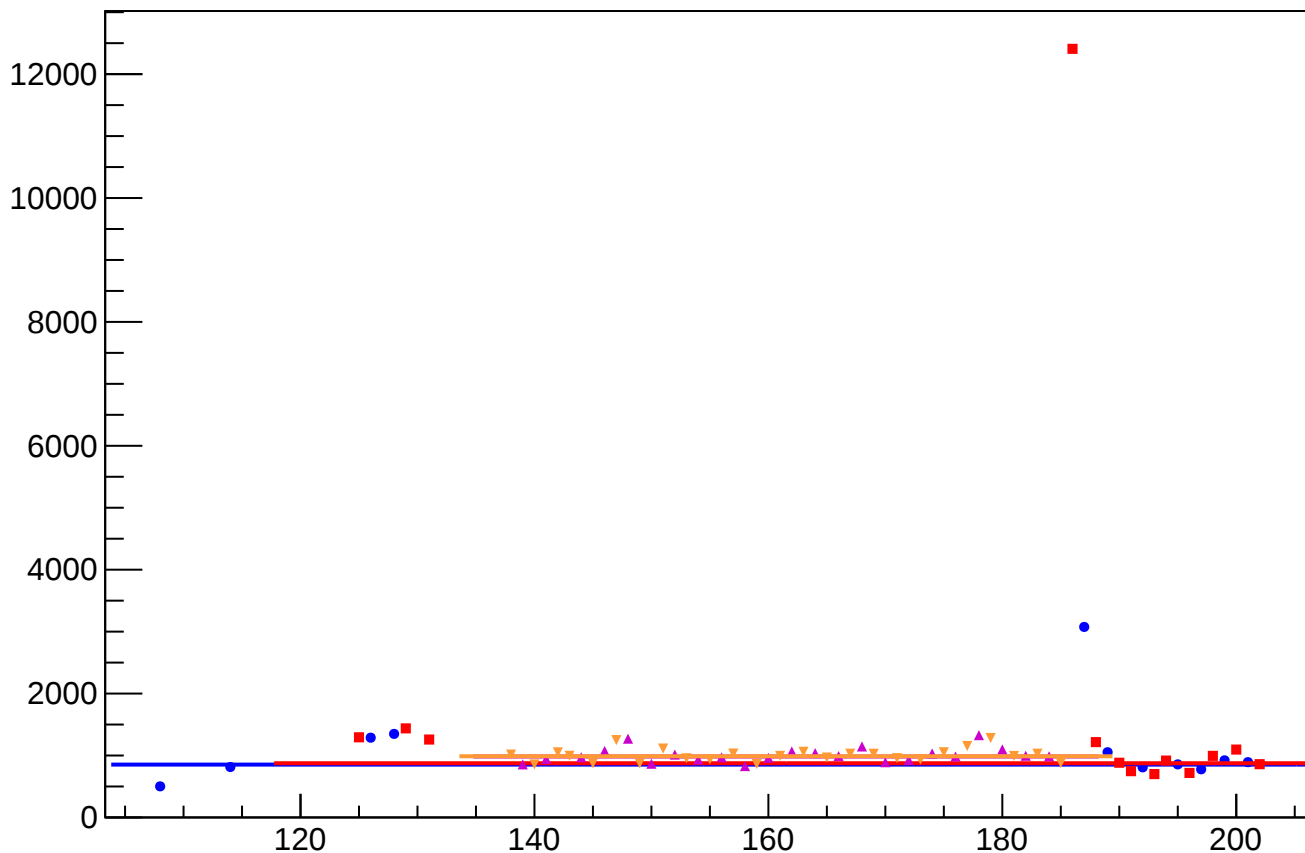
Right: -236.844+/-266.652  $\chi^2/\text{NDF}$ : 15.5/23

In: -3.144+/-203.617  $\chi^2/\text{NDF}$ :46.2/33

Out: -259.931+/-195.051  $\chi^2/\text{NDF}$ :25.3/37

All: -137.052+/-140.853  $\chi^2/\text{NDF}$ : 72.4/71

# asym\_sam5\_correction\_rms vs Slug, Sign Corrected



Right In: 853.297+/-0.280  $\chi^2/\text{NDF}$ : 303140.6/10

Left Out: 987.869+/-0.164  $\chi^2/\text{NDF}$ : 376958.5/24

Right Out: 875.385+/-0.255  $\chi^2/\text{NDF}$ : 1078456.3/12

Left In: 983.893+/-0.168  $\chi^2/\text{NDF}$ : 416265.7/22

Left: 985.929+/-0.117  $\chi^2/\text{NDF}$ : 793511.2/47

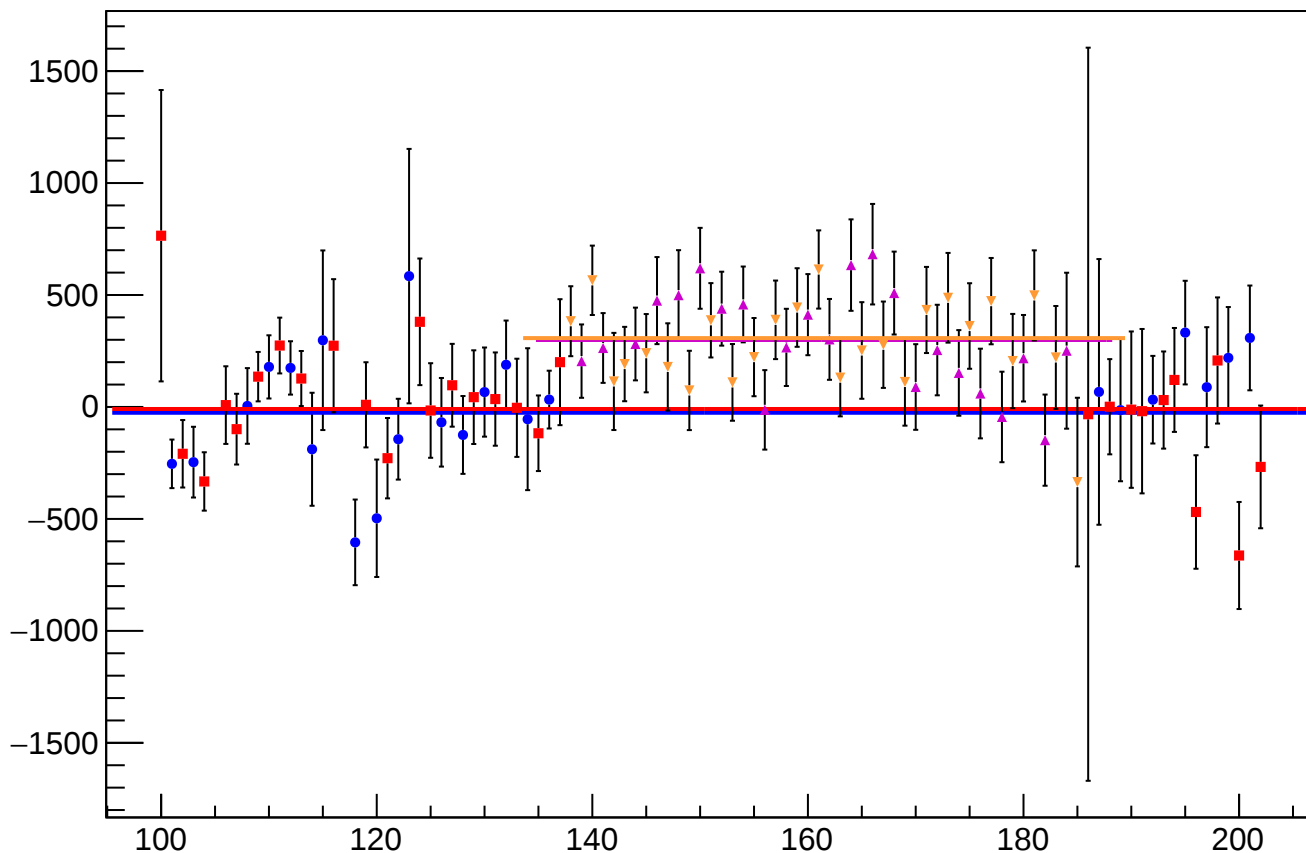
Right: 865.357+/-0.189  $\chi^2/\text{NDF}$ : 1384998.6/23

In: 949.320+/-0.144  $\chi^2/\text{NDF}$ : 879551.4/33

Out: 955.007+/-0.138  $\chi^2/\text{NDF}$ : 1592963.7/37

All: 952.286+/-0.100  $\chi^2/\text{NDF}$ : 2473328.6/71

# reg\_asym\_sam6\_mean vs Slug, Sign Corrected



Right In:  $-25.895 \pm 38.717$   $\chi^2/\text{NDF}$ : 34.3/23

Left Out:  $307.487 \pm 37.278$   $\chi^2/\text{NDF}$ : 20.7/24

Right Out:  $-9.056 \pm 35.879$   $\chi^2/\text{NDF}$ : 36.1/28

Left In:  $299.192 \pm 39.009$   $\chi^2/\text{NDF}$ : 28.5/22

Left:  $303.528 \pm 26.951$   $\chi^2/\text{NDF}$ : 49.3/47

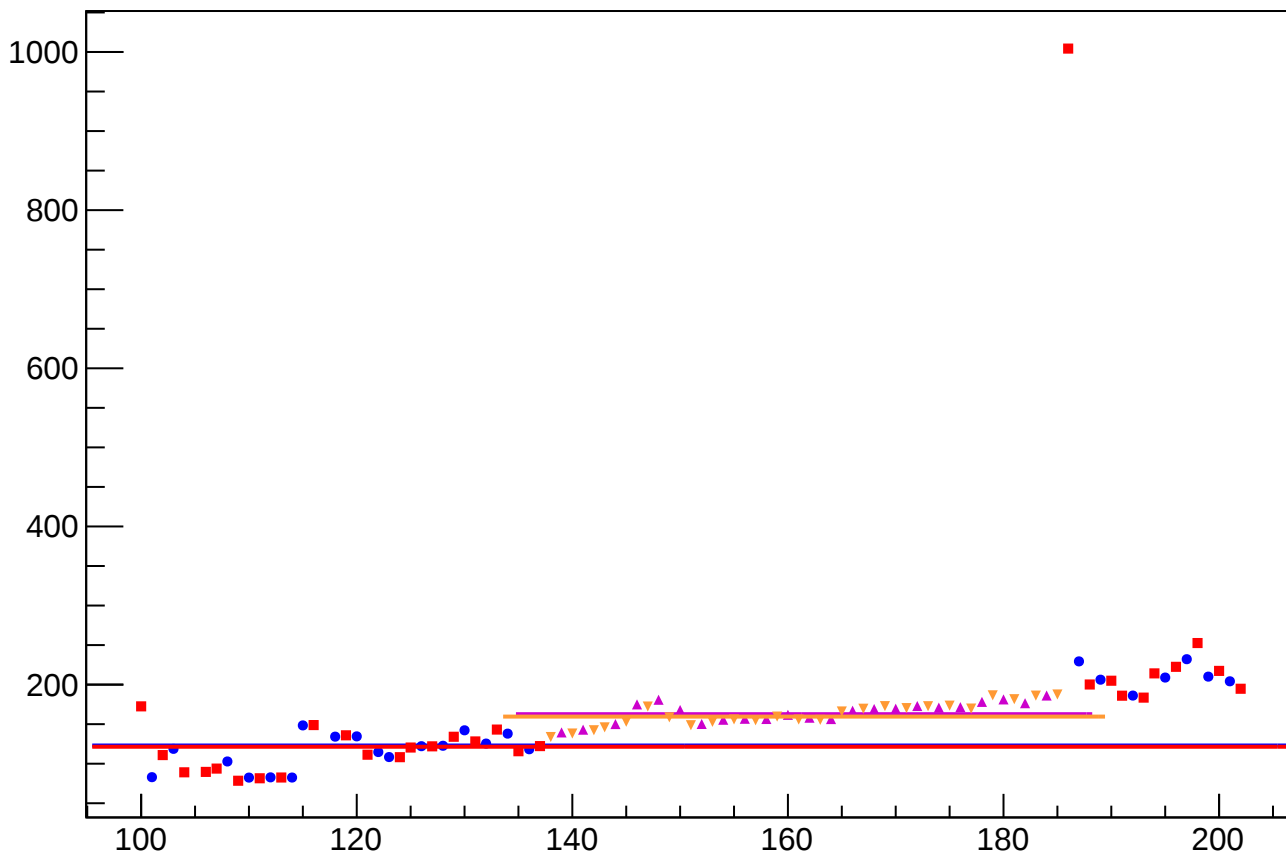
Right:  $-16.836 \pm 26.317$   $\chi^2/\text{NDF}$ : 70.5/52

In:  $135.429 \pm 27.480$   $\chi^2/\text{NDF}$ : 97.8/46

Out:  $143.167 \pm 25.851$   $\chi^2/\text{NDF}$ : 94.2/53

All:  $139.534 \pm 18.829$   $\chi^2/\text{NDF}$ : 192.1/100

# reg\_asym\_sam6\_rms vs Slug, Sign Corrected



Right In: 123.003 $\pm$ 0.027  $\chi^2$ /NDF: 2351799.2/23

Left Out: 159.568 $\pm$ 0.026  $\chi^2$ /NDF:287744.2/24

Right Out: 121.450 $\pm$ 0.025  $\chi^2$ /NDF: 3784783.3/28

Left In: 162.606 $\pm$ 0.028  $\chi^2$ /NDF:199542.3/22

Left: 161.019 $\pm$ 0.019  $\chi^2$ /NDF: 493626.9/47

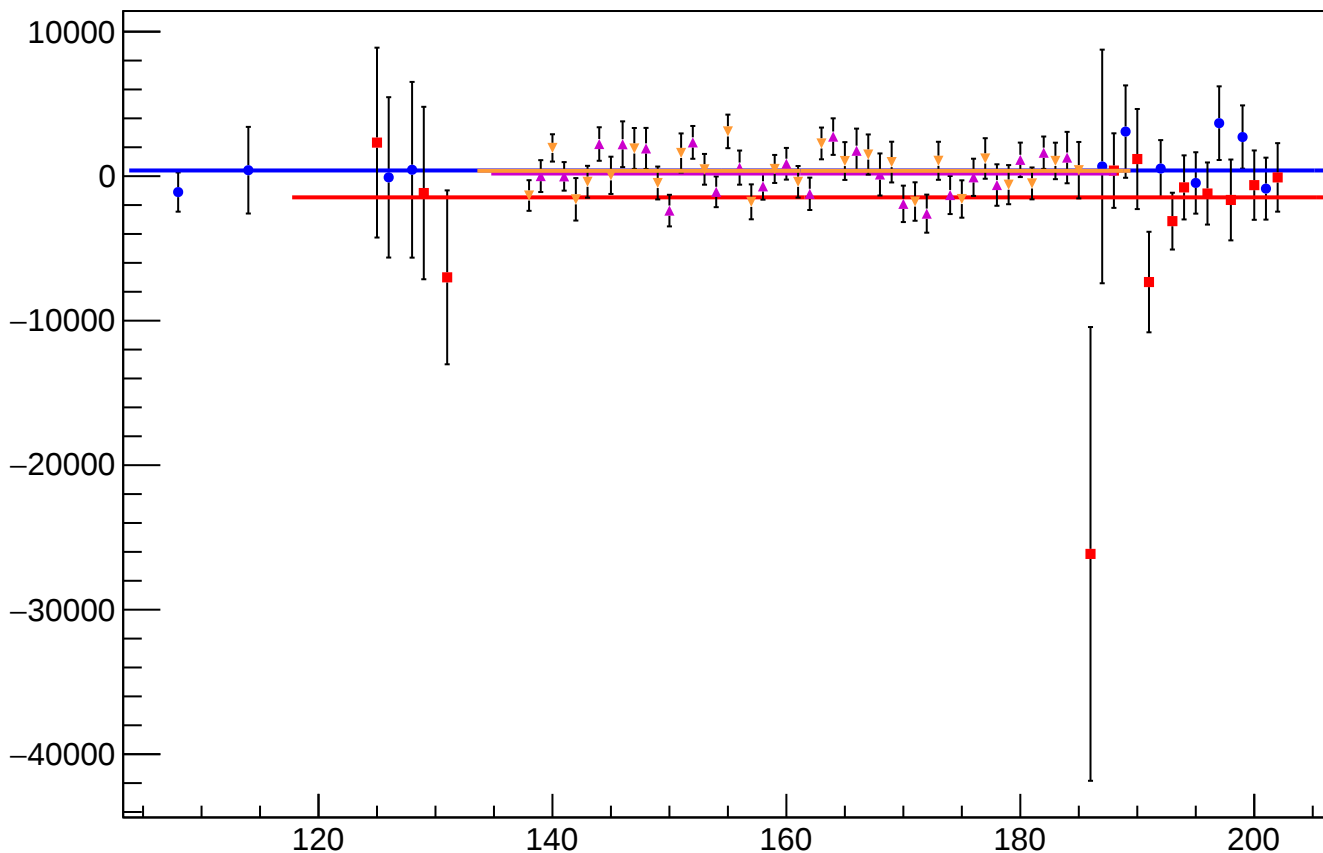
Right: 122.167 $\pm$ 0.019  $\chi^2$ /NDF: 6138313.7/52

In: 142.656 $\pm$ 0.019  $\chi^2$ /NDF:3589805.7/46

Out: 139.781 $\pm$ 0.018  $\chi^2$ /NDF:5158131.4/53

All: 141.130 $\pm$ 0.013  $\chi^2$ /NDF: 8759553.5/100

asym\_sam6\_correction\_mean vs Slug, Sign Corrected



Right In: 393.848 $\pm$ 727.925  $\chi^2$ /NDF: 5.2/10

Left Out: 370.001 $\pm$ 243.521  $\chi^2$ /NDF:30.5/24

Right Out: -1466.830 $\pm$ 801.286  $\chi^2$ /NDF: 8.9/12

Left In: 183.107 $\pm$ 252.258  $\chi^2$ /NDF:36.5/22

Left: 279.847 $\pm$ 175.203  $\chi^2$ /NDF: 67.2/47

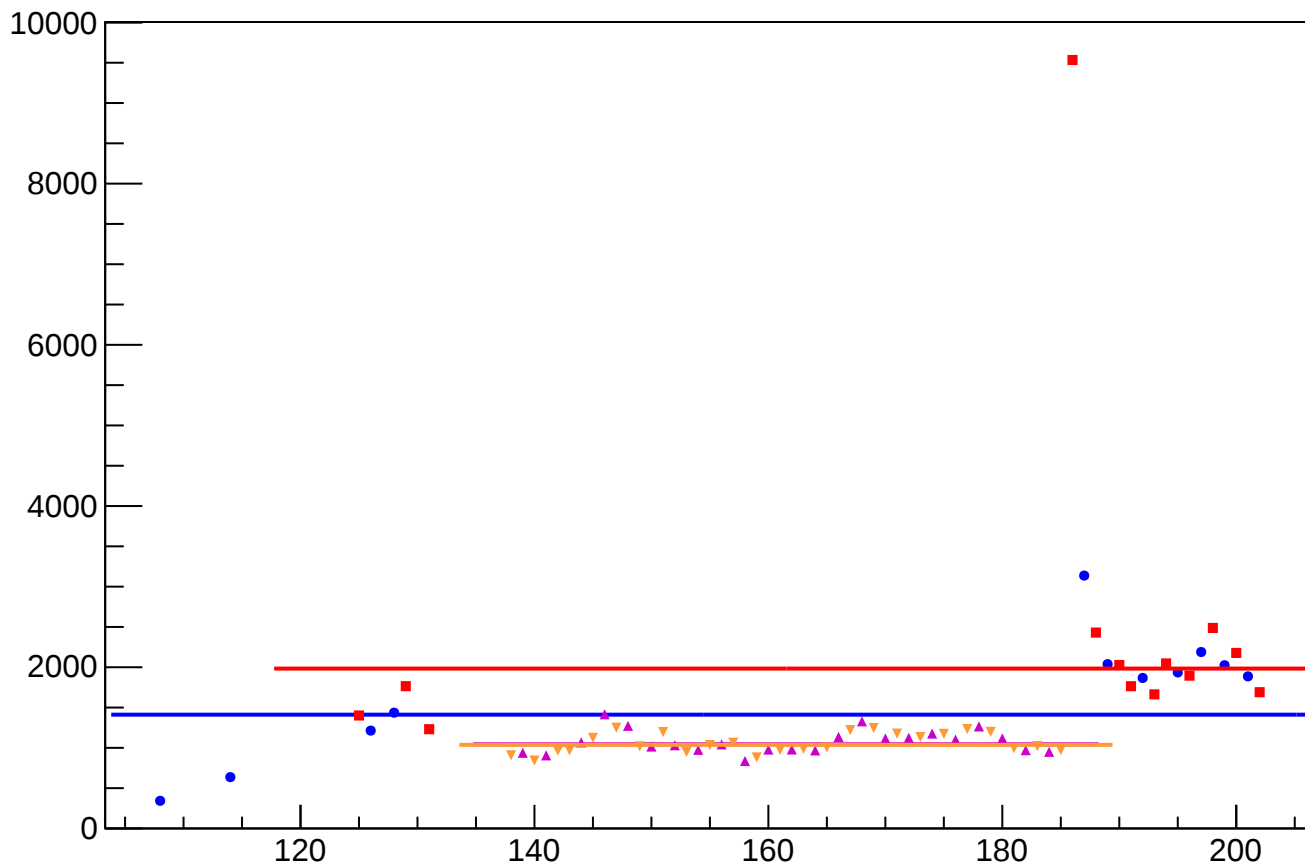
Right: -447.434 $\pm$ 538.794  $\chi^2$ /NDF: 17.0/23

In: 205.702 $\pm$ 238.352  $\chi^2$ /NDF:41.8/33

Out: 214.691 $\pm$ 232.998  $\chi^2$ /NDF:44.2/37

All: 210.299 $\pm$ 166.615  $\chi^2$ /NDF: 85.9/71

# asym\_sam6\_correction\_rms vs Slug, Sign Corrected



Right In: 1411.629+/-0.515  $\chi^2/\text{NDF}$ : 2215560.0/10

Left Out: 1037.689+/-0.172  $\chi^2/\text{NDF}$ : 494981.4/24

Right Out: 1983.582+/-0.567  $\chi^2/\text{NDF}$ : 747003.8/12

Left In: 1044.746+/-0.178  $\chi^2/\text{NDF}$ : 543315.5/22

Left: 1041.093+/-0.124  $\chi^2/\text{NDF}$ : 1039107.0/47

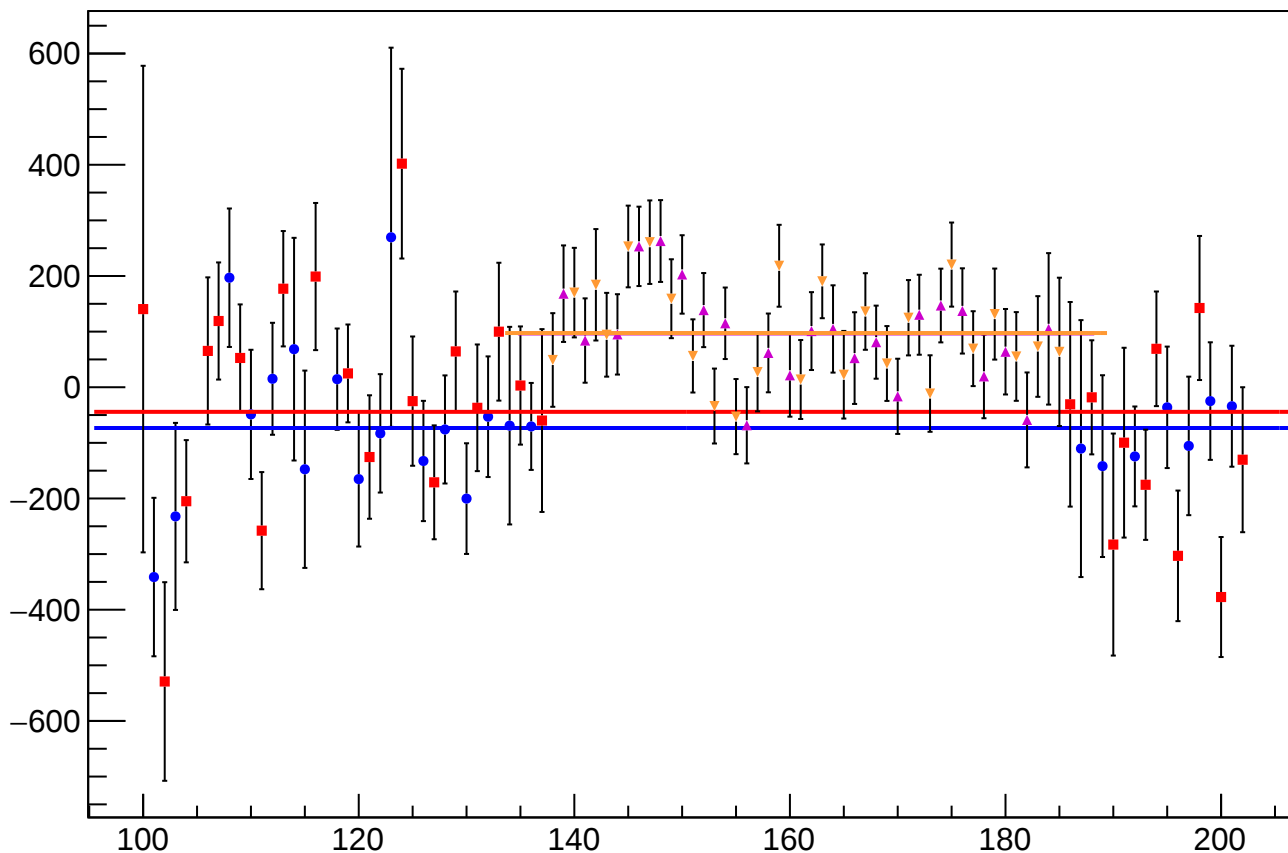
Right: 1670.230+/-0.381  $\chi^2/\text{NDF}$ : 3520837.4/23

In: 1084.082+/-0.169  $\chi^2/\text{NDF}$ : 3212460.6/33

Out: 1117.667+/-0.165  $\chi^2/\text{NDF}$ : 3793344.5/37

All: 1101.256+/-0.118  $\chi^2/\text{NDF}$ : 7026111.0/71

# reg\_asym\_sam7\_mean vs Slug, Sign Corrected



Right In: -73.291 $\pm$ 23.977  $\chi^2/\text{NDF}$ : 16.2/23

Left Out: 97.445 $\pm$ 14.880  $\chi^2/\text{NDF}$ :36.0/24

Right Out: -44.243 $\pm$ 22.139  $\chi^2/\text{NDF}$ : 59.5/28

Left In: 96.704 $\pm$ 15.369  $\chi^2/\text{NDF}$ :29.2/22

Left: 97.087 $\pm$ 10.690  $\chi^2/\text{NDF}$ : 65.2/47

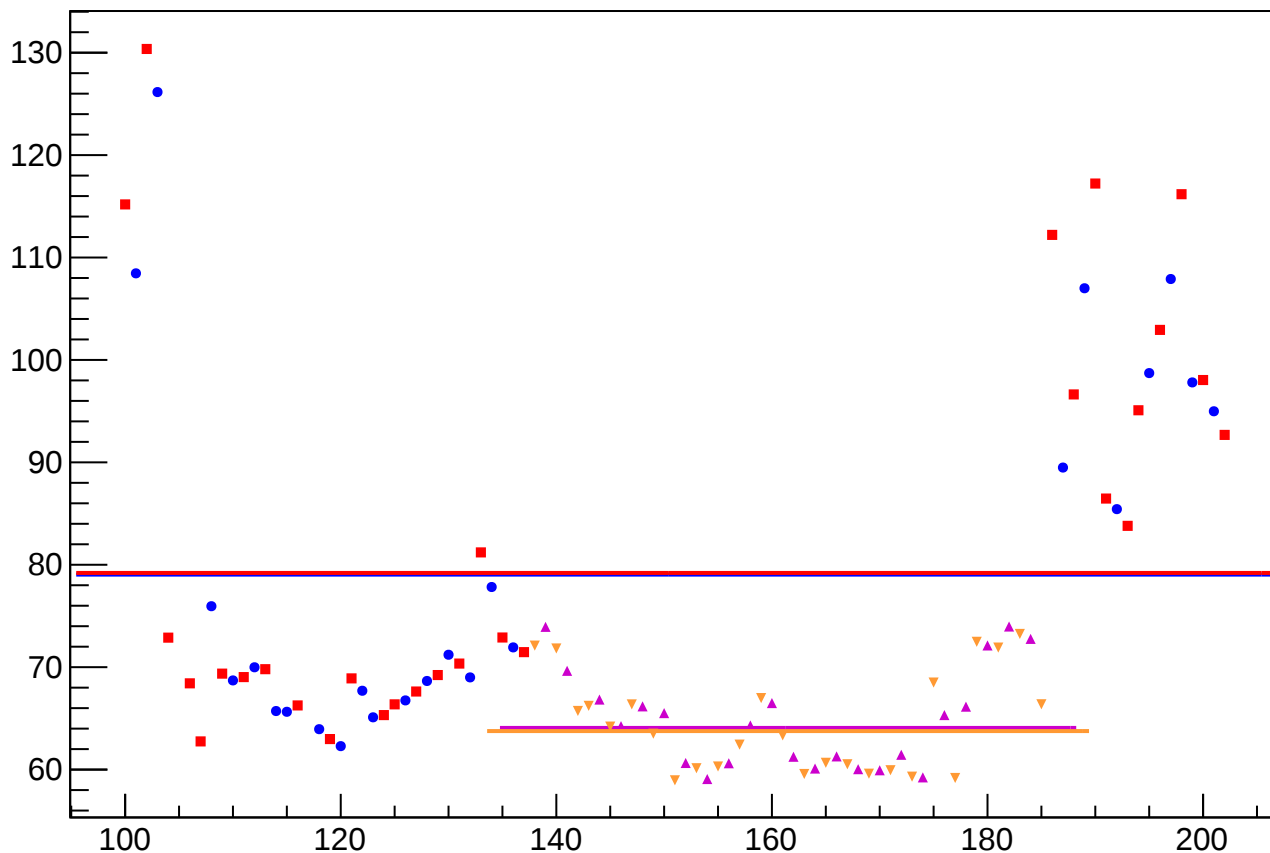
Right: -57.611 $\pm$ 16.266  $\chi^2/\text{NDF}$ : 76.4/52

In: 47.197 $\pm$ 12.939  $\chi^2/\text{NDF}$ :81.0/46

Out: 53.358 $\pm$ 12.350  $\chi^2/\text{NDF}$ :123.7/53

All: 50.421 $\pm$ 8.934  $\chi^2/\text{NDF}$ : 204.8/100

# reg\_asym\_sam7\_rms vs Slug, Sign Corrected



Right In: 79.039 $\pm$ 0.017  $\chi^2$ /NDF: 860887.0/23

Left Out: 63.761 $\pm$ 0.011  $\chi^2$ /NDF:192803.8/24

Right Out: 79.202 $\pm$ 0.016  $\chi^2$ /NDF: 1088496.1/28

Left In: 64.069 $\pm$ 0.011  $\chi^2$ /NDF:164660.4/22

Left: 63.910 $\pm$ 0.008  $\chi^2$ /NDF: 357877.2/47

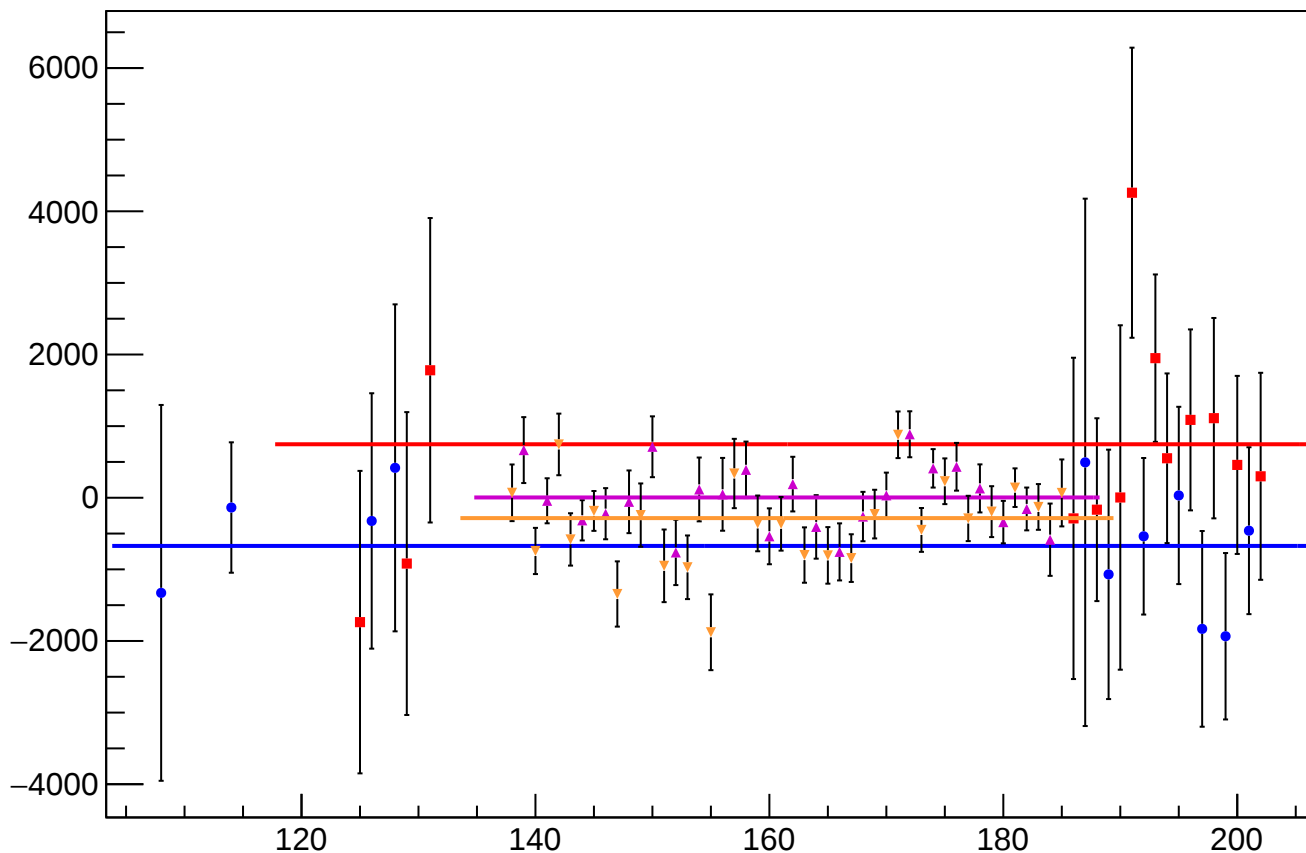
Right: 79.127 $\pm$ 0.012  $\chi^2$ /NDF: 1949432.6/52

In: 68.428 $\pm$ 0.009  $\chi^2$ /NDF:1578194.2/46

Out: 68.566 $\pm$ 0.009  $\chi^2$ /NDF:1951421.5/53

All: 68.500 $\pm$ 0.006  $\chi^2$ /NDF: 3529733.3/100

asym\_sam7\_correction\_mean vs Slug, Sign Corrected



Right In: -672.683+/-416.528  $\chi^2/\text{NDF}$ : 3.1/10

Left Out: -284.304+/-72.732  $\chi^2/\text{NDF}$ :55.1/24

Right Out: 746.879+/-422.342  $\chi^2/\text{NDF}$ : 7.4/12

Left In: 4.037+/-75.084  $\chi^2/\text{NDF}$ :32.4/22

Left: -144.720+/-52.241  $\chi^2/\text{NDF}$ : 95.0/47

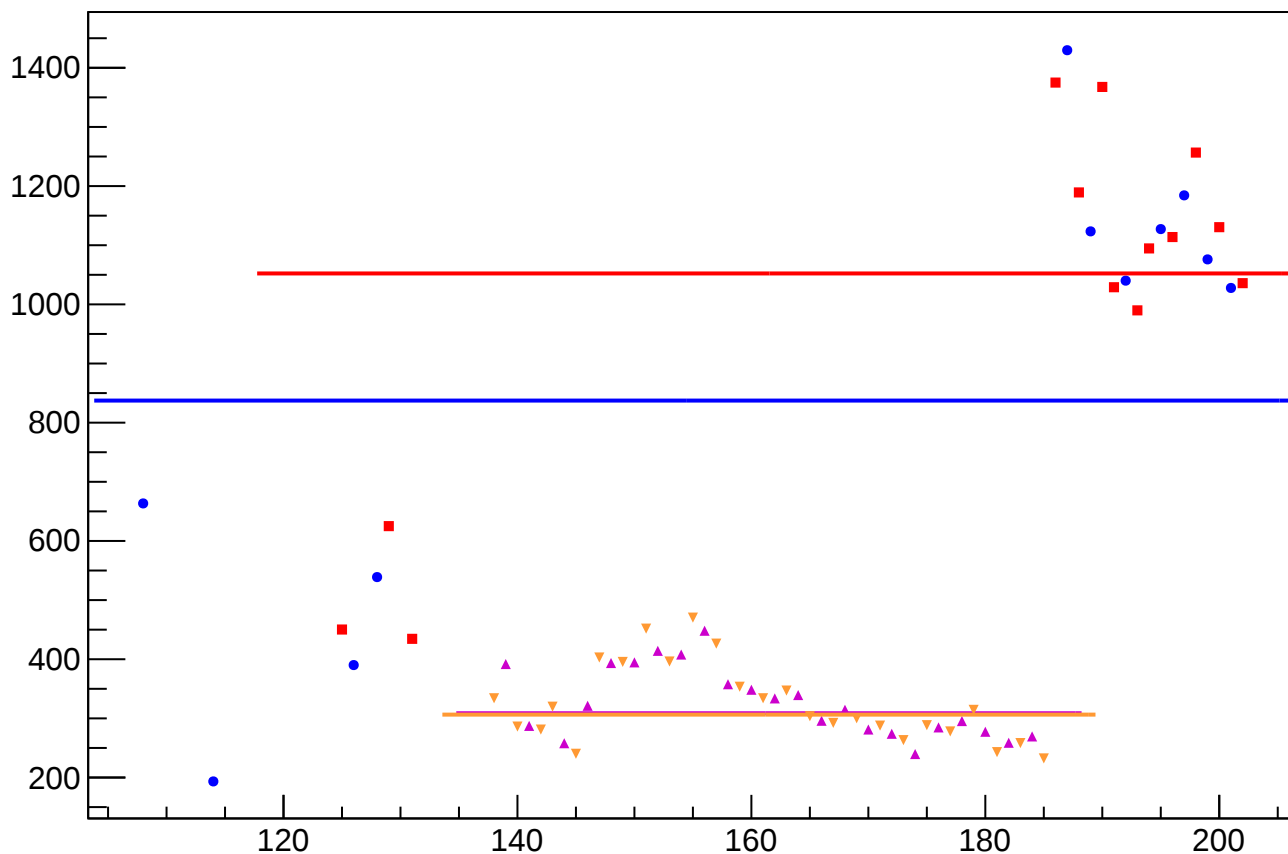
Right: 27.261+/-296.564  $\chi^2/\text{NDF}$ : 16.3/23

In: -17.261+/-73.893  $\chi^2/\text{NDF}$ :38.0/33

Out: -254.603+/-71.677  $\chi^2/\text{NDF}$ :68.3/37

All: -139.544+/-51.449  $\chi^2/\text{NDF}$ : 111.6/71

asym\_sam7\_correction\_rms vs Slug, Sign Corrected



Right In: 837.348+/-0.295  $\chi^2/\text{NDF}$ : 1720157.4/10

Left Out: 306.363+/-0.051  $\chi^2/\text{NDF}$ : 1215669.9/24

Right Out: 1052.291+/-0.299  $\chi^2/\text{NDF}$ : 576056.9/12

Left In: 308.727+/-0.053  $\chi^2/\text{NDF}$ : 1002947.4/22

Left: 307.507+/-0.037  $\chi^2/\text{NDF}$ : 2219640.0/47

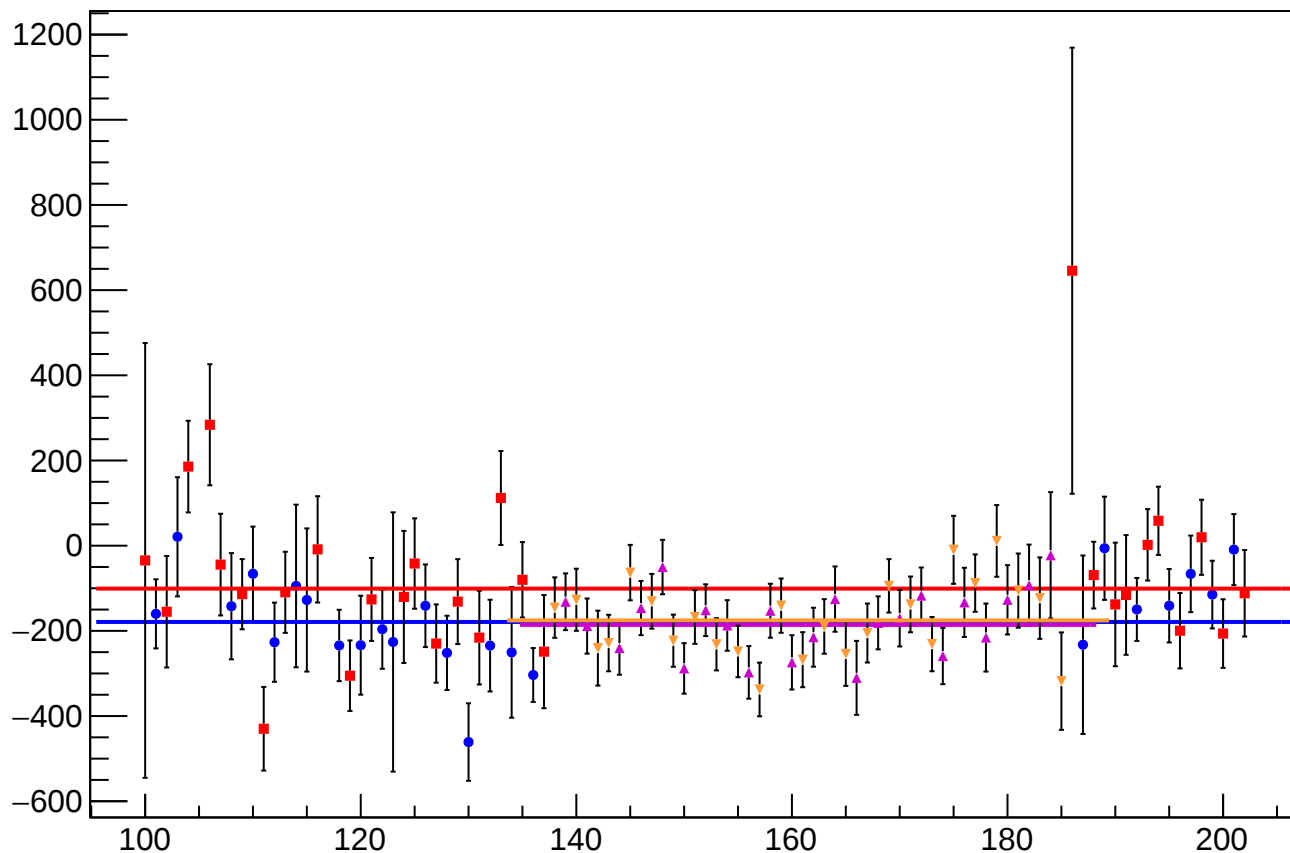
Right: 943.330+/-0.210  $\chi^2/\text{NDF}$ : 2558814.6/23

In: 325.363+/-0.052  $\chi^2/\text{NDF}$ : 5843018.3/33

Out: 327.848+/-0.051  $\chi^2/\text{NDF}$ : 7850761.5/37

All: 326.643+/-0.036  $\chi^2/\text{NDF}$ : 13694944.7/73

# reg\_asym\_sam8\_mean vs Slug, Sign Corrected



Right In:  $-179.069 \pm 20.237$   $\chi^2/\text{NDF}: 28.1/23$

Left Out:  $-175.471 \pm 13.846$   $\chi^2/\text{NDF}: 34.6/24$

Right Out:  $-100.826 \pm 19.196$   $\chi^2/\text{NDF}: 53.9/28$

Left In:  $-186.047 \pm 14.315$   $\chi^2/\text{NDF}: 23.6/22$

Left:  $-180.583 \pm 9.952$   $\chi^2/\text{NDF}: 58.5/47$

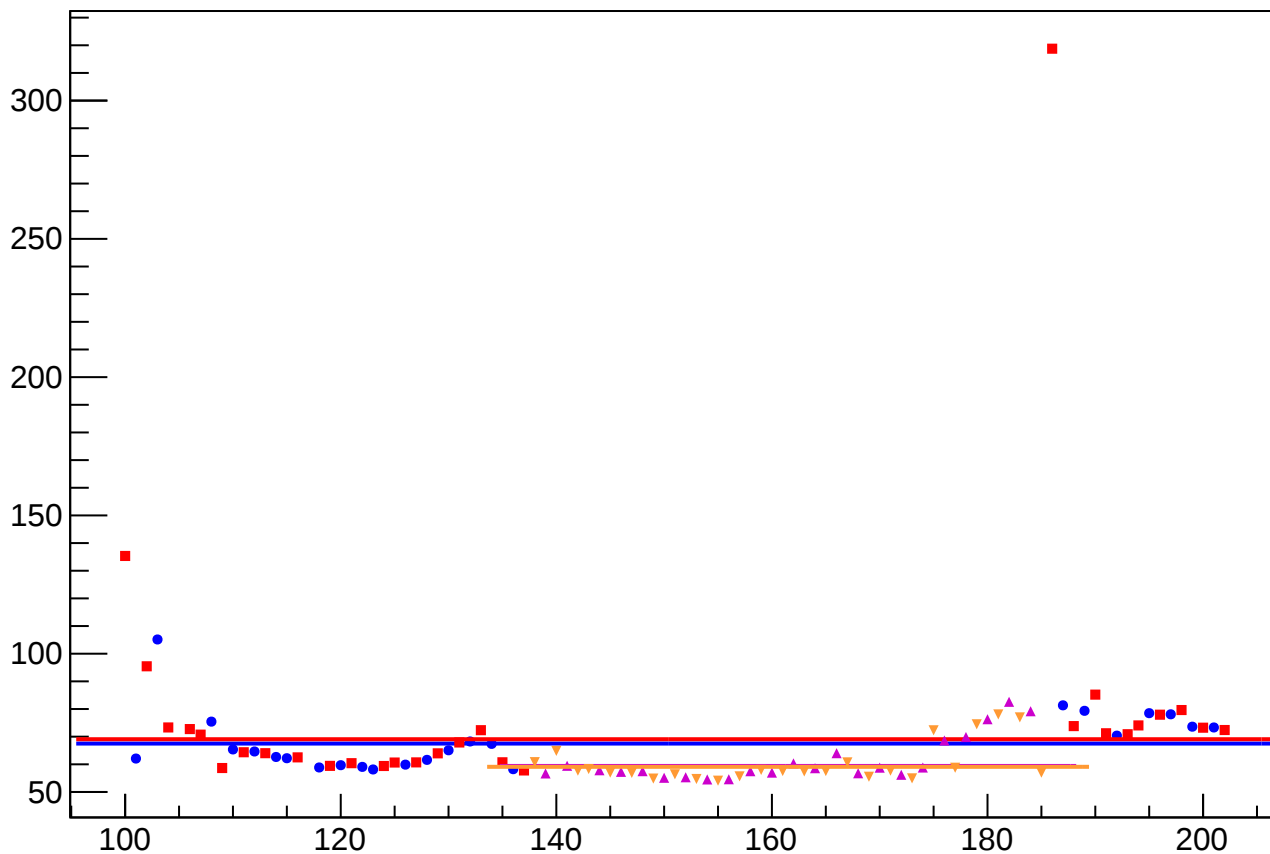
Right:  $-137.883 \pm 13.927$   $\chi^2/\text{NDF}: 89.9/52$

In:  $-183.720 \pm 11.687$   $\chi^2/\text{NDF}: 51.8/46$

Out:  $-149.926 \pm 11.229$   $\chi^2/\text{NDF}: 98.4/53$

All:  $-166.149 \pm 8.097$   $\chi^2/\text{NDF}: 154.6/100$

# reg\_asym\_sam8\_rms vs Slug, Sign Corrected



Right In: 67.507 $\pm$ 0.014  $\chi^2$ /NDF: 394788.2/23

Left Out: 59.099 $\pm$ 0.010  $\chi^2$ /NDF: 369788.6/24

Right Out: 69.075 $\pm$ 0.014  $\chi^2$ /NDF: 838835.3/28

Left In: 59.410 $\pm$ 0.010  $\chi^2$ /NDF: 373052.7/22

Left: 59.250 $\pm$ 0.007  $\chi^2$ /NDF: 743329.1/47

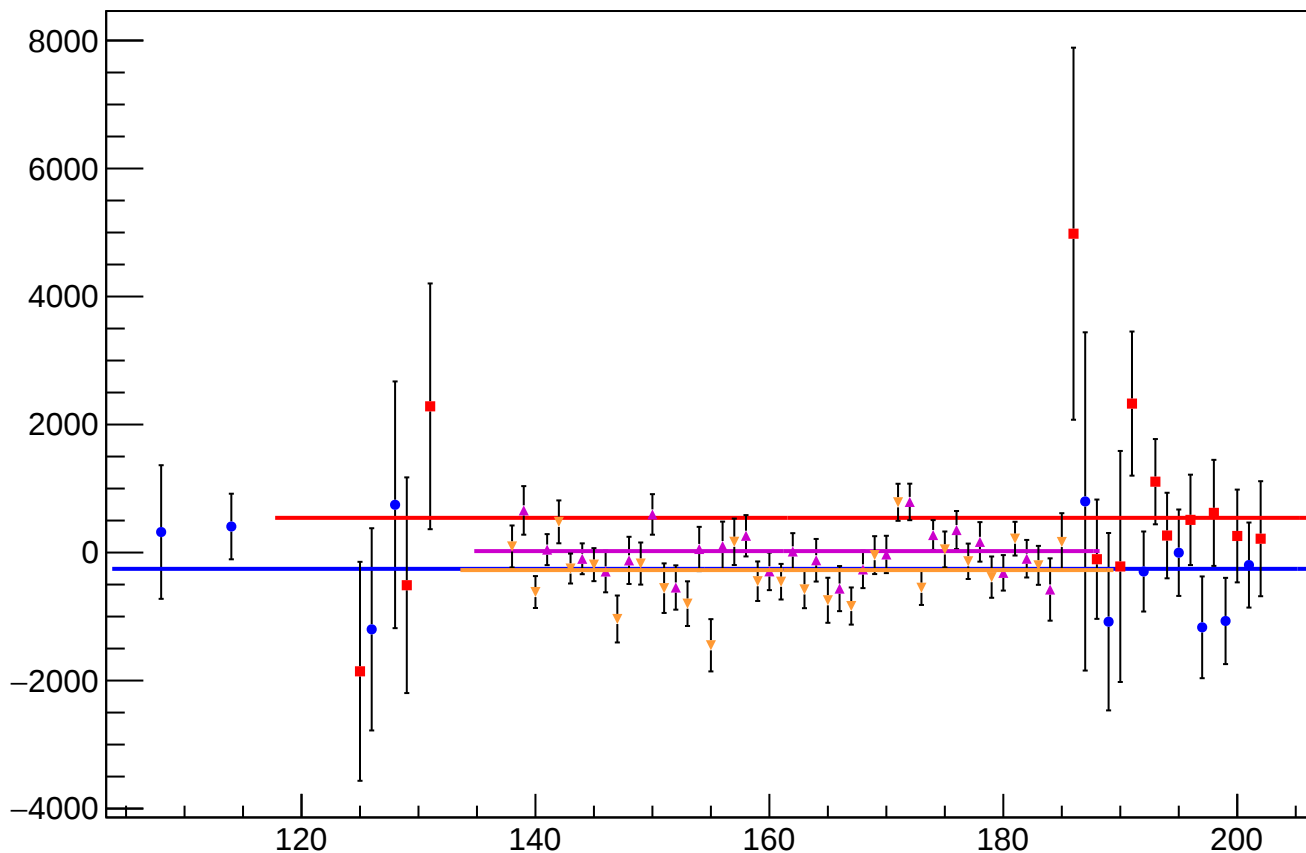
Right: 68.332 $\pm$ 0.010  $\chi^2$ /NDF: 1239943.6/52

In: 62.111 $\pm$ 0.008  $\chi^2$ /NDF: 981213.3/46

Out: 62.513 $\pm$ 0.008  $\chi^2$ /NDF: 1563912.9/53

All: 62.320 $\pm$ 0.006  $\chi^2$ /NDF: 2546359.8/100

asym\_sam8\_correction\_mean vs Slug, Sign Corrected



Right In:  $-254.616 \pm 243.509$   $\chi^2/\text{NDF}: 6.0/10$

Left Out:  $-274.091 \pm 60.799$   $\chi^2/\text{NDF}: 53.9/24$

Right Out:  $542.235 \pm 263.257$   $\chi^2/\text{NDF}: 9.9/12$

Left In:  $22.631 \pm 63.643$   $\chi^2/\text{NDF}: 28.9/22$

Left:  $-132.507 \pm 43.963$   $\chi^2/\text{NDF}: 94.2/47$

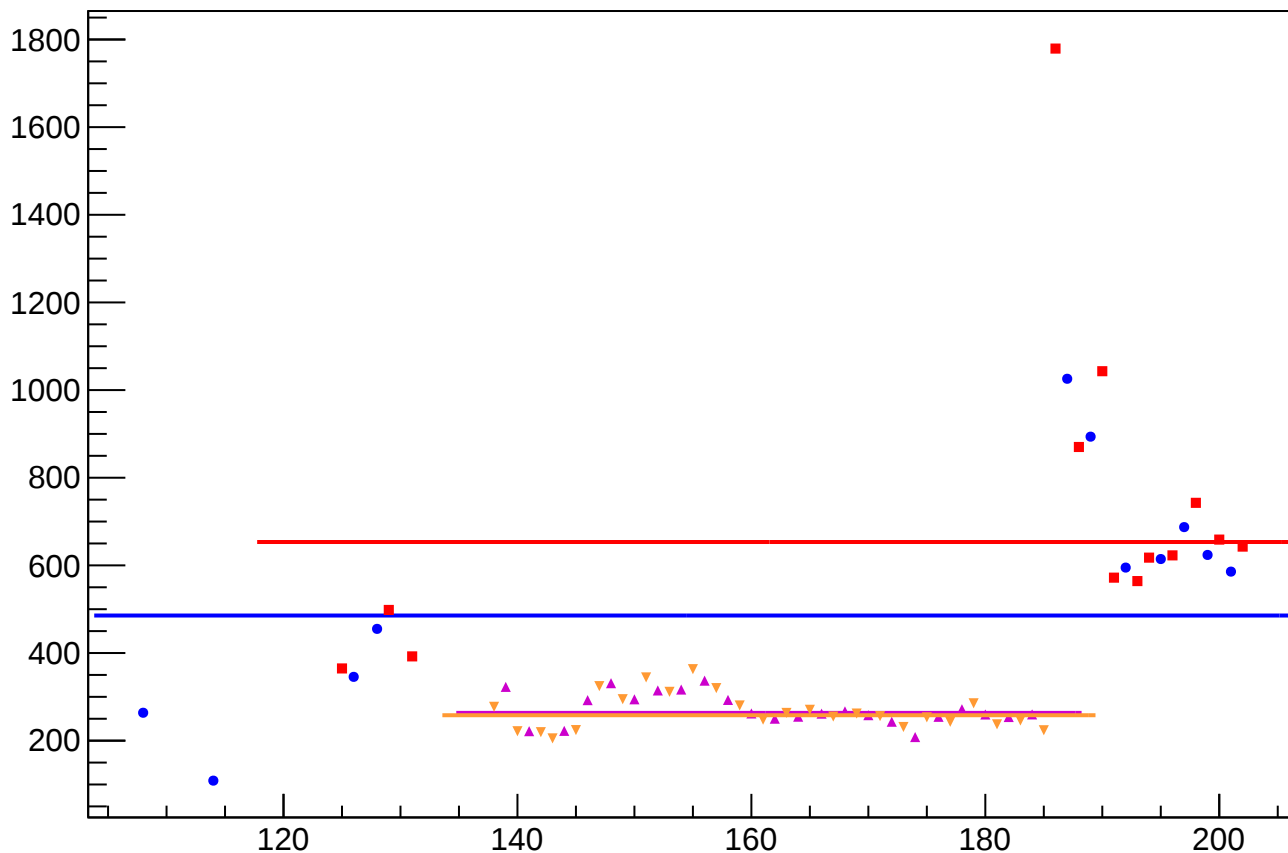
Right:  $112.803 \pm 178.761$   $\chi^2/\text{NDF}: 20.9/23$

In:  $4.903 \pm 61.575$   $\chi^2/\text{NDF}: 36.2/33$

Out:  $-232.755 \pm 59.240$   $\chi^2/\text{NDF}: 72.9/37$

All:  $-118.517 \pm 42.691$   $\chi^2/\text{NDF}: 116.8/71$

asym\_sam8\_correction\_rms vs Slug, Sign Corrected



Right In: 485.569+/-0.172  $\chi^2/\text{NDF}$ : 1838016.4/10

Left Out: 258.040+/-0.043  $\chi^2/\text{NDF}$ : 724823.3/24

Right Out: 653.324+/-0.186  $\chi^2/\text{NDF}$ : 691860.3/12

Left In: 263.397+/-0.045  $\chi^2/\text{NDF}$ : 585600.2/22

Left: 260.596+/-0.031  $\chi^2/\text{NDF}$ : 1317830.8/47

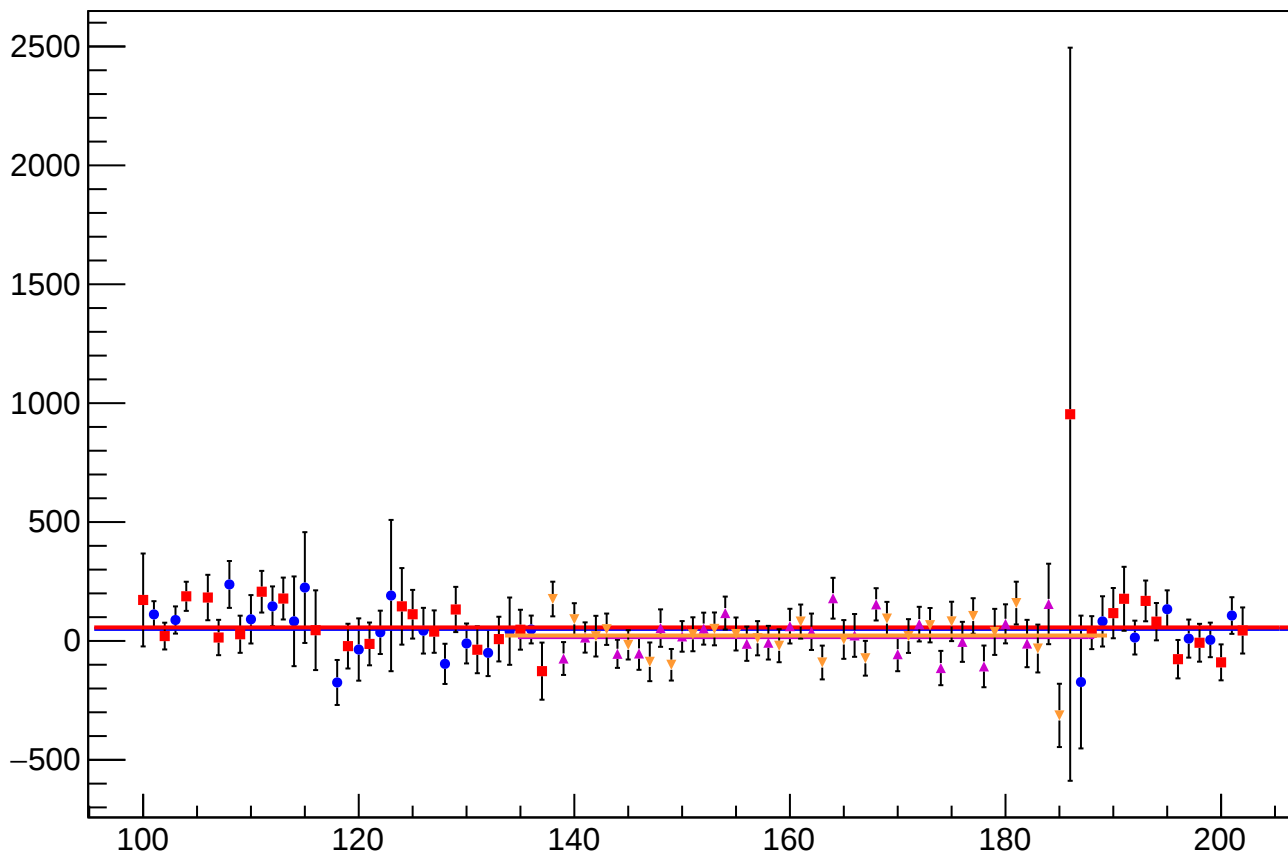
Right: 562.919+/-0.126  $\chi^2/\text{NDF}$ : 2967534.7/23

In: 277.603+/-0.044  $\chi^2/\text{NDF}$ : 3982042.7/33

Out: 278.056+/-0.042  $\chi^2/\text{NDF}$ : 5697431.8/37

All: 277.838+/-0.030  $\chi^2/\text{NDF}$ : 9679530.9/71

reg\_asym\_sam\_15\_avg\_mean vs Slug, Sign Corrected



Right In: 50.614 $\pm$ 17.885  $\chi^2$ /NDF: 21.5/23

Left Out: 22.871 $\pm$ 14.968  $\chi^2$ /NDF:29.0/24

Right Out: 56.881 $\pm$ 16.584  $\chi^2$ /NDF: 29.0/28

Left In: 16.198 $\pm$ 15.531  $\chi^2$ /NDF:23.3/22

Left: 19.658 $\pm$ 10.777  $\chi^2$ /NDF: 52.4/47

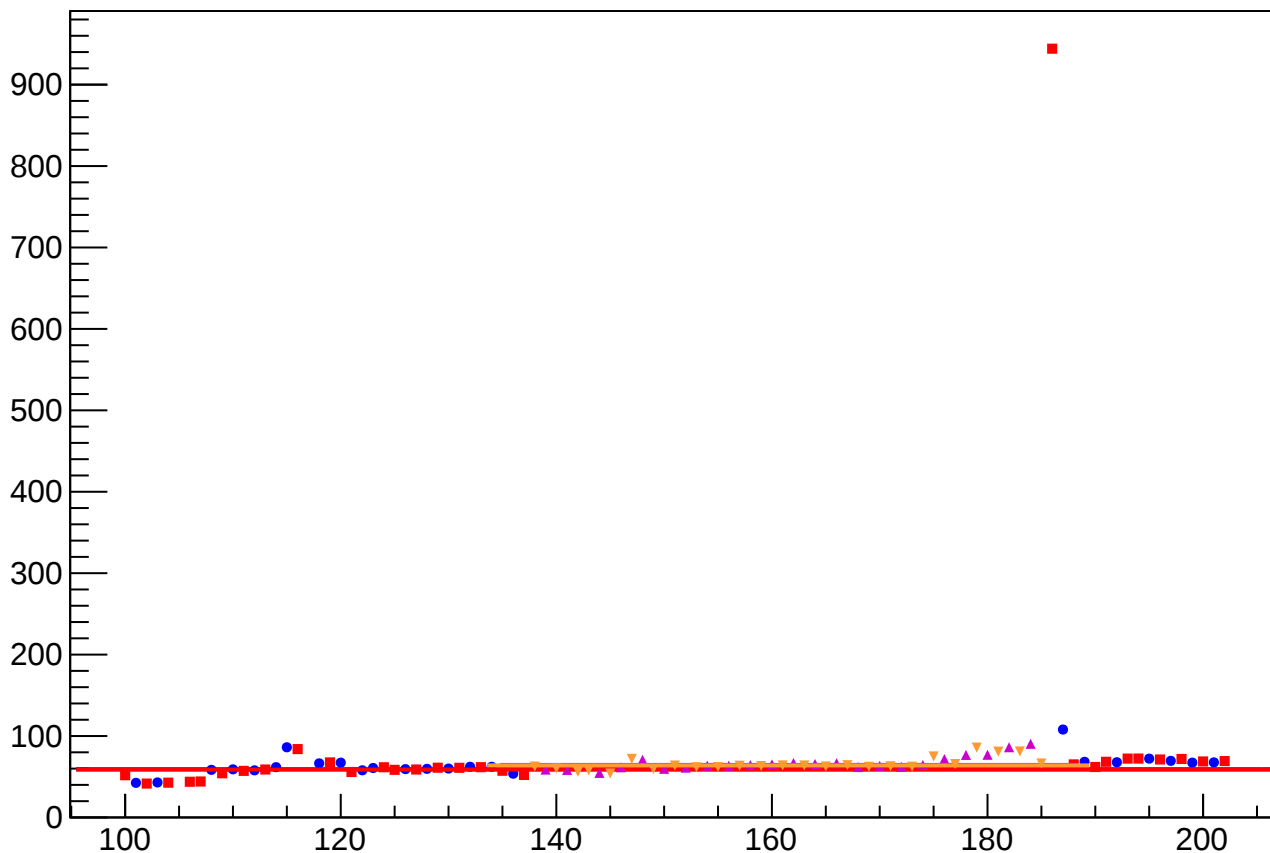
Right: 53.984 $\pm$ 12.161  $\chi^2$ /NDF: 50.6/52

In: 30.994 $\pm$ 11.726  $\chi^2$ /NDF:46.9/46

Out: 38.138 $\pm$ 11.112  $\chi^2$ /NDF:60.3/53

All: 34.758 $\pm$ 8.066  $\chi^2$ /NDF: 107.4/100

reg\_asym\_sam\_15\_avg\_rms vs Slug, Sign Corrected



Right In: 59.187 $\pm$ 0.013  $\chi^2$ /NDF: 649910.4/23

Left Out: 63.920 $\pm$ 0.011  $\chi^2$ /NDF: 395410.4/24

Right Out: 58.802 $\pm$ 0.012  $\chi^2$ /NDF: 1493103.3/28

Left In: 64.511 $\pm$ 0.011  $\chi^2$ /NDF: 370515.2/22

Left: 64.204 $\pm$ 0.008  $\chi^2$ /NDF: 767426.6/47

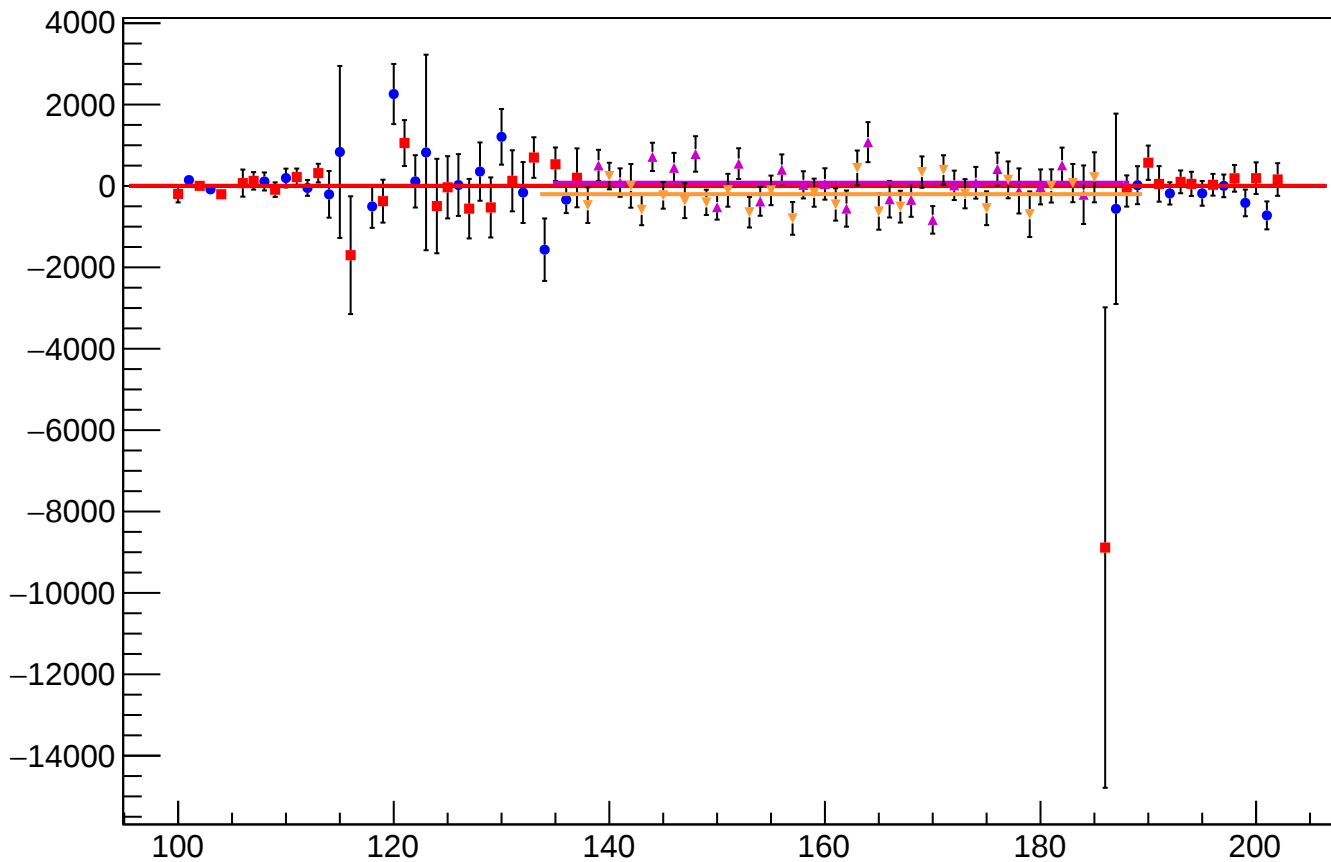
Right: 58.980 $\pm$ 0.009  $\chi^2$ /NDF: 2143512.4/52

In: 62.222 $\pm$ 0.008  $\chi^2$ /NDF: 1121442.1/46

Out: 61.623 $\pm$ 0.008  $\chi^2$ /NDF: 1993470.0/53

All: 61.906 $\pm$ 0.006  $\chi^2$ /NDF: 3117668.3/100

asym\_sam\_15\_avg\_correction\_mean vs Slug, Sign Corrected



Right In:  $0.630 \pm 47.902$   $\chi^2/\text{NDF}: 31.3/23$

Left Out:  $-201.082 \pm 79.549$   $\chi^2/\text{NDF}: 19.7/24$

Right Out:  $2.601 \pm 48.220$   $\chi^2/\text{NDF}: 24.1/28$

Left In:  $79.985 \pm 81.781$   $\chi^2/\text{NDF}: 33.4/22$

Left:  $-64.438 \pm 57.022$   $\chi^2/\text{NDF}: 59.1/47$

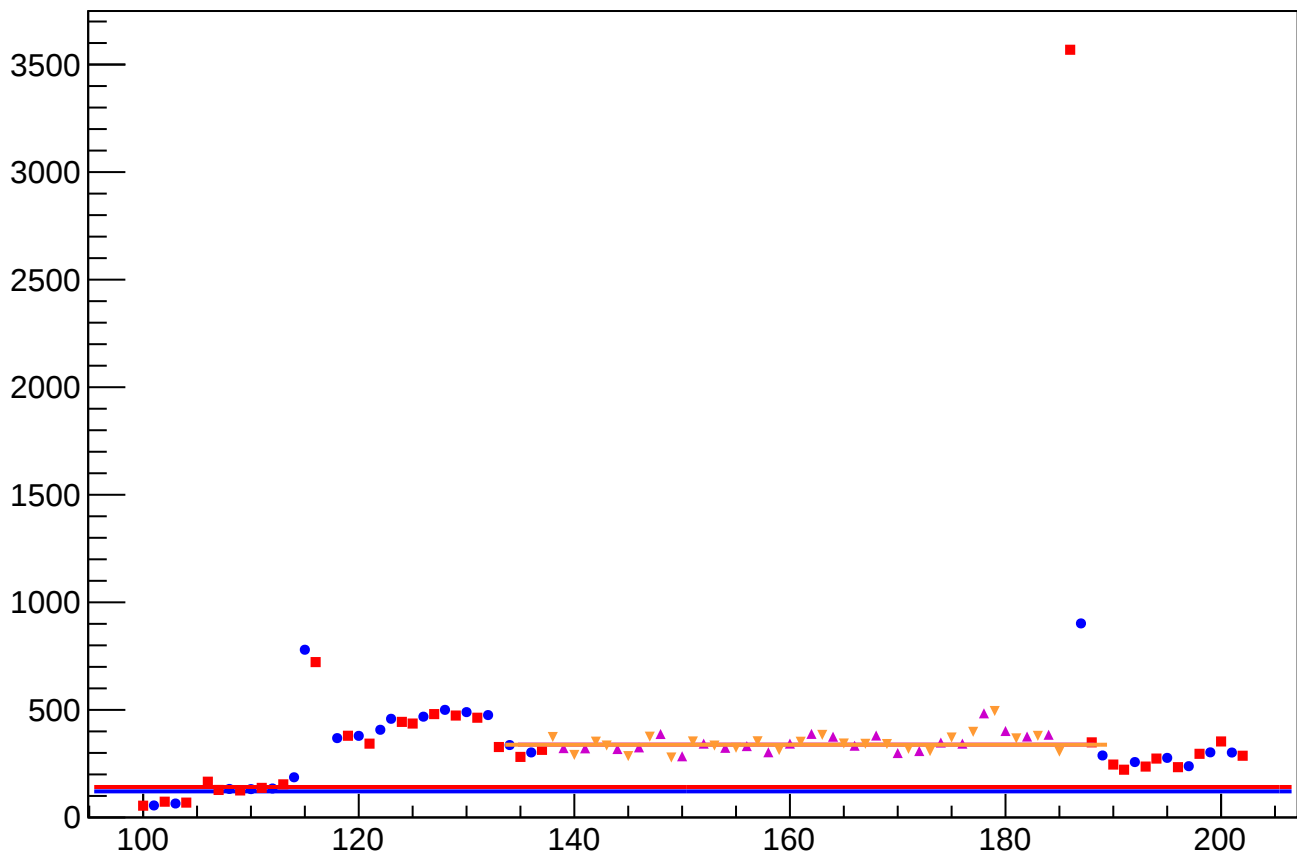
Right:  $1.609 \pm 33.984$   $\chi^2/\text{NDF}: 55.4/52$

In:  $20.901 \pm 41.334$   $\chi^2/\text{NDF}: 65.4/46$

Out:  $-52.131 \pm 41.236$   $\chi^2/\text{NDF}: 48.5/53$

All:  $-15.701 \pm 29.193$   $\chi^2/\text{NDF}: 115.5/100$

asym\_sam\_15\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 121.220+/-0.034  $\chi^2/\text{NDF}$ : 9265130.8/23

Left Out: 338.130+/-0.056  $\chi^2/\text{NDF}$ : 498601.7/24

Right Out: 141.621+/-0.034  $\chi^2/\text{NDF}$ : 9220158.8/28

Left In: 338.564+/-0.058  $\chi^2/\text{NDF}$ : 437243.0/22

Left: 338.341+/-0.040  $\chi^2/\text{NDF}$ : 935873.7/47

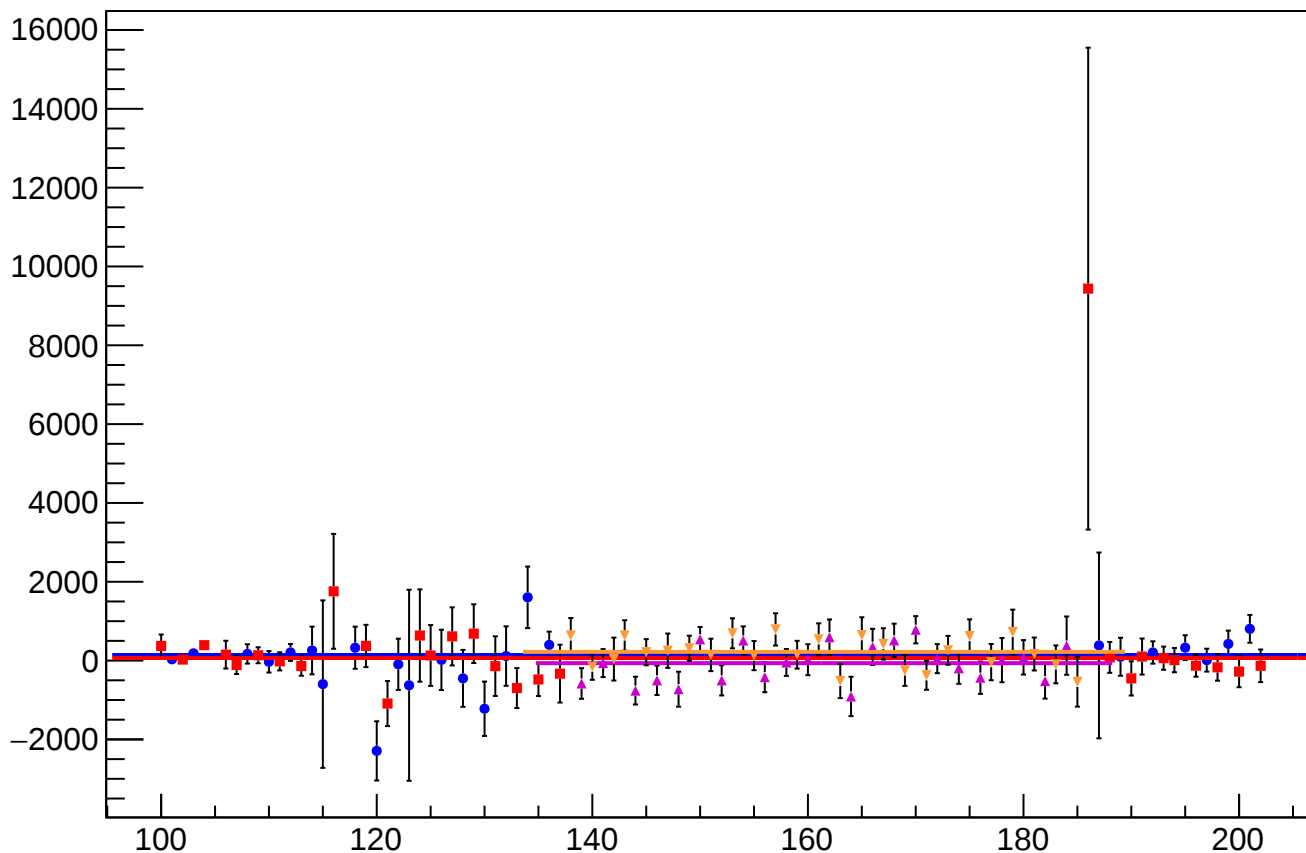
Right: 131.353+/-0.024  $\chi^2/\text{NDF}$ : 18665481.1/52

In: 176.739+/-0.029  $\chi^2/\text{NDF}$ : 20219973.3/46

Out: 194.425+/-0.029  $\chi^2/\text{NDF}$ : 18643911.1/53

All: 185.603+/-0.021  $\chi^2/\text{NDF}$ : 39047399.0/10

asym\_sam\_15\_avg\_mean vs Slug, Sign Corrected



Right In: 141.043 $\pm$ 57.145  $\chi^2$ /NDF: 26.2/23

Left Out: 221.083 $\pm$ 81.018  $\chi^2$ /NDF:19.7/24

Right Out: 65.868 $\pm$ 54.050  $\chi^2$ /NDF: 27.4/28

Left In: -65.510 $\pm$ 83.319  $\chi^2$ /NDF:34.0/22

Left: 81.798 $\pm$ 58.085  $\chi^2$ /NDF: 59.7/47

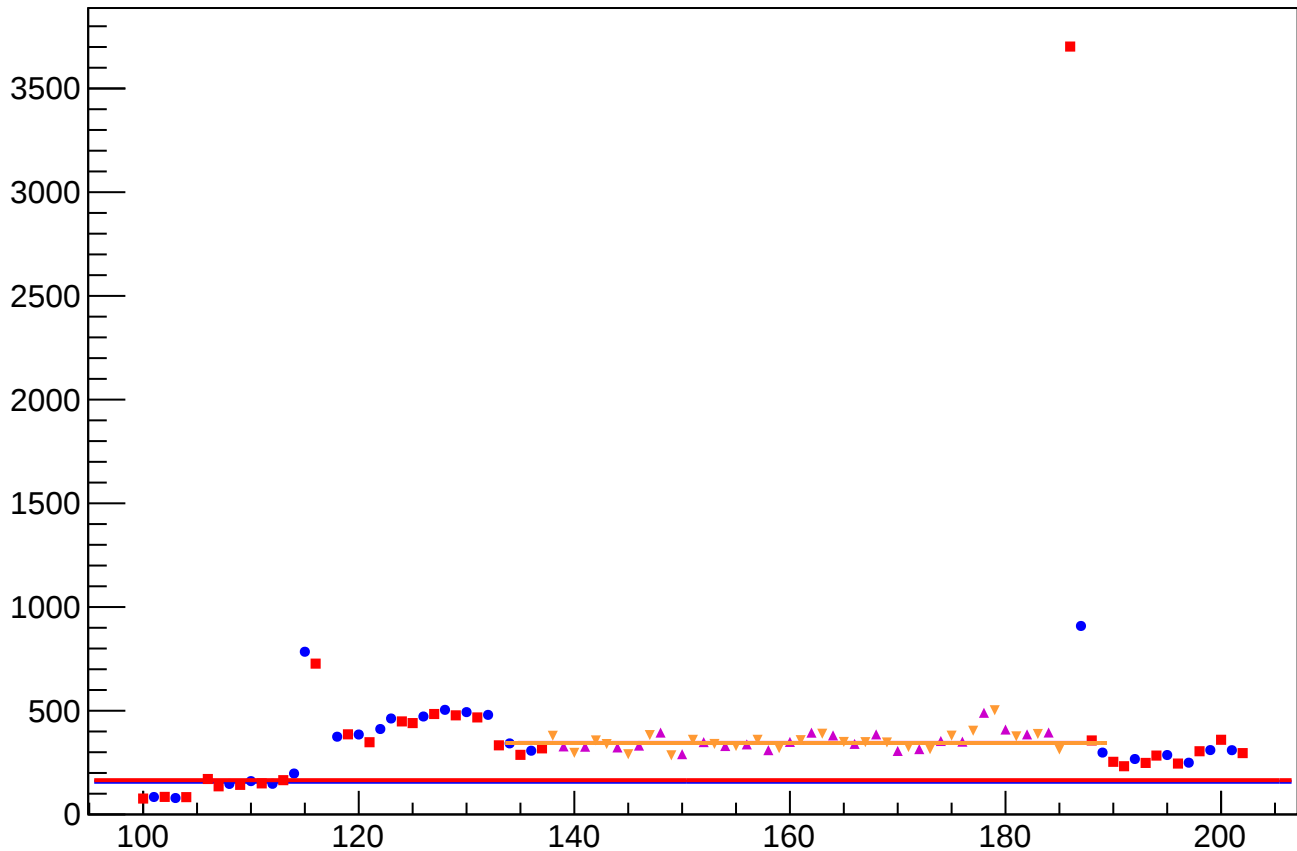
Right: 101.365 $\pm$ 39.268  $\chi^2$ /NDF: 54.5/52

In: 74.964 $\pm$ 47.126  $\chi^2$ /NDF:64.4/46

Out: 113.672 $\pm$ 44.963  $\chi^2$ /NDF:49.7/53

All: 95.227 $\pm$ 32.531  $\chi^2$ /NDF: 114.4/100

# asym\_sam\_15\_avg\_rms vs Slug, Sign Corrected



Right In: 157.619 $\pm$ 0.040  $\chi^2$ /NDF: 7153246.2/23

Left Out: 344.506 $\pm$ 0.057  $\chi^2$ /NDF:488323.4/24

Right Out: 165.279 $\pm$ 0.038  $\chi^2$ /NDF: 7813400.3/28

Left In: 345.039 $\pm$ 0.059  $\chi^2$ /NDF:427381.3/22

Left: 344.765 $\pm$ 0.041  $\chi^2$ /NDF: 915746.8/47

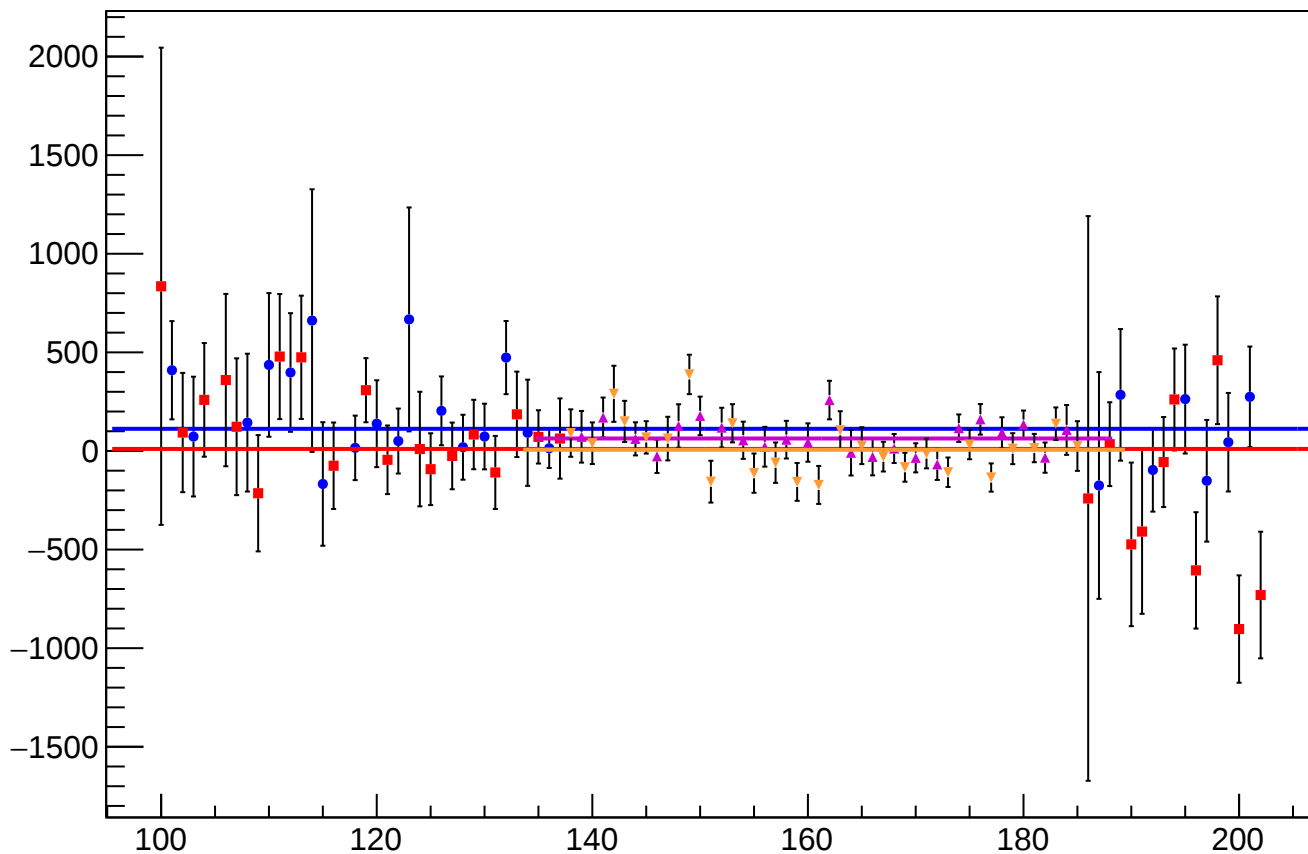
Right: 161.662 $\pm$ 0.028  $\chi^2$ /NDF: 14985610.8/52

In: 217.577 $\pm$ 0.033  $\chi^2$ /NDF:14463025.0/46

Out: 220.479 $\pm$ 0.032  $\chi^2$ /NDF:15074740.4/53

All: 219.096 $\pm$ 0.023  $\chi^2$ /NDF: 29541734.7/100

reg\_asym\_sam\_26\_avg\_mean vs Slug, Sign Corrected



Right In: 112.379 $\pm$ 44.605  $\chi^2$ /NDF: 14.5/23

Left Out: 6.020 $\pm$ 17.910  $\chi^2$ /NDF:46.0/24

Right Out: 10.312 $\pm$ 44.206  $\chi^2$ /NDF: 38.8/28

Left In: 63.279 $\pm$ 18.447  $\chi^2$ /NDF:19.8/22

Left: 33.804 $\pm$ 12.850  $\chi^2$ /NDF: 70.8/47

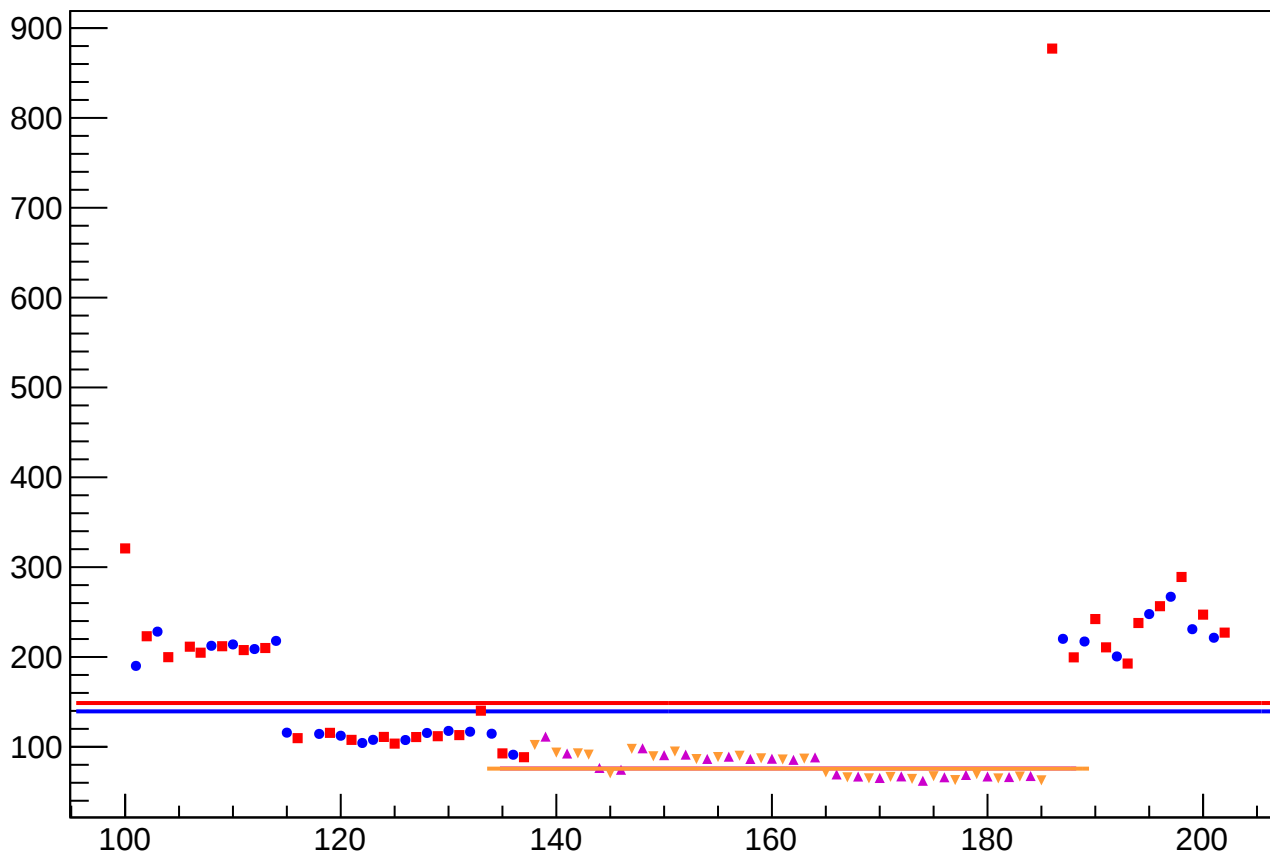
Right: 60.886 $\pm$ 31.398  $\chi^2$ /NDF: 55.9/52

In: 70.450 $\pm$ 17.046  $\chi^2$ /NDF:35.4/46

Out: 6.625 $\pm$ 16.599  $\chi^2$ /NDF:84.8/53

All: 37.689 $\pm$ 11.892  $\chi^2$ /NDF: 127.4/100

reg\_asym\_sam\_26\_avg\_rms vs Slug, Sign Corrected



Right In: 139.469 $\pm$ 0.032  $\chi^2$ /NDF: 2843075.6/23

Left Out: 75.743 $\pm$ 0.013  $\chi^2$ /NDF: 937821.8/24

Right Out: 148.761 $\pm$ 0.031  $\chi^2$ /NDF: 3867253.1/28

Left In: 75.909 $\pm$ 0.013  $\chi^2$ /NDF: 831366.4/22

Left: 75.824 $\pm$ 0.009  $\chi^2$ /NDF: 1769272.3/47

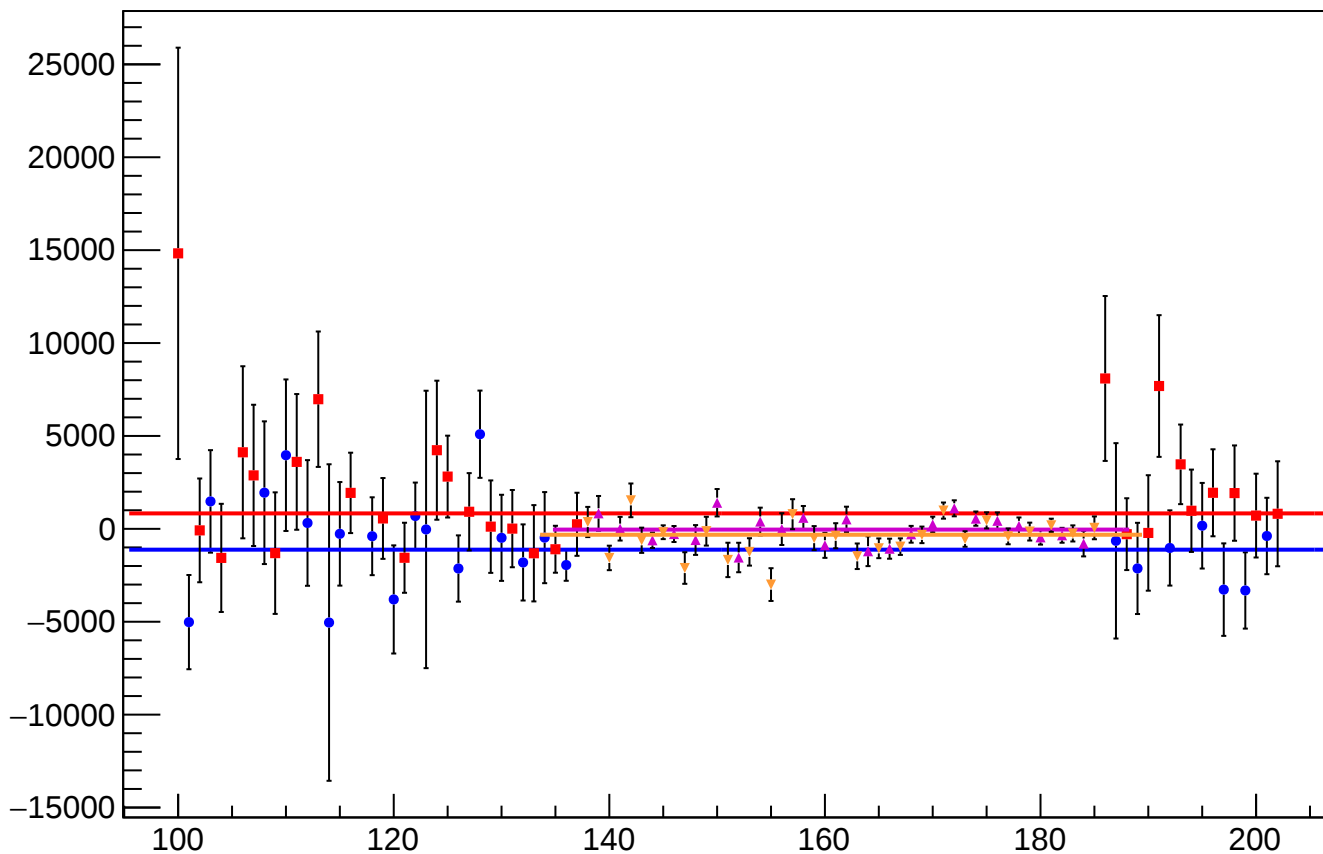
Right: 144.157 $\pm$ 0.022  $\chi^2$ /NDF: 6754111.8/52

In: 85.192 $\pm$ 0.012  $\chi^2$ /NDF: 7142285.0/46

Out: 86.038 $\pm$ 0.012  $\chi^2$ /NDF: 9492420.2/53

All: 85.626 $\pm$ 0.008  $\chi^2$ /NDF: 16637234.6/100

asym\_sam\_26\_avg\_correction\_mean vs Slug, Sign Corrected



Right In: -1121.239 $\pm$ 444.411  $\chi^2$ /NDF: 19.0/23

Left Out: -318.064 $\pm$ 108.014  $\chi^2$ /NDF:50.0/24

Right Out: 831.317 $\pm$ 451.133  $\chi^2$ /NDF: 22.2/28

Left In: -40.473 $\pm$ 110.252  $\chi^2$ /NDF:34.7/22

Left: -182.115 $\pm$ 77.156  $\chi^2$ /NDF: 88.0/47

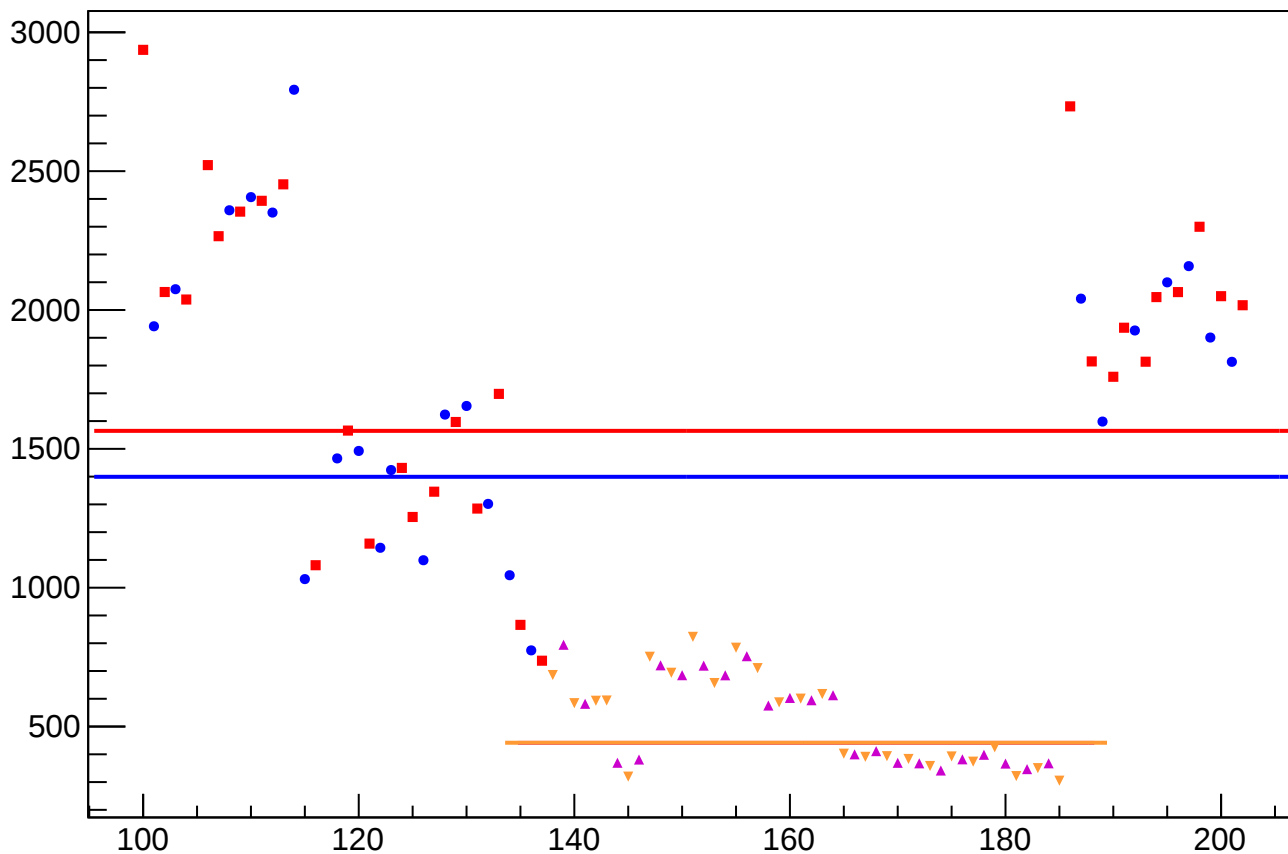
Right: -159.616 $\pm$ 316.596  $\chi^2$ /NDF: 50.7/52

In: -103.134 $\pm$ 107.008  $\chi^2$ /NDF:59.3/46

Out: -255.748 $\pm$ 105.045  $\chi^2$ /NDF:78.4/53

All: -180.854 $\pm$ 74.962  $\chi^2$ /NDF: 138.7/100

asym\_sam\_26\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 1399.324+/-0.314  $\chi^2/\text{NDF}$ : 2730553.7/23

Left Out: 441.685+/-0.076  $\chi^2/\text{NDF}$ : 3169140.9/24

Right Out: 1564.786+/-0.319  $\chi^2/\text{NDF}$ : 2745099.9/28

Left In: 441.009+/-0.078  $\chi^2/\text{NDF}$ : 2597018.1/22

Left: 441.354+/-0.055  $\chi^2/\text{NDF}$ : 5766197.3/47

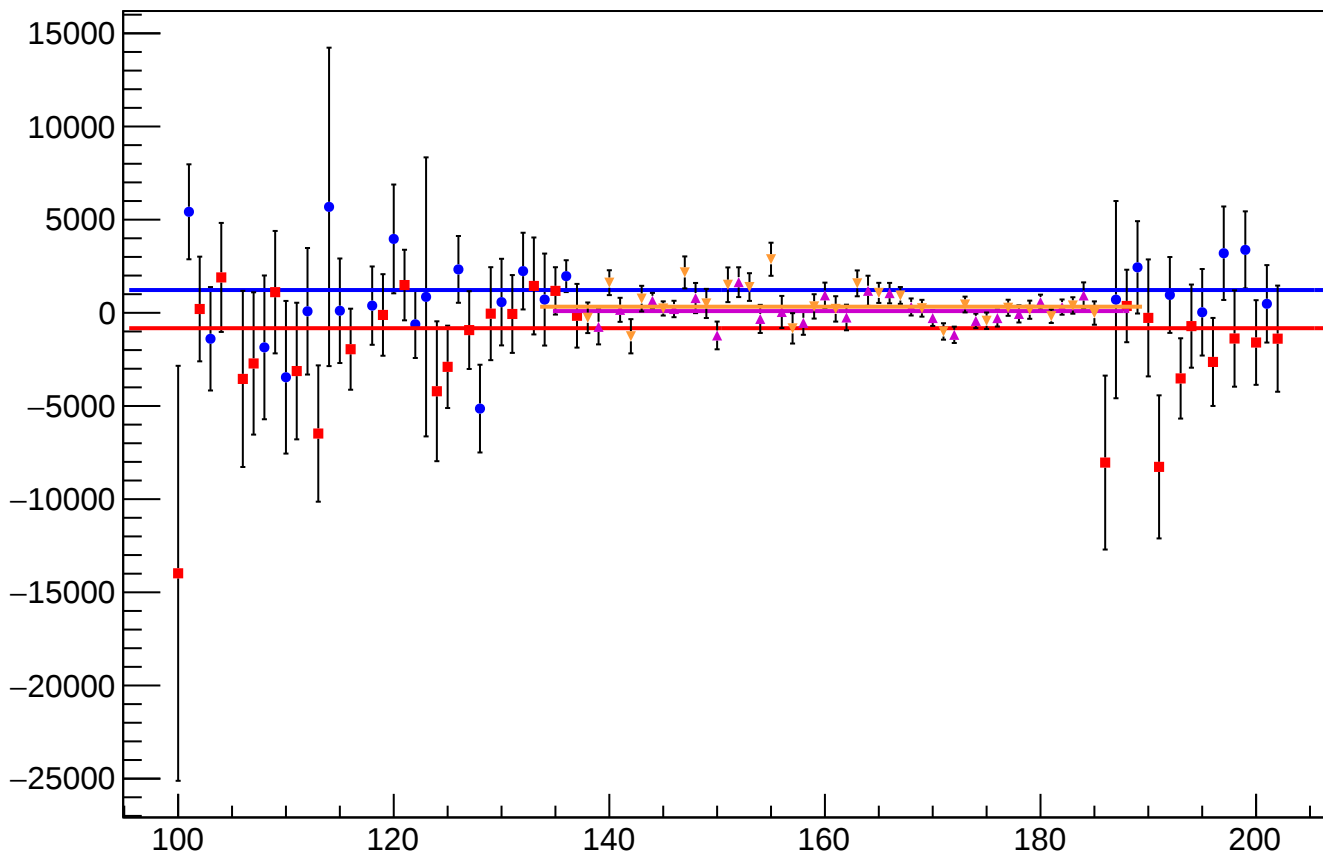
Right: 1480.813+/-0.224  $\chi^2/\text{NDF}$ : 5612194.3/52

In: 496.570+/-0.076  $\chi^2/\text{NDF}$ : 14088267.4/46

Out: 502.576+/-0.074  $\chi^2/\text{NDF}$ : 17637574.0/53

All: 499.629+/-0.053  $\chi^2/\text{NDF}$ : 31729049.9/10

asym\_sam\_26\_avg\_mean vs Slug, Sign Corrected



Right In: 1223.148 $\pm$ 447.203  $\chi^2$ /NDF: 19.3/23

Left Out: 328.599 $\pm$ 109.668  $\chi^2$ /NDF:47.7/24

Right Out: -824.977 $\pm$ 453.994  $\chi^2$ /NDF: 22.2/28

Left In: 93.310 $\pm$ 111.960  $\chi^2$ /NDF:33.3/22

Left: 213.387 $\pm$ 78.345  $\chi^2$ /NDF: 83.3/47

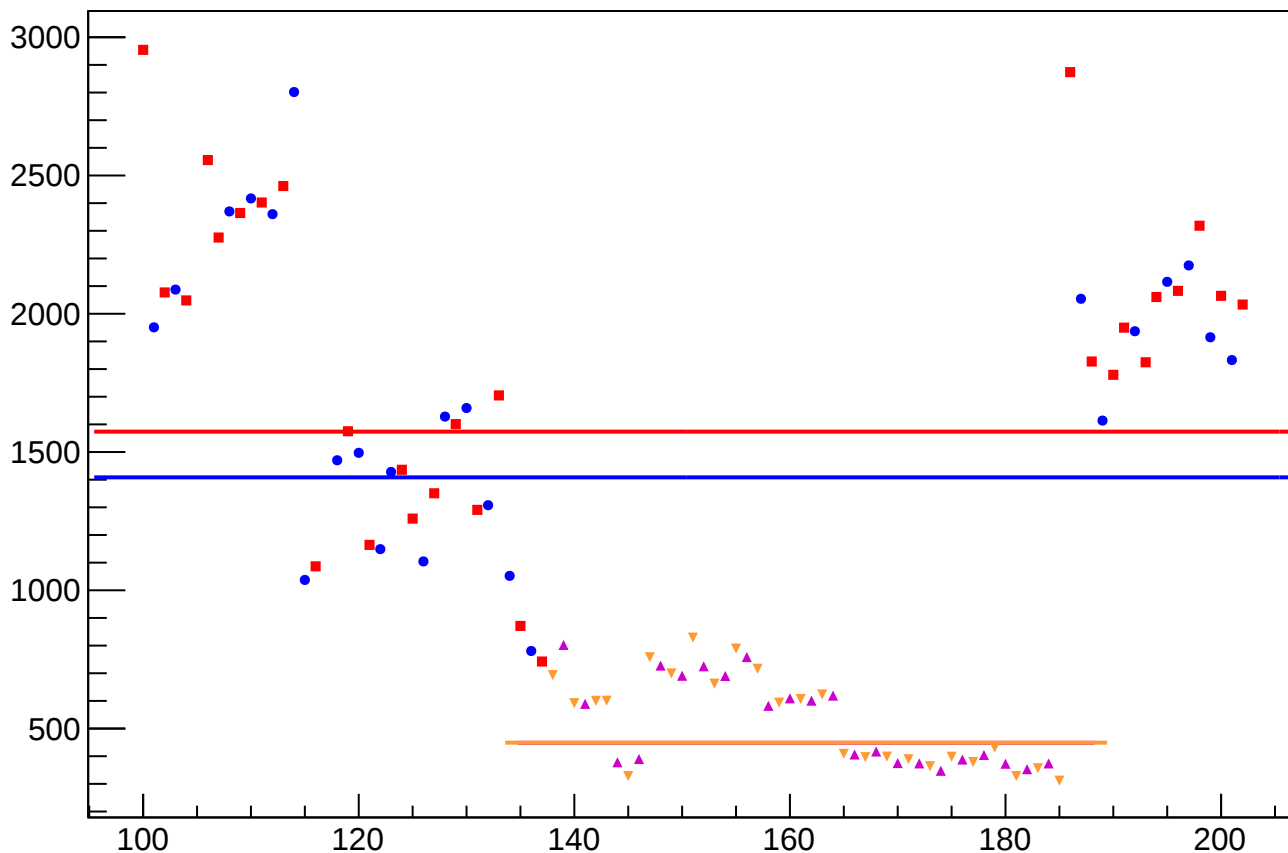
Right: 214.517 $\pm$ 318.594  $\chi^2$ /NDF: 51.9/52

In: 159.949 $\pm$ 108.608  $\chi^2$ /NDF:58.7/46

Out: 264.996 $\pm$ 106.602  $\chi^2$ /NDF:76.0/53

All: 213.452 $\pm$ 76.078  $\chi^2$ /NDF: 135.2/100

# asym\_sam\_26\_avg\_rms vs Slug, Sign Corrected



Right In:  $1408.385 \pm 0.316$   $\chi^2/\text{NDF}: 2723484.0/23$

Left Out:  $449.016 \pm 0.078$   $\chi^2/\text{NDF}: 3090476.2/24$

Right Out:  $1573.750 \pm 0.321$   $\chi^2/\text{NDF}: 2767361.1/28$

Left In:  $448.307 \pm 0.079$   $\chi^2/\text{NDF}: 2537376.0/22$

Left:  $448.669 \pm 0.055$   $\chi^2/\text{NDF}: 5627893.2/47$

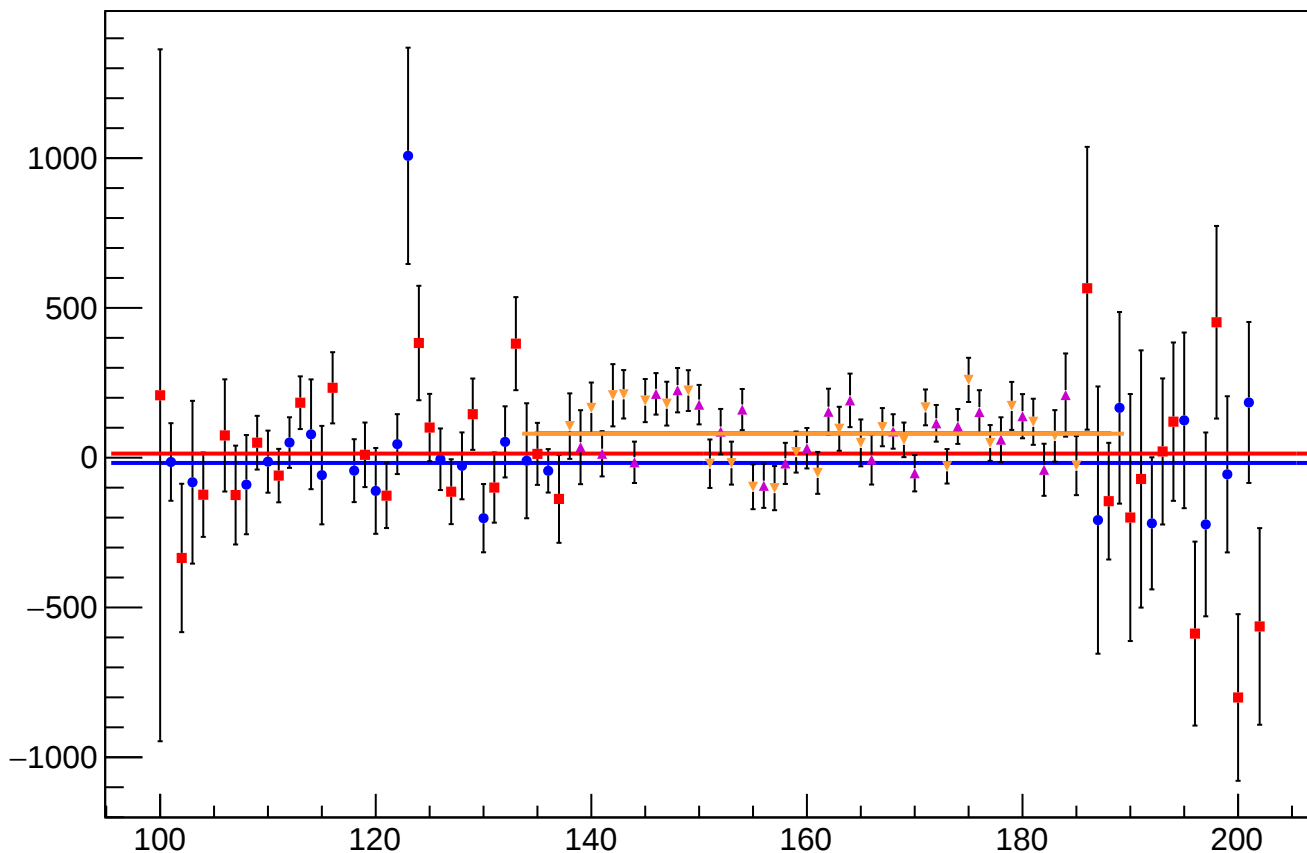
Right:  $1489.822 \pm 0.225$   $\chi^2/\text{NDF}: 5625519.0/52$

In:  $504.933 \pm 0.077$   $\chi^2/\text{NDF}: 13935099.5/46$

Out:  $511.029 \pm 0.075$   $\chi^2/\text{NDF}: 17456267.5/53$

All:  $508.038 \pm 0.054$   $\chi^2/\text{NDF}: 31394575.9/10$

# reg\_asym\_sam\_37\_avg\_mean vs Slug, Sign Corrected



Right In:  $-17.538 \pm 27.918$   $\chi^2/\text{NDF}: 15.9/23$

Left Out:  $80.171 \pm 14.592$   $\chi^2/\text{NDF}: 48.6/24$

Right Out:  $13.703 \pm 26.853$   $\chi^2/\text{NDF}: 47.8/28$

Left In:  $81.156 \pm 15.105$   $\chi^2/\text{NDF}: 35.3/22$

Left:  $80.646 \pm 10.495$   $\chi^2/\text{NDF}: 83.8/47$

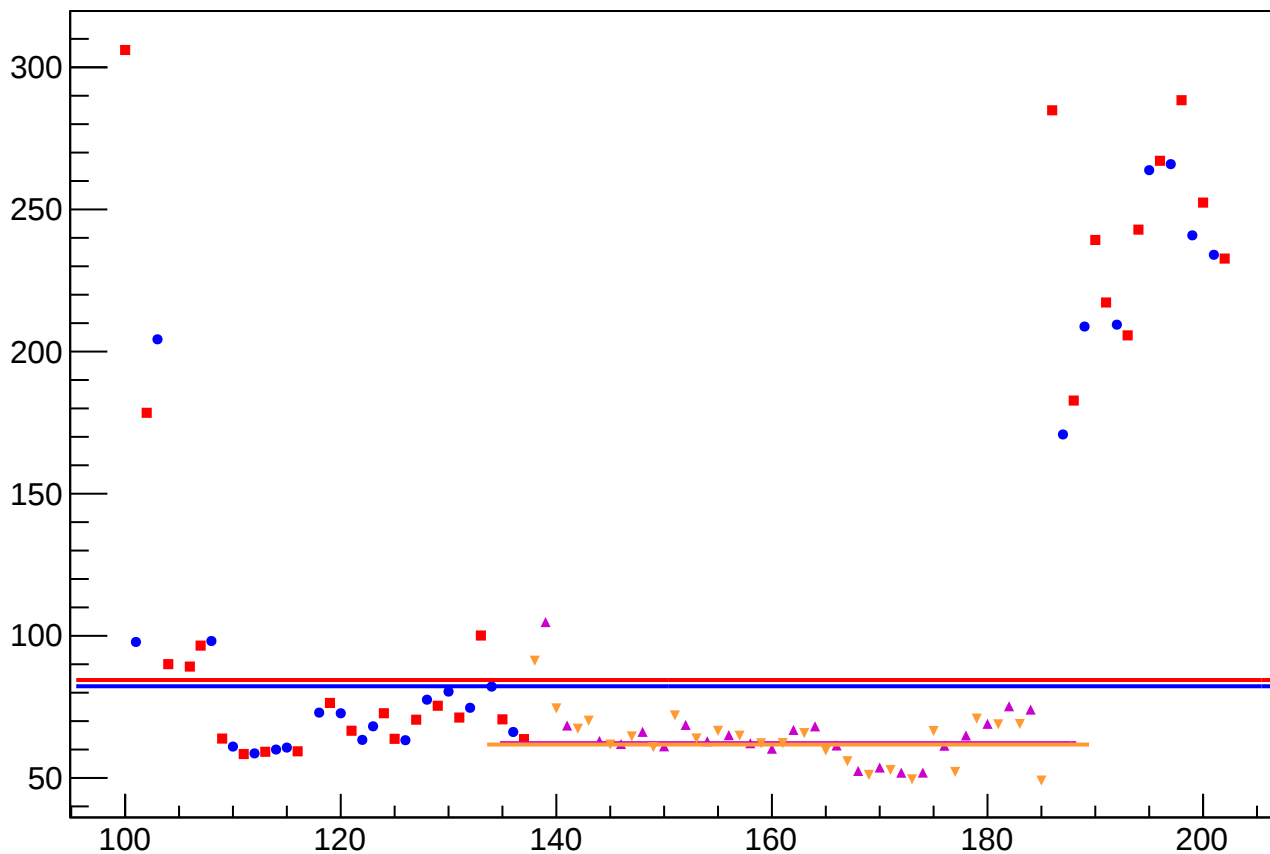
Right:  $-1.310 \pm 19.354$   $\chi^2/\text{NDF}: 64.4/52$

In:  $58.807 \pm 13.285$   $\chi^2/\text{NDF}: 60.9/46$

Out:  $65.018 \pm 12.821$   $\chi^2/\text{NDF}: 101.1/53$

All:  $62.023 \pm 9.226$   $\chi^2/\text{NDF}: 162.1/100$

reg\_asym\_sam\_37\_avg\_rms vs Slug, Sign Corrected



Right In: 82.263+/-0.020  $\chi^2/\text{NDF}$ : 4953363.8/23

Left Out: 61.761+/-0.010  $\chi^2/\text{NDF}$ : 645535.0/24

Right Out: 84.462+/-0.019  $\chi^2/\text{NDF}$ : 6421274.9/28

Left In: 62.250+/-0.011  $\chi^2/\text{NDF}$ : 591085.1/22

Left: 61.997+/-0.007  $\chi^2/\text{NDF}$ : 1237703.8/47

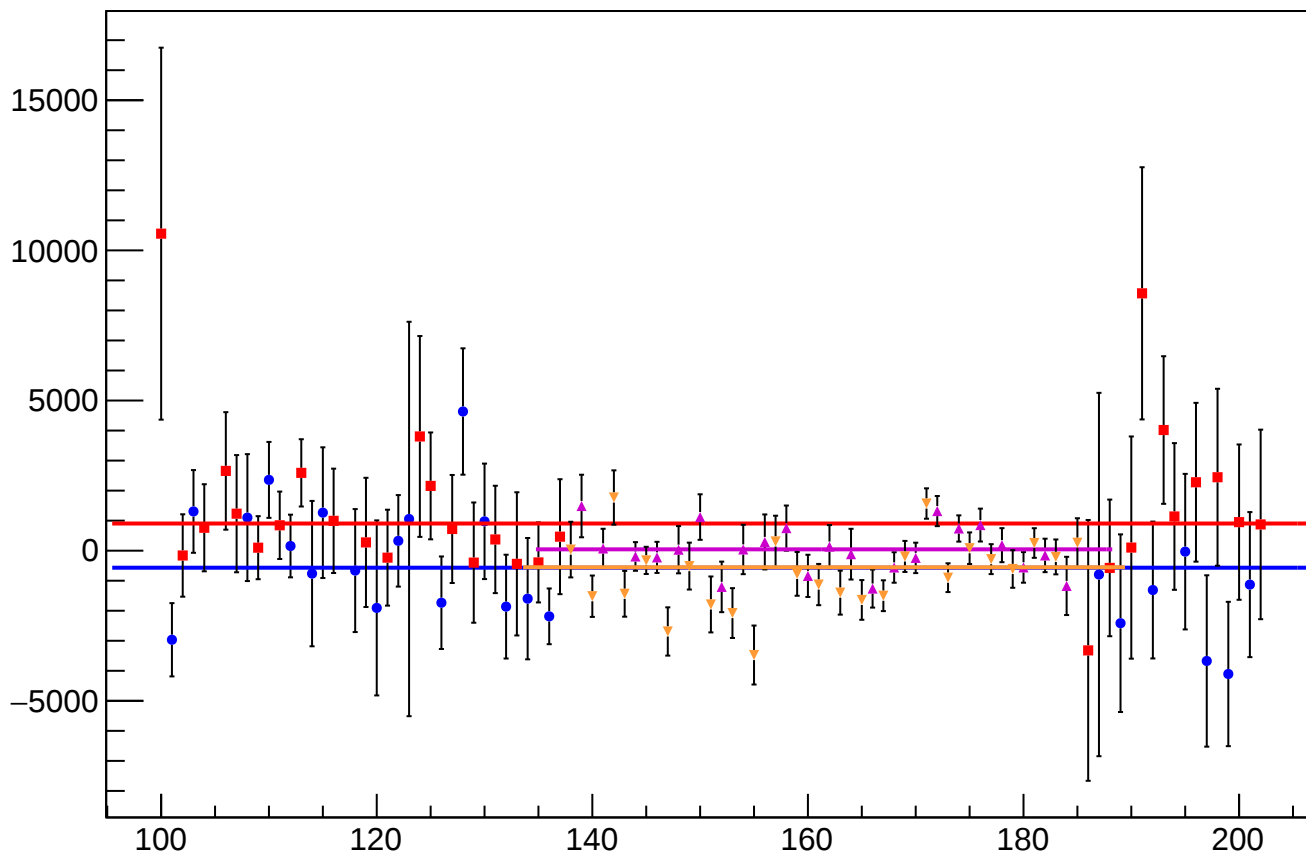
Right: 83.405+/-0.014  $\chi^2/\text{NDF}$ : 11381081.1/52

In: 66.782+/-0.009  $\chi^2/\text{NDF}$ : 6339462.6/46

Out: 66.936+/-0.009  $\chi^2/\text{NDF}$ : 8170244.7/53

All: 66.862+/-0.007  $\chi^2/\text{NDF}$ : 14509846.7/100

asym\_sam\_37\_avg\_correction\_mean vs Slug, Sign Corrected



Right In: -566.901 $\pm$ 358.781  $\chi^2$ /NDF: 28.7/23

Left Out: -552.511 $\pm$ 126.981  $\chi^2$ /NDF:65.3/24

Right Out: 904.510 $\pm$ 342.988  $\chi^2$ /NDF: 17.3/28

Left In: 44.578 $\pm$ 129.095  $\chi^2$ /NDF:29.6/22

Left: -258.894 $\pm$ 90.527  $\chi^2$ /NDF: 105.7/47

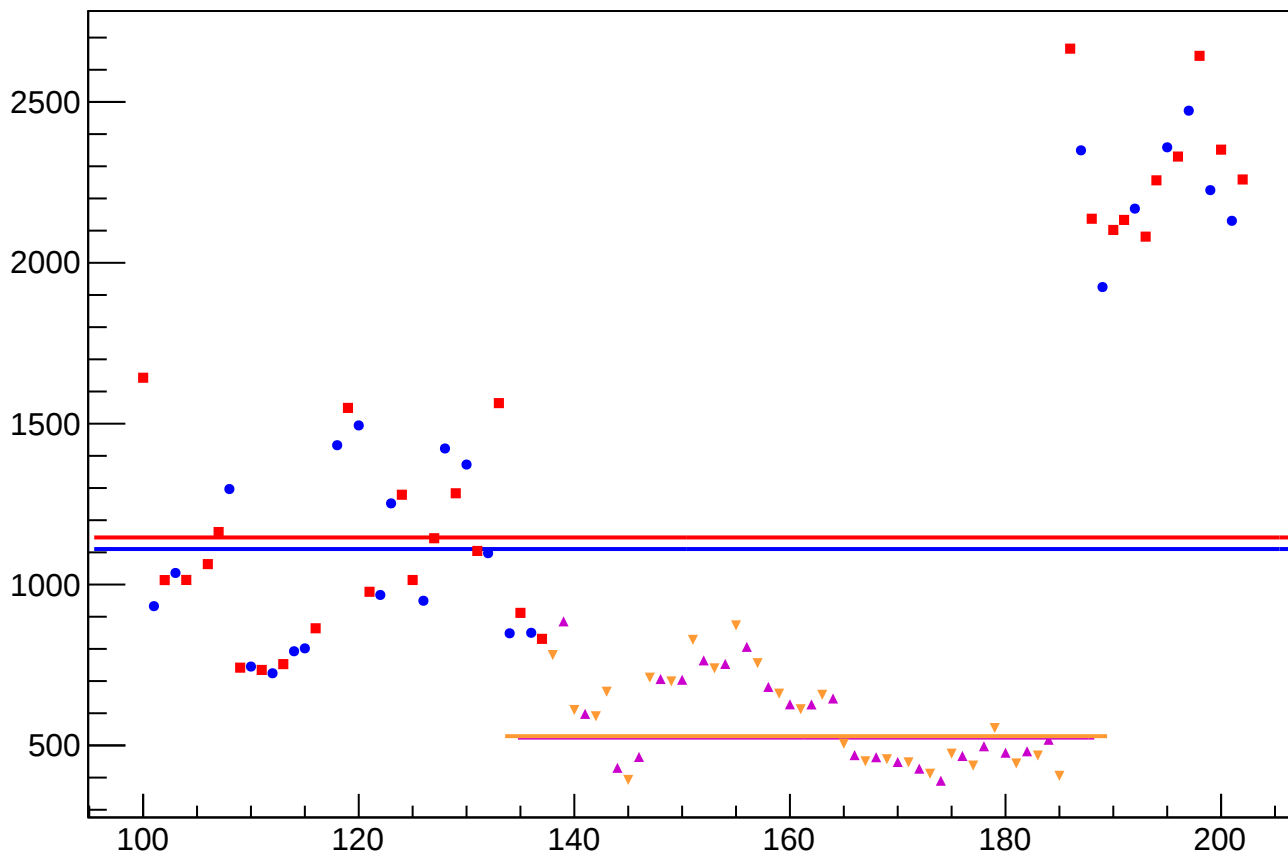
Right: 201.902 $\pm$ 247.924  $\chi^2$ /NDF: 54.8/52

In: -25.513 $\pm$ 121.471  $\chi^2$ /NDF:60.8/46

Out: -376.879 $\pm$ 119.082  $\chi^2$ /NDF:98.5/53

All: -204.685 $\pm$ 85.036  $\chi^2$ /NDF: 163.5/100

asym\_sam\_37\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 1110.368+/-0.254  $\chi^2/\text{NDF}$ : 3351527.8/23

Left Out: 528.736+/-0.090  $\chi^2/\text{NDF}$ : 1983697.7/24

Right Out: 1146.401+/-0.243  $\chi^2/\text{NDF}$ : 4383769.0/28

Left In: 524.268+/-0.091  $\chi^2/\text{NDF}$ : 1716257.3/22

Left: 526.539+/-0.064  $\chi^2/\text{NDF}$ : 3701172.5/47

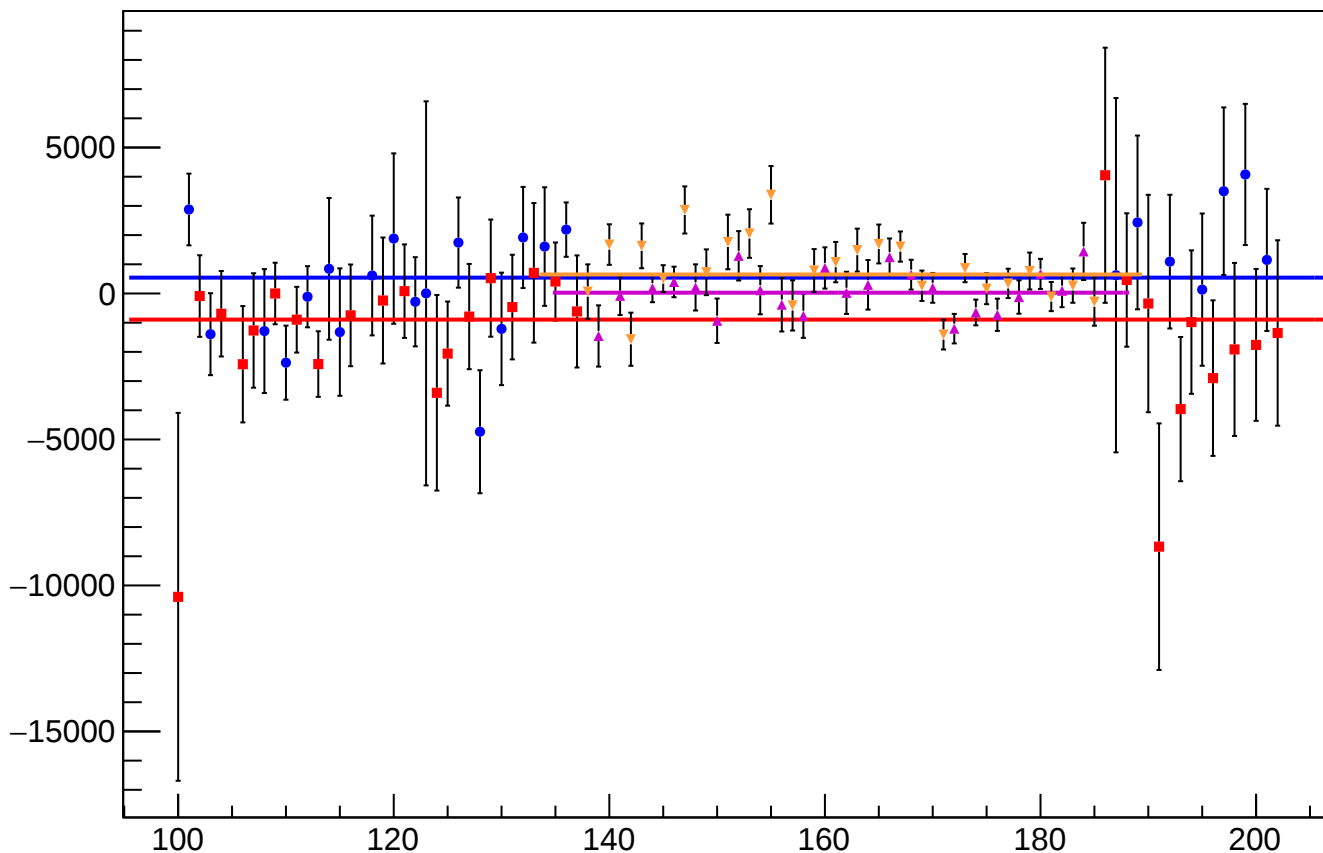
Right: 1129.195+/-0.175  $\chi^2/\text{NDF}$ : 7745837.2/52

In: 591.451+/-0.086  $\chi^2/\text{NDF}$ : 9793214.8/46

Out: 603.190+/-0.084  $\chi^2/\text{NDF}$ : 12071671.5/53

All: 597.437+/-0.060  $\chi^2/\text{NDF}$ : 21874412.0/100

# asym\_sam\_37\_avg\_mean vs Slug, Sign Corrected



Right In: 543.425 $\pm$ 360.477  $\chi^2$ /NDF: 28.7/23

Left Out: 651.560 $\pm$ 127.961  $\chi^2$ /NDF:61.1/24

Right Out: -894.408 $\pm$ 344.760  $\chi^2$ /NDF: 16.6/28

Left In: 27.483 $\pm$ 130.127  $\chi^2$ /NDF:28.5/22

Left: 344.758 $\pm$ 91.238  $\chi^2$ /NDF: 101.2/47

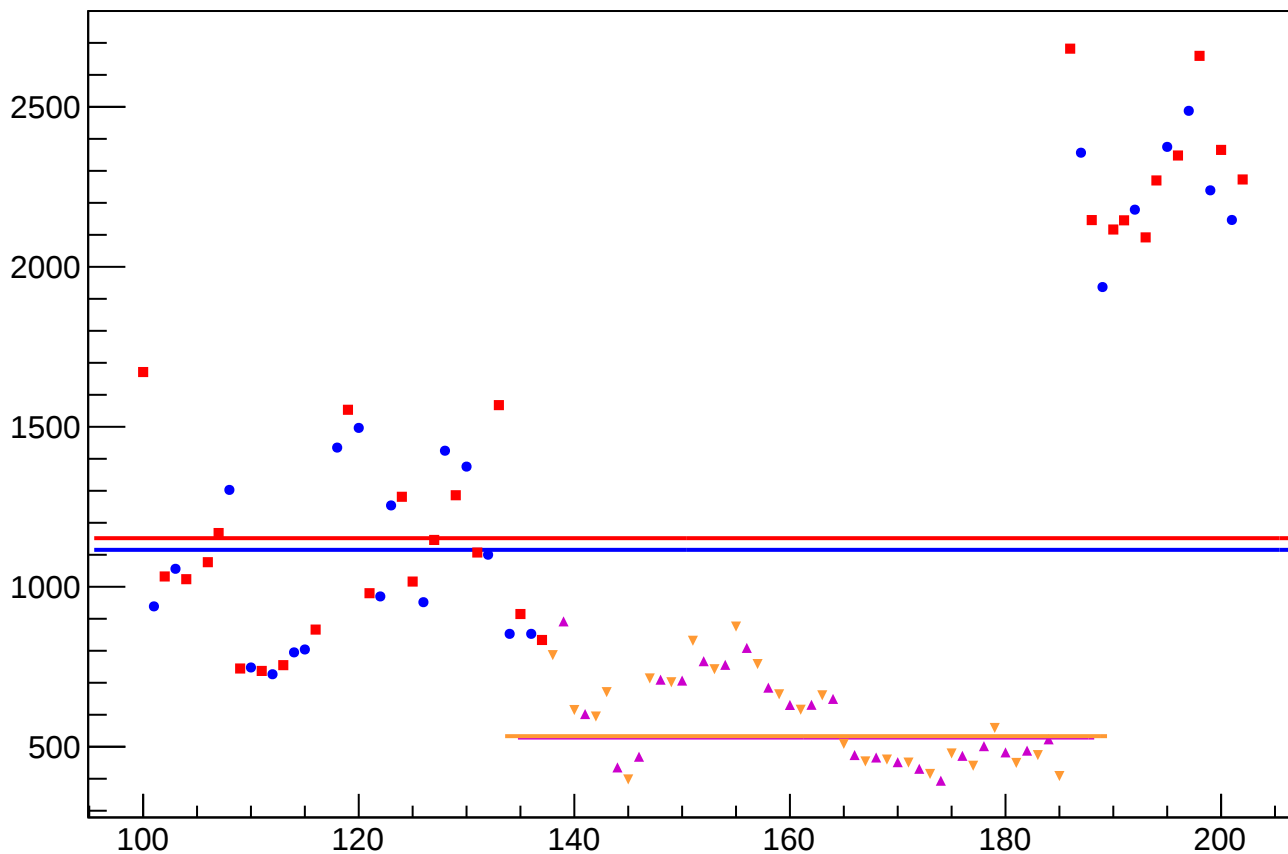
Right: -207.520 $\pm$ 249.153  $\chi^2$ /NDF: 53.6/52

In: 86.964 $\pm$ 122.396  $\chi^2$ /NDF:58.9/46

Out: 464.375 $\pm$ 119.964  $\chi^2$ /NDF:95.4/53

All: 279.456 $\pm$ 85.674  $\chi^2$ /NDF: 159.2/100

# asym\_sam\_37\_avg\_rms vs Slug, Sign Corrected



Right In: 1115.423+/-0.255  $\chi^2/\text{NDF}$ : 3358641.9/23

Left Out: 533.060+/-0.090  $\chi^2/\text{NDF}$ :1951536.4/24

Right Out: 1151.881+/-0.244  $\chi^2/\text{NDF}$ : 4393978.4/28

Left In: 528.694+/-0.092  $\chi^2/\text{NDF}$ :1688511.2/22

Left: 530.914+/-0.065  $\chi^2/\text{NDF}$ : 3641192.3/47

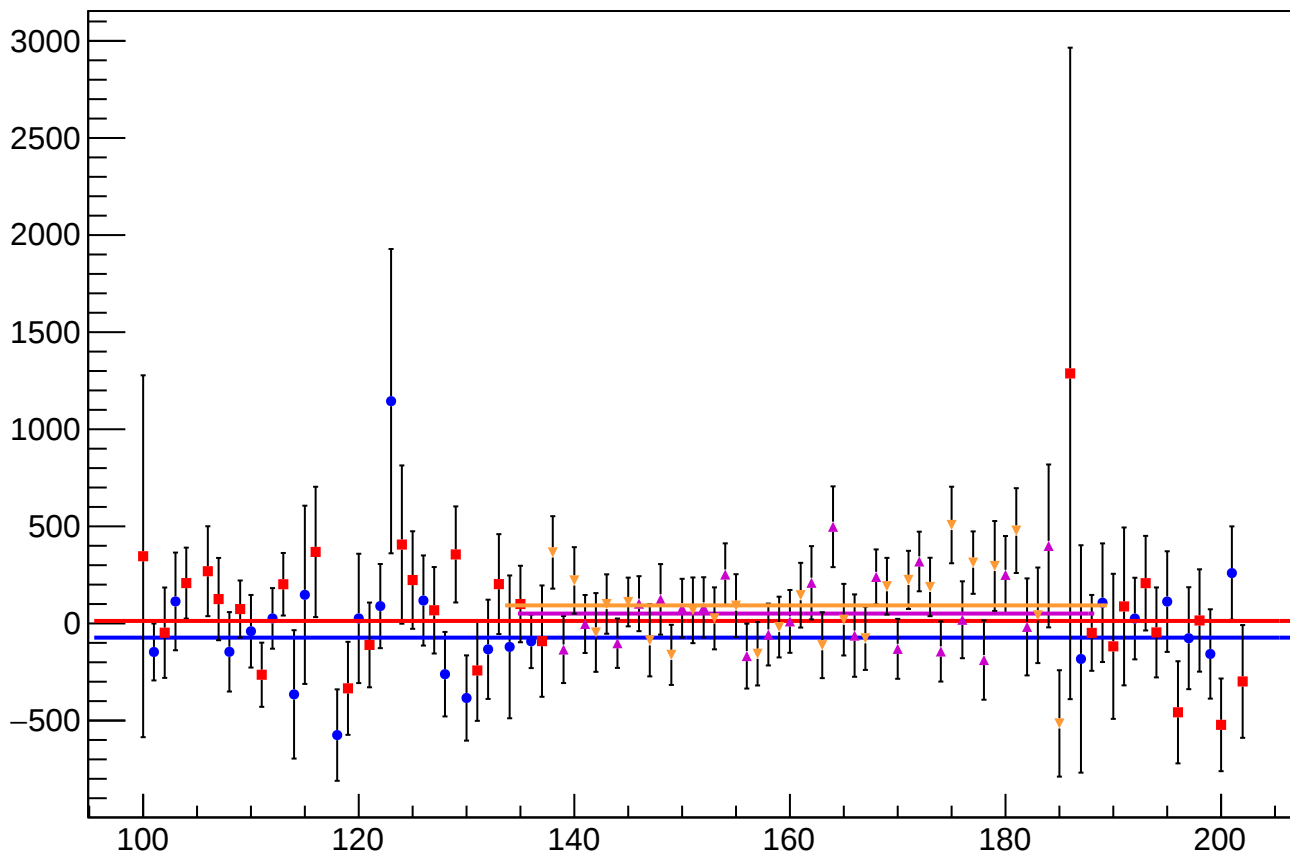
Right: 1134.464+/-0.176  $\chi^2/\text{NDF}$ : 7763305.1/52

In: 596.336+/-0.087  $\chi^2/\text{NDF}$ :9734760.5/46

Out: 607.987+/-0.085  $\chi^2/\text{NDF}$ :12008888.2/53

All: 602.278+/-0.061  $\chi^2/\text{NDF}$ : 21752891.4/10

reg\_asym\_sam\_48\_avg\_mean vs Slug, Sign Corrected



Right In:  $-73.056 \pm 46.750$   $\chi^2/\text{NDF}$ : 16.7/23

Left Out:  $92.994 \pm 34.054$   $\chi^2/\text{NDF}$ : 29.4/24

Right Out:  $12.960 \pm 43.887$   $\chi^2/\text{NDF}$ : 27.1/28

Left In:  $50.896 \pm 35.280$   $\chi^2/\text{NDF}$ : 23.5/22

Left:  $72.689 \pm 24.502$   $\chi^2/\text{NDF}$ : 53.6/47

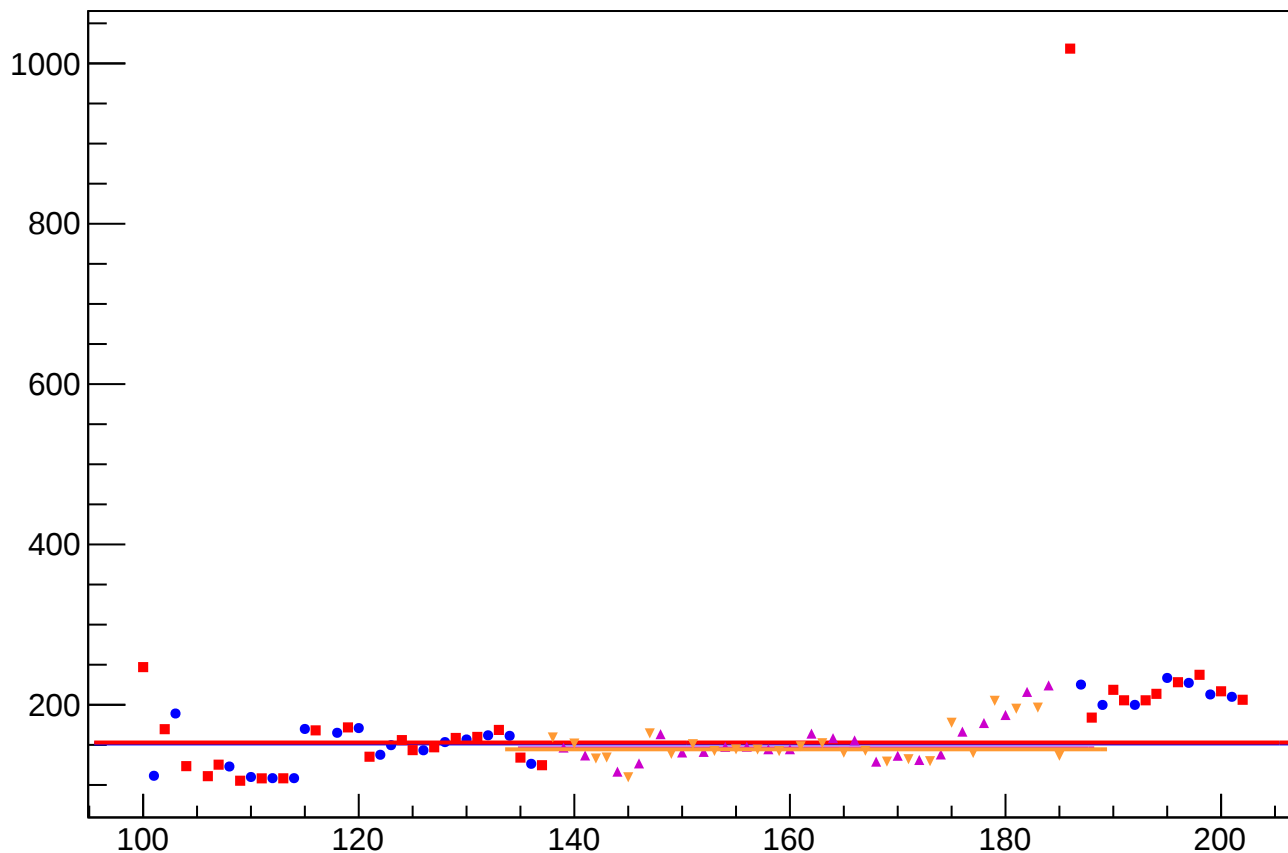
Right:  $-27.334 \pm 31.997$   $\chi^2/\text{NDF}$ : 45.6/52

In:  $5.919 \pm 28.161$   $\chi^2/\text{NDF}$ : 44.6/46

Out:  $62.916 \pm 26.904$   $\chi^2/\text{NDF}$ : 58.6/53

All:  $35.718 \pm 19.453$   $\chi^2/\text{NDF}$ : 105.4/100

reg\_asym\_sam\_48\_avg\_rms vs Slug, Sign Corrected



Right In: 151.805 $\pm$ 0.033  $\chi^2$ /NDF: 1432833.4/23

Left Out: 144.475 $\pm$ 0.024  $\chi^2$ /NDF: 670488.7/24

Right Out: 152.953 $\pm$ 0.031  $\chi^2$ /NDF: 2263650.4/28

Left In: 145.535 $\pm$ 0.025  $\chi^2$ /NDF: 643529.3/22

Left: 144.986 $\pm$ 0.017  $\chi^2$ /NDF: 1314951.6/47

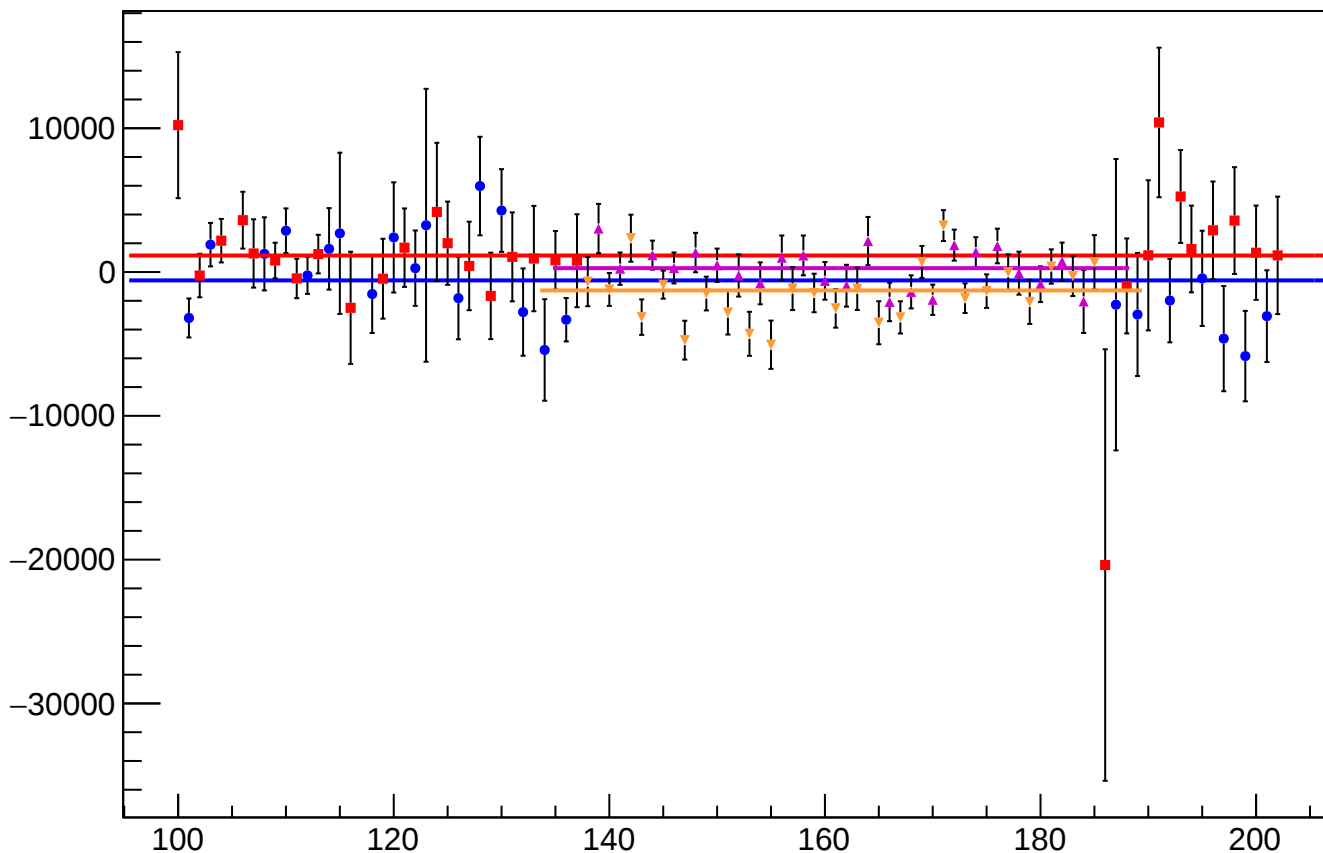
Right: 152.416 $\pm$ 0.023  $\chi^2$ /NDF: 3697125.0/52

In: 147.810 $\pm$ 0.020  $\chi^2$ /NDF: 2099289.3/46

Out: 147.661 $\pm$ 0.019  $\chi^2$ /NDF: 2980728.0/53

All: 147.732 $\pm$ 0.014  $\chi^2$ /NDF: 5080046.5/100

asym\_sam\_48\_avg\_correction\_mean vs Slug, Sign Corrected



Right In: -581.281+/-489.263  $\chi^2/\text{NDF}$ : 31.5/23

Left Out: -1279.328+/-259.299  $\chi^2/\text{NDF}$ : 55.9/24

Right Out: 1149.444+/-447.220  $\chi^2/\text{NDF}$ : 18.2/28

Left In: 269.952+/-266.245  $\chi^2/\text{NDF}$ : 24.3/22

Left: -525.161+/-185.759  $\chi^2/\text{NDF}$ : 97.6/47

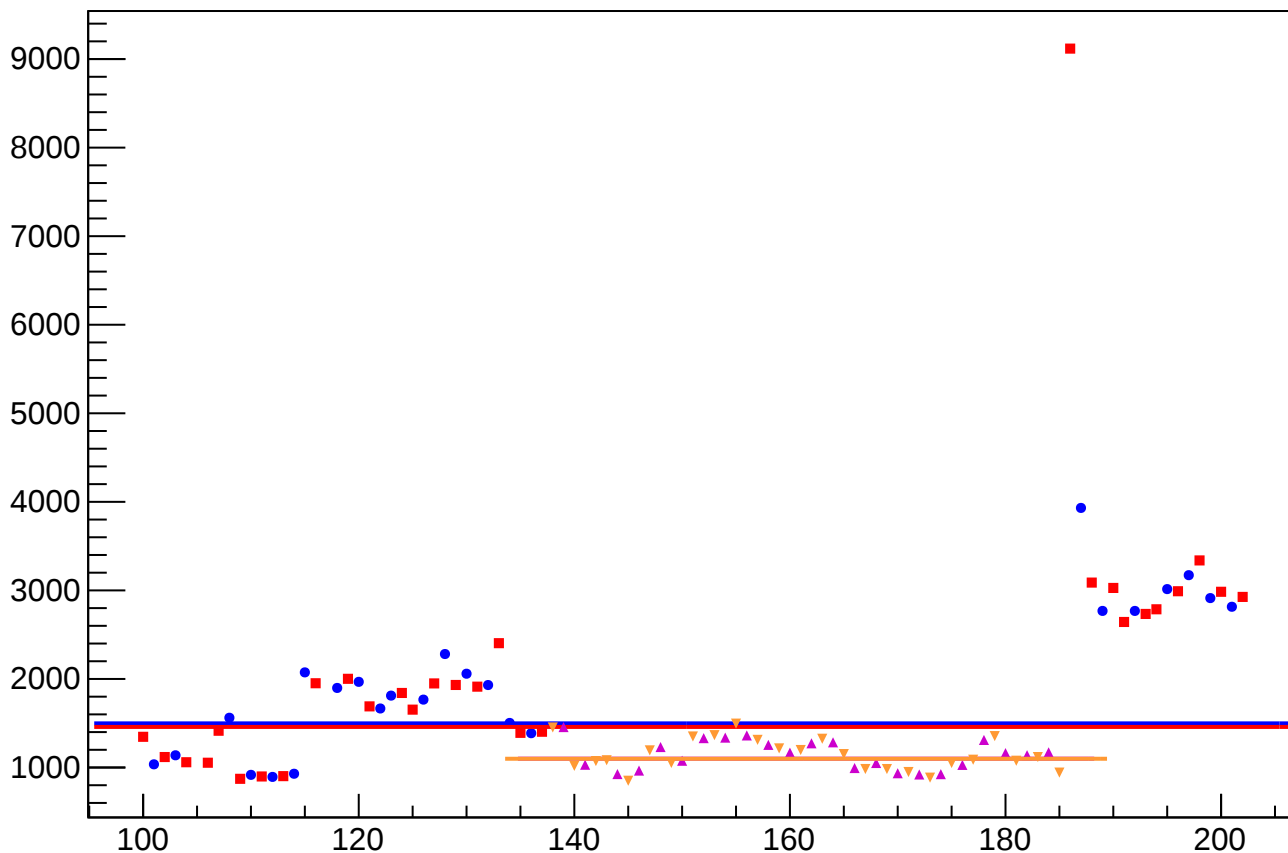
Right: 361.626+/-330.097  $\chi^2/\text{NDF}$ : 56.5/52

In: 75.470+/-233.861  $\chi^2/\text{NDF}$ : 58.1/46

Out: -668.267+/-224.321  $\chi^2/\text{NDF}$ : 96.2/53

All: -311.878+/-161.887  $\chi^2/\text{NDF}$ : 159.6/100

asym\_sam\_48\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 1498.470+/-0.346  $\chi^2/\text{NDF}$ : 3761914.7/23

Left Out: 1098.909+/-0.183  $\chi^2/\text{NDF}$ : 824328.7/24

Right Out: 1458.289+/-0.316  $\chi^2/\text{NDF}$ : 5480386.2/28

Left In: 1099.585+/-0.188  $\chi^2/\text{NDF}$ : 679896.1/22

Left: 1099.238+/-0.131  $\chi^2/\text{NDF}$ : 1504231.4/47

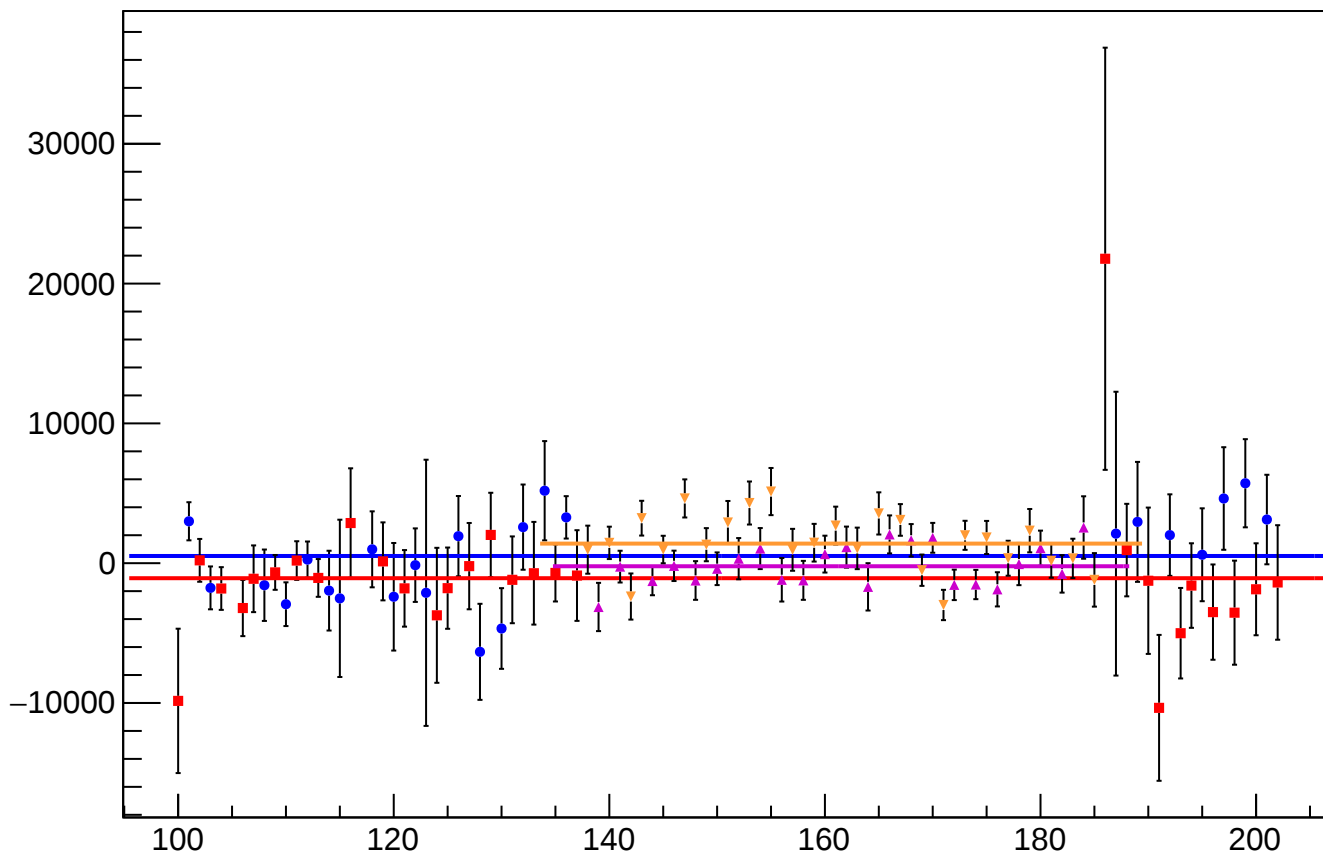
Right: 1476.580+/-0.233  $\chi^2/\text{NDF}$ : 9249650.0/52

In: 1190.719+/-0.165  $\chi^2/\text{NDF}$ : 5467447.5/46

Out: 1189.326+/-0.159  $\chi^2/\text{NDF}$ : 7271287.6/53

All: 1189.994+/-0.114  $\chi^2/\text{NDF}$ : 12738772.0/100

asym\_sam\_48\_avg\_mean vs Slug, Sign Corrected



Right In: 515.108 $\pm$ 492.215  $\chi^2$ /NDF: 31.1/23

Left Out: 1400.458 $\pm$ 261.804  $\chi^2$ /NDF:52.2/24

Right Out: -1074.476 $\pm$ 450.347  $\chi^2$ /NDF: 17.0/28

Left In: -219.393 $\pm$ 268.852  $\chi^2$ /NDF:25.0/22

Left: 612.044 $\pm$ 187.566  $\chi^2$ /NDF: 95.9/47

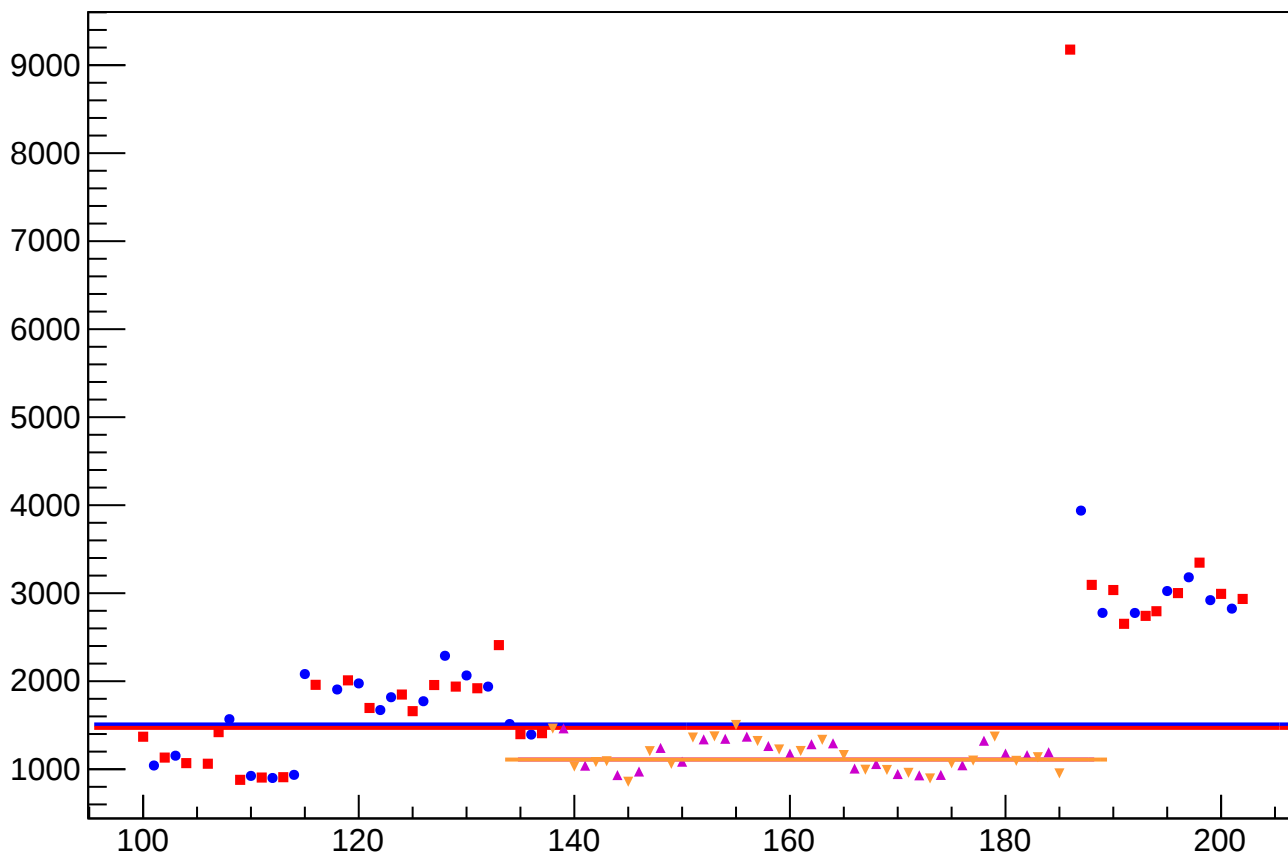
Right: -350.153 $\pm$ 332.261  $\chi^2$ /NDF: 53.8/52

In: -50.613 $\pm$ 235.949  $\chi^2$ /NDF:57.8/46

Out: 775.313 $\pm$ 226.337  $\chi^2$ /NDF:91.9/53

All: 379.516 $\pm$ 163.337  $\chi^2$ /NDF: 156.1/100

# asym\_sam\_48\_avg\_rms vs Slug, Sign Corrected



Right In: 1508.845+/-0.348  $\chi^2/\text{NDF}$ : 3729883.4/23

Left Out: 1109.761+/-0.185  $\chi^2/\text{NDF}$ : 812174.9/24

Right Out: 1469.710+/-0.318  $\chi^2/\text{NDF}$ : 5435515.2/28

Left In: 1110.542+/-0.190  $\chi^2/\text{NDF}$ : 669928.9/22

Left: 1110.141+/-0.133  $\chi^2/\text{NDF}$ : 1482112.5/47

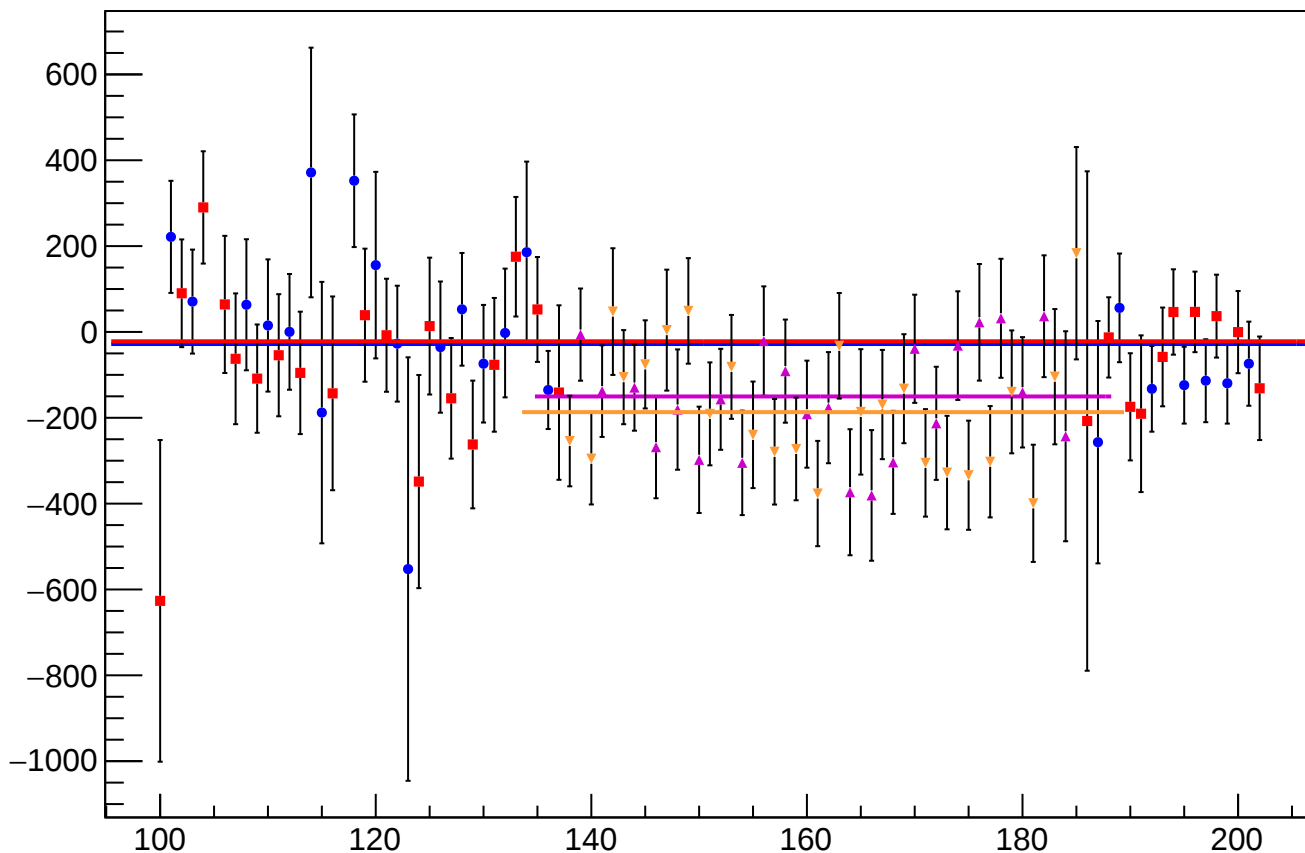
Right: 1487.542+/-0.235  $\chi^2/\text{NDF}$ : 9172280.5/52

In: 1202.067+/-0.167  $\chi^2/\text{NDF}$ : 5408501.5/46

Out: 1200.681+/-0.160  $\chi^2/\text{NDF}$ : 7202626.8/53

All: 1201.345+/-0.115  $\chi^2/\text{NDF}$ : 12611164.3/100

reg\_asym\_sam\_15\_dd\_mean vs Slug, Sign Corrected



Right In:  $-28.107 \pm 26.943$   $\chi^2/\text{NDF}$ : 23.1/23

Left Out:  $-186.838 \pm 25.308$   $\chi^2/\text{NDF}$ : 26.6/24

Right Out:  $-21.760 \pm 24.893$   $\chi^2/\text{NDF}$ : 23.6/28

Left In:  $-150.315 \pm 26.445$   $\chi^2/\text{NDF}$ : 20.7/22

Left:  $-169.379 \pm 18.284$   $\chi^2/\text{NDF}$ : 48.3/47

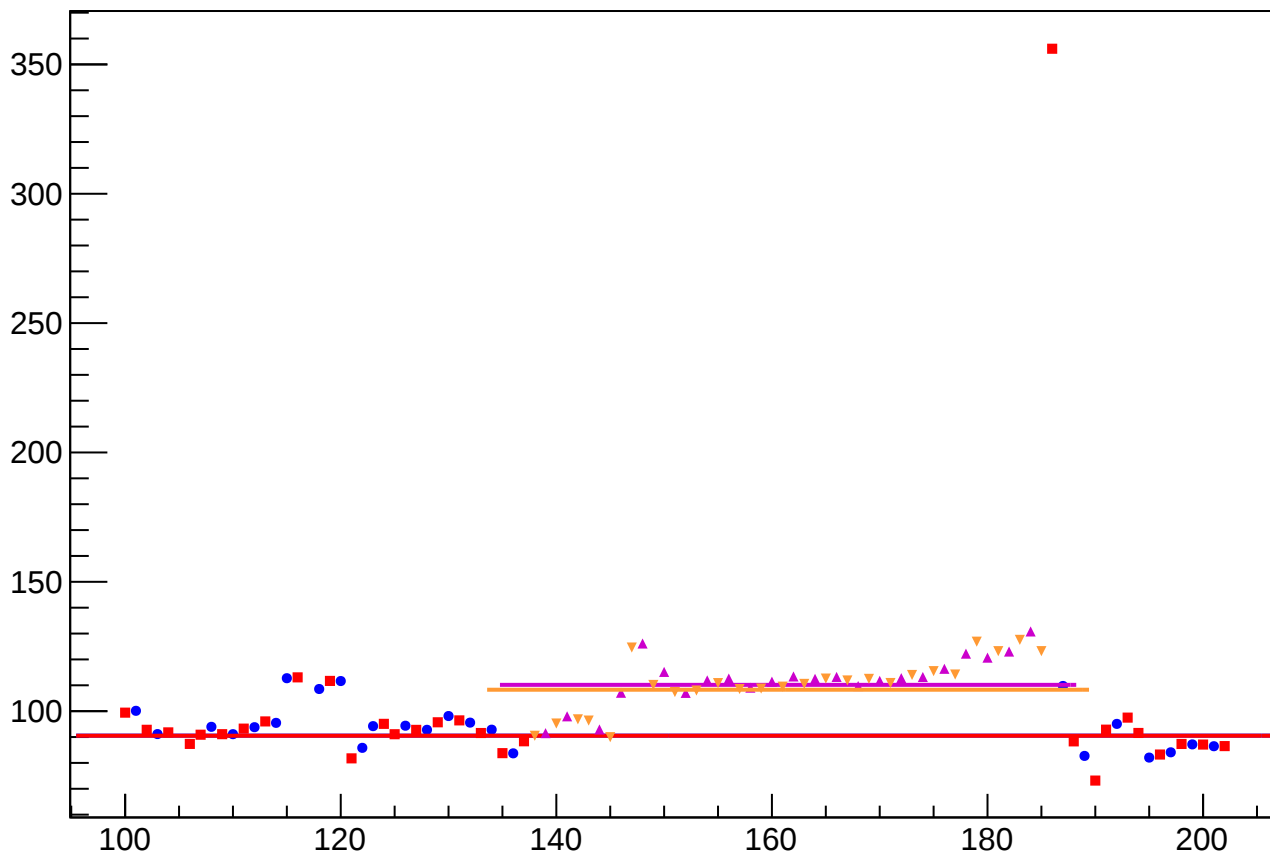
Right:  $-24.683 \pm 18.284$   $\chi^2/\text{NDF}$ : 46.7/52

In:  $-90.351 \pm 18.873$   $\chi^2/\text{NDF}$ : 54.3/46

Out:  $-102.935 \pm 17.747$   $\chi^2/\text{NDF}$ : 71.8/53

All:  $-97.029 \pm 12.929$   $\chi^2/\text{NDF}$ : 126.3/100

reg\_asym\_sam\_15\_dd\_rms vs Slug, Sign Corrected



Right In: 90.547+/-0.019  $\chi^2$ /NDF: 148581.0/23

Left Out: 108.287+/-0.018  $\chi^2$ /NDF: 330693.5/24

Right Out: 90.507+/-0.018  $\chi^2$ /NDF: 568927.0/28

Left In: 110.173+/-0.019  $\chi^2$ /NDF: 246967.7/22

Left: 109.189+/-0.013  $\chi^2$ /NDF: 582969.0/47

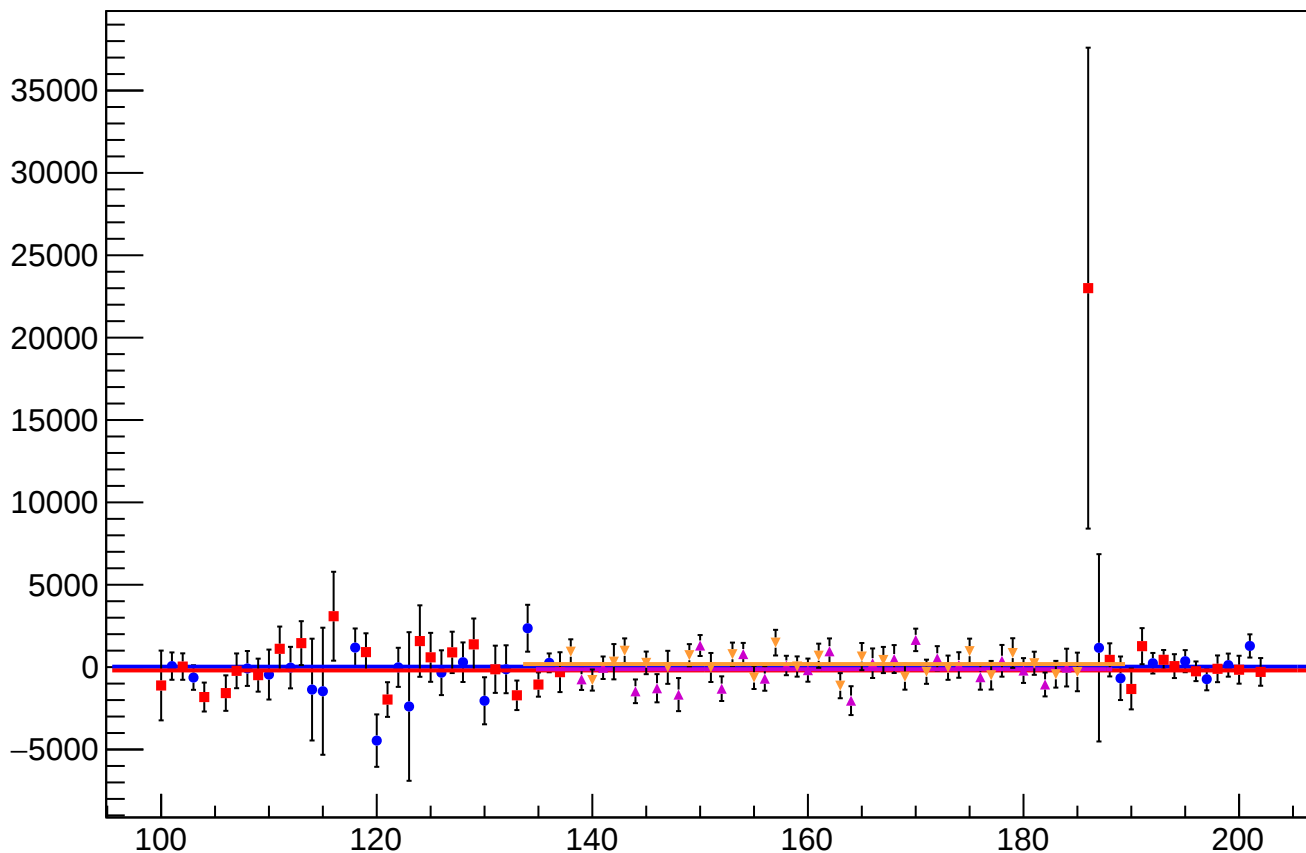
Right: 90.526+/-0.013  $\chi^2$ /NDF: 717510.3/52

In: 100.543+/-0.013  $\chi^2$ /NDF: 936043.0/46

Out: 99.250+/-0.013  $\chi^2$ /NDF: 1401360.4/53

All: 99.857+/-0.009  $\chi^2$ /NDF: 2342385.3/100

asym\_sam\_15\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: 25.719+/-201.430  $\chi^2/\text{NDF}$ : 20.7/23

Left Out: 185.392+/-153.683  $\chi^2/\text{NDF}$ :18.4/24

Right Out: -200.801+/-185.485  $\chi^2/\text{NDF}$ : 27.0/28

Left In: -128.782+/-157.155  $\chi^2/\text{NDF}$ :36.2/22

Left: 31.814+/-109.877  $\chi^2/\text{NDF}$ : 56.6/47

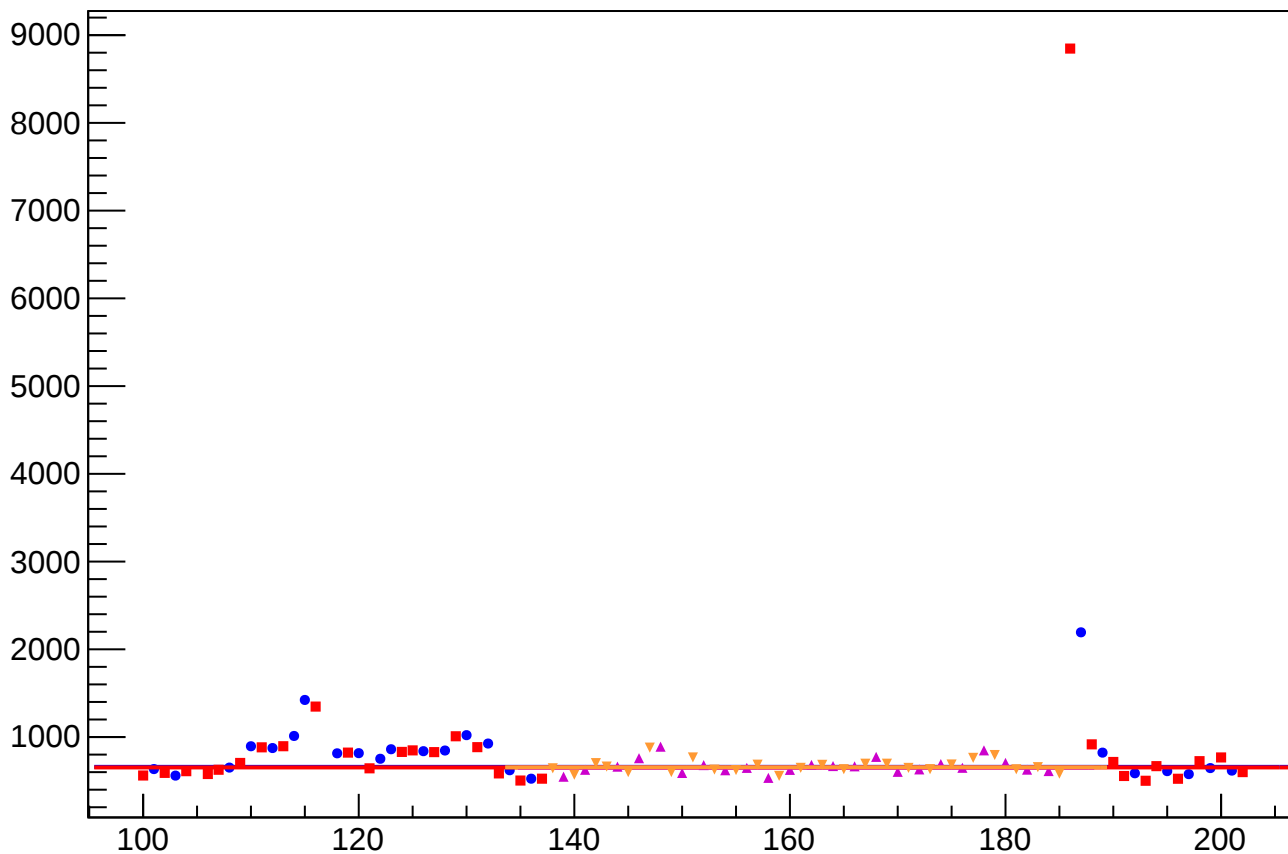
Right: -96.861+/-136.447  $\chi^2/\text{NDF}$ : 48.4/52

In: -70.321+/-123.905  $\chi^2/\text{NDF}$ :57.3/46

Out: 28.191+/-118.341  $\chi^2/\text{NDF}$ :47.9/53

All: -18.803+/-85.579  $\chi^2/\text{NDF}$ : 105.5/100

asym\_sam\_15\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 660.251+/-0.142  $\chi^2/\text{NDF}$ : 960491.9/23

Left Out: 655.155+/-0.109  $\chi^2/\text{NDF}$ : 367349.8/24

Right Out: 653.684+/-0.131  $\chi^2/\text{NDF}$ : 1765603.0/28

Left In: 650.883+/-0.111  $\chi^2/\text{NDF}$ : 466116.8/22

Left: 653.067+/-0.078  $\chi^2/\text{NDF}$ : 834222.1/47

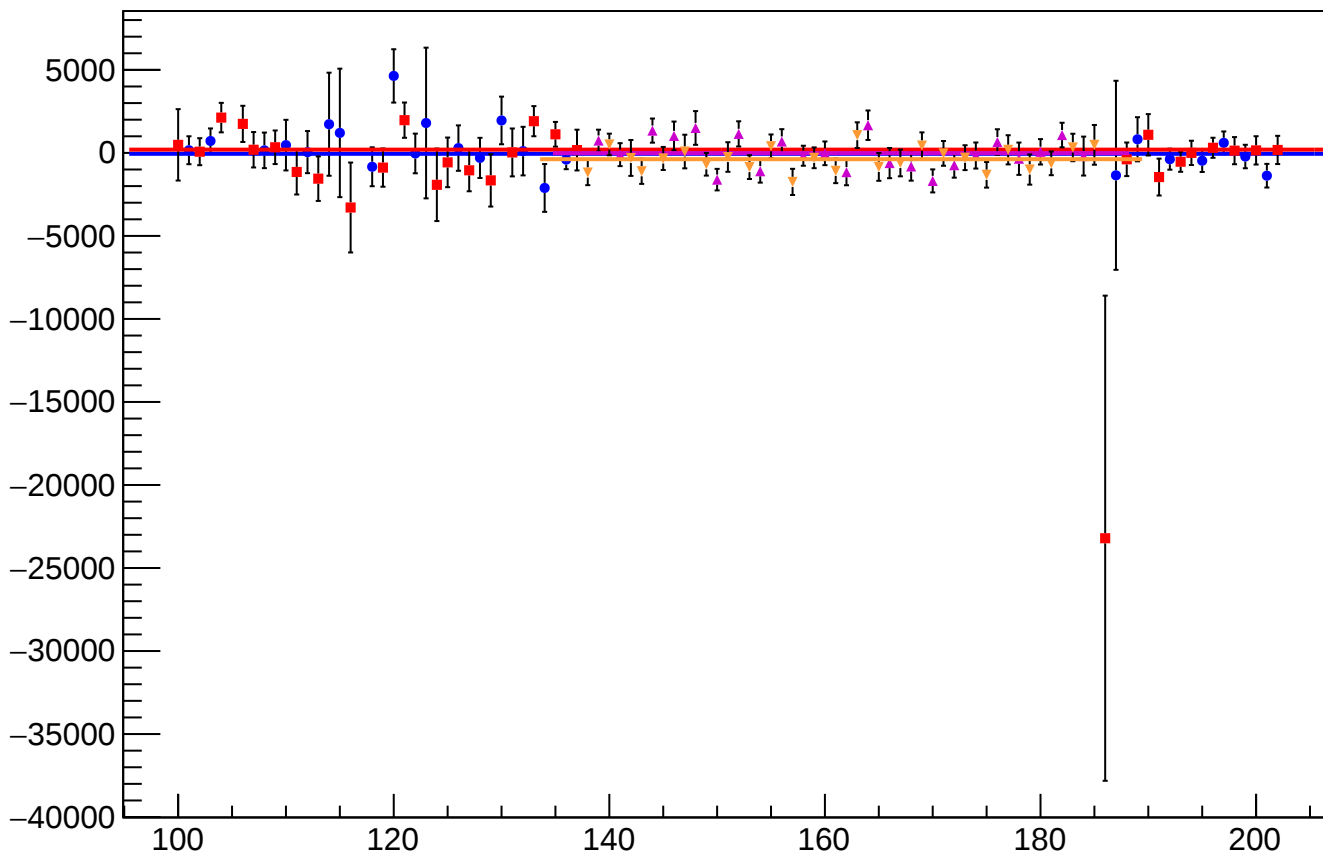
Right: 656.697+/-0.096  $\chi^2/\text{NDF}$ : 2727245.4/52

In: 654.428+/-0.088  $\chi^2/\text{NDF}$ : 1429297.9/46

Out: 654.556+/-0.084  $\chi^2/\text{NDF}$ : 2133027.4/53

All: 654.495+/-0.061  $\chi^2/\text{NDF}$ : 3562326.4/100

# asym\_sam\_15\_dd\_mean vs Slug, Sign Corrected



Right In:  $-54.701 \pm 203.511$   $\chi^2/\text{NDF}$ : 20.9/23

Left Out:  $-379.470 \pm 155.892$   $\chi^2/\text{NDF}$ : 18.8/24

Right Out:  $196.621 \pm 187.524$   $\chi^2/\text{NDF}$ : 30.7/28

Left In:  $-14.768 \pm 159.513$   $\chi^2/\text{NDF}$ : 37.2/22

Left:  $-201.306 \pm 111.491$   $\chi^2/\text{NDF}$ : 58.7/47

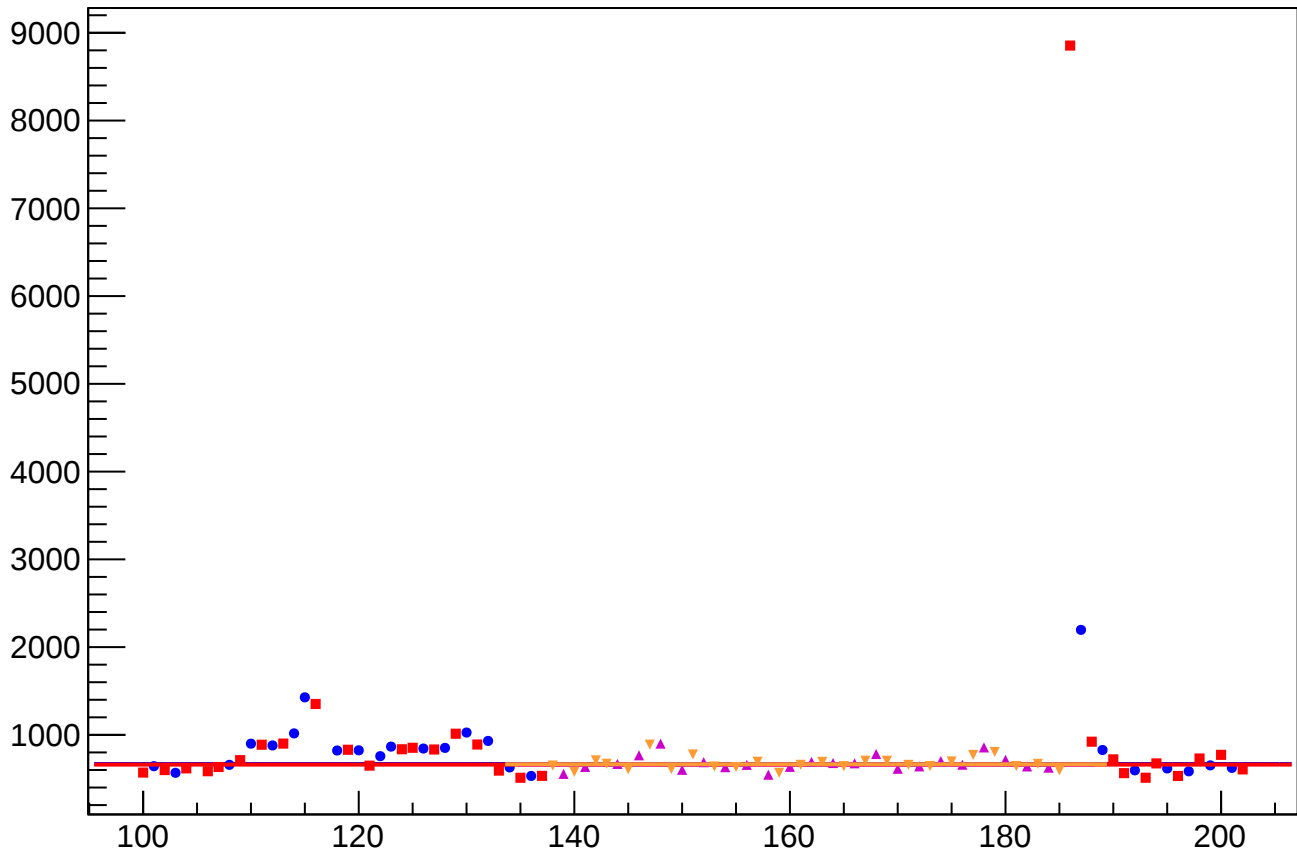
Right:  $81.218 \pm 137.905$   $\chi^2/\text{NDF}$ : 52.4/52

In:  $-29.965 \pm 125.544$   $\chi^2/\text{NDF}$ : 58.1/46

Out:  $-144.041 \pm 119.878$   $\chi^2/\text{NDF}$ : 55.1/53

All:  $-89.635 \pm 86.701$   $\chi^2/\text{NDF}$ : 113.6/100

# asym\_sam\_15\_dd\_rms vs Slug, Sign Corrected



Right In: 667.535+/-0.144  $\chi^2/\text{NDF}$ : 939246.1/23

Left Out: 664.773+/-0.110  $\chi^2/\text{NDF}$ : 357053.8/24

Right Out: 661.513+/-0.133  $\chi^2/\text{NDF}$ : 1729217.2/28

Left In: 660.890+/-0.113  $\chi^2/\text{NDF}$ : 449180.0/22

Left: 662.876+/-0.079  $\chi^2/\text{NDF}$ : 806839.8/47

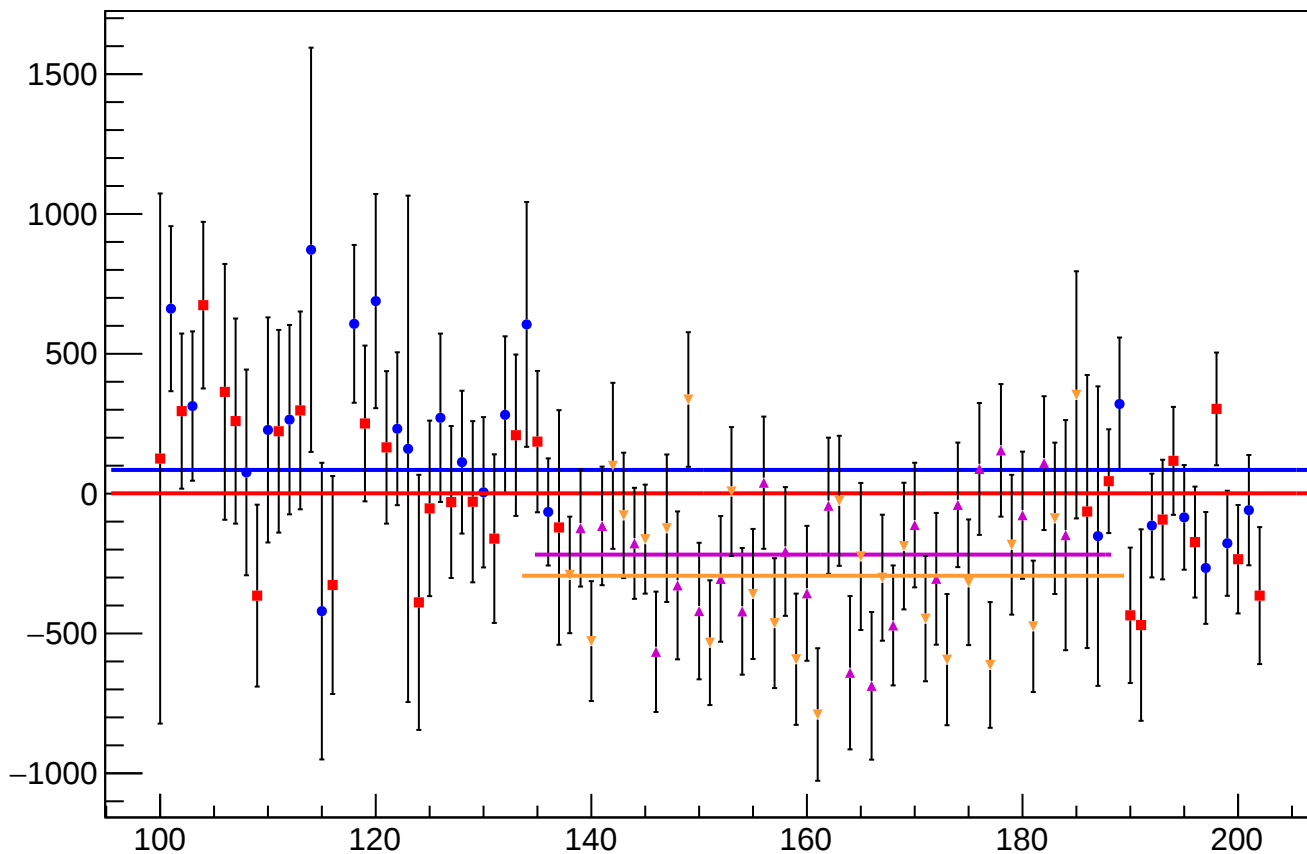
Right: 664.278+/-0.098  $\chi^2/\text{NDF}$ : 2669410.2/52

In: 663.419+/-0.089  $\chi^2/\text{NDF}$ : 1389746.8/46

Out: 663.441+/-0.085  $\chi^2/\text{NDF}$ : 2086628.3/53

All: 663.430+/-0.061  $\chi^2/\text{NDF}$ : 3476375.0/100

# reg\_asym\_sam\_26\_dd\_mean vs Slug, Sign Corrected



Right In:  $84.766 \pm 55.001$   $\chi^2/\text{NDF}: 25.0/23$

Left Out:  $-293.590 \pm 47.203$   $\chi^2/\text{NDF}: 30.3/24$

Right Out:  $1.180 \pm 51.205$   $\chi^2/\text{NDF}: 26.3/28$

Left In:  $-217.964 \pm 48.819$   $\chi^2/\text{NDF}: 21.3/22$

Left:  $-257.050 \pm 33.934$   $\chi^2/\text{NDF}: 52.9/47$

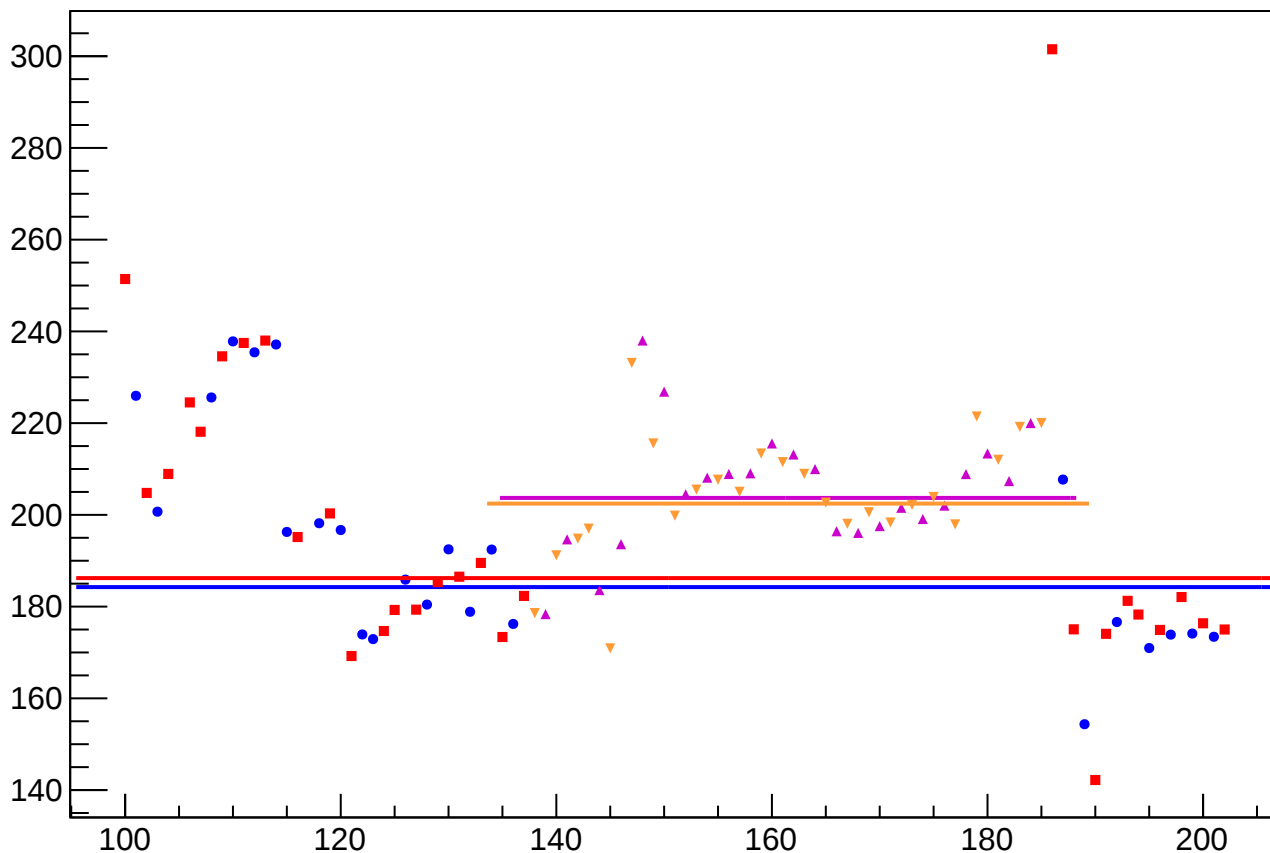
Right:  $39.990 \pm 37.478$   $\chi^2/\text{NDF}: 52.5/52$

In:  $-84.561 \pm 36.511$   $\chi^2/\text{NDF}: 63.2/46$

Out:  $-158.175 \pm 34.706$   $\chi^2/\text{NDF}: 74.5/53$

All:  $-123.232 \pm 25.155$   $\chi^2/\text{NDF}: 139.9/100$

reg\_asym\_sam\_26\_dd\_rms vs Slug, Sign Corrected



Right In: 184.252 $\pm$ 0.039  $\chi^2$ /NDF: 249392.3/23

Left Out: 202.459 $\pm$ 0.033  $\chi^2$ /NDF:158582.3/24

Right Out: 186.214 $\pm$ 0.036  $\chi^2$ /NDF: 418026.2/28

Left In: 203.699 $\pm$ 0.035  $\chi^2$ /NDF:136193.4/22

Left: 203.058 $\pm$ 0.024  $\chi^2$ /NDF: 295442.7/47

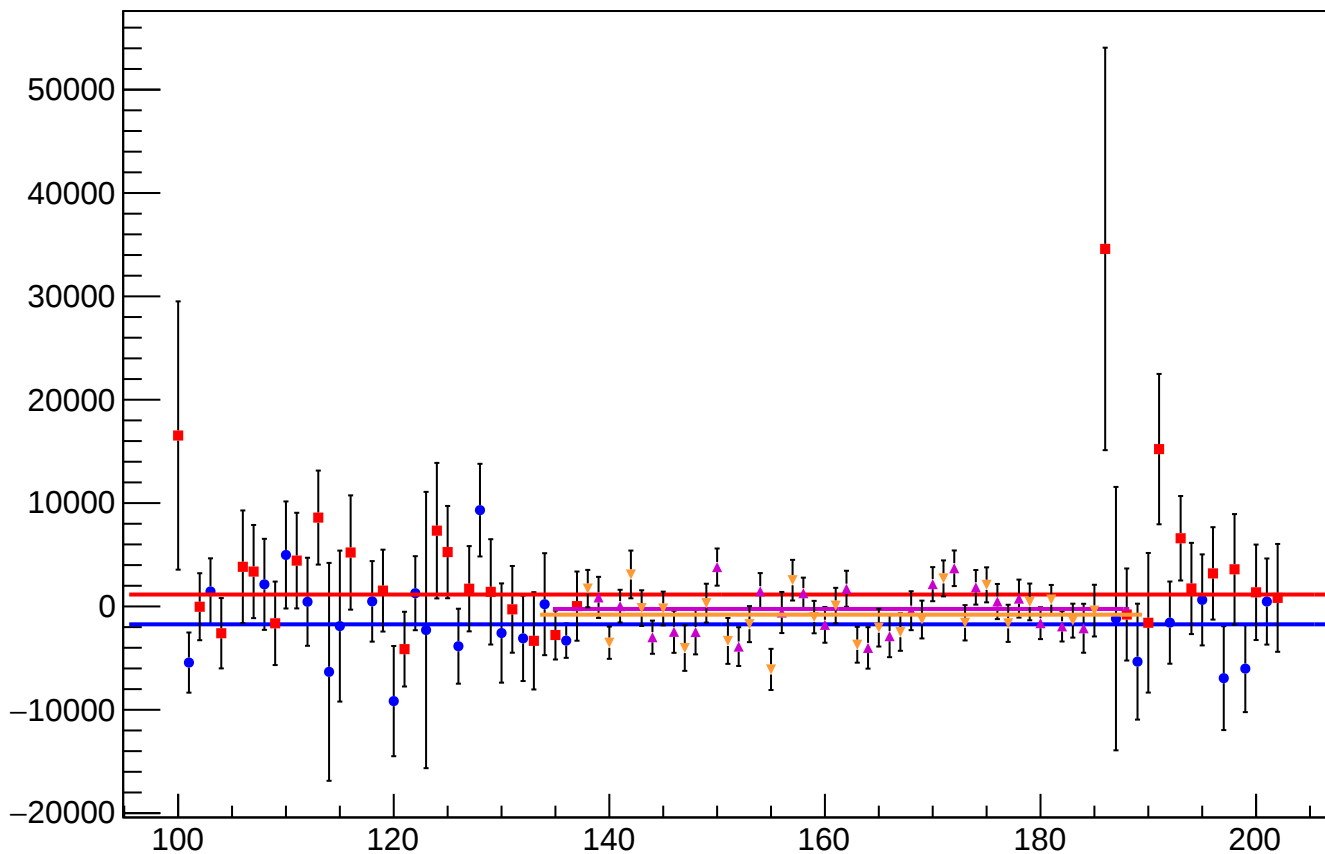
Right: 185.303 $\pm$ 0.027  $\chi^2$ /NDF: 668782.0/52

In: 195.129 $\pm$ 0.026  $\chi^2$ /NDF:525431.4/46

Out: 194.996 $\pm$ 0.025  $\chi^2$ /NDF:685421.7/53

All: 195.059 $\pm$ 0.018  $\chi^2$ /NDF: 1210867.1/100

asym\_sam\_26\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: -1730.752 $\pm$ 814.520  $\chi^2$ /NDF: 19.2/23

Left Out: -796.528 $\pm$ 357.851  $\chi^2$ /NDF: 35.7/24

Right Out: 1152.062 $\pm$ 812.729  $\chi^2$ /NDF: 24.5/28

Left In: -245.102 $\pm$ 369.846  $\chi^2$ /NDF: 35.7/22

Left: -529.902 $\pm$ 257.175  $\chi^2$ /NDF: 72.6/47

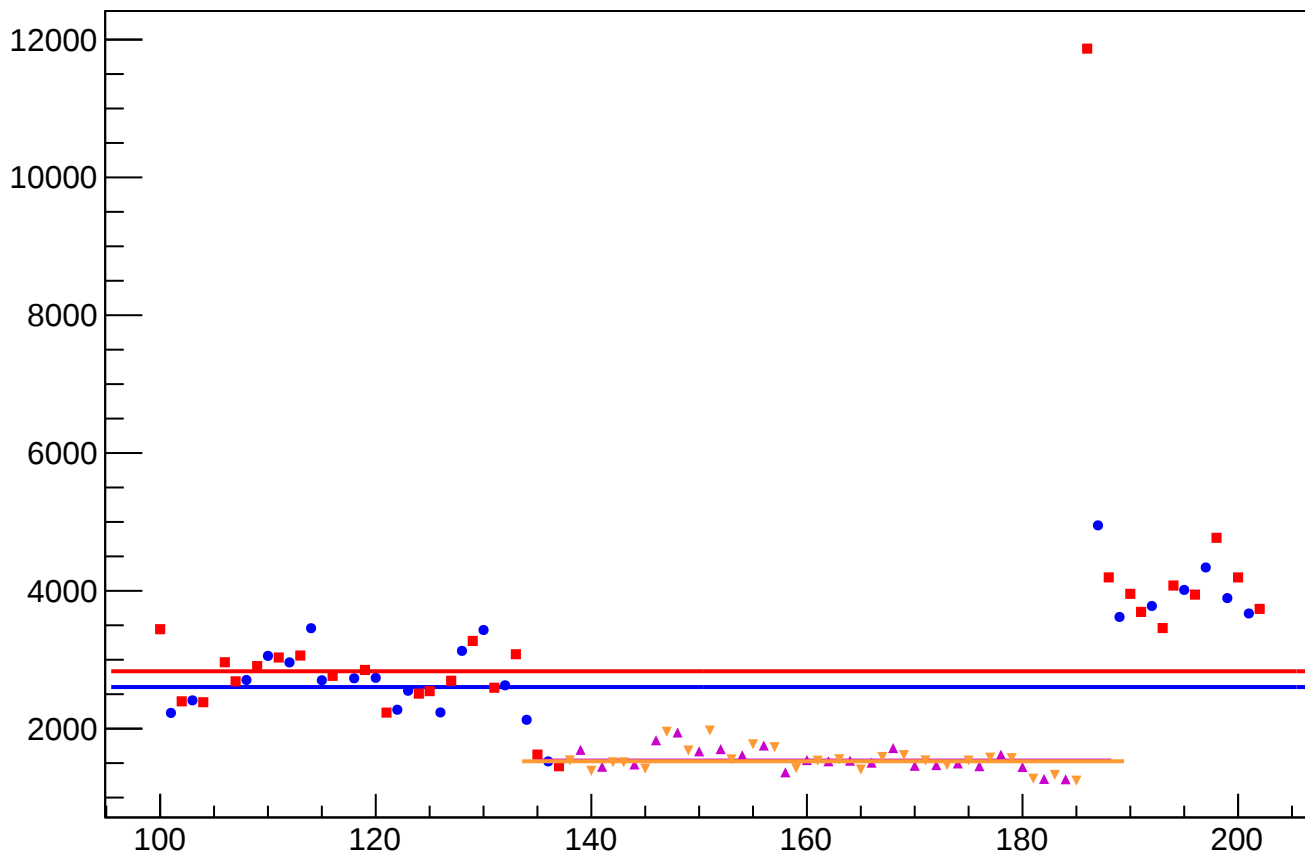
Right: -286.172 $\pm$ 575.318  $\chi^2$ /NDF: 49.9/52

In: -499.050 $\pm$ 336.756  $\chi^2$ /NDF: 57.6/46

Out: -480.099 $\pm$ 327.509  $\chi^2$ /NDF: 65.0/53

All: -489.311 $\pm$ 234.785  $\chi^2$ /NDF: 122.7/100

asym\_sam\_26\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 2603.634+/-0.576

$\chi^2/\text{NDF}$ : 2141504.3/23

Left Out: 1526.712+/-0.253

$\chi^2/\text{NDF}$ : 394892.7/24

Right Out: 2832.848+/-0.575

$\chi^2/\text{NDF}$ : 2575382.6/28

Left In: 1536.538+/-0.262

$\chi^2/\text{NDF}$ : 350373.3/22

Left: 1531.463+/-0.182

$\chi^2/\text{NDF}$ : 745995.2/47

Right: 2718.493+/-0.407

$\chi^2/\text{NDF}$ : 4796252.9/52

In: 1718.941+/-0.238

$\chi^2/\text{NDF}$ : 5337801.0/46

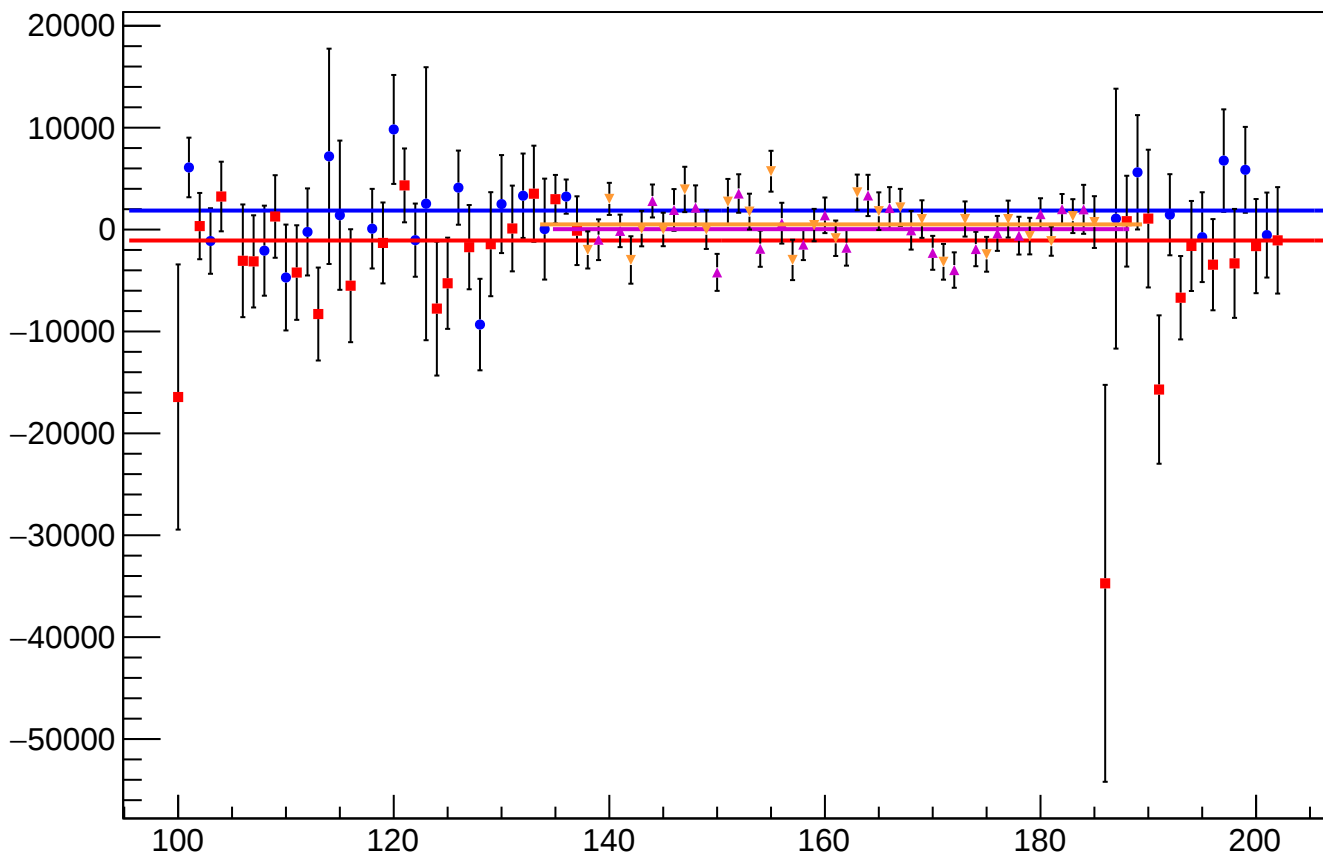
Out: 1738.813+/-0.232

$\chi^2/\text{NDF}$ : 7296990.1/53

All: 1729.154+/-0.166

$\chi^2/\text{NDF}$ : 12638370.4/100

# asym\_sam\_26\_dd\_mean vs Slug, Sign Corrected



Right In: 1866.098+/-817.553  $\chi^2/\text{NDF}$ : 19.5/23

Left Out: 507.982+/-361.172  $\chi^2/\text{NDF}$ : 35.4/24

Right Out: -1072.471+/-815.430  $\chi^2/\text{NDF}$ : 25.3/28

Left In: 40.080+/-373.261  $\chi^2/\text{NDF}$ : 33.6/22

Left: 281.730+/-259.556  $\chi^2/\text{NDF}$ : 69.8/47

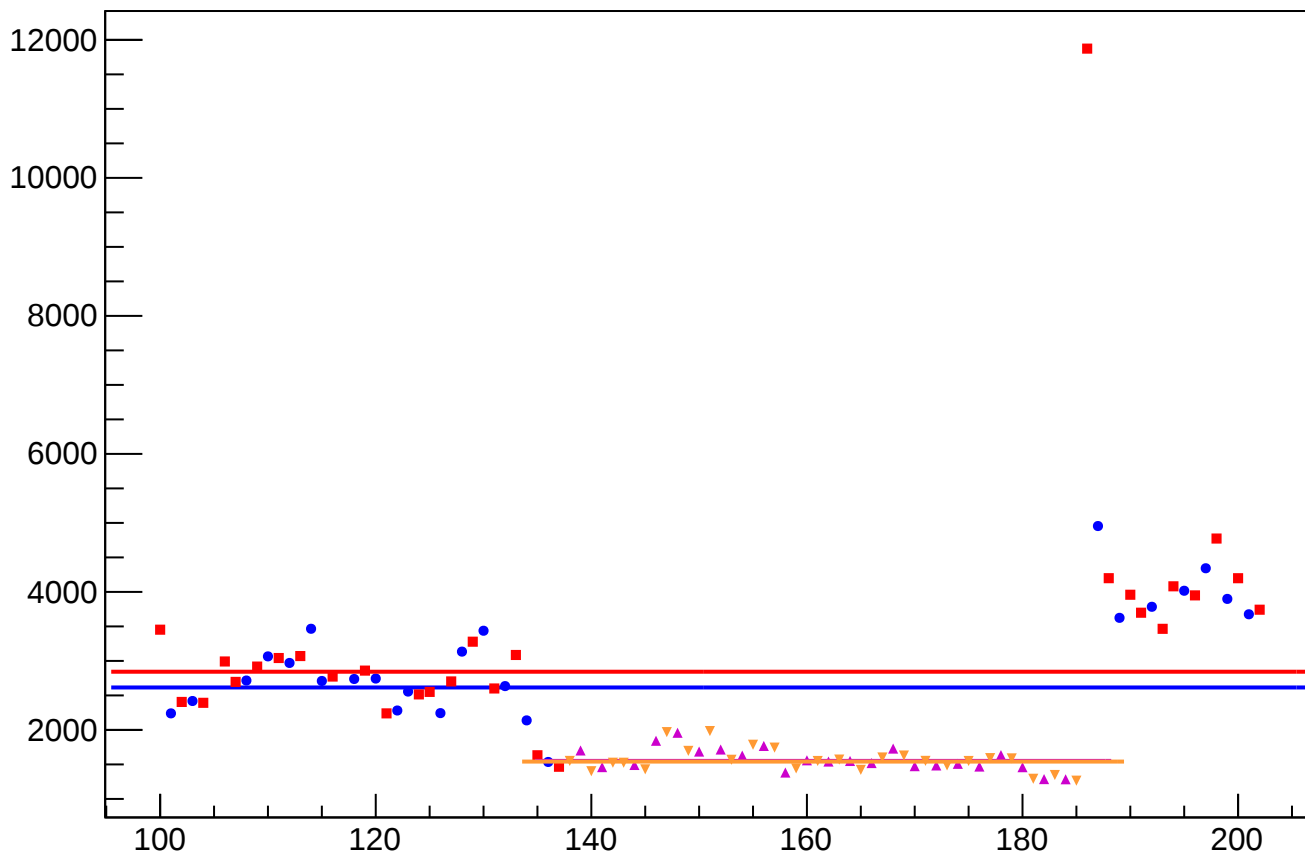
Right: 392.993+/-577.345  $\chi^2/\text{NDF}$ : 51.2/52

In: 355.051+/-339.546  $\chi^2/\text{NDF}$ : 57.2/46

Out: 248.778+/-330.230  $\chi^2/\text{NDF}$ : 63.8/53

All: 300.437+/-236.733  $\chi^2/\text{NDF}$ : 121.0/100

# asym\_sam\_26\_dd\_rms vs Slug, Sign Corrected



Right In: 2615.186 $\pm$ 0.578  $\chi^2/\text{NDF}$ : 2113906.2/23

Left Out: 1541.258 $\pm$ 0.255  $\chi^2/\text{NDF}$ : 382045.4/24

Right Out: 2843.414 $\pm$ 0.577  $\chi^2/\text{NDF}$ : 2550944.0/28

Left In: 1551.063 $\pm$ 0.264  $\chi^2/\text{NDF}$ : 338898.9/22

Left: 1546.000 $\pm$ 0.184  $\chi^2/\text{NDF}$ : 721657.1/47

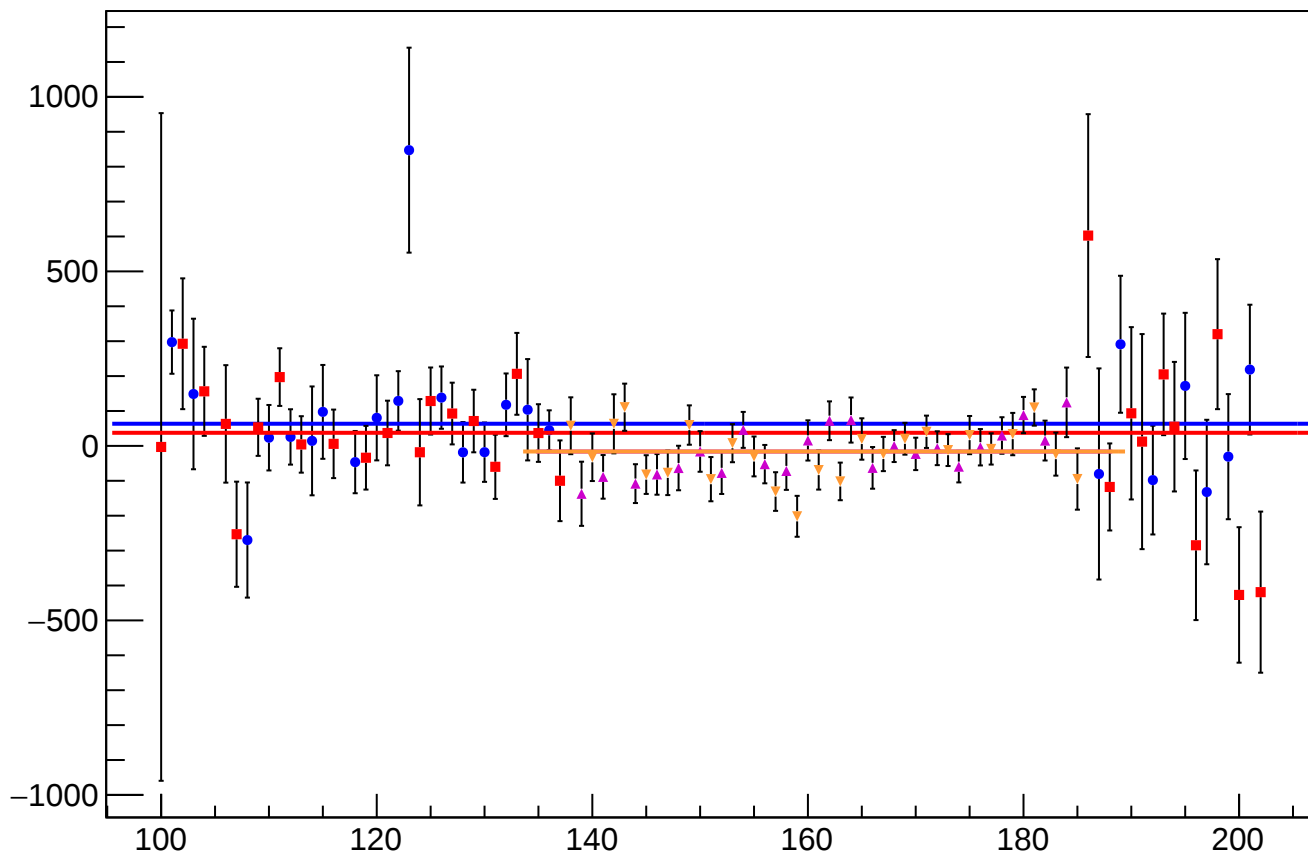
Right: 2729.597 $\pm$ 0.408  $\chi^2/\text{NDF}$ : 4742983.0/52

In: 1734.615 $\pm$ 0.240  $\chi^2/\text{NDF}$ : 5256653.3/46

Out: 1754.819 $\pm$ 0.234  $\chi^2/\text{NDF}$ : 7196678.1/53

All: 1744.998 $\pm$ 0.167  $\chi^2/\text{NDF}$ : 12456970.6/1

reg\_asym\_sam\_37\_dd\_mean vs Slug, Sign Corrected



Right In: 63.468 $\pm$ 22.642  $\chi^2$ /NDF: 28.6/23

Left Out: -16.049 $\pm$ 11.340  $\chi^2$ /NDF:39.7/24

Right Out: 37.523 $\pm$ 22.217  $\chi^2$ /NDF: 36.1/28

Left In: -16.162 $\pm$ 11.649  $\chi^2$ /NDF:25.2/22

Left: -16.104 $\pm$ 8.126  $\chi^2$ /NDF: 64.9/47

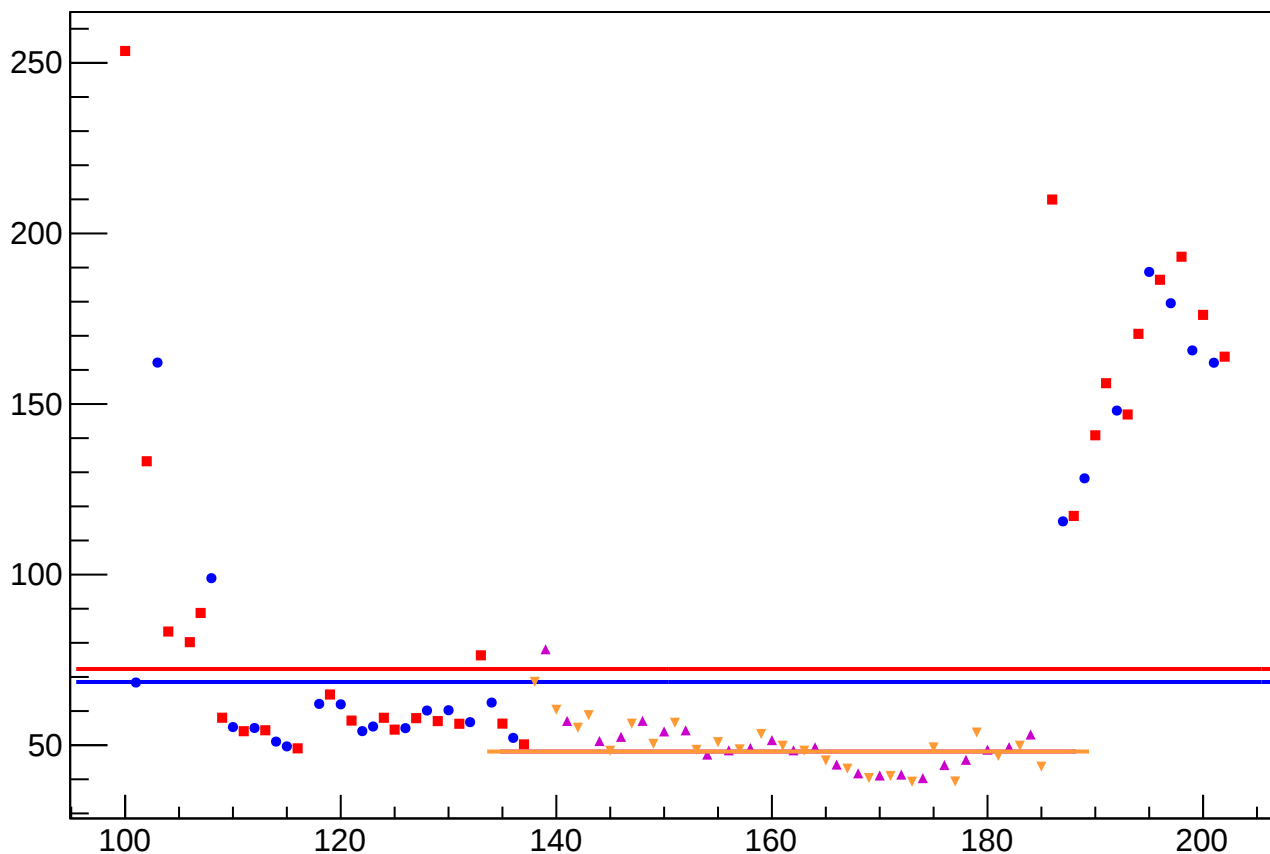
Right: 50.250 $\pm$ 15.858  $\chi^2$ /NDF: 65.3/52

In: 0.506 $\pm$ 10.359  $\chi^2$ /NDF:63.6/46

Out: -4.977 $\pm$ 10.100  $\chi^2$ /NDF:80.4/53

All: -2.305 $\pm$ 7.232  $\chi^2$ /NDF: 144.1/100

reg\_asym\_sam\_37\_dd\_rms vs Slug, Sign Corrected



Right In: 68.524+/-0.016  $\chi^2/\text{NDF}$ : 4054012.6/23

Left Out: 48.141+/-0.008  $\chi^2/\text{NDF}$ : 655250.3/24

Right Out: 72.336+/-0.016  $\chi^2/\text{NDF}$ : 5057594.9/28

Left In: 48.139+/-0.008  $\chi^2/\text{NDF}$ : 575025.5/22

Left: 48.140+/-0.006  $\chi^2/\text{NDF}$ : 1230275.9/47

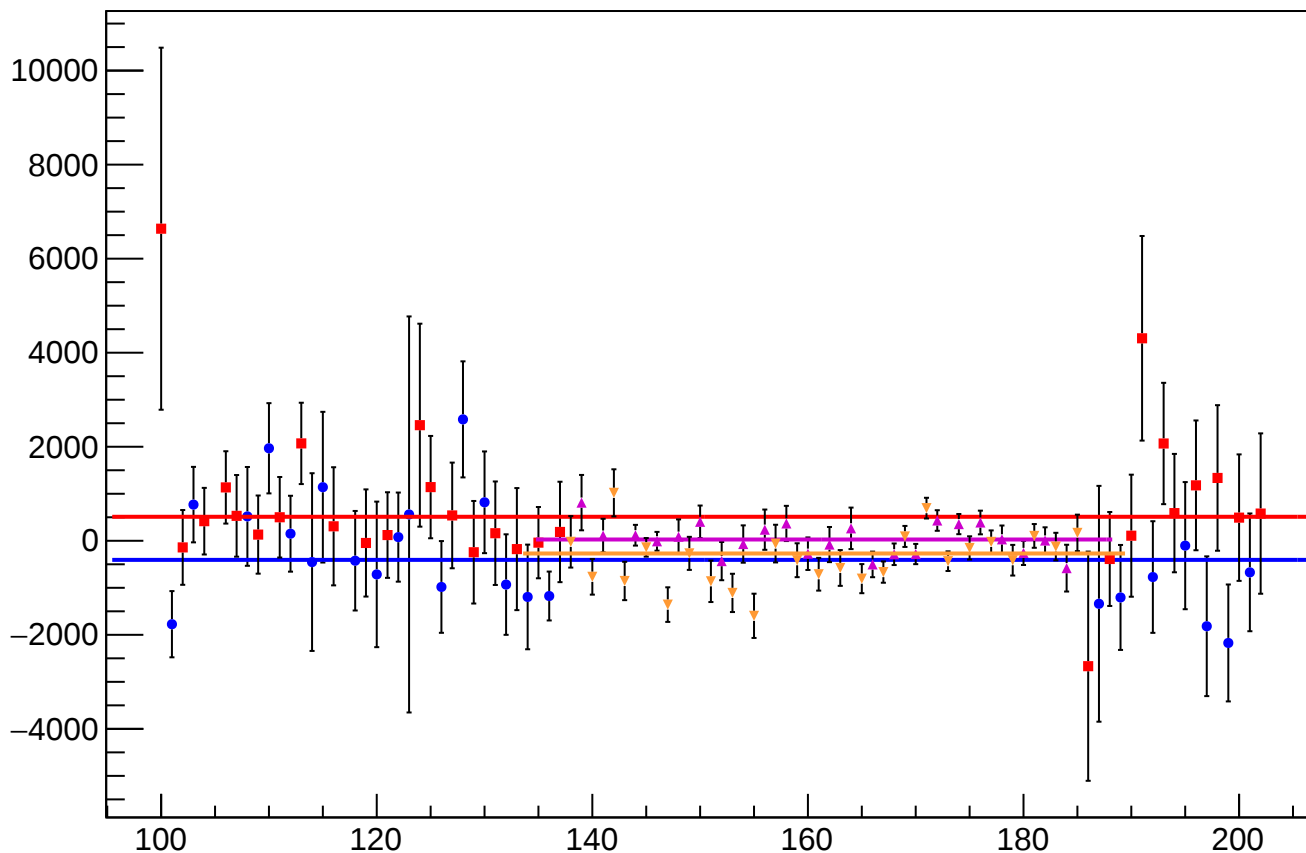
Right: 70.466+/-0.011  $\chi^2/\text{NDF}$ : 9140497.2/52

In: 52.406+/-0.007  $\chi^2/\text{NDF}$ : 5910802.7/46

Out: 53.141+/-0.007  $\chi^2/\text{NDF}$ : 7594622.6/53

All: 52.783+/-0.005  $\chi^2/\text{NDF}$ : 13510593.8/100

asym\_sam\_37\_dd\_correction\_mean vs Slug, Sign Corrected



Right In:  $-406.093 \pm 212.494$   $\chi^2/\text{NDF}$ : 28.8/23

Left Out:  $-270.214 \pm 60.177$   $\chi^2/\text{NDF}$ : 70.1/24

Right Out:  $510.578 \pm 199.241$   $\chi^2/\text{NDF}$ : 18.1/28

Left In:  $27.271 \pm 60.430$   $\chi^2/\text{NDF}$ : 25.1/22

Left:  $-122.095 \pm 42.641$   $\chi^2/\text{NDF}$ : 107.3/47

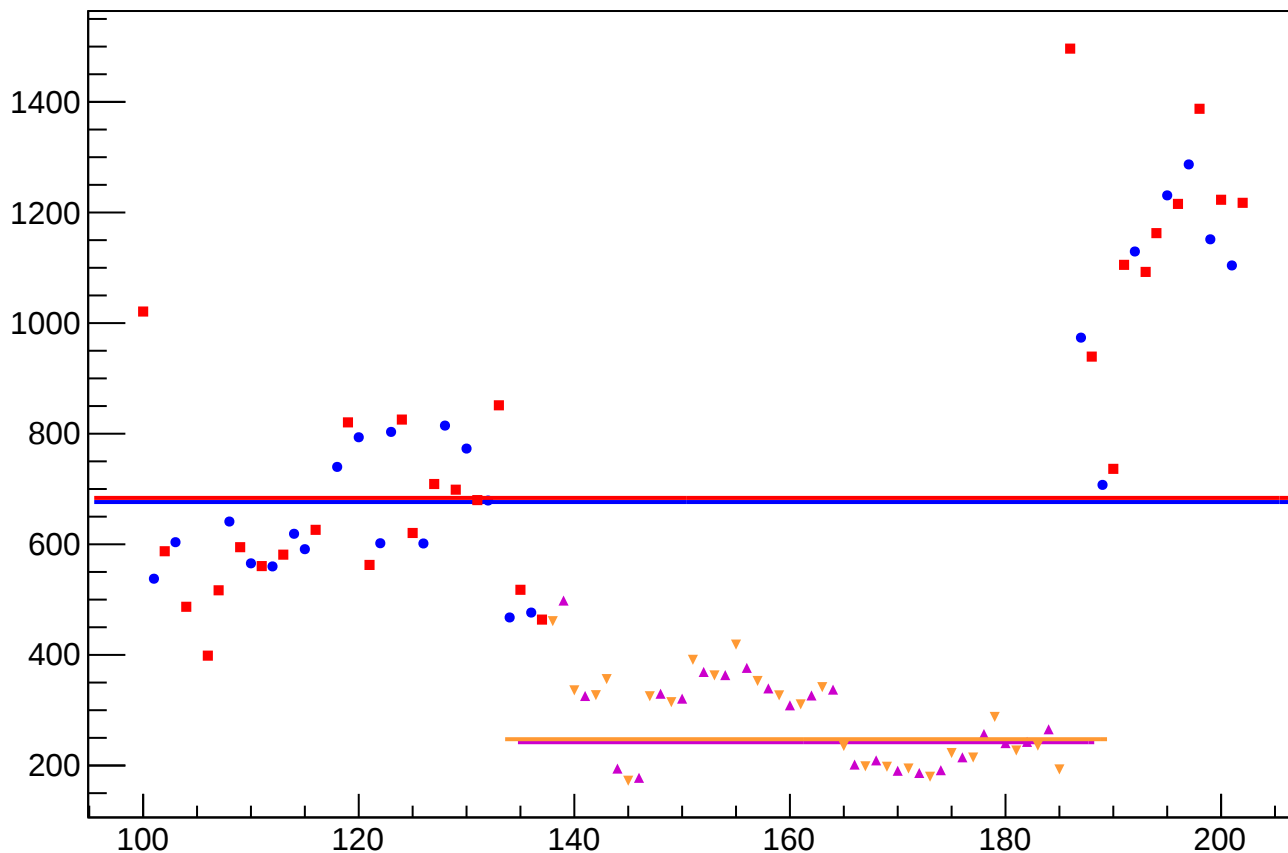
Right:  $81.717 \pm 145.344$   $\chi^2/\text{NDF}$ : 56.7/52

In:  $-5.155 \pm 58.125$   $\chi^2/\text{NDF}$ : 57.7/46

Out:  $-204.941 \pm 57.607$   $\chi^2/\text{NDF}$ : 102.2/53

All:  $-105.942 \pm 40.916$   $\chi^2/\text{NDF}$ : 165.8/100

asym\_sam\_37\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 676.418+/-0.150  $\chi^2/\text{NDF}$ : 2144215.2/23

Left Out: 247.570+/-0.043  $\chi^2/\text{NDF}$ : 2780931.0/24

Right Out: 683.915+/-0.141  $\chi^2/\text{NDF}$ : 3088860.3/28

Left In: 242.117+/-0.043  $\chi^2/\text{NDF}$ : 2466108.9/22

Left: 244.855+/-0.030  $\chi^2/\text{NDF}$ : 5255218.1/47

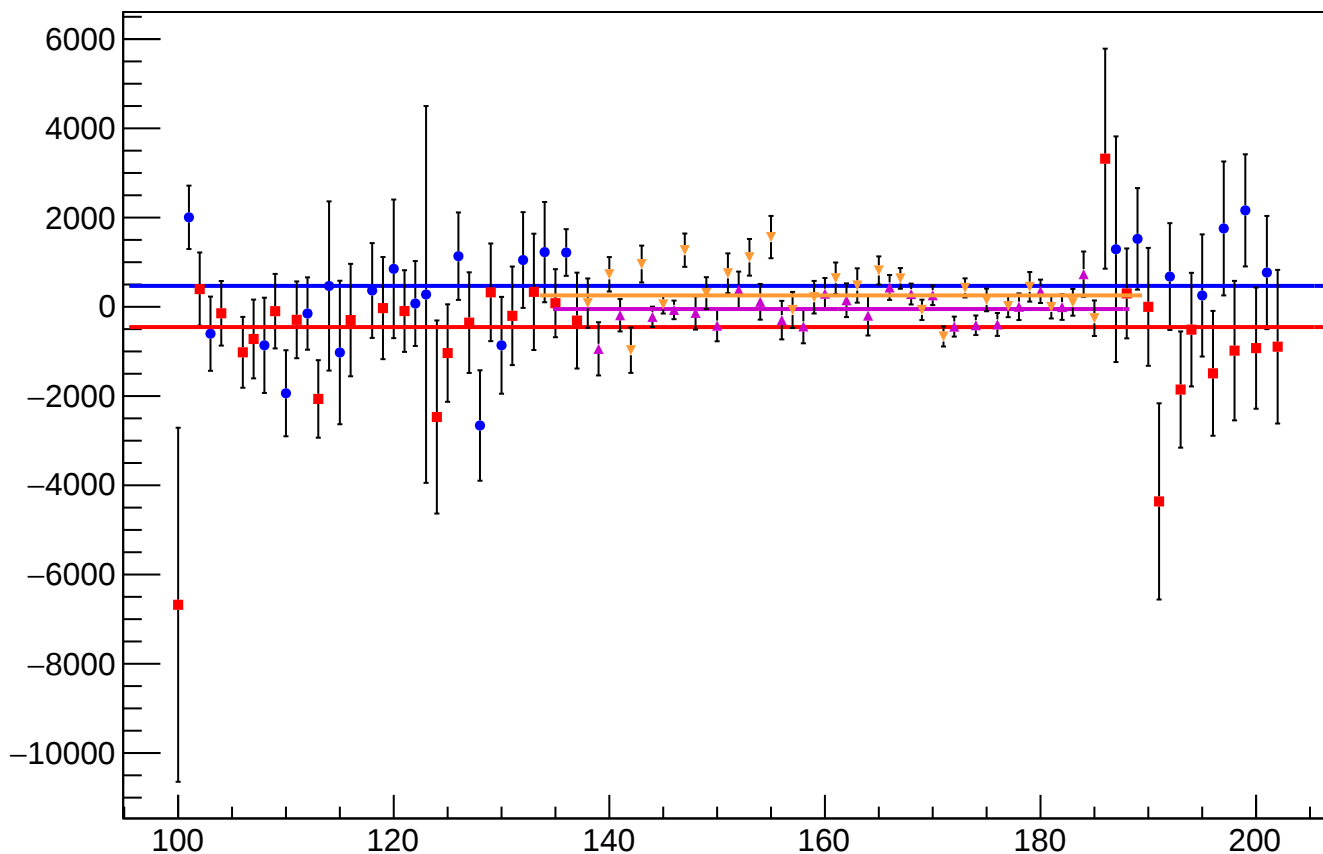
Right: 680.408+/-0.103  $\chi^2/\text{NDF}$ : 5234400.2/52

In: 274.613+/-0.041  $\chi^2/\text{NDF}$ : 12339692.5/46

Out: 284.048+/-0.041  $\chi^2/\text{NDF}$ : 14660360.7/53

All: 279.373+/-0.029  $\chi^2/\text{NDF}$ : 27026637.1/100

# asym\_sam\_37\_dd\_mean vs Slug, Sign Corrected



Right In: 469.120 $\pm$ 214.444  $\chi^2/\text{NDF}$ : 30.6/23

Left Out: 255.995 $\pm$ 61.418  $\chi^2/\text{NDF}$ : 63.6/24

Right Out: -453.915 $\pm$ 201.515  $\chi^2/\text{NDF}$ : 19.1/28

Left In: -49.832 $\pm$ 61.781  $\chi^2/\text{NDF}$ : 27.5/22

Left: 103.982 $\pm$ 43.557  $\chi^2/\text{NDF}$ : 103.4/47

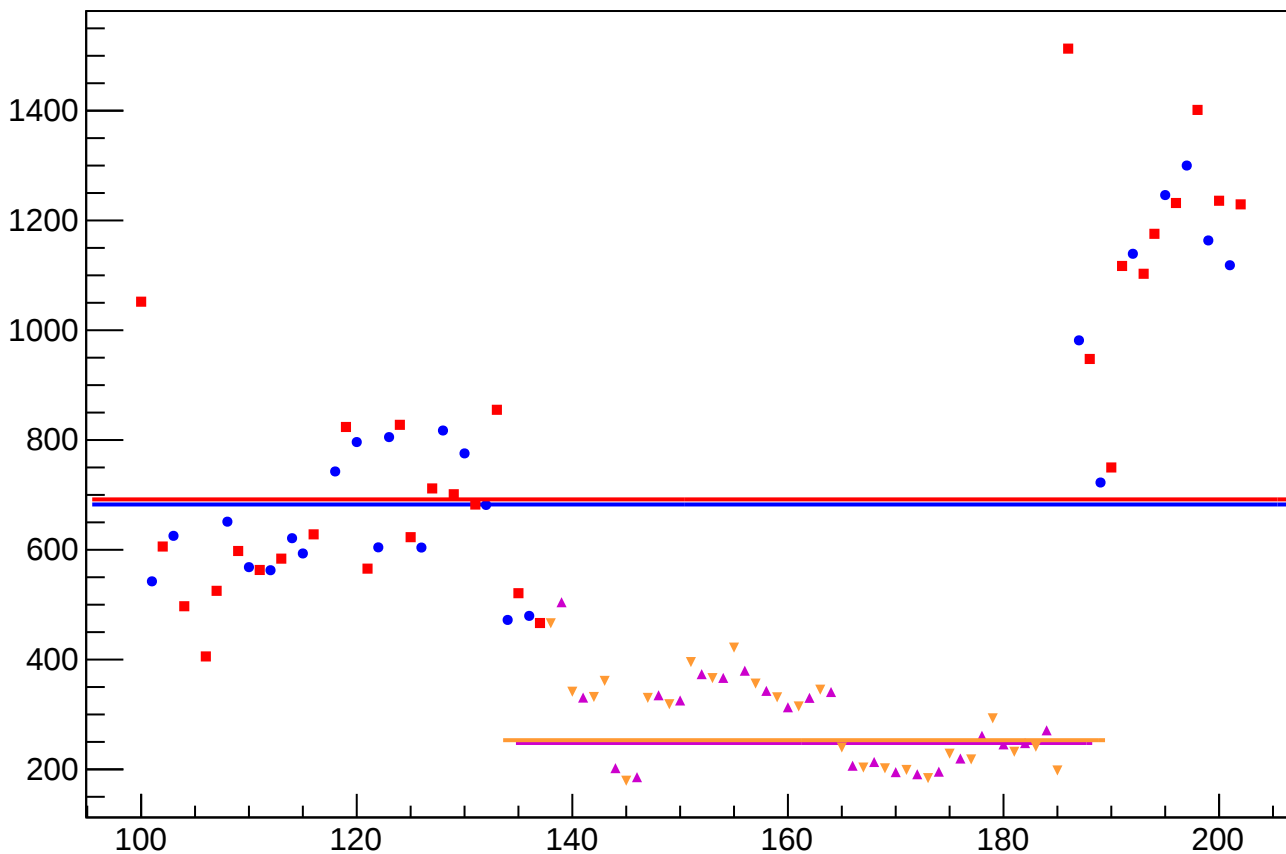
Right: -21.061 $\pm$ 146.851  $\chi^2/\text{NDF}$ : 59.5/52

In: -10.060 $\pm$ 59.367  $\chi^2/\text{NDF}$ : 63.5/46

Out: 195.655 $\pm$ 58.750  $\chi^2/\text{NDF}$ : 94.0/53

All: 93.871 $\pm$ 41.759  $\chi^2/\text{NDF}$ : 163.6/100

# asym\_sam\_37\_dd\_rms vs Slug, Sign Corrected



Right In: 682.566 $\pm$ 0.152  $\chi^2$ /NDF: 2151898.0/23

Left Out: 253.137 $\pm$ 0.043  $\chi^2$ /NDF:2665975.8/24

Right Out: 691.836 $\pm$ 0.142  $\chi^2$ /NDF: 3064213.3/28

Left In: 248.069 $\pm$ 0.044  $\chi^2$ /NDF:2343295.0/22

Left: 250.618 $\pm$ 0.031  $\chi^2$ /NDF: 5016040.5/47

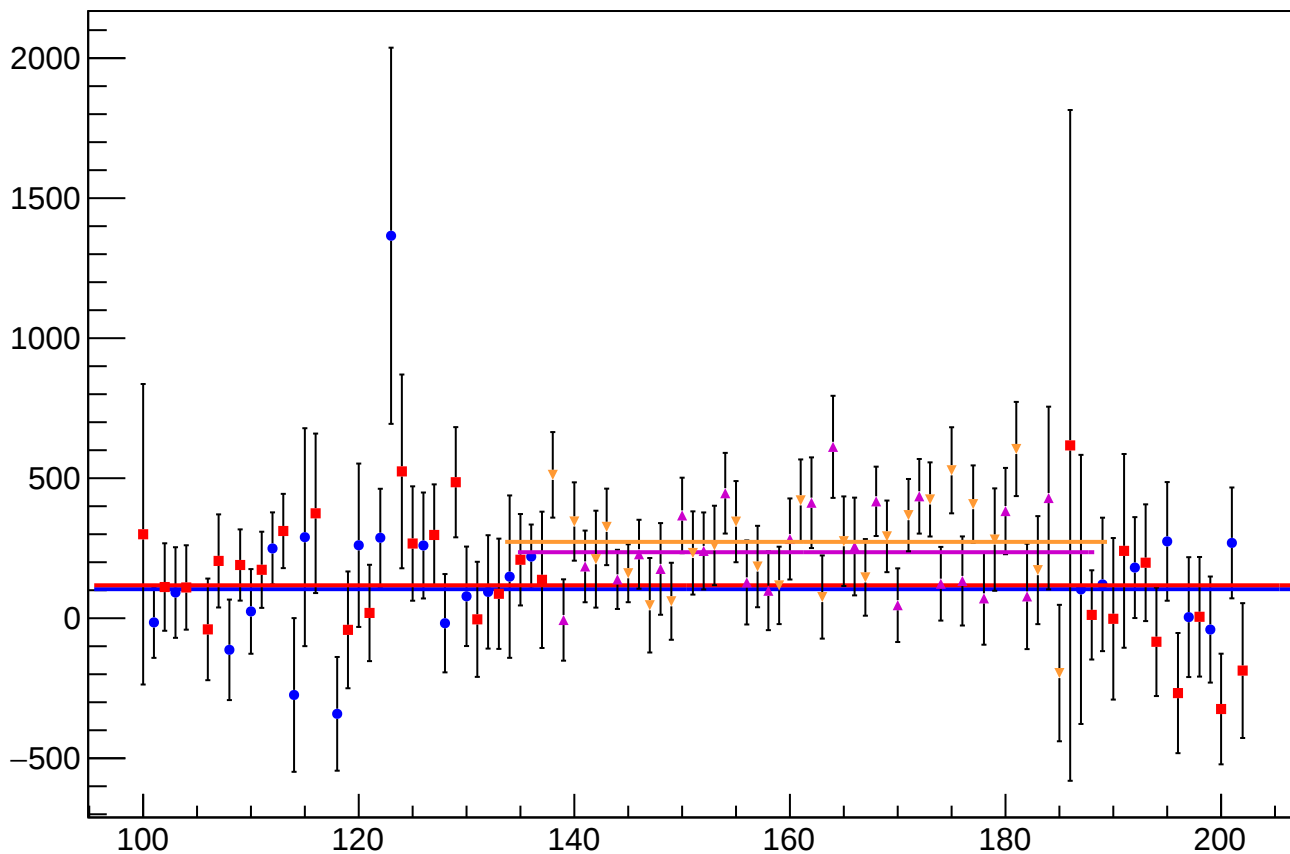
Right: 687.489 $\pm$ 0.104  $\chi^2$ /NDF: 5218095.9/52

In: 281.368 $\pm$ 0.042  $\chi^2$ /NDF:12076543.6/46

Out: 290.425 $\pm$ 0.042  $\chi^2$ /NDF:14403208.7/53

All: 285.944 $\pm$ 0.030  $\chi^2$ /NDF: 26503268.6/100

reg\_asym\_sam\_48\_dd\_mean vs Slug, Sign Corrected



Right In: 103.773+/-38.313  $\chi^2/\text{NDF}$ : 20.3/23

Left Out: 272.684+/-29.221  $\chi^2/\text{NDF}$ :27.4/24

Right Out: 117.659+/-35.662  $\chi^2/\text{NDF}$ : 24.8/28

Left In: 235.801+/-30.232  $\chi^2/\text{NDF}$ :24.6/22

Left: 254.870+/-21.011  $\chi^2/\text{NDF}$ : 52.8/47

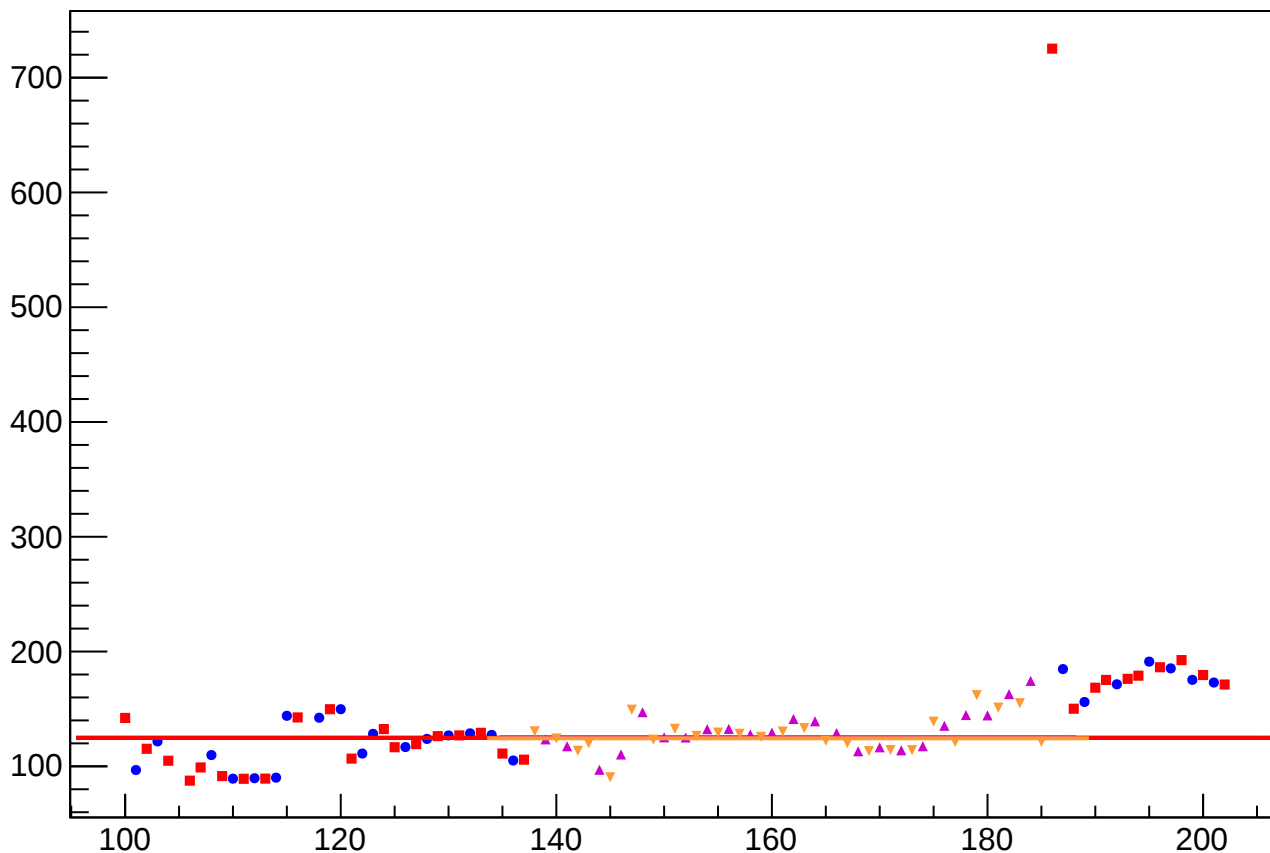
Right: 111.213+/-26.104  $\chi^2/\text{NDF}$ : 45.2/52

In: 185.140+/-23.733  $\chi^2/\text{NDF}$ :52.2/46

Out: 210.411+/-22.603  $\chi^2/\text{NDF}$ :63.6/53

All: 198.391+/-16.367  $\chi^2/\text{NDF}$ : 116.4/100

reg\_asym\_sam\_48\_dd\_rms vs Slug, Sign Corrected



Right In: 124.892 $\pm$ 0.027  $\chi^2$ /NDF: 1332350.5/23

Left Out: 124.429 $\pm$ 0.021  $\chi^2$ /NDF: 539731.8/24

Right Out: 124.782 $\pm$ 0.025  $\chi^2$ /NDF: 2201157.8/28

Left In: 125.205 $\pm$ 0.021  $\chi^2$ /NDF: 501388.2/22

Left: 124.804 $\pm$ 0.015  $\chi^2$ /NDF: 1041801.9/47

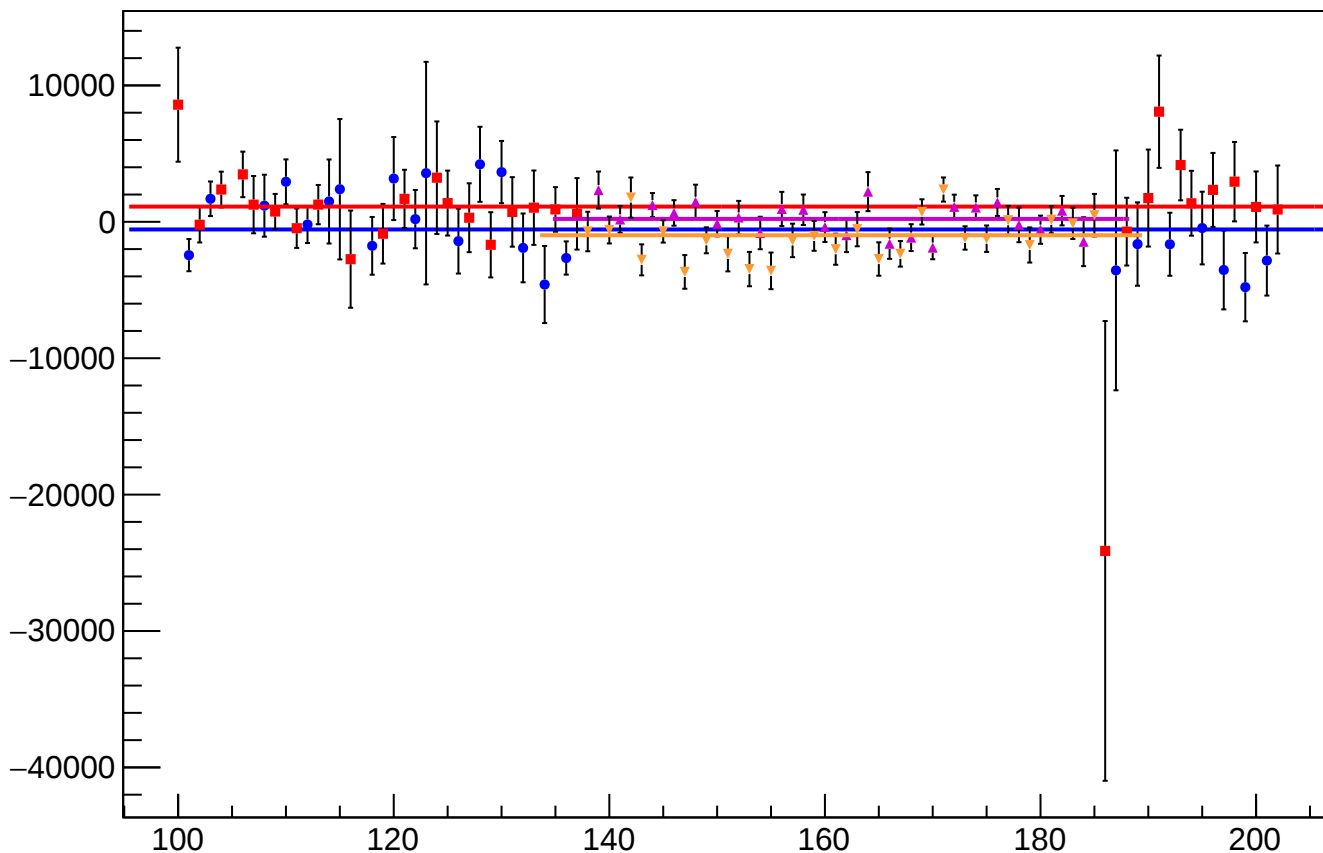
Right: 124.833 $\pm$ 0.018  $\chi^2$ /NDF: 3533517.3/52

In: 125.085 $\pm$ 0.017  $\chi^2$ /NDF: 1833820.7/46

Out: 124.570 $\pm$ 0.016  $\chi^2$ /NDF: 2741006.8/53

All: 124.815 $\pm$ 0.012  $\chi^2$ /NDF: 4575320.7/100

asym\_sam\_48\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: -559.582 $\pm$ 426.828  $\chi^2$ /NDF: 30.8/23

Left Out: -982.839 $\pm$ 218.021  $\chi^2$ /NDF: 47.2/24

Right Out: 1116.387 $\pm$ 395.510  $\chi^2$ /NDF: 20.0/28

Left In: 211.420 $\pm$ 223.296  $\chi^2$ /NDF: 25.7/22

Left: -399.983 $\pm$ 155.996  $\chi^2$ /NDF: 87.5/47

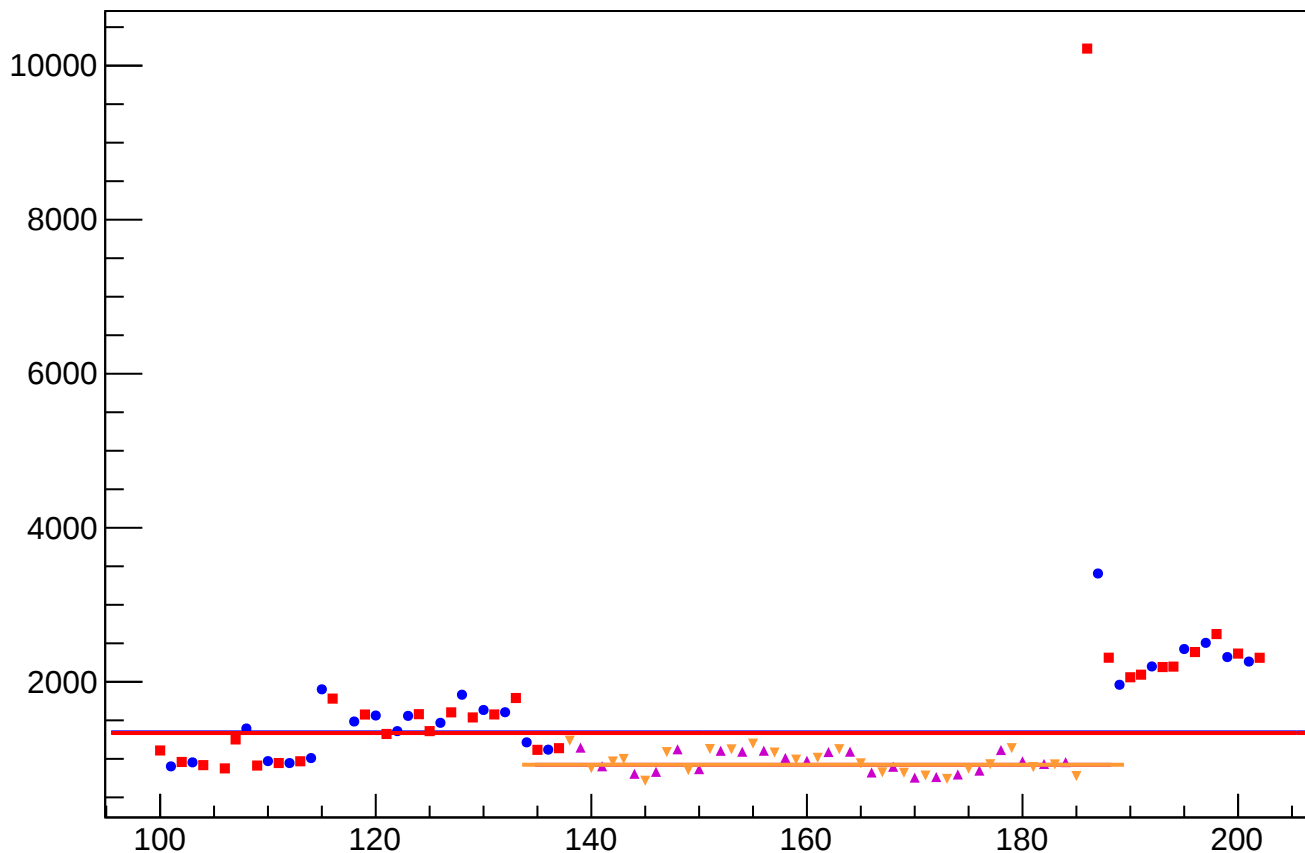
Right: 342.138 $\pm$ 290.108  $\chi^2$ /NDF: 59.2/52

In: 45.748 $\pm$ 197.856  $\chi^2$ /NDF: 59.1/46

Out: -493.614 $\pm$ 190.933  $\chi^2$ /NDF: 88.8/53

All: -233.534 $\pm$ 137.393  $\chi^2$ /NDF: 151.7/100

asym\_sam\_48\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 1343.993+/-0.302  $\chi^2/\text{NDF}$ : 2687886.3/23

Left Out: 923.586+/-0.154  $\chi^2/\text{NDF}$ : 842758.6/24

Right Out: 1335.364+/-0.280  $\chi^2/\text{NDF}$ : 3926936.5/28

Left In: 922.245+/-0.158  $\chi^2/\text{NDF}$ : 634712.1/22

Left: 922.932+/-0.110  $\chi^2/\text{NDF}$ : 1477507.6/47

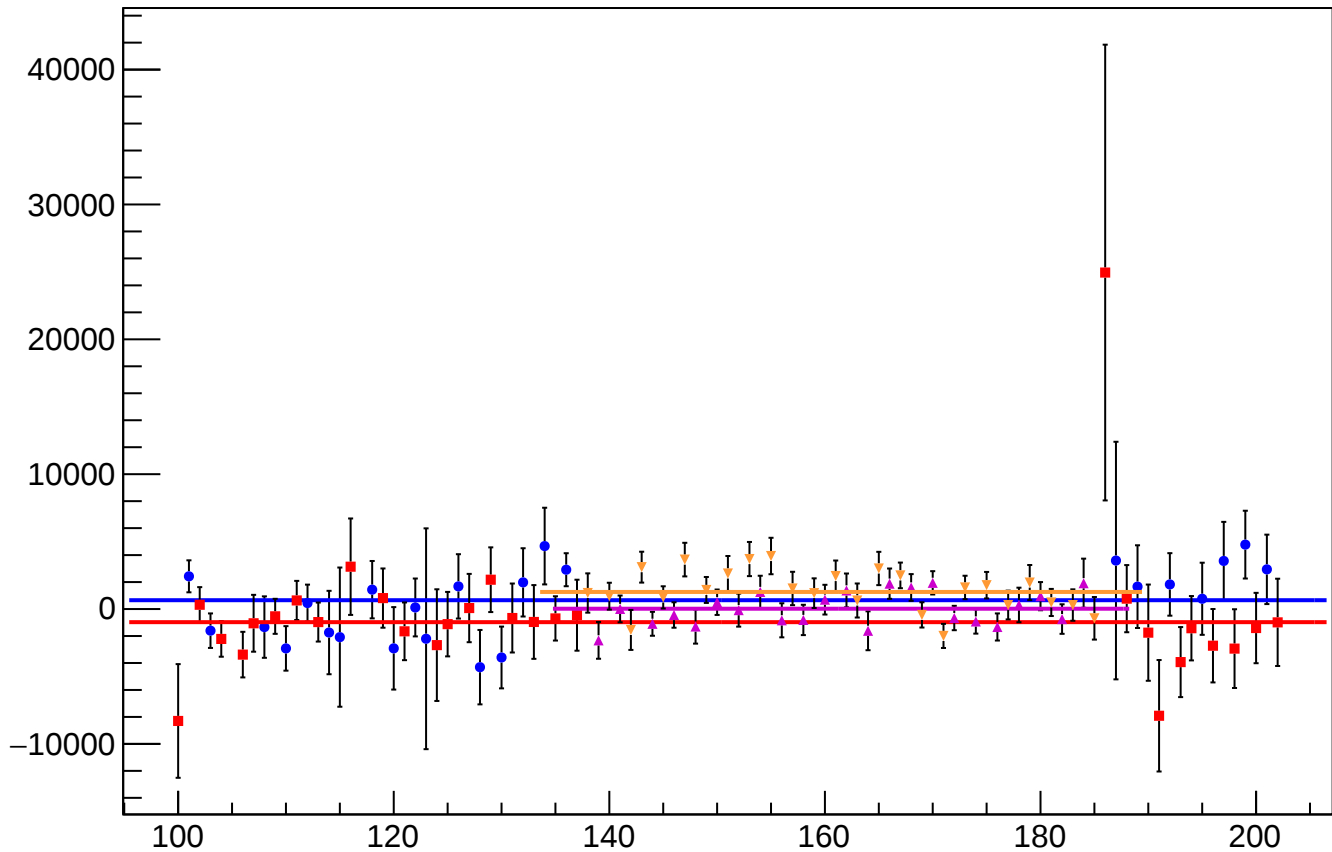
Right: 1339.350+/-0.205  $\chi^2/\text{NDF}$ : 6615262.6/52

In: 1012.870+/-0.140  $\chi^2/\text{NDF}$ : 4855685.7/46

Out: 1019.551+/-0.135  $\chi^2/\text{NDF}$ : 6432373.4/53

All: 1016.329+/-0.097  $\chi^2/\text{NDF}$ : 11289239.9/100

# asym\_sam\_48\_dd\_mean vs Slug, Sign Corrected



Right In:  $655.149 \pm 428.803$   $\chi^2/\text{NDF}$ : 30.9/23

Left Out:  $1267.344 \pm 220.133$   $\chi^2/\text{NDF}$ : 44.9/24

Right Out:  $-972.459 \pm 397.508$   $\chi^2/\text{NDF}$ : 20.4/28

Left In:  $23.478 \pm 225.490$   $\chi^2/\text{NDF}$ : 27.2/22

Left:  $660.362 \pm 157.518$   $\chi^2/\text{NDF}$ : 87.7/47

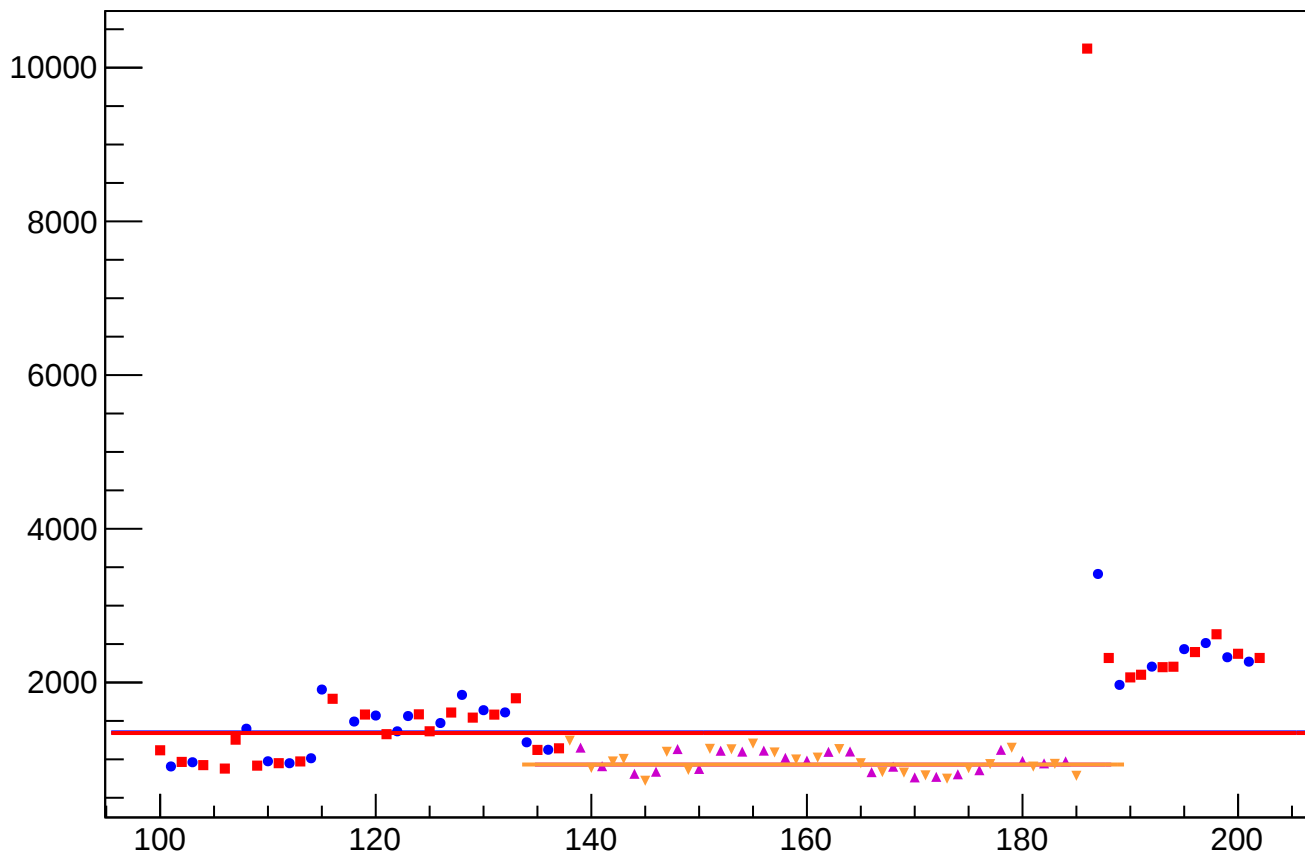
Right:  $-220.209 \pm 291.517$   $\chi^2/\text{NDF}$ : 59.1/52

In:  $160.314 \pm 199.578$   $\chi^2/\text{NDF}$ : 59.8/46

Out:  $741.663 \pm 192.576$   $\chi^2/\text{NDF}$ : 89.6/53

All:  $461.366 \pm 138.581$   $\chi^2/\text{NDF}$ : 153.8/100

# asym\_sam\_48\_dd\_rms vs Slug, Sign Corrected



Right In: 1350.751+/-0.303  $\chi^2/\text{NDF}$ : 2673248.3/23

Left Out: 932.764+/-0.156  $\chi^2/\text{NDF}$ : 829798.4/24

Right Out: 1342.474+/-0.281  $\chi^2/\text{NDF}$ : 3907112.7/28

Left In: 931.493+/-0.159  $\chi^2/\text{NDF}$ : 624436.4/22

Left: 932.144+/-0.111  $\chi^2/\text{NDF}$ : 1454267.3/47

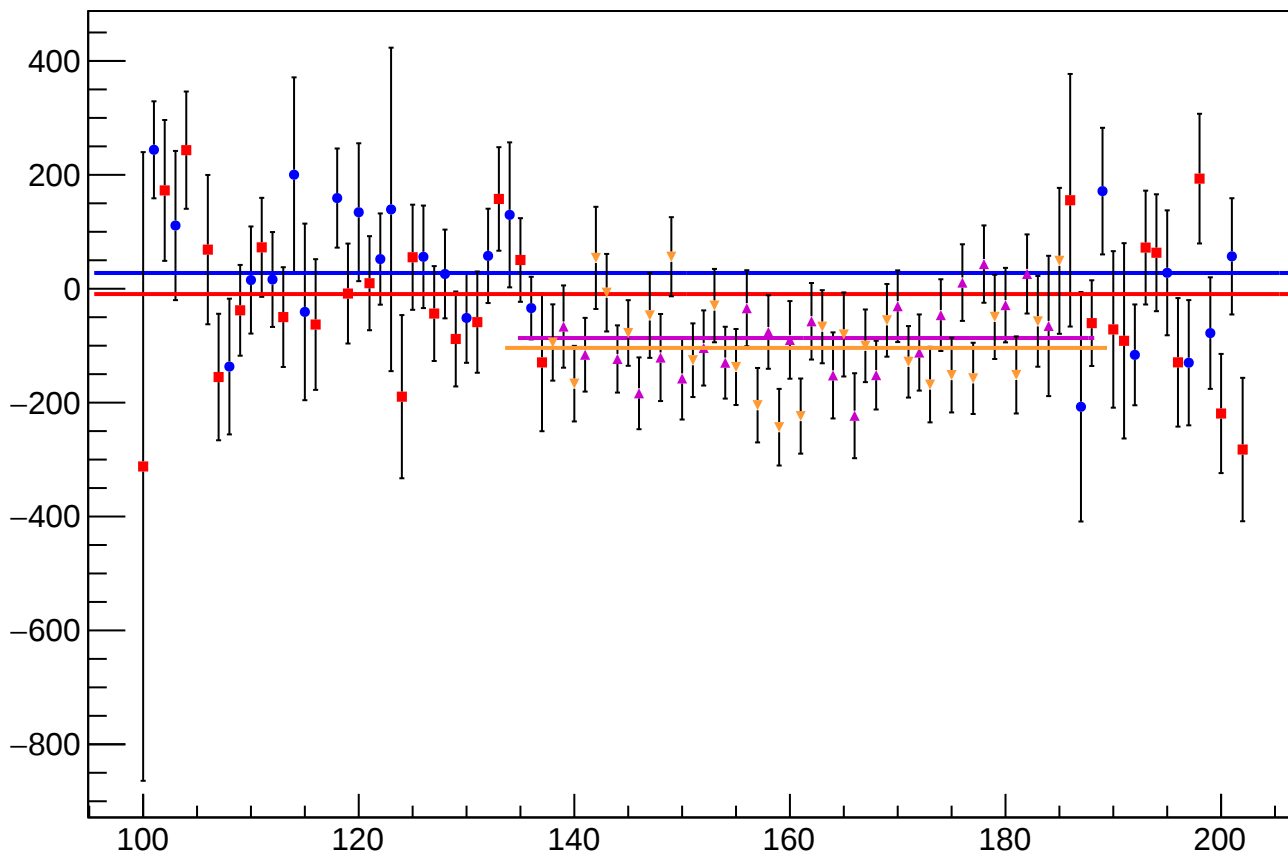
Right: 1346.299+/-0.206  $\chi^2/\text{NDF}$ : 6580761.7/52

In: 1022.315+/-0.141  $\chi^2/\text{NDF}$ : 4795462.4/46

Out: 1028.923+/-0.136  $\chi^2/\text{NDF}$ : 6362922.3/53

All: 1025.737+/-0.098  $\chi^2/\text{NDF}$ : 11159520.1/100

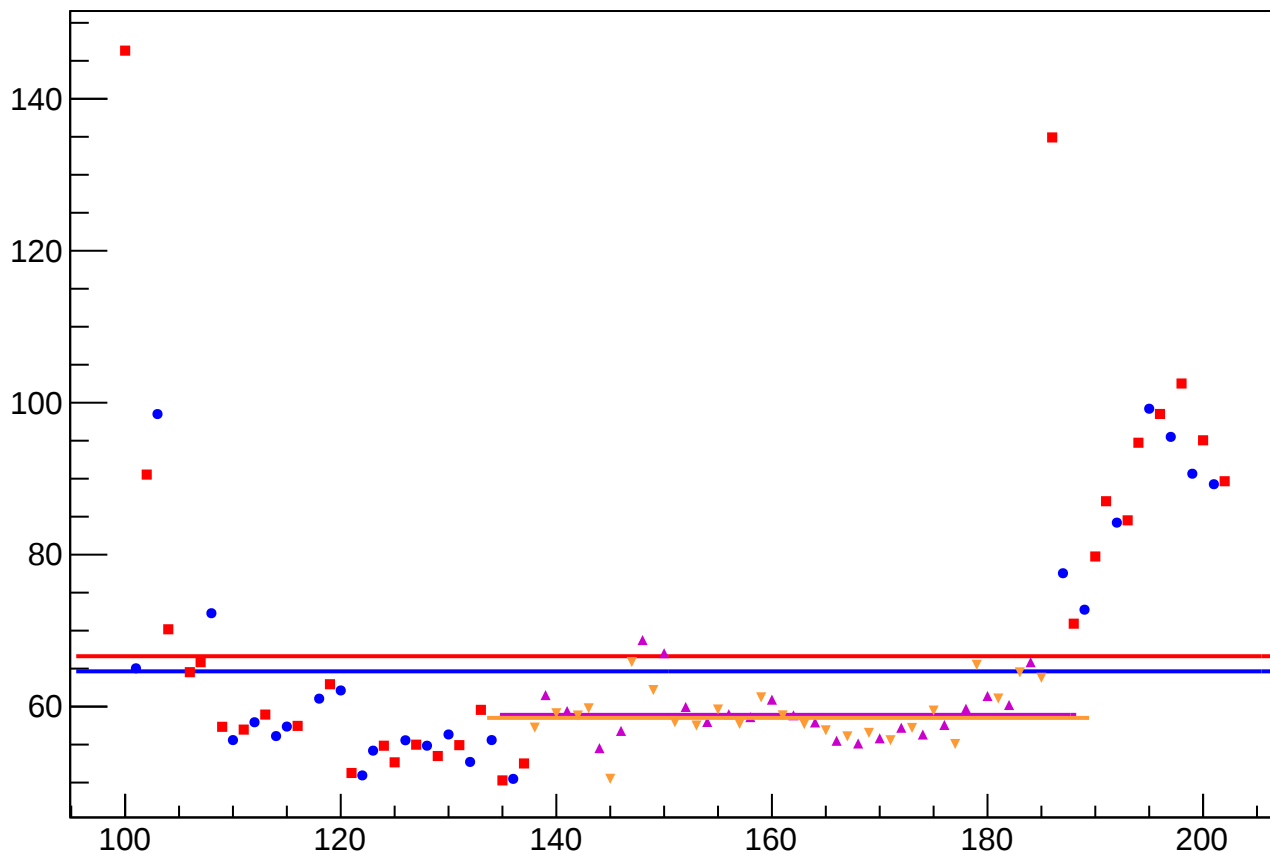
reg\_asym\_sam\_13\_57\_dd\_mean vs Slug, Sign Corrected



Right In:  $27.680 \pm 19.786$   $\chi^2/\text{NDF}$ : 25.4/23  
 Left Out:  $-103.899 \pm 13.642$   $\chi^2/\text{NDF}$ : 30.0/24  
 Right Out:  $-9.363 \pm 18.834$   $\chi^2/\text{NDF}$ : 36.2/28  
 Left In:  $-86.542 \pm 14.120$   $\chi^2/\text{NDF}$ : 21.4/22

Left:  $-95.520 \pm 9.811$   $\chi^2/\text{NDF}$ : 52.1/47  
 Right:  $8.246 \pm 13.642$   $\chi^2/\text{NDF}$ : 63.4/52  
 In:  $-47.999 \pm 11.493$   $\chi^2/\text{NDF}$ : 68.9/46  
 Out:  $-71.367 \pm 11.048$   $\chi^2/\text{NDF}$ : 82.7/53  
 All:  $-60.145 \pm 7.965$   $\chi^2/\text{NDF}$ : 153.7/100

reg\_asym\_sam\_13\_57\_dd\_rms vs Slug, Sign Corrected



Right In: 64.640 $\pm$ 0.014  $\chi^2$ /NDF: 123622.6/23

Left Out: 58.513 $\pm$ 0.010  $\chi^2$ /NDF:123221.6/24

Right Out: 66.630 $\pm$ 0.013  $\chi^2$ /NDF: 1622731.3/28

Left In: 58.913 $\pm$ 0.010  $\chi^2$ /NDF:109968.0/22

Left: 58.706 $\pm$ 0.007  $\chi^2$ /NDF: 234021.7/47

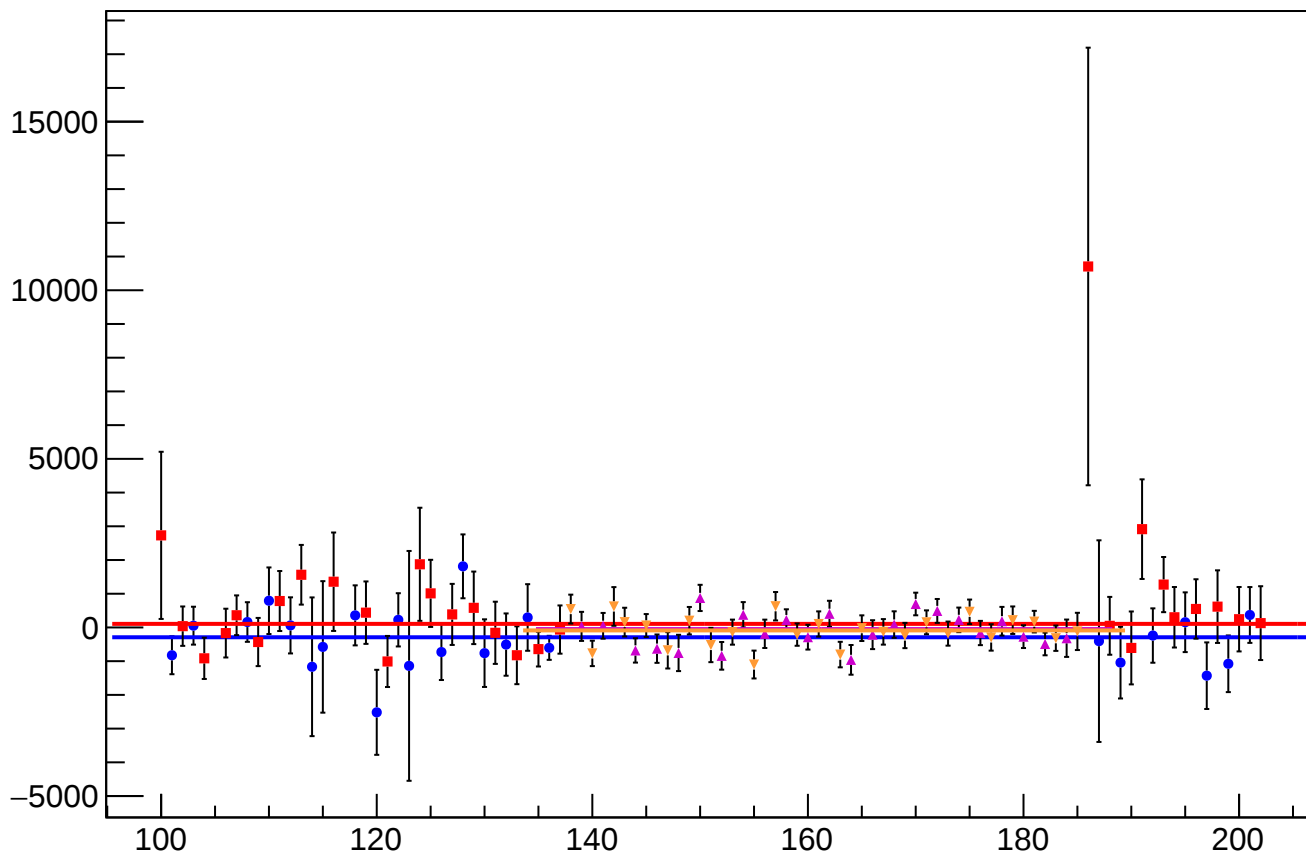
Right: 65.684 $\pm$ 0.010  $\chi^2$ /NDF: 2869968.4/52

In: 60.846 $\pm$ 0.008  $\chi^2$ /NDF:1457611.5/46

Out: 61.306 $\pm$ 0.008  $\chi^2$ /NDF:1989628.1/53

All: 61.085 $\pm$ 0.006  $\chi^2$ /NDF: 3448907.7/100

asym\_sam\_13\_57\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: -290.988+/-164.144  $\chi^2$ /NDF: 17.8/23

Left Out: -87.459+/-78.556  $\chi^2$ /NDF:27.7/24

Right Out: 106.110+/-158.800  $\chi^2$ /NDF: 26.1/28

Left In: -48.742+/-80.548  $\chi^2$ /NDF:35.3/22

Left: -68.585+/-56.239  $\chi^2$ /NDF: 63.2/47

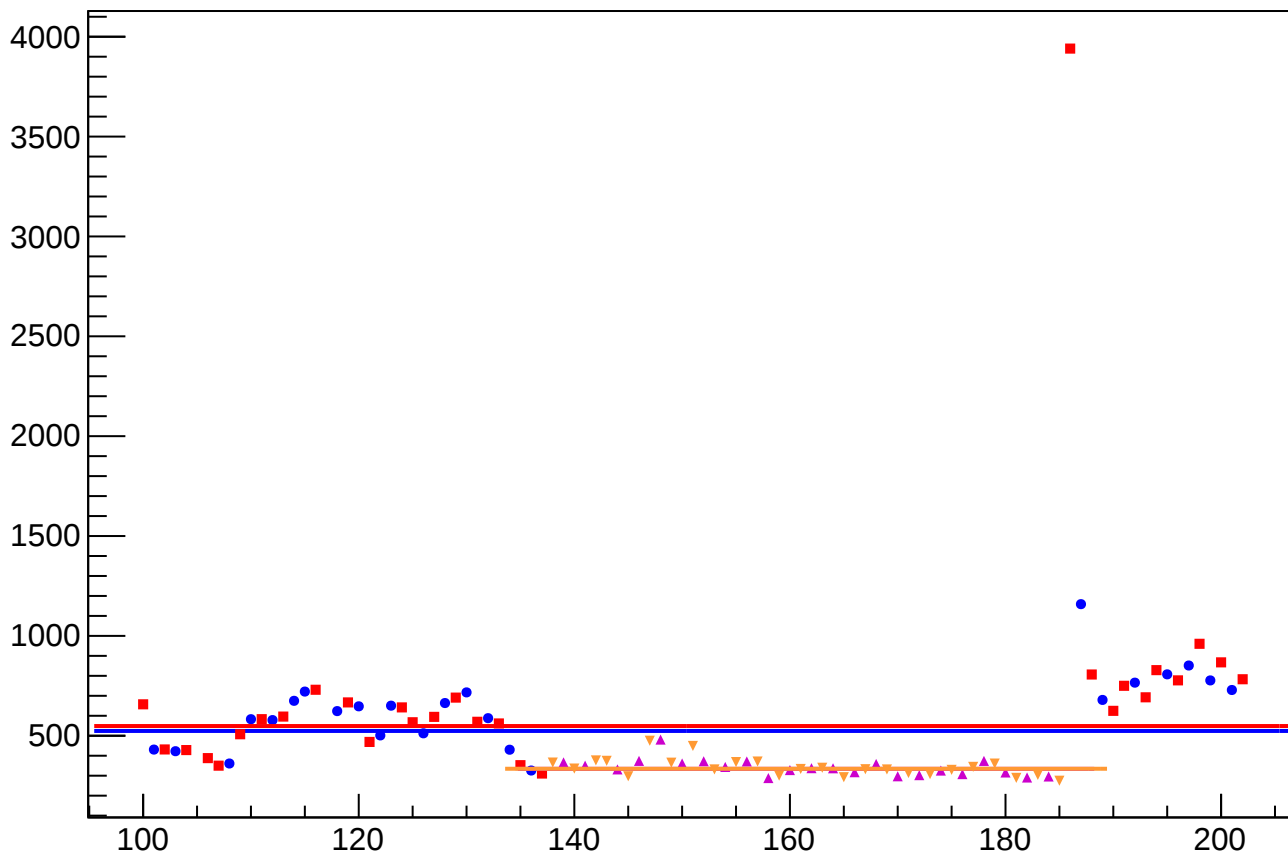
Right: -85.869+/-114.131  $\chi^2$ /NDF: 46.9/52

In: -95.754+/-72.311  $\chi^2$ /NDF:54.9/46

Out: -49.402+/-70.412  $\chi^2$ /NDF:55.0/53

All: -71.961+/-50.447  $\chi^2$ /NDF: 110.1/100

asym\_sam\_13\_57\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 524.034+/-0.116  $\chi^2/\text{NDF}$ : 2175579.3/23

Left Out: 334.749+/-0.056  $\chi^2/\text{NDF}$ : 491370.4/24

Right Out: 548.604+/-0.112  $\chi^2/\text{NDF}$ : 2920429.3/28

Left In: 334.147+/-0.057  $\chi^2/\text{NDF}$ : 397200.6/22

Left: 334.455+/-0.040  $\chi^2/\text{NDF}$ : 888628.3/47

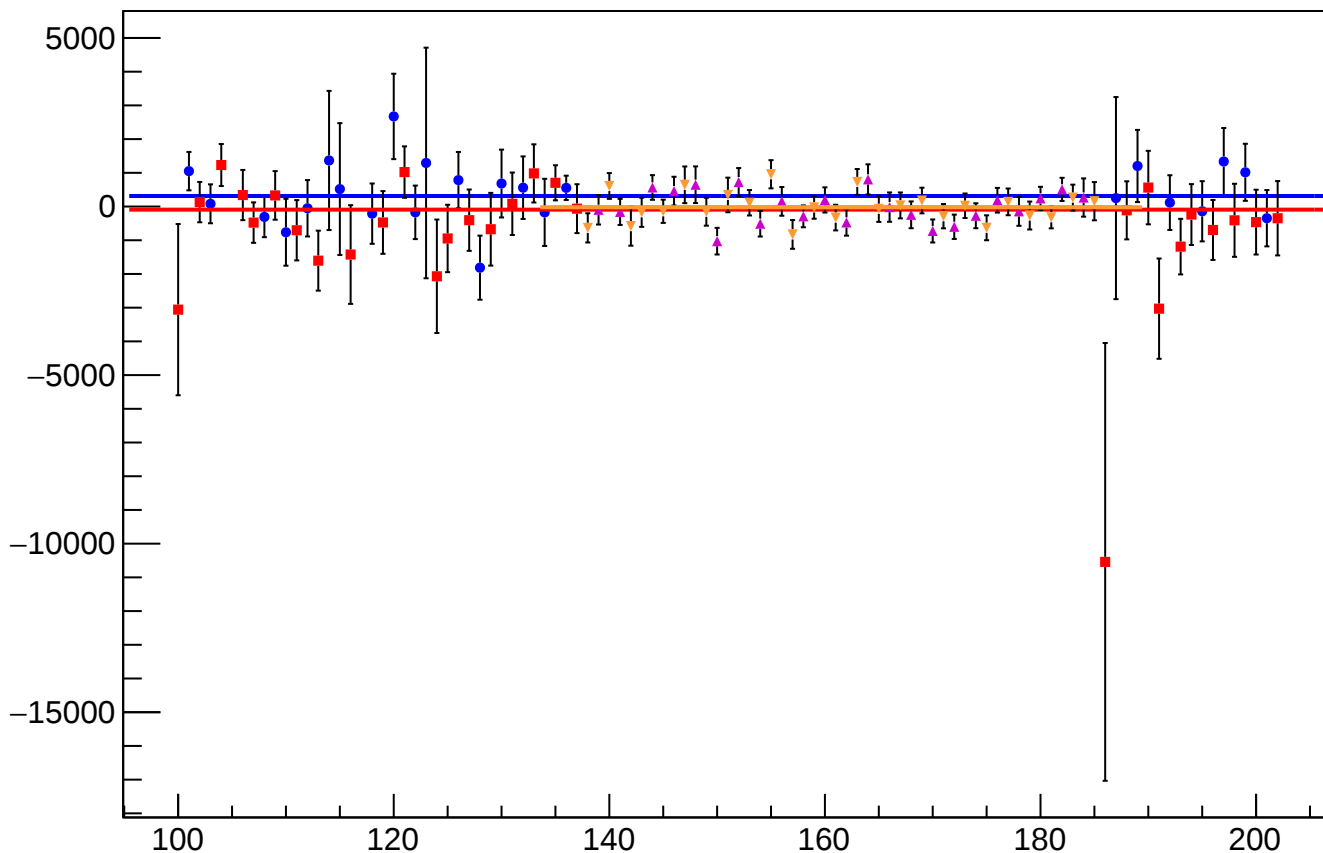
Right: 536.726+/-0.081  $\chi^2/\text{NDF}$ : 5119156.4/52

In: 370.998+/-0.051  $\chi^2/\text{NDF}$ : 4729871.2/46

Out: 376.794+/-0.050  $\chi^2/\text{NDF}$ : 6325880.9/53

All: 373.973+/-0.036  $\chi^2/\text{NDF}$ : 11062348.0/100

# asym\_sam\_13\_57\_dd\_mean vs Slug, Sign Corrected



Right In:  $312.535 \pm 165.920$   $\chi^2/\text{NDF}: 18.4/23$

Left Out:  $-20.895 \pm 79.812$   $\chi^2/\text{NDF}: 27.2/24$

Right Out:  $-92.282 \pm 160.549$   $\chi^2/\text{NDF}: 29.4/28$

Left In:  $-31.800 \pm 81.839$   $\chi^2/\text{NDF}: 34.0/22$

Left:  $-26.211 \pm 57.139$   $\chi^2/\text{NDF}: 61.3/47$

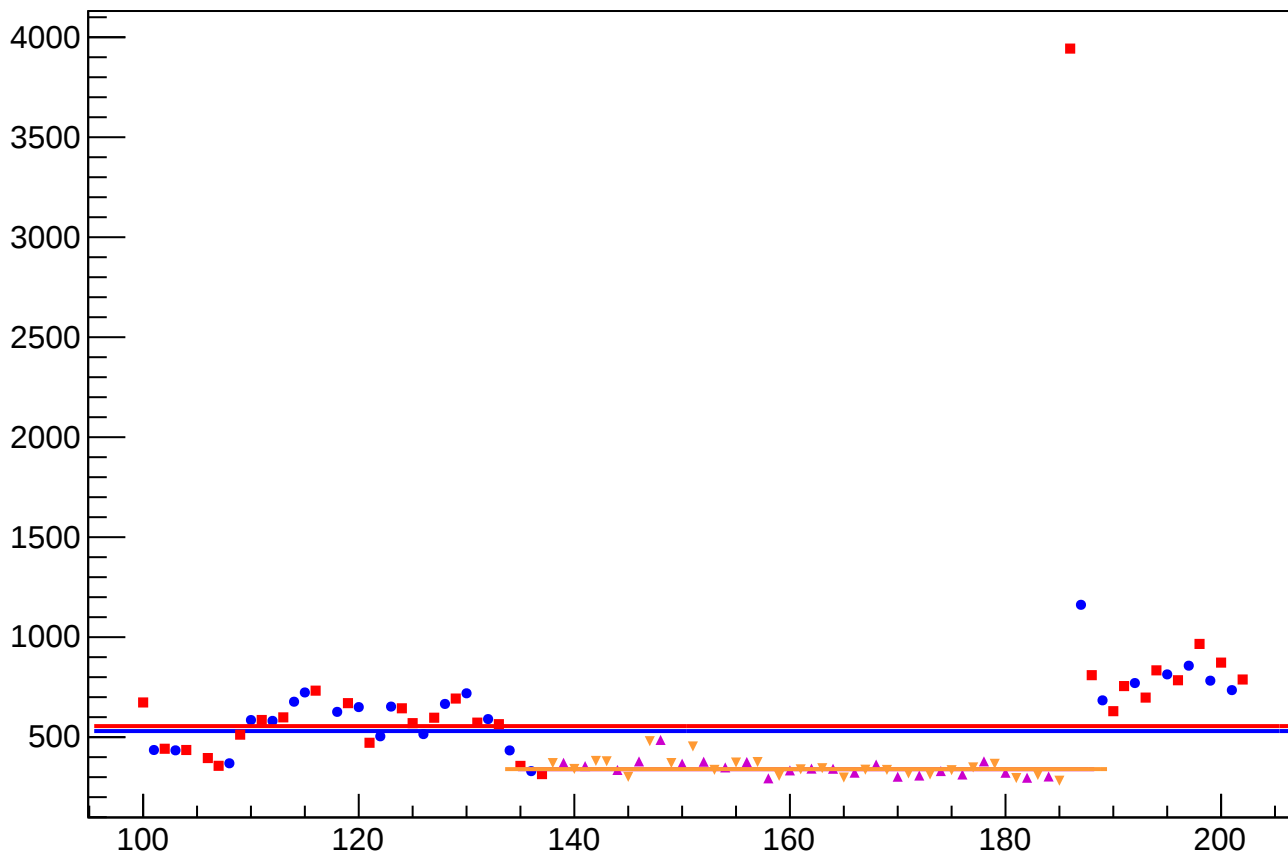
Right:  $103.469 \pm 115.377$   $\chi^2/\text{NDF}: 50.9/52$

In:  $35.581 \pm 73.397$   $\chi^2/\text{NDF}: 55.9/46$

Out:  $-35.041 \pm 71.468$   $\chi^2/\text{NDF}: 56.8/53$

All:  $-0.670 \pm 51.204$   $\chi^2/\text{NDF}: 113.2/100$

asym\_sam\_13\_57\_dd\_rms vs Slug, Sign Corrected



Right In: 530.454+/-0.117  $\chi^2/\text{NDF}$ : 2120492.6/23

Left Out: 340.238+/-0.056  $\chi^2/\text{NDF}$ : 468863.6/24

Right Out: 555.285+/-0.114  $\chi^2/\text{NDF}$ : 2857863.5/28

Left In: 339.621+/-0.058  $\chi^2/\text{NDF}$ : 379808.1/22

Left: 339.937+/-0.040  $\chi^2/\text{NDF}$ : 848729.8/47

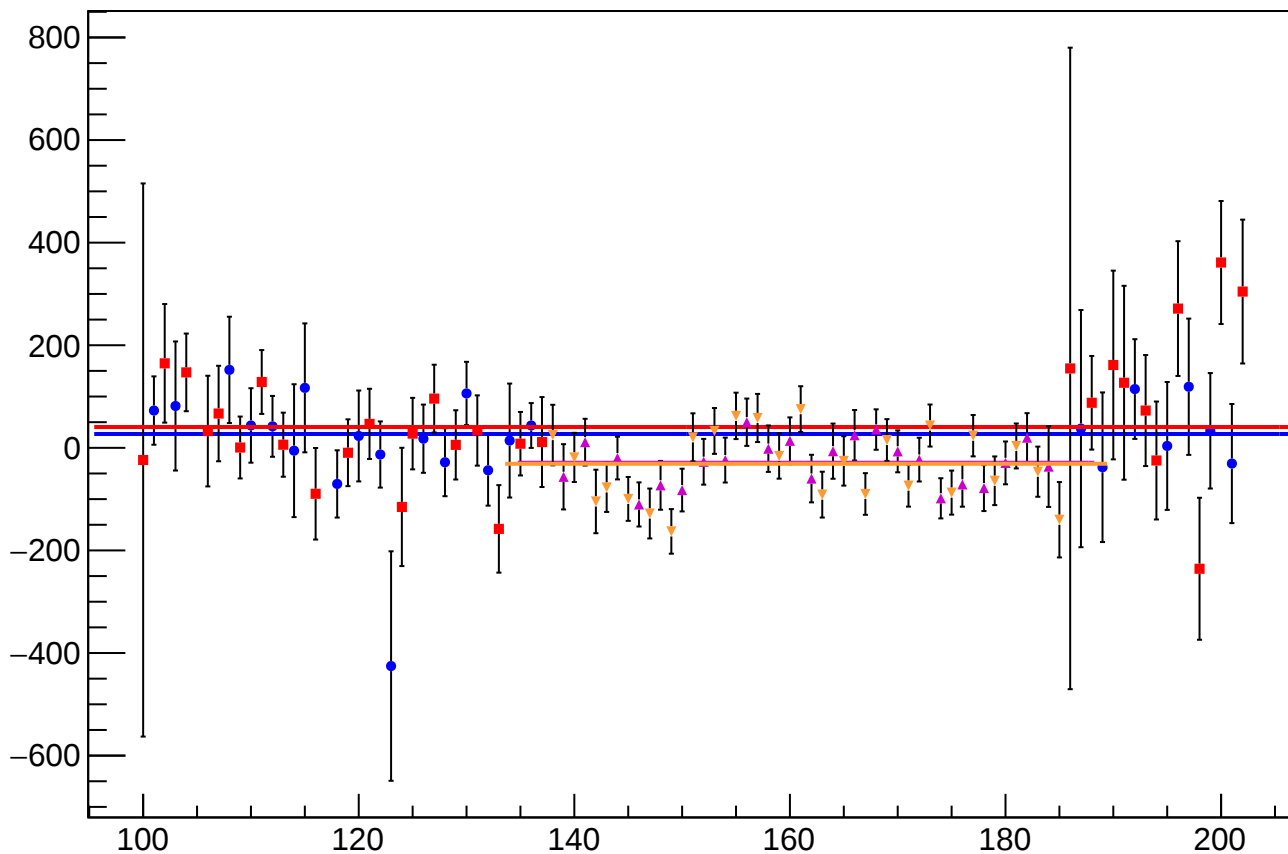
Right: 543.278+/-0.082  $\chi^2/\text{NDF}$ : 5001489.2/52

In: 376.964+/-0.052  $\chi^2/\text{NDF}$ : 4628282.4/46

Out: 382.851+/-0.051  $\chi^2/\text{NDF}$ : 6203934.0/53

All: 379.986+/-0.036  $\chi^2/\text{NDF}$ : 10838819.9/100

reg\_asym\_sam\_15\_37\_dd\_mean vs Slug, Sign Corrected



Right In:  $27.003 \pm 16.721$   $\chi^2/\text{NDF}: 14.8/23$

Left Out:  $-31.063 \pm 9.170$   $\chi^2/\text{NDF}: 52.6/24$

Right Out:  $40.604 \pm 16.093$   $\chi^2/\text{NDF}: 36.5/28$

Left In:  $-29.055 \pm 9.449$   $\chi^2/\text{NDF}: 22.4/22$

Left:  $-30.089 \pm 6.581$   $\chi^2/\text{NDF}: 75.1/47$

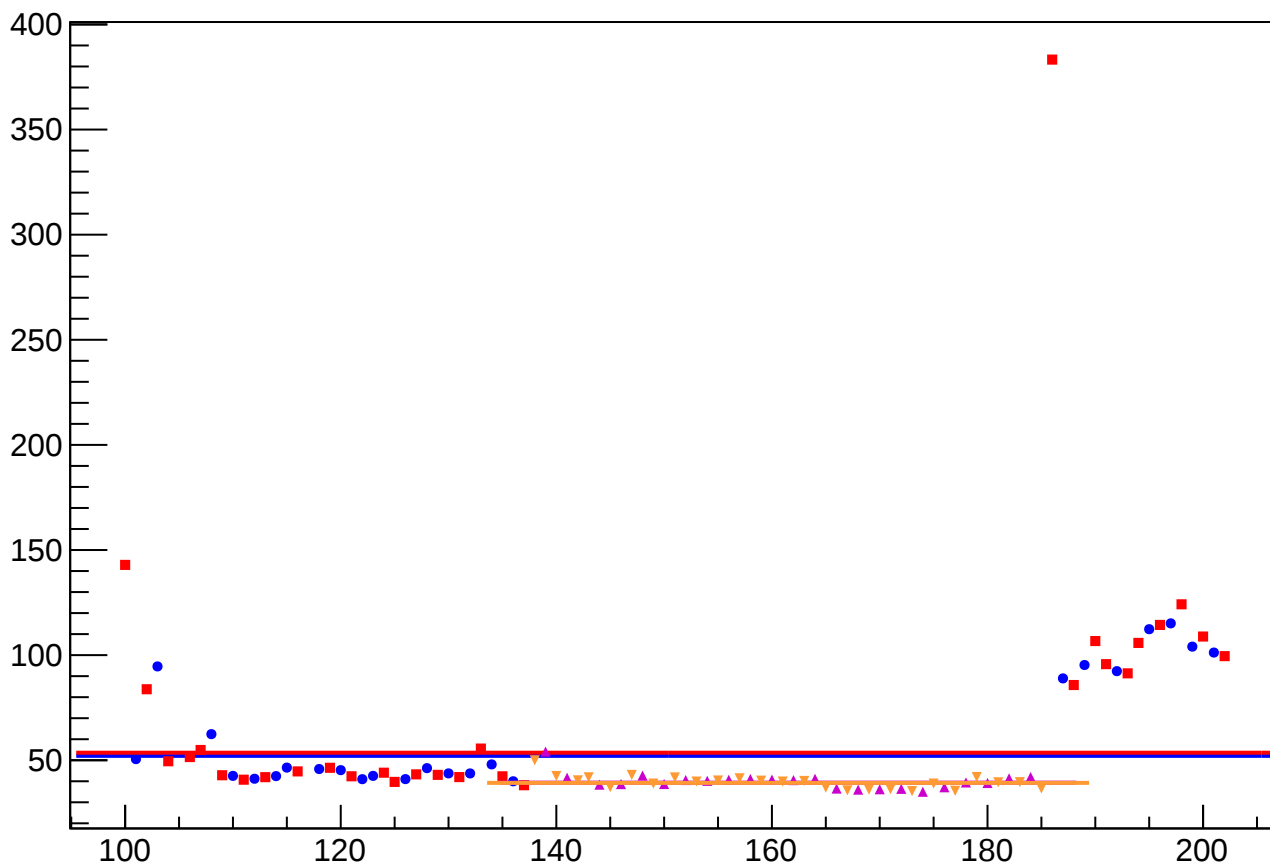
Right:  $34.064 \pm 11.595$   $\chi^2/\text{NDF}: 51.6/52$

In:  $-15.486 \pm 8.227$   $\chi^2/\text{NDF}: 45.8/46$

Out:  $-13.498 \pm 7.967$   $\chi^2/\text{NDF}: 104.0/53$

All:  $-14.460 \pm 5.723$   $\chi^2/\text{NDF}: 149.8/100$

reg\_asym\_sam\_15\_37\_dd\_rms vs Slug, Sign Corrected



Right In: 52.093 $\pm$ 0.012  $\chi^2$ /NDF: 3023718.7/23

Left Out: 39.235 $\pm$ 0.006  $\chi^2$ /NDF:201960.7/24

Right Out: 53.589 $\pm$ 0.011  $\chi^2$ /NDF: 4205728.0/28

Left In: 39.338 $\pm$ 0.007  $\chi^2$ /NDF:215671.3/22

Left: 39.285 $\pm$ 0.005  $\chi^2$ /NDF: 417755.0/47

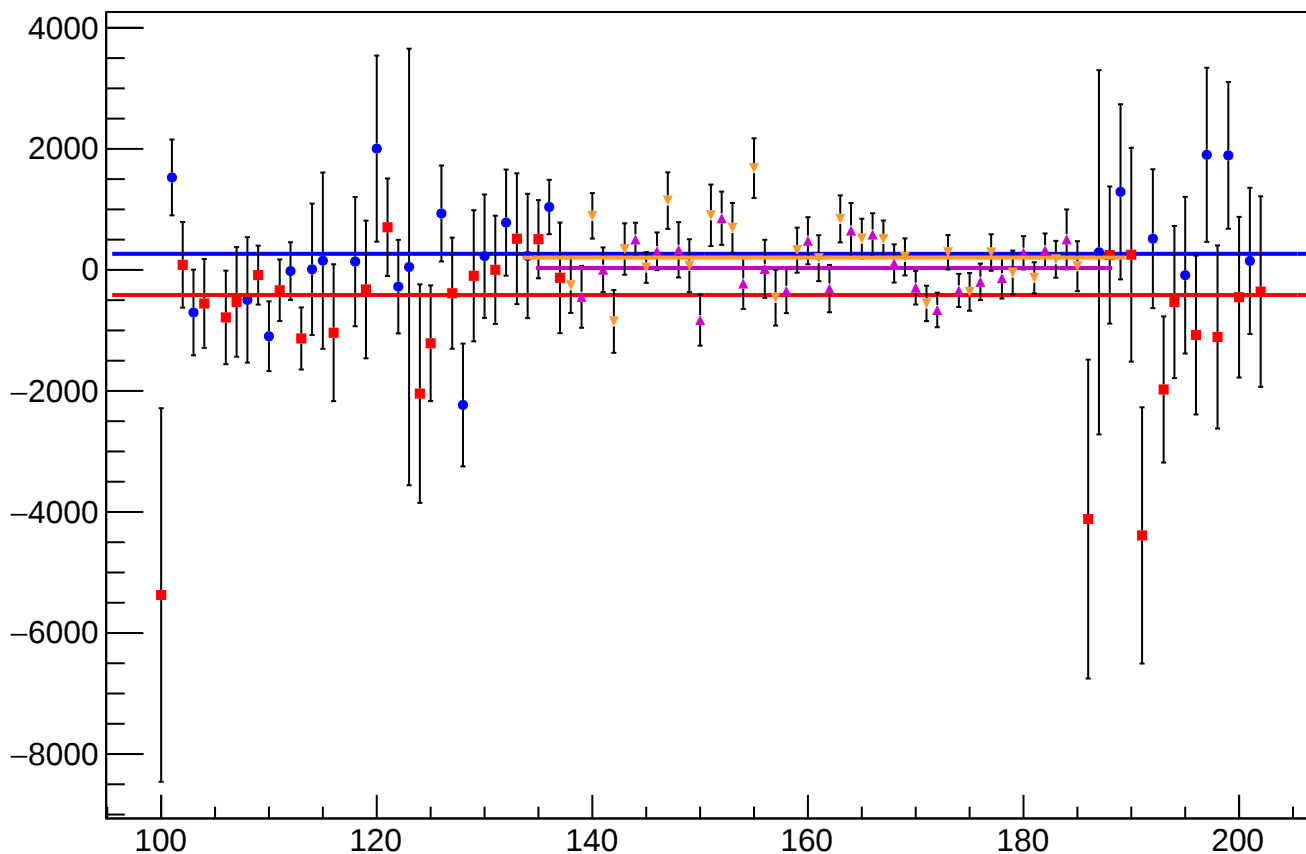
Right: 52.869 $\pm$ 0.008  $\chi^2$ /NDF: 7237749.2/52

In: 42.426 $\pm$ 0.006  $\chi^2$ /NDF:4121461.3/46

Out: 42.753 $\pm$ 0.006  $\chi^2$ /NDF:5608720.8/53

All: 42.595 $\pm$ 0.004  $\chi^2$ /NDF: 9731813.1/100

asym\_sam\_15\_37\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: 265.863 $\pm$ 177.399  $\chi^2$ /NDF: 28.1/23

Left Out: 202.369 $\pm$ 70.426  $\chi^2$ /NDF:44.8/24

Right Out: -414.488 $\pm$ 167.261  $\chi^2$ /NDF: 20.9/28

Left In: 31.548 $\pm$ 72.100  $\chi^2$ /NDF:33.4/22

Left: 118.965 $\pm$ 50.380  $\chi^2$ /NDF: 81.1/47

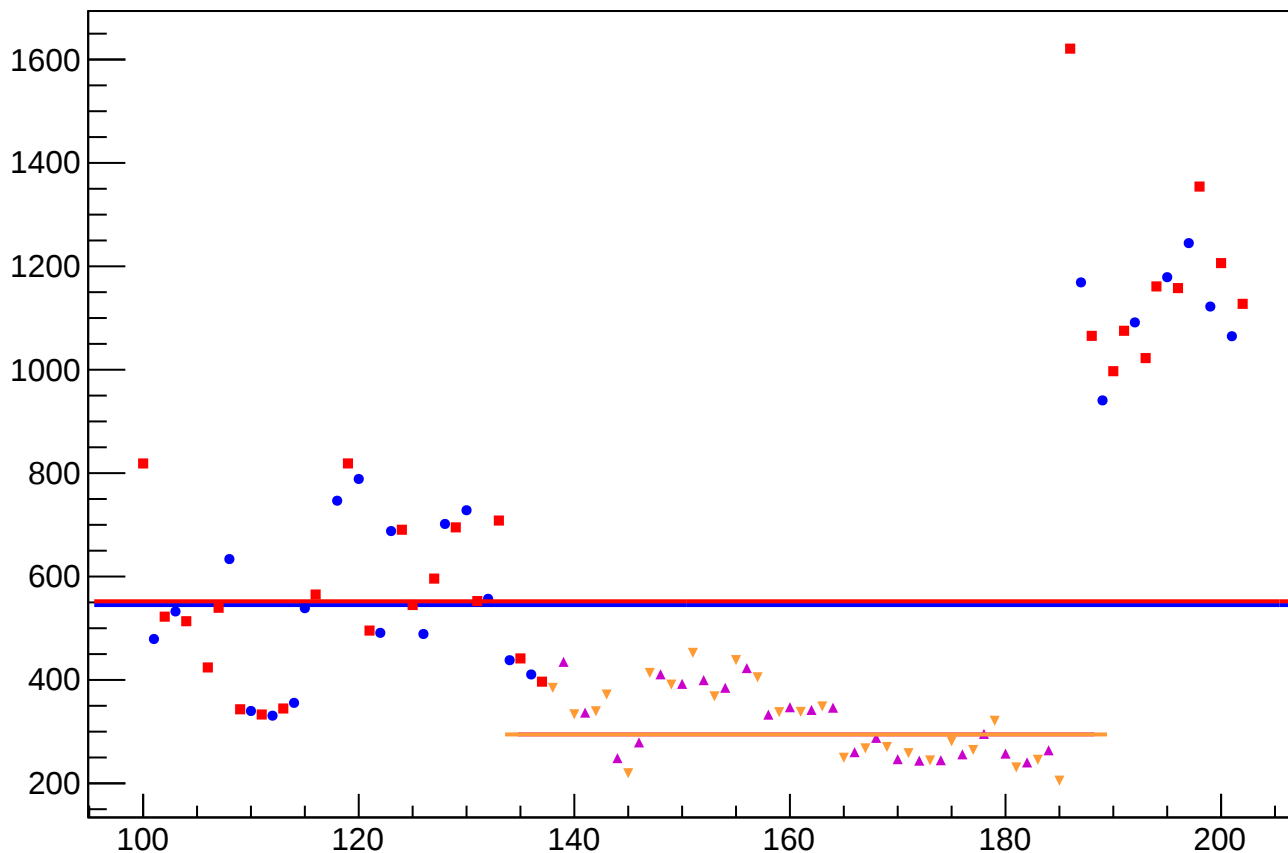
Right: -94.306 $\pm$ 121.698  $\chi^2$ /NDF: 56.7/52

In: 64.766 $\pm$ 66.794  $\chi^2$ /NDF:62.9/46

Out: 109.478 $\pm$ 64.907  $\chi^2$ /NDF:77.2/53

All: 87.763 $\pm$ 46.549  $\chi^2$ /NDF: 140.4/100

asym\_sam\_15\_37\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 544.834+/-0.125  $\chi^2/\text{NDF}$ : 3679100.2/23

Left Out: 294.591+/-0.050  $\chi^2/\text{NDF}$ : 1680474.5/24

Right Out: 552.135+/-0.118  $\chi^2/\text{NDF}$ : 4977747.5/28

Left In: 294.722+/-0.051  $\chi^2/\text{NDF}$ : 1297310.3/22

Left: 294.655+/-0.036  $\chi^2/\text{NDF}$ : 2977788.1/47

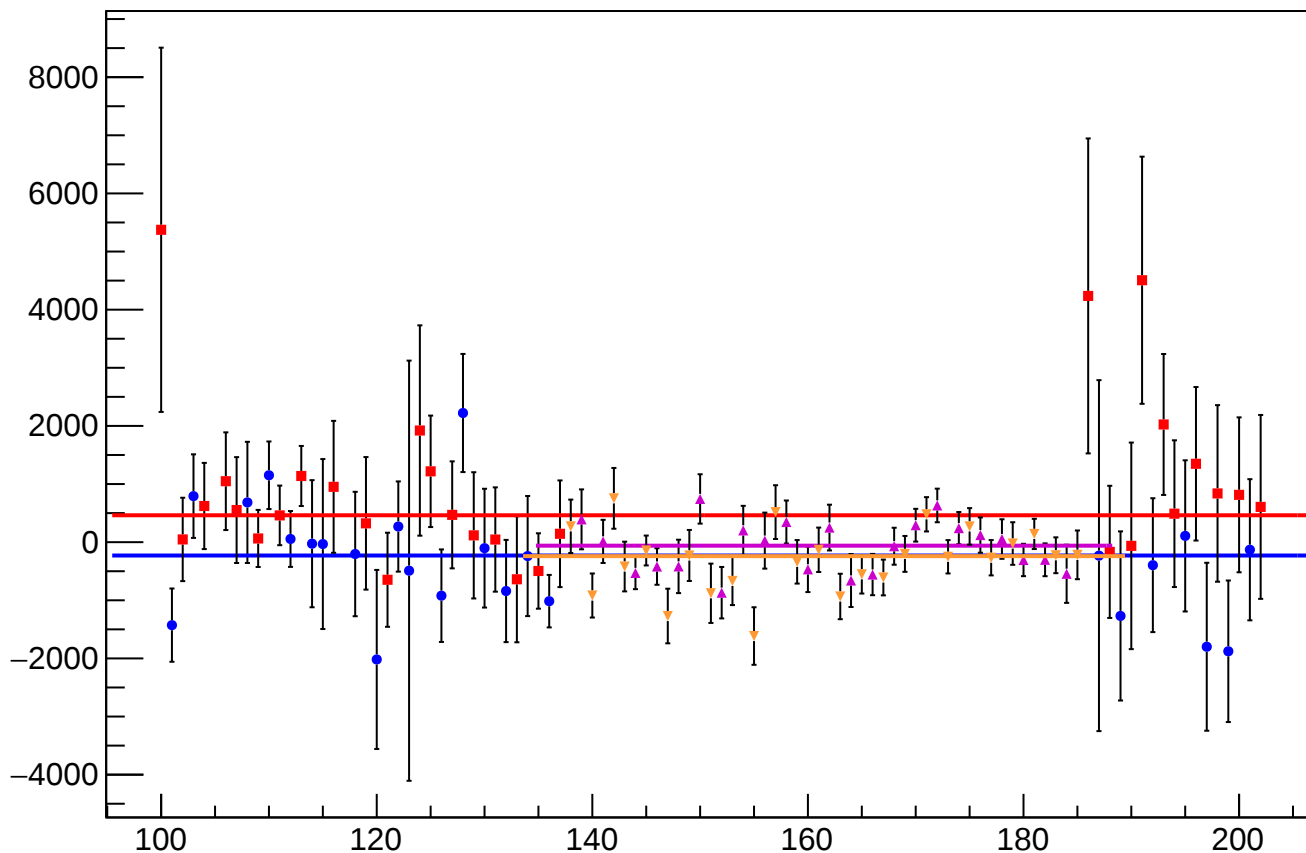
Right: 548.699+/-0.086  $\chi^2/\text{NDF}$ : 8658640.9/52

In: 330.179+/-0.047  $\chi^2/\text{NDF}$ : 8388355.8/46

Out: 333.374+/-0.046  $\chi^2/\text{NDF}$ : 10685914.7/53

All: 331.823+/-0.033  $\chi^2/\text{NDF}$ : 19076624.2/100

asym\_sam\_15\_37\_dd\_mean vs Slug, Sign Corrected



Right In:  $-229.579 \pm 178.466$   $\chi^2/\text{NDF}$ : 27.9/23

Left Out:  $-240.357 \pm 71.100$   $\chi^2/\text{NDF}$ : 42.9/24

Right Out:  $462.770 \pm 168.895$   $\chi^2/\text{NDF}$ : 20.9/28

Left In:  $-60.330 \pm 72.788$   $\chi^2/\text{NDF}$ : 30.9/22

Left:  $-152.455 \pm 50.862$   $\chi^2/\text{NDF}$ : 77.0/47

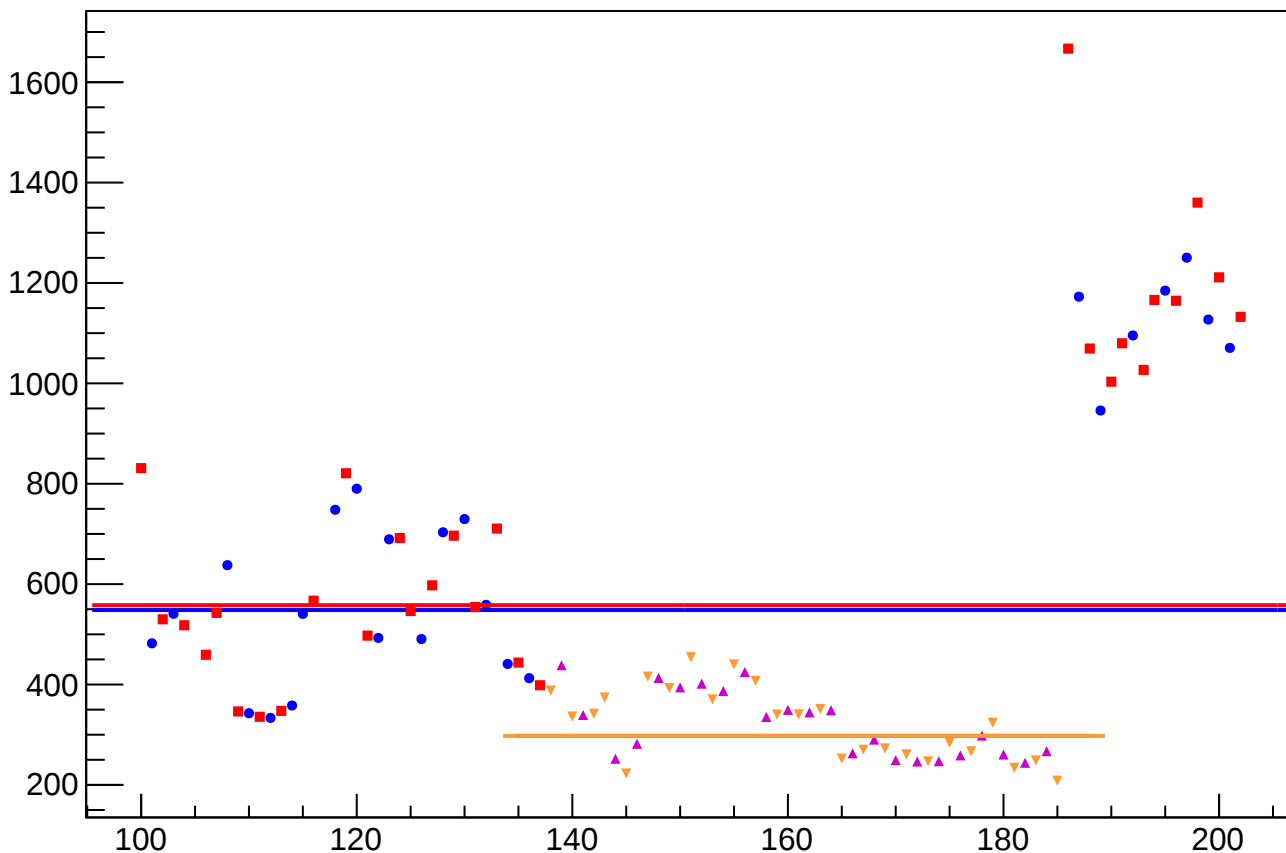
Right:  $135.657 \pm 122.671$   $\chi^2/\text{NDF}$ : 56.8/52

In:  $-84.468 \pm 67.398$   $\chi^2/\text{NDF}$ : 59.6/46

Out:  $-134.508 \pm 65.531$   $\chi^2/\text{NDF}$ : 78.6/53

All:  $-110.191 \pm 46.983$   $\chi^2/\text{NDF}$ : 138.4/100

asym\_sam\_15\_37\_dd\_rms vs Slug, Sign Corrected



Right In: 548.378+/-0.126  $\chi^2/\text{NDF}$ : 3661600.2/23

Left Out: 297.613+/-0.050  $\chi^2/\text{NDF}$ : 1637757.8/24

Right Out: 558.061+/-0.119  $\chi^2/\text{NDF}$ : 4932207.6/28

Left In: 297.699+/-0.051  $\chi^2/\text{NDF}$ : 1266306.2/22

Left: 297.655+/-0.036  $\chi^2/\text{NDF}$ : 2904065.4/47

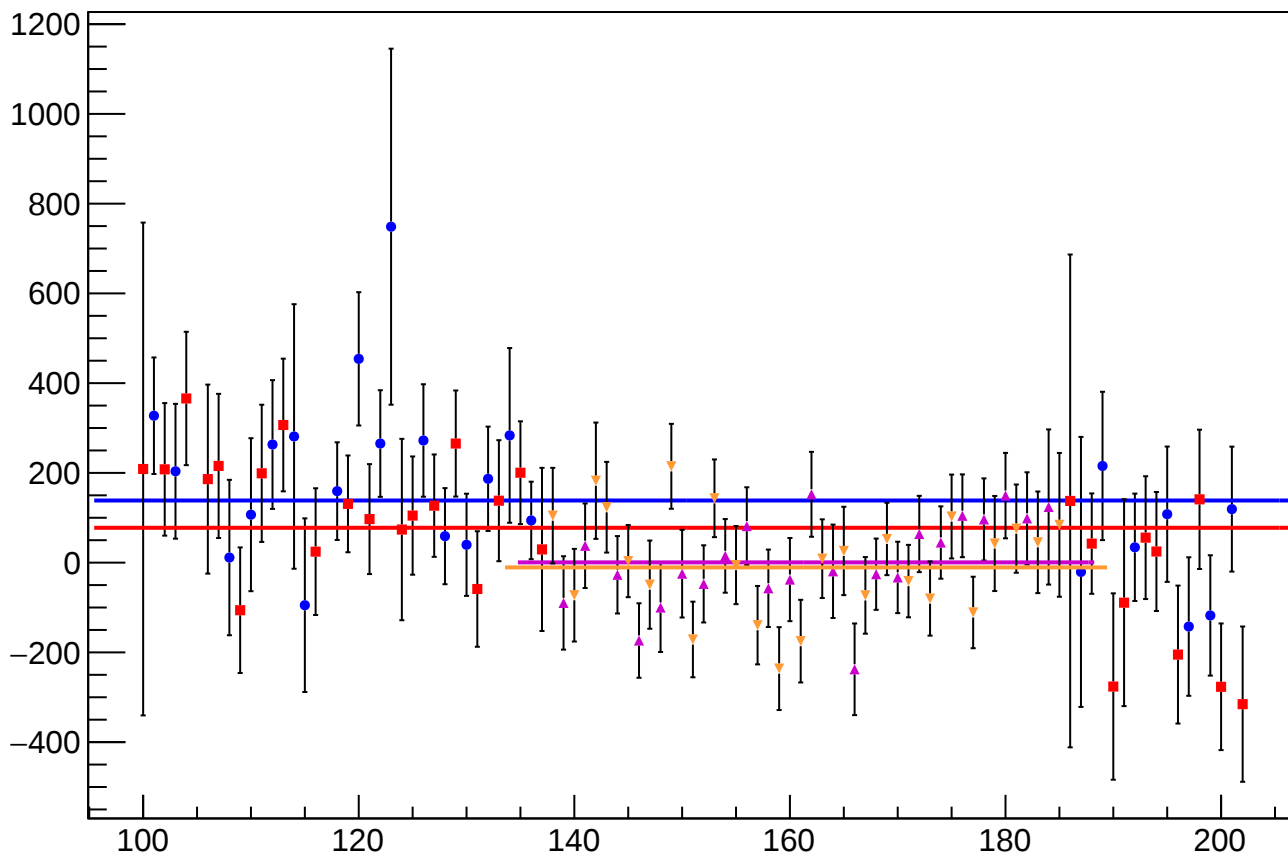
Right: 553.486+/-0.087  $\chi^2/\text{NDF}$ : 8596914.0/52

In: 333.451+/-0.048  $\chi^2/\text{NDF}$ : 8311112.2/46

Out: 336.821+/-0.046  $\chi^2/\text{NDF}$ : 10609967.5/53

All: 335.183+/-0.033  $\chi^2/\text{NDF}$ : 18923649.3/100

reg\_asym\_sam\_24\_68\_dd\_mean vs Slug, Sign Corrected



Right In: 138.481 $\pm$ 28.418  $\chi^2$ /NDF: 25.1/23

Left Out: -10.667 $\pm$ 18.610  $\chi^2$ /NDF:36.3/24

Right Out: 77.695 $\pm$ 27.182  $\chi^2$ /NDF: 34.8/28

Left In: 0.575 $\pm$ 19.091  $\chi^2$ /NDF:23.8/22

Left: -5.190 $\pm$ 13.326  $\chi^2$ /NDF: 60.3/47

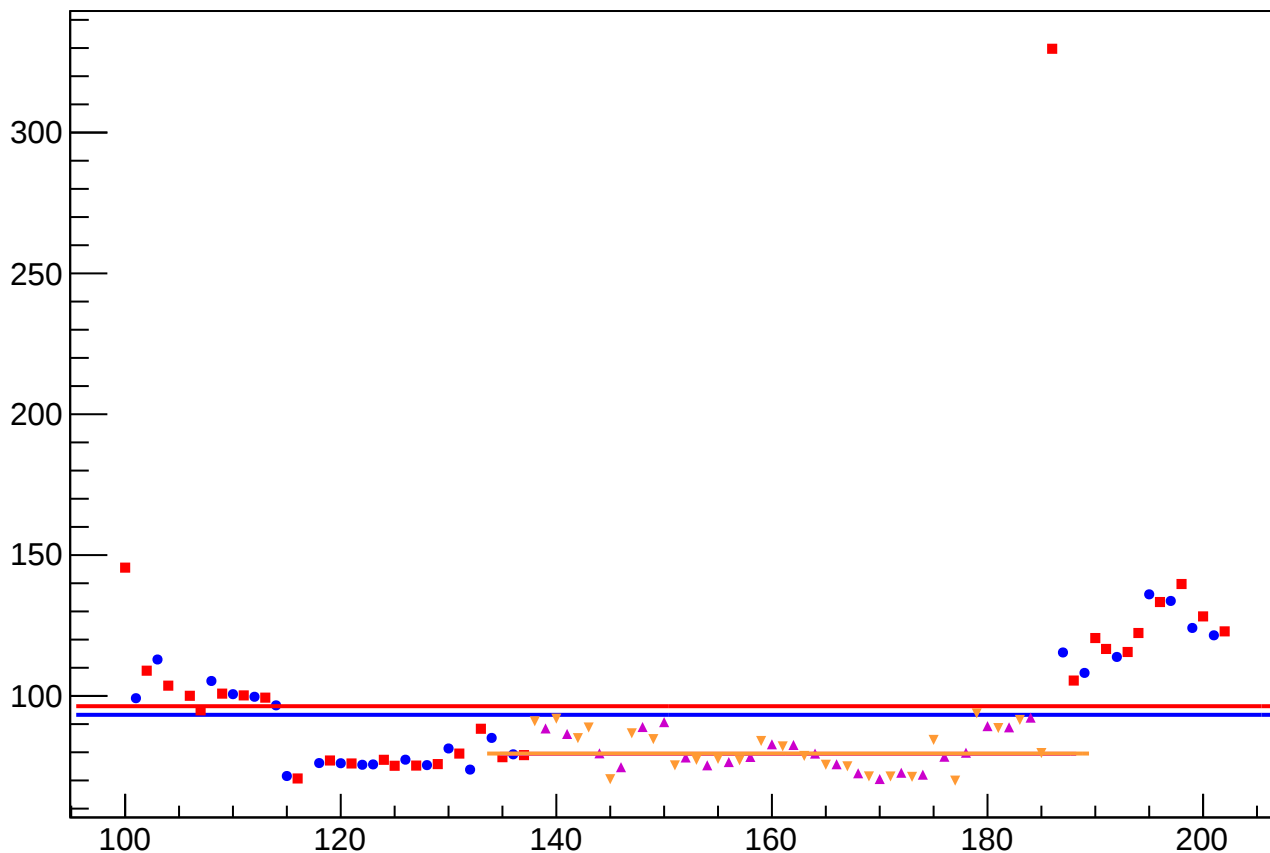
Right: 106.738 $\pm$ 19.643  $\chi^2$ /NDF: 62.3/52

In: 43.460 $\pm$ 15.847  $\chi^2$ /NDF:65.1/46

Out: 17.532 $\pm$ 15.356  $\chi^2$ /NDF:78.3/53

All: 30.087 $\pm$ 11.028  $\chi^2$ /NDF: 144.8/100

reg\_asym\_sam\_24\_68\_dd\_rms vs Slug, Sign Corrected



Right In: 93.295+/-0.020  $\chi^2/\text{NDF}$ : 1000021.2/23

Left Out: 79.551+/-0.013  $\chi^2/\text{NDF}$ : 309075.2/24

Right Out: 96.359+/-0.019  $\chi^2/\text{NDF}$ : 1487476.0/28

Left In: 79.436+/-0.013  $\chi^2/\text{NDF}$ : 212440.1/22

Left: 79.495+/-0.009  $\chi^2/\text{NDF}$ : 521552.2/47

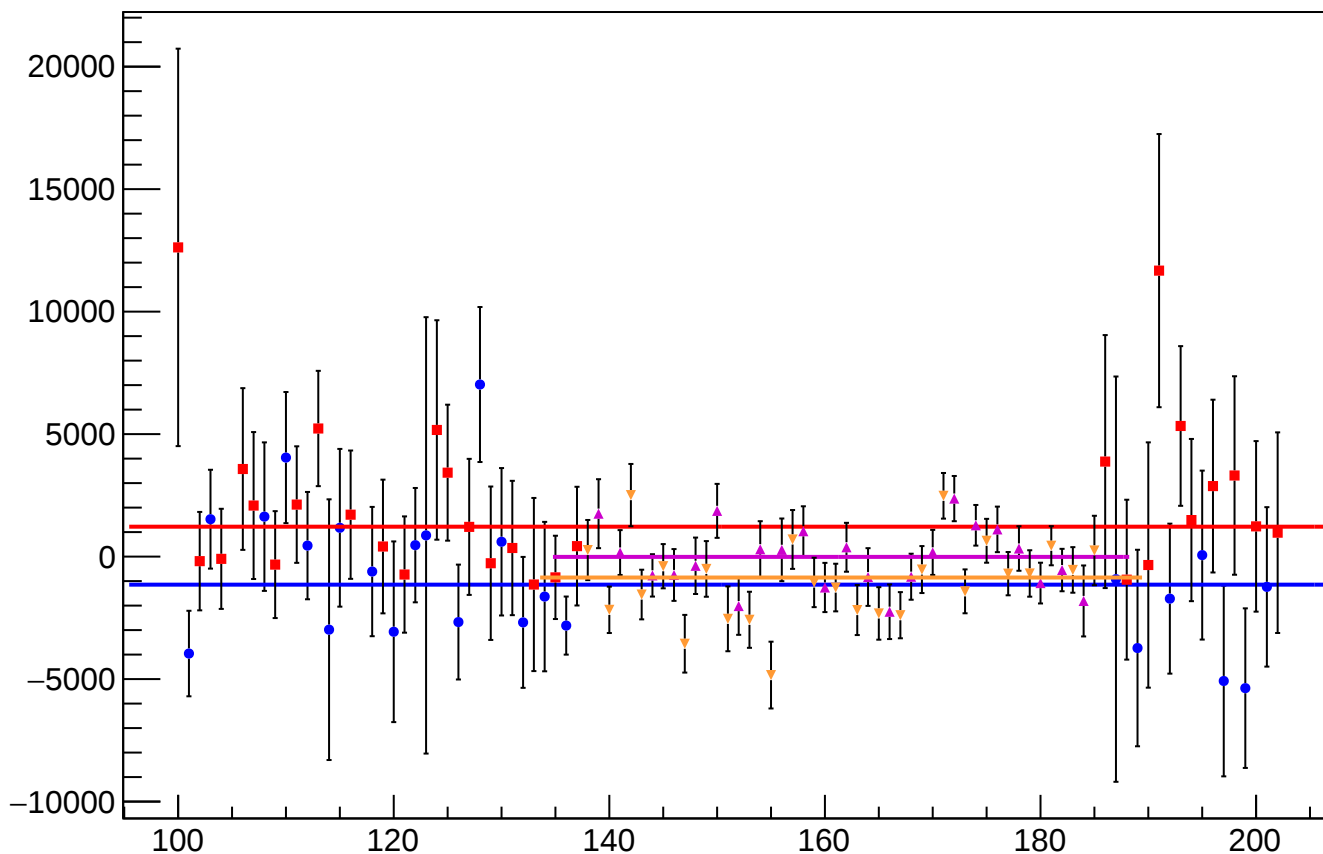
Right: 94.895+/-0.014  $\chi^2/\text{NDF}$ : 2499634.1/52

In: 83.746+/-0.011  $\chi^2/\text{NDF}$ : 1540192.3/46

Out: 84.915+/-0.011  $\chi^2/\text{NDF}$ : 2317176.6/53

All: 84.349+/-0.008  $\chi^2/\text{NDF}$ : 3862978.8/100

asym\_sam\_24\_68\_dd\_correction\_mean vs Slug, Sign Corrected



Right In:  $-1145.292 \pm 538.441$   $\chi^2/\text{NDF}: 24.0/23$

Left Out:  $-854.130 \pm 204.090$   $\chi^2/\text{NDF}: 56.0/24$

Right Out:  $1221.065 \pm 531.248$   $\chi^2/\text{NDF}: 18.0/28$

Left In:  $-11.687 \pm 210.073$   $\chi^2/\text{NDF}: 31.2/22$

Left:  $-445.076 \pm 146.383$   $\chi^2/\text{NDF}: 95.5/47$

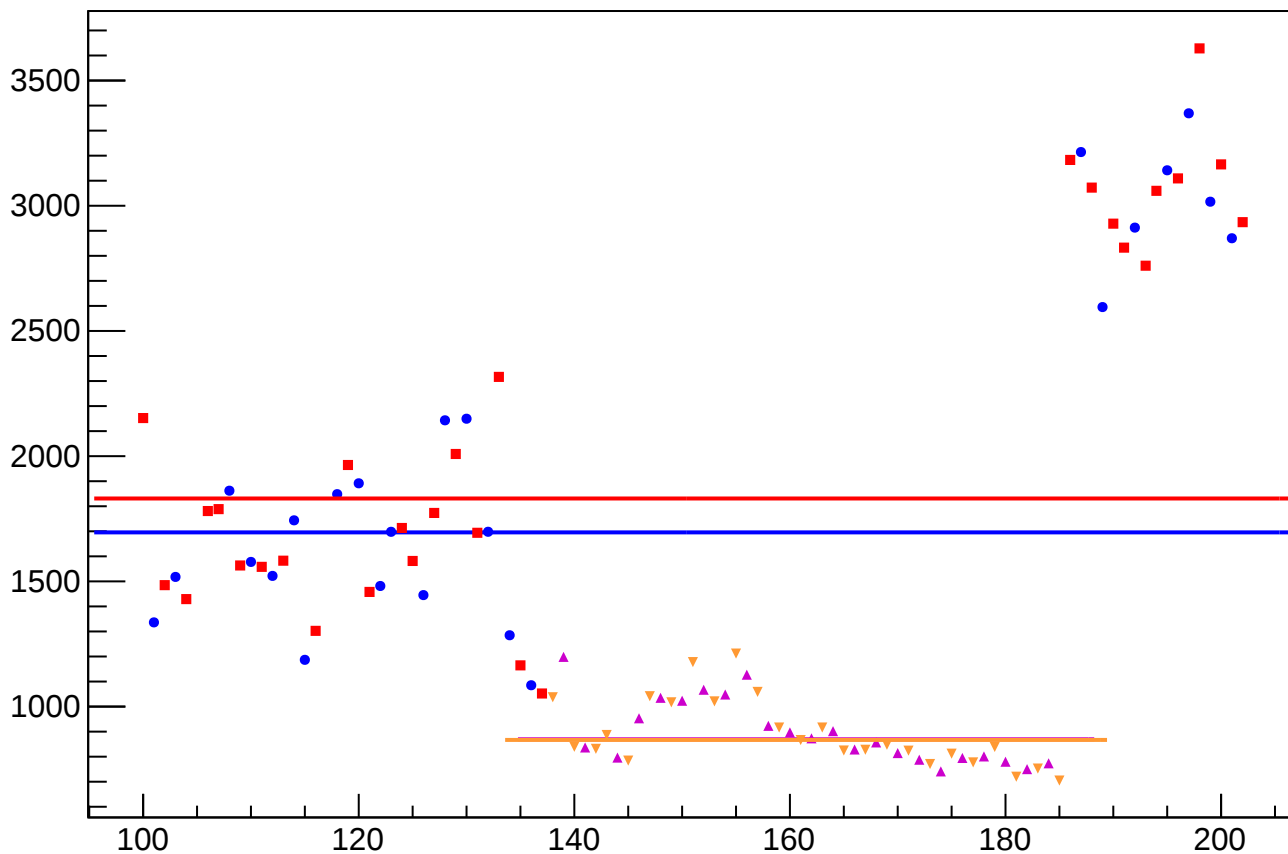
Right:  $53.800 \pm 378.167$   $\chi^2/\text{NDF}: 51.8/52$

In:  $-161.446 \pm 195.706$   $\chi^2/\text{NDF}: 59.1/46$

Out:  $-587.245 \pm 190.515$   $\chi^2/\text{NDF}: 87.3/53$

All:  $-380.067 \pm 136.513$   $\chi^2/\text{NDF}: 148.8/100$

asym\_sam\_24\_68\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 1695.654+/-0.381  $\chi^2/\text{NDF}$ : 2671580.0/23

Left Out: 866.893+/-0.144  $\chi^2/\text{NDF}$ : 661712.5/24

Right Out: 1830.994+/-0.376  $\chi^2/\text{NDF}$ : 3057123.3/28

Left In: 869.569+/-0.149  $\chi^2/\text{NDF}$ : 582301.2/22

Left: 868.192+/-0.104  $\chi^2/\text{NDF}$ : 1244180.7/47

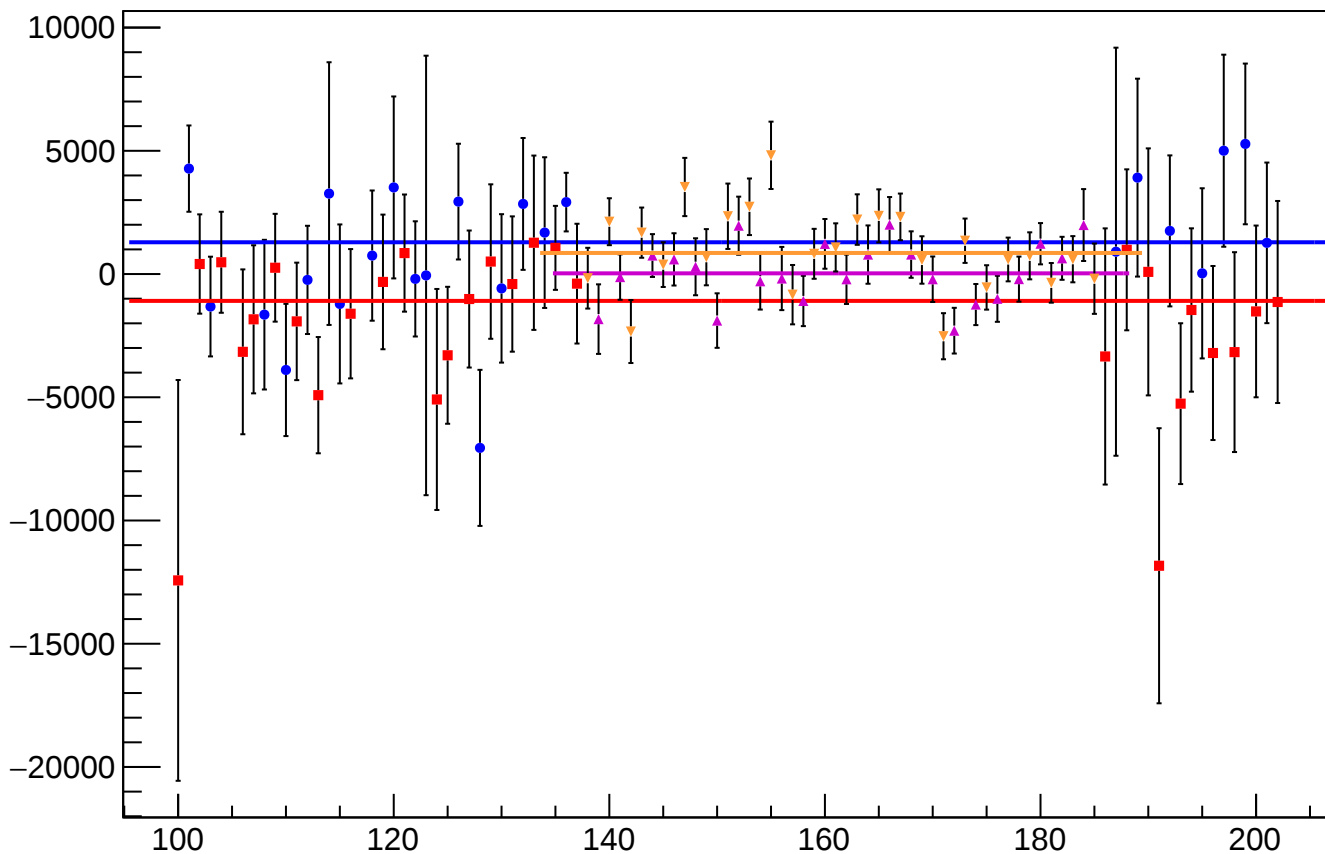
Right: 1764.234+/-0.267  $\chi^2/\text{NDF}$ : 5792732.0/52

In: 978.701+/-0.138  $\chi^2/\text{NDF}$ : 7339603.4/46

Out: 990.883+/-0.135  $\chi^2/\text{NDF}$ : 9458610.7/53

All: 984.956+/-0.097  $\chi^2/\text{NDF}$ : 16802192.6/100

asym\_sam\_24\_68\_dd\_mean vs Slug, Sign Corrected



Right In: 1288.953+/-539.463  $\chi^2/\text{NDF}$ : 24.3/23

Left Out: 855.664+/-205.047  $\chi^2/\text{NDF}$ : 54.1/24

Right Out: -1089.335+/-532.331  $\chi^2/\text{NDF}$ : 17.9/28

Left In: 28.553+/-211.034  $\chi^2/\text{NDF}$ : 29.7/22

Left: 454.007+/-147.061  $\chi^2/\text{NDF}$ : 91.7/47

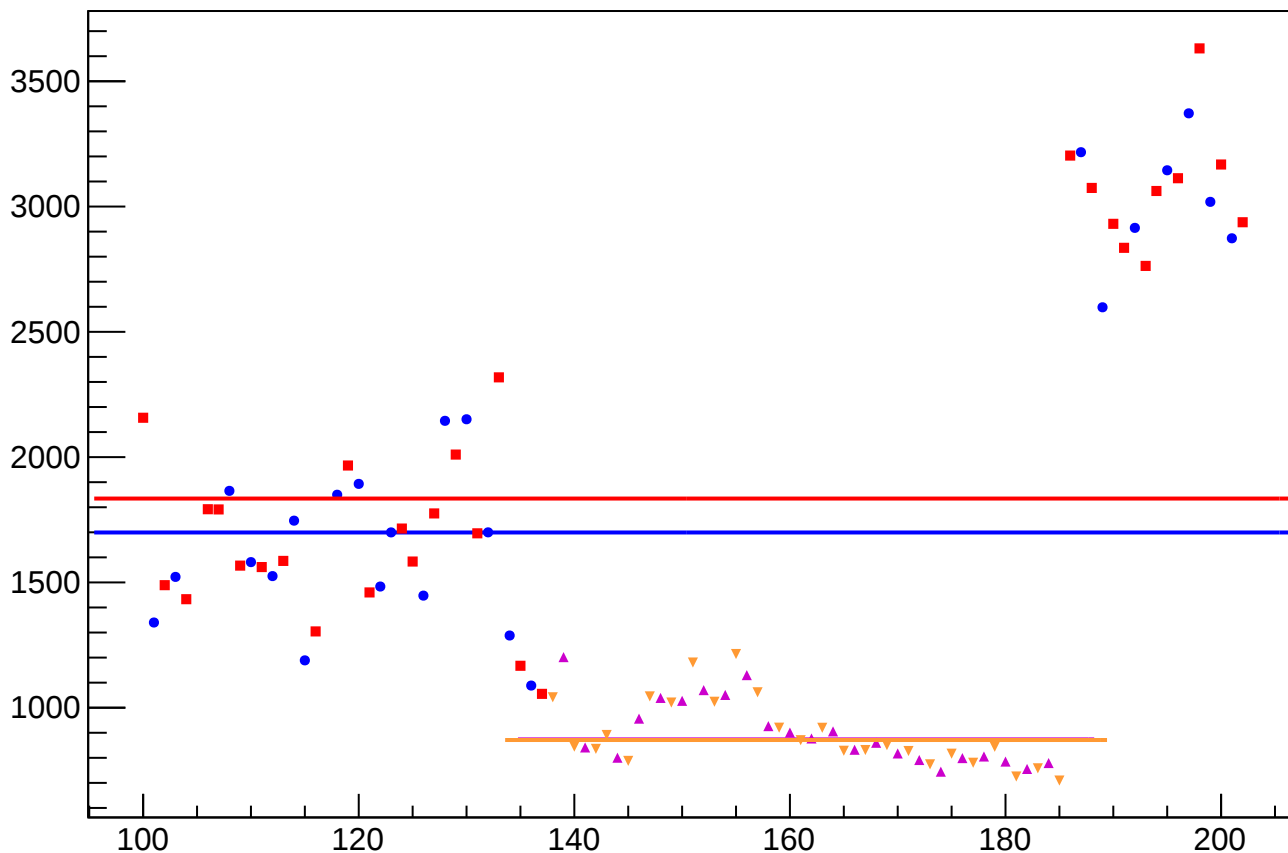
Right: 83.985+/-378.911  $\chi^2/\text{NDF}$ : 52.1/52

In: 195.834+/-196.531  $\chi^2/\text{NDF}$ : 58.8/46

Out: 604.372+/-191.343  $\chi^2/\text{NDF}$ : 83.6/53

All: 405.567+/-137.097  $\chi^2/\text{NDF}$ : 144.7/100

asym\_sam\_24\_68\_dd\_rms vs Slug, Sign Corrected



Right In: 1699.302 $\pm$ 0.381  $\chi^2$ /NDF: 2662204.4/23

Left Out: 871.109 $\pm$ 0.145  $\chi^2$ /NDF: 651751.1/24

Right Out: 1834.709 $\pm$ 0.376  $\chi^2$ /NDF: 3050013.8/28

Left In: 873.675 $\pm$ 0.149  $\chi^2$ /NDF: 573822.5/22

Left: 872.355 $\pm$ 0.104  $\chi^2$ /NDF: 1225725.6/47

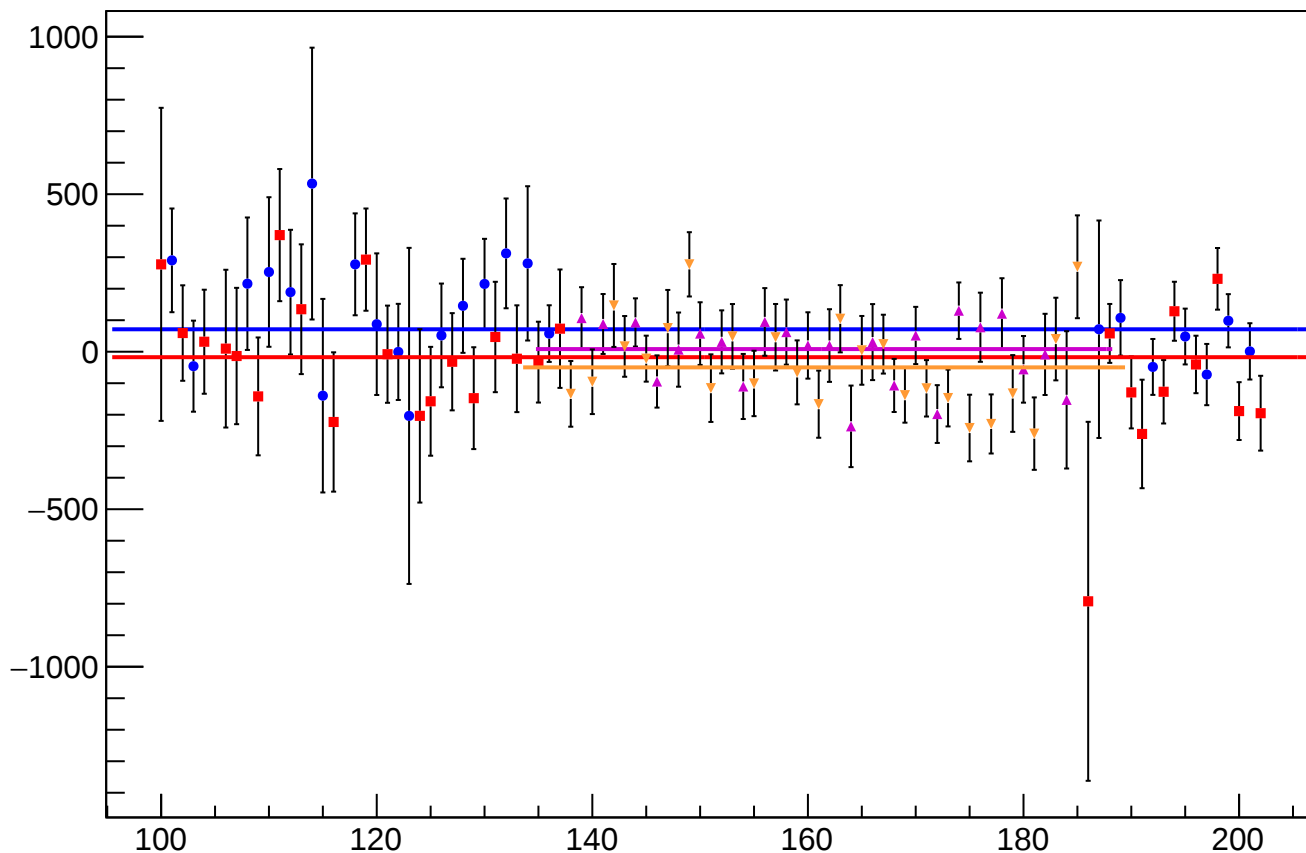
Right: 1767.906 $\pm$ 0.268  $\chi^2$ /NDF: 5776059.3/52

In: 983.253 $\pm$ 0.139  $\chi^2$ /NDF: 7298894.6/46

Out: 995.606 $\pm$ 0.135  $\chi^2$ /NDF: 9408371.6/53

All: 989.594 $\pm$ 0.097  $\chi^2$ /NDF: 16711322.4/10

reg\_asym\_sam\_26\_48\_dd\_mean vs Slug, Sign Corrected



Right In: 71.178+/-27.966  $\chi^2/\text{NDF}$ : 16.4/23

Left Out: -49.717+/-20.580  $\chi^2/\text{NDF}$ : 39.4/24

Right Out: -17.395+/-26.398  $\chi^2/\text{NDF}$ : 33.1/28

Left In: 8.343+/-21.271  $\chi^2/\text{NDF}$ : 22.0/22

Left: -21.646+/-14.791  $\chi^2/\text{NDF}$ : 65.3/47

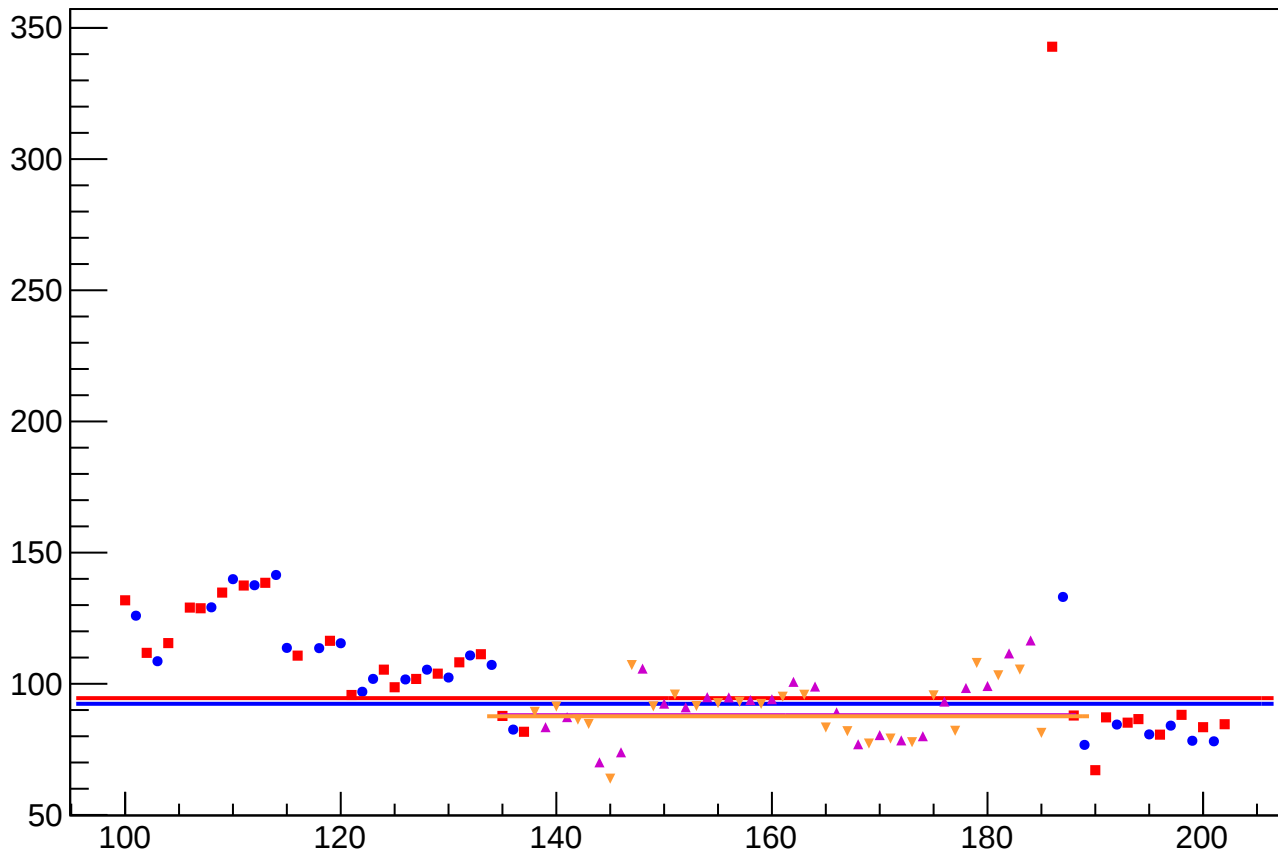
Right: 24.339+/-19.197  $\chi^2/\text{NDF}$ : 54.8/52

In: 31.371+/-16.930  $\chi^2/\text{NDF}$ : 41.6/46

Out: -37.498+/-16.231  $\chi^2/\text{NDF}$ : 73.4/53

All: -4.516+/-11.716  $\chi^2/\text{NDF}$ : 123.6/100

reg\_asym\_sam\_26\_48\_dd\_rms vs Slug, Sign Corrected



Right In: 92.378 $\pm$ 0.020  $\chi^2$ /NDF: 766528.4/23

Left Out: 87.625 $\pm$ 0.015  $\chi^2$ /NDF: 554690.7/24

Right Out: 94.529 $\pm$ 0.019  $\chi^2$ /NDF: 1173079.9/28

Left In: 88.032 $\pm$ 0.015  $\chi^2$ /NDF: 523710.9/22

Left: 87.822 $\pm$ 0.010  $\chi^2$ /NDF: 1078779.2/47

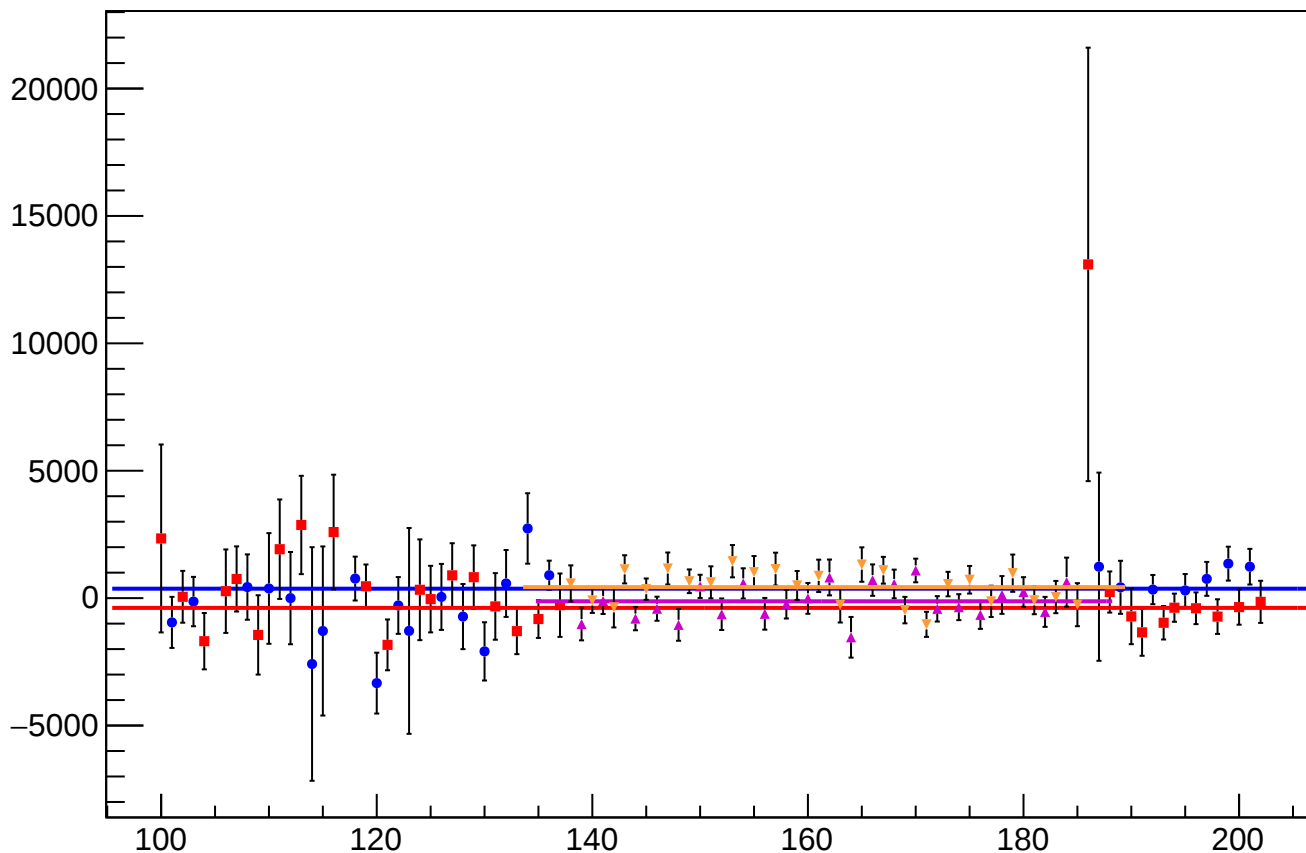
Right: 93.515 $\pm$ 0.014  $\chi^2$ /NDF: 1945866.0/52

In: 89.625 $\pm$ 0.012  $\chi^2$ /NDF: 1320828.3/46

Out: 90.235 $\pm$ 0.011  $\chi^2$ /NDF: 1812837.2/53

All: 89.943 $\pm$ 0.008  $\chi^2$ /NDF: 3135020.0/100

asym\_sam\_26\_48\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: 370.845+/-198.493  $\chi^2/\text{NDF}$ : 26.4/23

Left Out: 431.658+/-115.706  $\chi^2/\text{NDF}$ :30.5/24

Right Out: -382.799+/-181.904  $\chi^2/\text{NDF}$ : 21.6/28

Left In: -123.017+/-118.849  $\chi^2/\text{NDF}$ :29.3/22

Left: 161.753+/-82.905  $\chi^2/\text{NDF}$ : 70.9/47

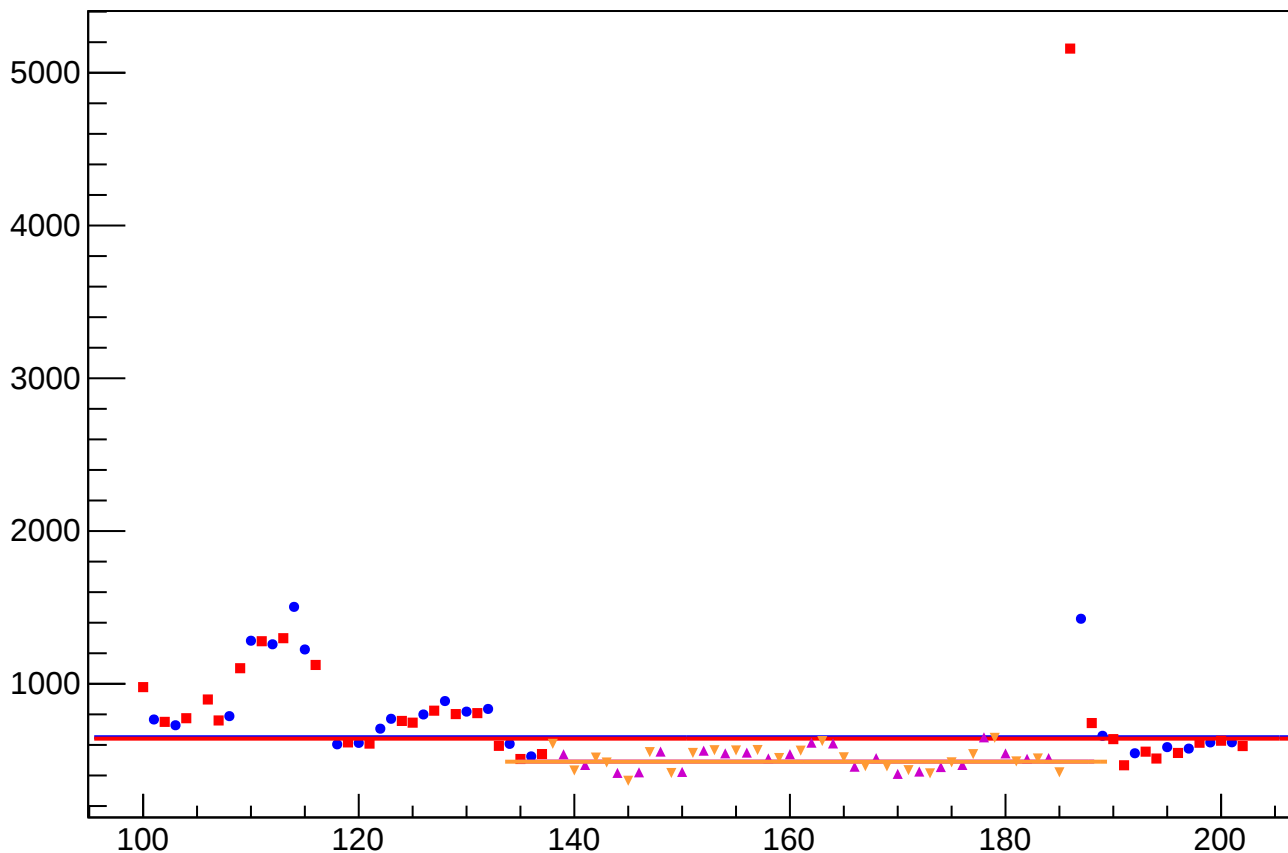
Right: -38.780+/-134.107  $\chi^2/\text{NDF}$ : 55.8/52

In: 7.314+/-101.968  $\chi^2/\text{NDF}$ :60.2/46

Out: 197.051+/-97.629  $\chi^2/\text{NDF}$ :66.3/53

All: 106.305+/-70.518  $\chi^2/\text{NDF}$ : 128.4/100

asym\_sam\_26\_48\_dd\_correction\_rms vs Slug, Sign Corrected



Right In:  $650.426 \pm 0.140$   $\chi^2/\text{NDF}: 1088292.7/23$

Left Out:  $490.267 \pm 0.082$   $\chi^2/\text{NDF}: 750277.0/24$

Right Out:  $641.141 \pm 0.129$   $\chi^2/\text{NDF}: 1931892.3/28$

Left In:  $490.910 \pm 0.084$   $\chi^2/\text{NDF}: 589235.5/22$

Left:  $490.580 \pm 0.059$   $\chi^2/\text{NDF}: 1339542.5/47$

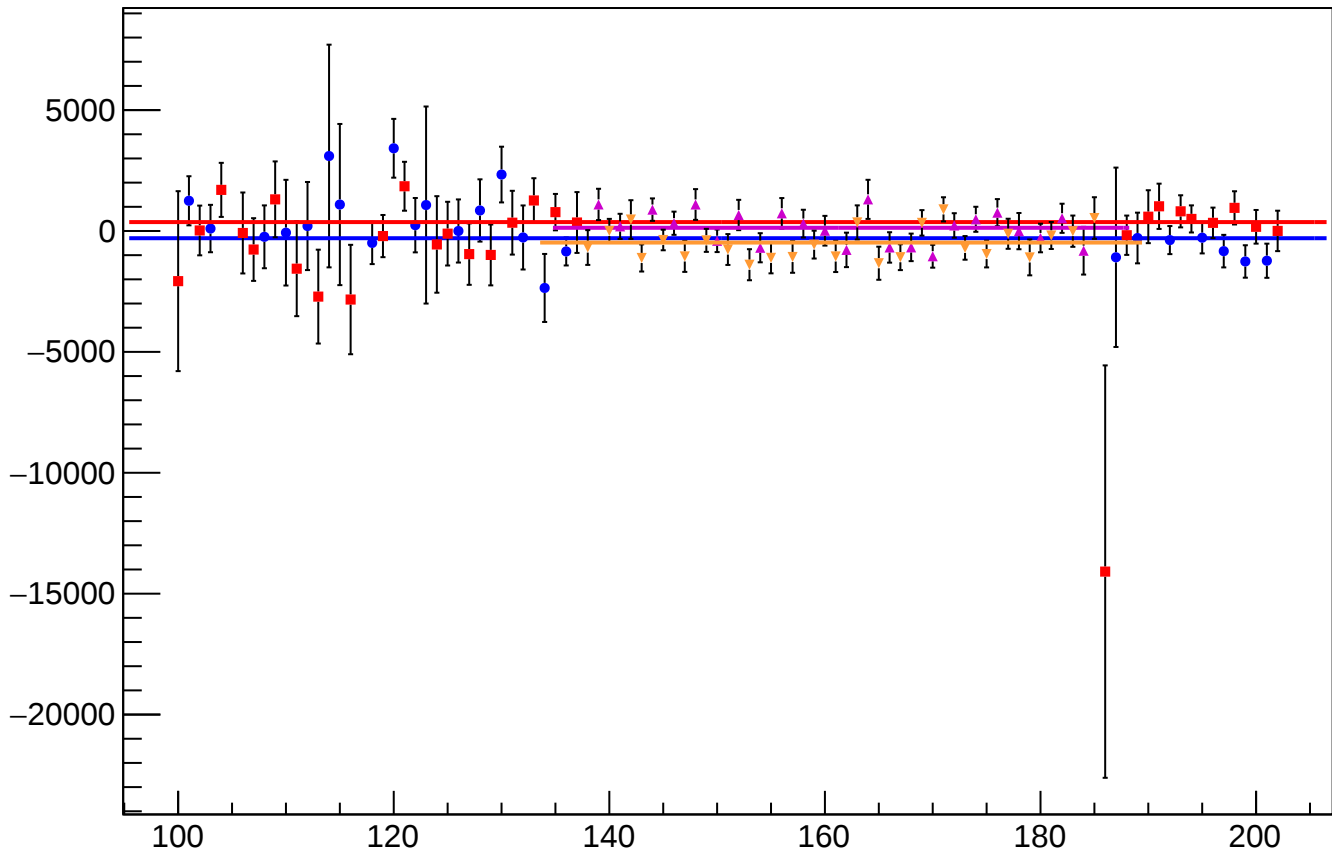
Right:  $645.379 \pm 0.095$   $\chi^2/\text{NDF}: 3022563.7/52$

In:  $533.006 \pm 0.072$   $\chi^2/\text{NDF}: 2628322.9/46$

Out:  $533.726 \pm 0.069$   $\chi^2/\text{NDF}: 3661705.3/53$

All:  $533.382 \pm 0.050$   $\chi^2/\text{NDF}: 6290080.3/100$

asym\_sam\_26\_48\_dd\_mean vs Slug, Sign Corrected



Right In: -298.815+/-200.699  $\chi^2/\text{NDF}$ : 26.6/23

Left Out: -478.197+/-117.659  $\chi^2/\text{NDF}$ : 27.8/24

Right Out: 368.302+/-184.108  $\chi^2/\text{NDF}$ : 20.4/28

Left In: 132.543+/-120.866  $\chi^2/\text{NDF}$ : 29.5/22

Left: -181.037+/-84.308  $\chi^2/\text{NDF}$ : 70.5/47

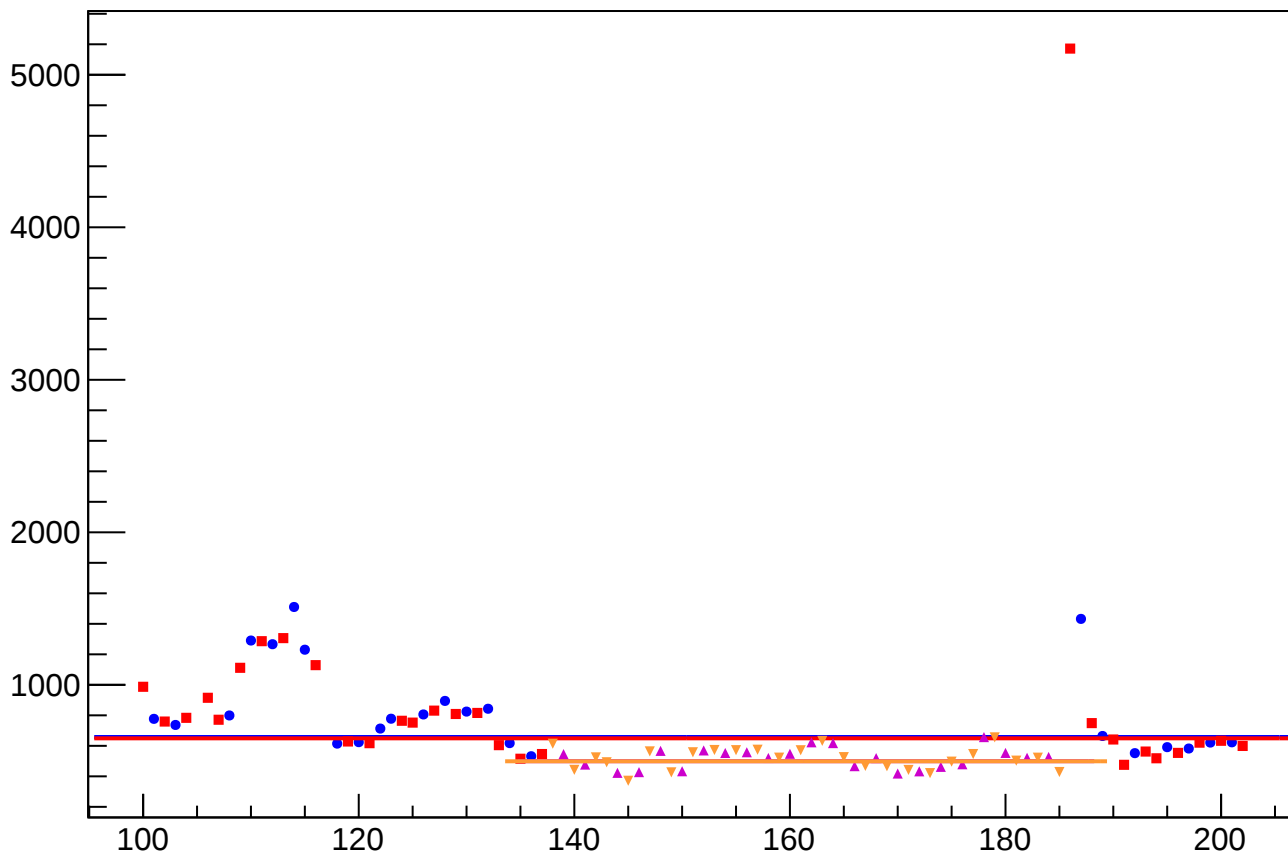
Right: 63.453+/-135.671  $\chi^2/\text{NDF}$ : 53.1/52

In: 17.738+/-103.540  $\chi^2/\text{NDF}$ : 59.6/46

Out: -232.726+/-99.142  $\chi^2/\text{NDF}$ : 63.2/53

All: -112.926+/-71.608  $\chi^2/\text{NDF}$ : 125.9/100

asym\_sam\_26\_48\_dd\_rms vs Slug, Sign Corrected



Right In: 657.889 $\pm$ 0.142  $\chi^2$ /NDF: 1076308.7/23

Left Out: 498.754 $\pm$ 0.083  $\chi^2$ /NDF: 734302.8/24

Right Out: 649.235 $\pm$ 0.130  $\chi^2$ /NDF: 1909762.1/28

Left In: 499.393 $\pm$ 0.085  $\chi^2$ /NDF: 576539.2/22

Left: 499.065 $\pm$ 0.060  $\chi^2$ /NDF: 1310870.7/47

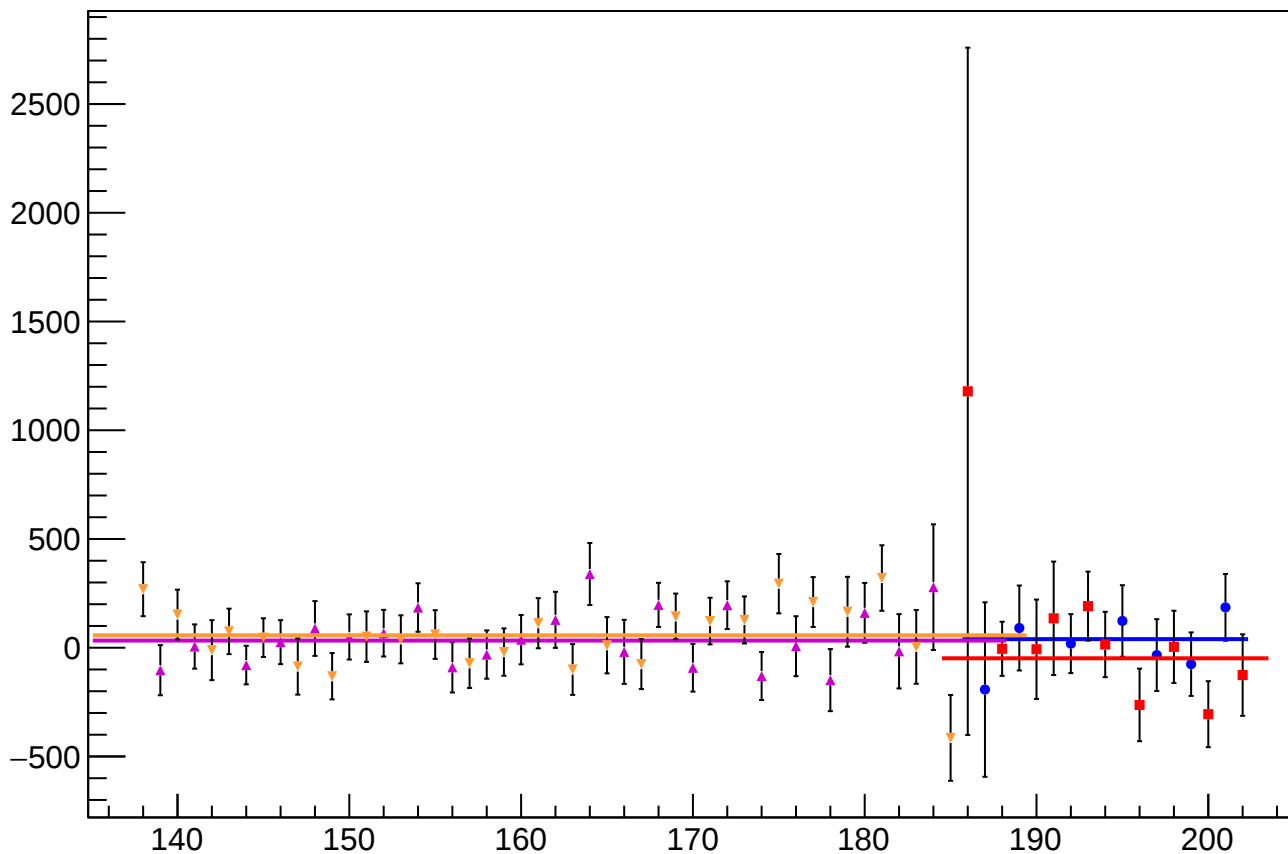
Right: 653.190 $\pm$ 0.096  $\chi^2$ /NDF: 2988090.3/52

In: 541.577 $\pm$ 0.073  $\chi^2$ /NDF: 2568193.9/46

Out: 542.391 $\pm$ 0.070  $\chi^2$ /NDF: 3592733.2/53

All: 542.002 $\pm$ 0.051  $\chi^2$ /NDF: 6160991.6/100

reg\_asym\_sam\_1548\_avg\_mean vs Slug, Sign Corrected



Right In: 39.485 $\pm$ 63.263  $\chi^2$ /NDF: 2.4/6

Left Out: 57.211 $\pm$ 23.714  $\chi^2$ /NDF:29.2/24

Right Out: -48.596 $\pm$ 55.308  $\chi^2$ /NDF: 8.5/9

Left In: 32.948 $\pm$ 24.587  $\chi^2$ /NDF:23.6/22

Left: 45.518 $\pm$ 17.069  $\chi^2$ /NDF: 53.3/47

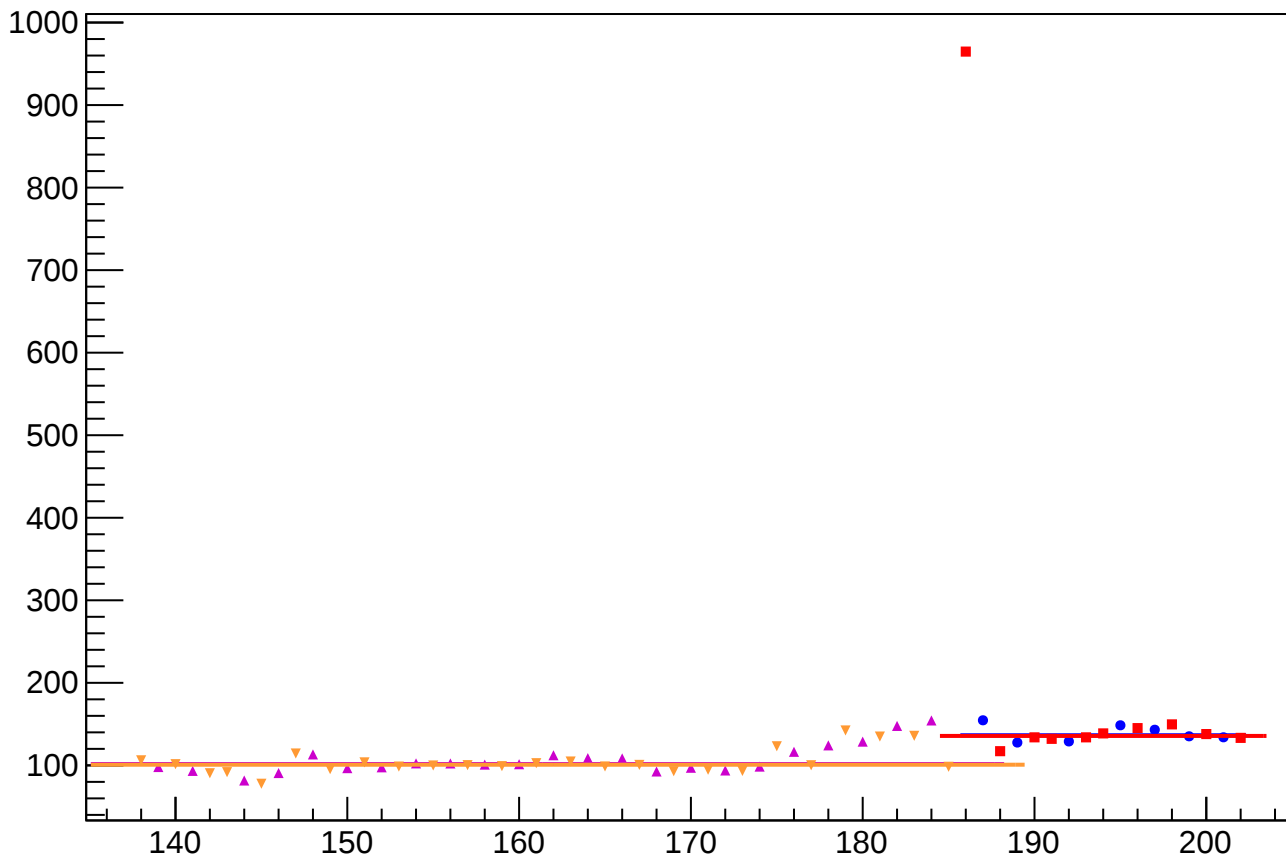
Right: -10.439 $\pm$ 41.639  $\chi^2$ /NDF: 12.0/16

In: 33.806 $\pm$ 22.917  $\chi^2$ /NDF:26.0/29

Out: 40.780 $\pm$ 21.795  $\chi^2$ /NDF:40.8/34

All: 37.468 $\pm$ 15.793  $\chi^2$ /NDF: 66.9/64

reg\_asym\_sam\_1548\_avg\_rms vs Slug, Sign Corrected



Right In: 136.485 $\pm$ 0.045  $\chi^2$ /NDF: 28964.1/6

Left Out: 100.801 $\pm$ 0.017  $\chi^2$ /NDF: 600502.4/24

Right Out: 135.672 $\pm$ 0.039  $\chi^2$ /NDF: 617724.3/9

Left In: 101.622 $\pm$ 0.017  $\chi^2$ /NDF: 582329.3/22

Left: 101.196 $\pm$ 0.012  $\chi^2$ /NDF: 1183987.6/47

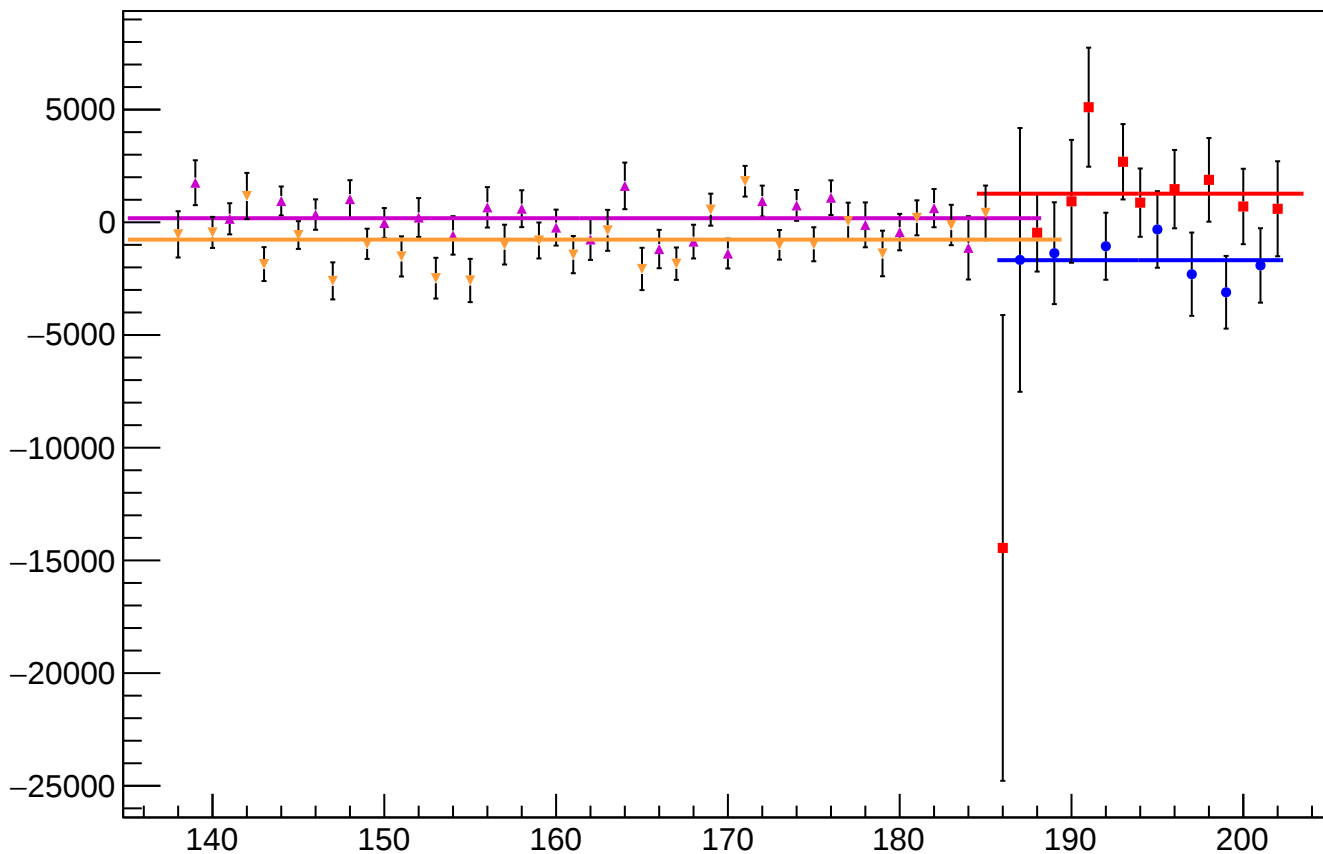
Right: 136.024 $\pm$ 0.029  $\chi^2$ /NDF: 646875.9/16

In: 106.197 $\pm$ 0.016  $\chi^2$ /NDF: 1138979.4/29

Out: 106.216 $\pm$ 0.015  $\chi^2$ /NDF: 1889806.9/34

All: 106.207 $\pm$ 0.011  $\chi^2$ /NDF: 3028787.0/64

asym\_sam\_1548\_avg\_correction\_mean vs Slug, Sign Corrected



Right In: -1680.855+/-695.406  $\chi^2/\text{NDF}$ : 1.8/6

Left Out: -766.358+/-161.066  $\chi^2/\text{NDF}$ : 46.5/24

Right Out: 1269.691+/-617.638  $\chi^2/\text{NDF}$ : 6.6/9

Left In: 181.584+/-165.671  $\chi^2/\text{NDF}$ : 25.0/22

Left: -305.743+/-115.485  $\chi^2/\text{NDF}$ : 88.4/47

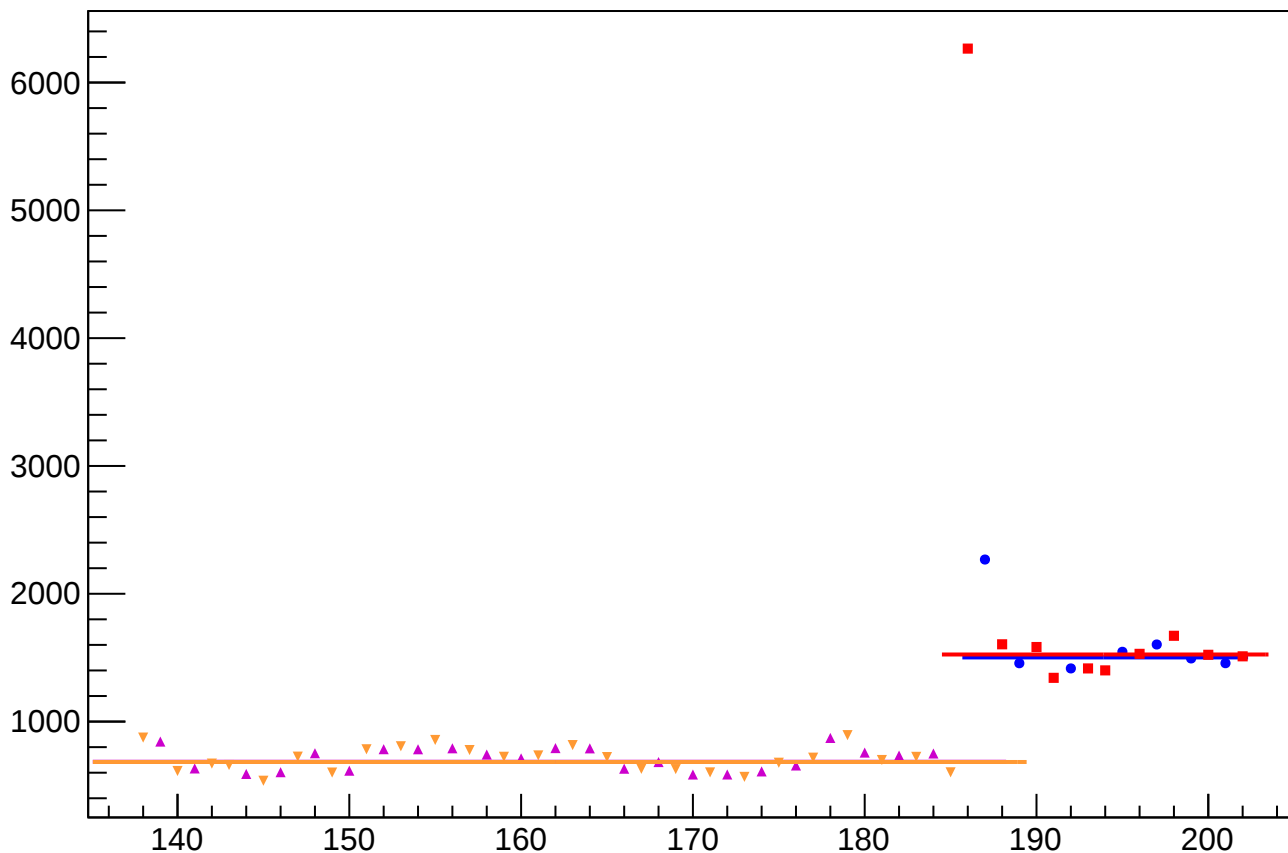
Right: -31.440+/-461.794  $\chi^2/\text{NDF}$ : 18.4/16

In: 81.556+/-161.160  $\chi^2/\text{NDF}$ : 33.5/29

Out: -636.713+/-155.854  $\chi^2/\text{NDF}$ : 63.3/34

All: -289.598+/-112.034  $\chi^2/\text{NDF}$ : 107.1/64

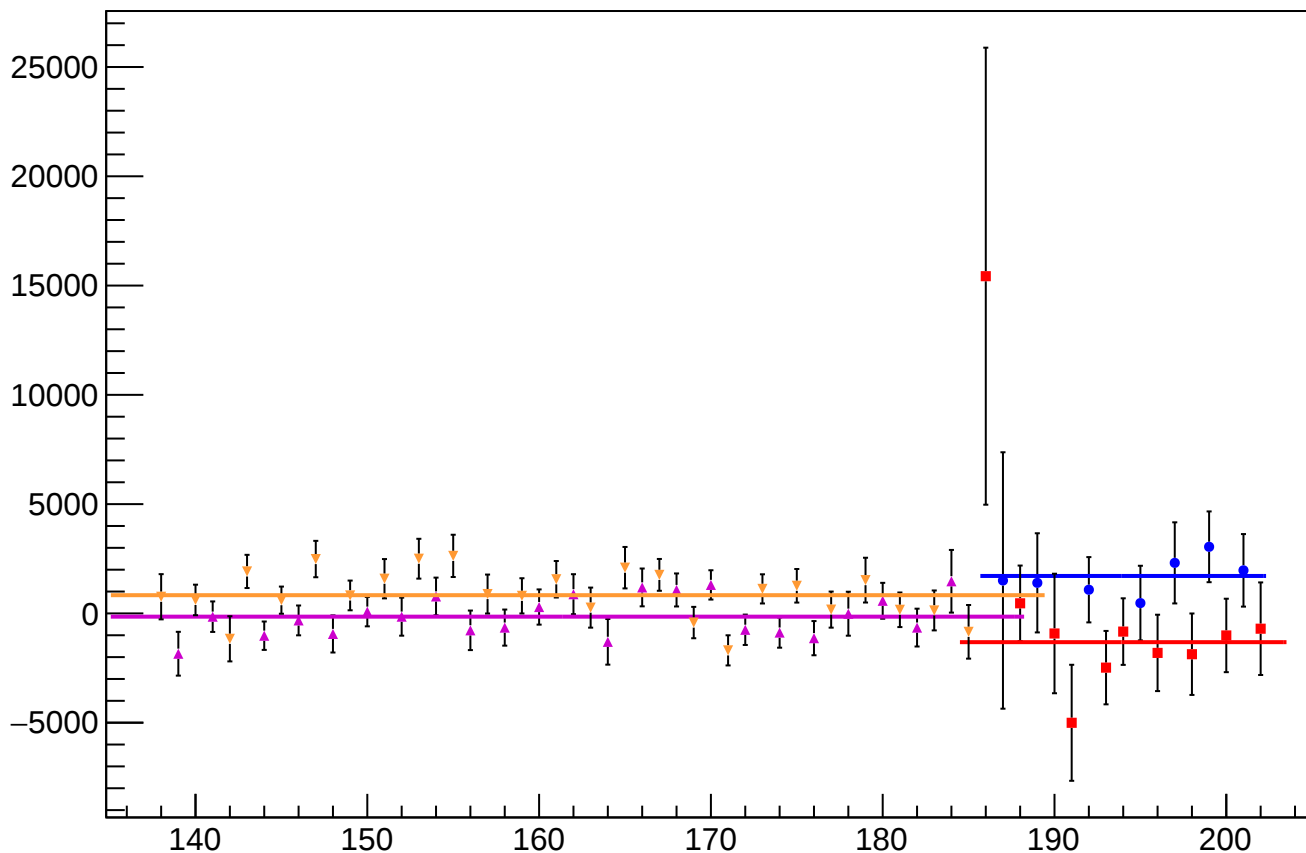
asym\_sam\_1548\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 1501.902 $\pm$ 0.492  $\chi^2$ /NDF: 50635.6/6  
 Left Out: 683.884 $\pm$ 0.114  $\chi^2$ /NDF: 667158.2/24  
 Right Out: 1524.873 $\pm$ 0.437  $\chi^2$ /NDF: 470353.0/9  
 Left In: 685.593 $\pm$ 0.117  $\chi^2$ /NDF: 529353.6/22

Left: 684.715 $\pm$ 0.082  $\chi^2$ /NDF: 1196621.1/47  
 Right: 1514.743 $\pm$ 0.327  $\chi^2$ /NDF: 522208.5/16  
 In: 729.435 $\pm$ 0.114  $\chi^2$ /NDF: 3187869.5/29  
 Out: 737.434 $\pm$ 0.110  $\chi^2$ /NDF: 4609425.5/34  
 All: 733.569 $\pm$ 0.079  $\chi^2$ /NDF: 7799840.9/64

asym\_sam\_1548\_avg\_mean vs Slug, Sign Corrected



Right In:  $1713.290 \pm 698.466$   $\chi^2/\text{NDF}: 1.5/6$

Left Out:  $833.395 \pm 162.965$   $\chi^2/\text{NDF}: 43.2/24$

Right Out:  $-1315.870 \pm 620.364$   $\chi^2/\text{NDF}: 6.4/9$

Left In:  $-148.814 \pm 167.644$   $\chi^2/\text{NDF}: 26.0/22$

Left:  $356.189 \pm 116.853$   $\chi^2/\text{NDF}: 86.9/47$

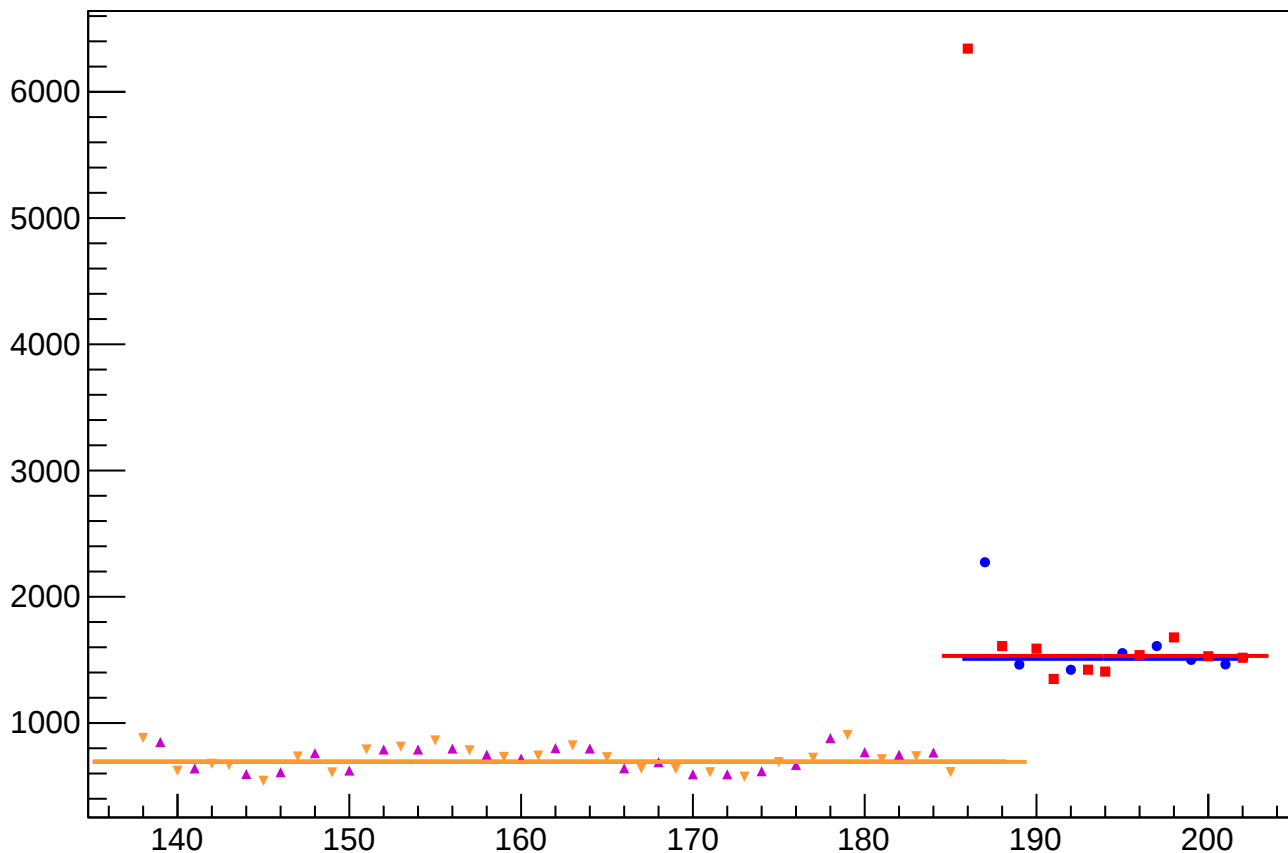
Right:  $19.947 \pm 463.829$   $\chi^2/\text{NDF}: 18.5/16$

In:  $-47.384 \pm 163.014$   $\chi^2/\text{NDF}: 34.3/29$

Out:  $694.654 \pm 157.617$   $\chi^2/\text{NDF}: 60.9/34$

All:  $336.121 \pm 113.312$   $\chi^2/\text{NDF}: 105.9/64$

asym\_sam\_1548\_avg\_rms vs Slug, Sign Corrected



Right In: 1508.553+/-0.494  $\chi^2/\text{NDF}$ : 50397.9/6

Left Out: 692.097+/-0.115  $\chi^2/\text{NDF}$ : 657259.6/24

Right Out: 1531.566+/-0.439  $\chi^2/\text{NDF}$ : 472028.2/9

Left In: 693.867+/-0.119  $\chi^2/\text{NDF}$ : 522053.5/22

Left: 692.957+/-0.083  $\chi^2/\text{NDF}$ : 1179427.7/47

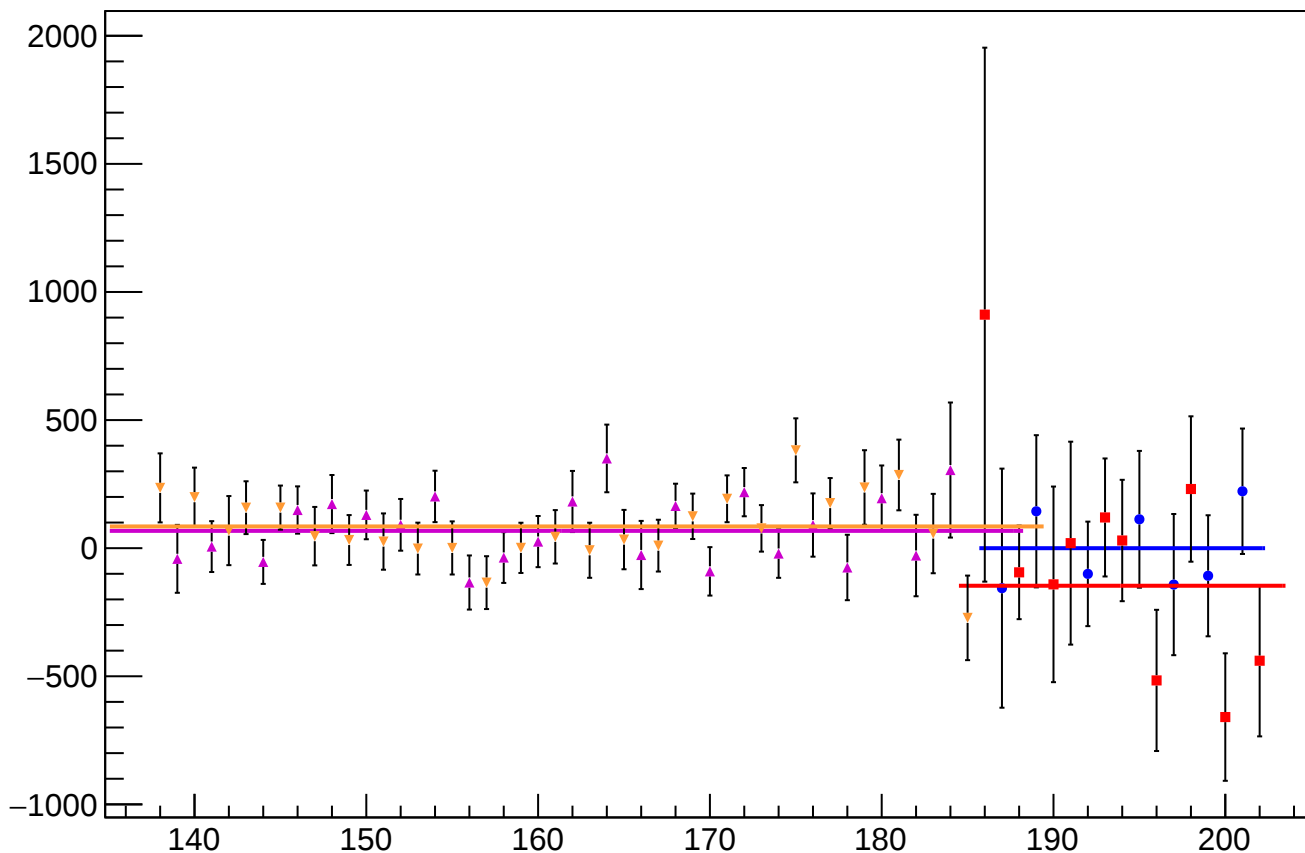
Right: 1521.417+/-0.328  $\chi^2/\text{NDF}$ : 523639.8/16

In: 738.243+/-0.115  $\chi^2/\text{NDF}$ : 3145184.6/29

Out: 746.287+/-0.111  $\chi^2/\text{NDF}$ : 4555116.1/34

All: 742.400+/-0.080  $\chi^2/\text{NDF}$ : 7702817.2/64

reg\_asym\_sam\_3748\_avg\_mean vs Slug, Sign Corrected



Right In:  $-0.077 \pm 99.126$   $\chi^2/\text{NDF}$ : 2.1/6

Left Out:  $84.860 \pm 21.643$   $\chi^2/\text{NDF}$ : 28.5/24

Right Out:  $-146.650 \pm 86.394$   $\chi^2/\text{NDF}$ : 12.0/9

Left In:  $67.552 \pm 22.449$   $\chi^2/\text{NDF}$ : 28.9/22

Left:  $76.522 \pm 15.581$   $\chi^2/\text{NDF}$ : 57.7/47

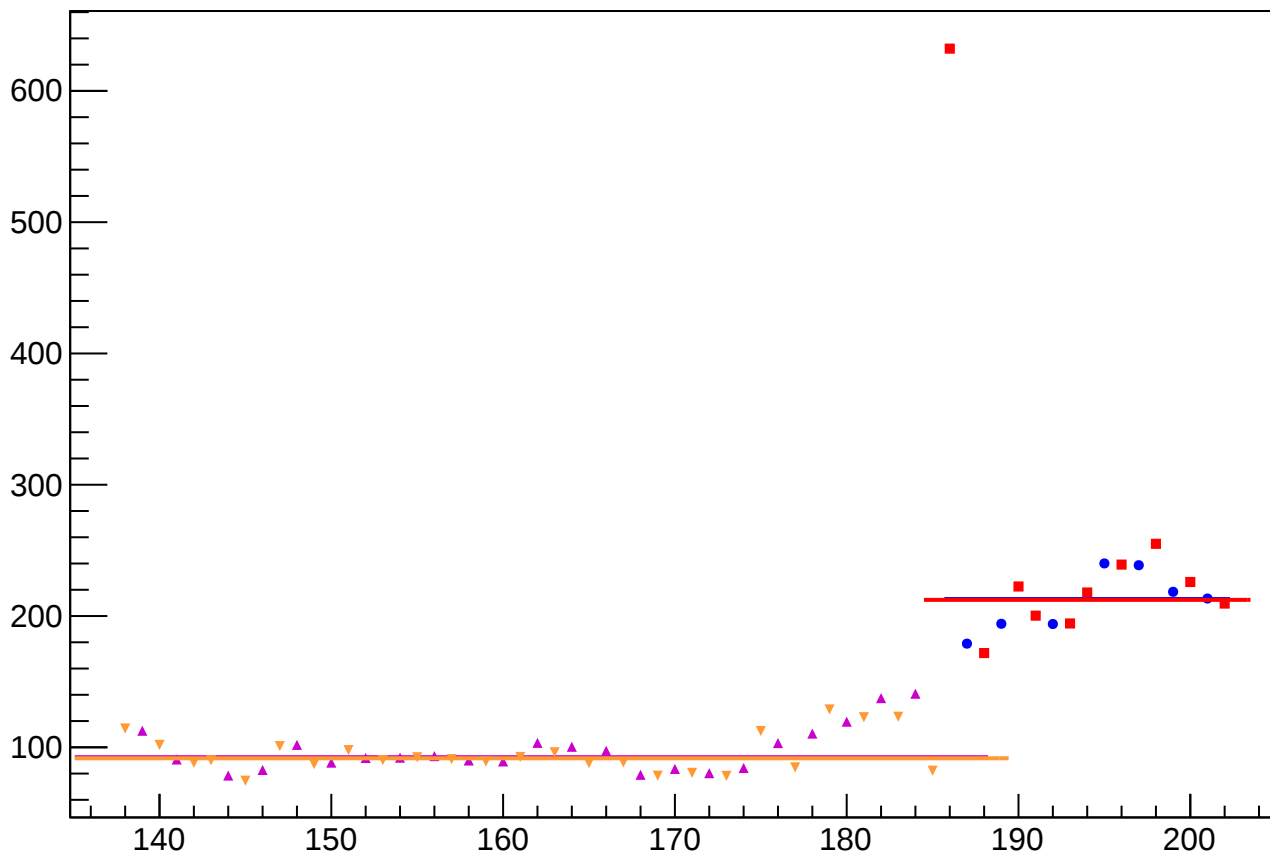
Right:  $-83.376 \pm 65.129$   $\chi^2/\text{NDF}$ : 15.3/16

In:  $64.253 \pm 21.895$   $\chi^2/\text{NDF}$ : 31.4/29

Out:  $71.189 \pm 20.994$   $\chi^2/\text{NDF}$ : 47.2/34

All:  $67.866 \pm 15.153$   $\chi^2/\text{NDF}$ : 78.6/64

reg\_asym\_sam\_3748\_avg\_rms vs Slug, Sign Corrected



Right In: 212.927 $\pm$ 0.070  $\chi^2$ /NDF: 75290.1/6

Left Out: 91.633 $\pm$ 0.015  $\chi^2$ /NDF: 693122.0/24

Right Out: 212.312 $\pm$ 0.061  $\chi^2$ /NDF: 509999.3/9

Left In: 92.466 $\pm$ 0.016  $\chi^2$ /NDF: 655700.4/22

Left: 92.034 $\pm$ 0.011  $\chi^2$ /NDF: 1350250.3/47

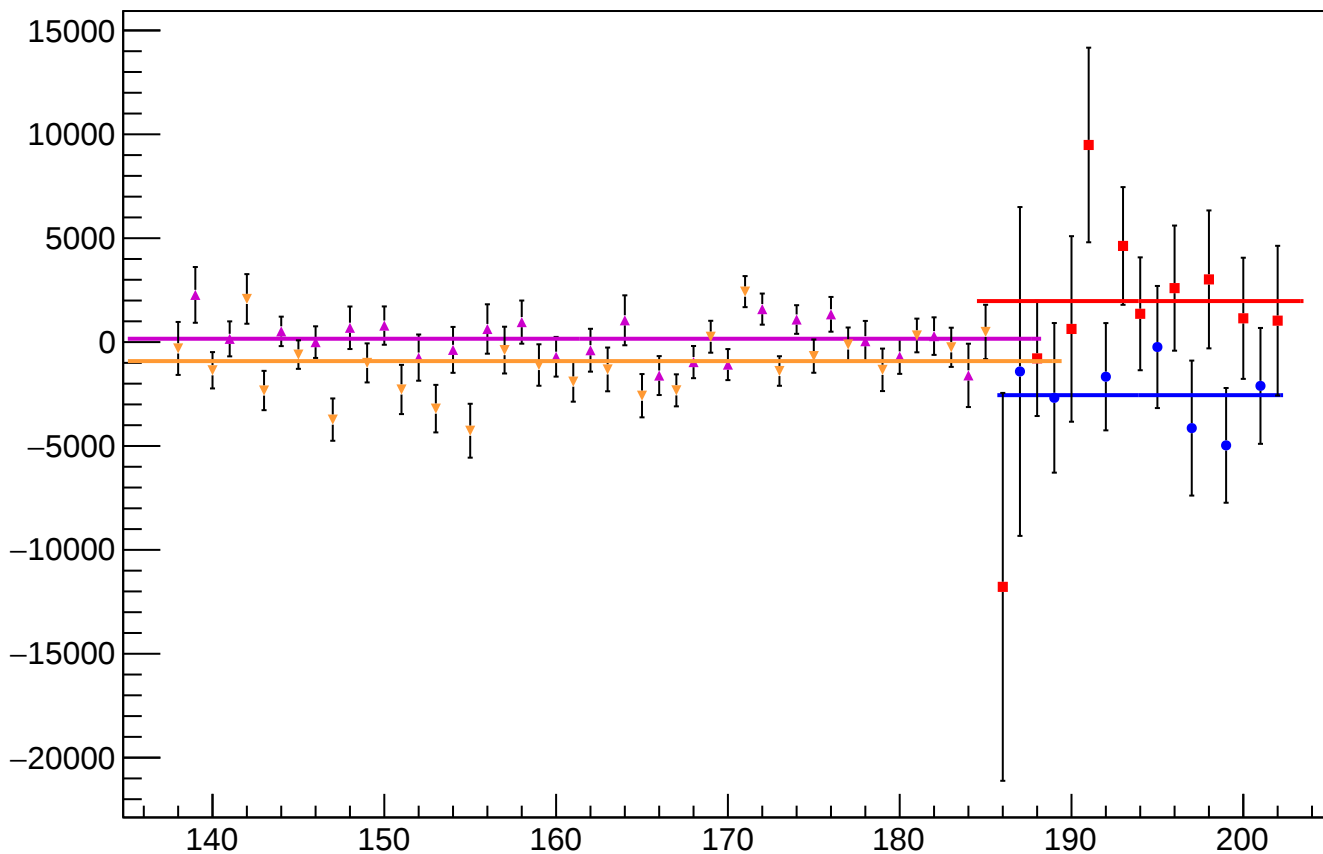
Right: 212.578 $\pm$ 0.046  $\chi^2$ /NDF: 585333.1/16

In: 98.343 $\pm$ 0.015  $\chi^2$ /NDF: 3540430.0/29

Out: 98.759 $\pm$ 0.015  $\chi^2$ /NDF: 4875095.0/34

All: 98.560 $\pm$ 0.011  $\chi^2$ /NDF: 8415901.6/64

asym\_sam\_3748\_avg\_correction\_mean vs Slug, Sign Corrected



Right In:  $-2554.106 \pm 1183.898$   $\chi^2/\text{NDF}: 1.8/6$

Left Out:  $-914.719 \pm 185.341$   $\chi^2/\text{NDF}: 64.2/24$

Right Out:  $1974.251 \pm 1058.146$   $\chi^2/\text{NDF}: 7.0/9$

Left In:  $161.076 \pm 189.491$   $\chi^2/\text{NDF}: 25.1/22$

Left:  $-388.730 \pm 132.499$   $\chi^2/\text{NDF}: 105.7/47$

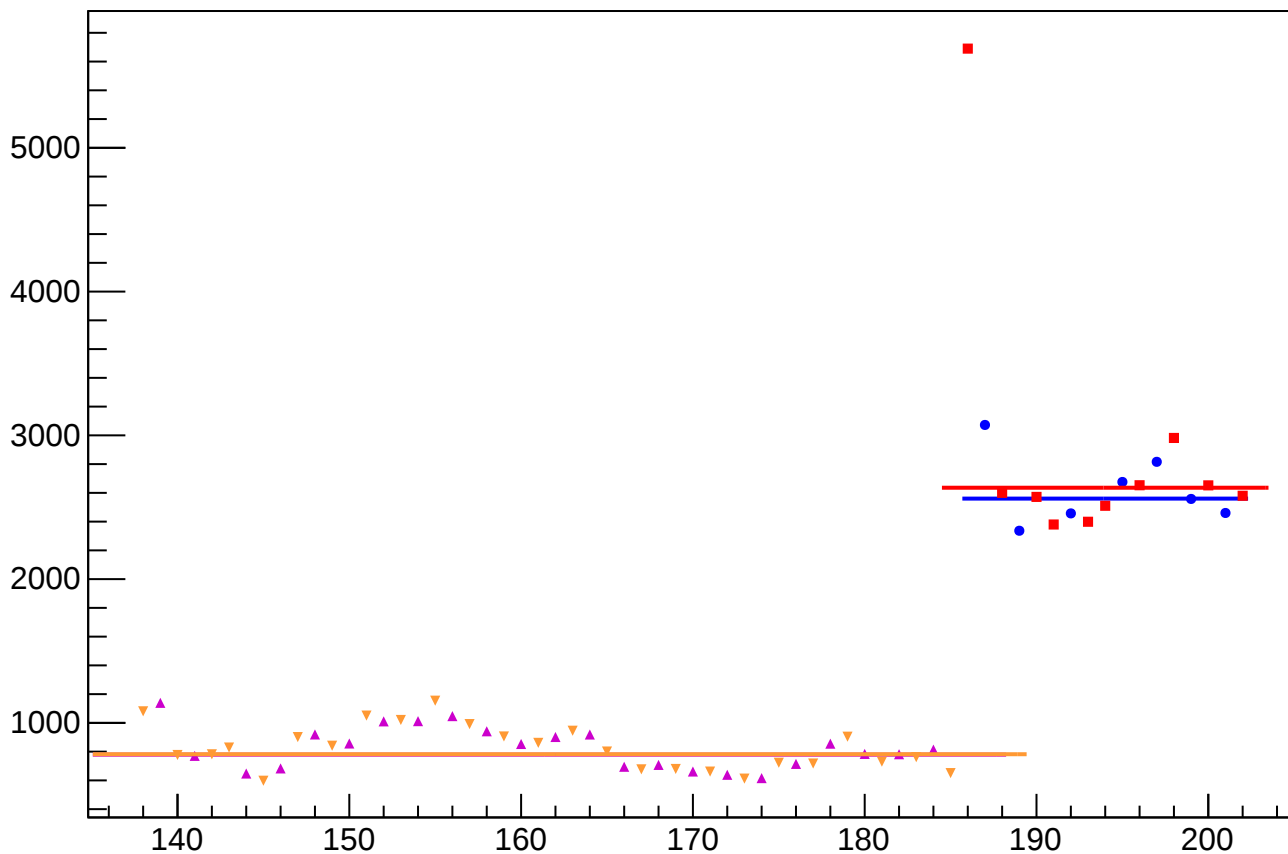
Right:  $-36.737 \pm 788.949$   $\chi^2/\text{NDF}: 17.0/16$

In:  $93.256 \pm 187.109$   $\chi^2/\text{NDF}: 32.0/29$

Out:  $-828.725 \pm 182.561$   $\chi^2/\text{NDF}: 78.4/34$

All:  $-379.075 \pm 130.669$   $\chi^2/\text{NDF}: 122.9/64$

asym\_sam\_3748\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 2560.082 $\pm$ 0.837  $\chi^2$ /NDF: 37352.1/6

Left Out: 782.042 $\pm$ 0.131  $\chi^2$ /NDF:1130984.3/24

Right Out: 2635.735 $\pm$ 0.748  $\chi^2$ /NDF: 261463.2/9

Left In: 778.995 $\pm$ 0.134  $\chi^2$ /NDF:980243.4/22

Left: 780.552 $\pm$ 0.094  $\chi^2$ /NDF: 2111492.1/47

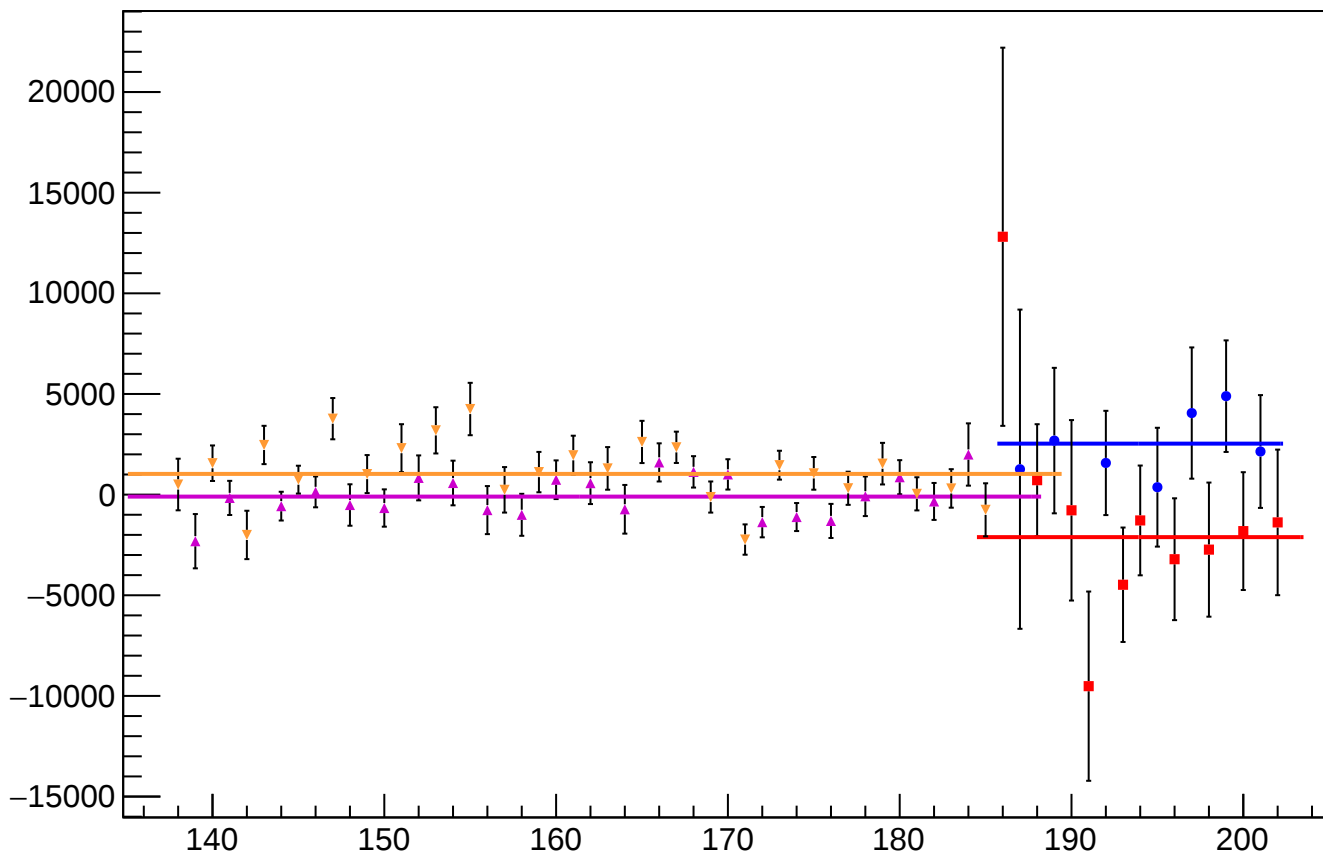
Right: 2602.138 $\pm$ 0.558  $\chi^2$ /NDF: 303355.3/16

In: 823.483 $\pm$ 0.132  $\chi^2$ /NDF:5431128.0/29

Out: 837.220 $\pm$ 0.129  $\chi^2$ /NDF:7347564.8/34

All: 830.520 $\pm$ 0.092  $\chi^2$ /NDF: 12784215.1/64

asym\_sam\_3748\_avg\_mean vs Slug, Sign Corrected



Right In: 2533.110+/-1188.452  $\chi^2/\text{NDF}$ : 1.7/6

Left Out: 1028.864+/-186.810  $\chi^2/\text{NDF}$ :60.2/24

Right Out: -2111.623+/-1062.103  $\chi^2/\text{NDF}$ : 7.1/9

Left In: -98.691+/-191.027  $\chi^2/\text{NDF}$ :25.4/22

Left: 477.669+/-133.561  $\chi^2/\text{NDF}$ : 103.3/47

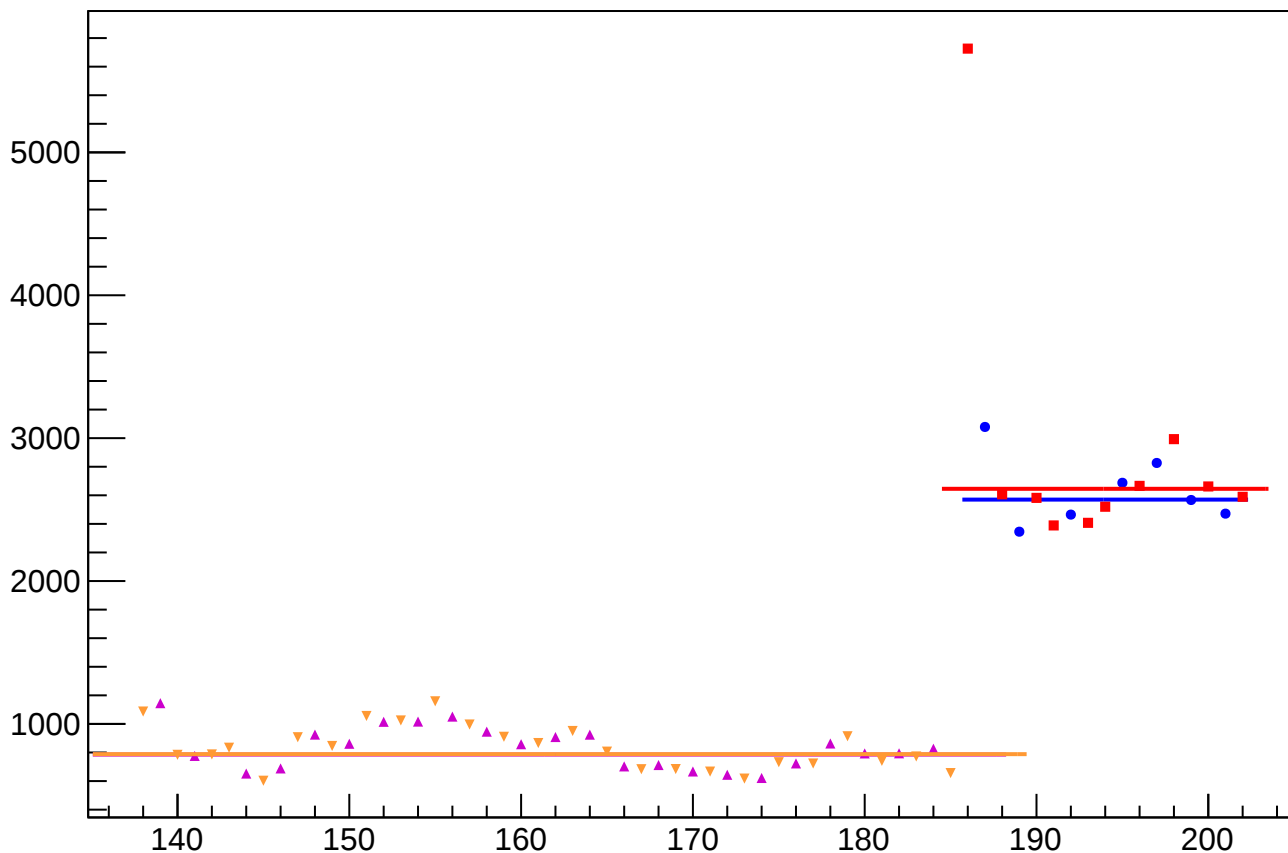
Right: -49.200+/-791.936  $\chi^2/\text{NDF}$ : 17.3/16

In: -32.408+/-188.606  $\chi^2/\text{NDF}$ :31.8/29

Out: 934.624+/-183.986  $\chi^2/\text{NDF}$ :75.8/34

All: 463.097+/-131.701  $\chi^2/\text{NDF}$ : 121.1/64

asym\_sam\_3748\_avg\_rms vs Slug, Sign Corrected



Right In: 2569.956 $\pm$ 0.840  $\chi^2/\text{NDF}$ : 37263.8/6

Left Out: 788.442 $\pm$ 0.132  $\chi^2/\text{NDF}$ : 1113741.6/24

Right Out: 2645.511 $\pm$ 0.751  $\chi^2/\text{NDF}$ : 262523.5/9

Left In: 785.490 $\pm$ 0.135  $\chi^2/\text{NDF}$ : 965338.9/22

Left: 786.999 $\pm$ 0.094  $\chi^2/\text{NDF}$ : 2079324.6/47

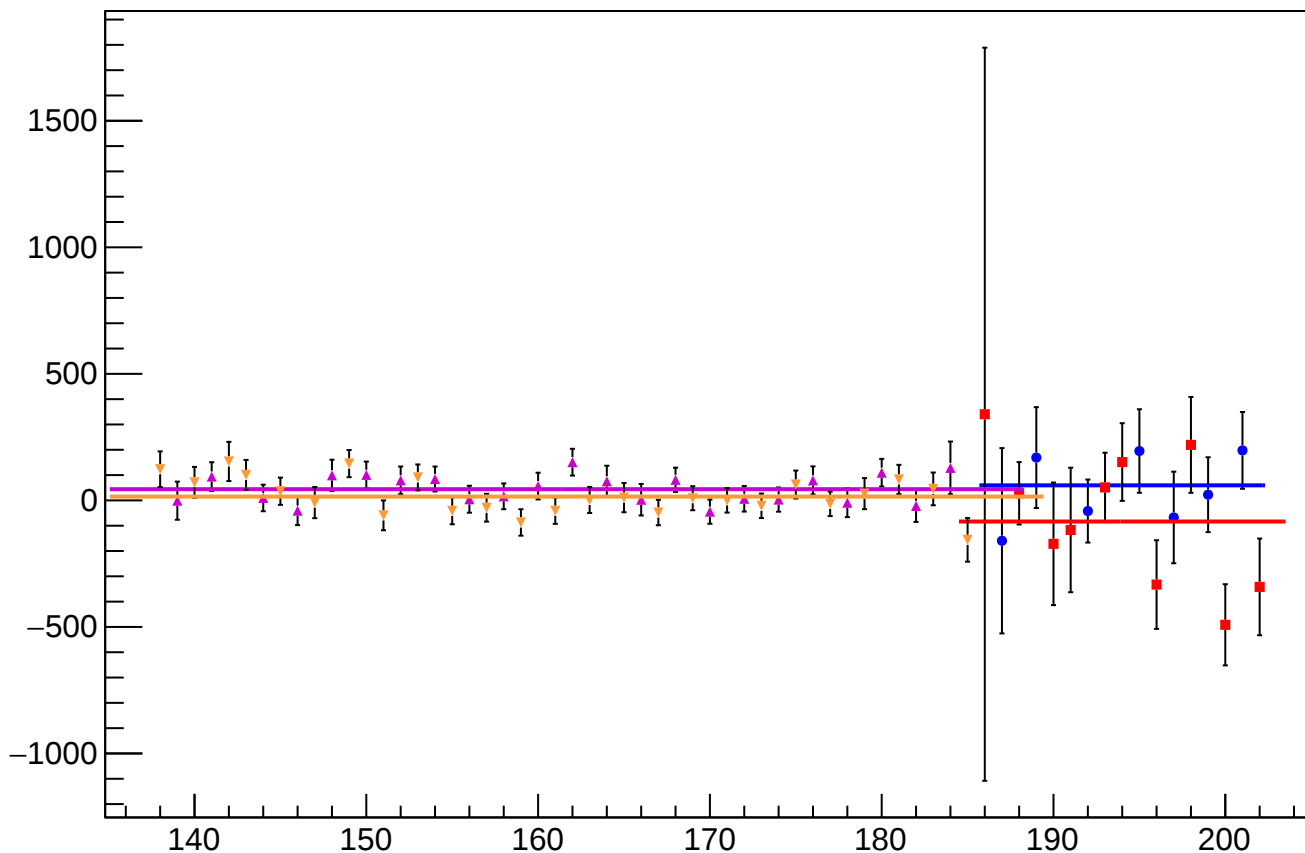
Right: 2611.962 $\pm$ 0.560  $\chi^2/\text{NDF}$ : 304281.4/16

In: 830.433 $\pm$ 0.133  $\chi^2/\text{NDF}$ : 5398067.6/29

Out: 844.169 $\pm$ 0.130  $\chi^2/\text{NDF}$ : 7307172.0/34

All: 837.471 $\pm$ 0.093  $\chi^2/\text{NDF}$ : 12710675.2/64

reg\_asym\_sam\_1526\_avg\_mean vs Slug, Sign Corrected



Right In: 59.466 $\pm$ 62.790  $\chi^2$ /NDF: 3.4/6

Left Out: 15.099 $\pm$ 11.154  $\chi^2$ /NDF:34.2/24

Right Out: -83.441 $\pm$ 55.697  $\chi^2$ /NDF: 17.3/9

Left In: 44.297 $\pm$ 11.530  $\chi^2$ /NDF:22.3/22

Left: 29.215 $\pm$ 8.017  $\chi^2$ /NDF: 59.8/47

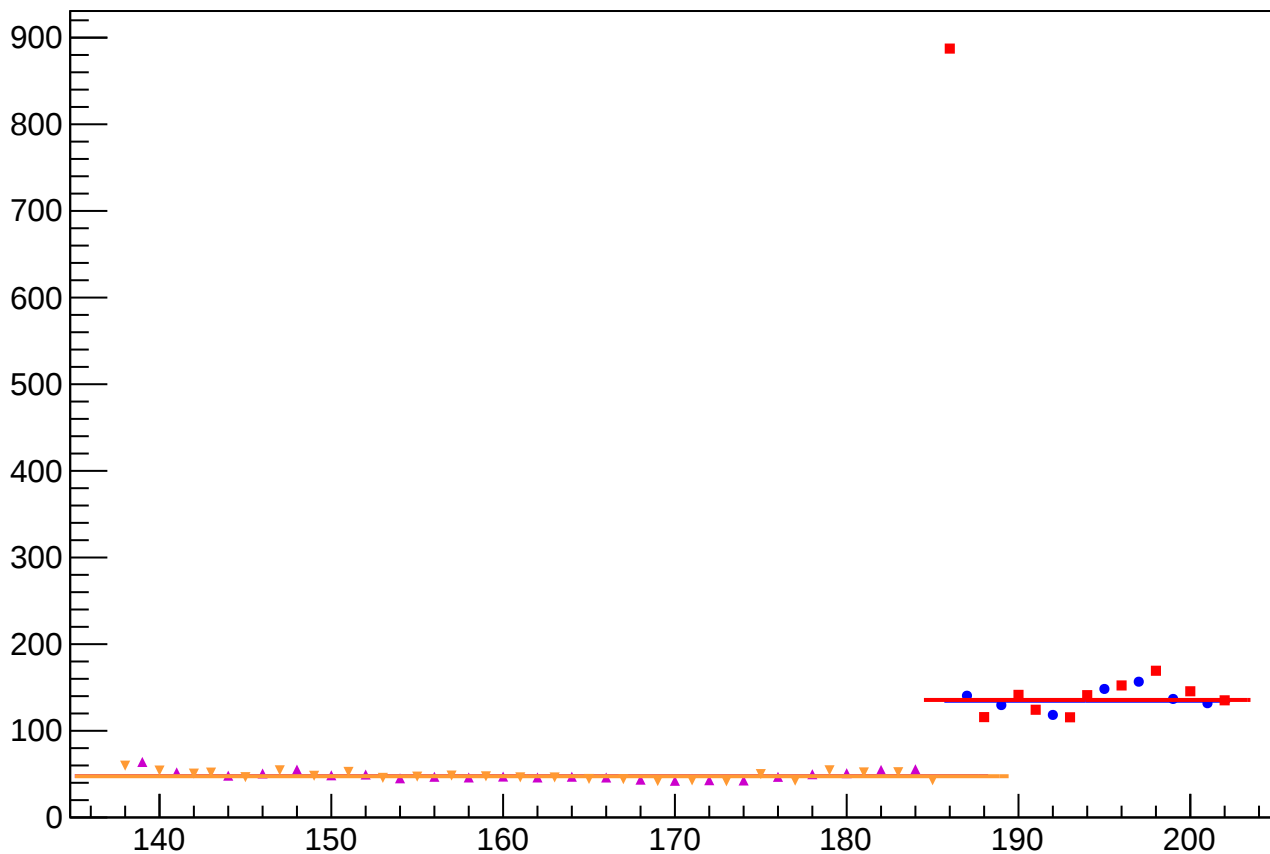
Right: -20.513 $\pm$ 41.667  $\chi^2$ /NDF: 23.5/16

In: 44.792 $\pm$ 11.340  $\chi^2$ /NDF:25.7/29

Out: 11.299 $\pm$ 10.937  $\chi^2$ /NDF:54.5/34

All: 27.440 $\pm$ 7.872  $\chi^2$ /NDF: 84.7/64

reg\_asym\_sam\_1526\_avg\_rms vs Slug, Sign Corrected



Right In: 134.716 $\pm$ 0.044  $\chi^2$ /NDF: 80534.7/6

Left Out: 47.586 $\pm$ 0.008  $\chi^2$ /NDF:312874.8/24

Right Out: 135.618 $\pm$ 0.039  $\chi^2$ /NDF: 730448.0/9

Left In: 47.846 $\pm$ 0.008  $\chi^2$ /NDF:281790.1/22

Left: 47.712 $\pm$ 0.006  $\chi^2$ /NDF: 595189.7/47

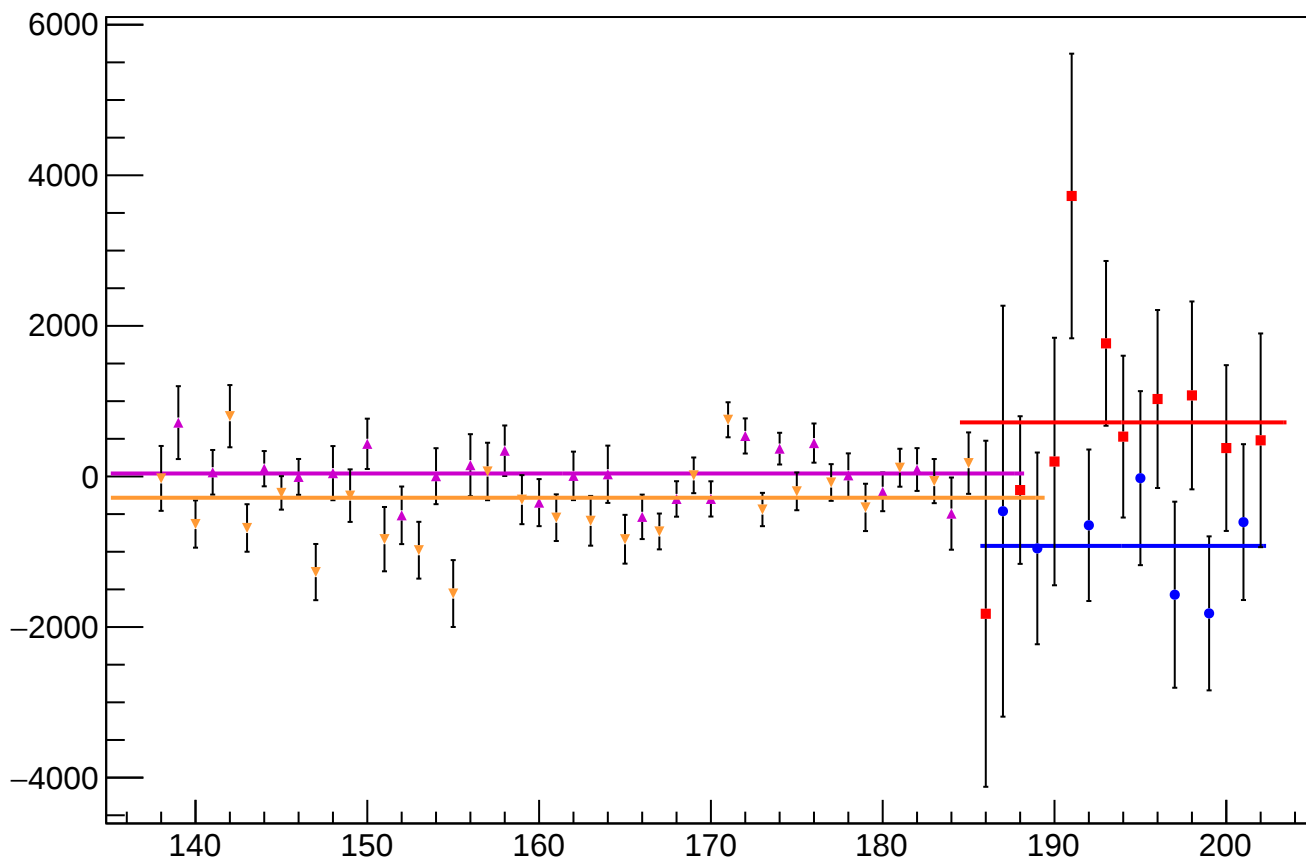
Right: 135.221 $\pm$ 0.029  $\chi^2$ /NDF: 811213.6/16

In: 50.680 $\pm$ 0.008  $\chi^2$ /NDF:4065550.3/29

Out: 50.981 $\pm$ 0.008  $\chi^2$ /NDF:5846965.3/34

All: 50.836 $\pm$ 0.006  $\chi^2$ /NDF: 9913247.0/64

asym\_sam\_1526\_avg\_correction\_mean vs Slug, Sign Corrected



Right In:  $-922.305 \pm 445.777$   $\chi^2/\text{NDF}: 1.8/6$

Left Out:  $-282.798 \pm 59.690$   $\chi^2/\text{NDF}: 66.5/24$

Right Out:  $718.033 \pm 399.678$   $\chi^2/\text{NDF}: 5.9/9$

Left In:  $39.432 \pm 60.759$   $\chi^2/\text{NDF}: 27.5/22$

Left:  $-124.543 \pm 42.580$   $\chi^2/\text{NDF}: 108.4/47$

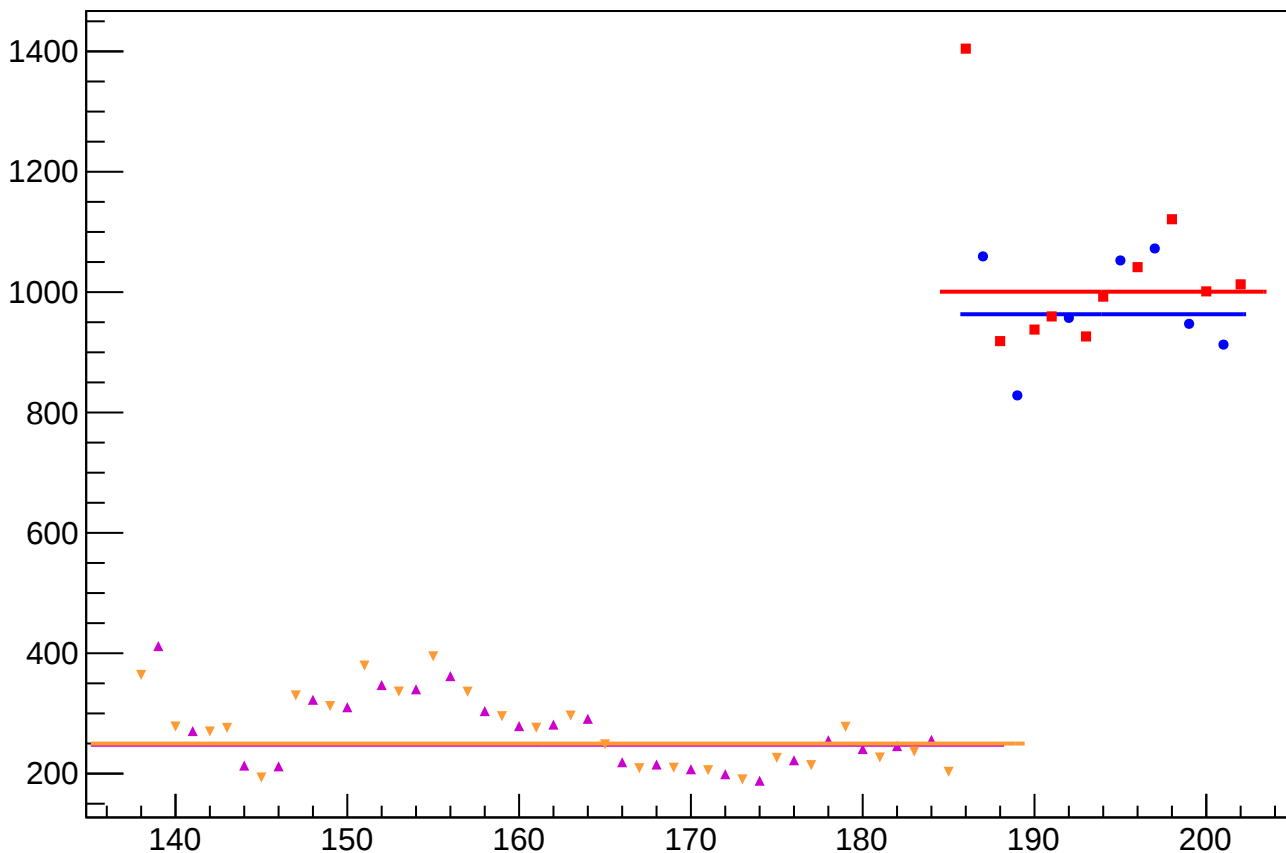
Right:  $-12.960 \pm 297.583$   $\chi^2/\text{NDF}: 15.3/16$

In:  $21.891 \pm 60.202$   $\chi^2/\text{NDF}: 34.0/29$

Out:  $-260.963 \pm 59.035$   $\chi^2/\text{NDF}: 78.6/34$

All:  $-122.304 \pm 42.151$   $\chi^2/\text{NDF}: 123.8/64$

asym\_sam\_1526\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 963.264+/-0.315  $\chi^2/\text{NDF}$ : 57841.8/6

Left Out: 249.956+/-0.042  $\chi^2/\text{NDF}$ : 1614205.9/24

Right Out: 1000.735+/-0.283  $\chi^2/\text{NDF}$ : 110166.7/9

Left In: 247.917+/-0.043  $\chi^2/\text{NDF}$ : 1410847.5/22

Left: 248.955+/-0.030  $\chi^2/\text{NDF}$ : 3026200.1/47

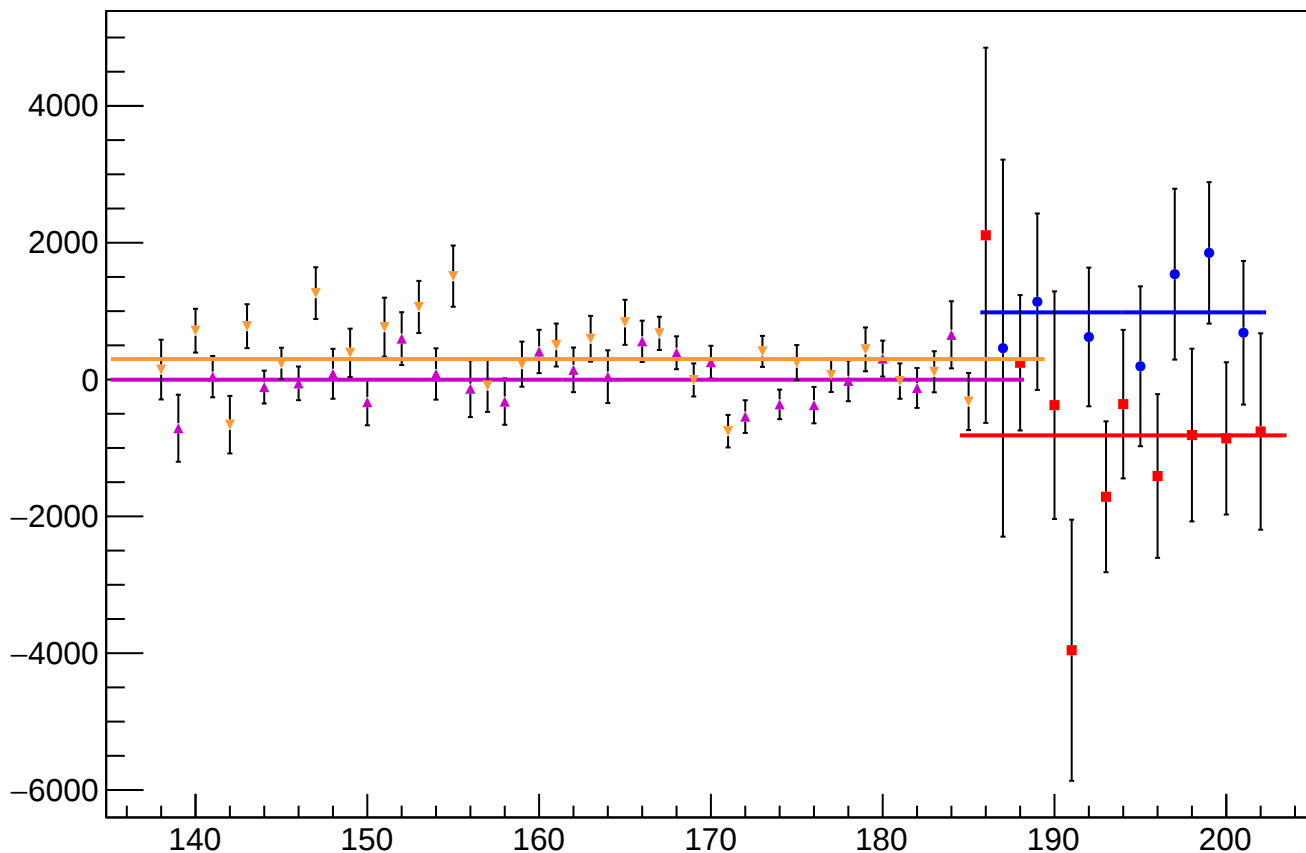
Right: 984.036+/-0.210  $\chi^2/\text{NDF}$ : 175842.2/16

In: 260.964+/-0.043  $\chi^2/\text{NDF}$ : 6525004.5/29

Out: 266.336+/-0.042  $\chi^2/\text{NDF}$ : 8627611.0/34

All: 263.703+/-0.030  $\chi^2/\text{NDF}$ : 15160735.6/64

asym\_sam\_1526\_avg\_mean vs Slug, Sign Corrected



Right In:  $982.005 \pm 450.705$   $\chi^2/\text{NDF}$ : 1.6/6

Left Out:  $299.562 \pm 60.860$   $\chi^2/\text{NDF}$ : 62.5/24

Right Out:  $-815.920 \pm 405.557$   $\chi^2/\text{NDF}$ : 6.2/9

Left In:  $-2.185 \pm 62.005$   $\chi^2/\text{NDF}$ : 29.2/22

Left:  $151.501 \pm 43.433$   $\chi^2/\text{NDF}$ : 103.7/47

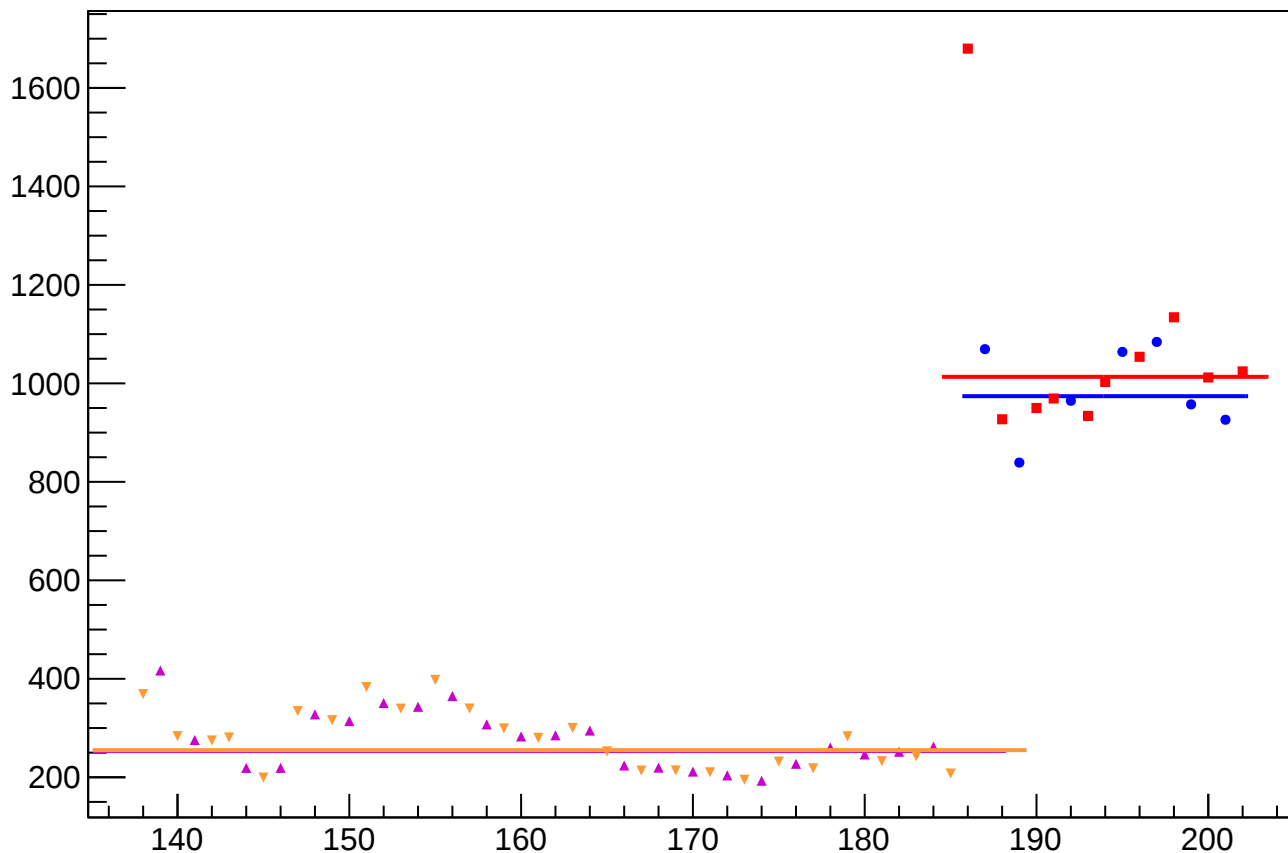
Right:  $-11.494 \pm 301.474$   $\chi^2/\text{NDF}$ : 16.6/16

In:  $16.096 \pm 61.426$   $\chi^2/\text{NDF}$ : 35.5/29

Out:  $274.996 \pm 60.186$   $\chi^2/\text{NDF}$ : 76.0/34

All:  $148.186 \pm 42.990$   $\chi^2/\text{NDF}$ : 120.6/64

asym\_sam\_1526\_avg\_rms vs Slug, Sign Corrected



Right In: 973.965 $\pm$ 0.319  $\chi^2$ /NDF: 56543.9/6

Left Out: 255.135 $\pm$ 0.043  $\chi^2$ /NDF: 1542039.5/24

Right Out: 1013.296 $\pm$ 0.287  $\chi^2$ /NDF: 168622.5/9

Left In: 253.287 $\pm$ 0.044  $\chi^2$ /NDF: 1341662.3/22

Left: 254.229 $\pm$ 0.031  $\chi^2$ /NDF: 2884606.5/47

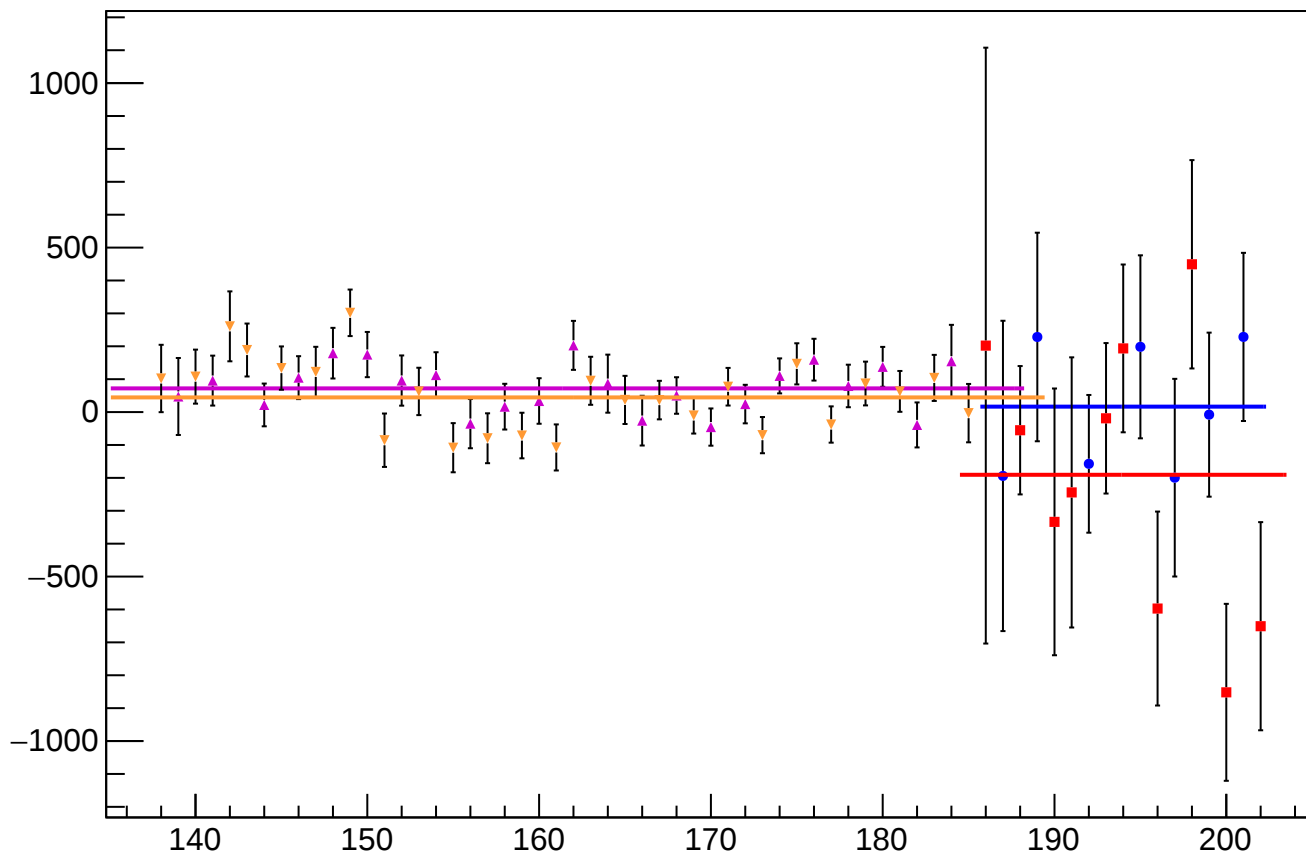
Right: 995.699 $\pm$ 0.213  $\chi^2$ /NDF: 233582.6/16

In: 266.674 $\pm$ 0.043  $\chi^2$ /NDF: 6416829.3/29

Out: 271.833 $\pm$ 0.043  $\chi^2$ /NDF: 8546277.1/34

All: 269.306 $\pm$ 0.030  $\chi^2$ /NDF: 14970303.6/64

reg\_asym\_sam\_3726\_avg\_mean vs Slug, Sign Corrected



Right In: 16.562 $\pm$ 103.882  $\chi^2$ /NDF: 3.0/6

Left Out: 44.602 $\pm$ 13.824  $\chi^2$ /NDF: 53.9/24

Right Out: -190.624 $\pm$ 91.555  $\chi^2$ /NDF: 17.8/9

Left In: 72.037 $\pm$ 14.296  $\chi^2$ /NDF: 25.3/22

Left: 57.859 $\pm$ 9.938  $\chi^2$ /NDF: 81.1/47

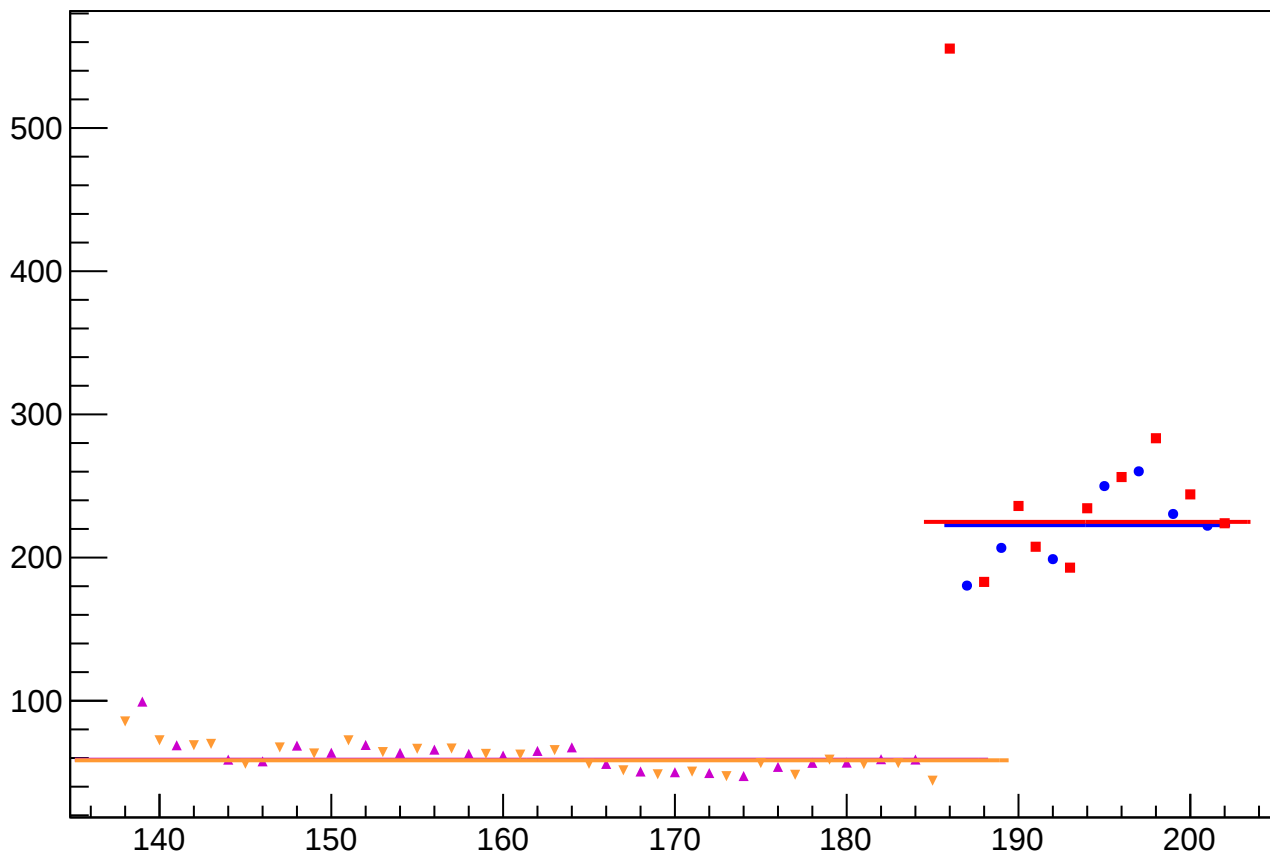
Right: -100.047 $\pm$ 68.686  $\chi^2$ /NDF: 23.0/16

In: 71.006 $\pm$ 14.163  $\chi^2$ /NDF: 28.6/29

Out: 39.358 $\pm$ 13.669  $\chi^2$ /NDF: 78.2/34

All: 54.621 $\pm$ 9.836  $\chi^2$ /NDF: 109.3/64

reg\_asym\_sam\_3726\_avg\_rms vs Slug, Sign Corrected



Right In: 222.643 $\pm$ 0.073  $\chi^2$ /NDF: 99283.1/6

Left Out: 58.423 $\pm$ 0.010  $\chi^2$ /NDF: 790091.3/24

Right Out: 224.933 $\pm$ 0.065  $\chi^2$ /NDF: 506548.3/9

Left In: 58.840 $\pm$ 0.010  $\chi^2$ /NDF: 679925.7/22

Left: 58.624 $\pm$ 0.007  $\chi^2$ /NDF: 1470896.0/47

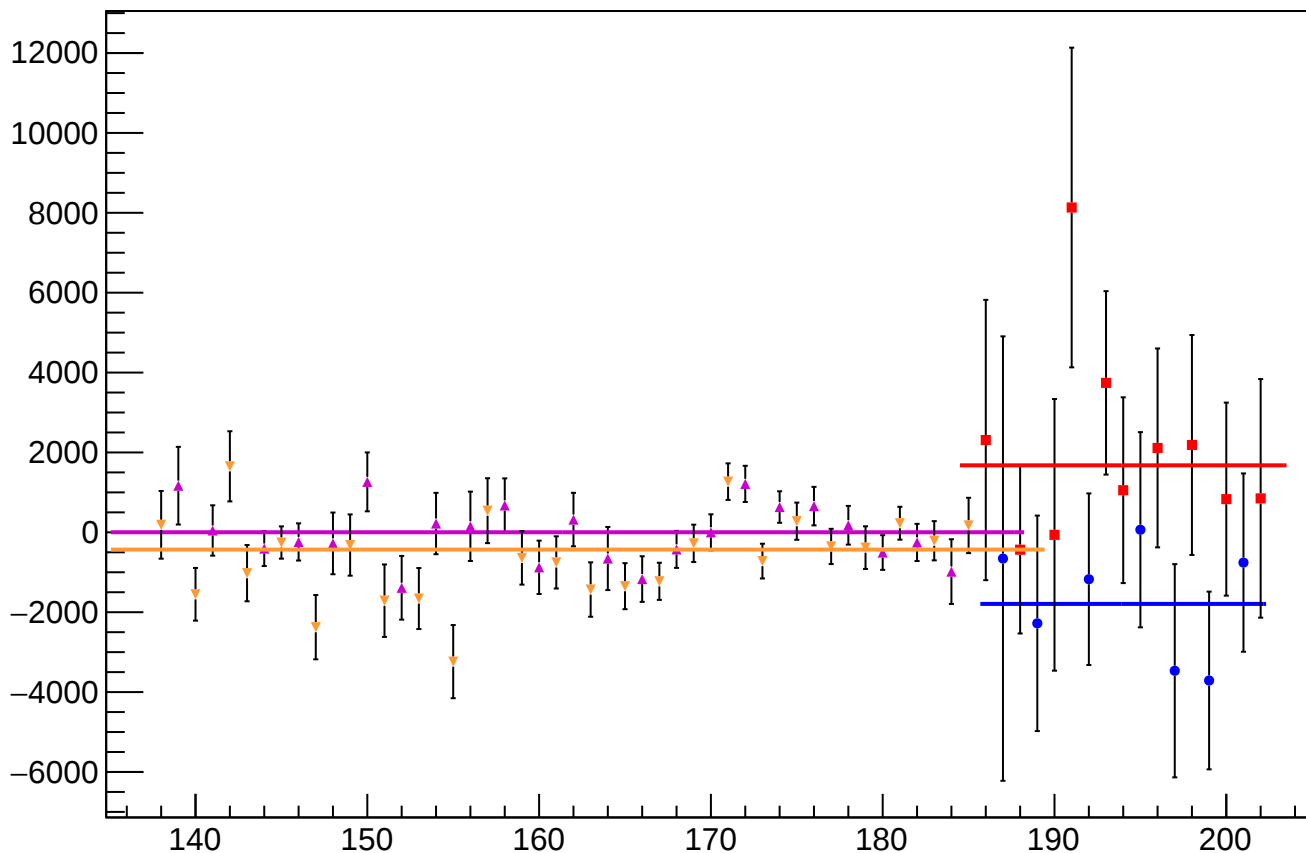
Right: 223.932 $\pm$ 0.049  $\chi^2$ /NDF: 606378.3/16

In: 61.884 $\pm$ 0.010  $\chi^2$ /NDF: 5659533.5/29

Out: 62.134 $\pm$ 0.010  $\chi^2$ /NDF: 7764476.4/34

All: 62.014 $\pm$ 0.007  $\chi^2$ /NDF: 13424332.7/64

asym\_sam\_3726\_avg\_correction\_mean vs Slug, Sign Corrected



Right In:  $-1792.140 \pm 954.858$   $\chi^2/\text{NDF}: 2.1/6$

Left Out:  $-432.330 \pm 114.408$   $\chi^2/\text{NDF}: 59.4/24$

Right Out:  $1677.524 \pm 842.643$   $\chi^2/\text{NDF}: 5.1/9$

Left In:  $1.825 \pm 116.459$   $\chi^2/\text{NDF}: 32.3/22$

Left:  $-219.109 \pm 81.614$   $\chi^2/\text{NDF}: 98.8/47$

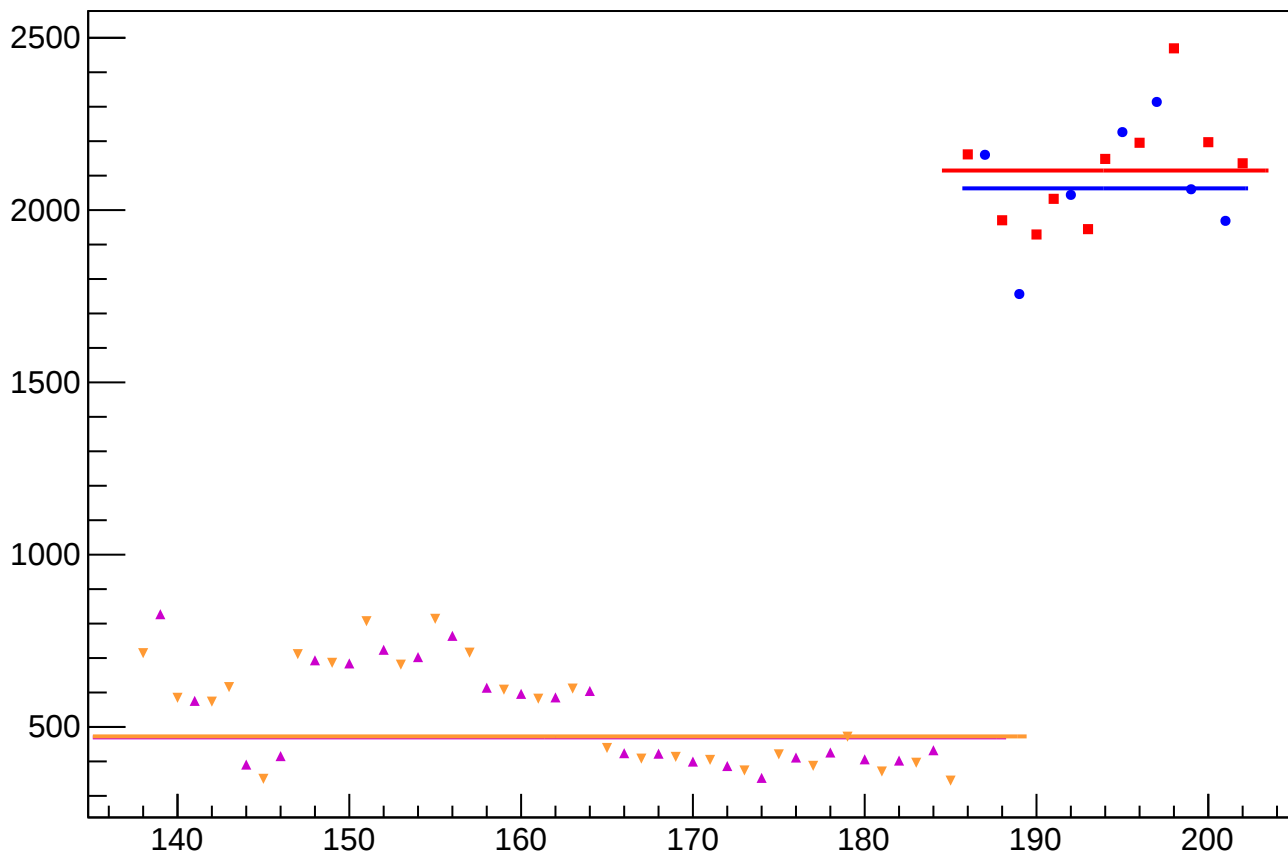
Right:  $158.457 \pm 631.806$   $\chi^2/\text{NDF}: 14.6/16$

In:  $-24.470 \pm 115.602$   $\chi^2/\text{NDF}: 37.9/29$

Out:  $-394.141 \pm 113.368$   $\chi^2/\text{NDF}: 70.6/34$

All:  $-212.912 \pm 80.942$   $\chi^2/\text{NDF}: 113.7/64$

asym\_sam\_3726\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 2063.075 $\pm$ 0.675  $\chi^2$ /NDF: 56768.2/6

Left Out: 472.569 $\pm$ 0.081  $\chi^2$ /NDF: 2508168.9/24

Right Out: 2114.840 $\pm$ 0.596  $\chi^2$ /NDF: 65706.4/9

Left In: 469.761 $\pm$ 0.082  $\chi^2$ /NDF: 2116885.7/22

Left: 471.190 $\pm$ 0.058  $\chi^2$ /NDF: 4625646.2/47

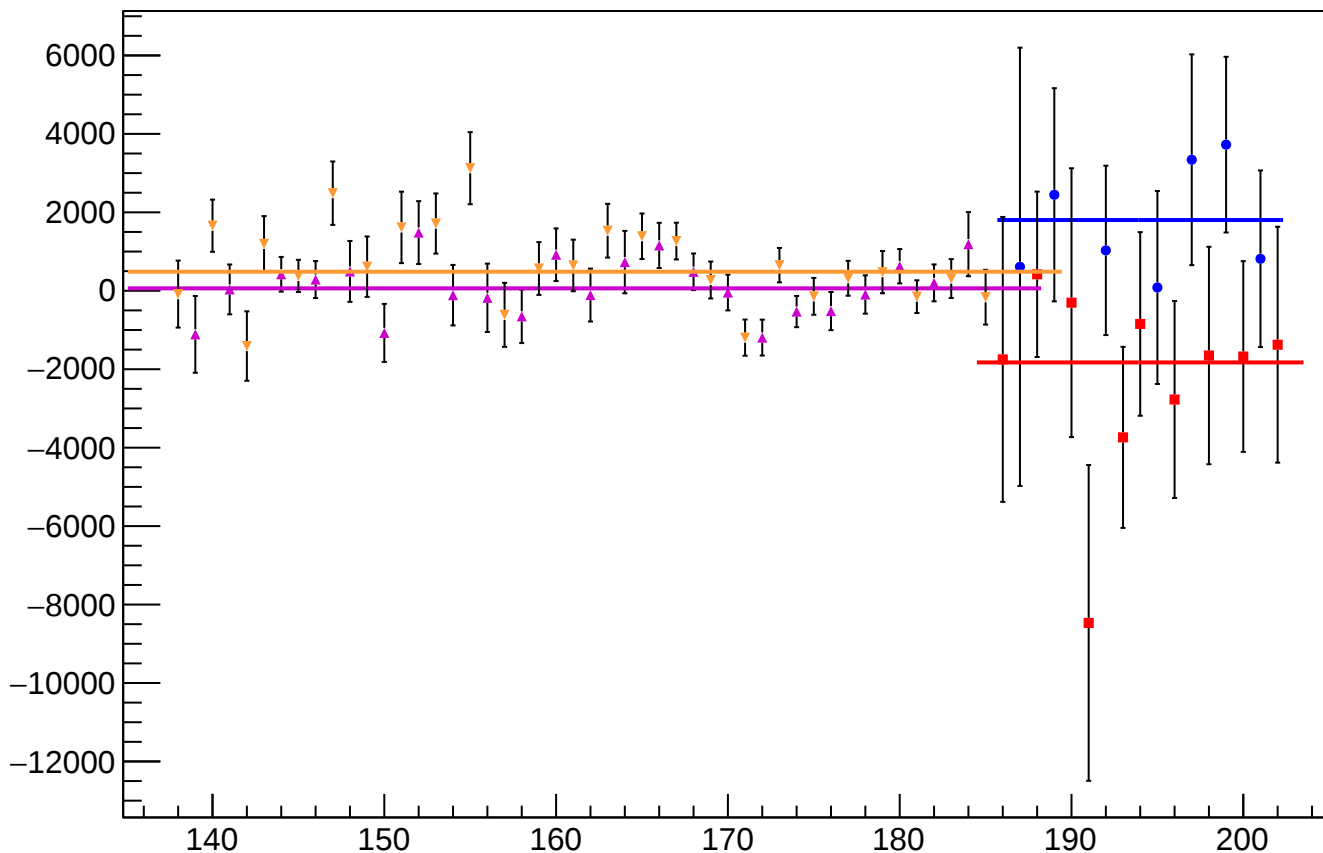
Right: 2092.177 $\pm$ 0.447  $\chi^2$ /NDF: 125779.2/16

In: 493.115 $\pm$ 0.082  $\chi^2$ /NDF: 7660743.0/29

Out: 502.295 $\pm$ 0.080  $\chi^2$ /NDF: 10033195.0/34

All: 497.794 $\pm$ 0.057  $\chi^2$ /NDF: 17700367.0/64

# asym\_sam\_3726\_avg\_mean vs Slug, Sign Corrected



Right In: 1804.181+/-961.154  $\chi^2/\text{NDF}$ : 2.0/6

Left Out: 486.645+/-115.346  $\chi^2/\text{NDF}$ : 56.0/24

Right Out: -1826.522+/-849.251  $\chi^2/\text{NDF}$ : 5.1/9

Left In: 61.775+/-117.449  $\chi^2/\text{NDF}$ : 31.2/22

Left: 278.047+/-82.295  $\chi^2/\text{NDF}$ : 93.8/47

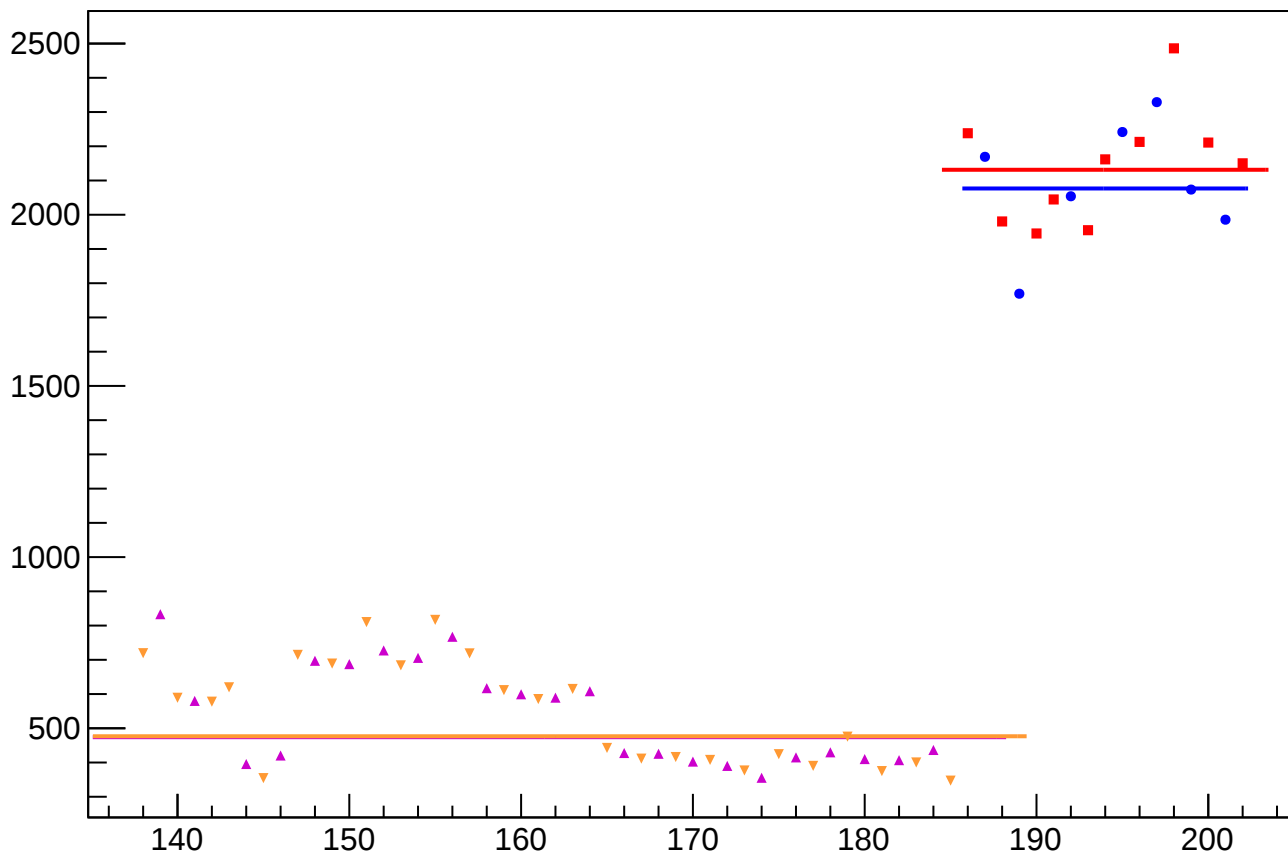
Right: -234.734+/-636.415  $\chi^2/\text{NDF}$ : 15.1/16

In: 87.409+/-116.582  $\chi^2/\text{NDF}$ : 36.4/29

Out: 444.746+/-114.297  $\chi^2/\text{NDF}$ : 68.4/34

All: 269.614+/-81.616  $\chi^2/\text{NDF}$ : 109.6/64

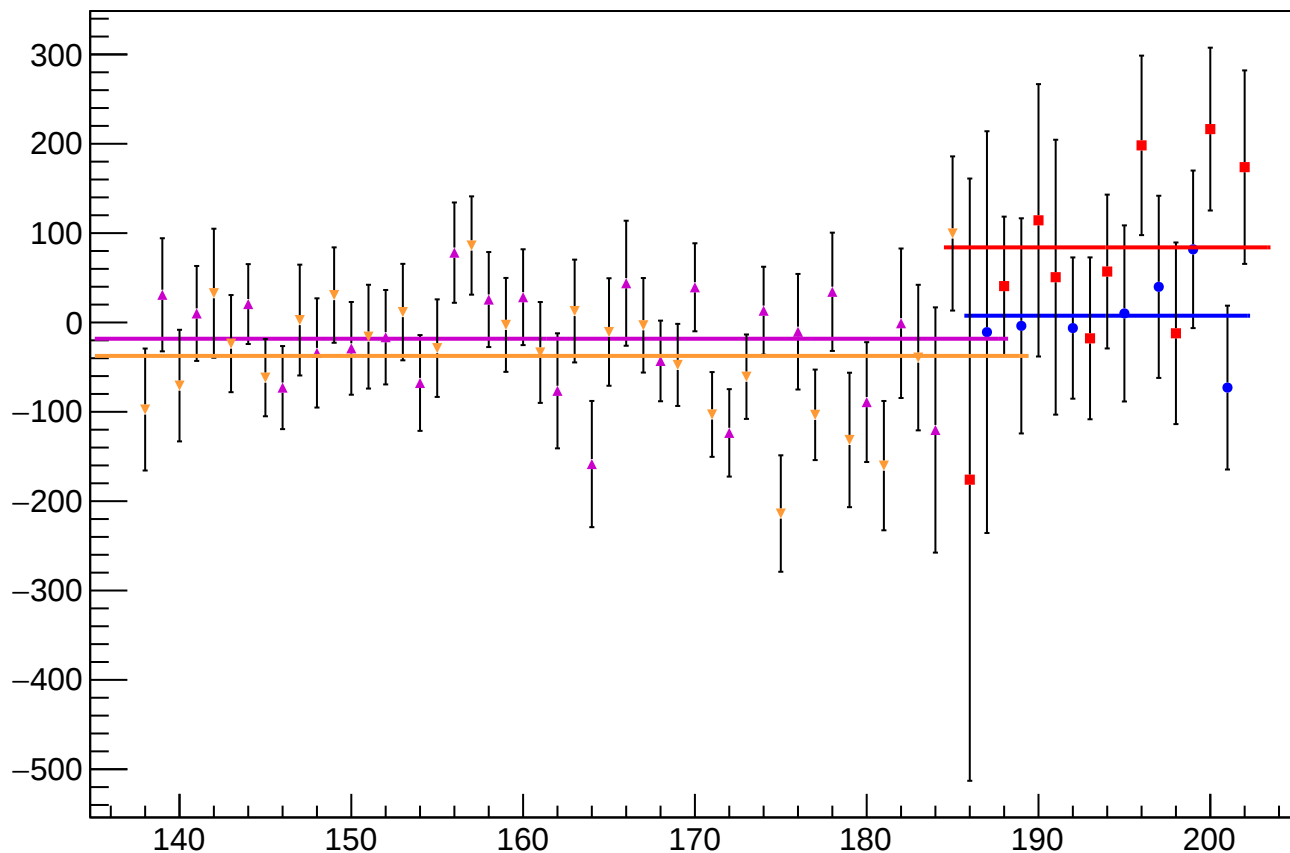
asym\_sam\_3726\_avg\_rms vs Slug, Sign Corrected



Right In: 2076.719 $\pm$ 0.680  $\chi^2$ /NDF: 56248.7/6  
 Left Out: 476.690 $\pm$ 0.082  $\chi^2$ /NDF: 2472737.6/24  
 Right Out: 2131.346 $\pm$ 0.601  $\chi^2$ /NDF: 67910.7/9  
 Left In: 473.983 $\pm$ 0.083  $\chi^2$ /NDF: 2087113.7/22

Left: 475.361 $\pm$ 0.058  $\chi^2$ /NDF: 4560392.0/47  
 Right: 2107.396 $\pm$ 0.450  $\chi^2$ /NDF: 127787.4/16  
 In: 497.563 $\pm$ 0.082  $\chi^2$ /NDF: 7622735.8/29  
 Out: 506.661 $\pm$ 0.081  $\chi^2$ /NDF: 9995429.0/34  
 All: 502.202 $\pm$ 0.058  $\chi^2$ /NDF: 17624375.7/64

reg\_asym\_sam\_15\_48\_dd\_mean vs Slug, Sign Corrected



Right In:  $7.568 \pm 37.918$   $\chi^2/\text{NDF}: 1.6/6$

Left Out:  $-37.413 \pm 11.390$   $\chi^2/\text{NDF}: 30.5/24$

Right Out:  $84.037 \pm 33.005$   $\chi^2/\text{NDF}: 7.3/9$

Left In:  $-18.210 \pm 11.788$   $\chi^2/\text{NDF}: 23.0/22$

Left:  $-28.141 \pm 8.191$   $\chi^2/\text{NDF}: 54.8/47$

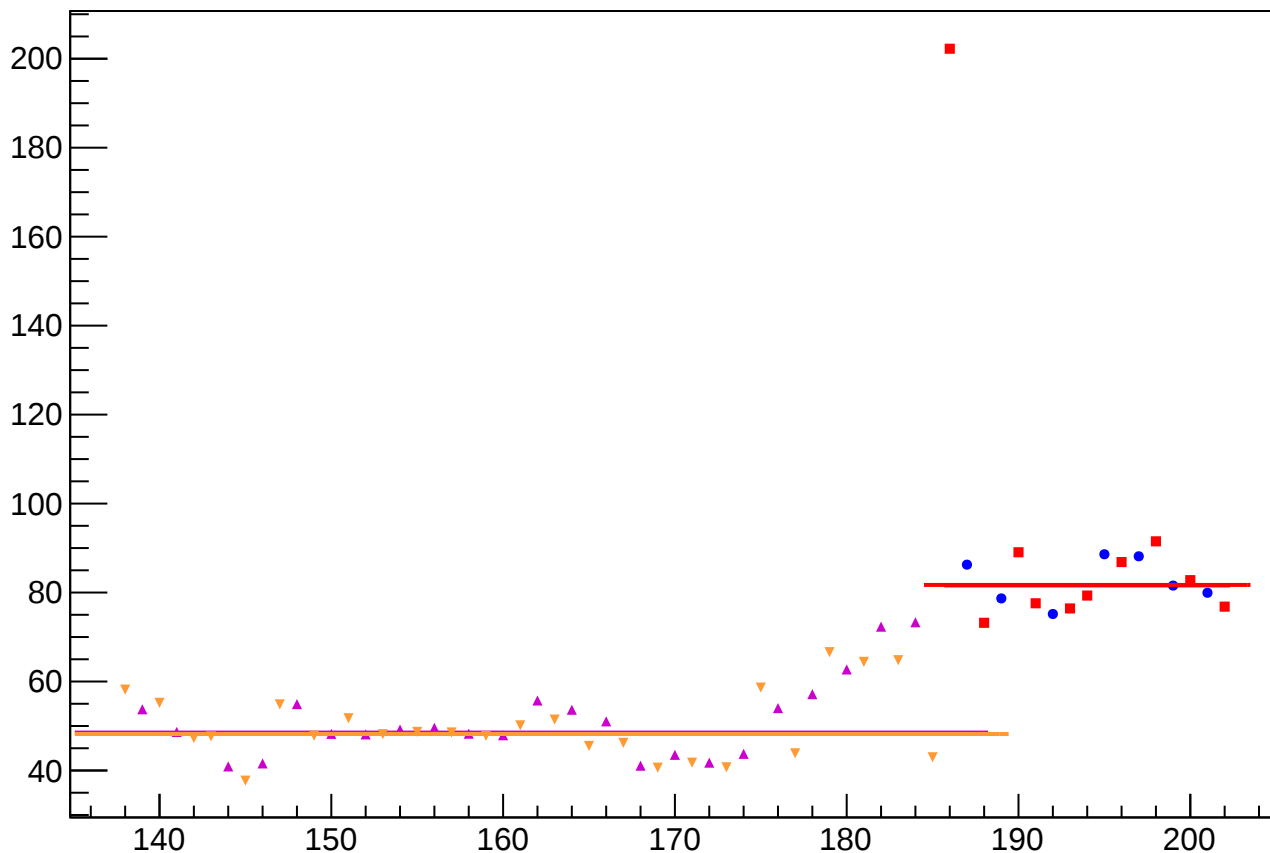
Right:  $51.074 \pm 24.895$   $\chi^2/\text{NDF}: 11.3/16$

In:  $-15.938 \pm 11.256$   $\chi^2/\text{NDF}: 25.0/29$

Out:  $-24.489 \pm 10.767$   $\chi^2/\text{NDF}: 49.9/34$

All:  $-20.404 \pm 7.781$   $\chi^2/\text{NDF}: 75.3/64$

reg\_asym\_sam\_15\_48\_dd\_rms vs Slug, Sign Corrected



Right In: 81.620 $\pm$ 0.027  $\chi^2$ /NDF: 34239.8/6

Left Out: 48.200 $\pm$ 0.008  $\chi^2$ /NDF: 750196.2/24

Right Out: 81.712 $\pm$ 0.023  $\chi^2$ /NDF: 322379.5/9

Left In: 48.527 $\pm$ 0.008  $\chi^2$ /NDF: 675340.8/22

Left: 48.358 $\pm$ 0.006  $\chi^2$ /NDF: 1426333.4/47

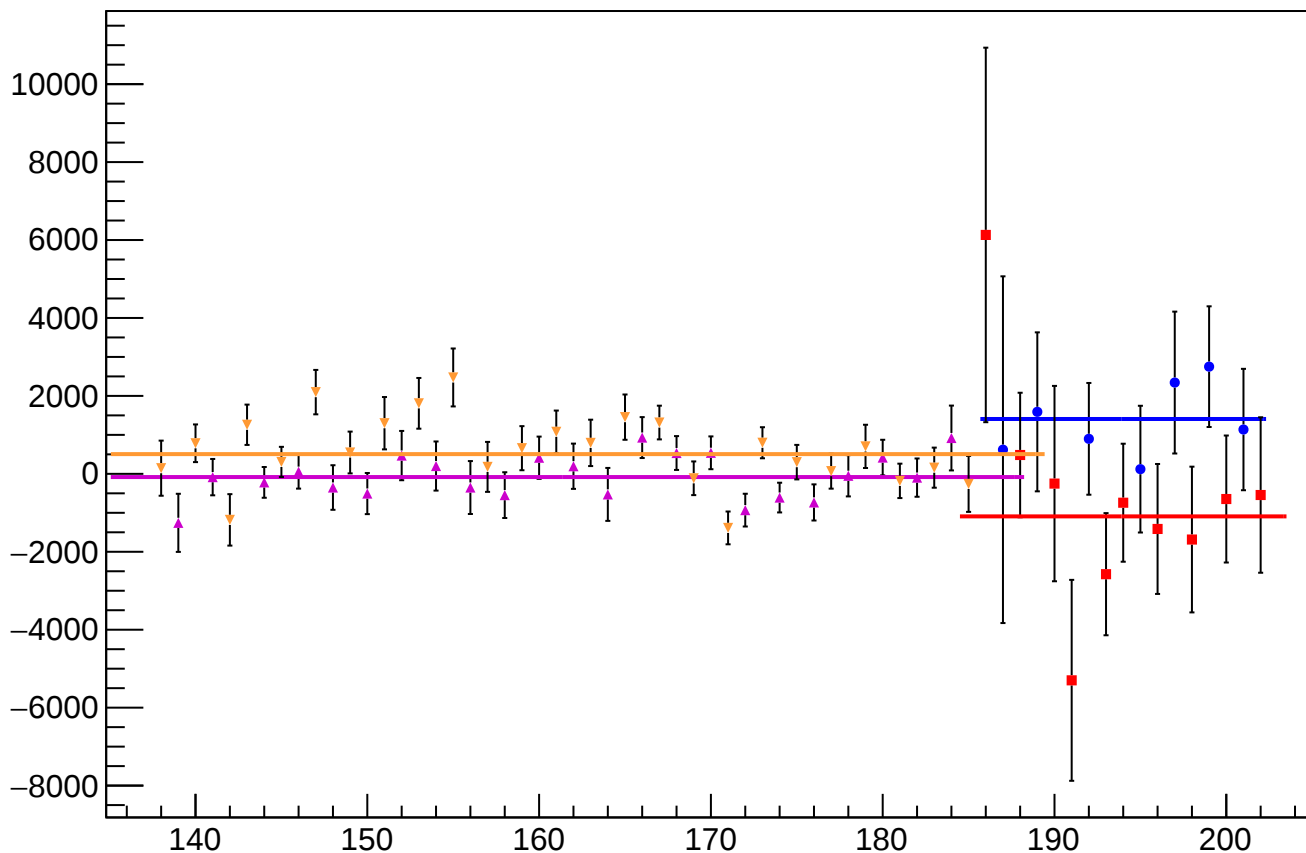
Right: 81.672 $\pm$ 0.018  $\chi^2$ /NDF: 356625.9/16

In: 51.443 $\pm$ 0.008  $\chi^2$ /NDF: 2098791.2/29

Out: 51.766 $\pm$ 0.008  $\chi^2$ /NDF: 2915104.7/34

All: 51.612 $\pm$ 0.006  $\chi^2$ /NDF: 5014753.8/64

asym\_sam\_15\_48\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: 1407.608+/-661.307  $\chi^2/\text{NDF}$ : 1.8/6

Left Out: 506.205+/-103.468  $\chi^2/\text{NDF}$ : 65.7/24

Right Out: -1091.843+/-591.122  $\chi^2/\text{NDF}$ : 7.2/9

Left In: -82.421+/-105.935  $\chi^2/\text{NDF}$ : 25.3/22

Left: 218.827+/-74.020  $\chi^2/\text{NDF}$ : 106.9/47

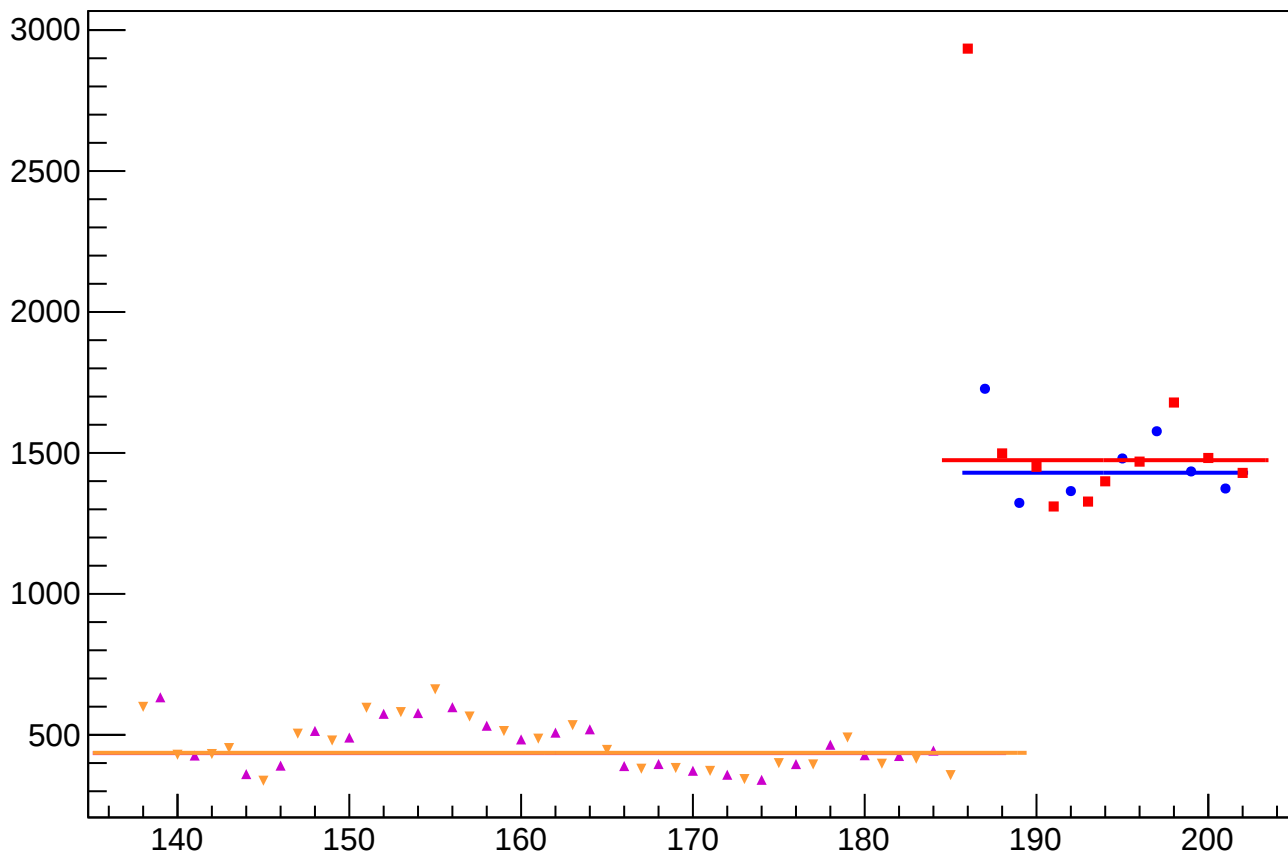
Right: 18.253+/-440.718  $\chi^2/\text{NDF}$ : 17.0/16

In: -45.142+/-104.602  $\chi^2/\text{NDF}$ : 32.1/29

Out: 458.700+/-101.918  $\chi^2/\text{NDF}$ : 80.0/34

All: 213.325+/-72.997  $\chi^2/\text{NDF}$ : 124.1/64

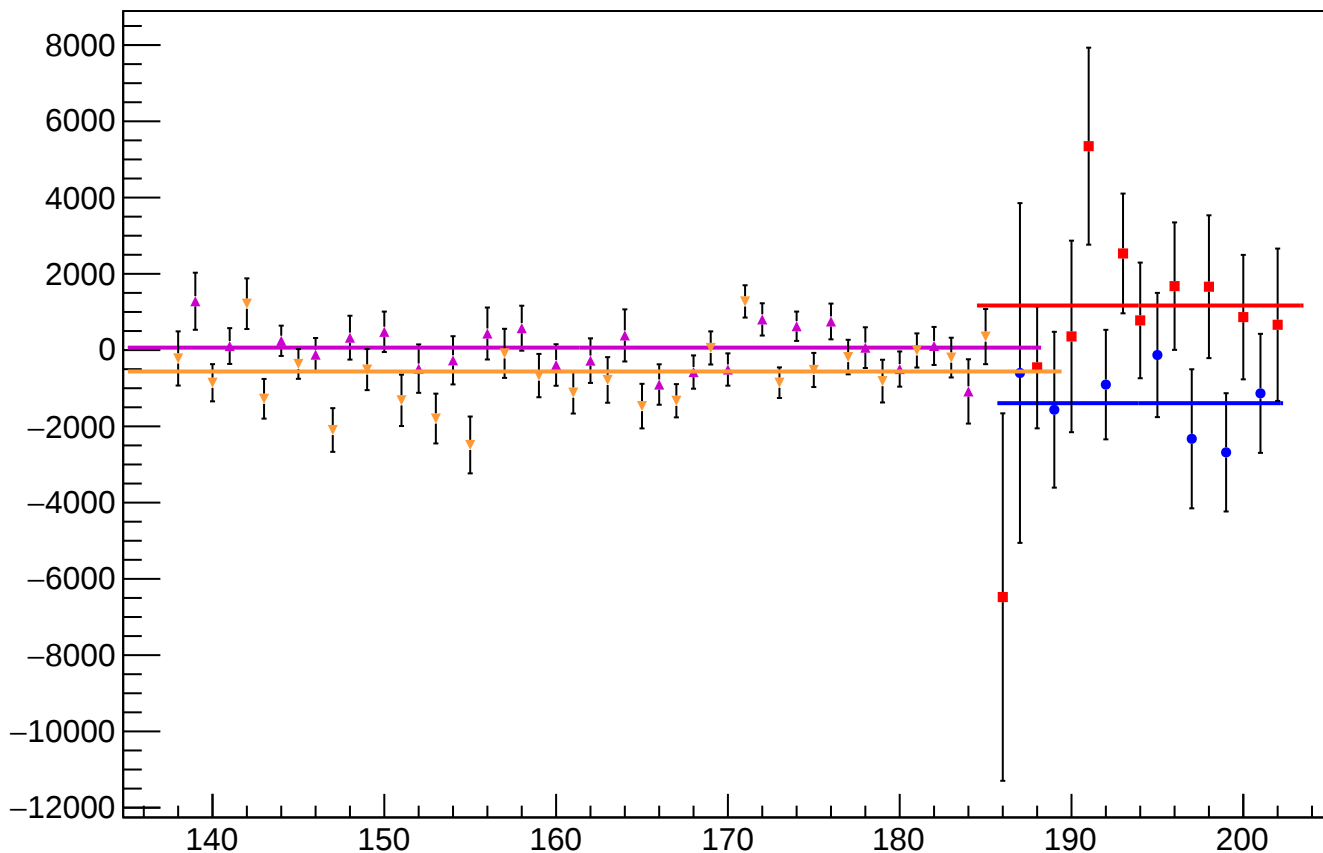
asym\_sam\_15\_48\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 1429.844+/-0.468  $\chi^2/\text{NDF}$ : 36202.4/6  
 Left Out: 436.301+/-0.073  $\chi^2/\text{NDF}$ : 1179348.4/24  
 Right Out: 1474.322+/-0.418  $\chi^2/\text{NDF}$ : 240795.0/9  
 Left In: 435.275+/-0.075  $\chi^2/\text{NDF}$ : 1027713.1/22

Left: 435.800+/-0.052  $\chi^2/\text{NDF}$ : 2207157.7/47  
 Right: 1454.568+/-0.312  $\chi^2/\text{NDF}$ : 282026.3/16  
 In: 460.158+/-0.074  $\chi^2/\text{NDF}$ : 5474430.2/29  
 Out: 467.159+/-0.072  $\chi^2/\text{NDF}$ : 7404011.4/34  
 All: 463.749+/-0.052  $\chi^2/\text{NDF}$ : 12883036.9/64

asym\_sam\_15\_48\_dd\_mean vs Slug, Sign Corrected



Right In: -1392.189 $\pm$ 662.494  $\chi^2$ /NDF: 1.7/6

Left Out: -560.684 $\pm$ 104.207  $\chi^2$ /NDF:61.8/24

Right Out: 1169.326 $\pm$ 592.149  $\chi^2$ /NDF: 7.4/9

Left In: 64.594 $\pm$ 106.708  $\chi^2$ /NDF:25.2/22

Left: -255.457 $\pm$ 74.554  $\chi^2$ /NDF: 104.5/47

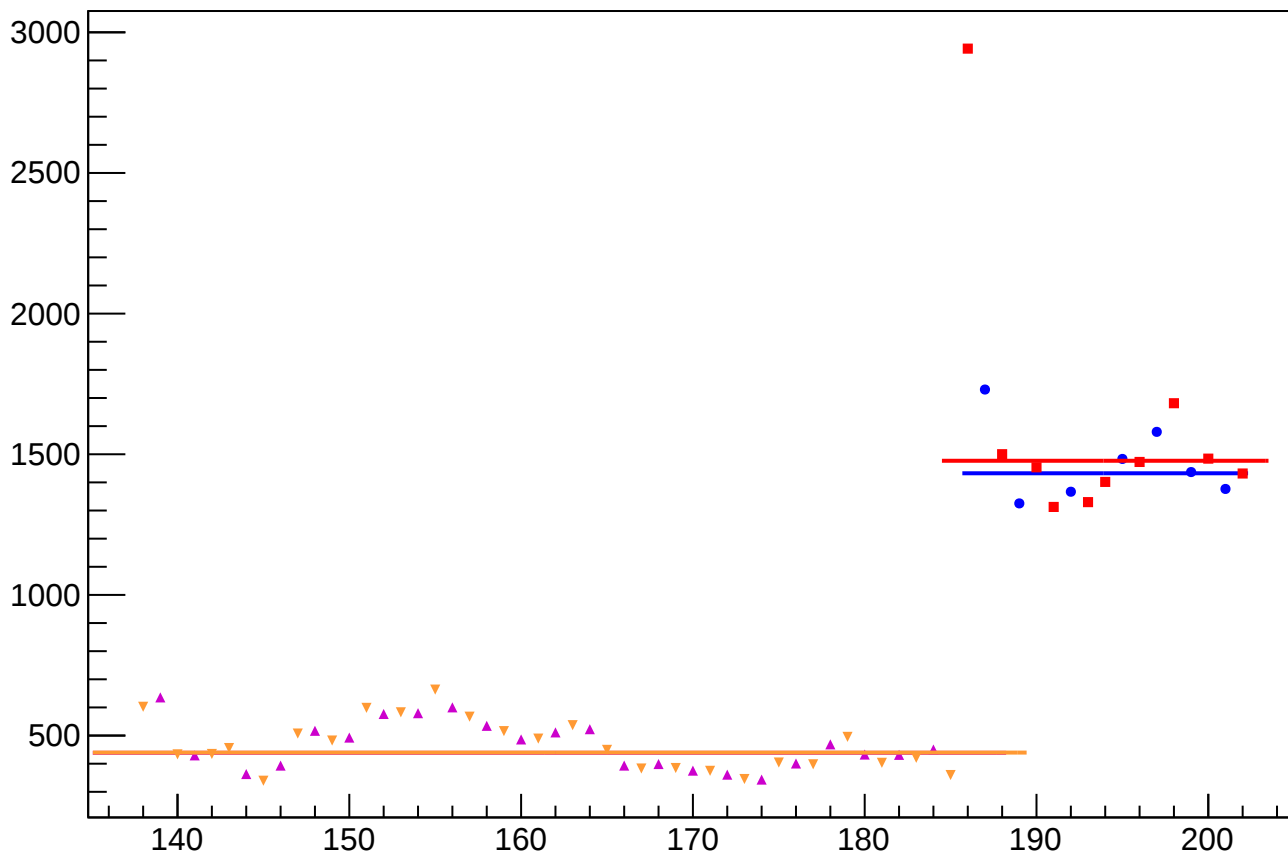
Right: 31.736 $\pm$ 441.496  $\chi^2$ /NDF: 17.4/16

In: 27.756 $\pm$ 105.350  $\chi^2$ /NDF:31.6/29

Out: -508.716 $\pm$ 102.630  $\chi^2$ /NDF:77.4/34

All: -247.494 $\pm$ 73.513  $\chi^2$ /NDF: 122.3/64

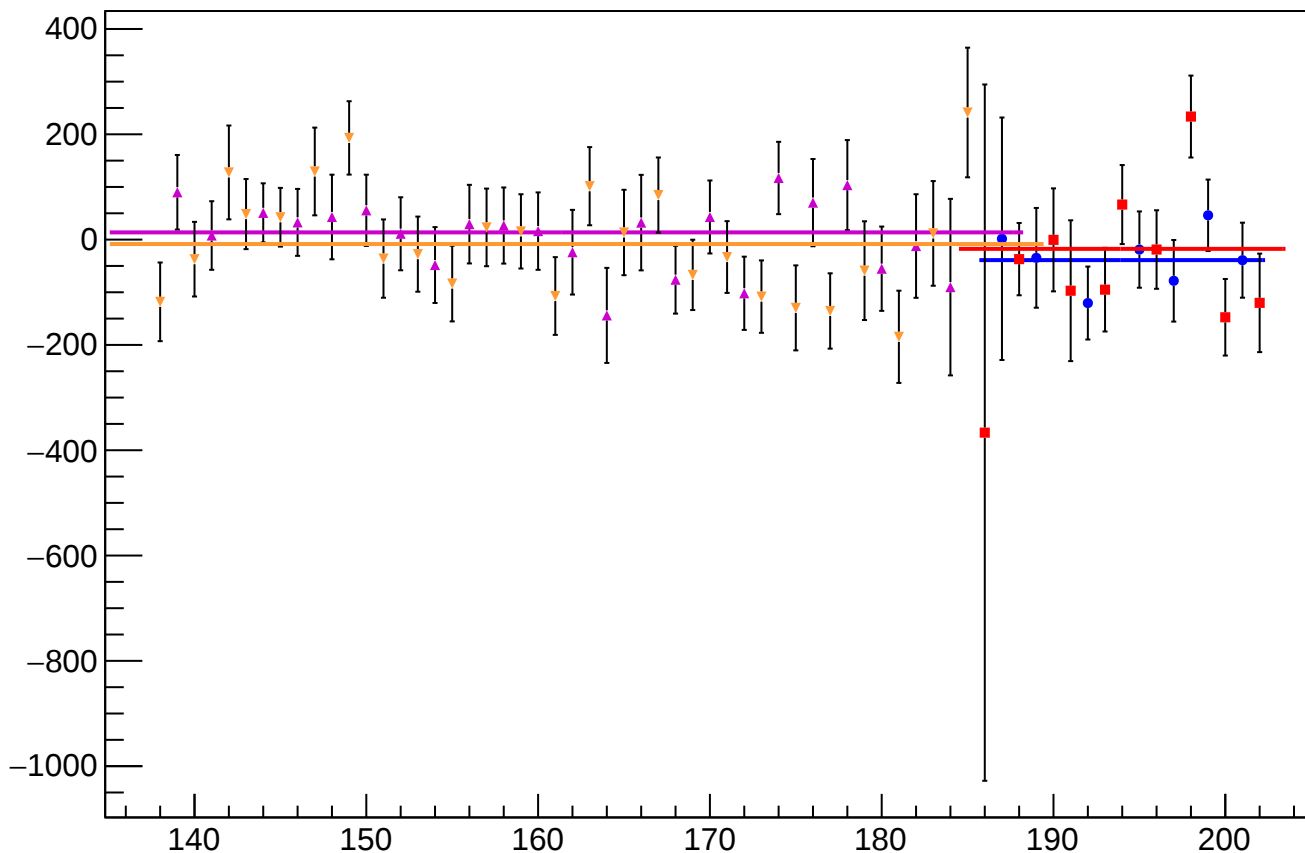
asym\_sam\_15\_48\_dd\_rms vs Slug, Sign Corrected



Right In: 1432.416 $\pm$ 0.468  $\chi^2$ /NDF: 36163.0/6  
 Left Out: 439.527 $\pm$ 0.074  $\chi^2$ /NDF:1163352.8/24  
 Right Out: 1476.880 $\pm$ 0.419  $\chi^2$ /NDF: 240967.9/9  
 Left In: 438.548 $\pm$ 0.075  $\chi^2$ /NDF:1013071.4/22

Left: 439.049 $\pm$ 0.053  $\chi^2$ /NDF: 2176510.4/47  
 Right: 1457.133 $\pm$ 0.312  $\chi^2$ /NDF: 282138.9/16  
 In: 463.680 $\pm$ 0.074  $\chi^2$ /NDF:5436569.9/29  
 Out: 470.688 $\pm$ 0.073  $\chi^2$ /NDF:7357856.7/34  
 All: 467.276 $\pm$ 0.052  $\chi^2$ /NDF: 12798967.5/64

reg\_asym\_sam\_37\_48\_dd\_mean vs Slug, Sign Corrected



Right In:  $-38.945 \pm 30.013$   $\chi^2/\text{NDF}$ : 3.3/6

Left Out:  $-8.416 \pm 14.935$   $\chi^2/\text{NDF}$ : 41.6/24

Right Out:  $-17.547 \pm 27.121$   $\chi^2/\text{NDF}$ : 17.8/9

Left In:  $13.723 \pm 15.478$   $\chi^2/\text{NDF}$ : 16.3/22

Left:  $2.258 \pm 10.747$   $\chi^2/\text{NDF}$ : 58.9/47

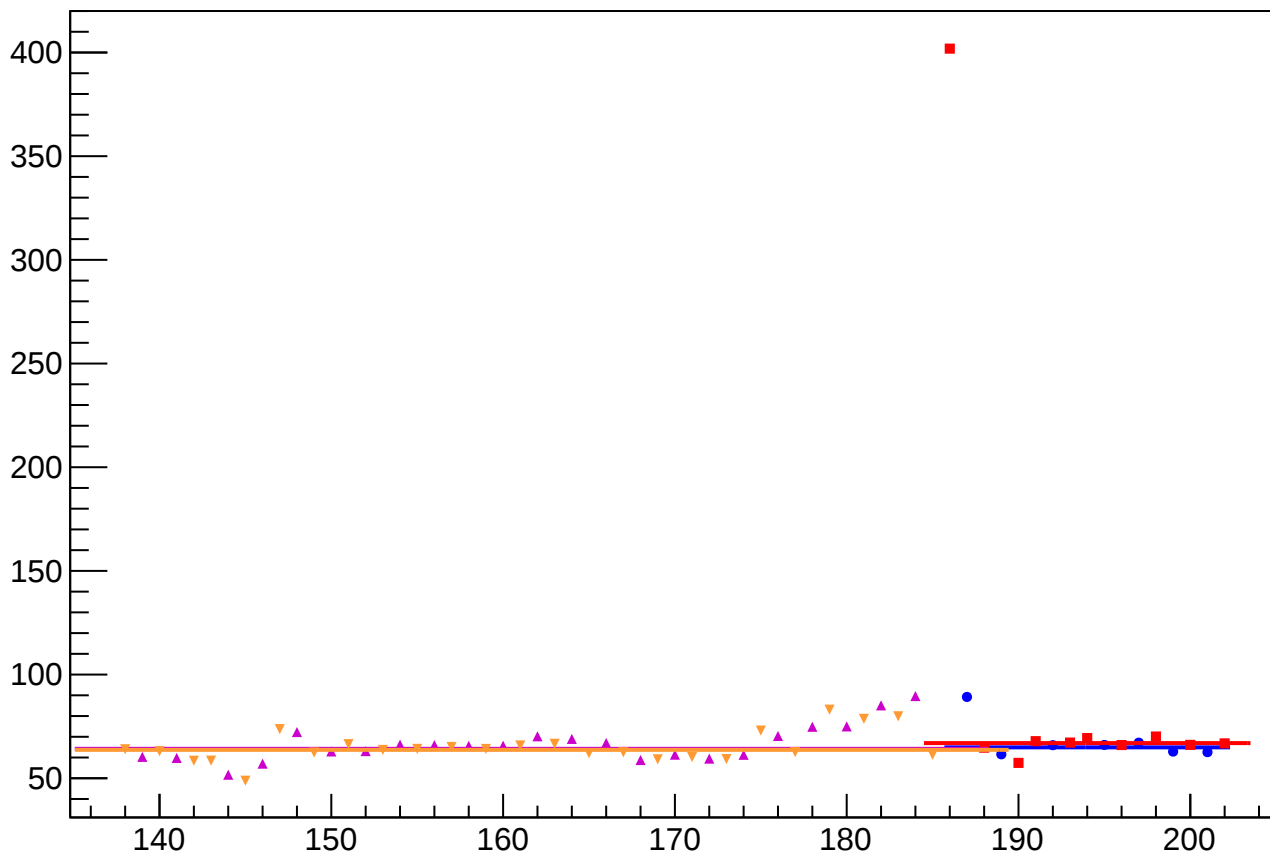
Right:  $-27.166 \pm 20.122$   $\chi^2/\text{NDF}$ : 21.4/16

In:  $2.658 \pm 13.756$   $\chi^2/\text{NDF}$ : 22.0/29

Out:  $-10.541 \pm 13.082$   $\chi^2/\text{NDF}$ : 59.5/34

All:  $-4.272 \pm 9.480$   $\chi^2/\text{NDF}$ : 82.0/64

reg\_asym\_sam\_37\_48\_dd\_rms vs Slug, Sign Corrected



Right In: 64.901 $\pm$ 0.021  $\chi^2$ /NDF: 31406.8/6

Left Out: 63.696 $\pm$ 0.011  $\chi^2$ /NDF: 448439.3/24

Right Out: 66.958 $\pm$ 0.019  $\chi^2$ /NDF: 540362.7/9

Left In: 64.189 $\pm$ 0.011  $\chi^2$ /NDF: 429670.3/22

Left: 63.934 $\pm$ 0.008  $\chi^2$ /NDF: 879161.0/47

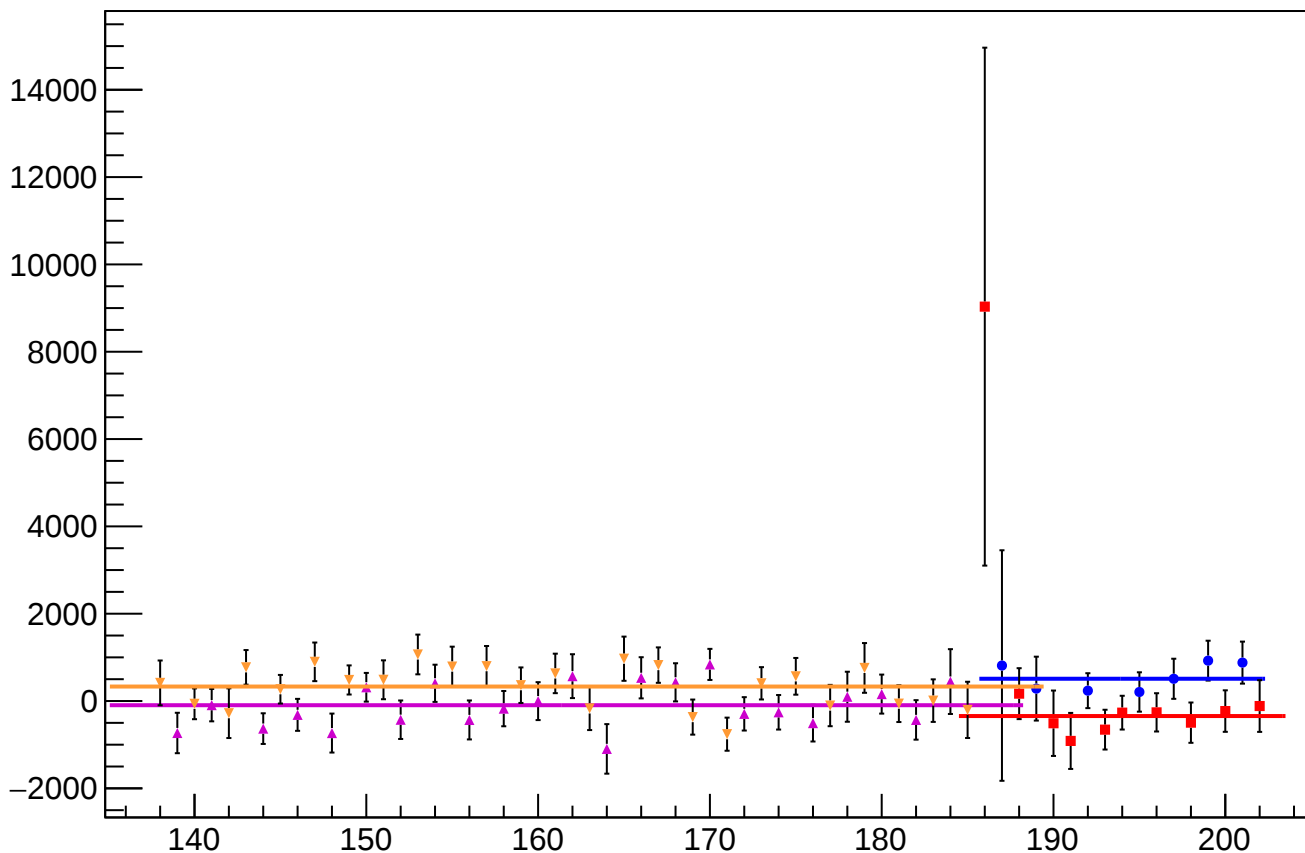
Right: 66.033 $\pm$ 0.014  $\chi^2$ /NDF: 576937.0/16

In: 64.339 $\pm$ 0.010  $\chi^2$ /NDF: 461966.8/29

Out: 64.455 $\pm$ 0.009  $\chi^2$ /NDF: 1010996.1/34

All: 64.400 $\pm$ 0.007  $\chi^2$ /NDF: 1473037.7/64

asym\_sam\_37\_48\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: 510.338 $\pm$ 192.310  $\chi^2$ /NDF: 2.4/6

Left Out: 331.739 $\pm$ 86.071  $\chi^2$ /NDF:29.9/24

Right Out: -344.035 $\pm$ 166.985  $\chi^2$ /NDF: 5.0/9

Left In: -95.910 $\pm$ 88.656  $\chi^2$ /NDF:28.7/22

Left: 124.240 $\pm$ 61.755  $\chi^2$ /NDF: 70.5/47

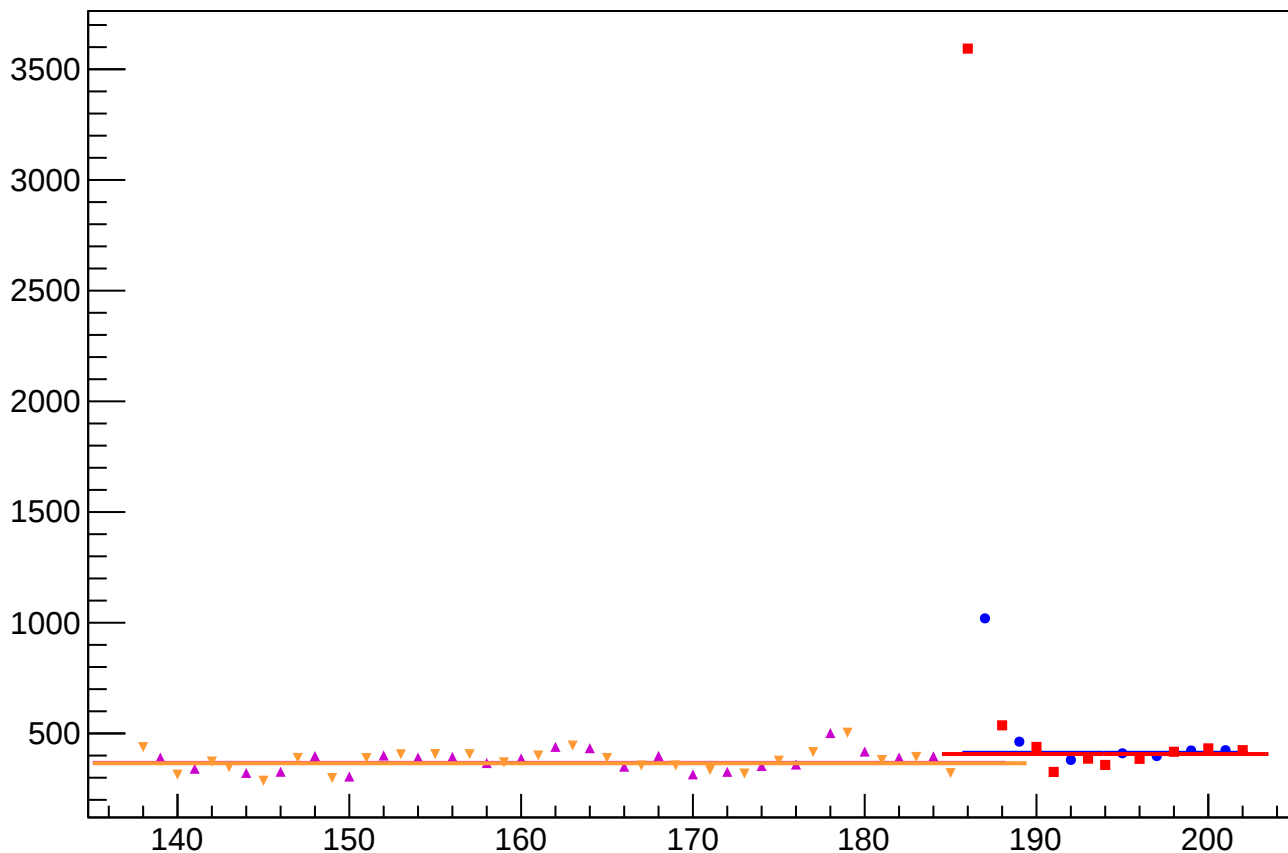
Right: 23.229 $\pm$ 126.086  $\chi^2$ /NDF: 18.7/16

In: 10.350 $\pm$ 80.512  $\chi^2$ /NDF:39.3/29

Out: 189.887 $\pm$ 76.506  $\chi^2$ /NDF:47.8/34

All: 104.697 $\pm$ 55.460  $\chi^2$ /NDF: 89.7/64

asym\_sam\_37\_48\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 412.518+/-0.136  $\chi^2/\text{NDF}$ : 132632.0/6

Left Out: 365.355+/-0.061  $\chi^2/\text{NDF}$ : 618453.7/24

Right Out: 406.946+/-0.118  $\chi^2/\text{NDF}$ : 761671.5/9

Left In: 366.925+/-0.063  $\chi^2/\text{NDF}$ : 478082.1/22

Left: 366.117+/-0.044  $\chi^2/\text{NDF}$ : 1096858.5/47

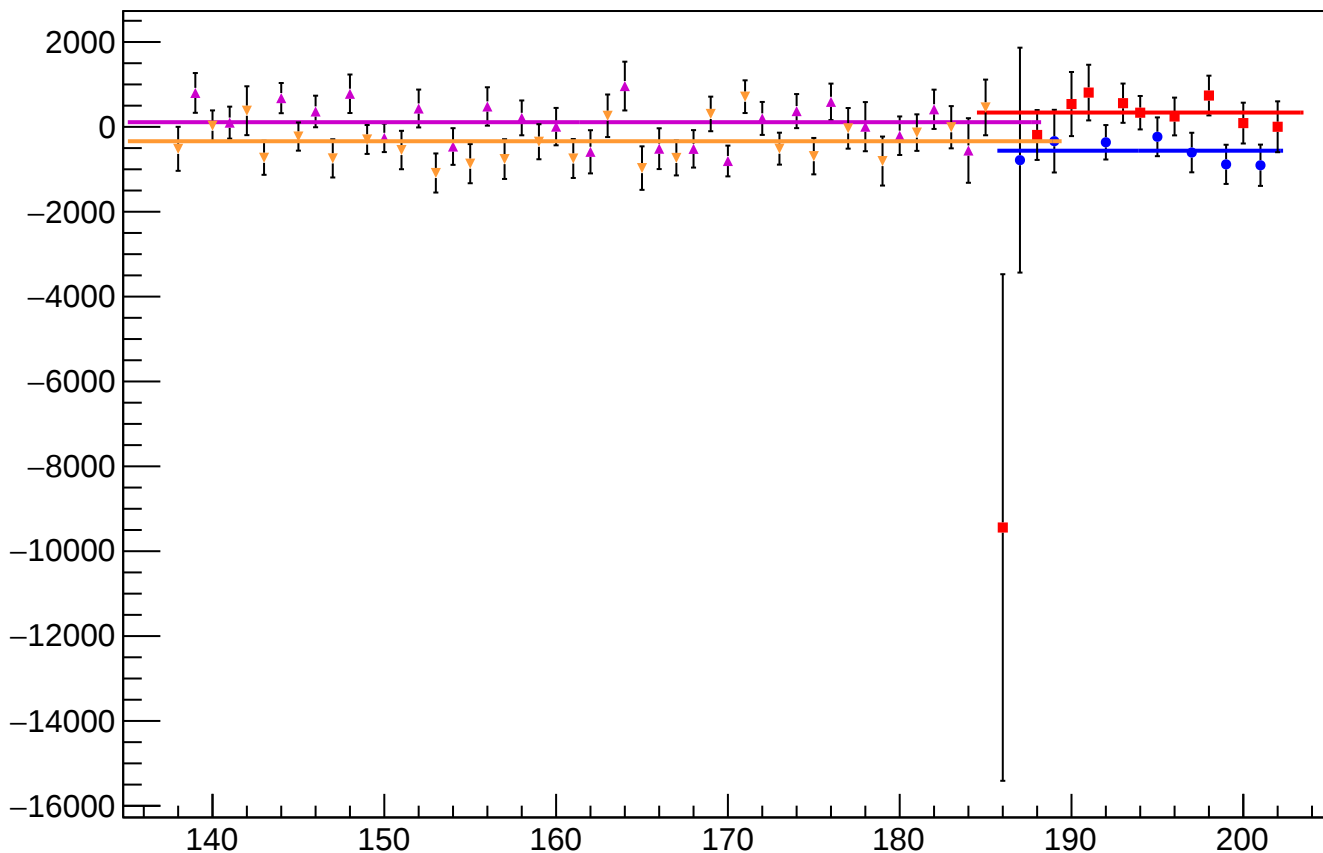
Right: 409.341+/-0.089  $\chi^2/\text{NDF}$ : 895260.9/16

In: 374.916+/-0.057  $\chi^2/\text{NDF}$ : 703426.9/29

Out: 374.085+/-0.054  $\chi^2/\text{NDF}$ : 1478150.4/34

All: 374.480+/-0.039  $\chi^2/\text{NDF}$ : 2181689.2/64

# asym\_sam\_37\_48\_dd\_mean vs Slug, Sign Corrected



Right In: -561.644+/-194.791  $\chi^2/\text{NDF}$ : 1.8/6

Left Out: -338.528+/-87.450  $\chi^2/\text{NDF}$ :28.2/24

Right Out: 337.574+/-169.433  $\chi^2/\text{NDF}$ : 5.7/9

Left In: 110.341+/-90.084  $\chi^2/\text{NDF}$ :29.2/22

Left: -120.751+/-62.747  $\chi^2/\text{NDF}$ : 70.2/47

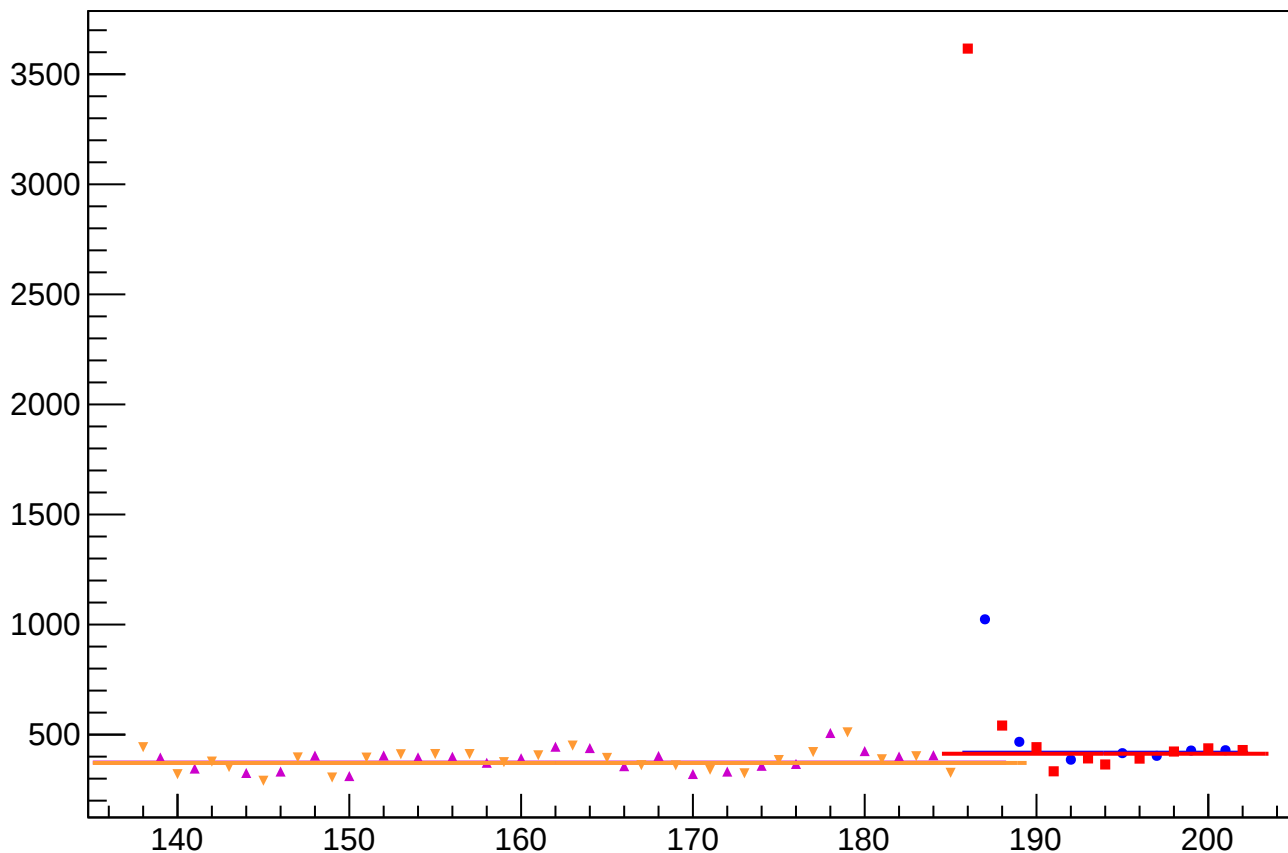
Right: -49.732+/-127.839  $\chi^2/\text{NDF}$ : 19.6/16

In: -8.057+/-81.764  $\chi^2/\text{NDF}$ :40.9/29

Out: -196.305+/-77.710  $\chi^2/\text{NDF}$ :46.4/34

All: -106.963+/-56.328  $\chi^2/\text{NDF}$ : 90.1/64

asym\_sam\_37\_48\_dd\_rms vs Slug, Sign Corrected



Right In: 417.947 $\pm$ 0.138  $\chi^2$ /NDF: 129671.6/6

Left Out: 371.356 $\pm$ 0.062  $\chi^2$ /NDF: 604070.6/24

Right Out: 413.150 $\pm$ 0.120  $\chi^2$ /NDF: 751100.6/9

Left In: 372.938 $\pm$ 0.064  $\chi^2$ /NDF: 467340.9/22

Left: 372.123 $\pm$ 0.044  $\chi^2$ /NDF: 1071729.1/47

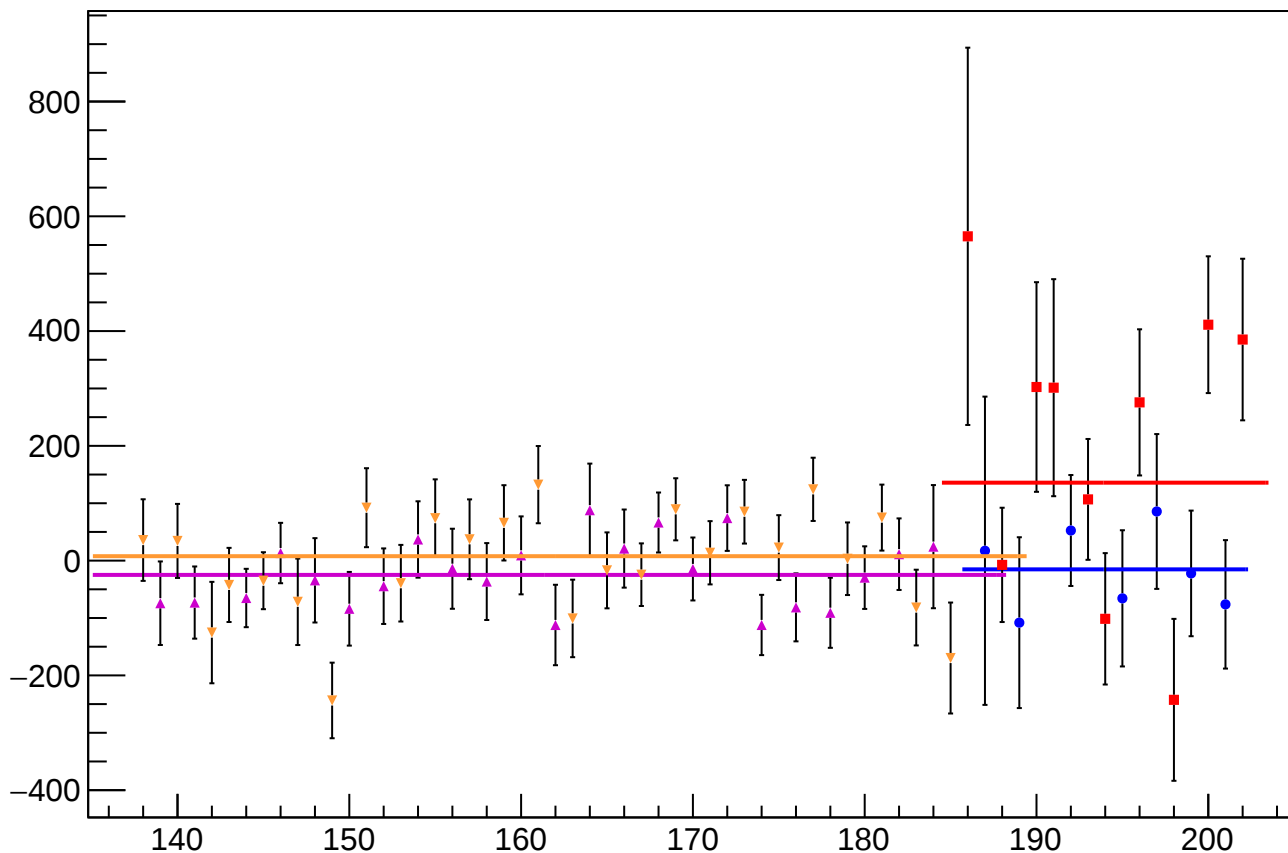
Right: 415.216 $\pm$ 0.090  $\chi^2$ /NDF: 881462.9/16

In: 380.868 $\pm$ 0.058  $\chi^2$ /NDF: 684980.8/29

Out: 380.148 $\pm$ 0.055  $\chi^2$ /NDF: 1451264.0/34

All: 380.489 $\pm$ 0.040  $\chi^2$ /NDF: 2136326.4/64

reg\_asym\_sam\_15\_26\_dd\_mean vs Slug, Sign Corrected



Right In:  $-15.224 \pm 46.864$   $\chi^2/\text{NDF}$ : 1.9/6

Left Out:  $7.723 \pm 12.656$   $\chi^2/\text{NDF}$ : 45.4/24

Right Out:  $135.839 \pm 41.984$   $\chi^2/\text{NDF}$ : 26.6/9

Left In:  $-24.887 \pm 13.029$   $\chi^2/\text{NDF}$ : 19.7/22

Left:  $-8.108 \pm 9.078$   $\chi^2/\text{NDF}$ : 68.4/47

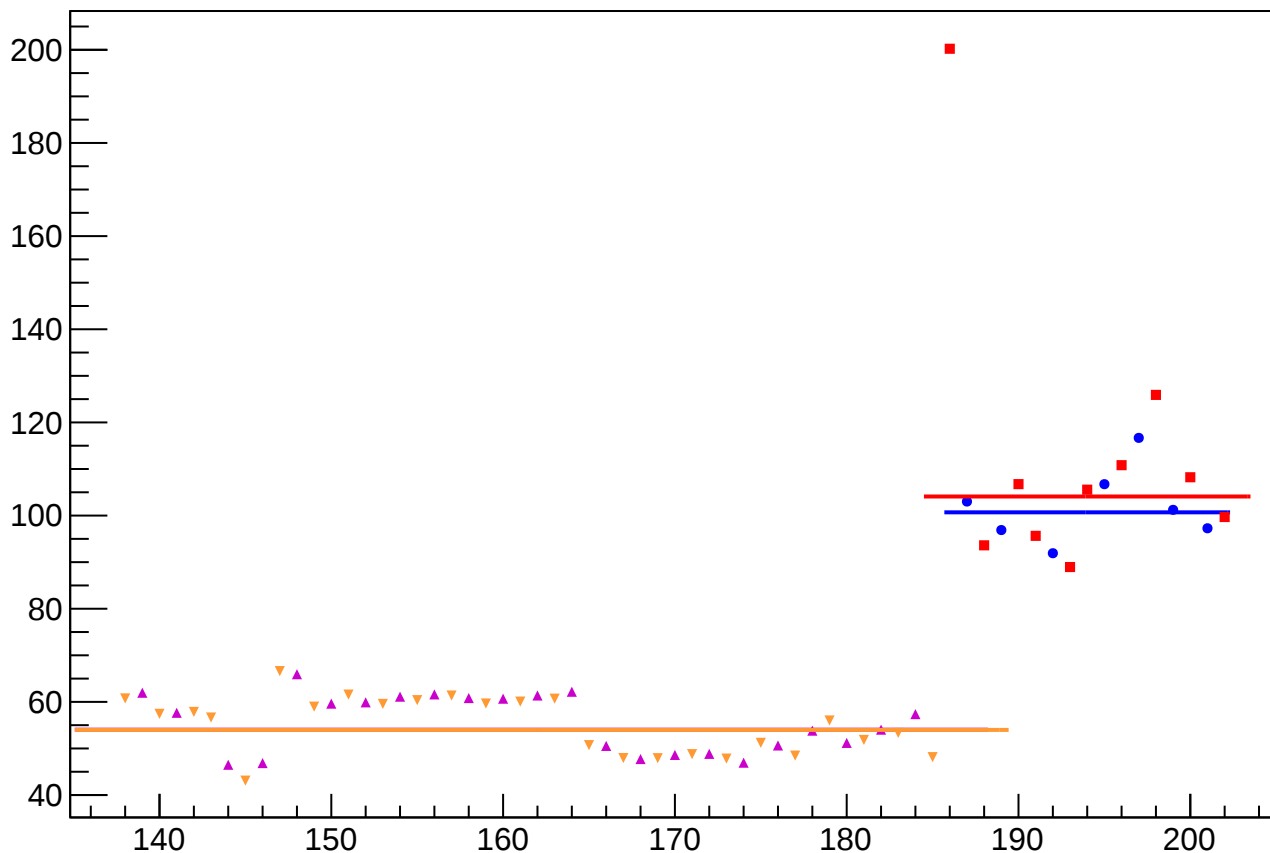
Right:  $68.579 \pm 31.271$   $\chi^2/\text{NDF}$ : 34.3/16

In:  $-24.194 \pm 12.553$   $\chi^2/\text{NDF}$ : 21.7/29

Out:  $18.395 \pm 12.117$   $\chi^2/\text{NDF}$ : 80.6/34

All:  $-2.148 \pm 8.718$   $\chi^2/\text{NDF}$ : 108.2/64

reg\_asym\_sam\_15\_26\_dd\_rms vs Slug, Sign Corrected



Right In: 100.697 $\pm$ 0.033  $\chi^2$ /NDF: 53137.2/6

Left Out: 53.984 $\pm$ 0.009  $\chi^2$ /NDF: 458972.1/24

Right Out: 104.098 $\pm$ 0.030  $\chi^2$ /NDF: 297068.3/9

Left In: 54.028 $\pm$ 0.009  $\chi^2$ /NDF: 443819.5/22

Left: 54.005 $\pm$ 0.006  $\chi^2$ /NDF: 902803.3/47

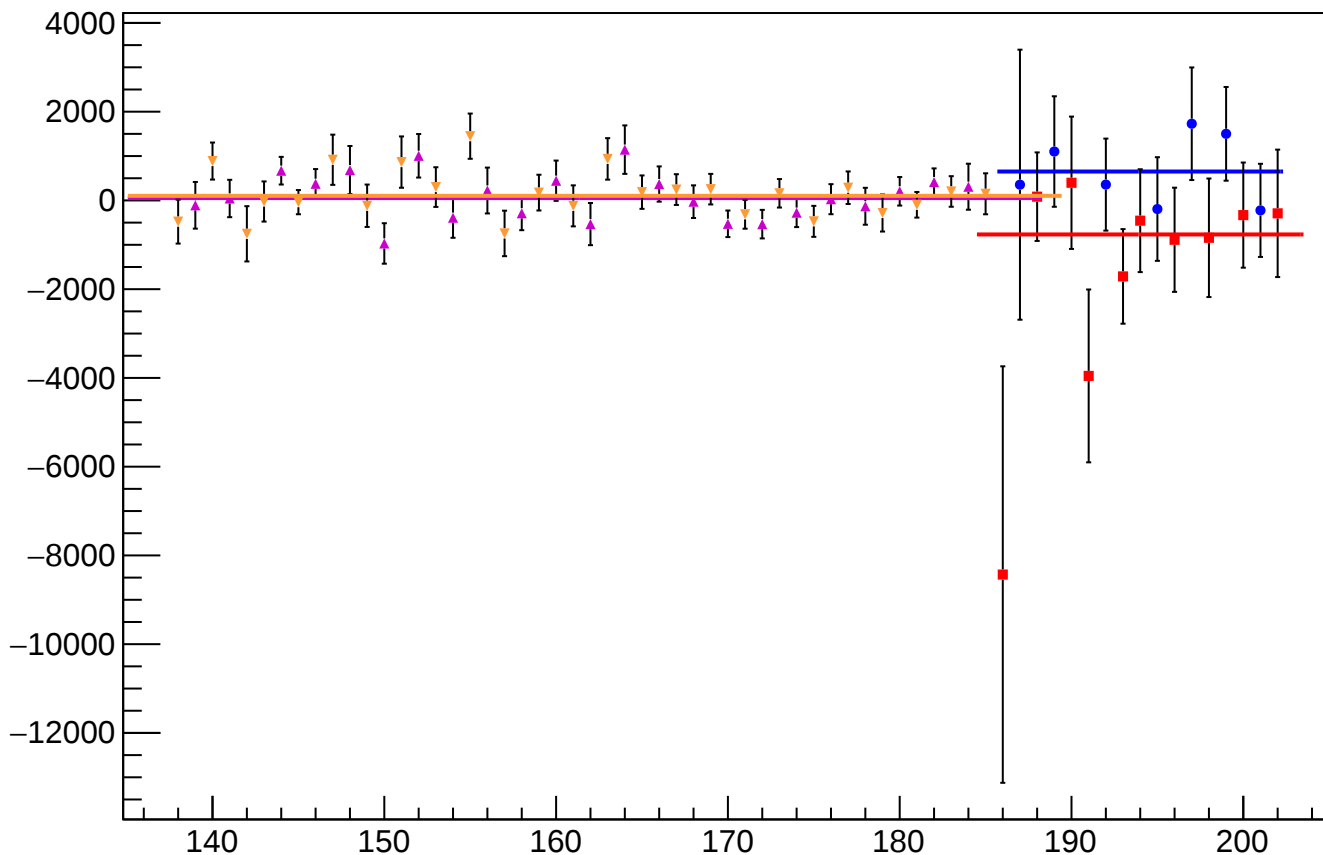
Right: 102.584 $\pm$ 0.022  $\chi^2$ /NDF: 356046.0/16

In: 57.376 $\pm$ 0.009  $\chi^2$ /NDF: 2338119.1/29

Out: 58.158 $\pm$ 0.009  $\chi^2$ /NDF: 3368215.8/34

All: 57.781 $\pm$ 0.006  $\chi^2$ /NDF: 5710352.3/64

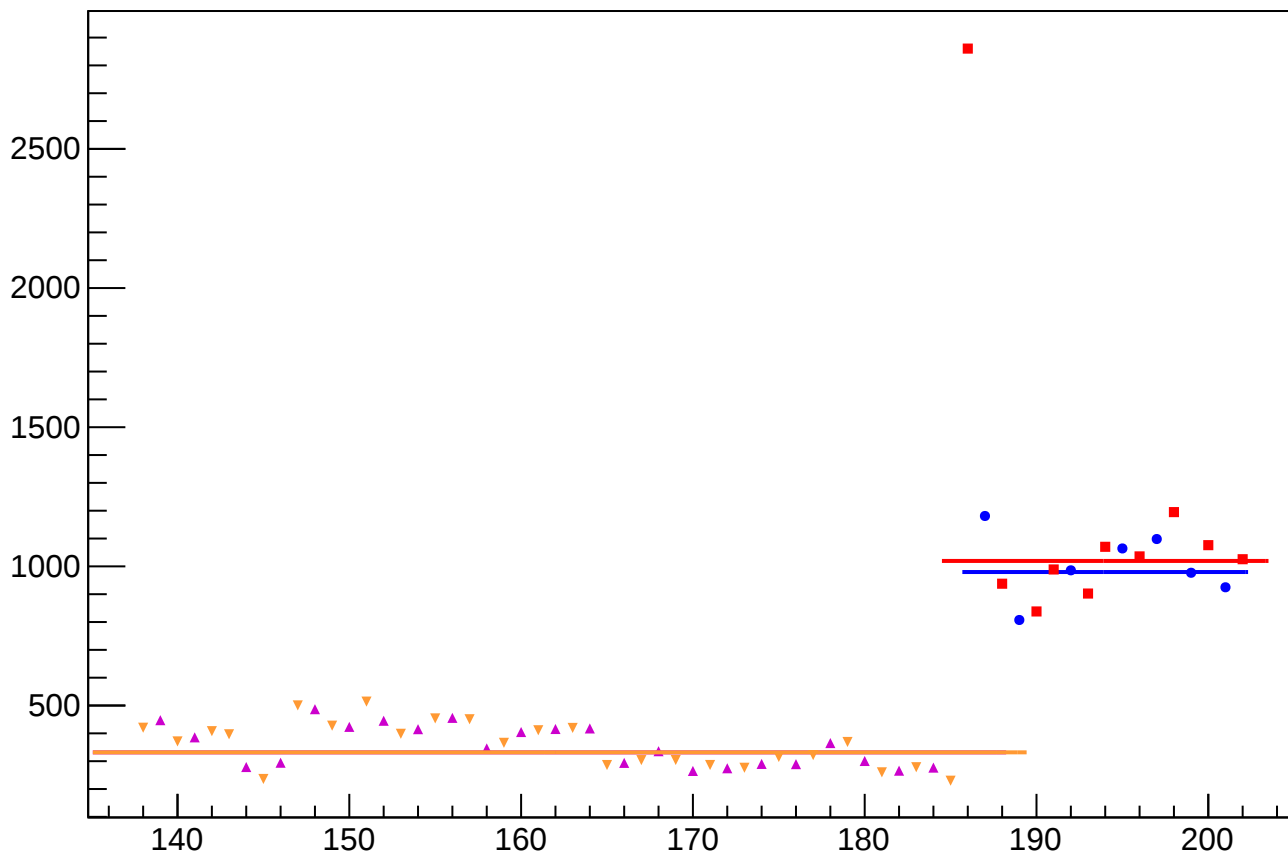
asym\_sam\_15\_26\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: 651.616+/-454.413  $\chi^2/\text{NDF}$ : 2.8/6  
 Left Out: 103.768+/-79.344  $\chi^2/\text{NDF}$ :31.0/24  
 Right Out: -766.411+/-412.673  $\chi^2/\text{NDF}$ : 7.8/9  
 Left In: 53.493+/-81.201  $\chi^2/\text{NDF}$ :34.1/22

Left: 79.212+/-56.750  $\chi^2/\text{NDF}$ : 65.3/47  
 Right: -125.501+/-305.497  $\chi^2/\text{NDF}$ : 15.9/16  
 In: 72.001+/-79.935  $\chi^2/\text{NDF}$ :38.6/29  
 Out: 72.746+/-77.917  $\chi^2/\text{NDF}$ :43.1/34  
 All: 72.383+/-55.795  $\chi^2/\text{NDF}$ : 81.6/64

asym\_sam\_15\_26\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 979.658 $\pm$ 0.321  $\chi^2/\text{NDF}$ : 80589.6/6

Left Out: 331.770 $\pm$ 0.056  $\chi^2/\text{NDF}$ : 1711721.9/24

Right Out: 1019.503 $\pm$ 0.292  $\chi^2/\text{NDF}$ : 418855.6/9

Left In: 331.666 $\pm$ 0.057  $\chi^2/\text{NDF}$ : 1303192.2/22

Left: 331.719 $\pm$ 0.040  $\chi^2/\text{NDF}$ : 3014915.7/47

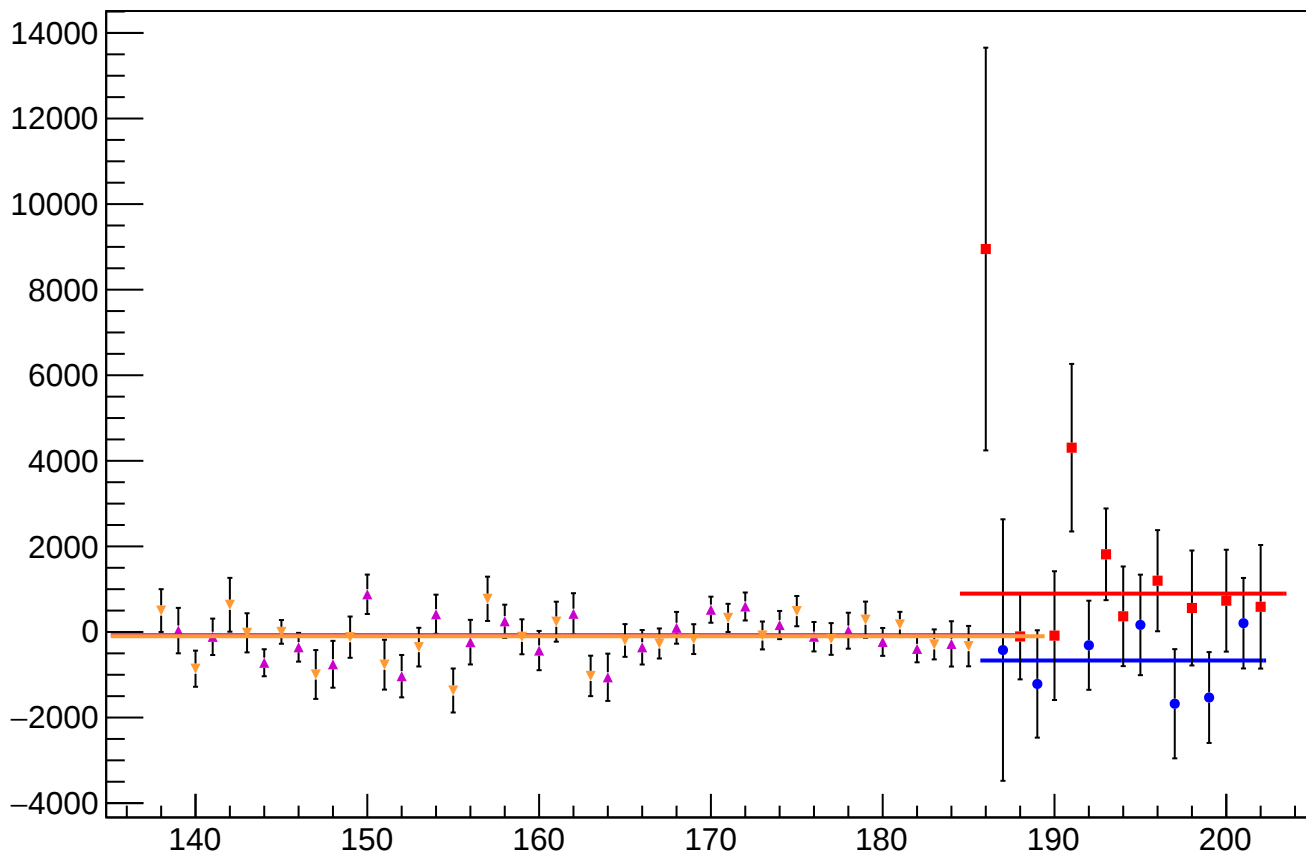
Right: 1001.494 $\pm$ 0.216  $\chi^2/\text{NDF}$ : 507872.5/16

In: 351.717 $\pm$ 0.057  $\chi^2/\text{NDF}$ : 5324880.7/29

Out: 356.288 $\pm$ 0.055  $\chi^2/\text{NDF}$ : 7487224.2/34

All: 354.061 $\pm$ 0.039  $\chi^2/\text{NDF}$ : 12815458.1/64

asym\_sam\_15\_26\_dd\_mean vs Slug, Sign Corrected



Right In: -666.529+/-457.117  $\chi^2/\text{NDF}$ : 2.8/6

Left Out: -99.785+/-80.428  $\chi^2/\text{NDF}$ :30.7/24

Right Out: 896.456+/-415.043  $\chi^2/\text{NDF}$ : 8.5/9

Left In: -75.579+/-82.319  $\chi^2/\text{NDF}$ :32.1/22

Left: -87.963+/-57.528  $\chi^2/\text{NDF}$ : 62.8/47

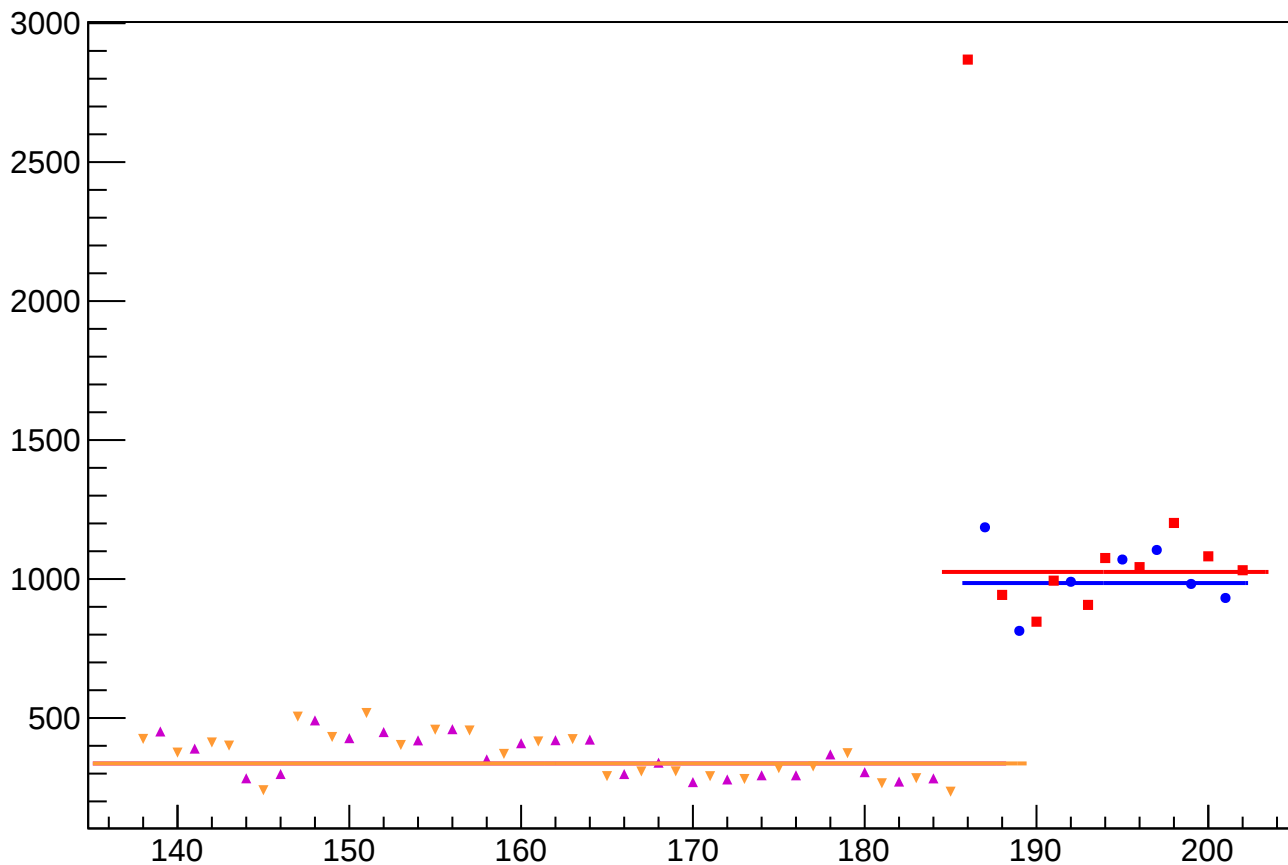
Right: 190.189+/-307.280  $\chi^2/\text{NDF}$ : 17.7/16

In: -94.142+/-81.015  $\chi^2/\text{NDF}$ :36.5/29

Out: -63.729+/-78.959  $\chi^2/\text{NDF}$ :44.7/34

All: -78.544+/-56.546  $\chi^2/\text{NDF}$ : 81.3/64

asym\_sam\_15\_26\_dd\_rms vs Slug, Sign Corrected



Right In: 985.556 $\pm$ 0.323  $\chi^2$ /NDF: 79214.4/6

Left Out: 336.557 $\pm$ 0.057  $\chi^2$ /NDF: 1665919.4/24

Right Out: 1025.520 $\pm$ 0.293  $\chi^2$ /NDF: 416749.8/9

Left In: 336.439 $\pm$ 0.058  $\chi^2$ /NDF: 1269066.3/22

Left: 336.500 $\pm$ 0.041  $\chi^2$ /NDF: 2934987.9/47

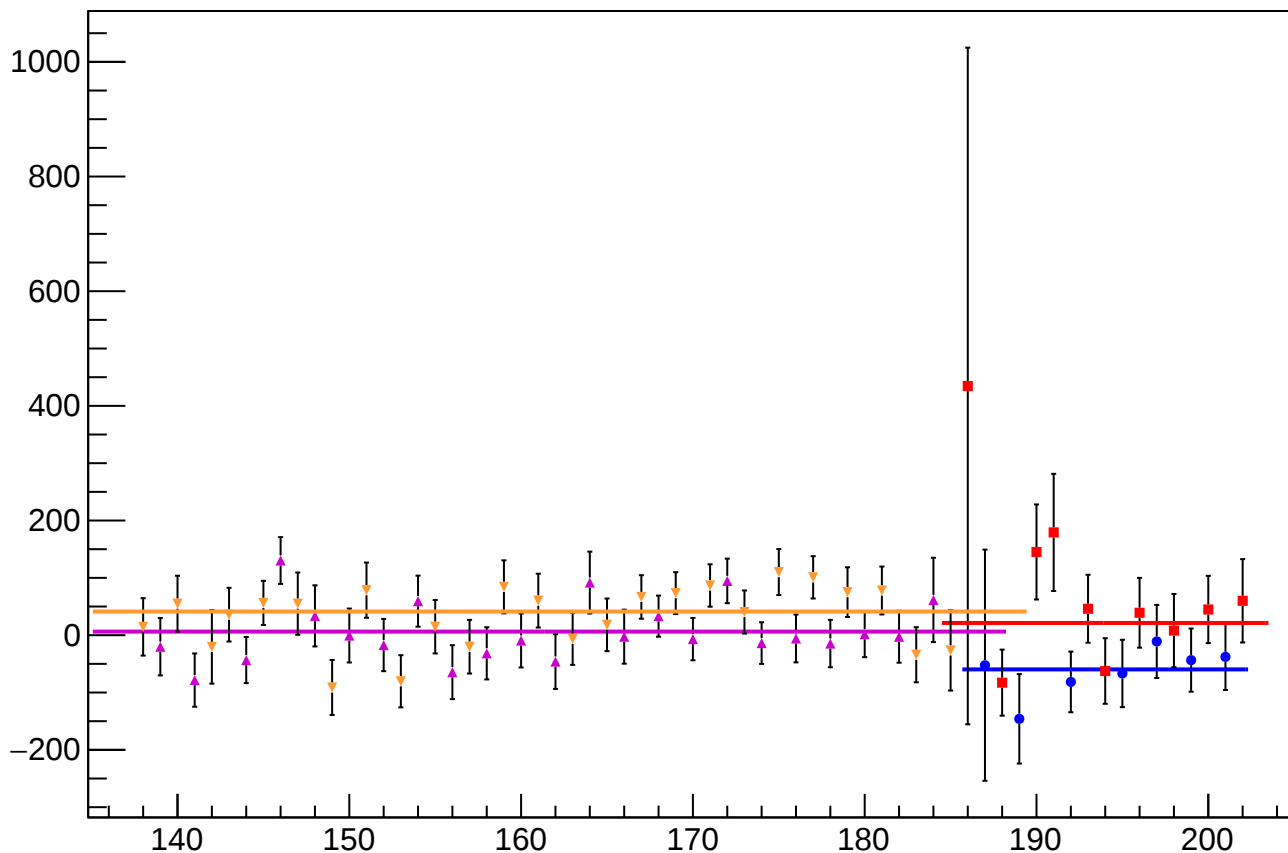
Right: 1007.461 $\pm$ 0.217  $\chi^2$ /NDF: 504343.6/16

In: 356.829 $\pm$ 0.057  $\chi^2$ /NDF: 5254530.9/29

Out: 361.493 $\pm$ 0.056  $\chi^2$ /NDF: 7394277.0/34

All: 359.221 $\pm$ 0.040  $\chi^2$ /NDF: 12652207.2/64

reg\_asym\_sam\_37\_26\_dd\_mean vs Slug, Sign Corrected



Right In:  $-59.668 \pm 24.175$   $\chi^2/\text{NDF}: 2.2/6$

Left Out:  $41.283 \pm 8.889$   $\chi^2/\text{NDF}: 34.4/24$

Right Out:  $21.350 \pm 21.666$   $\chi^2/\text{NDF}: 11.3/9$

Left In:  $6.254 \pm 9.175$   $\chi^2/\text{NDF}: 30.3/22$

Left:  $24.322 \pm 6.384$   $\chi^2/\text{NDF}: 72.2/47$

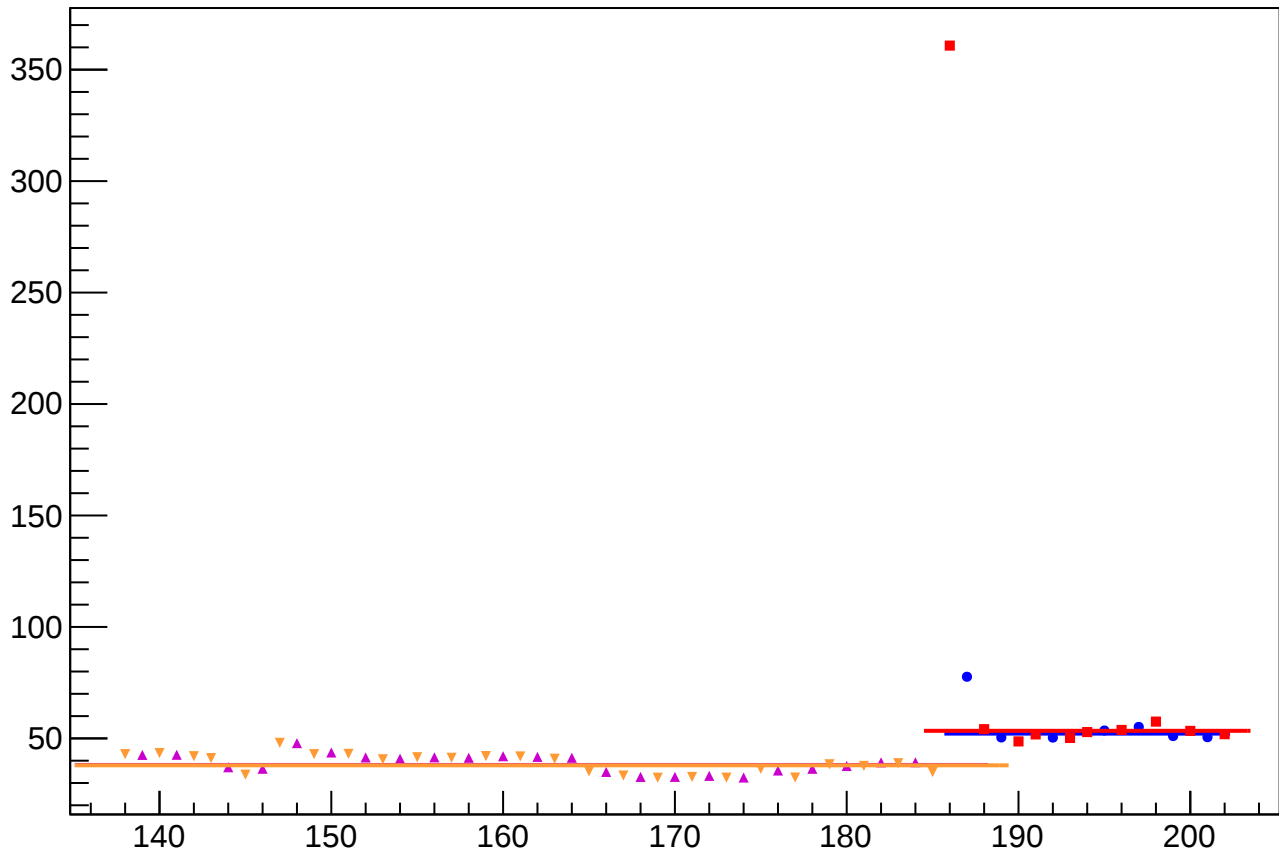
Right:  $-14.737 \pm 16.135$   $\chi^2/\text{NDF}: 19.7/16$

In:  $-2.045 \pm 8.578$   $\chi^2/\text{NDF}: 39.0/29$

Out:  $38.411 \pm 8.224$   $\chi^2/\text{NDF}: 46.4/34$

All:  $19.034 \pm 5.936$   $\chi^2/\text{NDF}: 97.0/64$

reg\_asym\_sam\_37\_26\_dd\_rms vs Slug, Sign Corrected



Right In: 52.158+/-0.017  $\chi^2/\text{NDF}$ : 43169.4/6

Left Out: 37.925+/-0.006  $\chi^2/\text{NDF}$ : 487085.3/24

Right Out: 53.405+/-0.015  $\chi^2/\text{NDF}$ : 565395.3/9

Left In: 38.087+/-0.006  $\chi^2/\text{NDF}$ : 396334.5/22

Left: 38.004+/-0.005  $\chi^2/\text{NDF}$ : 883742.3/47

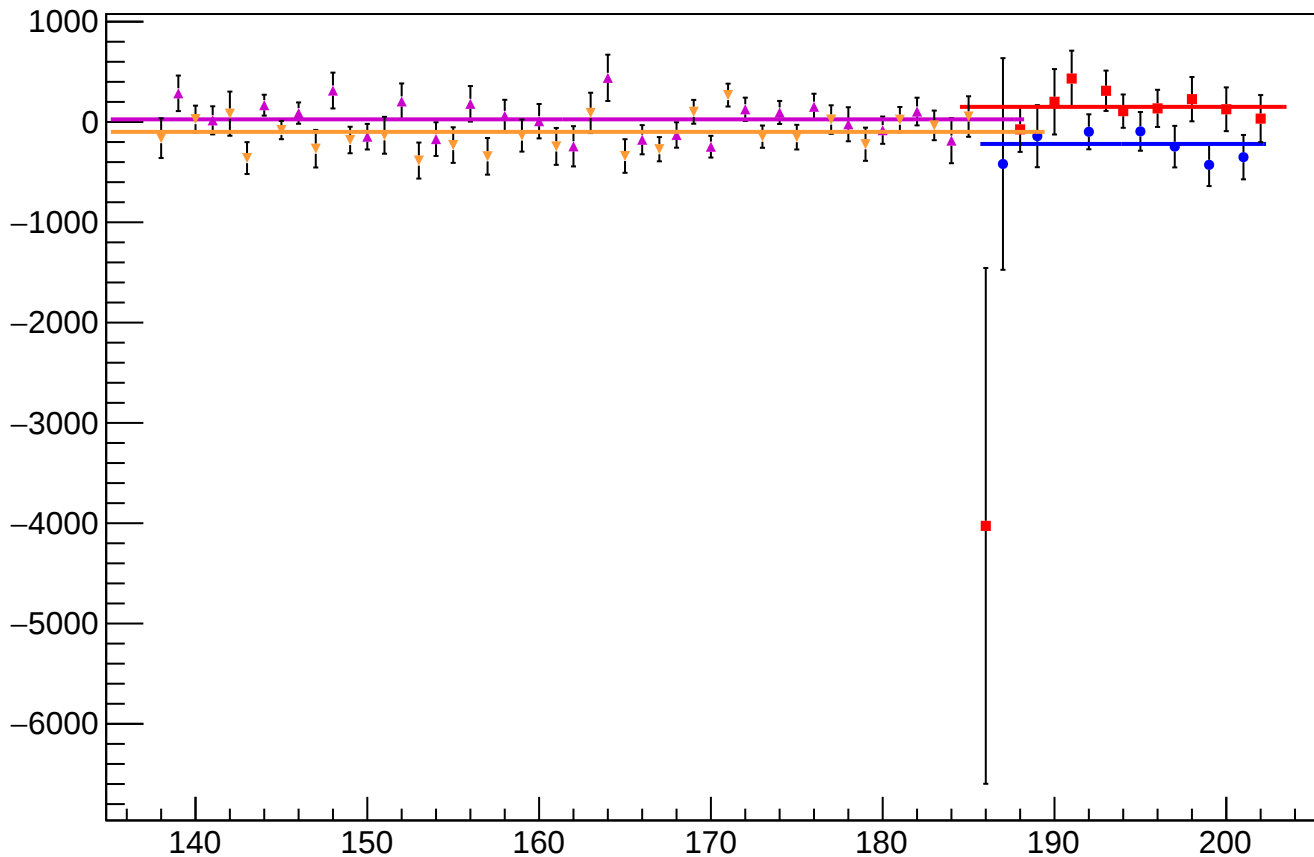
Right: 52.849+/-0.011  $\chi^2/\text{NDF}$ : 611516.2/16

In: 39.859+/-0.006  $\chi^2/\text{NDF}$ : 1031690.4/29

Out: 40.155+/-0.006  $\chi^2/\text{NDF}$ : 1926321.3/34

All: 40.013+/-0.004  $\chi^2/\text{NDF}$ : 2959259.2/64

asym\_sam\_37\_26\_dd\_correction\_mean vs Slug, Sign Corrected



Right In:  $-218.921 \pm 85.361$   $\chi^2/\text{NDF}$ : 2.3/6

Left Out:  $-98.741 \pm 29.095$   $\chi^2/\text{NDF}$ : 32.7/24

Right Out:  $150.662 \pm 72.148$   $\chi^2/\text{NDF}$ : 5.8/9

Left In:  $26.223 \pm 29.676$   $\chi^2/\text{NDF}$ : 30.7/22

Left:  $-37.493 \pm 20.776$   $\chi^2/\text{NDF}$ : 72.5/47

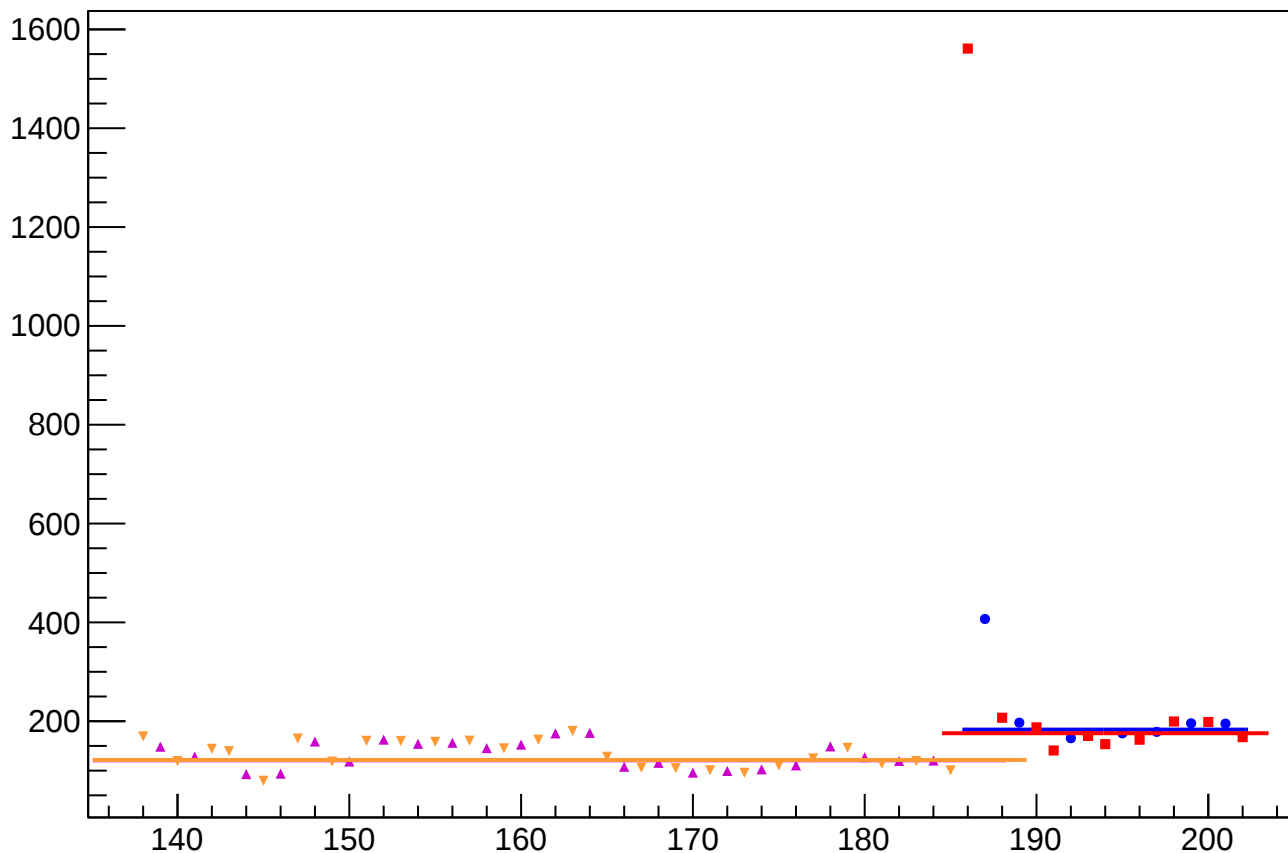
Right:  $-3.341 \pm 55.102$   $\chi^2/\text{NDF}$ : 19.1/16

In:  $-0.210 \pm 28.030$   $\chi^2/\text{NDF}$ : 40.4/29

Out:  $-63.854 \pm 26.984$   $\chi^2/\text{NDF}$ : 48.8/34

All:  $-33.242 \pm 19.440$   $\chi^2/\text{NDF}$ : 91.9/64

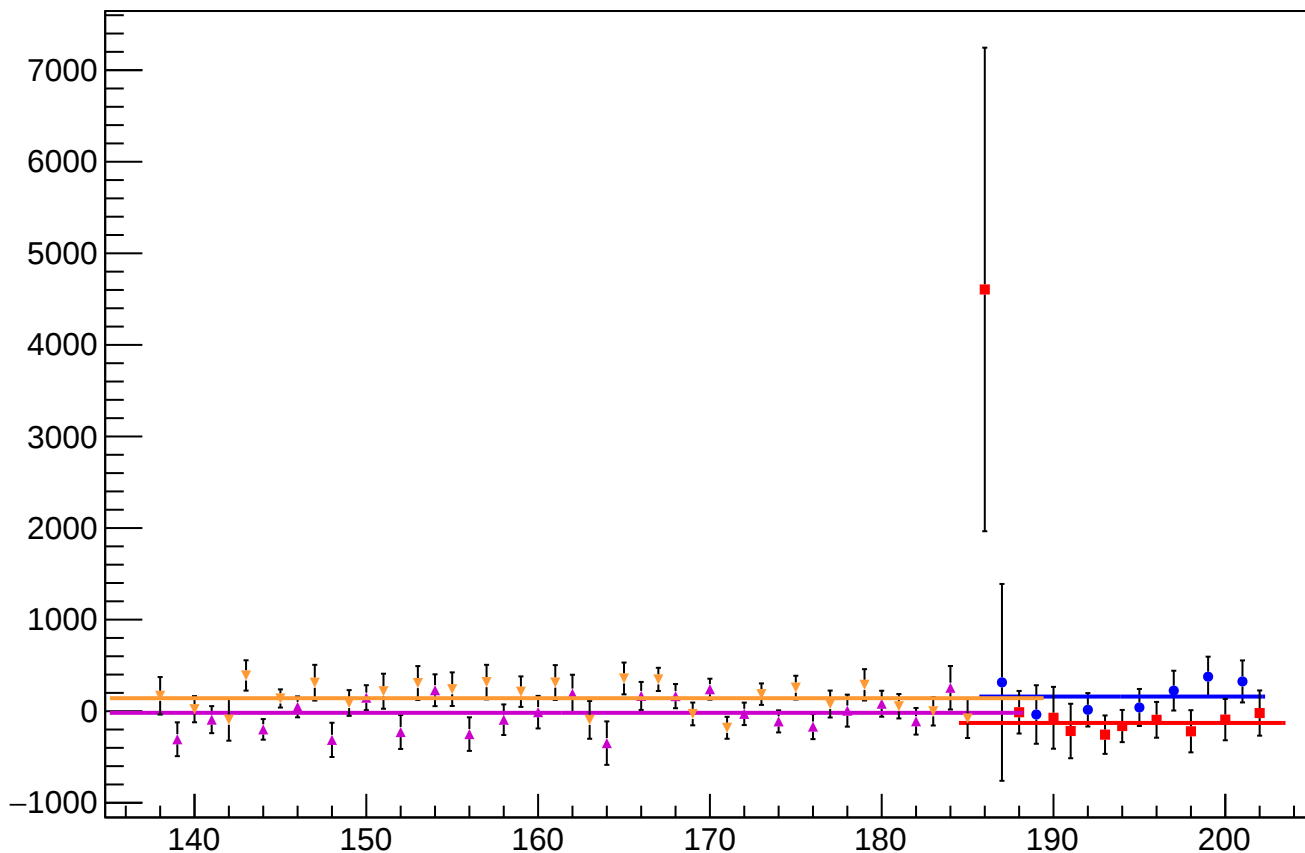
asym\_sam\_37\_26\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 183.015 $\pm$ 0.060  $\chi^2$ /NDF: 131485.3/6  
 Left Out: 121.592 $\pm$ 0.021  $\chi^2$ /NDF:1711423.9/24  
 Right Out: 175.661 $\pm$ 0.051  $\chi^2$ /NDF: 747849.5/9  
 Left In: 120.927 $\pm$ 0.021  $\chi^2$ /NDF:1382861.4/22

Left: 121.266 $\pm$ 0.015  $\chi^2$ /NDF: 3094797.5/47  
 Right: 178.726 $\pm$ 0.039  $\chi^2$ /NDF: 887993.8/16  
 In: 127.622 $\pm$ 0.020  $\chi^2$ /NDF:2458366.0/29  
 Out: 129.155 $\pm$ 0.019  $\chi^2$ /NDF:3425429.0/34  
 All: 128.418 $\pm$ 0.014  $\chi^2$ /NDF: 5886902.3/64

asym\_sam\_37\_26\_dd\_mean vs Slug, Sign Corrected



Right In: 159.881 $\pm$ 88.947  $\chi^2$ /NDF: 3.0/6

Left Out: 142.014 $\pm$ 30.574  $\chi^2$ /NDF:26.9/24

Right Out: -128.145 $\pm$ 75.625  $\chi^2$ /NDF: 4.4/9

Left In: -17.679 $\pm$ 31.209  $\chi^2$ /NDF:30.1/22

Left: 63.807 $\pm$ 21.840  $\chi^2$ /NDF: 70.4/47

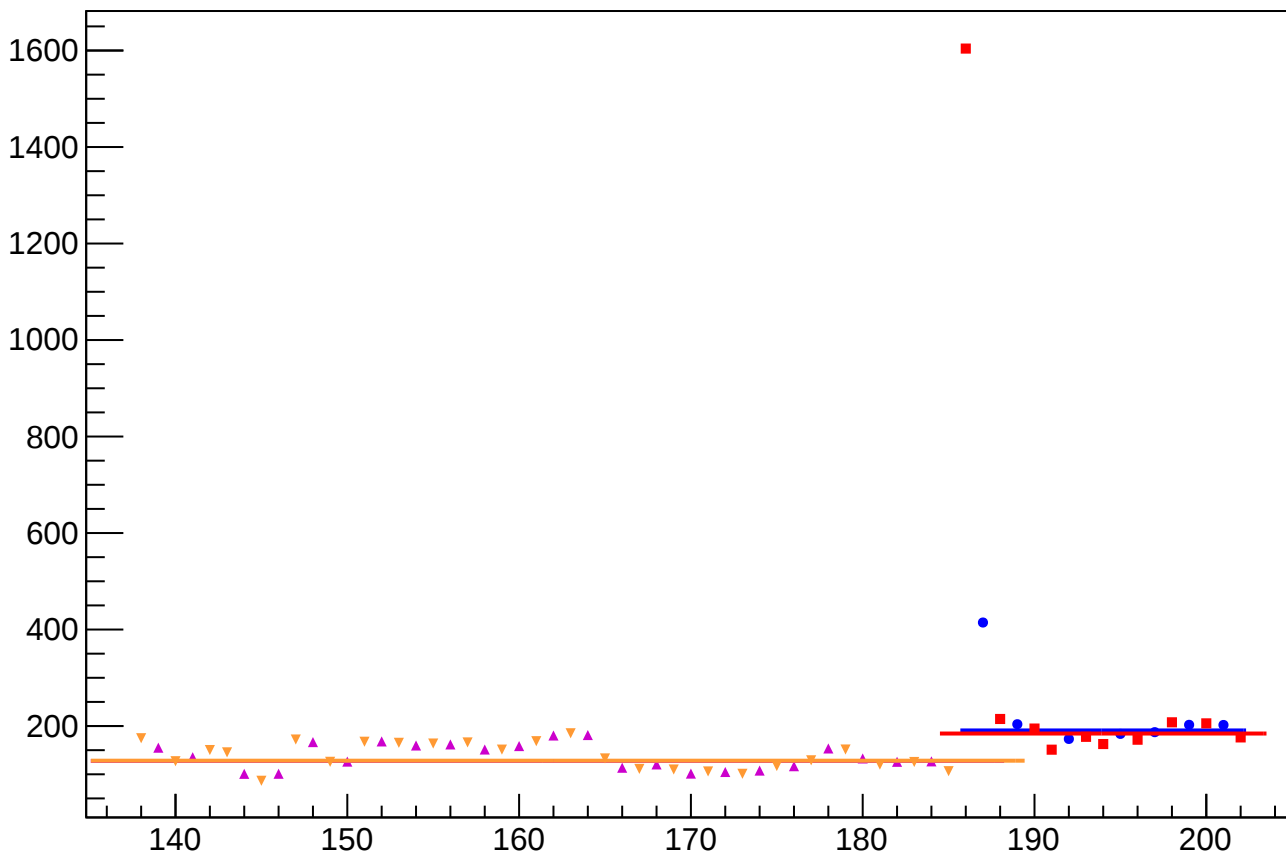
Right: -7.295 $\pm$ 57.615  $\chi^2$ /NDF: 13.4/16

In: 1.784 $\pm$ 29.449  $\chi^2$ /NDF:36.7/29

Out: 104.061 $\pm$ 28.345  $\chi^2$ /NDF:42.2/34

All: 54.874 $\pm$ 20.422  $\chi^2$ /NDF: 85.2/64

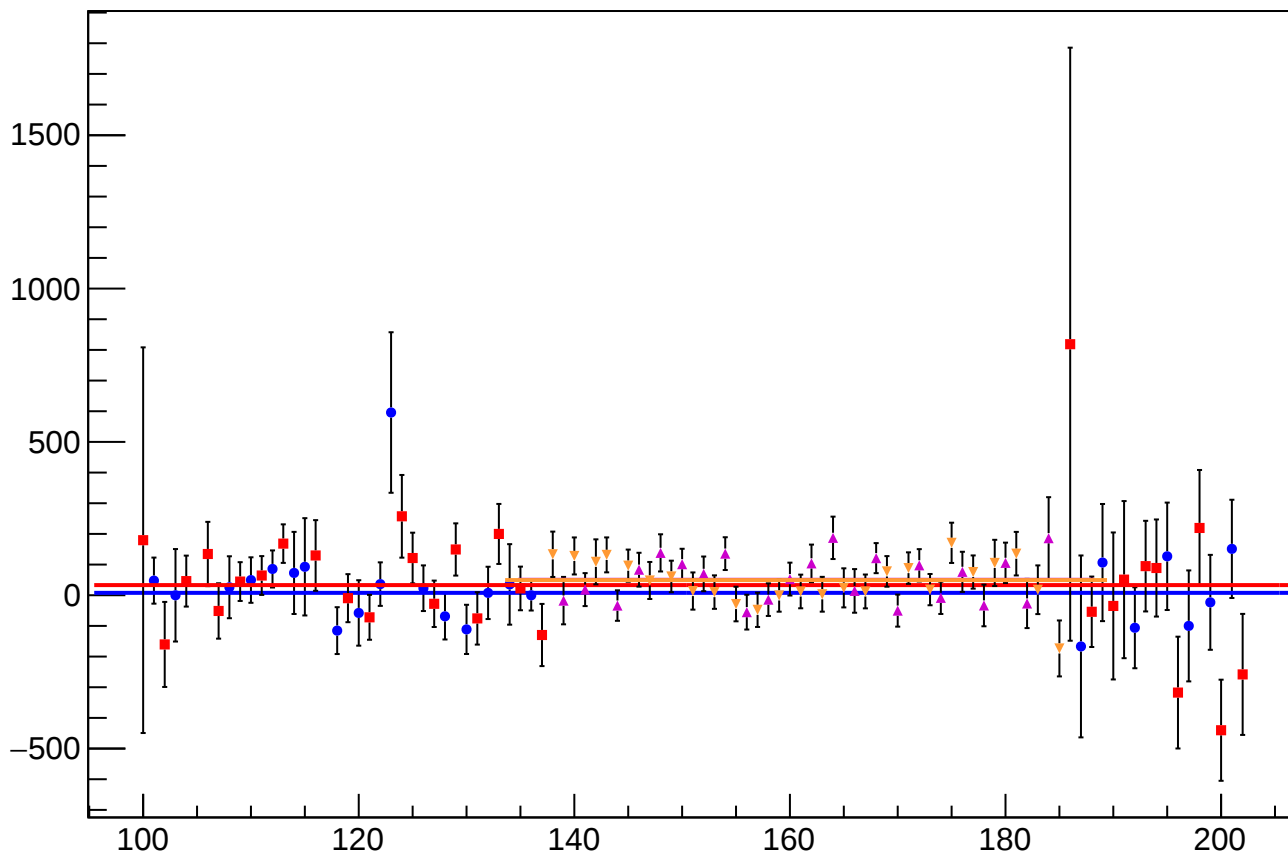
asym\_sam\_37\_26\_dd\_rms vs Slug, Sign Corrected



Right In: 190.865 $\pm$ 0.063  $\chi^2$ /NDF: 122085.3/6  
 Left Out: 128.175 $\pm$ 0.022  $\chi^2$ /NDF:1532922.0/24  
 Right Out: 184.475 $\pm$ 0.053  $\chi^2$ /NDF: 720339.2/9  
 Left In: 127.544 $\pm$ 0.022  $\chi^2$ /NDF:1235705.3/22

Left: 127.866 $\pm$ 0.015  $\chi^2$ /NDF: 2769045.1/47  
 Right: 187.156 $\pm$ 0.041  $\chi^2$ /NDF: 848415.7/16  
 In: 134.485 $\pm$ 0.021  $\chi^2$ /NDF:2260291.3/29  
 Out: 136.084 $\pm$ 0.020  $\chi^2$ /NDF:3205986.2/34  
 All: 135.315 $\pm$ 0.014  $\chi^2$ /NDF: 5469341.6/64

reg\_asym\_sam\_1357\_avg\_mean vs Slug, Sign Corrected



Right In: 7.799 $\pm$ 19.265  $\chi^2$ /NDF: 17.4/23

Left Out: 49.402 $\pm$ 11.806  $\chi^2$ /NDF: 28.1/24

Right Out: 33.080 $\pm$ 18.391  $\chi^2$ /NDF: 42.1/28

Left In: 50.331 $\pm$ 12.253  $\chi^2$ /NDF: 32.2/22

Left: 49.849 $\pm$ 8.502  $\chi^2$ /NDF: 60.3/47

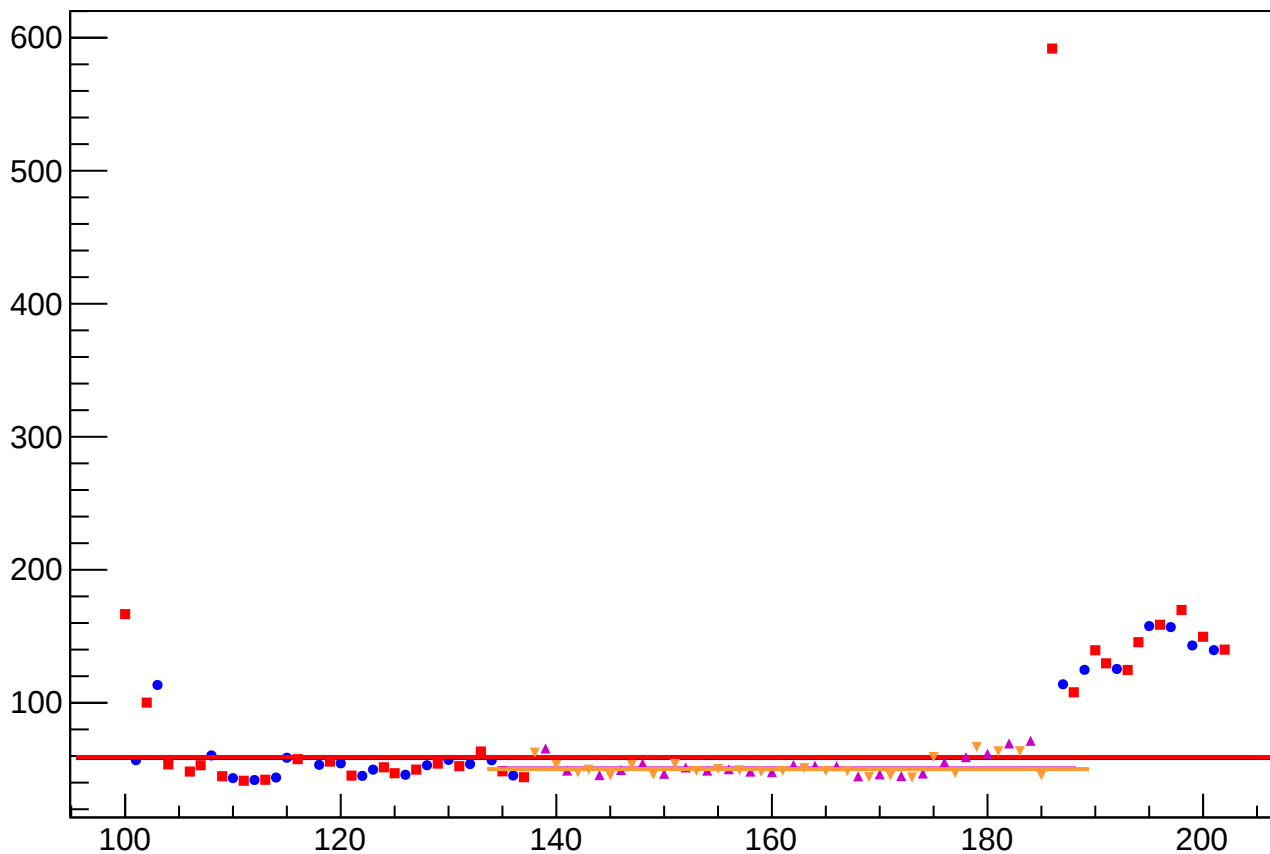
Right: 21.027 $\pm$ 13.303  $\chi^2$ /NDF: 60.3/52

In: 38.081 $\pm$ 10.339  $\chi^2$ /NDF: 53.0/46

Out: 44.639 $\pm$ 9.935  $\chi^2$ /NDF: 70.7/53

All: 41.491 $\pm$ 7.164  $\chi^2$ /NDF: 123.9/100

reg\_asym\_sam\_1357\_avg\_rms vs Slug, Sign Corrected



Right In: 58.473 $\pm$ 0.014  $\chi^2$ /NDF: 3993248.9/23

Left Out: 50.189 $\pm$ 0.008  $\chi^2$ /NDF: 467679.2/24

Right Out: 59.306 $\pm$ 0.013  $\chi^2$ /NDF: 5498307.7/28

Left In: 50.683 $\pm$ 0.009  $\chi^2$ /NDF: 469292.3/22

Left: 50.427 $\pm$ 0.006  $\chi^2$ /NDF: 938655.0/47

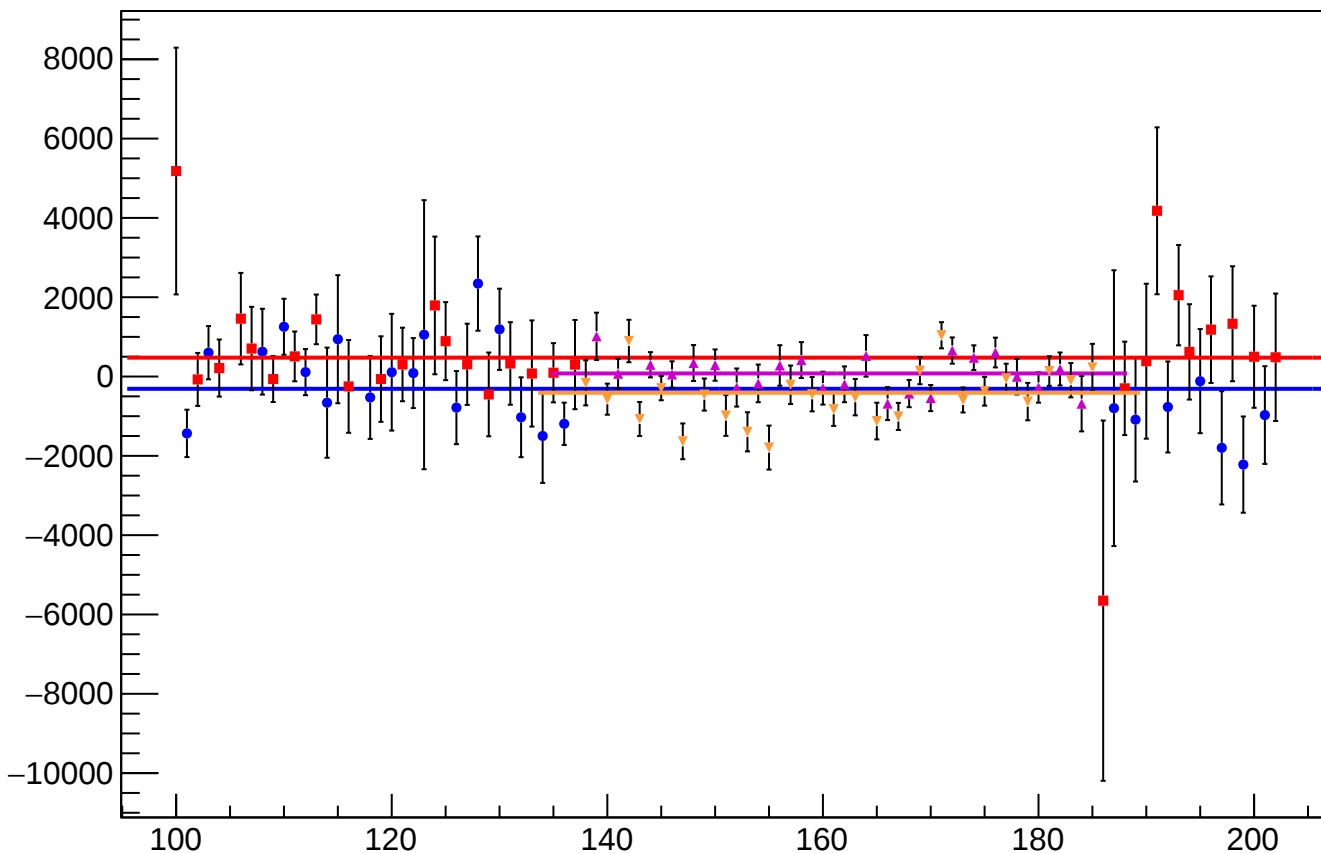
Right: 58.909 $\pm$ 0.009  $\chi^2$ /NDF: 9493513.4/52

In: 52.927 $\pm$ 0.007  $\chi^2$ /NDF: 4695350.5/46

Out: 52.850 $\pm$ 0.007  $\chi^2$ /NDF: 6314043.4/53

All: 52.887 $\pm$ 0.005  $\chi^2$ /NDF: 11009451.3/100

asym\_sam\_1357\_avg\_correction\_mean vs Slug, Sign Corrected



Right In:  $-309.192 \pm 195.393$   $\chi^2/\text{NDF}: 28.7/23$

Left Out:  $-409.164 \pm 82.348$   $\chi^2/\text{NDF}: 61.7/24$

Right Out:  $475.975 \pm 186.946$   $\chi^2/\text{NDF}: 17.3/28$

Left In:  $77.872 \pm 84.072$   $\chi^2/\text{NDF}: 24.8/22$

Left:  $-170.691 \pm 58.829$   $\chi^2/\text{NDF}: 103.6/47$

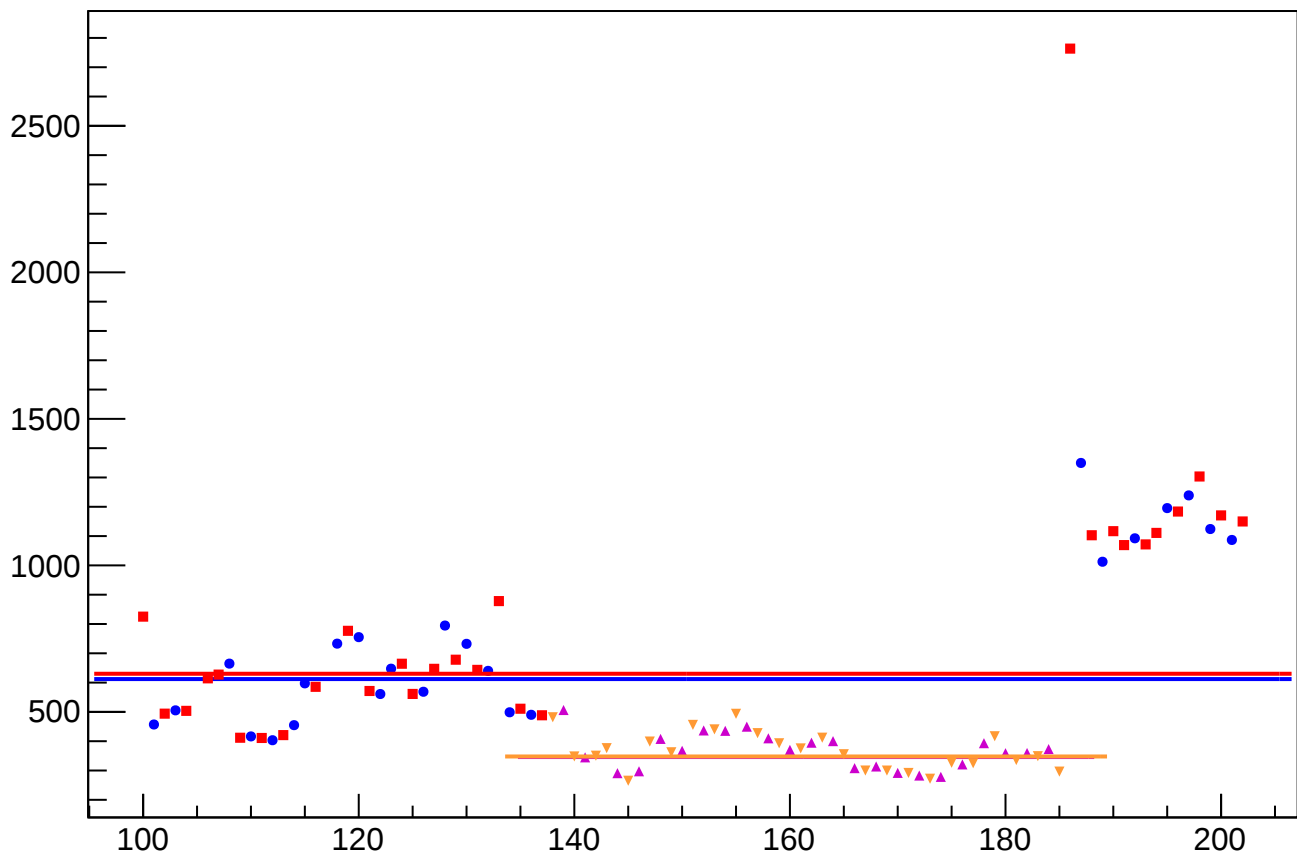
Right:  $100.730 \pm 135.078$   $\chi^2/\text{NDF}: 54.3/52$

In:  $17.407 \pm 77.227$   $\chi^2/\text{NDF}: 56.8/46$

Out:  $-265.326 \pm 75.361$   $\chi^2/\text{NDF}: 97.7/53$

All:  $-127.417 \pm 53.936$   $\chi^2/\text{NDF}: 161.4/100$

asym\_sam\_1357\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 612.044+/-0.138  $\chi^2/\text{NDF}$ : 2888176.7/23

Left Out: 347.875+/-0.058  $\chi^2/\text{NDF}$ :1044096.7/24

Right Out: 630.190+/-0.132  $\chi^2/\text{NDF}$ : 3988347.6/28

Left In: 345.954+/-0.059  $\chi^2/\text{NDF}$ :900847.0/22

Left: 346.935+/-0.042  $\chi^2/\text{NDF}$ : 1945476.7/47

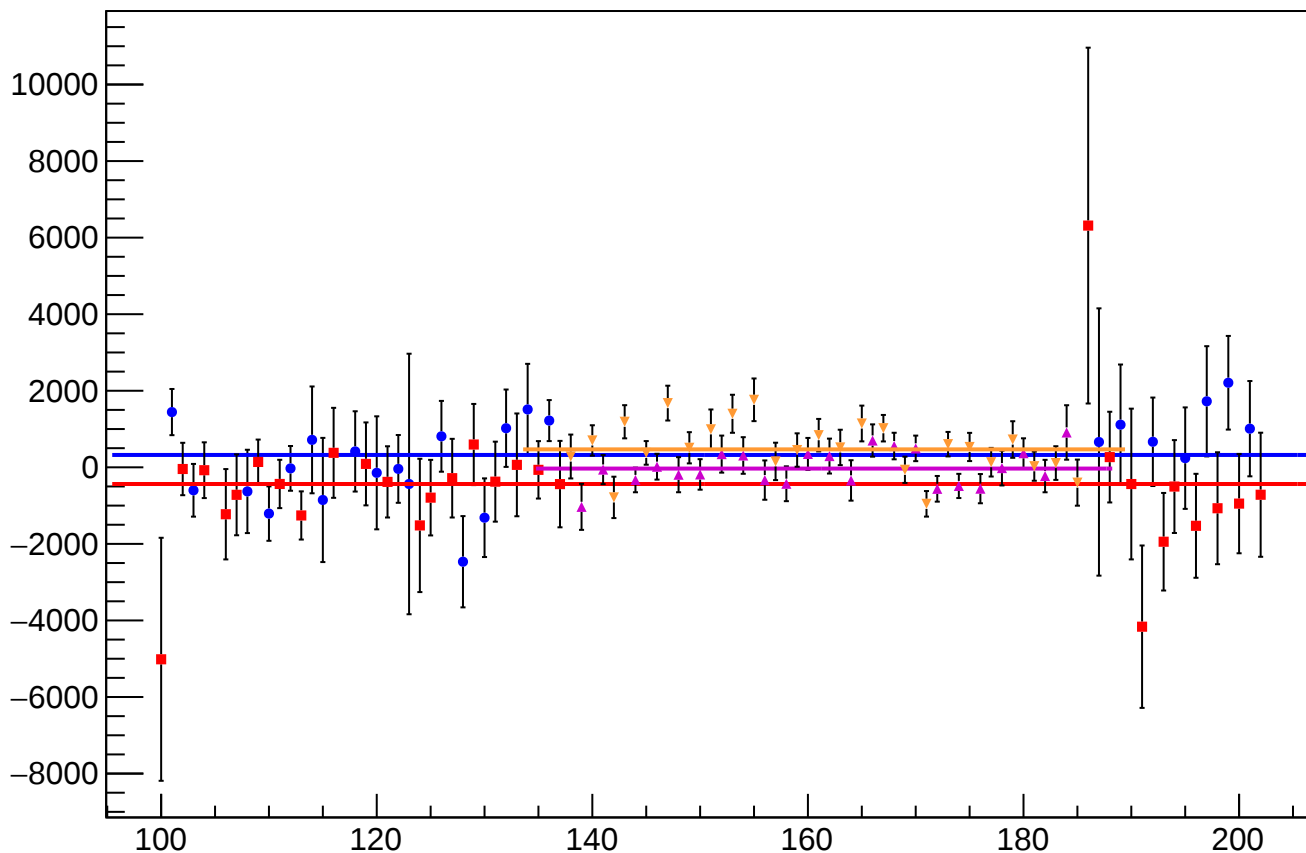
Right: 621.518+/-0.096  $\chi^2/\text{NDF}$ : 6885529.8/52

In: 387.521+/-0.055  $\chi^2/\text{NDF}$ :6918712.6/46

Out: 393.752+/-0.053  $\chi^2/\text{NDF}$ :8852314.4/53

All: 390.713+/-0.038  $\chi^2/\text{NDF}$ : 15777696.2/100

asym\_sam\_1357\_avg\_mean vs Slug, Sign Corrected



Right In: 323.140 $\pm$ 196.805  $\chi^2$ /NDF: 28.5/23

Left Out: 468.863 $\pm$ 83.295  $\chi^2$ /NDF:57.5/24

Right Out: -435.830 $\pm$ 188.405  $\chi^2$ /NDF: 16.4/28

Left In: -32.801 $\pm$ 85.064  $\chi^2$ /NDF:25.7/22

Left: 223.299 $\pm$ 59.514  $\chi^2$ /NDF: 100.9/47

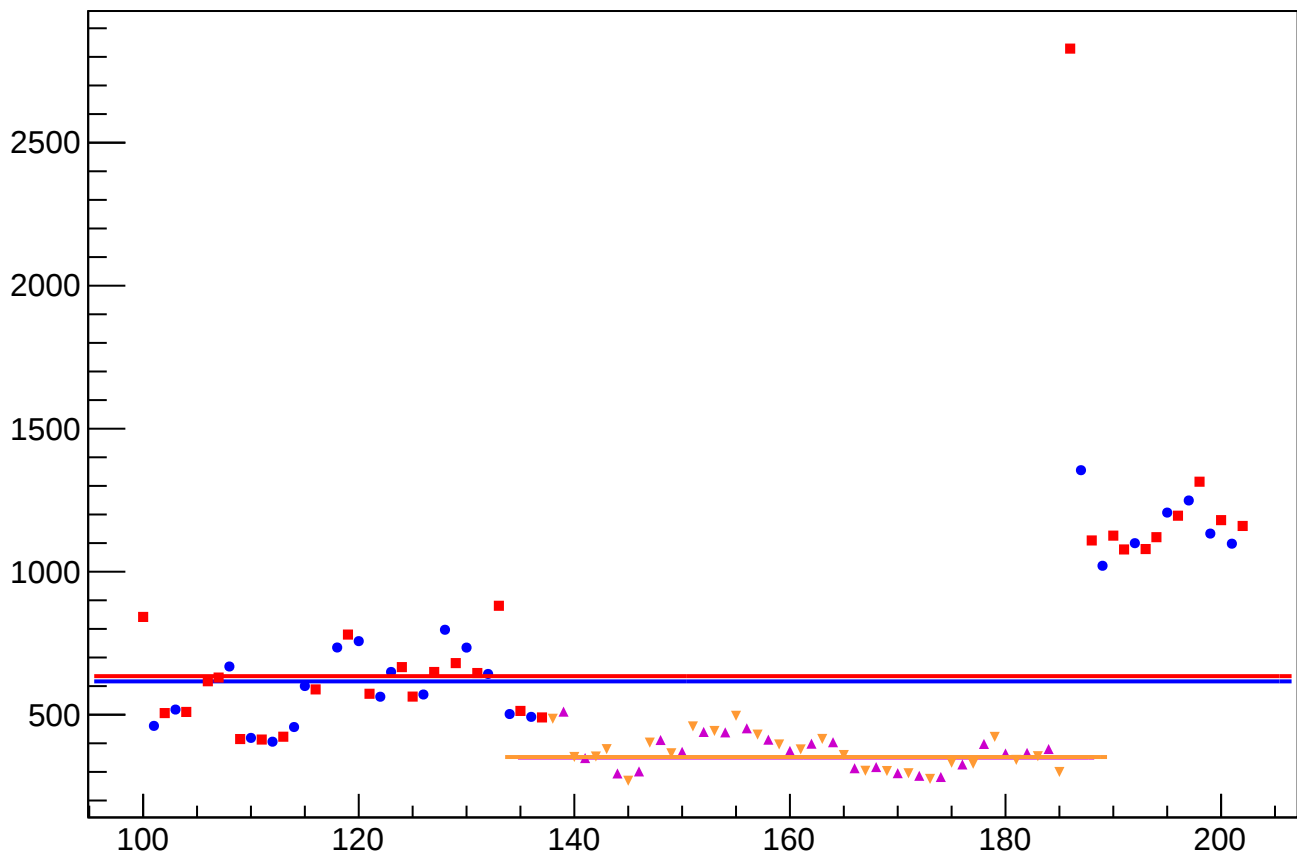
Right: -72.887 $\pm$ 136.095  $\chi^2$ /NDF: 52.7/52

In: 23.228 $\pm$ 78.082  $\chi^2$ /NDF:56.9/46

Out: 320.944 $\pm$ 76.182  $\chi^2$ /NDF:93.2/53

All: 175.752 $\pm$ 54.528  $\chi^2$ /NDF: 157.6/100

asym\_sam\_1357\_avg\_rms vs Slug, Sign Corrected



Right In: 616.528+/-0.139  $\chi^2/\text{NDF}$ : 2885268.3/23

Left Out: 352.015+/-0.059  $\chi^2/\text{NDF}$ : 1017195.6/24

Right Out: 634.810+/-0.133  $\chi^2/\text{NDF}$ : 3990669.4/28

Left In: 350.160+/-0.060  $\chi^2/\text{NDF}$ : 878380.0/22

Left: 351.107+/-0.042  $\chi^2/\text{NDF}$ : 1896060.8/47

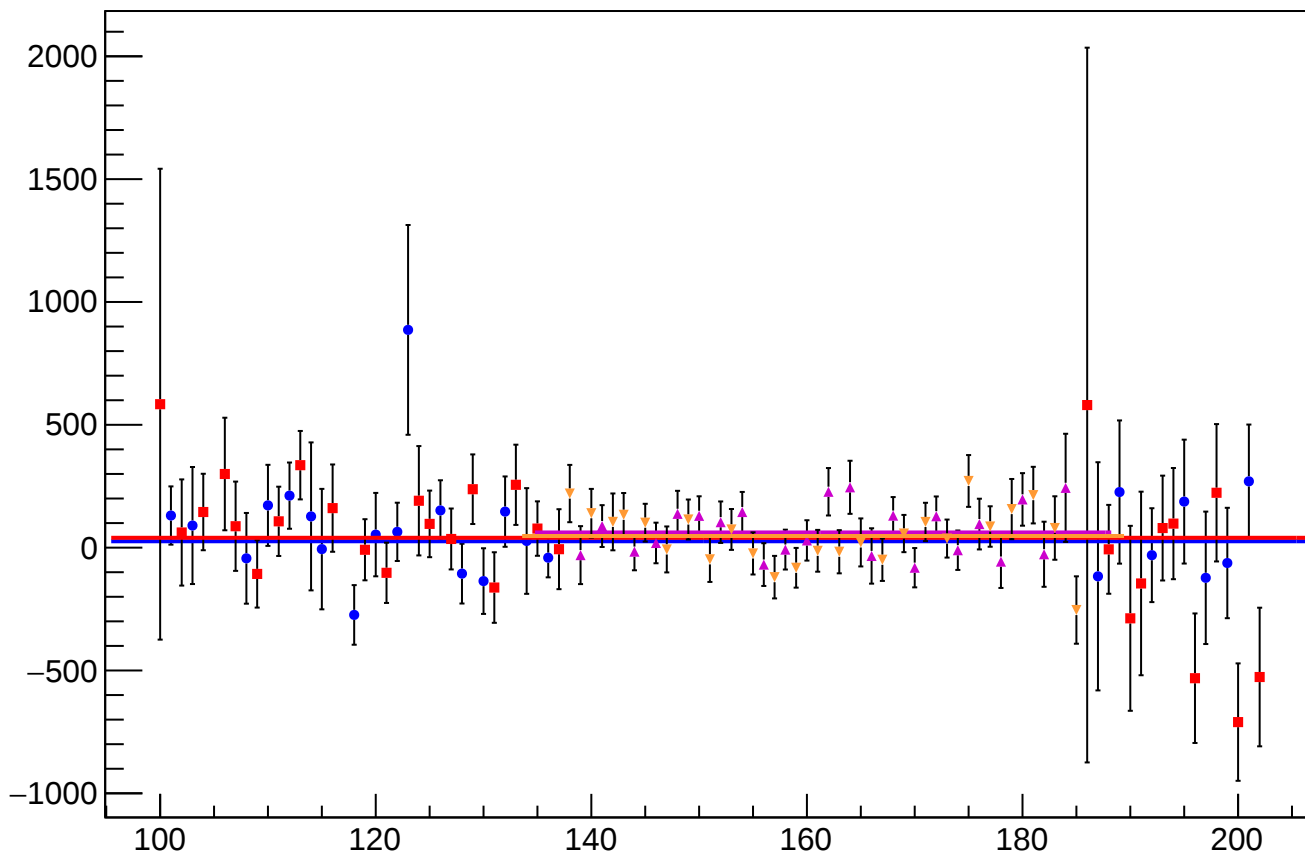
Right: 626.067+/-0.096  $\chi^2/\text{NDF}$ : 6884943.2/52

In: 392.089+/-0.055  $\chi^2/\text{NDF}$ : 6850646.9/46

Out: 398.252+/-0.054  $\chi^2/\text{NDF}$ : 8777099.7/53

All: 395.247+/-0.039  $\chi^2/\text{NDF}$ : 15634129.8/100

reg\_asym\_sam\_2468\_avg\_mean vs Slug, Sign Corrected



Right In: 25.978 $\pm$ 32.524  $\chi^2$ /NDF: 21.8/23

Left Out: 47.426 $\pm$ 18.253  $\chi^2$ /NDF:29.4/24

Right Out: 40.129 $\pm$ 32.112  $\chi^2$ /NDF: 36.8/28

Left In: 61.830 $\pm$ 18.958  $\chi^2$ /NDF:24.0/22

Left: 54.355 $\pm$ 13.149  $\chi^2$ /NDF: 53.7/47

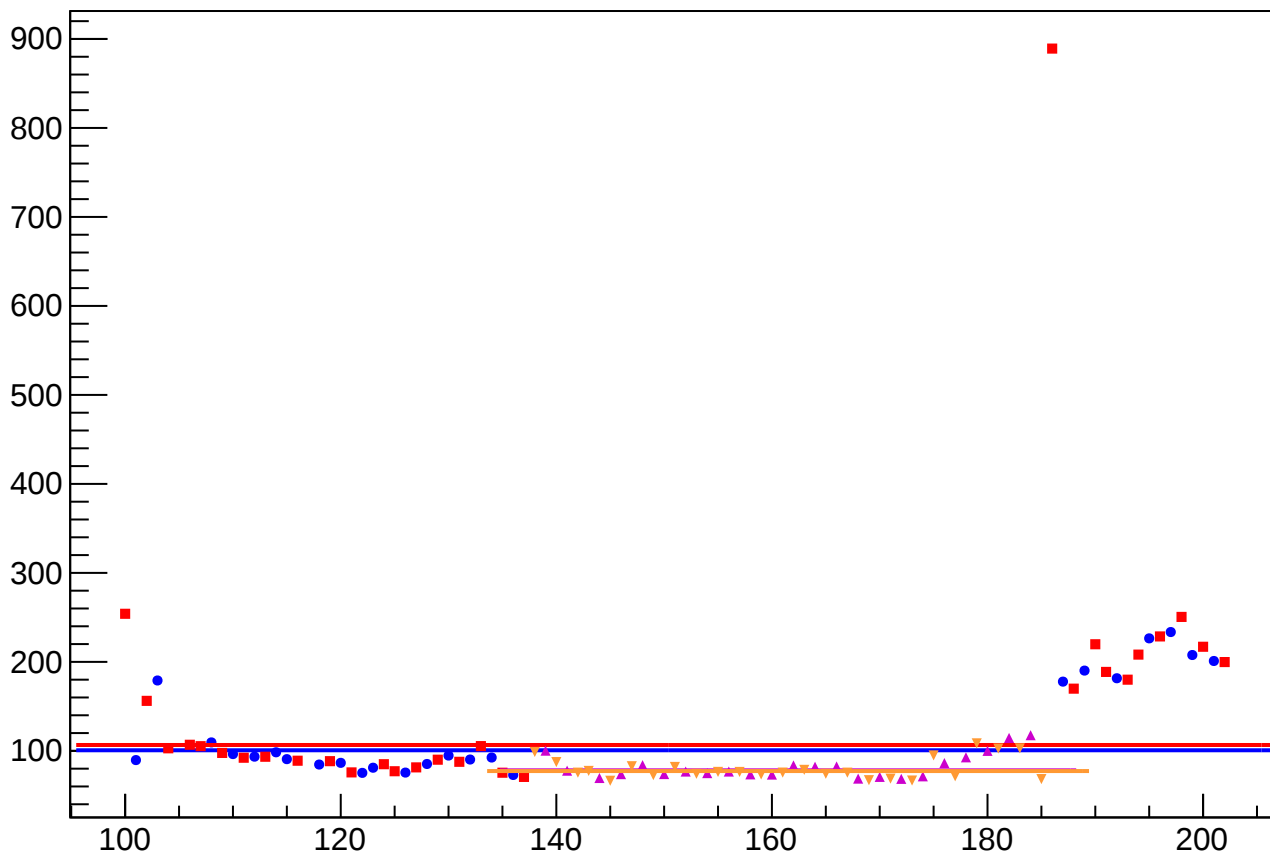
Right: 33.143 $\pm$ 22.851  $\chi^2$ /NDF: 58.8/52

In: 52.738 $\pm$ 16.378  $\chi^2$ /NDF:46.7/46

Out: 45.644 $\pm$ 15.868  $\chi^2$ /NDF:66.3/53

All: 49.079 $\pm$ 11.397  $\chi^2$ /NDF: 113.1/100

reg\_asym\_sam\_2468\_avg\_rms vs Slug, Sign Corrected



Right In: 100.670 $\pm$ 0.023  $\chi^2$ /NDF: 3185147.8/23

Left Out: 77.316 $\pm$ 0.013  $\chi^2$ /NDF: 635622.3/24

Right Out: 106.614 $\pm$ 0.023  $\chi^2$ /NDF: 4246900.8/28

Left In: 78.139 $\pm$ 0.013  $\chi^2$ /NDF: 582108.1/22

Left: 77.712 $\pm$ 0.009  $\chi^2$ /NDF: 1219684.1/47

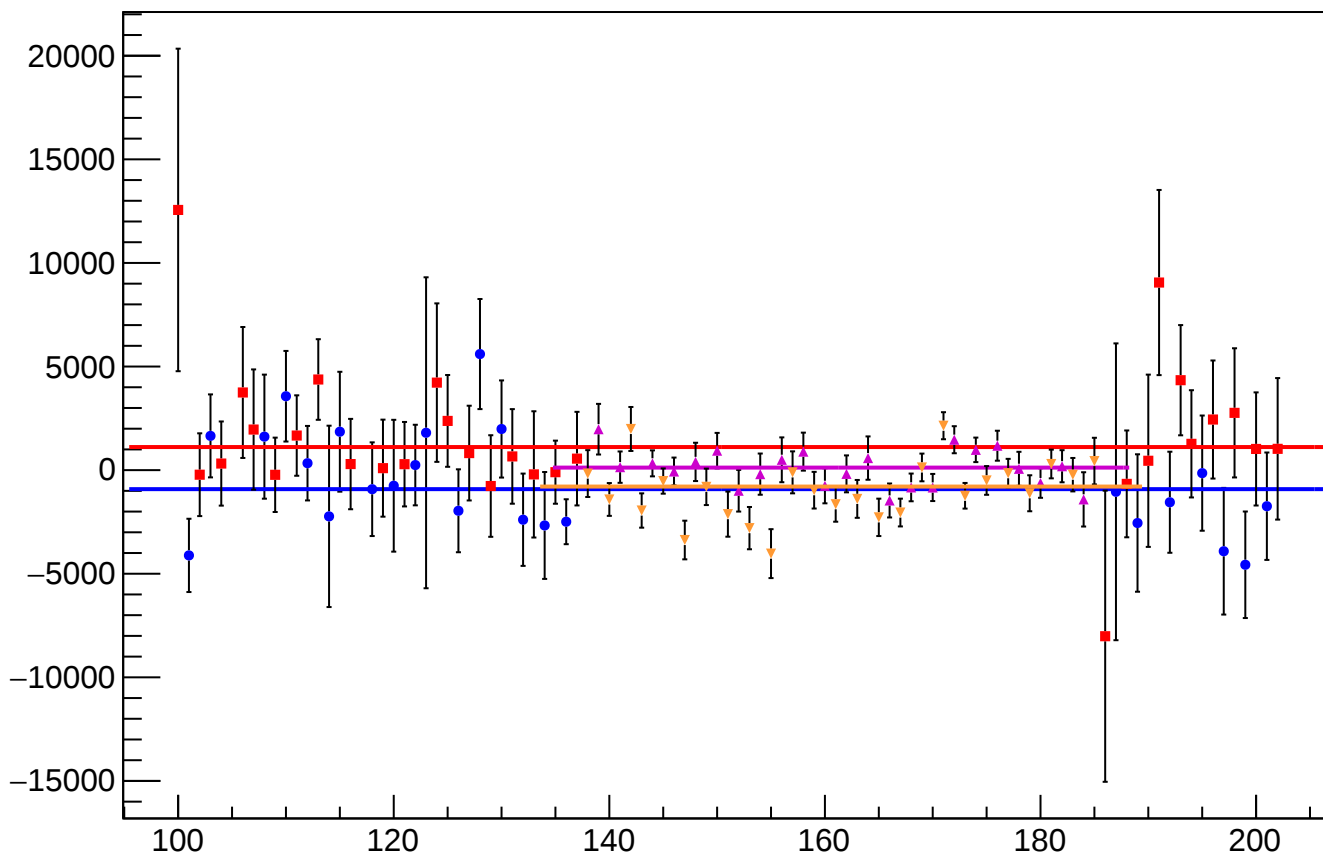
Right: 103.680 $\pm$ 0.016  $\chi^2$ /NDF: 7465869.0/52

In: 83.852 $\pm$ 0.012  $\chi^2$ /NDF: 4483675.6/46

Out: 84.470 $\pm$ 0.011  $\chi^2$ /NDF: 6140745.0/53

All: 84.171 $\pm$ 0.008  $\chi^2$ /NDF: 10625888.6/100

asym\_sam\_2468\_avg\_correction\_mean vs Slug, Sign Corrected



Right In: -917.336+/-469.386  $\chi^2/\text{NDF}$ : 26.1/23

Left Out: -792.776+/-162.659  $\chi^2/\text{NDF}$ :66.6/24

Right Out: 1114.199+/-457.654  $\chi^2/\text{NDF}$ : 17.3/28

Left In: 122.198+/-166.193  $\chi^2/\text{NDF}$ :25.9/22

Left: -345.122+/-116.247  $\chi^2/\text{NDF}$ : 108.0/47

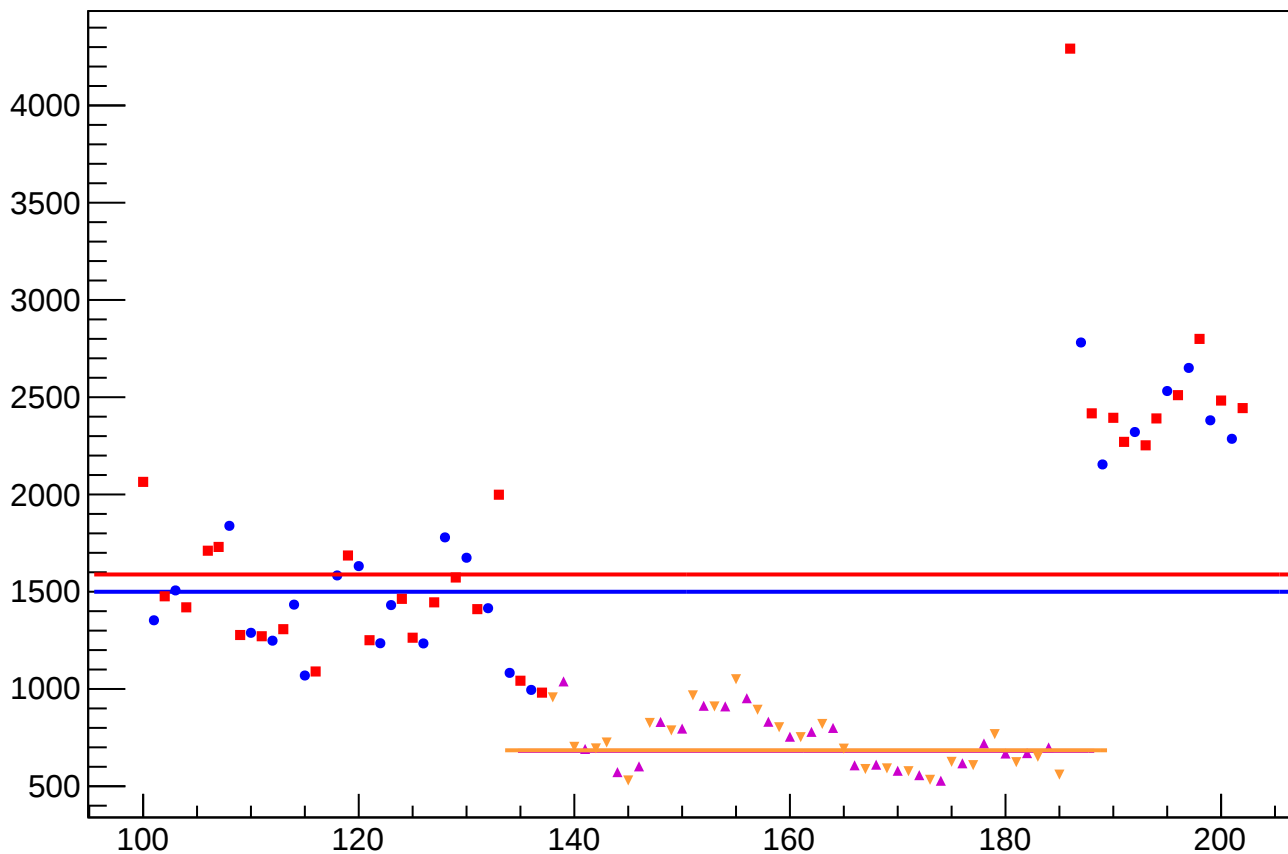
Right: 124.137+/-327.679  $\chi^2/\text{NDF}$ : 53.0/52

In: 6.396+/-156.663  $\chi^2/\text{NDF}$ :56.4/46

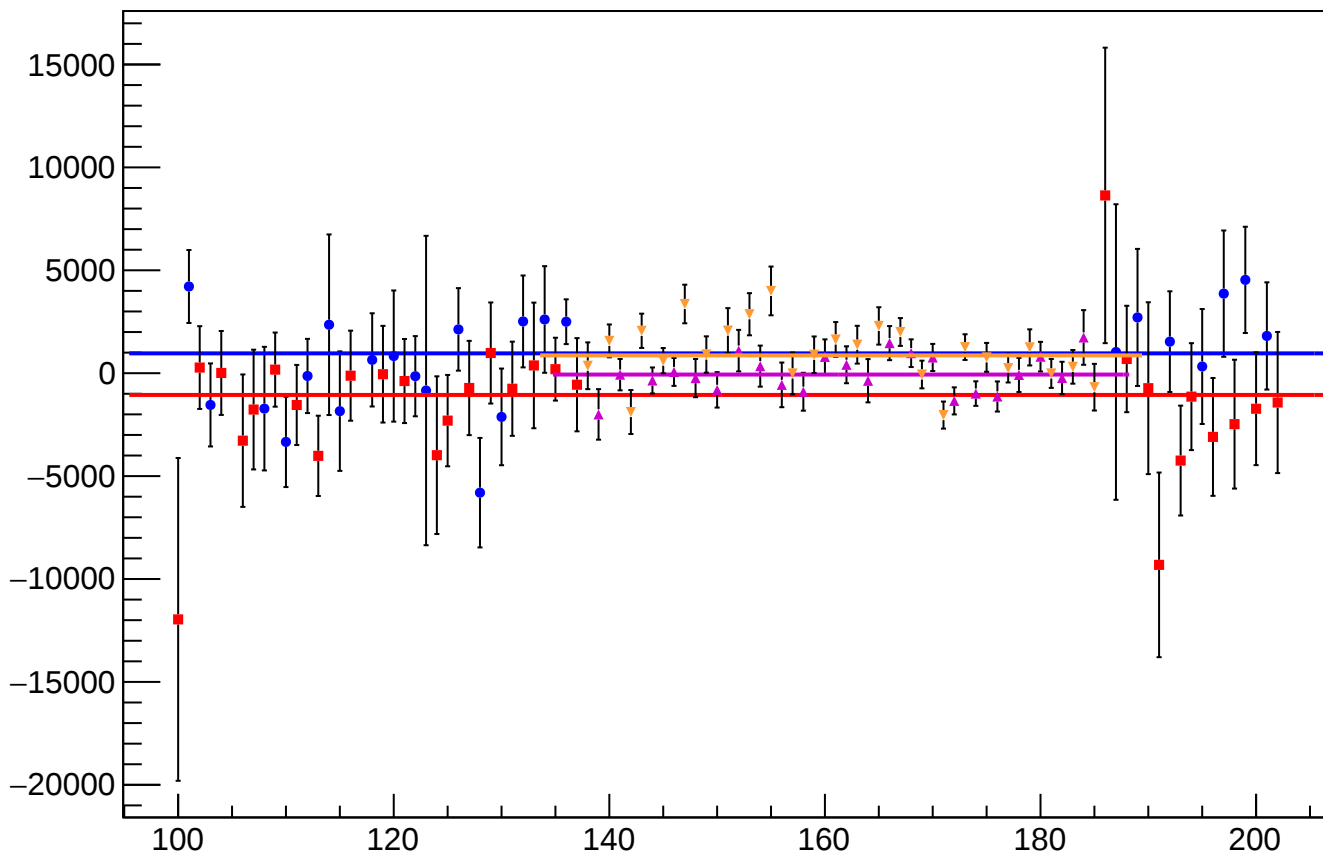
Out: -578.899+/-153.266  $\chi^2/\text{NDF}$ :99.4/53

All: -292.666+/-109.557  $\chi^2/\text{NDF}$ : 162.9/100

asym\_sam\_2468\_avg\_correction\_rms vs Slug, Sign Corrected



asym\_sam\_2468\_avg\_mean vs Slug, Sign Corrected



Right In: 963.888 $\pm$ 470.824  $\chi^2$ /NDF: 26.1/23

Left Out: 865.597 $\pm$ 163.885  $\chi^2$ /NDF:62.8/24

Right Out: -1055.735 $\pm$ 459.260  $\chi^2$ /NDF: 16.9/28

Left In: -65.924 $\pm$ 167.485  $\chi^2$ /NDF:26.4/22

Left: 409.953 $\pm$ 117.136  $\chi^2$ /NDF: 105.1/47

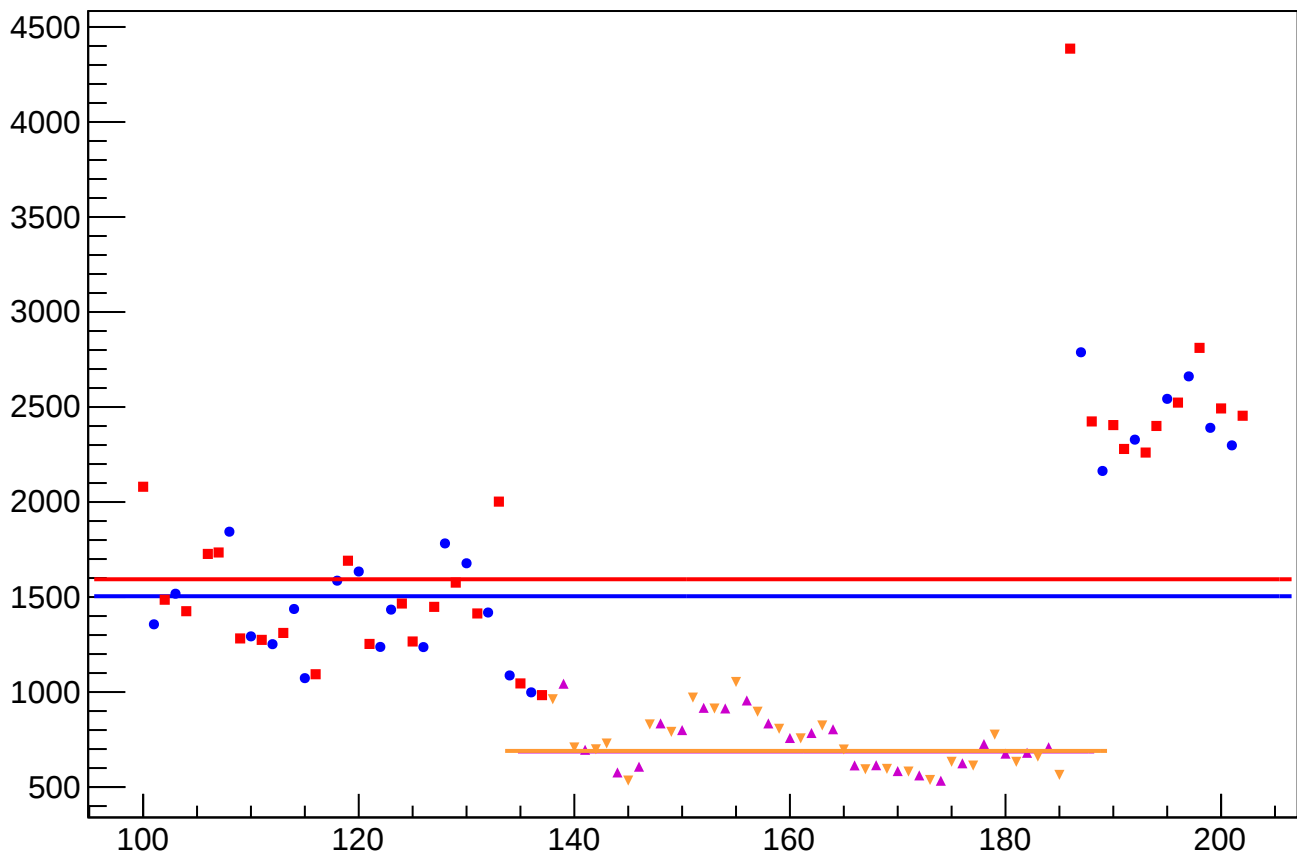
Right: -71.032 $\pm$ 328.758  $\chi^2$ /NDF: 52.5/52

In: 49.752 $\pm$ 157.798  $\chi^2$ /NDF:56.8/46

Out: 648.571 $\pm$ 154.352  $\chi^2$ /NDF:95.3/53

All: 355.771 $\pm$ 110.342  $\chi^2$ /NDF: 159.4/100

# asym\_sam\_2468\_avg\_rms vs Slug, Sign Corrected



Right In: 1504.237+/-0.333  $\chi^2/\text{NDF}$ : 2093339.2/23

Left Out: 690.166+/-0.116  $\chi^2/\text{NDF}$ :1258158.2/24

Right Out: 1593.527+/-0.325  $\chi^2/\text{NDF}$ : 2662820.6/28

Left In: 687.216+/-0.118  $\chi^2/\text{NDF}$ :1099706.1/22

Left: 688.723+/-0.083  $\chi^2/\text{NDF}$ : 2358181.3/47

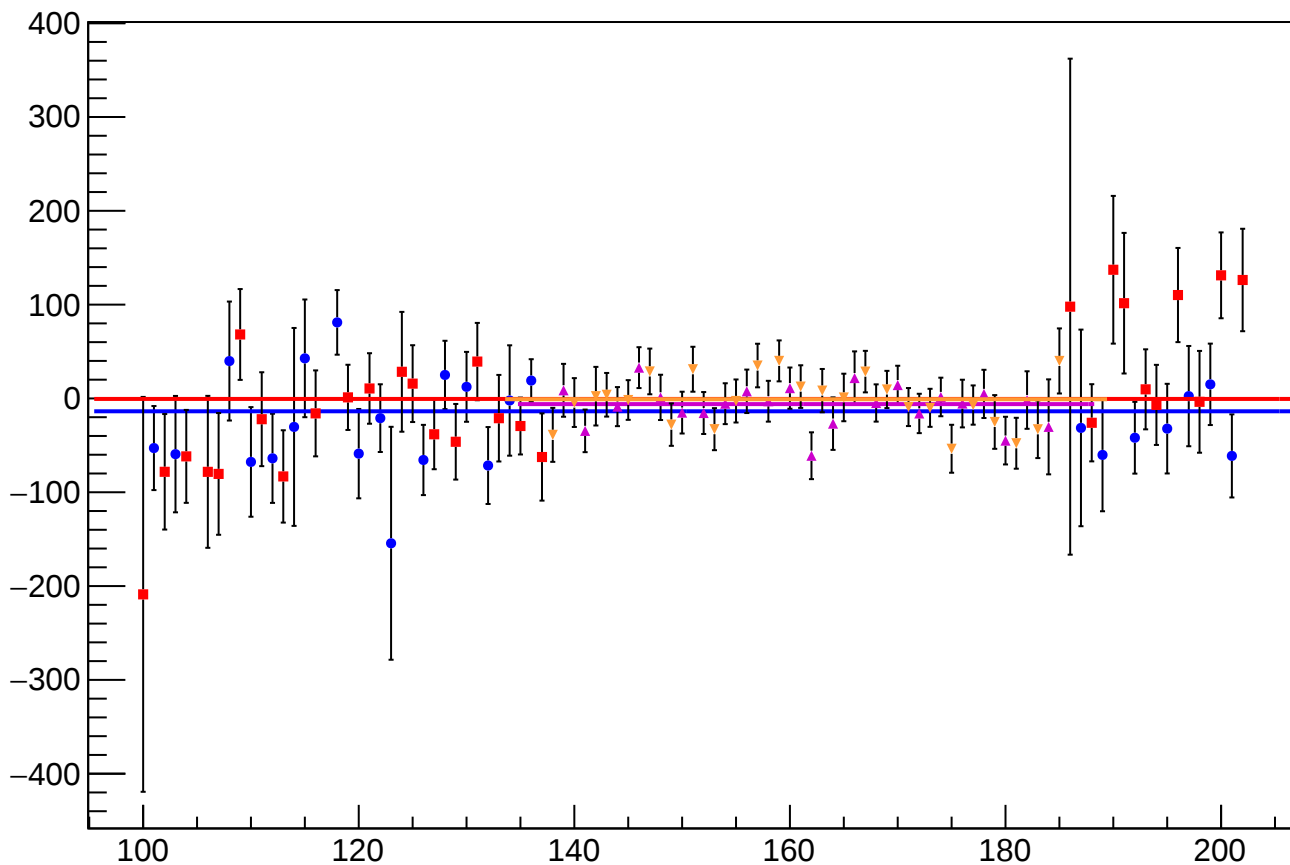
Right: 1549.992+/-0.232  $\chi^2/\text{NDF}$ : 4793020.1/52

In: 778.990+/-0.112  $\chi^2/\text{NDF}$ :8539077.6/46

Out: 792.206+/-0.109  $\chi^2/\text{NDF}$ :10785045.5/53

All: 785.744+/-0.078  $\chi^2/\text{NDF}$ : 19331292.8/100

reg\_asym\_sam\_1357\_2468\_dd\_mean vs Slug, Sign Corrected



Right In:  $-13.699 \pm 9.096$   $\chi^2/\text{NDF}$ : 25.3/23

Left Out:  $-0.861 \pm 4.760$   $\chi^2/\text{NDF}$ : 27.9/24

Right Out:  $-0.520 \pm 8.868$   $\chi^2/\text{NDF}$ : 42.3/28

Left In:  $-6.042 \pm 4.925$   $\chi^2/\text{NDF}$ : 16.9/22

Left:  $-3.363 \pm 3.423$   $\chi^2/\text{NDF}$ : 45.4/47

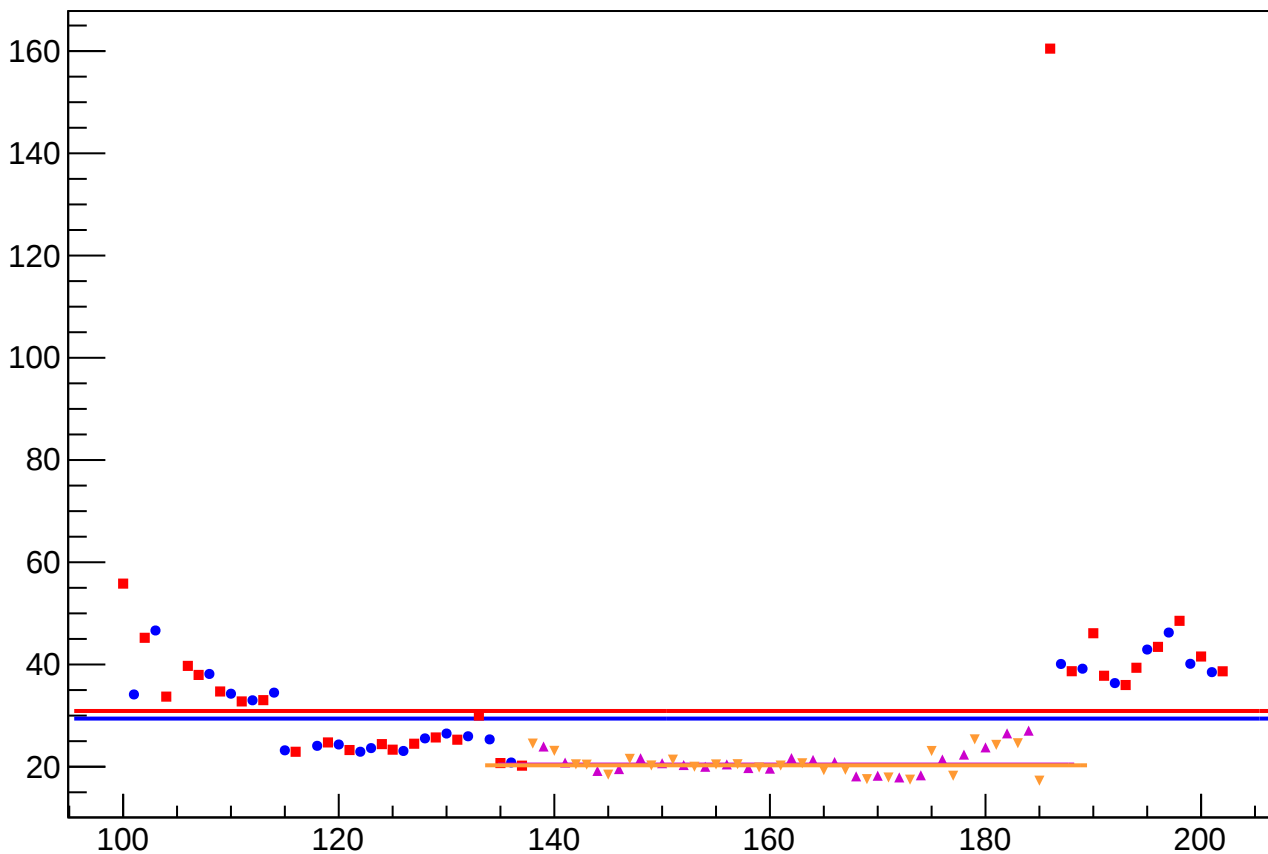
Right:  $-6.942 \pm 6.350$   $\chi^2/\text{NDF}$ : 68.6/52

In:  $-7.778 \pm 4.331$   $\chi^2/\text{NDF}$ : 42.7/46

Out:  $-0.785 \pm 4.194$   $\chi^2/\text{NDF}$ : 70.2/53

All:  $-4.169 \pm 3.013$   $\chi^2/\text{NDF}$ : 114.3/100

reg\_asym\_sam\_1357\_2468\_dd\_rms vs Slug, Sign Corrected



Right In: 29.419+/-0.006  $\chi^2/\text{NDF}$ : 1508166.2/23

Left Out: 20.279+/-0.003  $\chi^2/\text{NDF}$ : 407056.4/24

Right Out: 30.906+/-0.006  $\chi^2/\text{NDF}$ : 2201096.3/28

Left In: 20.424+/-0.003  $\chi^2/\text{NDF}$ : 323427.4/22

Left: 20.349+/-0.002  $\chi^2/\text{NDF}$ : 731373.7/47

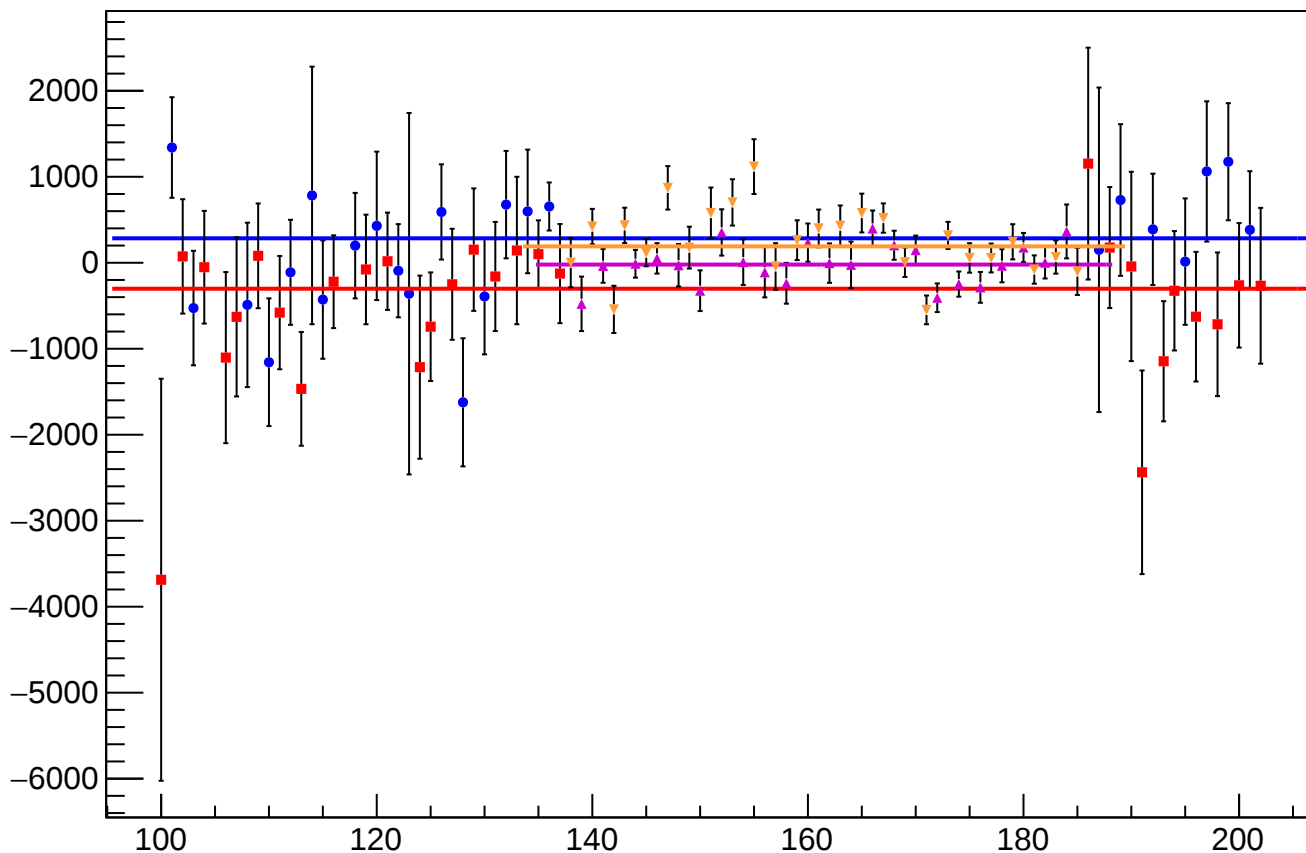
Right: 30.181+/-0.004  $\chi^2/\text{NDF}$ : 3736643.0/52

In: 22.463+/-0.003  $\chi^2/\text{NDF}$ : 3344158.3/46

Out: 22.656+/-0.003  $\chi^2/\text{NDF}$ : 4837454.5/53

All: 22.563+/-0.002  $\chi^2/\text{NDF}$ : 8183661.1/100

asym\_sam\_1357\_2468\_dd\_correction\_mean vs Slug, Sign Corrected



Right In:  $284.355 \pm 132.280$   $\chi^2/\text{NDF}$ : 24.7/23

Left Out:  $190.867 \pm 41.314$   $\chi^2/\text{NDF}$ : 67.9/24

Right Out:  $-301.771 \pm 130.318$   $\chi^2/\text{NDF}$ : 17.4/28

Left In:  $-20.998 \pm 42.291$   $\chi^2/\text{NDF}$ : 27.7/22

Left:  $87.410 \pm 29.553$   $\chi^2/\text{NDF}$ : 108.4/47

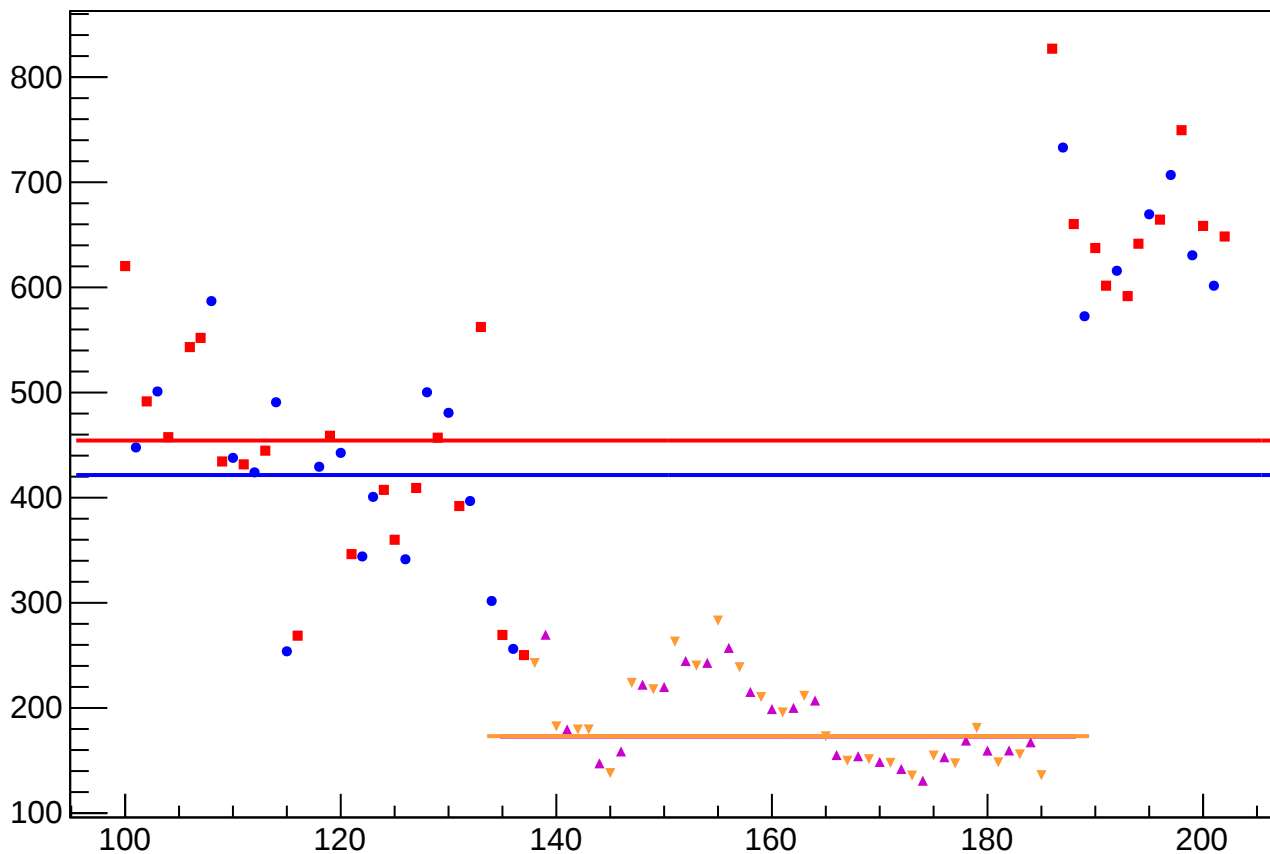
Right:  $-13.088 \pm 92.835$   $\chi^2/\text{NDF}$ : 52.0/52

In:  $7.318 \pm 40.282$   $\chi^2/\text{NDF}$ : 57.2/46

Out:  $145.877 \pm 39.382$   $\chi^2/\text{NDF}$ : 98.2/53

All:  $78.163 \pm 28.160$   $\chi^2/\text{NDF}$ : 161.5/100

asym\_sam\_1357\_2468\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 421.549+/-0.094  $\chi^2/\text{NDF}$ : 2191538.0/23

Left Out: 173.210+/-0.029  $\chi^2/\text{NDF}$ :1561250.6/24

Right Out: 454.364+/-0.092  $\chi^2/\text{NDF}$ : 2460275.9/28

Left In: 172.828+/-0.030  $\chi^2/\text{NDF}$ :1372131.7/22

Left: 173.023+/-0.021  $\chi^2/\text{NDF}$ : 2933465.9/47

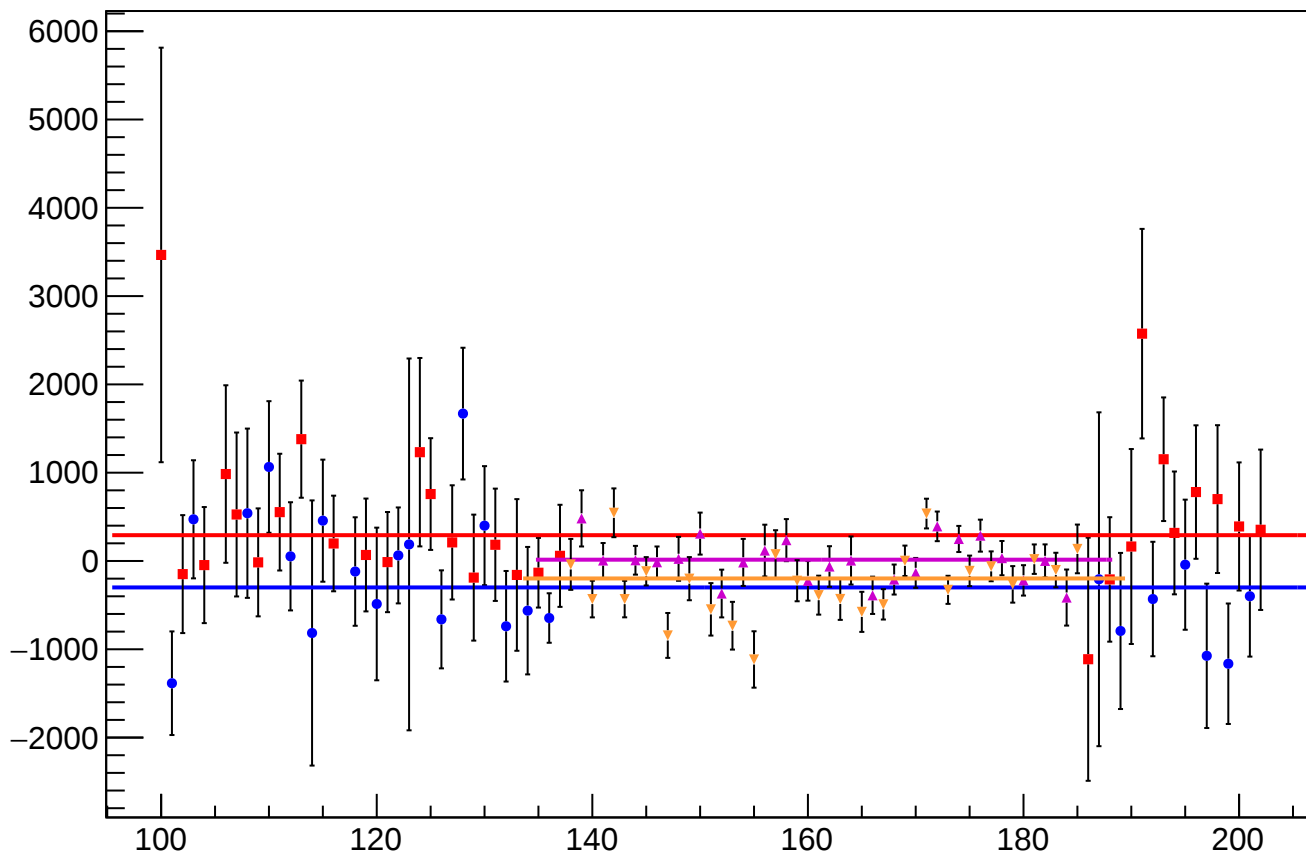
Right: 438.202+/-0.066  $\chi^2/\text{NDF}$ : 4714271.8/52

In: 195.892+/-0.028  $\chi^2/\text{NDF}$ :9978726.5/46

Out: 198.886+/-0.028  $\chi^2/\text{NDF}$ :12480520.8/53

All: 197.423+/-0.020  $\chi^2/\text{NDF}$ : 22464896.5/100

asym\_sam\_1357\_2468\_dd\_mean vs Slug, Sign Corrected



Right In: -299.583+/-132.649  $\chi^2/\text{NDF}$ : 24.8/23

Left Out: -197.918+/-41.638  $\chi^2/\text{NDF}$ : 64.3/24

Right Out: 292.211+/-130.704  $\chi^2/\text{NDF}$ : 17.5/28

Left In: 14.616+/-42.629  $\chi^2/\text{NDF}$ : 27.7/22

Left: -94.151+/-29.787  $\chi^2/\text{NDF}$ : 104.7/47

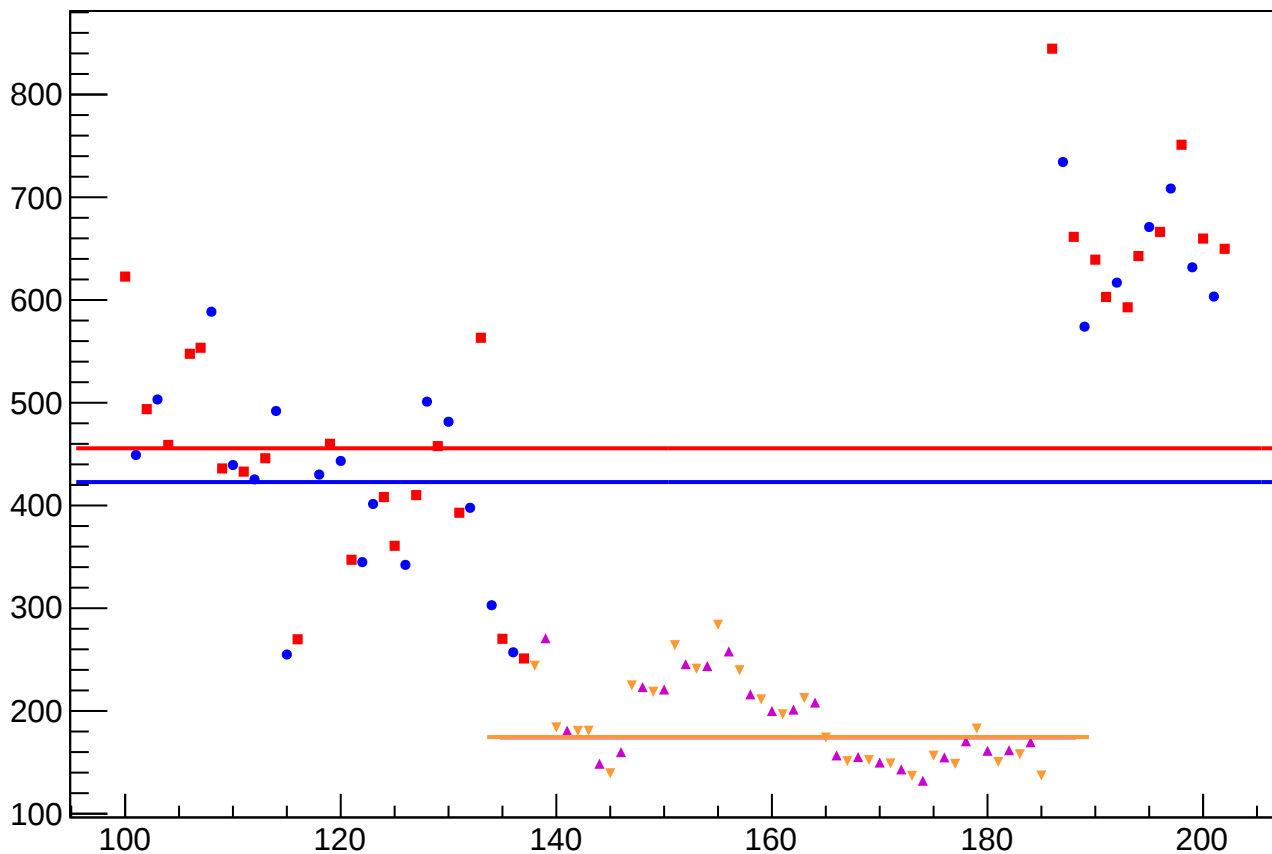
Right: 0.683+/-93.102  $\chi^2/\text{NDF}$ : 52.3/52

In: -14.797+/-40.585  $\chi^2/\text{NDF}$ : 57.6/46

Out: -152.760+/-39.674  $\chi^2/\text{NDF}$ : 94.5/53

All: -85.345+/-28.370  $\chi^2/\text{NDF}$ : 158.0/100

asym\_sam\_1357\_2468\_dd\_rms vs Slug, Sign Corrected



Right In: 422.791 $\pm$ 0.094  $\chi^2$ /NDF: 2185580.6/23

Left Out: 174.648 $\pm$ 0.029  $\chi^2$ /NDF:1531999.5/24

Right Out: 455.665 $\pm$ 0.092  $\chi^2$ /NDF: 2463364.4/28

Left In: 174.288 $\pm$ 0.030  $\chi^2$ /NDF:1344779.5/22

Left: 174.472 $\pm$ 0.021  $\chi^2$ /NDF: 2876851.9/47

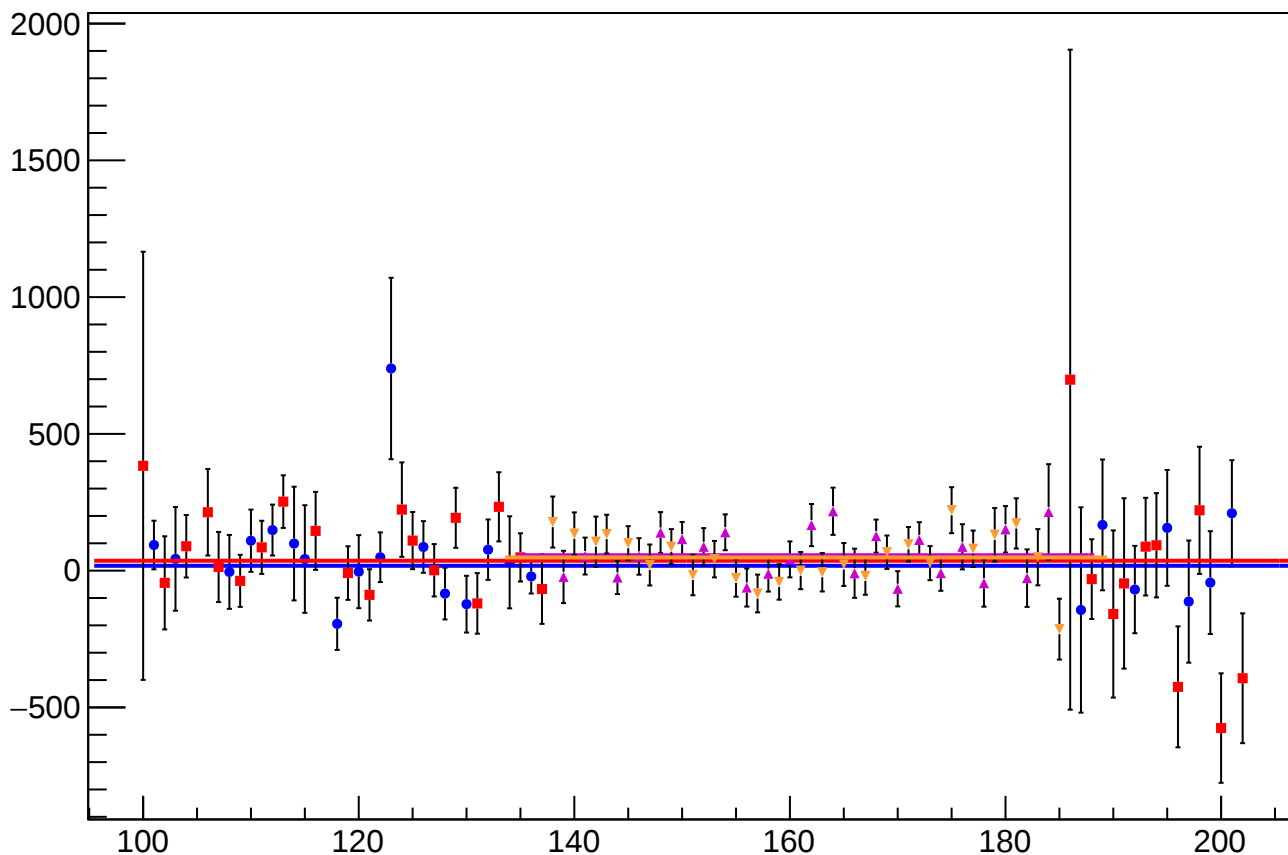
Right: 439.470 $\pm$ 0.066  $\chi^2$ /NDF: 4711269.0/52

In: 197.551 $\pm$ 0.029  $\chi^2$ /NDF:9892470.1/46

Out: 200.539 $\pm$ 0.028  $\chi^2$ /NDF:12388703.4/53

All: 199.079 $\pm$ 0.020  $\chi^2$ /NDF: 22286718.7/100

reg\_asym\_sam\_12345678\_avg\_mean vs Slug, Sign Corrected



Right In: 17.872 $\pm$ 25.012  $\chi^2$ /NDF: 20.3/23

Left Out: 48.233 $\pm$ 14.616  $\chi^2$ /NDF:29.3/24

Right Out: 36.286 $\pm$ 24.495  $\chi^2$ /NDF: 38.1/28

Left In: 56.403 $\pm$ 15.182  $\chi^2$ /NDF:27.5/22

Left: 52.163 $\pm$ 10.529  $\chi^2$ /NDF: 56.9/47

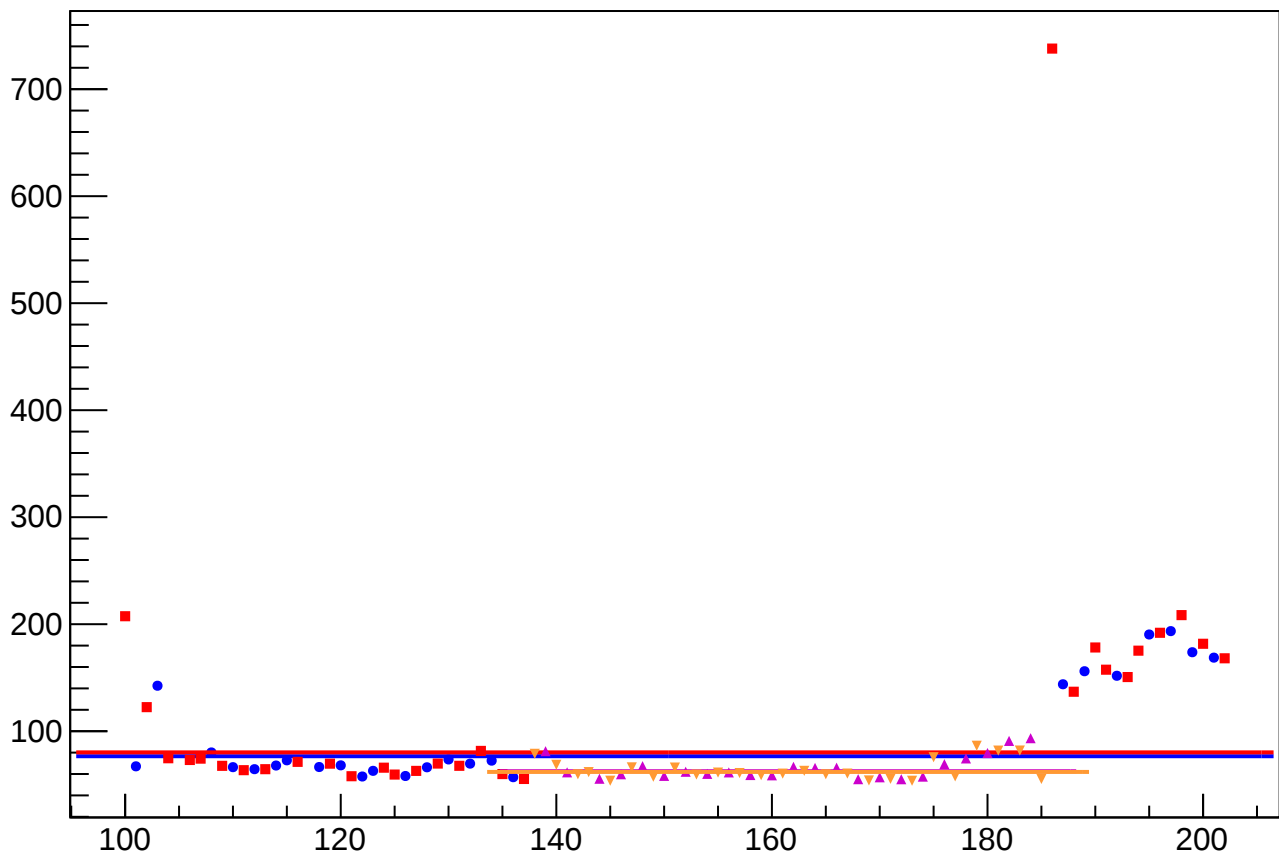
Right: 27.271 $\pm$ 17.501  $\chi^2$ /NDF: 58.7/52

In: 46.029 $\pm$ 12.978  $\chi^2$ /NDF:49.5/46

Out: 45.096 $\pm$ 12.551  $\chi^2$ /NDF:67.5/53

All: 45.547 $\pm$ 9.022  $\chi^2$ /NDF: 117.1/100

reg\_asym\_sam\_12345678\_avg\_rms vs Slug, Sign Corrected



Right In: 76.618+/-0.018  $\chi^2/\text{NDF}$ : 3588523.9/23

Left Out: 61.946+/-0.010  $\chi^2/\text{NDF}$ : 604989.2/24

Right Out: 80.221+/-0.017  $\chi^2/\text{NDF}$ : 4807402.7/28

Left In: 62.607+/-0.011  $\chi^2/\text{NDF}$ : 575516.1/22

Left: 62.264+/-0.007  $\chi^2/\text{NDF}$ : 1182470.7/47

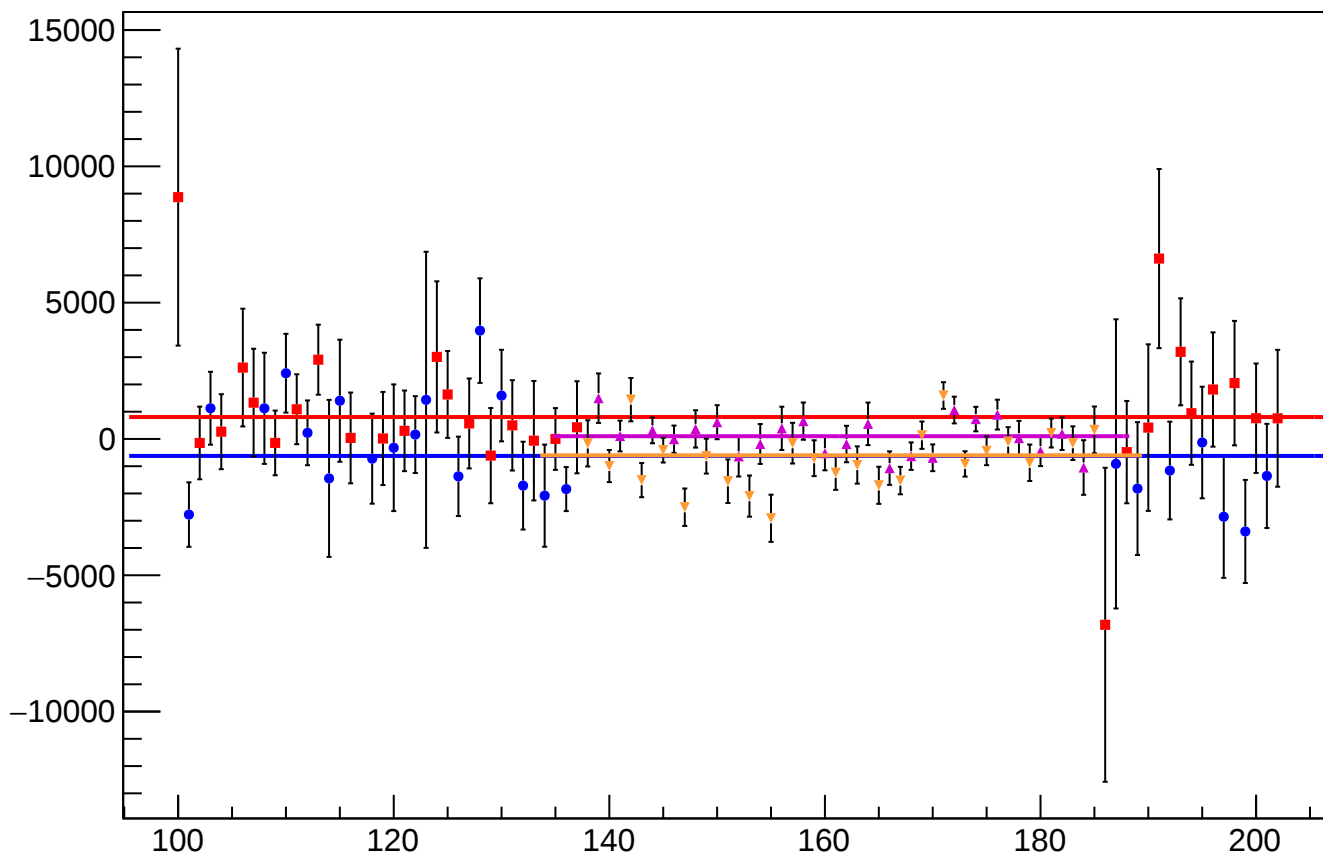
Right: 78.457+/-0.012  $\chi^2/\text{NDF}$ : 8417108.8/52

In: 66.379+/-0.009  $\chi^2/\text{NDF}$ : 4622620.2/46

Out: 66.744+/-0.009  $\chi^2/\text{NDF}$ : 6233274.5/53

All: 66.568+/-0.006  $\chi^2/\text{NDF}$ : 10856712.6/100

asym\_sam\_12345678\_avg\_correction\_mean vs Slug, Sign Corrected



Right In: -622.501+/-334.847  $\chi^2/\text{NDF}$ : 26.8/23

Left Out: -601.486+/-122.119  $\chi^2/\text{NDF}$ : 65.4/24

Right Out: 803.770+/-324.776  $\chi^2/\text{NDF}$ : 17.3/28

Left In: 100.548+/-124.725  $\chi^2/\text{NDF}$ : 25.5/22

Left: -257.880+/-87.258  $\chi^2/\text{NDF}$ : 107.0/47

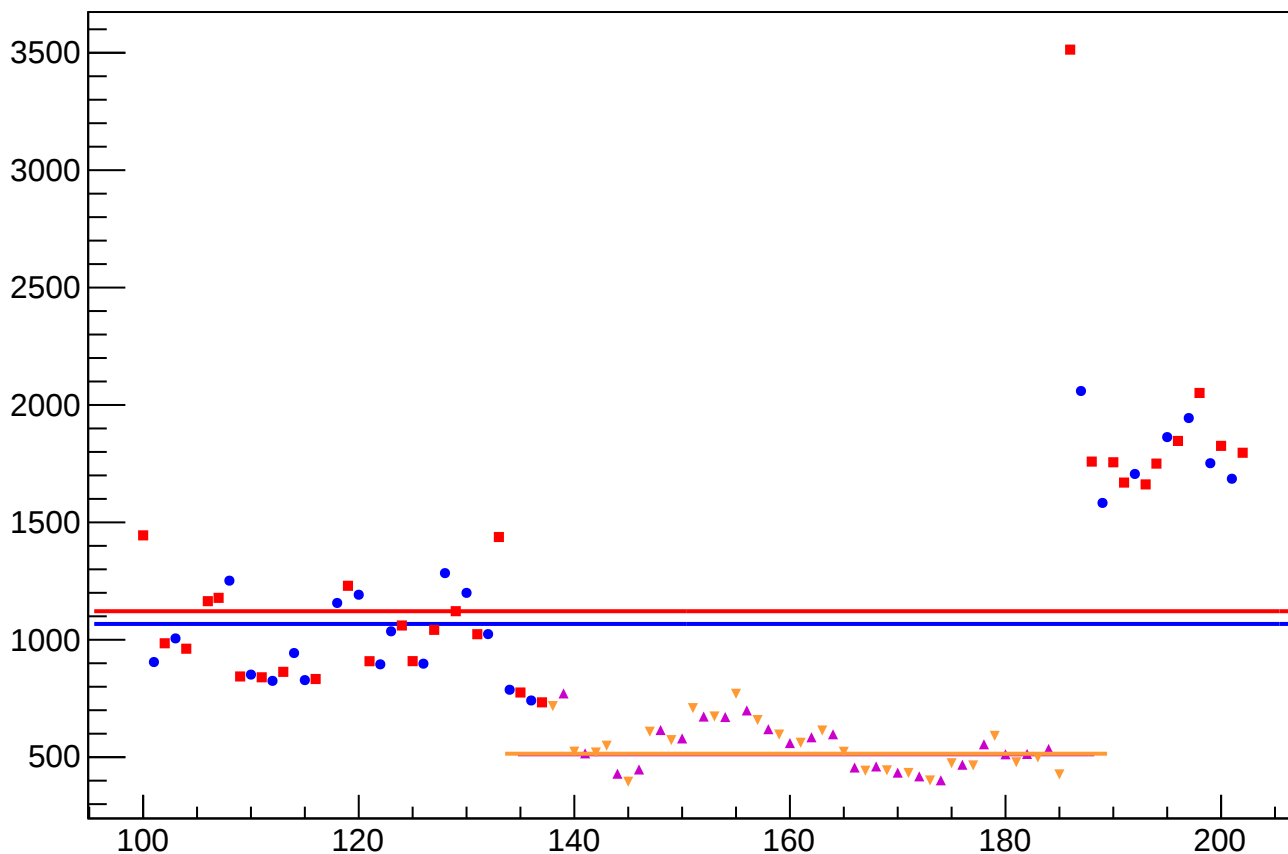
Right: 112.405+/-233.131  $\chi^2/\text{NDF}$ : 53.4/52

In: 12.452+/-116.880  $\chi^2/\text{NDF}$ : 56.4/46

Out: -427.418+/-114.305  $\chi^2/\text{NDF}$ : 99.0/53

All: -212.381+/-81.721  $\chi^2/\text{NDF}$ : 162.6/100

asym\_sam\_12345678\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 1067.454+/-0.237  $\chi^2/\text{NDF}$ : 2184251.8/23

Left Out: 514.758+/-0.086  $\chi^2/\text{NDF}$ : 1194945.9/24

Right Out: 1121.632+/-0.230  $\chi^2/\text{NDF}$ : 2886868.1/28

Left In: 512.199+/-0.088  $\chi^2/\text{NDF}$ : 1041302.8/22

Left: 513.505+/-0.062  $\chi^2/\text{NDF}$ : 2236678.4/47

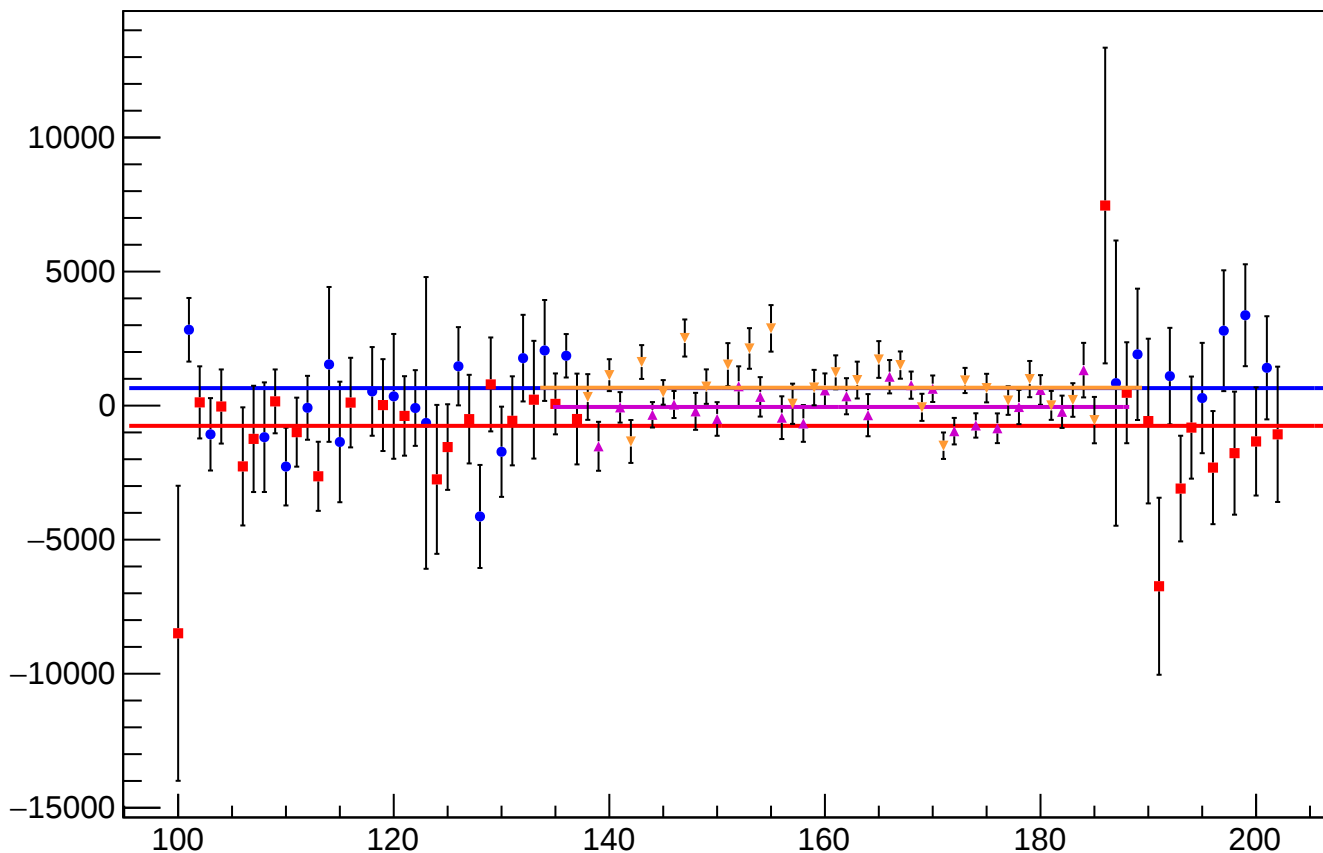
Right: 1095.370+/-0.165  $\chi^2/\text{NDF}$ : 5098098.0/52

In: 579.851+/-0.083  $\chi^2/\text{NDF}$ : 8054975.5/46

Out: 589.931+/-0.081  $\chi^2/\text{NDF}$ : 10200064.3/53

All: 585.003+/-0.058  $\chi^2/\text{NDF}$ : 18262643.2/10

asym\_sam\_12345678\_avg\_mean vs Slug, Sign Corrected



Right In: 652.940+/-336.089  $\chi^2/\text{NDF}$ : 26.7/23

Left Out: 667.625+/-123.146  $\chi^2/\text{NDF}$ : 61.5/24

Right Out: -754.693+/-326.150  $\chi^2/\text{NDF}$ : 16.7/28

Left In: -50.079+/-125.805  $\chi^2/\text{NDF}$ : 26.1/22

Left: 316.439+/-88.002  $\chi^2/\text{NDF}$ : 104.2/47

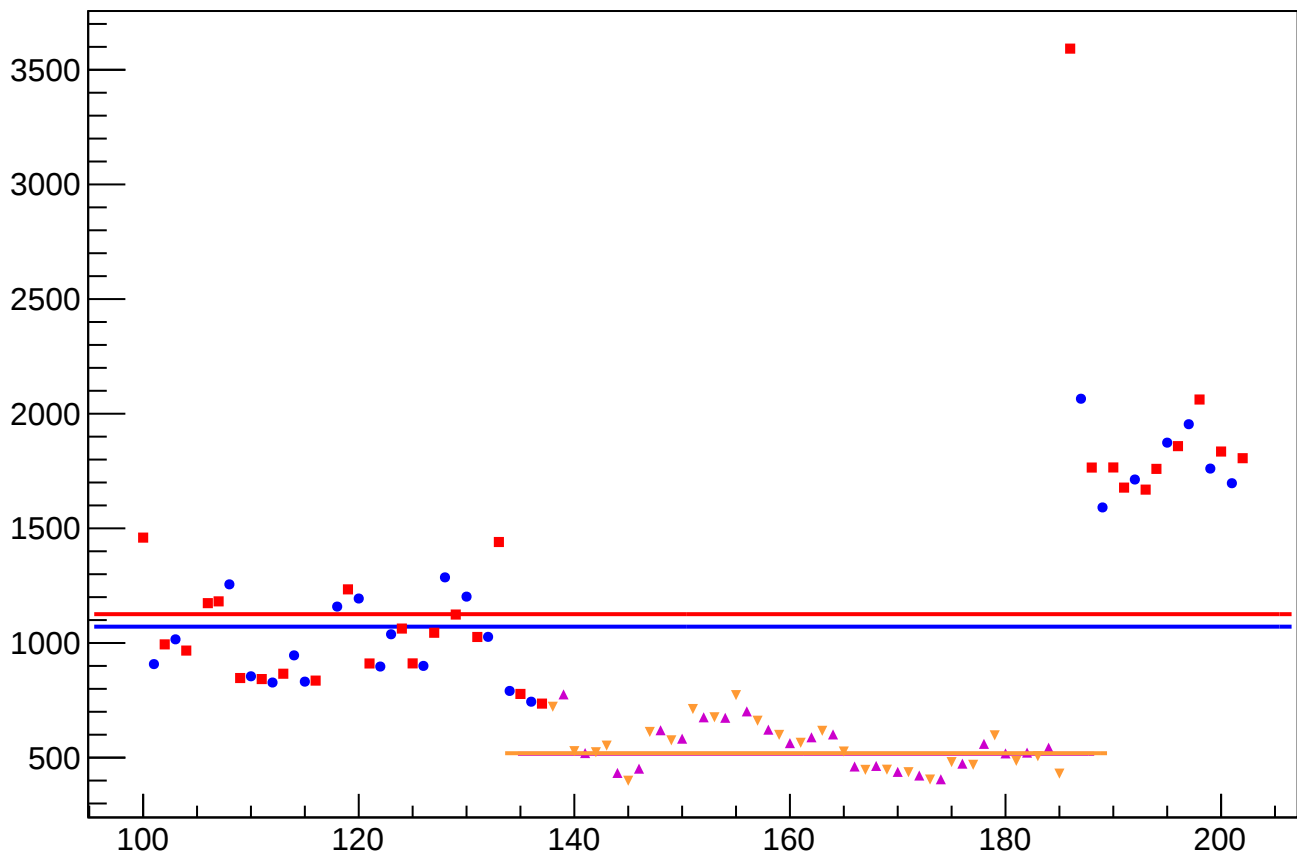
Right: -71.998+/-234.058  $\chi^2/\text{NDF}$ : 52.5/52

In: 36.319+/-117.821  $\chi^2/\text{NDF}$ : 56.6/46

Out: 490.157+/-115.207  $\chi^2/\text{NDF}$ : 94.9/53

All: 268.329+/-82.372  $\chi^2/\text{NDF}$ : 159.1/100

asym\_sam\_12345678\_avg\_rms vs Slug, Sign Corrected



Right In: 1071.250+/-0.238  $\chi^2/\text{NDF}$ : 2190862.6/23

Left Out: 519.254+/-0.087  $\chi^2/\text{NDF}$ :1172411.1/24

Right Out: 1125.732+/-0.231  $\chi^2/\text{NDF}$ : 2901473.7/28

Left In: 516.792+/-0.089  $\chi^2/\text{NDF}$ :1021374.1/22

Left: 518.049+/-0.062  $\chi^2/\text{NDF}$ : 2194176.4/47

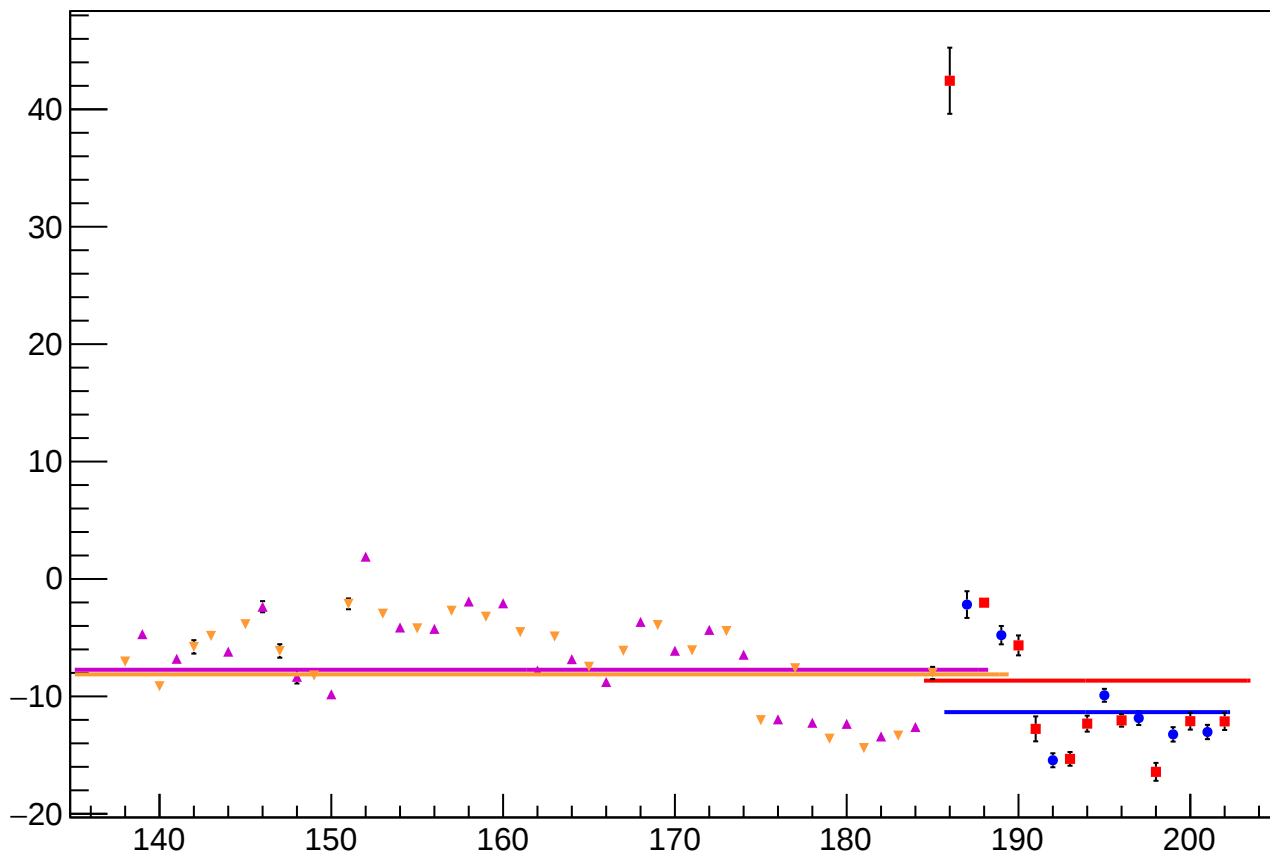
Right: 1099.308+/-0.166  $\chi^2/\text{NDF}$ : 5119402.4/52

In: 584.932+/-0.083  $\chi^2/\text{NDF}$ :7986535.4/46

Out: 594.926+/-0.081  $\chi^2/\text{NDF}$ :10126513.4/53

All: 590.041+/-0.058  $\chi^2/\text{NDF}$ : 18120404.8/10

reg\_asym\_sam1\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-11.341 \pm 0.245$   $\chi^2/\text{NDF}$ : 207.2/6

Left Out:  $-8.127 \pm 0.067$   $\chi^2/\text{NDF}$ : 3635.5/24

Right Out:  $-8.658 \pm 0.199$   $\chi^2/\text{NDF}$ : 1094.9/9

Left In:  $-7.732 \pm 0.069$   $\chi^2/\text{NDF}$ : 3719.0/22

Left:  $-7.934 \pm 0.048$   $\chi^2/\text{NDF}$ : 7371.4/47

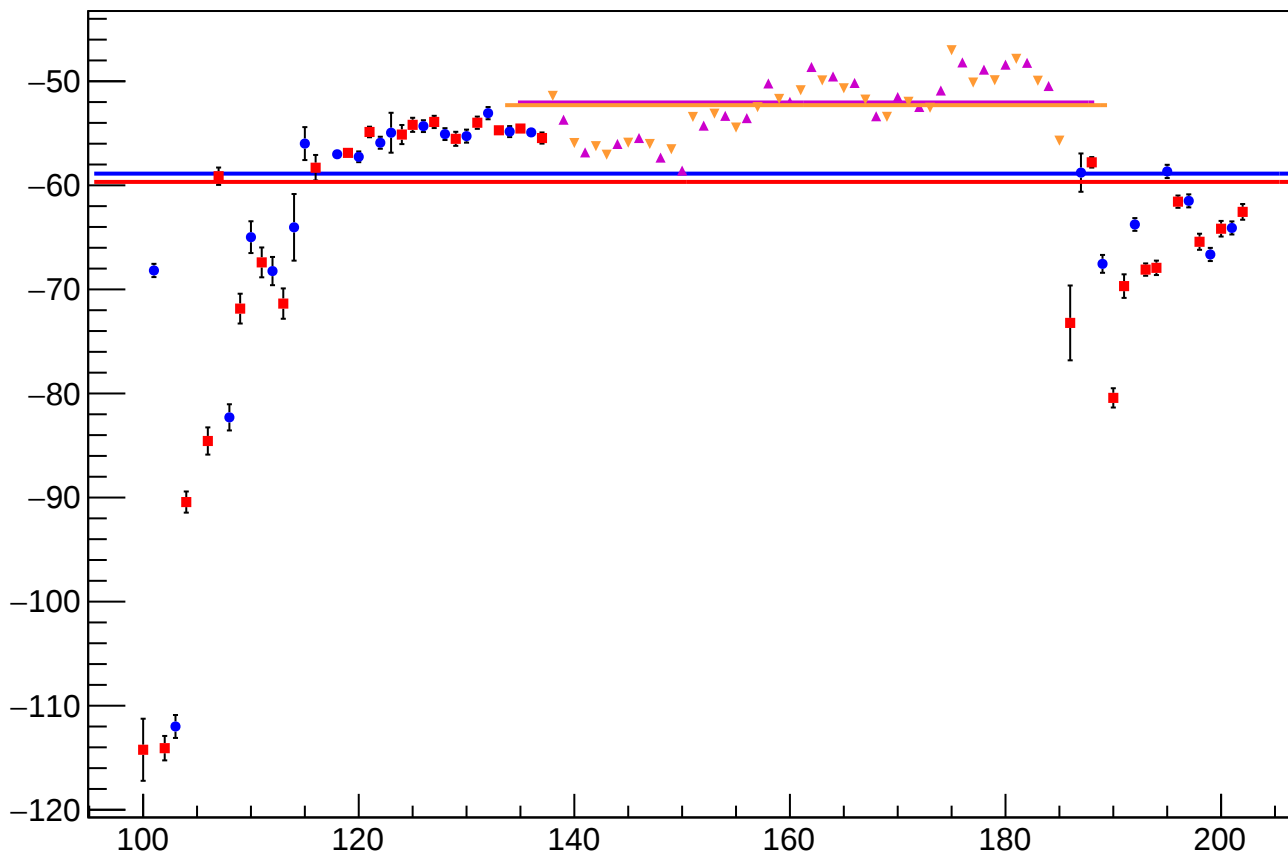
Right:  $-9.723 \pm 0.154$   $\chi^2/\text{NDF}$ : 1374.6/16

In:  $-7.997 \pm 0.066$   $\chi^2/\text{NDF}$ : 4127.8/29

Out:  $-8.182 \pm 0.064$   $\chi^2/\text{NDF}$ : 4736.8/34

All:  $-8.093 \pm 0.046$   $\chi^2/\text{NDF}$ : 8868.6/64

reg\_asym\_sam1\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: -58.875 $\pm$ 0.126  $\chi^2$ /NDF: 3943.2/23

Left Out: -52.297 $\pm$ 0.055  $\chi^2$ /NDF: 2657.5/24

Right Out: -59.672 $\pm$ 0.122  $\chi^2$ /NDF: 5952.4/28

Left In: -52.038 $\pm$ 0.057  $\chi^2$ /NDF: 3180.4/22

Left: -52.172 $\pm$ 0.040  $\chi^2$ /NDF: 5848.6/47

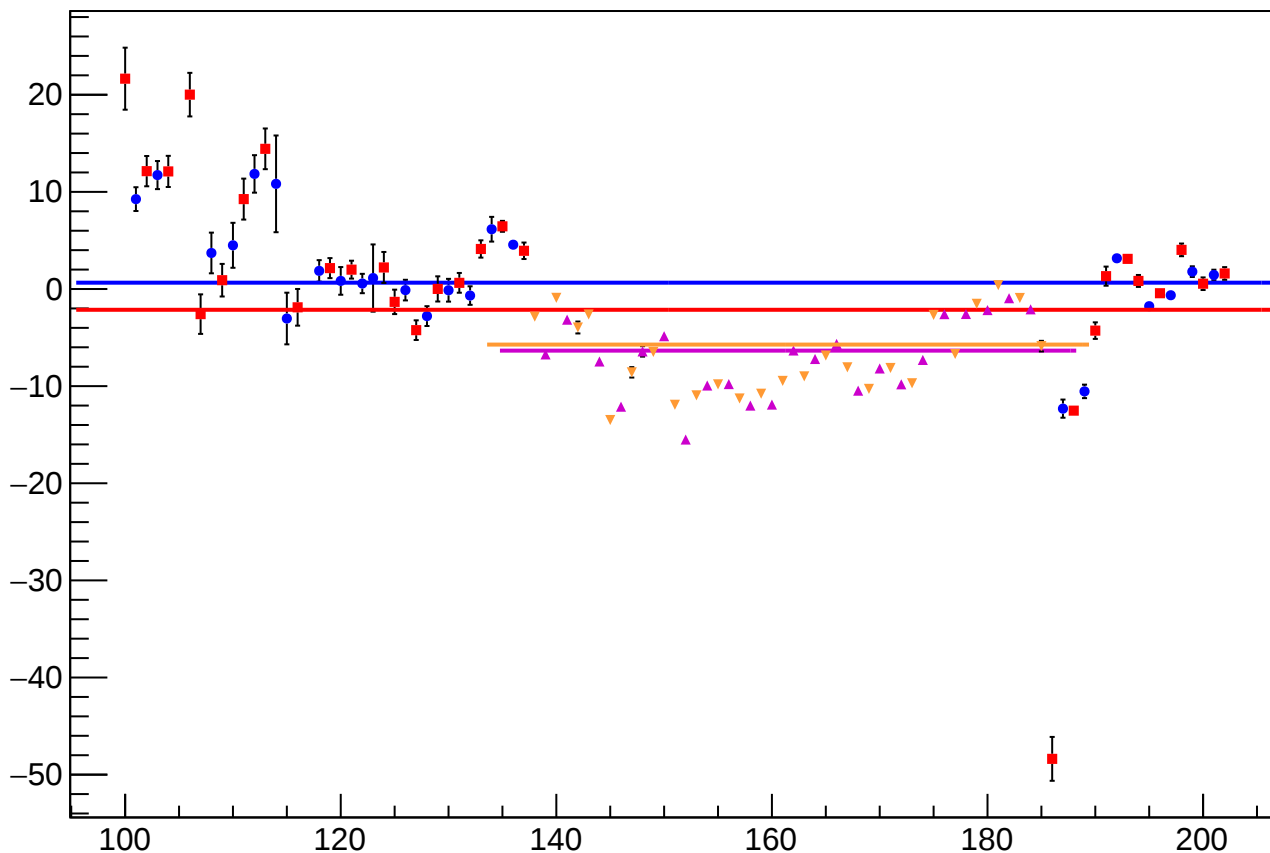
Right: -59.287 $\pm$ 0.087  $\chi^2$ /NDF: 9916.3/52

In: -53.207 $\pm$ 0.052  $\chi^2$ /NDF: 9569.7/46

Out: -53.553 $\pm$ 0.050  $\chi^2$ /NDF: 11666.4/53

All: -53.386 $\pm$ 0.036  $\chi^2$ /NDF: 21259.1/100

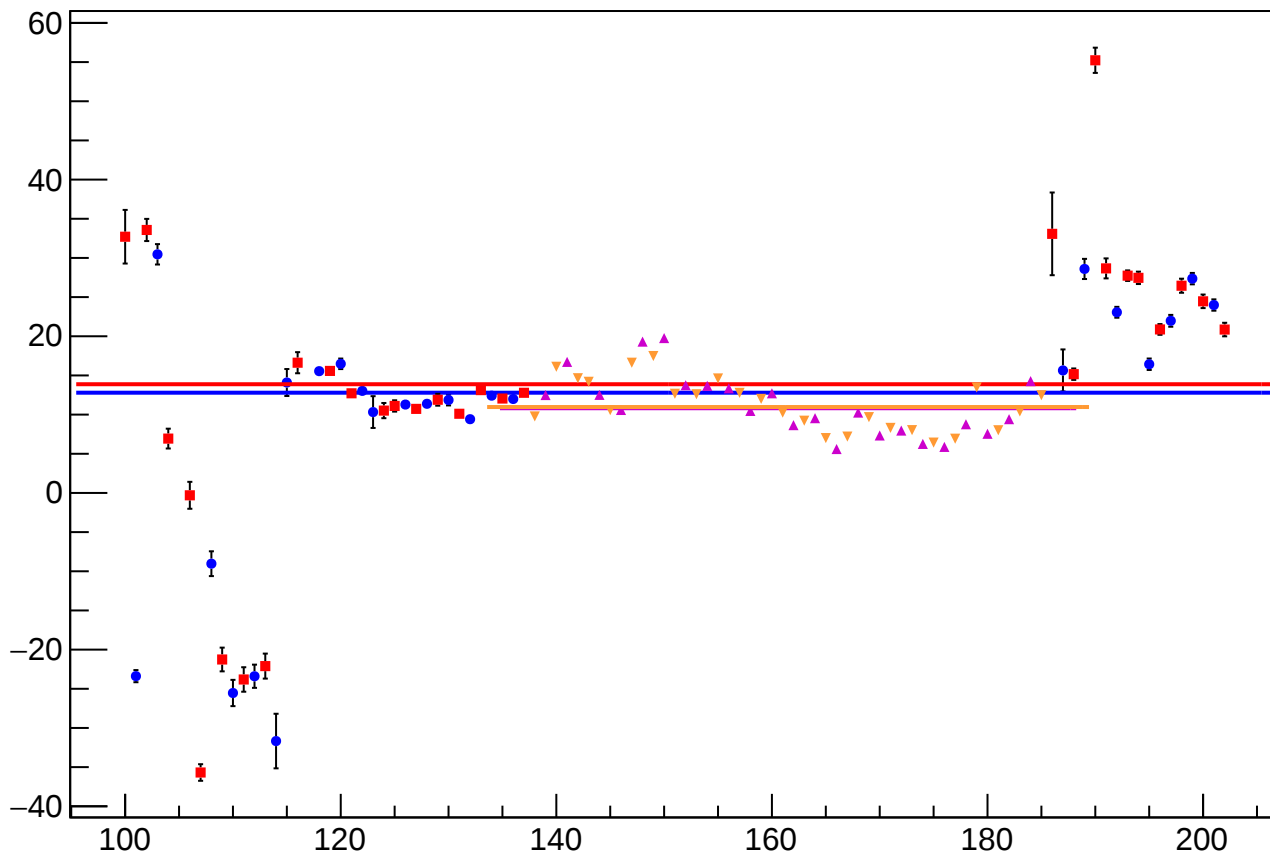
reg\_asym\_sam1\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $0.651 \pm 0.164$   $\chi^2/\text{NDF}: 795.0/23$   
 Left Out:  $-5.722 \pm 0.068$   $\chi^2/\text{NDF}: 3983.0/24$   
 Right Out:  $-2.139 \pm 0.144$   $\chi^2/\text{NDF}: 2978.8/28$   
 Left In:  $-6.344 \pm 0.069$   $\chi^2/\text{NDF}: 3383.7/22$

Left:  $-6.028 \pm 0.048$   $\chi^2/\text{NDF}: 7408.5/47$   
 Right:  $-0.932 \pm 0.108$   $\chi^2/\text{NDF}: 3937.3/52$   
 In:  $-5.306 \pm 0.063$   $\chi^2/\text{NDF}: 5721.0/46$   
 Out:  $-5.072 \pm 0.061$   $\chi^2/\text{NDF}: 7471.5/53$   
 All:  $-5.185 \pm 0.044$   $\chi^2/\text{NDF}: 13199.6/100$

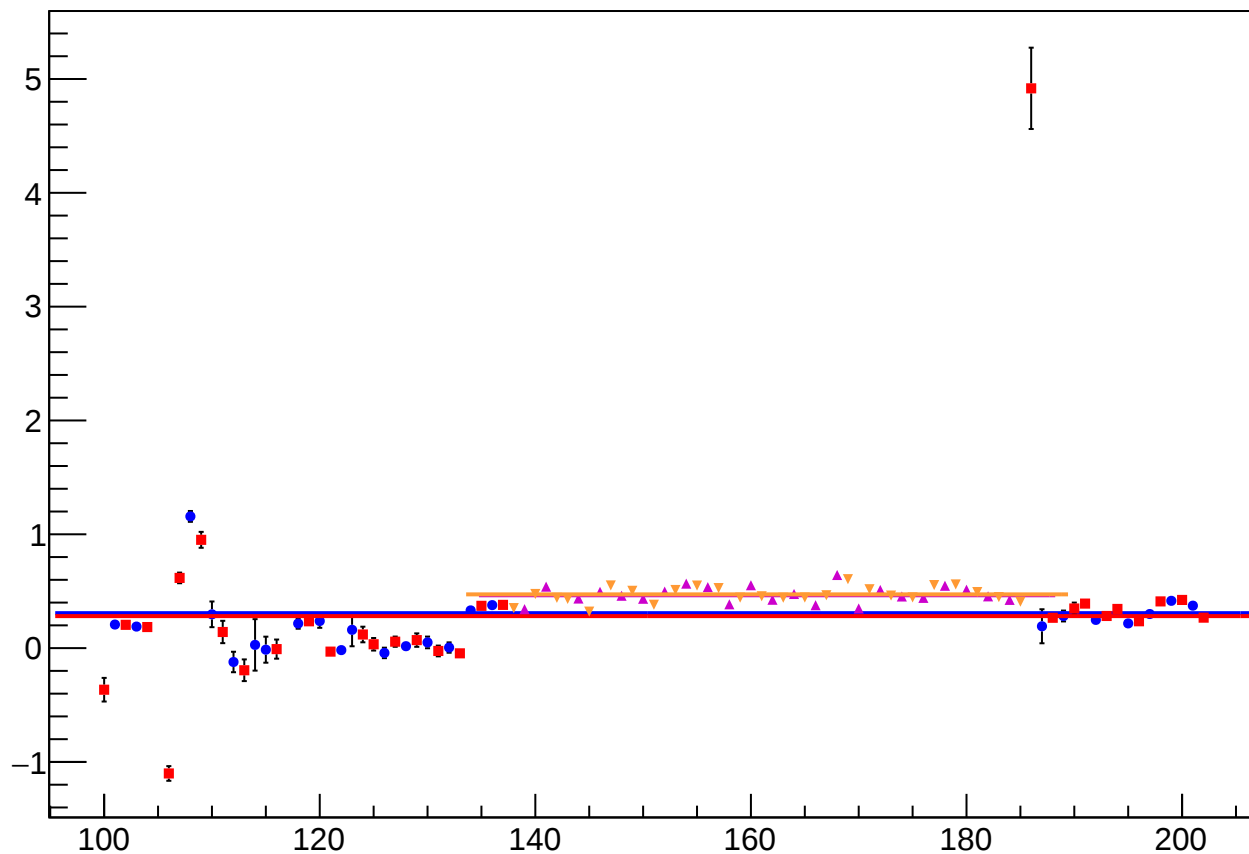
reg\_asym\_sam1\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $12.796 \pm 0.141$   $\chi^2/\text{NDF}$ : 5130.2/23  
 Left Out:  $10.967 \pm 0.061$   $\chi^2/\text{NDF}$ : 2637.7/24  
 Right Out:  $13.878 \pm 0.139$   $\chi^2/\text{NDF}$ : 6336.4/28  
 Left In:  $10.813 \pm 0.063$   $\chi^2/\text{NDF}$ : 3546.8/22

Left:  $10.892 \pm 0.044$   $\chi^2/\text{NDF}$ : 6187.5/47  
 Right:  $13.345 \pm 0.099$   $\chi^2/\text{NDF}$ : 11496.3/52  
 In:  $11.144 \pm 0.058$   $\chi^2/\text{NDF}$ : 8841.4/46  
 Out:  $11.442 \pm 0.056$   $\chi^2/\text{NDF}$ : 9340.6/53  
 All:  $11.297 \pm 0.040$   $\chi^2/\text{NDF}$ : 18195.8/100

reg\_asym\_sam1\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.307 $\pm$ 0.006  $\chi^2$ /NDF: 710.0/23

Left Out: 0.472 $\pm$ 0.003  $\chi^2$ /NDF:519.0/24

Right Out: 0.281 $\pm$ 0.006  $\chi^2$ /NDF: 1256.0/28

Left In: 0.464 $\pm$ 0.003  $\chi^2$ /NDF:733.1/22

Left: 0.468 $\pm$ 0.002  $\chi^2$ /NDF: 1256.2/47

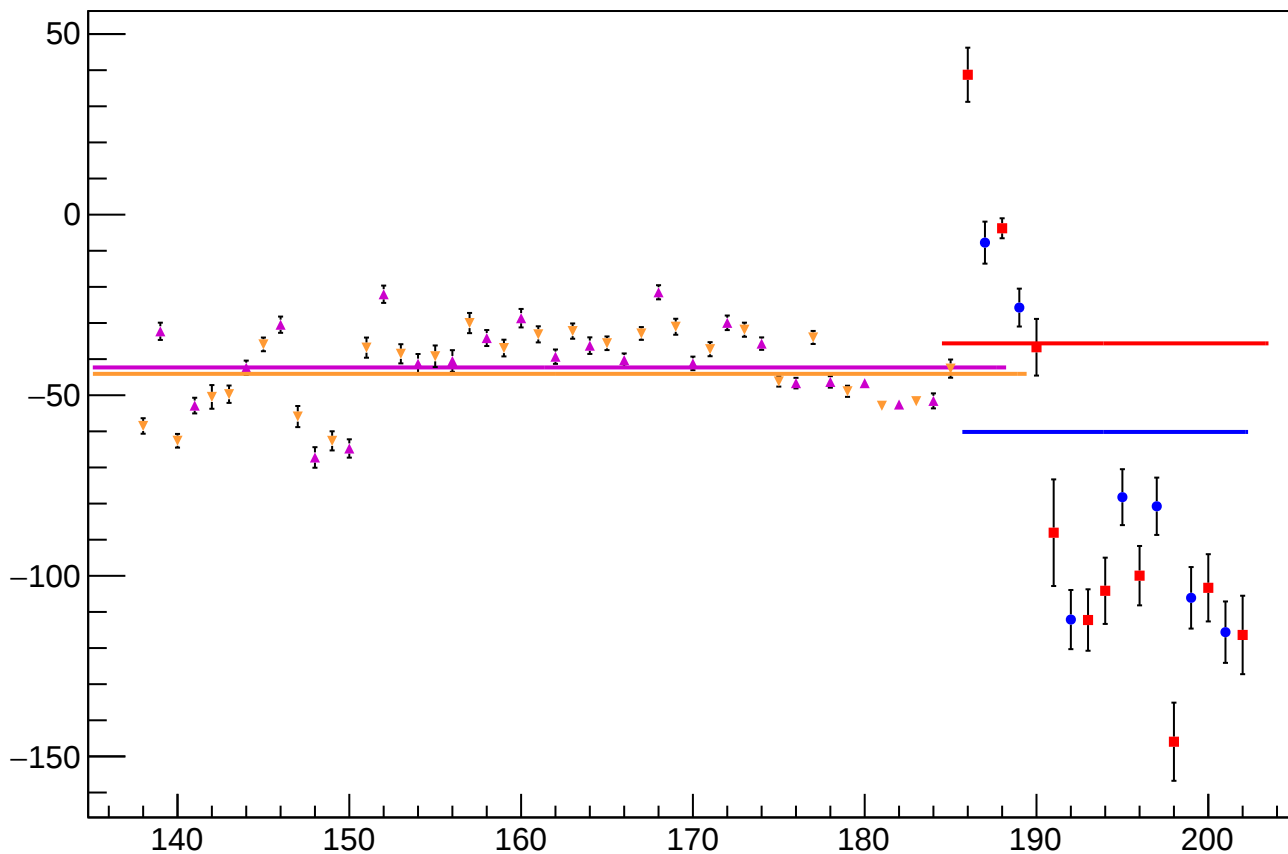
Right: 0.294 $\pm$ 0.004  $\chi^2$ /NDF: 1974.9/52

In: 0.438 $\pm$ 0.003  $\chi^2$ /NDF:1975.7/46

Out: 0.440 $\pm$ 0.003  $\chi^2$ /NDF:2591.4/53

All: 0.439 $\pm$ 0.002  $\chi^2$ /NDF: 4567.3/100

reg\_asym\_sam2\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-60.162 \pm 2.663$   $\chi^2/\text{NDF}$ : 248.3/6

Left Out:  $-44.077 \pm 0.389$   $\chi^2/\text{NDF}$ : 632.6/24

Right Out:  $-35.640 \pm 2.048$   $\chi^2/\text{NDF}$ : 653.9/9

Left In:  $-42.304 \pm 0.399$   $\chi^2/\text{NDF}$ : 640.6/22

Left:  $-43.214 \pm 0.278$   $\chi^2/\text{NDF}$ : 1283.3/47

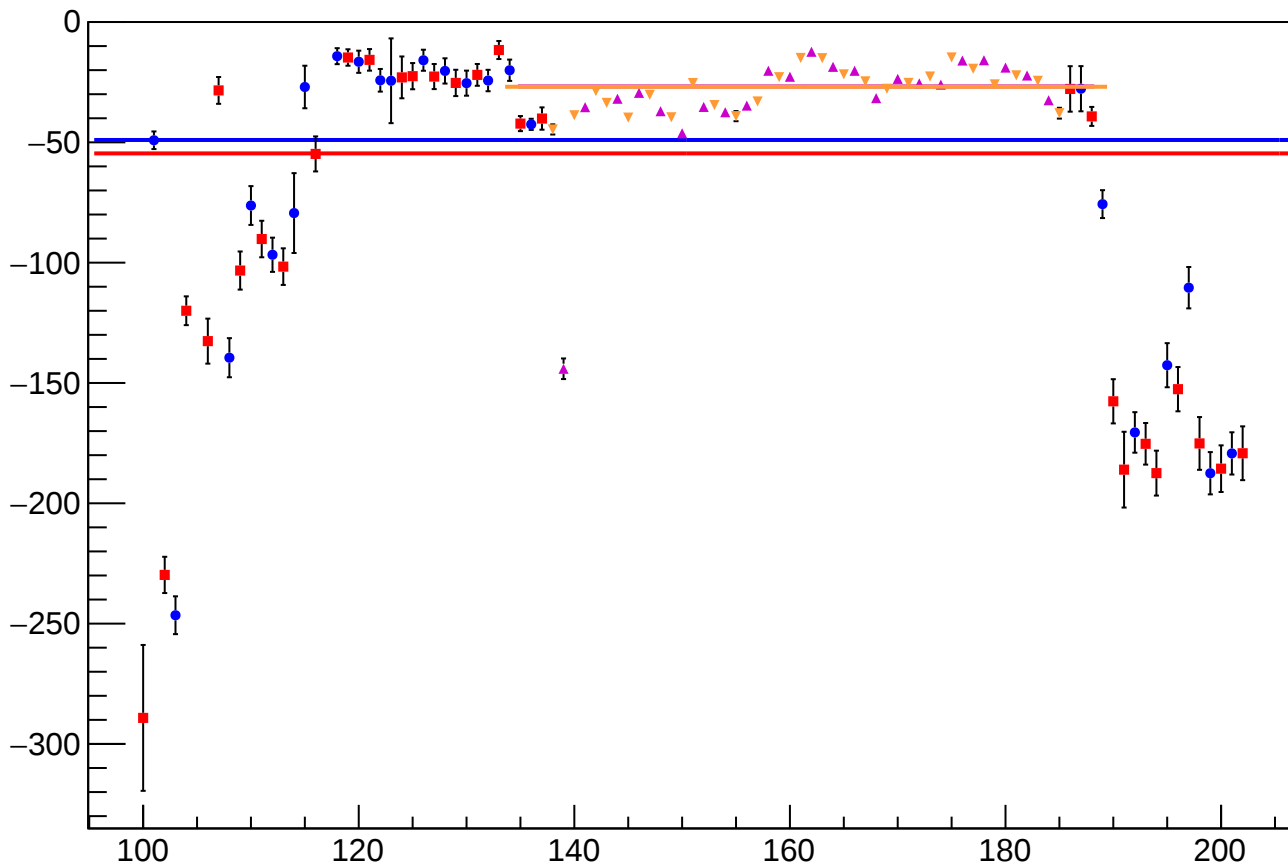
Right:  $-44.754 \pm 1.623$   $\chi^2/\text{NDF}$ : 955.5/16

In:  $-42.696 \pm 0.395$   $\chi^2/\text{NDF}$ : 933.0/29

Out:  $-43.784 \pm 0.382$   $\chi^2/\text{NDF}$ : 1302.8/34

All:  $-43.258 \pm 0.274$   $\chi^2/\text{NDF}$ : 2239.7/64

reg\_asym\_sam2\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-49.021 \pm 1.076$   $\chi^2/\text{NDF}$ : 2058.5/23

Left Out:  $-26.902 \pm 0.316$   $\chi^2/\text{NDF}$ : 631.0/24

Right Out:  $-54.597 \pm 1.094$   $\chi^2/\text{NDF}$ : 2601.3/28

Left In:  $-26.774 \pm 0.326$   $\chi^2/\text{NDF}$ : 1394.5/22

Left:  $-26.840 \pm 0.227$   $\chi^2/\text{NDF}$ : 2025.6/47

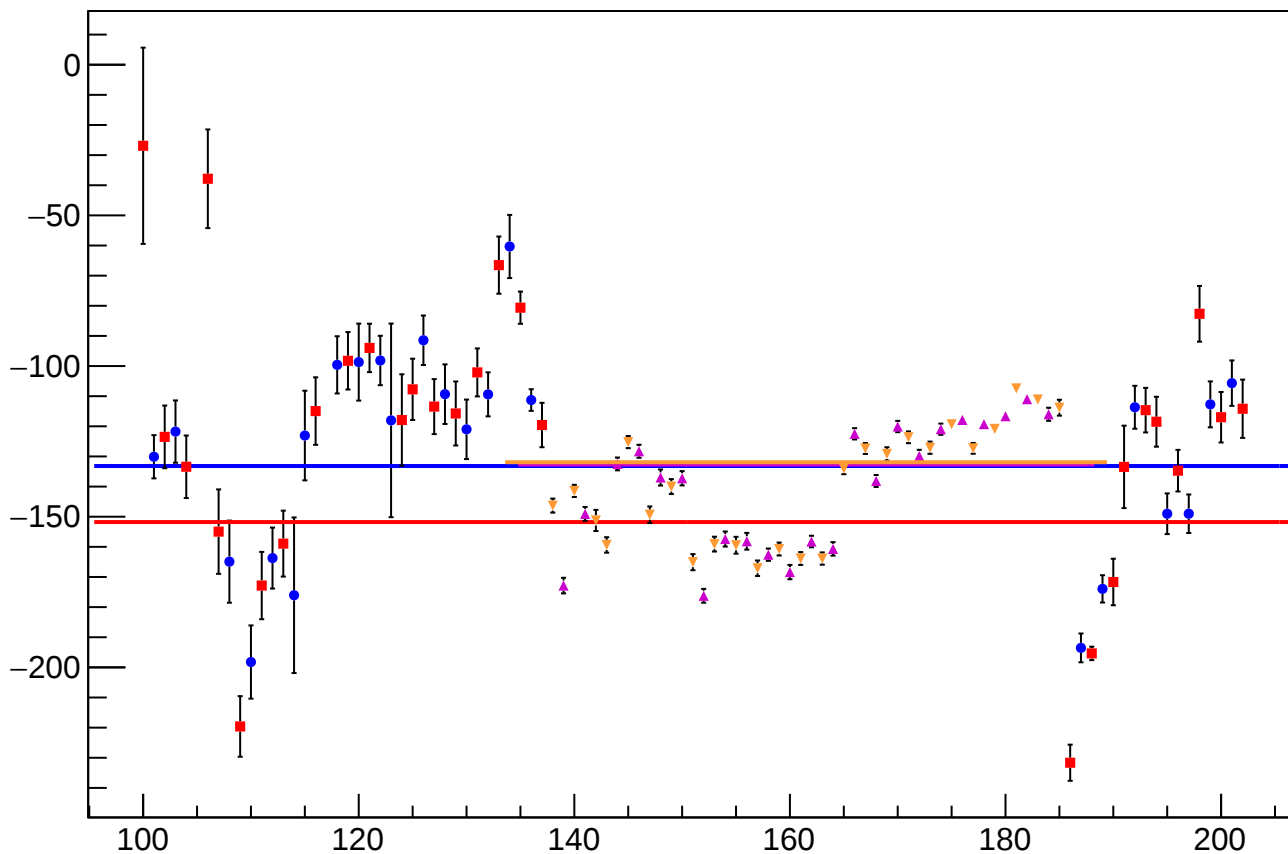
Right:  $-51.765 \pm 0.767$   $\chi^2/\text{NDF}$ : 4673.0/52

In:  $-28.646 \pm 0.312$   $\chi^2/\text{NDF}$ : 3844.3/46

Out:  $-29.039 \pm 0.304$   $\chi^2/\text{NDF}$ : 3824.0/53

All:  $-28.848 \pm 0.218$   $\chi^2/\text{NDF}$ : 7669.1/100

reg\_asym\_sam2\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-133.176 \pm 1.536$   $\chi^2/\text{NDF}: 495.6/23$

Left Out:  $-131.912 \pm 0.391$   $\chi^2/\text{NDF}: 2439.3/24$

Right Out:  $-151.775 \pm 1.353$   $\chi^2/\text{NDF}: 1289.9/28$

Left In:  $-132.690 \pm 0.399$   $\chi^2/\text{NDF}: 2480.2/22$

Left:  $-132.293 \pm 0.280$   $\chi^2/\text{NDF}: 4921.5/47$

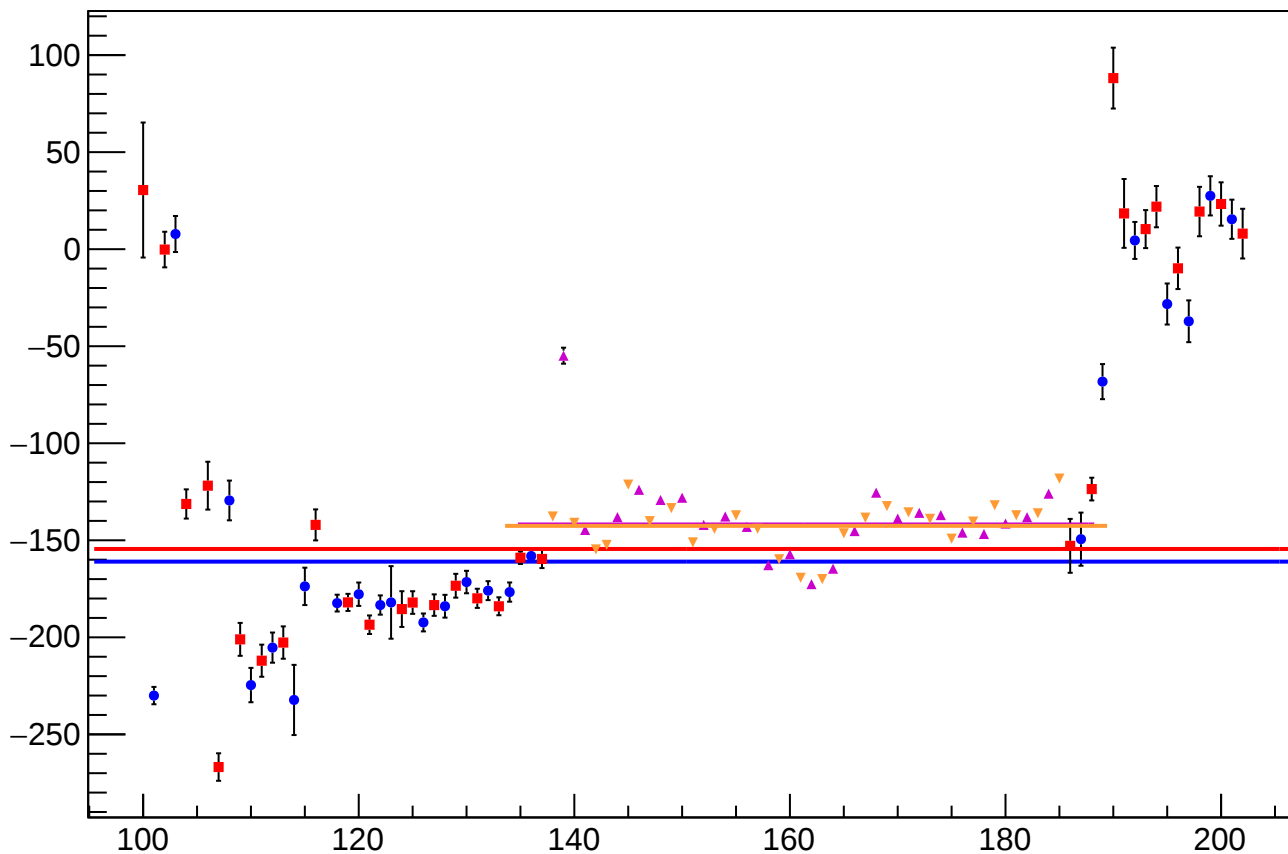
Right:  $-143.646 \pm 1.016$   $\chi^2/\text{NDF}: 1868.0/52$

In:  $-132.720 \pm 0.387$   $\chi^2/\text{NDF}: 2975.9/46$

Out:  $-133.446 \pm 0.376$   $\chi^2/\text{NDF}: 3927.9/53$

All:  $-133.093 \pm 0.270$   $\chi^2/\text{NDF}: 6905.6/100$

reg\_asym\_sam2\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-160.993 \pm 1.215$   $\chi^2/\text{NDF}: 2171.2/23$

Left Out:  $-142.564 \pm 0.354$   $\chi^2/\text{NDF}: 1147.7/24$

Right Out:  $-154.467 \pm 1.258$   $\chi^2/\text{NDF}: 2644.6/28$

Left In:  $-141.856 \pm 0.364$   $\chi^2/\text{NDF}: 1544.3/22$

Left:  $-142.220 \pm 0.254$   $\chi^2/\text{NDF}: 2693.9/47$

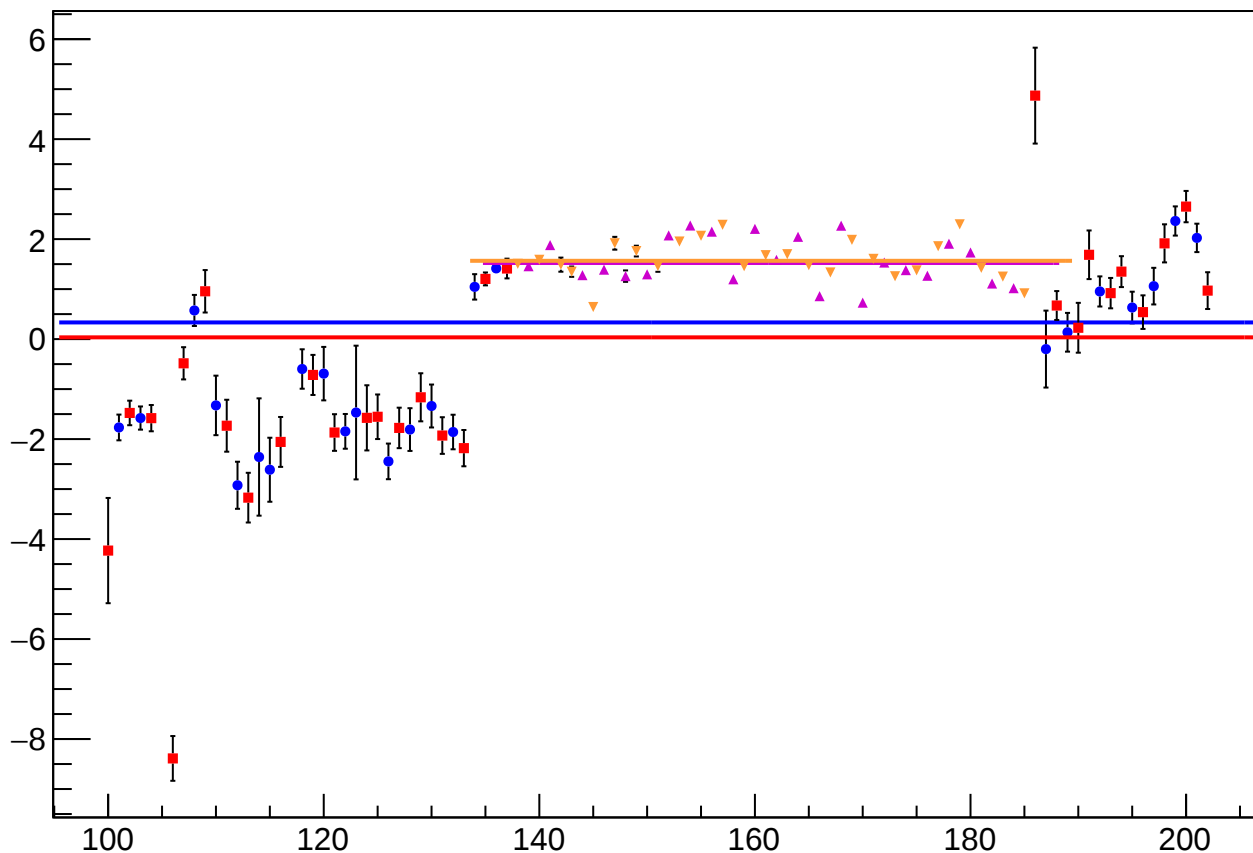
Right:  $-157.844 \pm 0.874$   $\chi^2/\text{NDF}: 4829.7/52$

In:  $-143.430 \pm 0.348$   $\chi^2/\text{NDF}: 3943.1/46$

Out:  $-143.437 \pm 0.341$   $\chi^2/\text{NDF}: 3875.2/53$

All:  $-143.434 \pm 0.244$   $\chi^2/\text{NDF}: 7818.3/100$

reg\_asym\_sam2\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $0.333 \pm 0.059$   $\chi^2/\text{NDF}$ : 633.7/23

Left Out:  $1.566 \pm 0.016$   $\chi^2/\text{NDF}$ : 542.8/24

Right Out:  $0.035 \pm 0.061$   $\chi^2/\text{NDF}$ : 967.8/28

Left In:  $1.523 \pm 0.017$   $\chi^2/\text{NDF}$ : 738.5/22

Left:  $1.545 \pm 0.012$   $\chi^2/\text{NDF}$ : 1284.8/47

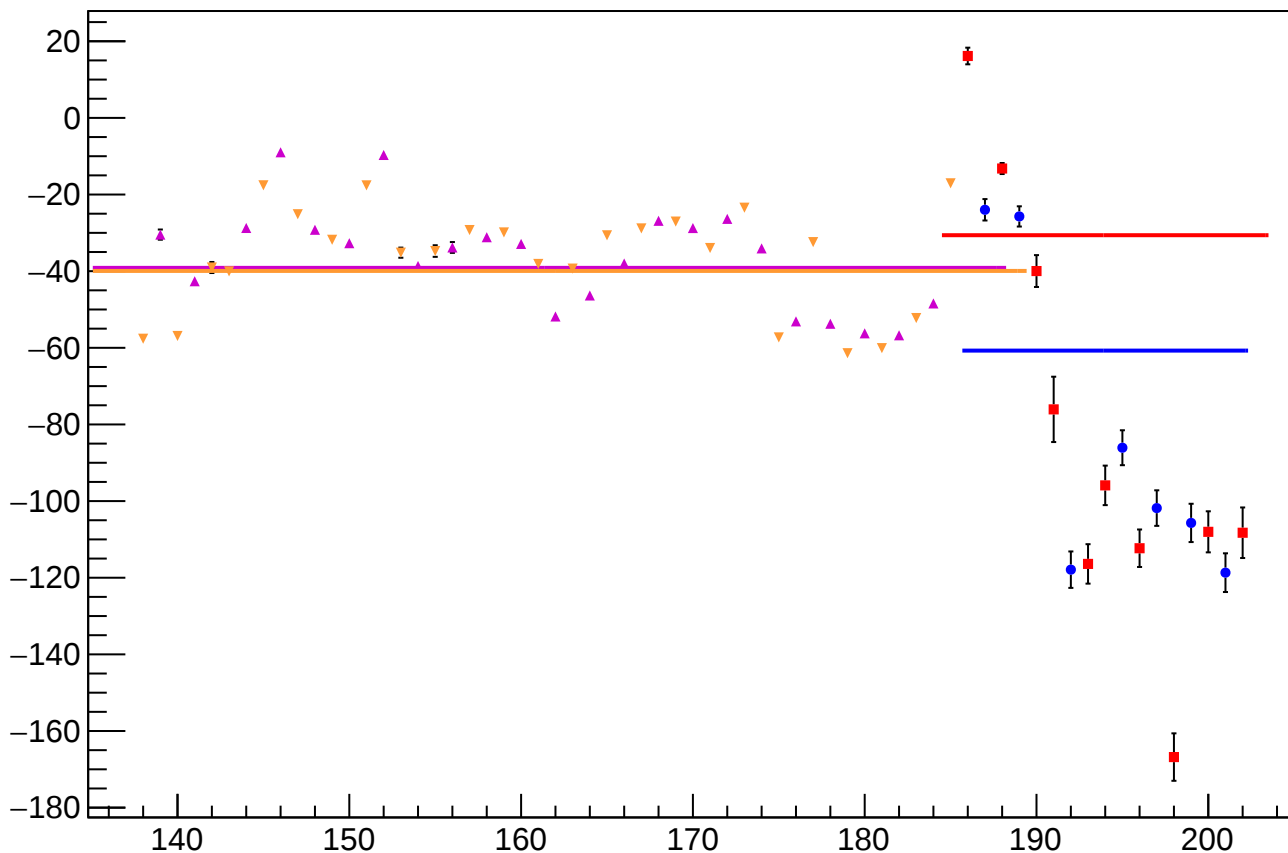
Right:  $0.187 \pm 0.042$   $\chi^2/\text{NDF}$ : 1613.9/52

In:  $1.438 \pm 0.016$   $\chi^2/\text{NDF}$ : 1743.3/46

Out:  $1.464 \pm 0.016$   $\chi^2/\text{NDF}$ : 2106.1/53

All:  $1.451 \pm 0.011$   $\chi^2/\text{NDF}$ : 3850.8/100

reg\_asym\_sam3\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-60.728 \pm 1.429$   $\chi^2/\text{NDF}: 815.4/6$

Left Out:  $-39.935 \pm 0.153$   $\chi^2/\text{NDF}: 9806.5/24$

Right Out:  $-30.613 \pm 1.017$   $\chi^2/\text{NDF}: 2191.1/9$

Left In:  $-39.137 \pm 0.155$   $\chi^2/\text{NDF}: 8534.5/22$

Left:  $-39.540 \pm 0.109$   $\chi^2/\text{NDF}: 18354.5/47$

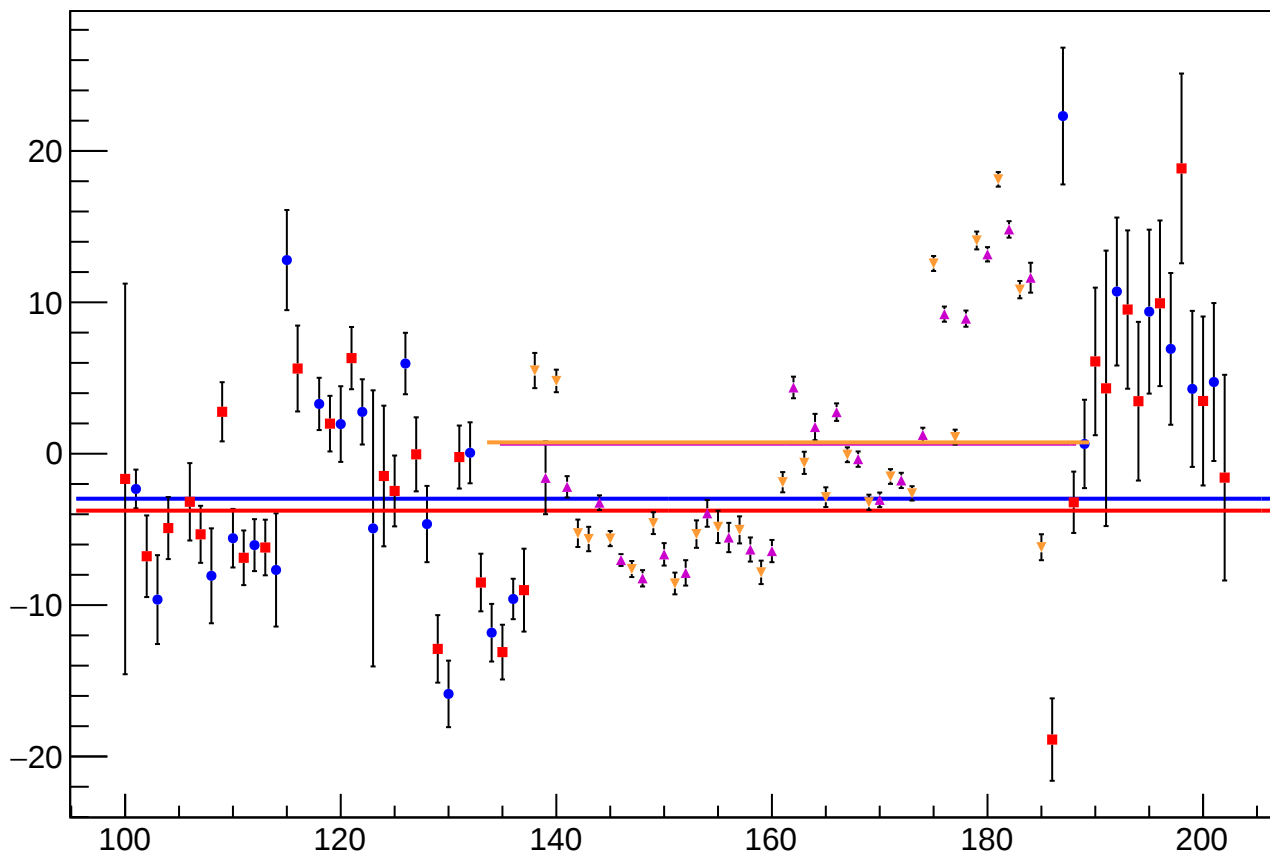
Right:  $-40.736 \pm 0.829$   $\chi^2/\text{NDF}: 3301.3/16$

In:  $-39.387 \pm 0.154$   $\chi^2/\text{NDF}: 9575.5/29$

Out:  $-39.728 \pm 0.151$   $\chi^2/\text{NDF}: 12079.8/34$

All:  $-39.560 \pm 0.108$   $\chi^2/\text{NDF}: 21657.8/64$

reg\_asym\_sam3\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-2.972 \pm 0.478$   $\chi^2/\text{NDF}: 218.2/23$

Left Out:  $0.749 \pm 0.124$   $\chi^2/\text{NDF}: 3970.9/24$

Right Out:  $-3.761 \pm 0.471$   $\chi^2/\text{NDF}: 187.4/28$

Left In:  $0.660 \pm 0.124$   $\chi^2/\text{NDF}: 3337.8/22$

Left:  $0.705 \pm 0.088$   $\chi^2/\text{NDF}: 7308.9/47$

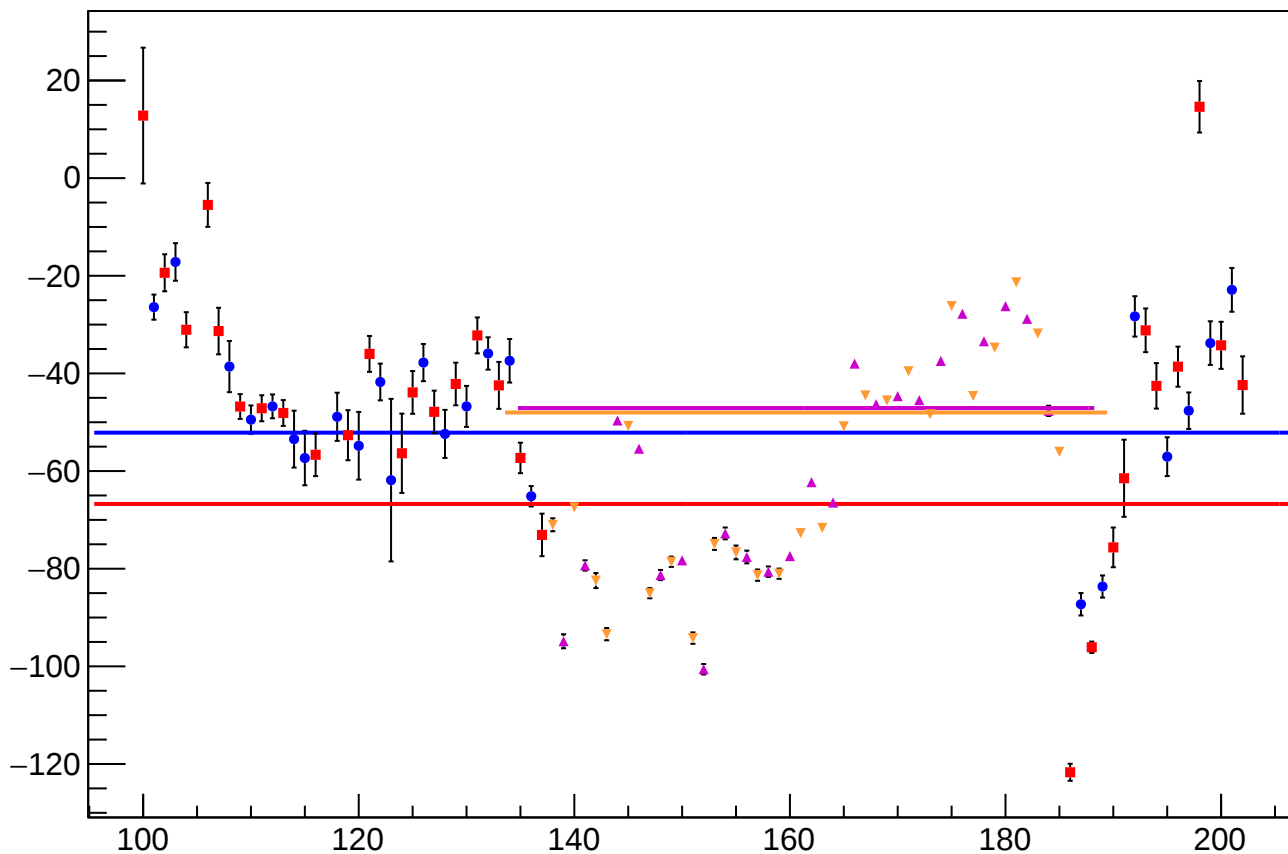
Right:  $-3.372 \pm 0.336$   $\chi^2/\text{NDF}: 406.9/52$

In:  $0.430 \pm 0.120$   $\chi^2/\text{NDF}: 3610.0/46$

Out:  $0.456 \pm 0.120$   $\chi^2/\text{NDF}: 4243.8/53$

All:  $0.443 \pm 0.085$   $\chi^2/\text{NDF}: 7853.8/100$

reg\_asym\_sam3\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-52.136 \pm 0.715$   $\chi^2/\text{NDF}$ : 817.8/23

Left Out:  $-48.008 \pm 0.155$   $\chi^2/\text{NDF}$ : 16950.0/24

Right Out:  $-66.734 \pm 0.608$   $\chi^2/\text{NDF}$ : 3054.8/28

Left In:  $-47.085 \pm 0.155$   $\chi^2/\text{NDF}$ : 15515.2/22

Left:  $-47.548 \pm 0.110$   $\chi^2/\text{NDF}$ : 32482.9/47

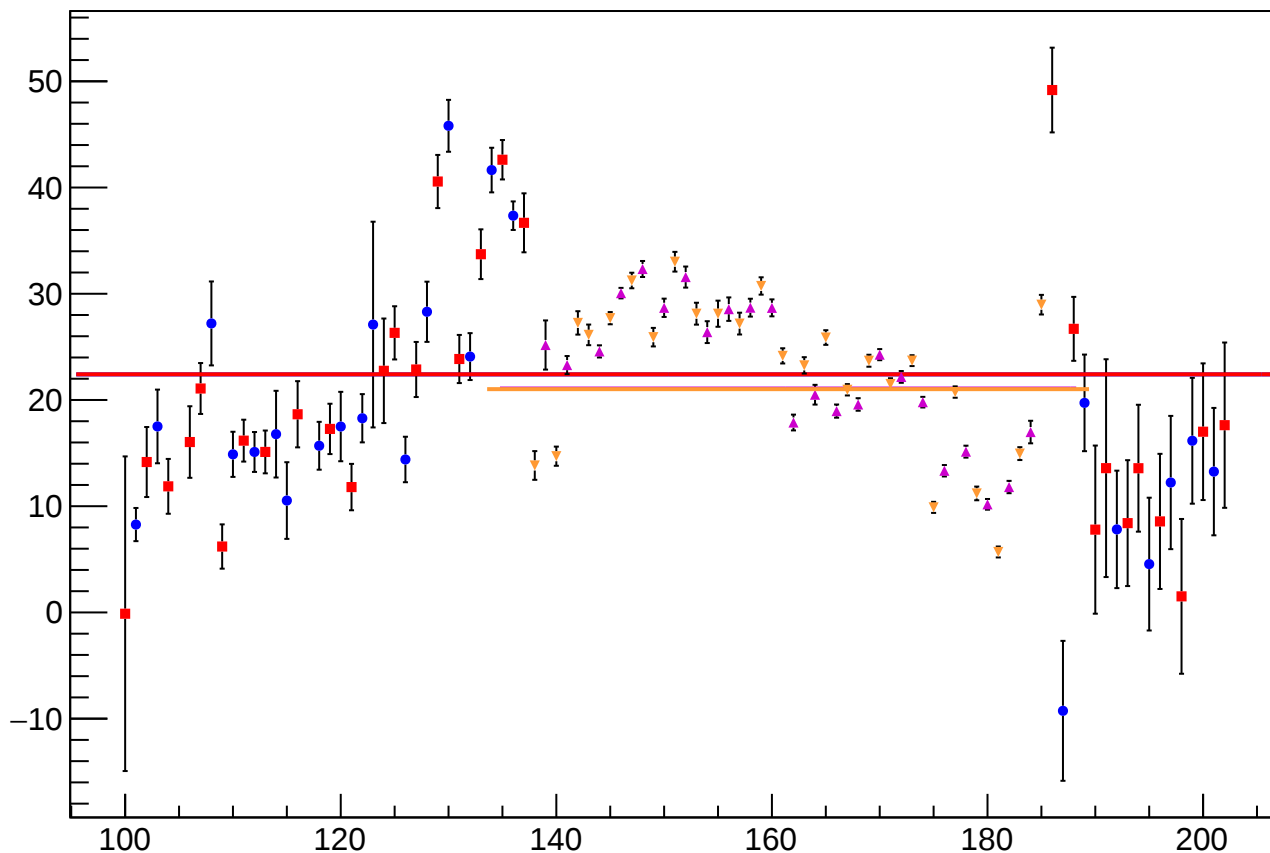
Right:  $-60.611 \pm 0.463$   $\chi^2/\text{NDF}$ : 4114.4/52

In:  $-47.312 \pm 0.152$   $\chi^2/\text{NDF}$ : 16380.6/46

Out:  $-49.146 \pm 0.150$   $\chi^2/\text{NDF}$ : 20895.8/53

All:  $-48.241 \pm 0.107$   $\chi^2/\text{NDF}$ : 37350.3/100

reg\_asym\_sam3\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 22.406 $\pm$ 0.542  $\chi^2$ /NDF: 503.5/23

Left Out: 21.020 $\pm$ 0.139  $\chi^2$ /NDF:2799.3/24

Right Out: 22.417 $\pm$ 0.544  $\chi^2$ /NDF: 439.4/28

Left In: 21.079 $\pm$ 0.140  $\chi^2$ /NDF:2173.2/22

Left: 21.049 $\pm$ 0.098  $\chi^2$ /NDF: 4972.6/47

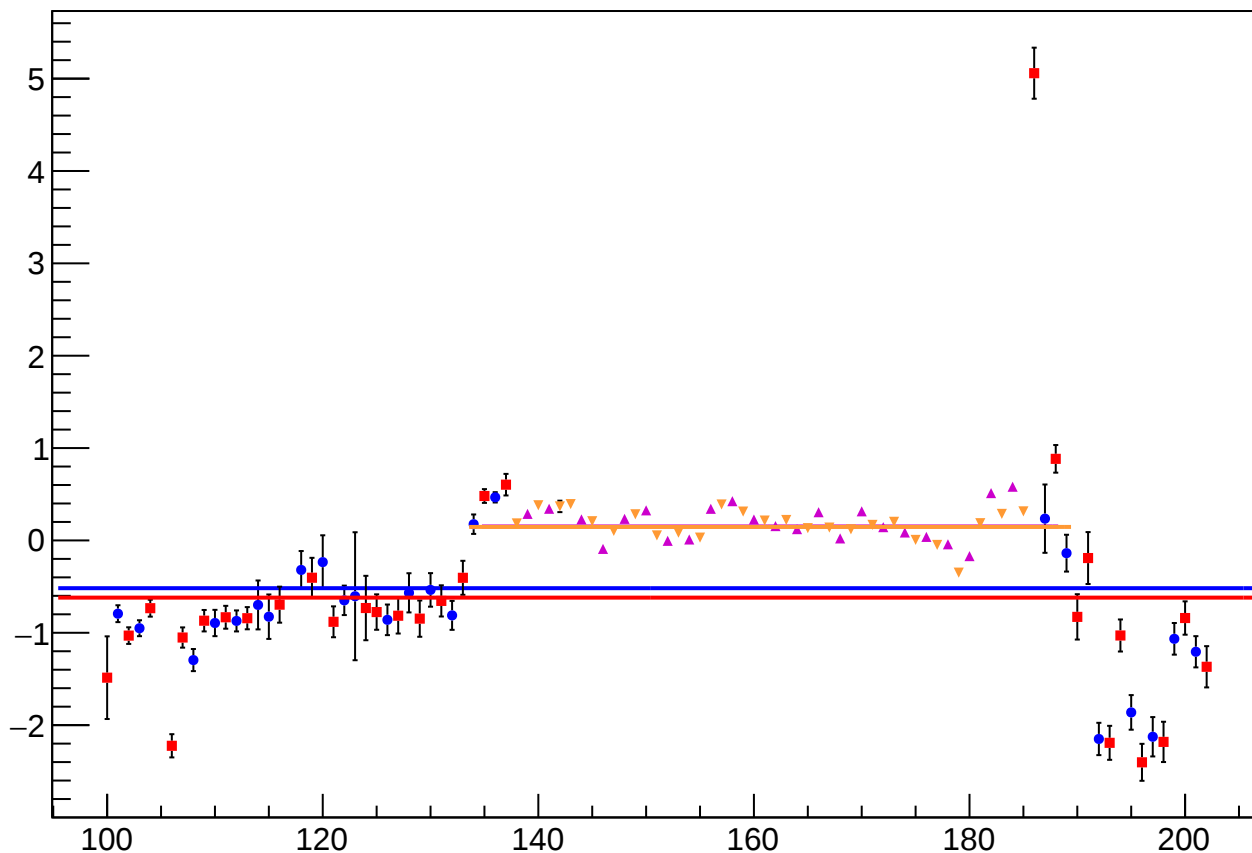
Right: 22.412 $\pm$ 0.384  $\chi^2$ /NDF: 942.9/52

In: 21.161 $\pm$ 0.135  $\chi^2$ /NDF:2682.4/46

Out: 21.105 $\pm$ 0.134  $\chi^2$ /NDF:3244.8/53

All: 21.133 $\pm$ 0.095  $\chi^2$ /NDF: 5927.3/100

reg\_asym\_sam3\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.517 \pm 0.028$   $\chi^2/\text{NDF}$ : 689.7/23

Left Out:  $0.146 \pm 0.006$   $\chi^2/\text{NDF}$ : 610.2/24

Right Out:  $-0.619 \pm 0.027$   $\chi^2/\text{NDF}$ : 1299.5/28

Left In:  $0.151 \pm 0.006$   $\chi^2/\text{NDF}$ : 869.5/22

Left:  $0.149 \pm 0.005$   $\chi^2/\text{NDF}$ : 1480.1/47

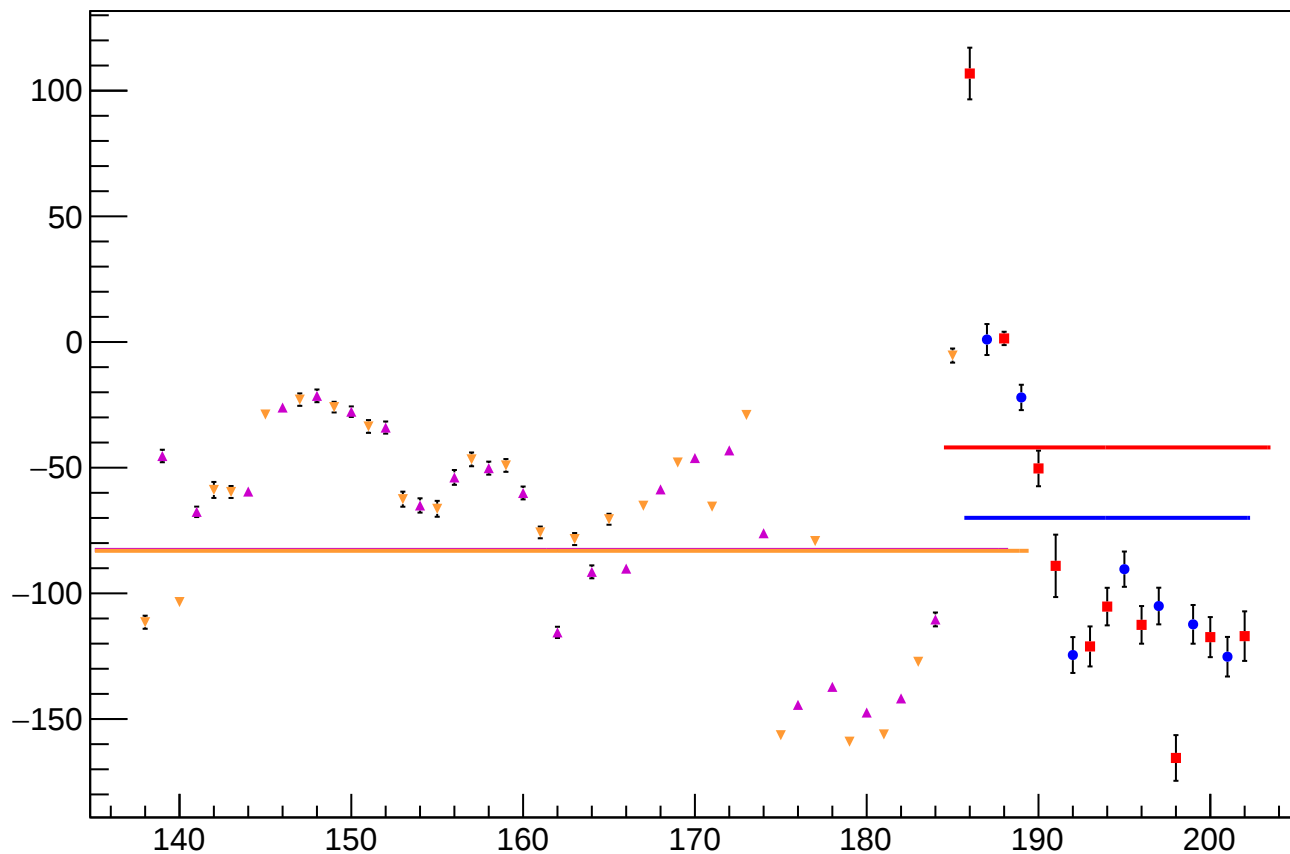
Right:  $-0.569 \pm 0.020$   $\chi^2/\text{NDF}$ : 1996.0/52

In:  $0.118 \pm 0.006$   $\chi^2/\text{NDF}$ : 2104.3/46

Out:  $0.107 \pm 0.006$   $\chi^2/\text{NDF}$ : 2654.5/53

All:  $0.112 \pm 0.004$   $\chi^2/\text{NDF}$ : 4760.3/100

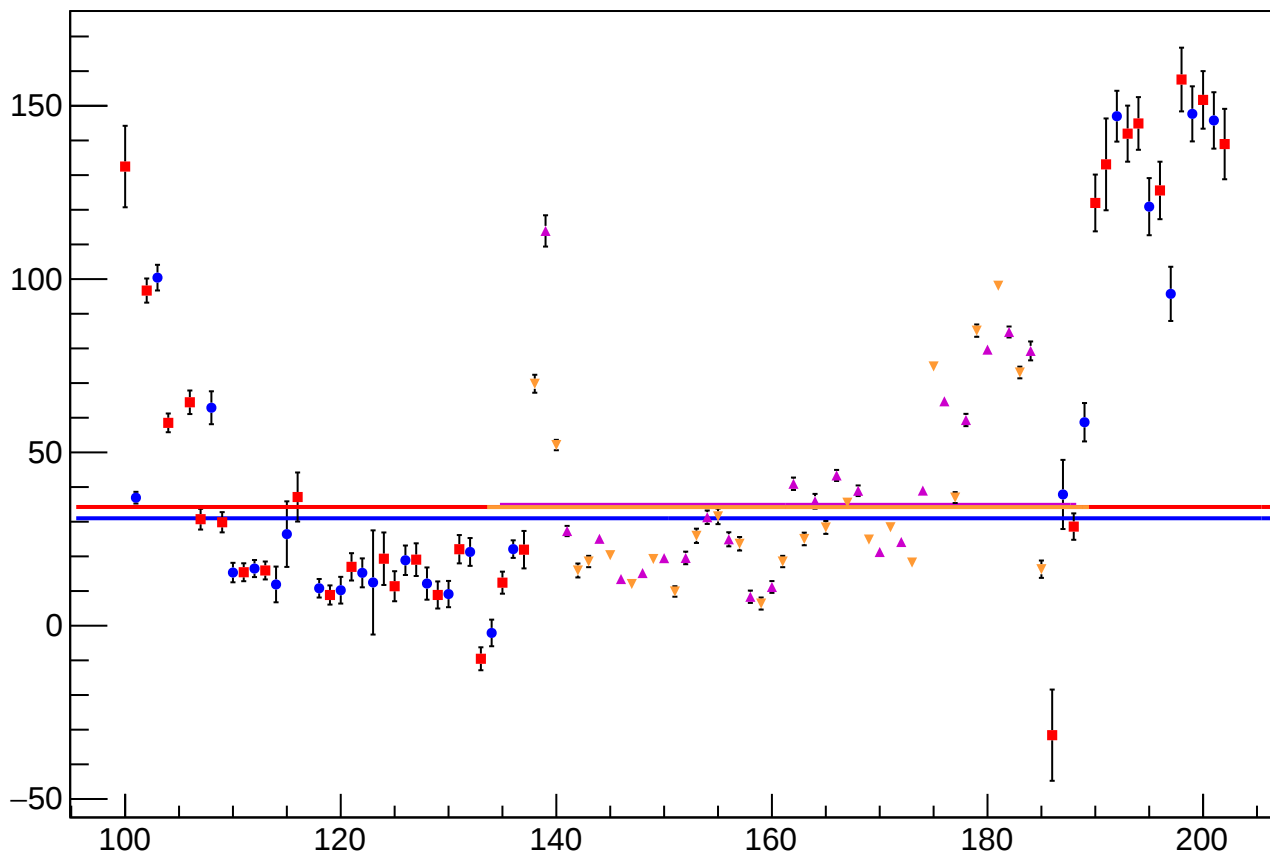
reg\_asym\_sam4\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-69.952 \pm 2.521$   $\chi^2/\text{NDF}$ : 392.3/6  
 Left Out:  $-83.068 \pm 0.406$   $\chi^2/\text{NDF}$ : 13817.3/24  
 Right Out:  $-41.941 \pm 1.933$   $\chi^2/\text{NDF}$ : 1084.3/9  
 Left In:  $-82.711 \pm 0.415$   $\chi^2/\text{NDF}$ : 10841.4/22

Left:  $-82.893 \pm 0.290$   $\chi^2/\text{NDF}$ : 24659.1/47  
 Right:  $-52.313 \pm 1.534$   $\chi^2/\text{NDF}$ : 1554.4/16  
 In:  $-82.374 \pm 0.410$   $\chi^2/\text{NDF}$ : 11258.6/29  
 Out:  $-81.328 \pm 0.398$   $\chi^2/\text{NDF}$ : 15335.1/34  
 All:  $-81.835 \pm 0.285$   $\chi^2/\text{NDF}$ : 26597.1/64

reg\_asym\_sam4\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $30.994 \pm 0.777$   $\chi^2/\text{NDF}: 1618.4/23$

Left Out:  $34.219 \pm 0.320$   $\chi^2/\text{NDF}: 6192.6/24$

Right Out:  $34.252 \pm 0.767$   $\chi^2/\text{NDF}: 2276.1/28$

Left In:  $34.870 \pm 0.329$   $\chi^2/\text{NDF}: 4716.1/22$

Left:  $34.535 \pm 0.230$   $\chi^2/\text{NDF}: 10910.7/47$

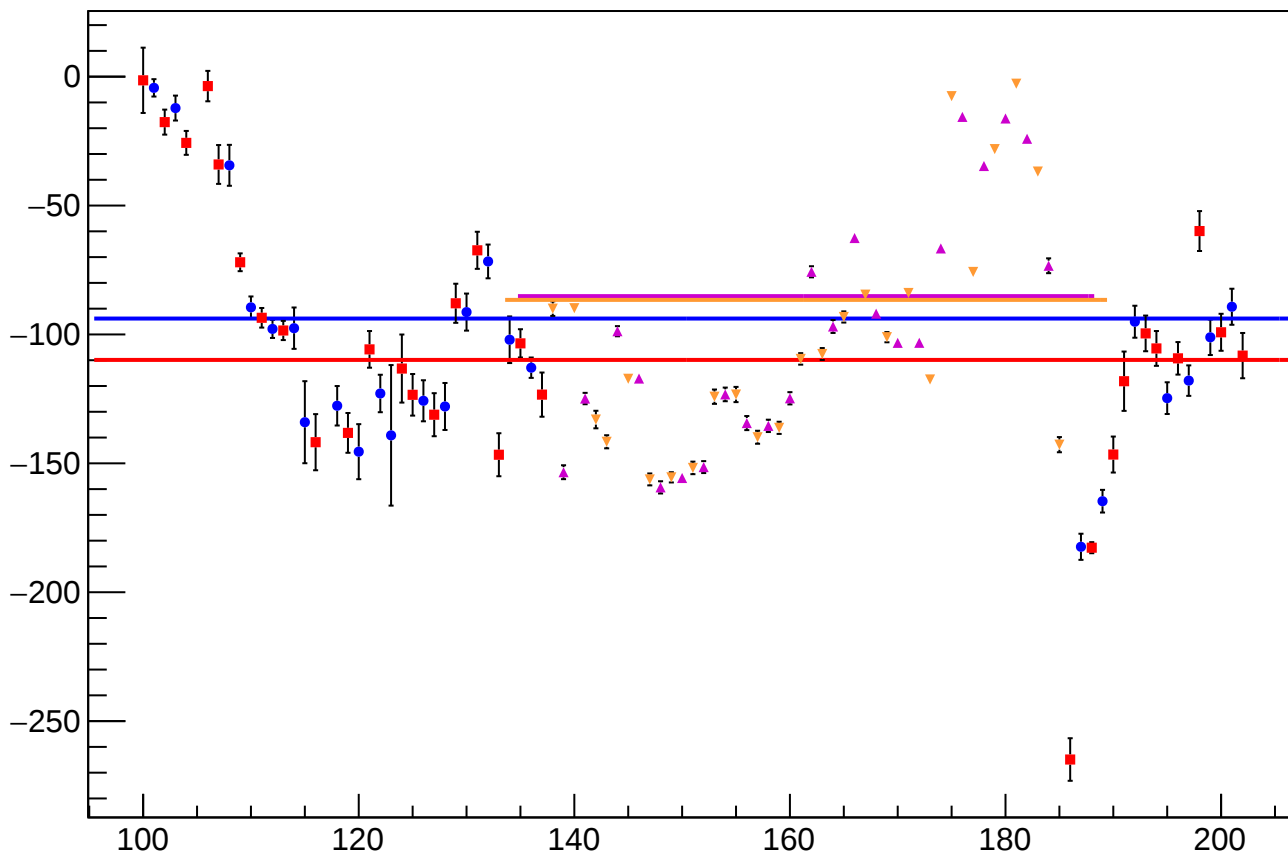
Right:  $32.644 \pm 0.546$   $\chi^2/\text{NDF}: 3903.4/52$

In:  $34.280 \pm 0.303$   $\chi^2/\text{NDF}: 6355.7/46$

Out:  $34.224 \pm 0.296$   $\chi^2/\text{NDF}: 8468.6/53$

All:  $34.251 \pm 0.212$   $\chi^2/\text{NDF}: 14824.3/100$

reg\_asym\_sam4\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-93.833 \pm 1.187$   $\chi^2/\text{NDF}$ : 1791.7/23

Left Out:  $-86.595 \pm 0.408$   $\chi^2/\text{NDF}$ : 14515.7/24

Right Out:  $-109.881 \pm 1.041$   $\chi^2/\text{NDF}$ : 3017.9/28

Left In:  $-85.134 \pm 0.415$   $\chi^2/\text{NDF}$ : 12841.3/22

Left:  $-85.876 \pm 0.291$   $\chi^2/\text{NDF}$ : 27363.3/47

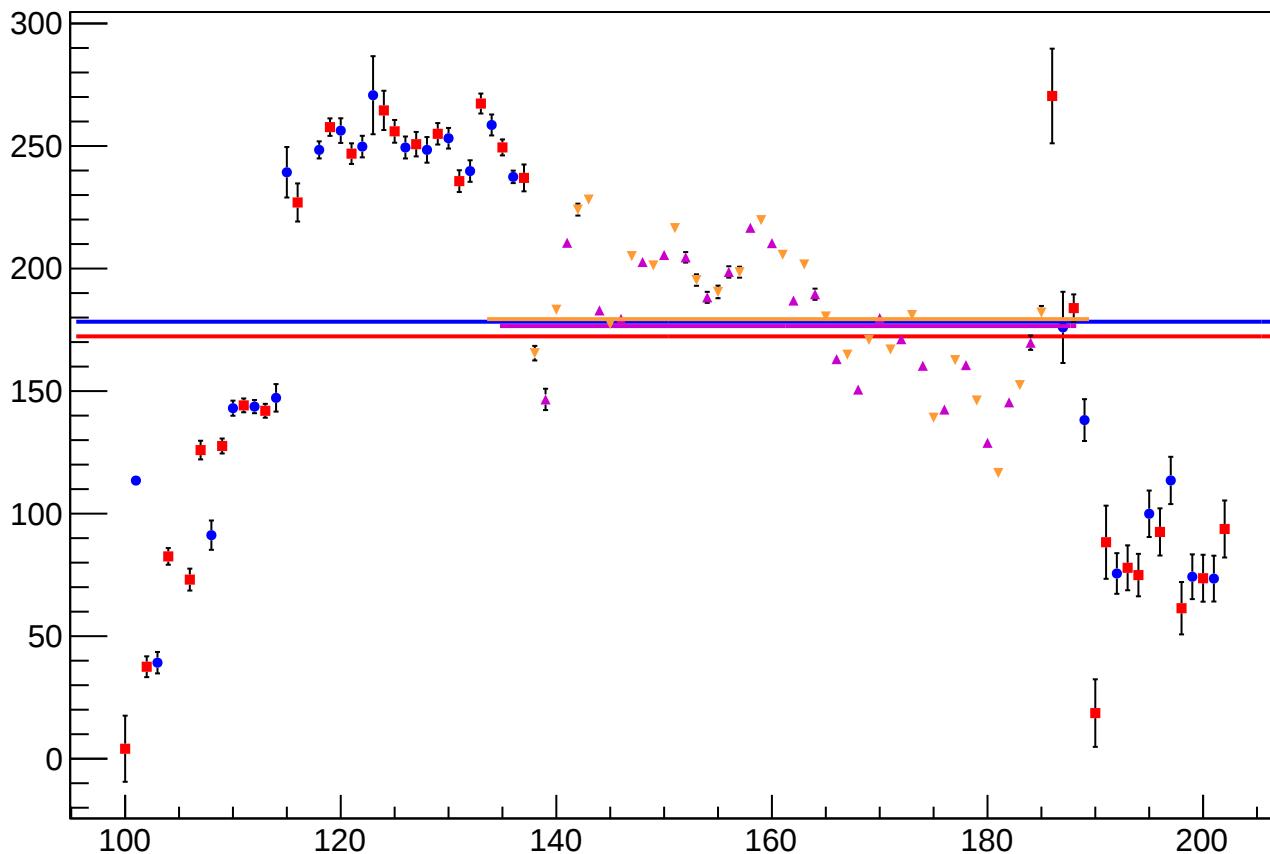
Right:  $-102.902 \pm 0.783$   $\chi^2/\text{NDF}$ : 4913.0/52

In:  $-86.082 \pm 0.392$   $\chi^2/\text{NDF}$ : 14680.9/46

Out:  $-89.701 \pm 0.380$   $\chi^2/\text{NDF}$ : 17967.2/53

All:  $-87.946 \pm 0.273$   $\chi^2/\text{NDF}$ : 32692.0/100

reg\_asym\_sam4\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 178.309 $\pm$ 0.891  $\chi^2$ /NDF: 5893.7/23

Left Out: 179.359 $\pm$ 0.362  $\chi^2$ /NDF: 5982.2/24

Right Out: 172.333 $\pm$ 0.885  $\chi^2$ /NDF: 7119.5/28

Left In: 176.531 $\pm$ 0.371  $\chi^2$ /NDF: 4426.0/22

Left: 177.980 $\pm$ 0.259  $\chi^2$ /NDF: 10438.0/47

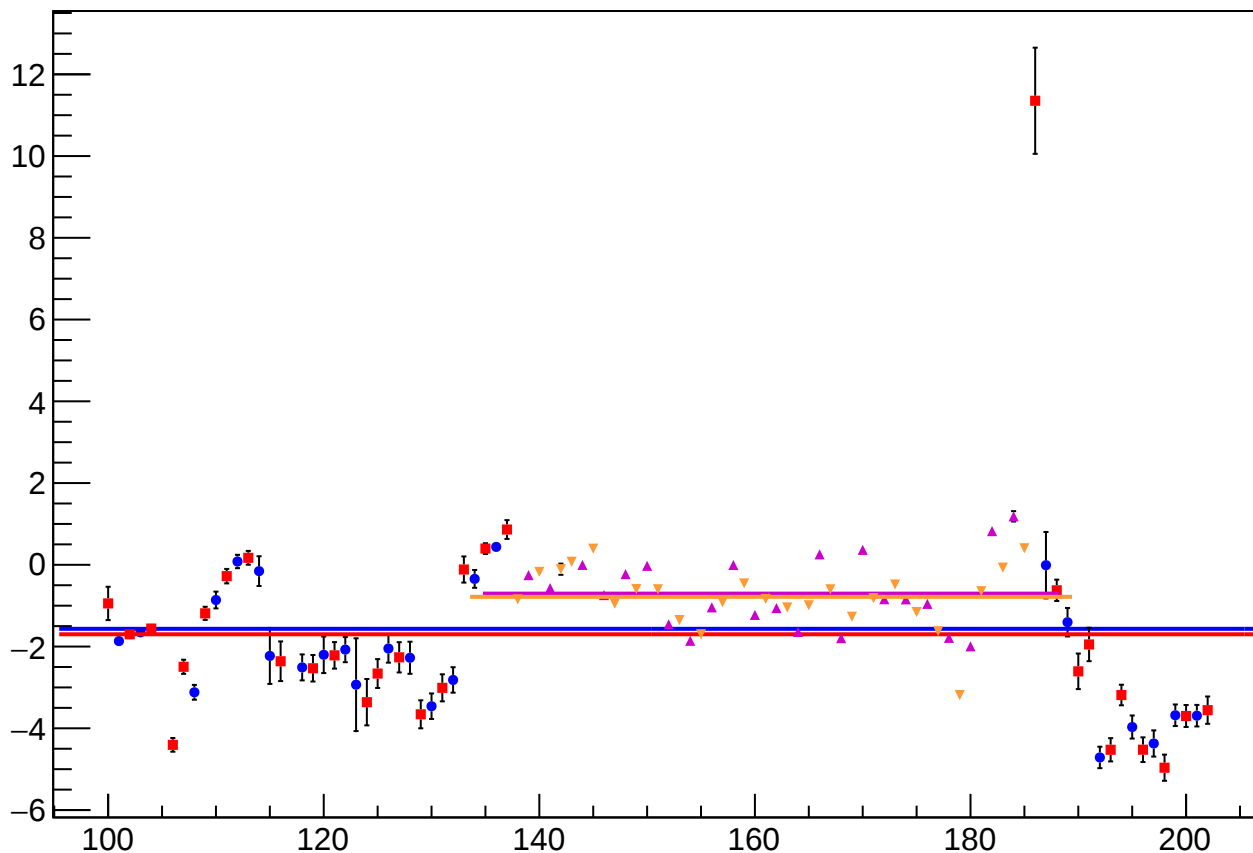
Right: 175.301 $\pm$ 0.628  $\chi^2$ /NDF: 13035.9/52

In: 176.794 $\pm$ 0.342  $\chi^2$ /NDF: 10323.1/46

Out: 178.353 $\pm$ 0.335  $\chi^2$ /NDF: 13155.7/53

All: 177.591 $\pm$ 0.239  $\chi^2$ /NDF: 23489.4/100

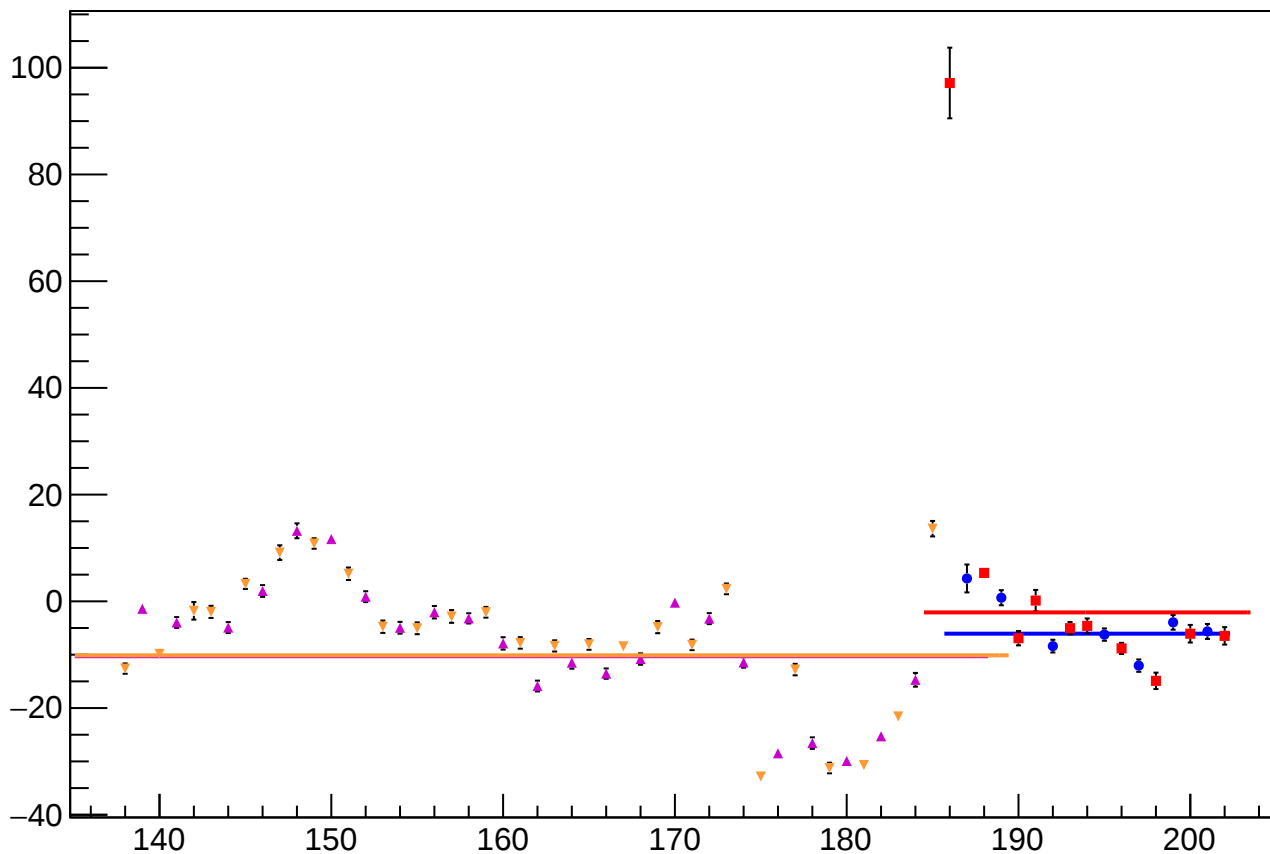
reg\_asym\_sam4\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-1.566 \pm 0.044$   $\chi^2/\text{NDF}$ : 1105.8/23  
 Left Out:  $-0.783 \pm 0.017$   $\chi^2/\text{NDF}$ : 1771.6/24  
 Right Out:  $-1.700 \pm 0.042$   $\chi^2/\text{NDF}$ : 1499.5/28  
 Left In:  $-0.705 \pm 0.017$   $\chi^2/\text{NDF}$ : 2407.7/22

Left:  $-0.745 \pm 0.012$   $\chi^2/\text{NDF}$ : 4190.3/47  
 Right:  $-1.637 \pm 0.030$   $\chi^2/\text{NDF}$ : 2610.0/52  
 In:  $-0.814 \pm 0.016$   $\chi^2/\text{NDF}$ : 3841.0/46  
 Out:  $-0.909 \pm 0.015$   $\chi^2/\text{NDF}$ : 3686.9/53  
 All:  $-0.862 \pm 0.011$   $\chi^2/\text{NDF}$ : 7546.3/100

reg\_asym\_sam5\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: -6.061+/-0.509  $\chi^2/\text{NDF}$ : 71.1/6

Left Out: -10.117+/-0.201  $\chi^2/\text{NDF}$ : 4138.1/24

Right Out: -2.074+/-0.389  $\chi^2/\text{NDF}$ : 507.0/9

Left In: -10.290+/-0.205  $\chi^2/\text{NDF}$ : 3451.0/22

Left: -10.202+/-0.144  $\chi^2/\text{NDF}$ : 7589.5/47

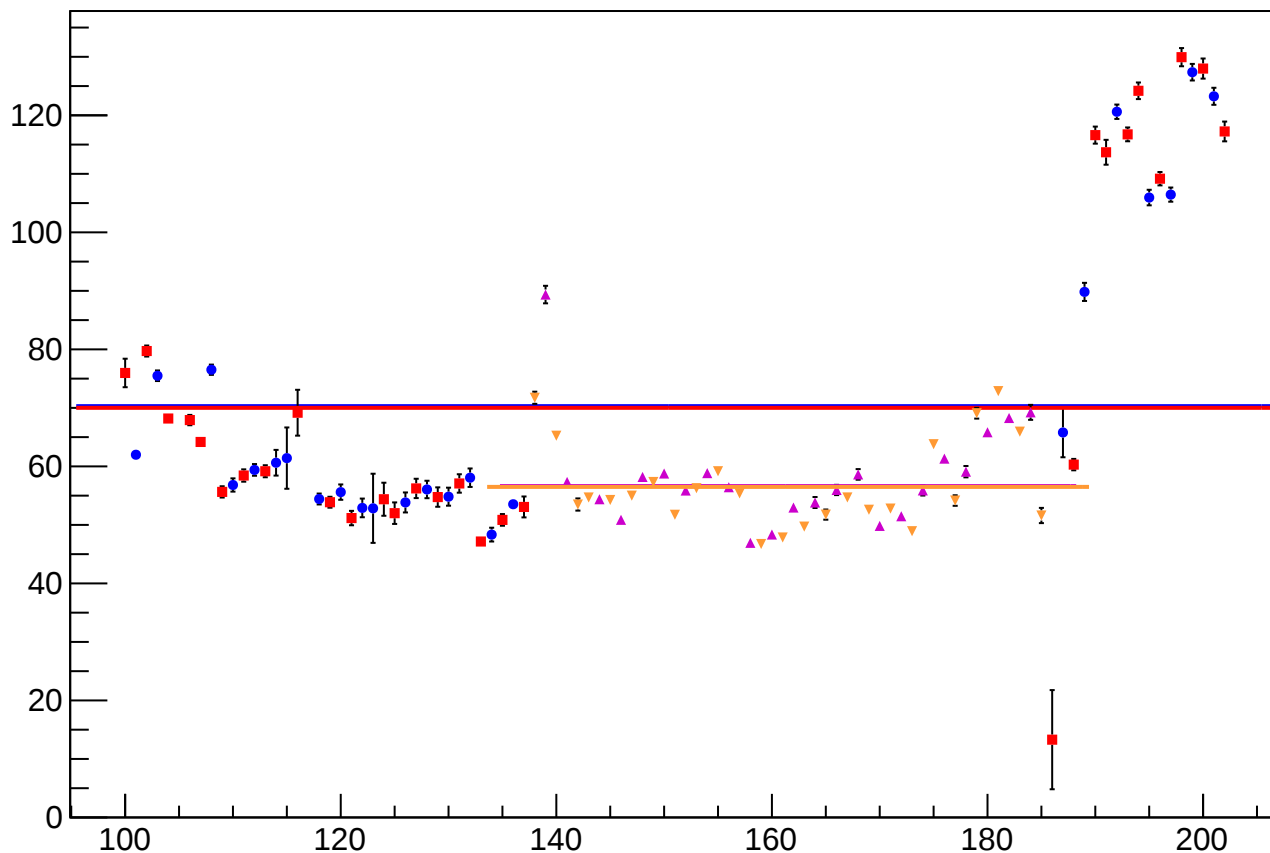
Right: -3.545+/-0.309  $\chi^2/\text{NDF}$ : 616.9/16

In: -9.697+/-0.190  $\chi^2/\text{NDF}$ : 3581.5/29

Out: -8.417+/-0.179  $\chi^2/\text{NDF}$ : 4982.2/34

All: -9.017+/-0.130  $\chi^2/\text{NDF}$ : 8587.8/64

reg\_asym\_sam5\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 70.296+/-0.237     $\chi^2/\text{NDF}$ : 8668.4/23

Left Out: 56.496+/-0.159     $\chi^2/\text{NDF}$ :1968.0/24

Right Out: 70.010+/-0.218     $\chi^2/\text{NDF}$ : 12341.8/28

Left In: 56.635+/-0.165     $\chi^2/\text{NDF}$ :1607.9/22

Left: 56.563+/-0.114     $\chi^2/\text{NDF}$ : 3576.3/47

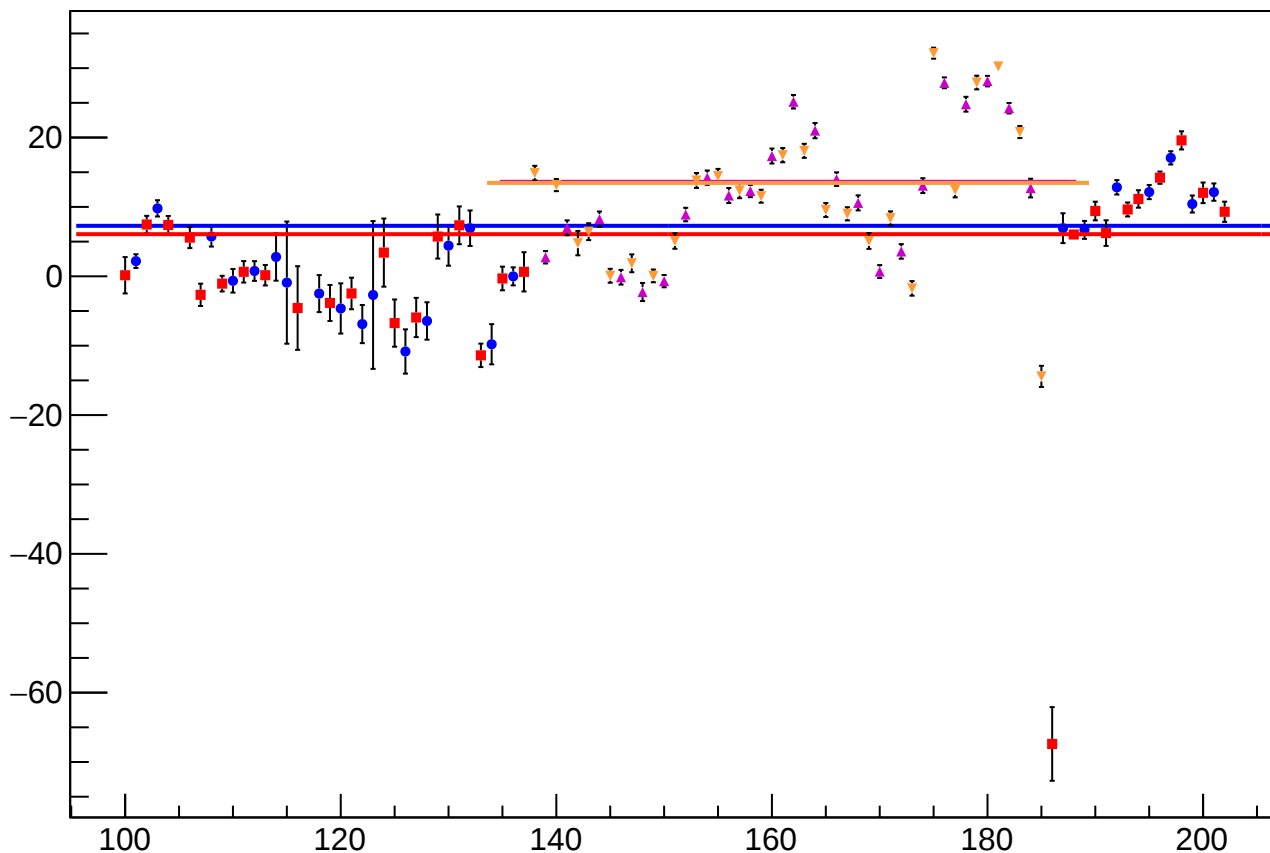
Right: 70.141+/-0.160     $\chi^2/\text{NDF}$ : 21011.0/52

In: 61.095+/-0.136     $\chi^2/\text{NDF}$ :12510.9/46

Out: 61.193+/-0.128     $\chi^2/\text{NDF}$ :16824.7/53

All: 61.147+/-0.093     $\chi^2/\text{NDF}$ : 29335.9/100

reg\_asym\_sam5\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $7.277 \pm 0.319$   $\chi^2/\text{NDF}$ : 432.0/23

Left Out:  $13.462 \pm 0.202$   $\chi^2/\text{NDF}$ : 2736.3/24

Right Out:  $6.072 \pm 0.262$   $\chi^2/\text{NDF}$ : 733.1/28

Left In:  $13.620 \pm 0.204$   $\chi^2/\text{NDF}$ : 2315.4/22

Left:  $13.540 \pm 0.144$   $\chi^2/\text{NDF}$ : 5052.0/47

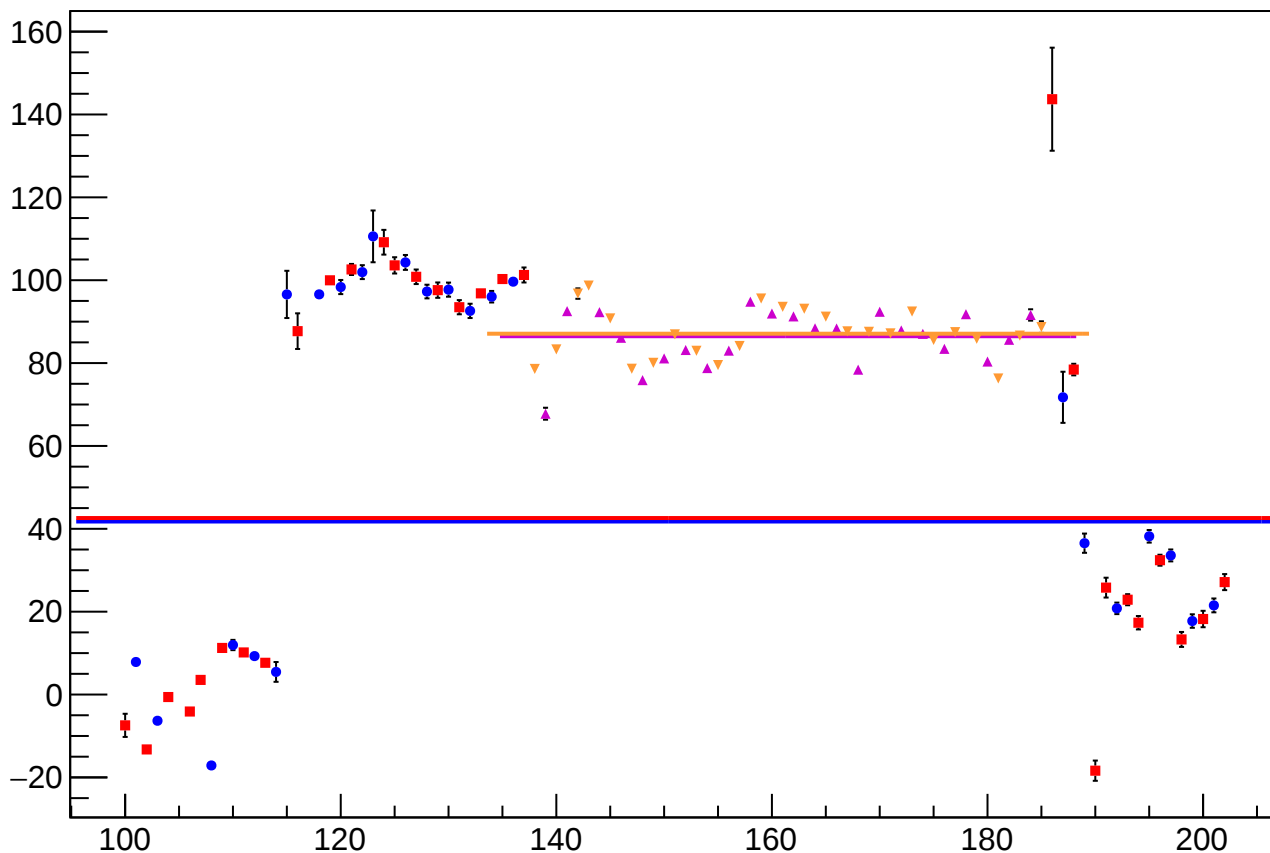
Right:  $6.558 \pm 0.203$   $\chi^2/\text{NDF}$ : 1173.6/52

In:  $11.773 \pm 0.172$   $\chi^2/\text{NDF}$ : 3027.6/46

Out:  $10.721 \pm 0.160$   $\chi^2/\text{NDF}$ : 3968.3/53

All:  $11.208 \pm 0.117$   $\chi^2/\text{NDF}$ : 7016.0/100

reg\_asym\_sam5\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 41.764 $\pm$ 0.276  $\chi^2$ /NDF: 25458.7/23

Left Out: 87.087 $\pm$ 0.179  $\chi^2$ /NDF:1085.8/24

Right Out: 42.600 $\pm$ 0.257  $\chi^2$ /NDF: 30745.6/28

Left In: 86.482 $\pm$ 0.185  $\chi^2$ /NDF:1003.2/22

Left: 86.794 $\pm$ 0.129  $\chi^2$ /NDF: 2094.5/47

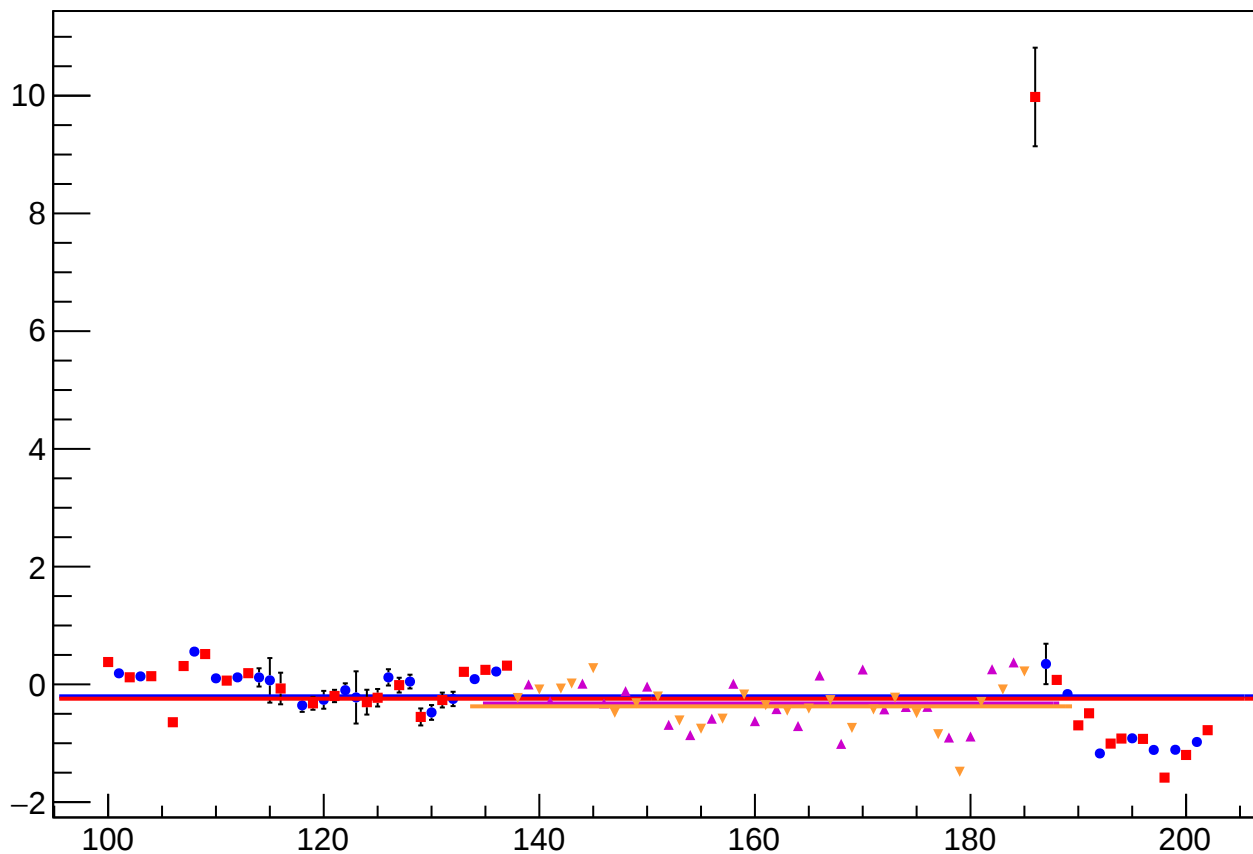
Right: 42.211 $\pm$ 0.188  $\chi^2$ /NDF: 56209.2/52

In: 72.659 $\pm$ 0.153  $\chi^2$ /NDF:44599.3/46

Out: 72.562 $\pm$ 0.147  $\chi^2$ /NDF:51980.4/53

All: 72.608 $\pm$ 0.106  $\chi^2$ /NDF: 96580.0/100

reg\_asym\_sam5\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.203 \pm 0.011$   $\chi^2/\text{NDF}$ : 2836.6/23

Left Out:  $-0.373 \pm 0.008$   $\chi^2/\text{NDF}$ : 1668.6/24

Right Out:  $-0.243 \pm 0.010$   $\chi^2/\text{NDF}$ : 3313.7/28

Left In:  $-0.325 \pm 0.008$   $\chi^2/\text{NDF}$ : 2284.1/22

Left:  $-0.349 \pm 0.006$   $\chi^2/\text{NDF}$ : 3970.2/47

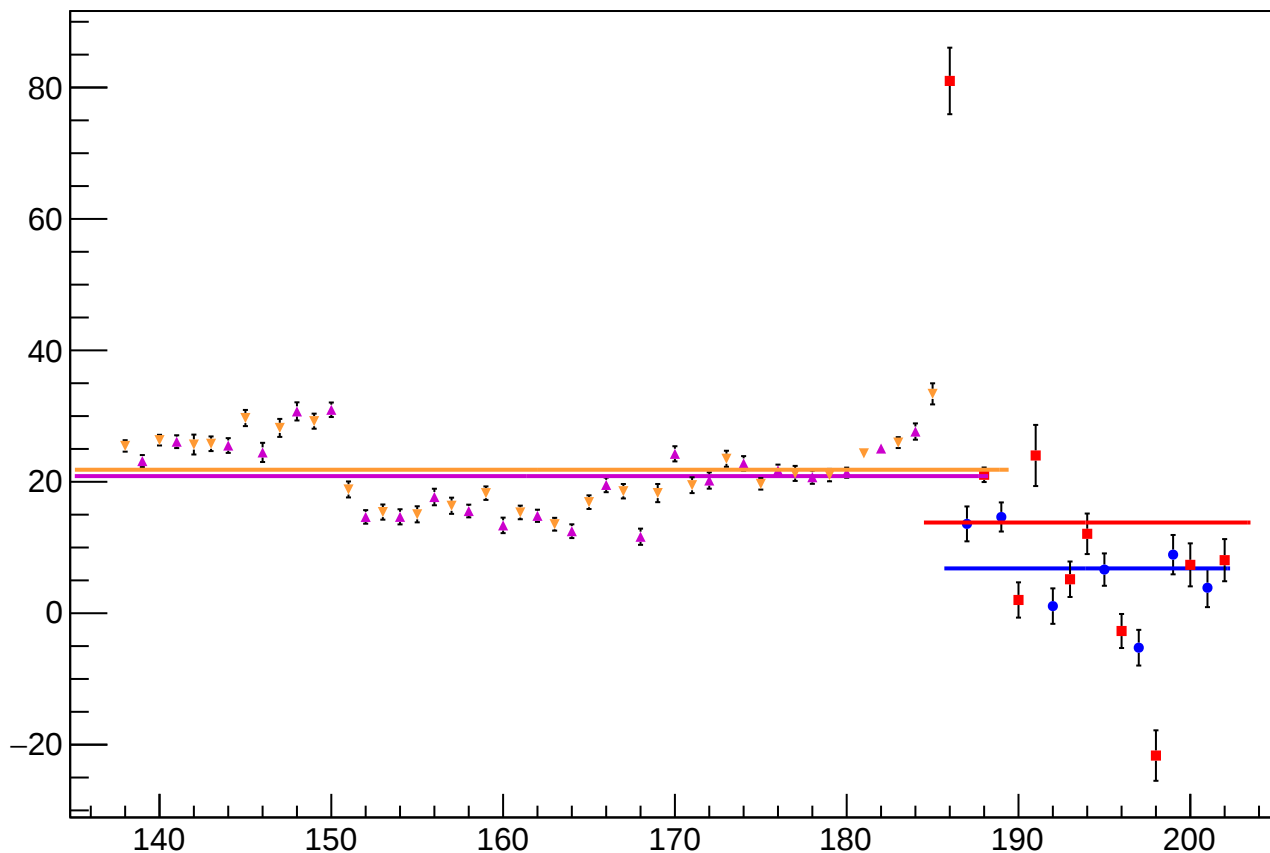
Right:  $-0.225 \pm 0.008$   $\chi^2/\text{NDF}$ : 6157.2/52

In:  $-0.284 \pm 0.007$   $\chi^2/\text{NDF}$ : 5196.0/46

Out:  $-0.324 \pm 0.006$   $\chi^2/\text{NDF}$ : 5078.7/53

All:  $-0.305 \pm 0.005$   $\chi^2/\text{NDF}$ : 10294.1/100

reg\_asym\_sam6\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $6.821 \pm 0.995$   $\chi^2/\text{NDF}: 44.7/6$

Left Out:  $21.836 \pm 0.210$   $\chi^2/\text{NDF}: 524.3/24$

Right Out:  $13.803 \pm 0.769$   $\chi^2/\text{NDF}: 386.8/9$

Left In:  $20.866 \pm 0.217$   $\chi^2/\text{NDF}: 576.9/22$

Left:  $21.366 \pm 0.151$   $\chi^2/\text{NDF}: 1111.6/47$

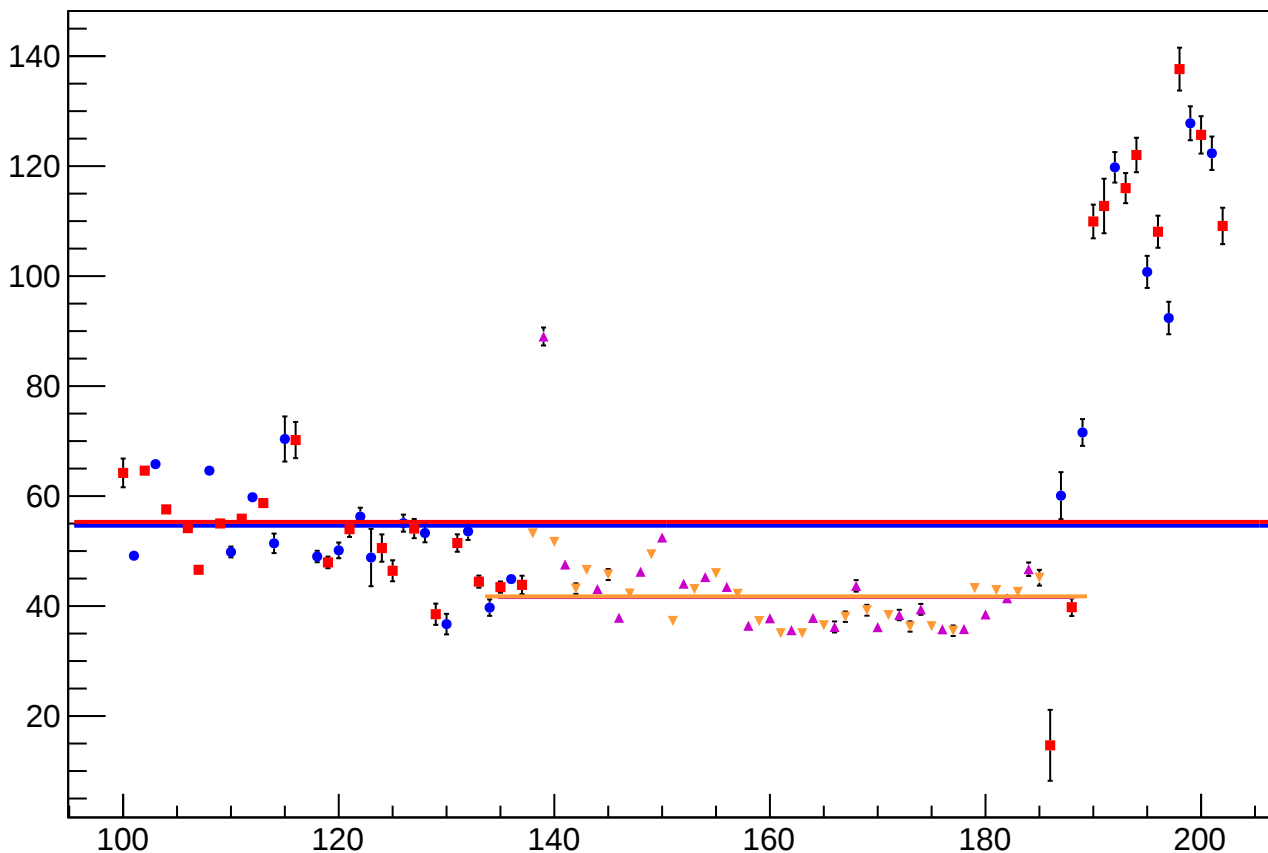
Right:  $11.191 \pm 0.609$   $\chi^2/\text{NDF}: 462.4/16$

In:  $20.230 \pm 0.212$   $\chi^2/\text{NDF}: 811.8/29$

Out:  $21.280 \pm 0.202$   $\chi^2/\text{NDF}: 1012.7/34$

All:  $20.779 \pm 0.146$   $\chi^2/\text{NDF}: 1837.4/64$

reg\_asym\_sam6\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 54.614 $\pm$ 0.207  $\chi^2$ /NDF: 3329.8/23

Left Out: 41.757 $\pm$ 0.165  $\chi^2$ /NDF:1015.7/24

Right Out: 55.305 $\pm$ 0.220  $\chi^2$ /NDF: 3948.3/28

Left In: 41.643 $\pm$ 0.174  $\chi^2$ /NDF:1611.0/22

Left: 41.703 $\pm$ 0.120  $\chi^2$ /NDF: 2626.9/47

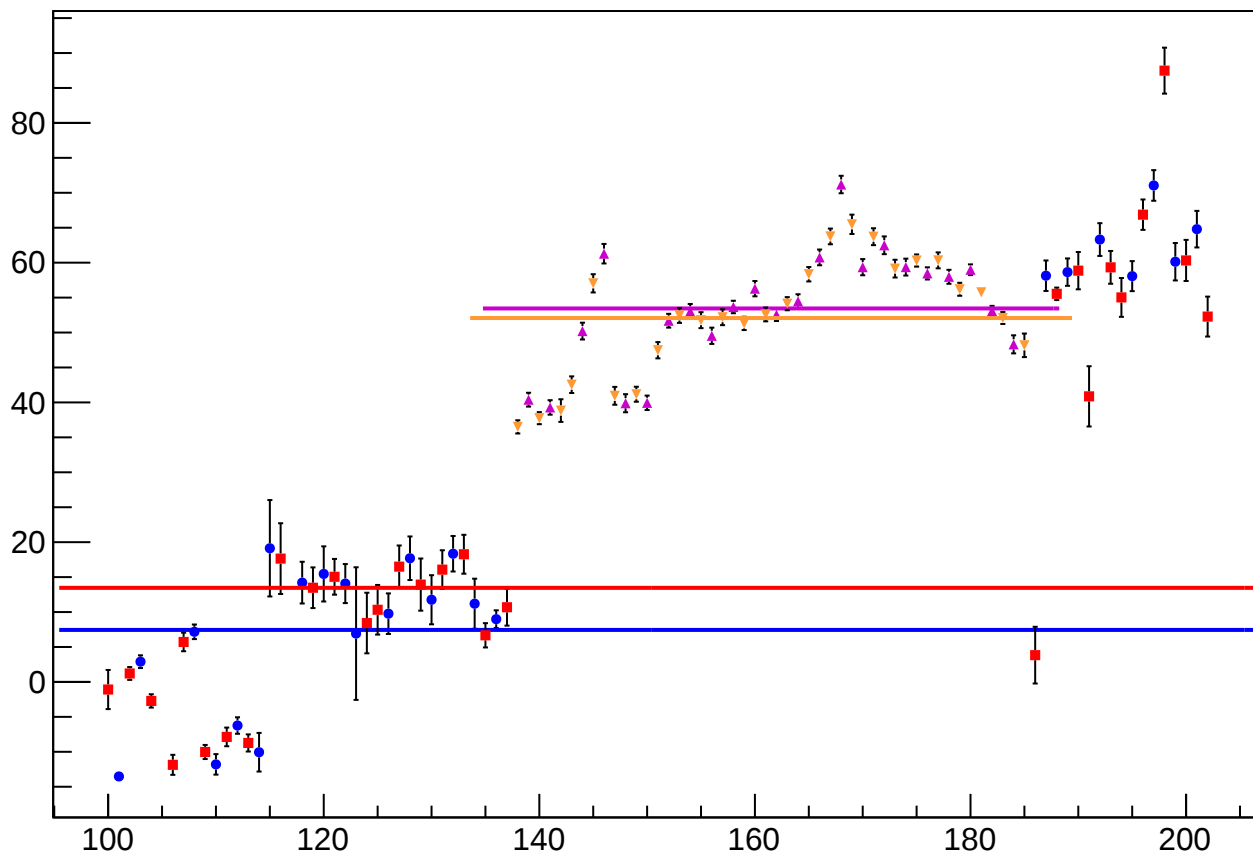
Right: 54.939 $\pm$ 0.151  $\chi^2$ /NDF: 7283.3/52

In: 46.993 $\pm$ 0.133  $\chi^2$ /NDF:7238.9/46

Out: 46.637 $\pm$ 0.132  $\chi^2$ /NDF:7382.0/53

All: 46.814 $\pm$ 0.094  $\chi^2$ /NDF: 14624.5/100

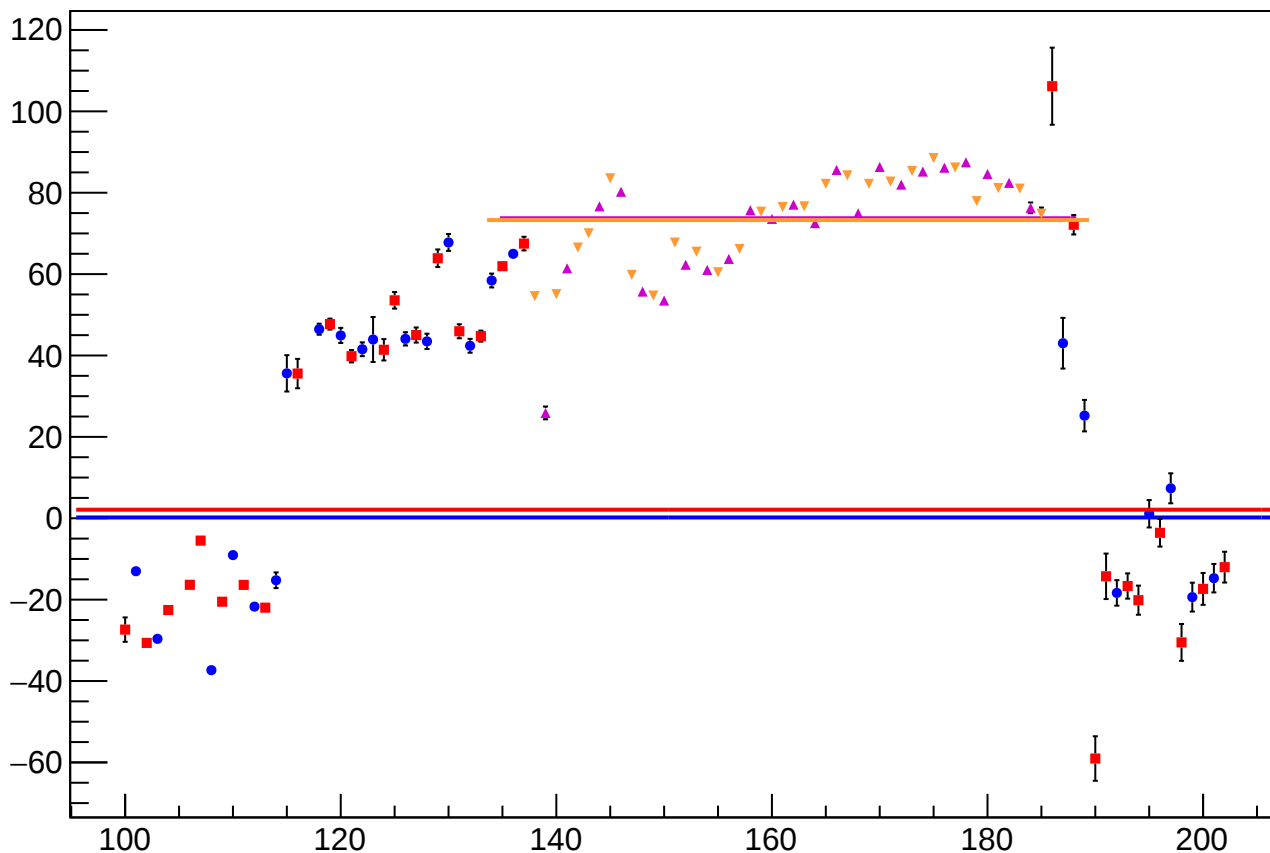
reg\_asym\_sam6\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $7.442 \pm 0.336$   $\chi^2/\text{NDF}: 5616.1/23$   
 Left Out:  $52.076 \pm 0.210$   $\chi^2/\text{NDF}: 1450.9/24$   
 Right Out:  $13.465 \pm 0.326$   $\chi^2/\text{NDF}: 6696.5/28$   
 Left In:  $53.447 \pm 0.215$   $\chi^2/\text{NDF}: 1169.0/22$

Left:  $52.744 \pm 0.150$   $\chi^2/\text{NDF}: 2640.6/47$   
 Right:  $10.537 \pm 0.234$   $\chi^2/\text{NDF}: 12478.1/52$   
 In:  $40.024 \pm 0.181$   $\chi^2/\text{NDF}: 20100.4/46$   
 Out:  $40.769 \pm 0.177$   $\chi^2/\text{NDF}: 18046.3/53$   
 All:  $40.406 \pm 0.126$   $\chi^2/\text{NDF}: 38155.4/100$

reg\_asym\_sam6\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $0.197 \pm 0.244$   $\chi^2/\text{NDF}: 18396.5/23$

Left Out:  $73.284 \pm 0.187$   $\chi^2/\text{NDF}: 3144.2/24$

Right Out:  $2.104 \pm 0.260$   $\chi^2/\text{NDF}: 16699.9/28$

Left In:  $73.730 \pm 0.194$   $\chi^2/\text{NDF}: 3775.8/22$

Left:  $73.498 \pm 0.135$   $\chi^2/\text{NDF}: 6922.7/47$

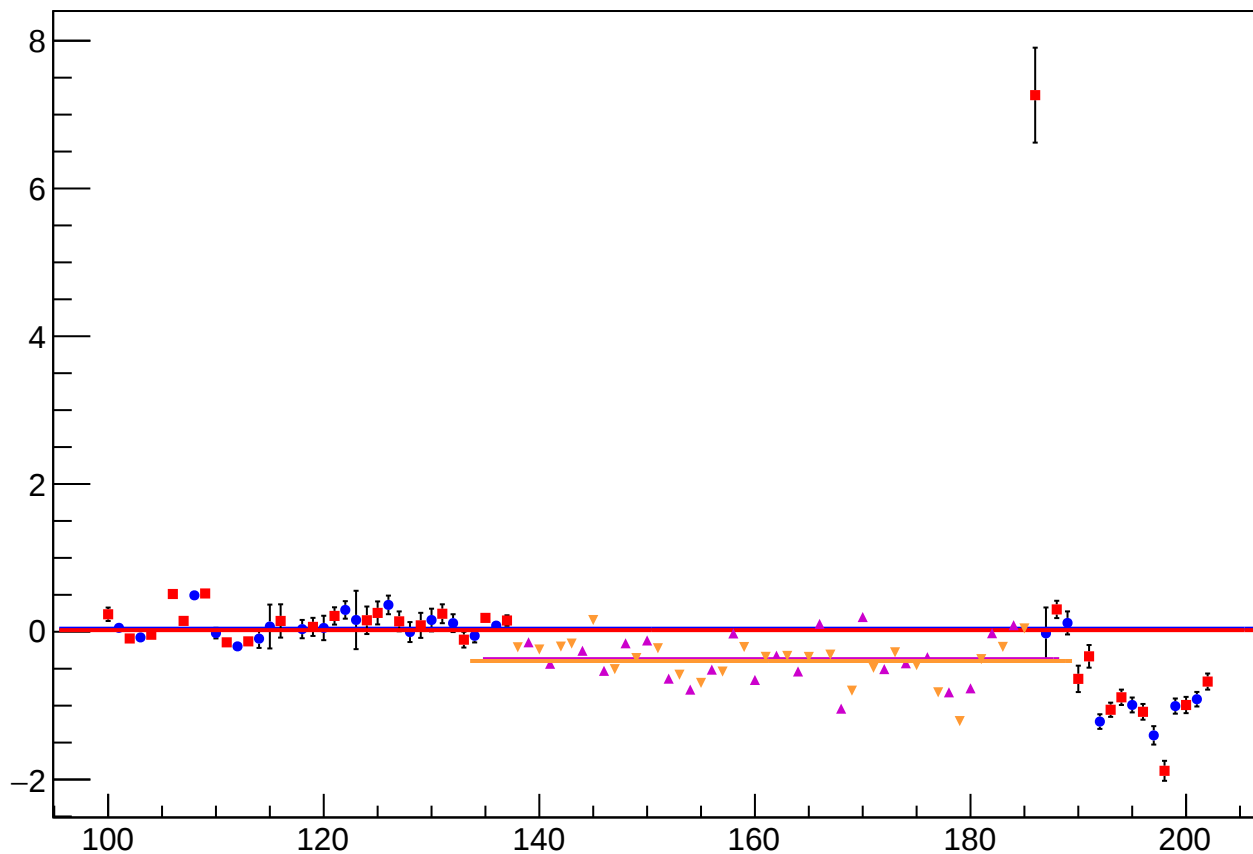
Right:  $1.088 \pm 0.178$   $\chi^2/\text{NDF}: 35125.1/52$

In:  $45.162 \pm 0.152$   $\chi^2/\text{NDF}: 77796.7/46$

Out:  $49.083 \pm 0.152$   $\chi^2/\text{NDF}: 69185.9/53$

All:  $47.125 \pm 0.107$   $\chi^2/\text{NDF}: 147315.9/100$

reg\_asym\_sam6\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.042 $\pm$ 0.011  $\chi^2$ /NDF: 1032.0/23

Left Out: -0.396 $\pm$ 0.009  $\chi^2$ /NDF:950.0/24

Right Out: 0.022 $\pm$ 0.011  $\chi^2$ /NDF: 1211.2/28

Left In: -0.371 $\pm$ 0.009  $\chi^2$ /NDF:1313.7/22

Left: -0.383 $\pm$ 0.006  $\chi^2$ /NDF: 2268.0/47

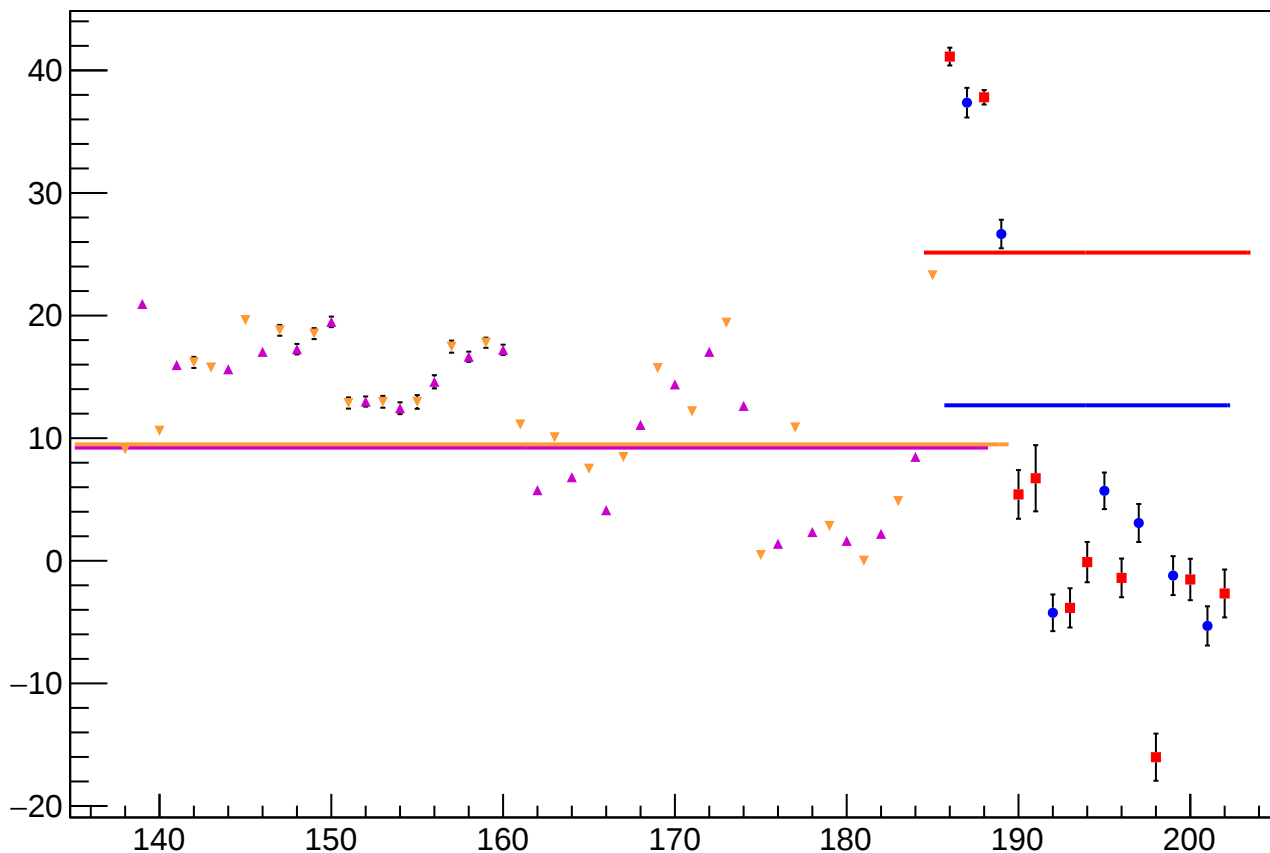
Right: 0.032 $\pm$ 0.008  $\chi^2$ /NDF: 2245.0/52

In: -0.207 $\pm$ 0.007  $\chi^2$ /NDF:3237.6/46

Out: -0.231 $\pm$ 0.007  $\chi^2$ /NDF:3101.8/53

All: -0.219 $\pm$ 0.005  $\chi^2$ /NDF: 6346.1/100

reg\_asym\_sam7\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 12.681 $\pm$ 0.533  $\chi^2$ /NDF: 953.2/6

Left Out: 9.495 $\pm$ 0.061  $\chi^2$ /NDF: 12609.1/24

Right Out: 25.138 $\pm$ 0.373  $\chi^2$ /NDF: 2843.6/9

Left In: 9.231 $\pm$ 0.063  $\chi^2$ /NDF: 10736.2/22

Left: 9.367 $\pm$ 0.044  $\chi^2$ /NDF: 23354.3/47

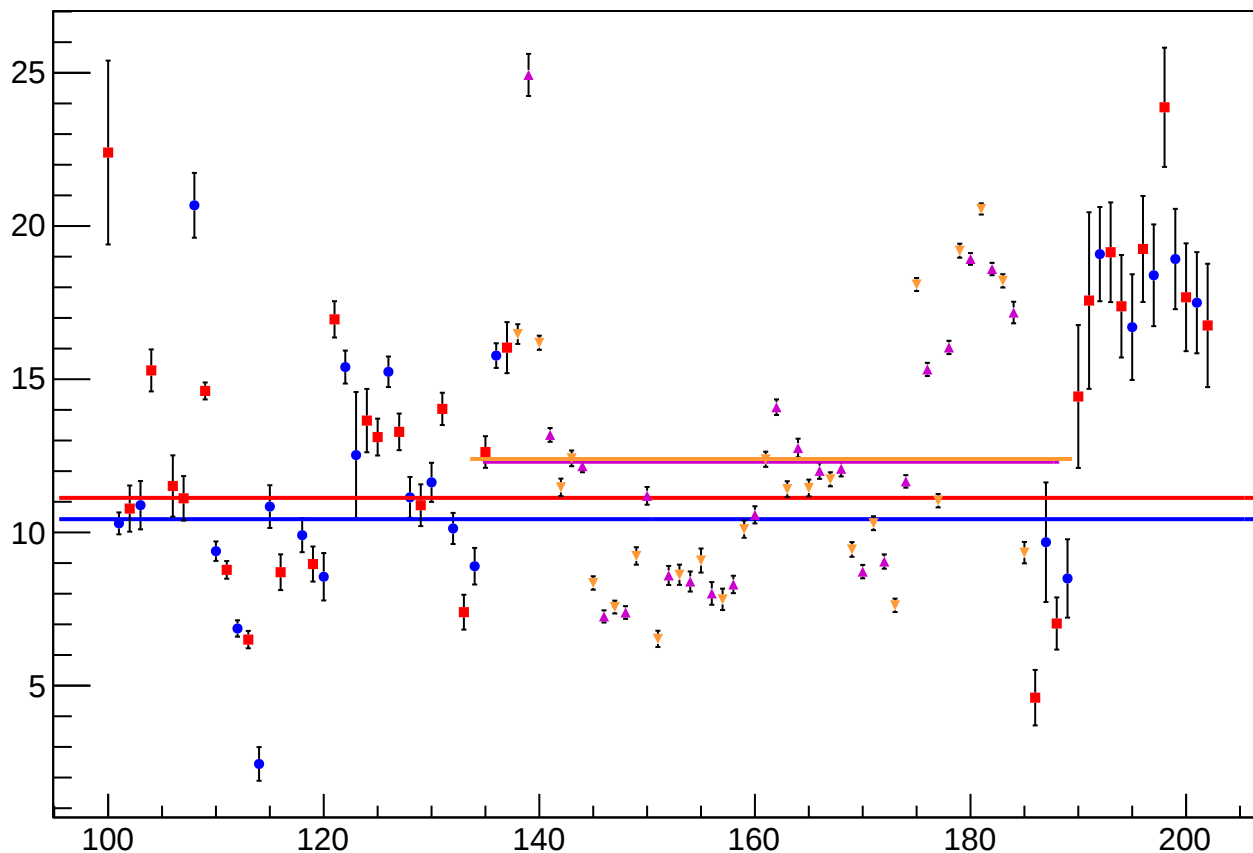
Right: 21.041 $\pm$ 0.305  $\chi^2$ /NDF: 4163.8/16

In: 9.279 $\pm$ 0.063  $\chi^2$ /NDF: 11730.7/29

Out: 9.906 $\pm$ 0.060  $\chi^2$ /NDF: 17166.2/34

All: 9.603 $\pm$ 0.043  $\chi^2$ /NDF: 28948.8/64

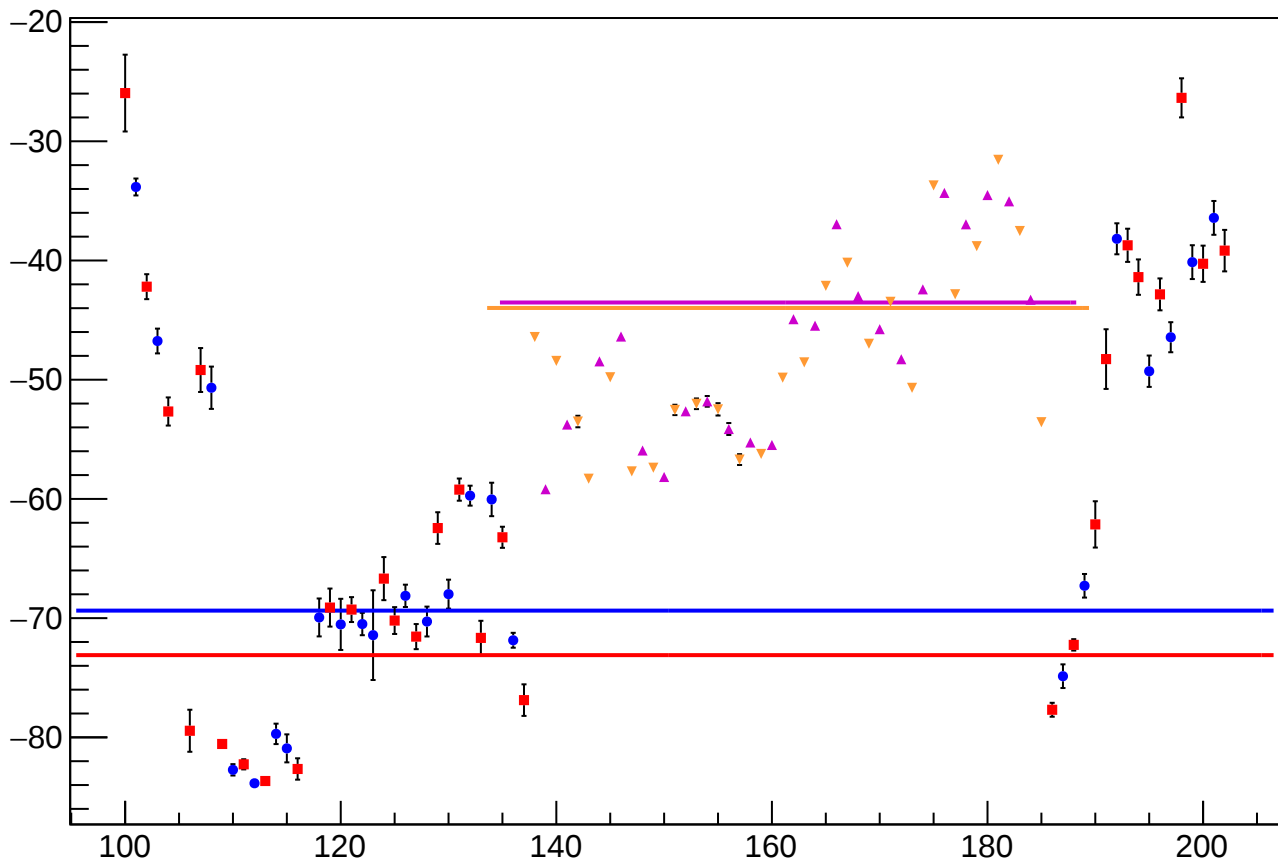
reg\_asym\_sam7\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $10.433 \pm 0.117$   $\chi^2/\text{NDF}: 984.0/23$   
 Left Out:  $12.397 \pm 0.050$   $\chi^2/\text{NDF}: 7542.8/24$   
 Right Out:  $11.128 \pm 0.113$   $\chi^2/\text{NDF}: 1023.7/28$   
 Left In:  $12.307 \pm 0.051$   $\chi^2/\text{NDF}: 5601.8/22$

Left:  $12.353 \pm 0.036$   $\chi^2/\text{NDF}: 13146.3/47$   
 Right:  $10.794 \pm 0.081$   $\chi^2/\text{NDF}: 2026.0/52$   
 In:  $12.007 \pm 0.047$   $\chi^2/\text{NDF}: 6800.0/46$   
 Out:  $12.191 \pm 0.045$   $\chi^2/\text{NDF}: 8672.4/53$   
 All:  $12.102 \pm 0.033$   $\chi^2/\text{NDF}: 15480.3/100$

reg\_asym\_sam7\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-69.369 \pm 0.182$   $\chi^2/\text{NDF}: 7904.3/23$

Left Out:  $-43.982 \pm 0.062$   $\chi^2/\text{NDF}: 17736.8/24$

Right Out:  $-73.103 \pm 0.156$   $\chi^2/\text{NDF}: 7151.1/28$

Left In:  $-43.523 \pm 0.063$   $\chi^2/\text{NDF}: 15267.1/22$

Left:  $-43.757 \pm 0.044$   $\chi^2/\text{NDF}: 33030.8/47$

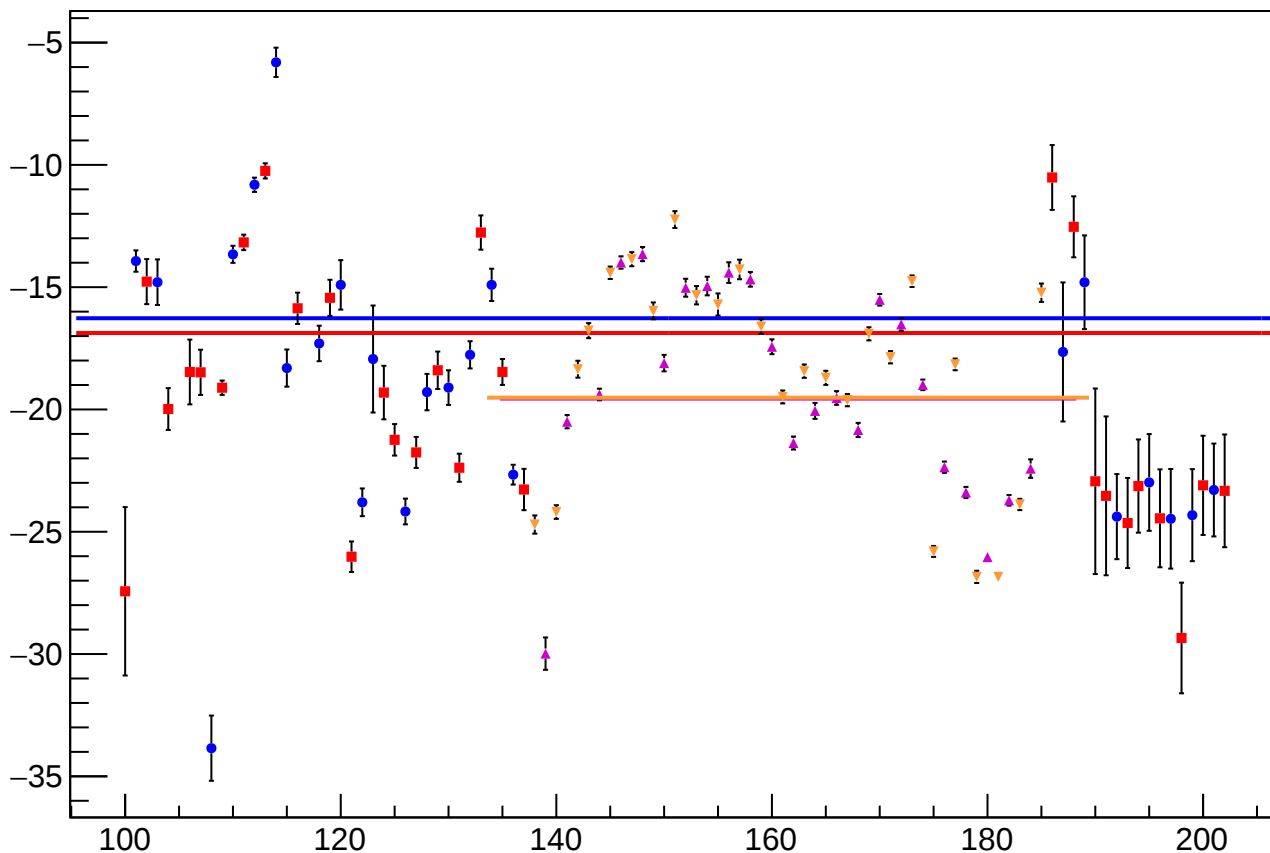
Right:  $-71.516 \pm 0.119$   $\chi^2/\text{NDF}: 15297.7/52$

In:  $-46.317 \pm 0.060$   $\chi^2/\text{NDF}: 41177.8/46$

Out:  $-47.929 \pm 0.058$   $\chi^2/\text{NDF}: 54852.0/53$

All:  $-47.153 \pm 0.041$   $\chi^2/\text{NDF}: 96406.9/100$

reg\_asym\_sam7\_diff\_bpm4eY\_slope vs Slug, Sign Corrected

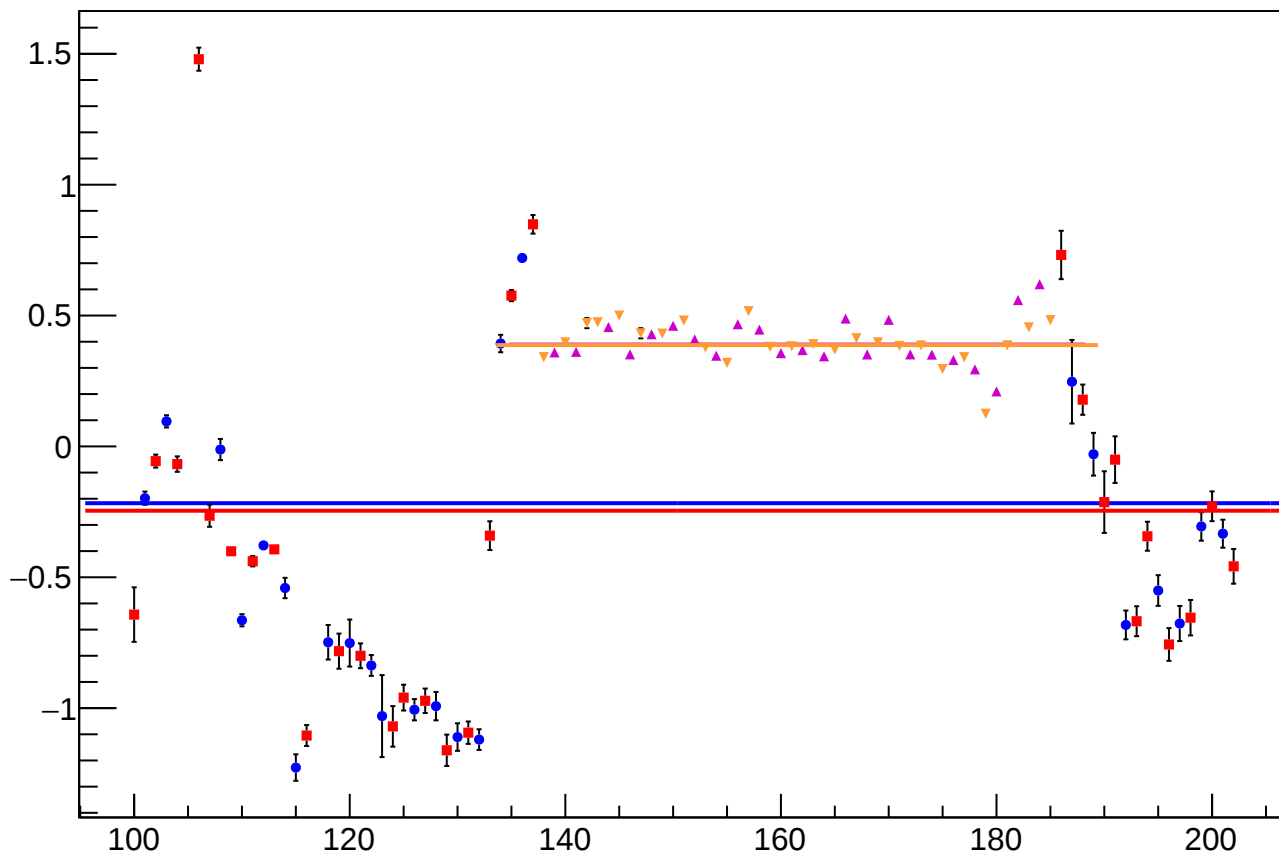


Right In:  $-16.270 \pm 0.131$   $\chi^2/\text{NDF}: 1704.9/23$   
 Left Out:  $-19.517 \pm 0.056$   $\chi^2/\text{NDF}: 6518.3/24$   
 Right Out:  $-16.873 \pm 0.125$   $\chi^2/\text{NDF}: 1344.2/28$   
 Left In:  $-19.555 \pm 0.057$   $\chi^2/\text{NDF}: 4311.2/22$

Left:  $-19.536 \pm 0.040$   $\chi^2/\text{NDF}: 10829.6/47$   
 Right:  $-16.584 \pm 0.091$   $\chi^2/\text{NDF}: 3060.2/52$   
 In:  $-19.025 \pm 0.053$   $\chi^2/\text{NDF}: 6545.1/46$   
 Out:  $-19.081 \pm 0.051$   $\chi^2/\text{NDF}: 8233.4/53$

All:  $-19.054 \pm 0.037$   $\chi^2/\text{NDF}: 14779.1/100$

reg\_asym\_sam7\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.217 \pm 0.007$   $\chi^2/\text{NDF}$ : 6496.6/23

Left Out:  $0.387 \pm 0.003$   $\chi^2/\text{NDF}$ : 995.0/24

Right Out:  $-0.246 \pm 0.007$   $\chi^2/\text{NDF}$ : 6519.6/28

Left In:  $0.389 \pm 0.003$   $\chi^2/\text{NDF}$ : 1256.9/22

Left:  $0.388 \pm 0.002$   $\chi^2/\text{NDF}$ : 2252.2/47

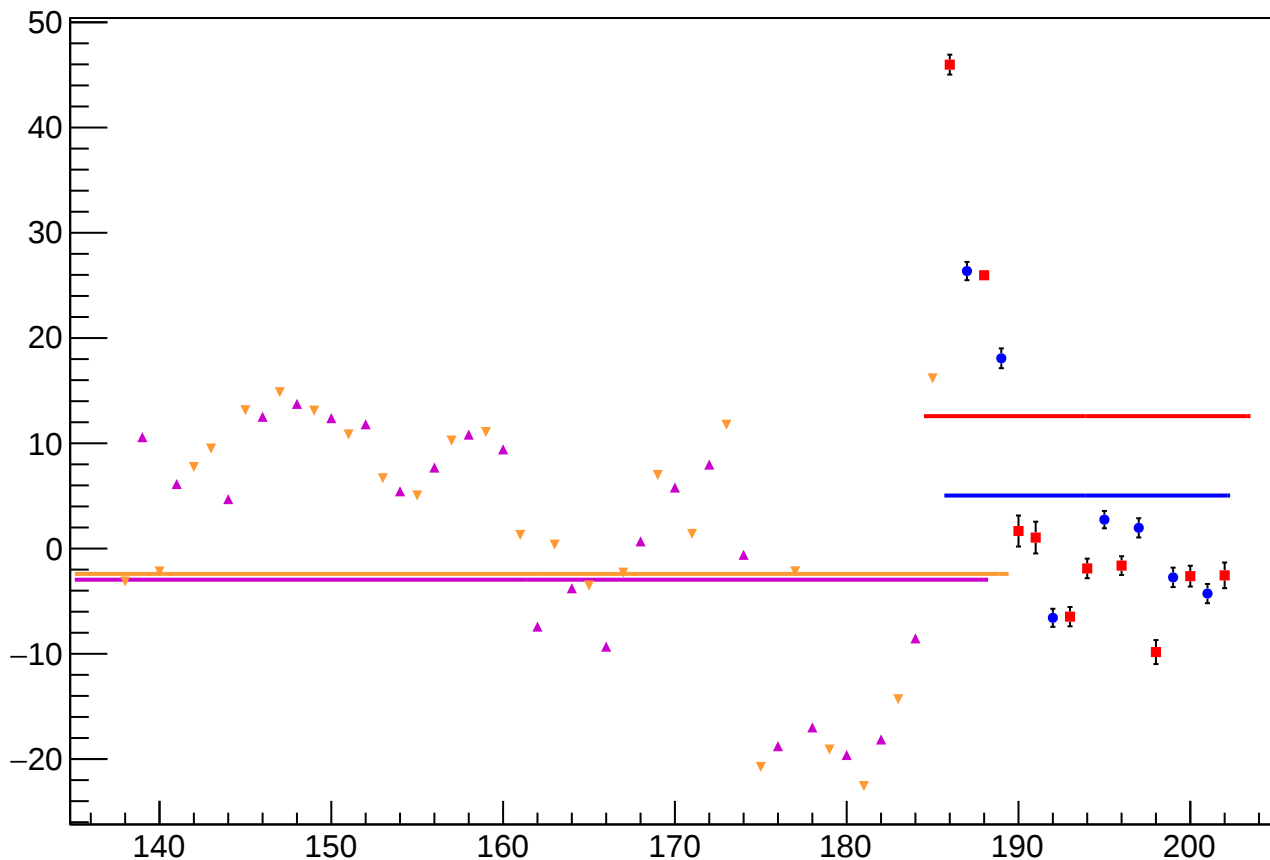
Right:  $-0.232 \pm 0.005$   $\chi^2/\text{NDF}$ : 13024.6/52

In:  $0.318 \pm 0.002$   $\chi^2/\text{NDF}$ : 13995.1/46

Out:  $0.309 \pm 0.002$   $\chi^2/\text{NDF}$ : 15102.3/53

All:  $0.313 \pm 0.002$   $\chi^2/\text{NDF}$ : 29105.6/100

reg\_asym\_sam8\_diff\_bpm1X\_slope vs Slug, Sign Corrected



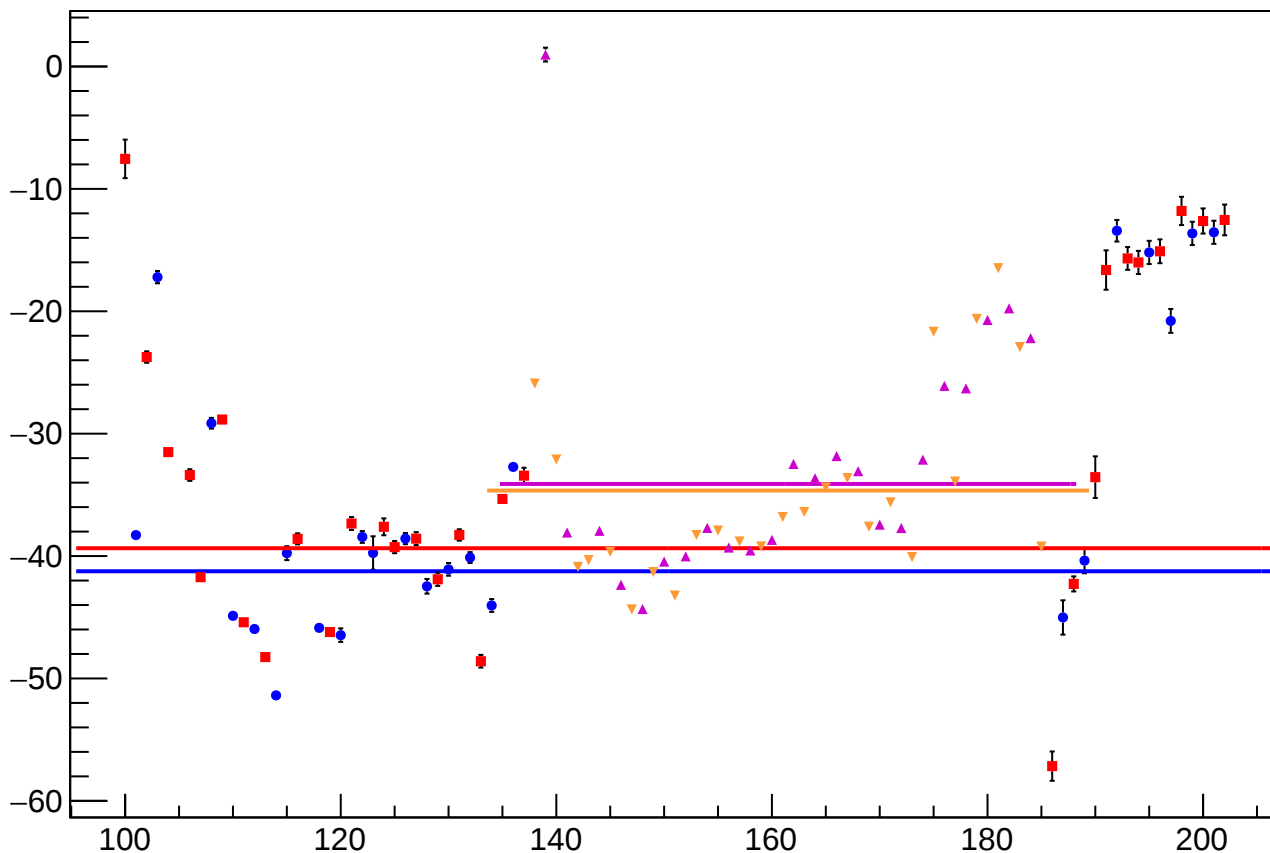
Right In:  $5.038 \pm 0.336$   $\chi^2/\text{NDF}: 1172.9/6$   
 Left Out:  $-2.407 \pm 0.053$   $\chi^2/\text{NDF}: 56368.5/24$   
 Right Out:  $12.578 \pm 0.272$   $\chi^2/\text{NDF}: 4040.4/9$   
 Left In:  $-2.959 \pm 0.055$   $\chi^2/\text{NDF}: 45922.6/22$

Left:  $-2.672 \pm 0.038$   $\chi^2/\text{NDF}: 102343.8/47$   
 Right:  $9.599 \pm 0.211$   $\chi^2/\text{NDF}: 5517.8/16$

In:  $-2.752 \pm 0.054$   $\chi^2/\text{NDF}: 47647.1/29$   
 Out:  $-1.862 \pm 0.052$   $\chi^2/\text{NDF}: 63341.8/34$

All:  $-2.287 \pm 0.037$   $\chi^2/\text{NDF}: 111130.0/64$

reg\_asym\_sam8\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-41.241 \pm 0.077$   $\chi^2/\text{NDF}: 10578.8/23$

Left Out:  $-34.646 \pm 0.042$   $\chi^2/\text{NDF}: 34674.7/24$

Right Out:  $-39.358 \pm 0.071$   $\chi^2/\text{NDF}: 15448.4/28$

Left In:  $-34.108 \pm 0.044$   $\chi^2/\text{NDF}: 29052.8/22$

Left:  $-34.390 \pm 0.030$   $\chi^2/\text{NDF}: 63806.0/47$

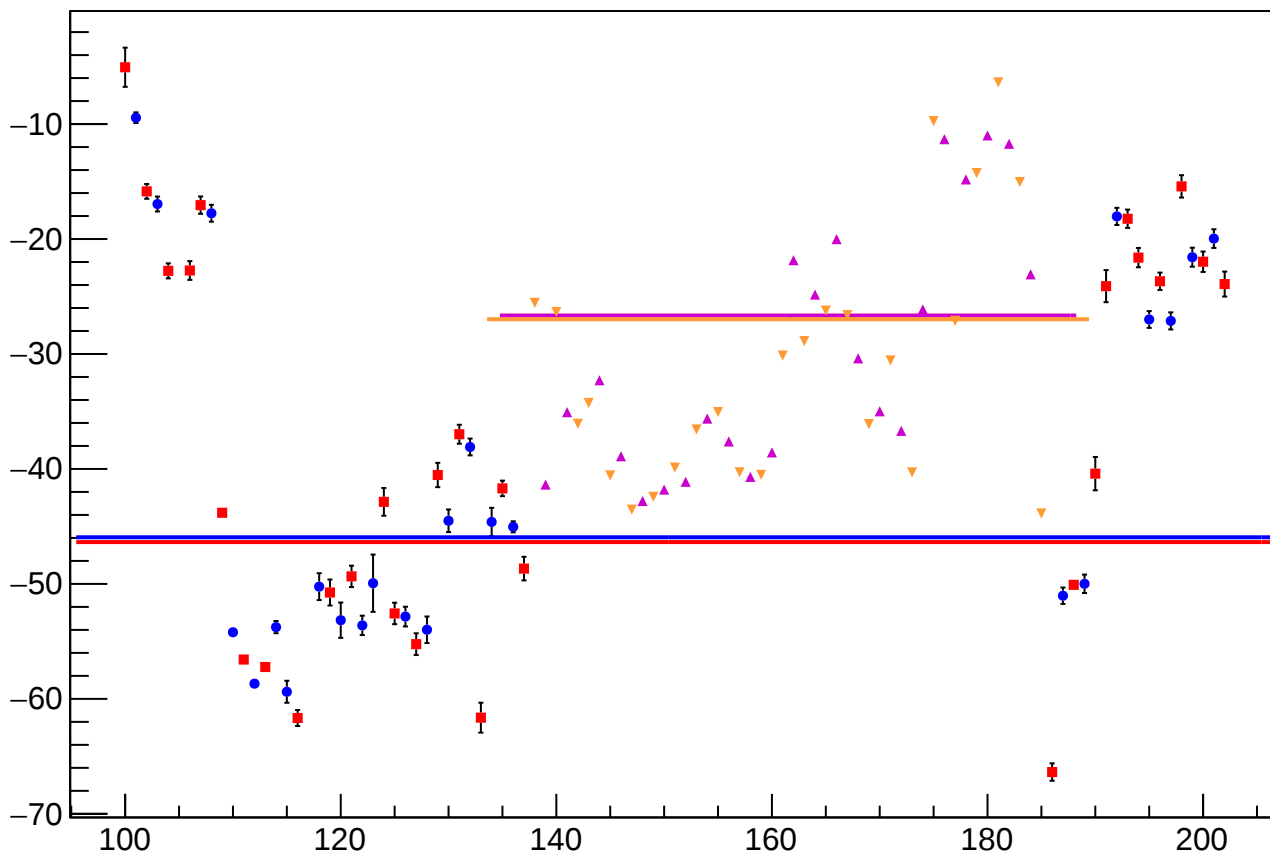
Right:  $-40.229 \pm 0.052$   $\chi^2/\text{NDF}: 26352.4/52$

In:  $-35.878 \pm 0.038$   $\chi^2/\text{NDF}: 46163.7/46$

Out:  $-35.858 \pm 0.036$   $\chi^2/\text{NDF}: 53395.1/53$

All:  $-35.867 \pm 0.026$   $\chi^2/\text{NDF}: 99559.0/100$

reg\_asym\_sam8\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-45.945 \pm 0.115$   $\chi^2/\text{NDF}: 19842.8/23$

Left Out:  $-26.978 \pm 0.053$   $\chi^2/\text{NDF}: 49361.1/24$

Right Out:  $-46.362 \pm 0.097$   $\chi^2/\text{NDF}: 18277.0/28$

Left In:  $-26.654 \pm 0.055$   $\chi^2/\text{NDF}: 42106.8/22$

Left:  $-26.821 \pm 0.038$   $\chi^2/\text{NDF}: 91485.8/47$

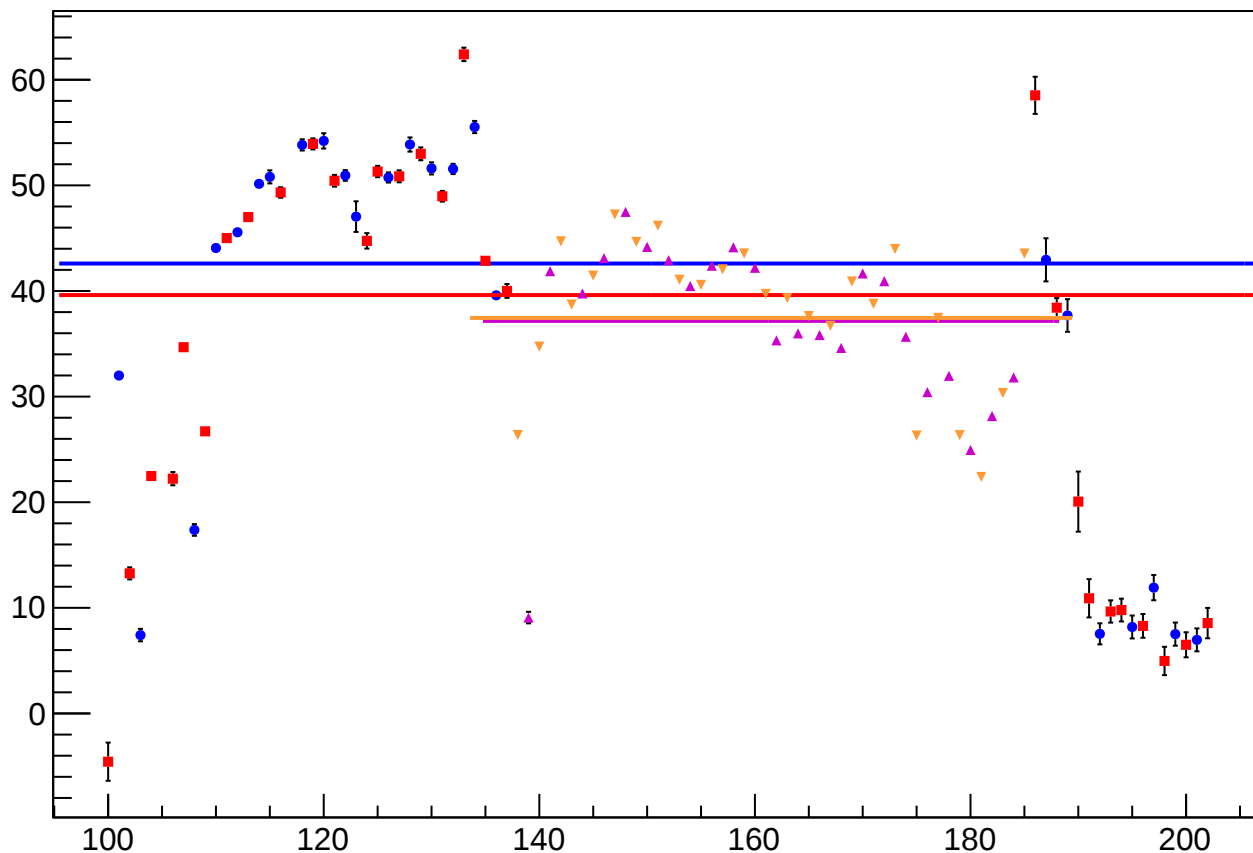
Right:  $-46.187 \pm 0.074$   $\chi^2/\text{NDF}: 38127.5/52$

In:  $-30.259 \pm 0.050$   $\chi^2/\text{NDF}: 84996.1/46$

Out:  $-31.446 \pm 0.047$   $\chi^2/\text{NDF}: 98253.3/53$

All:  $-30.888 \pm 0.034$   $\chi^2/\text{NDF}: 183553.4/100$

reg\_asym\_sam8\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 42.600 $\pm$ 0.085  $\chi^2$ /NDF: 15742.6/23

Left Out: 37.447 $\pm$ 0.047  $\chi^2$ /NDF:21570.6/24

Right Out: 39.613 $\pm$ 0.079  $\chi^2$ /NDF: 22382.6/28

Left In: 37.169 $\pm$ 0.049  $\chi^2$ /NDF:17236.9/22

Left: 37.314 $\pm$ 0.034  $\chi^2$ /NDF: 38824.1/47

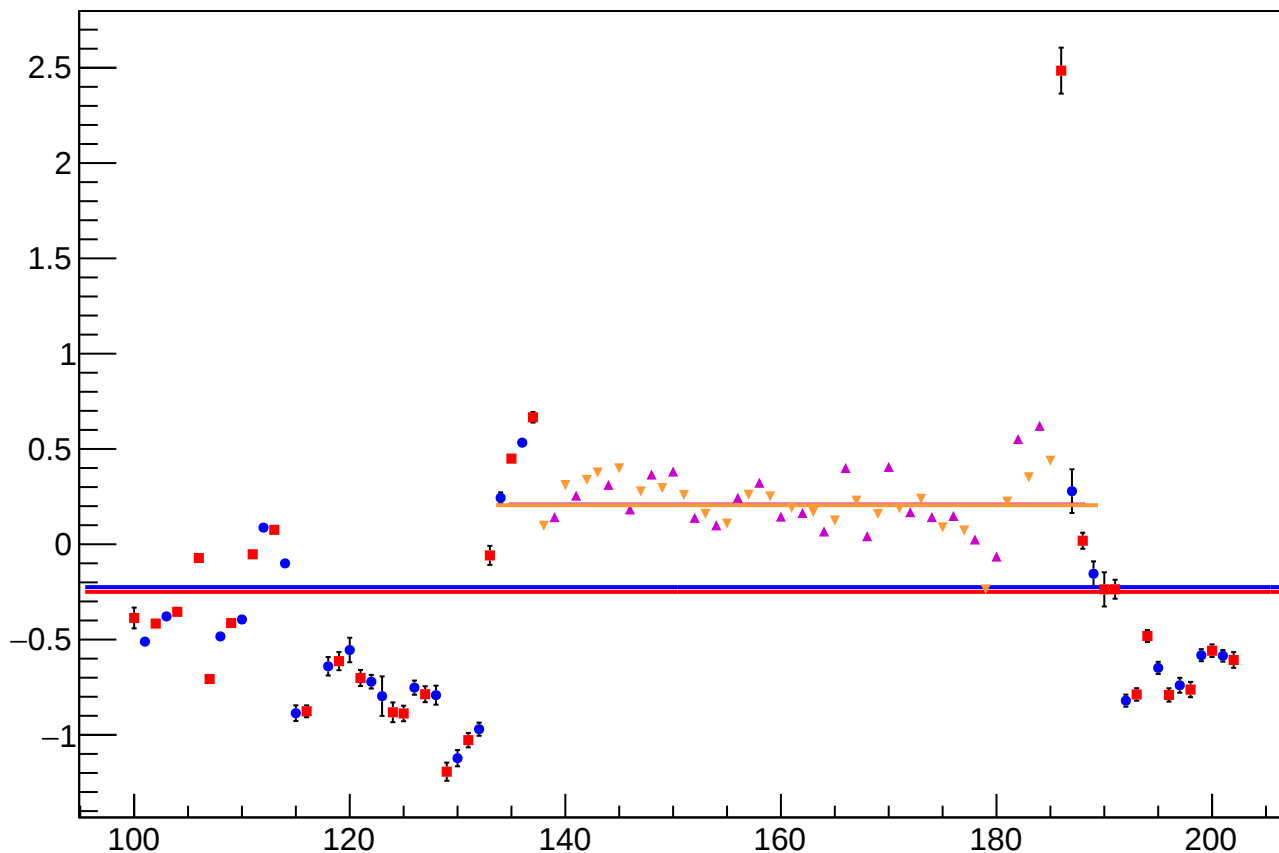
Right: 40.983 $\pm$ 0.058  $\chi^2$ /NDF: 38786.4/52

In: 38.524 $\pm$ 0.043  $\chi^2$ /NDF:36010.3/46

Out: 38.019 $\pm$ 0.040  $\chi^2$ /NDF:44511.1/53

All: 38.258 $\pm$ 0.029  $\chi^2$ /NDF: 80595.0/100

reg\_asym\_sam8\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.225 \pm 0.005$   $\chi^2/\text{NDF}$ : 8440.6/23

Left Out:  $0.205 \pm 0.002$   $\chi^2/\text{NDF}$ : 3826.2/24

Right Out:  $-0.250 \pm 0.004$   $\chi^2/\text{NDF}$ : 8908.2/28

Left In:  $0.208 \pm 0.002$   $\chi^2/\text{NDF}$ : 5094.6/22

Left:  $0.207 \pm 0.002$   $\chi^2/\text{NDF}$ : 8922.0/47

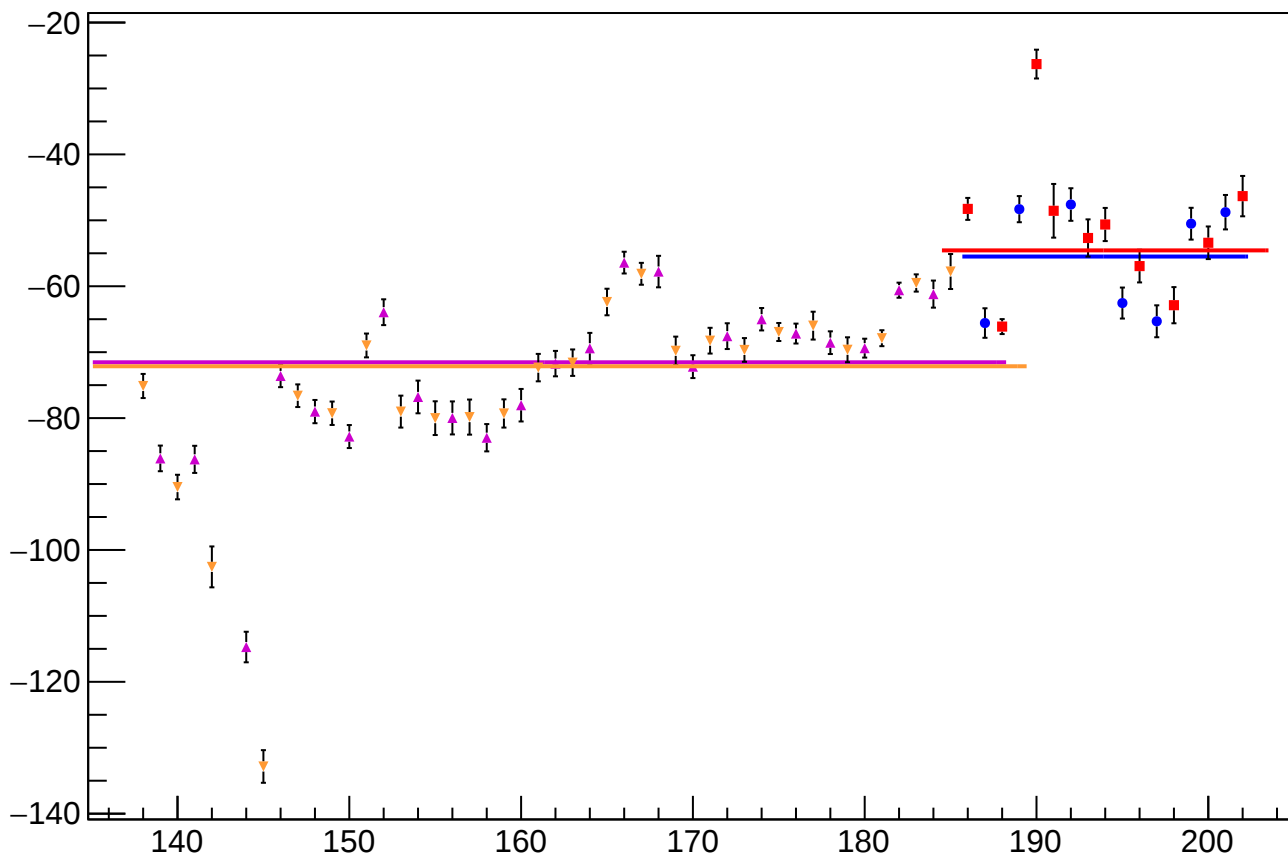
Right:  $-0.239 \pm 0.003$   $\chi^2/\text{NDF}$ : 17365.2/52

In:  $0.125 \pm 0.002$   $\chi^2/\text{NDF}$ : 20737.8/46

Out:  $0.105 \pm 0.002$   $\chi^2/\text{NDF}$ : 22402.8/53

All:  $0.114 \pm 0.001$   $\chi^2/\text{NDF}$ : 43192.4/100

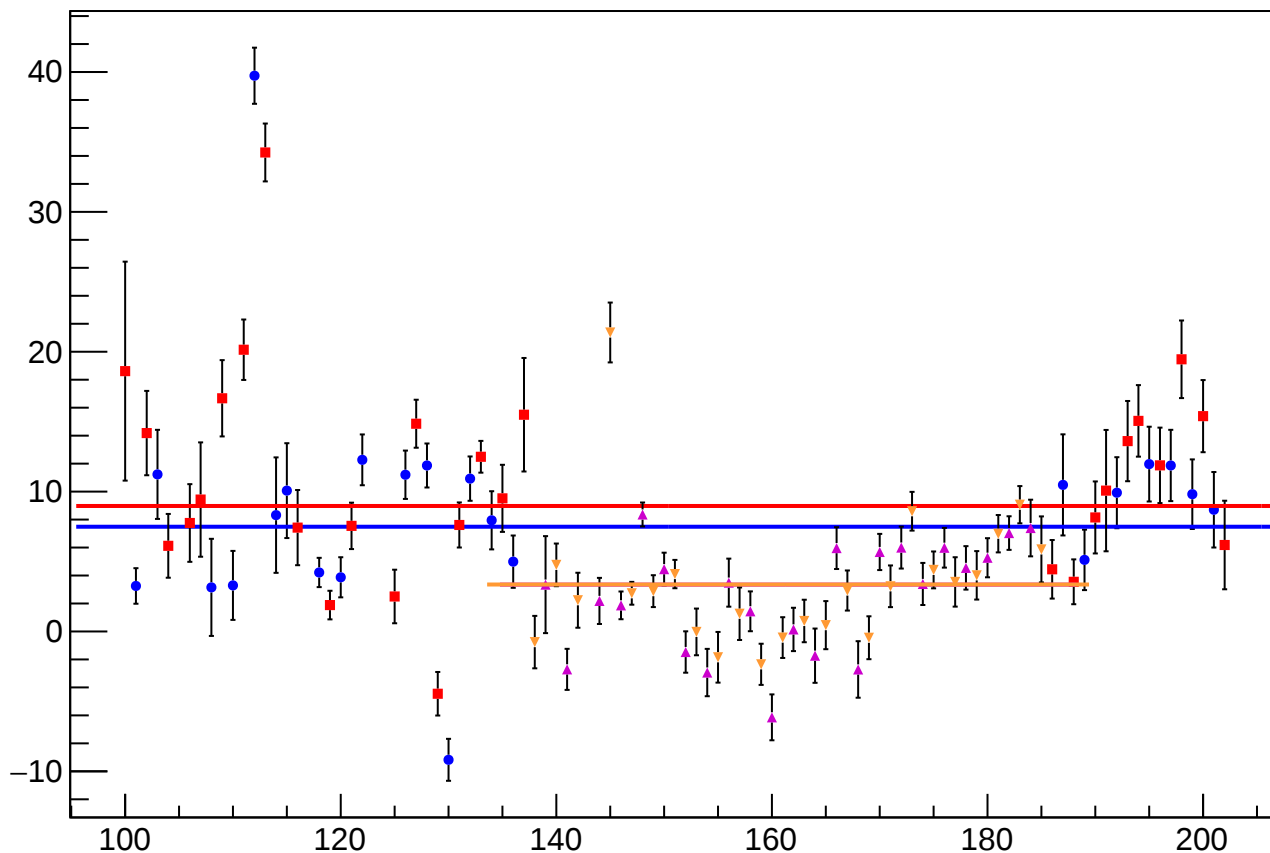
reg\_asym\_usl\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-55.494 \pm 0.881$   $\chi^2/\text{NDF}: 80.0/6$   
 Left Out:  $-72.138 \pm 0.383$   $\chi^2/\text{NDF}: 1121.3/23$   
 Right Out:  $-54.561 \pm 0.666$   $\chi^2/\text{NDF}: 307.7/9$   
 Left In:  $-71.534 \pm 0.382$   $\chi^2/\text{NDF}: 851.4/22$

Left:  $-71.835 \pm 0.270$   $\chi^2/\text{NDF}: 1974.0/46$   
 Right:  $-54.900 \pm 0.531$   $\chi^2/\text{NDF}: 388.4/16$   
 In:  $-69.001 \pm 0.350$   $\chi^2/\text{NDF}: 1210.3/29$   
 Out:  $-67.771 \pm 0.332$   $\chi^2/\text{NDF}: 1952.8/33$   
 All:  $-68.353 \pm 0.241$   $\chi^2/\text{NDF}: 3169.6/63$

reg\_asym\_usl\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $7.488 \pm 0.402$   $\chi^2/\text{NDF}: 450.8/22$

Left Out:  $3.357 \pm 0.295$   $\chi^2/\text{NDF}: 167.7/23$

Right Out:  $8.972 \pm 0.390$   $\chi^2/\text{NDF}: 396.8/27$

Left In:  $3.349 \pm 0.298$   $\chi^2/\text{NDF}: 163.5/22$

Left:  $3.353 \pm 0.210$   $\chi^2/\text{NDF}: 331.2/46$

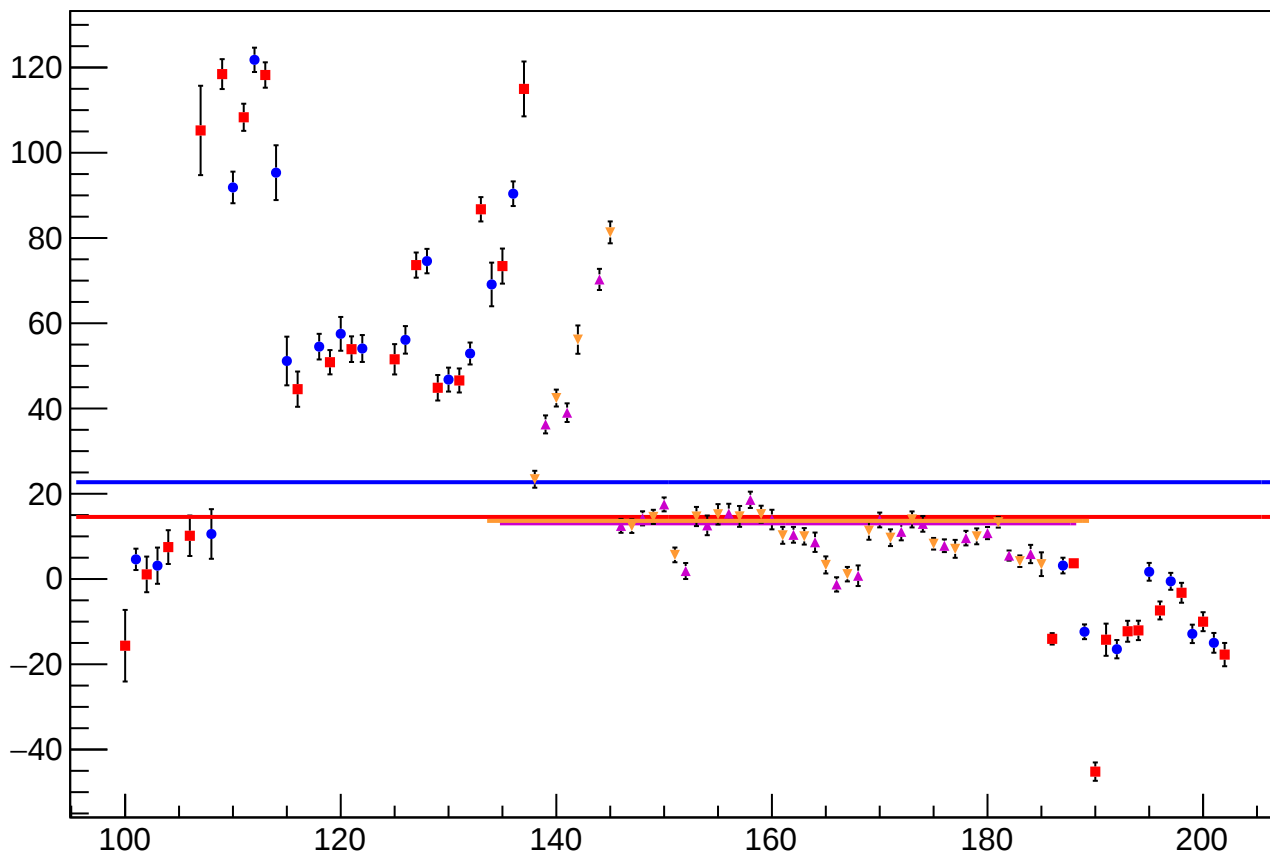
Right:  $8.253 \pm 0.280$   $\chi^2/\text{NDF}: 854.6/50$

In:  $4.820 \pm 0.239$   $\chi^2/\text{NDF}: 682.8/45$

Out:  $5.400 \pm 0.235$   $\chi^2/\text{NDF}: 696.5/51$

All:  $5.115 \pm 0.168$   $\chi^2/\text{NDF}: 1382.3/97$

reg\_asym\_usl\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 22.711 $\pm$ 0.563  $\chi^2$ /NDF: 4977.4/22

Left Out: 13.632 $\pm$ 0.382  $\chi^2$ /NDF:1300.0/23

Right Out: 14.565 $\pm$ 0.469  $\chi^2$ /NDF: 7384.9/27

Left In: 13.058 $\pm$ 0.380  $\chi^2$ /NDF:1024.7/22

Left: 13.344 $\pm$ 0.269  $\chi^2$ /NDF: 2325.9/46

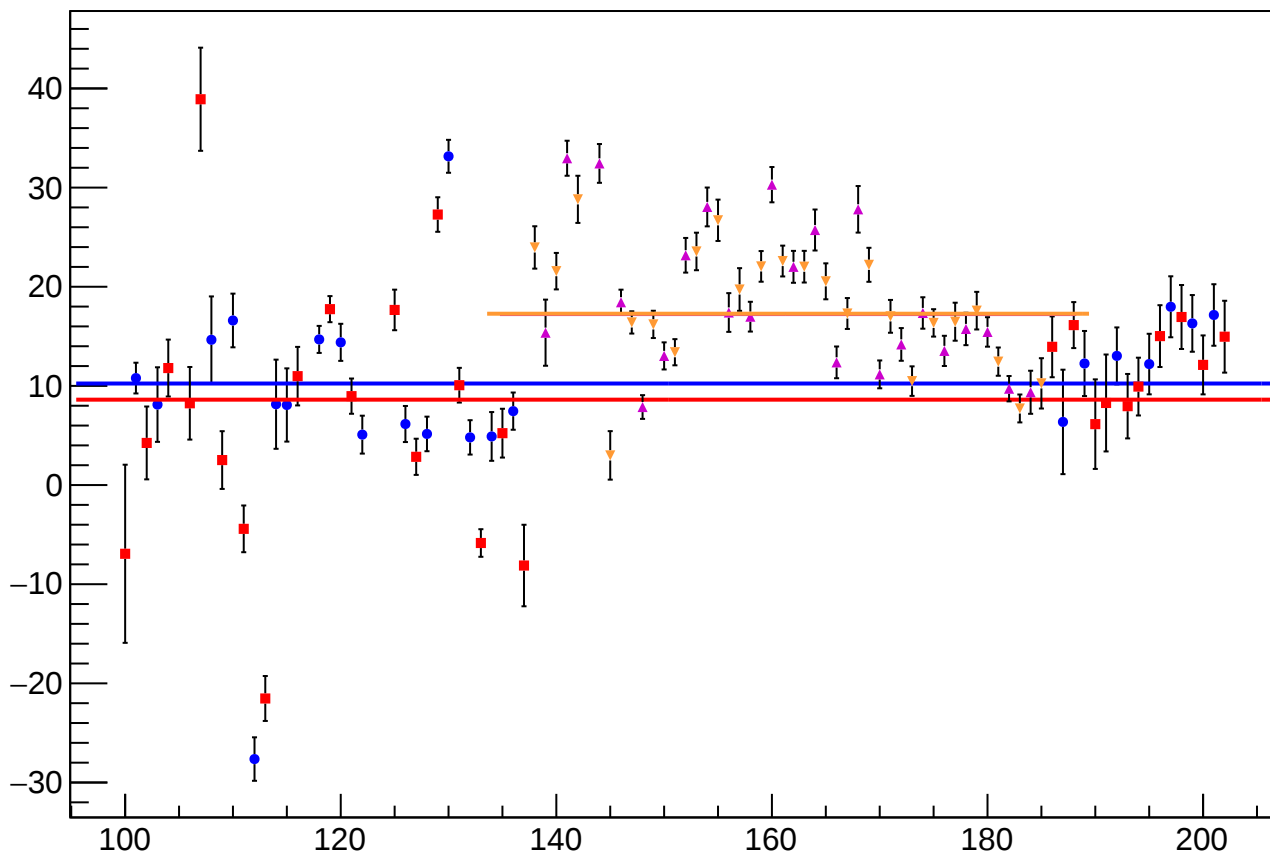
Right: 17.902 $\pm$ 0.361  $\chi^2$ /NDF: 12485.8/50

In: 16.075 $\pm$ 0.315  $\chi^2$ /NDF:6204.1/45

Out: 14.004 $\pm$ 0.296  $\chi^2$ /NDF:8687.3/51

All: 14.976 $\pm$ 0.216  $\chi^2$ /NDF: 14914.3/97

reg\_asym\_usl\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 10.240 $\pm$ 0.468  $\chi^2$ /NDF: 567.4/22

Left Out: 17.280 $\pm$ 0.337  $\chi^2$ /NDF:243.9/23

Right Out: 8.612 $\pm$ 0.459  $\chi^2$ /NDF: 601.2/27

Left In: 17.245 $\pm$ 0.339  $\chi^2$ /NDF:440.8/22

Left: 17.262 $\pm$ 0.239  $\chi^2$ /NDF: 684.6/46

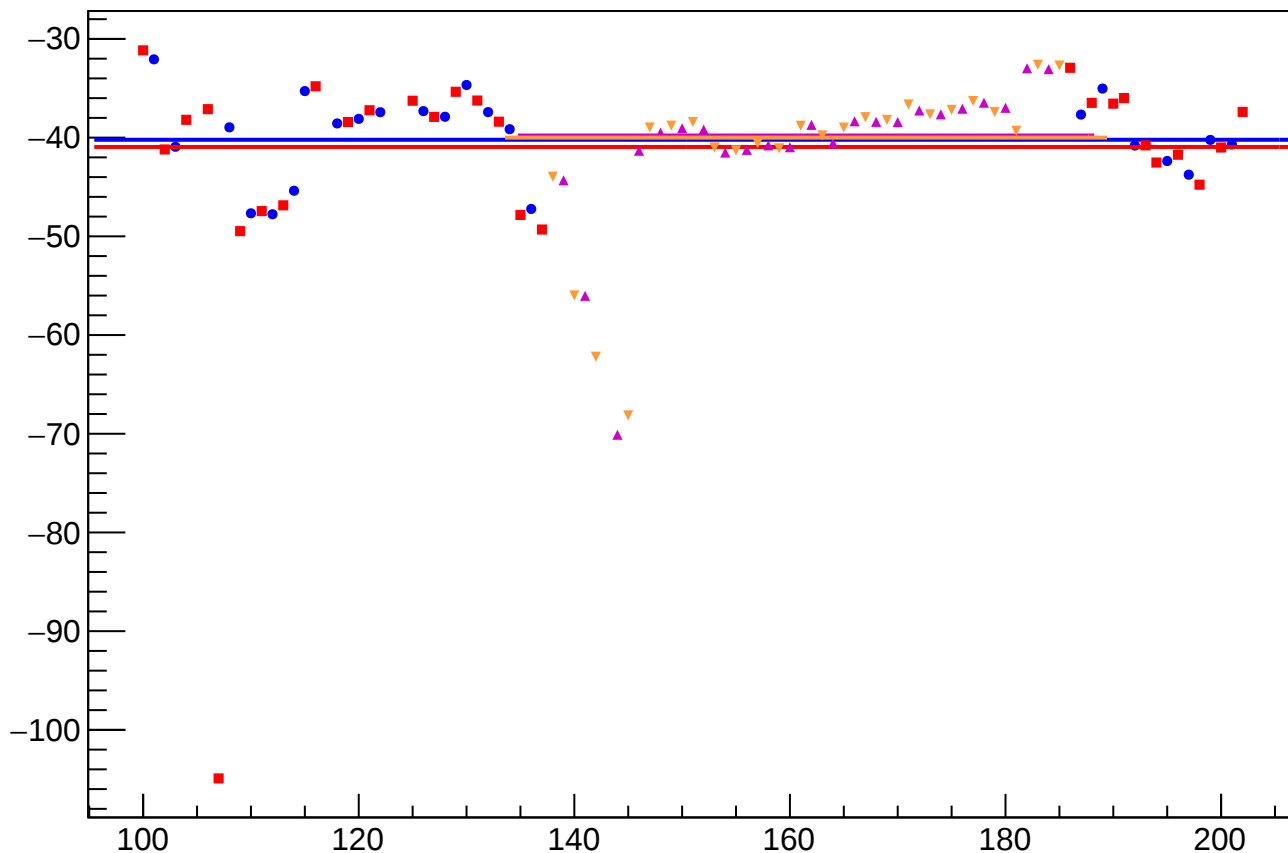
Right: 9.411 $\pm$ 0.328  $\chi^2$ /NDF: 1174.8/50

In: 14.829 $\pm$ 0.275  $\chi^2$ /NDF:1155.1/45

Out: 14.245 $\pm$ 0.272  $\chi^2$ /NDF:1076.5/51

All: 14.534 $\pm$ 0.193  $\chi^2$ /NDF: 2233.9/97

reg\_asym\_usl\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-40.216 \pm 0.024$   $\chi^2/\text{NDF}$ : 29827.7/22

Left Out:  $-39.999 \pm 0.016$   $\chi^2/\text{NDF}$ : 172263.8/23

Right Out:  $-40.946 \pm 0.023$   $\chi^2/\text{NDF}$ : 103668.9/27

Left In:  $-39.785 \pm 0.016$   $\chi^2/\text{NDF}$ : 144494.5/22

Left:  $-39.891 \pm 0.011$   $\chi^2/\text{NDF}$ : 316851.8/46

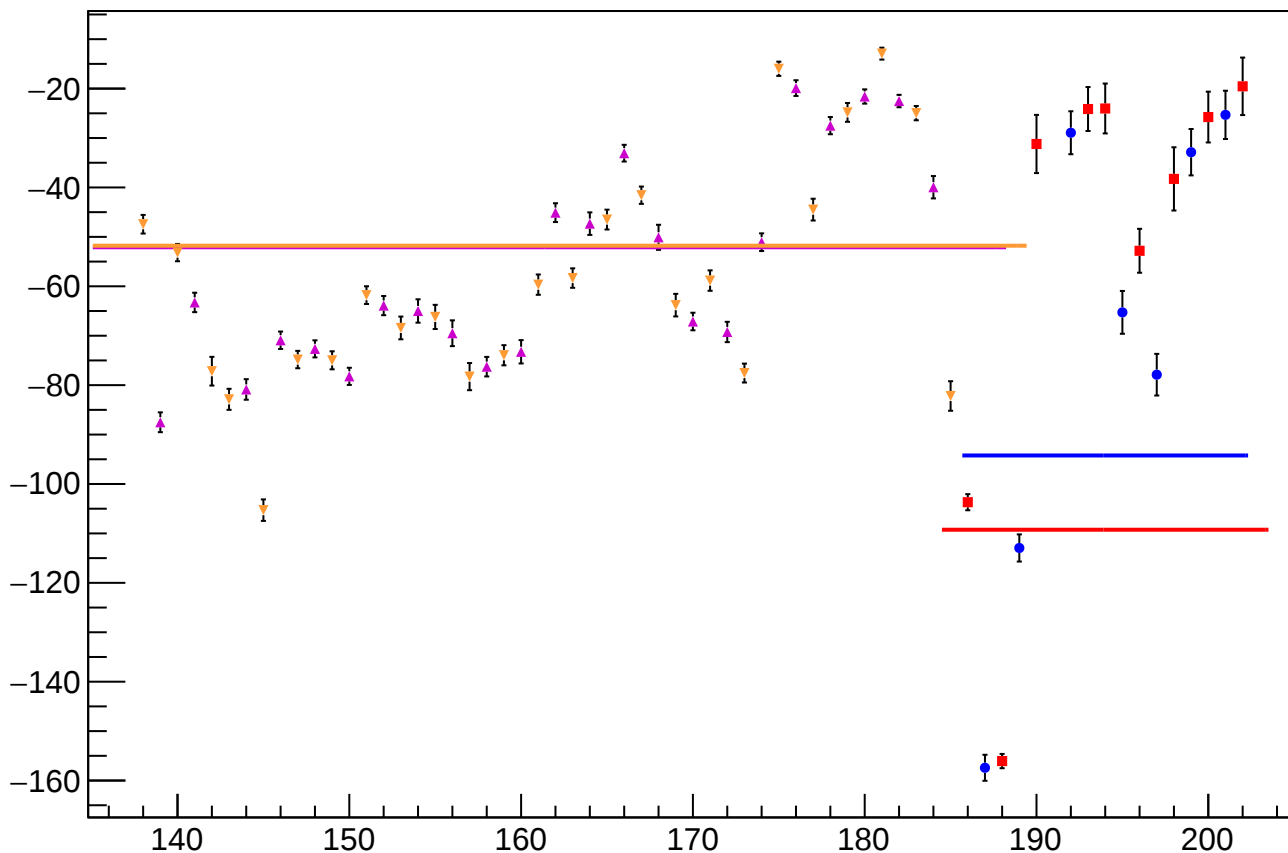
Right:  $-40.602 \pm 0.017$   $\chi^2/\text{NDF}$ : 133981.1/50

In:  $-39.912 \pm 0.013$   $\chi^2/\text{NDF}$ : 174546.3/45

Out:  $-40.306 \pm 0.013$   $\chi^2/\text{NDF}$ : 277102.7/51

All:  $-40.112 \pm 0.009$   $\chi^2/\text{NDF}$ : 452105.4/97

reg\_asym\_usr\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-94.228 \pm 1.378$   $\chi^2/\text{NDF}$ : 1278.8/6

Left Out:  $-51.787 \pm 0.383$   $\chi^2/\text{NDF}$ : 4164.8/24

Right Out:  $-109.253 \pm 0.947$   $\chi^2/\text{NDF}$ : 2673.3/8

Left In:  $-52.104 \pm 0.389$   $\chi^2/\text{NDF}$ : 3280.2/22

Left:  $-51.943 \pm 0.273$   $\chi^2/\text{NDF}$ : 7445.3/47

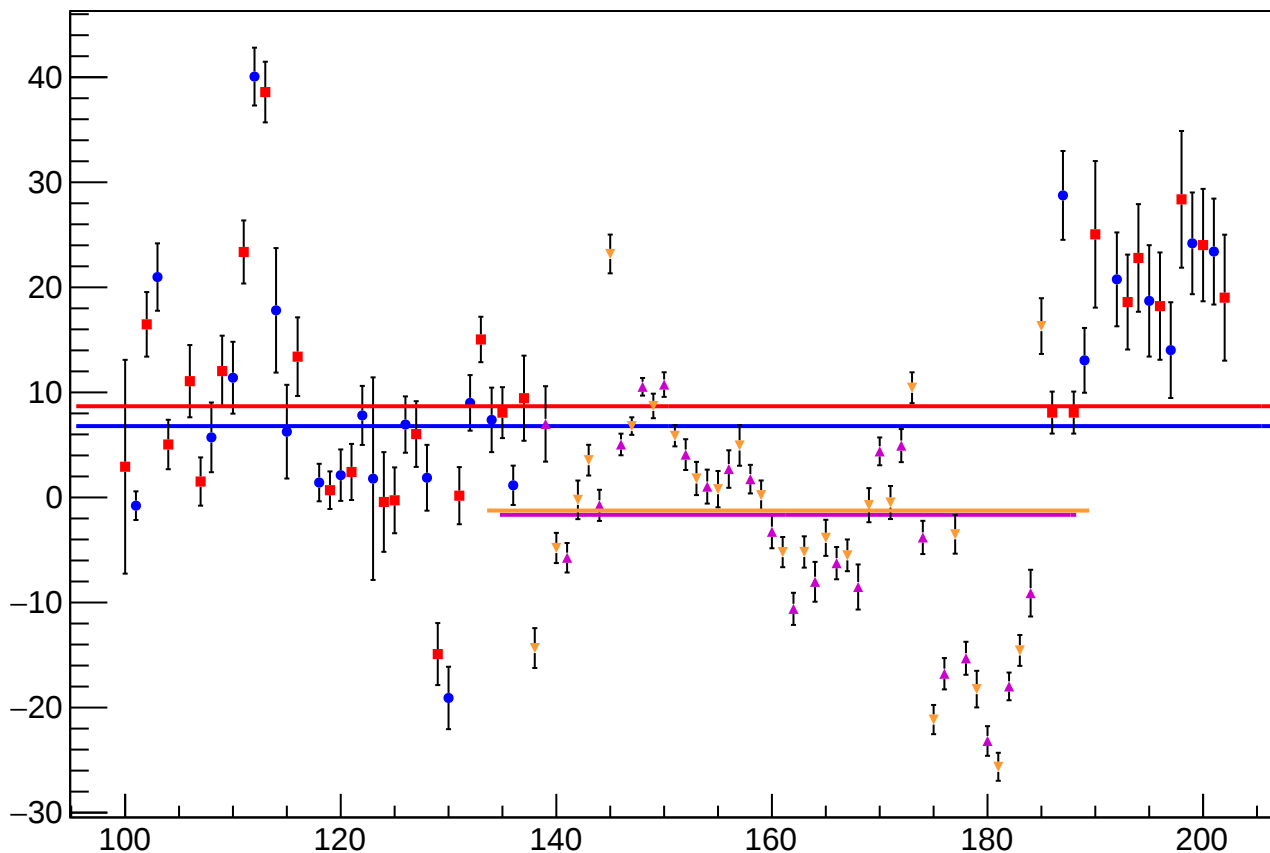
Right:  $-104.433 \pm 0.780$   $\chi^2/\text{NDF}$ : 4032.8/15

In:  $-55.208 \pm 0.374$   $\chi^2/\text{NDF}$ : 5424.6/29

Out:  $-59.853 \pm 0.355$   $\chi^2/\text{NDF}$ : 10004.2/33

All:  $-57.653 \pm 0.257$   $\chi^2/\text{NDF}$ : 15509.9/63

reg\_asym\_usr\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $6.791 \pm 0.586$   $\chi^2/\text{NDF}$ : 375.5/23

Left Out:  $-1.245 \pm 0.292$   $\chi^2/\text{NDF}$ : 1322.6/24

Right Out:  $8.683 \pm 0.569$   $\chi^2/\text{NDF}$ : 315.6/27

Left In:  $-1.650 \pm 0.300$   $\chi^2/\text{NDF}$ : 1092.2/22

Left:  $-1.442 \pm 0.209$   $\chi^2/\text{NDF}$ : 2415.8/47

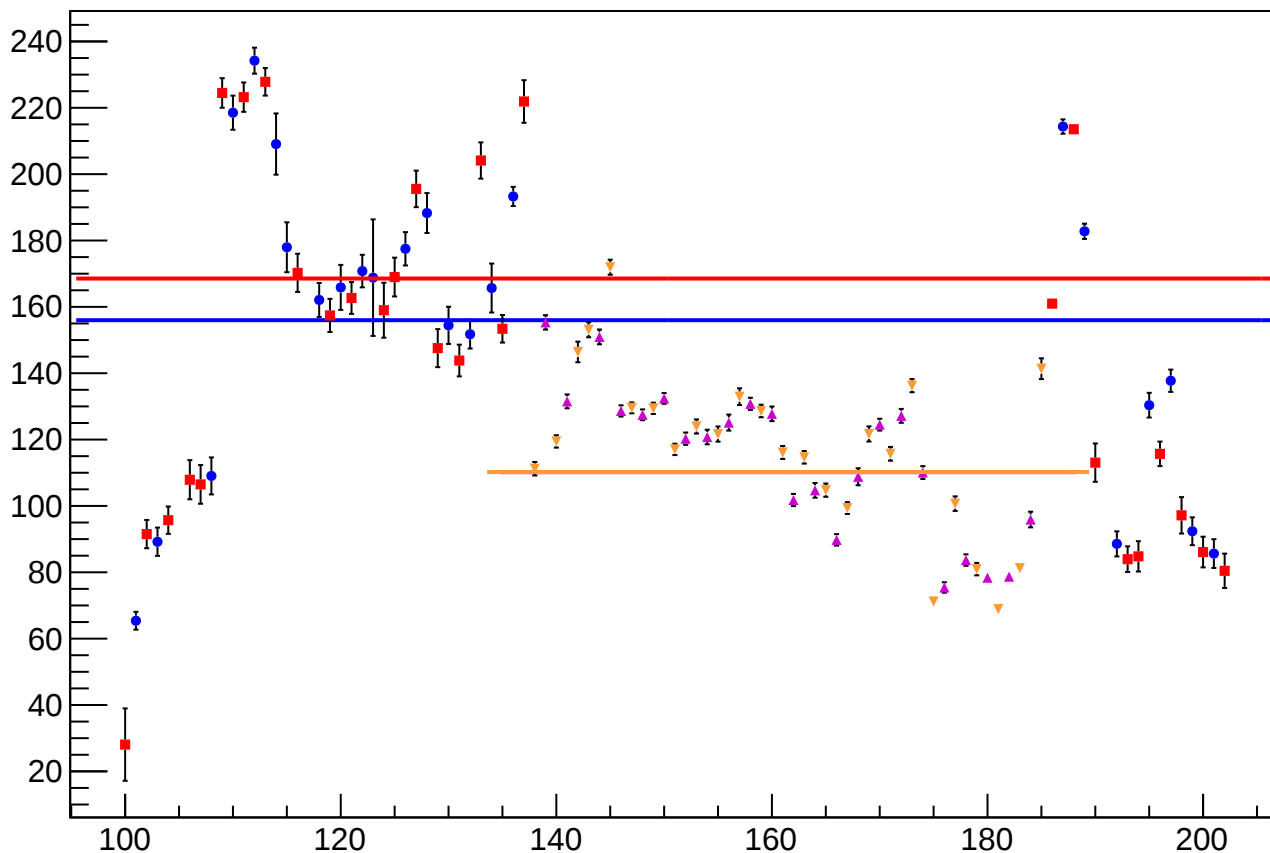
Right:  $7.766 \pm 0.408$   $\chi^2/\text{NDF}$ : 696.4/51

In:  $0.102 \pm 0.267$   $\chi^2/\text{NDF}$ : 1631.9/46

Out:  $0.822 \pm 0.260$   $\chi^2/\text{NDF}$ : 1879.4/52

All:  $0.472 \pm 0.186$   $\chi^2/\text{NDF}$ : 3515.0/99

reg\_asym\_usr\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $155.982 \pm 0.817$   $\chi^2/\text{NDF}: 4026.4/23$

Left Out:  $110.213 \pm 0.382$   $\chi^2/\text{NDF}: 4593.7/24$

Right Out:  $168.541 \pm 0.648$   $\chi^2/\text{NDF}: 5158.2/27$

Left In:  $110.171 \pm 0.386$   $\chi^2/\text{NDF}: 3702.6/22$

Left:  $110.192 \pm 0.272$   $\chi^2/\text{NDF}: 8296.2/47$

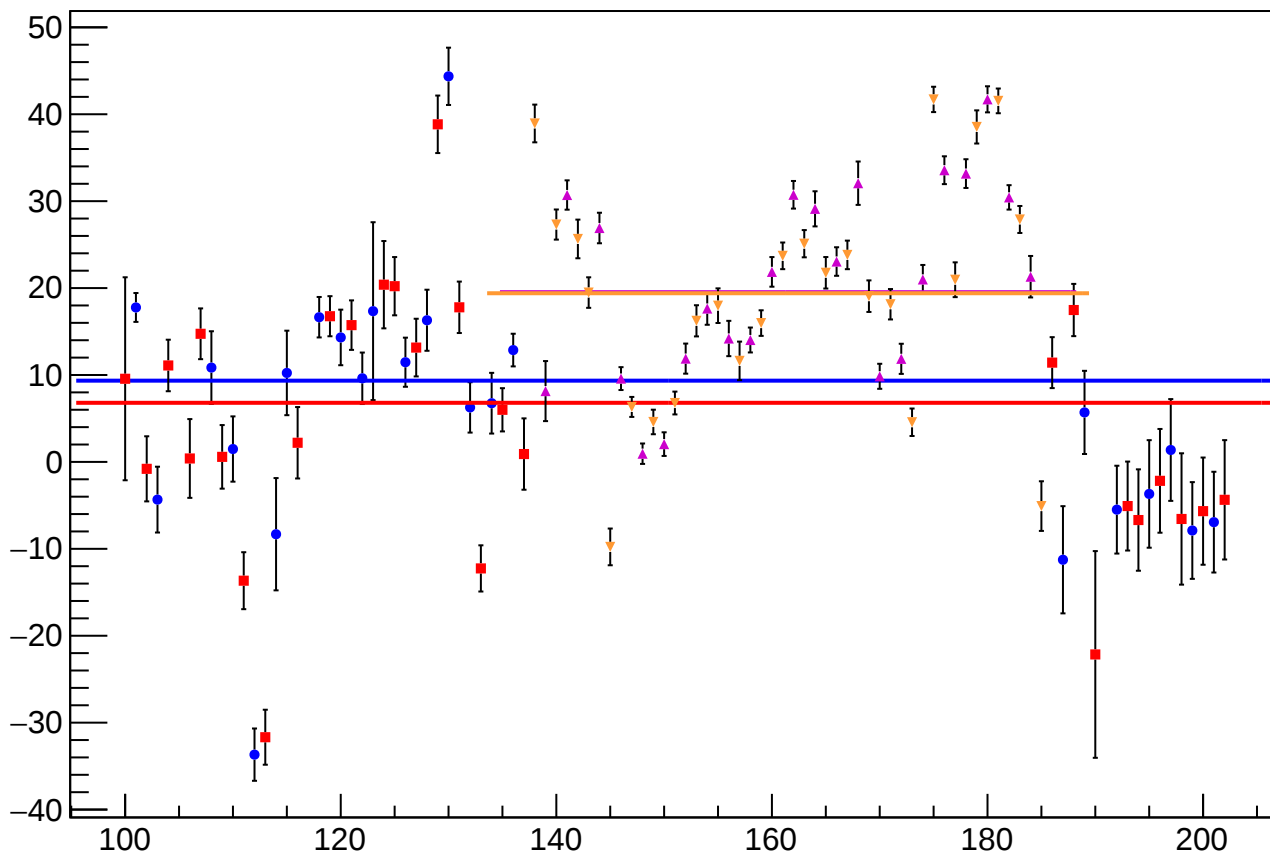
Right:  $163.695 \pm 0.507$   $\chi^2/\text{NDF}: 9329.8/51$

In:  $118.532 \pm 0.349$   $\chi^2/\text{NDF}: 10300.0/46$

Out:  $125.275 \pm 0.329$   $\chi^2/\text{NDF}: 15771.2/52$

All:  $122.102 \pm 0.239$   $\chi^2/\text{NDF}: 26268.8/99$

reg\_asym\_usr\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 9.348 $\pm$ 0.682  $\chi^2$ /NDF: 434.8/23

Left Out: 19.405 $\pm$ 0.335  $\chi^2$ /NDF:1453.4/24

Right Out: 6.800 $\pm$ 0.677  $\chi^2$ /NDF: 467.3/27

Left In: 19.530 $\pm$ 0.342  $\chi^2$ /NDF:1181.3/22

Left: 19.466 $\pm$ 0.239  $\chi^2$ /NDF: 2634.8/47

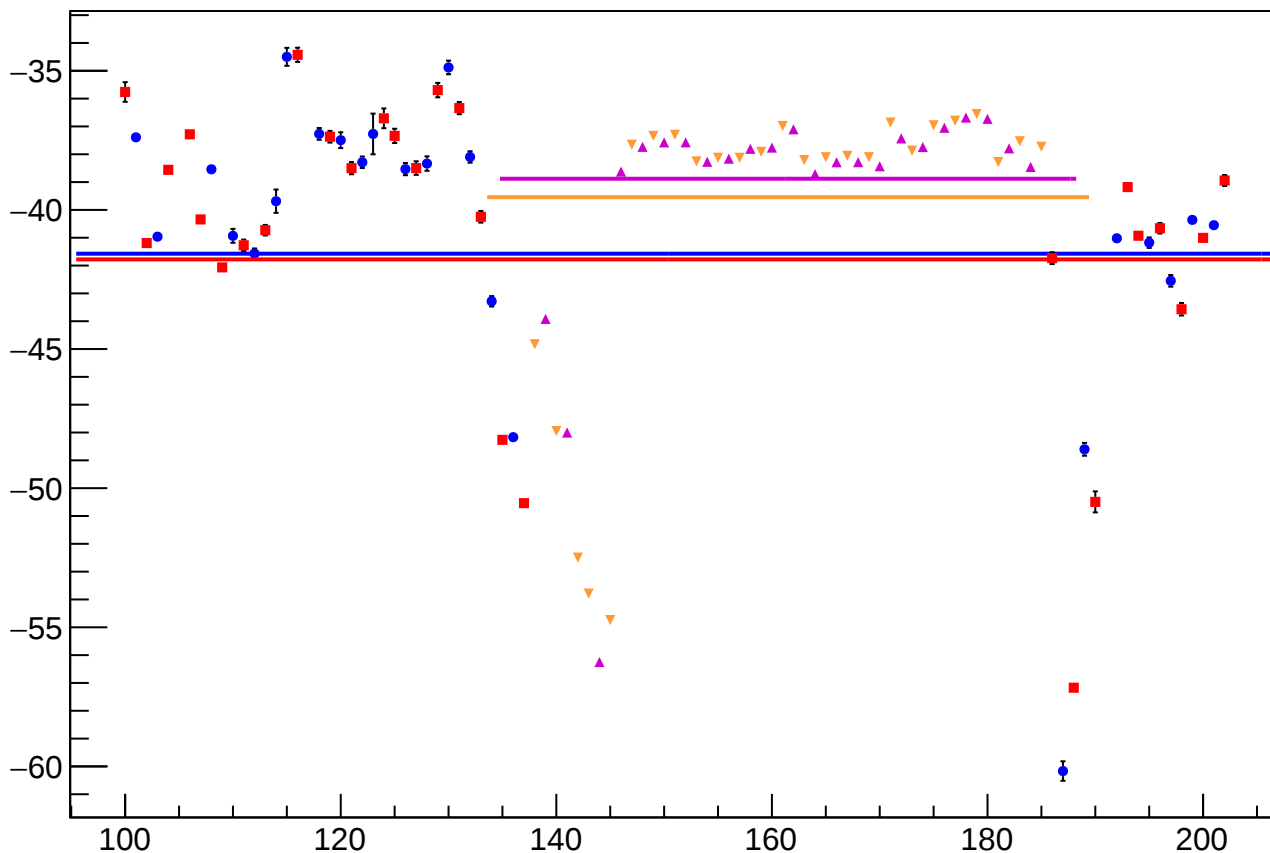
Right: 8.066 $\pm$ 0.480  $\chi^2$ /NDF: 909.2/51

In: 17.478 $\pm$ 0.306  $\chi^2$ /NDF:1794.3/46

Out: 16.932 $\pm$ 0.300  $\chi^2$ /NDF:2199.0/52

All: 17.200 $\pm$ 0.214  $\chi^2$ /NDF: 3994.9/99

reg\_asym\_usr\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-41.573 \pm 0.034$   $\chi^2/\text{NDF}: 16439.9/23$

Left Out:  $-39.542 \pm 0.016$   $\chi^2/\text{NDF}: 92024.1/24$

Right Out:  $-41.778 \pm 0.033$   $\chi^2/\text{NDF}: 22852.1/27$

Left In:  $-38.880 \pm 0.016$   $\chi^2/\text{NDF}: 53409.9/22$

Left:  $-39.214 \pm 0.011$   $\chi^2/\text{NDF}: 146312.0/47$

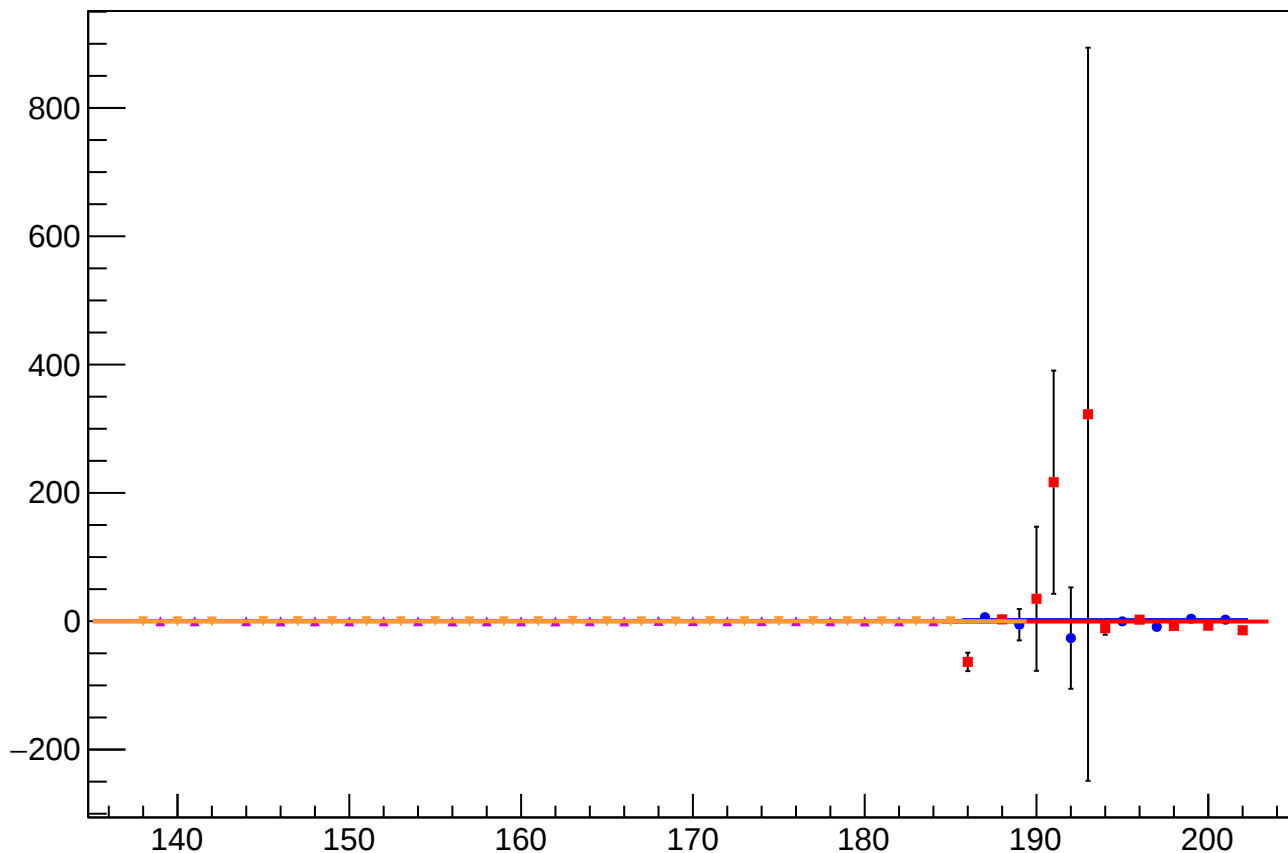
Right:  $-41.679 \pm 0.024$   $\chi^2/\text{NDF}: 39310.6/51$

In:  $-39.361 \pm 0.014$   $\chi^2/\text{NDF}: 74994.5/46$

Out:  $-39.956 \pm 0.014$   $\chi^2/\text{NDF}: 118615.2/52$

All:  $-39.662 \pm 0.010$   $\chi^2/\text{NDF}: 194477.1/99$

reg\_asym\_dsl\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 1.796 $\pm$ 1.978  $\chi^2$ /NDF: 7.8/6

Left Out: -0.089 $\pm$ 0.022  $\chi^2$ /NDF:39.7/23

Right Out: -0.448 $\pm$ 1.612  $\chi^2$ /NDF: 31.3/9

Left In: -0.026 $\pm$ 0.022  $\chi^2$ /NDF:33.3/22

Left: -0.057 $\pm$ 0.016  $\chi^2$ /NDF: 77.1/46

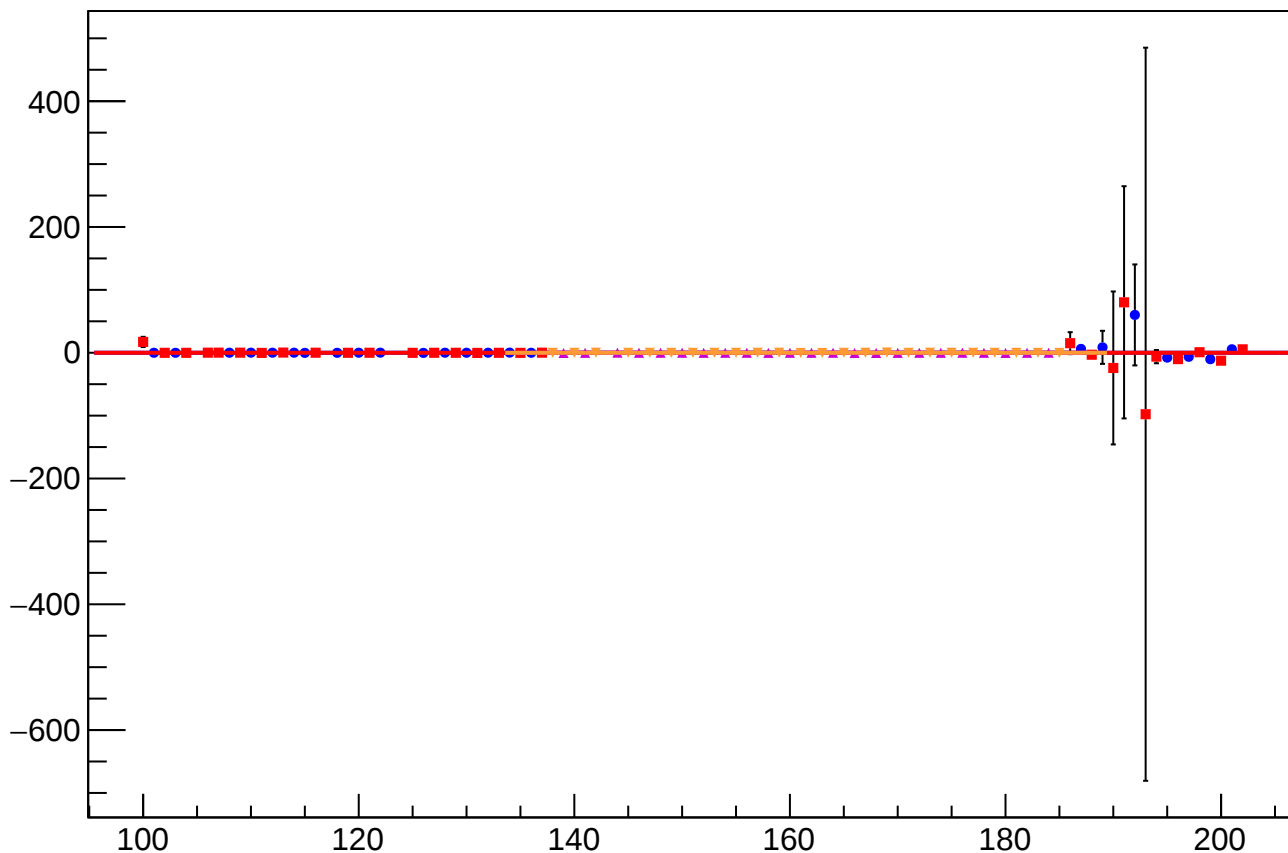
Right: 0.447 $\pm$ 1.250  $\chi^2$ /NDF: 39.9/16

In: -0.025 $\pm$ 0.022  $\chi^2$ /NDF:42.0/29

Out: -0.089 $\pm$ 0.022  $\chi^2$ /NDF:71.1/33

All: -0.057 $\pm$ 0.016  $\chi^2$ /NDF: 117.1/63

reg\_asym\_dsl\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-0.002 \pm 0.029$   $\chi^2/\text{NDF}$ : 22.0/22

Left Out:  $-0.081 \pm 0.017$   $\chi^2/\text{NDF}$ : 25.8/23

Right Out:  $-0.051 \pm 0.029$   $\chi^2/\text{NDF}$ : 35.3/27

Left In:  $-0.052 \pm 0.018$   $\chi^2/\text{NDF}$ : 31.7/22

Left:  $-0.067 \pm 0.012$   $\chi^2/\text{NDF}$ : 58.9/46

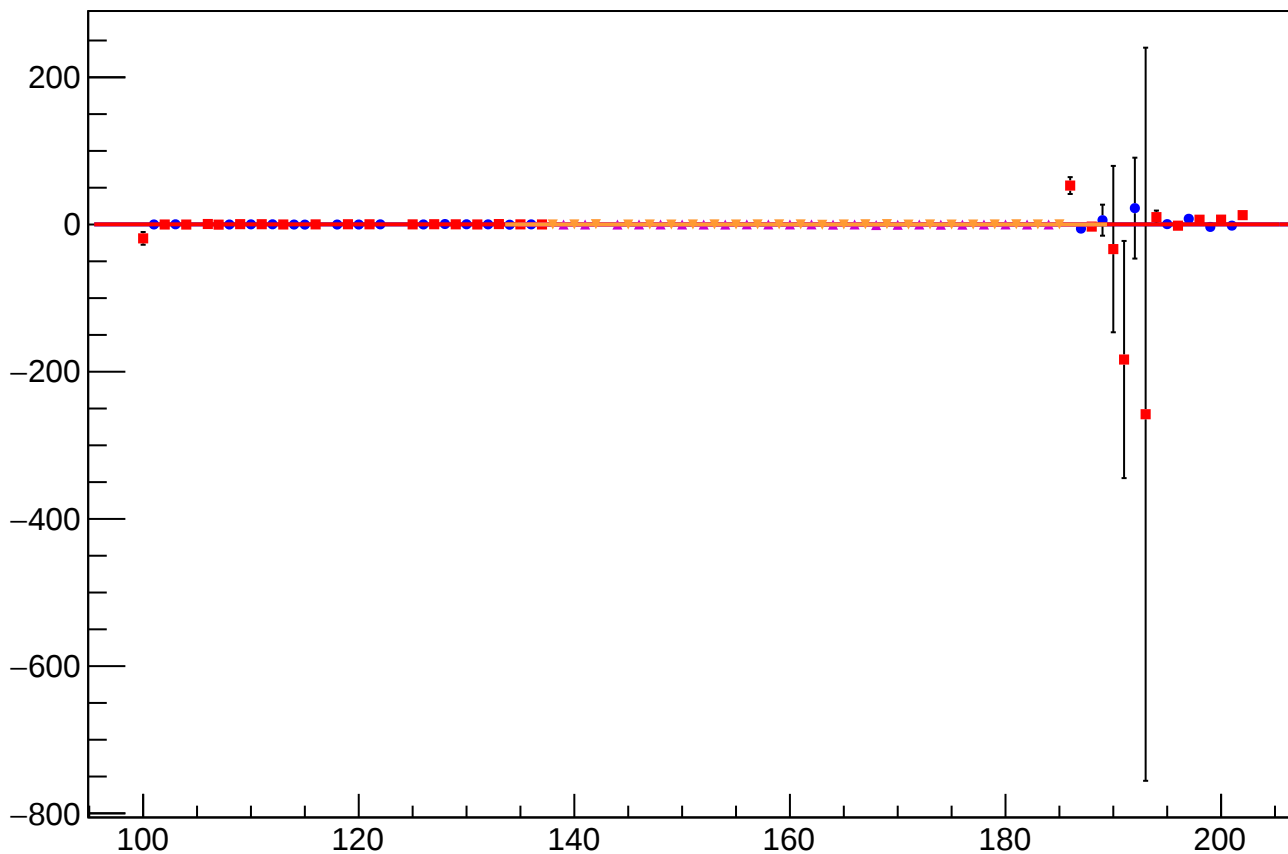
Right:  $-0.026 \pm 0.020$   $\chi^2/\text{NDF}$ : 58.7/50

In:  $-0.038 \pm 0.015$   $\chi^2/\text{NDF}$ : 55.9/45

Out:  $-0.073 \pm 0.015$   $\chi^2/\text{NDF}$ : 61.9/51

All:  $-0.056 \pm 0.011$   $\chi^2/\text{NDF}$ : 120.6/97

reg\_asym\_dsl\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 0.173 $\pm$ 0.053  $\chi^2$ /NDF: 22.6/22

Left Out: 0.081 $\pm$ 0.022  $\chi^2$ /NDF:38.4/23

Right Out: 0.235 $\pm$ 0.054  $\chi^2$ /NDF: 55.7/27

Left In: 0.020 $\pm$ 0.022  $\chi^2$ /NDF:35.6/22

Left: 0.051 $\pm$ 0.016  $\chi^2$ /NDF: 77.8/46

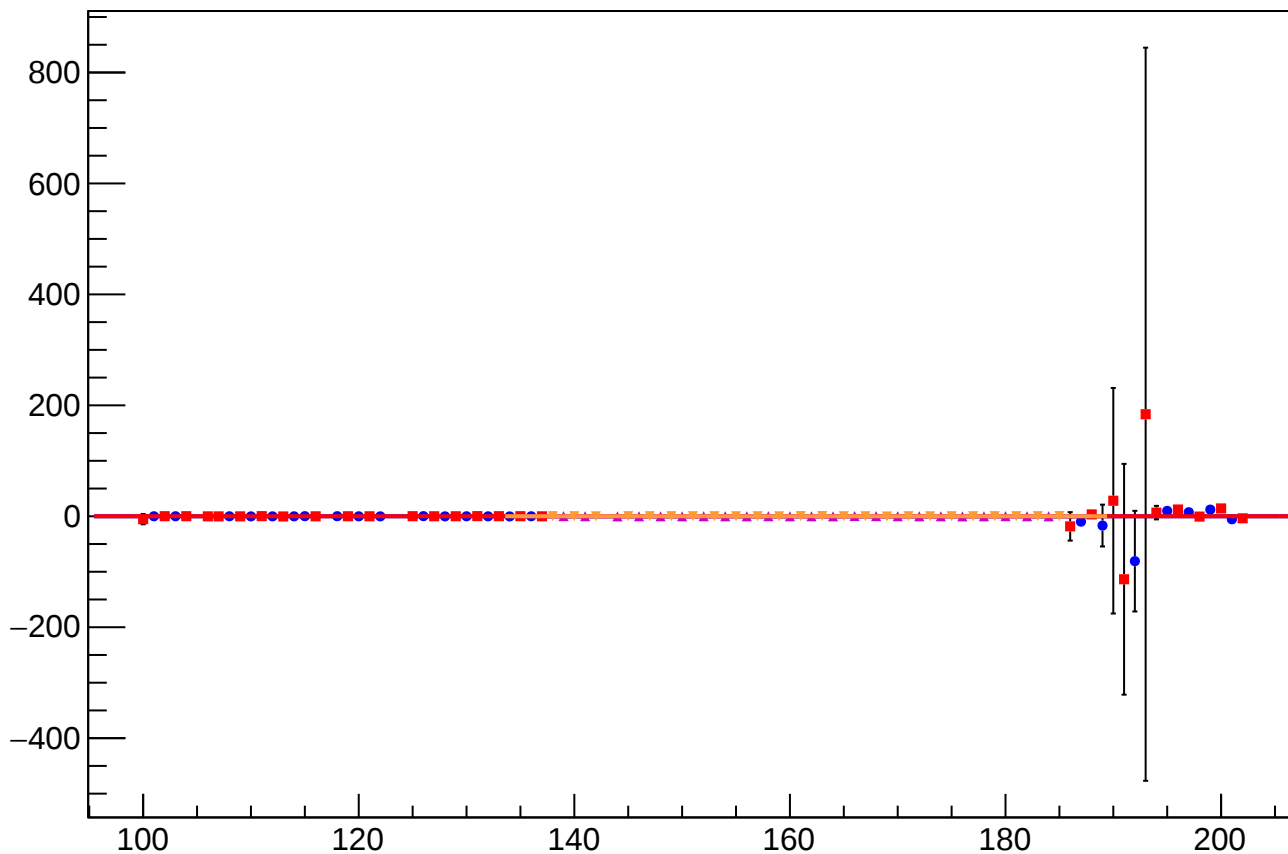
Right: 0.203 $\pm$ 0.038  $\chi^2$ /NDF: 79.0/50

In: 0.043 $\pm$ 0.020  $\chi^2$ /NDF:65.3/45

Out: 0.103 $\pm$ 0.020  $\chi^2$ /NDF:101.1/51

All: 0.073 $\pm$ 0.014  $\chi^2$ /NDF: 170.7/97

reg\_asym\_dsl\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-0.006 \pm 0.033$   $\chi^2/\text{NDF}: 23.9/22$

Left Out:  $0.105 \pm 0.020$   $\chi^2/\text{NDF}: 29.5/23$

Right Out:  $0.058 \pm 0.034$   $\chi^2/\text{NDF}: 29.2/27$

Left In:  $0.069 \pm 0.020$   $\chi^2/\text{NDF}: 31.3/22$

Left:  $0.088 \pm 0.014$   $\chi^2/\text{NDF}: 62.5/46$

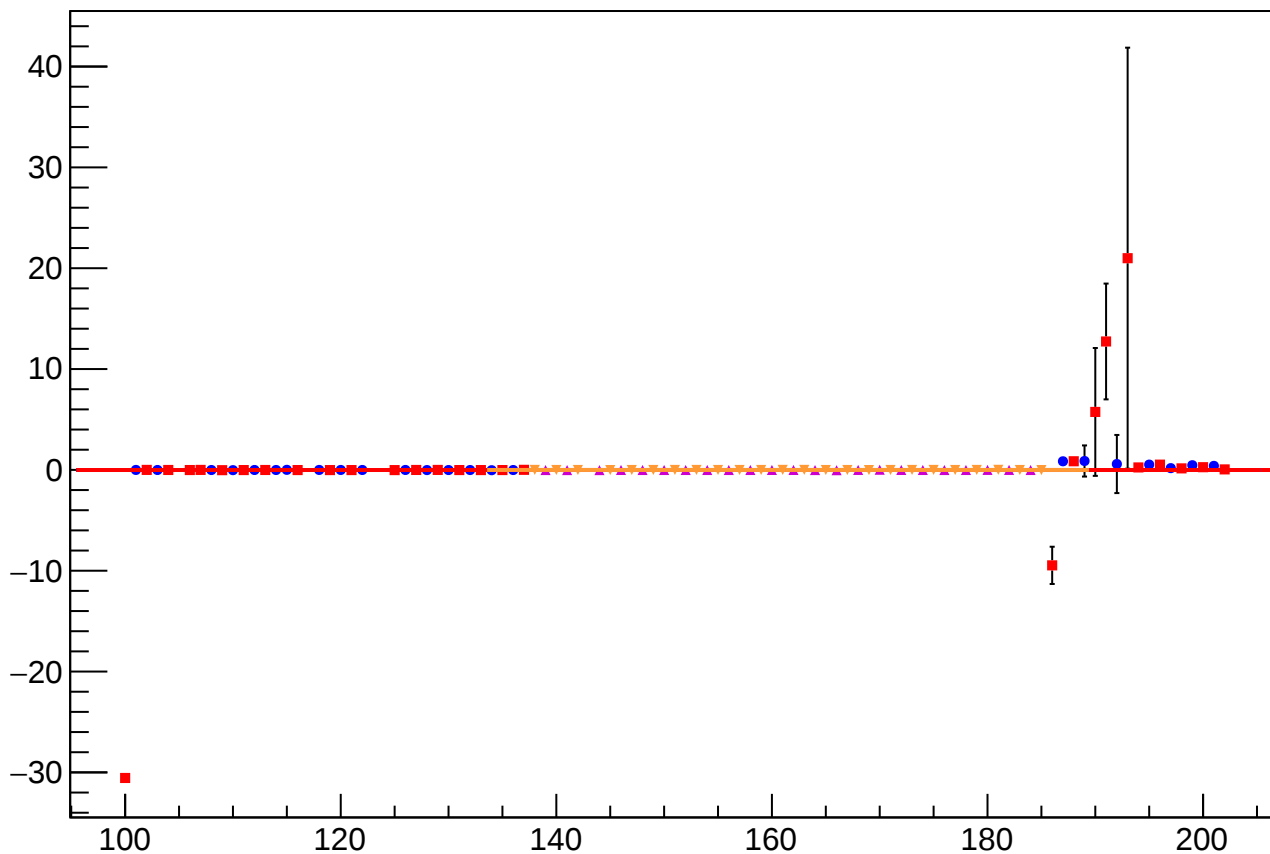
Right:  $0.025 \pm 0.024$   $\chi^2/\text{NDF}: 54.9/50$

In:  $0.049 \pm 0.017$   $\chi^2/\text{NDF}: 59.1/45$

Out:  $0.093 \pm 0.017$   $\chi^2/\text{NDF}: 60.1/51$

All:  $0.071 \pm 0.012$   $\chi^2/\text{NDF}: 122.6/97$

# reg\_asym\_dsl\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.012 \pm 0.002$   $\chi^2/\text{NDF}$ : 35.2/22

Left Out:  $-0.008 \pm 0.001$   $\chi^2/\text{NDF}$ : 30.1/23

Right Out:  $-0.012 \pm 0.002$   $\chi^2/\text{NDF}$ : 11945.8/27

Left In:  $-0.009 \pm 0.001$   $\chi^2/\text{NDF}$ : 40.8/22

Left:  $-0.008 \pm 0.001$   $\chi^2/\text{NDF}$ : 71.4/46

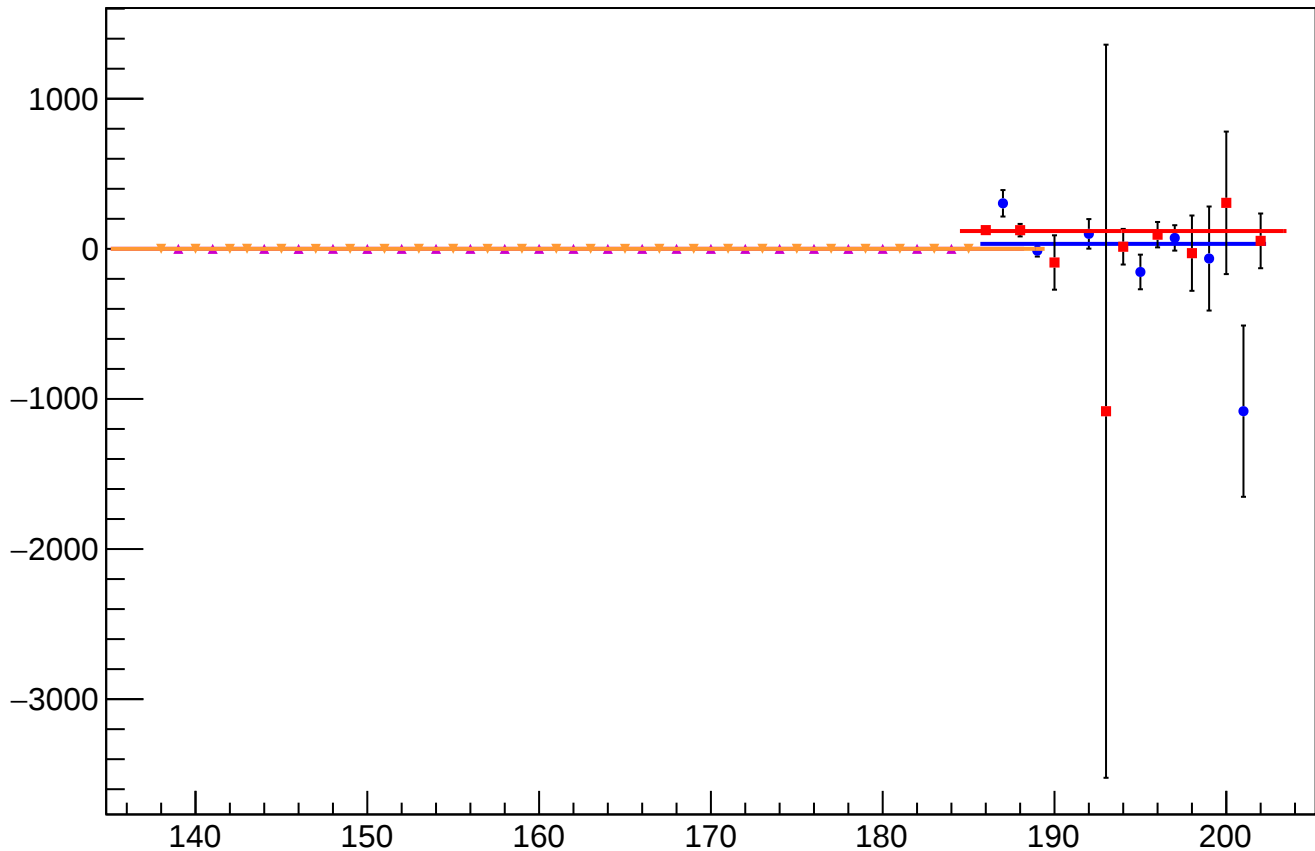
Right:  $-0.012 \pm 0.001$   $\chi^2/\text{NDF}$ : 11981.0/50

In:  $-0.009 \pm 0.001$   $\chi^2/\text{NDF}$ : 78.2/45

Out:  $-0.009 \pm 0.001$   $\chi^2/\text{NDF}$ : 11979.8/51

All:  $-0.009 \pm 0.001$   $\chi^2/\text{NDF}$ : 12058.2/97

reg\_asym\_dsr\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 33.080+/-30.155  $\chi^2/\text{NDF}$ : 17.9/6

Left Out: 0.017+/-0.027  $\chi^2/\text{NDF}$ :30.9/24

Right Out: 118.519+/-16.458  $\chi^2/\text{NDF}$ : 3.2/8

Left In: 0.002+/-0.028  $\chi^2/\text{NDF}$ :29.0/22

Left: 0.010+/-0.019  $\chi^2/\text{NDF}$ : 60.1/47

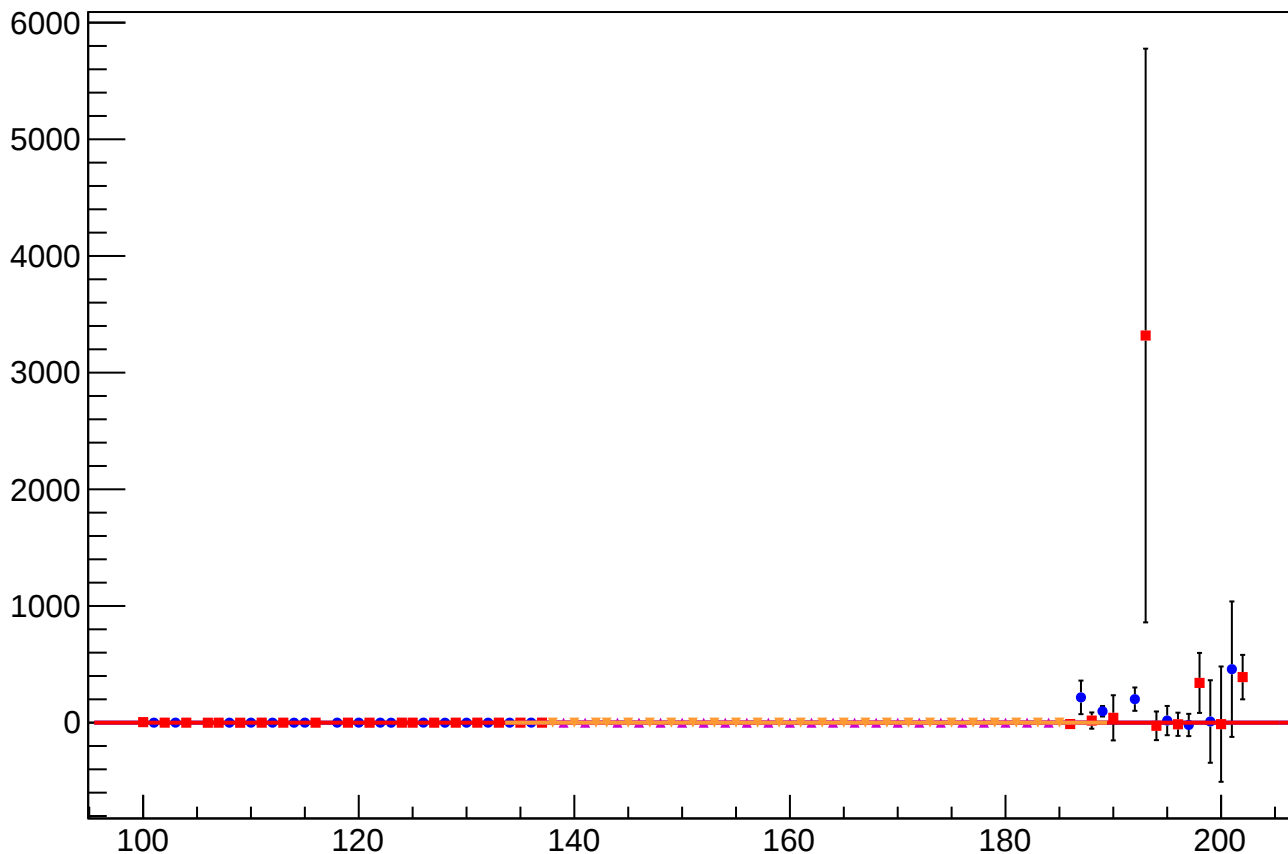
Right: 98.909+/-14.447  $\chi^2/\text{NDF}$ : 27.3/15

In: 0.002+/-0.028  $\chi^2/\text{NDF}$ :48.1/29

Out: 0.018+/-0.027  $\chi^2/\text{NDF}$ :86.0/33

All: 0.010+/-0.019  $\chi^2/\text{NDF}$ : 134.3/63

reg\_asym\_dsr\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-0.022 \pm 0.037$   $\chi^2/\text{NDF}$ : 34.7/23

Left Out:  $-0.060 \pm 0.021$   $\chi^2/\text{NDF}$ : 24.6/24

Right Out:  $-0.120 \pm 0.039$   $\chi^2/\text{NDF}$ : 26.7/27

Left In:  $-0.071 \pm 0.022$   $\chi^2/\text{NDF}$ : 49.0/22

Left:  $-0.065 \pm 0.015$   $\chi^2/\text{NDF}$ : 73.7/47

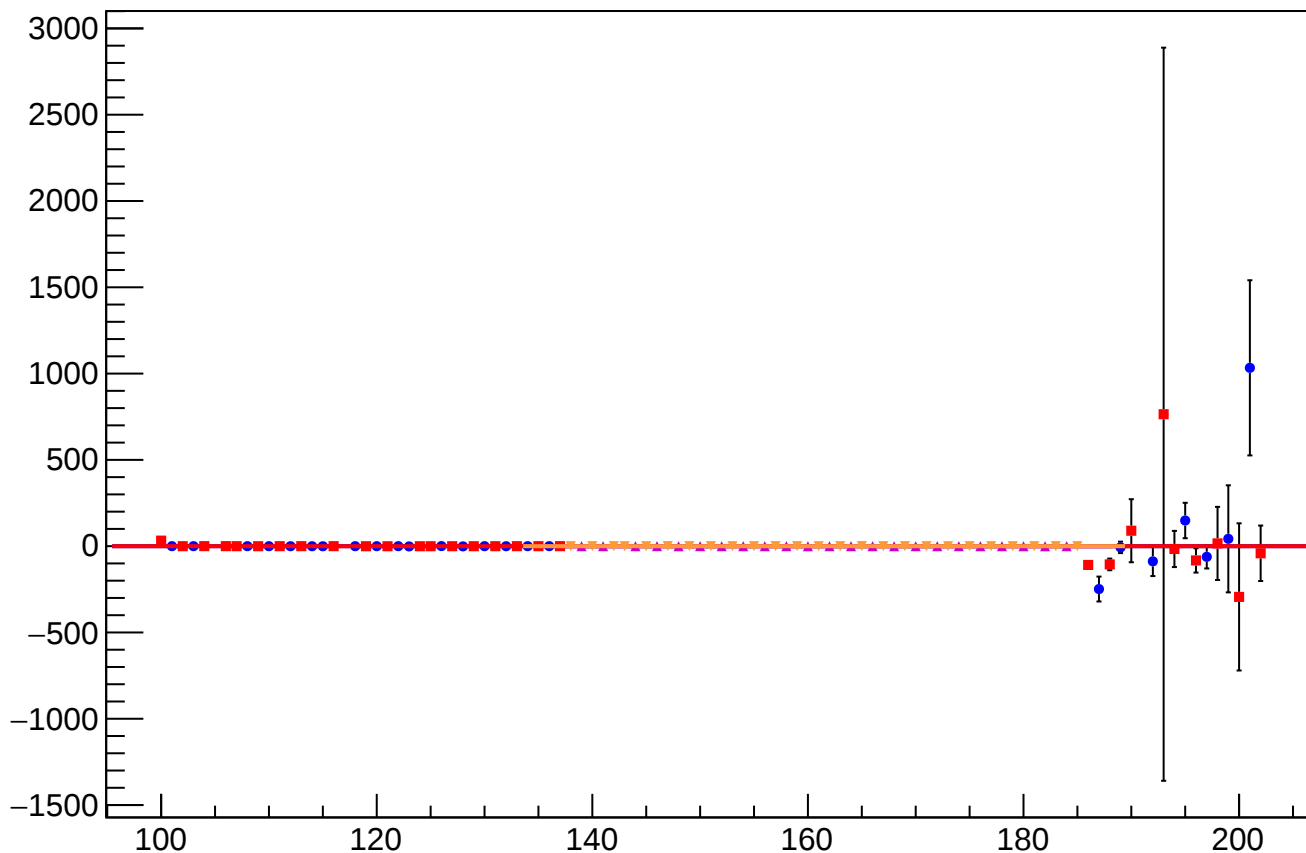
Right:  $-0.068 \pm 0.027$   $\chi^2/\text{NDF}$ : 64.7/51

In:  $-0.058 \pm 0.019$   $\chi^2/\text{NDF}$ : 85.0/46

Out:  $-0.073 \pm 0.019$   $\chi^2/\text{NDF}$ : 53.2/52

All:  $-0.066 \pm 0.013$   $\chi^2/\text{NDF}$ : 138.5/99

reg\_asym\_dsr\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-0.135 \pm 0.067$   $\chi^2/\text{NDF}: 44.8/23$

Left Out:  $-0.018 \pm 0.027$   $\chi^2/\text{NDF}: 29.0/24$

Right Out:  $-0.167 \pm 0.071$   $\chi^2/\text{NDF}: 78.2/27$

Left In:  $-0.033 \pm 0.027$   $\chi^2/\text{NDF}: 28.5/22$

Left:  $-0.025 \pm 0.019$   $\chi^2/\text{NDF}: 57.6/47$

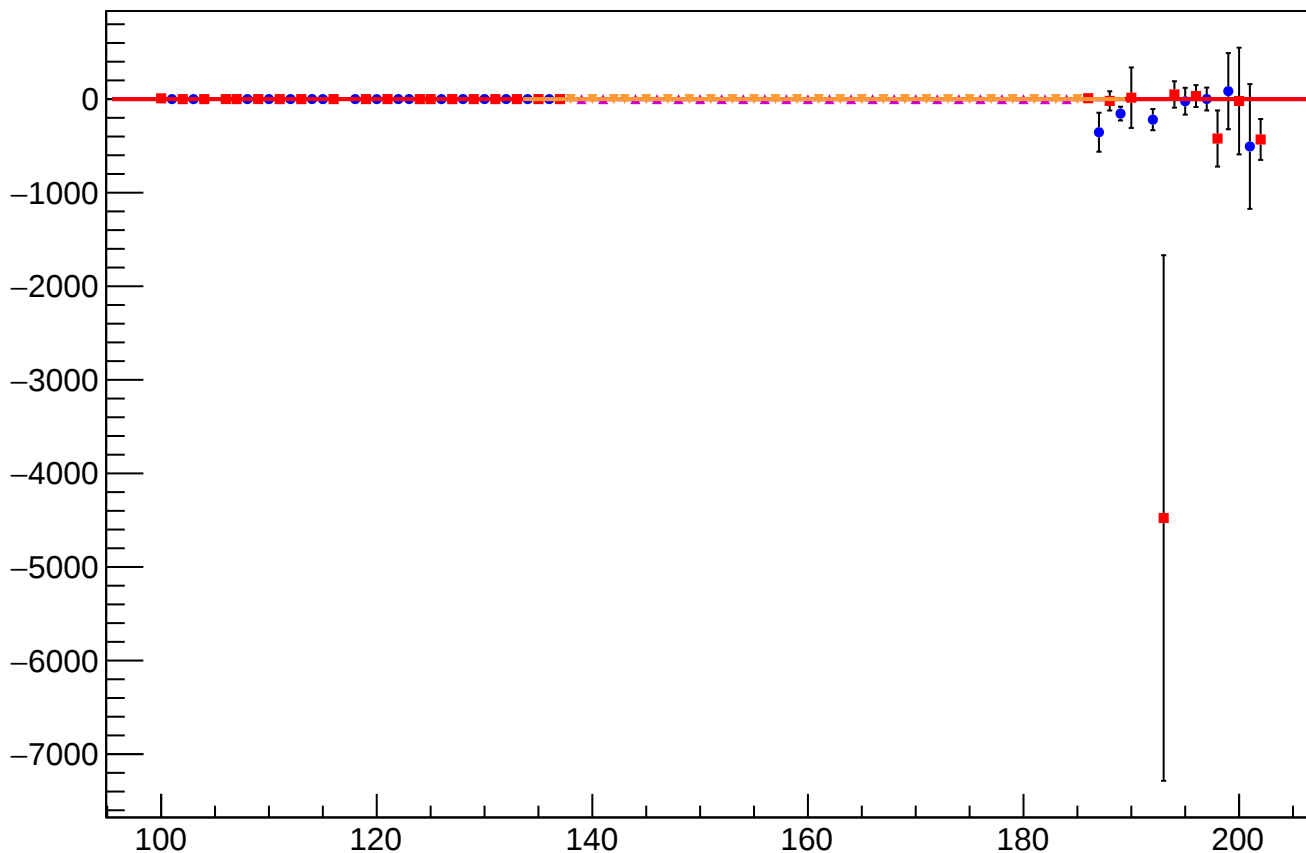
Right:  $-0.150 \pm 0.049$   $\chi^2/\text{NDF}: 123.1/51$

In:  $-0.047 \pm 0.025$   $\chi^2/\text{NDF}: 75.2/46$

Out:  $-0.037 \pm 0.025$   $\chi^2/\text{NDF}: 111.0/52$

All:  $-0.042 \pm 0.018$   $\chi^2/\text{NDF}: 186.4/99$

reg\_asym\_dsr\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 0.018 $\pm$ 0.043  $\chi^2$ /NDF: 33.4/23

Left Out: 0.063 $\pm$ 0.024  $\chi^2$ /NDF:24.6/24

Right Out: 0.144 $\pm$ 0.045  $\chi^2$ /NDF: 25.6/27

Left In: 0.069 $\pm$ 0.025  $\chi^2$ /NDF:51.8/22

Left: 0.066 $\pm$ 0.017  $\chi^2$ /NDF: 76.5/47

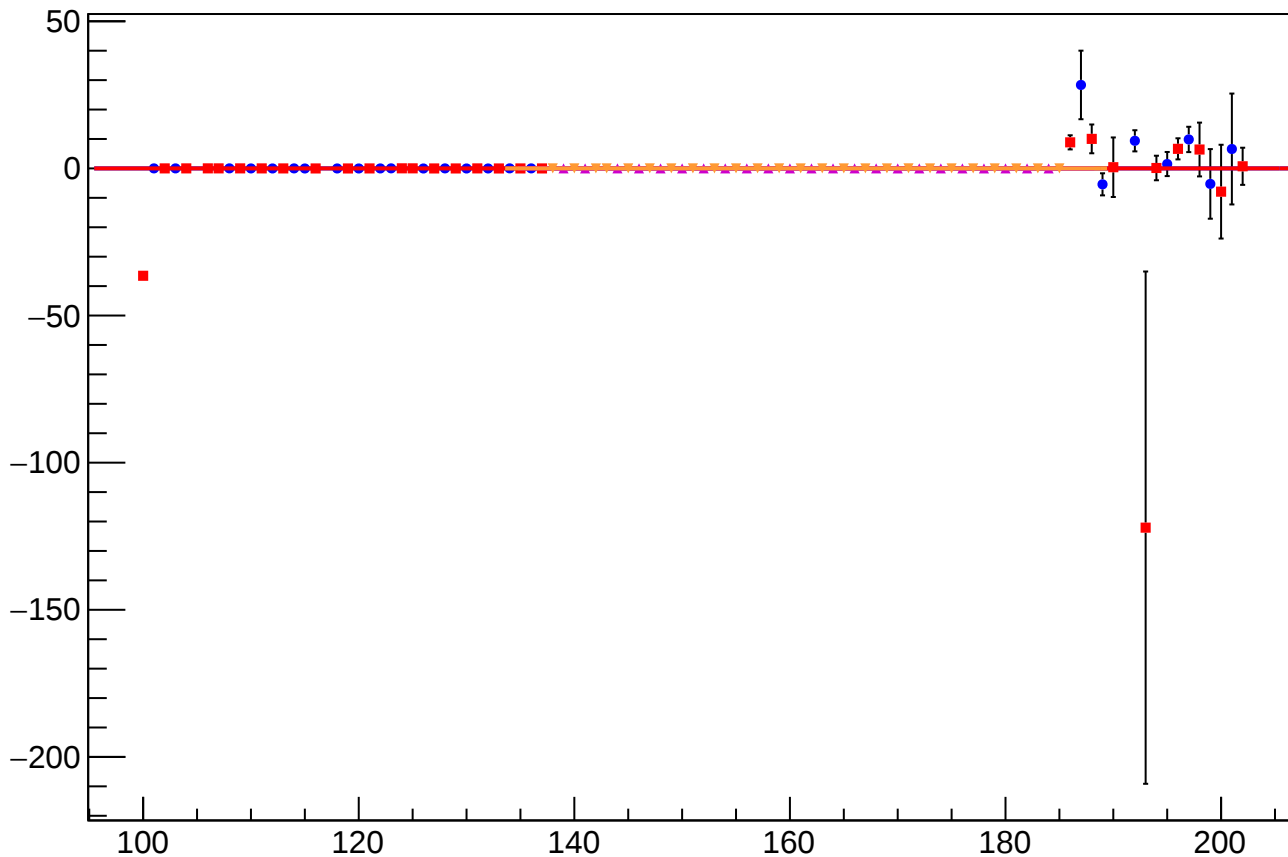
Right: 0.077 $\pm$ 0.031  $\chi^2$ /NDF: 63.0/51

In: 0.056 $\pm$ 0.021  $\chi^2$ /NDF:86.2/46

Out: 0.081 $\pm$ 0.021  $\chi^2$ /NDF:52.7/52

All: 0.069 $\pm$ 0.015  $\chi^2$ /NDF: 139.6/99

reg\_asym\_dsr\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.001 $\pm$ 0.002  $\chi^2$ /NDF: 51.0/23

Left Out: 0.008 $\pm$ 0.001  $\chi^2$ /NDF: 26.3/24

Right Out: 0.001 $\pm$ 0.002  $\chi^2$ /NDF: 10473.1/27

Left In: 0.009 $\pm$ 0.001  $\chi^2$ /NDF: 15.0/22

Left: 0.009 $\pm$ 0.001  $\chi^2$ /NDF: 41.4/47

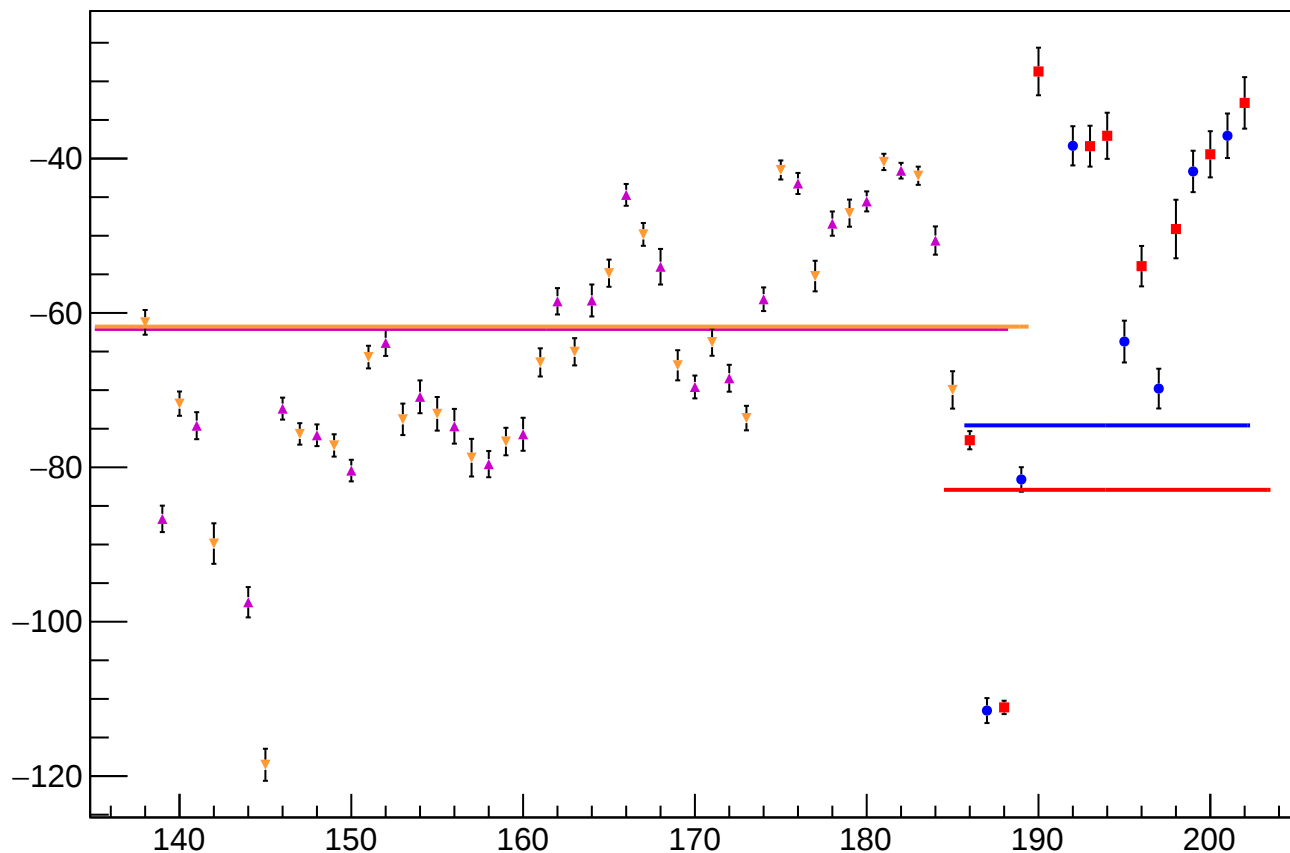
Right: 0.001 $\pm$ 0.002  $\chi^2$ /NDF: 10524.1/51

In: 0.007 $\pm$ 0.001  $\chi^2$ /NDF: 75.5/46

Out: 0.007 $\pm$ 0.001  $\chi^2$ /NDF: 10508.3/52

All: 0.007 $\pm$ 0.001  $\chi^2$ /NDF: 10583.9/99

reg\_asym\_us\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-74.567 \pm 0.822$   $\chi^2/\text{NDF}$ : 1083.8/6

Left Out:  $-61.771 \pm 0.334$   $\chi^2/\text{NDF}$ : 2504.9/23

Right Out:  $-82.916 \pm 0.594$   $\chi^2/\text{NDF}$ : 2560.0/8

Left In:  $-62.073 \pm 0.332$   $\chi^2/\text{NDF}$ : 2192.0/22

Left:  $-61.923 \pm 0.236$   $\chi^2/\text{NDF}$ : 4697.3/46

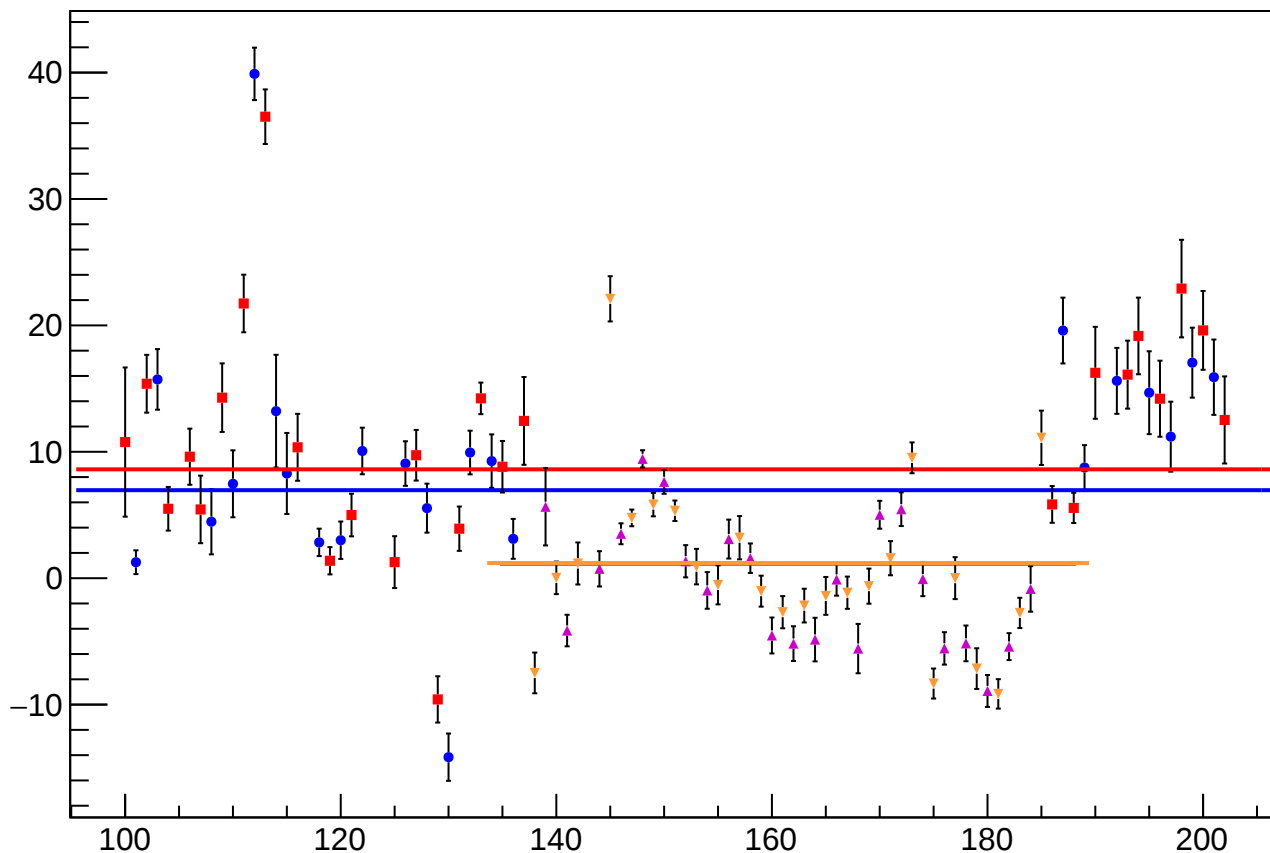
Right:  $-80.052 \pm 0.481$   $\chi^2/\text{NDF}$ : 3711.6/15

In:  $-63.829 \pm 0.308$   $\chi^2/\text{NDF}$ : 3474.4/29

Out:  $-66.851 \pm 0.291$   $\chi^2/\text{NDF}$ : 6028.4/32

All:  $-65.426 \pm 0.212$   $\chi^2/\text{NDF}$ : 9553.7/62

reg\_asym\_us\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $6.963 \pm 0.392$   $\chi^2/\text{NDF}: 535.6/22$

Left Out:  $1.198 \pm 0.253$   $\chi^2/\text{NDF}: 526.3/23$

Right Out:  $8.613 \pm 0.385$   $\chi^2/\text{NDF}: 474.1/26$

Left In:  $1.146 \pm 0.255$   $\chi^2/\text{NDF}: 462.9/22$

Left:  $1.172 \pm 0.180$   $\chi^2/\text{NDF}: 989.3/46$

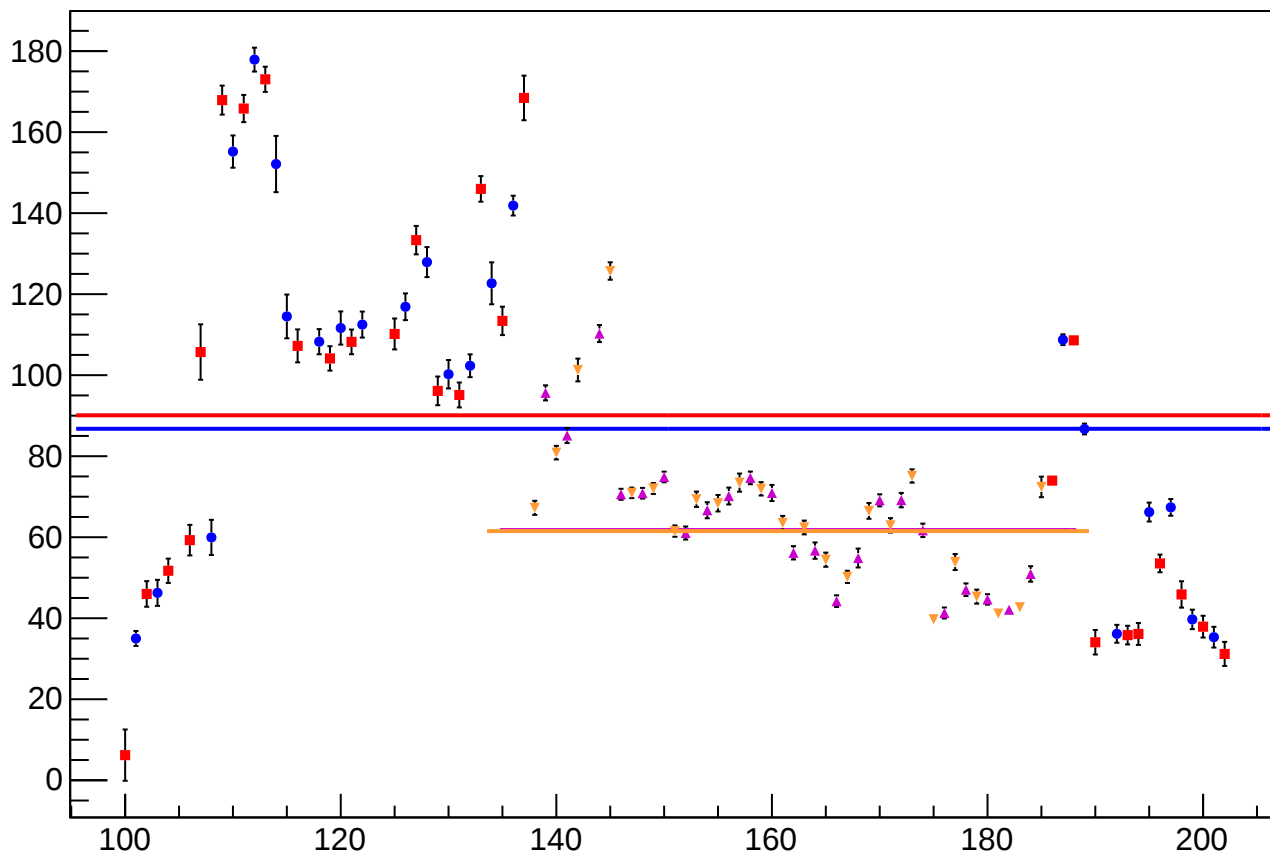
Right:  $7.802 \pm 0.275$   $\chi^2/\text{NDF}: 1018.7/49$

In:  $2.876 \pm 0.214$   $\chi^2/\text{NDF}: 1152.9/45$

Out:  $3.425 \pm 0.211$   $\chi^2/\text{NDF}: 1259.3/50$

All:  $3.154 \pm 0.150$   $\chi^2/\text{NDF}: 2415.5/96$

reg\_asym\_us\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 86.766 $\pm$ 0.528  $\chi^2$ /NDF: 5055.3/22

Left Out: 61.512 $\pm$ 0.332  $\chi^2$ /NDF: 2606.0/23

Right Out: 90.095 $\pm$ 0.422  $\chi^2$ /NDF: 6650.6/26

Left In: 61.762 $\pm$ 0.330  $\chi^2$ /NDF: 2418.2/22

Left: 61.638 $\pm$ 0.234  $\chi^2$ /NDF: 5024.5/46

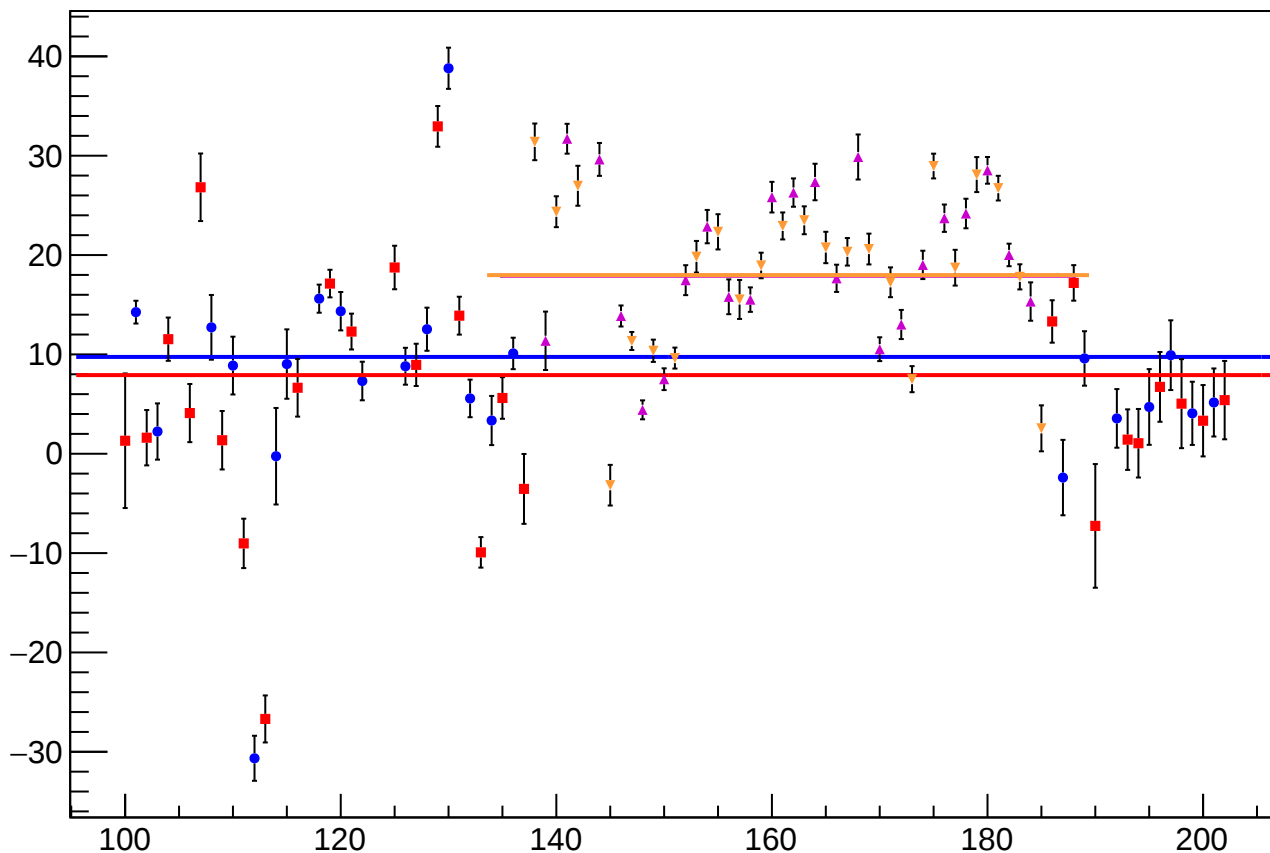
Right: 88.797 $\pm$ 0.330  $\chi^2$ /NDF: 11730.2/49

In: 68.788 $\pm$ 0.280  $\chi^2$ /NDF: 9087.0/45

Out: 72.457 $\pm$ 0.261  $\chi^2$ /NDF: 12089.3/50

All: 70.750 $\pm$ 0.191  $\chi^2$ /NDF: 21268.3/96

reg\_asym\_us\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 9.746 $\pm$ 0.462  $\chi^2$ /NDF: 601.3/22

Left Out: 17.980 $\pm$ 0.291  $\chi^2$ /NDF:674.4/23

Right Out: 7.916 $\pm$ 0.463  $\chi^2$ /NDF: 737.6/26

Left In: 17.916 $\pm$ 0.292  $\chi^2$ /NDF:726.5/22

Left: 17.948 $\pm$ 0.206  $\chi^2$ /NDF: 1400.9/46

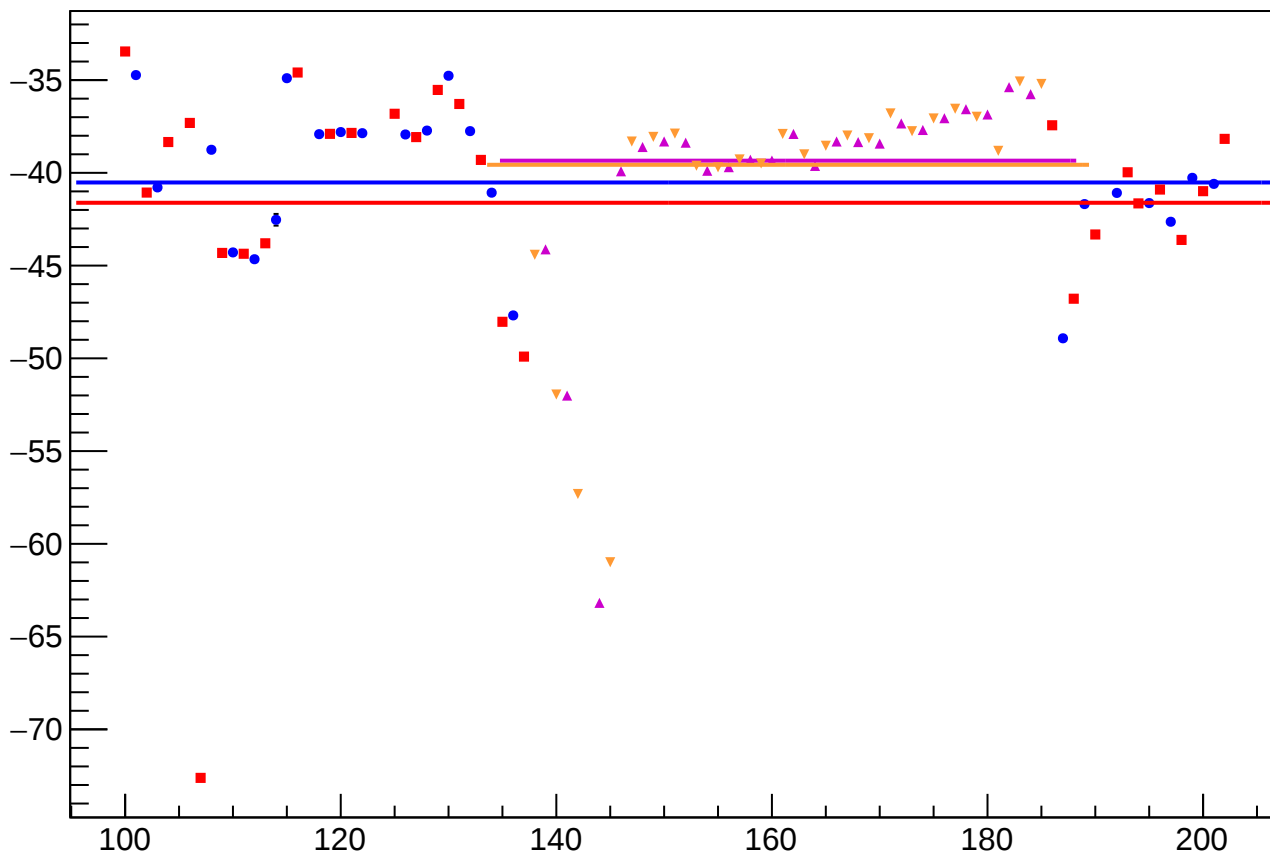
Right: 8.833 $\pm$ 0.327  $\chi^2$ /NDF: 1346.7/49

In: 15.582 $\pm$ 0.247  $\chi^2$ /NDF:1551.0/45

Out: 15.133 $\pm$ 0.246  $\chi^2$ /NDF:1750.6/50

All: 15.357 $\pm$ 0.174  $\chi^2$ /NDF: 3303.2/96

reg\_asym\_us\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: -40.519 $\pm$ 0.023  $\chi^2$ /NDF: 27331.7/22

Left Out: -39.566 $\pm$ 0.014  $\chi^2$ /NDF: 141198.7/23

Right Out: -41.613 $\pm$ 0.023  $\chi^2$ /NDF: 67195.2/26

Left In: -39.344 $\pm$ 0.014  $\chi^2$ /NDF: 116615.7/22

Left: -39.454 $\pm$ 0.010  $\chi^2$ /NDF: 257946.5/46

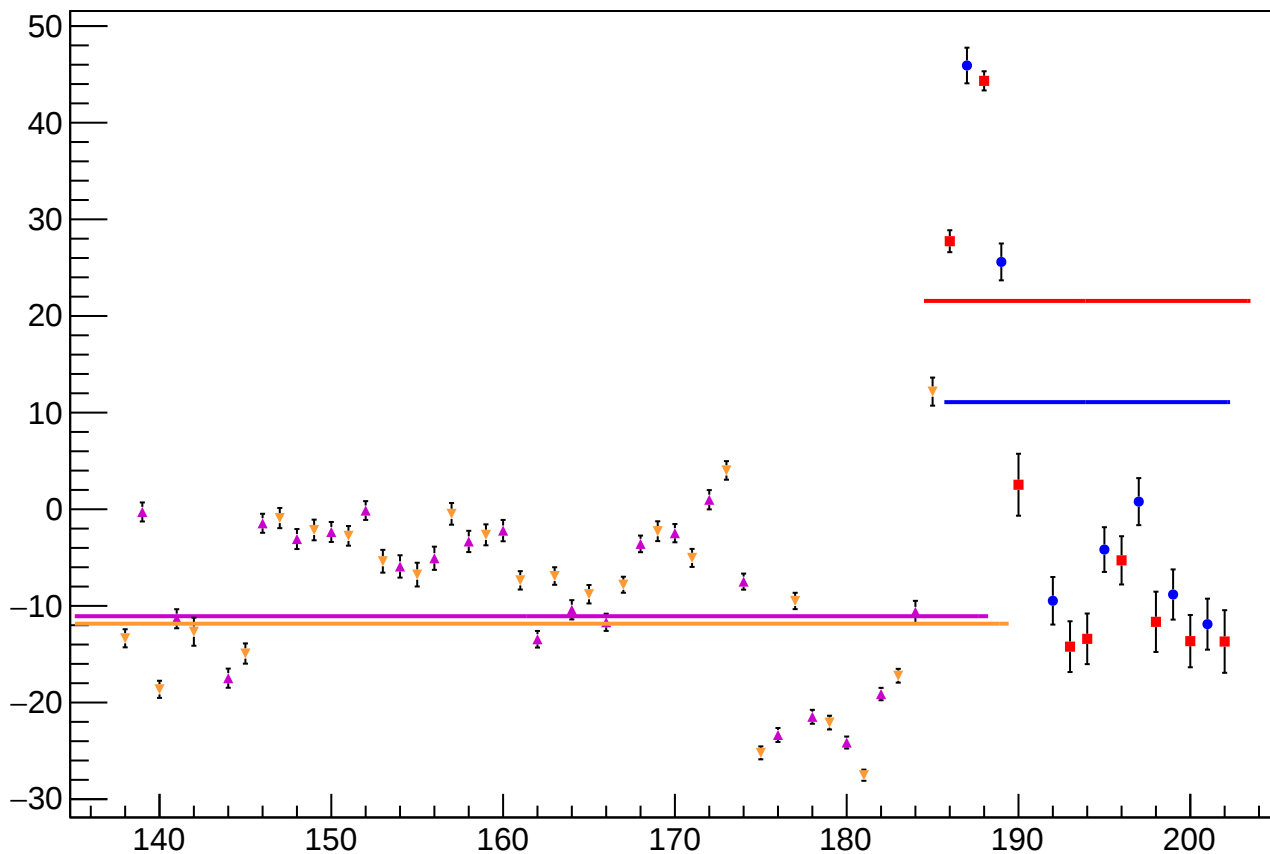
Right: -41.084 $\pm$ 0.016  $\chi^2$ /NDF: 95645.9/49

In: -39.639 $\pm$ 0.012  $\chi^2$ /NDF: 145822.2/45

Out: -40.113 $\pm$ 0.012  $\chi^2$ /NDF: 214330.6/50

All: -39.876 $\pm$ 0.008  $\chi^2$ /NDF: 360965.6/96

reg\_asym\_us\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 11.086+/-0.851  $\chi^2/\text{NDF}$ : 680.0/6

Left Out: -11.842+/-0.187  $\chi^2/\text{NDF}$ : 2739.8/23

Right Out: 21.559+/-0.611  $\chi^2/\text{NDF}$ : 1474.4/8

Left In: -11.067+/-0.188  $\chi^2/\text{NDF}$ : 2104.8/22

Left: -11.457+/-0.133  $\chi^2/\text{NDF}$ : 4853.2/46

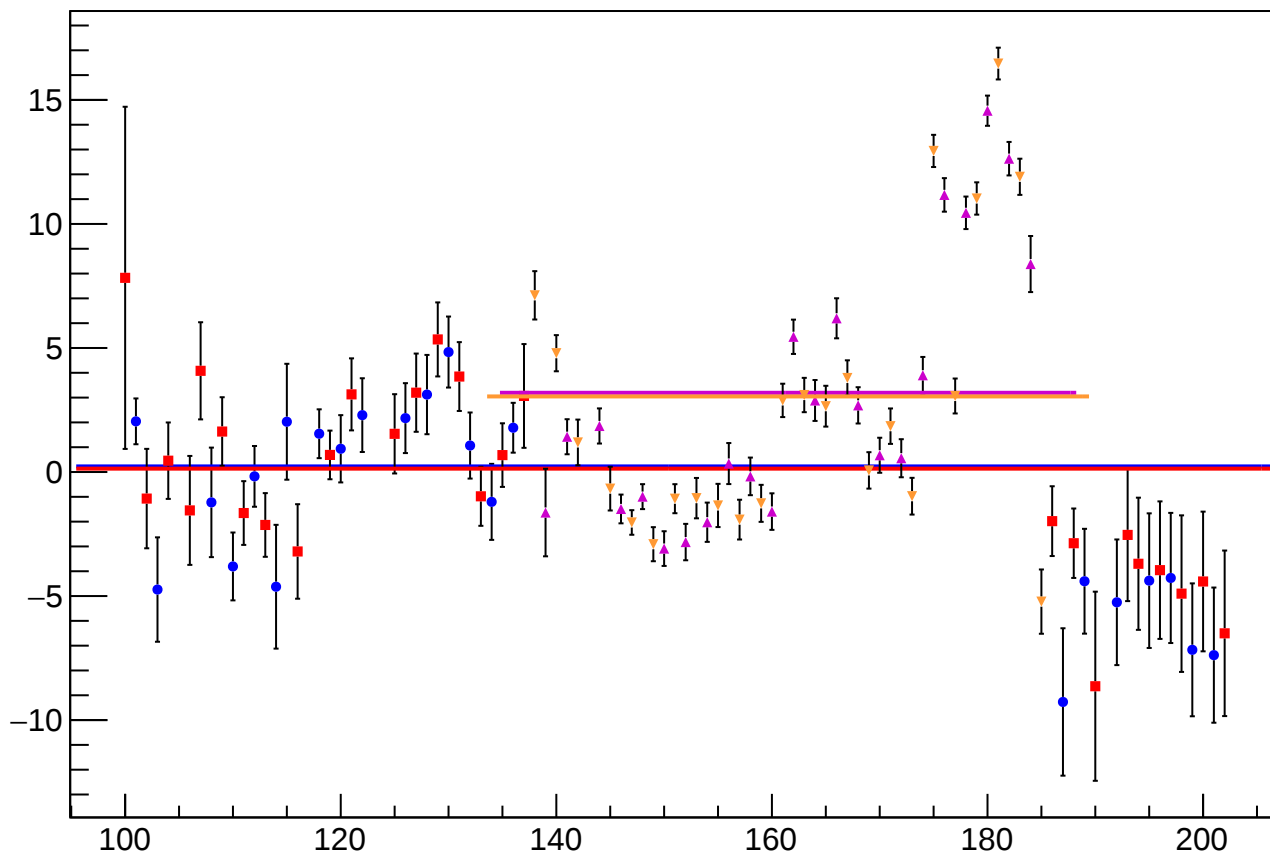
Right: 17.997+/-0.496  $\chi^2/\text{NDF}$ : 2254.5/15

In: -10.036+/-0.184  $\chi^2/\text{NDF}$ : 3431.2/29

Out: -8.985+/-0.179  $\chi^2/\text{NDF}$ : 6948.7/32

All: -9.496+/-0.128  $\chi^2/\text{NDF}$ : 10396.7/62

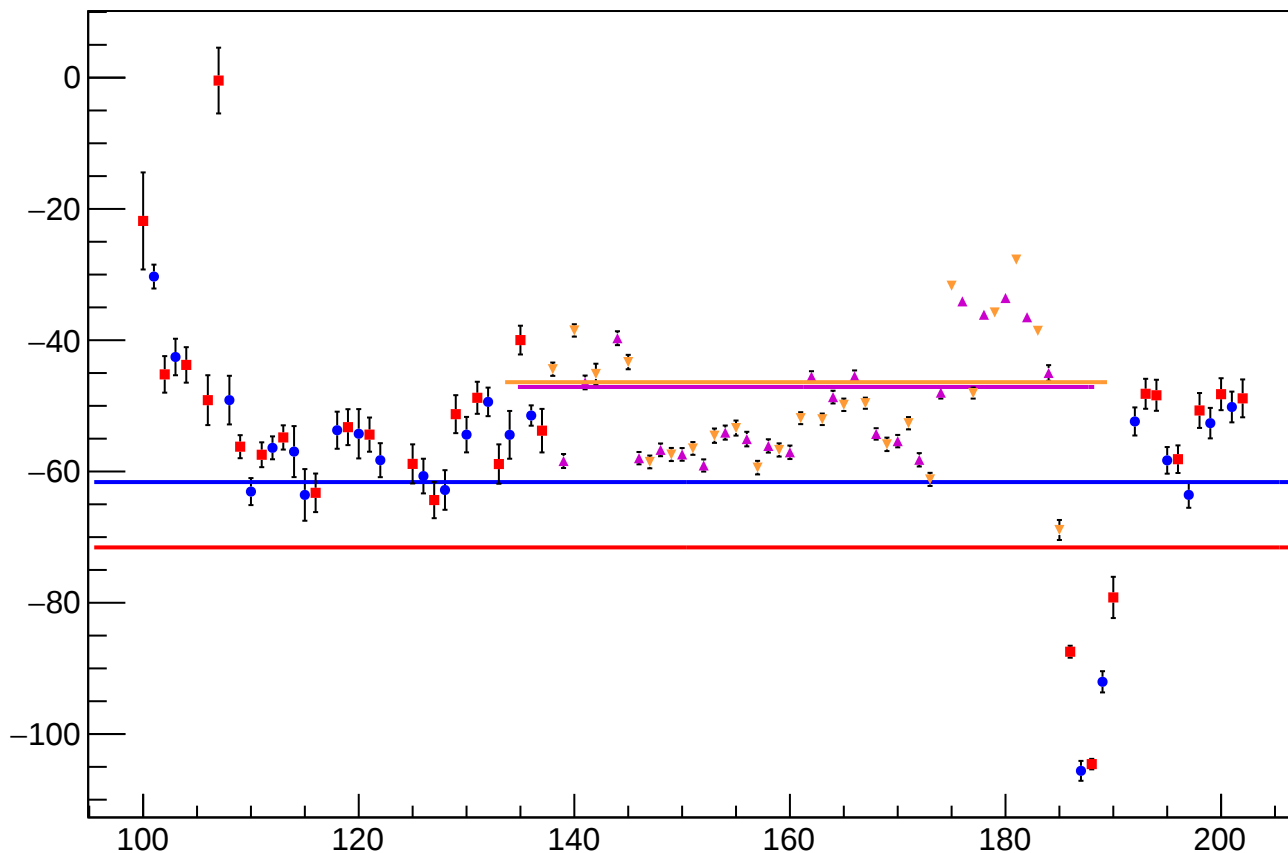
reg\_asym\_us\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $0.226 \pm 0.323$   $\chi^2/\text{NDF}: 87.2/22$   
 Left Out:  $3.047 \pm 0.148$   $\chi^2/\text{NDF}: 1457.2/23$   
 Right Out:  $0.136 \pm 0.319$   $\chi^2/\text{NDF}: 73.6/26$   
 Left In:  $3.194 \pm 0.150$   $\chi^2/\text{NDF}: 1295.0/22$

Left:  $3.119 \pm 0.105$   $\chi^2/\text{NDF}: 2752.7/46$   
 Right:  $0.181 \pm 0.227$   $\chi^2/\text{NDF}: 160.9/49$   
 In:  $2.668 \pm 0.136$   $\chi^2/\text{NDF}: 1451.7/45$   
 Out:  $2.533 \pm 0.134$   $\chi^2/\text{NDF}: 1599.2/50$   
 All:  $2.599 \pm 0.096$   $\chi^2/\text{NDF}: 3051.4/96$

reg\_asym\_us\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-61.613 \pm 0.469$   $\chi^2/\text{NDF}: 1722.4/22$

Left Out:  $-46.392 \pm 0.187$   $\chi^2/\text{NDF}: 3286.7/23$

Right Out:  $-71.566 \pm 0.391$   $\chi^2/\text{NDF}: 3683.4/26$

Left In:  $-47.128 \pm 0.187$   $\chi^2/\text{NDF}: 2516.0/22$

Left:  $-46.759 \pm 0.132$   $\chi^2/\text{NDF}: 5810.5/46$

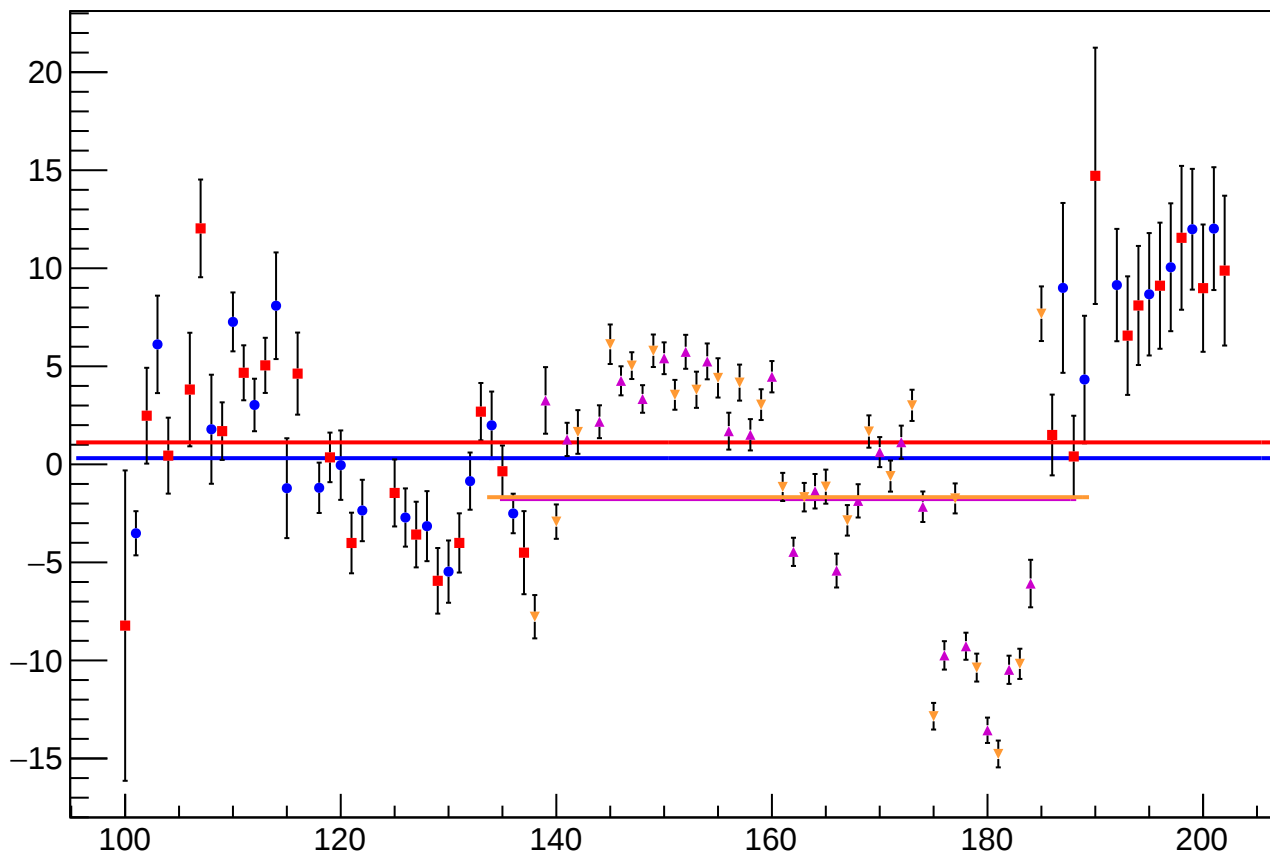
Right:  $-67.483 \pm 0.300$   $\chi^2/\text{NDF}: 5671.3/49$

In:  $-49.117 \pm 0.174$   $\chi^2/\text{NDF}: 5060.7/45$

Out:  $-51.055 \pm 0.168$   $\chi^2/\text{NDF}: 10342.8/50$

All:  $-50.117 \pm 0.121$   $\chi^2/\text{NDF}: 15467.7/96$

reg\_asym\_us\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $0.316 \pm 0.369$   $\chi^2/\text{NDF}$ : 145.8/22

Left Out:  $-1.675 \pm 0.167$   $\chi^2/\text{NDF}$ : 1483.8/23

Right Out:  $1.120 \pm 0.370$   $\chi^2/\text{NDF}$ : 137.8/26

Left In:  $-1.771 \pm 0.169$   $\chi^2/\text{NDF}$ : 1251.3/22

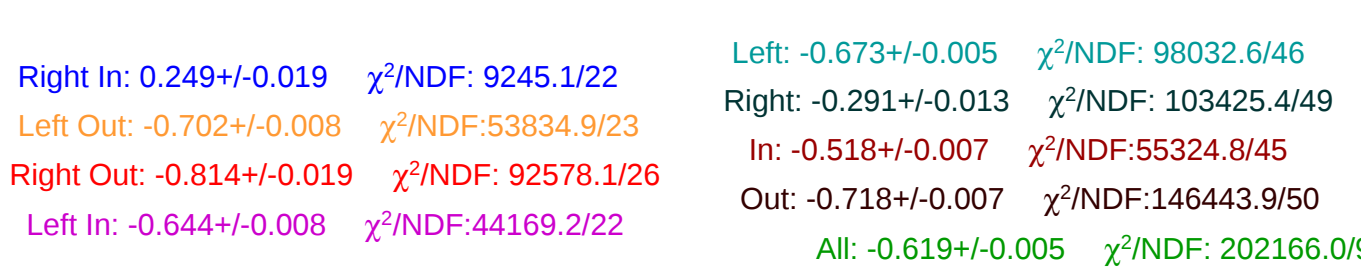
Left:  $-1.723 \pm 0.119$   $\chi^2/\text{NDF}$ : 2735.2/46

Right:  $0.716 \pm 0.262$   $\chi^2/\text{NDF}$ : 285.9/49

In:  $-1.410 \pm 0.154$   $\chi^2/\text{NDF}$ : 1423.4/45

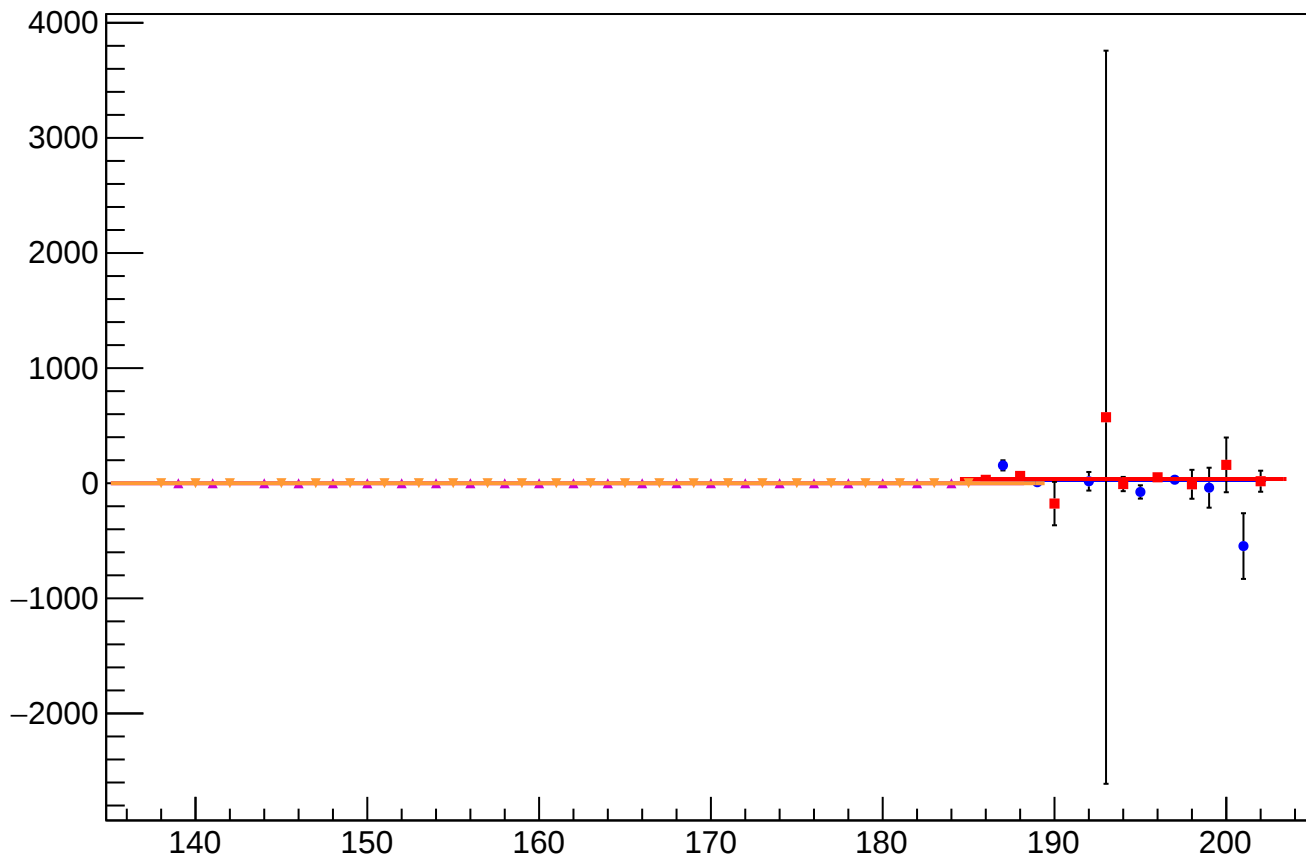
Out:  $-1.203 \pm 0.152$   $\chi^2/\text{NDF}$ : 1668.9/50

All:  $-1.306 \pm 0.108$   $\chi^2/\text{NDF}$ : 3093.2/96



All:  $-0.619 \pm 0.005$      $\chi^2/\text{NDF}$ : 202166.0/96

reg\_asym\_ds\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 28.147+/-18.781  $\chi^2/\text{NDF}$ : 16.2/6

Left Out: -0.037+/-0.018  $\chi^2/\text{NDF}$ : 35.4/23

Right Out: 36.716+/-9.912  $\chi^2/\text{NDF}$ : 4.3/8

Left In: -0.010+/-0.018  $\chi^2/\text{NDF}$ : 35.1/22

Left: -0.024+/-0.013  $\chi^2/\text{NDF}$ : 71.7/46

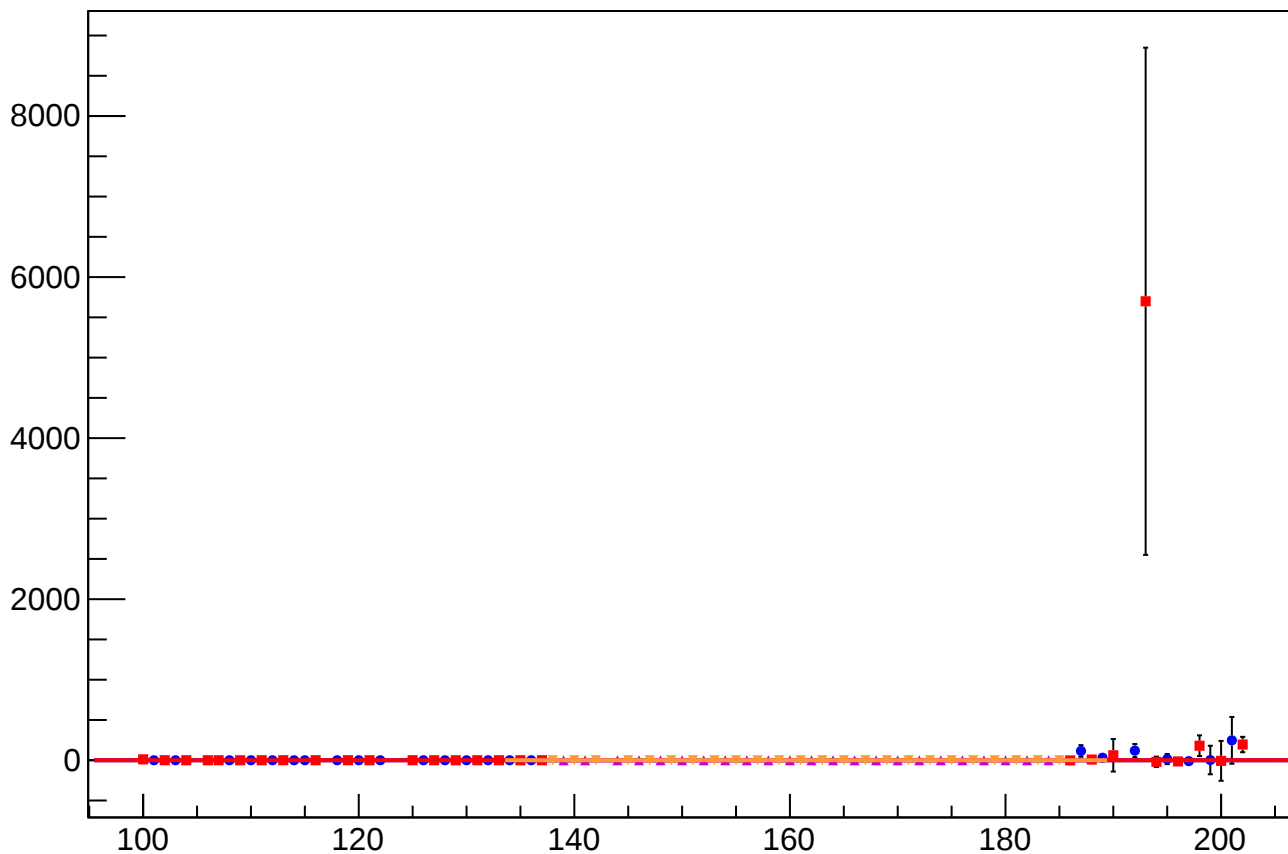
Right: 34.849+/-8.766  $\chi^2/\text{NDF}$ : 20.7/15

In: -0.010+/-0.018  $\chi^2/\text{NDF}$ : 53.6/29

Out: -0.037+/-0.018  $\chi^2/\text{NDF}$ : 53.5/32

All: -0.024+/-0.013  $\chi^2/\text{NDF}$ : 108.2/62

reg\_asym\_ds\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-0.013 \pm 0.023$   $\chi^2/\text{NDF}$ : 18.5/22

Left Out:  $-0.073 \pm 0.014$   $\chi^2/\text{NDF}$ : 27.8/23

Right Out:  $-0.088 \pm 0.025$   $\chi^2/\text{NDF}$ : 22.7/26

Left In:  $-0.064 \pm 0.014$   $\chi^2/\text{NDF}$ : 41.1/22

Left:  $-0.068 \pm 0.010$   $\chi^2/\text{NDF}$ : 69.1/46

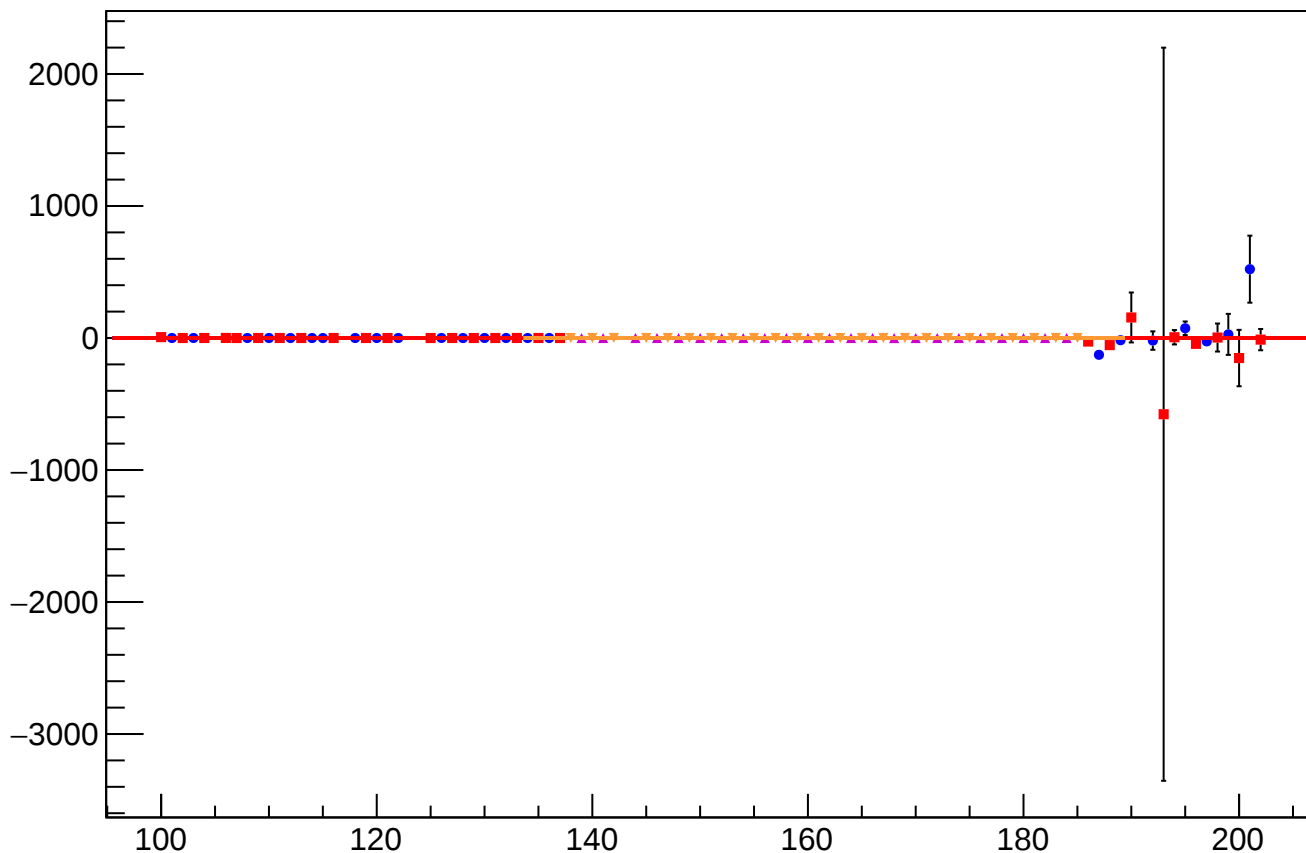
Right:  $-0.049 \pm 0.017$   $\chi^2/\text{NDF}$ : 45.9/49

In:  $-0.050 \pm 0.012$   $\chi^2/\text{NDF}$ : 63.0/45

Out:  $-0.076 \pm 0.012$   $\chi^2/\text{NDF}$ : 50.8/50

All:  $-0.063 \pm 0.009$   $\chi^2/\text{NDF}$ : 116.0/96

reg\_asym\_ds\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 0.016 +/- 0.043  $\chi^2/\text{NDF}$ : 29.0/22

Left Out: 0.035 +/- 0.018  $\chi^2/\text{NDF}$ : 32.2/23

Right Out: 0.031 +/- 0.045  $\chi^2/\text{NDF}$ : 29.8/26

Left In: -0.009 +/- 0.018  $\chi^2/\text{NDF}$ : 36.8/22

Left: 0.013 +/- 0.013  $\chi^2/\text{NDF}$ : 72.0/46

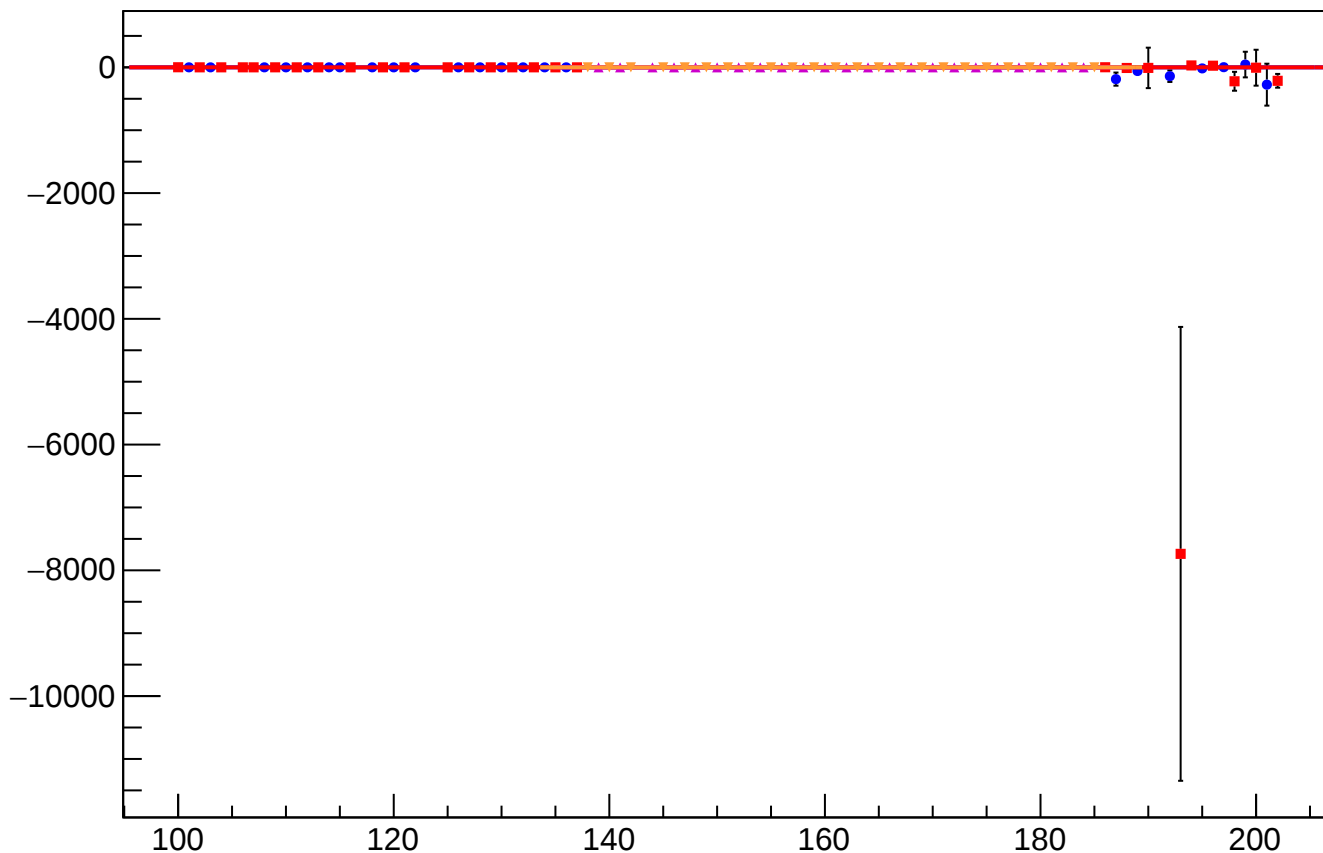
Right: 0.023 +/- 0.031  $\chi^2/\text{NDF}$ : 58.8/49

In: -0.005 +/- 0.017  $\chi^2/\text{NDF}$ : 66.1/45

Out: 0.035 +/- 0.017  $\chi^2/\text{NDF}$ : 62.0/50

All: 0.015 +/- 0.012  $\chi^2/\text{NDF}$ : 130.9/96

reg\_asym\_ds\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 0.008 $\pm$ 0.027  $\chi^2$ /NDF: 19.3/22

Left Out: 0.086 $\pm$ 0.016  $\chi^2$ /NDF:27.7/23

Right Out: 0.105 $\pm$ 0.029  $\chi^2$ /NDF: 19.2/26

Left In: 0.070 $\pm$ 0.016  $\chi^2$ /NDF:44.8/22

Left: 0.078 $\pm$ 0.011  $\chi^2$ /NDF: 73.1/46

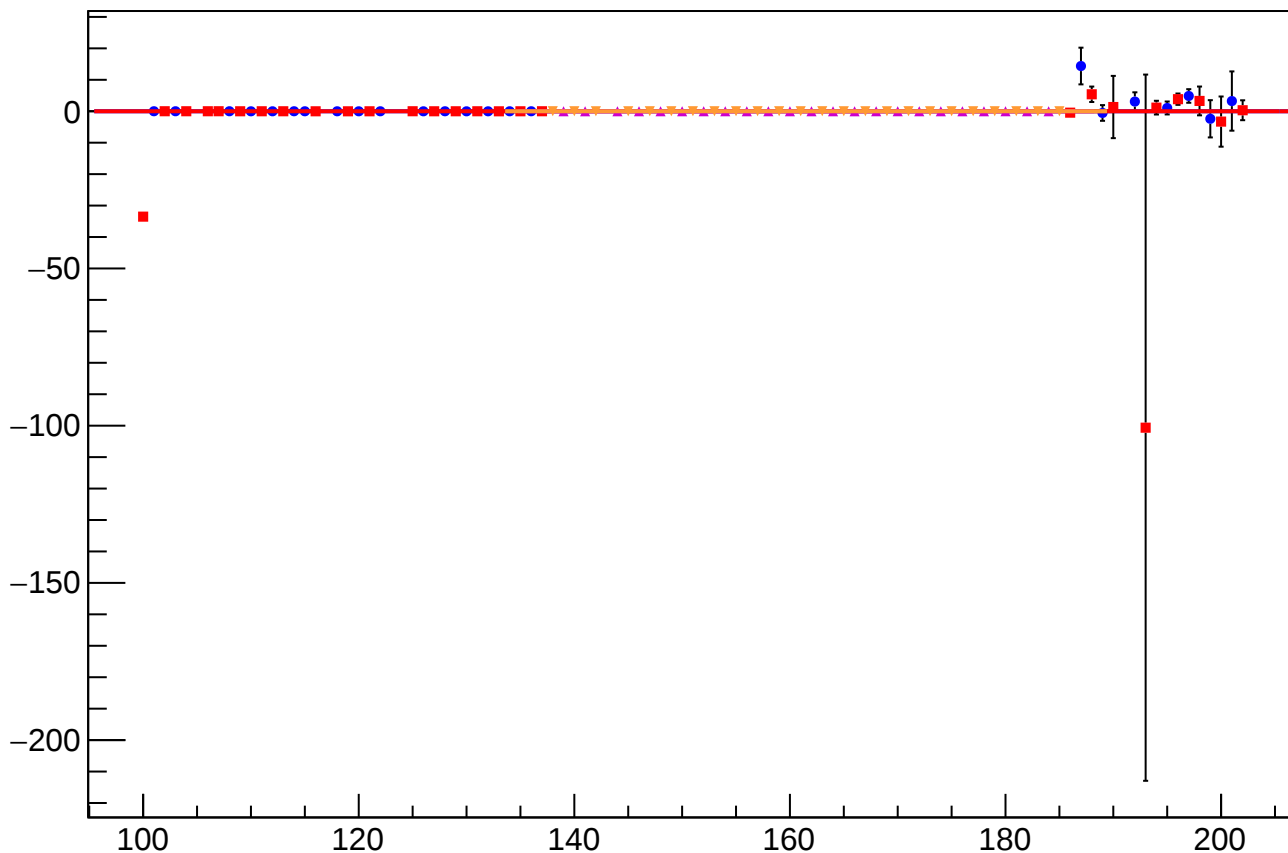
Right: 0.054 $\pm$ 0.020  $\chi^2$ /NDF: 44.5/49

In: 0.053 $\pm$ 0.014  $\chi^2$ /NDF:67.9/45

Out: 0.091 $\pm$ 0.014  $\chi^2$ /NDF:47.2/50

All: 0.072 $\pm$ 0.010  $\chi^2$ /NDF: 118.6/96

reg\_asym\_ds\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: -0.005 $\pm$ 0.001  $\chi^2$ /NDF: 34.4/22

Left Out: 0.000 $\pm$ 0.001  $\chi^2$ /NDF:23.6/23

Right Out: -0.006 $\pm$ 0.001  $\chi^2$ /NDF: 26520.2/26

Left In: 0.000 $\pm$ 0.001  $\chi^2$ /NDF:22.3/22

Left: 0.000 $\pm$ 0.001  $\chi^2$ /NDF: 45.9/46

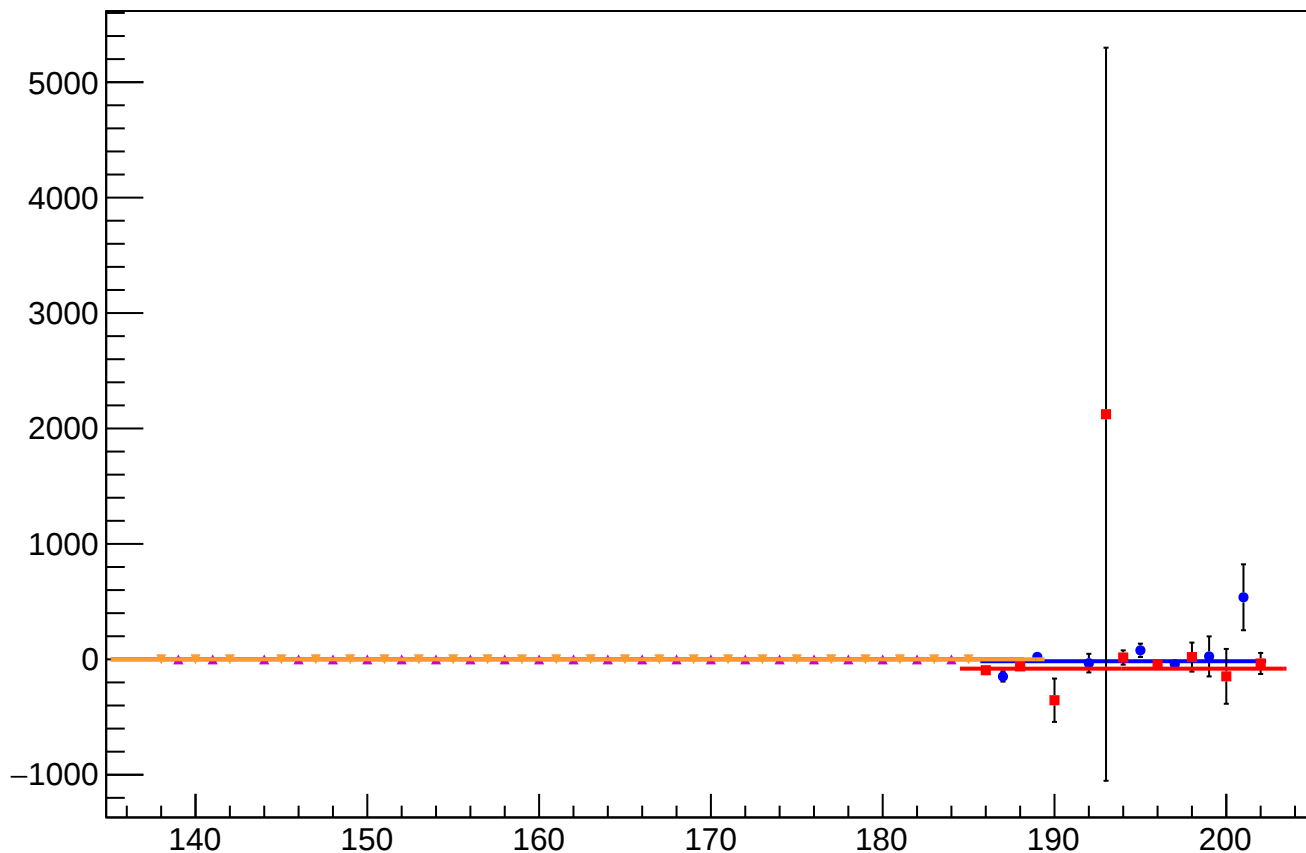
Right: -0.006 $\pm$ 0.001  $\chi^2$ /NDF: 26554.6/49

In: -0.001 $\pm$ 0.001  $\chi^2$ /NDF:68.4/45

Out: -0.001 $\pm$ 0.001  $\chi^2$ /NDF:26558.9/50

All: -0.001 $\pm$ 0.000  $\chi^2$ /NDF: 26627.3/96

reg\_asym\_ds\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-16.400 \pm 18.771$   $\chi^2/\text{NDF}: 17.6/6$

Left Out:  $-0.052 \pm 0.018$   $\chi^2/\text{NDF}: 37.3/23$

Right Out:  $-80.718 \pm 9.914$   $\chi^2/\text{NDF}: 9.0/8$

Left In:  $-0.009 \pm 0.018$   $\chi^2/\text{NDF}: 35.1/22$

Left:  $-0.031 \pm 0.013$   $\chi^2/\text{NDF}: 75.3/46$

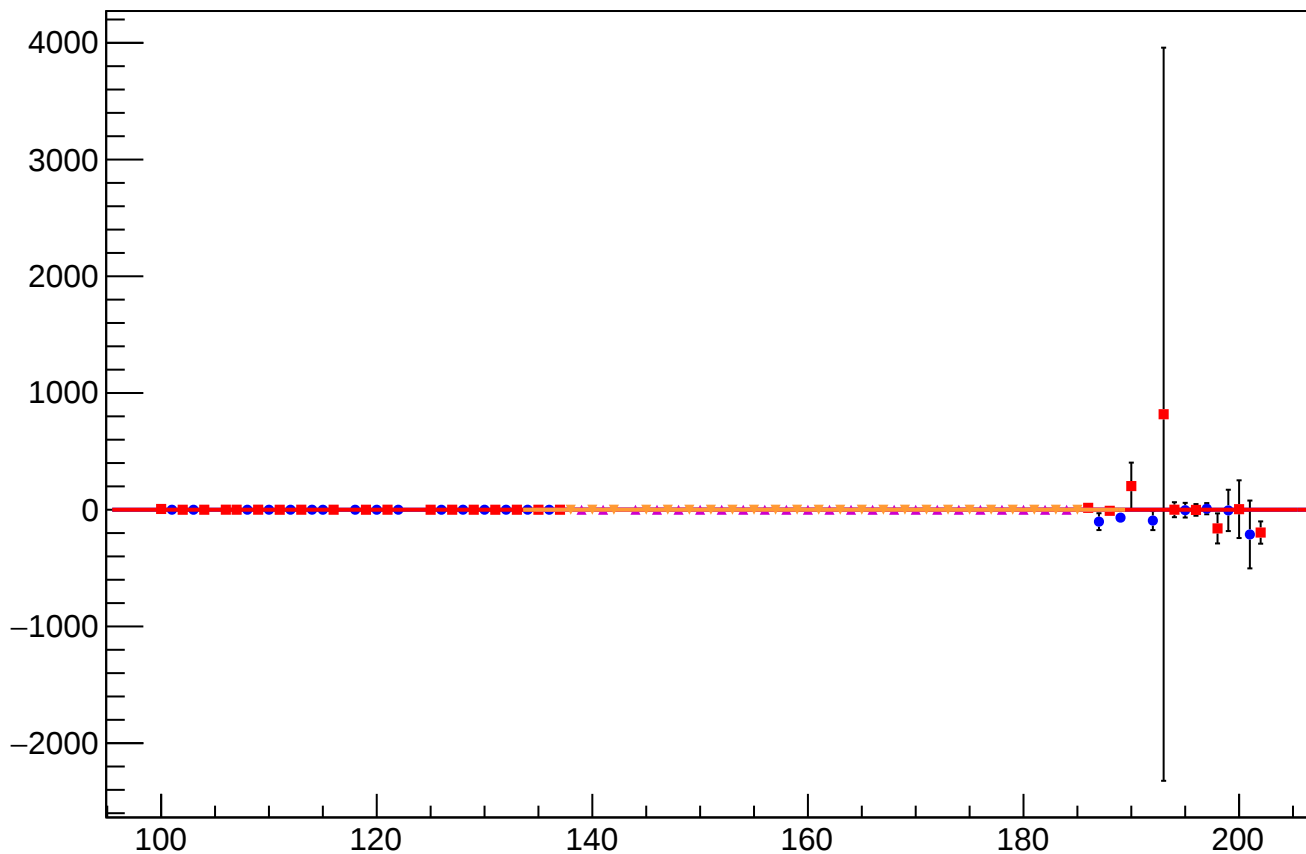
Right:  $-66.689 \pm 8.766$   $\chi^2/\text{NDF}: 35.8/15$

In:  $-0.009 \pm 0.018$   $\chi^2/\text{NDF}: 53.5/29$

Out:  $-0.052 \pm 0.018$   $\chi^2/\text{NDF}: 112.5/32$

All:  $-0.031 \pm 0.013$   $\chi^2/\text{NDF}: 168.9/62$

reg\_asym\_ds\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 0.008 $\pm$ 0.023  $\chi^2/\text{NDF}$ : 33.6/22

Left Out: -0.011 $\pm$ 0.014  $\chi^2/\text{NDF}$ : 29.6/23

Right Out: 0.037 $\pm$ 0.025  $\chi^2/\text{NDF}$ : 36.8/26

Left In: 0.005 $\pm$ 0.014  $\chi^2/\text{NDF}$ : 49.6/22

Left: -0.003 $\pm$ 0.010  $\chi^2/\text{NDF}$ : 79.7/46

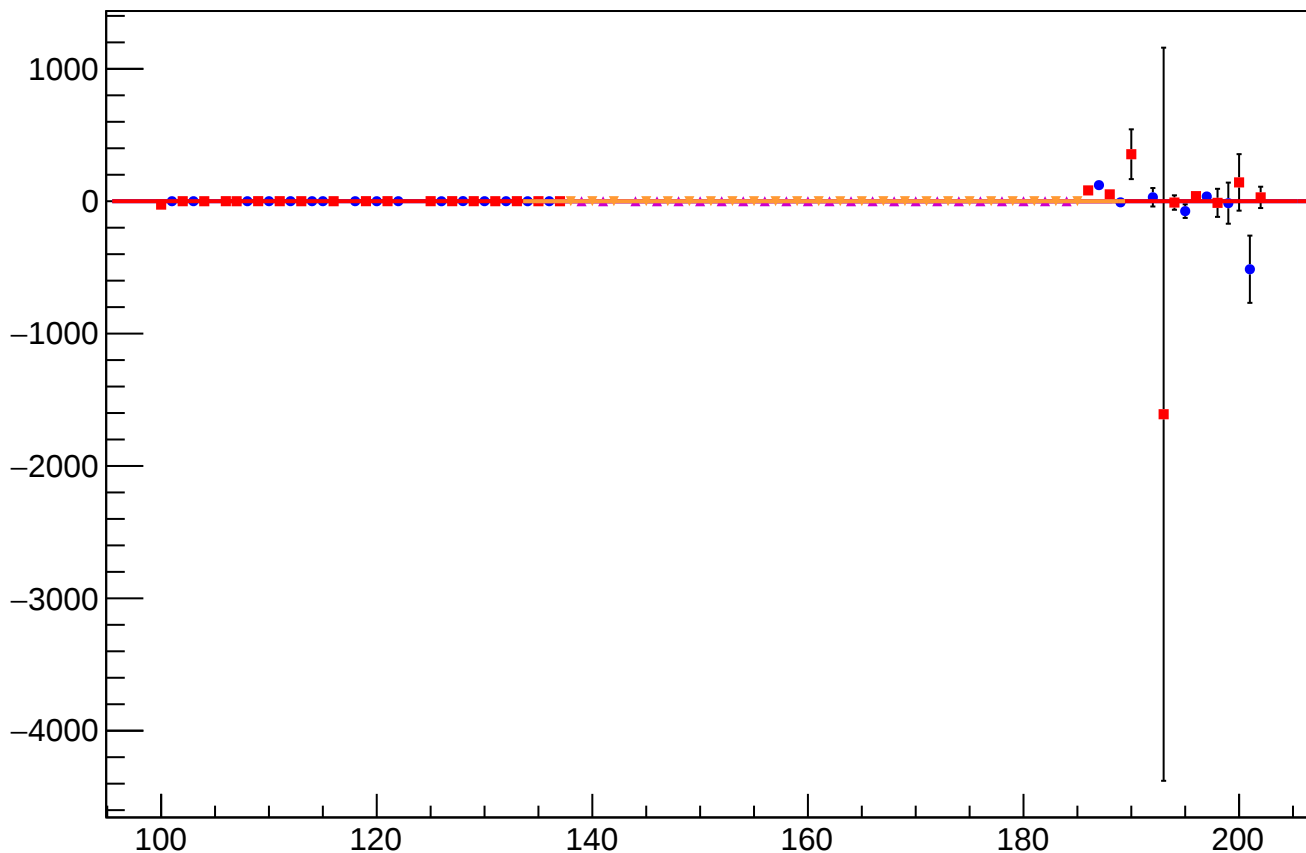
Right: 0.021 $\pm$ 0.017  $\chi^2/\text{NDF}$ : 71.1/49

In: 0.006 $\pm$ 0.012  $\chi^2/\text{NDF}$ : 83.1/45

Out: 0.001 $\pm$ 0.012  $\chi^2/\text{NDF}$ : 69.1/50

All: 0.003 $\pm$ 0.009  $\chi^2/\text{NDF}$ : 152.3/96

reg\_asym\_ds\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 0.157 $\pm$ 0.043  $\chi^2$ /NDF: 48.6/22

Left Out: 0.048 $\pm$ 0.018  $\chi^2$ /NDF:35.4/23

Right Out: 0.197 $\pm$ 0.045  $\chi^2$ /NDF: 107.6/26

Left In: 0.020 $\pm$ 0.018  $\chi^2$ /NDF:35.8/22

Left: 0.034 $\pm$ 0.013  $\chi^2$ /NDF: 72.4/46

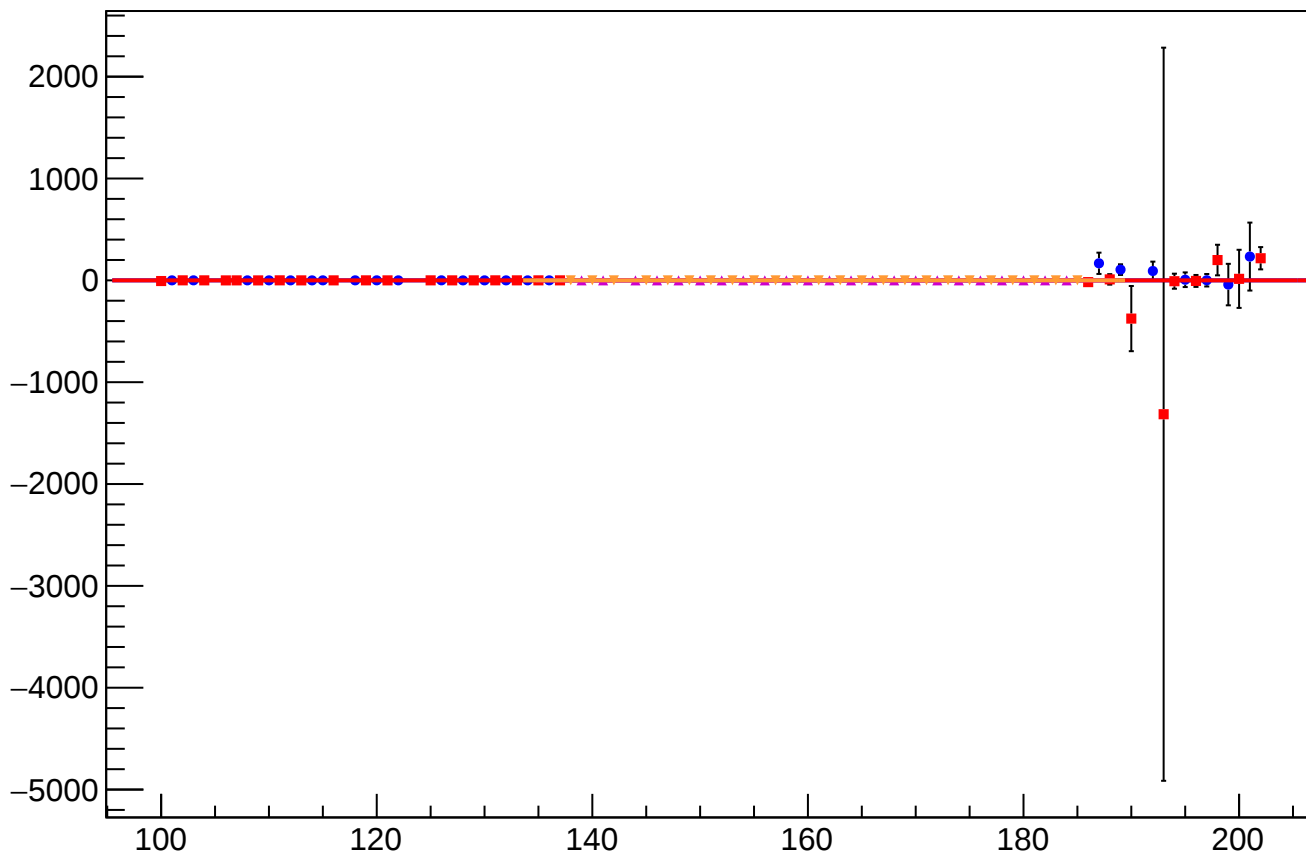
Right: 0.176 $\pm$ 0.031  $\chi^2$ /NDF: 156.7/49

In: 0.040 $\pm$ 0.017  $\chi^2$ /NDF:93.1/45

Out: 0.068 $\pm$ 0.017  $\chi^2$ /NDF:152.5/50

All: 0.054 $\pm$ 0.012  $\chi^2$ /NDF: 247.0/96

reg\_asym\_ds\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-0.010 \pm 0.027$   $\chi^2/\text{NDF}$ : 32.8/22

Left Out:  $0.022 \pm 0.016$   $\chi^2/\text{NDF}$ : 33.3/23

Right Out:  $-0.046 \pm 0.029$   $\chi^2/\text{NDF}$ : 34.2/26

Left In:  $0.006 \pm 0.016$   $\chi^2/\text{NDF}$ : 50.1/22

Left:  $0.014 \pm 0.011$   $\chi^2/\text{NDF}$ : 83.9/46

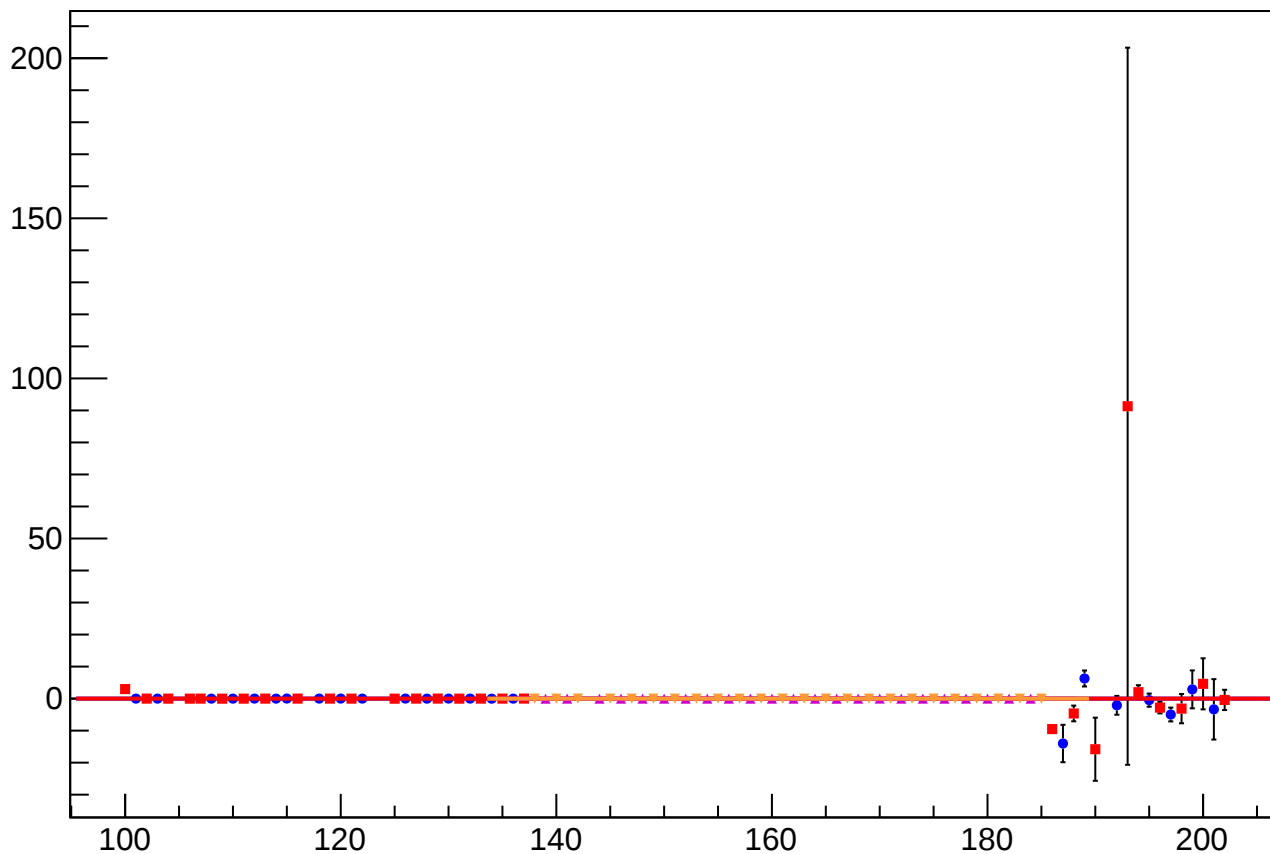
Right:  $-0.027 \pm 0.020$   $\chi^2/\text{NDF}$ : 67.8/49

In:  $0.002 \pm 0.014$   $\chi^2/\text{NDF}$ : 83.2/45

Out:  $0.005 \pm 0.014$   $\chi^2/\text{NDF}$ : 71.8/50

All:  $0.004 \pm 0.010$   $\chi^2/\text{NDF}$ : 155.0/96

reg\_asym\_ds\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.006 \pm 0.001$   $\chi^2/\text{NDF}$ : 45.8/22

Left Out:  $-0.008 \pm 0.001$   $\chi^2/\text{NDF}$ : 32.0/23

Right Out:  $-0.006 \pm 0.001$   $\chi^2/\text{NDF}$ : 213.7/26

Left In:  $-0.009 \pm 0.001$   $\chi^2/\text{NDF}$ : 37.2/22

Left:  $-0.008 \pm 0.001$   $\chi^2/\text{NDF}$ : 69.4/46

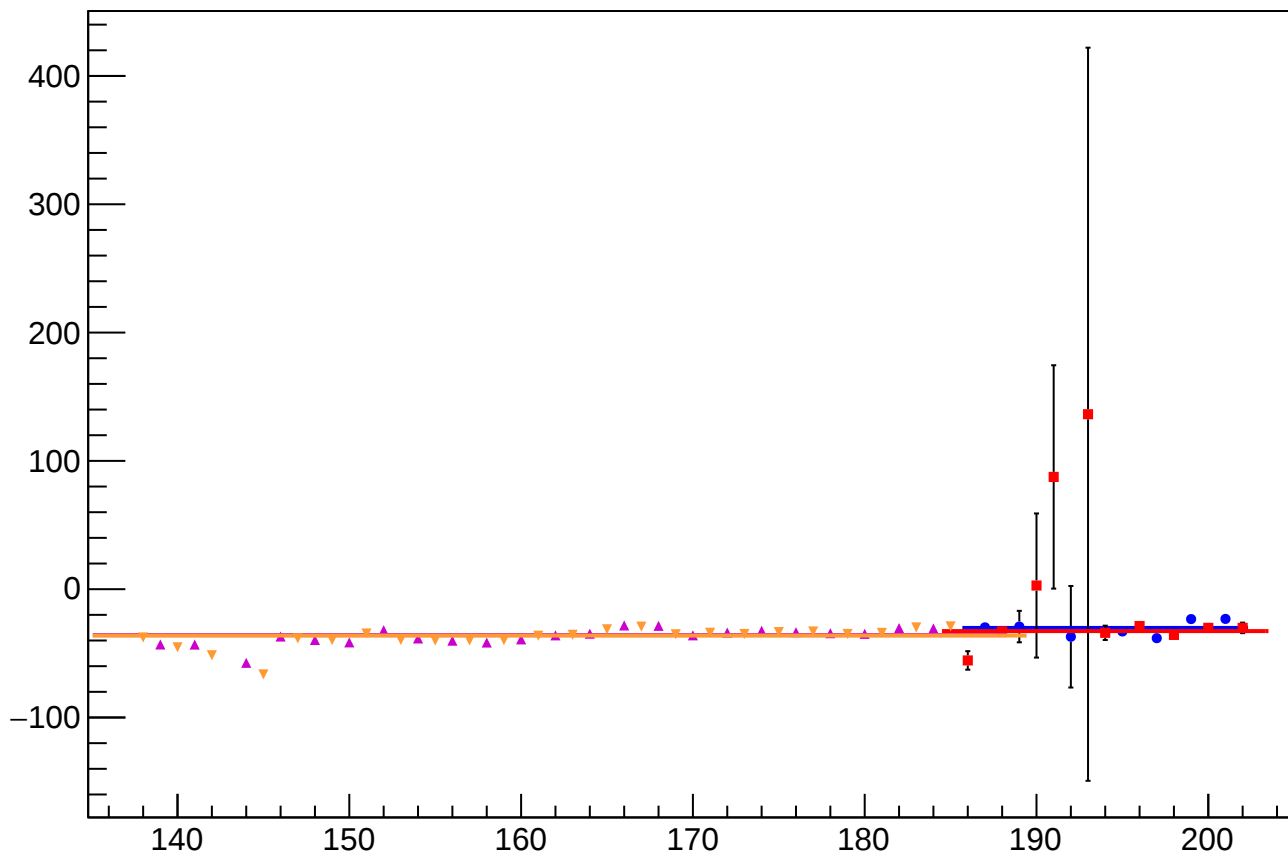
Right:  $-0.006 \pm 0.001$   $\chi^2/\text{NDF}$ : 259.5/49

In:  $-0.008 \pm 0.001$   $\chi^2/\text{NDF}$ : 85.5/45

Out:  $-0.008 \pm 0.001$   $\chi^2/\text{NDF}$ : 247.8/50

All:  $-0.008 \pm 0.000$   $\chi^2/\text{NDF}$ : 333.5/96

reg\_asym\_left\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-30.198 \pm 1.152$   $\chi^2/\text{NDF}: 19.0/6$

Left Out:  $-36.120 \pm 0.192$   $\chi^2/\text{NDF}: 1114.9/23$

Right Out:  $-32.657 \pm 0.938$   $\chi^2/\text{NDF}: 16.5/9$

Left In:  $-35.779 \pm 0.191$   $\chi^2/\text{NDF}: 854.1/22$

Left:  $-35.949 \pm 0.136$   $\chi^2/\text{NDF}: 1970.6/46$

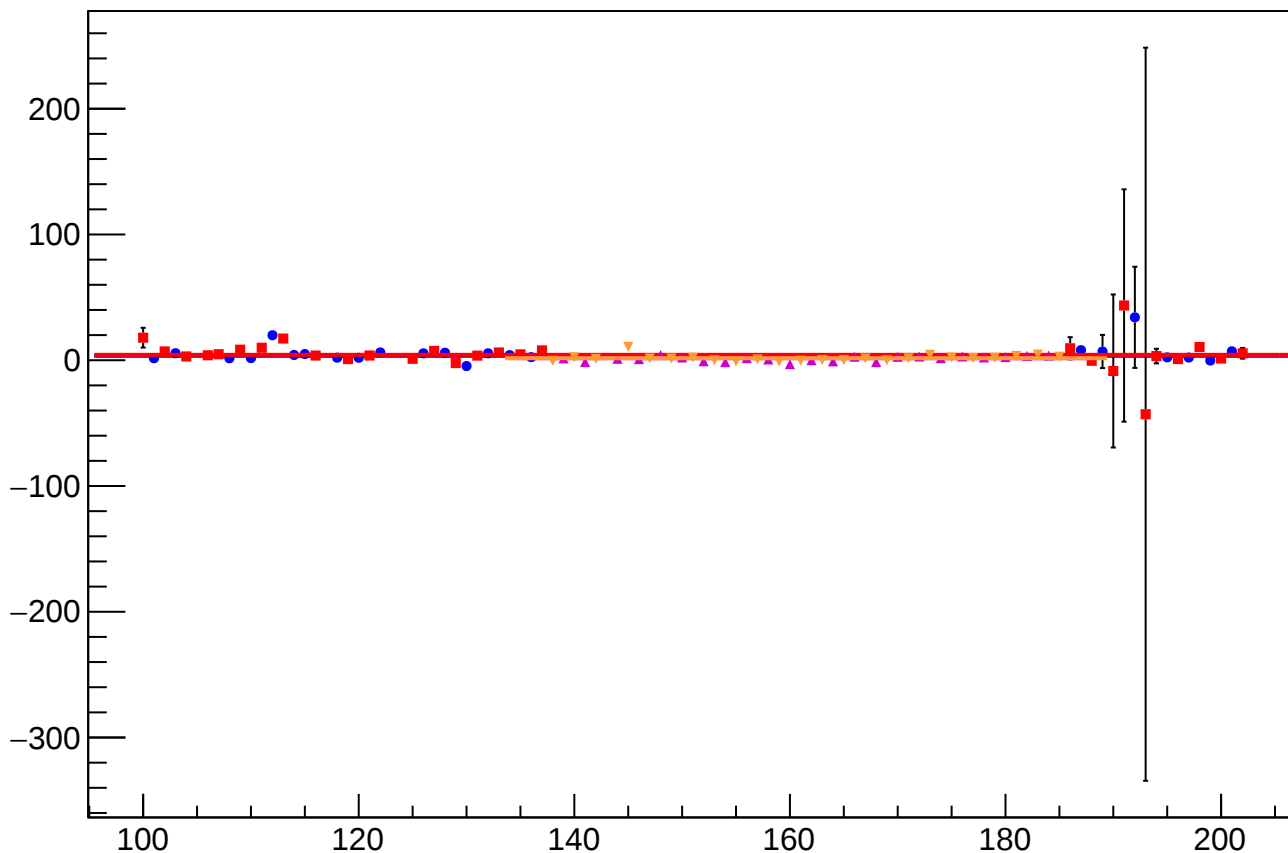
Right:  $-31.677 \pm 0.727$   $\chi^2/\text{NDF}: 38.3/16$

In:  $-35.629 \pm 0.189$   $\chi^2/\text{NDF}: 896.0/29$

Out:  $-35.981 \pm 0.188$   $\chi^2/\text{NDF}: 1144.5/33$

All:  $-35.806 \pm 0.133$   $\chi^2/\text{NDF}: 2042.2/63$

reg\_asym\_left\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 3.561 $\pm$ 0.218  $\chi^2$ /NDF: 445.6/22

Left Out: 1.634 $\pm$ 0.148  $\chi^2$ /NDF:166.5/23

Right Out: 4.311 $\pm$ 0.222  $\chi^2$ /NDF: 365.5/27

Left In: 1.641 $\pm$ 0.150  $\chi^2$ /NDF:163.2/22

Left: 1.638 $\pm$ 0.105  $\chi^2$ /NDF: 329.7/46

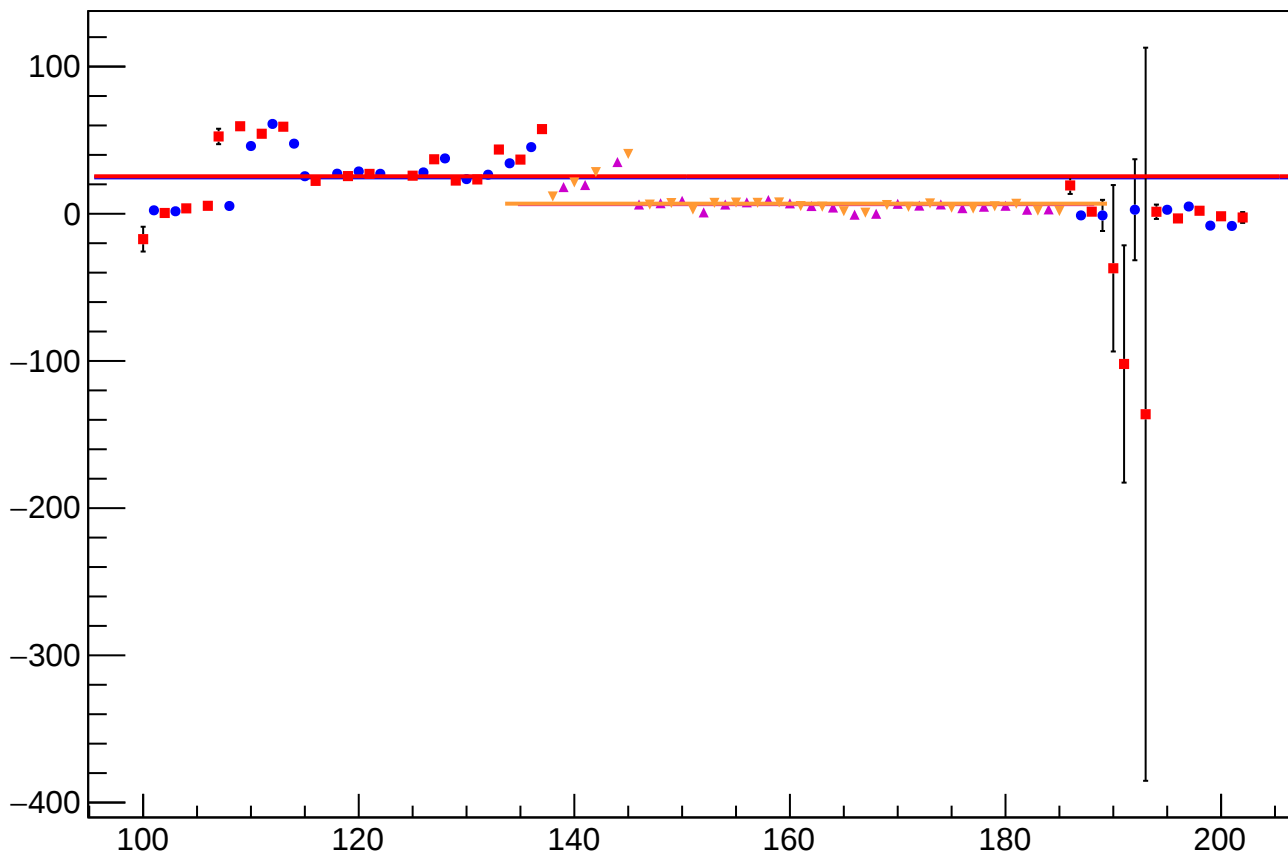
Right: 3.930 $\pm$ 0.155  $\chi^2$ /NDF: 816.9/50

In: 2.255 $\pm$ 0.123  $\chi^2$ /NDF:661.5/45

Out: 2.458 $\pm$ 0.123  $\chi^2$ /NDF:633.0/51

All: 2.357 $\pm$ 0.087  $\chi^2$ /NDF: 1295.9/97

reg\_asym\_left\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 24.714 $\pm$ 0.386  $\chi^2$ /NDF: 2333.0/22

Left Out: 6.866 $\pm$ 0.191  $\chi^2$ /NDF:1295.7/23

Right Out: 25.465 $\pm$ 0.372  $\chi^2$ /NDF: 2979.7/27

Left In: 6.537 $\pm$ 0.190  $\chi^2$ /NDF:1025.1/22

Left: 6.700 $\pm$ 0.135  $\chi^2$ /NDF: 2322.3/46

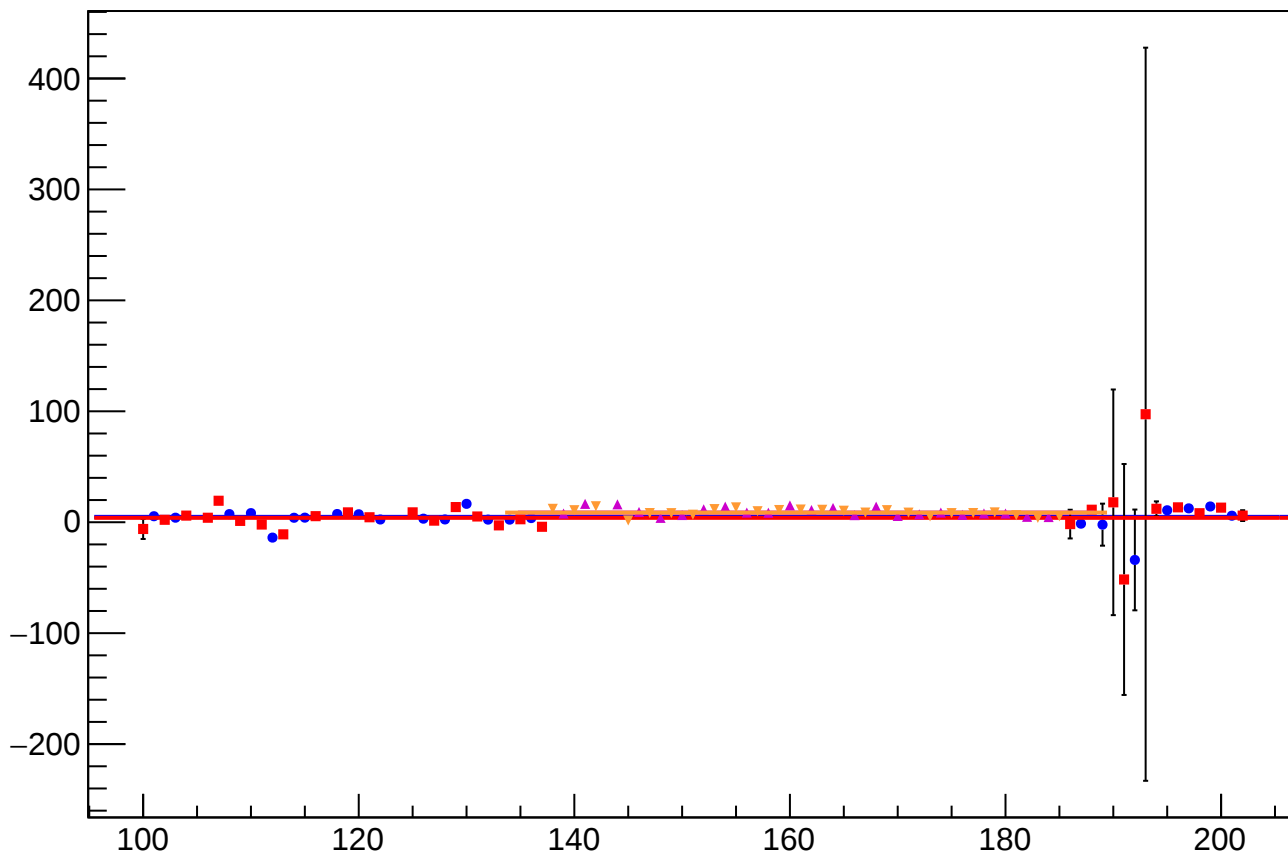
Right: 25.104 $\pm$ 0.268  $\chi^2$ /NDF: 5314.7/50

In: 10.096 $\pm$ 0.171  $\chi^2$ /NDF:5143.1/45

Out: 10.762 $\pm$ 0.170  $\chi^2$ /NDF:6254.0/51

All: 10.430 $\pm$ 0.121  $\chi^2$ /NDF: 11404.7/97

reg\_asym\_left\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 4.841 $\pm$ 0.252     $\chi^2$ /NDF: 562.9/22

Left Out: 8.695 $\pm$ 0.169     $\chi^2$ /NDF:241.0/23

Right Out: 3.970 $\pm$ 0.256     $\chi^2$ /NDF: 587.2/27

Left In: 8.668 $\pm$ 0.170     $\chi^2$ /NDF:436.7/22

Left: 8.681 $\pm$ 0.120     $\chi^2$ /NDF: 677.7/46

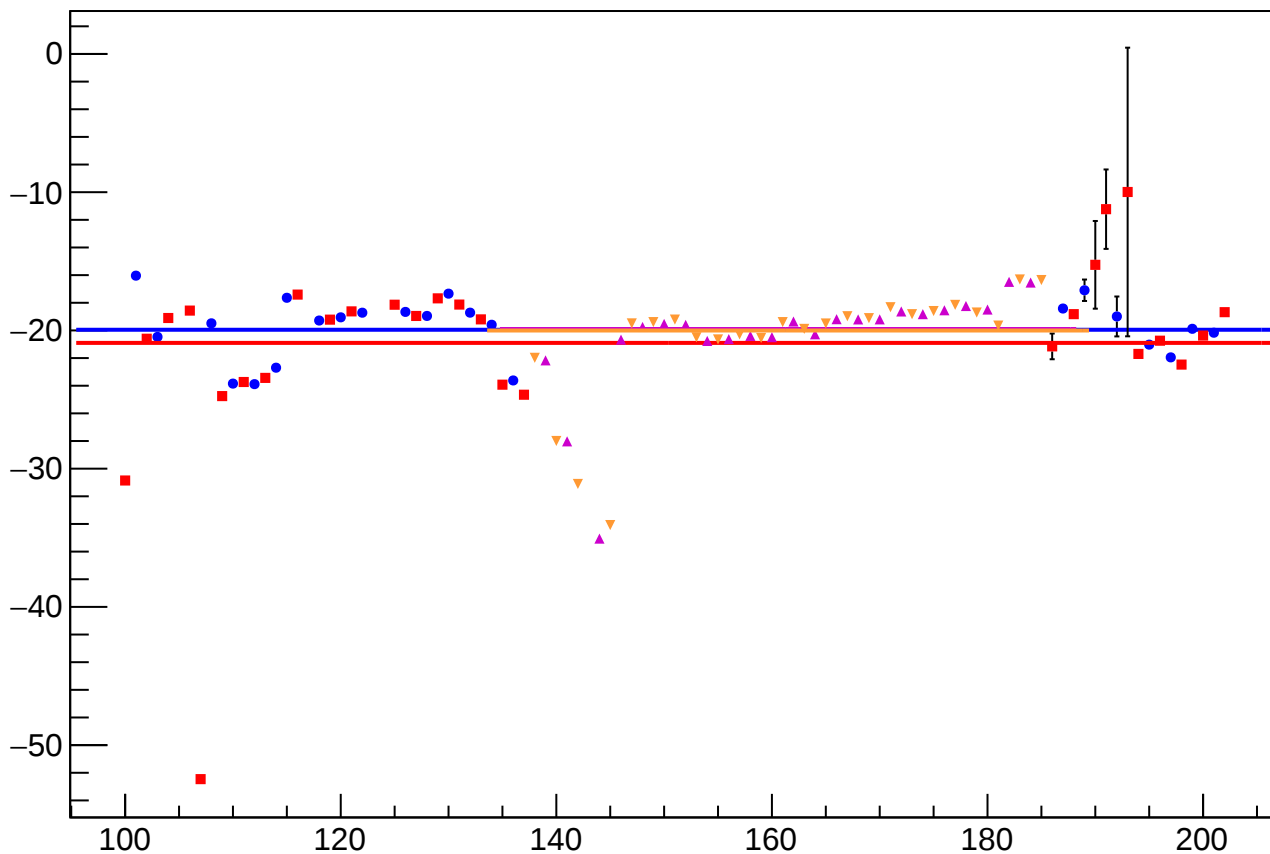
Right: 4.412 $\pm$ 0.179     $\chi^2$ /NDF: 1156.1/50

In: 7.468 $\pm$ 0.141     $\chi^2$ /NDF:1158.3/45

Out: 7.258 $\pm$ 0.141     $\chi^2$ /NDF:1066.0/51

All: 7.363 $\pm$ 0.100     $\chi^2$ /NDF: 2225.3/97

reg\_asym\_left\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: -19.951 $\pm$ 0.015  $\chi^2$ /NDF: 26447.3/22

Left Out: -20.006 $\pm$ 0.008  $\chi^2$ /NDF: 171763.9/23

Right Out: -20.902 $\pm$ 0.015  $\chi^2$ /NDF: 94695.9/27

Left In: -19.898 $\pm$ 0.008  $\chi^2$ /NDF: 144191.9/22

Left: -19.951 $\pm$ 0.006  $\chi^2$ /NDF: 316049.4/46

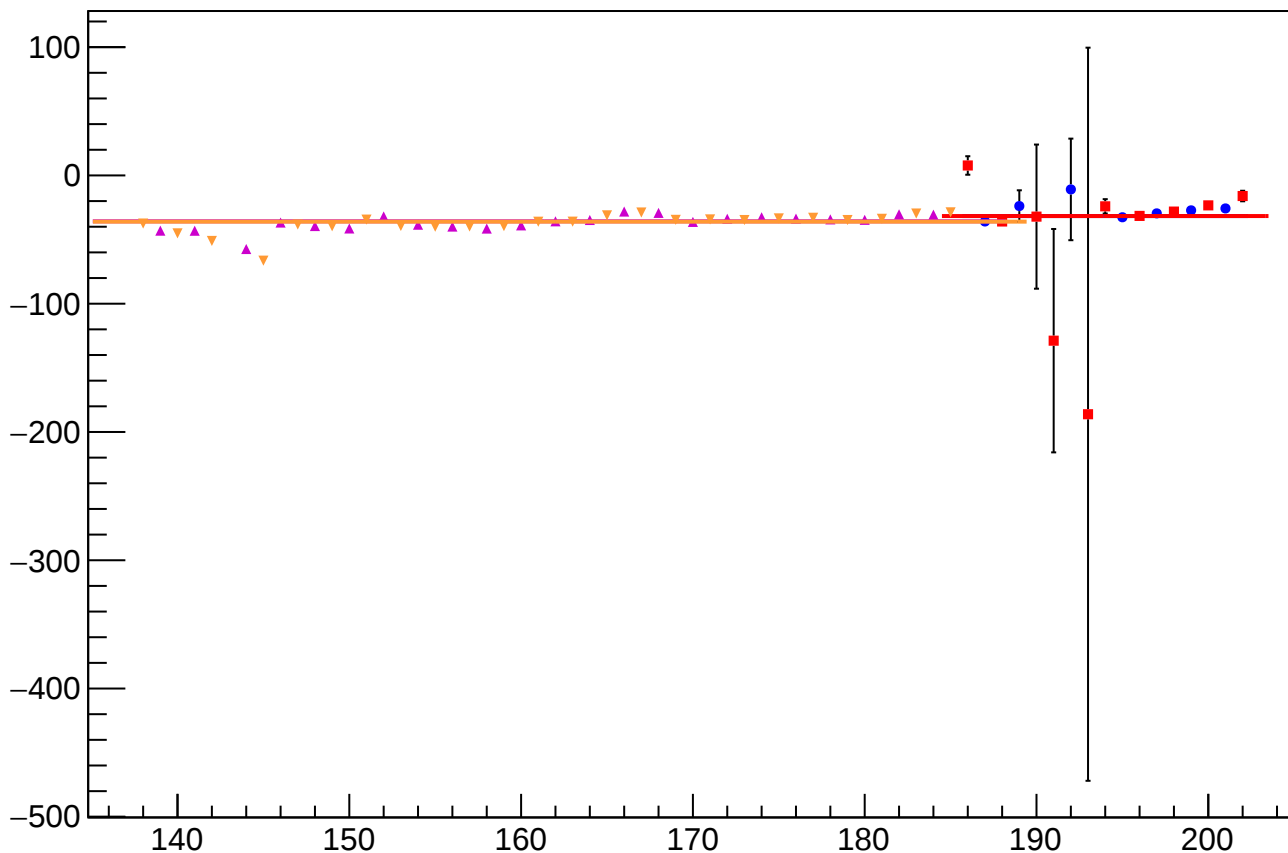
Right: -20.426 $\pm$ 0.011  $\chi^2$ /NDF: 123129.8/50

In: -19.909 $\pm$ 0.007  $\chi^2$ /NDF: 170649.1/45

Out: -20.198 $\pm$ 0.007  $\chi^2$ /NDF: 269228.6/51

All: -20.053 $\pm$ 0.005  $\chi^2$ /NDF: 440734.4/97

reg\_asym\_left\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-31.665 \pm 1.156$   $\chi^2/\text{NDF}: 11.6/6$

Left Out:  $-36.031 \pm 0.192$   $\chi^2/\text{NDF}: 1121.3/23$

Right Out:  $-31.673 \pm 0.940$   $\chi^2/\text{NDF}: 68.1/9$

Left In:  $-35.766 \pm 0.191$   $\chi^2/\text{NDF}: 842.6/22$

Left:  $-35.898 \pm 0.135$   $\chi^2/\text{NDF}: 1964.8/46$

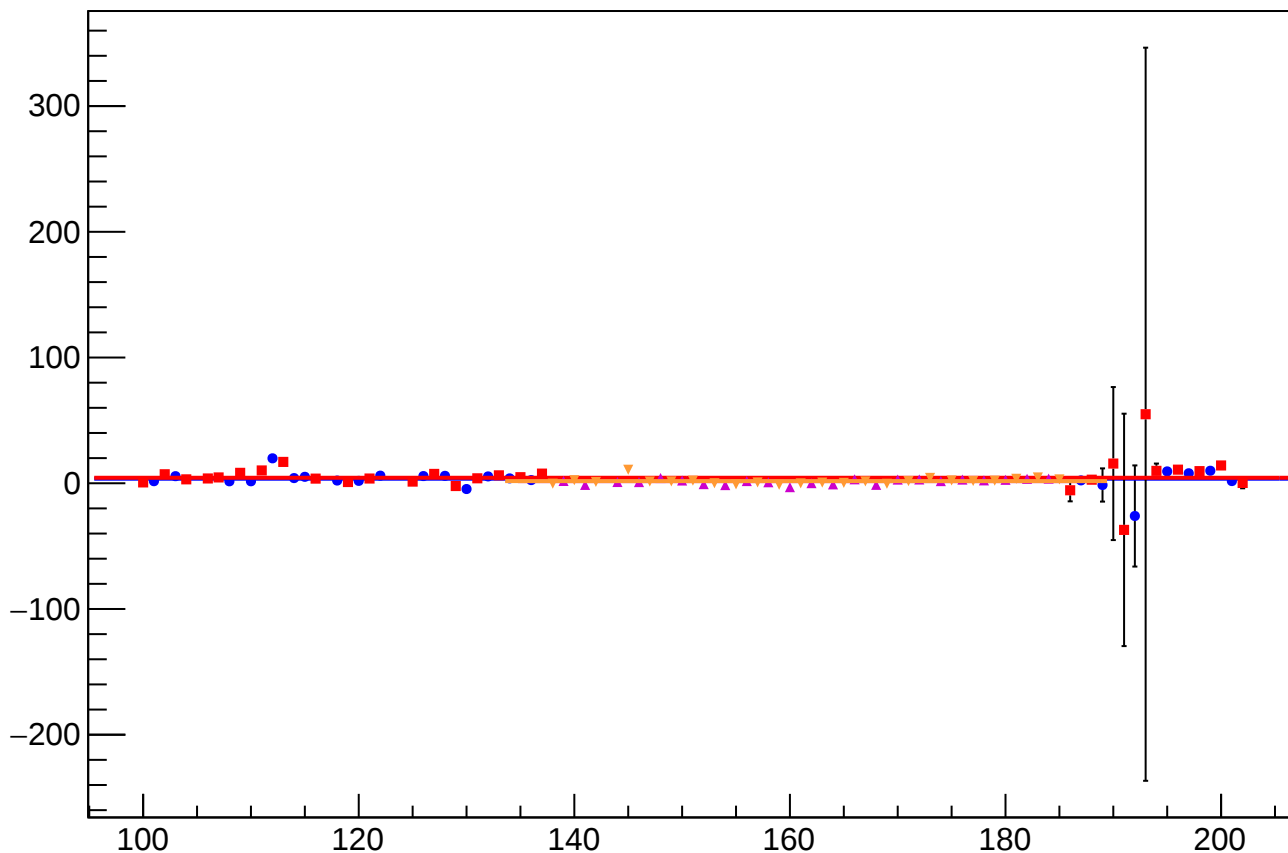
Right:  $-31.670 \pm 0.729$   $\chi^2/\text{NDF}: 79.7/16$

In:  $-35.657 \pm 0.189$   $\chi^2/\text{NDF}: 866.4/29$

Out:  $-35.857 \pm 0.188$   $\chi^2/\text{NDF}: 1210.0/33$

All:  $-35.757 \pm 0.133$   $\chi^2/\text{NDF}: 2077.0/63$

reg\_asym\_left\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 3.623 $\pm$ 0.218  $\chi^2$ /NDF: 447.6/22

Left Out: 1.724 $\pm$ 0.148  $\chi^2$ /NDF:168.2/23

Right Out: 4.371 $\pm$ 0.218  $\chi^2$ /NDF: 371.0/27

Left In: 1.705 $\pm$ 0.149  $\chi^2$ /NDF:163.0/22

Left: 1.714 $\pm$ 0.105  $\chi^2$ /NDF: 331.1/46

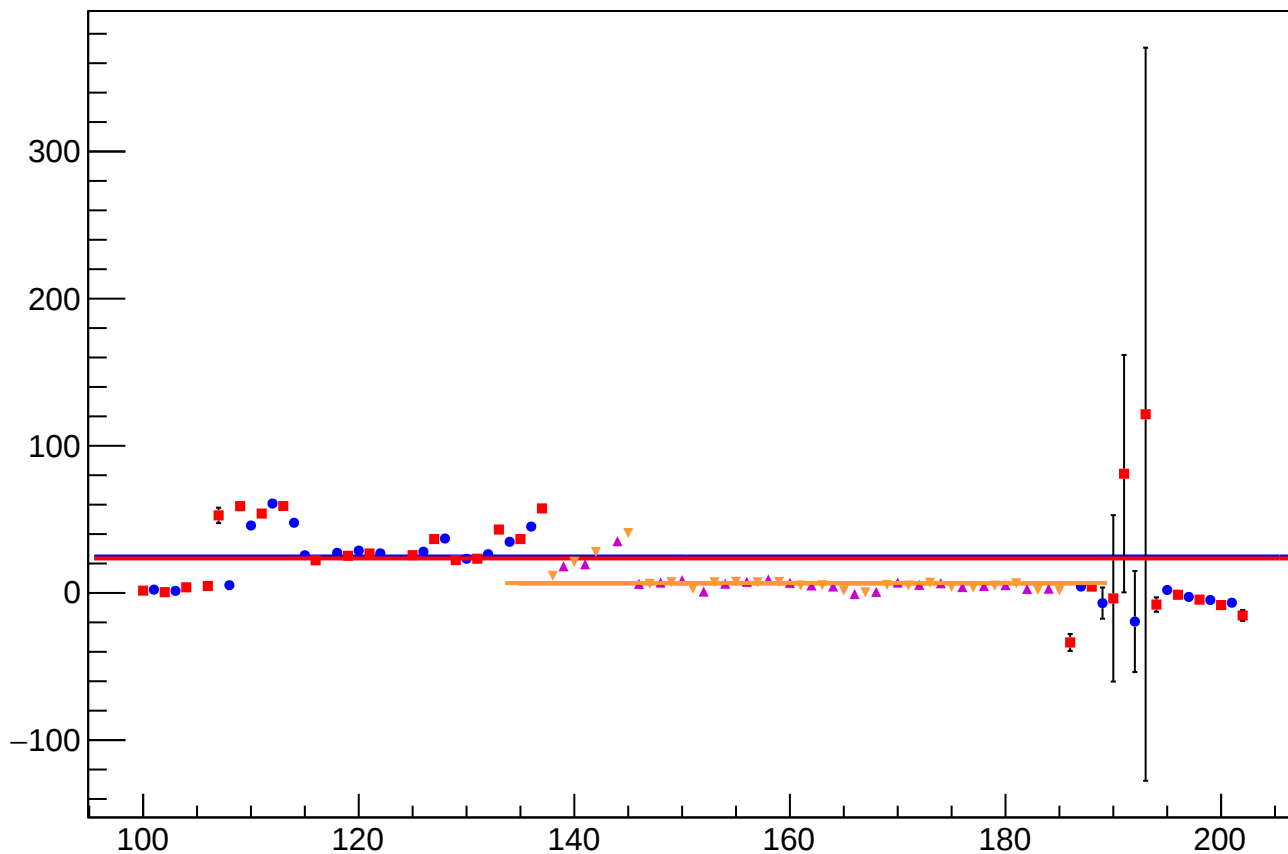
Right: 3.997 $\pm$ 0.154  $\chi^2$ /NDF: 824.5/50

In: 2.319 $\pm$ 0.123  $\chi^2$ /NDF:663.4/45

Out: 2.557 $\pm$ 0.122  $\chi^2$ /NDF:640.2/51

All: 2.439 $\pm$ 0.087  $\chi^2$ /NDF: 1305.5/97

reg\_asym\_left\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 24.762 $\pm$ 0.386  $\chi^2$ /NDF: 2255.4/22

Left Out: 6.779 $\pm$ 0.191  $\chi^2$ /NDF:1297.7/23

Right Out: 23.473 $\pm$ 0.358  $\chi^2$ /NDF: 3340.3/27

Left In: 6.532 $\pm$ 0.190  $\chi^2$ /NDF:1018.2/22

Left: 6.655 $\pm$ 0.135  $\chi^2$ /NDF: 2316.7/46

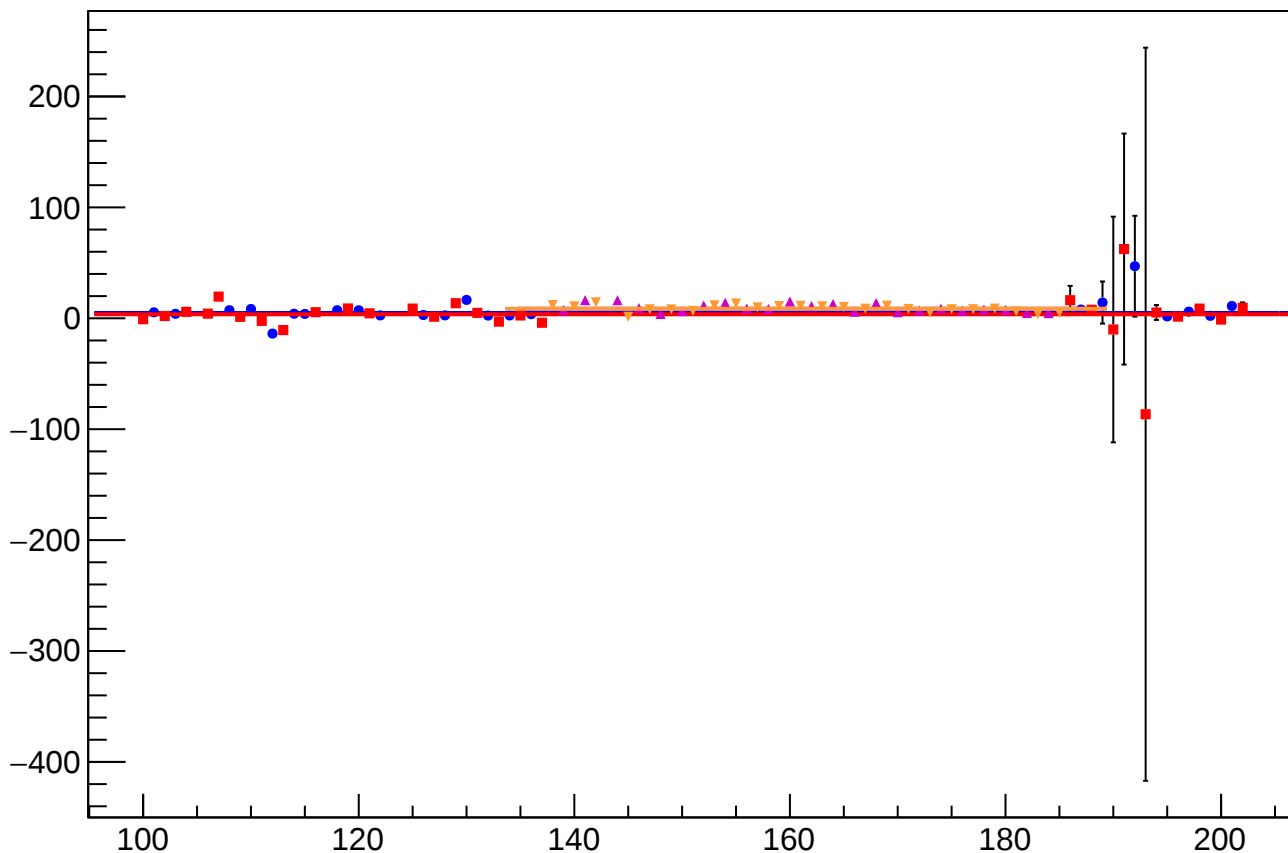
Right: 24.069 $\pm$ 0.262  $\chi^2$ /NDF: 5601.7/50

In: 10.099 $\pm$ 0.171  $\chi^2$ /NDF:5069.3/45

Out: 10.488 $\pm$ 0.169  $\chi^2$ /NDF:6330.3/51

All: 10.296 $\pm$ 0.120  $\chi^2$ /NDF: 11402.2/97

reg\_asym\_left\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 4.769 $\pm$ 0.252  $\chi^2$ /NDF: 548.5/22

Left Out: 8.585 $\pm$ 0.169  $\chi^2$ /NDF: 245.5/23

Right Out: 3.622 $\pm$ 0.251  $\chi^2$ /NDF: 579.0/27

Left In: 8.585 $\pm$ 0.170  $\chi^2$ /NDF: 441.8/22

Left: 8.585 $\pm$ 0.120  $\chi^2$ /NDF: 687.3/46

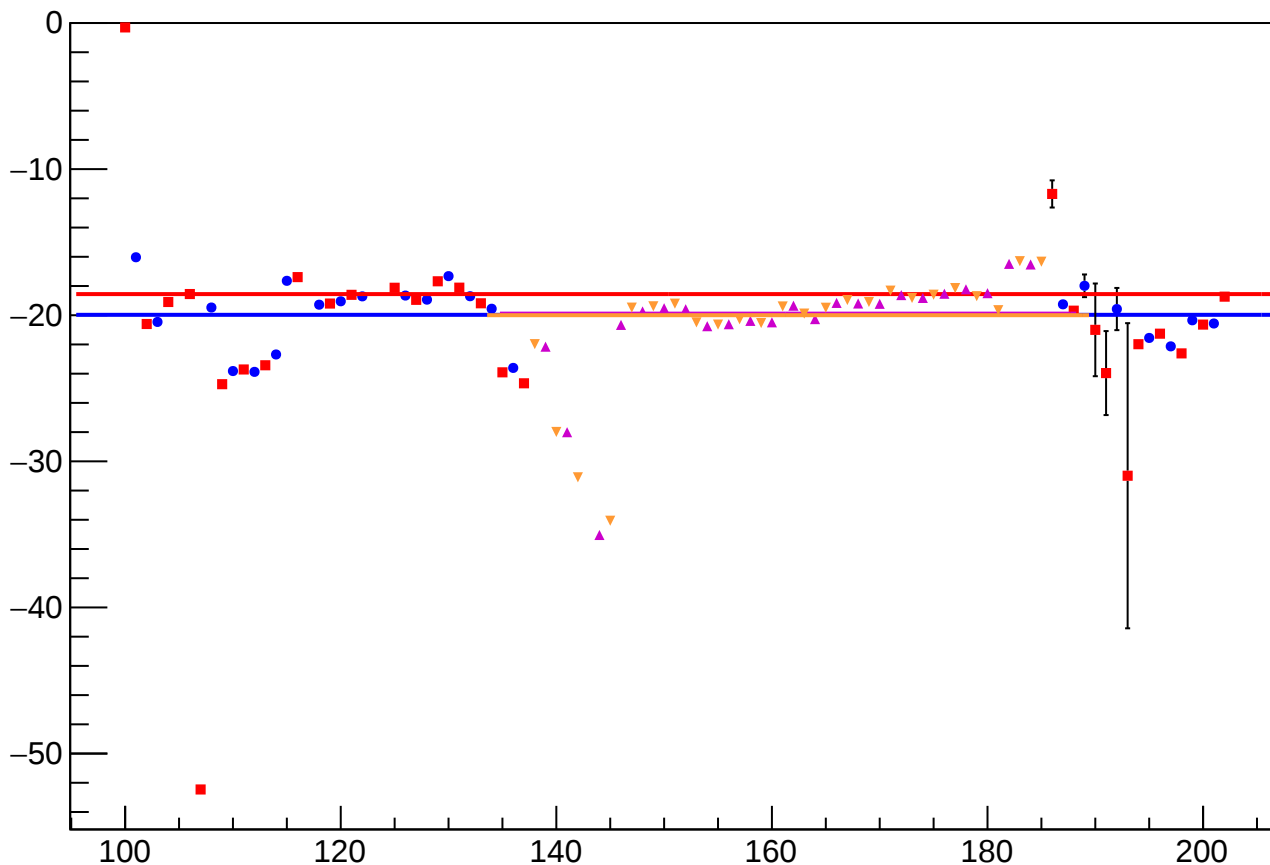
Right: 4.195 $\pm$ 0.178  $\chi^2$ /NDF: 1137.8/50

In: 7.388 $\pm$ 0.141  $\chi^2$ /NDF: 1148.2/45

Out: 7.042 $\pm$ 0.140  $\chi^2$ /NDF: 1093.1/51

All: 7.214 $\pm$ 0.099  $\chi^2$ /NDF: 2244.3/97

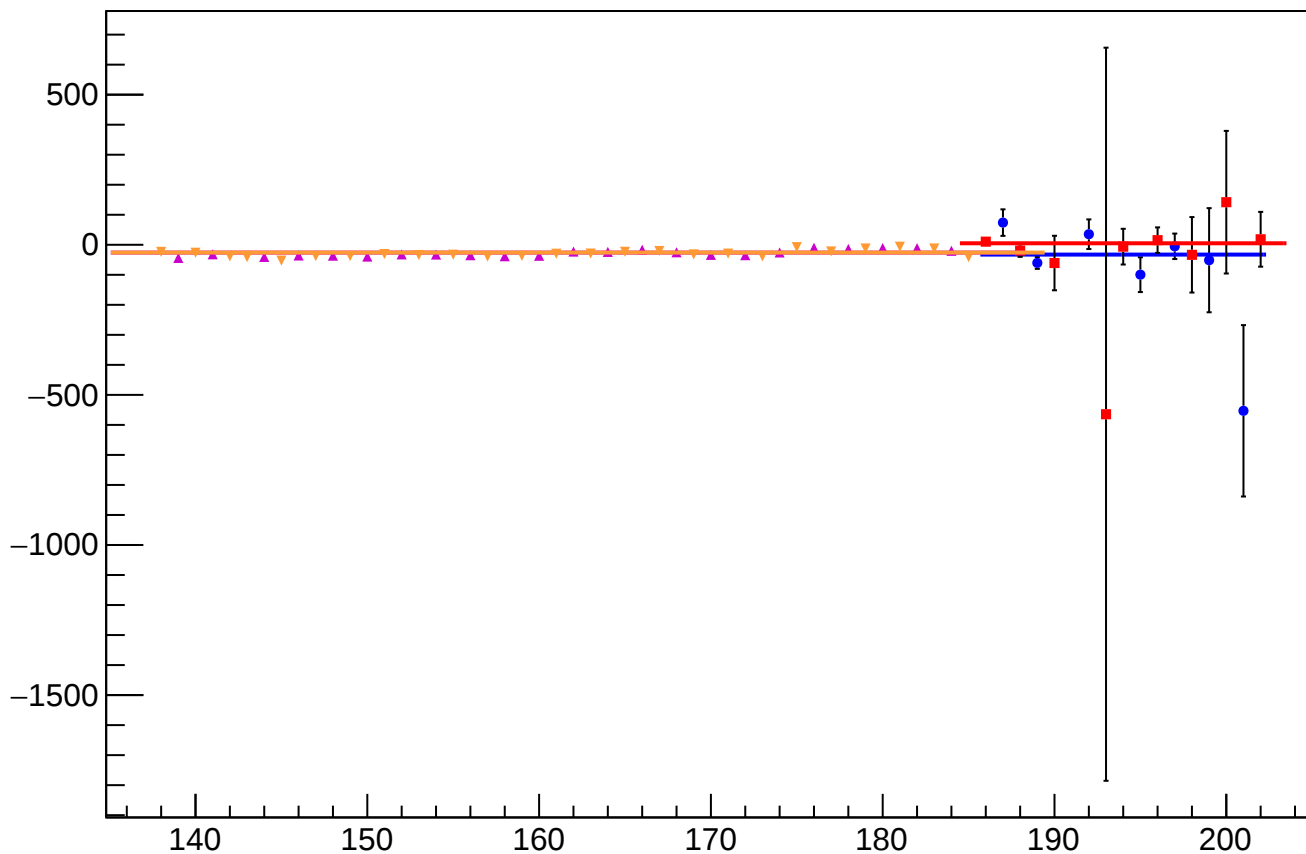
reg\_asym\_left\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-19.972 \pm 0.015$   $\chi^2/\text{NDF}: 26604.9/22$   
 Left Out:  $-19.998 \pm 0.008$   $\chi^2/\text{NDF}: 171944.6/23$   
 Right Out:  $-18.553 \pm 0.014$   $\chi^2/\text{NDF}: 303647.6/27$   
 Left In:  $-19.890 \pm 0.008$   $\chi^2/\text{NDF}: 144055.2/22$

Left:  $-19.944 \pm 0.006$   $\chi^2/\text{NDF}: 316093.4/46$   
 Right:  $-19.223 \pm 0.010$   $\chi^2/\text{NDF}: 334942.2/50$   
 In:  $-19.908 \pm 0.007$   $\chi^2/\text{NDF}: 170683.4/45$   
 Out:  $-19.658 \pm 0.007$   $\chi^2/\text{NDF}: 483475.9/51$   
 All:  $-19.782 \pm 0.005$   $\chi^2/\text{NDF}: 654808.1/97$

reg\_asym\_right\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



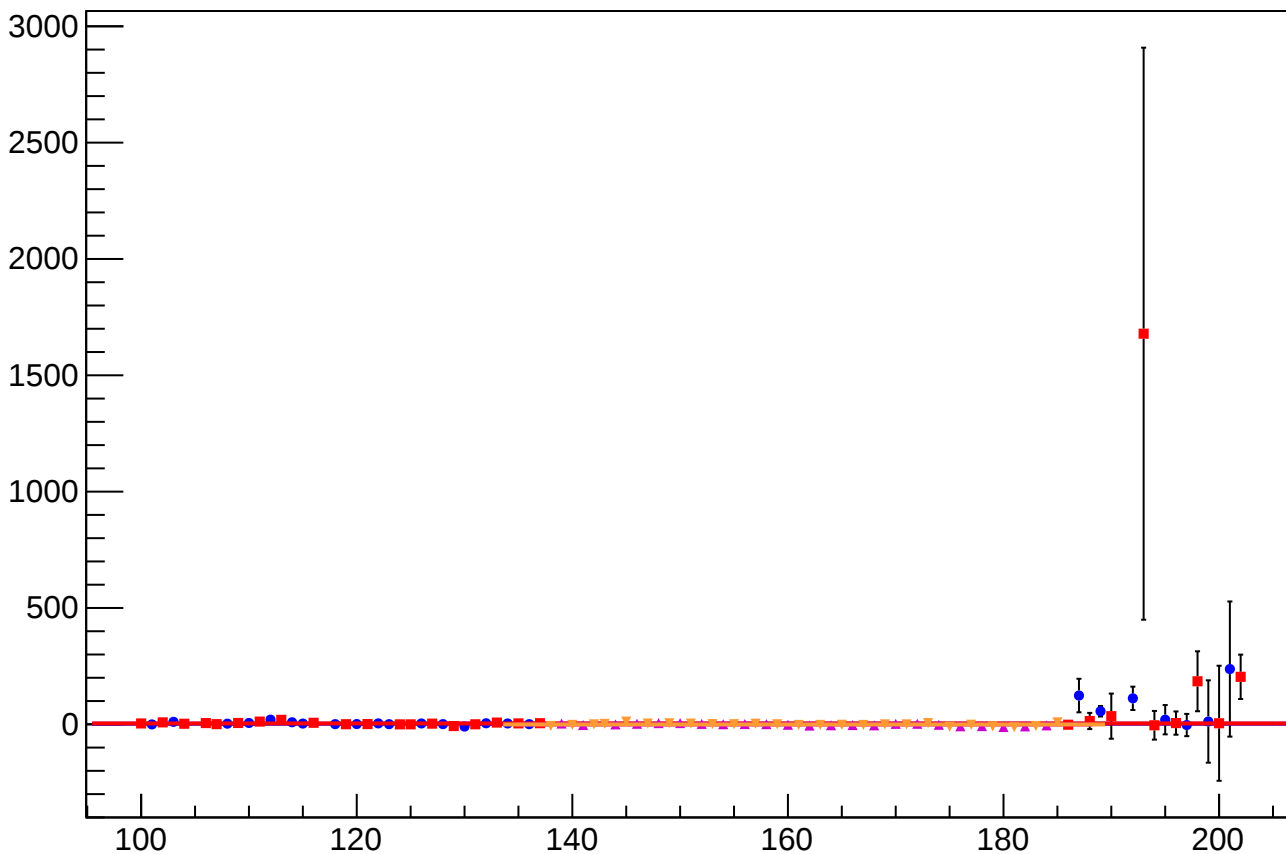
Right In:  $-32.667 \pm 15.119$   $\chi^2/\text{NDF}$ : 14.8/6  
 Left Out:  $-25.884 \pm 0.192$   $\chi^2/\text{NDF}$ : 4158.0/24  
 Right Out:  $5.012 \pm 8.258$   $\chi^2/\text{NDF}$ : 3.0/8  
 Left In:  $-26.052 \pm 0.195$   $\chi^2/\text{NDF}$ : 3279.5/22

Left:  $-25.967 \pm 0.137$   $\chi^2/\text{NDF}$ : 7437.8/47  
 Right:  $-3.646 \pm 7.247$   $\chi^2/\text{NDF}$ : 22.5/15

In:  $-26.053 \pm 0.195$   $\chi^2/\text{NDF}$ : 3294.4/29  
 Out:  $-25.868 \pm 0.192$   $\chi^2/\text{NDF}$ : 4174.9/33

All:  $-25.959 \pm 0.137$   $\chi^2/\text{NDF}$ : 7469.9/63

reg\_asym\_right\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $2.472 \pm 0.315$   $\chi^2/\text{NDF}$ : 308.3/23

Left Out:  $-0.654 \pm 0.146$   $\chi^2/\text{NDF}$ : 1320.8/24

Right Out:  $3.714 \pm 0.327$   $\chi^2/\text{NDF}$ : 277.8/27

Left In:  $-0.863 \pm 0.150$   $\chi^2/\text{NDF}$ : 1066.5/22

Left:  $-0.756 \pm 0.105$   $\chi^2/\text{NDF}$ : 2388.3/47

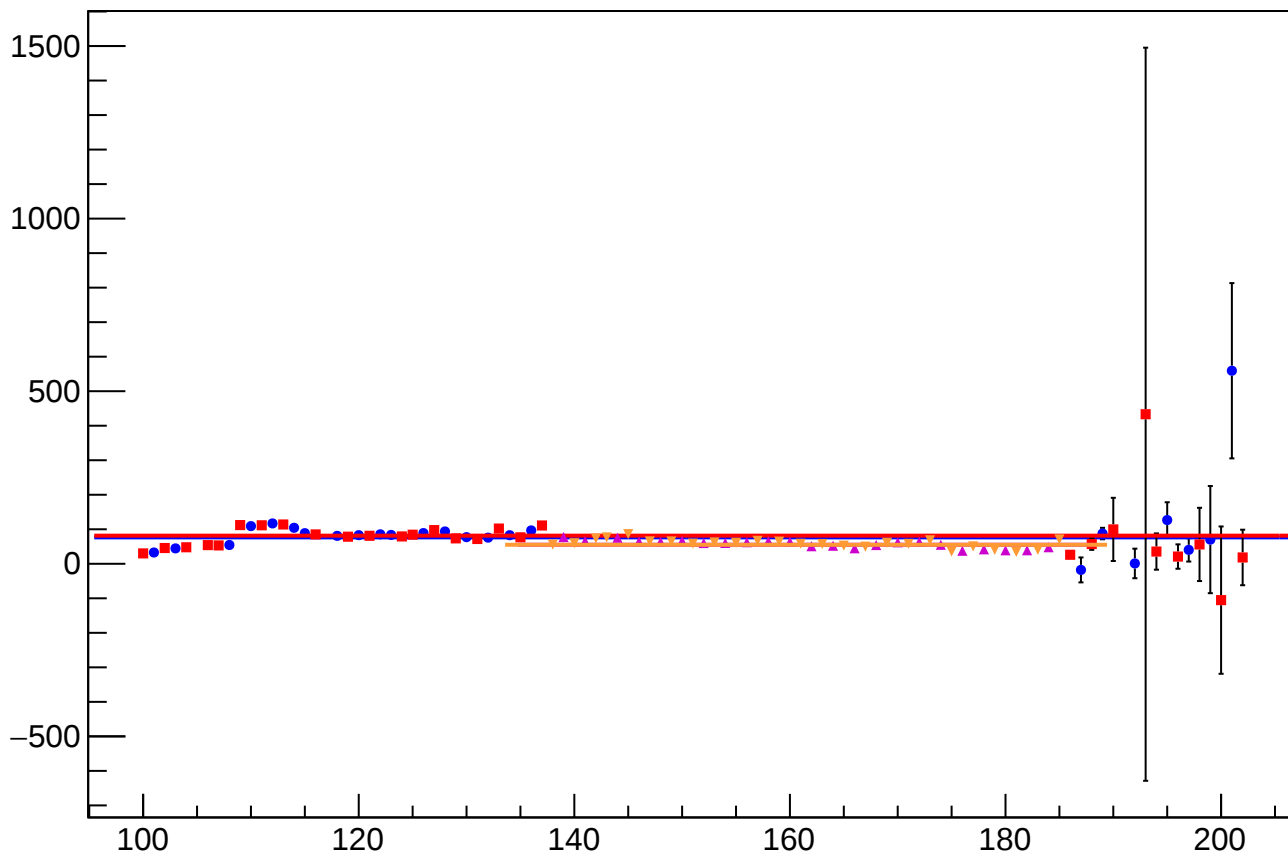
Right:  $3.070 \pm 0.227$   $\chi^2/\text{NDF}$ : 593.6/51

In:  $-0.243 \pm 0.136$   $\chi^2/\text{NDF}$ : 1466.2/46

Out:  $0.075 \pm 0.133$   $\chi^2/\text{NDF}$ : 1747.6/52

All:  $-0.081 \pm 0.095$   $\chi^2/\text{NDF}$ : 3216.7/99

reg\_asym\_right\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 76.528 $\pm$ 0.576  $\chi^2$ /NDF: 2268.8/23

Left Out: 55.098 $\pm$ 0.191  $\chi^2$ /NDF: 4579.3/24

Right Out: 81.490 $\pm$ 0.591  $\chi^2$ /NDF: 1631.9/27

Left In: 55.070 $\pm$ 0.193  $\chi^2$ /NDF: 3702.8/22

Left: 55.084 $\pm$ 0.136  $\chi^2$ /NDF: 8282.1/47

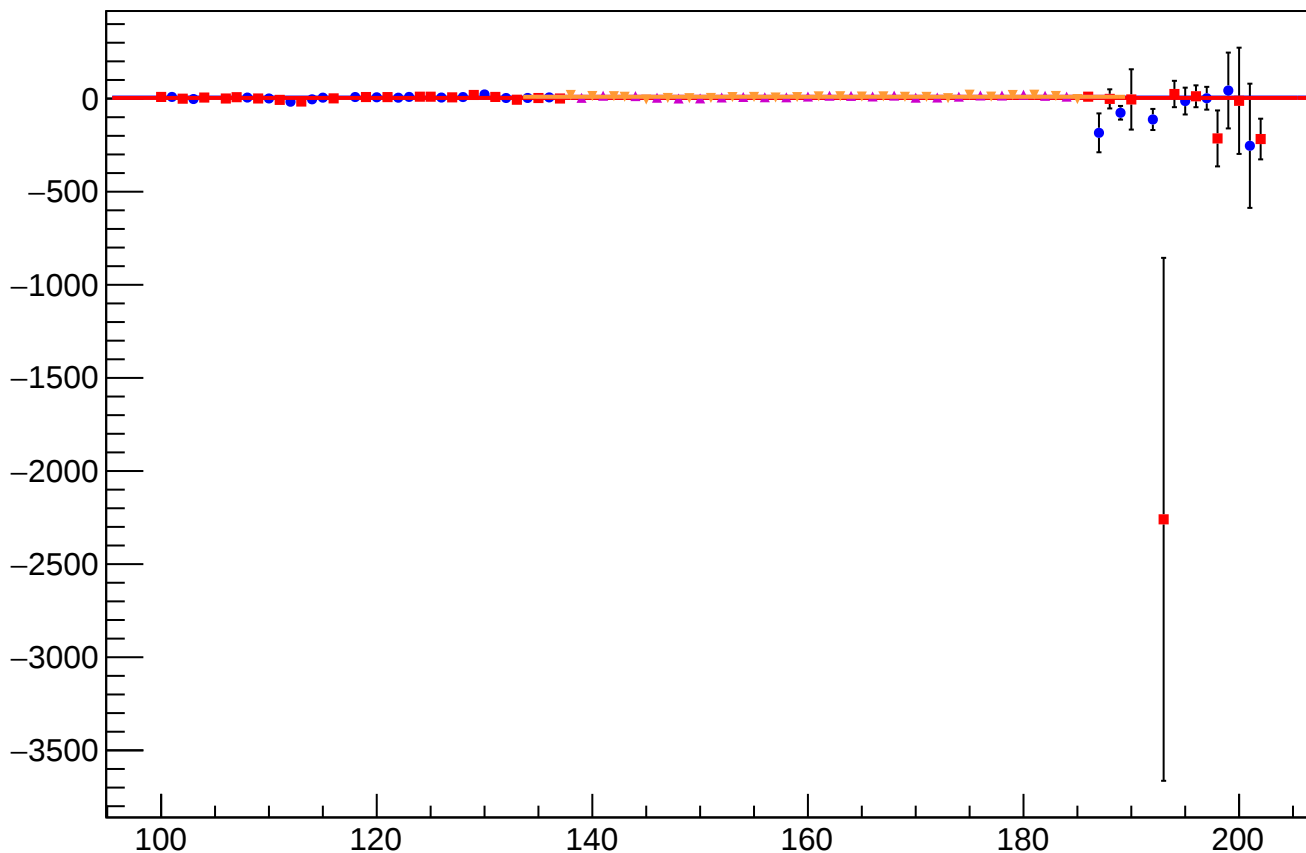
Right: 78.949 $\pm$ 0.412  $\chi^2$ /NDF: 3936.9/51

In: 57.243 $\pm$ 0.183  $\chi^2$ /NDF: 7217.5/46

Out: 57.609 $\pm$ 0.182  $\chi^2$ /NDF: 8018.4/52

All: 57.427 $\pm$ 0.129  $\chi^2$ /NDF: 15238.0/99

reg\_asym\_right\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 5.412 $\pm$ 0.361  $\chi^2$ /NDF: 398.9/23

Left Out: 9.737 $\pm$ 0.168  $\chi^2$ /NDF:1450.2/24

Right Out: 3.582 $\pm$ 0.375  $\chi^2$ /NDF: 430.7/27

Left In: 9.803 $\pm$ 0.172  $\chi^2$ /NDF:1158.7/22

Left: 9.769 $\pm$ 0.120  $\chi^2$ /NDF: 2609.0/47

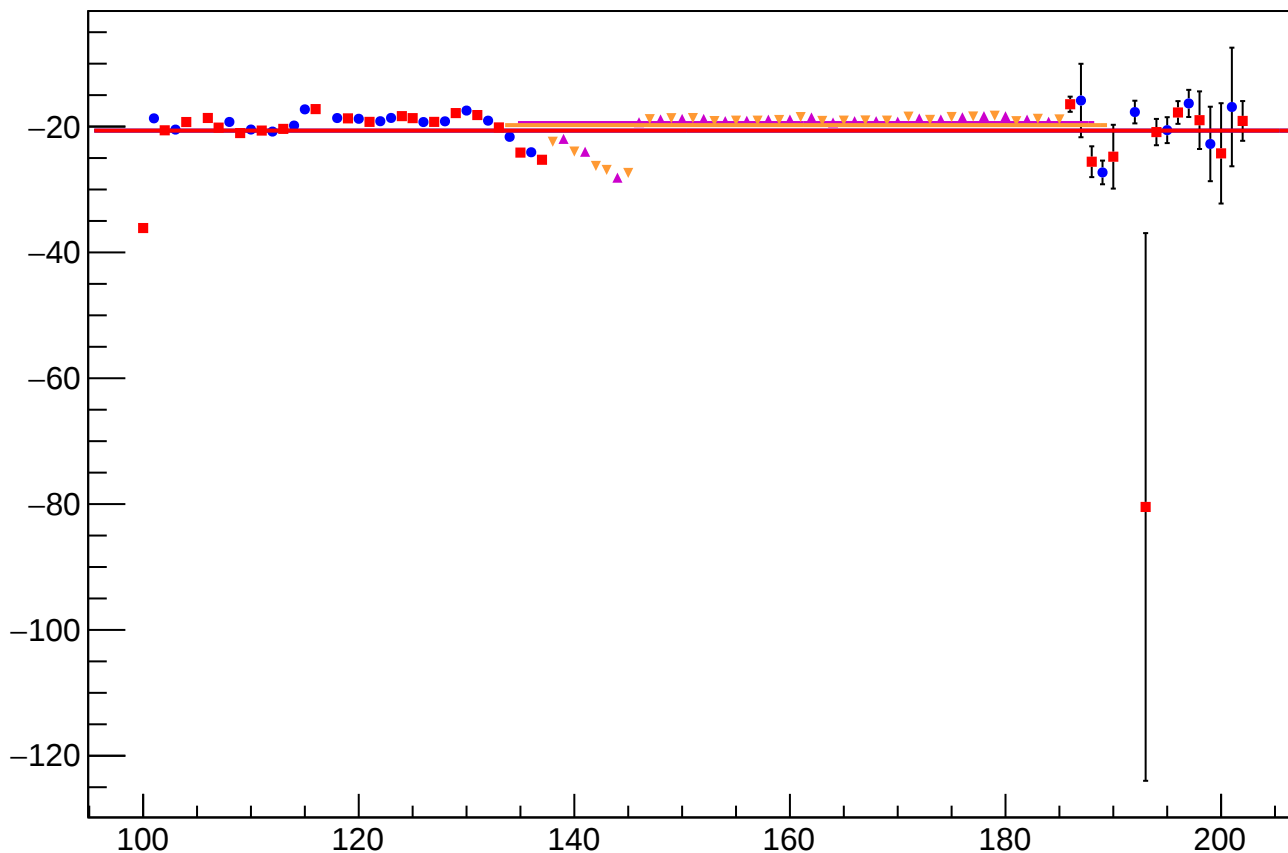
Right: 4.533 $\pm$ 0.260  $\chi^2$ /NDF: 841.9/51

In: 8.993 $\pm$ 0.155  $\chi^2$ /NDF:1678.4/46

Out: 8.713 $\pm$ 0.153  $\chi^2$ /NDF:2104.9/52

All: 8.851 $\pm$ 0.109  $\chi^2$ /NDF: 3785.0/99

reg\_asym\_right\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: -20.644 $\pm$ 0.019  $\chi^2$ /NDF: 12444.3/23

Left Out: -19.767 $\pm$ 0.008  $\chi^2$ /NDF: 91617.3/24

Right Out: -20.639 $\pm$ 0.019  $\chi^2$ /NDF: 13807.7/27

Left In: -19.435 $\pm$ 0.008  $\chi^2$ /NDF: 53170.9/22

Left: -19.603 $\pm$ 0.006  $\chi^2$ /NDF: 145665.0/47

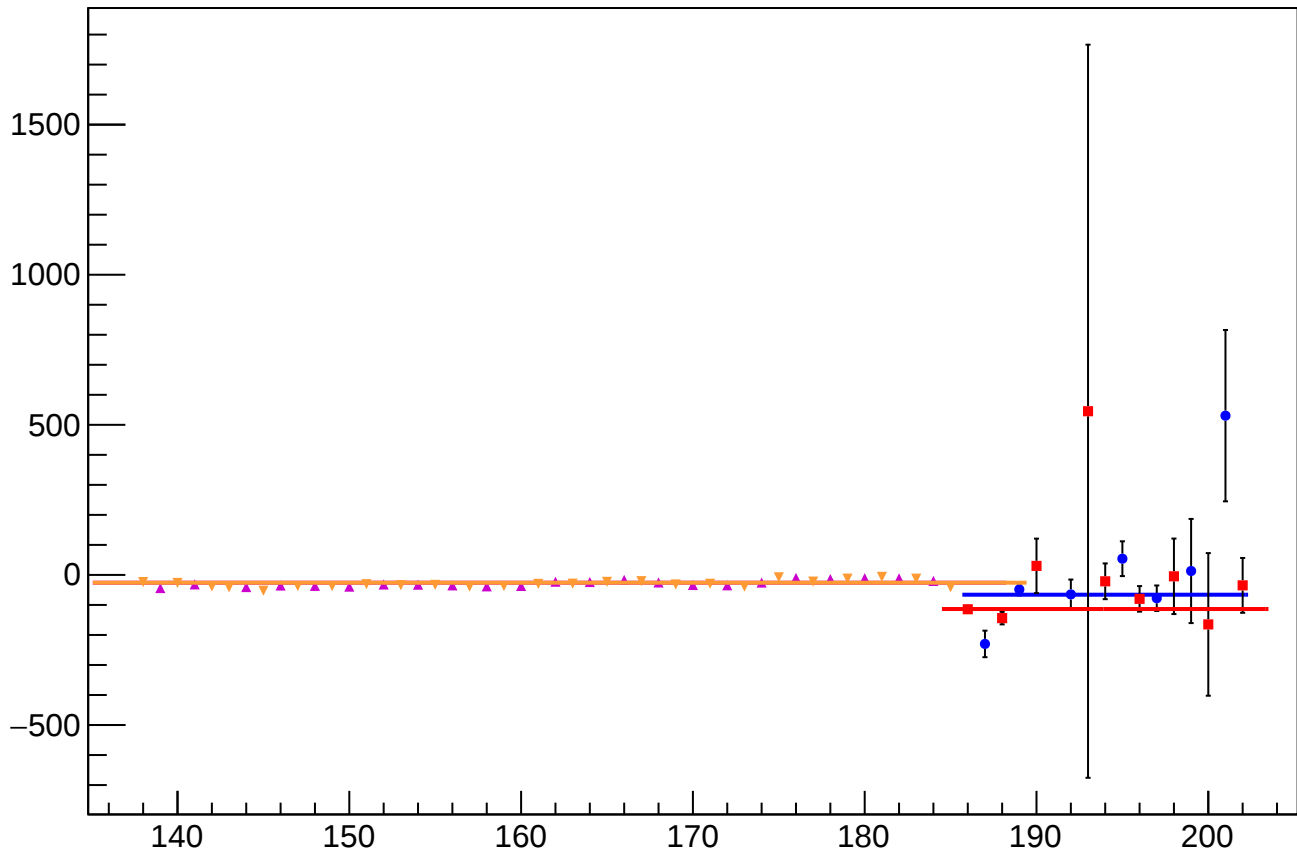
Right: -20.641 $\pm$ 0.014  $\chi^2$ /NDF: 26252.0/51

In: -19.610 $\pm$ 0.007  $\chi^2$ /NDF: 68952.7/46

Out: -19.890 $\pm$ 0.007  $\chi^2$ /NDF: 107148.1/52

All: -19.751 $\pm$ 0.005  $\chi^2$ /NDF: 176829.5/99

reg\_asym\_right\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-65.924 \pm 15.131$   $\chi^2/\text{NDF}$ : 23.5/6

Left Out:  $-25.899 \pm 0.192$   $\chi^2/\text{NDF}$ : 4127.5/24

Right Out:  $-113.584 \pm 8.264$   $\chi^2/\text{NDF}$ : 9.5/8

Left In:  $-26.046 \pm 0.195$   $\chi^2/\text{NDF}$ : 3246.7/22

Left:  $-25.971 \pm 0.137$   $\chi^2/\text{NDF}$ : 7374.6/47

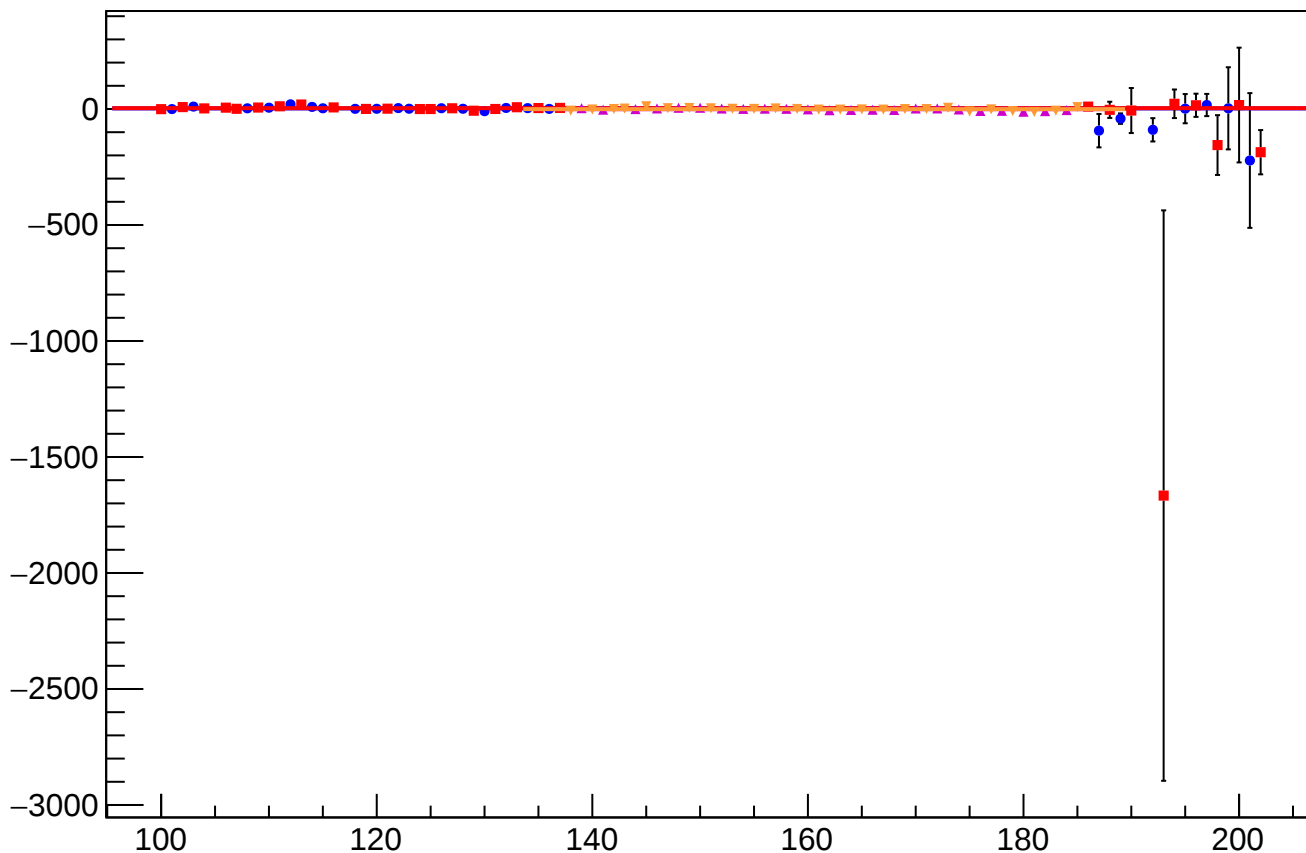
Right:  $-102.635 \pm 7.253$   $\chi^2/\text{NDF}$ : 40.6/15

In:  $-26.053 \pm 0.195$   $\chi^2/\text{NDF}$ : 3277.2/29

Out:  $-25.946 \pm 0.192$   $\chi^2/\text{NDF}$ : 4249.6/33

All:  $-25.999 \pm 0.137$   $\chi^2/\text{NDF}$ : 7526.9/63

reg\_asym\_right\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $2.442 \pm 0.315$   $\chi^2/\text{NDF}$ : 302.0/23

Left Out:  $-0.596 \pm 0.146$   $\chi^2/\text{NDF}$ : 1310.7/24

Right Out:  $3.594 \pm 0.318$   $\chi^2/\text{NDF}$ : 287.9/27

Left In:  $-0.795 \pm 0.151$   $\chi^2/\text{NDF}$ : 1106.3/22

Left:  $-0.693 \pm 0.105$   $\chi^2/\text{NDF}$ : 2417.9/47

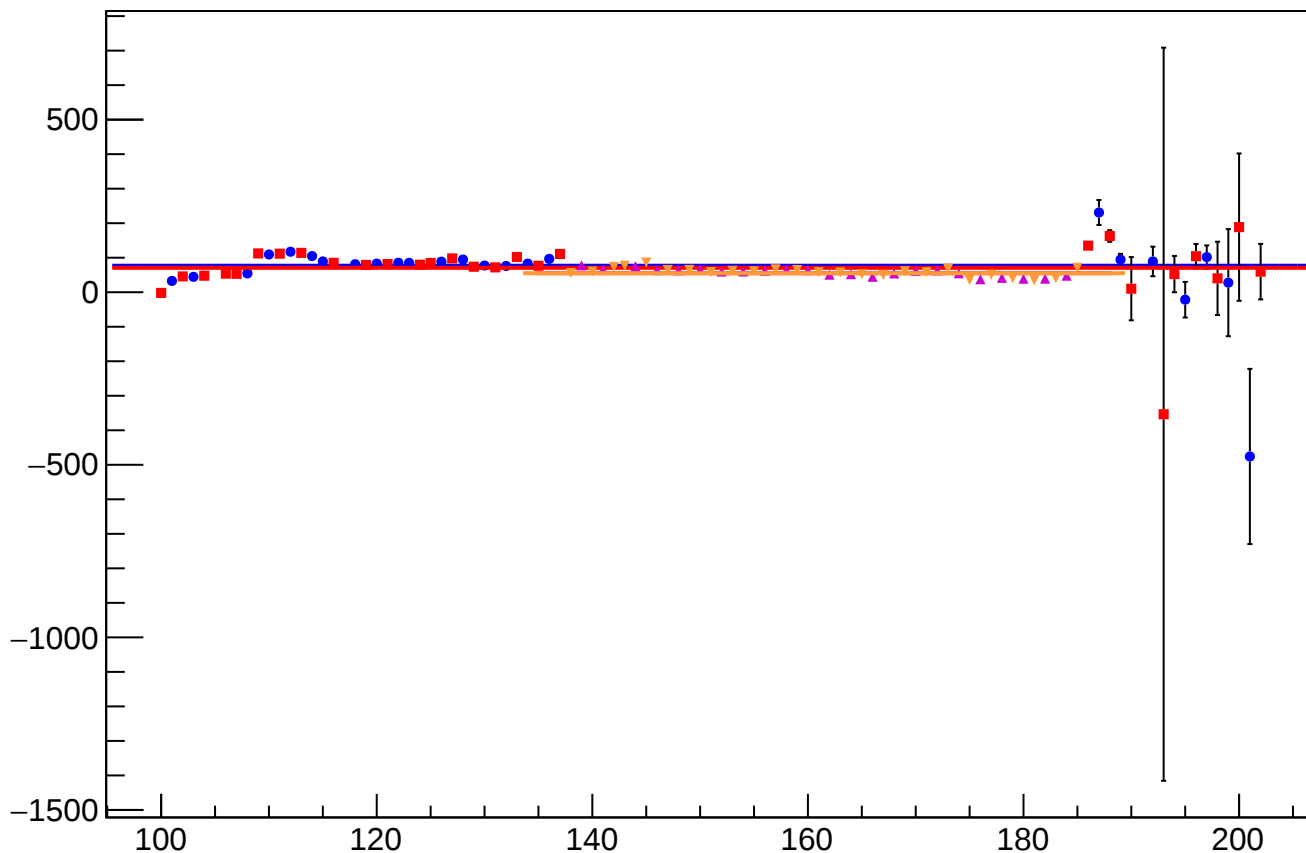
Right:  $3.012 \pm 0.224$   $\chi^2/\text{NDF}$ : 596.5/51

In:  $-0.193 \pm 0.136$   $\chi^2/\text{NDF}$ : 1494.2/46

Out:  $0.136 \pm 0.133$   $\chi^2/\text{NDF}$ : 1741.9/52

All:  $-0.025 \pm 0.095$   $\chi^2/\text{NDF}$ : 3239.1/99

reg\_asym\_right\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 76.729 $\pm$ 0.577  $\chi^2$ /NDF: 2293.3/23

Left Out: 55.111 $\pm$ 0.192  $\chi^2$ /NDF: 4560.2/24

Right Out: 70.755 $\pm$ 0.549  $\chi^2$ /NDF: 4491.2/27

Left In: 55.094 $\pm$ 0.194  $\chi^2$ /NDF: 3664.6/22

Left: 55.103 $\pm$ 0.136  $\chi^2$ /NDF: 8224.8/47

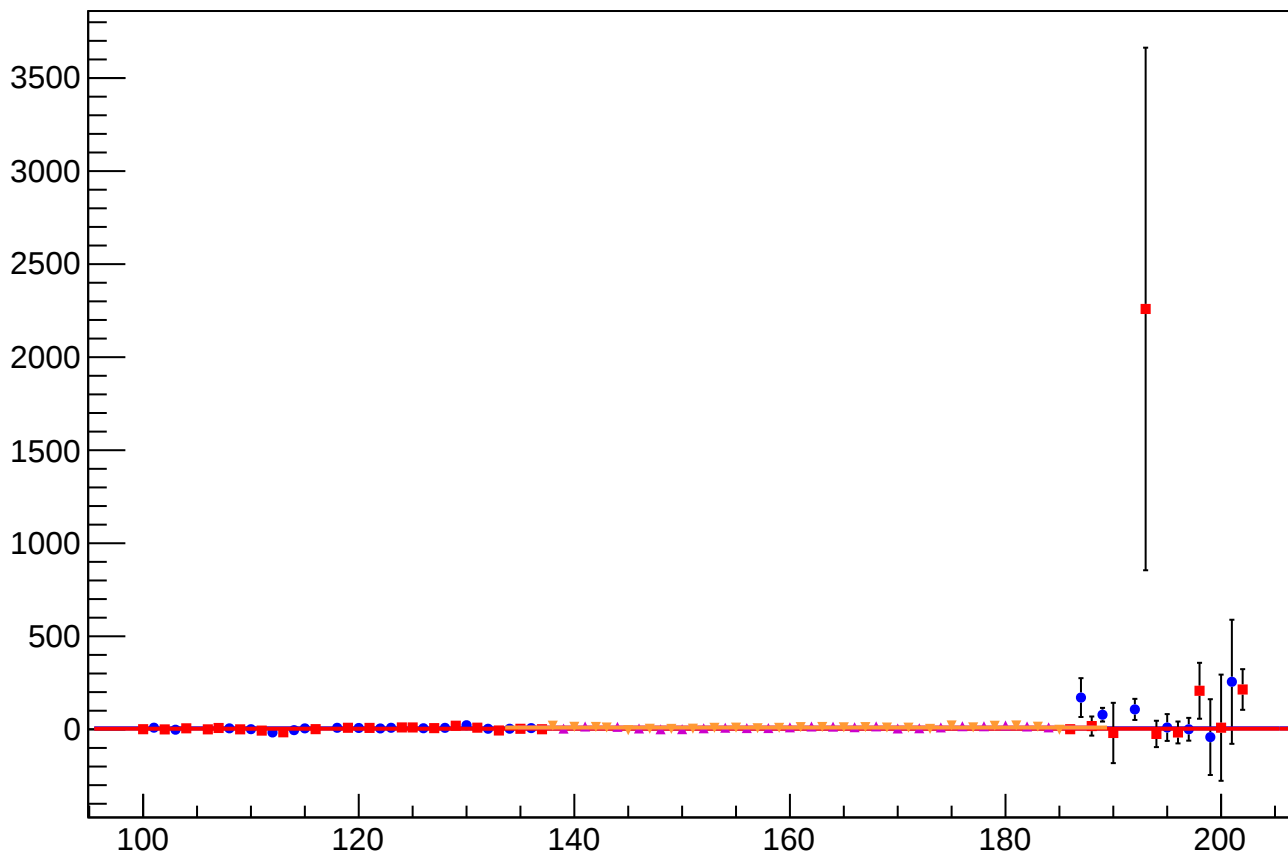
Right: 73.594 $\pm$ 0.397  $\chi^2$ /NDF: 6840.8/51

In: 57.286 $\pm$ 0.184  $\chi^2$ /NDF: 7223.1/46

Out: 56.811 $\pm$ 0.181  $\chi^2$ /NDF: 9775.9/52

All: 57.045 $\pm$ 0.129  $\chi^2$ /NDF: 17002.4/99

reg\_asym\_right\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 5.441+/-0.361  $\chi^2/\text{NDF}$ : 394.5/23

Left Out: 9.675+/-0.168  $\chi^2/\text{NDF}$ :1441.3/24

Right Out: 3.282+/-0.365  $\chi^2/\text{NDF}$ : 433.6/27

Left In: 9.738+/-0.172  $\chi^2/\text{NDF}$ :1191.1/22

Left: 9.706+/-0.120  $\chi^2/\text{NDF}$ : 2632.6/47

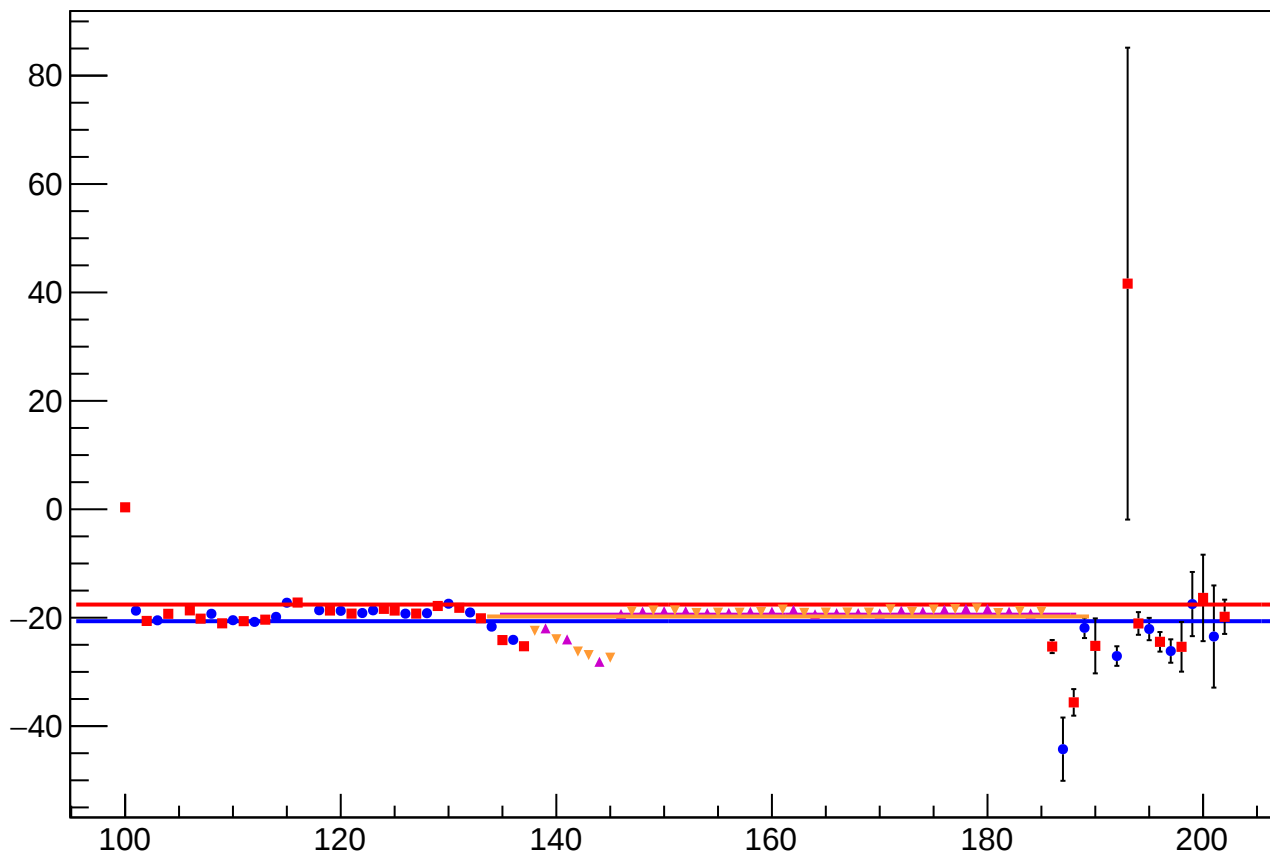
Right: 4.375+/-0.257  $\chi^2/\text{NDF}$ : 845.8/51

In: 8.945+/-0.155  $\chi^2/\text{NDF}$ :1701.1/46

Out: 8.562+/-0.153  $\chi^2/\text{NDF}$ :2127.7/52

All: 8.750+/-0.109  $\chi^2/\text{NDF}$ : 3831.9/99

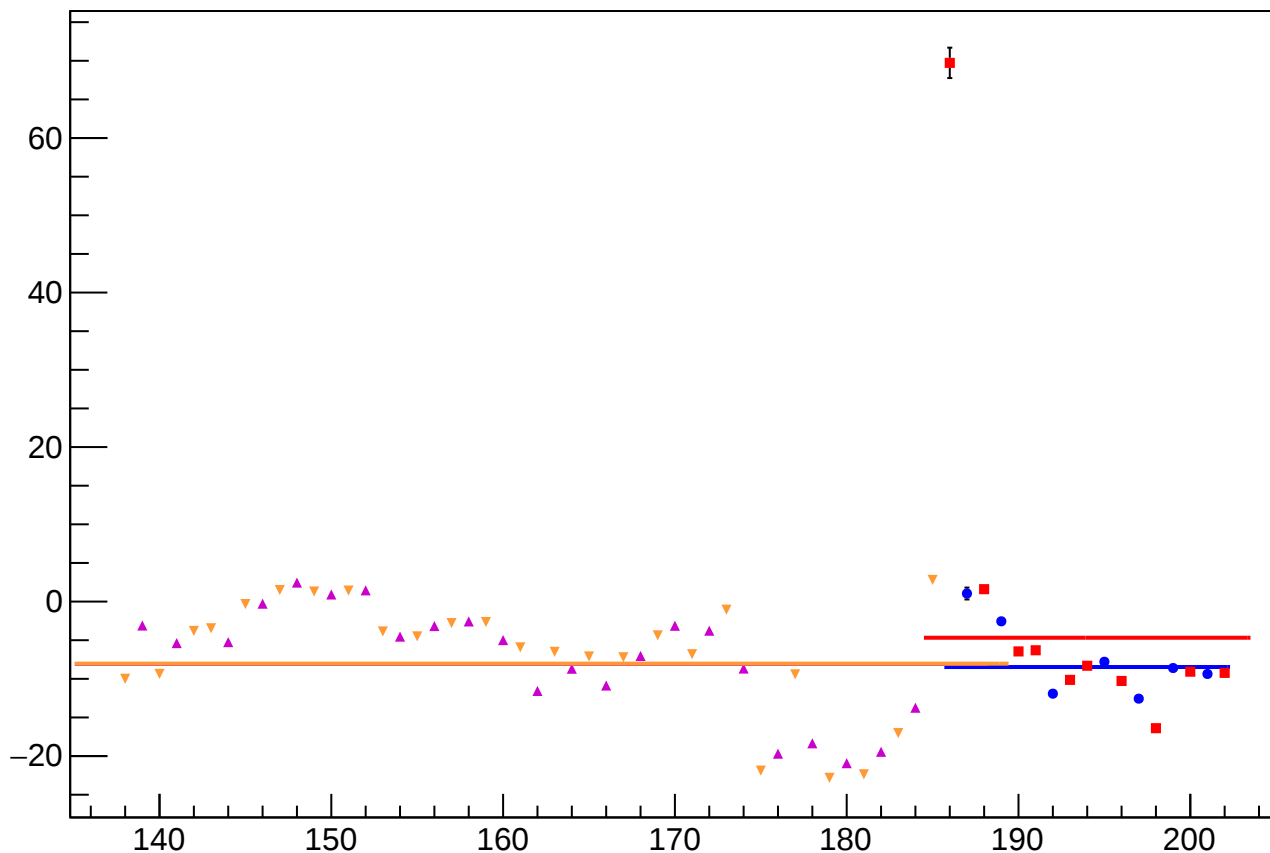
reg\_asym\_right\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-20.647 \pm 0.019$   $\chi^2/\text{NDF}: 12499.6/23$   
 Left Out:  $-19.775 \pm 0.008$   $\chi^2/\text{NDF}: 91510.1/24$   
 Right Out:  $-17.575 \pm 0.018$   $\chi^2/\text{NDF}: 178438.2/27$   
 Left In:  $-19.445 \pm 0.008$   $\chi^2/\text{NDF}: 53124.1/22$

Left:  $-19.611 \pm 0.006$   $\chi^2/\text{NDF}: 145502.5/47$   
 Right:  $-19.003 \pm 0.013$   $\chi^2/\text{NDF}: 204411.0/51$   
 In:  $-19.618 \pm 0.007$   $\chi^2/\text{NDF}: 68922.1/46$   
 Out:  $-19.422 \pm 0.007$   $\chi^2/\text{NDF}: 282427.8/52$   
 All:  $-19.518 \pm 0.005$   $\chi^2/\text{NDF}: 351713.2/99$

reg\_asym\_sam\_15\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected

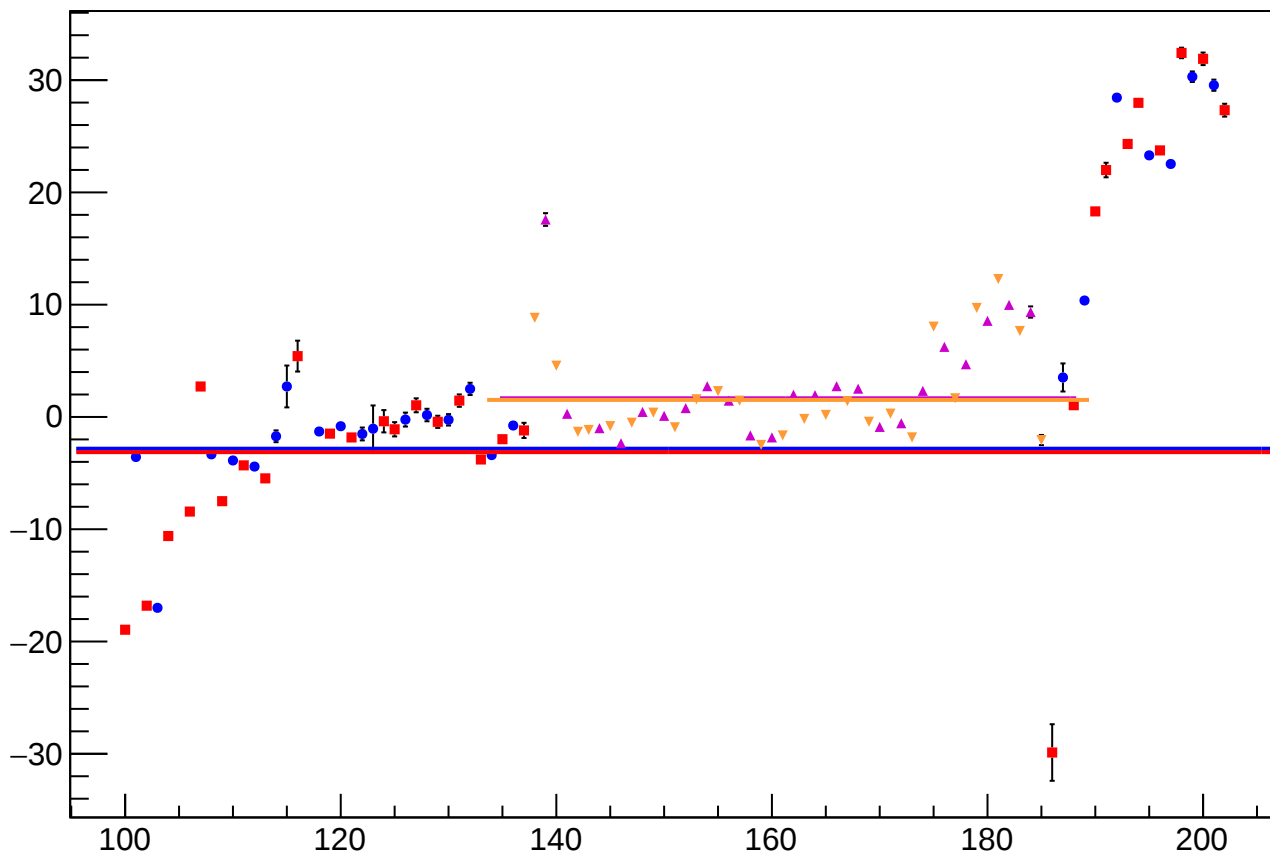


Right In:  $-8.471 \pm 0.162$   $\chi^2/\text{NDF}: 587.5/6$   
 Left Out:  $-8.034 \pm 0.070$   $\chi^2/\text{NDF}: 12568.0/24$   
 Right Out:  $-4.680 \pm 0.119$   $\chi^2/\text{NDF}: 3897.3/9$   
 Left In:  $-8.078 \pm 0.072$   $\chi^2/\text{NDF}: 10541.6/22$

Left:  $-8.055 \pm 0.050$   $\chi^2/\text{NDF}: 23109.8/47$   
 Right:  $-6.009 \pm 0.096$   $\chi^2/\text{NDF}: 4842.6/16$   
 In:  $-8.143 \pm 0.066$   $\chi^2/\text{NDF}: 11134.0/29$   
 Out:  $-7.163 \pm 0.060$   $\chi^2/\text{NDF}: 17056.5/34$

All:  $-7.612 \pm 0.044$   $\chi^2/\text{NDF}: 28311.0/64$

reg\_asym\_sam\_15\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-2.828 \pm 0.052$   $\chi^2/\text{NDF}: 35850.9/23$

Left Out:  $1.518 \pm 0.054$   $\chi^2/\text{NDF}: 4847.5/24$

Right Out:  $-3.134 \pm 0.054$   $\chi^2/\text{NDF}: 48727.1/28$

Left In:  $1.662 \pm 0.057$   $\chi^2/\text{NDF}: 4034.2/22$

Left:  $1.587 \pm 0.039$   $\chi^2/\text{NDF}: 8885.0/47$

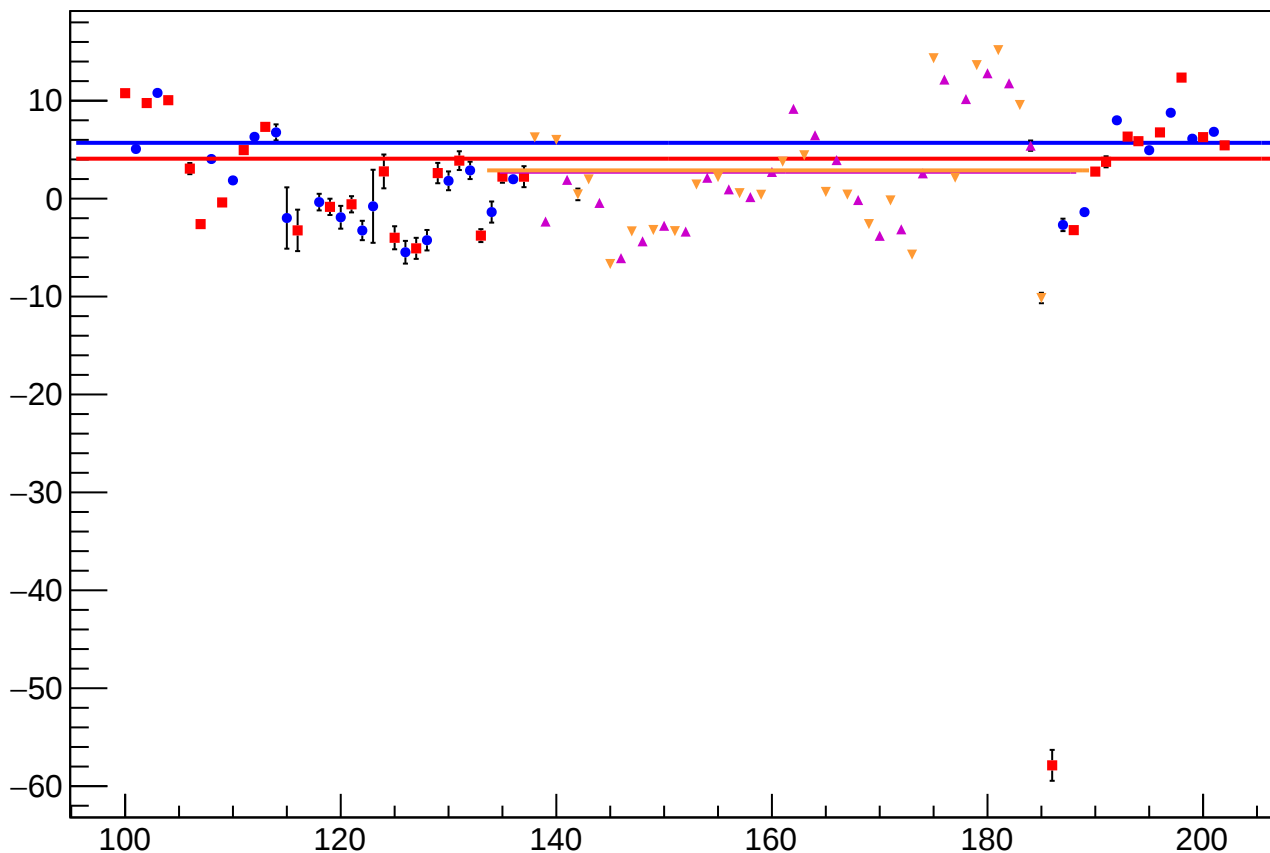
Right:  $-2.975 \pm 0.038$   $\chi^2/\text{NDF}: 84594.4/52$

In:  $-0.757 \pm 0.038$   $\chi^2/\text{NDF}: 43278.5/46$

Out:  $-0.804 \pm 0.038$   $\chi^2/\text{NDF}: 57231.2/53$

All:  $-0.781 \pm 0.027$   $\chi^2/\text{NDF}: 100510.4/100$

reg\_asym\_sam\_15\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 5.699 $\pm$ 0.076  $\chi^2$ /NDF: 2155.3/23

Left Out: 2.884 $\pm$ 0.070  $\chi^2$ /NDF:8893.2/24

Right Out: 4.079 $\pm$ 0.069  $\chi^2$ /NDF: 7630.5/28

Left In: 2.745 $\pm$ 0.071  $\chi^2$ /NDF:7183.1/22

Left: 2.816 $\pm$ 0.050  $\chi^2$ /NDF: 16078.2/47

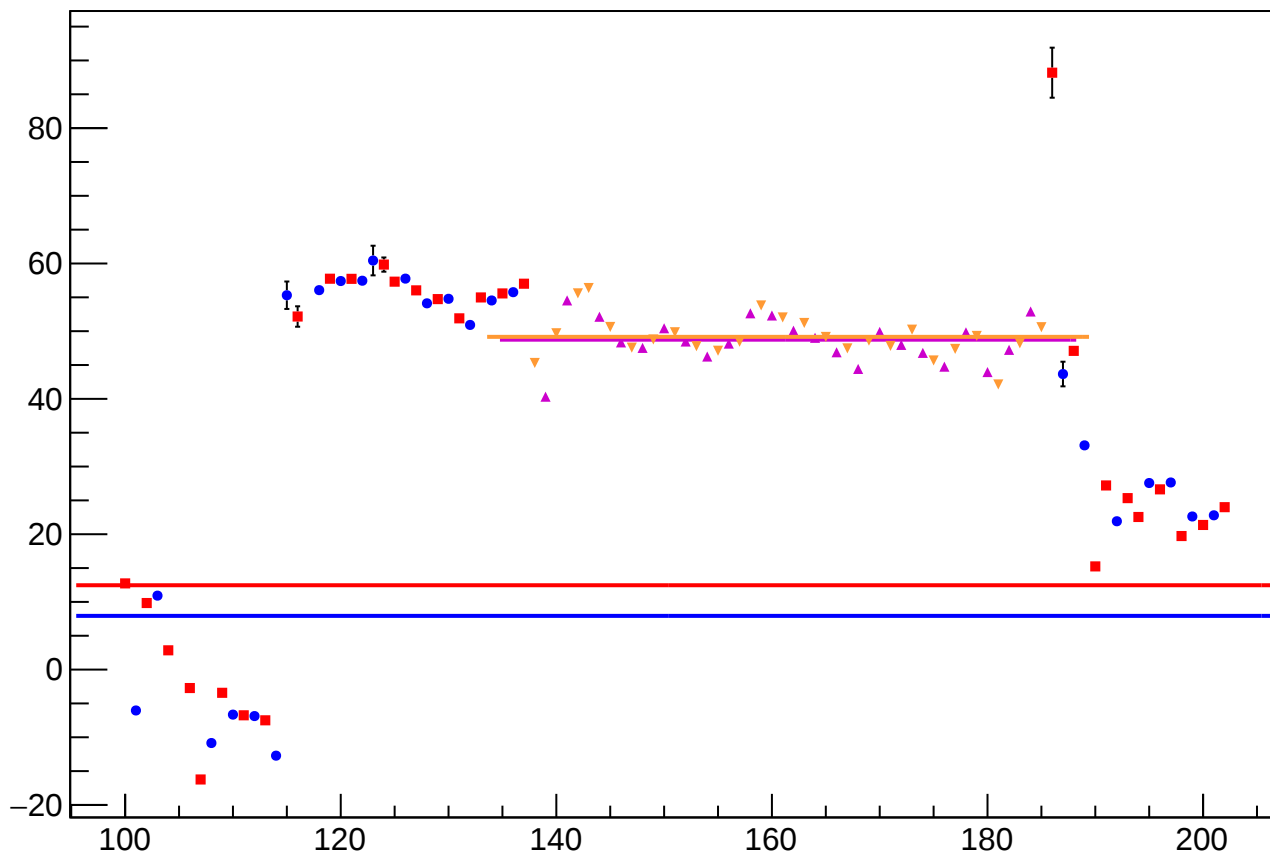
Right: 4.812 $\pm$ 0.051  $\chi^2$ /NDF: 10036.8/52

In: 4.138 $\pm$ 0.052  $\chi^2$ /NDF:10143.9/46

Out: 3.494 $\pm$ 0.049  $\chi^2$ /NDF:16671.3/53

All: 3.798 $\pm$ 0.036  $\chi^2$ /NDF: 26896.1/100

reg\_asym\_sam\_15\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $7.937 \pm 0.062$   $\chi^2/\text{NDF}: 128979.5/23$

Left Out:  $49.163 \pm 0.062$   $\chi^2/\text{NDF}: 2259.9/24$

Right Out:  $12.462 \pm 0.065$   $\chi^2/\text{NDF}: 134000.4/28$

Left In:  $48.744 \pm 0.064$   $\chi^2/\text{NDF}: 2097.7/22$

Left:  $48.960 \pm 0.044$   $\chi^2/\text{NDF}: 4380.0/47$

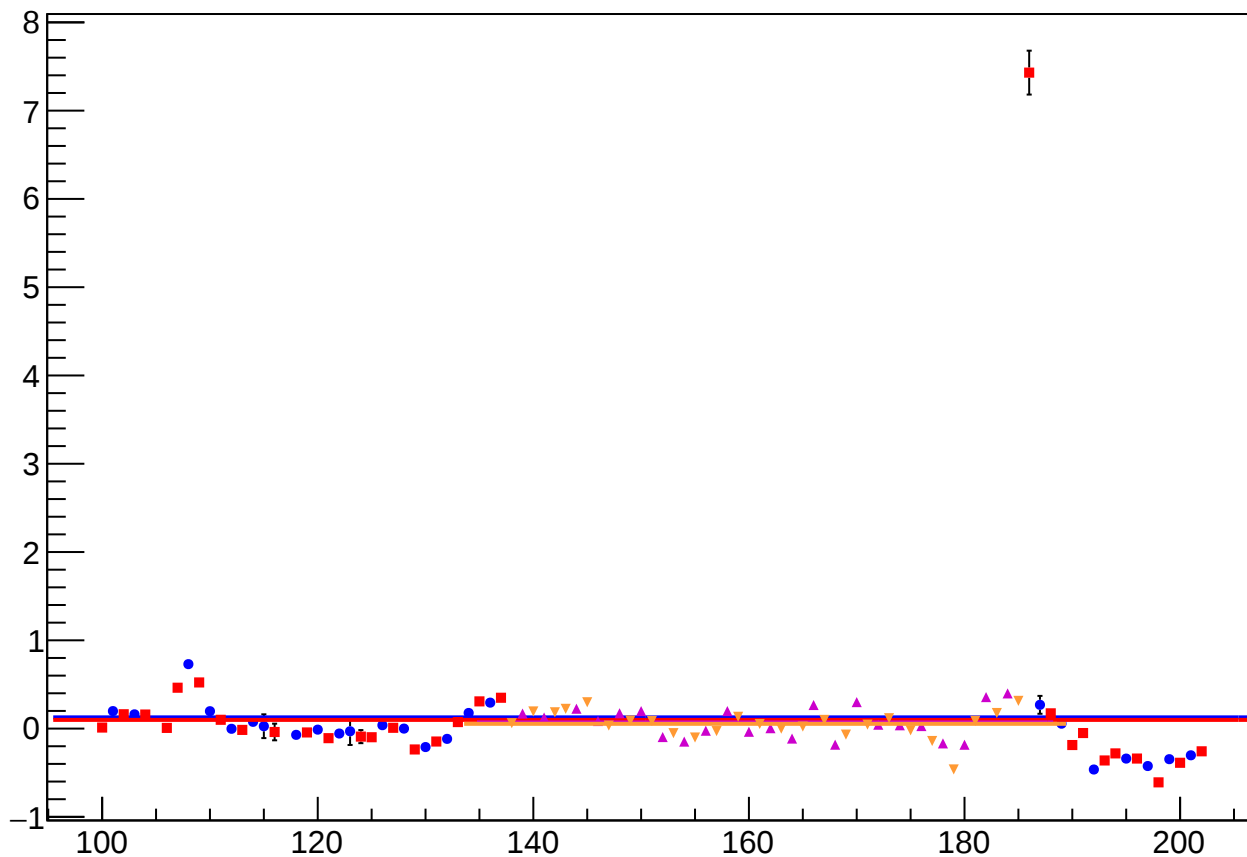
Right:  $10.095 \pm 0.045$   $\chi^2/\text{NDF}: 265526.1/52$

In:  $27.748 \pm 0.044$   $\chi^2/\text{NDF}: 341787.7/46$

Out:  $31.718 \pm 0.045$   $\chi^2/\text{NDF}: 304225.1/53$

All:  $29.720 \pm 0.032$   $\chi^2/\text{NDF}: 649978.2/100$

reg\_asym\_sam\_15\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.127+/-0.003  $\chi^2/\text{NDF}$ : 10801.1/23

Left Out: 0.054+/-0.003  $\chi^2/\text{NDF}$ : 2379.8/24

Right Out: 0.098+/-0.002  $\chi^2/\text{NDF}$ : 10572.0/28

Left In: 0.070+/-0.003  $\chi^2/\text{NDF}$ : 3233.8/22

Left: 0.062+/-0.002  $\chi^2/\text{NDF}$ : 5630.0/47

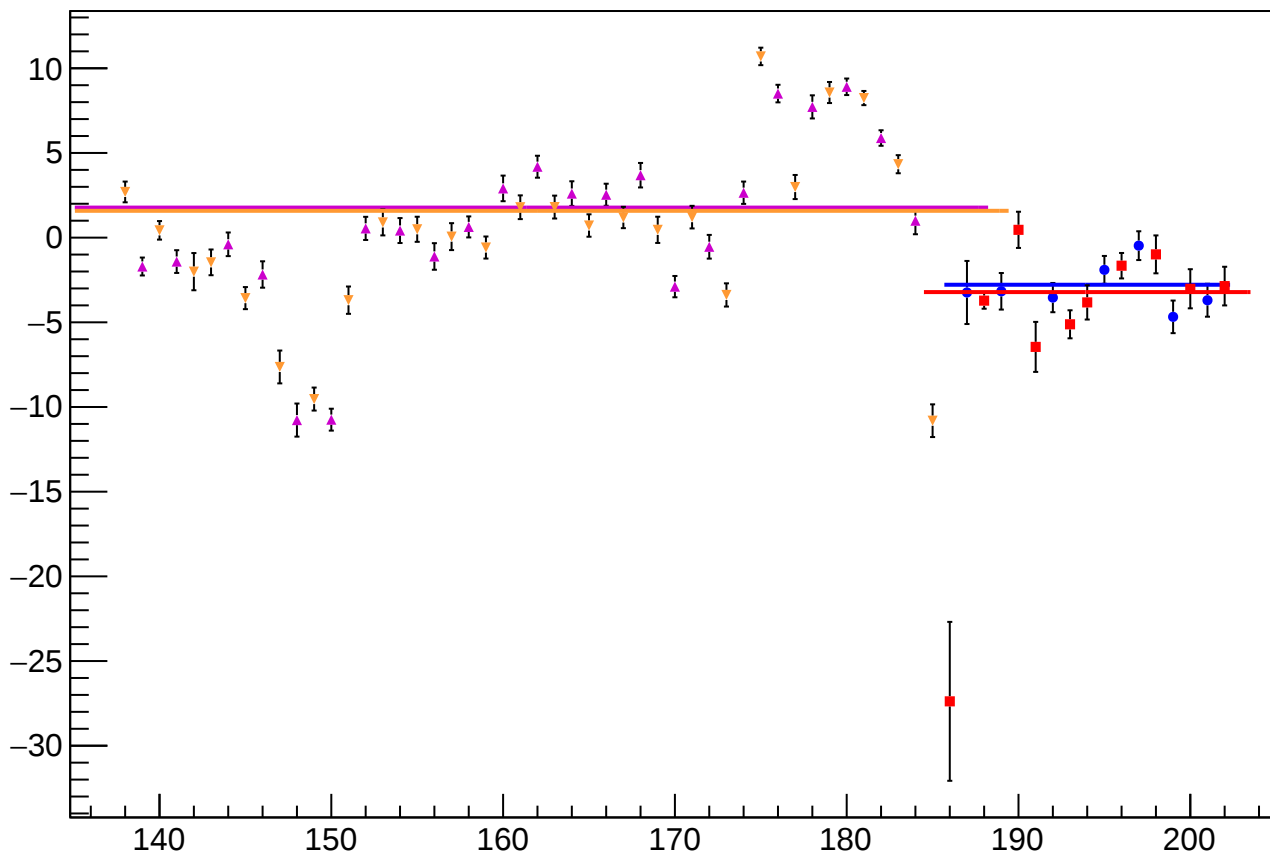
Right: 0.112+/-0.002  $\chi^2/\text{NDF}$ : 21439.5/52

In: 0.102+/-0.002  $\chi^2/\text{NDF}$ : 14254.4/46

Out: 0.080+/-0.002  $\chi^2/\text{NDF}$ : 13094.6/53

All: 0.090+/-0.001  $\chi^2/\text{NDF}$ : 27420.9/100

reg\_asym\_sam\_15\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-2.782 \pm 0.365$   $\chi^2/\text{NDF}$ : 14.2/6

Left Out:  $1.584 \pm 0.133$   $\chi^2/\text{NDF}$ : 1458.8/24

Right Out:  $-3.215 \pm 0.285$   $\chi^2/\text{NDF}$ : 58.3/9

Left In:  $1.774 \pm 0.135$   $\chi^2/\text{NDF}$ : 1297.3/22

Left:  $1.677 \pm 0.095$   $\chi^2/\text{NDF}$ : 2757.2/47

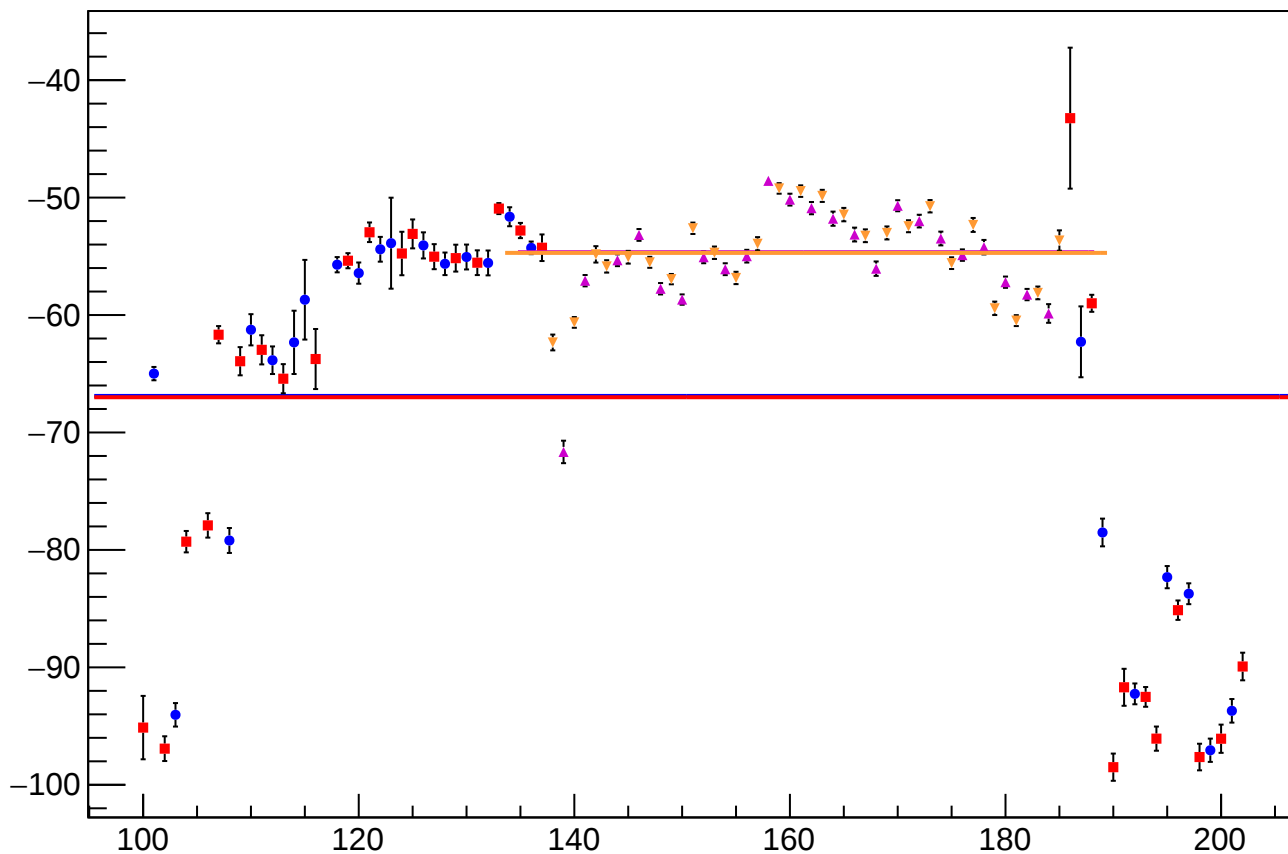
Right:  $-3.051 \pm 0.225$   $\chi^2/\text{NDF}$ : 73.4/16

In:  $1.225 \pm 0.127$   $\chi^2/\text{NDF}$ : 1448.3/29

Out:  $0.730 \pm 0.120$   $\chi^2/\text{NDF}$ : 1749.9/34

All:  $0.965 \pm 0.087$   $\chi^2/\text{NDF}$ : 3206.2/64

reg\_asym\_sam\_15\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: -66.889 $\pm$ 0.195  $\chi^2$ /NDF: 6093.6/23

Left Out: -54.707 $\pm$ 0.106  $\chi^2$ /NDF:1126.0/24

Right Out: -67.000 $\pm$ 0.179  $\chi^2$ /NDF: 9211.3/28

Left In: -54.650 $\pm$ 0.110  $\chi^2$ /NDF:1077.1/22

Left: -54.680 $\pm$ 0.076  $\chi^2$ /NDF: 2203.2/47

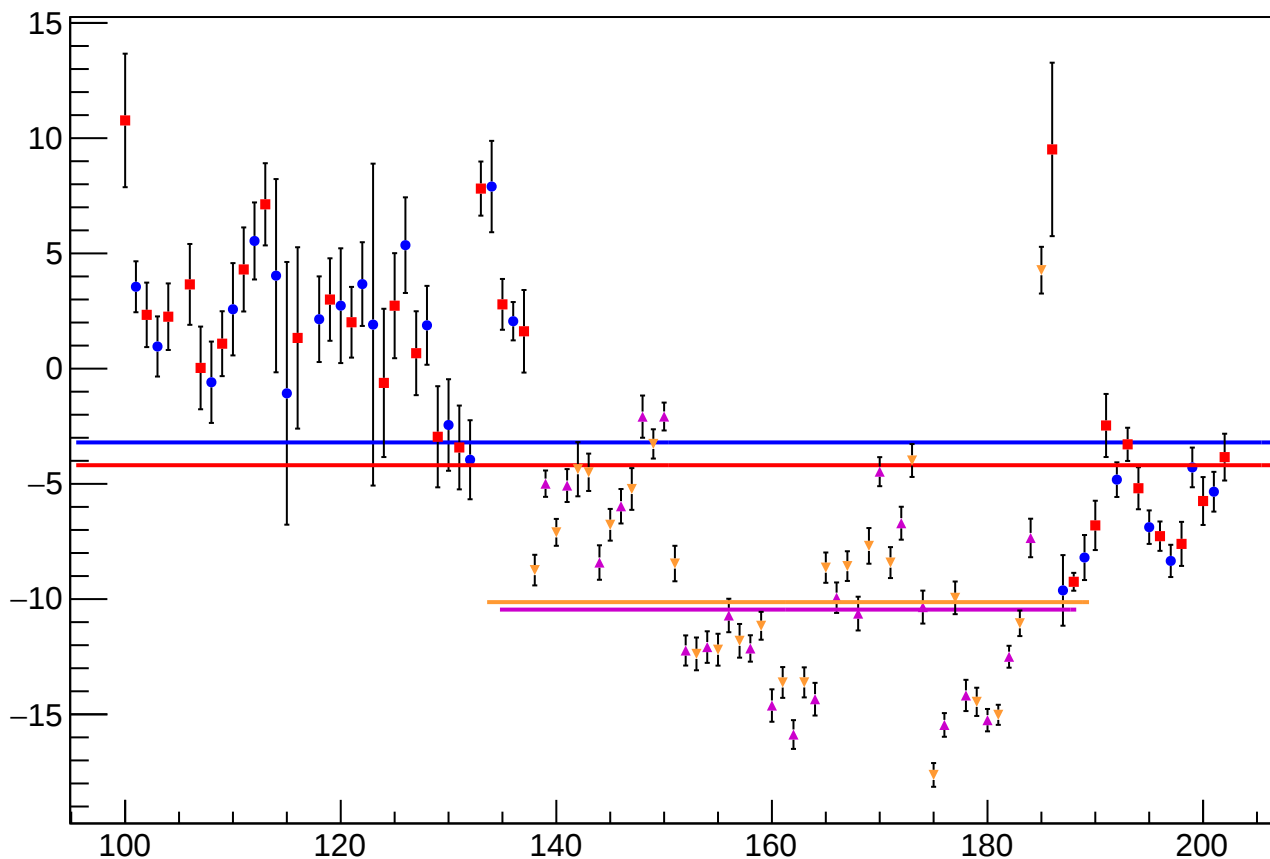
Right: -66.949 $\pm$ 0.132  $\chi^2$ /NDF: 15305.1/52

In: -57.588 $\pm$ 0.096  $\chi^2$ /NDF:10154.5/46

Out: -57.893 $\pm$ 0.091  $\chi^2$ /NDF:13842.9/53

All: -57.748 $\pm$ 0.066  $\chi^2$ /NDF: 24002.8/100

reg\_asym\_sam\_15\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-3.202 \pm 0.250$   $\chi^2/\text{NDF}: 350.6/23$

Left Out:  $-10.131 \pm 0.133$   $\chi^2/\text{NDF}: 1055.4/24$

Right Out:  $-4.191 \pm 0.207$   $\chi^2/\text{NDF}: 610.0/28$

Left In:  $-10.456 \pm 0.135$   $\chi^2/\text{NDF}: 1002.7/22$

Left:  $-10.291 \pm 0.095$   $\chi^2/\text{NDF}: 2061.1/47$

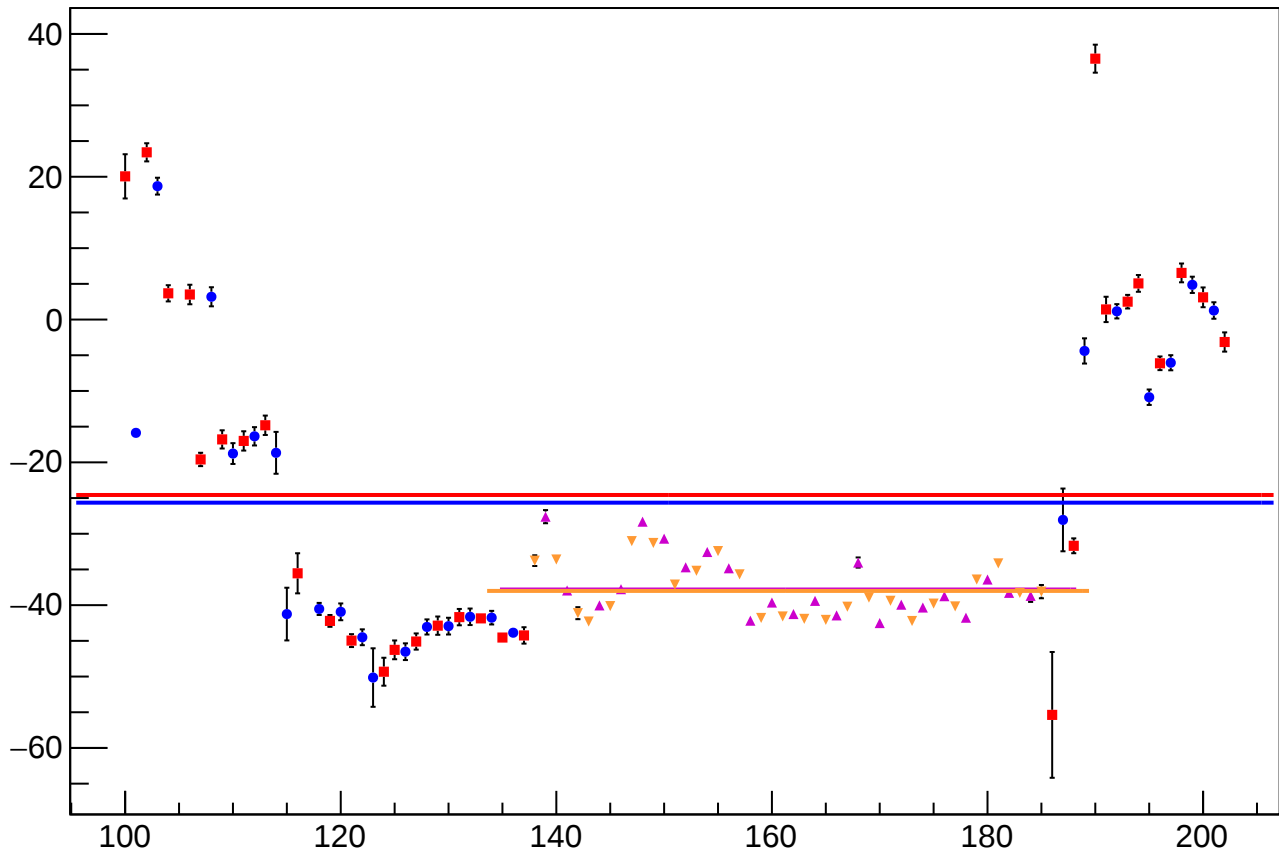
Right:  $-3.790 \pm 0.160$   $\chi^2/\text{NDF}: 969.9/52$

In:  $-8.830 \pm 0.119$   $\chi^2/\text{NDF}: 2004.1/46$

Out:  $-8.398 \pm 0.112$   $\chi^2/\text{NDF}: 2249.2/53$

All:  $-8.601 \pm 0.081$   $\chi^2/\text{NDF}: 4260.2/100$

reg\_asym\_sam\_15\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-25.647 \pm 0.224$   $\chi^2/\text{NDF}: 8043.7/23$

Left Out:  $-38.006 \pm 0.119$   $\chi^2/\text{NDF}: 946.0/24$

Right Out:  $-24.570 \pm 0.209$   $\chi^2/\text{NDF}: 11368.7/28$

Left In:  $-37.809 \pm 0.122$   $\chi^2/\text{NDF}: 1039.9/22$

Left:  $-37.910 \pm 0.085$   $\chi^2/\text{NDF}: 1987.2/47$

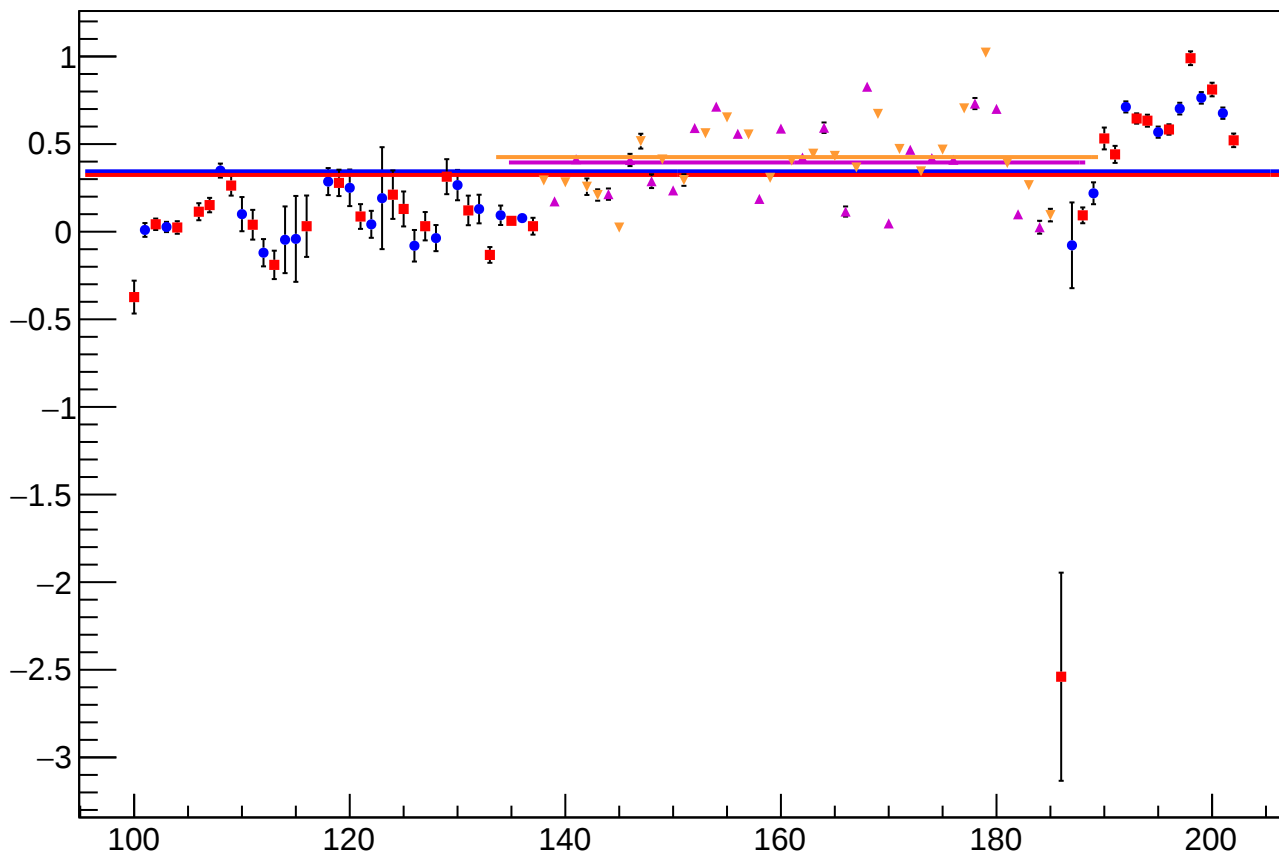
Right:  $-25.071 \pm 0.153$   $\chi^2/\text{NDF}: 19424.8/52$

In:  $-35.021 \pm 0.107$   $\chi^2/\text{NDF}: 11350.7/46$

Out:  $-34.734 \pm 0.103$   $\chi^2/\text{NDF}: 15433.7/53$

All:  $-34.872 \pm 0.074$   $\chi^2/\text{NDF}: 26788.1/100$

reg\_asym\_sam\_15\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.345 $\pm$ 0.009  $\chi^2$ /NDF: 1049.2/23

Left Out: 0.426 $\pm$ 0.005  $\chi^2$ /NDF:1303.7/24

Right Out: 0.324 $\pm$ 0.009  $\chi^2$ /NDF: 1376.3/28

Left In: 0.395 $\pm$ 0.005  $\chi^2$ /NDF:1798.2/22

Left: 0.411 $\pm$ 0.004  $\chi^2$ /NDF: 3118.1/47

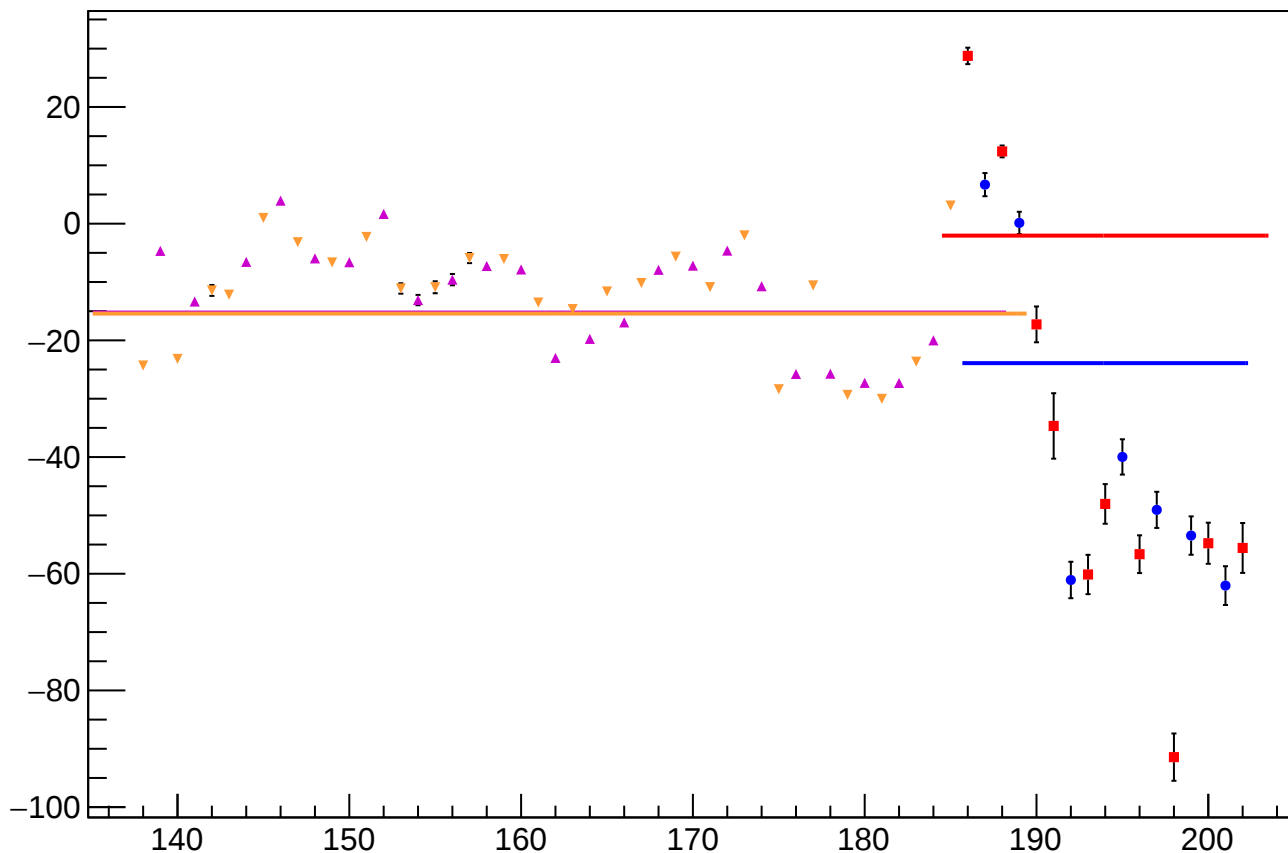
Right: 0.333 $\pm$ 0.006  $\chi^2$ /NDF: 2428.1/52

In: 0.383 $\pm$ 0.005  $\chi^2$ /NDF:2868.8/46

Out: 0.398 $\pm$ 0.005  $\chi^2$ /NDF:2778.1/53

All: 0.390 $\pm$ 0.003  $\chi^2$ /NDF: 5652.4/100

reg\_asym\_sam\_37\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-23.904 \pm 0.986$   $\chi^2/\text{NDF}: 844.6/6$

Left Out:  $-15.413 \pm 0.105$   $\chi^2/\text{NDF}: 10509.1/24$

Right Out:  $-2.048 \pm 0.693$   $\chi^2/\text{NDF}: 2370.4/9$

Left In:  $-15.229 \pm 0.107$   $\chi^2/\text{NDF}: 8657.3/22$

Left:  $-15.322 \pm 0.075$   $\chi^2/\text{NDF}: 19167.9/47$

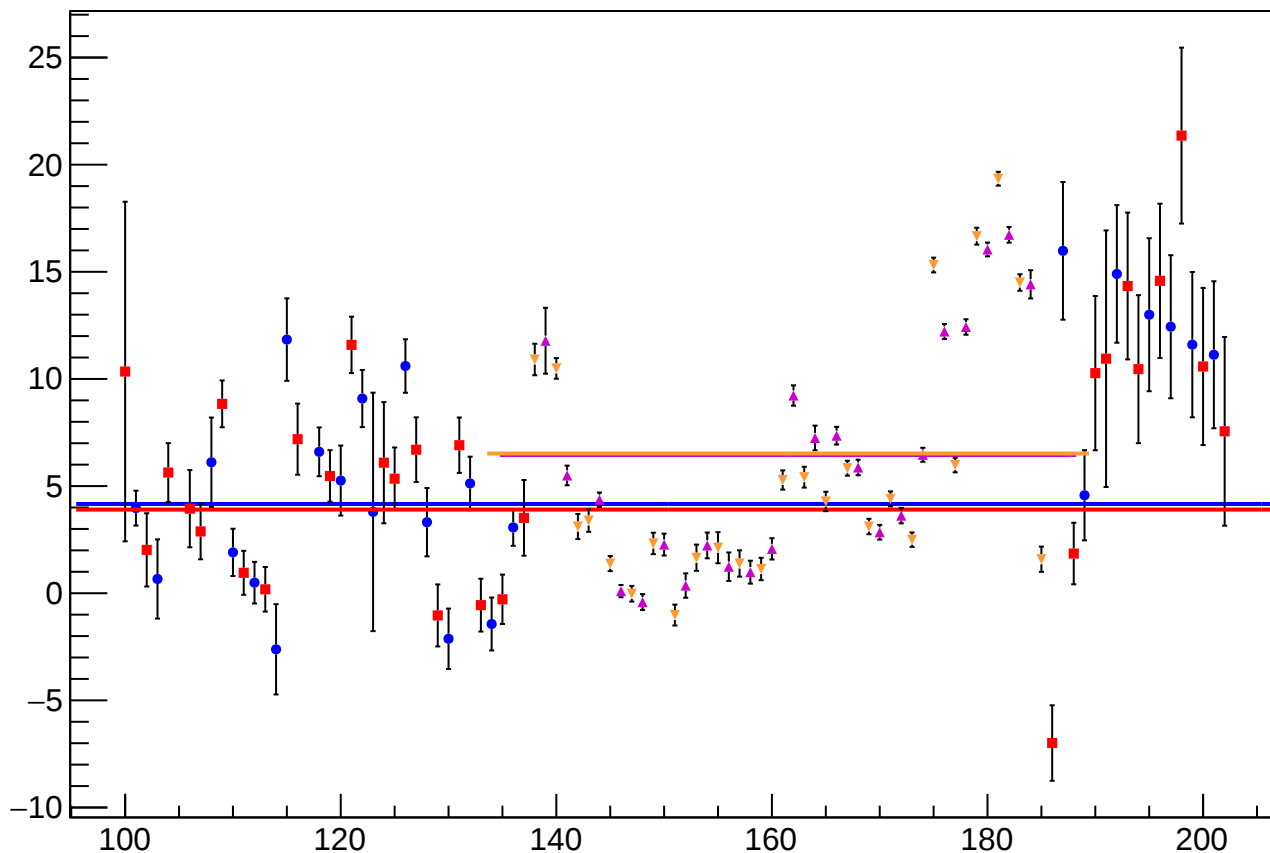
Right:  $-9.272 \pm 0.567$   $\chi^2/\text{NDF}: 3543.8/16$

In:  $-15.330 \pm 0.106$   $\chi^2/\text{NDF}: 9578.4/29$

Out:  $-15.111 \pm 0.104$   $\chi^2/\text{NDF}: 13243.1/34$

All:  $-15.218 \pm 0.074$   $\chi^2/\text{NDF}: 22823.6/64$

reg\_asym\_sam\_37\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 4.166+/-0.300  $\chi^2/\text{NDF}$ : 183.4/23

Left Out: 6.521+/-0.085  $\chi^2/\text{NDF}$ : 4985.2/24

Right Out: 3.904+/-0.297  $\chi^2/\text{NDF}$ : 222.2/28

Left In: 6.452+/-0.086  $\chi^2/\text{NDF}$ : 3948.0/22

Left: 6.487+/-0.061  $\chi^2/\text{NDF}$ : 8933.5/47

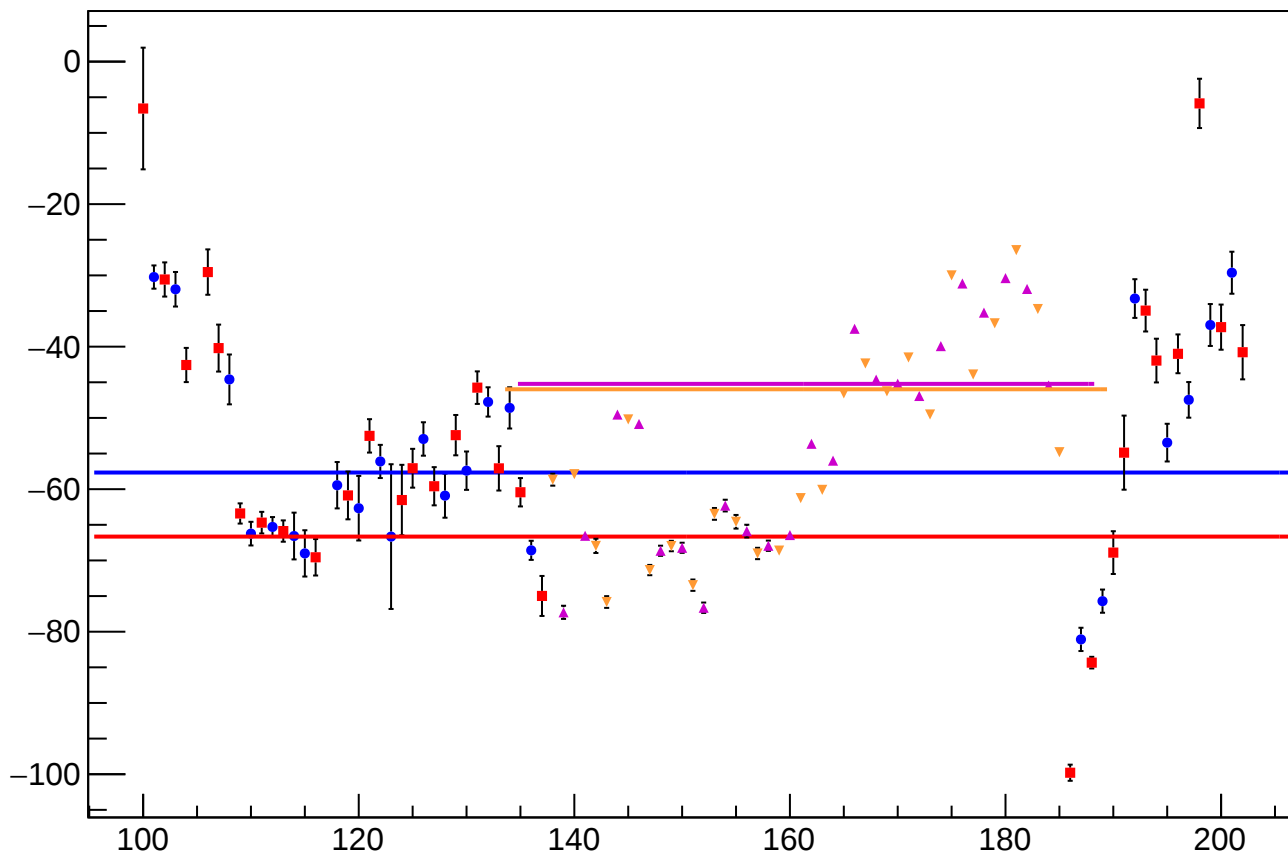
Right: 4.034+/-0.211  $\chi^2/\text{NDF}$ : 406.0/52

In: 6.278+/-0.083  $\chi^2/\text{NDF}$ : 4185.1/46

Out: 6.321+/-0.082  $\chi^2/\text{NDF}$ : 5279.0/53

All: 6.300+/-0.058  $\chi^2/\text{NDF}$ : 9464.2/100

reg\_asym\_sam\_37\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-57.664 \pm 0.457$   $\chi^2/\text{NDF}$ : 1161.9/23

Left Out:  $-45.982 \pm 0.106$   $\chi^2/\text{NDF}$ : 17360.1/24

Right Out:  $-66.653 \pm 0.392$   $\chi^2/\text{NDF}$ : 2824.6/28

Left In:  $-45.222 \pm 0.107$   $\chi^2/\text{NDF}$ : 15600.2/22

Left:  $-45.605 \pm 0.075$   $\chi^2/\text{NDF}$ : 32985.7/47

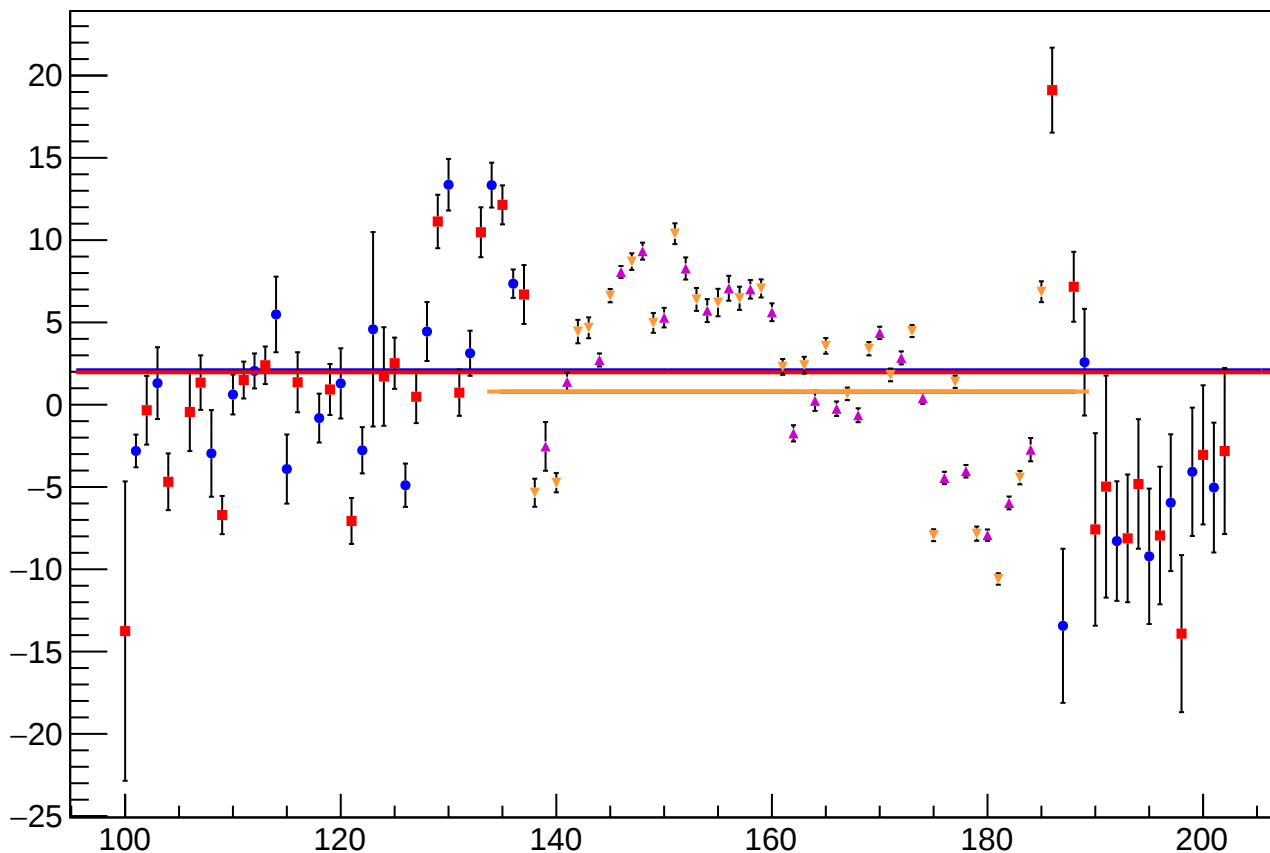
Right:  $-62.838 \pm 0.297$   $\chi^2/\text{NDF}$ : 4209.6/52

In:  $-45.872 \pm 0.104$   $\chi^2/\text{NDF}$ : 17466.0/46

Out:  $-47.396 \pm 0.103$   $\chi^2/\text{NDF}$ : 22774.5/53

All:  $-46.647 \pm 0.073$   $\chi^2/\text{NDF}$ : 40349.0/100

reg\_asym\_sam\_37\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $2.092 \pm 0.338$   $\chi^2/\text{NDF}$ : 279.9/23

Left Out:  $0.797 \pm 0.096$   $\chi^2/\text{NDF}$ : 3760.0/24

Right Out:  $1.968 \pm 0.340$   $\chi^2/\text{NDF}$ : 347.2/28

Left In:  $0.792 \pm 0.097$   $\chi^2/\text{NDF}$ : 2692.5/22

Left:  $0.795 \pm 0.068$   $\chi^2/\text{NDF}$ : 6452.5/47

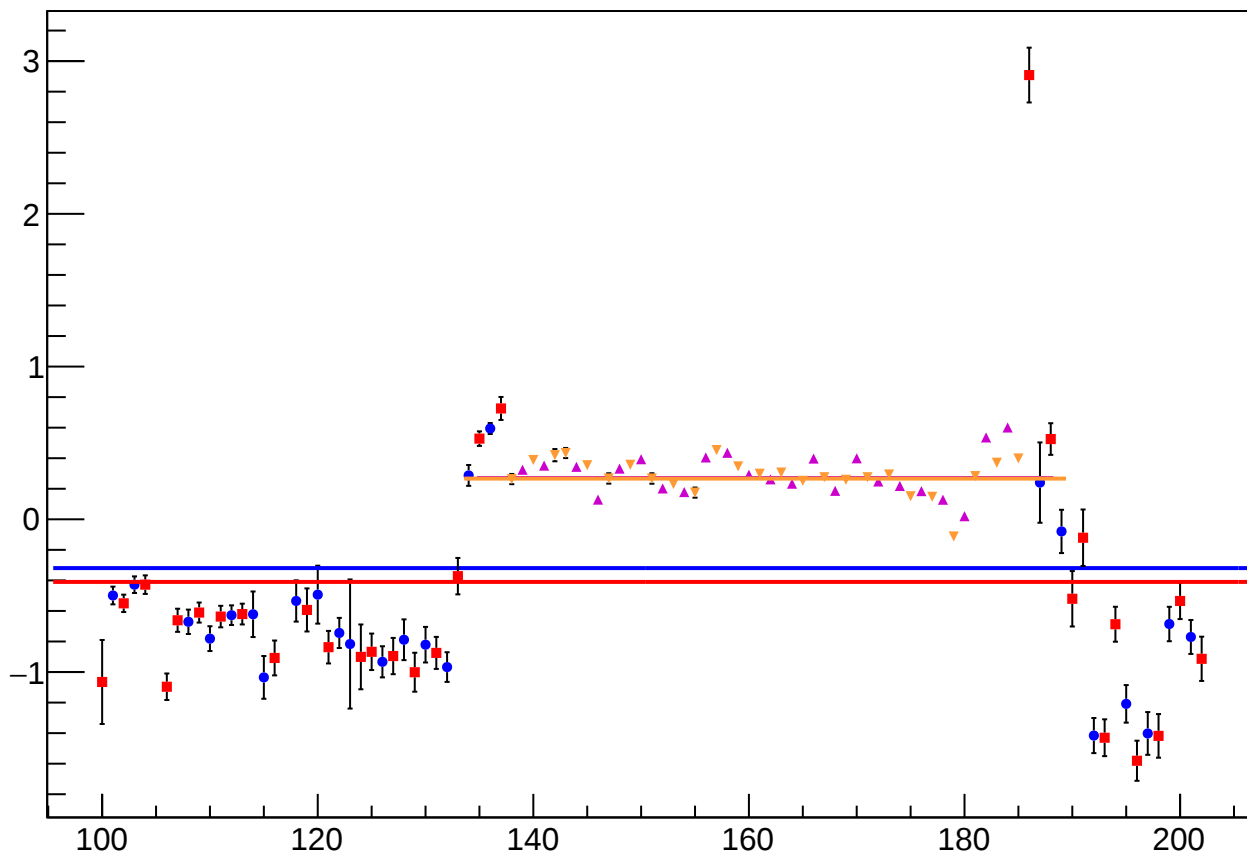
Right:  $2.030 \pm 0.240$   $\chi^2/\text{NDF}$ : 627.2/52

In:  $0.890 \pm 0.093$   $\chi^2/\text{NDF}$ : 2986.1/46

Out:  $0.883 \pm 0.092$   $\chi^2/\text{NDF}$ : 4118.2/53

All:  $0.887 \pm 0.065$   $\chi^2/\text{NDF}$ : 7104.2/100

reg\_asym\_sam\_37\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.319 \pm 0.018$   $\chi^2/\text{NDF}$ : 1215.6/23

Left Out:  $0.267 \pm 0.004$   $\chi^2/\text{NDF}$ : 699.8/24

Right Out:  $-0.410 \pm 0.017$   $\chi^2/\text{NDF}$ : 1492.0/28

Left In:  $0.270 \pm 0.004$   $\chi^2/\text{NDF}$ : 969.9/22

Left:  $0.268 \pm 0.003$   $\chi^2/\text{NDF}$ : 1670.1/47

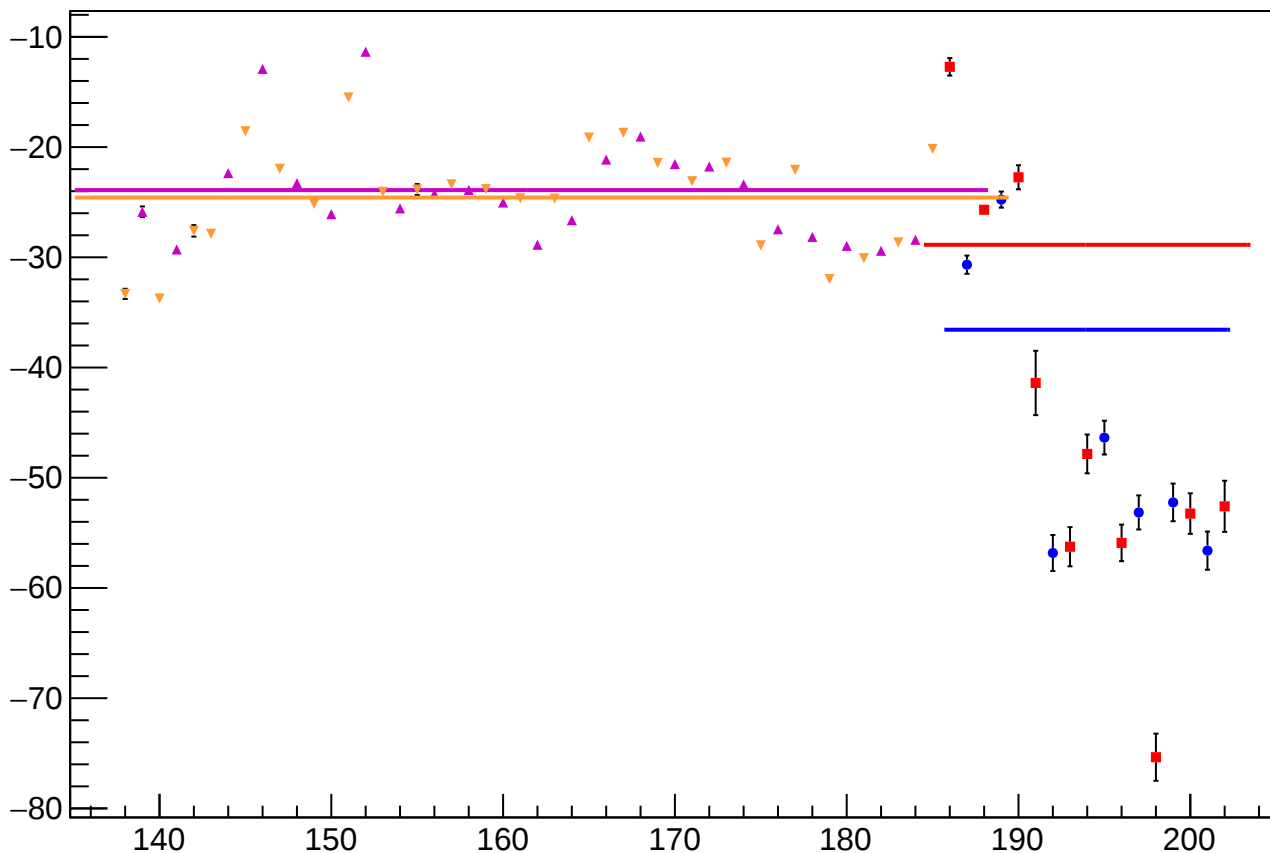
Right:  $-0.365 \pm 0.012$   $\chi^2/\text{NDF}$ : 2721.0/52

In:  $0.235 \pm 0.004$   $\chi^2/\text{NDF}$ : 3235.8/46

Out:  $0.226 \pm 0.004$   $\chi^2/\text{NDF}$ : 3622.5/53

All:  $0.231 \pm 0.003$   $\chi^2/\text{NDF}$ : 6860.6/100

reg\_asym\_sam\_37\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-36.569 \pm 0.437$   $\chi^2/\text{NDF}: 839.6/6$   
 Left Out:  $-24.577 \pm 0.051$   $\chi^2/\text{NDF}: 8590.4/24$   
 Right Out:  $-28.864 \pm 0.322$   $\chi^2/\text{NDF}: 1891.2/9$   
 Left In:  $-23.901 \pm 0.051$   $\chi^2/\text{NDF}: 9154.9/22$

Left:  $-24.240 \pm 0.036$   $\chi^2/\text{NDF}: 17833.1/47$

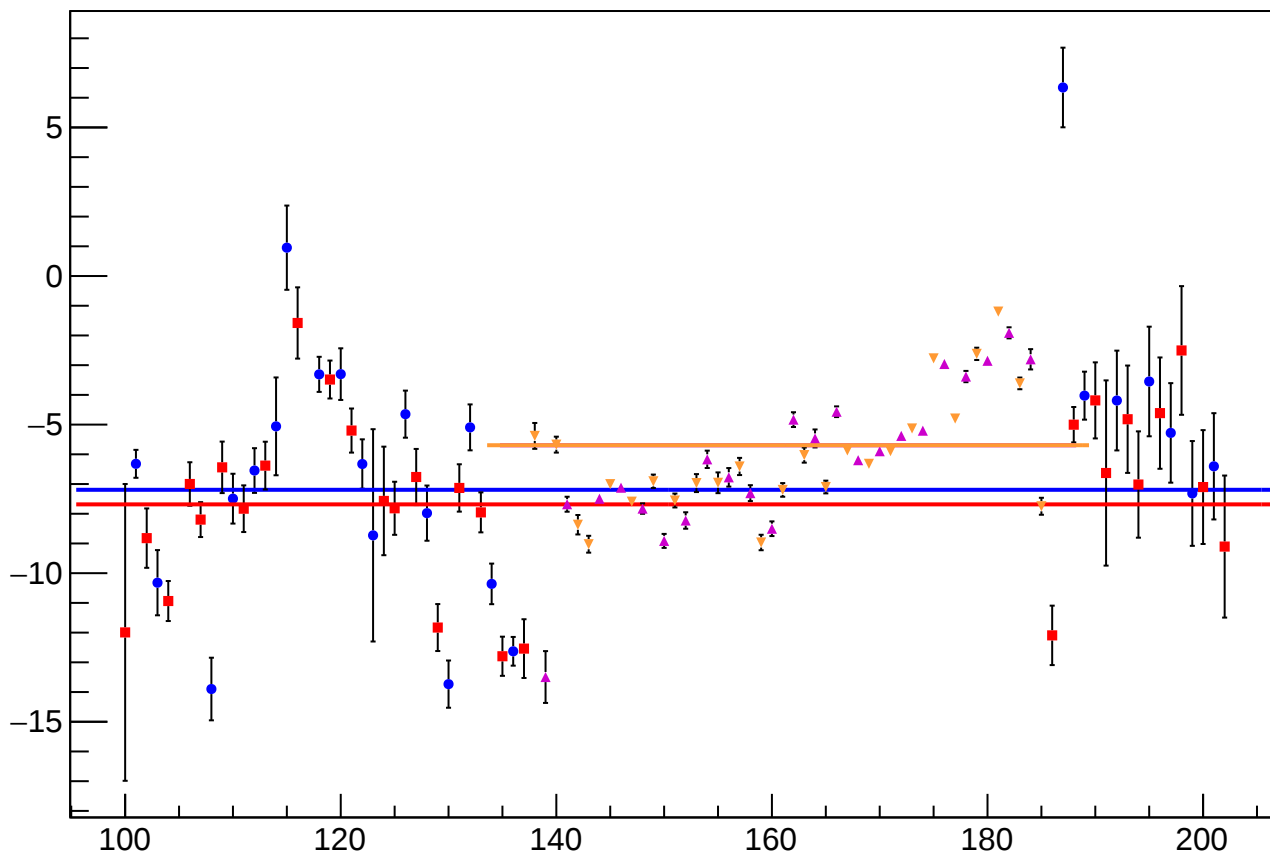
Right:  $-31.575 \pm 0.259$   $\chi^2/\text{NDF}: 2931.9/16$

In:  $-24.072 \pm 0.051$   $\chi^2/\text{NDF}: 10822.2/29$

Out:  $-24.682 \pm 0.050$   $\chi^2/\text{NDF}: 10654.4/34$

All:  $-24.379 \pm 0.036$   $\chi^2/\text{NDF}: 21549.5/64$

reg\_asym\_sam\_37\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-7.194 \pm 0.176$   $\chi^2/\text{NDF}$ : 512.5/23

Left Out:  $-5.694 \pm 0.041$   $\chi^2/\text{NDF}$ : 2258.3/24

Right Out:  $-7.684 \pm 0.169$   $\chi^2/\text{NDF}$ : 284.4/28

Left In:  $-5.696 \pm 0.041$   $\chi^2/\text{NDF}$ : 2309.8/22

Left:  $-5.695 \pm 0.029$   $\chi^2/\text{NDF}$ : 4568.1/47

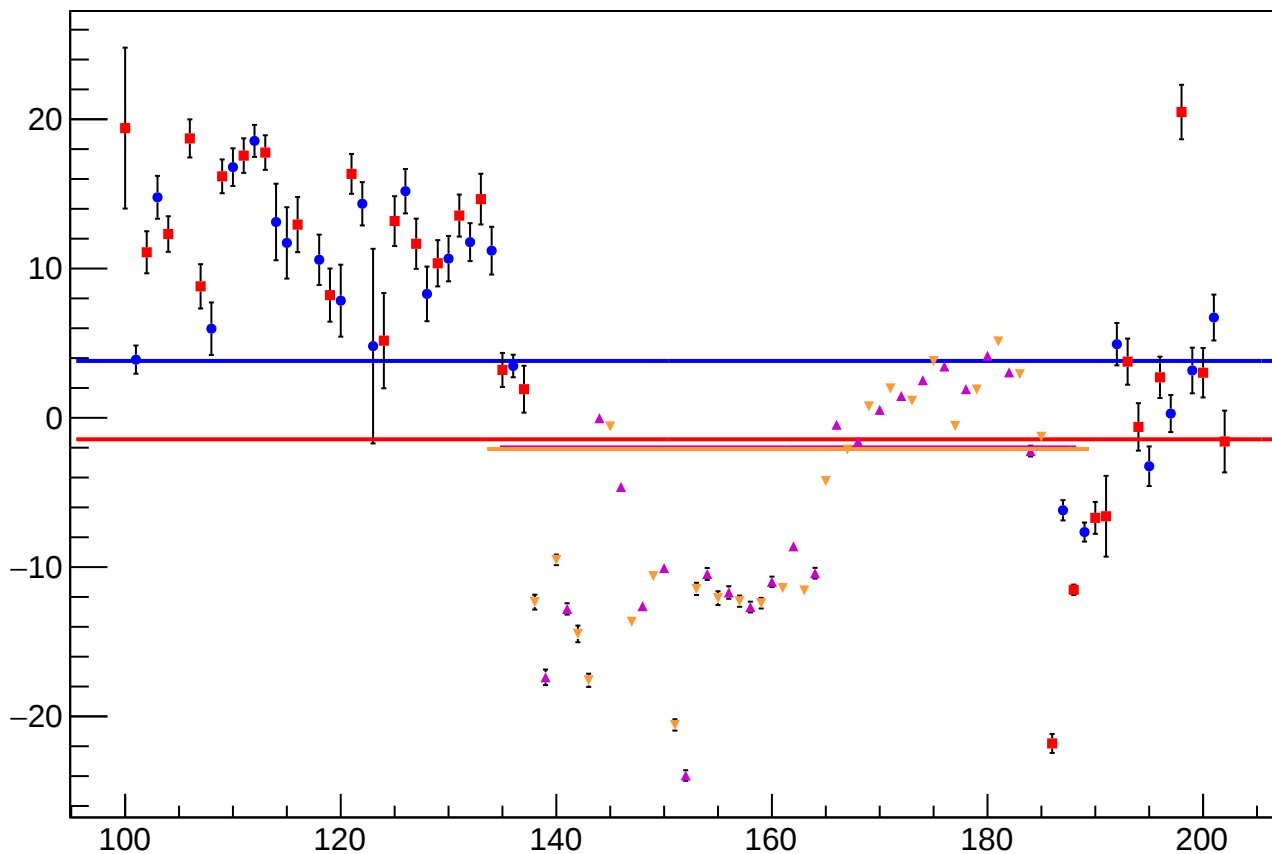
Right:  $-7.449 \pm 0.122$   $\chi^2/\text{NDF}$ : 801.0/52

In:  $-5.772 \pm 0.040$   $\chi^2/\text{NDF}$ : 2890.9/46

Out:  $-5.805 \pm 0.040$   $\chi^2/\text{NDF}$ : 2673.6/53

All:  $-5.789 \pm 0.028$   $\chi^2/\text{NDF}$ : 5564.8/100

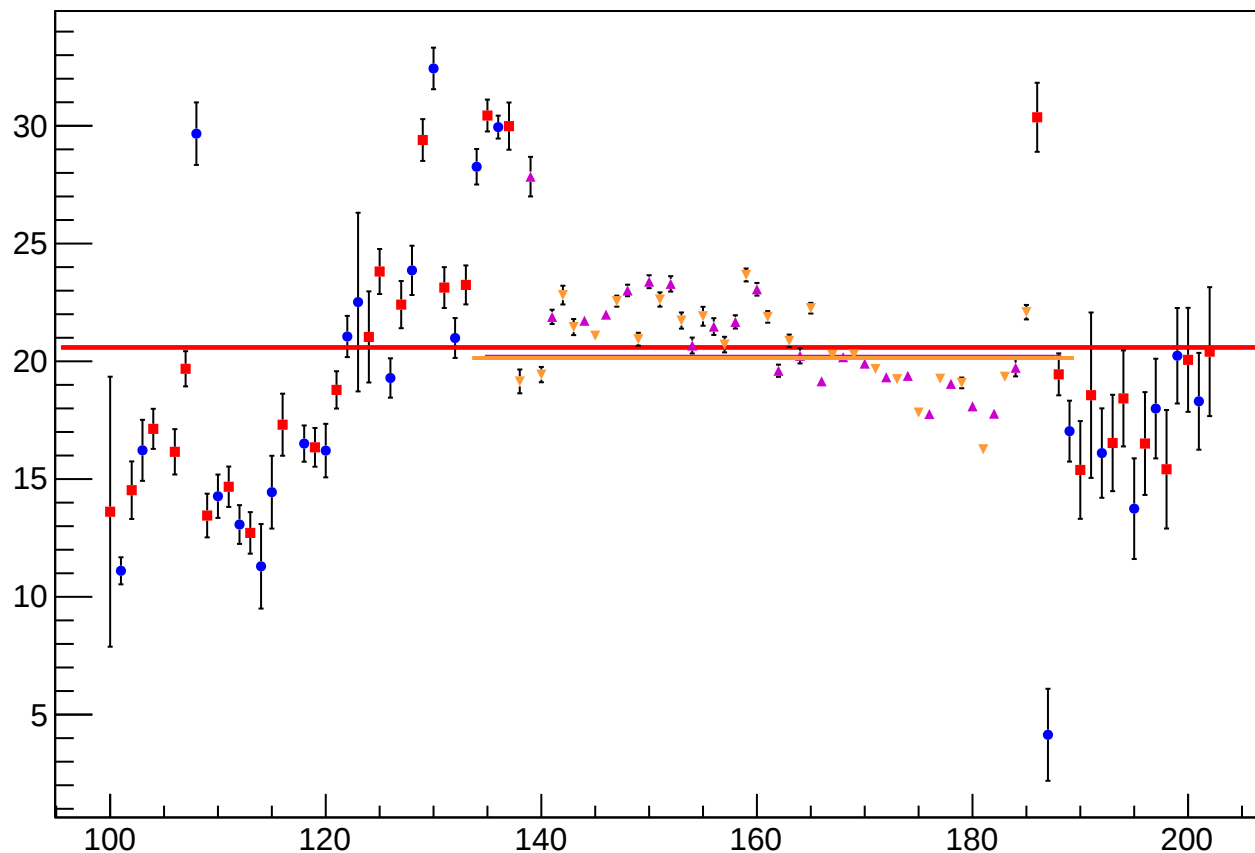
reg\_asym\_sam\_37\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $3.810 \pm 0.251$   $\chi^2/\text{NDF}: 1177.7/23$   
 Left Out:  $-2.092 \pm 0.051$   $\chi^2/\text{NDF}: 16305.3/24$   
 Right Out:  $-1.439 \pm 0.208$   $\chi^2/\text{NDF}: 4073.0/28$   
 Left In:  $-1.980 \pm 0.051$   $\chi^2/\text{NDF}: 15382.3/22$

Left:  $-2.036 \pm 0.036$   $\chi^2/\text{NDF}: 31690.0/47$   
 Right:  $0.704 \pm 0.160$   $\chi^2/\text{NDF}: 5510.2/52$   
 In:  $-1.748 \pm 0.050$   $\chi^2/\text{NDF}: 17072.4/46$   
 Out:  $-2.054 \pm 0.050$   $\chi^2/\text{NDF}: 20387.5/53$   
 All:  $-1.902 \pm 0.035$   $\chi^2/\text{NDF}: 37478.6/100$

reg\_asym\_sam\_37\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 20.582 $\pm$ 0.202  $\chi^2$ /NDF: 1311.1/23

Left Out: 20.141 $\pm$ 0.046  $\chi^2$ /NDF:1419.1/24

Right Out: 20.601 $\pm$ 0.199  $\chi^2$ /NDF: 787.4/28

Left In: 20.194 $\pm$ 0.046  $\chi^2$ /NDF:1447.4/22

Left: 20.167 $\pm$ 0.032  $\chi^2$ /NDF: 2867.2/47

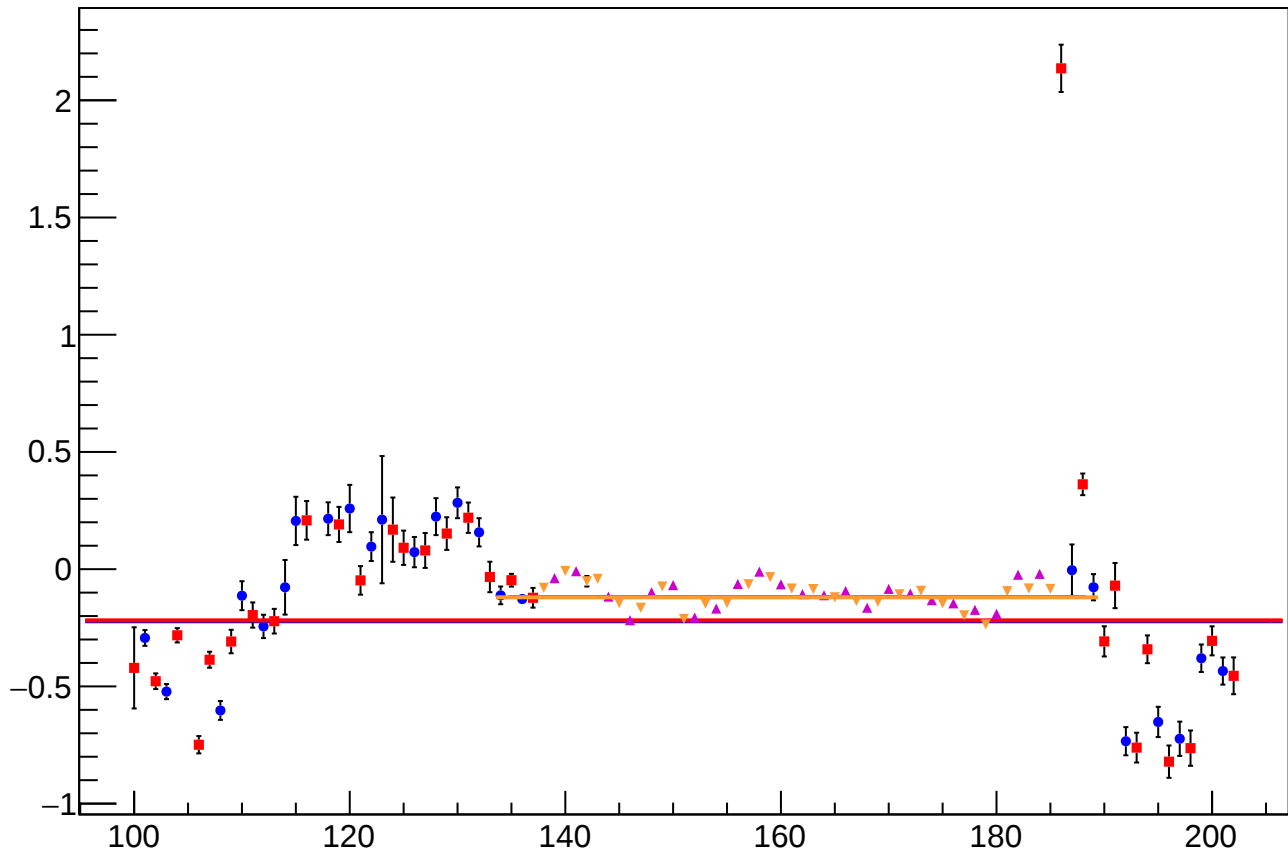
Right: 20.592 $\pm$ 0.142  $\chi^2$ /NDF: 2098.4/52

In: 20.213 $\pm$ 0.045  $\chi^2$ /NDF:2761.9/46

Out: 20.164 $\pm$ 0.045  $\chi^2$ /NDF:2211.6/53

All: 20.189 $\pm$ 0.032  $\chi^2$ /NDF: 4974.1/100

reg\_asym\_sam\_37\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.222 \pm 0.010$   $\chi^2/\text{NDF}$ : 672.0/23

Left Out:  $-0.120 \pm 0.002$   $\chi^2/\text{NDF}$ : 530.4/24

Right Out:  $-0.218 \pm 0.010$   $\chi^2/\text{NDF}$ : 1456.7/28

Left In:  $-0.119 \pm 0.002$   $\chi^2/\text{NDF}$ : 721.8/22

Left:  $-0.119 \pm 0.001$   $\chi^2/\text{NDF}$ : 1252.4/47

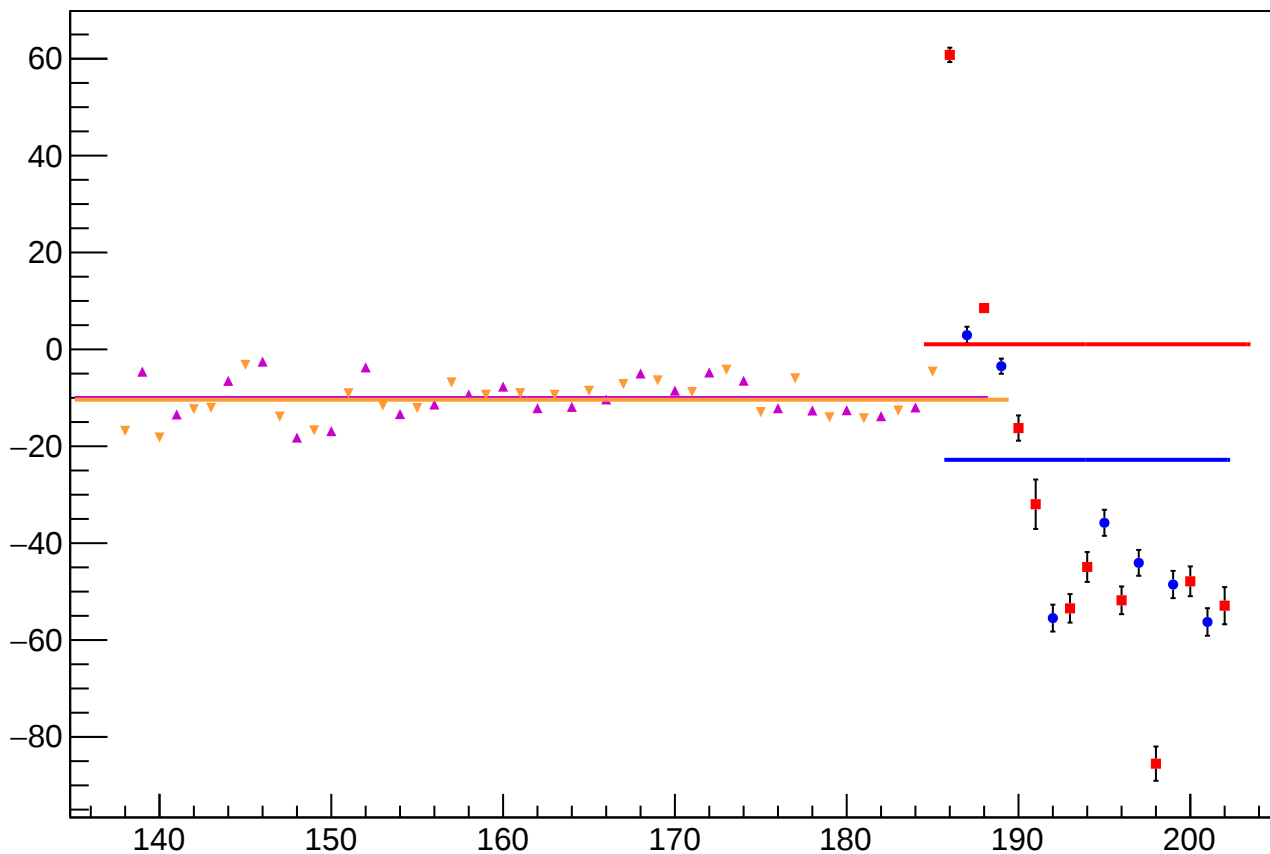
Right:  $-0.220 \pm 0.007$   $\chi^2/\text{NDF}$ : 2128.8/52

In:  $-0.123 \pm 0.002$   $\chi^2/\text{NDF}$ : 1492.8/46

Out:  $-0.124 \pm 0.002$   $\chi^2/\text{NDF}$ : 2084.4/53

All:  $-0.124 \pm 0.001$   $\chi^2/\text{NDF}$ : 3577.5/100

reg\_asym\_sam\_26\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected

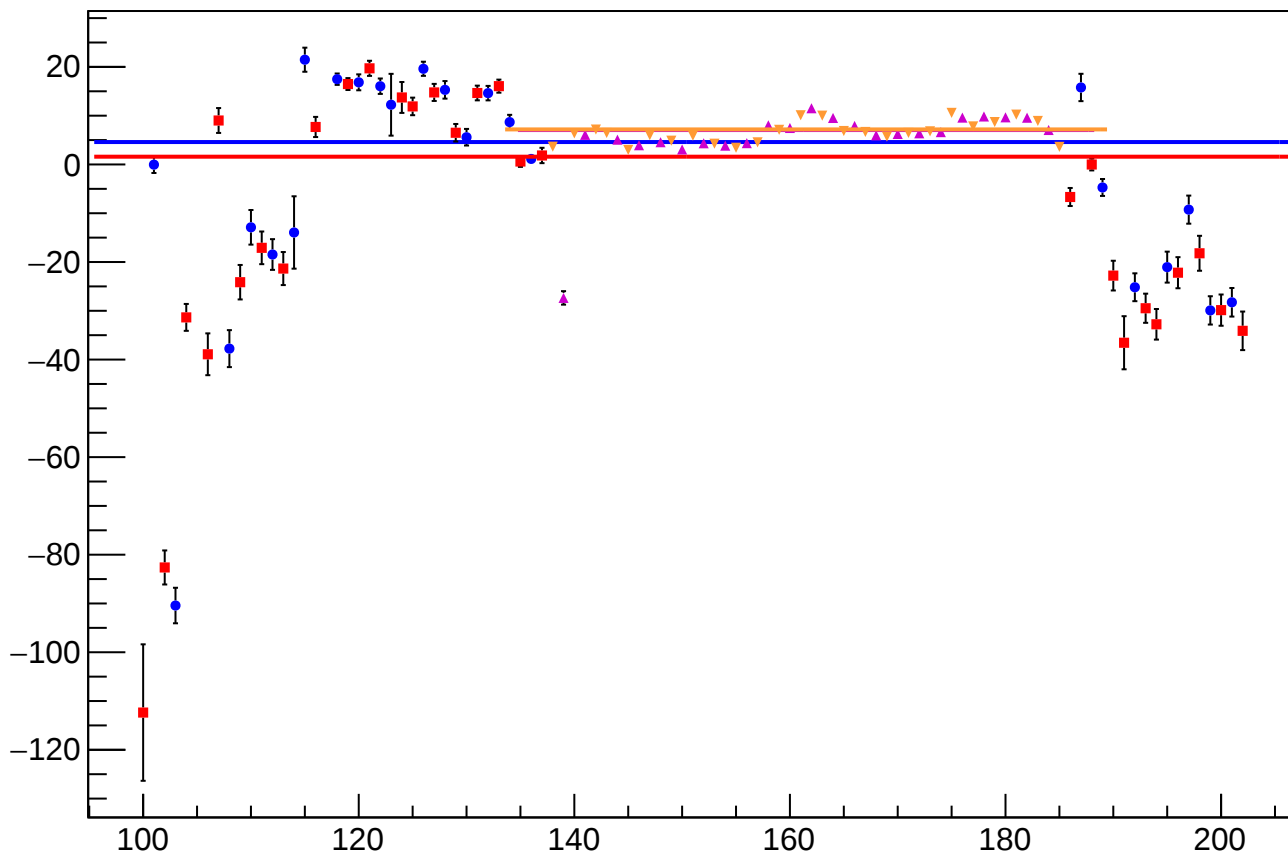


Right In:  $-22.798 \pm 0.845$   $\chi^2/\text{NDF}: 821.0/6$   
 Left Out:  $-10.391 \pm 0.088$   $\chi^2/\text{NDF}: 2111.6/24$   
 Right Out:  $1.050 \pm 0.621$   $\chi^2/\text{NDF}: 3733.7/9$   
 Left In:  $-10.036 \pm 0.090$   $\chi^2/\text{NDF}: 1758.7/22$

Left:  $-10.217 \pm 0.063$   $\chi^2/\text{NDF}: 3878.3/47$   
 Right:  $-7.317 \pm 0.501$   $\chi^2/\text{NDF}: 5071.5/16$   
 In:  $-10.177 \pm 0.089$   $\chi^2/\text{NDF}: 2805.1/29$   
 Out:  $-10.167 \pm 0.087$   $\chi^2/\text{NDF}: 6177.7/34$

All:  $-10.172 \pm 0.062$   $\chi^2/\text{NDF}: 8982.8/64$

reg\_asym\_sam\_26\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $4.595 \pm 0.376$   $\chi^2/\text{NDF}$ : 1900.2/23

Left Out:  $7.184 \pm 0.073$   $\chi^2/\text{NDF}$ : 917.3/24

Right Out:  $1.592 \pm 0.379$   $\chi^2/\text{NDF}$ : 2244.8/28

Left In:  $7.053 \pm 0.074$   $\chi^2/\text{NDF}$ : 1535.8/22

Left:  $7.119 \pm 0.052$   $\chi^2/\text{NDF}$ : 2454.8/47

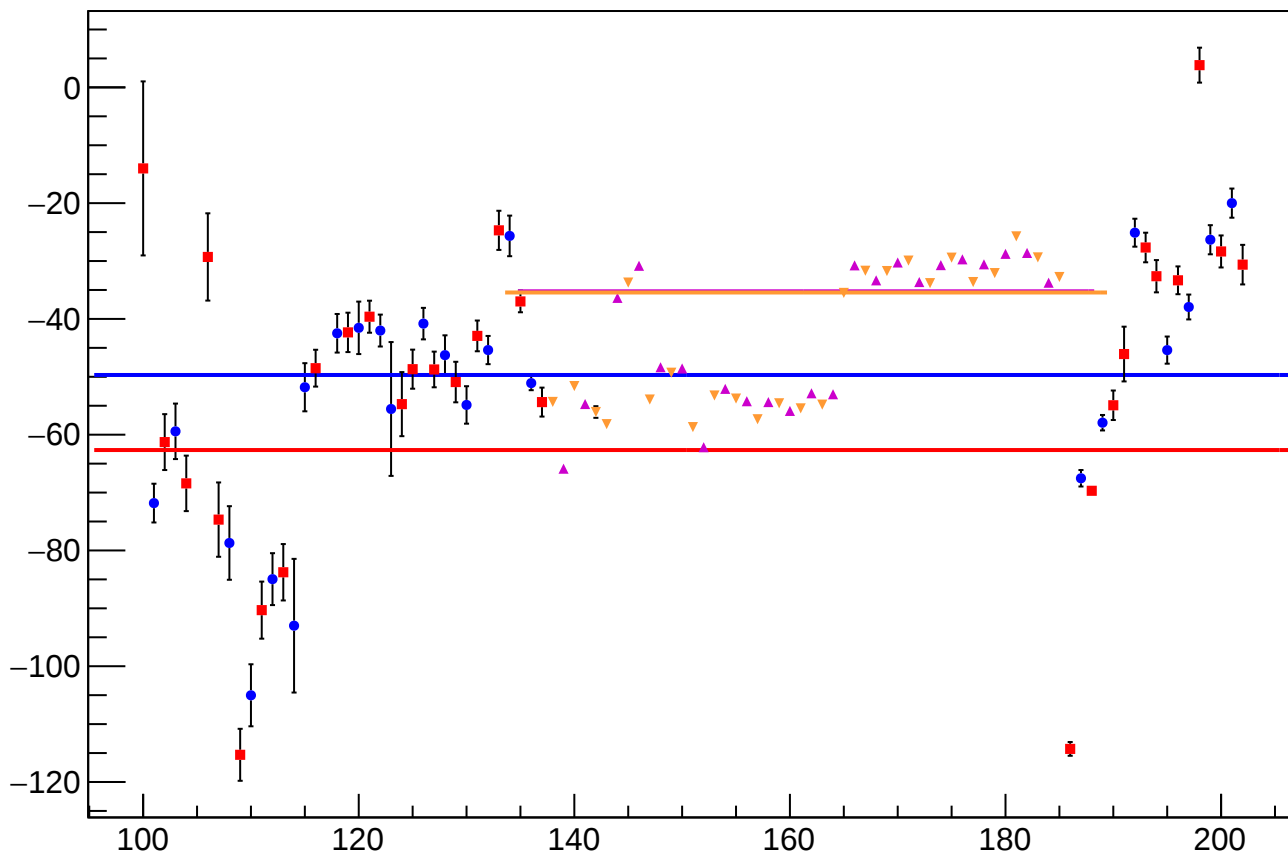
Right:  $3.107 \pm 0.267$   $\chi^2/\text{NDF}$ : 4176.5/52

In:  $6.961 \pm 0.073$   $\chi^2/\text{NDF}$ : 3477.1/46

Out:  $6.982 \pm 0.072$   $\chi^2/\text{NDF}$ : 3371.5/53

All:  $6.971 \pm 0.051$   $\chi^2/\text{NDF}$ : 6848.6/100

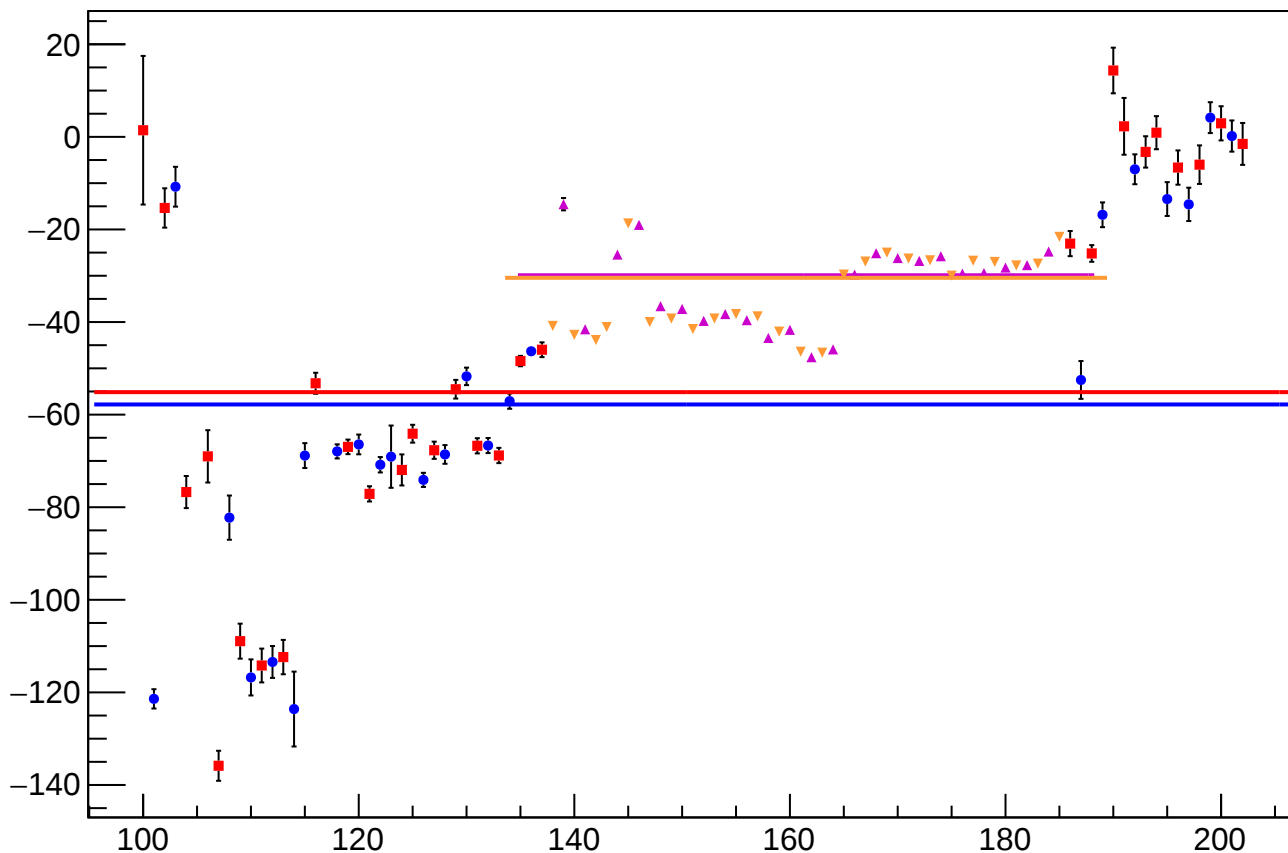
reg\_asym\_sam\_26\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-49.685 \pm 0.516$   $\chi^2/\text{NDF}$ : 890.3/23  
 Left Out:  $-35.434 \pm 0.089$   $\chi^2/\text{NDF}$ : 12782.8/24  
 Right Out:  $-62.653 \pm 0.433$   $\chi^2/\text{NDF}$ : 3970.6/28  
 Left In:  $-35.229 \pm 0.090$   $\chi^2/\text{NDF}$ : 11602.9/22

Left:  $-35.333 \pm 0.063$   $\chi^2/\text{NDF}$ : 24388.3/47  
 Right:  $-57.296 \pm 0.332$   $\chi^2/\text{NDF}$ : 5231.6/52  
 In:  $-35.657 \pm 0.089$   $\chi^2/\text{NDF}$ : 13255.1/46  
 Out:  $-36.538 \pm 0.087$   $\chi^2/\text{NDF}$ : 20546.2/53  
 All:  $-36.105 \pm 0.062$   $\chi^2/\text{NDF}$ : 33851.5/100

reg\_asym\_sam\_26\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: -57.803 $\pm$ 0.423  $\chi^2$ /NDF: 3583.3/23

Left Out: -30.448 $\pm$ 0.082  $\chi^2$ /NDF: 8167.7/24

Right Out: -55.141 $\pm$ 0.438  $\chi^2$ /NDF: 3862.7/28

Left In: -29.892 $\pm$ 0.083  $\chi^2$ /NDF: 7115.0/22

Left: -30.174 $\pm$ 0.058  $\chi^2$ /NDF: 15305.7/47

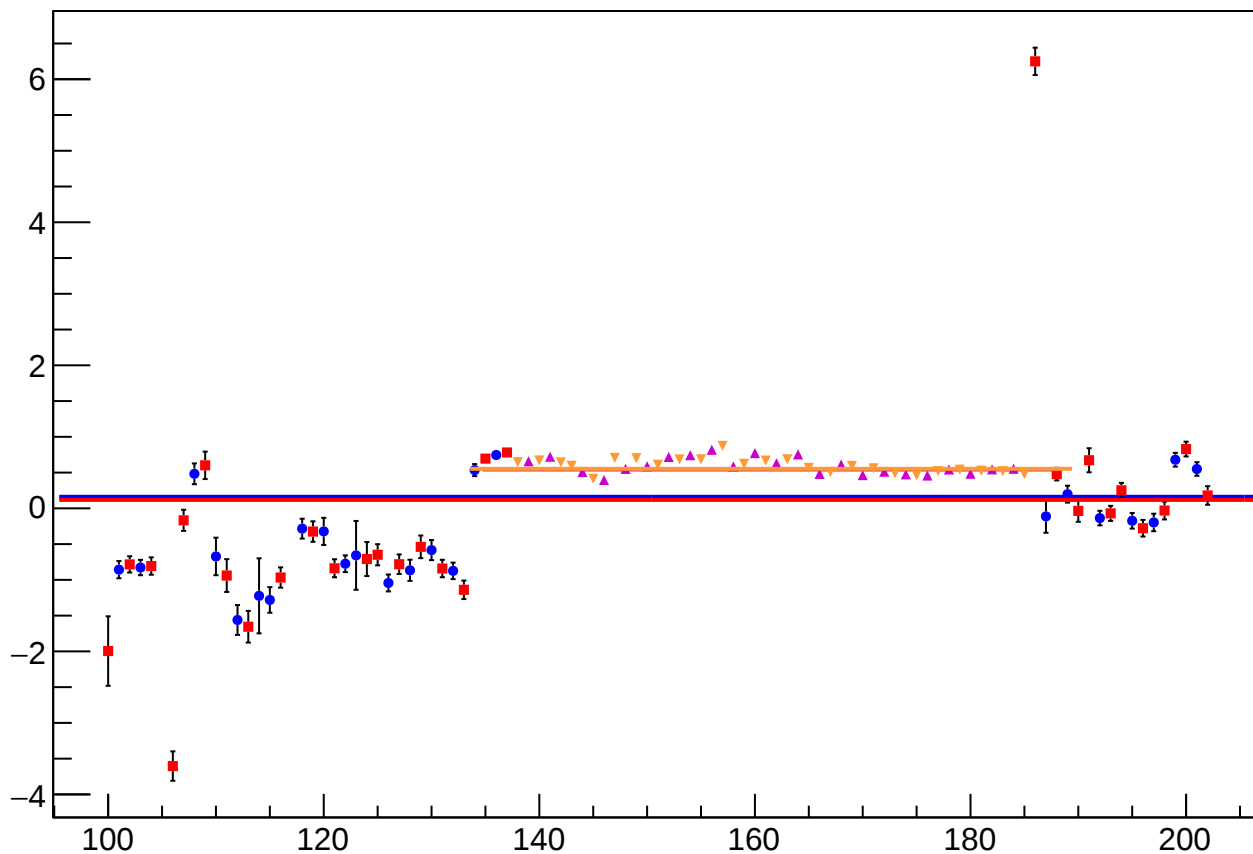
Right: -56.519 $\pm$ 0.305  $\chi^2$ /NDF: 7465.0/52

In: -30.915 $\pm$ 0.081  $\chi^2$ /NDF: 14886.2/46

Out: -31.273 $\pm$ 0.080  $\chi^2$ /NDF: 15095.7/53

All: -31.096 $\pm$ 0.057  $\chi^2$ /NDF: 29991.8/100

reg\_asym\_sam\_26\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.161 $\pm$ 0.021  $\chi^2$ /NDF: 1061.1/23

Left Out: 0.553 $\pm$ 0.004  $\chi^2$ /NDF:542.1/24

Right Out: 0.118 $\pm$ 0.022  $\chi^2$ /NDF: 2327.7/28

Left In: 0.544 $\pm$ 0.004  $\chi^2$ /NDF:655.9/22

Left: 0.548 $\pm$ 0.003  $\chi^2$ /NDF: 1200.9/47

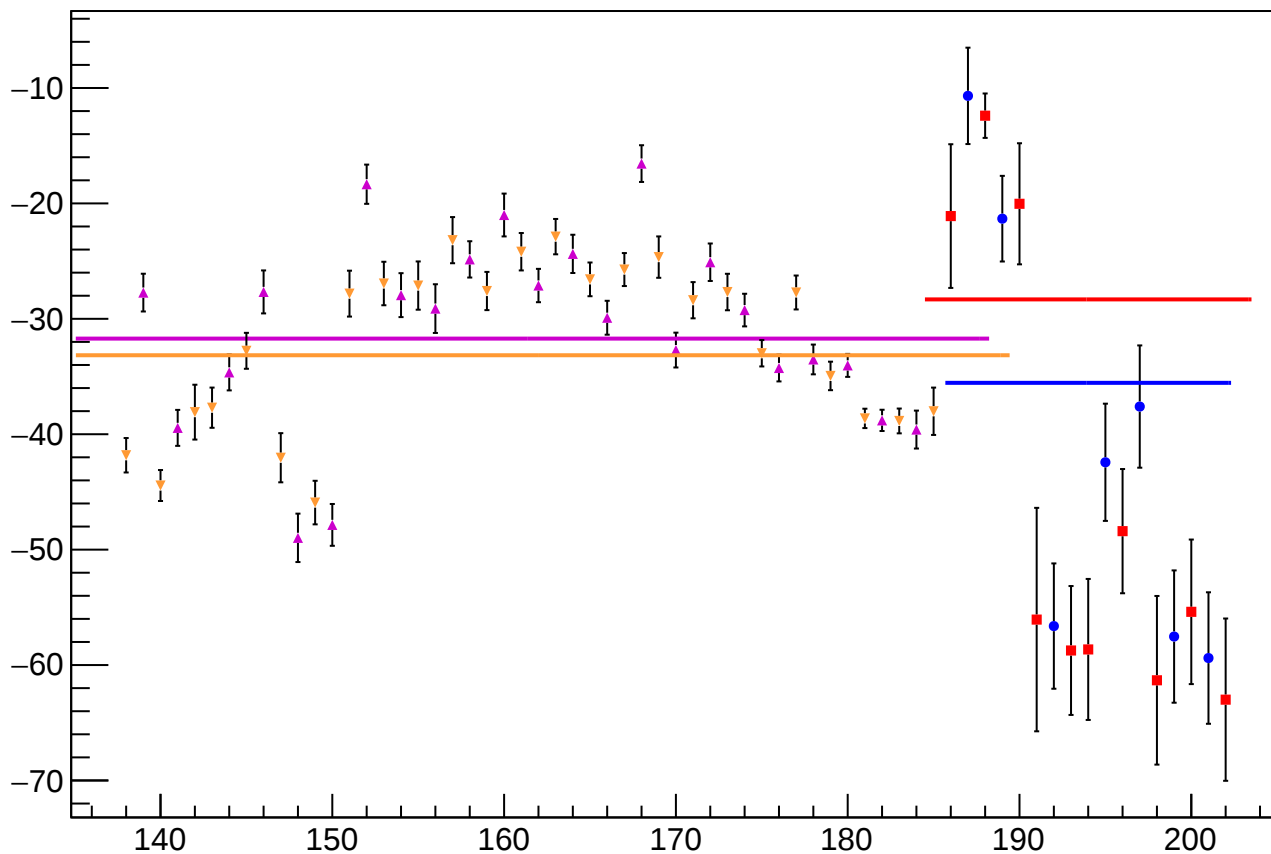
Right: 0.140 $\pm$ 0.015  $\chi^2$ /NDF: 3390.9/52

In: 0.532 $\pm$ 0.004  $\chi^2$ /NDF:2040.1/46

Out: 0.540 $\pm$ 0.004  $\chi^2$ /NDF:3264.9/53

All: 0.536 $\pm$ 0.003  $\chi^2$ /NDF: 5307.8/100

reg\_asym\_sam\_26\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-35.547 \pm 1.827$   $\chi^2/\text{NDF}$ : 99.4/6

Left Out:  $-33.157 \pm 0.300$   $\chi^2/\text{NDF}$ : 500.1/24

Right Out:  $-28.318 \pm 1.413$   $\chi^2/\text{NDF}$ : 212.2/9

Left In:  $-31.714 \pm 0.309$   $\chi^2/\text{NDF}$ : 542.3/22

Left:  $-32.456 \pm 0.215$   $\chi^2/\text{NDF}$ : 1053.6/47

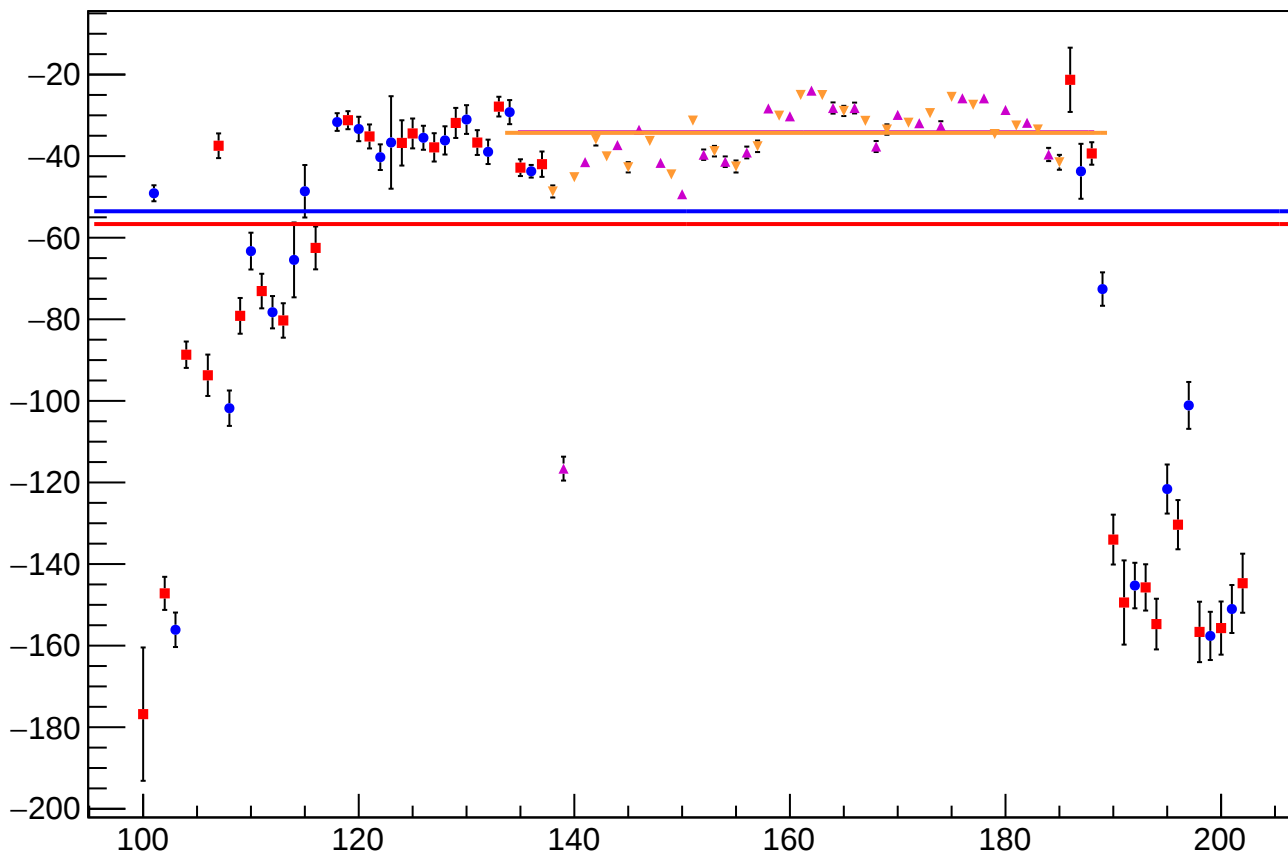
Right:  $-31.023 \pm 1.118$   $\chi^2/\text{NDF}$ : 321.4/16

In:  $-31.821 \pm 0.305$   $\chi^2/\text{NDF}$ : 646.0/29

Out:  $-32.948 \pm 0.294$   $\chi^2/\text{NDF}$ : 723.5/34

All:  $-32.405 \pm 0.211$   $\chi^2/\text{NDF}$ : 1376.6/64

reg\_asym\_sam\_26\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-53.518 \pm 0.690$   $\chi^2/\text{NDF}: 2242.0/23$

Left Out:  $-34.287 \pm 0.241$   $\chi^2/\text{NDF}: 695.3/24$

Right Out:  $-56.653 \pm 0.700$   $\chi^2/\text{NDF}: 2887.1/28$

Left In:  $-34.145 \pm 0.251$   $\chi^2/\text{NDF}: 1452.6/22$

Left:  $-34.219 \pm 0.174$   $\chi^2/\text{NDF}: 2148.1/47$

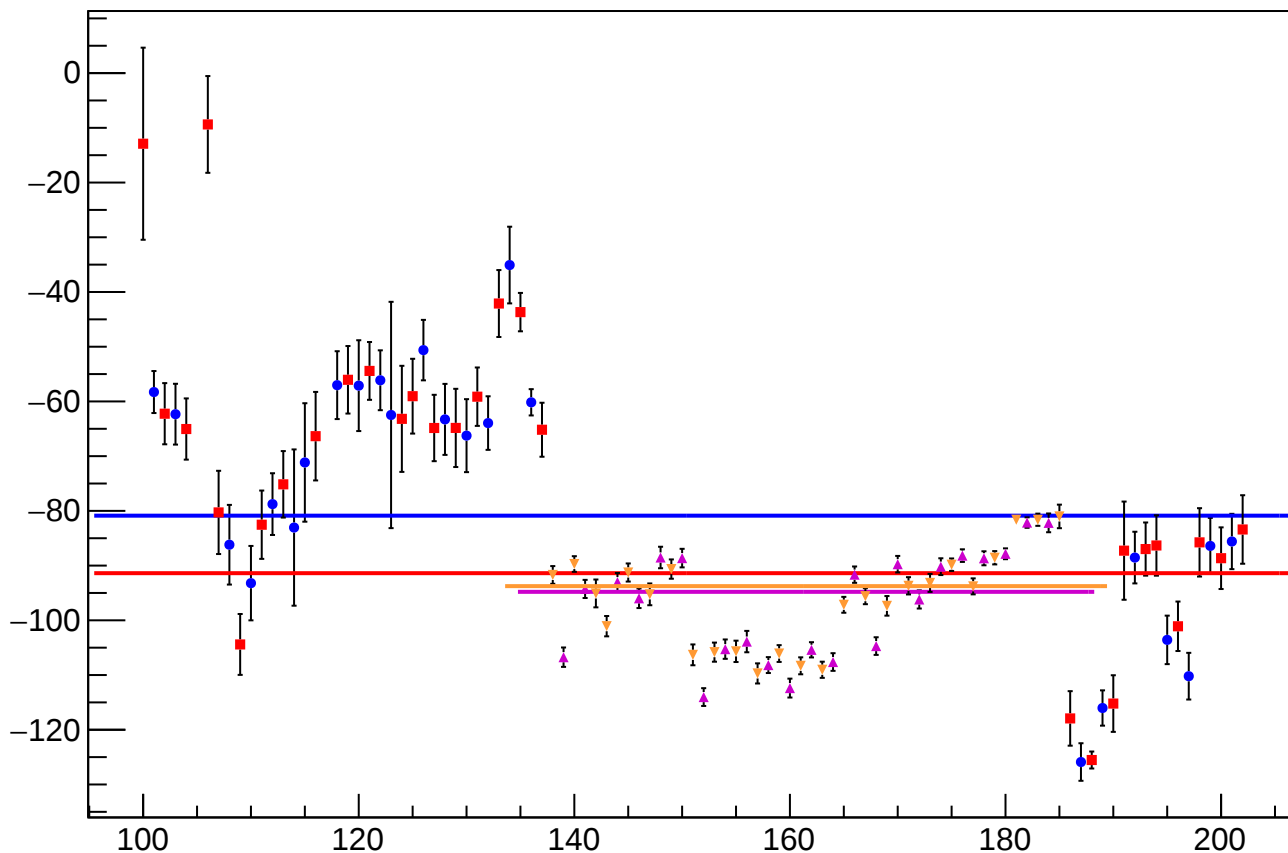
Right:  $-55.062 \pm 0.491$   $\chi^2/\text{NDF}: 5139.2/52$

In:  $-36.408 \pm 0.236$   $\chi^2/\text{NDF}: 4391.7/46$

Out:  $-36.665 \pm 0.228$   $\chi^2/\text{NDF}: 4494.6/53$

All:  $-36.541 \pm 0.164$   $\chi^2/\text{NDF}: 8886.9/100$

reg\_asym\_sam\_26\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-80.875 \pm 1.007$   $\chi^2/\text{NDF}$ : 635.2/23

Left Out:  $-93.754 \pm 0.302$   $\chi^2/\text{NDF}$ : 883.1/24

Right Out:  $-91.385 \pm 0.900$   $\chi^2/\text{NDF}$ : 1185.4/28

Left In:  $-94.796 \pm 0.308$   $\chi^2/\text{NDF}$ : 974.7/22

Left:  $-94.264 \pm 0.216$   $\chi^2/\text{NDF}$ : 1863.6/47

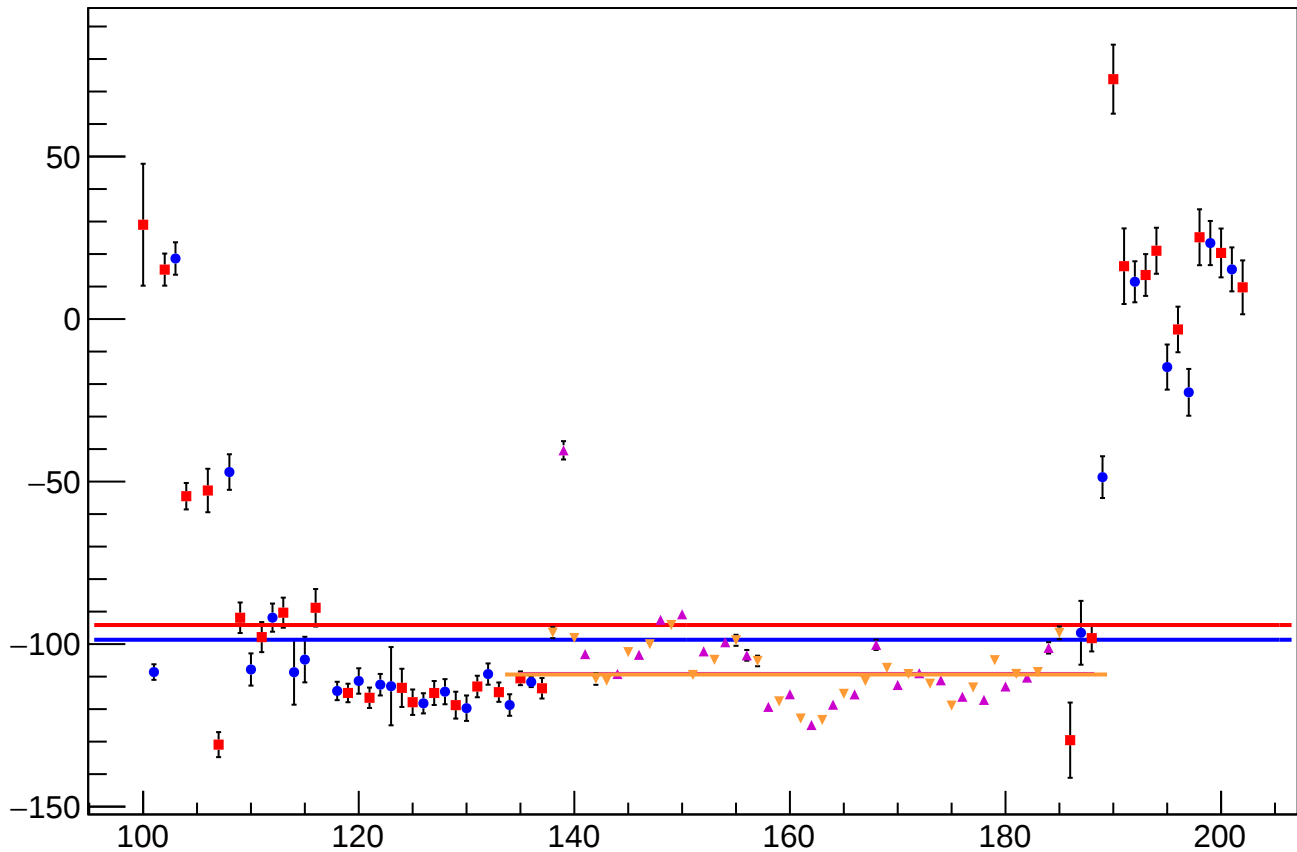
Right:  $-86.722 \pm 0.671$   $\chi^2/\text{NDF}$ : 1881.2/52

In:  $-93.603 \pm 0.295$   $\chi^2/\text{NDF}$ : 1784.5/46

Out:  $-93.514 \pm 0.286$   $\chi^2/\text{NDF}$ : 2074.7/53

All:  $-93.557 \pm 0.205$   $\chi^2/\text{NDF}$ : 3859.3/100

reg\_asym\_sam\_26\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-98.660 \pm 0.782$   $\chi^2/\text{NDF}: 2158.6/23$

Left Out:  $-109.351 \pm 0.271$   $\chi^2/\text{NDF}: 826.8/24$

Right Out:  $-94.128 \pm 0.806$   $\chi^2/\text{NDF}: 2805.4/28$

Left In:  $-109.184 \pm 0.280$   $\chi^2/\text{NDF}: 1501.1/22$

Left:  $-109.270 \pm 0.195$   $\chi^2/\text{NDF}: 2328.1/47$

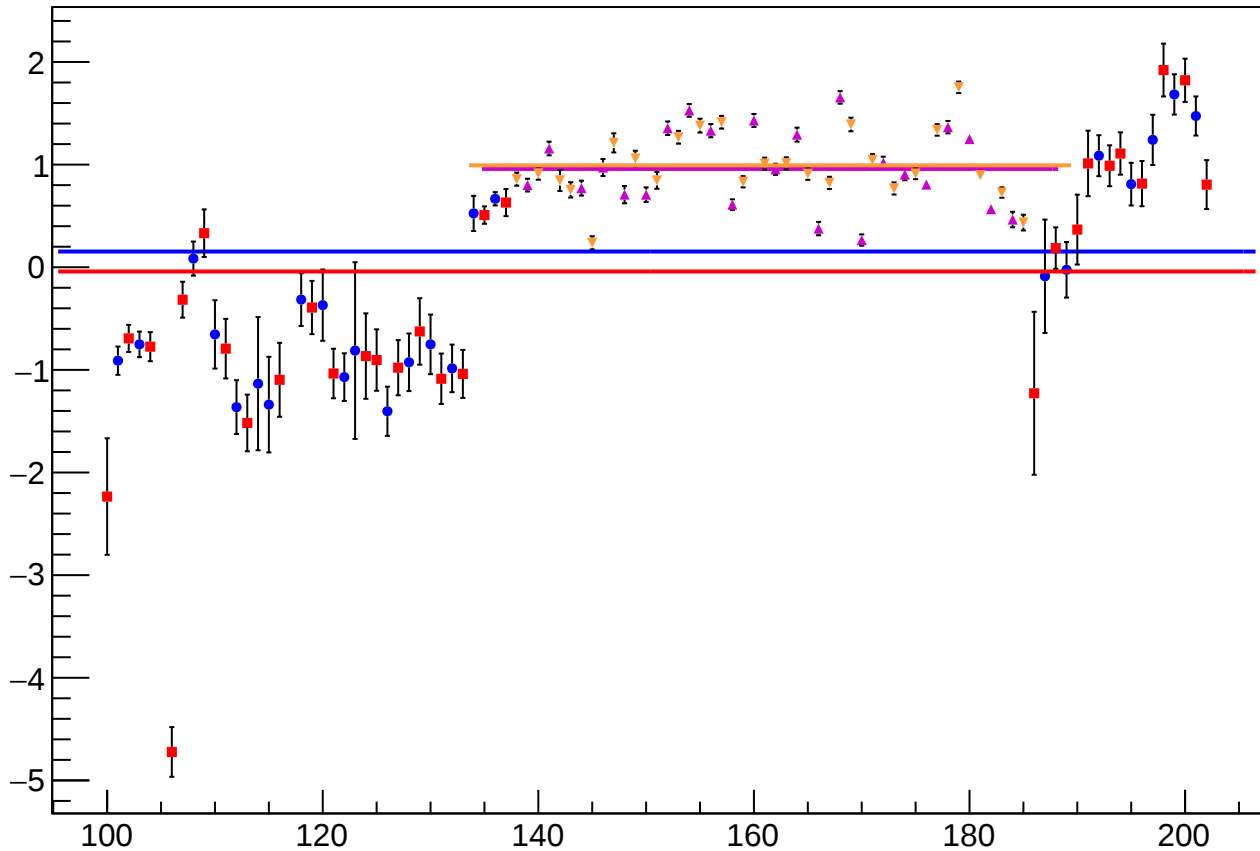
Right:  $-96.465 \pm 0.561$   $\chi^2/\text{NDF}: 4980.2/52$

In:  $-107.988 \pm 0.264$   $\chi^2/\text{NDF}: 3820.4/46$

Out:  $-107.804 \pm 0.257$   $\chi^2/\text{NDF}: 3952.4/53$

All:  $-107.894 \pm 0.184$   $\chi^2/\text{NDF}: 7773.0/100$

reg\_asym\_sam\_26\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $0.153 \pm 0.038$   $\chi^2/\text{NDF}$ : 519.7/23

Left Out:  $0.993 \pm 0.012$   $\chi^2/\text{NDF}$ : 638.6/24

Right Out:  $-0.041 \pm 0.038$   $\chi^2/\text{NDF}$ : 877.1/28

Left In:  $0.958 \pm 0.013$   $\chi^2/\text{NDF}$ : 894.5/22

Left:  $0.976 \pm 0.009$   $\chi^2/\text{NDF}$ : 1537.0/47

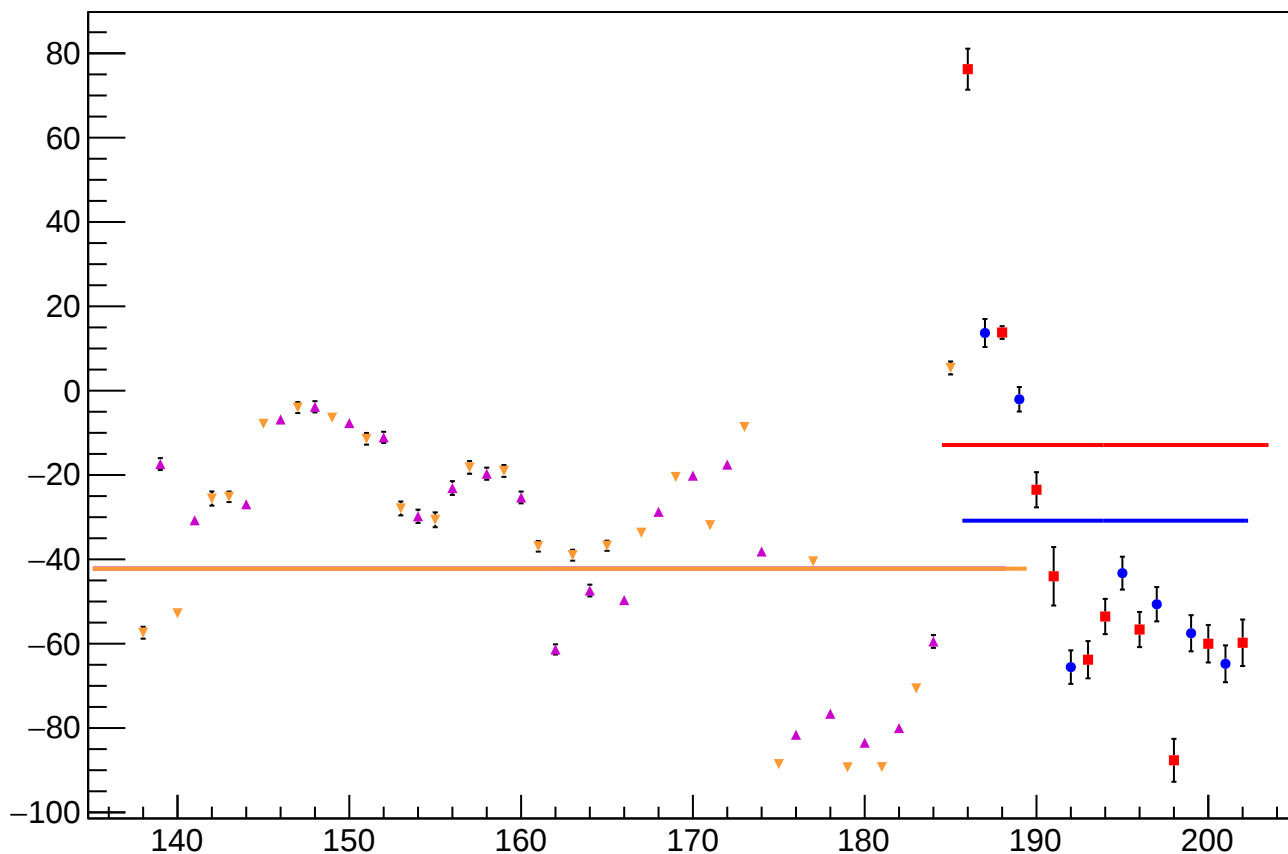
Right:  $0.057 \pm 0.027$   $\chi^2/\text{NDF}$ : 1409.8/52

In:  $0.877 \pm 0.012$   $\chi^2/\text{NDF}$ : 1819.0/46

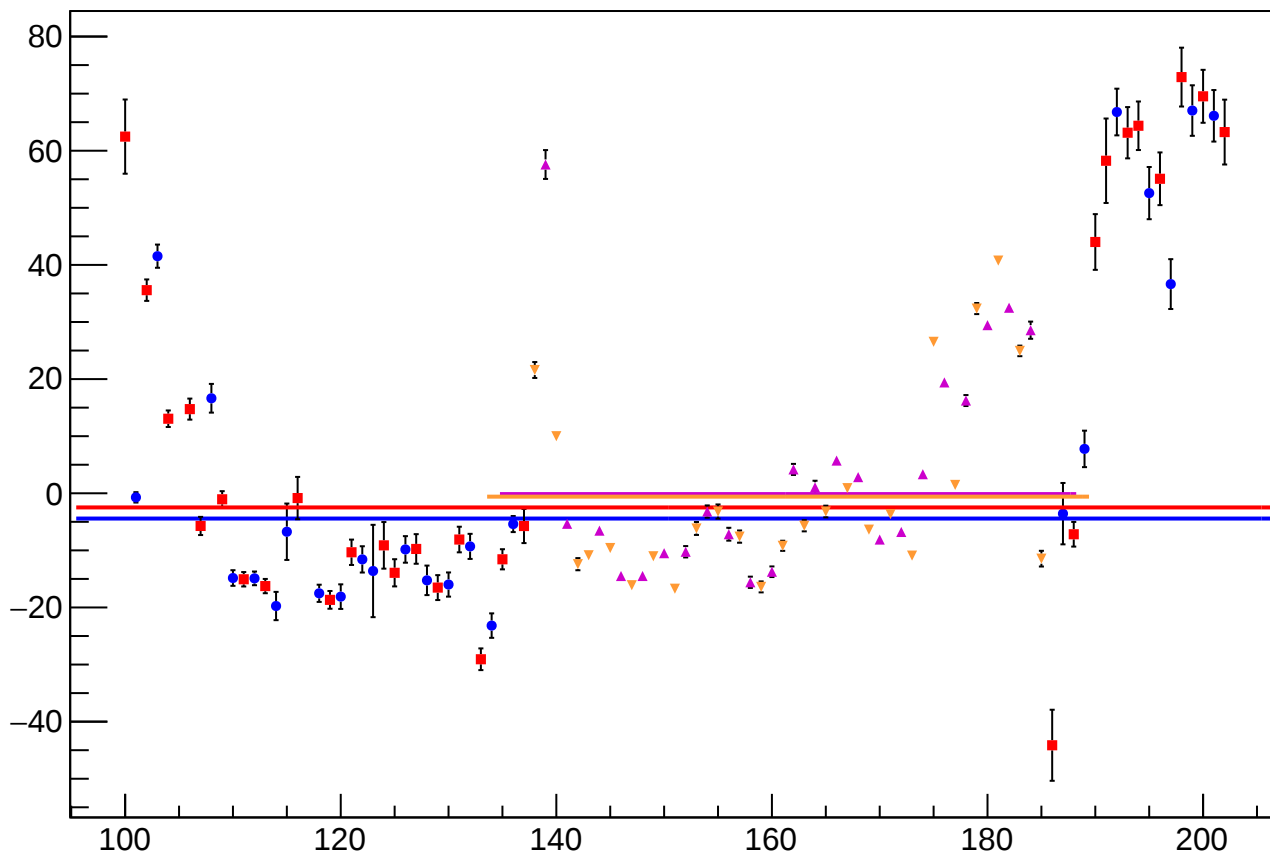
Out:  $0.894 \pm 0.012$   $\chi^2/\text{NDF}$ : 2178.1/53

All:  $0.886 \pm 0.008$   $\chi^2/\text{NDF}$ : 3998.1/100

reg\_asym\_sam\_48\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



reg\_asym\_sam\_48\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected

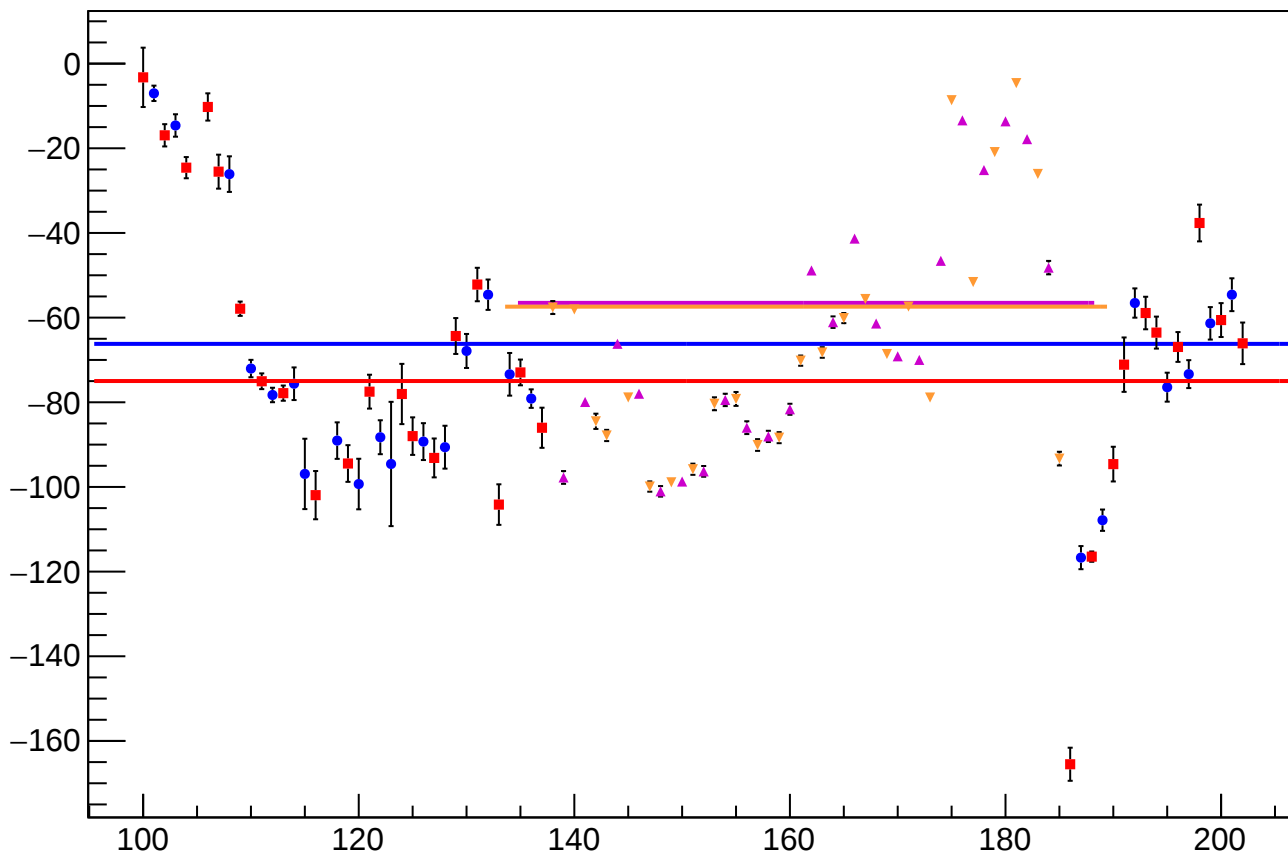


Right In:  $-4.426 \pm 0.416$   $\chi^2/\text{NDF}: 2099.3/23$   
 Left Out:  $-0.590 \pm 0.174$   $\chi^2/\text{NDF}: 8750.9/24$   
 Right Out:  $-2.478 \pm 0.408$   $\chi^2/\text{NDF}: 2777.1/28$   
 Left In:  $-0.142 \pm 0.179$   $\chi^2/\text{NDF}: 6862.5/22$

Left:  $-0.372 \pm 0.125$   $\chi^2/\text{NDF}: 15616.6/47$   
 Right:  $-3.435 \pm 0.291$   $\chi^2/\text{NDF}: 4887.6/52$   
 In:  $-0.812 \pm 0.165$   $\chi^2/\text{NDF}: 9051.3/46$   
 Out:  $-0.881 \pm 0.160$   $\chi^2/\text{NDF}: 11546.1/53$

All:  $-0.847 \pm 0.115$   $\chi^2/\text{NDF}: 20597.6/100$

reg\_asym\_sam\_48\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-66.204 \pm 0.635$   $\chi^2/\text{NDF}$ : 2448.1/23

Left Out:  $-57.413 \pm 0.223$   $\chi^2/\text{NDF}$ : 18604.1/24

Right Out:  $-74.979 \pm 0.558$   $\chi^2/\text{NDF}$ : 3648.7/28

Left In:  $-56.519 \pm 0.227$   $\chi^2/\text{NDF}$ : 16352.6/22

Left:  $-56.974 \pm 0.159$   $\chi^2/\text{NDF}$ : 34964.5/47

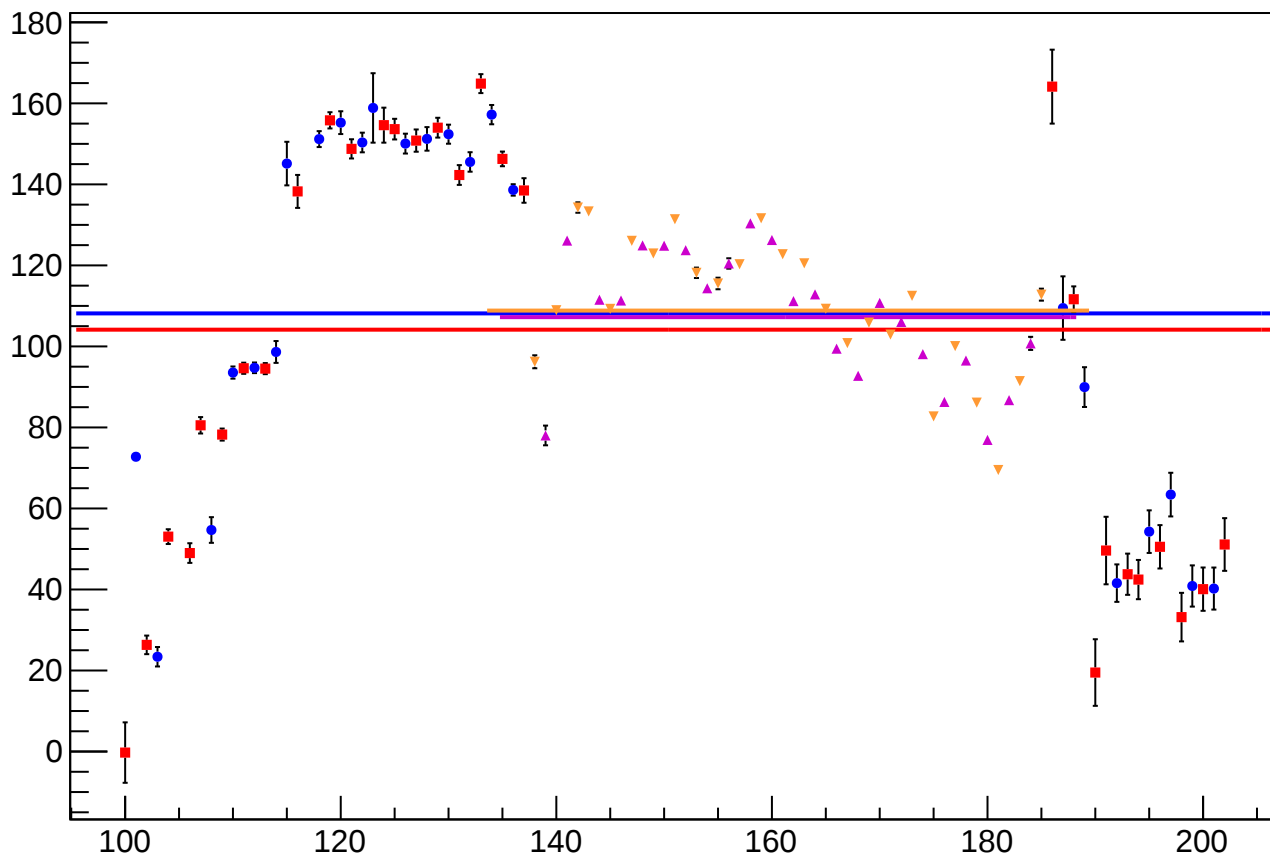
Right:  $-71.156 \pm 0.419$   $\chi^2/\text{NDF}$ : 6204.5/52

In:  $-57.616 \pm 0.214$   $\chi^2/\text{NDF}$ : 19006.8/46

Out:  $-59.836 \pm 0.207$   $\chi^2/\text{NDF}$ : 23106.8/53

All:  $-58.760 \pm 0.149$   $\chi^2/\text{NDF}$ : 42169.1/100

reg\_asym\_sam\_48\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 108.149 $\pm$ 0.476  $\chi^2$ /NDF: 6642.0/23

Left Out: 108.846 $\pm$ 0.197  $\chi^2$ /NDF: 7400.2/24

Right Out: 104.133 $\pm$ 0.469  $\chi^2$ /NDF: 8033.4/28

Left In: 107.225 $\pm$ 0.202  $\chi^2$ /NDF: 5565.3/22

Left: 108.056 $\pm$ 0.141  $\chi^2$ /NDF: 12998.4/47

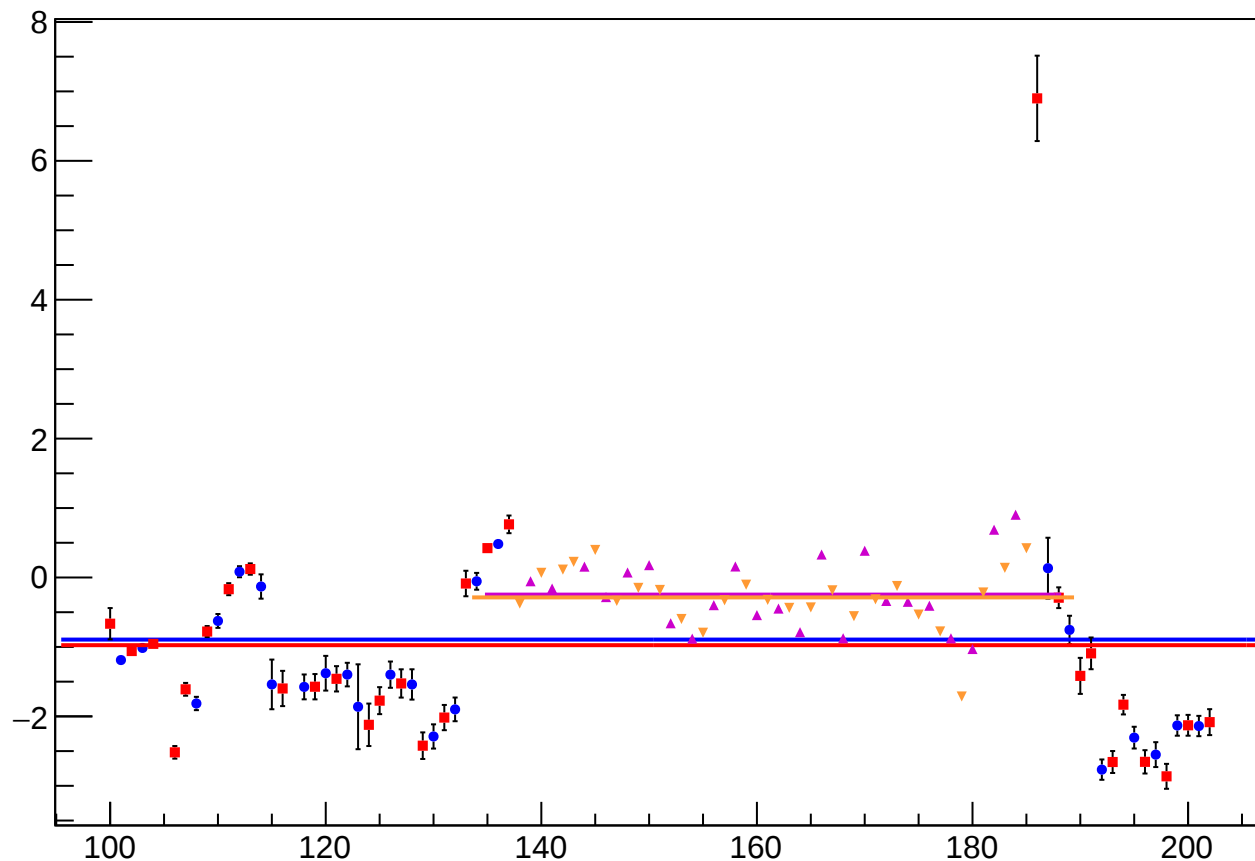
Right: 106.114 $\pm$ 0.334  $\chi^2$ /NDF: 14711.5/52

In: 107.366 $\pm$ 0.186  $\chi^2$ /NDF: 12210.5/46

Out: 108.139 $\pm$ 0.182  $\chi^2$ /NDF: 15519.3/53

All: 107.762 $\pm$ 0.130  $\chi^2$ /NDF: 27738.5/100

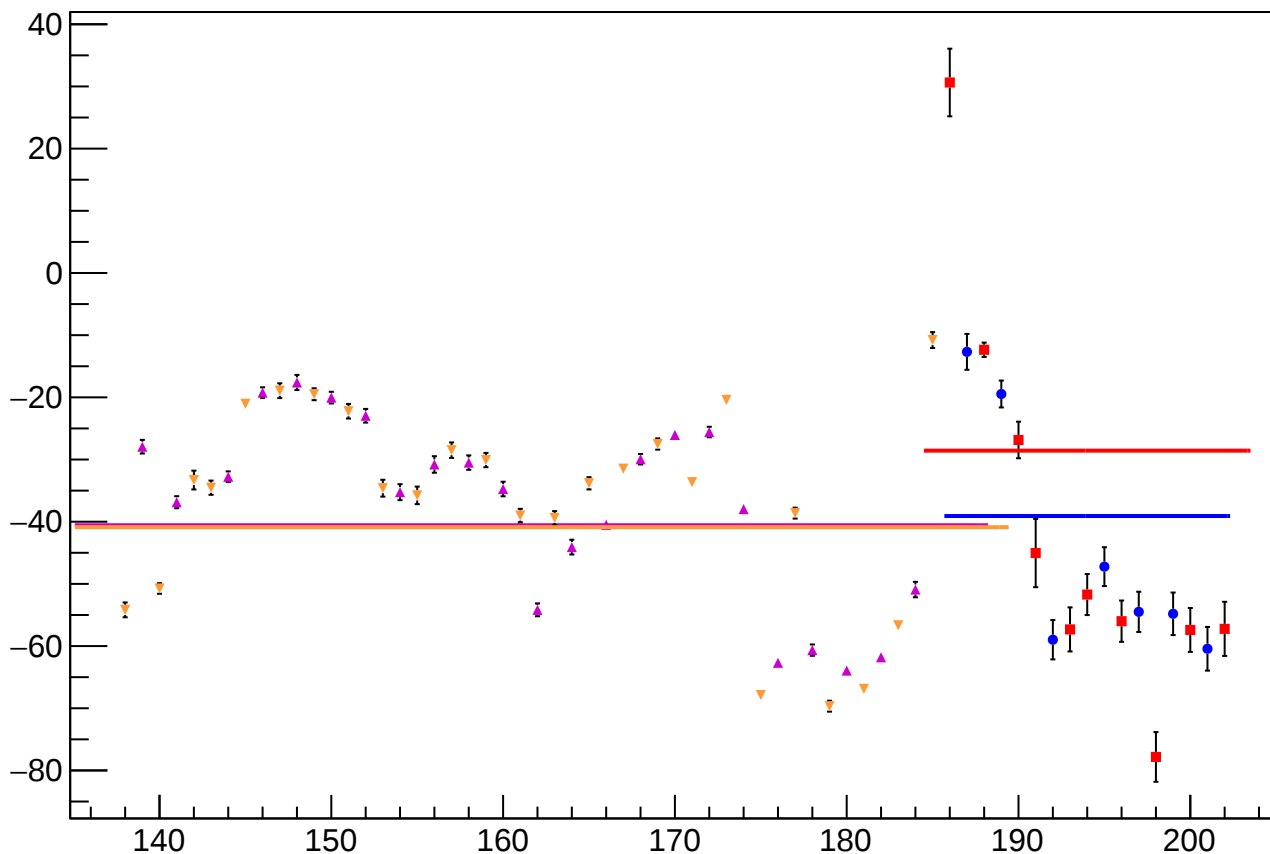
reg\_asym\_sam\_48\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.894 \pm 0.024$   $\chi^2/\text{NDF}$ : 1530.2/23  
 Left Out:  $-0.287 \pm 0.009$   $\chi^2/\text{NDF}$ : 2052.9/24  
 Right Out:  $-0.975 \pm 0.022$   $\chi^2/\text{NDF}$ : 1989.2/28  
 Left In:  $-0.247 \pm 0.009$   $\chi^2/\text{NDF}$ : 2792.8/22

Left:  $-0.267 \pm 0.006$   $\chi^2/\text{NDF}$ : 4855.3/47  
 Right:  $-0.937 \pm 0.016$   $\chi^2/\text{NDF}$ : 3525.4/52  
 In:  $-0.331 \pm 0.009$   $\chi^2/\text{NDF}$ : 4957.0/46  
 Out:  $-0.384 \pm 0.008$   $\chi^2/\text{NDF}$ : 4852.7/53  
 All:  $-0.358 \pm 0.006$   $\chi^2/\text{NDF}$ : 9829.3/100

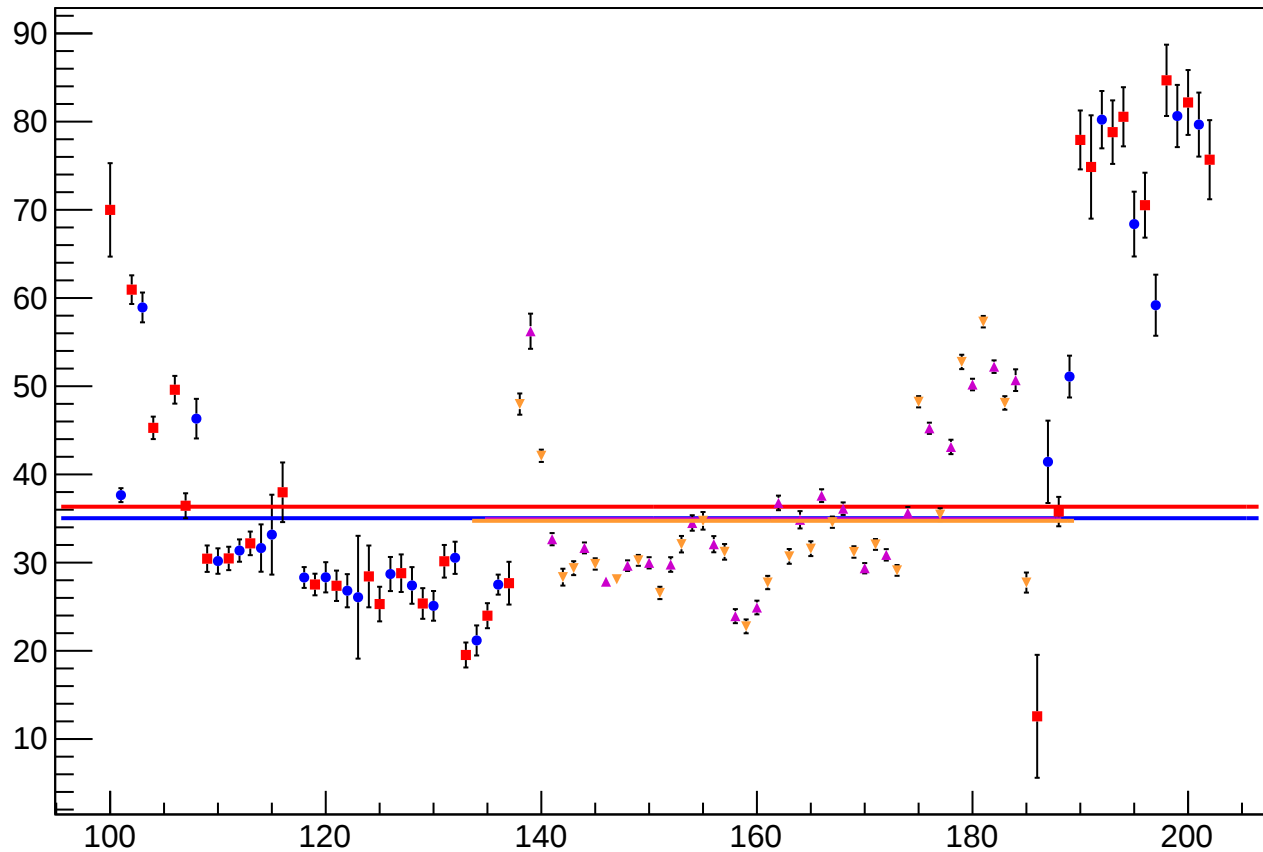
reg\_asym\_sam\_48\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-39.083 \pm 1.119$   $\chi^2/\text{NDF}: 293.4/6$   
 Left Out:  $-40.880 \pm 0.186$   $\chi^2/\text{NDF}: 9123.2/24$   
 Right Out:  $-28.570 \pm 0.848$   $\chi^2/\text{NDF}: 770.0/9$   
 Left In:  $-40.567 \pm 0.190$   $\chi^2/\text{NDF}: 6954.7/22$

Left:  $-40.726 \pm 0.133$   $\chi^2/\text{NDF}: 16079.4/47$   
 Right:  $-32.406 \pm 0.676$   $\chi^2/\text{NDF}: 1119.4/16$   
 In:  $-40.525 \pm 0.187$   $\chi^2/\text{NDF}: 7249.8/29$   
 Out:  $-40.314 \pm 0.182$   $\chi^2/\text{NDF}: 10094.2/34$   
 All:  $-40.417 \pm 0.130$   $\chi^2/\text{NDF}: 17344.7/64$

reg\_asym\_sam\_48\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 35.037 $\pm$ 0.360  $\chi^2$ /NDF: 1191.7/23

Left Out: 34.741 $\pm$ 0.147  $\chi^2$ /NDF:3693.2/24

Right Out: 36.339 $\pm$ 0.356  $\chi^2$ /NDF: 1828.4/28

Left In: 34.922 $\pm$ 0.152  $\chi^2$ /NDF:2672.9/22

Left: 34.829 $\pm$ 0.106  $\chi^2$ /NDF: 6366.8/47

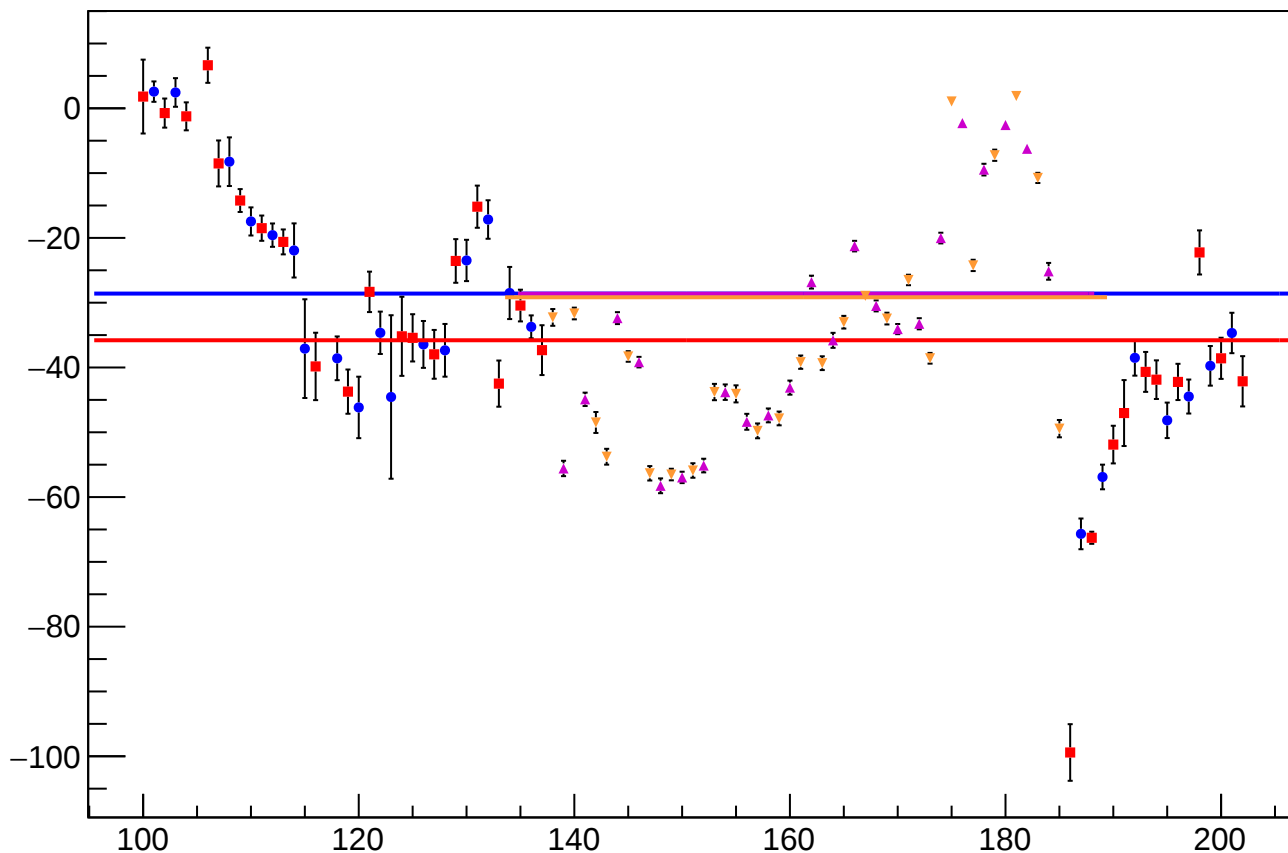
Right: 35.695 $\pm$ 0.253  $\chi^2$ /NDF: 3026.7/52

In: 34.940 $\pm$ 0.140  $\chi^2$ /NDF:3864.7/46

Out: 34.974 $\pm$ 0.136  $\chi^2$ /NDF:5538.8/53

All: 34.957 $\pm$ 0.098  $\chi^2$ /NDF: 9403.5/100

reg\_asym\_sam\_48\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-28.594 \pm 0.549$   $\chi^2/\text{NDF}$ : 1320.8/23

Left Out:  $-29.163 \pm 0.187$   $\chi^2/\text{NDF}$ : 10126.0/24

Right Out:  $-35.798 \pm 0.479$   $\chi^2/\text{NDF}$ : 2555.2/28

Left In:  $-28.616 \pm 0.190$   $\chi^2/\text{NDF}$ : 9040.9/22

Left:  $-28.894 \pm 0.133$   $\chi^2/\text{NDF}$ : 19171.1/47

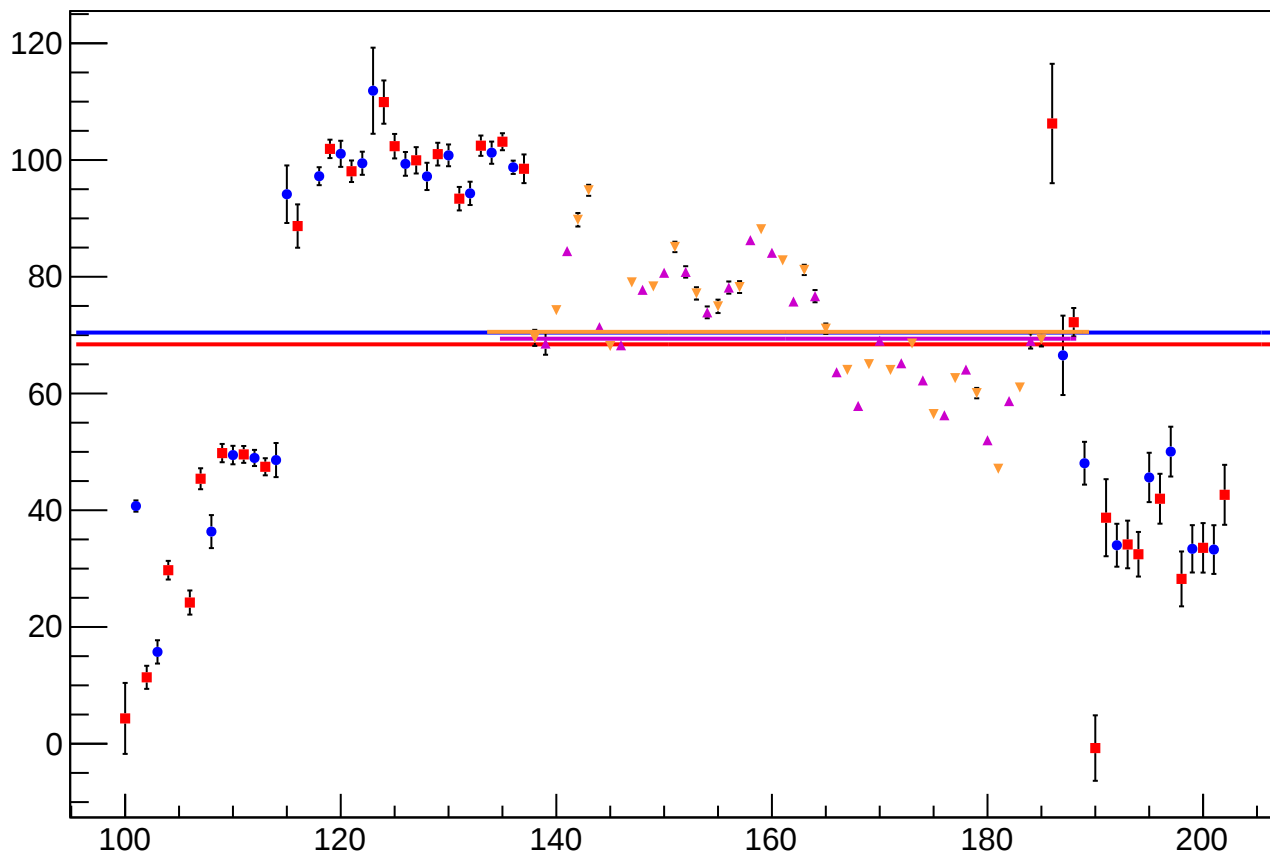
Right:  $-32.688 \pm 0.361$   $\chi^2/\text{NDF}$ : 3973.7/52

In:  $-28.614 \pm 0.179$   $\chi^2/\text{NDF}$ : 10361.6/46

Out:  $-30.041 \pm 0.174$   $\chi^2/\text{NDF}$ : 12847.8/53

All:  $-29.348 \pm 0.125$   $\chi^2/\text{NDF}$ : 23242.0/100

reg\_asym\_sam\_48\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $70.441 \pm 0.414$   $\chi^2/\text{NDF}: 5051.9/23$

Left Out:  $70.563 \pm 0.166$   $\chi^2/\text{NDF}: 4589.1/24$

Right Out:  $68.422 \pm 0.413$   $\chi^2/\text{NDF}: 6076.1/28$

Left In:  $69.387 \pm 0.170$   $\chi^2/\text{NDF}: 3321.8/22$

Left:  $69.989 \pm 0.119$   $\chi^2/\text{NDF}: 7935.4/47$

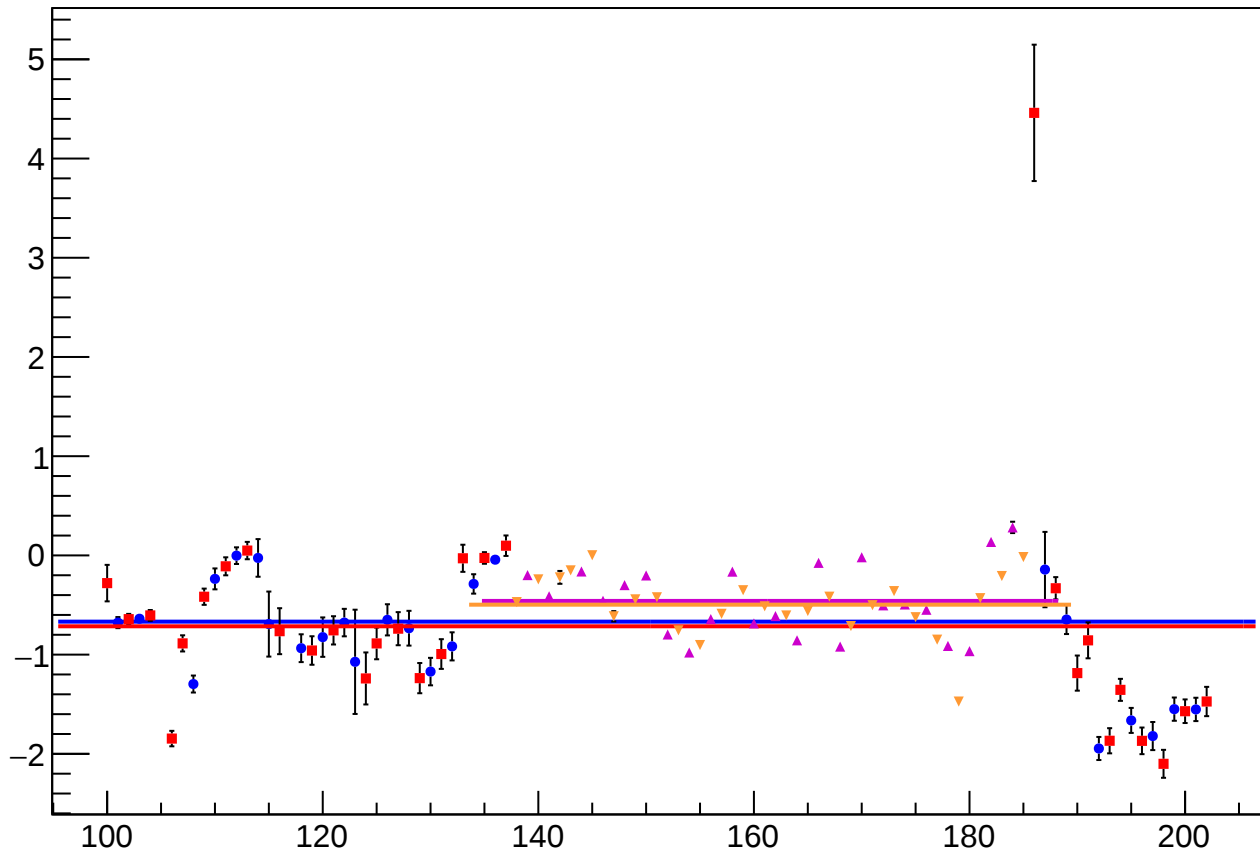
Right:  $69.428 \pm 0.292$   $\chi^2/\text{NDF}: 11140.0/52$

In:  $69.539 \pm 0.157$   $\chi^2/\text{NDF}: 8379.3/46$

Out:  $70.264 \pm 0.154$   $\chi^2/\text{NDF}: 10688.4/53$

All:  $69.909 \pm 0.110$   $\chi^2/\text{NDF}: 19078.5/100$

reg\_asym\_sam\_48\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.668 \pm 0.020$   $\chi^2/\text{NDF}$ : 724.0/23

Left Out:  $-0.497 \pm 0.008$   $\chi^2/\text{NDF}$ : 1449.3/24

Right Out:  $-0.714 \pm 0.019$   $\chi^2/\text{NDF}$ : 1052.0/28

Left In:  $-0.459 \pm 0.008$   $\chi^2/\text{NDF}$ : 1958.4/22

Left:  $-0.478 \pm 0.005$   $\chi^2/\text{NDF}$ : 3419.9/47

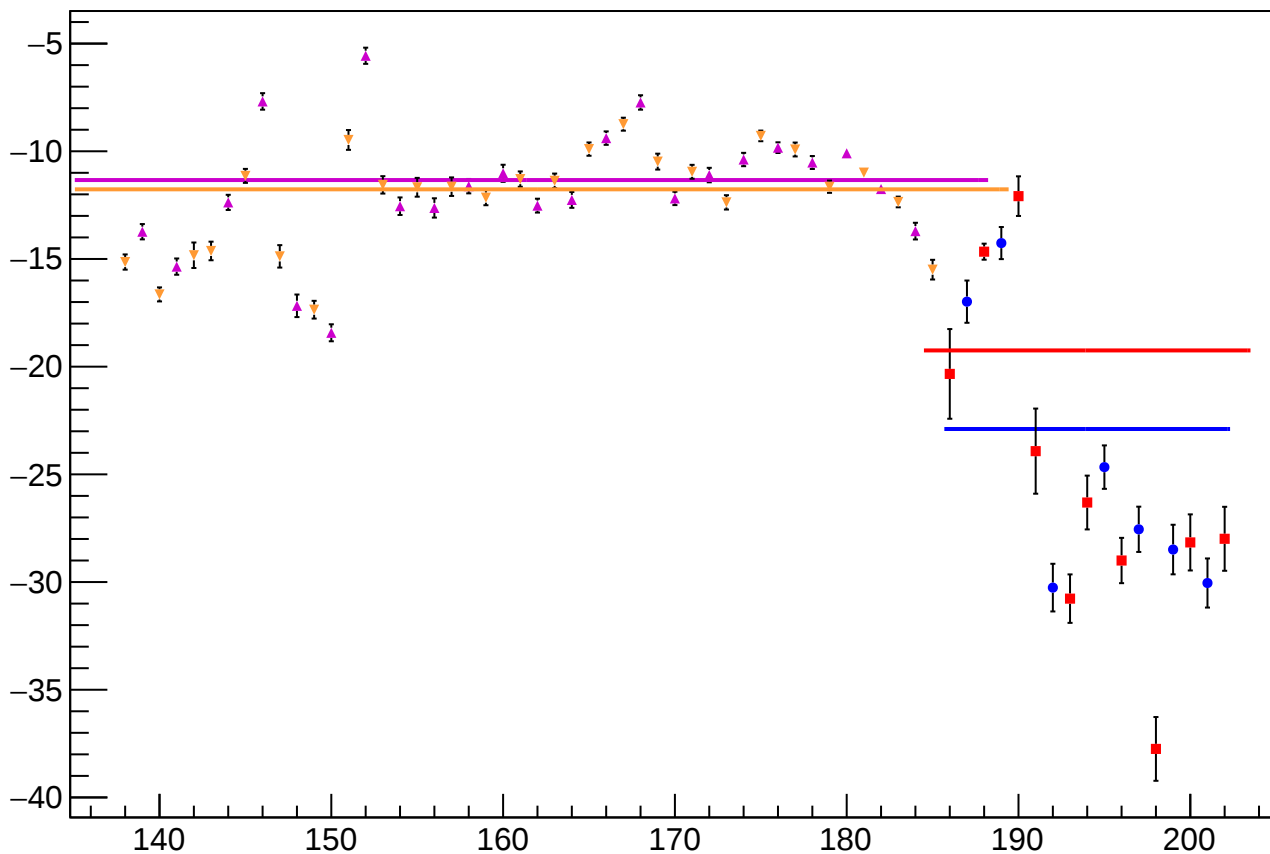
Right:  $-0.692 \pm 0.014$   $\chi^2/\text{NDF}$ : 1778.7/52

In:  $-0.485 \pm 0.007$   $\chi^2/\text{NDF}$ : 2773.4/46

Out:  $-0.526 \pm 0.007$   $\chi^2/\text{NDF}$ : 2611.6/53

All:  $-0.506 \pm 0.005$   $\chi^2/\text{NDF}$ : 5401.4/100

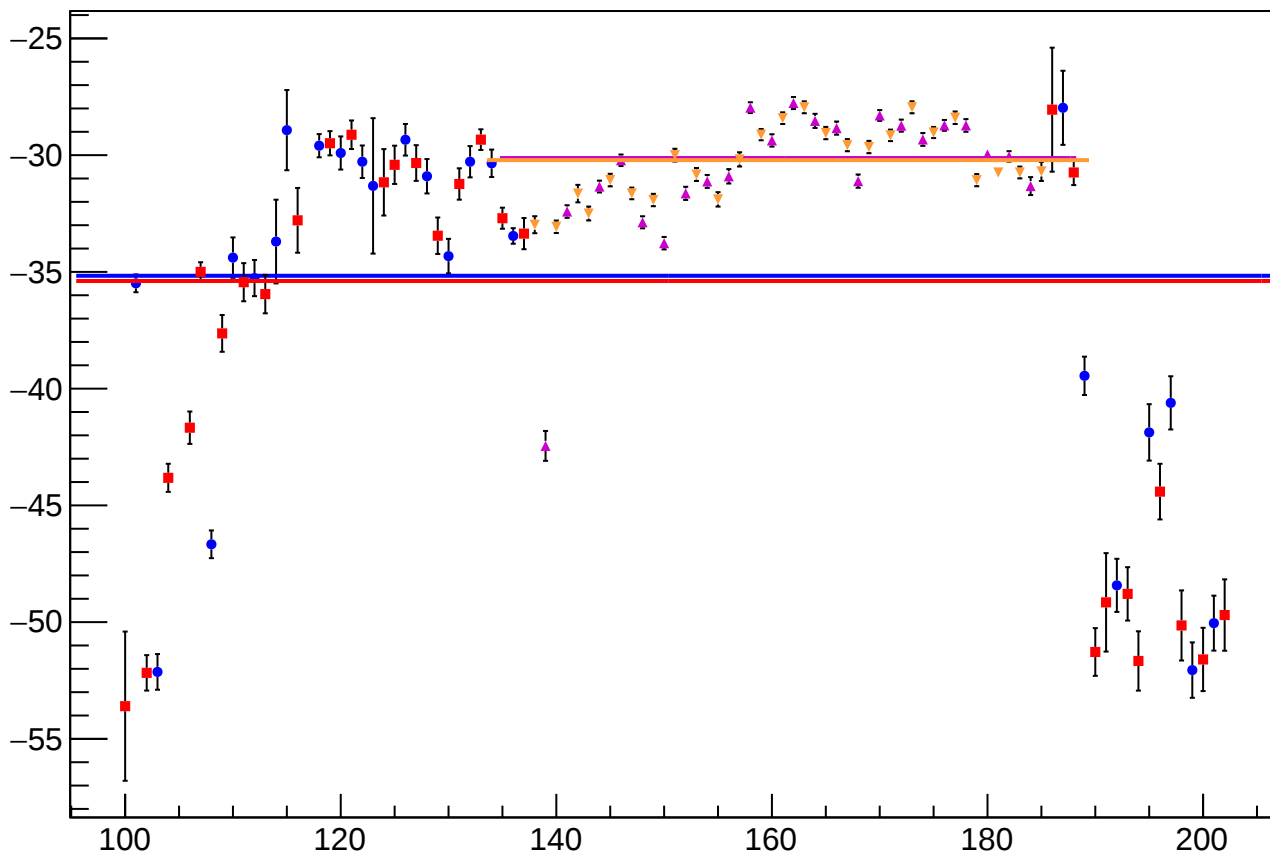
reg\_asym\_sam\_13\_57\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-22.894 \pm 0.376$   $\chi^2/\text{NDF}: 300.5/6$   
 Left Out:  $-11.767 \pm 0.067$   $\chi^2/\text{NDF}: 1020.8/24$   
 Right Out:  $-19.246 \pm 0.280$   $\chi^2/\text{NDF}: 678.8/9$   
 Left In:  $-11.336 \pm 0.068$   $\chi^2/\text{NDF}: 1269.3/22$

Left:  $-11.556 \pm 0.048$   $\chi^2/\text{NDF}: 2310.6/47$   
 Right:  $-20.549 \pm 0.225$   $\chi^2/\text{NDF}: 1039.8/16$   
 In:  $-11.702 \pm 0.067$   $\chi^2/\text{NDF}: 2484.4/29$   
 Out:  $-12.167 \pm 0.065$   $\chi^2/\text{NDF}: 2373.1/34$   
 All:  $-11.942 \pm 0.047$   $\chi^2/\text{NDF}: 4882.4/64$

reg\_asym\_sam\_13\_57\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-35.166 \pm 0.143$   $\chi^2/\text{NDF}$ : 1971.4/23

Left Out:  $-30.212 \pm 0.054$   $\chi^2/\text{NDF}$ : 734.0/24

Right Out:  $-35.389 \pm 0.139$   $\chi^2/\text{NDF}$ : 2464.5/28

Left In:  $-30.124 \pm 0.056$   $\chi^2/\text{NDF}$ : 1226.2/22

Left:  $-30.169 \pm 0.039$   $\chi^2/\text{NDF}$ : 1961.5/47

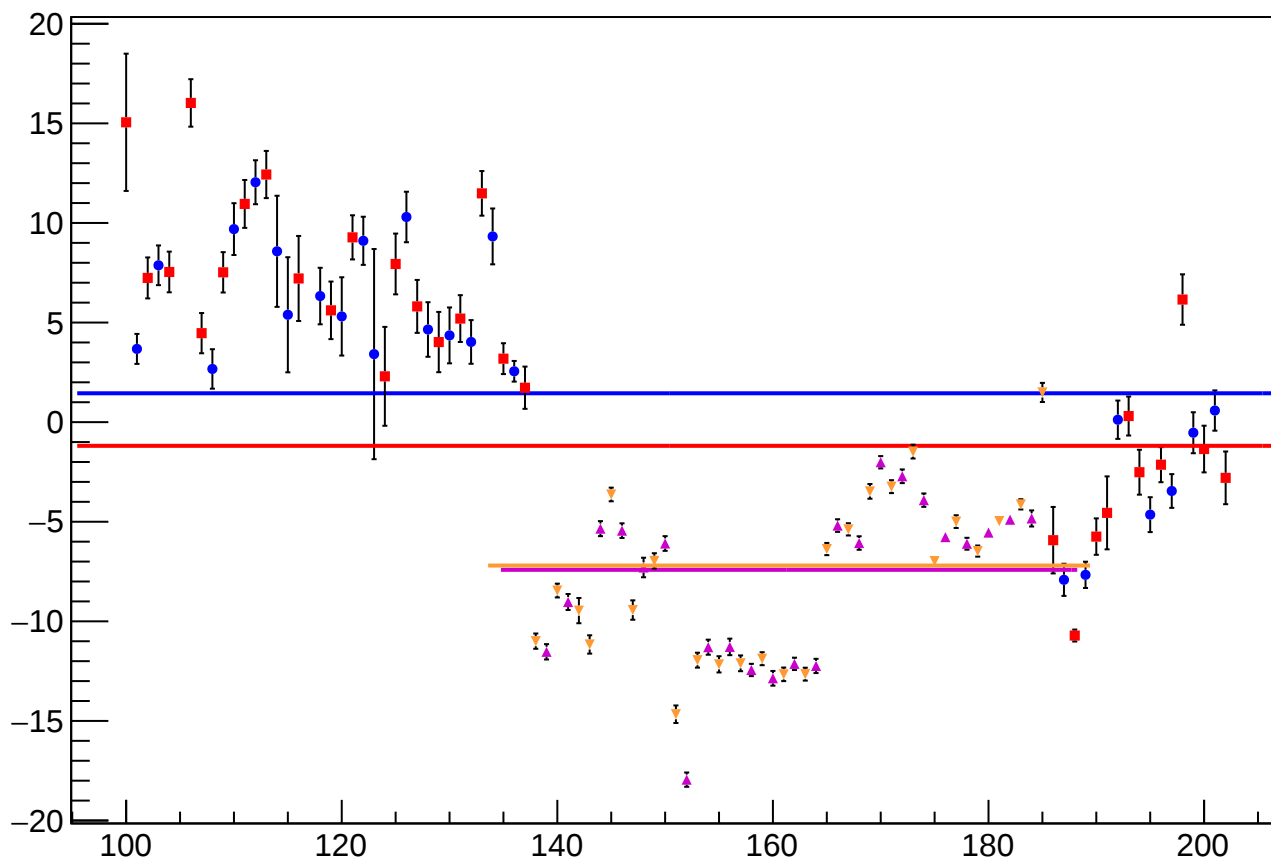
Right:  $-35.281 \pm 0.100$   $\chi^2/\text{NDF}$ : 4437.1/52

In:  $-30.783 \pm 0.052$   $\chi^2/\text{NDF}$ : 4276.7/46

Out:  $-30.892 \pm 0.050$   $\chi^2/\text{NDF}$ : 4411.5/53

All:  $-30.839 \pm 0.036$   $\chi^2/\text{NDF}$ : 8690.5/100

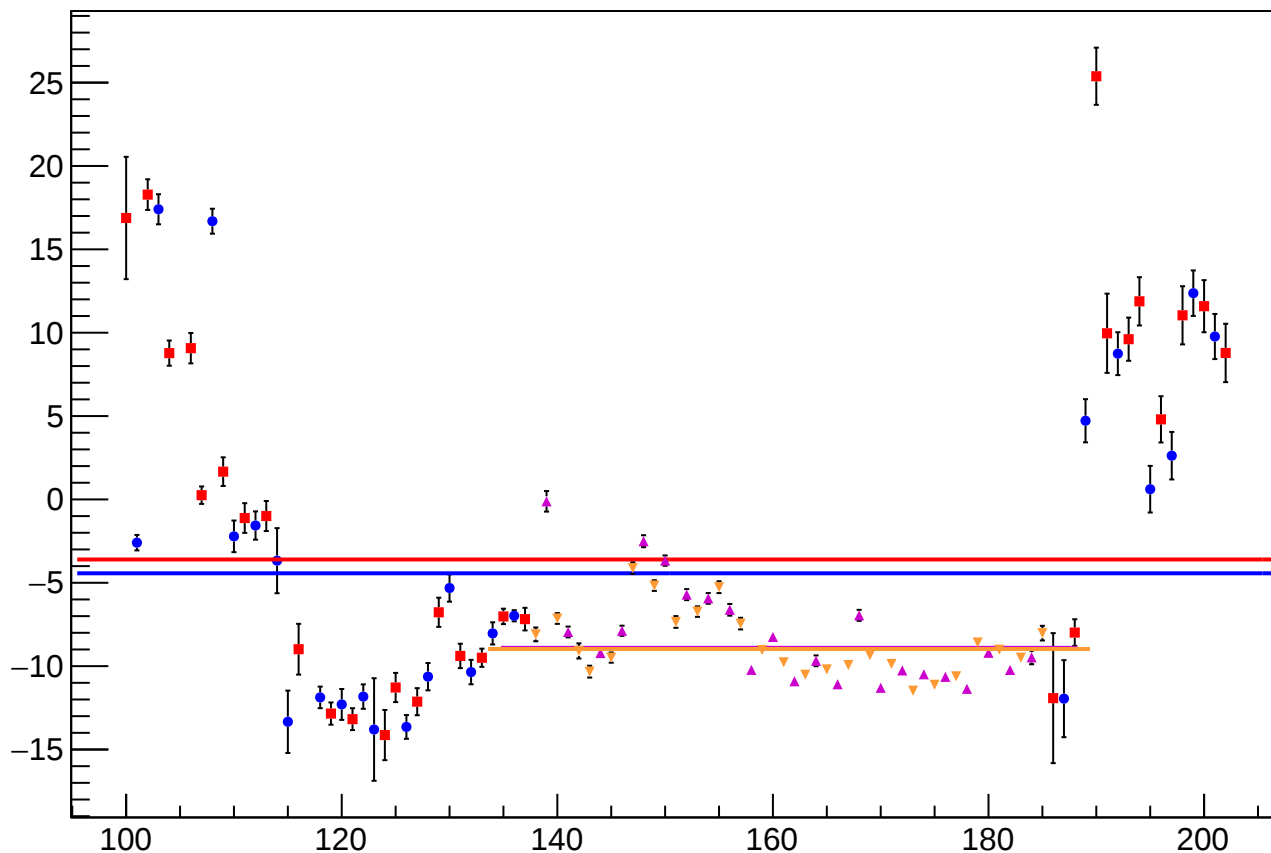
reg\_asym\_sam\_13\_57\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $1.449 \pm 0.208$   $\chi^2/\text{NDF}: 762.6/23$   
 Left Out:  $-7.199 \pm 0.067$   $\chi^2/\text{NDF}: 3037.3/24$   
 Right Out:  $-1.189 \pm 0.179$   $\chi^2/\text{NDF}: 2194.8/28$   
 Left In:  $-7.415 \pm 0.068$   $\chi^2/\text{NDF}: 3123.3/22$

Left:  $-7.305 \pm 0.048$   $\chi^2/\text{NDF}: 6165.7/47$   
 Right:  $-0.065 \pm 0.136$   $\chi^2/\text{NDF}: 3050.0/52$   
 In:  $-6.560 \pm 0.065$   $\chi^2/\text{NDF}: 5531.6/46$   
 Out:  $-6.462 \pm 0.063$   $\chi^2/\text{NDF}: 6222.0/53$   
 All:  $-6.510 \pm 0.045$   $\chi^2/\text{NDF}: 11754.8/100$

reg\_asym\_sam\_13\_57\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-4.431 \pm 0.163$   $\chi^2/\text{NDF}$ : 2597.3/23

Left Out:  $-8.970 \pm 0.060$   $\chi^2/\text{NDF}$ : 878.8/24

Right Out:  $-3.603 \pm 0.162$   $\chi^2/\text{NDF}$ : 2917.7/28

Left In:  $-8.900 \pm 0.062$   $\chi^2/\text{NDF}$ : 1533.9/22

Left:  $-8.936 \pm 0.043$   $\chi^2/\text{NDF}$ : 2413.4/47

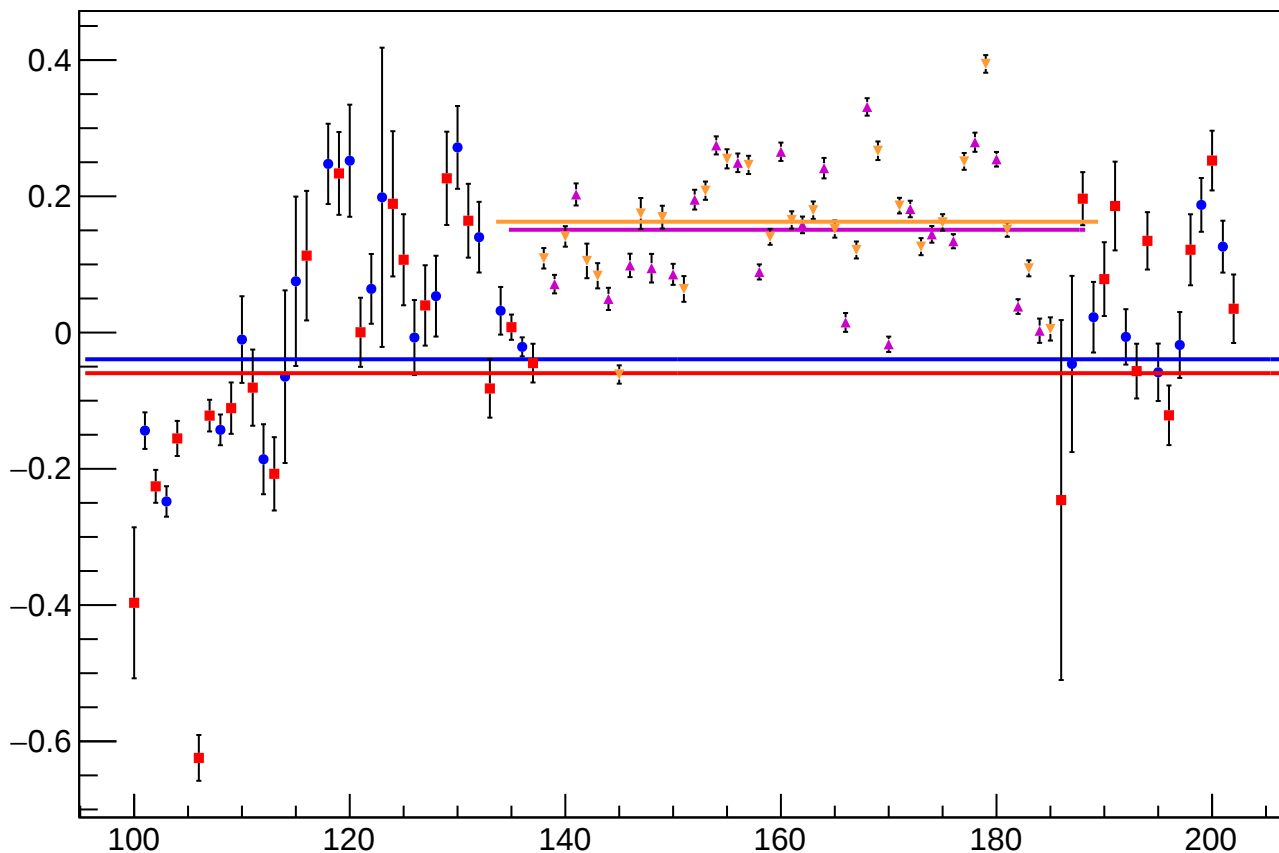
Right:  $-4.014 \pm 0.115$   $\chi^2/\text{NDF}$ : 5528.0/52

In:  $-8.341 \pm 0.058$   $\chi^2/\text{NDF}$ : 4789.2/46

Out:  $-8.319 \pm 0.056$   $\chi^2/\text{NDF}$ : 4762.3/53

All:  $-8.329 \pm 0.040$   $\chi^2/\text{NDF}$ : 9551.6/100

reg\_asym\_sam\_13\_57\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.039 \pm 0.008$   $\chi^2/\text{NDF}$ : 275.2/23

Left Out:  $0.163 \pm 0.003$   $\chi^2/\text{NDF}$ : 1018.1/24

Right Out:  $-0.060 \pm 0.007$   $\chi^2/\text{NDF}$ : 614.1/28

Left In:  $0.151 \pm 0.003$   $\chi^2/\text{NDF}$ : 1286.5/22

Left:  $0.157 \pm 0.002$   $\chi^2/\text{NDF}$ : 2313.9/47

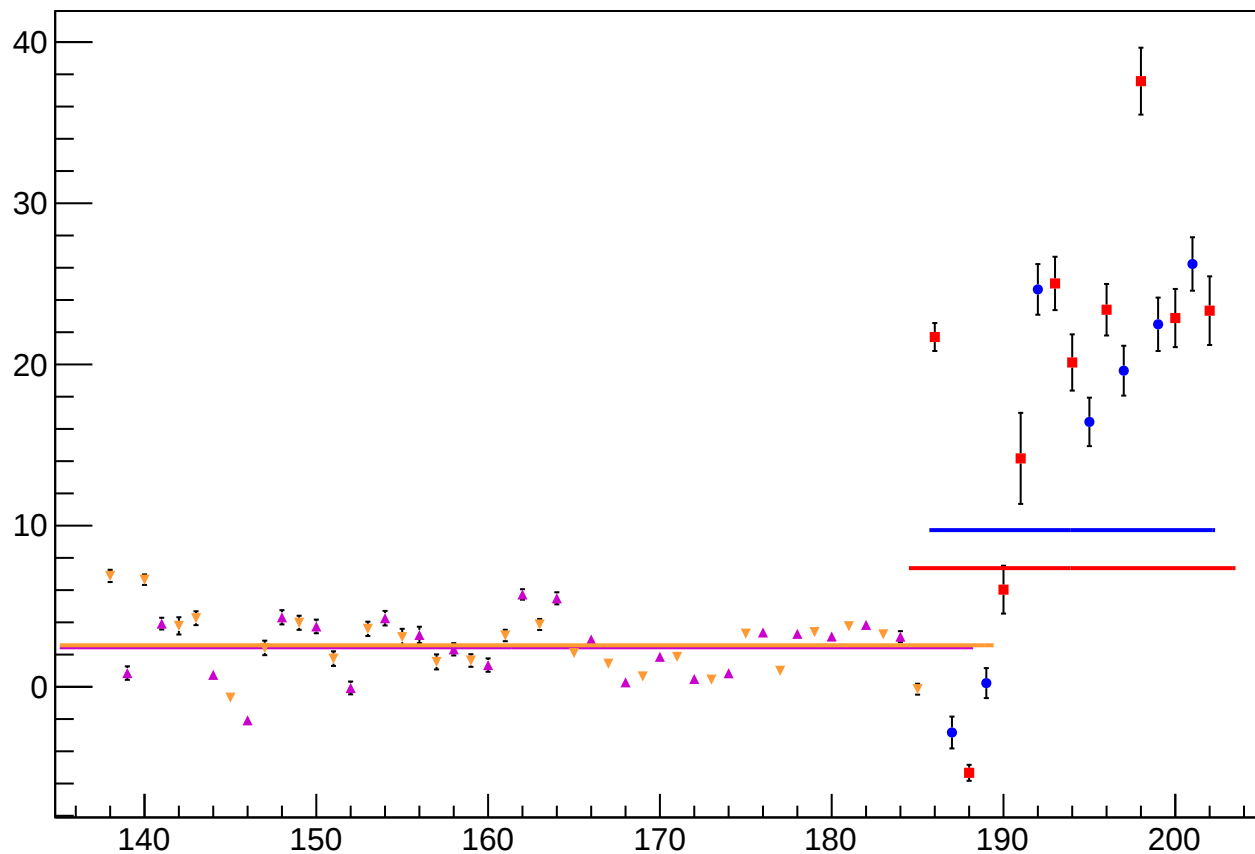
Right:  $-0.050 \pm 0.005$   $\chi^2/\text{NDF}$ : 893.0/52

In:  $0.128 \pm 0.003$   $\chi^2/\text{NDF}$ : 2119.5/46

Out:  $0.136 \pm 0.003$   $\chi^2/\text{NDF}$ : 2427.0/53

All:  $0.132 \pm 0.002$   $\chi^2/\text{NDF}$ : 4550.9/100

reg\_asym\_sam\_15\_37\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 9.722 $\pm$ 0.489  $\chi^2$ /NDF: 575.3/6

Left Out: 2.577 $\pm$ 0.058  $\chi^2$ /NDF:867.5/24

Right Out: 7.363 $\pm$ 0.358  $\chi^2$ /NDF: 1544.5/9

Left In: 2.452 $\pm$ 0.059  $\chi^2$ /NDF:871.3/22

Left: 2.516 $\pm$ 0.042  $\chi^2$ /NDF: 1741.0/47

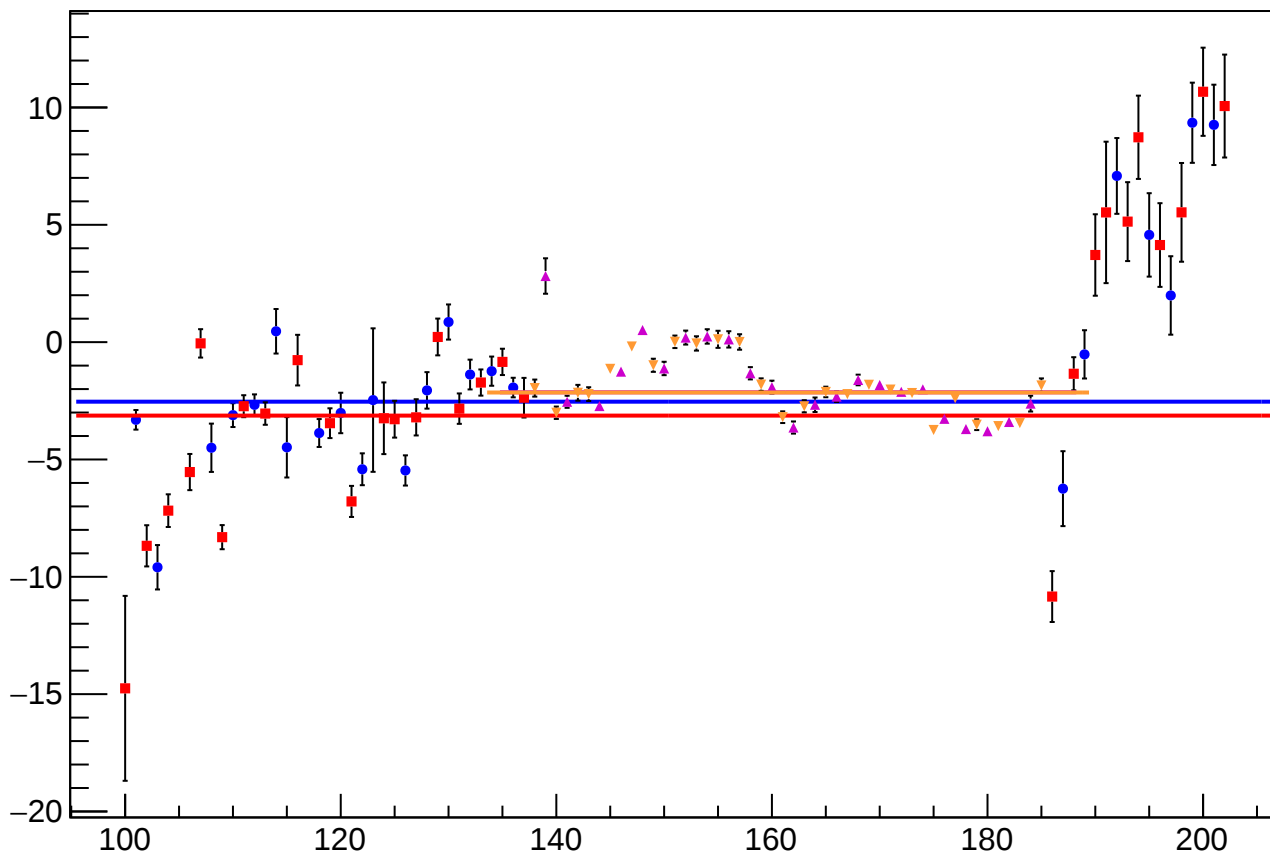
Right: 8.184 $\pm$ 0.289  $\chi^2$ /NDF: 2135.0/16

In: 2.558 $\pm$ 0.059  $\chi^2$ /NDF:1664.0/29

Out: 2.700 $\pm$ 0.058  $\chi^2$ /NDF:2586.4/34

All: 2.631 $\pm$ 0.041  $\chi^2$ /NDF: 4253.4/64

reg\_asym\_sam\_15\_37\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-2.537 \pm 0.150$   $\chi^2/\text{NDF}$ : 315.1/23

Left Out:  $-2.146 \pm 0.048$   $\chi^2/\text{NDF}$ : 573.4/24

Right Out:  $-3.130 \pm 0.146$   $\chi^2/\text{NDF}$ : 571.8/28

Left In:  $-2.136 \pm 0.048$   $\chi^2/\text{NDF}$ : 691.2/22

Left:  $-2.141 \pm 0.034$   $\chi^2/\text{NDF}$ : 1264.6/47

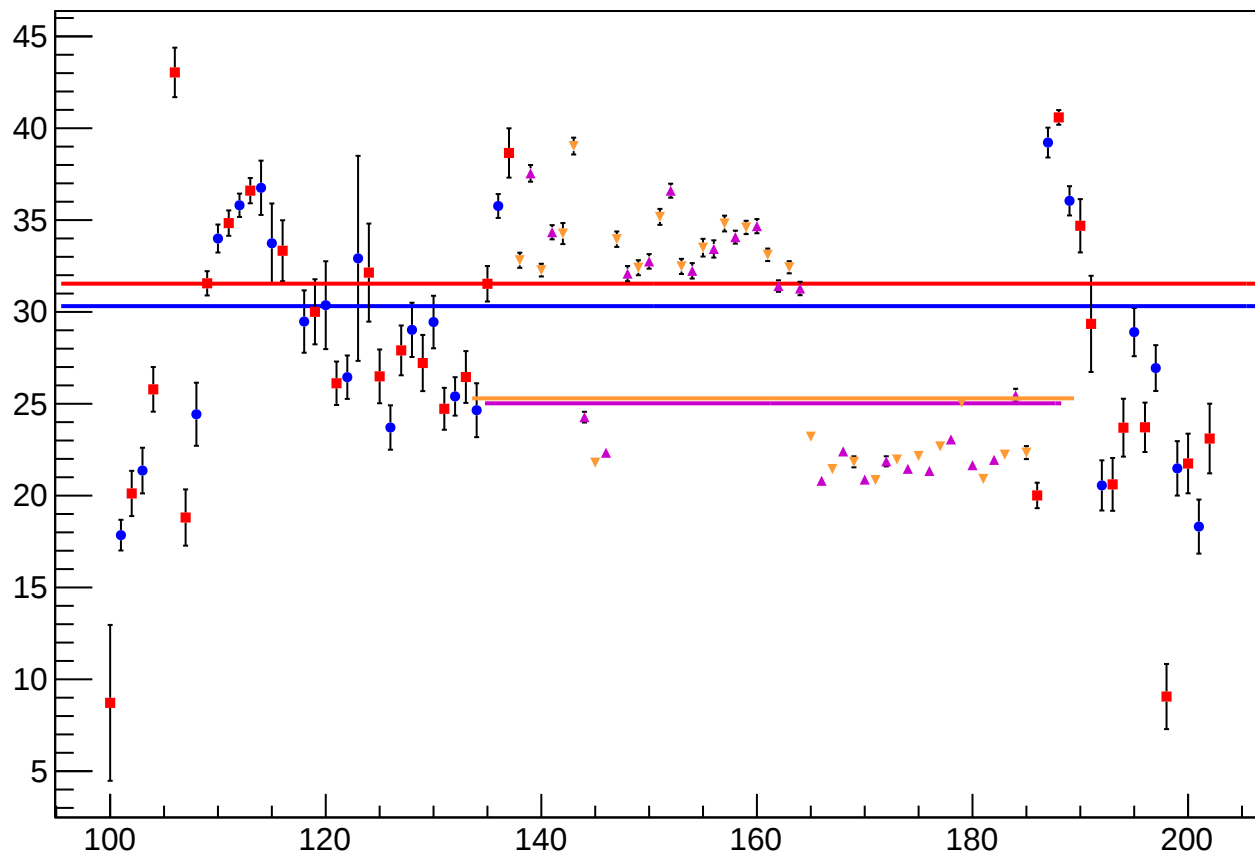
Right:  $-2.840 \pm 0.105$   $\chi^2/\text{NDF}$ : 894.9/52

In:  $-2.174 \pm 0.046$   $\chi^2/\text{NDF}$ : 1012.8/46

Out:  $-2.240 \pm 0.045$   $\chi^2/\text{NDF}$ : 1186.1/53

All:  $-2.208 \pm 0.032$   $\chi^2/\text{NDF}$ : 2200.0/100

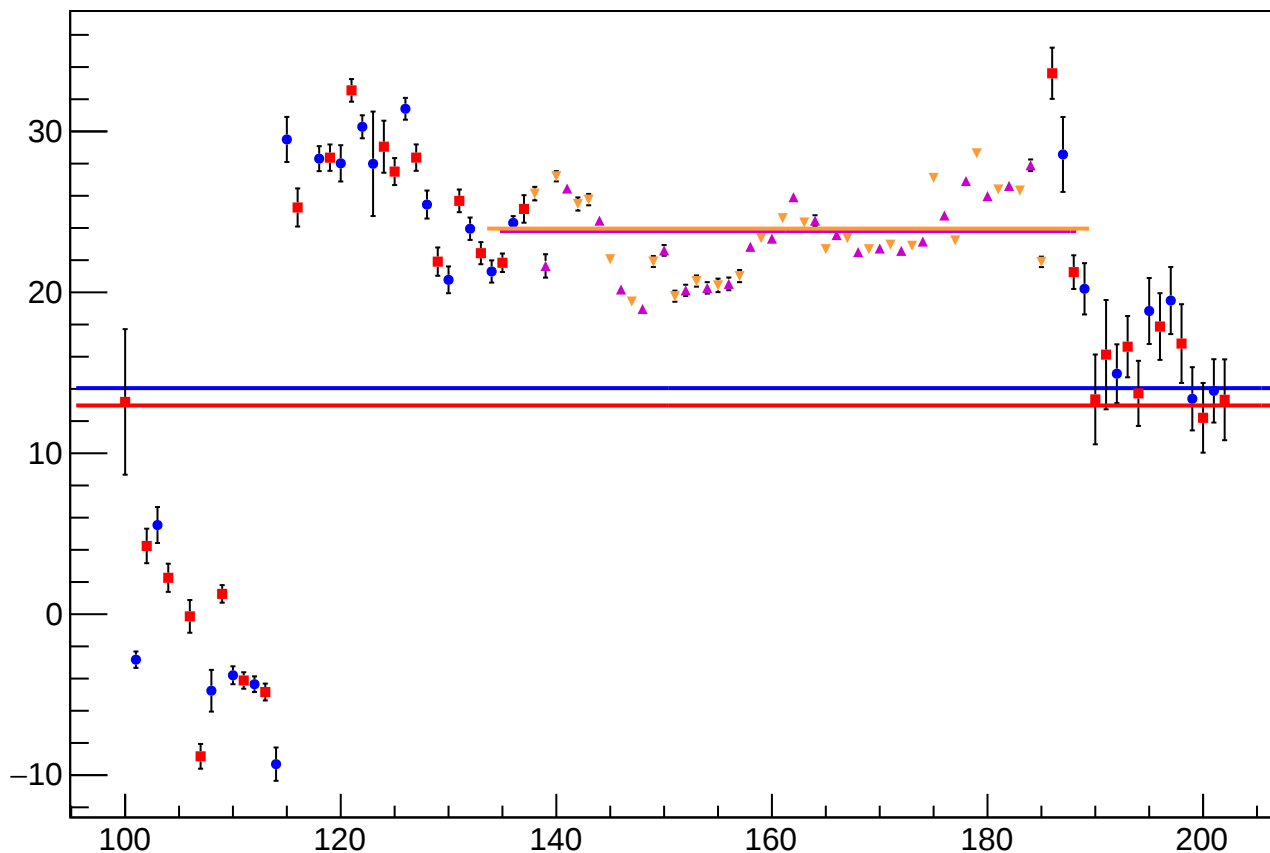
reg\_asym\_sam\_15\_37\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $30.316 \pm 0.225$   $\chi^2/\text{NDF}: 889.2/23$   
 Left Out:  $25.296 \pm 0.059$   $\chi^2/\text{NDF}: 8272.3/24$   
 Right Out:  $31.539 \pm 0.196$   $\chi^2/\text{NDF}: 1609.4/28$   
 Left In:  $25.025 \pm 0.060$   $\chi^2/\text{NDF}: 7610.5/22$

Left:  $25.162 \pm 0.042$   $\chi^2/\text{NDF}: 15893.3/47$   
 Right:  $31.013 \pm 0.148$   $\chi^2/\text{NDF}: 2515.4/52$   
 In:  $25.371 \pm 0.058$   $\chi^2/\text{NDF}: 9015.4/46$   
 Out:  $25.813 \pm 0.056$   $\chi^2/\text{NDF}: 10814.9/53$   
 All:  $25.597 \pm 0.040$   $\chi^2/\text{NDF}: 19860.4/100$

reg\_asym\_sam\_15\_37\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 14.048 $\pm$ 0.168  $\chi^2$ /NDF: 7343.0/23

Left Out: 23.962 $\pm$ 0.053  $\chi^2$ /NDF:1922.4/24

Right Out: 12.972 $\pm$ 0.167  $\chi^2$ /NDF: 7207.5/28

Left In: 23.805 $\pm$ 0.054  $\chi^2$ /NDF:1761.3/22

Left: 23.885 $\pm$ 0.038  $\chi^2$ /NDF: 3688.0/47

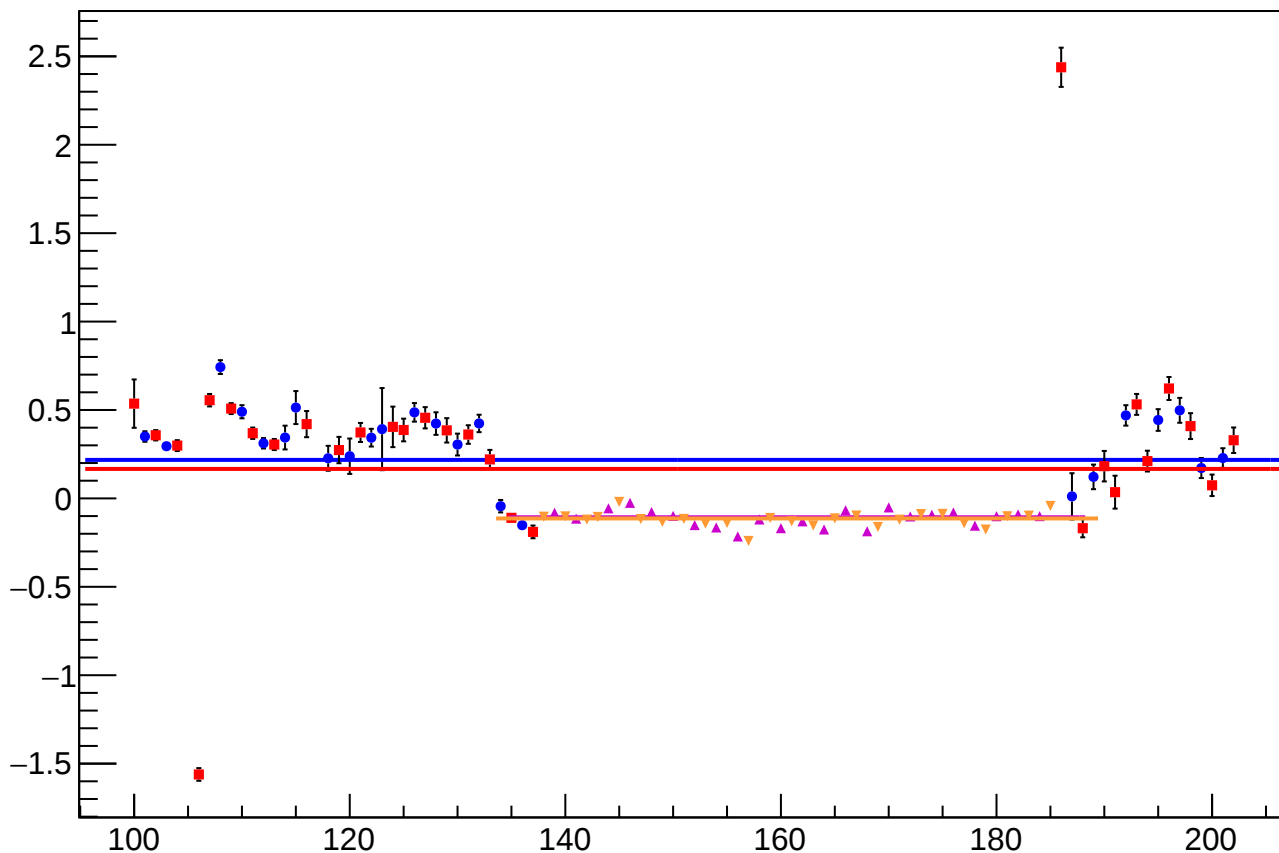
Right: 13.505 $\pm$ 0.119  $\chi^2$ /NDF: 14571.1/52

In: 22.894 $\pm$ 0.051  $\chi^2$ /NDF:12148.5/46

Out: 22.951 $\pm$ 0.051  $\chi^2$ /NDF:13061.5/53

All: 22.923 $\pm$ 0.036  $\chi^2$ /NDF: 25210.6/100

reg\_asym\_sam\_15\_37\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $0.218 \pm 0.009$   $\chi^2/\text{NDF}: 901.8/23$

Left Out:  $-0.113 \pm 0.002$   $\chi^2/\text{NDF}: 291.0/24$

Right Out:  $0.167 \pm 0.008$   $\chi^2/\text{NDF}: 3591.7/28$

Left In:  $-0.107 \pm 0.002$   $\chi^2/\text{NDF}: 321.8/22$

Left:  $-0.110 \pm 0.002$   $\chi^2/\text{NDF}: 616.6/47$

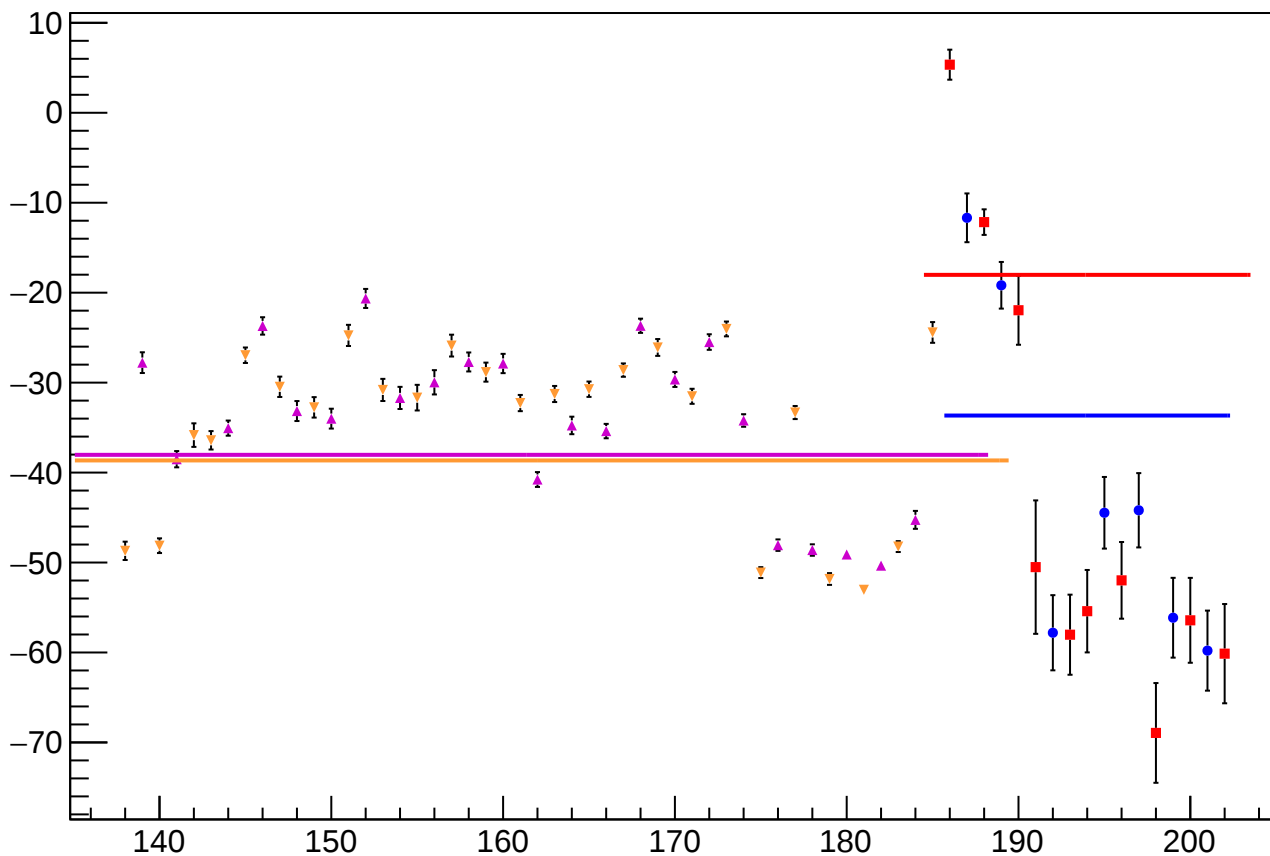
Right:  $0.191 \pm 0.006$   $\chi^2/\text{NDF}: 4511.1/52$

In:  $-0.083 \pm 0.002$   $\chi^2/\text{NDF}: 2494.0/46$

Out:  $-0.092 \pm 0.002$   $\chi^2/\text{NDF}: 4894.0/53$

All:  $-0.088 \pm 0.002$   $\chi^2/\text{NDF}: 7396.0/100$

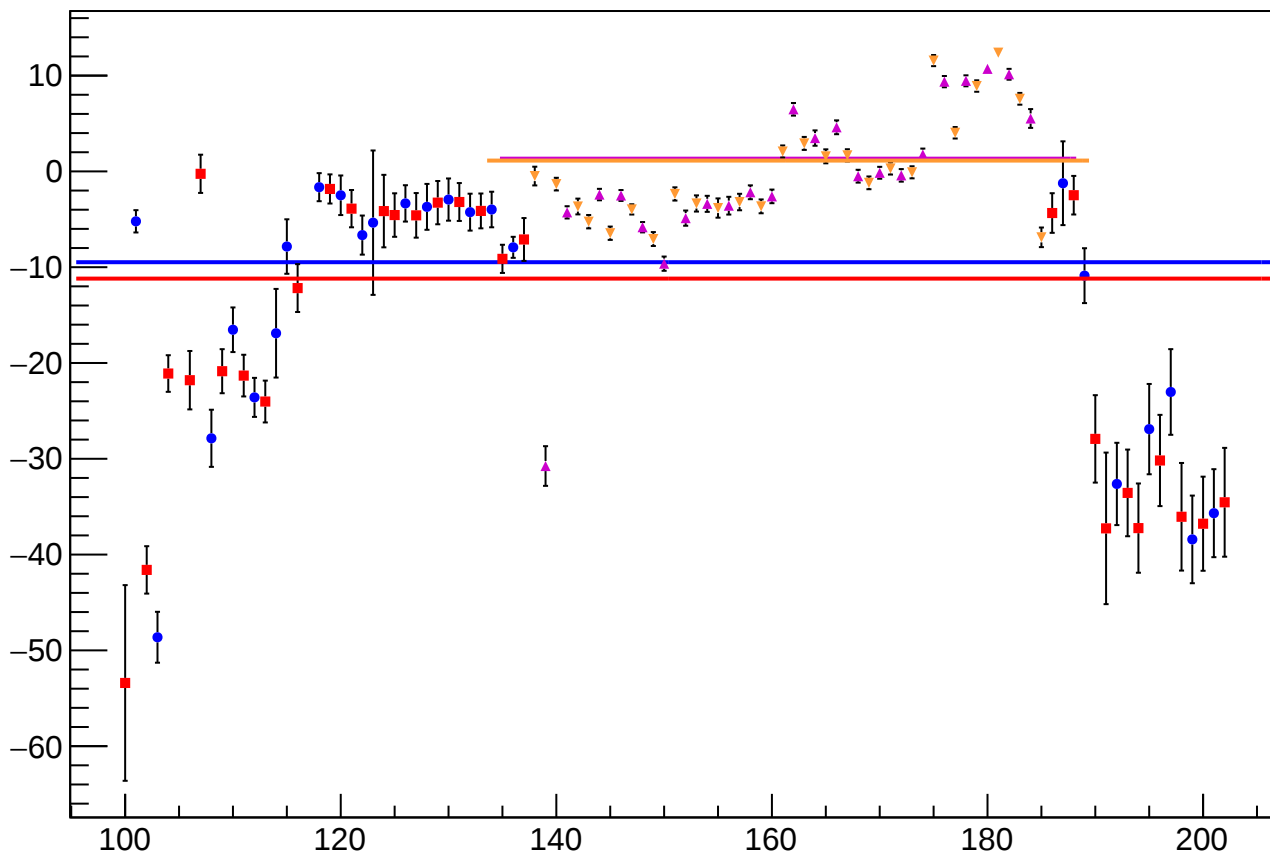
reg\_asym\_sam\_24\_68\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-33.659 \pm 1.330$   $\chi^2/\text{NDF}: 204.4/6$   
 Left Out:  $-38.650 \pm 0.169$   $\chi^2/\text{NDF}: 4077.2/24$   
 Right Out:  $-18.019 \pm 0.912$   $\chi^2/\text{NDF}: 652.9/9$   
 Left In:  $-38.027 \pm 0.173$   $\chi^2/\text{NDF}: 3091.9/22$

Left:  $-38.346 \pm 0.121$   $\chi^2/\text{NDF}: 7175.7/47$   
 Right:  $-23.016 \pm 0.752$   $\chi^2/\text{NDF}: 951.3/16$   
 In:  $-37.954 \pm 0.172$   $\chi^2/\text{NDF}: 3306.9/29$   
 Out:  $-37.964 \pm 0.166$   $\chi^2/\text{NDF}: 5225.3/34$   
 All:  $-37.959 \pm 0.119$   $\chi^2/\text{NDF}: 8532.2/64$

reg\_asym\_sam\_24\_68\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-9.479 \pm 0.447$   $\chi^2/\text{NDF}$ : 542.3/23

Left Out:  $1.130 \pm 0.136$   $\chi^2/\text{NDF}$ : 1799.3/24

Right Out:  $-11.191 \pm 0.451$   $\chi^2/\text{NDF}$ : 621.4/28

Left In:  $1.329 \pm 0.140$   $\chi^2/\text{NDF}$ : 2048.0/22

Left:  $1.227 \pm 0.097$   $\chi^2/\text{NDF}$ : 3848.4/47

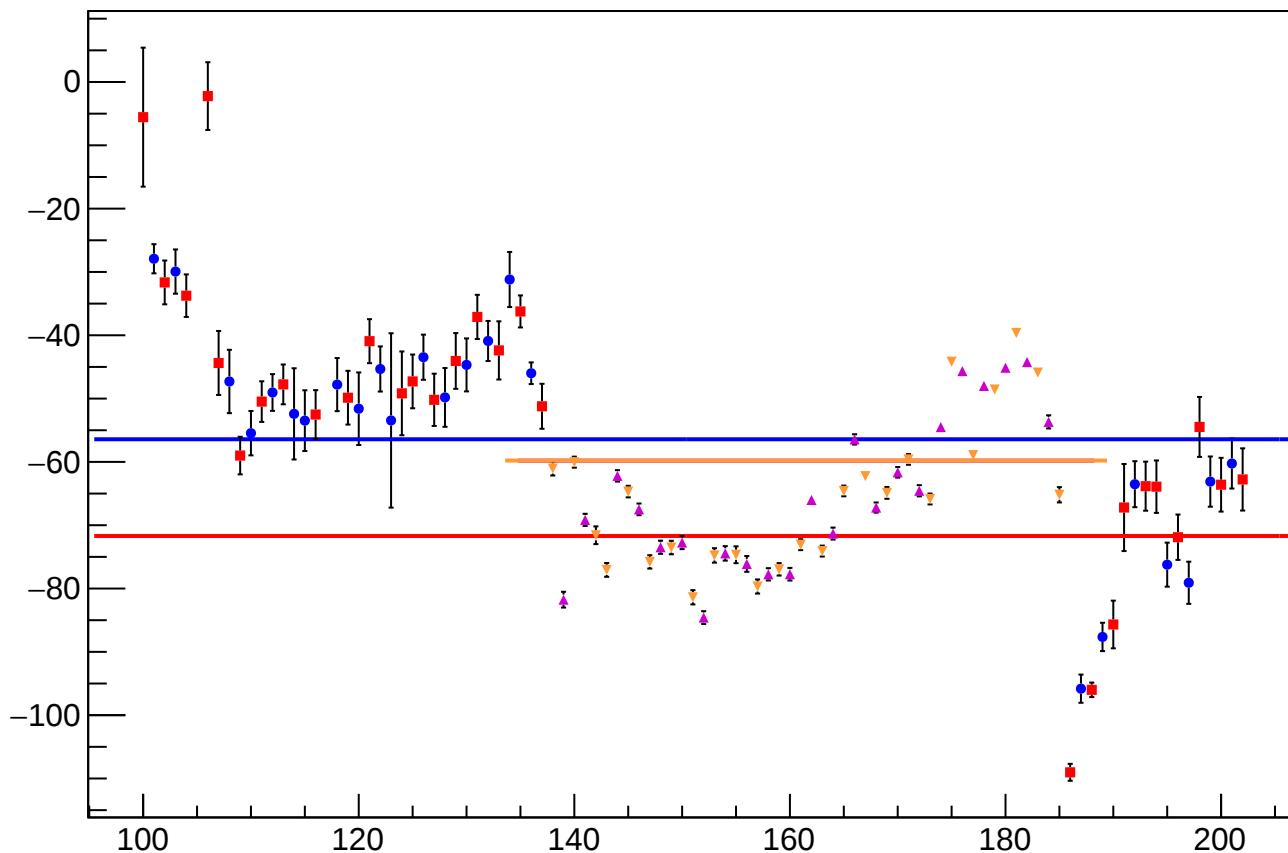
Right:  $-10.328 \pm 0.317$   $\chi^2/\text{NDF}$ : 1171.0/52

In:  $0.365 \pm 0.133$   $\chi^2/\text{NDF}$ : 3123.6/46

Out:  $0.102 \pm 0.130$   $\chi^2/\text{NDF}$ : 3105.9/53

All:  $0.230 \pm 0.093$   $\chi^2/\text{NDF}$ : 6231.5/100

reg\_asym\_sam\_24\_68\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-56.424 \pm 0.674$   $\chi^2/\text{NDF}$ : 947.6/23

Left Out:  $-59.789 \pm 0.170$   $\chi^2/\text{NDF}$ : 5837.7/24

Right Out:  $-71.699 \pm 0.570$   $\chi^2/\text{NDF}$ : 2495.5/28

Left In:  $-59.802 \pm 0.173$   $\chi^2/\text{NDF}$ : 5217.5/22

Left:  $-59.795 \pm 0.121$   $\chi^2/\text{NDF}$ : 11055.3/47

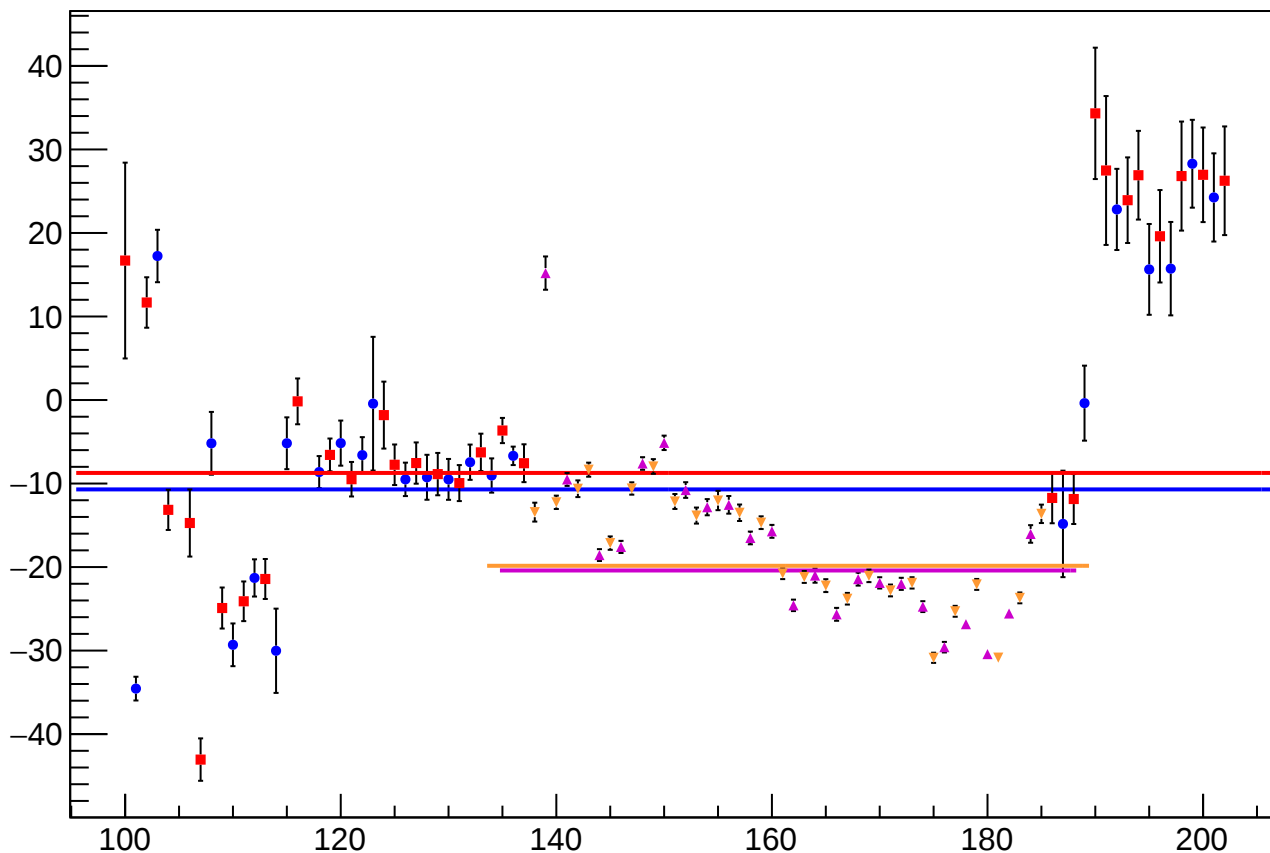
Right:  $-65.337 \pm 0.435$   $\chi^2/\text{NDF}$ : 3742.7/52

In:  $-59.593 \pm 0.168$   $\chi^2/\text{NDF}$ : 6188.7/46

Out:  $-60.764 \pm 0.163$   $\chi^2/\text{NDF}$ : 8734.7/53

All:  $-60.196 \pm 0.117$   $\chi^2/\text{NDF}$ : 14948.5/100

reg\_asym\_sam\_24\_68\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected

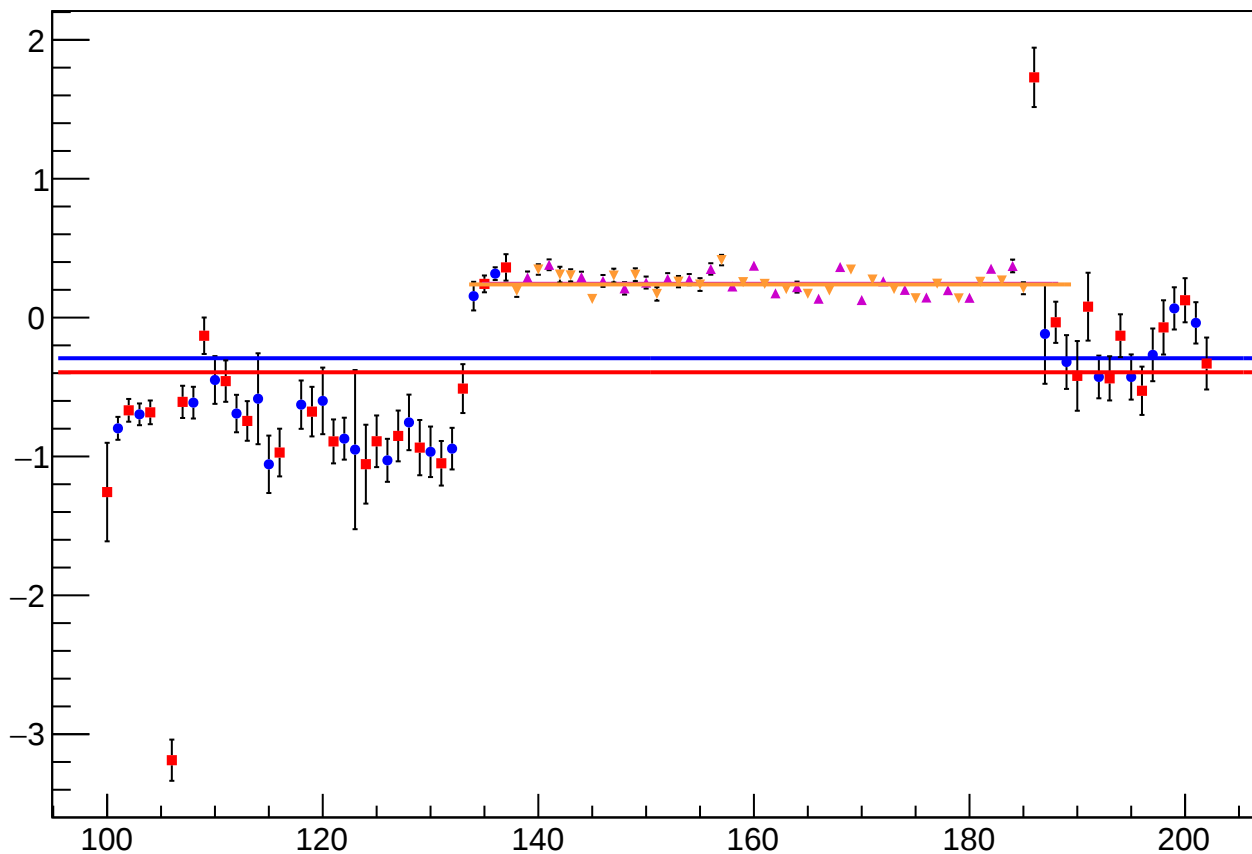


Right In:  $-10.703 \pm 0.506$   $\chi^2/\text{NDF}$ : 682.1/23  
 Left Out:  $-19.847 \pm 0.153$   $\chi^2/\text{NDF}$ : 1931.3/24  
 Right Out:  $-8.730 \pm 0.521$   $\chi^2/\text{NDF}$ : 638.3/28  
 Left In:  $-20.410 \pm 0.157$   $\chi^2/\text{NDF}$ : 2302.0/22

Left:  $-20.122 \pm 0.109$   $\chi^2/\text{NDF}$ : 4239.8/47  
 Right:  $-9.744 \pm 0.363$   $\chi^2/\text{NDF}$ : 1327.8/52  
 In:  $-19.562 \pm 0.150$   $\chi^2/\text{NDF}$ : 3319.4/46  
 Out:  $-18.967 \pm 0.147$   $\chi^2/\text{NDF}$ : 2989.0/53

All:  $-19.259 \pm 0.105$   $\chi^2/\text{NDF}$ : 6316.4/100

reg\_asym\_sam\_24\_68\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.293 \pm 0.025$   $\chi^2/\text{NDF}$ : 382.1/23

Left Out:  $0.239 \pm 0.007$   $\chi^2/\text{NDF}$ : 93.0/24

Right Out:  $-0.394 \pm 0.026$   $\chi^2/\text{NDF}$ : 762.4/28

Left In:  $0.243 \pm 0.007$   $\chi^2/\text{NDF}$ : 138.3/22

Left:  $0.241 \pm 0.005$   $\chi^2/\text{NDF}$ : 231.5/47

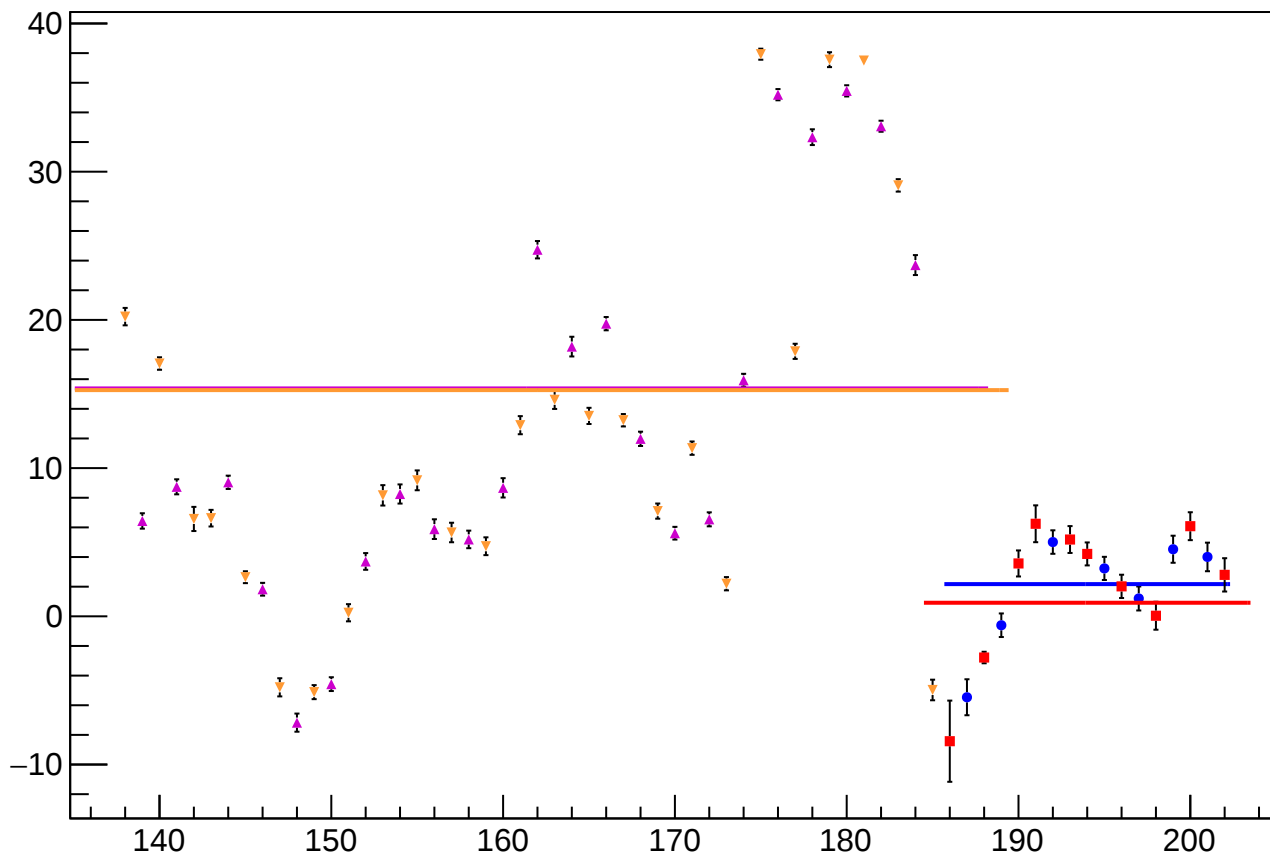
Right:  $-0.343 \pm 0.018$   $\chi^2/\text{NDF}$ : 1152.4/52

In:  $0.204 \pm 0.007$   $\chi^2/\text{NDF}$ : 931.3/46

Out:  $0.194 \pm 0.007$   $\chi^2/\text{NDF}$ : 1424.6/53

All:  $0.199 \pm 0.005$   $\chi^2/\text{NDF}$ : 2356.9/100

reg\_asym\_sam\_26\_48\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $2.173 \pm 0.328$   $\chi^2/\text{NDF}: 78.1/6$

Left Out:  $15.263 \pm 0.100$   $\chi^2/\text{NDF}: 19175.2/24$

Right Out:  $0.916 \pm 0.248$   $\chi^2/\text{NDF}: 205.4/9$

Left In:  $15.377 \pm 0.103$   $\chi^2/\text{NDF}: 16268.9/22$

Left:  $15.318 \pm 0.072$   $\chi^2/\text{NDF}: 35444.7/47$

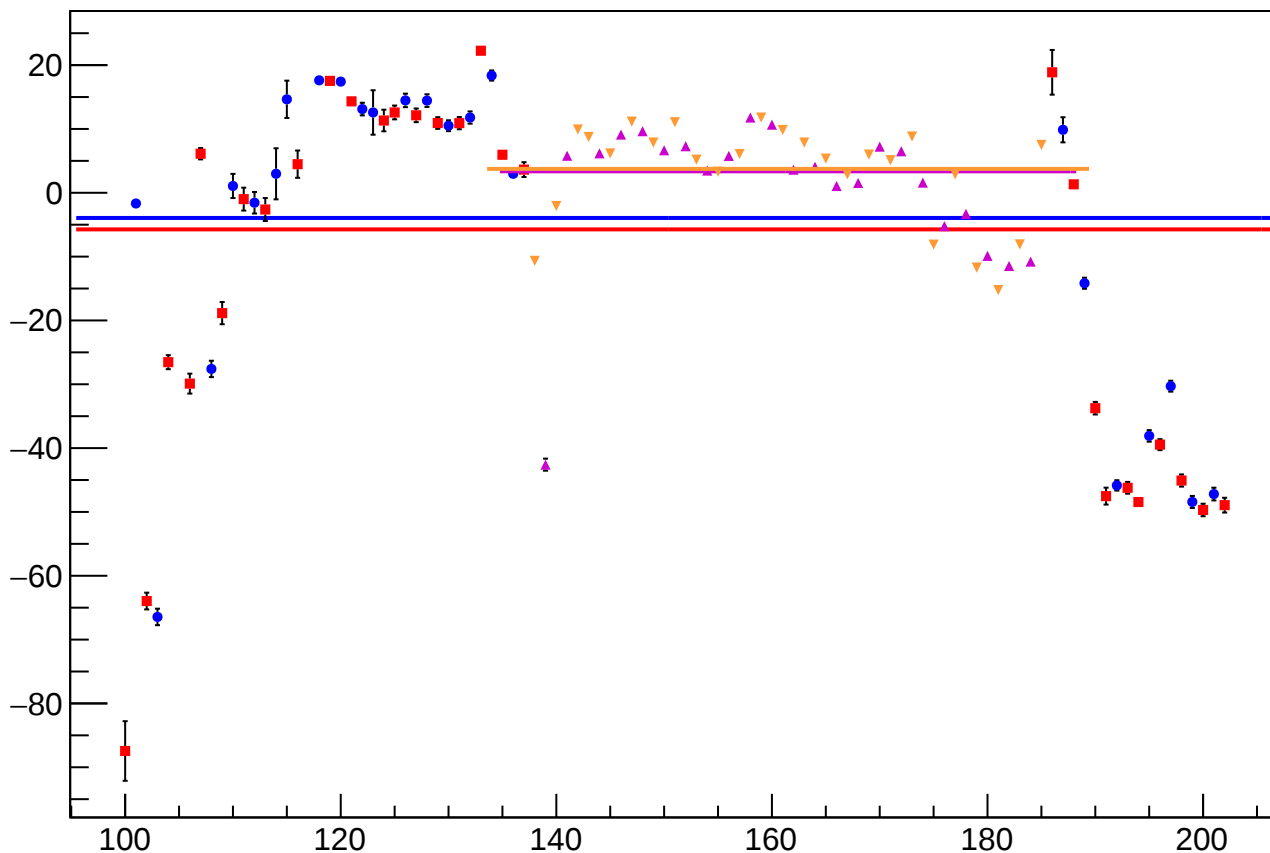
Right:  $1.373 \pm 0.198$   $\chi^2/\text{NDF}: 292.8/16$

In:  $14.198 \pm 0.098$   $\chi^2/\text{NDF}: 17821.6/29$

Out:  $13.242 \pm 0.093$   $\chi^2/\text{NDF}: 22251.4/34$

All:  $13.695 \pm 0.068$   $\chi^2/\text{NDF}: 40123.0/64$

reg\_asym\_sam\_26\_48\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-3.943 \pm 0.186$   $\chi^2/\text{NDF}: 17502.3/23$

Left Out:  $3.746 \pm 0.079$   $\chi^2/\text{NDF}: 9247.4/24$

Right Out:  $-5.734 \pm 0.172$   $\chi^2/\text{NDF}: 24700.6/28$

Left In:  $3.365 \pm 0.081$   $\chi^2/\text{NDF}: 8527.0/22$

Left:  $3.561 \pm 0.057$   $\chi^2/\text{NDF}: 17785.7/47$

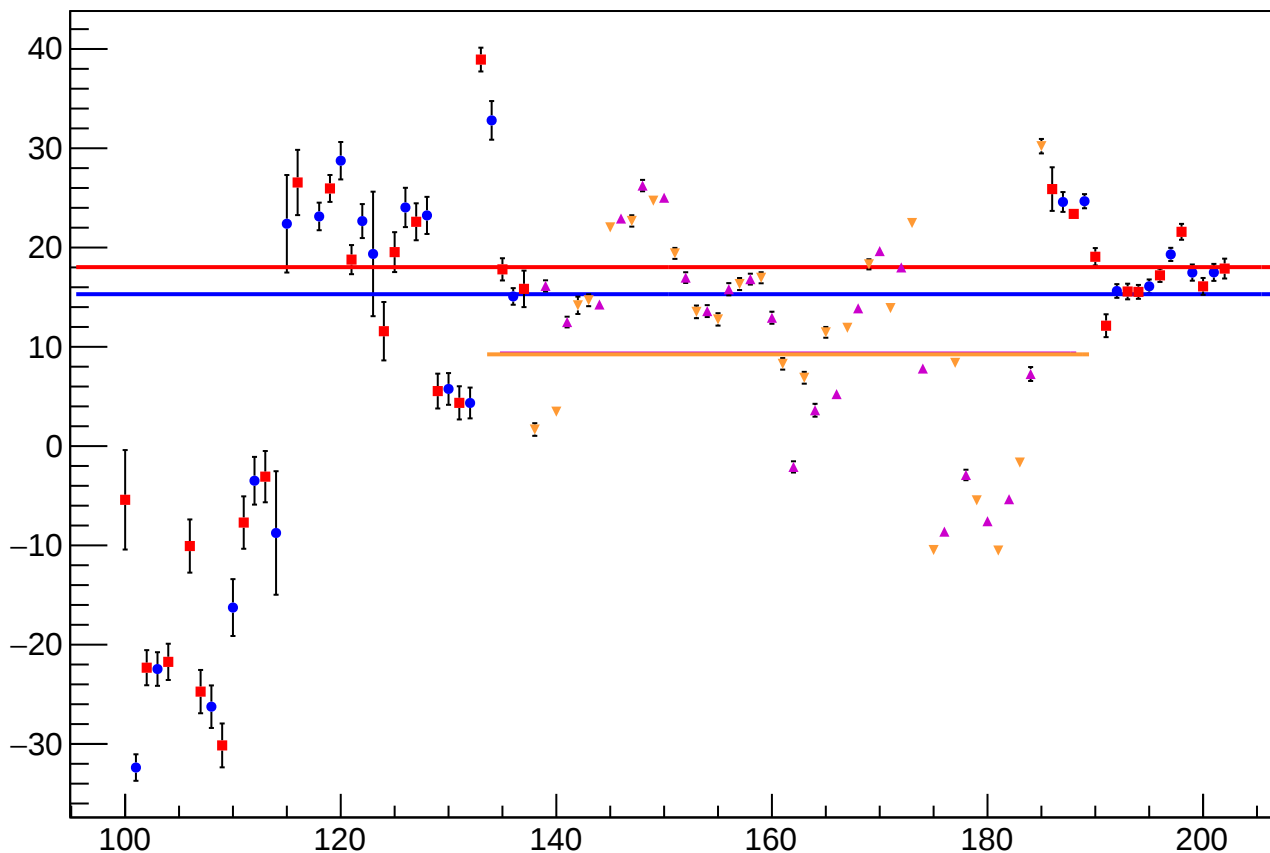
Right:  $-4.909 \pm 0.126$   $\chi^2/\text{NDF}: 42252.8/52$

In:  $2.197 \pm 0.074$   $\chi^2/\text{NDF}: 27322.4/46$

Out:  $2.107 \pm 0.072$   $\chi^2/\text{NDF}: 36453.4/53$

All:  $2.150 \pm 0.052$   $\chi^2/\text{NDF}: 63776.6/100$

reg\_asym\_sam\_26\_48\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 15.302 $\pm$ 0.236  $\chi^2$ /NDF: 2965.1/23

Left Out: 9.242 $\pm$ 0.101  $\chi^2$ /NDF:13633.2/24

Right Out: 18.027 $\pm$ 0.189  $\chi^2$ /NDF: 3002.1/28

Left In: 9.328 $\pm$ 0.103  $\chi^2$ /NDF:11968.5/22

Left: 9.284 $\pm$ 0.072  $\chi^2$ /NDF: 25602.0/47

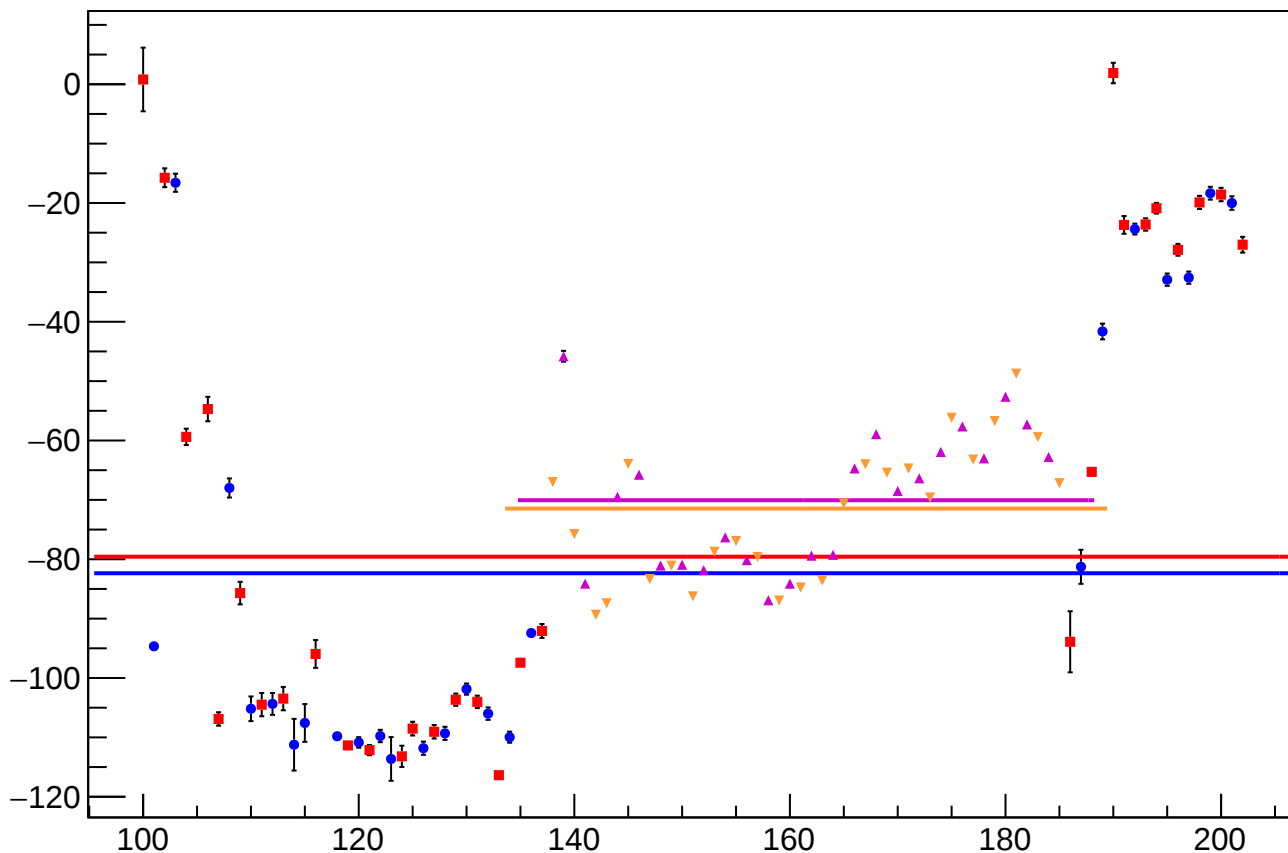
Right: 16.958 $\pm$ 0.148  $\chi^2$ /NDF: 6048.5/52

In: 10.279 $\pm$ 0.094  $\chi^2$ /NDF:15473.8/46

Out: 11.186 $\pm$ 0.089  $\chi^2$ /NDF:18312.9/53

All: 10.758 $\pm$ 0.065  $\chi^2$ /NDF: 33835.7/100

reg\_asym\_sam\_26\_48\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-82.355 \pm 0.217$   $\chi^2/\text{NDF}$ : 25639.2/23

Left Out:  $-71.465 \pm 0.089$   $\chi^2/\text{NDF}$ : 16409.7/24

Right Out:  $-79.573 \pm 0.204$   $\chi^2/\text{NDF}$ : 35858.7/28

Left In:  $-70.061 \pm 0.092$   $\chi^2/\text{NDF}$ : 13058.5/22

Left:  $-70.782 \pm 0.064$   $\chi^2/\text{NDF}$ : 29588.5/47

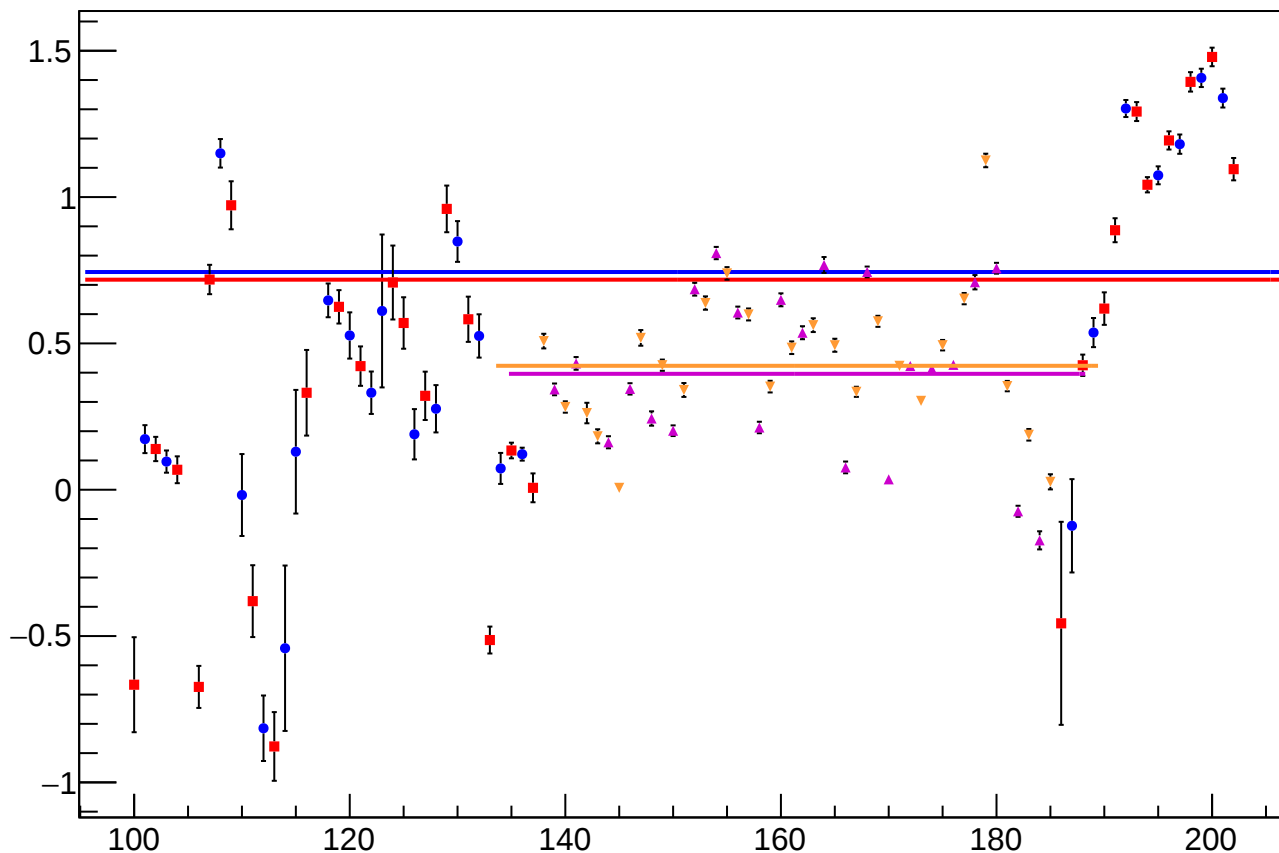
Right:  $-80.877 \pm 0.149$   $\chi^2/\text{NDF}$ : 61585.1/52

In:  $-71.924 \pm 0.084$   $\chi^2/\text{NDF}$ : 41420.1/46

Out:  $-72.770 \pm 0.082$   $\chi^2/\text{NDF}$ : 53595.5/53

All:  $-72.361 \pm 0.059$   $\chi^2/\text{NDF}$ : 95067.3/100

reg\_asym\_sam\_26\_48\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.744 $\pm$ 0.010  $\chi^2$ /NDF: 3335.0/23

Left Out: 0.424 $\pm$ 0.004  $\chi^2$ /NDF:2885.0/24

Right Out: 0.718 $\pm$ 0.009  $\chi^2$ /NDF: 4473.7/28

Left In: 0.396 $\pm$ 0.004  $\chi^2$ /NDF:4051.5/22

Left: 0.410 $\pm$ 0.003  $\chi^2$ /NDF: 6958.5/47

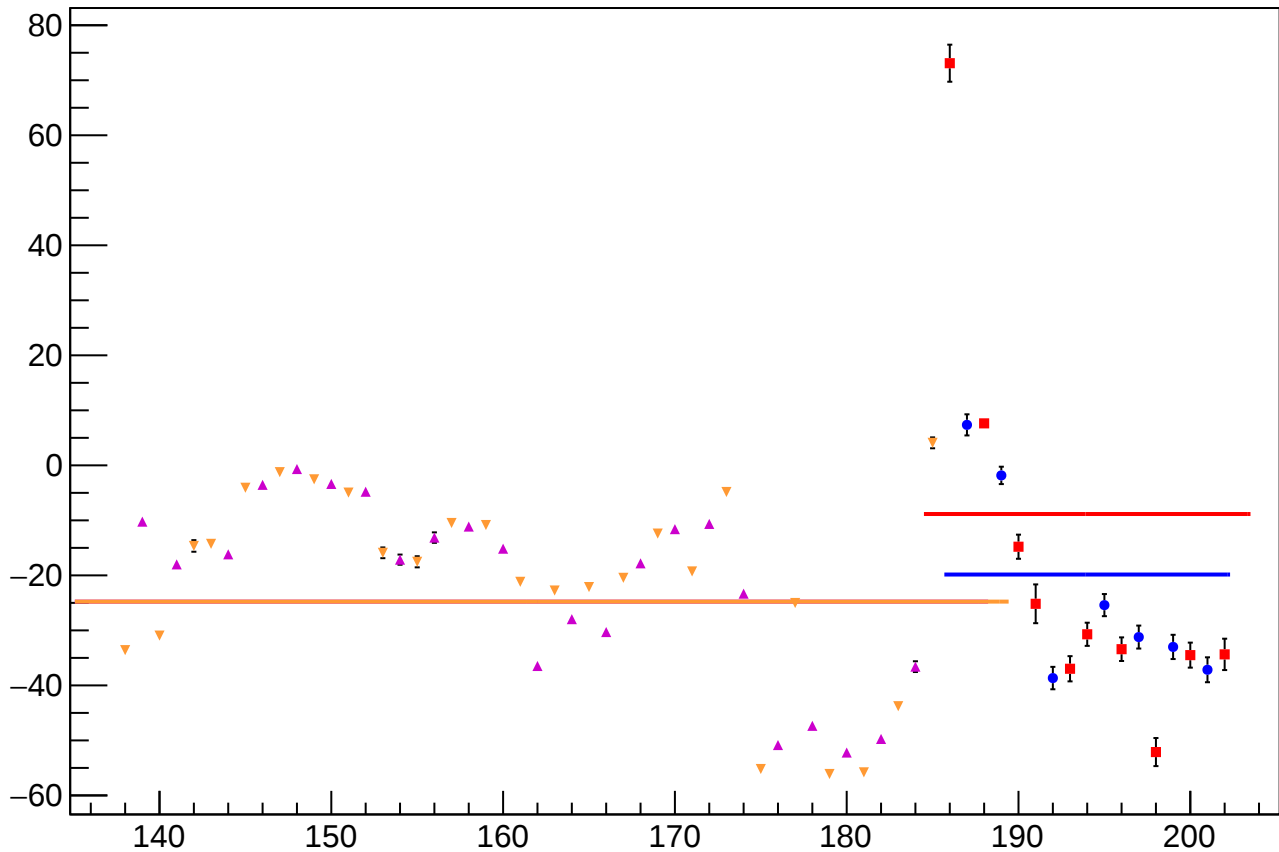
Right: 0.730 $\pm$ 0.006  $\chi^2$ /NDF: 7812.9/52

In: 0.452 $\pm$ 0.004  $\chi^2$ /NDF:8509.2/46

Out: 0.477 $\pm$ 0.004  $\chi^2$ /NDF:8295.6/53

All: 0.465 $\pm$ 0.003  $\chi^2$ /NDF: 16826.6/100

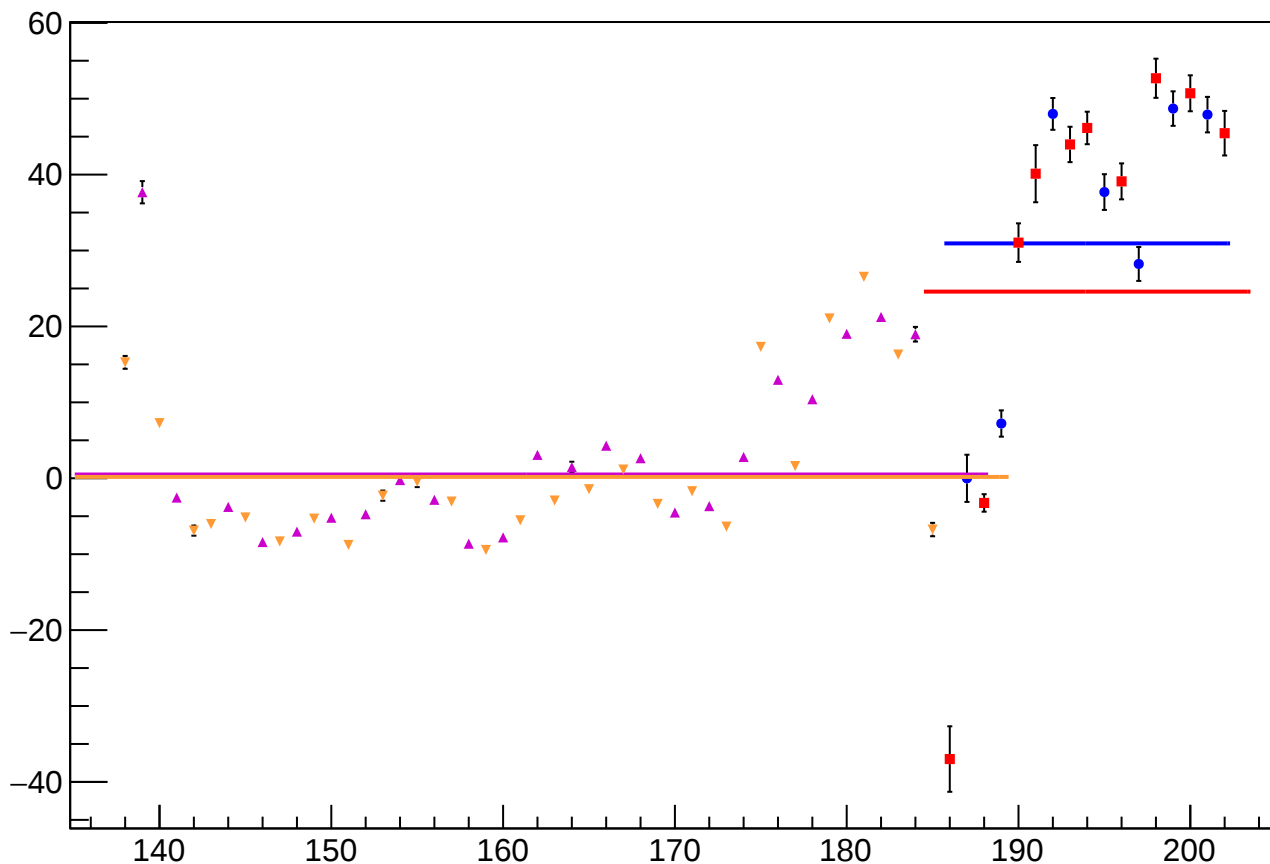
reg\_asym\_sam\_1548\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-19.847 \pm 0.747$   $\chi^2/\text{NDF}$ : 547.5/6  
 Left Out:  $-24.769 \pm 0.139$   $\chi^2/\text{NDF}$ : 18318.8/24  
 Right Out:  $-8.846 \pm 0.574$   $\chi^2/\text{NDF}$ : 1928.6/9  
 Left In:  $-24.775 \pm 0.143$   $\chi^2/\text{NDF}$ : 14807.4/22

Left:  $-24.772 \pm 0.100$   $\chi^2/\text{NDF}$ : 33126.2/47  
 Right:  $-12.923 \pm 0.455$   $\chi^2/\text{NDF}$ : 2612.5/16  
 In:  $-24.601 \pm 0.140$   $\chi^2/\text{NDF}$ : 15396.9/29  
 Out:  $-23.881 \pm 0.135$   $\chi^2/\text{NDF}$ : 20975.1/34  
 All:  $-24.229 \pm 0.097$   $\chi^2/\text{NDF}$ : 36385.6/64

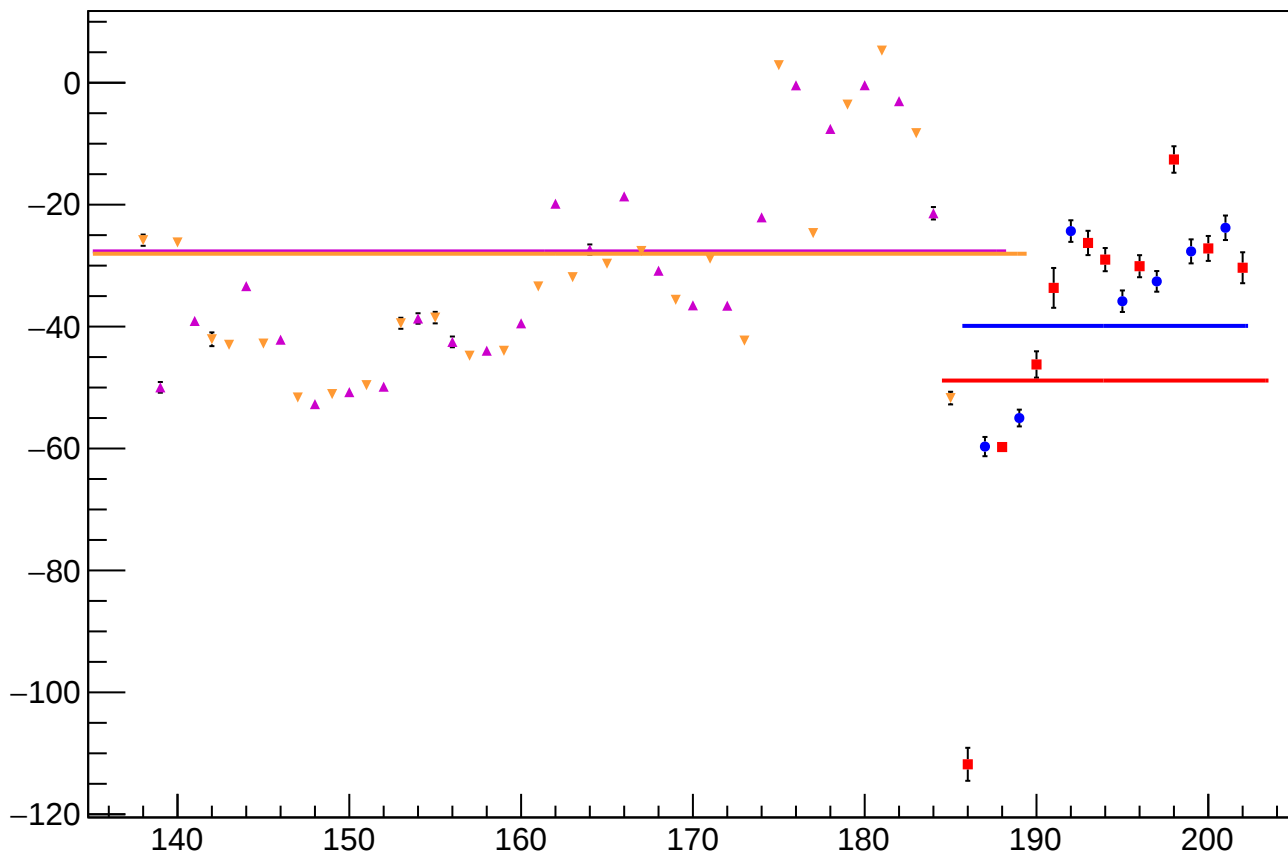
reg\_asym\_sam\_1548\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 30.937+/-0.839  $\chi^2/\text{NDF}$ : 476.3/6  
 Left Out: 0.177+/-0.109  $\chi^2/\text{NDF}$ :8295.6/24  
 Right Out: 24.586+/-0.697  $\chi^2/\text{NDF}$ : 1309.6/9  
 Left In: 0.493+/-0.112  $\chi^2/\text{NDF}$ :6555.4/22

Left: 0.330+/-0.078  $\chi^2/\text{NDF}$ : 14855.0/47  
 Right: 27.182+/-0.536  $\chi^2/\text{NDF}$ : 1819.9/16  
 In: 1.028+/-0.111  $\chi^2/\text{NDF}$ :8326.6/29  
 Out: 0.755+/-0.107  $\chi^2/\text{NDF}$ :10802.0/34  
 All: 0.886+/-0.077  $\chi^2/\text{NDF}$ : 19131.7/64

reg\_asym\_sam\_1548\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-39.885 \pm 0.643$   $\chi^2/\text{NDF}: 481.4/6$

Left Out:  $-28.050 \pm 0.140$   $\chi^2/\text{NDF}: 17144.5/24$

Right Out:  $-48.852 \pm 0.484$   $\chi^2/\text{NDF}: 1636.8/9$

Left In:  $-27.666 \pm 0.142$   $\chi^2/\text{NDF}: 15003.2/22$

Left:  $-27.862 \pm 0.100$   $\chi^2/\text{NDF}: 32151.3/47$

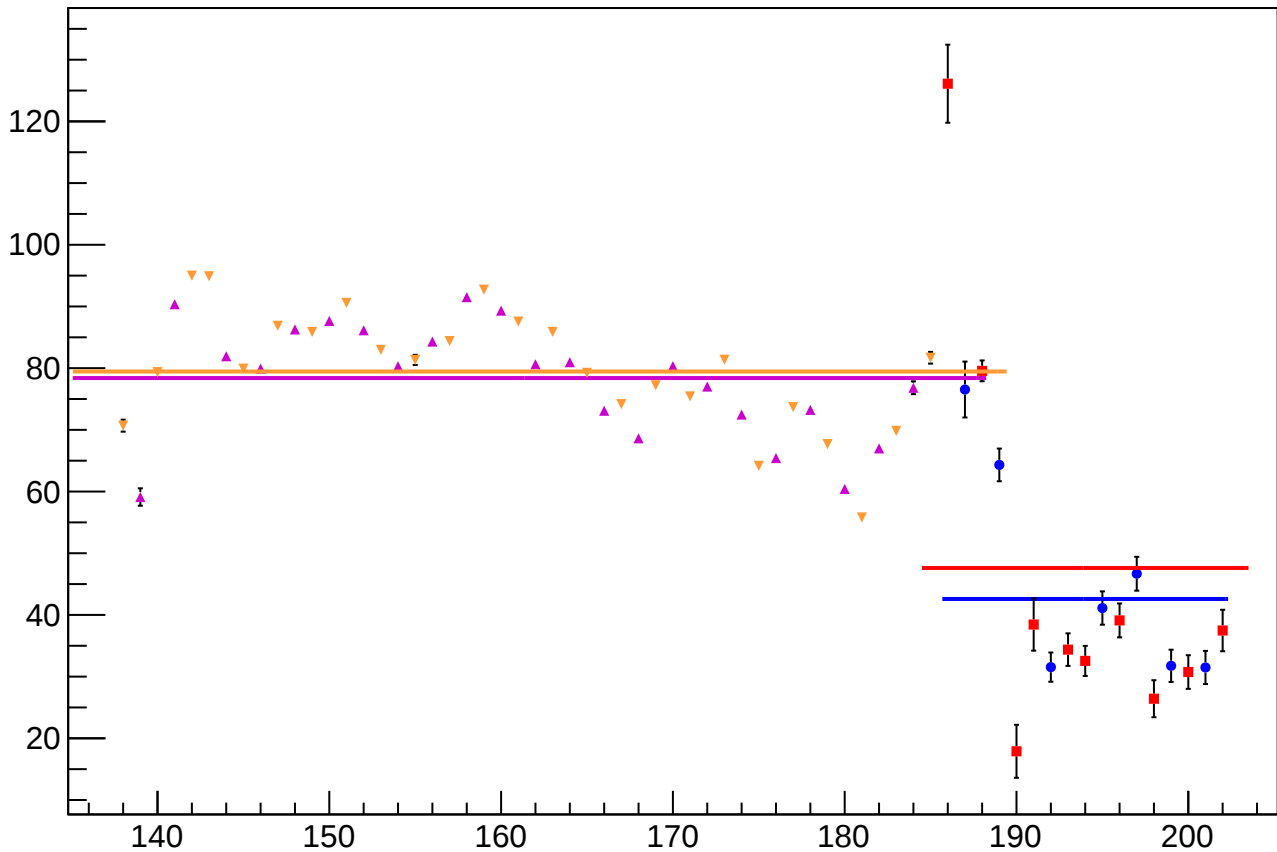
Right:  $-45.606 \pm 0.387$   $\chi^2/\text{NDF}: 2242.4/16$

In:  $-28.239 \pm 0.139$   $\chi^2/\text{NDF}: 15829.2/29$

Out:  $-29.654 \pm 0.134$   $\chi^2/\text{NDF}: 20486.2/34$

All:  $-28.970 \pm 0.097$   $\chi^2/\text{NDF}: 36368.9/64$

reg\_asym\_sam\_1548\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $42.587 \pm 1.041$   $\chi^2/\text{NDF}: 182.0/6$

Left Out:  $79.456 \pm 0.123$   $\chi^2/\text{NDF}: 6077.1/24$

Right Out:  $47.614 \pm 0.889$   $\chi^2/\text{NDF}: 735.4/9$

Left In:  $78.396 \pm 0.127$   $\chi^2/\text{NDF}: 4707.3/22$

Left:  $78.941 \pm 0.088$   $\chi^2/\text{NDF}: 10820.4/47$

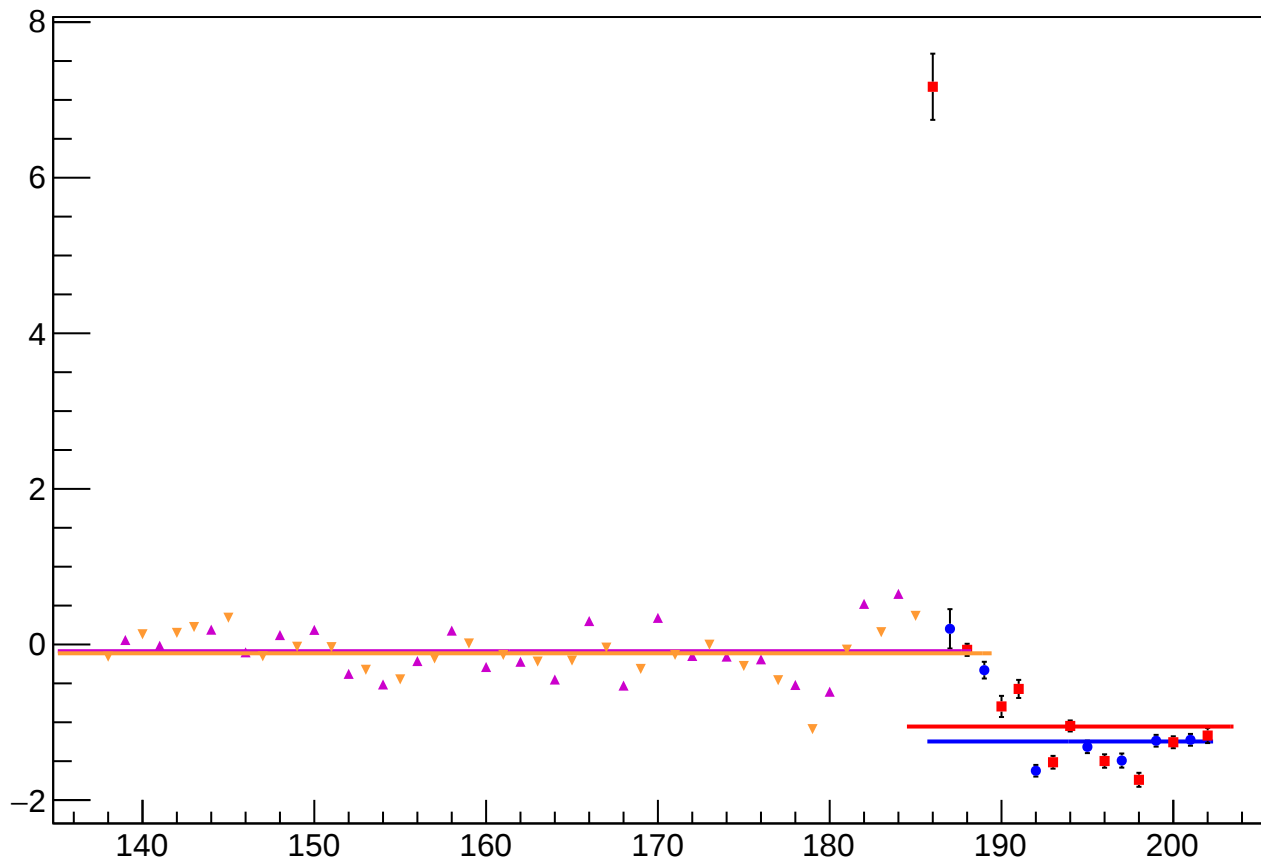
Right:  $45.492 \pm 0.676$   $\chi^2/\text{NDF}: 930.9/16$

In:  $77.873 \pm 0.126$   $\chi^2/\text{NDF}: 6056.4/29$

Out:  $78.856 \pm 0.122$   $\chi^2/\text{NDF}: 8070.4/34$

All:  $78.380 \pm 0.088$   $\chi^2/\text{NDF}: 14158.3/64$

reg\_asym\_sam\_1548\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-1.247 \pm 0.033$   $\chi^2/\text{NDF}$ : 138.9/6

Left Out:  $-0.113 \pm 0.006$   $\chi^2/\text{NDF}$ : 2303.1/24

Right Out:  $-1.055 \pm 0.029$   $\chi^2/\text{NDF}$ : 679.3/9

Left In:  $-0.086 \pm 0.006$   $\chi^2/\text{NDF}$ : 3132.1/22

Left:  $-0.100 \pm 0.004$   $\chi^2/\text{NDF}$ : 5446.4/47

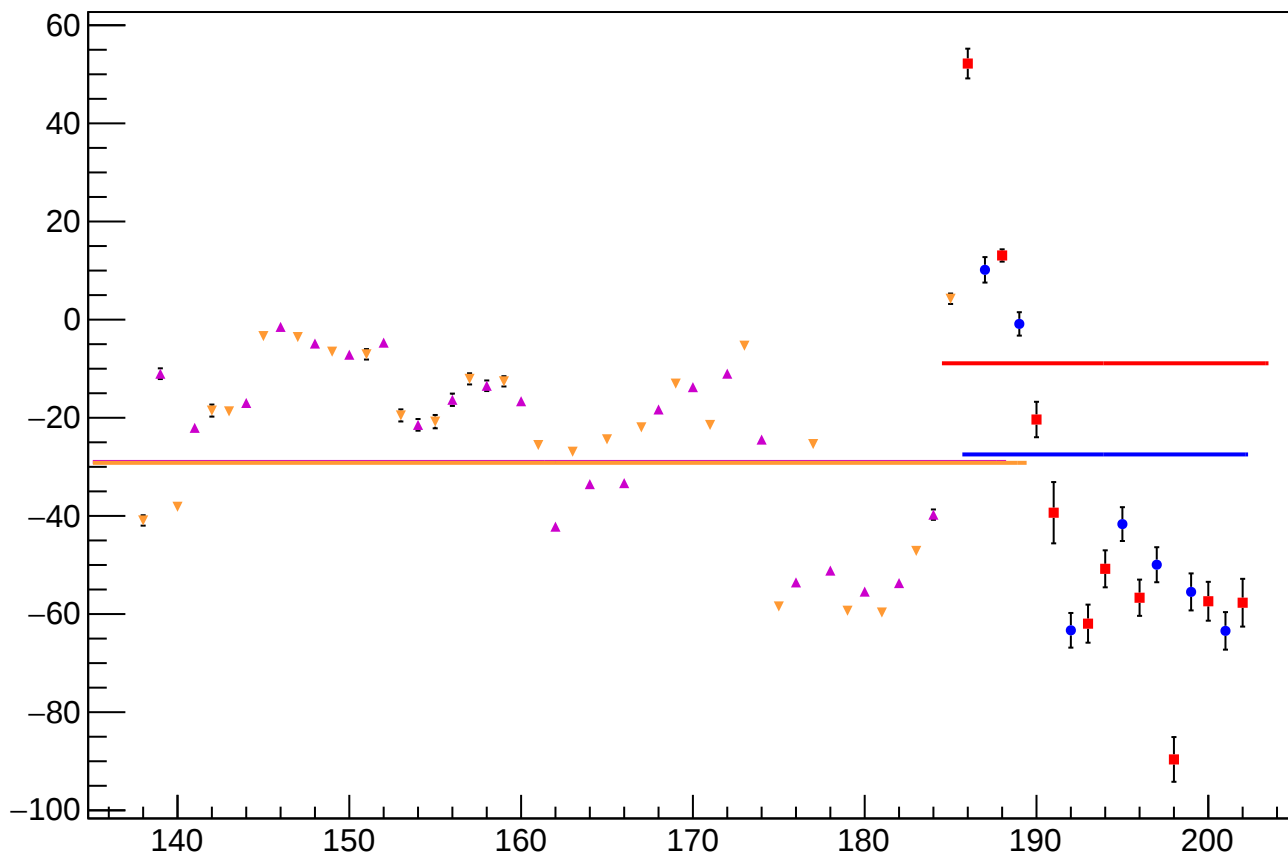
Right:  $-1.138 \pm 0.022$   $\chi^2/\text{NDF}$ : 837.1/16

In:  $-0.120 \pm 0.006$   $\chi^2/\text{NDF}$ : 4454.8/29

Out:  $-0.148 \pm 0.006$   $\chi^2/\text{NDF}$ : 3992.5/34

All:  $-0.134 \pm 0.004$   $\chi^2/\text{NDF}$ : 8459.2/64

reg\_asym\_sam\_3748\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: -27.470 $\pm$ 1.191  $\chi^2$ /NDF: 637.5/6

Left Out: -29.180 $\pm$ 0.157  $\chi^2$ /NDF:16912.2/24

Right Out: -8.896 $\pm$ 0.908  $\chi^2$ /NDF: 1789.9/9

Left In: -29.003 $\pm$ 0.160  $\chi^2$ /NDF:13416.8/22

Left: -29.093 $\pm$ 0.112  $\chi^2$ /NDF: 30329.6/47

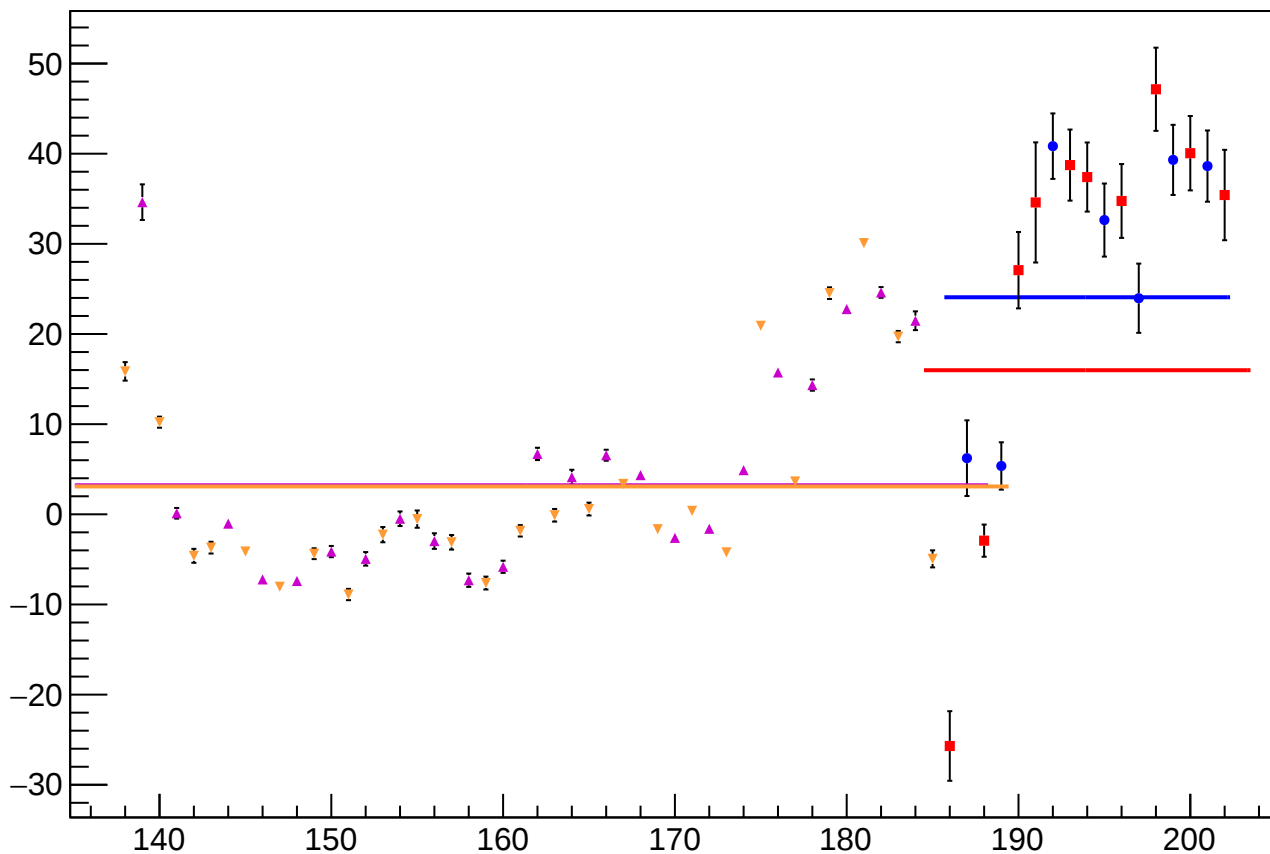
Right: -15.727 $\pm$ 0.722  $\chi^2$ /NDF: 2581.4/16

In: -28.975 $\pm$ 0.158  $\chi^2$ /NDF:14055.9/29

Out: -28.593 $\pm$ 0.154  $\chi^2$ /NDF:19186.8/34

All: -28.779 $\pm$ 0.111  $\chi^2$ /NDF: 33245.7/64

reg\_asym\_sam\_3748\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 24.075 $\pm$ 1.365  $\chi^2$ /NDF: 123.5/6

Left Out: 3.091 $\pm$ 0.124  $\chi^2$ /NDF:8084.1/24

Right Out: 15.983 $\pm$ 1.120  $\chi^2$ /NDF: 423.7/9

Left In: 3.221 $\pm$ 0.127  $\chi^2$ /NDF:6237.6/22

Left: 3.155 $\pm$ 0.089  $\chi^2$ /NDF: 14322.2/47

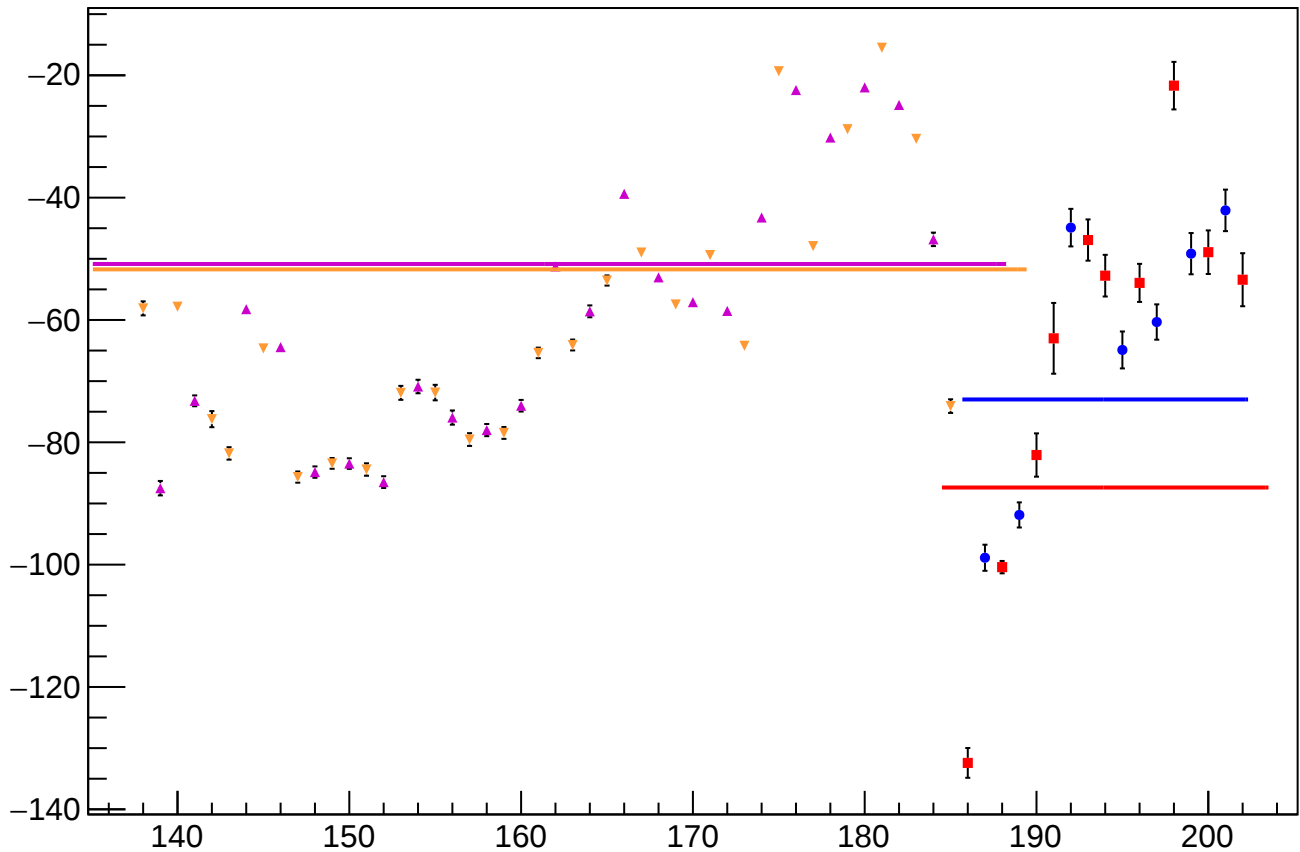
Right: 19.239 $\pm$ 0.866  $\chi^2$ /NDF: 568.2/16

In: 3.400 $\pm$ 0.126  $\chi^2$ /NDF:6592.4/29

Out: 3.248 $\pm$ 0.124  $\chi^2$ /NDF:8638.6/34

All: 3.322 $\pm$ 0.088  $\chi^2$ /NDF: 15231.7/64

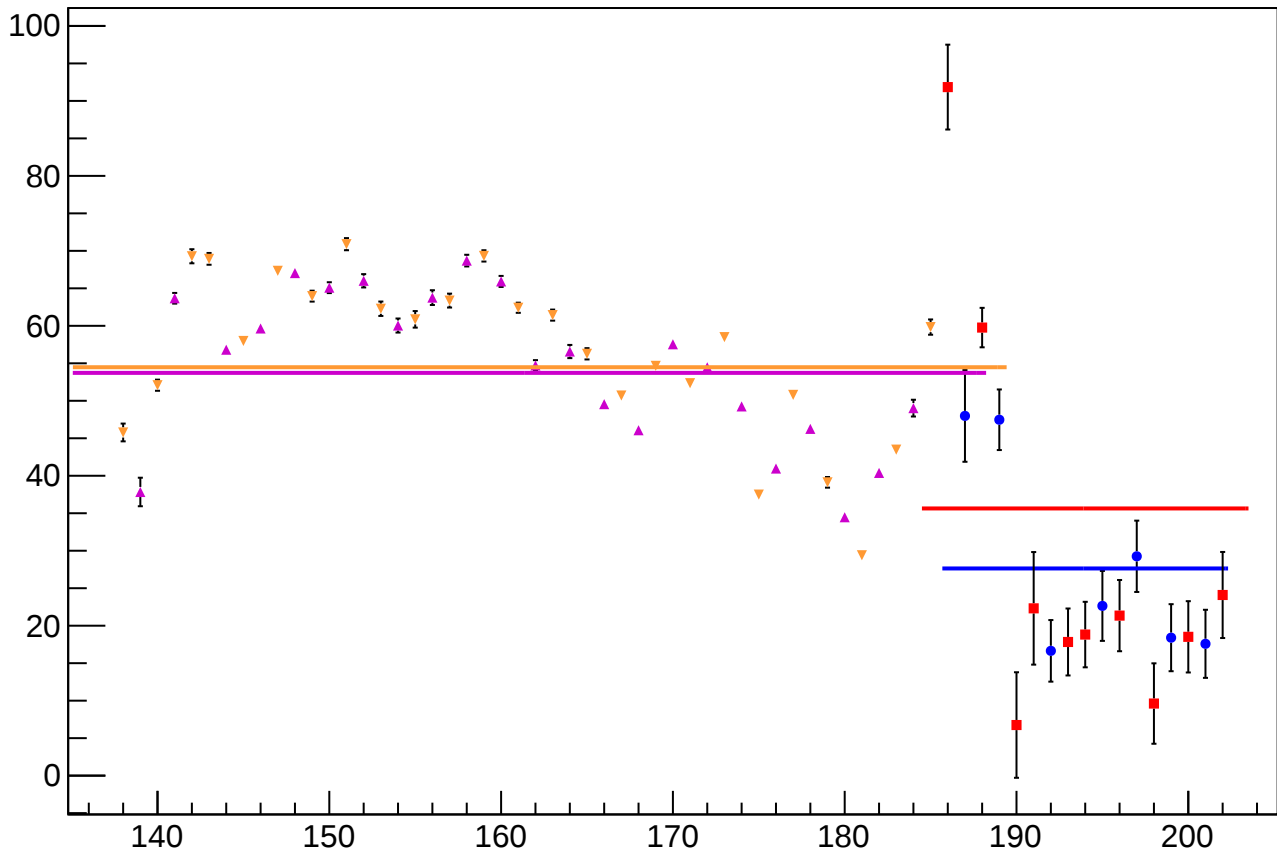
reg\_asym\_sam\_3748\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-72.995 \pm 1.017$   $\chi^2/\text{NDF}: 474.6/6$   
 Left Out:  $-51.729 \pm 0.158$   $\chi^2/\text{NDF}: 19538.0/24$   
 Right Out:  $-87.391 \pm 0.760$   $\chi^2/\text{NDF}: 1354.4/9$   
 Left In:  $-50.844 \pm 0.160$   $\chi^2/\text{NDF}: 17272.0/22$

Left:  $-51.293 \pm 0.112$   $\chi^2/\text{NDF}: 36825.5/47$   
 Right:  $-82.234 \pm 0.609$   $\chi^2/\text{NDF}: 1957.7/16$   
 In:  $-51.380 \pm 0.158$   $\chi^2/\text{NDF}: 18209.7/29$   
 Out:  $-53.206 \pm 0.155$   $\chi^2/\text{NDF}: 23004.7/34$   
 All:  $-52.314 \pm 0.111$   $\chi^2/\text{NDF}: 41282.6/64$

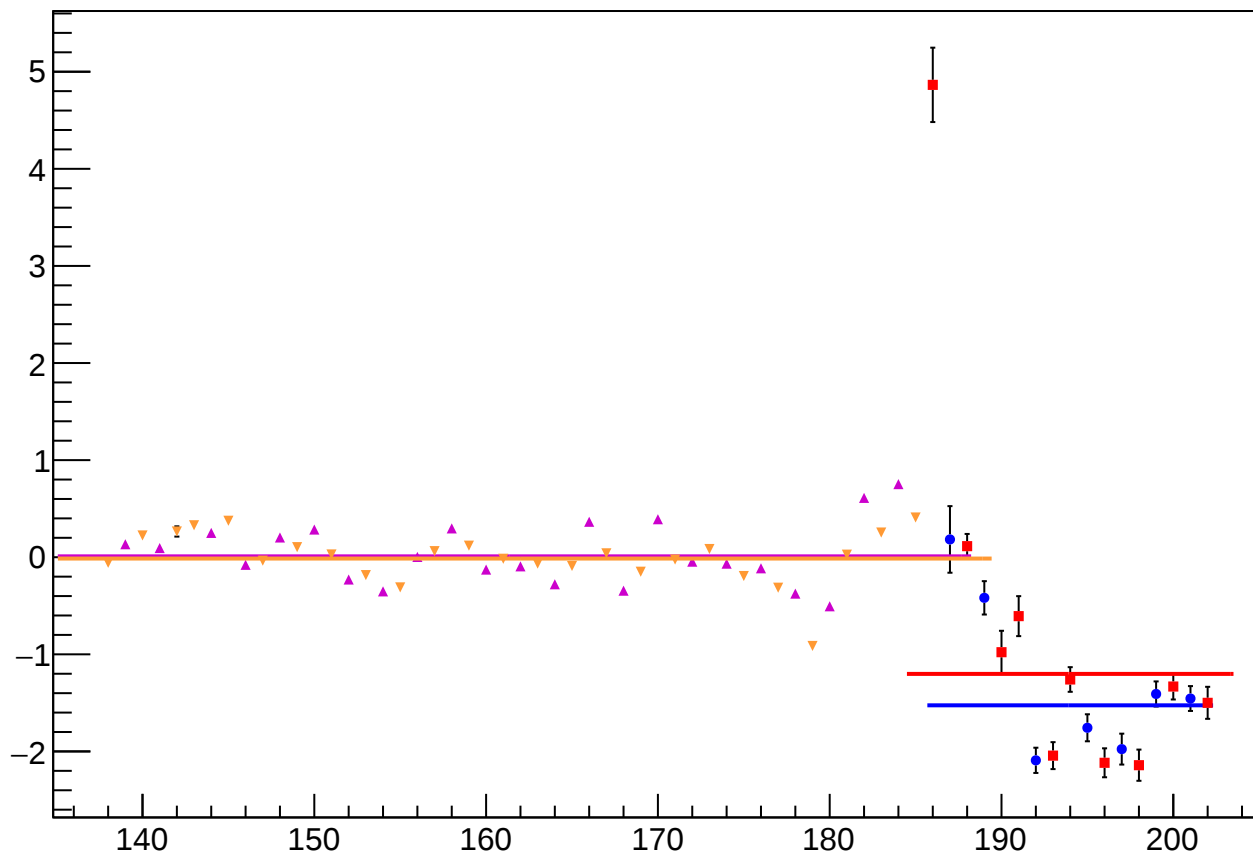
reg\_asym\_sam\_3748\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 27.635 $\pm$ 1.725  $\chi^2$ /NDF: 52.7/6  
 Left Out: 54.476 $\pm$ 0.140  $\chi^2$ /NDF: 6266.9/24  
 Right Out: 35.639 $\pm$ 1.459  $\chi^2$ /NDF: 283.0/9  
 Left In: 53.724 $\pm$ 0.143  $\chi^2$ /NDF: 4585.7/22

Left: 54.107 $\pm$ 0.100  $\chi^2$ /NDF: 10866.7/47  
 Right: 32.301 $\pm$ 1.114  $\chi^2$ /NDF: 348.3/16  
 In: 53.545 $\pm$ 0.143  $\chi^2$ /NDF: 4865.5/29  
 Out: 54.304 $\pm$ 0.140  $\chi^2$ /NDF: 6715.0/34  
 All: 53.933 $\pm$ 0.100  $\chi^2$ /NDF: 11595.0/64

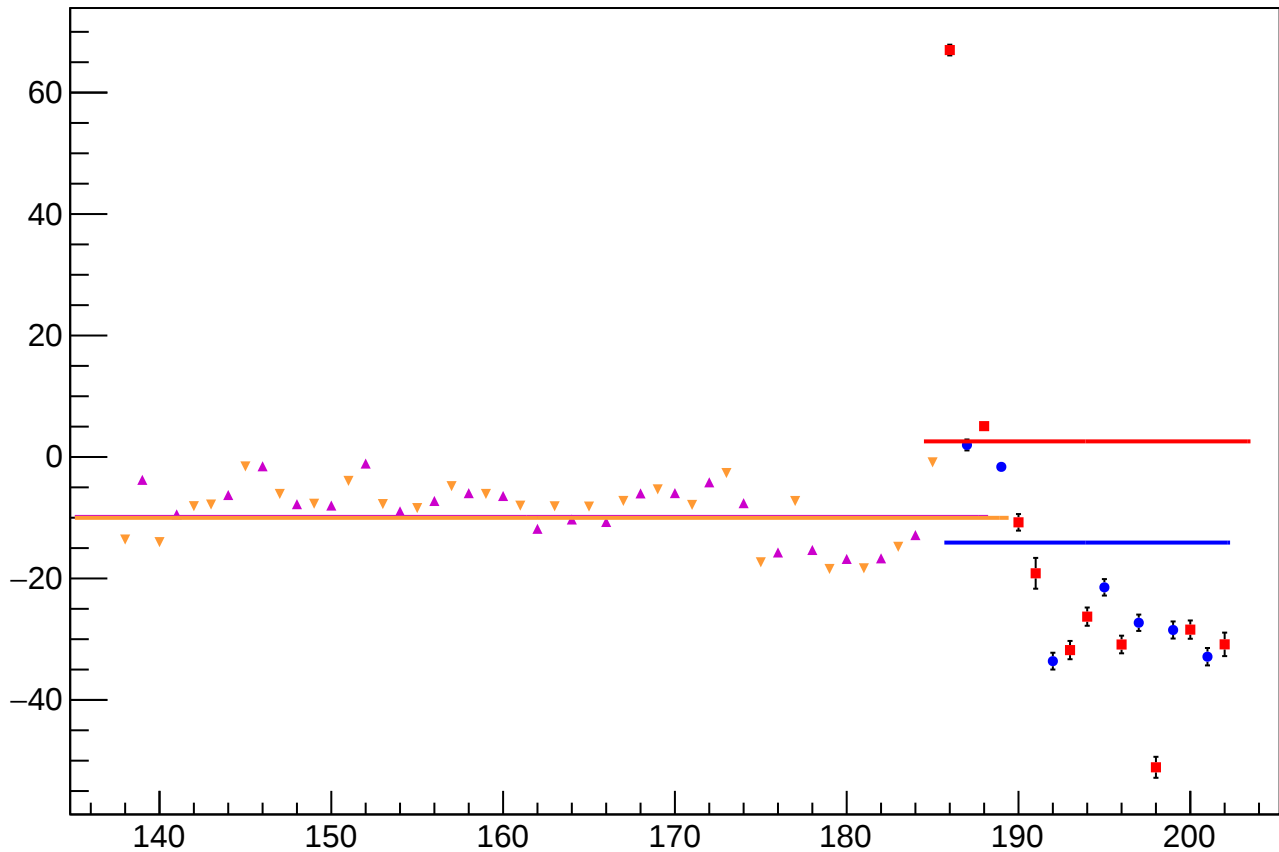
reg\_asym\_sam\_3748\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-1.525 \pm 0.056$   $\chi^2/\text{NDF}: 97.2/6$   
 Left Out:  $-0.014 \pm 0.006$   $\chi^2/\text{NDF}: 1654.7/24$   
 Right Out:  $-1.202 \pm 0.050$   $\chi^2/\text{NDF}: 482.8/9$   
 Left In:  $0.009 \pm 0.007$   $\chi^2/\text{NDF}: 2220.5/22$

Left:  $-0.003 \pm 0.005$   $\chi^2/\text{NDF}: 3881.4/47$   
 Right:  $-1.343 \pm 0.037$   $\chi^2/\text{NDF}: 598.5/16$   
 In:  $-0.011 \pm 0.007$   $\chi^2/\text{NDF}: 3046.2/29$   
 Out:  $-0.033 \pm 0.006$   $\chi^2/\text{NDF}: 2699.5/34$   
 All:  $-0.023 \pm 0.005$   $\chi^2/\text{NDF}: 5751.4/64$

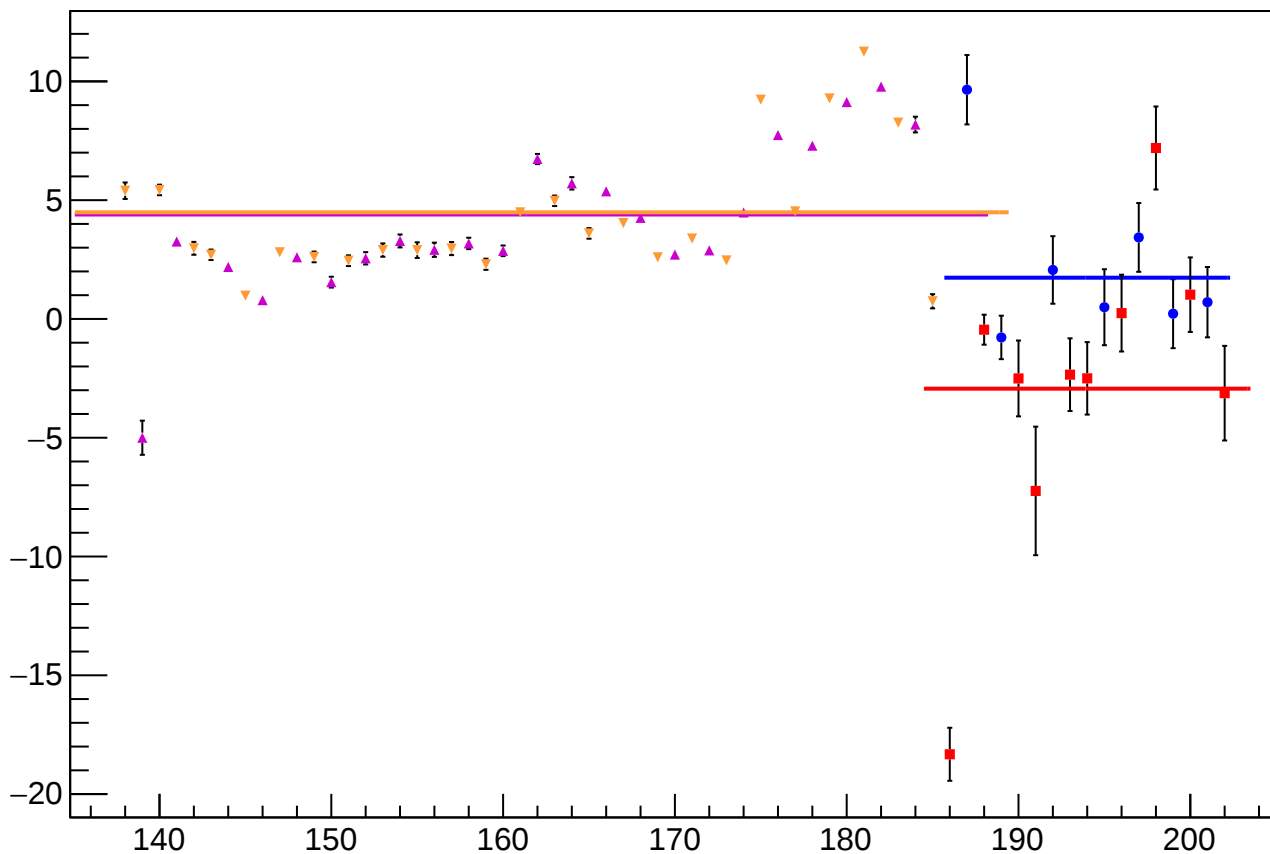
reg\_asym\_sam\_1526\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-14.092 \pm 0.434$   $\chi^2/\text{NDF}: 1145.8/6$   
 Left Out:  $-10.017 \pm 0.051$   $\chi^2/\text{NDF}: 12552.8/24$   
 Right Out:  $2.570 \pm 0.326$   $\chi^2/\text{NDF}: 8610.3/9$   
 Left In:  $-9.865 \pm 0.051$   $\chi^2/\text{NDF}: 9345.4/22$

Left:  $-9.942 \pm 0.036$   $\chi^2/\text{NDF}: 21902.5/47$   
 Right:  $-3.433 \pm 0.261$   $\chi^2/\text{NDF}: 10697.1/16$   
 In:  $-9.924 \pm 0.051$   $\chi^2/\text{NDF}: 10584.5/29$   
 Out:  $-9.720 \pm 0.050$   $\chi^2/\text{NDF}: 22618.4/34$   
 All:  $-9.820 \pm 0.036$   $\chi^2/\text{NDF}: 33211.0/64$

reg\_asym\_sam\_1526\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $1.736 \pm 0.503$   $\chi^2/\text{NDF}: 40.5/6$

Left Out:  $4.489 \pm 0.041$   $\chi^2/\text{NDF}: 4832.3/24$

Right Out:  $-2.935 \pm 0.406$   $\chi^2/\text{NDF}: 252.3/9$

Left In:  $4.396 \pm 0.041$   $\chi^2/\text{NDF}: 4230.4/22$

Left:  $4.443 \pm 0.029$   $\chi^2/\text{NDF}: 9065.3/47$

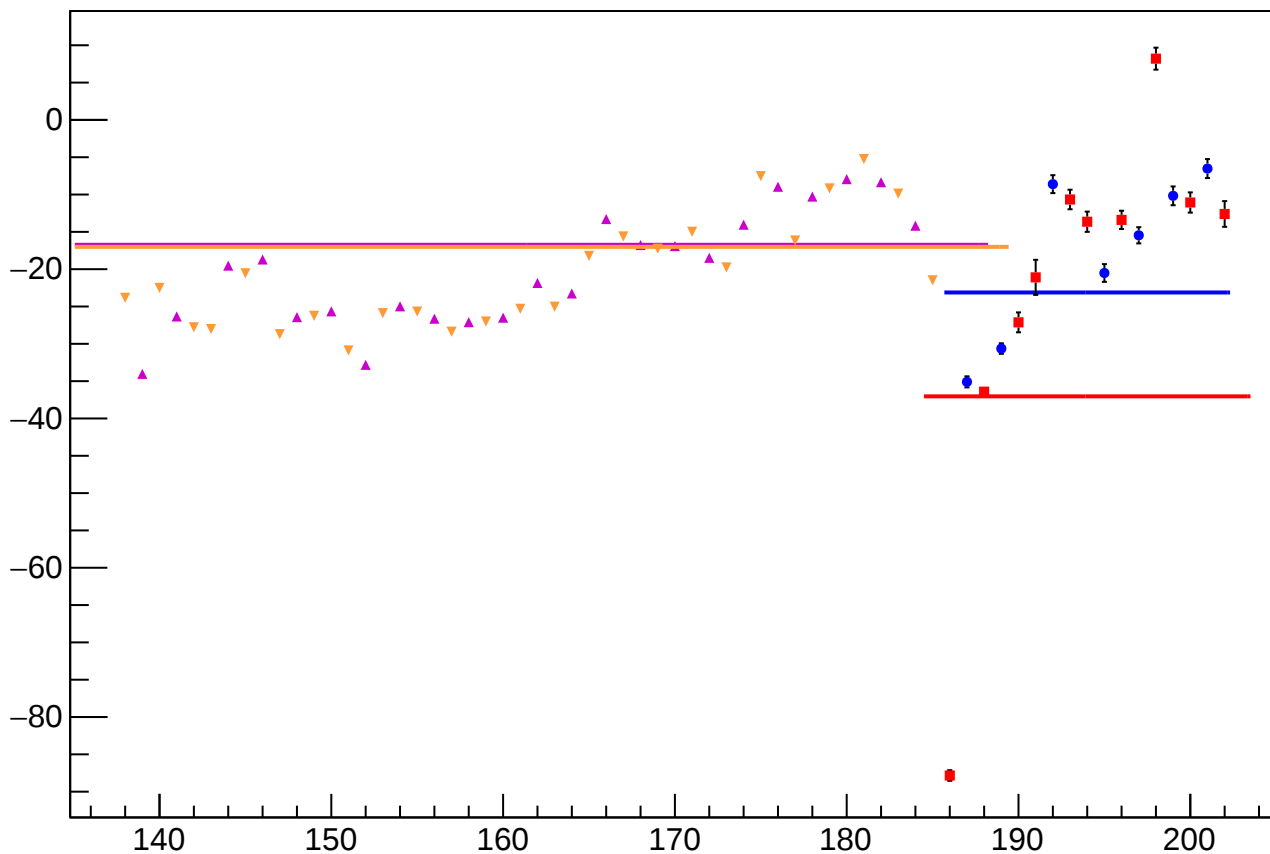
Right:  $-1.091 \pm 0.316$   $\chi^2/\text{NDF}: 345.1/16$

In:  $4.378 \pm 0.041$   $\chi^2/\text{NDF}: 4298.7/29$

Out:  $4.415 \pm 0.040$   $\chi^2/\text{NDF}: 5415.8/34$

All:  $4.397 \pm 0.029$   $\chi^2/\text{NDF}: 9715.0/64$

reg\_asym\_sam\_1526\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-23.120 \pm 0.369$   $\chi^2/\text{NDF}$ : 850.8/6

Left Out:  $-17.008 \pm 0.051$   $\chi^2/\text{NDF}$ : 22094.7/24

Right Out:  $-37.038 \pm 0.271$   $\chi^2/\text{NDF}$ : 7799.5/9

Left In:  $-16.732 \pm 0.052$   $\chi^2/\text{NDF}$ : 18777.2/22

Left:  $-16.871 \pm 0.036$   $\chi^2/\text{NDF}$ : 40886.5/47

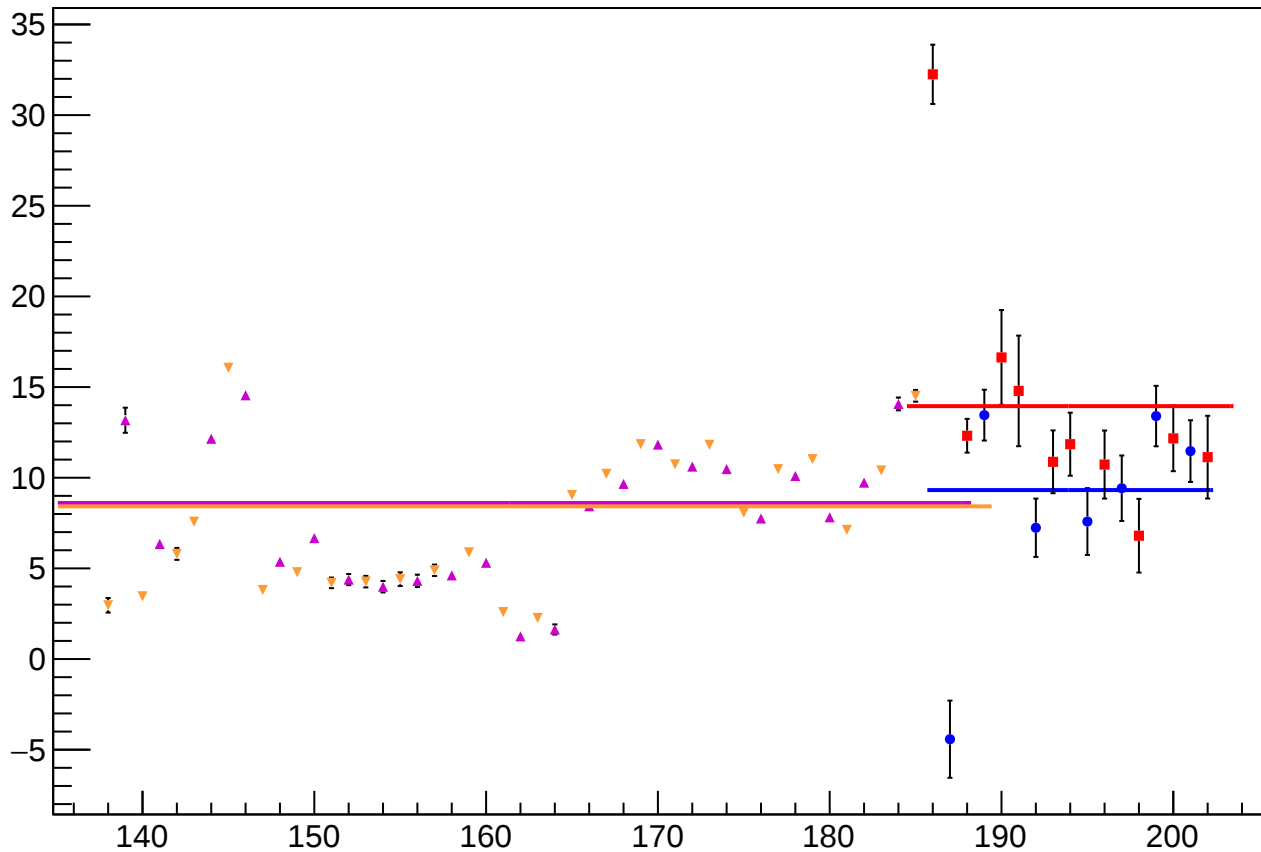
Right:  $-32.165 \pm 0.219$   $\chi^2/\text{NDF}$ : 9572.6/16

In:  $-16.853 \pm 0.051$   $\chi^2/\text{NDF}$ : 19921.3/29

Out:  $-17.694 \pm 0.050$   $\chi^2/\text{NDF}$ : 35163.0/34

All:  $-17.281 \pm 0.036$   $\chi^2/\text{NDF}$ : 55222.3/64

reg\_asym\_sam\_1526\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $9.319 \pm 0.642$   $\chi^2/\text{NDF}$ : 60.5/6

Left Out:  $8.422 \pm 0.046$   $\chi^2/\text{NDF}$ : 6470.1/24

Right Out:  $13.948 \pm 0.537$   $\chi^2/\text{NDF}$ : 151.9/9

Left In:  $8.606 \pm 0.046$   $\chi^2/\text{NDF}$ : 5504.2/22

Left:  $8.513 \pm 0.032$   $\chi^2/\text{NDF}$ : 11982.4/47

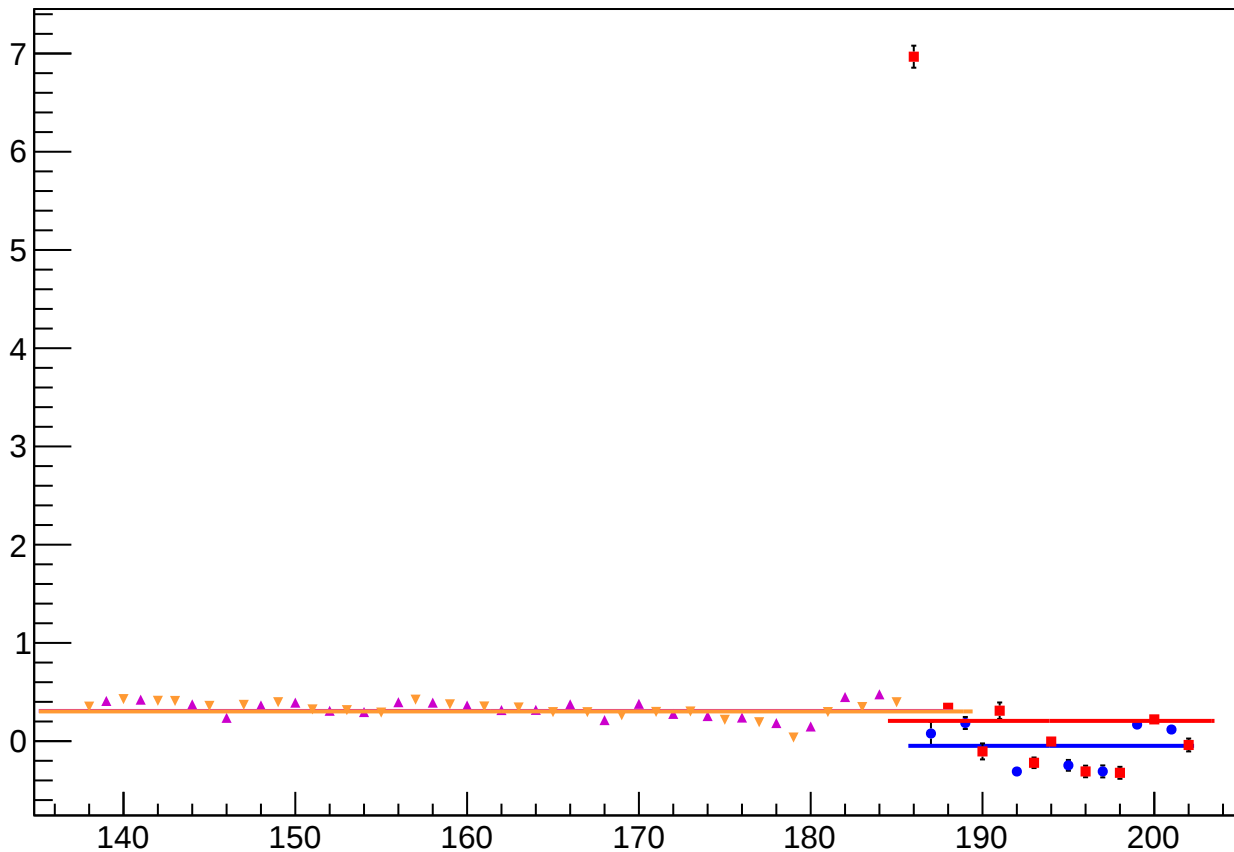
Right:  $12.044 \pm 0.412$   $\chi^2/\text{NDF}$ : 243.0/16

In:  $8.610 \pm 0.046$   $\chi^2/\text{NDF}$ : 5566.0/29

Out:  $8.461 \pm 0.045$   $\chi^2/\text{NDF}$ : 6727.1/34

All:  $8.535 \pm 0.032$   $\chi^2/\text{NDF}$ : 12298.4/64

reg\_asym\_sam\_1526\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.048 \pm 0.021$   $\chi^2/\text{NDF}: 105.3/6$

Left Out:  $0.302 \pm 0.002$   $\chi^2/\text{NDF}: 1590.9/24$

Right Out:  $0.206 \pm 0.019$   $\chi^2/\text{NDF}: 3903.0/9$

Left In:  $0.307 \pm 0.002$   $\chi^2/\text{NDF}: 1699.5/22$

Left:  $0.305 \pm 0.001$   $\chi^2/\text{NDF}: 3293.0/47$

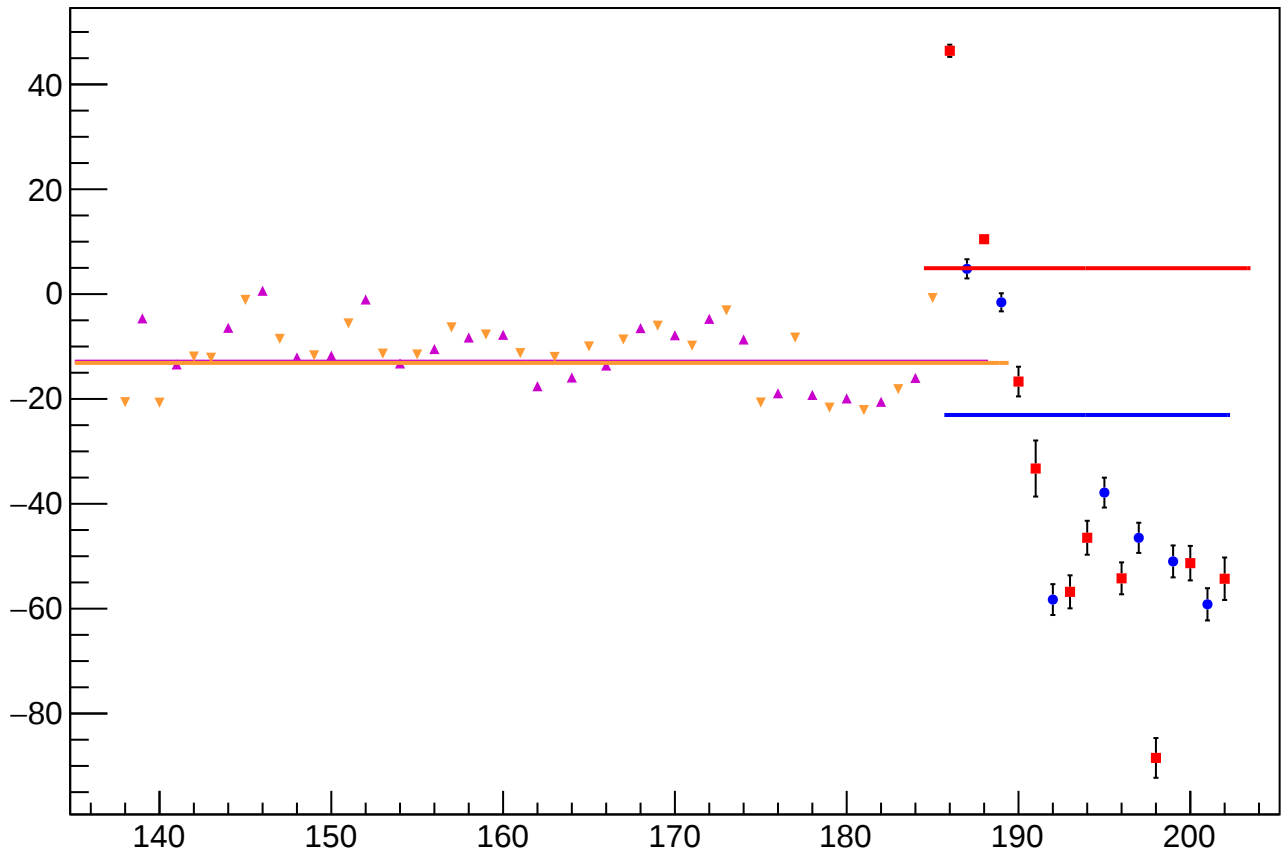
Right:  $0.095 \pm 0.014$   $\chi^2/\text{NDF}: 4087.4/16$

In:  $0.304 \pm 0.002$   $\chi^2/\text{NDF}: 2077.8/29$

Out:  $0.301 \pm 0.002$   $\chi^2/\text{NDF}: 5519.5/34$

All:  $0.303 \pm 0.001$   $\chi^2/\text{NDF}: 7598.0/64$

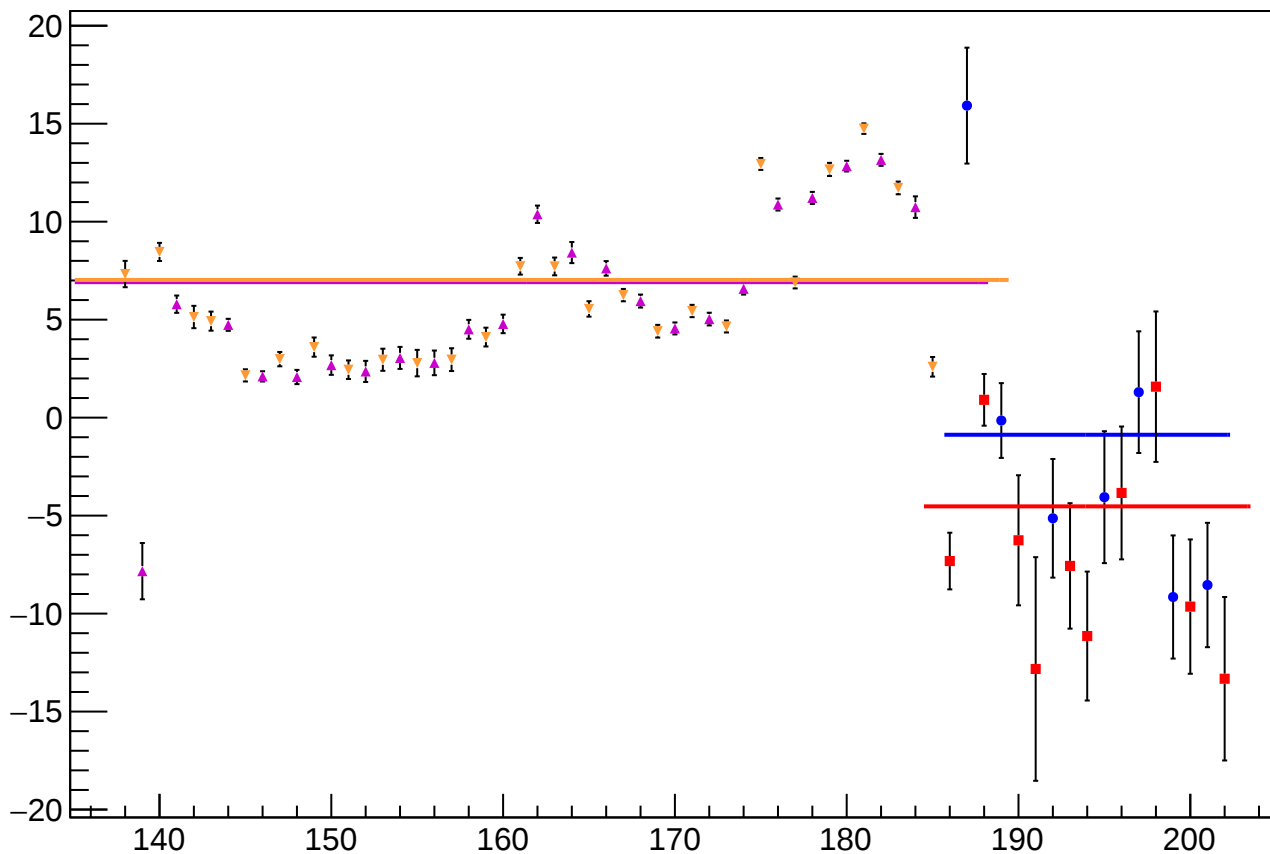
reg\_asym\_sam\_3726\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-23.056 \pm 0.910$   $\chi^2/\text{NDF}: 845.9/6$   
 Left Out:  $-13.125 \pm 0.094$   $\chi^2/\text{NDF}: 5977.6/24$   
 Right Out:  $4.938 \pm 0.623$   $\chi^2/\text{NDF}: 3535.4/9$   
 Left In:  $-12.885 \pm 0.095$   $\chi^2/\text{NDF}: 4776.2/22$

Left:  $-13.007 \pm 0.067$   $\chi^2/\text{NDF}: 10757.0/47$   
 Right:  $-4.006 \pm 0.514$   $\chi^2/\text{NDF}: 5025.4/16$   
 In:  $-12.995 \pm 0.095$   $\chi^2/\text{NDF}: 5745.7/29$   
 Out:  $-12.726 \pm 0.093$   $\chi^2/\text{NDF}: 10333.8/34$   
 All:  $-12.858 \pm 0.066$   $\chi^2/\text{NDF}: 16083.6/64$

reg\_asym\_sam\_3726\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-0.874 \pm 1.060$   $\chi^2/\text{NDF}: 48.6/6$

Left Out:  $7.028 \pm 0.077$   $\chi^2/\text{NDF}: 2665.3/24$

Right Out:  $-4.528 \pm 0.776$   $\chi^2/\text{NDF}: 37.3/9$

Left In:  $6.914 \pm 0.078$   $\chi^2/\text{NDF}: 2428.2/22$

Left:  $6.971 \pm 0.055$   $\chi^2/\text{NDF}: 5094.6/47$

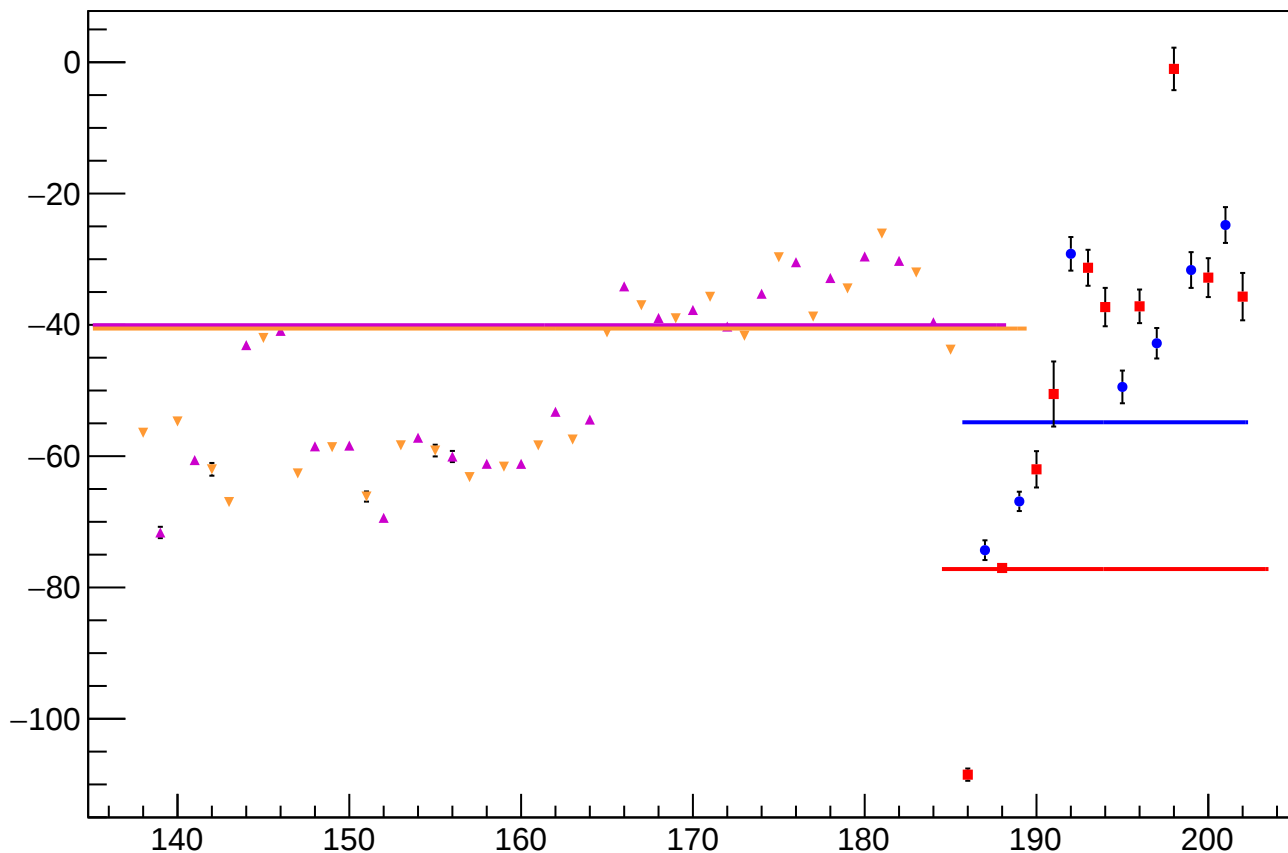
Right:  $-3.253 \pm 0.626$   $\chi^2/\text{NDF}: 93.6/16$

In:  $6.872 \pm 0.078$   $\chi^2/\text{NDF}: 2530.5/29$

Out:  $6.914 \pm 0.077$   $\chi^2/\text{NDF}: 2922.3/34$

All:  $6.894 \pm 0.055$   $\chi^2/\text{NDF}: 5453.0/64$

reg\_asym\_sam\_3726\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-54.837 \pm 0.773$   $\chi^2/\text{NDF}$ : 560.8/6

Left Out:  $-40.563 \pm 0.095$   $\chi^2/\text{NDF}$ : 15637.6/24

Right Out:  $-77.193 \pm 0.515$   $\chi^2/\text{NDF}$ : 2802.2/9

Left In:  $-40.053 \pm 0.096$   $\chi^2/\text{NDF}$ : 13927.3/22

Left:  $-40.310 \pm 0.067$   $\chi^2/\text{NDF}$ : 29579.2/47

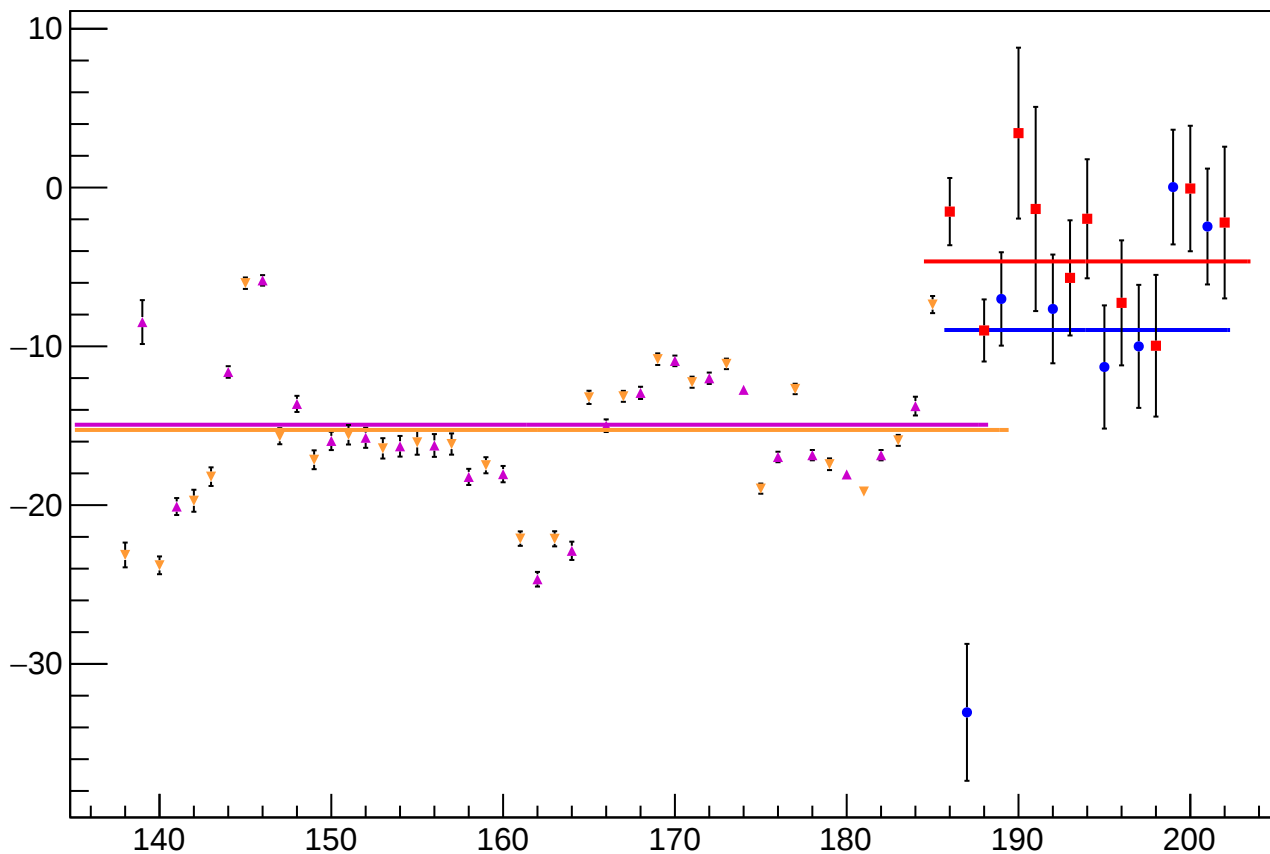
Right:  $-70.326 \pm 0.428$   $\chi^2/\text{NDF}$ : 3942.3/16

In:  $-40.276 \pm 0.095$   $\chi^2/\text{NDF}$ : 14848.3/29

Out:  $-41.762 \pm 0.093$   $\chi^2/\text{NDF}$ : 23337.0/34

All:  $-41.033 \pm 0.066$   $\chi^2/\text{NDF}$ : 38310.1/64

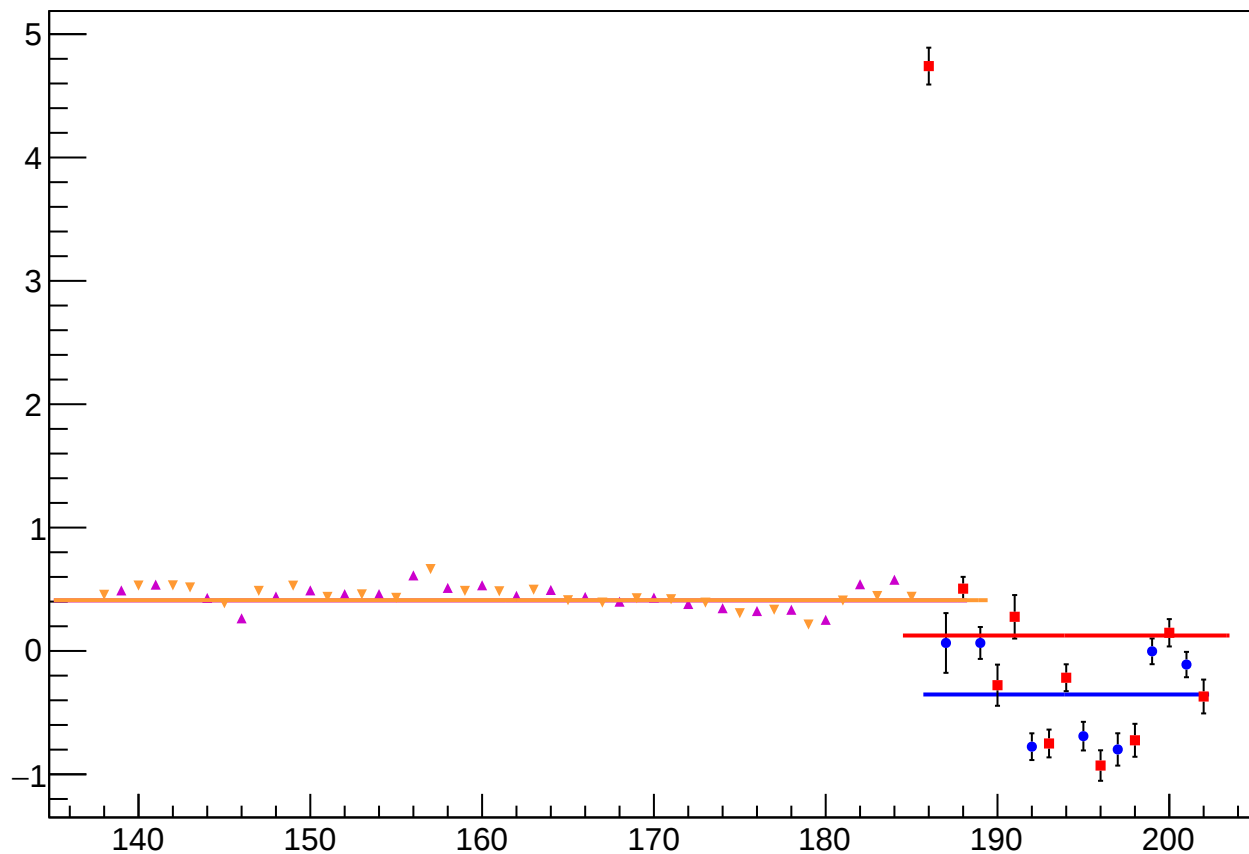
reg\_asym\_sam\_3726\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-8.971 \pm 1.361$   $\chi^2/\text{NDF}$ : 41.6/6  
 Left Out:  $-15.266 \pm 0.086$   $\chi^2/\text{NDF}$ : 2595.5/24  
 Right Out:  $-4.652 \pm 1.047$   $\chi^2/\text{NDF}$ : 13.7/9  
 Left In:  $-14.936 \pm 0.087$   $\chi^2/\text{NDF}$ : 2199.7/22

Left:  $-15.103 \pm 0.061$   $\chi^2/\text{NDF}$ : 4802.4/47  
 Right:  $-6.256 \pm 0.830$   $\chi^2/\text{NDF}$ : 61.7/16  
 In:  $-14.912 \pm 0.087$   $\chi^2/\text{NDF}$ : 2260.4/29  
 Out:  $-15.195 \pm 0.086$   $\chi^2/\text{NDF}$ : 2711.3/34  
 All:  $-15.055 \pm 0.061$   $\chi^2/\text{NDF}$ : 4977.2/64

reg\_asym\_sam\_3726\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.353 \pm 0.046$   $\chi^2/\text{NDF}$ : 65.5/6

Left Out:  $0.411 \pm 0.004$   $\chi^2/\text{NDF}$ : 428.7/24

Right Out:  $0.125 \pm 0.039$   $\chi^2/\text{NDF}$ : 1173.6/9

Left In:  $0.409 \pm 0.004$   $\chi^2/\text{NDF}$ : 557.8/22

Left:  $0.410 \pm 0.003$   $\chi^2/\text{NDF}$ : 986.7/47

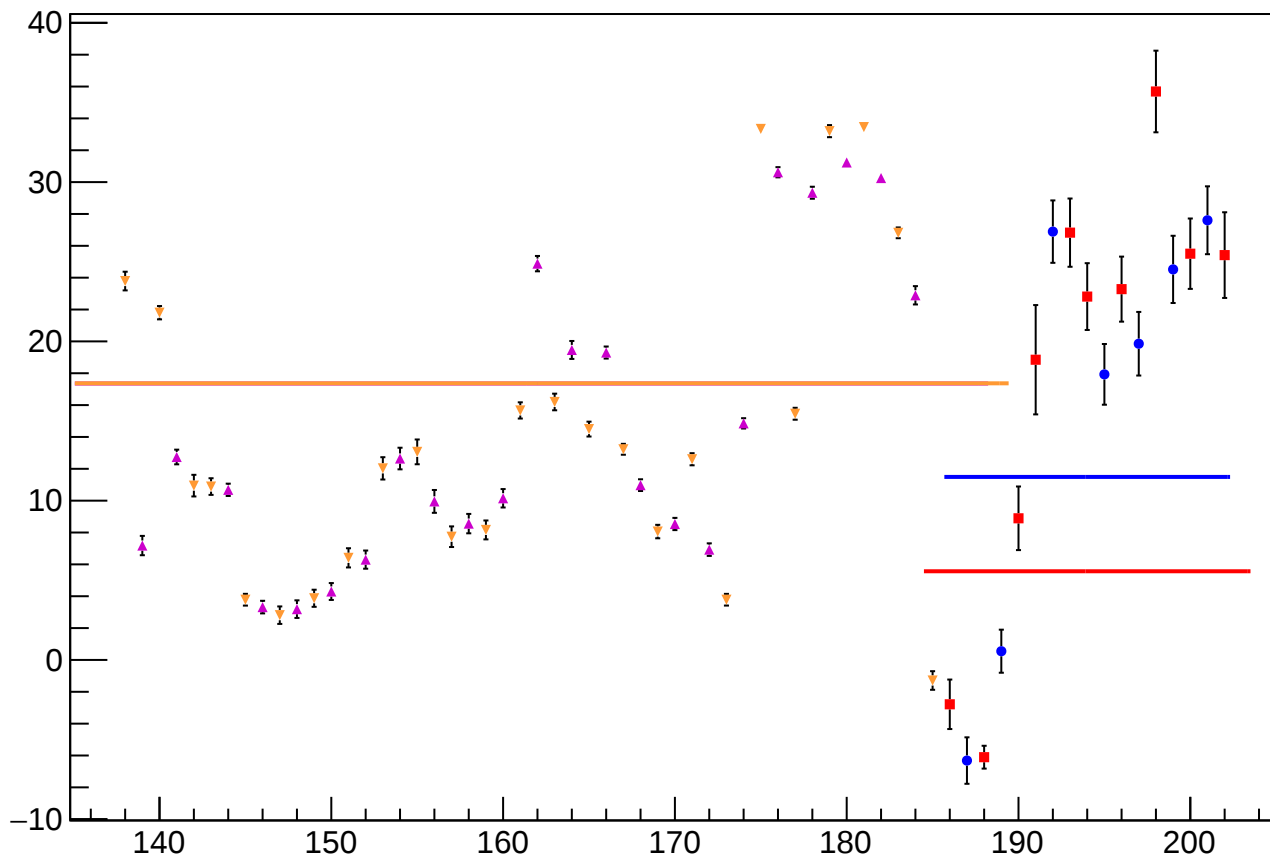
Right:  $-0.080 \pm 0.030$   $\chi^2/\text{NDF}$ : 1301.9/16

In:  $0.404 \pm 0.004$   $\chi^2/\text{NDF}$ : 900.7/29

Out:  $0.409 \pm 0.004$   $\chi^2/\text{NDF}$ : 1654.3/34

All:  $0.406 \pm 0.003$   $\chi^2/\text{NDF}$ : 2555.8/64

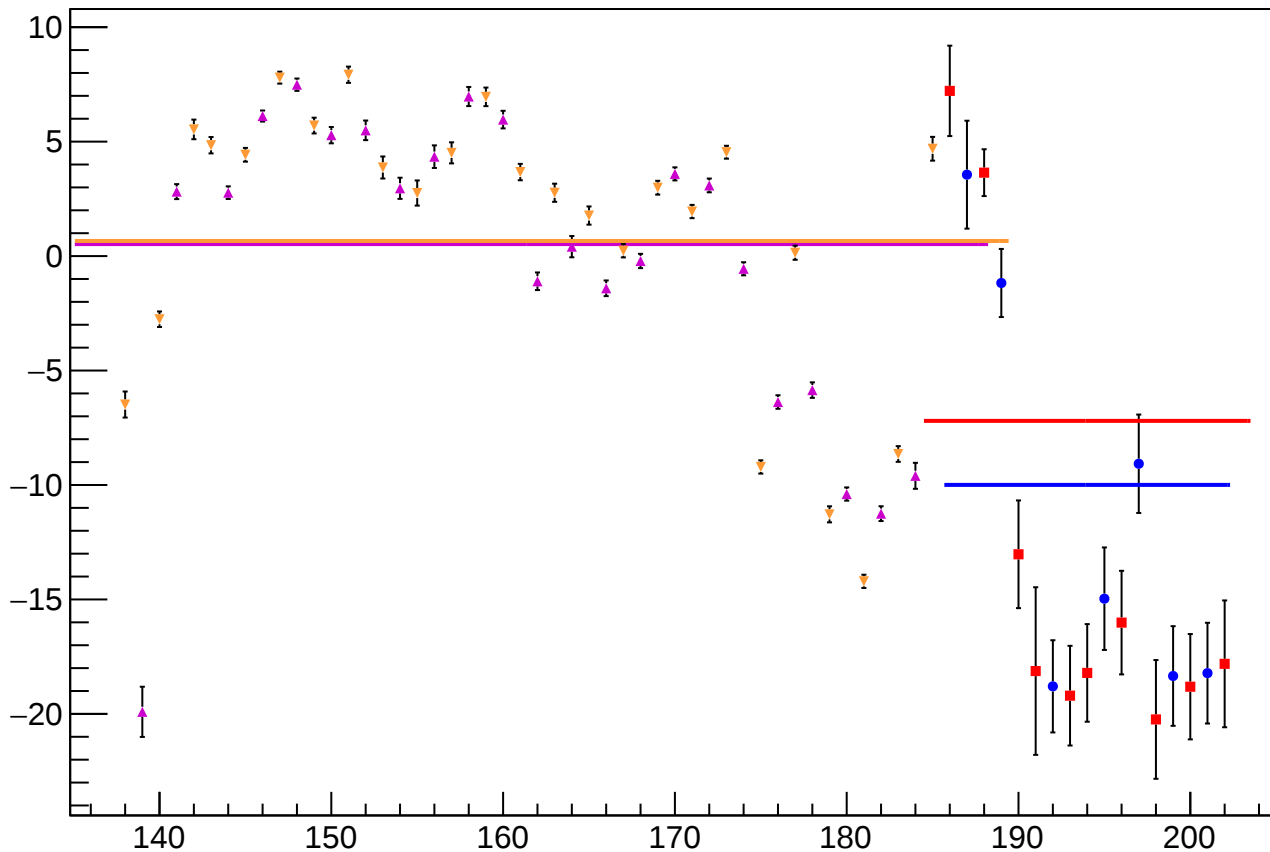
reg\_asym\_sam\_15\_48\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 11.491 $\pm$ 0.667  $\chi^2$ /NDF: 400.6/6  
 Left Out: 17.367 $\pm$ 0.087  $\chi^2$ /NDF:16337.6/24  
 Right Out: 5.567 $\pm$ 0.508  $\chi^2$ /NDF: 827.3/9  
 Left In: 17.355 $\pm$ 0.089  $\chi^2$ /NDF:12745.1/22

Left: 17.361 $\pm$ 0.062  $\chi^2$ /NDF: 29082.8/47  
 Right: 7.742 $\pm$ 0.404  $\chi^2$ /NDF: 1277.8/16  
 In: 17.253 $\pm$ 0.088  $\chi^2$ /NDF:13221.8/29  
 Out: 17.030 $\pm$ 0.086  $\chi^2$ /NDF:17689.3/34  
 All: 17.139 $\pm$ 0.061  $\chi^2$ /NDF: 30914.3/64

reg\_asym\_sam\_15\_48\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-9.996 \pm 0.764$   $\chi^2/\text{NDF}$ : 121.1/6

Left Out:  $0.661 \pm 0.069$   $\chi^2/\text{NDF}$ : 8553.9/24

Right Out:  $-7.199 \pm 0.625$   $\chi^2/\text{NDF}$ : 318.4/9

Left In:  $0.524 \pm 0.071$   $\chi^2/\text{NDF}$ : 6729.7/22

Left:  $0.594 \pm 0.050$   $\chi^2/\text{NDF}$ : 15285.5/47

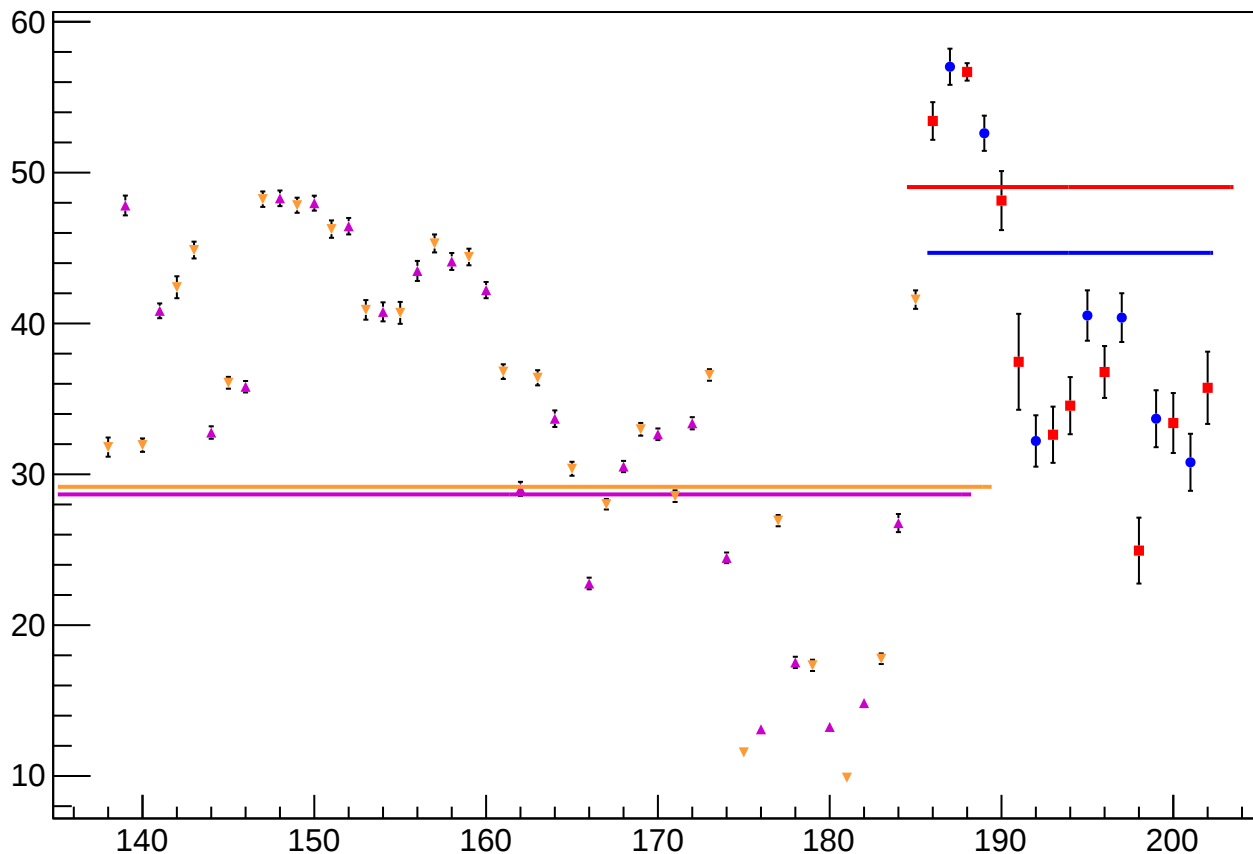
Right:  $-8.319 \pm 0.484$   $\chi^2/\text{NDF}$ : 447.5/16

In:  $0.434 \pm 0.071$   $\chi^2/\text{NDF}$ : 7038.6/29

Out:  $0.565 \pm 0.069$   $\chi^2/\text{NDF}$ : 9028.5/34

All:  $0.501 \pm 0.049$   $\chi^2/\text{NDF}$ : 16068.9/64

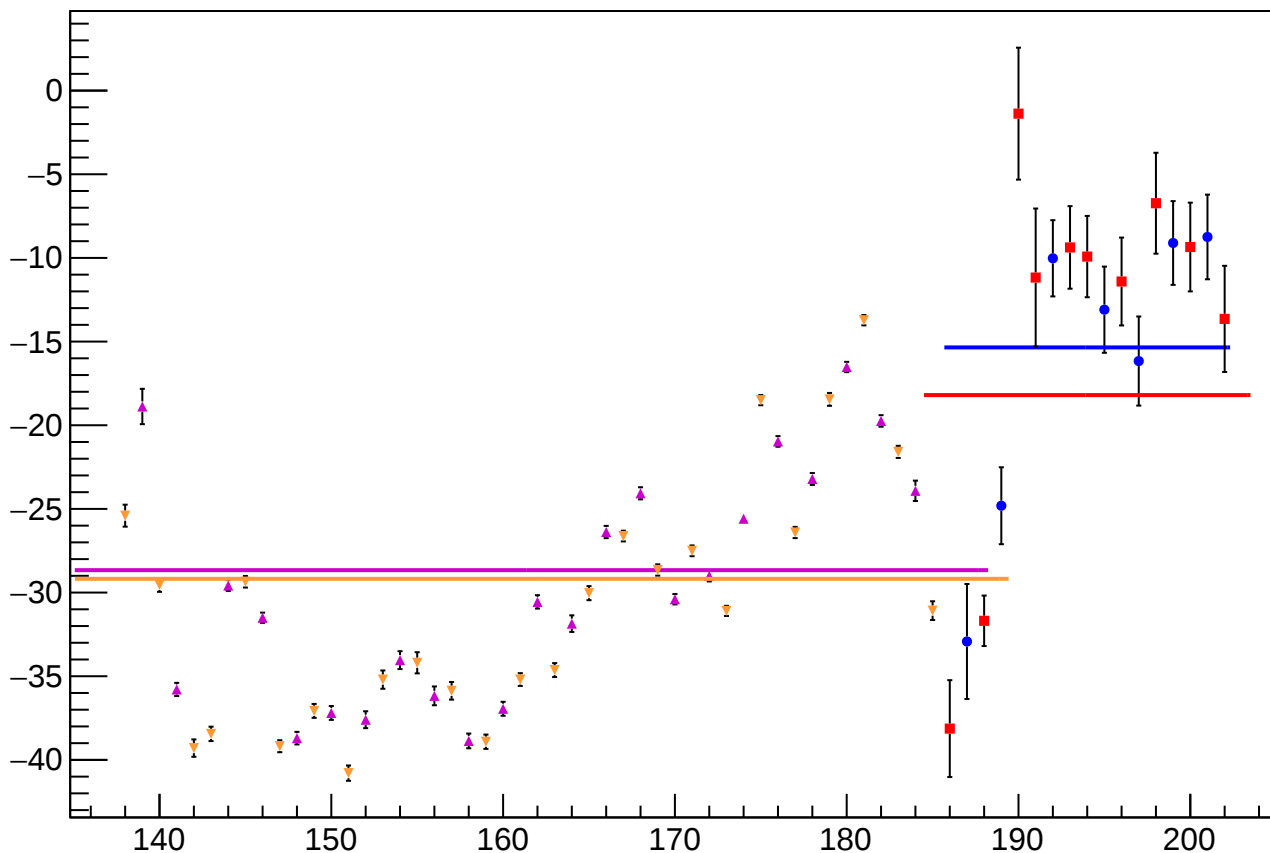
reg\_asym\_sam\_15\_48\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 44.682 $\pm$ 0.570  $\chi^2$ /NDF: 306.8/6  
 Left Out: 29.171 $\pm$ 0.088  $\chi^2$ /NDF:18974.7/24  
 Right Out: 49.044 $\pm$ 0.425  $\chi^2$ /NDF: 601.3/9  
 Left In: 28.667 $\pm$ 0.089  $\chi^2$ /NDF:16847.2/22

Left: 28.923 $\pm$ 0.063  $\chi^2$ /NDF: 35838.1/47  
 Right: 47.485 $\pm$ 0.341  $\chi^2$ /NDF: 945.8/16  
 In: 29.049 $\pm$ 0.088  $\chi^2$ /NDF:17924.5/29  
 Out: 29.983 $\pm$ 0.086  $\chi^2$ /NDF:21671.1/34  
 All: 29.527 $\pm$ 0.062  $\chi^2$ /NDF: 39653.2/64

reg\_asym\_sam\_15\_48\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Left:  $-28.924 \pm 0.056$   $\chi^2/\text{NDF} = 15773.0/47$

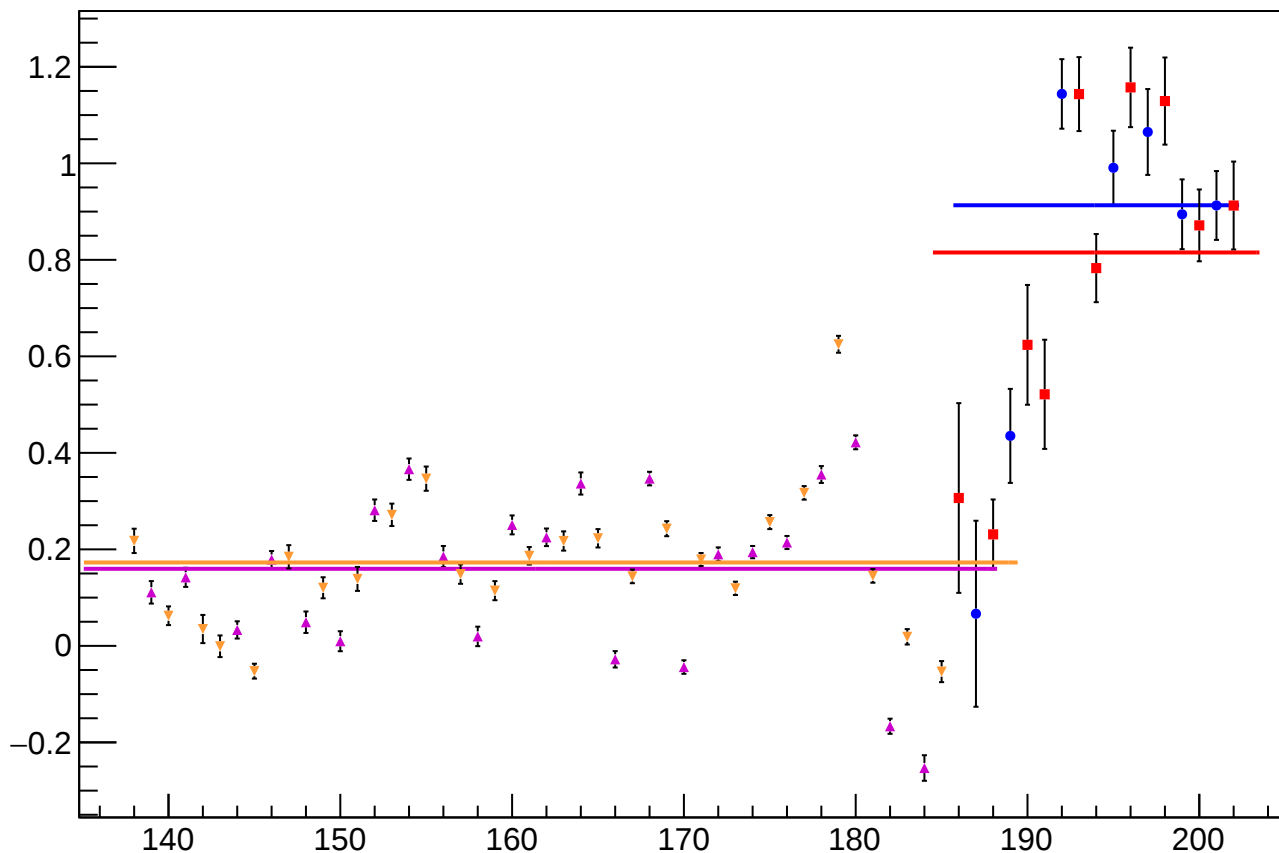
Right:  $-17.014 \pm 0.622$   $\chi^2/\text{NDF} = 274.7/16$

In:  $-28.570 \pm 0.080$   $\chi^2/\text{NDF} = 6921.7/29$

Out:  $-29.077 \pm 0.078$   $\chi^2/\text{NDF} = 9469.1/34$

All:  $-28.829 \pm 0.056$   $\chi^2/\text{NDF} = 16411.7/64$

reg\_asym\_sam\_15\_48\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $0.913 \pm 0.031$   $\chi^2/\text{NDF}: 57.6/6$

Left Out:  $0.173 \pm 0.004$   $\chi^2/\text{NDF}: 1478.5/24$

Right Out:  $0.815 \pm 0.028$   $\chi^2/\text{NDF}: 130.7/9$

Left In:  $0.160 \pm 0.004$   $\chi^2/\text{NDF}: 2057.9/22$

Left:  $0.166 \pm 0.003$   $\chi^2/\text{NDF}: 3542.9/47$

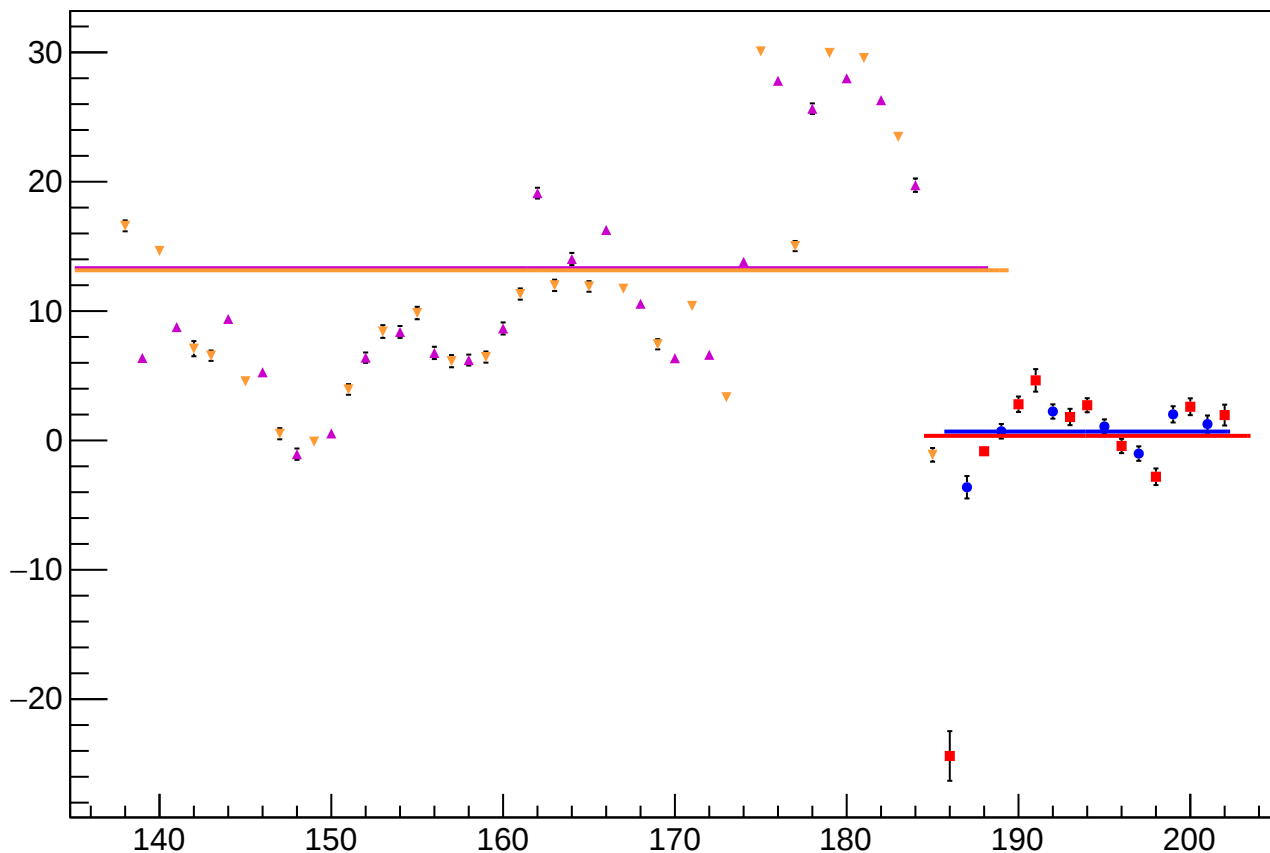
Right:  $0.858 \pm 0.021$   $\chi^2/\text{NDF}: 193.7/16$

In:  $0.170 \pm 0.004$   $\chi^2/\text{NDF}: 2680.3/29$

Out:  $0.183 \pm 0.004$   $\chi^2/\text{NDF}: 2137.7/34$

All:  $0.177 \pm 0.003$   $\chi^2/\text{NDF}: 4825.2/64$

reg\_asym\_sam\_37\_48\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $0.686 \pm 0.229$   $\chi^2/\text{NDF}: 47.5/6$

Left Out:  $13.153 \pm 0.075$   $\chi^2/\text{NDF}: 17079.7/24$

Right Out:  $0.355 \pm 0.176$   $\chi^2/\text{NDF}: 291.3/9$

Left In:  $13.315 \pm 0.077$   $\chi^2/\text{NDF}: 13977.7/22$

Left:  $13.232 \pm 0.054$   $\chi^2/\text{NDF}: 31059.6/47$

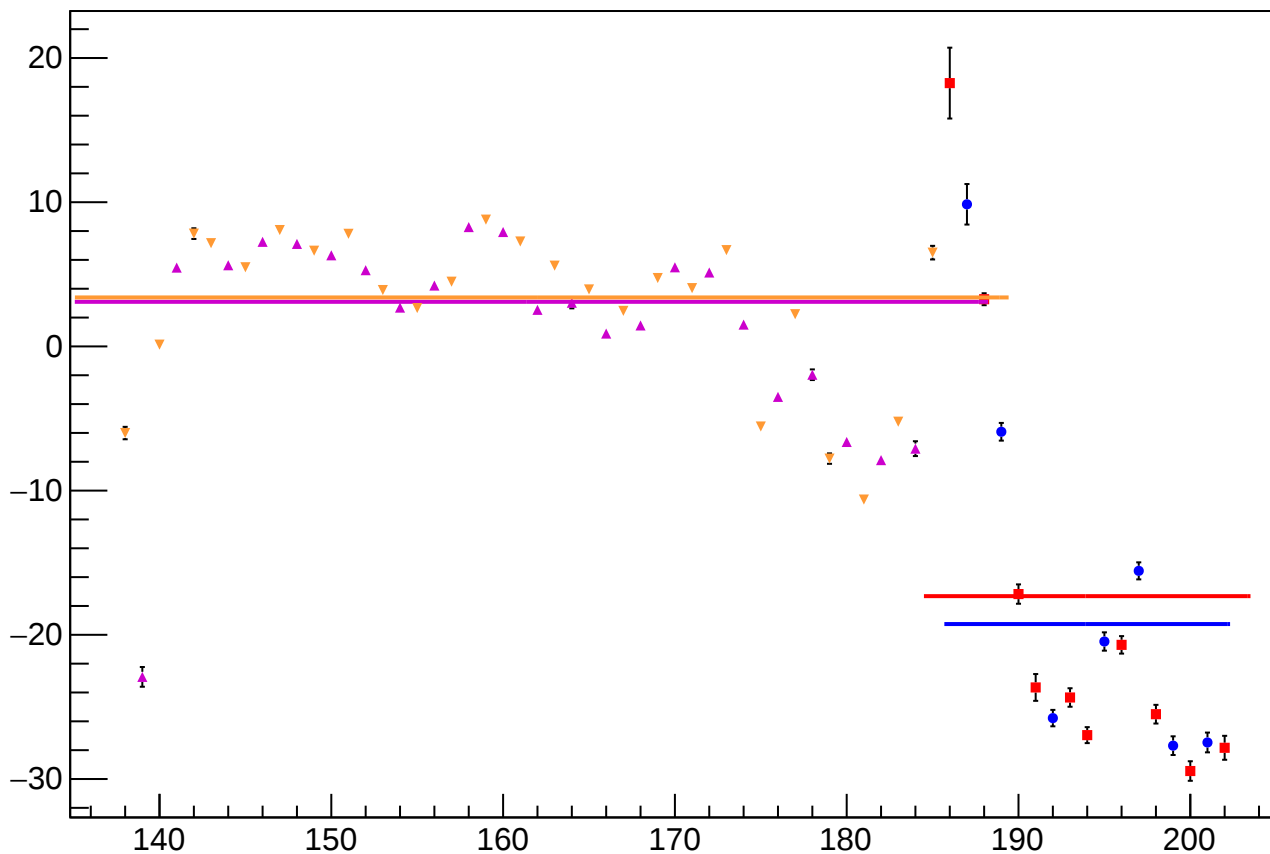
Right:  $0.477 \pm 0.139$   $\chi^2/\text{NDF}: 340.1/16$

In:  $12.032 \pm 0.073$   $\chi^2/\text{NDF}: 16751.2/29$

Out:  $11.170 \pm 0.069$   $\chi^2/\text{NDF}: 21857.0/34$

All:  $11.577 \pm 0.050$   $\chi^2/\text{NDF}: 38681.7/64$

reg\_asym\_sam\_37\_48\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-19.254 \pm 0.249$   $\chi^2/\text{NDF}: 1387.3/6$

Left Out:  $3.396 \pm 0.058$   $\chi^2/\text{NDF}: 8101.5/24$

Right Out:  $-17.319 \pm 0.205$   $\chi^2/\text{NDF}: 3818.6/9$

Left In:  $3.092 \pm 0.061$   $\chi^2/\text{NDF}: 7104.4/22$

Left:  $3.250 \pm 0.042$   $\chi^2/\text{NDF}: 15218.9/47$

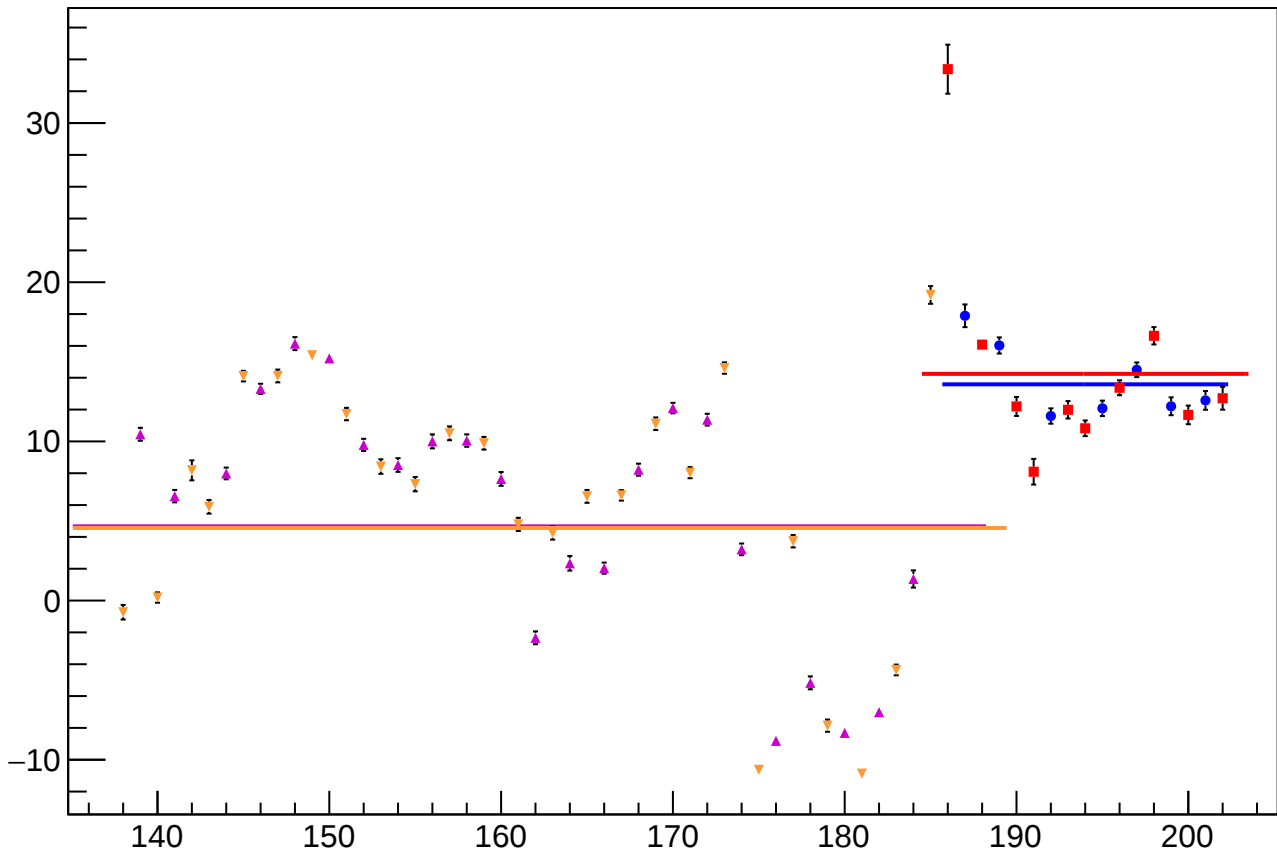
Right:  $-18.100 \pm 0.158$   $\chi^2/\text{NDF}: 5241.8/16$

In:  $1.846 \pm 0.059$   $\chi^2/\text{NDF}: 16082.2/29$

Out:  $1.843 \pm 0.056$   $\chi^2/\text{NDF}: 21359.5/34$

All:  $1.844 \pm 0.041$   $\chi^2/\text{NDF}: 37441.8/64$

reg\_asym\_sam\_37\_48\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 13.586+/-0.199  $\chi^2/\text{NDF}$ : 99.3/6

Left Out: 4.561+/-0.075  $\chi^2/\text{NDF}$ :13592.1/24

Right Out: 14.243+/-0.151  $\chi^2/\text{NDF}$ : 400.6/9

Left In: 4.662+/-0.077  $\chi^2/\text{NDF}$ :11281.5/22

Left: 4.610+/-0.054  $\chi^2/\text{NDF}$ : 24874.4/47

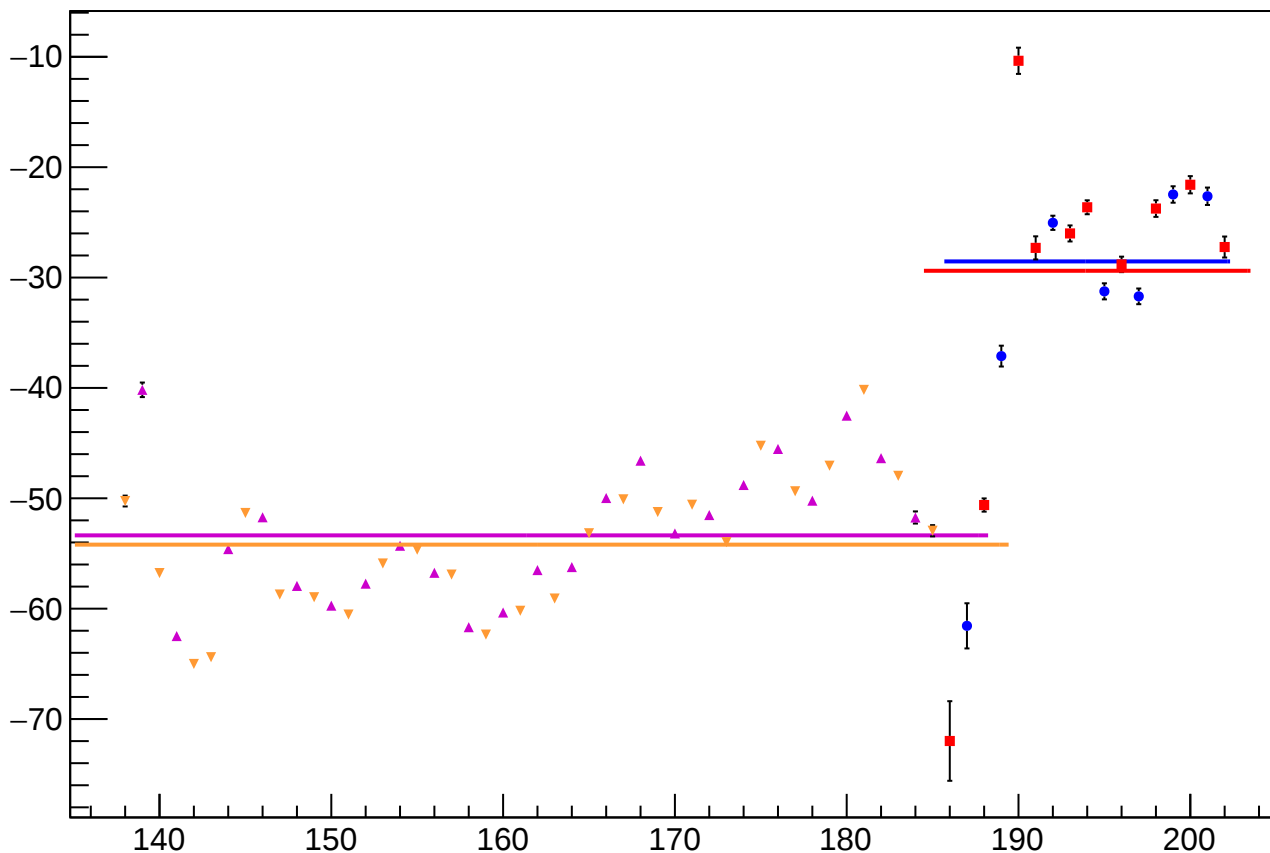
Right: 14.004+/-0.120  $\chi^2/\text{NDF}$ : 506.8/16

In: 5.816+/-0.072  $\chi^2/\text{NDF}$ :13127.1/29

Out: 6.501+/-0.067  $\chi^2/\text{NDF}$ :17297.5/34

All: 6.179+/-0.049  $\chi^2/\text{NDF}$ : 30473.0/64

reg\_asym\_sam\_37\_48\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-28.537 \pm 0.301$   $\chi^2/\text{NDF}: 528.3/6$   
 Left Out:  $-54.199 \pm 0.066$   $\chi^2/\text{NDF}: 8454.7/24$   
 Right Out:  $-29.386 \pm 0.255$   $\chi^2/\text{NDF}: 1921.3/9$   
 Left In:  $-53.359 \pm 0.068$   $\chi^2/\text{NDF}: 6882.0/22$

Left:  $-53.792 \pm 0.048$   $\chi^2/\text{NDF}: 15414.3/47$

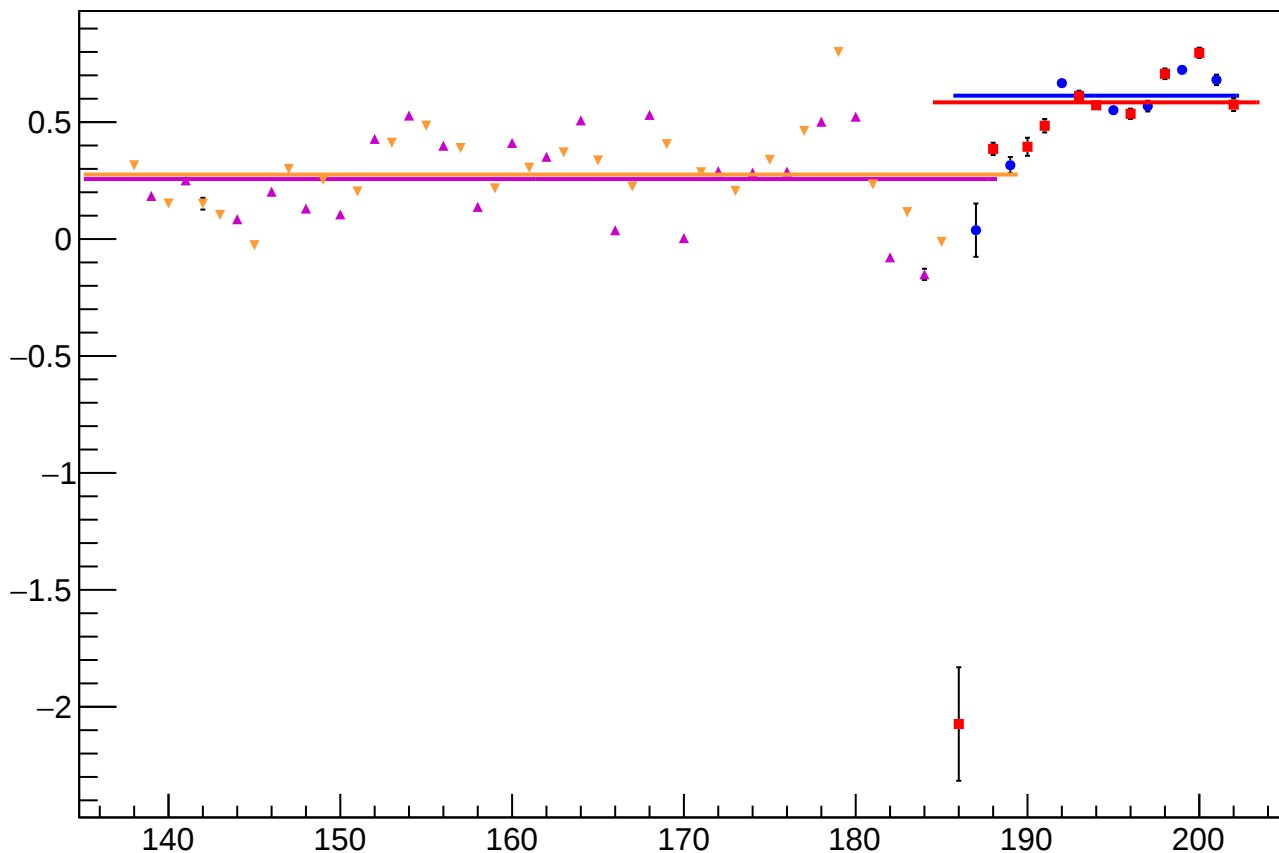
Right:  $-29.032 \pm 0.194$   $\chi^2/\text{NDF}: 2454.2/16$

In:  $-52.136 \pm 0.067$   $\chi^2/\text{NDF}: 13881.4/29$

Out:  $-52.620 \pm 0.064$   $\chi^2/\text{NDF}: 19265.1/34$

All:  $-52.387 \pm 0.046$   $\chi^2/\text{NDF}: 33173.7/64$

reg\_asym\_sam\_37\_48\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.613 $\pm$ 0.009  $\chi^2$ /NDF: 151.7/6

Left Out: 0.276 $\pm$ 0.003  $\chi^2$ /NDF:2623.6/24

Right Out: 0.584 $\pm$ 0.008  $\chi^2$ /NDF: 342.9/9

Left In: 0.257 $\pm$ 0.003  $\chi^2$ /NDF:3623.9/22

Left: 0.266 $\pm$ 0.002  $\chi^2$ /NDF: 6267.0/47

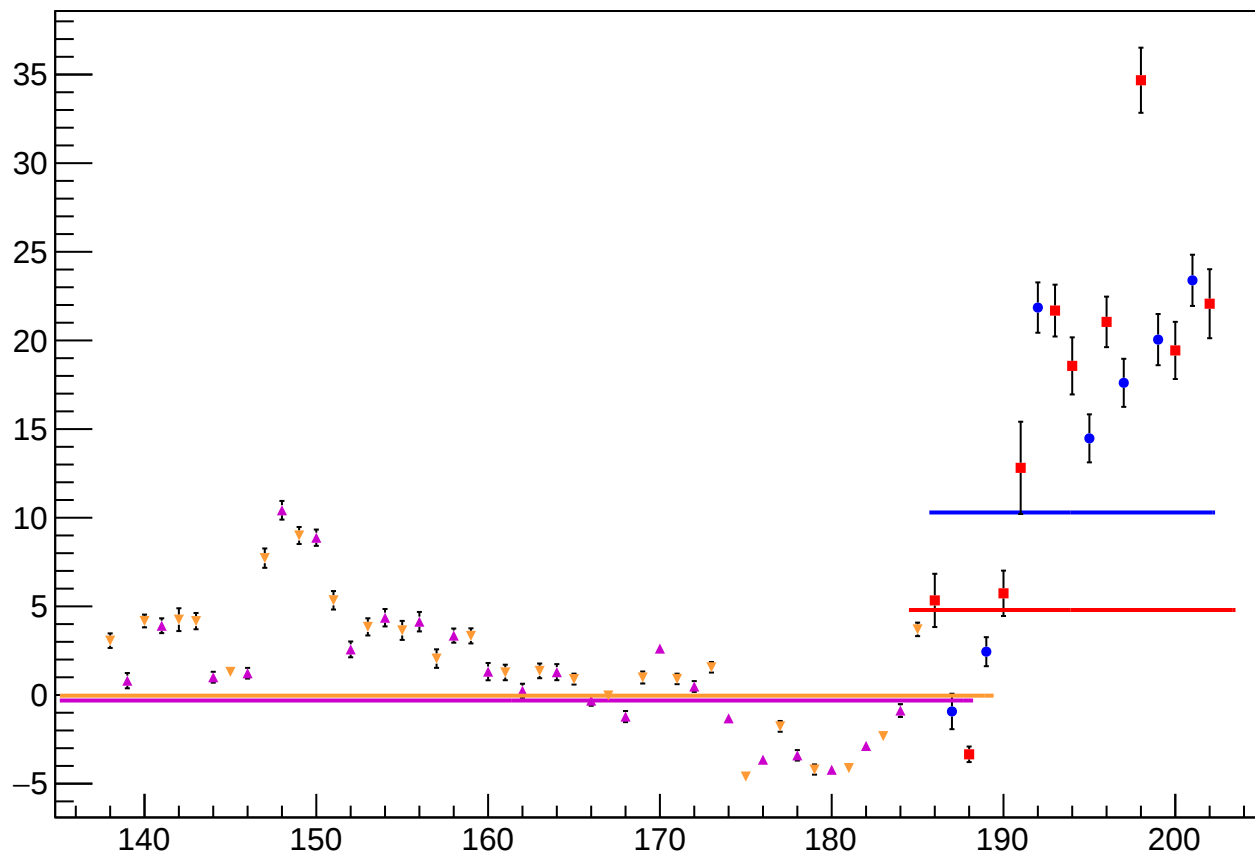
Right: 0.597 $\pm$ 0.006  $\chi^2$ /NDF: 500.0/16

In: 0.292 $\pm$ 0.003  $\chi^2$ /NDF:5096.4/29

Out: 0.315 $\pm$ 0.003  $\chi^2$ /NDF:4272.6/34

All: 0.304 $\pm$ 0.002  $\chi^2$ /NDF: 9400.1/64

reg\_asym\_sam\_15\_26\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 10.296 $\pm$ 0.446  $\chi^2$ /NDF: 450.7/6

Left Out: -0.037 $\pm$ 0.066  $\chi^2$ /NDF: 2637.7/24

Right Out: 4.795 $\pm$ 0.339  $\chi^2$ /NDF: 1116.5/9

Left In: -0.310 $\pm$ 0.067  $\chi^2$ /NDF: 2250.5/22

Left: -0.171 $\pm$ 0.047  $\chi^2$ /NDF: 4896.5/47

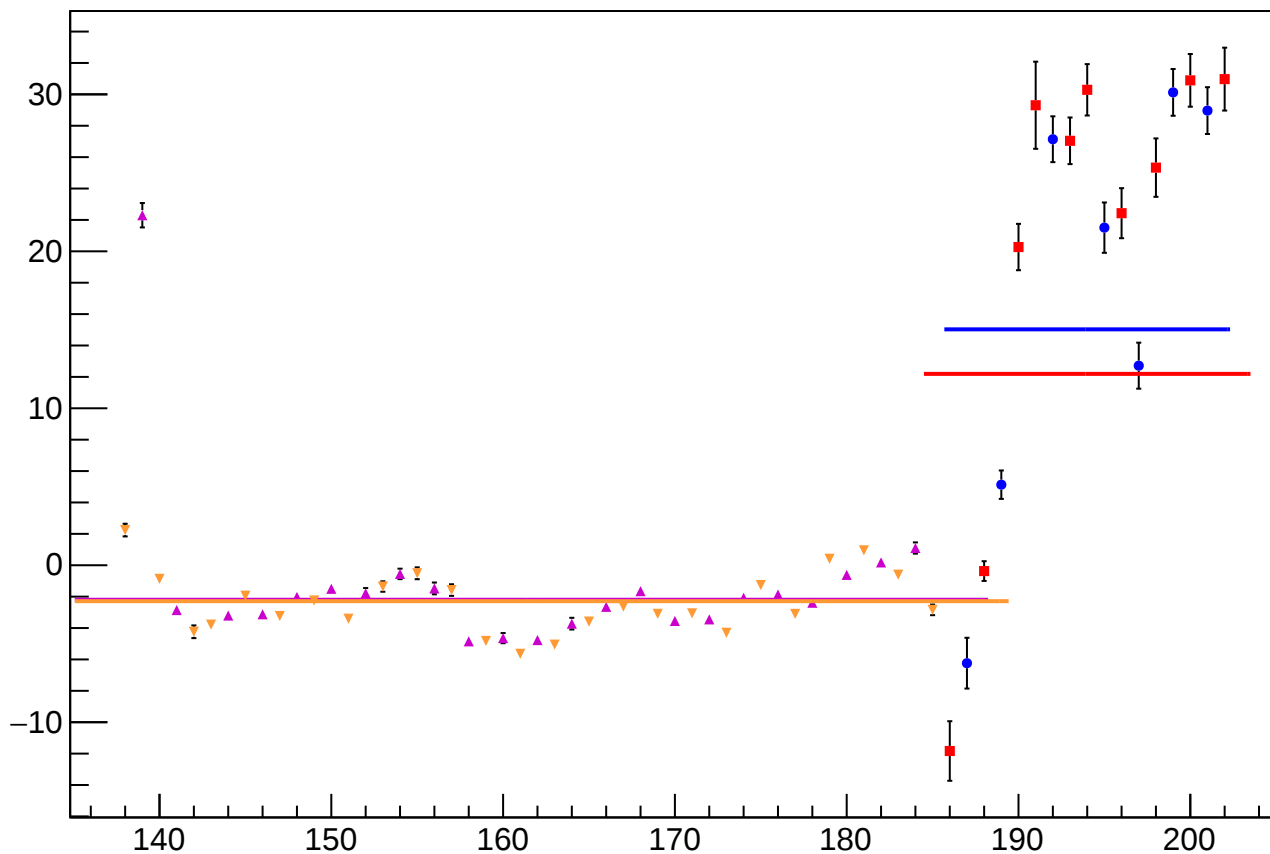
Right: 6.815 $\pm$ 0.270  $\chi^2$ /NDF: 1663.6/16

In: -0.073 $\pm$ 0.067  $\chi^2$ /NDF: 3255.1/29

Out: 0.139 $\pm$ 0.065  $\chi^2$ /NDF: 3949.5/34

All: 0.036 $\pm$ 0.046  $\chi^2$ /NDF: 7209.8/64

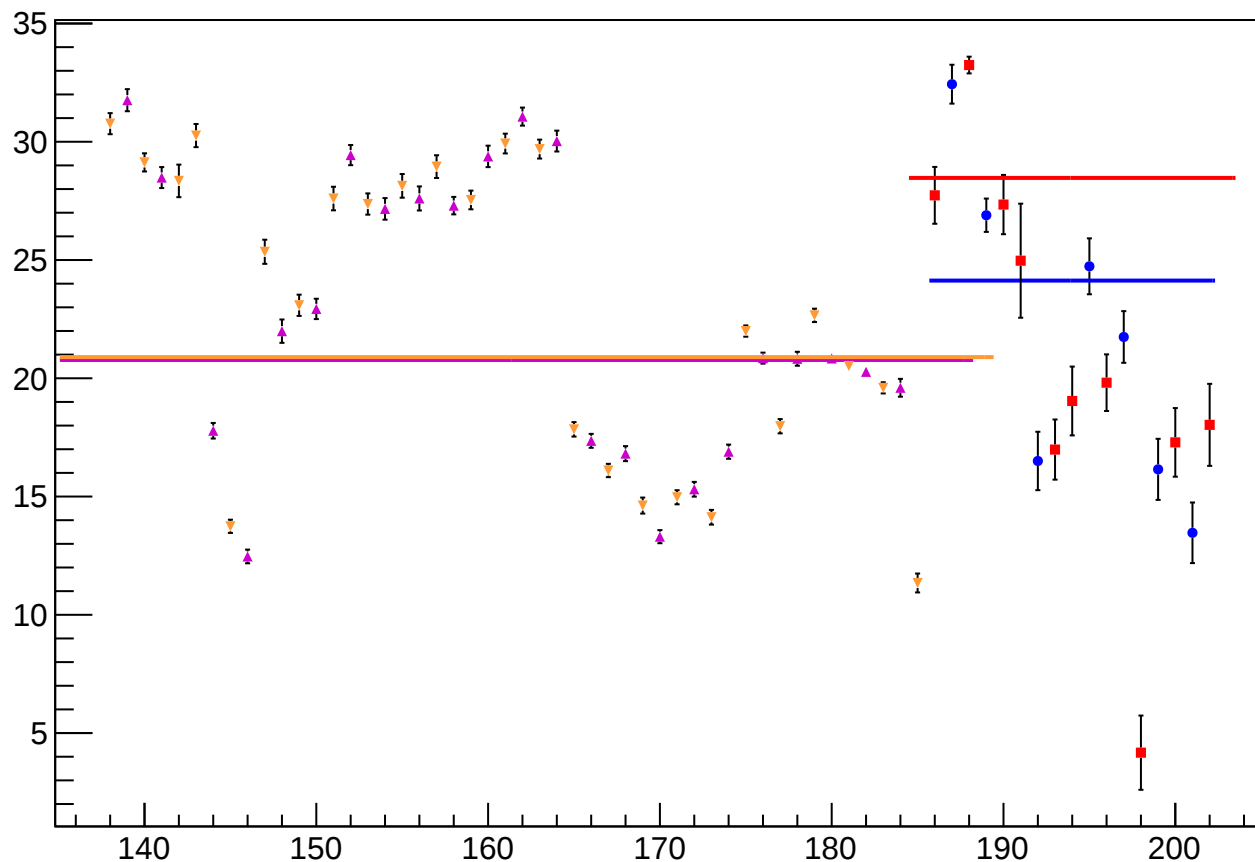
reg\_asym\_sam\_15\_26\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $15.029 \pm 0.511$   $\chi^2/\text{NDF}: 570.1/6$   
 Left Out:  $-2.288 \pm 0.054$   $\chi^2/\text{NDF}: 1137.7/24$   
 Right Out:  $12.193 \pm 0.426$   $\chi^2/\text{NDF}: 1153.8/9$   
 Left In:  $-2.198 \pm 0.055$   $\chi^2/\text{NDF}: 1673.9/22$

Left:  $-2.244 \pm 0.039$   $\chi^2/\text{NDF}: 2813.0/47$   
 Right:  $13.354 \pm 0.327$   $\chi^2/\text{NDF}: 1742.0/16$   
 In:  $-2.000 \pm 0.055$   $\chi^2/\text{NDF}: 3366.5/29$   
 Out:  $-2.058 \pm 0.054$   $\chi^2/\text{NDF}: 3429.6/34$   
 All:  $-2.029 \pm 0.038$   $\chi^2/\text{NDF}: 6796.7/64$

reg\_asym\_sam\_15\_26\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 24.131 $\pm$ 0.380  $\chi^2$ /NDF: 268.0/6

Left Out: 20.894 $\pm$ 0.067  $\chi^2$ /NDF: 6655.4/24

Right Out: 28.472 $\pm$ 0.283  $\chi^2$ /NDF: 696.5/9

Left In: 20.774 $\pm$ 0.068  $\chi^2$ /NDF: 5927.9/22

Left: 20.835 $\pm$ 0.047  $\chi^2$ /NDF: 12584.8/47

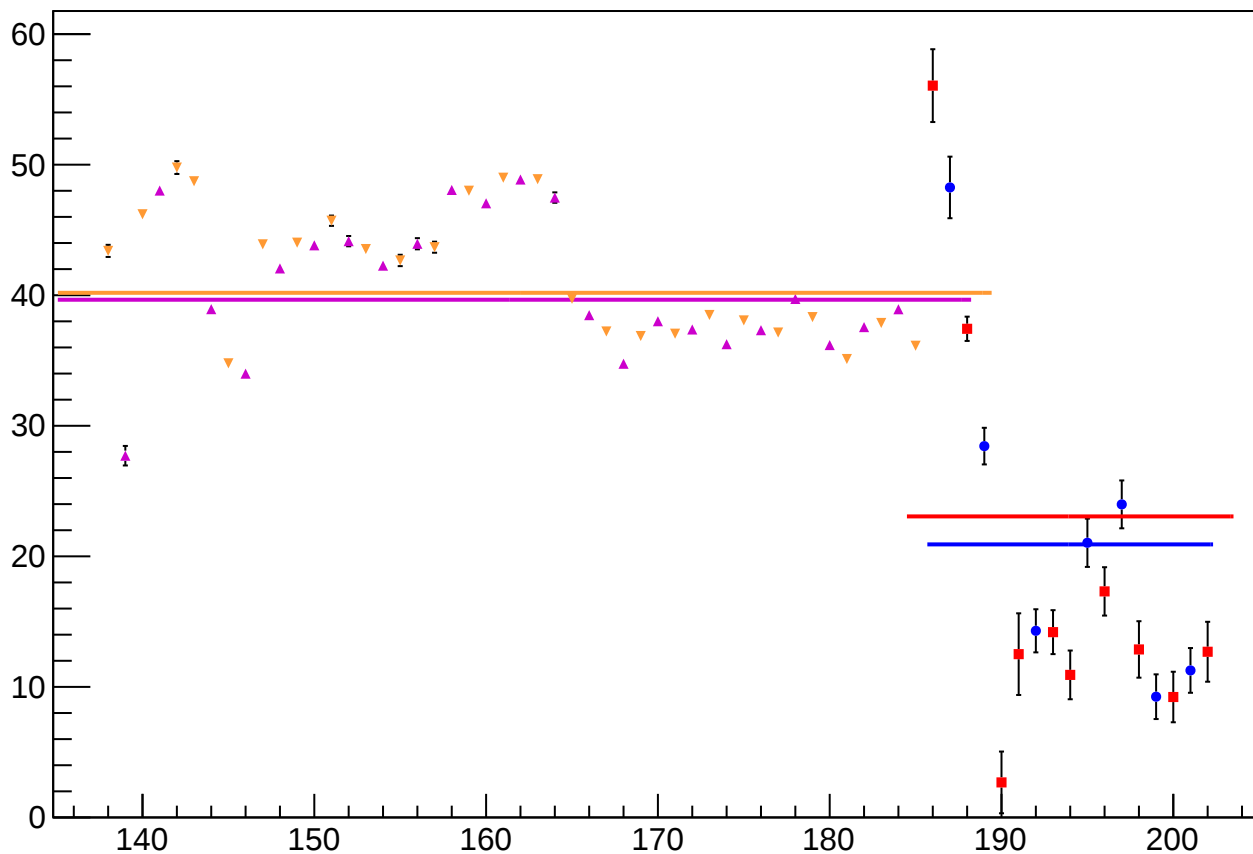
Right: 26.925 $\pm$ 0.227  $\chi^2$ /NDF: 1048.3/16

In: 20.877 $\pm$ 0.066  $\chi^2$ /NDF: 6271.3/29

Out: 21.293 $\pm$ 0.065  $\chi^2$ /NDF: 8031.0/34

All: 21.090 $\pm$ 0.046  $\chi^2$ /NDF: 14322.4/64

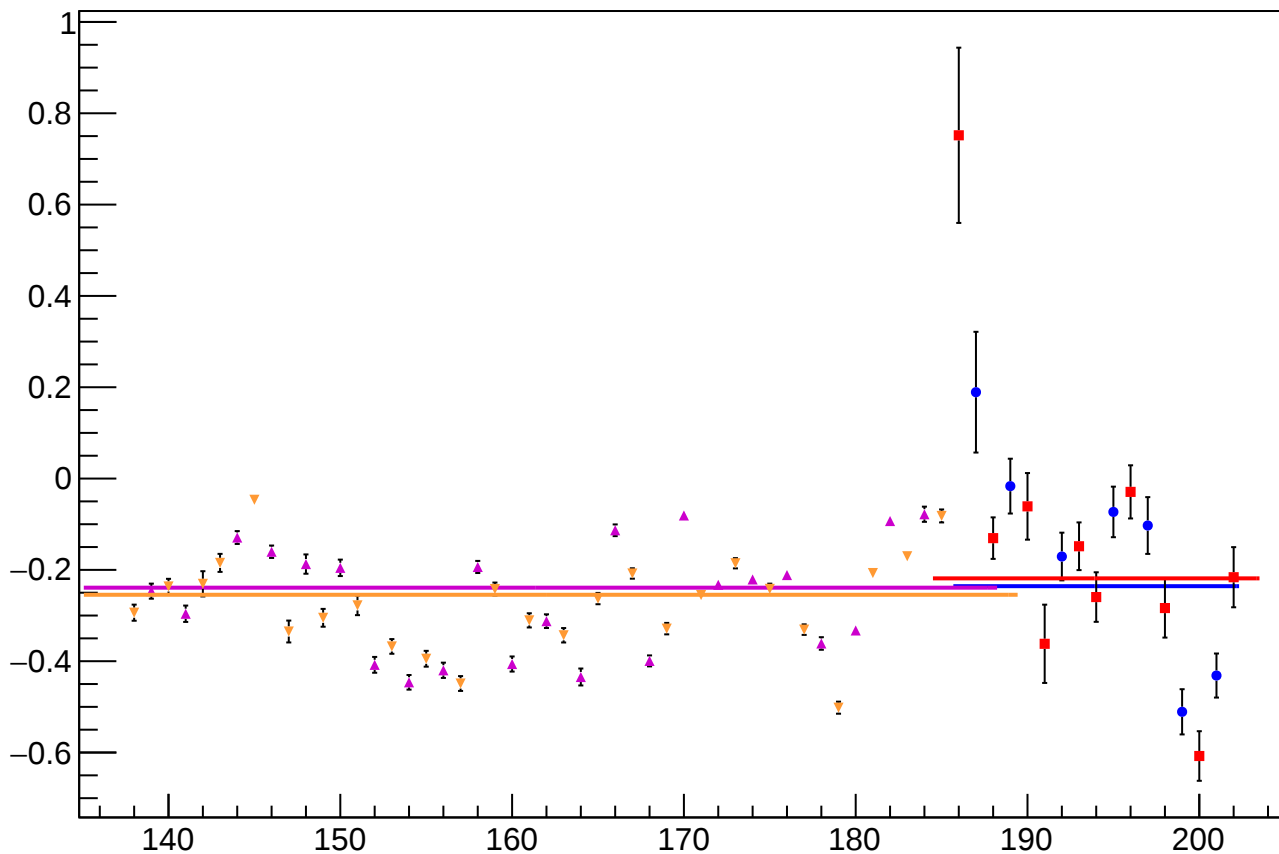
reg\_asym\_sam\_15\_26\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 20.915 $\pm$ 0.656  $\chi^2/\text{NDF}$ : 260.3/6  
 Left Out: 40.186 $\pm$ 0.060  $\chi^2/\text{NDF}$ :5932.7/24  
 Right Out: 23.059 $\pm$ 0.562  $\chi^2/\text{NDF}$ : 637.7/9  
 Left In: 39.655 $\pm$ 0.061  $\chi^2/\text{NDF}$ :5298.6/22

Left: 39.925 $\pm$ 0.043  $\chi^2/\text{NDF}$ : 11269.2/47  
 Right: 22.151 $\pm$ 0.427  $\chi^2/\text{NDF}$ : 904.2/16  
 In: 39.492 $\pm$ 0.061  $\chi^2/\text{NDF}$ :6368.7/29  
 Out: 39.990 $\pm$ 0.060  $\chi^2/\text{NDF}$ :7489.2/34  
 All: 39.746 $\pm$ 0.043  $\chi^2/\text{NDF}$ : 13891.8/64

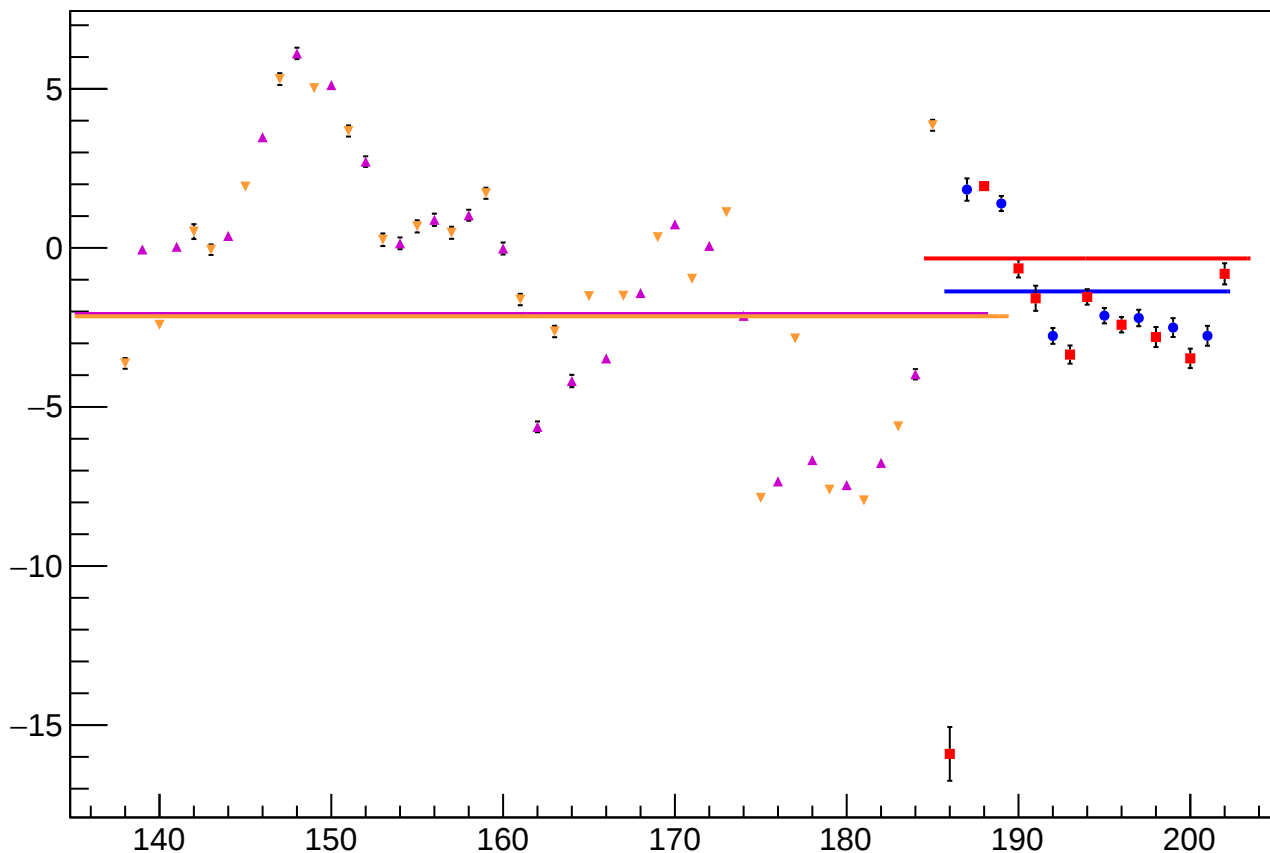
reg\_asym\_sam\_15\_26\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.236 \pm 0.022$   $\chi^2/\text{NDF}$ : 85.7/6  
 Left Out:  $-0.255 \pm 0.003$   $\chi^2/\text{NDF}$ : 1420.4/24  
 Right Out:  $-0.219 \pm 0.019$   $\chi^2/\text{NDF}$ : 102.1/9  
 Left In:  $-0.239 \pm 0.003$   $\chi^2/\text{NDF}$ : 1750.5/22

Left:  $-0.247 \pm 0.002$   $\chi^2/\text{NDF}$ : 3186.7/47  
 Right:  $-0.226 \pm 0.014$   $\chi^2/\text{NDF}$ : 188.2/16  
 In:  $-0.239 \pm 0.003$   $\chi^2/\text{NDF}$ : 1836.2/29  
 Out:  $-0.254 \pm 0.003$   $\chi^2/\text{NDF}$ : 1525.9/34  
 All:  $-0.247 \pm 0.002$   $\chi^2/\text{NDF}$ : 3376.9/64

reg\_asym\_sam\_37\_26\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected

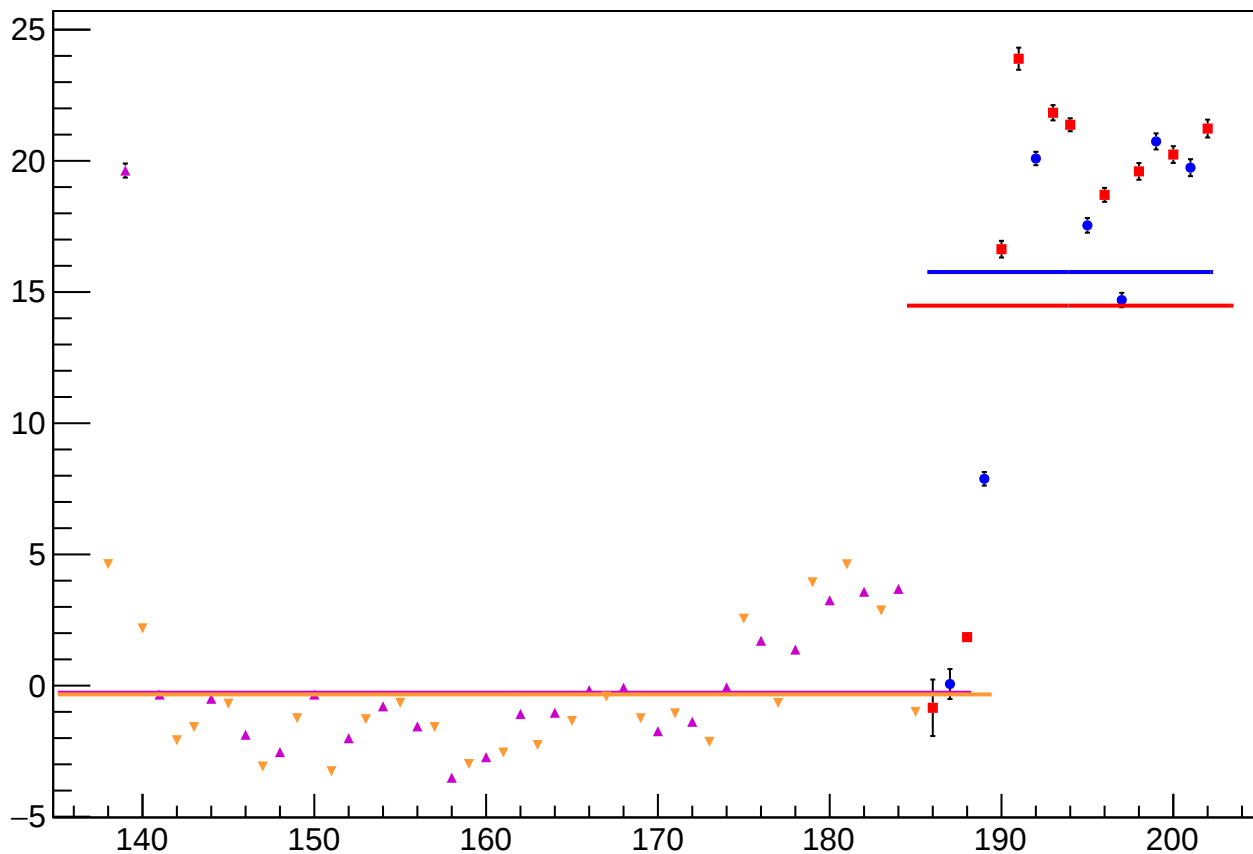


Right In:  $-1.368 \pm 0.102$   $\chi^2/\text{NDF}$ : 305.1/6  
 Left Out:  $-2.149 \pm 0.026$   $\chi^2/\text{NDF}$ : 24536.3/24  
 Right Out:  $-0.331 \pm 0.075$   $\chi^2/\text{NDF}$ : 1159.5/9  
 Left In:  $-2.078 \pm 0.026$   $\chi^2/\text{NDF}$ : 23245.8/22

Left:  $-2.114 \pm 0.018$   $\chi^2/\text{NDF}$ : 47785.8/47  
 Right:  $-0.692 \pm 0.060$   $\chi^2/\text{NDF}$ : 1531.5/16  
 In:  $-2.035 \pm 0.025$   $\chi^2/\text{NDF}$ : 23596.1/29  
 Out:  $-1.957 \pm 0.024$   $\chi^2/\text{NDF}$ : 26225.2/34

All:  $-1.994 \pm 0.017$   $\chi^2/\text{NDF}$ : 49826.2/64

reg\_asym\_sam\_37\_26\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 15.763+/-0.112  $\chi^2/\text{NDF}$ : 2438.4/6

Left Out: -0.335+/-0.021  $\chi^2/\text{NDF}$ : 12596.1/24

Right Out: 14.481+/-0.089  $\chi^2/\text{NDF}$ : 9515.3/9

Left In: -0.269+/-0.021  $\chi^2/\text{NDF}$ : 13323.1/22

Left: -0.303+/-0.015  $\chi^2/\text{NDF}$ : 25924.2/47

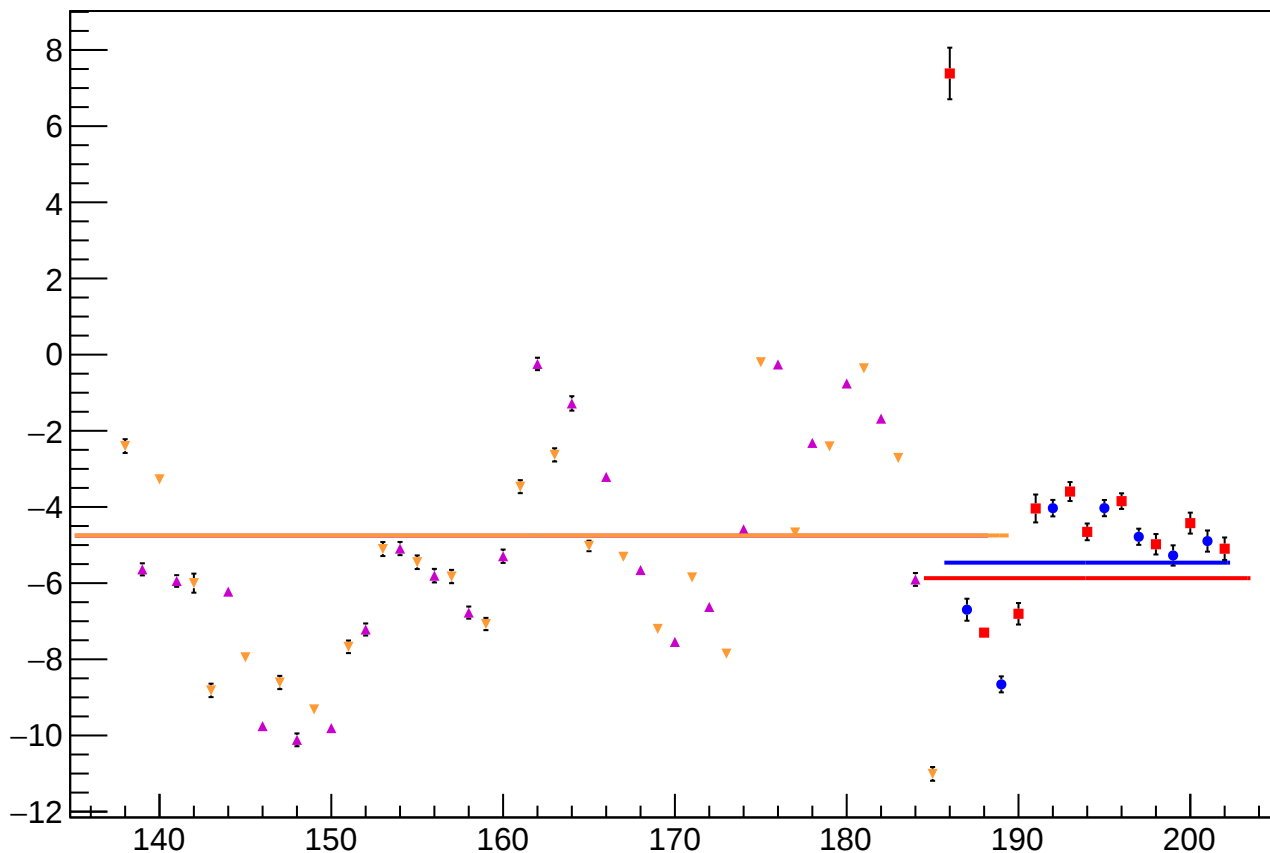
Right: 14.979+/-0.070  $\chi^2/\text{NDF}$ : 12033.6/16

In: 0.270+/-0.021  $\chi^2/\text{NDF}$ : 35492.7/29

Out: 0.412+/-0.020  $\chi^2/\text{NDF}$ : 48226.4/34

All: 0.343+/-0.014  $\chi^2/\text{NDF}$ : 83743.3/64

reg\_asym\_sam\_37\_26\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-5.462 \pm 0.089$   $\chi^2/\text{NDF}$ : 352.9/6  
 Left Out:  $-4.748 \pm 0.026$   $\chi^2/\text{NDF}$ : 13289.8/24  
 Right Out:  $-5.869 \pm 0.064$   $\chi^2/\text{NDF}$ : 934.3/9  
 Left In:  $-4.753 \pm 0.026$   $\chi^2/\text{NDF}$ : 14119.2/22

Left:  $-4.751 \pm 0.018$   $\chi^2/\text{NDF}$ : 27409.0/47

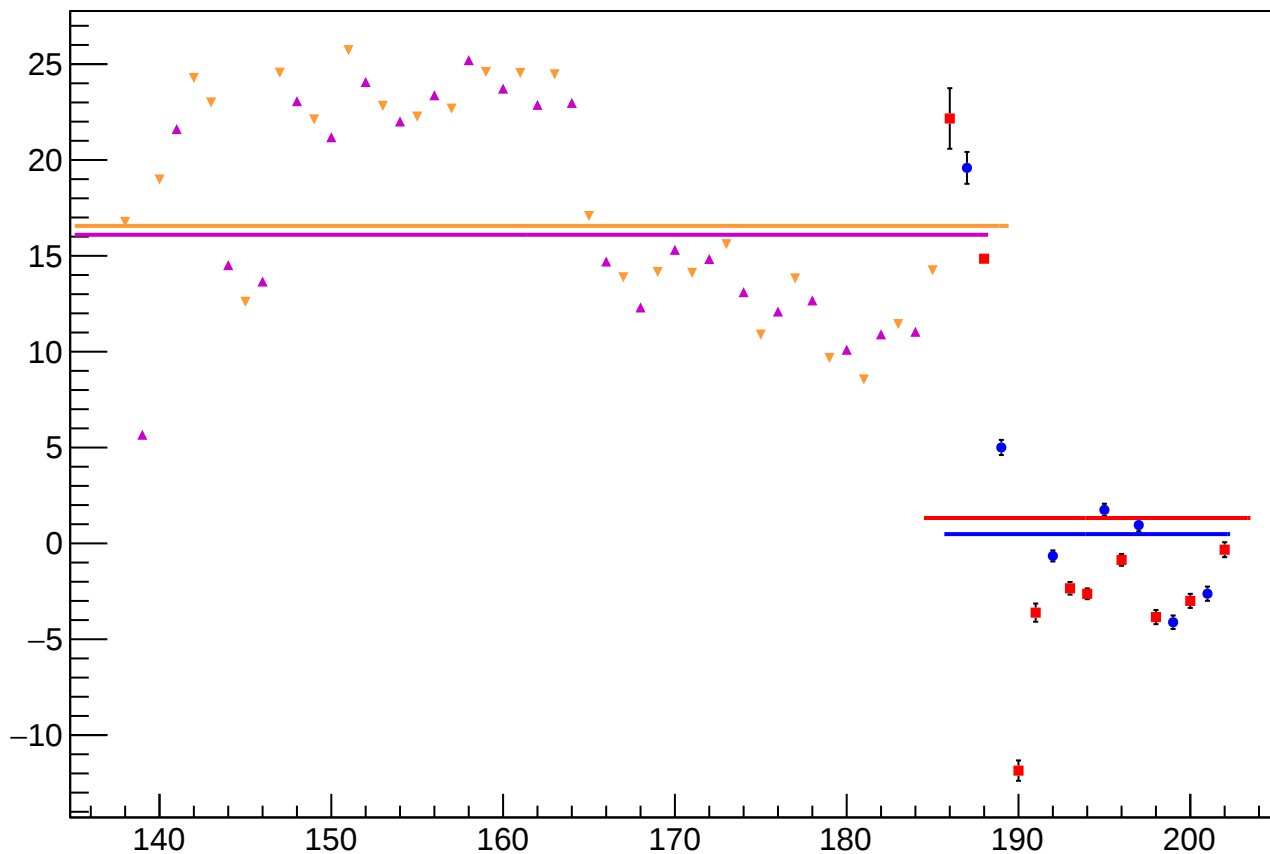
Right:  $-5.731 \pm 0.052$   $\chi^2/\text{NDF}$ : 1301.2/16

In:  $-4.810 \pm 0.025$   $\chi^2/\text{NDF}$ : 14530.9/29

Out:  $-4.907 \pm 0.024$   $\chi^2/\text{NDF}$ : 14491.6/34

All:  $-4.861 \pm 0.017$   $\chi^2/\text{NDF}$ : 29030.3/64

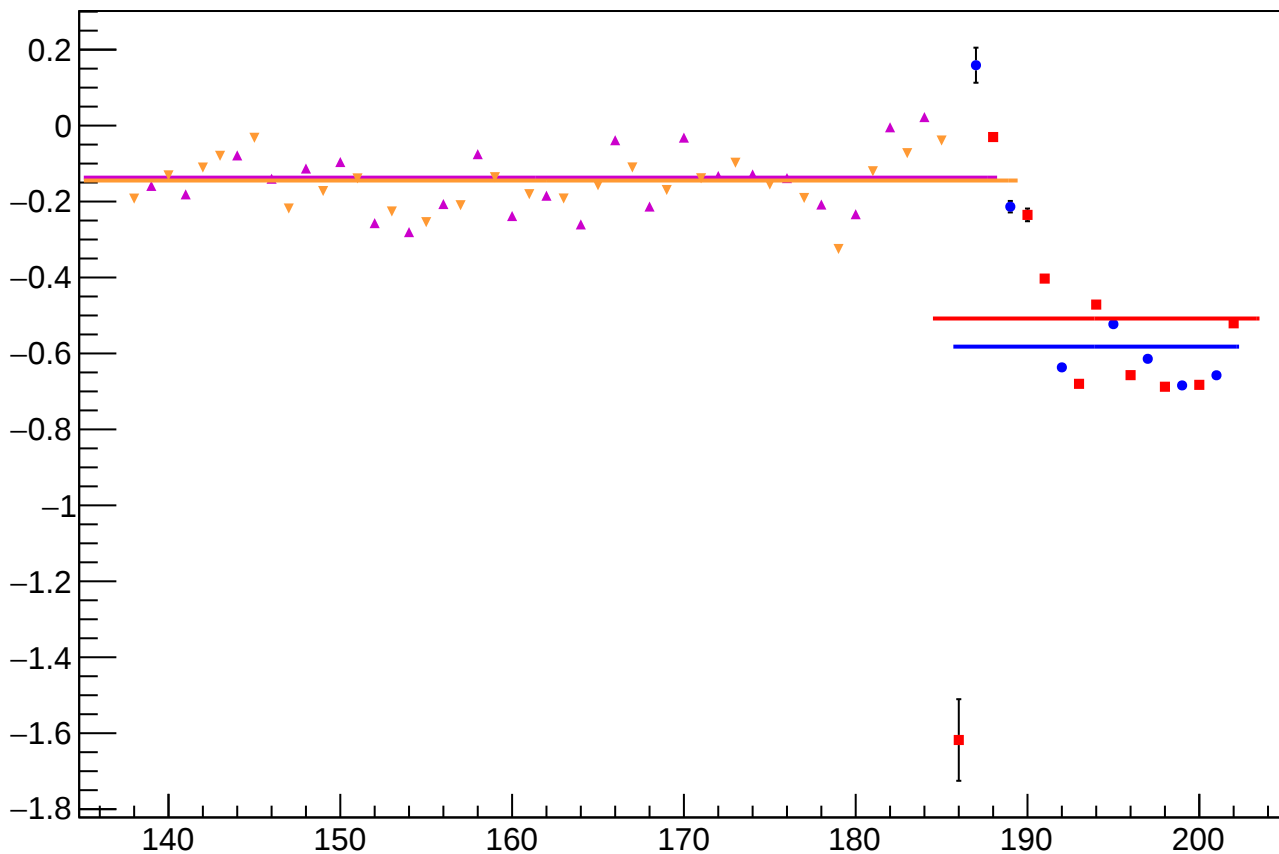
reg\_asym\_sam\_37\_26\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $0.484 \pm 0.136$   $\chi^2/\text{NDF}: 931.5/6$   
 Left Out:  $16.563 \pm 0.023$   $\chi^2/\text{NDF}: 53858.5/24$   
 Right Out:  $1.325 \pm 0.112$   $\chi^2/\text{NDF}: 4961.0/9$   
 Left In:  $16.098 \pm 0.024$   $\chi^2/\text{NDF}: 42345.7/22$

Left:  $16.335 \pm 0.017$   $\chi^2/\text{NDF}: 96401.9/47$   
 Right:  $0.987 \pm 0.086$   $\chi^2/\text{NDF}: 5915.3/16$   
 In:  $15.645 \pm 0.023$   $\chi^2/\text{NDF}: 56033.9/29$   
 Out:  $15.935 \pm 0.023$   $\chi^2/\text{NDF}: 76670.9/34$   
 All:  $15.793 \pm 0.016$   $\chi^2/\text{NDF}: 132784.9/64$

reg\_asym\_sam\_37\_26\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.582 \pm 0.004$   $\chi^2/\text{NDF}$ : 1086.6/6

Left Out:  $-0.145 \pm 0.001$   $\chi^2/\text{NDF}$ : 3769.7/24

Right Out:  $-0.508 \pm 0.004$   $\chi^2/\text{NDF}$ : 3634.8/9

Left In:  $-0.137 \pm 0.001$   $\chi^2/\text{NDF}$ : 5392.6/22

Left:  $-0.141 \pm 0.001$   $\chi^2/\text{NDF}$ : 9187.6/47

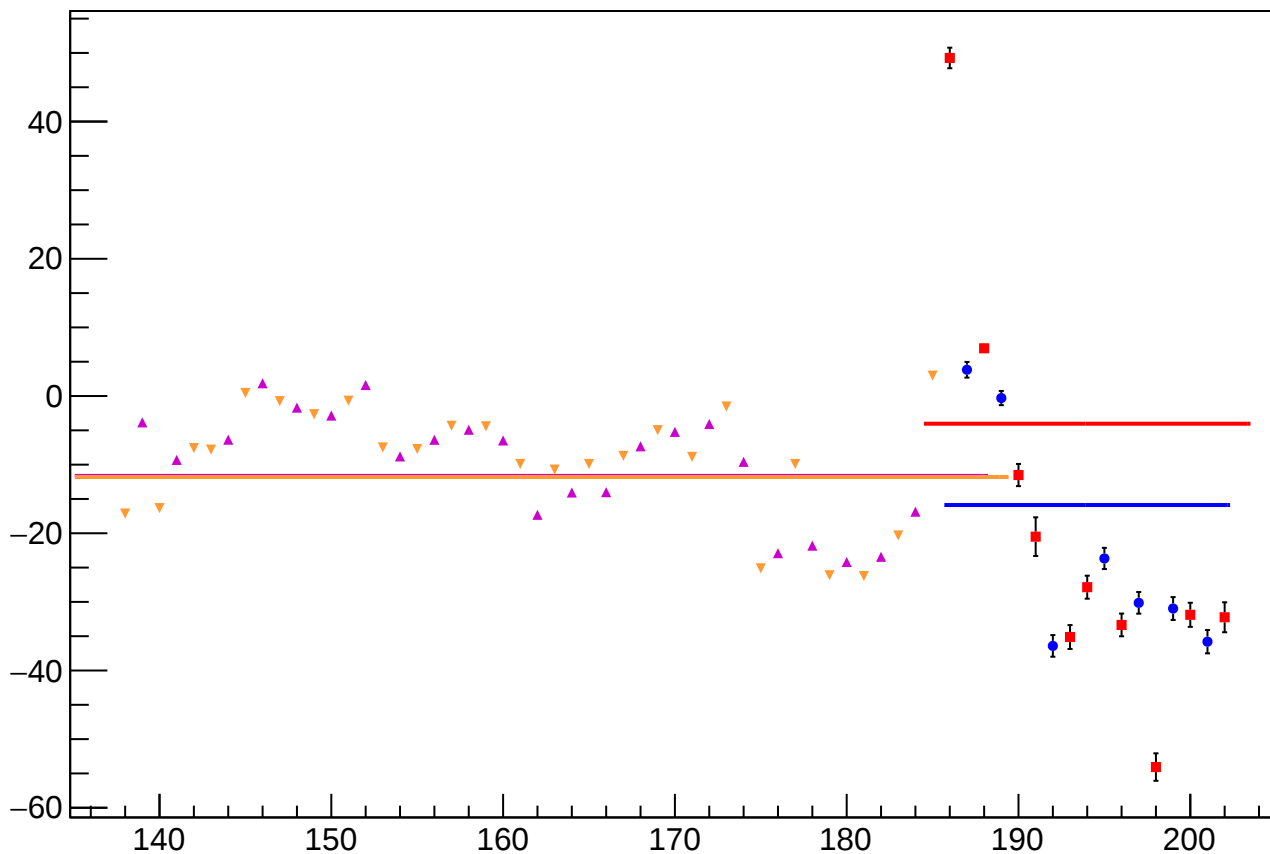
Right:  $-0.538 \pm 0.003$   $\chi^2/\text{NDF}$ : 4900.3/16

In:  $-0.164 \pm 0.001$   $\chi^2/\text{NDF}$ : 16800.6/29

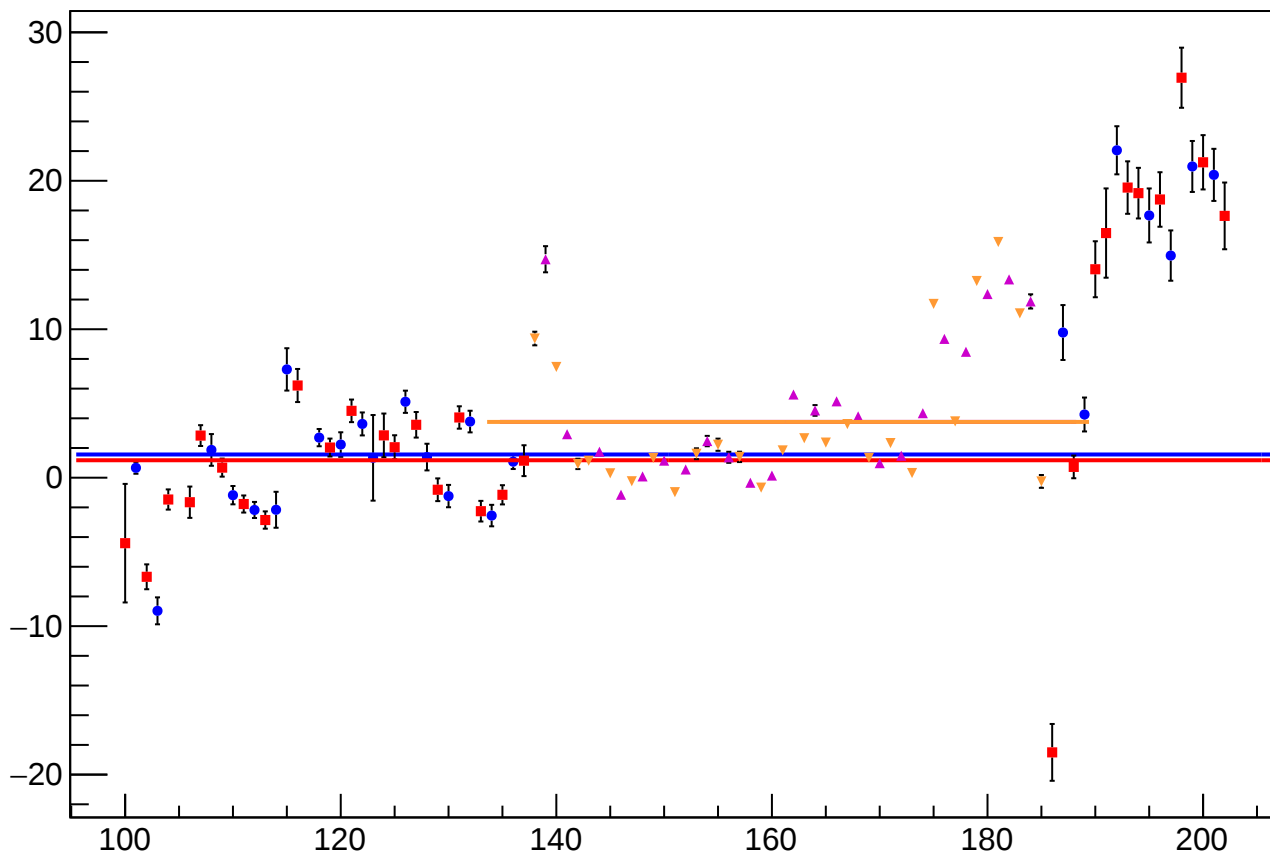
Out:  $-0.174 \pm 0.001$   $\chi^2/\text{NDF}$ : 17029.3/34

All:  $-0.169 \pm 0.001$   $\chi^2/\text{NDF}$ : 33881.1/64

reg\_asym\_sam\_1357\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



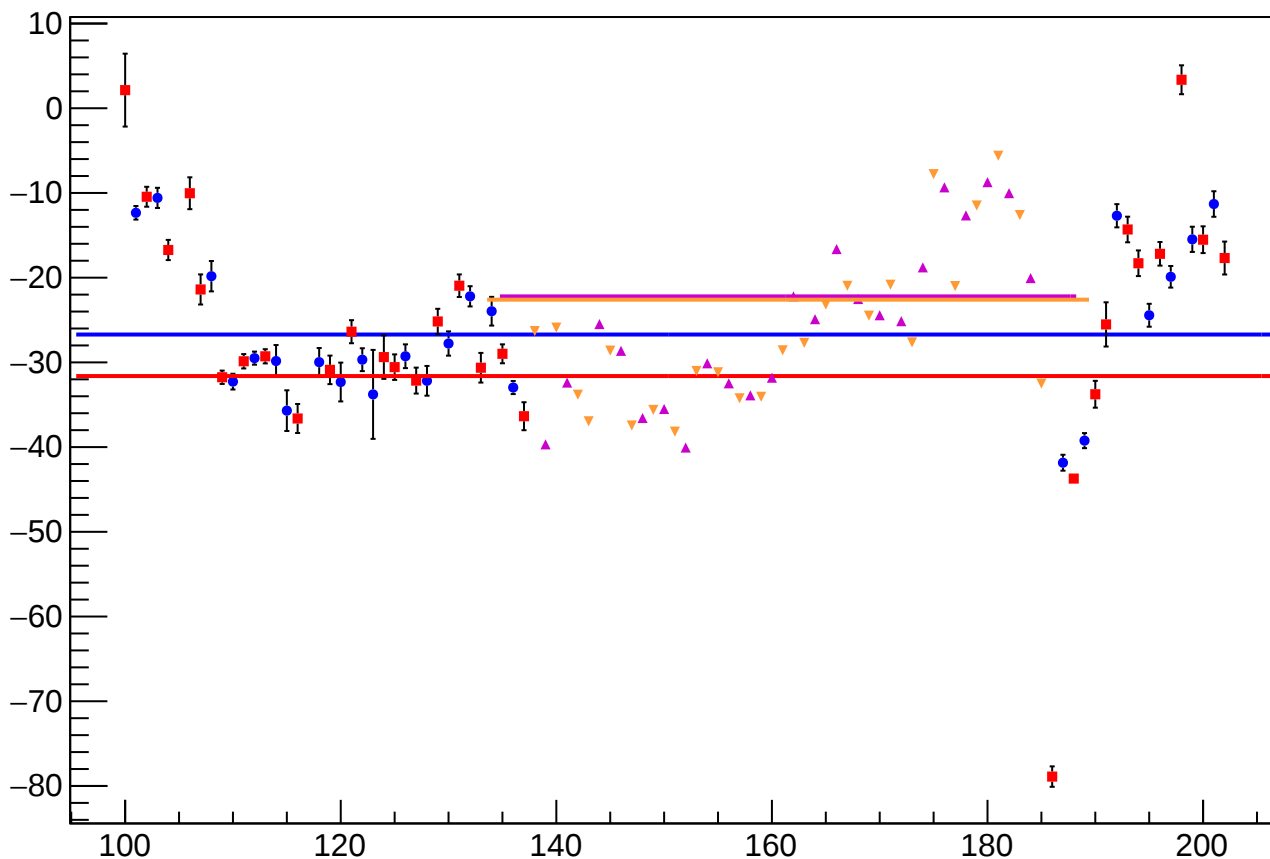
reg\_asym\_sam\_1357\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $1.563 \pm 0.164$   $\chi^2/\text{NDF}: 892.3/23$   
 Left Out:  $3.757 \pm 0.056$   $\chi^2/\text{NDF}: 7450.7/24$   
 Right Out:  $1.175 \pm 0.165$   $\chi^2/\text{NDF}: 1127.9/28$   
 Left In:  $3.757 \pm 0.057$   $\chi^2/\text{NDF}: 5629.4/22$

Left:  $3.757 \pm 0.040$   $\chi^2/\text{NDF}: 13080.0/47$   
 Right:  $1.370 \pm 0.116$   $\chi^2/\text{NDF}: 2023.1/52$   
 In:  $3.524 \pm 0.054$   $\chi^2/\text{NDF}: 6681.6/46$   
 Out:  $3.494 \pm 0.053$   $\chi^2/\text{NDF}: 8798.8/53$   
 All:  $3.508 \pm 0.038$   $\chi^2/\text{NDF}: 15480.6/100$

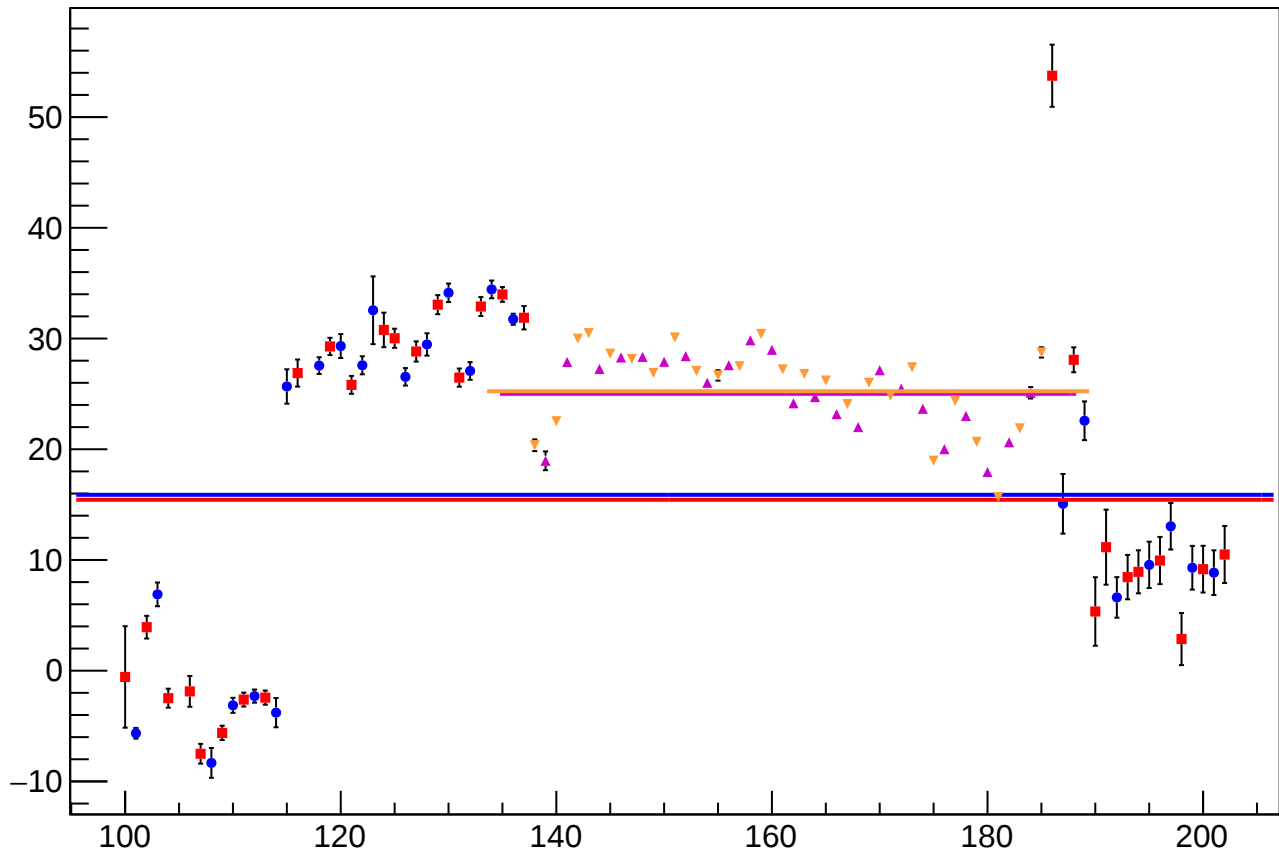
reg\_asym\_sam\_1357\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-26.712 \pm 0.250$   $\chi^2/\text{NDF}$ : 1452.4/23  
 Left Out:  $-22.598 \pm 0.071$   $\chi^2/\text{NDF}$ : 19933.4/24  
 Right Out:  $-31.613 \pm 0.222$   $\chi^2/\text{NDF}$ : 4056.5/28  
 Left In:  $-22.209 \pm 0.072$   $\chi^2/\text{NDF}$ : 17627.4/22

Left:  $-22.406 \pm 0.050$   $\chi^2/\text{NDF}$ : 37575.6/47  
 Right:  $-29.446 \pm 0.166$   $\chi^2/\text{NDF}$ : 5723.5/52  
 In:  $-22.551 \pm 0.069$   $\chi^2/\text{NDF}$ : 19379.9/46  
 Out:  $-23.425 \pm 0.067$   $\chi^2/\text{NDF}$ : 25481.8/53  
 All:  $-22.997 \pm 0.048$   $\chi^2/\text{NDF}$ : 44944.0/100

reg\_asym\_sam\_1357\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 15.886 $\pm$ 0.187  $\chi^2$ /NDF: 7618.1/23

Left Out: 25.242 $\pm$ 0.063  $\chi^2$ /NDF:3786.5/24

Right Out: 15.437 $\pm$ 0.189  $\chi^2$ /NDF: 7658.0/28

Left In: 25.009 $\pm$ 0.064  $\chi^2$ /NDF:2722.0/22

Left: 25.128 $\pm$ 0.045  $\chi^2$ /NDF: 6515.2/47

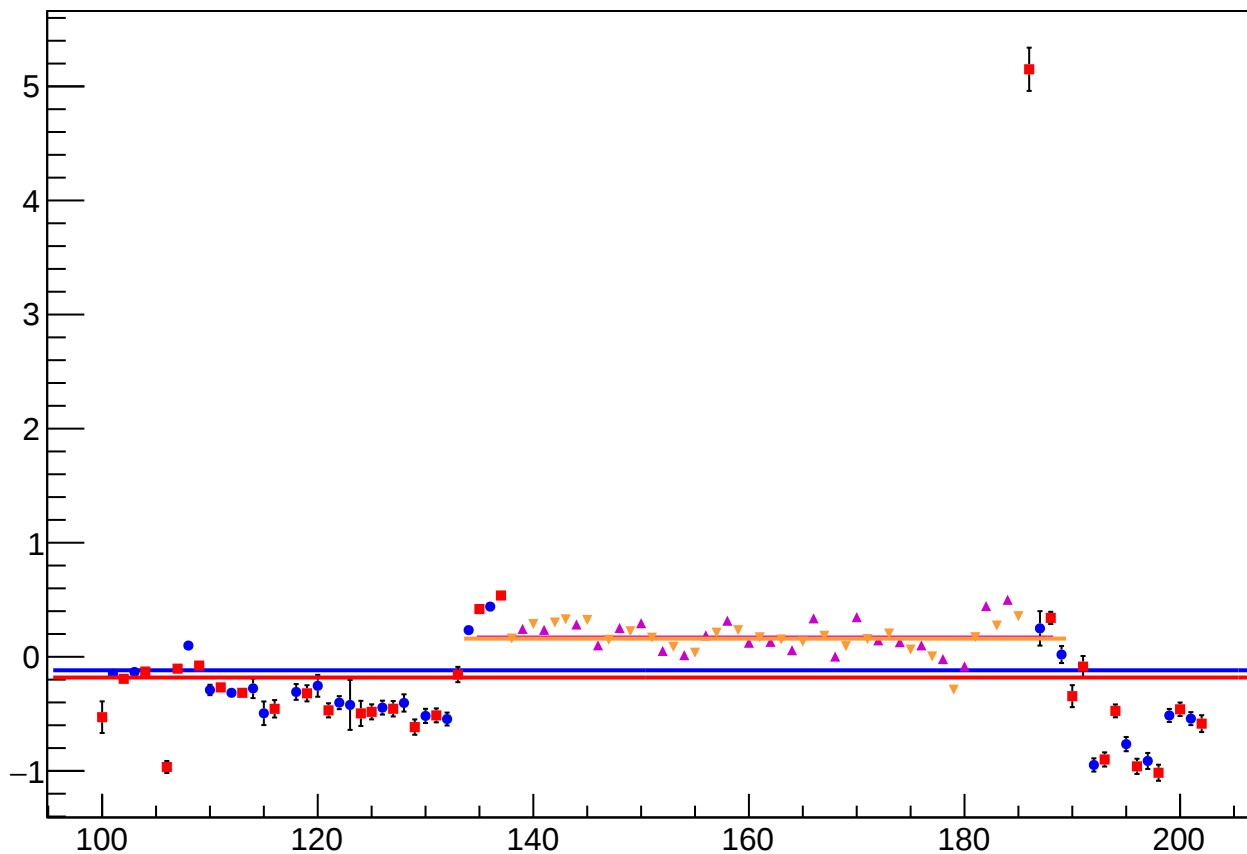
Right: 15.664 $\pm$ 0.133  $\chi^2$ /NDF: 15278.9/52

In: 24.052 $\pm$ 0.060  $\chi^2$ /NDF:12480.8/46

Out: 24.270 $\pm$ 0.059  $\chi^2$ /NDF:13875.7/53

All: 24.163 $\pm$ 0.042  $\chi^2$ /NDF: 26363.1/100

reg\_asym\_sam\_1357\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.118 \pm 0.010$   $\chi^2/\text{NDF}$ : 1630.2/23

Left Out:  $0.159 \pm 0.003$   $\chi^2/\text{NDF}$ : 1864.2/24

Right Out:  $-0.181 \pm 0.009$   $\chi^2/\text{NDF}$ : 2561.4/28

Left In:  $0.169 \pm 0.003$   $\chi^2/\text{NDF}$ : 2418.8/22

Left:  $0.164 \pm 0.002$   $\chi^2/\text{NDF}$ : 4288.4/47

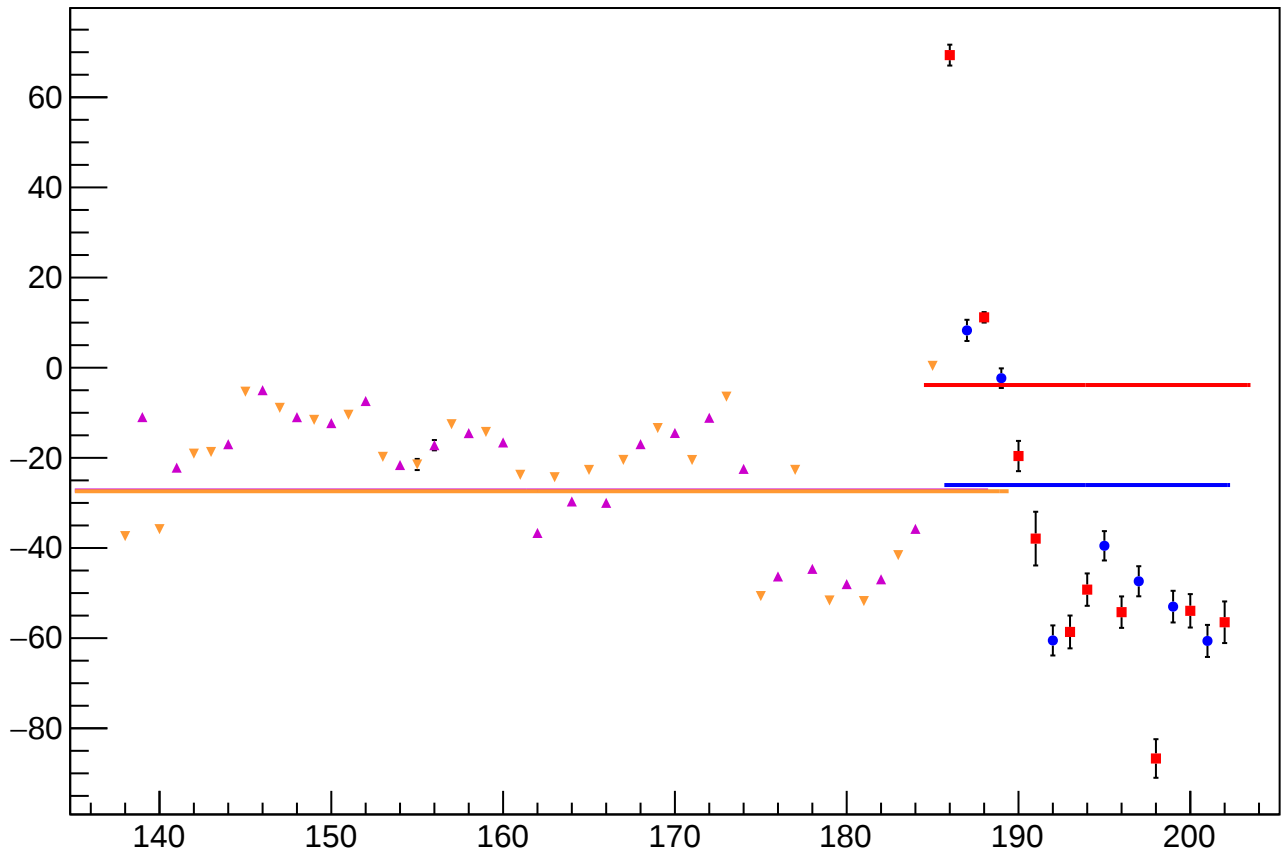
Right:  $-0.150 \pm 0.007$   $\chi^2/\text{NDF}$ : 4213.9/52

In:  $0.144 \pm 0.003$   $\chi^2/\text{NDF}$ : 4874.5/46

Out:  $0.130 \pm 0.003$   $\chi^2/\text{NDF}$ : 5630.7/53

All:  $0.137 \pm 0.002$   $\chi^2/\text{NDF}$ : 10518.3/100

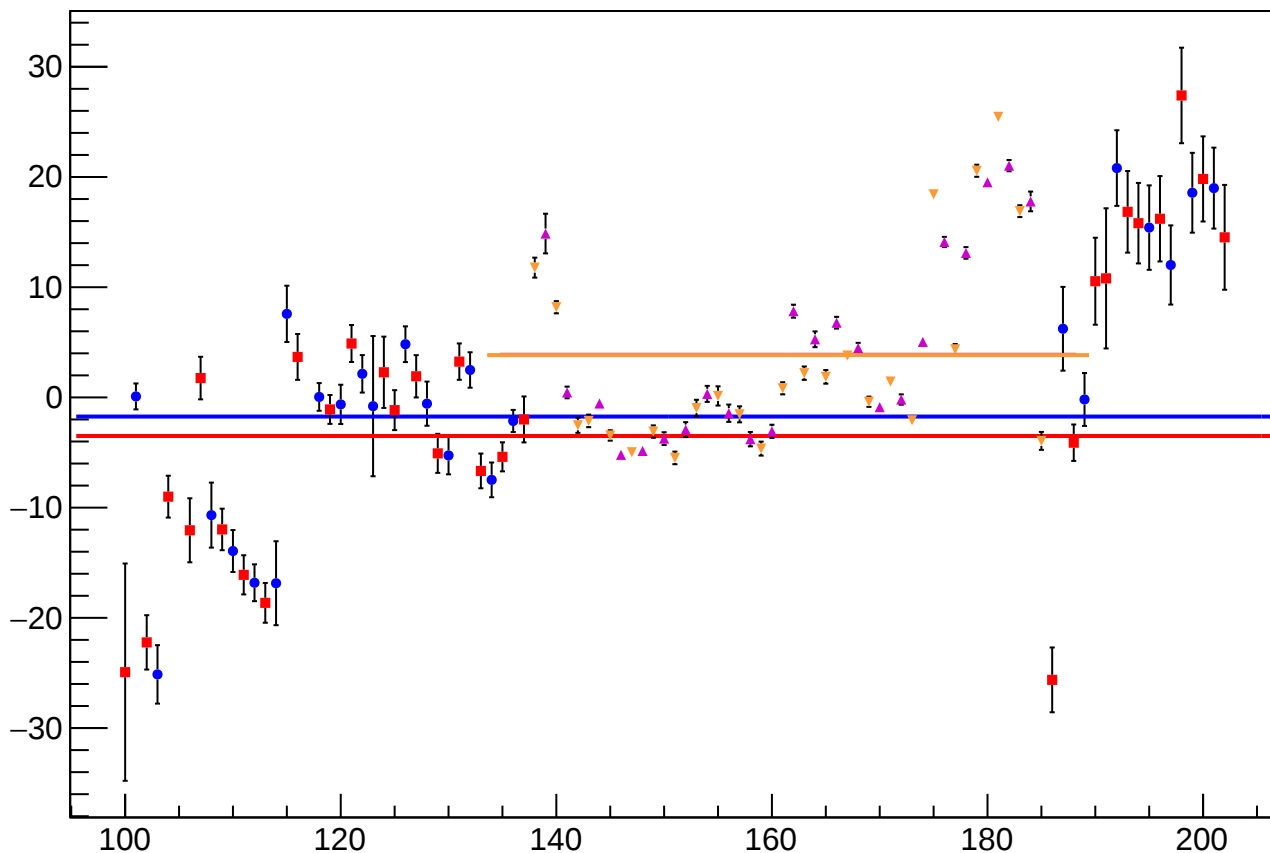
reg\_asym\_sam\_2468\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-26.030 \pm 1.100$   $\chi^2/\text{NDF}: 650.0/6$   
 Left Out:  $-27.408 \pm 0.137$   $\chi^2/\text{NDF}: 14850.5/24$   
 Right Out:  $-3.840 \pm 0.829$   $\chi^2/\text{NDF}: 2500.5/9$   
 Left In:  $-27.243 \pm 0.139$   $\chi^2/\text{NDF}: 11305.2/22$

Left:  $-27.327 \pm 0.098$   $\chi^2/\text{NDF}: 26156.4/47$   
 Right:  $-11.878 \pm 0.662$   $\chi^2/\text{NDF}: 3409.8/16$   
 In:  $-27.224 \pm 0.138$   $\chi^2/\text{NDF}: 11956.4/29$   
 Out:  $-26.783 \pm 0.135$   $\chi^2/\text{NDF}: 18137.1/34$   
 All:  $-26.998 \pm 0.097$   $\chi^2/\text{NDF}: 30098.7/64$

reg\_asym\_sam\_2468\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-1.736 \pm 0.391$   $\chi^2/\text{NDF}$ : 435.8/23

Left Out:  $3.841 \pm 0.109$   $\chi^2/\text{NDF}$ : 6939.2/24

Right Out:  $-3.499 \pm 0.394$   $\chi^2/\text{NDF}$ : 565.2/28

Left In:  $3.866 \pm 0.111$   $\chi^2/\text{NDF}$ : 5424.0/22

Left:  $3.853 \pm 0.078$   $\chi^2/\text{NDF}$ : 12363.3/47

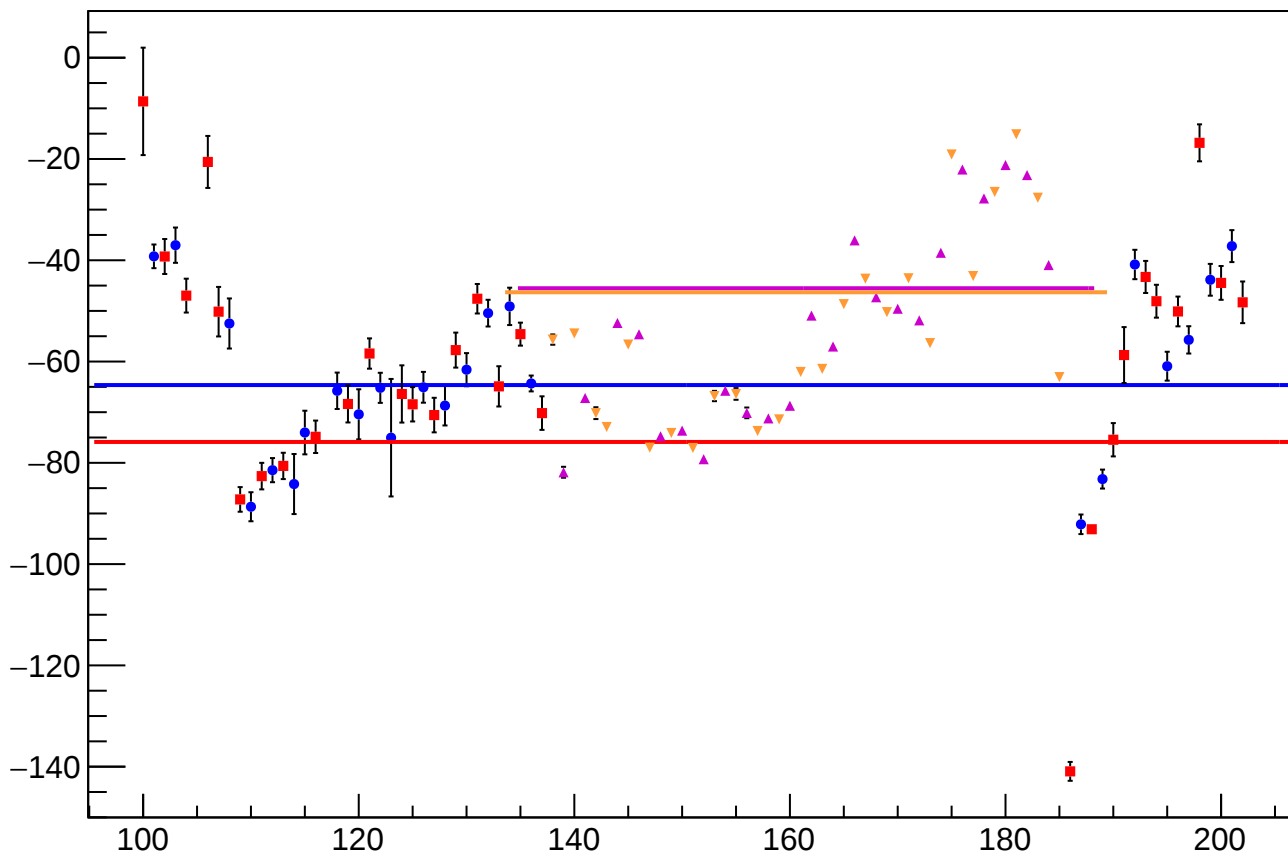
Right:  $-2.611 \pm 0.278$   $\chi^2/\text{NDF}$ : 1011.1/52

In:  $3.448 \pm 0.107$   $\chi^2/\text{NDF}$ : 6049.4/46

Out:  $3.318 \pm 0.105$   $\chi^2/\text{NDF}$ : 7826.2/53

All:  $3.382 \pm 0.075$   $\chi^2/\text{NDF}$ : 13876.3/100

reg\_asym\_sam\_2468\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-64.643 \pm 0.582$   $\chi^2/\text{NDF}$ : 874.1/23

Left Out:  $-46.318 \pm 0.138$   $\chi^2/\text{NDF}$ : 20134.6/24

Right Out:  $-75.877 \pm 0.510$   $\chi^2/\text{NDF}$ : 2890.6/28

Left In:  $-45.522 \pm 0.140$   $\chi^2/\text{NDF}$ : 17525.4/22

Left:  $-45.925 \pm 0.098$   $\chi^2/\text{NDF}$ : 37676.5/47

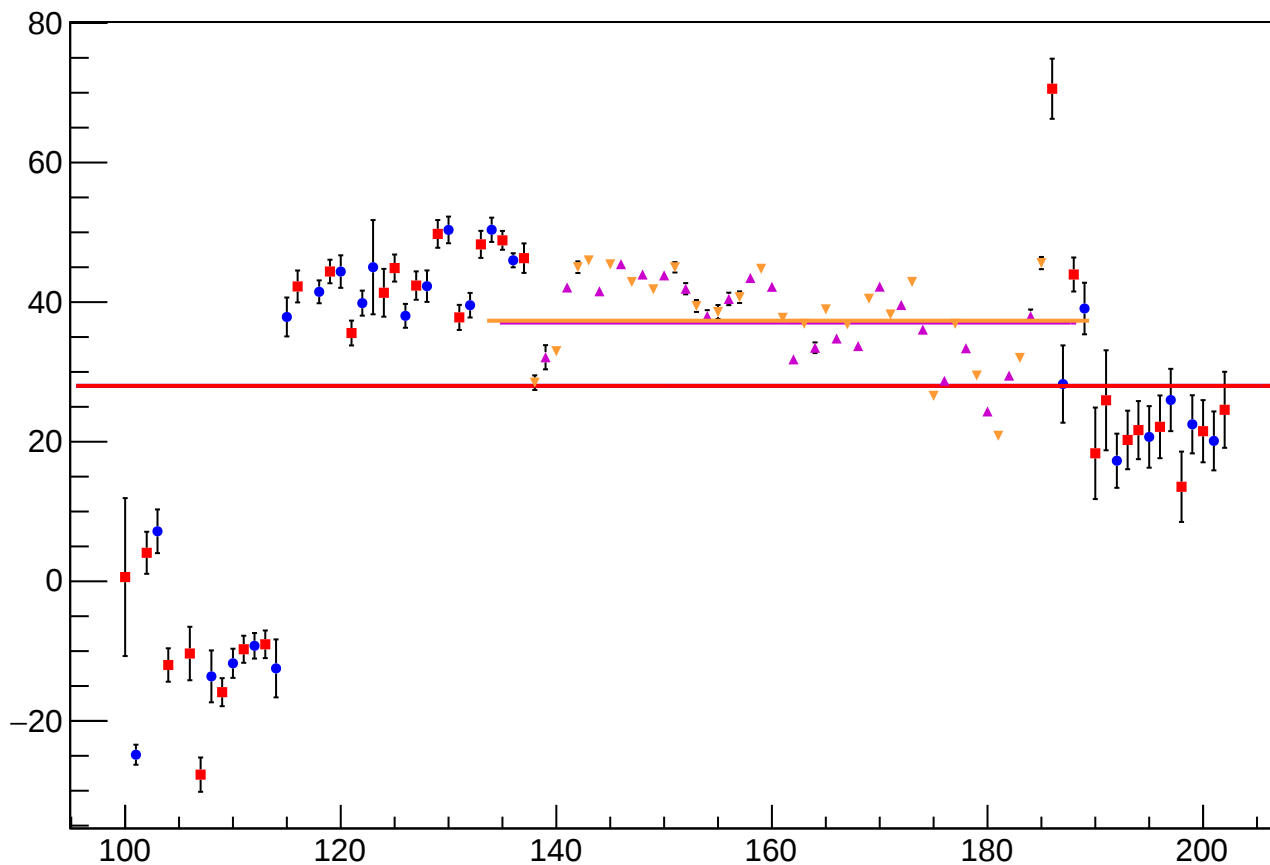
Right:  $-71.002 \pm 0.383$   $\chi^2/\text{NDF}$ : 3975.6/52

In:  $-46.564 \pm 0.136$   $\chi^2/\text{NDF}$ : 19420.0/46

Out:  $-48.336 \pm 0.133$   $\chi^2/\text{NDF}$ : 26160.1/53

All:  $-47.468 \pm 0.095$   $\chi^2/\text{NDF}$ : 45666.7/100

reg\_asym\_sam\_2468\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 28.007 $\pm$ 0.443  $\chi^2$ /NDF: 3336.0/23

Left Out: 37.340 $\pm$ 0.123  $\chi^2$ /NDF:3149.1/24

Right Out: 27.999 $\pm$ 0.452  $\chi^2$ /NDF: 3194.0/28

Left In: 37.074 $\pm$ 0.125  $\chi^2$ /NDF:2397.3/22

Left: 37.209 $\pm$ 0.088  $\chi^2$ /NDF: 5548.7/47

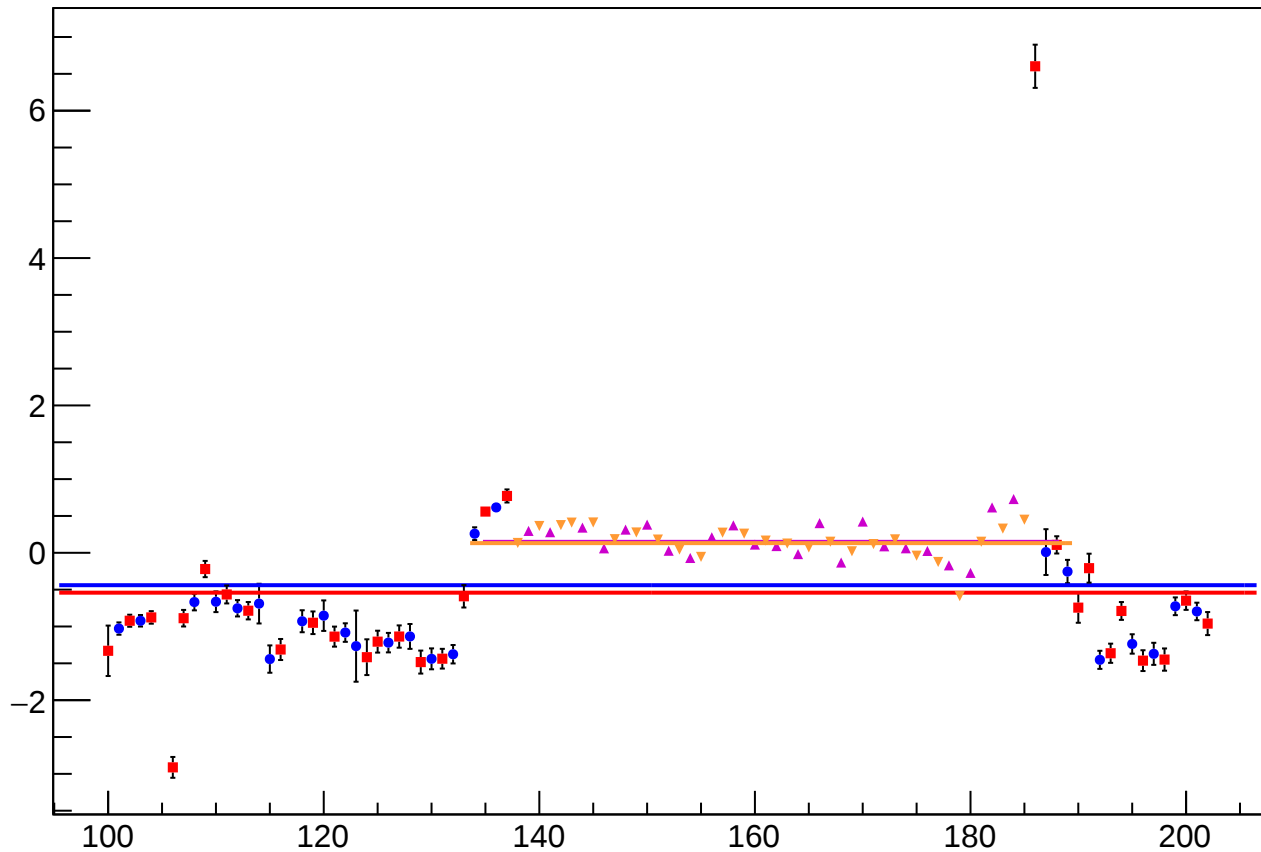
Right: 28.003 $\pm$ 0.316  $\chi^2$ /NDF: 6530.0/52

In: 36.403 $\pm$ 0.120  $\chi^2$ /NDF:6121.3/46

Out: 36.697 $\pm$ 0.119  $\chi^2$ /NDF:6741.2/53

All: 36.552 $\pm$ 0.084  $\chi^2$ /NDF: 12865.4/100

reg\_asym\_sam\_2468\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.439 \pm 0.023$   $\chi^2/\text{NDF}$ : 1193.6/23

Left Out:  $0.131 \pm 0.006$   $\chi^2/\text{NDF}$ : 1426.3/24

Right Out:  $-0.541 \pm 0.023$   $\chi^2/\text{NDF}$ : 1919.5/28

Left In:  $0.149 \pm 0.006$   $\chi^2/\text{NDF}$ : 1803.6/22

Left:  $0.140 \pm 0.004$   $\chi^2/\text{NDF}$ : 3234.6/47

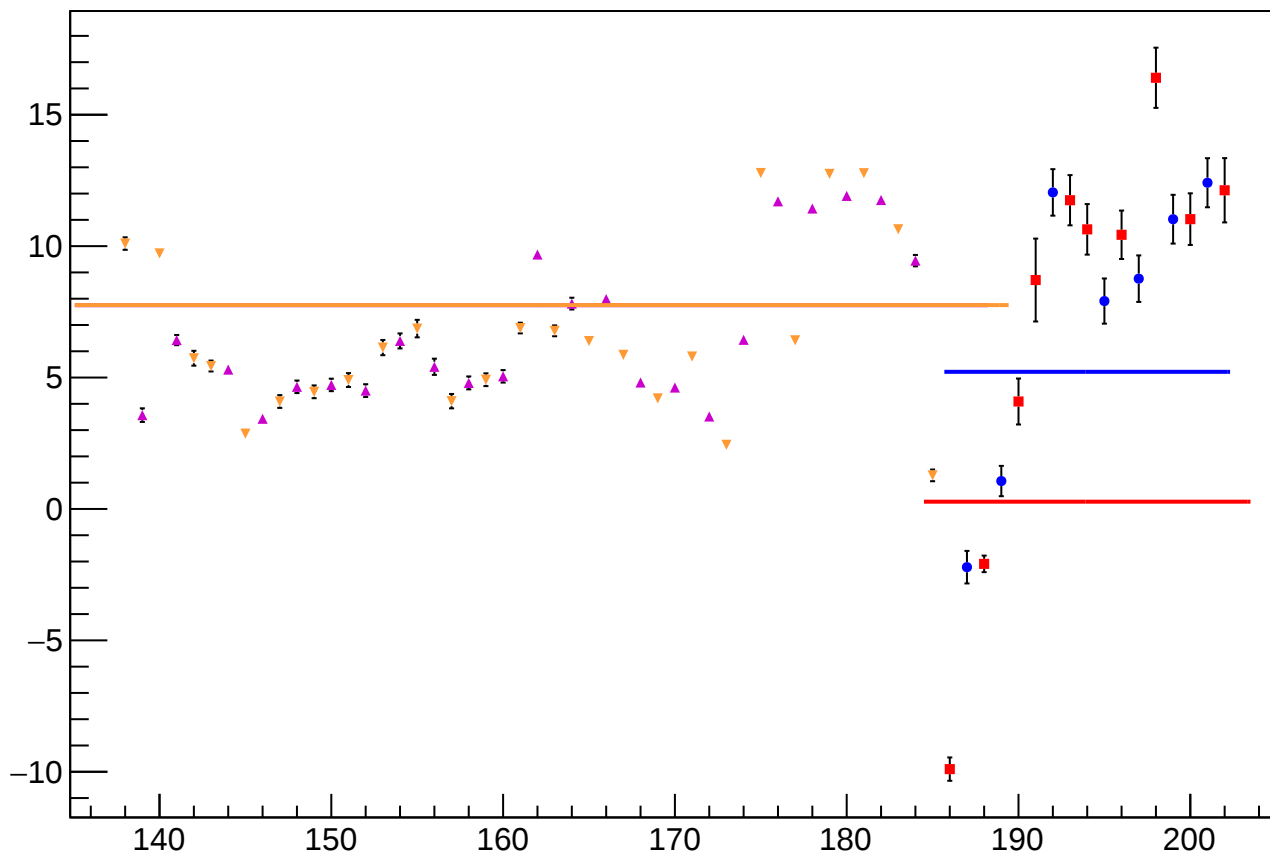
Right:  $-0.490 \pm 0.016$   $\chi^2/\text{NDF}$ : 3123.3/52

In:  $0.113 \pm 0.006$   $\chi^2/\text{NDF}$ : 3634.7/46

Out:  $0.092 \pm 0.005$   $\chi^2/\text{NDF}$ : 4182.1/53

All:  $0.102 \pm 0.004$   $\chi^2/\text{NDF}$ : 7824.3/100

reg\_asym\_sam\_1357\_2468\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $5.218 \pm 0.291$   $\chi^2/\text{NDF}: 380.1/6$

Left Out:  $7.757 \pm 0.034$   $\chi^2/\text{NDF}: 11728.6/24$

Right Out:  $0.277 \pm 0.210$   $\chi^2/\text{NDF}: 1422.6/9$

Left In:  $7.753 \pm 0.035$   $\chi^2/\text{NDF}: 8345.2/22$

Left:  $7.755 \pm 0.025$   $\chi^2/\text{NDF}: 20073.8/47$

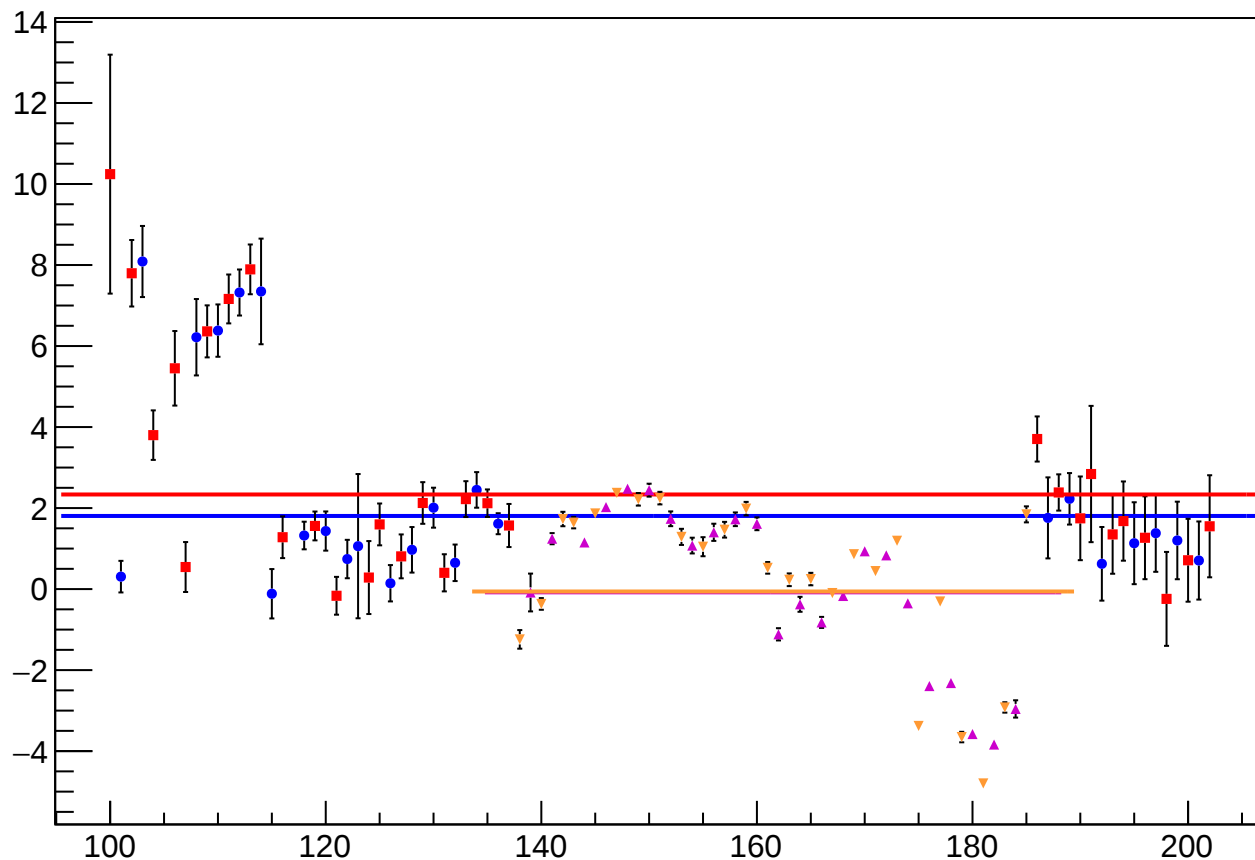
Right:  $1.970 \pm 0.170$   $\chi^2/\text{NDF}: 1992.5/16$

In:  $7.716 \pm 0.035$   $\chi^2/\text{NDF}: 8800.2/29$

Out:  $7.562 \pm 0.034$   $\chi^2/\text{NDF}: 14388.4/34$

All:  $7.637 \pm 0.024$   $\chi^2/\text{NDF}: 23198.6/64$

reg\_asym\_sam\_1357\_2468\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 1.805 $\pm$ 0.111  $\chi^2$ /NDF: 297.9/23

Left Out: -0.059 $\pm$ 0.028  $\chi^2$ /NDF: 6068.8/24

Right Out: 2.336 $\pm$ 0.111  $\chi^2$ /NDF: 352.5/28

Left In: -0.080 $\pm$ 0.028  $\chi^2$ /NDF: 4979.5/22

Left: -0.070 $\pm$ 0.020  $\chi^2$ /NDF: 11048.5/47

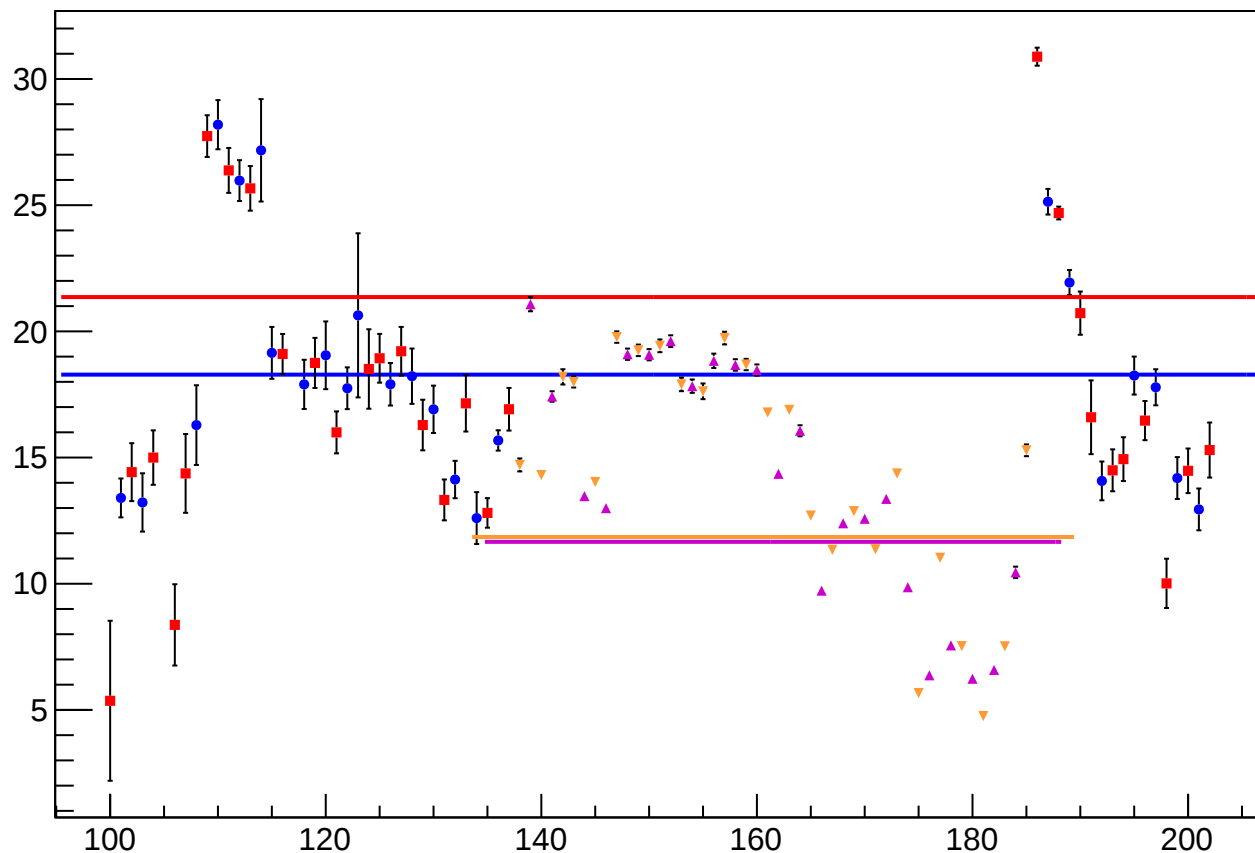
Right: 2.070 $\pm$ 0.078  $\chi^2$ /NDF: 661.9/52

In: 0.035 $\pm$ 0.027  $\chi^2$ /NDF: 5549.8/46

Out: 0.082 $\pm$ 0.027  $\chi^2$ /NDF: 6860.0/53

All: 0.059 $\pm$ 0.019  $\chi^2$ /NDF: 12411.2/100

reg\_asym\_sam\_1357\_2468\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 18.286 $\pm$ 0.162  $\chi^2$ /NDF: 714.2/23

Left Out: 11.853 $\pm$ 0.035  $\chi^2$ /NDF:19149.4/24

Right Out: 21.359 $\pm$ 0.137  $\chi^2$ /NDF: 2032.1/28

Left In: 11.660 $\pm$ 0.035  $\chi^2$ /NDF:16710.2/22

Left: 11.758 $\pm$ 0.025  $\chi^2$ /NDF: 35874.9/47

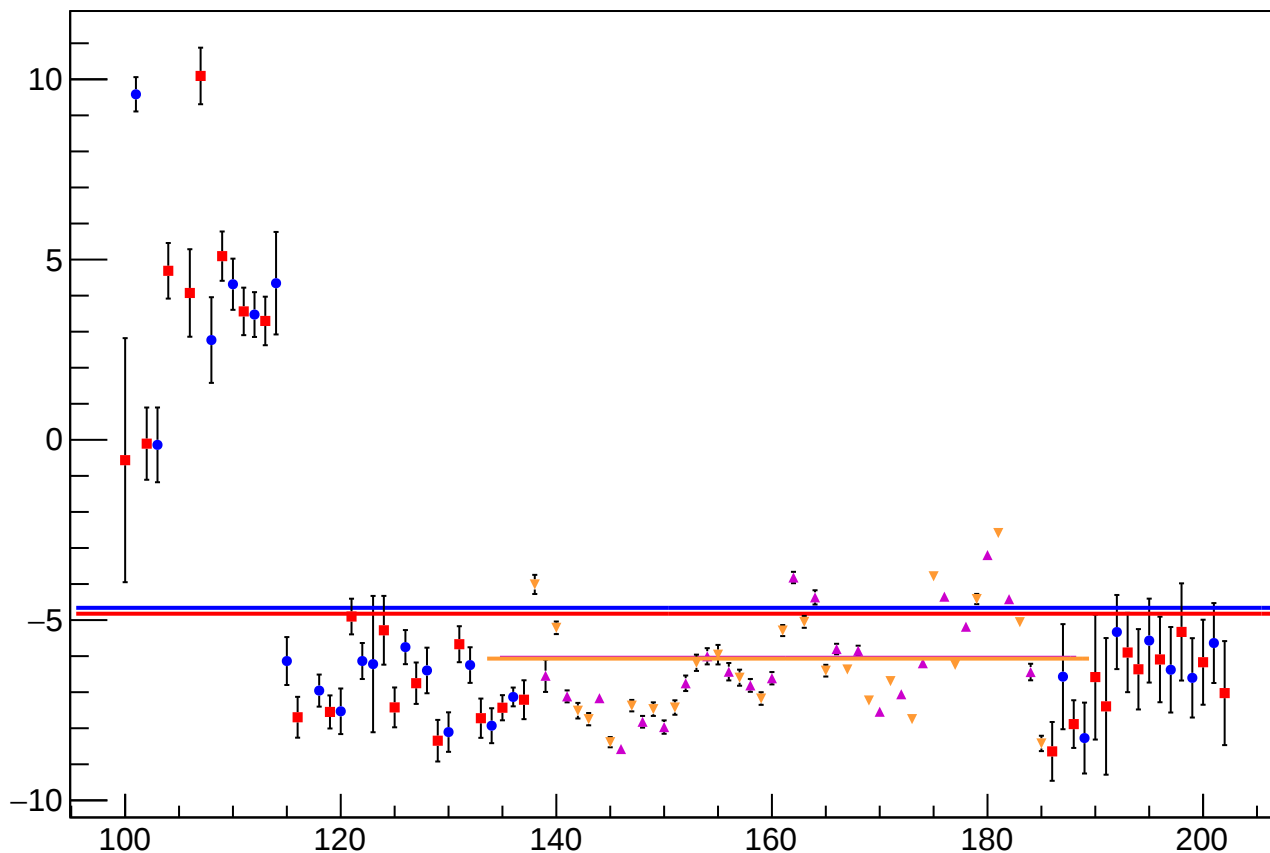
Right: 20.078 $\pm$ 0.104  $\chi^2$ /NDF: 2957.3/52

In: 11.960 $\pm$ 0.034  $\chi^2$ /NDF:19030.3/46

Out: 12.428 $\pm$ 0.034  $\chi^2$ /NDF:25729.7/53

All: 12.199 $\pm$ 0.024  $\chi^2$ /NDF: 44854.8/100

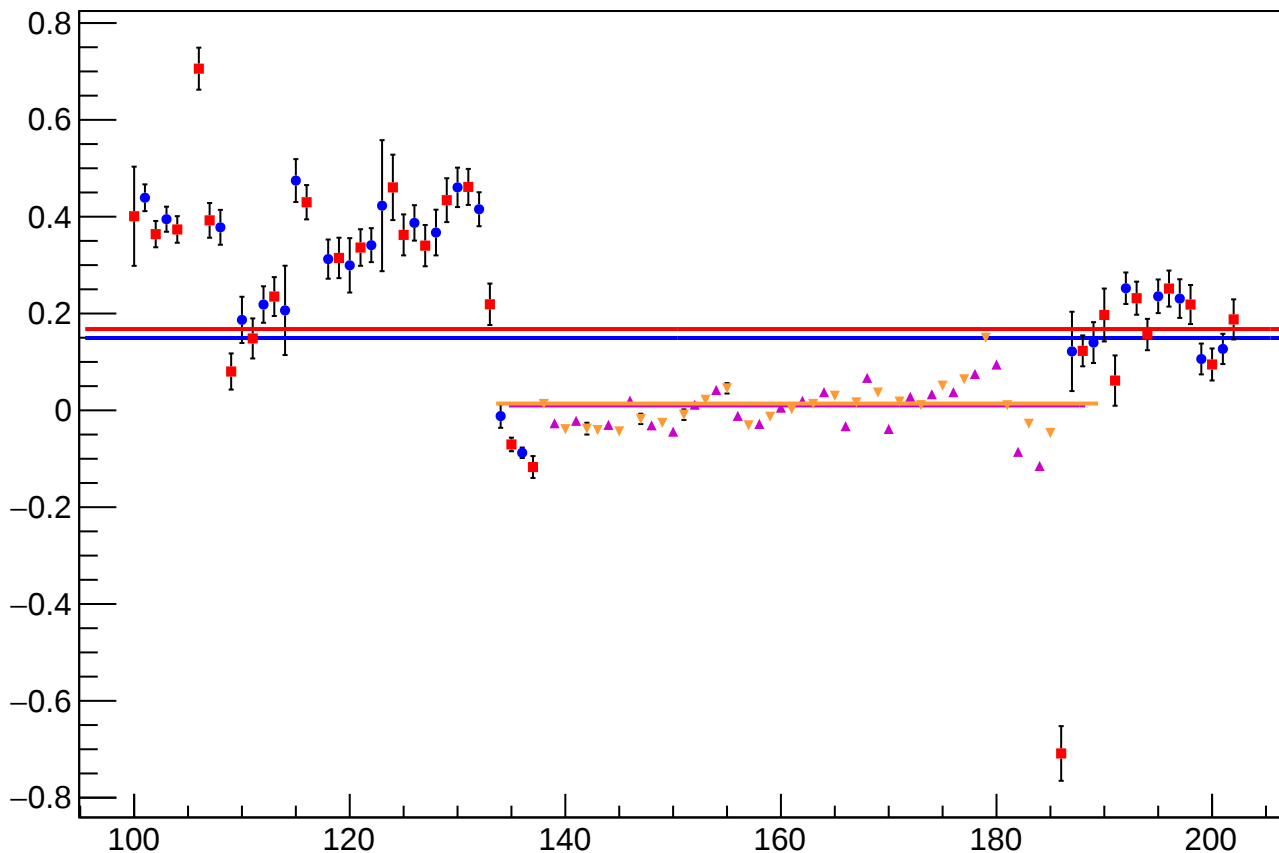
reg\_asym\_sam\_1357\_2468\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-4.660 \pm 0.125$   $\chi^2/\text{NDF}$ : 1606.6/23  
 Left Out:  $-6.068 \pm 0.031$   $\chi^2/\text{NDF}$ : 2671.7/24  
 Right Out:  $-4.823 \pm 0.127$   $\chi^2/\text{NDF}$ : 1401.6/28  
 Left In:  $-6.045 \pm 0.032$   $\chi^2/\text{NDF}$ : 2293.7/22

Left:  $-6.057 \pm 0.022$   $\chi^2/\text{NDF}$ : 4965.7/47  
 Right:  $-4.740 \pm 0.089$   $\chi^2/\text{NDF}$ : 3009.0/52  
 In:  $-5.961 \pm 0.031$   $\chi^2/\text{NDF}$ : 4016.0/46  
 Out:  $-5.998 \pm 0.030$   $\chi^2/\text{NDF}$ : 4163.4/53  
 All:  $-5.980 \pm 0.022$   $\chi^2/\text{NDF}$ : 8180.2/100

reg\_asym\_sam\_1357\_2468\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.149 $\pm$ 0.006  $\chi^2$ /NDF: 1081.6/23

Left Out: 0.014 $\pm$ 0.001  $\chi^2$ /NDF:956.2/24

Right Out: 0.168 $\pm$ 0.006  $\chi^2$ /NDF: 1265.8/28

Left In: 0.010 $\pm$ 0.001  $\chi^2$ /NDF:1216.1/22

Left: 0.012 $\pm$ 0.001  $\chi^2$ /NDF: 2176.2/47

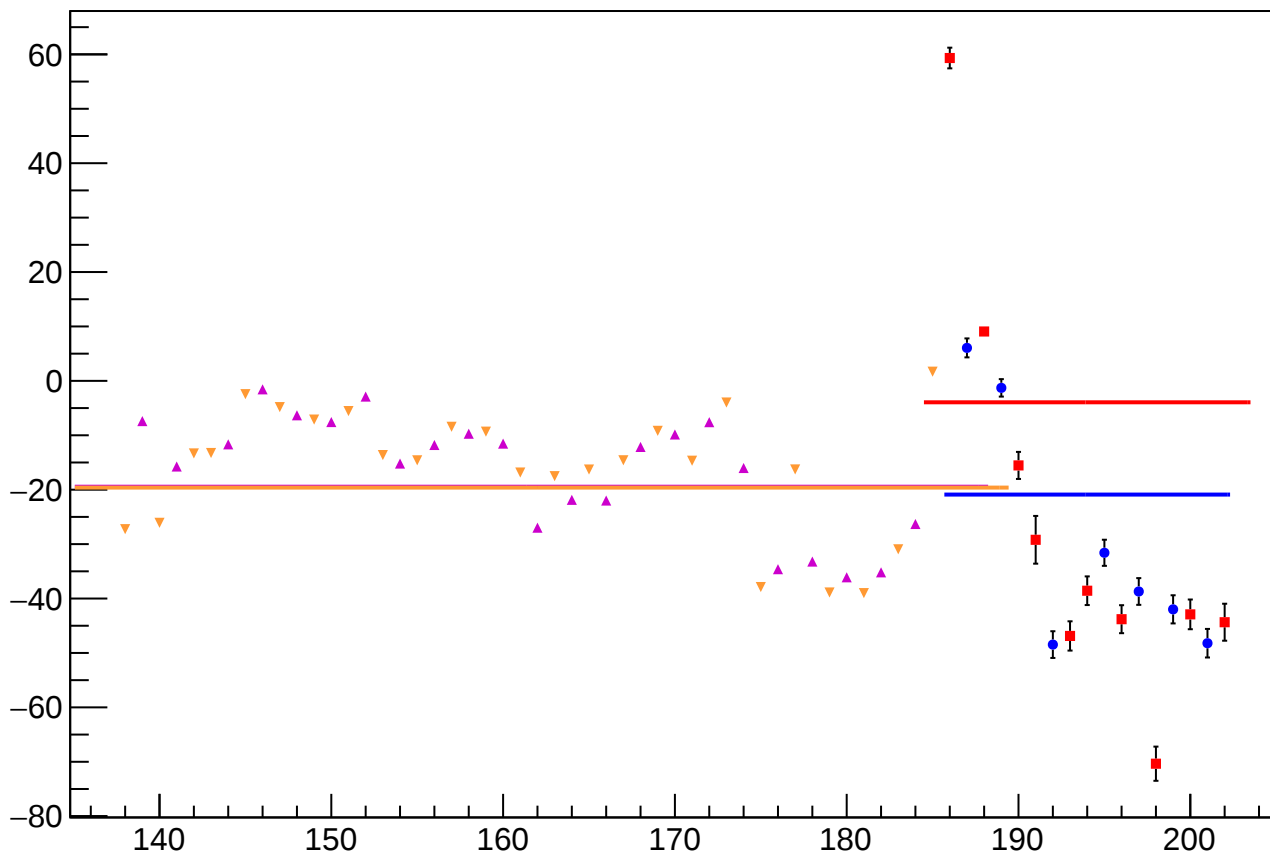
Right: 0.159 $\pm$ 0.004  $\chi^2$ /NDF: 2351.7/52

In: 0.017 $\pm$ 0.001  $\chi^2$ /NDF:2760.7/46

Out: 0.021 $\pm$ 0.001  $\chi^2$ /NDF:2781.9/53

All: 0.019 $\pm$ 0.001  $\chi^2$ /NDF: 5547.4/100

reg\_asym\_sam\_12345678\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-20.896 \pm 0.812$   $\chi^2/\text{NDF}$ : 762.1/6

Left Out:  $-19.612 \pm 0.103$   $\chi^2/\text{NDF}$ : 15761.3/24

Right Out:  $-3.939 \pm 0.616$   $\chi^2/\text{NDF}$ : 2858.8/9

Left In:  $-19.450 \pm 0.105$   $\chi^2/\text{NDF}$ : 12283.1/22

Left:  $-19.533 \pm 0.074$   $\chi^2/\text{NDF}$ : 28045.6/47

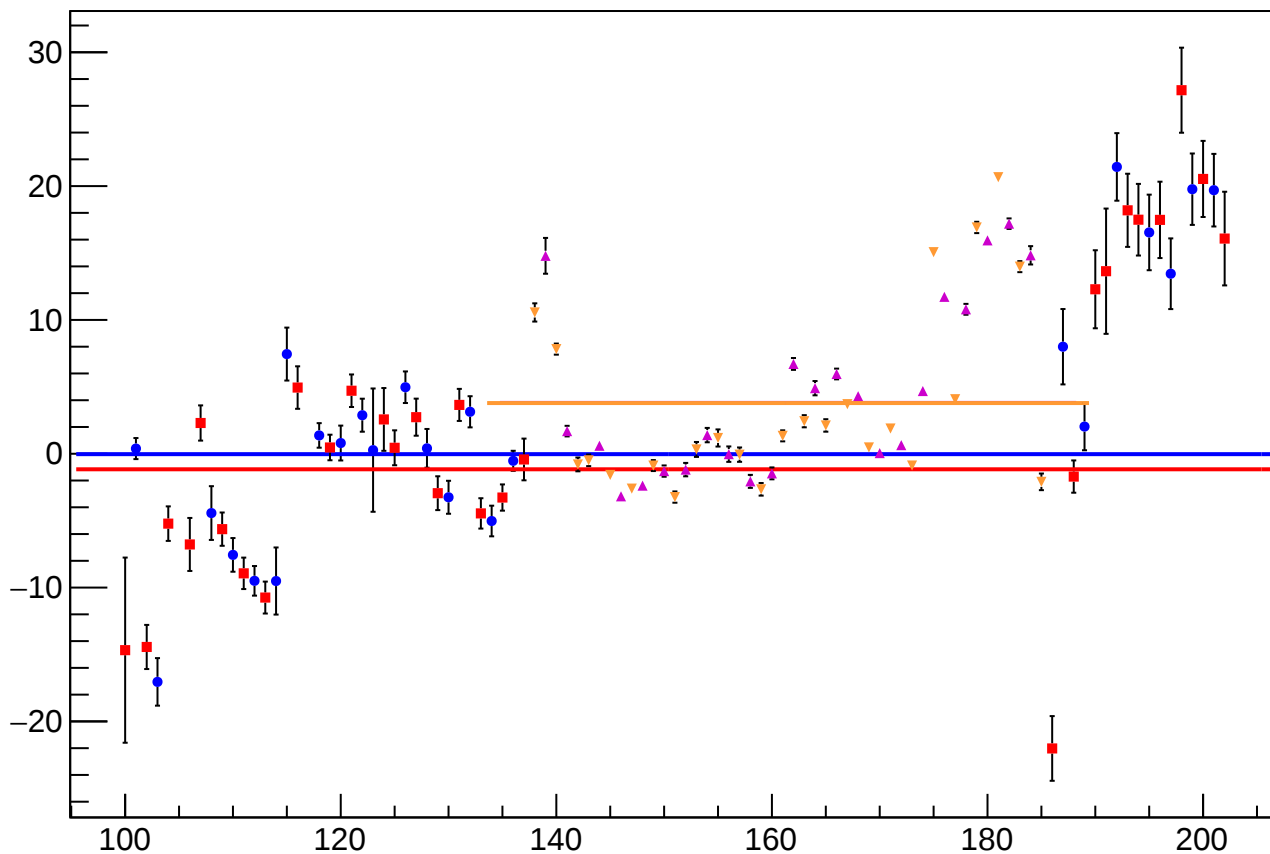
Right:  $-10.134 \pm 0.491$   $\chi^2/\text{NDF}$ : 3897.9/16

In:  $-19.474 \pm 0.104$   $\chi^2/\text{NDF}$ : 13048.3/29

Out:  $-19.184 \pm 0.102$   $\chi^2/\text{NDF}$ : 19250.2/34

All:  $-19.326 \pm 0.073$   $\chi^2/\text{NDF}$ : 32302.5/64

reg\_asym\_sam\_12345678\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-0.030 \pm 0.279$   $\chi^2/\text{NDF}$ : 544.8/23

Left Out:  $3.788 \pm 0.082$   $\chi^2/\text{NDF}$ : 7150.5/24

Right Out:  $-1.161 \pm 0.281$   $\chi^2/\text{NDF}$ : 708.4/28

Left In:  $3.799 \pm 0.084$   $\chi^2/\text{NDF}$ : 5517.0/22

Left:  $3.793 \pm 0.059$   $\chi^2/\text{NDF}$ : 12667.5/47

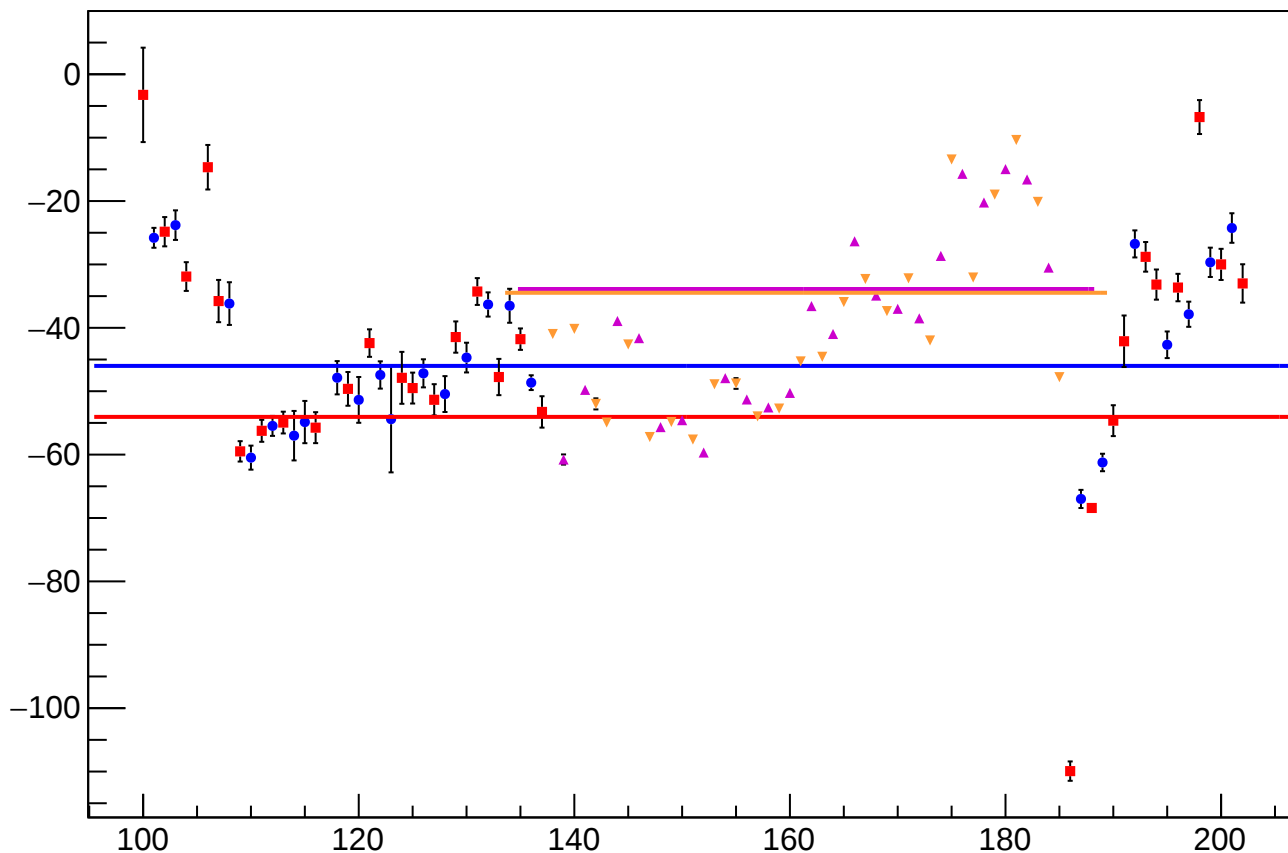
Right:  $-0.592 \pm 0.198$   $\chi^2/\text{NDF}$ : 1261.4/52

In:  $3.484 \pm 0.080$   $\chi^2/\text{NDF}$ : 6234.2/46

Out:  $3.400 \pm 0.079$   $\chi^2/\text{NDF}$ : 8144.1/53

All:  $3.441 \pm 0.056$   $\chi^2/\text{NDF}$ : 14378.8/100

reg\_asym\_sam\_12345678\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-46.006 \pm 0.418$   $\chi^2/\text{NDF}$ : 999.9/23

Left Out:  $-34.471 \pm 0.104$   $\chi^2/\text{NDF}$ : 20196.3/24

Right Out:  $-54.050 \pm 0.369$   $\chi^2/\text{NDF}$ : 3207.3/28

Left In:  $-33.875 \pm 0.105$   $\chi^2/\text{NDF}$ : 17638.7/22

Left:  $-34.177 \pm 0.074$   $\chi^2/\text{NDF}$ : 37851.2/47

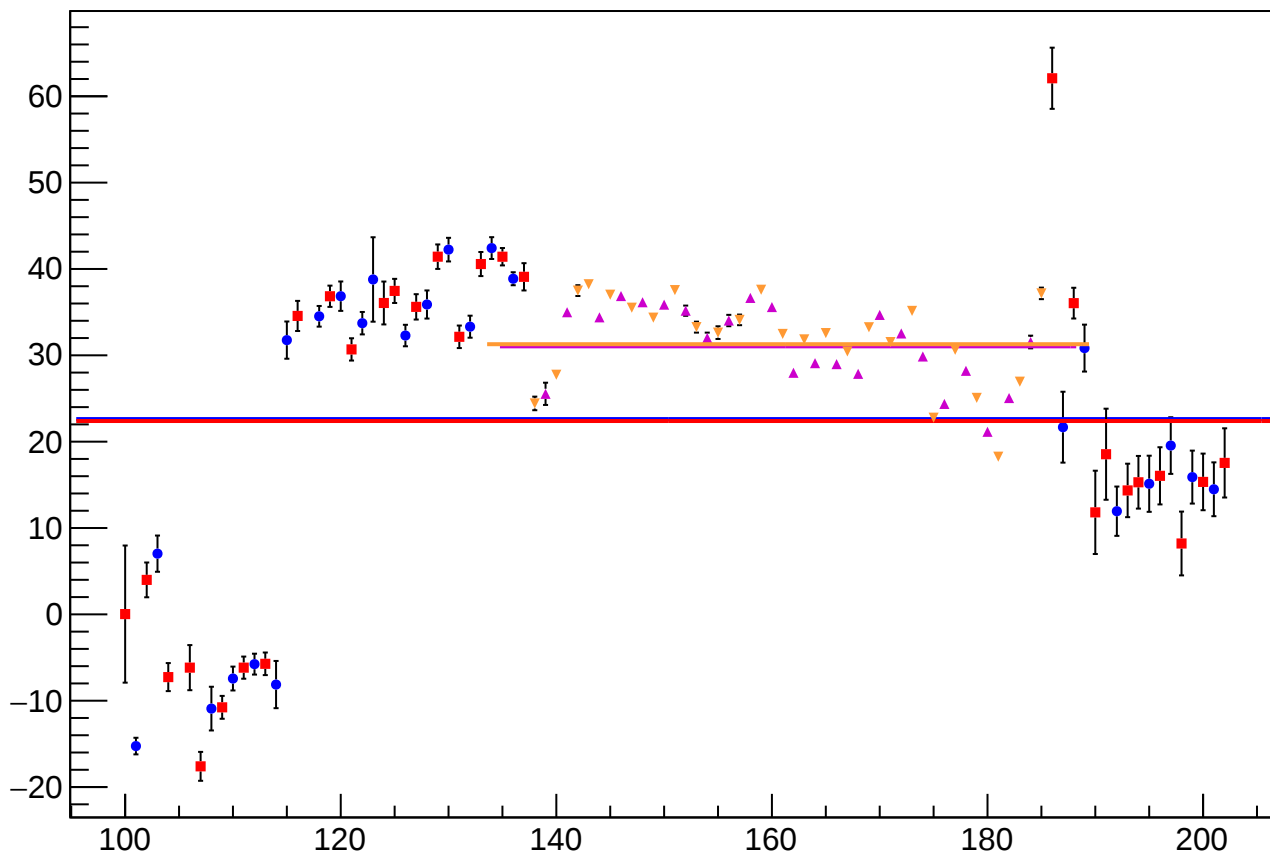
Right:  $-50.532 \pm 0.277$   $\chi^2/\text{NDF}$ : 4415.2/52

In:  $-34.597 \pm 0.102$   $\chi^2/\text{NDF}$ : 19429.1/46

Out:  $-35.911 \pm 0.100$   $\chi^2/\text{NDF}$ : 26013.0/53

All:  $-35.267 \pm 0.071$   $\chi^2/\text{NDF}$ : 45526.6/100

reg\_asym\_sam\_12345678\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 22.615 $\pm$ 0.317  $\chi^2$ /NDF: 4359.0/23

Left Out: 31.286 $\pm$ 0.092  $\chi^2$ /NDF:3345.7/24

Right Out: 22.391 $\pm$ 0.322  $\chi^2$ /NDF: 4257.1/28

Left In: 31.039 $\pm$ 0.094  $\chi^2$ /NDF:2480.0/22

Left: 31.165 $\pm$ 0.066  $\chi^2$ /NDF: 5829.2/47

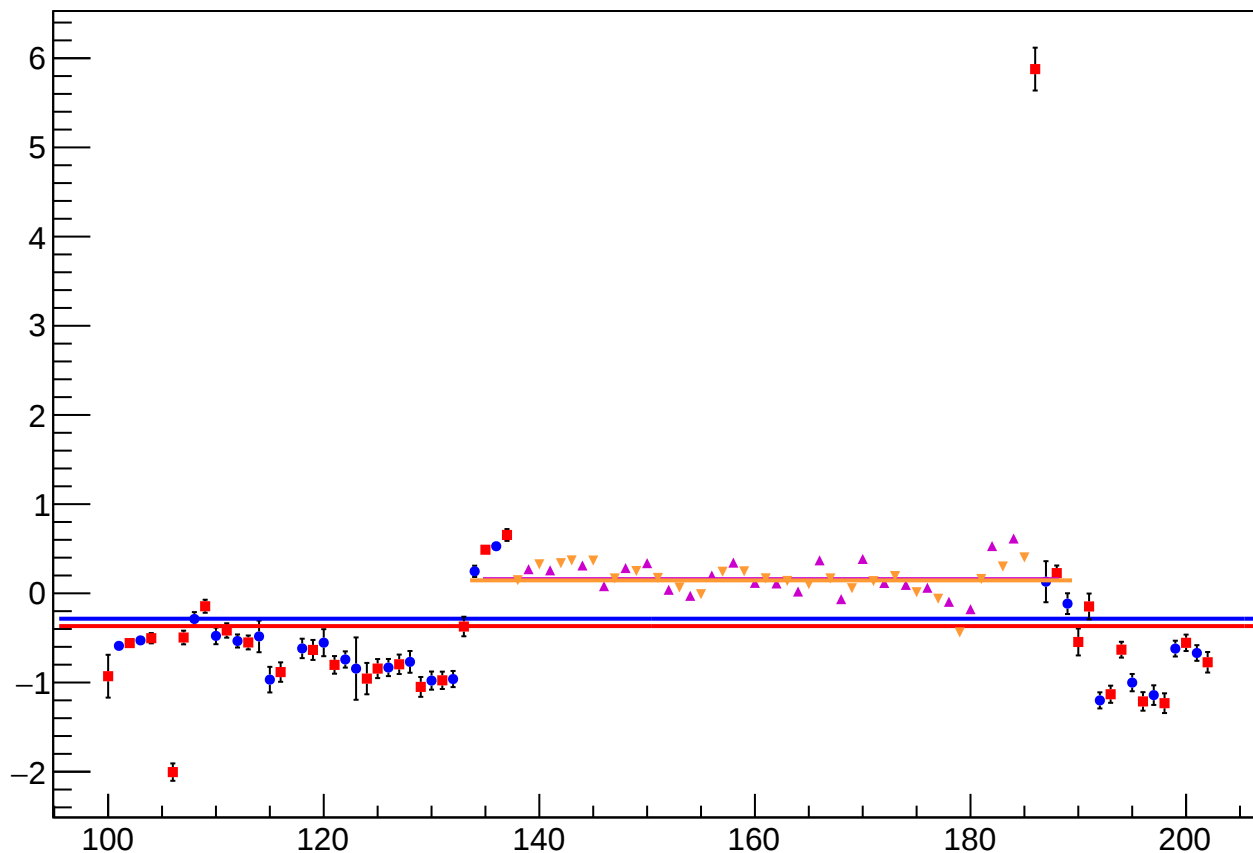
Right: 22.505 $\pm$ 0.226  $\chi^2$ /NDF: 8616.4/52

In: 30.354 $\pm$ 0.090  $\chi^2$ /NDF:7489.2/46

Out: 30.611 $\pm$ 0.089  $\chi^2$ /NDF:8306.7/53

All: 30.485 $\pm$ 0.063  $\chi^2$ /NDF: 15800.1/100

reg\_asym\_sam\_12345678\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.285 \pm 0.016$   $\chi^2/\text{NDF}$ : 1286.7/23

Left Out:  $0.145 \pm 0.004$   $\chi^2/\text{NDF}$ : 1579.6/24

Right Out:  $-0.367 \pm 0.016$   $\chi^2/\text{NDF}$ : 2122.9/28

Left In:  $0.159 \pm 0.004$   $\chi^2/\text{NDF}$ : 2009.8/22

Left:  $0.152 \pm 0.003$   $\chi^2/\text{NDF}$ : 3594.3/47

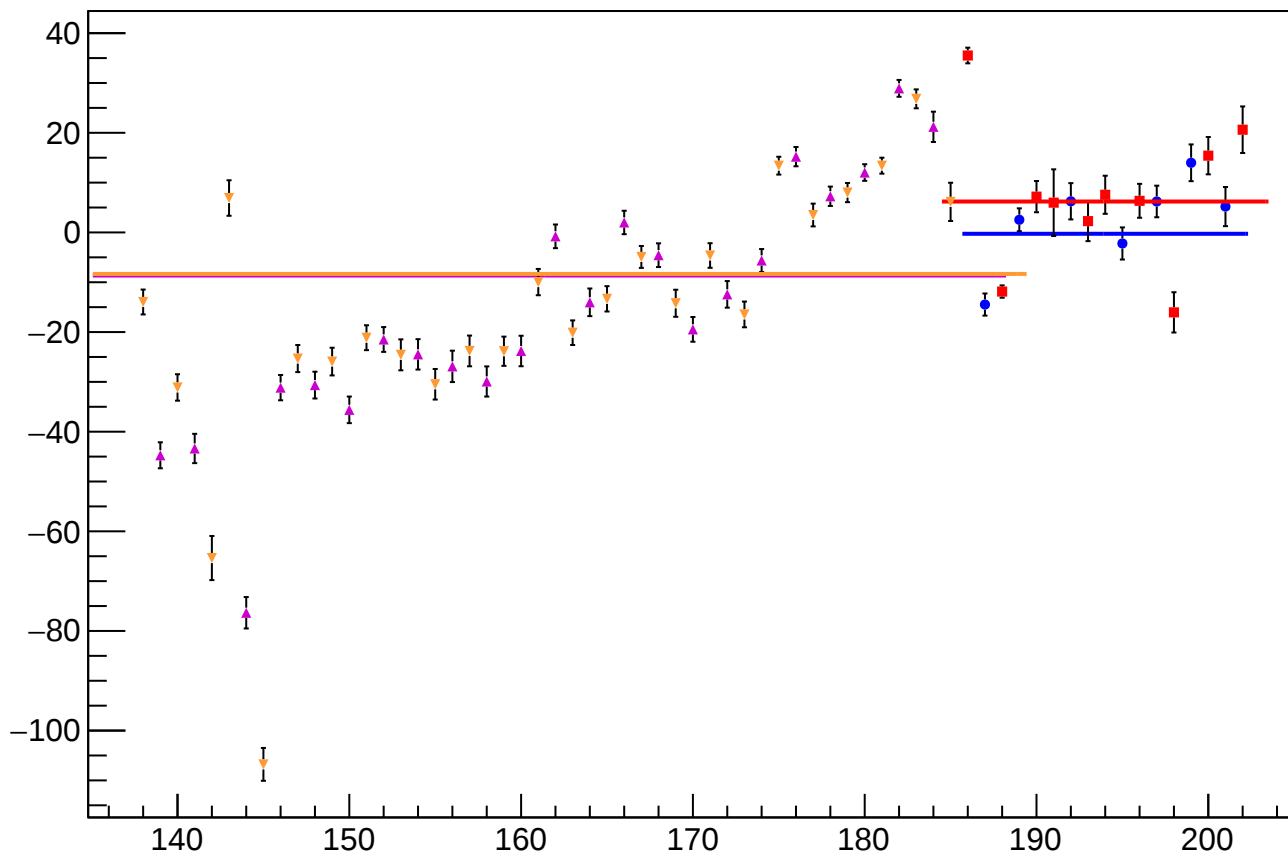
Right:  $-0.326 \pm 0.011$   $\chi^2/\text{NDF}$ : 3422.7/52

In:  $0.129 \pm 0.004$   $\chi^2/\text{NDF}$ : 3998.5/46

Out:  $0.112 \pm 0.004$   $\chi^2/\text{NDF}$ : 4652.3/53

All:  $0.121 \pm 0.003$   $\chi^2/\text{NDF}$ : 8659.5/100

reg\_asym\_atl1\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-0.272 \pm 1.117$   $\chi^2/\text{NDF}$ : 67.1/6

Left Out:  $-8.332 \pm 0.500$   $\chi^2/\text{NDF}$ : 2226.2/24

Right Out:  $6.205 \pm 0.797$   $\chi^2/\text{NDF}$ : 608.0/9

Left In:  $-8.652 \pm 0.507$   $\chi^2/\text{NDF}$ : 2223.8/22

Left:  $-8.490 \pm 0.356$   $\chi^2/\text{NDF}$ : 4450.2/47

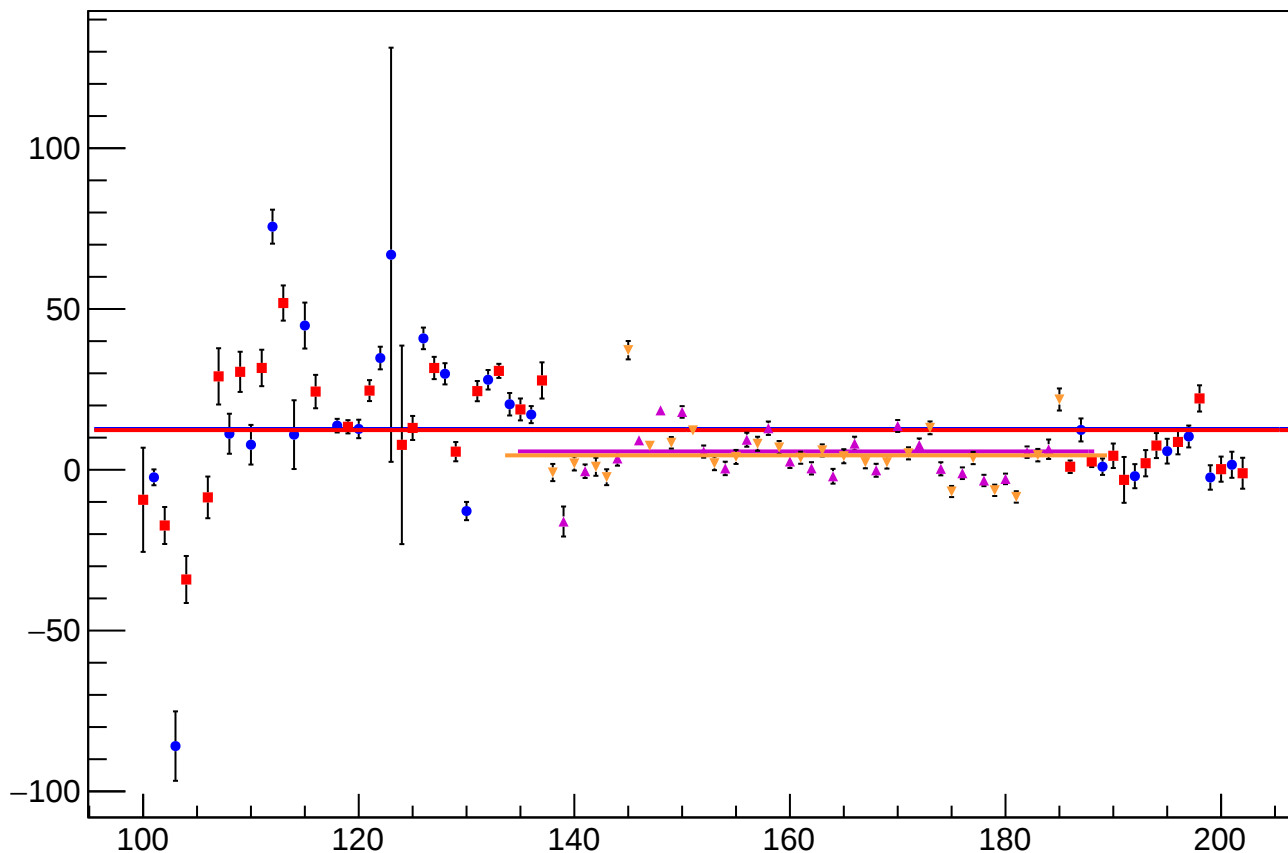
Right:  $4.021 \pm 0.649$   $\chi^2/\text{NDF}$ : 697.3/16

In:  $-7.220 \pm 0.462$   $\chi^2/\text{NDF}$ : 2337.6/29

Out:  $-4.229 \pm 0.423$   $\chi^2/\text{NDF}$ : 3073.1/34

All:  $-5.594 \pm 0.312$   $\chi^2/\text{NDF}$ : 5433.5/64

reg\_asym\_atl1\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 12.684 $\pm$ 0.718  $\chi^2$ /NDF: 598.4/23

Left Out: 4.484 $\pm$ 0.392  $\chi^2$ /NDF: 371.9/24

Right Out: 12.340 $\pm$ 0.661  $\chi^2$ /NDF: 414.9/28

Left In: 5.705 $\pm$ 0.404  $\chi^2$ /NDF: 324.1/22

Left: 5.076 $\pm$ 0.281  $\chi^2$ /NDF: 700.6/47

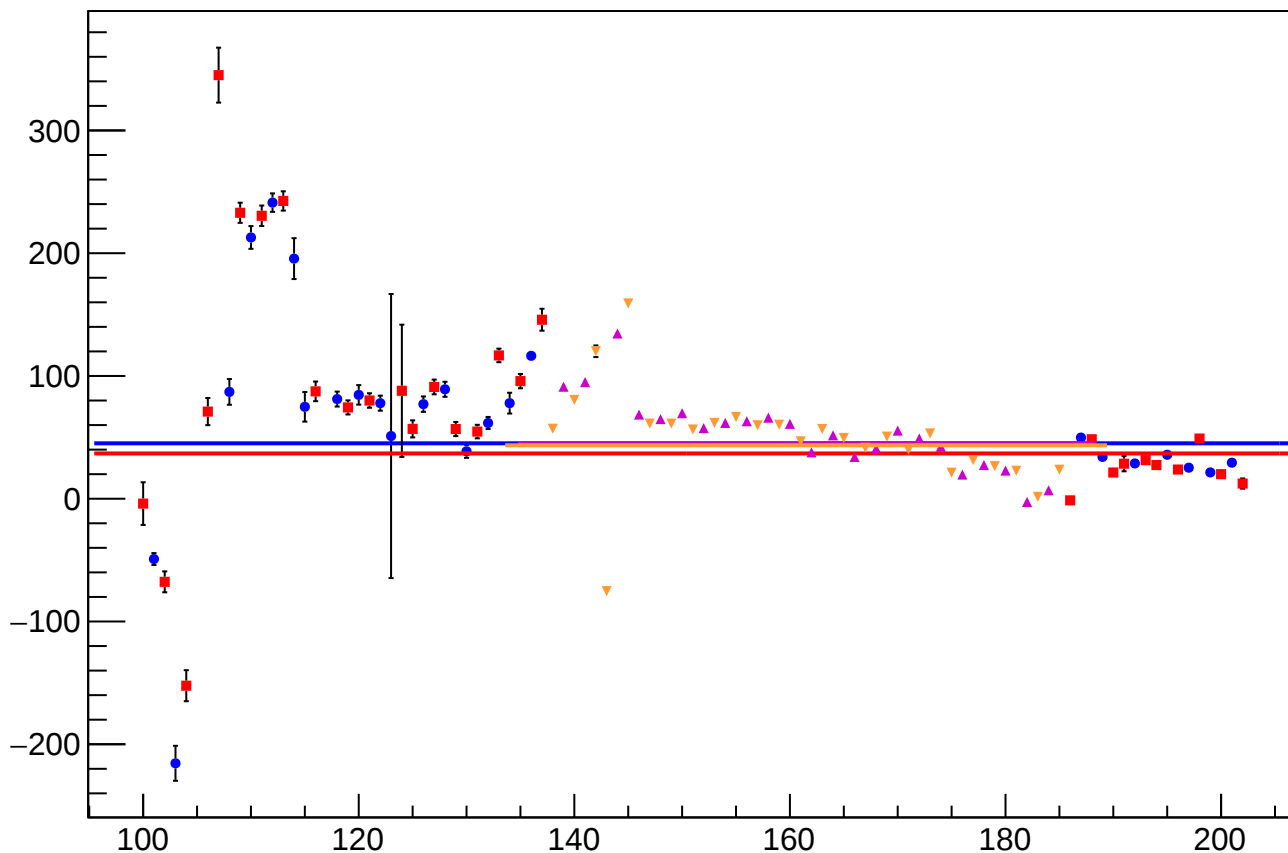
Right: 12.498 $\pm$ 0.486  $\chi^2$ /NDF: 1013.4/52

In: 7.383 $\pm$ 0.352  $\chi^2$ /NDF: 994.2/46

Out: 6.530 $\pm$ 0.337  $\chi^2$ /NDF: 891.3/53

All: 6.938 $\pm$ 0.244  $\chi^2$ /NDF: 1888.5/100

reg\_asym\_atl1\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 45.148+/-0.819     $\chi^2/\text{NDF}$ : 2527.8/23

Left Out: 43.524+/-0.498     $\chi^2/\text{NDF}$ : 3830.7/24

Right Out: 36.889+/-0.617     $\chi^2/\text{NDF}$ : 4268.9/28

Left In: 45.211+/-0.504     $\chi^2/\text{NDF}$ : 3048.5/22

Left: 44.358+/-0.354     $\chi^2/\text{NDF}$ : 6884.8/47

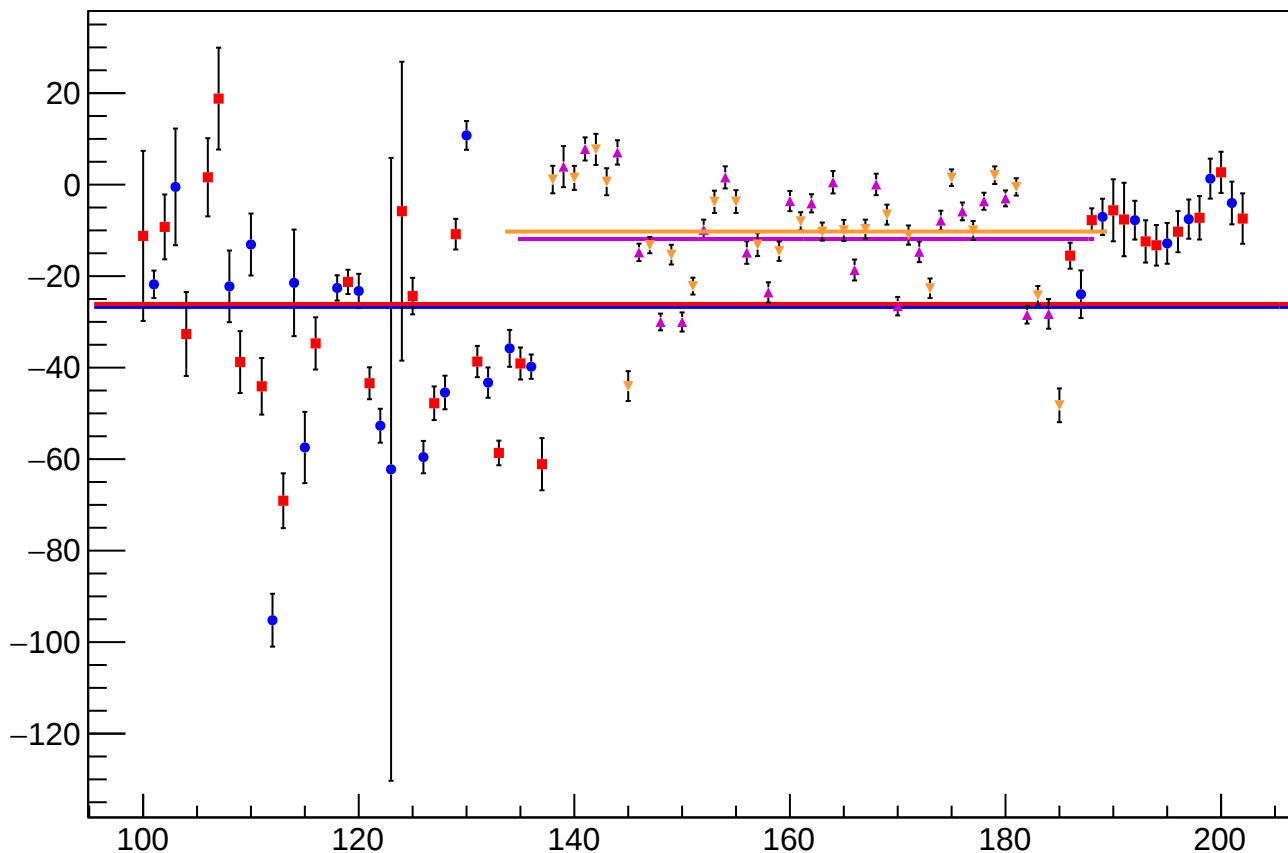
Right: 39.876+/-0.493     $\chi^2/\text{NDF}$ : 6861.6/52

In: 45.194+/-0.429     $\chi^2/\text{NDF}$ : 5576.3/46

Out: 40.902+/-0.388     $\chi^2/\text{NDF}$ : 8169.7/53

All: 42.829+/-0.288     $\chi^2/\text{NDF}$ : 13801.0/100

reg\_asym\_atl1\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-26.728 \pm 0.847$   $\chi^2/\text{NDF}$ : 668.2/23

Left Out:  $-10.257 \pm 0.444$   $\chi^2/\text{NDF}$ : 552.4/24

Right Out:  $-26.092 \pm 0.807$   $\chi^2/\text{NDF}$ : 571.1/28

Left In:  $-11.877 \pm 0.456$   $\chi^2/\text{NDF}$ : 666.2/22

Left:  $-11.046 \pm 0.318$   $\chi^2/\text{NDF}$ : 1225.1/47

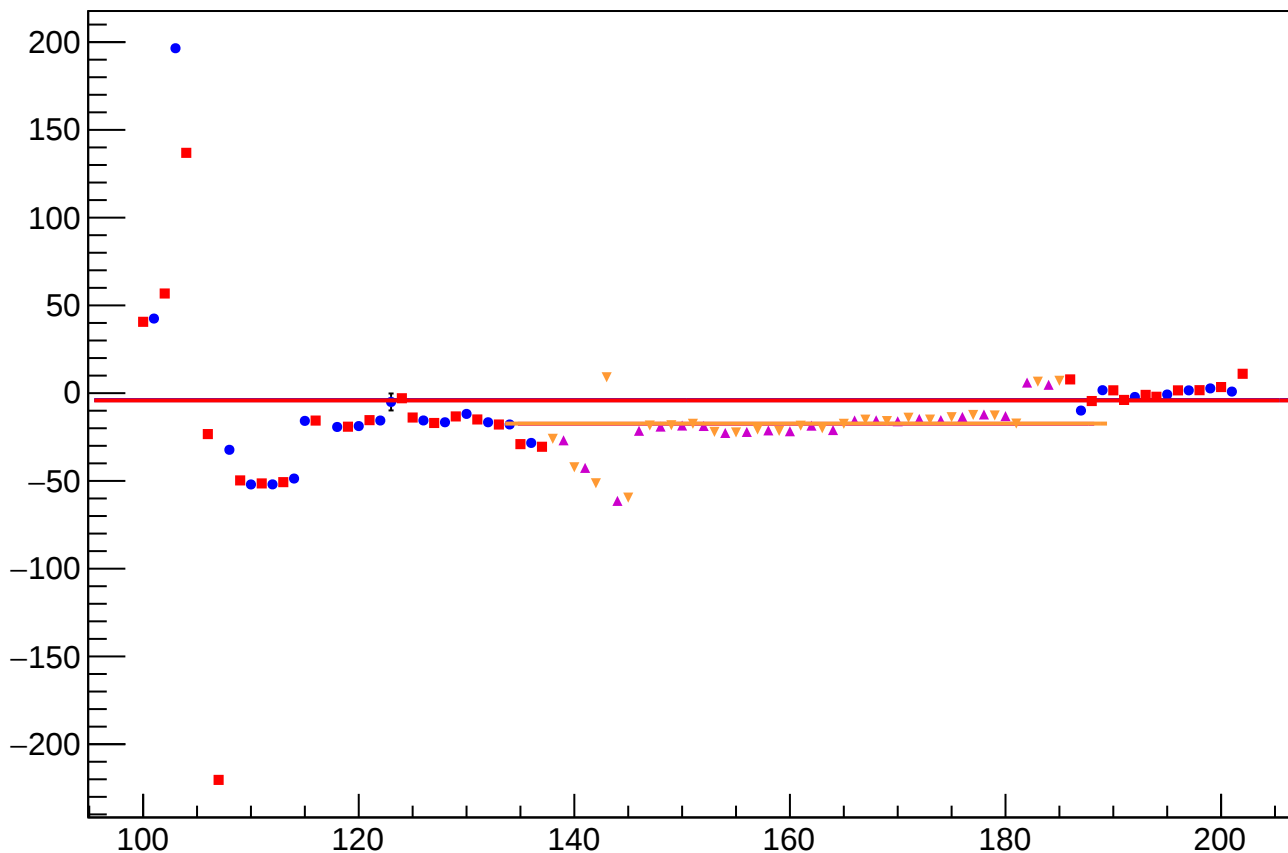
Right:  $-26.395 \pm 0.584$   $\chi^2/\text{NDF}$ : 1239.5/52

In:  $-15.213 \pm 0.402$   $\chi^2/\text{NDF}$ : 1572.6/46

Out:  $-13.937 \pm 0.389$   $\chi^2/\text{NDF}$ : 1418.8/53

All:  $-14.555 \pm 0.279$   $\chi^2/\text{NDF}$ : 2996.6/100

reg\_asym\_atl1\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: -3.963+/-0.041  $\chi^2/\text{NDF}$ : 589486.2/23

Left Out: -17.333+/-0.020  $\chi^2/\text{NDF}$ : 325197.2/24

Right Out: -4.129+/-0.038  $\chi^2/\text{NDF}$ : 600178.3/28

Left In: -17.491+/-0.021  $\chi^2/\text{NDF}$ : 259215.8/22

Left: -17.411+/-0.015  $\chi^2/\text{NDF}$ : 584442.6/47

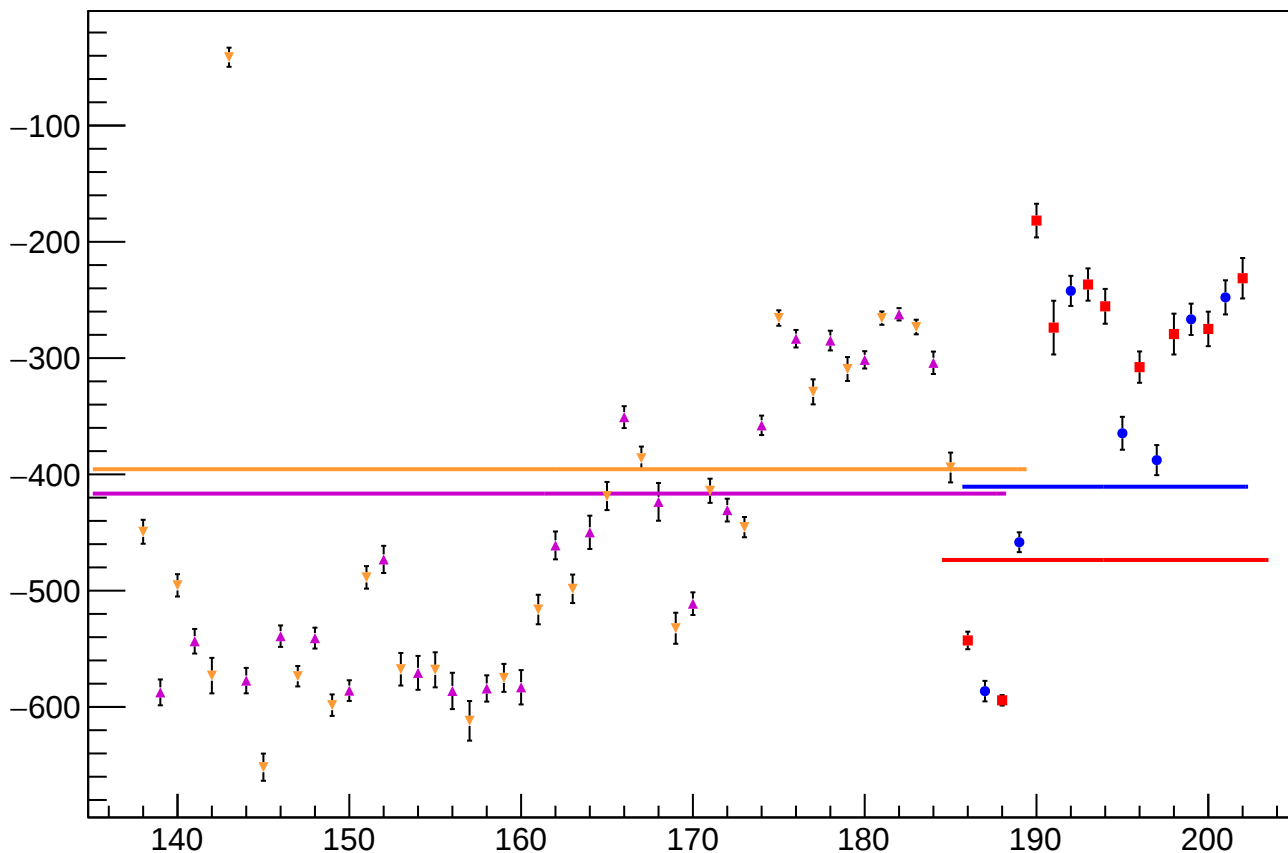
Right: -4.052+/-0.028  $\chi^2/\text{NDF}$ : 1189673.6/52

In: -14.710+/-0.018  $\chi^2/\text{NDF}$ : 936718.7/46

Out: -14.366+/-0.018  $\chi^2/\text{NDF}$ : 1019508.8/53

All: -14.533+/-0.013  $\chi^2/\text{NDF}$ : 1956406.2/100

reg\_asym\_atl2\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-410.594 \pm 4.315$   $\chi^2/\text{NDF}$ : 848.9/6

Left Out:  $-395.547 \pm 1.953$   $\chi^2/\text{NDF}$ : 5946.5/24

Right Out:  $-473.604 \pm 3.160$   $\chi^2/\text{NDF}$ : 2439.9/9

Left In:  $-416.521 \pm 2.005$   $\chi^2/\text{NDF}$ : 3917.0/22

Left:  $-405.762 \pm 1.399$   $\chi^2/\text{NDF}$ : 9919.7/47

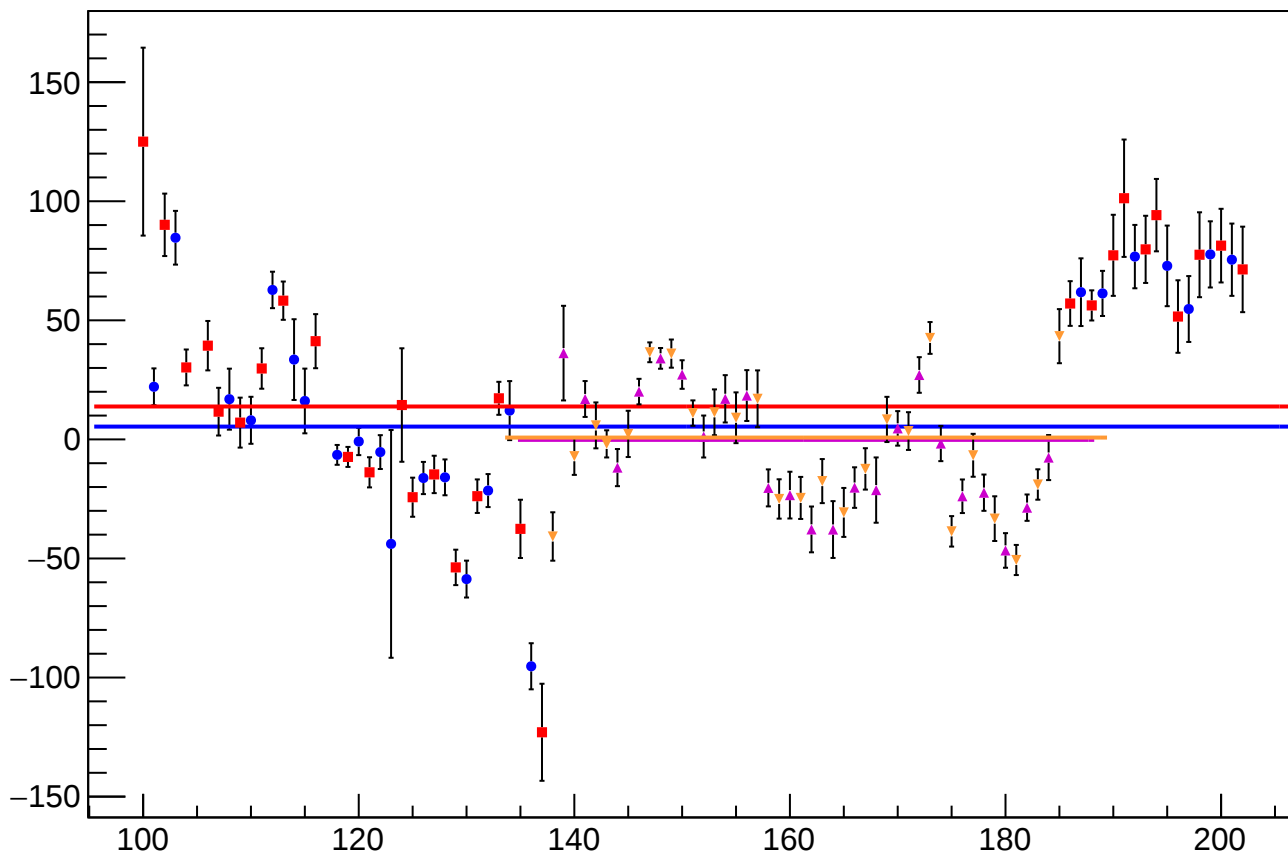
Right:  $-451.604 \pm 2.550$   $\chi^2/\text{NDF}$ : 3427.5/16

In:  $-415.469 \pm 1.818$   $\chi^2/\text{NDF}$ : 4767.4/29

Out:  $-417.126 \pm 1.662$   $\chi^2/\text{NDF}$ : 8827.8/34

All:  $-416.372 \pm 1.227$   $\chi^2/\text{NDF}$ : 13595.7/64

reg\_asym\_atl2\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $5.377 \pm 1.798$   $\chi^2/\text{NDF}$ : 493.6/23

Left Out:  $0.767 \pm 1.503$   $\chi^2/\text{NDF}$ : 350.1/24

Right Out:  $13.816 \pm 1.721$   $\chi^2/\text{NDF}$ : 537.1/28

Left In:  $-0.202 \pm 1.575$   $\chi^2/\text{NDF}$ : 260.8/22

Left:  $0.305 \pm 1.087$   $\chi^2/\text{NDF}$ : 611.1/47

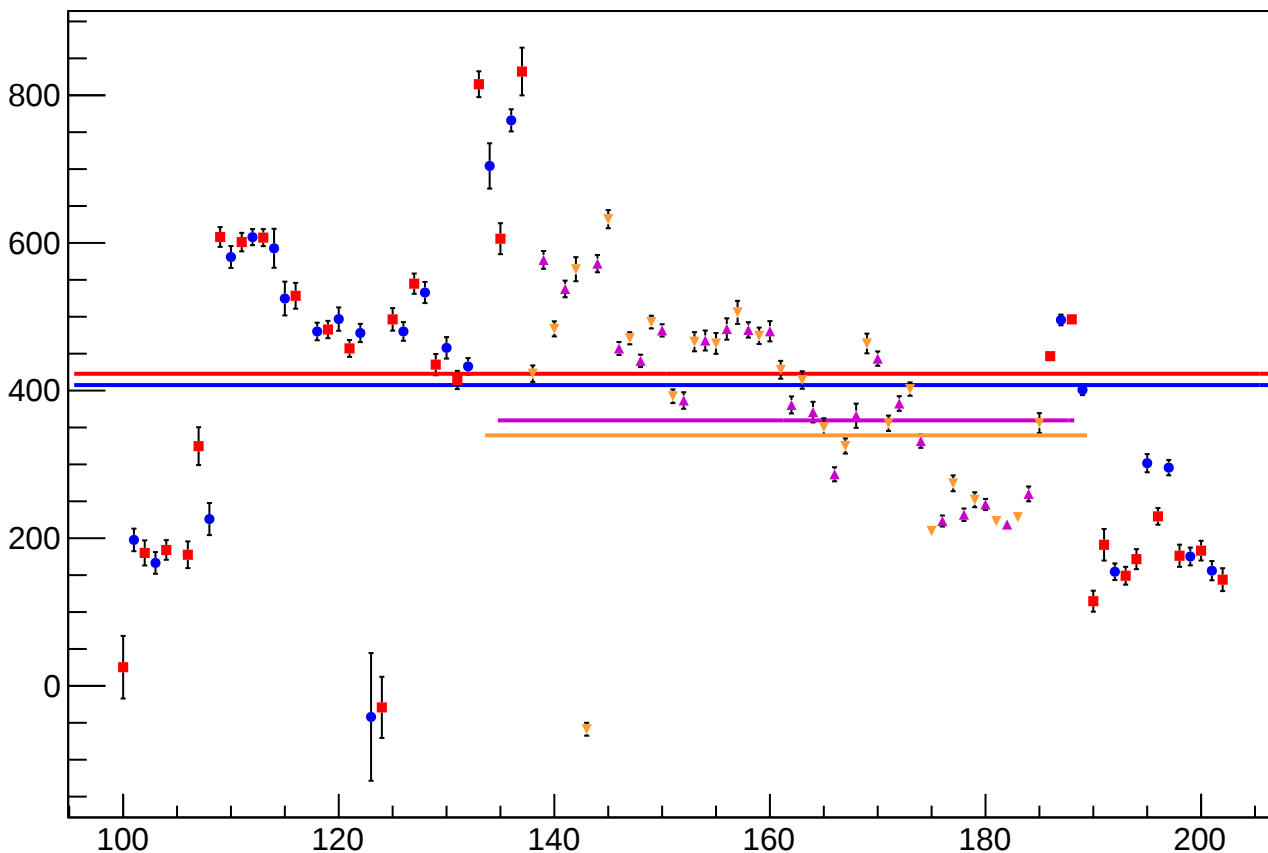
Right:  $9.781 \pm 1.243$   $\chi^2/\text{NDF}$ : 1042.2/52

In:  $2.221 \pm 1.185$   $\chi^2/\text{NDF}$ : 759.9/46

Out:  $6.412 \pm 1.132$   $\chi^2/\text{NDF}$ : 919.8/53

All:  $4.412 \pm 0.818$   $\chi^2/\text{NDF}$ : 1686.2/100

reg\_asym\_atl2\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 407.458 $\pm$ 2.590  $\chi^2/\text{NDF}$ : 3584.0/23

Left Out: 339.355 $\pm$ 1.963  $\chi^2/\text{NDF}$ :5502.5/24

Right Out: 422.766 $\pm$ 2.106  $\chi^2/\text{NDF}$ : 5576.6/28

Left In: 359.609 $\pm$ 2.003  $\chi^2/\text{NDF}$ :3398.5/22

Left: 349.278 $\pm$ 1.402  $\chi^2/\text{NDF}$ : 8953.2/47

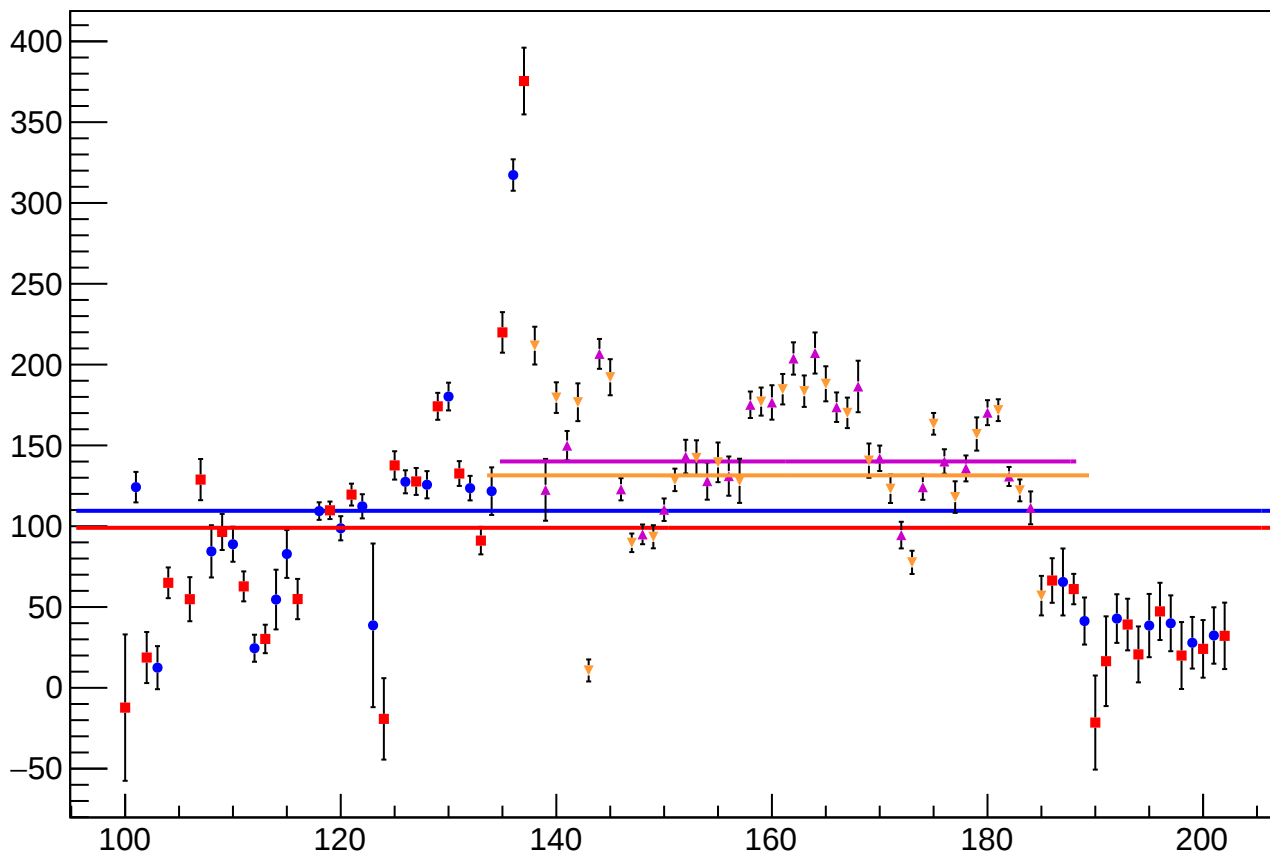
Right: 416.673 $\pm$ 1.634  $\chi^2/\text{NDF}$ : 9181.6/52

In: 377.510 $\pm$ 1.584  $\chi^2/\text{NDF}$ :7196.1/46

Out: 378.123 $\pm$ 1.436  $\chi^2/\text{NDF}$ :11918.6/53

All: 377.847 $\pm$ 1.064  $\chi^2/\text{NDF}$ : 19114.7/100

reg\_asym\_atl2\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $109.528 \pm 2.105$   $\chi^2/\text{NDF}: 840.7/23$

Left Out:  $131.464 \pm 1.728$   $\chi^2/\text{NDF}: 809.3/24$

Right Out:  $99.014 \pm 2.032$   $\chi^2/\text{NDF}: 723.1/28$

Left In:  $140.069 \pm 1.795$   $\chi^2/\text{NDF}: 316.5/22$

Left:  $135.602 \pm 1.245$   $\chi^2/\text{NDF}: 1137.8/47$

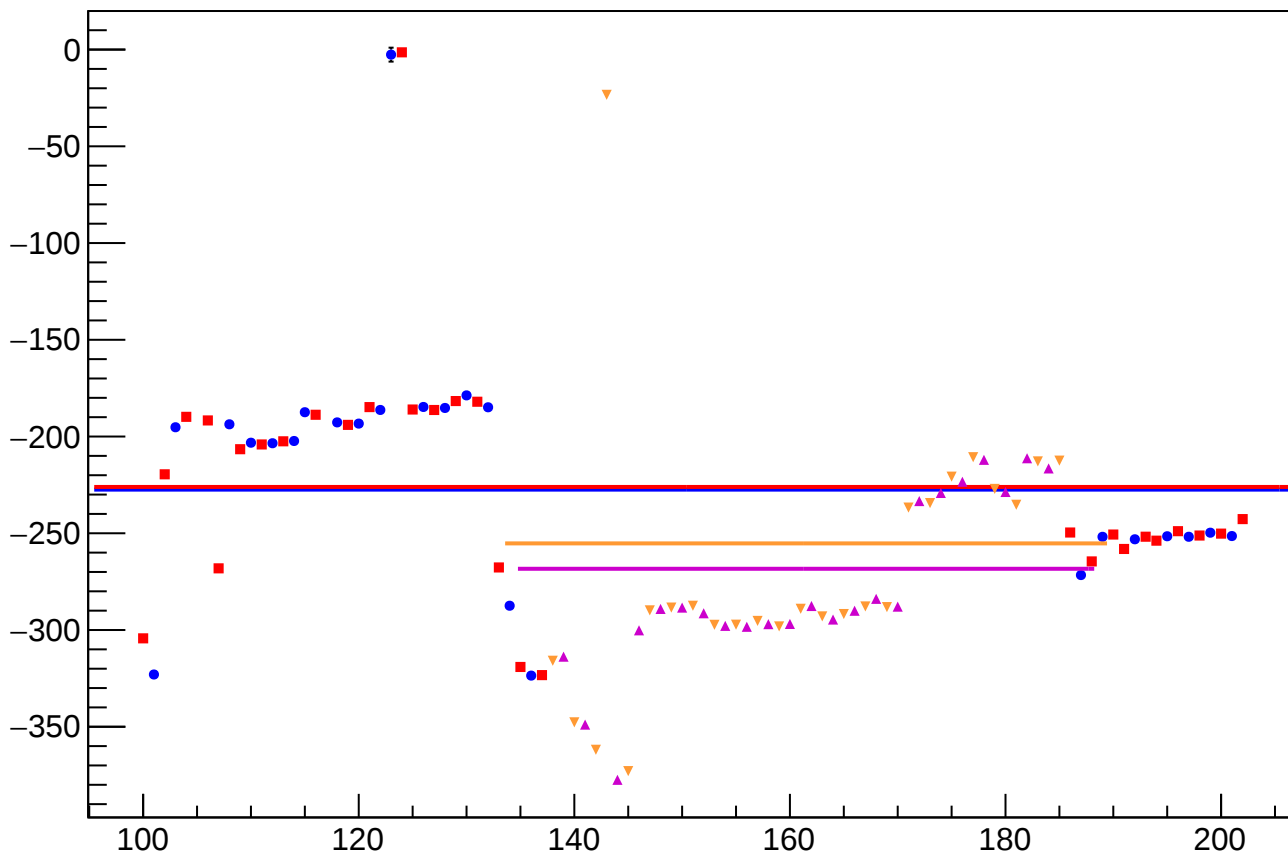
Right:  $104.085 \pm 1.462$   $\chi^2/\text{NDF}: 1576.7/52$

In:  $127.212 \pm 1.366$   $\chi^2/\text{NDF}: 1279.1/46$

Out:  $117.848 \pm 1.316$   $\chi^2/\text{NDF}: 1680.5/53$

All:  $122.357 \pm 0.948$   $\chi^2/\text{NDF}: 2983.9/100$

reg\_asym\_atl2\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: -227.436+/-0.115  $\chi^2/\text{NDF}$ : 165893.6/23

Left Out: -255.232+/-0.082  $\chi^2/\text{NDF}$ : 728016.7/24

Right Out: -226.061+/-0.107  $\chi^2/\text{NDF}$ : 147906.1/28

Left In: -268.353+/-0.084  $\chi^2/\text{NDF}$ : 262479.3/22

Left: -261.661+/-0.059  $\chi^2/\text{NDF}$ : 1003051.2/47

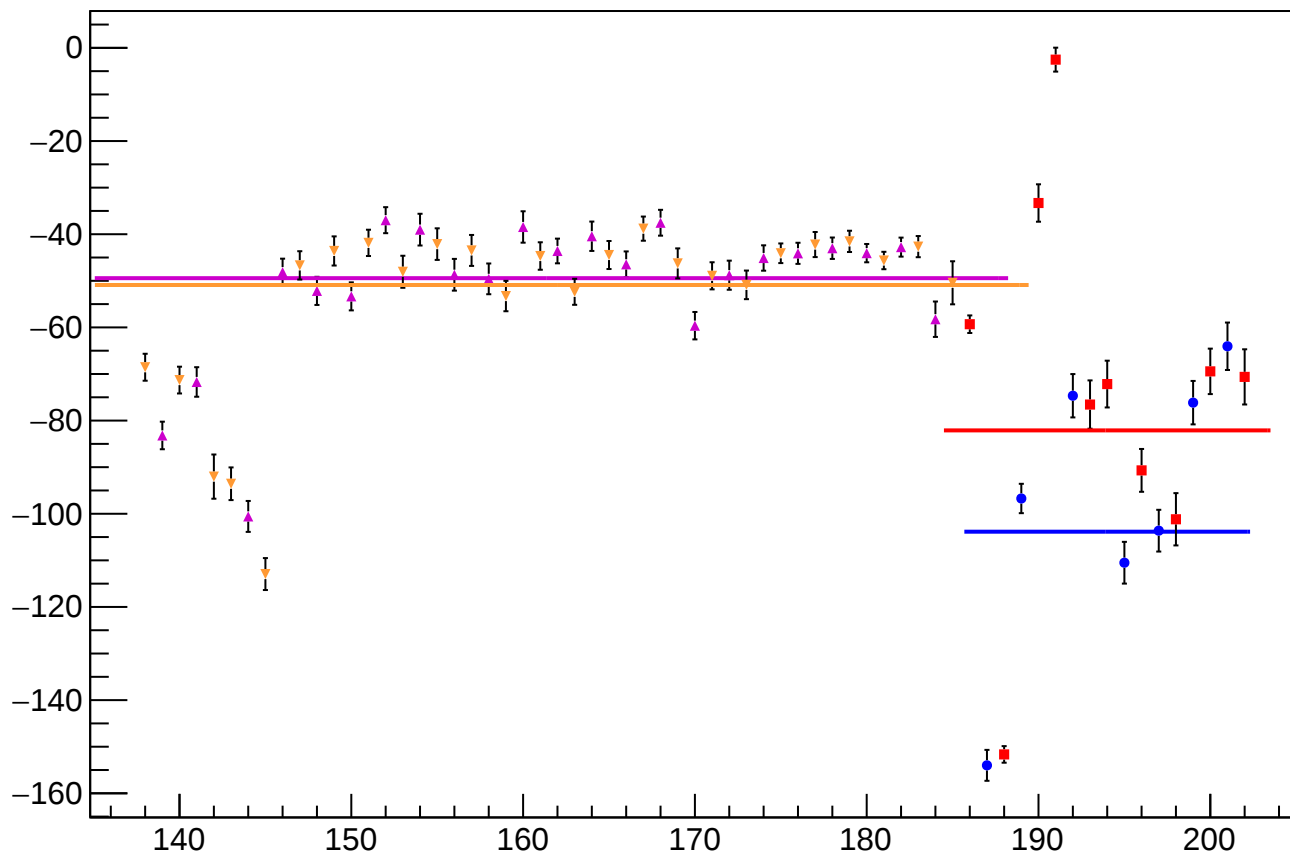
Right: -226.696+/-0.078  $\chi^2/\text{NDF}$ : 313876.6/52

In: -254.208+/-0.068  $\chi^2/\text{NDF}$ : 511138.8/46

Out: -244.388+/-0.065  $\chi^2/\text{NDF}$ : 923011.6/53

All: -249.100+/-0.047  $\chi^2/\text{NDF}$ : 1445113.9/10

# reg\_asym\_atr1\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-103.848 \pm 1.539$   $\chi^2/\text{NDF}: 371.5/6$

Left Out:  $-50.897 \pm 0.573$   $\chi^2/\text{NDF}: 761.1/24$

Right Out:  $-82.105 \pm 0.982$   $\chi^2/\text{NDF}: 2810.4/9$

Left In:  $-49.432 \pm 0.584$   $\chi^2/\text{NDF}: 543.4/22$

Left:  $-50.179 \pm 0.409$   $\chi^2/\text{NDF}: 1307.8/47$

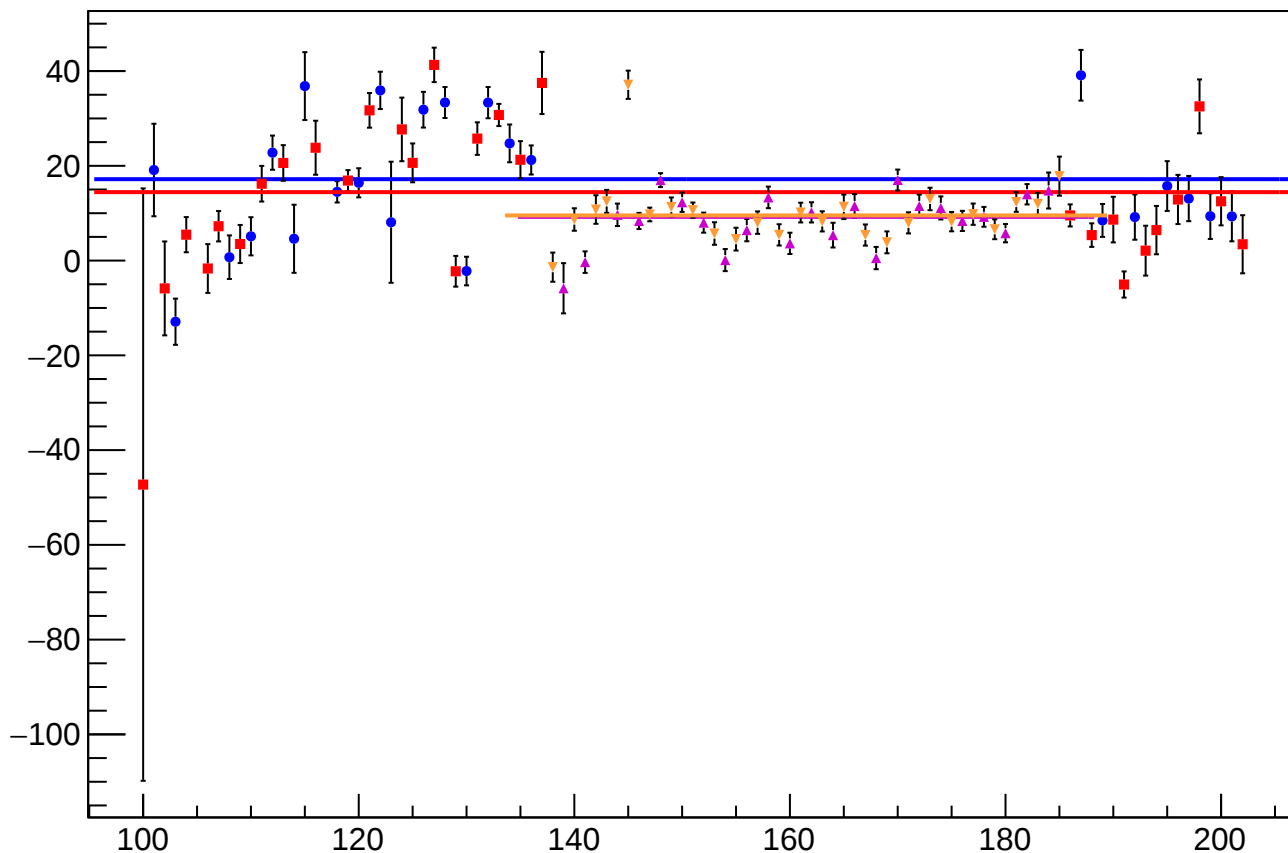
Right:  $-88.395 \pm 0.828$   $\chi^2/\text{NDF}: 3323.7/16$

In:  $-56.277 \pm 0.546$   $\chi^2/\text{NDF}: 2007.4/29$

Out:  $-58.818 \pm 0.495$   $\chi^2/\text{NDF}: 4325.0/34$

All:  $-57.672 \pm 0.367$   $\chi^2/\text{NDF}: 6344.3/64$

reg\_asym\_atr1\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $17.180 \pm 0.815$   $\chi^2/\text{NDF}$ : 239.3/23

Left Out:  $9.530 \pm 0.446$   $\chi^2/\text{NDF}$ : 134.4/24

Right Out:  $14.444 \pm 0.695$   $\chi^2/\text{NDF}$ : 314.7/28

Left In:  $9.231 \pm 0.462$   $\chi^2/\text{NDF}$ : 124.0/22

Left:  $9.386 \pm 0.321$   $\chi^2/\text{NDF}$ : 258.5/47

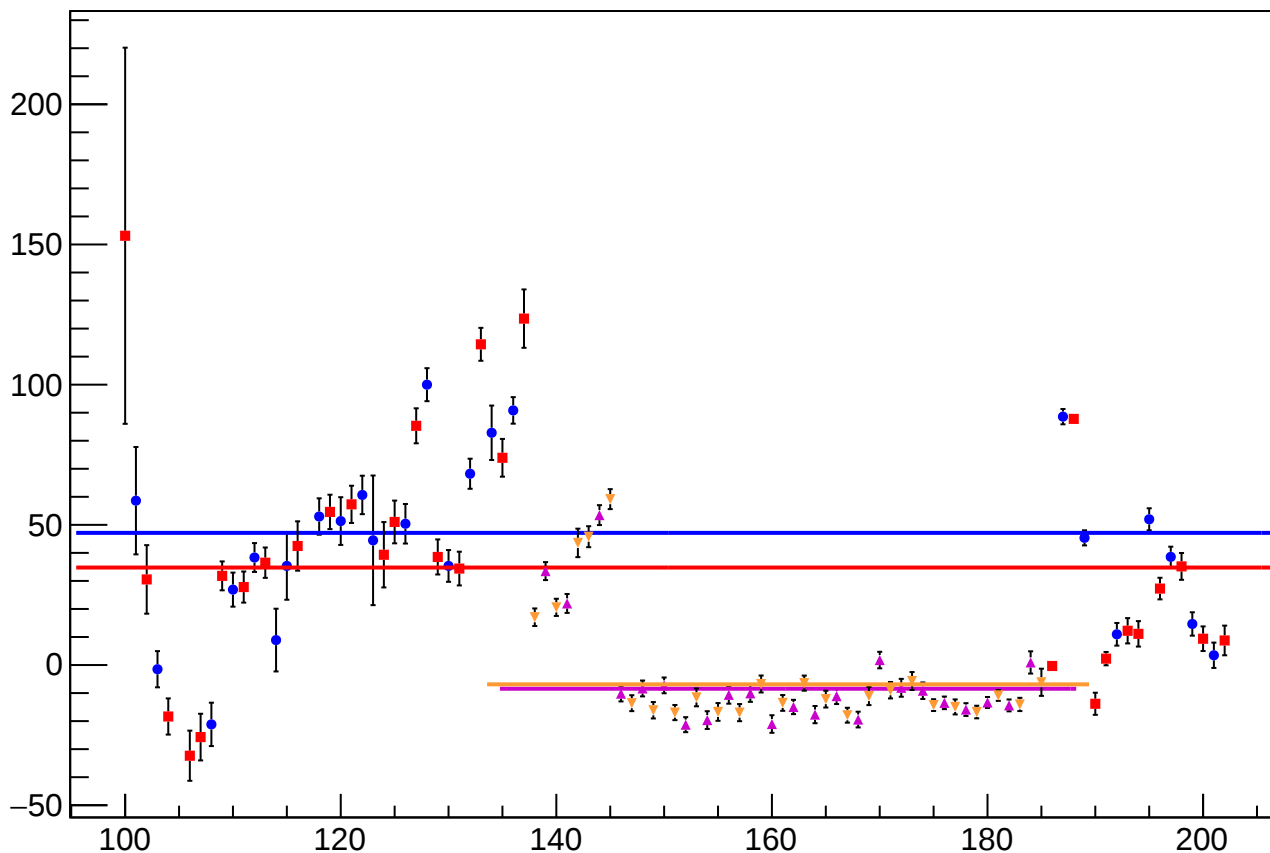
Right:  $15.597 \pm 0.529$   $\chi^2/\text{NDF}$ : 560.5/52

In:  $11.163 \pm 0.402$   $\chi^2/\text{NDF}$ : 435.3/46

Out:  $10.962 \pm 0.375$   $\chi^2/\text{NDF}$ : 484.4/53

All:  $11.056 \pm 0.274$   $\chi^2/\text{NDF}$ : 919.9/100

reg\_asym\_atr1\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 47.140 $\pm$ 1.034  $\chi^2$ /NDF: 838.6/23

Left Out: -6.888 $\pm$ 0.571  $\chi^2$ /NDF:914.2/24

Right Out: 34.774 $\pm$ 0.735  $\chi^2$ /NDF: 2921.9/28

Left In: -8.451 $\pm$ 0.580  $\chi^2$ /NDF:688.9/22

Left: -7.658 $\pm$ 0.407  $\chi^2$ /NDF: 1606.8/47

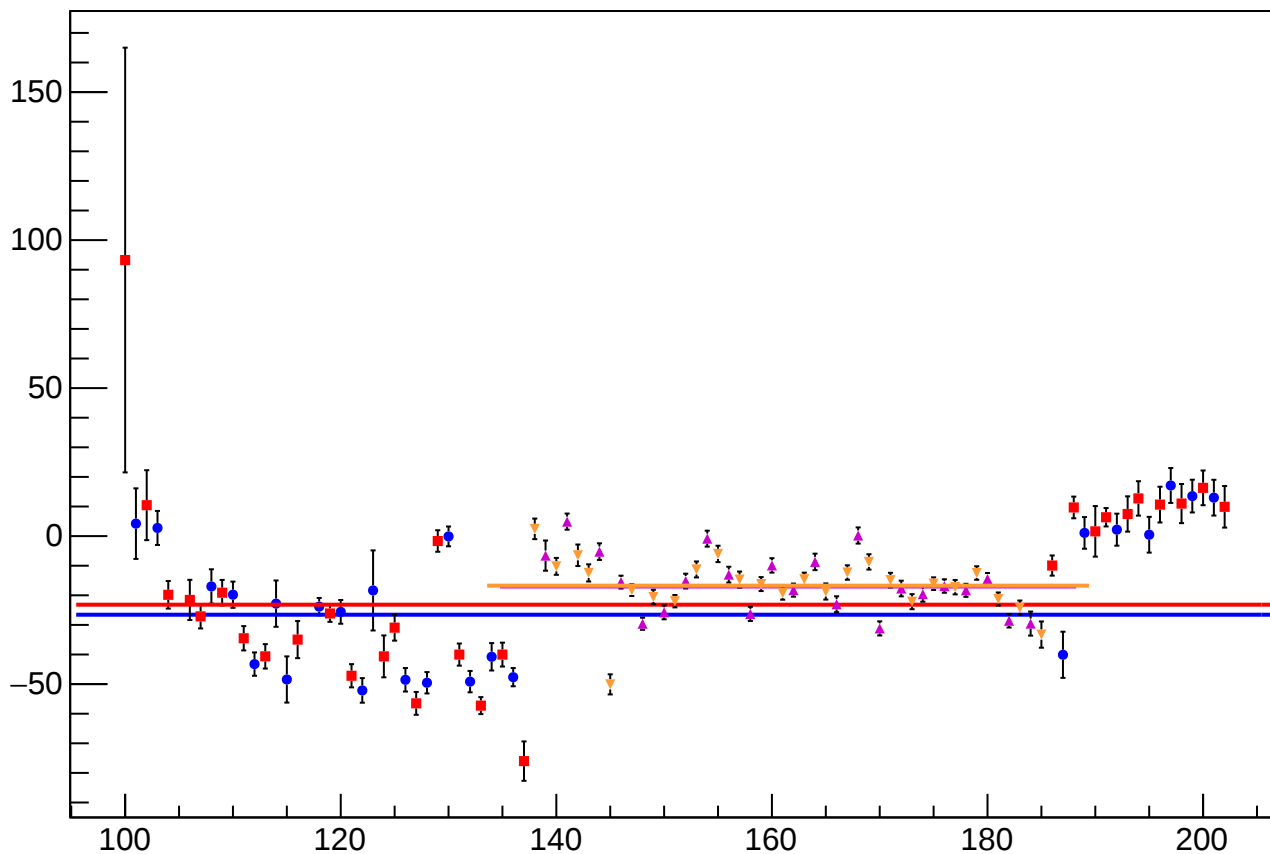
Right: 38.926 $\pm$ 0.599  $\chi^2$ /NDF: 3855.5/52

In: 4.842 $\pm$ 0.506  $\chi^2$ /NDF:3725.6/46

Out: 8.781 $\pm$ 0.451  $\chi^2$ /NDF:5838.5/53

All: 7.036 $\pm$ 0.337  $\chi^2$ /NDF: 9597.9/100

reg\_asym\_atr1\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-26.555 \pm 0.946$   $\chi^2/\text{NDF}$ : 560.3/23

Left Out:  $-16.733 \pm 0.507$   $\chi^2/\text{NDF}$ : 223.3/24

Right Out:  $-23.168 \pm 0.831$   $\chi^2/\text{NDF}$ : 825.6/28

Left In:  $-17.023 \pm 0.522$   $\chi^2/\text{NDF}$ : 327.6/22

Left:  $-16.874 \pm 0.364$   $\chi^2/\text{NDF}$ : 551.0/47

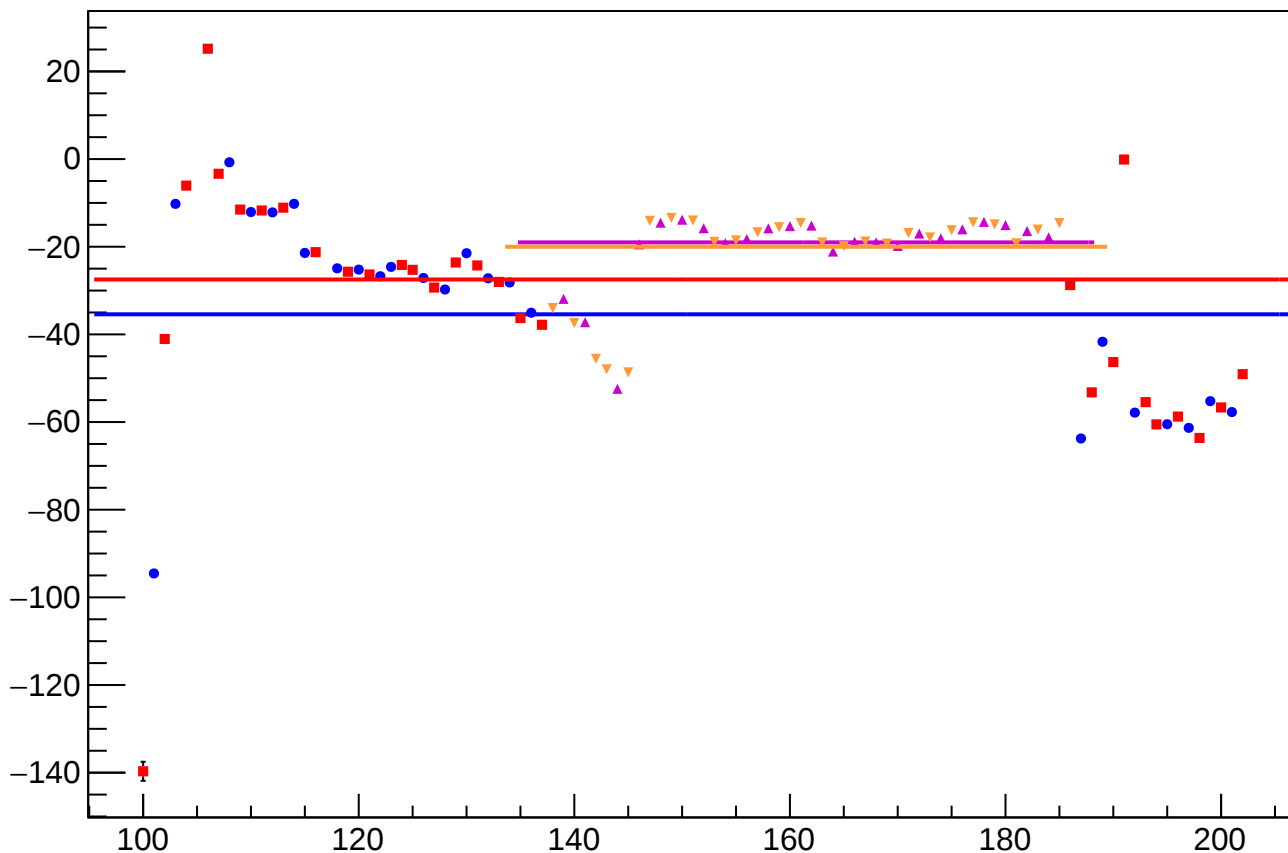
Right:  $-24.642 \pm 0.624$   $\chi^2/\text{NDF}$ : 1393.2/52

In:  $-19.246 \pm 0.457$   $\chi^2/\text{NDF}$ : 965.7/46

Out:  $-18.478 \pm 0.433$   $\chi^2/\text{NDF}$ : 1092.6/53

All:  $-18.841 \pm 0.314$   $\chi^2/\text{NDF}$ : 2059.9/100

reg\_asym\_atr1\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-35.418 \pm 0.046$   $\chi^2/\text{NDF}: 196501.5/23$

Left Out:  $-20.006 \pm 0.023$   $\chi^2/\text{NDF}: 145623.8/24$

Right Out:  $-27.473 \pm 0.038$   $\chi^2/\text{NDF}: 399622.9/28$

Left In:  $-19.007 \pm 0.024$   $\chi^2/\text{NDF}: 90873.3/22$

Left:  $-19.514 \pm 0.017$   $\chi^2/\text{NDF}: 237400.2/47$

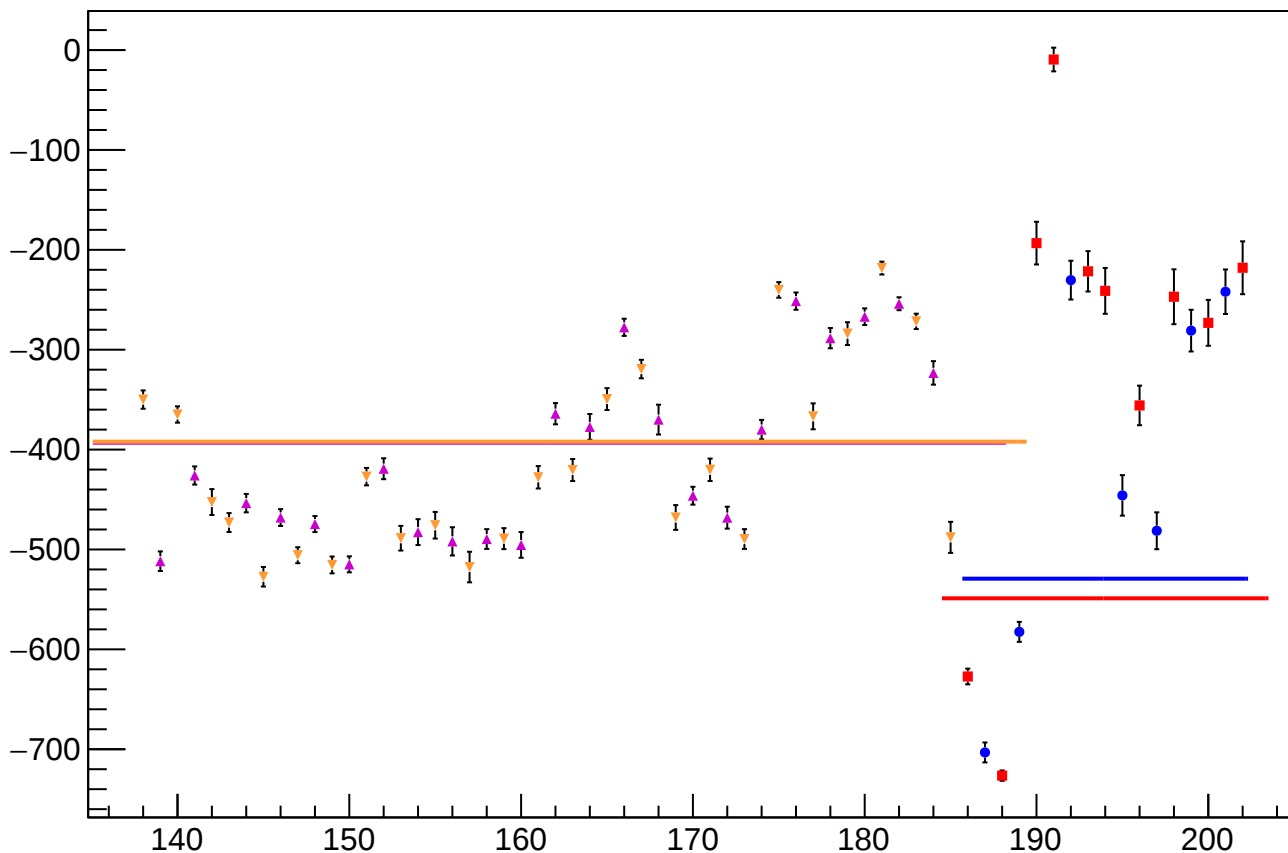
Right:  $-30.736 \pm 0.029$   $\chi^2/\text{NDF}: 613825.8/52$

In:  $-22.463 \pm 0.021$   $\chi^2/\text{NDF}: 388552.3/46$

Out:  $-22.025 \pm 0.020$   $\chi^2/\text{NDF}: 573027.3/53$

All:  $-22.232 \pm 0.014$   $\chi^2/\text{NDF}: 961808.1/100$

reg\_asym\_atr2\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: -529.237 $\pm$ 5.556  $\chi^2$ /NDF: 901.4/6

Left Out: -392.054 $\pm$ 1.967  $\chi^2$ /NDF:2717.2/24

Right Out: -548.902 $\pm$ 3.668  $\chi^2$ /NDF: 4579.0/9

Left In: -393.113 $\pm$ 2.006  $\chi^2$ /NDF:2253.3/22

Left: -392.573 $\pm$ 1.404  $\chi^2$ /NDF: 4970.6/47

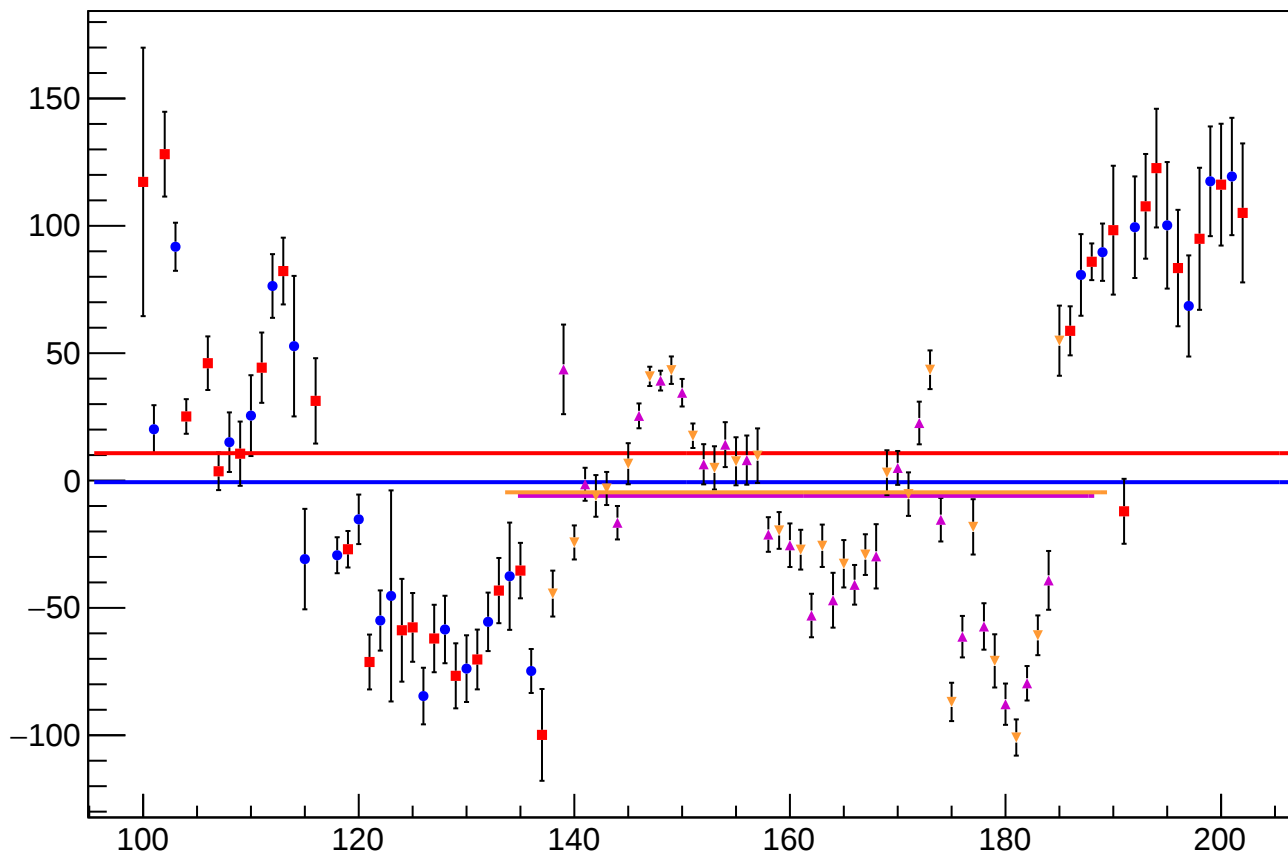
Right: -542.932 $\pm$ 3.061  $\chi^2$ /NDF: 5489.1/16

In: -408.805 $\pm$ 1.886  $\chi^2$ /NDF:3685.7/29

Out: -427.067 $\pm$ 1.733  $\chi^2$ /NDF:8716.1/34

All: -418.707 $\pm$ 1.276  $\chi^2$ /NDF: 12452.7/64

reg\_asym\_atr2\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-0.642 \pm 2.601$   $\chi^2/\text{NDF}$ : 598.5/23

Left Out:  $-4.624 \pm 1.462$   $\chi^2/\text{NDF}$ : 772.9/24

Right Out:  $10.739 \pm 2.265$   $\chi^2/\text{NDF}$ : 673.8/28

Left In:  $-6.019 \pm 1.516$   $\chi^2/\text{NDF}$ : 654.1/22

Left:  $-5.296 \pm 1.053$   $\chi^2/\text{NDF}$ : 1427.4/47

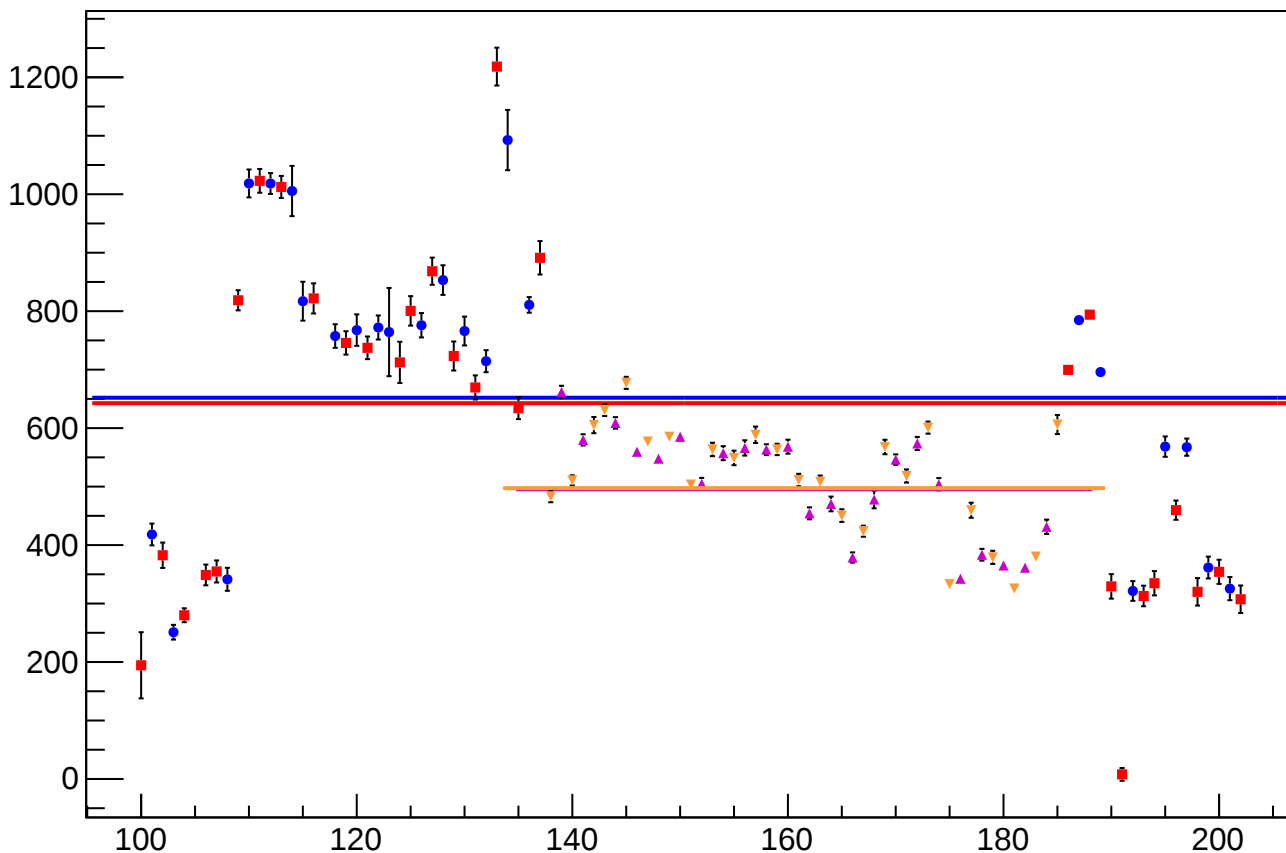
Right:  $5.831 \pm 1.708$   $\chi^2/\text{NDF}$ : 1283.2/52

In:  $-4.655 \pm 1.310$   $\chi^2/\text{NDF}$ : 1255.8/46

Out:  $-0.105 \pm 1.228$   $\chi^2/\text{NDF}$ : 1479.2/53

All:  $-2.234 \pm 0.896$   $\chi^2/\text{NDF}$ : 2741.4/100

reg\_asym\_atr2\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $651.995 \pm 3.428$   $\chi^2/\text{NDF}: 3844.7/23$

Left Out:  $497.381 \pm 1.966$   $\chi^2/\text{NDF}: 2614.6/24$

Right Out:  $642.658 \pm 2.556$   $\chi^2/\text{NDF}: 9374.4/28$

Left In:  $495.454 \pm 1.992$   $\chi^2/\text{NDF}: 2253.8/22$

Left:  $496.430 \pm 1.399$   $\chi^2/\text{NDF}: 4868.9/47$

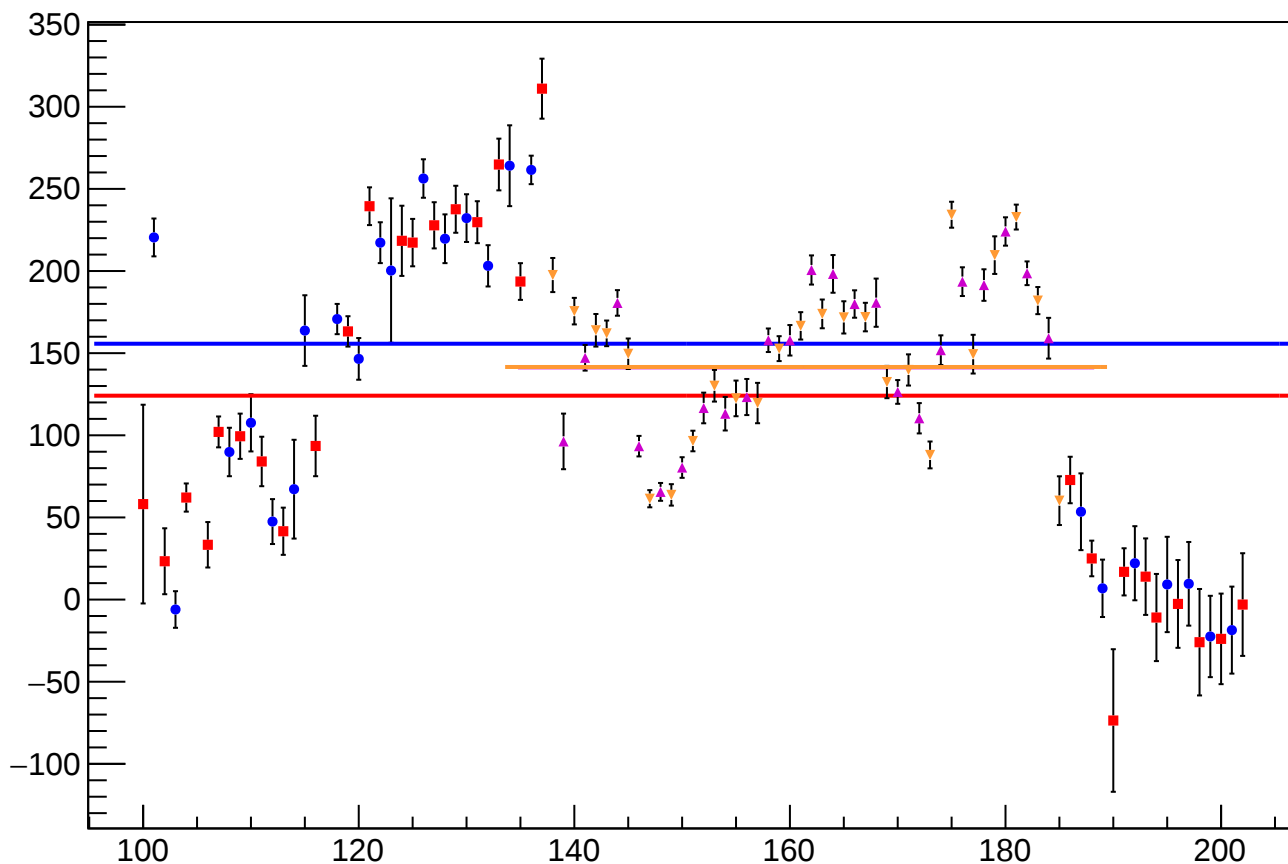
Right:  $645.994 \pm 2.049$   $\chi^2/\text{NDF}: 13223.9/52$

In:  $534.975 \pm 1.722$   $\chi^2/\text{NDF}: 7657.4/46$

Out:  $551.384 \pm 1.558$   $\chi^2/\text{NDF}: 14019.0/53$

All:  $543.999 \pm 1.156$   $\chi^2/\text{NDF}: 21726.3/100$

reg\_asym\_atr2\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 155.743 $\pm$ 3.046  $\chi^2/\text{NDF}$ : 953.0/23

Left Out: 141.588 $\pm$ 1.698  $\chi^2/\text{NDF}$ :959.6/24

Right Out: 124.117 $\pm$ 2.726  $\chi^2/\text{NDF}$ : 1073.0/28

Left In: 141.360 $\pm$ 1.748  $\chi^2/\text{NDF}$ :741.2/22

Left: 141.478 $\pm$ 1.218  $\chi^2/\text{NDF}$ : 1700.8/47

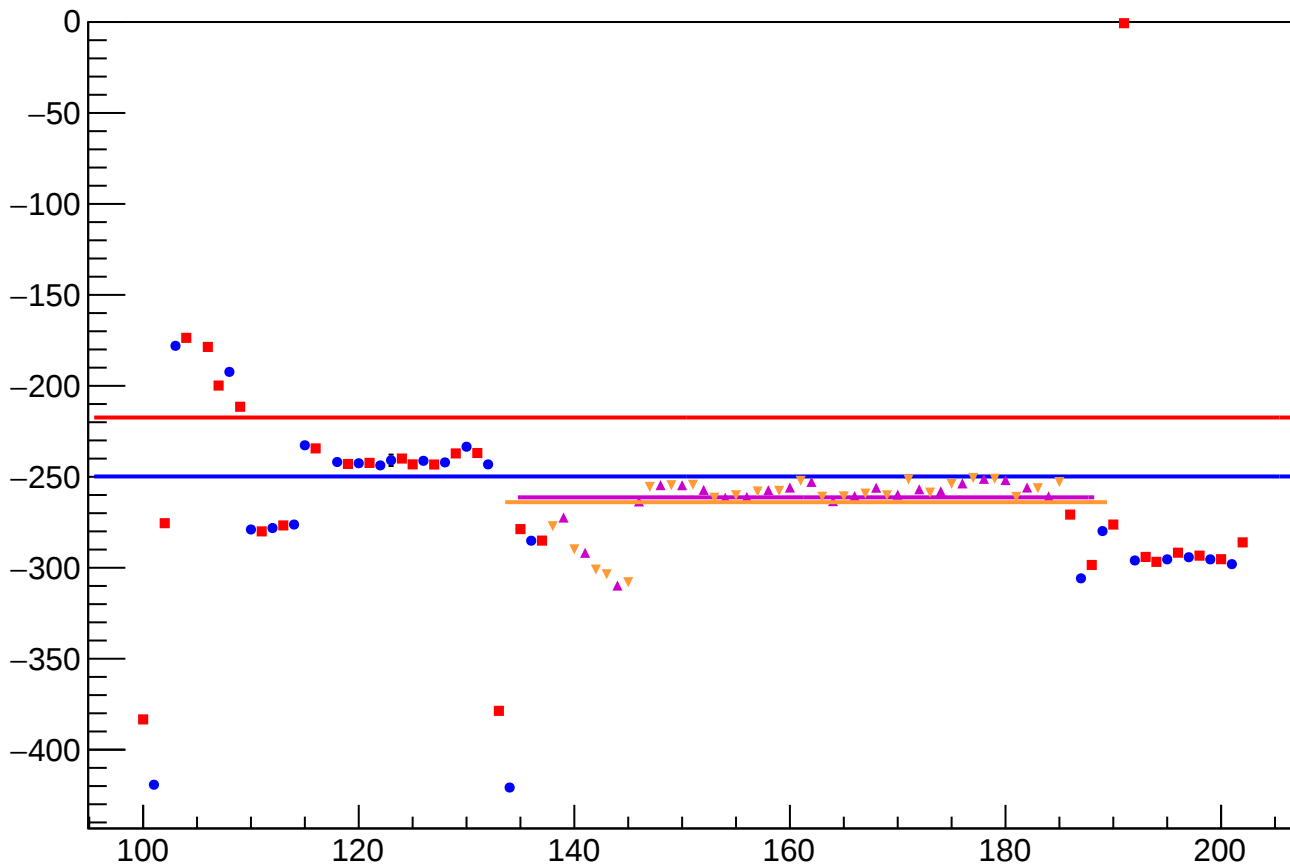
Right: 138.181 $\pm$ 2.031  $\chi^2/\text{NDF}$ : 2085.9/52

In: 144.924 $\pm$ 1.516  $\chi^2/\text{NDF}$ :1711.0/46

Out: 136.702 $\pm$ 1.441  $\chi^2/\text{NDF}$ :2062.2/53

All: 140.606 $\pm$ 1.045  $\chi^2/\text{NDF}$ : 3788.6/100

reg\_asym\_atr2\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: -249.821+/-0.143  $\chi^2/\text{NDF}$ : 192802.9/23

Left Out: -263.943+/-0.081  $\chi^2/\text{NDF}$ : 39085.0/24

Right Out: -217.405+/-0.125  $\chi^2/\text{NDF}$ : 485462.9/28

Left In: -261.286+/-0.082  $\chi^2/\text{NDF}$ : 23348.4/22

Left: -262.627+/-0.058  $\chi^2/\text{NDF}$ : 62963.4/47

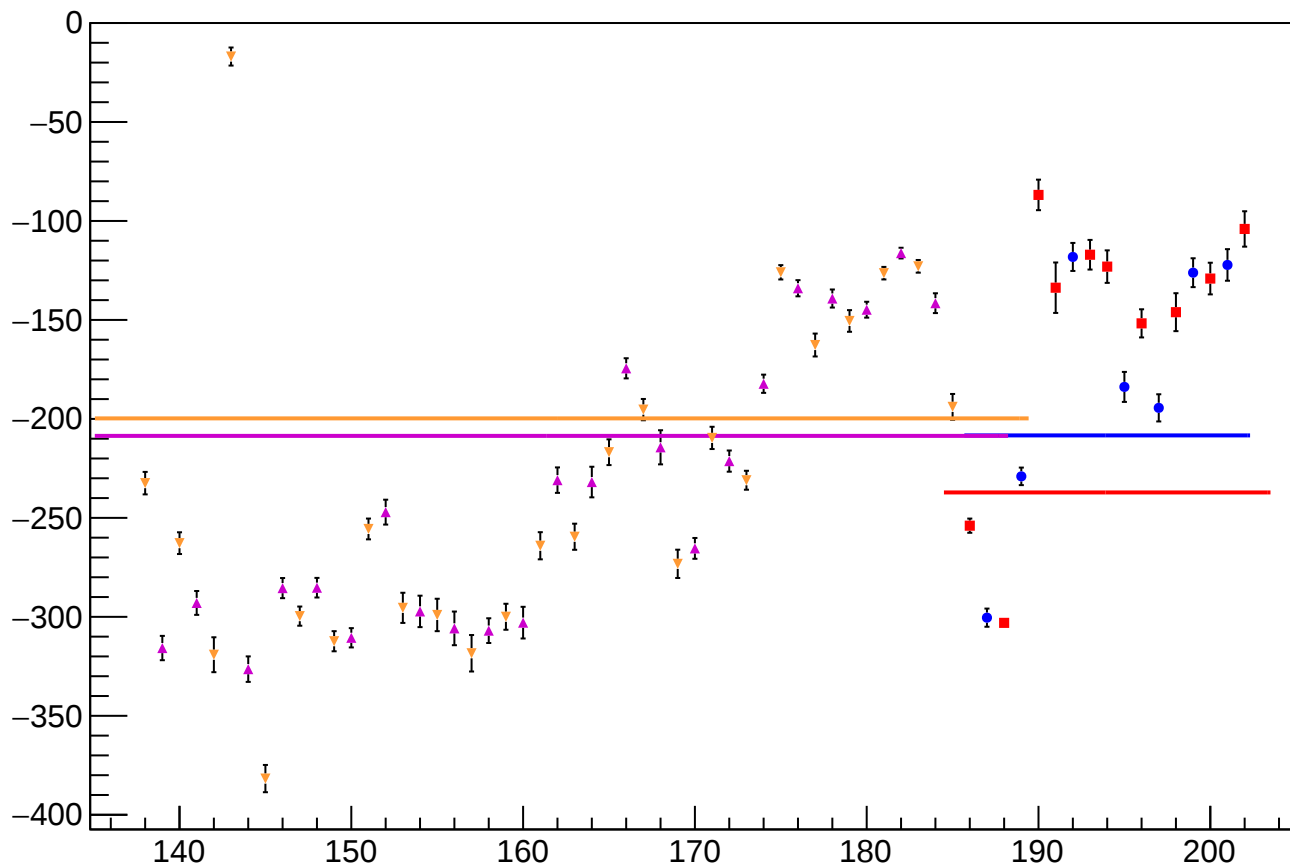
Right: -231.503+/-0.094  $\chi^2/\text{NDF}$ : 707299.7/52

In: -258.451+/-0.071  $\chi^2/\text{NDF}$ : 220989.0/46

Out: -250.193+/-0.068  $\chi^2/\text{NDF}$ : 621490.7/53

All: -254.149+/-0.049  $\chi^2/\text{NDF}$ : 849504.1/100

reg\_asym\_atl\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-208.338 \pm 2.286$   $\chi^2/\text{NDF}$ : 844.4/6

Left Out:  $-199.741 \pm 1.061$   $\chi^2/\text{NDF}$ : 6361.5/24

Right Out:  $-237.153 \pm 1.644$   $\chi^2/\text{NDF}$ : 2328.8/9

Left In:  $-208.579 \pm 1.082$   $\chi^2/\text{NDF}$ : 4805.1/22

Left:  $-204.073 \pm 0.758$   $\chi^2/\text{NDF}$ : 11200.6/47

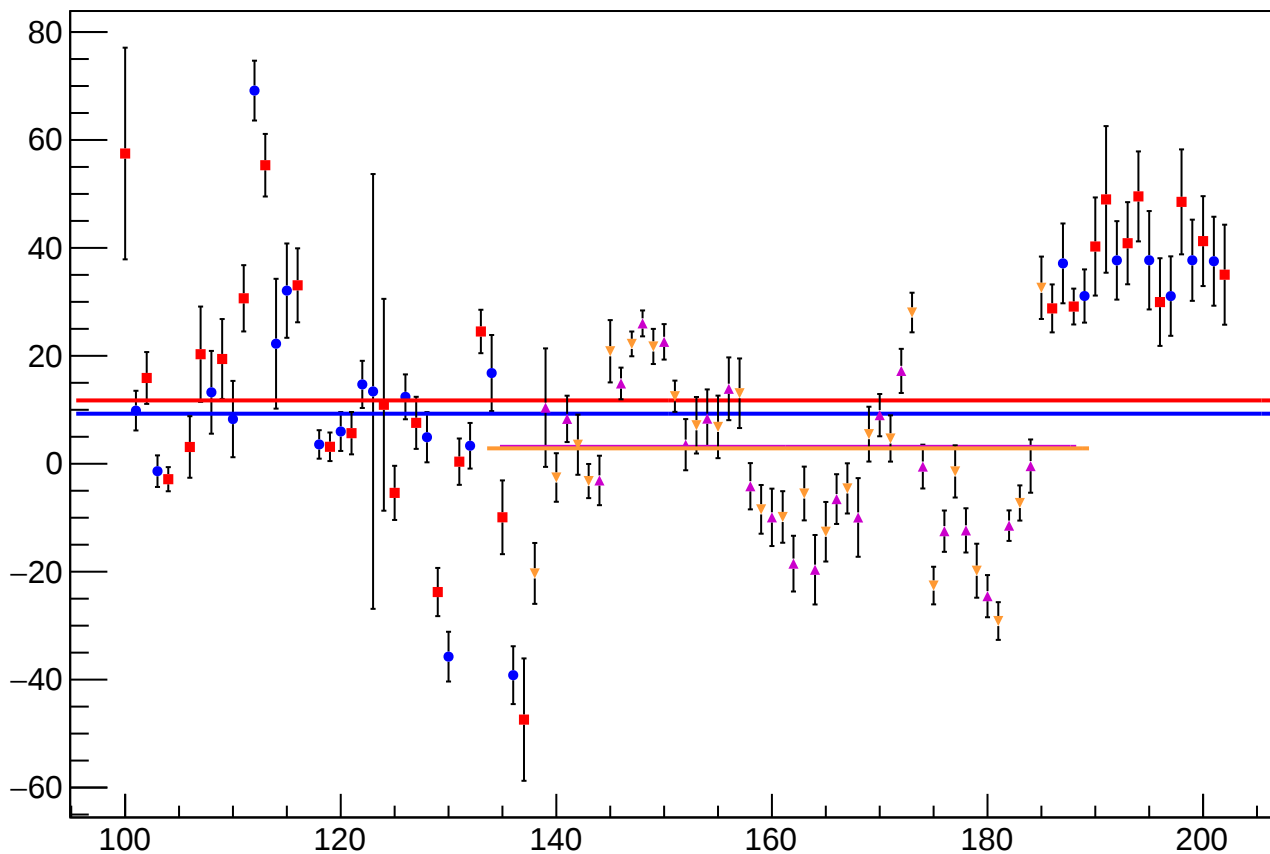
Right:  $-227.328 \pm 1.335$   $\chi^2/\text{NDF}$ : 3278.0/16

In:  $-208.535 \pm 0.978$   $\chi^2/\text{NDF}$ : 5649.5/29

Out:  $-210.744 \pm 0.892$   $\chi^2/\text{NDF}$ : 9055.9/34

All:  $-209.742 \pm 0.659$   $\chi^2/\text{NDF}$ : 14708.2/64

reg\_asym\_atl\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $9.276 \pm 1.022$   $\chi^2/\text{NDF}: 420.4/23$

Left Out:  $2.853 \pm 0.820$   $\chi^2/\text{NDF}: 419.8/24$

Right Out:  $11.737 \pm 0.947$   $\chi^2/\text{NDF}: 404.6/28$

Left In:  $3.136 \pm 0.857$   $\chi^2/\text{NDF}: 319.8/22$

Left:  $2.988 \pm 0.592$   $\chi^2/\text{NDF}: 739.7/47$

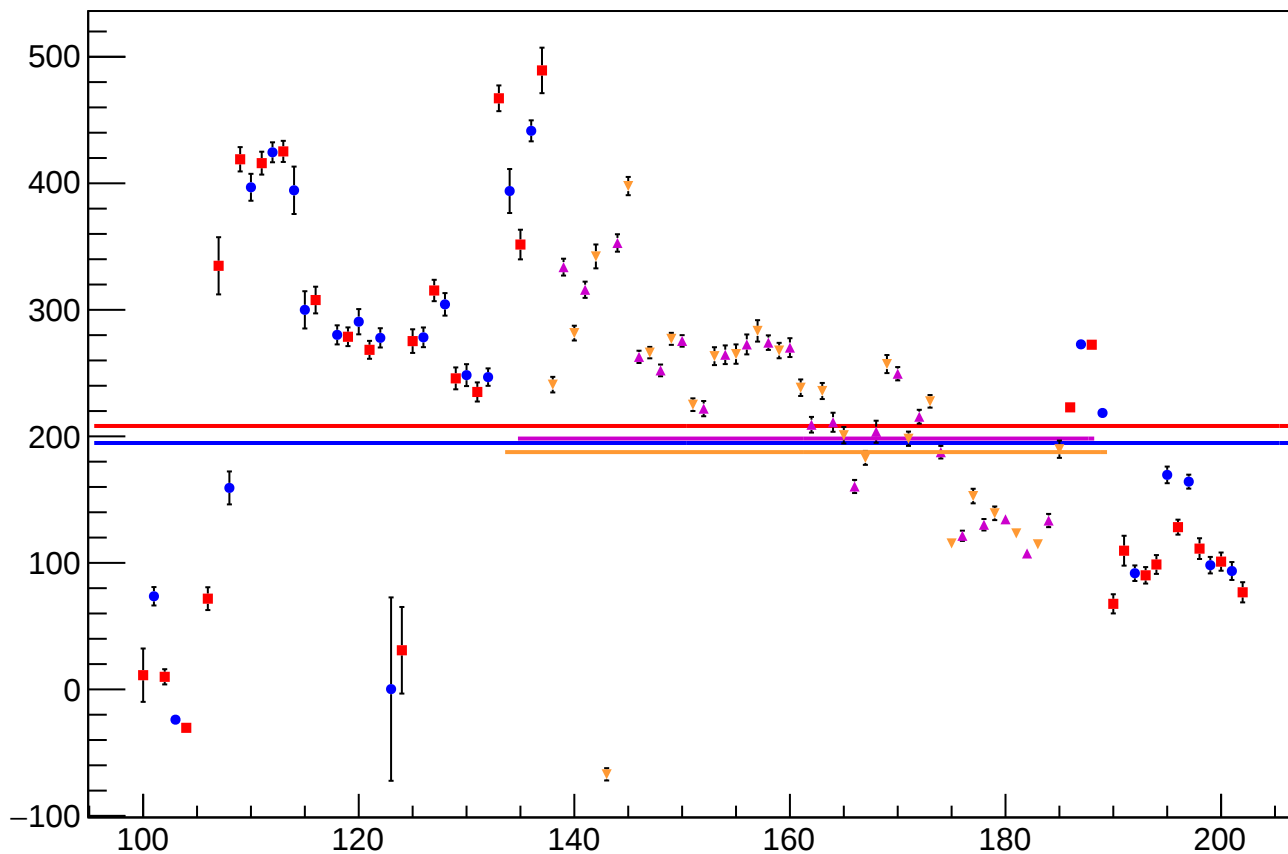
Right:  $10.601 \pm 0.695$   $\chi^2/\text{NDF}: 828.1/52$

In:  $5.669 \pm 0.657$   $\chi^2/\text{NDF}: 761.4/46$

Out:  $6.660 \pm 0.620$   $\chi^2/\text{NDF}: 874.7/53$

All:  $6.193 \pm 0.451$   $\chi^2/\text{NDF}: 1637.3/100$

reg\_asym\_atl\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 194.757 $\pm$ 1.385  $\chi^2$ /NDF: 7941.5/23

Left Out: 187.565 $\pm$ 1.066  $\chi^2$ /NDF: 7082.0/24

Right Out: 208.209 $\pm$ 1.111  $\chi^2$ /NDF: 11225.5/28

Left In: 198.269 $\pm$ 1.082  $\chi^2$ /NDF: 4515.8/22

Left: 192.839 $\pm$ 0.759  $\chi^2$ /NDF: 11647.5/47

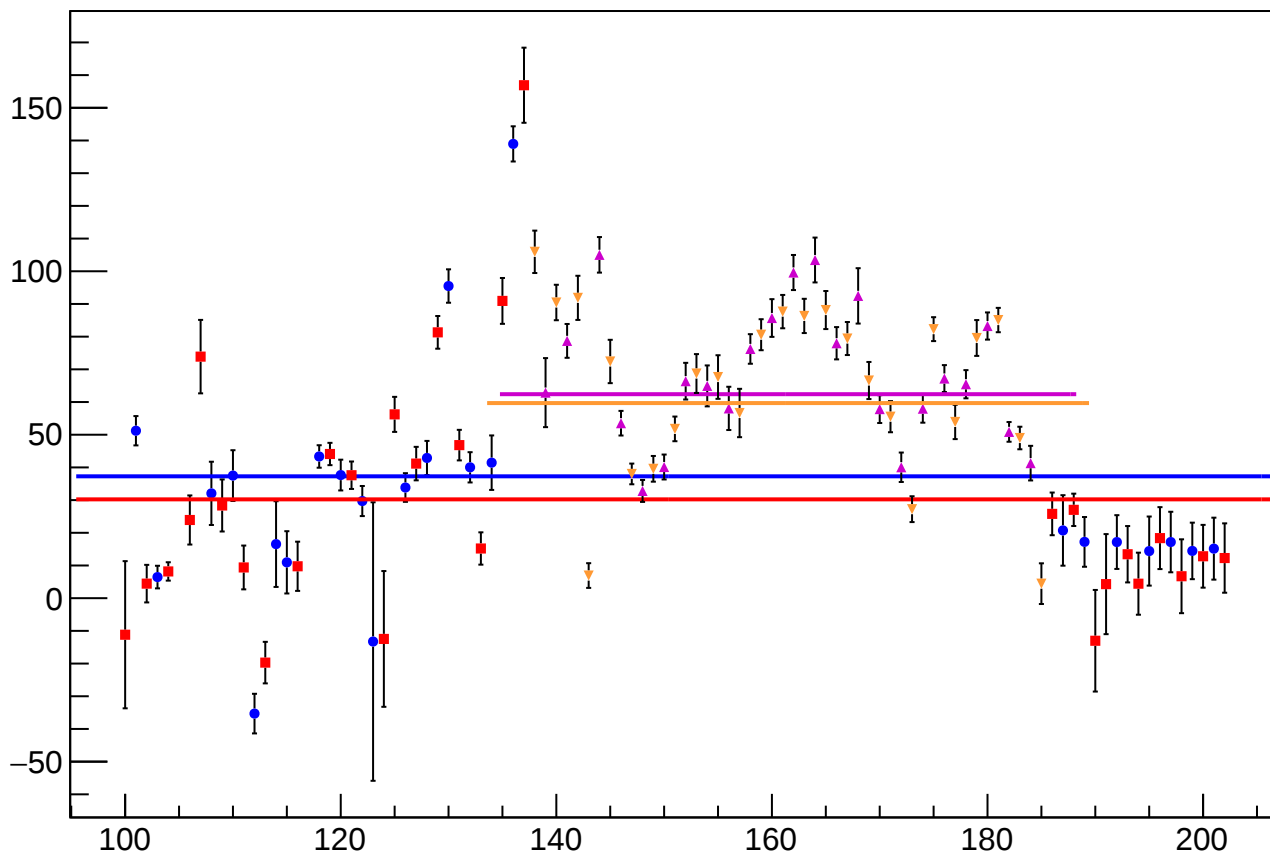
Right: 202.944 $\pm$ 0.867  $\chi^2$ /NDF: 19224.4/52

In: 196.939 $\pm$ 0.853  $\chi^2$ /NDF: 12461.3/46

Out: 197.459 $\pm$ 0.769  $\chi^2$ /NDF: 18487.3/53

All: 197.226 $\pm$ 0.571  $\chi^2$ /NDF: 30948.8/100

reg\_asym\_atl\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 37.276 $\pm$ 1.203  $\chi^2$ /NDF: 776.2/23

Left Out: 59.682 $\pm$ 0.941  $\chi^2$ /NDF: 757.6/24

Right Out: 30.228 $\pm$ 1.137  $\chi^2$ /NDF: 589.1/28

Left In: 62.400 $\pm$ 0.974  $\chi^2$ /NDF: 406.3/22

Left: 60.993 $\pm$ 0.677  $\chi^2$ /NDF: 1167.9/47

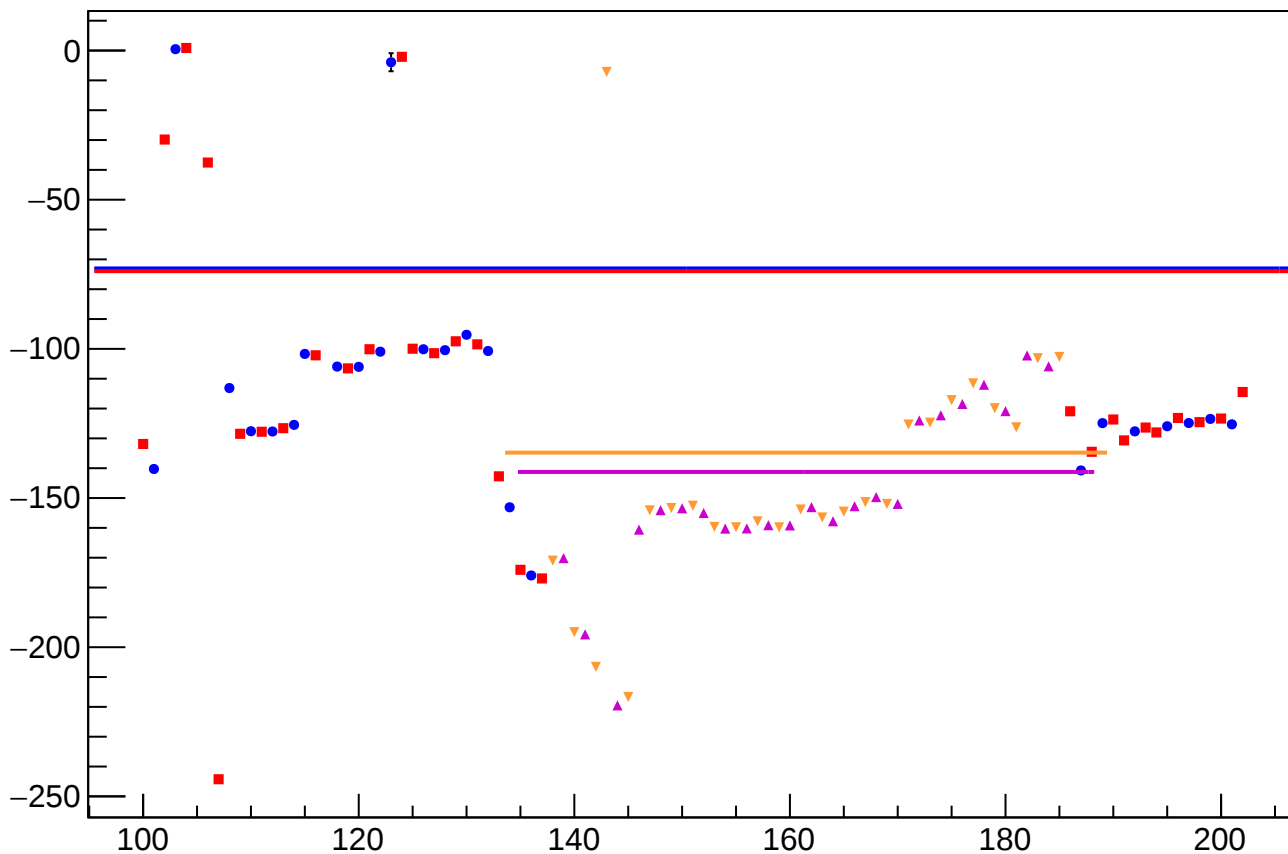
Right: 33.553 $\pm$ 0.826  $\chi^2$ /NDF: 1383.4/52

In: 52.451 $\pm$ 0.757  $\chi^2$ /NDF: 1445.9/46

Out: 47.714 $\pm$ 0.725  $\chi^2$ /NDF: 1745.0/53

All: 49.979 $\pm$ 0.524  $\chi^2$ /NDF: 3211.4/100

reg\_asym\_atl\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: -73.045 $\pm$ 0.054  $\chi^2$ /NDF: 1373766.1/23

Left Out: -134.780 $\pm$ 0.045  $\chi^2$ /NDF: 804747.3/24

Right Out: -73.951 $\pm$ 0.051  $\chi^2$ /NDF: 1376925.6/28

Left In: -141.255 $\pm$ 0.045  $\chi^2$ /NDF: 347229.8/22

Left: -137.961 $\pm$ 0.032  $\chi^2$ /NDF: 1162377.9/47

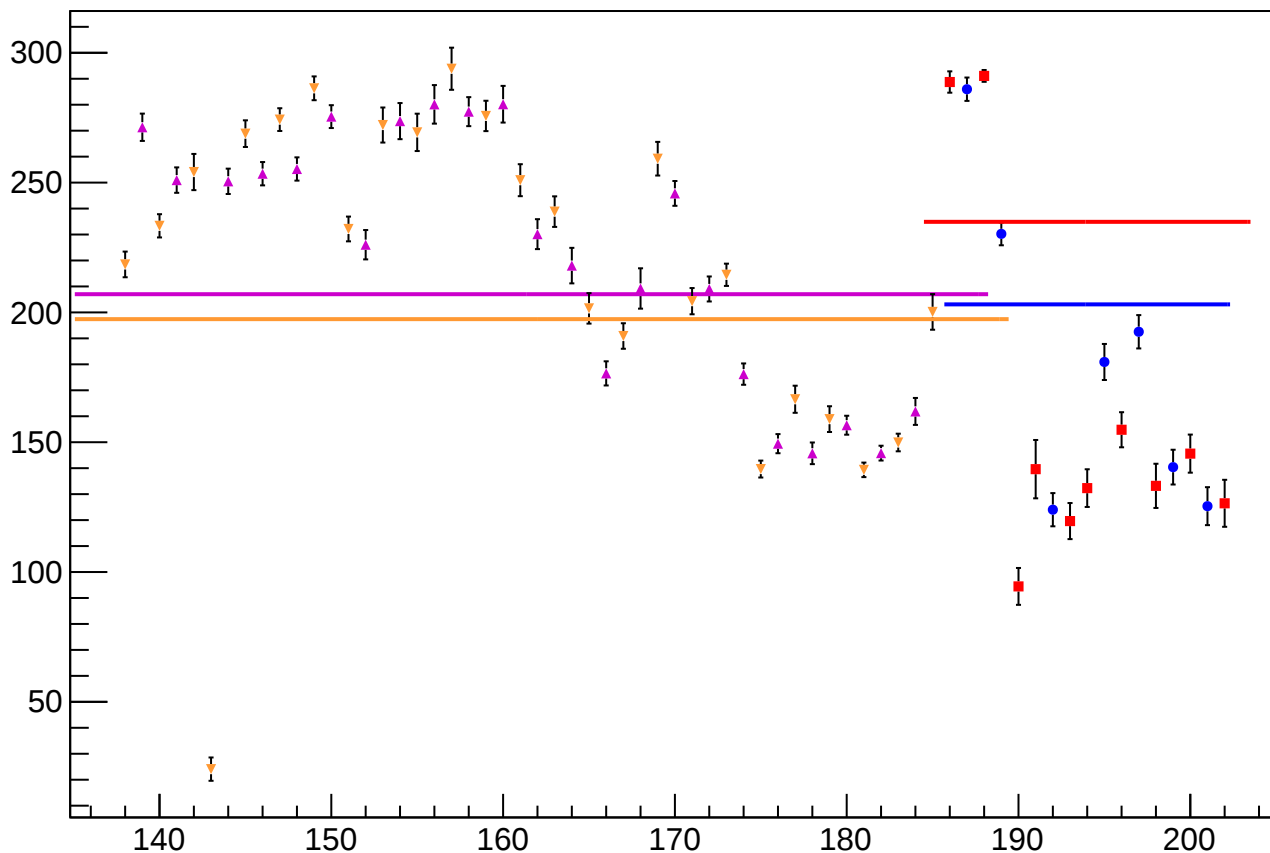
Right: -73.524 $\pm$ 0.037  $\chi^2$ /NDF: 2750837.7/52

In: -113.365 $\pm$ 0.035  $\chi^2$ /NDF: 2648428.1/46

Out: -108.756 $\pm$ 0.034  $\chi^2$ /NDF: 2980983.8/53

All: -110.982 $\pm$ 0.024  $\chi^2$ /NDF: 5638468.7/100

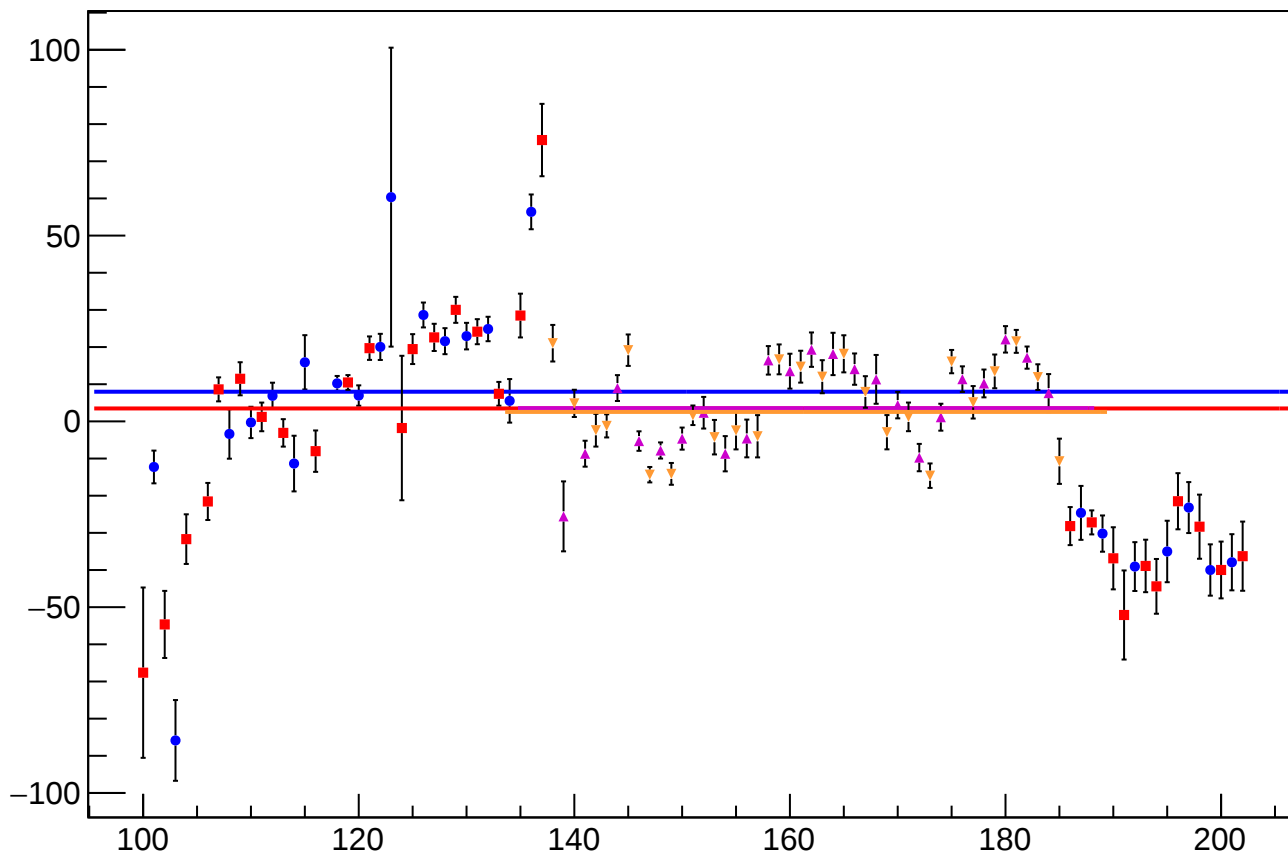
reg\_asym\_atl\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 203.094 $\pm$ 2.174  $\chi^2$ /NDF: 744.0/6  
 Left Out: 197.408 $\pm$ 0.963  $\chi^2$ /NDF:4384.2/24  
 Right Out: 234.889 $\pm$ 1.610  $\chi^2$ /NDF: 2291.8/9  
 Left In: 207.014 $\pm$ 0.990  $\chi^2$ /NDF:2611.5/22

Left: 202.077 $\pm$ 0.690  $\chi^2$ /NDF: 7044.1/47  
 Right: 223.622 $\pm$ 1.294  $\chi^2$ /NDF: 3174.0/16  
 In: 206.341 $\pm$ 0.901  $\chi^2$ /NDF:3358.3/29  
 Out: 207.278 $\pm$ 0.826  $\chi^2$ /NDF:7075.0/34  
 All: 206.850 $\pm$ 0.609  $\chi^2$ /NDF: 10433.9/64

reg\_asym\_atl\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $7.981 \pm 0.879$   $\chi^2/\text{NDF}$ : 595.0/23

Left Out:  $2.548 \pm 0.741$   $\chi^2/\text{NDF}$ : 275.4/24

Right Out:  $3.477 \pm 0.831$   $\chi^2/\text{NDF}$ : 695.4/28

Left In:  $3.559 \pm 0.774$   $\chi^2/\text{NDF}$ : 192.0/22

Left:  $3.031 \pm 0.535$   $\chi^2/\text{NDF}$ : 468.3/47

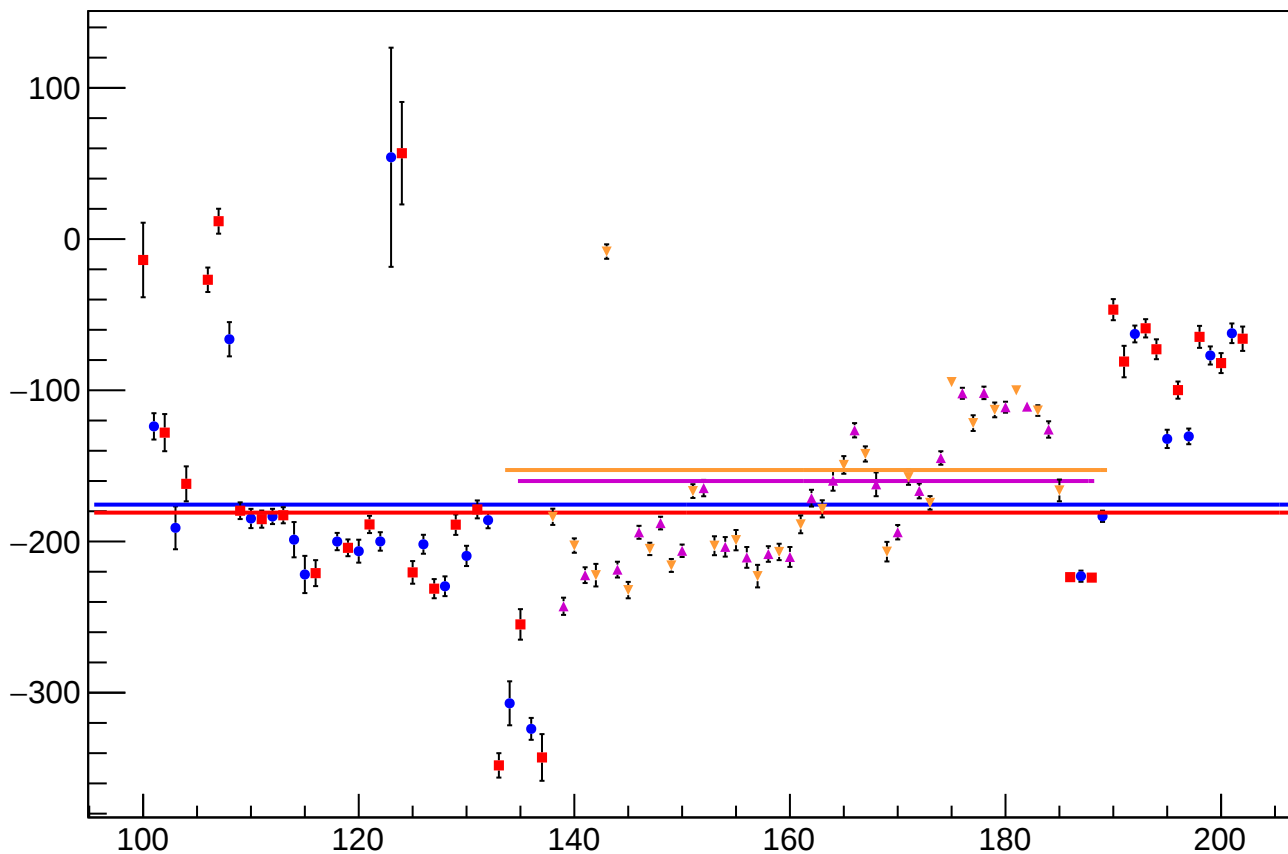
Right:  $5.603 \pm 0.604$   $\chi^2/\text{NDF}$ : 1304.3/52

In:  $5.491 \pm 0.581$   $\chi^2/\text{NDF}$ : 801.2/46

Out:  $2.959 \pm 0.553$   $\chi^2/\text{NDF}$ : 971.5/53

All:  $4.163 \pm 0.401$   $\chi^2/\text{NDF}$ : 1782.8/100

reg\_asym\_atl\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-175.619 \pm 1.288$   $\chi^2/\text{NDF}: 2112.5/23$

Left Out:  $-152.738 \pm 0.967$   $\chi^2/\text{NDF}: 3077.8/24$

Right Out:  $-180.908 \pm 1.053$   $\chi^2/\text{NDF}: 4494.3/28$

Left In:  $-160.021 \pm 0.989$   $\chi^2/\text{NDF}: 2024.4/22$

Left:  $-156.299 \pm 0.691$   $\chi^2/\text{NDF}: 5129.9/47$

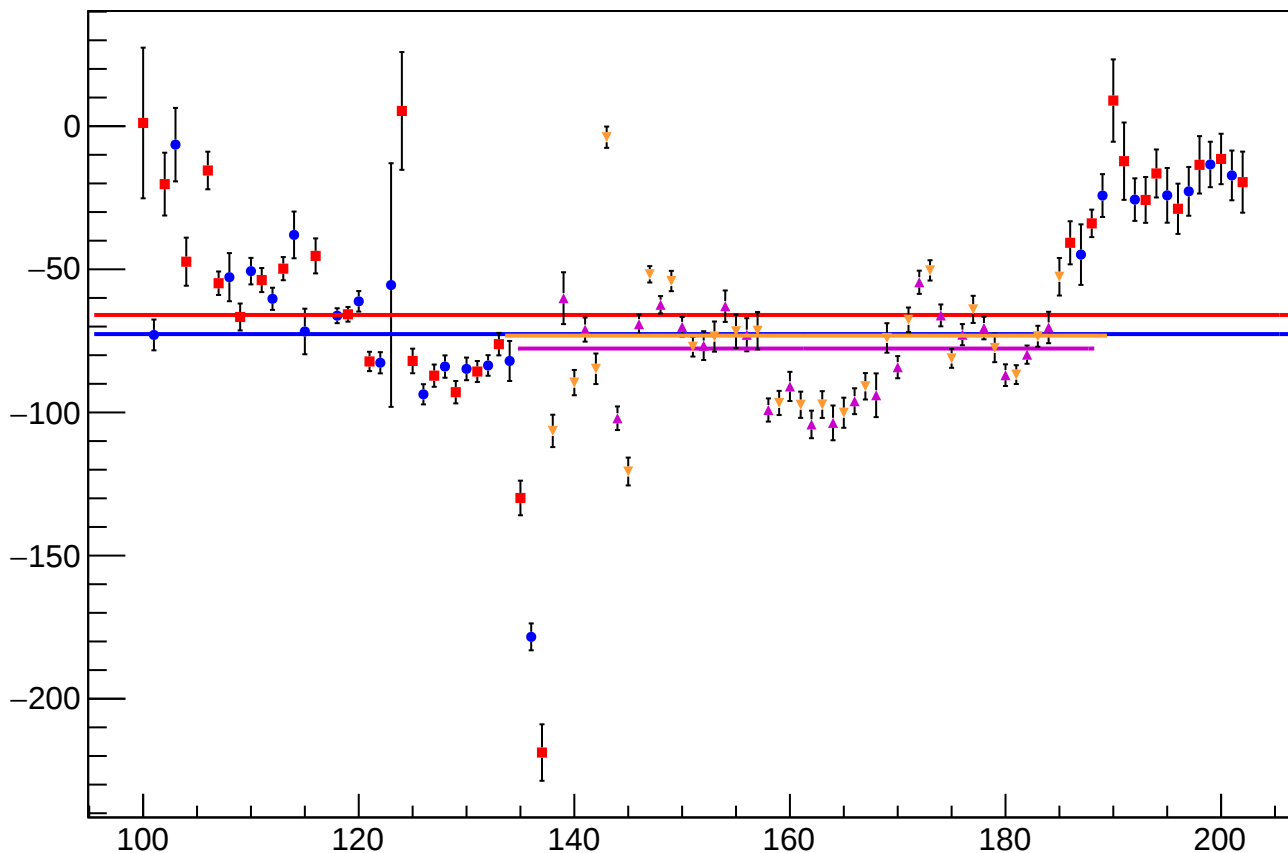
Right:  $-178.790 \pm 0.815$   $\chi^2/\text{NDF}: 6616.9/52$

In:  $-165.805 \pm 0.784$   $\chi^2/\text{NDF}: 4229.1/46$

Out:  $-165.630 \pm 0.712$   $\chi^2/\text{NDF}: 7960.5/53$

All:  $-165.709 \pm 0.527$   $\chi^2/\text{NDF}: 12189.7/100$

reg\_asym\_atl\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: -72.629+/-1.026  $\chi^2/\text{NDF}$ : 922.7/23

Left Out: -73.165+/-0.851  $\chi^2/\text{NDF}$ : 788.6/24

Right Out: -65.942+/-0.978  $\chi^2/\text{NDF}$ : 905.5/28

Left In: -77.678+/-0.883  $\chi^2/\text{NDF}$ : 248.3/22

Left: -75.339+/-0.613  $\chi^2/\text{NDF}$ : 1050.4/47

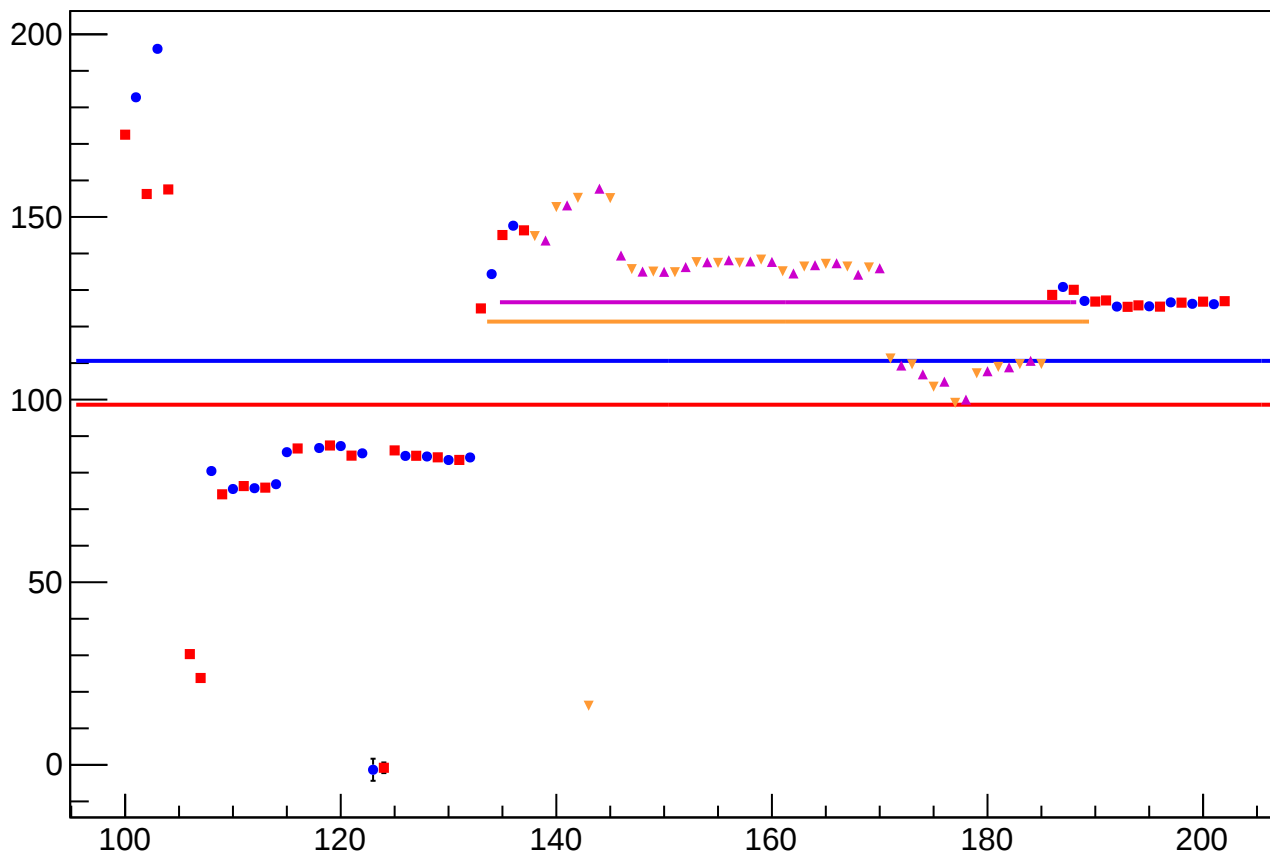
Right: -69.124+/-0.708  $\chi^2/\text{NDF}$ : 1850.4/52

In: -75.530+/-0.669  $\chi^2/\text{NDF}$ : 1184.8/46

Out: -70.050+/-0.642  $\chi^2/\text{NDF}$ : 1725.2/53

All: -72.676+/-0.463  $\chi^2/\text{NDF}$ : 2944.9/100

reg\_asym\_atl\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 110.600 $\pm$ 0.059  $\chi^2$ /NDF: 304544.6/23

Left Out: 121.356 $\pm$ 0.040  $\chi^2$ /NDF: 481977.3/24

Right Out: 98.601 $\pm$ 0.052  $\chi^2$ /NDF: 561896.5/28

Left In: 126.653 $\pm$ 0.041  $\chi^2$ /NDF: 163046.1/22

Left: 123.954 $\pm$ 0.029  $\chi^2$ /NDF: 653496.6/47

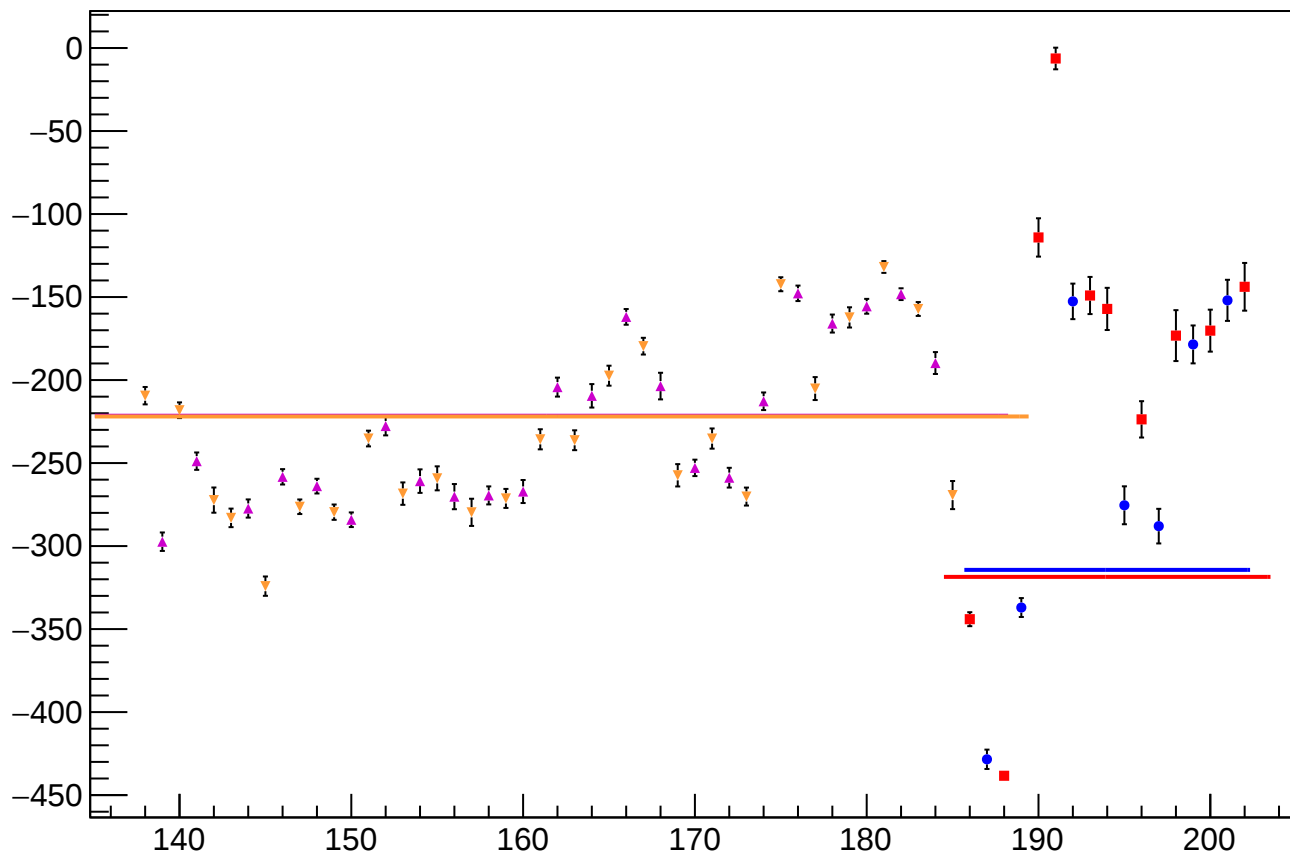
Right: 103.911 $\pm$ 0.039  $\chi^2$ /NDF: 889582.3/52

In: 121.400 $\pm$ 0.034  $\chi^2$ /NDF: 517564.2/46

Out: 112.913 $\pm$ 0.032  $\chi^2$ /NDF: 1162149.2/53

All: 116.933 $\pm$ 0.023  $\chi^2$ /NDF: 1713113.7/100

reg\_asym\_atr\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: -314.335+/-3.162  $\chi^2/\text{NDF}$ : 958.5/6

Left Out: -221.934+/-1.084  $\chi^2/\text{NDF}$ : 2578.4/24

Right Out: -318.555+/-2.068  $\chi^2/\text{NDF}$ : 5043.2/9

Left In: -221.483+/-1.102  $\chi^2/\text{NDF}$ : 2149.8/22

Left: -221.712+/-0.773  $\chi^2/\text{NDF}$ : 4728.2/47

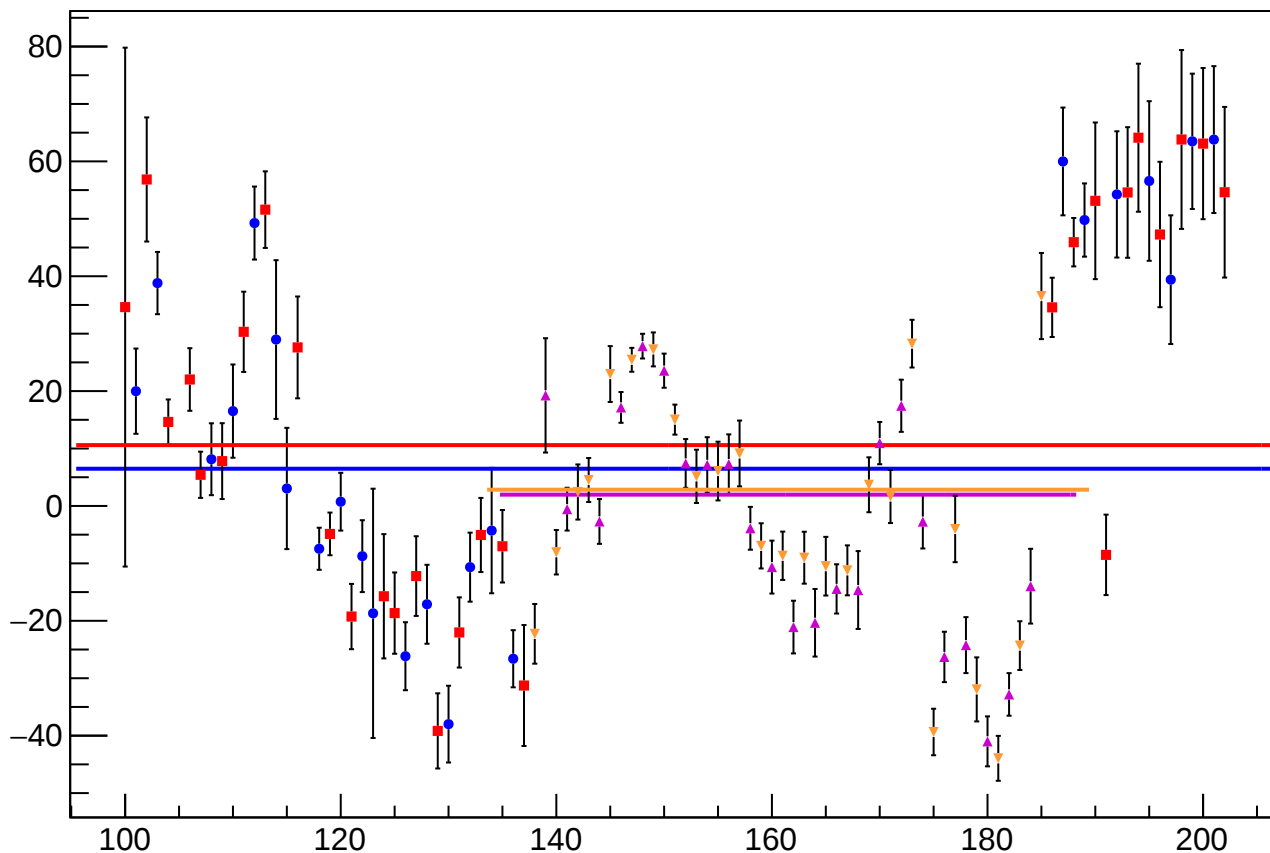
Right: -317.291+/-1.730  $\chi^2/\text{NDF}$ : 6003.0/16

In: -231.546+/-1.041  $\chi^2/\text{NDF}$ : 3877.3/29

Out: -242.779+/-0.960  $\chi^2/\text{NDF}$ : 9334.2/34

All: -237.613+/-0.706  $\chi^2/\text{NDF}$ : 13274.4/64

reg\_asym\_atr\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $6.481 \pm 1.425$   $\chi^2/\text{NDF}: 414.0/23$

Left Out:  $2.832 \pm 0.807$   $\chi^2/\text{NDF}: 686.9/24$

Right Out:  $10.592 \pm 1.228$   $\chi^2/\text{NDF}: 455.8/28$

Left In:  $1.969 \pm 0.835$   $\chi^2/\text{NDF}: 589.1/22$

Left:  $2.415 \pm 0.580$   $\chi^2/\text{NDF}: 1276.5/47$

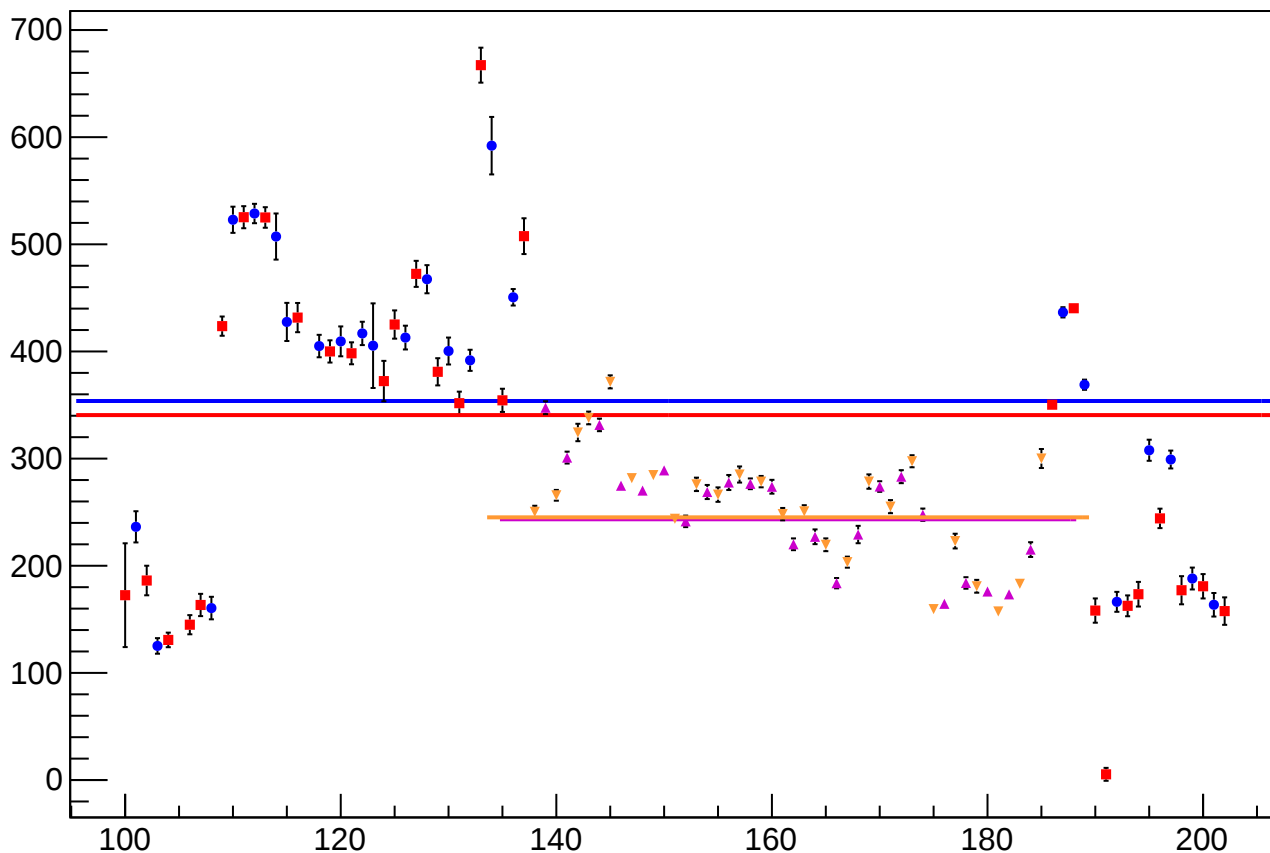
Right:  $8.840 \pm 0.930$   $\chi^2/\text{NDF}: 874.6/52$

In:  $3.122 \pm 0.720$   $\chi^2/\text{NDF}: 1010.6/46$

Out:  $5.173 \pm 0.674$   $\chi^2/\text{NDF}: 1170.6/53$

All:  $4.215 \pm 0.492$   $\chi^2/\text{NDF}: 2185.5/100$

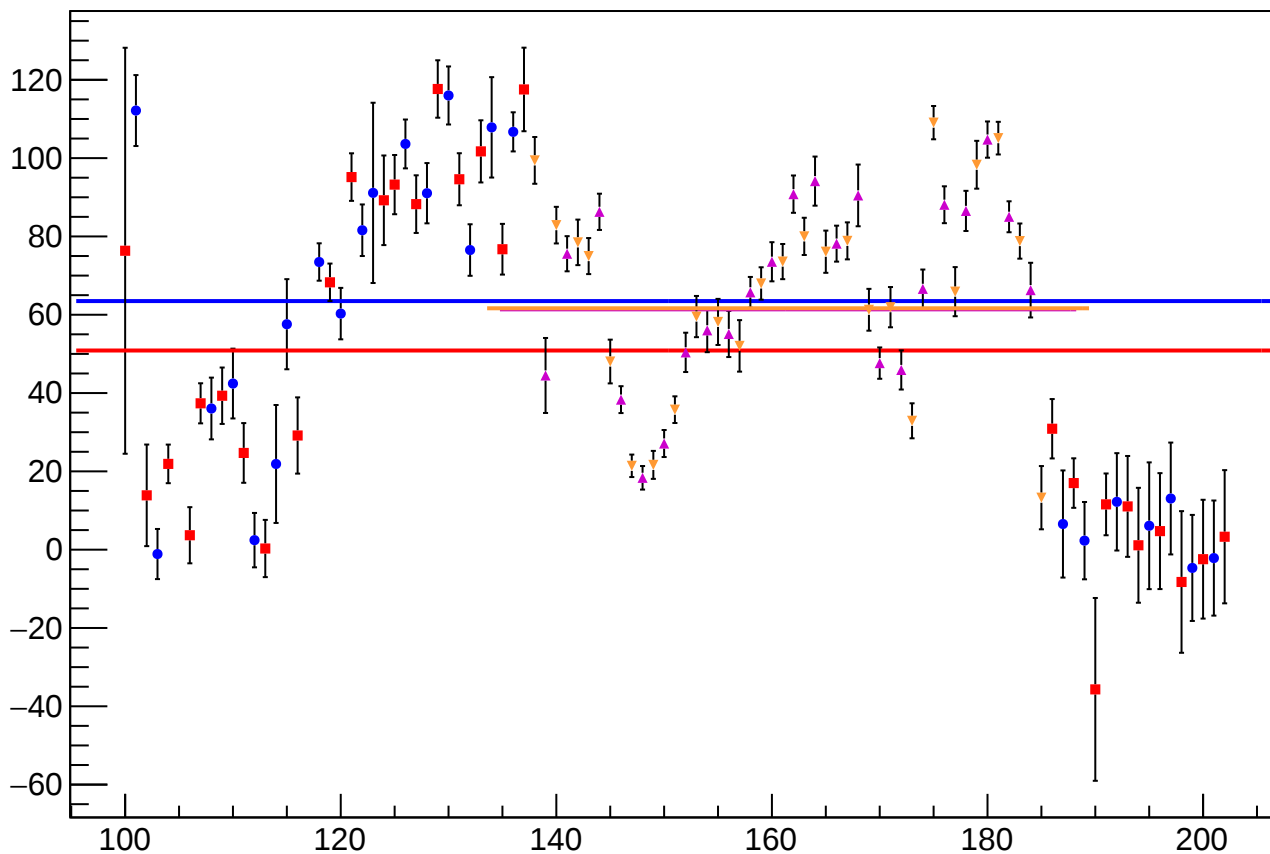
reg\_asym\_atr\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 353.769 $\pm$ 1.921  $\chi^2$ /NDF: 3813.5/23  
 Left Out: 245.179 $\pm$ 1.082  $\chi^2$ /NDF:2597.4/24  
 Right Out: 340.616 $\pm$ 1.423  $\chi^2$ /NDF: 9654.1/28  
 Left In: 243.366 $\pm$ 1.094  $\chi^2$ /NDF:2236.7/22

Left: 244.282 $\pm$ 0.769  $\chi^2$ /NDF: 4835.5/47  
 Right: 345.277 $\pm$ 1.143  $\chi^2$ /NDF: 13497.9/52  
 In: 270.397 $\pm$ 0.950  $\chi^2$ /NDF:8545.4/46  
 Out: 280.147 $\pm$ 0.861  $\chi^2$ /NDF:15101.9/53  
 All: 275.750 $\pm$ 0.638  $\chi^2$ /NDF: 23705.1/100

reg\_asym\_atr\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $63.492 \pm 1.665$   $\chi^2/\text{NDF}: 585.2/23$

Left Out:  $61.647 \pm 0.936$   $\chi^2/\text{NDF}: 871.5/24$

Right Out:  $50.867 \pm 1.472$   $\chi^2/\text{NDF}: 653.2/28$

Left In:  $61.375 \pm 0.961$   $\chi^2/\text{NDF}: 699.7/22$

Left:  $61.515 \pm 0.671$   $\chi^2/\text{NDF}: 1571.3/47$

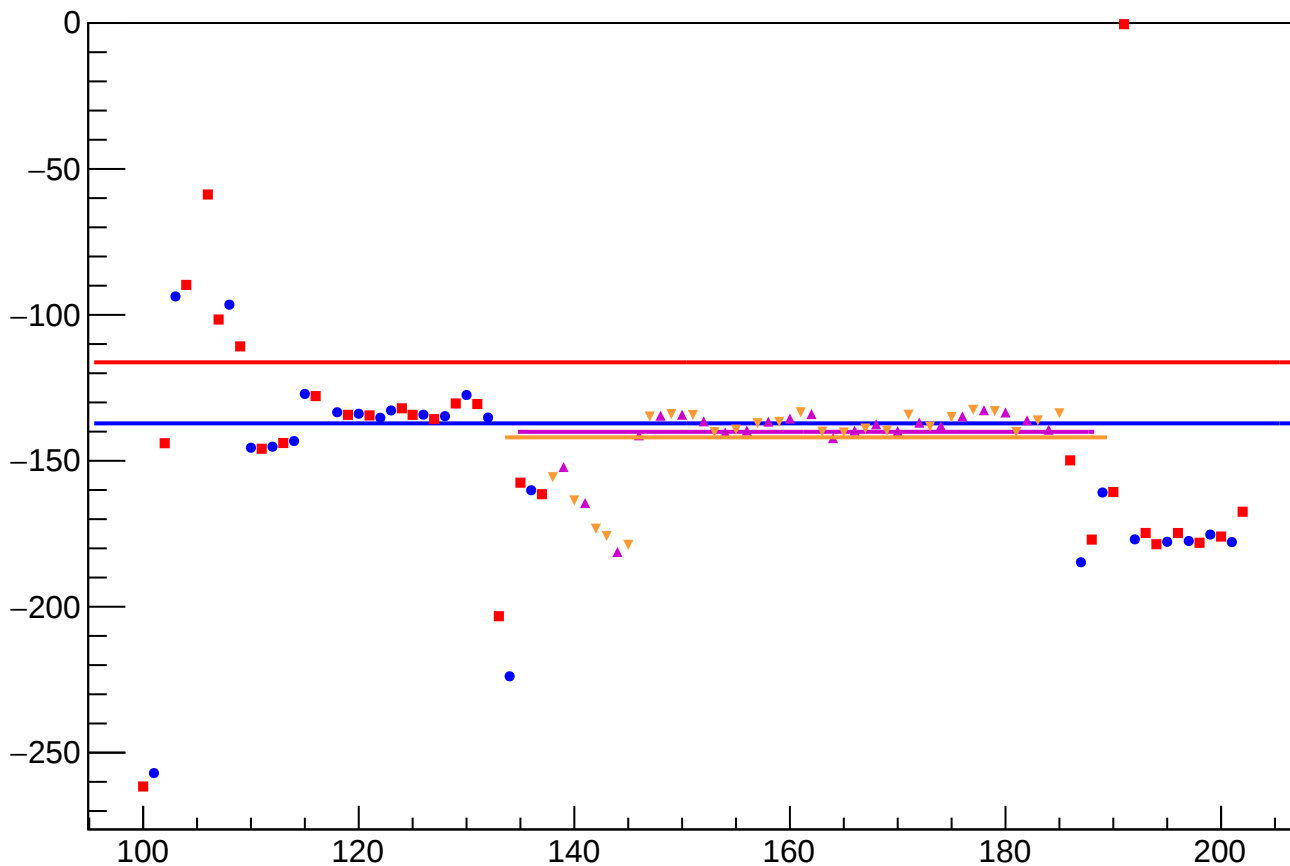
Right:  $56.408 \pm 1.103$   $\chi^2/\text{NDF}: 1270.7/52$

In:  $61.904 \pm 0.832$   $\chi^2/\text{NDF}: 1286.1/46$

Out:  $58.544 \pm 0.790$   $\chi^2/\text{NDF}: 1562.9/53$

All:  $60.137 \pm 0.573$   $\chi^2/\text{NDF}: 2857.6/100$

reg\_asym\_atr\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-137.175 \pm 0.080$   $\chi^2/\text{NDF}: 228635.6/23$

Left Out:  $-141.969 \pm 0.045$   $\chi^2/\text{NDF}: 80252.6/24$

Right Out:  $-116.260 \pm 0.069$   $\chi^2/\text{NDF}: 597494.0/28$

Left In:  $-140.068 \pm 0.045$   $\chi^2/\text{NDF}: 48030.7/22$

Left:  $-141.025 \pm 0.032$   $\chi^2/\text{NDF}: 129181.1/47$

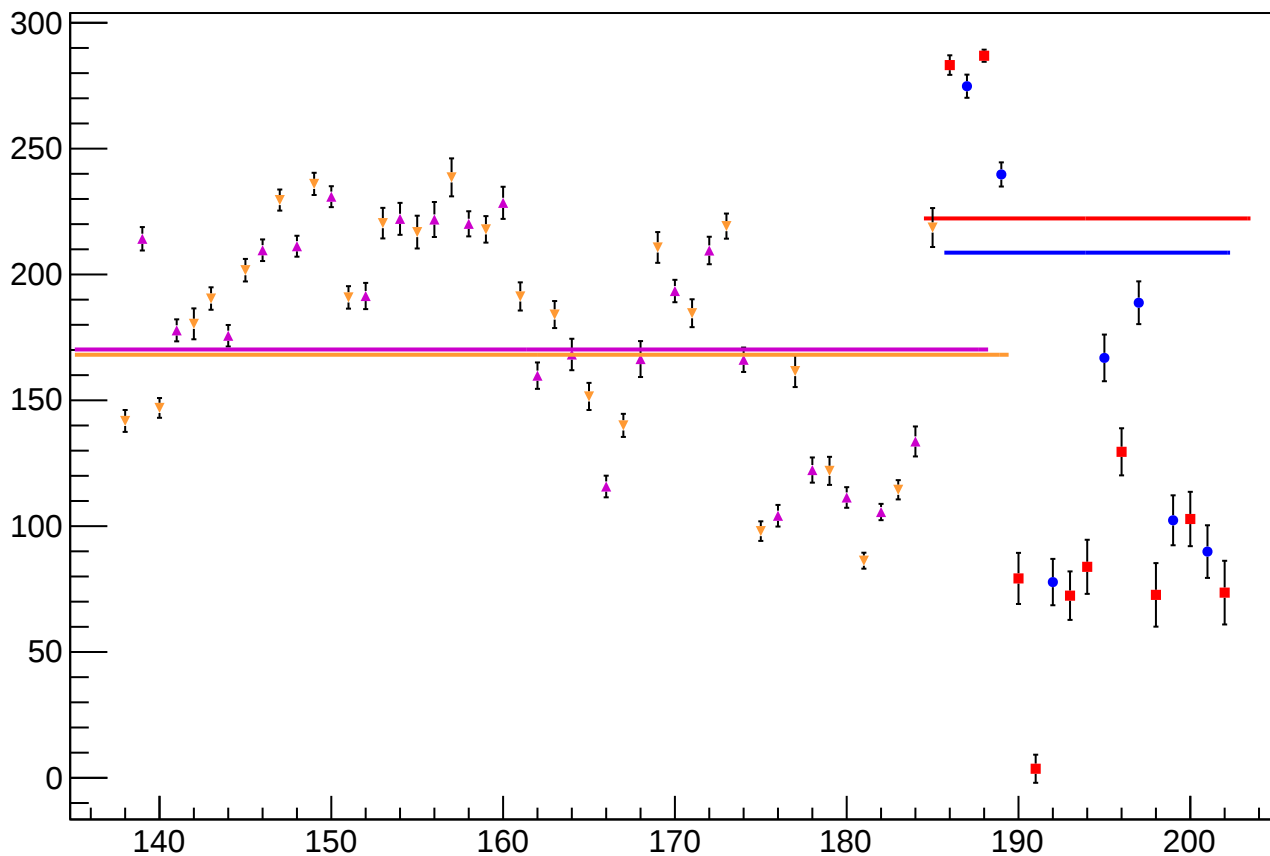
Right:  $-125.200 \pm 0.052$   $\chi^2/\text{NDF}: 865429.6/52$

In:  $-139.371 \pm 0.039$   $\chi^2/\text{NDF}: 277662.8/46$

Out:  $-134.366 \pm 0.038$   $\chi^2/\text{NDF}: 775575.3/53$

All:  $-136.758 \pm 0.027$   $\chi^2/\text{NDF}: 1061747.1/100$

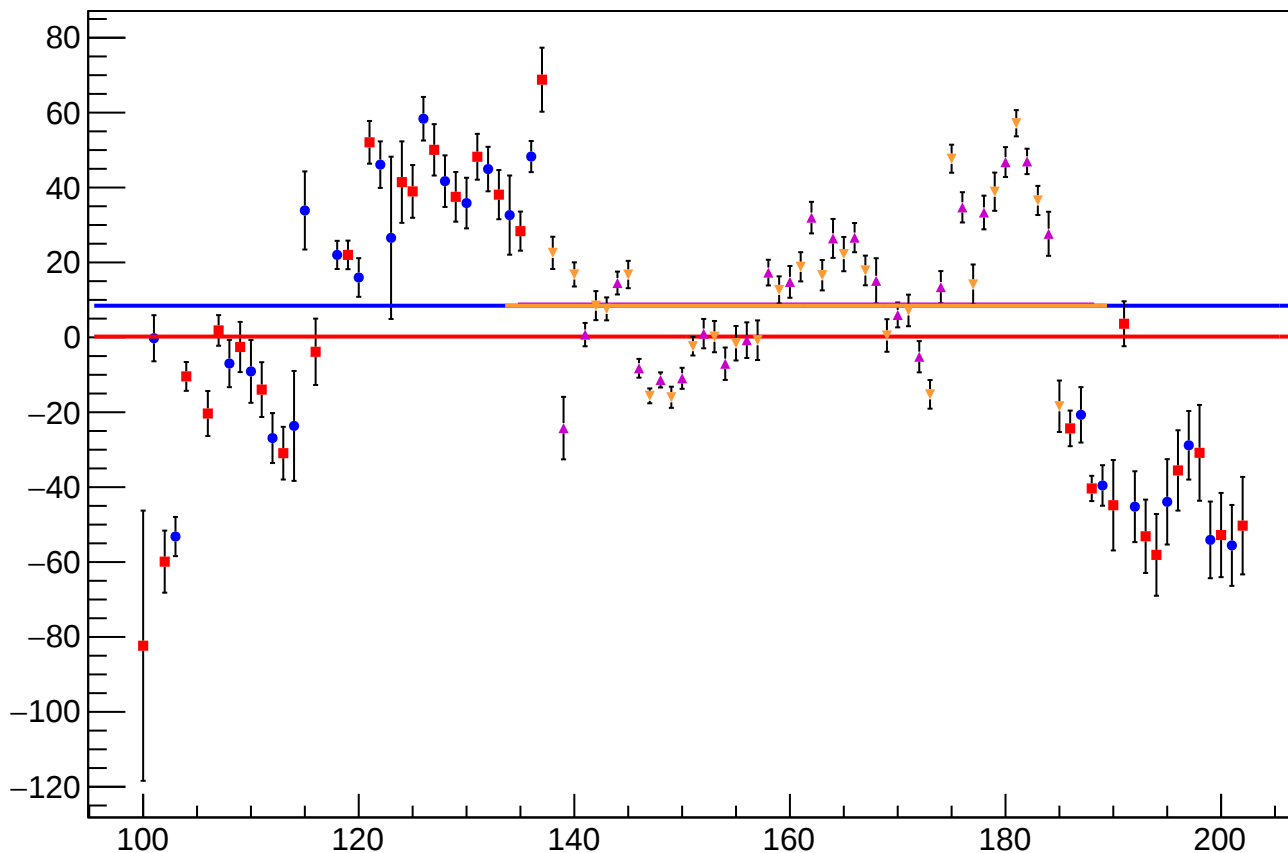
reg\_asym\_atr\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 208.671 $\pm$ 2.606  $\chi^2$ /NDF: 720.1/6  
 Left Out: 168.106 $\pm$ 0.970  $\chi^2$ /NDF:2468.8/24  
 Right Out: 222.264 $\pm$ 1.735  $\chi^2$ /NDF: 3603.4/9  
 Left In: 170.198 $\pm$ 0.995  $\chi^2$ /NDF:2024.5/22

Left: 169.125 $\pm$ 0.695  $\chi^2$ /NDF: 4495.5/47  
 Right: 218.089 $\pm$ 1.445  $\chi^2$ /NDF: 4342.4/16  
 In: 175.095 $\pm$ 0.930  $\chi^2$ /NDF:2934.8/29  
 Out: 181.003 $\pm$ 0.847  $\chi^2$ /NDF:6814.2/34  
 All: 178.324 $\pm$ 0.626  $\chi^2$ /NDF: 9771.0/64

reg\_asym\_atr\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $8.446 \pm 1.356$   $\chi^2/\text{NDF}$ : 727.2/23

Left Out:  $8.436 \pm 0.728$   $\chi^2/\text{NDF}$ : 752.0/24

Right Out:  $0.206 \pm 1.170$   $\chi^2/\text{NDF}$ : 832.0/28

Left In:  $8.769 \pm 0.758$   $\chi^2/\text{NDF}$ : 626.8/22

Left:  $8.596 \pm 0.525$   $\chi^2/\text{NDF}$ : 1379.0/47

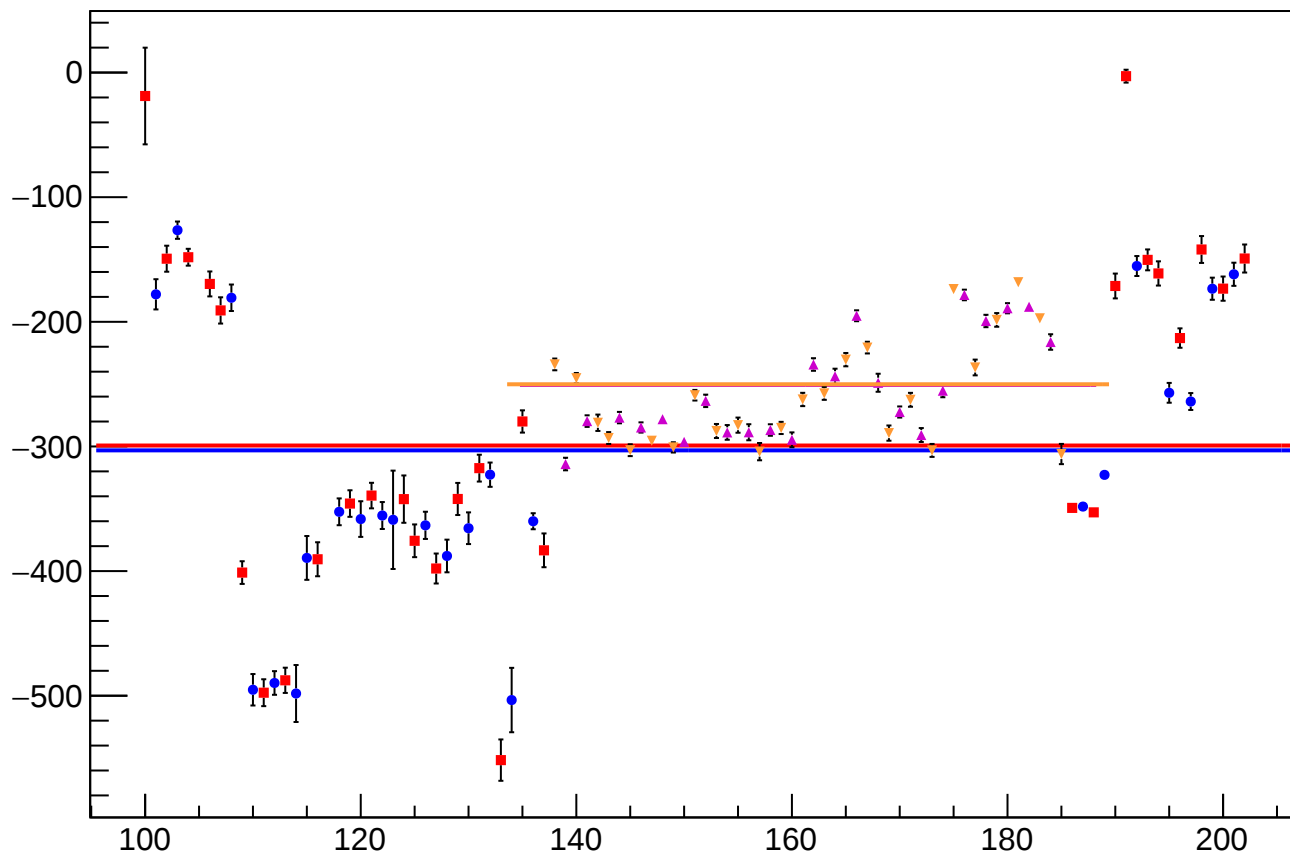
Right:  $3.722 \pm 0.886$   $\chi^2/\text{NDF}$ : 1580.3/52

In:  $8.692 \pm 0.662$   $\chi^2/\text{NDF}$ : 1354.0/46

Out:  $6.138 \pm 0.618$   $\chi^2/\text{NDF}$ : 1619.7/53

All:  $7.328 \pm 0.452$   $\chi^2/\text{NDF}$ : 2981.7/100

reg\_asym\_atr\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-303.139 \pm 1.692$   $\chi^2/\text{NDF}: 2923.2/23$

Left Out:  $-250.119 \pm 0.972$   $\chi^2/\text{NDF}: 2246.9/24$

Right Out:  $-299.251 \pm 1.246$   $\chi^2/\text{NDF}: 7993.4/28$

Left In:  $-250.628 \pm 0.990$   $\chi^2/\text{NDF}: 1937.1/22$

Left:  $-250.369 \pm 0.694$   $\chi^2/\text{NDF}: 4184.2/47$

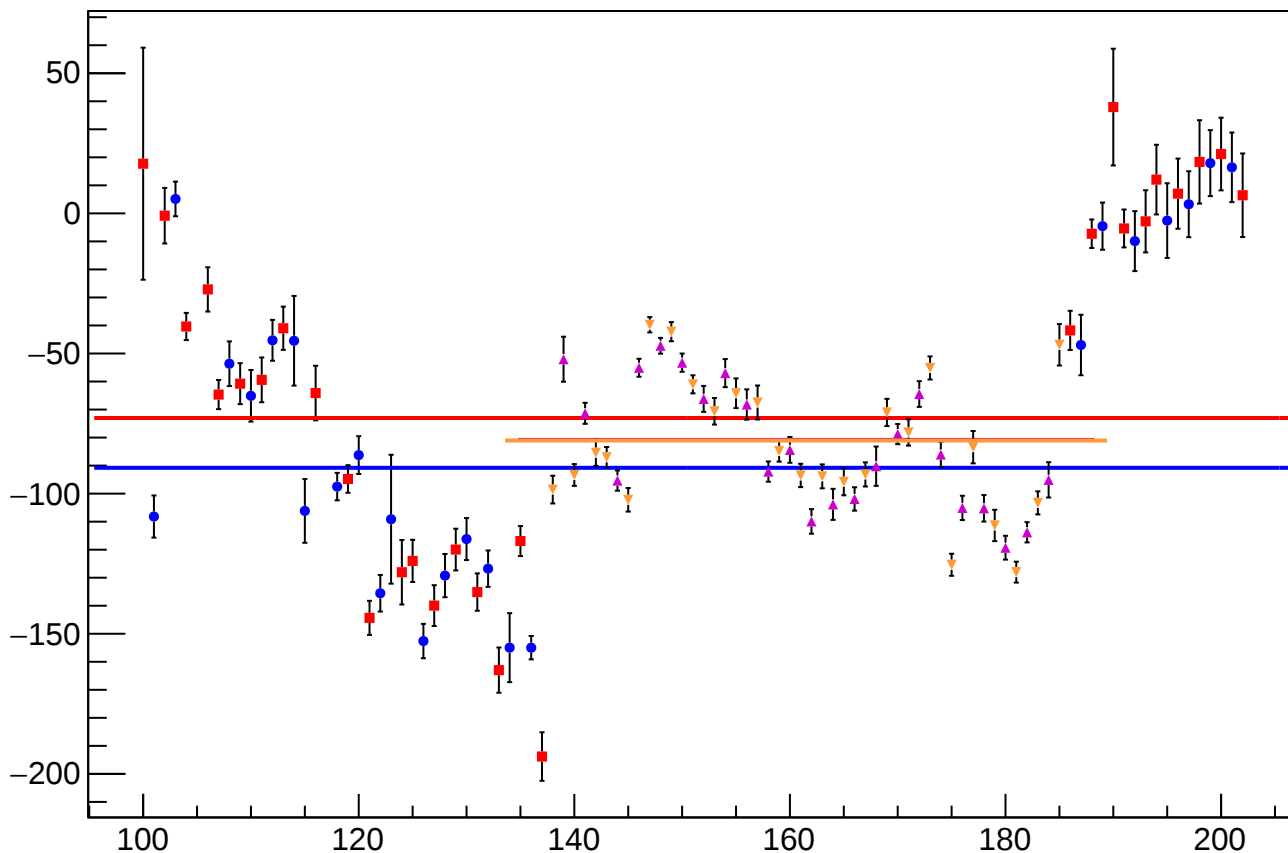
Right:  $-300.618 \pm 1.003$   $\chi^2/\text{NDF}: 10920.1/52$

In:  $-264.028 \pm 0.855$   $\chi^2/\text{NDF}: 5577.7/46$

Out:  $-268.709 \pm 0.767$   $\chi^2/\text{NDF}: 11206.5/53$

All:  $-266.622 \pm 0.571$   $\chi^2/\text{NDF}: 16800.9/100$

reg\_asym\_atr\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-90.785 \pm 1.585$   $\chi^2/\text{NDF}: 1253.4/23$

Left Out:  $-81.057 \pm 0.843$   $\chi^2/\text{NDF}: 913.0/24$

Right Out:  $-73.011 \pm 1.409$   $\chi^2/\text{NDF}: 1548.7/28$

Left In:  $-80.834 \pm 0.872$   $\chi^2/\text{NDF}: 693.1/22$

Left:  $-80.949 \pm 0.606$   $\chi^2/\text{NDF}: 1606.2/47$

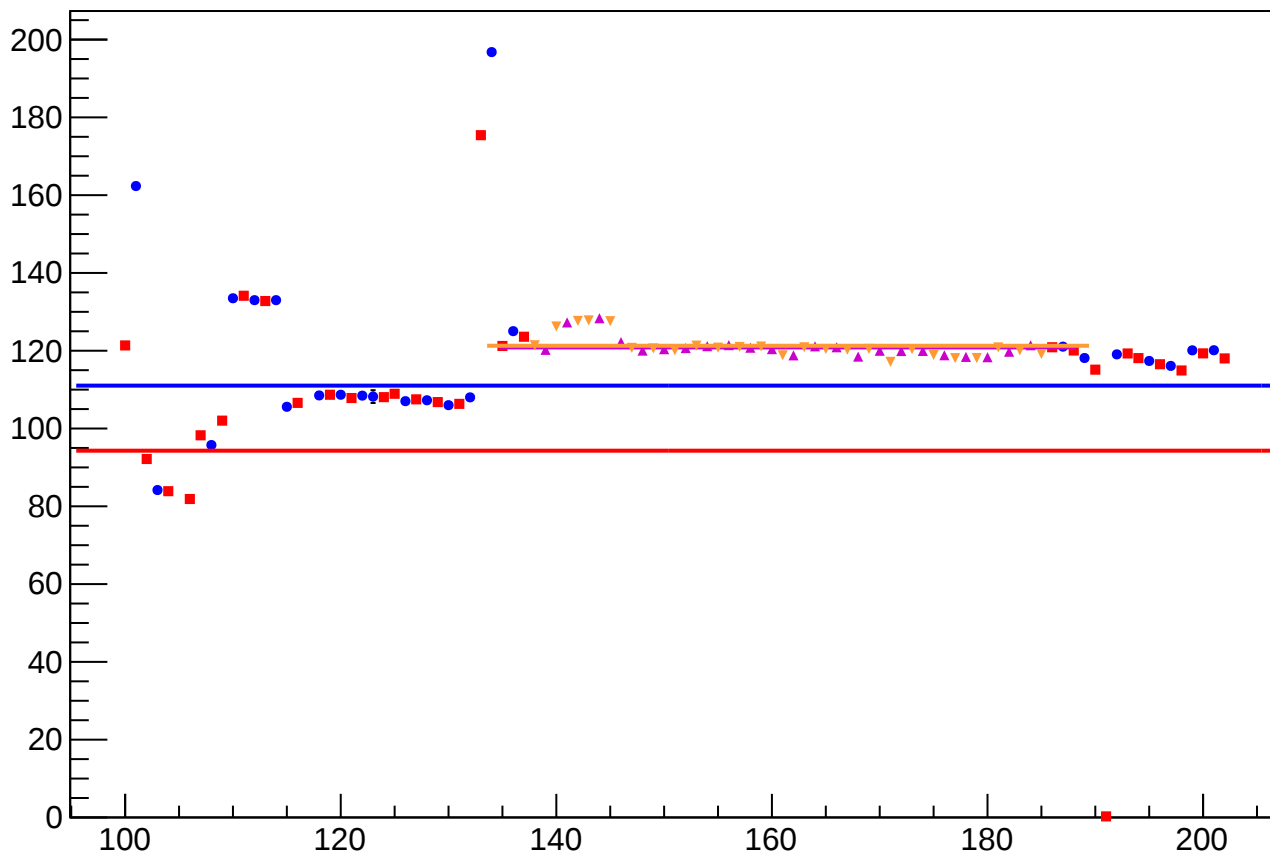
Right:  $-80.852 \pm 1.053$   $\chi^2/\text{NDF}: 2872.4/52$

In:  $-83.144 \pm 0.764$   $\chi^2/\text{NDF}: 1976.7/46$

Out:  $-78.935 \pm 0.723$   $\chi^2/\text{NDF}: 2485.8/53$

All:  $-80.925 \pm 0.525$   $\chi^2/\text{NDF}: 4478.6/100$

reg\_asym\_atr\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 111.029 $\pm$ 0.074  $\chi^2$ /NDF: 77072.5/23

Left Out: 121.283 $\pm$ 0.040  $\chi^2$ /NDF:4939.3/24

Right Out: 94.302 $\pm$ 0.064  $\chi^2$ /NDF: 356527.2/28

Left In: 120.843 $\pm$ 0.041  $\chi^2$ /NDF:3368.2/22

Left: 121.066 $\pm$ 0.029  $\chi^2$ /NDF: 8366.9/47

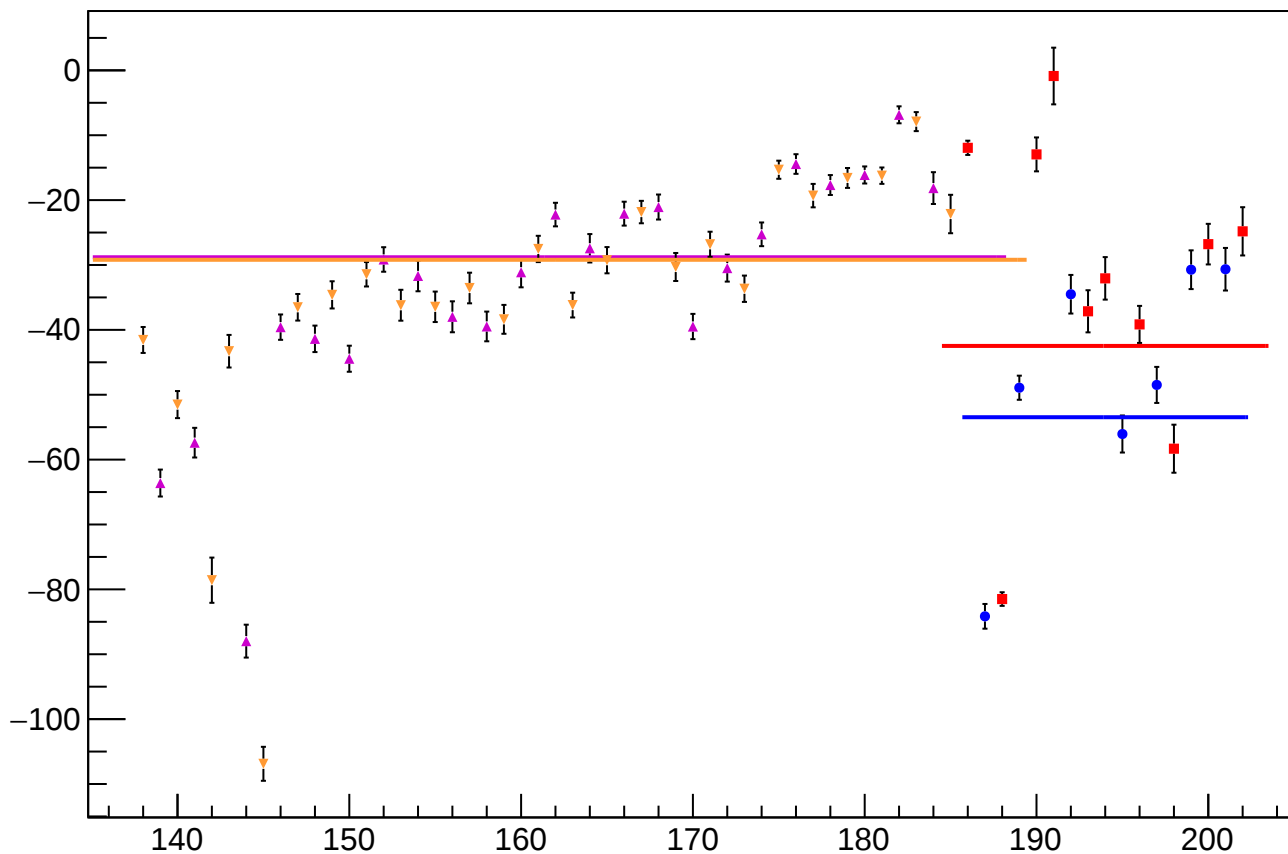
Right: 101.439 $\pm$ 0.048  $\chi^2$ /NDF: 463061.4/52

In: 118.554 $\pm$ 0.036  $\chi^2$ /NDF:94003.1/46

Out: 113.617 $\pm$ 0.034  $\chi^2$ /NDF:490075.6/53

All: 115.965 $\pm$ 0.025  $\chi^2$ /NDF: 594146.1/100

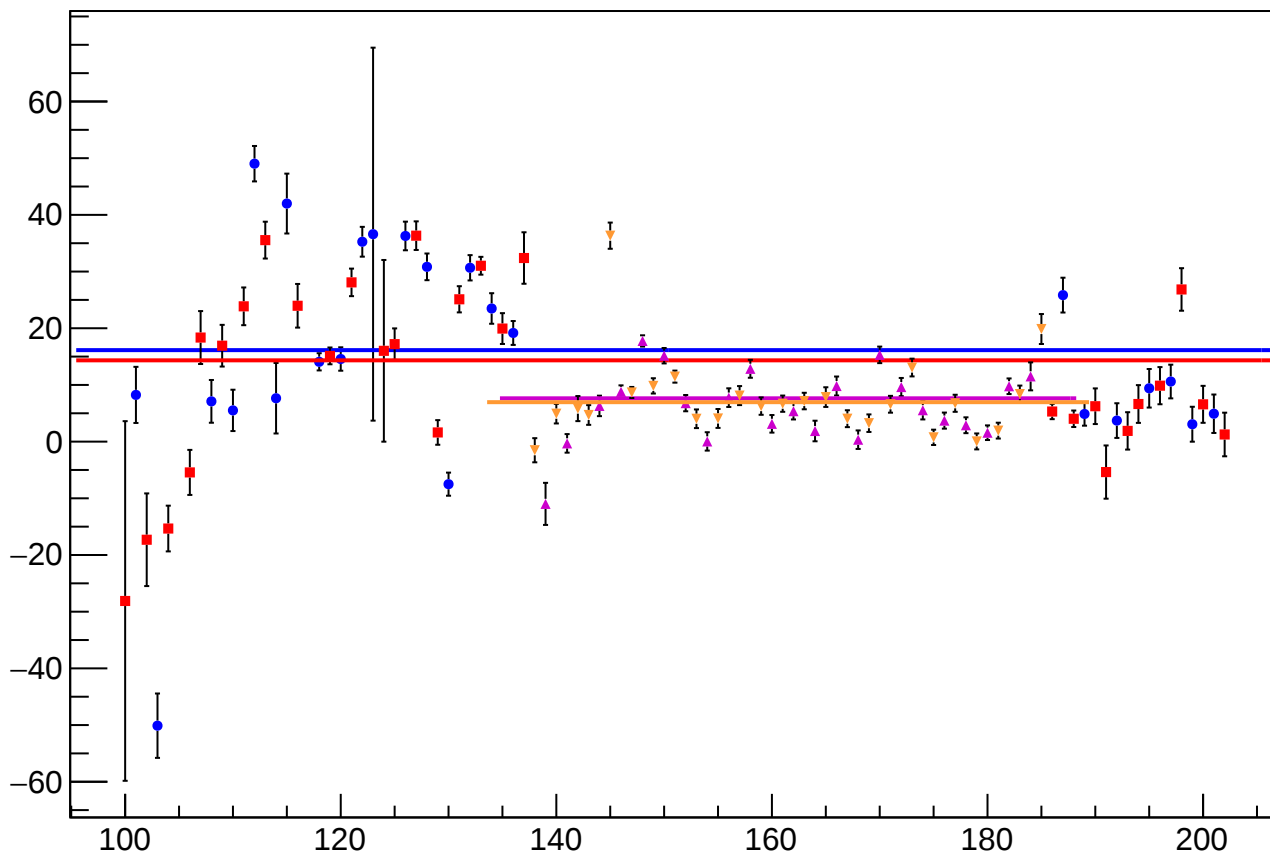
reg\_asym\_at1\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: -53.466±/0.939  $\chi^2/\text{NDF}$ : 416.2/6  
 Left Out: -29.199±/0.389  $\chi^2/\text{NDF}$ :1881.5/24  
 Right Out: -42.476±/0.633  $\chi^2/\text{NDF}$ : 2454.5/9  
 Left In: -28.810±/0.395  $\chi^2/\text{NDF}$ :1763.8/22

Left: -29.008±/0.277  $\chi^2/\text{NDF}$ : 3645.8/47  
 Right: -45.912±/0.525  $\chi^2/\text{NDF}$ : 2964.8/16  
 In: -32.523±/0.364  $\chi^2/\text{NDF}$ :2765.8/29  
 Out: -32.831±/0.331  $\chi^2/\text{NDF}$ :4655.4/34  
 All: -32.692±/0.245  $\chi^2/\text{NDF}$ : 7421.6/64

reg\_asym\_at1\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 16.139+/-0.561  $\chi^2$ /NDF: 727.0/23

Left Out: 6.960+/-0.303  $\chi^2$ /NDF:321.3/24

Right Out: 14.339+/-0.494  $\chi^2$ /NDF: 621.2/28

Left In: 7.638+/-0.313  $\chi^2$ /NDF:337.7/22

Left: 7.287+/-0.218  $\chi^2$ /NDF: 661.5/47

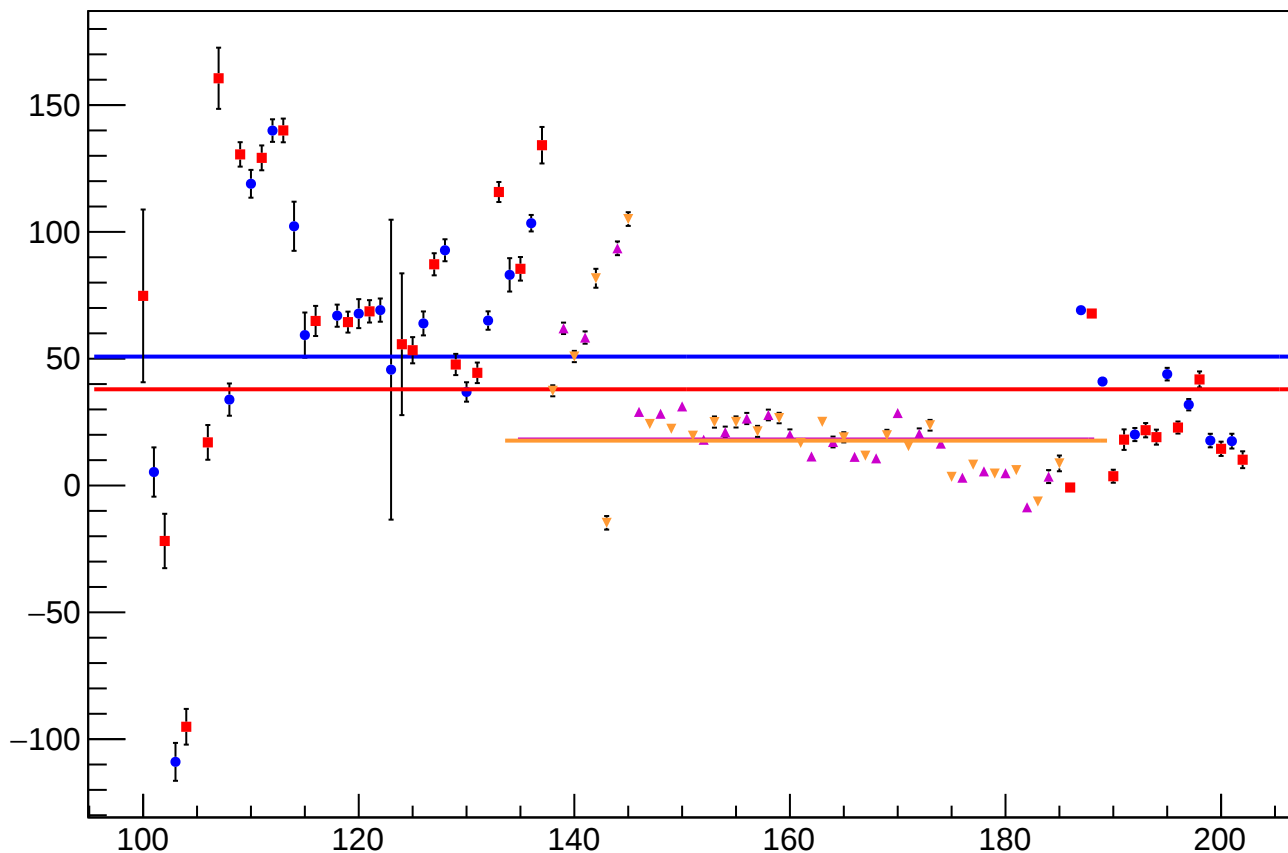
Right: 15.126+/-0.371  $\chi^2$ /NDF: 1354.0/52

In: 9.661+/-0.274  $\chi^2$ /NDF:1239.7/46

Out: 8.976+/-0.258  $\chi^2$ /NDF:1104.6/53

All: 9.299+/-0.188  $\chi^2$ /NDF: 2347.6/100

reg\_asym\_at1\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 50.832 $\pm$ 0.669  $\chi^2$ /NDF: 2206.3/23

Left Out: 17.705 $\pm$ 0.387  $\chi^2$ /NDF: 2432.2/24

Right Out: 37.940 $\pm$ 0.482  $\chi^2$ /NDF: 6274.6/28

Left In: 18.150 $\pm$ 0.393  $\chi^2$ /NDF: 2339.4/22

Left: 17.924 $\pm$ 0.276  $\chi^2$ /NDF: 4772.2/47

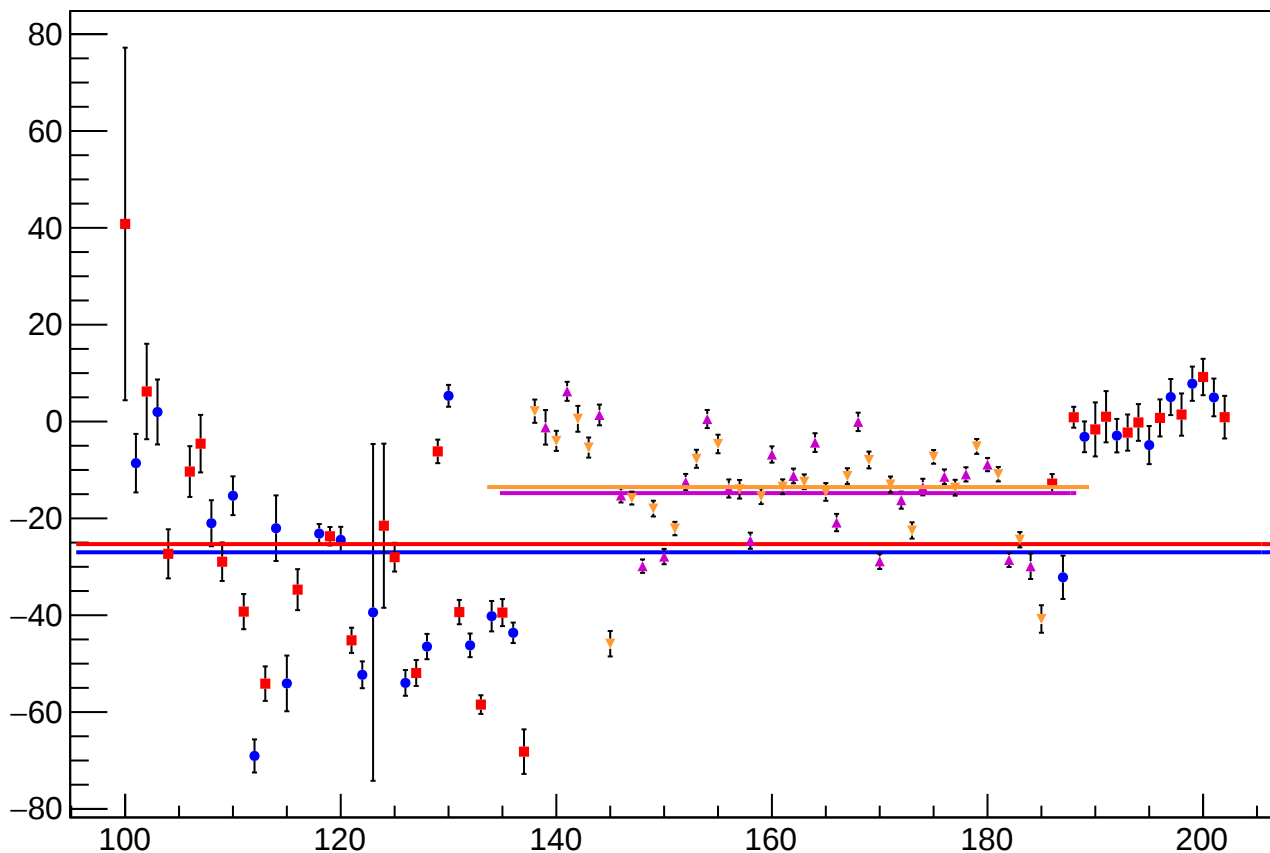
Right: 42.339 $\pm$ 0.391  $\chi^2$ /NDF: 8725.4/52

In: 26.516 $\pm$ 0.339  $\chi^2$ /NDF: 6319.9/46

Out: 25.649 $\pm$ 0.302  $\chi^2$ /NDF: 9778.8/53

All: 26.033 $\pm$ 0.225  $\chi^2$ /NDF: 16102.4/100

reg\_asym\_at1\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-27.003 \pm 0.658$   $\chi^2/\text{NDF}: 1181.1/23$

Left Out:  $-13.531 \pm 0.344$   $\chi^2/\text{NDF}: 572.8/24$

Right Out:  $-25.310 \pm 0.602$   $\chi^2/\text{NDF}: 1296.0/28$

Left In:  $-14.778 \pm 0.354$   $\chi^2/\text{NDF}: 838.0/22$

Left:  $-14.136 \pm 0.247$   $\chi^2/\text{NDF}: 1417.2/47$

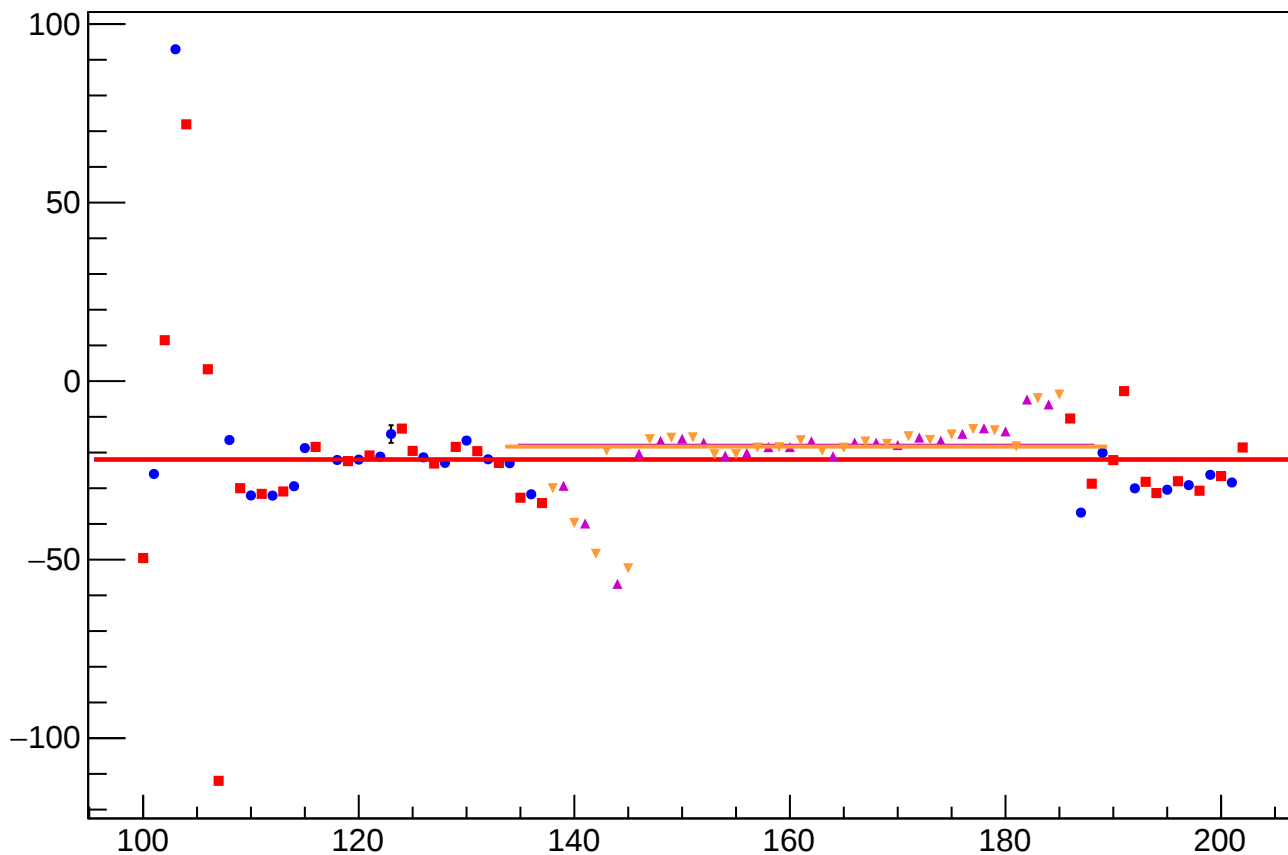
Right:  $-26.081 \pm 0.444$   $\chi^2/\text{NDF}: 2480.7/52$

In:  $-17.524 \pm 0.312$   $\chi^2/\text{NDF}: 2286.8/46$

Out:  $-16.433 \pm 0.299$   $\chi^2/\text{NDF}: 2157.6/53$

All:  $-16.955 \pm 0.216$   $\chi^2/\text{NDF}: 4450.9/100$

reg\_asym\_at1\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-21.944 \pm 0.032$   $\chi^2/\text{NDF}: 512523.1/23$

Left Out:  $-18.334 \pm 0.016$   $\chi^2/\text{NDF}: 284152.1/24$

Right Out:  $-21.958 \pm 0.030$   $\chi^2/\text{NDF}: 486403.0/28$

Left In:  $-18.083 \pm 0.016$   $\chi^2/\text{NDF}: 241949.5/22$

Left:  $-18.211 \pm 0.011$   $\chi^2/\text{NDF}: 526224.9/47$

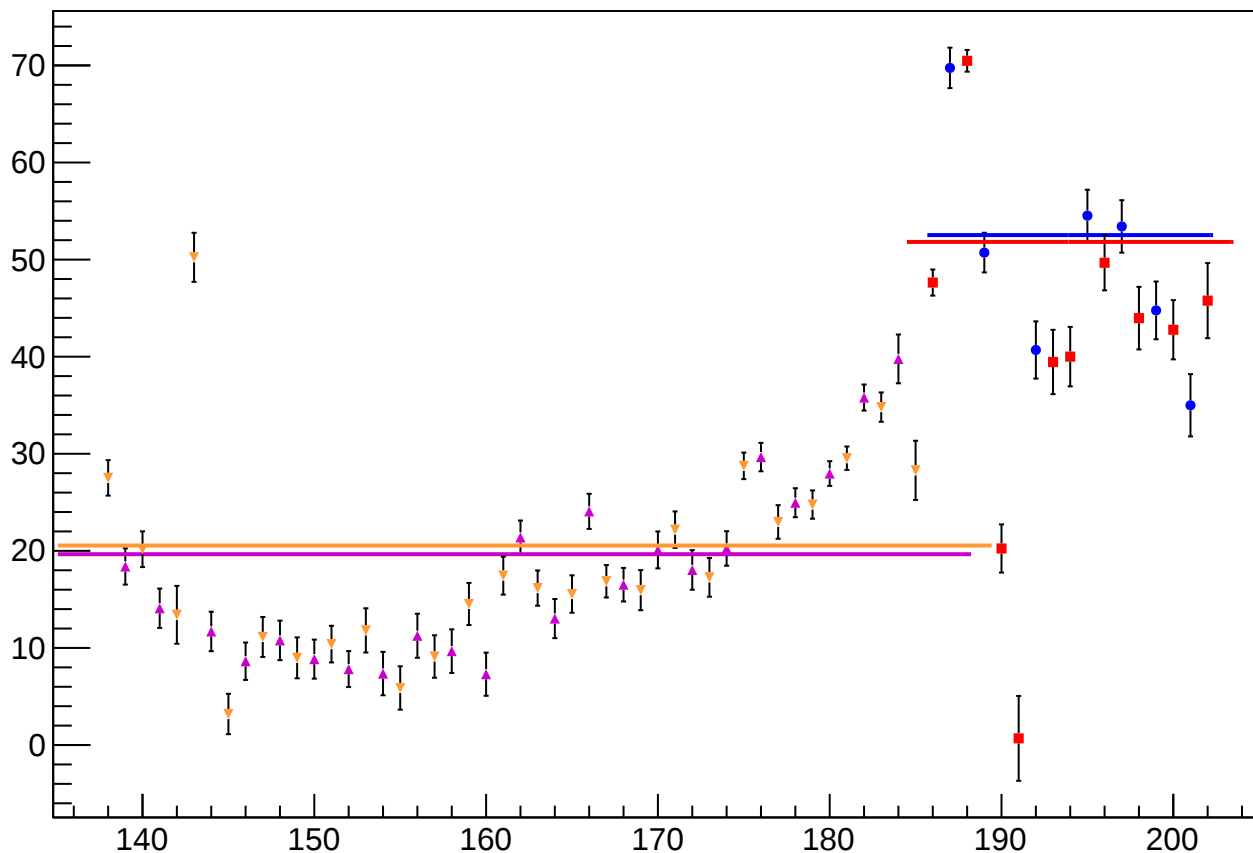
Right:  $-21.952 \pm 0.022$   $\chi^2/\text{NDF}: 998926.2/52$

In:  $-18.852 \pm 0.014$   $\chi^2/\text{NDF}: 765942.2/46$

Out:  $-19.141 \pm 0.014$   $\chi^2/\text{NDF}: 782199.0/53$

All:  $-19.001 \pm 0.010$   $\chi^2/\text{NDF}: 1548348.0/100$

reg\_asym\_at1\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 52.526 $\pm$ 0.965  $\chi^2$ /NDF: 122.6/6

Left Out: 20.550 $\pm$ 0.373  $\chi^2$ /NDF: 626.4/24

Right Out: 51.820 $\pm$ 0.680  $\chi^2$ /NDF: 633.6/9

Left In: 19.656 $\pm$ 0.380  $\chi^2$ /NDF: 571.8/22

Left: 20.112 $\pm$ 0.266  $\chi^2$ /NDF: 1201.0/47

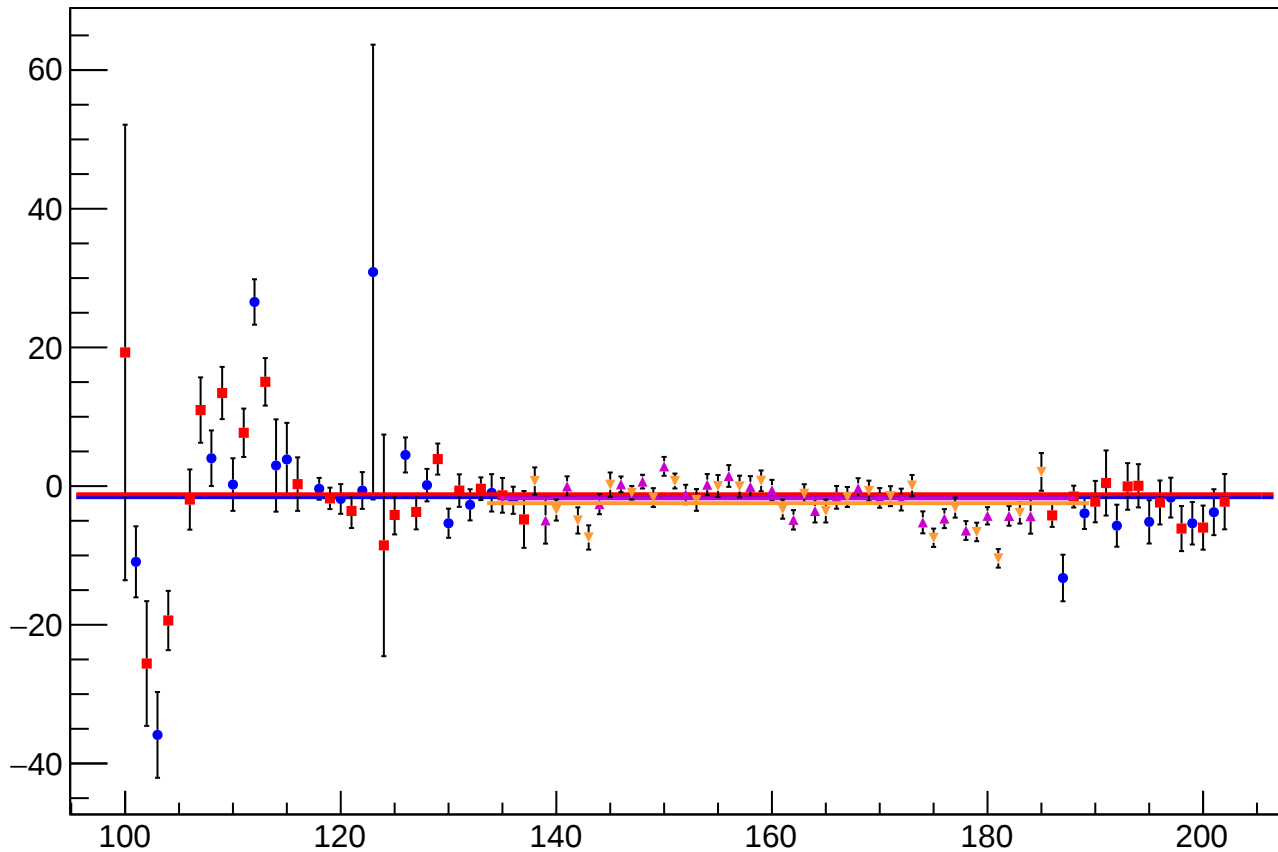
Right: 52.054 $\pm$ 0.556  $\chi^2$ /NDF: 756.5/16

In: 24.074 $\pm$ 0.354  $\chi^2$ /NDF: 1698.1/29

Out: 27.781 $\pm$ 0.327  $\chi^2$ /NDF: 2884.5/34

All: 26.073 $\pm$ 0.240  $\chi^2$ /NDF: 4641.7/64

reg\_asym\_at1\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-1.591 \pm 0.569$   $\chi^2/\text{NDF}: 141.5/23$

Left Out:  $-2.455 \pm 0.292$   $\chi^2/\text{NDF}: 106.0/24$

Right Out:  $-1.178 \pm 0.514$   $\chi^2/\text{NDF}: 95.0/28$

Left In:  $-1.758 \pm 0.302$   $\chi^2/\text{NDF}: 67.4/22$

Left:  $-2.118 \pm 0.210$   $\chi^2/\text{NDF}: 176.1/47$

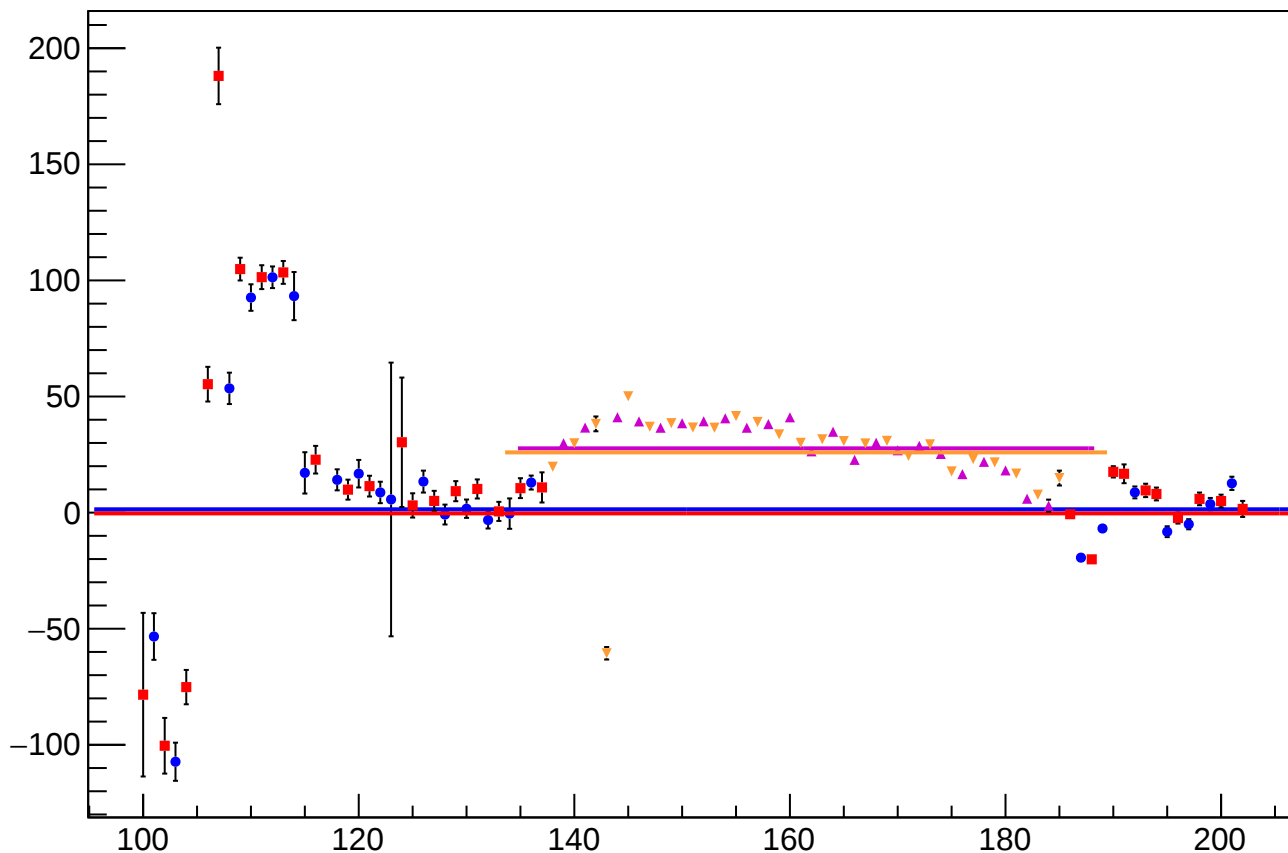
Right:  $-1.364 \pm 0.381$   $\chi^2/\text{NDF}: 236.8/52$

In:  $-1.721 \pm 0.267$   $\chi^2/\text{NDF}: 209.0/46$

Out:  $-2.143 \pm 0.254$   $\chi^2/\text{NDF}: 205.6/53$

All:  $-1.942 \pm 0.184$   $\chi^2/\text{NDF}: 415.9/100$

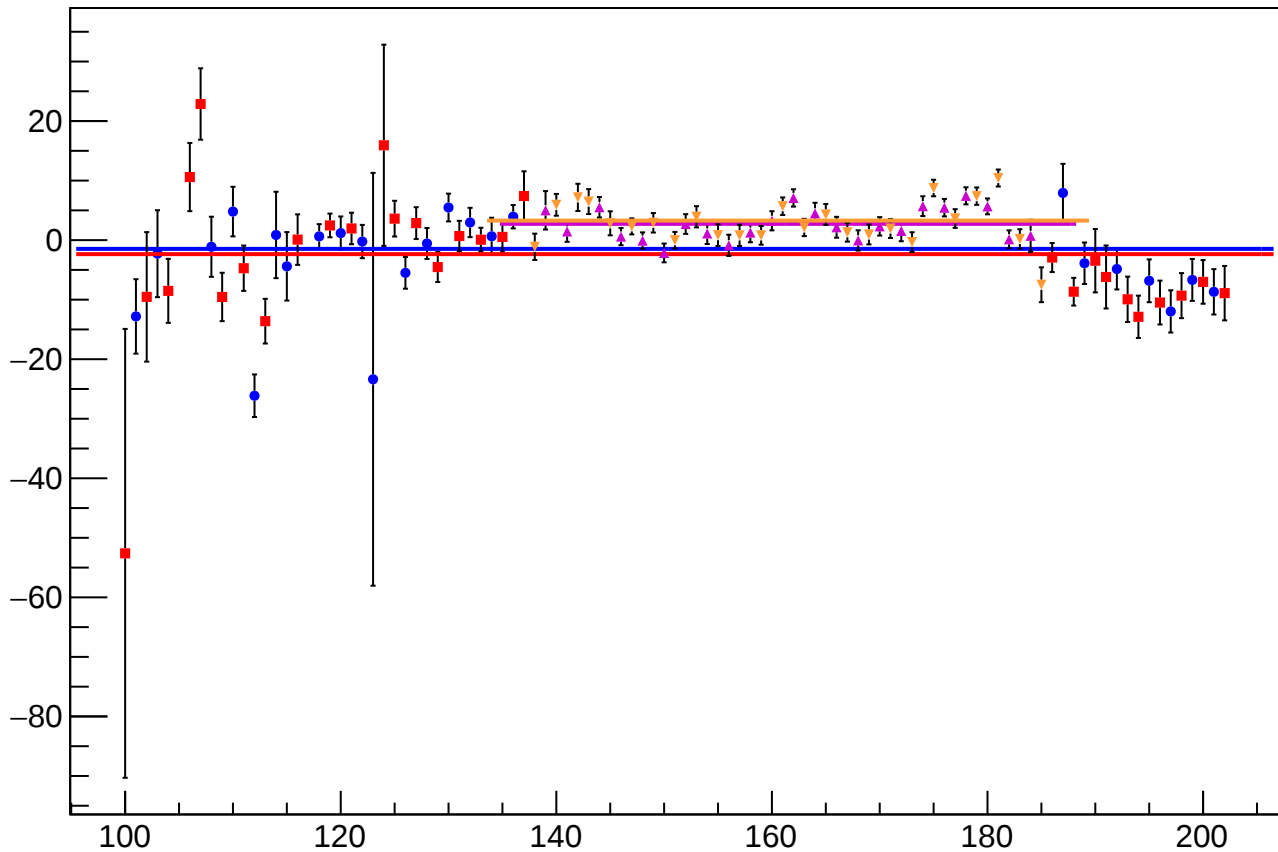
reg\_asym\_at1\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $1.431 \pm 0.687$   $\chi^2/\text{NDF}: 1320.8/23$   
 Left Out:  $25.938 \pm 0.372$   $\chi^2/\text{NDF}: 1711.6/24$   
 Right Out:  $-0.332 \pm 0.517$   $\chi^2/\text{NDF}: 2403.5/28$   
 Left In:  $27.677 \pm 0.378$   $\chi^2/\text{NDF}: 803.9/22$

Left:  $26.794 \pm 0.265$   $\chi^2/\text{NDF}: 2526.2/47$   
 Right:  $0.306 \pm 0.413$   $\chi^2/\text{NDF}: 3728.5/52$   
 In:  $21.571 \pm 0.331$   $\chi^2/\text{NDF}: 3244.9/46$   
 Out:  $16.961 \pm 0.302$   $\chi^2/\text{NDF}: 5816.2/53$   
 All:  $19.054 \pm 0.223$   $\chi^2/\text{NDF}: 9166.8/100$

reg\_asym\_at1\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-1.466 \pm 0.662$   $\chi^2/\text{NDF}$ : 100.5/23

Left Out:  $3.283 \pm 0.331$   $\chi^2/\text{NDF}$ : 102.3/24

Right Out:  $-2.352 \pm 0.618$   $\chi^2/\text{NDF}$ : 99.7/28

Left In:  $2.738 \pm 0.341$   $\chi^2/\text{NDF}$ : 64.5/22

Left:  $3.018 \pm 0.238$   $\chi^2/\text{NDF}$ : 168.1/47

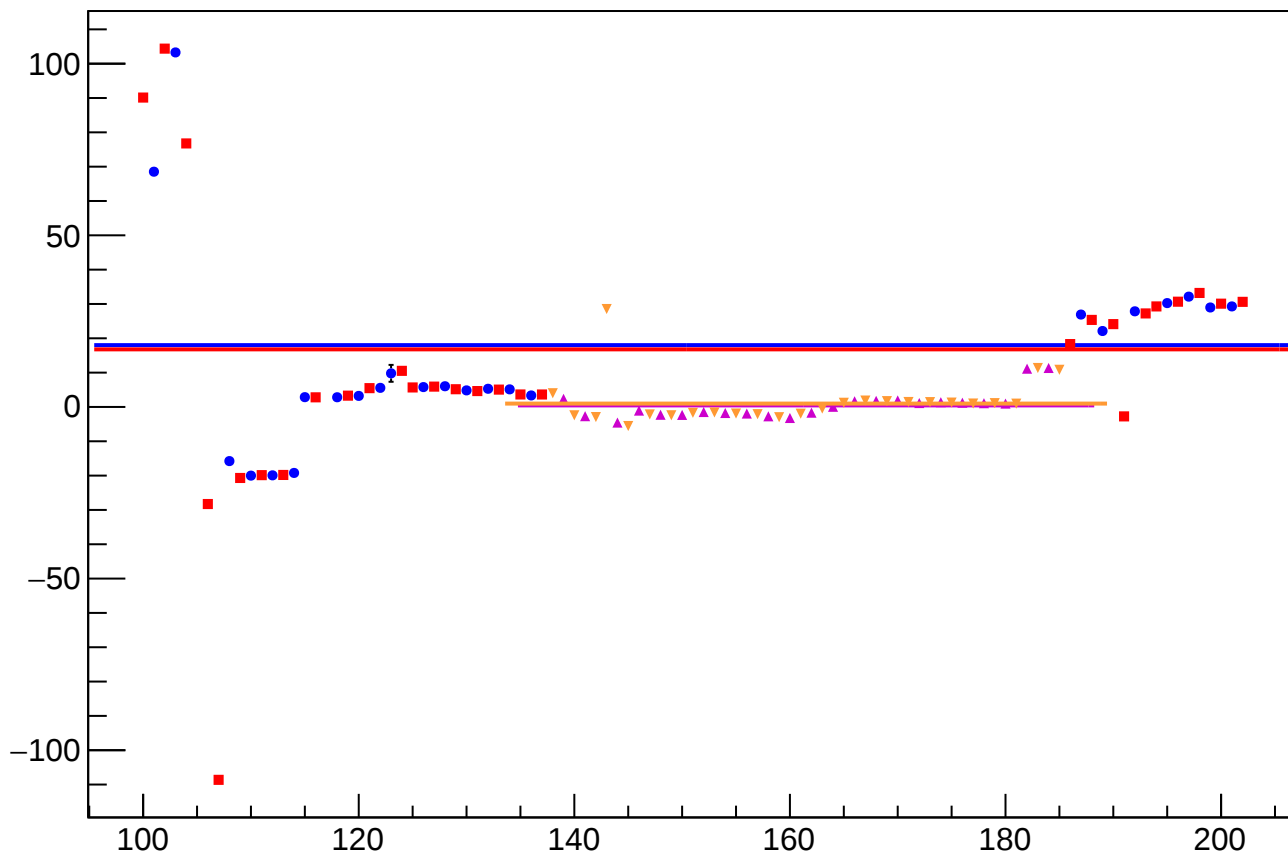
Right:  $-1.940 \pm 0.452$   $\chi^2/\text{NDF}$ : 201.1/52

In:  $1.857 \pm 0.303$   $\chi^2/\text{NDF}$ : 196.8/46

Out:  $2.025 \pm 0.292$   $\chi^2/\text{NDF}$ : 266.5/53

All:  $1.944 \pm 0.210$   $\chi^2/\text{NDF}$ : 463.5/100

reg\_asym\_at1\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 18.008 $\pm$ 0.032  $\chi^2$ /NDF: 471236.6/23

Left Out: 0.979 $\pm$ 0.015  $\chi^2$ /NDF:117391.3/24

Right Out: 16.776 $\pm$ 0.030  $\chi^2$ /NDF: 706864.0/28

Left In: 0.451 $\pm$ 0.015  $\chi^2$ /NDF:50699.8/22

Left: 0.719 $\pm$ 0.011  $\chi^2$ /NDF: 168685.3/47

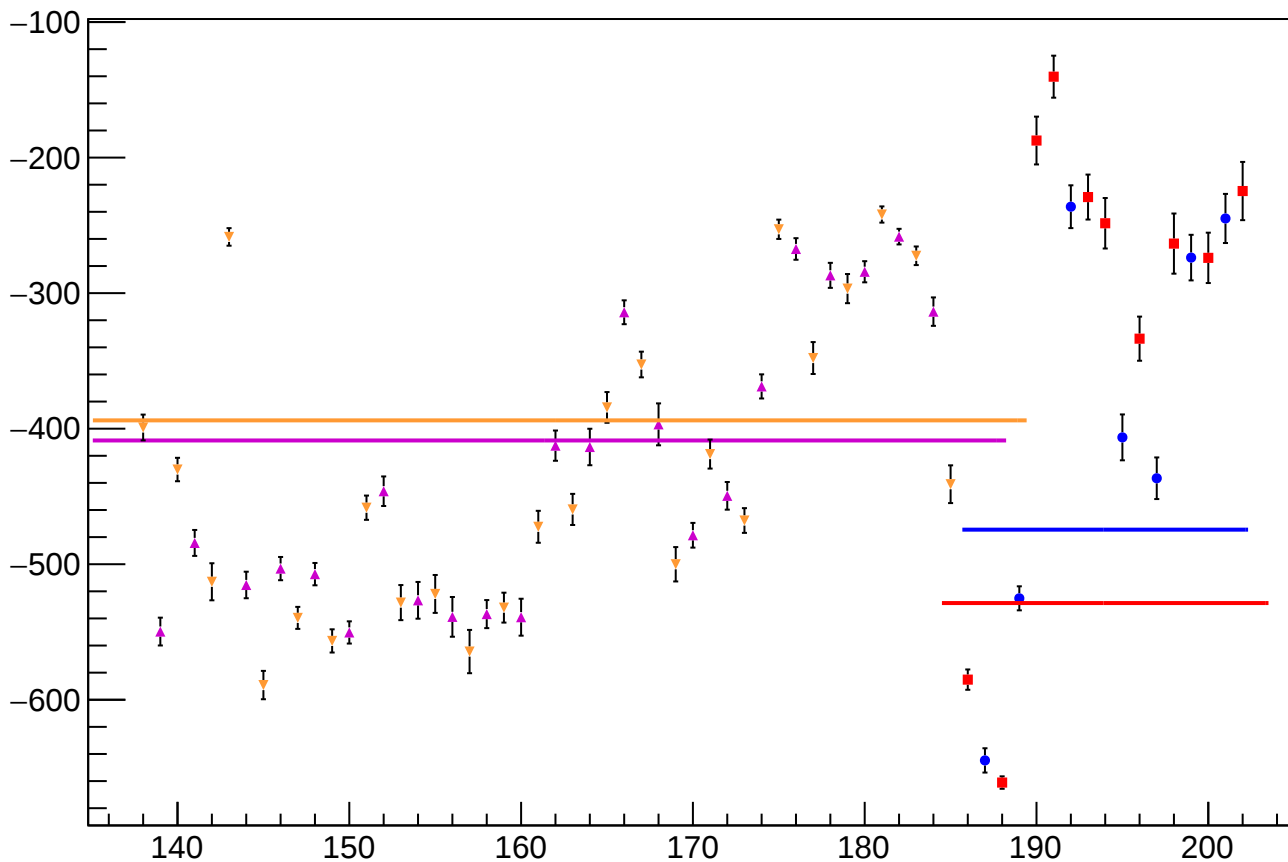
Right: 17.346 $\pm$ 0.022  $\chi^2$ /NDF: 1178903.9/52

In: 3.787 $\pm$ 0.014  $\chi^2$ /NDF:767893.4/46

Out: 4.279 $\pm$ 0.014  $\chi^2$ /NDF:1050145.5/53

All: 4.040 $\pm$ 0.010  $\chi^2$ /NDF: 1818683.0/100

reg\_asym\_at2\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: -474.499+/-4.794  $\chi^2/\text{NDF}$ : 946.4/6

Left Out: -393.871+/-1.897  $\chi^2/\text{NDF}$ : 3772.8/24

Right Out: -528.651+/-3.335  $\chi^2/\text{NDF}$ : 3116.9/9

Left In: -408.696+/-1.979  $\chi^2/\text{NDF}$ : 3062.9/22

Left: -400.970+/-1.369  $\chi^2/\text{NDF}$ : 6864.9/47

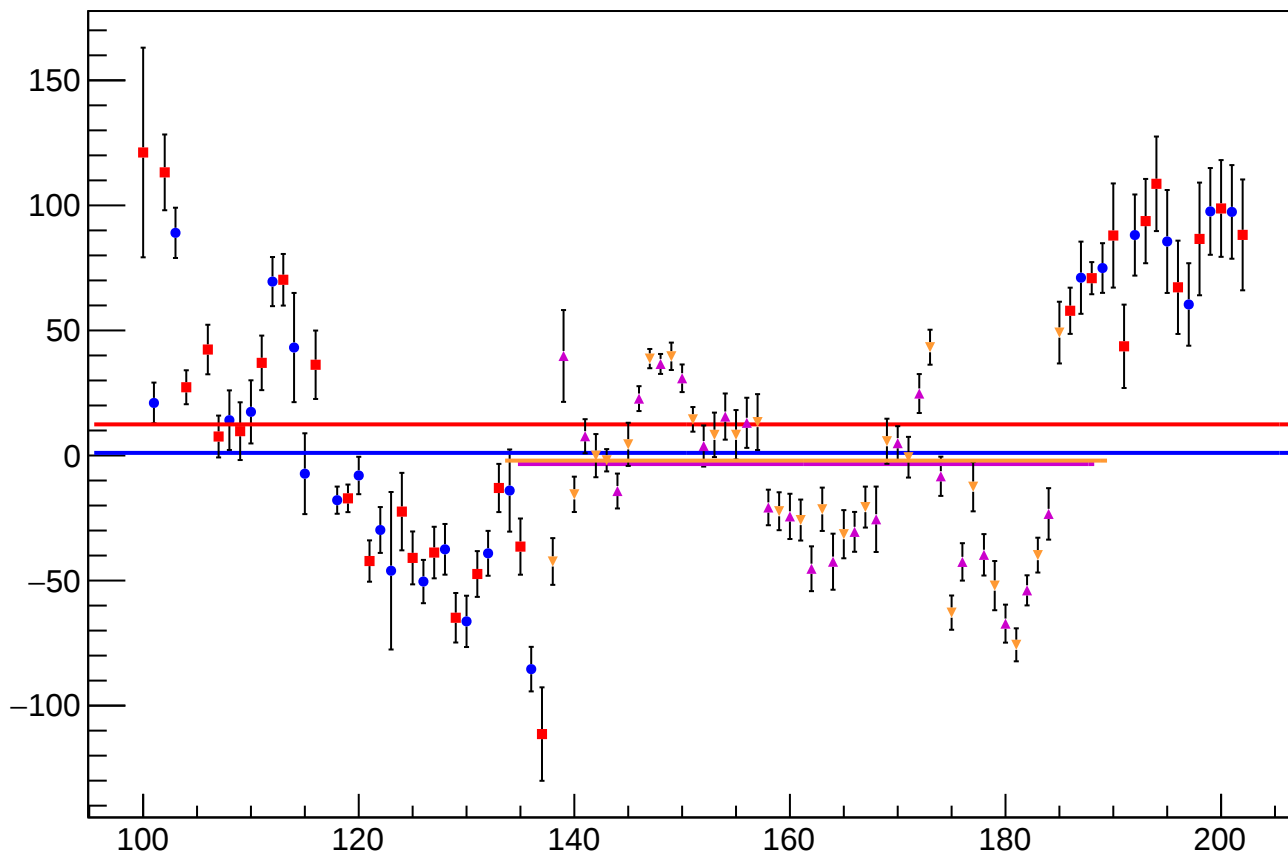
Right: -510.997+/-2.738  $\chi^2/\text{NDF}$ : 4149.2/16

In: -418.275+/-1.829  $\chi^2/\text{NDF}$ : 4170.2/29

Out: -426.827+/-1.649  $\chi^2/\text{NDF}$ : 8124.0/34

All: -422.994+/-1.225  $\chi^2/\text{NDF}$ : 12306.2/64

reg\_asym\_at2\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $1.048 \pm 2.174$   $\chi^2/\text{NDF}$ : 568.3/23

Left Out:  $-2.037 \pm 1.424$   $\chi^2/\text{NDF}$ : 563.8/24

Right Out:  $12.445 \pm 1.987$   $\chi^2/\text{NDF}$ : 630.0/28

Left In:  $-3.420 \pm 1.520$   $\chi^2/\text{NDF}$ : 451.0/22

Left:  $-2.683 \pm 1.039$   $\chi^2/\text{NDF}$ : 1015.2/47

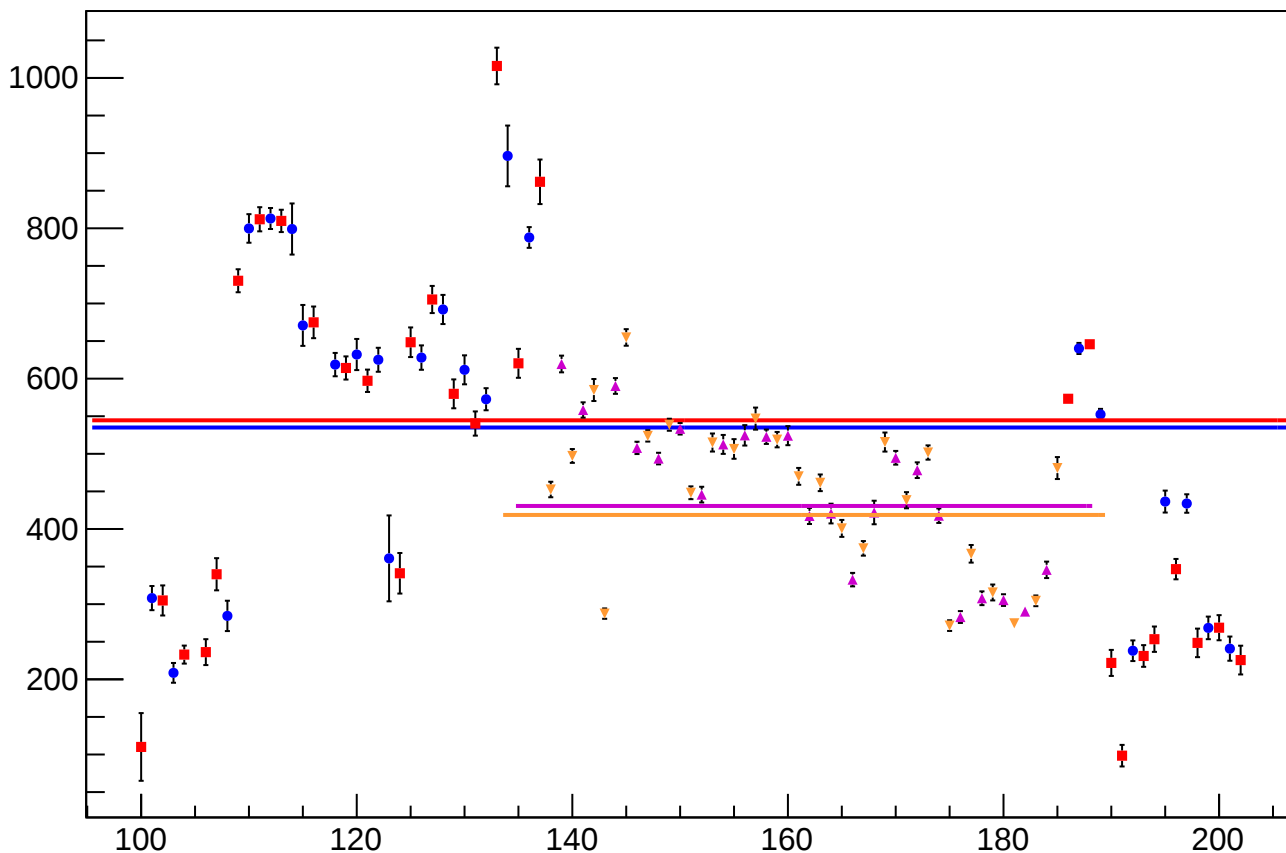
Right:  $7.258 \pm 1.467$   $\chi^2/\text{NDF}$ : 1213.3/52

In:  $-1.953 \pm 1.246$   $\chi^2/\text{NDF}$ : 1022.1/46

Out:  $2.878 \pm 1.158$   $\chi^2/\text{NDF}$ : 1228.9/53

All:  $0.640 \pm 0.848$   $\chi^2/\text{NDF}$ : 2259.1/100

reg\_asym\_at2\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $535.002 \pm 2.959$   $\chi^2/\text{NDF}$ : 3712.1/23

Left Out:  $418.680 \pm 1.905$   $\chi^2/\text{NDF}$ : 3296.5/24

Right Out:  $544.567 \pm 2.290$   $\chi^2/\text{NDF}$ : 6677.7/28

Left In:  $430.640 \pm 1.971$   $\chi^2/\text{NDF}$ : 2850.6/22

Left:  $424.457 \pm 1.370$   $\chi^2/\text{NDF}$ : 6166.1/47

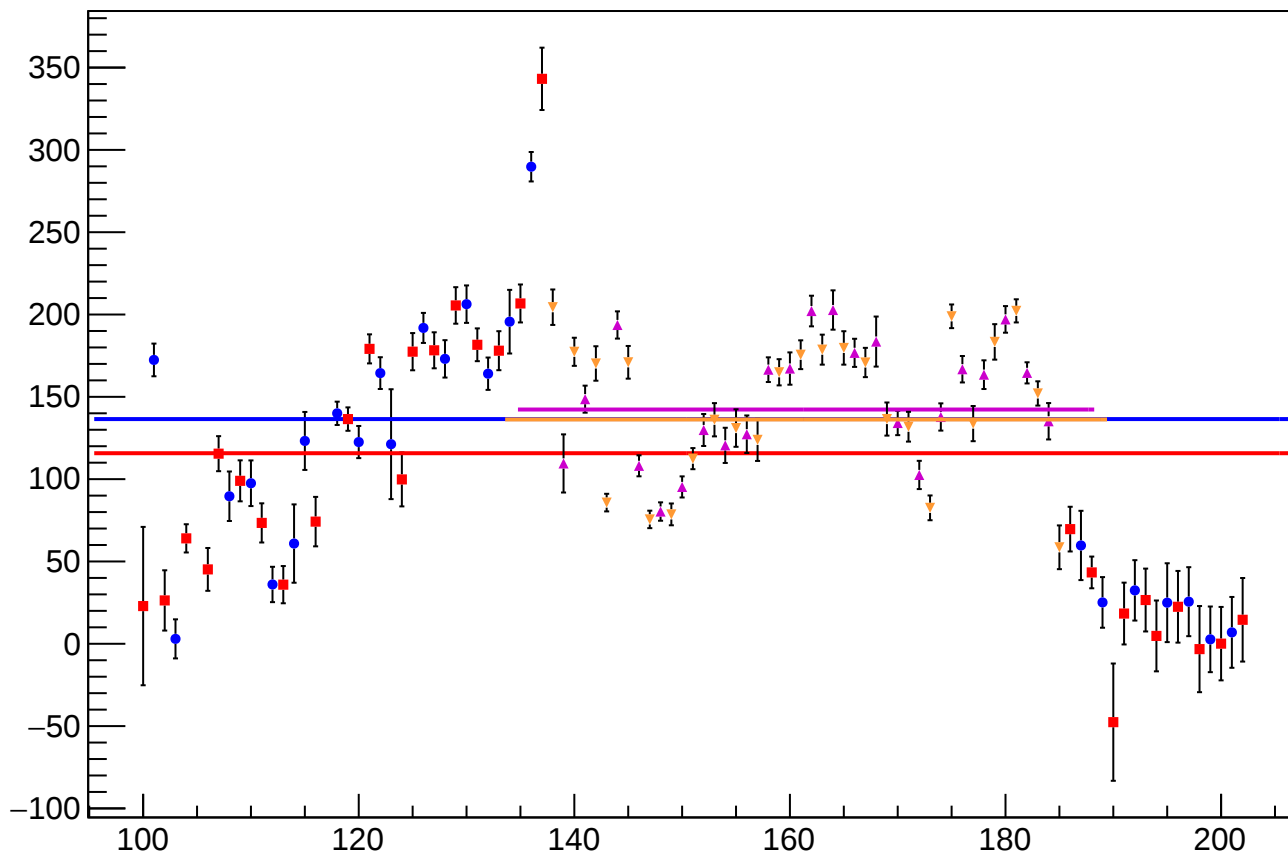
Right:  $540.984 \pm 1.811$   $\chi^2/\text{NDF}$ : 10396.3/52

In:  $462.707 \pm 1.640$   $\chi^2/\text{NDF}$ : 7424.3/46

Out:  $470.158 \pm 1.465$   $\chi^2/\text{NDF}$ : 11760.1/53

All:  $466.853 \pm 1.092$   $\chi^2/\text{NDF}$ : 19195.9/100

reg\_asym\_at2\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 136.491 $\pm$ 2.550  $\chi^2$ /NDF: 891.1/23

Left Out: 136.258 $\pm$ 1.651  $\chi^2$ /NDF:758.3/24

Right Out: 115.754 $\pm$ 2.373  $\chi^2$ /NDF: 878.4/28

Left In: 142.296 $\pm$ 1.745  $\chi^2$ /NDF:459.8/22

Left: 139.111 $\pm$ 1.199  $\chi^2$ /NDF: 1224.4/47

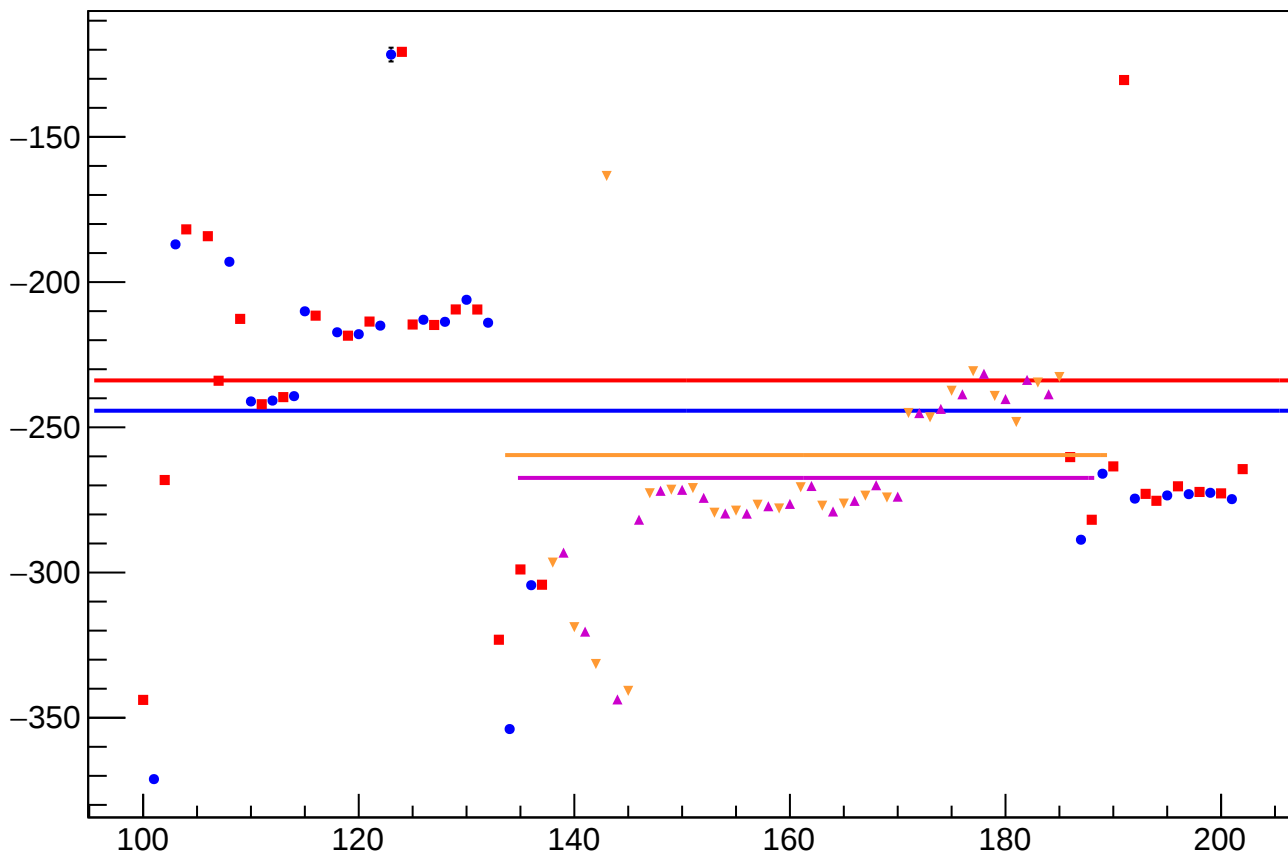
Right: 125.379 $\pm$ 1.737  $\chi^2$ /NDF: 1805.0/52

In: 140.445 $\pm$ 1.440  $\chi^2$ /NDF:1354.4/46

Out: 129.571 $\pm$ 1.355  $\chi^2$ /NDF:1687.0/53

All: 134.679 $\pm$ 0.987  $\chi^2$ /NDF: 3071.7/100

reg\_asym\_at2\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-244.285 \pm 0.129$   $\chi^2/\text{NDF}: 162352.0/23$

Left Out:  $-259.557 \pm 0.079$   $\chi^2/\text{NDF}: 238235.2/24$

Right Out:  $-233.851 \pm 0.117$   $\chi^2/\text{NDF}: 171940.8/28$

Left In:  $-267.417 \pm 0.082$   $\chi^2/\text{NDF}: 98035.5/22$

Left:  $-263.361 \pm 0.057$   $\chi^2/\text{NDF}: 341051.4/47$

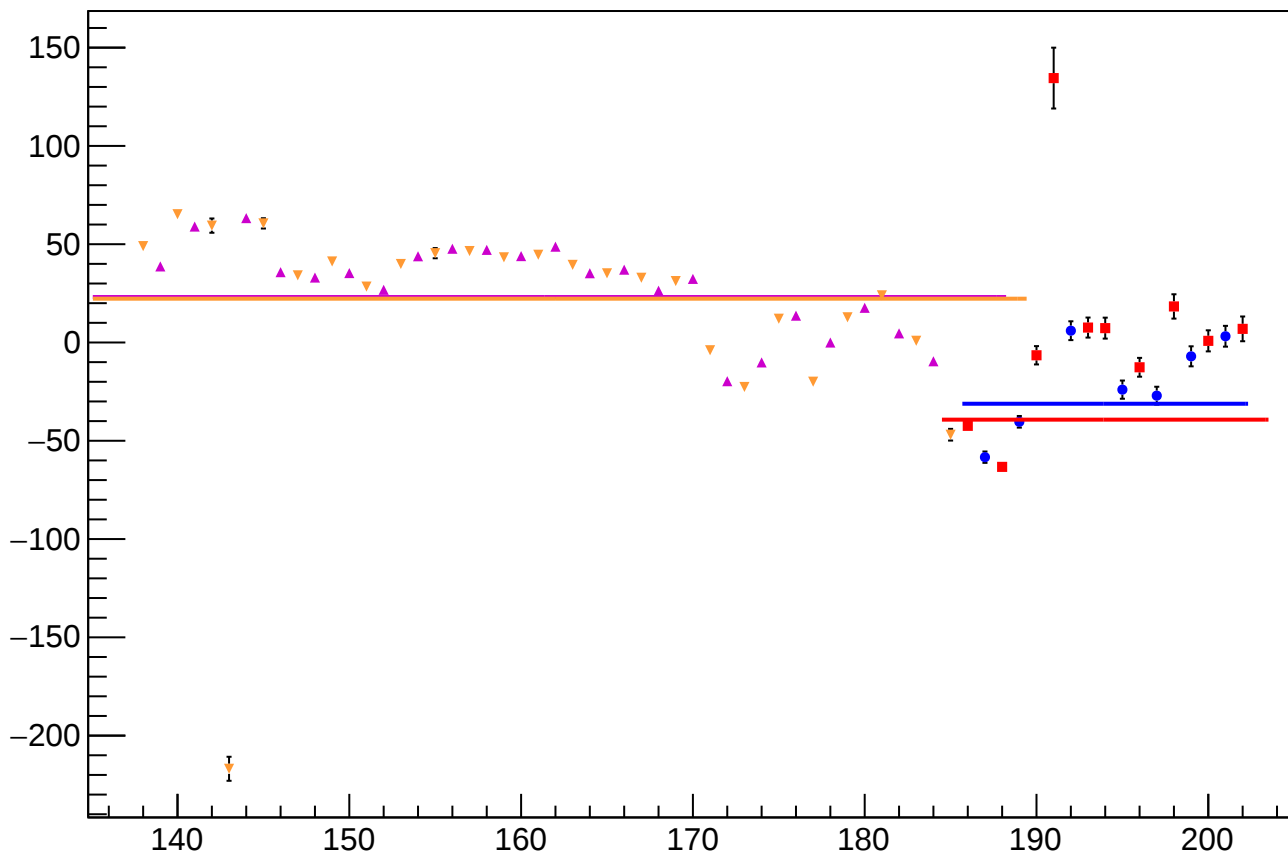
Right:  $-238.555 \pm 0.087$   $\chi^2/\text{NDF}: 337876.5/52$

In:  $-260.811 \pm 0.069$   $\chi^2/\text{NDF}: 283297.9/46$

Out:  $-251.497 \pm 0.066$   $\chi^2/\text{NDF}: 443298.9/53$

All:  $-255.911 \pm 0.048$   $\chi^2/\text{NDF}: 736172.8/100$

reg\_asym\_at2\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: -31.164 $\pm$ 1.495  $\chi^2$ /NDF: 226.1/6

Left Out: 22.279 $\pm$ 0.399  $\chi^2$ /NDF: 5171.0/24

Right Out: -39.256 $\pm$ 1.004  $\chi^2$ /NDF: 803.9/9

Left In: 23.136 $\pm$ 0.401  $\chi^2$ /NDF: 2744.7/22

Left: 22.705 $\pm$ 0.283  $\chi^2$ /NDF: 7918.0/47

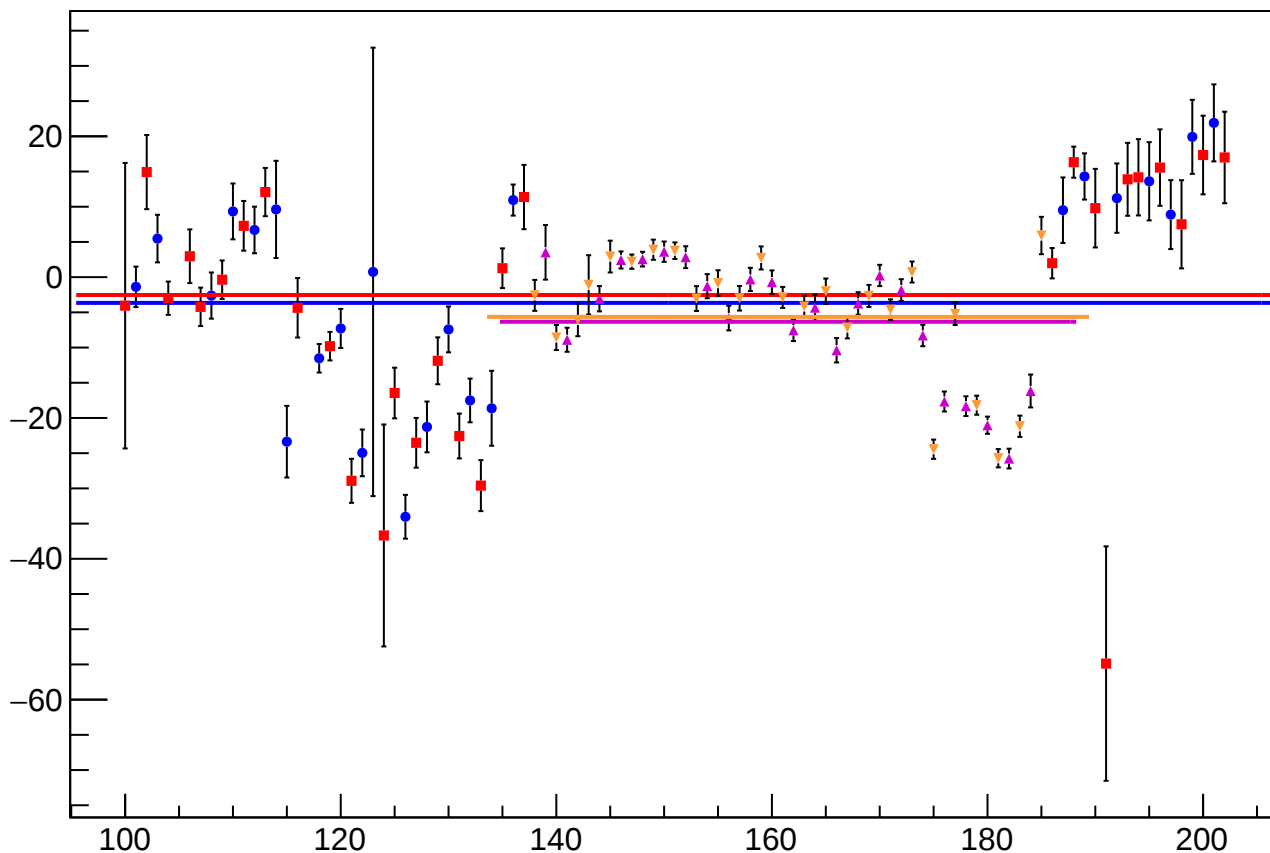
Right: -36.742 $\pm$ 0.833  $\chi^2$ /NDF: 1050.3/16

In: 19.485 $\pm$ 0.388  $\chi^2$ /NDF: 4201.2/29

Out: 13.892 $\pm$ 0.371  $\chi^2$ /NDF: 9220.7/34

All: 16.562 $\pm$ 0.268  $\chi^2$ /NDF: 13530.6/64

reg\_asym\_at2\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-3.654 \pm 0.721$   $\chi^2/\text{NDF}$ : 402.9/23

Left Out:  $-5.642 \pm 0.316$   $\chi^2/\text{NDF}$ : 893.7/24

Right Out:  $-2.533 \pm 0.650$   $\chi^2/\text{NDF}$ : 441.0/28

Left In:  $-6.337 \pm 0.321$   $\chi^2/\text{NDF}$ : 783.0/22

Left:  $-5.983 \pm 0.225$   $\chi^2/\text{NDF}$ : 1679.1/47

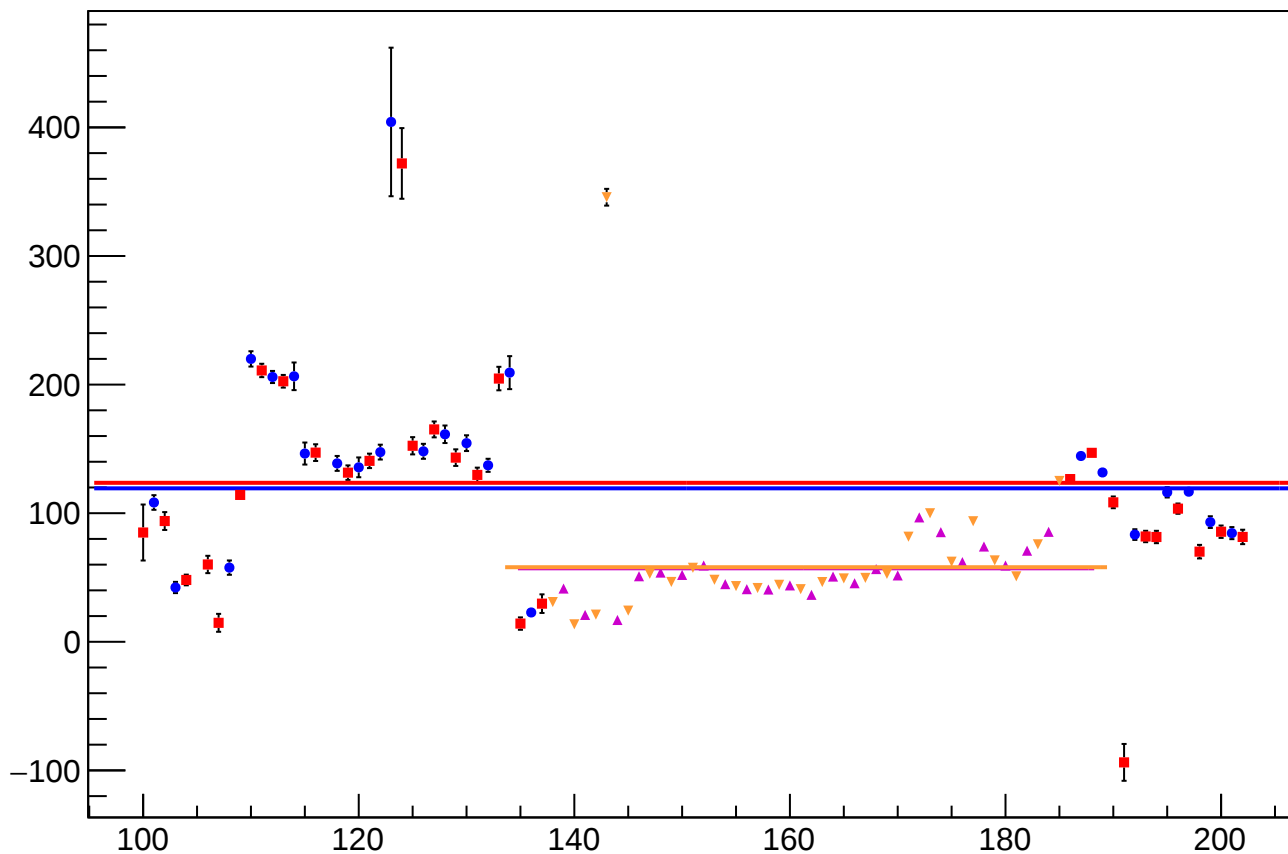
Right:  $-3.036 \pm 0.483$   $\chi^2/\text{NDF}$ : 845.3/52

In:  $-5.892 \pm 0.293$   $\chi^2/\text{NDF}$ : 1197.4/46

Out:  $-5.049 \pm 0.284$   $\chi^2/\text{NDF}$ : 1353.3/53

All:  $-5.457 \pm 0.204$   $\chi^2/\text{NDF}$ : 2555.0/100

reg\_asym\_at2\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 119.325+/-0.944  $\chi^2/\text{NDF}$ : 2462.1/23

Left Out: 57.990+/-0.398  $\chi^2/\text{NDF}$ : 4635.7/24

Right Out: 123.626+/-0.707  $\chi^2/\text{NDF}$ : 3172.5/28

Left In: 57.139+/-0.400  $\chi^2/\text{NDF}$ : 1803.4/22

Left: 57.566+/-0.282  $\chi^2/\text{NDF}$ : 6441.4/47

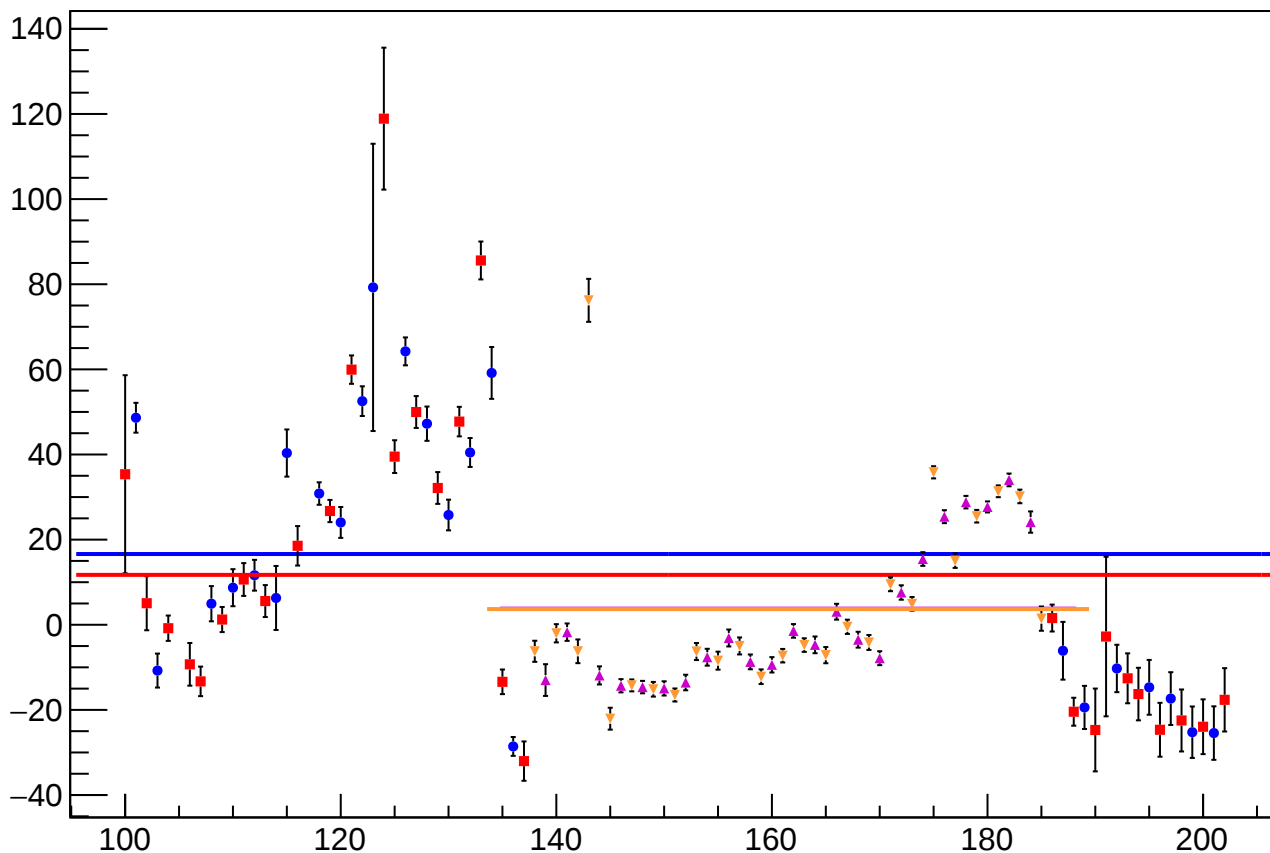
Right: 122.081+/-0.566  $\chi^2/\text{NDF}$ : 5647.8/52

In: 66.587+/-0.368  $\chi^2/\text{NDF}$ : 7945.8/46

Out: 73.783+/-0.347  $\chi^2/\text{NDF}$ : 14354.0/53

All: 70.398+/-0.252  $\chi^2/\text{NDF}$ : 22502.4/100

reg\_asym\_at2\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $16.618 \pm 0.836$   $\chi^2/\text{NDF}$ : 1328.3/23

Left Out:  $3.684 \pm 0.357$   $\chi^2/\text{NDF}$ : 2541.7/24

Right Out:  $11.722 \pm 0.776$   $\chi^2/\text{NDF}$ : 1385.2/28

Left In:  $3.786 \pm 0.362$   $\chi^2/\text{NDF}$ : 2198.8/22

Left:  $3.734 \pm 0.254$   $\chi^2/\text{NDF}$ : 4740.5/47

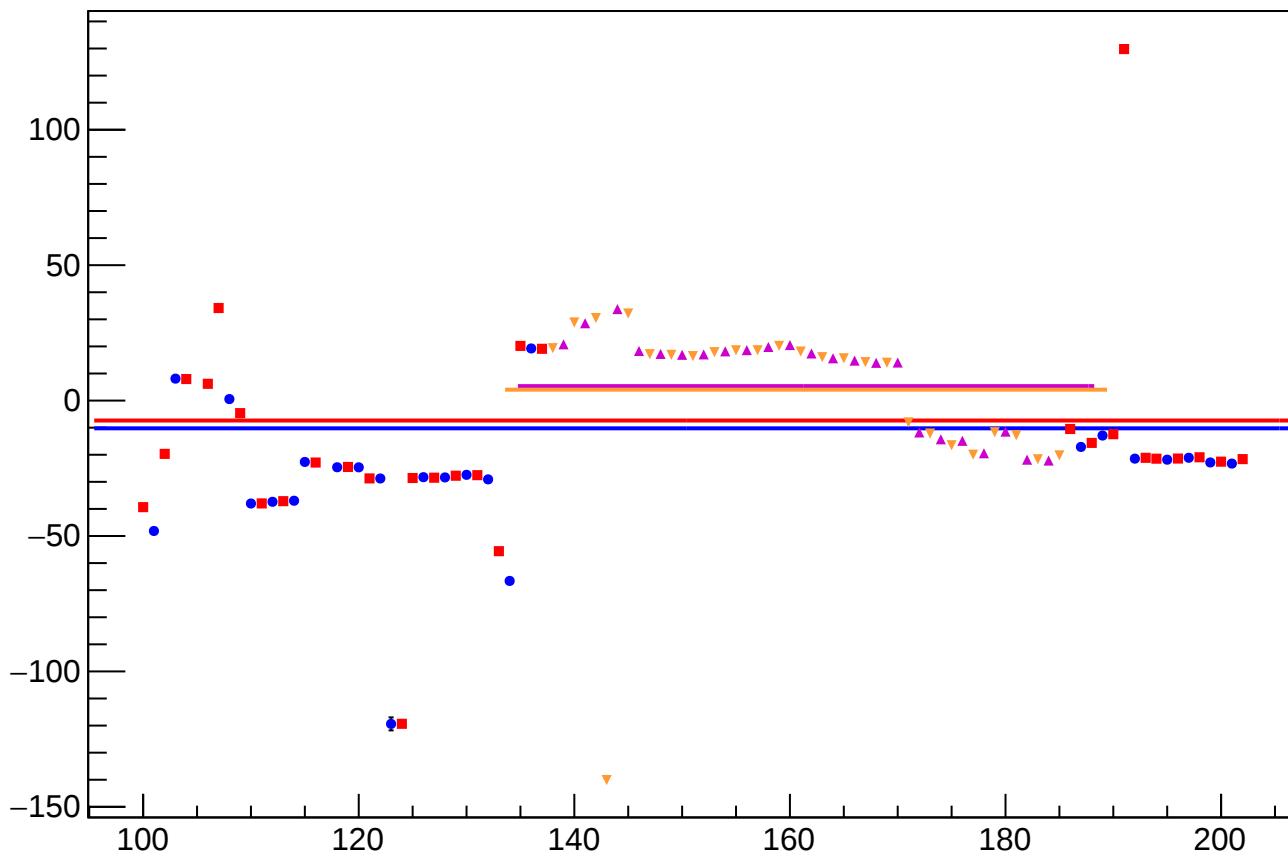
Right:  $13.986 \pm 0.569$   $\chi^2/\text{NDF}$ : 2731.9/52

In:  $5.808 \pm 0.332$   $\chi^2/\text{NDF}$ : 3725.5/46

Out:  $5.087 \pm 0.324$   $\chi^2/\text{NDF}$ : 4015.4/53

All:  $5.439 \pm 0.232$   $\chi^2/\text{NDF}$ : 7743.3/100

reg\_asym\_at2\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: -10.241 $\pm$ 0.040  $\chi^2$ /NDF: 292539.6/23

Left Out: 4.026 $\pm$ 0.016  $\chi^2$ /NDF:1383143.9/24

Right Out: -7.357 $\pm$ 0.038  $\chi^2$ /NDF: 381397.5/28

Left In: 5.335 $\pm$ 0.016  $\chi^2$ /NDF:1077818.8/22

Left: 4.678 $\pm$ 0.012  $\chi^2$ /NDF: 2464153.9/47

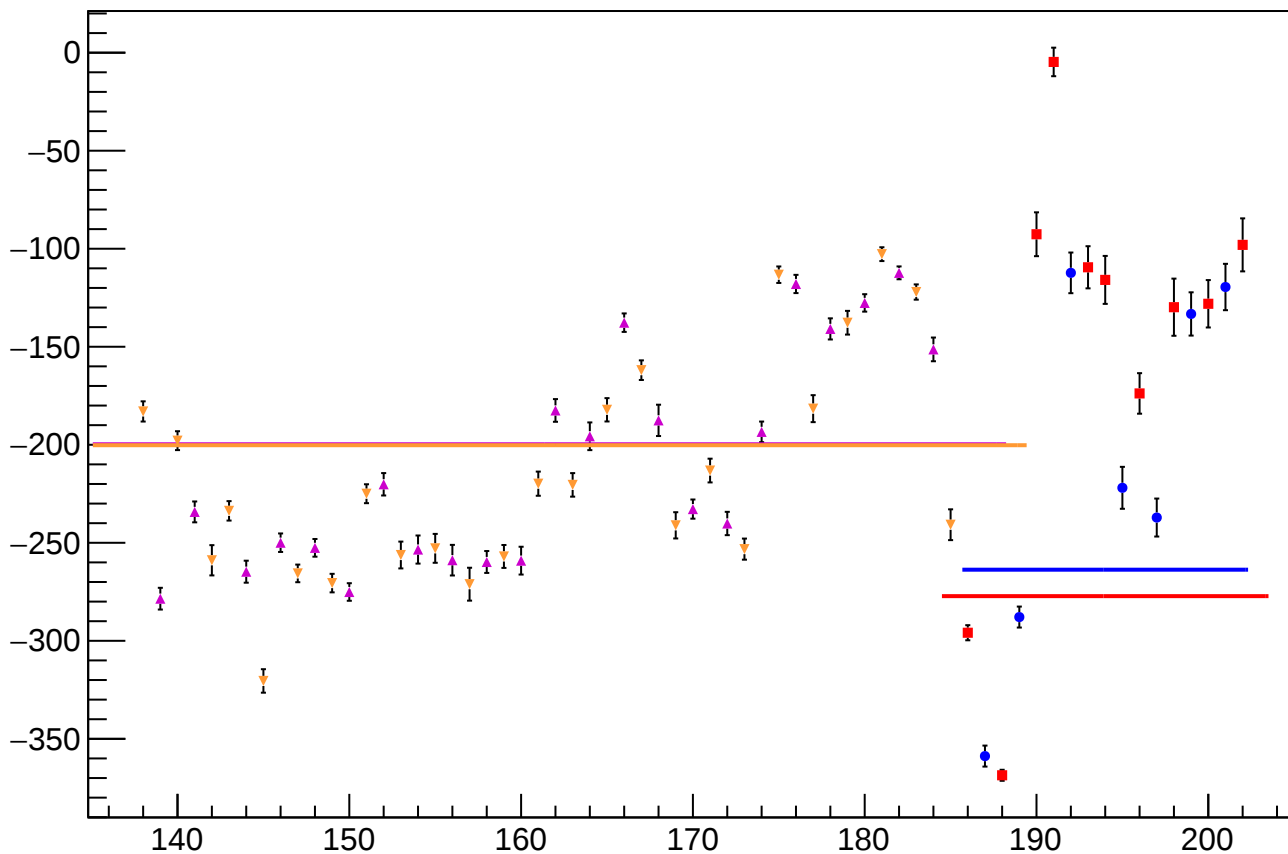
Right: -8.721 $\pm$ 0.027  $\chi^2$ /NDF: 676725.6/52

In: 3.053 $\pm$ 0.015  $\chi^2$ /NDF:1502139.5/46

Out: 2.210 $\pm$ 0.015  $\chi^2$ /NDF:1841713.3/53

All: 2.627 $\pm$ 0.011  $\chi^2$ /NDF: 3345412.9/100

reg\_asym\_atl1r2\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: -263.723+/-2.964  $\chi^2/\text{NDF}$ : 859.9/6

Left Out: -200.228+/-1.078  $\chi^2/\text{NDF}$ : 3225.0/24

Right Out: -277.214+/-1.953  $\chi^2/\text{NDF}$ : 3700.9/9

Left In: -199.739+/-1.097  $\chi^2/\text{NDF}$ : 2968.0/22

Left: -199.988+/-0.769  $\chi^2/\text{NDF}$ : 6193.2/47

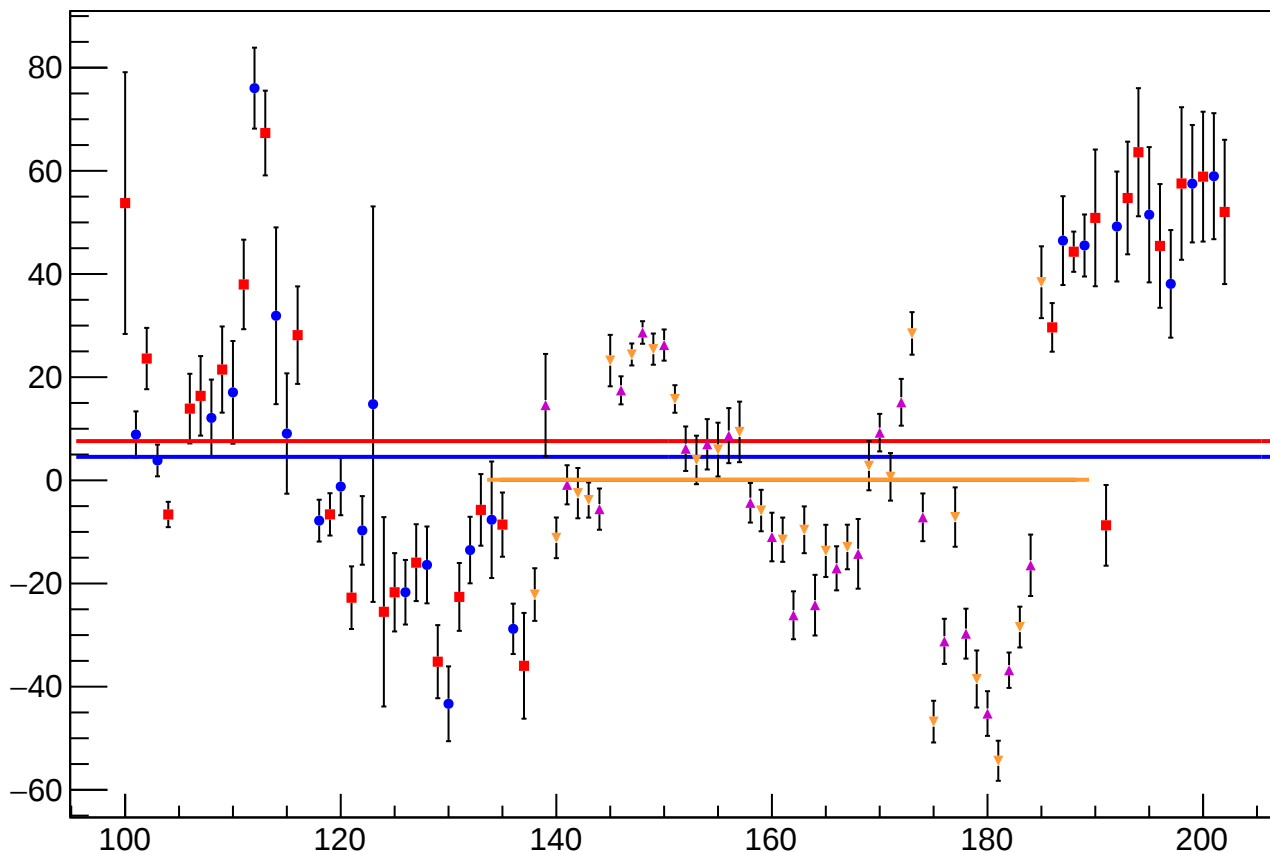
Right: -273.131+/-1.630  $\chi^2/\text{NDF}$ : 4575.3/16

In: -207.454+/-1.029  $\chi^2/\text{NDF}$ : 4237.8/29

Out: -218.209+/-0.944  $\chi^2/\text{NDF}$ : 8117.4/34

All: -213.297+/-0.696  $\chi^2/\text{NDF}$ : 12414.6/64

reg\_asym\_atl1r2\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 4.551+/-1.358  $\chi^2/\text{NDF}$ : 381.5/23

Left Out: 0.109+/-0.807  $\chi^2/\text{NDF}$ :831.2/24

Right Out: 7.608+/-1.210  $\chi^2/\text{NDF}$ : 482.6/28

Left In: 0.097+/-0.838  $\chi^2/\text{NDF}$ :715.5/22

Left: 0.103+/-0.581  $\chi^2/\text{NDF}$ : 1546.7/47

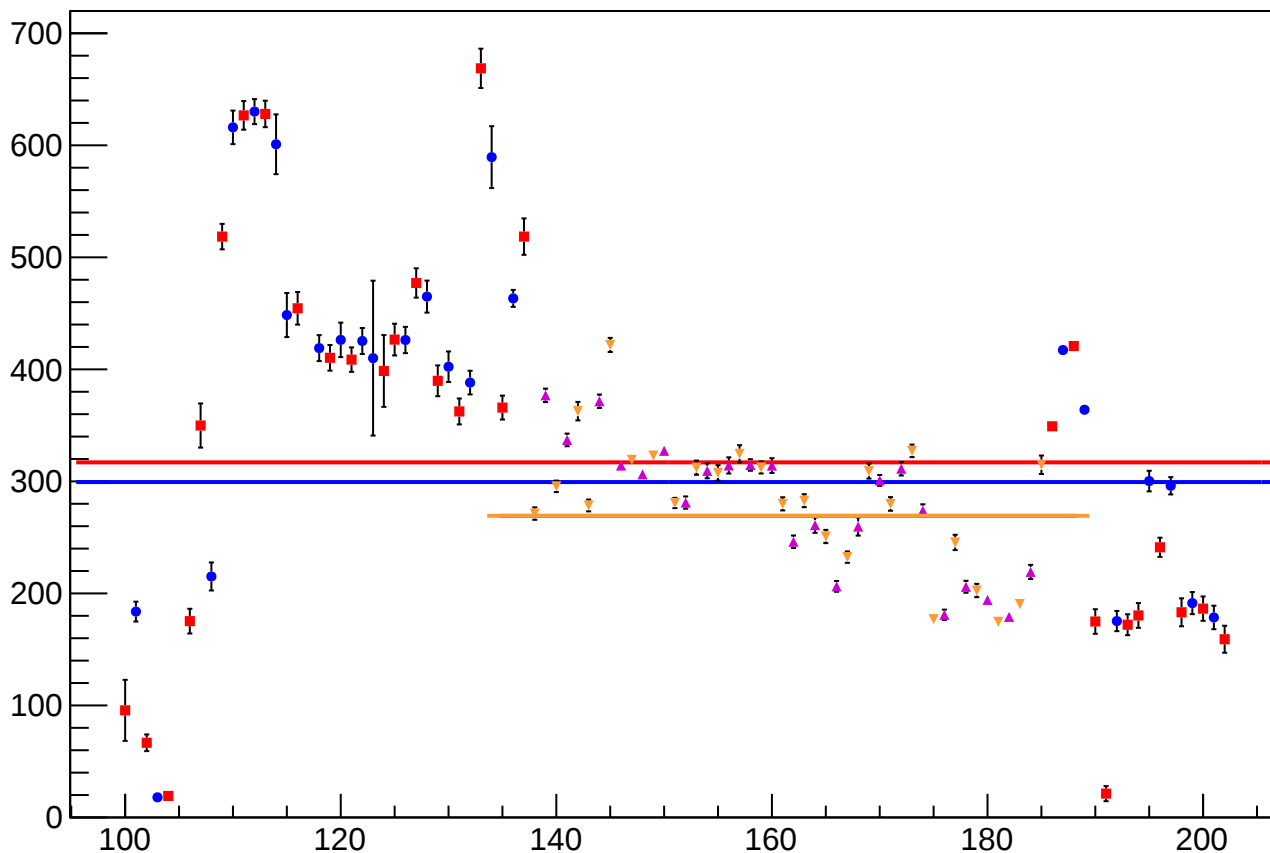
Right: 6.254+/-0.903  $\chi^2/\text{NDF}$ : 866.8/52

In: 1.326+/-0.713  $\chi^2/\text{NDF}$ :1104.7/46

Out: 2.417+/-0.672  $\chi^2/\text{NDF}$ :1340.4/53

All: 1.904+/-0.489  $\chi^2/\text{NDF}$ : 2446.3/100

reg\_asym\_atl1r2\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 299.396 $\pm$ 1.758  $\chi^2$ /NDF: 9176.1/23

Left Out: 269.278 $\pm$ 1.078  $\chi^2$ /NDF:3146.7/24

Right Out: 316.989 $\pm$ 1.345  $\chi^2$ /NDF: 13930.2/28

Left In: 269.191 $\pm$ 1.091  $\chi^2$ /NDF:3170.2/22

Left: 269.235 $\pm$ 0.767  $\chi^2$ /NDF: 6316.9/47

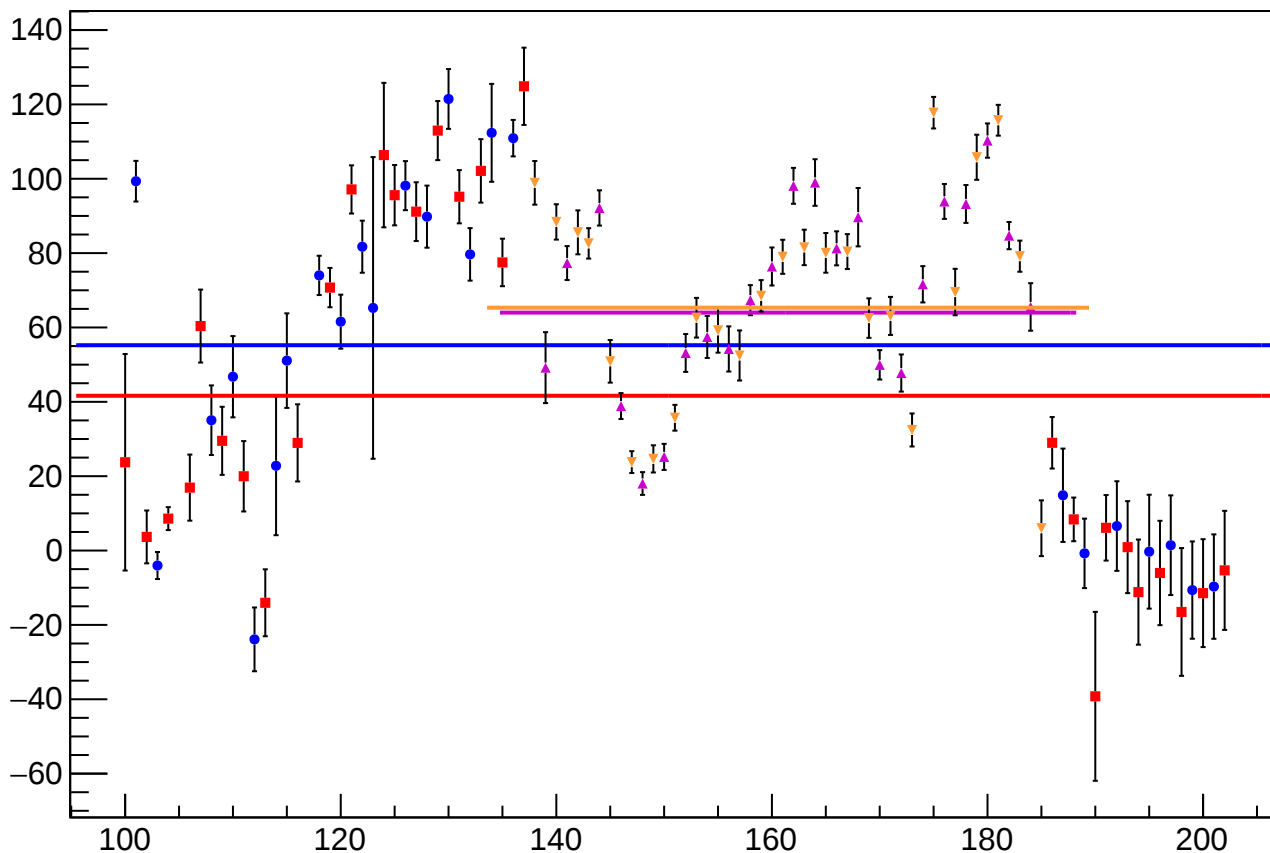
Right: 310.492 $\pm$ 1.068  $\chi^2$ /NDF: 23169.4/52

In: 277.584 $\pm$ 0.927  $\chi^2$ /NDF:12559.4/46

Out: 287.925 $\pm$ 0.841  $\chi^2$ /NDF:17843.1/53

All: 283.255 $\pm$ 0.623  $\chi^2$ /NDF: 30470.7/100

reg\_asym\_atl1r2\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $55.227 \pm 1.596$   $\chi^2/\text{NDF}: 877.1/23$

Left Out:  $65.323 \pm 0.935$   $\chi^2/\text{NDF}: 1007.1/24$

Right Out:  $41.635 \pm 1.469$   $\chi^2/\text{NDF}: 816.4/28$

Left In:  $63.999 \pm 0.963$   $\chi^2/\text{NDF}: 799.5/22$

Left:  $64.681 \pm 0.671$   $\chi^2/\text{NDF}: 1807.5/47$

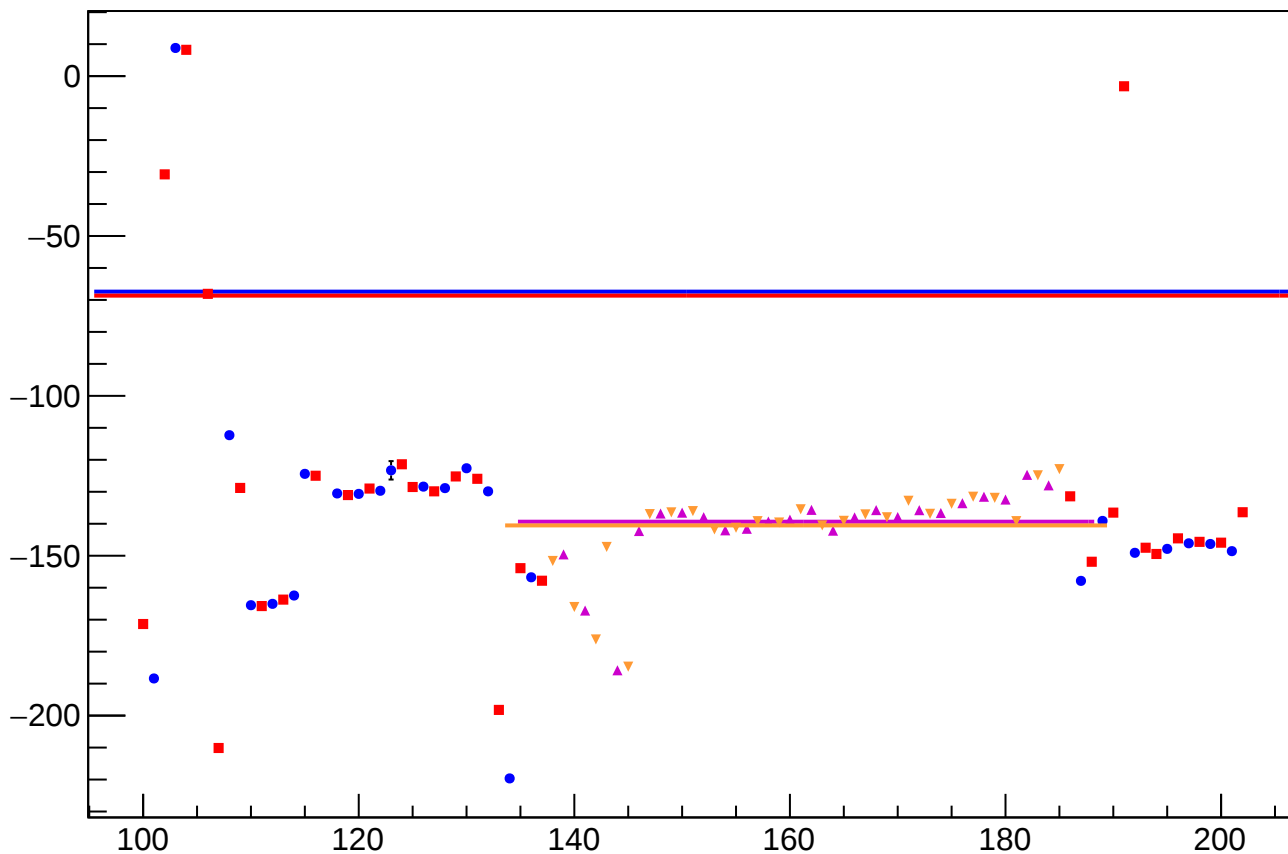
Right:  $47.871 \pm 1.081$   $\chi^2/\text{NDF}: 1732.8/52$

In:  $61.658 \pm 0.824$   $\chi^2/\text{NDF}: 1698.7/46$

Out:  $58.497 \pm 0.789$   $\chi^2/\text{NDF}: 2008.6/53$

All:  $60.007 \pm 0.570$   $\chi^2/\text{NDF}: 3715.0/100$

reg\_asym\_atl1r2\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-67.405 \pm 0.065$   $\chi^2/\text{NDF}: 1493817.4/23$

Left Out:  $-140.519 \pm 0.045$   $\chi^2/\text{NDF}: 77489.0/24$

Right Out:  $-68.654 \pm 0.062$   $\chi^2/\text{NDF}: 1358849.5/28$

Left In:  $-139.360 \pm 0.045$   $\chi^2/\text{NDF}: 62449.0/22$

Left:  $-139.945 \pm 0.032$   $\chi^2/\text{NDF}: 140272.6/47$

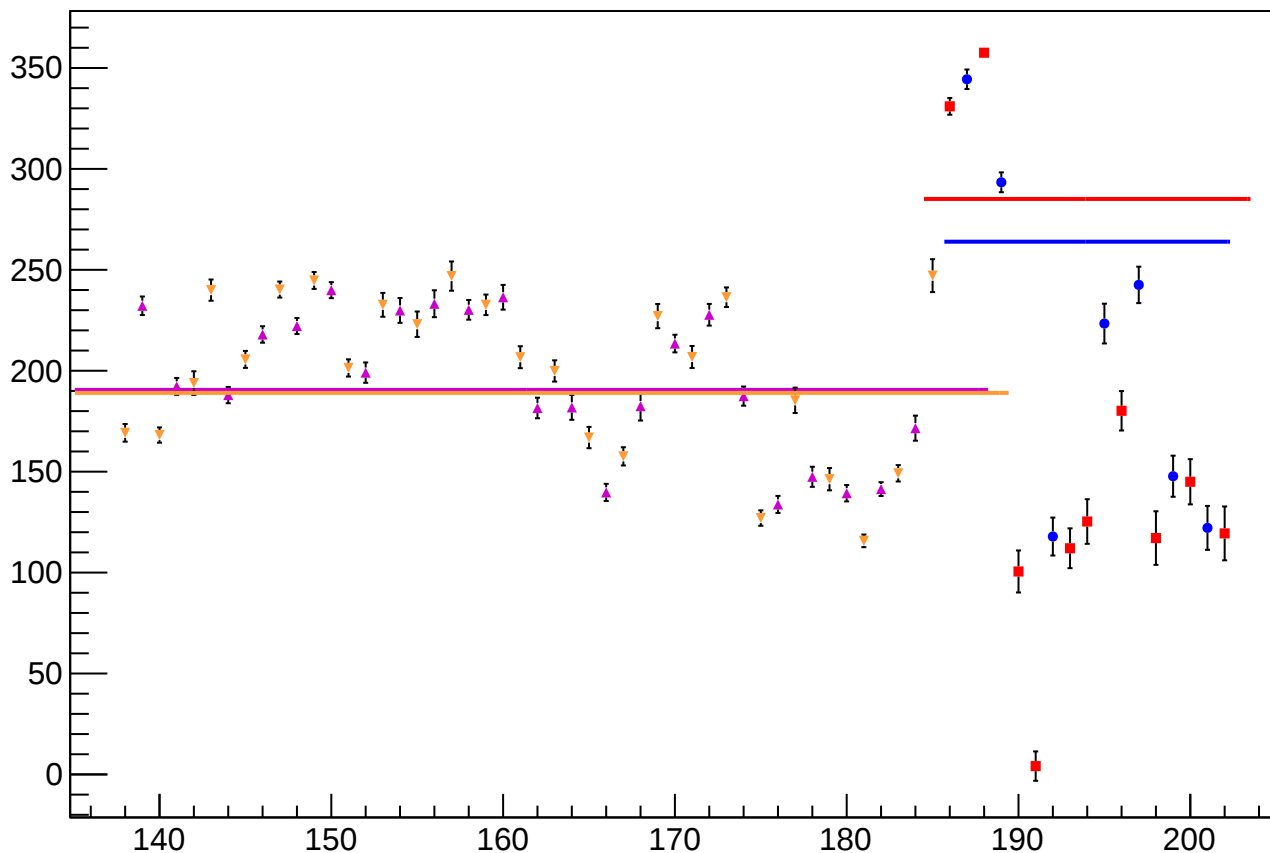
Right:  $-68.056 \pm 0.045$   $\chi^2/\text{NDF}: 2852860.2/52$

In:  $-115.988 \pm 0.037$   $\chi^2/\text{NDF}: 2386403.6/46$

Out:  $-116.149 \pm 0.036$   $\chi^2/\text{NDF}: 2318636.3/53$

All:  $-116.070 \pm 0.026$   $\chi^2/\text{NDF}: 4705049.6/100$

reg\_asym\_atl1r2\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 263.937 $\pm$ 2.711  $\chi^2$ /NDF: 876.6/6

Left Out: 189.030 $\pm$ 0.956  $\chi^2$ /NDF:1980.9/24

Right Out: 285.117 $\pm$ 1.846  $\chi^2$ /NDF: 3866.6/9

Left In: 190.506 $\pm$ 0.975  $\chi^2$ /NDF:1412.7/22

Left: 189.753 $\pm$ 0.683  $\chi^2$ /NDF: 3394.8/47

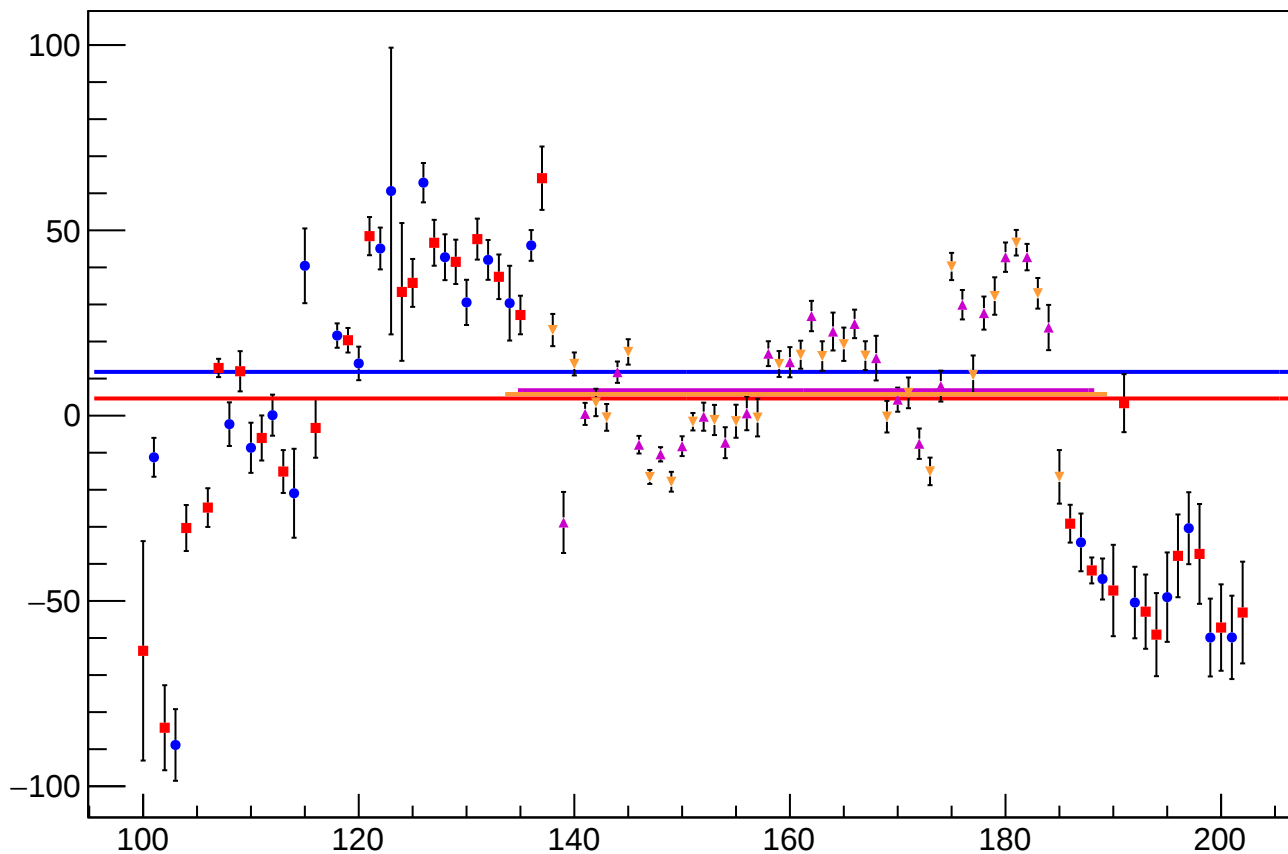
Right: 278.408 $\pm$ 1.526  $\chi^2$ /NDF: 4784.9/16

In: 198.919 $\pm$ 0.918  $\chi^2$ /NDF:2939.1/29

Out: 209.354 $\pm$ 0.849  $\chi^2$ /NDF:7984.8/34

All: 204.542 $\pm$ 0.623  $\chi^2$ /NDF: 10993.6/64

reg\_asym\_atl1r2\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $11.805 \pm 1.285$   $\chi^2/\text{NDF}: 747.6/23$

Left Out:  $5.834 \pm 0.712$   $\chi^2/\text{NDF}: 652.2/24$

Right Out:  $4.630 \pm 1.085$   $\chi^2/\text{NDF}: 891.7/28$

Left In:  $6.862 \pm 0.736$   $\chi^2/\text{NDF}: 522.7/22$

Left:  $6.331 \pm 0.512$   $\chi^2/\text{NDF}: 1176.0/47$

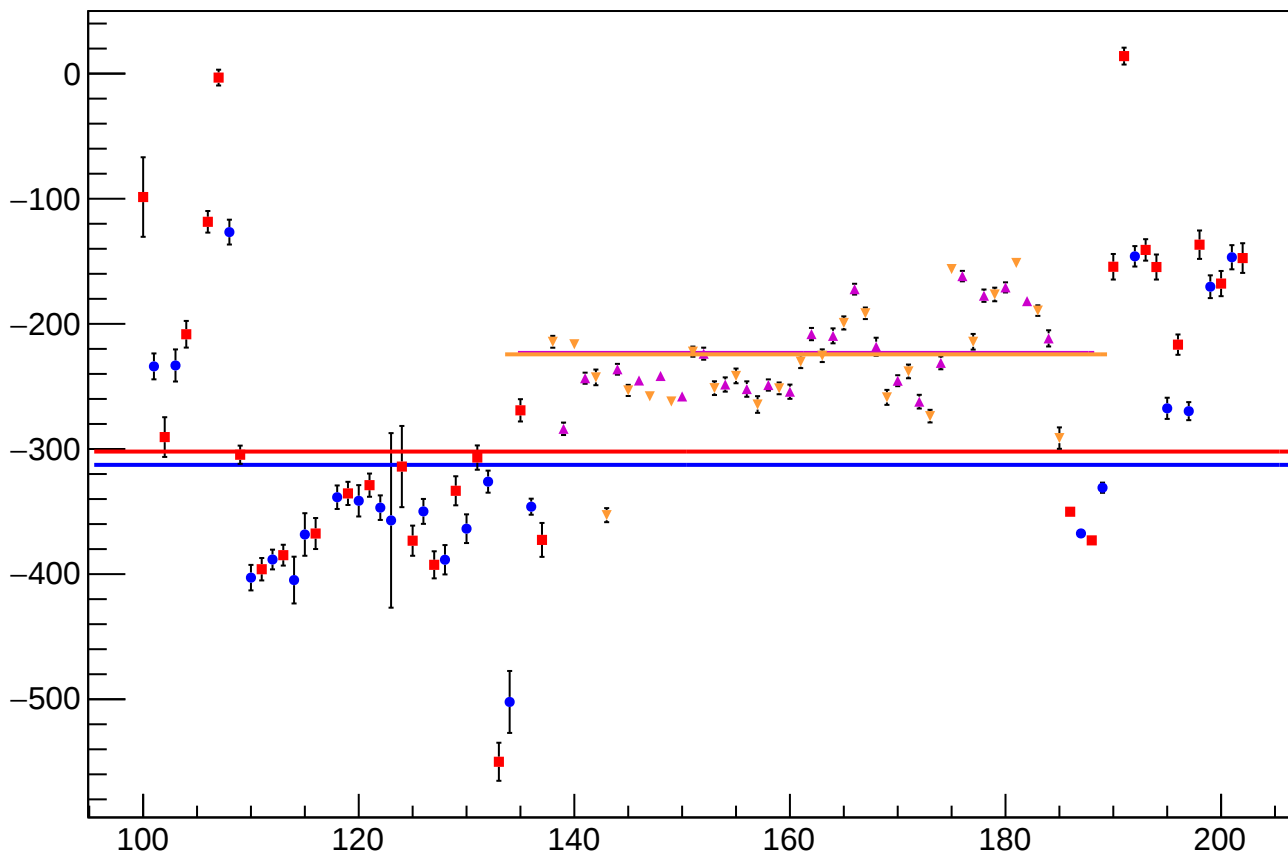
Right:  $7.618 \pm 0.829$   $\chi^2/\text{NDF}: 1657.5/52$

In:  $8.084 \pm 0.639$   $\chi^2/\text{NDF}: 1281.5/46$

Out:  $5.472 \pm 0.596$   $\chi^2/\text{NDF}: 1544.8/53$

All:  $6.686 \pm 0.436$   $\chi^2/\text{NDF}: 2835.2/100$

reg\_asym\_atl1r2\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-312.685 \pm 1.705$   $\chi^2/\text{NDF}$ : 2071.4/23

Left Out:  $-224.364 \pm 0.956$   $\chi^2/\text{NDF}$ : 2103.2/24

Right Out:  $-302.058 \pm 1.272$   $\chi^2/\text{NDF}$ : 8591.1/28

Left In:  $-223.223 \pm 0.969$   $\chi^2/\text{NDF}$ : 1269.3/22

Left:  $-223.801 \pm 0.681$   $\chi^2/\text{NDF}$ : 3373.2/47

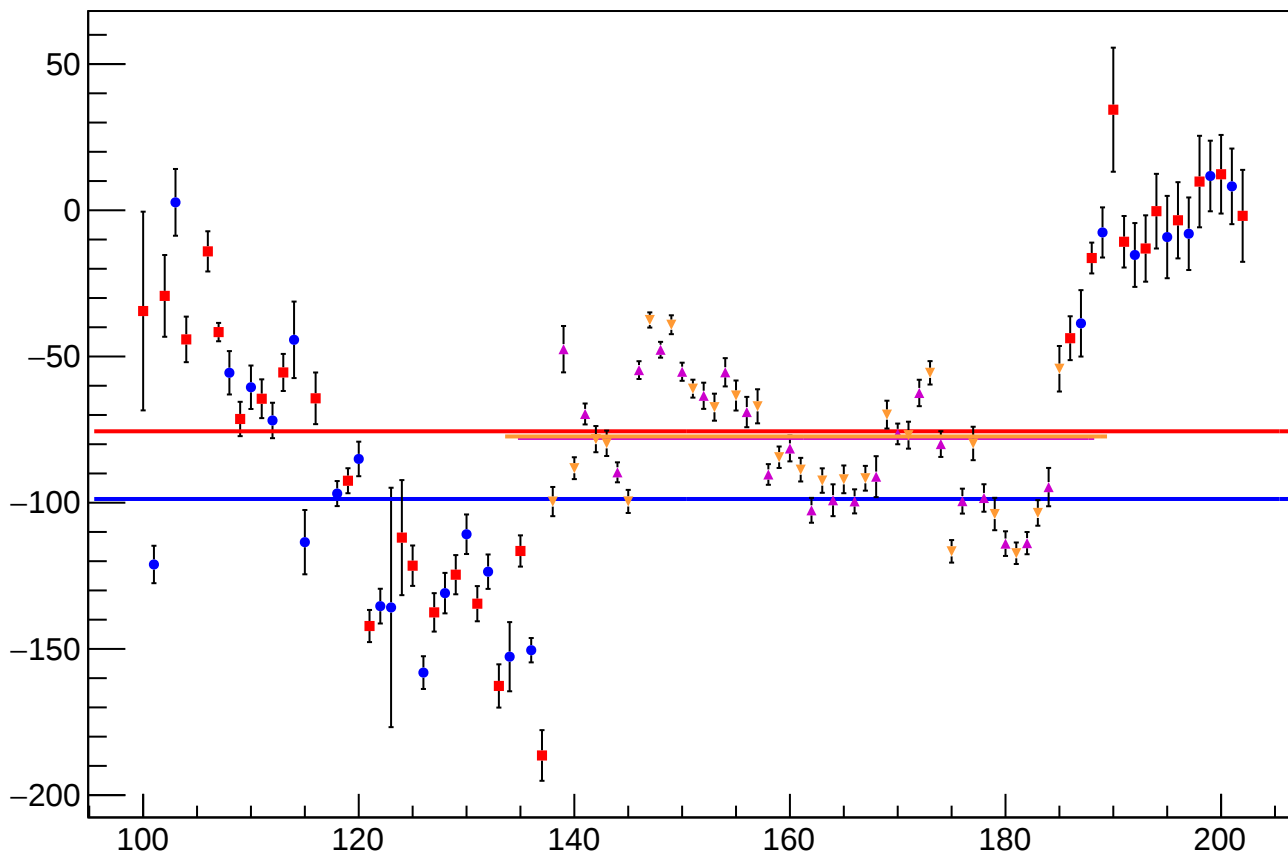
Right:  $-305.860 \pm 1.020$   $\chi^2/\text{NDF}$ : 10687.4/52

In:  $-245.077 \pm 0.843$   $\chi^2/\text{NDF}$ : 5422.1/46

Out:  $-252.404 \pm 0.764$   $\chi^2/\text{NDF}$ : 13077.9/53

All:  $-249.096 \pm 0.566$   $\chi^2/\text{NDF}$ : 18541.5/100

reg\_asym\_atl1r2\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: -98.727 $\pm$ 1.500  $\chi^2$ /NDF: 1010.2/23

Left Out: -77.343 $\pm$ 0.827  $\chi^2$ /NDF:846.2/24

Right Out: -75.579 $\pm$ 1.304  $\chi^2$ /NDF: 1465.6/28

Left In: -77.838 $\pm$ 0.849  $\chi^2$ /NDF:622.8/22

Left: -77.584 $\pm$ 0.592  $\chi^2$ /NDF: 1469.2/47

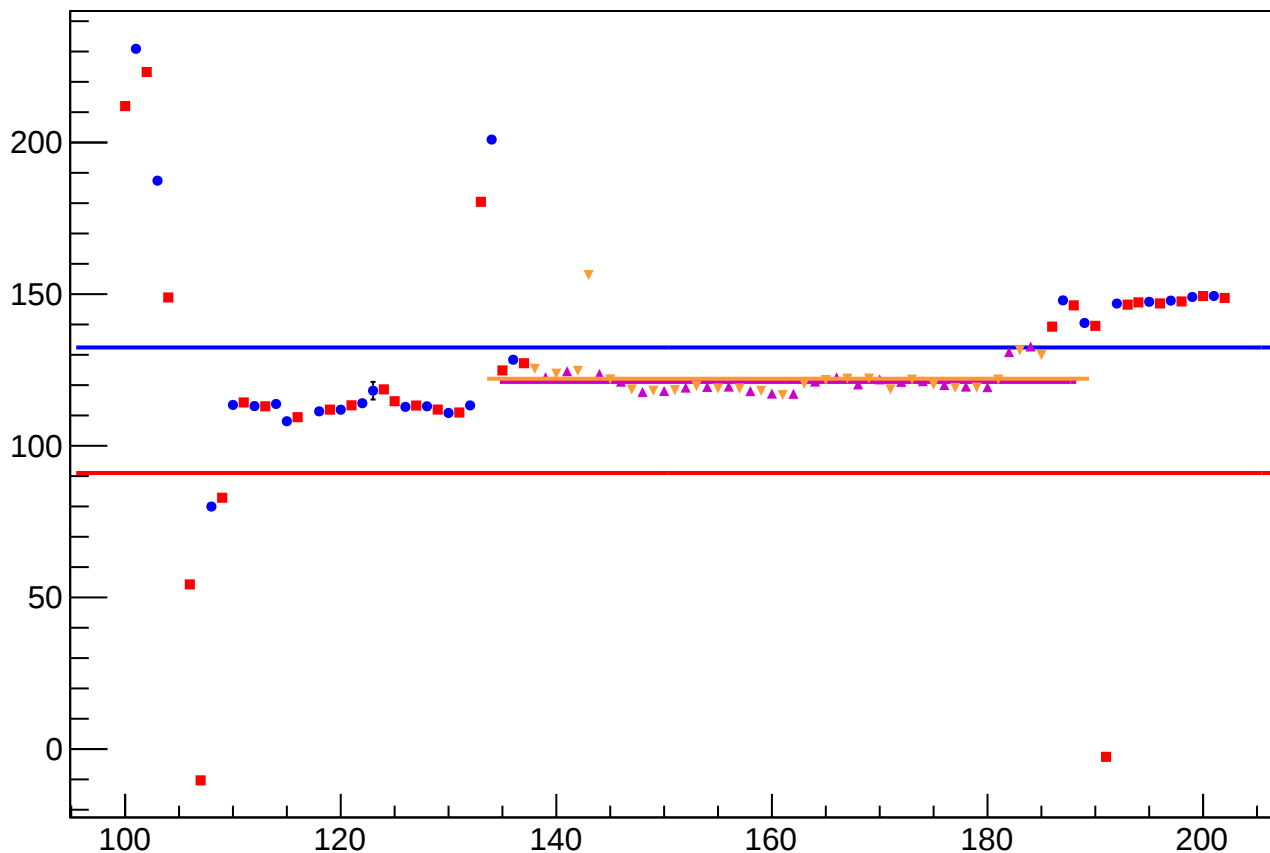
Right: -85.543 $\pm$ 0.984  $\chi^2$ /NDF: 2611.4/52

In: -82.903 $\pm$ 0.739  $\chi^2$ /NDF:1779.9/46

Out: -76.838 $\pm$ 0.698  $\chi^2$ /NDF:2313.1/53

All: -79.700 $\pm$ 0.507  $\chi^2$ /NDF: 4128.6/100

reg\_asym\_atl1r2\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 132.417 $\pm$ 0.077  $\chi^2$ /NDF: 200563.6/23

Left Out: 122.119 $\pm$ 0.039  $\chi^2$ /NDF:30480.7/24

Right Out: 91.042 $\pm$ 0.063  $\chi^2$ /NDF: 1099957.5/28

Left In: 121.055 $\pm$ 0.040  $\chi^2$ /NDF:7931.6/22

Left: 121.591 $\pm$ 0.028  $\chi^2$ /NDF: 38773.7/47

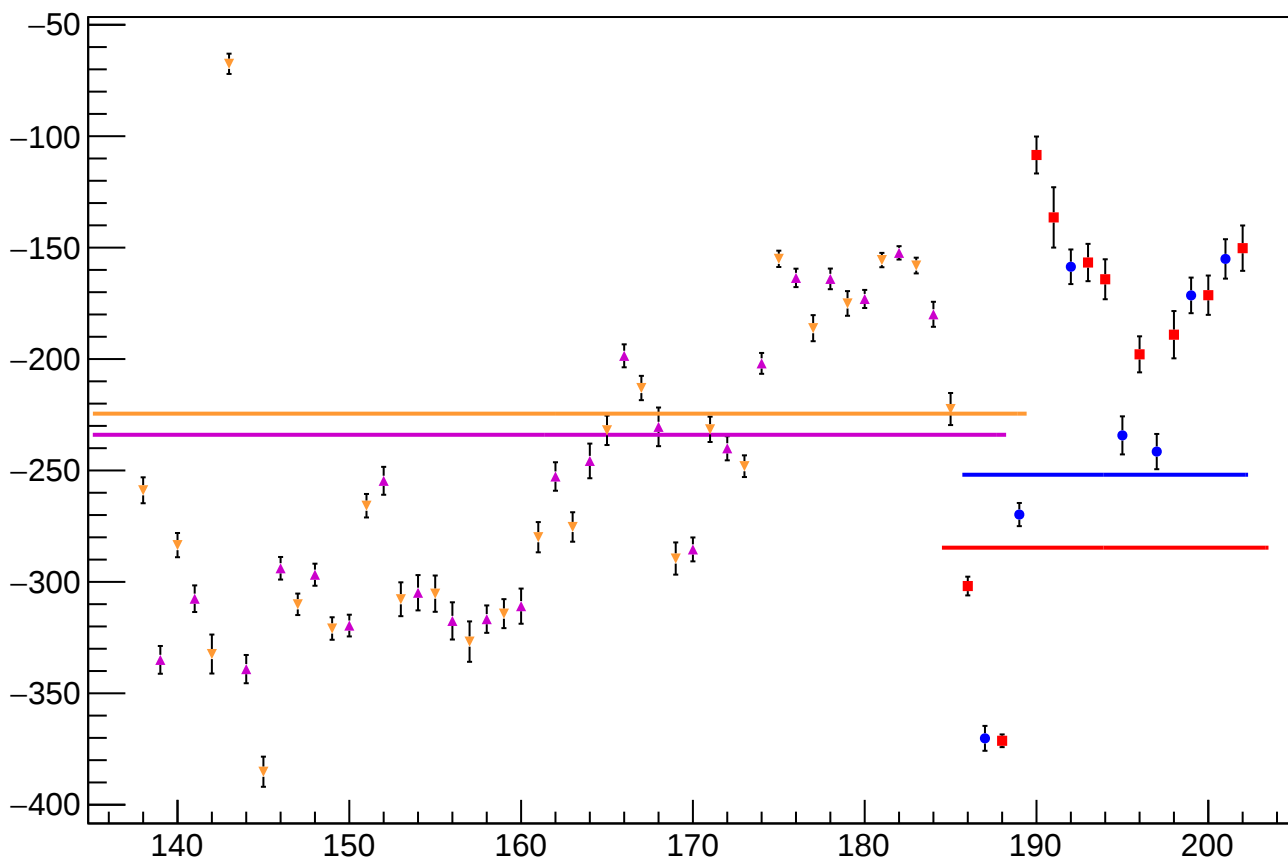
Right: 107.686 $\pm$ 0.049  $\chi^2$ /NDF: 1471800.6/52

In: 123.430 $\pm$ 0.035  $\chi^2$ /NDF:225587.2/46

Out: 113.458 $\pm$ 0.033  $\chi^2$ /NDF:1303703.7/53

All: 118.174 $\pm$ 0.024  $\chi^2$ /NDF: 1571260.1/100

reg\_asym\_atr1l2\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-251.915 \pm 2.637$   $\chi^2/\text{NDF}: 832.5/6$

Left Out:  $-224.501 \pm 1.079$   $\chi^2/\text{NDF}: 4870.6/24$

Right Out:  $-284.646 \pm 1.914$   $\chi^2/\text{NDF}: 2461.1/9$

Left In:  $-233.988 \pm 1.109$   $\chi^2/\text{NDF}: 3538.4/22$

Left:  $-229.116 \pm 0.773$   $\chi^2/\text{NDF}: 8446.6/47$

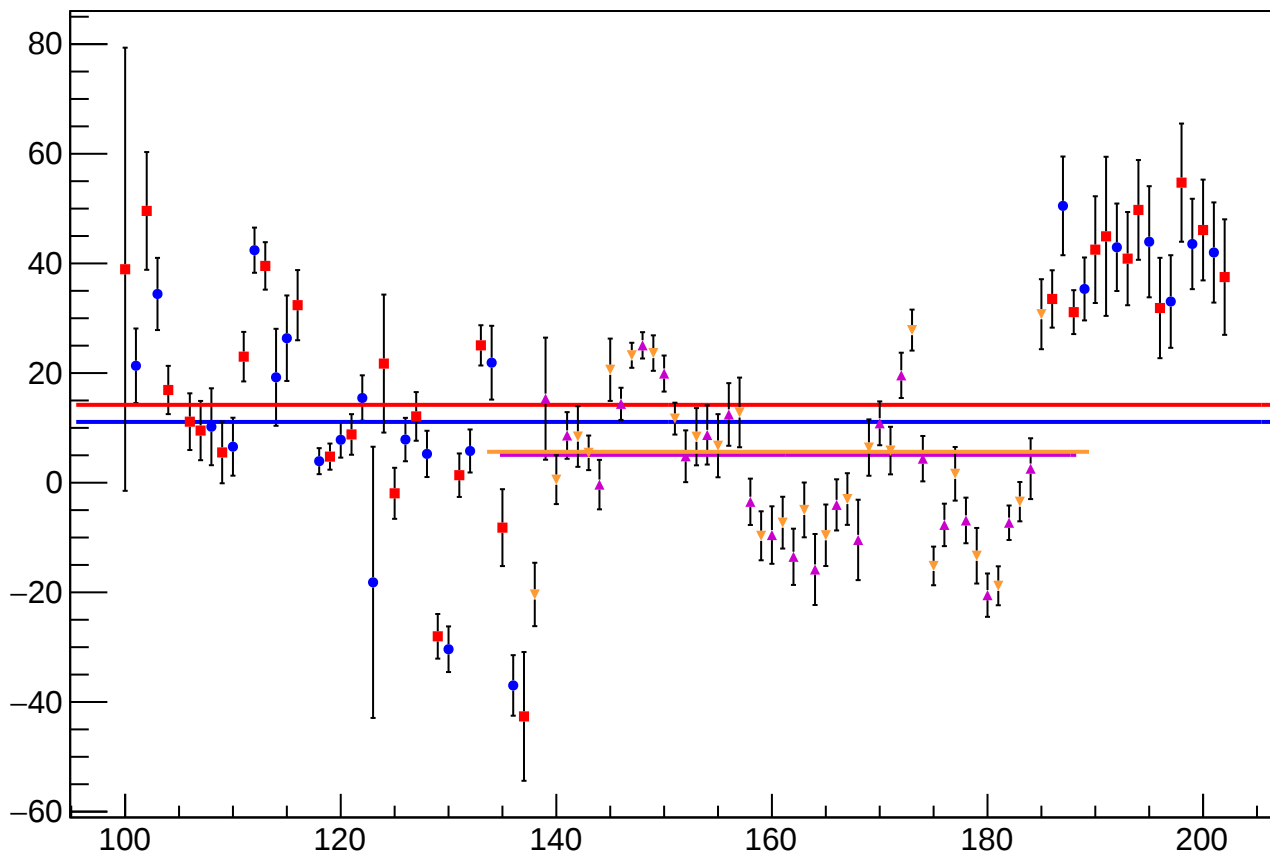
Right:  $-273.349 \pm 1.549$   $\chi^2/\text{NDF}: 3394.5/16$

In:  $-236.681 \pm 1.022$   $\chi^2/\text{NDF}: 4410.2/29$

Out:  $-239.004 \pm 0.940$   $\chi^2/\text{NDF}: 8080.8/34$

All:  $-237.939 \pm 0.692$   $\chi^2/\text{NDF}: 12493.8/64$

reg\_asym\_atr1l2\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 11.088 $\pm$ 1.038  $\chi^2$ /NDF: 369.8/23

Left Out: 5.638 $\pm$ 0.828  $\chi^2$ /NDF:313.6/24

Right Out: 14.204 $\pm$ 0.976  $\chi^2$ /NDF: 356.4/28

Left In: 5.077 $\pm$ 0.869  $\chi^2$ /NDF:239.7/22

Left: 5.371 $\pm$ 0.599  $\chi^2$ /NDF: 553.6/47

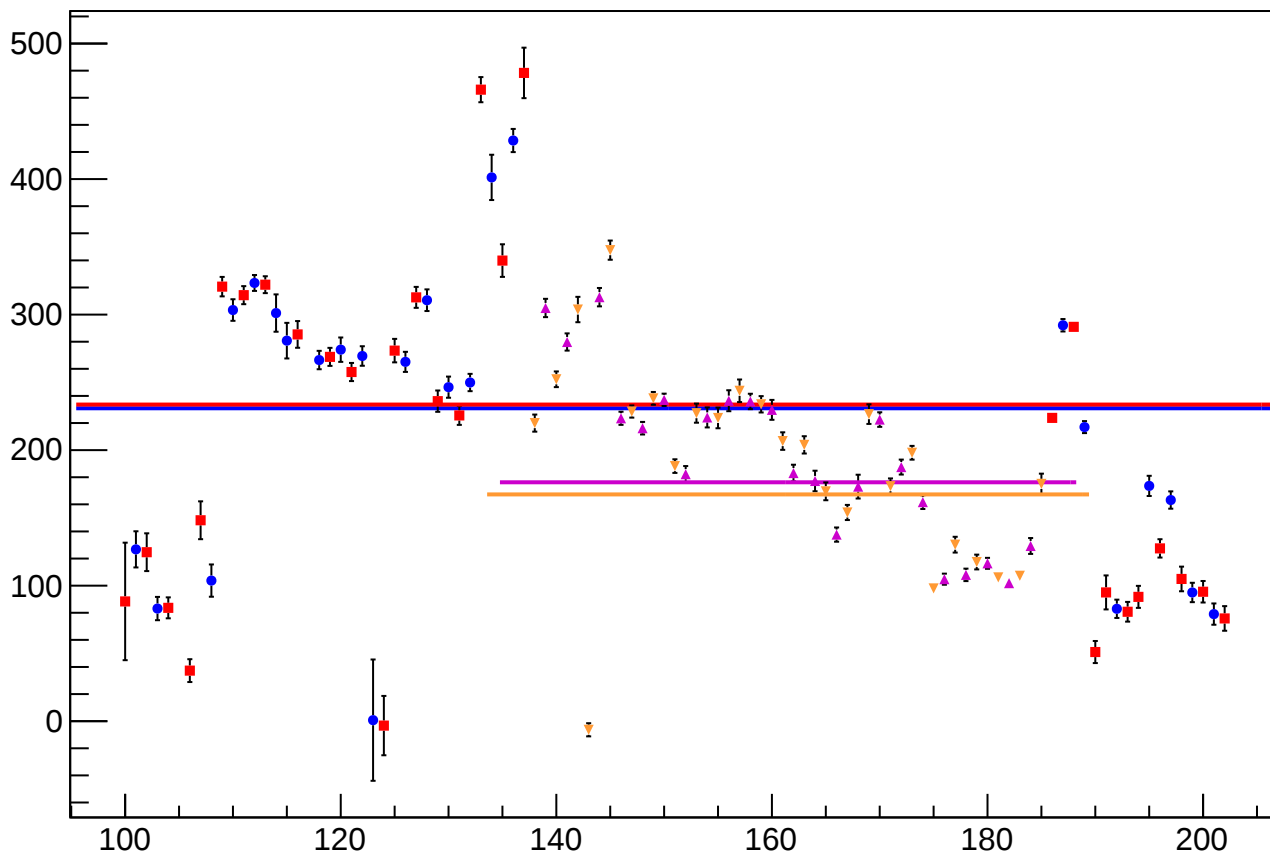
Right: 12.742 $\pm$ 0.711  $\chi^2$ /NDF: 731.0/52

In: 7.553 $\pm$ 0.666  $\chi^2$ /NDF:629.2/46

Out: 9.224 $\pm$ 0.631  $\chi^2$ /NDF:714.9/53

All: 8.433 $\pm$ 0.458  $\chi^2$ /NDF: 1347.4/100

reg\_asym\_atr1l2\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 230.878+/-1.531  $\chi^2/\text{NDF}$ : 3295.4/23

Left Out: 167.327+/-1.082  $\chi^2/\text{NDF}$ : 4454.5/24

Right Out: 233.624+/-1.241  $\chi^2/\text{NDF}$ : 5767.3/28

Left In: 176.272+/-1.106  $\chi^2/\text{NDF}$ : 3169.5/22

Left: 171.704+/-0.774  $\chi^2/\text{NDF}$ : 7657.4/47

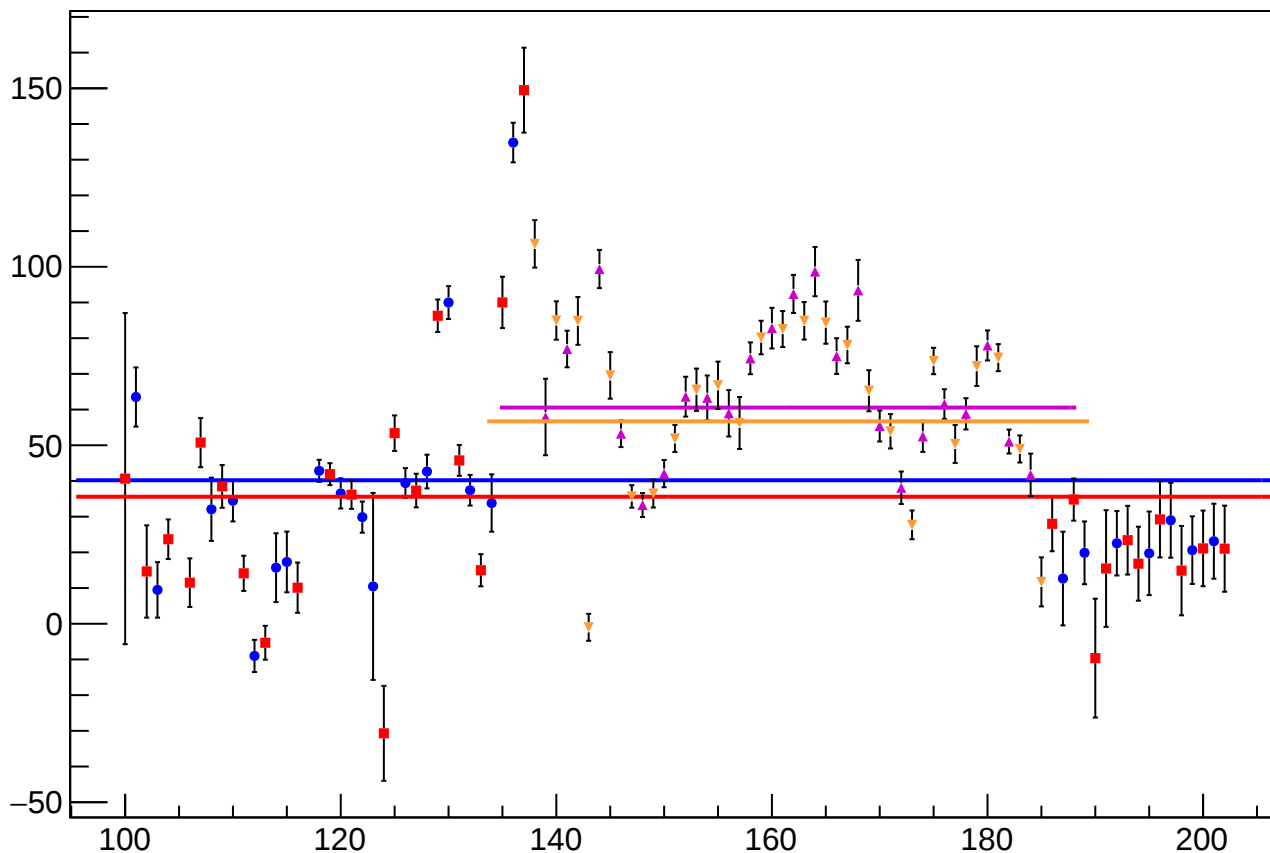
Right: 232.535+/-0.964  $\chi^2/\text{NDF}$ : 9064.6/52

In: 194.994+/-0.896  $\chi^2/\text{NDF}$ : 7301.1/46

Out: 195.983+/-0.816  $\chi^2/\text{NDF}$ : 11843.0/53

All: 195.535+/-0.603  $\chi^2/\text{NDF}$ : 19144.8/100

reg\_asym\_atr1l2\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $40.195 \pm 1.212$   $\chi^2/\text{NDF}$ : 600.4/23

Left Out:  $56.695 \pm 0.952$   $\chi^2/\text{NDF}$ : 690.4/24

Right Out:  $35.586 \pm 1.149$   $\chi^2/\text{NDF}$ : 493.6/28

Left In:  $60.555 \pm 0.990$   $\chi^2/\text{NDF}$ : 335.6/22

Left:  $58.548 \pm 0.686$   $\chi^2/\text{NDF}$ : 1034.0/47

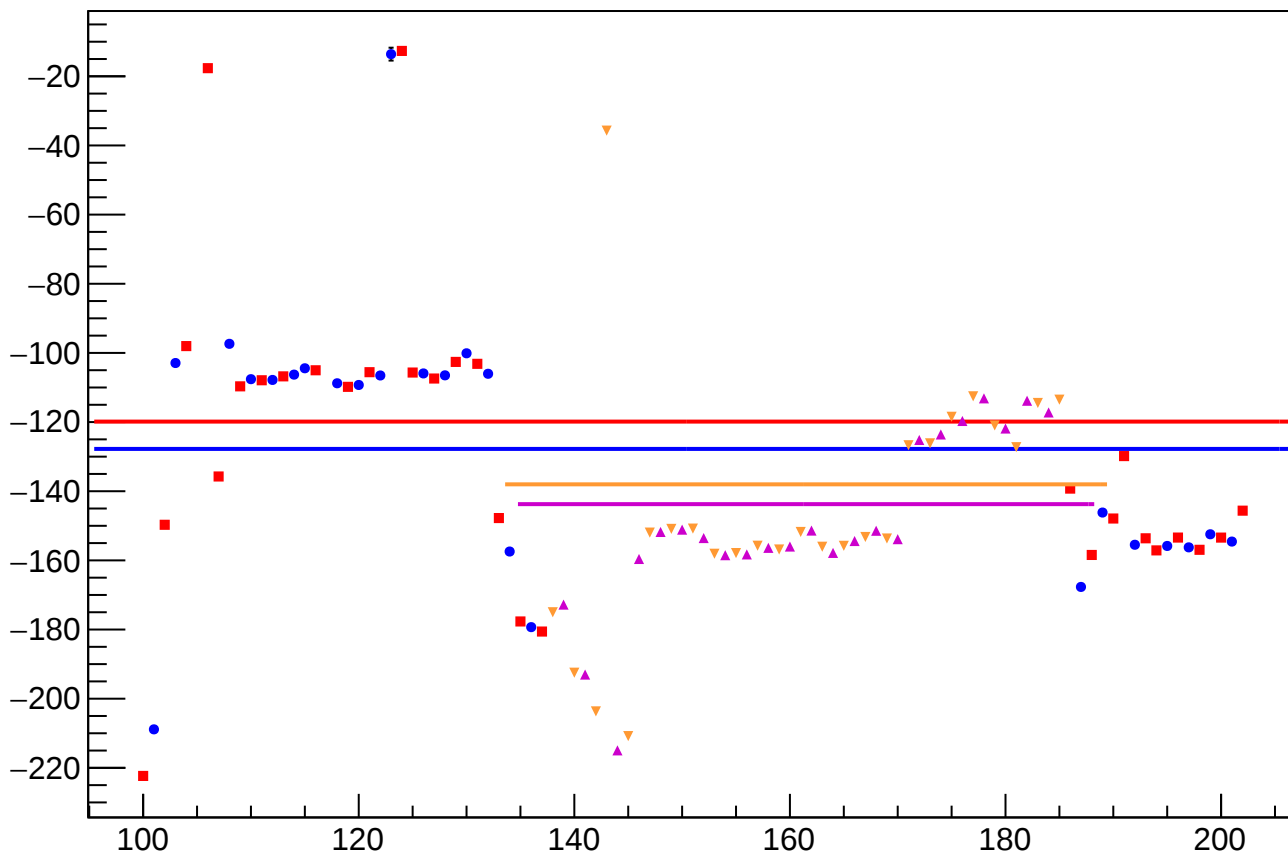
Right:  $37.768 \pm 0.834$   $\chi^2/\text{NDF}$ : 1101.6/52

In:  $52.402 \pm 0.767$   $\chi^2/\text{NDF}$ : 1105.3/46

Out:  $48.104 \pm 0.733$   $\chi^2/\text{NDF}$ : 1384.2/53

All:  $50.156 \pm 0.530$   $\chi^2/\text{NDF}$ : 2506.0/100

reg\_asym\_atr1l2\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-127.764 \pm 0.067$   $\chi^2/\text{NDF}: 202318.4/23$

Left Out:  $-138.008 \pm 0.045$   $\chi^2/\text{NDF}: 565767.2/24$

Right Out:  $-119.862 \pm 0.061$   $\chi^2/\text{NDF}: 449700.3/28$

Left In:  $-143.735 \pm 0.046$   $\chi^2/\text{NDF}: 258408.3/22$

Left:  $-140.811 \pm 0.032$   $\chi^2/\text{NDF}: 832055.2/47$

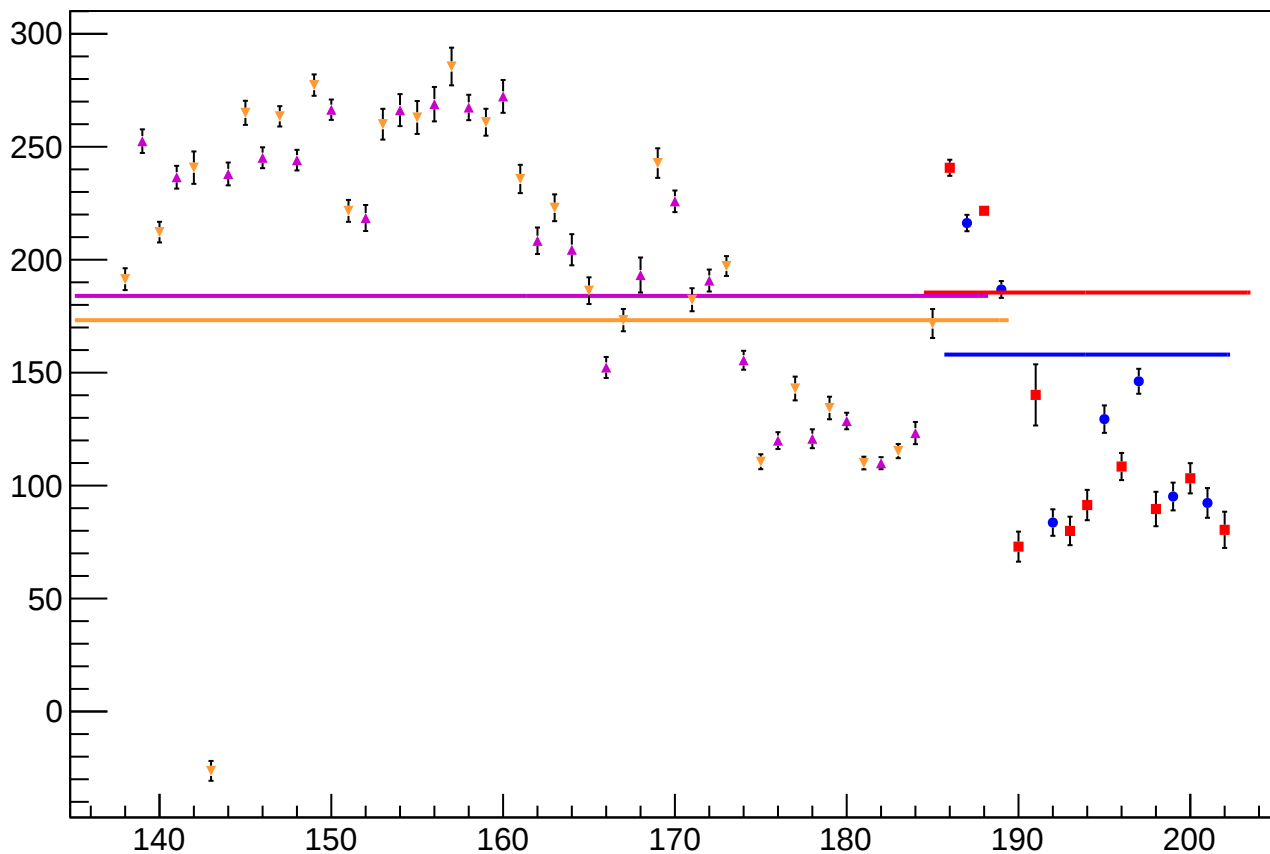
Right:  $-123.437 \pm 0.045$   $\chi^2/\text{NDF}: 659663.4/52$

In:  $-138.590 \pm 0.038$   $\chi^2/\text{NDF}: 499393.2/46$

Out:  $-131.561 \pm 0.036$   $\chi^2/\text{NDF}: 1072911.5/53$

All:  $-134.913 \pm 0.026$   $\chi^2/\text{NDF}: 1590246.1/10$

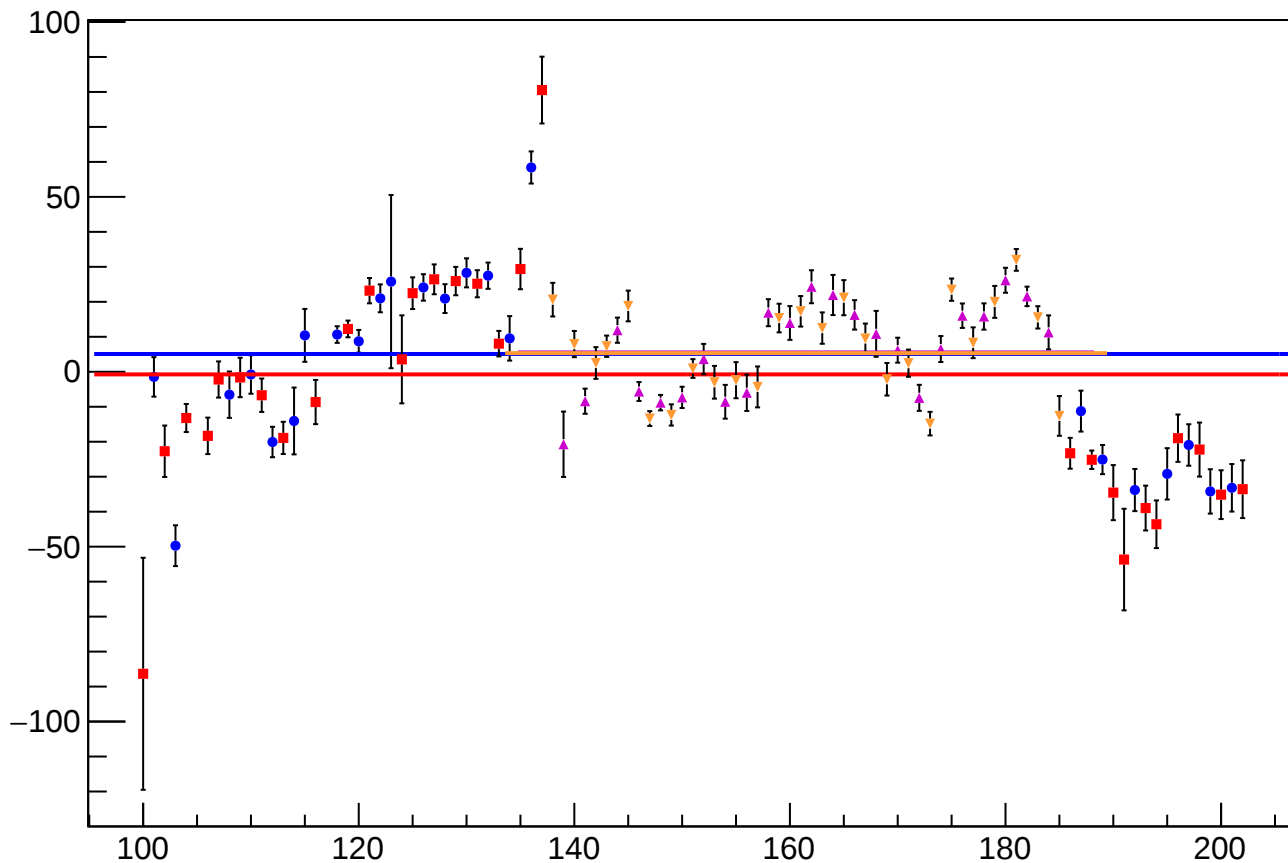
reg\_asym\_atr1l2\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 158.005 $\pm$ 1.868  $\chi^2$ /NDF: 708.6/6  
 Left Out: 173.229 $\pm$ 0.966  $\chi^2$ /NDF:5846.0/24  
 Right Out: 185.473 $\pm$ 1.380  $\chi^2$ /NDF: 2036.1/9  
 Left In: 183.984 $\pm$ 0.991  $\chi^2$ /NDF:3613.7/22

Left: 178.467 $\pm$ 0.692  $\chi^2$ /NDF: 9520.1/47  
 Right: 175.776 $\pm$ 1.110  $\chi^2$ /NDF: 2884.6/16  
 In: 178.280 $\pm$ 0.875  $\chi^2$ /NDF:4473.2/29  
 Out: 177.253 $\pm$ 0.791  $\chi^2$ /NDF:7934.9/34  
 All: 177.715 $\pm$ 0.587  $\chi^2$ /NDF: 12408.9/64

reg\_asym\_atr1l2\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 5.082 $\pm$ 0.966  $\chi^2$ /NDF: 610.3/23

Left Out: 5.321 $\pm$ 0.747  $\chi^2$ /NDF:345.5/24

Right Out: -0.750 $\pm$ 0.897  $\chi^2$ /NDF: 662.8/28

Left In: 5.527 $\pm$ 0.781  $\chi^2$ /NDF:256.3/22

Left: 5.420 $\pm$ 0.540  $\chi^2$ /NDF: 601.9/47

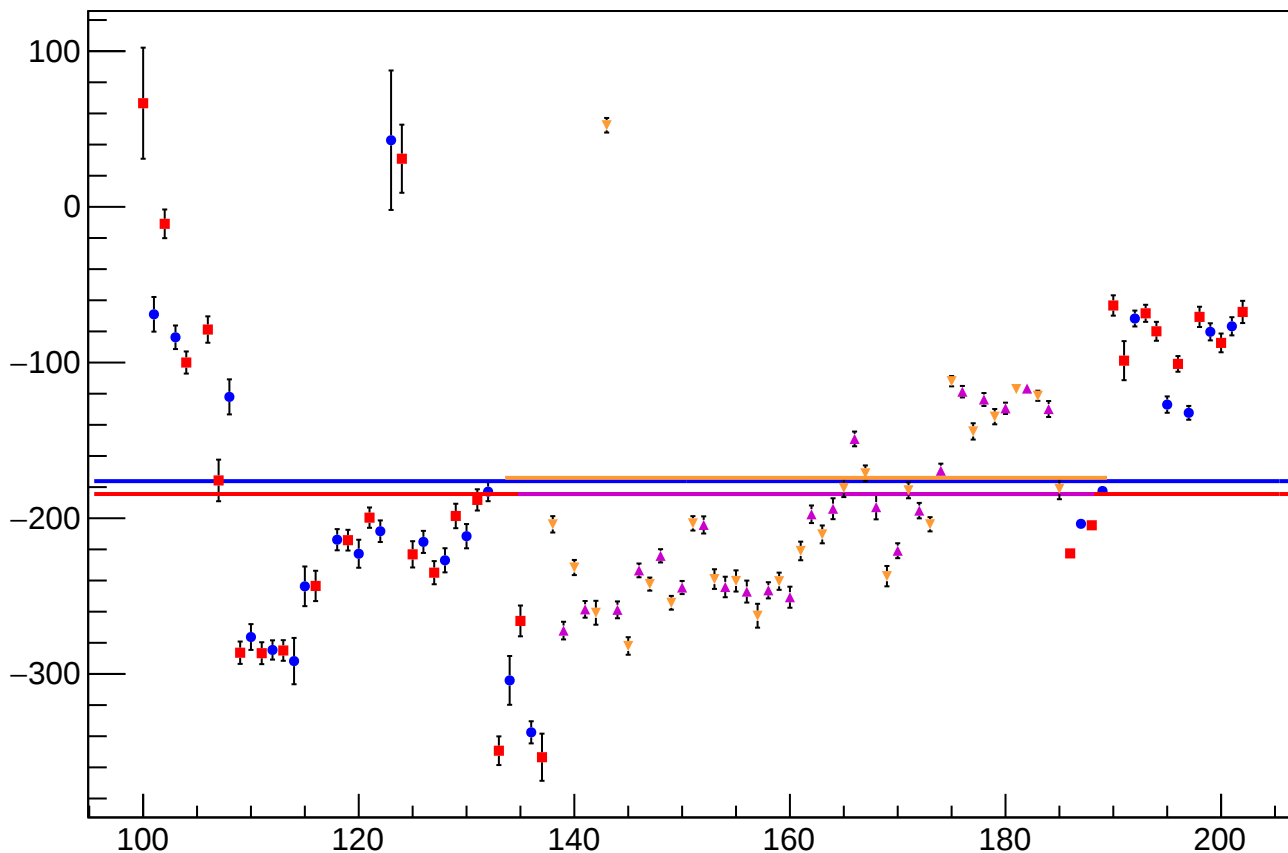
Right: 1.949 $\pm$ 0.657  $\chi^2$ /NDF: 1292.7/52

In: 5.351 $\pm$ 0.607  $\chi^2$ /NDF:866.7/46

Out: 2.832 $\pm$ 0.574  $\chi^2$ /NDF:1035.4/53

All: 4.021 $\pm$ 0.417  $\chi^2$ /NDF: 1911.2/100

reg\_asym\_atr1l2\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-176.163 \pm 1.243$   $\chi^2/\text{NDF}: 2873.1/23$

Left Out:  $-174.061 \pm 0.971$   $\chi^2/\text{NDF}: 5443.3/24$

Right Out:  $-184.437 \pm 0.981$   $\chi^2/\text{NDF}: 4691.0/28$

Left In:  $-184.456 \pm 0.991$   $\chi^2/\text{NDF}: 3051.6/22$

Left:  $-179.154 \pm 0.693$   $\chi^2/\text{NDF}: 8551.0/47$

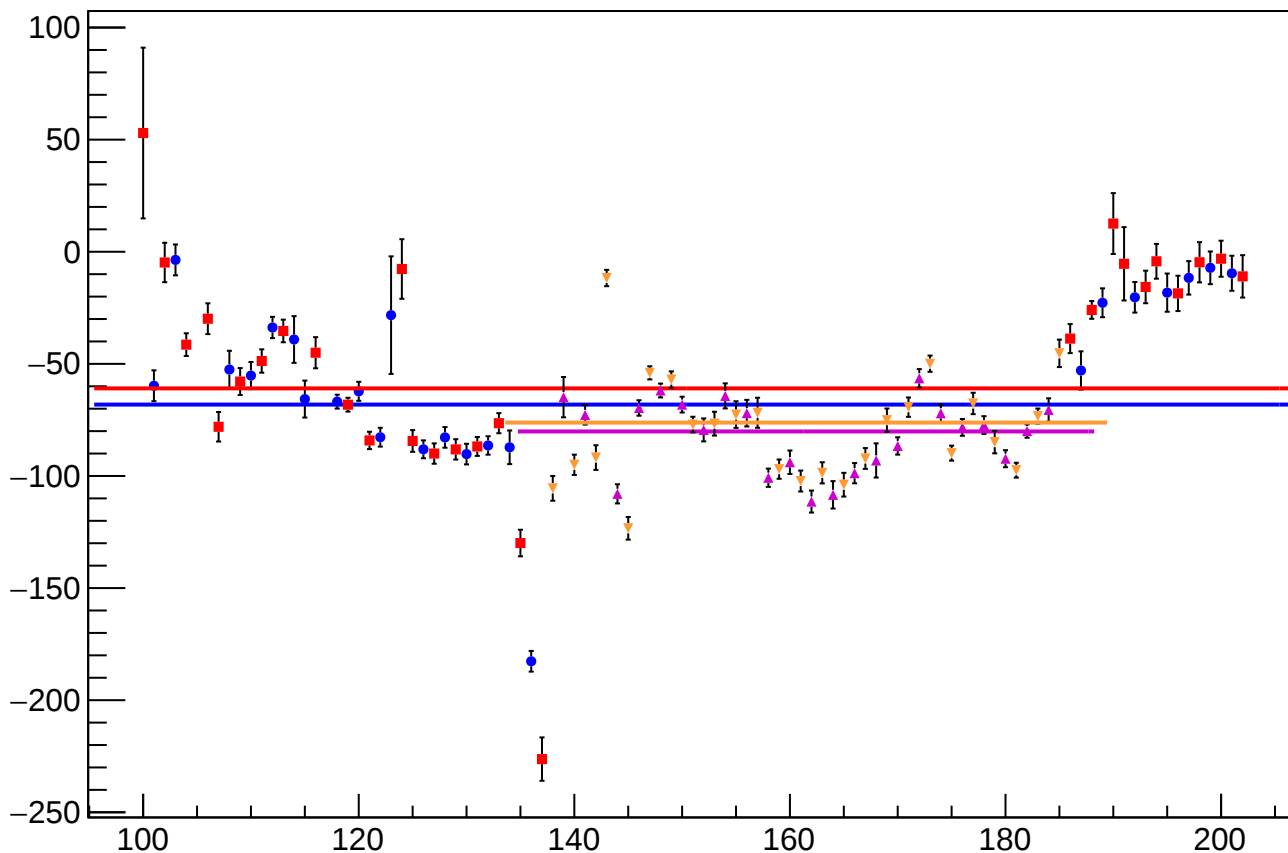
Right:  $-181.260 \pm 0.770$   $\chi^2/\text{NDF}: 7591.3/52$

In:  $-181.235 \pm 0.775$   $\chi^2/\text{NDF}: 5951.9/46$

Out:  $-179.193 \pm 0.690$   $\chi^2/\text{NDF}: 10190.7/53$

All:  $-180.097 \pm 0.515$   $\chi^2/\text{NDF}: 16146.5/100$

reg\_asym\_atr1l2\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-68.160 \pm 1.134$   $\chi^2/\text{NDF}: 1194.3/23$

Left Out:  $-76.182 \pm 0.857$   $\chi^2/\text{NDF}: 801.0/24$

Right Out:  $-60.934 \pm 1.071$   $\chi^2/\text{NDF}: 1134.8/28$

Left In:  $-80.149 \pm 0.889$   $\chi^2/\text{NDF}: 283.3/22$

Left:  $-78.094 \pm 0.617$   $\chi^2/\text{NDF}: 1094.6/47$

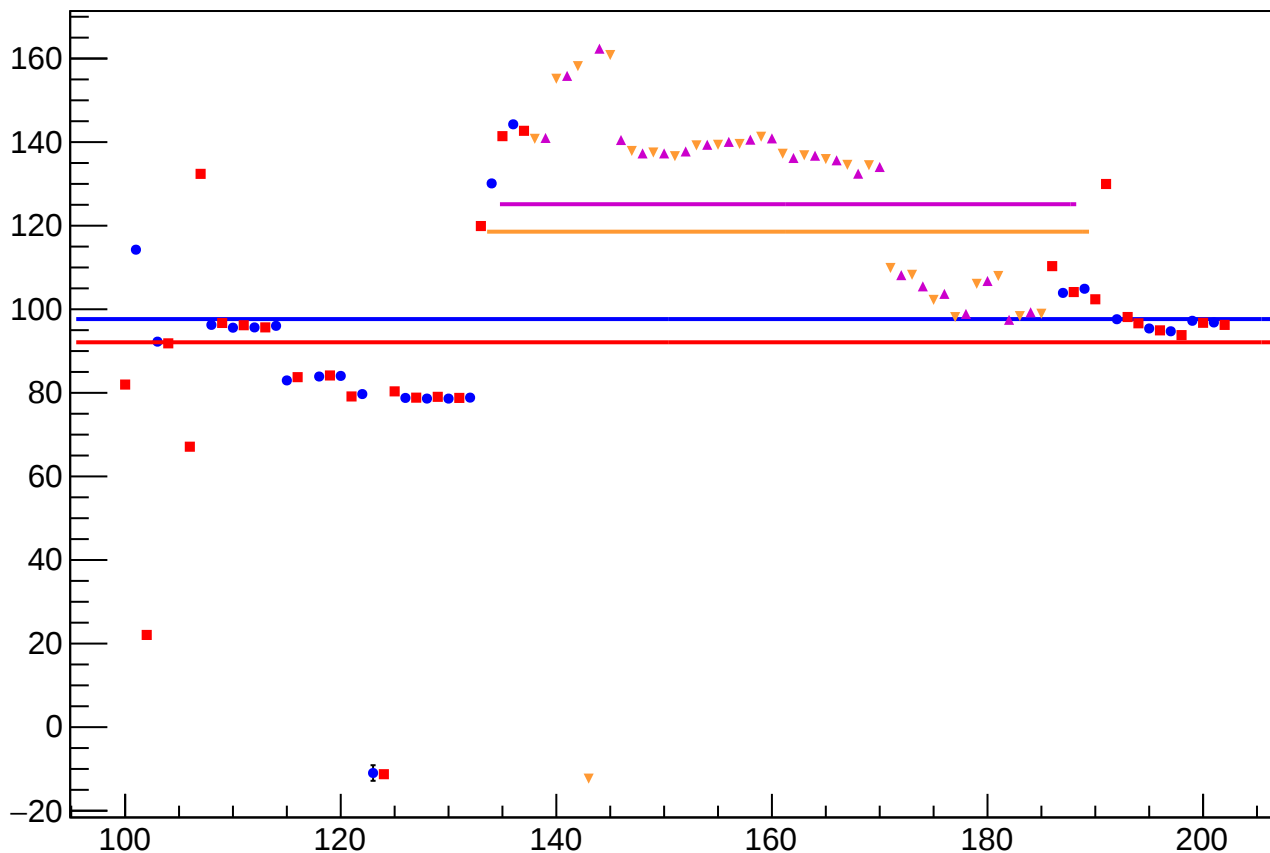
Right:  $-64.339 \pm 0.779$   $\chi^2/\text{NDF}: 2350.6/52$

In:  $-75.586 \pm 0.700$   $\chi^2/\text{NDF}: 1546.8/46$

Out:  $-70.225 \pm 0.669$   $\chi^2/\text{NDF}: 2059.4/53$

All:  $-72.786 \pm 0.484$   $\chi^2/\text{NDF}: 3636.8/100$

reg\_asym\_atr1l2\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $97.652 \pm 0.058$   $\chi^2/\text{NDF}: 94861.9/23$

Left Out:  $118.569 \pm 0.040$   $\chi^2/\text{NDF}: 728689.7/24$

Right Out:  $92.098 \pm 0.053$   $\chi^2/\text{NDF}: 240542.9/28$

Left In:  $125.139 \pm 0.041$   $\chi^2/\text{NDF}: 220927.1/22$

Left:  $121.790 \pm 0.029$   $\chi^2/\text{NDF}: 962526.8/47$

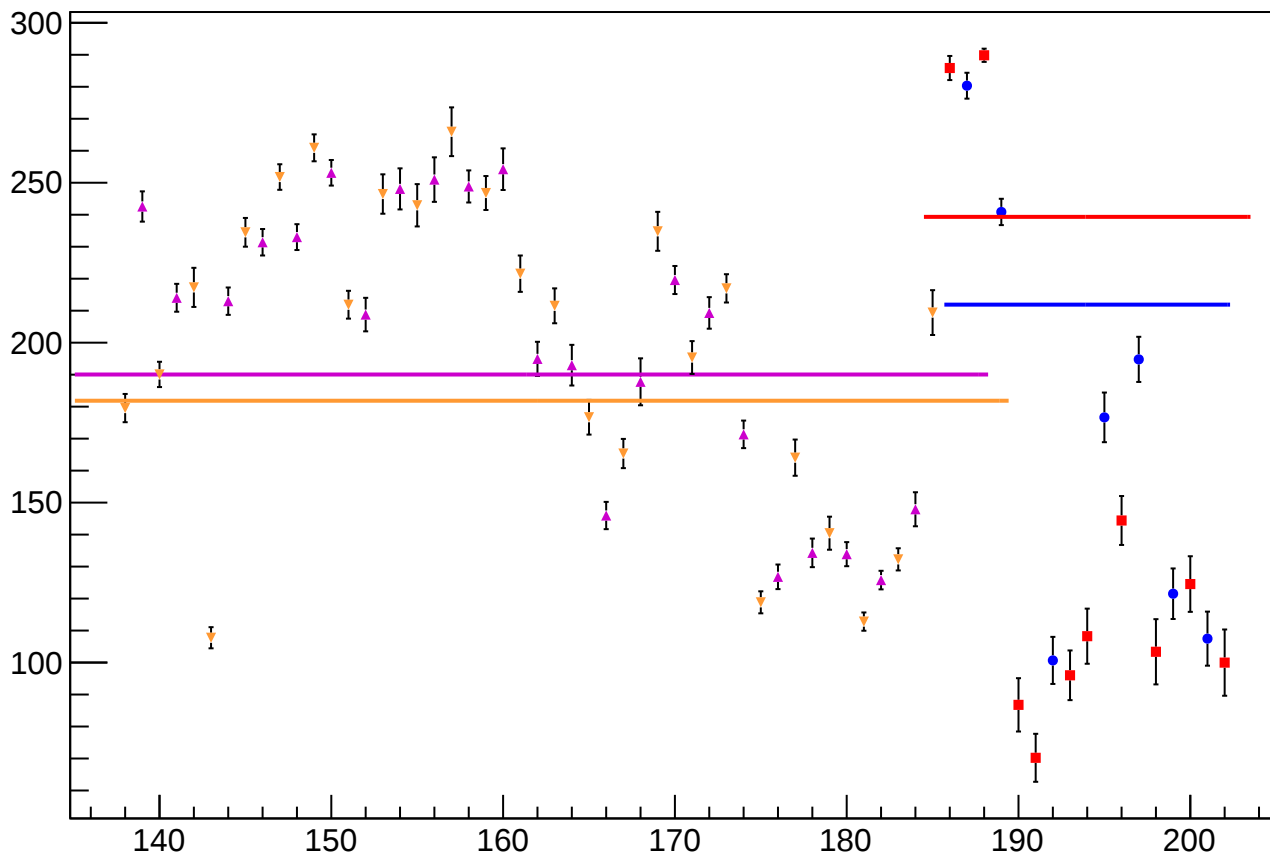
Right:  $94.610 \pm 0.039$   $\chi^2/\text{NDF}: 340361.6/52$

In:  $115.976 \pm 0.034$   $\chi^2/\text{NDF}: 463569.4/46$

Out:  $108.824 \pm 0.032$   $\chi^2/\text{NDF}: 1126550.3/53$

All:  $112.235 \pm 0.023$   $\chi^2/\text{NDF}: 1613668.9/100$

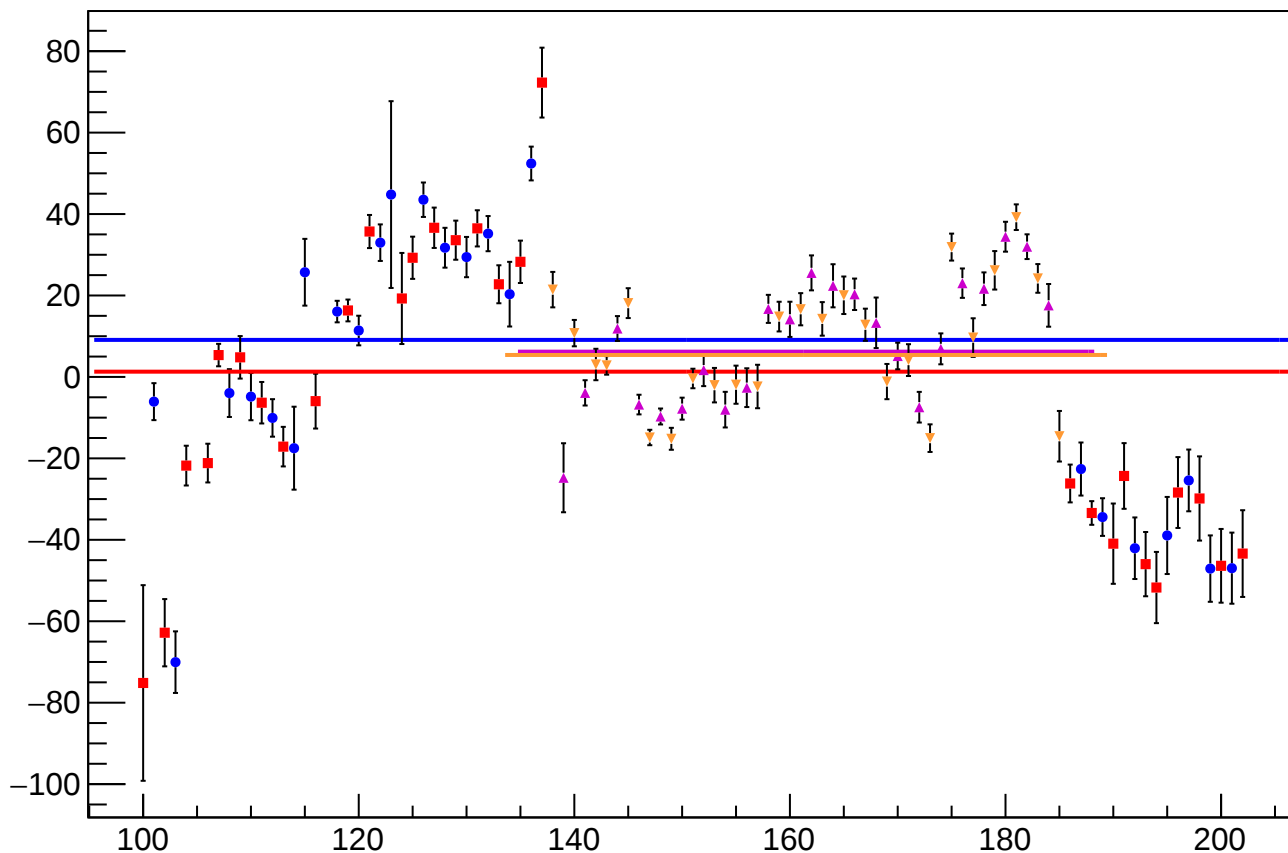
reg\_asym\_atl\_dd\_atr\_dd\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $211.892 \pm 2.207$   $\chi^2/\text{NDF}: 874.0/6$   
 Left Out:  $181.850 \pm 0.913$   $\chi^2/\text{NDF}: 3303.4/24$   
 Right Out:  $239.331 \pm 1.551$   $\chi^2/\text{NDF}: 2851.7/9$   
 Left In:  $190.048 \pm 0.953$   $\chi^2/\text{NDF}: 2438.4/22$

Left:  $185.775 \pm 0.659$   $\chi^2/\text{NDF}: 5780.3/47$   
 Right:  $230.260 \pm 1.269$   $\chi^2/\text{NDF}: 3829.2/16$   
 In:  $193.480 \pm 0.875$   $\chi^2/\text{NDF}: 3394.9/29$   
 Out:  $196.653 \pm 0.787$   $\chi^2/\text{NDF}: 7175.1/34$   
 All:  $195.234 \pm 0.585$   $\chi^2/\text{NDF}: 10577.3/64$

reg\_asym\_atl\_dd\_atr\_dd\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 9.094 $\pm$ 1.068  $\chi^2$ /NDF: 742.9/23

Left Out: 5.394 $\pm$ 0.688  $\chi^2$ /NDF: 526.5/24

Right Out: 1.292 $\pm$ 0.948  $\chi^2$ /NDF: 890.2/28

Left In: 6.206 $\pm$ 0.732  $\chi^2$ /NDF: 407.5/22

Left: 5.775 $\pm$ 0.501  $\chi^2$ /NDF: 934.7/47

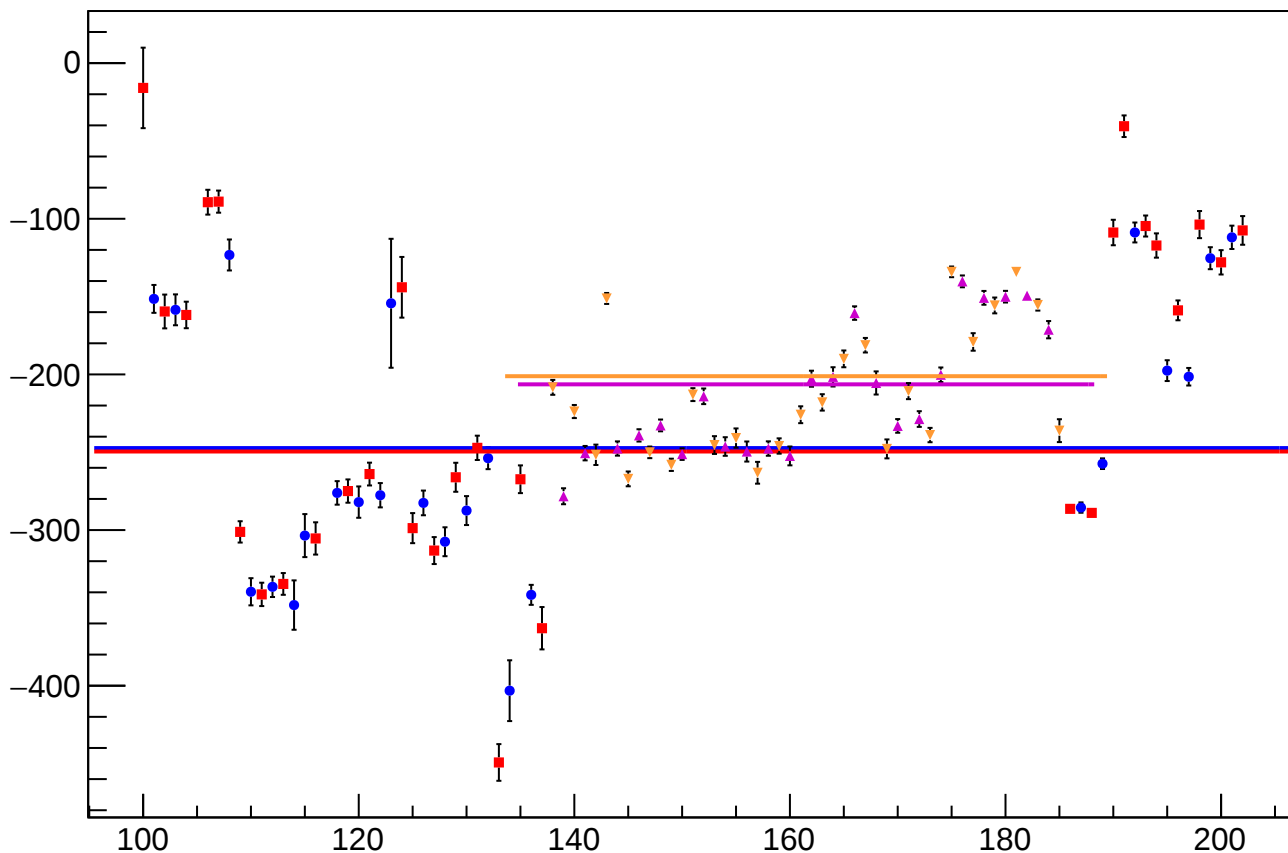
Right: 4.731 $\pm$ 0.709  $\chi^2$ /NDF: 1663.1/52

In: 7.129 $\pm$ 0.604  $\chi^2$ /NDF: 1155.4/46

Out: 3.978 $\pm$ 0.557  $\chi^2$ /NDF: 1429.0/53

All: 5.427 $\pm$ 0.409  $\chi^2$ /NDF: 2599.2/100

reg\_asym\_atl\_dd\_atr\_dd\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-247.332 \pm 1.413$   $\chi^2/\text{NDF}$ : 2465.2/23

Left Out:  $-201.144 \pm 0.918$   $\chi^2/\text{NDF}$ : 2488.8/24

Right Out:  $-249.523 \pm 1.080$   $\chi^2/\text{NDF}$ : 5667.1/28

Left In:  $-206.379 \pm 0.950$   $\chi^2/\text{NDF}$ : 2111.6/22

Left:  $-203.672 \pm 0.660$   $\chi^2/\text{NDF}$ : 4616.1/47

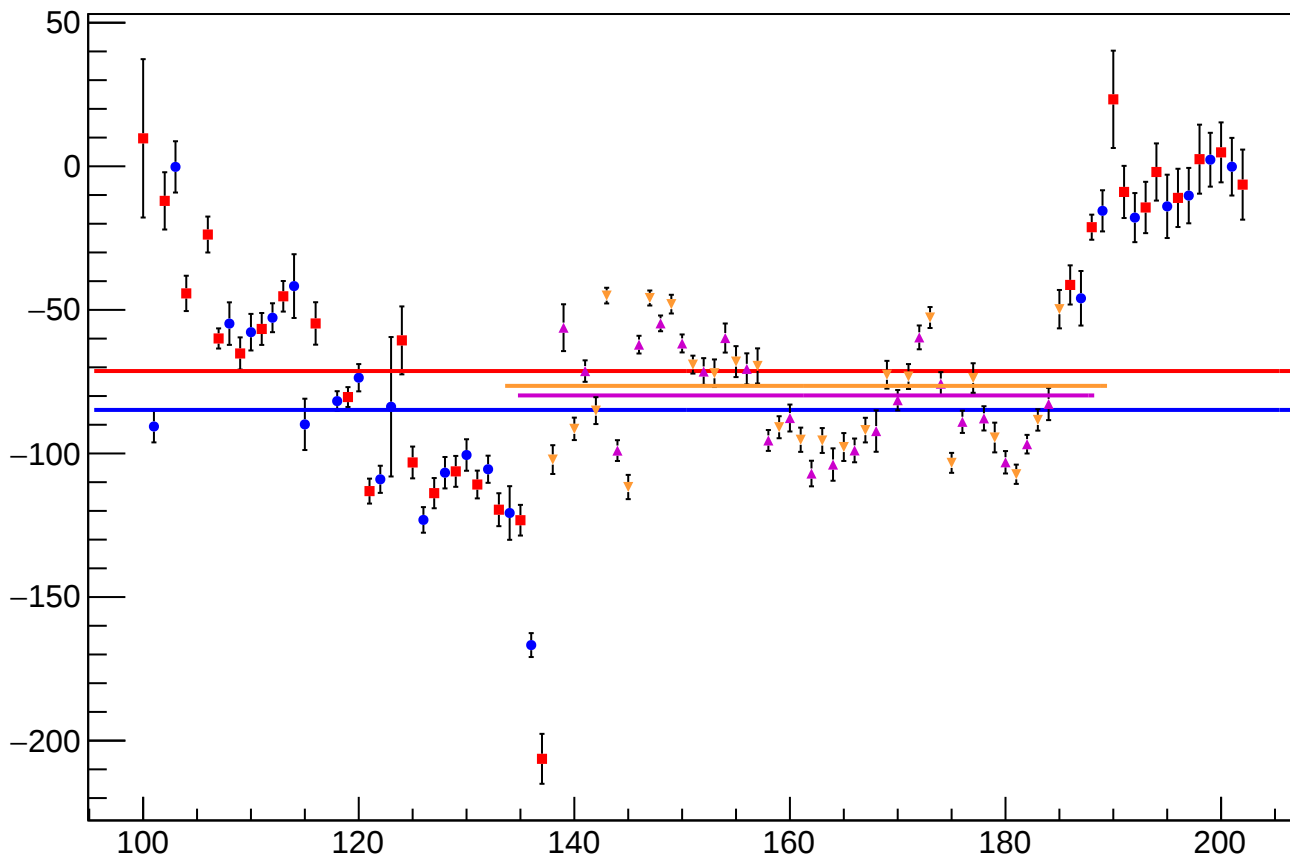
Right:  $-248.715 \pm 0.858$   $\chi^2/\text{NDF}$ : 8133.8/52

In:  $-219.119 \pm 0.788$   $\chi^2/\text{NDF}$ : 5155.4/46

Out:  $-221.433 \pm 0.699$   $\chi^2/\text{NDF}$ : 9321.0/53

All:  $-220.413 \pm 0.523$   $\chi^2/\text{NDF}$ : 14481.3/100

reg\_asym\_atl\_dd\_atr\_dd\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-84.838 \pm 1.251$   $\chi^2/\text{NDF}: 1162.9/23$

Left Out:  $-76.460 \pm 0.797$   $\chi^2/\text{NDF}: 781.3/24$

Right Out:  $-71.296 \pm 1.135$   $\chi^2/\text{NDF}: 1355.7/28$

Left In:  $-79.792 \pm 0.840$   $\chi^2/\text{NDF}: 412.3/22$

Left:  $-78.038 \pm 0.578$   $\chi^2/\text{NDF}: 1201.9/47$

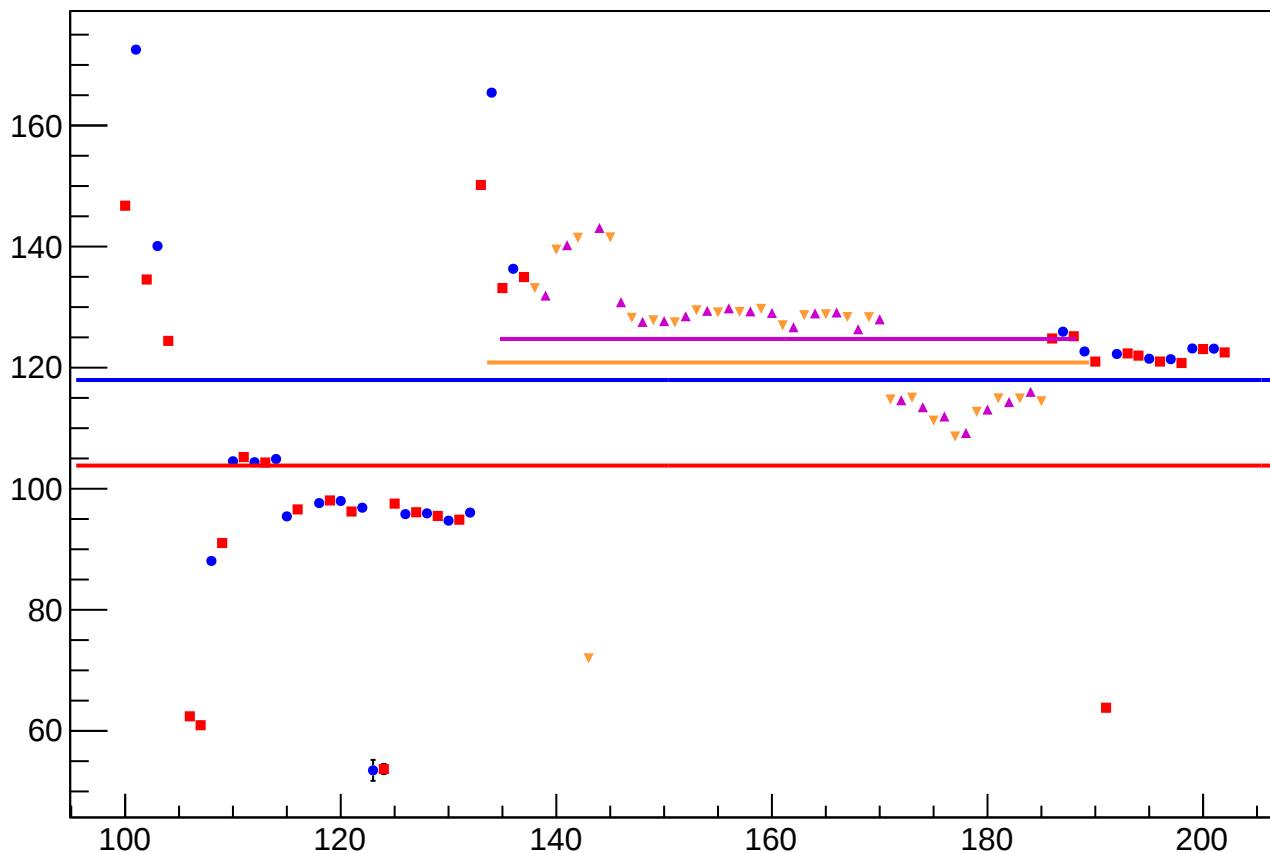
Right:  $-77.410 \pm 0.841$   $\chi^2/\text{NDF}: 2582.8/52$

In:  $-81.359 \pm 0.697$   $\chi^2/\text{NDF}: 1586.4/46$

Out:  $-74.756 \pm 0.652$   $\chi^2/\text{NDF}: 2150.8/53$

All:  $-77.837 \pm 0.476$   $\chi^2/\text{NDF}: 3785.1/100$

reg\_asym\_atl\_dd\_atr\_dd\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $117.958 \pm 0.066$   $\chi^2/\text{NDF}$ : 107867.7/23

Left Out:  $120.855 \pm 0.038$   $\chi^2/\text{NDF}$ : 182759.1/24

Right Out:  $103.824 \pm 0.056$   $\chi^2/\text{NDF}$ : 235682.4/28

Left In:  $124.738 \pm 0.039$   $\chi^2/\text{NDF}$ : 51298.3/22

Left:  $122.737 \pm 0.027$   $\chi^2/\text{NDF}$ : 239101.1/47

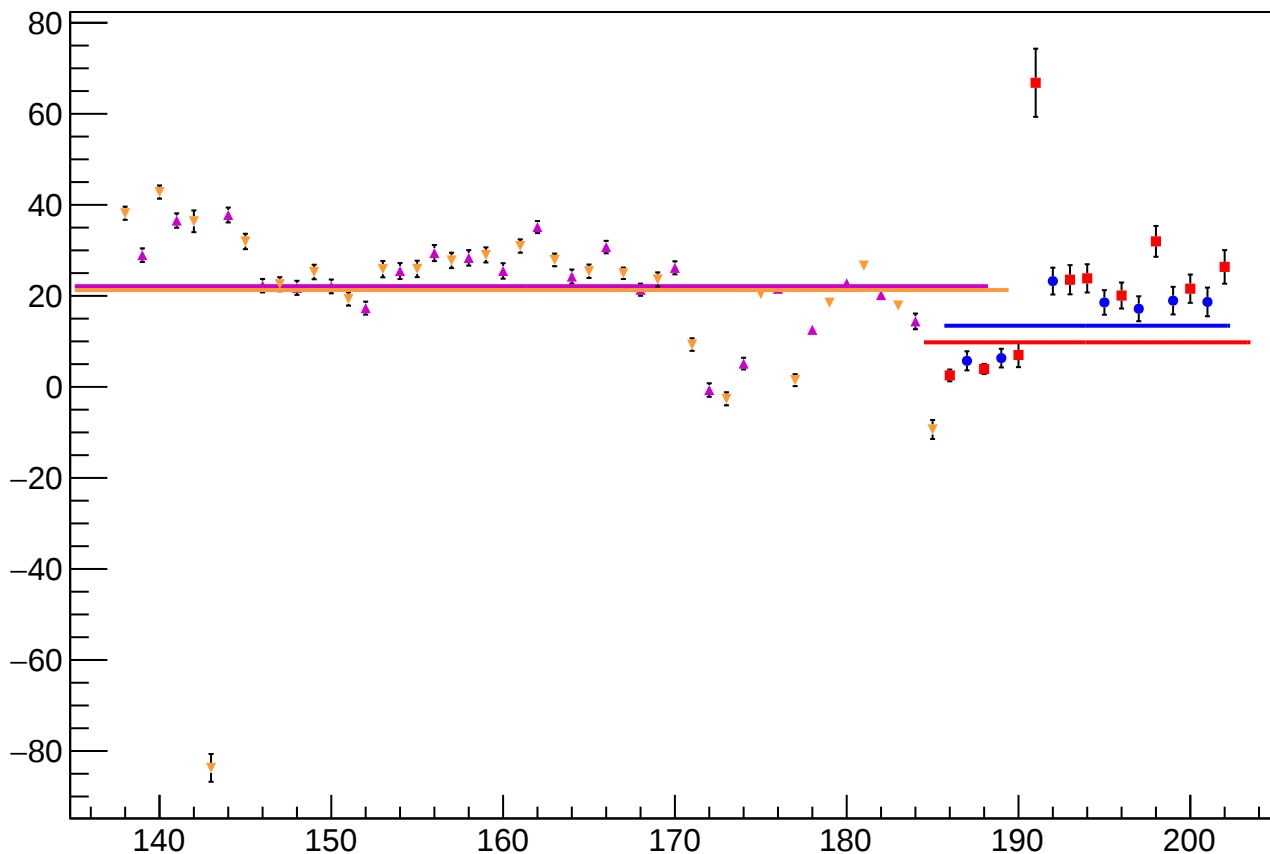
Right:  $109.787 \pm 0.043$   $\chi^2/\text{NDF}$ : 370248.3/52

In:  $122.958 \pm 0.034$   $\chi^2/\text{NDF}$ : 167000.6/46

Out:  $115.499 \pm 0.032$   $\chi^2/\text{NDF}$ : 481429.4/53

All:  $118.977 \pm 0.023$   $\chi^2/\text{NDF}$ : 674563.9/100

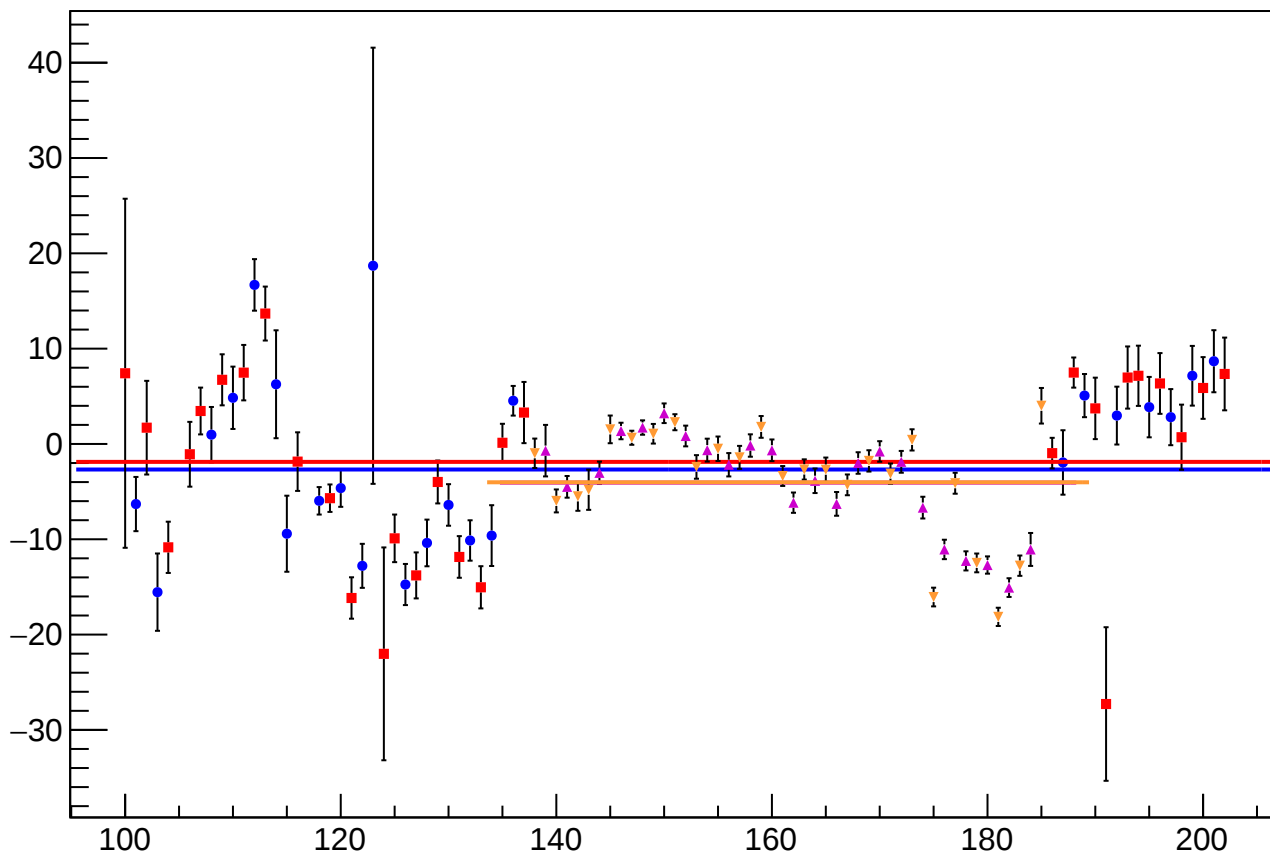
reg\_asym\_atl\_dd\_atr\_dd\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 13.444 $\pm$ 0.972  $\chi^2$ /NDF: 48.1/6  
 Left Out: 21.282 $\pm$ 0.282  $\chi^2$ /NDF:2600.5/24  
 Right Out: 9.792 $\pm$ 0.683  $\chi^2$ /NDF: 247.4/9  
 Left In: 22.127 $\pm$ 0.285  $\chi^2$ /NDF:900.2/22

Left: 21.700 $\pm$ 0.201  $\chi^2$ /NDF: 3505.2/47  
 Right: 10.998 $\pm$ 0.559  $\chi^2$ /NDF: 304.9/16  
 In: 21.437 $\pm$ 0.274  $\chi^2$ /NDF:1021.8/29  
 Out: 19.602 $\pm$ 0.261  $\chi^2$ /NDF:3089.9/34  
 All: 20.475 $\pm$ 0.189  $\chi^2$ /NDF: 4135.2/64

reg\_asym\_atl\_dd\_atr\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-2.681 \pm 0.521$   $\chi^2/\text{NDF}$ : 229.1/23

Left Out:  $-4.022 \pm 0.223$   $\chi^2/\text{NDF}$ : 734.1/24

Right Out:  $-1.880 \pm 0.479$   $\chi^2/\text{NDF}$ : 299.2/28

Left In:  $-4.059 \pm 0.228$   $\chi^2/\text{NDF}$ : 577.2/22

Left:  $-4.040 \pm 0.159$   $\chi^2/\text{NDF}$ : 1311.4/47

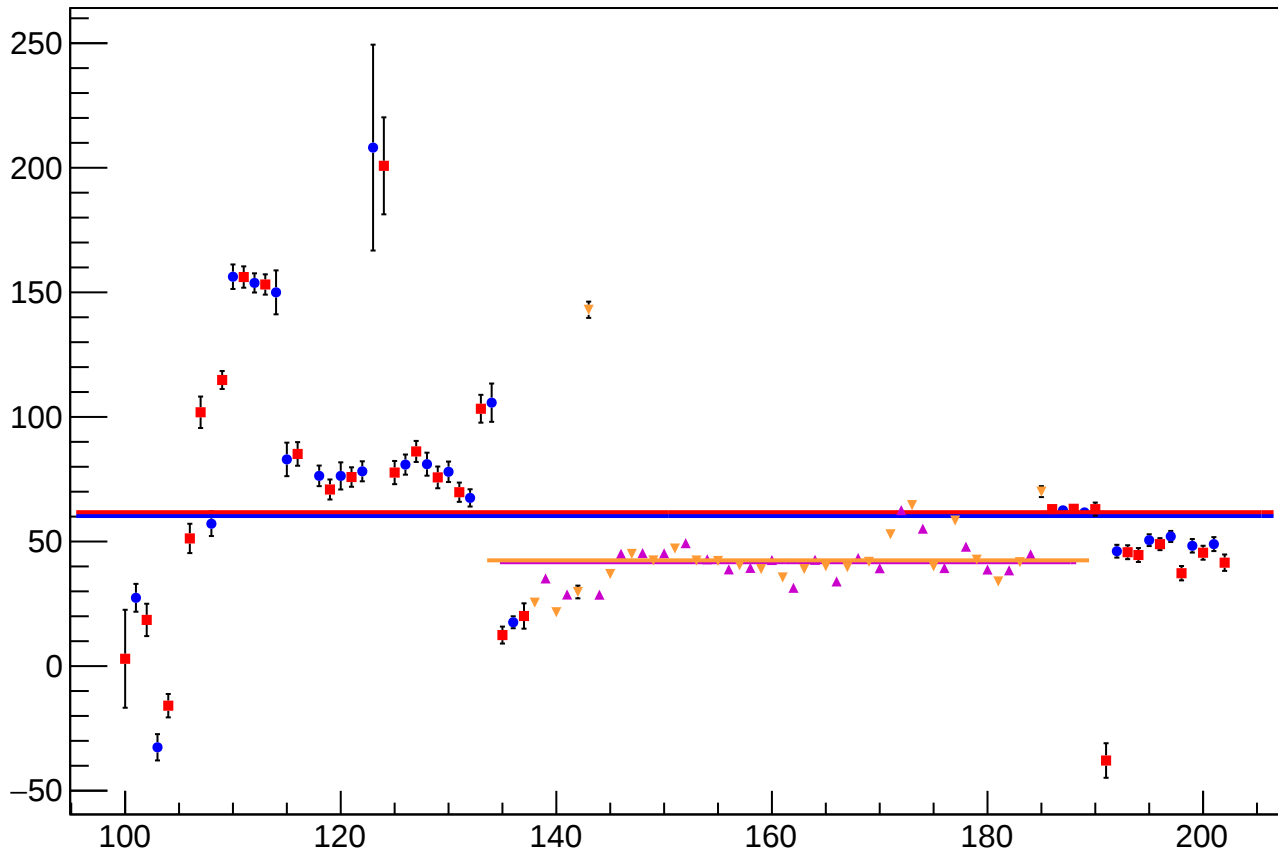
Right:  $-2.247 \pm 0.353$   $\chi^2/\text{NDF}$ : 529.6/52

In:  $-3.837 \pm 0.209$   $\chi^2/\text{NDF}$ : 812.2/46

Out:  $-3.640 \pm 0.202$   $\chi^2/\text{NDF}$ : 1049.8/53

All:  $-3.735 \pm 0.145$   $\chi^2/\text{NDF}$ : 1862.5/100

reg\_asym\_atl\_dd\_atr\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $60.234 \pm 0.659$   $\chi^2/\text{NDF}$ : 2006.7/23

Left Out:  $42.452 \pm 0.282$   $\chi^2/\text{NDF}$ : 2016.0/24

Right Out:  $61.780 \pm 0.502$   $\chi^2/\text{NDF}$ : 2513.8/28

Left In:  $41.695 \pm 0.284$   $\chi^2/\text{NDF}$ : 630.2/22

Left:  $42.077 \pm 0.200$   $\chi^2/\text{NDF}$ : 2649.8/47

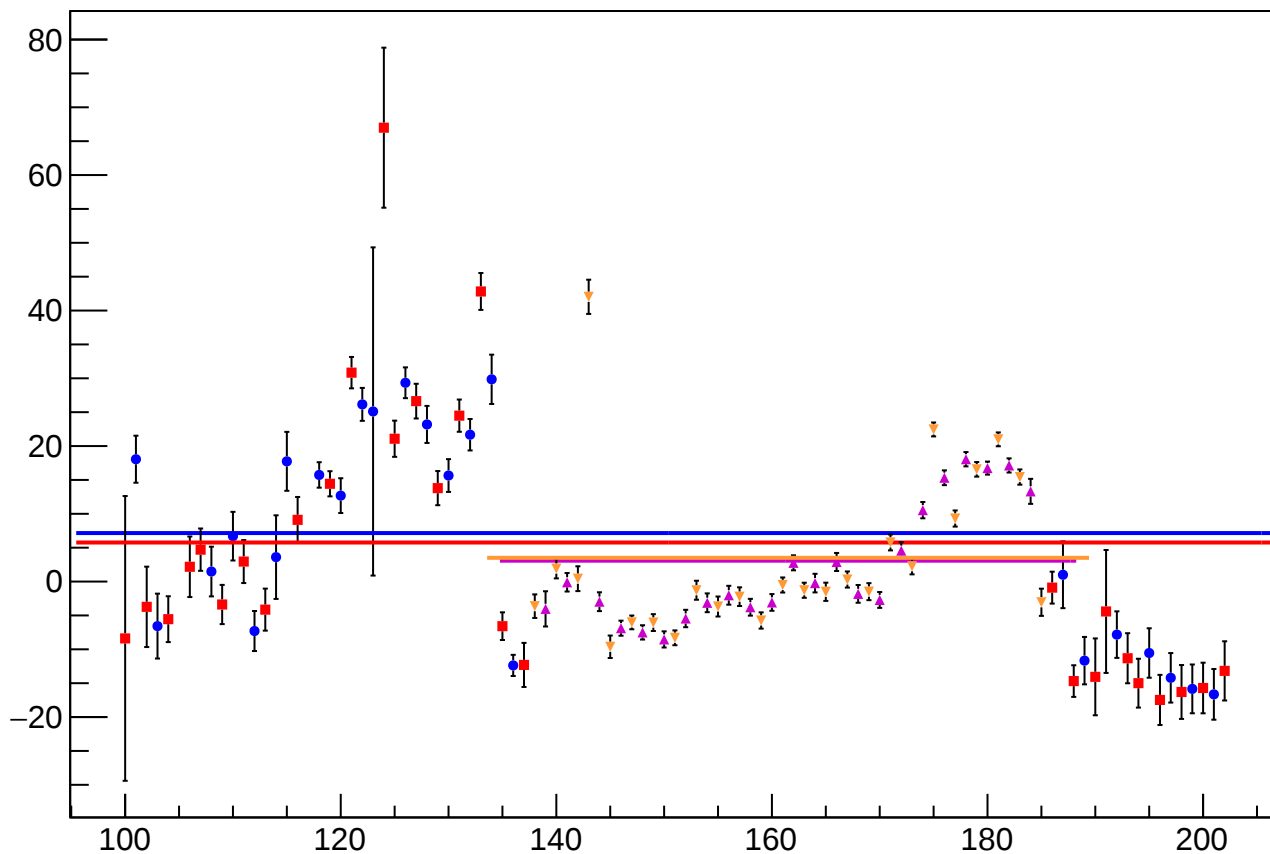
Right:  $61.212 \pm 0.399$   $\chi^2/\text{NDF}$ : 4524.1/52

In:  $44.603 \pm 0.261$   $\chi^2/\text{NDF}$ : 3304.9/46

Out:  $47.088 \pm 0.246$   $\chi^2/\text{NDF}$ : 5657.1/53

All:  $45.920 \pm 0.179$   $\chi^2/\text{NDF}$ : 9010.0/100

reg\_asym\_atl\_dd\_atr\_dd\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $7.158 \pm 0.603$   $\chi^2/\text{NDF}$ : 702.8/23

Left Out:  $3.505 \pm 0.252$   $\chi^2/\text{NDF}$ : 1691.3/24

Right Out:  $5.763 \pm 0.570$   $\chi^2/\text{NDF}$ : 901.5/28

Left In:  $3.081 \pm 0.257$   $\chi^2/\text{NDF}$ : 1265.7/22

Left:  $3.297 \pm 0.180$   $\chi^2/\text{NDF}$ : 2958.4/47

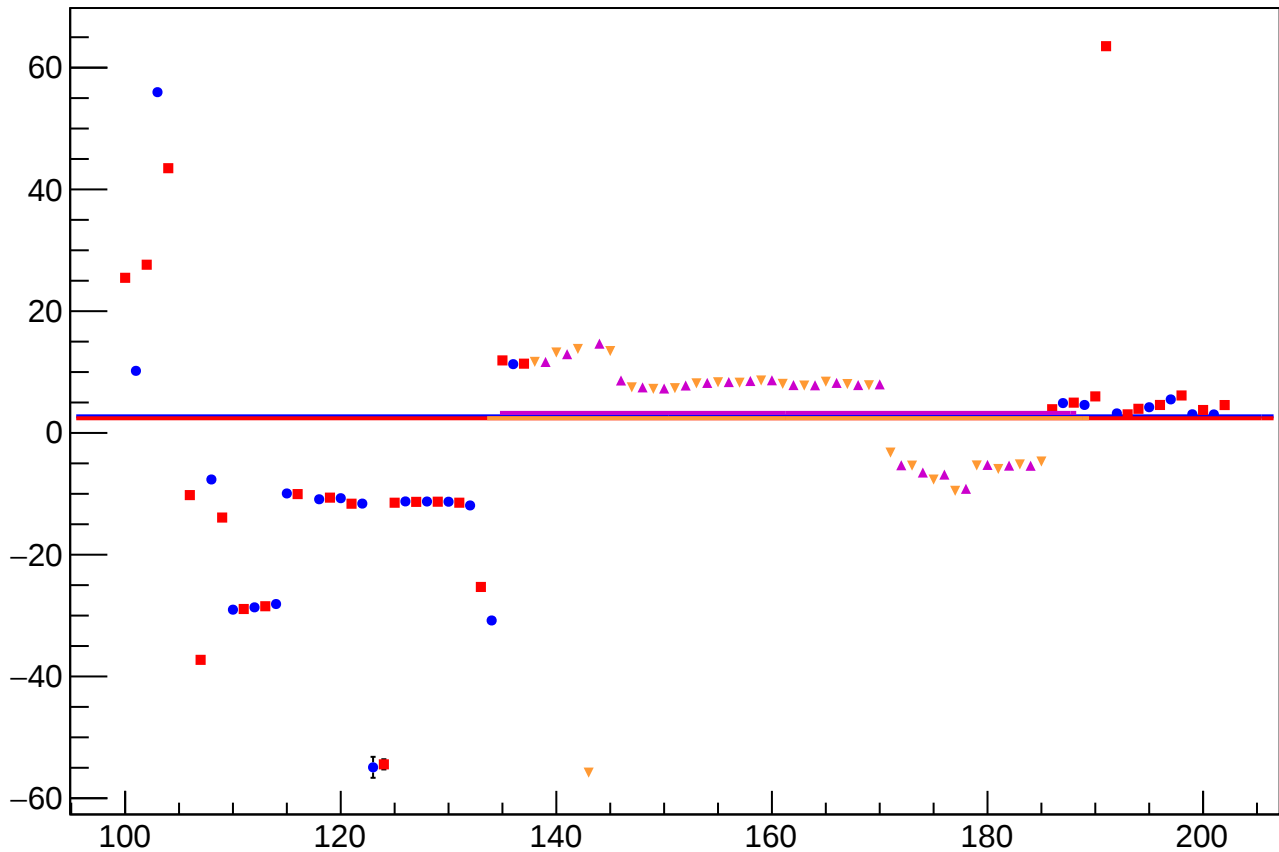
Right:  $6.422 \pm 0.414$   $\chi^2/\text{NDF}$ : 1607.1/52

In:  $3.709 \pm 0.236$   $\chi^2/\text{NDF}$ : 2007.2/46

Out:  $3.875 \pm 0.231$   $\chi^2/\text{NDF}$ : 2605.9/53

All:  $3.794 \pm 0.165$   $\chi^2/\text{NDF}$ : 4613.4/100

reg\_asym\_atl\_dd\_atr\_dd\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 2.726 $\pm$ 0.029  $\chi^2$ /NDF: 359210.1/23

Left Out: 2.425 $\pm$ 0.012  $\chi^2$ /NDF: 616382.5/24

Right Out: 2.406 $\pm$ 0.027  $\chi^2$ /NDF: 431242.9/28

Left In: 3.293 $\pm$ 0.012  $\chi^2$ /NDF: 404323.8/22

Left: 2.855 $\pm$ 0.008  $\chi^2$ /NDF: 1023497.1/47

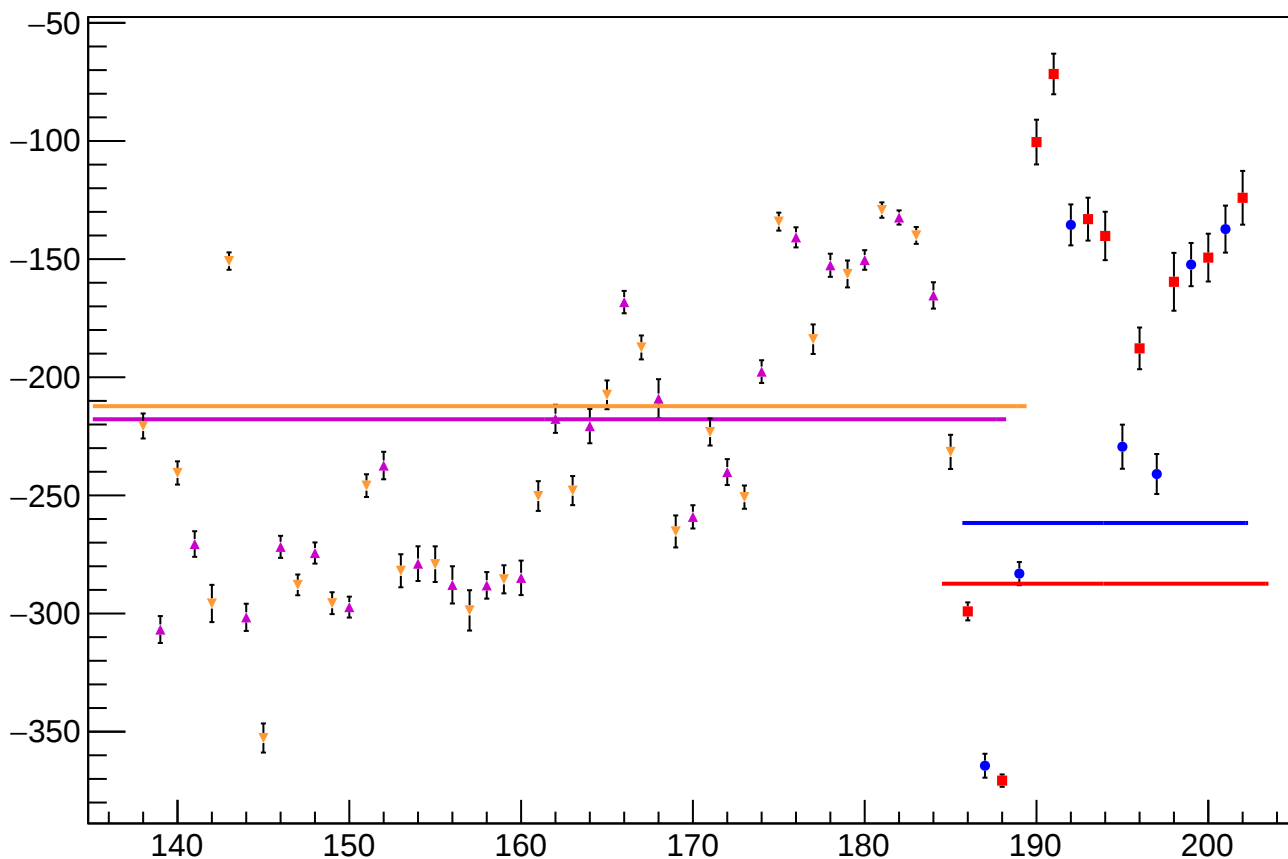
Right: 2.556 $\pm$ 0.020  $\chi^2$ /NDF: 790518.0/52

In: 3.213 $\pm$ 0.011  $\chi^2$ /NDF: 763864.8/46

Out: 2.422 $\pm$ 0.011  $\chi^2$ /NDF: 1047625.8/53

All: 2.811 $\pm$ 0.008  $\chi^2$ /NDF: 1814209.7/100

reg\_asym\_atl\_avg\_atr\_avg\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-261.670 \pm 2.659$   $\chi^2/\text{NDF}$ : 960.3/6

Left Out:  $-212.231 \pm 1.029$   $\chi^2/\text{NDF}$ : 3875.4/24

Right Out:  $-287.375 \pm 1.829$   $\chi^2/\text{NDF}$ : 3171.2/9

Left In:  $-217.779 \pm 1.067$   $\chi^2/\text{NDF}$ : 3448.9/22

Left:  $-214.906 \pm 0.741$   $\chi^2/\text{NDF}$ : 7338.3/47

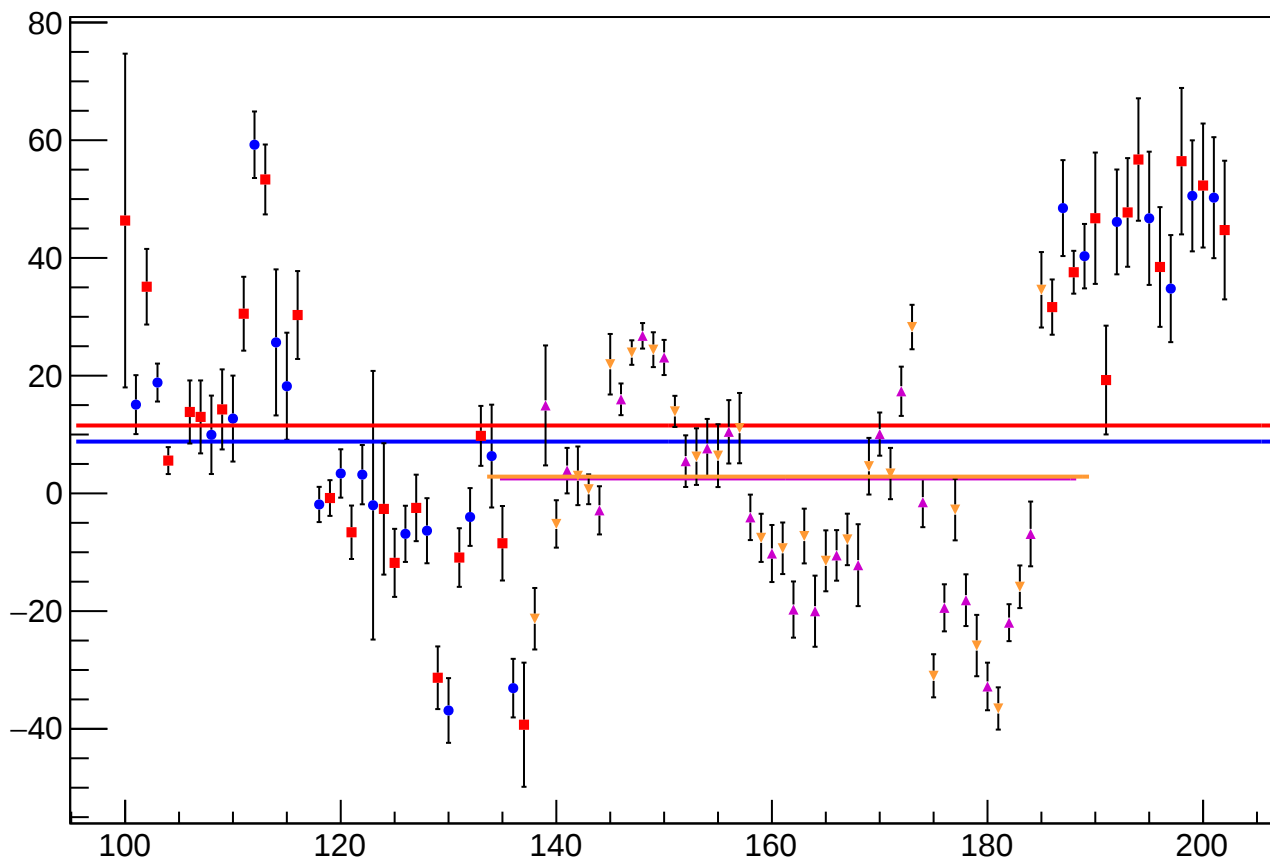
Right:  $-279.115 \pm 1.507$   $\chi^2/\text{NDF}$ : 4194.9/16

In:  $-223.866 \pm 0.990$   $\chi^2/\text{NDF}$ : 4644.0/29

Out:  $-230.302 \pm 0.897$   $\chi^2/\text{NDF}$ : 8327.9/34

All:  $-227.400 \pm 0.665$   $\chi^2/\text{NDF}$ : 12995.1/64

reg\_asym\_atl\_avg\_atr\_avg\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $8.801 \pm 1.158$   $\chi^2/\text{NDF}: 404.7/23$

Left Out:  $2.848 \pm 0.775$   $\chi^2/\text{NDF}: 582.1/24$

Right Out:  $11.535 \pm 1.032$   $\chi^2/\text{NDF}: 419.6/28$

Left In:  $2.540 \pm 0.822$   $\chi^2/\text{NDF}: 473.6/22$

Left:  $2.703 \pm 0.564$   $\chi^2/\text{NDF}: 1055.8/47$

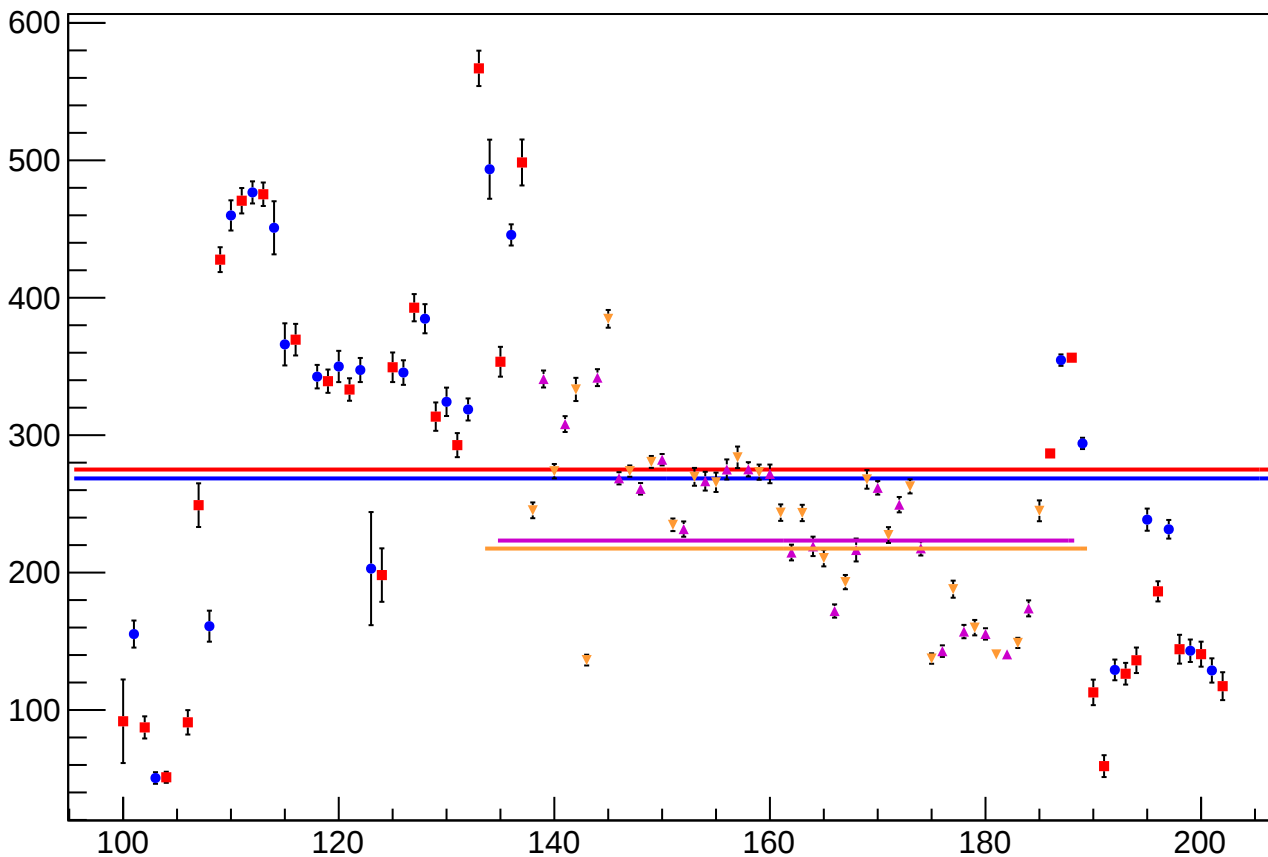
Right:  $10.325 \pm 0.770$   $\chi^2/\text{NDF}: 827.5/52$

In:  $4.640 \pm 0.671$   $\chi^2/\text{NDF}: 897.8/46$

Out:  $5.979 \pm 0.620$   $\chi^2/\text{NDF}: 1047.1/53$

All:  $5.363 \pm 0.455$   $\chi^2/\text{NDF}: 1947.0/100$

reg\_asym\_atl\_avg\_atr\_avg\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 268.516 $\pm$ 1.572  $\chi^2$ /NDF: 6433.7/23

Left Out: 217.484 $\pm$ 1.032  $\chi^2$ /NDF:3769.5/24

Right Out: 274.994 $\pm$ 1.222  $\chi^2$ /NDF: 10415.0/28

Left In: 223.309 $\pm$ 1.062  $\chi^2$ /NDF:3378.0/22

Left: 220.314 $\pm$ 0.740  $\chi^2$ /NDF: 7163.0/47

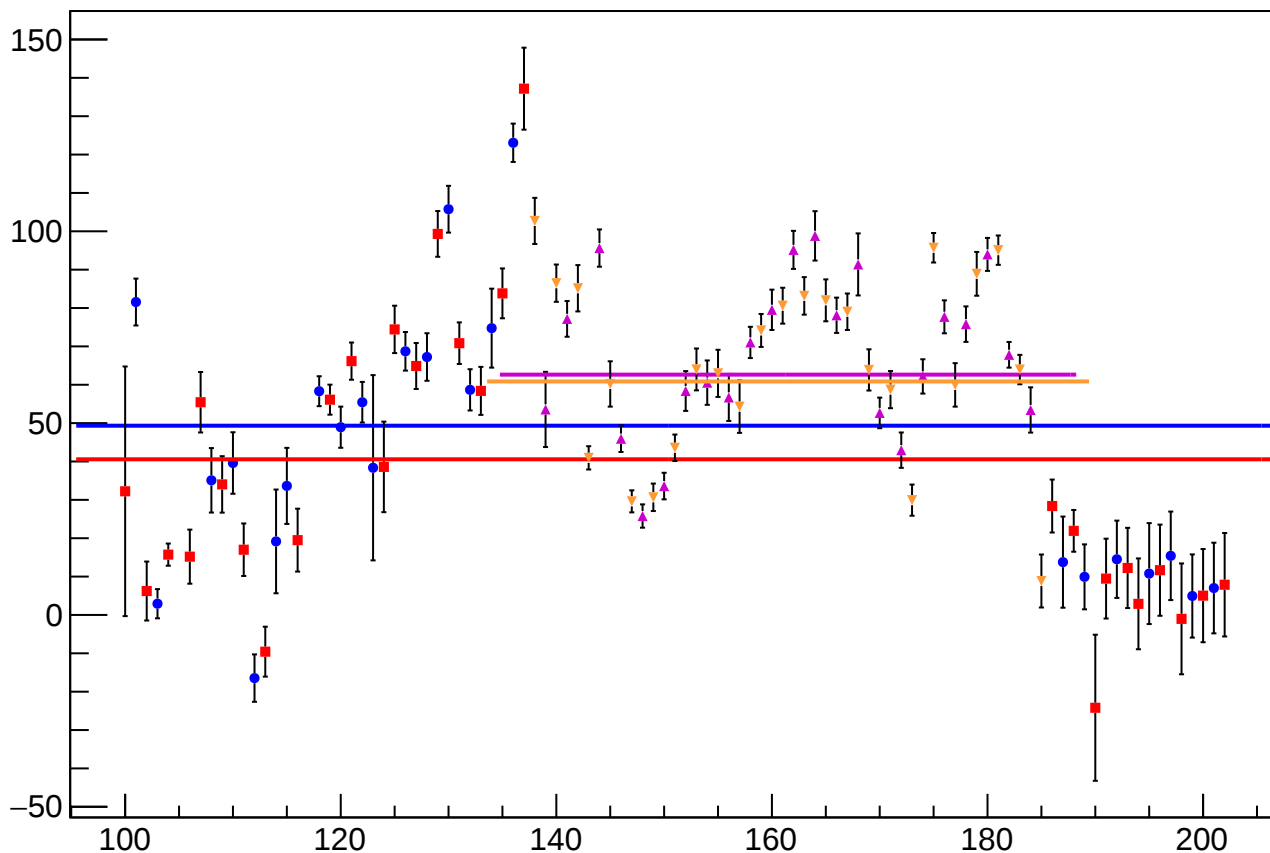
Right: 272.555 $\pm$ 0.965  $\chi^2$ /NDF: 16859.3/52

In: 237.473 $\pm$ 0.880  $\chi^2$ /NDF:10379.5/46

Out: 241.442 $\pm$ 0.789  $\chi^2$ /NDF:15477.4/53

All: 239.674 $\pm$ 0.587  $\chi^2$ /NDF: 25868.2/100

reg\_asym\_atl\_avg\_atr\_avg\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $49.329 \pm 1.359$   $\chi^2/\text{NDF}: 733.7/23$

Left Out:  $60.863 \pm 0.897$   $\chi^2/\text{NDF}: 731.6/24$

Right Out:  $40.571 \pm 1.242$   $\chi^2/\text{NDF}: 623.2/28$

Left In:  $62.640 \pm 0.943$   $\chi^2/\text{NDF}: 515.4/22$

Left:  $61.707 \pm 0.650$   $\chi^2/\text{NDF}: 1248.9/47$

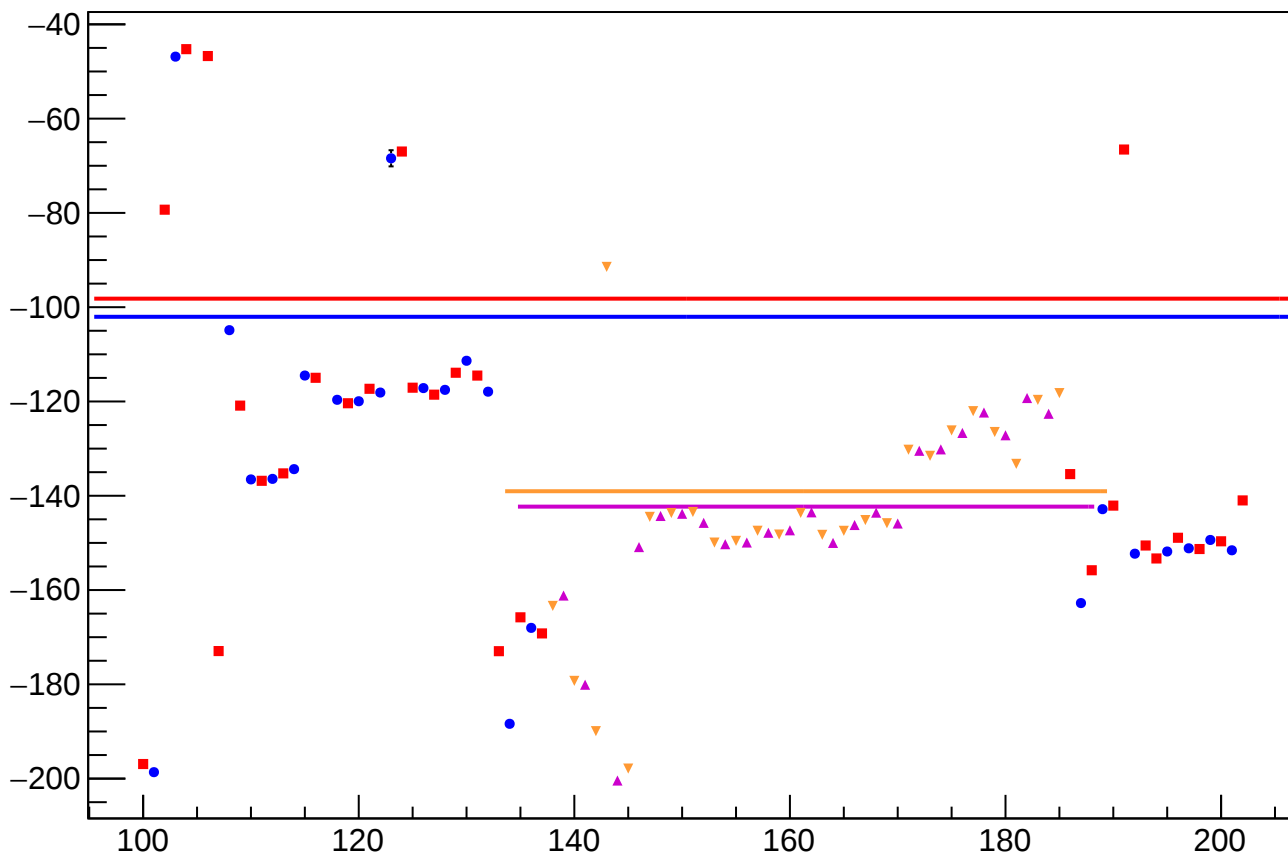
Right:  $44.556 \pm 0.917$   $\chi^2/\text{NDF}: 1379.5/52$

In:  $58.315 \pm 0.775$   $\chi^2/\text{NDF}: 1313.9/46$

Out:  $53.908 \pm 0.727$   $\chi^2/\text{NDF}: 1530.4/53$

All:  $55.972 \pm 0.530$   $\chi^2/\text{NDF}: 2861.5/100$

reg\_asym\_atl\_avg\_atr\_avg\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: -102.037 $\pm$ 0.061  $\chi^2$ /NDF: 679581.6/23

Left Out: -139.040 $\pm$ 0.043  $\chi^2$ /NDF:258113.4/24

Right Out: -98.189 $\pm$ 0.056  $\chi^2$ /NDF: 716196.7/28

Left In: -142.305 $\pm$ 0.044  $\chi^2$ /NDF:143351.8/22

Left: -140.627 $\pm$ 0.031  $\chi^2$ /NDF: 404285.9/47

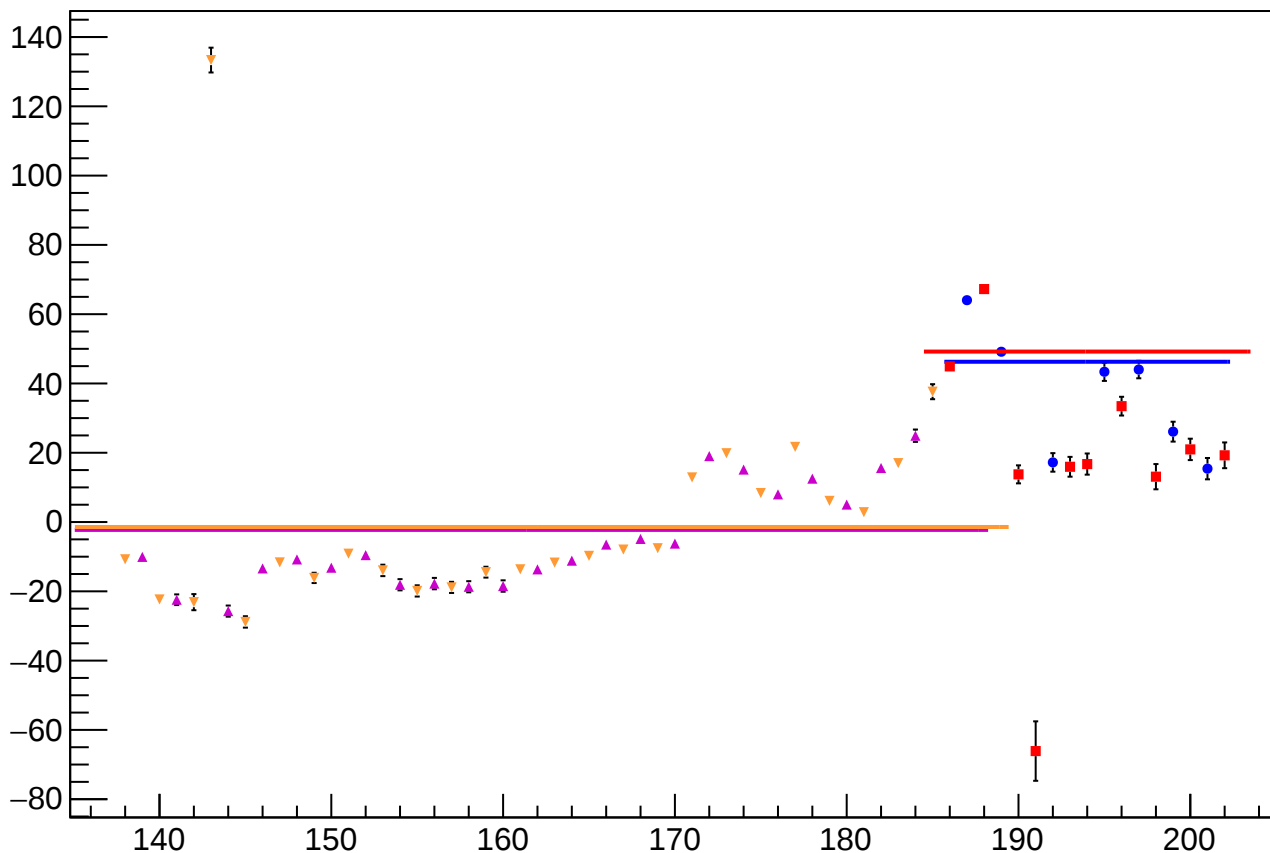
Right: -99.962 $\pm$ 0.041  $\chi^2$ /NDF: 1397916.0/52

In: -128.529 $\pm$ 0.036  $\chi^2$ /NDF:1108462.1/46

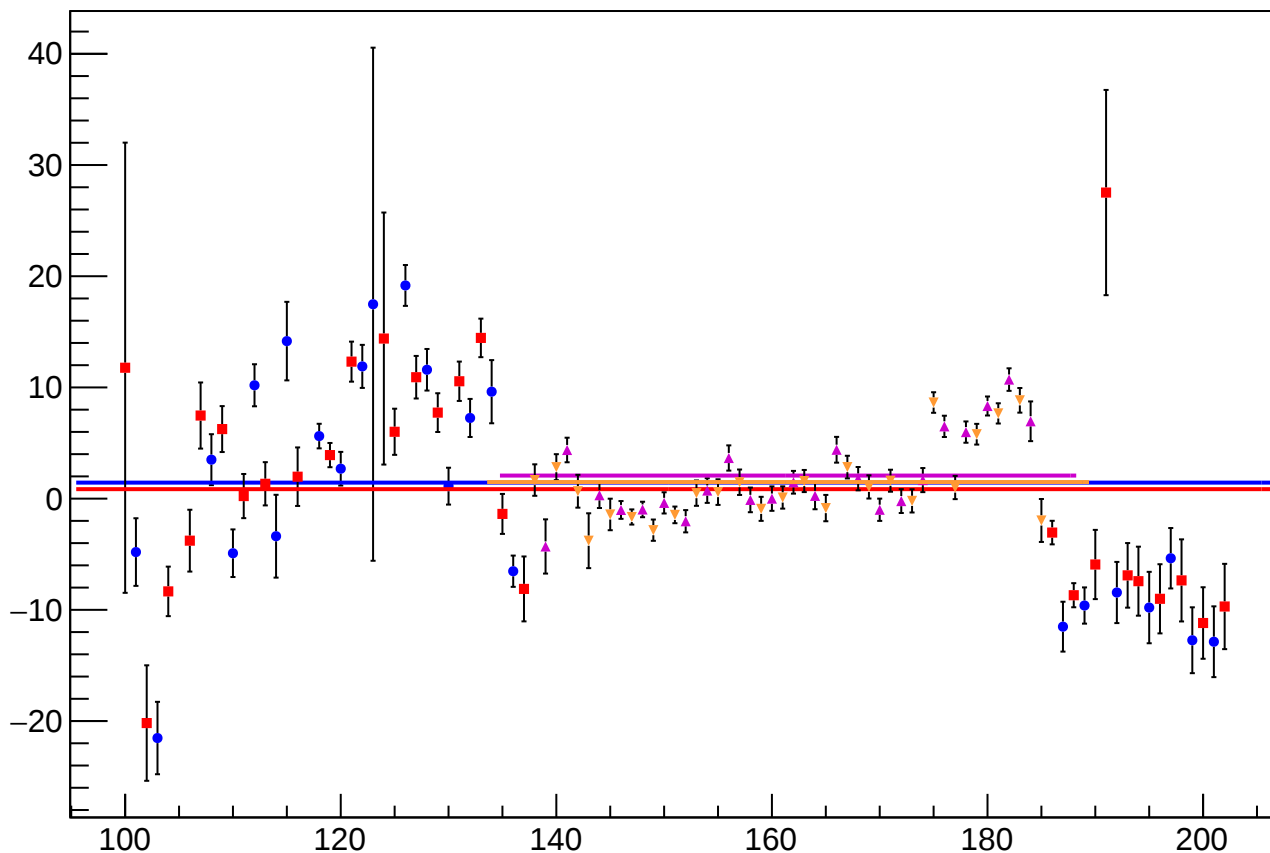
Out: -124.111 $\pm$ 0.034  $\chi^2$ /NDF:1306168.7/53

All: -126.219 $\pm$ 0.025  $\chi^2$ /NDF: 2422617.8/100

reg\_asym\_atl\_avg\_atr\_avg\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



reg\_asym\_atl\_avg\_atr\_avg\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 1.440 $\pm$ 0.421  $\chi^2$ /NDF: 472.9/23

Left Out: 1.491 $\pm$ 0.210  $\chi^2$ /NDF:259.1/24

Right Out: 0.852 $\pm$ 0.381  $\chi^2$ /NDF: 405.7/28

Left In: 2.075 $\pm$ 0.215  $\chi^2$ /NDF:274.6/22

Left: 1.776 $\pm$ 0.150  $\chi^2$ /NDF: 537.4/47

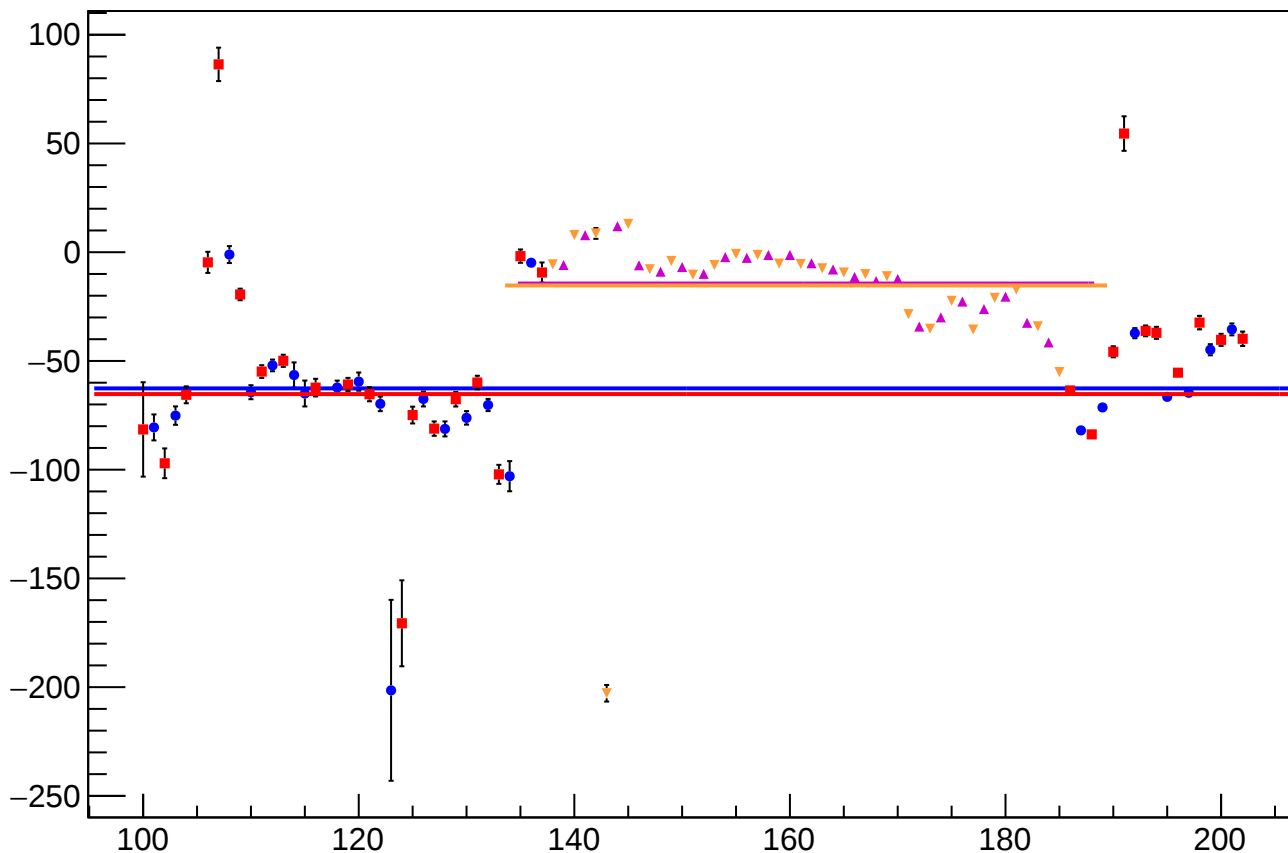
Right: 1.117 $\pm$ 0.283  $\chi^2$ /NDF: 879.7/52

In: 1.943 $\pm$ 0.192  $\chi^2$ /NDF:749.3/46

Out: 1.342 $\pm$ 0.184  $\chi^2$ /NDF:666.9/53

All: 1.630 $\pm$ 0.133  $\chi^2$ /NDF: 1421.3/100

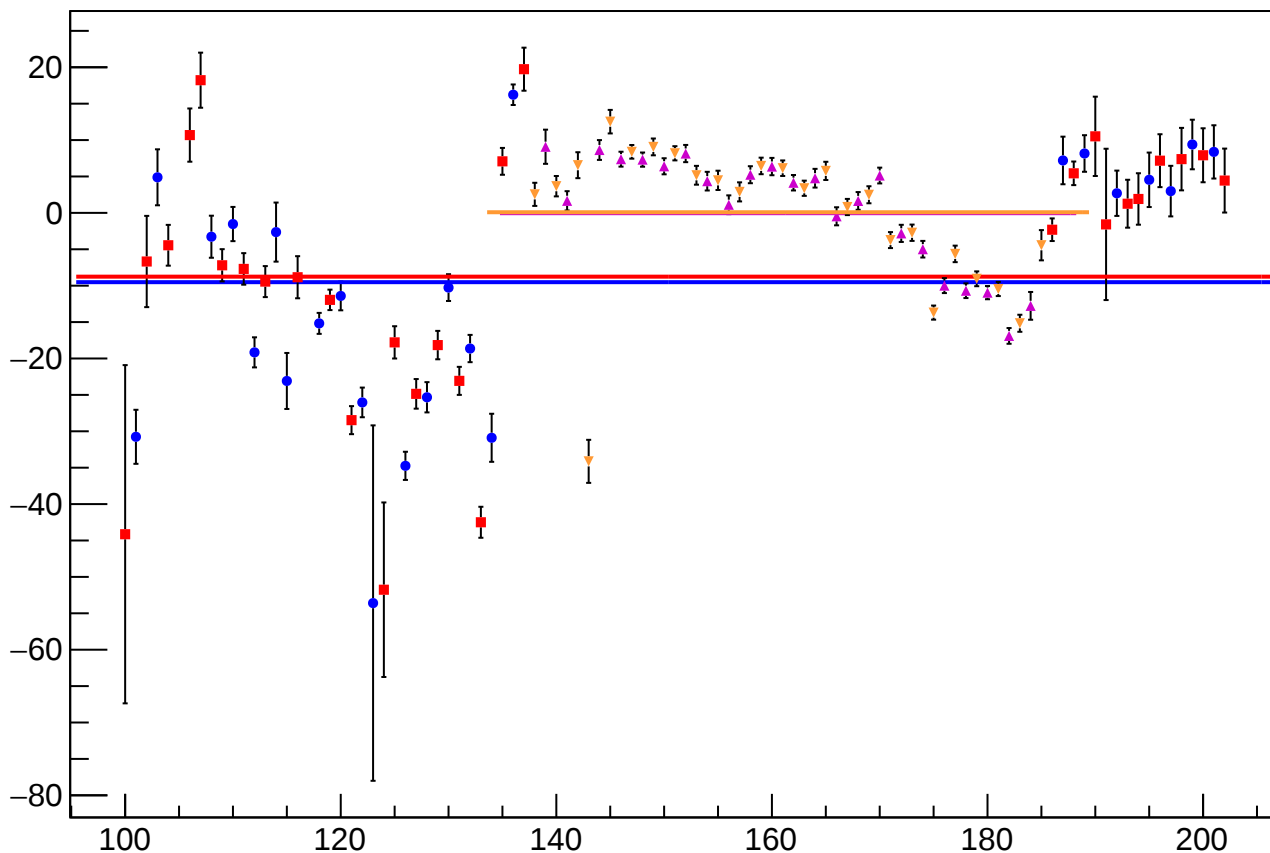
reg\_asym\_atl\_avg\_atr\_avg\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: -62.622+/-0.522  $\chi^2/\text{NDF}$ : 1710.3/23  
 Left Out: -15.279+/-0.267  $\chi^2/\text{NDF}$ : 4820.1/24  
 Right Out: -65.235+/-0.378  $\chi^2/\text{NDF}$ : 3301.3/28  
 Left In: -14.406+/-0.269  $\chi^2/\text{NDF}$ : 2032.4/22

Left: -14.846+/-0.189  $\chi^2/\text{NDF}$ : 6857.8/47  
 Right: -64.337+/-0.306  $\chi^2/\text{NDF}$ : 5028.1/52  
 In: -24.533+/-0.239  $\chi^2/\text{NDF}$ : 10485.6/46  
 Out: -31.904+/-0.218  $\chi^2/\text{NDF}$ : 19789.6/53  
 All: -28.561+/-0.161  $\chi^2/\text{NDF}$ : 30794.1/100

reg\_asym\_atl\_avg\_atr\_avg\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-9.518 \pm 0.492$   $\chi^2/\text{NDF}$ : 985.3/23

Left Out:  $0.087 \pm 0.238$   $\chi^2/\text{NDF}$ : 1172.3/24

Right Out:  $-8.760 \pm 0.461$   $\chi^2/\text{NDF}$ : 971.3/28

Left In:  $-0.044 \pm 0.243$   $\chi^2/\text{NDF}$ : 1028.2/22

Left:  $0.023 \pm 0.170$   $\chi^2/\text{NDF}$ : 2200.6/47

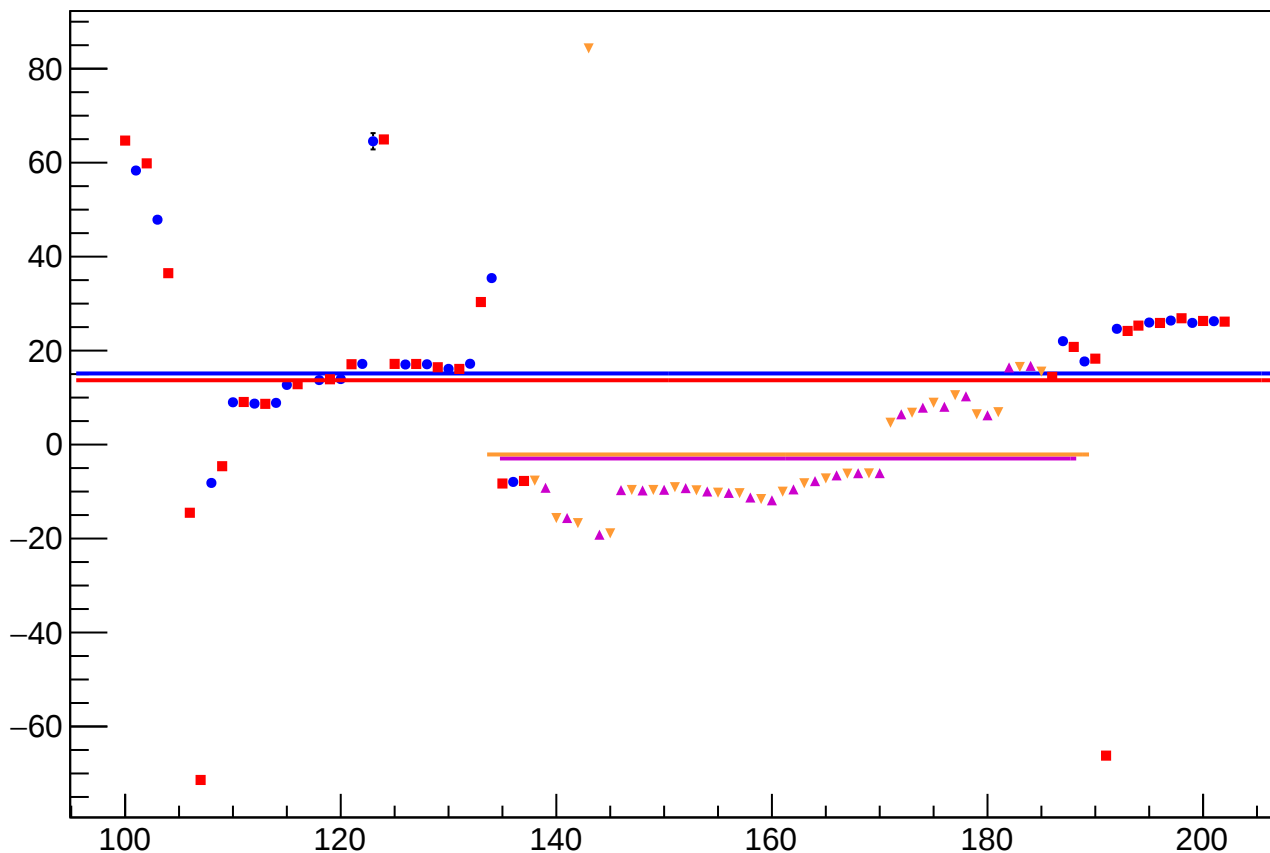
Right:  $-9.114 \pm 0.336$   $\chi^2/\text{NDF}$ : 1957.9/52

In:  $-1.902 \pm 0.218$   $\chi^2/\text{NDF}$ : 2311.6/46

Out:  $-1.780 \pm 0.212$   $\chi^2/\text{NDF}$ : 2434.6/53

All:  $-1.839 \pm 0.152$   $\chi^2/\text{NDF}$ : 4746.3/100

reg\_asym\_atl\_avg\_atr\_avg\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 15.136+/-0.025  $\chi^2/\text{NDF}$ : 457676.3/23

Left Out: -2.105+/-0.011  $\chi^2/\text{NDF}$ : 1093120.2/24

Right Out: 13.691+/-0.024  $\chi^2/\text{NDF}$ : 735925.9/28

Left In: -2.959+/-0.011  $\chi^2/\text{NDF}$ : 763000.9/22

Left: -2.529+/-0.008  $\chi^2/\text{NDF}$ : 1859155.7/47

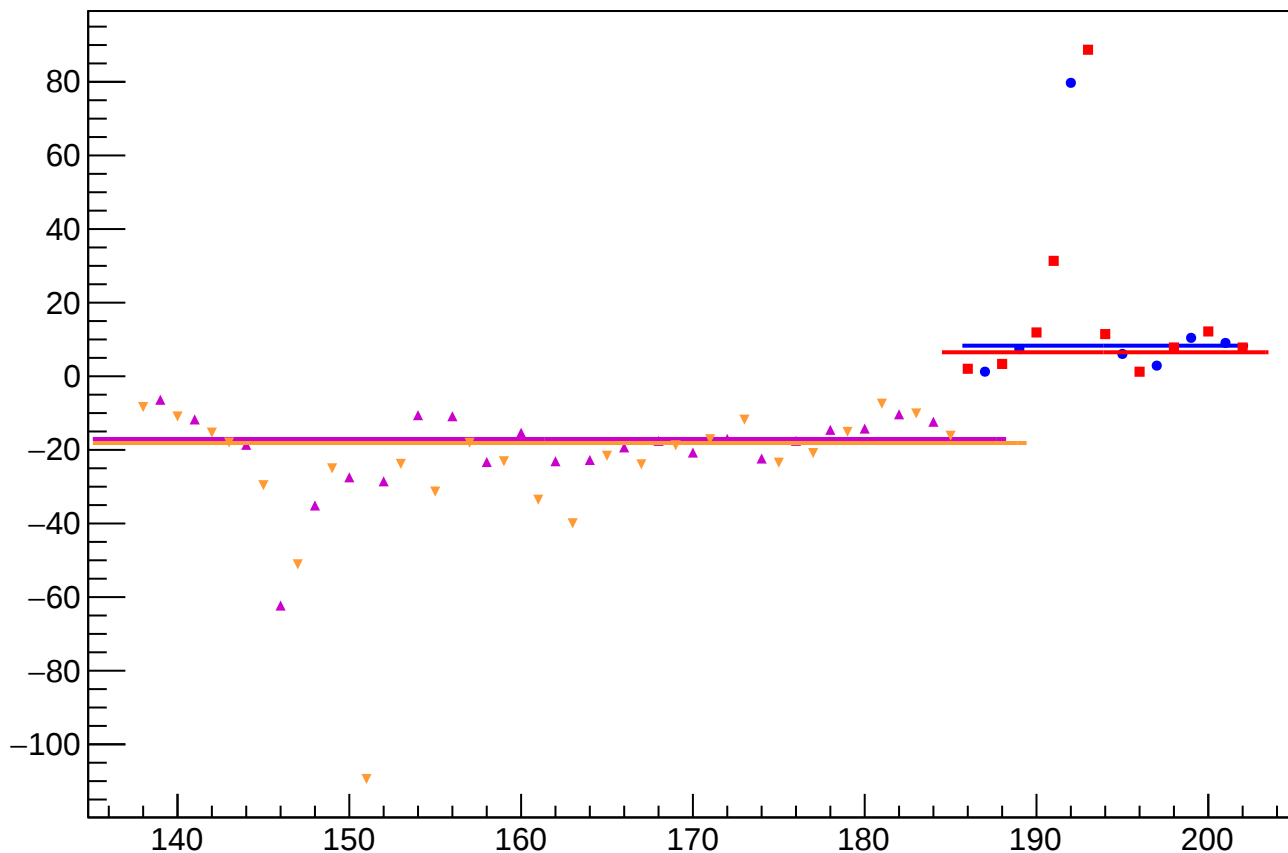
Right: 14.377+/-0.017  $\chi^2/\text{NDF}$ : 1195358.6/52

In: -0.019+/-0.010  $\chi^2/\text{NDF}$ : 1660241.6/46

Out: 0.648+/-0.010  $\chi^2/\text{NDF}$ : 2193614.6/53

All: 0.319+/-0.007  $\chi^2/\text{NDF}$ : 3856082.7/100

reg\_asym\_bcm\_an\_ds3\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 8.313 $\pm$ 0.084  $\chi^2$ /NDF: 24435.6/6

Left Out: -18.128 $\pm$ 0.039  $\chi^2$ /NDF: 88551.6/24

Right Out: 6.519 $\pm$ 0.069  $\chi^2$ /NDF: 25612.4/9

Left In: -17.038 $\pm$ 0.038  $\chi^2$ /NDF: 44141.1/22

Left: -17.572 $\pm$ 0.027  $\chi^2$ /NDF: 133092.4/47

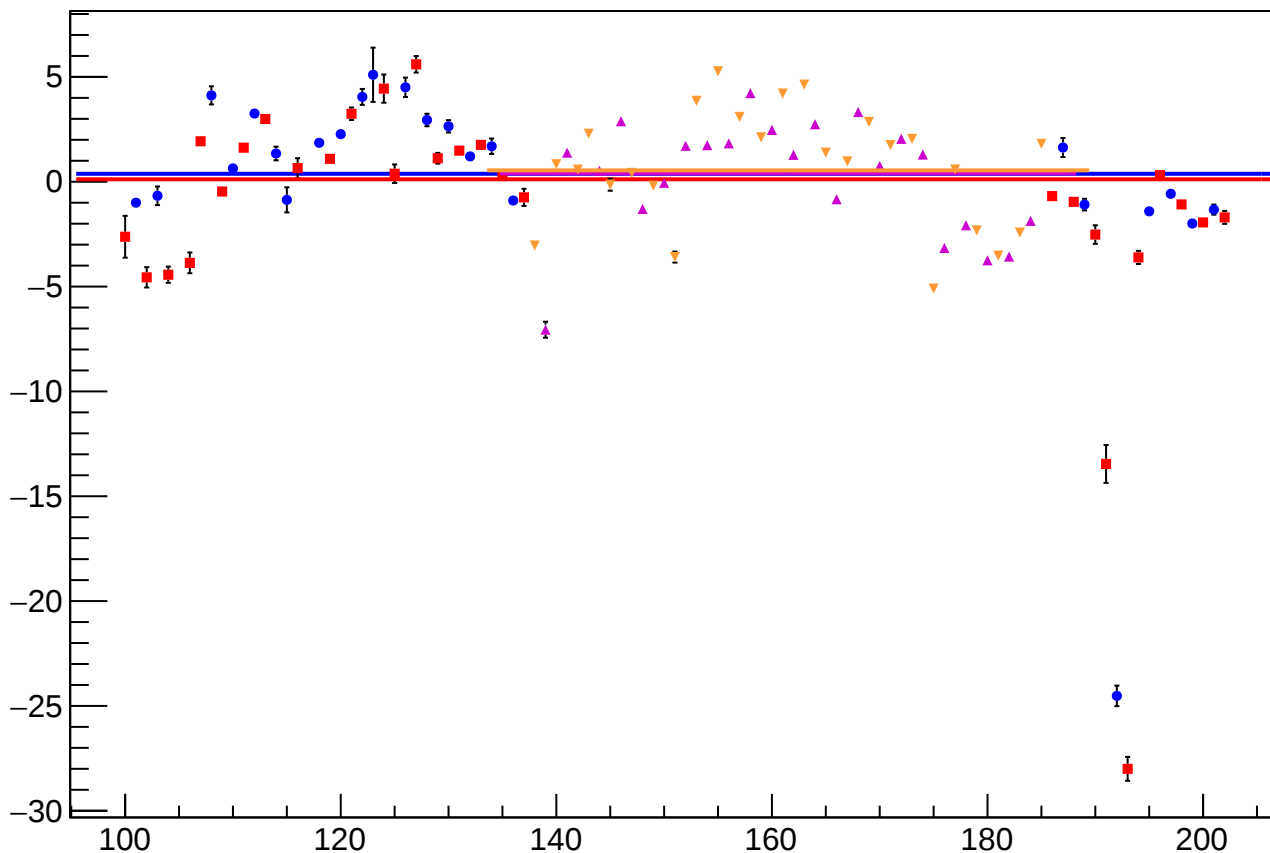
Right: 7.243 $\pm$ 0.053  $\chi^2$ /NDF: 50321.7/16

In: -12.677 $\pm$ 0.035  $\chi^2$ /NDF: 144521.6/29

Out: -12.162 $\pm$ 0.034  $\chi^2$ /NDF: 211269.4/34

All: -12.413 $\pm$ 0.024  $\chi^2$ /NDF: 355904.0/64

reg\_asym\_bcm\_an\_ds3\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 0.379 $\pm$ 0.052  $\chi^2$ /NDF: 3801.7/23

Left Out: 0.543 $\pm$ 0.032  $\chi^2$ /NDF: 7085.3/24

Right Out: 0.118 $\pm$ 0.048  $\chi^2$ /NDF: 4246.1/28

Left In: 0.397 $\pm$ 0.031  $\chi^2$ /NDF: 6235.6/22

Left: 0.466 $\pm$ 0.022  $\chi^2$ /NDF: 13331.6/47

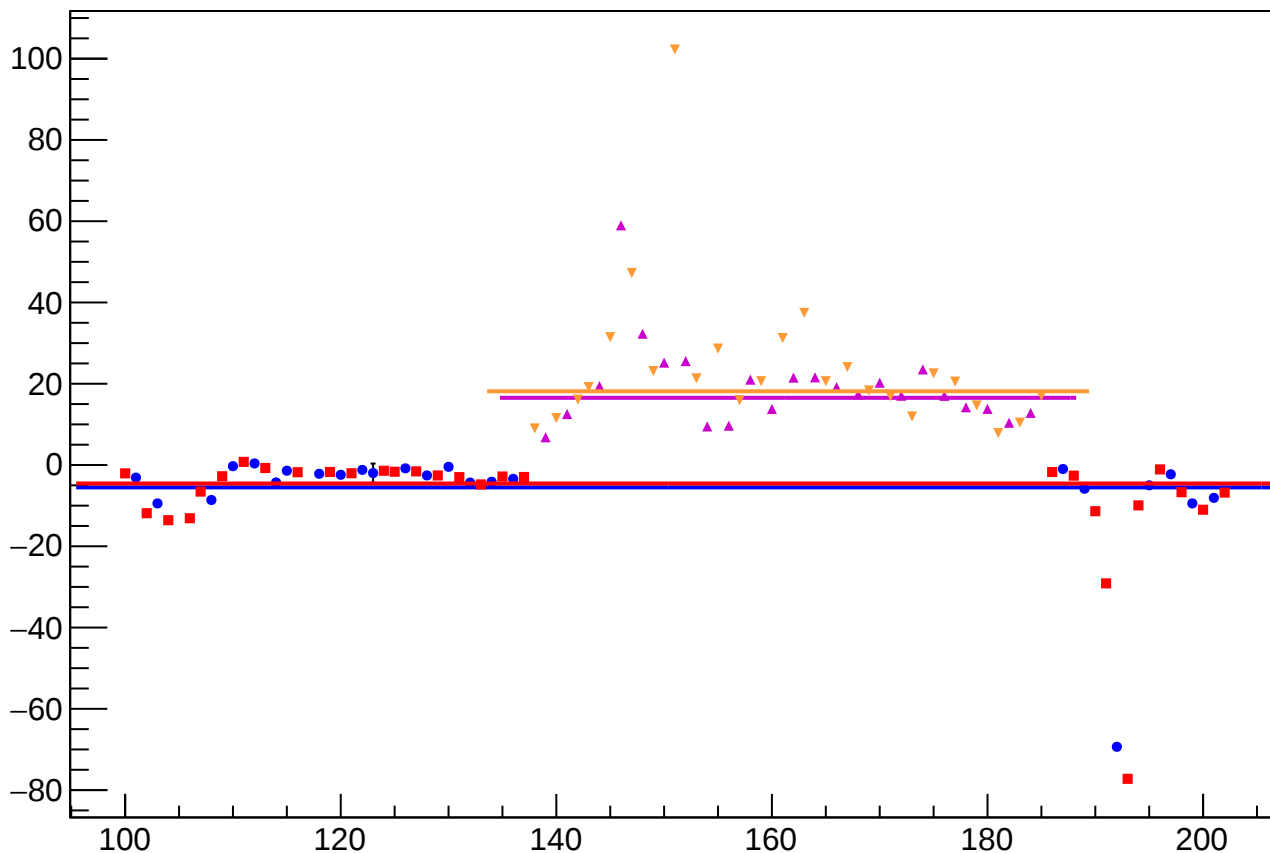
Right: 0.238 $\pm$ 0.035  $\chi^2$ /NDF: 8061.6/52

In: 0.392 $\pm$ 0.026  $\chi^2$ /NDF: 10037.4/46

Out: 0.409 $\pm$ 0.027  $\chi^2$ /NDF: 11385.9/53

All: 0.400 $\pm$ 0.019  $\chi^2$ /NDF: 21423.5/100

reg\_asym\_bcm\_an\_ds3\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: -5.506+/-0.060  $\chi^2/\text{NDF}$ : 26553.3/23

Left Out: 18.150+/-0.039  $\chi^2/\text{NDF}$ : 77847.8/24

Right Out: -4.553+/-0.050  $\chi^2/\text{NDF}$ : 27637.1/28

Left In: 16.543+/-0.038  $\chi^2/\text{NDF}$ : 40855.0/22

Left: 17.318+/-0.027  $\chi^2/\text{NDF}$ : 119577.9/47

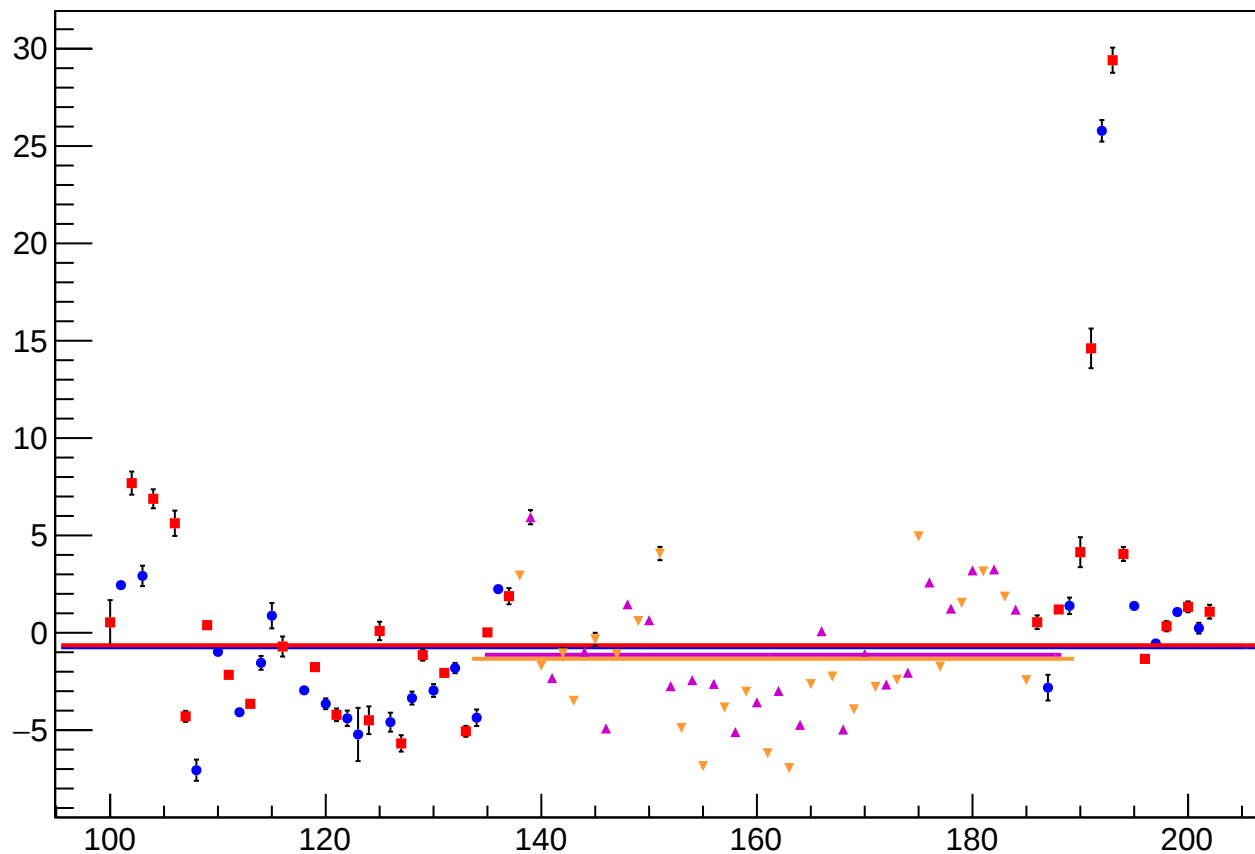
Right: -4.941+/-0.038  $\chi^2/\text{NDF}$ : 54340.4/52

In: 10.280+/-0.032  $\chi^2/\text{NDF}$ : 164260.6/46

Out: 9.474+/-0.031  $\chi^2/\text{NDF}$ : 234356.6/53

All: 9.862+/-0.022  $\chi^2/\text{NDF}$ : 398948.1/100

reg\_asym\_bcm\_an\_ds3\_diff\_bpm4eY\_slope vs Slug, Sign Corrected

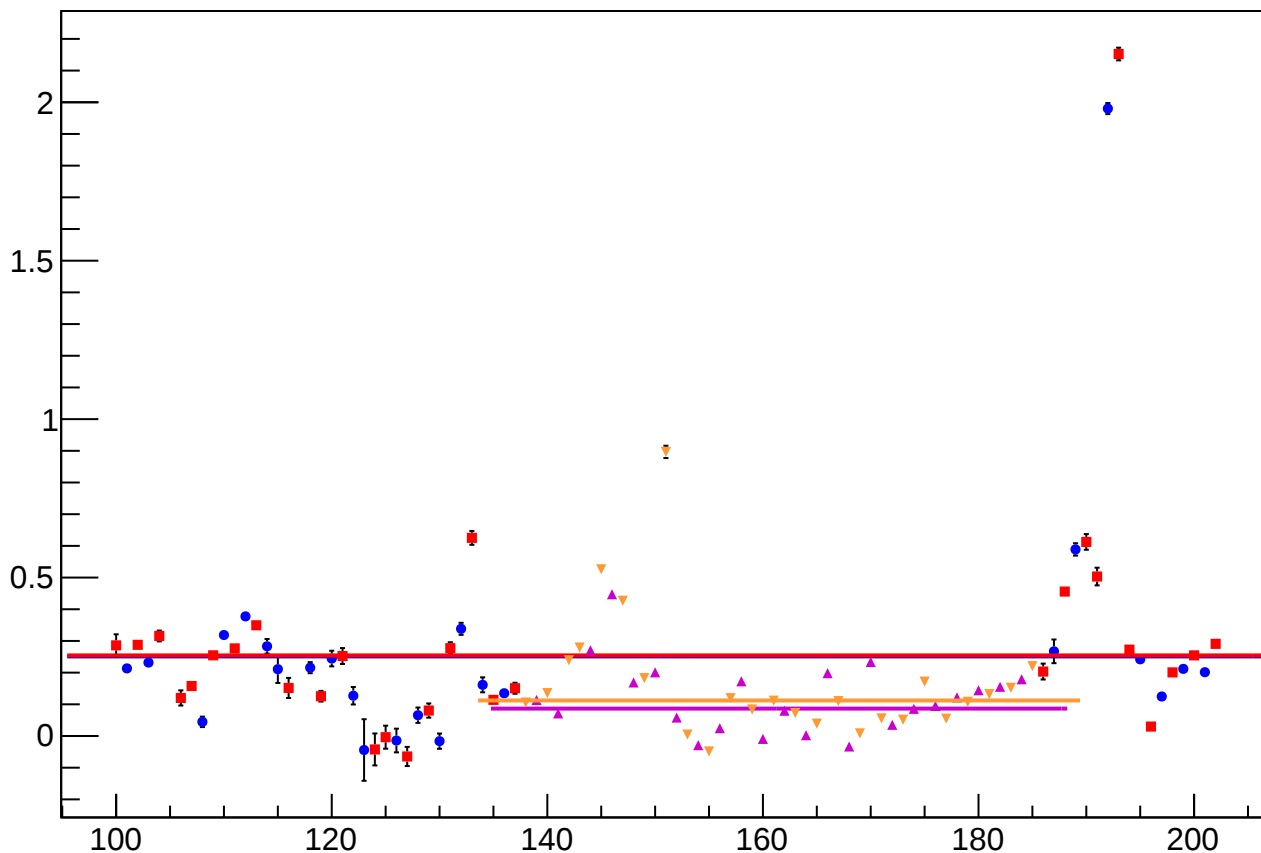


Right In:  $-0.744 \pm 0.060$   $\chi^2/\text{NDF}: 3889.9/23$   
 Left Out:  $-1.338 \pm 0.036$   $\chi^2/\text{NDF}: 7943.1/24$   
 Right Out:  $-0.641 \pm 0.056$   $\chi^2/\text{NDF}: 4466.4/28$   
 Left In:  $-1.129 \pm 0.034$   $\chi^2/\text{NDF}: 6740.3/22$

Left:  $-1.228 \pm 0.025$   $\chi^2/\text{NDF}: 14701.0/47$   
 Right:  $-0.688 \pm 0.041$   $\chi^2/\text{NDF}: 8357.8/52$   
 In:  $-1.036 \pm 0.030$   $\chi^2/\text{NDF}: 10661.0/46$   
 Out:  $-1.133 \pm 0.030$   $\chi^2/\text{NDF}: 12520.1/53$

All:  $-1.084 \pm 0.021$   $\chi^2/\text{NDF}: 23186.4/100$

reg\_asym\_bcm\_an\_ds3\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.251 $\pm$ 0.003  $\chi^2$ /NDF: 11170.3/23

Left Out: 0.112 $\pm$ 0.002  $\chi^2$ /NDF:4503.9/24

Right Out: 0.254 $\pm$ 0.003  $\chi^2$ /NDF: 11594.0/28

Left In: 0.087 $\pm$ 0.002  $\chi^2$ /NDF:3655.4/22

Left: 0.098 $\pm$ 0.001  $\chi^2$ /NDF: 8295.3/47

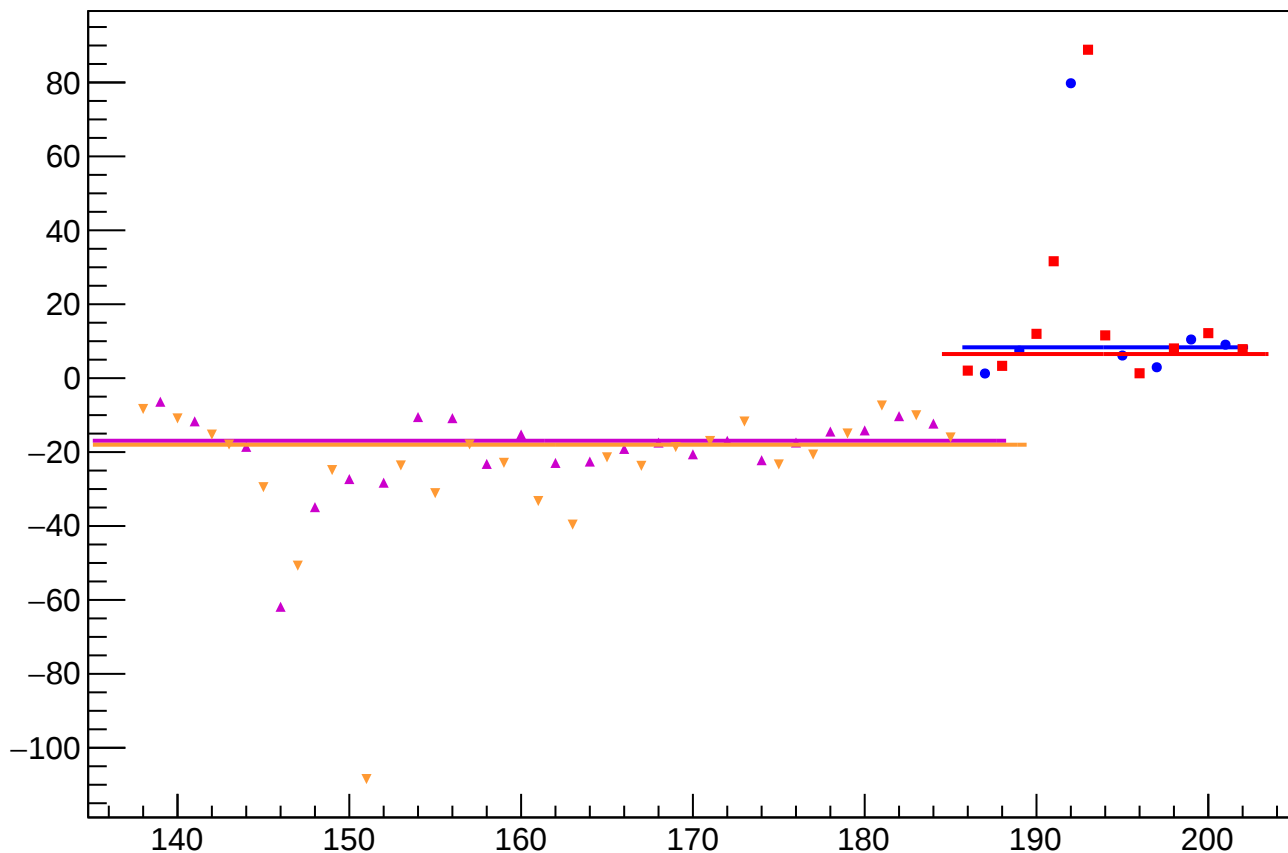
Right: 0.253 $\pm$ 0.002  $\chi^2$ /NDF: 22764.9/52

In: 0.125 $\pm$ 0.001  $\chi^2$ /NDF:17643.6/46

Out: 0.153 $\pm$ 0.001  $\chi^2$ /NDF:18337.4/53

All: 0.138 $\pm$ 0.001  $\chi^2$ /NDF: 36193.5/100

reg\_asym\_bcm\_an\_ds\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $8.347 \pm 0.083$   $\chi^2/\text{NDF}$ : 24619.4/6

Left Out:  $-18.005 \pm 0.039$   $\chi^2/\text{NDF}$ : 88391.0/24

Right Out:  $6.528 \pm 0.068$   $\chi^2/\text{NDF}$ : 25968.2/9

Left In:  $-16.934 \pm 0.038$   $\chi^2/\text{NDF}$ : 44060.6/22

Left:  $-17.459 \pm 0.027$   $\chi^2/\text{NDF}$ : 132843.0/47

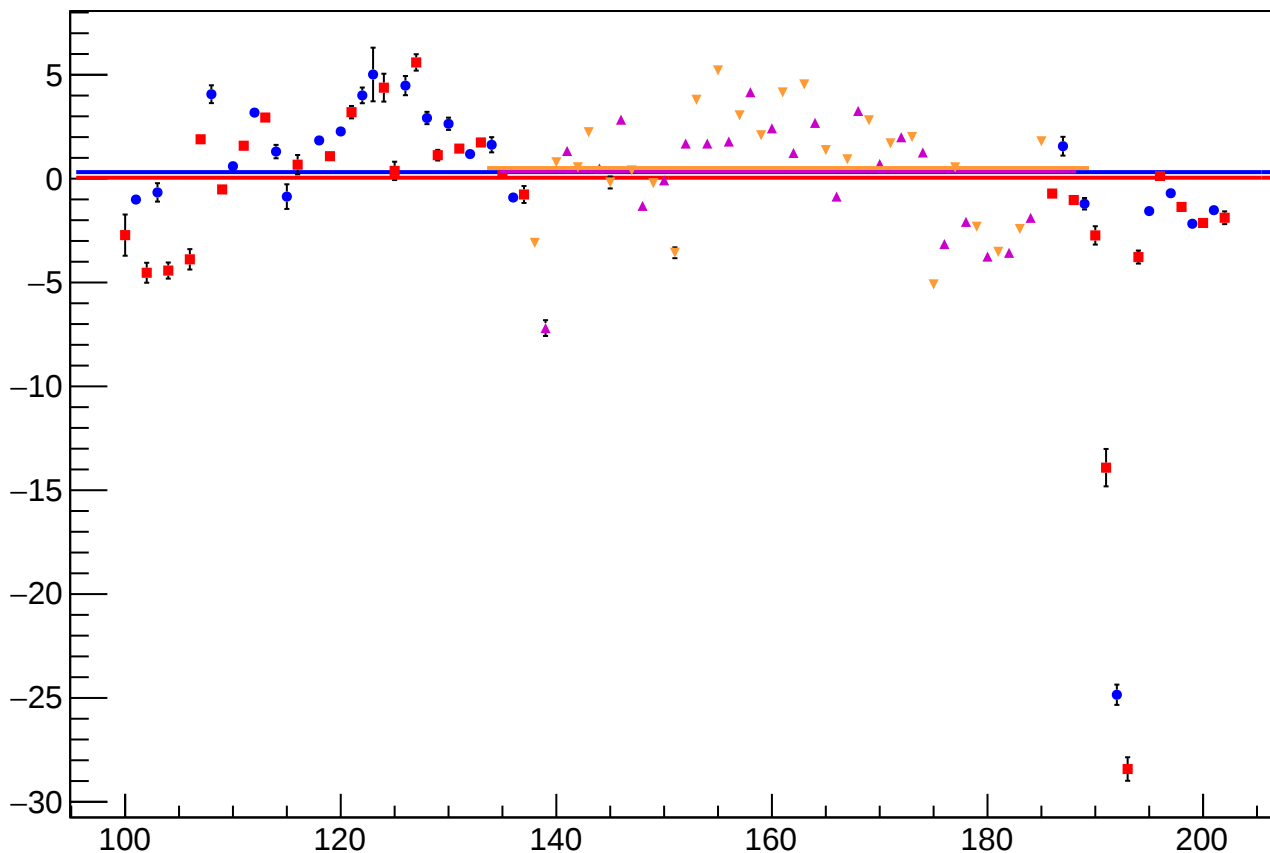
Right:  $7.259 \pm 0.053$   $\chi^2/\text{NDF}$ : 50872.6/16

In:  $-12.599 \pm 0.035$   $\chi^2/\text{NDF}$ : 144963.3/29

Out:  $-12.055 \pm 0.034$   $\chi^2/\text{NDF}$ : 212116.0/34

All:  $-12.320 \pm 0.024$   $\chi^2/\text{NDF}$ : 357206.8/64

reg\_asym\_bcm\_an\_ds\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 0.314 $\pm$ 0.051  $\chi^2$ /NDF: 3931.6/23

Left Out: 0.511 $\pm$ 0.032  $\chi^2$ /NDF: 7070.4/24

Right Out: 0.045 $\pm$ 0.047  $\chi^2$ /NDF: 4411.8/28

Left In: 0.360 $\pm$ 0.031  $\chi^2$ /NDF: 6221.1/22

Left: 0.432 $\pm$ 0.022  $\chi^2$ /NDF: 13303.2/47

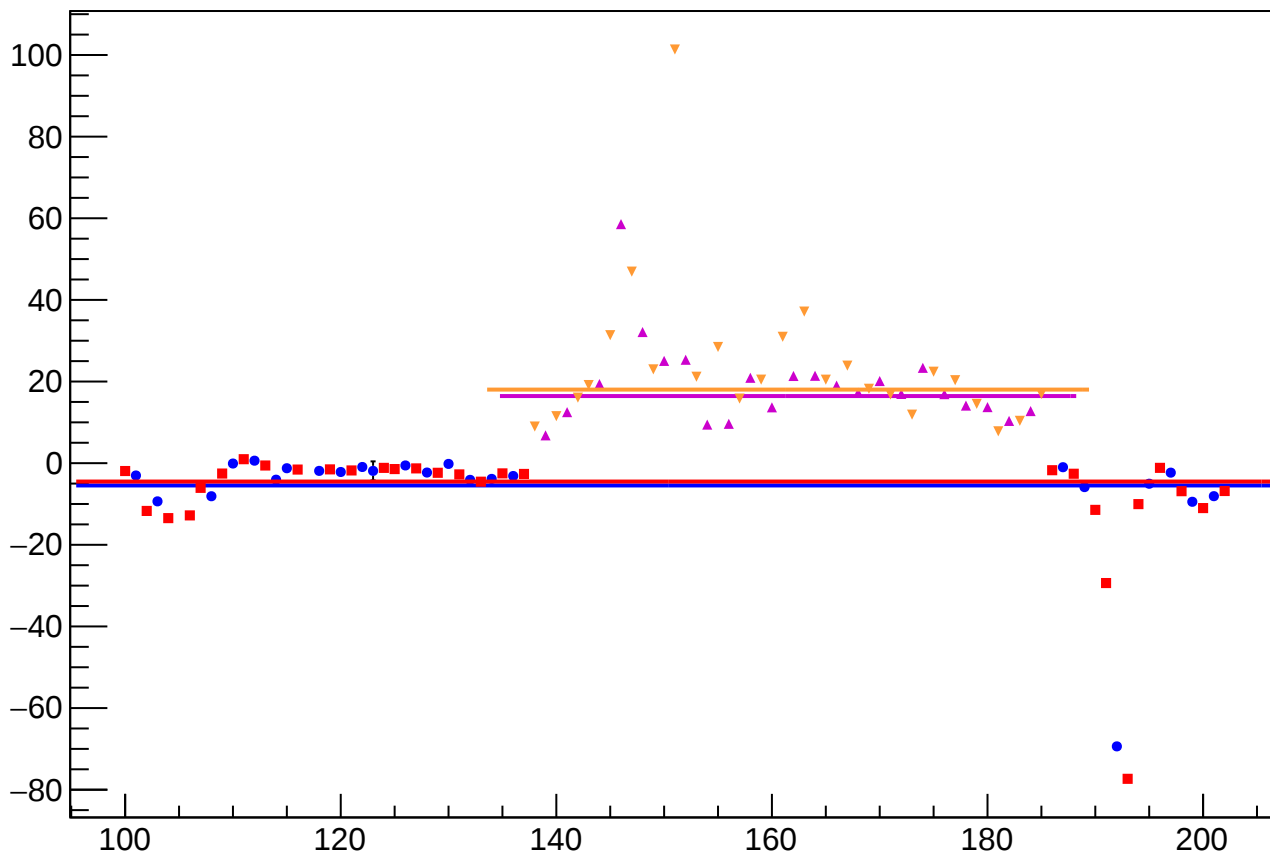
Right: 0.168 $\pm$ 0.035  $\chi^2$ /NDF: 8358.3/52

In: 0.348 $\pm$ 0.026  $\chi^2$ /NDF: 10153.3/46

Out: 0.364 $\pm$ 0.027  $\chi^2$ /NDF: 11548.7/53

All: 0.356 $\pm$ 0.019  $\chi^2$ /NDF: 21702.3/100

reg\_asym\_bcm\_an\_ds\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: -5.459+/-0.060  $\chi^2/\text{NDF}$ : 26885.9/23

Left Out: 18.027+/-0.039  $\chi^2/\text{NDF}$ : 77718.1/24

Right Out: -4.501+/-0.049  $\chi^2/\text{NDF}$ : 28109.1/28

Left In: 16.443+/-0.038  $\chi^2/\text{NDF}$ : 40780.6/22

Left: 17.207+/-0.027  $\chi^2/\text{NDF}$ : 119360.0/47

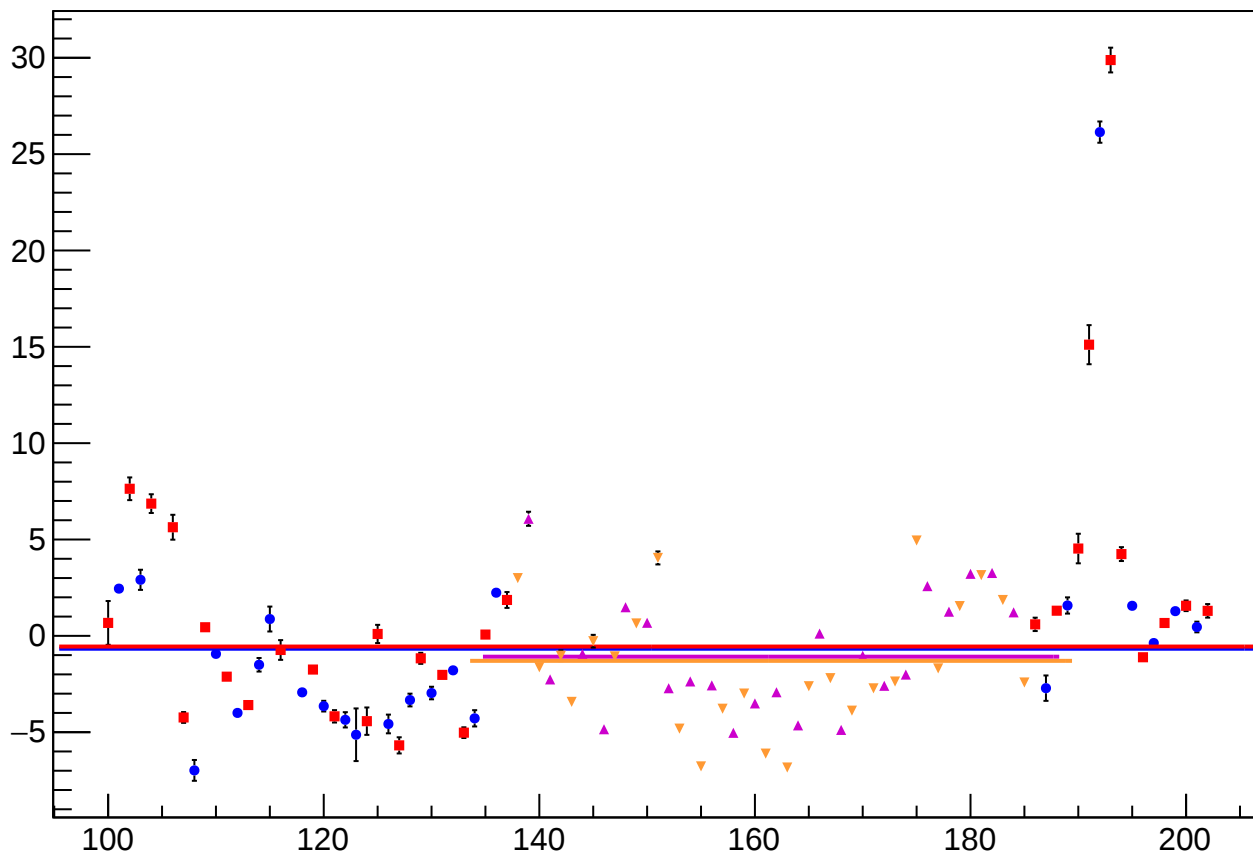
Right: -4.890+/-0.038  $\chi^2/\text{NDF}$ : 55148.3/52

In: 10.239+/-0.032  $\chi^2/\text{NDF}$ : 164246.1/46

Out: 9.410+/-0.031  $\chi^2/\text{NDF}$ : 234635.2/53

All: 9.808+/-0.022  $\chi^2/\text{NDF}$ : 399235.5/100

reg\_asym\_bcm\_an\_ds\_diff\_bpm4eY\_slope vs Slug, Sign Corrected

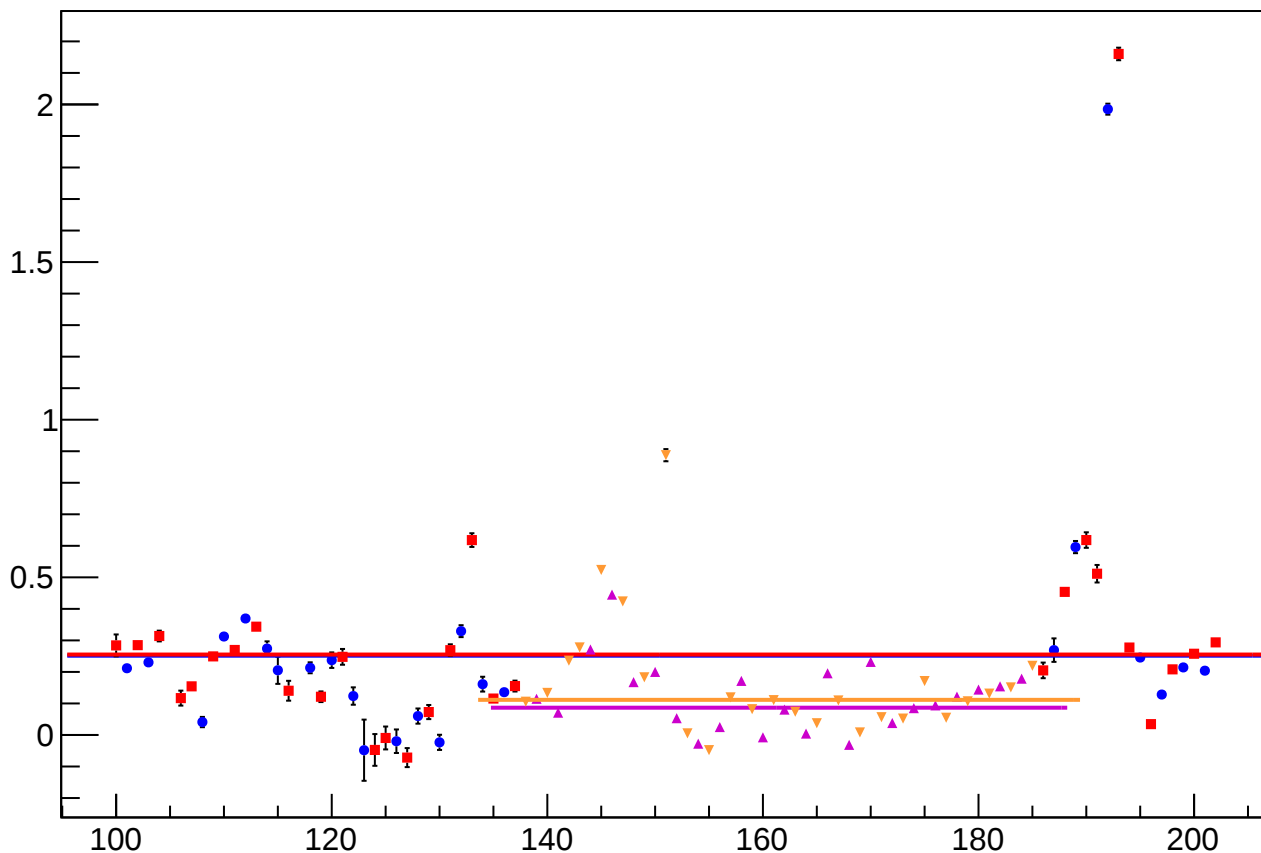


Right In:  $-0.668 \pm 0.060$   $\chi^2/\text{NDF}$ : 3995.8/23  
 Left Out:  $-1.297 \pm 0.036$   $\chi^2/\text{NDF}$ : 7925.1/24  
 Right Out:  $-0.555 \pm 0.055$   $\chi^2/\text{NDF}$ : 4620.7/28  
 Left In:  $-1.082 \pm 0.034$   $\chi^2/\text{NDF}$ : 6724.1/22

Left:  $-1.184 \pm 0.025$   $\chi^2/\text{NDF}$ : 14668.4/47  
 Right:  $-0.607 \pm 0.041$   $\chi^2/\text{NDF}$ : 8618.3/52  
 In:  $-0.982 \pm 0.030$   $\chi^2/\text{NDF}$ : 10755.8/46  
 Out:  $-1.080 \pm 0.030$   $\chi^2/\text{NDF}$ : 12672.6/53

All:  $-1.030 \pm 0.021$   $\chi^2/\text{NDF}$ : 23433.8/100

reg\_asym\_bcm\_an\_ds\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $0.252 \pm 0.003$   $\chi^2/\text{NDF}: 11297.4/23$

Left Out:  $0.111 \pm 0.002$   $\chi^2/\text{NDF}: 4496.0/24$

Right Out:  $0.255 \pm 0.003$   $\chi^2/\text{NDF}: 11730.7/28$

Left In:  $0.087 \pm 0.001$   $\chi^2/\text{NDF}: 3625.5/22$

Left:  $0.098 \pm 0.001$   $\chi^2/\text{NDF}: 8251.9/47$

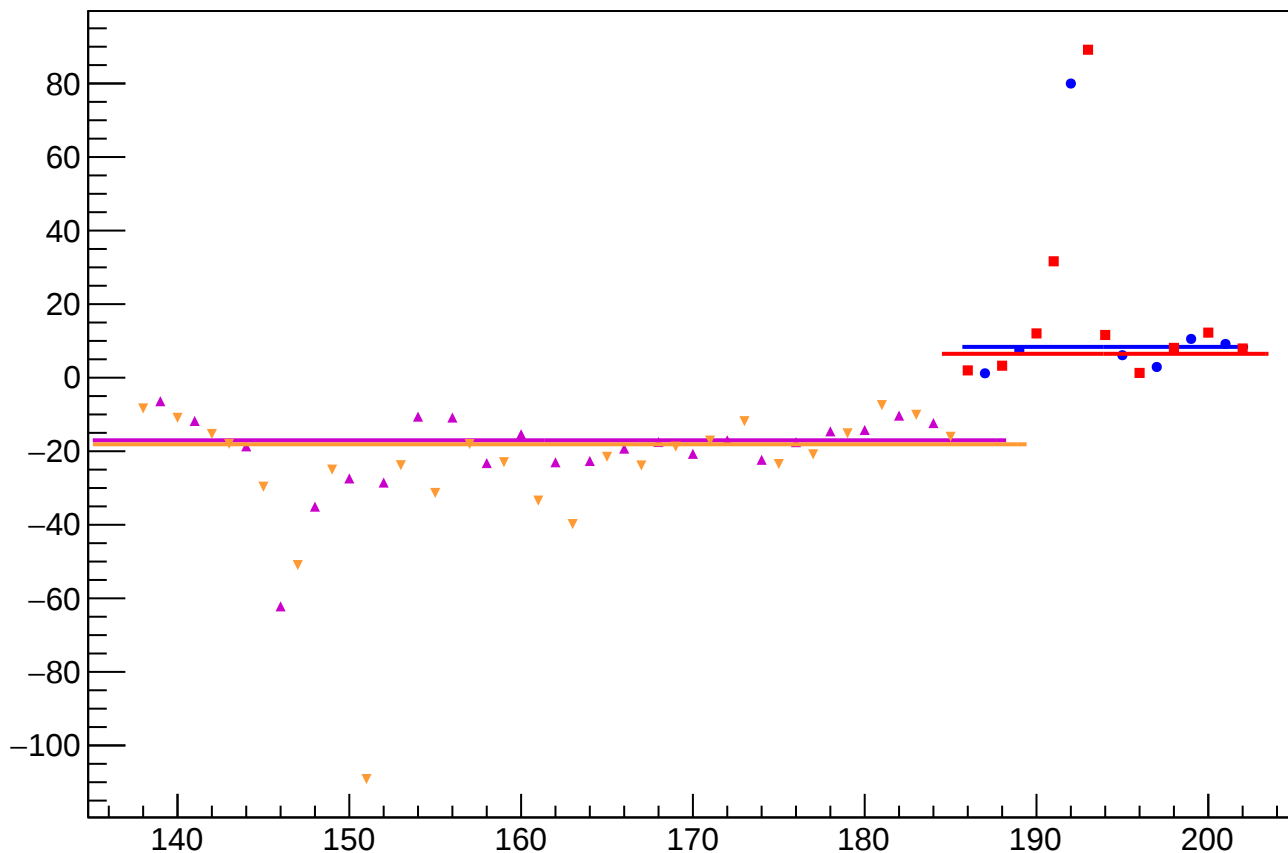
Right:  $0.253 \pm 0.002$   $\chi^2/\text{NDF}: 23029.1/52$

In:  $0.125 \pm 0.001$   $\chi^2/\text{NDF}: 17780.8/46$

Out:  $0.152 \pm 0.001$   $\chi^2/\text{NDF}: 18539.9/53$

All:  $0.138 \pm 0.001$   $\chi^2/\text{NDF}: 36530.3/100$

reg\_asym\_bcm\_an\_us\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 8.374+/-0.084  $\chi^2/\text{NDF}$ : 24616.1/6

Left Out: -18.112+/-0.039  $\chi^2/\text{NDF}$ : 88529.7/24

Right Out: 6.493+/-0.068  $\chi^2/\text{NDF}$ : 26011.7/9

Left In: -17.024+/-0.038  $\chi^2/\text{NDF}$ : 44141.8/22

Left: -17.557+/-0.027  $\chi^2/\text{NDF}$ : 133072.9/47

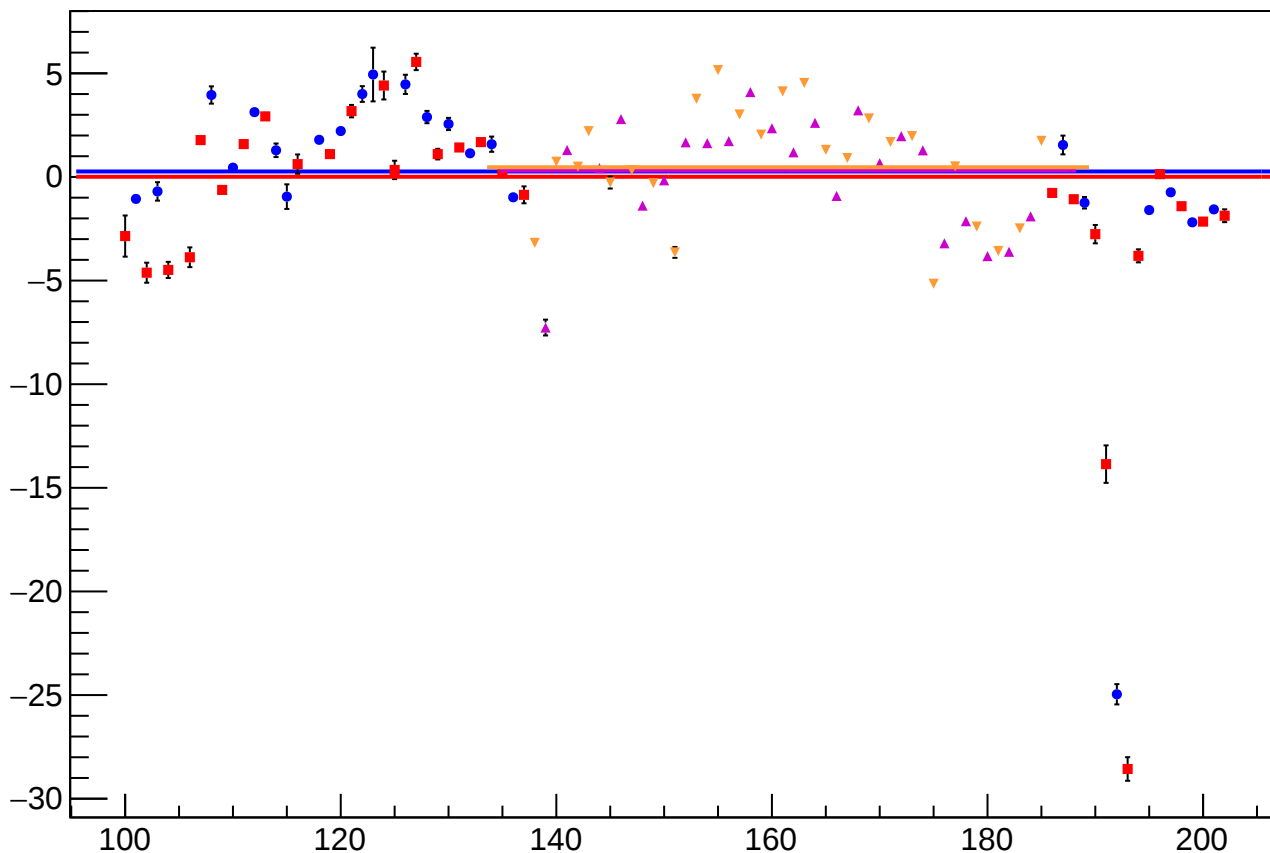
Right: 7.245+/-0.053  $\chi^2/\text{NDF}$ : 50929.9/16

In: -12.689+/-0.035  $\chi^2/\text{NDF}$ : 144804.4/29

Out: -12.125+/-0.034  $\chi^2/\text{NDF}$ : 212365.0/34

All: -12.400+/-0.024  $\chi^2/\text{NDF}$ : 357305.1/64

reg\_asym\_bcm\_an\_us\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 0.265+/-0.052  $\chi^2/\text{NDF}$ : 3916.1/23

Left Out: 0.469+/-0.032  $\chi^2/\text{NDF}$ : 7093.0/24

Right Out: 0.010+/-0.047  $\chi^2/\text{NDF}$ : 4405.5/28

Left In: 0.311+/-0.031  $\chi^2/\text{NDF}$ : 6183.1/22

Left: 0.386+/-0.022  $\chi^2/\text{NDF}$ : 13288.8/47

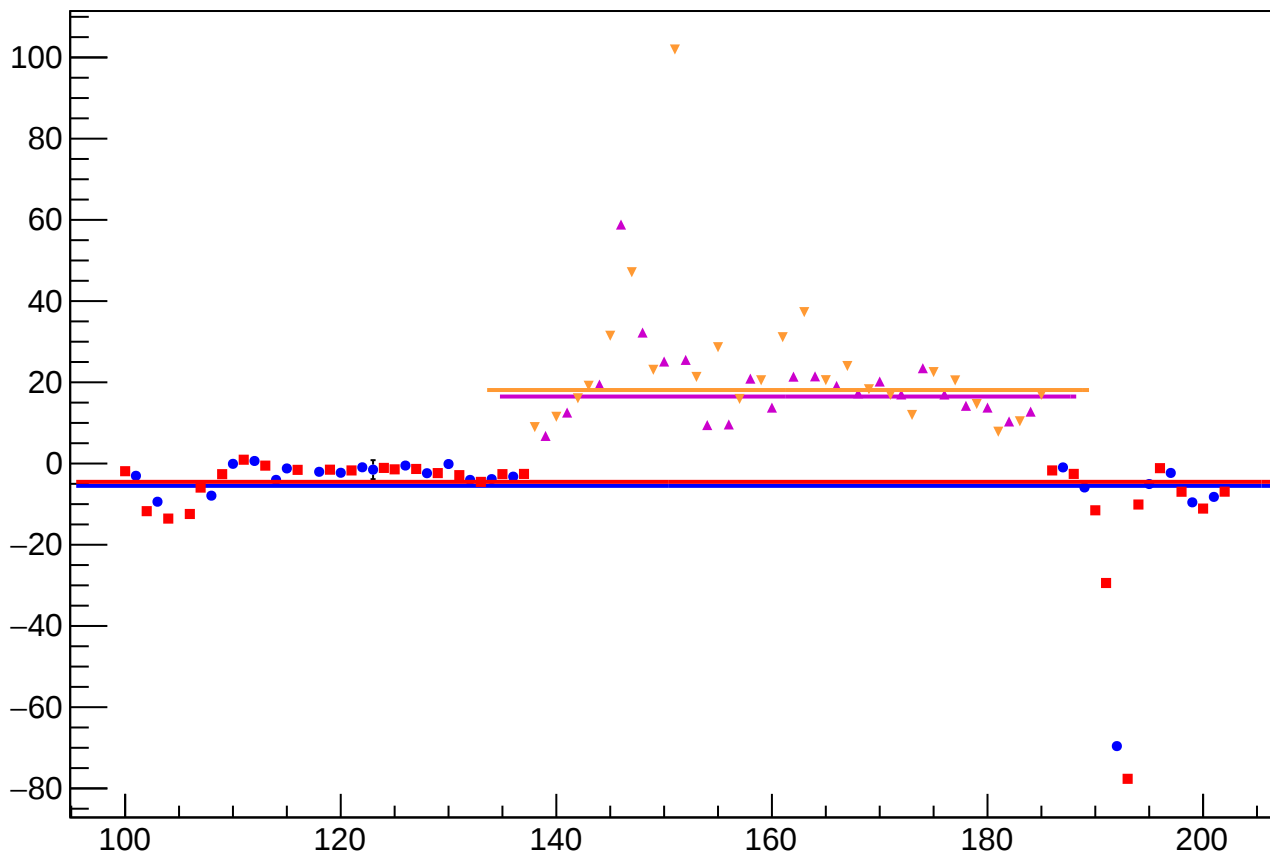
Right: 0.126+/-0.035  $\chi^2/\text{NDF}$ : 8334.7/52

In: 0.299+/-0.026  $\chi^2/\text{NDF}$ : 10099.8/46

Out: 0.324+/-0.027  $\chi^2/\text{NDF}$ : 11562.6/53

All: 0.311+/-0.019  $\chi^2/\text{NDF}$ : 21662.8/100

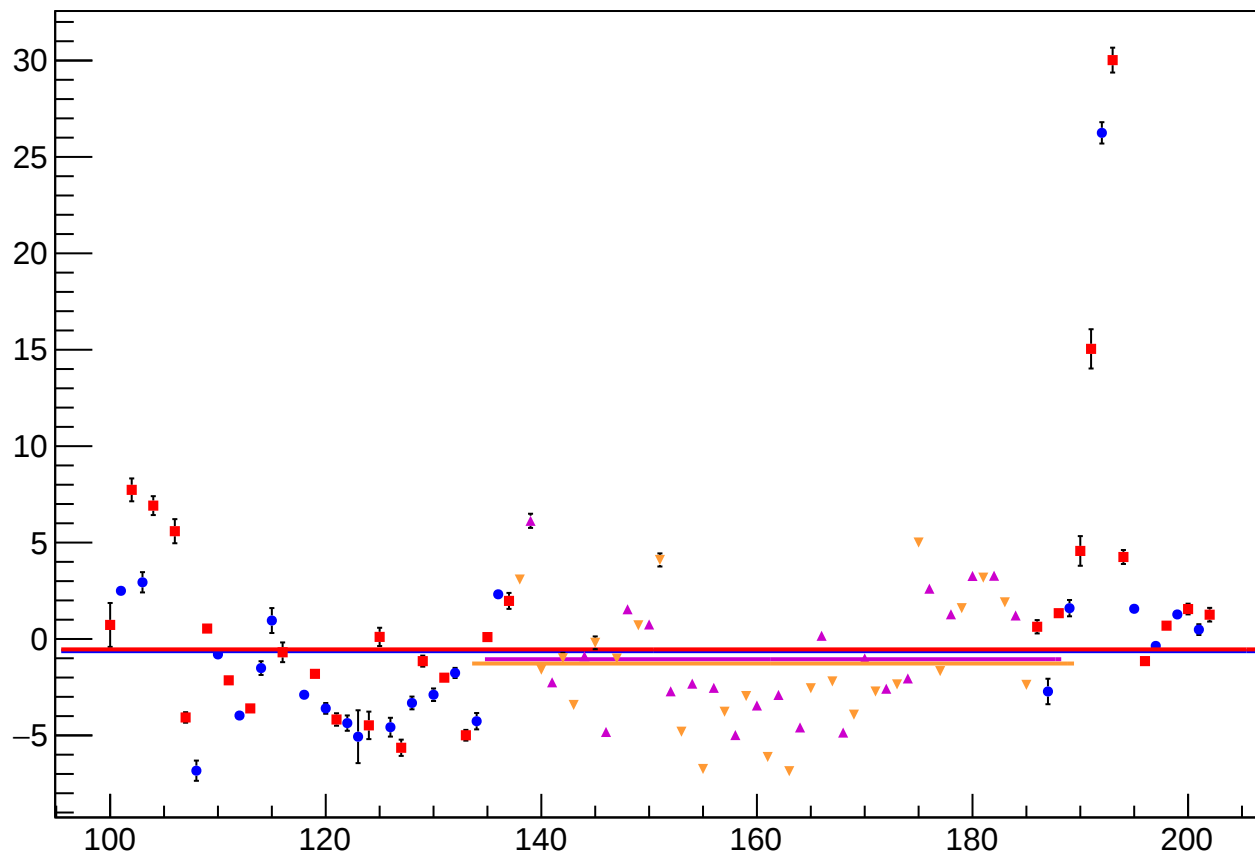
reg\_asym\_bcm\_an\_us\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-5.496 \pm 0.060$   $\chi^2/\text{NDF}: 26887.5/23$   
 Left Out:  $18.101 \pm 0.039$   $\chi^2/\text{NDF}: 77839.7/24$   
 Right Out:  $-4.508 \pm 0.049$   $\chi^2/\text{NDF}: 28127.5/28$   
 Left In:  $16.496 \pm 0.038$   $\chi^2/\text{NDF}: 40867.3/22$

Left:  $17.270 \pm 0.027$   $\chi^2/\text{NDF}: 119584.1/47$   
 Right:  $-4.907 \pm 0.038$   $\chi^2/\text{NDF}: 55176.4/52$   
 In:  $10.288 \pm 0.032$   $\chi^2/\text{NDF}: 164046.5/46$   
 Out:  $9.435 \pm 0.031$   $\chi^2/\text{NDF}: 234865.6/53$   
 All:  $9.844 \pm 0.022$   $\chi^2/\text{NDF}: 399284.4/100$

reg\_asym\_bcm\_an\_us\_diff\_bpm4eY\_slope vs Slug, Sign Corrected

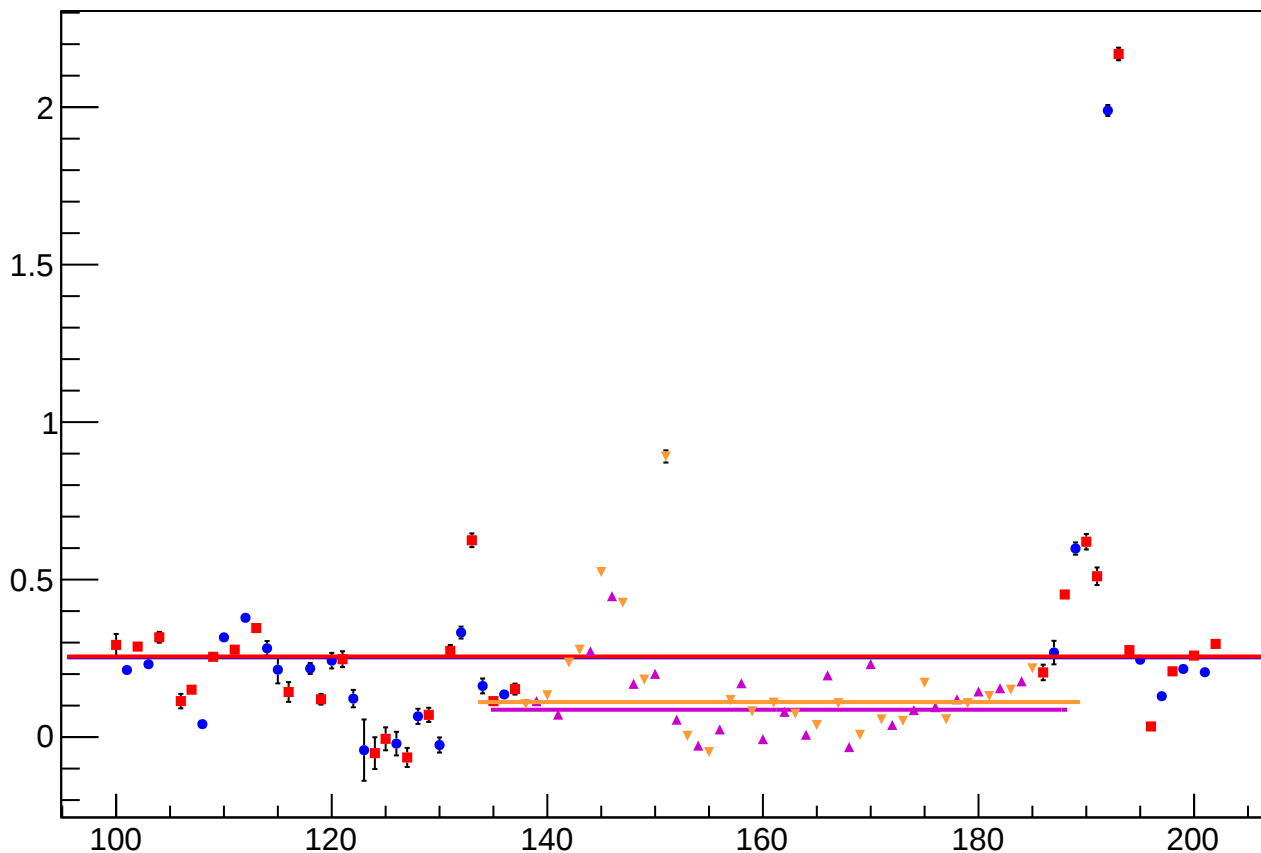


Right In:  $-0.632 \pm 0.060$   $\chi^2/\text{NDF}$ : 3984.8/23  
 Left Out:  $-1.273 \pm 0.036$   $\chi^2/\text{NDF}$ : 7951.6/24  
 Right Out:  $-0.540 \pm 0.056$   $\chi^2/\text{NDF}$ : 4618.0/28  
 Left In:  $-1.050 \pm 0.034$   $\chi^2/\text{NDF}$ : 6673.4/22

Left:  $-1.156 \pm 0.025$   $\chi^2/\text{NDF}$ : 14645.3/47  
 Right:  $-0.582 \pm 0.041$   $\chi^2/\text{NDF}$ : 8604.1/52  
 In:  $-0.950 \pm 0.030$   $\chi^2/\text{NDF}$ : 10694.5/46  
 Out:  $-1.058 \pm 0.030$   $\chi^2/\text{NDF}$ : 12692.6/53

All:  $-1.003 \pm 0.021$   $\chi^2/\text{NDF}$ : 23393.7/100

reg\_asym\_bcm\_an\_us\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.253+/-0.003  $\chi^2/\text{NDF}$ : 11288.3/23

Left Out: 0.111+/-0.002  $\chi^2/\text{NDF}$ : 4474.5/24

Right Out: 0.256+/-0.003  $\chi^2/\text{NDF}$ : 11747.2/28

Left In: 0.087+/-0.001  $\chi^2/\text{NDF}$ : 3598.5/22

Left: 0.098+/-0.001  $\chi^2/\text{NDF}$ : 8197.1/47

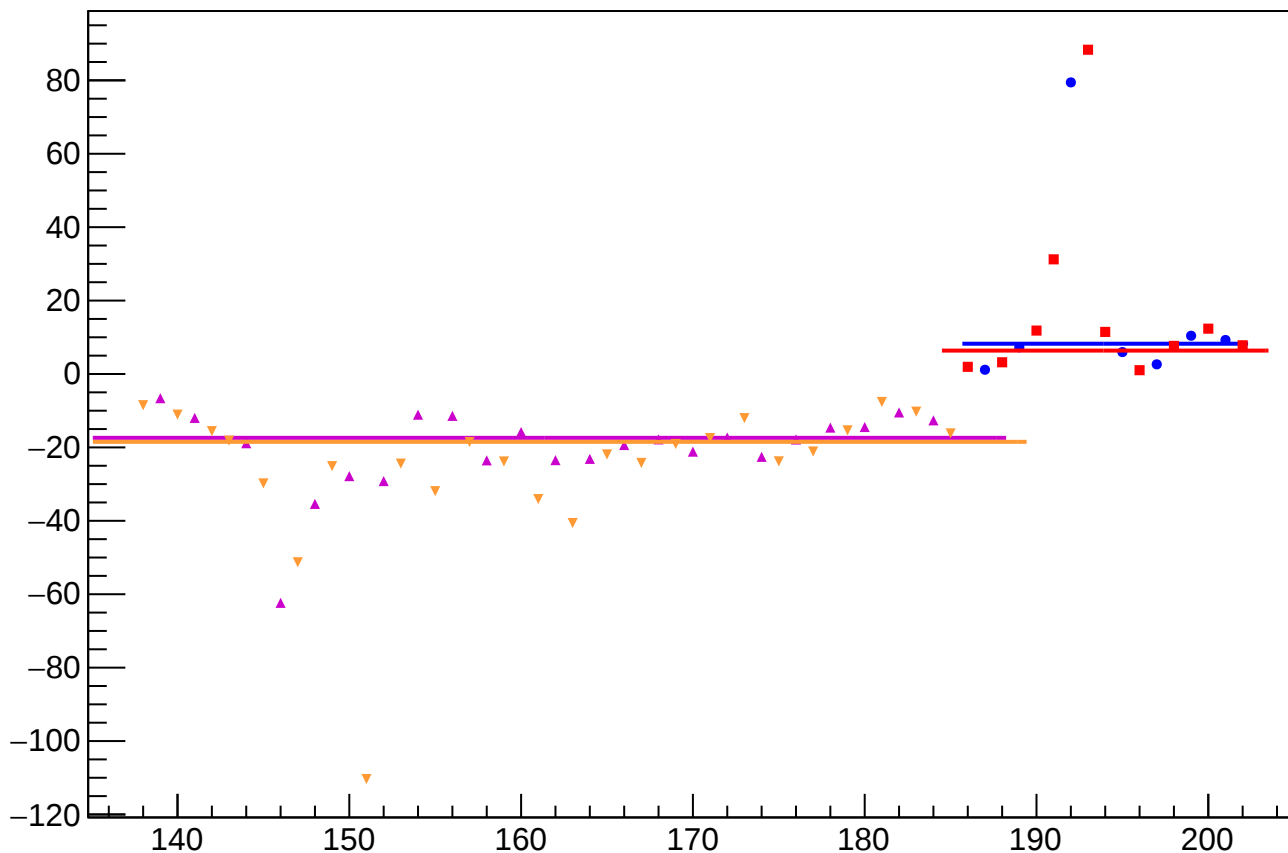
Right: 0.255+/-0.002  $\chi^2/\text{NDF}$ : 23036.0/52

In: 0.126+/-0.001  $\chi^2/\text{NDF}$ : 17763.2/46

Out: 0.152+/-0.001  $\chi^2/\text{NDF}$ : 18548.7/53

All: 0.139+/-0.001  $\chi^2/\text{NDF}$ : 36513.5/100

reg\_asym\_bcm\_dg\_ds\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 8.249+/-0.084  $\chi^2/\text{NDF}$ : 24278.3/6

Left Out: -18.479+/-0.040  $\chi^2/\text{NDF}$ : 87883.4/24

Right Out: 6.378+/-0.069  $\chi^2/\text{NDF}$ : 25544.8/9

Left In: -17.393+/-0.039  $\chi^2/\text{NDF}$ : 43178.9/22

Left: -17.926+/-0.028  $\chi^2/\text{NDF}$ : 131443.9/47

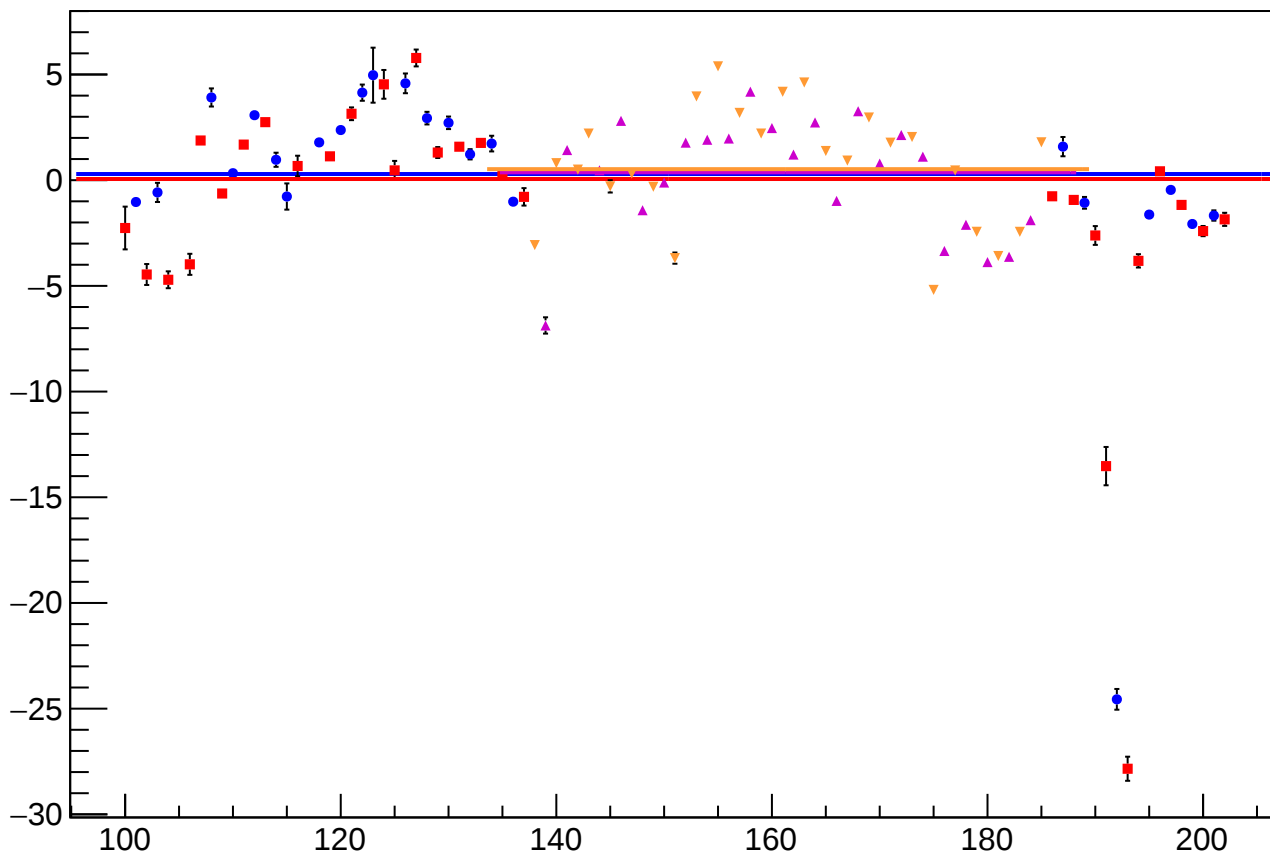
Right: 7.124+/-0.053  $\chi^2/\text{NDF}$ : 50118.7/16

In: -12.885+/-0.035  $\chi^2/\text{NDF}$ : 143619.8/29

Out: -12.255+/-0.034  $\chi^2/\text{NDF}$ : 211592.1/34

All: -12.561+/-0.025  $\chi^2/\text{NDF}$ : 355374.9/64

reg\_asym\_bcm\_dg\_ds\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 0.292 $\pm$ 0.052  $\chi^2$ /NDF: 3793.3/23

Left Out: 0.522 $\pm$ 0.033  $\chi^2$ /NDF: 7055.1/24

Right Out: 0.056 $\pm$ 0.048  $\chi^2$ /NDF: 4243.3/28

Left In: 0.371 $\pm$ 0.031  $\chi^2$ /NDF: 6217.4/22

Left: 0.443 $\pm$ 0.023  $\chi^2$ /NDF: 13283.4/47

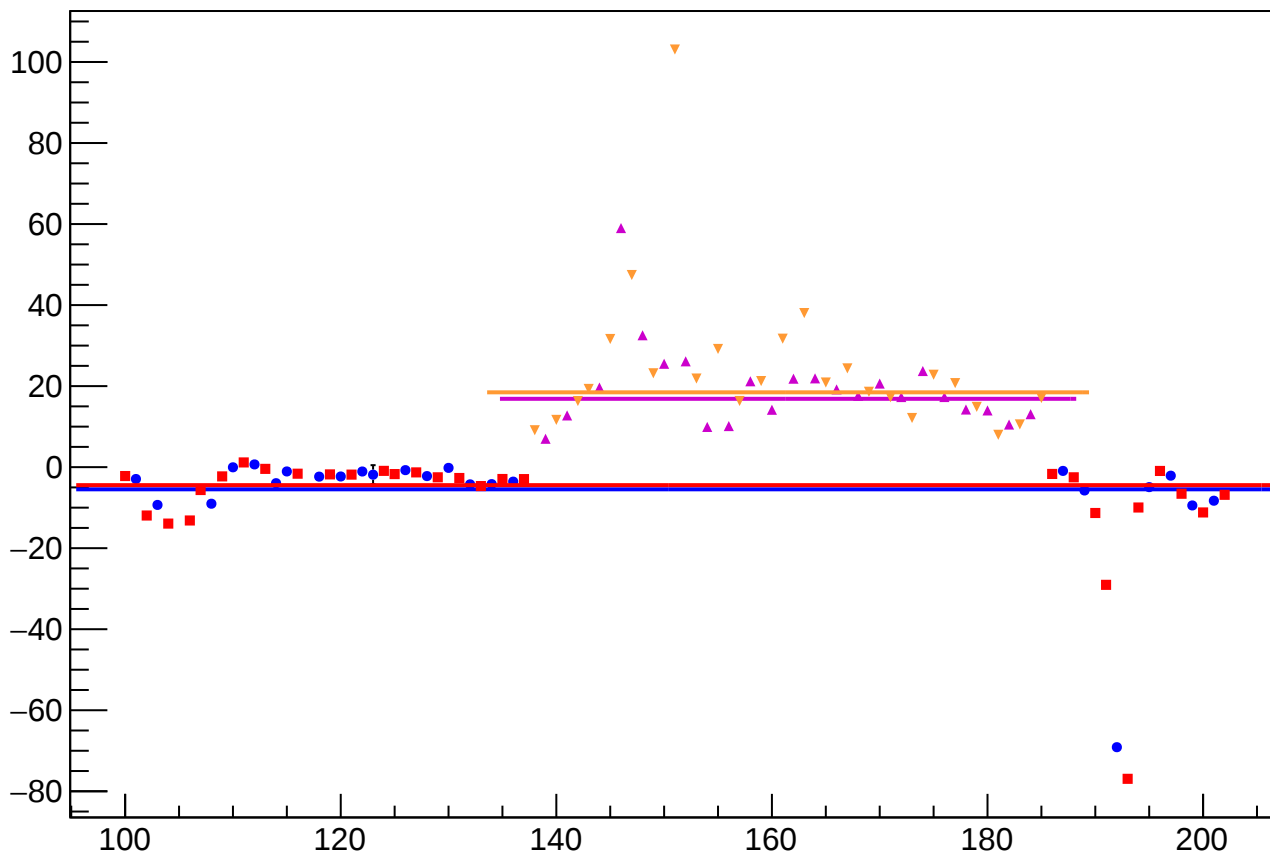
Right: 0.164 $\pm$ 0.035  $\chi^2$ /NDF: 8047.5/52

In: 0.350 $\pm$ 0.027  $\chi^2$ /NDF: 10012.4/46

Out: 0.373 $\pm$ 0.027  $\chi^2$ /NDF: 11362.1/53

All: 0.361 $\pm$ 0.019  $\chi^2$ /NDF: 21374.8/100

reg\_asym\_bcm\_dg\_ds\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-5.472 \pm 0.061$   $\chi^2/\text{NDF}: 26424.1/23$

Left Out:  $18.467 \pm 0.040$   $\chi^2/\text{NDF}: 77226.7/24$

Right Out:  $-4.443 \pm 0.050$   $\chi^2/\text{NDF}: 27630.6/28$

Left In:  $16.867 \pm 0.039$   $\chi^2/\text{NDF}: 39779.0/22$

Left:  $17.640 \pm 0.028$   $\chi^2/\text{NDF}: 117837.8/47$

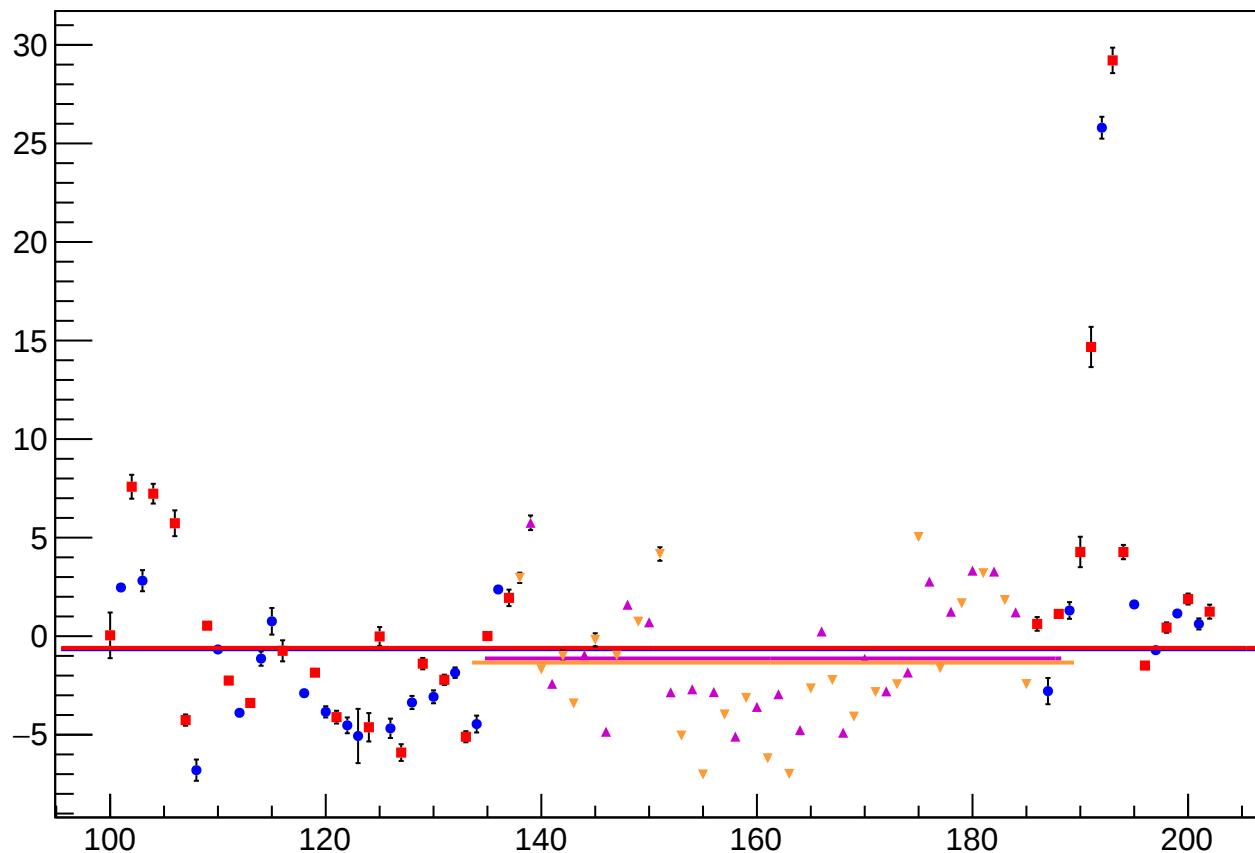
Right:  $-4.858 \pm 0.038$   $\chi^2/\text{NDF}: 54226.5/52$

In:  $10.427 \pm 0.033$   $\chi^2/\text{NDF}: 162924.5/46$

Out:  $9.526 \pm 0.031$   $\chi^2/\text{NDF}: 233629.5/53$

All:  $9.957 \pm 0.022$   $\chi^2/\text{NDF}: 396954.5/100$

reg\_asym\_bcm\_dg\_ds\_diff\_bpm4eY\_slope vs Slug, Sign Corrected

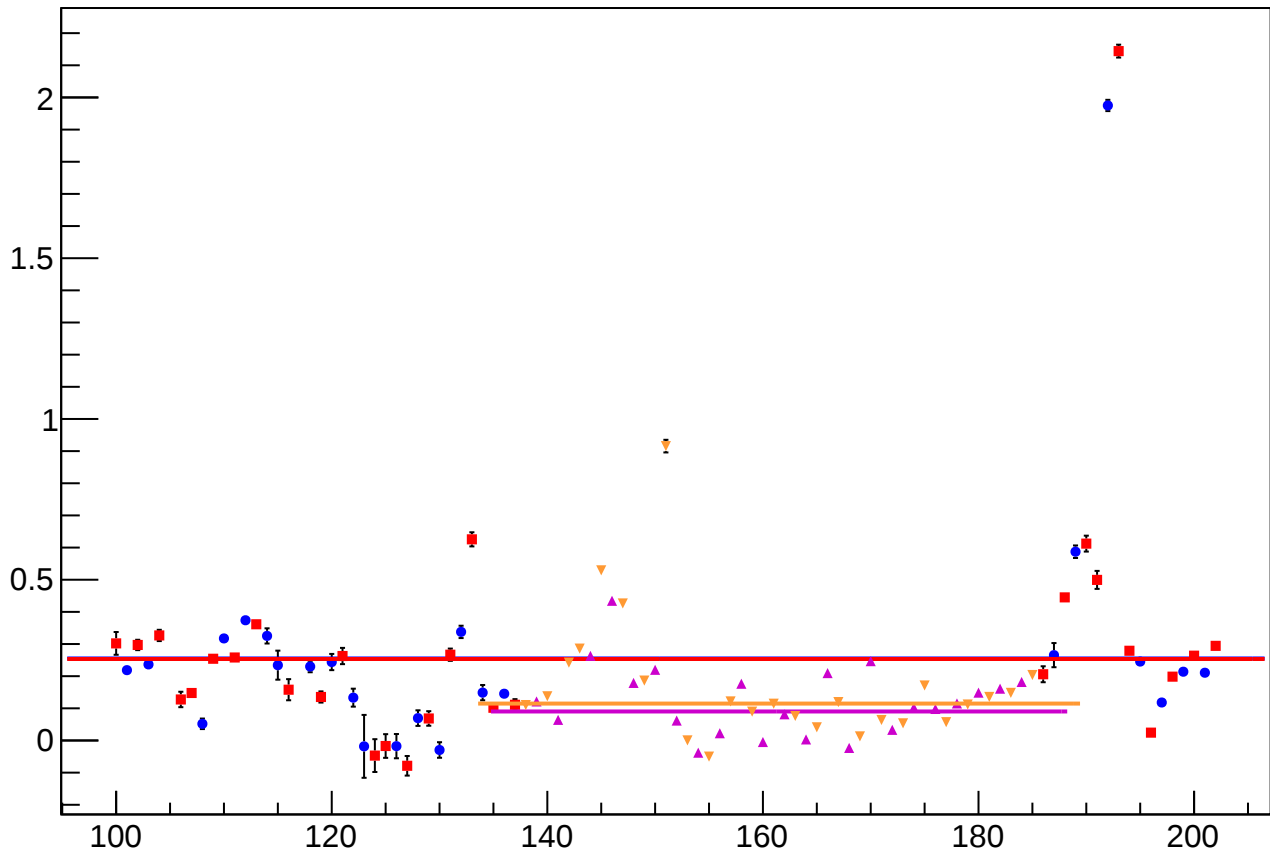


Right In:  $-0.660 \pm 0.061$   $\chi^2/\text{NDF}: 3877.3/23$   
 Left Out:  $-1.340 \pm 0.037$   $\chi^2/\text{NDF}: 7907.4/24$   
 Right Out:  $-0.594 \pm 0.056$   $\chi^2/\text{NDF}: 4461.4/28$   
 Left In:  $-1.132 \pm 0.035$   $\chi^2/\text{NDF}: 6708.5/22$

Left:  $-1.231 \pm 0.025$   $\chi^2/\text{NDF}: 14632.9/47$   
 Right:  $-0.624 \pm 0.042$   $\chi^2/\text{NDF}: 8339.3/52$   
 In:  $-1.017 \pm 0.030$   $\chi^2/\text{NDF}: 10630.6/46$   
 Out:  $-1.119 \pm 0.031$   $\chi^2/\text{NDF}: 12491.7/53$

All:  $-1.067 \pm 0.022$   $\chi^2/\text{NDF}: 23128.0/100$

reg\_asym\_bcm\_dg\_ds\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.255 $\pm$ 0.003  $\chi^2$ /NDF: 11027.7/23

Left Out: 0.115 $\pm$ 0.002  $\chi^2$ /NDF:4431.9/24

Right Out: 0.253 $\pm$ 0.003  $\chi^2$ /NDF: 11599.8/28

Left In: 0.090 $\pm$ 0.002  $\chi^2$ /NDF:3676.5/22

Left: 0.102 $\pm$ 0.001  $\chi^2$ /NDF: 8228.2/47

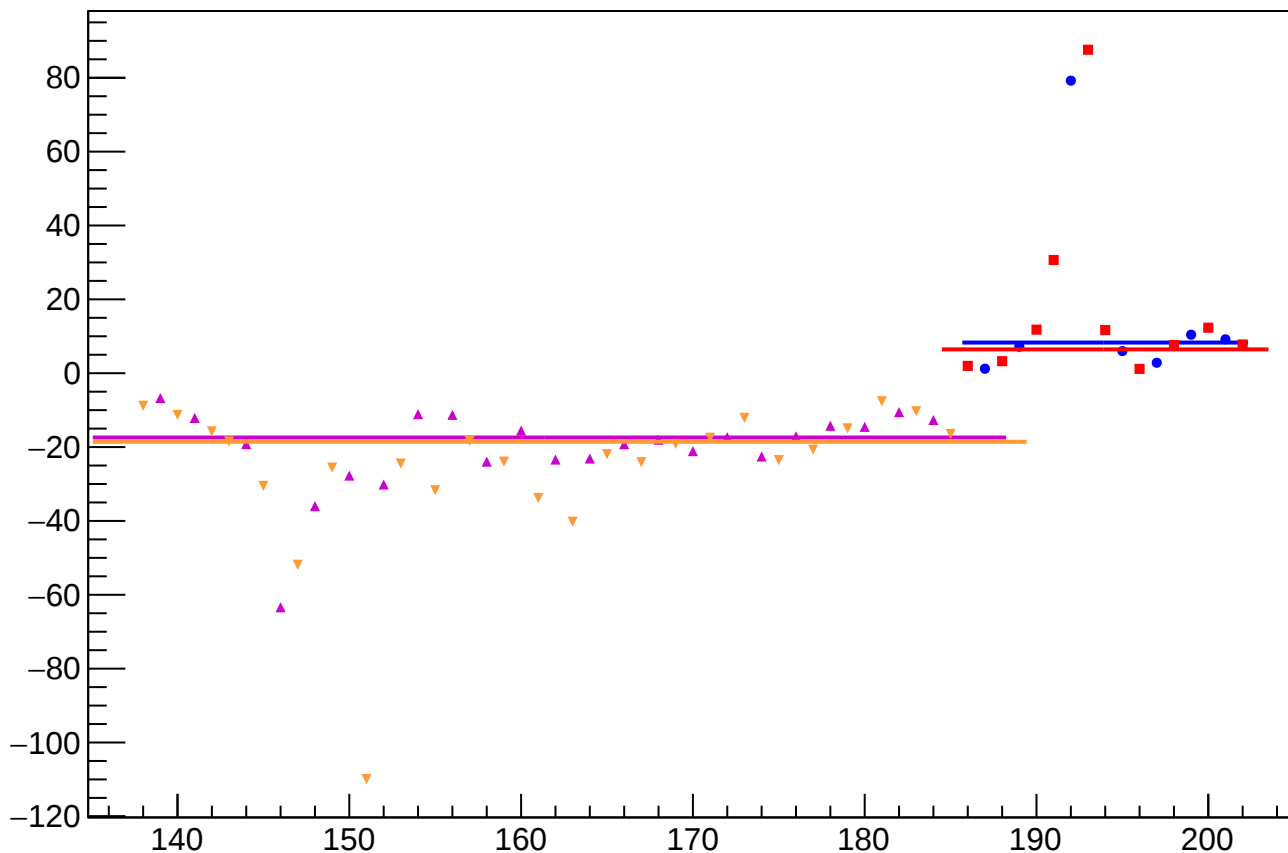
Right: 0.254 $\pm$ 0.002  $\chi^2$ /NDF: 22627.7/52

In: 0.129 $\pm$ 0.001  $\chi^2$ /NDF:17445.3/46

Out: 0.155 $\pm$ 0.001  $\chi^2$ /NDF:18106.9/53

All: 0.142 $\pm$ 0.001  $\chi^2$ /NDF: 35725.7/100

reg\_asym\_bcm\_dg\_us\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $8.304 \pm 0.085$   $\chi^2/\text{NDF}: 23786.5/6$

Left Out:  $-18.566 \pm 0.040$   $\chi^2/\text{NDF}: 86389.6/24$

Right Out:  $6.452 \pm 0.070$   $\chi^2/\text{NDF}: 24877.1/9$

Left In:  $-17.414 \pm 0.039$   $\chi^2/\text{NDF}: 43504.1/22$

Left:  $-17.979 \pm 0.028$   $\chi^2/\text{NDF}: 130314.7/47$

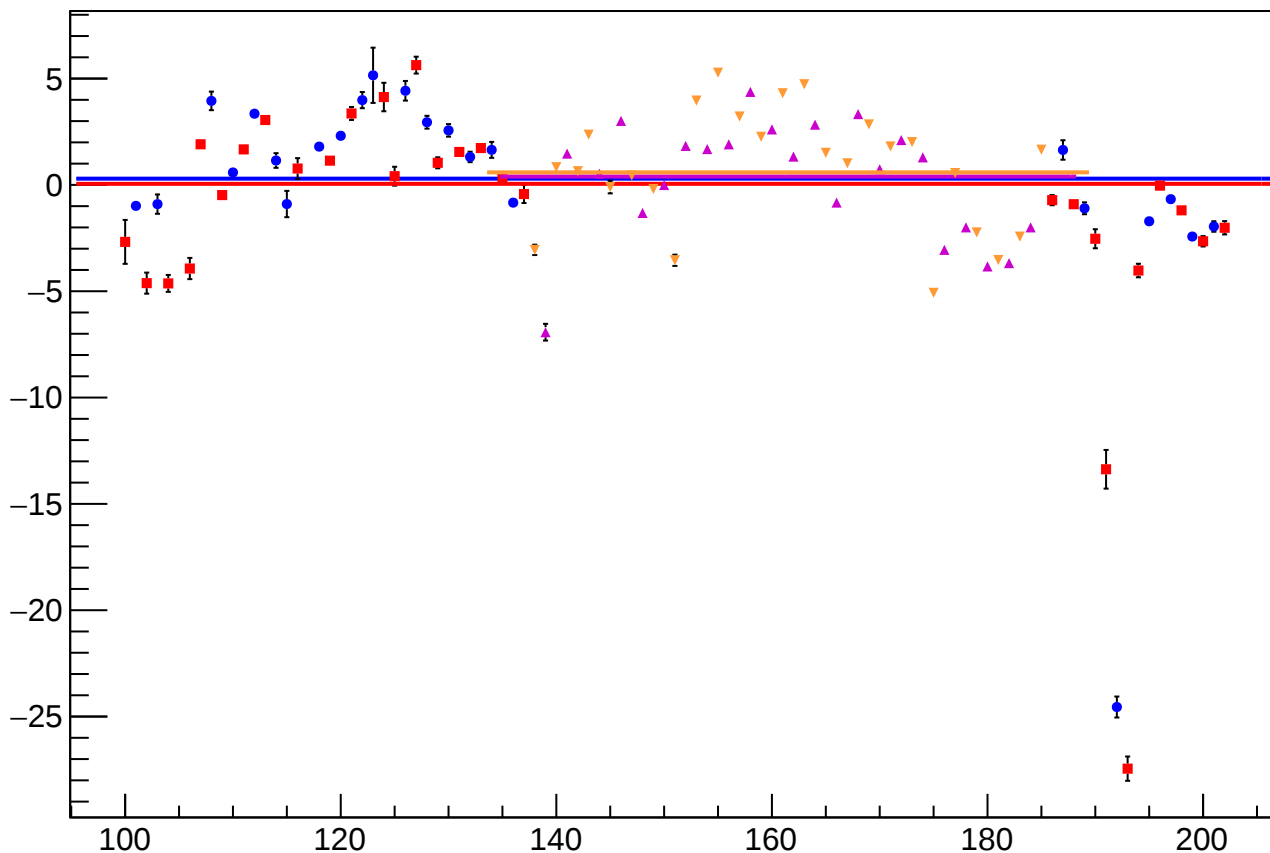
Right:  $7.192 \pm 0.054$   $\chi^2/\text{NDF}: 48946.7/16$

In:  $-12.911 \pm 0.036$   $\chi^2/\text{NDF}: 142271.9/29$

Out:  $-12.327 \pm 0.035$   $\chi^2/\text{NDF}: 208344.9/34$

All:  $-12.611 \pm 0.025$   $\chi^2/\text{NDF}: 350753.9/64$

reg\_asym\_bcm\_dg\_us\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 0.294+/-0.053  $\chi^2/\text{NDF}$ : 3836.1/23

Left Out: 0.591+/-0.033  $\chi^2/\text{NDF}$ : 6796.5/24

Right Out: 0.050+/-0.049  $\chi^2/\text{NDF}$ : 4201.3/28

Left In: 0.394+/-0.032  $\chi^2/\text{NDF}$ : 6059.8/22

Left: 0.488+/-0.023  $\chi^2/\text{NDF}$ : 12874.6/47

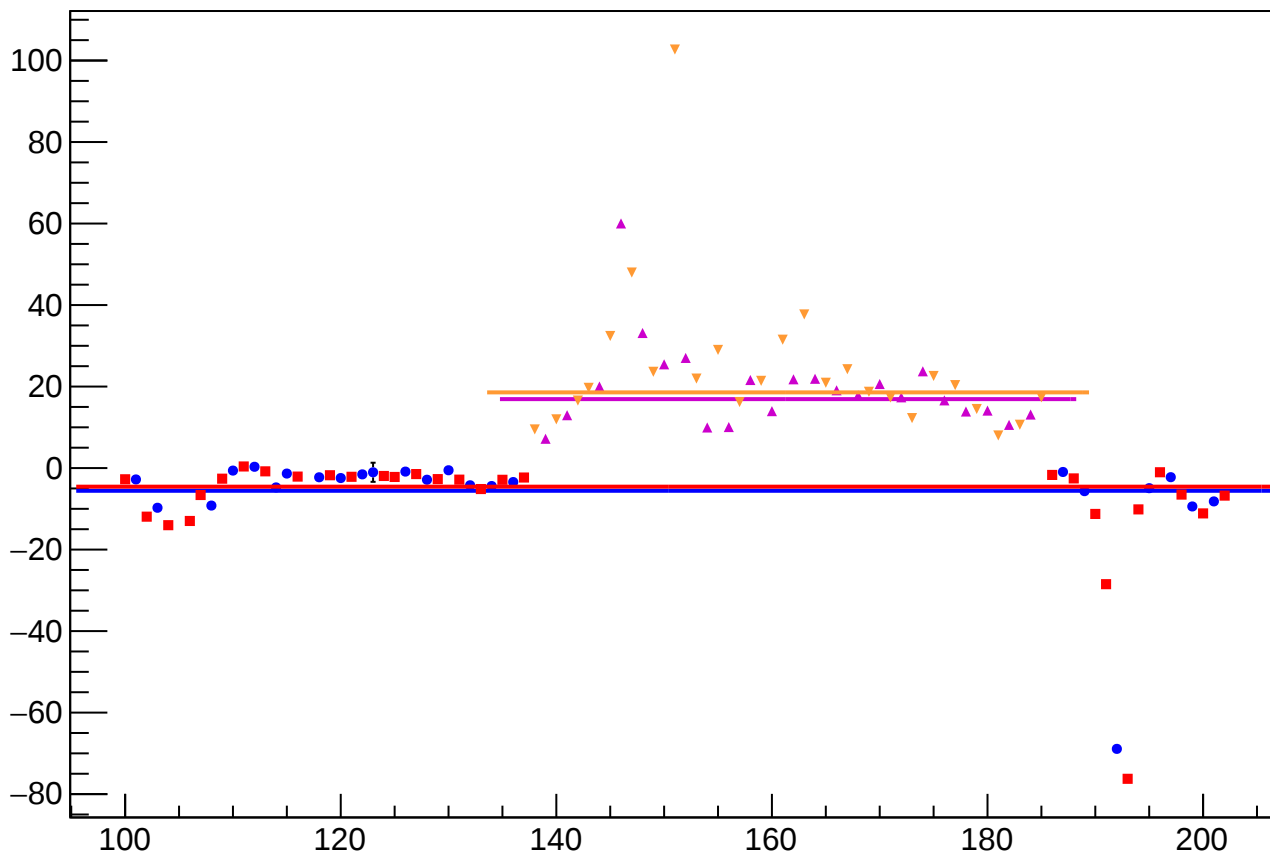
Right: 0.162+/-0.036  $\chi^2/\text{NDF}$ : 8048.9/52

In: 0.368+/-0.027  $\chi^2/\text{NDF}$ : 9898.6/46

Out: 0.419+/-0.027  $\chi^2/\text{NDF}$ : 11081.6/53

All: 0.393+/-0.019  $\chi^2/\text{NDF}$ : 20982.0/100

reg\_asym\_bcm\_dg\_us\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-5.570 \pm 0.061$   $\chi^2/\text{NDF}: 25719.0/23$

Left Out:  $18.573 \pm 0.040$   $\chi^2/\text{NDF}: 76029.9/24$

Right Out:  $-4.563 \pm 0.051$   $\chi^2/\text{NDF}: 26729.6/28$

Left In:  $16.919 \pm 0.039$   $\chi^2/\text{NDF}: 40154.5/22$

Left:  $17.718 \pm 0.028$   $\chi^2/\text{NDF}: 117057.3/47$

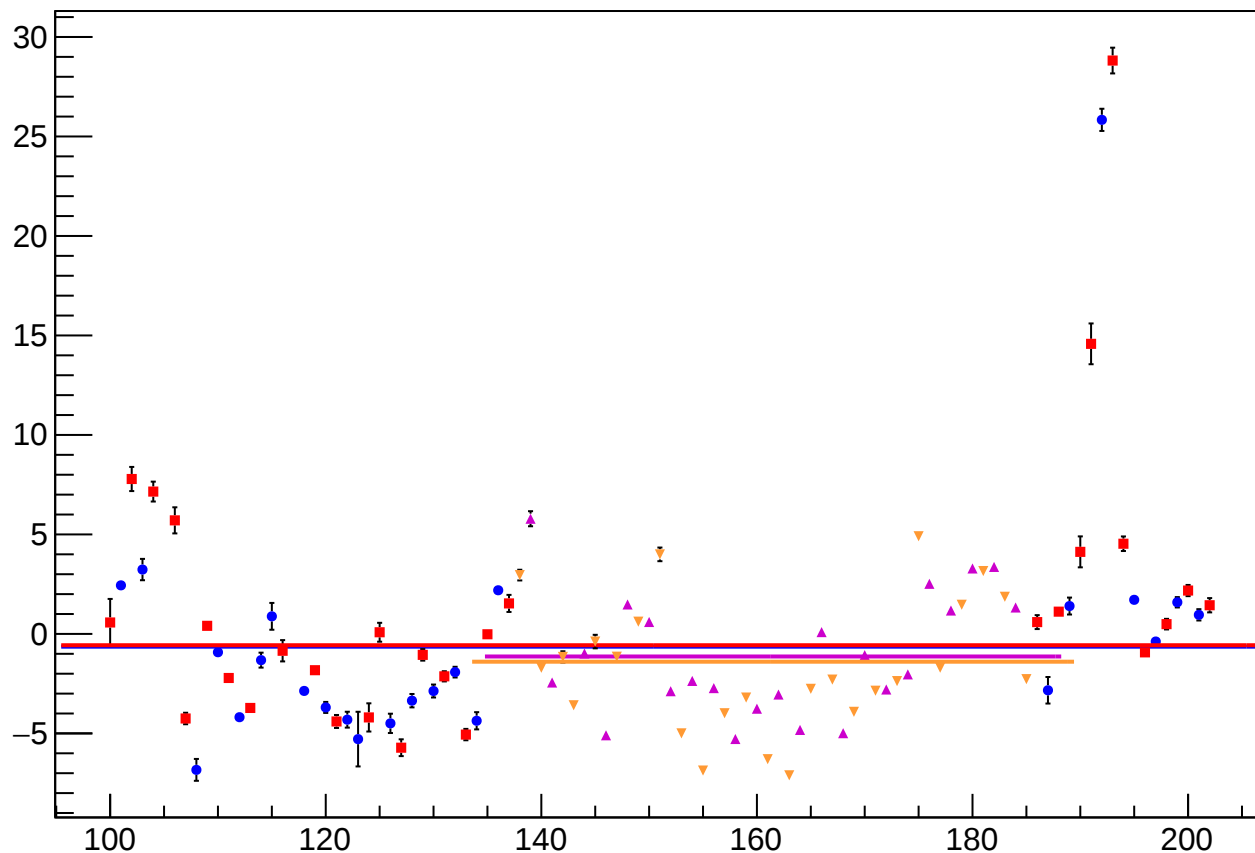
Right:  $-4.971 \pm 0.039$   $\chi^2/\text{NDF}: 52608.9/52$

In:  $10.468 \pm 0.033$   $\chi^2/\text{NDF}: 161713.0/46$

Out:  $9.604 \pm 0.032$   $\chi^2/\text{NDF}: 230787.0/53$

All:  $10.017 \pm 0.023$   $\chi^2/\text{NDF}: 392860.6/100$

reg\_asym\_bcm\_dg\_us\_diff\_bpm4eY\_slope vs Slug, Sign Corrected

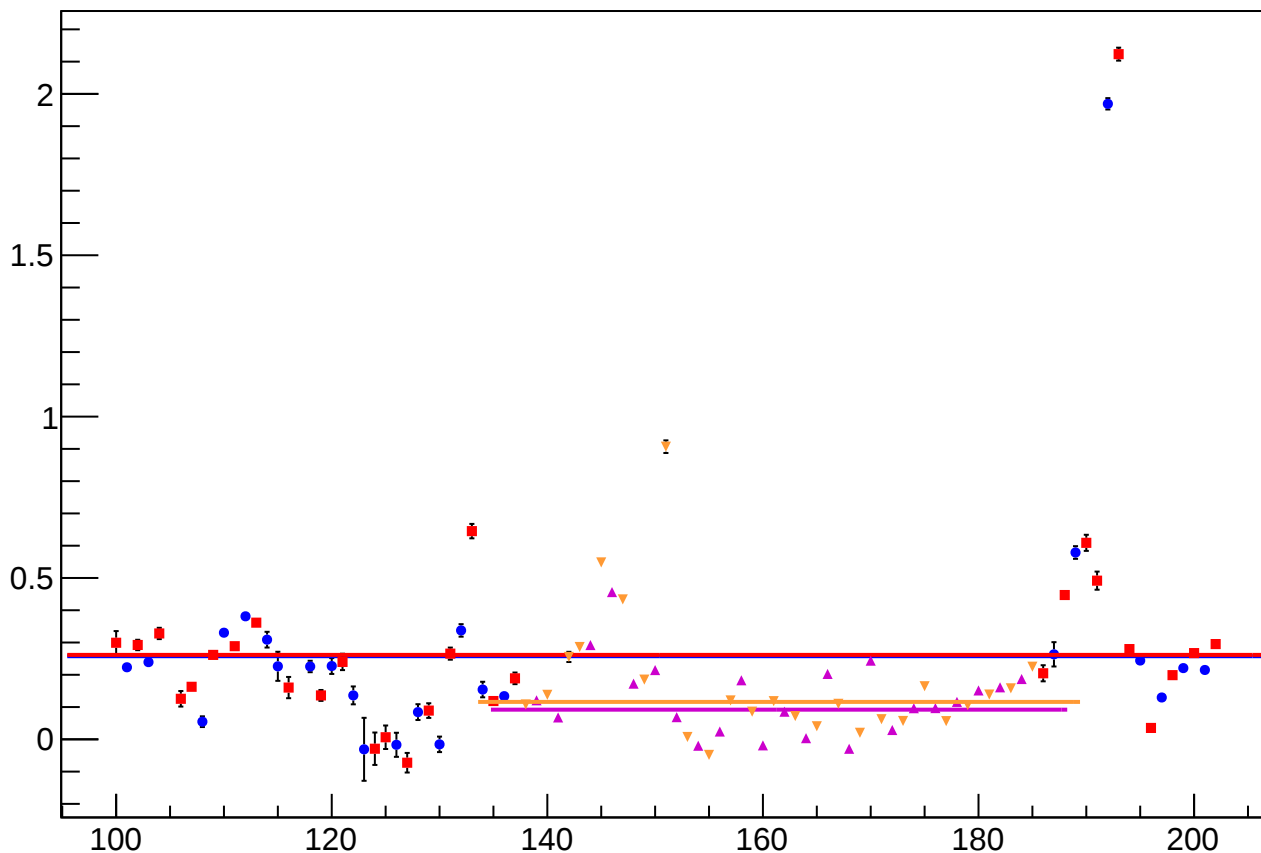


Right In:  $-0.640 \pm 0.062$   $\chi^2/\text{NDF}: 3875.3/23$   
 Left Out:  $-1.396 \pm 0.037$   $\chi^2/\text{NDF}: 7651.5/24$   
 Right Out:  $-0.569 \pm 0.057$   $\chi^2/\text{NDF}: 4403.0/28$   
 Left In:  $-1.135 \pm 0.035$   $\chi^2/\text{NDF}: 6597.7/22$

Left:  $-1.259 \pm 0.025$   $\chi^2/\text{NDF}: 14275.6/47$   
 Right:  $-0.601 \pm 0.042$   $\chi^2/\text{NDF}: 8279.0/52$   
 In:  $-1.014 \pm 0.031$   $\chi^2/\text{NDF}: 10521.1/46$   
 Out:  $-1.153 \pm 0.031$   $\chi^2/\text{NDF}: 12202.0/53$

All:  $-1.083 \pm 0.022$   $\chi^2/\text{NDF}: 22733.3/100$

reg\_asym\_bcm\_dg\_us\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.258 $\pm$ 0.003  $\chi^2$ /NDF: 10783.8/23

Left Out: 0.116 $\pm$ 0.002  $\chi^2$ /NDF:4463.0/24

Right Out: 0.262 $\pm$ 0.003  $\chi^2$ /NDF: 11071.9/28

Left In: 0.092 $\pm$ 0.002  $\chi^2$ /NDF:3631.4/22

Left: 0.103 $\pm$ 0.001  $\chi^2$ /NDF: 8207.3/47

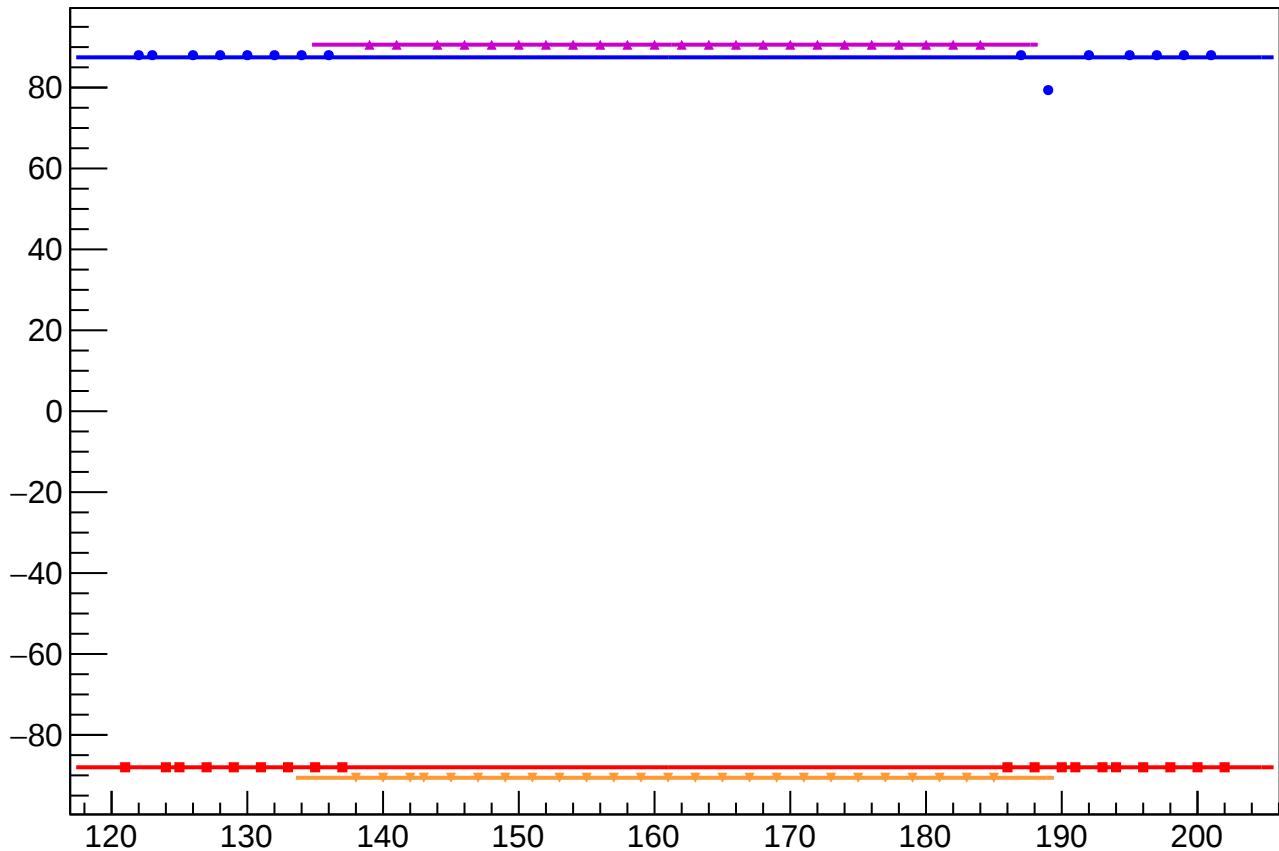
Right: 0.260 $\pm$ 0.002  $\chi^2$ /NDF: 21856.8/52

In: 0.131 $\pm$ 0.001  $\chi^2$ /NDF:17119.4/46

Out: 0.158 $\pm$ 0.001  $\chi^2$ /NDF:17761.8/53

All: 0.144 $\pm$ 0.001  $\chi^2$ /NDF: 35065.6/100

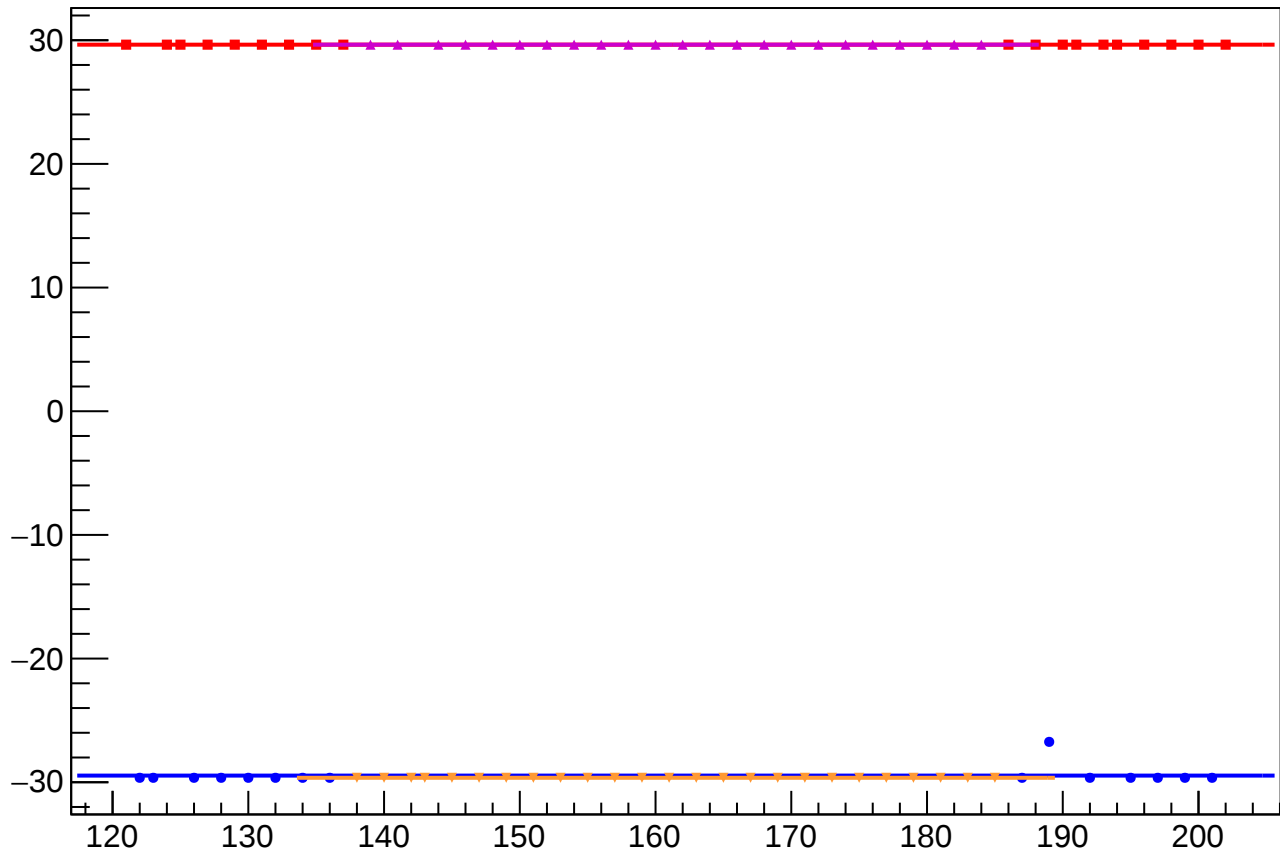
# VWienAngle\_mean vs Slug, Sign Corrected



Right In:  $87.471 \pm 0.000$   $\chi^2/\text{NDF}$ : 3563163047937570024656618796351488.0/14  
 Left Out:  $-90.599 \pm 0.000$   $\chi^2/\text{NDF}$ : 6053403.0/24  
 Right Out:  $-88.001 \pm 0.000$   $\chi^2/\text{NDF}$ : 564849.7/18  
 Left In:  $90.599 \pm 0.000$   $\chi^2/\text{NDF}$ : 5932436.0/22

Left:  $-2.410 \pm 0.000$   $\chi^2/\text{NDF}$ : 30521213250005045  
 Right:  $-7.439 \pm 0.000$   $\chi^2/\text{NDF}$ : 1384306298231736  
 In:  $89.615 \pm 0.000$   $\chi^2/\text{NDF}$ : 913684921381488243  
 Out:  $-89.719 \pm 0.000$   $\chi^2/\text{NDF}$ : 4370642619298555  
 All:  $-4.056 \pm 0.000$   $\chi^2/\text{NDF}$ : 4439506355756

# HWienAngle\_mean vs Slug, Sign Corrected



Right In: -29.462+/-0.000

$\chi^2/\text{NDF}$ : 404241051273333620658862186037248.0/14

Left Out: -29.641+/-0.000

$\chi^2/\text{NDF}$ : 654199.2/24

Right Out: 29.641+/-0.000

$\chi^2/\text{NDF}$ : 1252168.4/18

Left In: 29.641+/-0.000

$\chi^2/\text{NDF}$ : 511825.6/22

Left: -0.789+/-0.000

$\chi^2/\text{NDF}$ : 32668496095314519

Right: 2.506+/-0.000

$\chi^2/\text{NDF}$ : 15704962858924273

In: 11.051+/-0.000

$\chi^2/\text{NDF}$ : 19901914432687960

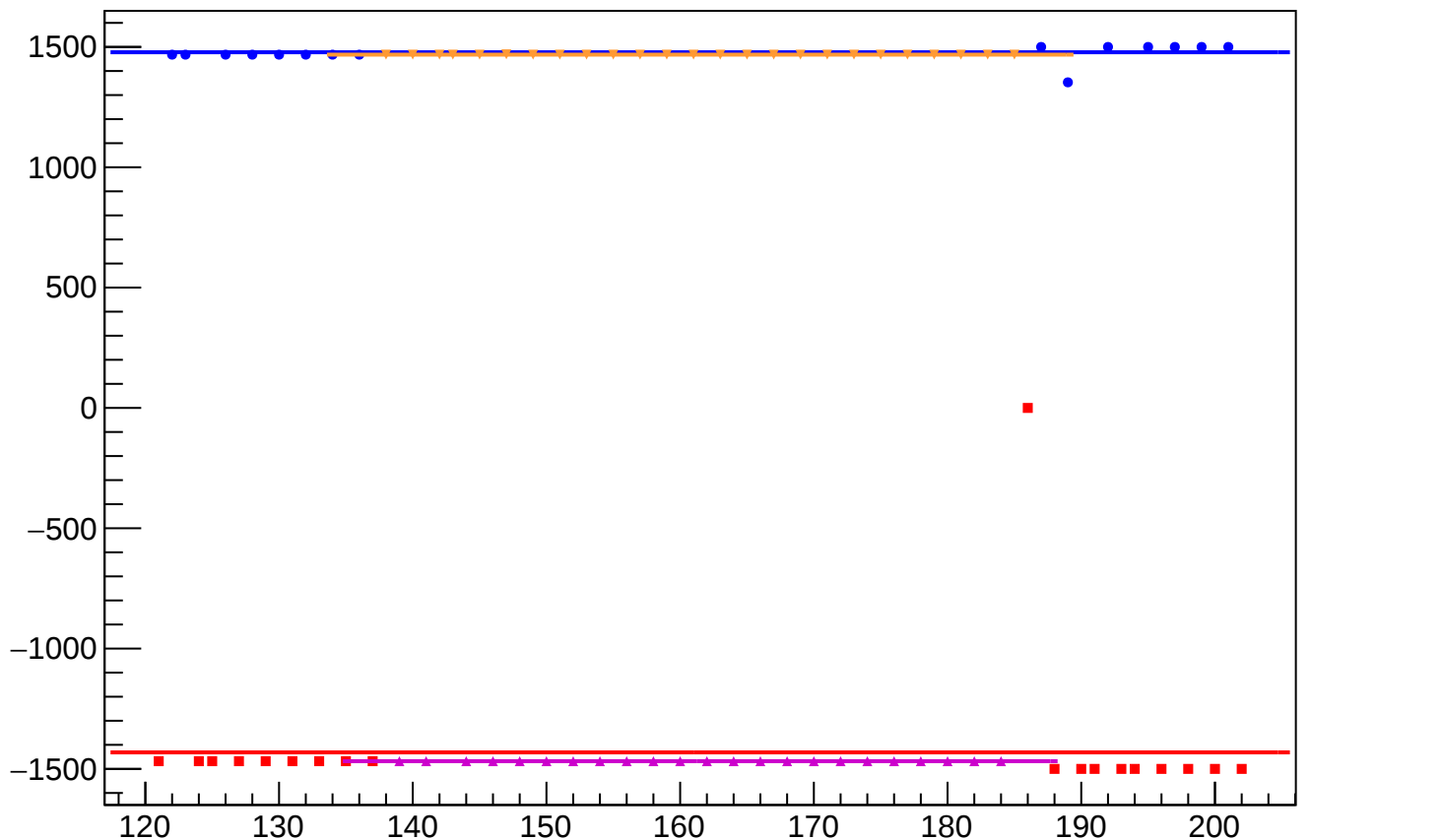
Out: -9.552+/-0.000

$\chi^2/\text{NDF}$ : 22746024977791658

All: 0.289+/-0.000

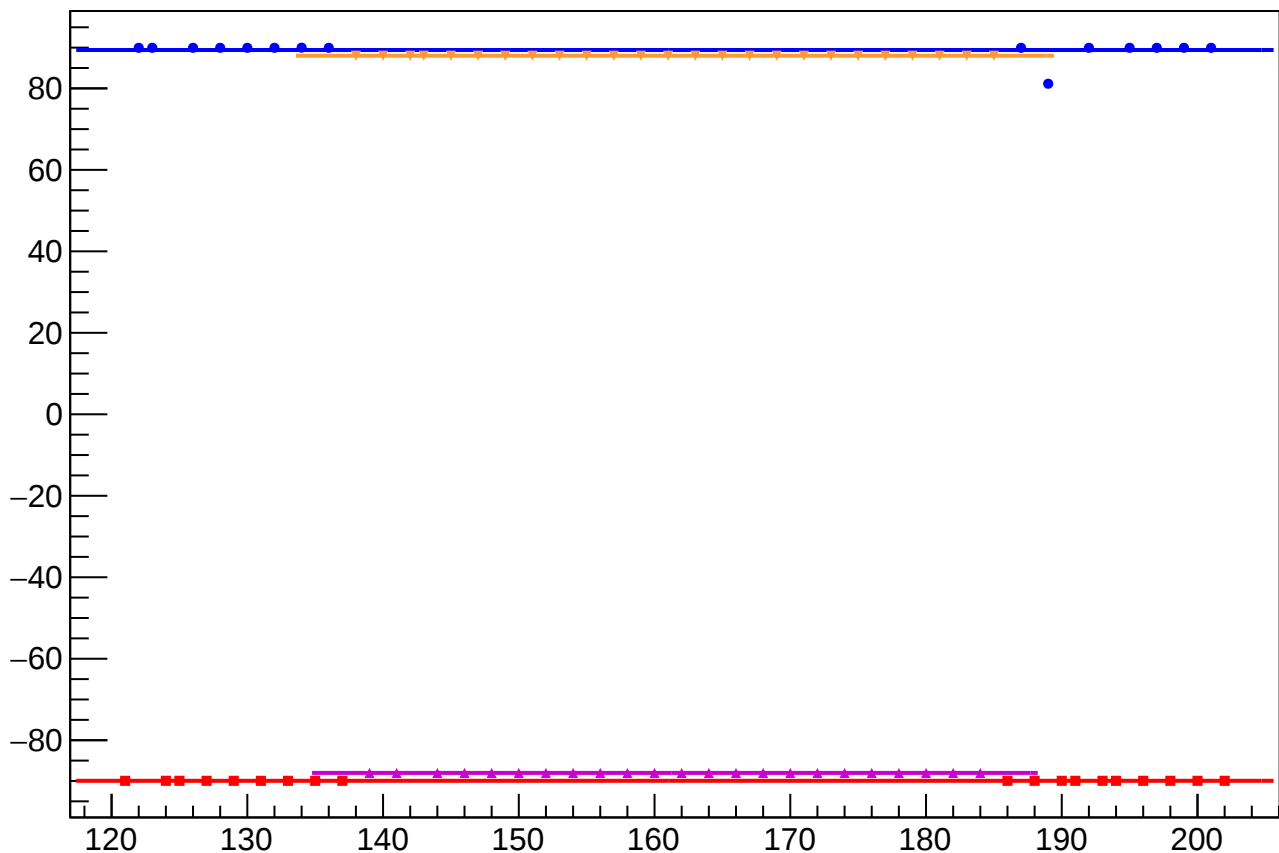
$\chi^2/\text{NDF}$ : 4850559526905

# psub\_pl\_pos\_mean vs Slug, Sign Corrected



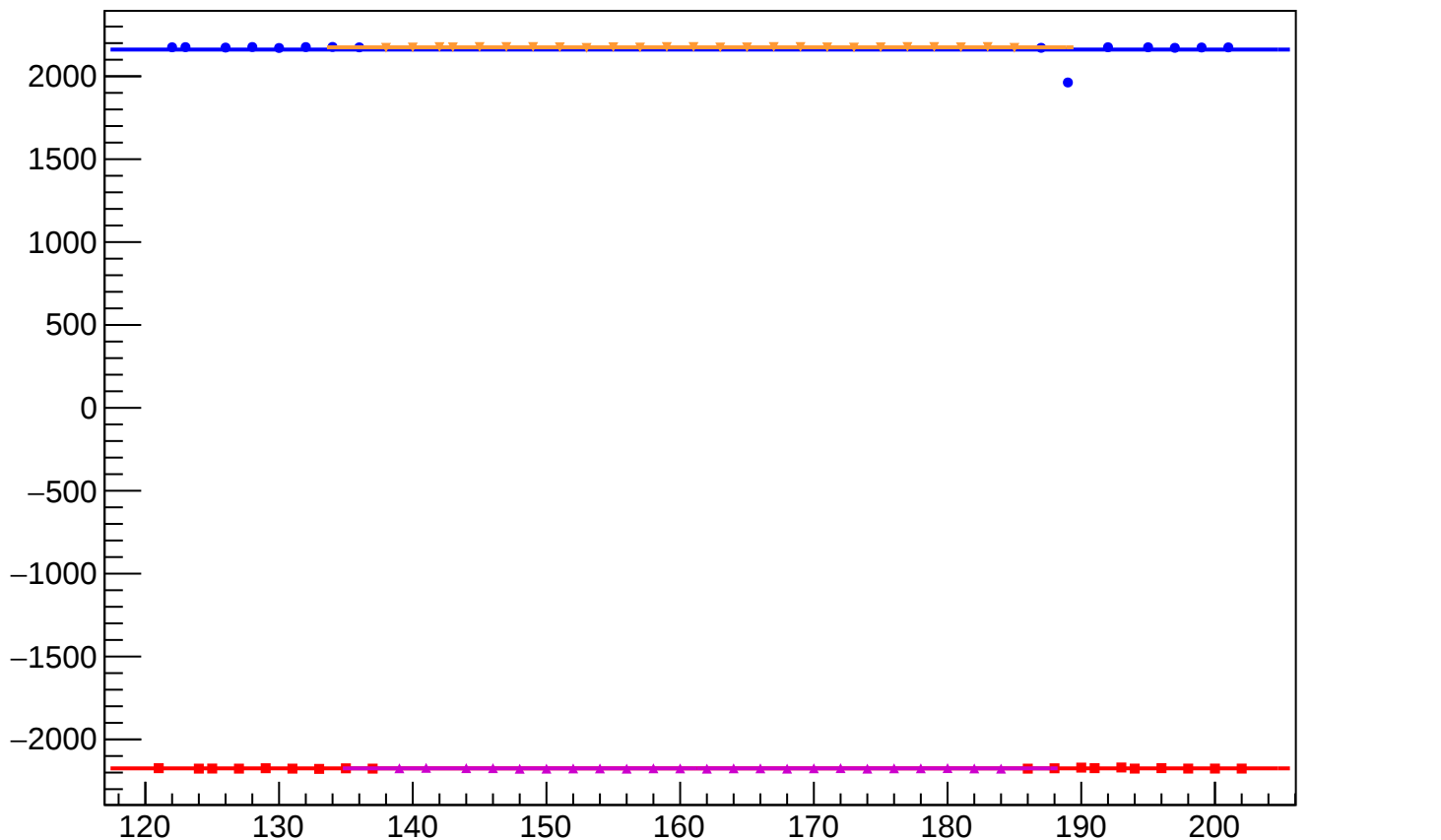
Right In: 1477.913+/-0.000  $\chi^2/\text{NDF}$ : 1045108886946435338230360909453197312.0/14  
 Left Out: 1468.048+/-0.000  $\chi^2/\text{NDF}$ : 127960980922965975039069502046208.0/24  
 Right Out: -1431.410+/-0.000  $\chi^2/\text{NDF}$ : 81218146005158958630670070305655881728.0/18  
 Left In: -1467.994+/-0.000  $\chi^2/\text{NDF}$ : 145848702340275035310993178624.0/22  
 All: -5.021+/-0.000  $\chi^2/\text{NDF}$ : 1192220061050

# Phi\_FG\_mean vs Slug, Sign Corrected



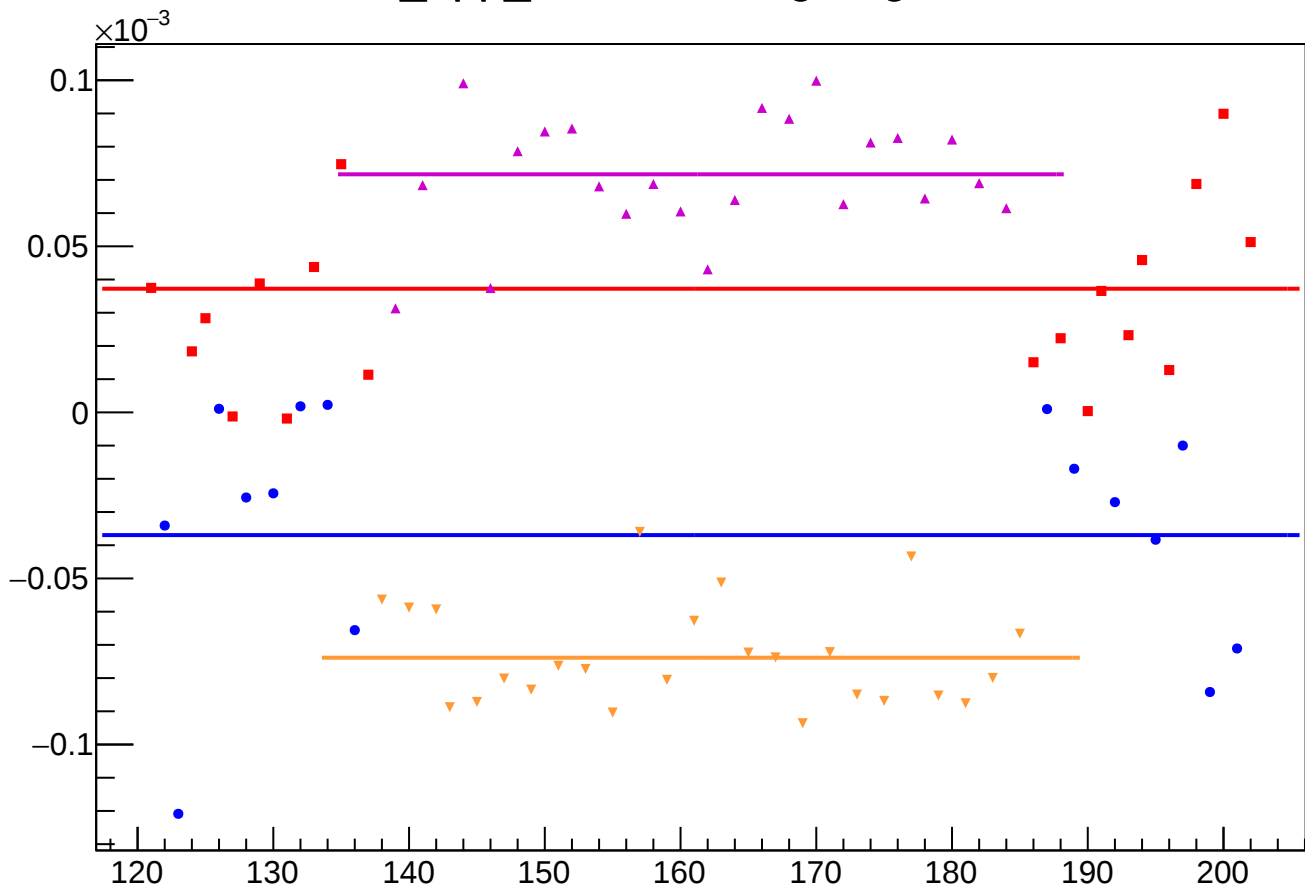
|                            |                                                               |                       |                                          |
|----------------------------|---------------------------------------------------------------|-----------------------|------------------------------------------|
| Right In: 89.419+/-0.000   | $\chi^2/\text{NDF}$ : 3724309323880927610464620081315840.0/14 | Left: 2.342+/-0.000   | $\chi^2/\text{NDF}$ : 288085769312401978 |
| Left Out: 88.021+/-0.000   | $\chi^2/\text{NDF}$ : 5326388.8/24                            | Right: -7.604+/-0.000 | $\chi^2/\text{NDF}$ : 1446625383991192   |
| Right Out: -89.959+/-0.000 | $\chi^2/\text{NDF}$ : 3189976.8/18                            | In: -32.210+/-0.000   | $\chi^2/\text{NDF}$ : 17938154517996657  |
| Left In: -88.021+/-0.000   | $\chi^2/\text{NDF}$ : 6084099.2/22                            | Out: 27.708+/-0.000   | $\chi^2/\text{NDF}$ : 20502693627952885  |
|                            |                                                               | All: -0.913+/-0.000   | $\chi^2/\text{NDF}$ : 4339528199126      |

# HALLA\_p\_mean vs Slug, Sign Corrected



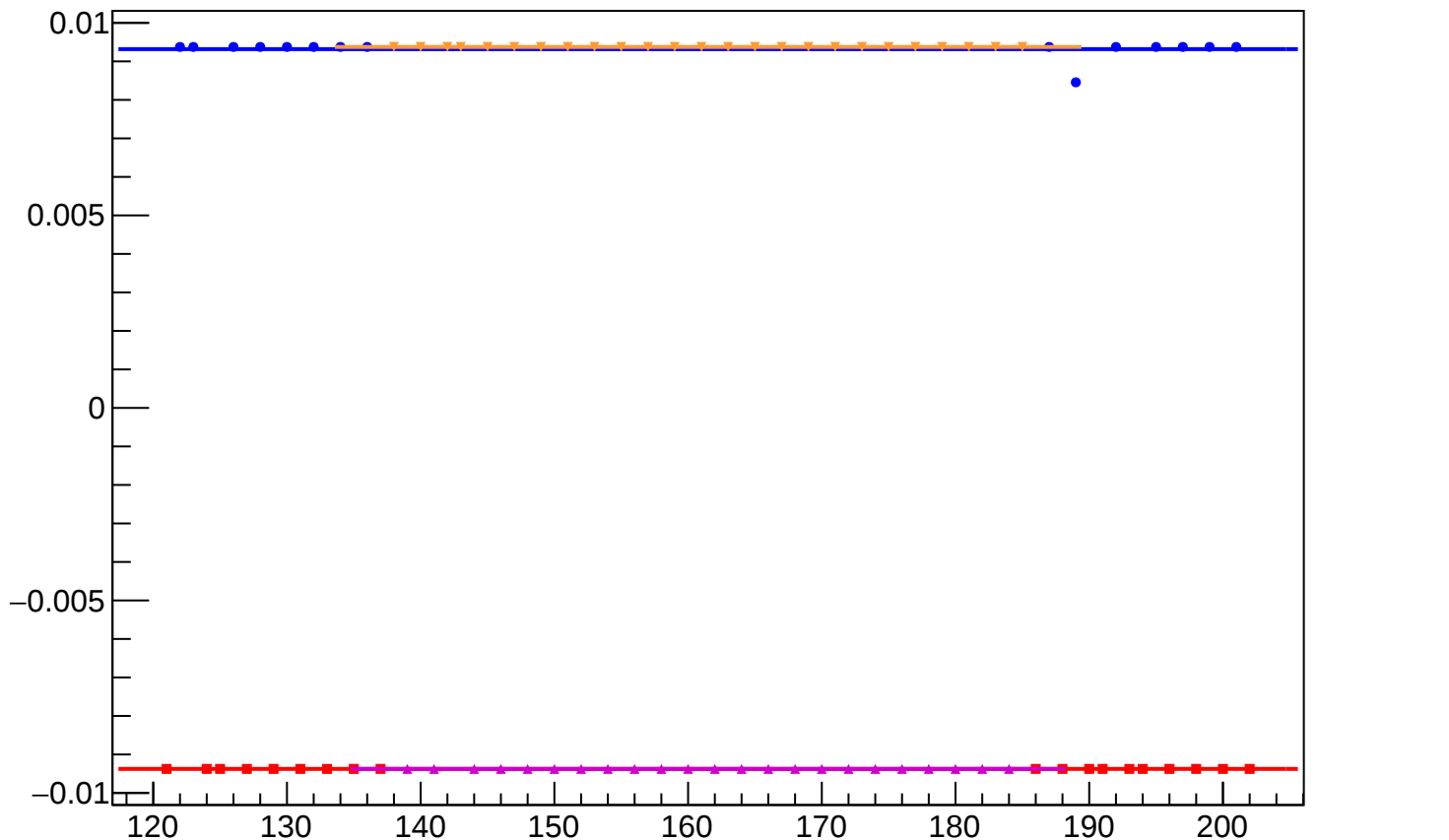
|                              |                                                                  |                                    |                                        |
|------------------------------|------------------------------------------------------------------|------------------------------------|----------------------------------------|
| Right In: 2161.203+/-0.000   | $\chi^2/\text{NDF}$ : 2144869473423248925464965959248773120.0/14 | Left: 57.898+/-0.000               | $\chi^2/\text{NDF}$ : 1758341875465085 |
| Left Out: 2174.622+/-0.000   | $\chi^2/\text{NDF}$ : 5110578135476093110874911595823104.0/24    | Right: -183.961+/-0.000            | $\chi^2/\text{NDF}$ : 84518834936081   |
| Right Out: -2174.594+/-0.000 | $\chi^2/\text{NDF}$ : 4468670326257295343699562682384384.0/18    | In: -810.799+/-0.000               | $\chi^2/\text{NDF}$ : 1071027367152075 |
| Left In: -2174.539+/-0.000   | $\chi^2/\text{NDF}$ : 3400742562425168967494665391570944.0/22    | Out: 700.796+/-0.000               | $\chi^2/\text{NDF}$ : 1224308602590192 |
|                              | All: -21.249+/-0.000                                             | $\chi^2/\text{NDF}$ : 261065312592 |                                        |

# HALLA\_dpp\_mean vs Slug, Sign Corrected



|                          |                                                     |                      |                                           |
|--------------------------|-----------------------------------------------------|----------------------|-------------------------------------------|
| Right In: -0.000+/-0.000 | $\chi^2/\text{NDF}$ : 666990770083655124516864.0/14 | Left: -0.000+/-0.000 | $\chi^2/\text{NDF}$ : 20702696564433151   |
| Left Out: -0.000+/-0.000 | $\chi^2/\text{NDF}$ : 450400934180541069000704.0/24 | Right: 0.000+/-0.000 | $\chi^2/\text{NDF}$ : 38420272151043799   |
| Right Out: 0.000+/-0.000 | $\chi^2/\text{NDF}$ : 701744545303834554007552.0/18 | In: 0.000+/-0.000    | $\chi^2/\text{NDF}$ : 7950514948536087842 |
| Left In: 0.000+/-0.000   | $\chi^2/\text{NDF}$ : 562166279020739416817664.0/22 | Out: -0.000+/-0.000  | $\chi^2/\text{NDF}$ : 91400675000642127   |
|                          |                                                     | All: -0.000+/-0.000  | $\chi^2/\text{NDF}$ : 2459155649763       |

# MQ171LM\_mean vs Slug, Sign Corrected



Right In: 0.009+/-0.000

$\chi^2/\text{NDF}$ : 40439517413462641838391296.0/14

Left: 0.000+/-0.000

$\chi^2/\text{NDF}$ : 326809514411447718

Right: -0.001+/-0.000

$\chi^2/\text{NDF}$ : 1571095060758243

Left Out: 0.009+/-0.000

$\chi^2/\text{NDF}$ : 0.1/24

In: -0.003+/-0.000

$\chi^2/\text{NDF}$ : 199095023310172766

Right Out: -0.009+/-0.000

$\chi^2/\text{NDF}$ : 0.1/18

Out: 0.003+/-0.000

$\chi^2/\text{NDF}$ : 227546972352024300

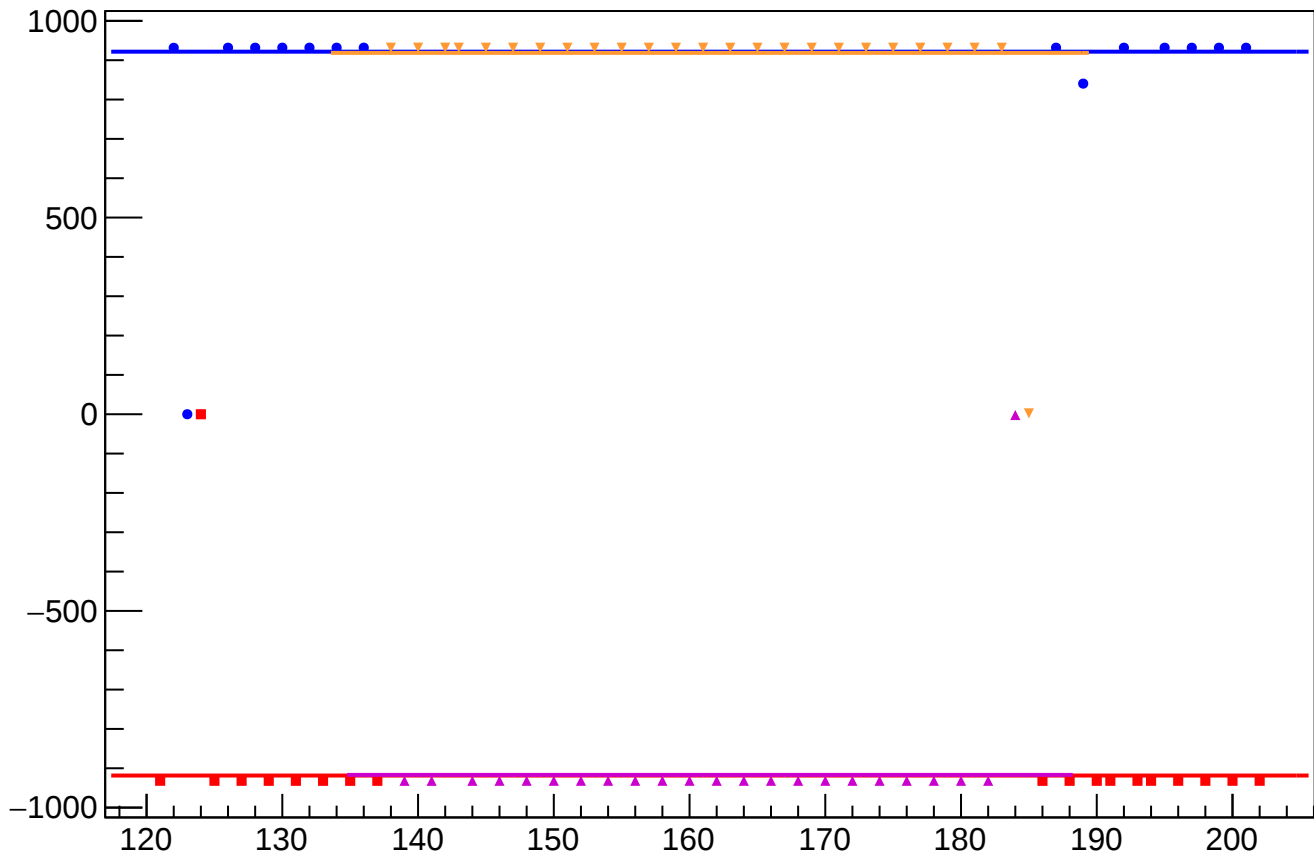
Left In: -0.009+/-0.000

$\chi^2/\text{NDF}$ : 0.1/22

All: -0.000+/-0.000

$\chi^2/\text{NDF}$ : 4852408874246

# HacL\_Q2\_HP3458A\_IOUT\_mean vs Slug, Sign Corrected



Right In: 921.698+/-0.000

$\chi^2/\text{NDF}$ : 3813170059097610946940299109933776896.0/14

Left Out: 918.645+/-0.000

$\chi^2/\text{NDF}$ : 23003498704056084939752432521336324096.0/24

Right Out: -918.478+/-0.000

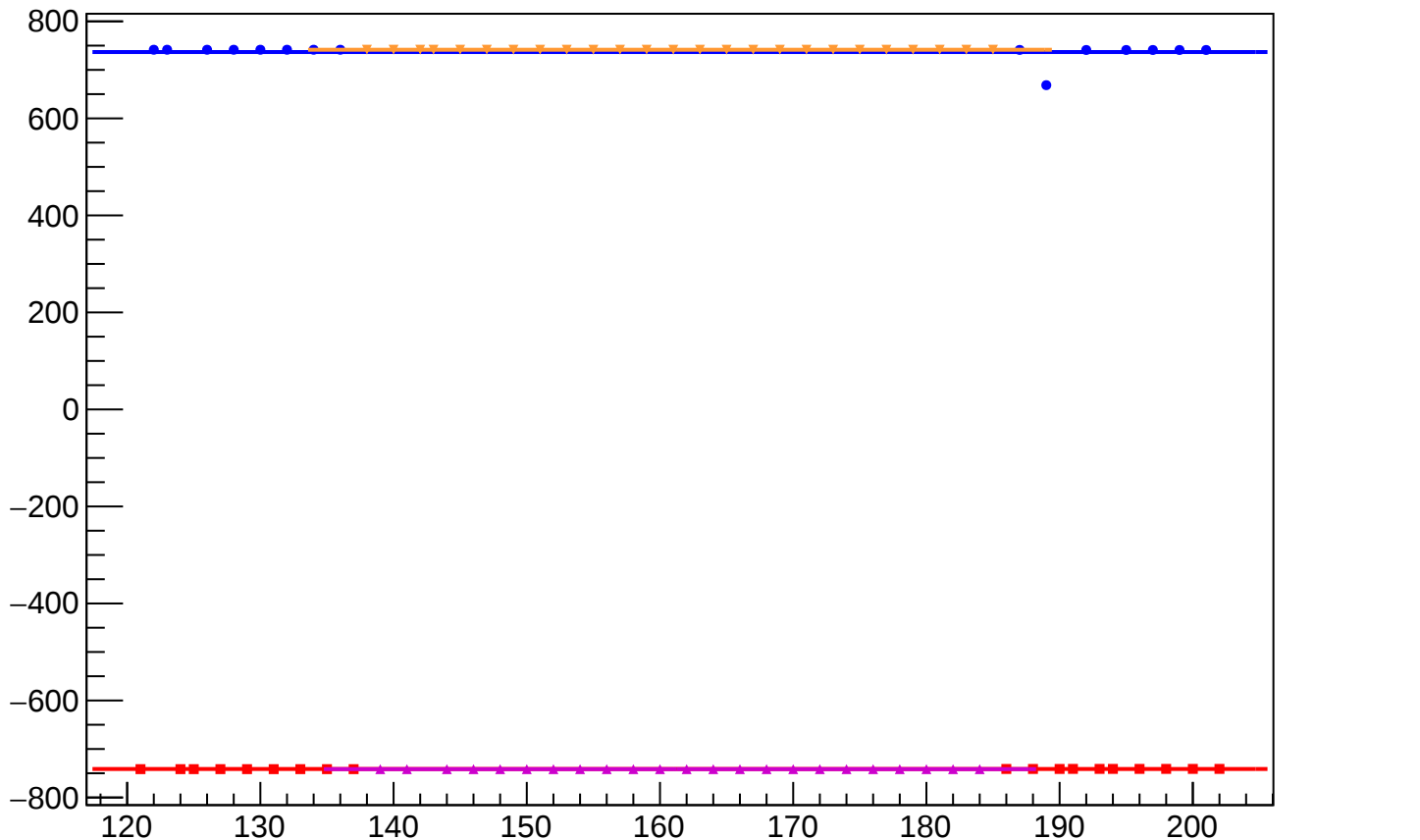
$\chi^2/\text{NDF}$ : 11980942808679929874551283206716391424.0/18

Left In: -916.890+/-0.000

$\chi^2/\text{NDF}$ : 2466789491747623125028694438888133632.0/22

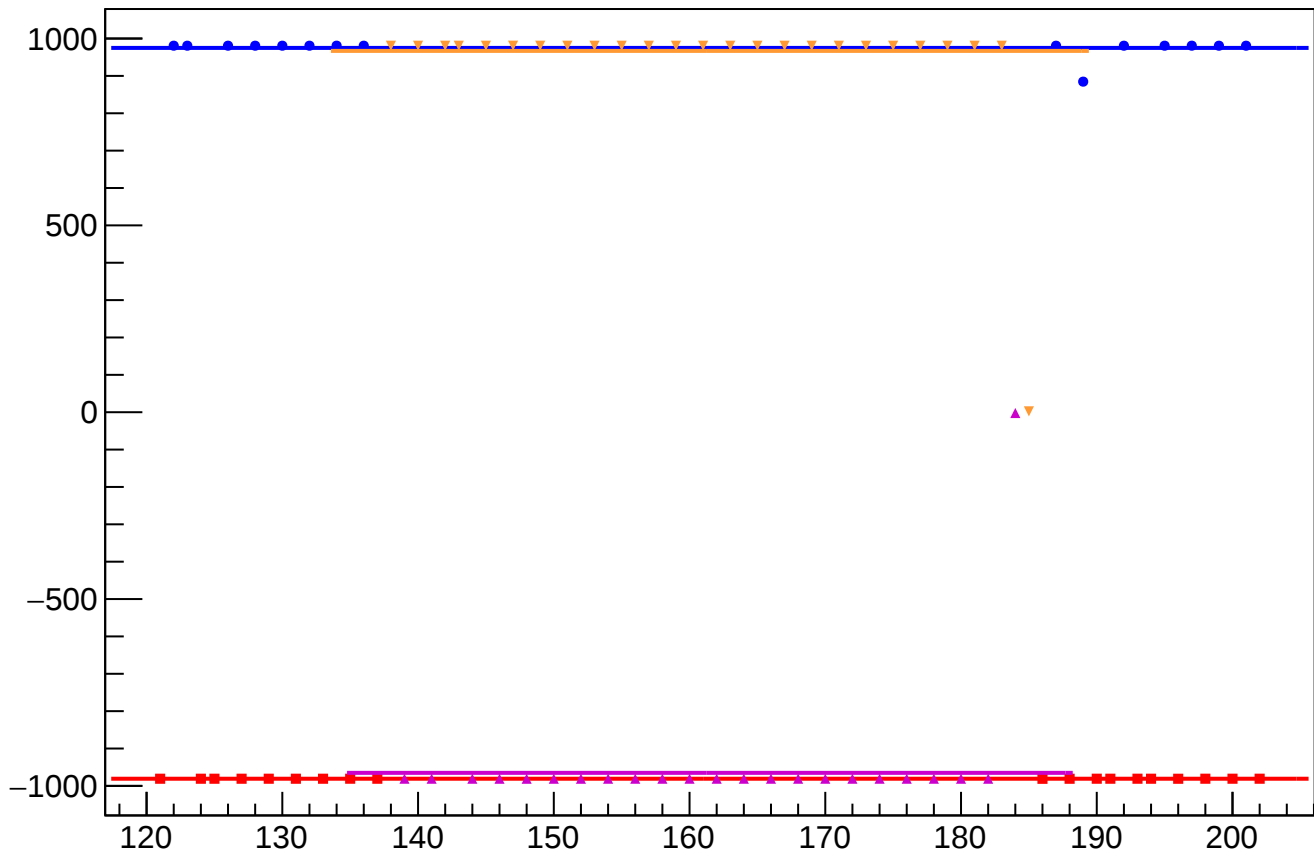
All: -7.076+/-0.000  $\chi^2/\text{NDF}$ : 4729380129664

# HacL\_D1\_HP3458A\_IOUT\_mean vs Slug, Sign Corrected



|                             |                                                                 |                        |                                         |
|-----------------------------|-----------------------------------------------------------------|------------------------|-----------------------------------------|
| Right In: 736.782+/-0.000   | $\chi^2/\text{NDF}$ : 253374980658742752844833628826370048.0/14 | Left: 19.729+/-0.000   | $\chi^2/\text{NDF}$ : 20445098666994125 |
| Left Out: 741.513+/-0.000   | $\chi^2/\text{NDF}$ : 244782737401533731539808944128.0/24       | Right: -62.641+/-0.000 | $\chi^2/\text{NDF}$ : 982115675921564   |
| Right Out: -741.212+/-0.000 | $\chi^2/\text{NDF}$ : 49211306006959264958425742704640.0/18     | In: -276.538+/-0.000   | $\chi^2/\text{NDF}$ : 1245079064514079  |
| Left In: -741.512+/-0.000   | $\chi^2/\text{NDF}$ : 215375309108434607405602439168.0/22       | Out: 239.060+/-0.000   | $\chi^2/\text{NDF}$ : 1422950196320501  |
|                             | All: -7.227+/-0.000                                             |                        | $\chi^2/\text{NDF}$ : 3034887309183     |

# HacL\_Q3\_HP3458A\_IOUT\_mean vs Slug, Sign Corrected



Right In: 974.914 +/- 0.000

$\chi^2/\text{NDF}$ : 442790431841413357733910720368607232.0/14

Left Out: 966.936 +/- 0.000

$\chi^2/\text{NDF}$ : 25485578616543458629432284645183979520.0/24

Right Out: -980.829 +/- 0.000

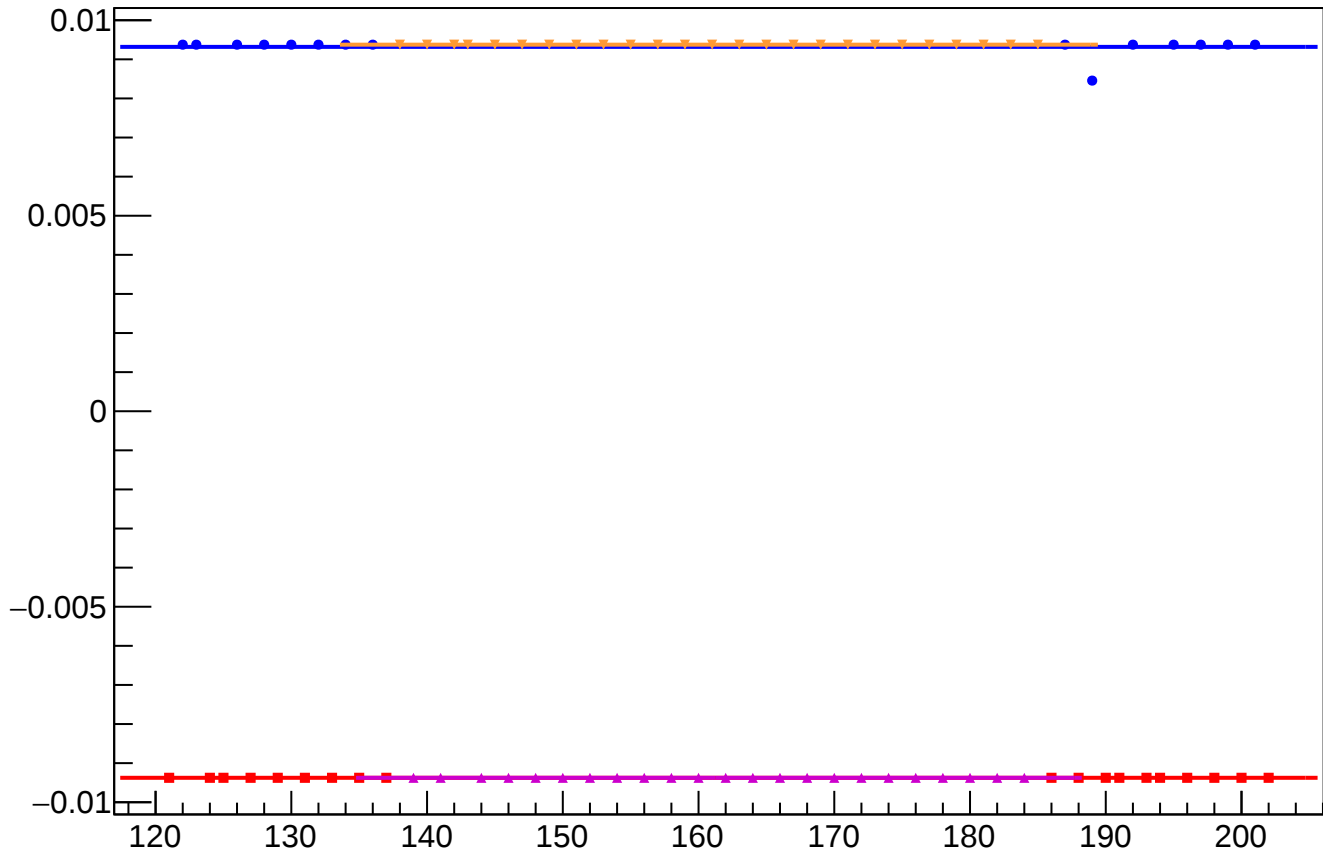
$\chi^2/\text{NDF}$ : 3004226555619554166118677479424.0/18

Left In: -965.102 +/- 0.000

$\chi^2/\text{NDF}$ : 27330319430012441419356351914146004992.0/22

All: -9.226 +/- 0.000  $\chi^2/\text{NDF}$ : 5257029450446

# MQ172RM\_mean vs Slug, Sign Corrected



Right In: 0.009+/-0.000

$\chi^2/\text{NDF}$ : 40439517413462641838391296.0/14

Left: 0.000+/-0.000

$\chi^2/\text{NDF}$ : 326809514411447718

Right: -0.001+/-0.000

$\chi^2/\text{NDF}$ : 1571095060758243

Left Out: 0.009+/-0.000

$\chi^2/\text{NDF}$ : 0.1/24

In: -0.003+/-0.000

$\chi^2/\text{NDF}$ : 199095023310172766

Right Out: -0.009+/-0.000

$\chi^2/\text{NDF}$ : 0.1/18

Out: 0.003+/-0.000

$\chi^2/\text{NDF}$ : 227546972352024300

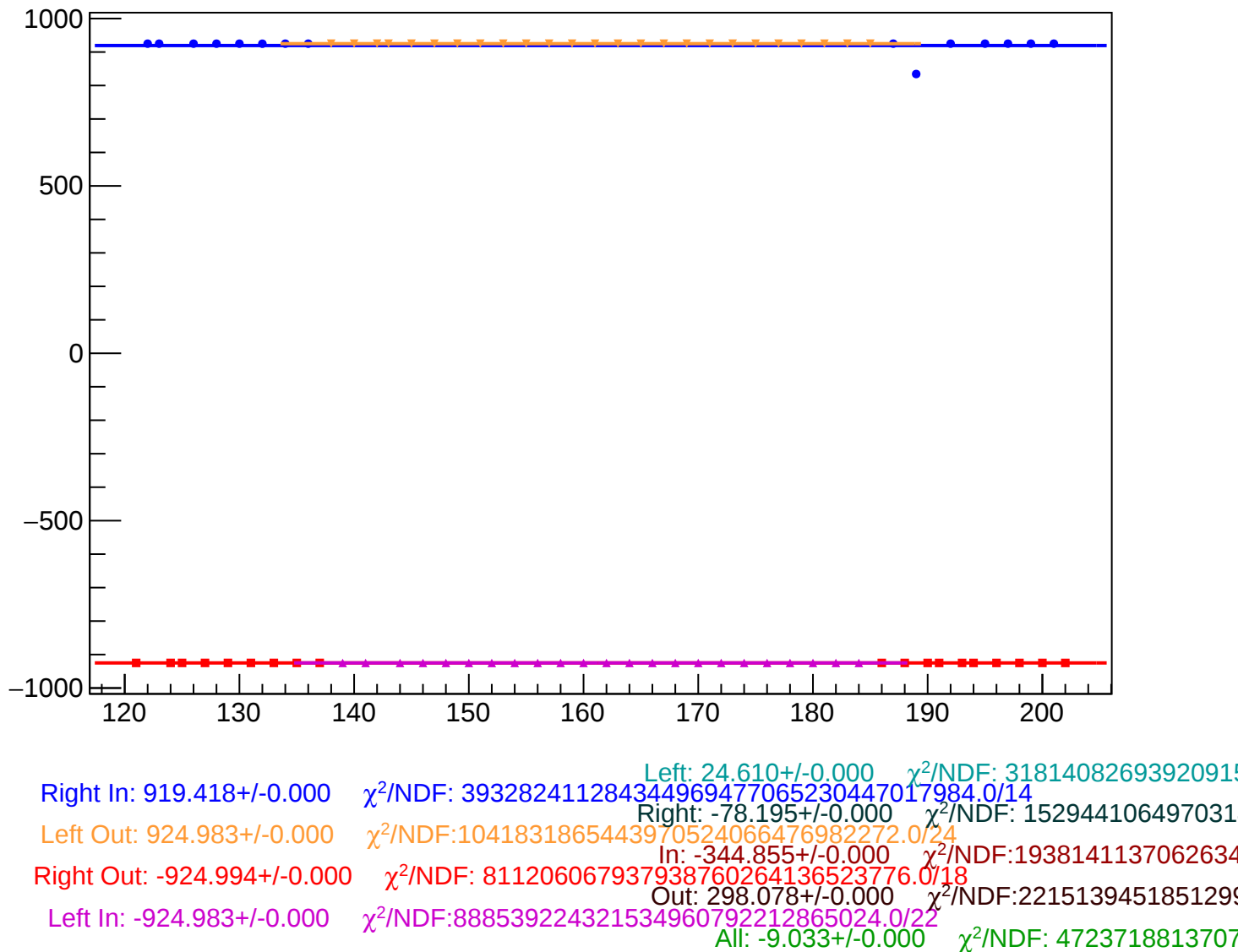
Left In: -0.009+/-0.000

$\chi^2/\text{NDF}$ : 0.1/22

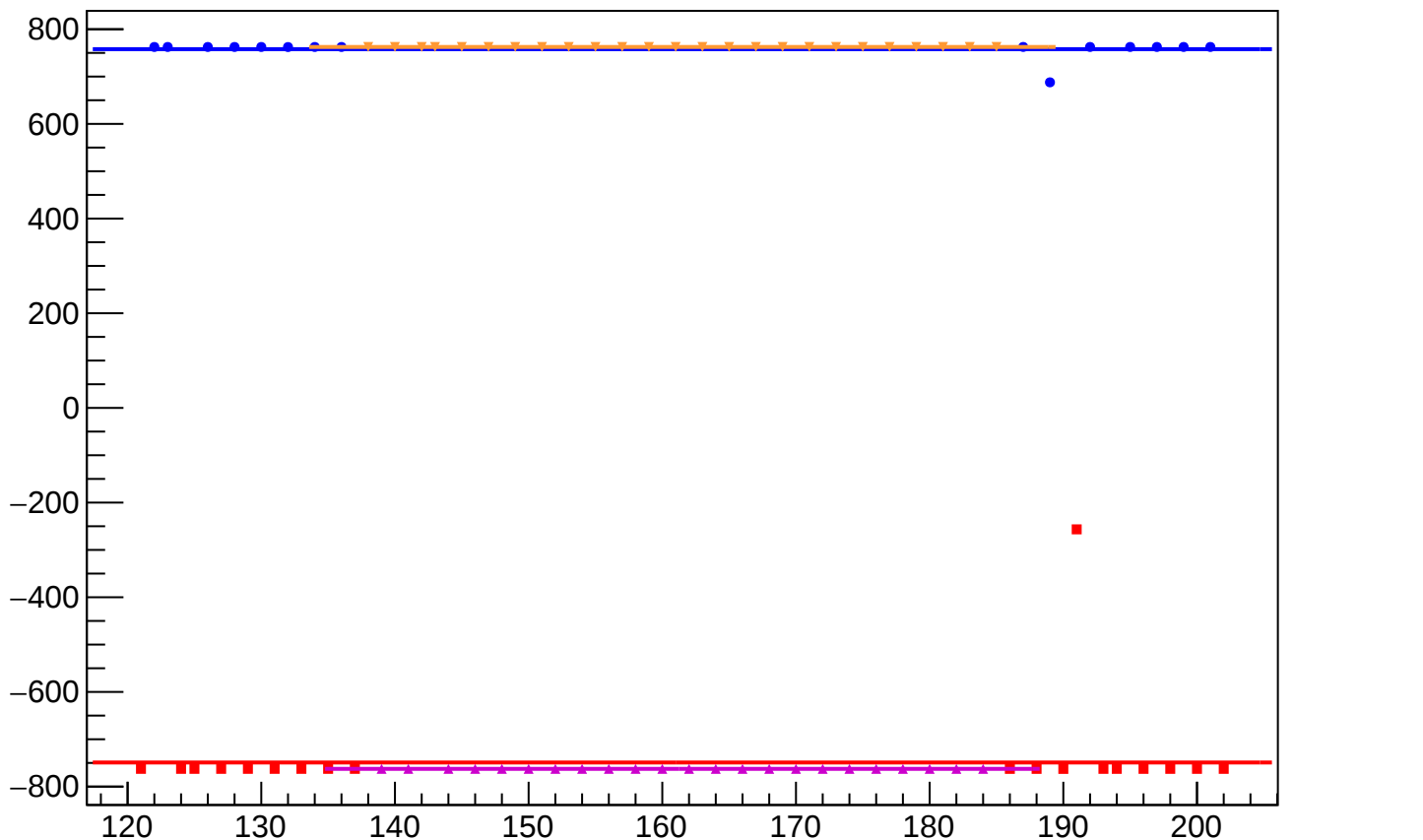
All: -0.000+/-0.000

$\chi^2/\text{NDF}$ : 4852408874246

# HacR\_Q2\_HP3458A\_IOUT\_mean vs Slug, Sign Corrected

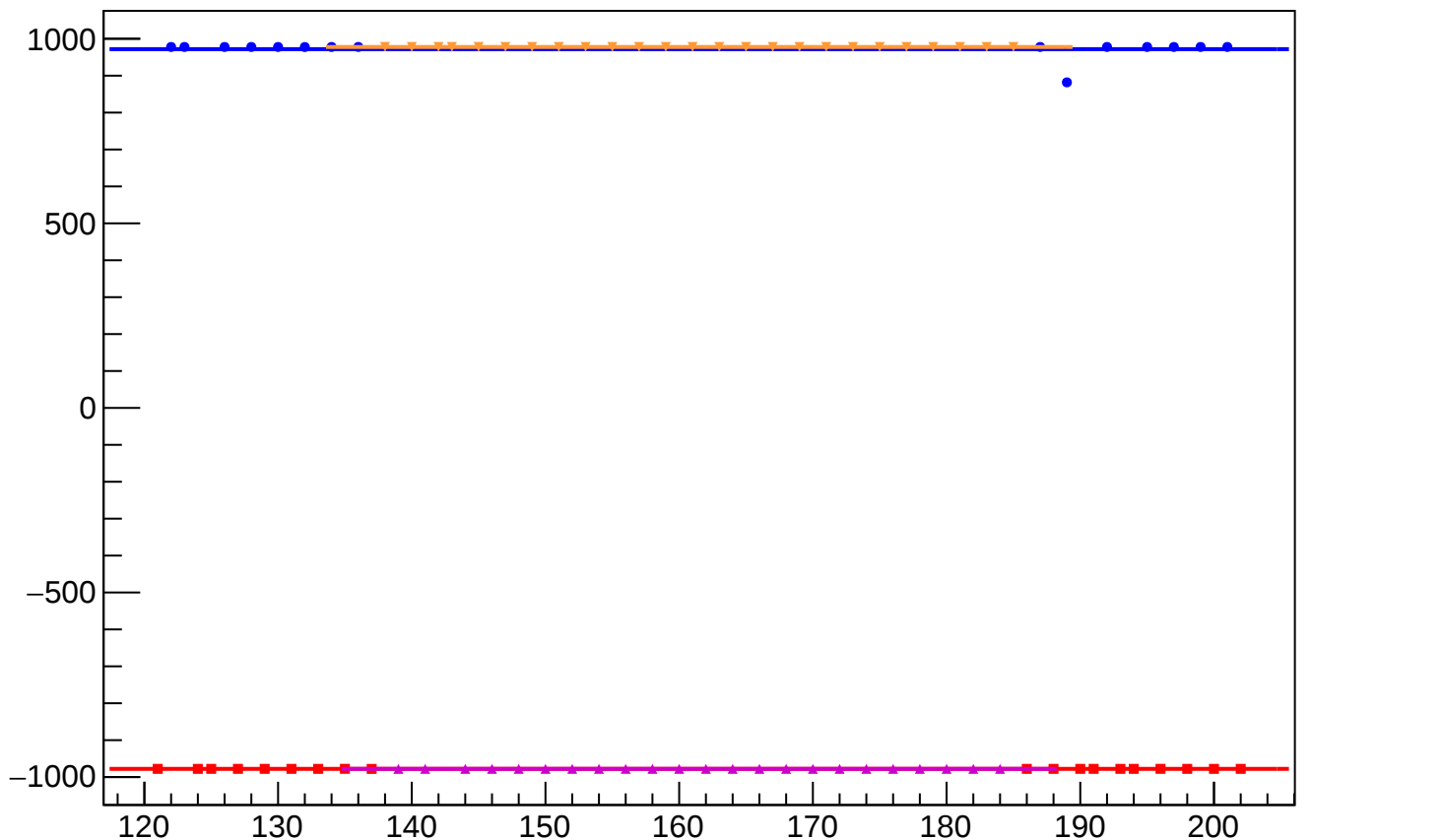


# HacR\_D1\_HP3458A\_IOUT\_mean vs Slug, Sign Corrected



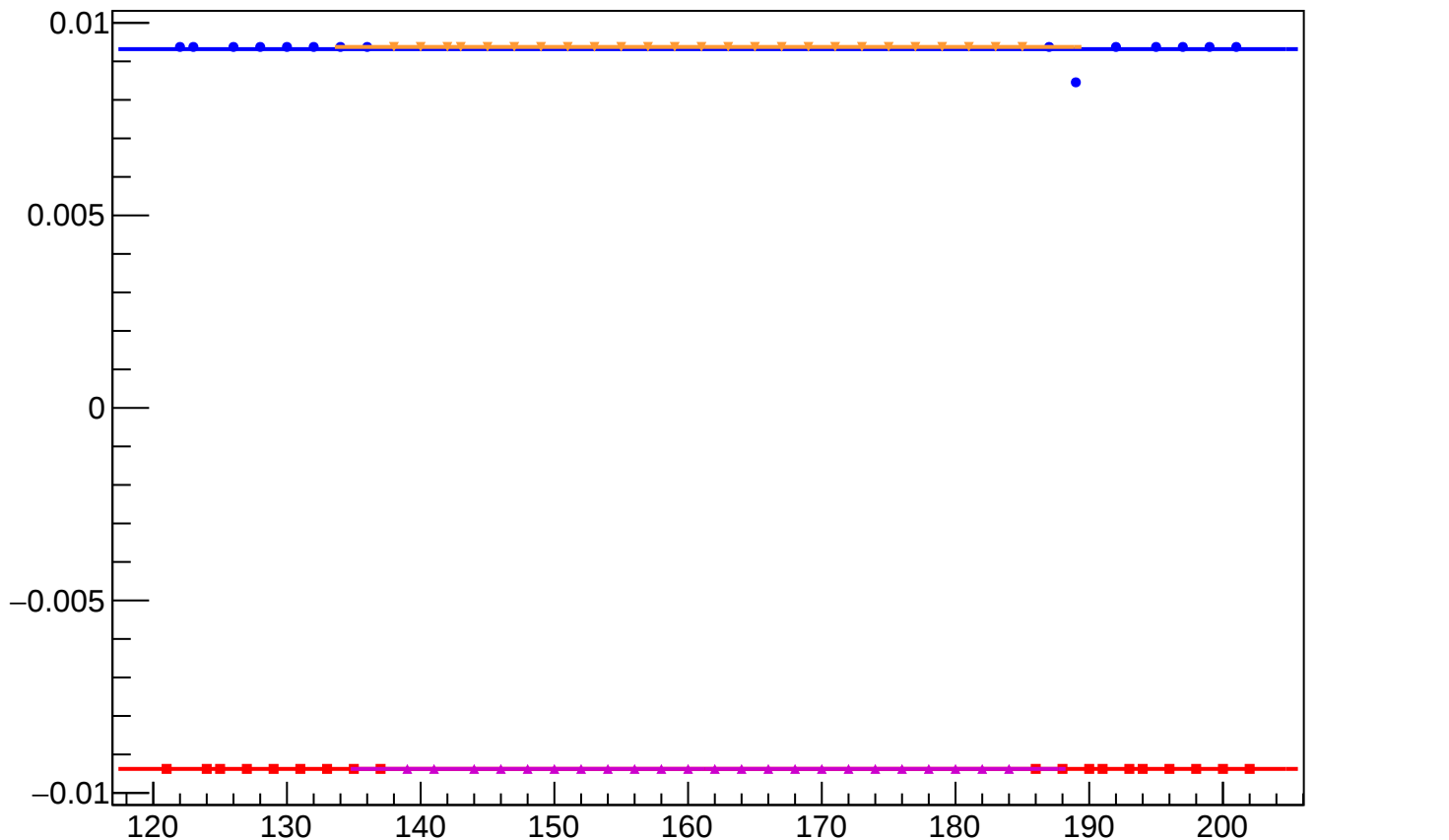
Right In: 757.926+/-0.000  $\chi^2/\text{NDF}$ : 267109508372637598183610360661016576.0/14  
 Left Out: 762.518+/-0.000  $\chi^2/\text{NDF}$ : 731741258759628909874415403008.0/24  
 Right Out: -749.092+/-0.000  $\chi^2/\text{NDF}$ : 6479590015604735457838098344740651008.0/18  
 Left In: -762.519+/-0.000  $\chi^2/\text{NDF}$ : 629058355419214408155297480704.0/22  
 All: -5.069+/-0.000  $\chi^2/\text{NDF}$ : 3196847166690

# HacR\_Q3\_HP3458A\_IOUT\_mean vs Slug, Sign Corrected



|                             |                                                                 |                                     |                                         |
|-----------------------------|-----------------------------------------------------------------|-------------------------------------|-----------------------------------------|
| Right In: 971.873+/-0.000   | $\chi^2/\text{NDF}$ : 439656757323967411197803035879276544.0/14 | Left: 26.015+/-0.000                | $\chi^2/\text{NDF}$ : 35546397150663117 |
| Left Out: 977.738+/-0.000   | $\chi^2/\text{NDF}$ : 1154150409979077132991401558016.0/24      | Right: -82.648+/-0.000              | $\chi^2/\text{NDF}$ : 170891025023619   |
| Right Out: -977.752+/-0.000 | $\chi^2/\text{NDF}$ : 1785660516578967357178874167296.0/18      | In: -364.516+/-0.000                | $\chi^2/\text{NDF}$ : 2165556234208640  |
| Left In: -977.735+/-0.000   | $\chi^2/\text{NDF}$ : 976503887937607318263199432704.0/22       | Out: 315.078+/-0.000                | $\chi^2/\text{NDF}$ : 2475025502135654  |
|                             | All: -9.545+/-0.000                                             | $\chi^2/\text{NDF}$ : 5277927889374 |                                         |

# hesDipole\_current\_mean vs Slug, Sign Corrected



Right In: 0.009+/-0.000

$\chi^2/\text{NDF}$ : 40439517413462641838391296.0/14

Left Out: 0.009+/-0.000

$\chi^2/\text{NDF}$ : 0.1/24

Right Out: -0.009+/-0.000

$\chi^2/\text{NDF}$ : 0.1/18

Left In: -0.009+/-0.000

$\chi^2/\text{NDF}$ : 0.1/22

Left: 0.000+/-0.000

$\chi^2/\text{NDF}$ : 326809514411447718

Right: -0.001+/-0.000

$\chi^2/\text{NDF}$ : 1571095060758243

In: -0.003+/-0.000

$\chi^2/\text{NDF}$ : 199095023310172766

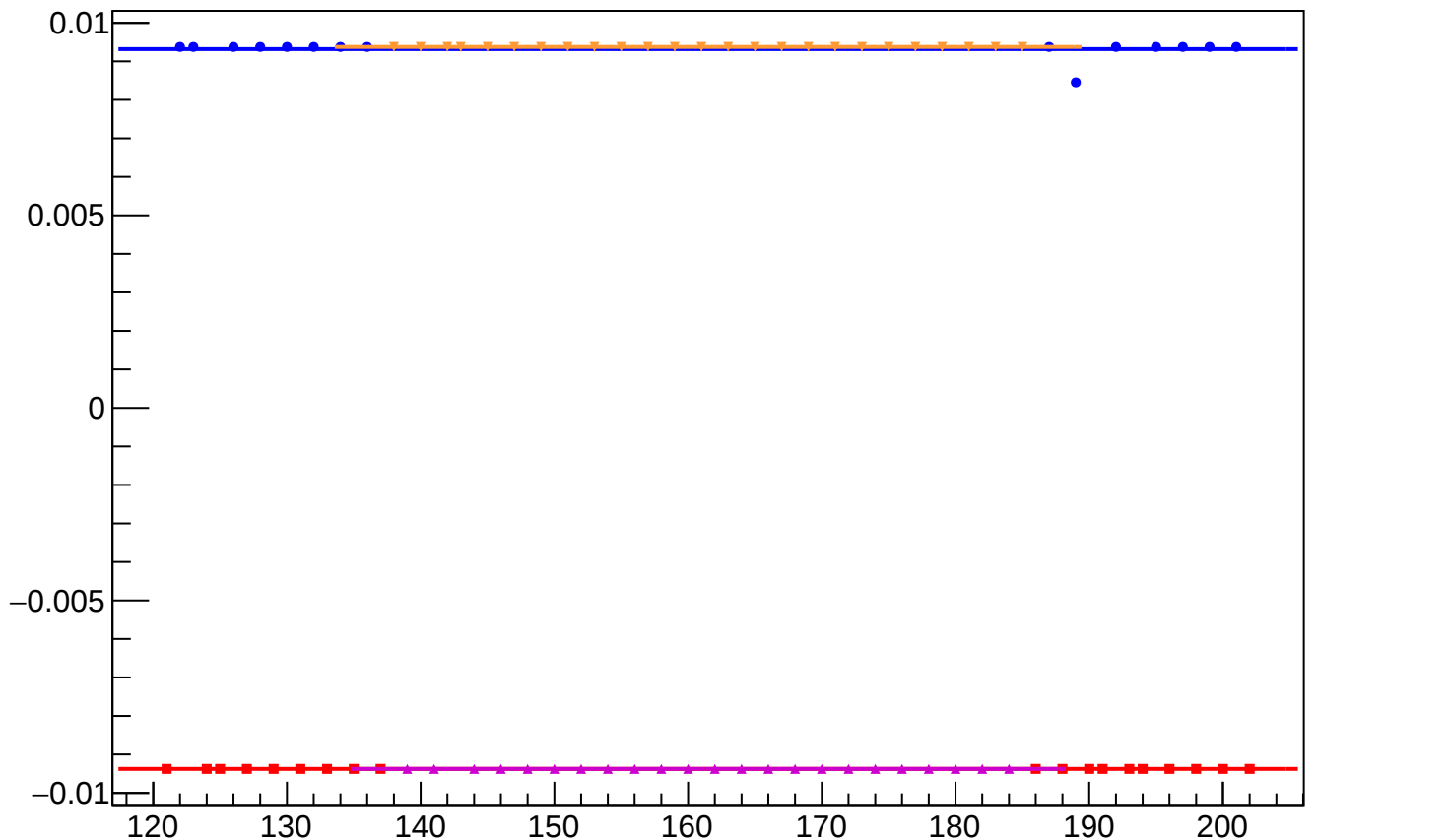
Out: 0.003+/-0.000

$\chi^2/\text{NDF}$ : 227546972352024300

All: -0.000+/-0.000

$\chi^2/\text{NDF}$ : 4852408874246

MSUPERBIGBITereadcalc\_mean vs Slug, Sign Corrected



Right In: 0.009+/-0.000

$\chi^2/\text{NDF}$ : 40439517413462641838391296.0/14

Left Out: 0.009+/-0.000

$\chi^2/\text{NDF}$ : 0.1/24

Right Out: -0.009+/-0.000

$\chi^2/\text{NDF}$ : 0.1/18

Left In: -0.009+/-0.000

$\chi^2/\text{NDF}$ : 0.1/22

Left: 0.000+/-0.000

$\chi^2/\text{NDF}$ : 326809514411447718

Right: -0.001+/-0.000

$\chi^2/\text{NDF}$ : 1571095060758243

In: -0.003+/-0.000

$\chi^2/\text{NDF}$ : 199095023310172766

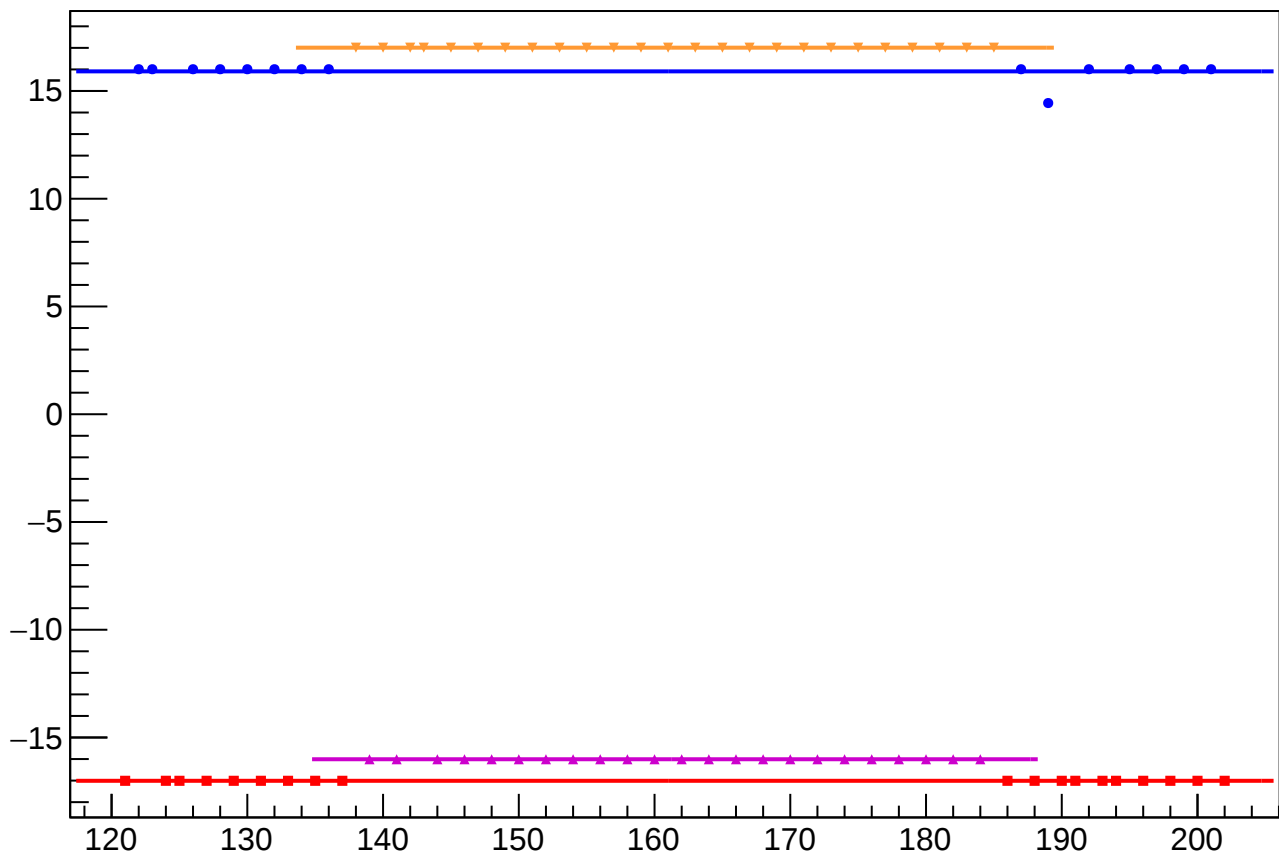
Out: 0.003+/-0.000

$\chi^2/\text{NDF}$ : 227546972352024300

All: -0.000+/-0.000

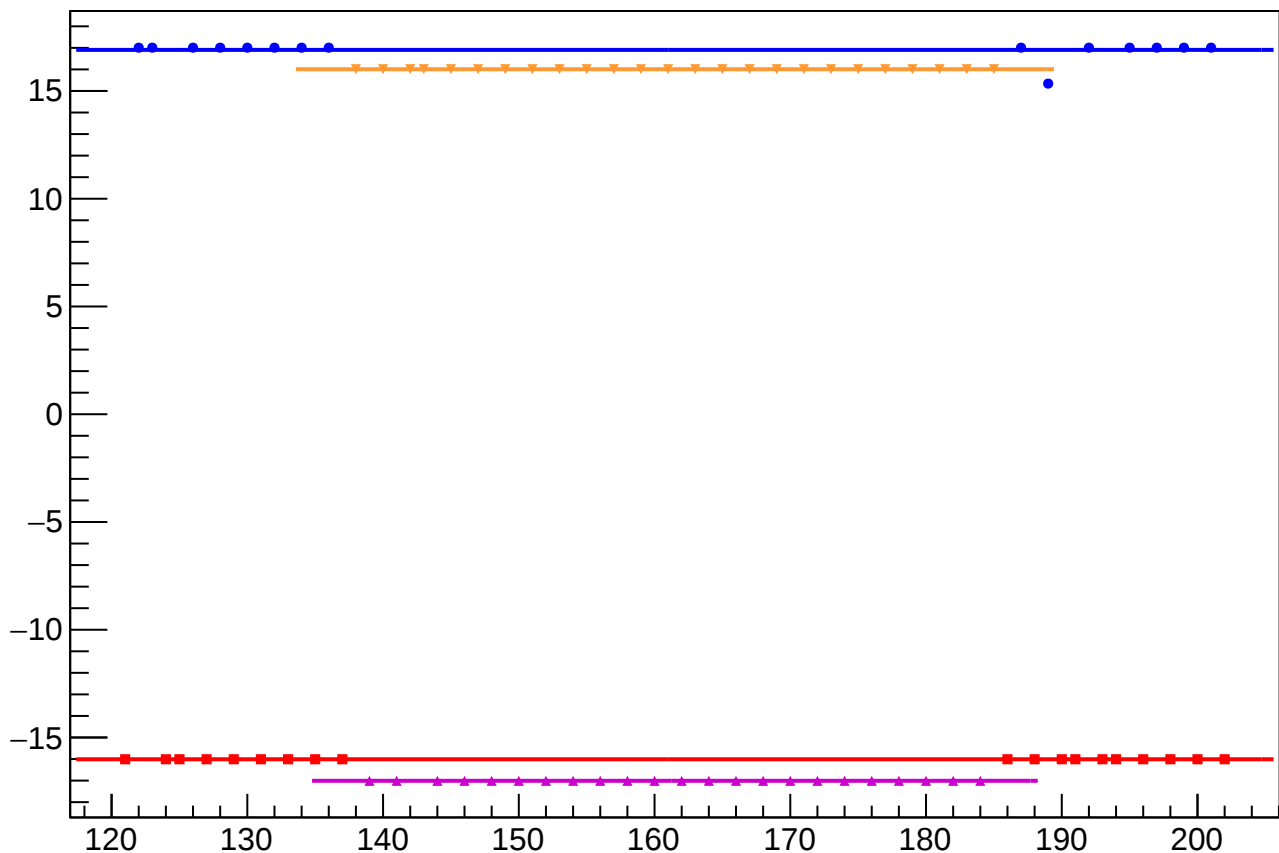
$\chi^2/\text{NDF}$ : 4852408874246

# IGL1I00DI24\_24M\_mean vs Slug, Sign Corrected



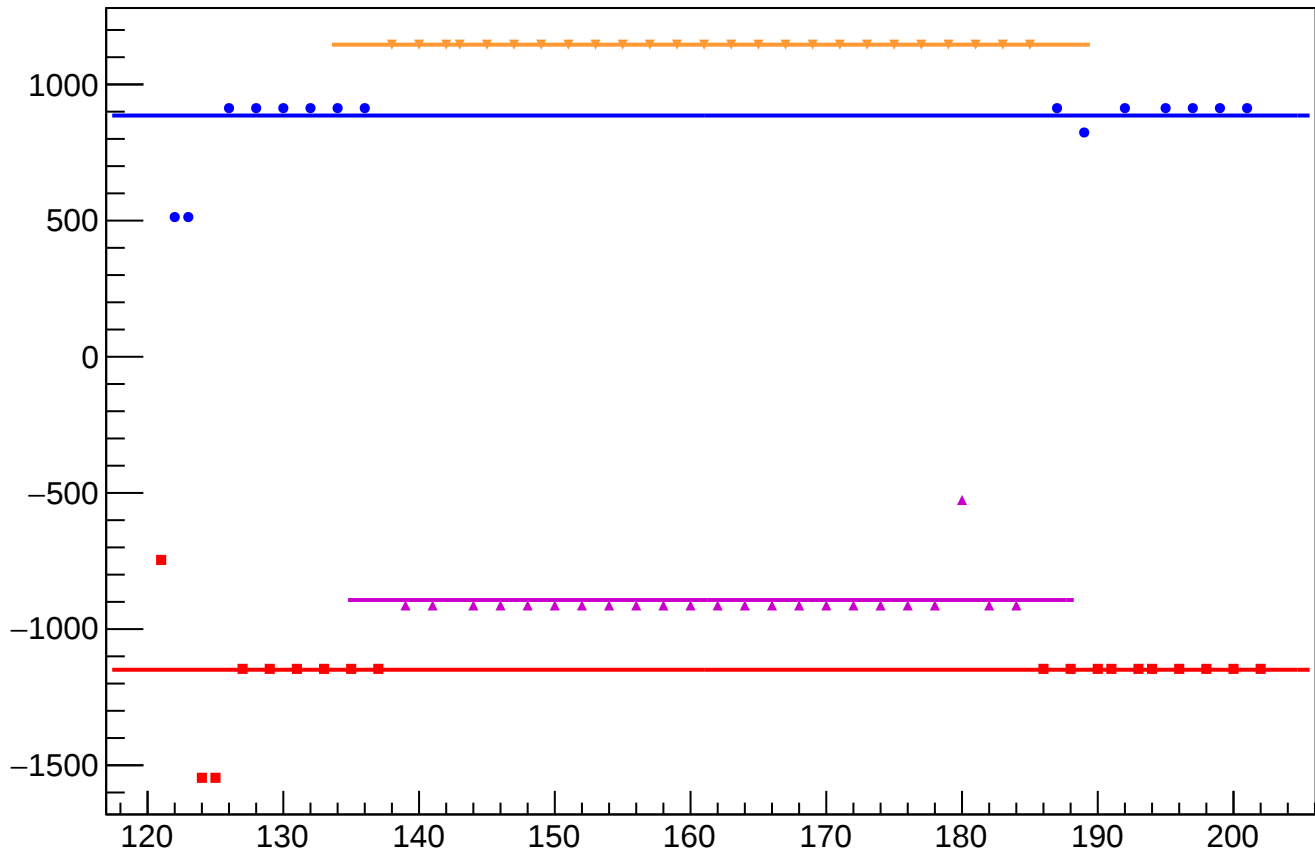
Right In:  $15.910 \pm 0.000$   $\chi^2/\text{NDF}: 117677667926883955735463351812096.0/14$   
 Left Out:  $17.009 \pm 0.000$   $\chi^2/\text{NDF}: 26284444608576238643052544.0/24$   
 Right Out:  $-17.009 \pm 0.000$   $\chi^2/\text{NDF}: 14014947925279166114562048.0/18$   
 Left In:  $-16.009 \pm 0.000$   $\chi^2/\text{NDF}: 127973174512756677672960.0/22$   
 All:  $-0.062 \pm 0.000$   $\chi^2/\text{NDF}: 1427362223902$

# IGL1I00OD16\_16\_mean vs Slug, Sign Corrected



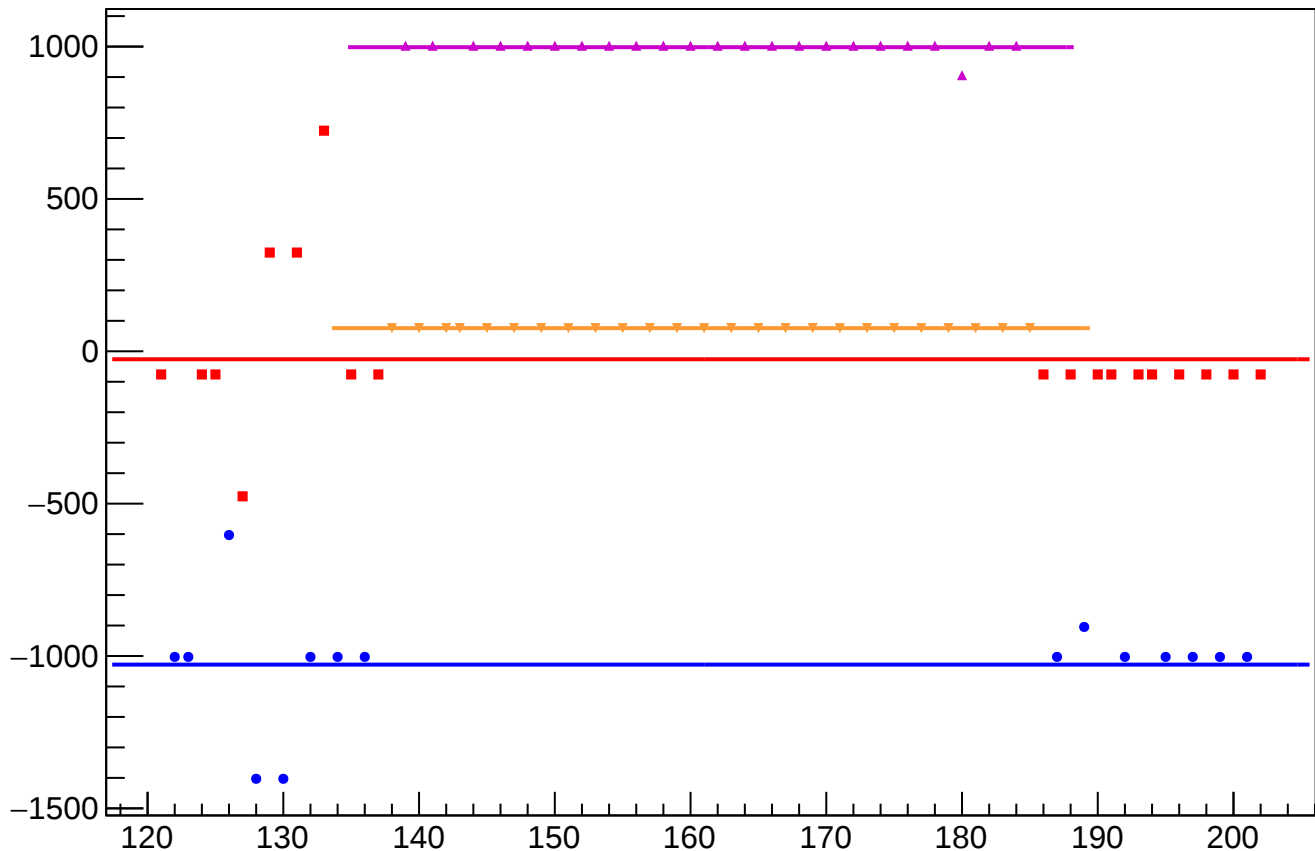
Right In: 16.907 $\pm$ 0.000  $\chi^2$ /NDF: 133119023592343308984050444664832.0/14  
 Left Out: 16.009 $\pm$ 0.000  $\chi^2$ /NDF: 89740.8/24  
 Right Out: -16.009 $\pm$ 0.000  $\chi^2$ /NDF: 219745.1/18  
 Left In: -17.009 $\pm$ 0.000  $\chi^2$ /NDF: 115033472633445654986752.0/22  
 All: -0.269 $\pm$ 0.000  $\chi^2$ /NDF: 1482514588927

# RTPAPOSUCNT\_mean vs Slug, Sign Corrected



Right In: 885.840+/-0.000  $\chi^2/\text{NDF}$ : 6995959155520191606718079797324414976.0/14  
 Left Out: 1146.011+/-0.000  $\chi^2/\text{NDF}$ : 8041760976861450519237885952.0/24  
 Right Out: -1149.279+/-0.000  $\chi^2/\text{NDF}$ : 13750206758580971418852399490699100160.0/18  
 Left In: -893.116+/-0.000  $\chi^2/\text{NDF}$ : 13219826761707982974212661987208331264.0/22  
 All: 32.984+/-0.000  $\chi^2/\text{NDF}$ : 5926186973585

# RTPAPOSVCNT\_mean vs Slug, Sign Corrected



Right In: -1028.242+/-0.000

$\chi^2/\text{NDF}$ : 23162847495419230756471442199711580160.0/14

Left Out: 76.011+/-0.000

$\chi^2/\text{NDF}$ : 11003263624957134120836661248.0/24

Right Out: -26.164+/-0.000

$\chi^2/\text{NDF}$ : 44607222910312271582762111522725429248.0/18

Left In: 998.020+/-0.000

$\chi^2/\text{NDF}$ : 826231736084035689068445378231140352.0/22

All: 193.909+/-0.000  $\chi^2/\text{NDF}$ : 255476949153