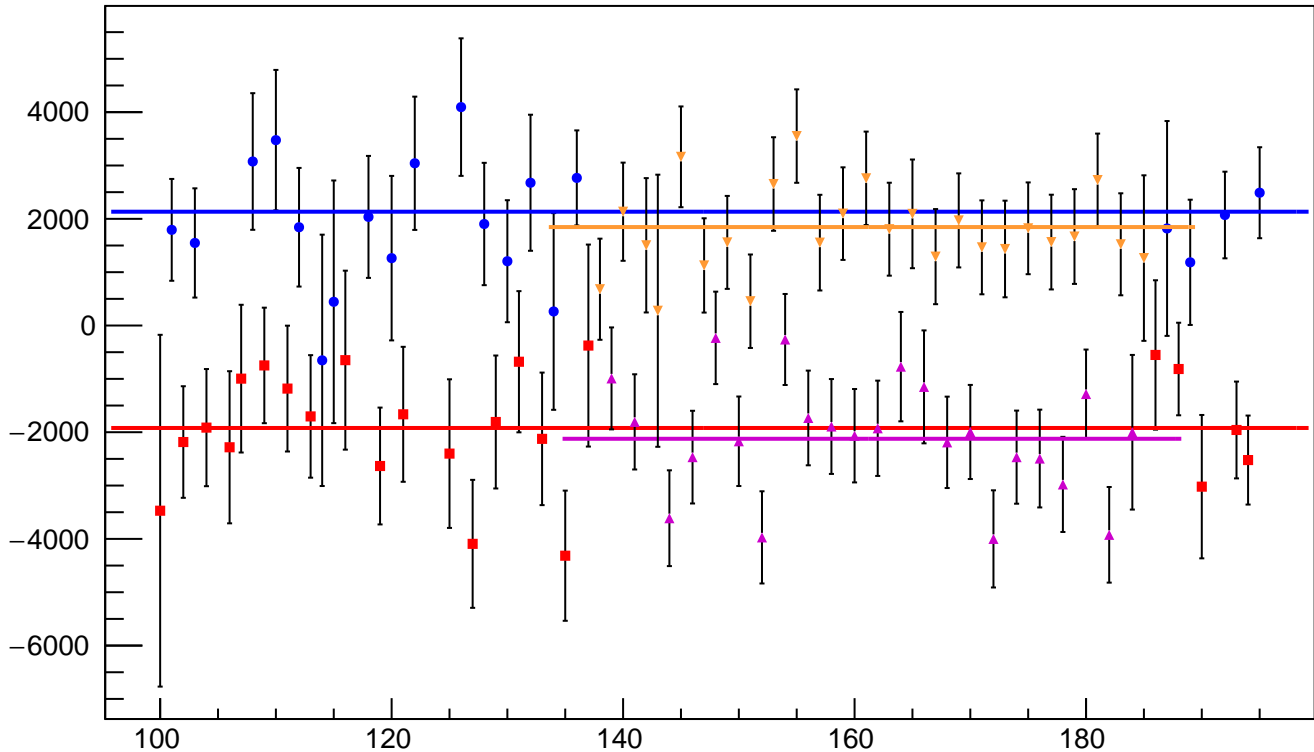


# reg\_asym\_us\_avg\_mean vs Slug



Right In: 2133.764+/-263.483

$\chi^2$ /NDF: 10.5/19

Left Out: 1845.799+/-186.902

$\chi^2$ /NDF:15.5/24

Right Out: -1920.594+/-249.556

$\chi^2$ /NDF: 16.0/22

Left In: -2123.138+/-188.684

$\chi^2$ /NDF:32.0/22

+ sign 1942.193+/-152.443

$\chi^2$ /NDF: 26.8/44

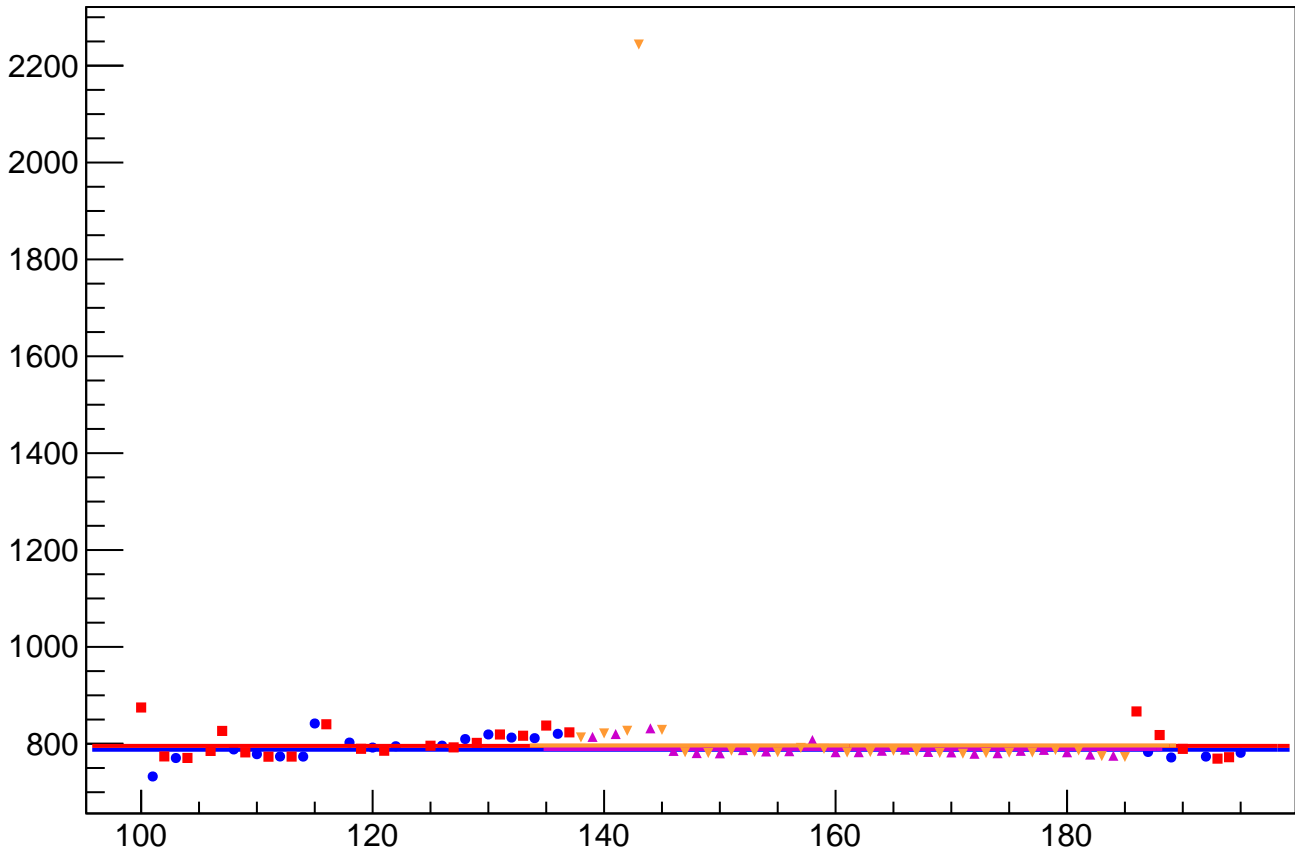
All: -79.150+/-107.103

$\chi^2$ /NDF: 422.4/90

- sign -2049.467+/-150.507

$\chi^2$ /NDF: 48.5/45

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



Right In: 787.668 $\pm$ 0.186  $\chi^2$ /NDF: 16560.4/19

Left Out: 796.441 $\pm$ 0.132  $\chi^2$ /NDF: 658708.8/24

Right Out: 795.651 $\pm$ 0.176  $\chi^2$ /NDF: 21363.6/22

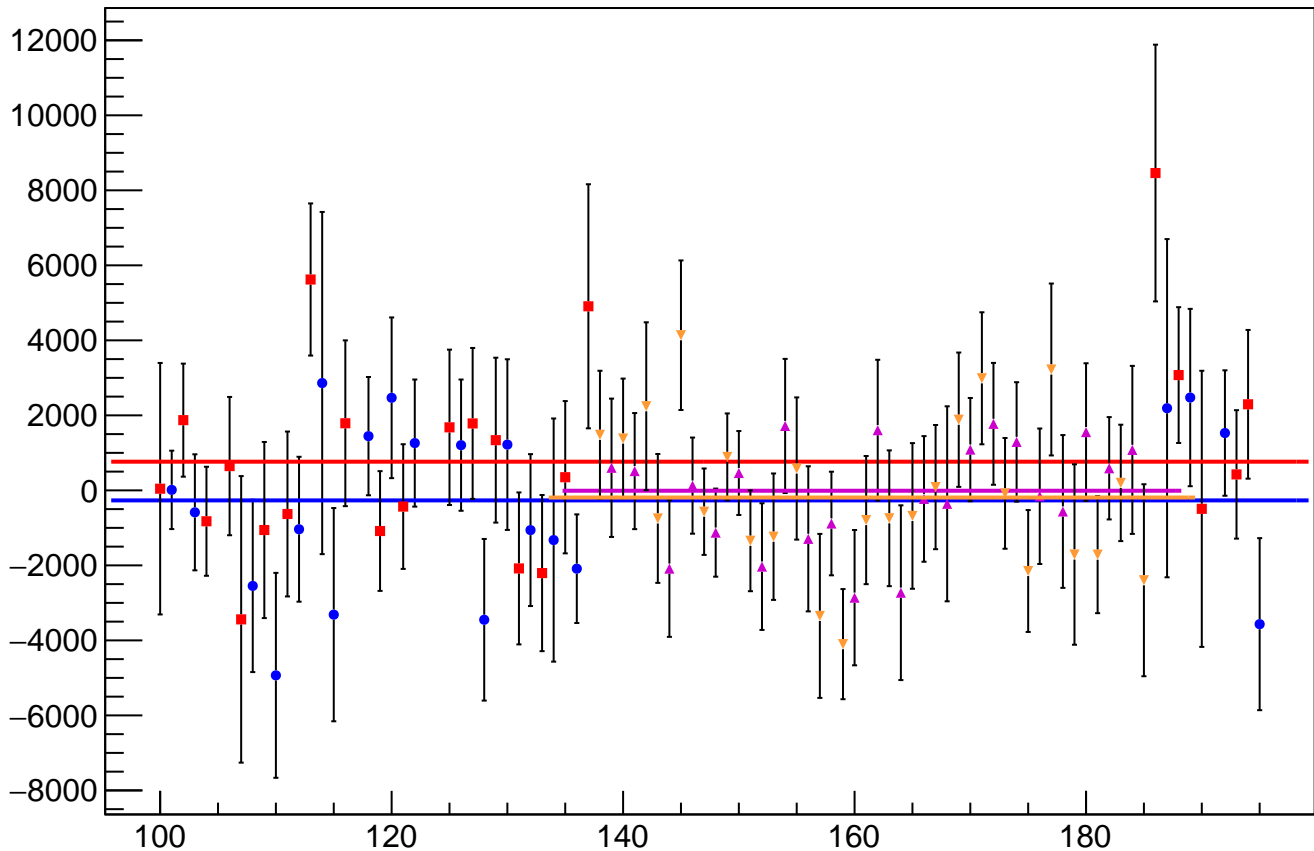
Left In: 789.185 $\pm$ 0.133  $\chi^2$ /NDF: 11343.2/22

+ sign 793.504 $\pm$ 0.108  $\chi^2$ /NDF: 676744.2/44

All: 792.508 $\pm$ 0.076  $\chi^2$ /NDF: 710474.3/90

- sign 791.537 $\pm$ 0.106  $\chi^2$ /NDF: 33561.4/45

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



Right In:  $-267.544 \pm 430.669$   $\chi^2/\text{NDF}: 19.4/19$

Left Out:  $-191.027 \pm 333.904$   $\chi^2/\text{NDF}: 30.1/24$

Right Out:  $764.752 \pm 425.875$   $\chi^2/\text{NDF}: 25.4/22$

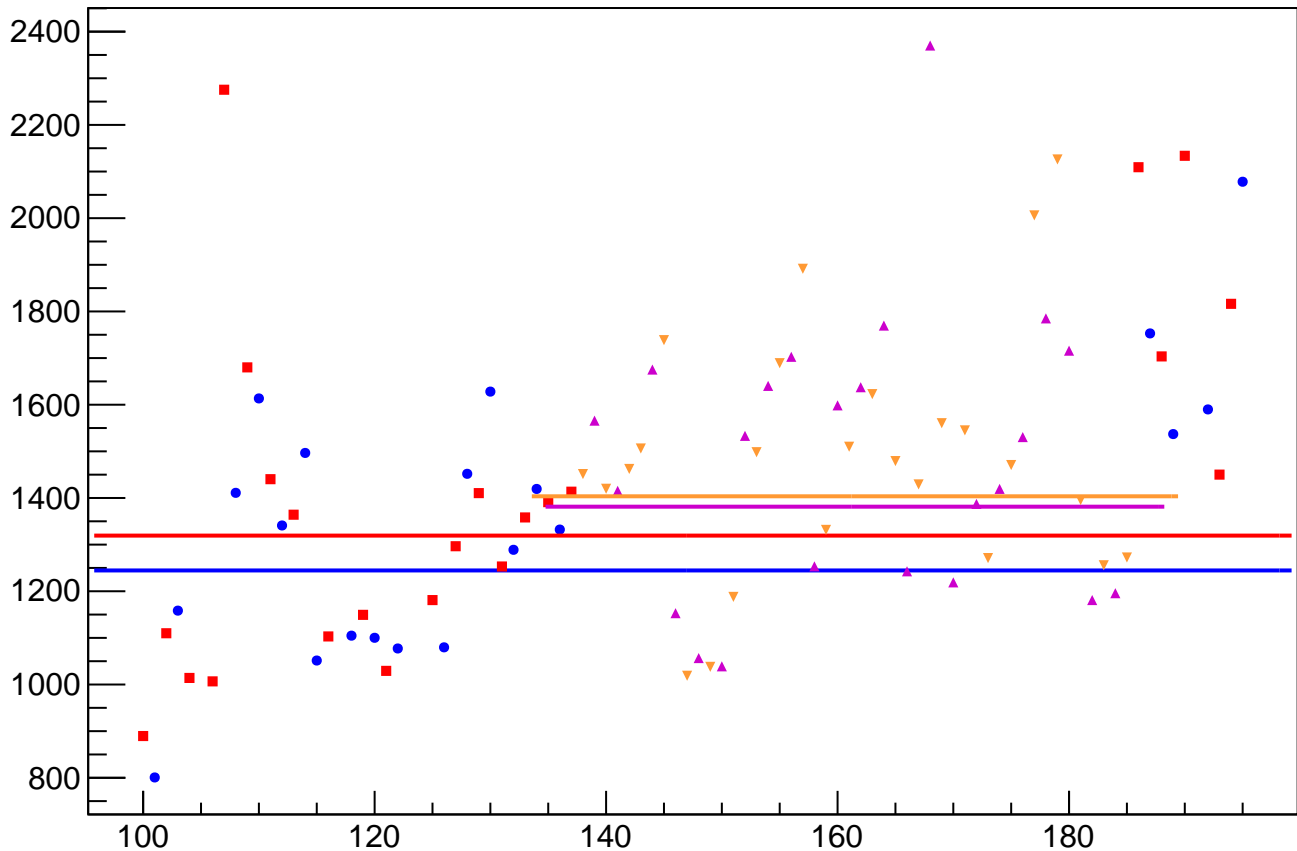
Left In:  $-10.093 \pm 337.810$   $\chi^2/\text{NDF}: 14.2/22$

+ sign  $-219.754 \pm 263.883$   $\chi^2/\text{NDF}: 49.6/44$

All:  $33.950 \pm 186.867$   $\chi^2/\text{NDF}: 93.1/90$

- sign  $289.150 \pm 264.659$   $\chi^2/\text{NDF}: 41.7/45$

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



Right In: 1244.609+/-0.305  $\chi^2$ /NDF: 991152.5/19

Left Out: 1403.610+/-0.236  $\chi^2$ /NDF: 1126524.9/24

Right Out: 1319.340+/-0.301  $\chi^2$ /NDF: 950823.2/22

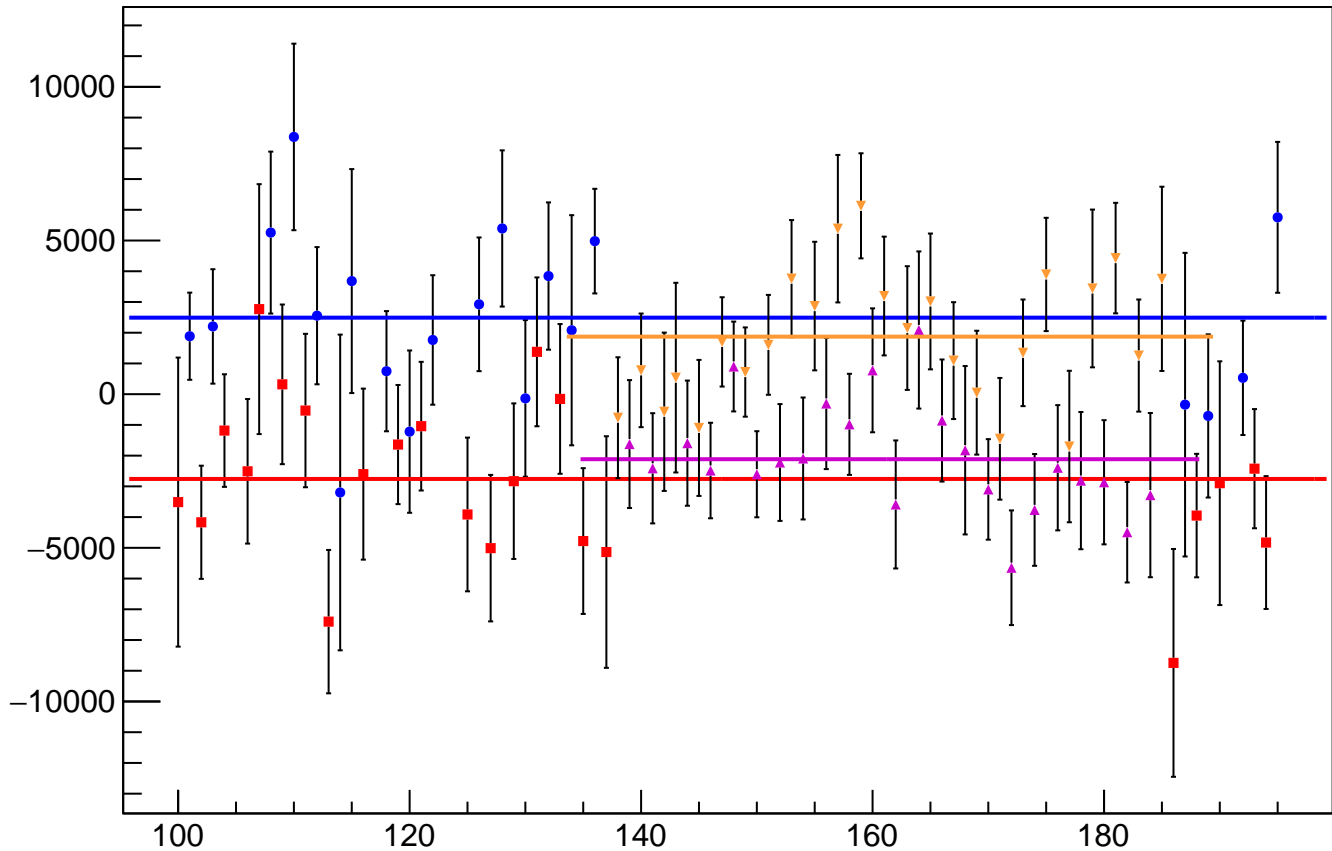
Left In: 1381.359+/-0.239  $\chi^2$ /NDF: 1276488.2/22

+ sign 1343.916+/-0.187  $\chi^2$ /NDF: 2287938.5/44

All: 1350.642+/-0.132  $\chi^2$ /NDF: 4543890.0/90

- sign 1357.407+/-0.187  $\chi^2$ /NDF: 2253345.2/45

# asym\_us\_avg\_mean vs Slug



Right In:  $2490.034 \pm 517.747$   $\chi^2/\text{NDF}: 18.8/19$

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

Right Out:  $-2758.710 \pm 503.891$   $\chi^2/\text{NDF}: 20.6/22$

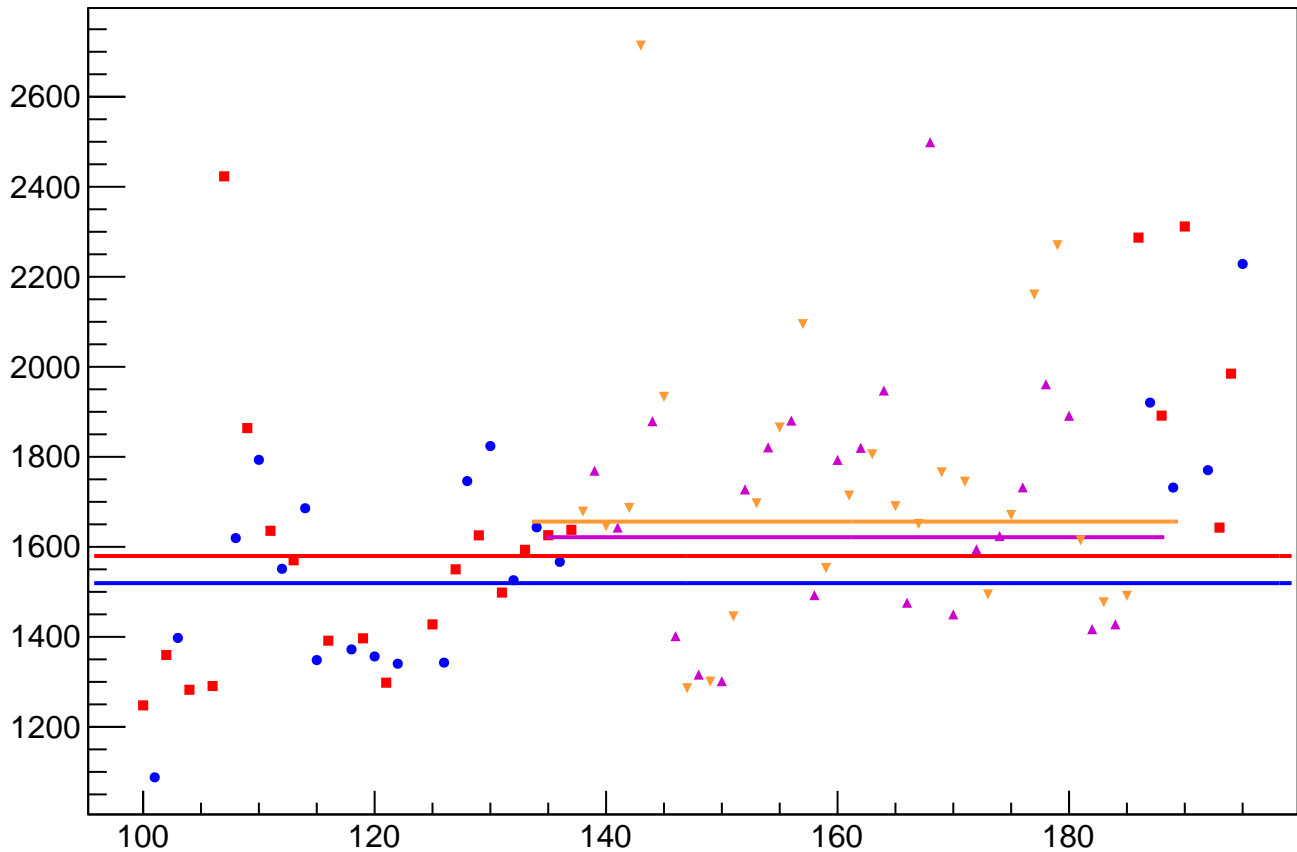
Left In:  $-2116.114 \pm 392.997$   $\chi^2/\text{NDF}: 18.8/22$

+ sign  $2096.731 \pm 312.367$   $\chi^2/\text{NDF}: 45.8/44$

All:  $-148.950 \pm 219.996$   $\chi^2/\text{NDF}: 188.8/90$

- sign  $-2359.156 \pm 309.890$   $\chi^2/\text{NDF}: 40.4/45$

# asym\_us\_avg\_rms vs Slug



Right In: 1519.332 $\pm$ 0.366  $\chi^2$ /NDF: 543798.3/19

Left Out: 1656.119 $\pm$ 0.277  $\chi^2$ /NDF: 910573.4/24

Right Out: 1579.619 $\pm$ 0.356  $\chi^2$ /NDF: 568949.2/22

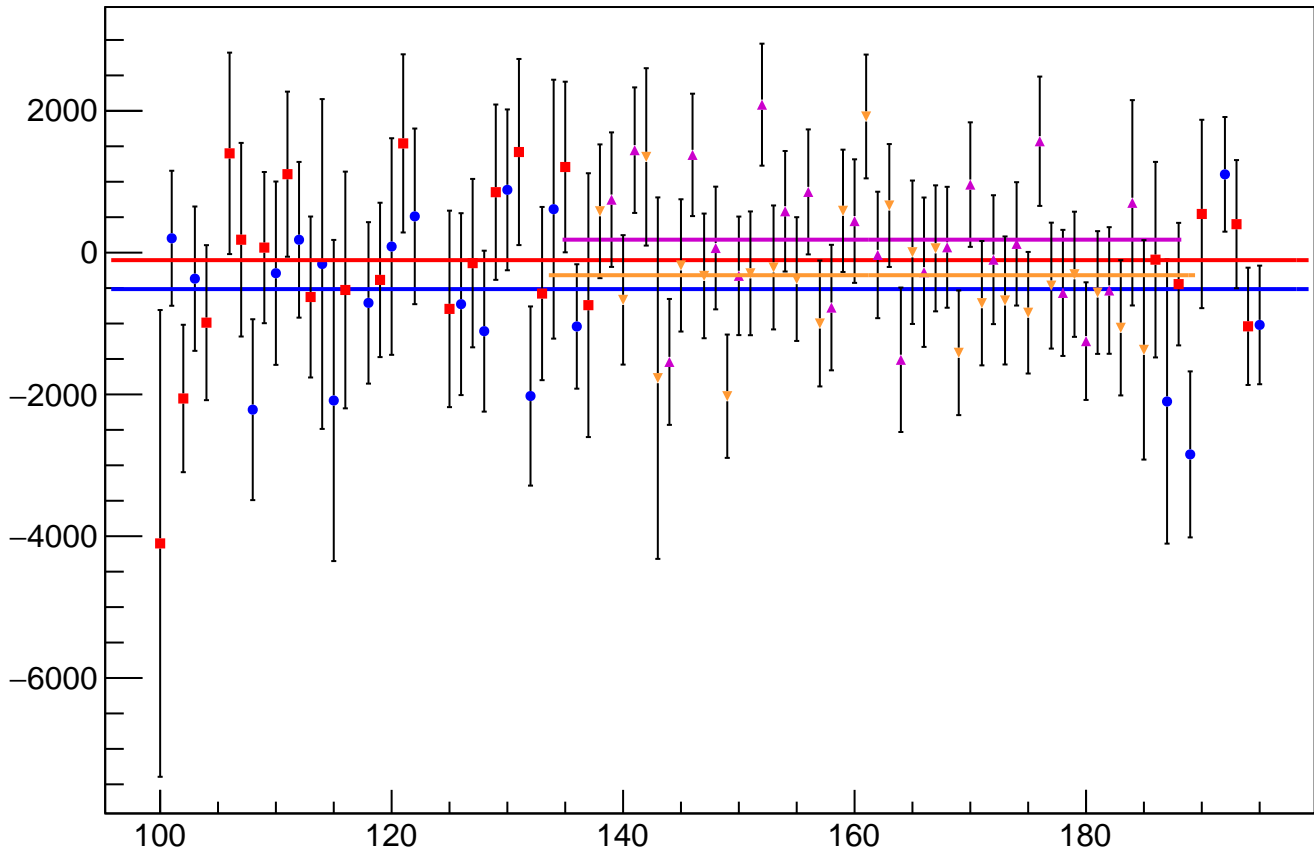
Left In: 1621.417 $\pm$ 0.278  $\chi^2$ /NDF: 775310.1/22

+ sign 1606.329 $\pm$ 0.221  $\chi^2$ /NDF: 1543158.4/44

All: 1605.966 $\pm$ 0.156  $\chi^2$ /NDF: 2895979.7/90

- sign 1605.608 $\pm$ 0.219  $\chi^2$ /NDF: 1352815.9/45

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



Right In:  $-514.290 \pm 261.154$   $\chi^2/\text{NDF}: 17.1/19$

Left Out:  $-318.336 \pm 186.041$   $\chi^2/\text{NDF}: 20.4/24$

Right Out:  $-105.853 \pm 247.370$   $\chi^2/\text{NDF}: 15.6/22$

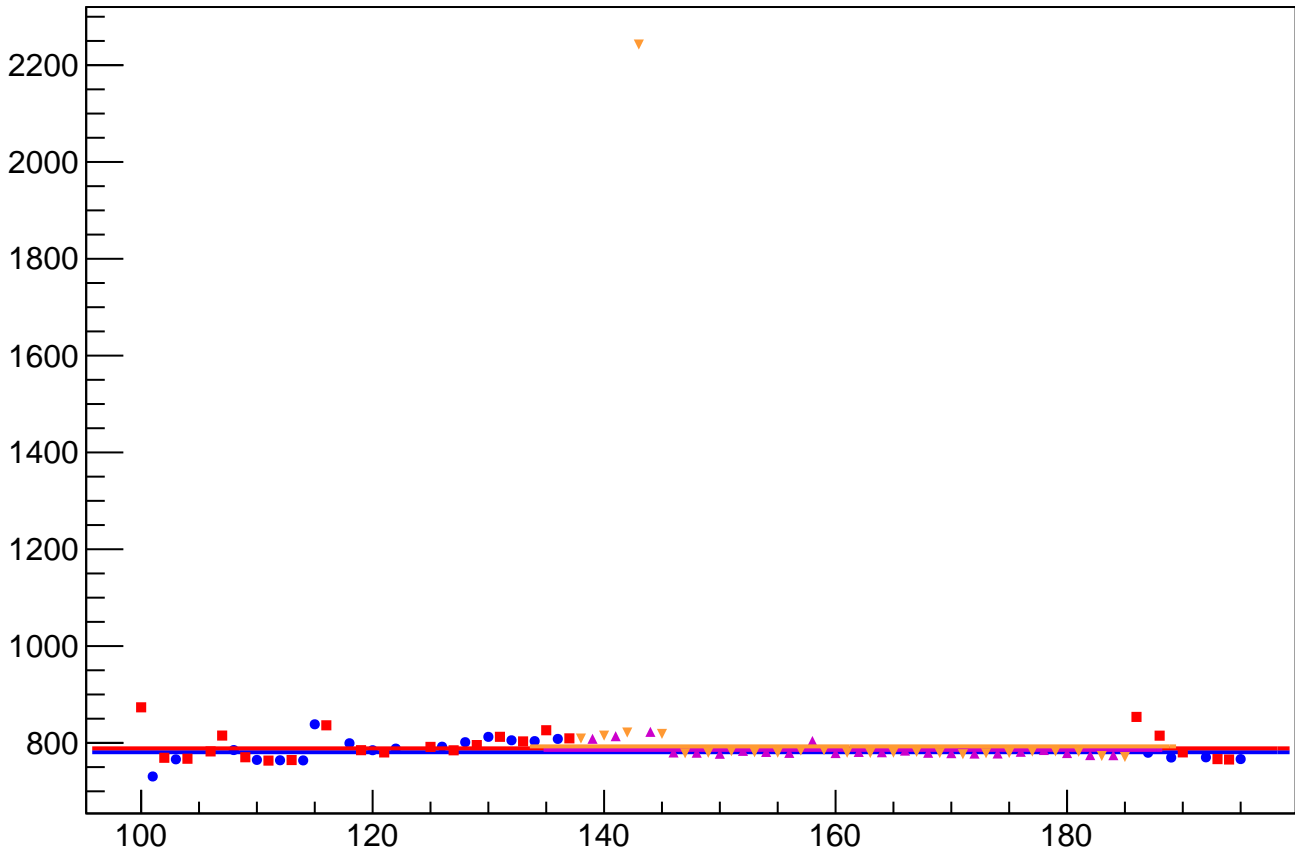
Left In:  $182.895 \pm 187.817$   $\chi^2/\text{NDF}: 26.1/22$

+ sign  $-384.302 \pm 151.524$   $\chi^2/\text{NDF}: 37.9/44$

All:  $-150.527 \pm 106.452$   $\chi^2/\text{NDF}: 85.2/90$

- sign  $77.308 \pm 149.587$   $\chi^2/\text{NDF}: 42.6/45$

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



Right In:  $780.748 \pm 0.185$   $\chi^2/\text{NDF}: 15282.1/19$

Left Out:  $792.791 \pm 0.132$   $\chi^2/\text{NDF}: 659510.7/24$

Right Out:  $788.724 \pm 0.175$   $\chi^2/\text{NDF}: 20078.2/22$

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

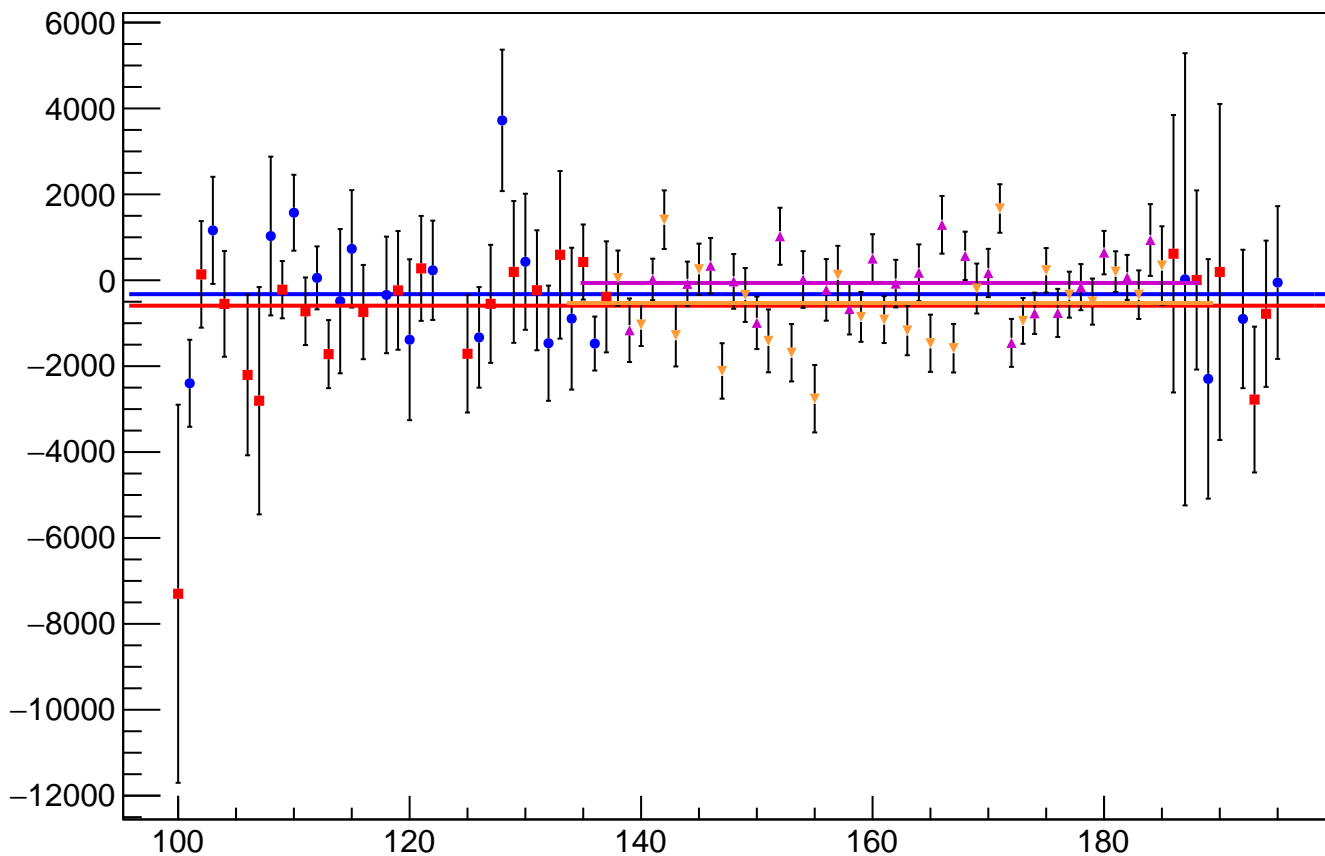
+ sign  $788.737 \pm 0.107$   $\chi^2/\text{NDF}: 677614.1/44$

All:  $787.724 \pm 0.075$   $\chi^2/\text{NDF}: 707445.8/90$

- sign  $786.737 \pm 0.106$   $\chi^2/\text{NDF}: 29655.3/45$



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



Right In:  $-324.068 \pm 273.841$   $\chi^2/\text{NDF}: 24.0/19$

Left Out:  $-530.101 \pm 119.543$   $\chi^2/\text{NDF}: 61.6/24$

Right Out:  $-591.933 \pm 262.893$   $\chi^2/\text{NDF}: 11.7/22$

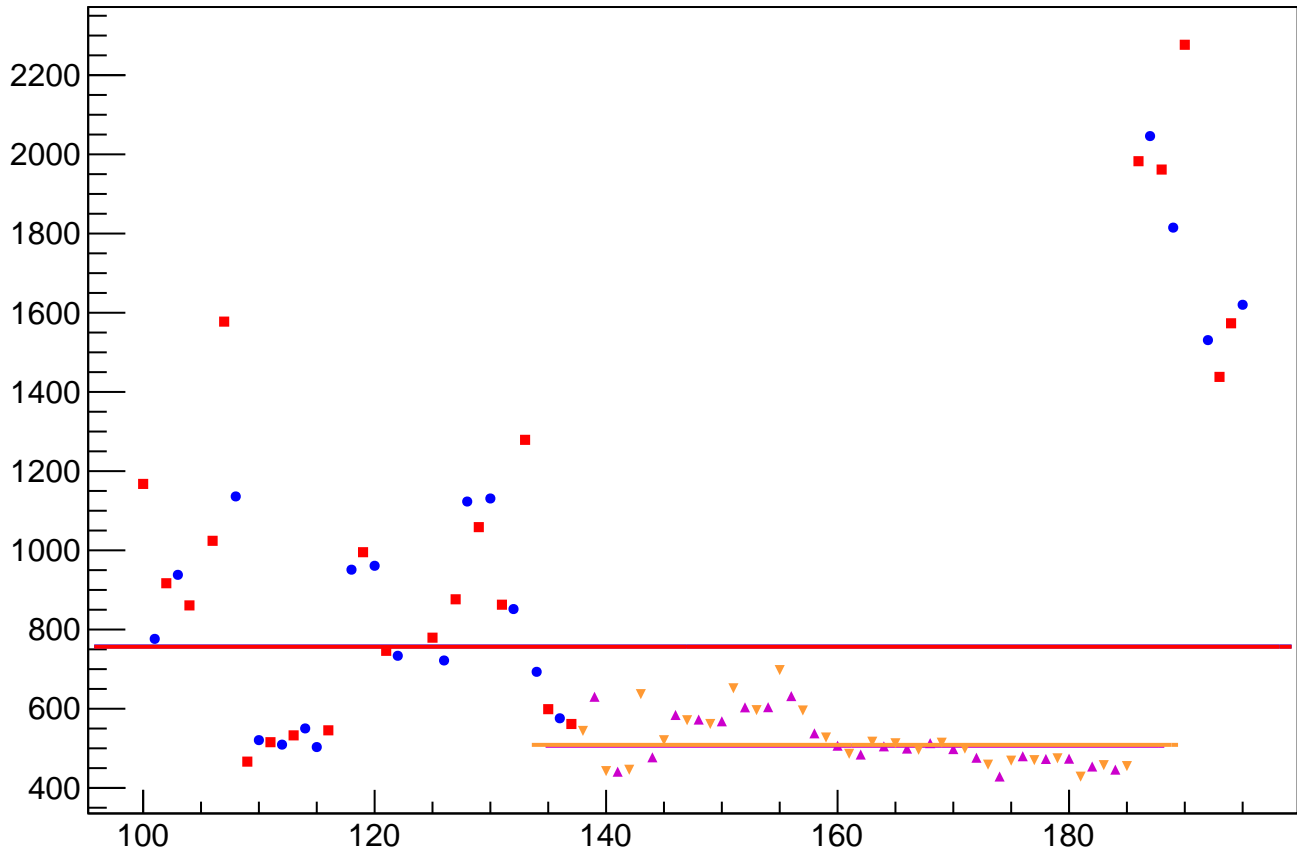
Left In:  $-62.768 \pm 122.045$   $\chi^2/\text{NDF}: 28.8/22$

+ sign  $-497.123 \pm 109.559$   $\chi^2/\text{NDF}: 86.1/44$

All:  $-328.619 \pm 77.869$   $\chi^2/\text{NDF}: 134.7/90$

- sign  $-156.592 \pm 110.698$   $\chi^2/\text{NDF}: 43.8/45$

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



Right In: 757.213+/-0.194  $\chi^2$ /NDF: 2394478.7/19

Left Out: 508.773+/-0.085  $\chi^2$ /NDF: 549245.1/24

+ sign 548.539+/-0.077  $\chi^2$ /NDF: 4326411.9/44

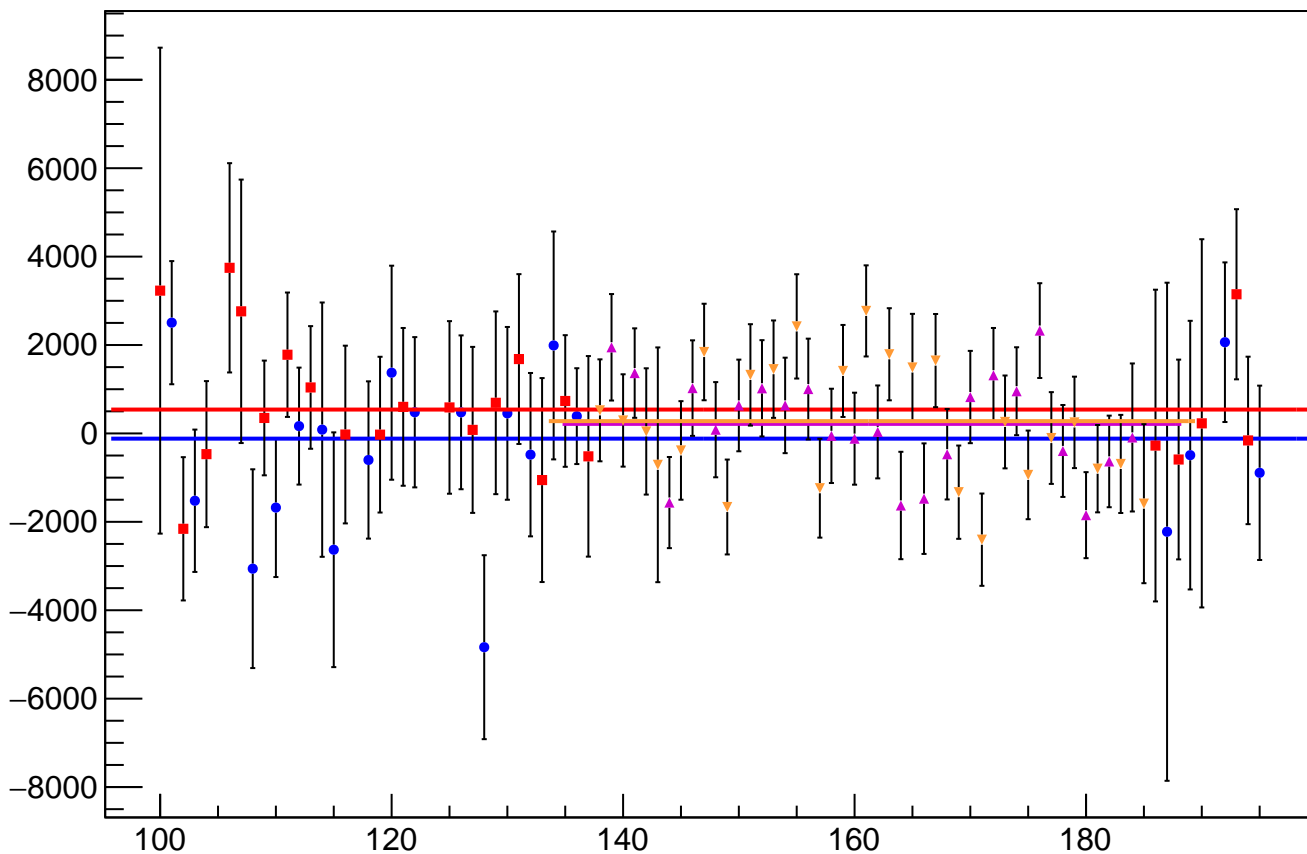
Right Out: 756.501+/-0.186  $\chi^2$ /NDF: 3547469.7/22

All: 549.622+/-0.055  $\chi^2$ /NDF: 9799968.4/90

- sign 550.728+/-0.078  $\chi^2$ /NDF: 5473161.5/45

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

# asym\_us\_dd\_mean vs Slug



Right In:  $-118.035 \pm 408.523$   $\chi^2/\text{NDF}: 16.6/19$

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

Right Out:  $539.863 \pm 397.136$   $\chi^2/\text{NDF}: 10.3/22$

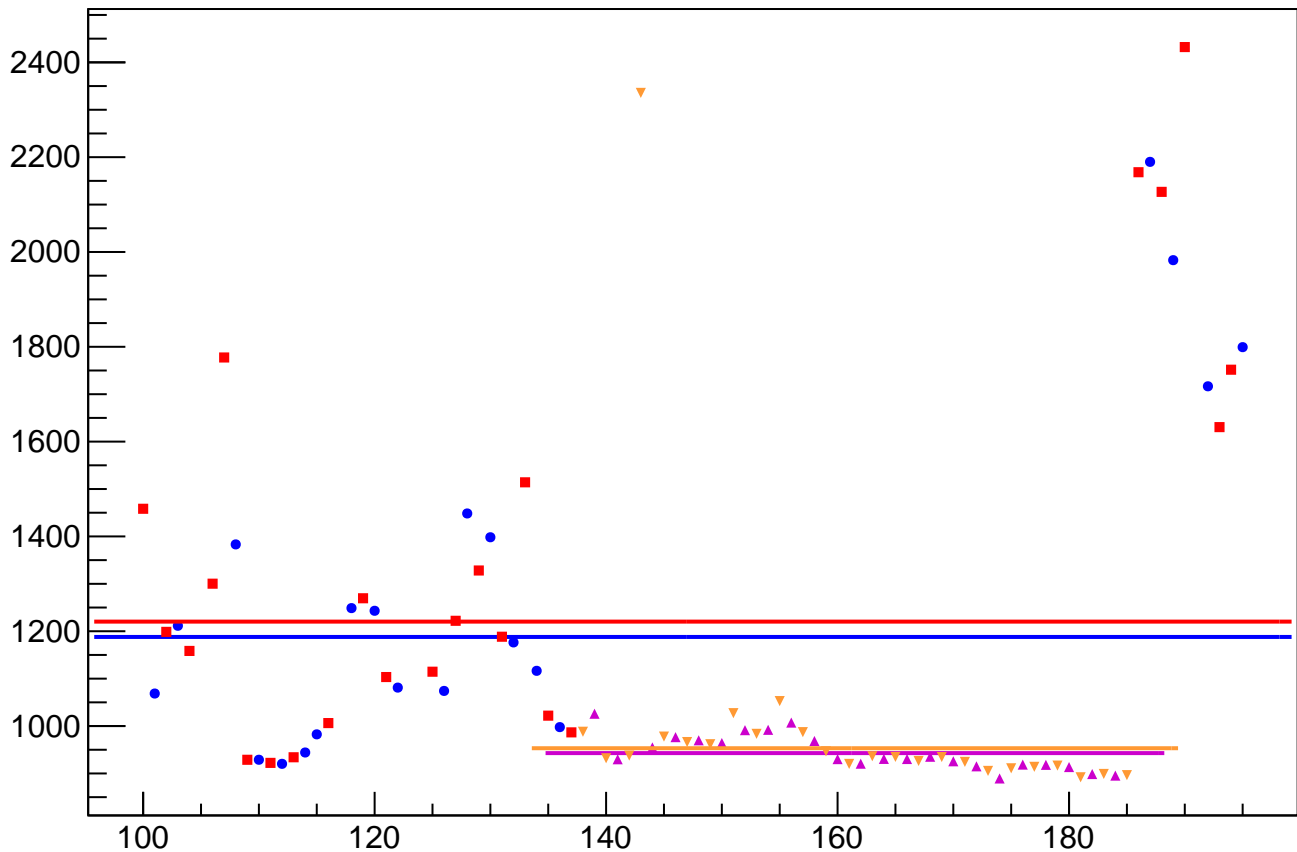
Left In:  $216.121 \pm 225.600$   $\chi^2/\text{NDF}: 24.4/22$

+ sign  $186.788 \pm 196.129$   $\chi^2/\text{NDF}: 55.7/44$

All:  $240.938 \pm 138.695$   $\chi^2/\text{NDF}: 91.1/90$

- sign  $295.105 \pm 196.159$   $\chi^2/\text{NDF}: 35.2/45$

# asym\_us\_dd\_rms vs Slug



Right In: 1187.954+/-0.289  $\chi^2/\text{NDF}$ : 894081.5/19

Left Out: 953.221+/-0.158  $\chi^2/\text{NDF}$ : 606273.1/24

Right Out: 1220.307+/-0.281  $\chi^2/\text{NDF}$ : 1372668.3/22

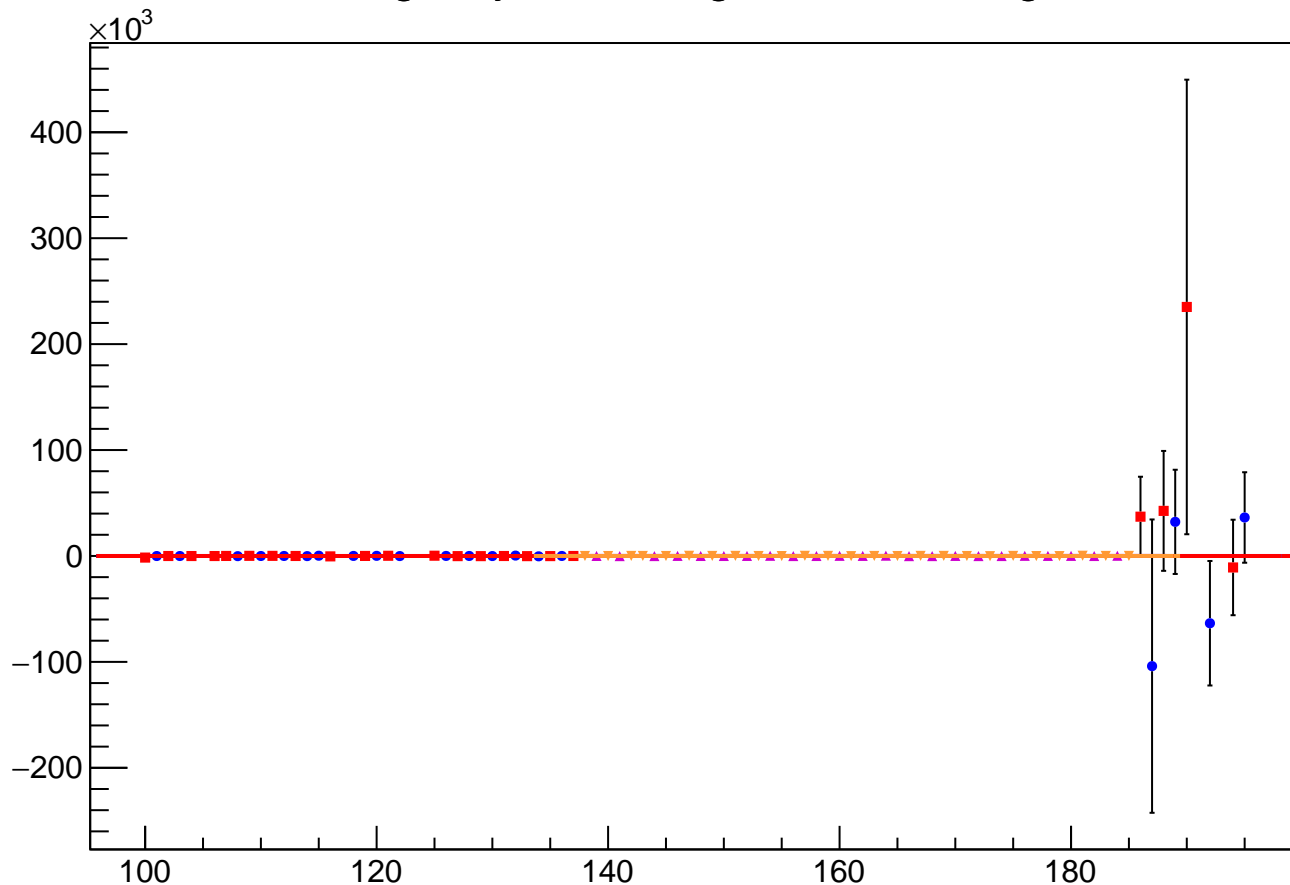
Left In: 942.927+/-0.160  $\chi^2/\text{NDF}$ : 48402.9/22

+ sign 1007.325+/-0.139  $\chi^2/\text{NDF}$ : 2008468.8/44

All: 1008.962+/-0.098  $\chi^2/\text{NDF}$ : 4167453.5/90

- sign 1010.599+/-0.139  $\chi^2/\text{NDF}$ : 2158706.0/45

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



Right In:  $-15.543 \pm 30.032$   $\chi^2/\text{NDF}: 18.8/19$

Left Out:  $4.556 \pm 20.959$   $\chi^2/\text{NDF}: 22.5/24$

Right Out:  $-31.718 \pm 30.492$   $\chi^2/\text{NDF}: 19.6/21$

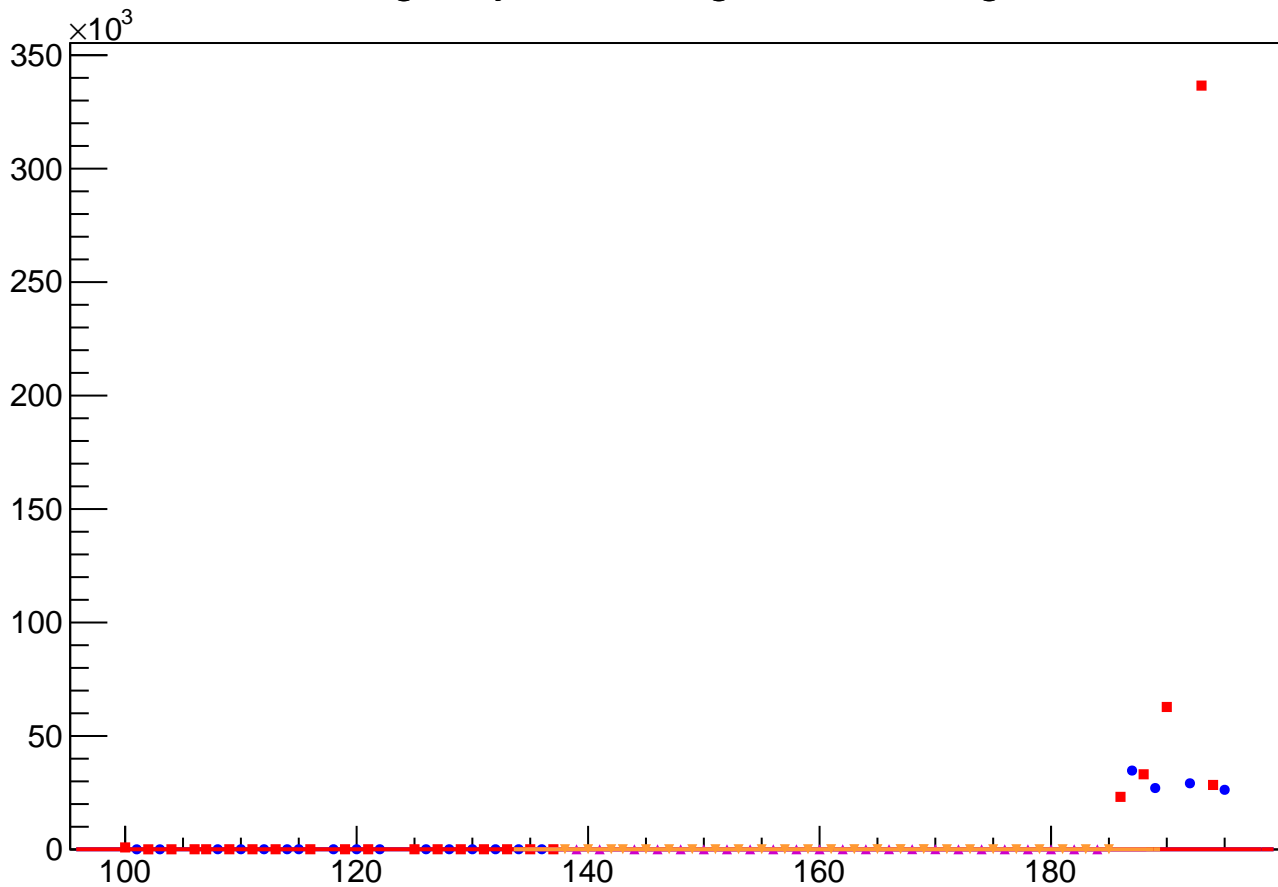
Left In:  $22.931 \pm 21.584$   $\chi^2/\text{NDF}: 22.5/22$

+ sign  $-2.027 \pm 17.187$   $\chi^2/\text{NDF}: 41.6/44$

All:  $1.248 \pm 12.302$   $\chi^2/\text{NDF}: 85.9/89$

- sign  $4.688 \pm 17.617$   $\chi^2/\text{NDF}: 44.2/44$

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



Right In: 76.086 $\pm$ 0.021  $\chi^2/\text{NDF}$ : 2395472.1/19

Left Out: 89.483 $\pm$ 0.015  $\chi^2/\text{NDF}$ : 470330.2/24

Right Out: 79.411 $\pm$ 0.022  $\chi^2/\text{NDF}$ : 2858540.2/22

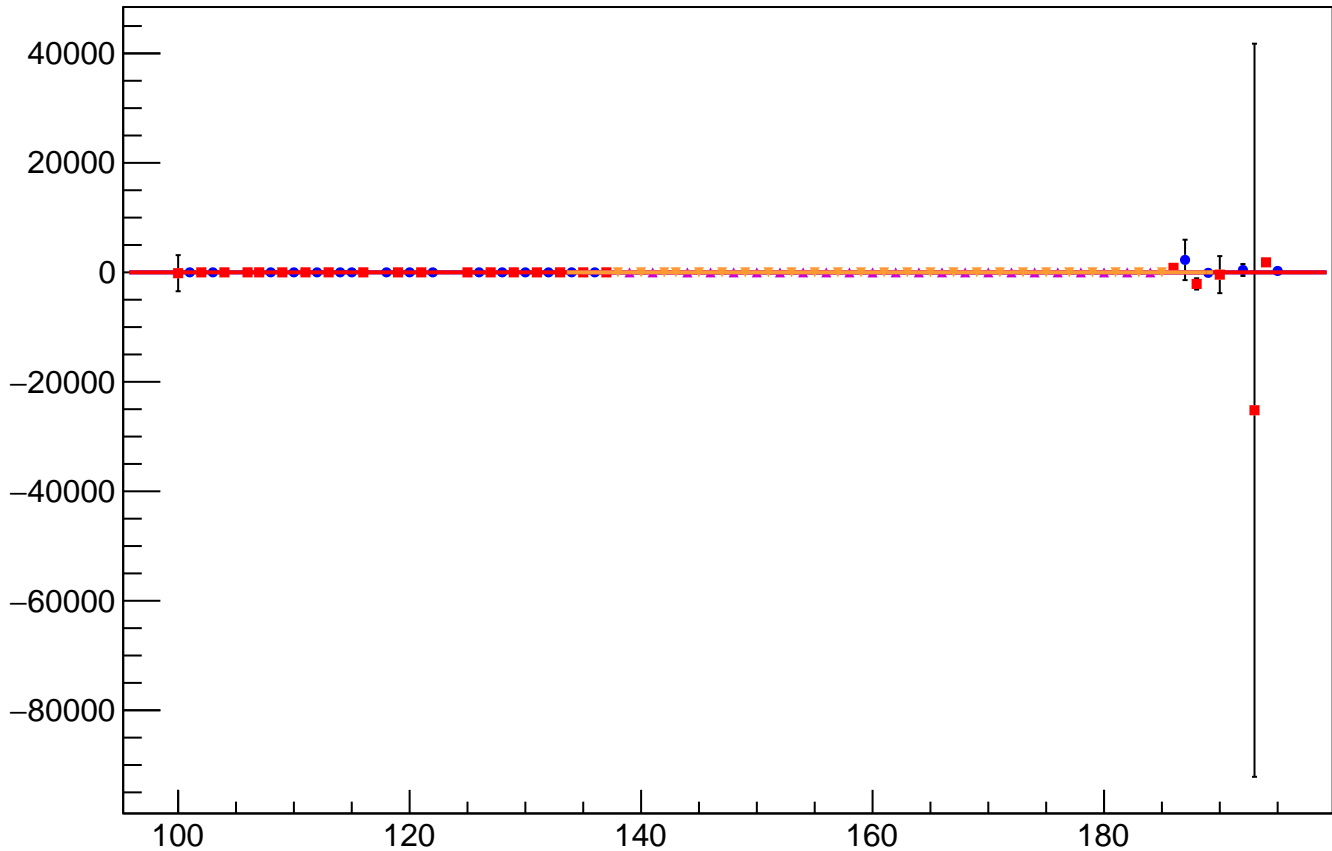
Left In: 89.596 $\pm$ 0.015  $\chi^2/\text{NDF}$ : 508511.1/22

+ sign 85.095 $\pm$ 0.012  $\chi^2/\text{NDF}$ : 3133455.1/44

All: 85.632 $\pm$ 0.009  $\chi^2/\text{NDF}$ : 6653162.0/90

- sign 86.196 $\pm$ 0.012  $\chi^2/\text{NDF}$ : 3515709.4/45

# asym\_ds\_avg\_correction\_mean vs Slug



Right In:  $-0.290 \pm 0.502$   $\chi^2/\text{NDF}: 21.6/19$

Left Out:  $0.134 \pm 0.367$   $\chi^2/\text{NDF}: 21.3/24$

Right Out:  $-0.038 \pm 0.525$   $\chi^2/\text{NDF}: 19.7/22$

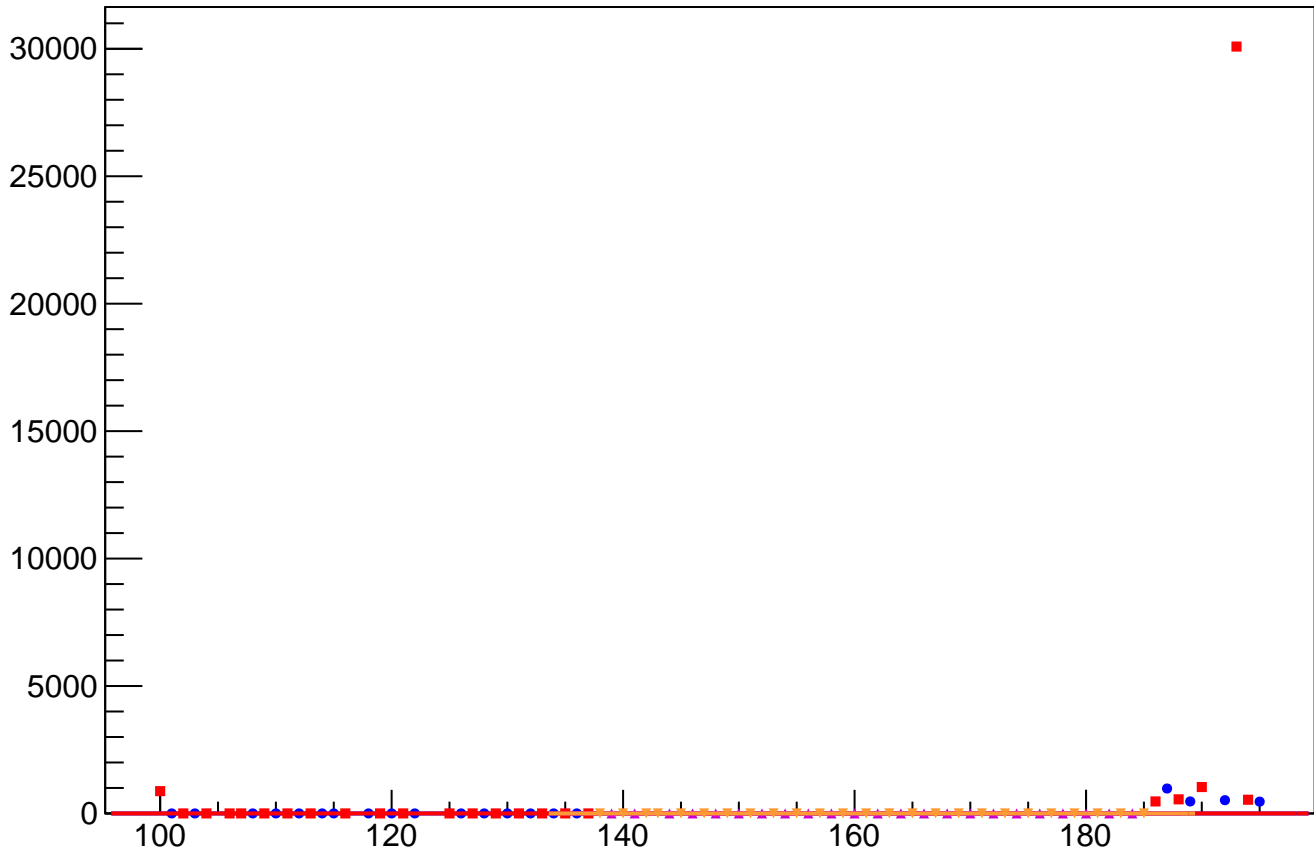
Left In:  $0.519 \pm 0.387$   $\chi^2/\text{NDF}: 26.3/22$

+ sign  $-0.014 \pm 0.296$   $\chi^2/\text{NDF}: 43.4/44$

All:  $0.146 \pm 0.215$   $\chi^2/\text{NDF}: 90.7/90$

- sign  $0.323 \pm 0.312$   $\chi^2/\text{NDF}: 46.7/45$

# asym\_ds\_avg\_correction\_rms vs Slug



Right In: 1.152 $\pm$ 0.000  $\chi^2$ /NDF: 2261792.4/19

Left Out: 1.404 $\pm$ 0.000  $\chi^2$ /NDF:992478.0/24

Right Out: 1.260 $\pm$ 0.000  $\chi^2$ /NDF: 3097581.4/22

Left In: 1.453 $\pm$ 0.000  $\chi^2$ /NDF:995852.2/22

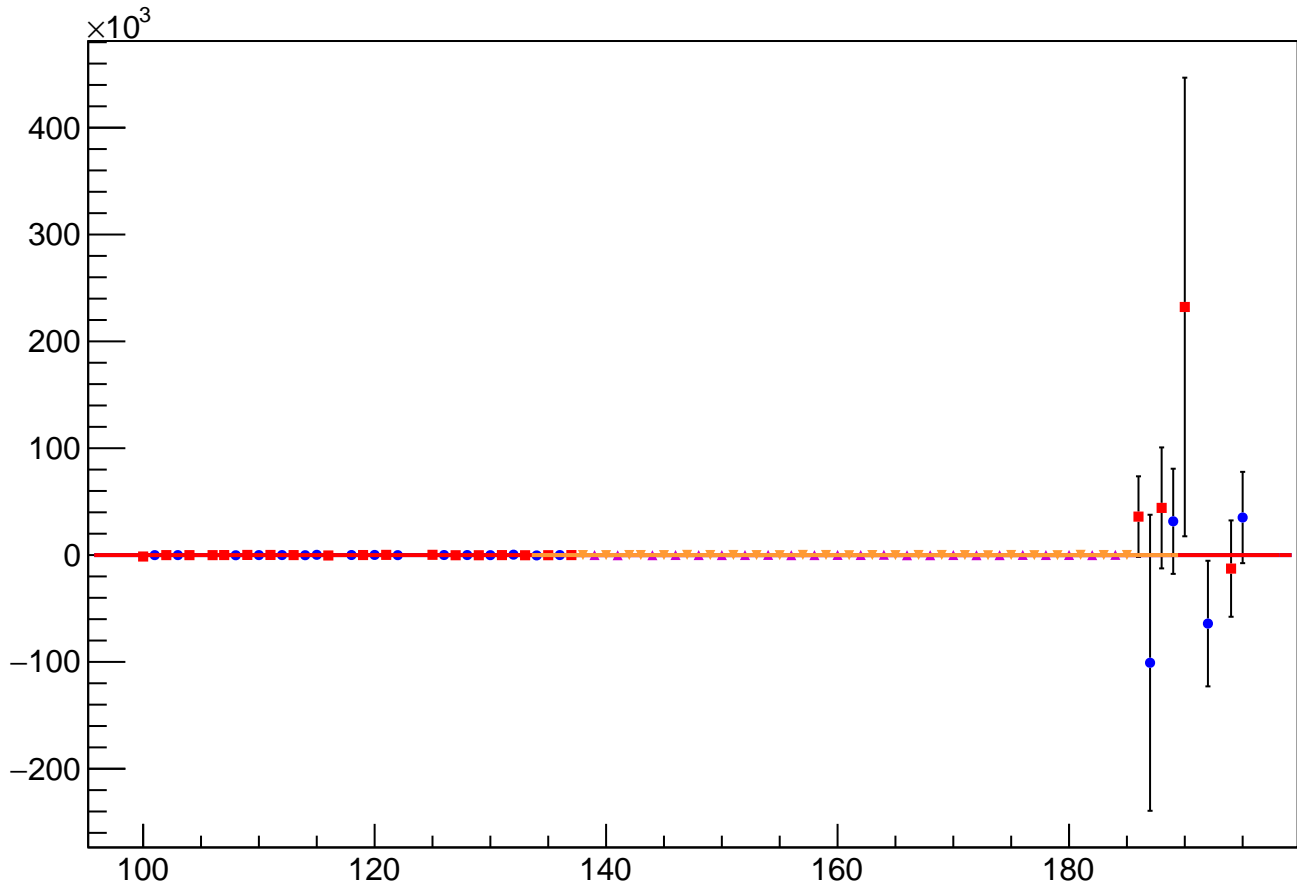
+ sign 1.316 $\pm$ 0.000  $\chi^2$ /NDF: 3581940.9/44

All: 1.349 $\pm$ 0.000  $\chi^2$ /NDF: 7902608.4/90

- sign 1.385 $\pm$ 0.000  $\chi^2$ /NDF: 4269632.0/45



# asym\_ds\_avg\_mean vs Slug



Right In:  $-14.480 \pm 30.040$   $\chi^2/\text{NDF}: 19.0/19$

Left Out:  $4.417 \pm 20.966$   $\chi^2/\text{NDF}: 22.1/24$

Right Out:  $-31.998 \pm 30.500$   $\chi^2/\text{NDF}: 19.6/21$

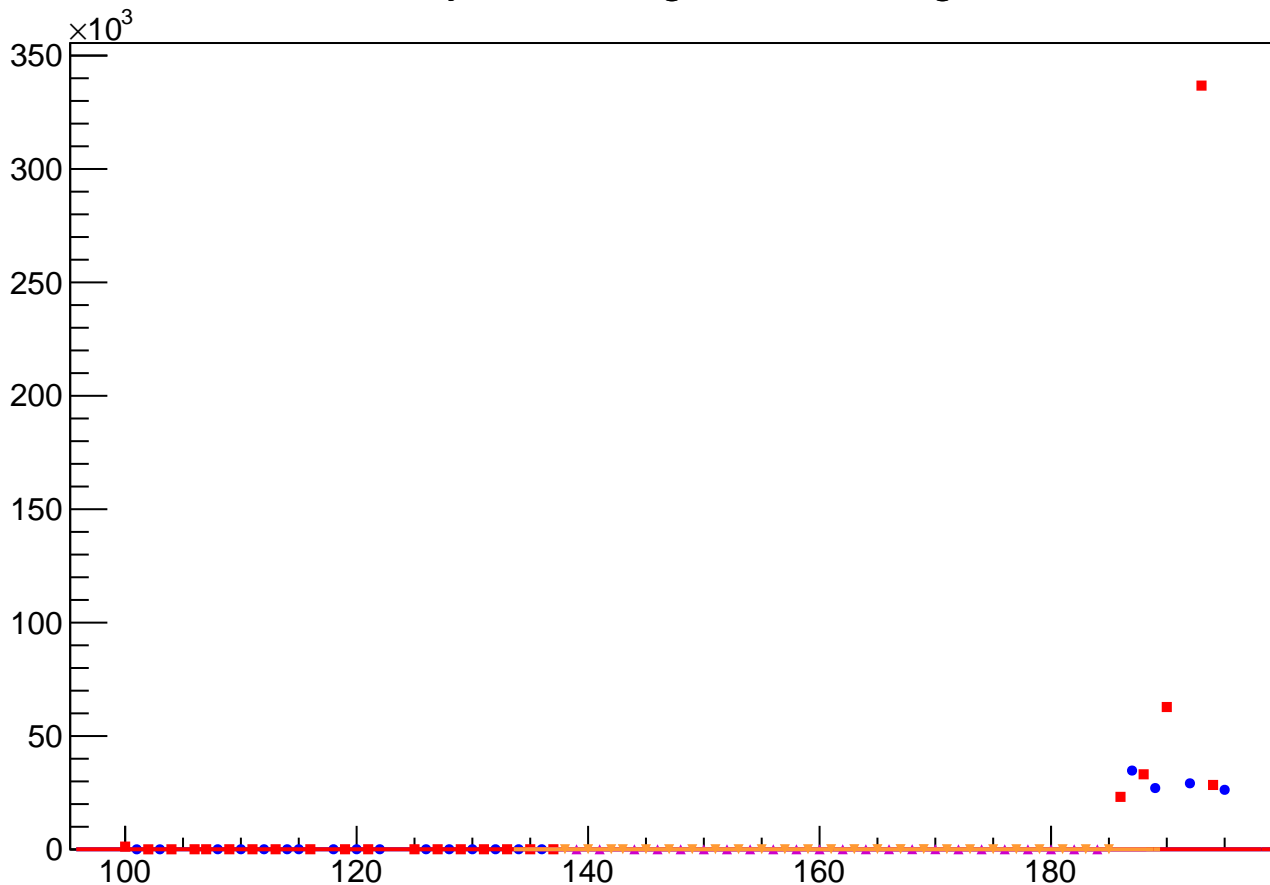
Left In:  $22.446 \pm 21.591$   $\chi^2/\text{NDF}: 22.3/22$

+ sign  $-1.772 \pm 17.192$   $\chi^2/\text{NDF}: 41.4/44$

All:  $1.175 \pm 12.306$   $\chi^2/\text{NDF}: 85.5/89$

- sign  $4.271 \pm 17.623$   $\chi^2/\text{NDF}: 44.0/44$

# asym\_ds\_avg\_rms vs Slug



Right In: 76.106 $\pm$ 0.021  $\chi^2$ /NDF: 2395488.7/19

Left Out: 89.510 $\pm$ 0.015  $\chi^2$ /NDF:471081.1/24

Right Out: 79.414 $\pm$ 0.022  $\chi^2$ /NDF: 2865116.3/22

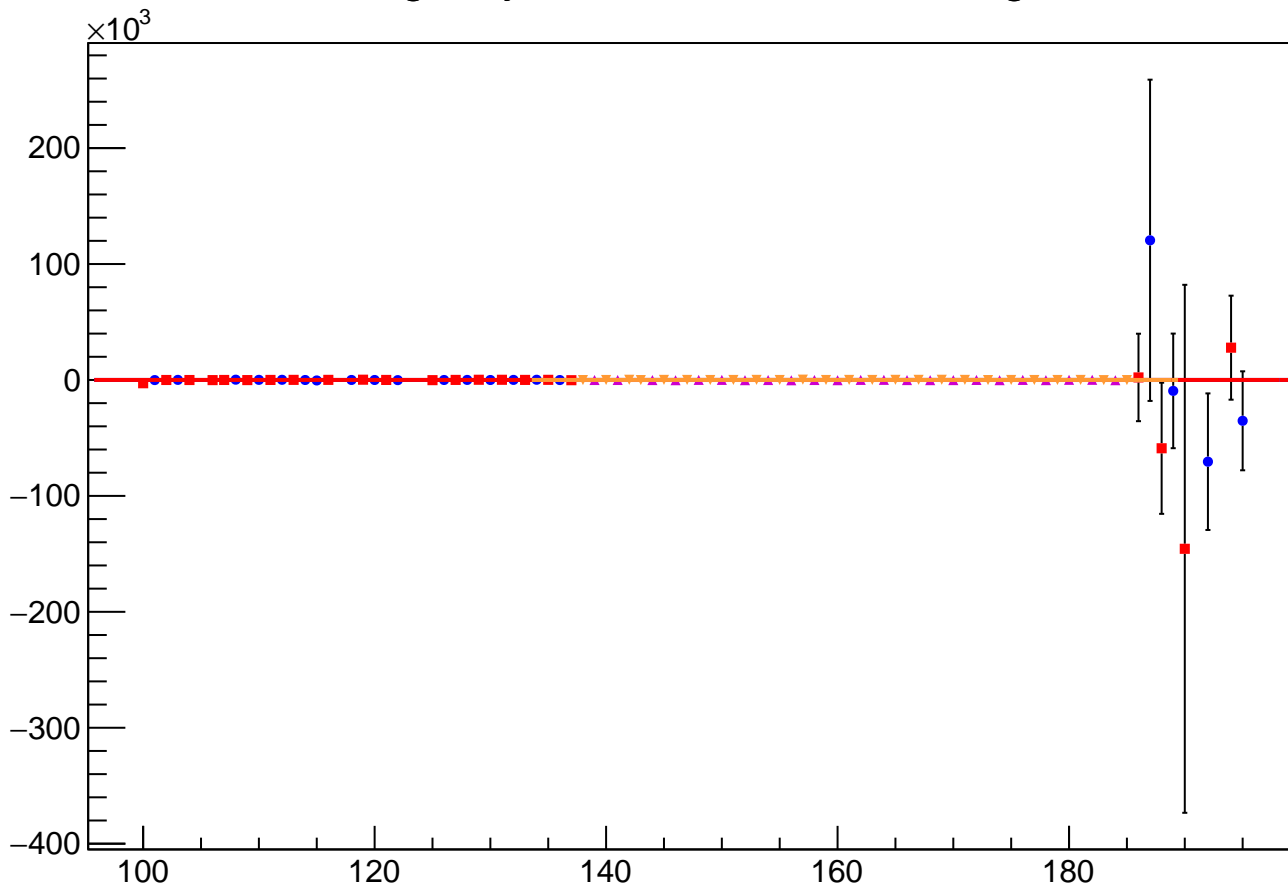
Left In: 89.622 $\pm$ 0.015  $\chi^2$ /NDF:509391.8/22

+ sign 85.119 $\pm$ 0.012  $\chi^2$ /NDF: 3134341.5/44

All: 85.653 $\pm$ 0.009  $\chi^2$ /NDF: 6662057.7/90

- sign 86.214 $\pm$ 0.012  $\chi^2$ /NDF: 3523759.3/45

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



Right In:  $8.080 \pm 30.012$   $\chi^2/\text{NDF}$ : 16.9/19

Left Out:  $9.877 \pm 20.965$   $\chi^2/\text{NDF}$ : 18.5/24

Right Out:  $25.769 \pm 30.473$   $\chi^2/\text{NDF}$ : 14.7/21

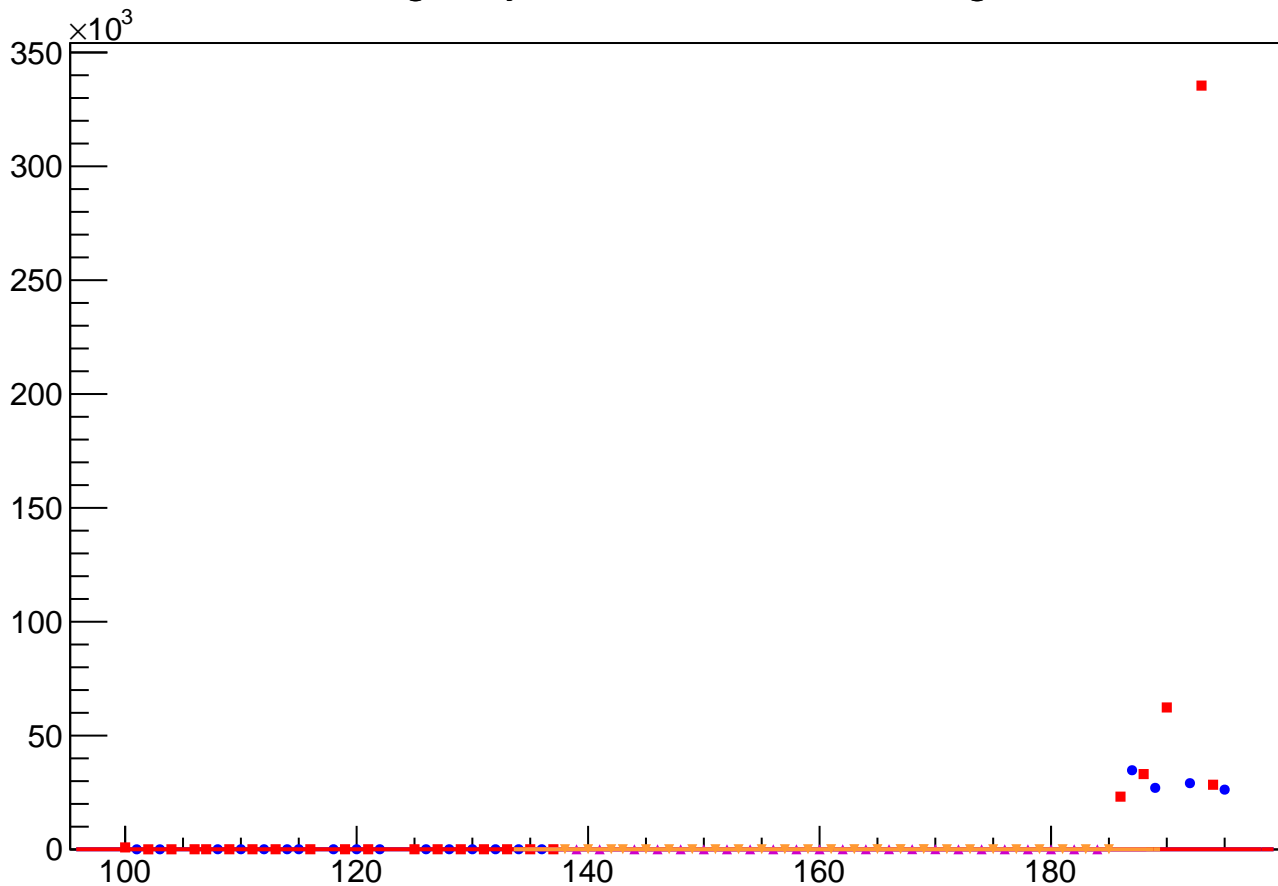
Left In:  $-43.424 \pm 21.593$   $\chi^2/\text{NDF}$ : 31.4/22

+ sign  $9.288 \pm 17.187$   $\chi^2/\text{NDF}$ : 35.5/44

All:  $-5.136 \pm 12.303$   $\chi^2/\text{NDF}$ : 86.4/89

- sign  $-20.294 \pm 17.618$   $\chi^2/\text{NDF}$ : 49.5/44

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



Right In: 76.036 $\pm$ 0.021  $\chi^2$ /NDF: 2394752.4/19

Left Out: 89.507 $\pm$ 0.015  $\chi^2$ /NDF: 468988.9/24

Right Out: 79.362 $\pm$ 0.022  $\chi^2$ /NDF: 2857980.2/22

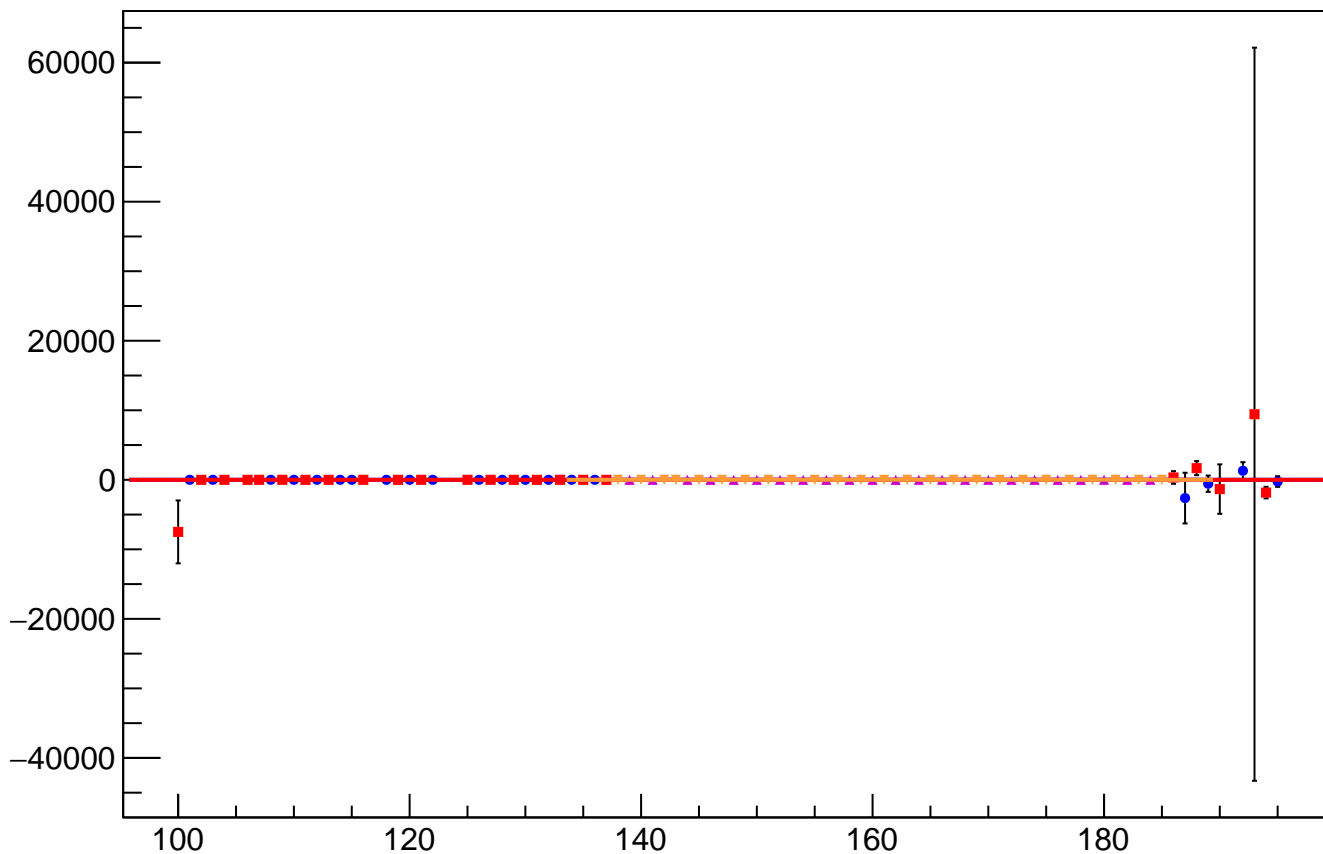
Left In: 89.628 $\pm$ 0.015  $\chi^2$ /NDF: 511042.3/22

+ sign 85.090 $\pm$ 0.012  $\chi^2$ /NDF: 3134527.4/44

All: 85.629 $\pm$ 0.009  $\chi^2$ /NDF: 6658697.3/90

- sign 86.196 $\pm$ 0.012  $\chi^2$ /NDF: 3520128.9/45

# asym\_ds\_dd\_correction\_mean vs Slug



Right In:  $0.892 \pm 0.531$   $\chi^2/\text{NDF}: 13.9/19$

Left Out:  $-0.517 \pm 0.382$   $\chi^2/\text{NDF}: 20.7/24$

Right Out:  $-0.348 \pm 0.549$   $\chi^2/\text{NDF}: 21.4/22$

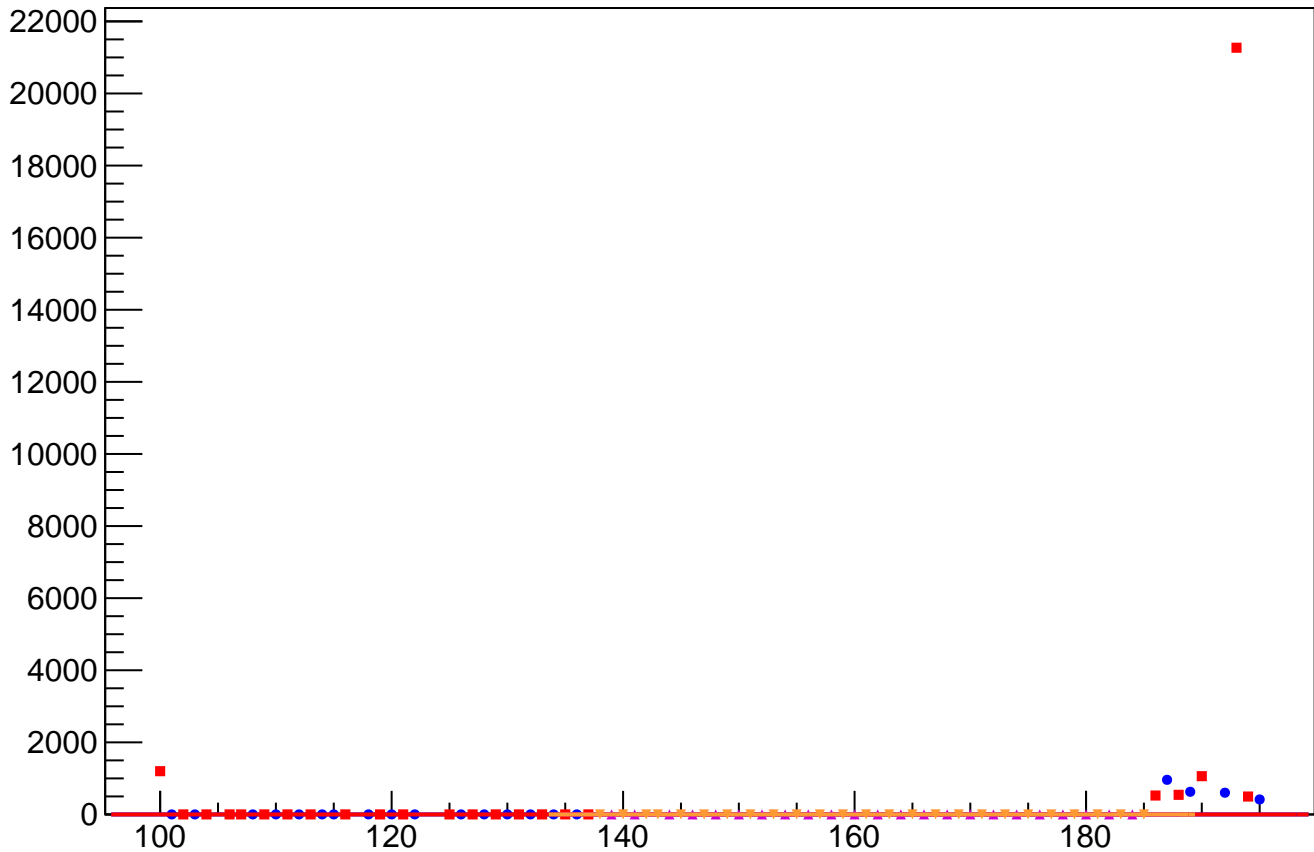
Left In:  $0.072 \pm 0.390$   $\chi^2/\text{NDF}: 20.4/22$

+ sign  $-0.037 \pm 0.310$   $\chi^2/\text{NDF}: 39.3/44$

All:  $-0.053 \pm 0.222$   $\chi^2/\text{NDF}: 81.4/90$

- sign  $-0.069 \pm 0.318$   $\chi^2/\text{NDF}: 42.2/45$

# asym\_ds\_dd\_correction\_rms vs Slug



Right In: 1.234+/-0.000  $\chi^2$ /NDF: 2403279.4/19

Left Out: 1.472+/-0.000  $\chi^2$ /NDF:1156063.1/24

Right Out: 1.316+/-0.000  $\chi^2$ /NDF: 2996220.5/22

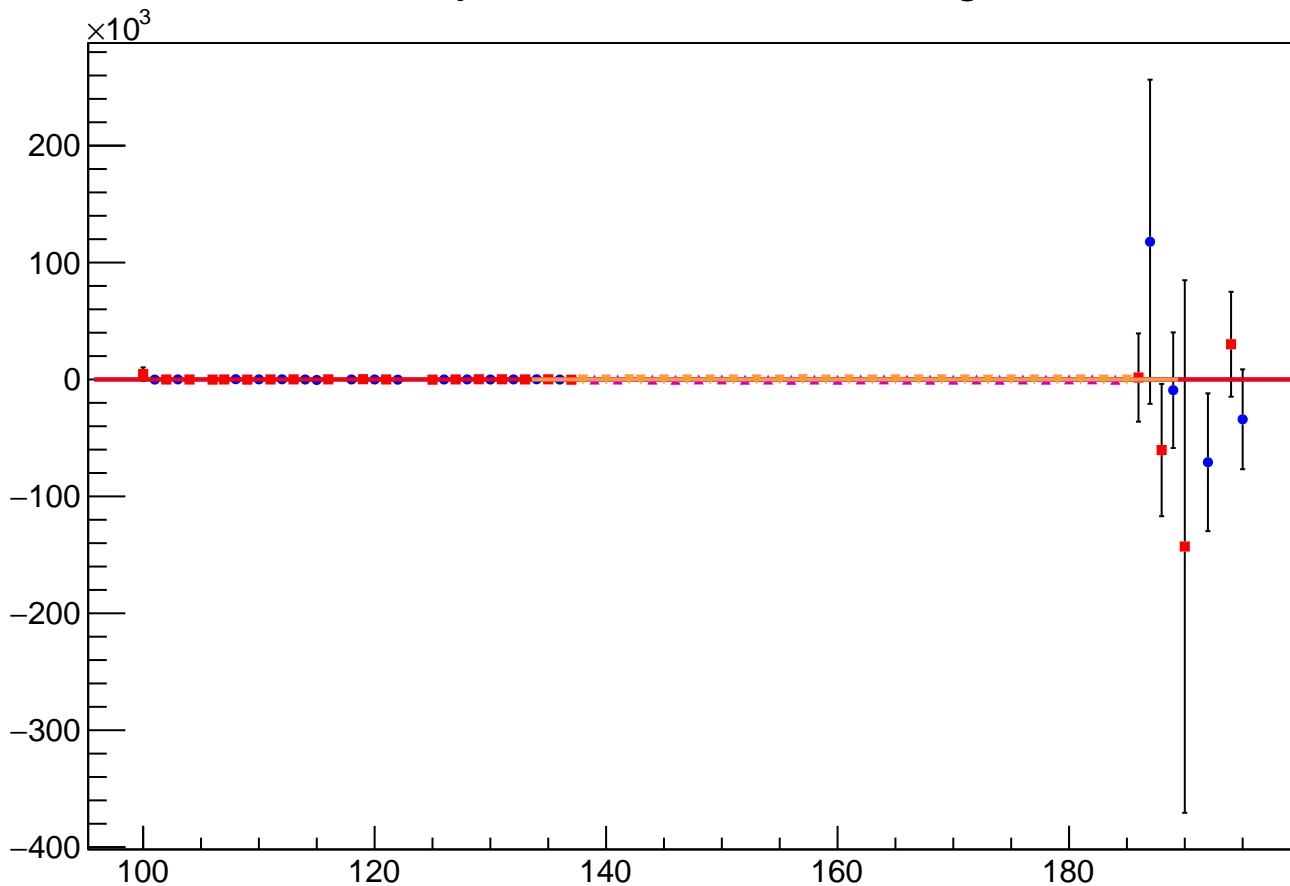
Left In: 1.461+/-0.000  $\chi^2$ /NDF:1048537.6/22

+ sign 1.391+/-0.000  $\chi^2$ /NDF: 3825529.5/44

All: 1.401+/-0.000  $\chi^2$ /NDF: 7967866.5/90

- sign 1.412+/-0.000  $\chi^2$ /NDF: 4137691.0/45

# asym\_ds\_dd\_mean vs Slug



Right In:  $7.373 \pm 30.020$   $\chi^2/\text{NDF}: 16.7/19$

Left Out:  $10.423 \pm 20.971$   $\chi^2/\text{NDF}: 18.4/24$

Right Out:  $26.379 \pm 30.482$   $\chi^2/\text{NDF}: 15.0/21$

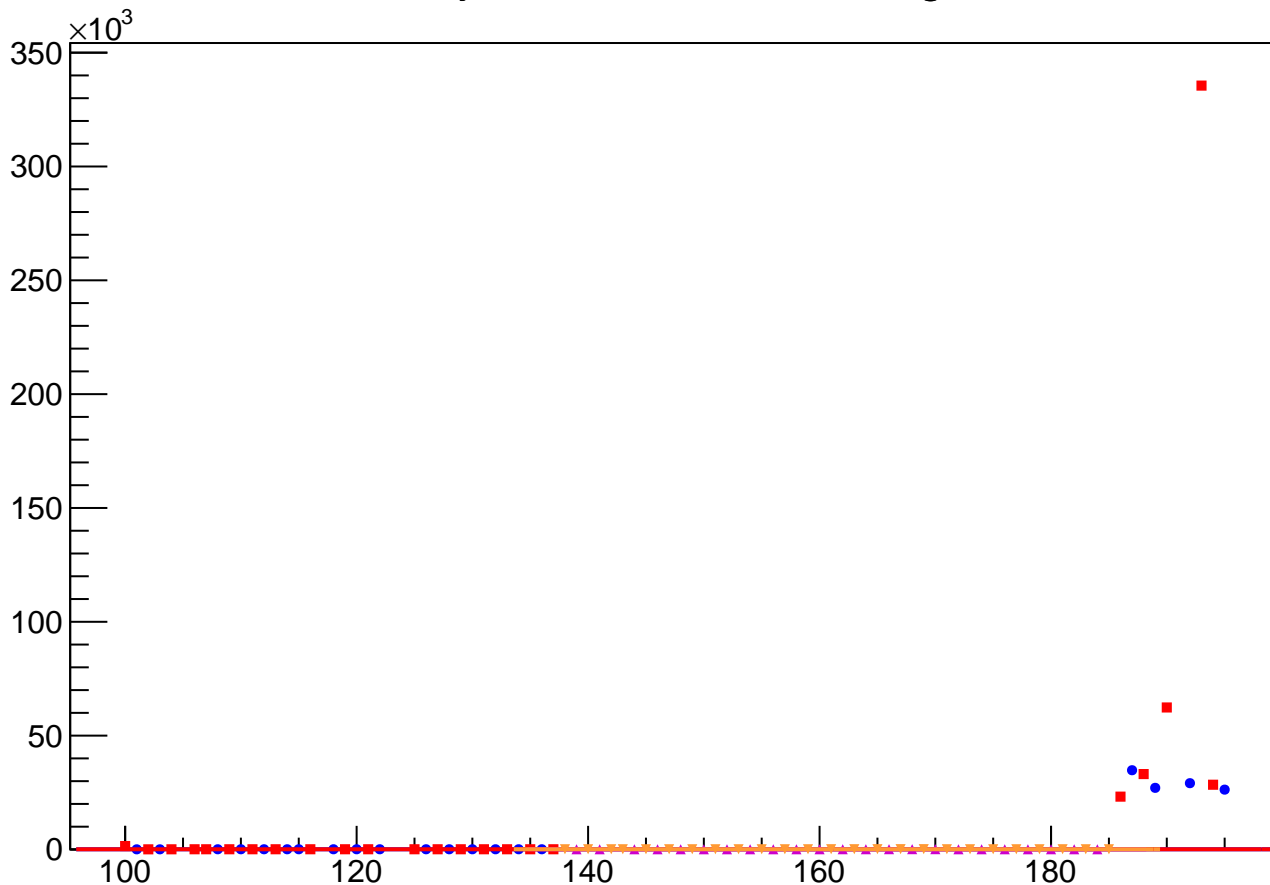
Left In:  $-43.905 \pm 21.600$   $\chi^2/\text{NDF}: 31.1/22$

+ sign  $9.423 \pm 17.192$   $\chi^2/\text{NDF}: 35.1/44$

All:  $-5.124 \pm 12.306$   $\chi^2/\text{NDF}: 86.2/89$

- sign  $-20.410 \pm 17.624$   $\chi^2/\text{NDF}: 49.6/44$

# asym\_ds\_dd\_rms vs Slug



Right In: 76.057 $\pm$ 0.021  $\chi^2$ /NDF: 2394800.7/19

Left Out: 89.535 $\pm$ 0.015  $\chi^2$ /NDF: 469743.0/24

Right Out: 79.359 $\pm$ 0.022  $\chi^2$ /NDF: 2867264.7/22

Left In: 89.655 $\pm$ 0.015  $\chi^2$ /NDF: 511848.9/22

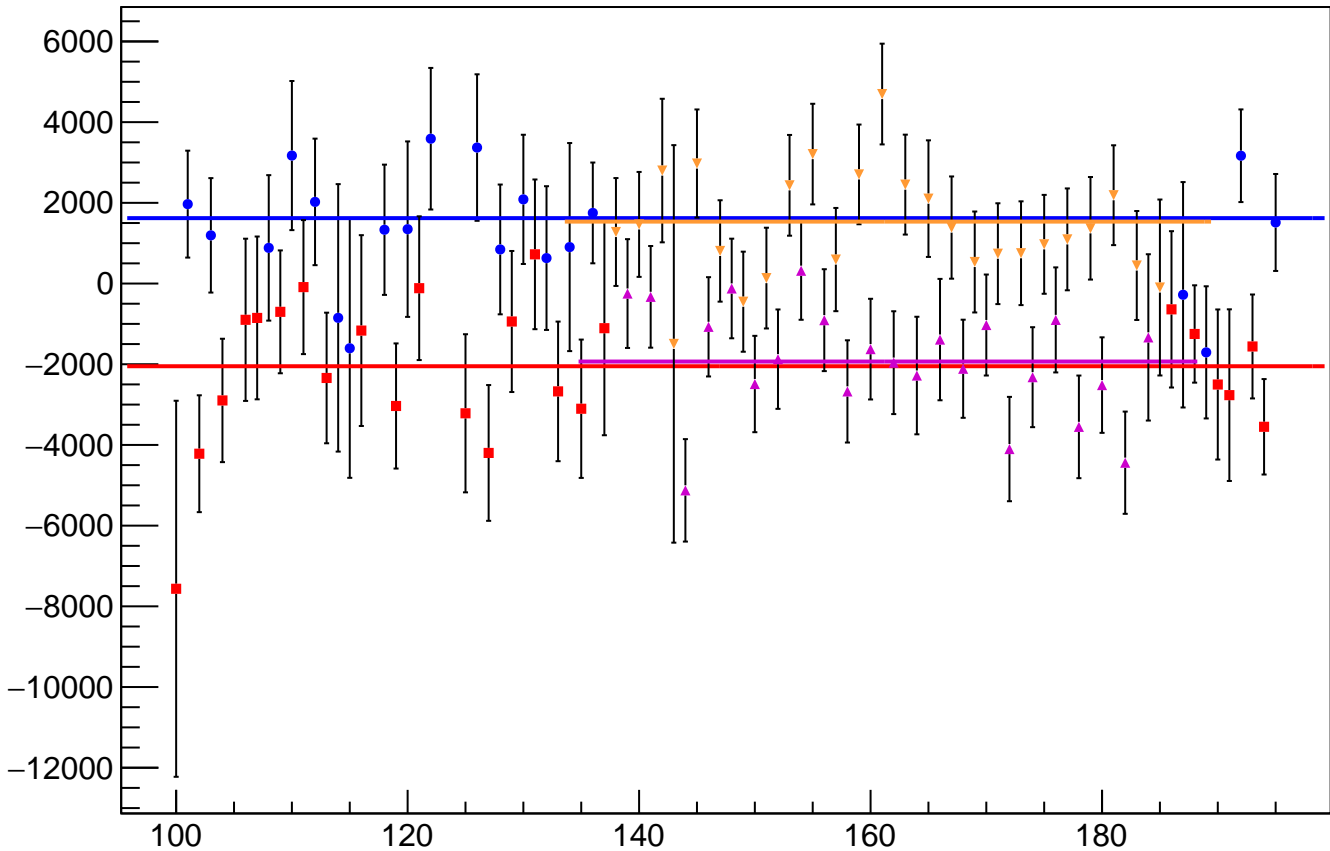
+ sign 85.115 $\pm$ 0.012  $\chi^2$ /NDF: 3135448.3/44

All: 85.650 $\pm$ 0.009  $\chi^2$ /NDF: 6670444.8/90

- sign 86.213 $\pm$ 0.012  $\chi^2$ /NDF: 3531017.3/45



# reg\_asym\_usl\_mean vs Slug



Right In: 1620.987+/-369.577  $\chi^2$ /NDF: 12.0/19

Left Out: 1535.246+/-265.882  $\chi^2$ /NDF:20.4/24

Right Out: -2049.501+/-345.878  $\chi^2$ /NDF: 16.7/23

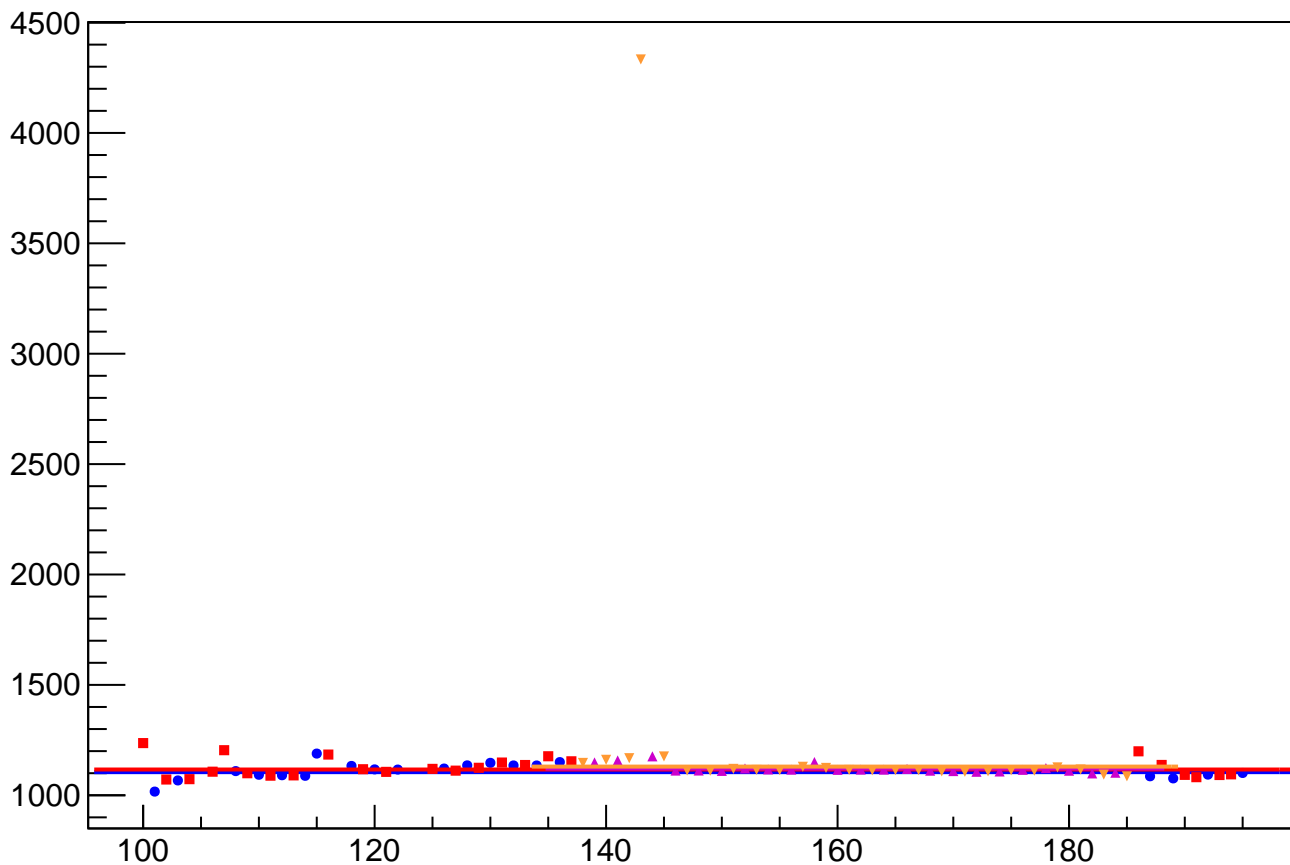
Left In: -1933.000+/-268.006  $\chi^2$ /NDF:27.0/22

+ sign 1564.488+/-215.831  $\chi^2$ /NDF: 32.4/44

All: -239.065+/-151.189  $\chi^2$ /NDF: 213.3/91

- sign -1976.706+/-211.851  $\chi^2$ /NDF: 43.8/46

# reg\_asym\_usl\_rms vs Slug



Right In: 1104.755+/-0.261  $\chi^2$ /NDF: 19343.2/19

Left Out: 1129.901+/-0.188  $\chi^2$ /NDF: 858259.9/24

Right Out: 1116.702+/-0.245  $\chi^2$ /NDF: 22070.1/23

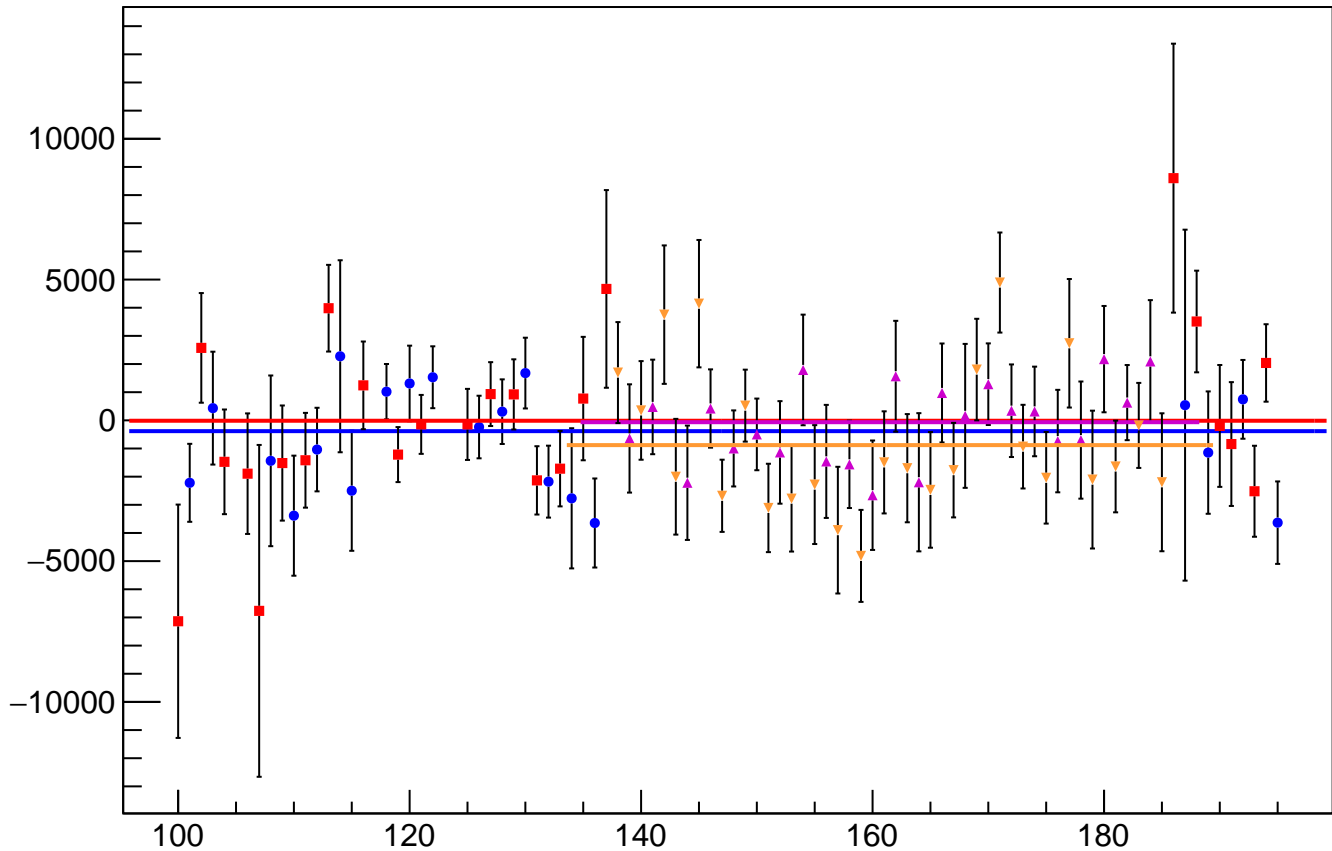
Left In: 1120.991+/-0.190  $\chi^2$ /NDF: 9641.8/22

+ sign 1121.325+/-0.153  $\chi^2$ /NDF: 883704.4/44

All: 1120.335+/-0.107  $\chi^2$ /NDF: 915690.9/91

- sign 1119.382+/-0.150  $\chi^2$ /NDF: 31904.0/46

# asym\_usl\_correction\_mean vs Slug



Right In:  $-383.571 \pm 335.816$   $\chi^2/\text{NDF}: 28.4/19$

Left Out:  $-879.685 \pm 355.692$   $\chi^2/\text{NDF}: 43.5/24$

Right Out:  $-14.086 \pm 324.368$   $\chi^2/\text{NDF}: 37.3/23$

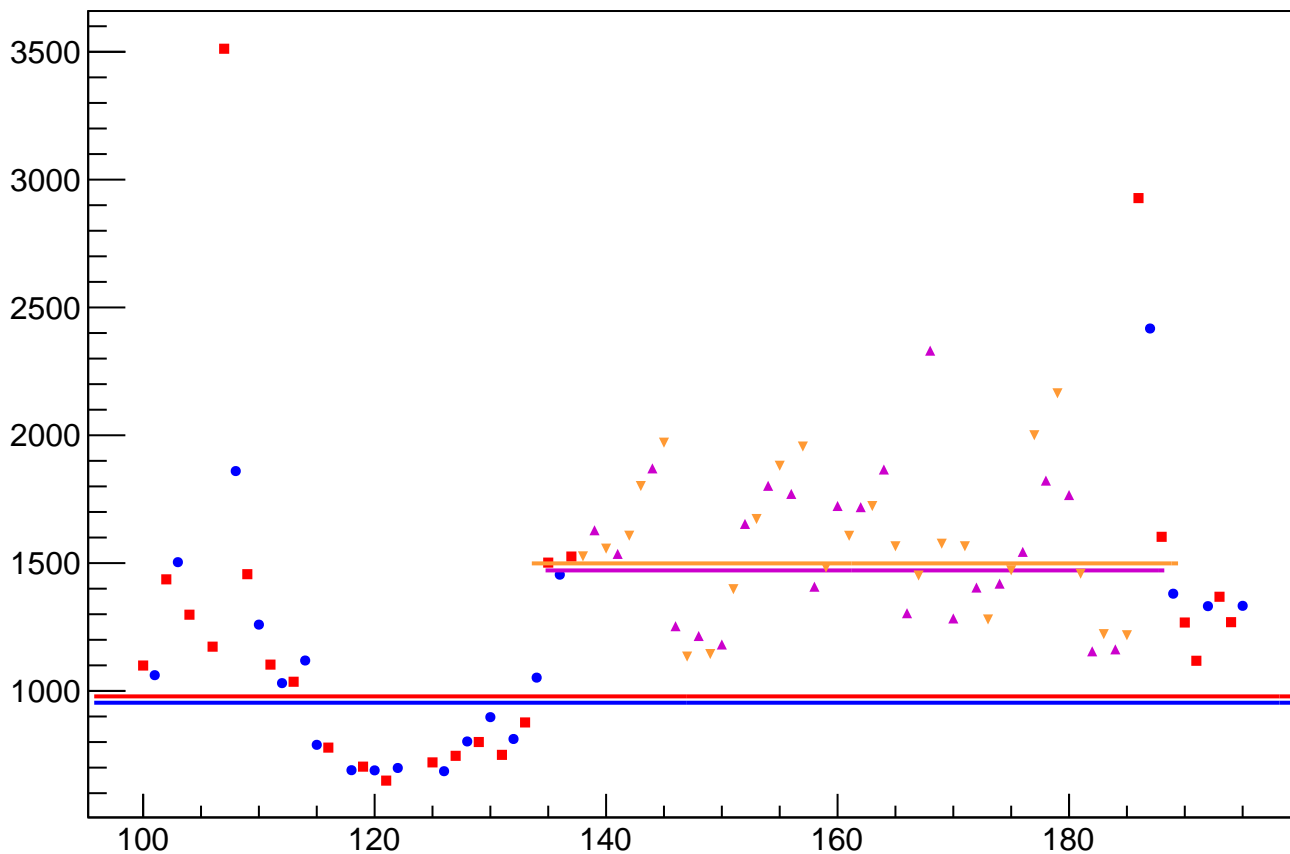
Left In:  $-65.738 \pm 358.785$   $\chi^2/\text{NDF}: 12.1/22$

+ sign  $-617.380 \pm 244.182$   $\chi^2/\text{NDF}: 73.0/44$

All:  $-323.078 \pm 171.387$   $\chi^2/\text{NDF}: 125.3/91$

- sign  $-37.316 \pm 240.613$   $\chi^2/\text{NDF}: 49.4/46$

# asym\_usl\_correction\_rms vs Slug



Right In: 953.850+/-0.237  $\chi^2/\text{NDF}$ : 1584560.7/19

Left Out: 1498.849+/-0.252  $\chi^2/\text{NDF}$ : 1053906.2/24

Right Out: 978.648+/-0.229  $\chi^2/\text{NDF}$ : 2345214.5/23

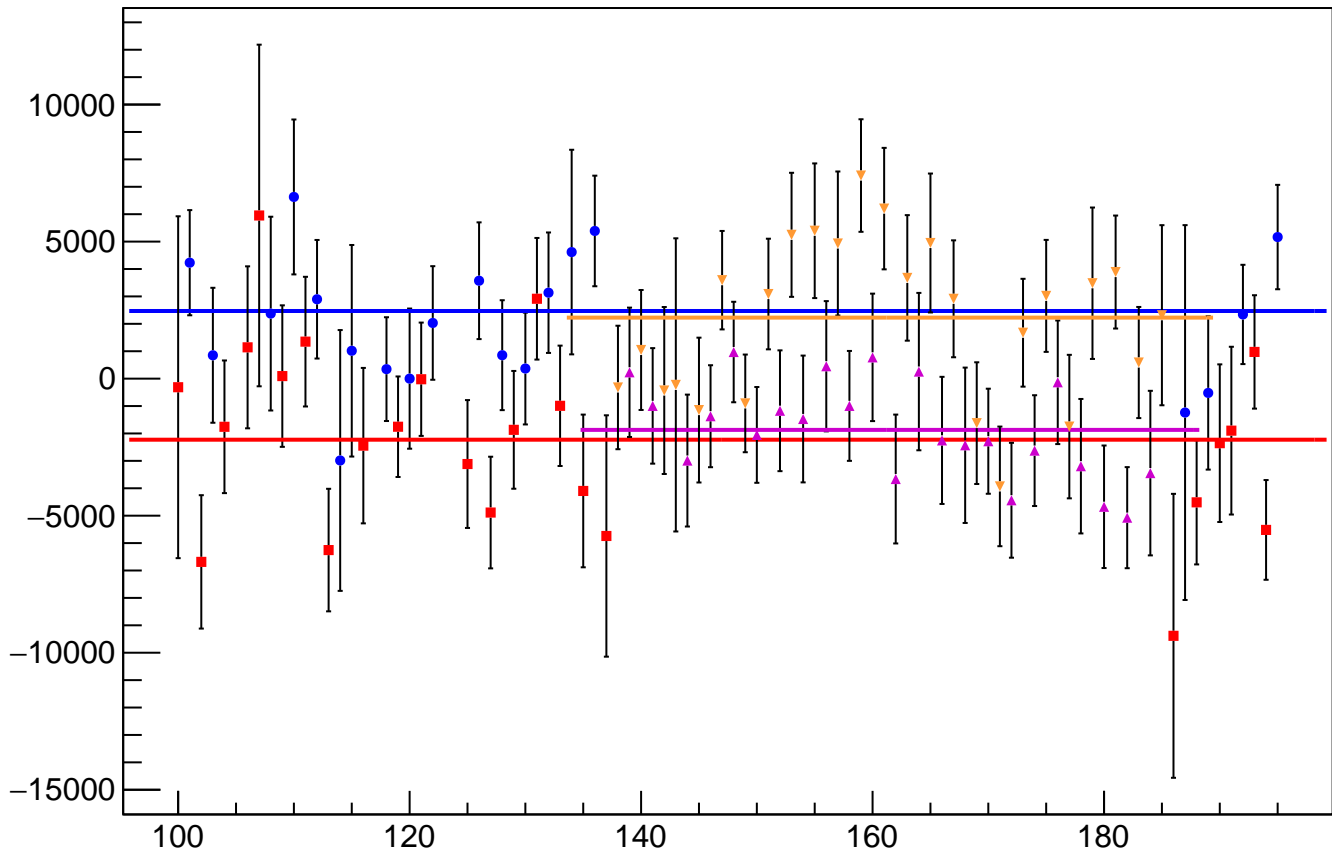
Left In: 1471.394+/-0.254  $\chi^2/\text{NDF}$ : 1105310.5/22

+ sign 1210.698+/-0.173  $\chi^2/\text{NDF}$ : 5121010.9/44

All: 1205.401+/-0.121  $\chi^2/\text{NDF}$ : 10649111.4/9

- sign 1200.259+/-0.170  $\chi^2/\text{NDF}$ : 5526246.0/46

# asym\_usl\_mean vs Slug



Right In: 2468.016 $\pm$ 527.363  $\chi^2$ /NDF: 15.1/19

Left Out: 2226.533 $\pm$ 454.821  $\chi^2$ /NDF:38.8/24

Right Out: -2227.853 $\pm$ 505.201  $\chi^2$ /NDF: 31.3/23

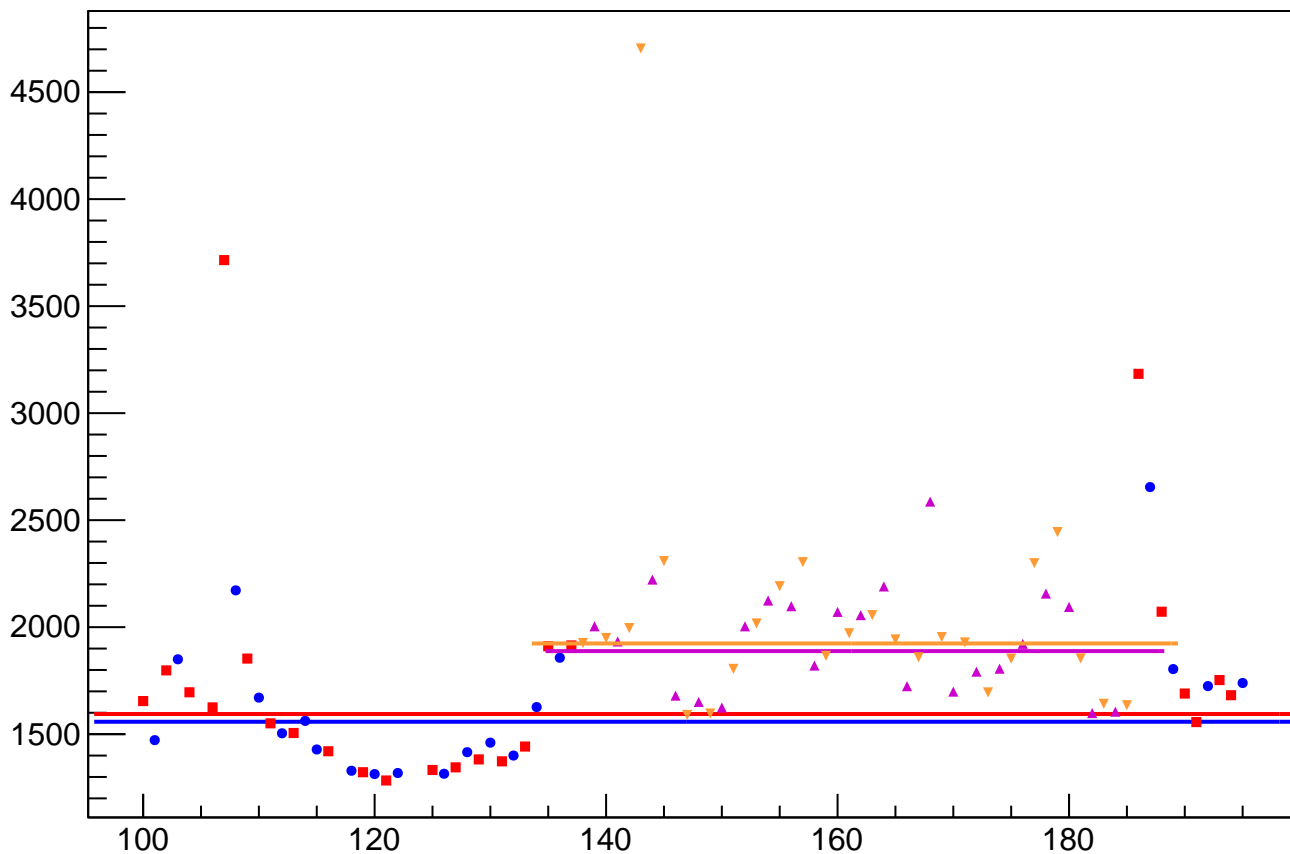
Left In: -1869.792 $\pm$ 455.465  $\chi^2$ /NDF:14.9/22

+ sign 2329.536 $\pm$ 344.422  $\chi^2$ /NDF: 54.0/44

All: 110.399 $\pm$ 241.343  $\chi^2$ /NDF: 182.1/91

- sign -2030.335 $\pm$ 338.283  $\chi^2$ /NDF: 46.5/46

# asym\_usl\_rms vs Slug



Right In: 1557.986 $\pm$ 0.373  $\chi^2$ /NDF: 370981.0/19

Left Out: 1923.833 $\pm$ 0.322  $\chi^2$ /NDF: 1006152.2/24

Right Out: 1594.176 $\pm$ 0.357  $\chi^2$ /NDF: 806954.6/23

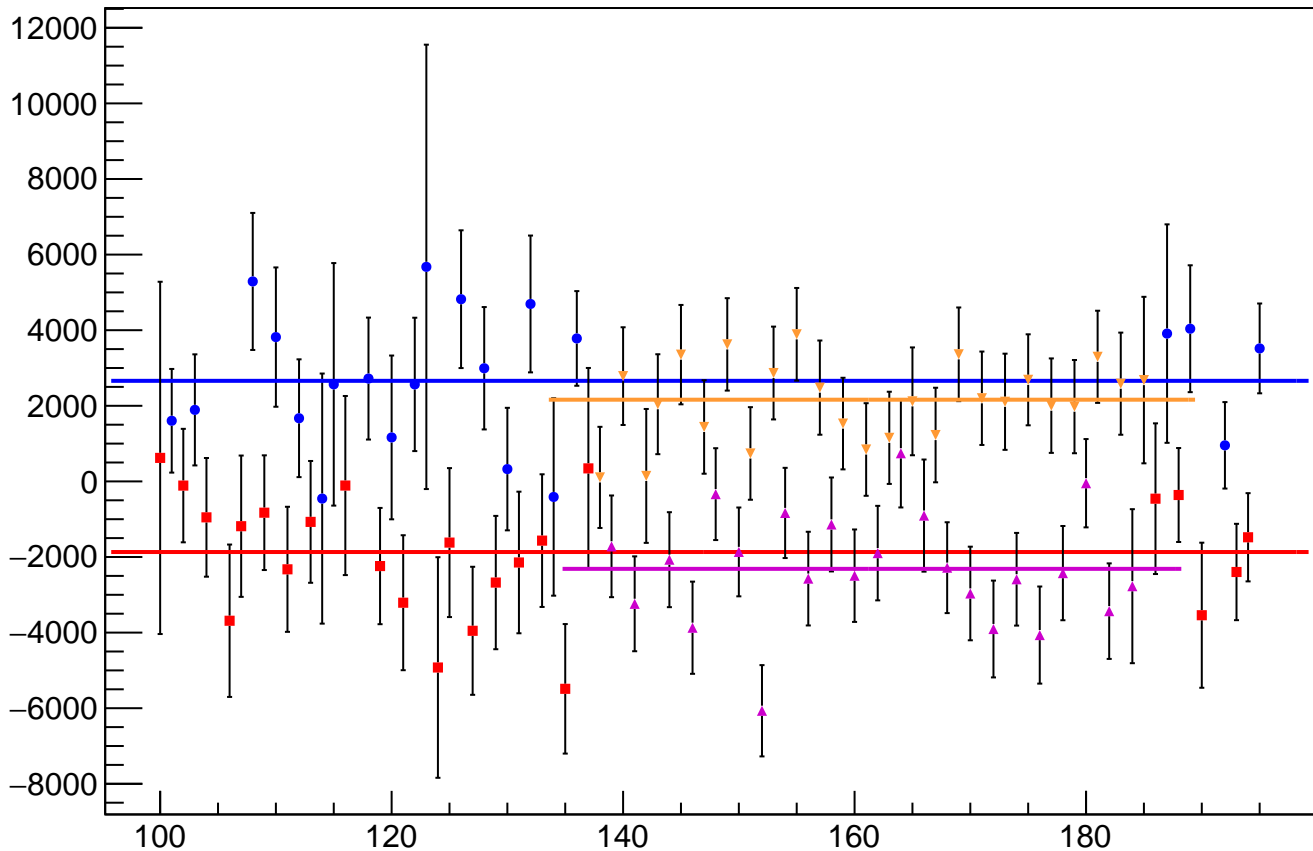
Left In: 1888.121 $\pm$ 0.322  $\chi^2$ /NDF: 504568.6/22

+ sign 1767.784 $\pm$ 0.244  $\chi^2$ /NDF: 1929098.3/44

All: 1761.952 $\pm$ 0.171  $\chi^2$ /NDF: 3615244.0/91

- sign 1756.326 $\pm$ 0.239  $\chi^2$ /NDF: 1685019.2/46

# reg\_asym\_usr\_mean vs Slug



Right In:  $2660.467 \pm 371.570$   $\chi^2/\text{NDF}: 16.0/20$

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

Right Out:  $-1868.198 \pm 349.523$   $\chi^2/\text{NDF}: 16.0/23$

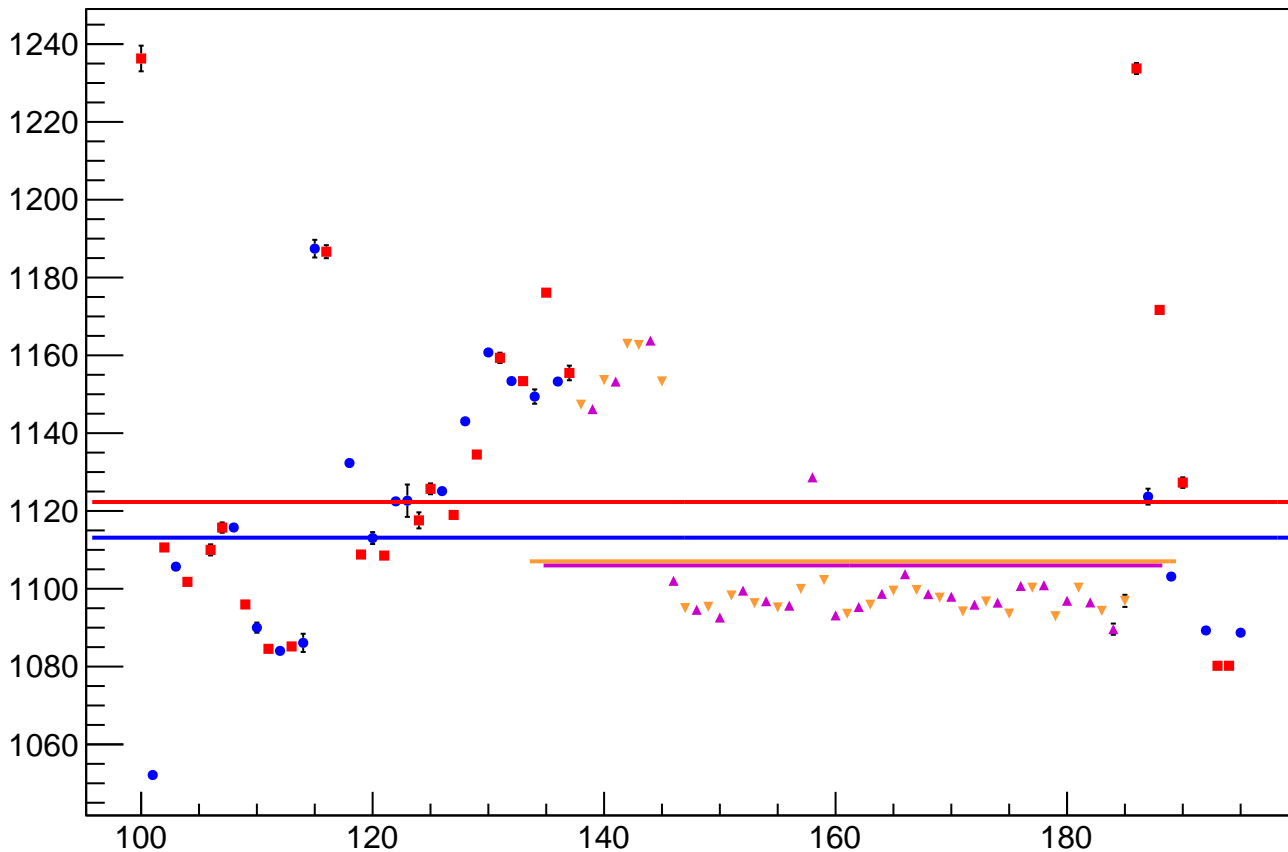
Left In:  $-2313.505 \pm 264.429$   $\chi^2/\text{NDF}: 31.3/22$

+ sign  $2323.351 \pm 211.655$   $\chi^2/\text{NDF}: 32.3/45$

All:  $77.755 \pm 149.388$   $\chi^2/\text{NDF}: 304.9/92$

- sign  $-2151.408 \pm 210.879$   $\chi^2/\text{NDF}: 48.3/46$

# reg\_asym\_usr\_rms vs Slug



Right In: 1113.134 $\pm$ 0.263  $\chi^2$ /NDF: 14315.6/20

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

Right Out: 1122.307 $\pm$ 0.247  $\chi^2$ /NDF: 24226.8/23

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

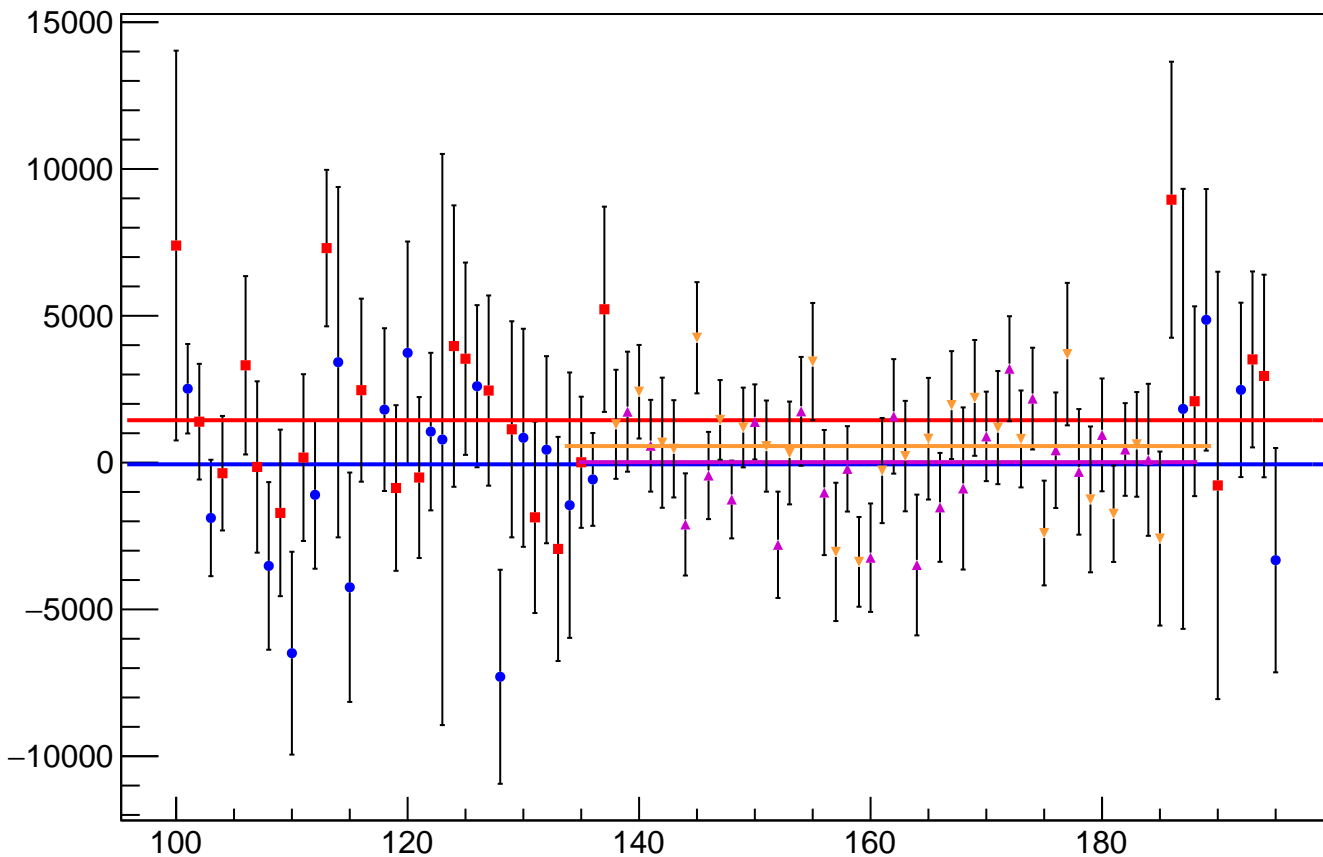
+ sign 1109.029 $\pm$ 0.150  $\chi^2$ /NDF: 29852.7/45

All: 1110.487 $\pm$ 0.106  $\chi^2$ /NDF: 68589.7/92

- sign 1111.934 $\pm$ 0.149  $\chi^2$ /NDF: 38547.9/46



# asym\_usr\_correction\_mean vs Slug



Right In:  $-58.467 \pm 623.860$   $\chi^2/\text{NDF}: 19.8/20$

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

Right Out:  $1443.217 \pm 617.063$   $\chi^2/\text{NDF}: 18.0/23$

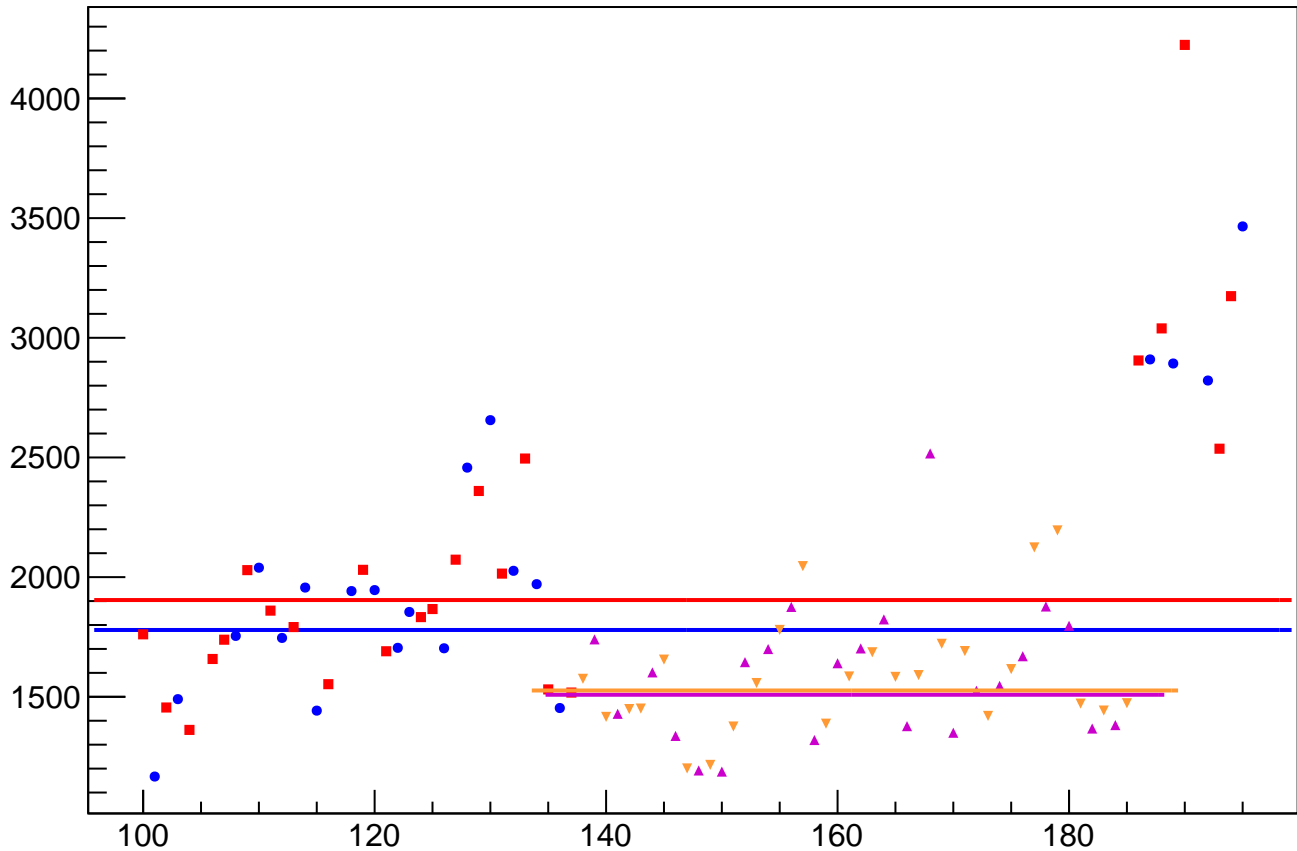
Left In:  $15.520 \pm 366.854$   $\chi^2/\text{NDF}: 20.1/22$

+ sign  $407.381 \pm 312.394$   $\chi^2/\text{NDF}: 47.3/45$

All:  $397.960 \pm 221.929$   $\chi^2/\text{NDF}: 89.4/92$

- sign  $388.360 \pm 315.335$   $\chi^2/\text{NDF}: 42.1/46$

# asym\_usr\_correction\_rms vs Slug



Right In: 1779.205+/-0.441  $\chi^2$ /NDF: 1495868.7/20

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

Right Out: 1904.291+/-0.436  $\chi^2$ /NDF: 1396608.9/23

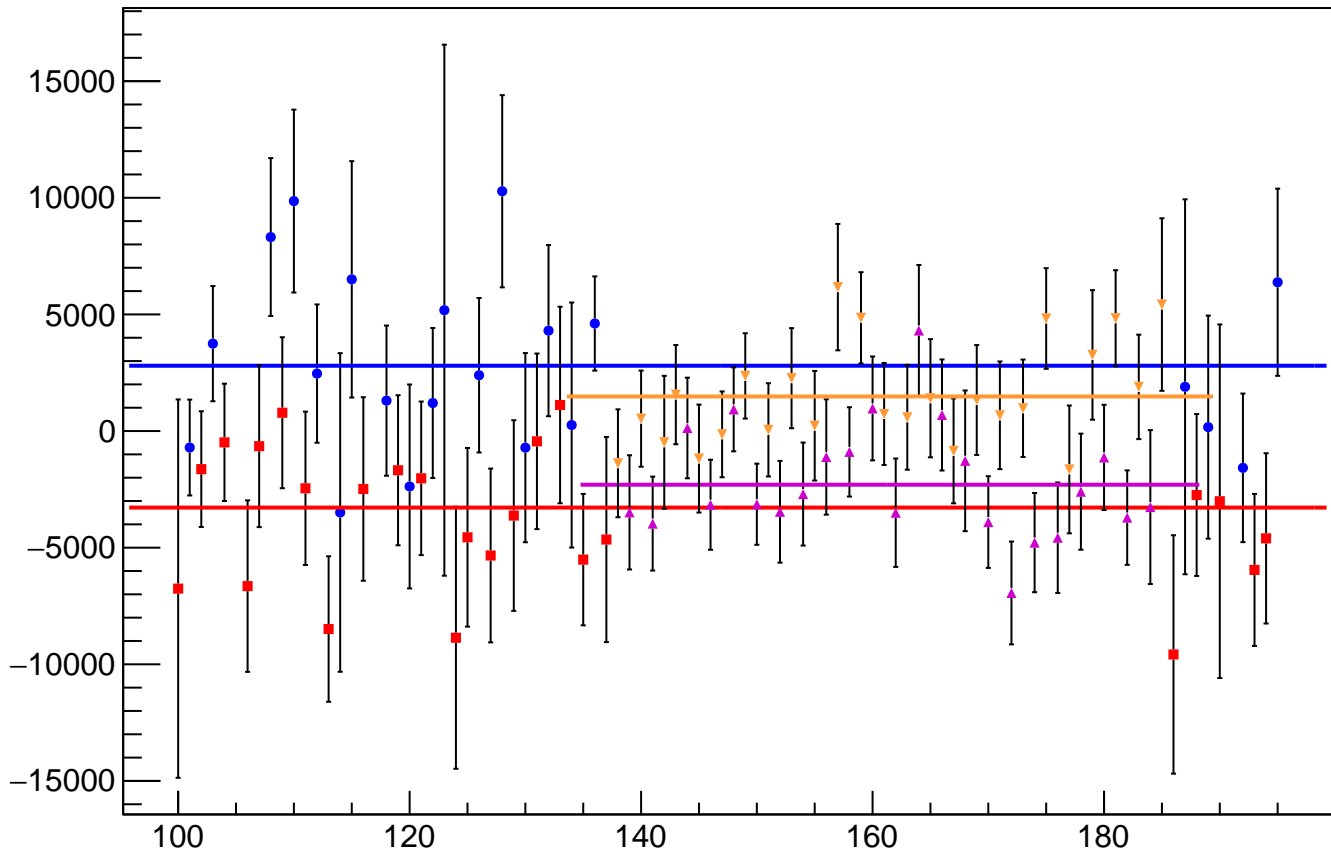
Left In: 1508.581+/-0.259  $\chi^2$ /NDF: 931684.8/22

+ sign 1589.783+/-0.221  $\chi^2$ /NDF: 2495668.7/45

All: 1600.748+/-0.157  $\chi^2$ /NDF: 5436628.0/92

- sign 1611.920+/-0.223  $\chi^2$ /NDF: 2935985.0/46

# asym\_usr\_mean vs Slug



Right In: 2799.936 $\pm$ 752.315  $\chi^2$ /NDF: 20.5/20

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

Right Out: -3281.207 $\pm$ 728.999  $\chi^2$ /NDF: 14.3/23

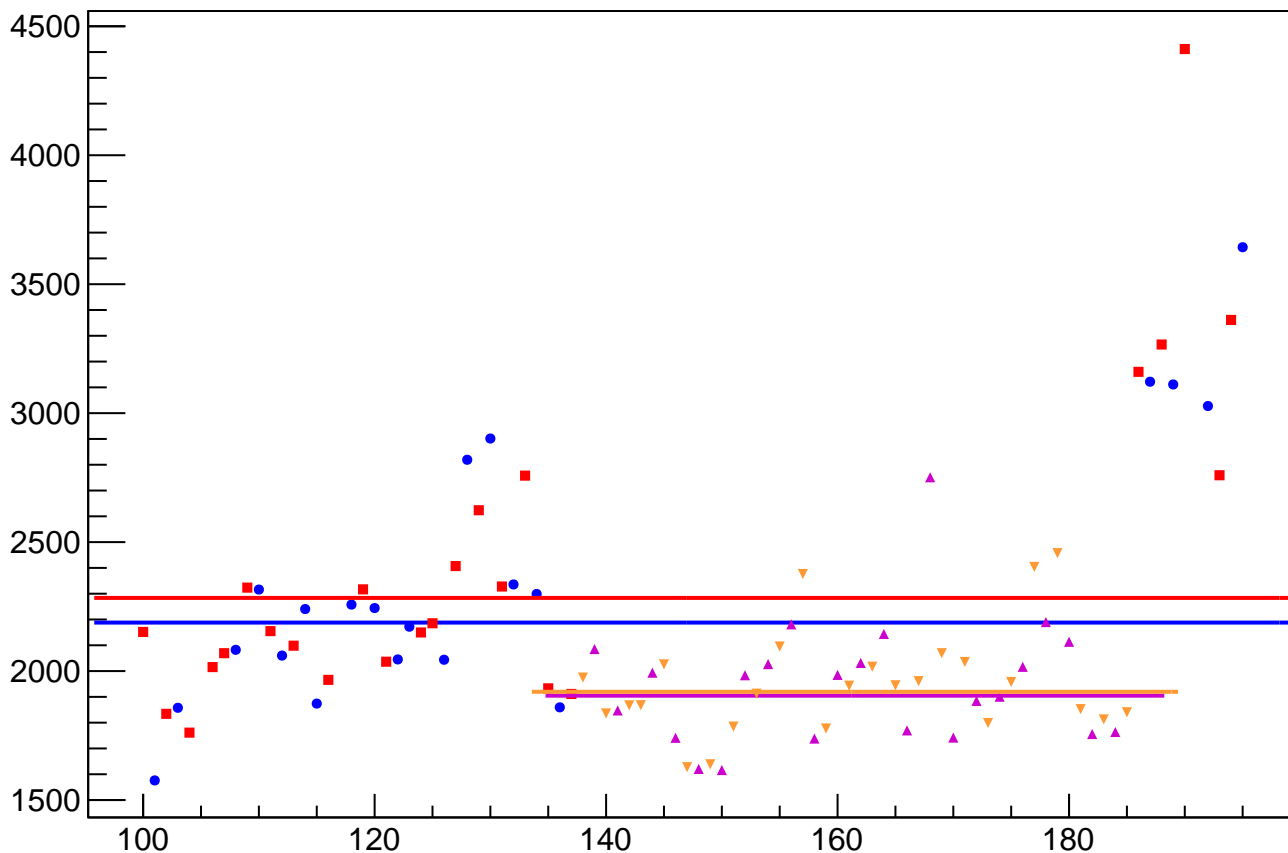
Left In: -2301.247 $\pm$ 459.040  $\chi^2$ /NDF:24.8/22

+ sign 1829.536 $\pm$ 386.175  $\chi^2$ /NDF: 43.7/45

All: -362.055 $\pm$ 273.866  $\chi^2$ /NDF: 148.9/92

- sign -2579.483 $\pm$ 388.445  $\chi^2$ /NDF: 40.4/46

# asym\_usr\_rms vs Slug



Right In: 2188.035 $\pm$ 0.532  $\chi^2$ /NDF: 907532.3/20

Left Out: 1919.732 $\pm$ 0.318  $\chi^2$ /NDF: 366218.1/24

Right Out: 2283.703 $\pm$ 0.515  $\chi^2$ /NDF: 888945.9/23

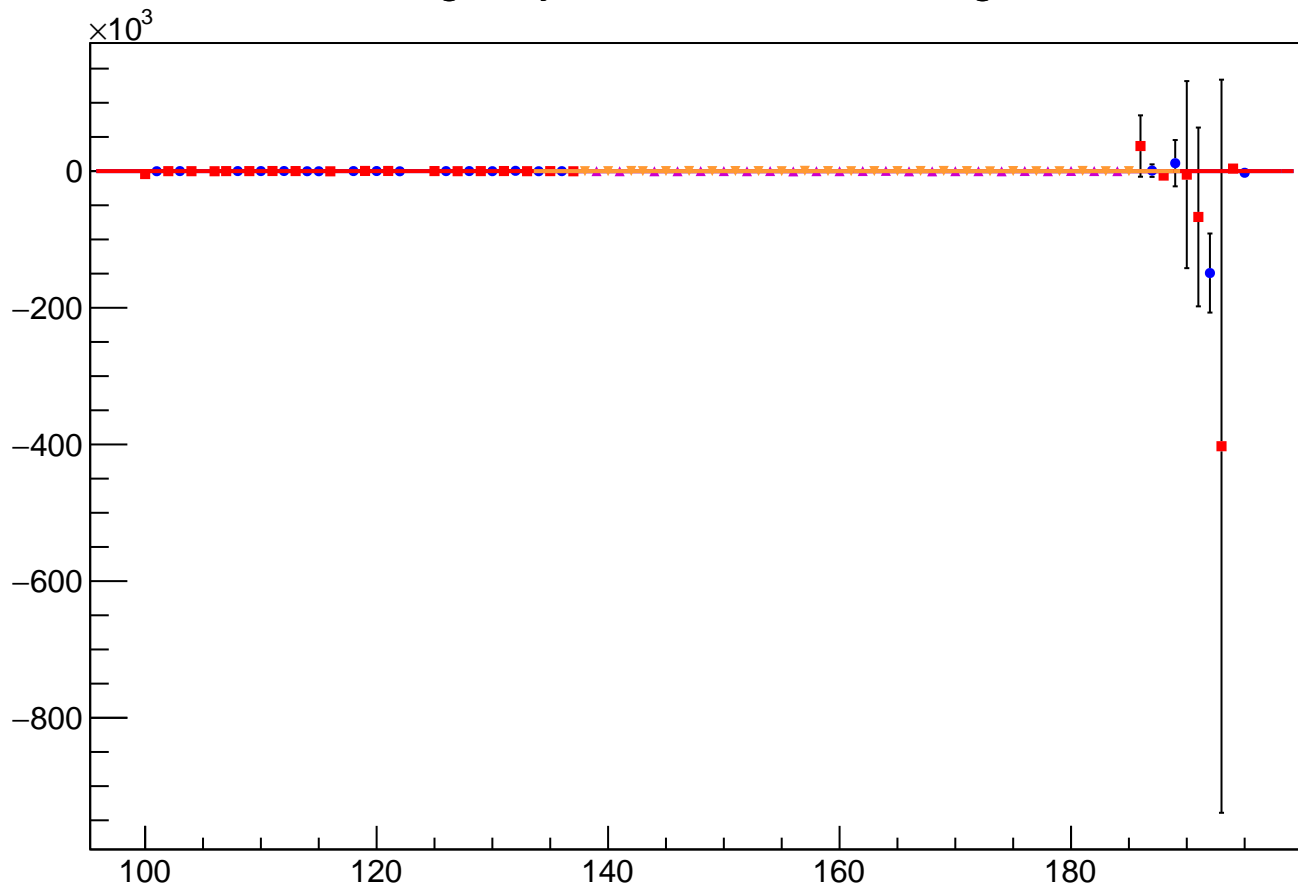
Left In: 1904.629 $\pm$ 0.325  $\chi^2$ /NDF: 447350.7/22

+ sign 1990.428 $\pm$ 0.273  $\chi^2$ /NDF: 1461102.8/45

All: 2001.279 $\pm$ 0.194  $\chi^2$ /NDF: 3187818.0/92

- sign 1202.257 $\pm$ 0.275  $\chi^2$ /NDF: 1723538.5/46

# reg\_asym\_dsl\_mean vs Slug



Right In:  $-0.985 \pm 36.770$   $\chi^2/\text{NDF}: 23.6/19$

Left Out:  $7.608 \pm 25.572$   $\chi^2/\text{NDF}: 36.5/24$

Right Out:  $-1.650 \pm 36.755$   $\chi^2/\text{NDF}: 17.0/23$

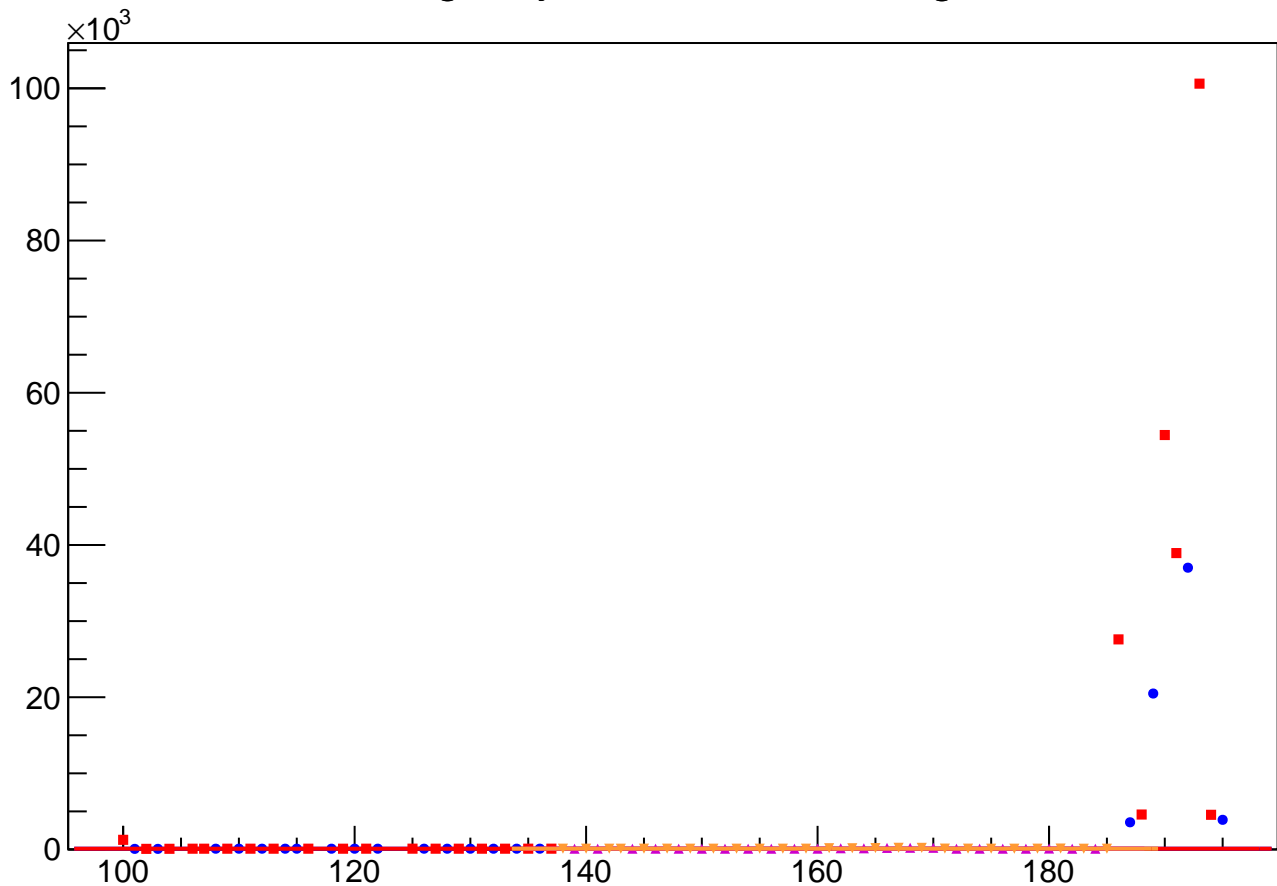
Left In:  $-24.786 \pm 26.343$   $\chi^2/\text{NDF}: 36.4/22$

+ sign  $4.807 \pm 20.994$   $\chi^2/\text{NDF}: 60.1/44$

All:  $-5.850 \pm 14.991$   $\chi^2/\text{NDF}: 114.3/91$

- sign  $-16.935 \pm 21.412$   $\chi^2/\text{NDF}: 53.6/46$

# reg\_asym\_dsl\_rms vs Slug



Right In: 94.426+/-0.026  $\chi^2$ /NDF: 3587318.6/19

Left Out: 107.590+/-0.018  $\chi^2$ /NDF: 1447372.1/24

Right Out: 96.703+/-0.026  $\chi^2$ /NDF: 3719284.9/23

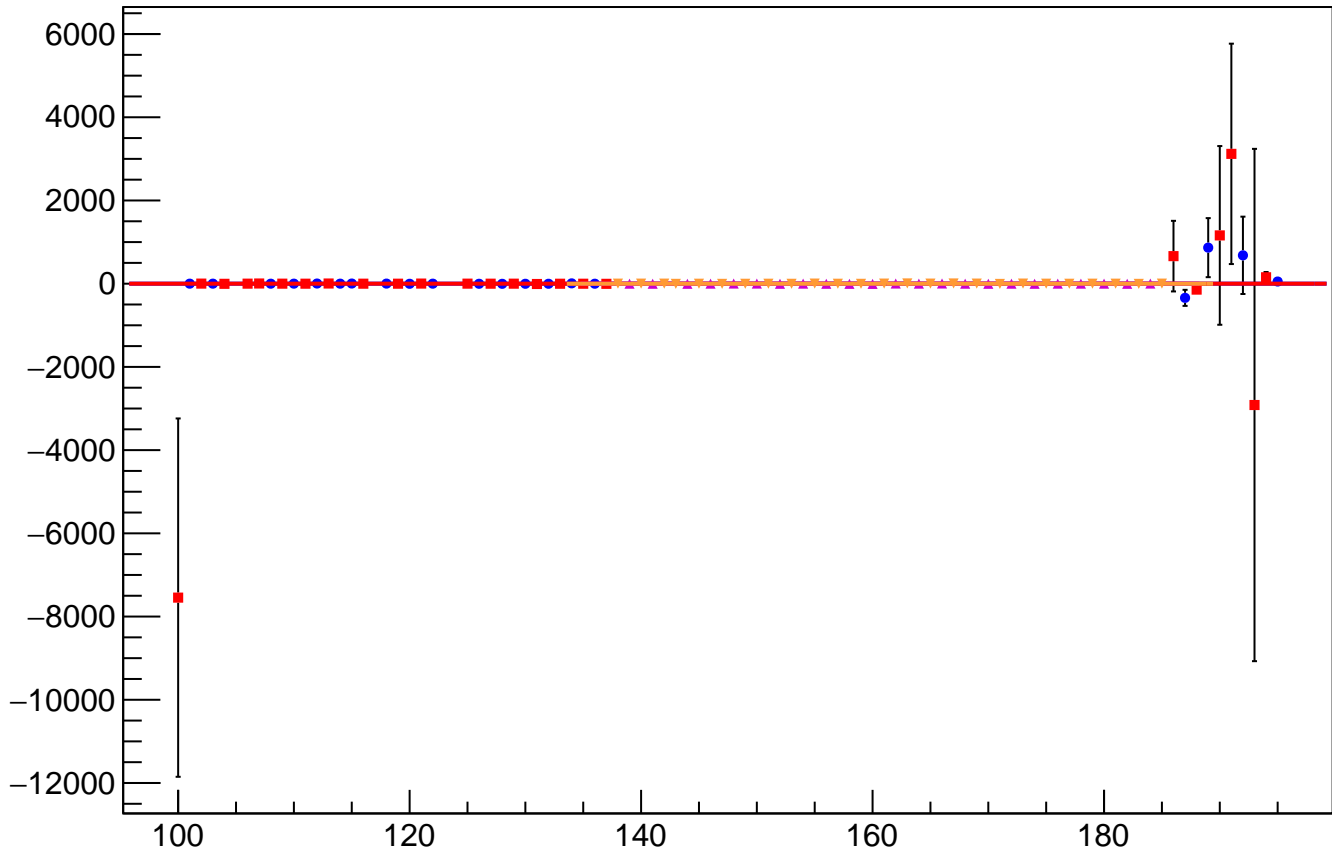
Left In: 107.672+/-0.019  $\chi^2$ /NDF: 1491034.7/22

+ sign 103.298+/-0.015  $\chi^2$ /NDF: 5207452.0/44

All: 103.618+/-0.011  $\chi^2$ /NDF: 10536402.0/91

- sign 103.950+/-0.015  $\chi^2$ /NDF: 5328006.2/46

# asym\_dsl\_correction\_mean vs Slug



Right In:  $0.391 \pm 0.617$   $\chi^2/\text{NDF}: 16.1/19$

Left Out:  $-0.765 \pm 0.459$   $\chi^2/\text{NDF}: 34.1/24$

Right Out:  $0.343 \pm 0.644$   $\chi^2/\text{NDF}: 27.0/23$

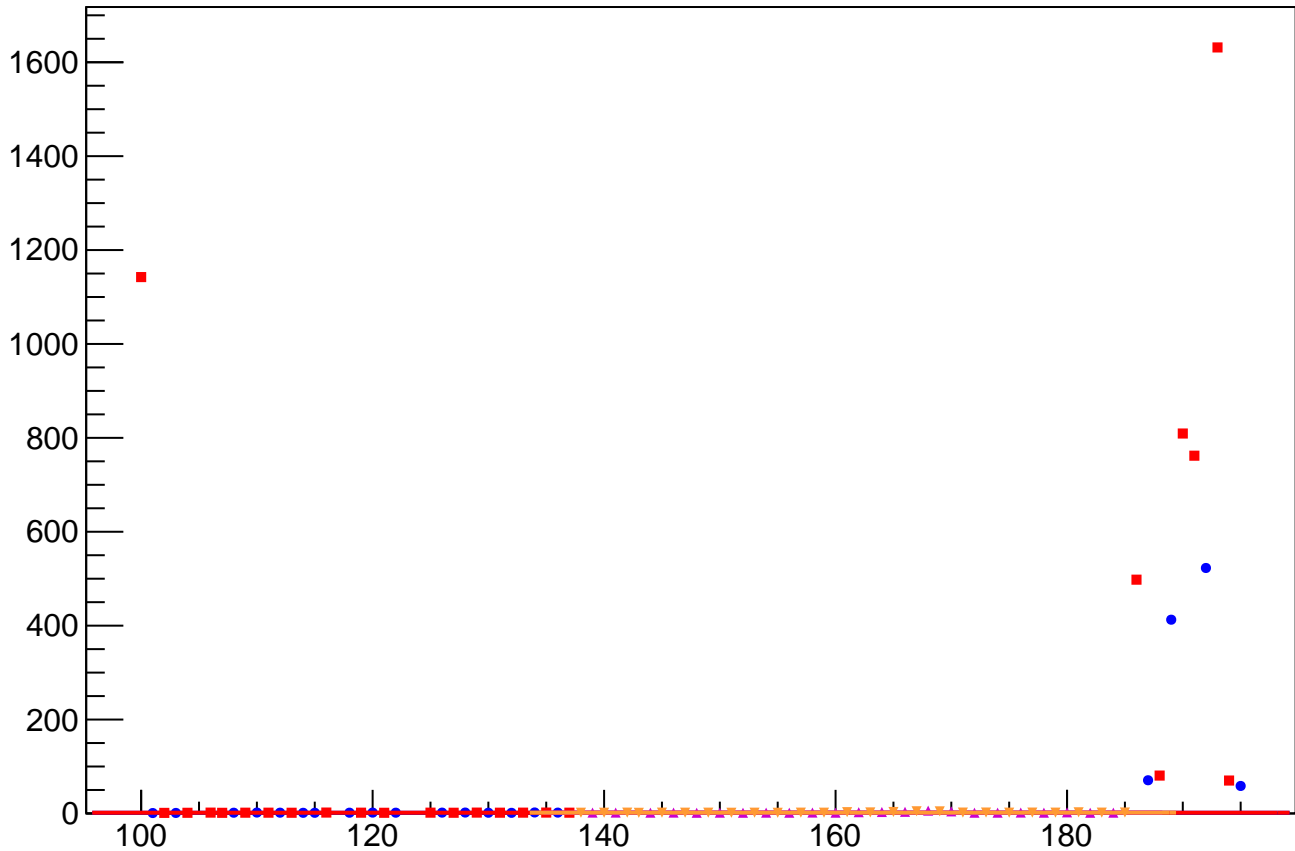
Left In:  $0.067 \pm 0.485$   $\chi^2/\text{NDF}: 25.0/22$

+ sign  $-0.353 \pm 0.368$   $\chi^2/\text{NDF}: 52.5/44$

All:  $-0.106 \pm 0.267$   $\chi^2/\text{NDF}: 105.5/91$

- sign  $0.167 \pm 0.387$   $\chi^2/\text{NDF}: 52.1/46$

# asym\_dsl\_correction\_rms vs Slug



Right In: 1.426+/-0.000  $\chi^2/\text{NDF}$ : 3571946.7/19

Left Out: 1.746+/-0.000  $\chi^2/\text{NDF}$ : 1683746.5/24

Right Out: 1.560+/-0.000  $\chi^2/\text{NDF}$ : 3384085.4/23

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

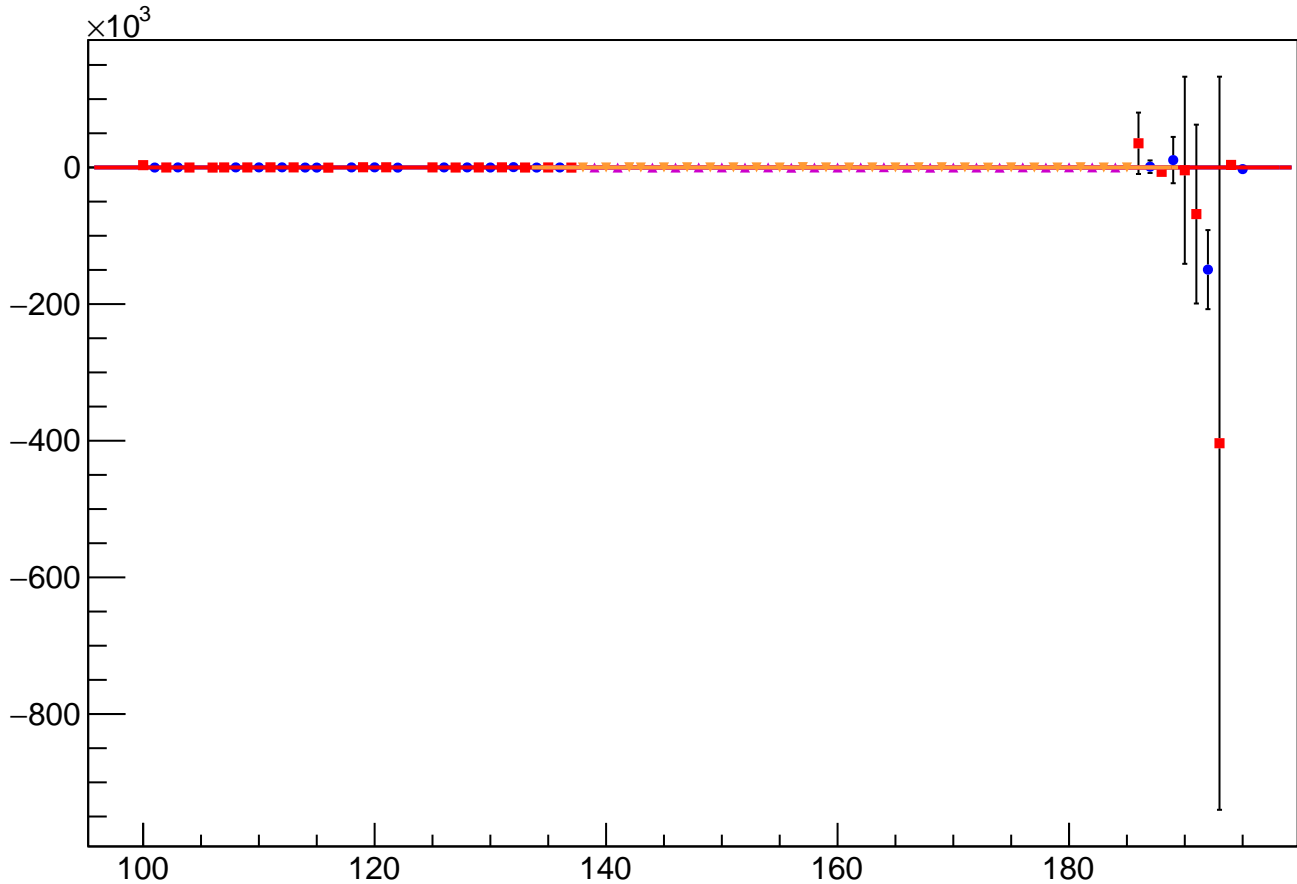
+ sign 1.632+/-0.000  $\chi^2/\text{NDF}$ : 5603576.0/44

All: 1.671+/-0.000  $\chi^2/\text{NDF}$ : 11137691.3/91

- sign 1.715+/-0.000  $\chi^2/\text{NDF}$ : 5486070.6/46



# asym\_dsl\_mean vs Slug



Right In:  $-0.686 \pm 36.779$   $\chi^2/\text{NDF}: 23.8/19$

Left Out:  $8.411 \pm 25.580$   $\chi^2/\text{NDF}: 36.3/24$

Right Out:  $-1.411 \pm 36.765$   $\chi^2/\text{NDF}: 16.4/23$

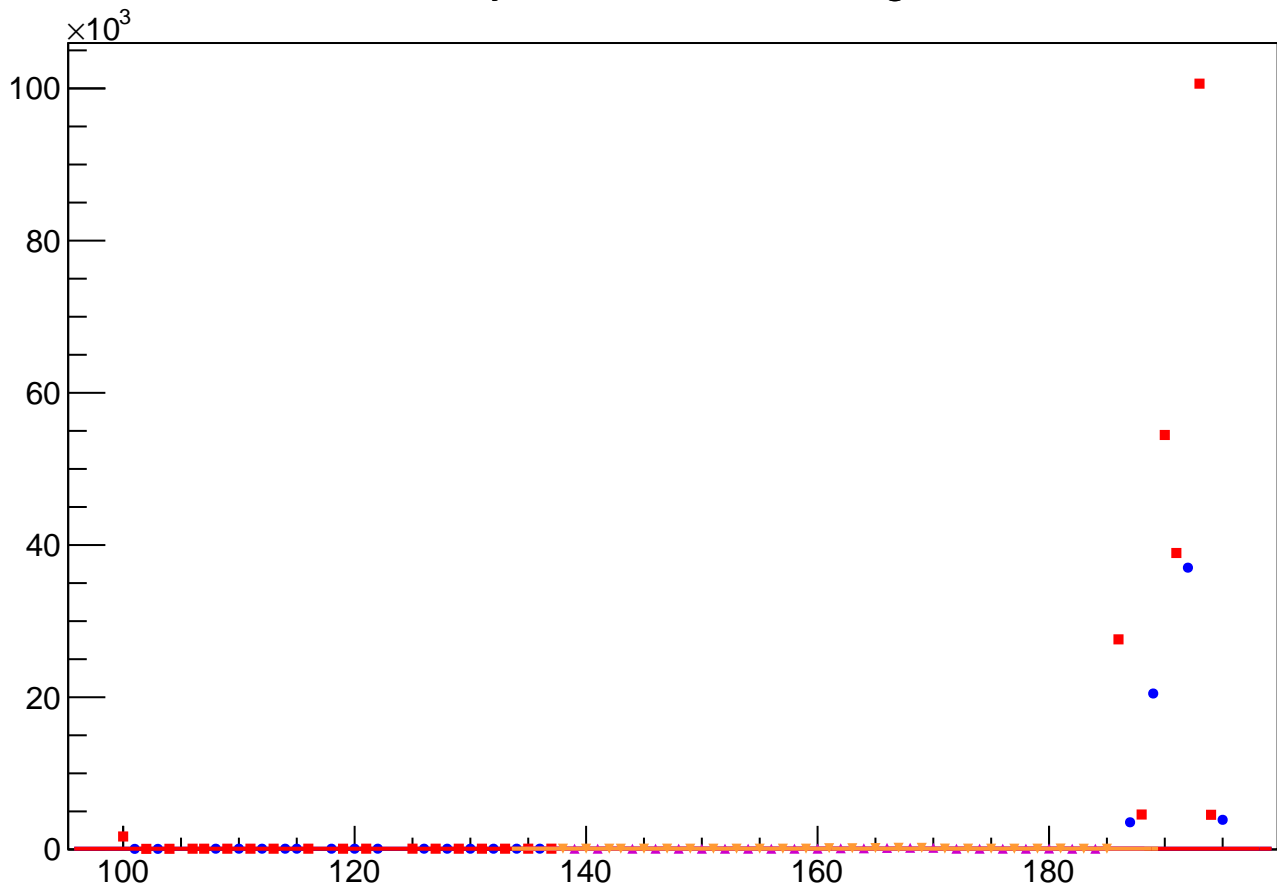
Left In:  $-25.312 \pm 26.351$   $\chi^2/\text{NDF}: 35.7/22$

+ sign  $5.446 \pm 21.000$   $\chi^2/\text{NDF}: 60.2/44$

All:  $-5.654 \pm 14.995$   $\chi^2/\text{NDF}: 113.1/91$

- sign  $-17.200 \pm 21.418$   $\chi^2/\text{NDF}: 52.4/46$

# asym\_dsl\_rms vs Slug



Right In: 94.451 $\pm$ 0.026  $\chi^2$ /NDF: 3587306.0/19

Left Out: 107.620 $\pm$ 0.018  $\chi^2$ /NDF: 1448769.2/24

Right Out: 96.712 $\pm$ 0.026  $\chi^2$ /NDF: 3724464.4/23

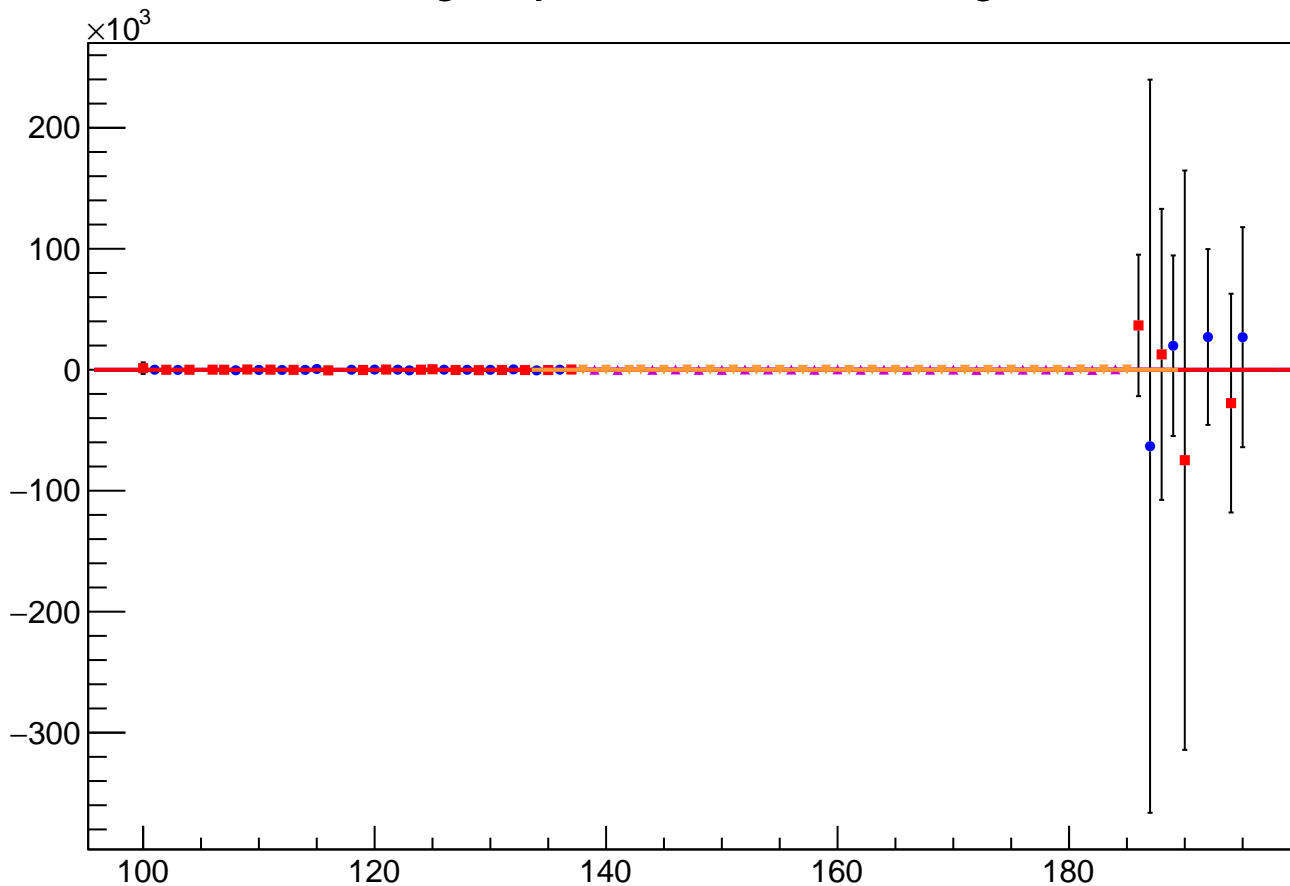
Left In: 107.703 $\pm$ 0.019  $\chi^2$ /NDF: 1492338.5/22

+ sign 103.327 $\pm$ 0.015  $\chi^2$ /NDF: 5208903.1/44

All: 103.643 $\pm$ 0.011  $\chi^2$ /NDF: 10544723.1/91

- sign 103.973 $\pm$ 0.015  $\chi^2$ /NDF: 5334891.3/46

# reg\_asym\_dsr\_mean vs Slug



Right In:  $-26.773 \pm 46.841$   $\chi^2/\text{NDF}$ : 14.8/20

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

Right Out:  $-53.368 \pm 47.775$   $\chi^2/\text{NDF}$ : 16.0/22

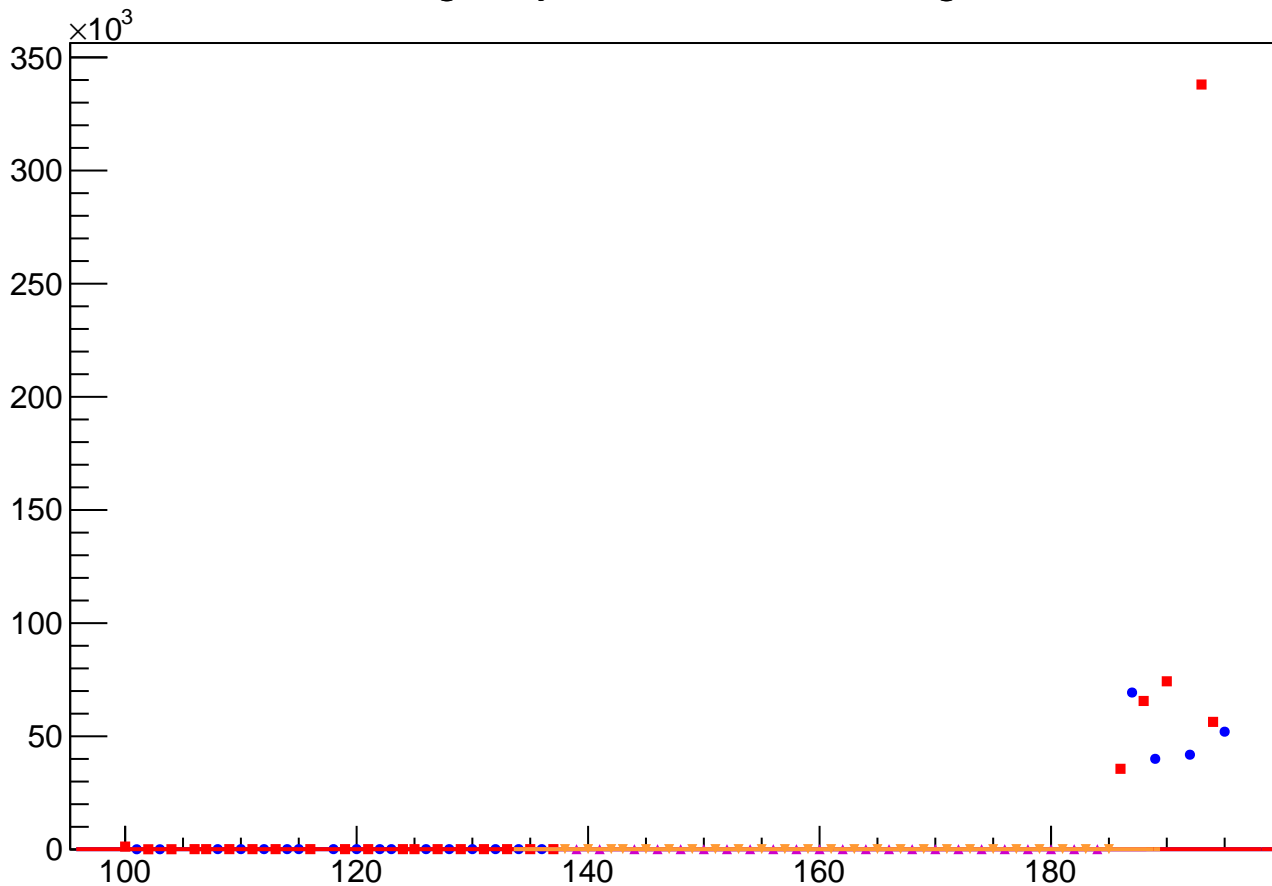
Left In:  $65.335 \pm 32.944$   $\chi^2/\text{NDF}$ : 19.3/22

+ sign  $-17.278 \pm 26.458$   $\chi^2/\text{NDF}$ : 26.8/45

All:  $4.353 \pm 18.939$   $\chi^2/\text{NDF}$ : 67.7/91

- sign  $27.081 \pm 27.121$   $\chi^2/\text{NDF}$ : 39.5/45

# reg\_asym\_dsr\_rms vs Slug



Right In: 117.814 $\pm$ 0.033  $\chi^2$ /NDF: 2820937.9/20

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

Right Out: 124.782 $\pm$ 0.034  $\chi^2$ /NDF: 3187166.3/23

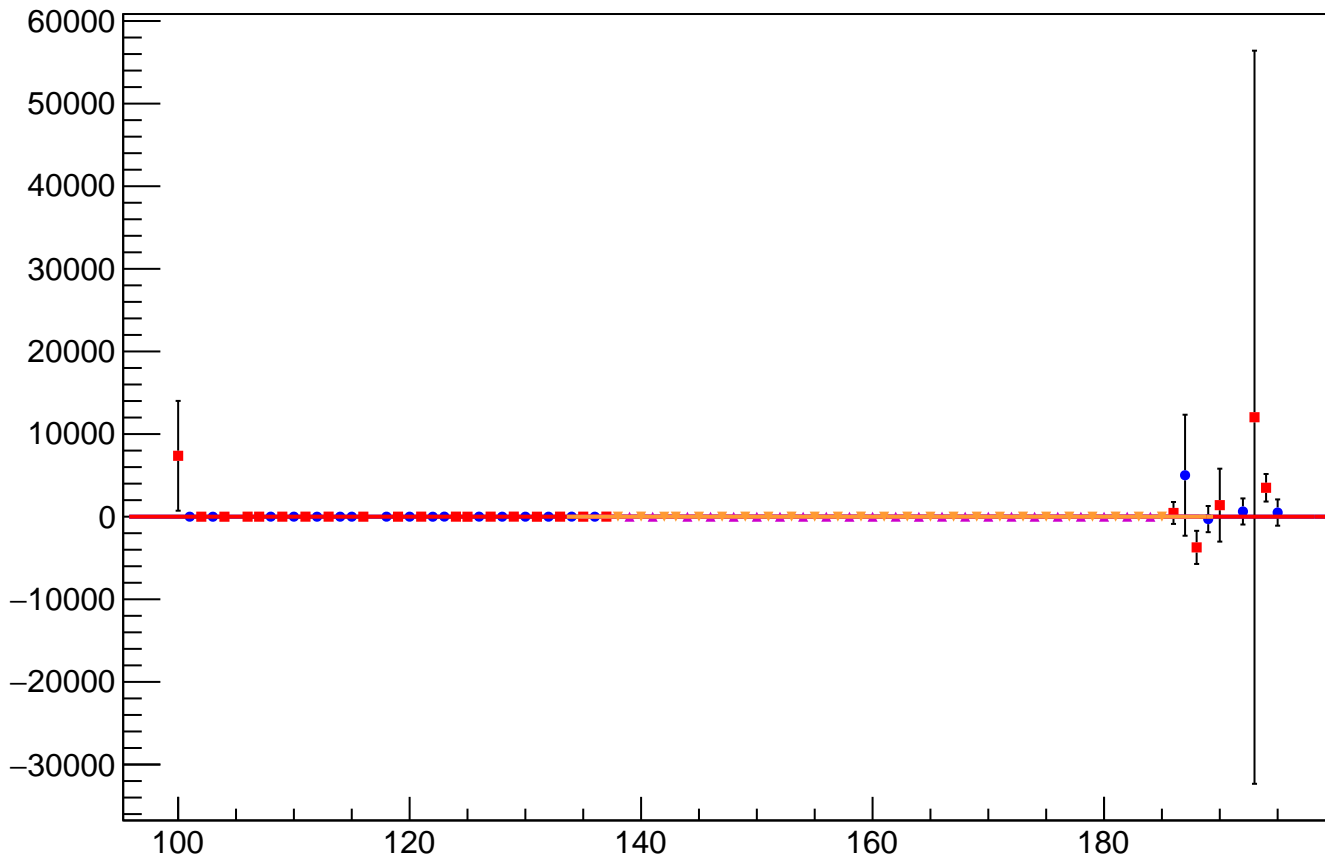
Left In: 137.804 $\pm$ 0.023  $\chi^2$ /NDF:460.3/22

+ sign 131.462 $\pm$ 0.019  $\chi^2$ /NDF: 3070730.3/45

All: 132.508 $\pm$ 0.013  $\chi^2$ /NDF: 6365487.2/92

- sign 133.608 $\pm$ 0.019  $\chi^2$ /NDF: 3288341.6/46

# asym\_dsr\_correction\_mean vs Slug



Right In:  $-0.719 \pm 0.810$   $\chi^2/\text{NDF}: 13.0/20$

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

Right Out:  $0.639 \pm 0.852$   $\chi^2/\text{NDF}: 22.8/23$

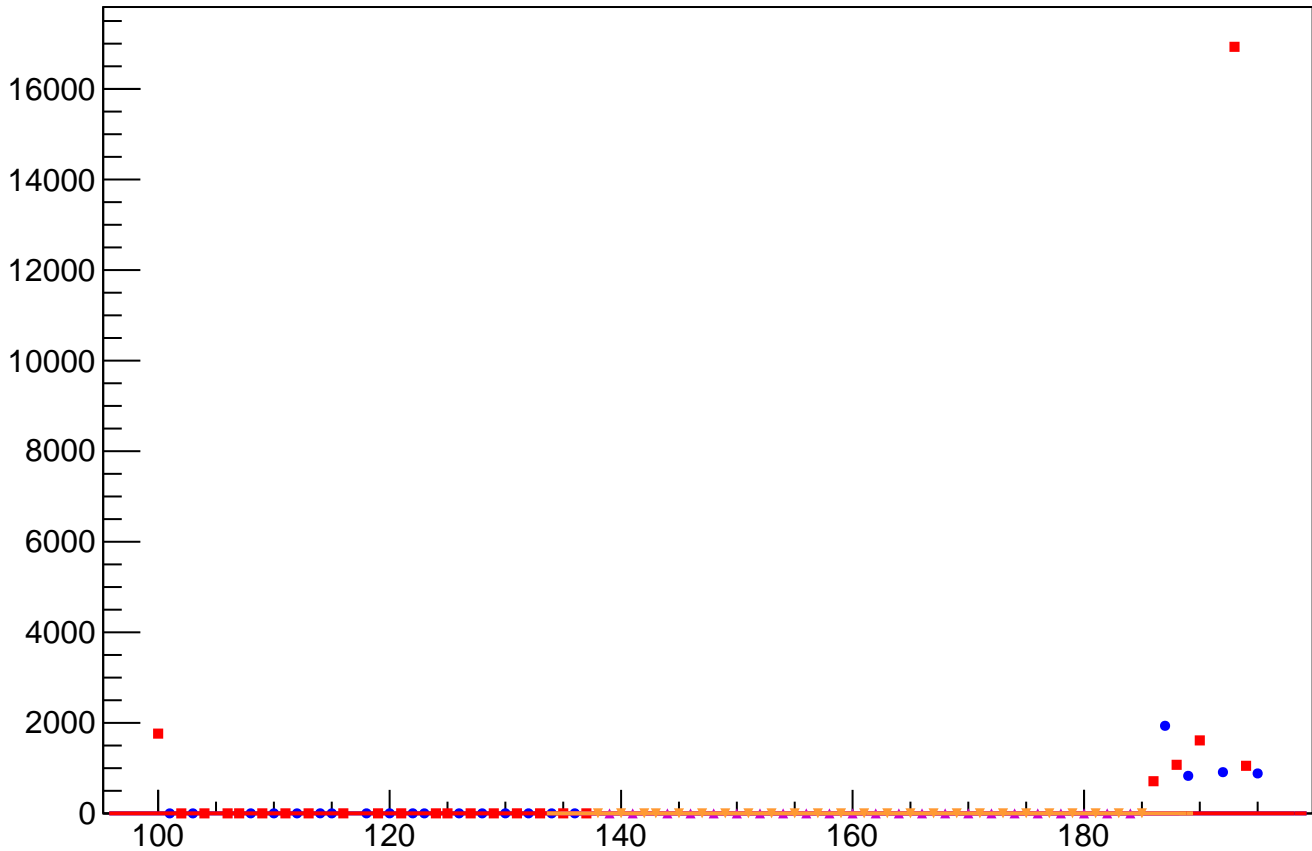
Left In:  $-0.290 \pm 0.579$   $\chi^2/\text{NDF}: 20.7/22$

+ sign  $0.087 \pm 0.467$   $\chi^2/\text{NDF}: 43.4/45$

All:  $0.046 \pm 0.334$   $\chi^2/\text{NDF}: 87.8/92$

- sign  $0.003 \pm 0.479$   $\chi^2/\text{NDF}: 44.3/46$

# asym\_dsr\_correction\_rms vs Slug



Right In: 1.866 $\pm$ 0.001  $\chi^2$ /NDF: 2453723.3/20

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

Right Out: 2.064 $\pm$ 0.001  $\chi^2$ /NDF: 3023311.2/23

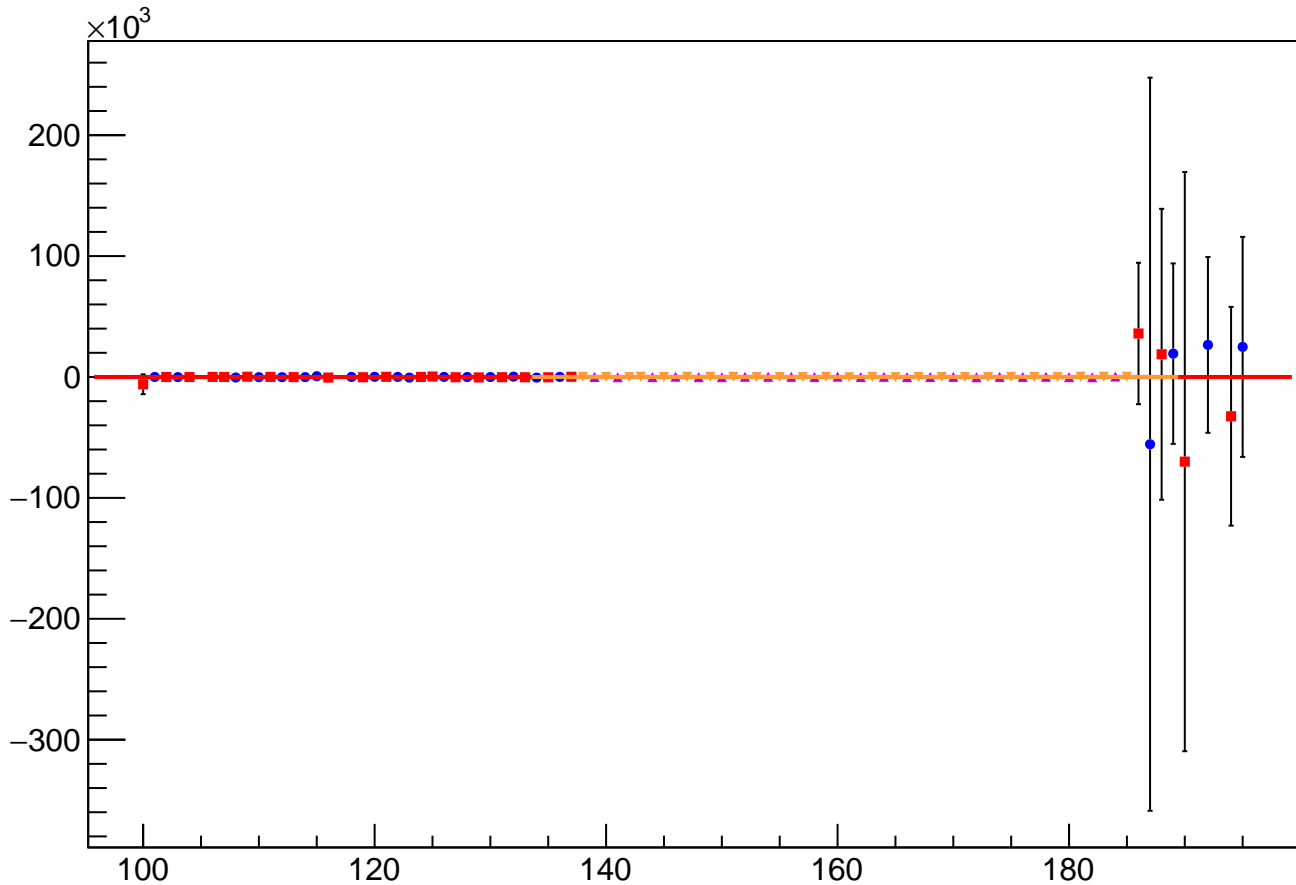
Left In: 2.193 $\pm$ 0.000  $\chi^2$ /NDF:510890.7/22

+ sign 2.130 $\pm$ 0.000  $\chi^2$ /NDF: 3147466.7/45

All: 2.141 $\pm$ 0.000  $\chi^2$ /NDF: 6714994.8/92

- sign 2.152 $\pm$ 0.000  $\chi^2$ /NDF: 3565313.4/46

# asym\_dsr\_mean vs Slug



Right In:  $-25.035 \pm 46.854$   $\chi^2/\text{NDF}: 14.8/20$

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

Right Out:  $-54.270 \pm 47.789$   $\chi^2/\text{NDF}: 16.7/22$

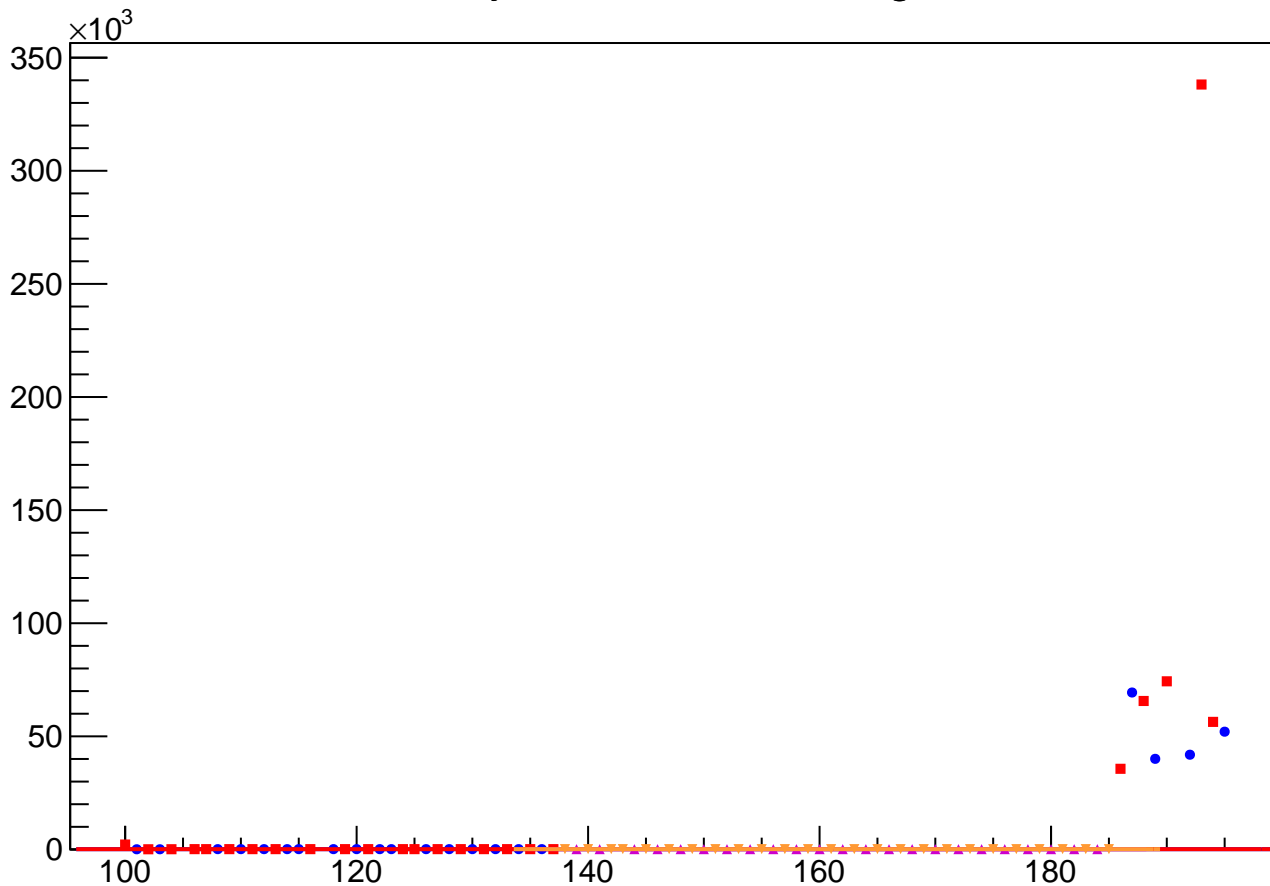
Left In:  $65.231 \pm 32.953$   $\chi^2/\text{NDF}: 19.4/22$

+ sign  $-17.101 \pm 26.465$   $\chi^2/\text{NDF}: 26.6/45$

All:  $4.268 \pm 18.944$   $\chi^2/\text{NDF}: 68.3/91$

- sign  $26.721 \pm 27.129$   $\chi^2/\text{NDF}: 40.3/45$

# asym\_dsr\_rms vs Slug



Right In: 117.845 $\pm$ 0.033  $\chi^2$ /NDF: 2820975.7/20

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

Right Out: 124.771 $\pm$ 0.034  $\chi^2$ /NDF: 3197800.0/23

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

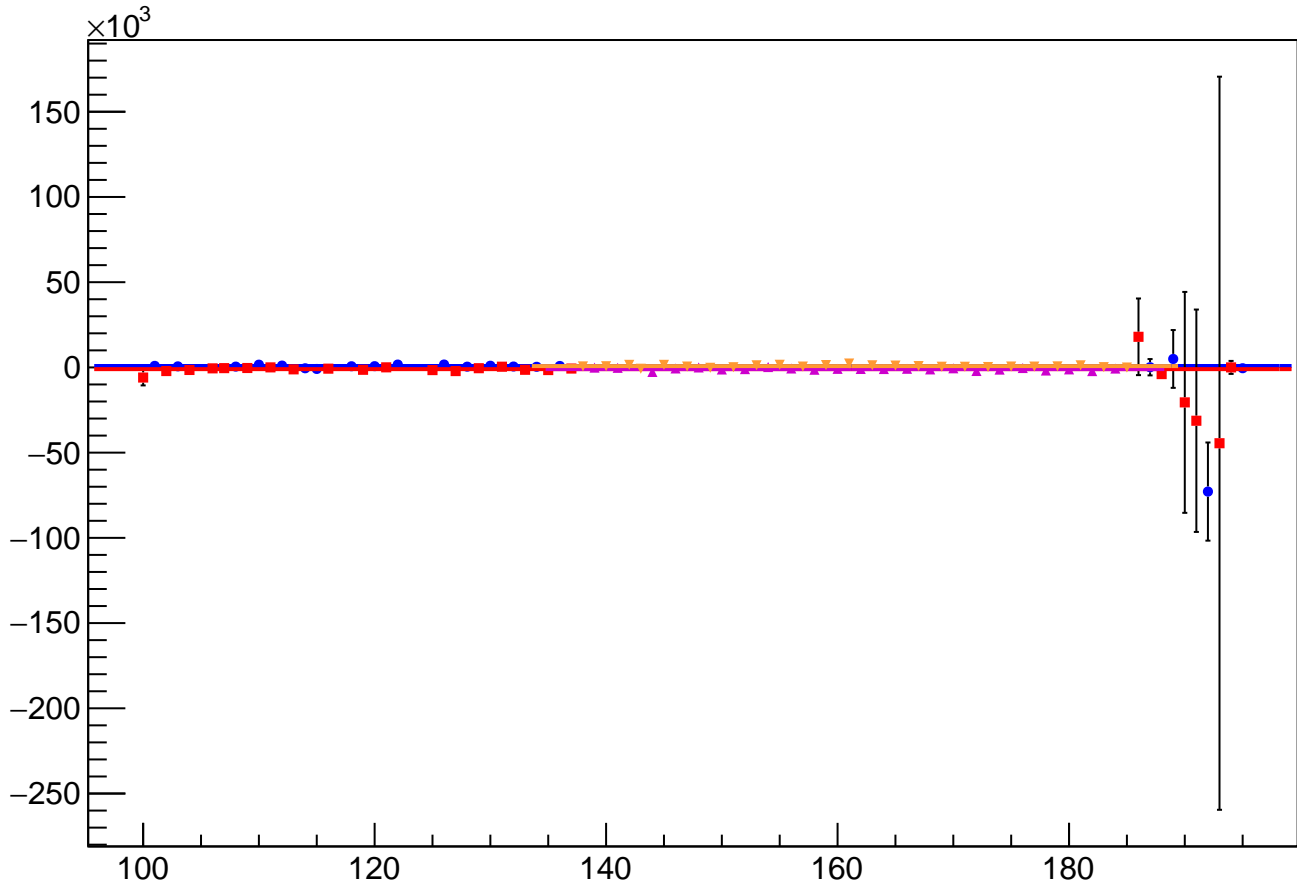
+ sign 131.498 $\pm$ 0.019  $\chi^2$ /NDF: 3070799.4/45

All: 132.538 $\pm$ 0.013  $\chi^2$ /NDF: 6376817.0/92

- sign 133.631 $\pm$ 0.019  $\chi^2$ /NDF: 3299686.4/46



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



Right In:  $829.510 \pm 215.388$   $\chi^2/\text{NDF}: 12.2/19$

Left Out:  $779.744 \pm 133.856$   $\chi^2/\text{NDF}: 19.6/24$

Right Out:  $-1009.353 \pm 212.318$   $\chi^2/\text{NDF}: 16.2/23$

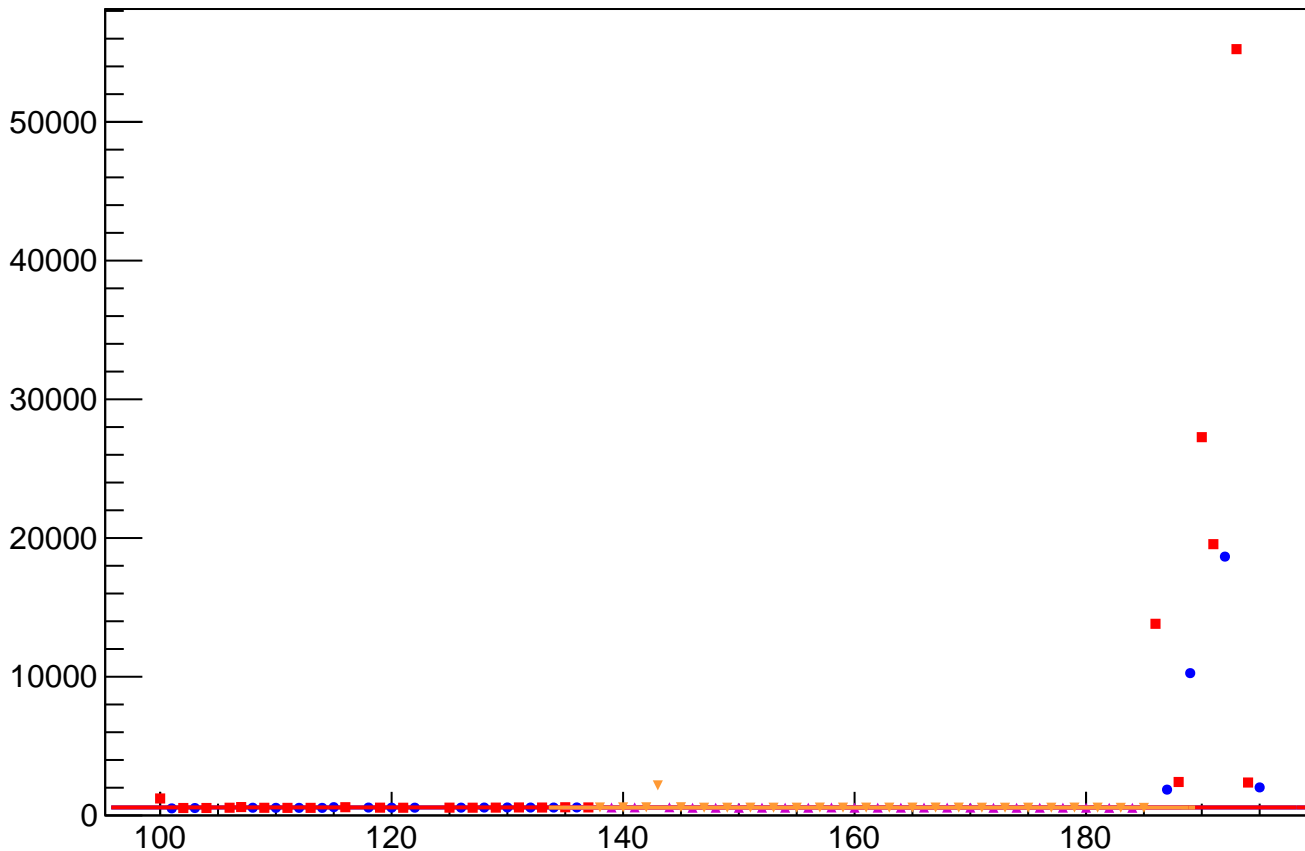
Left In:  $-974.402 \pm 134.932$   $\chi^2/\text{NDF}: 27.4/22$

+ sign  $793.610 \pm 113.690$   $\chi^2/\text{NDF}: 31.9/44$

All:  $-93.935 \pm 80.458$   $\chi^2/\text{NDF}: 197.6/91$

- sign  $-984.457 \pm 113.880$   $\chi^2/\text{NDF}: 43.7/46$

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



Right In: 576.042+/-0.152  $\chi^2$ /NDF: 2480600.9/19

Left Out: 568.874+/-0.095  $\chi^2$ /NDF:853714.5/24

Right Out: 580.236+/-0.150  $\chi^2$ /NDF: 2695032.1/23

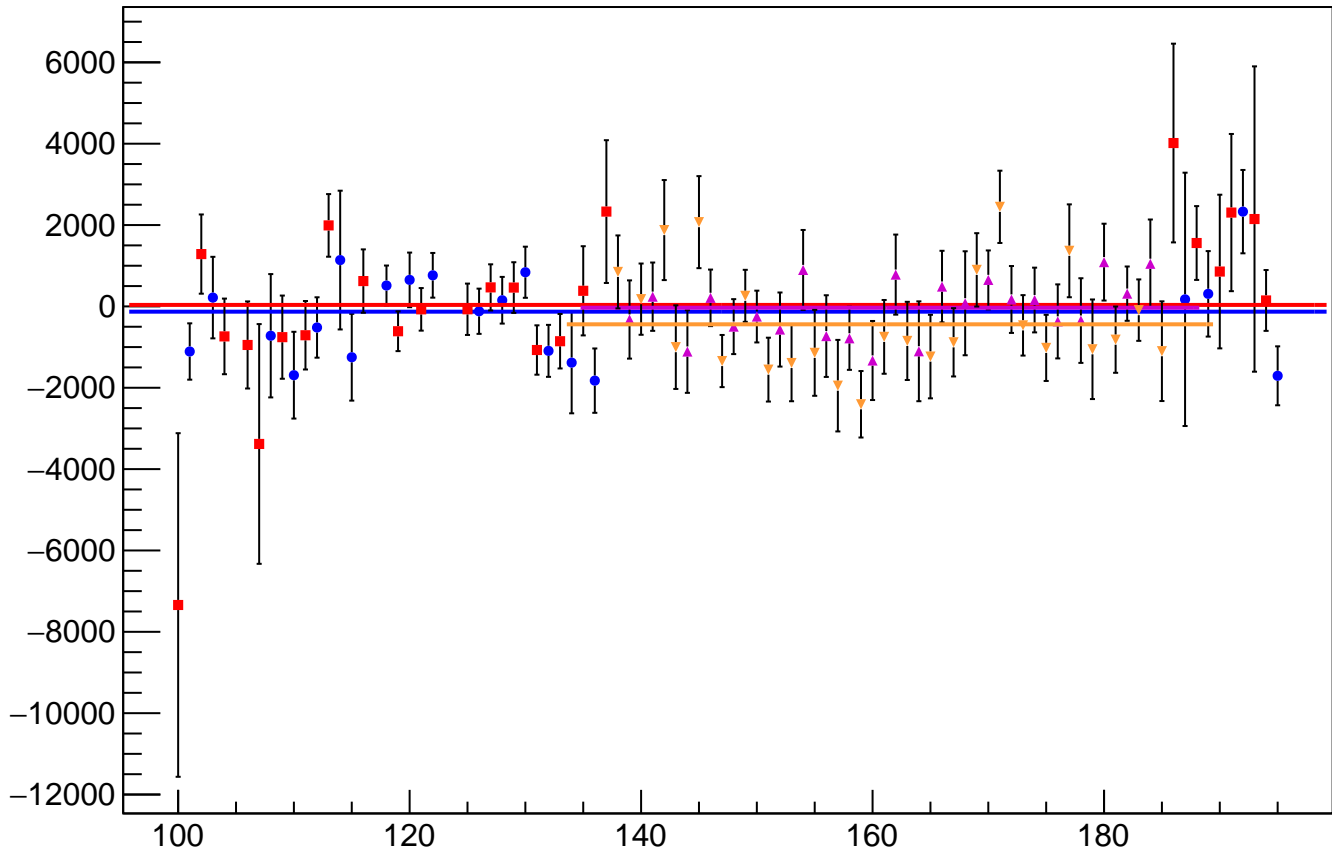
Left In: 564.383+/-0.095  $\chi^2$ /NDF:9209.5/22

+ sign 570.871+/-0.080  $\chi^2$ /NDF: 3335913.2/44

All: 569.909+/-0.057  $\chi^2$ /NDF: 6048384.0/91

- sign 568.944+/-0.081  $\chi^2$ /NDF: 2712183.8/46

# asym\_left\_avg\_correction\_mean vs Slug



Right In:  $-129.393 \pm 170.345$   $\chi^2/\text{NDF}: 33.2/19$

Left Out:  $-440.022 \pm 177.884$   $\chi^2/\text{NDF}: 43.5/24$

Right Out:  $36.712 \pm 169.309$   $\chi^2/\text{NDF}: 33.2/23$

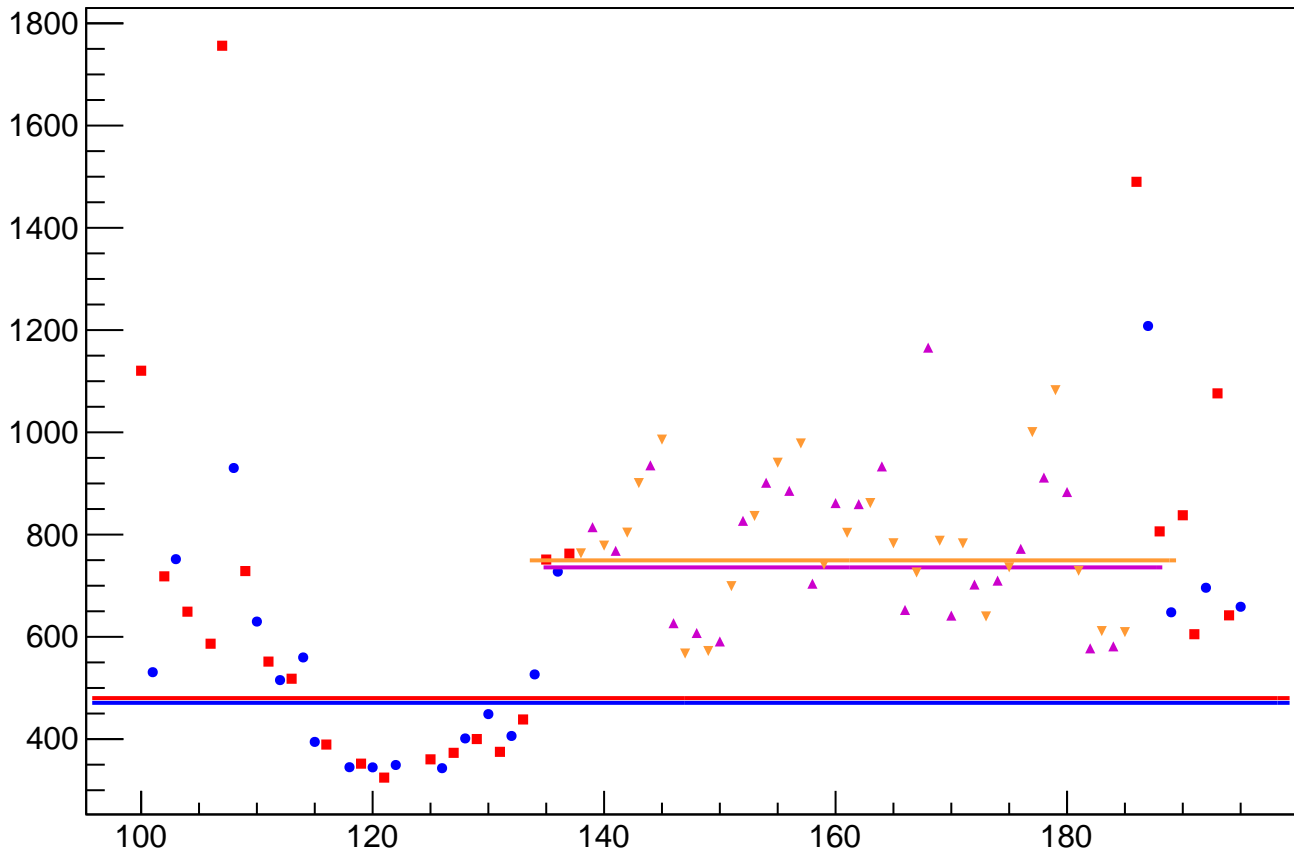
Left In:  $-32.411 \pm 179.430$   $\chi^2/\text{NDF}: 12.2/22$

+ sign  $-277.986 \pm 123.031$   $\chi^2/\text{NDF}: 78.3/44$

All:  $-137.043 \pm 87.035$   $\chi^2/\text{NDF}: 126.4/91$

- sign  $4.155 \pm 123.142$   $\chi^2/\text{NDF}: 45.4/46$

# asym\_left\_avg\_correction\_rms vs Slug



Right In: 470.940 $\pm$ 0.120  $\chi^2$ /NDF: 1495296.2/19

Left Out: 749.578 $\pm$ 0.126  $\chi^2$ /NDF: 1053455.5/24

Right Out: 480.193 $\pm$ 0.120  $\chi^2$ /NDF: 2347542.8/23

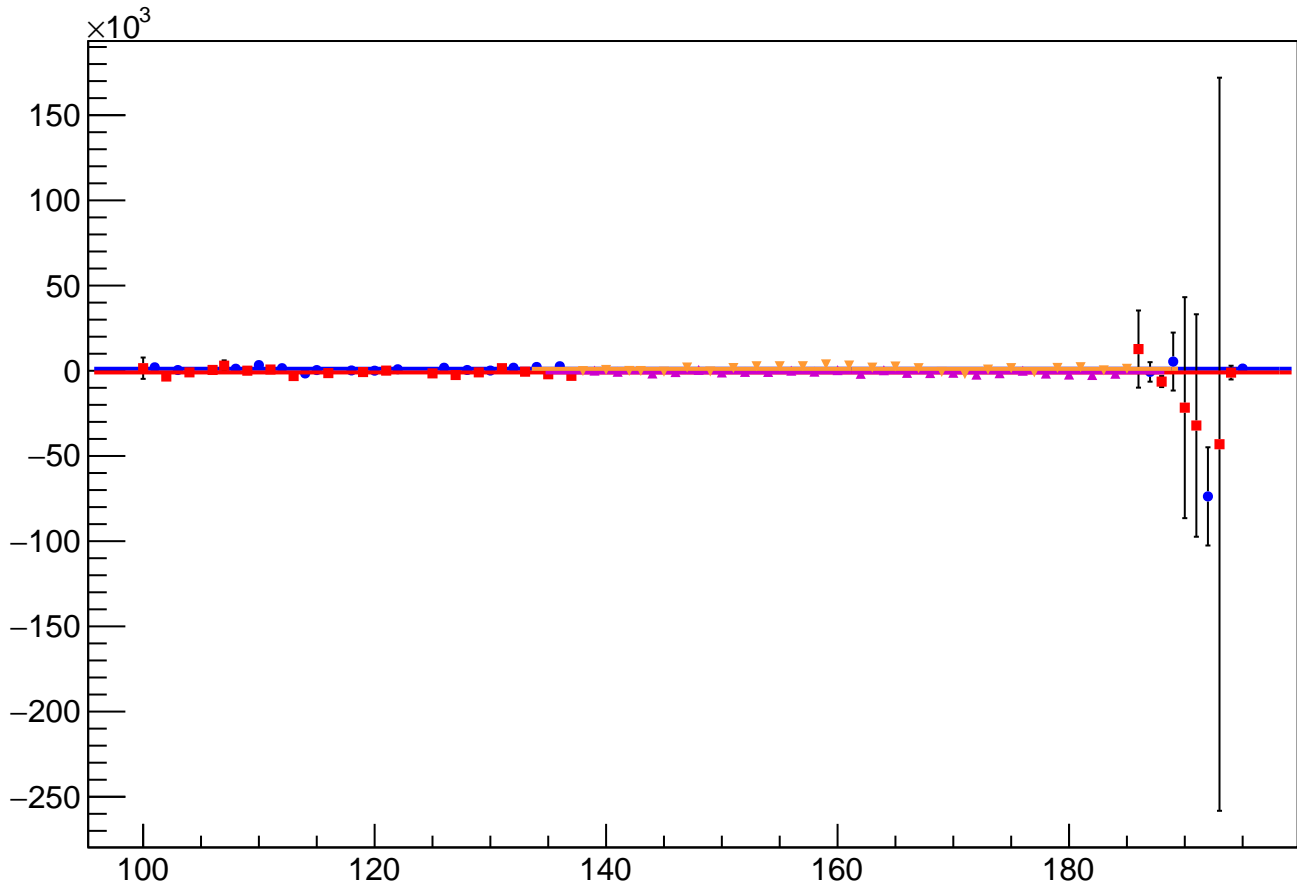
Left In: 735.850 $\pm$ 0.127  $\chi^2$ /NDF: 1105405.5/22

+ sign 604.230 $\pm$ 0.087  $\chi^2$ /NDF: 5108549.0/44

All: 602.421 $\pm$ 0.062  $\chi^2$ /NDF: 10710233.4/9

- sign 600.608 $\pm$ 0.087  $\chi^2$ /NDF: 5600818.3/46

# asym\_left\_avg\_mean vs Slug



Right In: 1186.557+/-293.294  $\chi^2$ /NDF: 18.7/19

Left Out: 1128.601+/-228.001  $\chi^2$ /NDF:39.1/24

Right Out: -986.826+/-292.200  $\chi^2$ /NDF: 26.6/23

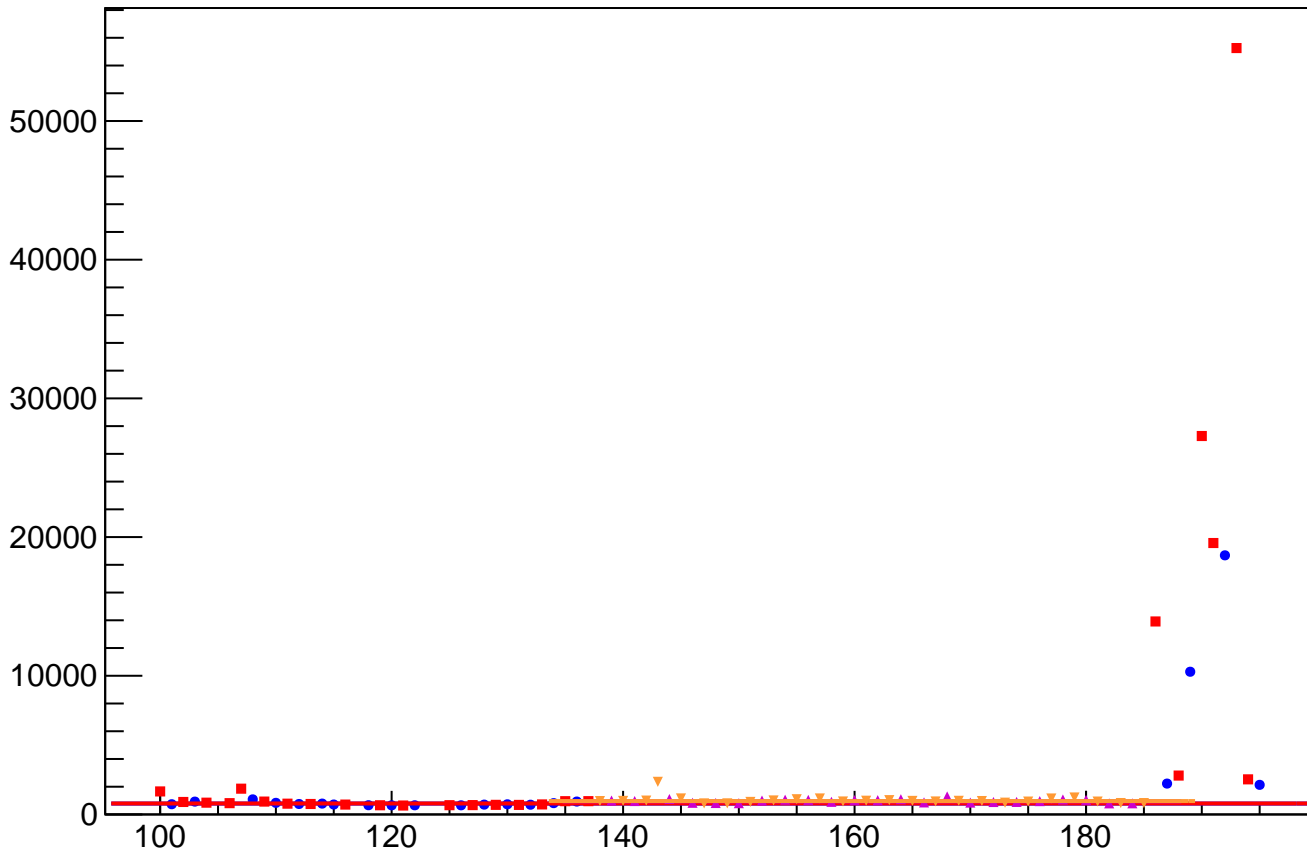
Left In: -941.702+/-228.324  $\chi^2$ /NDF:14.8/22

+ sign 1150.432+/-180.008  $\chi^2$ /NDF: 57.8/44

All: 95.251+/-127.251  $\chi^2$ /NDF: 167.9/91

- sign -958.809+/-179.912  $\chi^2$ /NDF: 41.4/46

# asym\_left\_avg\_rms vs Slug



Right In: 784.234+/-0.207  $\chi^2/\text{NDF}$ : 2469108.9/19

Left Out: 964.493+/-0.161  $\chi^2/\text{NDF}$ :1002763.0/24

Right Out: 791.630+/-0.207  $\chi^2/\text{NDF}$ : 2998430.0/23

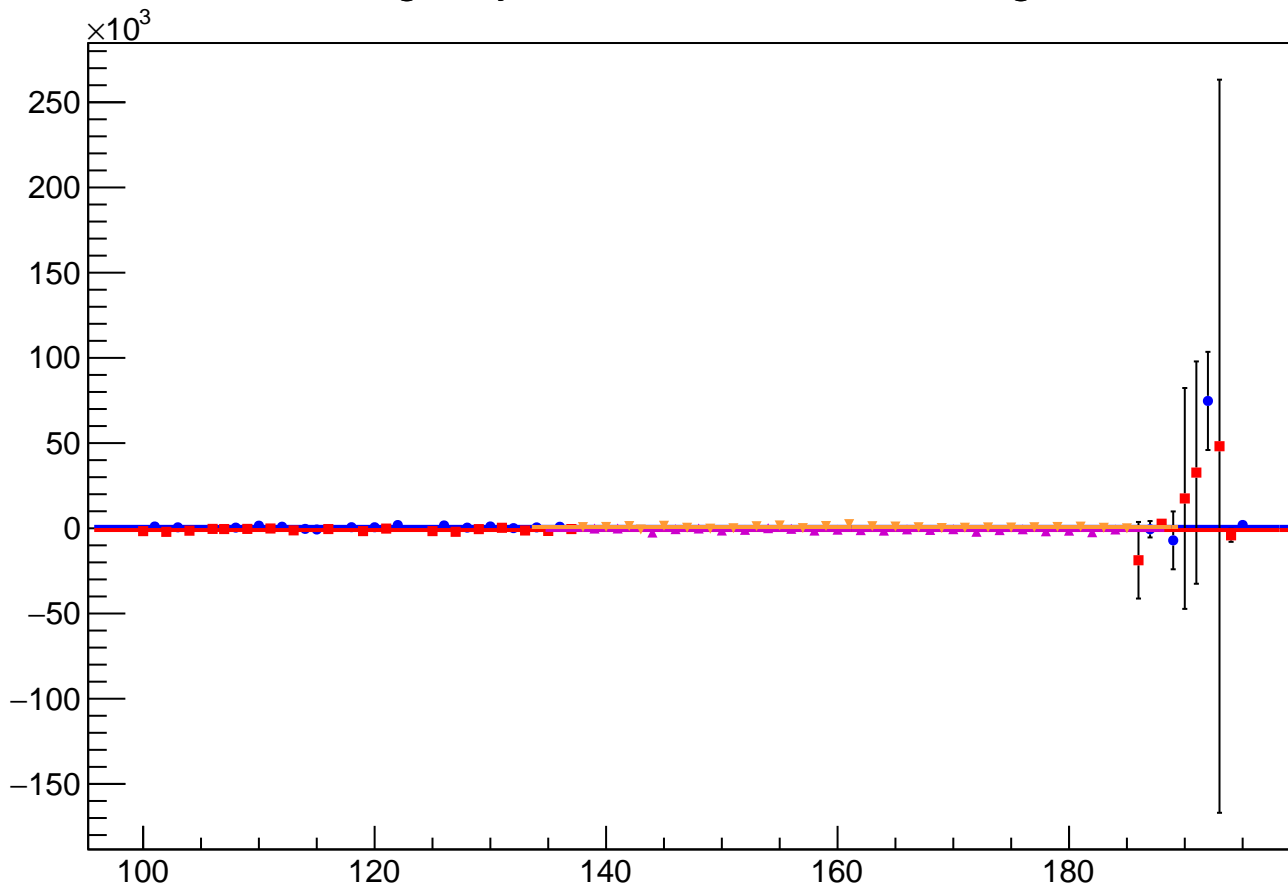
Left In: 946.573+/-0.161  $\chi^2/\text{NDF}$ :501366.9/22

+ sign 896.592+/-0.127  $\chi^2/\text{NDF}$ : 3942768.6/44

All: 892.210+/-0.090  $\chi^2/\text{NDF}$ : 7794100.5/91

- sign 887.833+/-0.127  $\chi^2/\text{NDF}$ : 3848962.8/46

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



Right In:  $855.955 \pm 215.229$   $\chi^2/\text{NDF}: 13.2/19$

Left Out:  $753.308 \pm 133.745$   $\chi^2/\text{NDF}: 21.4/24$

Right Out:  $-1013.189 \pm 207.351$   $\chi^2/\text{NDF}: 15.8/23$

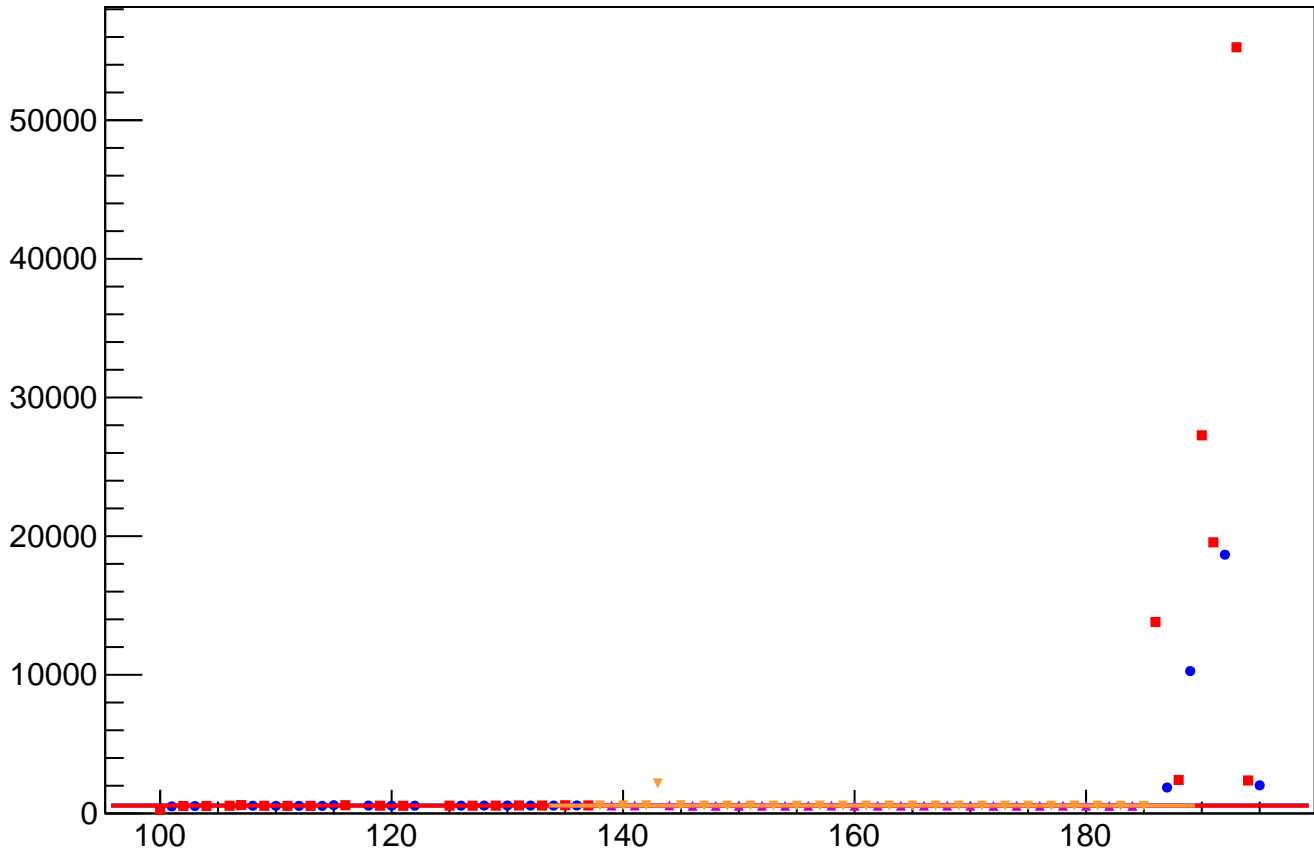
Left In:  $-958.517 \pm 134.824$   $\chi^2/\text{NDF}: 26.8/22$

+ sign  $781.903 \pm 113.598$   $\chi^2/\text{NDF}: 34.8/44$

All:  $-100.826 \pm 80.125$   $\chi^2/\text{NDF}: 197.6/91$

- sign  $-974.763 \pm 113.031$   $\chi^2/\text{NDF}: 42.6/46$

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



Right In: 575.558 $\pm$ 0.152  $\chi^2$ /NDF: 2483952.2/19

Left Out: 568.400 $\pm$ 0.095  $\chi^2$ /NDF: 854012.8/24

Right Out: 563.245 $\pm$ 0.147  $\chi^2$ /NDF: 2875469.6/23

Left In: 563.934 $\pm$ 0.095  $\chi^2$ /NDF: 9204.6/22

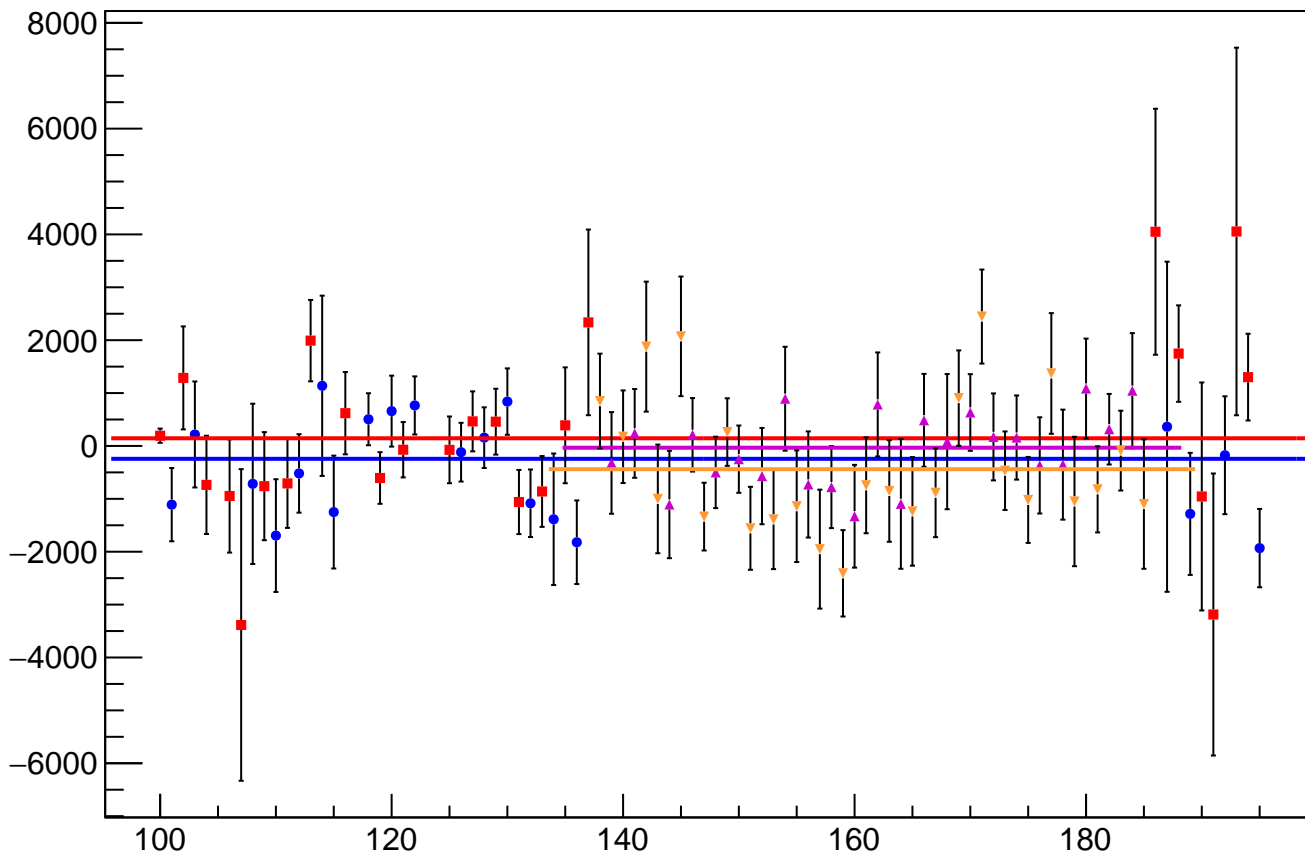
+ sign 570.394 $\pm$ 0.080  $\chi^2$ /NDF: 3339560.9/44

All: 567.045 $\pm$ 0.057  $\chi^2$ /NDF: 6227710.2/91

- sign 563.729 $\pm$ 0.080  $\chi^2$ /NDF: 2884689.8/46



# asym\_left\_dd\_correction\_mean vs Slug



Right In:  $-243.373 \pm 171.231$   $\chi^2/\text{NDF}: 29.0/19$

Left Out:  $-439.659 \pm 177.808$   $\chi^2/\text{NDF}: 43.6/24$

Right Out:  $145.140 \pm 105.832$   $\chi^2/\text{NDF}: 34.8/23$

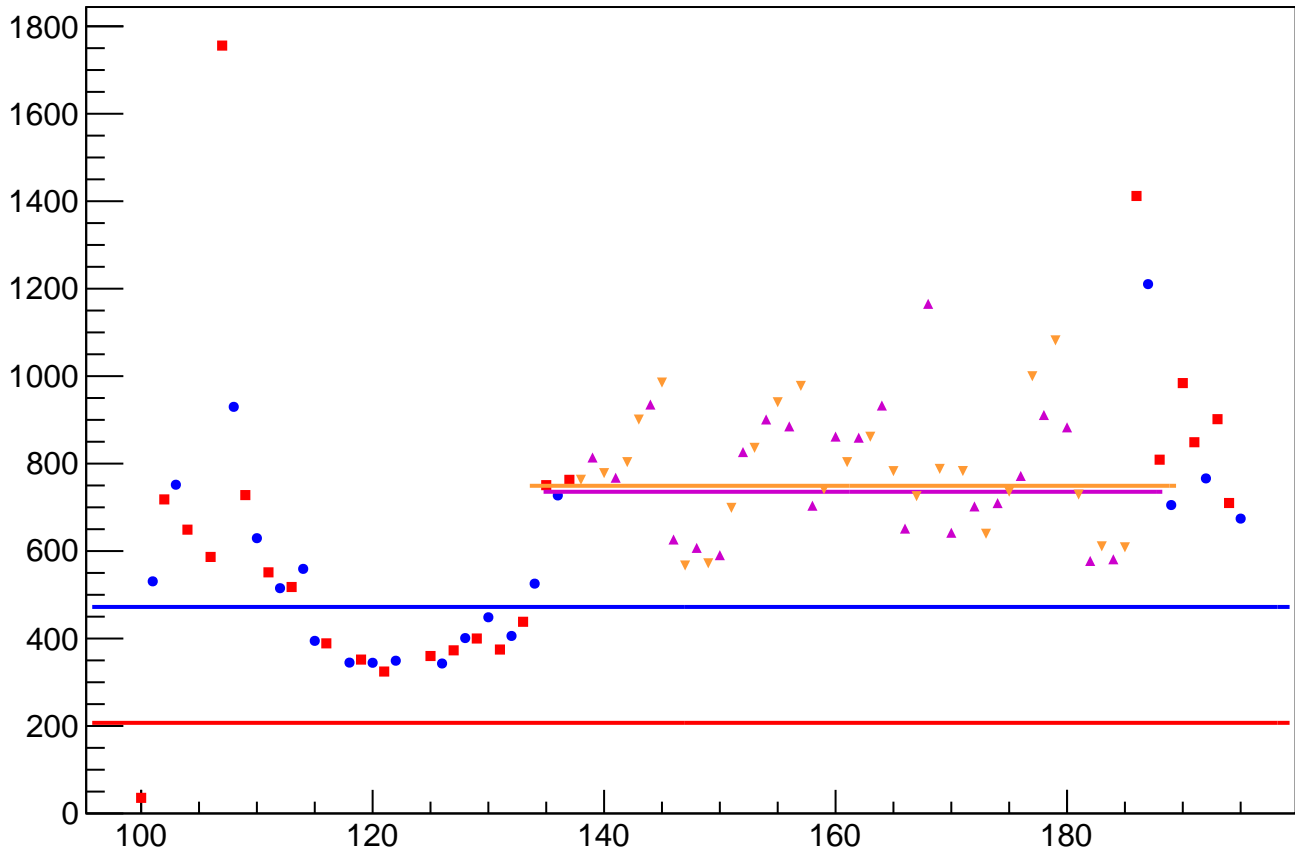
Left In:  $-33.325 \pm 179.355$   $\chi^2/\text{NDF}: 12.1/22$

+ sign  $-337.818 \pm 123.338$   $\chi^2/\text{NDF}: 73.2/44$

All:  $-55.262 \pm 73.303$   $\chi^2/\text{NDF}: 129.0/91$

- sign  $99.050 \pm 91.147$   $\chi^2/\text{NDF}: 47.7/46$

# asym\_left\_dd\_correction\_rms vs Slug



Right In: 472.229 $\pm$ 0.121  $\chi^2$ /NDF: 1581539.1/19

Left Out: 749.270 $\pm$ 0.126  $\chi^2$ /NDF: 1054352.9/24

Right Out: 207.203 $\pm$ 0.075  $\chi^2$ /NDF: 10780817.9/23

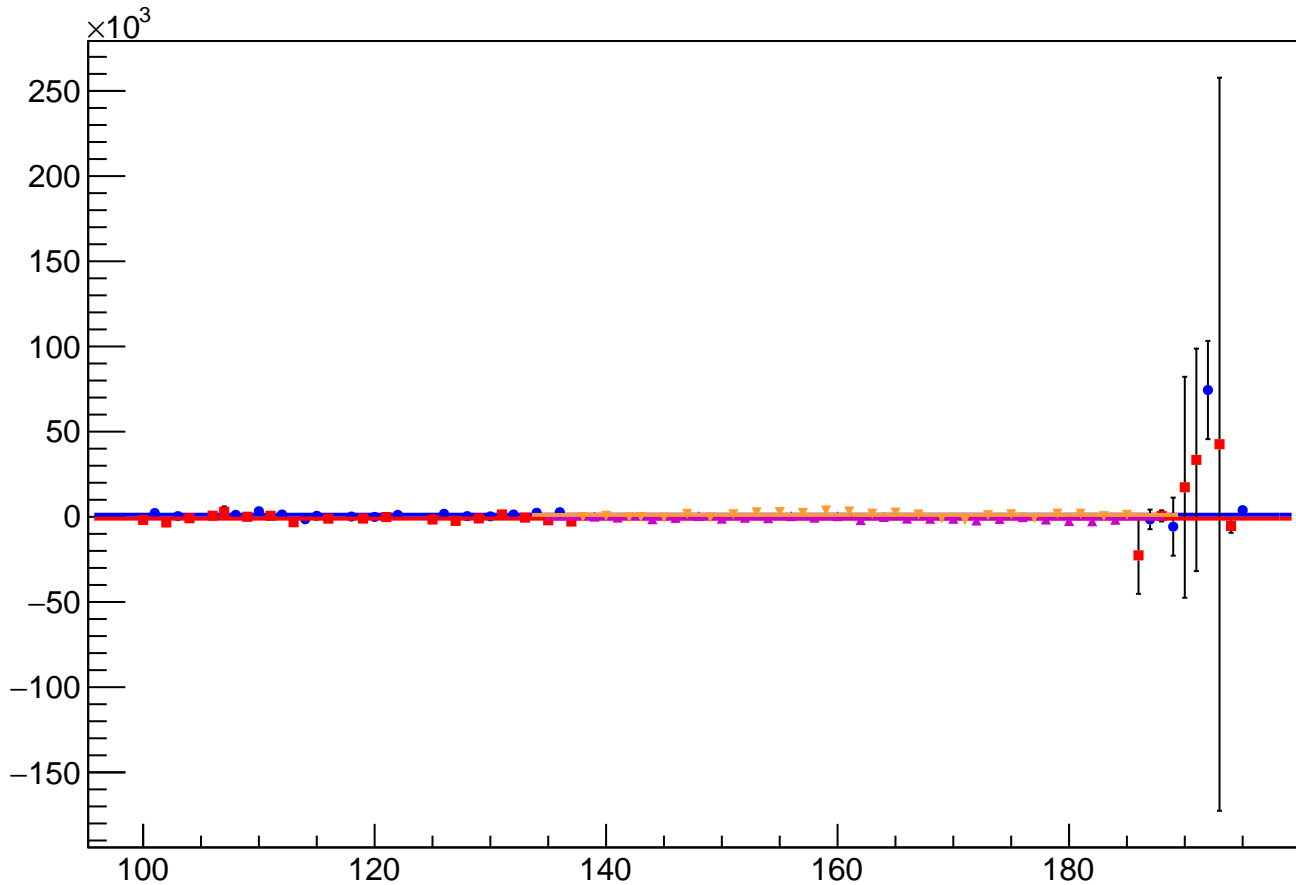
Left In: 735.543 $\pm$ 0.127  $\chi^2$ /NDF: 1105222.3/22

+ sign 605.530 $\pm$ 0.087  $\chi^2$ /NDF: 5154980.7/44

All: 436.153 $\pm$ 0.052  $\chi^2$ /NDF: 35745637.0/9

- sign 343.652 $\pm$ 0.064  $\chi^2$ /NDF: 24759047.0/46

# asym\_left\_dd\_mean vs Slug



Right In: 1227.978 $\pm$ 293.120  $\chi^2$ /NDF: 19.8/19

Left Out: 1096.531 $\pm$ 227.868  $\chi^2$ /NDF: 38.4/24

Right Out: -1058.643 $\pm$ 279.873  $\chi^2$ /NDF: 25.1/23

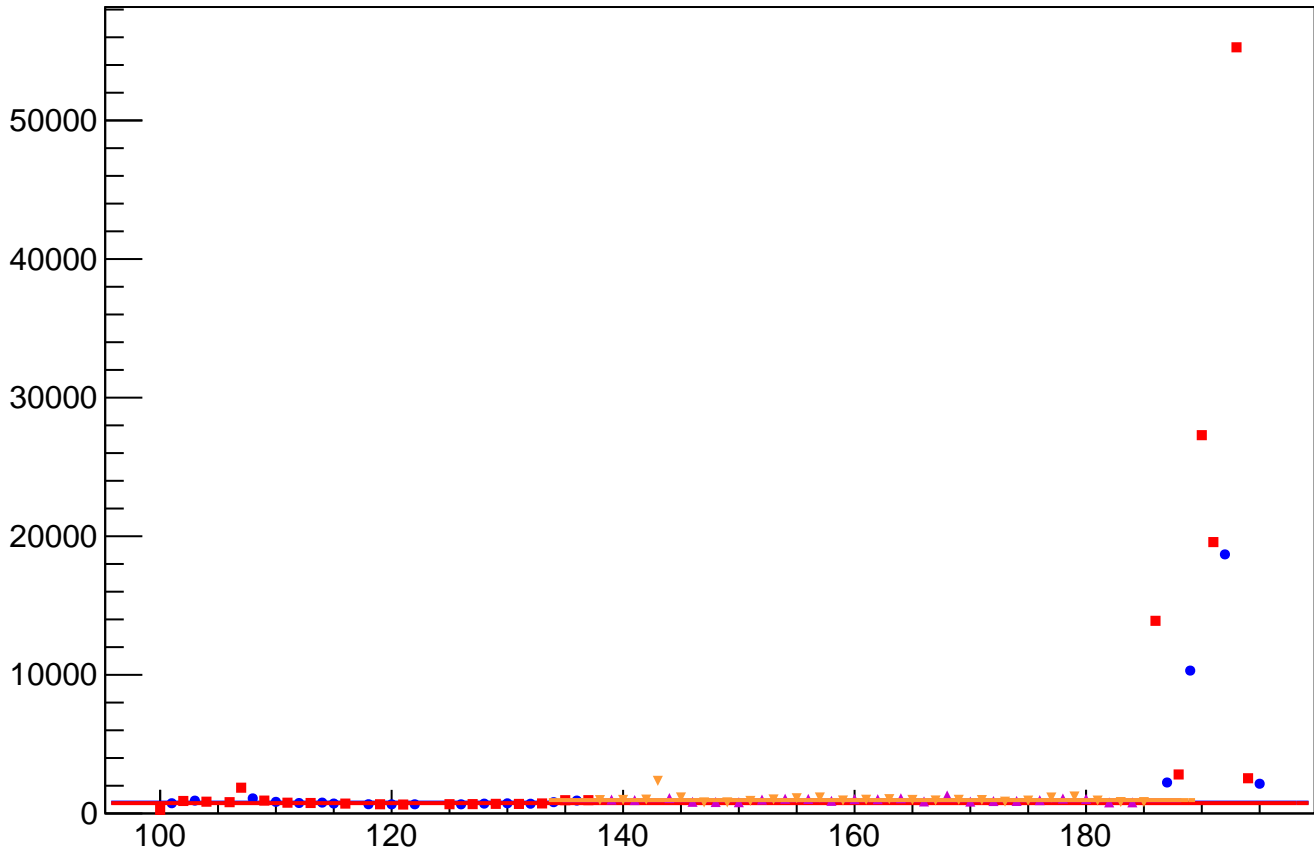
Left In: -926.281 $\pm$ 228.196  $\chi^2$ /NDF: 15.1/22

+ sign 1146.045 $\pm$ 179.902  $\chi^2$ /NDF: 58.4/44

All: 65.326 $\pm$ 126.120  $\chi^2$ /NDF: 169.7/91

- sign -979.137 $\pm$ 176.859  $\chi^2$ /NDF: 40.4/46

# asym\_left\_dd\_rms vs Slug



Right In: 783.641 $\pm$ 0.207  $\chi^2$ /NDF: 2474156.5/19

Left Out: 963.933 $\pm$ 0.161  $\chi^2$ /NDF:1003095.2/24

Right Out: 744.754 $\pm$ 0.198  $\chi^2$ /NDF: 3517333.1/23

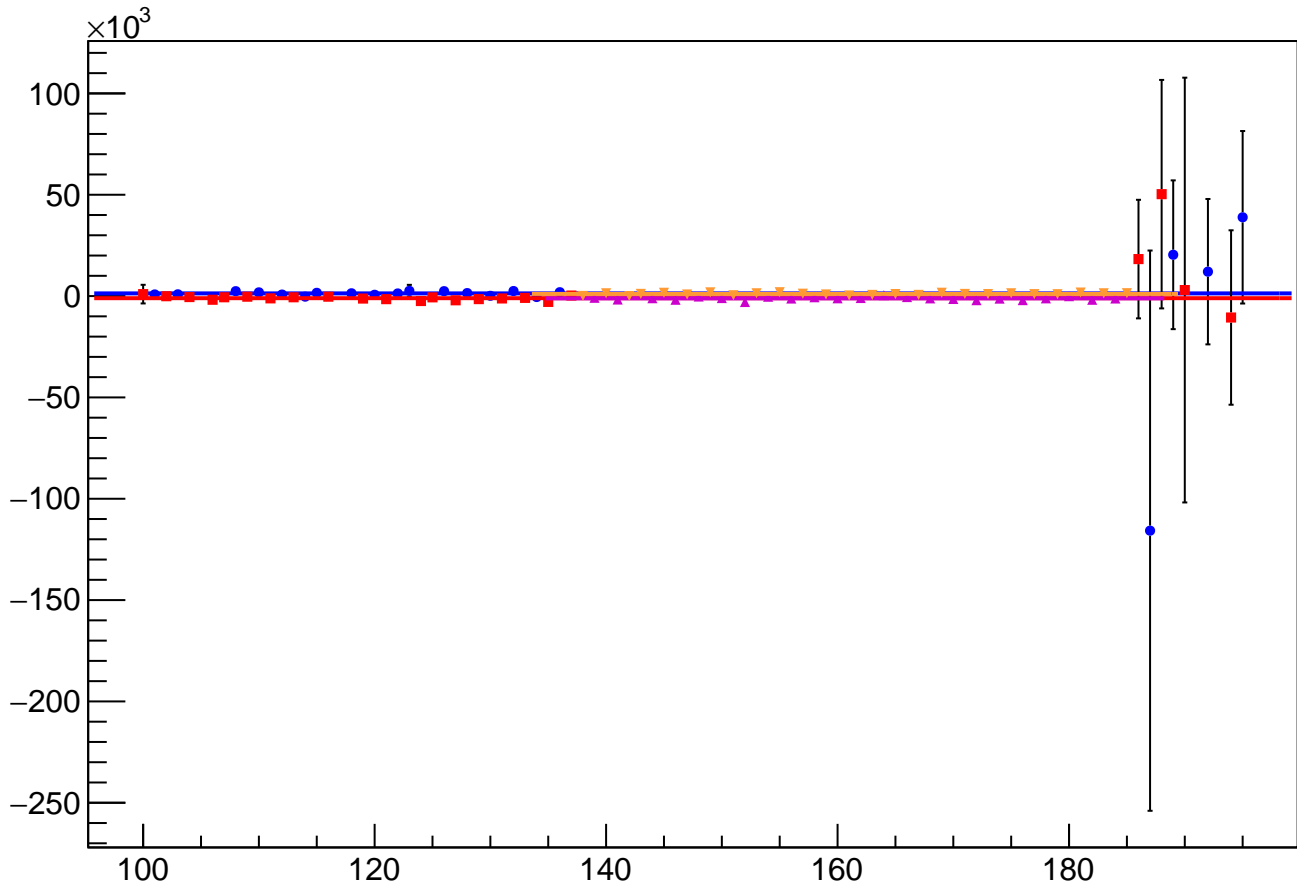
Left In: 946.041 $\pm$ 0.161  $\chi^2$ /NDF:501442.7/22

+ sign 896.019 $\pm$ 0.127  $\chi^2$ /NDF: 3948878.0/44

All: 880.581 $\pm$ 0.089  $\chi^2$ /NDF: 8618022.2/91

- sign 865.661 $\pm$ 0.125  $\chi^2$ /NDF: 4640182.0/46

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



Right In: 1325.824+/-218.589  $\chi^2$ /NDF: 14.6/20

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

Right Out: -1038.976+/-212.069  $\chi^2$ /NDF: 14.8/22

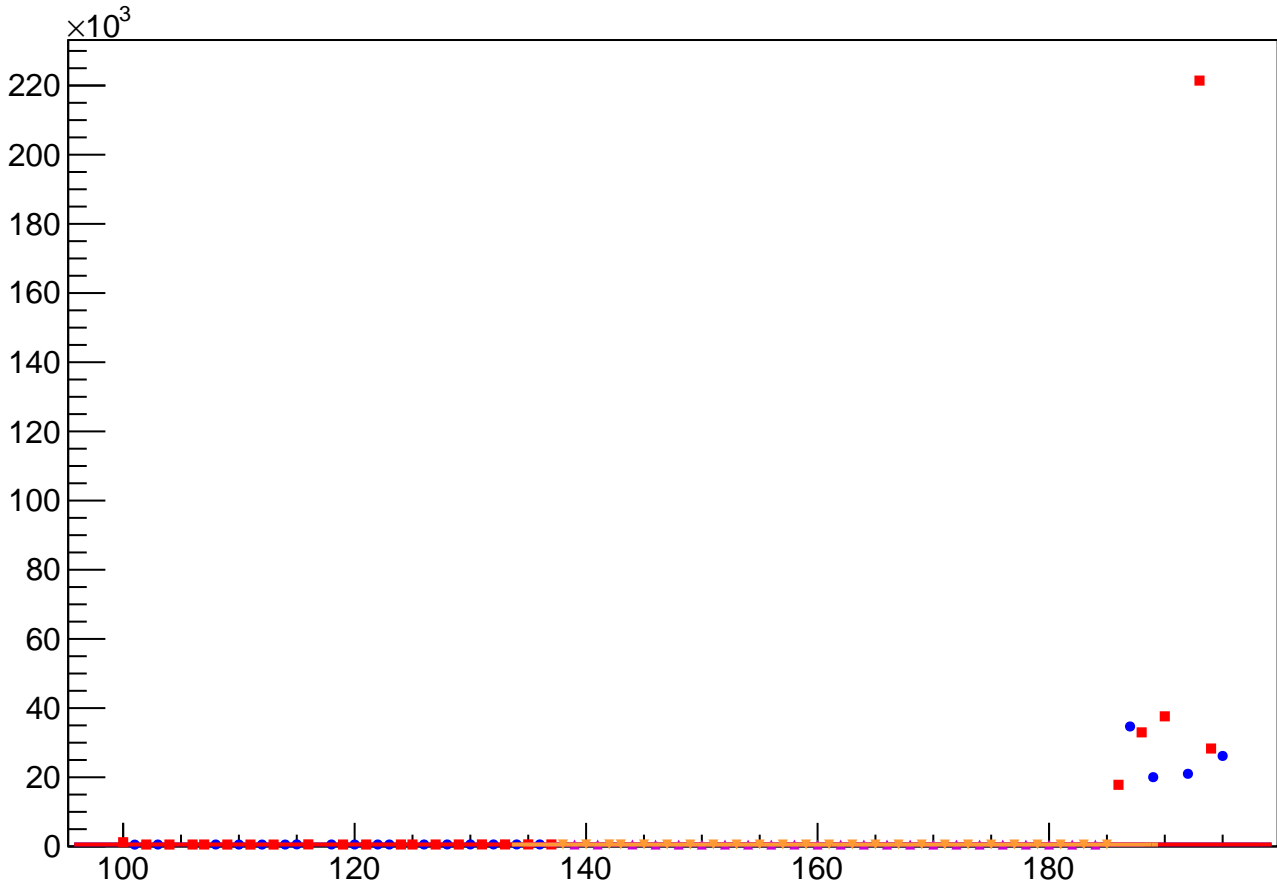
Left In: -1123.857+/-133.163  $\chi^2$ /NDF:30.0/22

+ sign 1139.288+/-111.536  $\chi^2$ /NDF: 30.8/45

All: 32.072+/-79.302  $\chi^2$ /NDF: 275.0/91

- sign -1099.853+/-112.774  $\chi^2$ /NDF: 44.9/45

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



Right In: 565.746 $\pm$ 0.155  $\chi^2$ /NDF: 2085859.9/20

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

Right Out: 567.559 $\pm$ 0.150  $\chi^2$ /NDF: 2642802.8/23

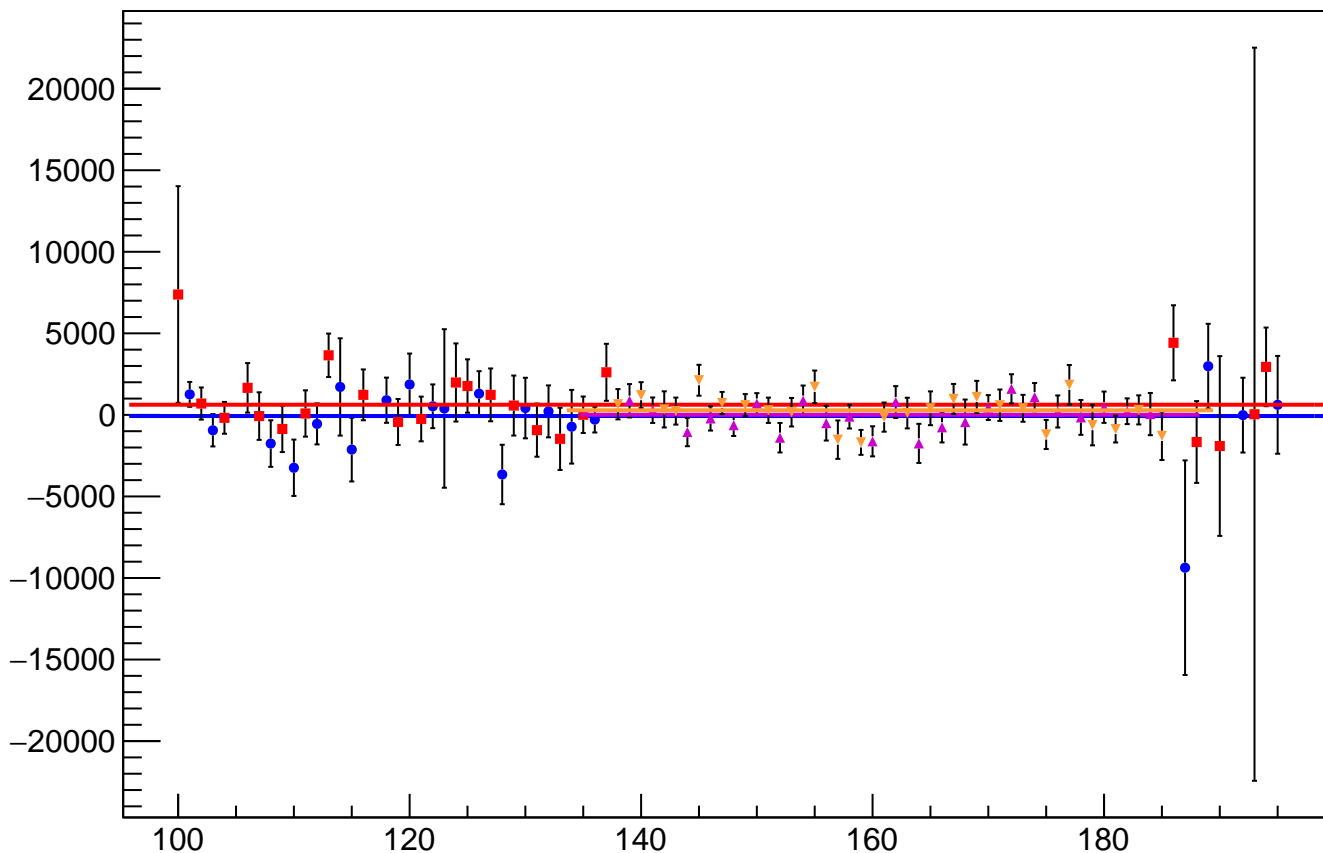
Left In: 556.969 $\pm$ 0.094  $\chi^2$ /NDF: 11209.7/22

+ sign 559.672 $\pm$ 0.079  $\chi^2$ /NDF: 2102700.5/45

All: 559.816 $\pm$ 0.056  $\chi^2$ /NDF: 4760296.4/92

- sign 559.964 $\pm$ 0.080  $\chi^2$ /NDF: 2657589.2/46

# asym\_right\_avg\_correction\_mean vs Slug



Right In:  $-69.797 \pm 320.213$   $\chi^2/\text{NDF}: 20.5/20$

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

Right Out:  $623.578 \pm 323.190$   $\chi^2/\text{NDF}: 19.3/23$

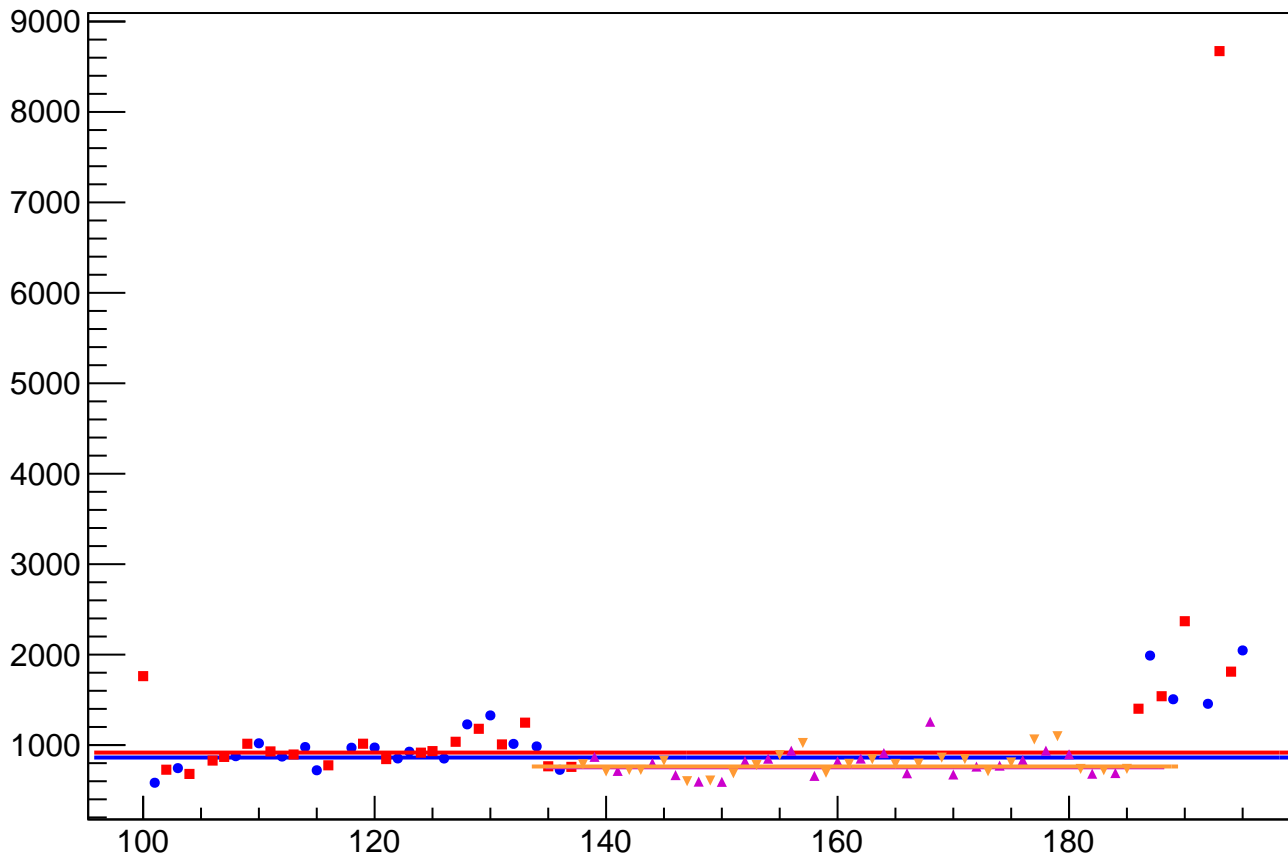
Left In:  $8.211 \pm 183.382$   $\chi^2/\text{NDF}: 20.2/22$

+ sign  $197.132 \pm 157.189$   $\chi^2/\text{NDF}: 48.1/45$

All:  $177.890 \pm 111.956$   $\chi^2/\text{NDF}: 90.4/92$

- sign  $158.080 \pm 159.495$   $\chi^2/\text{NDF}: 42.2/46$

# asym\_right\_avg\_correction\_rms vs Slug



Right In:  $862.128 \pm 0.226$   $\chi^2/\text{NDF}: 1263570.0/20$

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

Right Out:  $916.847 \pm 0.229$   $\chi^2/\text{NDF}: 1312411.3/23$

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

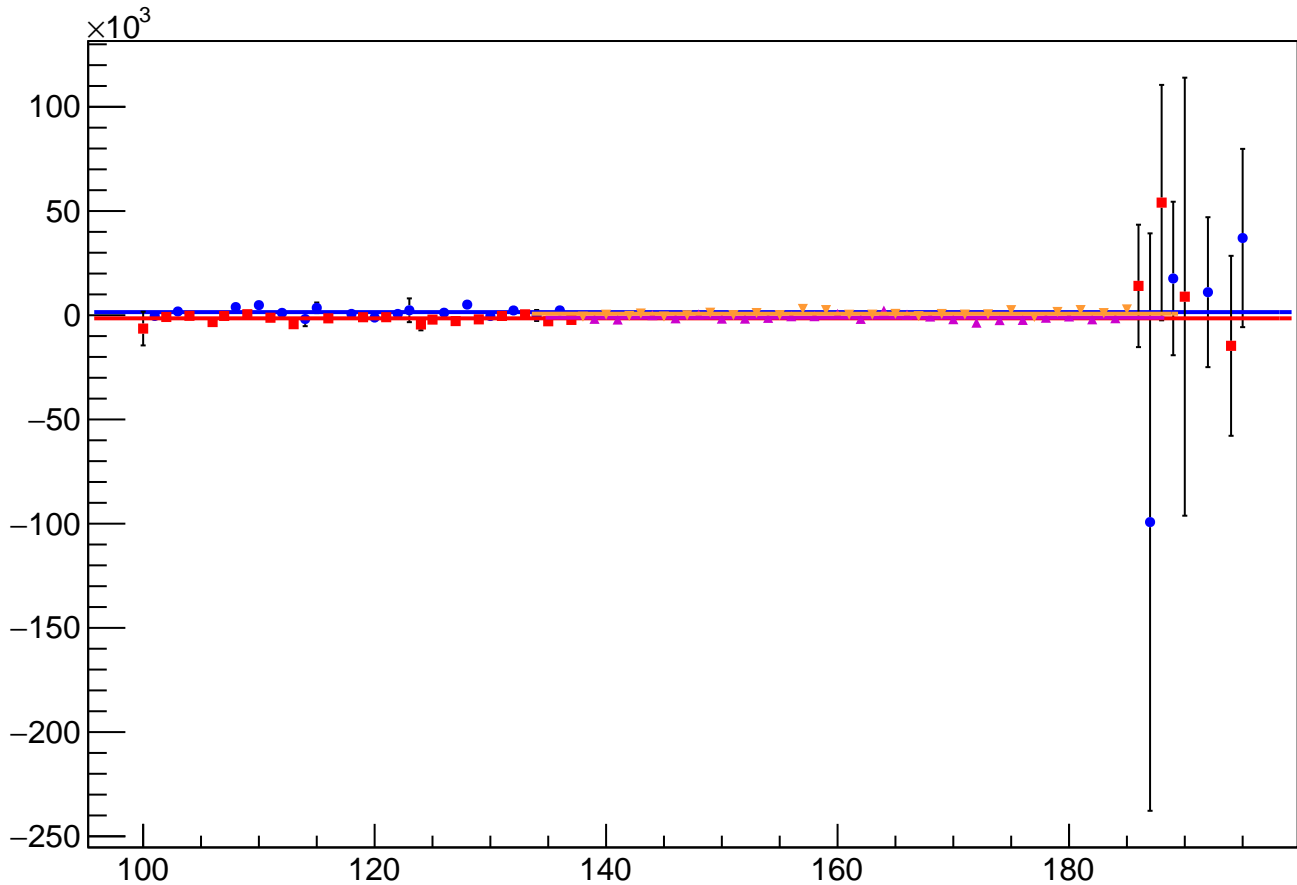
+ sign  $786.951 \pm 0.111$   $\chi^2/\text{NDF}: 2162500.6/45$

All:  $790.294 \pm 0.079$   $\chi^2/\text{NDF}: 4792224.0/92$

- sign  $793.735 \pm 0.113$   $\chi^2/\text{NDF}: 2627887.9/46$



# asym\_right\_avg\_mean vs Slug



Right In:  $1503.396 \pm 402.598$   $\chi^2/\text{NDF}: 18.6/20$

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

Right Out:  $-1483.046 \pm 400.651$   $\chi^2/\text{NDF}: 13.4/22$

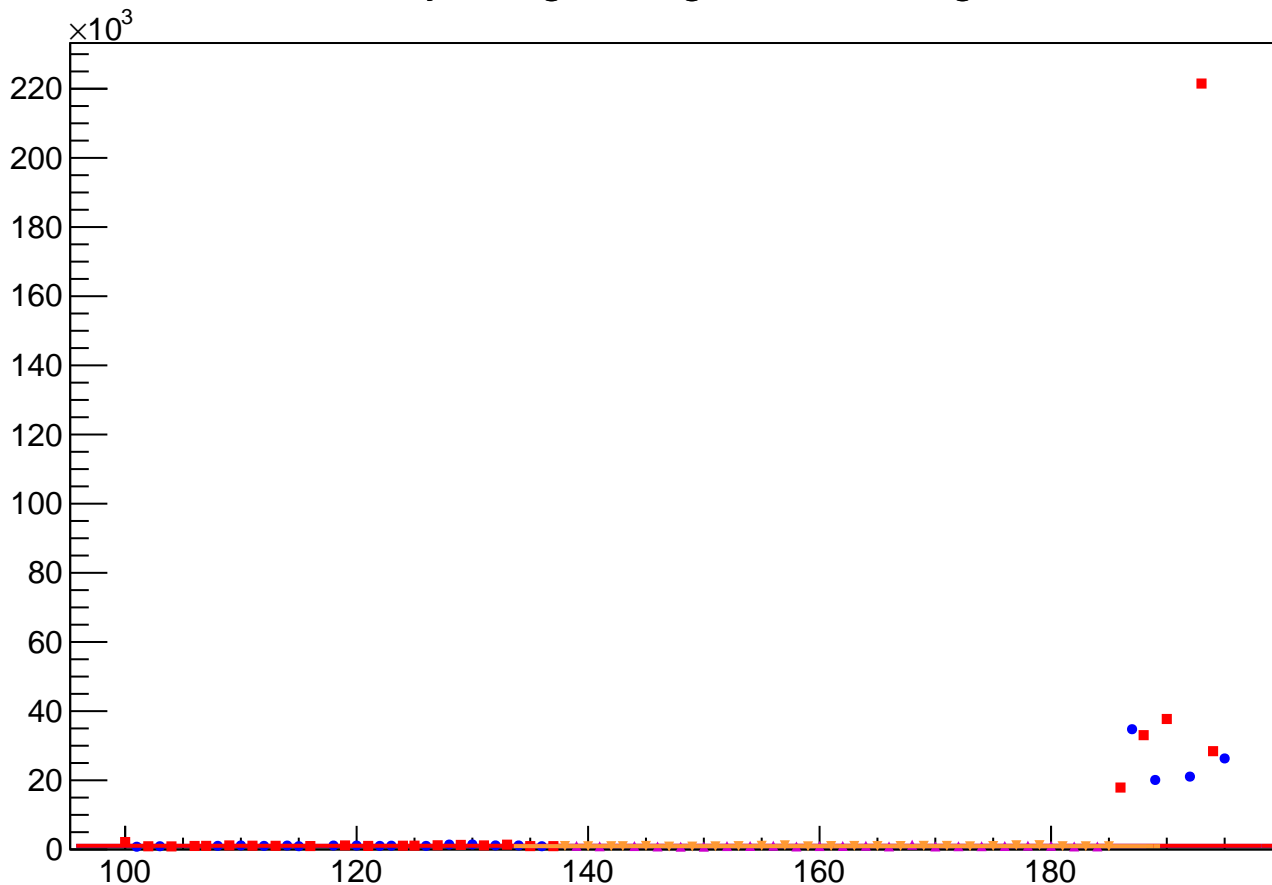
Left In:  $-1124.587 \pm 230.065$   $\chi^2/\text{NDF}: 25.4/22$

+ sign  $922.073 \pm 196.764$   $\chi^2/\text{NDF}: 42.9/45$

All:  $-130.896 \pm 140.094$   $\chi^2/\text{NDF}: 140.3/91$

- sign  $-1213.475 \pm 199.511$   $\chi^2/\text{NDF}: 39.3/45$

# asym\_right\_avg\_rms vs Slug



Right In: 1029.376 $\pm$ 0.285  $\chi^2$ /NDF: 2327233.7/20

Left Out: 962.256 $\pm$ 0.159  $\chi^2$ /NDF:362937.6/24

Right Out: 1065.676 $\pm$ 0.283  $\chi^2$ /NDF: 2731334.8/23

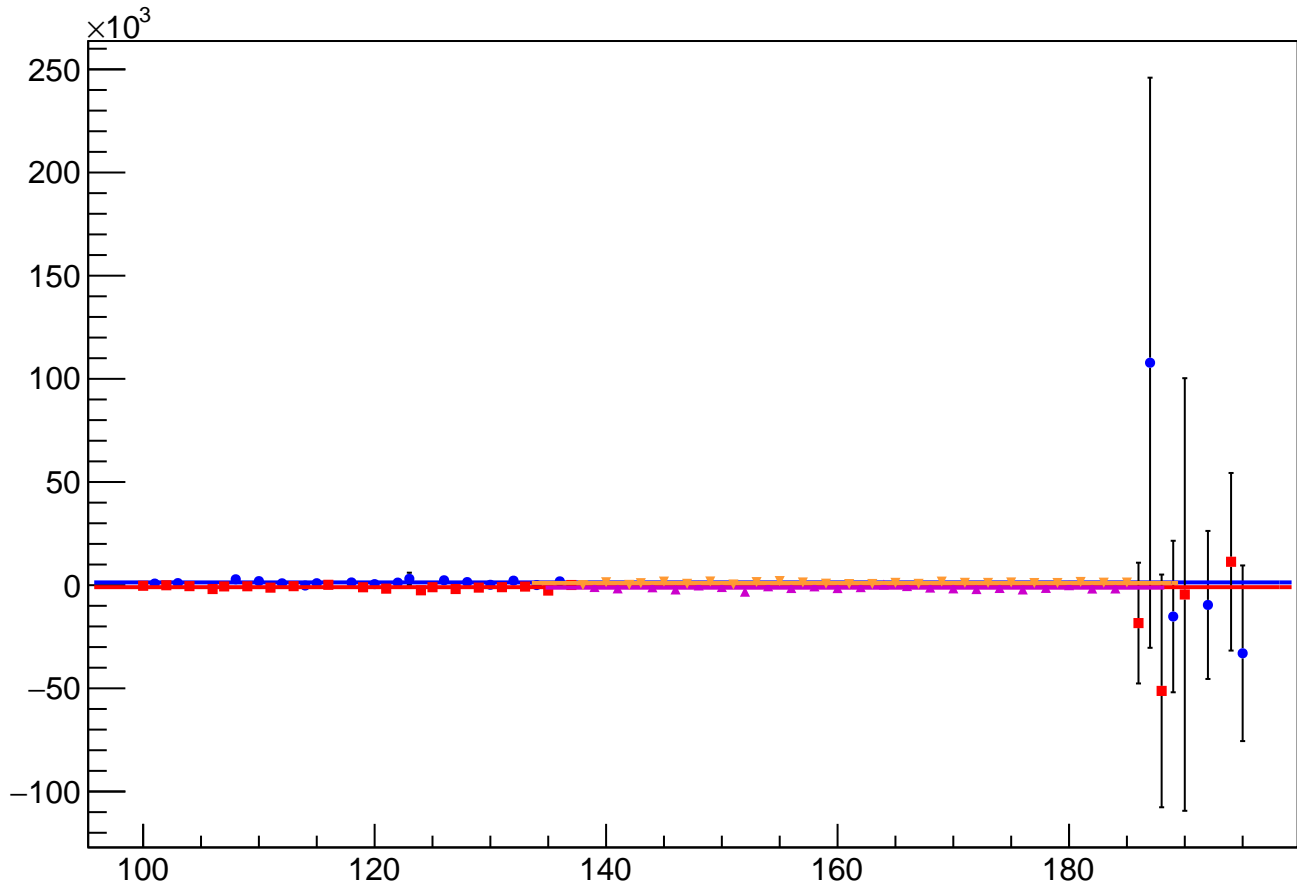
Left In: 954.643 $\pm$ 0.163  $\chi^2$ /NDF:443395.0/22

+ sign 978.288 $\pm$ 0.139  $\chi^2$ /NDF: 2732482.7/45

All: 980.205 $\pm$ 0.099  $\chi^2$ /NDF: 6023111.2/92

- sign 982.176 $\pm$ 0.141  $\chi^2$ /NDF: 3290243.4/46

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



Right In: 1343.766 $\pm$ 218.843  $\chi^2$ /NDF: 13.5/20

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

Right Out: -966.736 $\pm$ 208.604  $\chi^2$ /NDF: 13.4/22

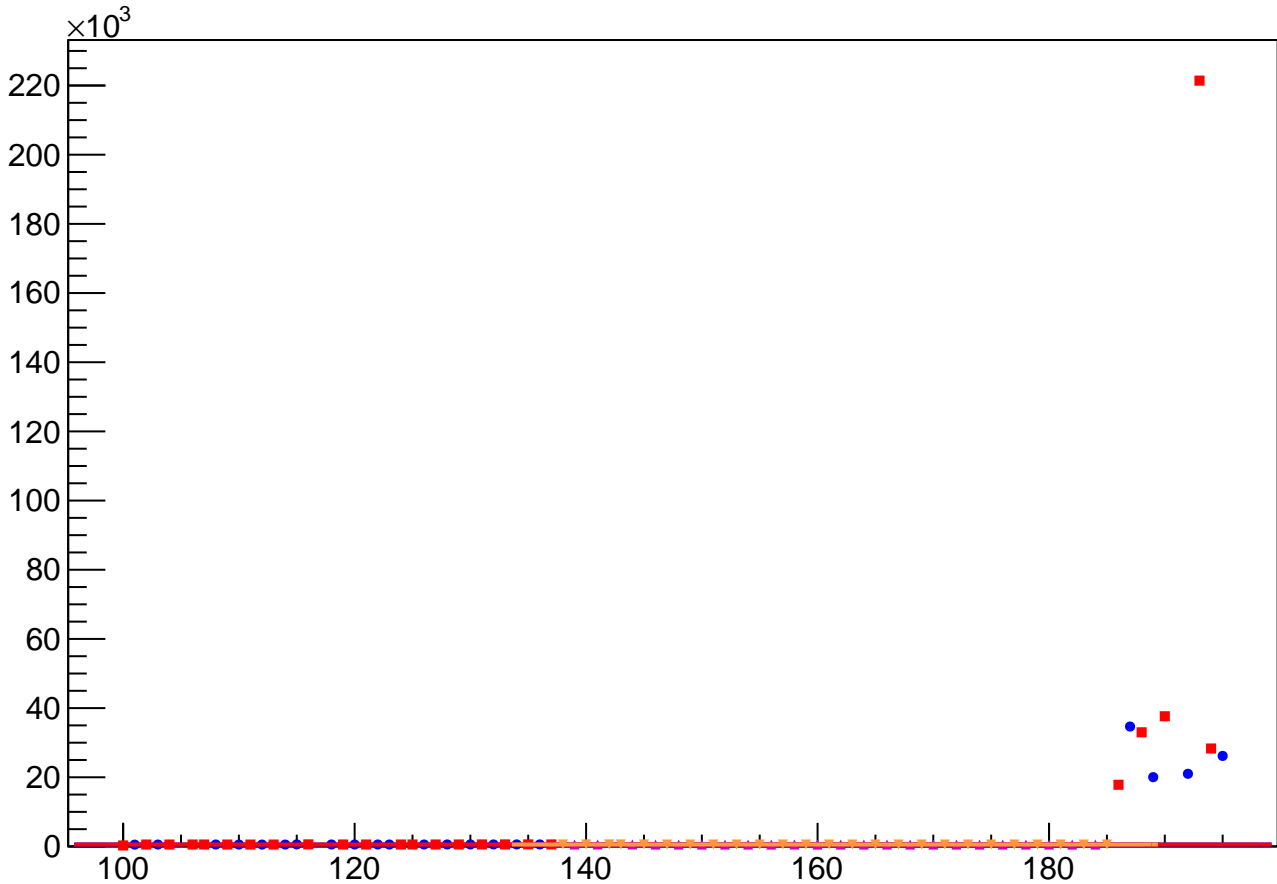
Left In: -1189.481 $\pm$ 133.313  $\chi^2$ /NDF:32.2/22

+ sign 1154.300 $\pm$ 111.654  $\chi^2$ /NDF: 29.5/45

All: 21.621 $\pm$ 79.190  $\chi^2$ /NDF: 283.0/91

- sign -1124.889 $\pm$ 112.333  $\chi^2$ /NDF: 46.4/45

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



Right In: 566.403 $\pm$ 0.155  $\chi^2$ /NDF: 2085940.8/20

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

Right Out: 556.622 $\pm$ 0.148  $\chi^2$ /NDF: 2728186.7/23

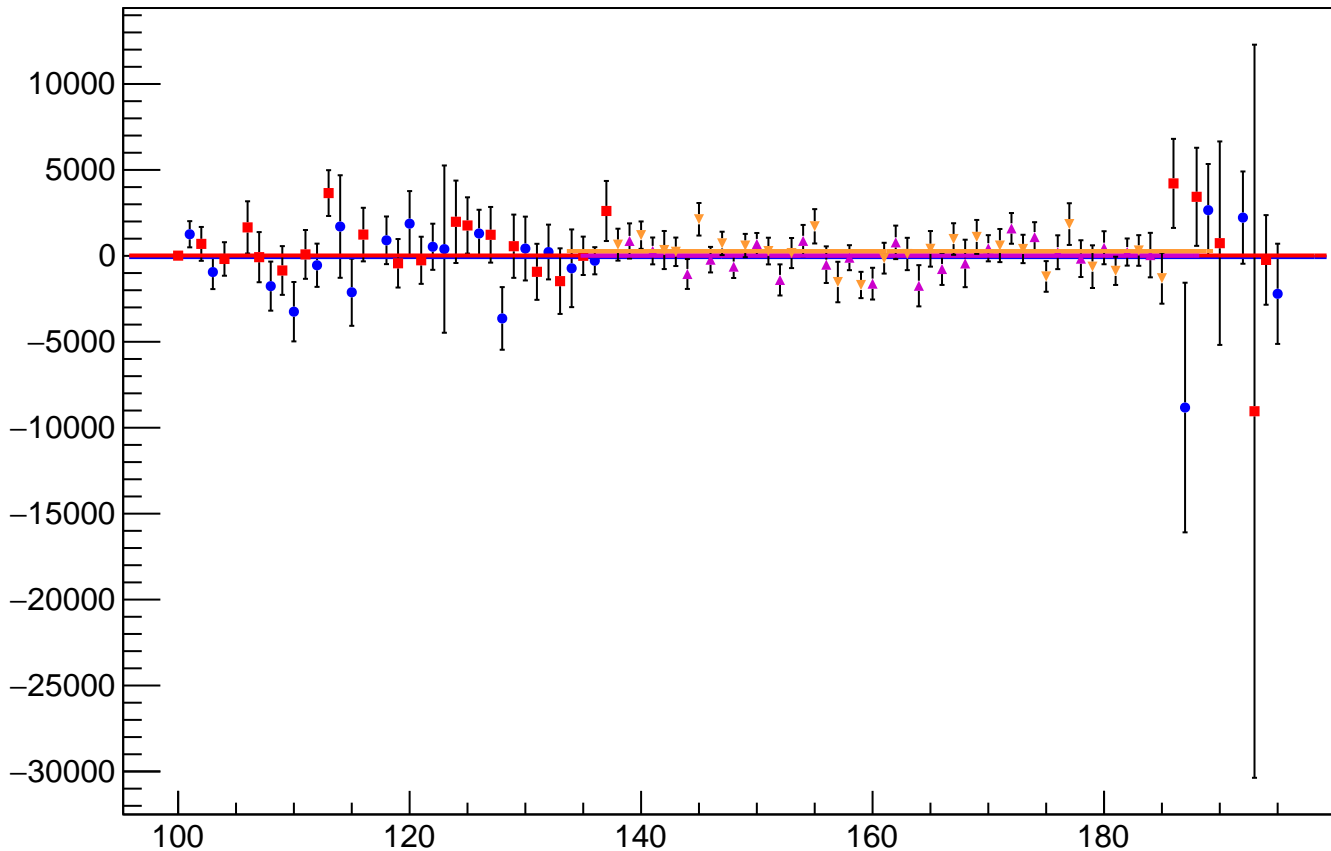
Left In: 557.597 $\pm$ 0.094  $\chi^2$ /NDF: 11276.8/22

+ sign 560.261 $\pm$ 0.079  $\chi^2$ /NDF: 2102856.3/45

All: 558.796 $\pm$ 0.056  $\chi^2$ /NDF: 4843043.1/92

- sign 557.314 $\pm$ 0.079  $\chi^2$ /NDF: 2739494.4/46

# asym\_right\_dd\_correction\_mean vs Slug



Right In:  $-72.297 \pm 321.273$   $\chi^2/\text{NDF}: 20.8/20$

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

Right Out:  $21.607 \pm 38.942$   $\chi^2/\text{NDF}: 20.1/23$

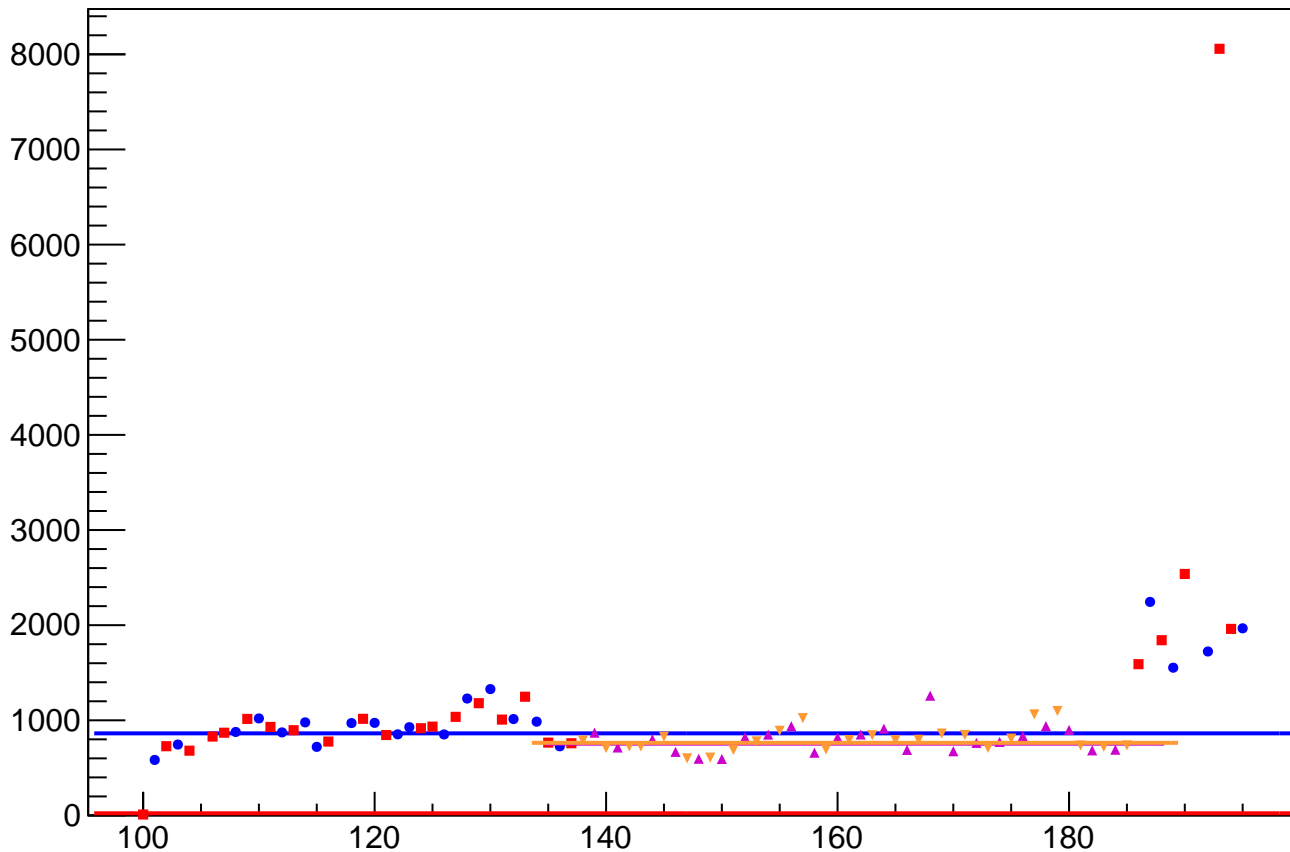
Left In:  $7.306 \pm 183.473$   $\chi^2/\text{NDF}: 20.1/22$

+ sign  $196.558 \pm 157.350$   $\chi^2/\text{NDF}: 48.5/45$

All:  $30.711 \pm 37.024$   $\chi^2/\text{NDF}: 90.0/92$

- sign  $20.991 \pm 38.093$   $\chi^2/\text{NDF}: 40.3/46$

# asym\_right\_dd\_correction\_rms vs Slug



Right In: 862.938 $\pm$ 0.227  $\chi^2$ /NDF: 1333134.6/20

Left Out: 763.307 $\pm$ 0.128  $\chi^2$ /NDF: 753728.9/24

Right Out: 23.033 $\pm$ 0.028  $\chi^2$ /NDF: 16776106.9/23

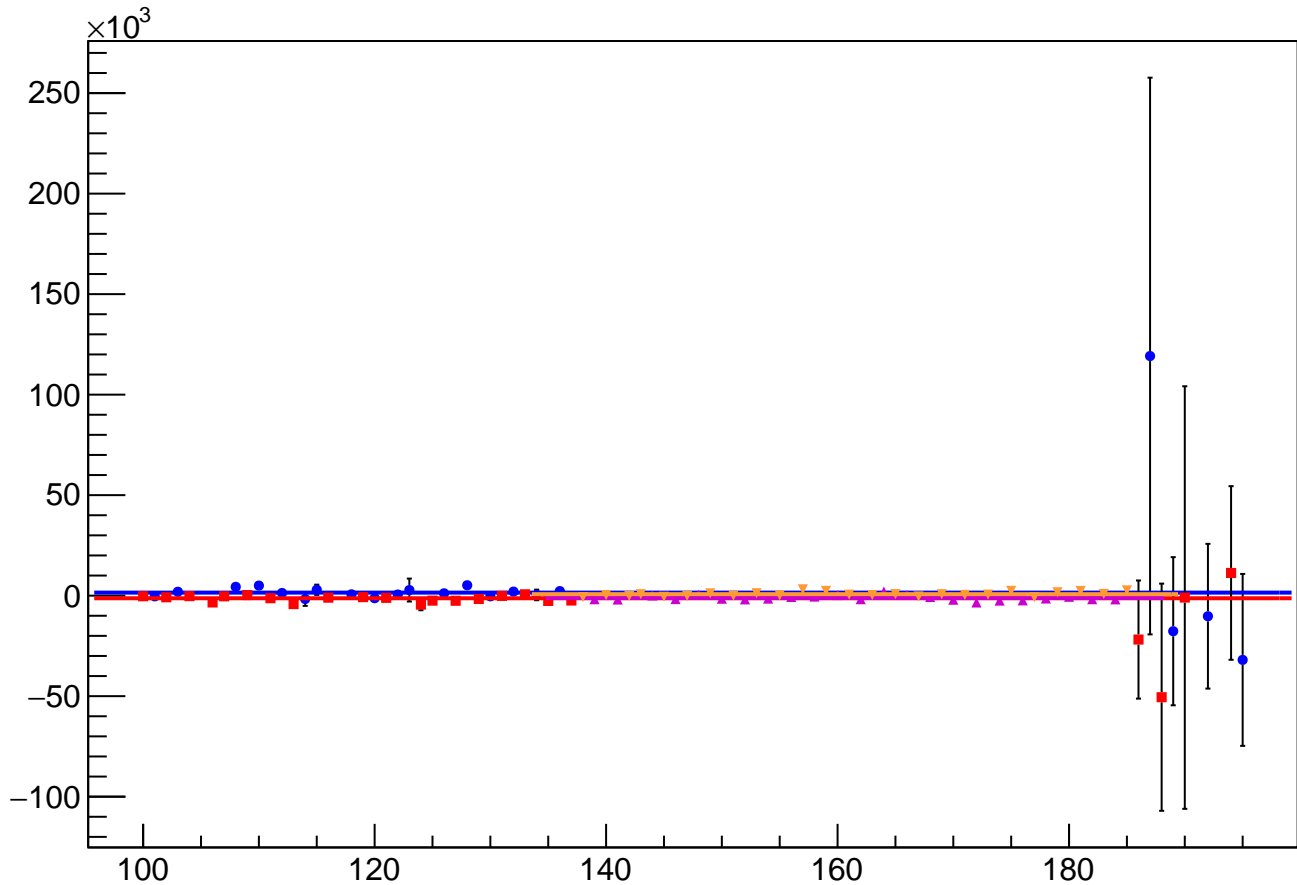
Left In: 754.483 $\pm$ 0.130  $\chi^2$ /NDF: 931536.8/22

+ sign 787.206 $\pm$ 0.111  $\chi^2$ /NDF: 2233068.1/45

All: 95.125 $\pm$ 0.026  $\chi^2$ /NDF: 91316427.1/92

- sign 54.563 $\pm$ 0.027  $\chi^2$ /NDF: 48124748.3/46

# asym\_right\_dd\_mean vs Slug



Right In:  $1513.745 \pm 402.821$   $\chi^2/\text{NDF}: 19.5/20$

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

Right Out:  $-1292.138 \pm 376.623$   $\chi^2/\text{NDF}: 13.7/22$

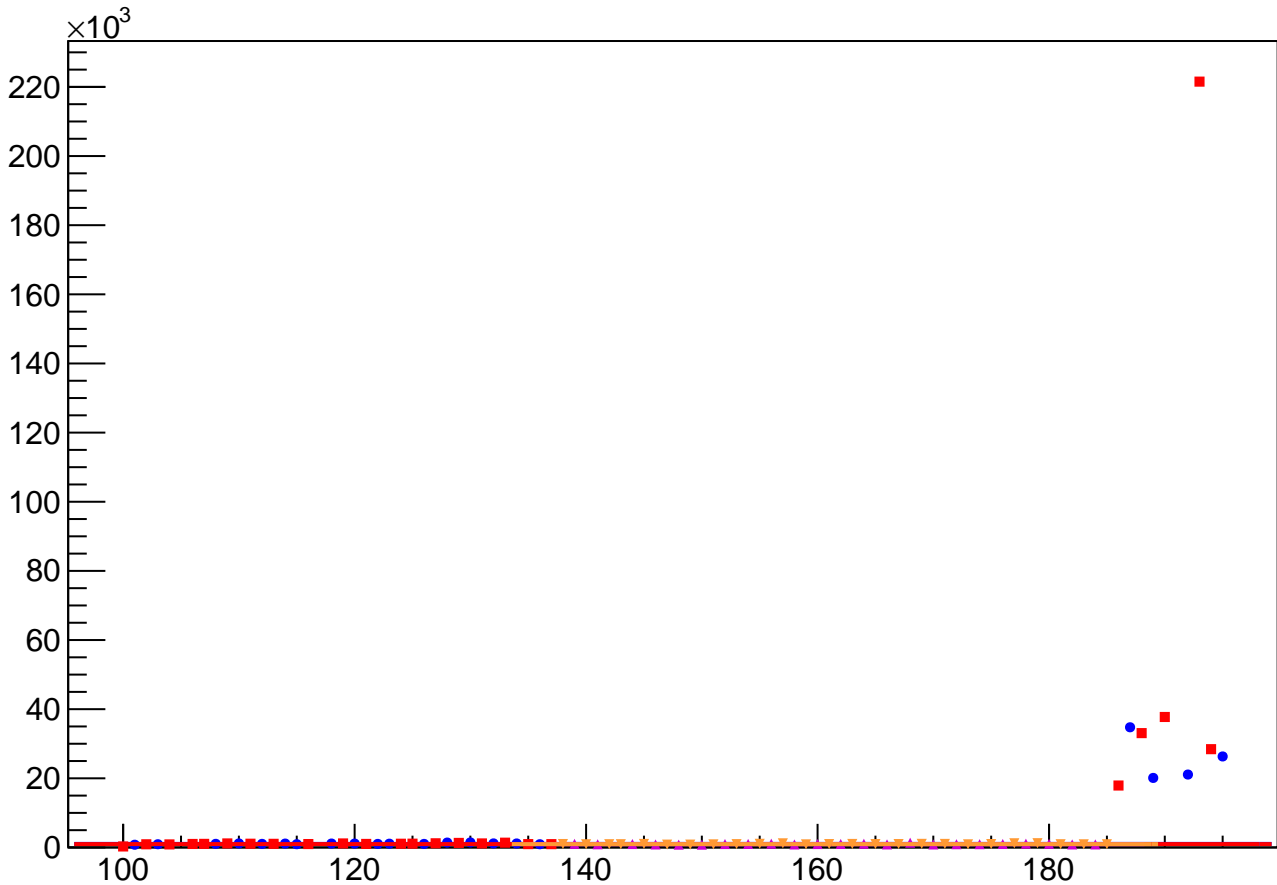
Left In:  $-1176.288 \pm 230.229$   $\chi^2/\text{NDF}: 24.2/22$

+ sign  $926.966 \pm 196.872$   $\chi^2/\text{NDF}: 42.6/45$

All:  $-142.796 \pm 139.054$   $\chi^2/\text{NDF}: 139.5/91$

- sign  $-1207.803 \pm 196.434$   $\chi^2/\text{NDF}: 38.0/45$

# asym\_right\_dd\_rms vs Slug



Right In: 1029.952 $\pm$ 0.285  $\chi^2$ /NDF: 2327243.9/20

Left Out: 962.776 $\pm$ 0.160  $\chi^2$ /NDF:362837.8/24

Right Out: 971.044 $\pm$ 0.266  $\chi^2$ /NDF: 3585925.0/23

Left In: 955.331 $\pm$ 0.163  $\chi^2$ /NDF:443068.5/22

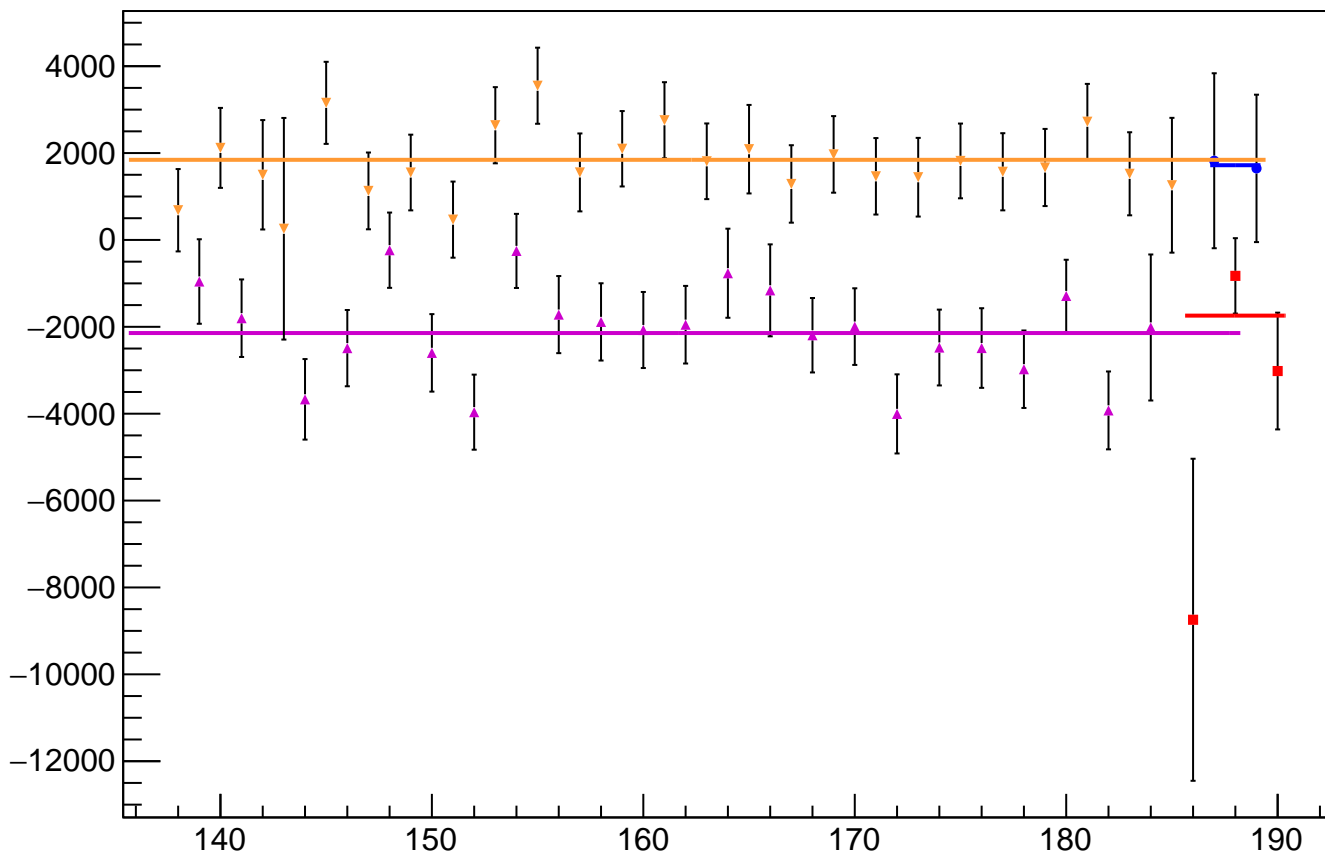
+ sign 978.822 $\pm$ 0.139  $\chi^2$ /NDF: 2732415.8/45

All: 969.192 $\pm$ 0.098  $\chi^2$ /NDF: 6773492.8/92

- sign 959.605 $\pm$ 0.139  $\chi^2$ /NDF: 4031527.9/46



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



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

Left Out: 1844.361+/-186.909  $\chi^2$ /NDF:15.4/24

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

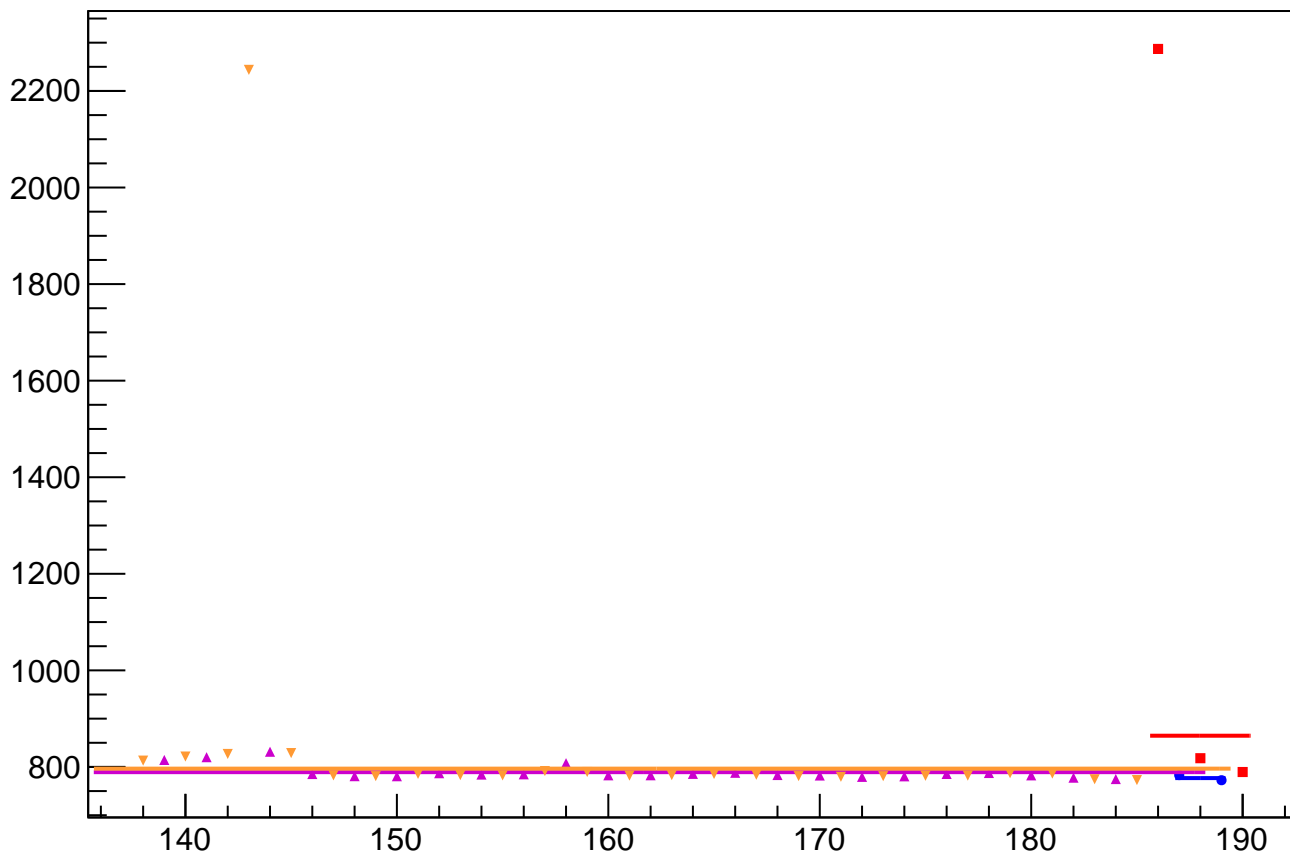
Left In: -2143.254+/-190.144  $\chi^2$ /NDF:32.4/22

+ sign 1841.835+/-185.000  $\chi^2$ /NDF: 15.4/26

All: -150.766+/-130.375  $\chi^2$ /NDF: 284.1/52

- sign -2116.795+/-183.762  $\chi^2$ /NDF: 38.2/25

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



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

Left Out: 796.470 $\pm$ 0.132  $\chi^2$ /NDF: 658729.4/24

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

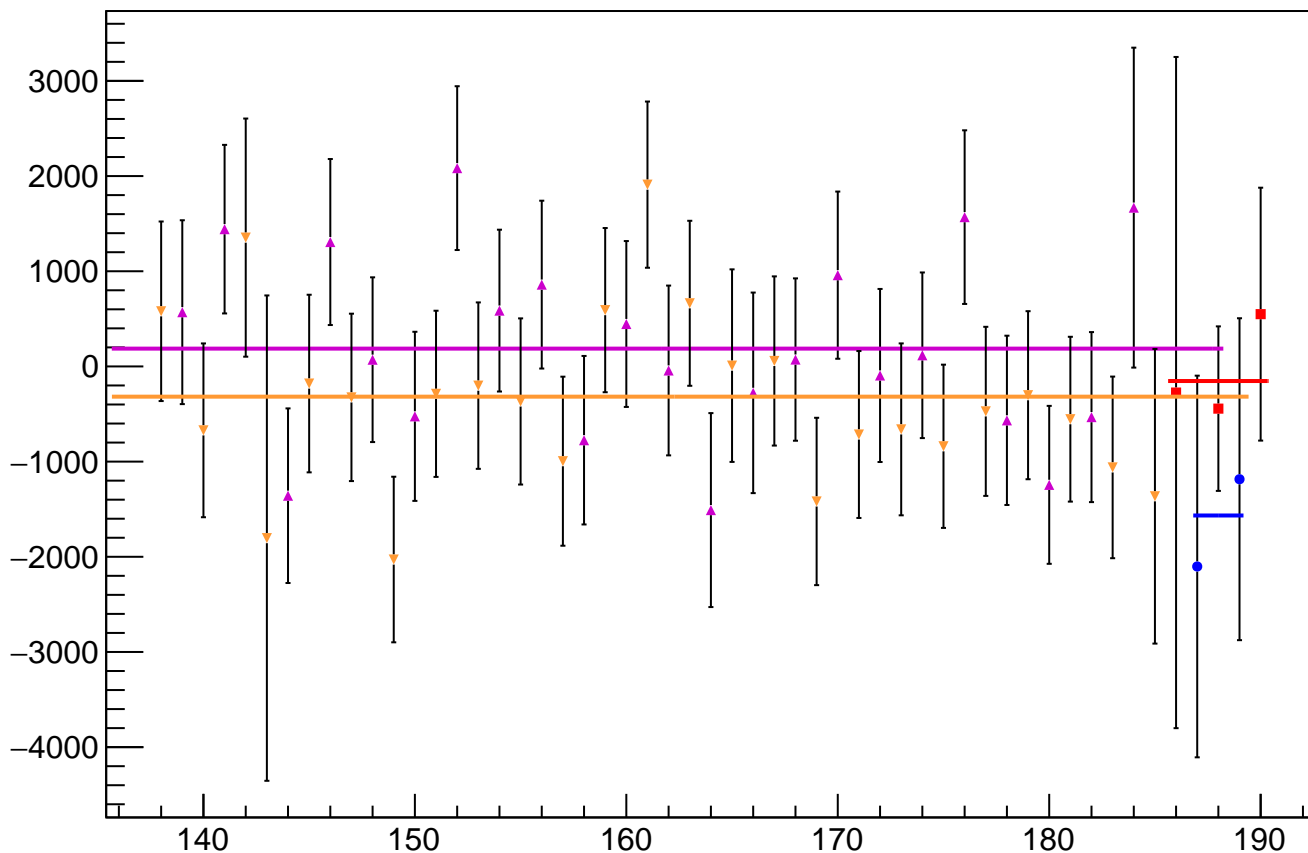
Left In: 789.176 $\pm$ 0.134  $\chi^2$ /NDF: 10860.4/22

+ sign 796.072 $\pm$ 0.131  $\chi^2$ /NDF: 659207.9/26

All: 795.109 $\pm$ 0.092  $\chi^2$ /NDF: 997468.1/52

- sign 794.158 $\pm$ 0.130  $\chi^2$ /NDF: 338152.4/25

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



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

Left Out:  $-317.611 \pm 186.045$   $\chi^2/\text{NDF}: 20.3/24$

Right Out:  $-153.360 \pm 709.634$   $\chi^2/\text{NDF}: 0.4/2$

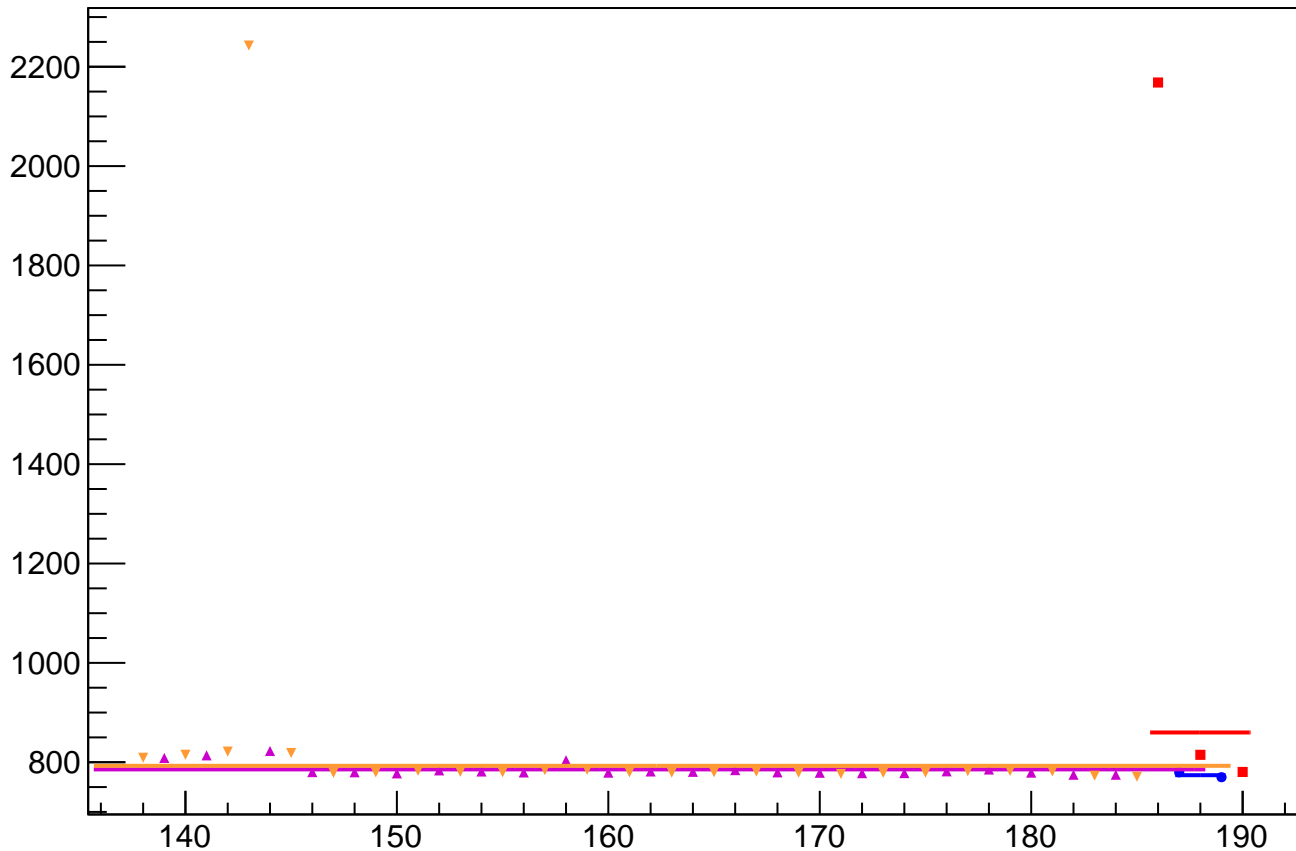
Left In:  $187.105 \pm 189.265$   $\chi^2/\text{NDF}: 25.6/22$

+ sign  $-342.947 \pm 184.148$   $\chi^2/\text{NDF}: 21.4/26$

All:  $-87.464 \pm 129.759$   $\chi^2/\text{NDF}: 51.4/52$

- sign  $164.494 \pm 182.873$   $\chi^2/\text{NDF}: 26.2/25$

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



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

Left Out:  $792.811 \pm 0.132$   $\chi^2/\text{NDF}: 659508.7/24$

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

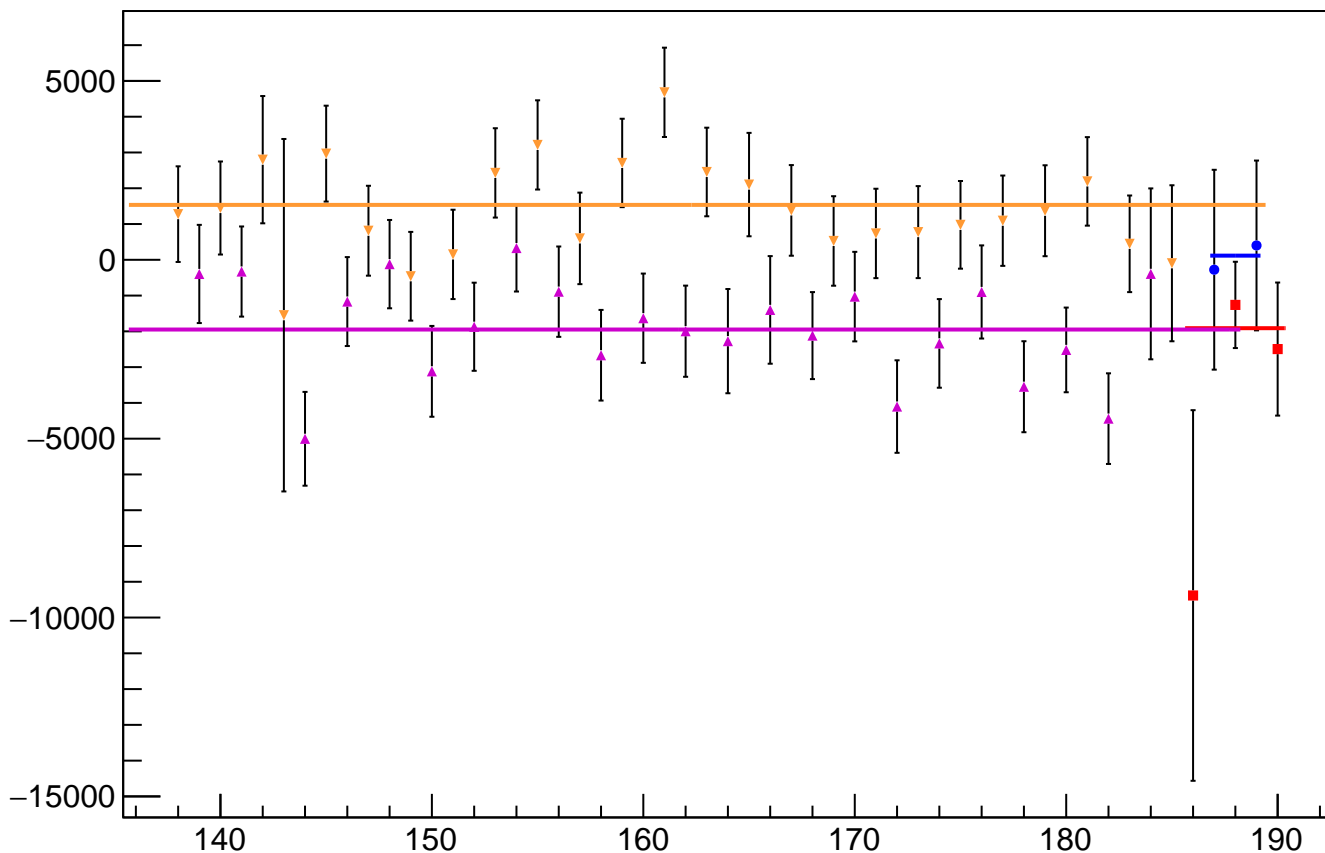
Left In:  $785.562 \pm 0.134$   $\chi^2/\text{NDF}: 9033.0/22$

+ sign  $792.428 \pm 0.130$   $\chi^2/\text{NDF}: 659954.8/26$

All:  $791.456 \pm 0.092$   $\chi^2/\text{NDF}: 977536.6/52$

- sign  $790.499 \pm 0.129$   $\chi^2/\text{NDF}: 317471.3/25$

# cor\_asym\_usl\_mean vs Slug



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

Left Out:  $1534.720 \pm 265.890$   $\chi^2/\text{NDF}: 20.3/24$

Right Out:  $-1911.693 \pm 993.236$   $\chi^2/\text{NDF}: 2.5/2$

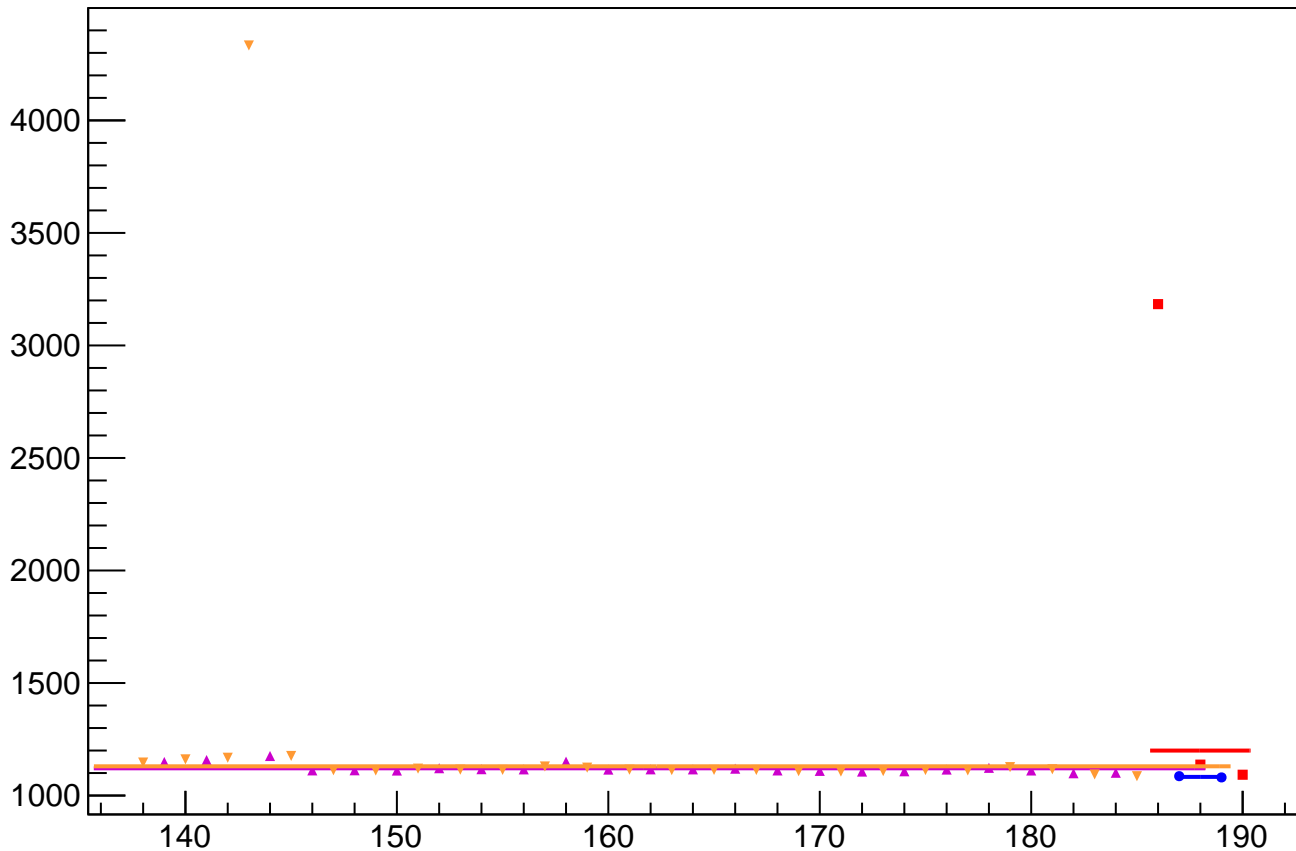
Left In:  $-1949.077 \pm 270.080$   $\chi^2/\text{NDF}: 26.8/22$

+ sign  $1504.716 \pm 263.063$   $\chi^2/\text{NDF}: 20.9/26$

All:  $-237.014 \pm 185.143$   $\chi^2/\text{NDF}: 137.0/52$

- sign  $-1946.503 \pm 260.617$   $\chi^2/\text{NDF}: 29.2/25$

# cor\_asym\_usl\_rms vs Slug



Right In: 1082.866 $\pm$ 1.279  $\chi^2$ /NDF: 4.6/1

Left Out: 1129.937 $\pm$ 0.188  $\chi^2$ /NDF: 858269.9/24

Right Out: 1199.844 $\pm$ 0.702  $\chi^2$ /NDF: 305356.1/2

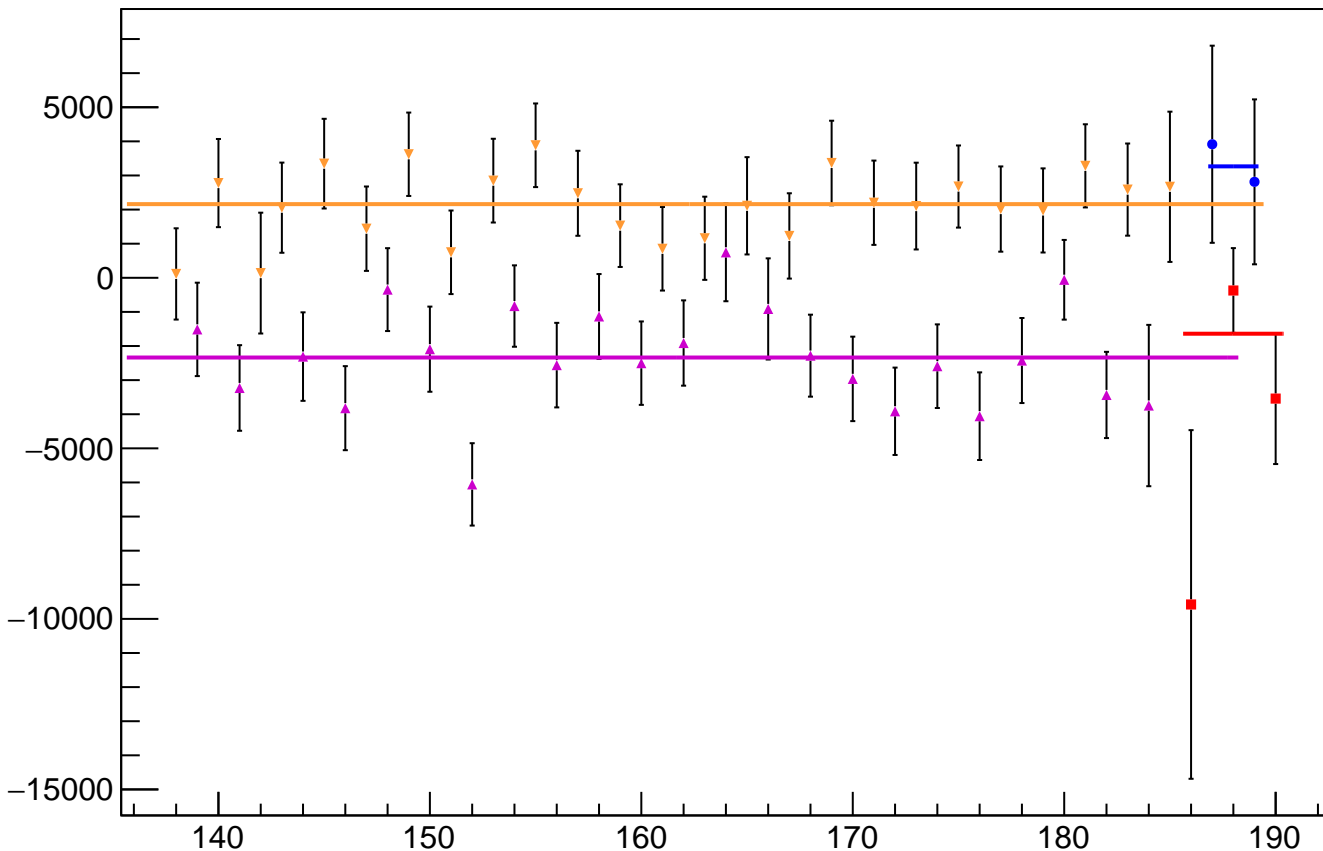
Left In: 1120.977 $\pm$ 0.191  $\chi^2$ /NDF: 9259.6/22

+ sign 1128.941 $\pm$ 0.186  $\chi^2$ /NDF: 859600.5/26

All: 1127.662 $\pm$ 0.131  $\chi^2$ /NDF: 1186051.5/52

- sign 1126.407 $\pm$ 0.184  $\chi^2$ /NDF: 326357.4/25

# cor\_asym\_usr\_mean vs Slug



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

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

Right Out:  $-1639.449 \pm 1022.123$   $\chi^2/\text{NDF}$ : 4.4/2

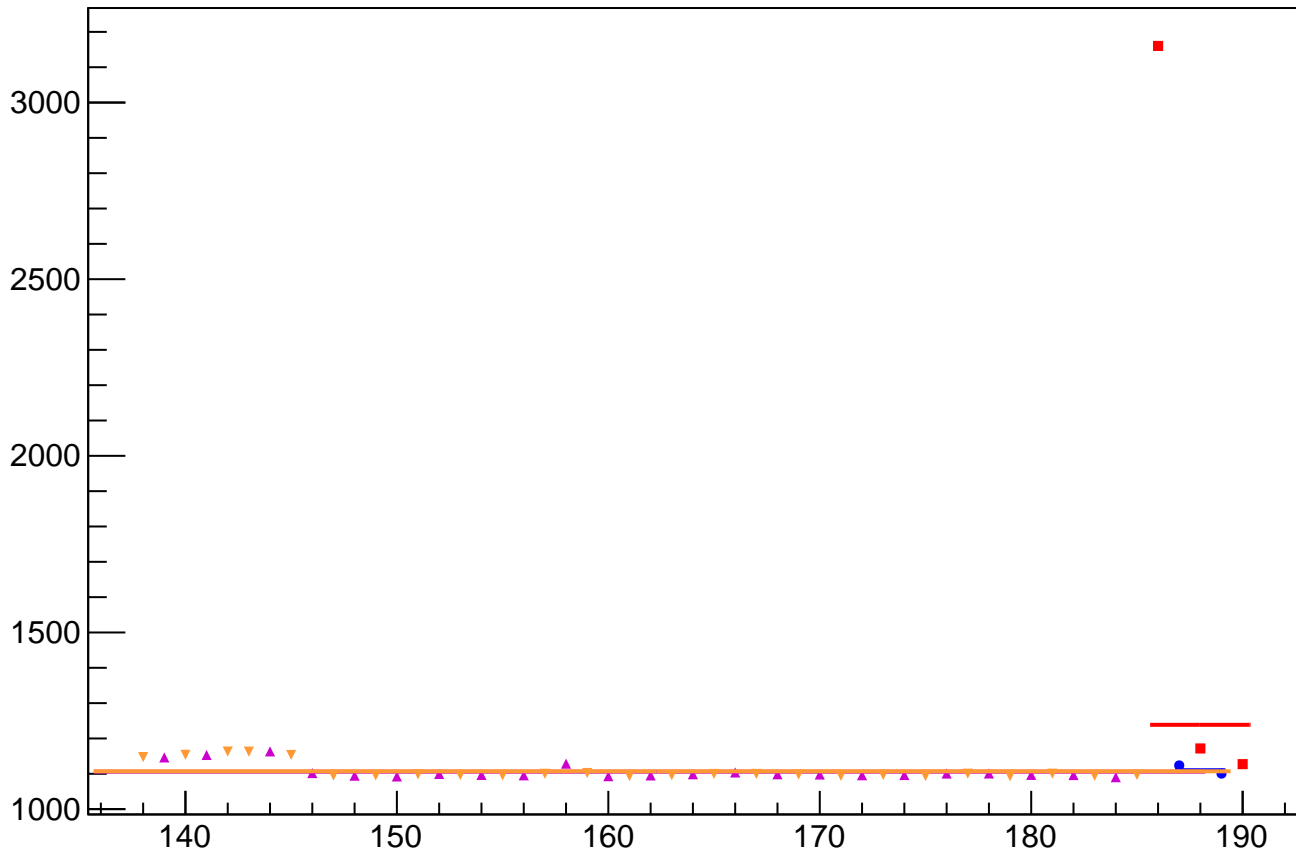
Left In:  $-2337.232 \pm 266.468$   $\chi^2/\text{NDF}$ : 31.3/22

+ sign  $2180.827 \pm 255.078$   $\chi^2/\text{NDF}$ : 15.4/26

All:  $-31.822 \pm 181.339$   $\chi^2/\text{NDF}$ : 203.7/52

- sign  $-2292.825 \pm 257.850$   $\chi^2/\text{NDF}$ : 36.2/25

# cor\_asym\_usr\_rms vs Slug



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

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

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

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

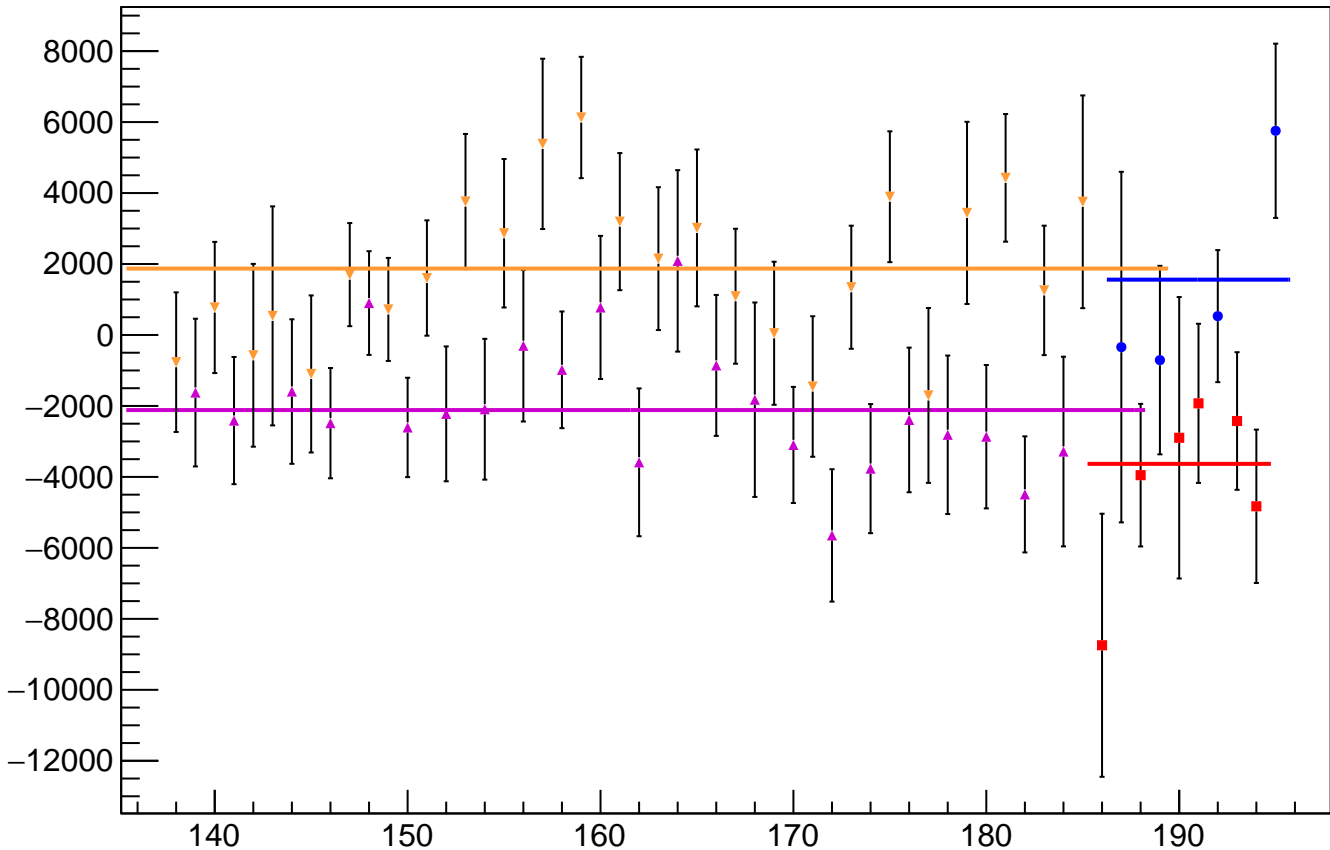
+ sign 1107.148+/-0.180  $\chi^2$ /NDF: 15265.7/26

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

- sign 1114.399+/-0.182  $\chi^2$ /NDF: 337913.0/25



# asym\_us\_agg\_avg\_mean vs Slug



Right In: 1559.294+/-1252.530  $\chi^2/\text{NDF}$ : 4.1/3

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

Right Out: -3631.982+/-969.918  $\chi^2/\text{NDF}$ : 3.2/5

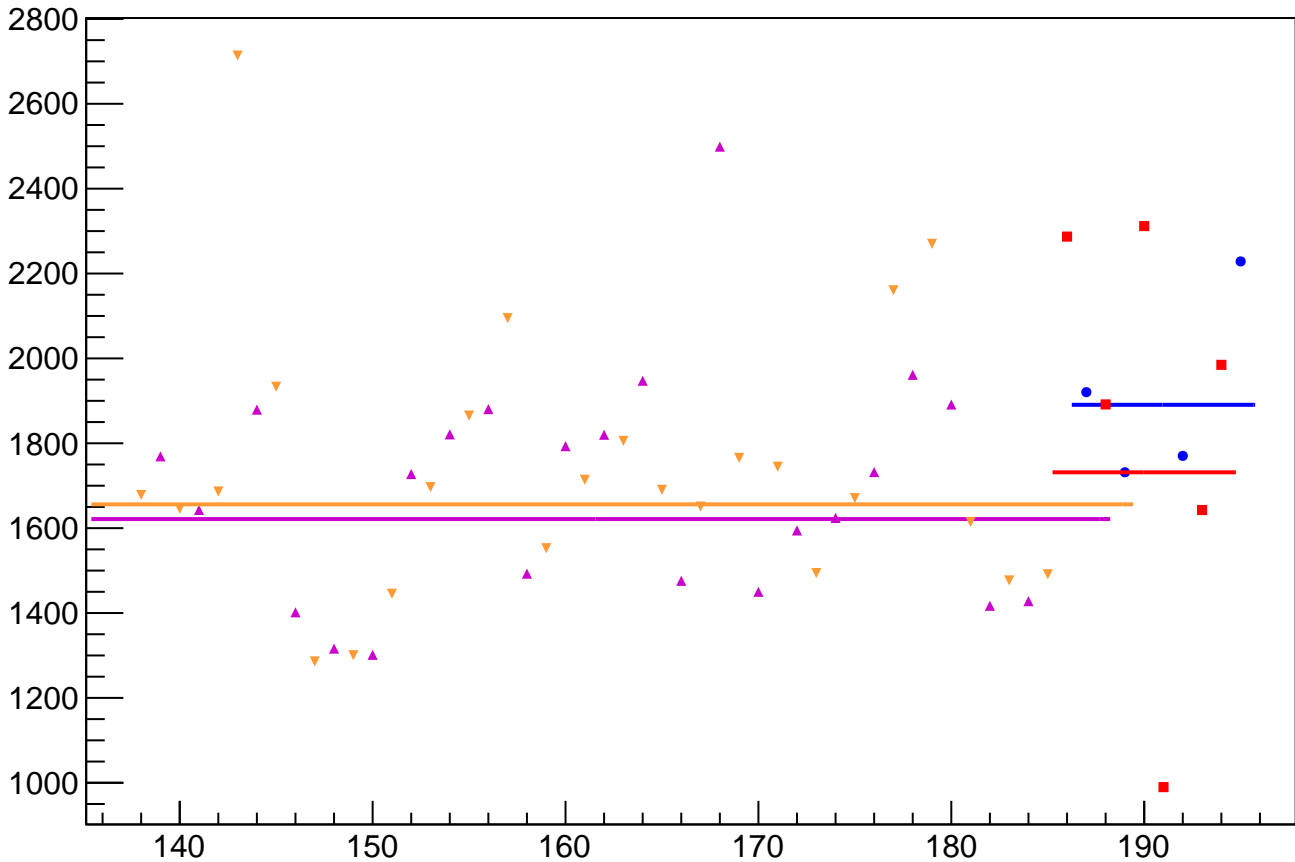
Left In: -2116.114+/-392.997  $\chi^2/\text{NDF}$ : 18.8/22

+ sign 1843.815+/-373.831  $\chi^2/\text{NDF}$ : 30.3/28

All: -297.303+/-260.879  $\chi^2/\text{NDF}$ : 118.3/57

- sign -2329.886+/-364.233  $\chi^2/\text{NDF}$ : 24.1/28

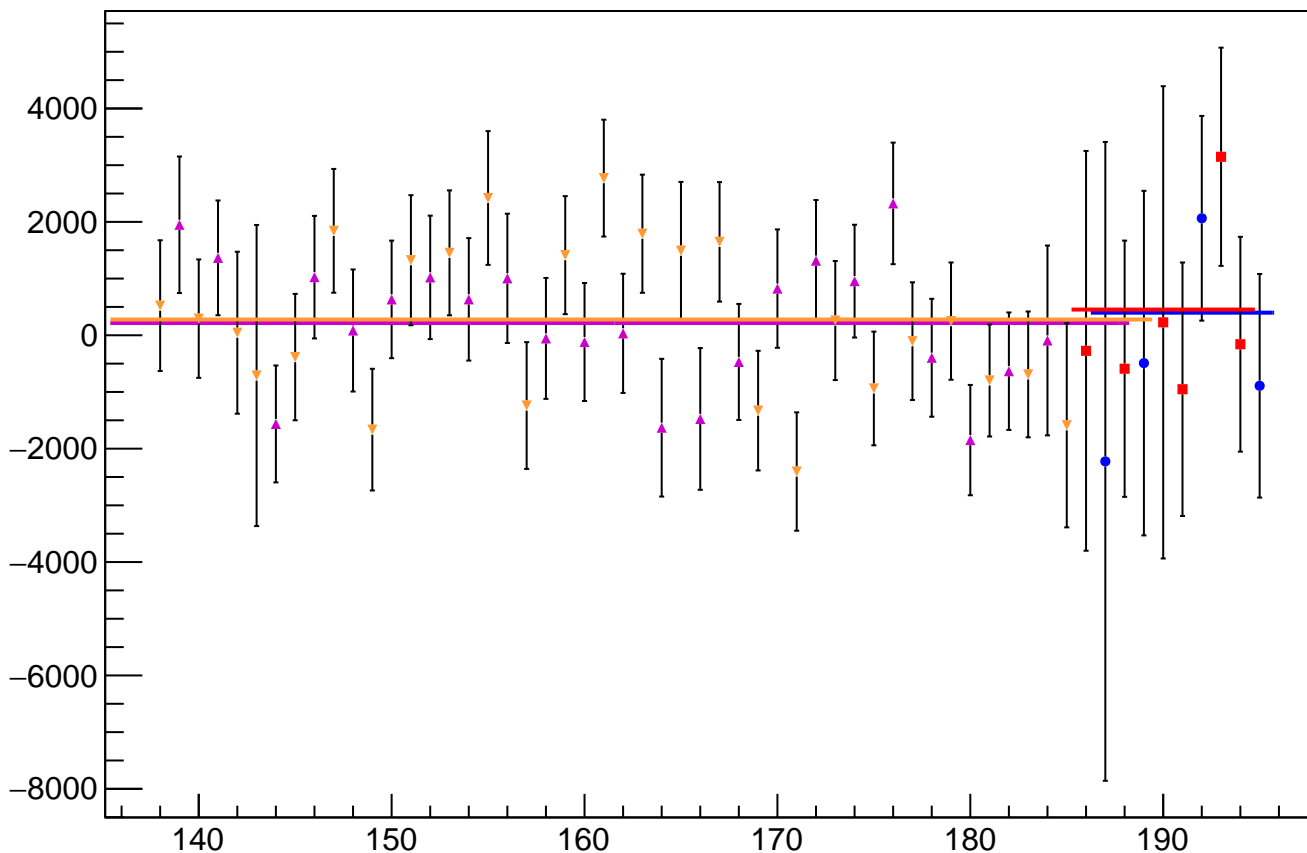
# asym\_us\_agg\_avg\_rms vs Slug



Right In: 1890.677+/-0.886  $\chi^2$ /NDF: 53484.8/3  
 Left Out: 1656.119+/-0.277  $\chi^2$ /NDF:910573.4/24  
 Right Out: 1731.593+/-0.686  $\chi^2$ /NDF: 350954.0/5  
 Left In: 1621.417+/-0.278  $\chi^2$ /NDF:775310.1/22

+ sign 1677.014+/-0.264  $\chi^2$ /NDF: 1027948.3/28  
 All: 1656.463+/-0.184  $\chi^2$ /NDF: 2188161.7/57  
 - sign 1636.954+/-0.258  $\chi^2$ /NDF: 1148431.8/28

# asym\_us\_agg\_dd\_mean vs Slug



Right In:  $398.742 \pm 1192.082$   $\chi^2/\text{NDF}: 1.6/3$

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

Right Out:  $453.385 \pm 961.049$   $\chi^2/\text{NDF}: 2.7/5$

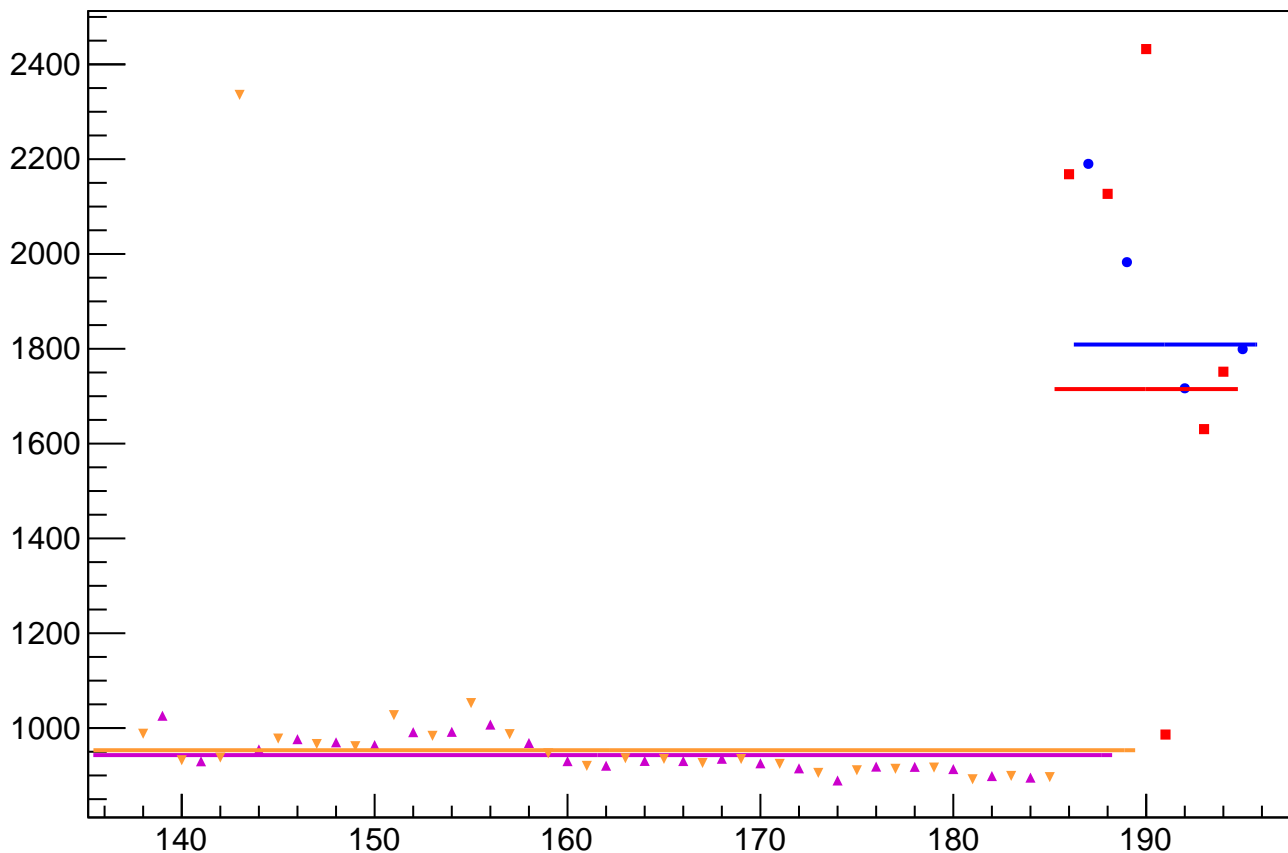
Left In:  $216.121 \pm 225.600$   $\chi^2/\text{NDF}: 24.4/22$

+ sign  $282.190 \pm 219.749$   $\chi^2/\text{NDF}: 40.0/28$

All:  $255.337 \pm 155.344$   $\chi^2/\text{NDF}: 67.2/57$

- sign  $228.512 \pm 219.630$   $\chi^2/\text{NDF}: 27.2/28$

# asym\_us\_agg\_dd\_rms vs Slug



Right In: 1808.997 $\pm$ 0.843  $\chi^2$ /NDF: 20969.6/3

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

Right Out: 1715.025 $\pm$ 0.680  $\chi^2$ /NDF: 375952.1/5

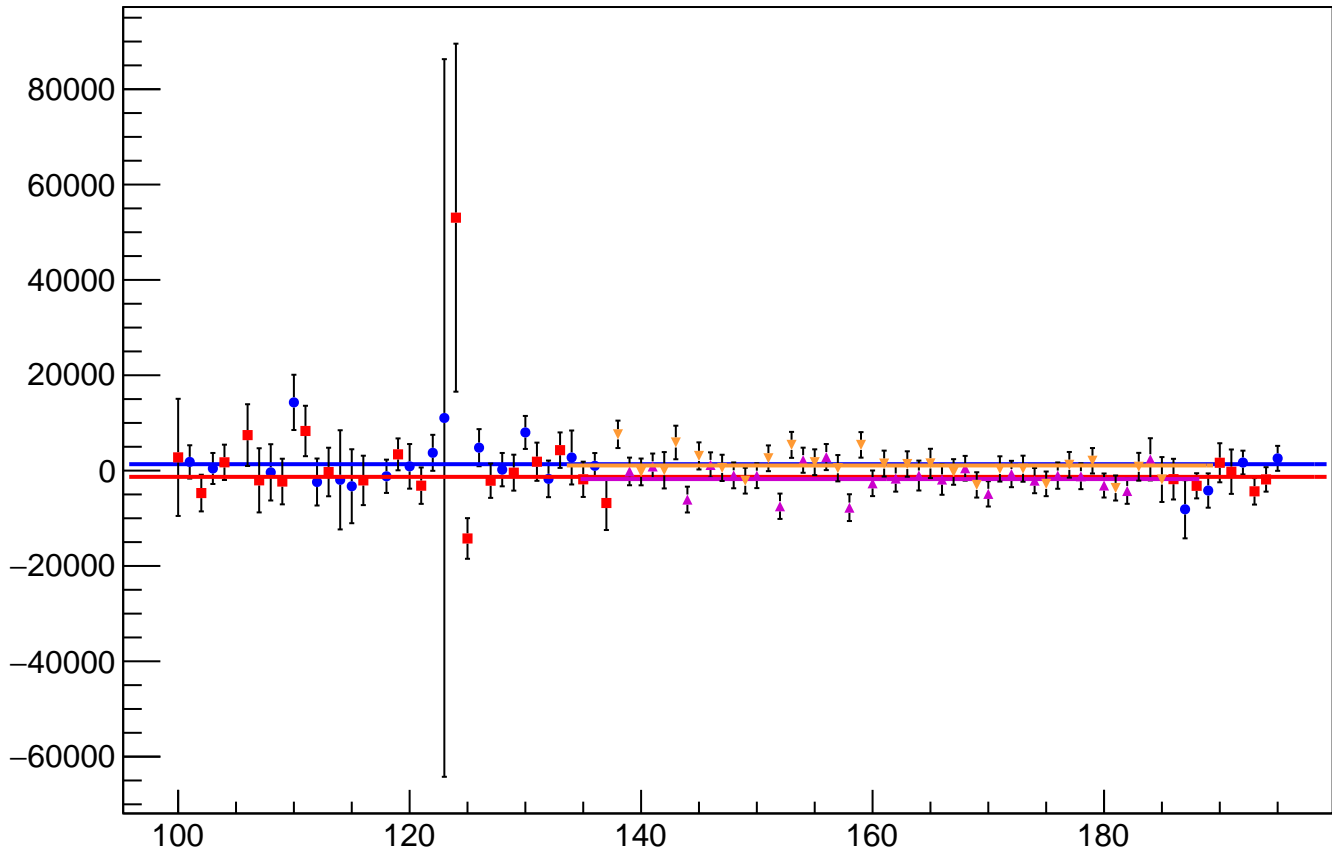
Left In: 942.927 $\pm$ 0.160  $\chi^2$ /NDF:48402.9/22

+ sign 982.302 $\pm$ 0.155  $\chi^2$ /NDF: 1622930.8/28

All: 982.776 $\pm$ 0.110  $\chi^2$ /NDF: 3270763.3/57

- sign 983.251 $\pm$ 0.155  $\chi^2$ /NDF: 1647813.8/28

# reg\_asym\_atl1\_mean vs Slug



Right In: 1346.040+/-851.237  $\chi^2/\text{NDF}$ : 17.5/20

Left Out: 1078.054+/-564.005  $\chi^2/\text{NDF}$ : 23.6/24

Right Out: -1313.173+/-807.317  $\chi^2/\text{NDF}$ : 26.7/24

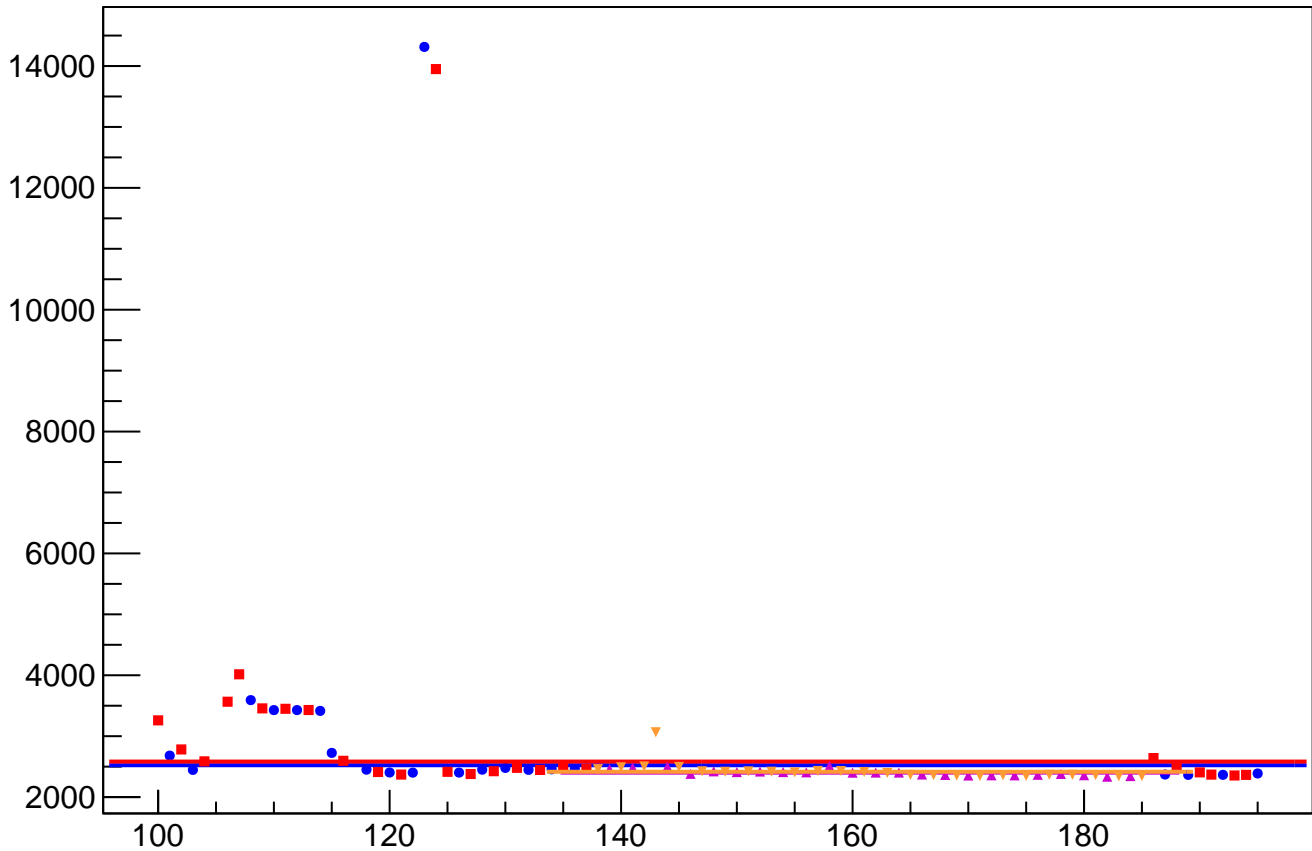
Left In: -1777.100+/-575.895  $\chi^2/\text{NDF}$ : 24.1/22

+ sign 1159.810+/-470.167  $\chi^2/\text{NDF}$ : 41.2/45

All: -234.365+/-331.986  $\chi^2/\text{NDF}$ : 109.7/93

- sign -1620.642+/-468.834  $\chi^2/\text{NDF}$ : 51.0/47

# reg\_asym\_atl1\_rms vs Slug



Right In: 2523.082 $\pm$ 0.602  $\chi^2$ /NDF: 280027.0/20

Left Out: 2416.019 $\pm$ 0.399  $\chi^2$ /NDF: 82636.1/24

Right Out: 2583.319 $\pm$ 0.571  $\chi^2$ /NDF: 586437.7/24

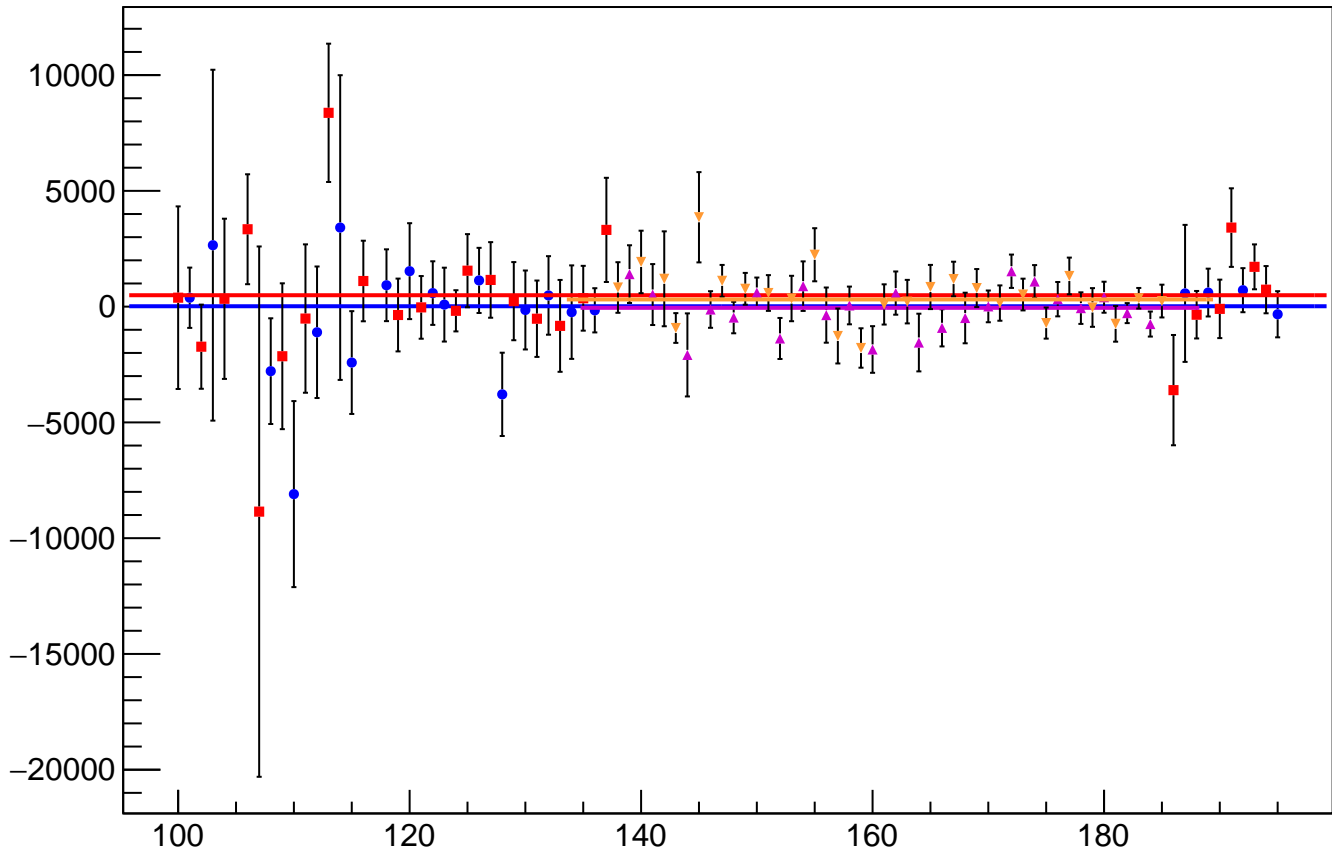
Left In: 2401.422 $\pm$ 0.407  $\chi^2$ /NDF: 13747.6/22

+ sign 2448.681 $\pm$ 0.332  $\chi^2$ /NDF: 384648.9/45

All: 2455.744 $\pm$ 0.235  $\chi^2$ /NDF: 1053023.1/93

- sign 2462.766 $\pm$ 0.332  $\chi^2$ /NDF: 667474.2/47

# asym\_atl1\_correction\_mean vs Slug



Right In:  $16.874 \pm 337.214$   $\chi^2/\text{NDF}: 14.7/20$

Left Out:  $310.873 \pm 160.650$   $\chi^2/\text{NDF}: 29.7/24$

Right Out:  $492.815 \pm 315.057$   $\chi^2/\text{NDF}: 24.0/24$

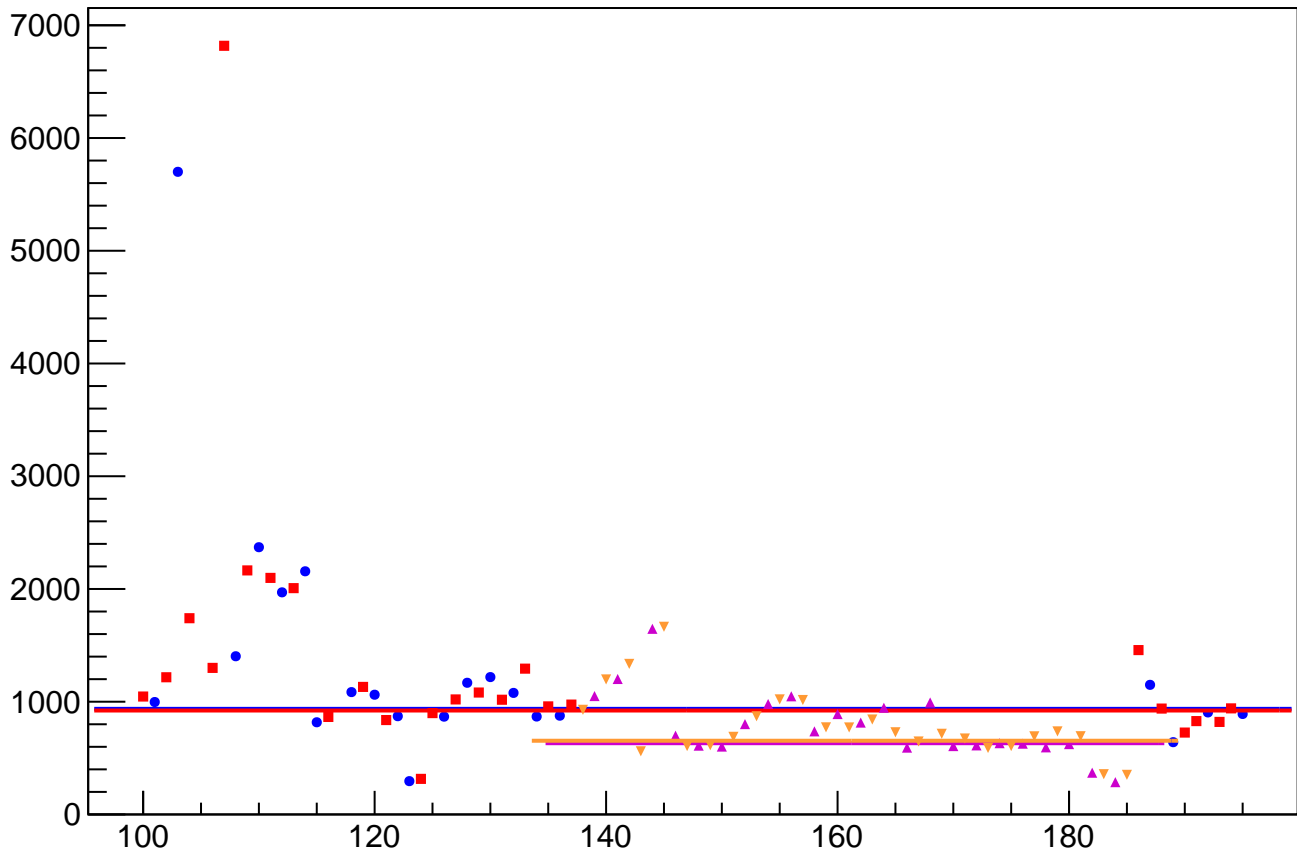
Left In:  $-51.454 \pm 161.744$   $\chi^2/\text{NDF}: 23.8/22$

+ sign  $256.489 \pm 145.033$   $\chi^2/\text{NDF}: 45.1/45$

All:  $158.512 \pm 102.147$   $\chi^2/\text{NDF}: 96.2/93$

- sign  $62.072 \pm 143.890$   $\chi^2/\text{NDF}: 50.2/47$

# asym\_atl1\_correction\_rms vs Slug



Right In: 936.664 $\pm$ 0.238  $\chi^2$ /NDF: 2122929.9/20

Left Out: 653.803 $\pm$ 0.114  $\chi^2$ /NDF: 3254694.4/24

Right Out: 922.031 $\pm$ 0.223  $\chi^2$ /NDF: 2850949.3/24

Left In: 632.053 $\pm$ 0.114  $\chi^2$ /NDF: 3942853.4/22

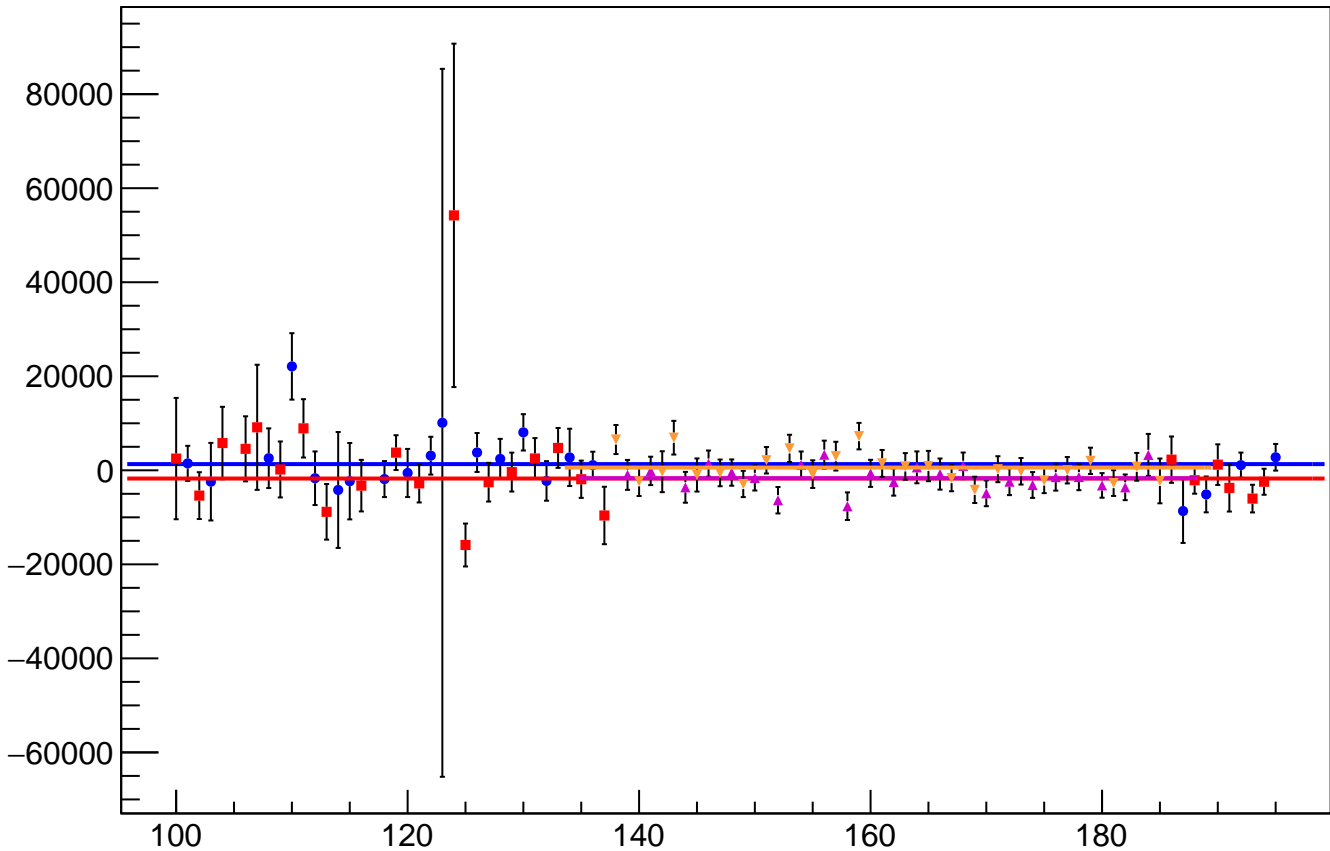
+ sign 706.126 $\pm$ 0.103  $\chi^2$ /NDF: 6524553.3/45

All: 699.278 $\pm$ 0.072  $\chi^2$ /NDF: 14668069.5/93

- sign 692.538 $\pm$ 0.102  $\chi^2$ /NDF: 8134668.9/47



# asym\_atl1\_mean vs Slug



Right In:  $1318.039 \pm 956.135$   $\chi^2/\text{NDF}: 20.2/20$

Left Out:  $580.879 \pm 597.173$   $\chi^2/\text{NDF}: 25.3/24$

Right Out:  $-1749.747 \pm 909.994$   $\chi^2/\text{NDF}: 30.5/24$

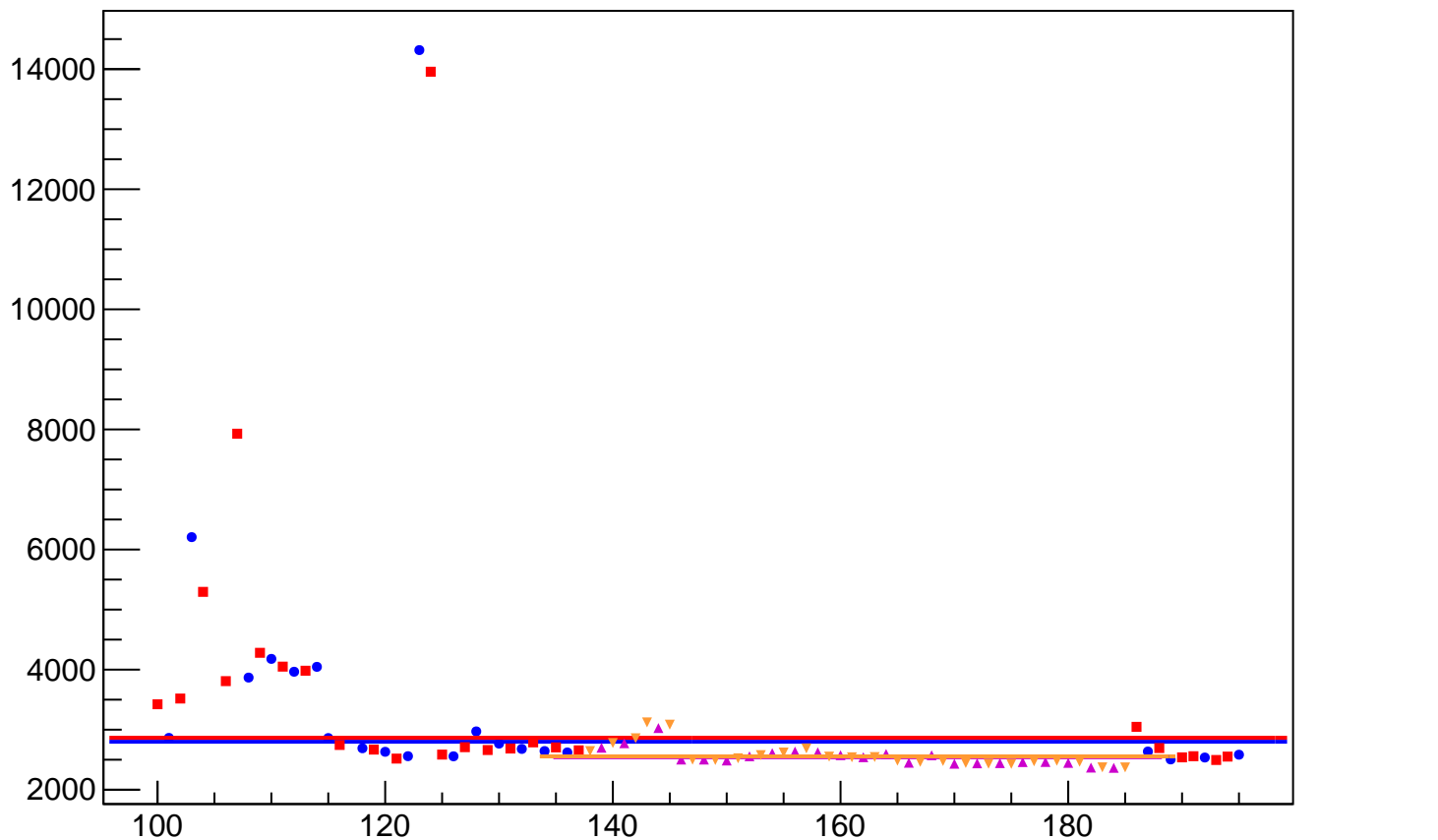
Left In:  $-1679.572 \pm 610.111$   $\chi^2/\text{NDF}: 18.2/22$

+ sign  $787.742 \pm 506.500$   $\chi^2/\text{NDF}: 45.9/45$

All:  $-456.170 \pm 358.239$   $\chi^2/\text{NDF}: 106.7/93$

- sign  $-1701.334 \pm 506.755$   $\chi^2/\text{NDF}: 48.7/47$

# asym\_atl1\_rms vs Slug



Right In: 2799.432+/-0.676  $\chi^2$ /NDF: 701595.8/20

Left Out: 2555.279+/-0.422  $\chi^2$ /NDF: 154743.6/24

Right Out: 2864.977+/-0.643  $\chi^2$ /NDF: 1138004.6/24

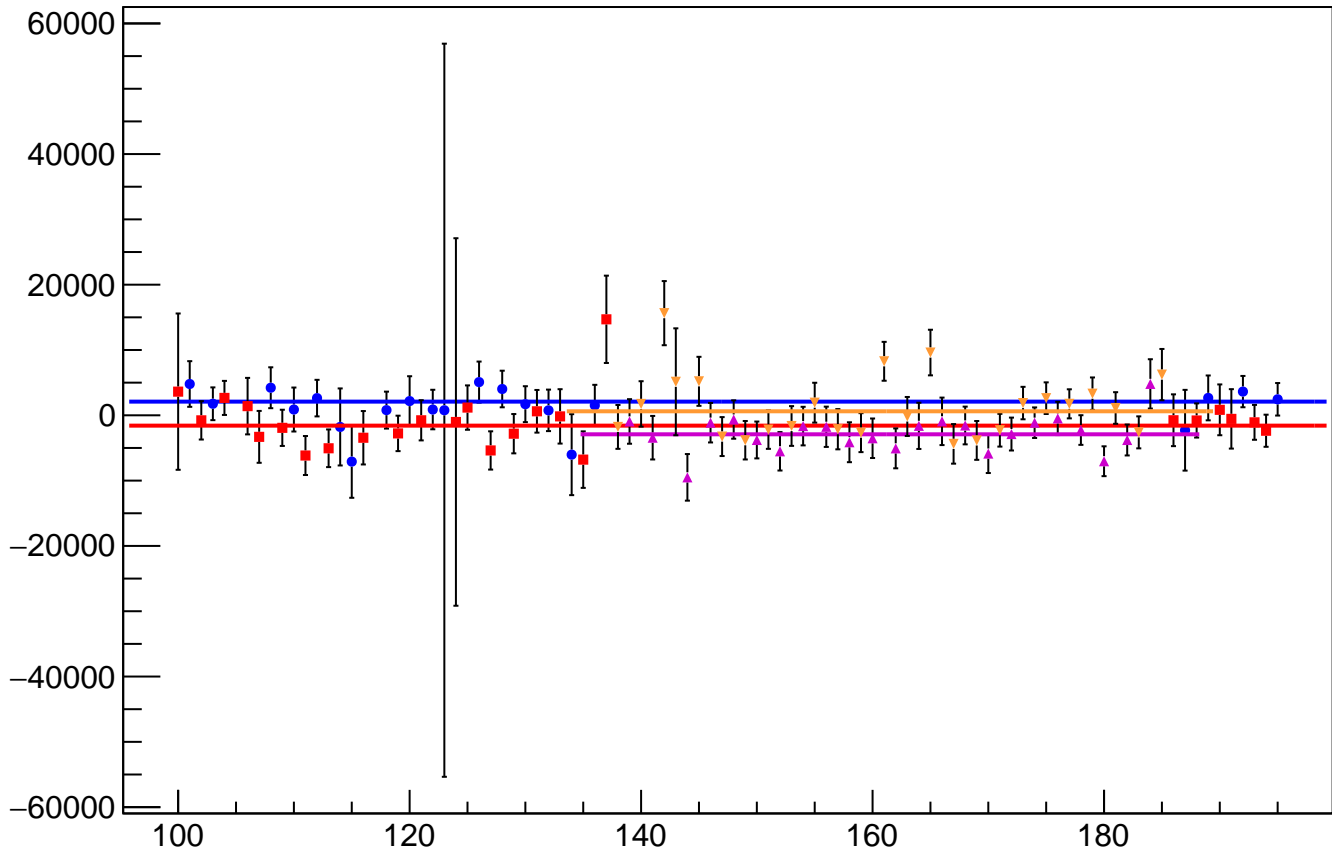
Left In: 2540.988+/-0.431  $\chi^2$ /NDF: 94756.7/22

+ sign 2623.793+/-0.358  $\chi^2$ /NDF: 950154.3/45

All: 2632.623+/-0.253  $\chi^2$ /NDF: 2359033.5/93

- sign 2641.461+/-0.358  $\chi^2$ /NDF: 1407663.1/47

# reg\_asym\_atl2\_mean vs Slug



Right In: 2094.906+/-714.841  $\chi^2$ /NDF: 9.1/20

Left Out: 614.867+/-591.148  $\chi^2$ /NDF:45.2/24

Right Out: -1582.639+/-670.733  $\chi^2$ /NDF: 19.0/24

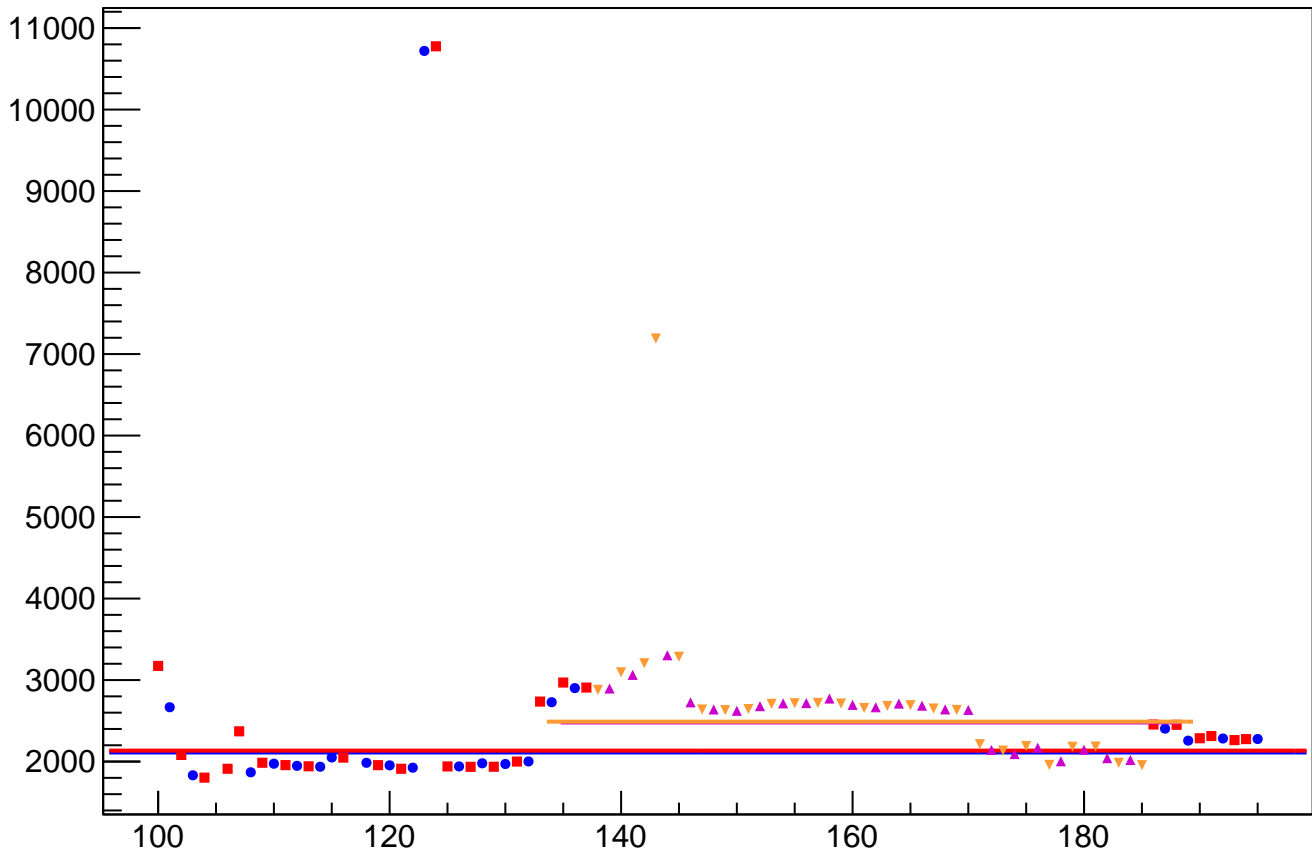
Left In: -2909.108+/-599.673  $\chi^2$ /NDF:17.4/22

+ sign 1215.954+/-455.556  $\chi^2$ /NDF: 56.8/45

All: -585.250+/-319.078  $\chi^2$ /NDF: 126.1/93

- sign -2319.837+/-447.052  $\chi^2$ /NDF: 38.6/47

# reg\_asym\_atl2\_rms vs Slug



Right In: 2111.381+/-0.505  $\chi^2$ /NDF: 352497.6/20

Left Out: 2489.577+/-0.418  $\chi^2$ /NDF:1364203.3/24

Right Out: 2134.322+/-0.474  $\chi^2$ /NDF: 521674.1/24

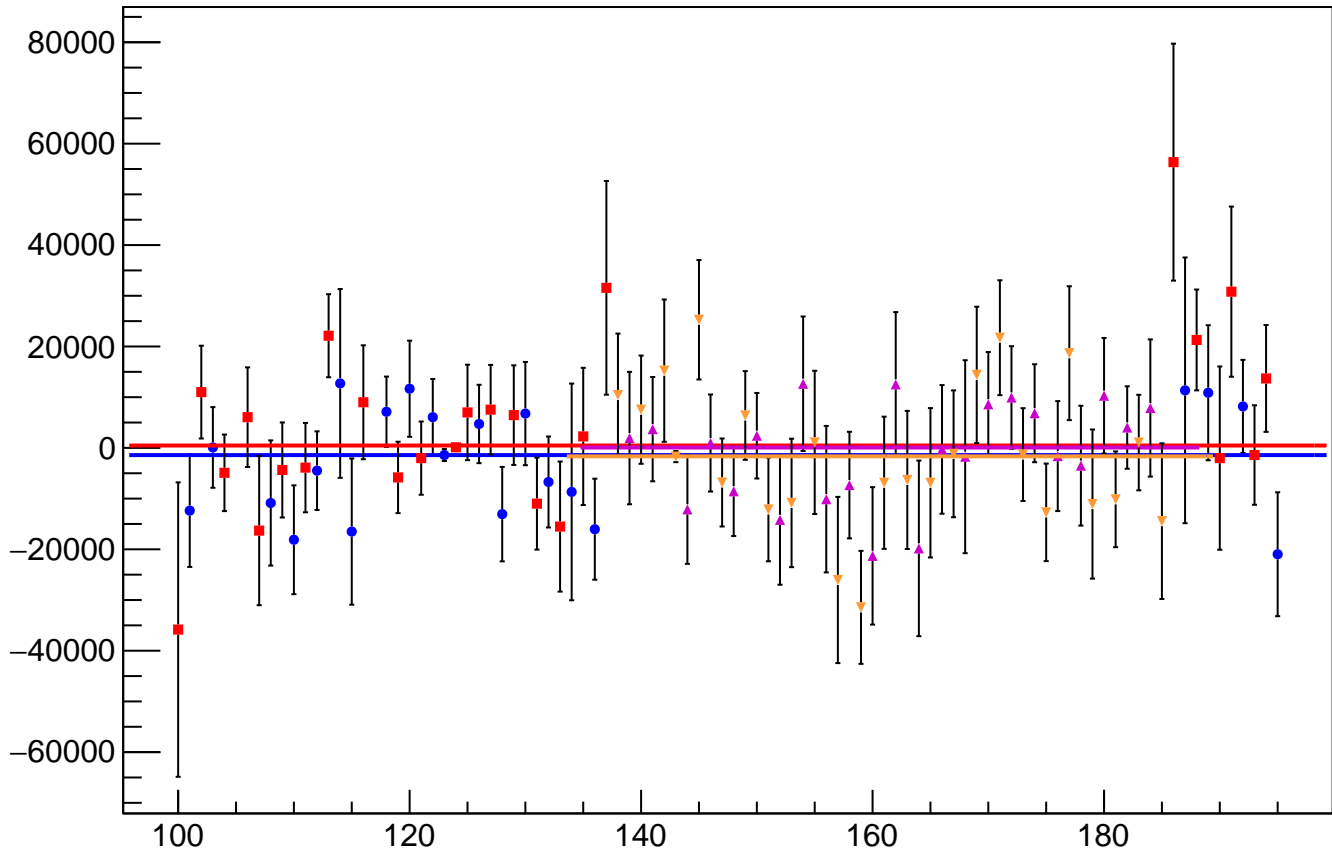
Left In: 2479.348+/-0.424  $\chi^2$ /NDF:668398.2/22

+ sign 2335.980+/-0.322  $\chi^2$ /NDF: 2049157.5/45

All: 2330.933+/-0.226  $\chi^2$ /NDF: 3533831.6/93

- sign 2326.073+/-0.316  $\chi^2$ /NDF: 1484192.2/47

# asym\_atl2\_correction\_mean vs Slug



Right In:  $-1421.251 \pm 1039.926$   $\chi^2/\text{NDF}: 20.4/20$

Left Out:  $-1665.417 \pm 993.060$   $\chi^2/\text{NDF}: 32.4/24$

Right Out:  $467.933 \pm 689.044$   $\chi^2/\text{NDF}: 36.1/24$

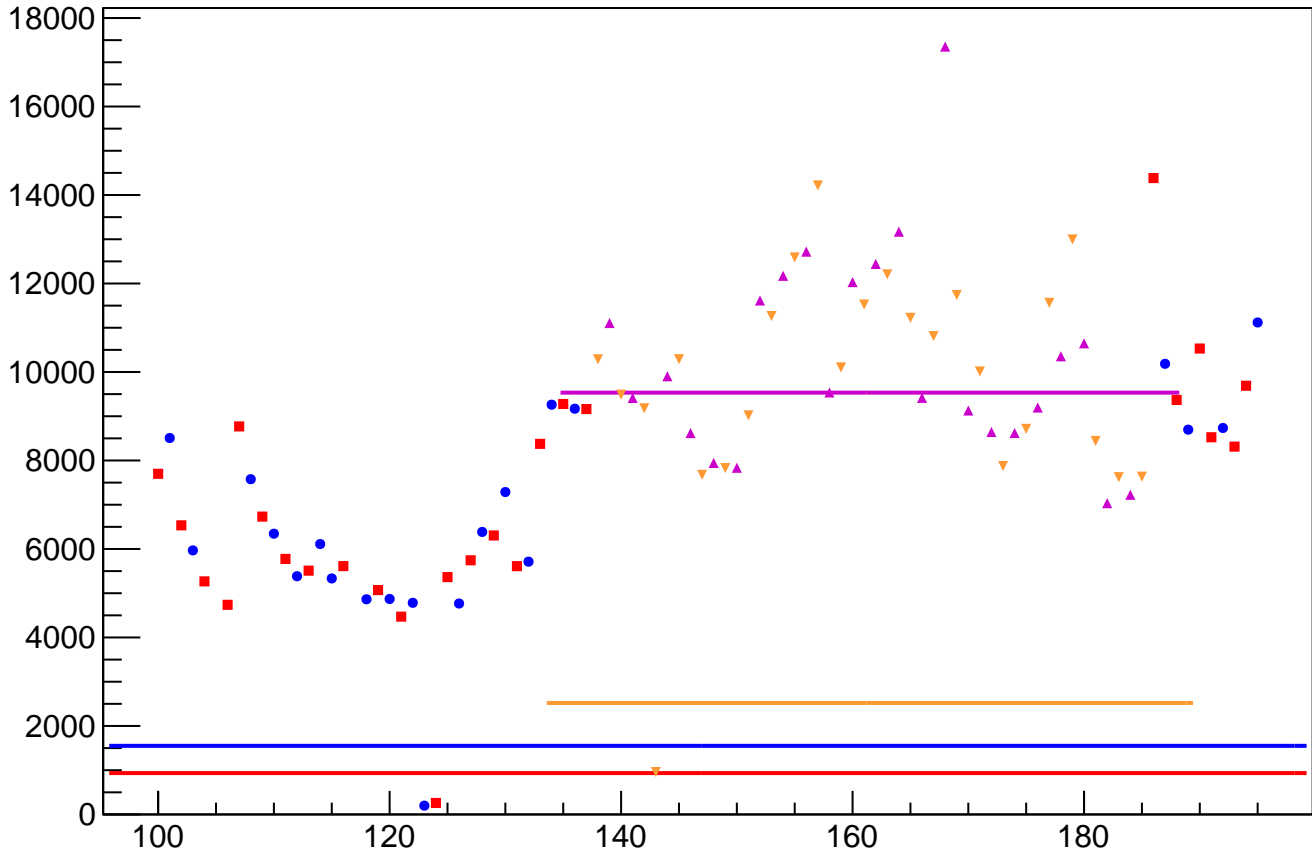
Left In:  $80.274 \pm 2331.531$   $\chi^2/\text{NDF}: 13.8/22$

+ sign  $-1548.959 \pm 718.196$   $\chi^2/\text{NDF}: 52.9/45$

All:  $-473.562 \pm 486.280$   $\chi^2/\text{NDF}: 106.9/93$

- sign  $436.794 \pm 660.792$   $\chi^2/\text{NDF}: 49.9/47$

# asym\_atl2\_correction\_rms vs Slug



Right In: 1550.963+/-0.735  $\chi^2$ /NDF: 13362590.8/20

Left Out: 2519.359+/-0.702  $\chi^2$ /NDF:23642118.3/24

Right Out: 935.367+/-0.487  $\chi^2$ /NDF: 17091795.8/24

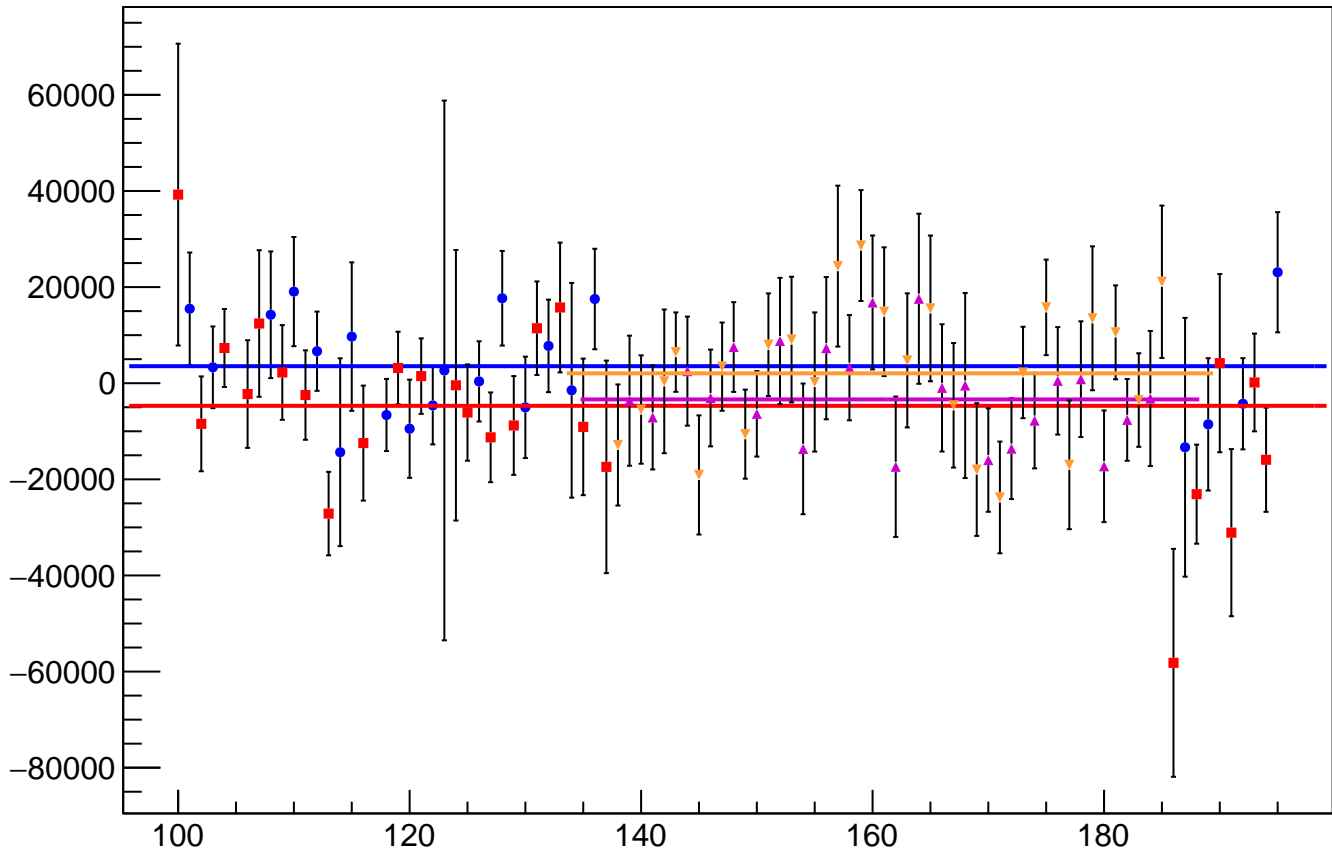
Left In: 9533.563+/-1.649  $\chi^2$ /NDF:1316640.0/22

+ sign 2057.473+/-0.508  $\chi^2$ /NDF: 37911832.4/45

All: 1823.812+/-0.344  $\chi^2$ /NDF: 81725971.8/9

- sign 1626.011+/-0.467  $\chi^2$ /NDF: 43423232.7/47

# asym\_atl2\_mean vs Slug



Right In: 3541.782+/-2365.084  $\chi^2$ /NDF: 18.4/20

Left Out: 2055.950+/-2333.494  $\chi^2$ /NDF:30.7/24

Right Out: -4702.665+/-2206.633  $\chi^2$ /NDF: 33.2/24

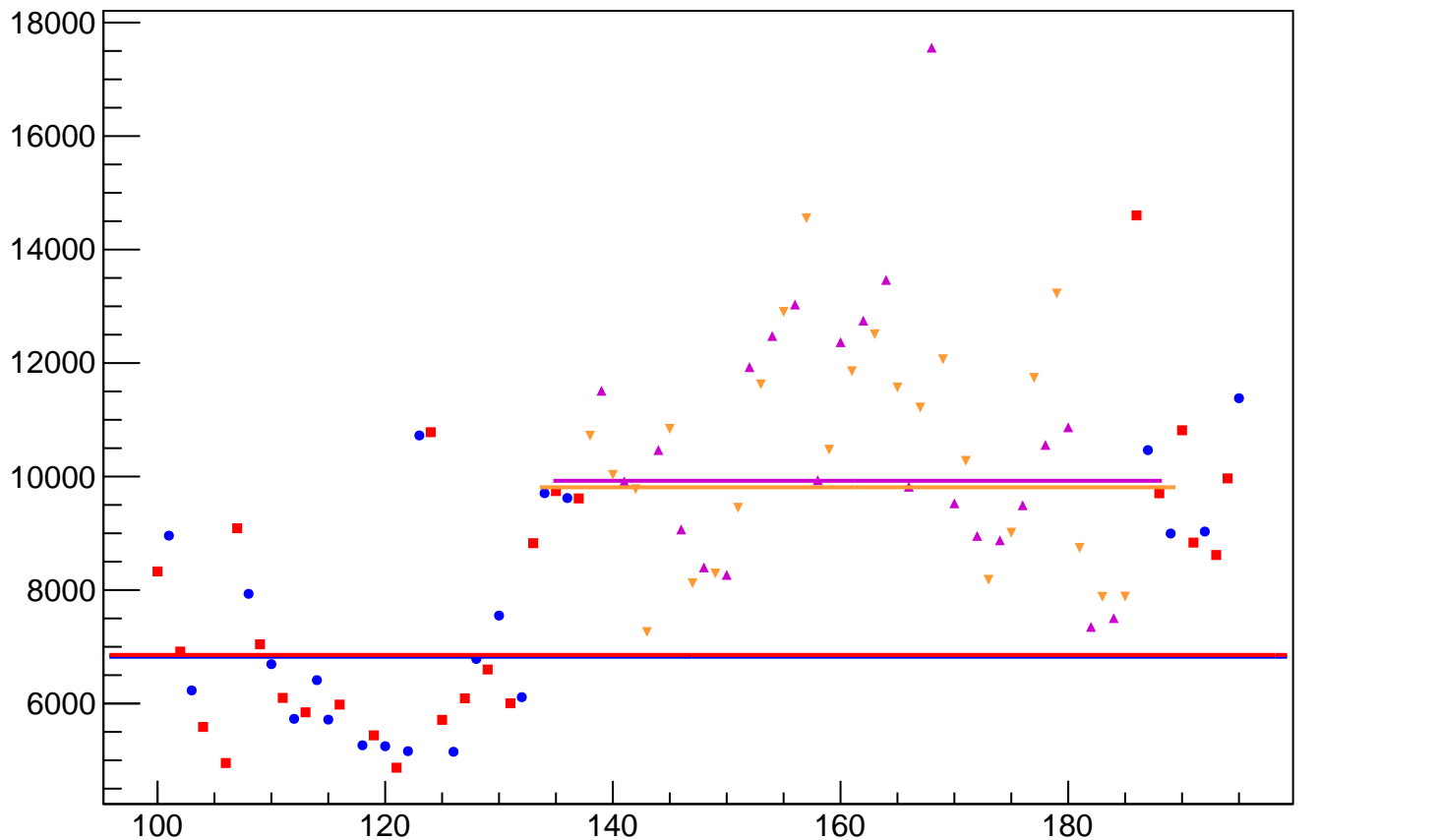
Left In: -3371.931+/-2423.242  $\chi^2$ /NDF:13.1/22

+ sign 2788.877+/-1661.085  $\chi^2$ /NDF: 49.3/45

All: -717.076+/-1163.978  $\chi^2$ /NDF: 104.5/93

- sign -4099.421+/-1631.540  $\chi^2$ /NDF: 46.5/47

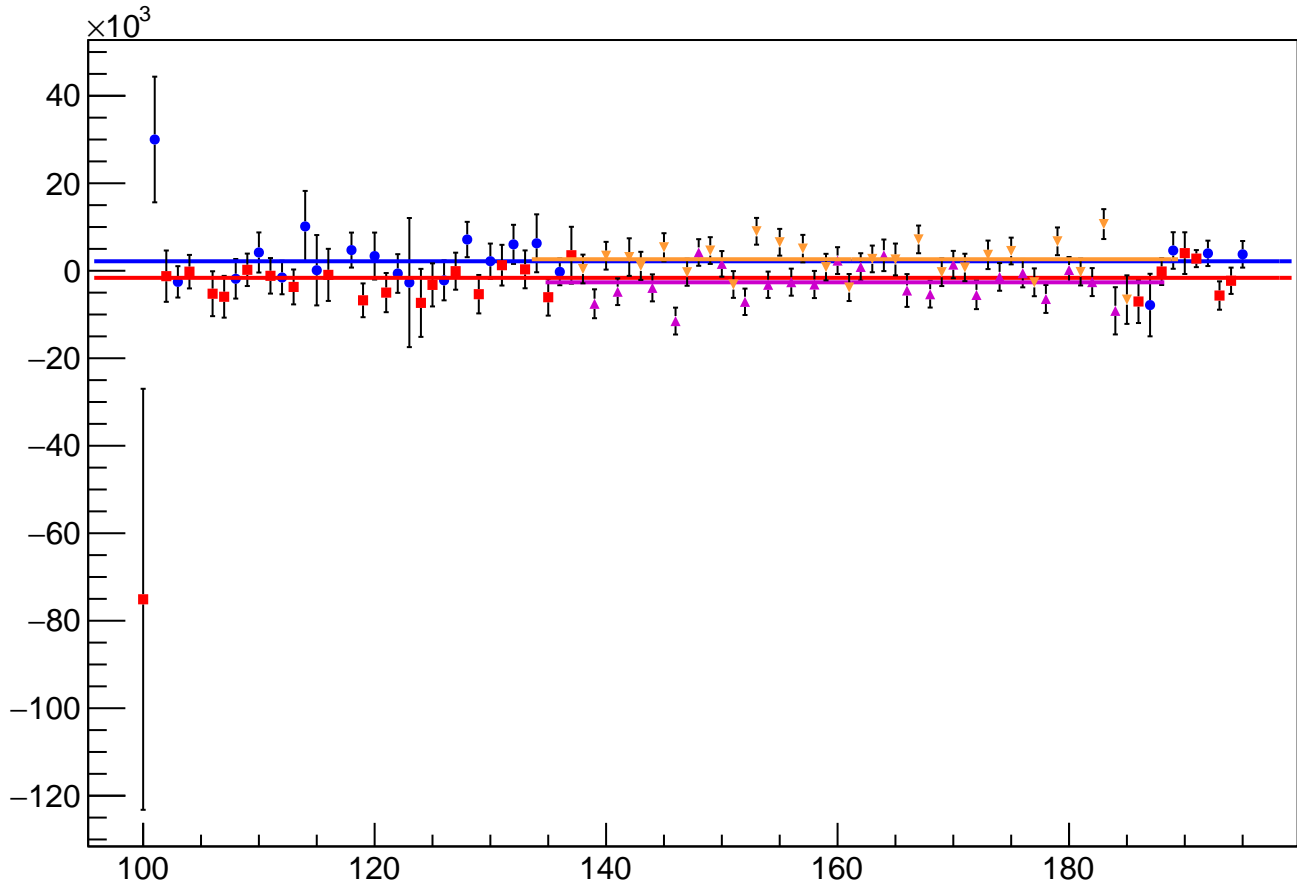
# asym\_atl2\_rms vs Slug



Right In: 6824.366+/-1.672	$\chi^2/\text{NDF}$ : 1102201.6/20	+ sign 8337.782+/-1.175	$\chi^2/\text{NDF}$ : 3932208.5/45
Left Out: 9811.053+/-1.650	$\chi^2/\text{NDF}$ : 1213831.0/24	All: 8292.103+/-0.823	$\chi^2/\text{NDF}$ : 8263105.1/93
Right Out: 6857.300+/-1.560	$\chi^2/\text{NDF}$ : 1363667.8/24	- sign 8248.035+/-1.154	$\chi^2/\text{NDF}$ : 4327925.0/47
Left In: 9925.337+/-1.713	$\chi^2/\text{NDF}$ : 1211554.7/22		



# reg\_asym\_atr1\_mean vs Slug



Right In: 2170.332+/-960.044  $\chi^2$ /NDF: 16.5/20

Left Out: 2635.833+/-646.121  $\chi^2$ /NDF:35.1/24

Right Out: -1617.114+/-809.397  $\chi^2$ /NDF: 20.0/24

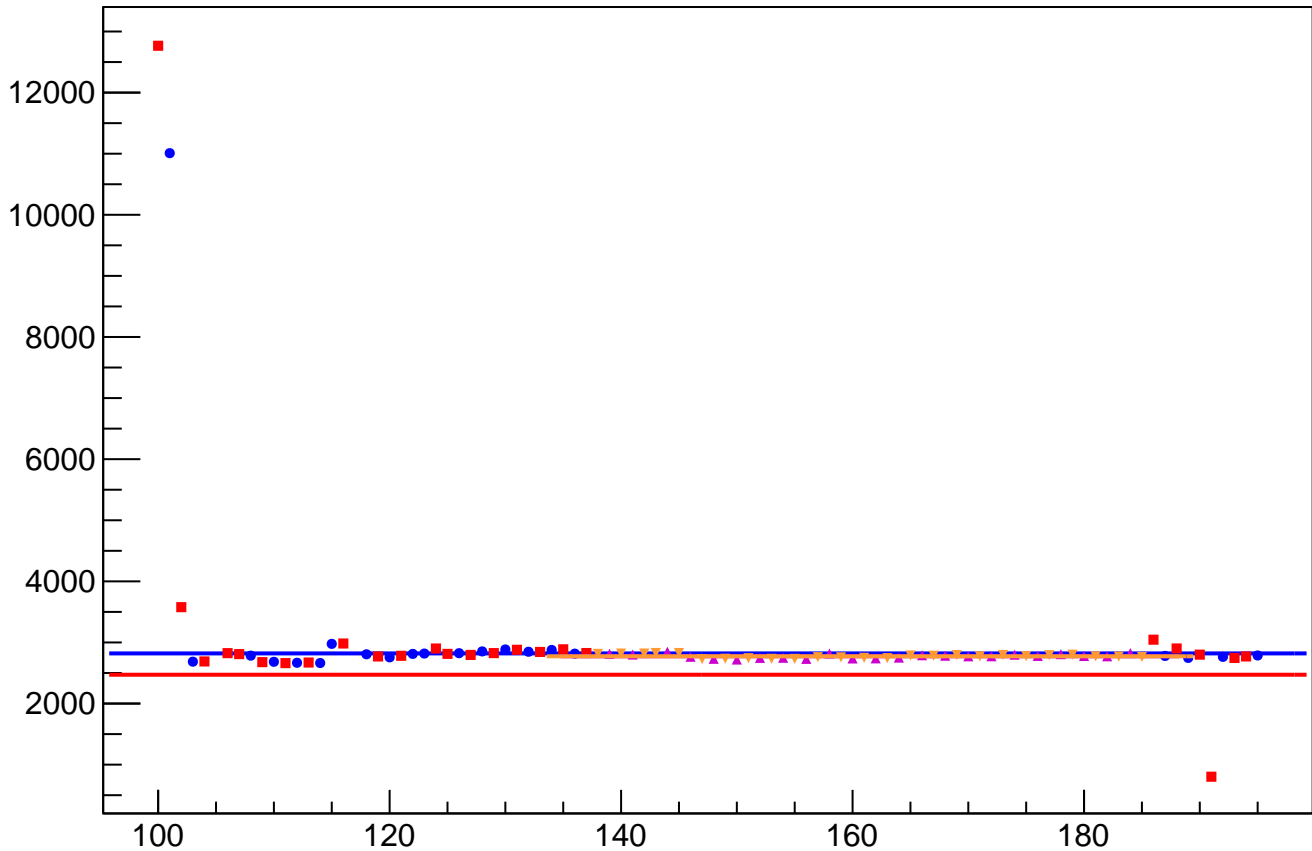
Left In: -2638.607+/-664.569  $\chi^2$ /NDF:35.2/22

+ sign 2490.716+/-536.030  $\chi^2$ /NDF: 51.8/45

All: 31.045+/-370.854  $\chi^2$ /NDF: 148.4/93

- sign -2227.270+/-513.621  $\chi^2$ /NDF: 56.2/47

# reg\_asym\_atr1\_rms vs Slug



Right In: 2820.704+/-0.679  $\chi^2/\text{NDF}$ : 662412.1/20

Left Out: 2773.713+/-0.457  $\chi^2/\text{NDF}$ : 4616.5/24

+ sign 2788.362+/-0.379  $\chi^2/\text{NDF}$ : 670326.4/45

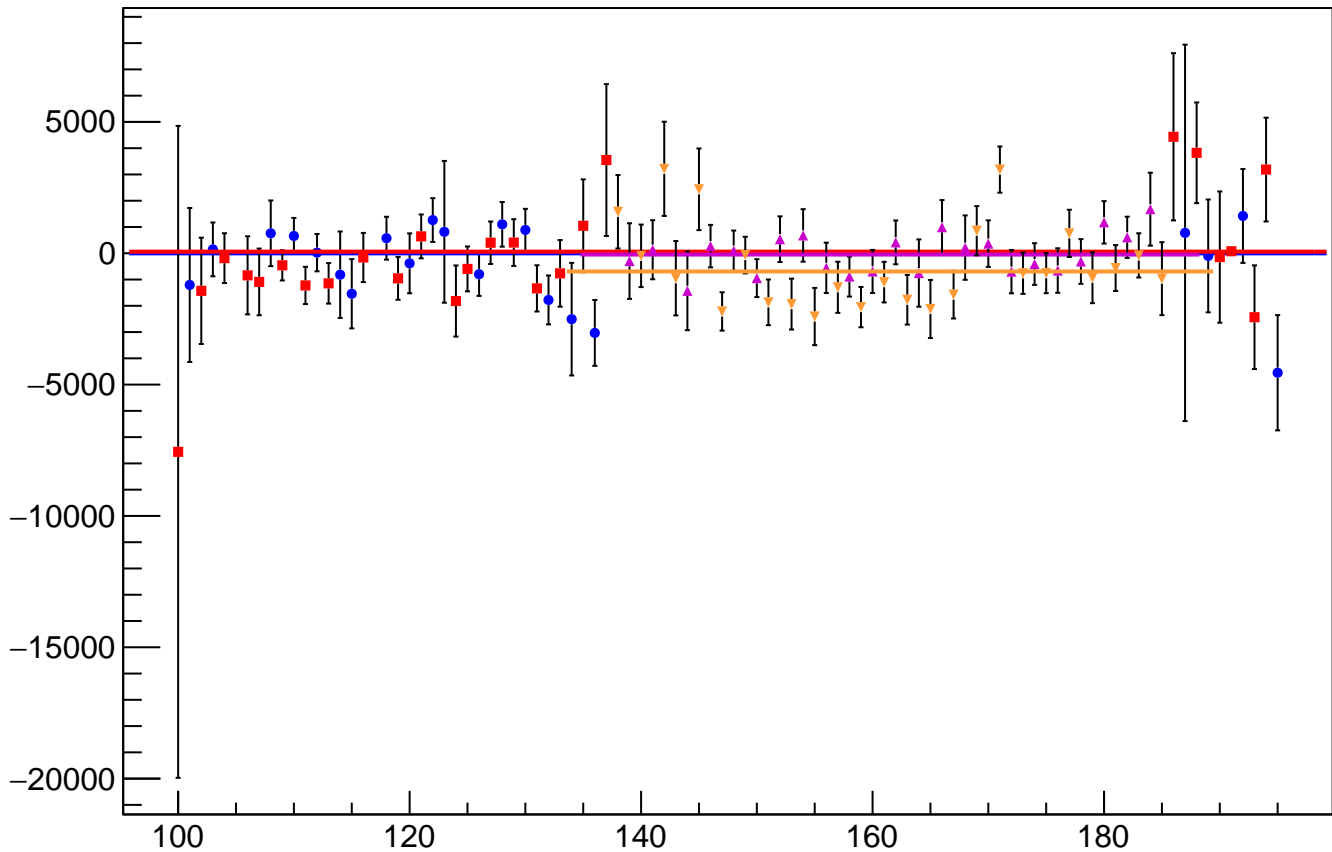
Right Out: 2471.709+/-0.572  $\chi^2/\text{NDF}$ : 1915281.1/24

All: 2717.425+/-0.262  $\chi^2/\text{NDF}$ : 2824452.7/93

Left In: 2774.036+/-0.470  $\chi^2/\text{NDF}$ : 4985.3/22

- sign 2652.294+/-0.363  $\chi^2/\text{NDF}$ : 2086939.4/47

# asym\_atr1\_correction\_mean vs Slug



Right In:  $-3.889 \pm 237.235$   $\chi^2/\text{NDF}: 25.7/20$

Left Out:  $-692.808 \pm 187.297$   $\chi^2/\text{NDF}: 56.0/24$

Right Out:  $62.081 \pm 37.911$   $\chi^2/\text{NDF}: 28.4/24$

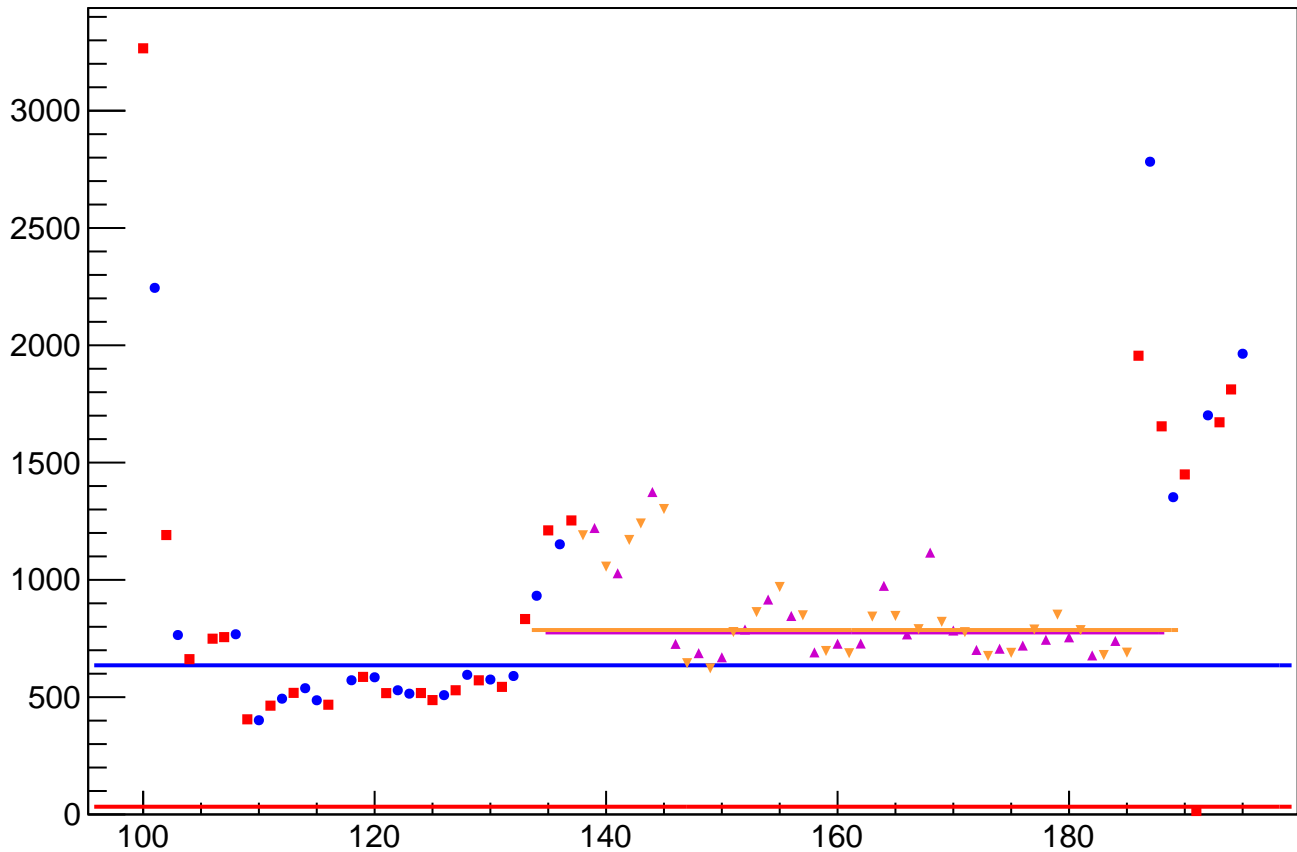
Left In:  $-49.244 \pm 189.190$   $\chi^2/\text{NDF}: 13.6/22$

+ sign  $-428.280 \pm 147.004$   $\chi^2/\text{NDF}: 86.9/45$

All:  $28.572 \pm 36.038$   $\chi^2/\text{NDF}: 139.6/93$

- sign  $57.783 \pm 37.172$   $\chi^2/\text{NDF}: 42.4/47$

# asym\_atr1\_correction\_rms vs Slug



Right In: 635.797 $\pm$ 0.168  $\chi^2$ /NDF: 3346461.7/20

Left Out: 786.173 $\pm$ 0.132  $\chi^2$ /NDF: 1249536.1/24

Right Out: 32.955 $\pm$ 0.027  $\chi^2$ /NDF: 18455639.5/24

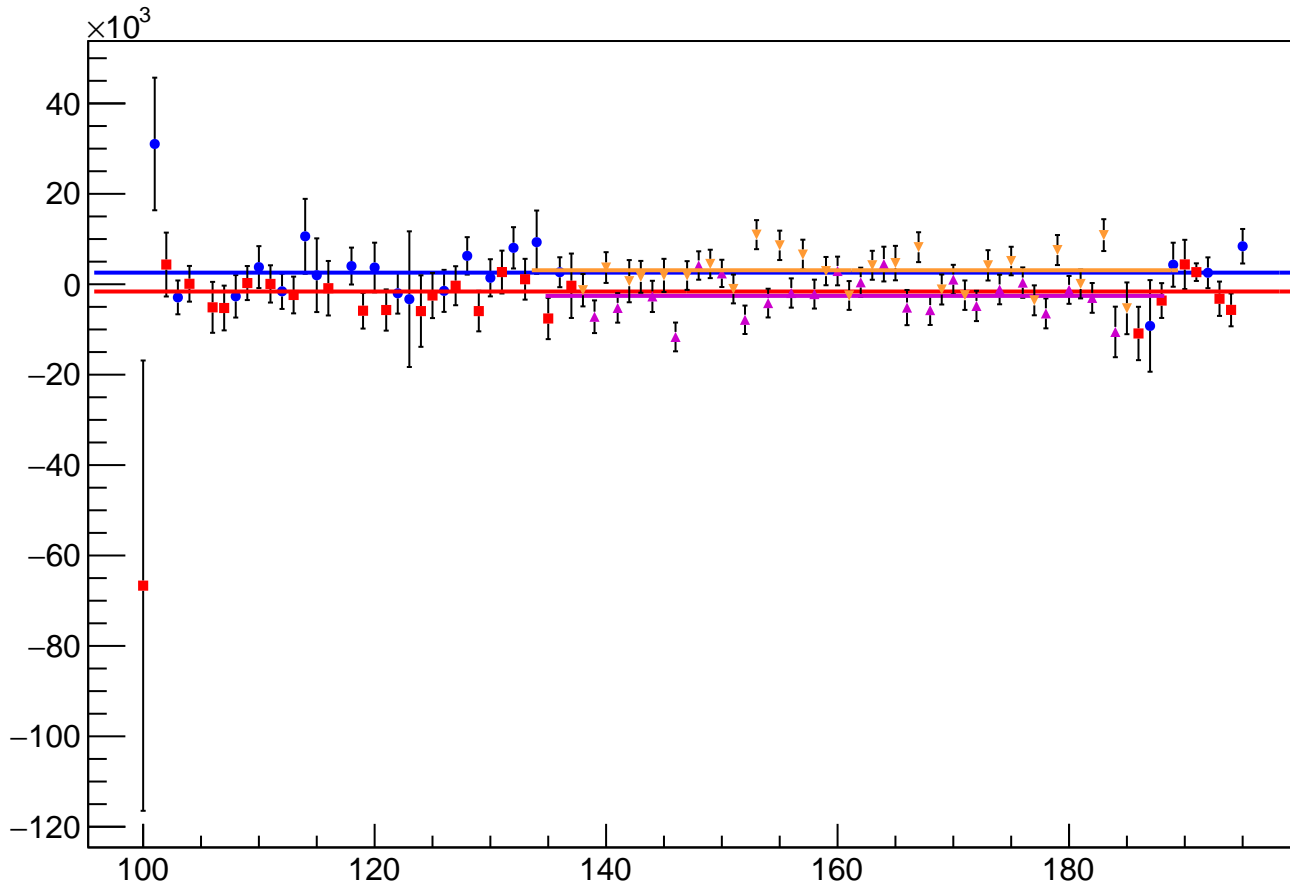
Left In: 775.930 $\pm$ 0.134  $\chi^2$ /NDF: 1056766.5/22

+ sign 728.432 $\pm$ 0.104  $\chi^2$ /NDF: 5091027.7/45

All: 101.711 $\pm$ 0.025  $\chi^2$ /NDF: 92933132.7/93

- sign 61.637 $\pm$ 0.026  $\chi^2$ /NDF: 49166562.3/47

# asym\_atr1\_mean vs Slug



Right In: 2569.459 $\pm$ 1031.202  $\chi^2$ /NDF: 18.5/20

Left Out: 3094.826 $\pm$ 678.510  $\chi^2$ /NDF:38.7/24

Right Out: -1603.948 $\pm$ 862.070  $\chi^2$ /NDF: 20.5/24

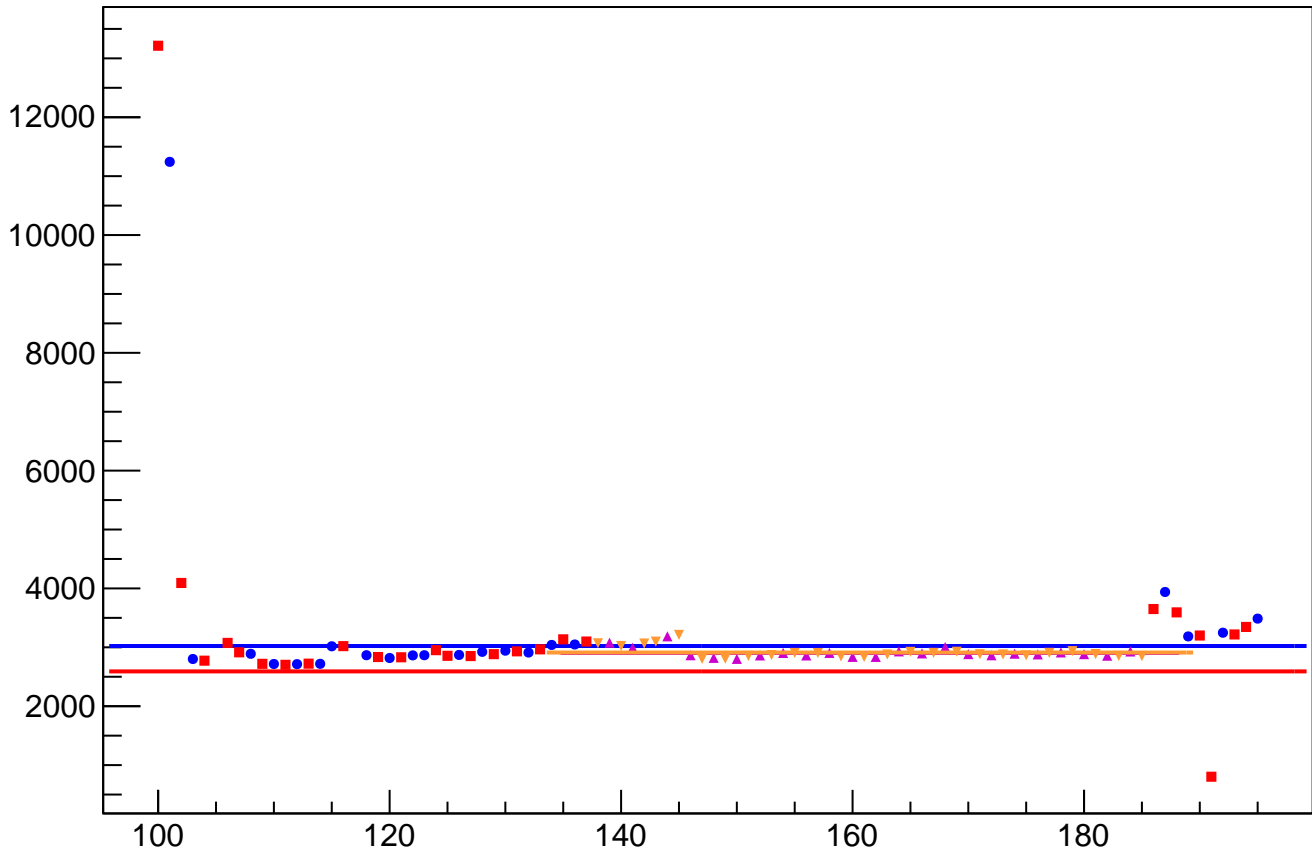
Left In: -2573.184 $\pm$ 695.795  $\chi^2$ /NDF:35.7/22

+ sign 2936.095 $\pm$ 566.817  $\chi^2$ /NDF: 57.3/45

All: 255.280 $\pm$ 391.519  $\chi^2$ /NDF: 157.0/93

- sign -2190.850 $\pm$ 541.439  $\chi^2$ /NDF: 56.9/47

# asym\_atr1\_rms vs Slug



Right In: 3022.016+/-0.729  $\chi^2$ /NDF: 731456.8/20

Left Out: 2911.226+/-0.480  $\chi^2$ /NDF:36644.3/24

Right Out: 2591.026+/-0.610  $\chi^2$ /NDF: 2376447.7/24

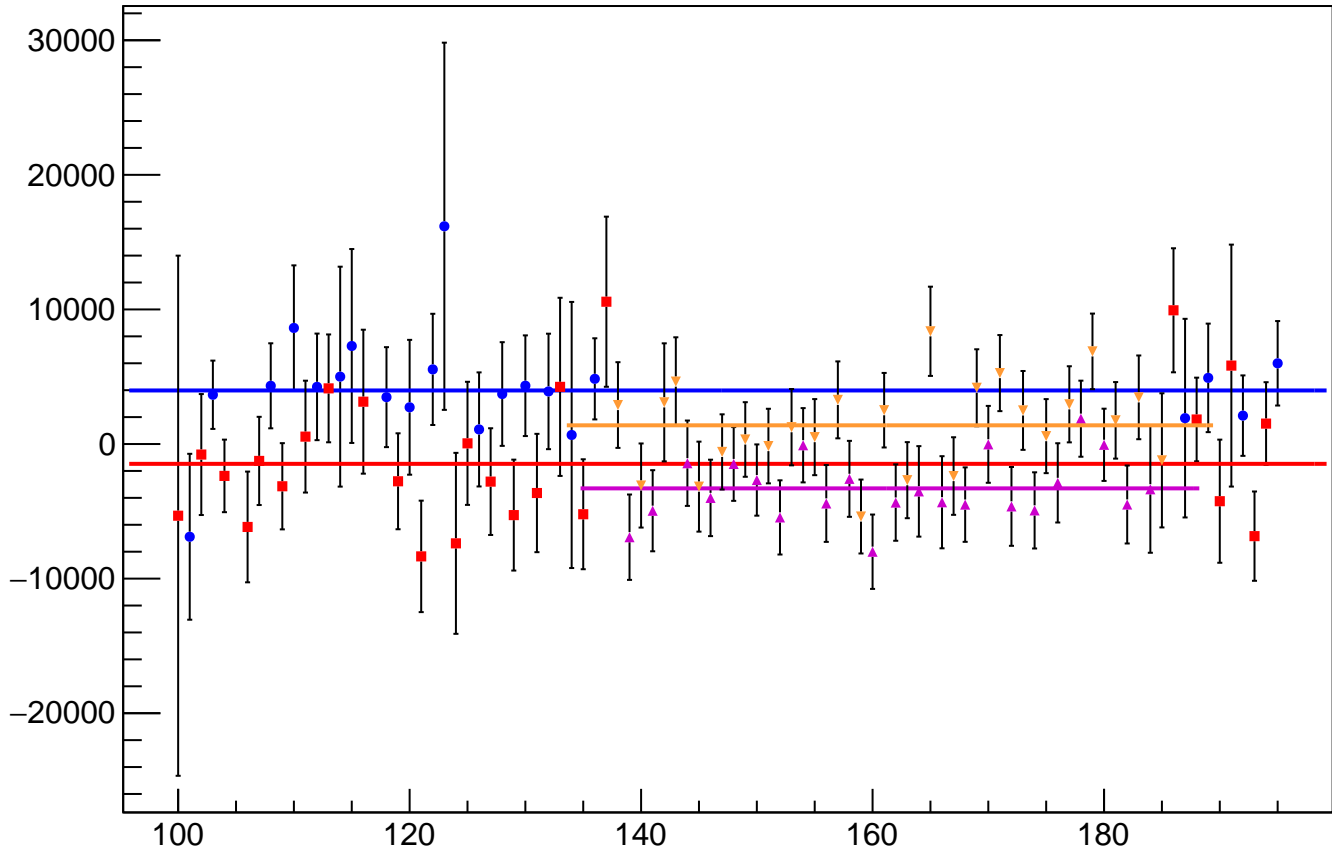
Left In: 2903.411+/-0.492  $\chi^2$ /NDF:28838.5/22

+ sign 2944.699+/-0.401  $\chi^2$ /NDF: 784211.9/45

All: 2858.676+/-0.277  $\chi^2$ /NDF: 3436618.6/93

- sign 2780.184+/-0.383  $\chi^2$ /NDF: 2564309.4/47

# reg\_asym\_atr2\_mean vs Slug



Right In: 3979.863+/-889.072  $\chi^2$ /NDF: 7.0/20

Left Out: 1390.275+/-596.516  $\chi^2$ /NDF:29.2/24

Right Out: -1472.481+/-818.919  $\chi^2$ /NDF: 26.7/24

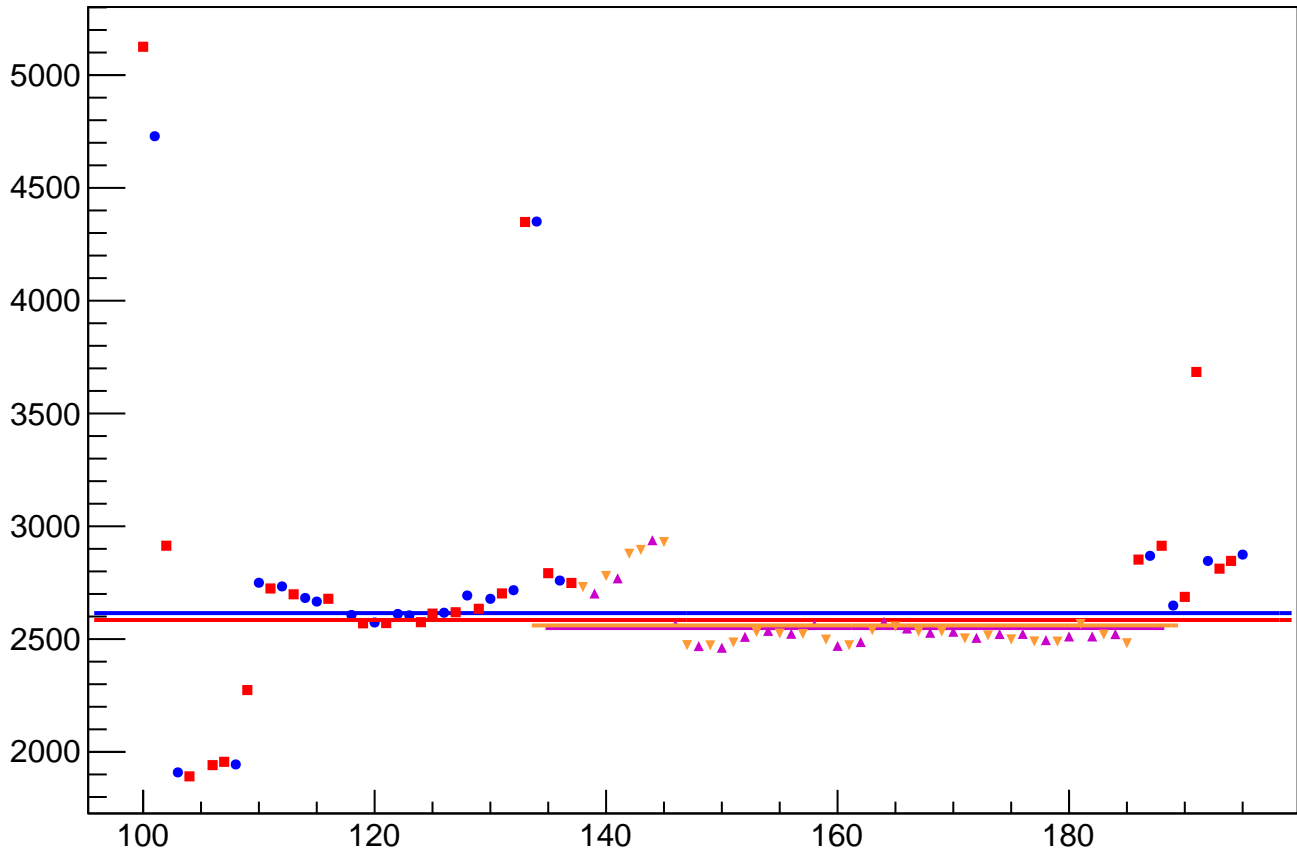
Left In: -3295.367+/-609.991  $\chi^2$ /NDF:14.9/22

+ sign 2194.143+/-495.352  $\chi^2$ /NDF: 42.0/45

All: -255.631+/-348.069  $\chi^2$ /NDF: 135.1/93

- sign -2644.877+/-489.194  $\chi^2$ /NDF: 44.8/47

# reg\_asym\_atr2\_rms vs Slug



Right In: 2615.171+/-0.629  $\chi^2$ /NDF: 581065.8/20

Left Out: 2560.531+/-0.422  $\chi^2$ /NDF:86771.4/24

Right Out: 2584.699+/-0.579  $\chi^2$ /NDF: 558083.5/24

Left In: 2548.870+/-0.431  $\chi^2$ /NDF:55266.2/22

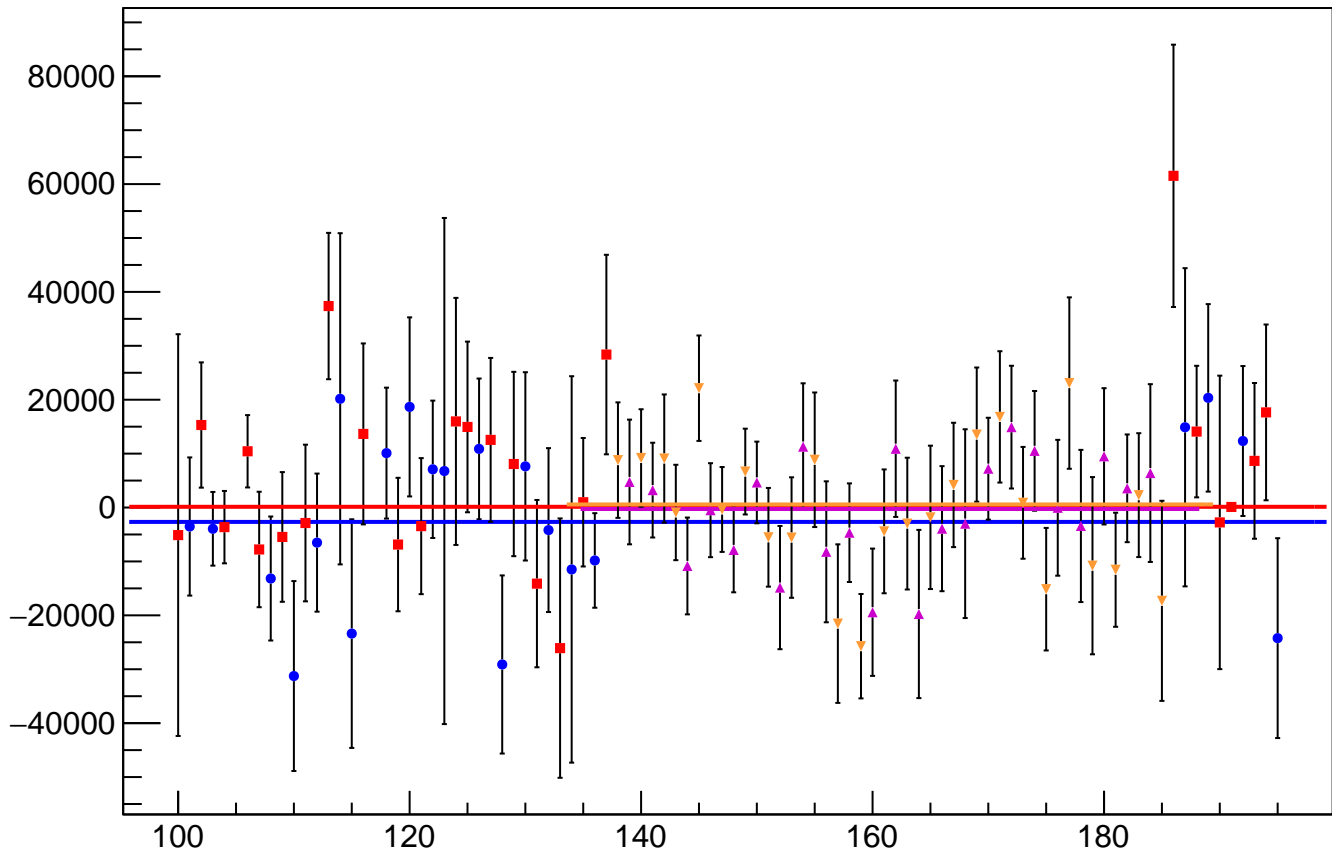
+ sign 2577.493+/-0.350  $\chi^2$ /NDF: 673046.2/45

All: 2569.475+/-0.246  $\chi^2$ /NDF: 1289893.2/93

- sign 2561.655+/-0.346  $\chi^2$ /NDF: 615811.9/47



# asym\_atr2\_correction\_mean vs Slug



Right In:  $-2668.028 \pm 3040.946$   $\chi^2/\text{NDF}: 17.8/20$

Left Out:  $572.477 \pm 2184.376$   $\chi^2/\text{NDF}: 28.2/24$

Right Out:  $136.224 \pm 195.027$   $\chi^2/\text{NDF}: 29.6/24$

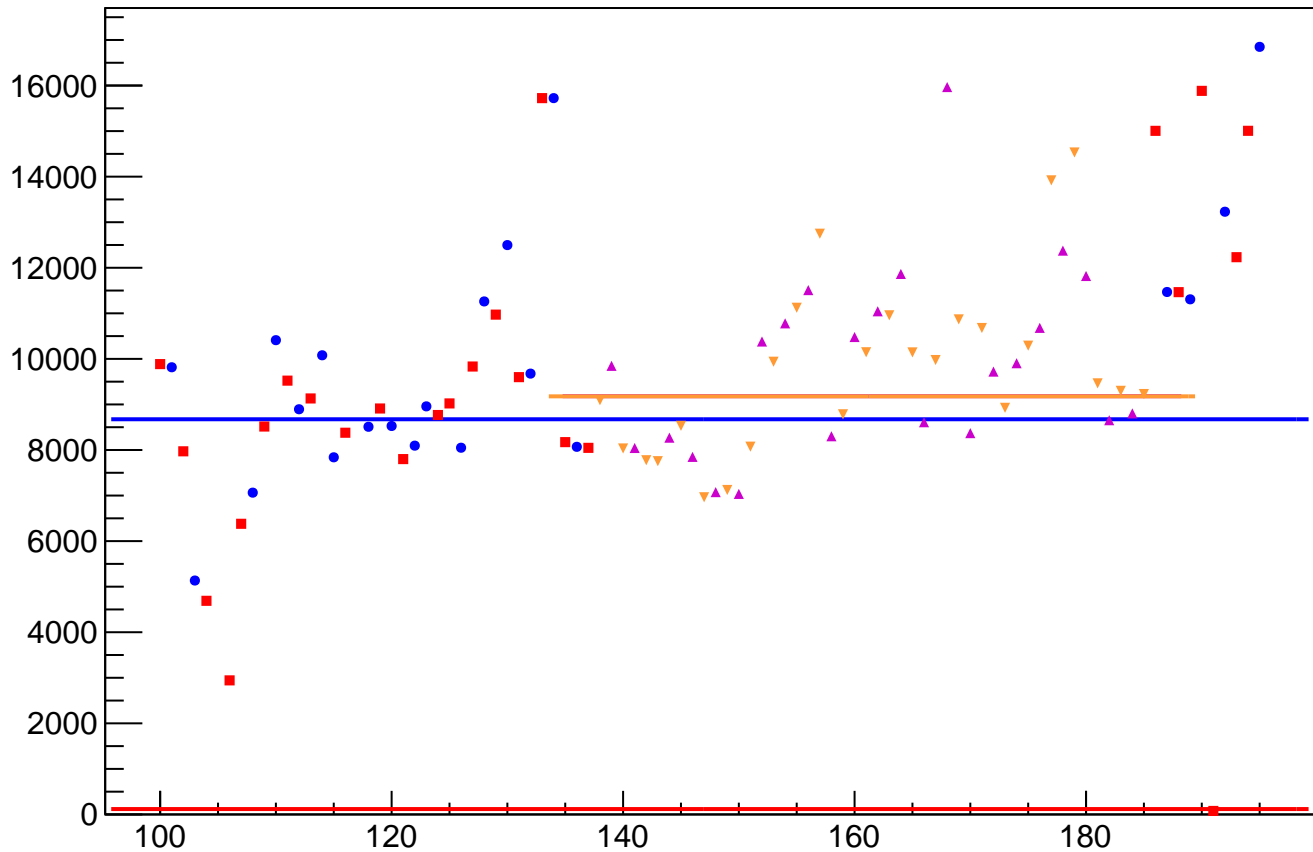
Left In:  $-275.116 \pm 2242.836$   $\chi^2/\text{NDF}: 15.7/22$

+ sign  $-530.471 \pm 1774.107$   $\chi^2/\text{NDF}: 46.8/45$

All:  $125.272 \pm 193.139$   $\chi^2/\text{NDF}: 92.3/93$

- sign  $133.137 \pm 194.293$   $\chi^2/\text{NDF}: 45.3/47$

# asym\_atr2\_correction\_rms vs Slug



Right In: 8674.614+/-2.150  $\chi^2$ /NDF: 1536017.5/20

Left Out: 9177.688+/-1.545  $\chi^2$ /NDF: 1176195.8/24

Right Out: 118.512+/-0.138  $\chi^2$ /NDF: 19664905.4/24

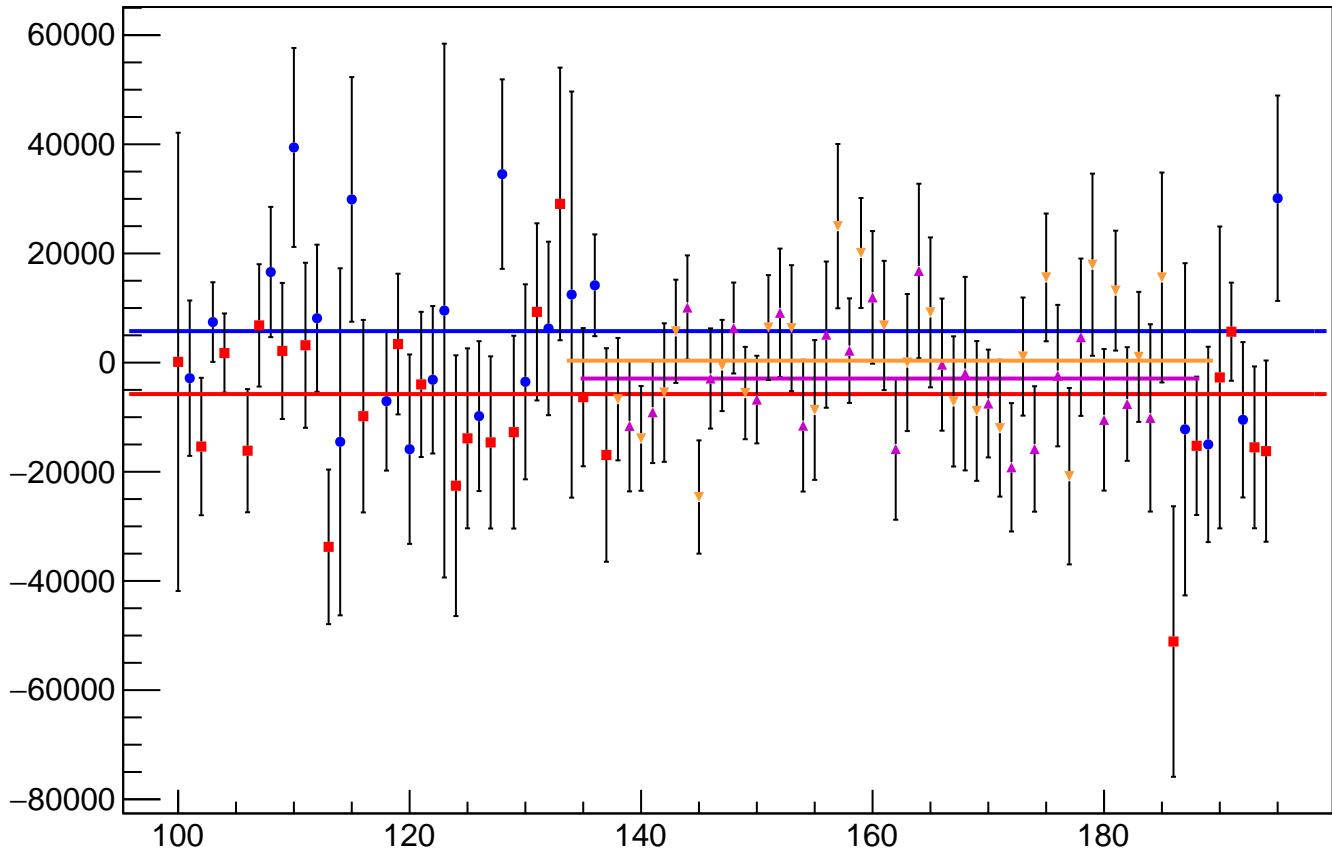
Left In: 9181.254+/-1.586  $\chi^2$ /NDF: 1236469.7/22

+ sign 9006.460+/-1.254  $\chi^2$ /NDF: 2748319.4/45

All: 291.054+/-0.137  $\chi^2$ /NDF: 104905326.0/9

- sign 186.523+/-0.137  $\chi^2$ /NDF: 53311647.0/47

# asym\_atr2\_mean vs Slug



Right In: 5768.994+/-3201.244  $\chi^2$ /NDF: 19.1/20

Left Out: 355.717+/-2281.682  $\chi^2$ /NDF:26.2/24

Right Out: -5762.992+/-2784.039  $\chi^2$ /NDF: 19.7/24

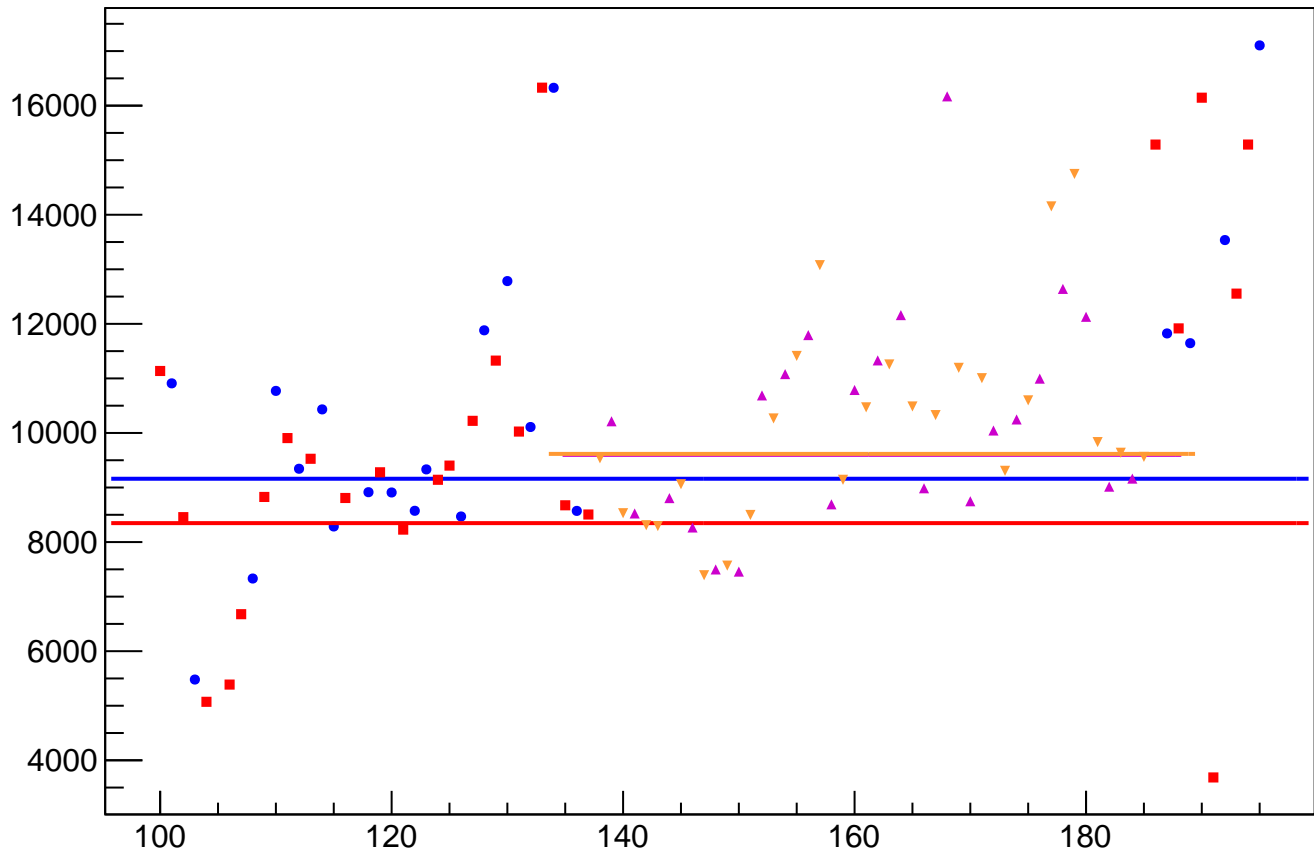
Left In: -2918.356+/-2338.461  $\chi^2$ /NDF:14.9/22

+ sign 2179.313+/-1858.031  $\chi^2$ /NDF: 47.2/45

All: -1073.787+/-1289.330  $\chi^2$ /NDF: 88.4/93

- sign -4095.093+/-1790.613  $\chi^2$ /NDF: 35.3/47

# asym\_atr2\_rms vs Slug



Right In: 9160.727+/-2.264  $\chi^2$ /NDF: 1439373.4/20

Left Out: 9616.245+/-1.613  $\chi^2$ /NDF: 1011665.6/24

Right Out: 8347.334+/-1.969  $\chi^2$ /NDF: 2494732.6/24

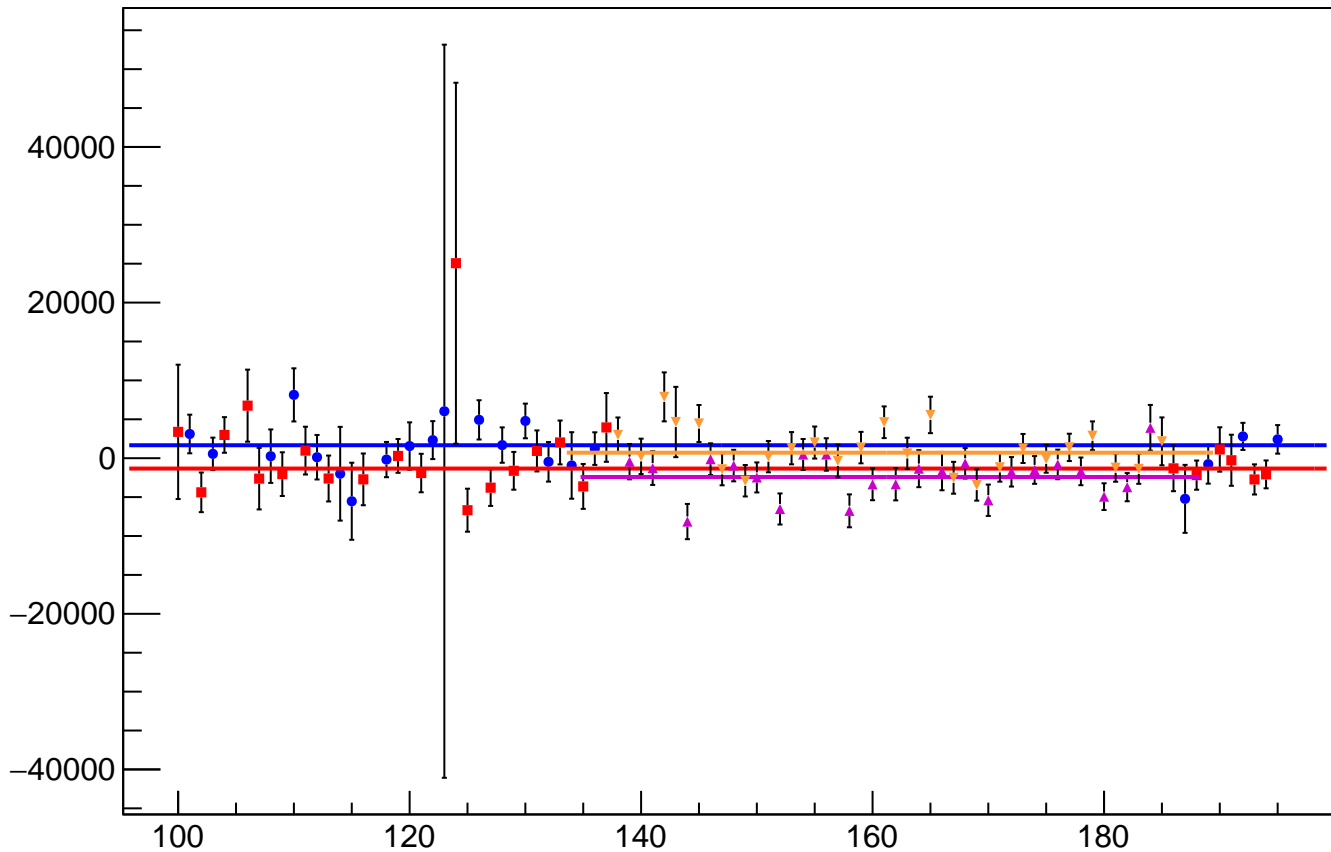
Left In: 9598.531+/-1.654  $\chi^2$ /NDF: 1082171.6/22

+ sign 9462.793+/-1.314  $\chi^2$ /NDF: 2477892.5/45

All: 9264.803+/-0.912  $\chi^2$ /NDF: 6335457.5/93

- sign 9080.927+/-1.266  $\chi^2$ /NDF: 3813764.9/47

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



Right In:  $1665.106 \pm 572.394$   $\chi^2/\text{NDF}: 16.7/20$

Left Out:  $709.722 \pm 417.377$   $\chi^2/\text{NDF}: 34.8/24$

Right Out:  $-1331.499 \pm 542.207$   $\chi^2/\text{NDF}: 22.2/24$

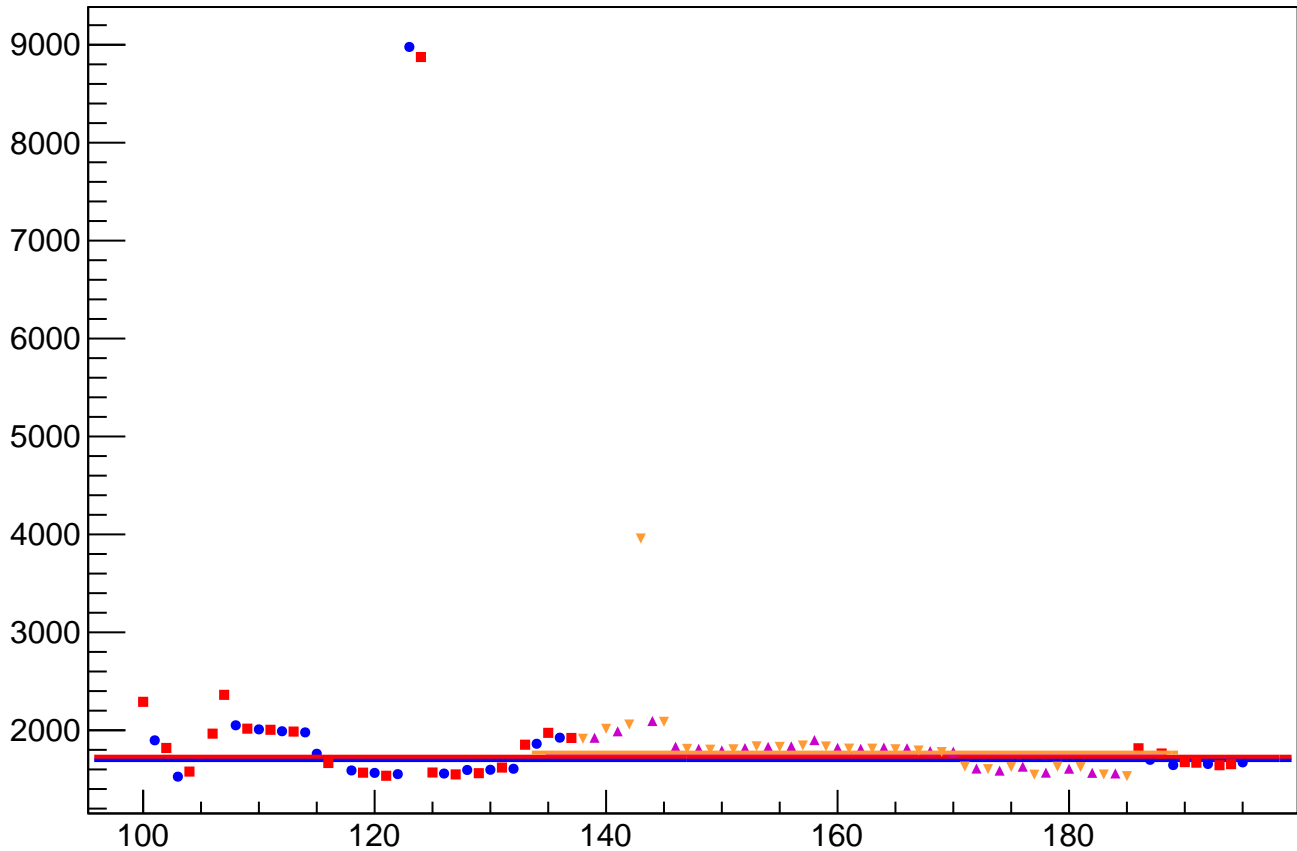
Left In:  $-2414.749 \pm 423.472$   $\chi^2/\text{NDF}: 34.0/22$

+ sign  $1041.366 \pm 337.242$   $\chi^2/\text{NDF}: 53.3/45$

All:  $-497.361 \pm 237.220$   $\chi^2/\text{NDF}: 153.2/93$

- sign  $-2004.332 \pm 333.744$   $\chi^2/\text{NDF}: 58.6/47$

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



Right In: 1695.524 $\pm$ 0.405  $\chi^2$ /NDF: 198691.5/20

Left Out: 1772.046 $\pm$ 0.295  $\chi^2$ /NDF: 702472.4/24

Right Out: 1730.056 $\pm$ 0.382  $\chi^2$ /NDF: 409209.6/24

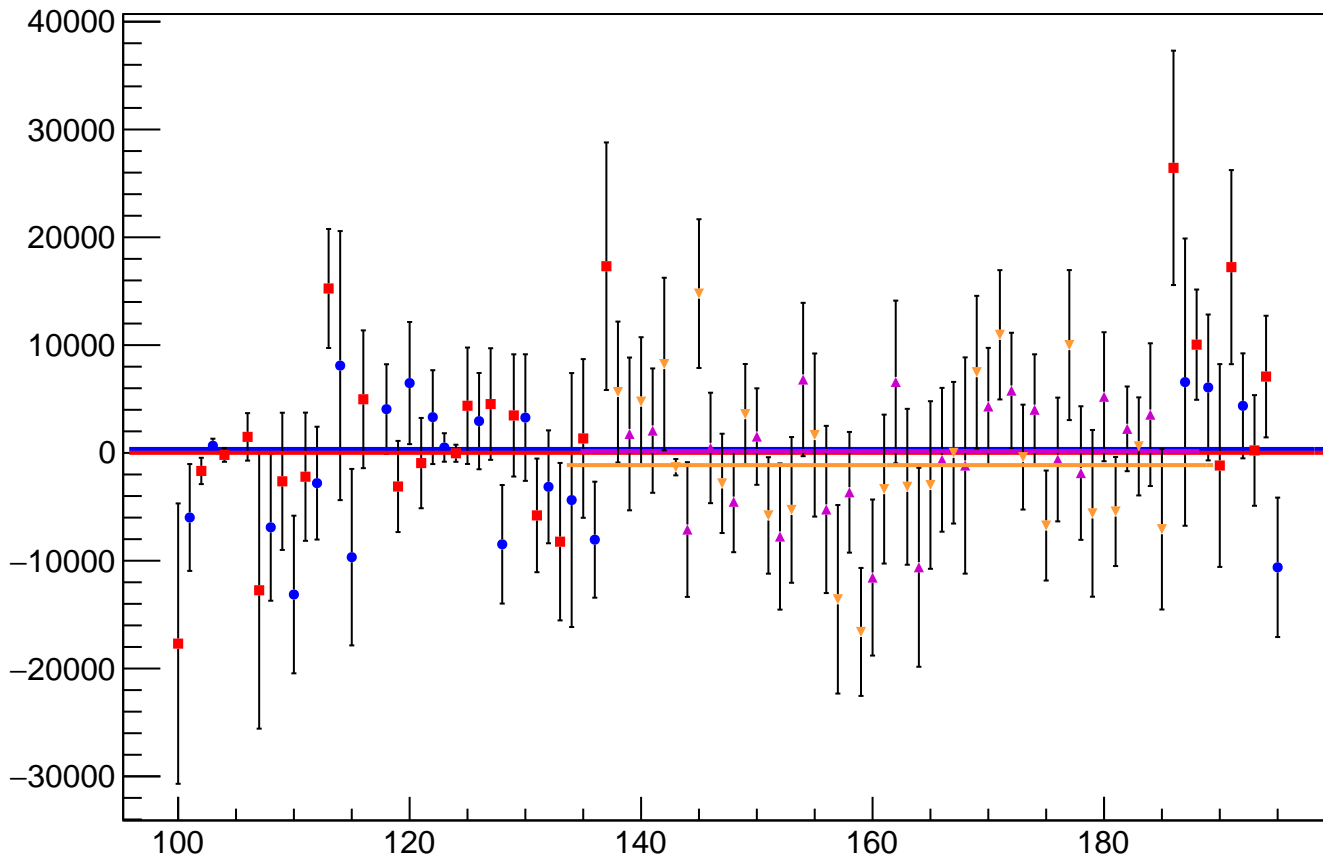
Left In: 1759.600 $\pm$ 0.299  $\chi^2$ /NDF: 214891.5/22

+ sign 1745.482 $\pm$ 0.238  $\chi^2$ /NDF: 924500.6/45

All: 1746.941 $\pm$ 0.168  $\chi^2$ /NDF: 1552377.2/93

- sign 1748.365 $\pm$ 0.236  $\chi^2$ /NDF: 627802.7/47

# asym\_atl\_avg\_correction\_mean vs Slug



Right In: 369.749+/-533.419  $\chi^2$ /NDF: 21.8/20

Left Out: -1129.807+/-647.600  $\chi^2$ /NDF:31.5/24

Right Out: 6.905+/-428.085  $\chi^2$ /NDF: 36.0/24

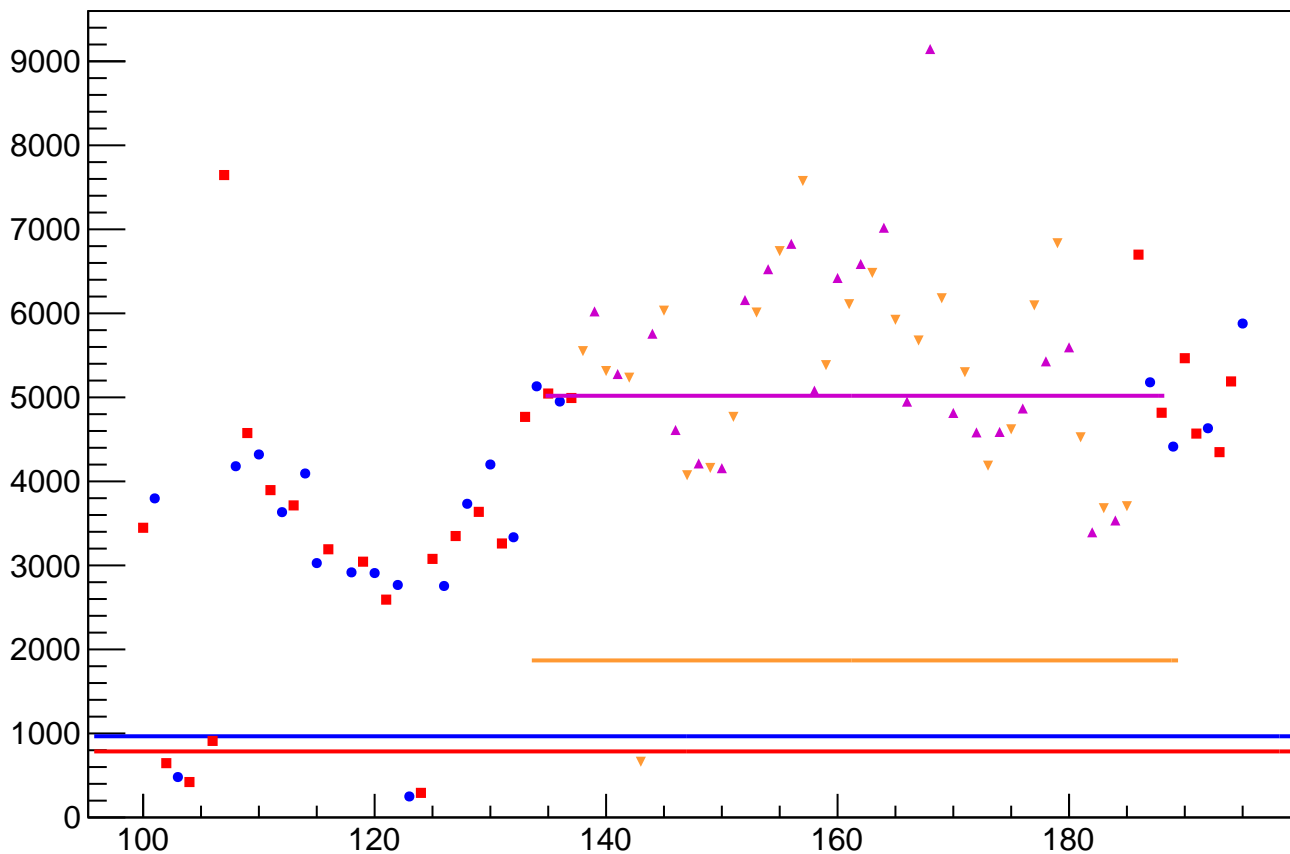
Left In: 168.182+/-1232.411  $\chi^2$ /NDF:14.2/22

+ sign -236.394+/-411.731  $\chi^2$ /NDF: 56.5/45

All: -103.716+/-288.505  $\chi^2$ /NDF: 106.9/93

- sign 24.269+/-404.384  $\chi^2$ /NDF: 50.2/47

# asym\_atl\_avg\_correction\_rms vs Slug



Right In: 966.281+/-0.377  $\chi^2$ /NDF: 11214178.5/20

Left Out: 1868.983+/-0.458  $\chi^2$ /NDF:19852416.6/24

Right Out: 785.949+/-0.303  $\chi^2$ /NDF: 13347471.7/24

Left In: 5019.114+/-0.871  $\chi^2$ /NDF:1569031.9/22

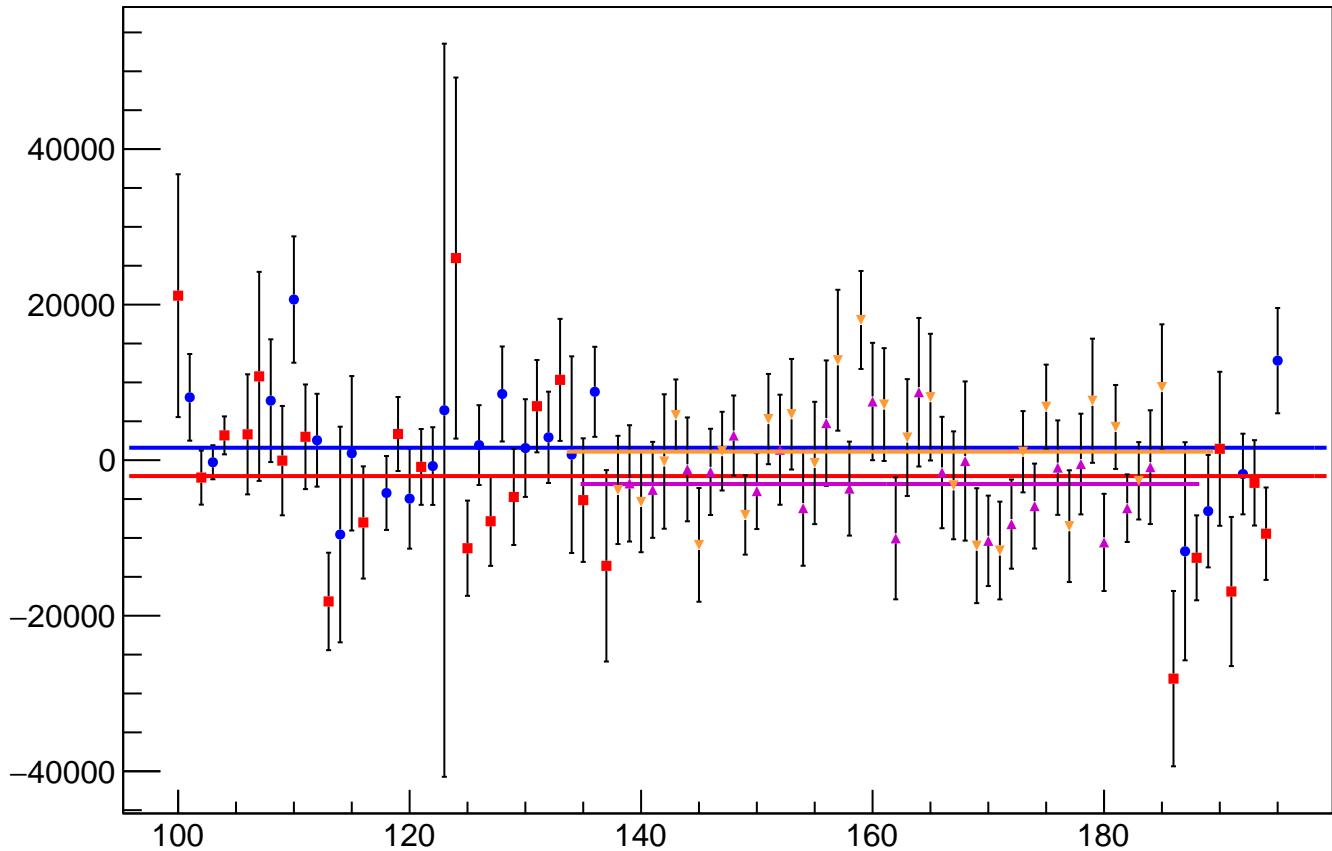
+ sign 1331.167+/-0.291  $\chi^2$ /NDF: 33381827.9/45

All: 1285.636+/-0.204  $\chi^2$ /NDF: 69402425.9/95

- sign 1241.715+/-0.286  $\chi^2$ /NDF: 35972546.3/47



# asym\_atl\_avg\_mean vs Slug



Right In:  $1597.511 \pm 1228.105$   $\chi^2/\text{NDF}$ : 19.8/20

Left Out:  $1094.317 \pm 1273.113$   $\chi^2/\text{NDF}$ : 32.0/24

Right Out:  $-2043.311 \pm 1173.301$   $\chi^2/\text{NDF}$ : 41.4/24

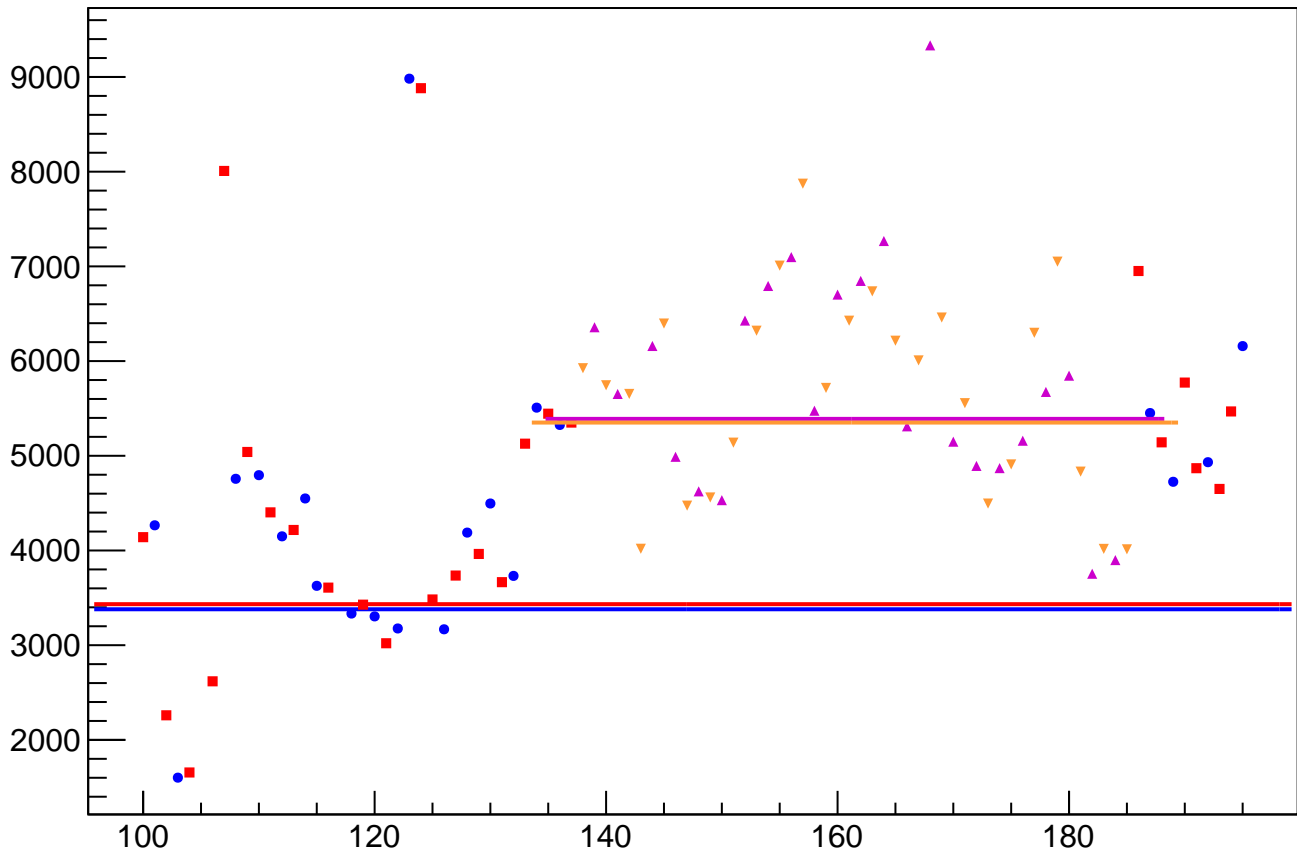
Left In:  $-3064.775 \pm 1318.173$   $\chi^2/\text{NDF}$ : 12.6/22

+ sign  $1354.965 \pm 883.884$   $\chi^2/\text{NDF}$ : 51.9/45

All:  $-586.287 \pm 622.341$   $\chi^2/\text{NDF}$ : 115.8/93

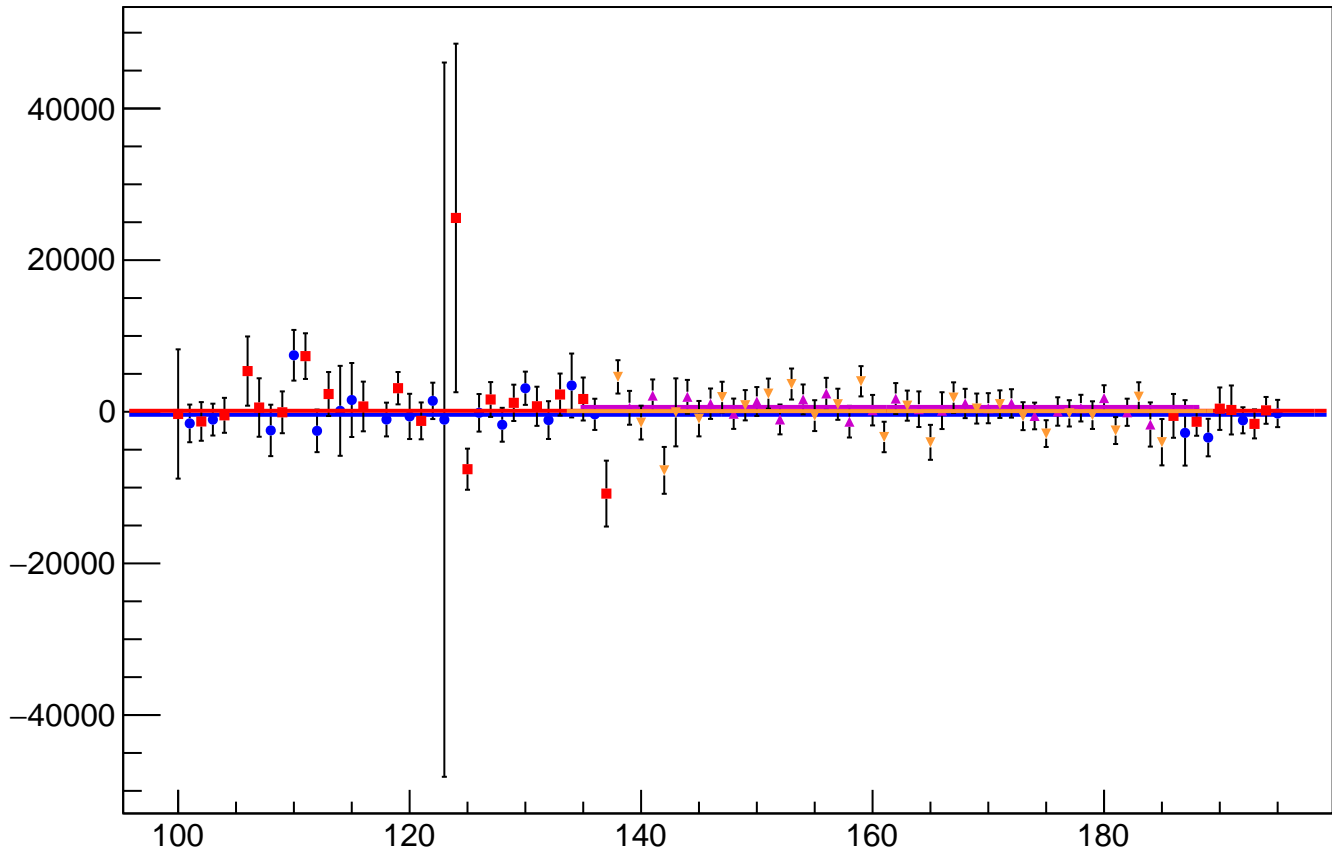
- sign  $-2494.848 \pm 876.410$   $\chi^2/\text{NDF}$ : 54.3/47

# asym\_atl\_avg\_rms vs Slug



Right In: 3379.317+/-0.868	$\chi^2/\text{NDF}$ : 2594408.7/20	+ sign 4329.592+/-0.625	$\chi^2/\text{NDF}$ : 6320218.7/45
Left Out: 5350.804+/-0.900	$\chi^2/\text{NDF}$ : 1241497.9/24		
Right Out: 3433.118+/-0.820	$\chi^2/\text{NDF}$ : 3047015.7/24	All: 4307.619+/-0.439	$\chi^2/\text{NDF}$ : 13164536.2/9
Left In: 5389.724+/-0.932	$\chi^2/\text{NDF}$ : 1309863.0/22	- sign 4286.309+/-0.616	$\chi^2/\text{NDF}$ : 6841882.9/47

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



Right In:  $-395.570 \pm 564.371$   $\chi^2/\text{NDF}: 13.4/20$

Left Out:  $86.214 \pm 411.530$   $\chi^2/\text{NDF}: 36.0/24$

Right Out:  $129.990 \pm 534.485$   $\chi^2/\text{NDF}: 29.0/24$

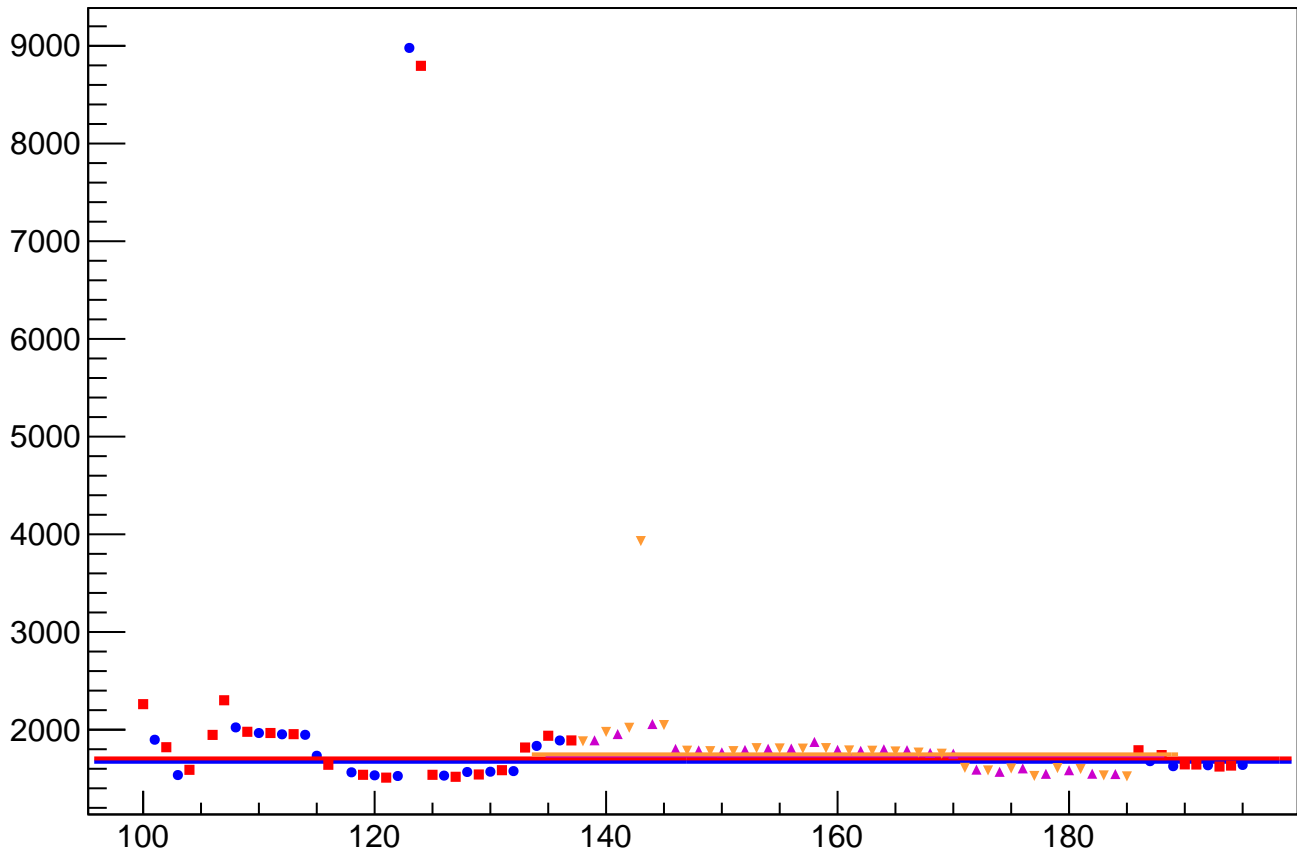
Left In:  $640.235 \pm 417.645$   $\chi^2/\text{NDF}: 6.2/22$

+ sign  $-81.030 \pm 332.517$   $\chi^2/\text{NDF}: 49.9/45$

All:  $185.617 \pm 233.904$   $\chi^2/\text{NDF}: 86.9/93$

- sign  $446.798 \pm 329.091$   $\chi^2/\text{NDF}: 35.7/47$

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



Right In: 1671.818+/-0.399  $\chi^2$ /NDF: 196972.4/20

Left Out: 1747.320+/-0.291  $\chi^2$ /NDF:698192.3/24

Right Out: 1705.776+/-0.377  $\chi^2$ /NDF: 405135.6/24

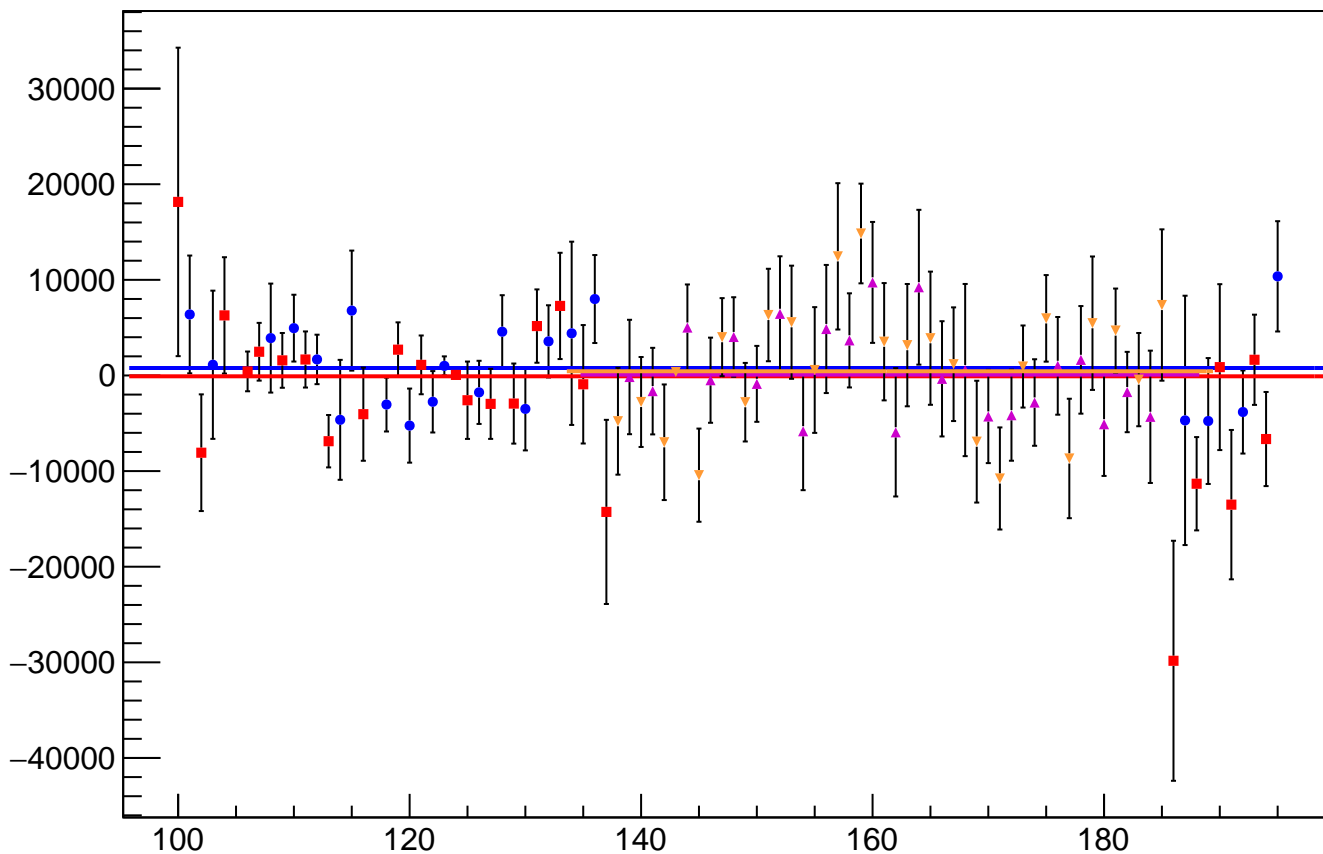
Left In: 1735.540+/-0.295  $\chi^2$ /NDF:206766.6/22

+ sign 1721.111+/-0.235  $\chi^2$ /NDF: 918533.9/45

All: 1722.682+/-0.165  $\chi^2$ /NDF: 1534388.9/93

- sign 1724.217+/-0.232  $\chi^2$ /NDF: 615766.7/47

# asym\_atl\_dd\_correction\_mean vs Slug



Right In: 780.453+/-687.857  $\chi^2/\text{NDF}$ : 20.3/20

Left Out: 442.187+/-440.335  $\chi^2/\text{NDF}$ : 33.9/24

Right Out: -87.959+/-353.619  $\chi^2/\text{NDF}$ : 36.7/24

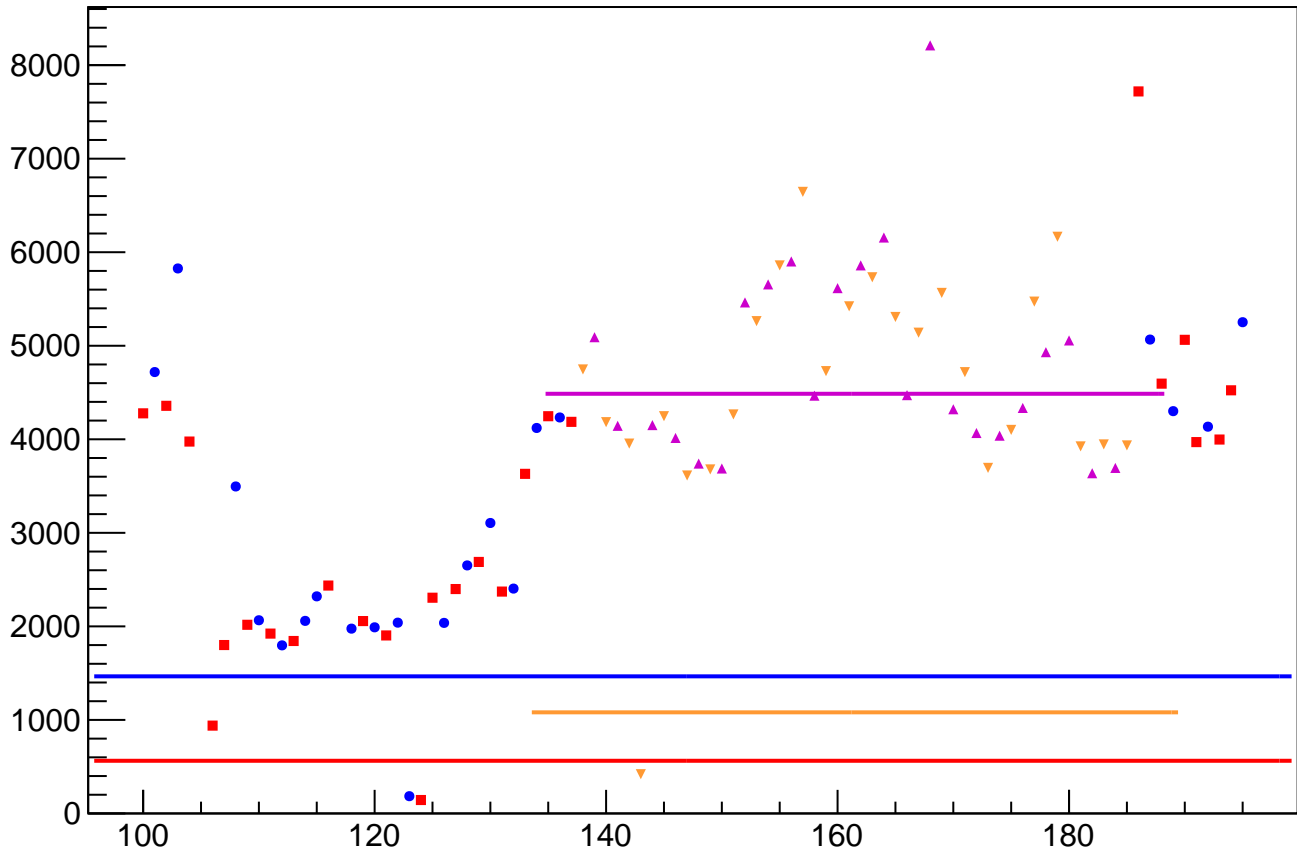
Left In: 88.508+/-1094.838  $\chi^2/\text{NDF}$ : 13.4/22

+ sign 540.514+/-370.855  $\chi^2/\text{NDF}$ : 54.4/45

All: 204.970+/-249.205  $\chi^2/\text{NDF}$ : 106.1/93

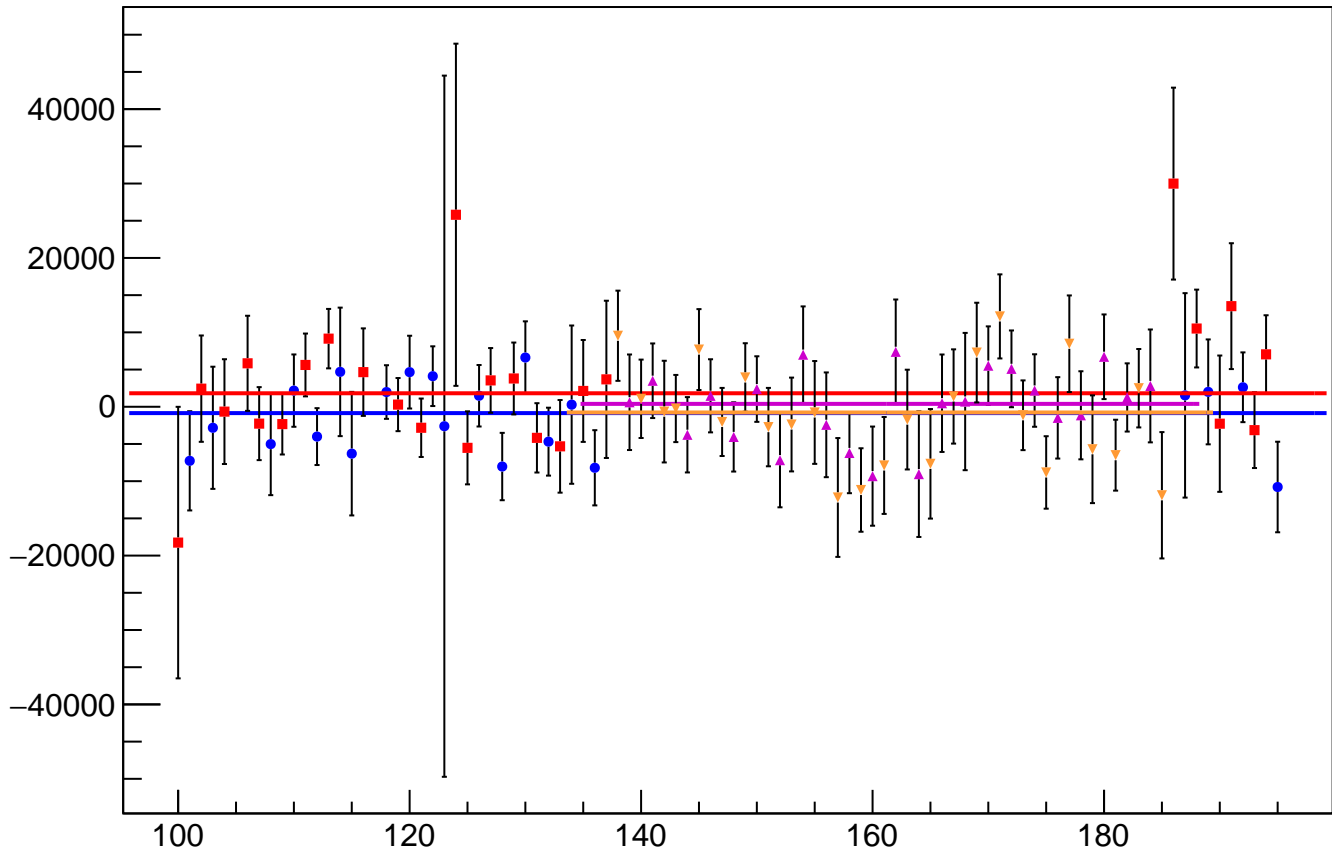
- sign -71.289+/-336.502  $\chi^2/\text{NDF}$ : 50.2/47

# asym\_atl\_dd\_correction\_rms vs Slug



Right In: 1465.817+/-0.486	$\chi^2$ /NDF: 8765981.4/20	+ sign 1192.860+/-0.262	$\chi^2$ /NDF: 33666218.6/45
Left Out: 1081.004+/-0.311	$\chi^2$ /NDF:24456244.2/24	All: 1050.778+/-0.176	$\chi^2$ /NDF: 74154434.2/50
Right Out: 563.171+/-0.250	$\chi^2$ /NDF: 15514025.1/24	- sign 933.799+/-0.238	$\chi^2$ /NDF: 39952954.0/47
Left In: 4486.570+/-0.774	$\chi^2$ /NDF:1181598.1/22		

# asym\_atl\_dd\_mean vs Slug



Right In:  $-851.144 \pm 1176.607$   $\chi^2/\text{NDF}: 18.1/20$

Left Out:  $-766.008 \pm 1147.372$   $\chi^2/\text{NDF}: 29.9/24$

Right Out:  $1814.510 \pm 1088.165$   $\chi^2/\text{NDF}: 27.7/24$

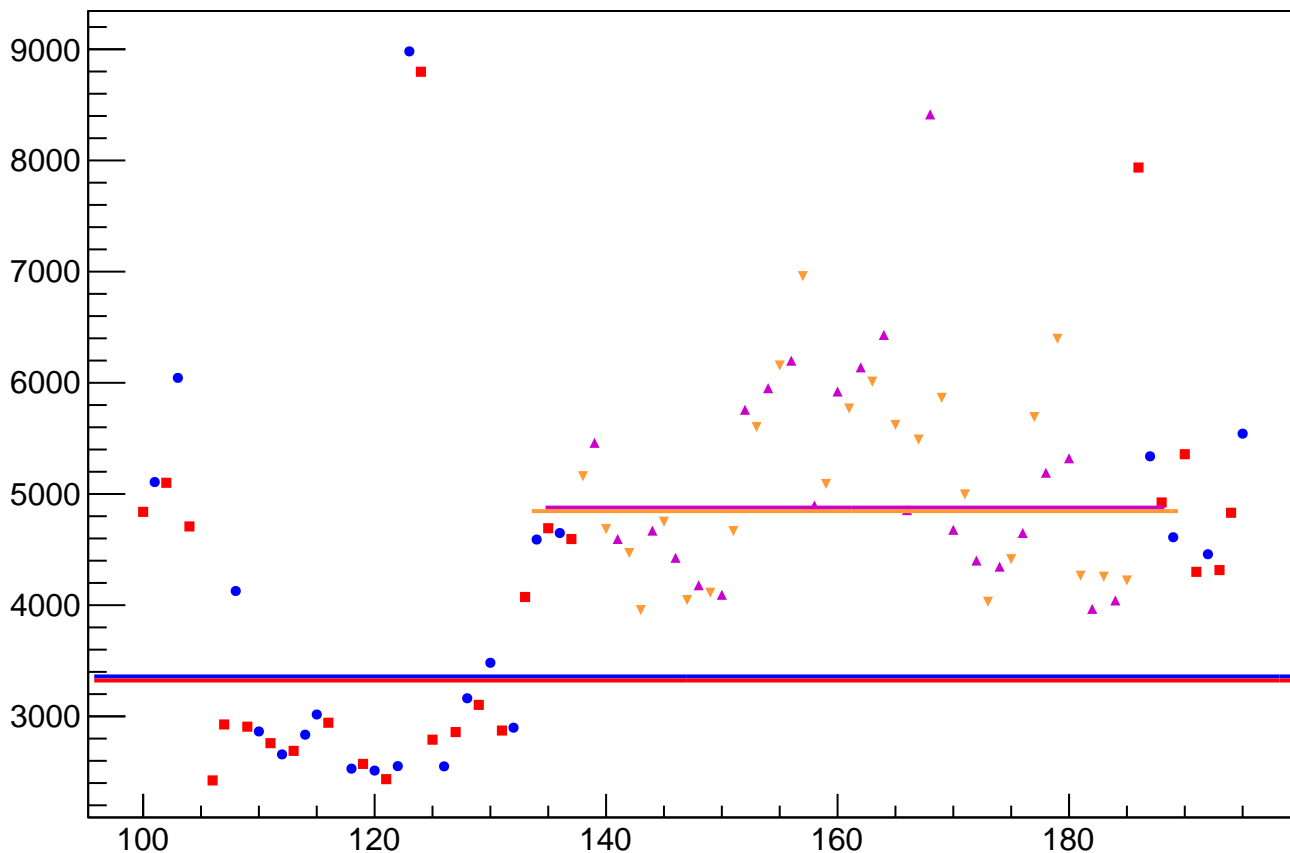
Left In:  $388.944 \pm 1186.300$   $\chi^2/\text{NDF}: 14.2/22$

+ sign  $-807.505 \pm 821.456$   $\chi^2/\text{NDF}: 48.1/45$

All:  $201.541 \pm 573.819$   $\chi^2/\text{NDF}: 93.7/93$

- sign  $1163.120 \pm 801.902$   $\chi^2/\text{NDF}: 42.7/47$

# asym\_atl\_dd\_rms vs Slug



Right In: 3358.880+/-0.832  $\chi^2$ /NDF: 1482176.6/20

Left Out: 4845.779+/-0.811  $\chi^2$ /NDF:909173.9/24

Right Out: 3322.400+/-0.761  $\chi^2$ /NDF: 1732760.6/24

Left In: 4877.456+/-0.839  $\chi^2$ /NDF:958623.2/22

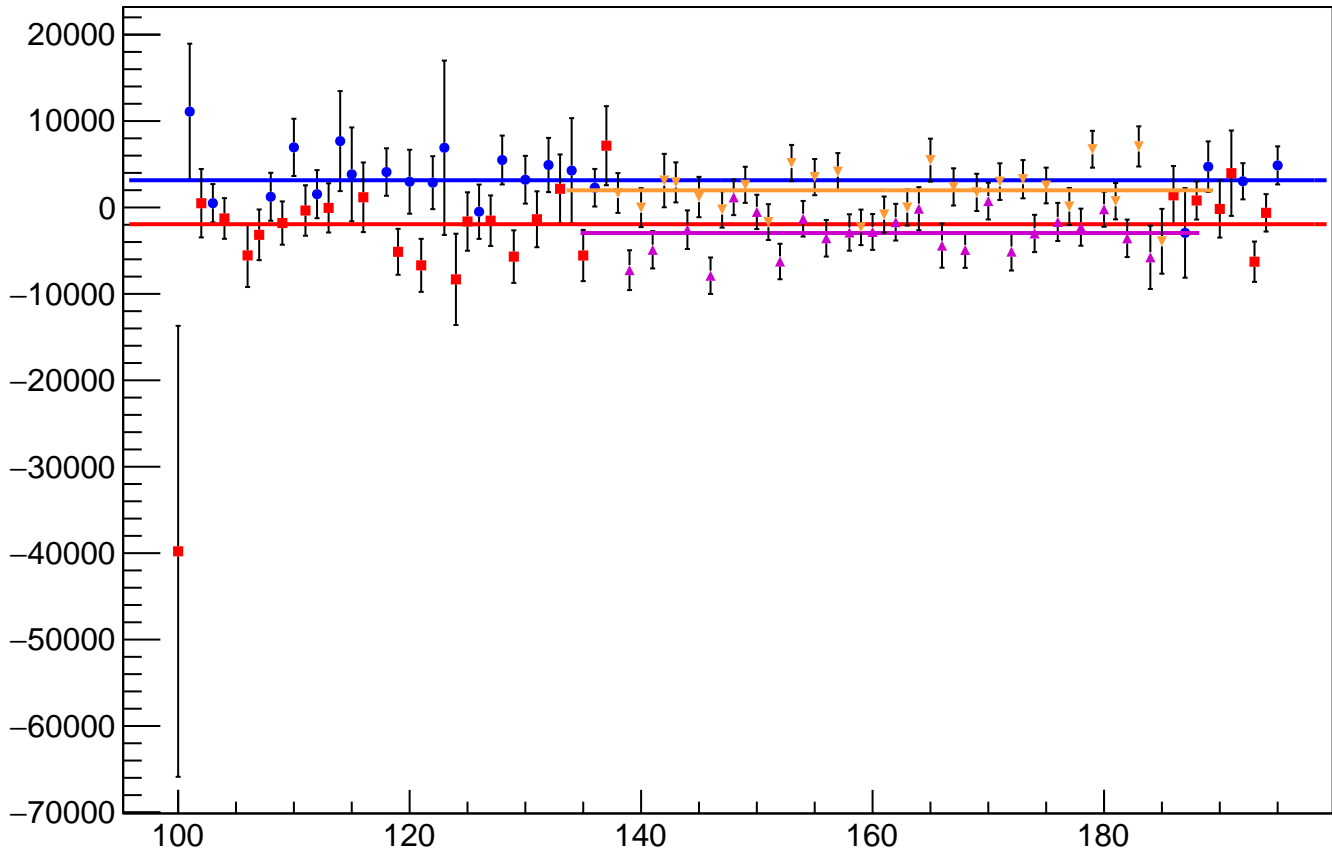
+ sign 4121.029+/-0.581  $\chi^2$ /NDF: 4028511.5/45

All: 4071.520+/-0.405  $\chi^2$ /NDF: 8618180.5/93

- sign 4024.877+/-0.564  $\chi^2$ /NDF: 4575559.8/47



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



Right In: 3150.235+/-667.802  $\chi^2$ /NDF: 10.3/20

Left Out: 1985.469+/-443.190  $\chi^2$ /NDF:32.4/24

Right Out: -1936.921+/-615.836  $\chi^2$ /NDF: 26.5/24

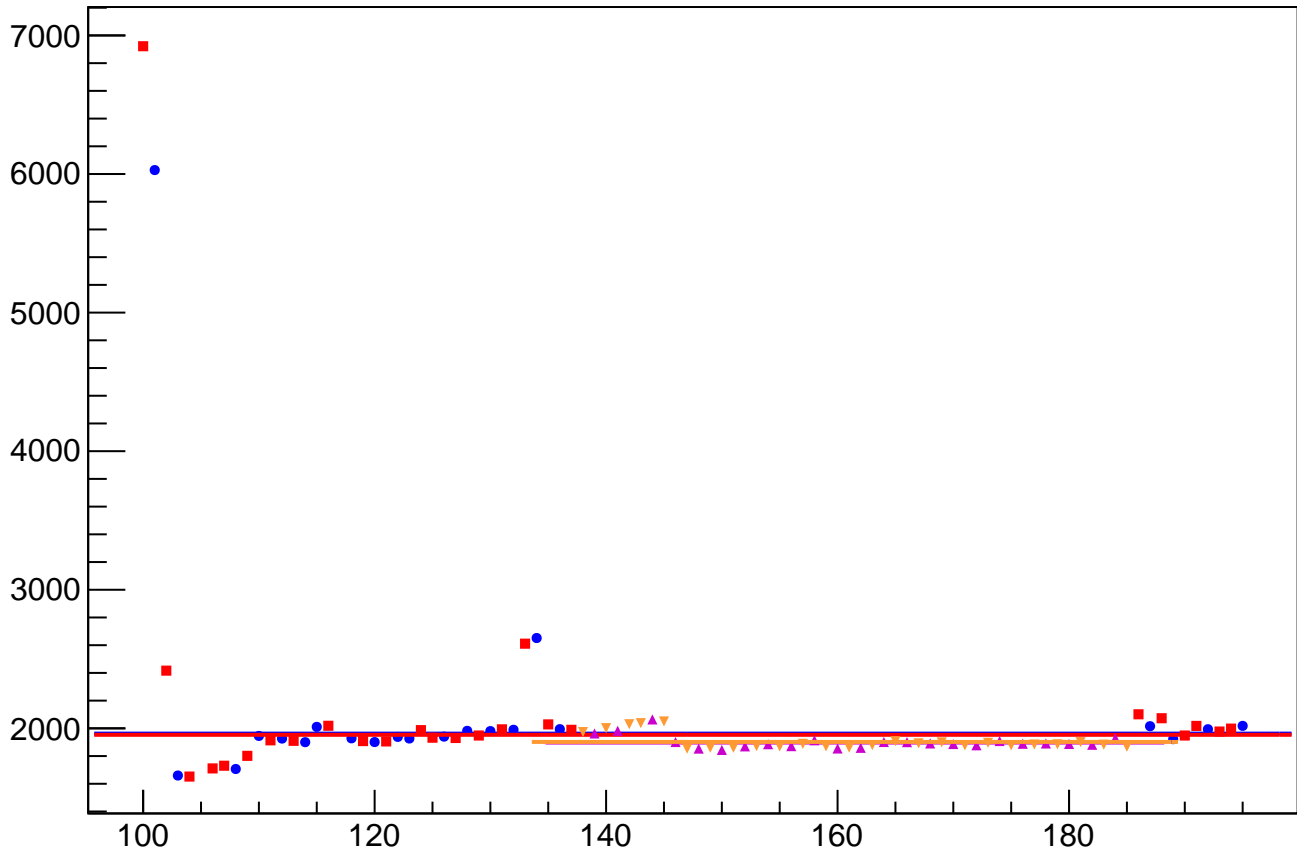
Left In: -2955.900+/-454.551  $\chi^2$ /NDF:28.4/22

+ sign 2341.615+/-369.269  $\chi^2$ /NDF: 44.9/45

All: -151.317+/-259.848  $\chi^2$ /NDF: 191.8/93

- sign -2596.542+/-365.718  $\chi^2$ /NDF: 56.7/47

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



Right In:  $1961.850 \pm 0.472$   $\chi^2/\text{NDF}: 620042.3/20$

Left Out:  $1901.884 \pm 0.313$   $\chi^2/\text{NDF}: 30446.9/24$

Right Out:  $1953.329 \pm 0.435$   $\chi^2/\text{NDF}: 231719.6/24$

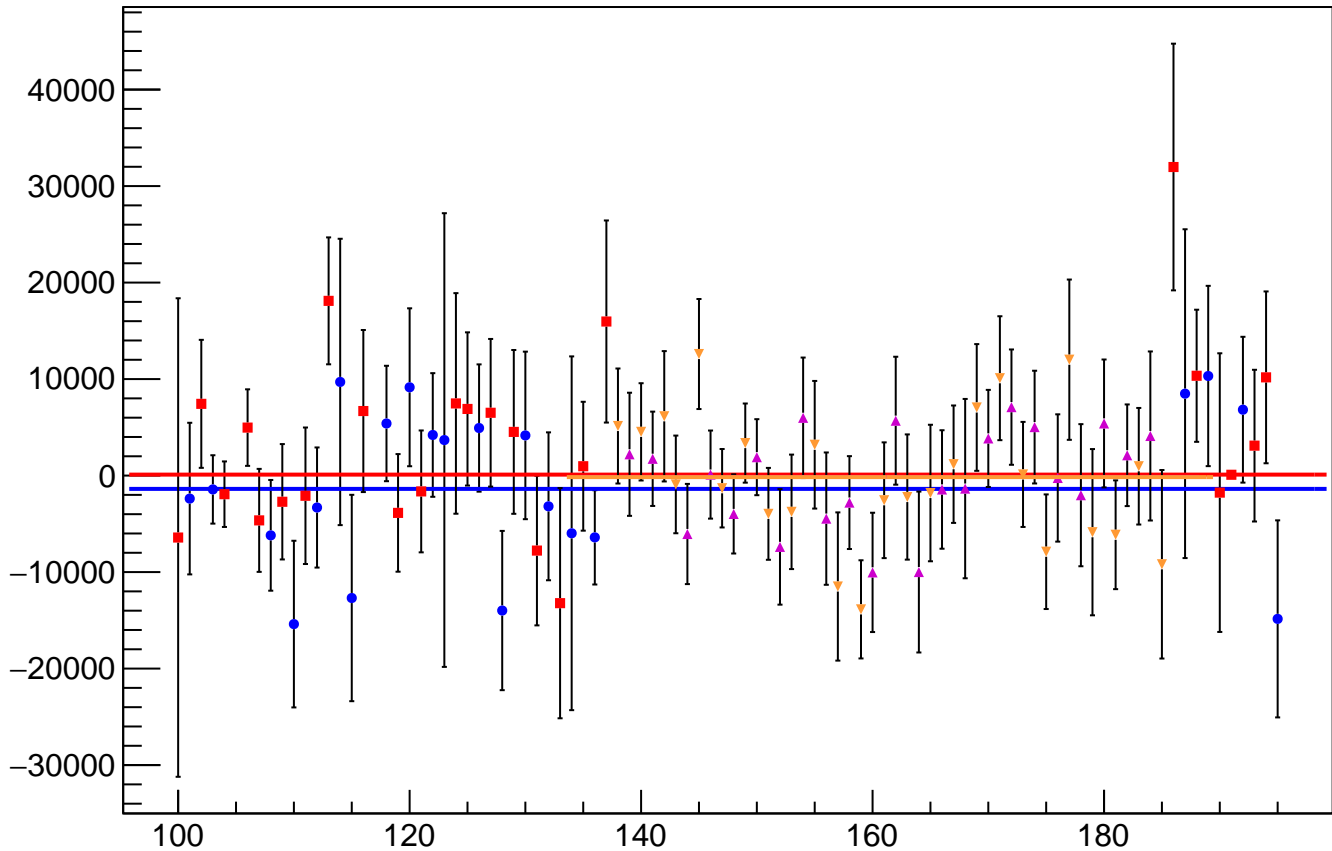
Left In:  $1897.456 \pm 0.321$   $\chi^2/\text{NDF}: 21180.1/22$

+ sign  $1920.220 \pm 0.261$   $\chi^2/\text{NDF}: 661685.1/45$

All:  $1918.695 \pm 0.184$   $\chi^2/\text{NDF}: 925331.6/93$

- sign  $1917.202 \pm 0.258$   $\chi^2/\text{NDF}: 263579.0/47$

# asym\_atr\_avg\_correction\_mean vs Slug



Right In:  $-1379.297 \pm 1575.766$   $\chi^2/\text{NDF}: 18.5/20$

Left Out:  $-157.539 \pm 1165.844$   $\chi^2/\text{NDF}: 29.5/24$

Right Out:  $100.133 \pm 109.606$   $\chi^2/\text{NDF}: 29.5/24$

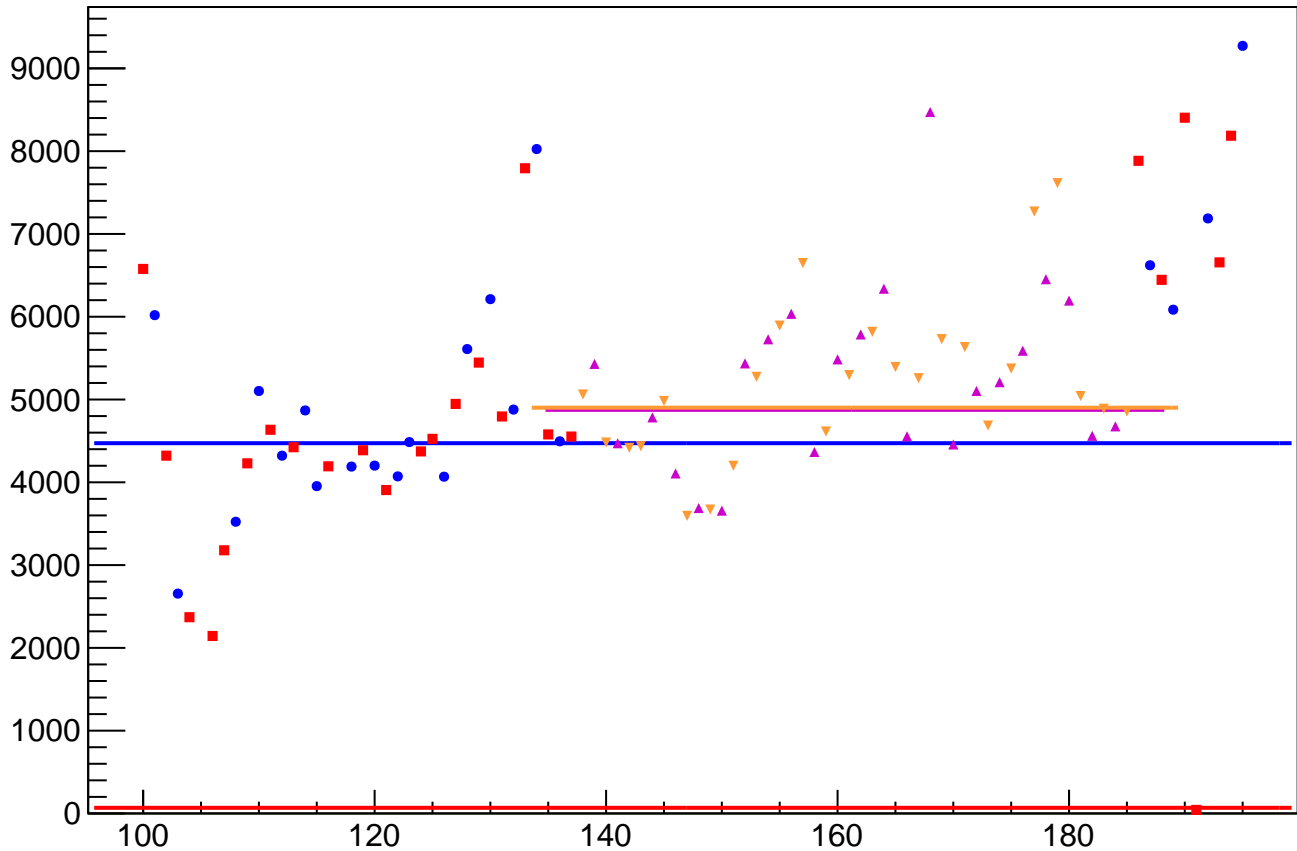
Left In:  $-139.000 \pm 1190.889$   $\chi^2/\text{NDF}: 14.7/22$

+ sign  $-589.737 \pm 937.218$   $\chi^2/\text{NDF}: 48.4/45$

All:  $88.921 \pm 108.412$   $\chi^2/\text{NDF}: 93.2/93$

- sign  $98.125 \pm 109.144$   $\chi^2/\text{NDF}: 44.3/47$

# asym\_atr\_avg\_correction\_rms vs Slug



Right In: 4472.514+/-1.114  $\chi^2$ /NDF: 1688937.9/20

Left Out: 4901.357+/-0.824  $\chi^2$ /NDF: 1136916.0/24

Right Out: 68.215+/-0.078  $\chi^2$ /NDF: 19729475.5/24

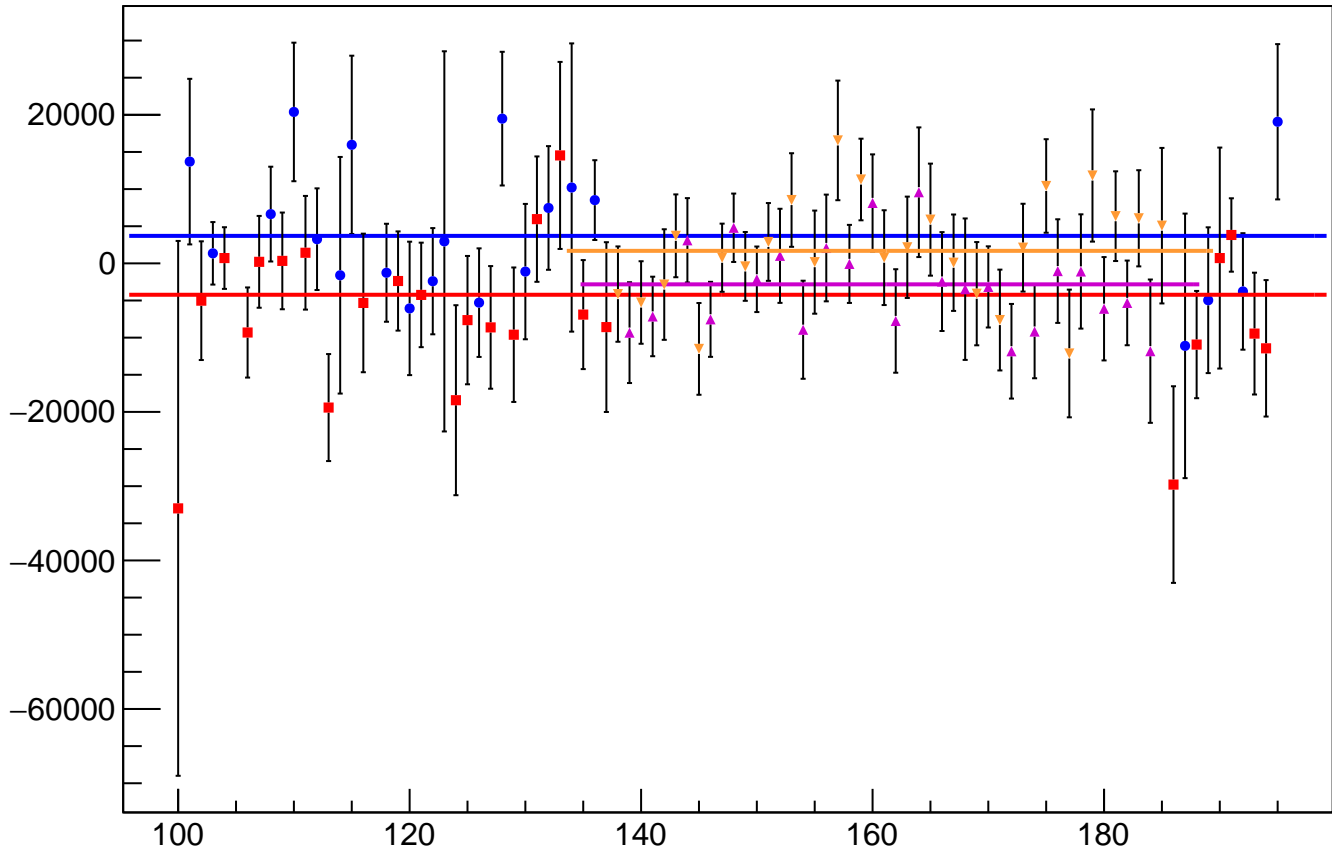
Left In: 4875.112+/-0.842  $\chi^2$ /NDF: 1229198.0/22

+ sign 4749.653+/-0.663  $\chi^2$ /NDF: 2921582.9/45

All: 170.691+/-0.077  $\chi^2$ /NDF: 104578988.2/5

- sign 108.592+/-0.077  $\chi^2$ /NDF: 53269899.3/47

# asym\_atr\_avg\_mean vs Slug



Right In: 3702.000+/-1759.506  $\chi^2/\text{NDF}$ : 18.7/20

Left Out: 1686.531+/-1261.650  $\chi^2/\text{NDF}$ : 25.4/24

Right Out: -4226.920+/-1521.758  $\chi^2/\text{NDF}$ : 23.2/24

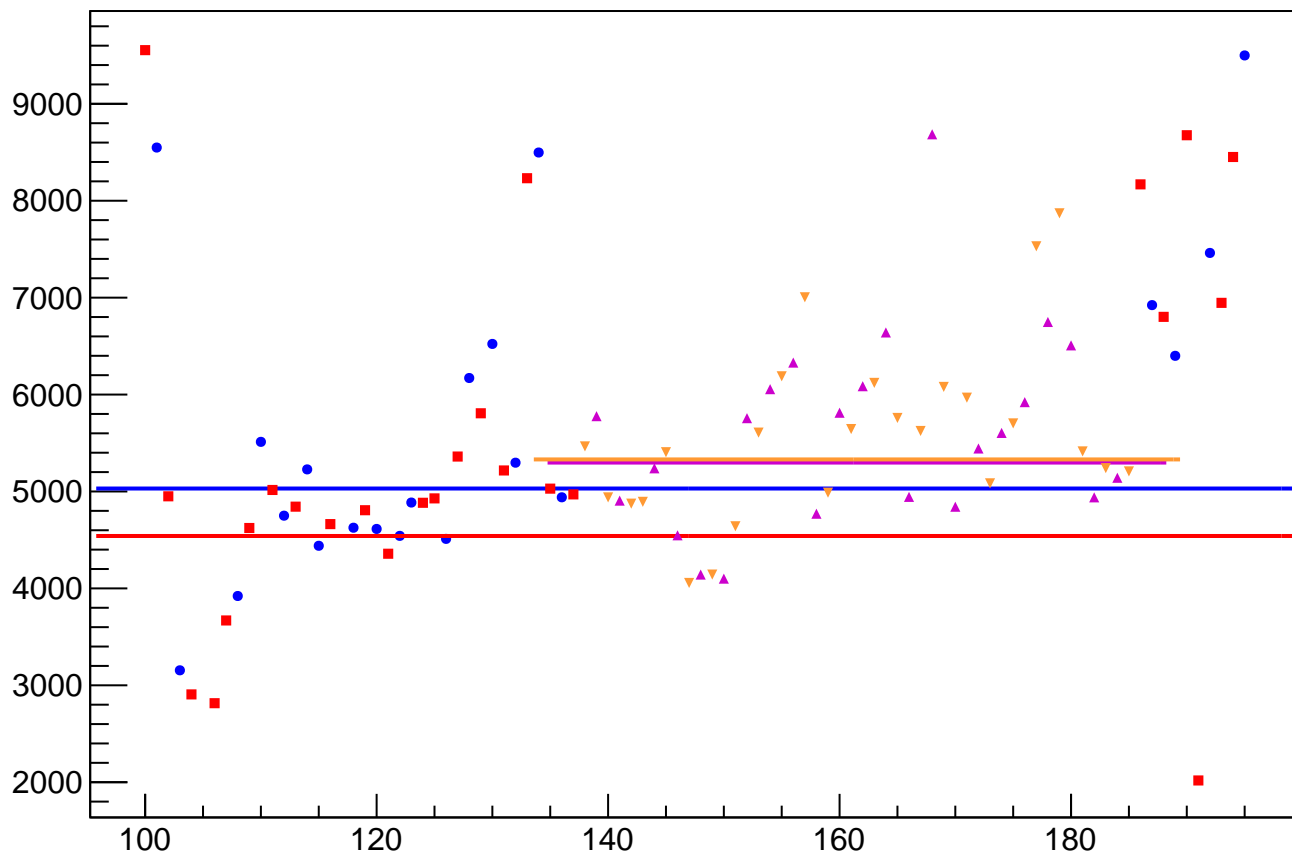
Left In: -2824.078+/-1288.414  $\chi^2/\text{NDF}$ : 18.0/22

+ sign 2370.918+/-1025.306  $\chi^2/\text{NDF}$ : 45.0/45

All: -640.252+/-709.688  $\chi^2/\text{NDF}$ : 103.2/93

- sign -3409.812+/-983.312  $\chi^2/\text{NDF}$ : 41.7/47

# asym\_atr\_avg\_rms vs Slug



Right In: 5030.537 $\pm$ 1.244  $\chi^2$ /NDF: 1473397.1/20

Left Out: 5330.725 $\pm$ 0.892  $\chi^2$ /NDF: 868061.7/24

Right Out: 4540.749 $\pm$ 1.071  $\chi^2$ /NDF: 2412554.9/24

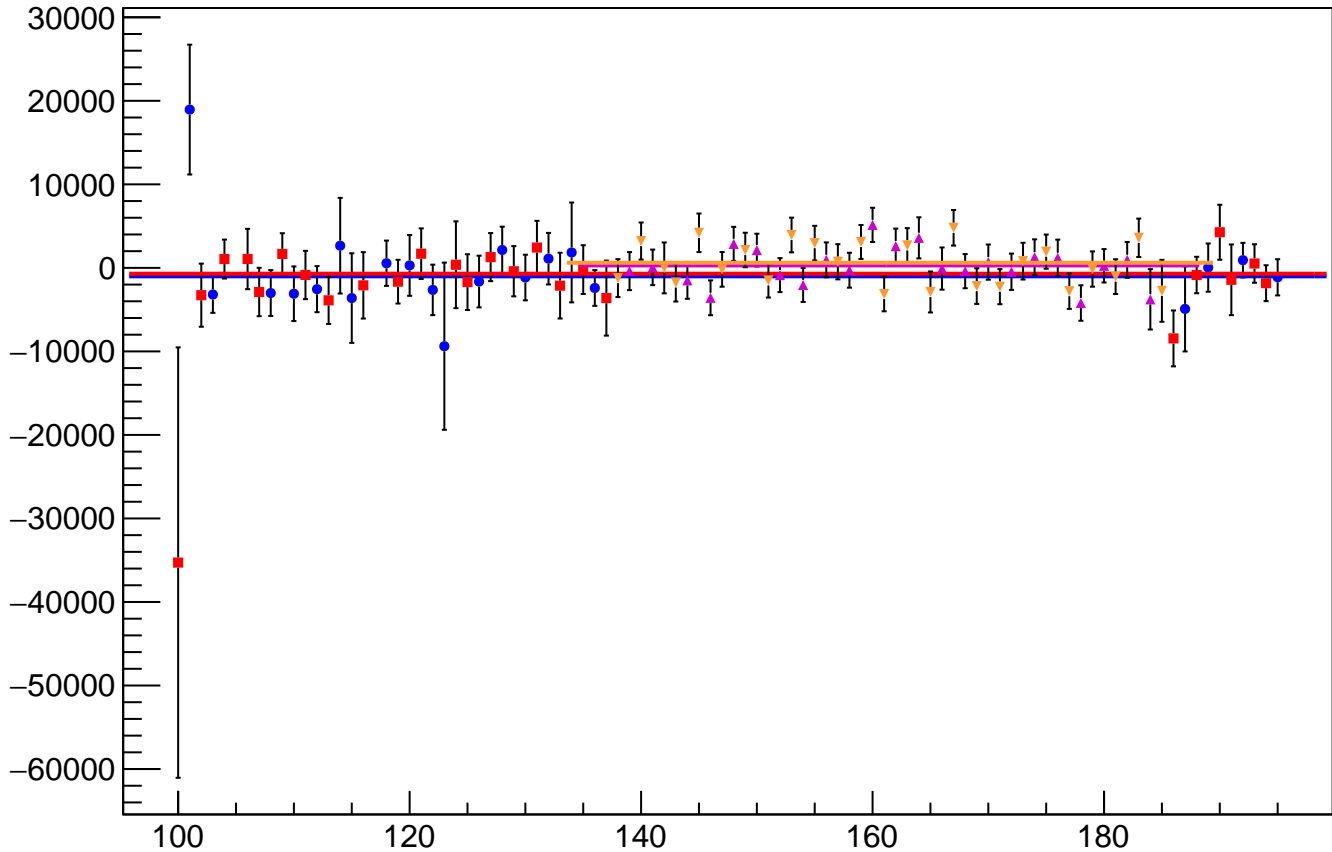
Left In: 5298.329 $\pm$ 0.911  $\chi^2$ /NDF: 956021.6/22

+ sign 5228.791 $\pm$ 0.725  $\chi^2$ /NDF: 2379906.0/45

All: 5099.145 $\pm$ 0.501  $\chi^2$ /NDF: 6099992.7/93

- sign 4980.351 $\pm$ 0.694  $\chi^2$ /NDF: 3658808.7/47

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



Right In:  $-1010.327 \pm 659.081$   $\chi^2/\text{NDF}: 15.0/20$

Left Out:  $612.314 \pm 438.264$   $\chi^2/\text{NDF}: 32.7/24$

Right Out:  $-700.940 \pm 606.747$   $\chi^2/\text{NDF}: 17.1/24$

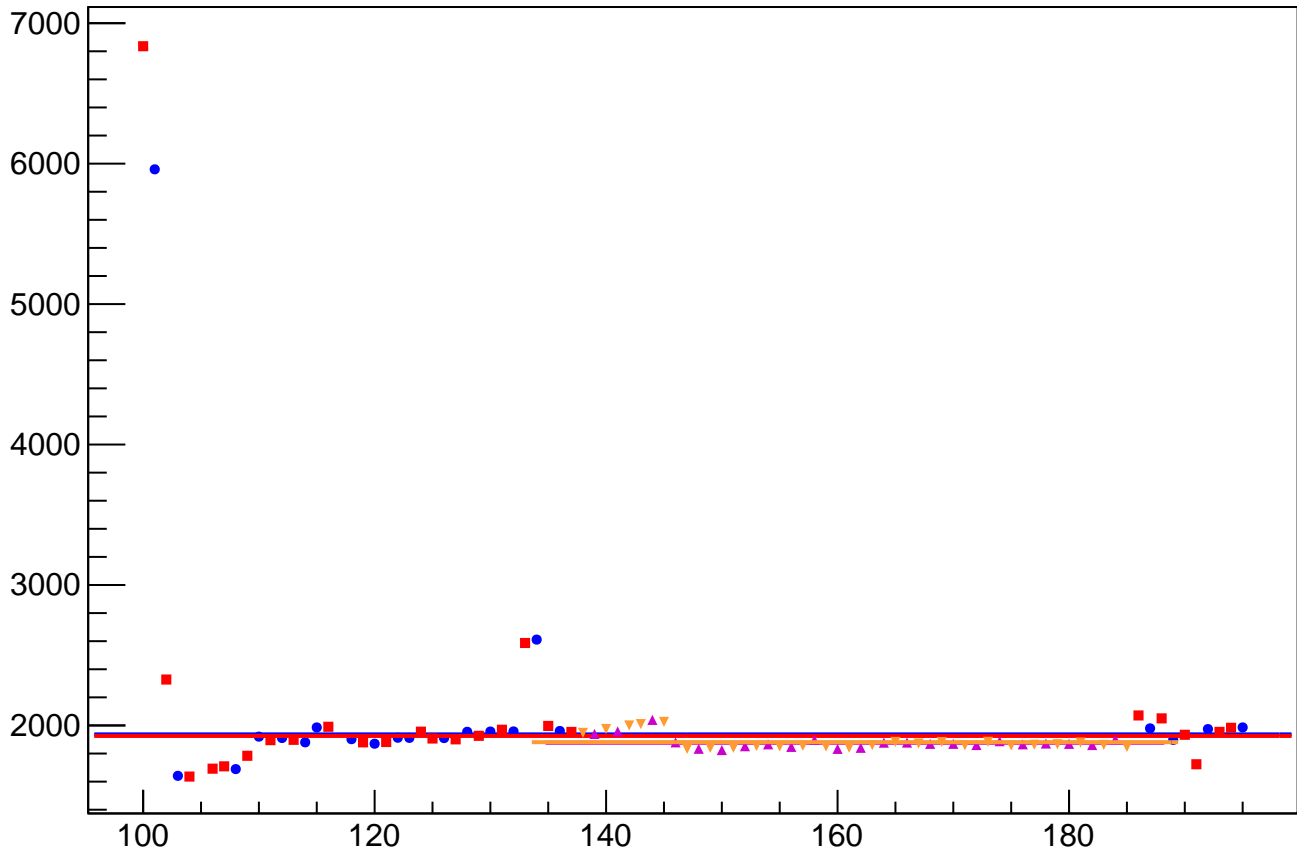
Left In:  $293.009 \pm 449.575$   $\chi^2/\text{NDF}: 23.6/22$

+ sign  $114.808 \pm 364.945$   $\chi^2/\text{NDF}: 51.9/45$

All:  $26.873 \pm 256.728$   $\chi^2/\text{NDF}: 94.4/93$

- sign  $-59.278 \pm 361.222$   $\chi^2/\text{NDF}: 42.5/47$

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



Right In: 1936.316 $\pm$ 0.466  $\chi^2$ /NDF: 618441.8/20

Left Out: 1880.808 $\pm$ 0.310  $\chi^2$ /NDF: 28655.5/24

Right Out: 1925.185 $\pm$ 0.428  $\chi^2$ /NDF: 230051.0/24

Left In: 1876.685 $\pm$ 0.318  $\chi^2$ /NDF: 20499.7/22

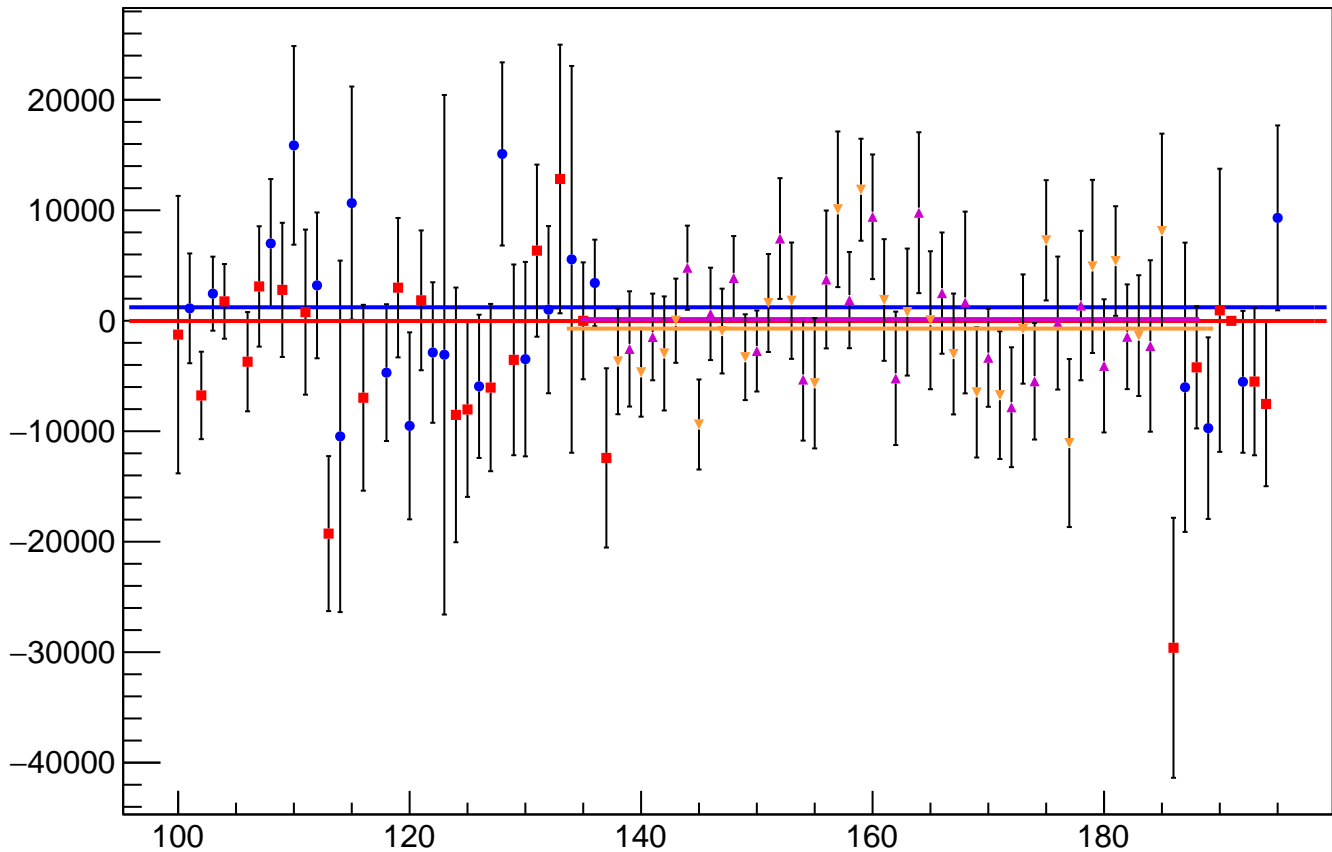
+ sign 1897.827 $\pm$ 0.258  $\chi^2$ /NDF: 656933.7/45

All: 1895.847 $\pm$ 0.181  $\chi^2$ /NDF: 915867.4/93

- sign 1893.910 $\pm$ 0.255  $\chi^2$ /NDF: 258817.2/47



# asym\_atr\_dd\_correction\_mean vs Slug



Right In: 1220.629+/-1458.472  $\chi^2$ /NDF: 17.0/20

Left Out: -707.785+/-1017.719  $\chi^2$ /NDF:27.1/24

Right Out: -20.781+/-85.828  $\chi^2$ /NDF: 28.0/24

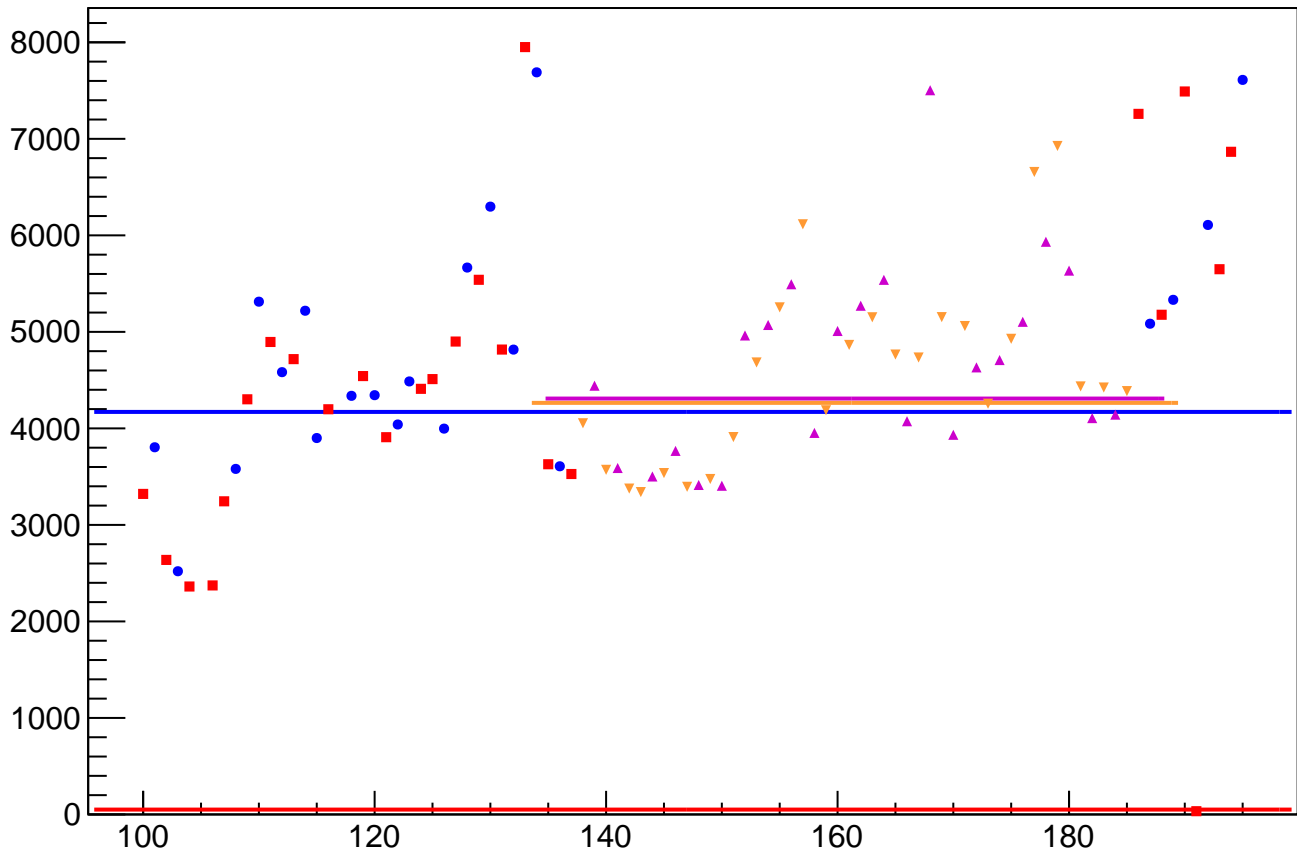
Left In: 150.495+/-1053.655  $\chi^2$ /NDF:16.9/22

+ sign -76.288+/-834.610  $\chi^2$ /NDF: 45.3/45

All: -20.241+/-85.099  $\chi^2$ /NDF: 90.2/93

- sign -19.652+/-85.545  $\chi^2$ /NDF: 45.0/47

# asym\_atr\_dd\_correction\_rms vs Slug



Right In: 4170.659+/-1.031  $\chi^2$ /NDF: 1460296.6/20

Left Out: 4264.433+/-0.720  $\chi^2$ /NDF:1354900.8/24

Right Out: 50.471+/-0.061  $\chi^2$ /NDF: 19825186.9/24

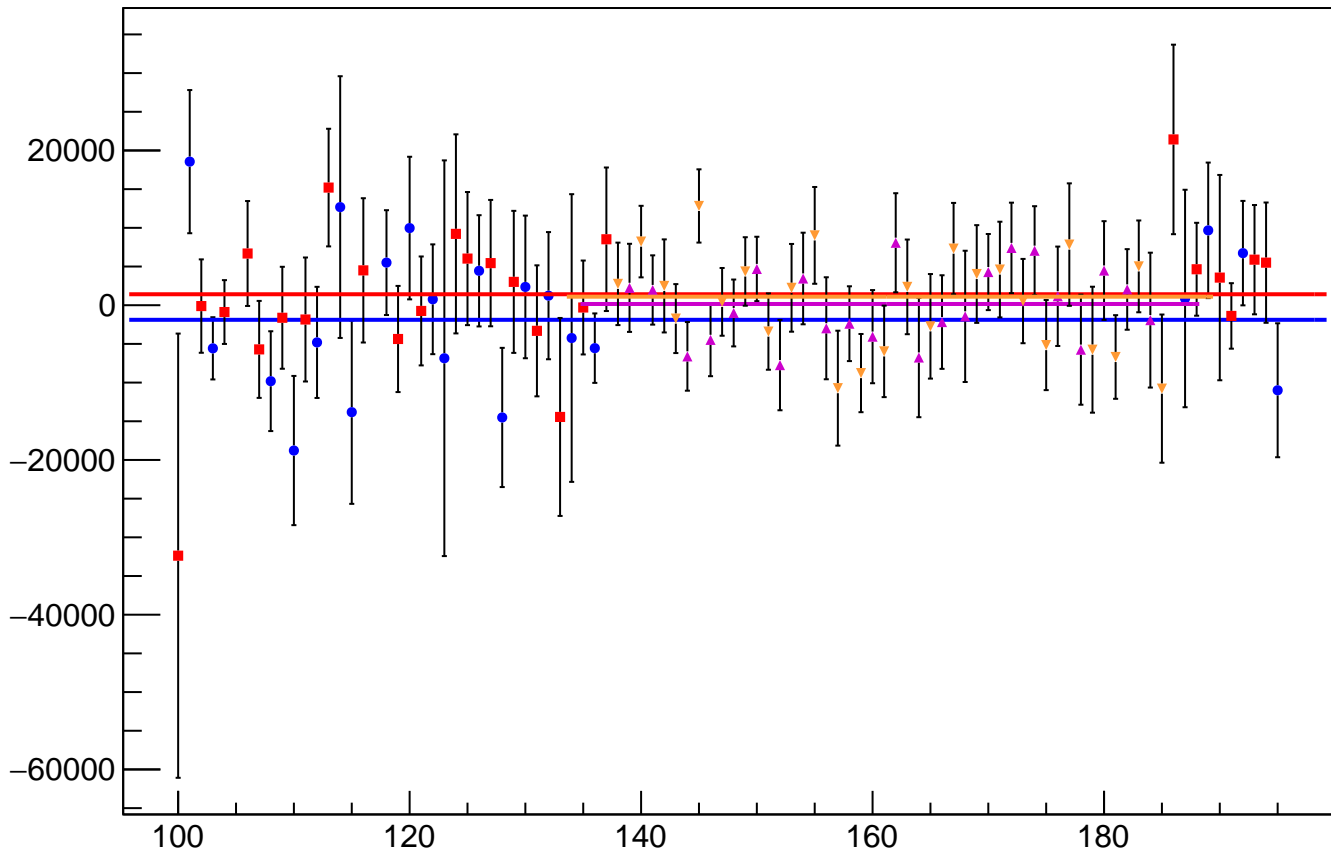
Left In: 4309.034+/-0.745  $\chi^2$ /NDF:1305133.3/22

+ sign 4233.725+/-0.590  $\chi^2$ /NDF: 2820757.9/45

All: 121.741+/-0.060  $\chi^2$ /NDF: 105463836.9/9

- sign 78.542+/-0.060  $\chi^2$ /NDF: 53585720.1/47

# asym\_atr\_dd\_mean vs Slug



Right In:  $-1886.841 \pm 1672.486$   $\chi^2/\text{NDF}: 23.5/20$

Left Out:  $1102.204 \pm 1126.663$   $\chi^2/\text{NDF}: 28.6/24$

Right Out:  $1416.581 \pm 1441.450$   $\chi^2/\text{NDF}: 15.8/24$

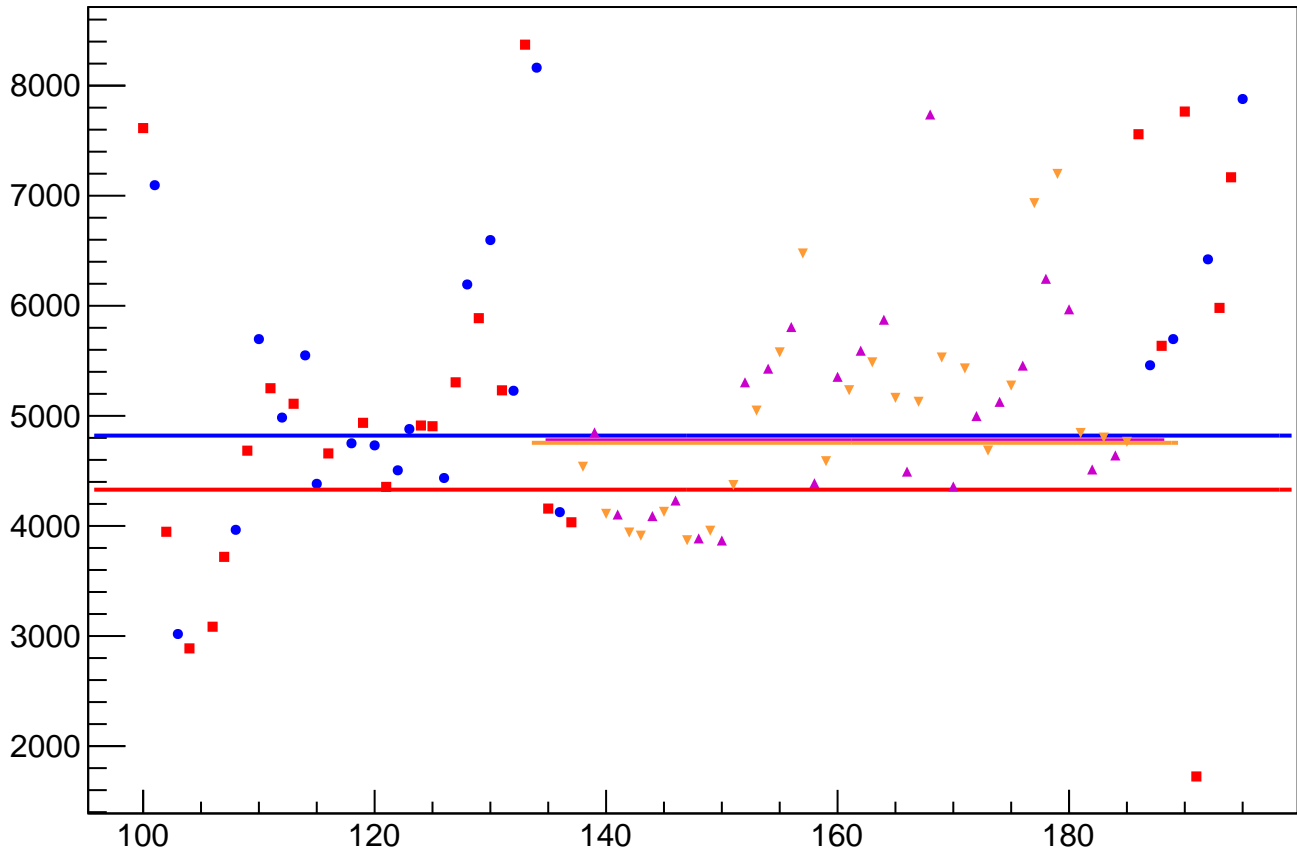
Left In:  $158.683 \pm 1161.507$   $\chi^2/\text{NDF}: 15.5/22$

+ sign  $169.183 \pm 934.420$   $\chi^2/\text{NDF}: 54.3/45$

All:  $419.443 \pm 649.870$   $\chi^2/\text{NDF}: 86.2/93$

- sign  $653.894 \pm 904.424$   $\chi^2/\text{NDF}: 31.8/47$

# asym\_atr\_dd\_rms vs Slug



Right In: 4820.789 $\pm$ 1.183  $\chi^2$ /NDF: 1216952.6/20

Left Out: 4755.383 $\pm$ 0.797  $\chi^2$ /NDF:953328.0/24

Right Out: 4329.602 $\pm$ 1.015  $\chi^2$ /NDF: 2275269.5/24

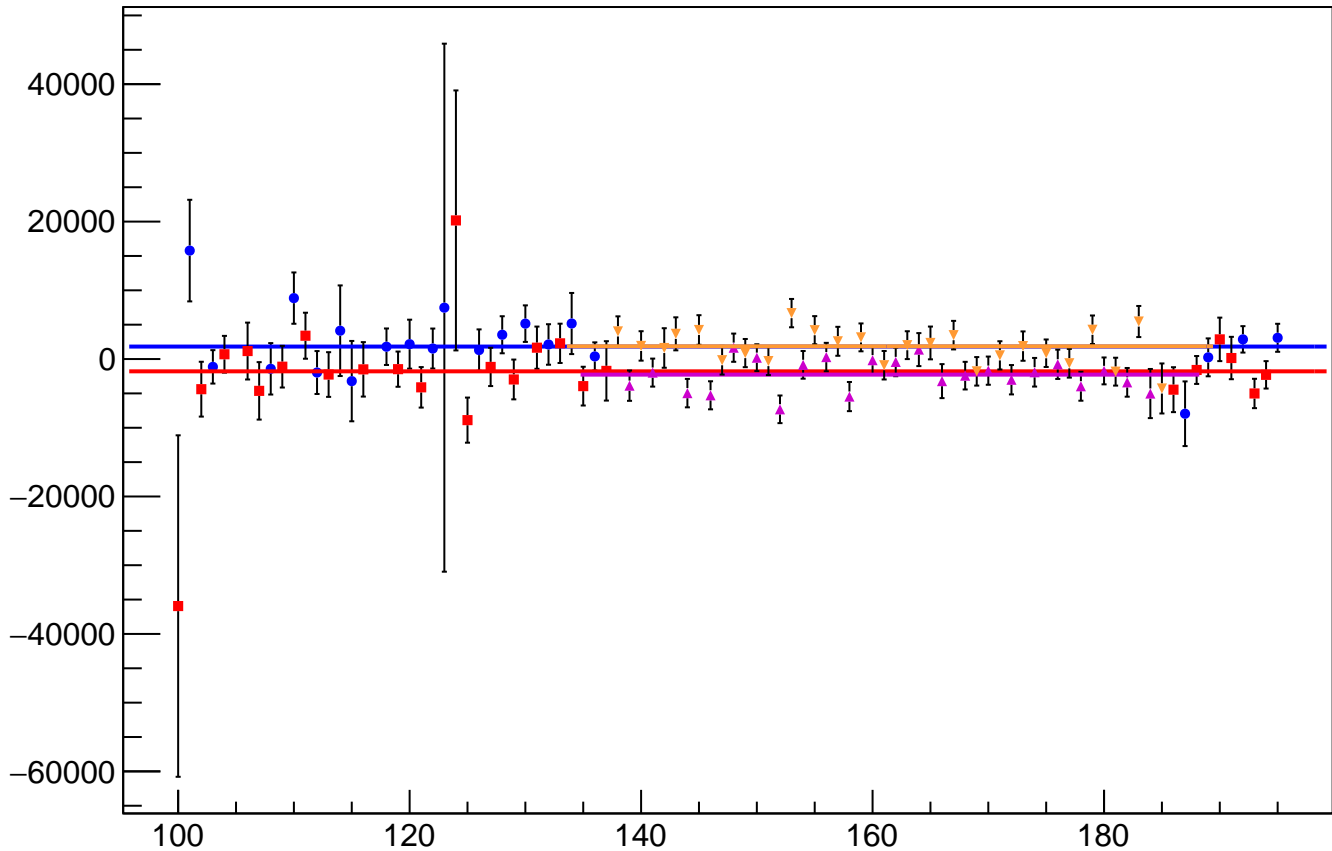
Left In: 4777.831 $\pm$ 0.821  $\chi^2$ /NDF:950291.2/22

+ sign 4775.799 $\pm$ 0.661  $\chi^2$ /NDF: 2172384.5/45

All: 4685.153 $\pm$ 0.459  $\chi^2$ /NDF: 5552174.0/93

- sign 4600.504 $\pm$ 0.639  $\chi^2$ /NDF: 3343392.2/47

# reg\_asym\_at1\_avg\_mean vs Slug



Right In: 1815.796+/-658.296  $\chi^2/\text{NDF}$ : 20.1/20

Left Out: 1856.570+/-430.977  $\chi^2/\text{NDF}$ :30.0/24

Right Out: -1788.312+/-607.796  $\chi^2/\text{NDF}$ : 23.0/24

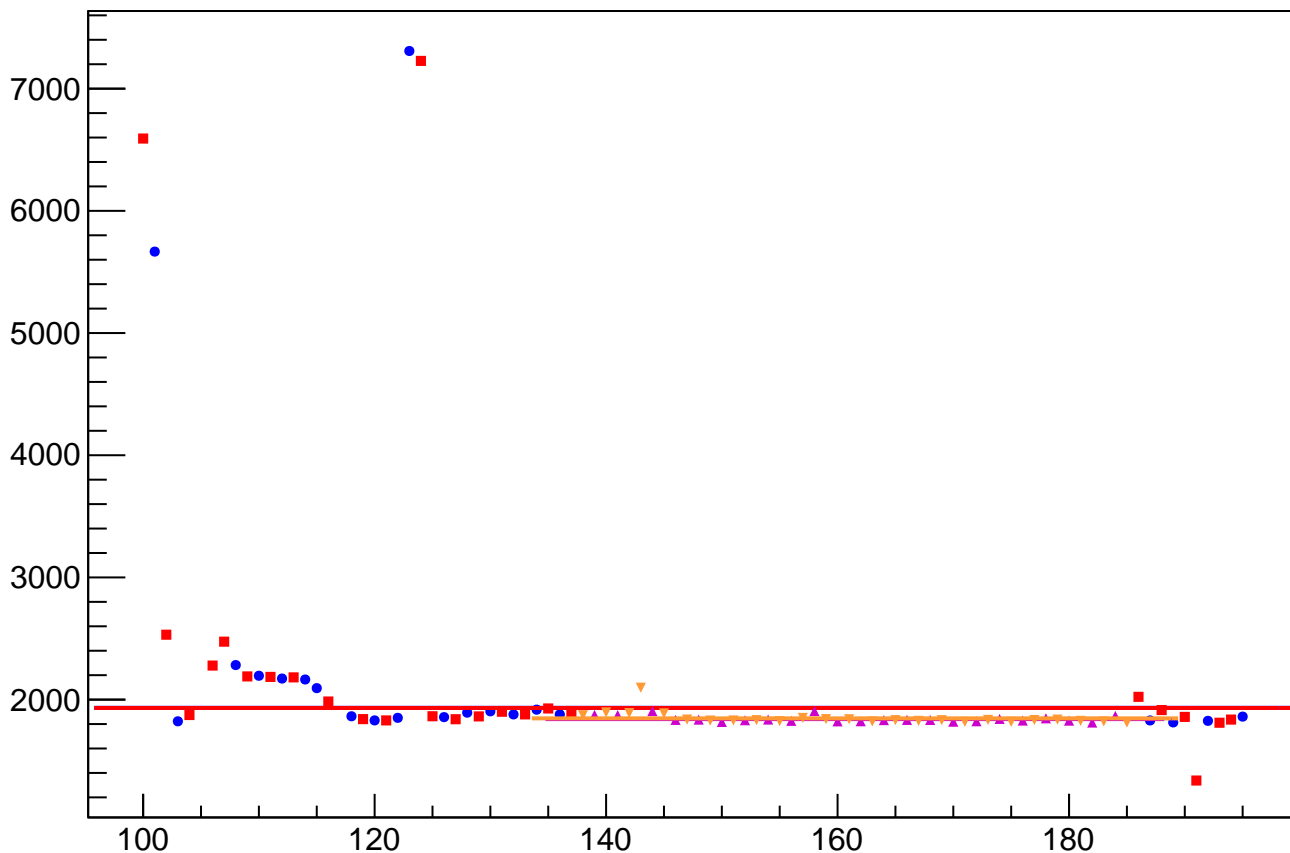
Left In: -2268.464+/-441.710  $\chi^2/\text{NDF}$ :26.9/22

+ sign 1844.337+/-360.576  $\chi^2/\text{NDF}$ : 50.1/45

All: -147.002+/-253.806  $\chi^2/\text{NDF}$ : 160.8/93

- sign -2102.516+/-357.317  $\chi^2/\text{NDF}$ : 50.2/47

# reg\_asym\_at1\_avg\_rms vs Slug



Right In:  $1932.758 \pm 0.465$   $\chi^2/\text{NDF}: 618671.5/20$

Left Out:  $1846.602 \pm 0.305$   $\chi^2/\text{NDF}: 27302.8/24$

Right Out:  $1931.735 \pm 0.430$   $\chi^2/\text{NDF}: 457390.0/24$

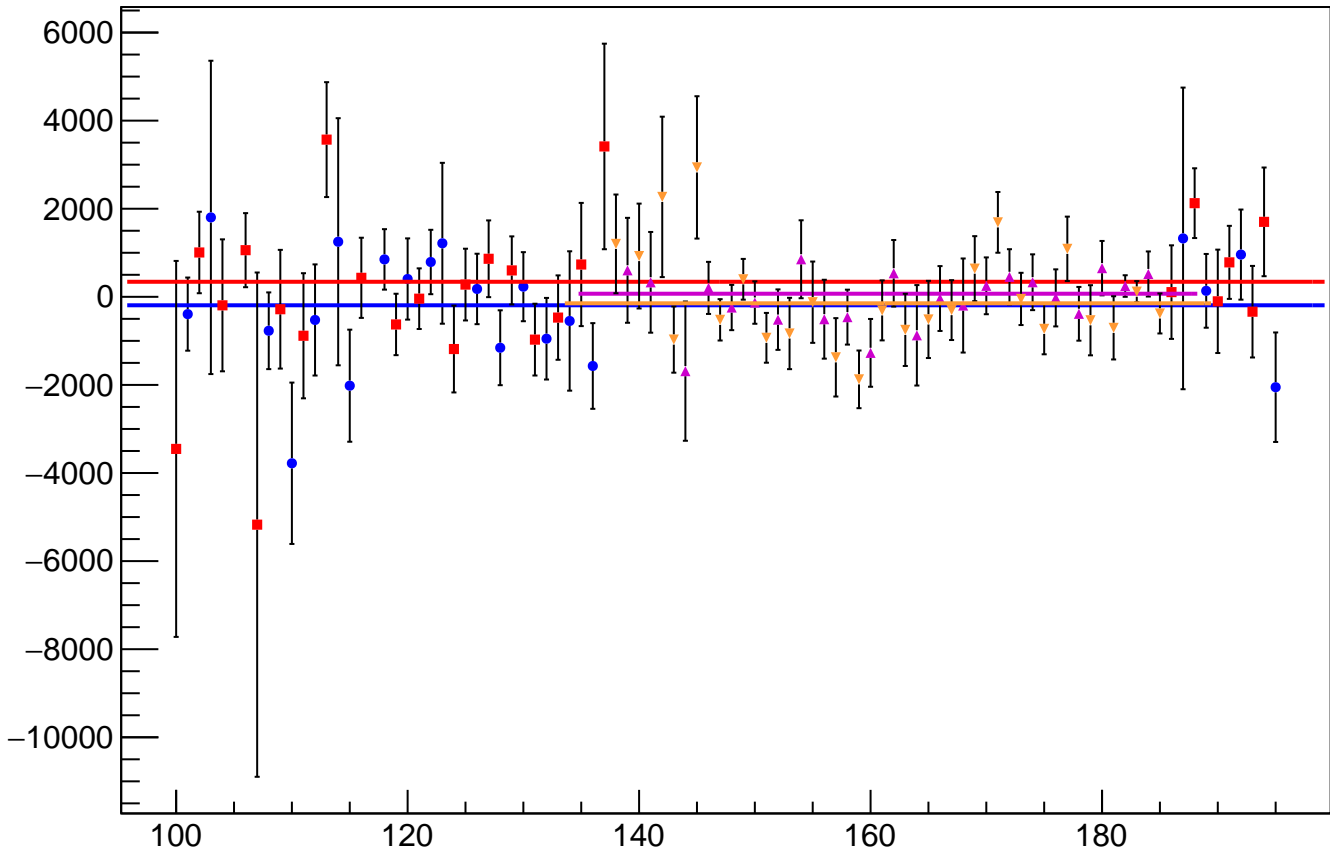
Left In:  $1840.541 \pm 0.312$   $\chi^2/\text{NDF}: 6740.2/22$

+ sign  $1872.451 \pm 0.255$   $\chi^2/\text{NDF}: 669954.2/45$

All:  $1872.253 \pm 0.179$   $\chi^2/\text{NDF}: 1163548.7/93$

- sign  $1872.059 \pm 0.253$   $\chi^2/\text{NDF}: 493593.3/47$

# asym\_at1\_avg\_correction\_mean vs Slug



Right In:  $-192.084 \pm 221.937$   $\chi^2/\text{NDF}$ : 20.5/20

Left Out:  $-146.999 \pm 121.984$   $\chi^2/\text{NDF}$ : 37.7/24

Right Out:  $341.644 \pm 199.260$   $\chi^2/\text{NDF}$ : 27.6/24

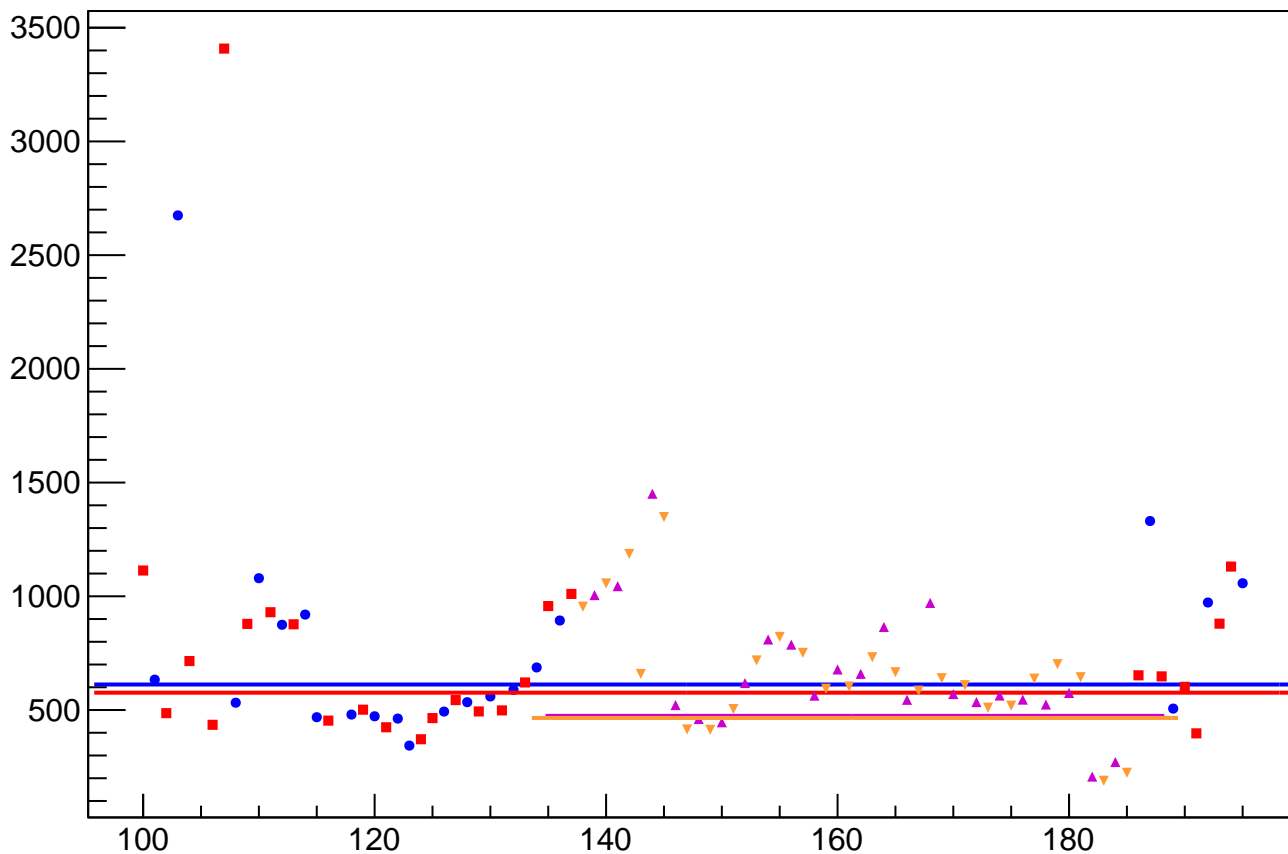
Left In:  $70.340 \pm 126.373$   $\chi^2/\text{NDF}$ : 12.3/22

+ sign  $-157.459 \pm 106.901$   $\chi^2/\text{NDF}$ : 58.2/45

All:  $-4.389 \pm 75.526$   $\chi^2/\text{NDF}$ : 103.6/93

- sign  $148.163 \pm 106.720$   $\chi^2/\text{NDF}$ : 41.2/47

# asym\_at1\_avg\_correction\_rms vs Slug



Right In: 612.173 $\pm$ 0.157  $\chi^2$ /NDF: 2073324.1/20

Left Out: 465.080 $\pm$ 0.086  $\chi^2$ /NDF: 7086137.6/24

Right Out: 576.191 $\pm$ 0.141  $\chi^2$ /NDF: 2186768.6/24

Left In: 474.263 $\pm$ 0.089  $\chi^2$ /NDF: 6173100.1/22

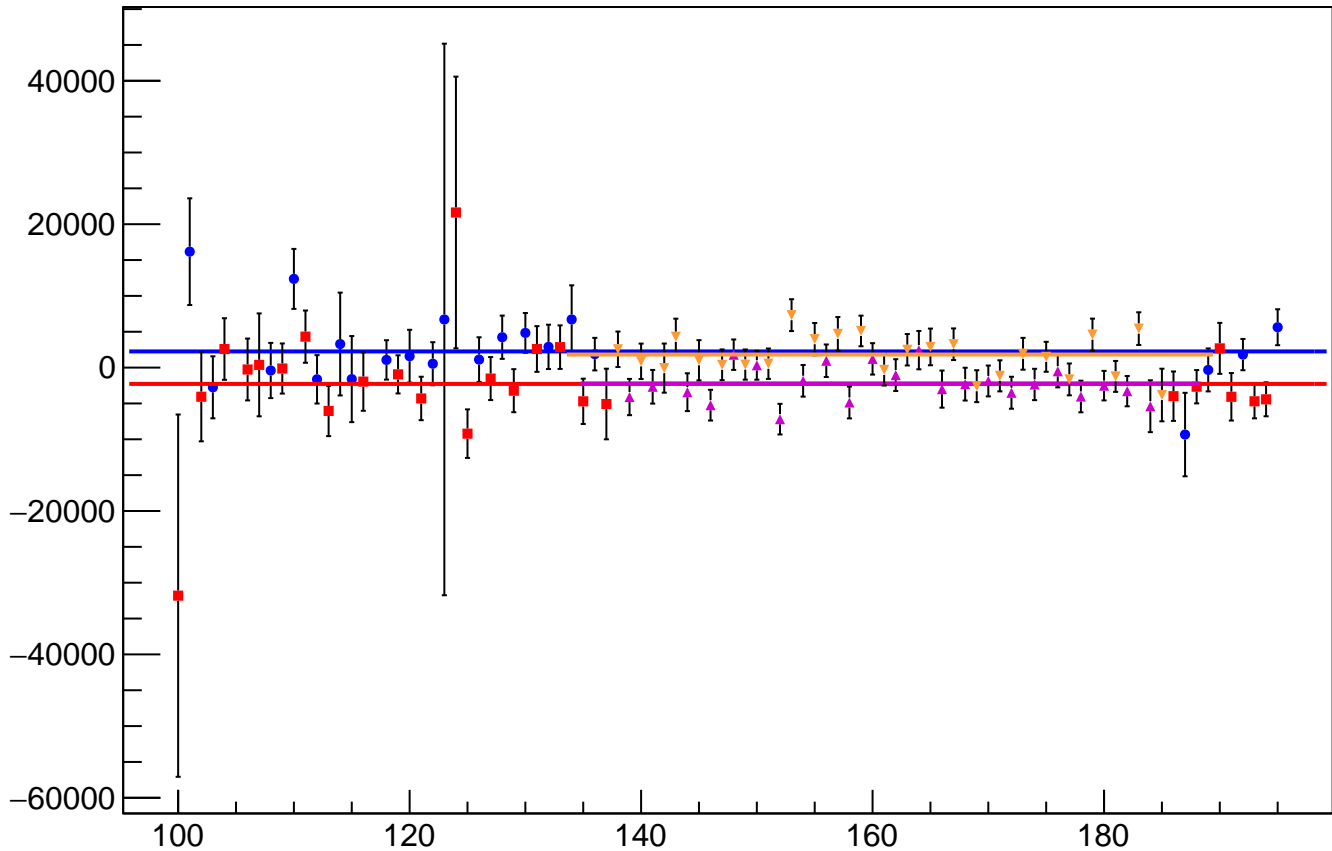
+ sign 499.207 $\pm$ 0.076  $\chi^2$ /NDF: 9834164.4/45

All: 501.358 $\pm$ 0.053  $\chi^2$ /NDF: 18568869.9/93

- sign 503.501 $\pm$ 0.075  $\chi^2$ /NDF: 8733089.7/47



# asym\_at1\_avg\_mean vs Slug



Right In: 2255.337+/-736.262  $\chi^2$ /NDF: 22.4/20

Left Out: 1824.066+/-462.694  $\chi^2$ /NDF:32.1/24

Right Out: -2274.877+/-680.638  $\chi^2$ /NDF: 25.0/24

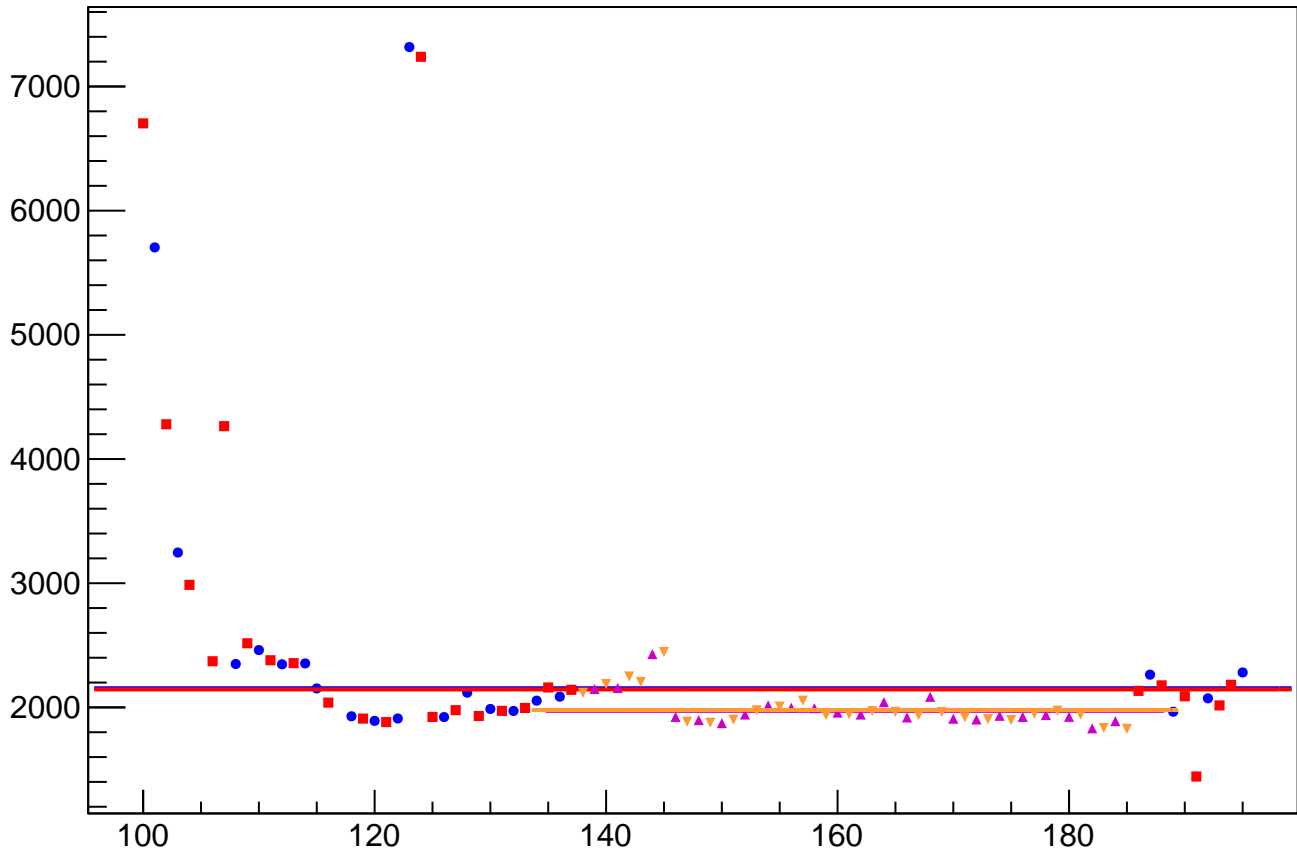
Left In: -2208.114+/-474.050  $\chi^2$ /NDF:25.3/22

+ sign 1946.167+/-391.757  $\chi^2$ /NDF: 54.8/45

All: -156.629+/-276.034  $\chi^2$ /NDF: 162.4/93

- sign -2229.921+/-388.999  $\chi^2$ /NDF: 50.4/47

# asym\_at1\_avg\_rms vs Slug



Right In: 2154.474+/-0.521  $\chi^2$ /NDF: 724726.6/20

Left Out: 1978.997+/-0.327  $\chi^2$ /NDF: 139299.8/24

Right Out: 2144.591+/-0.481  $\chi^2$ /NDF: 905142.0/24

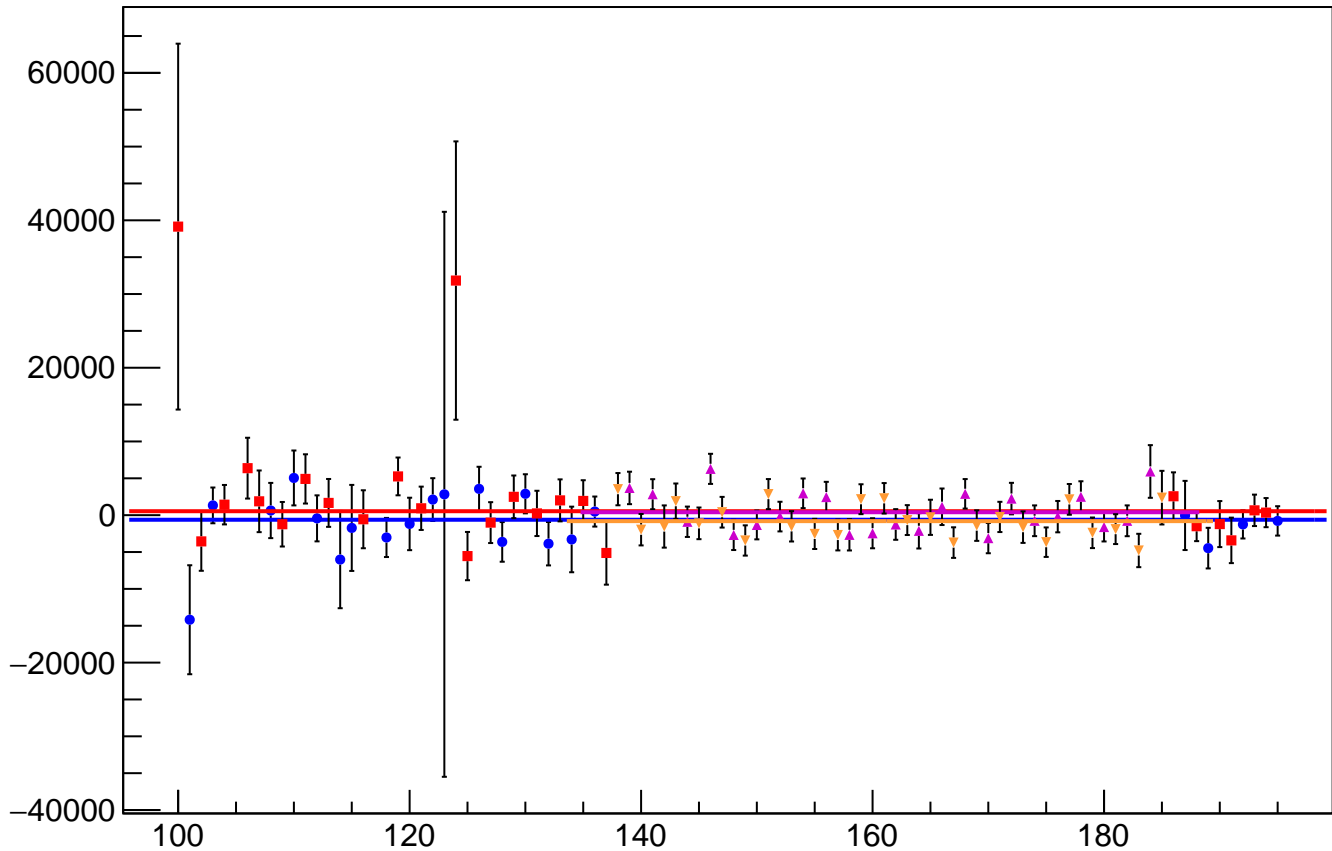
Left In: 1972.166+/-0.335  $\chi^2$ /NDF: 116452.5/22

+ sign 2028.678+/-0.277  $\chi^2$ /NDF: 945468.5/45

All: 2028.582+/-0.195  $\chi^2$ /NDF: 2053489.5/93

- sign 2028.487+/-0.275  $\chi^2$ /NDF: 1108020.7/47

# reg\_asym\_at1\_dd\_mean vs Slug



Right In:  $-620.763 \pm 655.462$   $\chi^2/\text{NDF}: 17.8/20$

Left Out:  $-808.436 \pm 430.304$   $\chi^2/\text{NDF}: 27.9/24$

Right Out:  $537.036 \pm 605.736$   $\chi^2/\text{NDF}: 24.0/24$

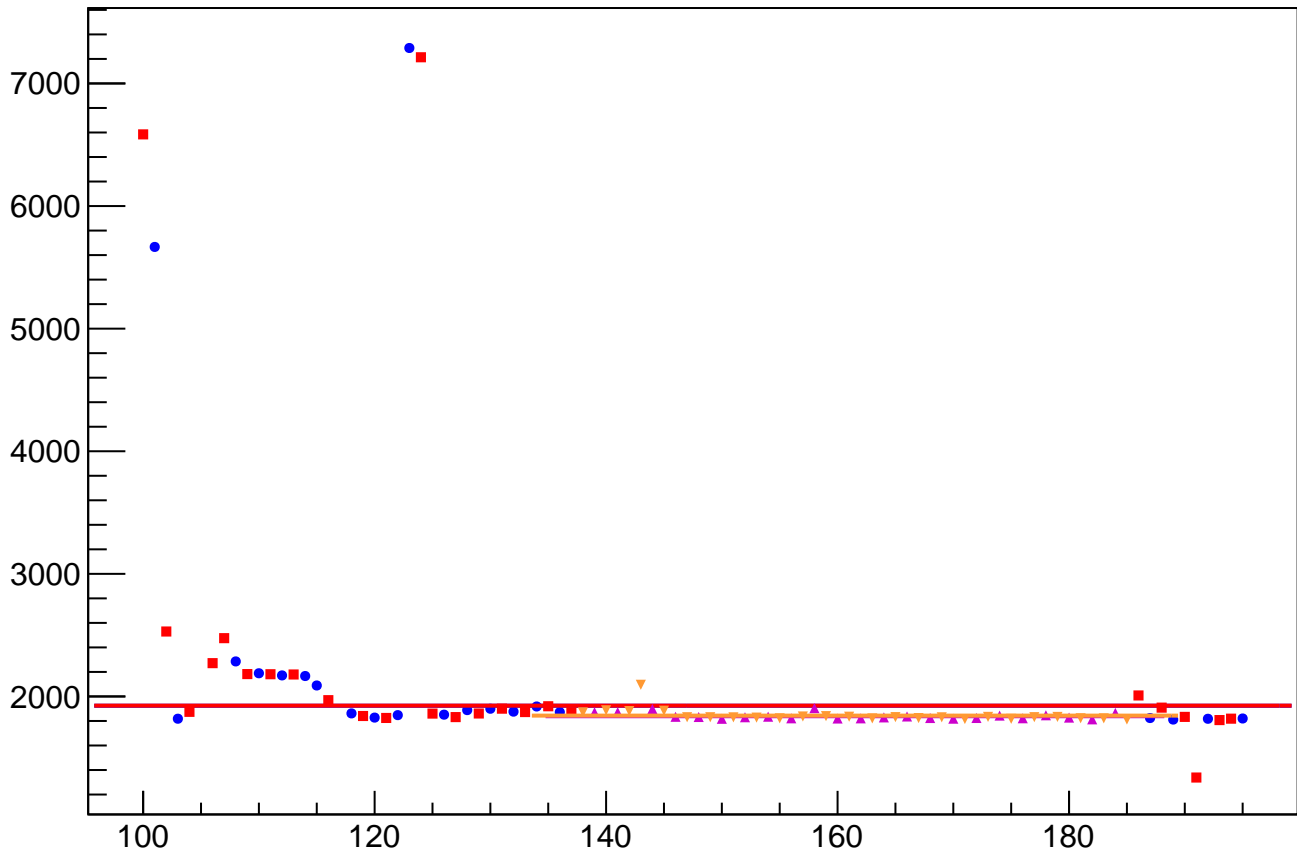
Left In:  $398.797 \pm 441.246$   $\chi^2/\text{NDF}: 34.4/22$

+ sign  $-751.913 \pm 359.715$   $\chi^2/\text{NDF}: 45.8/45$

All:  $-147.471 \pm 253.267$   $\chi^2/\text{NDF}: 109.8/93$

- sign  $446.721 \pm 356.652$   $\chi^2/\text{NDF}: 58.4/47$

# reg\_asym\_at1\_dd\_rms vs Slug



Right In: 1924.096+/-0.463  $\chi^2$ /NDF: 624677.5/20

Left Out: 1843.747+/-0.304  $\chi^2$ /NDF:26867.4/24

Right Out: 1925.094+/-0.428  $\chi^2$ /NDF: 458630.0/24

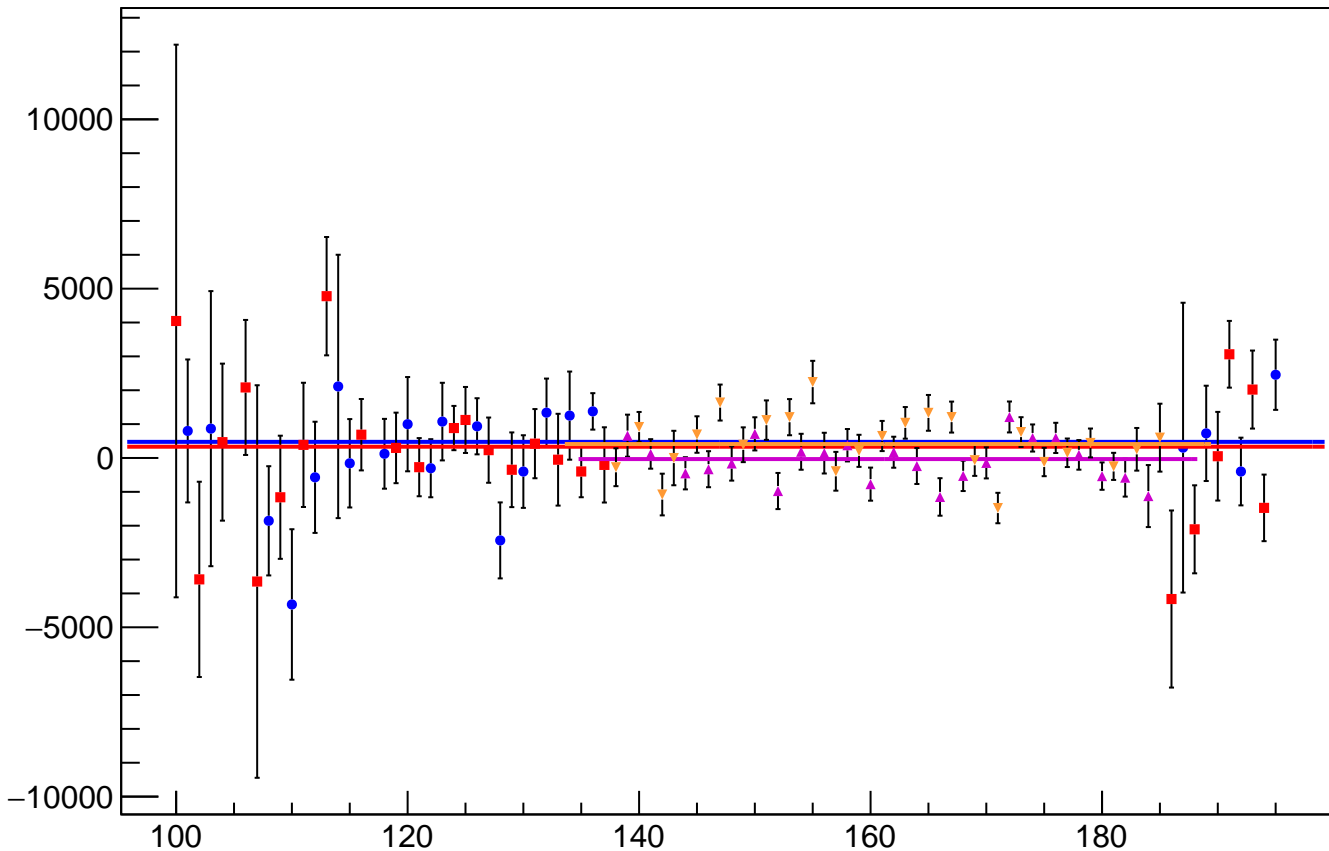
Left In: 1838.611+/-0.312  $\chi^2$ /NDF:6335.1/22

+ sign 1867.946+/-0.254  $\chi^2$ /NDF: 672547.3/45

All: 1868.272+/-0.179  $\chi^2$ /NDF: 1164150.3/93

- sign 1868.593+/-0.252  $\chi^2$ /NDF: 491599.8/47

# asym\_at1\_dd\_correction\_mean vs Slug



Right In:  $476.263 \pm 249.114$   $\chi^2/\text{NDF}: 25.0/20$

Left Out:  $411.072 \pm 100.456$   $\chi^2/\text{NDF}: 61.2/24$

Right Out:  $332.543 \pm 234.542$   $\chi^2/\text{NDF}: 33.8/24$

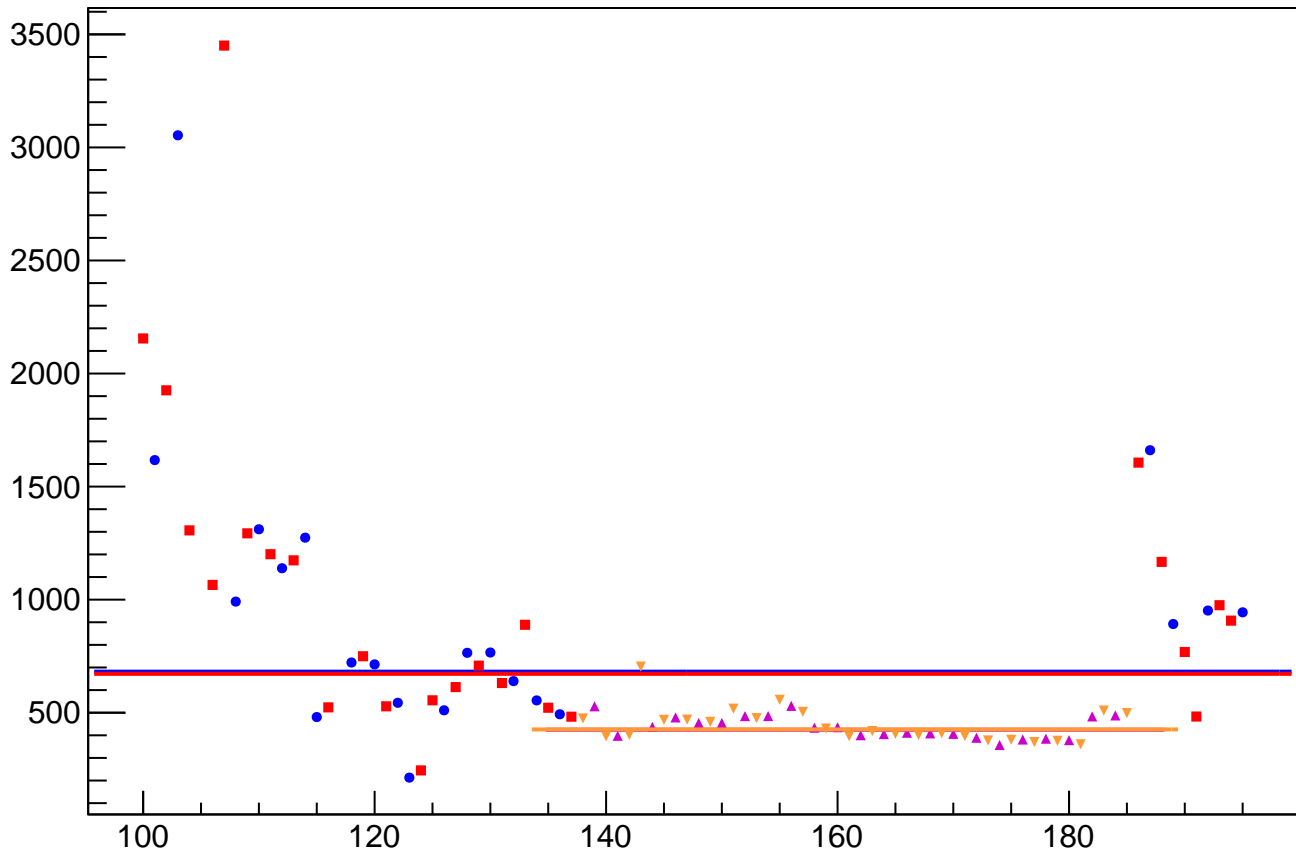
Left In:  $-32.456 \pm 102.403$   $\chi^2/\text{NDF}: 32.7/22$

+ sign  $420.190 \pm 93.166$   $\chi^2/\text{NDF}: 86.2/45$

All:  $224.524 \pm 66.118$   $\chi^2/\text{NDF}: 163.7/93$

- sign  $25.983 \pm 93.848$   $\chi^2/\text{NDF}: 68.6/47$

# asym\_at1\_dd\_correction\_rms vs Slug



Right In:  $681.583 \pm 0.176$   $\chi^2/\text{NDF}: 2748904.7/20$

Left Out:  $426.027 \pm 0.071$   $\chi^2/\text{NDF}: 733072.9/24$

+ sign  $461.772 \pm 0.066$   $\chi^2/\text{NDF}: 5292365.7/45$

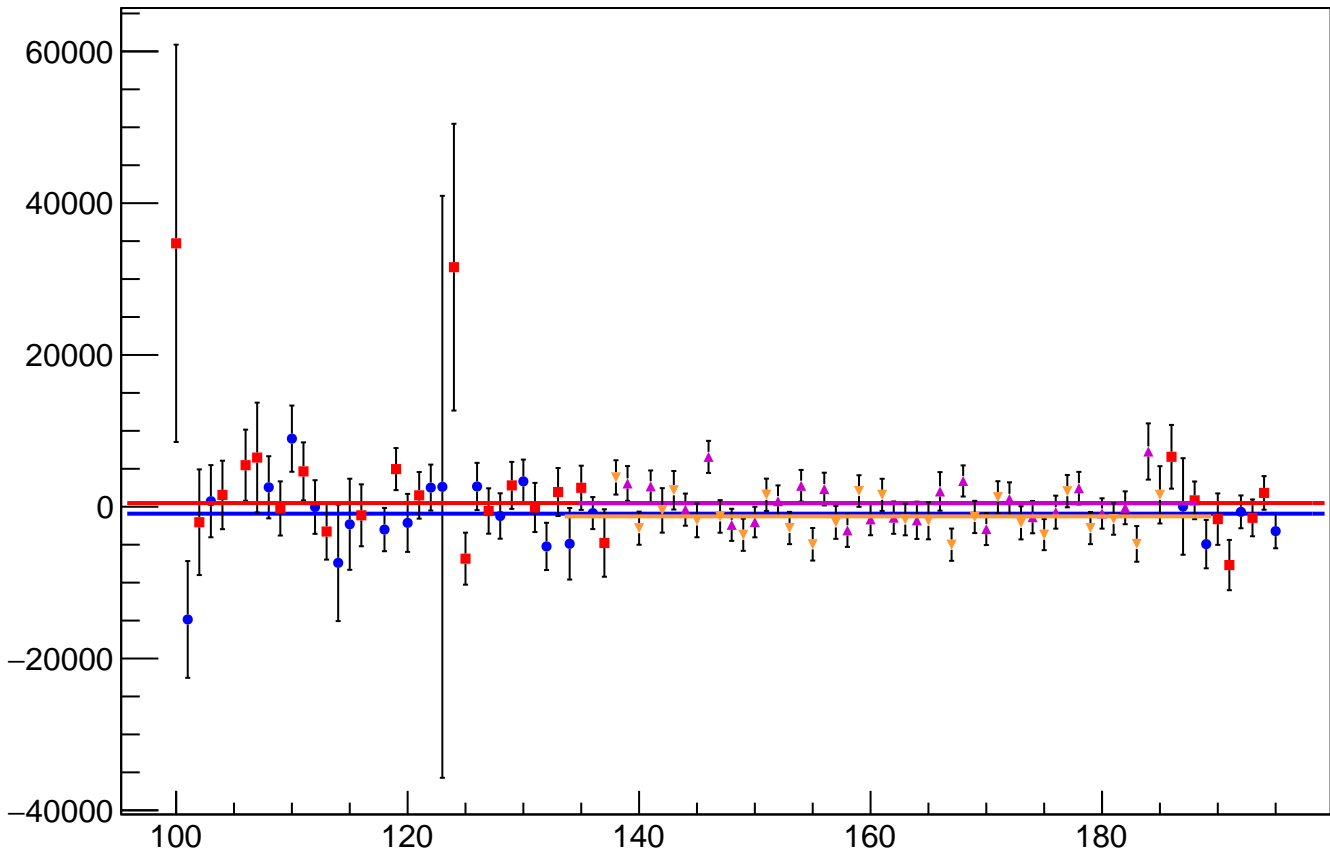
Right Out:  $671.918 \pm 0.166$   $\chi^2/\text{NDF}: 3768670.3/24$

All:  $462.992 \pm 0.047$   $\chi^2/\text{NDF}: 11320527.2/90$

- sign  $464.230 \pm 0.066$   $\chi^2/\text{NDF}: 6027470.5/47$

Left In:  $424.639 \pm 0.072$   $\chi^2/\text{NDF}: 391611.2/22$

# asym\_at1\_dd\_mean vs Slug



Right In:  $-913.252 \pm 737.060$   $\chi^2/\text{NDF}: 20.8/20$

Left Out:  $-1267.885 \pm 443.219$   $\chi^2/\text{NDF}: 30.8/24$

Right Out:  $488.079 \pm 691.610$   $\chi^2/\text{NDF}: 28.5/24$

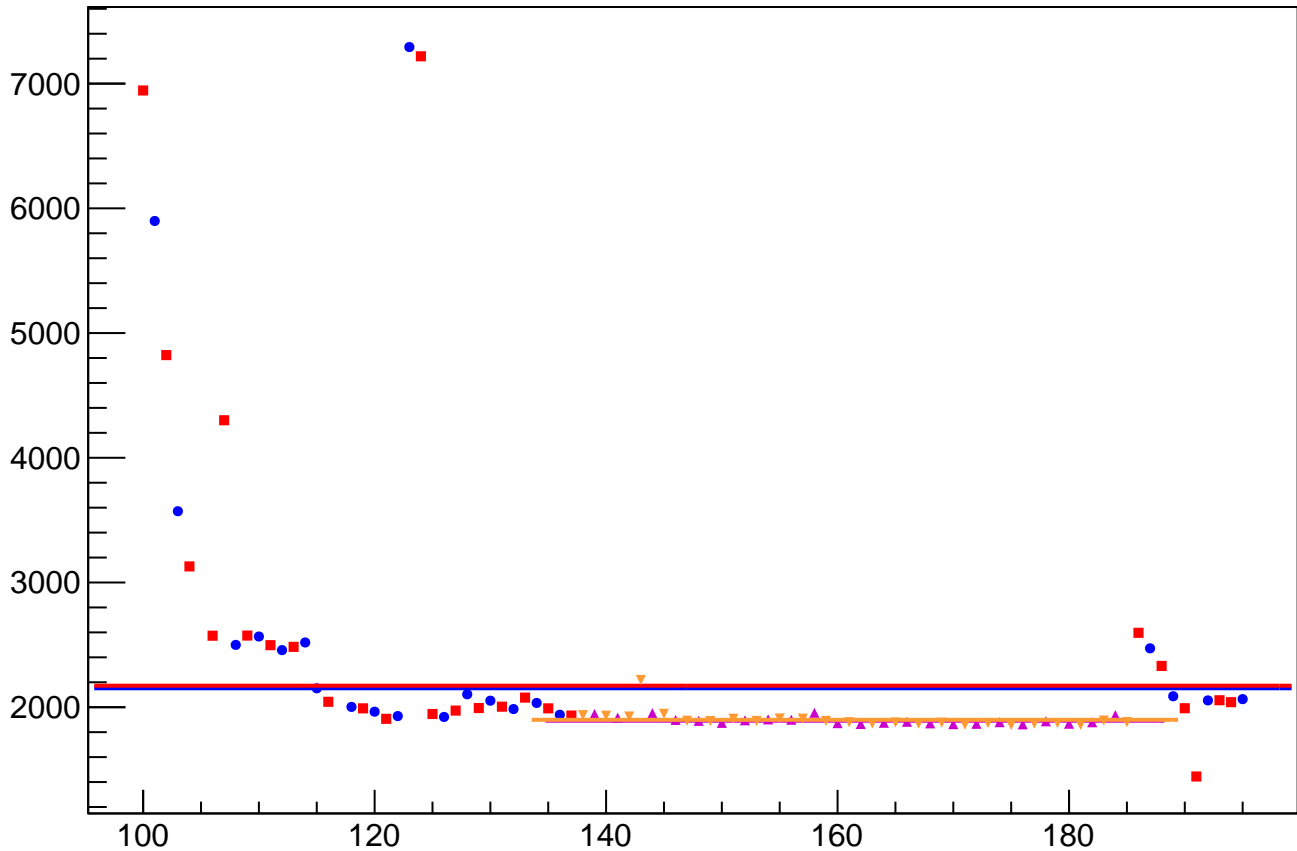
Left In:  $462.599 \pm 453.947$   $\chi^2/\text{NDF}: 32.6/22$

+ sign  $-1173.705 \pm 379.833$   $\chi^2/\text{NDF}: 51.8/45$

All:  $-350.999 \pm 268.465$   $\chi^2/\text{NDF}: 122.3/93$

- sign  $470.271 \pm 379.502$   $\chi^2/\text{NDF}: 61.1/47$

# asym\_at1\_dd\_rms vs Slug



Right In: 2151.853+/-0.521  $\chi^2$ /NDF: 815724.2/20

Left Out: 1898.962+/-0.313  $\chi^2$ /NDF:38680.4/24

+ sign 1966.122+/-0.269  $\chi^2$ /NDF: 1027323.5/45

Right Out: 2172.652+/-0.489  $\chi^2$ /NDF: 1044001.4/24

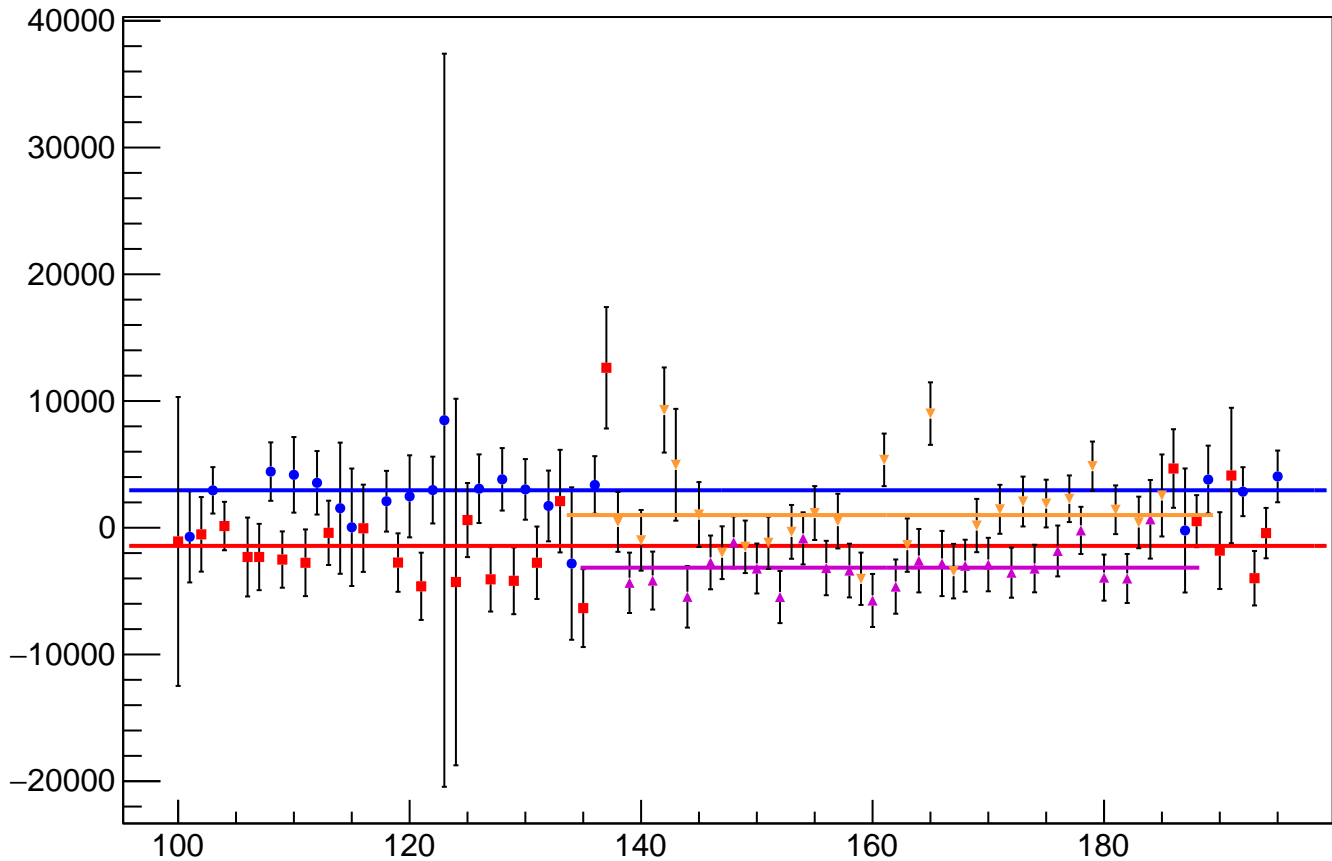
All: 1971.210+/-0.190  $\chi^2$ /NDF: 2310144.3/93

Left In: 1891.693+/-0.321  $\chi^2$ /NDF:7420.7/22

- sign 1976.289+/-0.268  $\chi^2$ /NDF: 1282103.8/47



# reg\_asym\_at2\_avg\_mean vs Slug



Right In:  $2956.693 \pm 592.479$   $\chi^2/\text{NDF}: 4.4/20$

Left Out:  $1001.263 \pm 435.247$   $\chi^2/\text{NDF}: 44.6/24$

Right Out:  $-1431.054 \pm 552.866$   $\chi^2/\text{NDF}: 25.9/24$

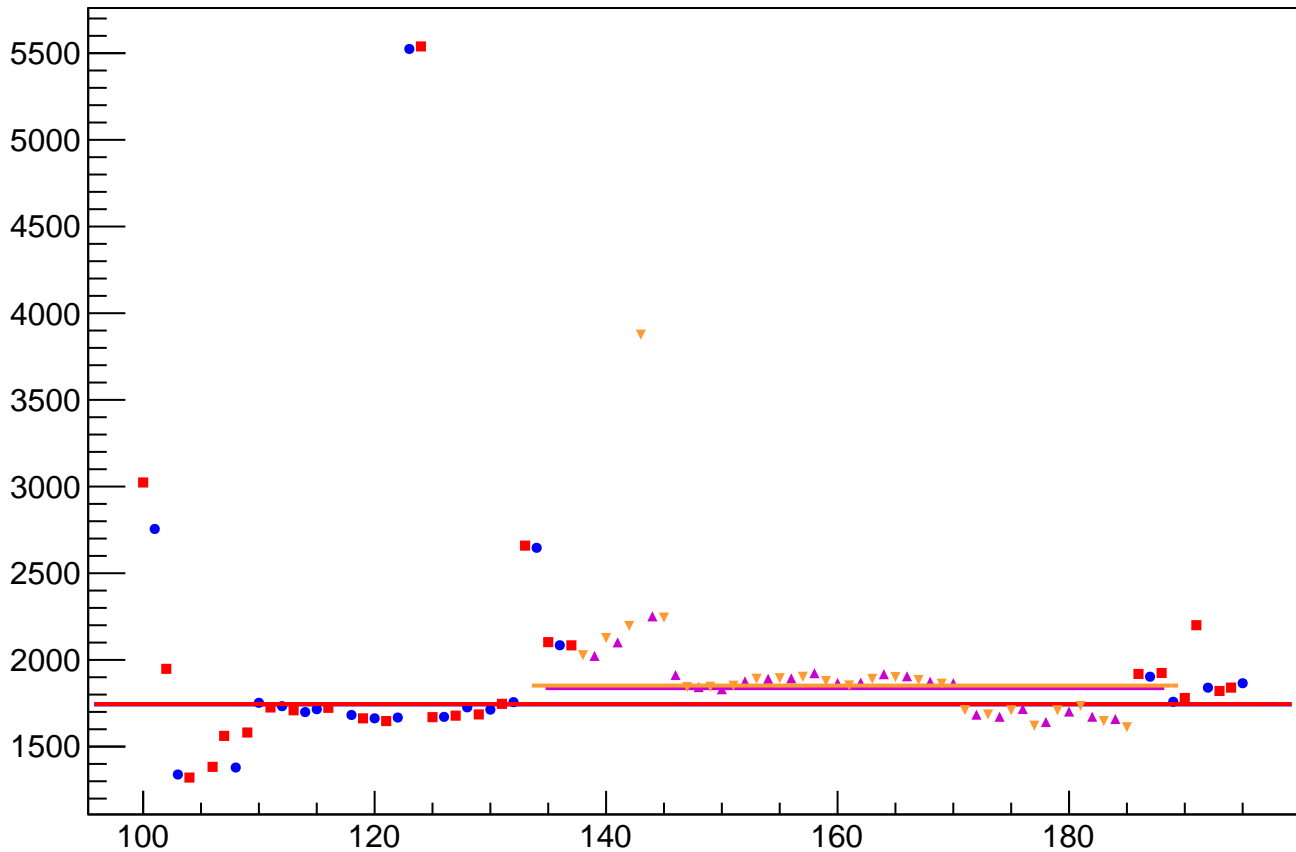
Left In:  $-3150.437 \pm 441.145$   $\chi^2/\text{NDF}: 11.8/22$

+ sign  $1686.658 \pm 350.770$   $\chi^2/\text{NDF}: 56.1/45$

All:  $-433.083 \pm 245.903$   $\chi^2/\text{NDF}: 171.6/93$

- sign  $-2481.584 \pm 344.825$   $\chi^2/\text{NDF}: 43.7/47$

# reg\_asym\_at2\_avg\_rms vs Slug



Right In: 1743.233+/-0.419  $\chi^2$ /NDF: 450494.4/20

Left Out: 1851.959+/-0.308  $\chi^2$ /NDF: 648954.2/24

Right Out: 1745.246+/-0.391  $\chi^2$ /NDF: 510634.8/24

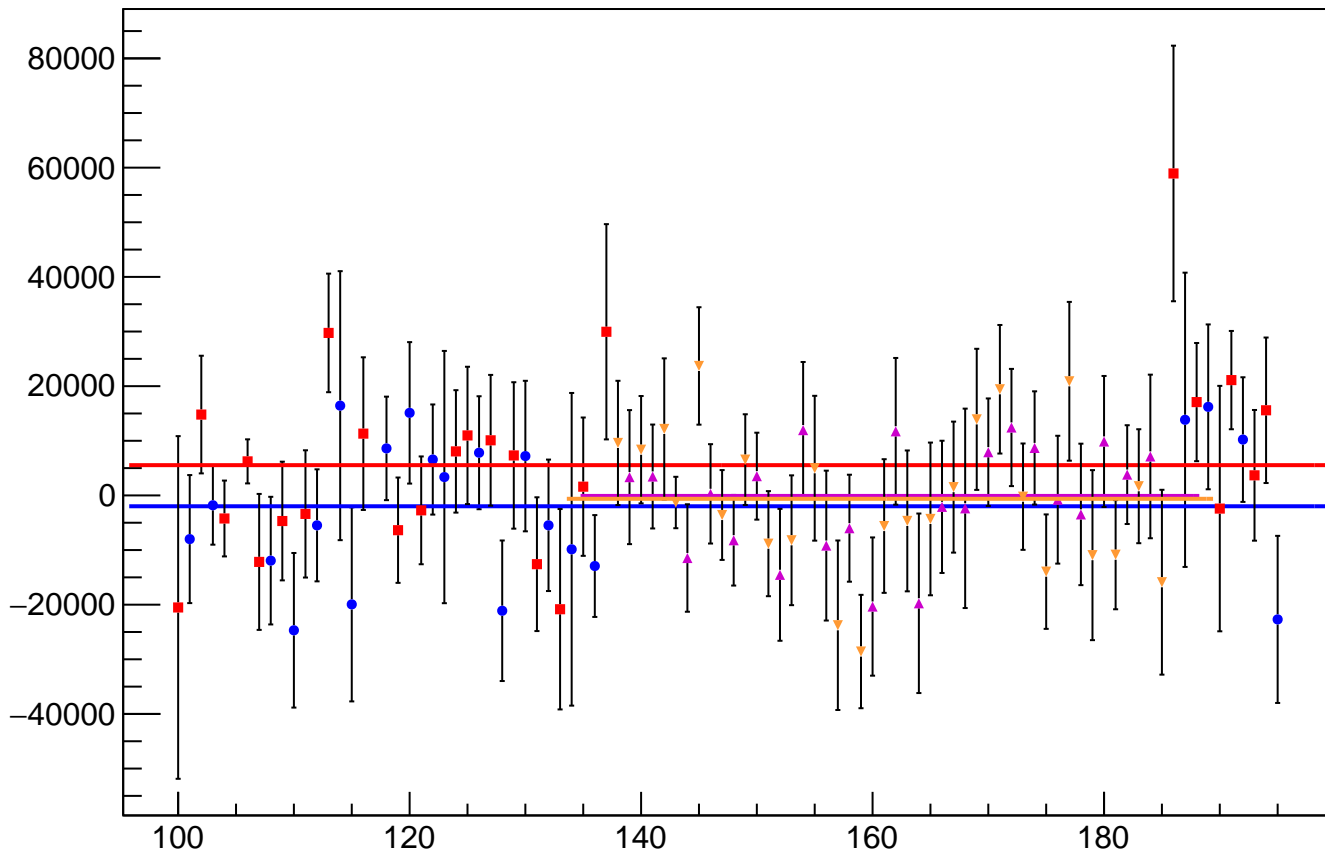
Left In: 1837.151+/-0.312  $\chi^2$ /NDF: 200514.0/22

+ sign 1813.849+/-0.248  $\chi^2$ /NDF: 1143192.9/45

All: 1807.518+/-0.174  $\chi^2$ /NDF: 1889390.9/93

- sign 1801.399+/-0.244  $\chi^2$ /NDF: 744916.6/47

# asym\_at2\_avg\_correction\_mean vs Slug



Right In:  $-1985.920 \pm 2672.618$   $\chi^2/\text{NDF}: 18.9/20$

Left Out:  $-619.372 \pm 2069.686$   $\chi^2/\text{NDF}: 30.1/24$

Right Out:  $5540.501 \pm 2078.647$   $\chi^2/\text{NDF}: 30.7/24$

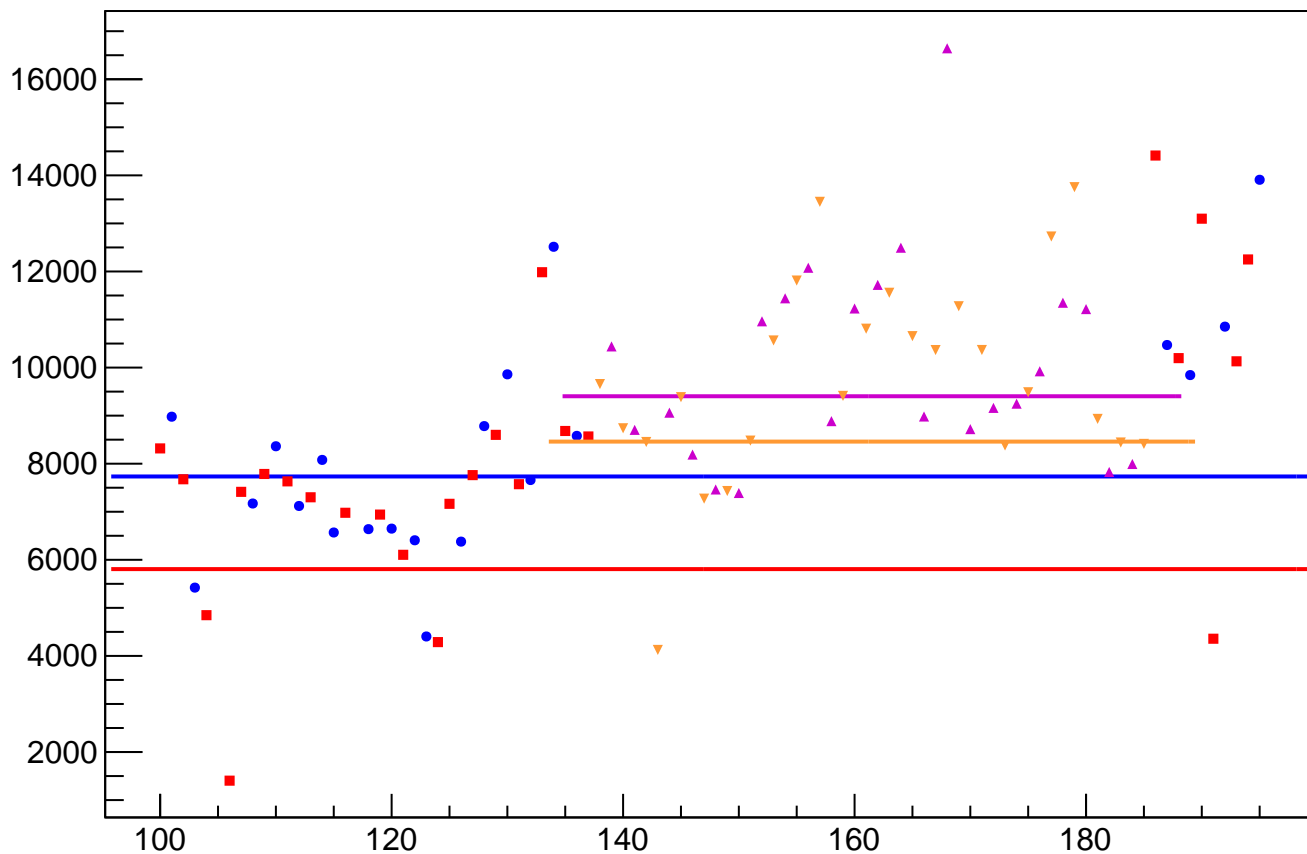
Left In:  $-93.334 \pm 2293.826$   $\chi^2/\text{NDF}: 14.6/22$

+ sign  $-1131.668 \pm 1636.383$   $\chi^2/\text{NDF}: 49.2/45$

All:  $1059.115 \pm 1121.585$   $\chi^2/\text{NDF}: 101.2/93$

- sign  $3000.166 \pm 1540.295$   $\chi^2/\text{NDF}: 48.6/47$

# asym\_at2\_avg\_correction\_rms vs Slug



Right In: 7734.059+/-1.890  $\chi^2$ /NDF: 1072512.8/20

Left Out: 8459.960+/-1.463  $\chi^2$ /NDF:3087200.5/24

Right Out: 5806.473+/-1.470  $\chi^2$ /NDF: 4928148.5/24

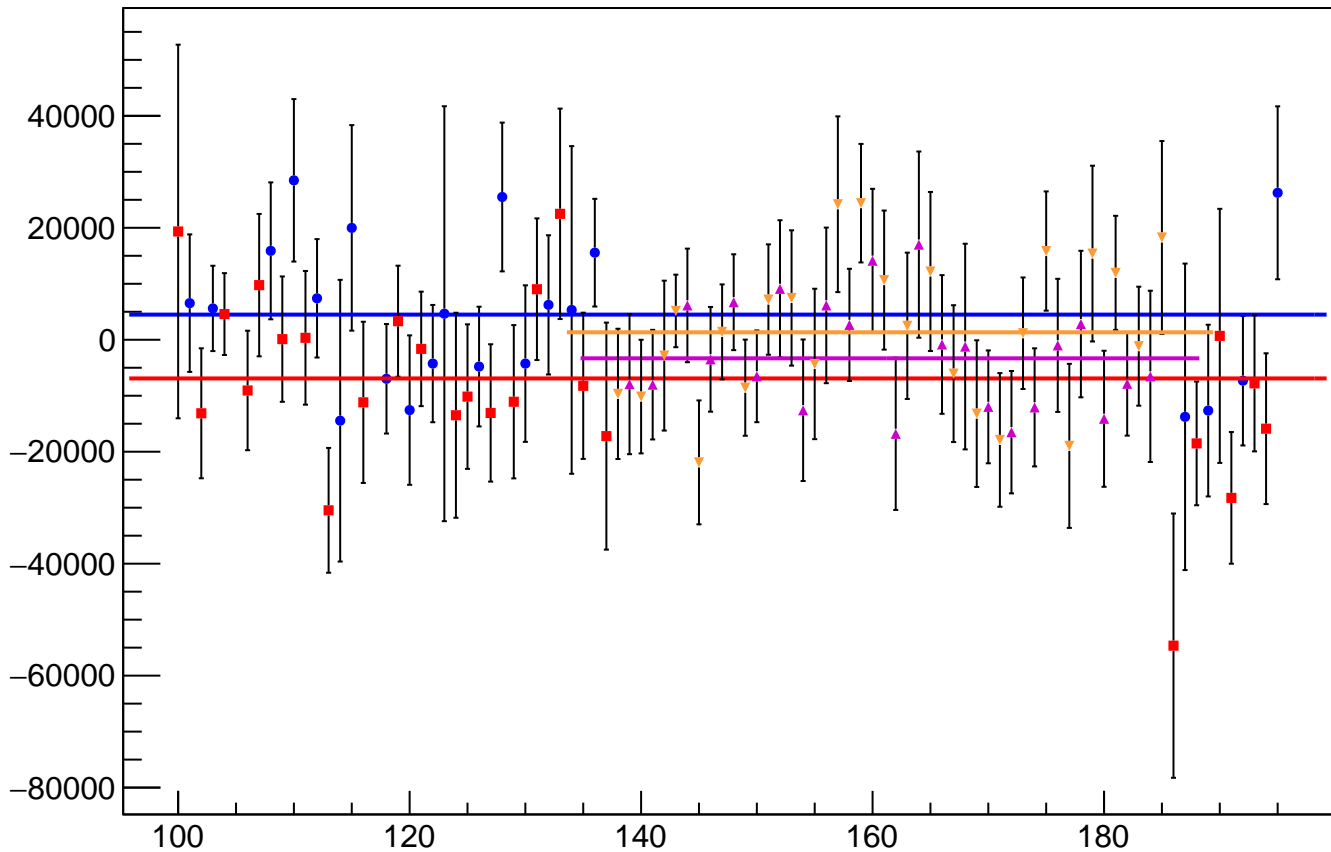
Left In: 9403.481+/-1.622  $\chi^2$ /NDF:1142646.9/22

+ sign 8187.832+/-1.157  $\chi^2$ /NDF: 4251943.2/45

All: 7785.159+/-0.793  $\chi^2$ /NDF: 13251606.5/95

- sign 7428.388+/-1.089  $\chi^2$ /NDF: 8771257.3/47

# asym\_at2\_avg\_mean vs Slug



Right In: 4493.333+/-2774.747  $\chi^2$ /NDF: 18.4/20

Left Out: 1332.828+/-2213.733  $\chi^2$ /NDF:28.0/24

Right Out: -6908.168+/-2505.024  $\chi^2$ /NDF: 25.7/24

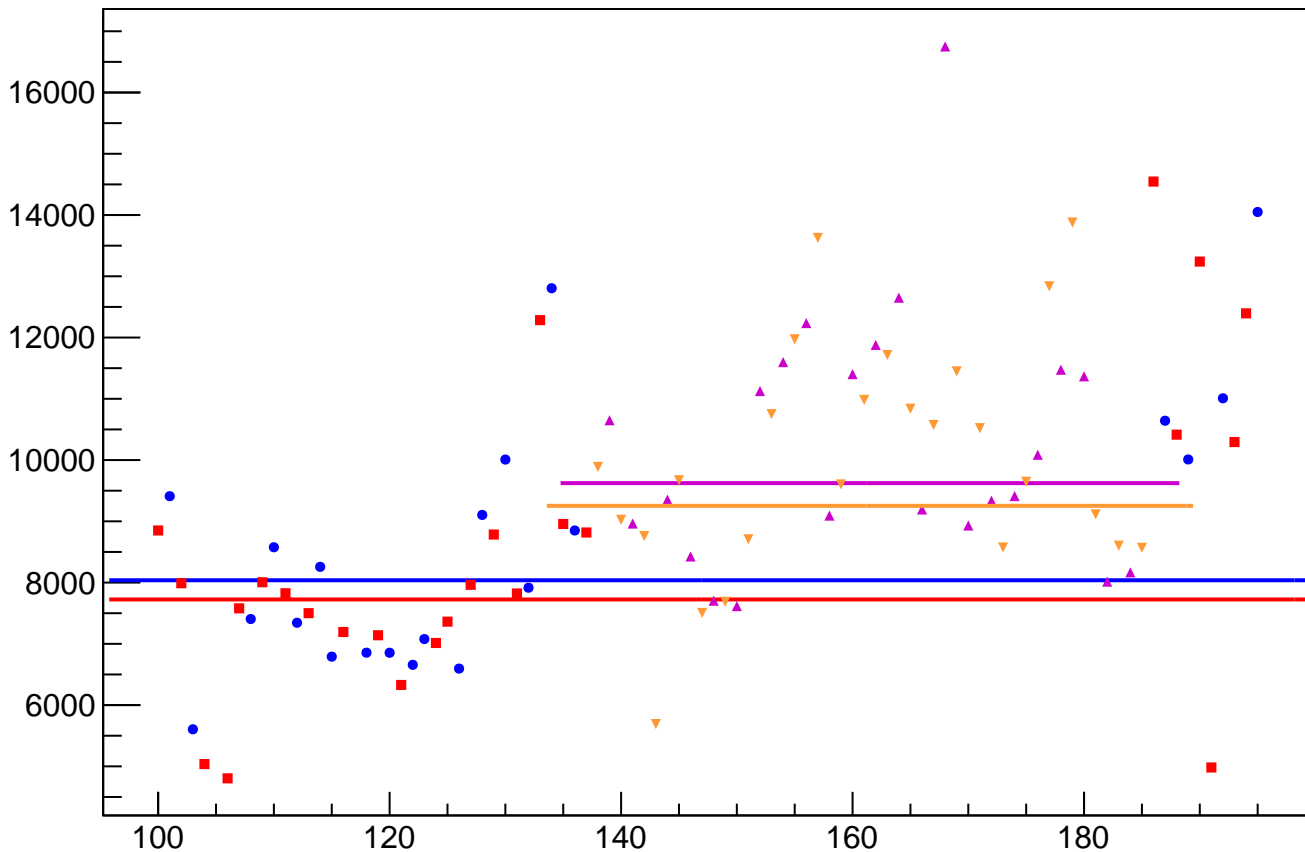
Left In: -3316.909+/-2344.543  $\chi^2$ /NDF:13.7/22

+ sign 2562.083+/-1730.479  $\chi^2$ /NDF: 47.3/45

All: -1256.945+/-1216.963  $\chi^2$ /NDF: 97.4/93

- sign -4993.827+/-1711.766  $\chi^2$ /NDF: 40.5/47

# asym\_at2\_avg\_rms vs Slug



Right In: 8037.863+/-1.962  $\chi^2$ /NDF: 978309.7/20

Left Out: 9252.712+/-1.565  $\chi^2$ /NDF: 1597668.9/24

Right Out: 7724.443+/-1.771  $\chi^2$ /NDF: 1474525.0/24

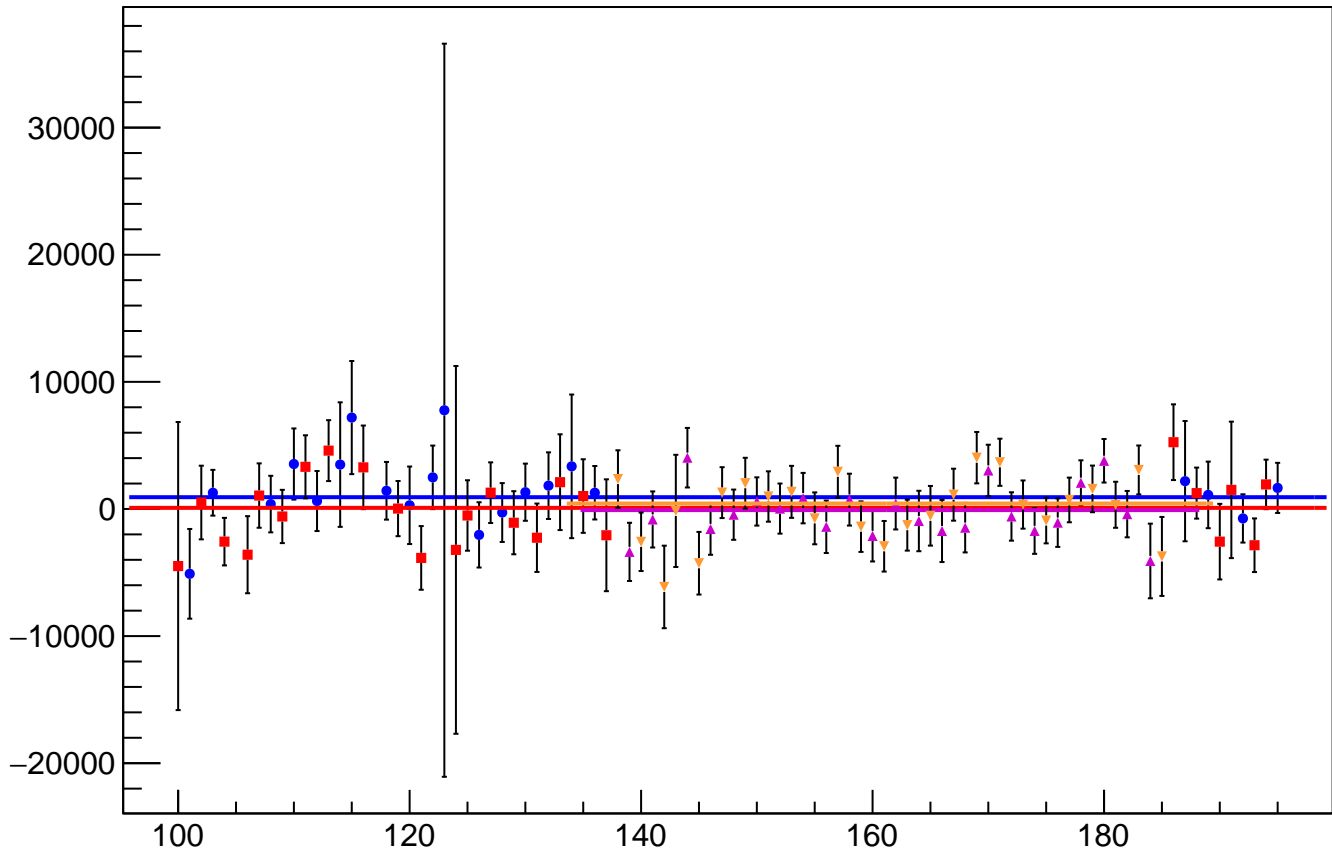
Left In: 9623.485+/-1.658  $\chi^2$ /NDF: 1069924.0/22

+ sign 8780.192+/-1.224  $\chi^2$ /NDF: 2810251.5/45

All: 8758.178+/-0.860  $\chi^2$ /NDF: 5968110.2/93

- sign 8736.639+/-1.210  $\chi^2$ /NDF: 3157218.3/47

# reg\_asym\_at2\_dd\_mean vs Slug



Right In: 926.870+/-566.374  $\chi^2/\text{NDF}$ : 9.7/20

Left Out: 429.447+/-416.378  $\chi^2/\text{NDF}$ : 28.7/24

Right Out: 87.665+/-530.379  $\chi^2/\text{NDF}$ : 21.6/24

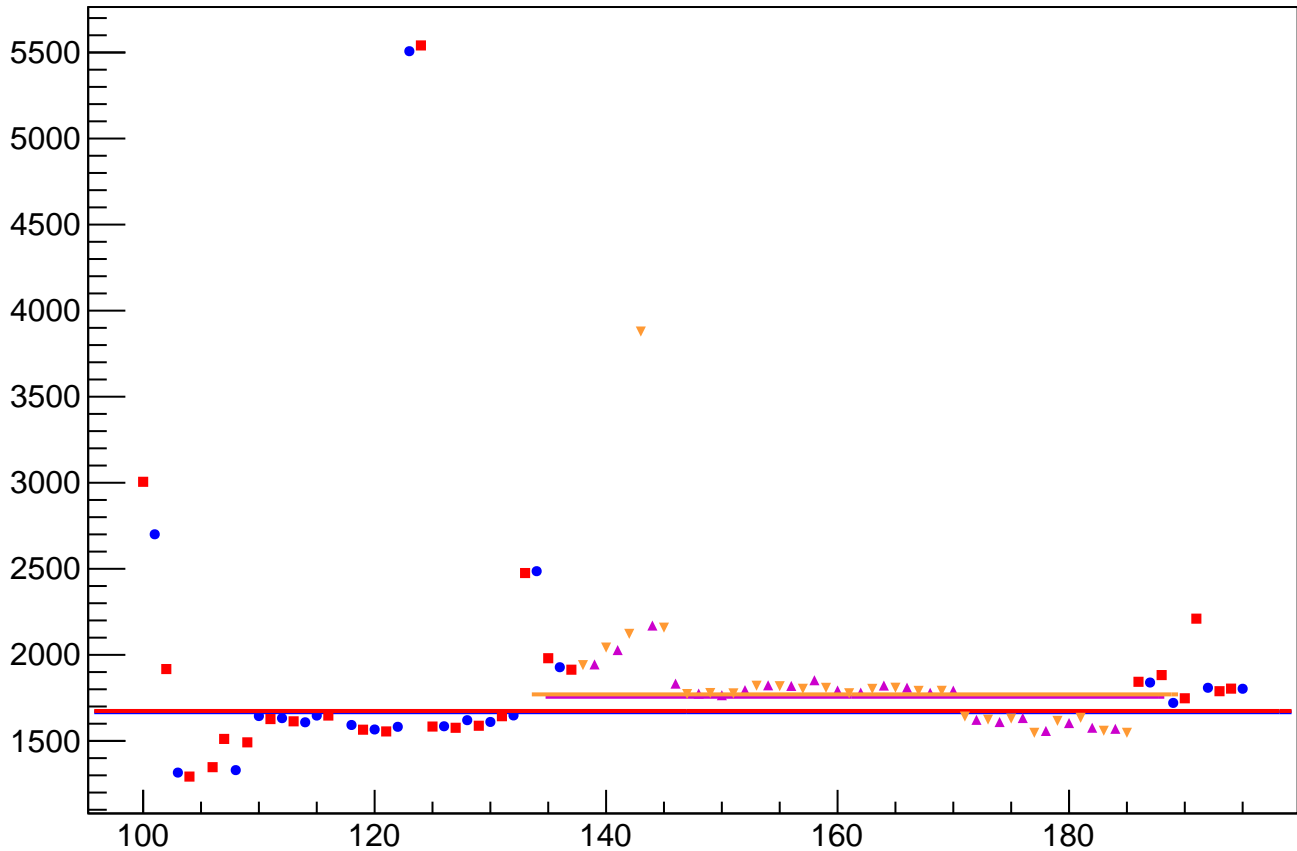
Left In: -88.373+/-421.957  $\chi^2/\text{NDF}$ : 21.0/22

+ sign 603.966+/-335.476  $\chi^2/\text{NDF}$ : 38.9/45

All: 286.971+/-235.331  $\chi^2/\text{NDF}$ : 83.2/93

- sign -20.139+/-330.204  $\chi^2/\text{NDF}$ : 42.6/47

# reg\_asym\_at2\_dd\_rms vs Slug



Right In: 1666.827+/-0.400  $\chi^2$ /NDF: 437763.1/20

Left Out: 1770.384+/-0.294  $\chi^2$ /NDF:699536.9/24

Right Out: 1674.017+/-0.375  $\chi^2$ /NDF: 517046.5/24

Left In: 1756.623+/-0.298  $\chi^2$ /NDF:223077.6/22

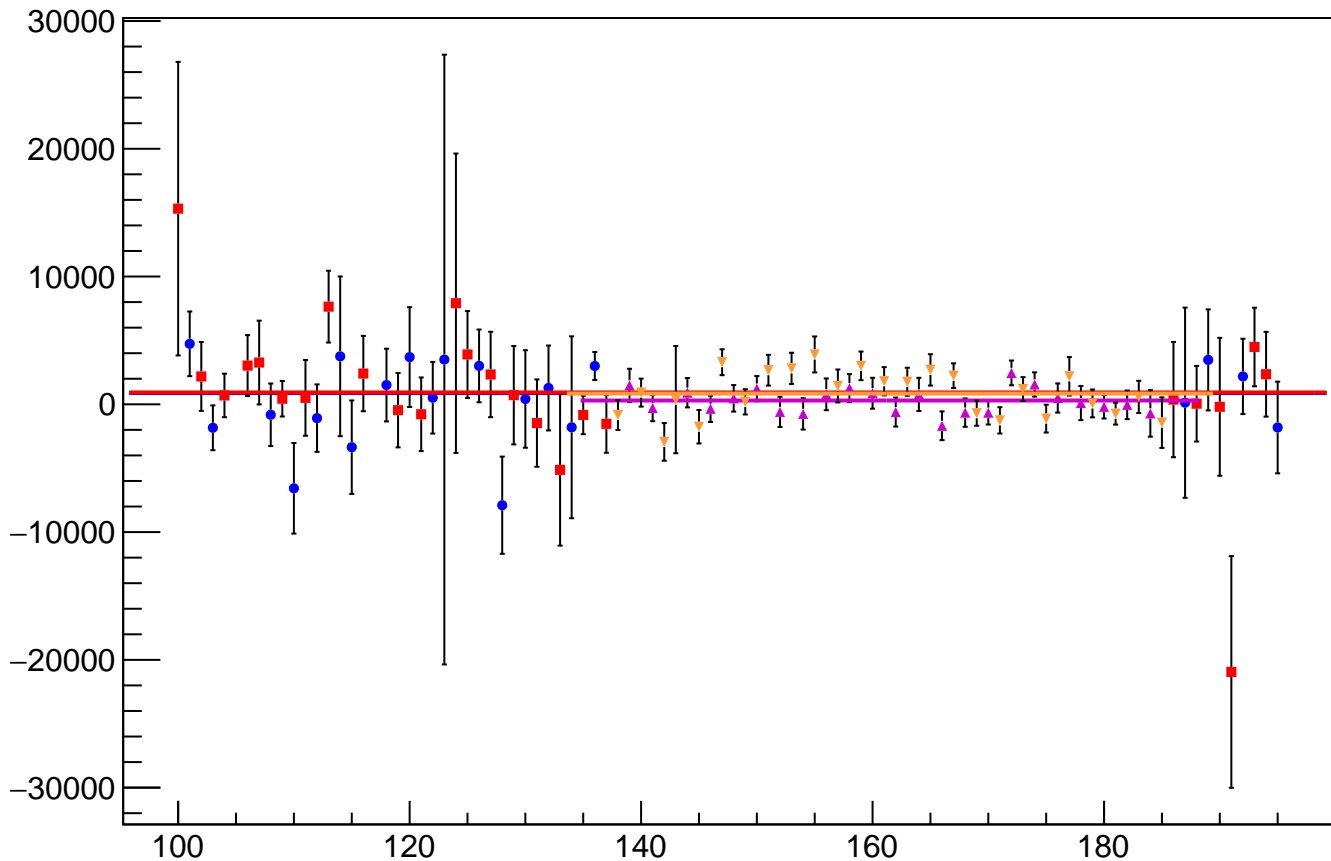
+ sign 1734.051+/-0.237  $\chi^2$ /NDF: 1180703.9/45

All: 1729.253+/-0.166  $\chi^2$ /NDF: 1951344.1/93

- sign 1724.604+/-0.233  $\chi^2$ /NDF: 769834.6/47



# asym\_at2\_dd\_correction\_mean vs Slug



Right In: 883.362 $\pm$ 600.623  $\chi^2$ /NDF: 23.3/20

Left Out: 839.344 $\pm$ 230.465  $\chi^2$ /NDF:54.4/24

Right Out: 928.350 $\pm$ 552.619  $\chi^2$ /NDF: 22.6/24

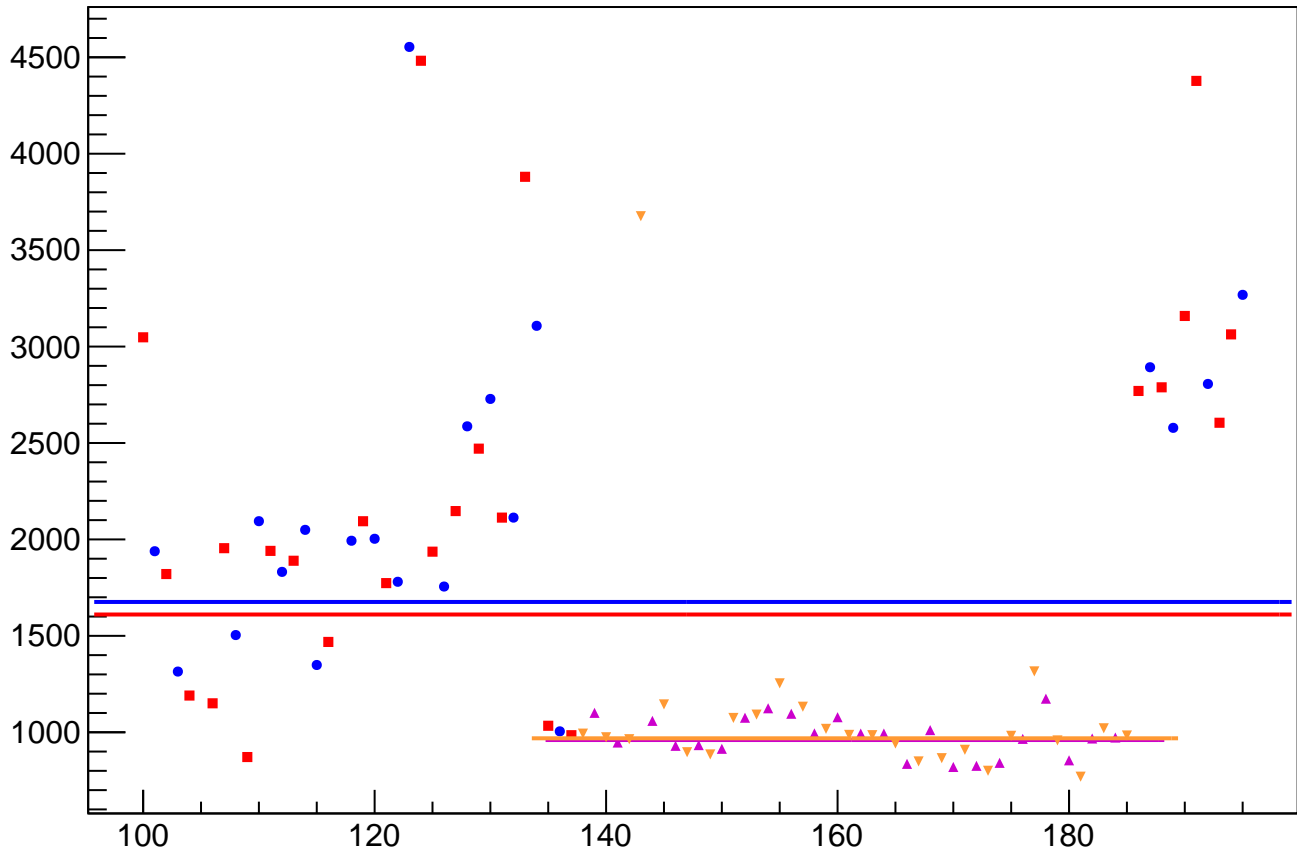
Left In: 298.801 $\pm$ 231.400  $\chi^2$ /NDF:18.3/22

+ sign 844.993 $\pm$ 215.169  $\chi^2$ /NDF: 77.7/45

All: 617.034 $\pm$ 151.533  $\chi^2$ /NDF: 122.0/93

- sign 392.717 $\pm$ 213.443  $\chi^2$ /NDF: 42.1/47

# asym\_at2\_dd\_correction\_rms vs Slug



Right In: 1675.736+/-0.425  $\chi^2$ /NDF: 2227413.5/20

Left Out: 968.712+/-0.163  $\chi^2$ /NDF: 1393696.6/24

Right Out: 1610.661+/-0.391  $\chi^2$ /NDF: 3400539.7/24

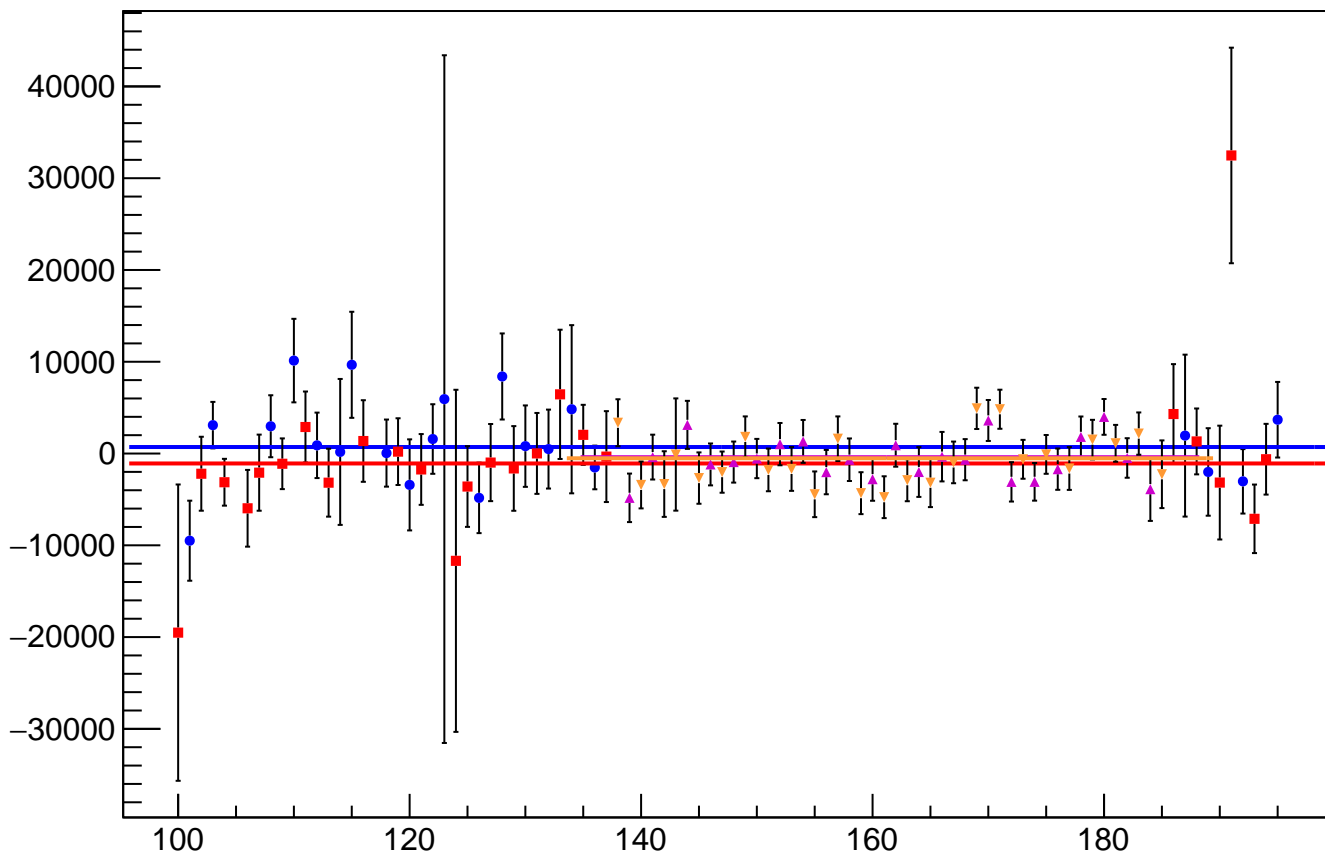
Left In: 959.805+/-0.164  $\chi^2$ /NDF: 371210.5/22

+ sign 1059.450+/-0.152  $\chi^2$ /NDF: 6036809.2/45

All: 1058.164+/-0.107  $\chi^2$ /NDF: 12169105.5/95

- sign 1056.900+/-0.151  $\chi^2$ /NDF: 6132154.7/47

# asym\_at2\_dd\_mean vs Slug



Right In:  $710.033 \pm 891.394$   $\chi^2/\text{NDF}: 22.2/20$

Left Out:  $-517.719 \pm 481.486$   $\chi^2/\text{NDF}: 34.0/24$

Right Out:  $-1082.034 \pm 831.362$   $\chi^2/\text{NDF}: 20.4/24$

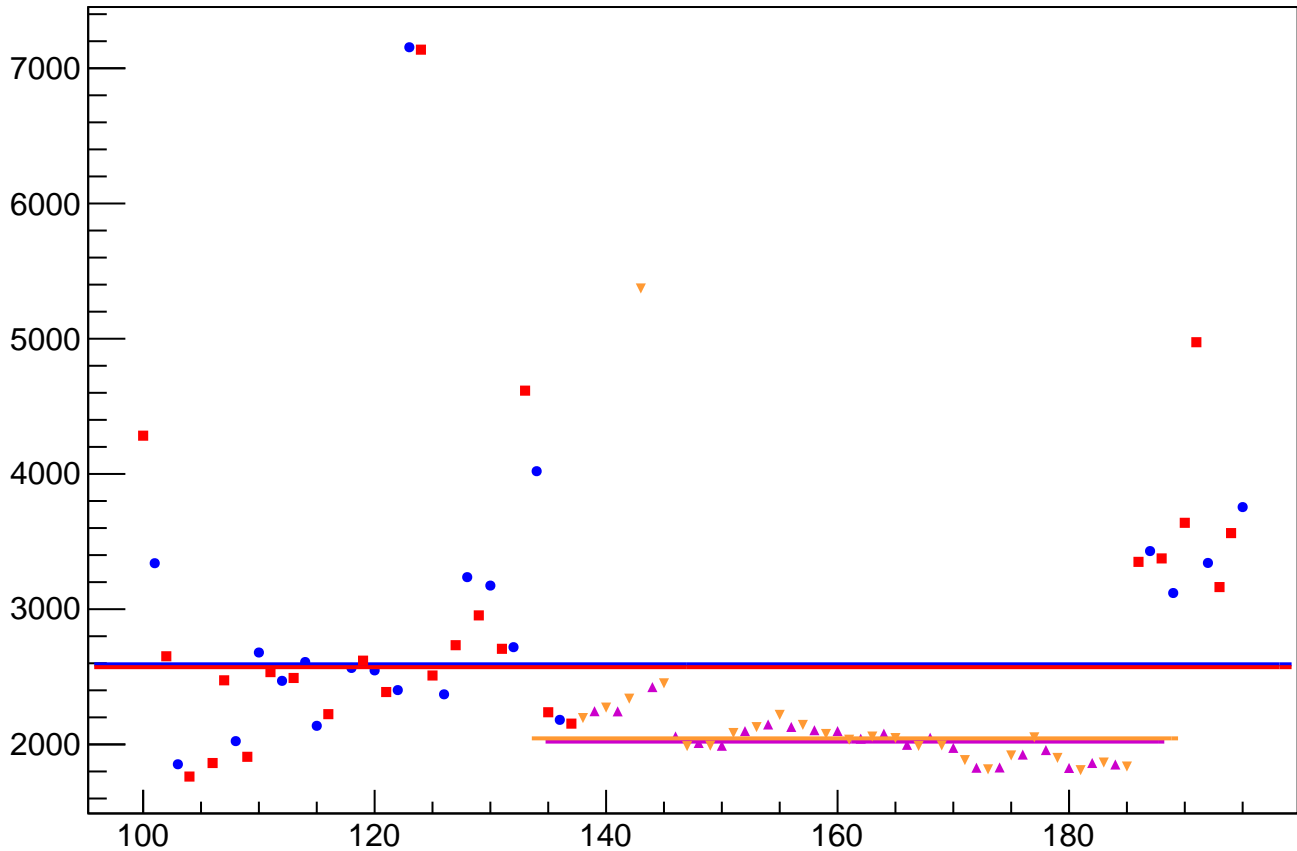
Left In:  $-397.398 \pm 485.048$   $\chi^2/\text{NDF}: 21.8/22$

+ sign  $-240.415 \pm 423.636$   $\chi^2/\text{NDF}: 57.7/45$

All:  $-407.677 \pm 297.887$   $\chi^2/\text{NDF}: 100.7/93$

- sign  $-571.264 \pm 418.955$   $\chi^2/\text{NDF}: 42.7/47$

# asym\_at2\_dd\_rms vs Slug



Right In: 2592.314+/-0.630  $\chi^2$ /NDF: 818221.6/20

Left Out: 2044.722+/-0.340  $\chi^2$ /NDF:788703.5/24

Right Out: 2571.178+/-0.588  $\chi^2$ /NDF: 1226232.1/24

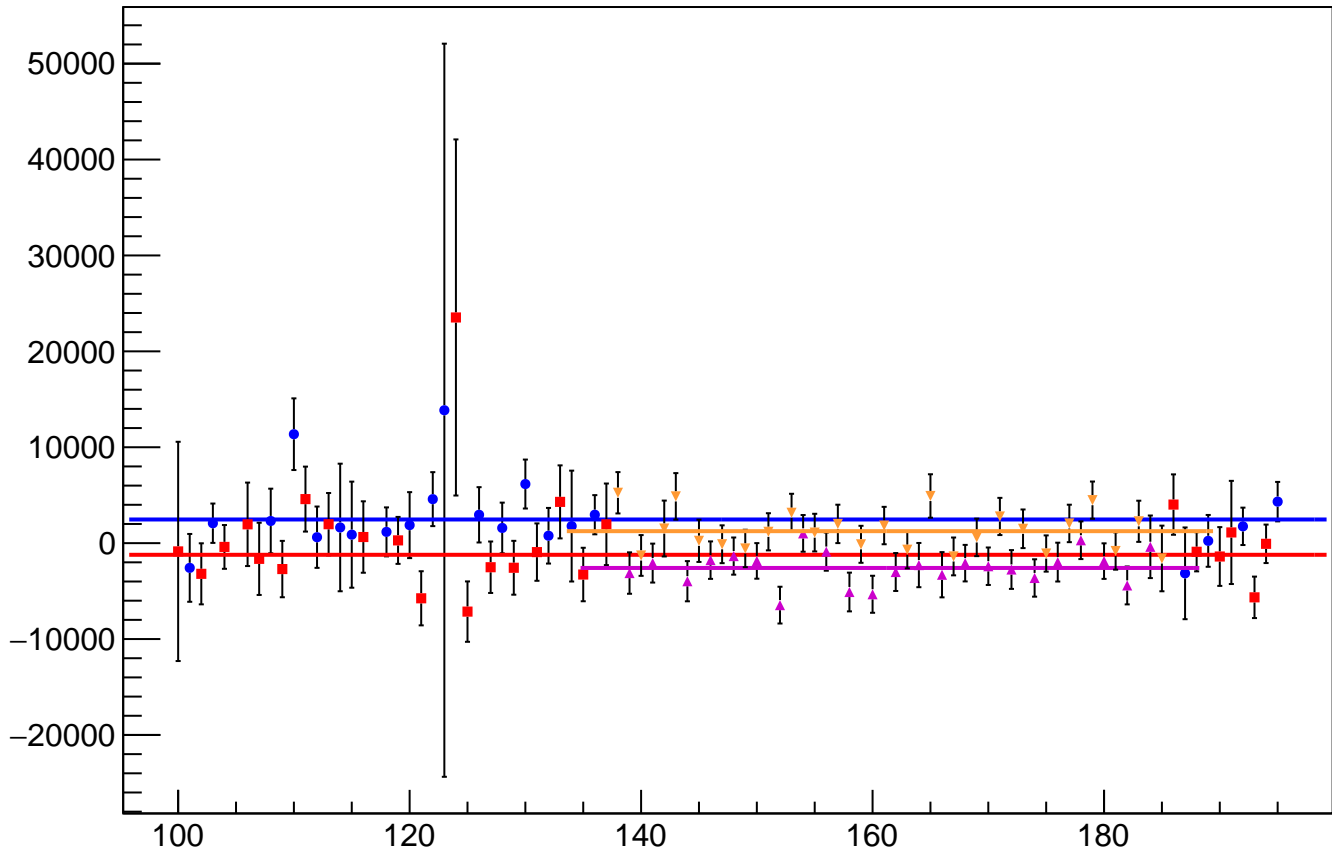
Left In: 2020.802+/-0.343  $\chi^2$ /NDF:173502.0/22

+ sign 2168.404+/-0.300  $\chi^2$ /NDF: 2191207.7/45

All: 2164.444+/-0.211  $\chi^2$ /NDF: 4245226.5/93

- sign 2160.572+/-0.296  $\chi^2$ /NDF: 2053673.3/47

# reg\_asym\_atl1r2\_avg\_mean vs Slug



Right In: 2467.708 $\pm$ 634.846  $\chi^2$ /NDF: 14.8/20

Left Out: 1249.917 $\pm$ 412.486  $\chi^2$ /NDF:23.0/24

Right Out: -1214.837 $\pm$ 601.761  $\chi^2$ /NDF: 24.9/24

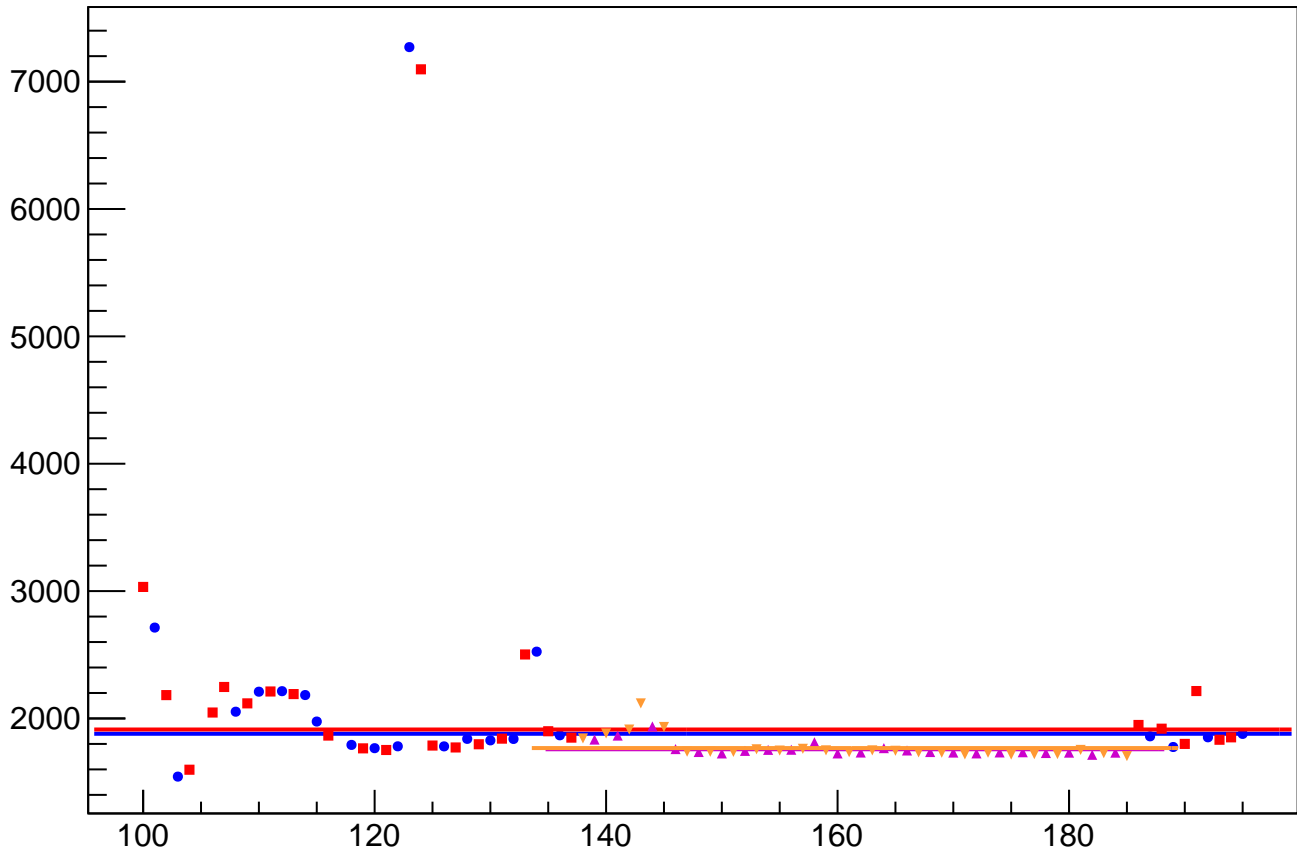
Left In: -2586.937 $\pm$ 421.510  $\chi^2$ /NDF:17.5/22

+ sign 1611.414 $\pm$ 345.887  $\chi^2$ /NDF: 40.4/45

All: -265.456 $\pm$ 244.350  $\chi^2$ /NDF: 145.0/93

- sign -2135.311 $\pm$ 345.240  $\chi^2$ /NDF: 45.9/47

# reg\_asym\_atl1r2\_avg\_rms vs Slug



Right In: 1879.791+/-0.449  $\chi^2$ /NDF: 291696.0/20

Left Out: 1767.517+/-0.292  $\chi^2$ /NDF: 77674.7/24

Right Out: 1913.337+/-0.425  $\chi^2$ /NDF: 375157.1/24

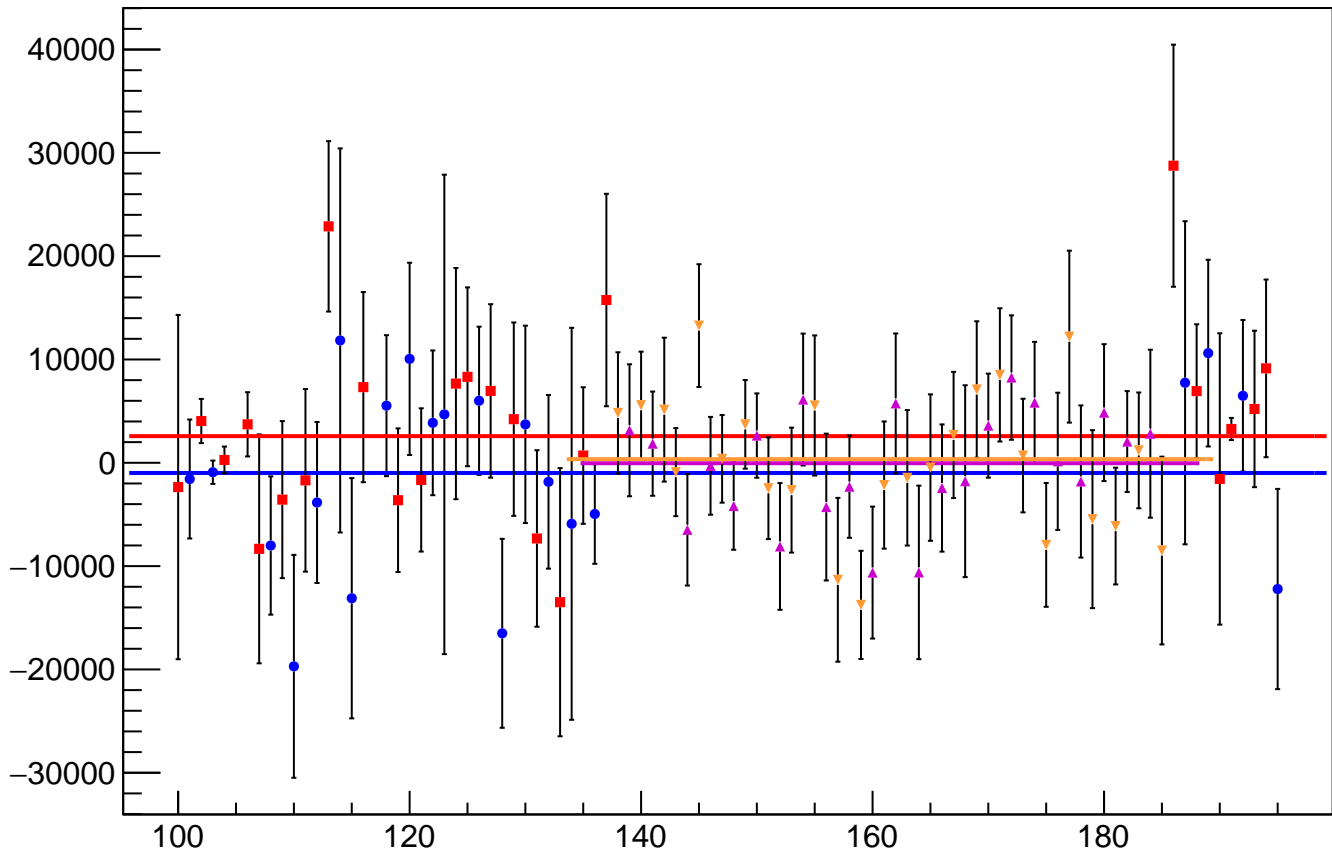
Left In: 1758.076+/-0.298  $\chi^2$ /NDF: 29806.0/22

+ sign 1800.845+/-0.245  $\chi^2$ /NDF: 413356.1/45

All: 1805.058+/-0.173  $\chi^2$ /NDF: 908352.2/93

- sign 1809.252+/-0.244  $\chi^2$ /NDF: 494404.1/47

# asym\_atl1r2\_avg\_correction\_mean vs Slug



Right In:  $-983.864 \pm 964.153$   $\chi^2/\text{NDF}: 17.9/20$

Left Out:  $351.227 \pm 1170.051$   $\chi^2/\text{NDF}: 27.8/24$

Right Out:  $2580.453 \pm 695.496$   $\chi^2/\text{NDF}: 25.4/24$

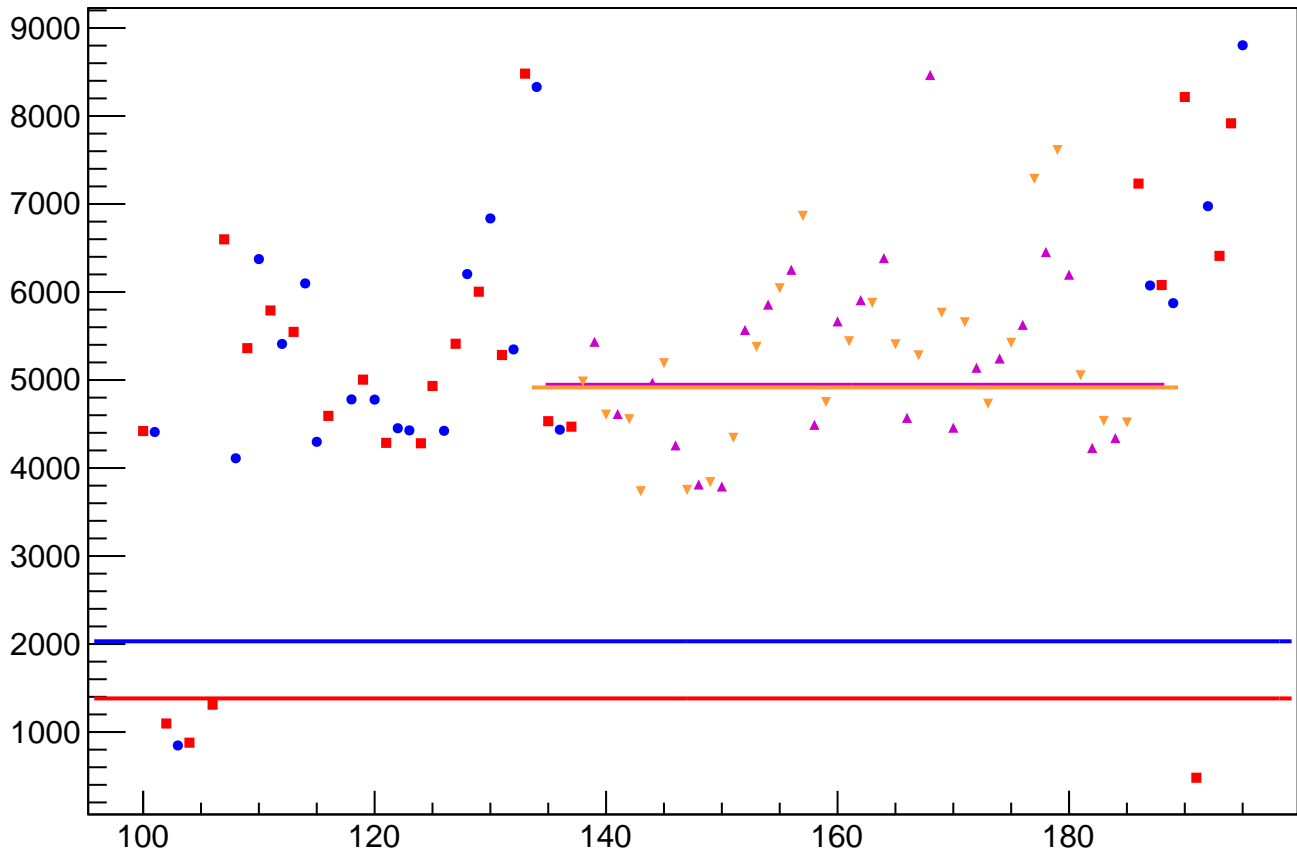
Left In:  $-40.618 \pm 1207.491$   $\chi^2/\text{NDF}: 16.0/22$

+ sign  $-443.934 \pm 744.077$   $\chi^2/\text{NDF}: 46.5/45$

All:  $988.067 \pm 468.325$   $\chi^2/\text{NDF}: 97.6/93$

- sign  $1927.511 \pm 602.673$   $\chi^2/\text{NDF}: 45.0/47$

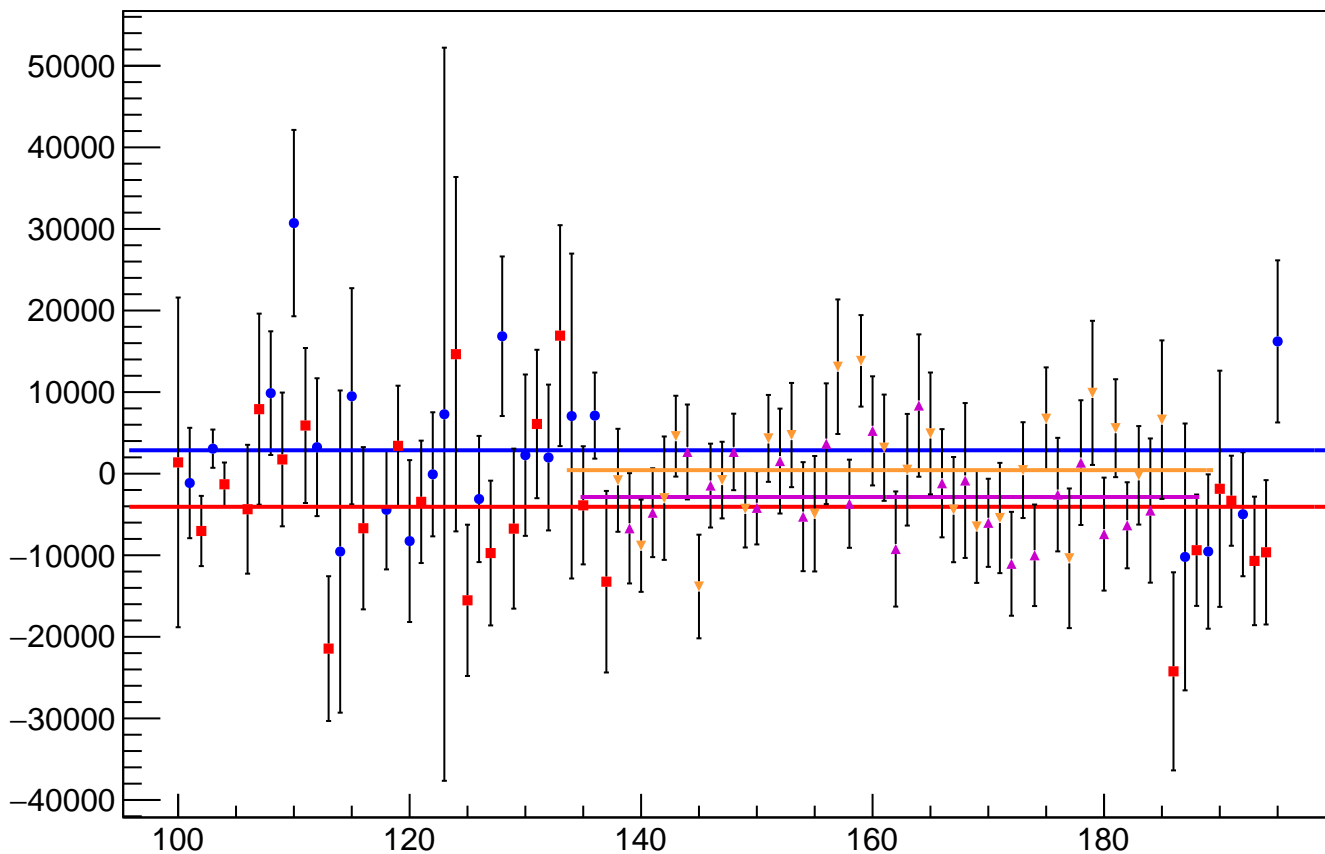
# asym\_atl1r2\_avg\_correction\_rms vs Slug



Right In:  $2031.101 \pm 0.682$   $\chi^2/\text{NDF}: 8920671.1/20$   
 Left Out:  $4915.865 \pm 0.827$   $\chi^2/\text{NDF}: 1186479.7/24$  + sign  $3197.740 \pm 0.526$   $\chi^2/\text{NDF}: 17347929.5/45$   
 Right Out:  $1381.958 \pm 0.492$   $\chi^2/\text{NDF}: 12090058.2/24$  All:  $2637.378 \pm 0.331$   $\chi^2/\text{NDF}: 45586842.4/9$   
 Left In:  $4945.817 \pm 0.854$   $\chi^2/\text{NDF}: 1188288.6/22$  - sign  $2269.760 \pm 0.426$   $\chi^2/\text{NDF}: 26360457.4/47$



# asym\_atl1r2\_avg\_mean vs Slug



Right In: 2867.202+/-1527.690  $\chi^2$ /NDF: 18.8/20

Left Out: 430.860+/-1258.273  $\chi^2$ /NDF:27.1/24

Right Out: -4061.541+/-1441.195  $\chi^2$ /NDF: 20.8/24

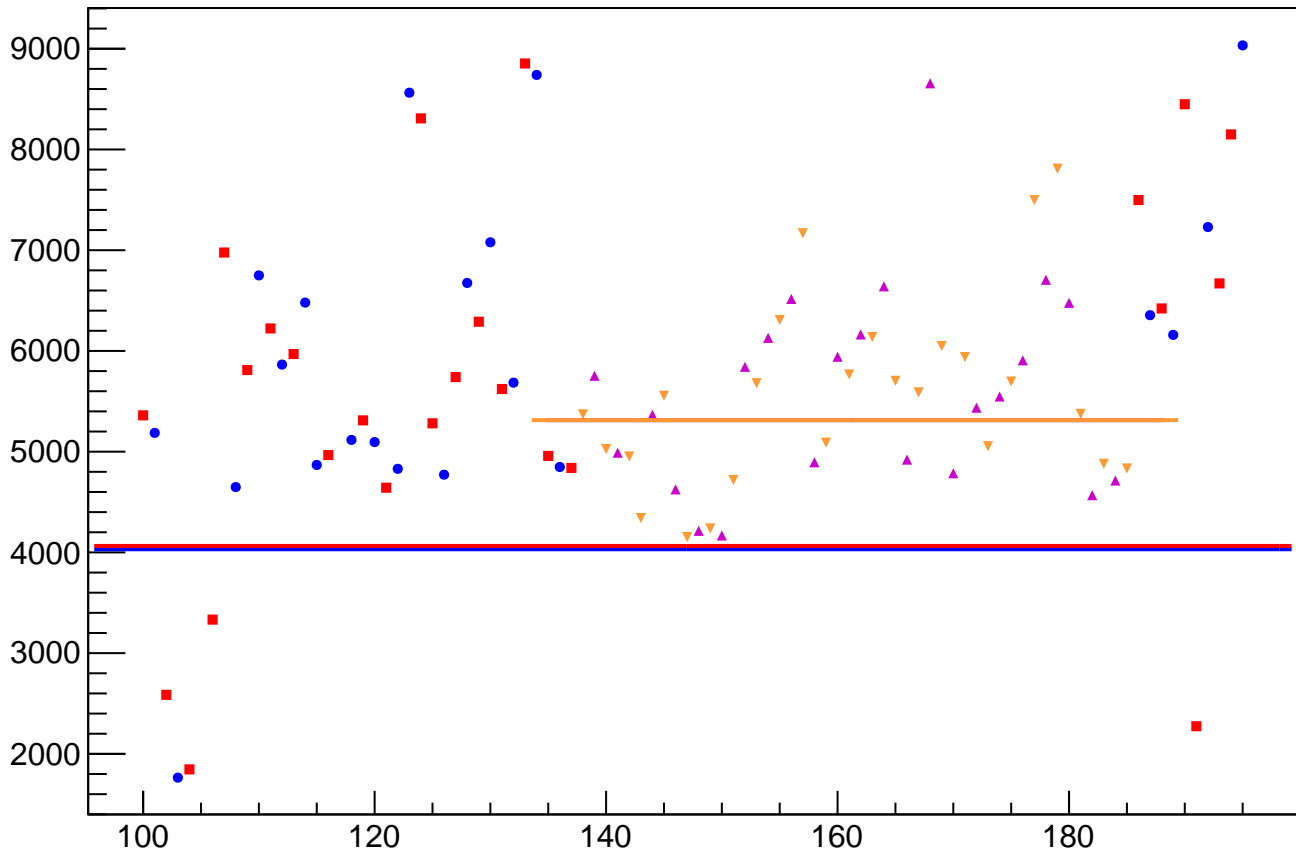
Left In: -2860.252+/-1292.328  $\chi^2$ /NDF:12.9/22

+ sign 1415.607+/-971.244  $\chi^2$ /NDF: 47.4/45

All: -1012.651+/-683.537  $\chi^2$ /NDF: 93.9/93

- sign -3395.668+/-962.154  $\chi^2$ /NDF: 34.1/47

# asym\_atl1r2\_avg\_rms vs Slug



Right In:  $4031.382 \pm 1.080$   $\chi^2/\text{NDF}: 3881978.9/20$

Left Out:  $5313.008 \pm 0.890$   $\chi^2/\text{NDF}: 894369.8/24$

Right Out:  $4064.054 \pm 1.014$   $\chi^2/\text{NDF}: 4216743.6/24$

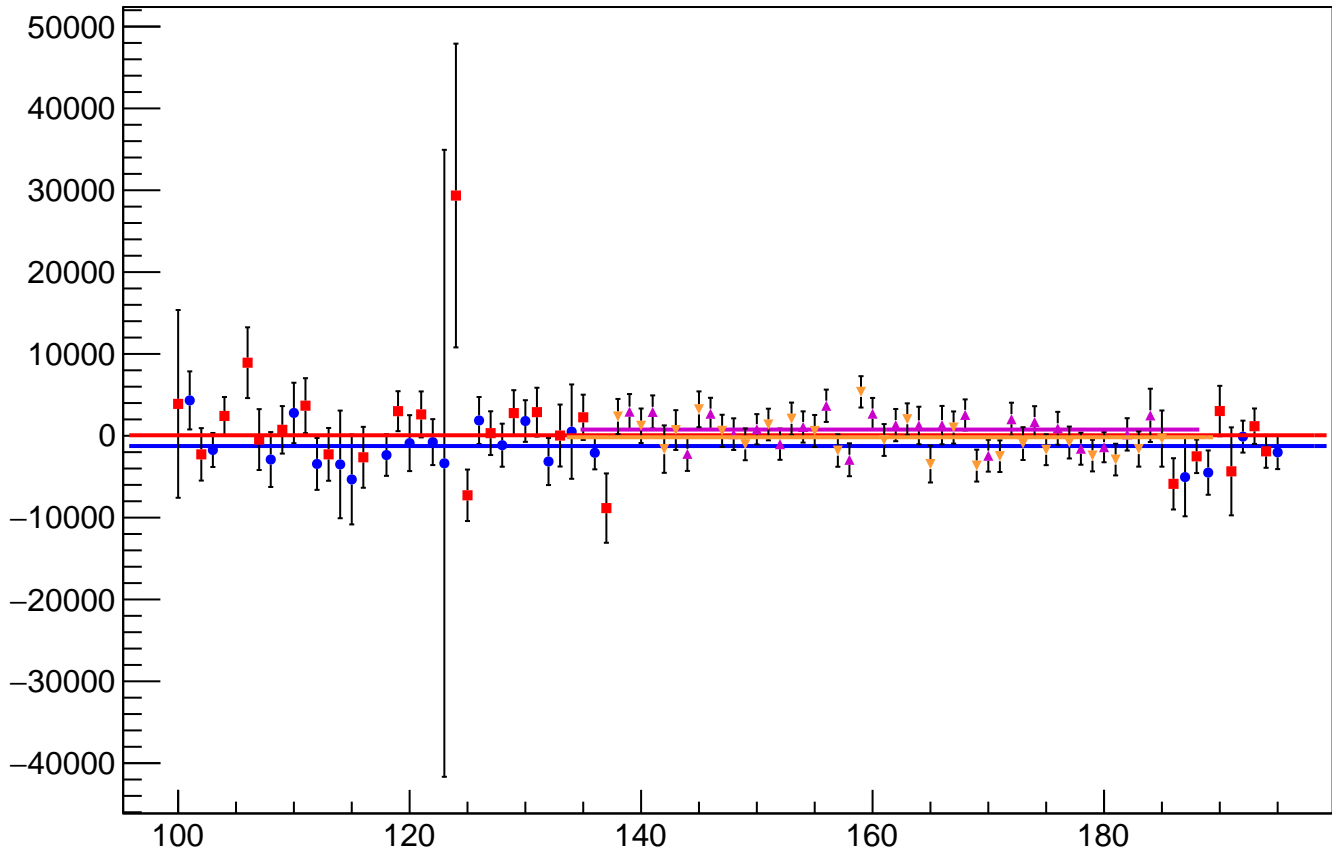
Left In:  $5312.861 \pm 0.914$   $\chi^2/\text{NDF}: 957400.7/22$

+ sign  $4794.986 \pm 0.687$   $\chi^2/\text{NDF}: 5615015.7/45$

All:  $4773.719 \pm 0.483$   $\chi^2/\text{NDF}: 11628391.5/95$

- sign  $4752.949 \pm 0.679$   $\chi^2/\text{NDF}: 6011480.3/47$

# reg\_asym\_atl1r2\_dd\_mean vs Slug



Right In:  $-1254.370 \pm 633.366$   $\chi^2/\text{NDF}$ : 11.2/20

Left Out:  $-179.794 \pm 410.976$   $\chi^2/\text{NDF}$ : 29.3/24

Right Out:  $62.486 \pm 600.865$   $\chi^2/\text{NDF}$ : 33.2/24

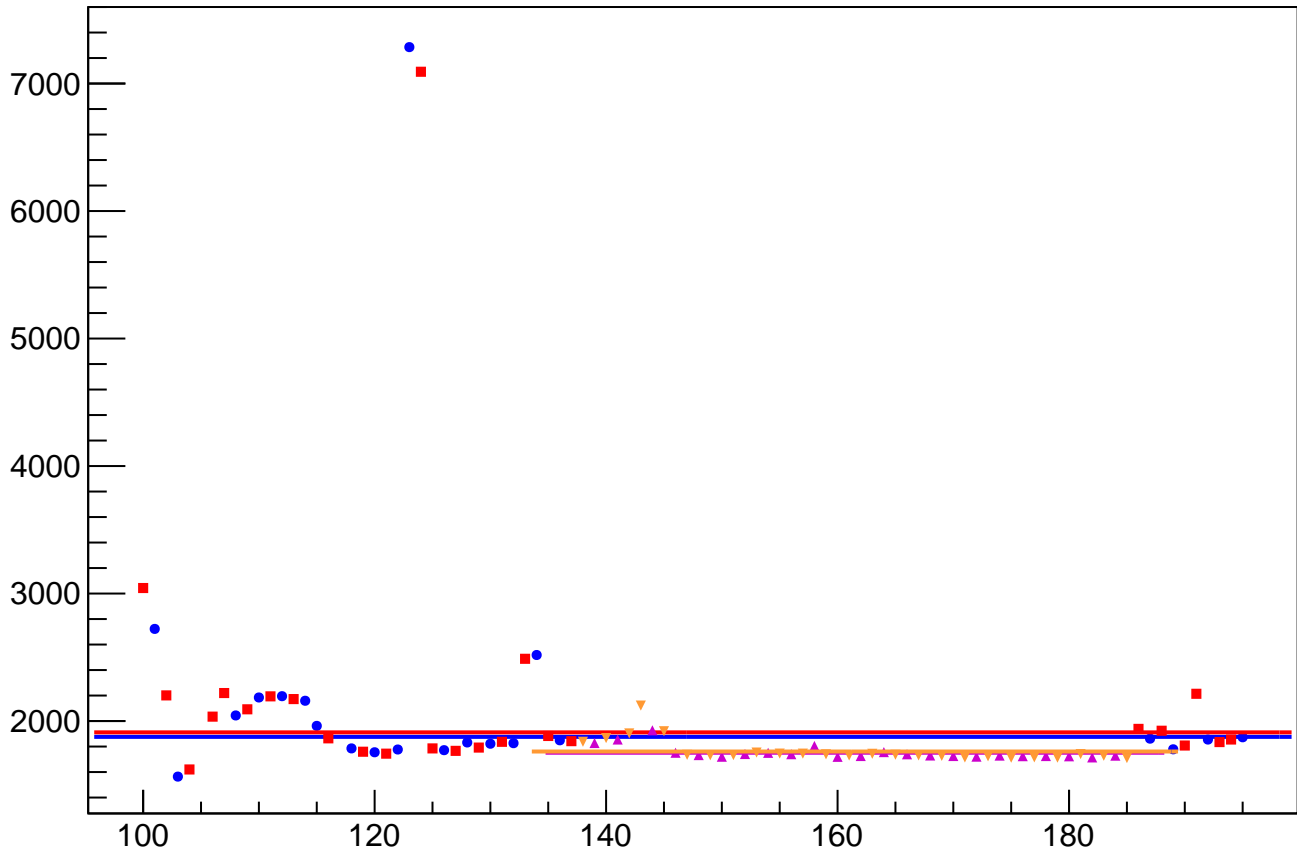
Left In:  $759.753 \pm 419.905$   $\chi^2/\text{NDF}$ : 20.3/22

+ sign  $-498.180 \pm 344.757$   $\chi^2/\text{NDF}$ : 42.5/45

All:  $17.242 \pm 243.579$   $\chi^2/\text{NDF}$ : 101.4/93

- sign  $530.964 \pm 344.188$   $\chi^2/\text{NDF}$ : 54.4/47

# reg\_asym\_atl1r2\_dd\_rms vs Slug



Right In: 1875.900+/-0.448  $\chi^2/\text{NDF}$ : 282466.2/20

Left Out: 1761.091+/-0.291  $\chi^2/\text{NDF}$ : 77468.5/24

Right Out: 1911.301+/-0.424  $\chi^2/\text{NDF}$ : 363081.2/24

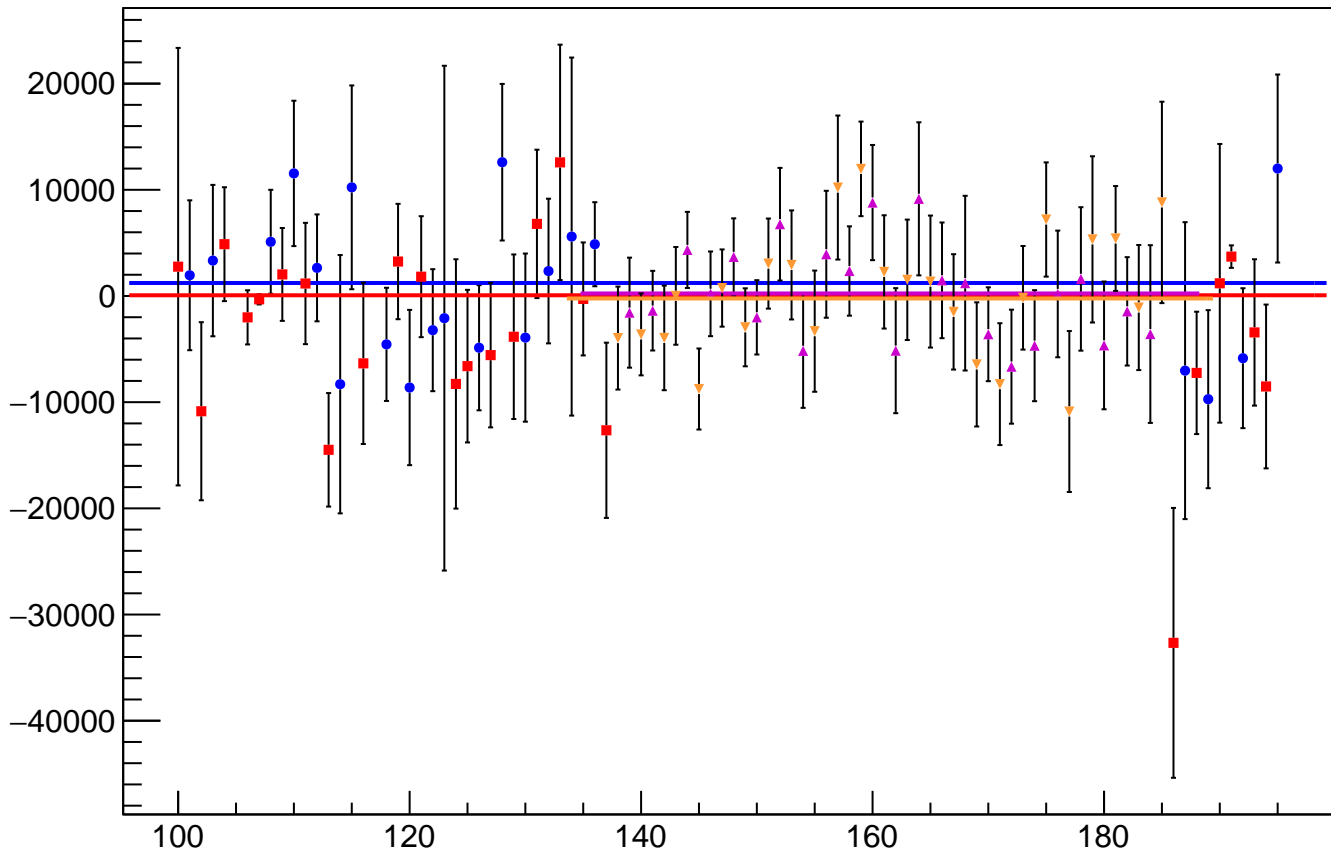
Left In: 1751.418+/-0.297  $\chi^2/\text{NDF}$ : 28578.7/22

+ sign 1795.108+/-0.244  $\chi^2/\text{NDF}$ : 406179.9/45

All: 1799.539+/-0.172  $\chi^2/\text{NDF}$ : 893773.9/93

- sign 1803.952+/-0.243  $\chi^2/\text{NDF}$ : 486934.4/47

# asym\_atl1r2\_dd\_correction\_mean vs Slug



Right In: 1225.234+/-1485.716  $\chi^2$ /NDF: 17.7/20

Left Out: -235.806+/-1005.144  $\chi^2$ /NDF:28.9/24

Right Out: 67.286+/-414.263  $\chi^2$ /NDF: 41.1/24

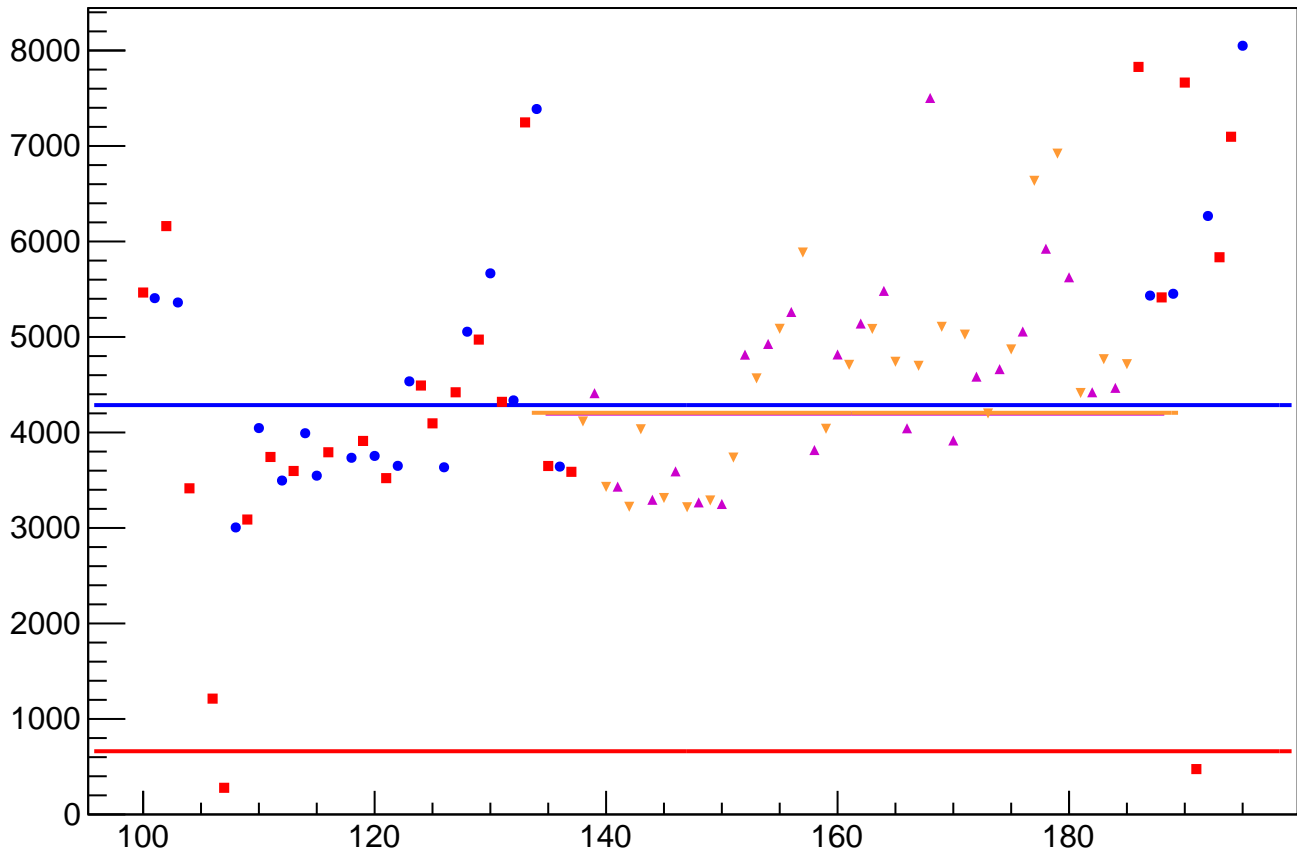
Left In: 239.224+/-1028.883  $\chi^2$ /NDF:15.3/22

+ sign 222.946+/-832.518  $\chi^2$ /NDF: 47.2/45

All: 114.399+/-348.907  $\chi^2$ /NDF: 103.6/93

- sign 91.271+/-384.283  $\chi^2$ /NDF: 56.4/47

# asym\_atl1r2\_dd\_correction\_rms vs Slug



Right In: 4286.634+/-1.051  $\chi^2$ /NDF: 1176100.4/20

Left Out: 4206.076+/-0.711  $\chi^2$ /NDF:1442269.3/24

Right Out: 662.021+/-0.293  $\chi^2$ /NDF: 15392497.6/24

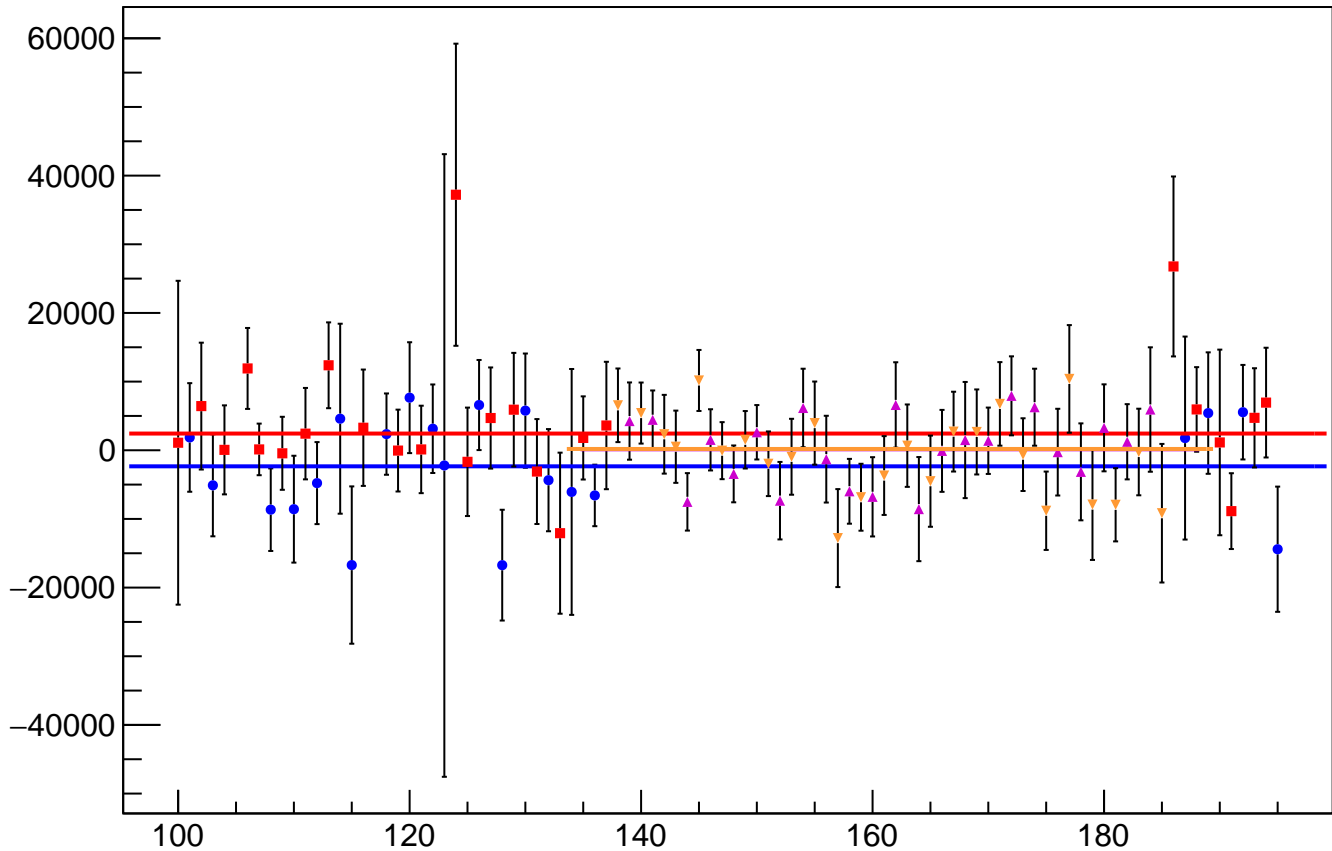
Left In: 4197.267+/-0.728  $\chi^2$ /NDF:1471012.9/22

+ sign 4231.371+/-0.589  $\chi^2$ /NDF: 2622403.5/45

All: 1695.495+/-0.247  $\chi^2$ /NDF: 62314694.6/5

- sign 1155.184+/-0.272  $\chi^2$ /NDF: 37181870.0/47

# asym\_atl1r2\_dd\_mean vs Slug



Right In:  $-2339.410 \pm 1661.778$   $\chi^2/\text{NDF}: 18.0/20$

Left Out:  $189.721 \pm 1106.851$   $\chi^2/\text{NDF}: 25.0/24$

Right Out:  $2433.558 \pm 1404.548$   $\chi^2/\text{NDF}: 19.9/24$

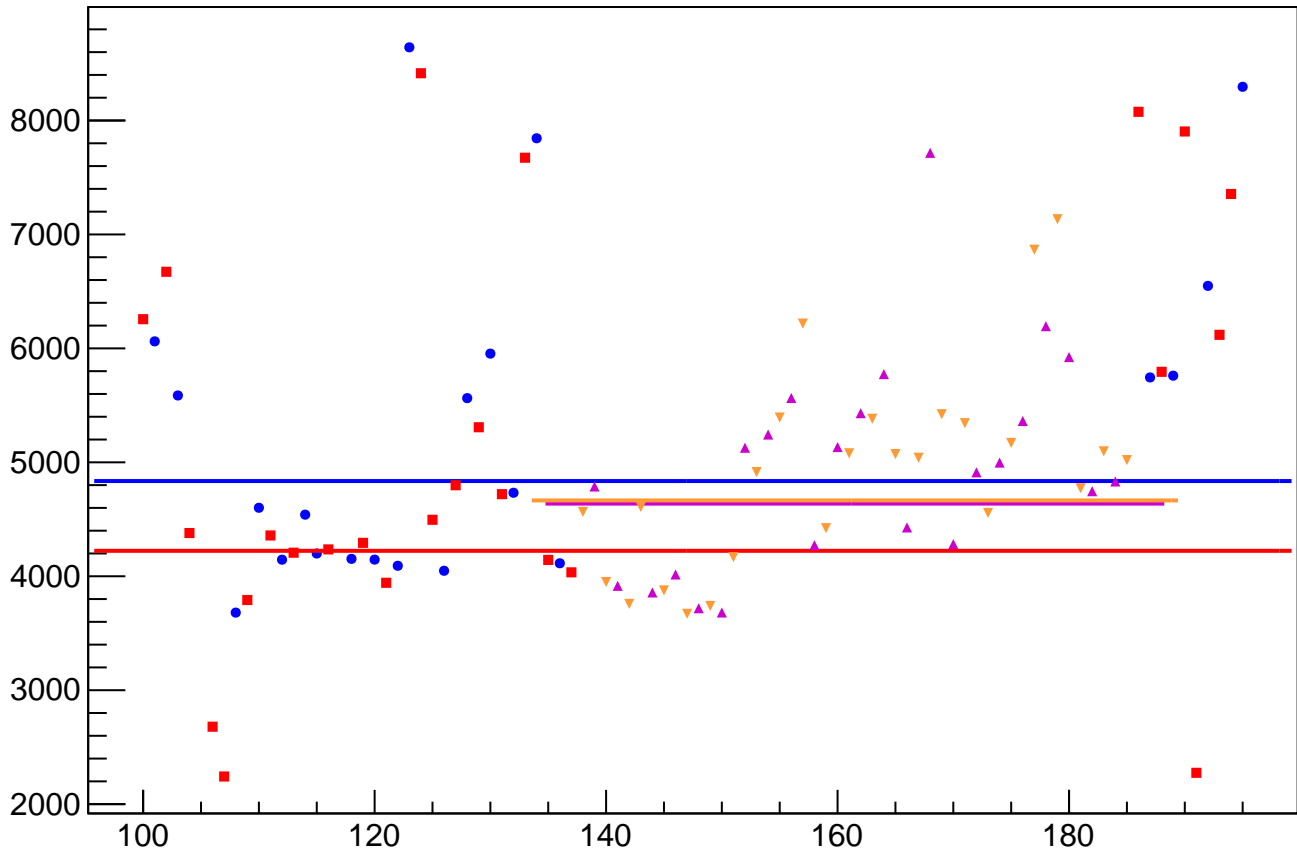
Left In:  $137.477 \pm 1129.656$   $\chi^2/\text{NDF}: 18.6/22$

+ sign  $-587.500 \pm 921.212$   $\chi^2/\text{NDF}: 44.5/45$

All:  $262.880 \pm 636.427$   $\chi^2/\text{NDF}: 86.3/93$

- sign  $1039.352 \pm 880.270$   $\chi^2/\text{NDF}: 40.2/47$

# asym\_atl1r2\_dd\_rms vs Slug



Right In: 4835.622+/-1.175  $\chi^2$ /NDF: 890983.1/20

Left Out: 4665.620+/-0.783  $\chi^2$ /NDF:1017235.0/24

+ sign 4717.863+/-0.651  $\chi^2$ /NDF: 1922716.9/45

Right Out: 4223.413+/-0.988  $\chi^2$ /NDF: 2342023.0/24

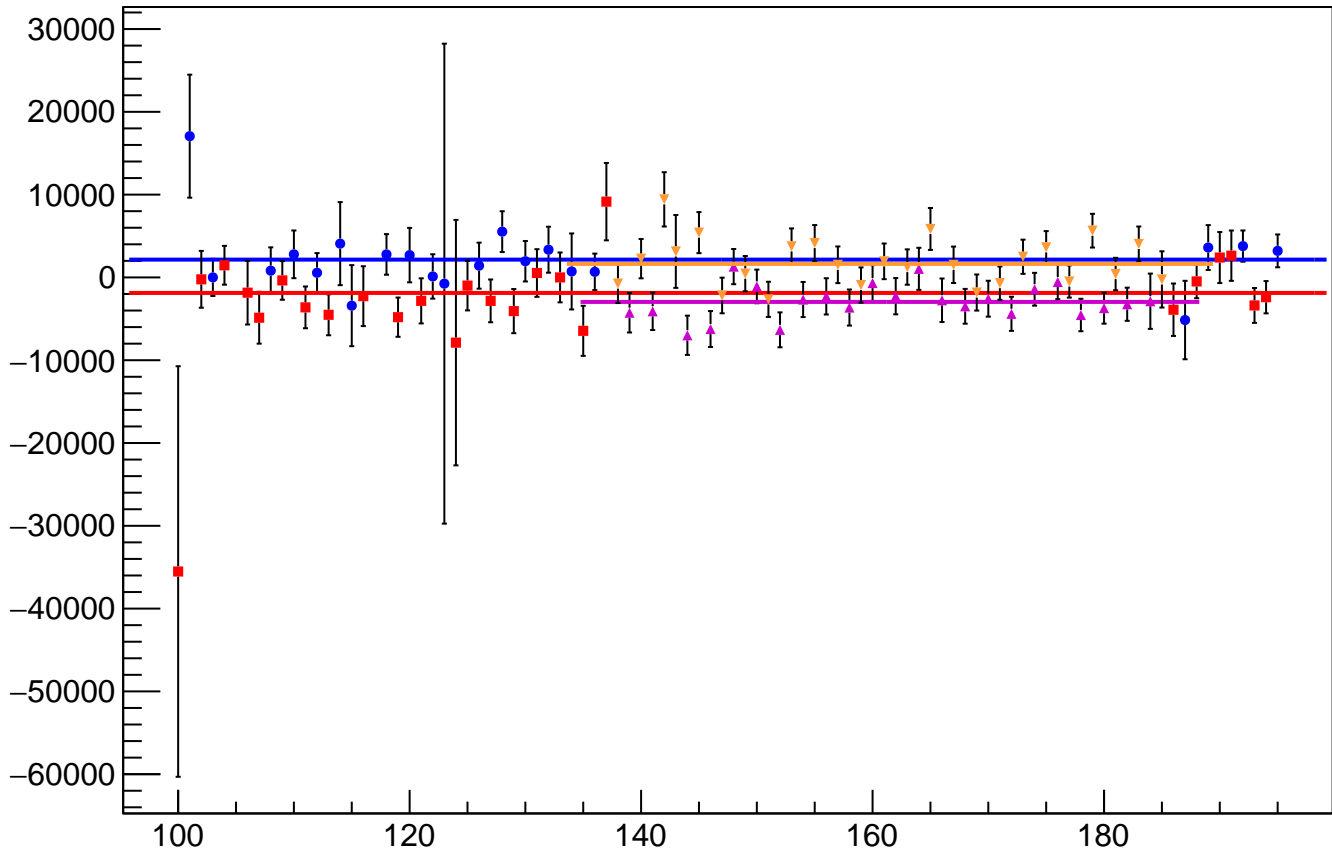
All: 4590.152+/-0.450  $\chi^2$ /NDF: 5509704.7/93

Left In: 4637.777+/-0.799  $\chi^2$ /NDF:1065217.2/22

- sign 4474.010+/-0.621  $\chi^2$ /NDF: 3513593.0/47



# reg\_asym\_atr1l2\_avg\_mean vs Slug



Right In: 2149.796+/-610.523  $\chi^2$ /NDF: 14.2/20

Left Out: 1630.035+/-447.063  $\chi^2$ /NDF:35.4/24

Right Out: -1874.093+/-561.644  $\chi^2$ /NDF: 24.3/24

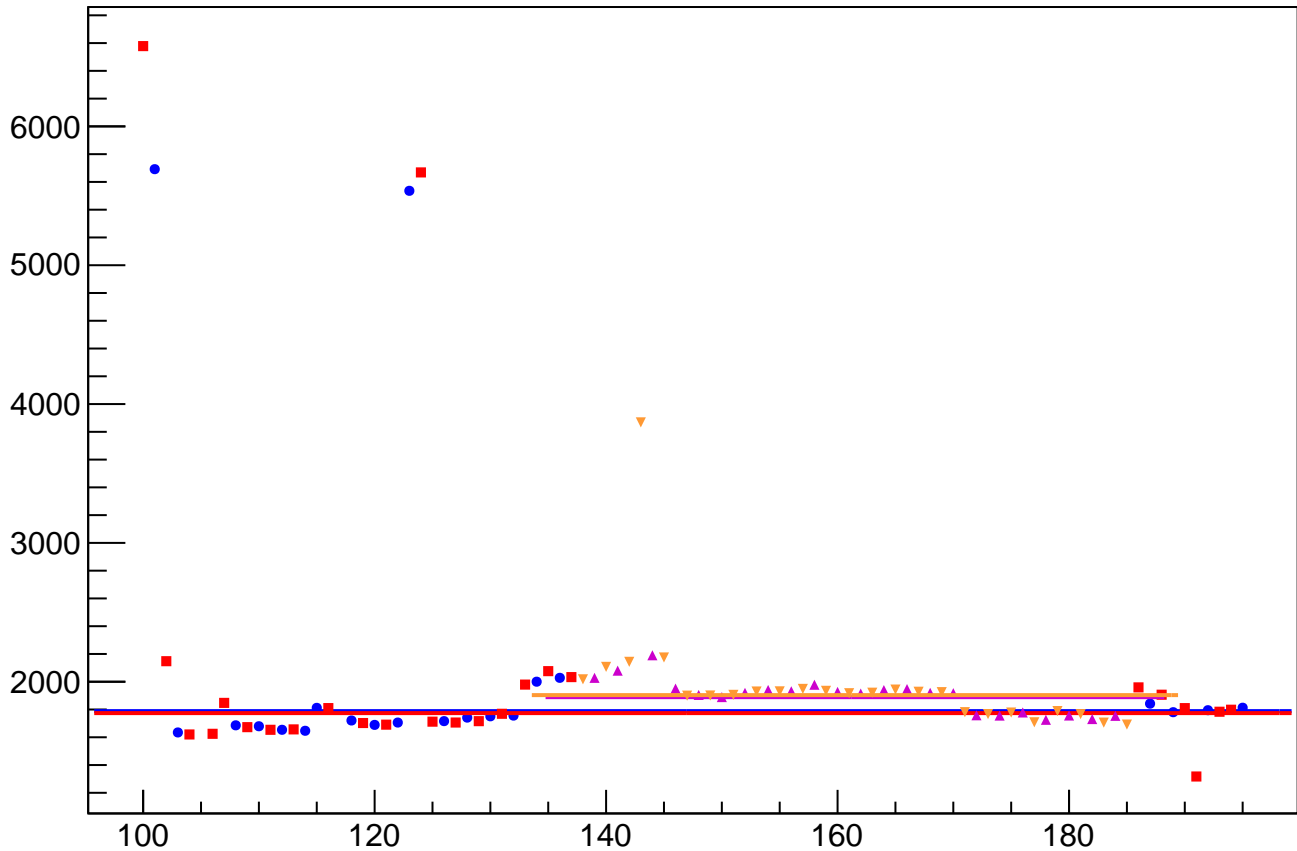
Left In: -2958.620+/-453.688  $\chi^2$ /NDF:20.4/22

+ sign 1811.456+/-360.698  $\chi^2$ /NDF: 50.1/45

All: -406.742+/-252.260  $\chi^2$ /NDF: 171.1/93

- sign -2530.380+/-352.926  $\chi^2$ /NDF: 47.0/47

# reg\_asym\_atr1l2\_avg\_rms vs Slug



Right In: 1788.299+/-0.432  $\chi^2$ /NDF: 645323.8/20

Left Out: 1903.618+/-0.316  $\chi^2$ /NDF: 541575.7/24

Right Out: 1774.024+/-0.395  $\chi^2$ /NDF: 367341.9/24

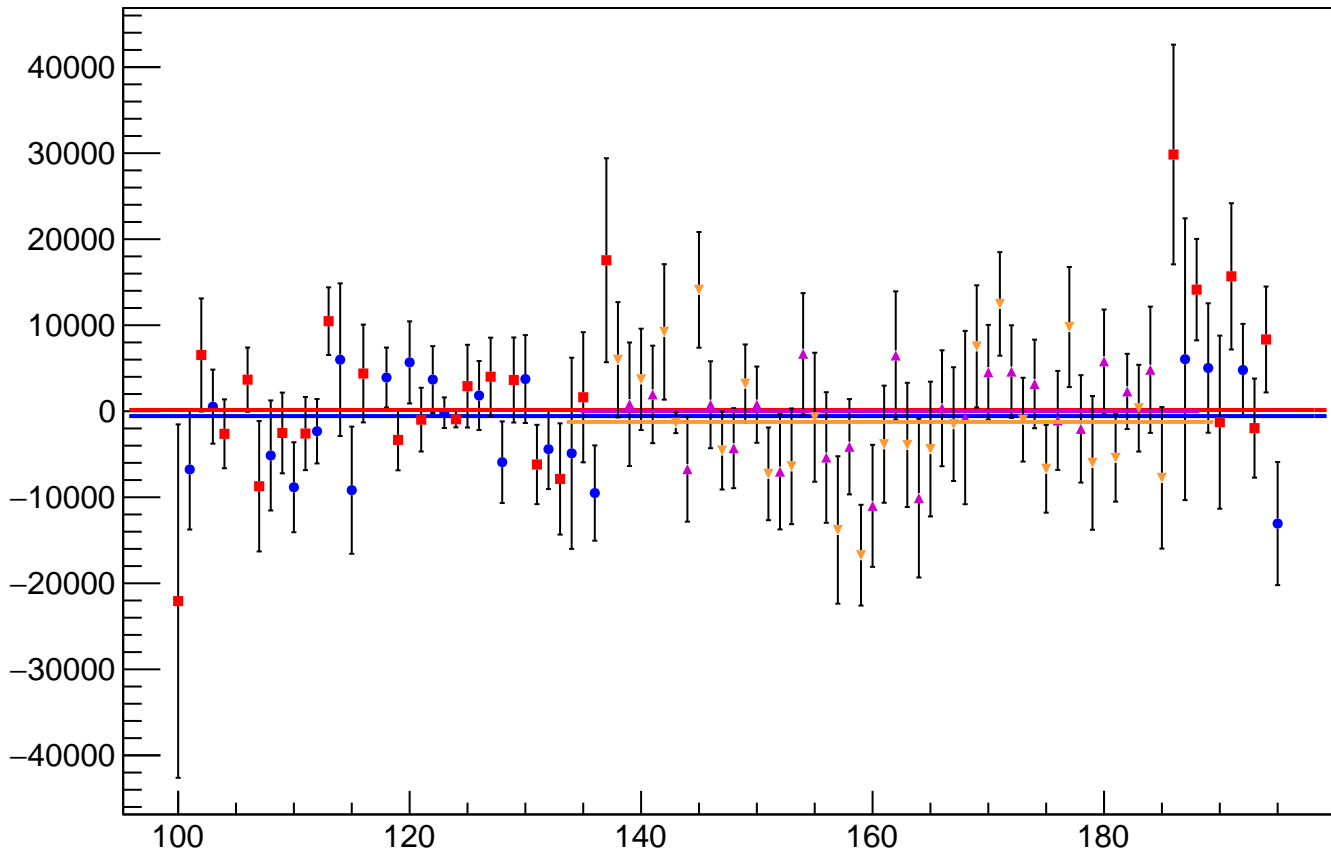
Left In: 1888.927+/-0.321  $\chi^2$ /NDF: 126417.2/22

+ sign 1863.366+/-0.255  $\chi^2$ /NDF: 1233349.1/45

All: 1853.097+/-0.178  $\chi^2$ /NDF: 1781215.6/93

- sign 1843.301+/-0.249  $\chi^2$ /NDF: 544698.8/47

# asym\_atr1l2\_avg\_correction\_mean vs Slug



Right In: -561.739+/-974.028  $\chi^2$ /NDF: 21.1/20

Left Out: -1239.833+/-865.201  $\chi^2$ /NDF:33.9/24

Right Out: 146.621+/-704.805  $\chi^2$ /NDF: 38.9/24

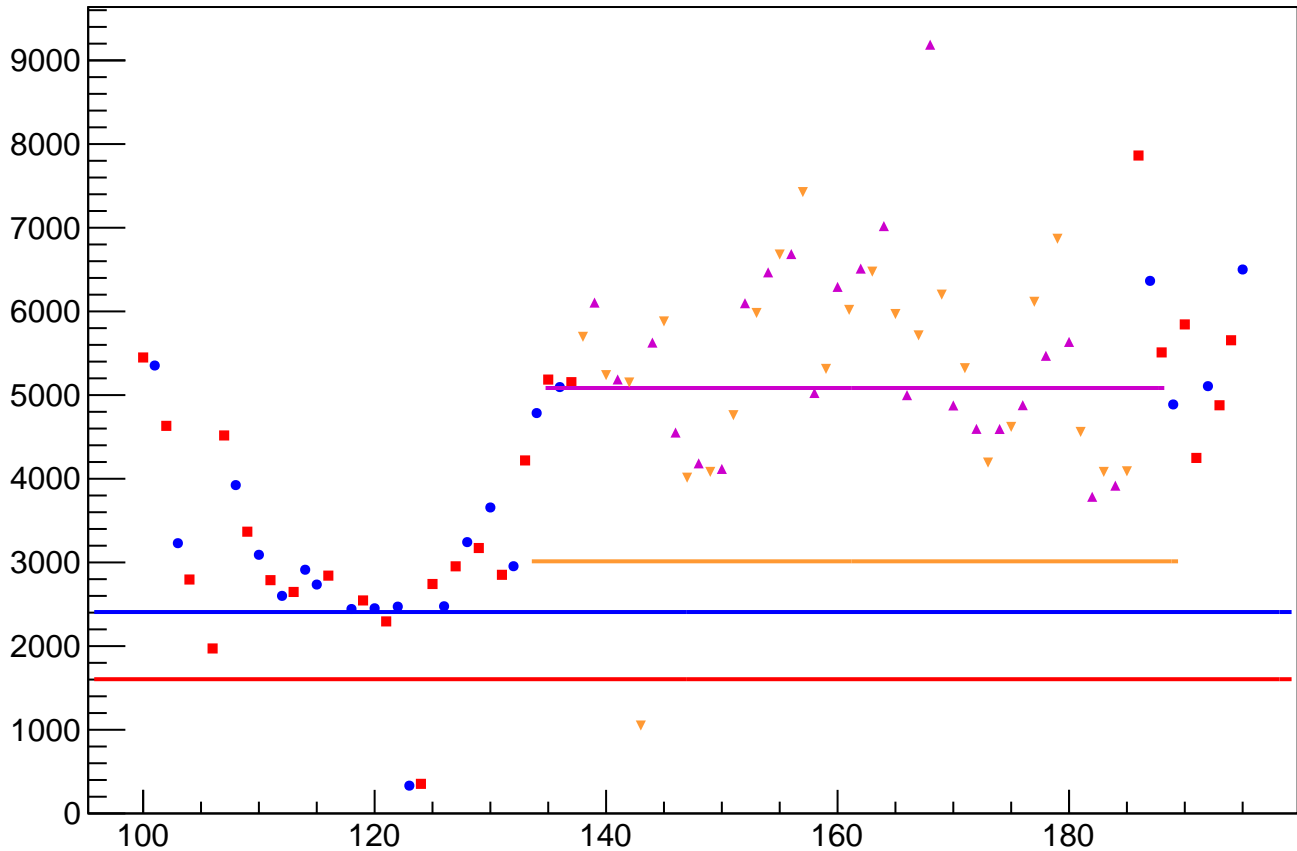
Left In: 15.863+/-1243.317  $\chi^2$ /NDF:13.2/22

+ sign -940.768+/-646.858  $\chi^2$ /NDF: 55.3/45

All: -384.747+/-444.999  $\chi^2$ /NDF: 108.9/93

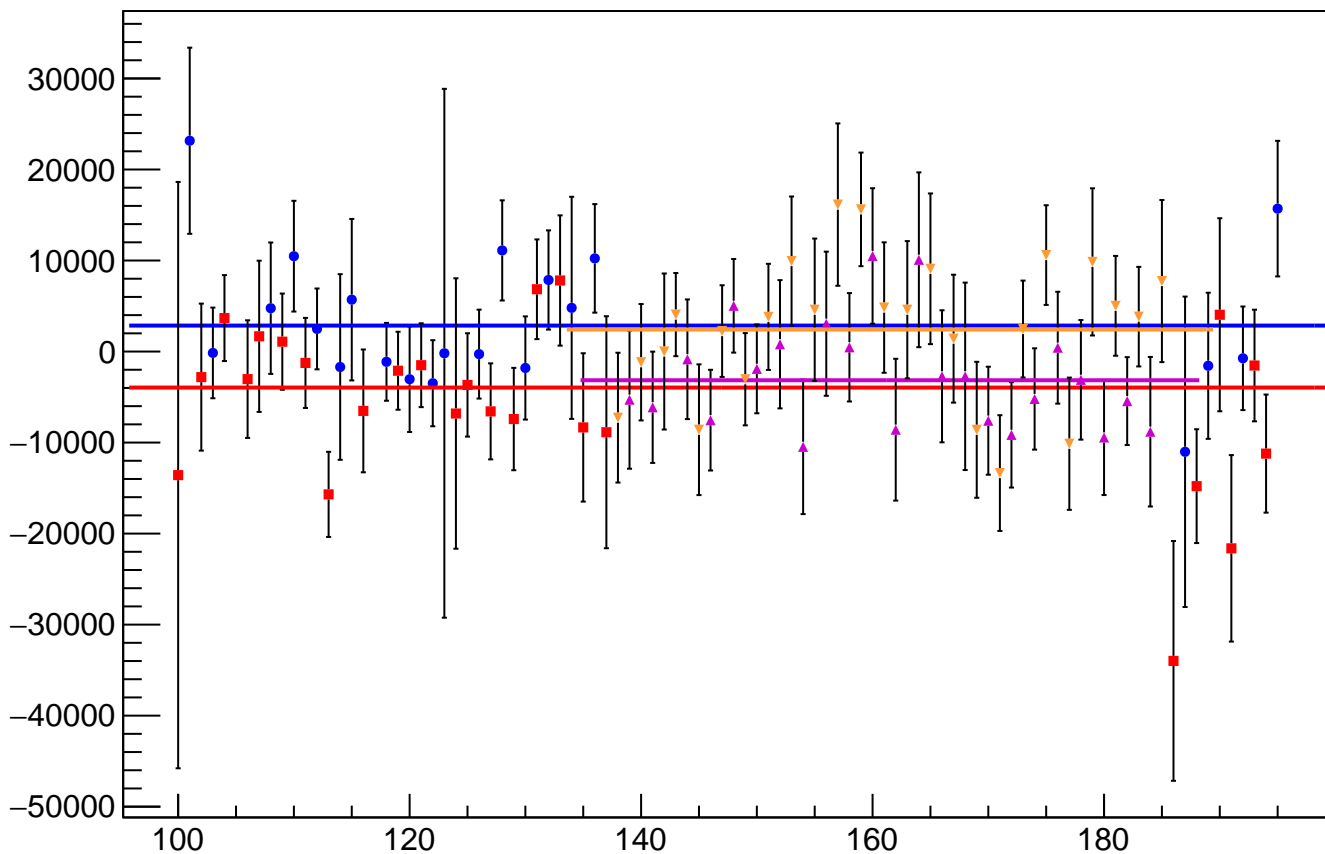
- sign 114.821+/-613.141  $\chi^2$ /NDF: 52.2/47

# asym\_atr1l2\_avg\_correction\_rms vs Slug



Right In: 2407.334+/-0.689	$\chi^2/\text{NDF}: 5583430.3/20$	+ sign 2746.029+/-0.457	$\chi^2/\text{NDF}: 18286819.0/45$
Left Out: 3013.268+/-0.612	$\chi^2/\text{NDF}: 12270753.9/24$	All: 2590.556+/-0.315	$\chi^2/\text{NDF}: 42126183.8/9$
Right Out: 1604.513+/-0.498	$\chi^2/\text{NDF}: 10457633.9/24$	- sign 2450.868+/-0.434	$\chi^2/\text{NDF}: 23620020.3/47$
Left In: 5084.645+/-0.879	$\chi^2/\text{NDF}: 1303587.7/22$		

# asym\_atr1l2\_avg\_mean vs Slug



Right In: 2851.863+/-1358.219  $\chi^2$ /NDF: 20.0/20

Left Out: 2417.210+/-1286.482  $\chi^2$ /NDF:29.9/24

Right Out: -3956.193+/-1266.930  $\chi^2$ /NDF: 32.2/24

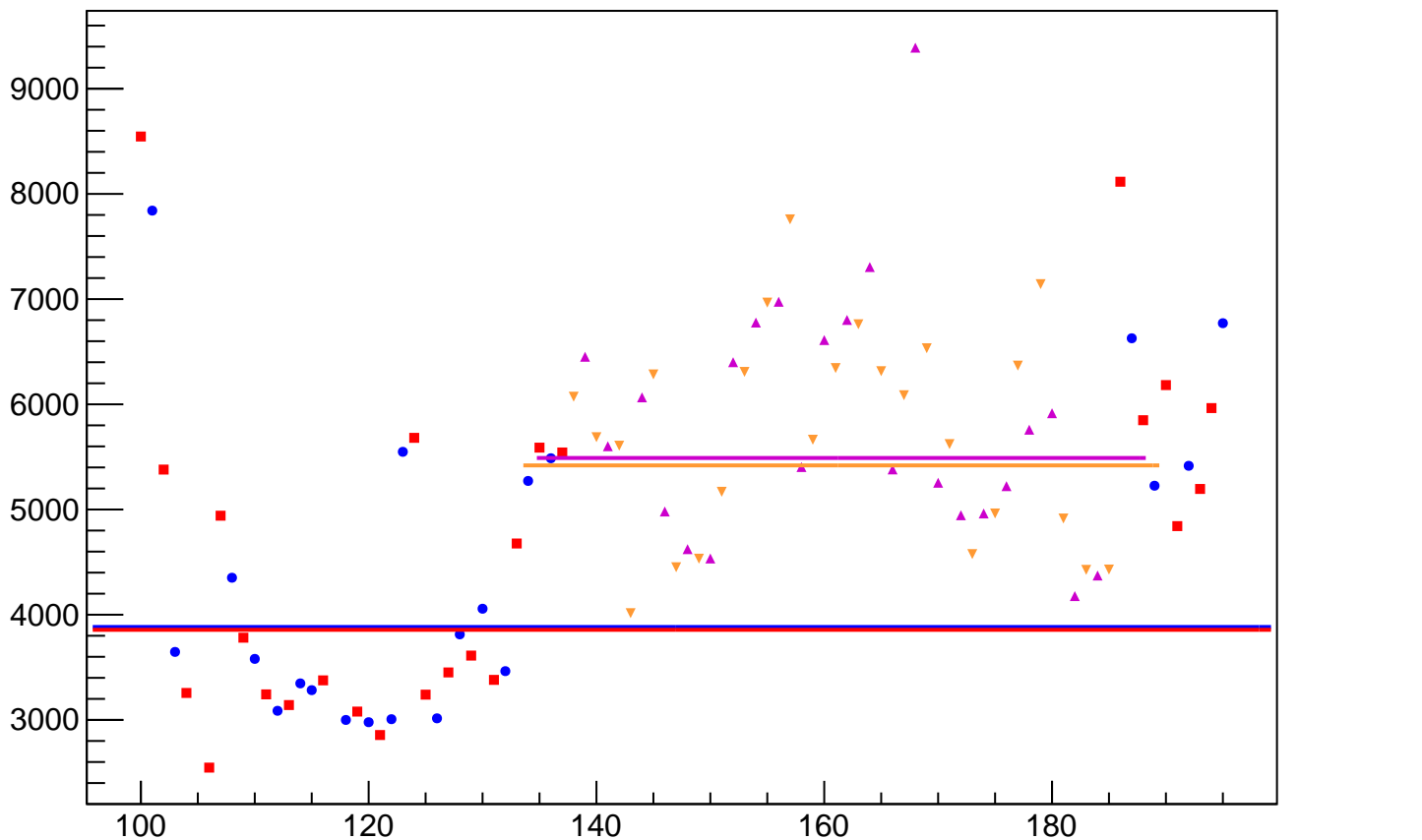
Left In: -3153.449+/-1337.378  $\chi^2$ /NDF:15.5/22

+ sign 2622.755+/-934.012  $\chi^2$ /NDF: 50.0/45

All: -524.567+/-655.346  $\chi^2$ /NDF: 120.2/93

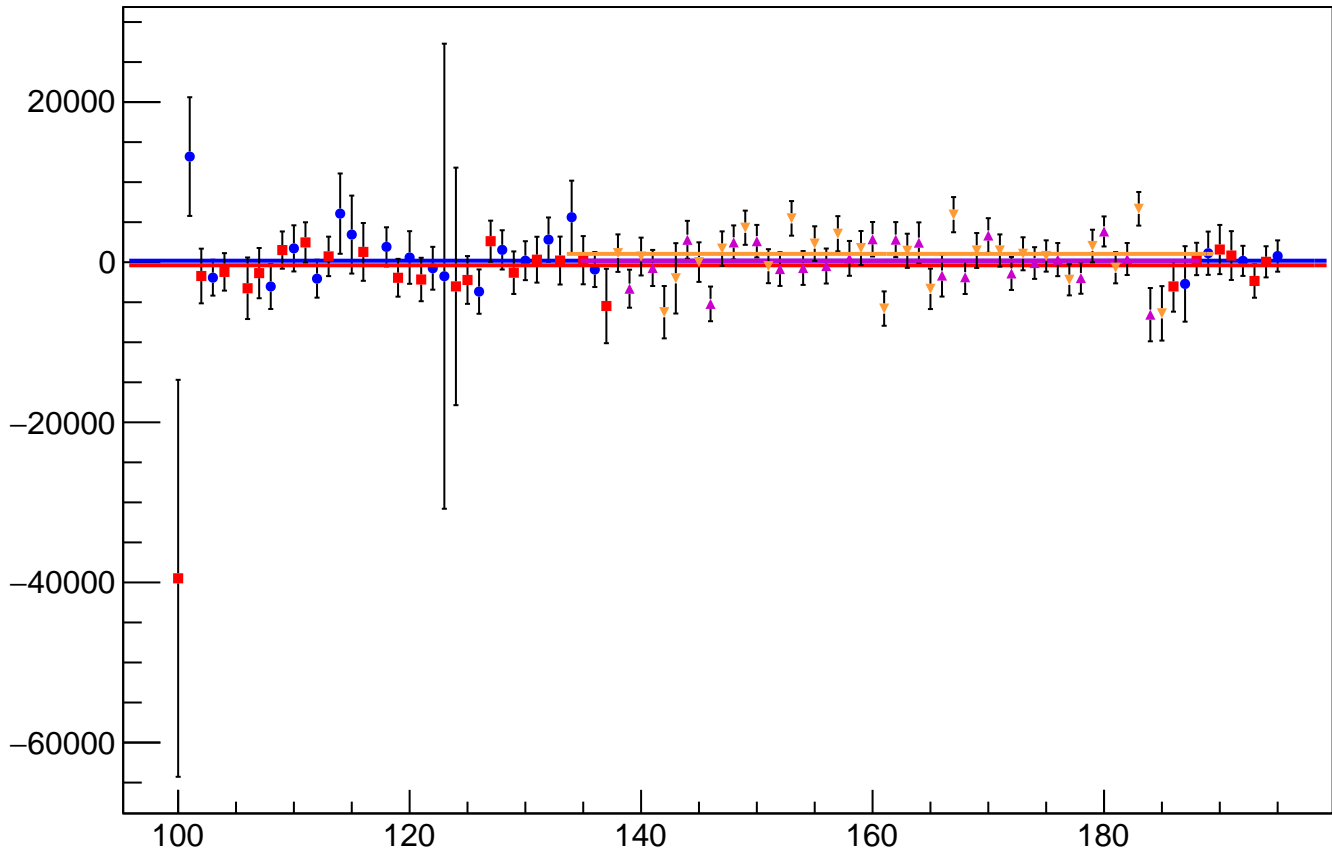
- sign -3576.519+/-919.752  $\chi^2$ /NDF: 47.9/47

# asym\_atr1l2\_avg\_rms vs Slug



Right In: 3883.446+/-0.960	$\chi^2/\text{NDF}: 1407567.4/20$	+ sign 4693.001+/-0.660	$\chi^2/\text{NDF}: 3865547.6/45$
Left Out: 5419.305+/-0.910	$\chi^2/\text{NDF}: 1109972.1/24$	All: 4655.399+/-0.462	$\chi^2/\text{NDF}: 8157492.7/93$
Right Out: 3856.466+/-0.885	$\chi^2/\text{NDF}: 1631290.1/24$	- sign 4619.391+/-0.646	$\chi^2/\text{NDF}: 4285599.6/47$
Left In: 5489.885+/-0.946	$\chi^2/\text{NDF}: 1064353.3/22$		

# reg\_asym\_atr1l2\_dd\_mean vs Slug



Right In: 189.026 $\pm$ 608.090  $\chi^2$ /NDF: 14.3/20

Left Out: 1041.262 $\pm$ 446.249  $\chi^2$ /NDF:48.6/24

Right Out: -383.773 $\pm$ 559.840  $\chi^2$ /NDF: 12.3/24

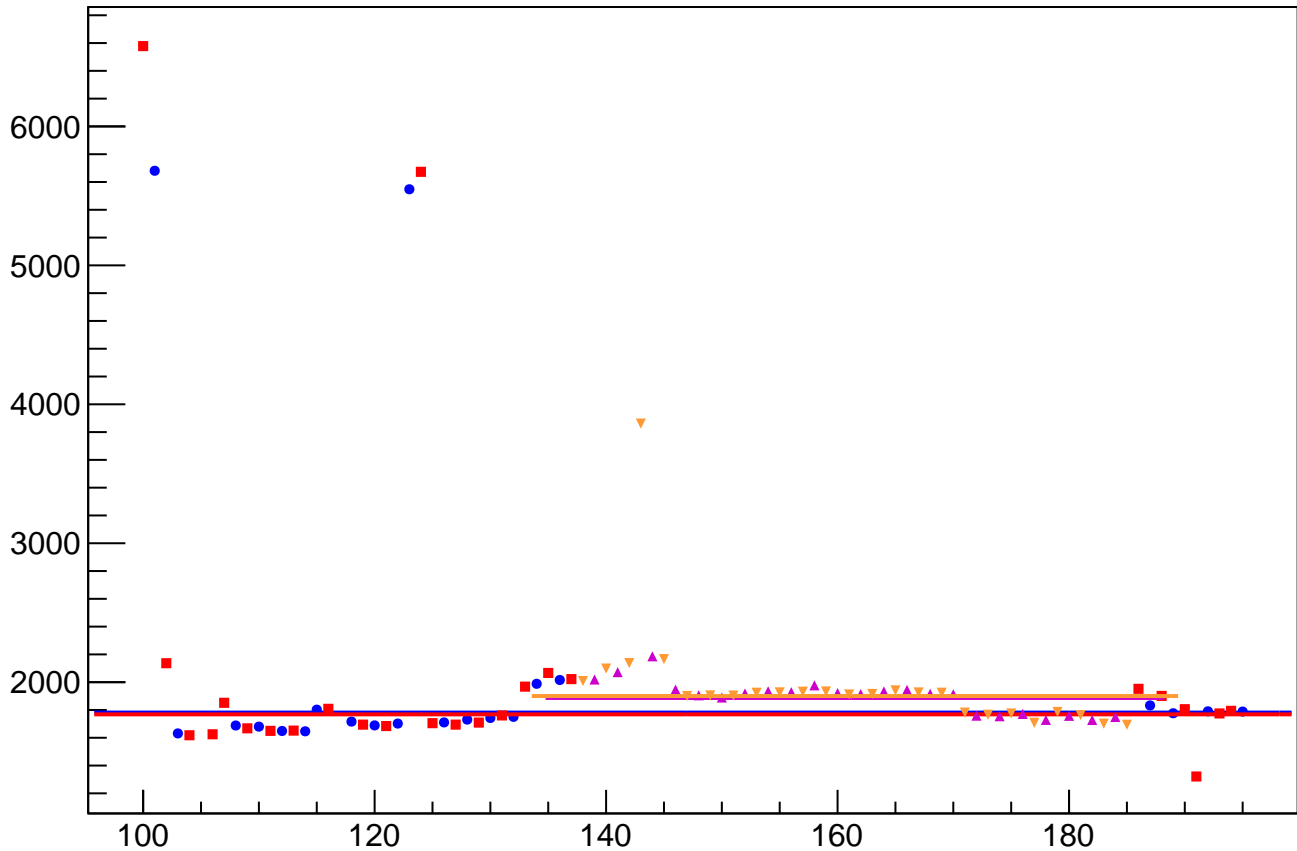
Left In: 191.966 $\pm$ 453.055  $\chi^2$ /NDF:30.0/22

+ sign 742.951 $\pm$ 359.768  $\chi^2$ /NDF: 64.2/45

All: 345.239 $\pm$ 251.669  $\chi^2$ /NDF: 109.5/93

- sign -35.873 $\pm$ 352.180  $\chi^2$ /NDF: 42.9/47

# reg\_asym\_atr1l2\_dd\_rms vs Slug



Right In: 1781.282+/-0.430  $\chi^2$ /NDF: 643338.8/20

Left Out: 1900.295+/-0.316  $\chi^2$ /NDF: 537892.5/24

Right Out: 1768.516+/-0.394  $\chi^2$ /NDF: 364696.3/24

Left In: 1886.378+/-0.320  $\chi^2$ /NDF: 123520.6/22

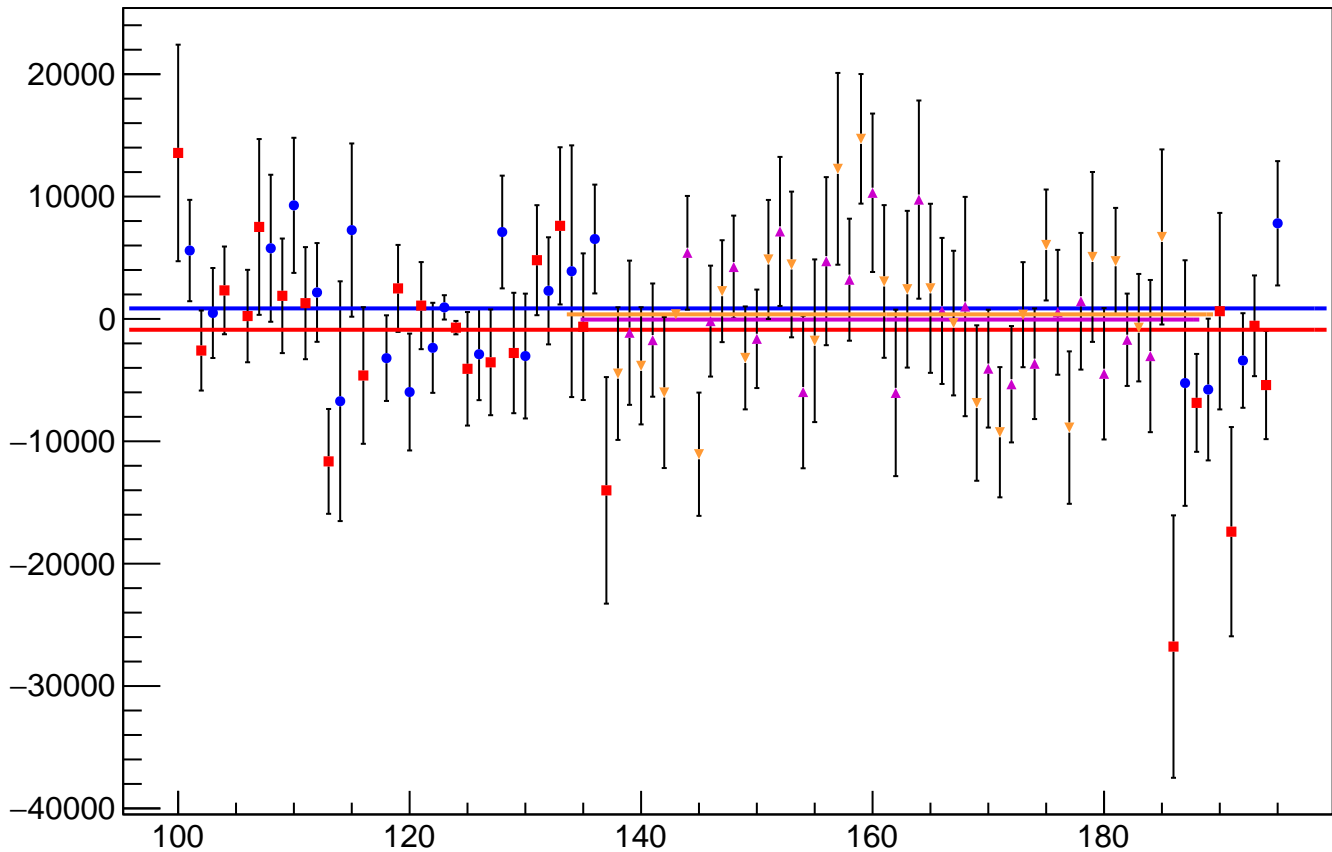
+ sign 1858.636+/-0.254  $\chi^2$ /NDF: 1231024.7/45

All: 1848.834+/-0.178  $\chi^2$ /NDF: 1776006.2/93

- sign 1839.476+/-0.249  $\chi^2$ /NDF: 542079.6/47



# asym\_atr1l2\_dd\_correction\_mean vs Slug



Right In:  $860.456 \pm 724.036$   $\chi^2/\text{NDF}: 20.0/20$

Left Out:  $373.277 \pm 382.071$   $\chi^2/\text{NDF}: 30.8/24$

Right Out:  $-885.175 \pm 476.461$   $\chi^2/\text{NDF}: 33.1/24$

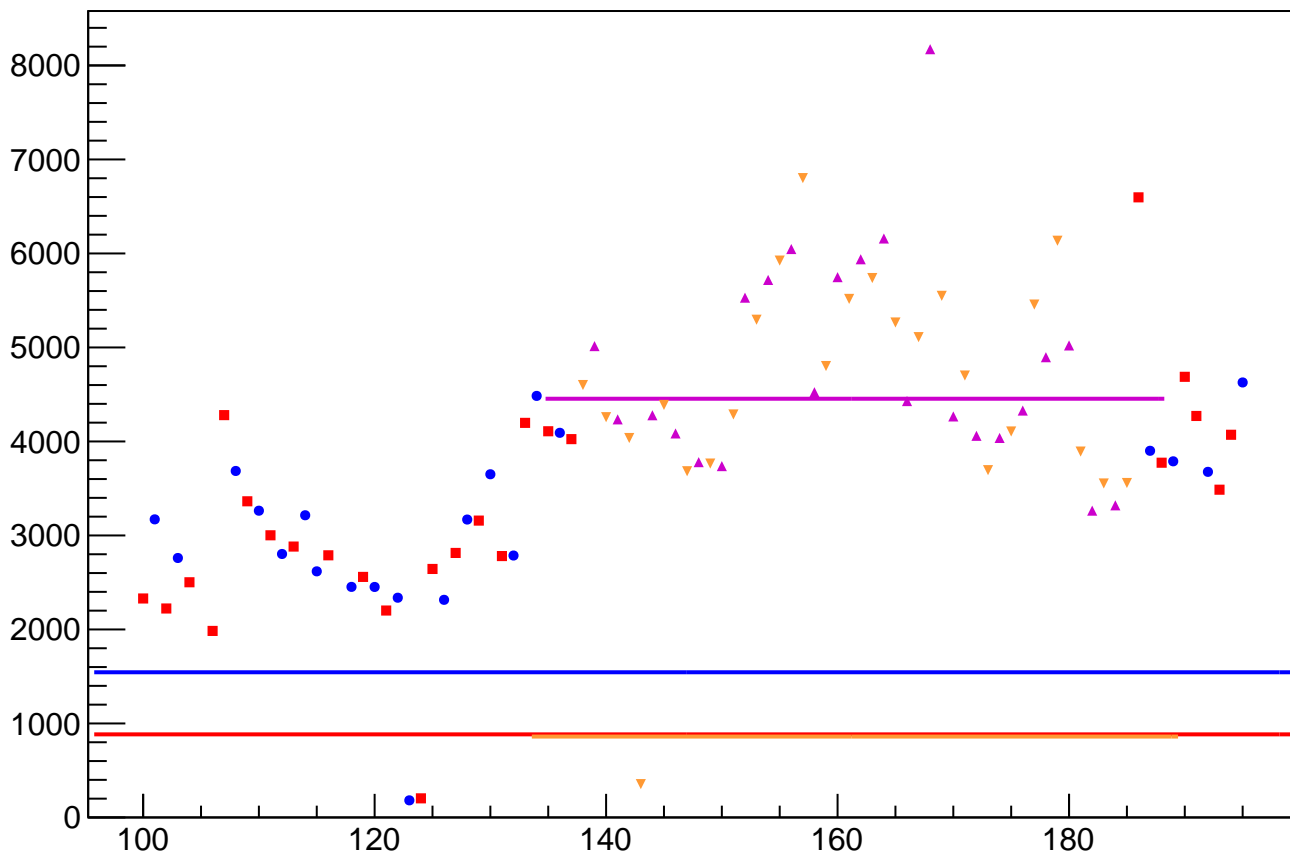
Left In:  $-53.099 \pm 1089.888$   $\chi^2/\text{NDF}: 14.5/22$

+ sign  $479.390 \pm 337.909$   $\chi^2/\text{NDF}: 51.2/45$

All:  $18.176 \pm 267.216$   $\chi^2/\text{NDF}: 104.3/93$

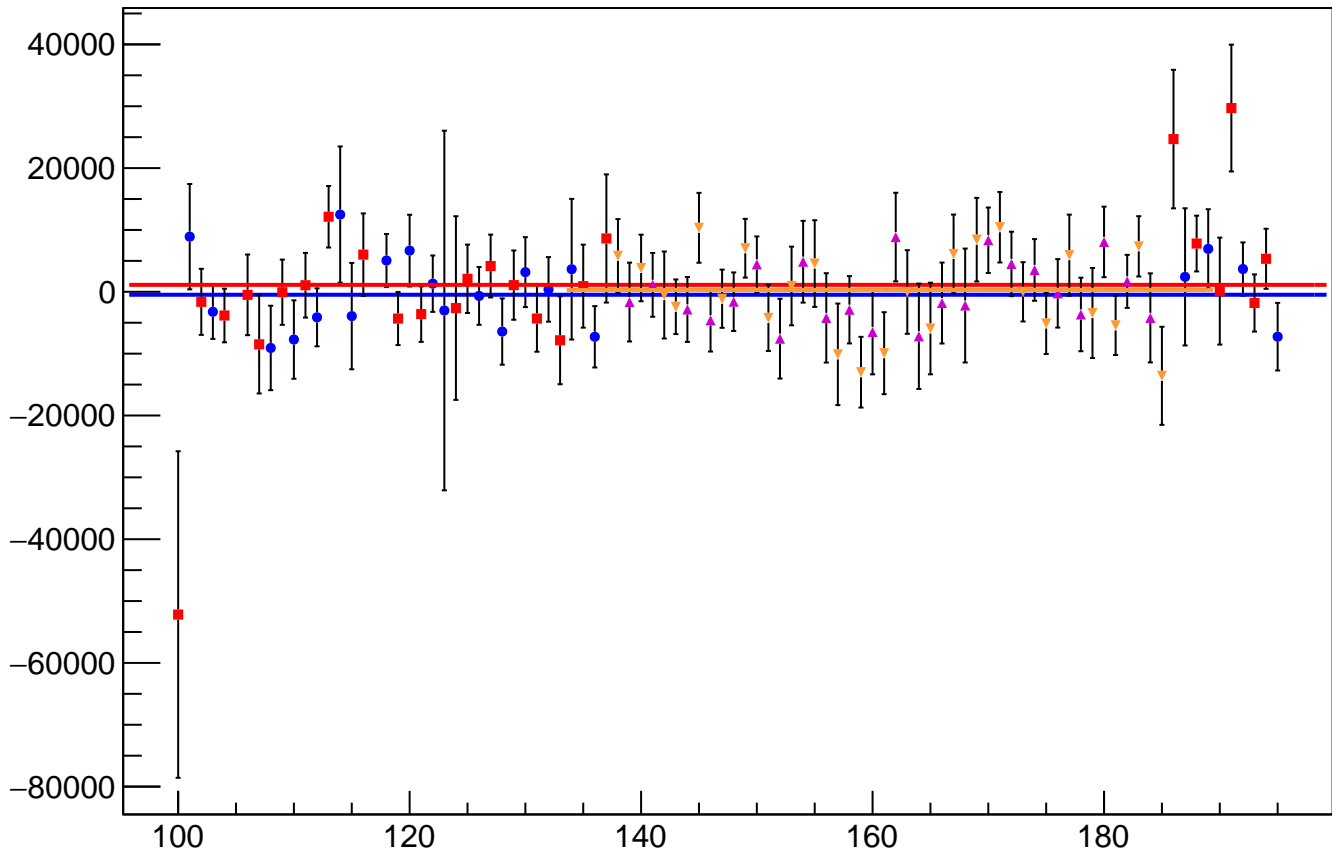
- sign  $-751.669 \pm 436.567$   $\chi^2/\text{NDF}: 48.1/47$

# asym\_atr1l2\_dd\_correction\_rms vs Slug



Right In: 1544.523+/-0.512	$\chi^2/\text{NDF}$ : 8732444.3/20	+ sign 1009.523+/-0.239	$\chi^2/\text{NDF}$ : 36468615.0/45
Left Out: 860.545+/-0.270	$\chi^2/\text{NDF}$ : 26340106.5/24	All: 1177.104+/-0.189	$\chi^2/\text{NDF}$ : 71048477.6/5
Right Out: 883.948+/-0.337	$\chi^2/\text{NDF}$ : 13896909.4/24	- sign 1456.825+/-0.309	$\chi^2/\text{NDF}$ : 33266895.8/47
Left In: 4454.402+/-0.771	$\chi^2/\text{NDF}$ : 1349758.1/22		

# asym\_atr1l2\_dd\_mean vs Slug



Right In:  $-477.683 \pm 1259.742$   $\chi^2/\text{NDF}: 17.6/20$

Left Out:  $288.508 \pm 1155.419$   $\chi^2/\text{NDF}: 32.4/24$

Right Out:  $1123.199 \pm 1168.959$   $\chi^2/\text{NDF}: 34.6/24$

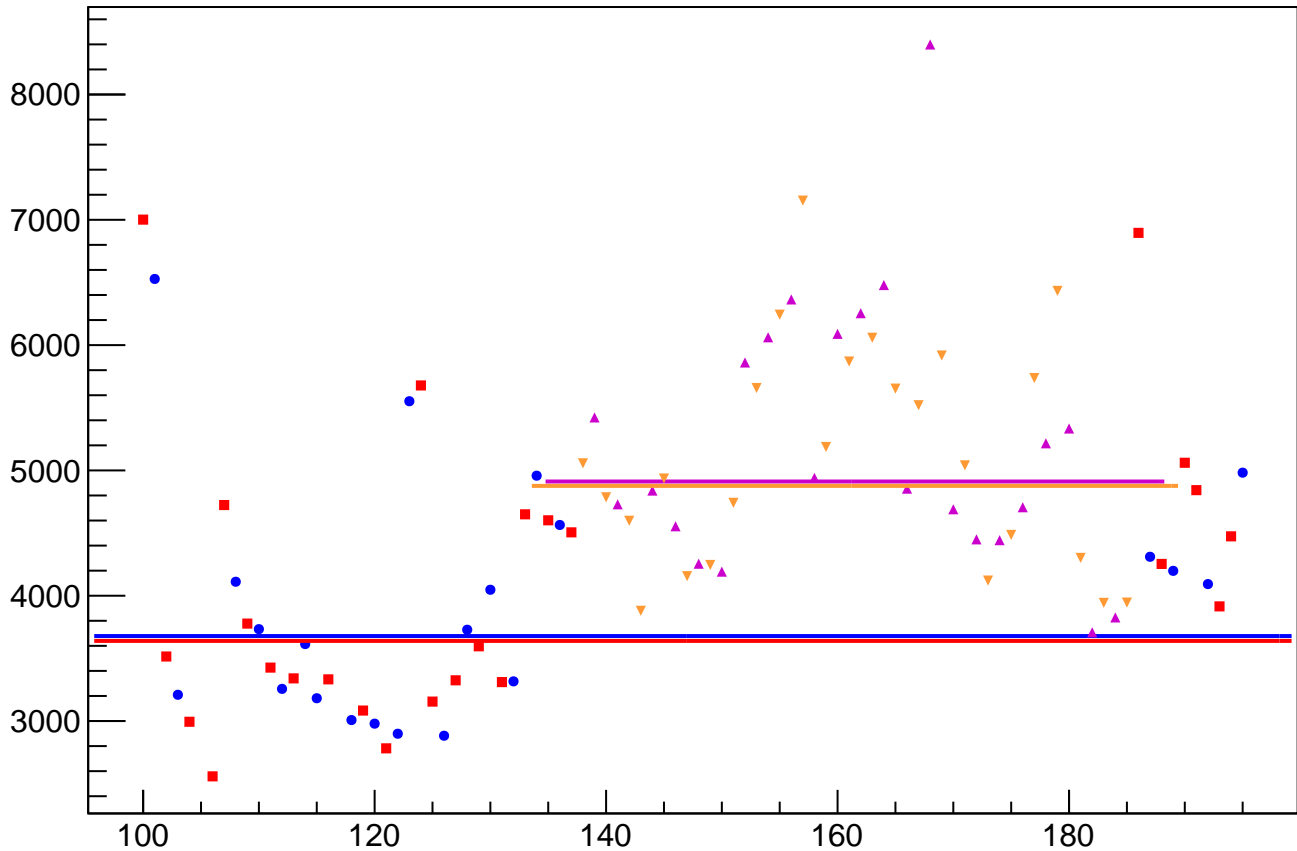
Left In:  $332.488 \pm 1196.011$   $\chi^2/\text{NDF}: 14.7/22$

+ sign  $-61.554 \pm 851.501$   $\chi^2/\text{NDF}: 50.2/45$

All:  $345.010 \pm 596.539$   $\chi^2/\text{NDF}: 100.1/93$

- sign  $736.887 \pm 835.979$   $\chi^2/\text{NDF}: 49.5/47$

# asym\_atr1l2\_dd\_rms vs Slug



Right In: 3678.123+/-0.891  $\chi^2$ /NDF: 740489.1/20

Left Out: 4876.564+/-0.817  $\chi^2$ /NDF: 972528.1/24

Right Out: 3639.491+/-0.818  $\chi^2$ /NDF: 845601.0/24

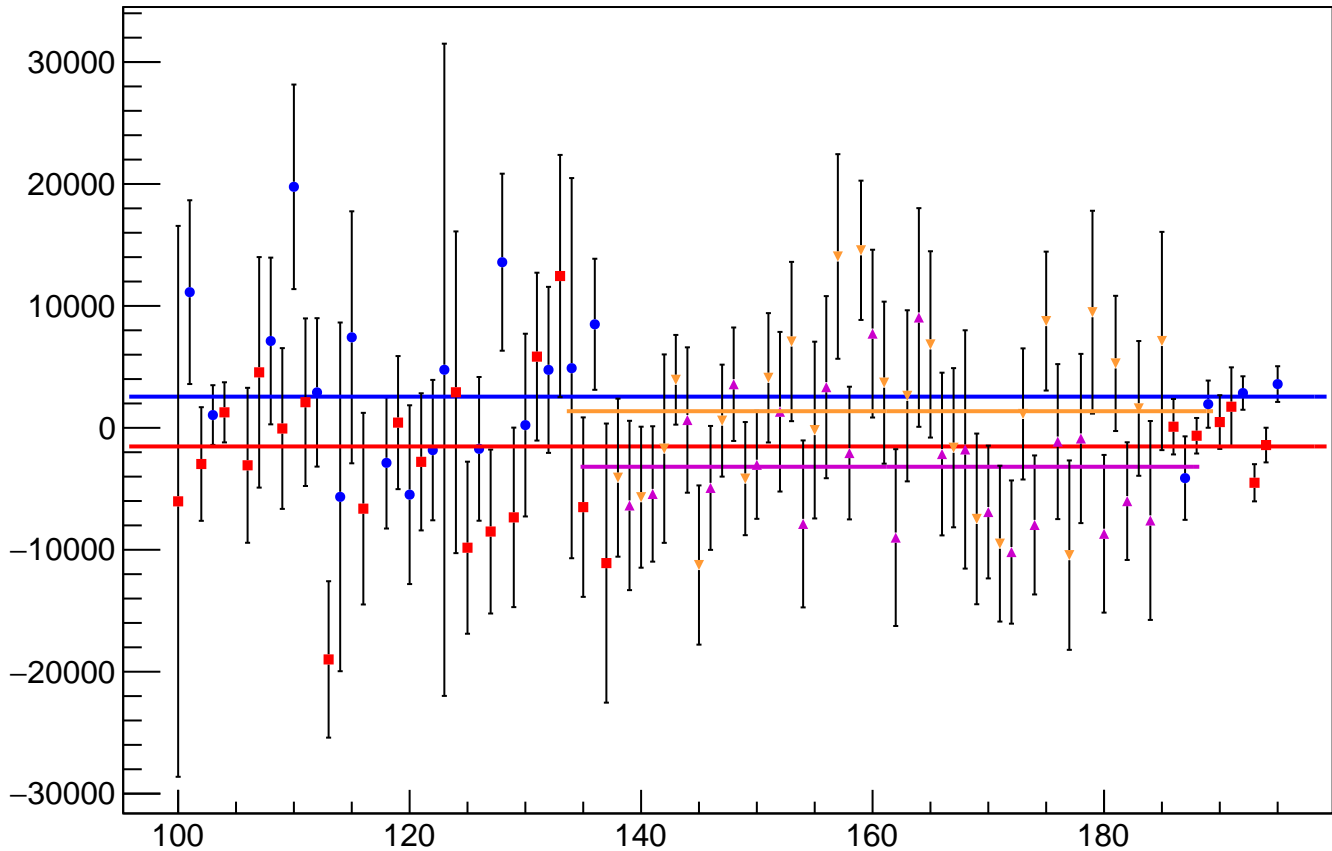
Left In: 4911.546+/-0.846  $\chi^2$ /NDF: 1043164.6/22

+ sign 4329.011+/-0.602  $\chi^2$ /NDF: 2696107.3/45

All: 4290.904+/-0.421  $\chi^2$ /NDF: 5761194.9/93

- sign 4254.553+/-0.588  $\chi^2$ /NDF: 3057260.9/47

# reg\_asym\_atl\_avg\_atr\_avg\_avg\_mean vs Slug



Right In: 2559.322+/-741.060  $\chi^2$ /NDF: 18.4/20

Left Out: 1365.082+/-1206.268  $\chi^2$ /NDF:28.0/24

Right Out: -1525.517+/-643.674  $\chi^2$ /NDF: 24.3/24

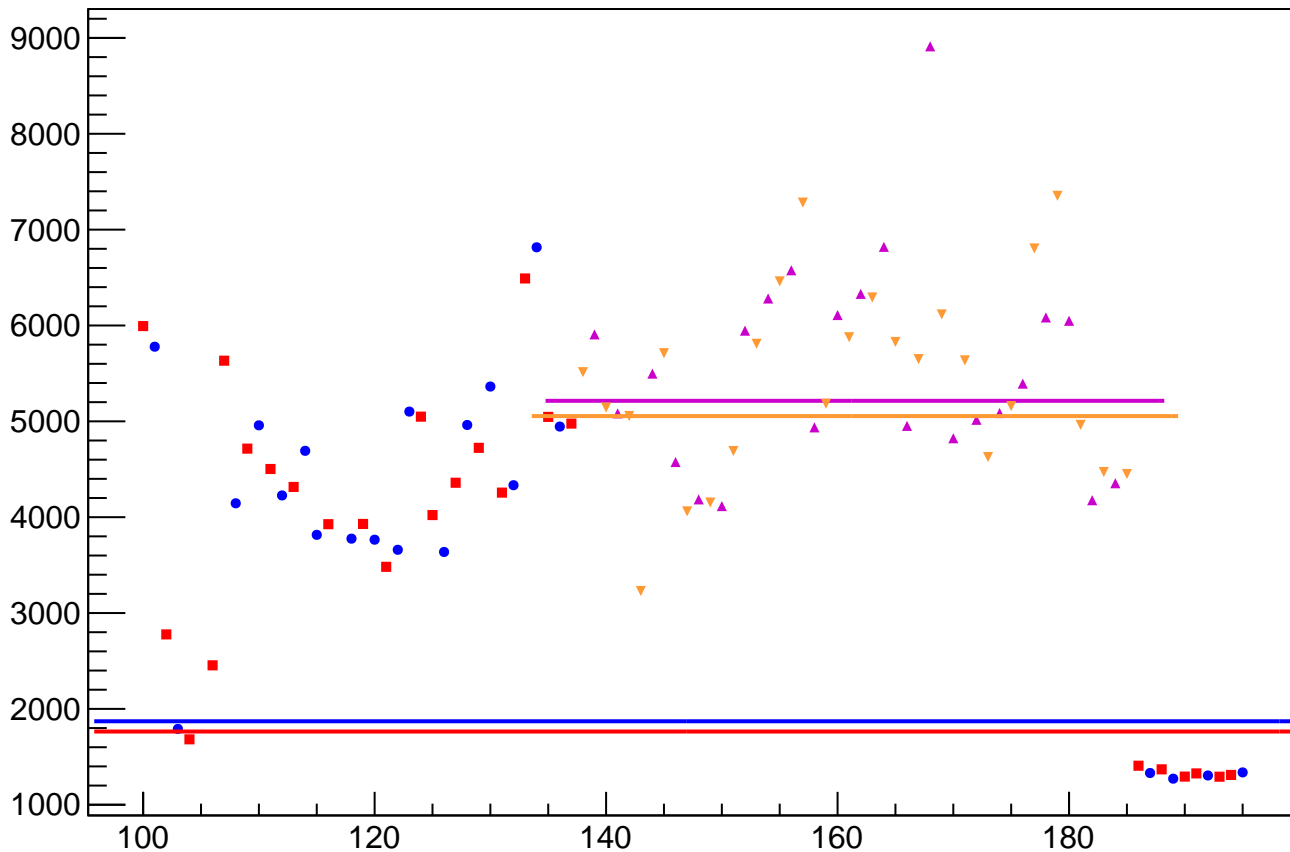
Left In: -3191.160+/-1270.021  $\chi^2$ /NDF:14.0/22

+ sign 2232.098+/-631.424  $\chi^2$ /NDF: 47.1/45

All: -11.181+/-424.791  $\chi^2$ /NDF: 109.8/93

- sign -1865.927+/-574.145  $\chi^2$ /NDF: 39.6/47

# reg\_asym\_atl\_avg\_atr\_avg\_avg\_rms vs Slug



Right In: 1870.800+/-0.524  $\chi^2$ /NDF: 5026906.3/20

Left Out: 5054.711+/-0.853  $\chi^2$ /NDF: 1437224.7/24

Right Out: 1763.912+/-0.454  $\chi^2$ /NDF: 5161608.9/24

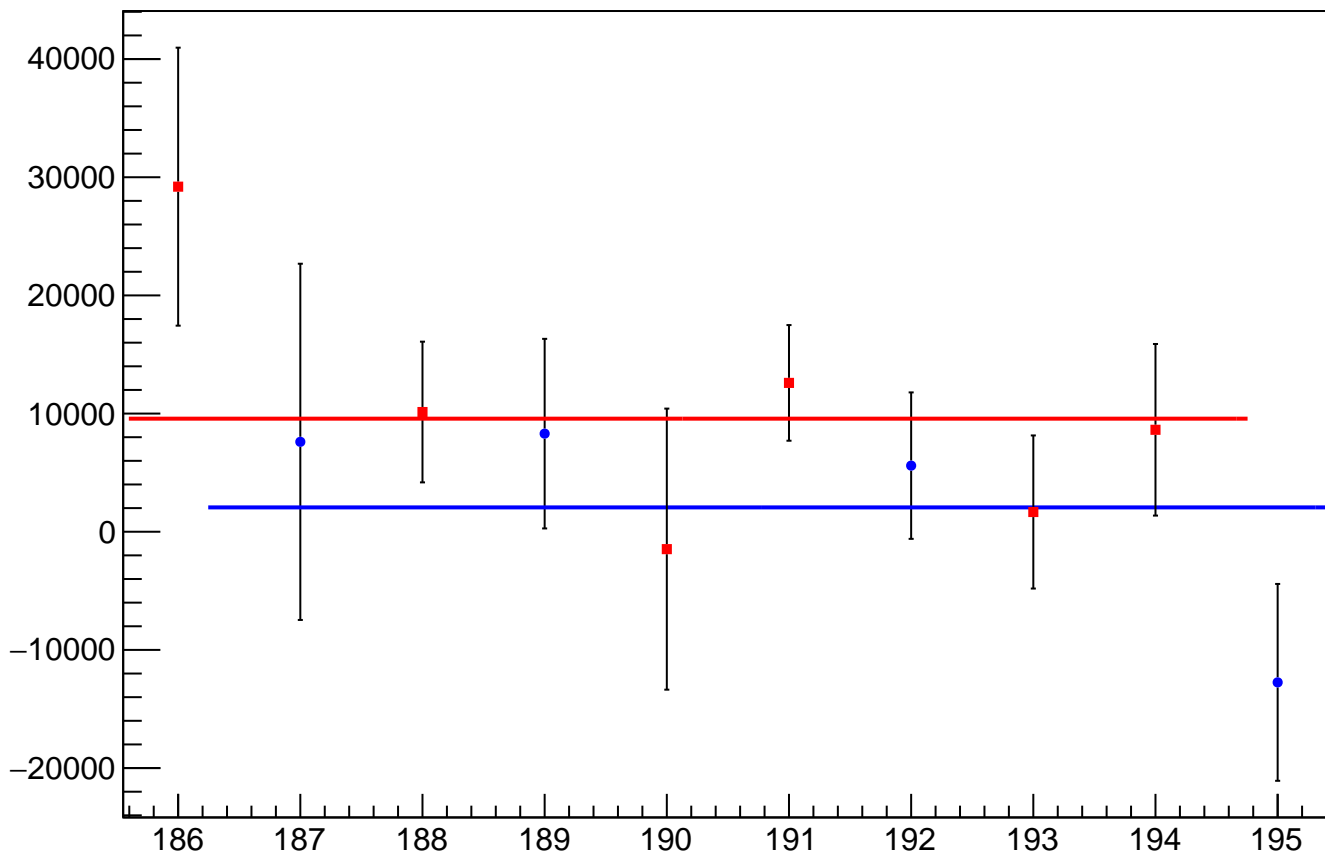
Left In: 5214.120+/-0.898  $\chi^2$ /NDF: 1052501.5/22

+ sign 2743.191+/-0.446  $\chi^2$ /NDF: 16579958.0/45

All: 2591.668+/-0.300  $\chi^2$ /NDF: 34757589.8/95

- sign 2466.788+/-0.405  $\chi^2$ /NDF: 17967538.4/47

# asym\_atl\_avg\_atr\_avg\_avg\_correction\_mean vs Slug



Right In: 2060.112+/-4069.269  $\chi^2$ /NDF: 4.2/3

Left Out: 0.000+/-0.000  $\chi^2$ /NDF:0.0/0

Right Out: 9569.109+/-2805.502  $\chi^2$ /NDF: 5.5/5

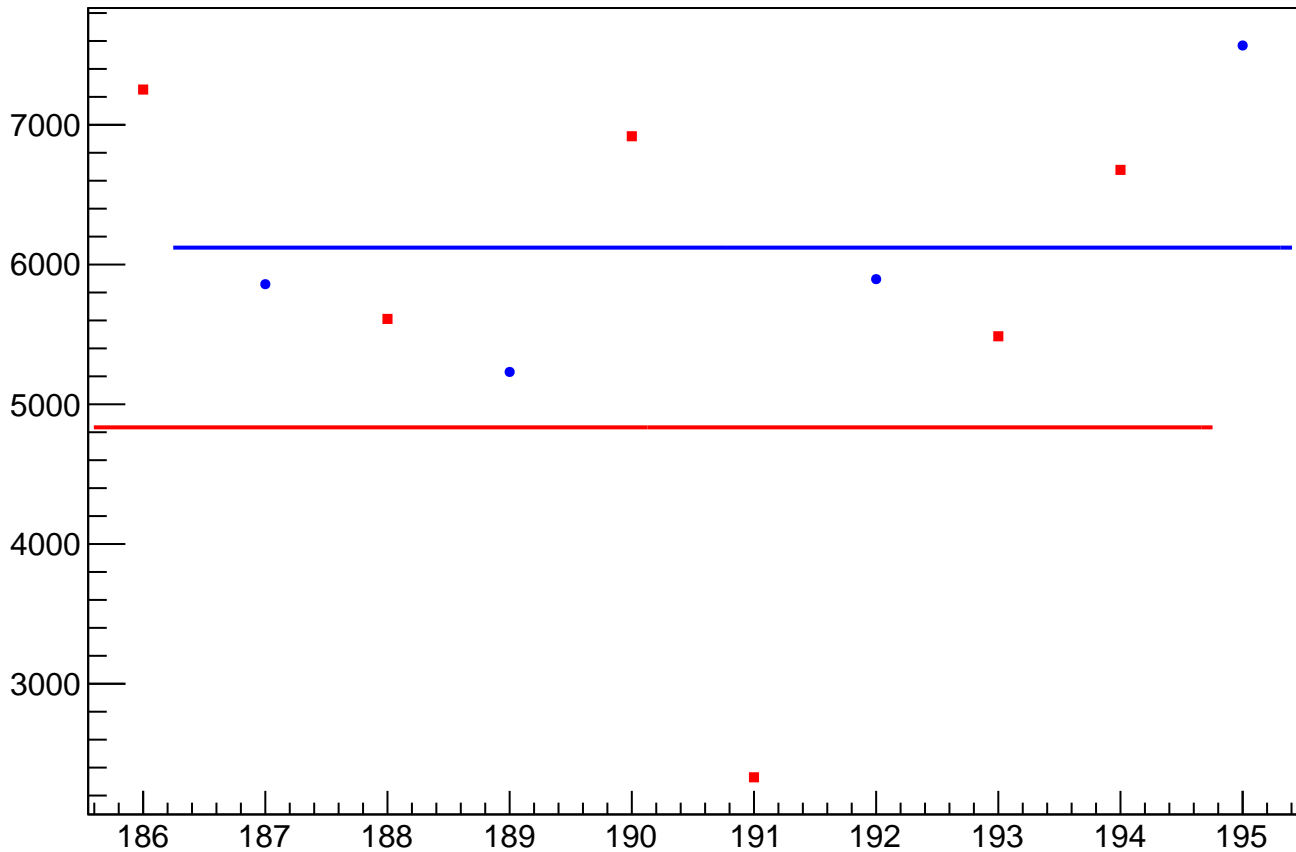
Left In: 0.000+/-0.000  $\chi^2$ /NDF:0.0/0

+ sign 0.000+/-0.000  $\chi^2$ /NDF: 0.0/0

All: 7149.844+/-2309.762  $\chi^2$ /NDF: 12.1/9

- sign 0.000+/-0.000  $\chi^2$ /NDF: 0.0/0

# asym\_atl\_avg\_atr\_avg\_avg\_correction\_rms vs Slug



Right In: 6121.215+/-2.877  $\chi^2$ /NDF: 88160.9/3

Left Out: 0.000+/-0.000  $\chi^2$ /NDF:0.0/0

Right Out: 4834.934+/-1.984  $\chi^2$ /NDF: 852634.7/5

Left In: 0.000+/-0.000  $\chi^2$ /NDF:0.0/0

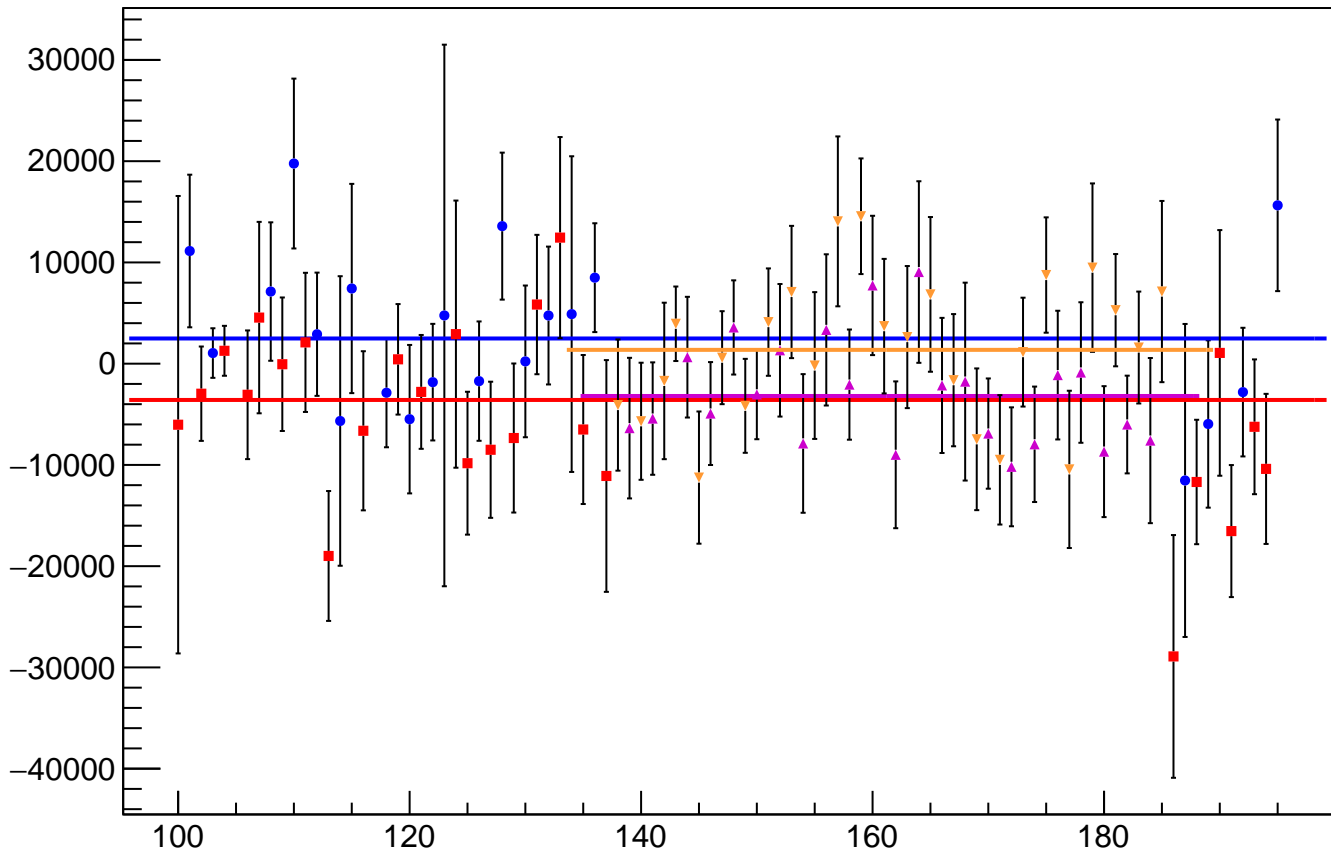
+ sign 0.000+/-0.000  $\chi^2$ /NDF: 0.0/0

All: 5249.351+/-1.633  $\chi^2$ /NDF: 1076246.5/9

- sign 0.000+/-0.000  $\chi^2$ /NDF: 0.0/0



# asym\_atl\_avg\_atr\_avg\_avg\_mean vs Slug



Right In: 2488.402+/-1374.540  $\chi^2$ /NDF: 19.0/20

Left Out: 1365.082+/-1206.268  $\chi^2$ /NDF:28.0/24

Right Out: -3583.333+/-1263.239  $\chi^2$ /NDF: 30.3/24

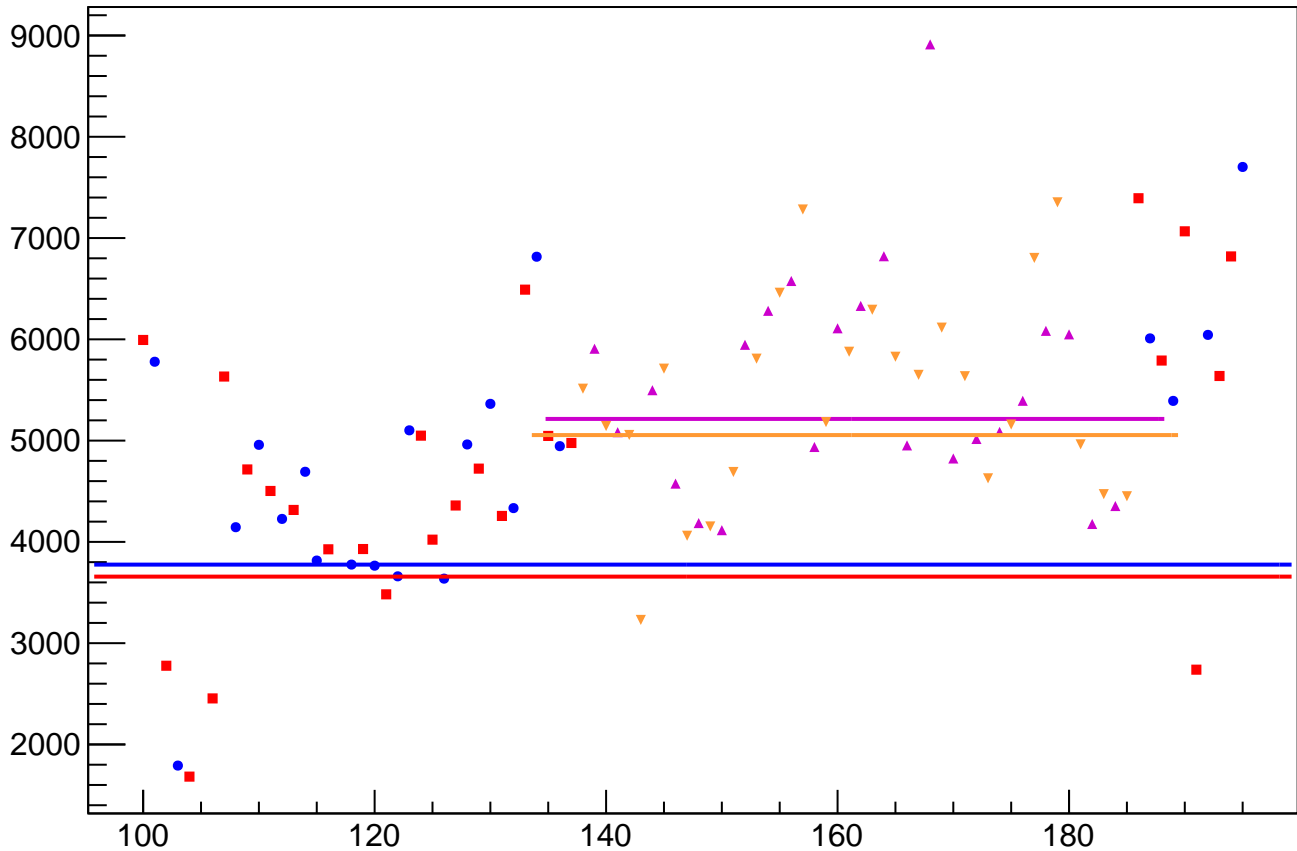
Left In: -3191.160+/-1270.021  $\chi^2$ /NDF:14.0/22

+ sign 1853.810+/-906.649  $\chi^2$ /NDF: 47.3/45

All: -799.283+/-637.167  $\chi^2$ /NDF: 108.5/93

- sign -3388.296+/-895.633  $\chi^2$ /NDF: 44.3/47

# asym\_atl\_avg\_atr\_avg\_avg\_rms vs Slug



Right In:  $3775.691 \pm 0.972$   $\chi^2/\text{NDF}: 2656368.7/20$

Left Out:  $5054.711 \pm 0.853$   $\chi^2/\text{NDF}: 1437224.7/24$

Right Out:  $3657.169 \pm 0.886$   $\chi^2/\text{NDF}: 3216269.9/24$

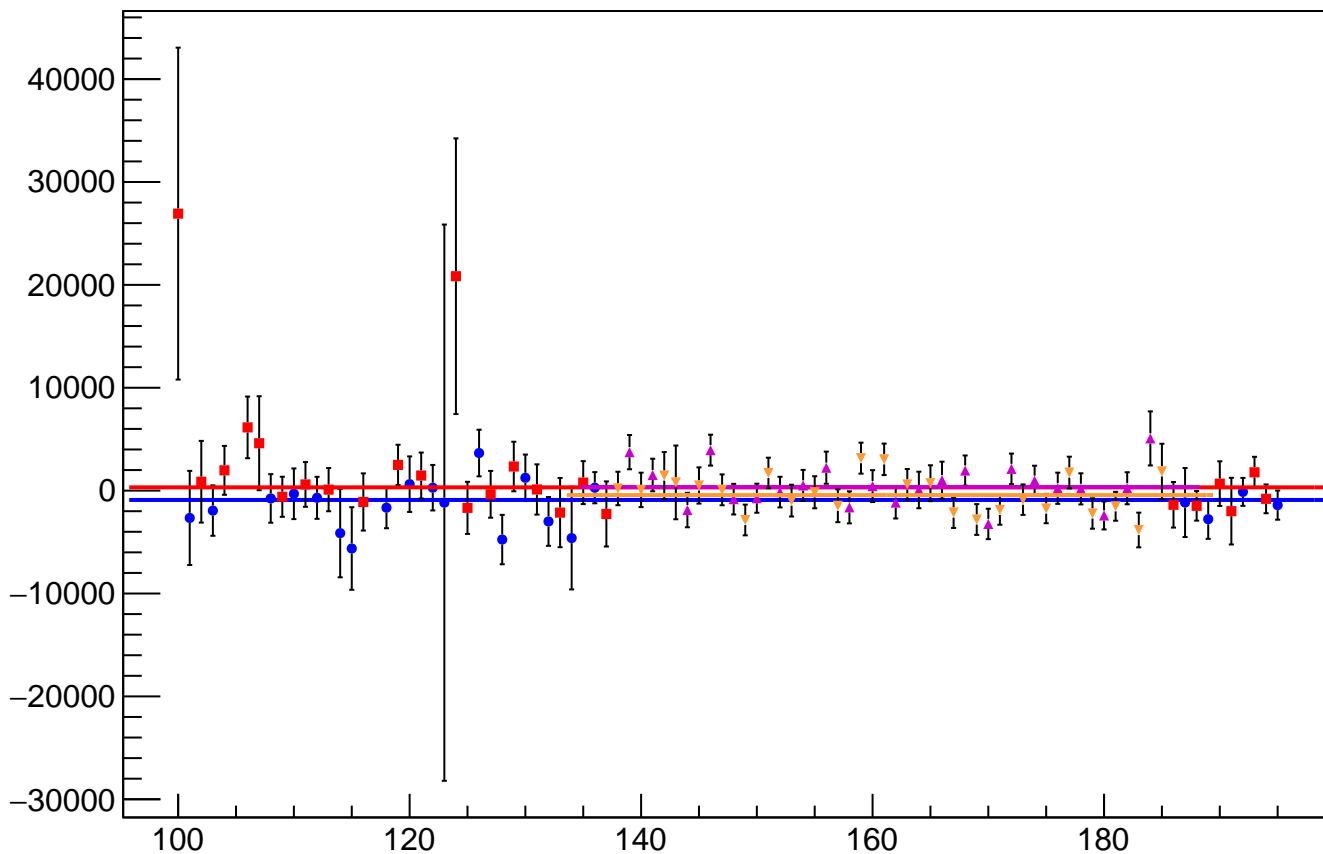
Left In:  $5214.120 \pm 0.898$   $\chi^2/\text{NDF}: 1052501.5/22$

+ sign  $4498.228 \pm 0.641$   $\chi^2/\text{NDF}: 5071894.2/45$

All:  $4461.276 \pm 0.450$   $\chi^2/\text{NDF}: 10869694.8/95$

- sign  $4425.493 \pm 0.631$   $\chi^2/\text{NDF}: 5791261.1/47$

# reg\_asym\_atl\_avg\_atr\_avg\_dd\_mean vs Slug



Right In:  $-906.099 \pm 491.985$   $\chi^2/\text{NDF}: 14.0/20$

Left Out:  $-431.715 \pm 320.540$   $\chi^2/\text{NDF}: 33.1/24$

Right Out:  $319.004 \pm 458.642$   $\chi^2/\text{NDF}: 19.2/24$

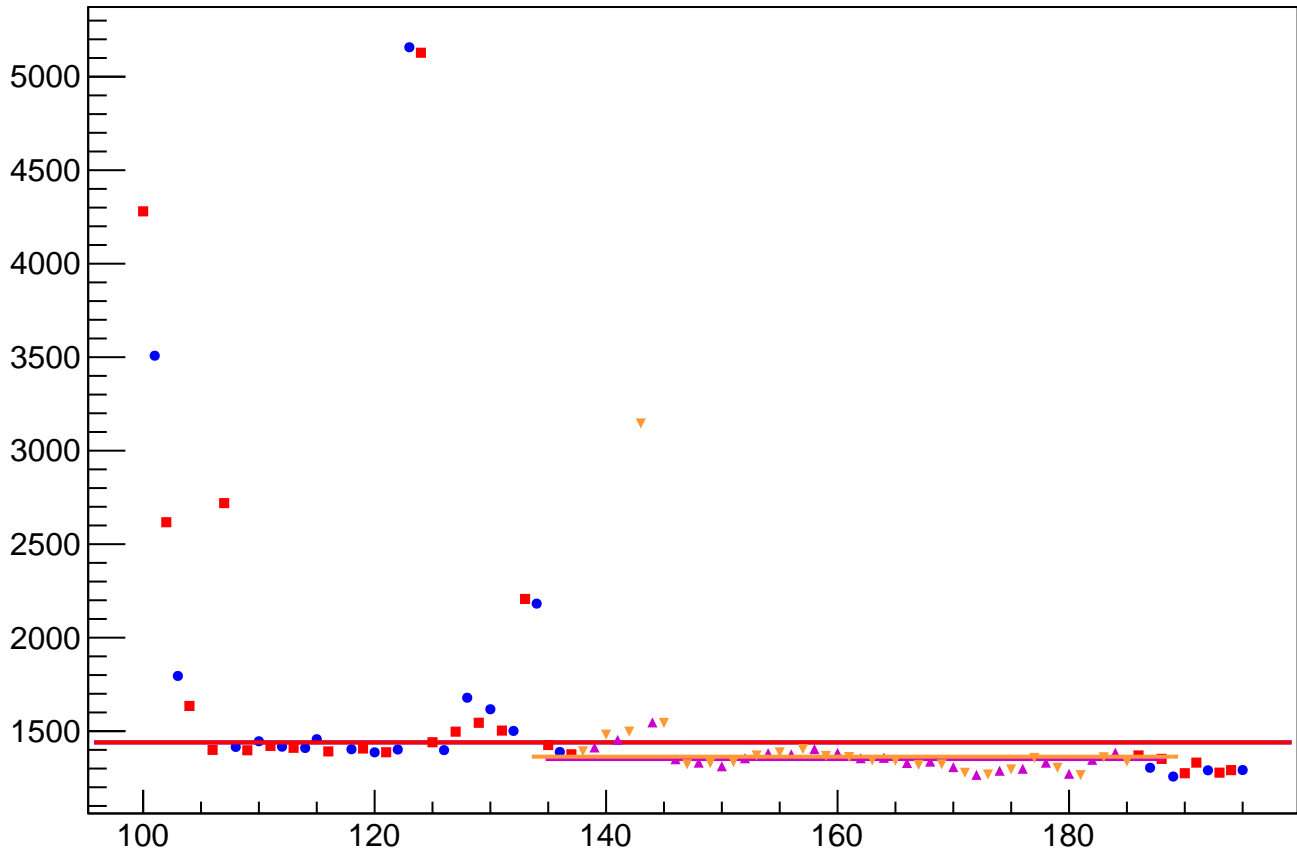
Left In:  $343.737 \pm 324.368$   $\chi^2/\text{NDF}: 33.8/22$

+ sign  $-573.077 \pm 268.567$   $\chi^2/\text{NDF}: 47.7/45$

All:  $-112.426 \pm 188.570$   $\chi^2/\text{NDF}: 106.5/93$

- sign  $335.491 \pm 264.829$   $\chi^2/\text{NDF}: 53.0/47$

# reg\_asym\_atl\_avg\_atr\_avg\_dd\_rms vs Slug



Right In: 1439.755+/-0.348  $\chi^2$ /NDF: 639410.1/20

Left Out: 1363.561+/-0.227  $\chi^2$ /NDF: 575226.6/24

Right Out: 1439.825+/-0.324  $\chi^2$ /NDF: 743971.7/24

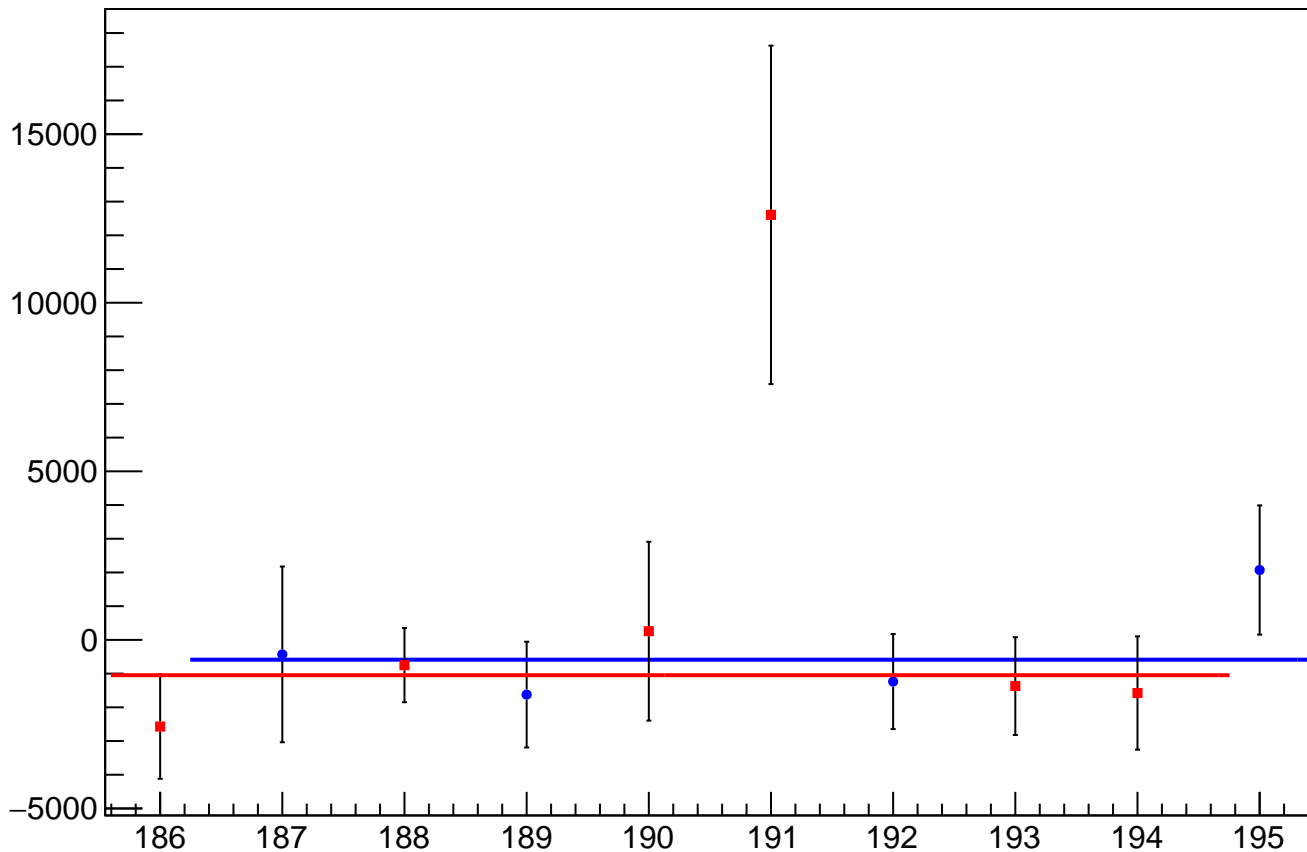
Left In: 1350.909+/-0.229  $\chi^2$ /NDF: 67144.5/22

+ sign 1386.267+/-0.190  $\chi^2$ /NDF: 1248312.2/45

All: 1383.371+/-0.133  $\chi^2$ /NDF: 2109994.2/93

- sign 1380.555+/-0.187  $\chi^2$ /NDF: 861223.4/47

# asym\_atl\_avg\_atr\_avg\_dd\_correction\_mean vs Slug



Right In:  $-587.493 \pm 867.430$   $\chi^2/\text{NDF}$ : 2.6/3

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 0.0/0

Right Out:  $-1047.487 \pm 665.999$   $\chi^2/\text{NDF}$ : 8.8/5

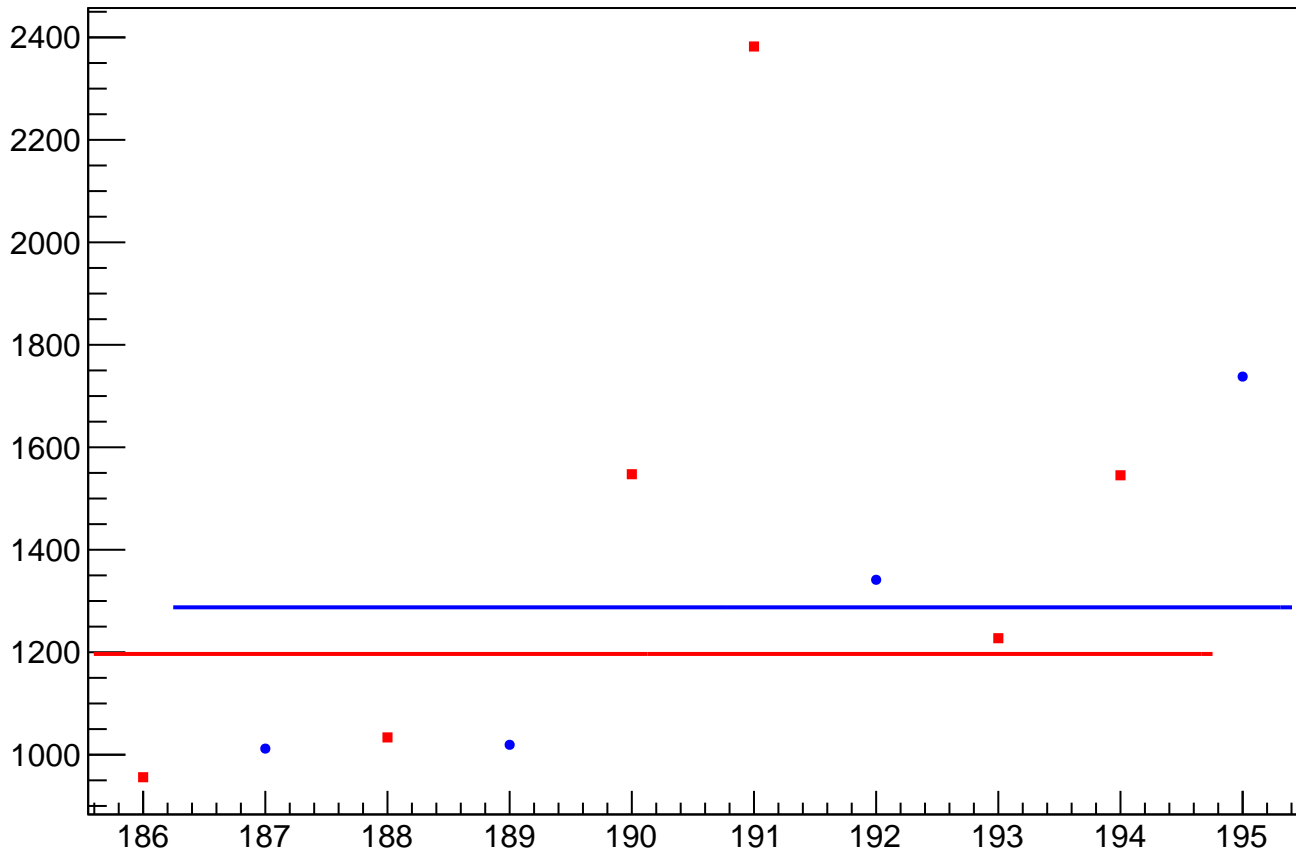
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 0.0/0

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 0.0/0

All:  $-876.890 \pm 528.256$   $\chi^2/\text{NDF}$ : 11.6/9

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 0.0/0

# asym\_atl\_avg\_atr\_avg\_dd\_correction\_rms vs Slug



Right In: 1287.662 $\pm$ 0.613  $\chi^2$ /NDF: 194234.0/3

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Right Out: 1196.665 $\pm$ 0.471  $\chi^2$ /NDF: 325606.2/5

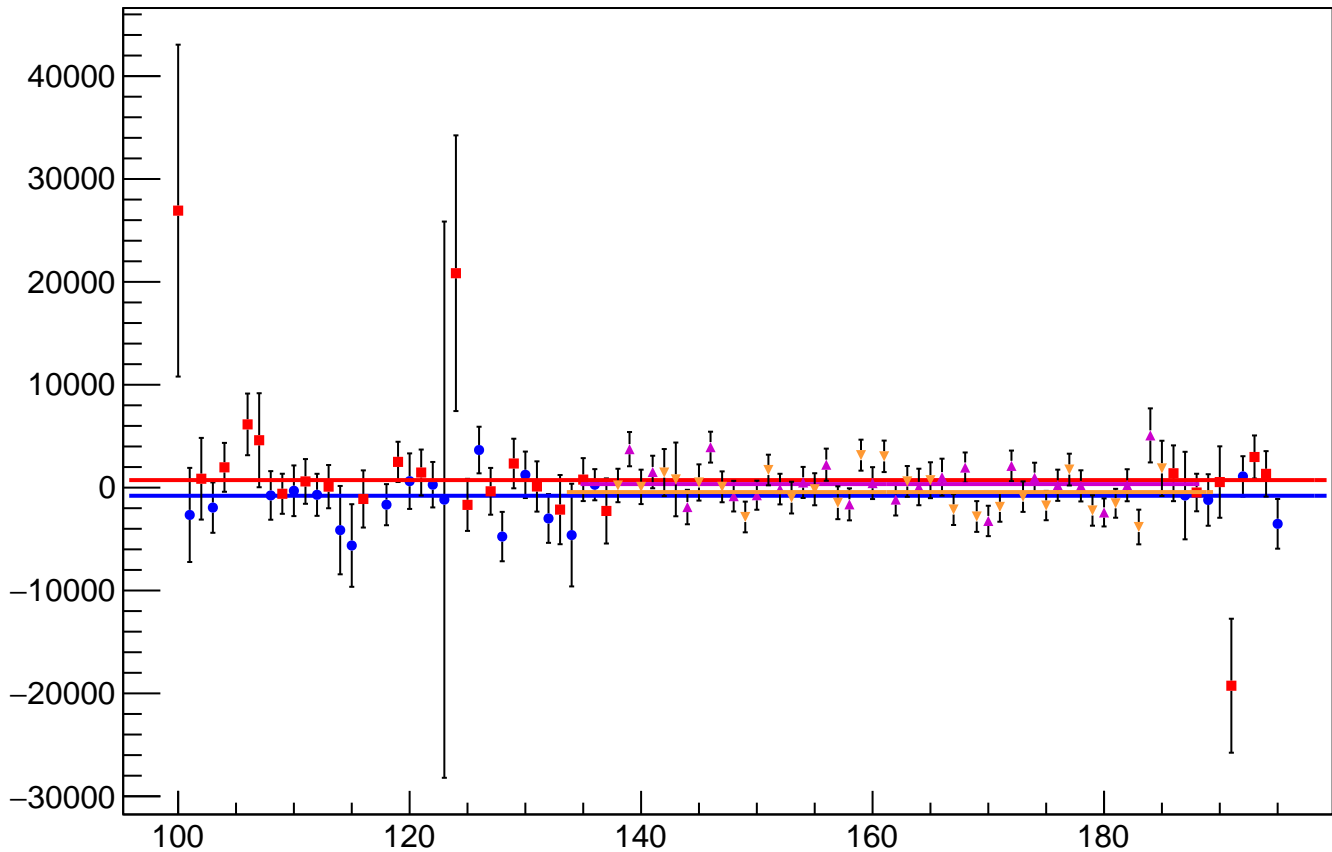
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

All: 1230.413 $\pm$ 0.374  $\chi^2$ /NDF: 533687.3/9

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

# asym\_atl\_avg\_atr\_avg\_dd\_mean vs Slug



Right In:  $-790.557 \pm 544.507$   $\chi^2/\text{NDF}: 14.8/20$

Left Out:  $-431.715 \pm 320.540$   $\chi^2/\text{NDF}: 33.1/24$

Right Out:  $732.574 \pm 514.037$   $\chi^2/\text{NDF}: 25.5/24$

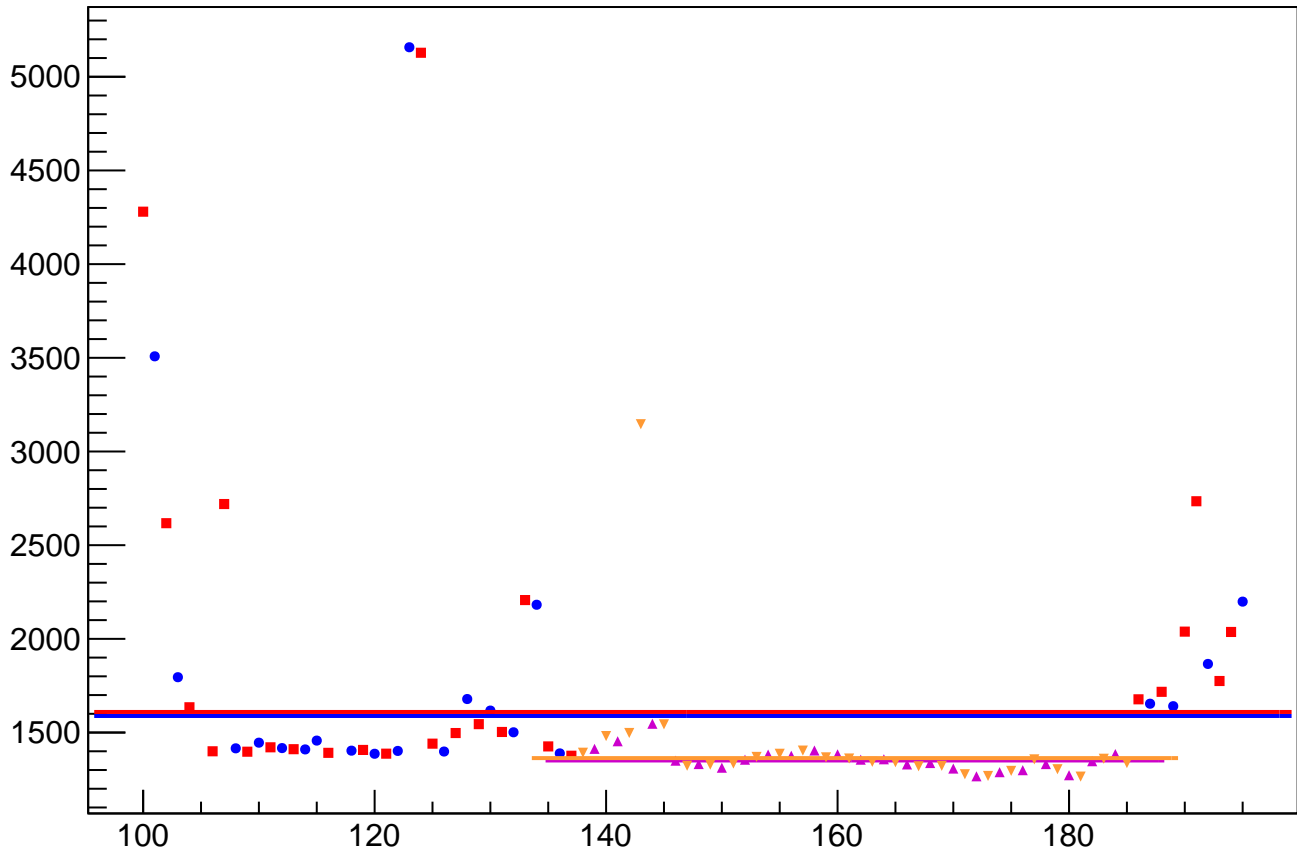
Left In:  $343.737 \pm 324.368$   $\chi^2/\text{NDF}: 33.8/22$

+ sign  $-524.065 \pm 276.231$   $\chi^2/\text{NDF}: 48.2/45$

All:  $-31.398 \pm 194.645$   $\chi^2/\text{NDF}: 114.1/93$

- sign  $454.473 \pm 274.319$   $\chi^2/\text{NDF}: 59.7/47$

# asym\_atl\_avg\_atr\_avg\_dd\_rms vs Slug



Right In: 1588.417+/-0.385  $\chi^2/\text{NDF}$ : 733044.2/20

Left Out: 1363.561+/-0.227  $\chi^2/\text{NDF}$ : 575226.6/24

Right Out: 1609.836+/-0.363  $\chi^2/\text{NDF}$ : 853825.5/24

Left In: 1350.909+/-0.229  $\chi^2/\text{NDF}$ : 67144.5/22

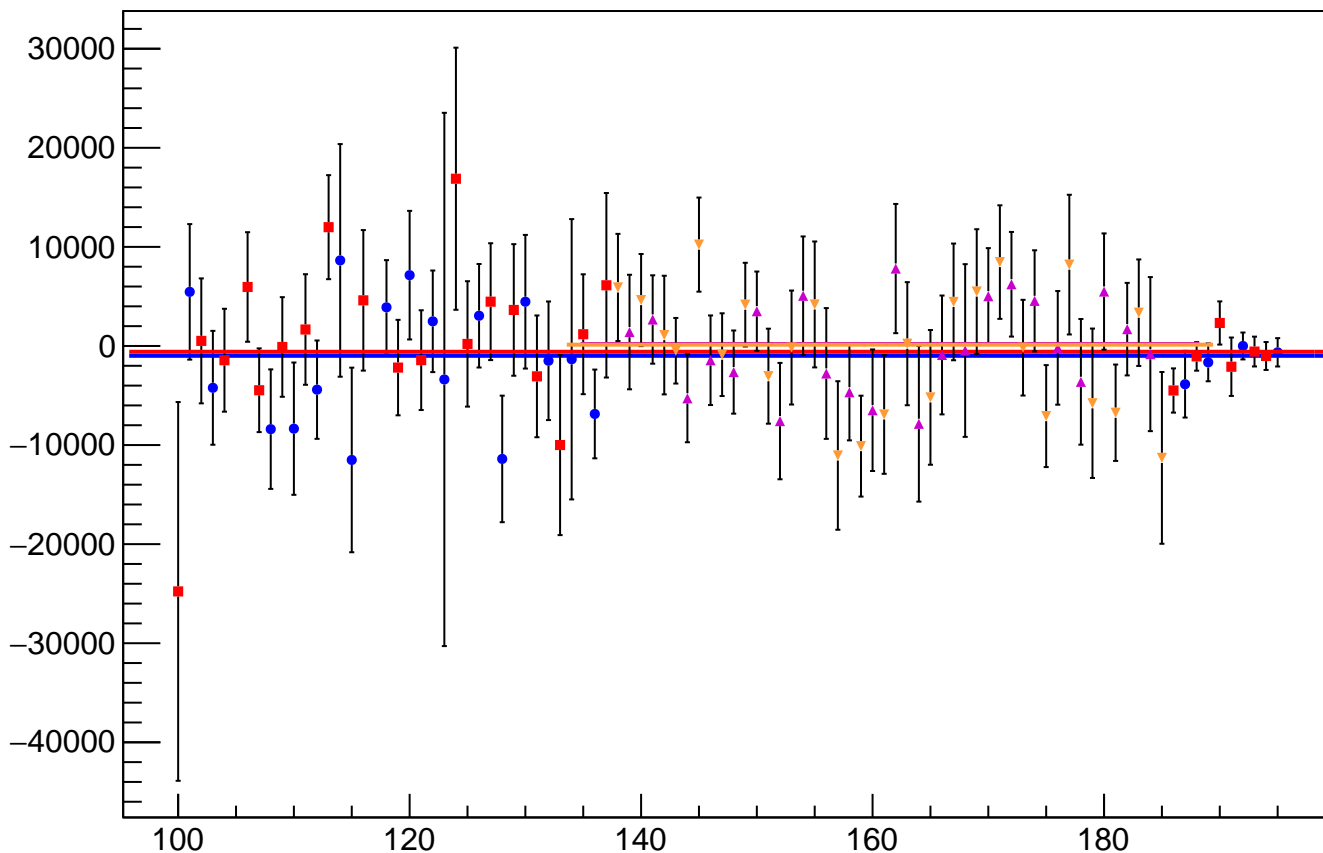
+ sign 1421.430+/-0.195  $\chi^2/\text{NDF}$ : 1561557.7/45

All: 1423.051+/-0.138  $\chi^2/\text{NDF}$ : 2845604.6/93

- sign 1424.649+/-0.194  $\chi^2/\text{NDF}$ : 1283910.1/47



# reg\_asym\_atl\_dd\_atr\_dd\_avg\_mean vs Slug



Right In:  $-991.644 \pm 739.650$   $\chi^2/\text{NDF}: 16.5/20$

Left Out:  $132.142 \pm 1065.543$   $\chi^2/\text{NDF}: 28.1/24$

Right Out:  $-583.533 \pm 635.116$   $\chi^2/\text{NDF}: 20.5/24$

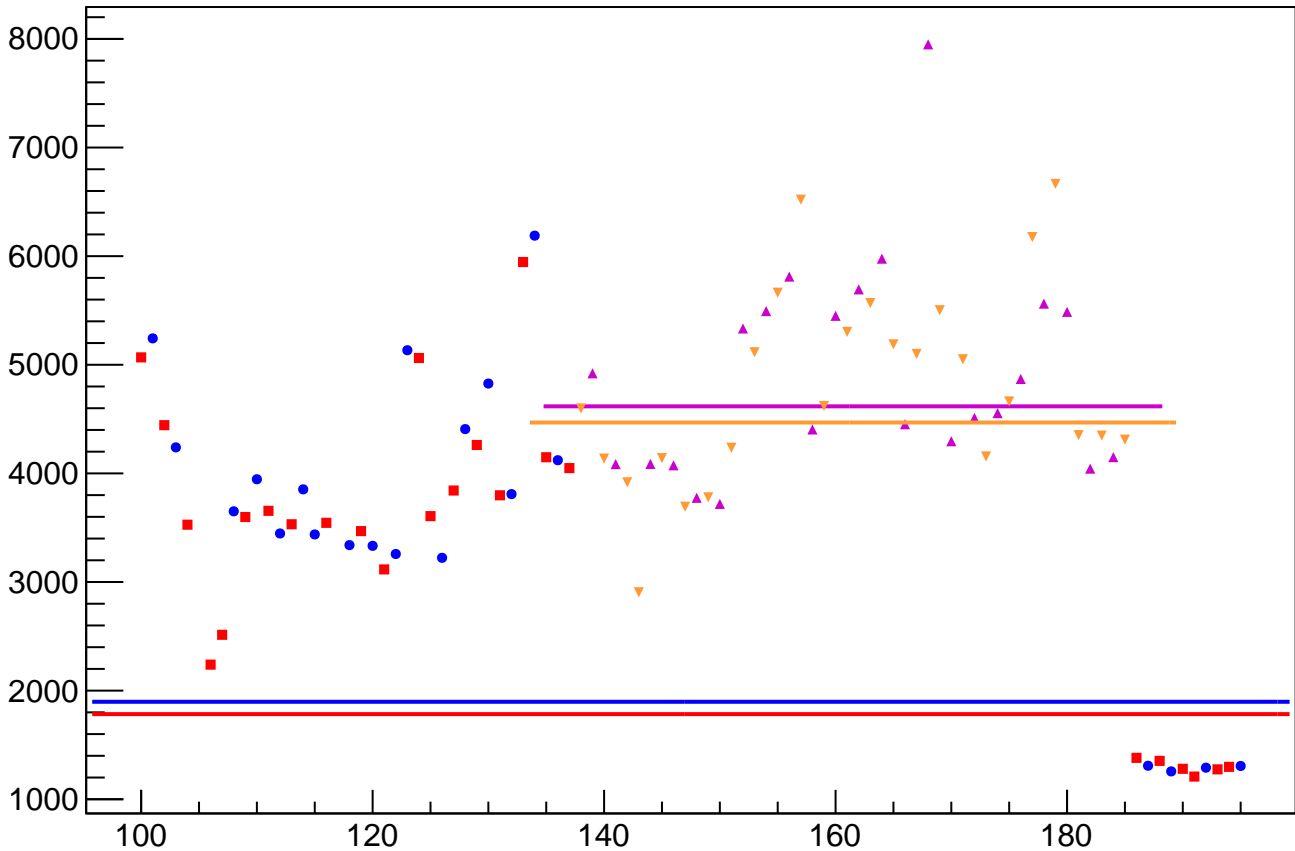
Left In:  $200.182 \pm 1123.499$   $\chi^2/\text{NDF}: 14.7/22$

+ sign  $-626.226 \pm 607.609$   $\chi^2/\text{NDF}: 45.4/45$

All:  $-499.043 \pm 408.931$   $\chi^2/\text{NDF}: 81.1/93$

- sign  $-393.737 \pm 552.888$   $\chi^2/\text{NDF}: 35.6/47$

# reg\_asym\_atl\_dd\_atr\_dd\_avg\_rms vs Slug



Right In: 1897.372 $\pm$ 0.523  $\chi^2$ /NDF: 4648683.8/20

Left Out: 4468.520 $\pm$ 0.753  $\chi^2$ /NDF:1380601.0/24

Right Out: 1783.787 $\pm$ 0.448  $\chi^2$ /NDF: 4695867.7/24

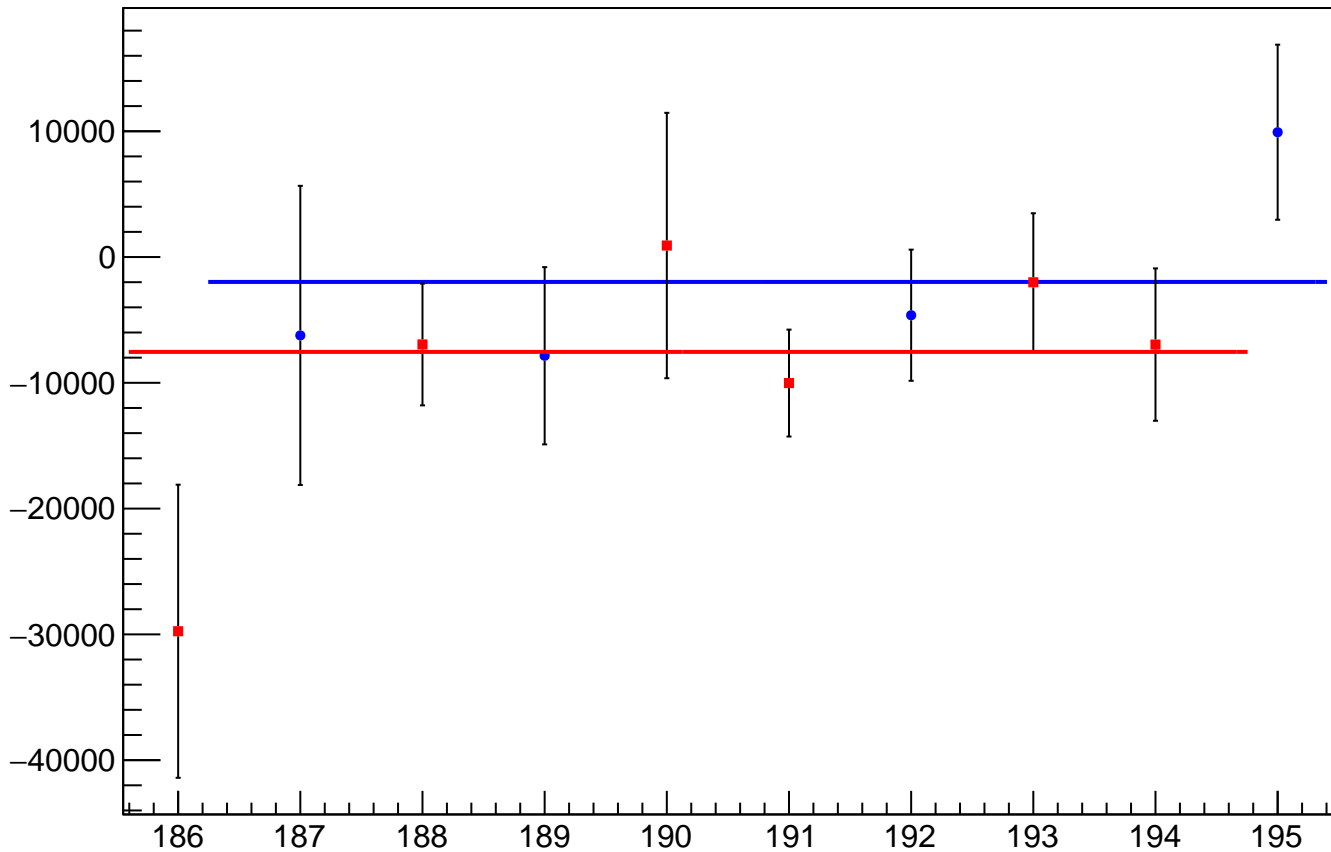
Left In: 4617.293 $\pm$ 0.794  $\chi^2$ /NDF:999599.8/22

+ sign 2733.418 $\pm$ 0.430  $\chi^2$ /NDF: 13887793.8/45

All: 2588.007 $\pm$ 0.289  $\chi^2$ /NDF: 29442016.4/9

- sign 2467.964 $\pm$ 0.390  $\chi^2$ /NDF: 15345114.8/47

# asym\_atl\_dd\_atr\_dd\_avg\_correction\_mean vs Slug



Right In:  $-1978.305 \pm 3436.980$   $\chi^2/\text{NDF}: 4.0/3$

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 0.0/0$

Right Out:  $-7541.814 \pm 2391.692$   $\chi^2/\text{NDF}: 5.7/5$

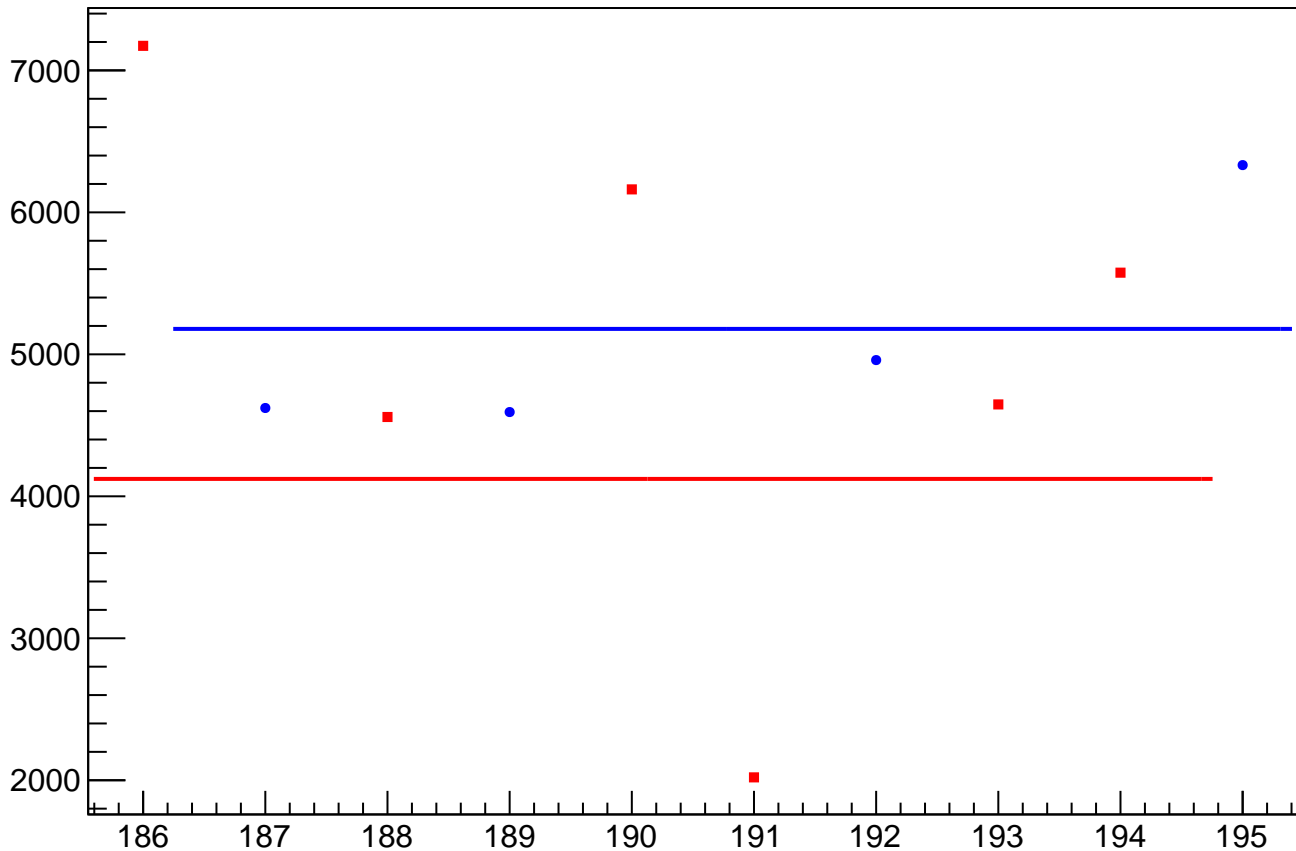
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 0.0/0$

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 0.0/0$

All:  $-5726.706 \pm 1963.152$   $\chi^2/\text{NDF}: 11.4/9$

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 0.0/0$

# asym\_atl\_dd\_atr\_dd\_avg\_correction\_rms vs Slug



Right In: 5179.175+/-2.430  $\chi^2/\text{NDF}$ : 76720.0/3

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Right Out: 4122.545+/-1.691  $\chi^2/\text{NDF}$ : 850685.3/5

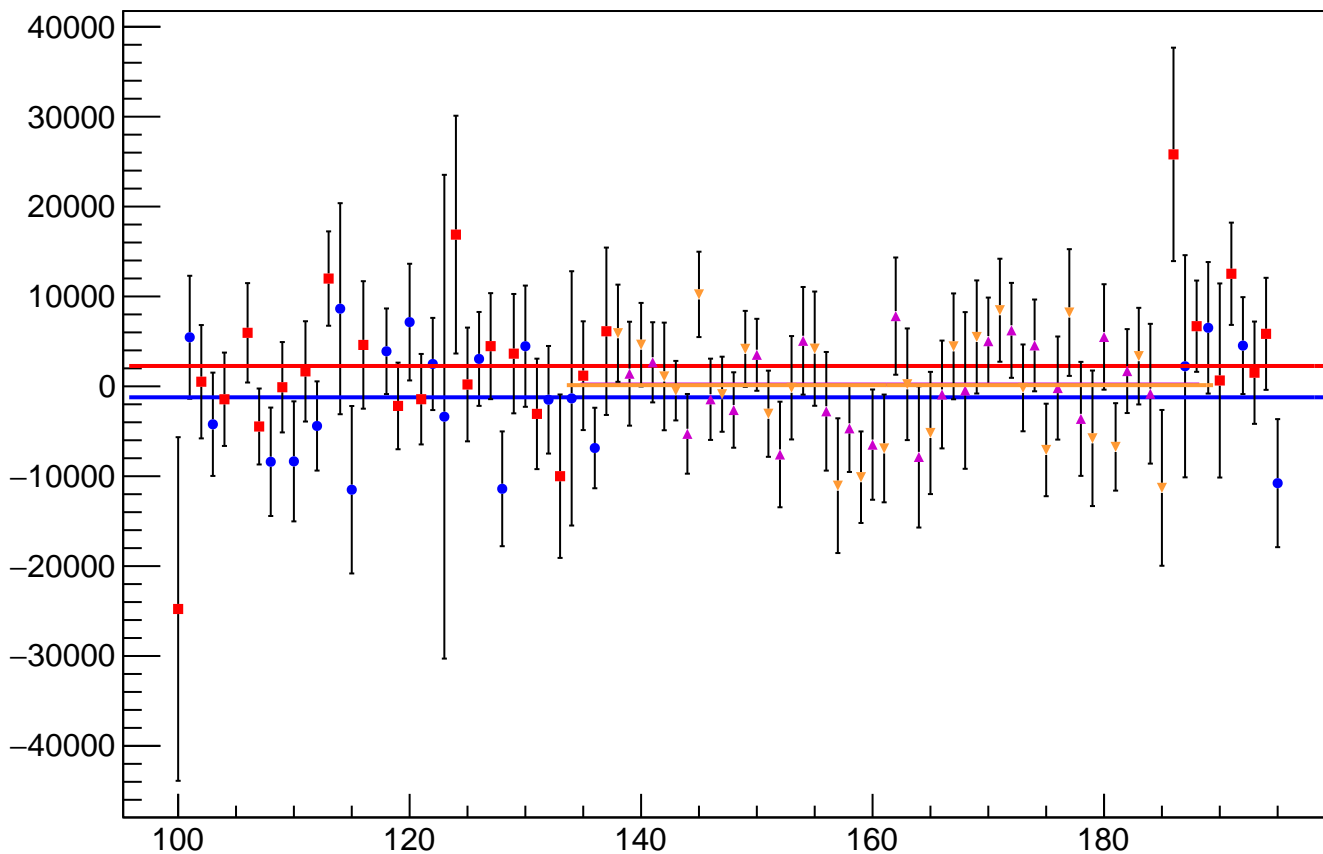
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

All: 4467.273+/-1.388  $\chi^2/\text{NDF}$ : 1054761.2/9

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

# asym\_atl\_dd\_atr\_dd\_avg\_mean vs Slug



Right In:  $-1220.248 \pm 1395.533$   $\chi^2/\text{NDF}: 19.1/20$

Left Out:  $132.142 \pm 1065.543$   $\chi^2/\text{NDF}: 28.1/24$

Right Out:  $2265.080 \pm 1225.661$   $\chi^2/\text{NDF}: 23.3/24$

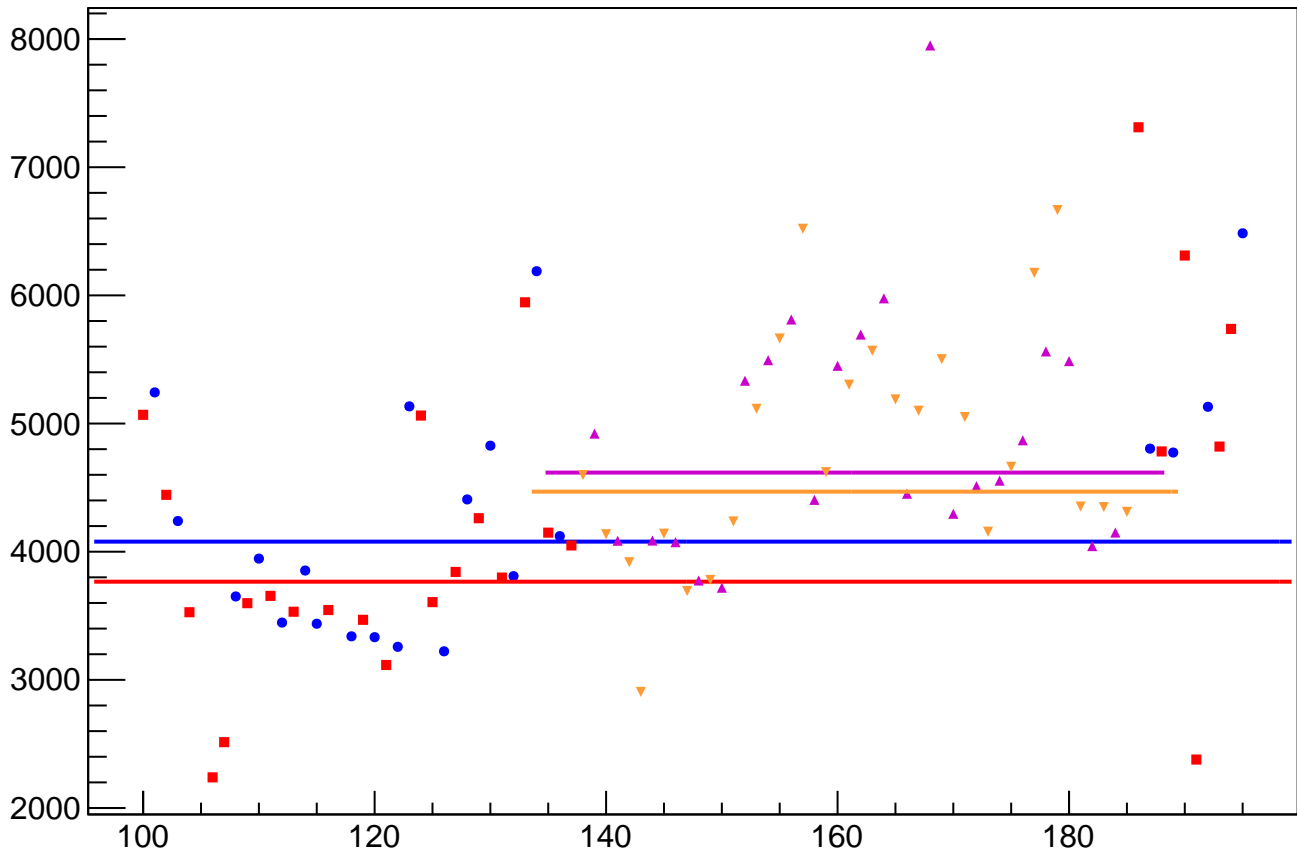
Left In:  $200.182 \pm 1123.499$   $\chi^2/\text{NDF}: 14.7/22$

+ sign  $-365.922 \pm 846.899$   $\chi^2/\text{NDF}: 47.8/45$

All:  $405.382 \pm 592.126$   $\chi^2/\text{NDF}: 89.1/93$

- sign  $1143.001 \pm 828.200$   $\chi^2/\text{NDF}: 39.6/47$

# asym\_atl\_dd\_atr\_dd\_avg\_rms vs Slug



Right In: 4078.596+/-0.987  $\chi^2$ /NDF: 703531.6/20

Left Out: 4468.520+/-0.753  $\chi^2$ /NDF:1380601.0/24

+ sign 4324.913+/-0.599  $\chi^2$ /NDF: 2182770.2/45

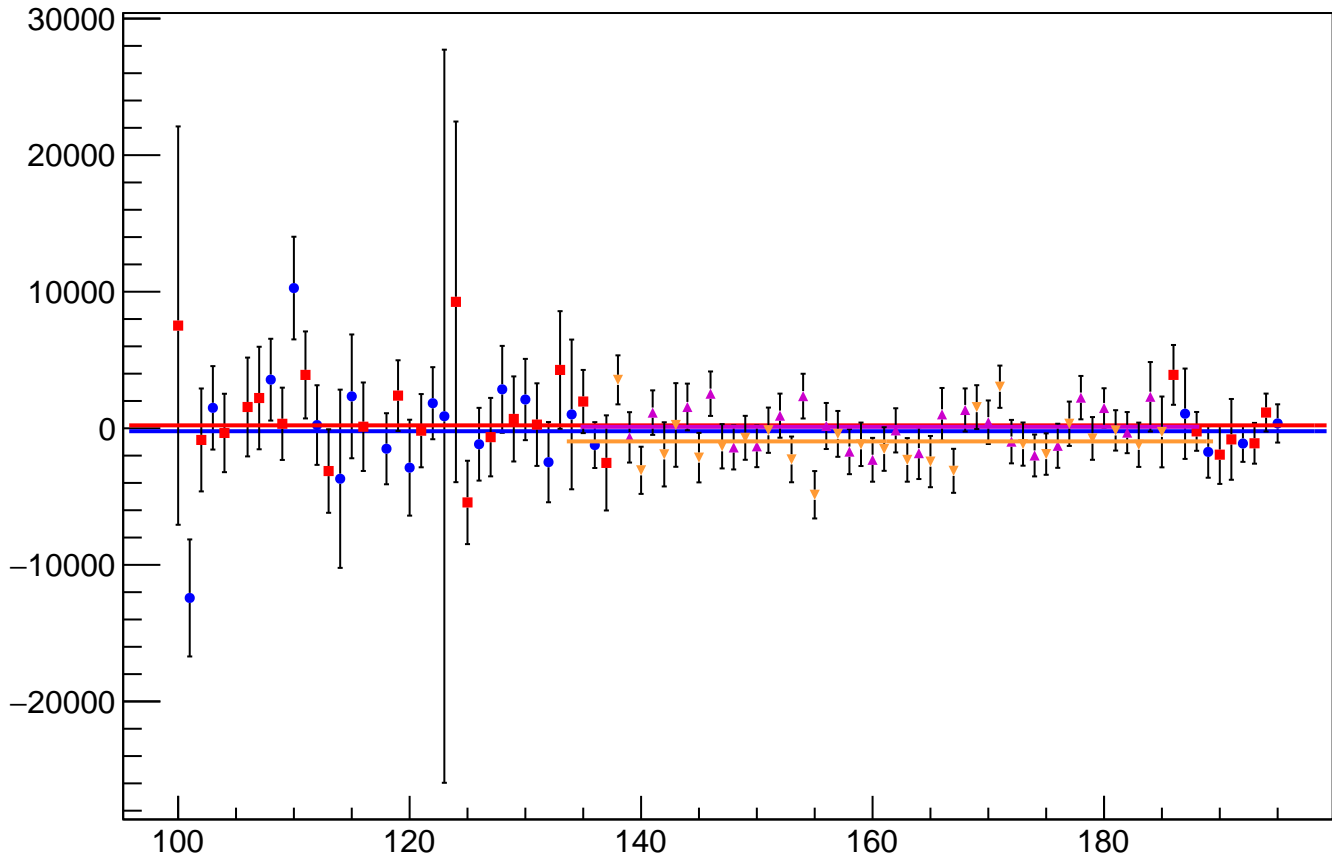
Right Out: 3766.079+/-0.860  $\chi^2$ /NDF: 1374224.6/24

All: 4273.973+/-0.418  $\chi^2$ /NDF: 5099018.7/93

Left In: 4617.293+/-0.794  $\chi^2$ /NDF:999599.8/22

- sign 4225.579+/-0.584  $\chi^2$ /NDF: 2902138.6/47

# reg\_asym\_atl\_dd\_atr\_dd\_dd\_mean vs Slug



Right In:  $-214.115 \pm 559.069$   $\chi^2/\text{NDF}$ : 23.9/20

Left Out:  $-958.410 \pm 339.496$   $\chi^2/\text{NDF}$ : 28.5/24

Right Out:  $214.828 \pm 509.646$   $\chi^2/\text{NDF}$ : 15.4/24

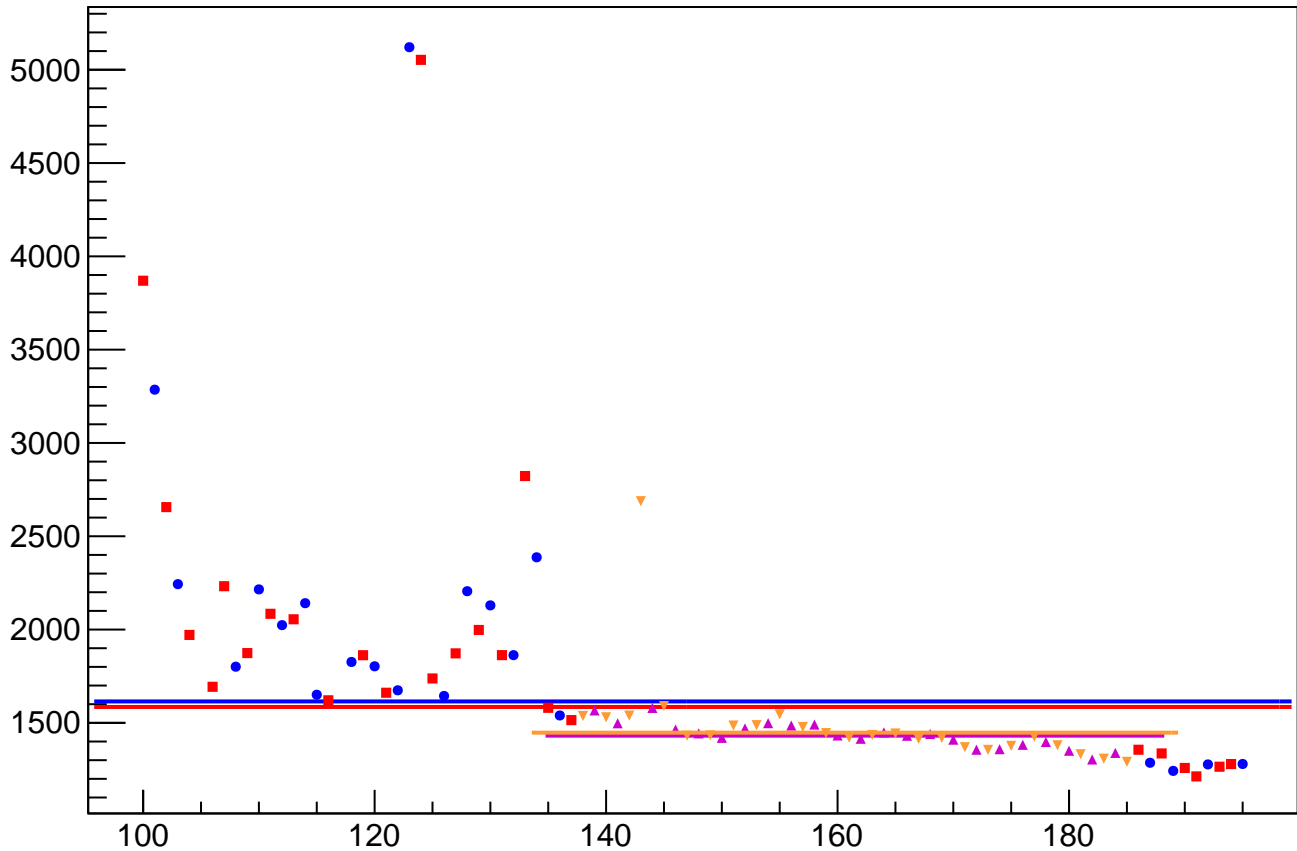
Left In:  $107.512 \pm 343.663$   $\chi^2/\text{NDF}$ : 19.5/22

+ sign  $-757.889 \pm 290.183$   $\chi^2/\text{NDF}$ : 53.8/45

All:  $-300.214 \pm 203.309$   $\chi^2/\text{NDF}$ : 93.6/93

- sign  $141.057 \pm 284.935$   $\chi^2/\text{NDF}$ : 34.9/47

# reg\_asym\_atl\_dd\_atr\_dd\_dd\_rms vs Slug



Right In:  $1614.876 \pm 0.395$   $\chi^2/\text{NDF}: 1079121.8/20$

Left Out:  $1447.554 \pm 0.240$   $\chi^2/\text{NDF}: 419254.7/24$

Right Out:  $1585.163 \pm 0.360$   $\chi^2/\text{NDF}: 1185137.9/24$

Left In:  $1431.456 \pm 0.243$   $\chi^2/\text{NDF}: 75130.4/22$

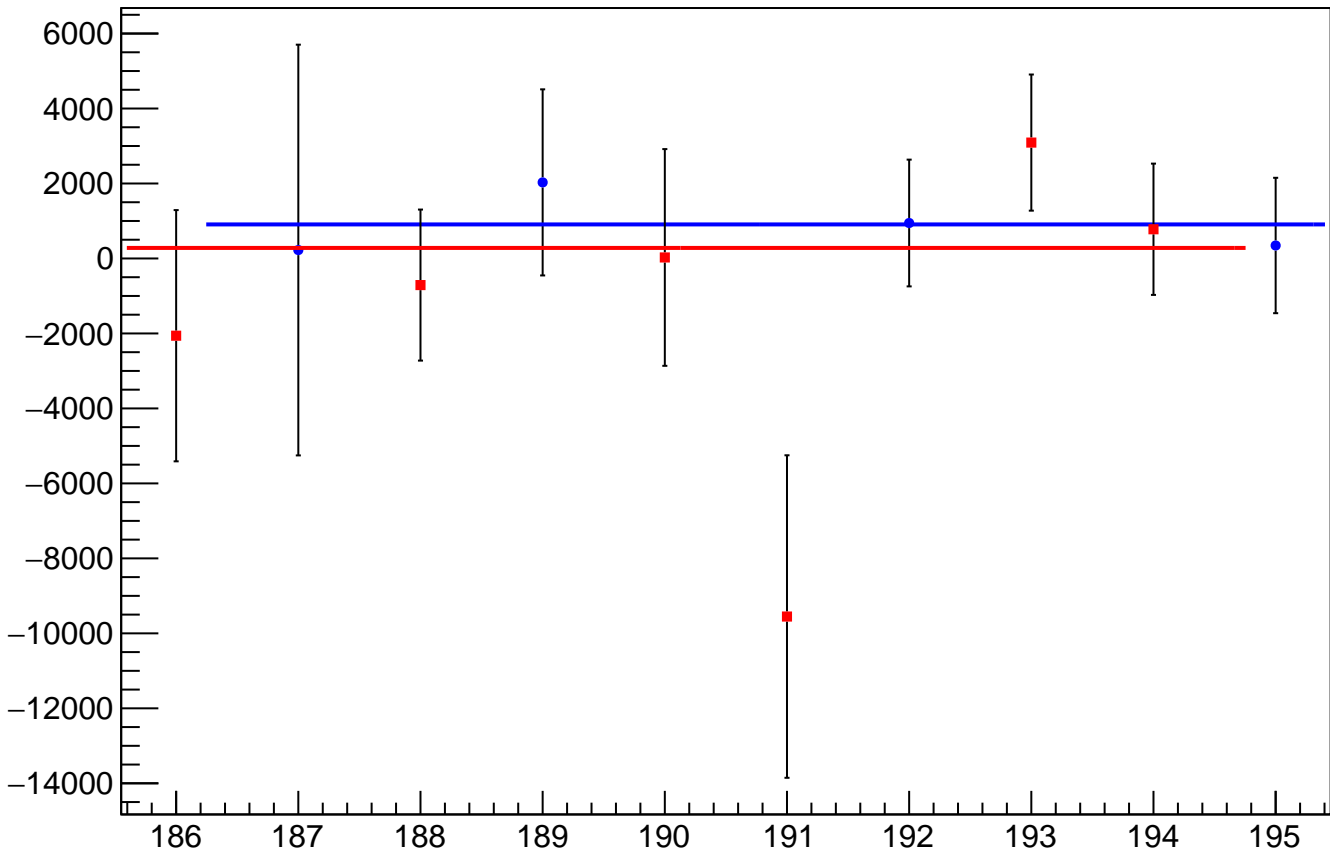
+ sign  $1492.633 \pm 0.205$   $\chi^2/\text{NDF}: 1629257.8/45$

All:  $1485.947 \pm 0.144$   $\chi^2/\text{NDF}: 3016670.2/93$

- sign  $1479.501 \pm 0.201$   $\chi^2/\text{NDF}: 1385327.2/47$



# asym\_atl\_dd\_atr\_dd\_dd\_correction\_mean vs Slug



Right In: 908.210 $\pm$ 1083.263  $\chi^2$ /NDF: 0.3/3

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Right Out: 281.242 $\pm$ 937.169  $\chi^2$ /NDF: 8.4/5

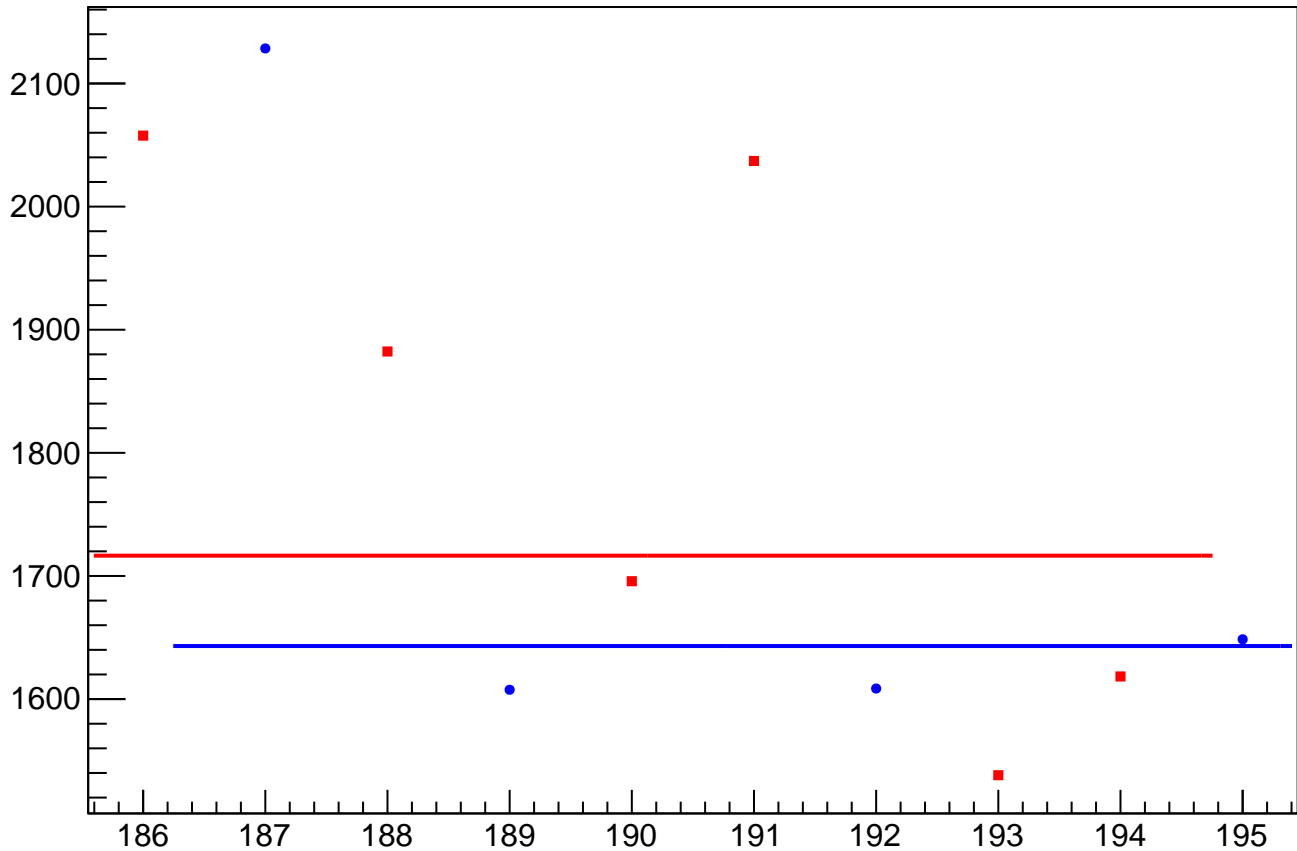
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

All: 549.627 $\pm$ 708.745  $\chi^2$ /NDF: 8.9/9

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

# asym\_atl\_dd\_atr\_dd\_dd\_correction\_rms vs Slug



Right In: 1643.099+/-0.766  $\chi^2$ /NDF: 16961.3/3

Left Out: 0.000+/-0.000  $\chi^2$ /NDF:0.0/0

Right Out: 1716.500+/-0.663  $\chi^2$ /NDF: 71062.1/5

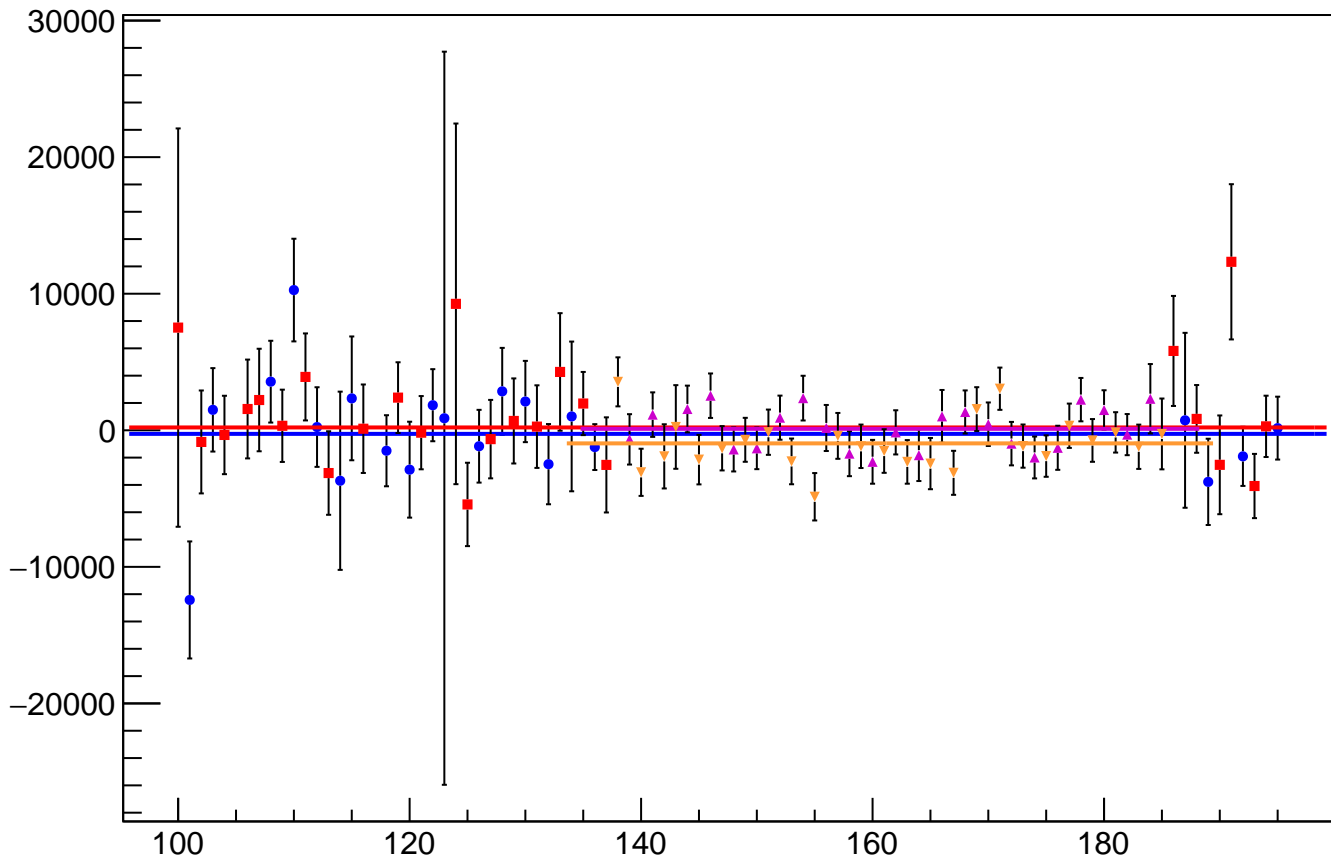
Left In: 0.000+/-0.000  $\chi^2$ /NDF:0.0/0

+ sign 0.000+/-0.000  $\chi^2$ /NDF: 0.0/0

All: 1685.079+/-0.501  $\chi^2$ /NDF: 93275.3/9

- sign 0.000+/-0.000  $\chi^2$ /NDF: 0.0/0

# asym\_atl\_dd\_atr\_dd\_dd\_mean vs Slug



Right In:  $-261.948 \pm 660.664$   $\chi^2/\text{NDF}: 24.5/20$

Left Out:  $-958.410 \pm 339.496$   $\chi^2/\text{NDF}: 28.5/24$

Right Out:  $208.346 \pm 625.421$   $\chi^2/\text{NDF}: 20.6/24$

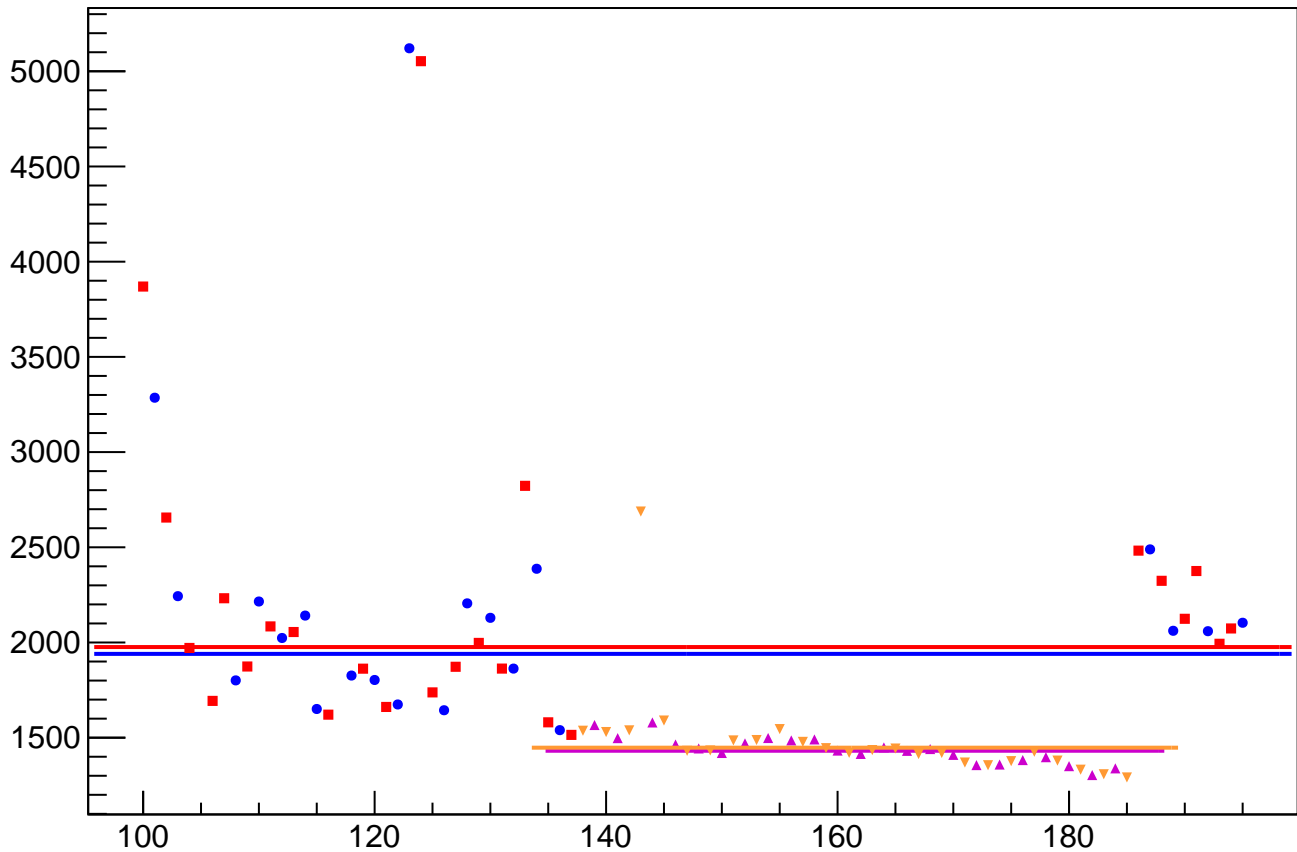
Left In:  $107.512 \pm 343.663$   $\chi^2/\text{NDF}: 19.5/22$

+ sign  $-812.919 \pm 301.961$   $\chi^2/\text{NDF}: 53.9/45$

All:  $-339.801 \pm 213.245$   $\chi^2/\text{NDF}: 98.8/93$

- sign  $130.897 \pm 301.188$   $\chi^2/\text{NDF}: 40.1/47$

# asym\_atl\_dd\_atr\_dd\_dd\_rms vs Slug



Right In: 1940.175+/-0.467  $\chi^2$ /NDF: 507831.1/20

Left Out: 1447.554+/-0.240  $\chi^2$ /NDF:419254.7/24

Right Out: 1976.045+/-0.442  $\chi^2$ /NDF: 567748.2/24

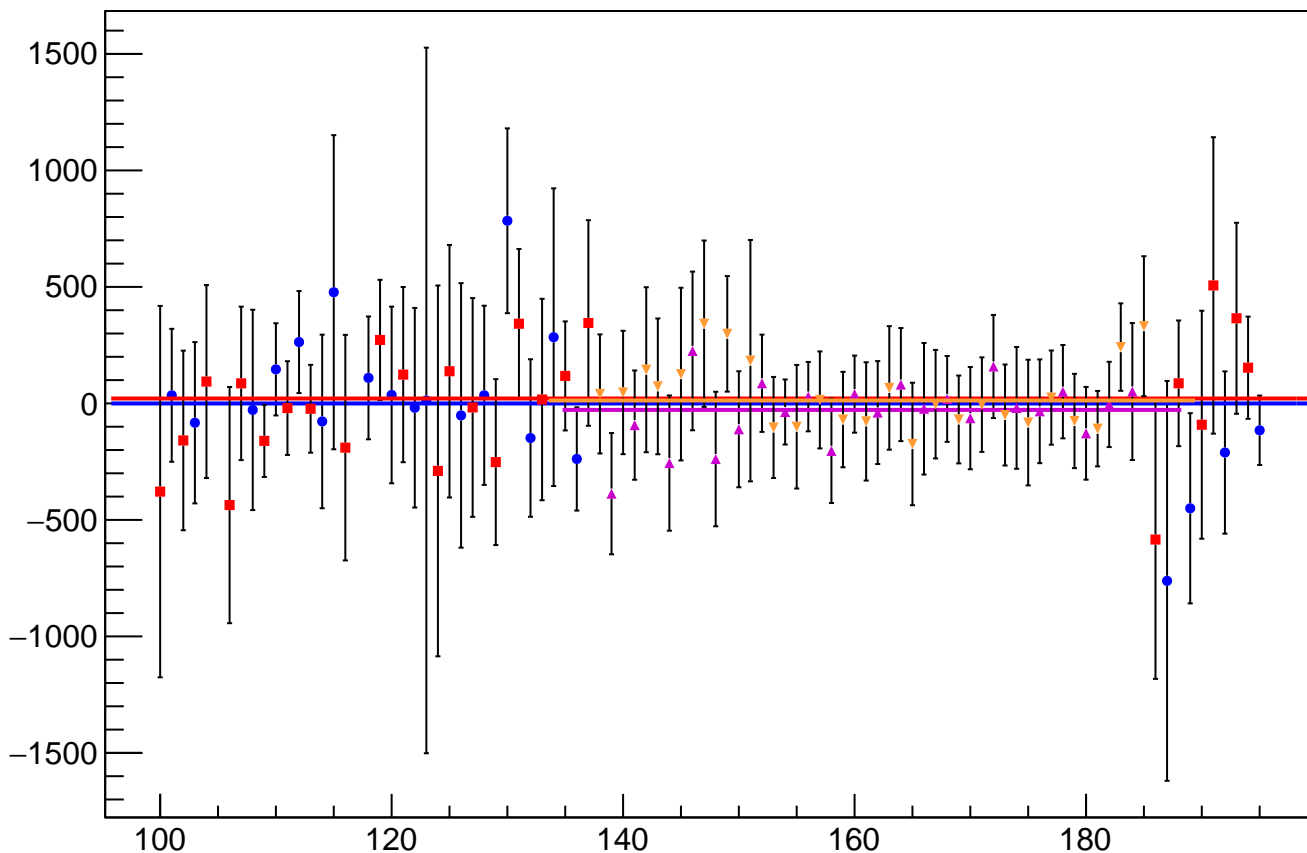
Left In: 1431.456+/-0.243  $\chi^2$ /NDF:75130.4/22

+ sign 1550.464+/-0.214  $\chi^2$ /NDF: 1806773.1/45

All: 1554.120+/-0.151  $\chi^2$ /NDF: 3615006.0/93

- sign 1557.756+/-0.213  $\chi^2$ /NDF: 1807648.2/47

# asym\_bcm\_an\_us\_bcm\_an\_ds\_agg\_avg\_mean vs Slug



Right In:  $-0.200 \pm 67.801$   $\chi^2/\text{NDF}: 11.2/20$

Left Out:  $12.618 \pm 47.486$   $\chi^2/\text{NDF}: 7.7/24$

Right Out:  $21.118 \pm 62.759$   $\chi^2/\text{NDF}: 9.3/24$

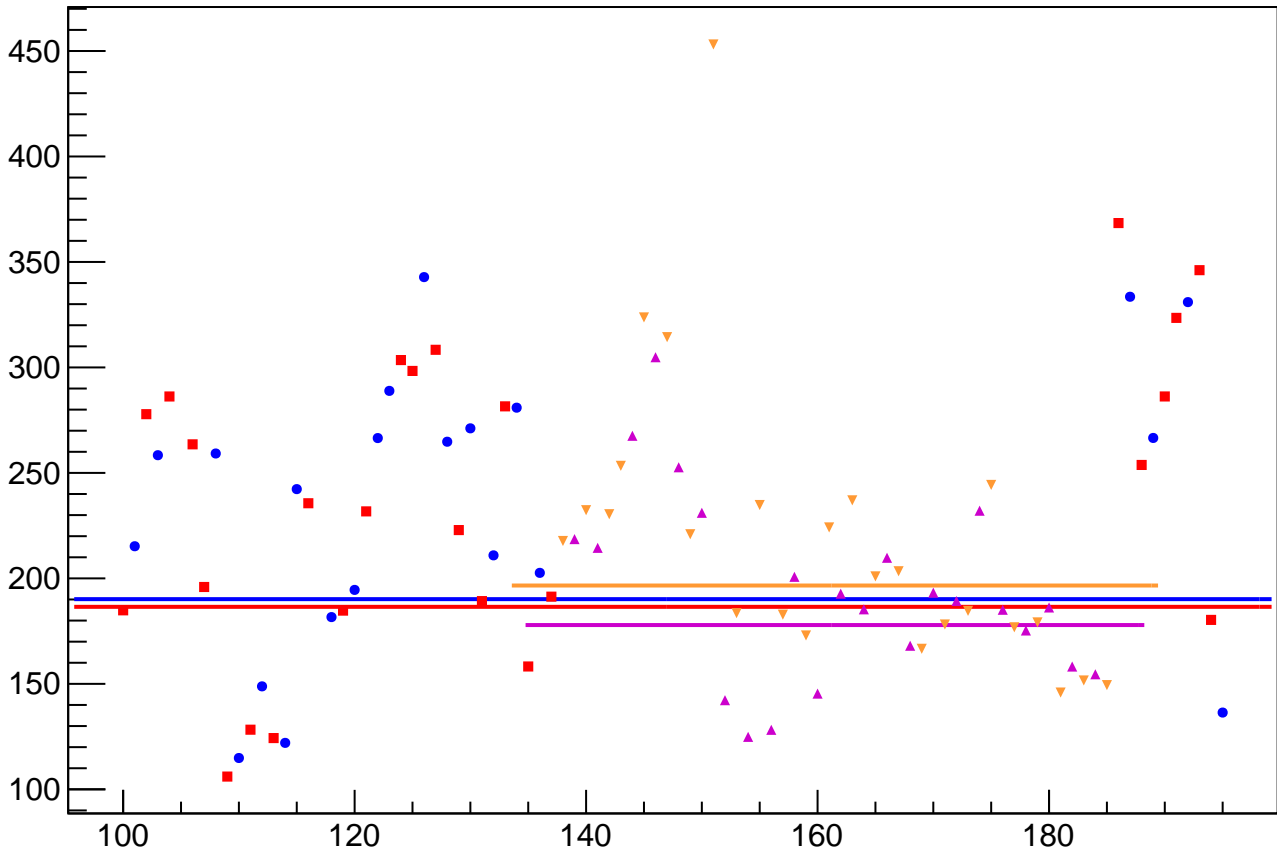
Left In:  $-27.921 \pm 44.523$   $\chi^2/\text{NDF}: 6.5/22$

+ sign  $8.400 \pm 38.895$   $\chi^2/\text{NDF}: 18.9/45$

All:  $-2.234 \pm 26.543$   $\chi^2/\text{NDF}: 35.3/93$

- sign  $-11.503 \pm 36.313$   $\chi^2/\text{NDF}: 16.3/47$

# asym\_bcm\_an\_us\_bcm\_an\_ds\_agg\_avg\_rms vs Slug



Right In: 190.159 $\pm$ 0.048  $\chi^2$ /NDF: 1729880.3/20

Left Out: 196.620 $\pm$ 0.034  $\chi^2$ /NDF: 1793507.9/24

Right Out: 186.514 $\pm$ 0.044  $\chi^2$ /NDF: 2450332.8/24

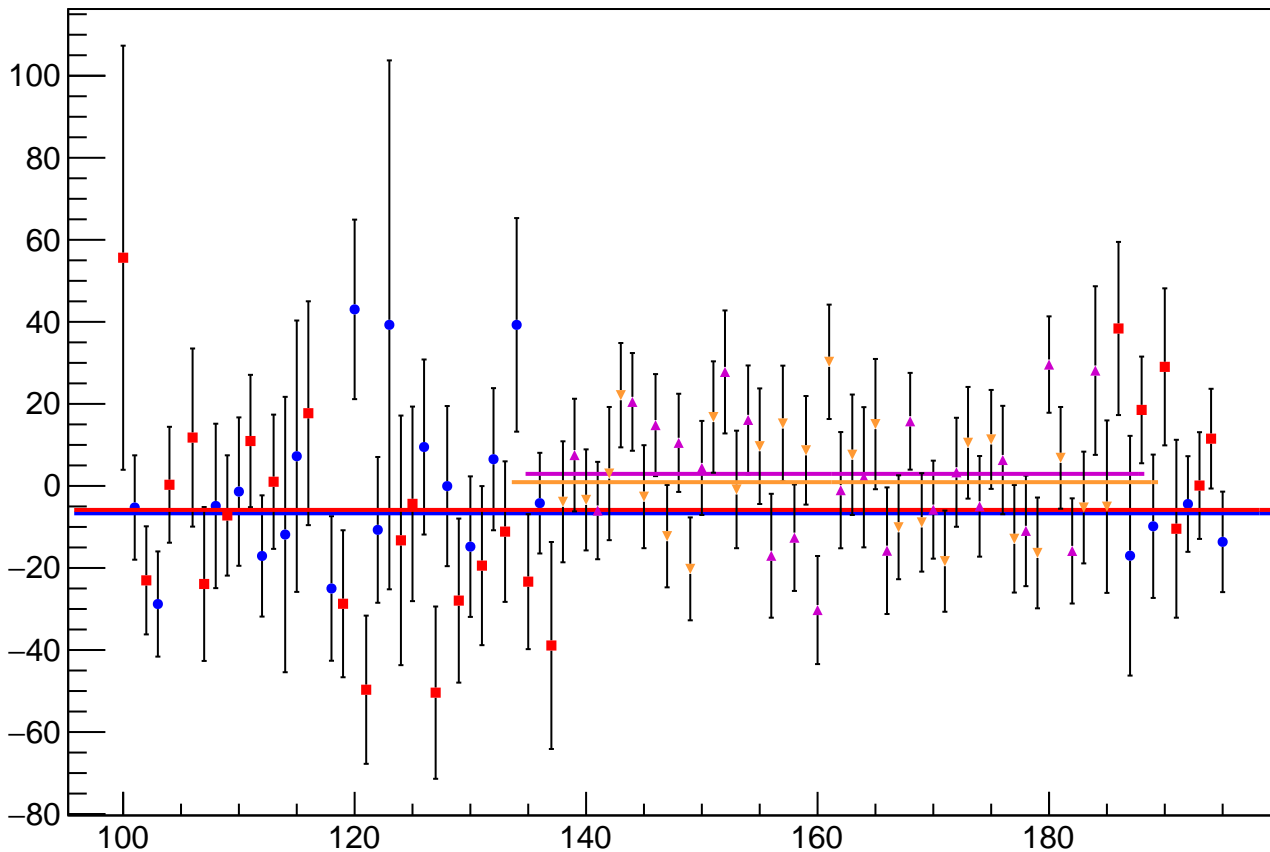
Left In: 177.878 $\pm$ 0.031  $\chi^2$ /NDF: 1644086.7/22

+ sign 194.494 $\pm$ 0.028  $\chi^2$ /NDF: 3535569.8/45

All: 187.161 $\pm$ 0.019  $\chi^2$ /NDF: 7788230.8/93

- sign 180.769 $\pm$ 0.026  $\chi^2$ /NDF: 4119610.7/47

# asym\_bcm\_an\_us\_bcm\_an\_ds\_agg\_dd\_mean vs Slug



Right In:  $-6.678 \pm 3.752$   $\chi^2/\text{NDF}: 15.7/20$

Left Out:  $0.920 \pm 2.696$   $\chi^2/\text{NDF}: 24.0/24$

Right Out:  $-5.846 \pm 3.525$   $\chi^2/\text{NDF}: 37.2/24$

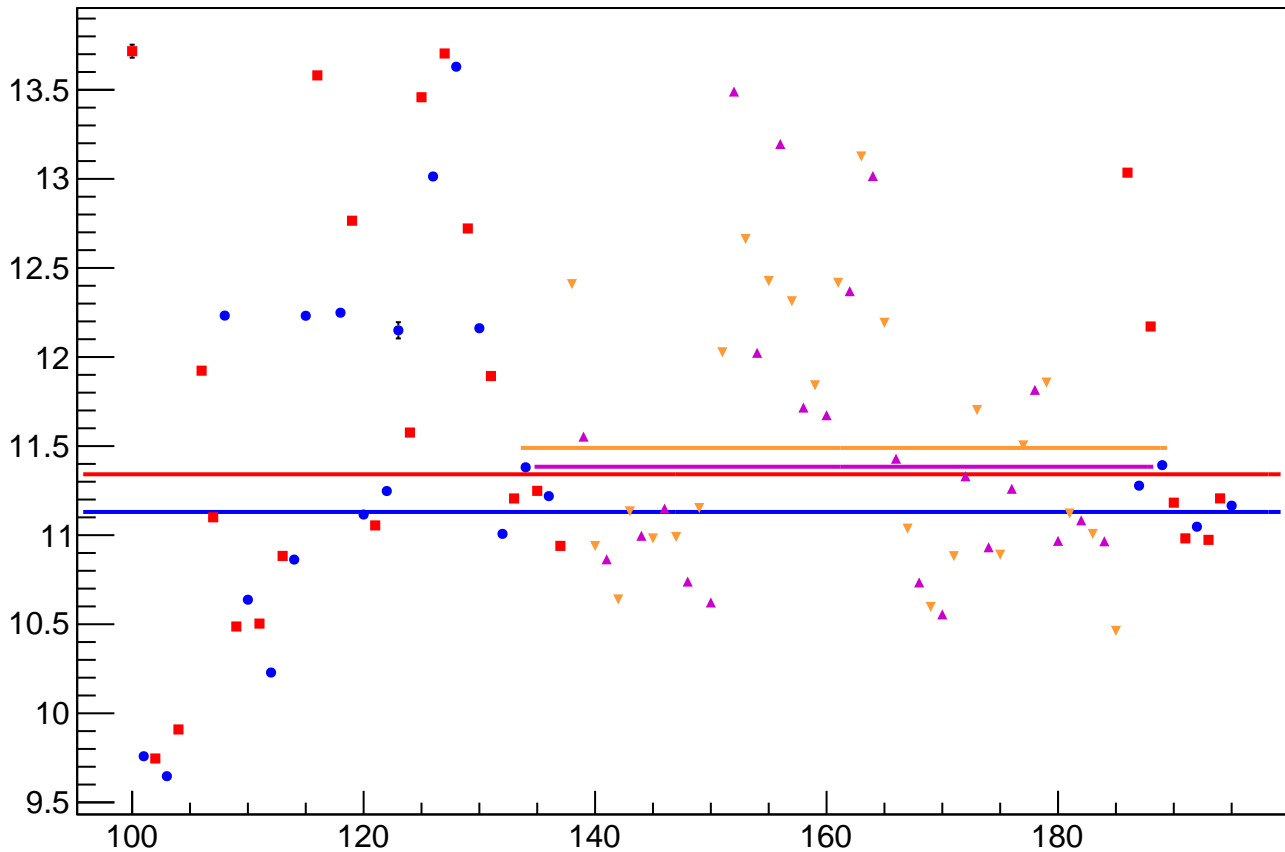
Left In:  $2.941 \pm 2.745$   $\chi^2/\text{NDF}: 31.0/22$

+ sign  $-1.668 \pm 2.189$   $\chi^2/\text{NDF}: 42.4/45$

All:  $-1.015 \pm 1.540$   $\chi^2/\text{NDF}: 114.7/93$

- sign  $-0.376 \pm 2.166$   $\chi^2/\text{NDF}: 72.1/47$

# asym\_bcm\_an\_us\_bcm\_an\_ds\_agg\_dd\_rms vs Slug



Right In: 11.130 $\pm$ 0.003  $\chi^2$ /NDF: 132588.6/20

Left Out: 11.490 $\pm$ 0.002  $\chi^2$ /NDF:132399.1/24

Right Out: 11.342 $\pm$ 0.002  $\chi^2$ /NDF: 172958.0/24

Left In: 11.384 $\pm$ 0.002  $\chi^2$ /NDF:149799.6/22

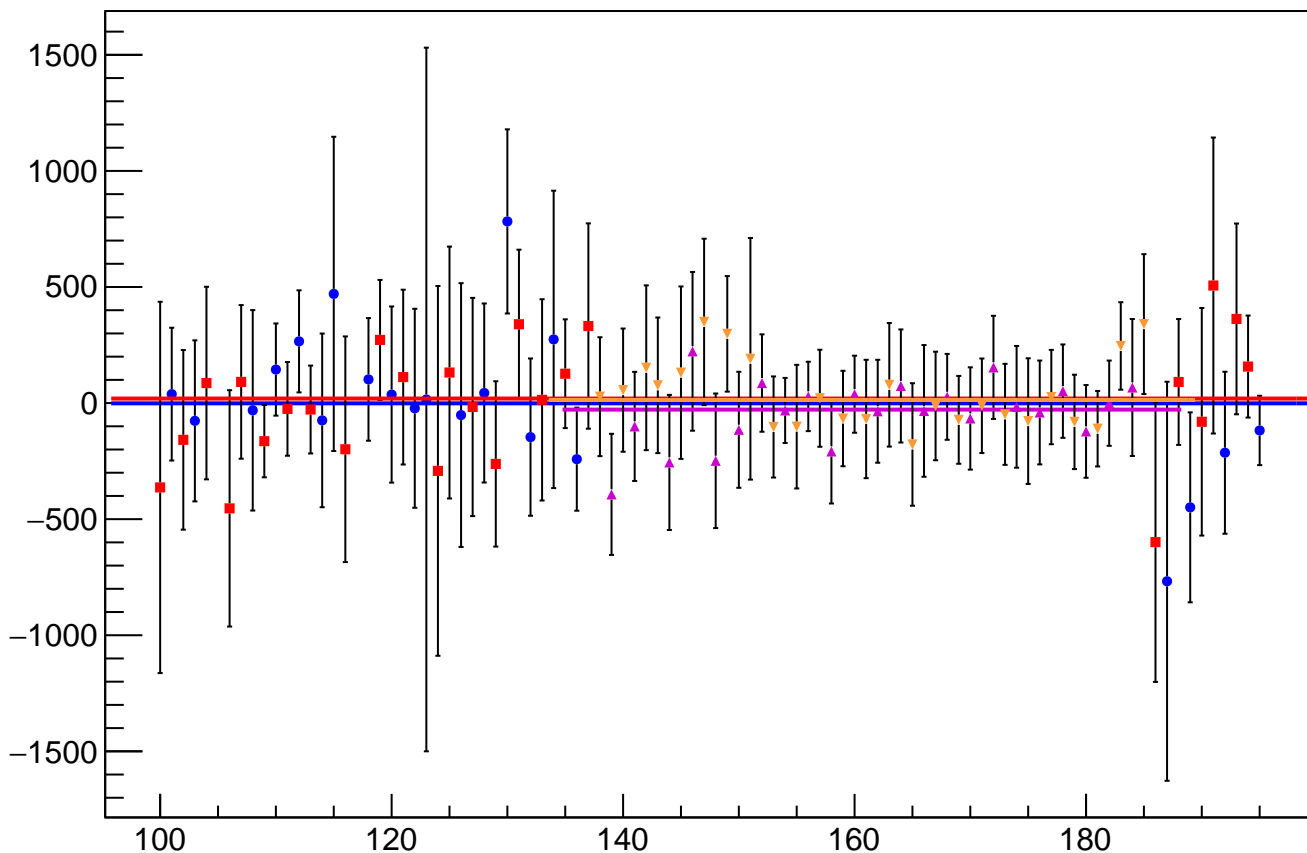
+ sign 11.367 $\pm$ 0.002  $\chi^2$ /NDF: 277096.0/45

All: 11.368 $\pm$ 0.001  $\chi^2$ /NDF: 600033.2/93

- sign 11.368 $\pm$ 0.002  $\chi^2$ /NDF: 322937.1/47



# asym\_bcm\_an\_us\_bcm\_an\_ds3\_agg\_avg\_mean vs Slug



Right In:  $-1.091 \pm 67.970$   $\chi^2/\text{NDF}: 11.2/20$

Left Out:  $13.323 \pm 47.662$   $\chi^2/\text{NDF}: 7.9/24$

Right Out:  $19.595 \pm 62.944$   $\chi^2/\text{NDF}: 9.5/24$

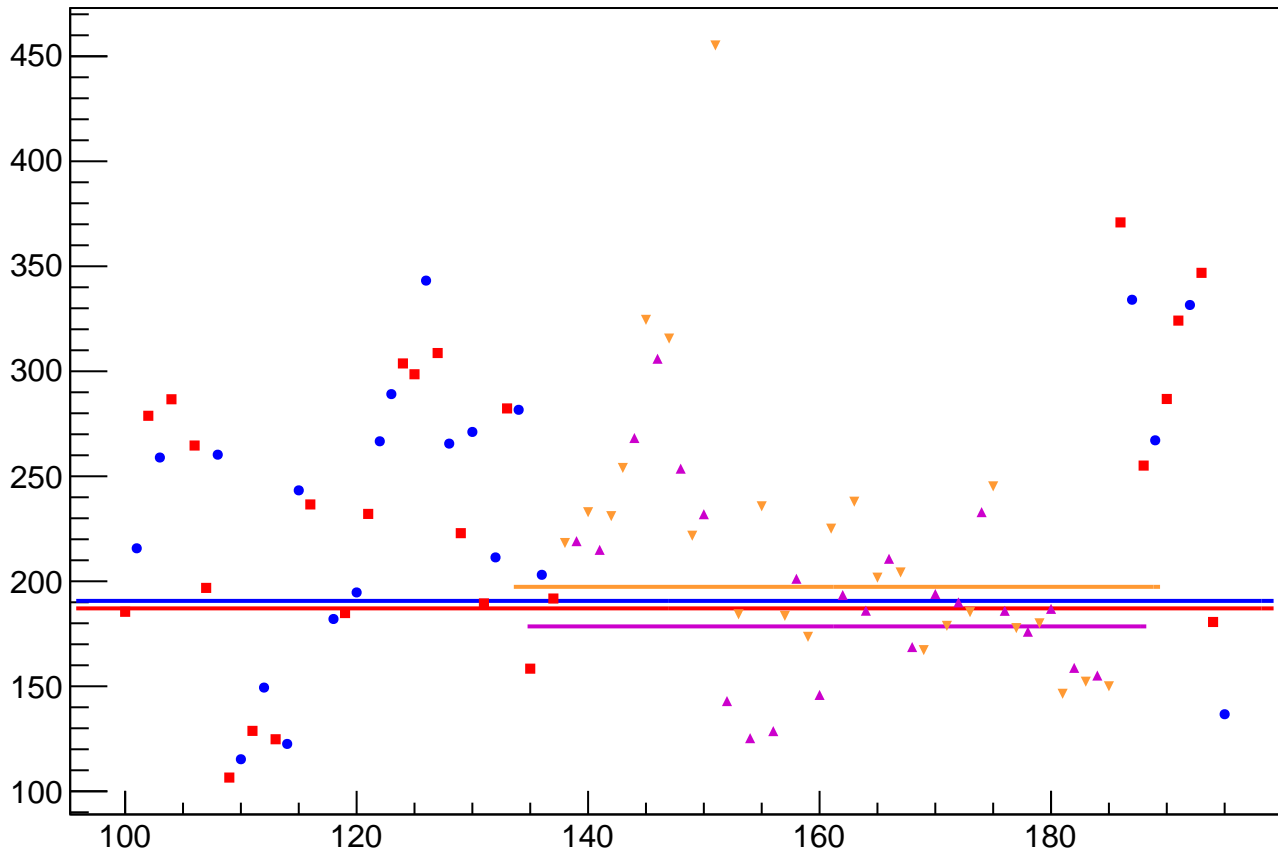
Left In:  $-28.050 \pm 44.681$   $\chi^2/\text{NDF}: 6.6/22$

+ sign  $8.572 \pm 39.024$   $\chi^2/\text{NDF}: 19.1/45$

All:  $-2.465 \pm 26.632$   $\chi^2/\text{NDF}: 35.7/93$

- sign  $-12.086 \pm 36.435$   $\chi^2/\text{NDF}: 16.5/47$

# asym\_bcm\_an\_us\_bcm\_an\_ds3\_agg\_avg\_rms vs Slug



Right In: 190.663 $\pm$ 0.048  $\chi^2$ /NDF: 1724797.4/20

Left Out: 197.355 $\pm$ 0.034  $\chi^2$ /NDF:1790824.5/24

Right Out: 187.093 $\pm$ 0.045  $\chi^2$ /NDF: 2444578.2/24

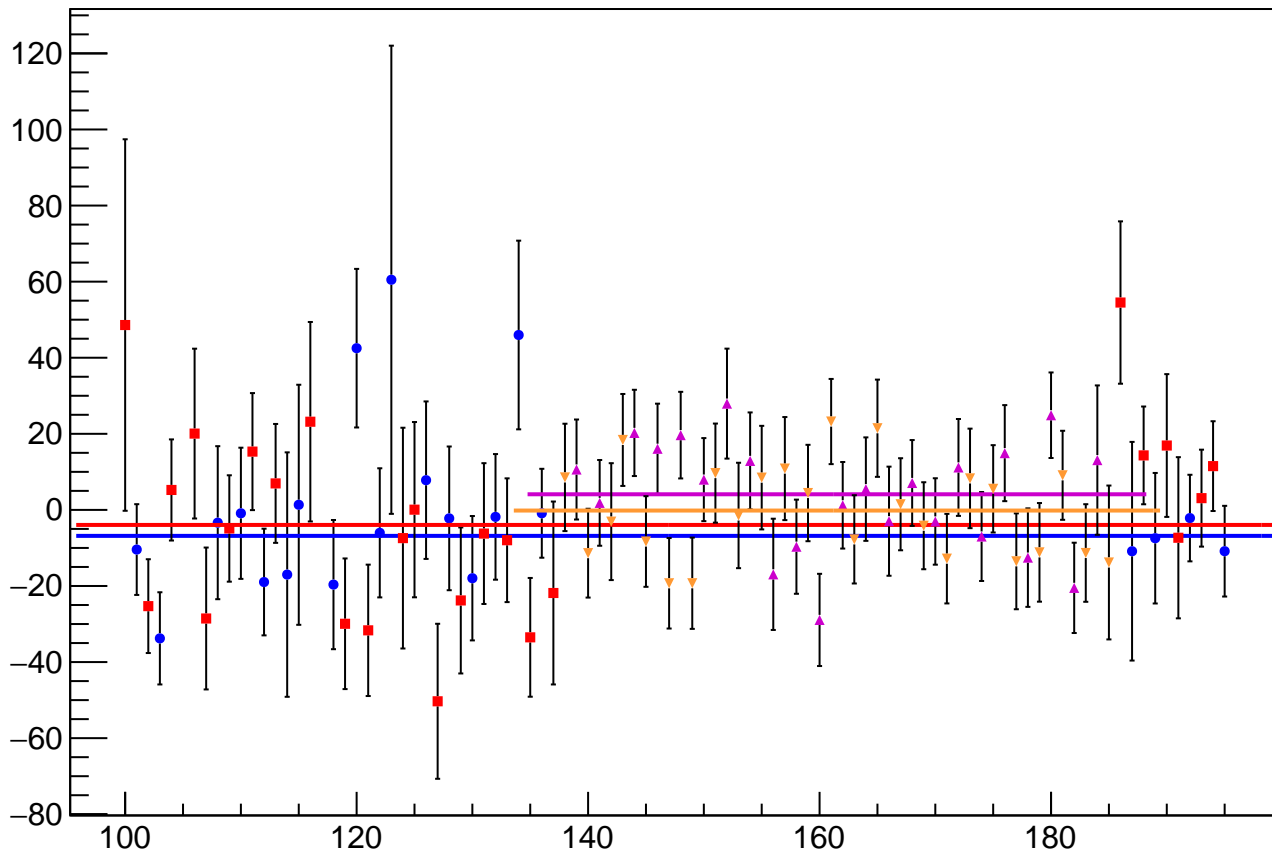
Left In: 178.512 $\pm$ 0.032  $\chi^2$ /NDF:1642304.1/22

+ sign 195.149 $\pm$ 0.028  $\chi^2$ /NDF: 3528620.7/45

All: 187.797 $\pm$ 0.019  $\chi^2$ /NDF: 7773107.2/93

- sign 181.387 $\pm$ 0.026  $\chi^2$ /NDF: 4111598.4/47

# asym\_bcm\_an\_us\_bcm\_an\_ds3\_agg\_dd\_mean vs Slug



Right In:  $-6.827 \pm 3.601$   $\chi^2/\text{NDF}: 19.7/20$

Left Out:  $-0.170 \pm 2.520$   $\chi^2/\text{NDF}: 24.4/24$

Right Out:  $-3.951 \pm 3.399$   $\chi^2/\text{NDF}: 38.8/24$

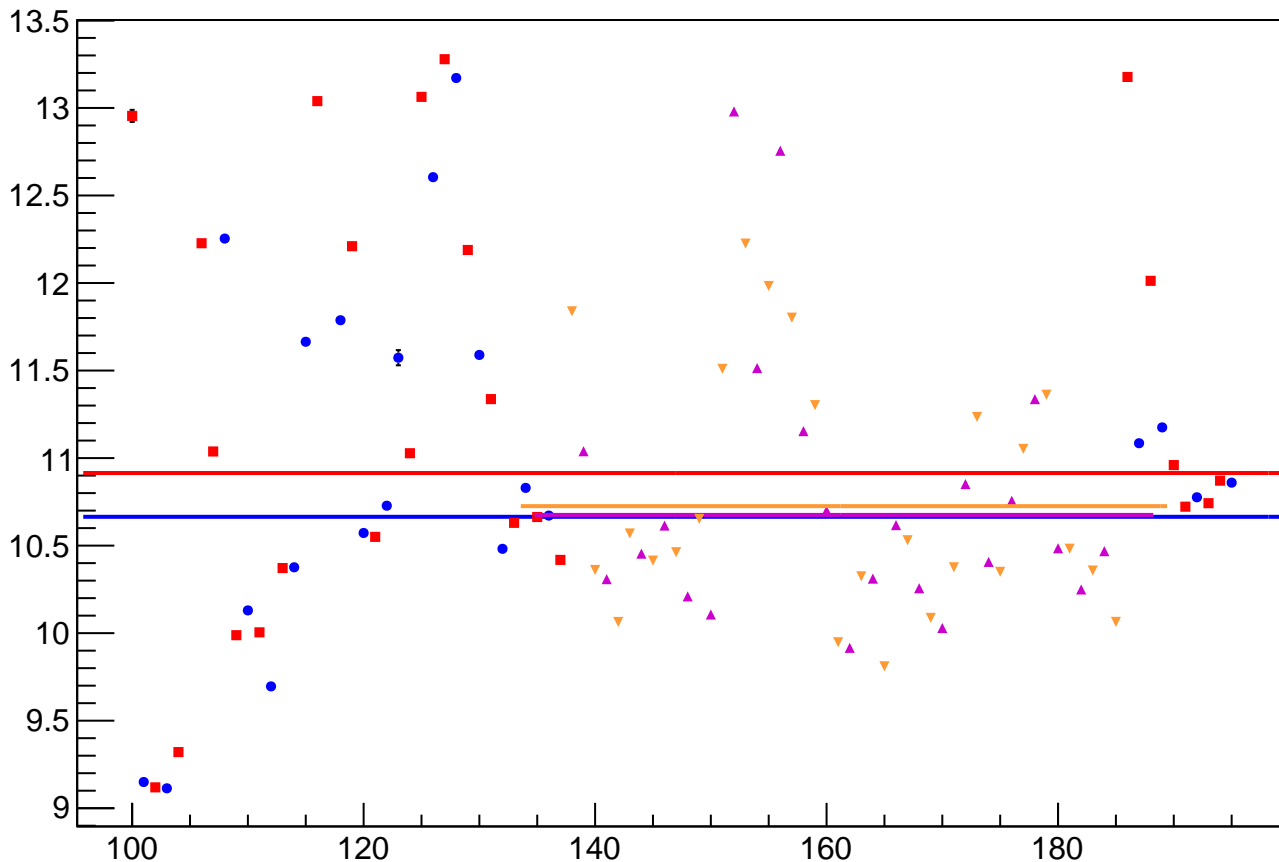
Left In:  $4.107 \pm 2.577$   $\chi^2/\text{NDF}: 31.5/22$

+ sign  $-2.359 \pm 2.065$   $\chi^2/\text{NDF}: 46.3/45$

All:  $-0.587 \pm 1.456$   $\chi^2/\text{NDF}: 121.8/93$

- sign  $1.165 \pm 2.054$   $\chi^2/\text{NDF}: 74.0/47$

# asym\_bcm\_an\_us\_bcm\_an\_ds3\_agg\_dd\_rms vs Slug



Right In: 10.665 $\pm$ 0.003  $\chi^2$ /NDF: 162844.1/20

Left Out: 10.725 $\pm$ 0.002  $\chi^2$ /NDF: 132170.8/24

Right Out: 10.915 $\pm$ 0.002  $\chi^2$ /NDF: 219132.5/24

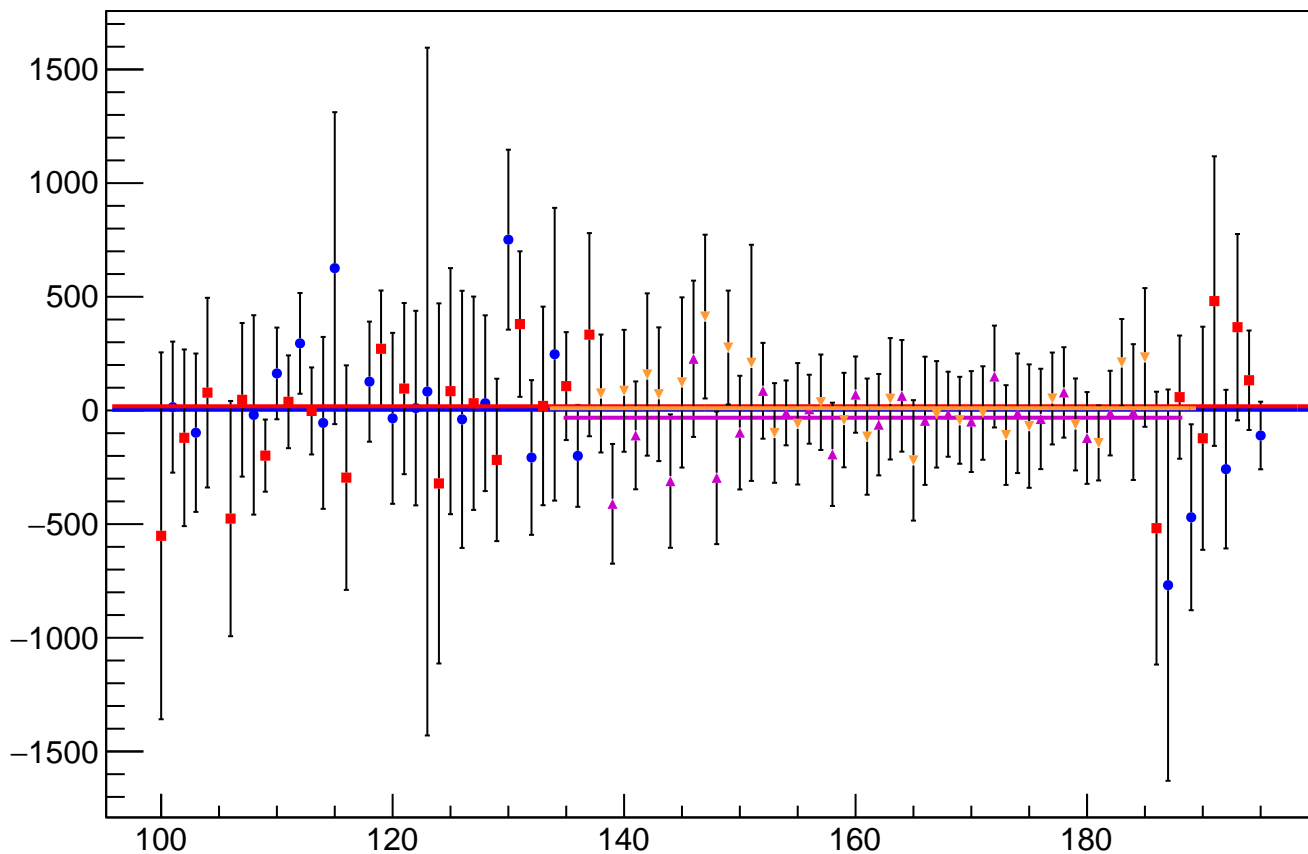
Left In: 10.675 $\pm$ 0.002  $\chi^2$ /NDF: 145938.2/22

+ sign 10.705 $\pm$ 0.001  $\chi^2$ /NDF: 295398.5/45

All: 10.734 $\pm$ 0.001  $\chi^2$ /NDF: 667542.9/93

- sign 10.763 $\pm$ 0.001  $\chi^2$ /NDF: 371368.5/47

# asym\_bcm\_dg\_us\_bcm\_an\_ds\_agg\_avg\_mean vs Slug



Right In: 3.061 $\pm$ 68.239  $\chi^2$ /NDF: 11.7/20

Left Out: 9.801 $\pm$ 47.979  $\chi^2$ /NDF: 7.5/24

Right Out: 18.433 $\pm$ 63.396  $\chi^2$ /NDF: 9.9/24

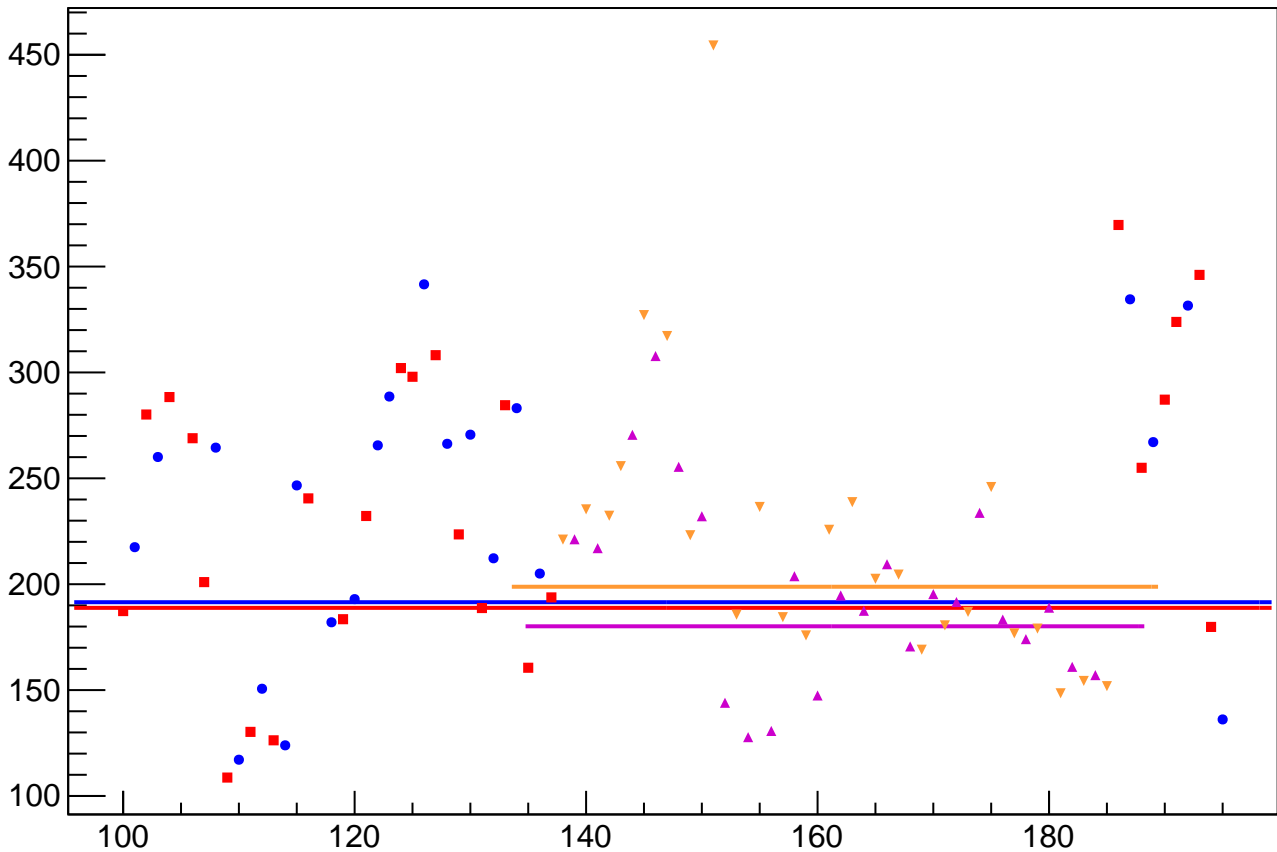
Left In: -31.989 $\pm$ 45.038  $\chi^2$ /NDF: 7.2/22

+ sign 7.572 $\pm$ 39.248  $\chi^2$ /NDF: 19.3/45

All: -4.507 $\pm$ 26.813  $\chi^2$ /NDF: 36.9/93

- sign -15.076 $\pm$ 36.716  $\chi^2$ /NDF: 17.4/47

# asym\_bcm\_dg\_us\_bcm\_an\_ds\_agg\_avg\_rms vs Slug



Right In: 191.496+/-0.048  $\chi^2/\text{NDF}$ : 1710597.5/20

Left Out: 198.800+/-0.034  $\chi^2/\text{NDF}$ : 1763119.1/24

Right Out: 188.836+/-0.045  $\chi^2/\text{NDF}$ : 2376491.4/24

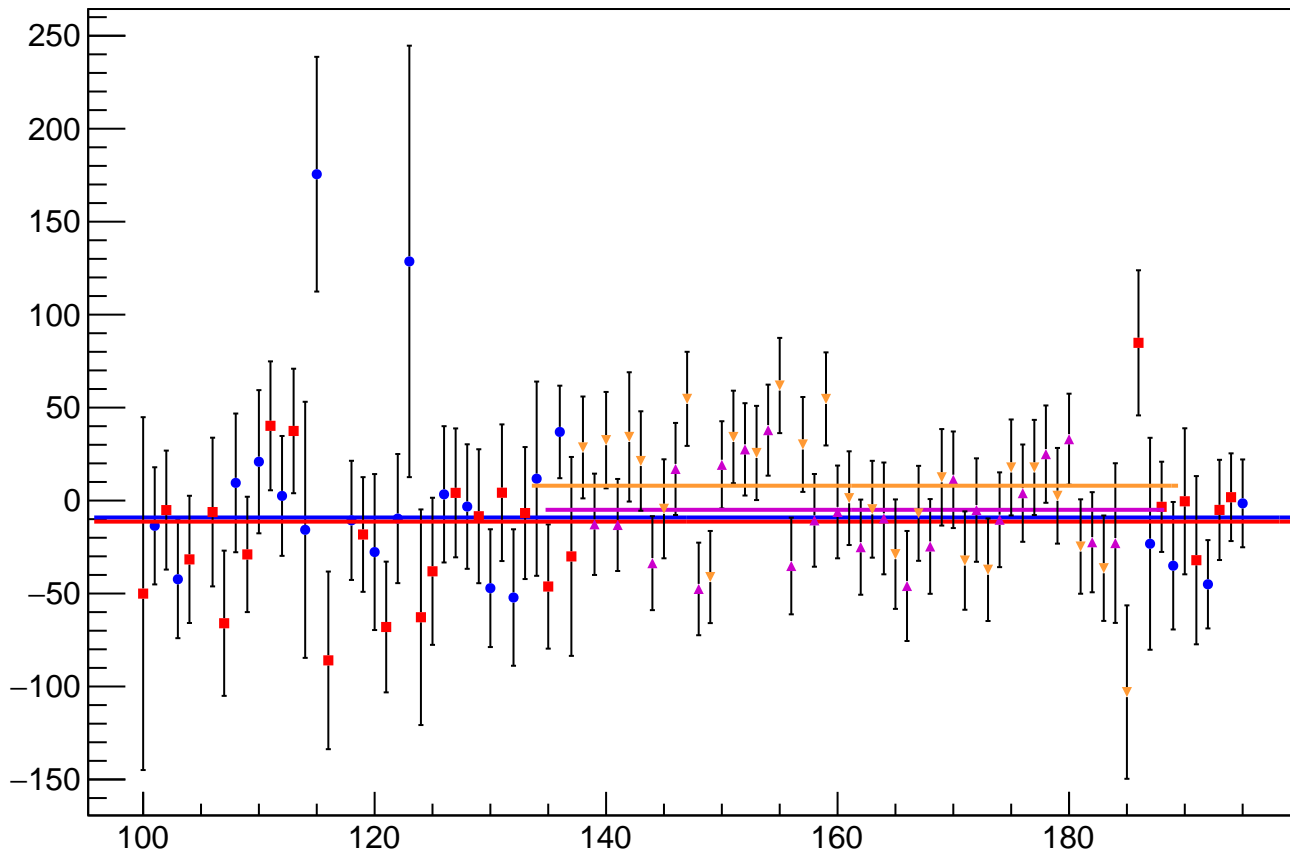
Left In: 180.123+/-0.032  $\chi^2/\text{NDF}$ : 1593842.6/22

+ sign 196.384+/-0.028  $\chi^2/\text{NDF}$ : 3489049.9/45

All: 189.271+/-0.019  $\chi^2/\text{NDF}$ : 7607677.3/93

- sign 183.046+/-0.026  $\chi^2/\text{NDF}$ : 3995440.2/47

# asym\_bcm\_dg\_us\_bcm\_an\_ds\_agg\_dd\_mean vs Slug



Right In:  $-9.101 \pm 7.593$   $\chi^2/\text{NDF}: 21.8/20$

Left Out:  $7.990 \pm 5.327$   $\chi^2/\text{NDF}: 37.4/24$

Right Out:  $-11.328 \pm 7.024$   $\chi^2/\text{NDF}: 22.0/24$

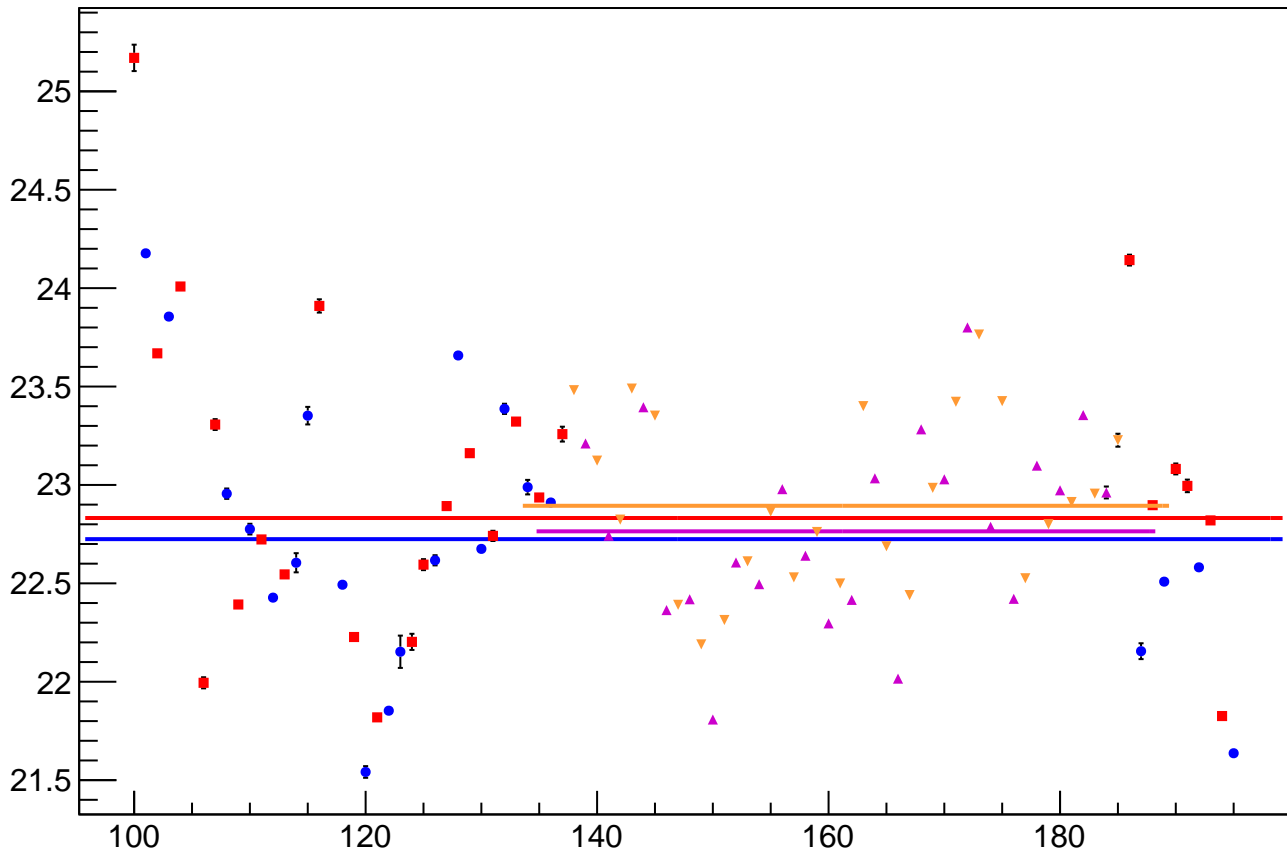
Left In:  $-4.973 \pm 5.444$   $\chi^2/\text{NDF}: 20.5/22$

+ sign  $2.352 \pm 4.361$   $\chi^2/\text{NDF}: 62.7/45$

All:  $-2.568 \pm 3.063$   $\chi^2/\text{NDF}: 108.1/93$

- sign  $-7.358 \pm 4.303$   $\chi^2/\text{NDF}: 42.9/47$

# asym\_bcm\_dg\_us\_bcm\_an\_ds\_agg\_dd\_rms vs Slug



Right In: 22.725 $\pm$ 0.005  $\chi^2$ /NDF: 17236.3/20

Left Out: 22.894 $\pm$ 0.004  $\chi^2$ /NDF: 13070.5/24

Right Out: 22.832 $\pm$ 0.005  $\chi^2$ /NDF: 17170.7/24

Left In: 22.764 $\pm$ 0.004  $\chi^2$ /NDF: 14665.7/22

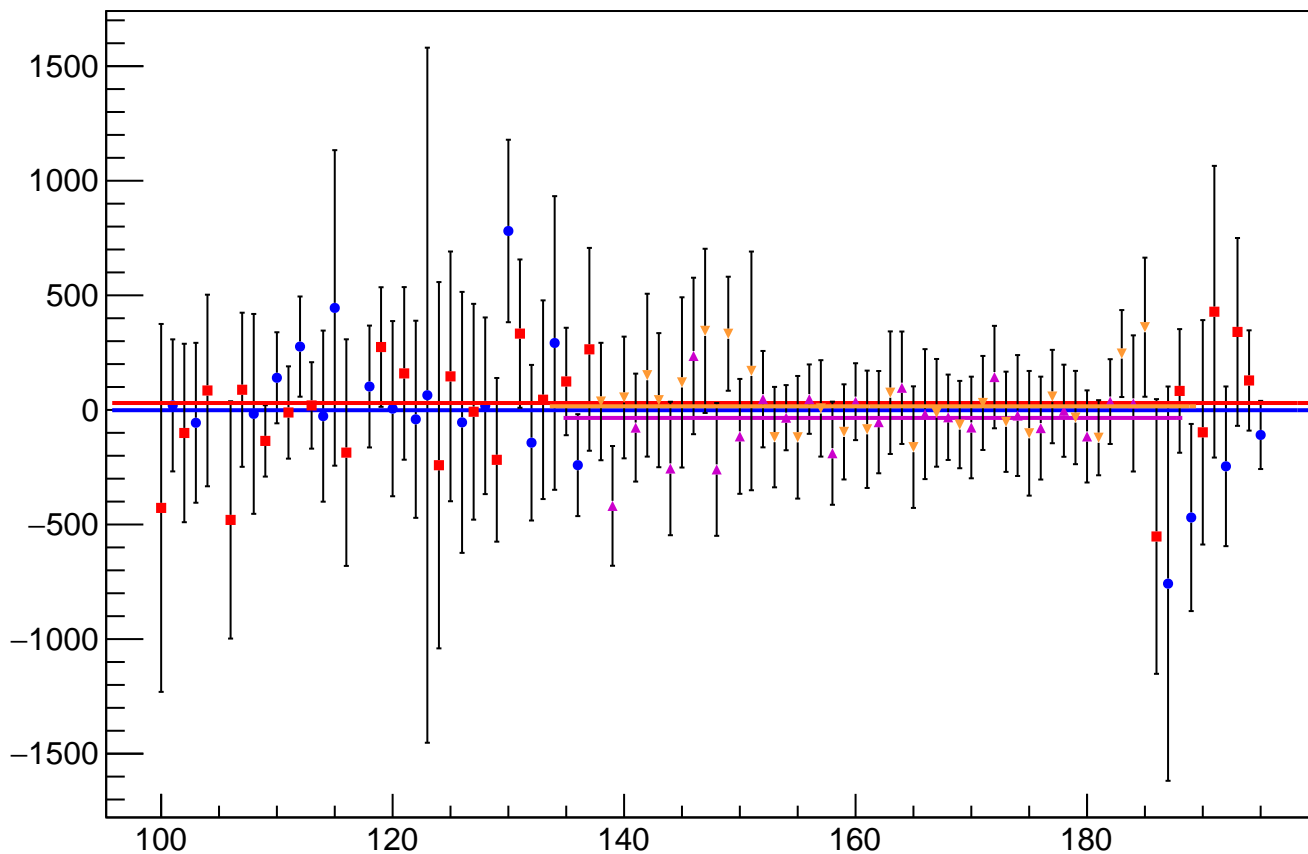
+ sign 22.838 $\pm$ 0.003  $\chi^2$ /NDF: 30974.9/45

All: 22.814 $\pm$ 0.002  $\chi^2$ /NDF: 63052.8/93

- sign 22.790 $\pm$ 0.003  $\chi^2$ /NDF: 31952.5/47



# asym\_bcm\_dg\_ds\_bcm\_an\_ds\_agg\_avg\_mean vs Slug



Right In:  $-1.278 \pm 68.017$   $\chi^2/\text{NDF}: 11.3/20$

Left Out:  $15.904 \pm 47.898$   $\chi^2/\text{NDF}: 8.4/24$

Right Out:  $30.131 \pm 63.021$   $\chi^2/\text{NDF}: 8.0/24$

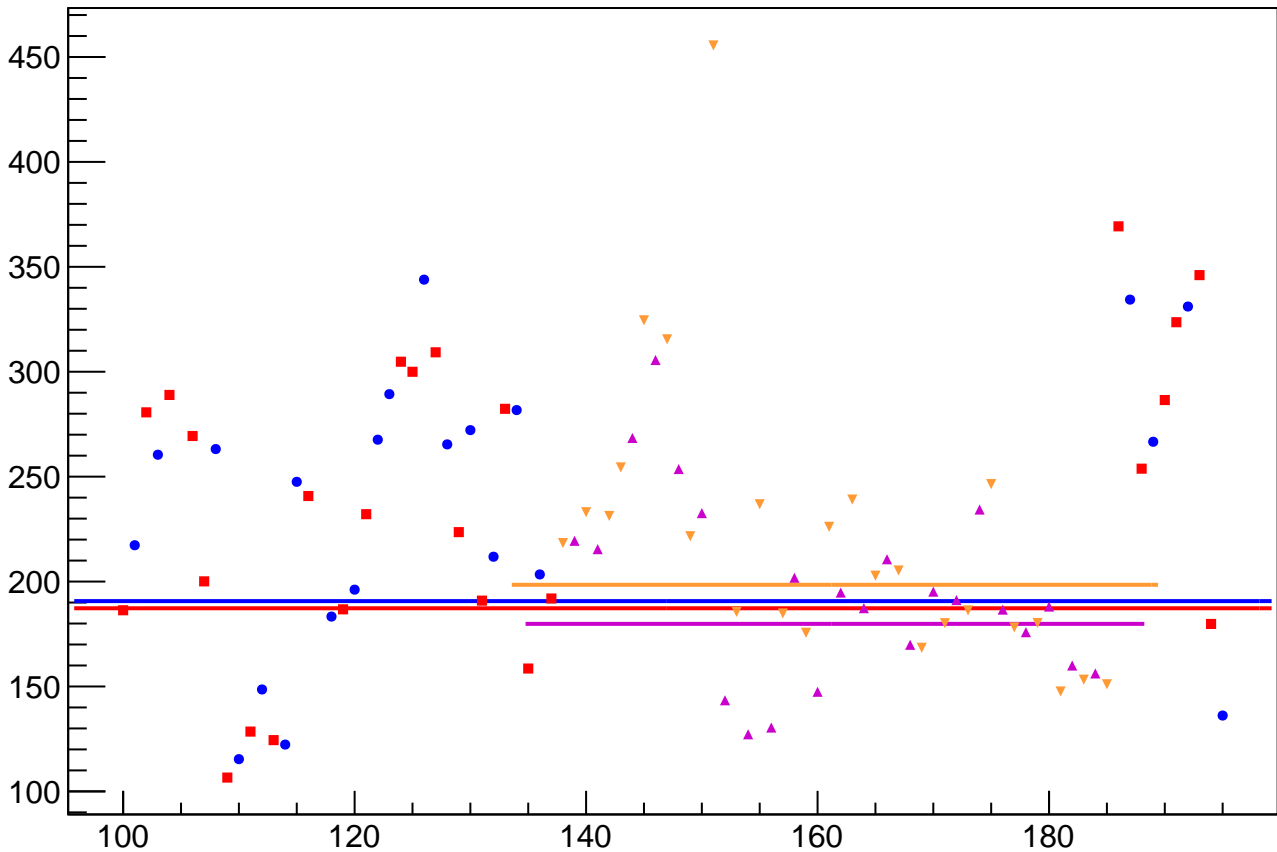
Left In:  $-34.919 \pm 44.971$   $\chi^2/\text{NDF}: 6.6/22$

+ sign  $10.208 \pm 39.162$   $\chi^2/\text{NDF}: 19.7/45$

All:  $-2.163 \pm 26.743$   $\chi^2/\text{NDF}: 35.2/93$

- sign  $-12.971 \pm 36.606$   $\chi^2/\text{NDF}: 15.3/47$

# asym\_bcm\_dg\_ds\_bcm\_an\_ds\_agg\_avg\_rms vs Slug



Right In: 190.685 $\pm$ 0.048  $\chi^2$ /NDF: 1746152.6/20

Left Out: 198.450 $\pm$ 0.034  $\chi^2$ /NDF:1761433.9/24

Right Out: 187.267 $\pm$ 0.045  $\chi^2$ /NDF: 2460900.8/24

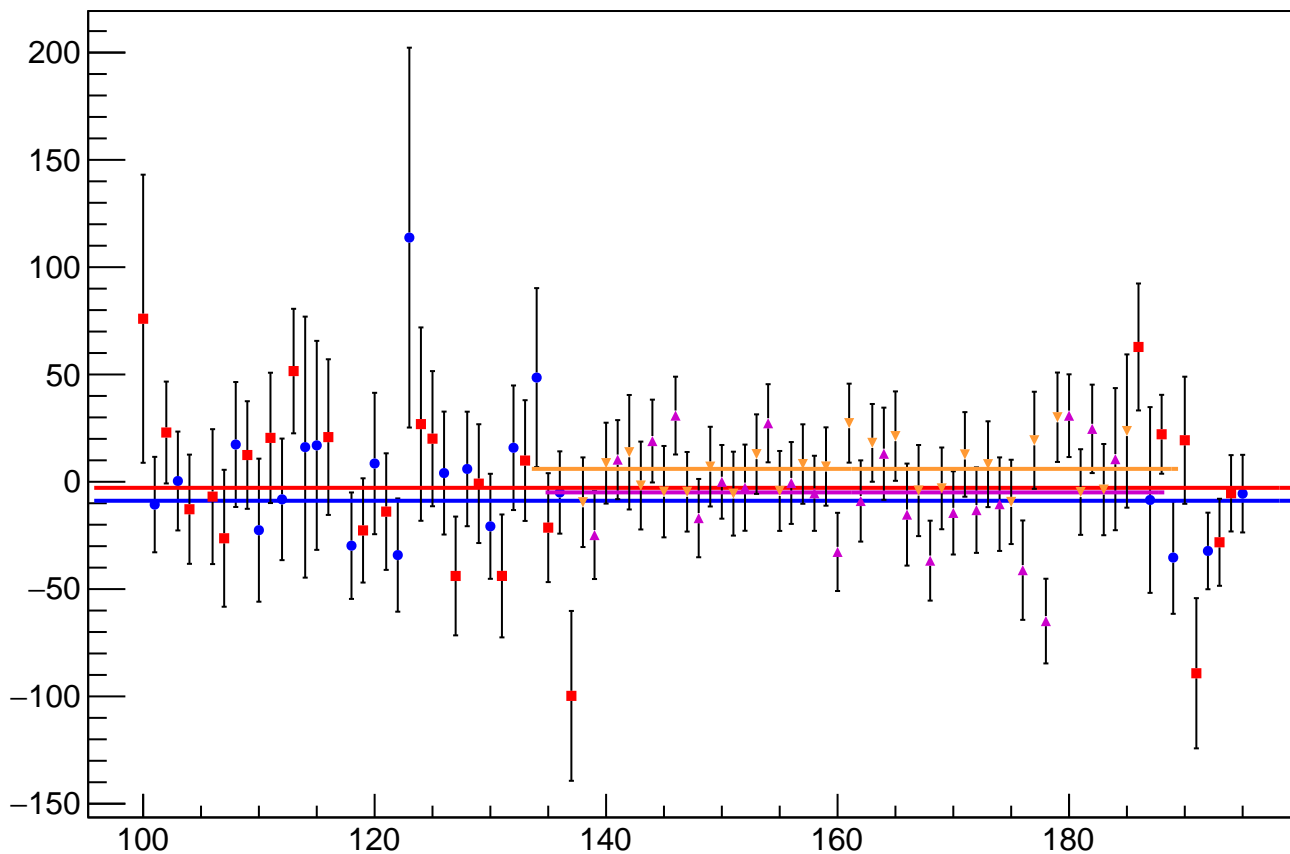
Left In: 179.839 $\pm$ 0.032  $\chi^2$ /NDF:1588834.3/22

+ sign 195.876 $\pm$ 0.028  $\chi^2$ /NDF: 3525010.8/45

All: 188.655 $\pm$ 0.019  $\chi^2$ /NDF: 7720567.4/93

- sign 182.345 $\pm$ 0.026  $\chi^2$ /NDF: 4068146.4/47

# asym\_bcm\_dg\_ds\_bcm\_an\_ds\_agg\_dd\_mean vs Slug



Right In:  $-8.843 \pm 5.872$   $\chi^2/\text{NDF}: 11.6/20$

Left Out:  $6.020 \pm 4.017$   $\chi^2/\text{NDF}: 8.1/24$

Right Out:  $-2.817 \pm 5.451$   $\chi^2/\text{NDF}: 36.0/24$

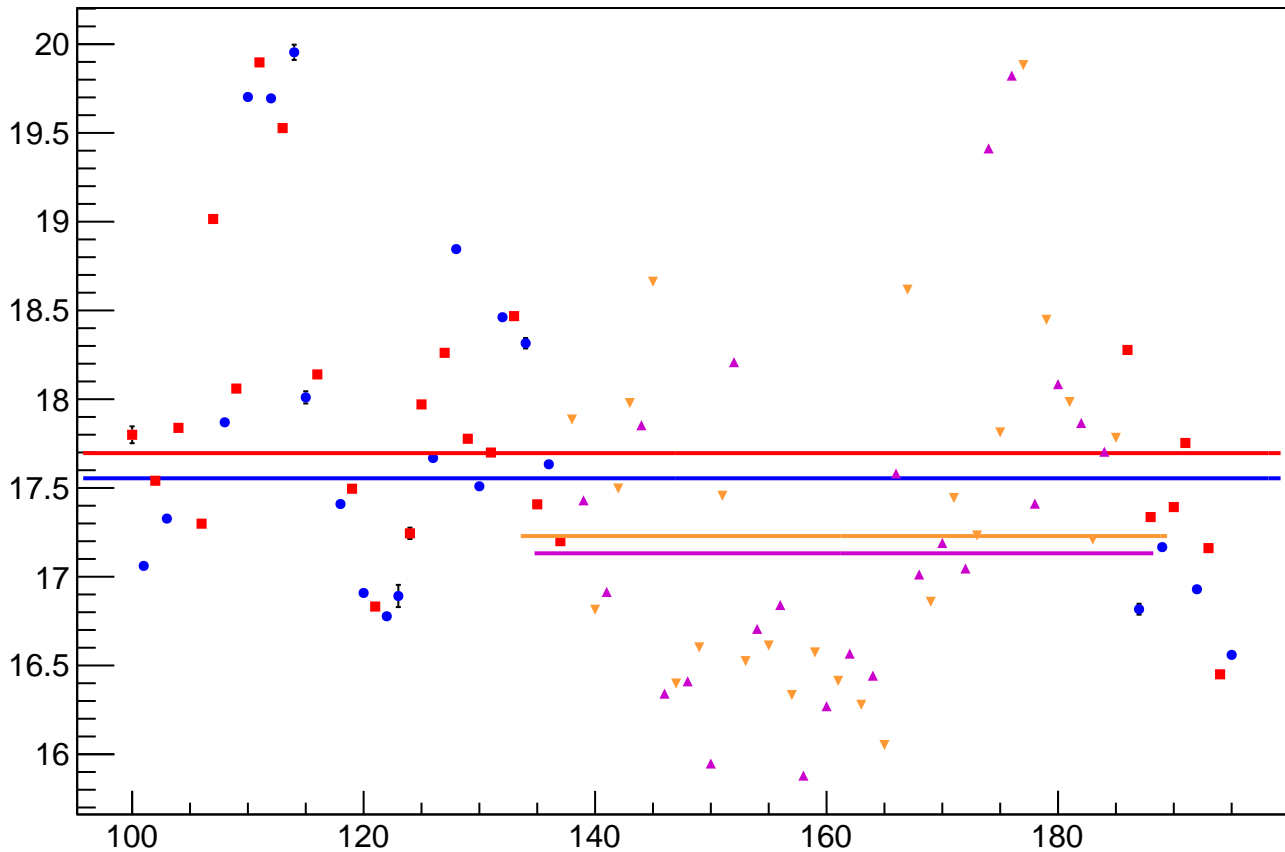
Left In:  $-4.943 \pm 4.108$   $\chi^2/\text{NDF}: 34.8/22$

+ sign  $1.281 \pm 3.316$   $\chi^2/\text{NDF}: 24.1/45$

All:  $-1.475 \pm 2.332$   $\chi^2/\text{NDF}: 96.4/93$

- sign  $-4.173 \pm 3.280$   $\chi^2/\text{NDF}: 70.9/47$

# asym\_bcm\_dg\_ds\_bcm\_an\_ds\_agg\_dd\_rms vs Slug



Right In: 17.555 $\pm$ 0.004  $\chi^2$ /NDF: 44019.0/20

Left Out: 17.229 $\pm$ 0.003  $\chi^2$ /NDF:98624.7/24

Right Out: 17.696 $\pm$ 0.004  $\chi^2$ /NDF: 41493.2/24

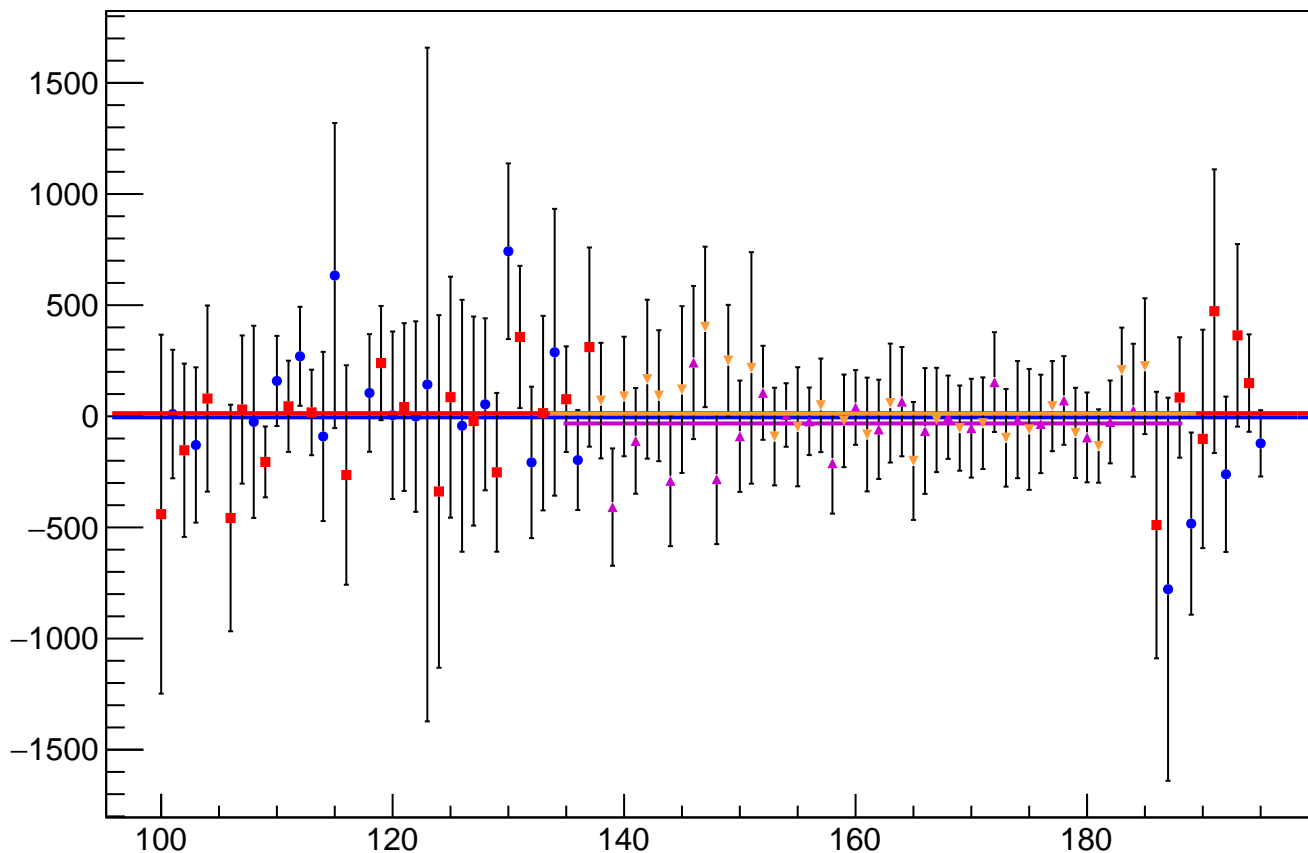
Left In: 17.132 $\pm$ 0.003  $\chi^2$ /NDF:103997.3/22

+ sign 17.333 $\pm$ 0.002  $\chi^2$ /NDF: 146827.5/45

All: 17.335 $\pm$ 0.002  $\chi^2$ /NDF: 305991.8/93

- sign 17.336 $\pm$ 0.002  $\chi^2$ /NDF: 159163.2/47

# asym\_bcm\_dg\_us\_bcm\_an\_us\_agg\_avg\_mean vs Slug



Right In:  $-4.716 \pm 68.405$   $\chi^2/\text{NDF}: 11.6/20$

Left Out:  $12.474 \pm 48.086$   $\chi^2/\text{NDF}: 6.8/24$

Right Out:  $14.281 \pm 63.525$   $\chi^2/\text{NDF}: 9.3/24$

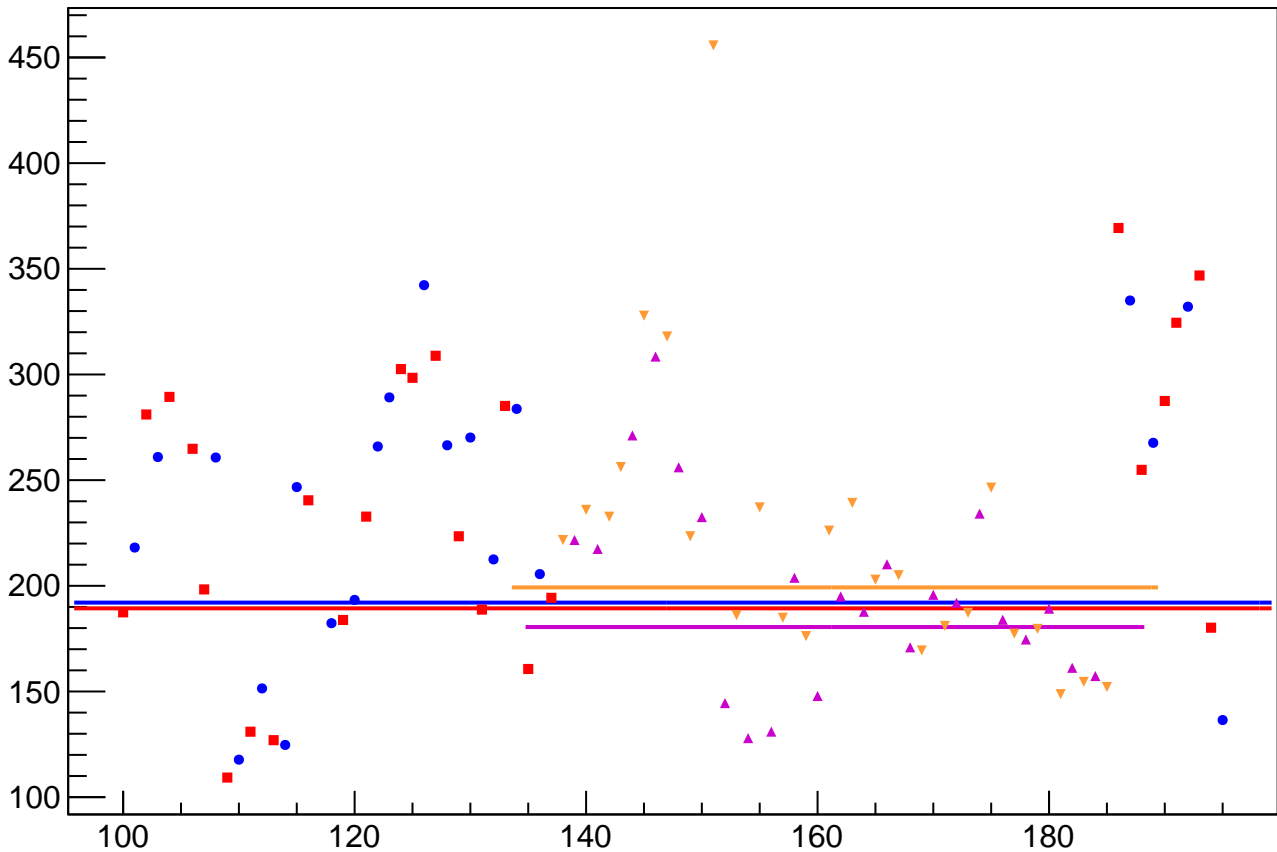
Left In:  $-32.159 \pm 45.131$   $\chi^2/\text{NDF}: 6.9/22$

+ sign  $6.789 \pm 39.339$   $\chi^2/\text{NDF}: 18.5/45$

All:  $-5.678 \pm 26.871$   $\chi^2/\text{NDF}: 35.3/93$

- sign  $-16.582 \pm 36.791$   $\chi^2/\text{NDF}: 16.6/47$

# asym\_bcm\_dg\_us\_bcm\_an\_us\_agg\_avg\_rms vs Slug



Right In:  $192.056 \pm 0.048$   $\chi^2/\text{NDF}: 1694725.7/20$

Left Out:  $199.241 \pm 0.034$   $\chi^2/\text{NDF}: 1764097.7/24$

Right Out:  $189.332 \pm 0.045$   $\chi^2/\text{NDF}: 2353994.2/24$

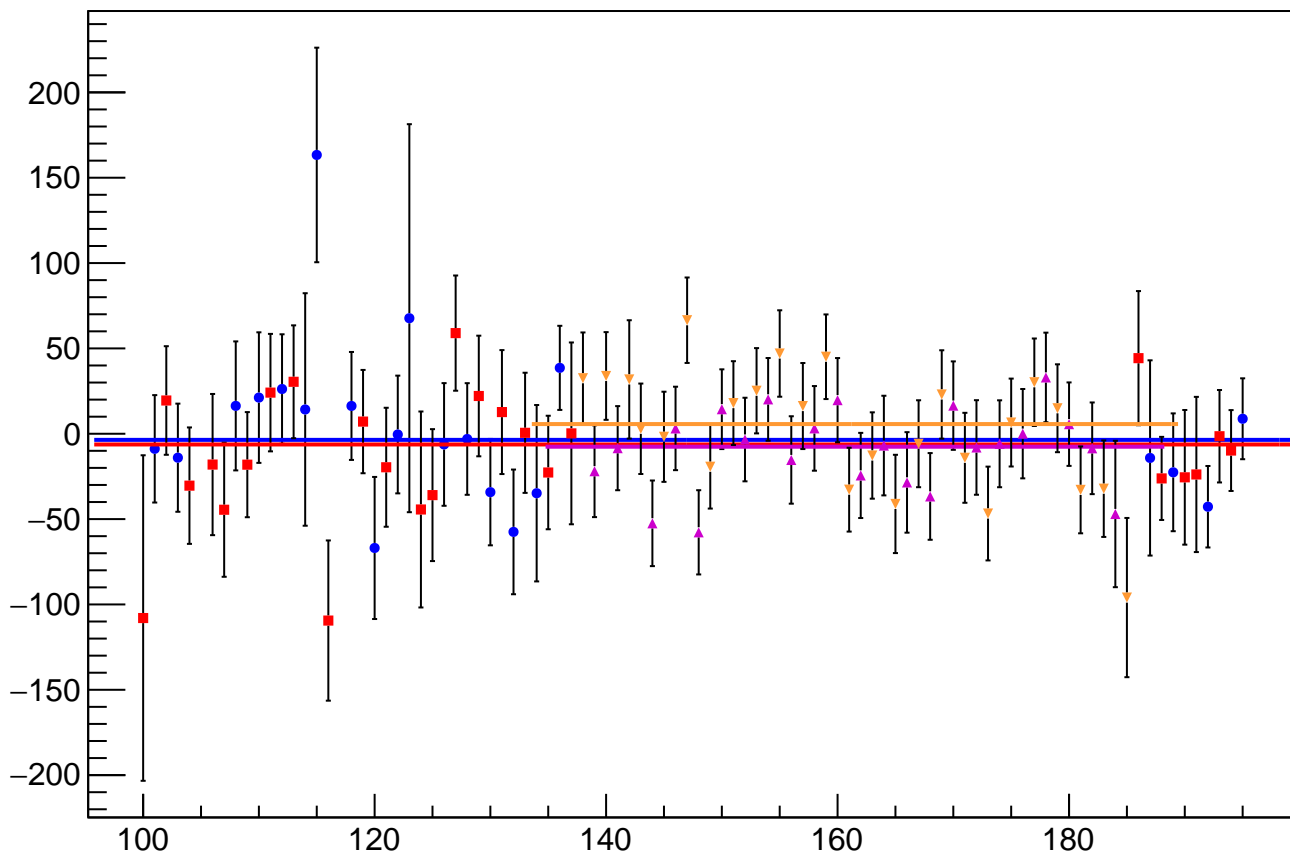
Left In:  $180.494 \pm 0.032$   $\chi^2/\text{NDF}: 1593784.1/22$

+ sign  $196.865 \pm 0.028$   $\chi^2/\text{NDF}: 3473593.8/45$

All:  $189.713 \pm 0.019$   $\chi^2/\text{NDF}: 7571004.7/93$

- sign  $183.458 \pm 0.026$   $\chi^2/\text{NDF}: 3973508.5/47$

# asym\_bcm\_dg\_us\_bcm\_an\_us\_agg\_dd\_mean vs Slug



Right In:  $-3.580 \pm 7.555$   $\chi^2/\text{NDF}: 21.7/20$

Left Out:  $5.673 \pm 5.278$   $\chi^2/\text{NDF}: 36.4/24$

Right Out:  $-6.280 \pm 6.992$   $\chi^2/\text{NDF}: 19.4/24$

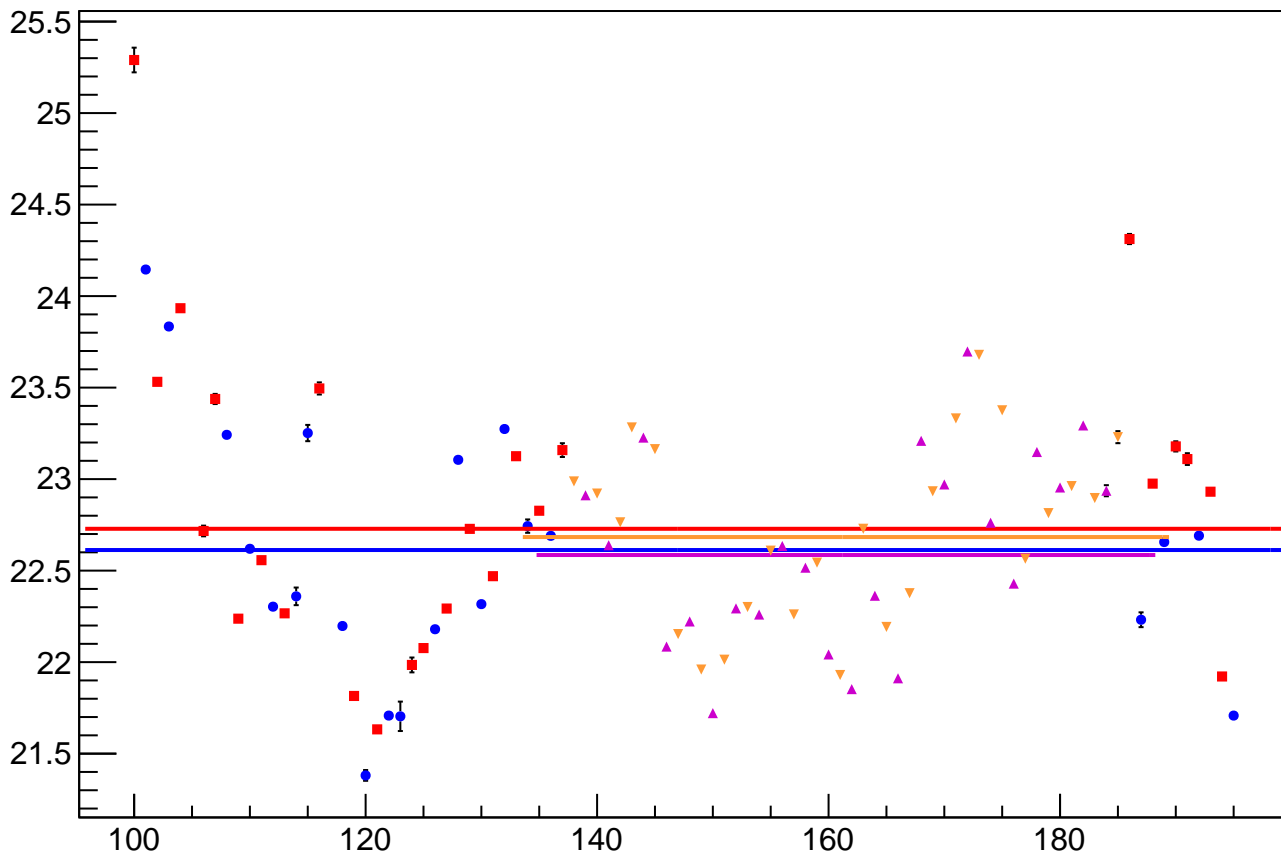
Left In:  $-7.594 \pm 5.402$   $\chi^2/\text{NDF}: 18.3/22$

+ sign  $2.638 \pm 4.327$   $\chi^2/\text{NDF}: 59.1/45$

All:  $-2.291 \pm 3.041$   $\chi^2/\text{NDF}: 99.4/93$

- sign  $-7.103 \pm 4.275$   $\chi^2/\text{NDF}: 37.7/47$

# asym\_bcm\_dg\_us\_bcm\_an\_us\_agg\_dd\_rms vs Slug



Right In: 22.613 $\pm$ 0.005  $\chi^2$ /NDF: 16934.7/20

Left Out: 22.683 $\pm$ 0.004  $\chi^2$ /NDF: 16318.1/24

Right Out: 22.729 $\pm$ 0.005  $\chi^2$ /NDF: 19176.1/24

Left In: 22.585 $\pm$ 0.004  $\chi^2$ /NDF: 18087.5/22

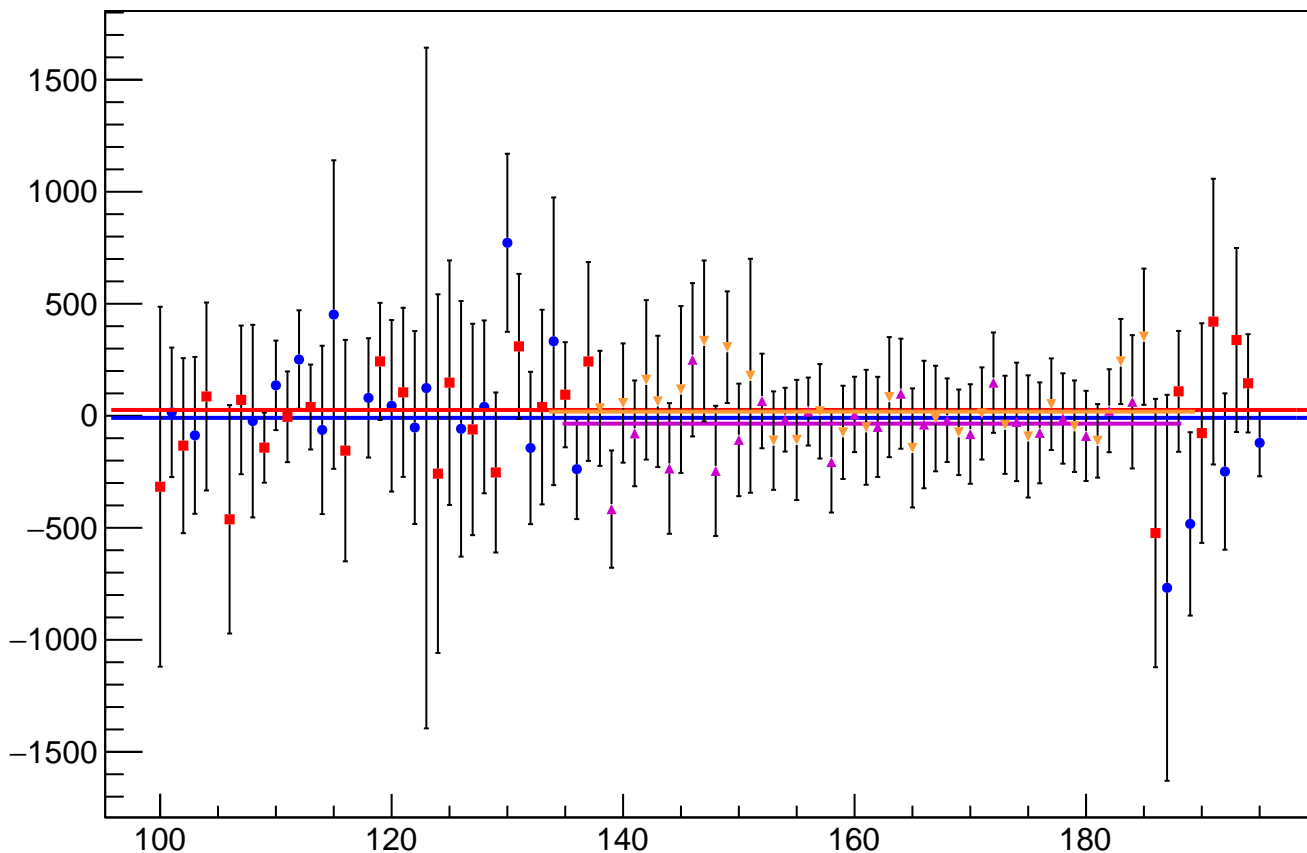
+ sign 22.660 $\pm$ 0.003  $\chi^2$ /NDF: 33371.1/45

All: 22.649 $\pm$ 0.002  $\chi^2$ /NDF: 71185.8/93

- sign 22.639 $\pm$ 0.003  $\chi^2$ /NDF: 37790.0/47



# asym\_bcm\_dg\_ds\_bcm\_an\_us\_agg\_avg\_mean vs Slug



Right In:  $-9.174 \pm 68.185$   $\chi^2/\text{NDF}: 11.1/20$

Left Out:  $18.633 \pm 48.006$   $\chi^2/\text{NDF}: 7.6/24$

Right Out:  $26.104 \pm 63.153$   $\chi^2/\text{NDF}: 7.5/24$

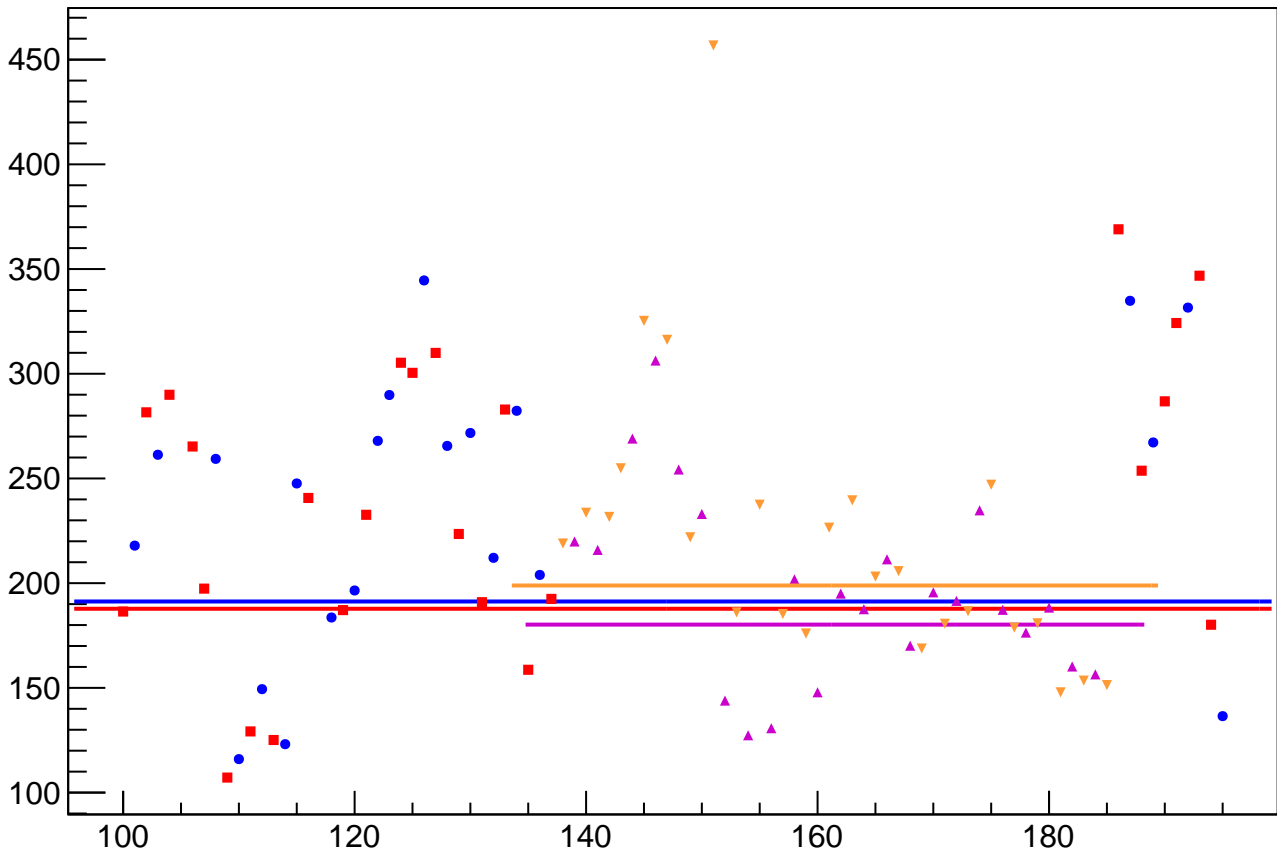
Left In:  $-35.046 \pm 45.063$   $\chi^2/\text{NDF}: 6.3/22$

+ sign  $9.417 \pm 39.253$   $\chi^2/\text{NDF}: 18.8/45$

All:  $-3.305 \pm 26.801$   $\chi^2/\text{NDF}: 33.4/93$

- sign  $-14.416 \pm 36.682$   $\chi^2/\text{NDF}: 14.4/47$

# asym\_bcm\_dg\_ds\_bcm\_an\_us\_agg\_avg\_rms vs Slug



Right In: 191.254 $\pm$ 0.048  $\chi^2$ /NDF: 1729588.9/20

Left Out: 198.891 $\pm$ 0.034  $\chi^2$ /NDF:1762454.6/24

Right Out: 187.779 $\pm$ 0.045  $\chi^2$ /NDF: 2437232.7/24

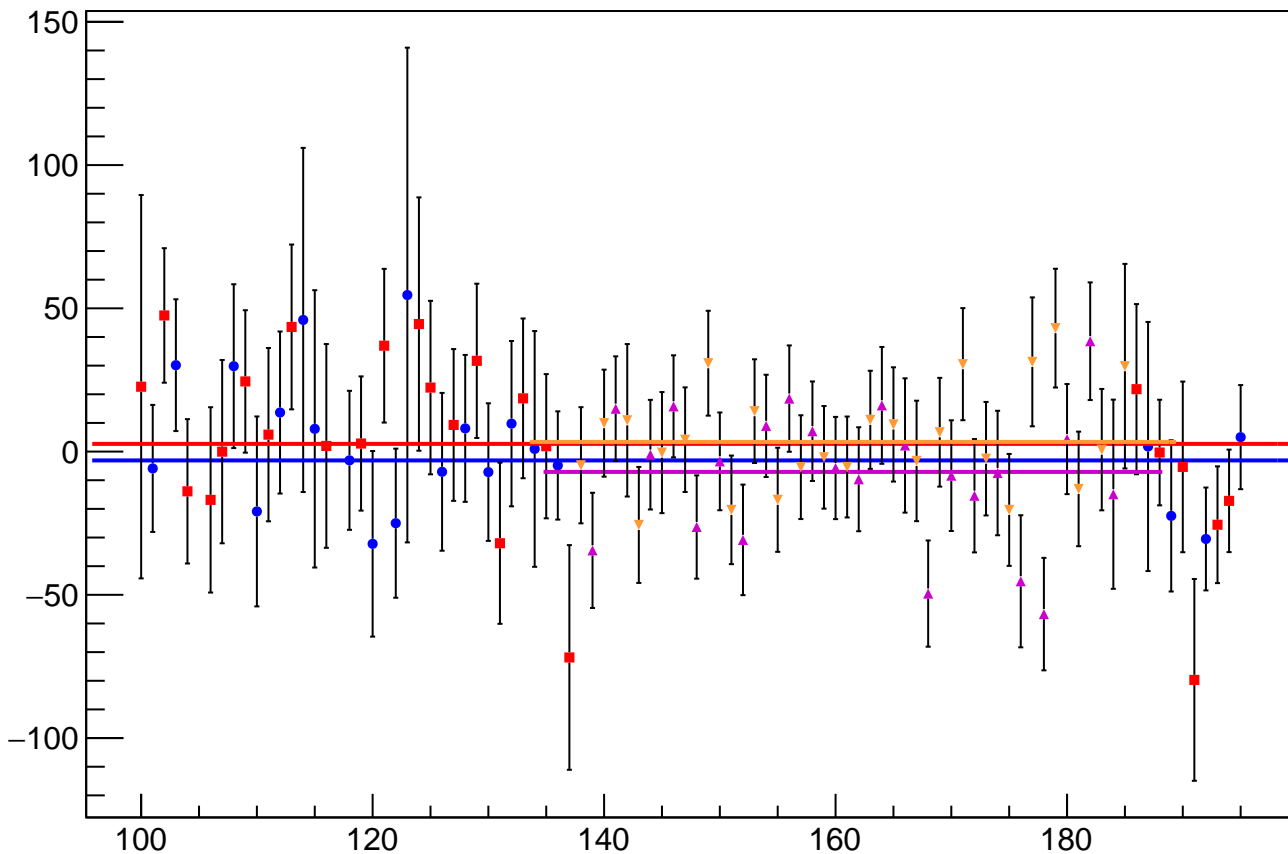
Left In: 180.207 $\pm$ 0.032  $\chi^2$ /NDF:1589005.4/22

+ sign 196.360 $\pm$ 0.028  $\chi^2$ /NDF: 3508818.5/45

All: 189.101 $\pm$ 0.019  $\chi^2$ /NDF: 7682228.2/93

- sign 182.762 $\pm$ 0.026  $\chi^2$ /NDF: 4045287.5/47

# asym\_bcm\_dg\_ds\_bcm\_an\_us\_agg\_dd\_mean vs Slug



Right In:  $-3.086 \pm 5.819$   $\chi^2/\text{NDF}: 10.3/20$

Left Out:  $3.372 \pm 3.947$   $\chi^2/\text{NDF}: 18.8/24$

Right Out:  $2.688 \pm 5.407$   $\chi^2/\text{NDF}: 26.1/24$

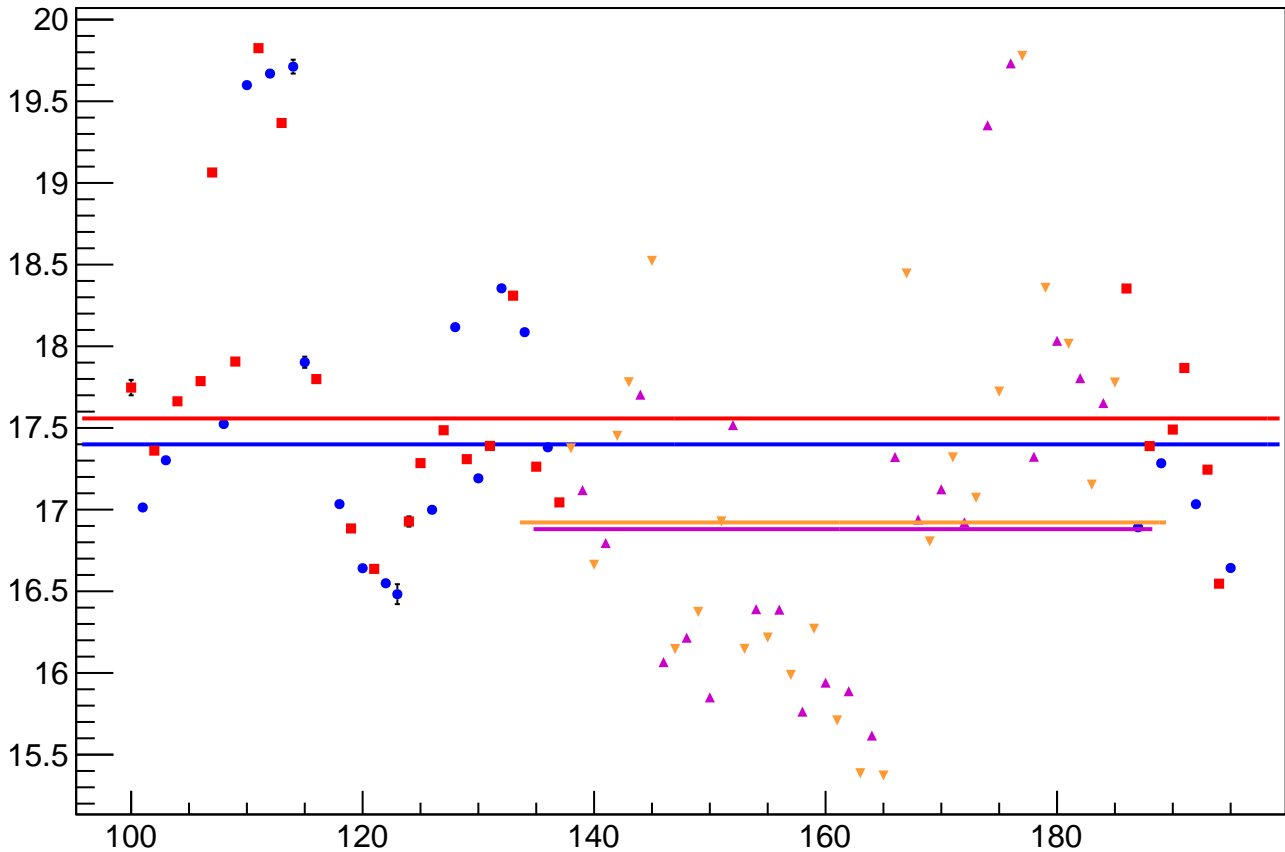
Left In:  $-7.099 \pm 4.047$   $\chi^2/\text{NDF}: 32.5/22$

+ sign  $1.337 \pm 3.266$   $\chi^2/\text{NDF}: 29.9/45$

All:  $-1.144 \pm 2.300$   $\chi^2/\text{NDF}: 91.8/93$

- sign  $-3.585 \pm 3.240$   $\chi^2/\text{NDF}: 60.7/47$

# asym\_bcm\_dg\_ds\_bcm\_an\_us\_agg\_dd\_rms vs Slug



Right In: 17.399 $\pm$ 0.004  $\chi^2$ /NDF: 38965.4/20

Left Out: 16.921 $\pm$ 0.003  $\chi^2$ /NDF: 138990.4/24

Right Out: 17.558 $\pm$ 0.004  $\chi^2$ /NDF: 39896.4/24

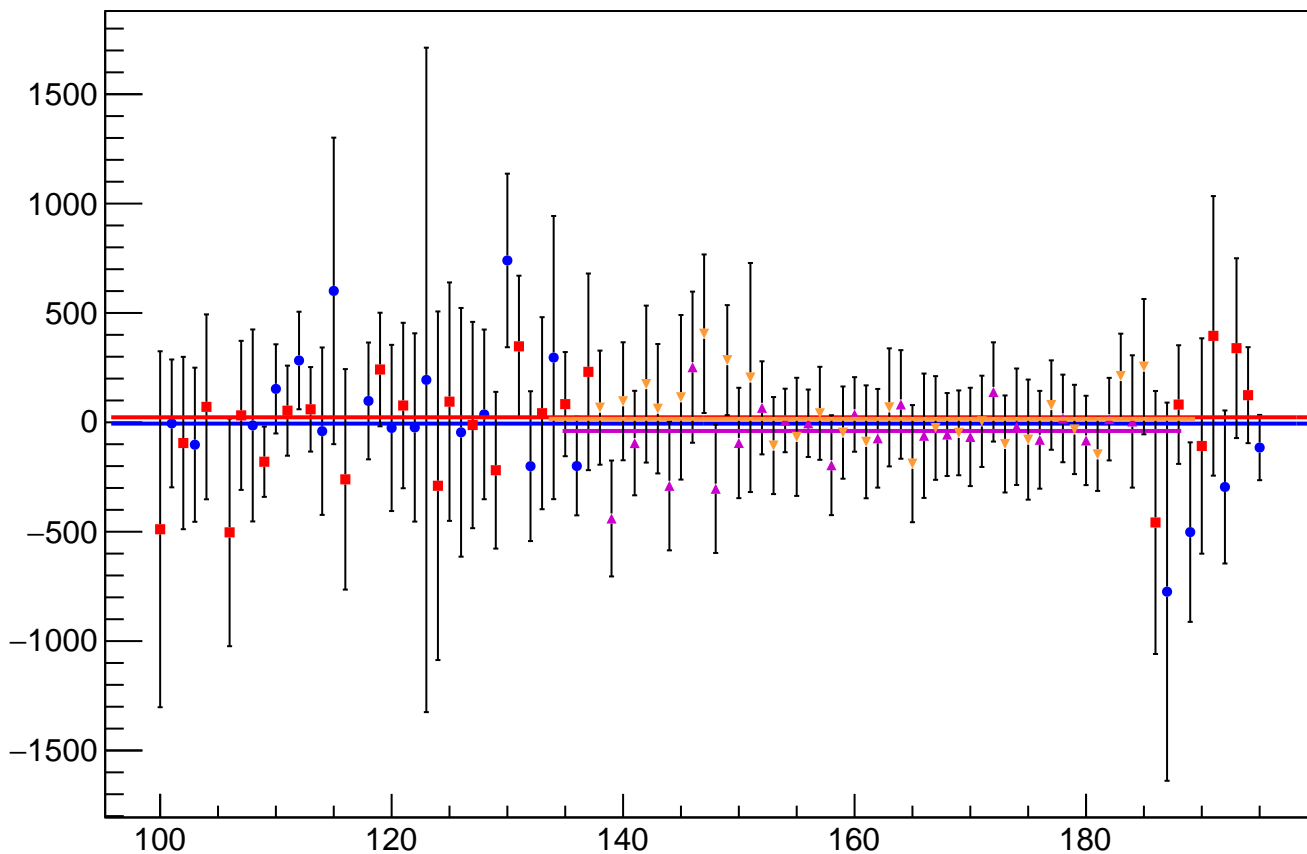
Left In: 16.880 $\pm$ 0.003  $\chi^2$ /NDF: 121736.1/22

+ sign 17.072 $\pm$ 0.002  $\chi^2$ /NDF: 187199.5/45

All: 17.098 $\pm$ 0.002  $\chi^2$ /NDF: 369215.5/93

- sign 17.124 $\pm$ 0.002  $\chi^2$ /NDF: 181763.7/47

# asym\_bcm\_dg\_us\_bcm\_dg\_ds\_agg\_avg\_mean vs Slug



Right In:  $-5.737 \pm 68.707$   $\chi^2/\text{NDF}: 11.6/20$

Left Out:  $15.970 \pm 48.503$   $\chi^2/\text{NDF}: 7.4/24$

Right Out:  $23.085 \pm 63.892$   $\chi^2/\text{NDF}: 8.0/24$

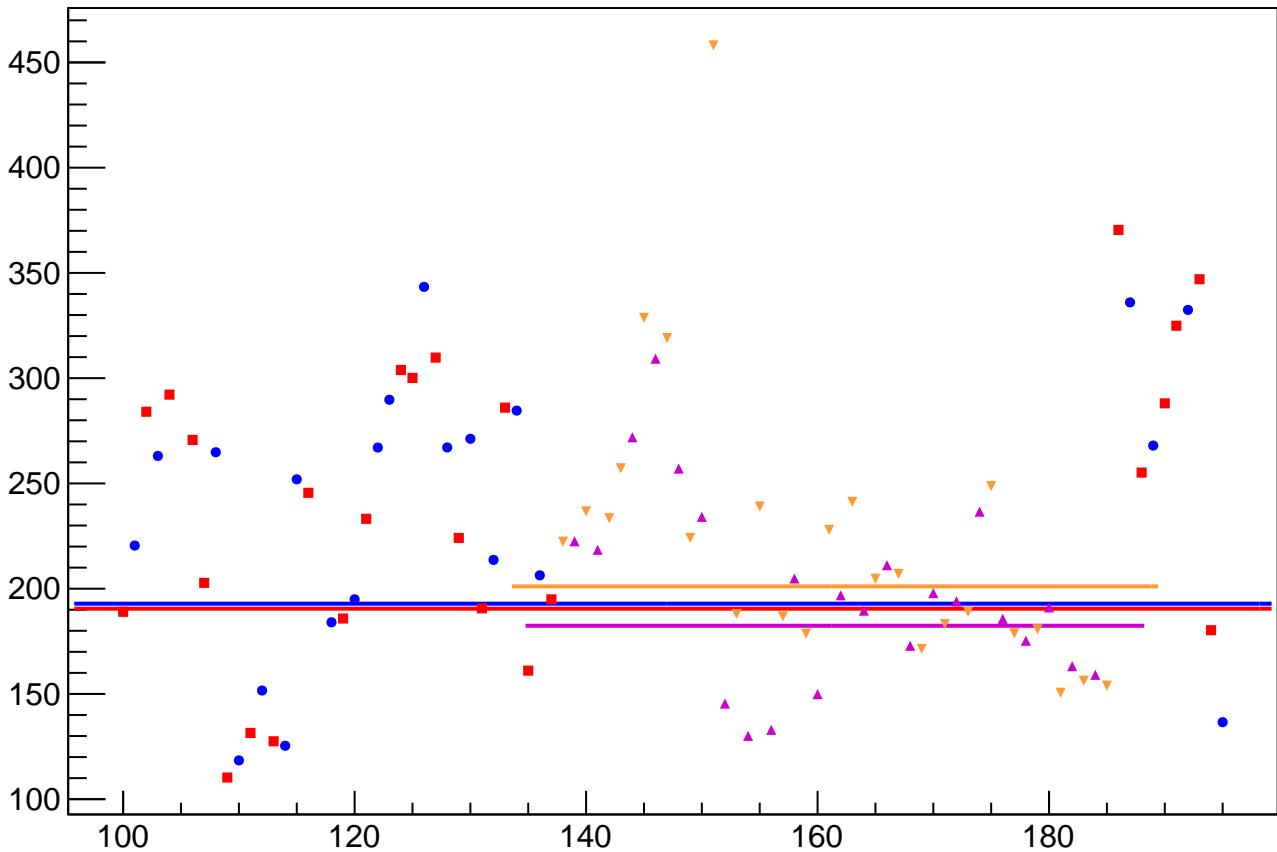
Left In:  $-39.377 \pm 45.571$   $\chi^2/\text{NDF}: 6.9/22$

+ sign  $8.750 \pm 39.624$   $\chi^2/\text{NDF}: 19.0/45$

All:  $-5.672 \pm 27.082$   $\chi^2/\text{NDF}: 34.8/93$

- sign  $-18.315 \pm 37.101$   $\chi^2/\text{NDF}: 15.5/47$

# asym\_bcm\_dg\_us\_bcm\_dg\_ds\_agg\_avg\_rms vs Slug



Right In: 192.874 $\pm$ 0.049  $\chi^2$ /NDF: 1703482.8/20

Left Out: 201.091 $\pm$ 0.034  $\chi^2$ /NDF:1731069.1/24

Right Out: 190.491 $\pm$ 0.045  $\chi^2$ /NDF: 2350910.3/24

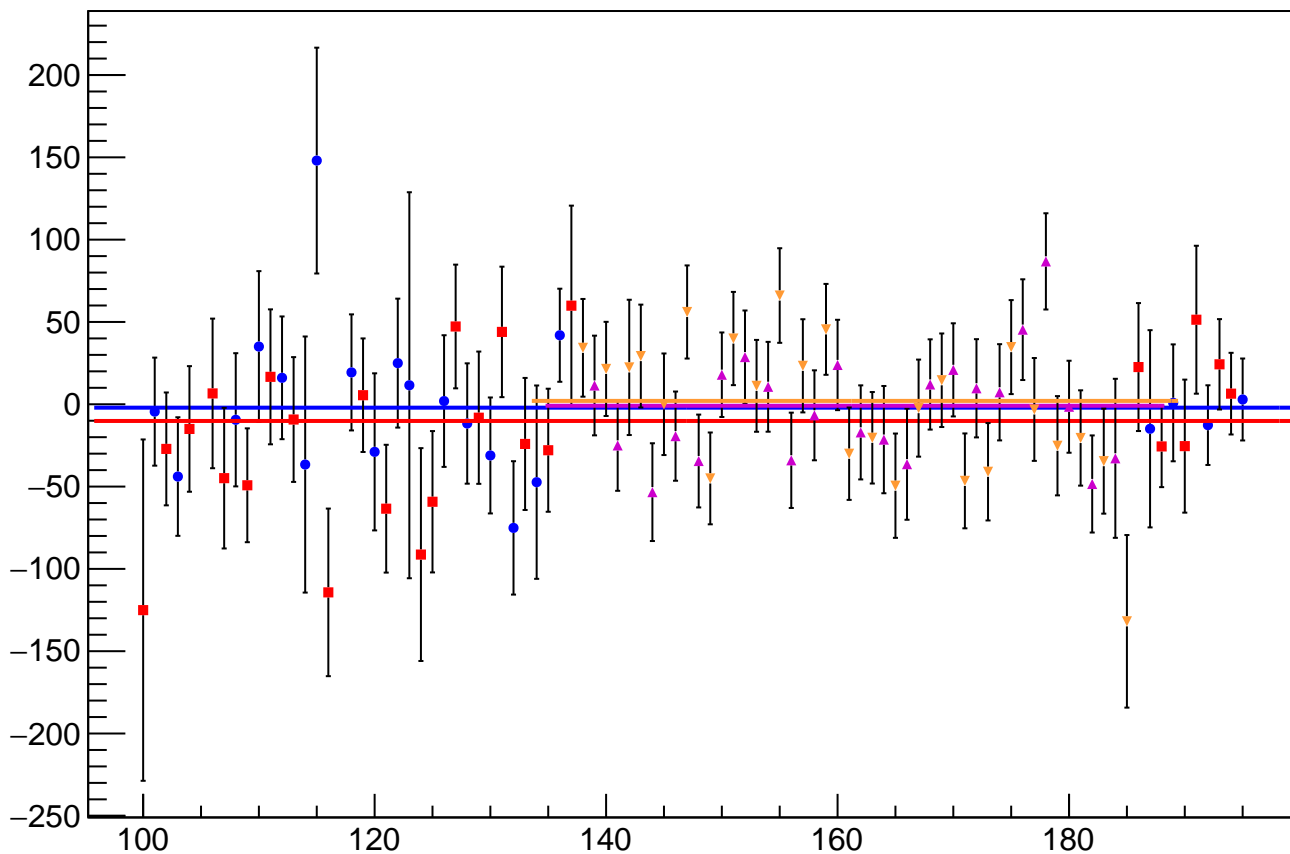
Left In: 182.396 $\pm$ 0.032  $\chi^2$ /NDF:1548907.7/22

+ sign 198.358 $\pm$ 0.028  $\chi^2$ /NDF: 3453642.3/45

All: 191.307 $\pm$ 0.019  $\chi^2$ /NDF: 7493591.8/93

- sign 185.126 $\pm$ 0.026  $\chi^2$ /NDF: 3921096.4/47

# asym\_bcm\_dg\_us\_bcm\_dg\_ds\_agg\_dd\_mean vs Slug



Right In:  $-2.065 \pm 8.283$   $\chi^2/\text{NDF}: 15.8/20$

Left Out:  $2.054 \pm 5.970$   $\chi^2/\text{NDF}: 39.4/24$

Right Out:  $-10.143 \pm 7.582$   $\chi^2/\text{NDF}: 24.2/24$

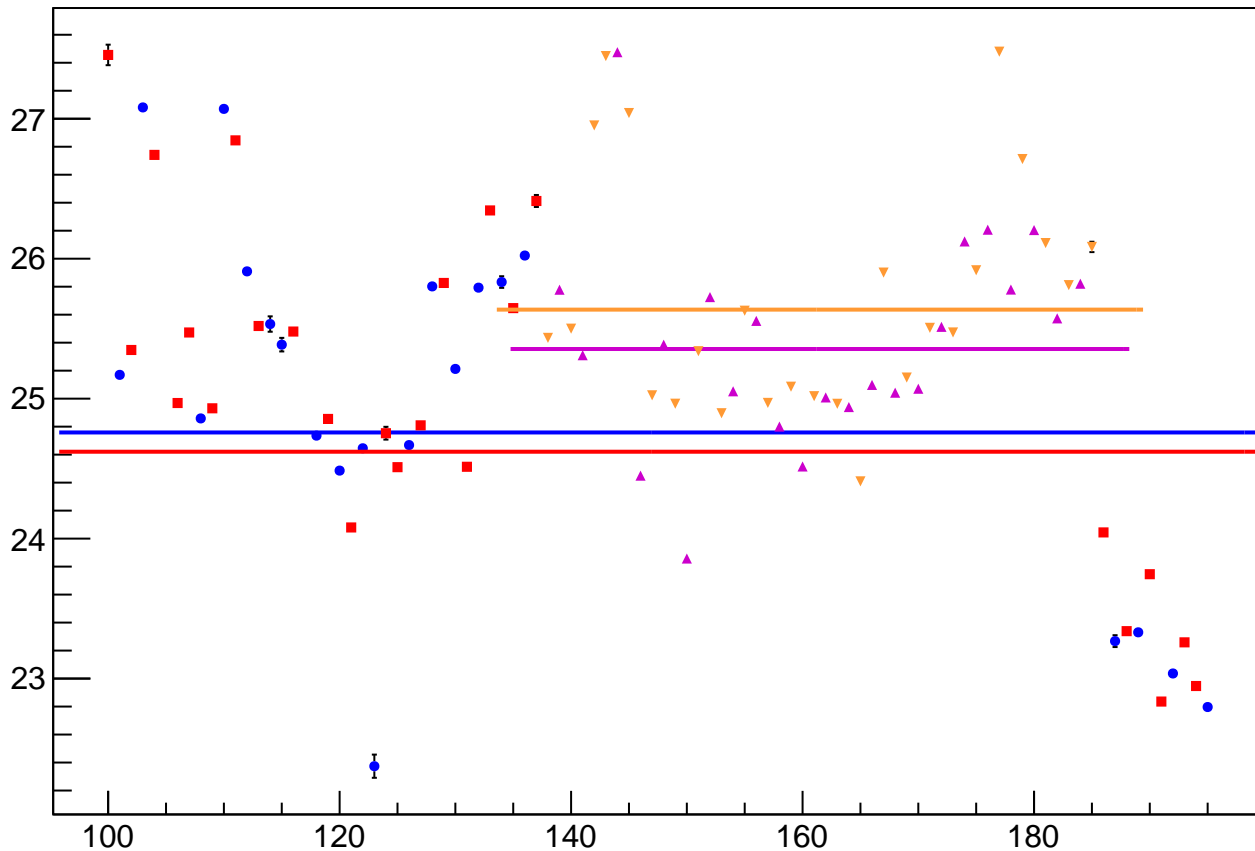
Left In:  $-0.900 \pm 6.069$   $\chi^2/\text{NDF}: 27.1/22$

+ sign  $0.645 \pm 4.843$   $\chi^2/\text{NDF}: 55.4/45$

All:  $-1.988 \pm 3.387$   $\chi^2/\text{NDF}: 108.1/93$

- sign  $-4.510 \pm 4.738$   $\chi^2/\text{NDF}: 52.1/47$

# asym\_bcm\_dg\_us\_bcm\_dg\_ds\_agg\_dd\_rms vs Slug



Right In: 24.758 $\pm$ 0.006  $\chi^2$ /NDF: 51885.1/20

Left Out: 25.636 $\pm$ 0.004  $\chi^2$ /NDF:35130.7/24

Right Out: 24.621 $\pm$ 0.005  $\chi^2$ /NDF: 50488.1/24

Left In: 25.355 $\pm$ 0.004  $\chi^2$ /NDF:29766.2/22

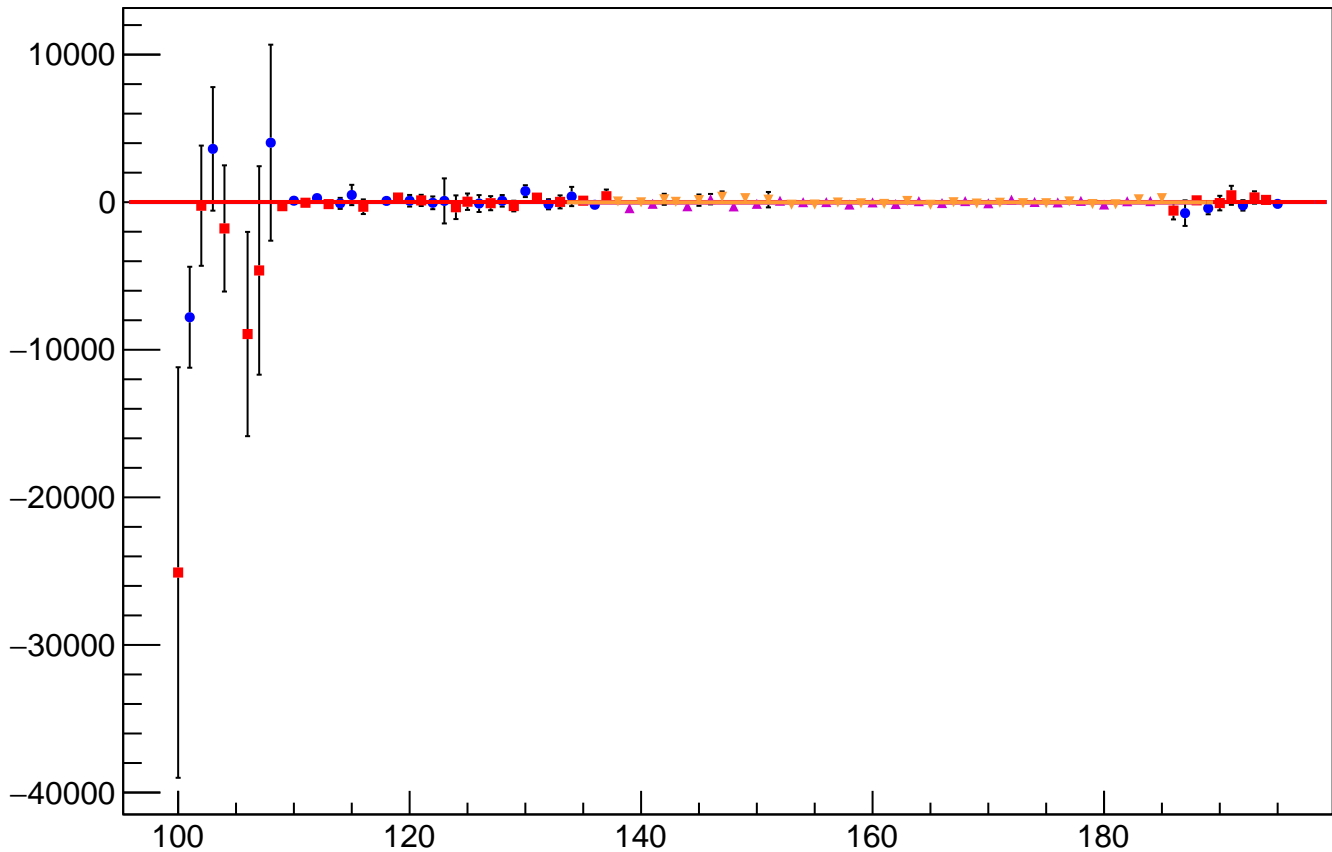
+ sign 25.336 $\pm$ 0.003  $\chi^2$ /NDF: 101794.5/45

All: 25.199 $\pm$ 0.002  $\chi^2$ /NDF: 196595.7/93

- sign 25.068 $\pm$ 0.003  $\chi^2$ /NDF: 91674.6/47



# asym\_bcm\_cav4cQ\_bcm\_an\_us\_agg\_avg\_mean vs Slug



Right In:  $7.042 \pm 73.747$   $\chi^2/\text{NDF}: 16.2/20$

Left Out:  $-12.820 \pm 48.216$   $\chi^2/\text{NDF}: 7.9/24$

Right Out:  $14.100 \pm 70.612$   $\chi^2/\text{NDF}: 14.7/24$

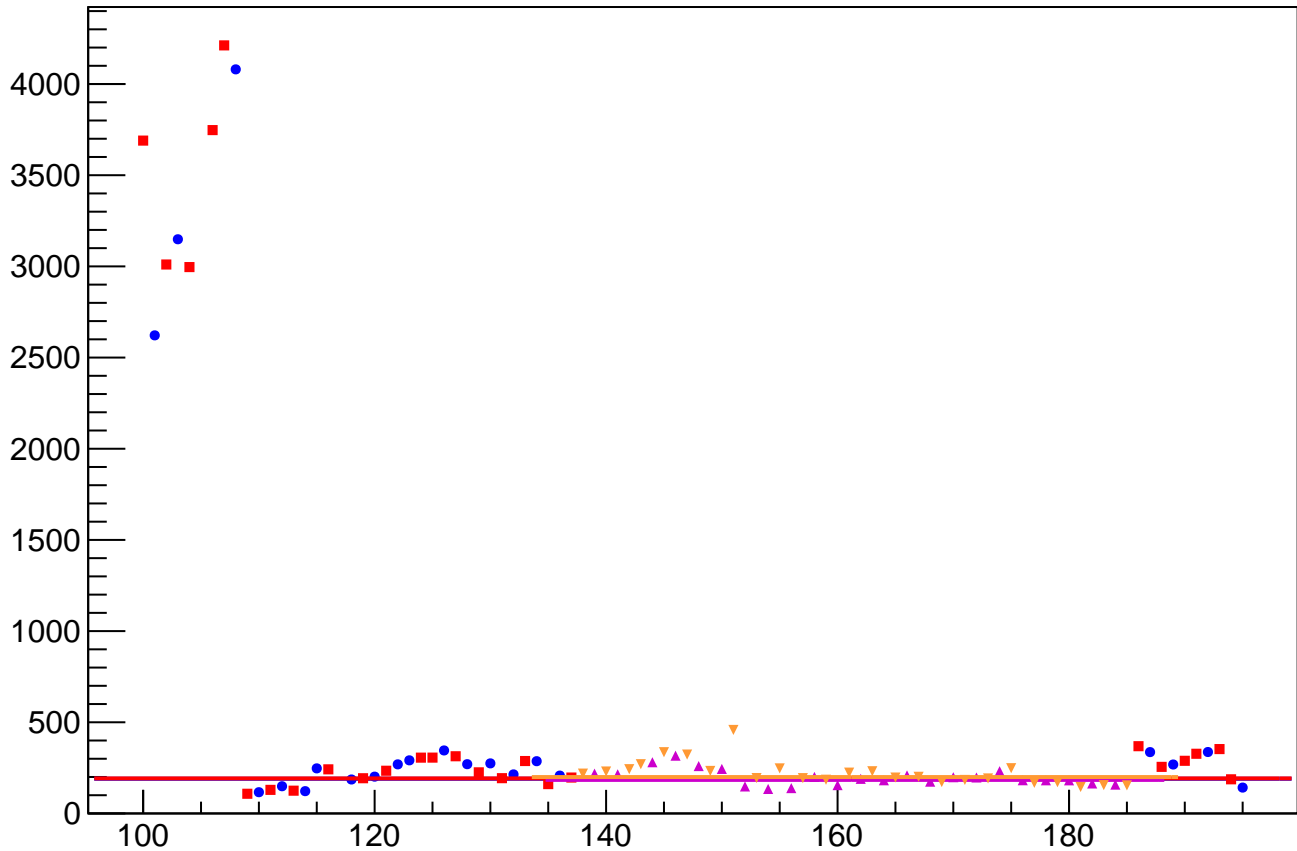
Left In:  $-26.836 \pm 45.876$   $\chi^2/\text{NDF}: 7.5/22$

+ sign  $-6.872 \pm 40.356$   $\chi^2/\text{NDF}: 24.1/45$

All:  $-10.966 \pm 27.845$   $\chi^2/\text{NDF}: 46.6/93$

- sign  $-14.686 \pm 38.470$   $\chi^2/\text{NDF}: 22.4/47$

# asym\_bcm\_cav4cQ\_bcm\_an\_us\_agg\_avg\_rms vs Slug



Right In: 190.223 $\pm$ 0.052  $\chi^2$ /NDF: 4243441.2/20

Left Out: 199.536 $\pm$ 0.034  $\chi^2$ /NDF: 1880548.8/24

Right Out: 192.121 $\pm$ 0.050  $\chi^2$ /NDF: 5057435.6/24

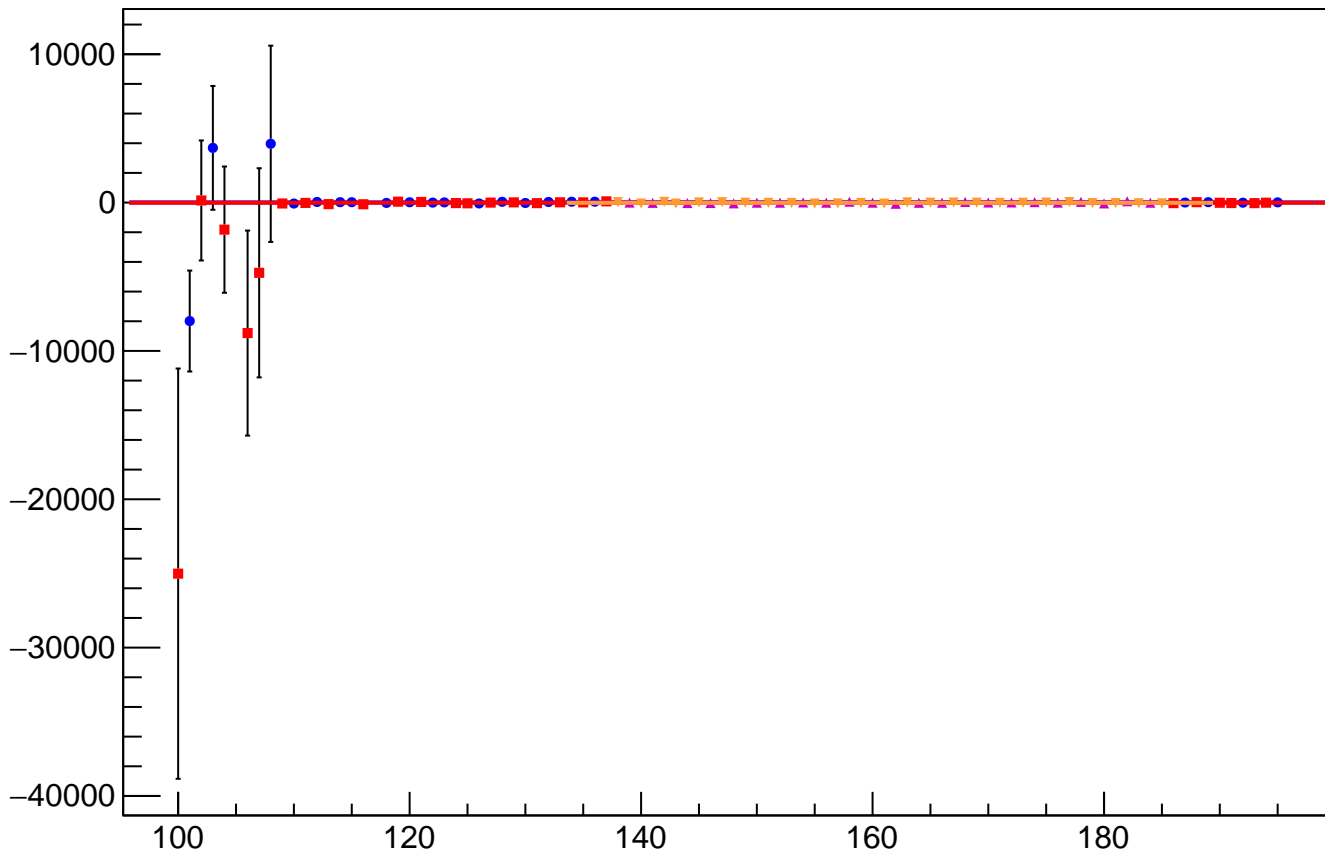
Left In: 184.031 $\pm$ 0.032  $\chi^2$ /NDF: 1423454.3/22

+ sign 196.747 $\pm$ 0.029  $\chi^2$ /NDF: 6146332.5/45

All: 191.343 $\pm$ 0.020  $\chi^2$ /NDF: 12714125.7/90

- sign 186.433 $\pm$ 0.027  $\chi^2$ /NDF: 6499348.7/47

# asym\_bcm\_cav4cQ\_bcm\_an\_us\_agg\_dd\_mean vs Slug



Right In: 9.855+/-10.118  $\chi^2$ /NDF: 19.6/20

Left Out: -17.580+/-6.694  $\chi^2$ /NDF:22.3/24

Right Out: -11.577+/-9.472  $\chi^2$ /NDF: 26.9/24

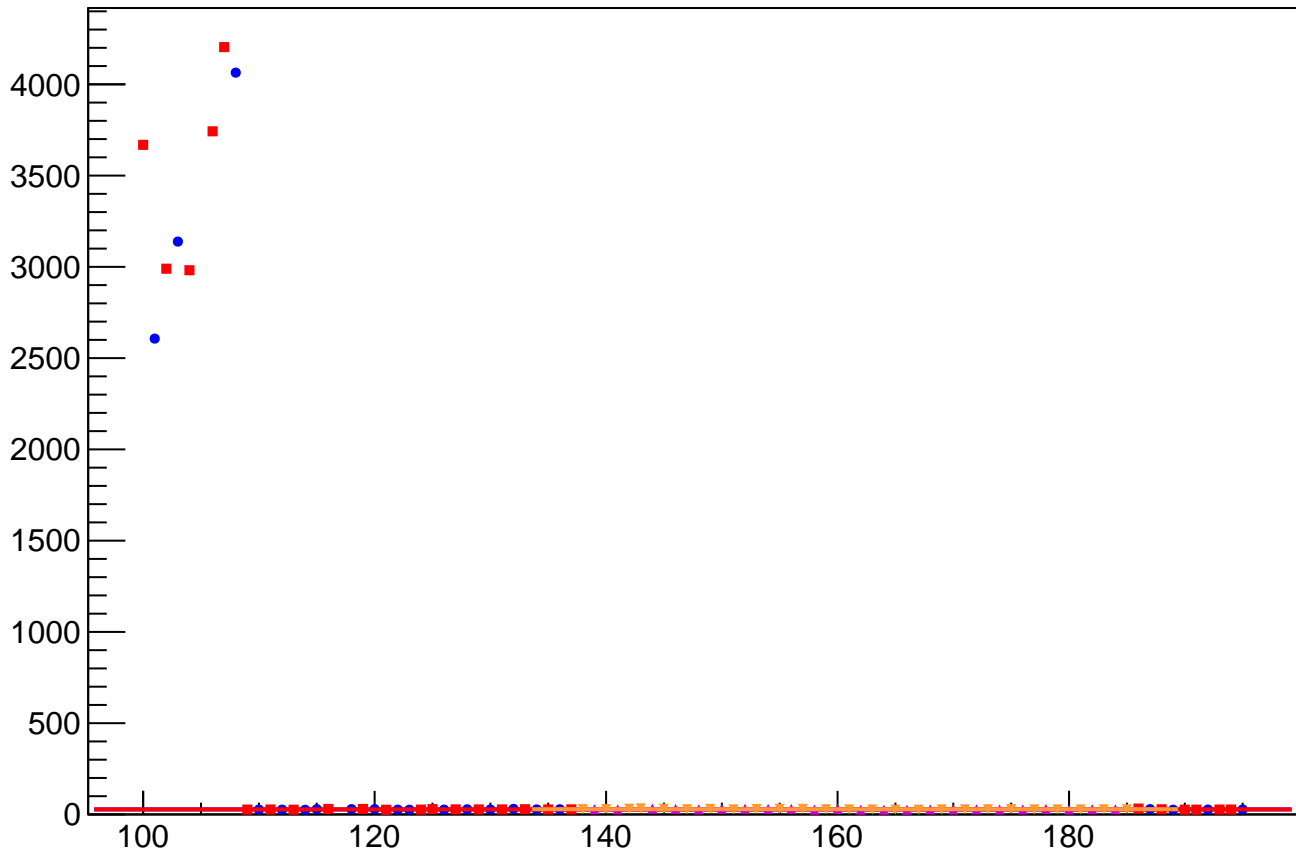
Left In: -1.038+/-6.880  $\chi^2$ /NDF:32.4/22

+ sign -9.228+/-5.583  $\chi^2$ /NDF: 47.0/45

All: -6.947+/-3.942  $\chi^2$ /NDF: 107.5/93

- sign -4.678+/-5.567  $\chi^2$ /NDF: 60.2/47

# asym\_bcm\_cav4cQ\_bcm\_an\_us\_agg\_dd\_rms vs Slug



Right In: 27.601 $\pm$ 0.007  $\chi^2$ /NDF: 3034202.2/20

Left Out: 28.691 $\pm$ 0.005  $\chi^2$ /NDF: 110483.8/24

Right Out: 27.638 $\pm$ 0.007  $\chi^2$ /NDF: 3499117.0/24

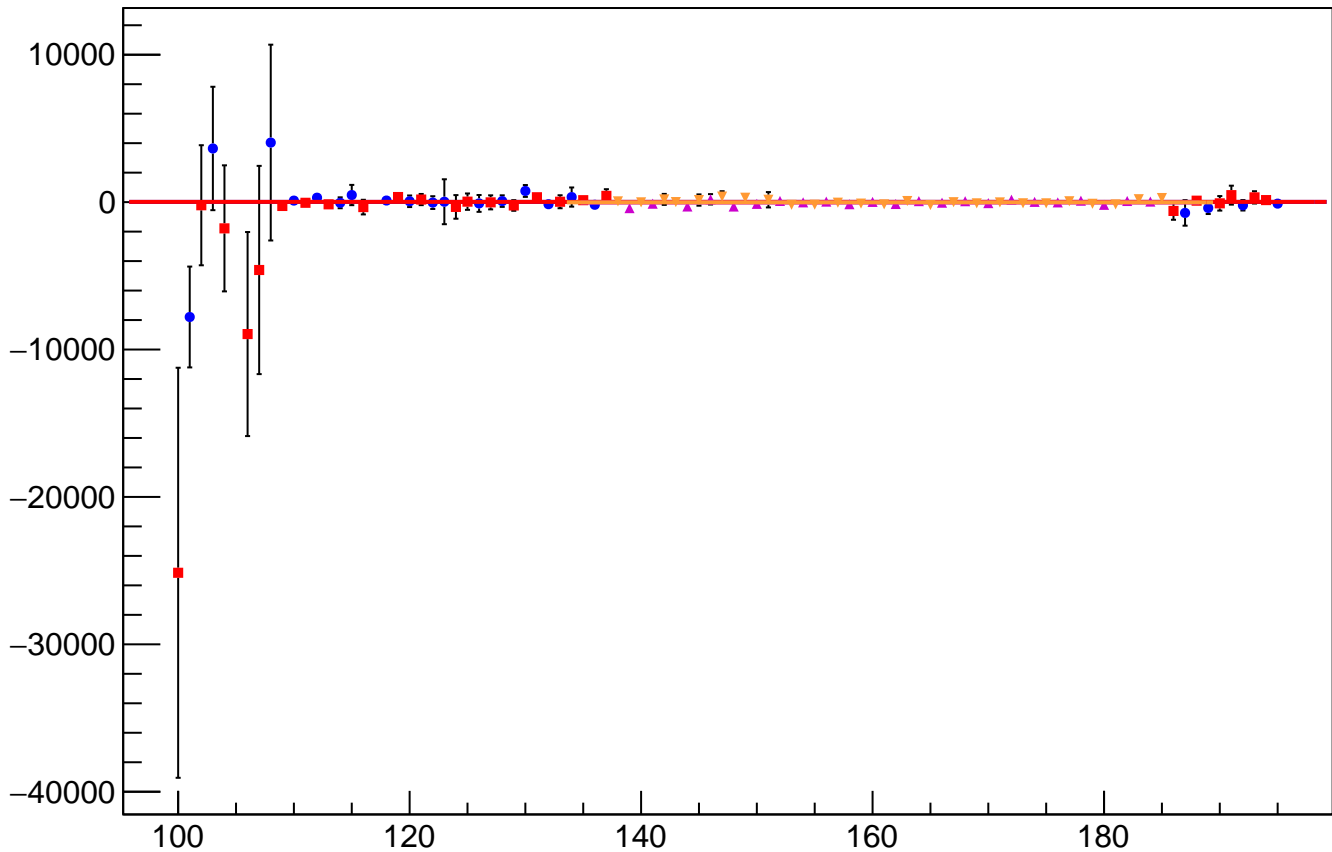
Left In: 28.673 $\pm$ 0.005  $\chi^2$ /NDF: 124751.4/22

+ sign 28.359 $\pm$ 0.004  $\chi^2$ /NDF: 3160813.1/45

All: 28.337 $\pm$ 0.003  $\chi^2$ /NDF: 6800351.5/93

- sign 28.315 $\pm$ 0.004  $\chi^2$ /NDF: 3639477.1/47

# asym\_bcm\_cav4cQ\_bcm\_an\_ds\_agg\_avg\_mean vs Slug



Right In: 14.303+/-73.537  $\chi^2$ /NDF: 16.3/20

Left Out: -15.483+/-48.109  $\chi^2$ /NDF: 8.7/24

Right Out: 17.625+/-70.418  $\chi^2$ /NDF: 15.4/24

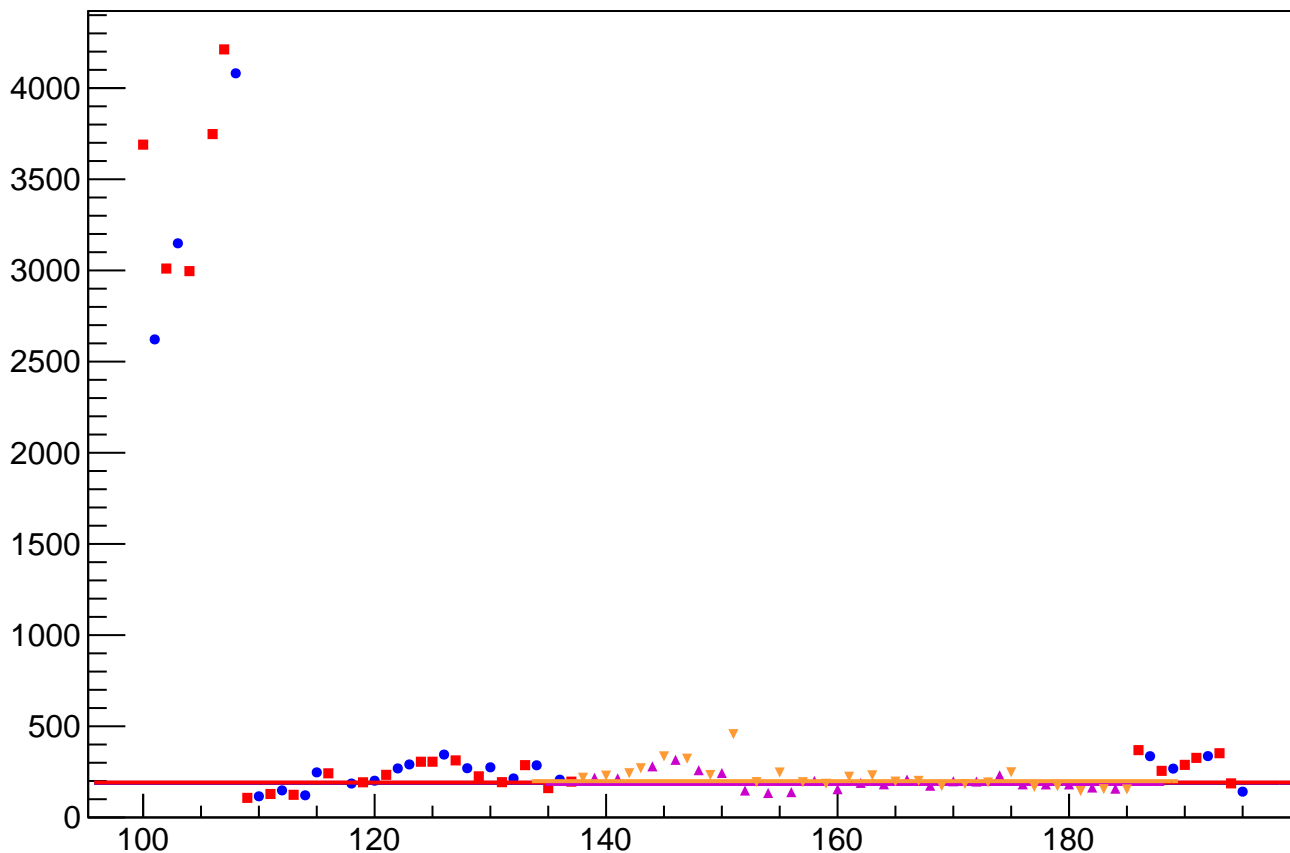
Left In: -27.009+/-45.785  $\chi^2$ /NDF: 7.8/22

+ sign -6.555+/-40.259  $\chi^2$ /NDF: 25.1/45

All: -10.323+/-27.781  $\chi^2$ /NDF: 48.6/93

- sign -13.747+/-38.385  $\chi^2$ /NDF: 23.5/47

asym\_bcm\_cav4cQ\_bcm\_an\_ds\_agg\_avg\_rms vs Slug



Right In: 189.596 $\pm$ 0.052  $\chi^2$ /NDF: 4256199.1/20

Left Out: 199.094 $\pm$ 0.034  $\chi^2$ /NDF:1880343.4/24

Right Out: 191.483 $\pm$ 0.050  $\chi^2$ /NDF: 5075595.6/24

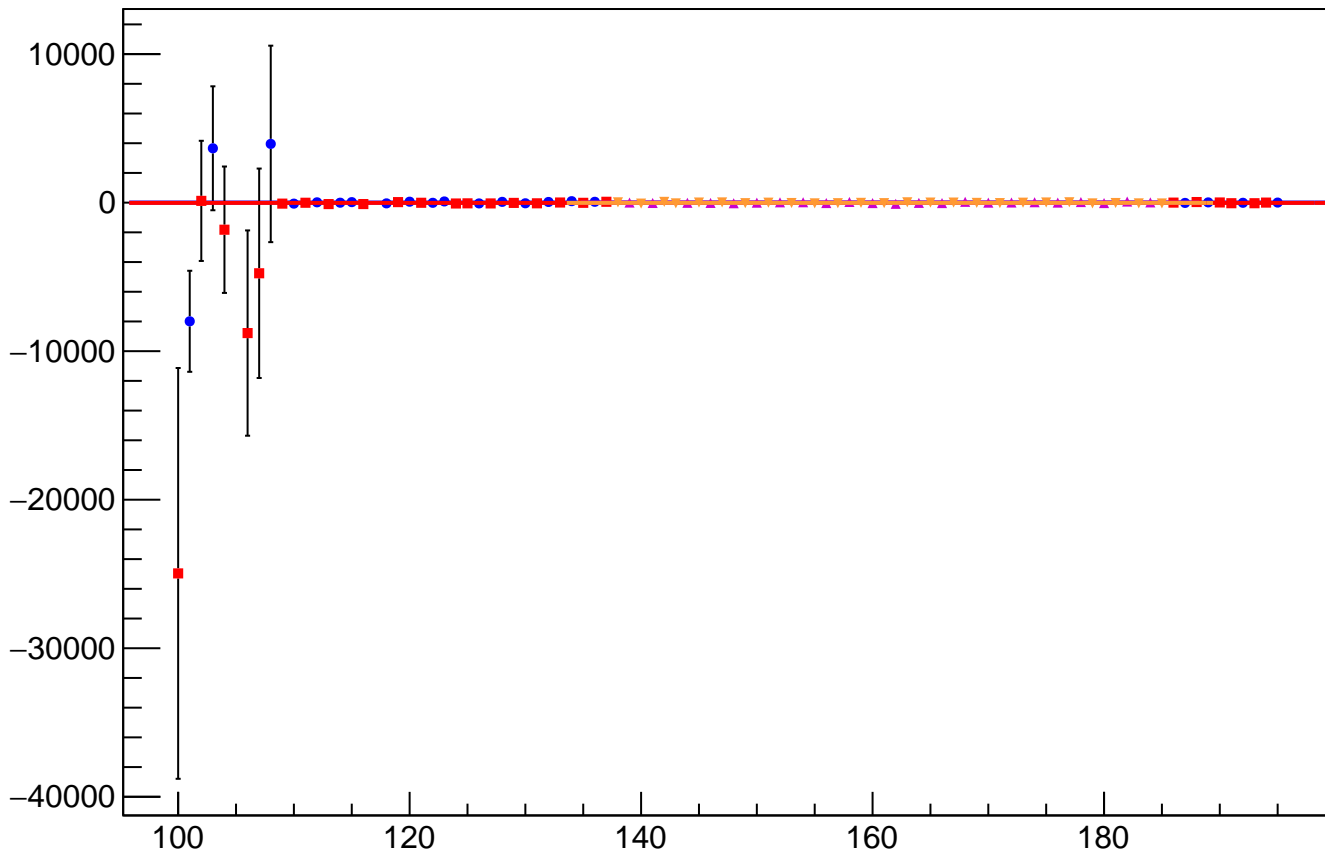
Left In: 183.667 $\pm$ 0.032  $\chi^2$ /NDF:1422895.7/22

+ sign 196.247 $\pm$ 0.028  $\chi^2$ /NDF: 6159905.3/45

All: 190.874 $\pm$ 0.020  $\chi^2$ /NDF: 12743726.6/90

- sign 185.990 $\pm$ 0.027  $\chi^2$ /NDF: 6515810.7/47

# asym\_bcm\_cav4cQ\_bcm\_an\_ds\_agg\_dd\_mean vs Slug



Right In: 5.287+/-10.161  $\chi^2$ /NDF: 23.4/20

Left Out: -15.006+/-6.723  $\chi^2$ /NDF:17.5/24

Right Out: -16.750+/-9.508  $\chi^2$ /NDF: 22.6/24

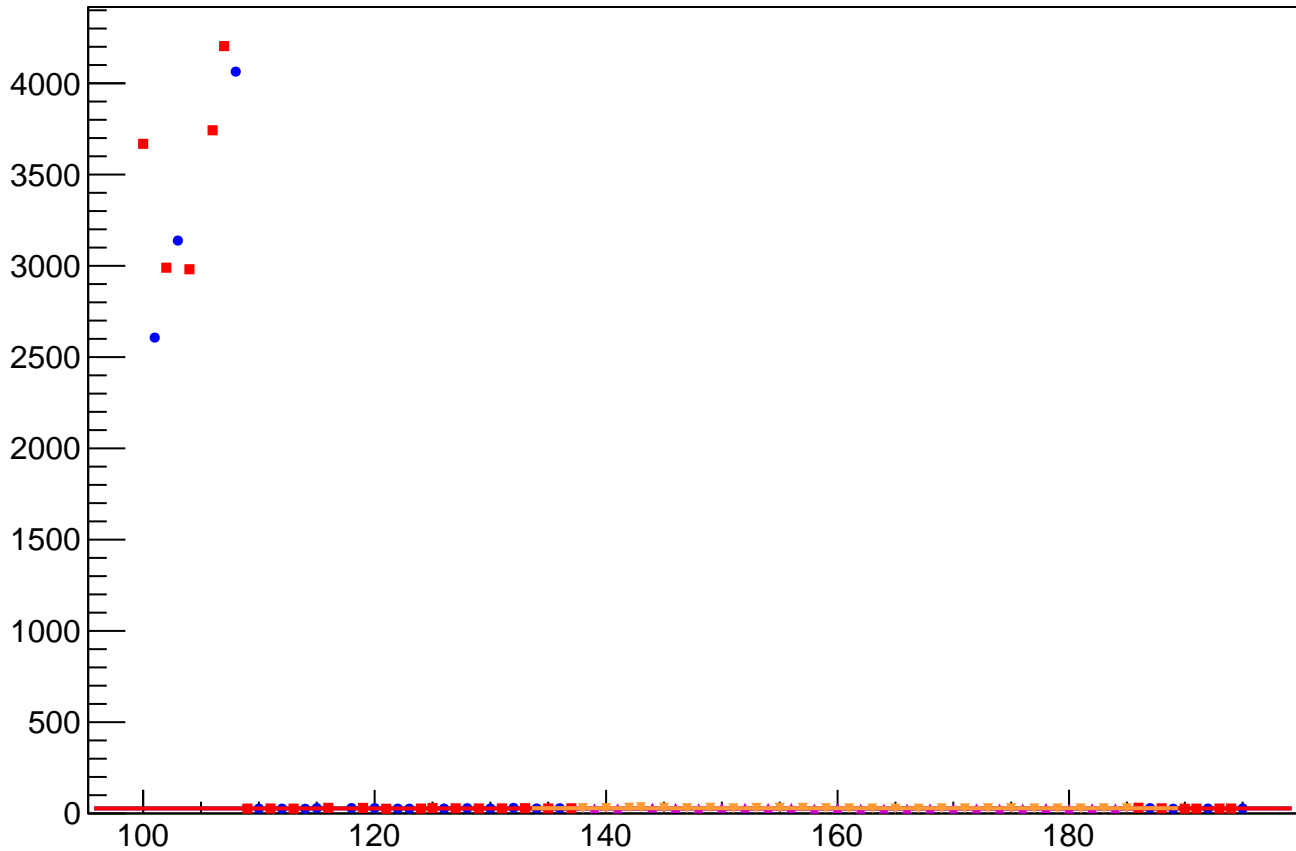
Left In: 0.702+/-6.909  $\chi^2$ /NDF:26.4/22

+ sign -8.827+/-5.607  $\chi^2$ /NDF: 43.6/45

All: -7.072+/-3.959  $\chi^2$ /NDF: 95.0/93

- sign -5.328+/-5.589  $\chi^2$ /NDF: 51.1/47

# asym\_bcm\_cav4cQ\_bcm\_an\_ds\_agg\_dd\_rms vs Slug



Right In: 27.713+/-0.007  $\chi^2$ /NDF: 3036622.3/20

Left Out: 28.813+/-0.005  $\chi^2$ /NDF: 121973.8/24

Right Out: 27.745+/-0.007  $\chi^2$ /NDF: 3497319.8/24

Left In: 28.792+/-0.005  $\chi^2$ /NDF: 129393.1/22

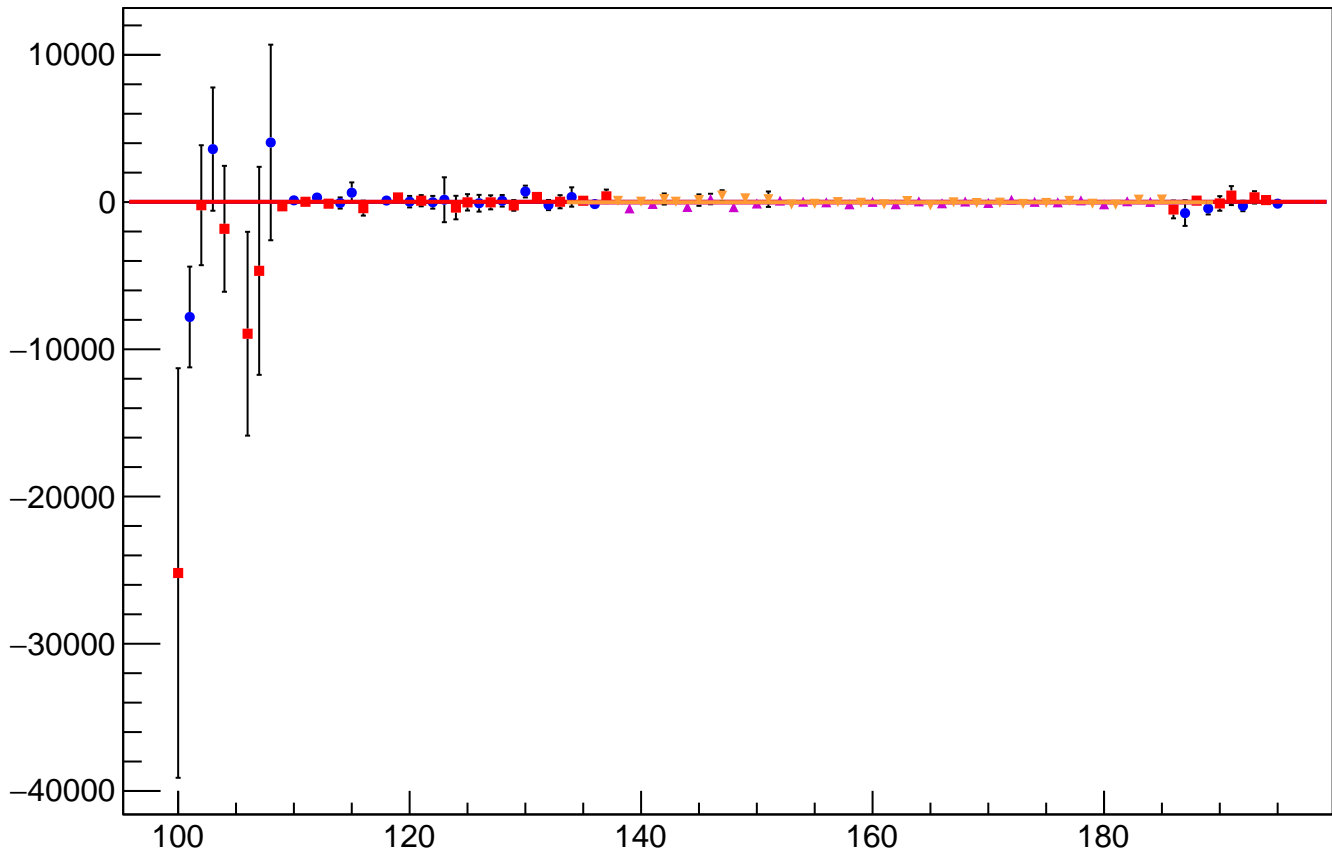
+ sign 28.478+/-0.004  $\chi^2$ /NDF: 3174886.0/45

All: 28.454+/-0.003  $\chi^2$ /NDF: 6817548.3/93

- sign 28.431+/-0.004  $\chi^2$ /NDF: 3642591.0/47



# asym\_bcm\_cav4cQ\_bcm\_dg\_us\_agg\_avg\_mean vs Slug



Right In: 12.803+/-74.171  $\chi^2/\text{NDF}$ : 16.7/20

Left Out: -15.548+/-48.688  $\chi^2/\text{NDF}$ : 8.0/24

Right Out: 19.316+/-71.171  $\chi^2/\text{NDF}$ : 14.5/24

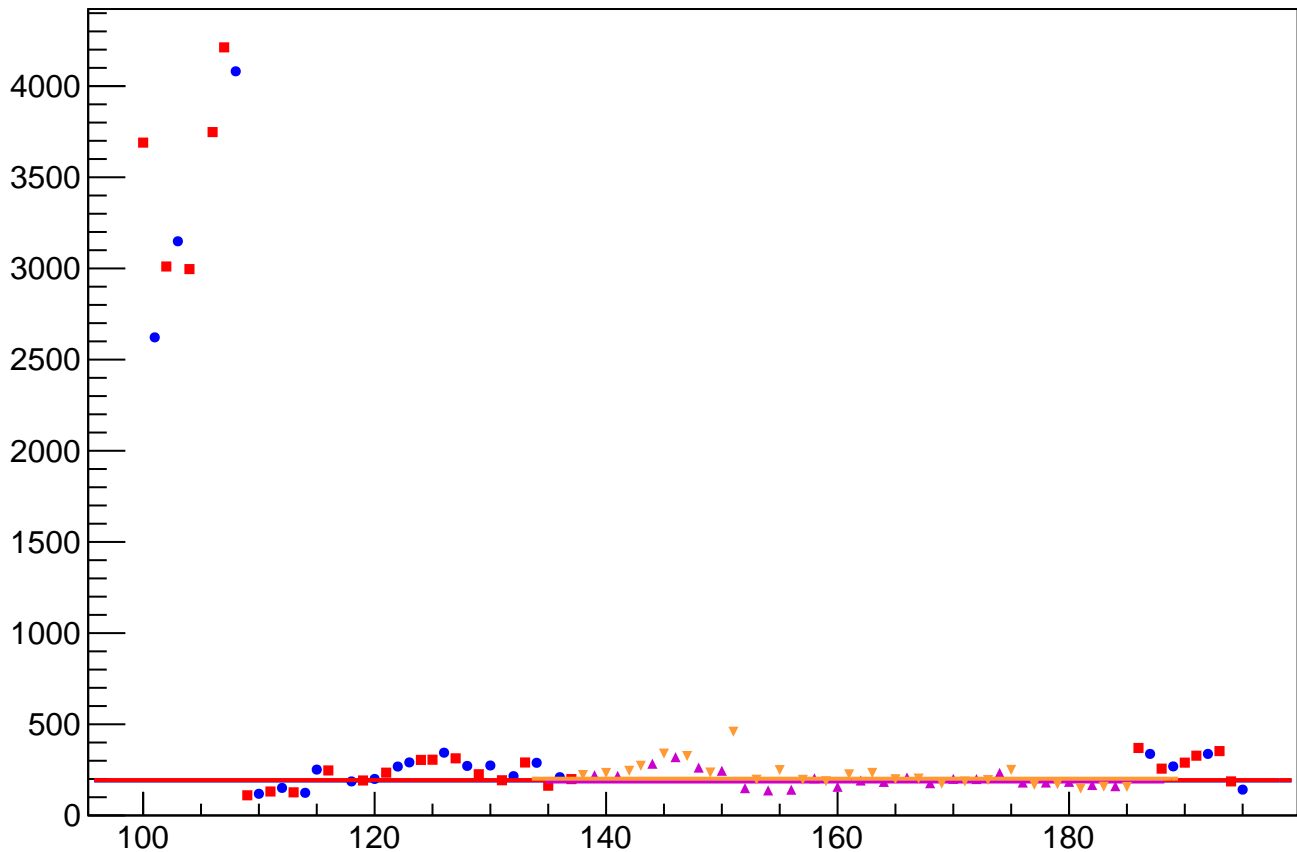
Left In: -31.170+/-46.359  $\chi^2/\text{NDF}$ : 8.2/22

+ sign -7.010+/-40.702  $\chi^2/\text{NDF}$ : 24.8/45

All: -11.783+/-28.101  $\chi^2/\text{NDF}$ : 47.8/93

- sign -16.130+/-38.845  $\chi^2/\text{NDF}$ : 23.0/47

# asym\_bcm\_cav4cQ\_bcm\_dg\_us\_agg\_avg\_rms vs Slug



Right In: 191.505+/-0.052  $\chi^2/\text{NDF}$ : 4215358.6/20

Left Out: 201.600+/-0.034  $\chi^2/\text{NDF}$ : 1857453.2/24

Right Out: 194.082+/-0.050  $\chi^2/\text{NDF}$ : 4994643.5/24

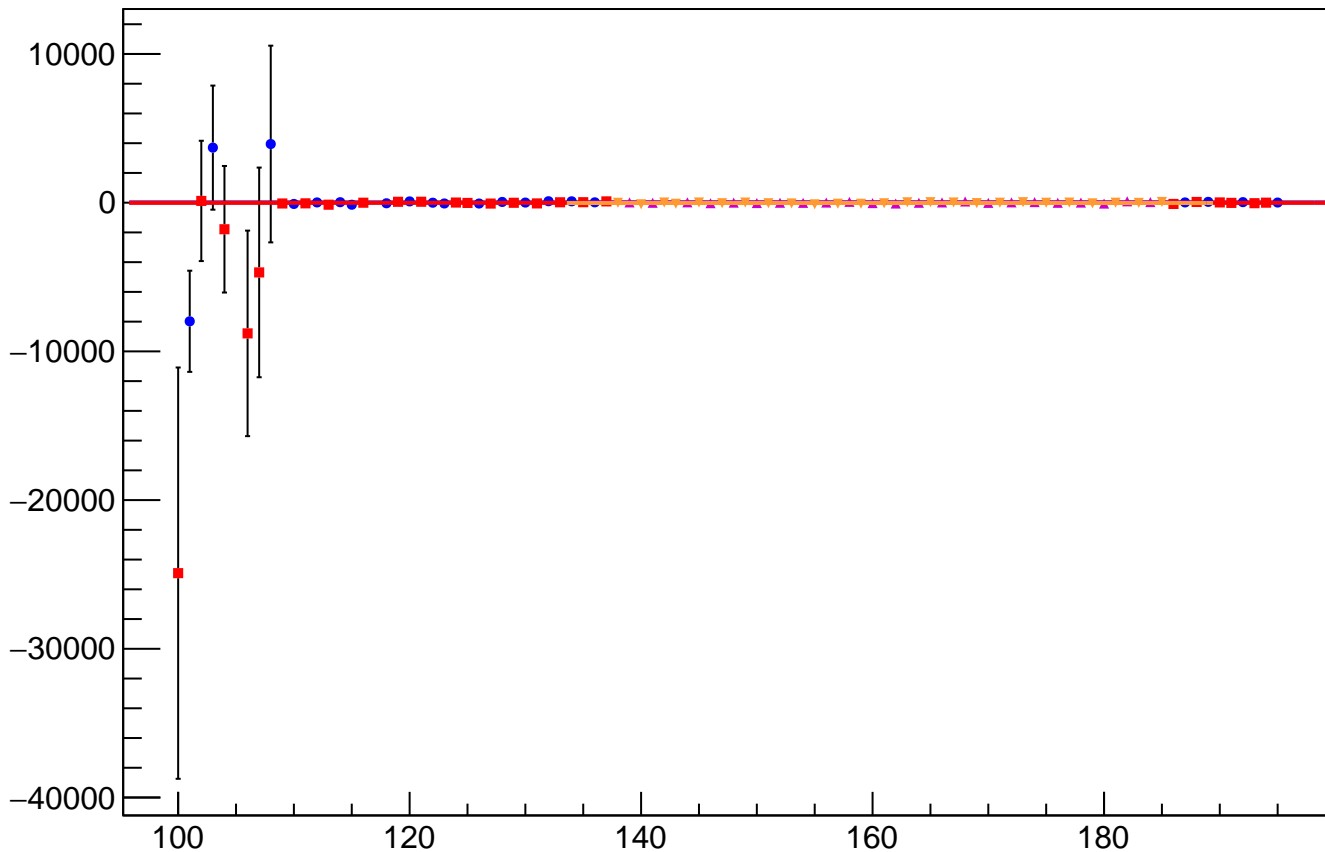
Left In: 186.107+/-0.033  $\chi^2/\text{NDF}$ : 1391327.2/22

+ sign 198.560+/-0.029  $\chi^2/\text{NDF}$ : 6098703.8/45

All: 193.286+/-0.020  $\chi^2/\text{NDF}$ : 12566466.7/90

- sign 188.483+/-0.027  $\chi^2/\text{NDF}$ : 6403602.0/47

# asym\_bcm\_cav4cQ\_bcm\_dg\_us\_agg\_dd\_mean vs Slug



Right In: 14.244+/-12.395  $\chi^2/\text{NDF}$ : 21.6/20

Left Out: -23.360+/-8.064  $\chi^2/\text{NDF}$ : 25.8/24

Right Out: -7.679+/-11.579  $\chi^2/\text{NDF}$ : 26.2/24

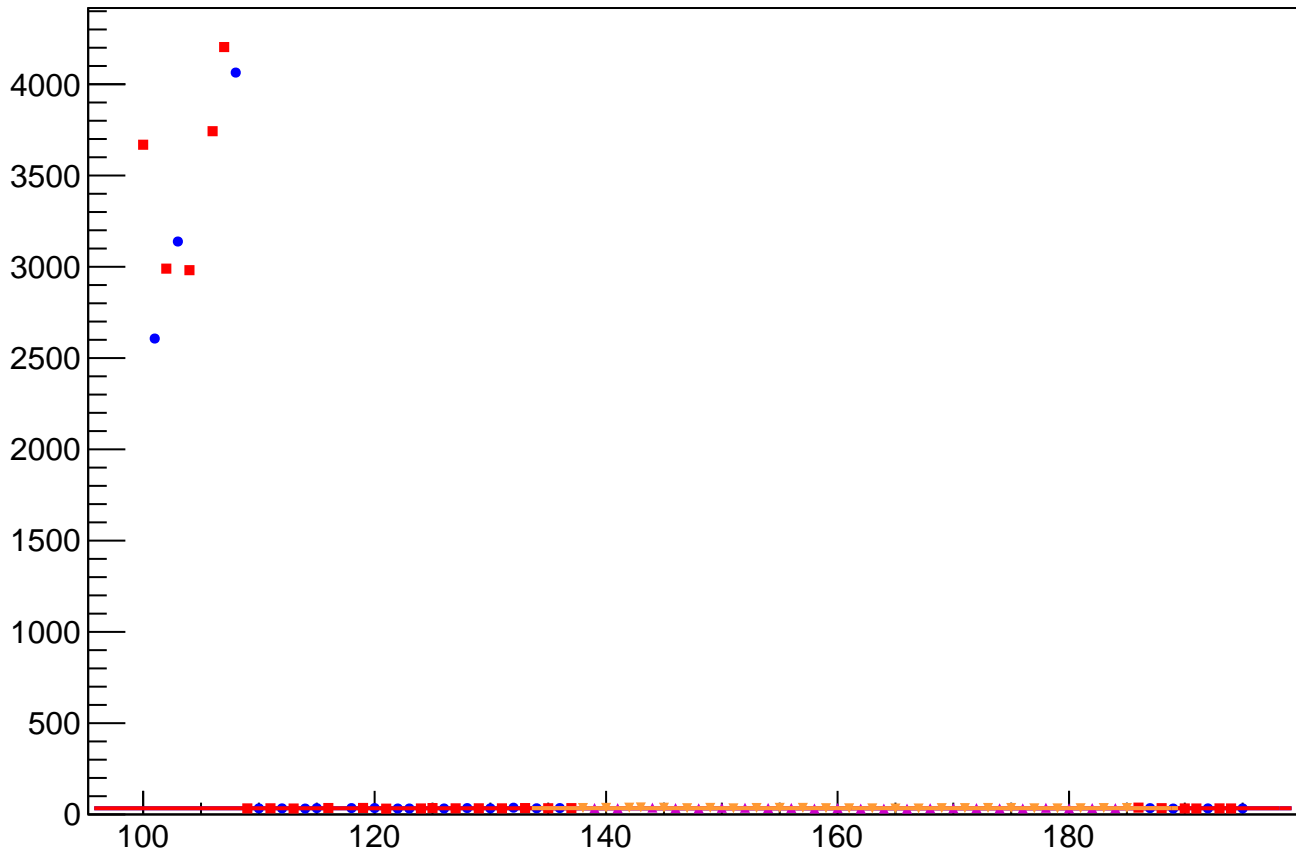
Left In: 6.001+/-8.309  $\chi^2/\text{NDF}$ : 21.1/22

+ sign -12.176+/-6.760  $\chi^2/\text{NDF}$ : 53.8/45

All: -5.403+/-4.777  $\chi^2/\text{NDF}$ : 104.1/93

- sign 1.351+/-6.751  $\chi^2/\text{NDF}$ : 48.3/47

# asym\_bcm\_cav4cQ\_bcm\_dg\_us\_agg\_dd\_rms vs Slug



Right In: 33.837 $\pm$ 0.009  $\chi^2$ /NDF: 3011034.2/20

Left Out: 34.614 $\pm$ 0.006  $\chi^2$ /NDF: 57946.1/24

Right Out: 33.854 $\pm$ 0.008  $\chi^2$ /NDF: 3462153.2/24

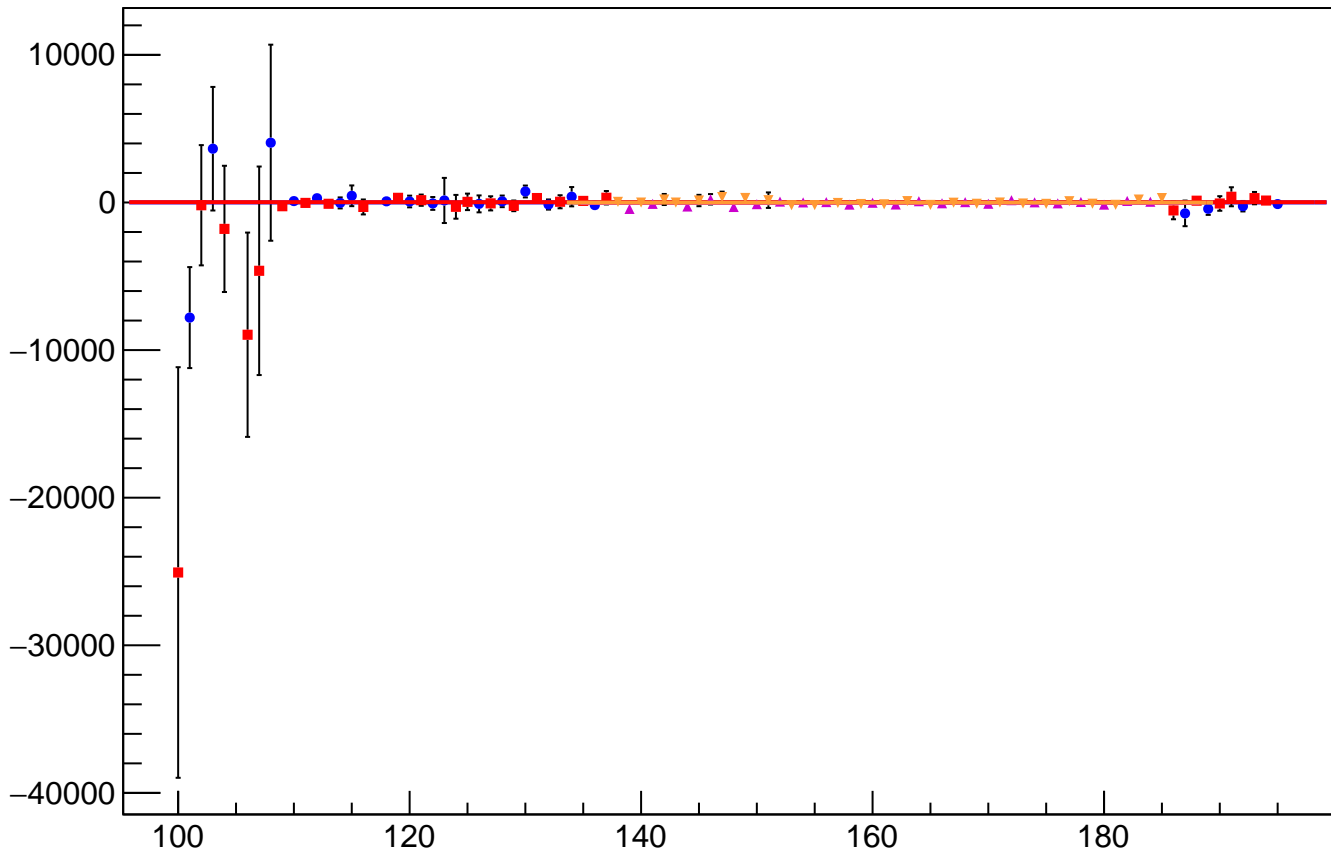
Left In: 34.685 $\pm$ 0.006  $\chi^2$ /NDF: 60315.2/22

+ sign 34.383 $\pm$ 0.005  $\chi^2$ /NDF: 3074503.6/45

All: 34.393 $\pm$ 0.003  $\chi^2$ /NDF: 6603787.6/93

- sign 34.402 $\pm$ 0.005  $\chi^2$ /NDF: 3529276.0/47

# asym\_bcm\_cav4cQ\_bcm\_dg\_ds\_agg\_avg\_mean vs Slug



Right In: 5.085+/-73.902  $\chi^2$ /NDF: 16.3/20

Left Out: -8.916+/-48.615  $\chi^2$ /NDF: 8.6/24

Right Out: 21.468+/-70.805  $\chi^2$ /NDF: 13.2/24

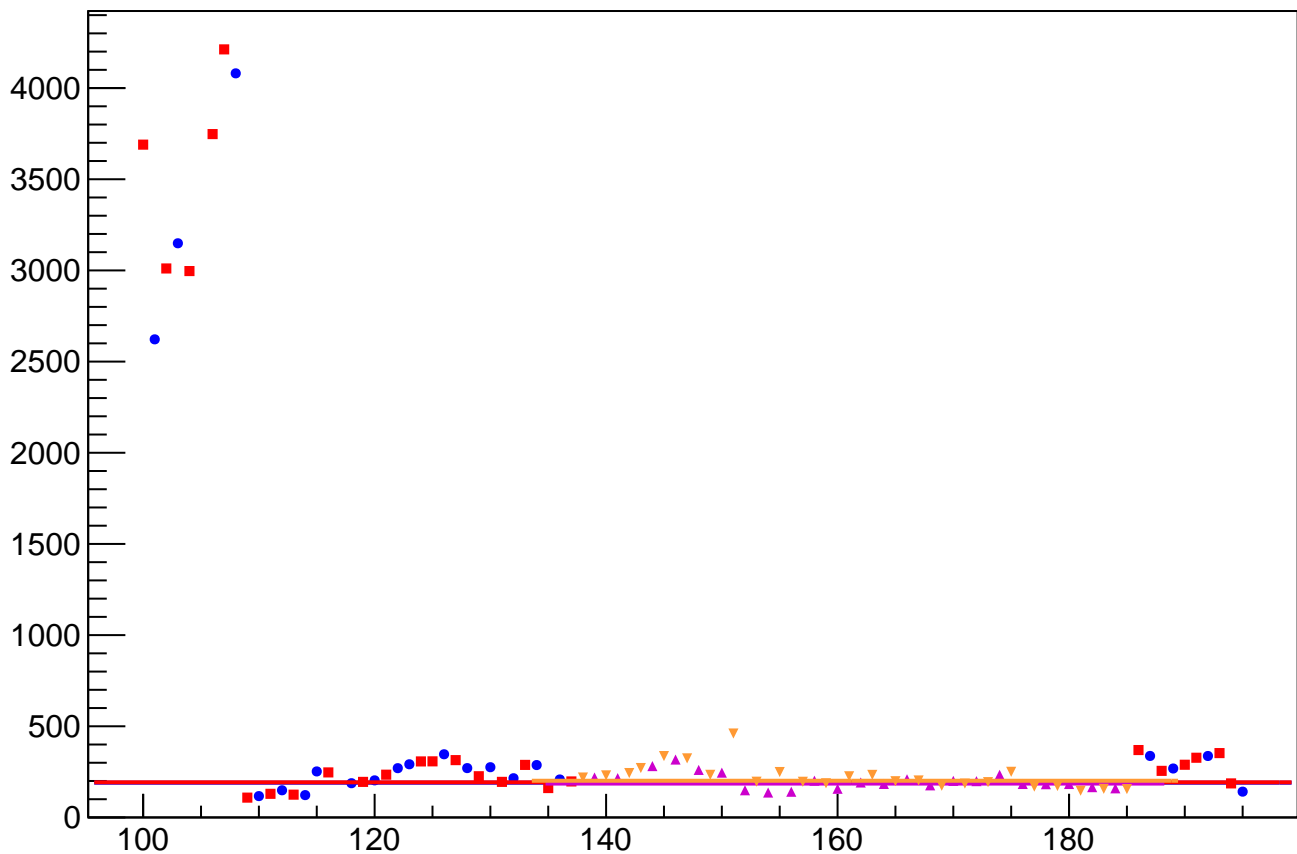
Left In: -34.127+/-46.296  $\chi^2$ /NDF: 7.4/22

+ sign -4.688+/-40.615  $\chi^2$ /NDF: 24.9/45

All: -11.383+/-28.036  $\chi^2$ /NDF: 46.1/93

- sign -17.477+/-38.748  $\chi^2$ /NDF: 21.1/47

asym\_bcm\_cav4cQ\_bcm\_dg\_ds\_agg\_avg\_rms vs Slug



Right In: 190.591 $\pm$ 0.052  $\chi^2$ /NDF: 4249957.9/20

Left Out: 201.296 $\pm$ 0.034  $\chi^2$ /NDF:1851134.1/24

Right Out: 192.687 $\pm$ 0.050  $\chi^2$ /NDF: 5054641.8/24

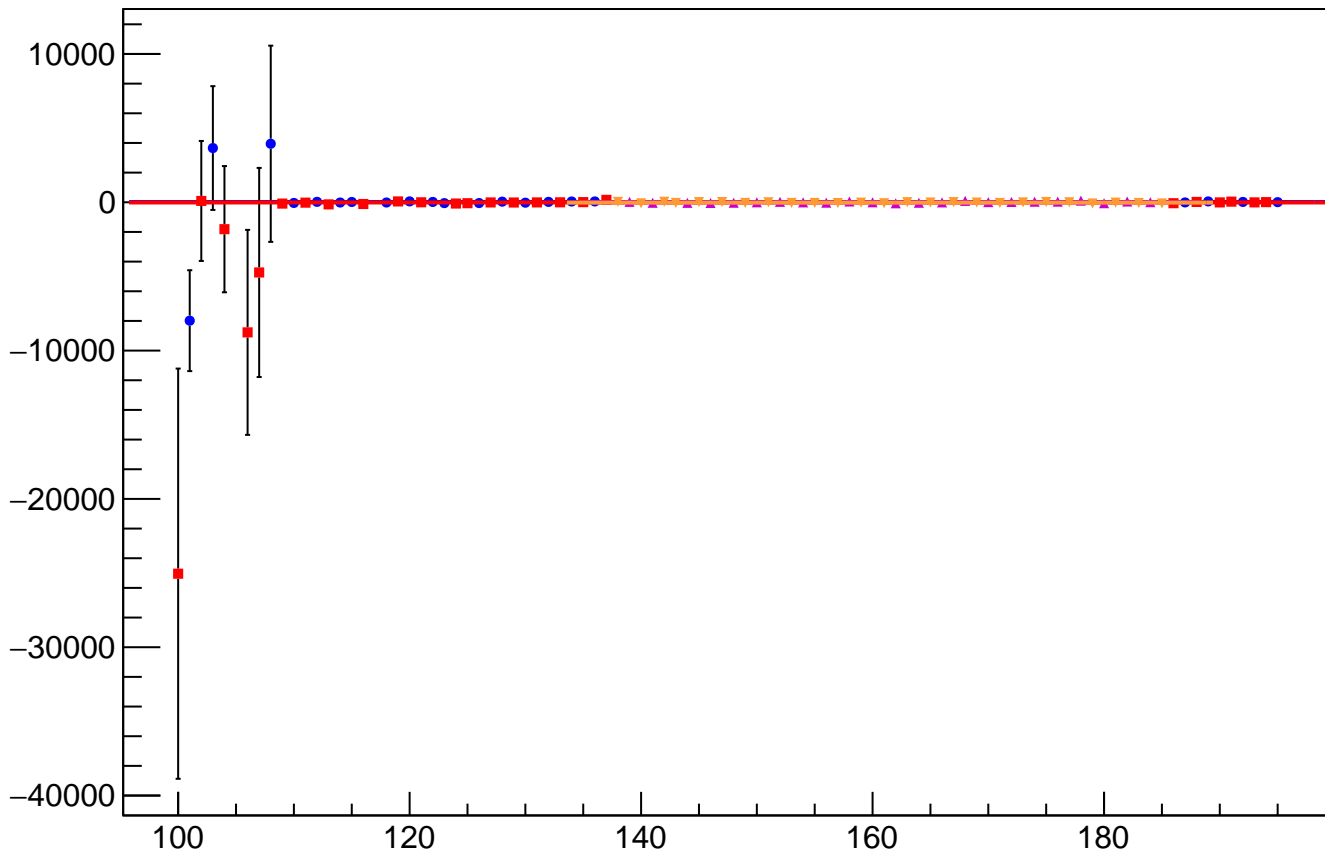
Left In: 185.854 $\pm$ 0.033  $\chi^2$ /NDF:1381771.9/22

+ sign 198.063 $\pm$ 0.029  $\chi^2$ /NDF: 6130383.4/45

All: 192.743 $\pm$ 0.020  $\chi^2$ /NDF: 12645399.0/90

- sign 187.900 $\pm$ 0.027  $\chi^2$ /NDF: 6449463.6/47

# asym\_bcm\_cav4cQ\_bcm\_dg\_ds\_agg\_dd\_mean vs Slug



Right In: 15.887 $\pm$ 11.250  $\chi^2$ /NDF: 15.7/20

Left Out: -22.879 $\pm$ 7.340  $\chi^2$ /NDF:18.8/24

Right Out: -11.229 $\pm$ 10.510  $\chi^2$ /NDF: 31.8/24

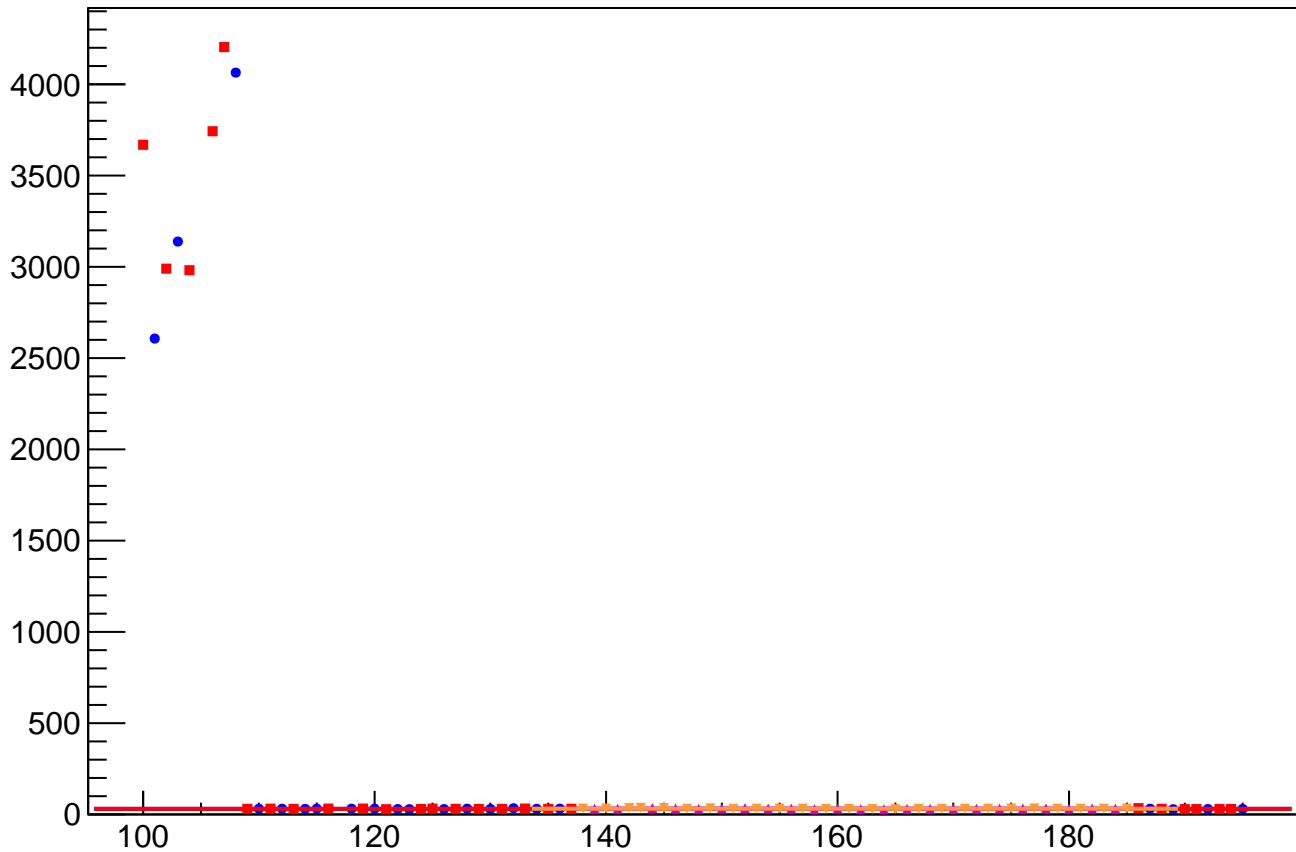
Left In: 5.943 $\pm$ 7.550  $\chi^2$ /NDF:38.3/22

+ sign -11.304 $\pm$ 6.147  $\chi^2$ /NDF: 42.8/45

All: -5.588 $\pm$ 4.341  $\chi^2$ /NDF: 116.5/93

- sign 0.099 $\pm$ 6.132  $\chi^2$ /NDF: 71.9/47

# asym\_bcm\_cav4cQ\_bcm\_dg\_ds\_agg\_dd\_rms vs Slug



Right In: 30.706 $\pm$ 0.008  $\chi^2$ /NDF: 3023811.1/20

Left Out: 31.482 $\pm$ 0.005  $\chi^2$ /NDF:82437.2/24

Right Out: 30.698 $\pm$ 0.007  $\chi^2$ /NDF: 3475550.5/24

Left In: 31.484 $\pm$ 0.005  $\chi^2$ /NDF:87981.1/22

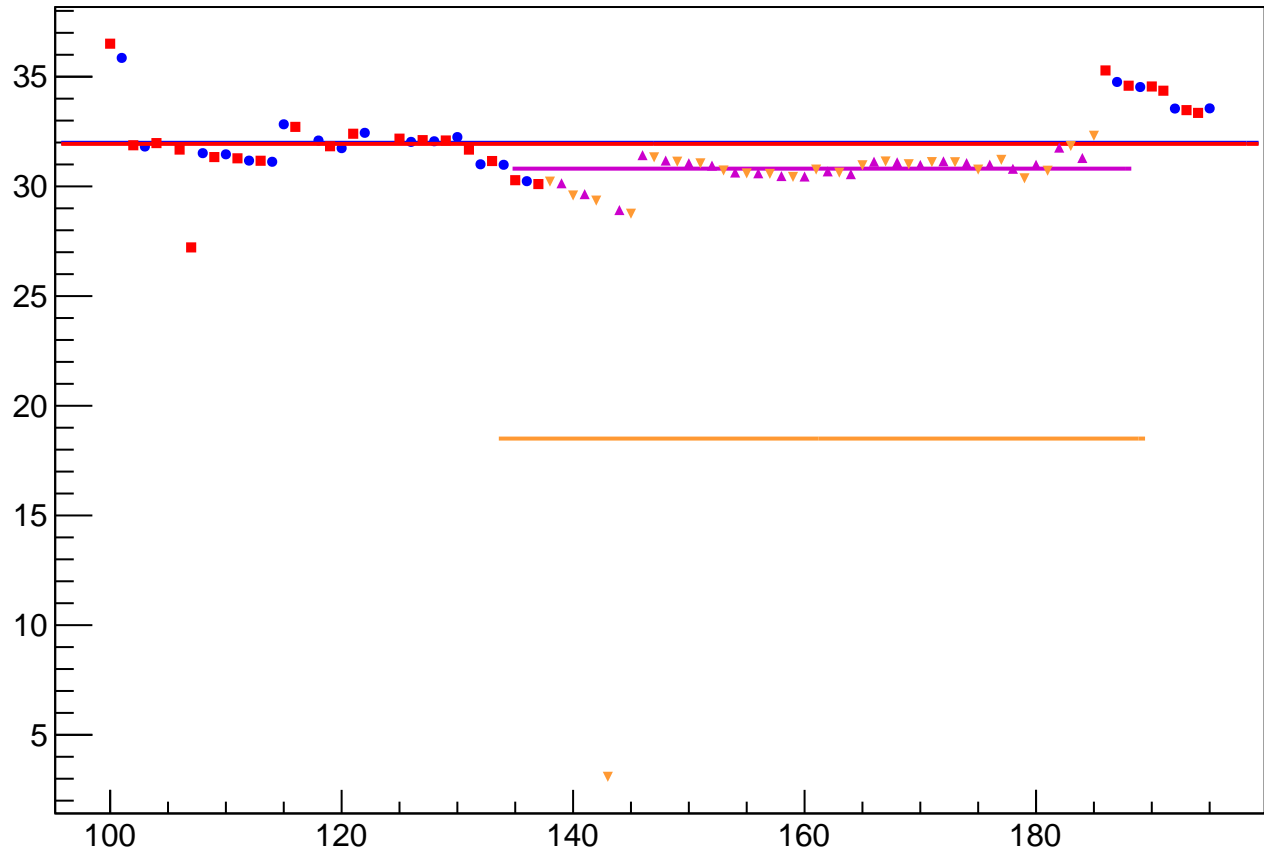
+ sign 31.250 $\pm$ 0.004  $\chi^2$ /NDF: 3112921.7/45

All: 31.233 $\pm$ 0.003  $\chi^2$ /NDF: 6683873.8/93

- sign 31.217 $\pm$ 0.004  $\chi^2$ /NDF: 3570922.6/47



# yield\_usl\_mean vs Slug



Right In: 31.988+/-0.000  $\chi^2$ /NDF: 1975182673.8/19

Left Out: 18.505+/-0.000  $\chi^2$ /NDF: 940607632746.3/24

Right Out: 31.939+/-0.000  $\chi^2$ /NDF: 1819225957.2/23

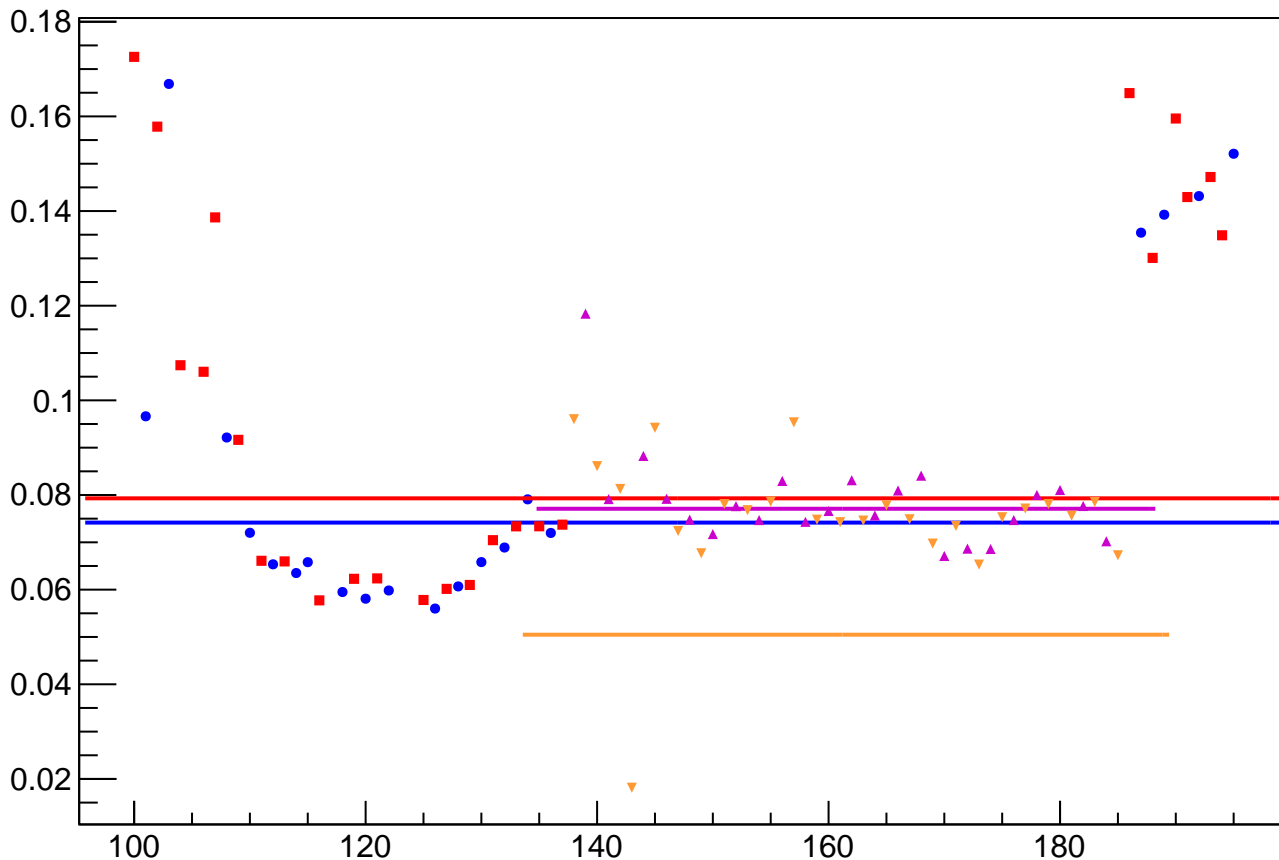
Left In: 30.809+/-0.000  $\chi^2$ /NDF: 821961762.3/22

+ sign 21.393+/-0.000  $\chi^2$ /NDF: 1135701391524.4/4

All: 25.206+/-0.000  $\chi^2$ /NDF: 1375267581520

- sign 31.190+/-0.000  $\chi^2$ /NDF: 3787572493.3/46

# yield\_usl\_rms vs Slug



Right In: 0.074 $\pm$ 0.000  $\chi^2$ /NDF: 1810099.0/19

Left Out: 0.050 $\pm$ 0.000  $\chi^2$ /NDF:8543648.6/24

Right Out: 0.079 $\pm$ 0.000  $\chi^2$ /NDF: 2346558.8/23

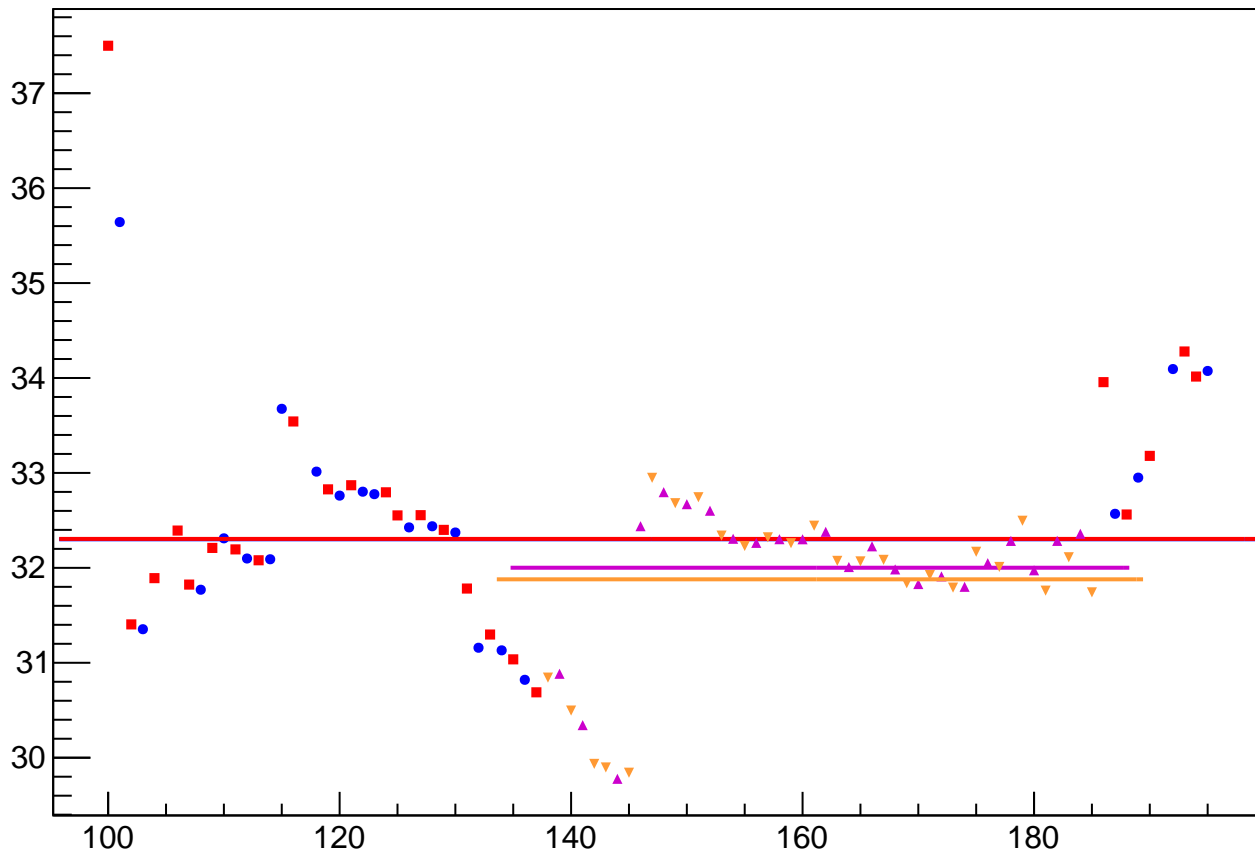
Left In: 0.077 $\pm$ 0.000  $\chi^2$ /NDF:325844.3/22

+ sign 0.056 $\pm$ 0.000  $\chi^2$ /NDF: 11545997.7/44

All: 0.064 $\pm$ 0.000  $\chi^2$ /NDF: 16666154.5/91

- sign 0.078 $\pm$ 0.000  $\chi^2$ /NDF: 2681122.9/46

# yield\_usr\_mean vs Slug



Right In: 32.301+/-0.000  $\chi^2$ /NDF: 1144033929.1/20

Left Out: 31.879+/-0.000  $\chi^2$ /NDF: 1976281391.1/24

Right Out: 32.305+/-0.000  $\chi^2$ /NDF: 648421435.7/23

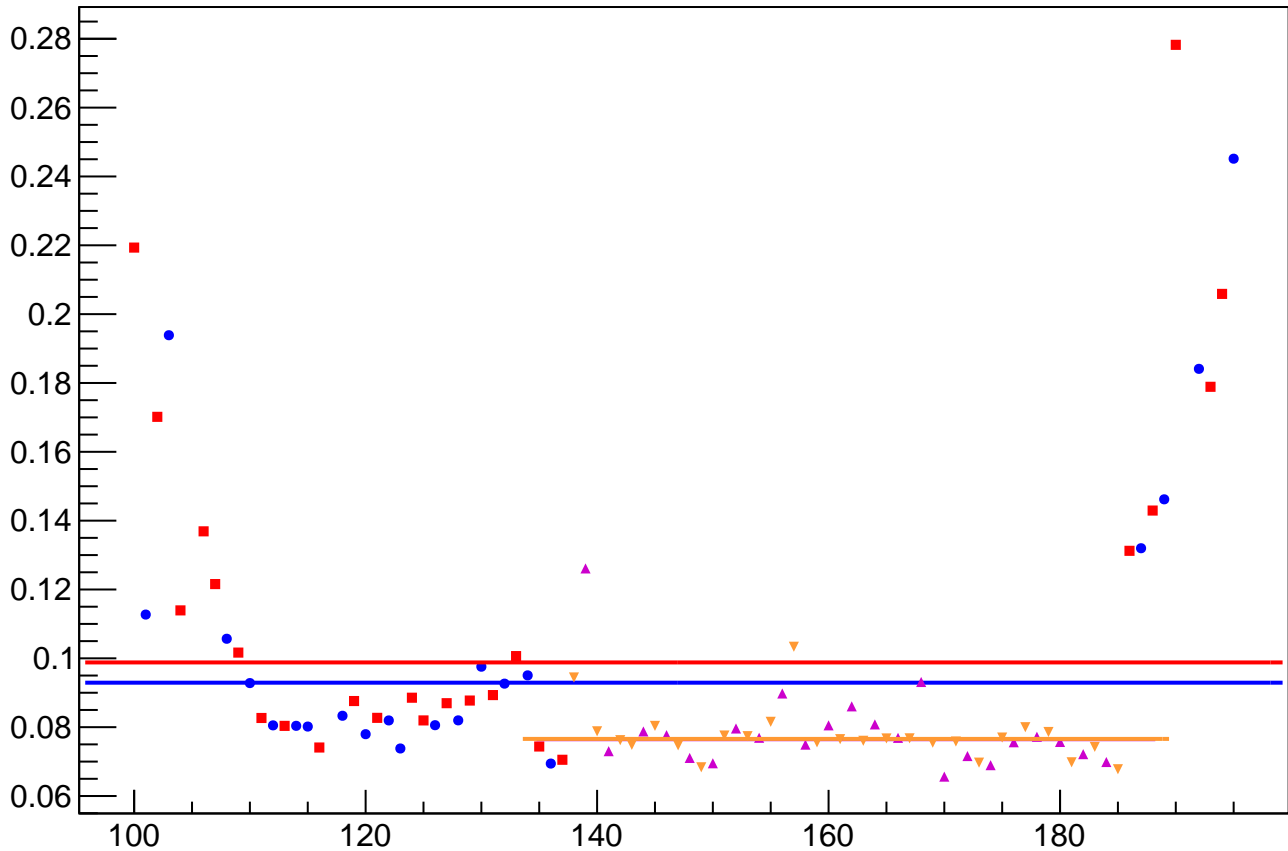
Left In: 32.001+/-0.000  $\chi^2$ /NDF: 1411110671.9/22

+ sign 31.975+/-0.000  $\chi^2$ /NDF: 3236893187.4/45

All: 32.024+/-0.000  $\chi^2$ /NDF: 5375418172.5/50

- sign 32.074+/-0.000  $\chi^2$ /NDF: 2120473938.1/46

# yield\_usr\_rms vs Slug



Right In: 0.093 $\pm$ 0.000  $\chi^2$ /NDF: 1788339.5/20

Left Out: 0.077 $\pm$ 0.000  $\chi^2$ /NDF:209648.5/24

Right Out: 0.099 $\pm$ 0.000  $\chi^2$ /NDF: 1886222.0/23

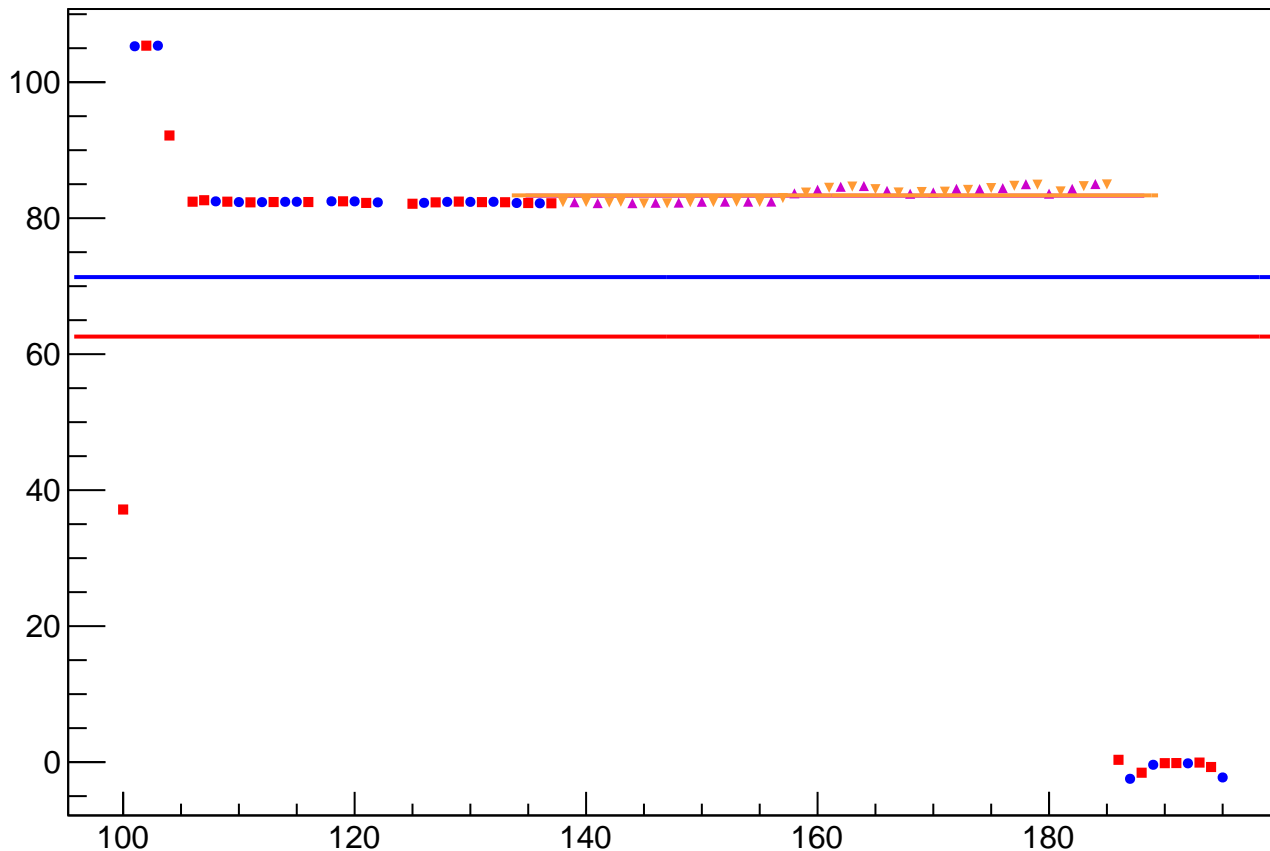
Left In: 0.076 $\pm$ 0.000  $\chi^2$ /NDF:432563.3/22

+ sign 0.080 $\pm$ 0.000  $\chi^2$ /NDF: 2347807.7/45

All: 0.081 $\pm$ 0.000  $\chi^2$ /NDF: 5333855.8/92

- sign 0.082 $\pm$ 0.000  $\chi^2$ /NDF: 2977154.8/46

# yield\_dsl\_mean vs Slug



Right In: 71.335+/-0.000  $\chi^2$ /NDF: 5262817410864.3/19

Left Out: 83.355+/-0.000  $\chi^2$ /NDF: 9142393022.8/24

Right Out: 62.586+/-0.000  $\chi^2$ /NDF: 7604748399391.1/23

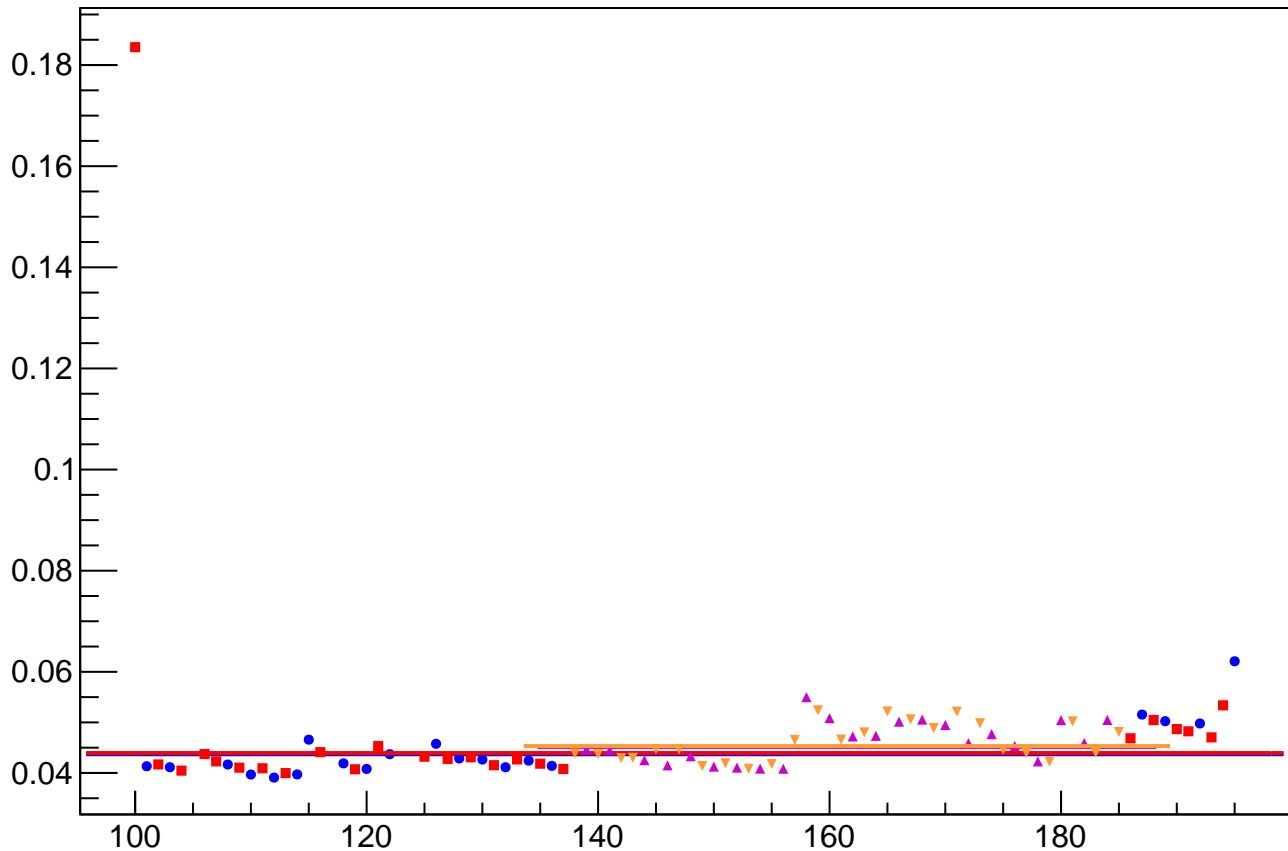
Left In: 83.309+/-0.000  $\chi^2$ /NDF: 8421247810.9/22

+ sign 79.230+/-0.000  $\chi^2$ /NDF: 5703327129108.3/4

All: 77.226+/-0.000  $\chi^2$ /NDF: 1480692886907

- sign 75.273+/-0.000  $\chi^2$ /NDF: 8998541220583.5/4

# yield\_dsl\_rms vs Slug



Right In: 0.044 $\pm$ 0.000  $\chi^2$ /NDF: 235596.3/19

Left Out: 0.045 $\pm$ 0.000  $\chi^2$ /NDF:211358.2/24

Right Out: 0.044 $\pm$ 0.000  $\chi^2$ /NDF: 227351.2/23

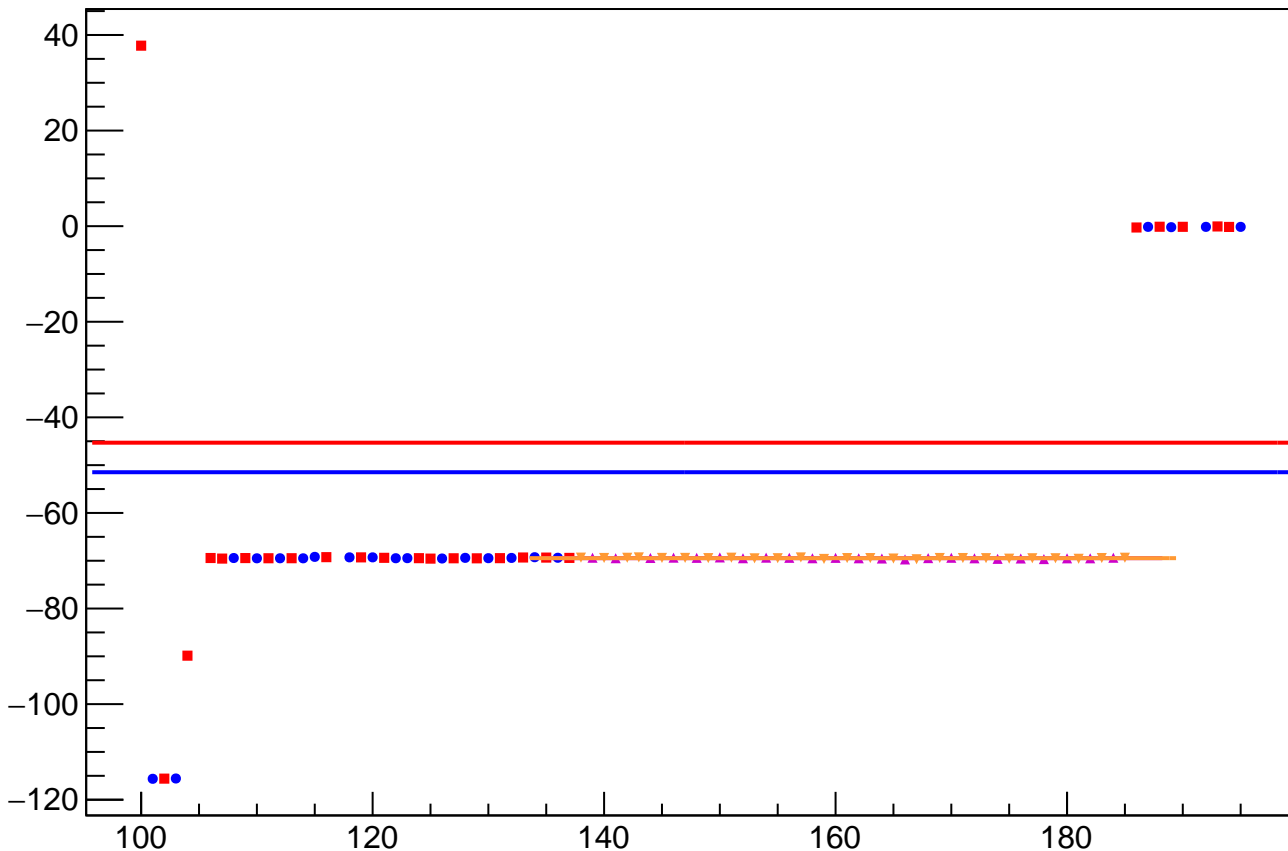
Left In: 0.045 $\pm$ 0.000  $\chi^2$ /NDF:242885.4/22

+ sign 0.045 $\pm$ 0.000  $\chi^2$ /NDF: 462511.7/44

All: 0.045 $\pm$ 0.000  $\chi^2$ /NDF: 942149.3/91

- sign 0.045 $\pm$ 0.000  $\chi^2$ /NDF: 479543.5/46

# yield\_dsr\_mean vs Slug



Right In:  $-51.481 \pm 0.000$   $\chi^2/\text{NDF}: 4326984706290.6/20$

Left Out:  $-69.461 \pm 0.000$   $\chi^2/\text{NDF}: 49572401.9/24$

Right Out:  $-45.301 \pm 0.000$   $\chi^2/\text{NDF}: 4812858269557.5/23$

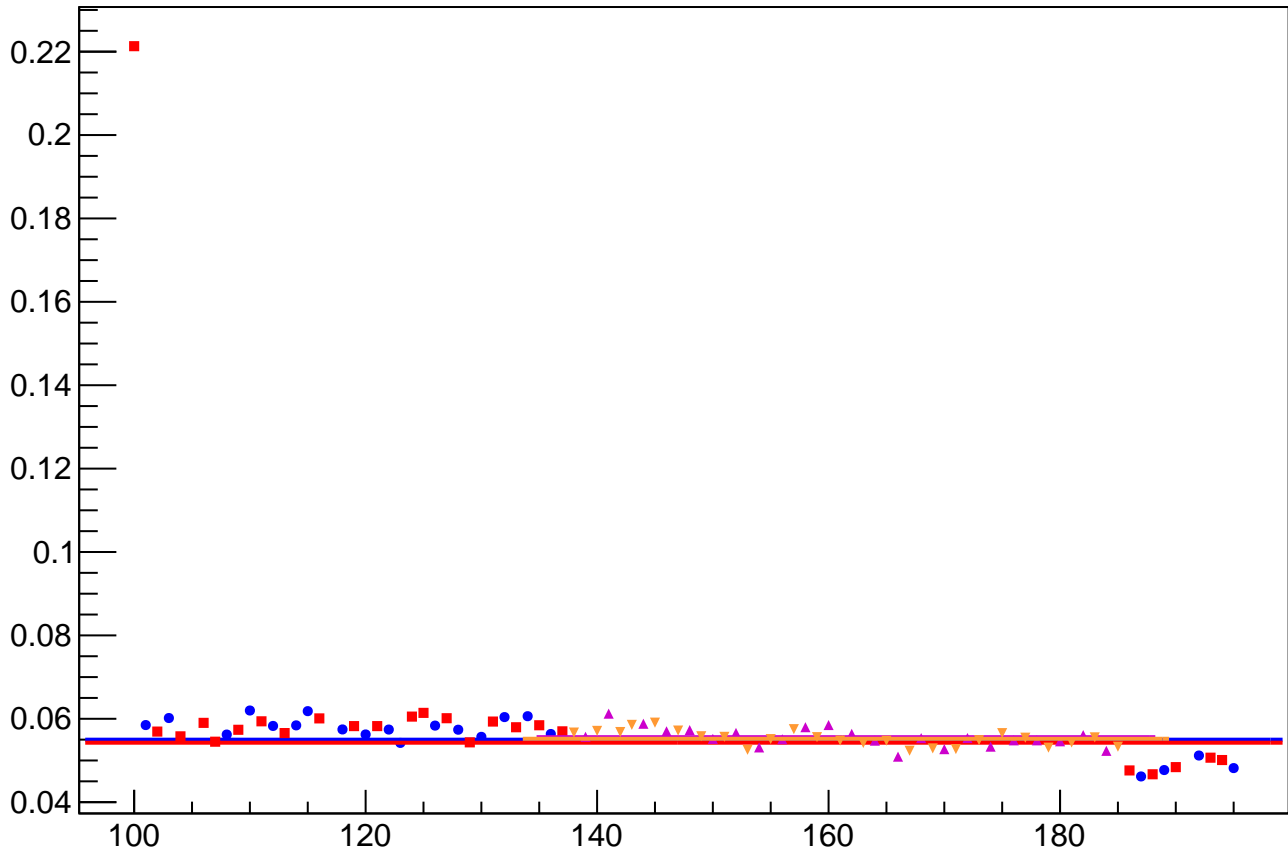
Left In:  $-69.458 \pm 0.000$   $\chi^2/\text{NDF}: 52798704.3/22$

+ sign  $-63.542 \pm 0.000$   $\chi^2/\text{NDF}: 4947526620523.8/24$

All:  $-61.881 \pm 0.000$   $\chi^2/\text{NDF}: 110214769655.5/23$

- sign  $-60.242 \pm 0.000$   $\chi^2/\text{NDF}: 6026288328920.5/24$

# yield\_dsr\_rms vs Slug



Right In: 0.055+/-0.000  $\chi^2/\text{NDF}$ : 119834.3/20

Left Out: 0.055+/-0.000  $\chi^2/\text{NDF}$ :38761.8/24

Right Out: 0.054+/-0.000  $\chi^2/\text{NDF}$ : 230224.1/23

Left In: 0.056+/-0.000  $\chi^2/\text{NDF}$ :52190.5/22

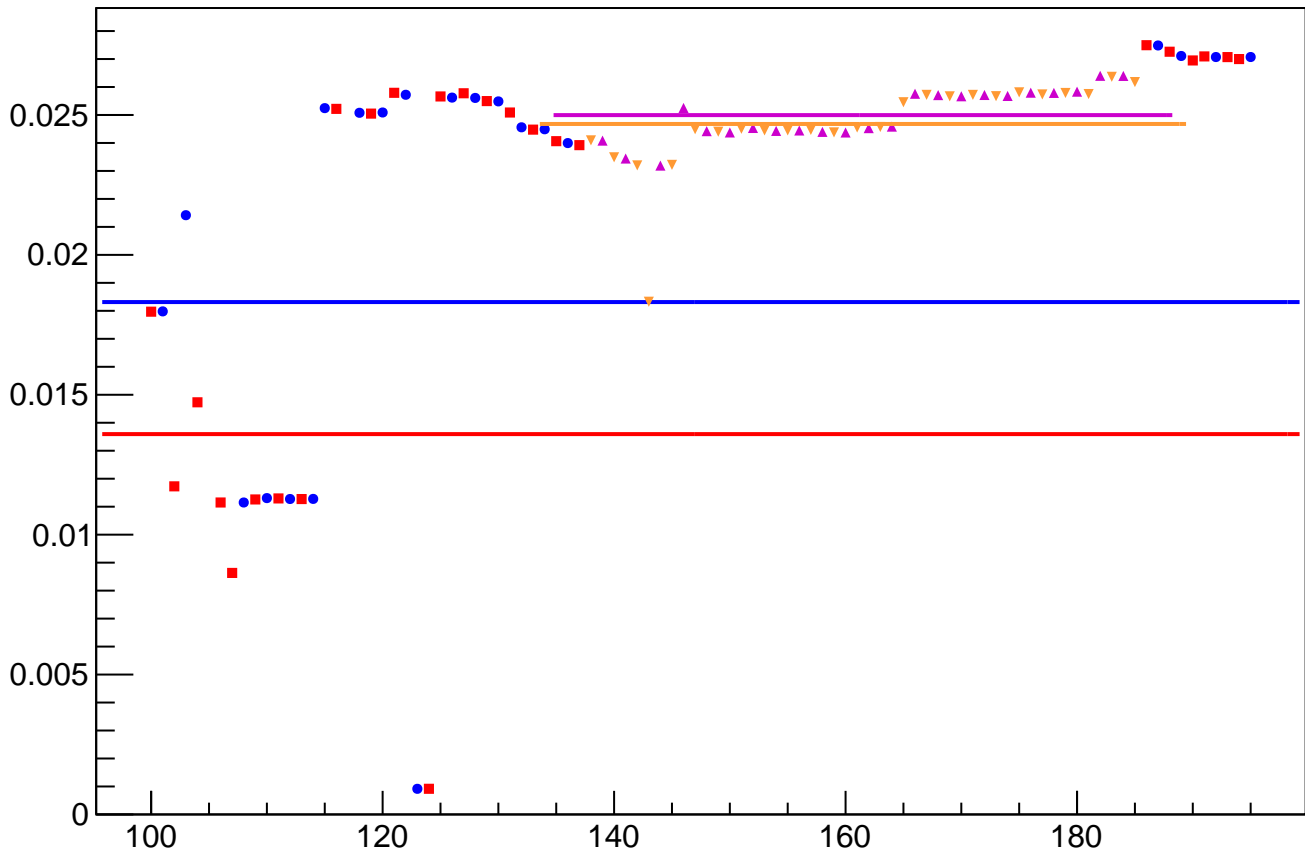
+ sign 0.055+/-0.000  $\chi^2/\text{NDF}$ : 158780.3/45

All: 0.055+/-0.000  $\chi^2/\text{NDF}$ : 448573.1/92

- sign 0.055+/-0.000  $\chi^2/\text{NDF}$ : 289770.1/46



# yield\_atl1\_mean vs Slug



Right In: 0.018 $\pm$ 0.000  $\chi^2$ /NDF: 150100312613.6/20

Left Out: 0.025 $\pm$ 0.000  $\chi^2$ /NDF: 9641065555.8/24

Right Out: 0.014 $\pm$ 0.000  $\chi^2$ /NDF: 320467114903.7/24

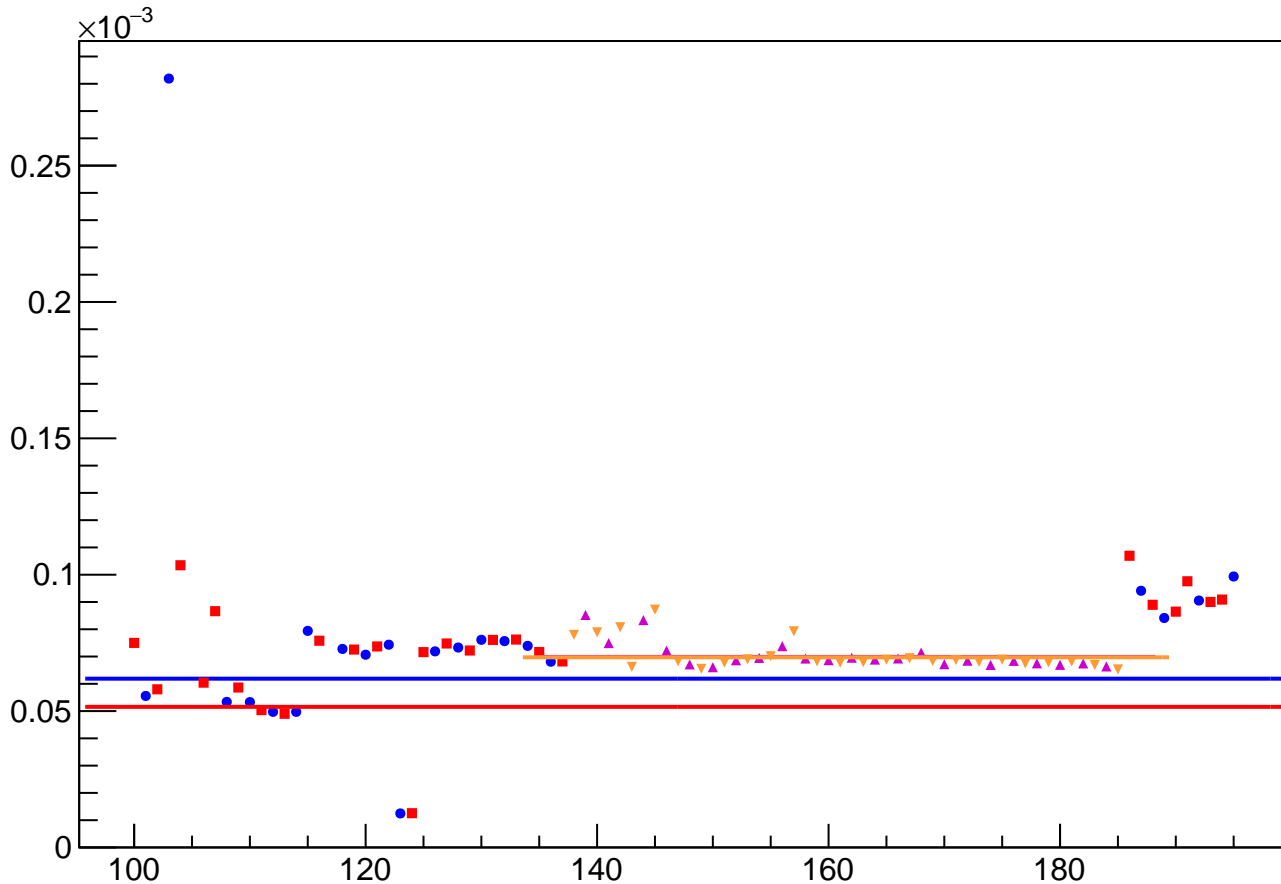
Left In: 0.025 $\pm$ 0.000  $\chi^2$ /NDF: 2462473687.7/22

+ sign 0.022 $\pm$ 0.000  $\chi^2$ /NDF: 211474508434.6/45

All: 0.021 $\pm$ 0.000  $\chi^2$ /NDF: 756482460165.9

- sign 0.020 $\pm$ 0.000  $\chi^2$ /NDF: 525633310266.4/47

# yield\_atl1\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2$ /NDF: 2581007.5/20

Left Out: 0.000+/-0.000  $\chi^2$ /NDF:158125.0/24

Right Out: 0.000+/-0.000  $\chi^2$ /NDF: 5120077.4/24

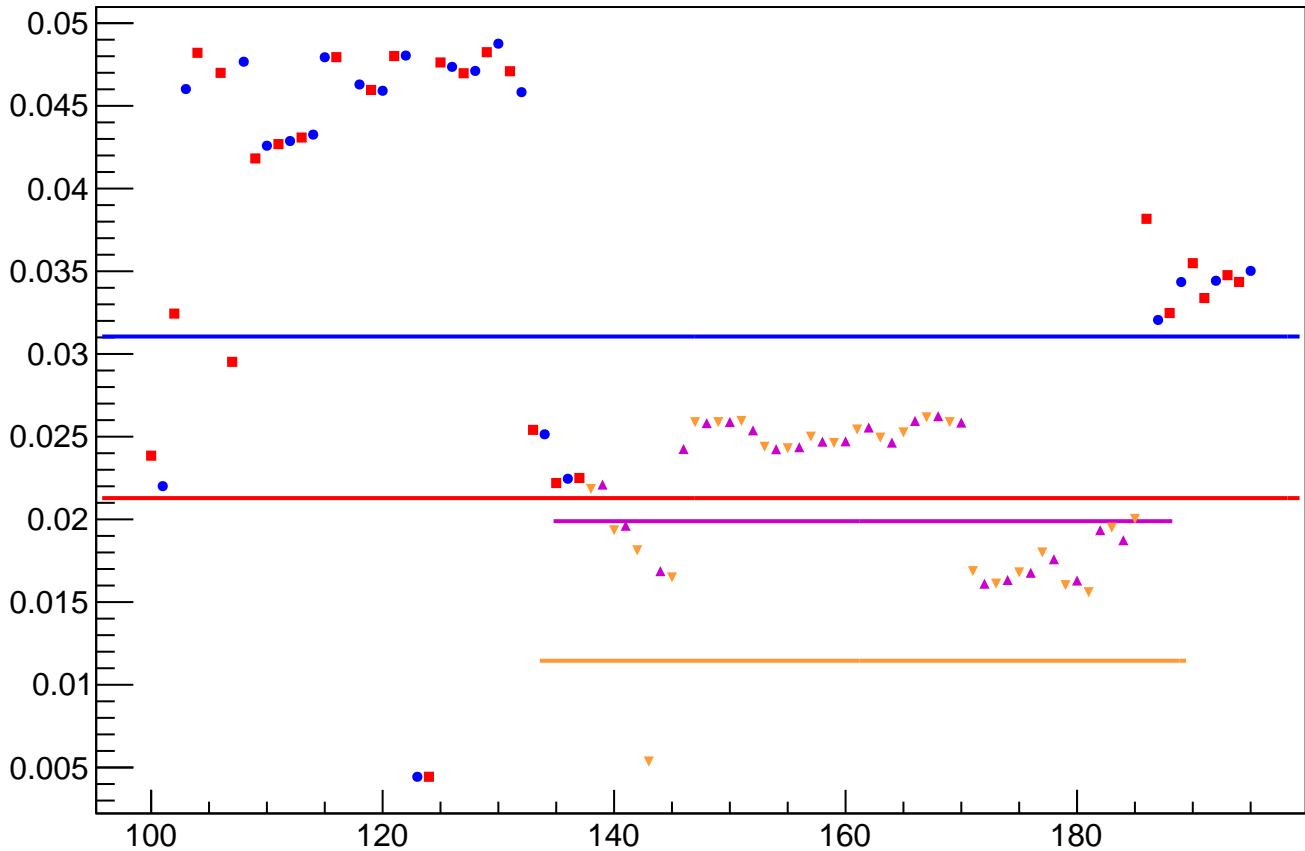
Left In: 0.000+/-0.000  $\chi^2$ /NDF:129289.8/22

+ sign 0.000+/-0.000  $\chi^2$ /NDF: 2895601.4/45

All: 0.000+/-0.000  $\chi^2$ /NDF: 9355485.2/93

- sign 0.000+/-0.000  $\chi^2$ /NDF: 6293722.5/47

# yield\_atl2\_mean vs Slug



Right In: 0.031 $\pm$ 0.000  $\chi^2$ /NDF: 21172926514.6/20

+ sign 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 88568601751.3/45

Left Out: 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 40294472965.0/24

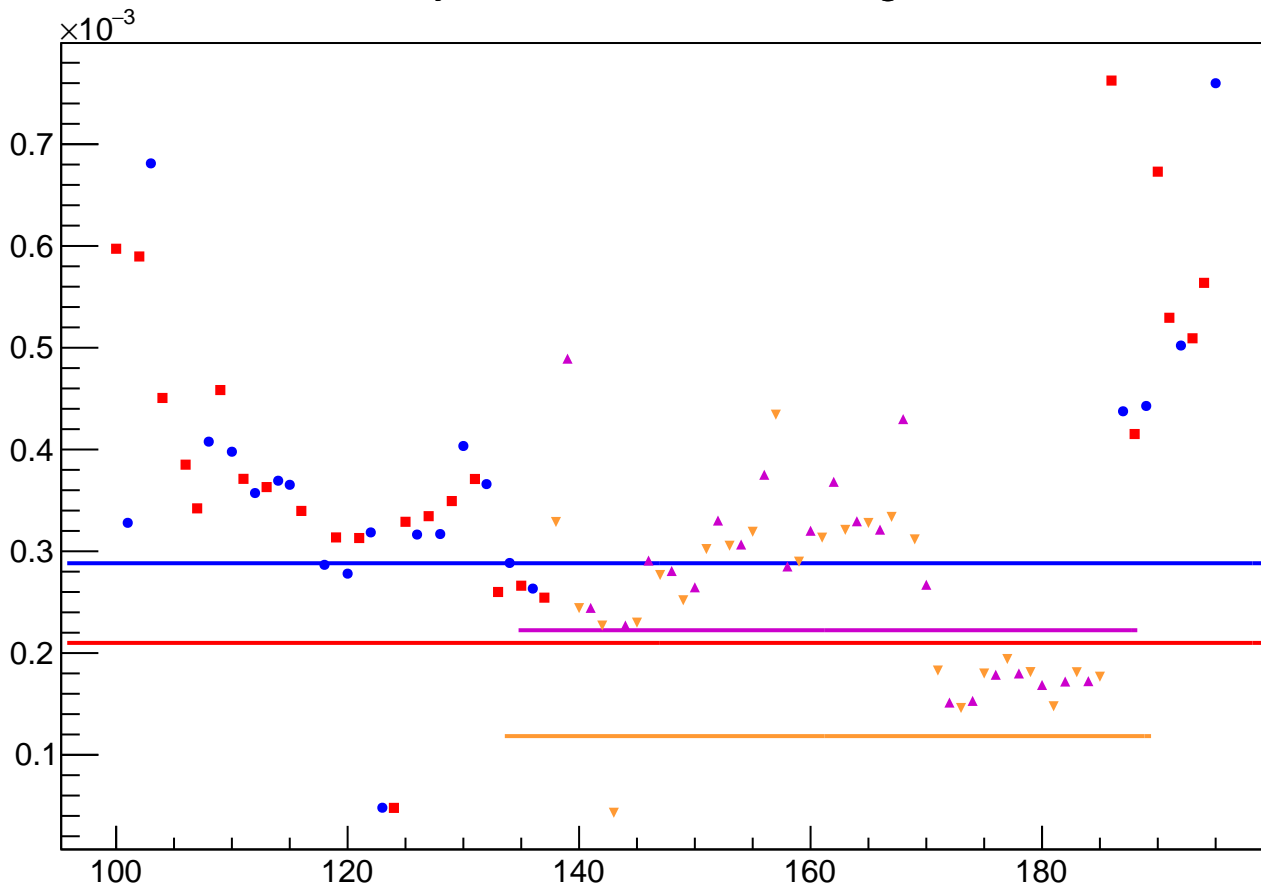
Right Out: 0.021 $\pm$ 0.000  $\chi^2$ /NDF: 41967168088.8/24

All: 0.016 $\pm$ 0.000  $\chi^2$ /NDF: 148413555379.6

- sign 0.020 $\pm$ 0.000  $\chi^2$ /NDF: 46600837258.3/47

Left In: 0.020 $\pm$ 0.000  $\chi^2$ /NDF: 4458790813.3/22

# yield\_atl2\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2$ /NDF: 3523309.9/20

Left Out: 0.000+/-0.000  $\chi^2$ /NDF:13563132.9/24

Right Out: 0.000+/-0.000  $\chi^2$ /NDF: 7992232.2/24

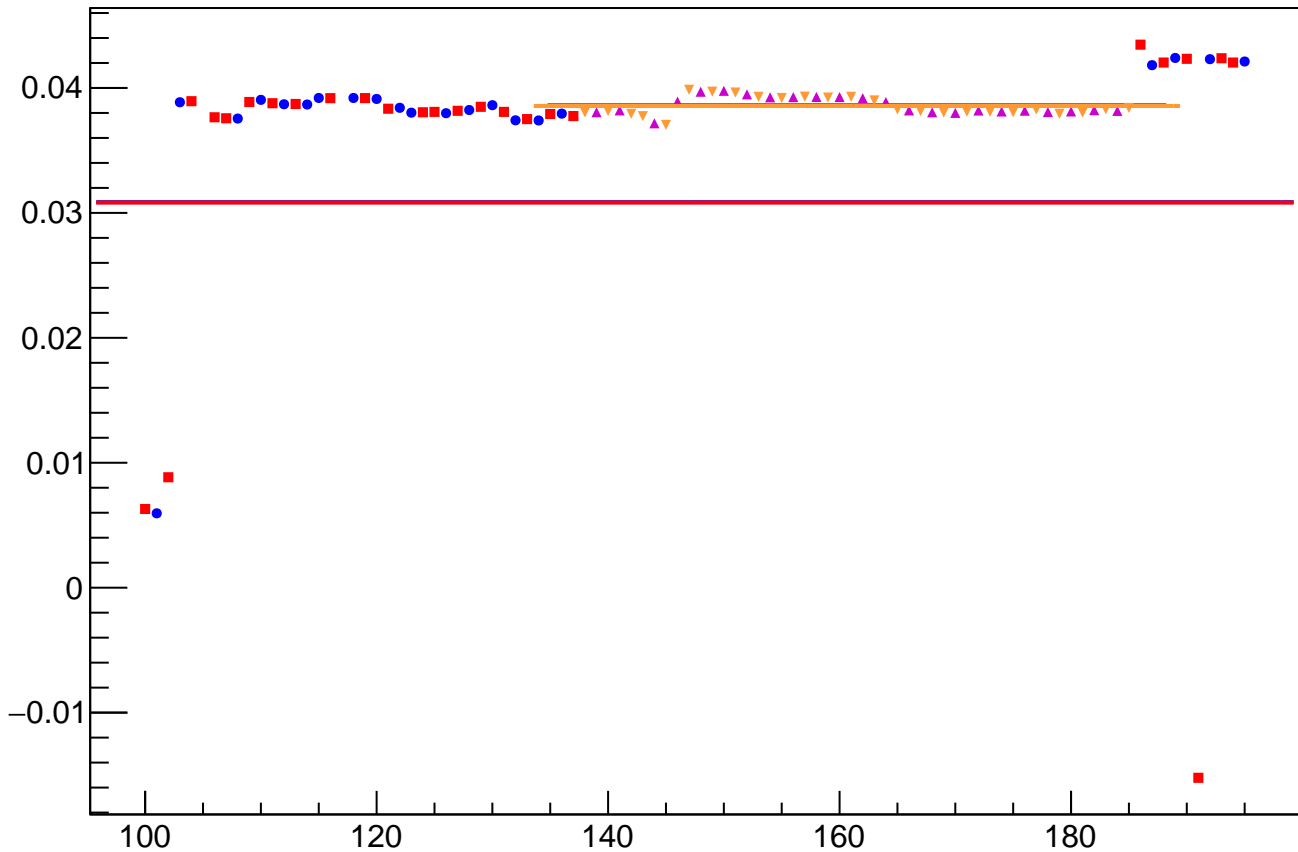
Left In: 0.000+/-0.000  $\chi^2$ /NDF:3281119.0/22

+ sign 0.000+/-0.000  $\chi^2$ /NDF: 21156406.9/45

All: 0.000+/-0.000  $\chi^2$ /NDF: 36296015.6/93

- sign 0.000+/-0.000  $\chi^2$ /NDF: 11301152.7/47

# yield\_atr1\_mean vs Slug



Right In: 0.031 $\pm$ 0.000  $\chi^2$ /NDF: 103245378937.9/20

Left Out: 0.039 $\pm$ 0.000  $\chi^2$ /NDF: 539468437.3/24

Right Out: 0.031 $\pm$ 0.000  $\chi^2$ /NDF: 170271297283.2/24

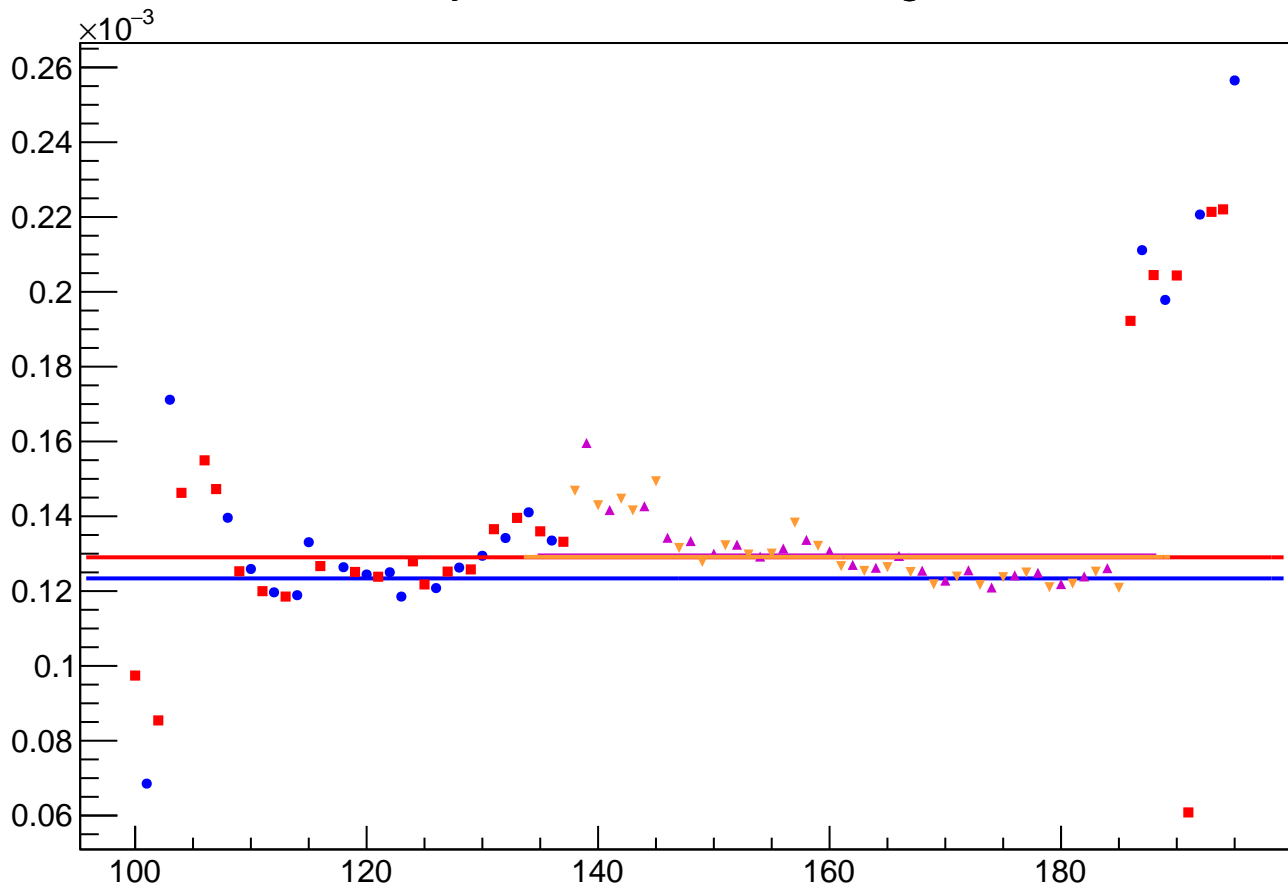
Left In: 0.039 $\pm$ 0.000  $\chi^2$ /NDF: 465745982.6/22

+ sign 0.036 $\pm$ 0.000  $\chi^2$ /NDF: 124502563733.3/45

All: 0.036 $\pm$ 0.000  $\chi^2$ /NDF: 317055107442.7

- sign 0.036 $\pm$ 0.000  $\chi^2$ /NDF: 192521392718.9/47

# yield\_atr1\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2$ /NDF: 1822908.8/20

Left Out: 0.000+/-0.000  $\chi^2$ /NDF:130321.6/24

Right Out: 0.000+/-0.000  $\chi^2$ /NDF: 1709135.9/24

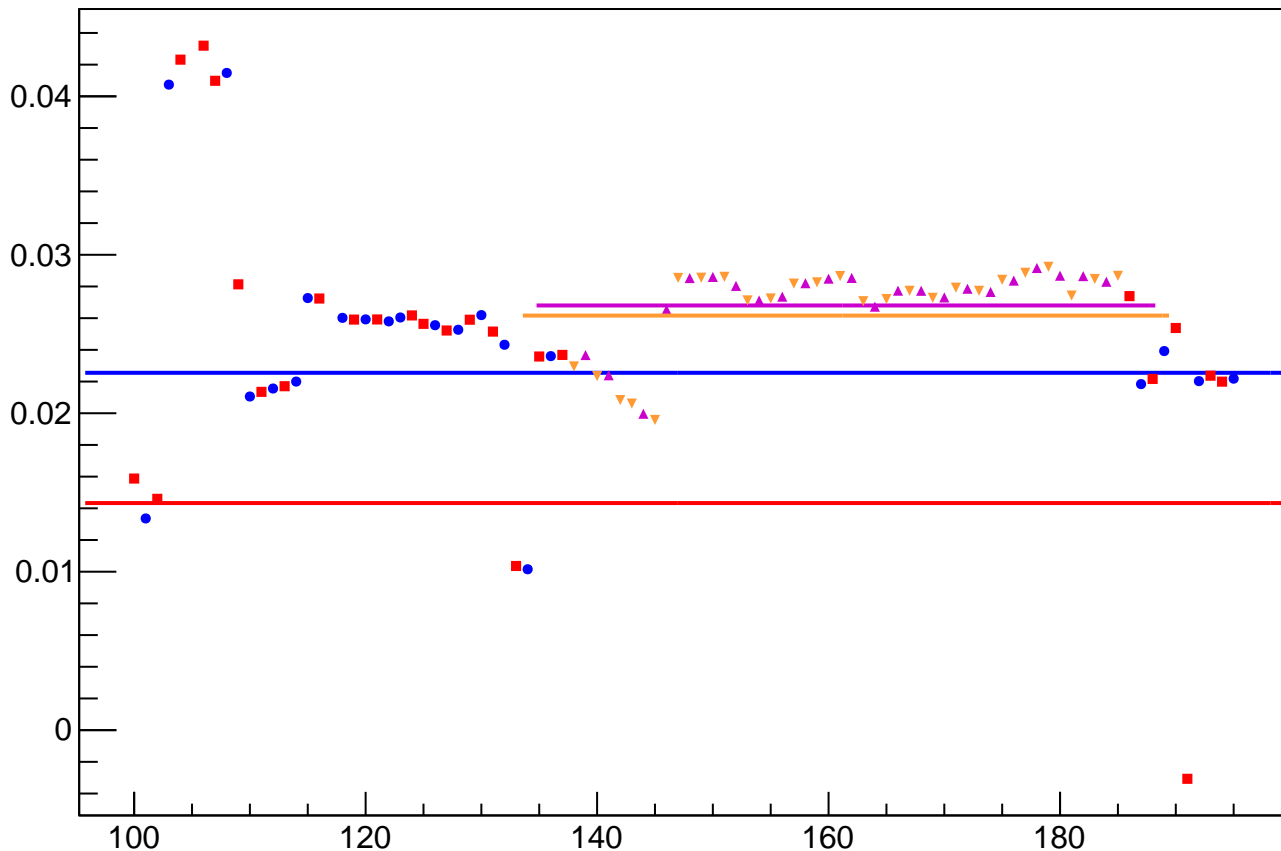
Left In: 0.000+/-0.000  $\chi^2$ /NDF:114763.2/22

+ sign 0.000+/-0.000  $\chi^2$ /NDF: 1976385.6/45

All: 0.000+/-0.000  $\chi^2$ /NDF: 3807217.3/93

- sign 0.000+/-0.000  $\chi^2$ /NDF: 1824077.1/47

# yield\_atr2\_mean vs Slug



Right In: 0.023+/-0.000  $\chi^2/\text{NDF}$ : 4244021004.6/20

Left Out: 0.026+/-0.000  $\chi^2/\text{NDF}$ : 2056710635.1/24

Right Out: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 30521324011.0/24

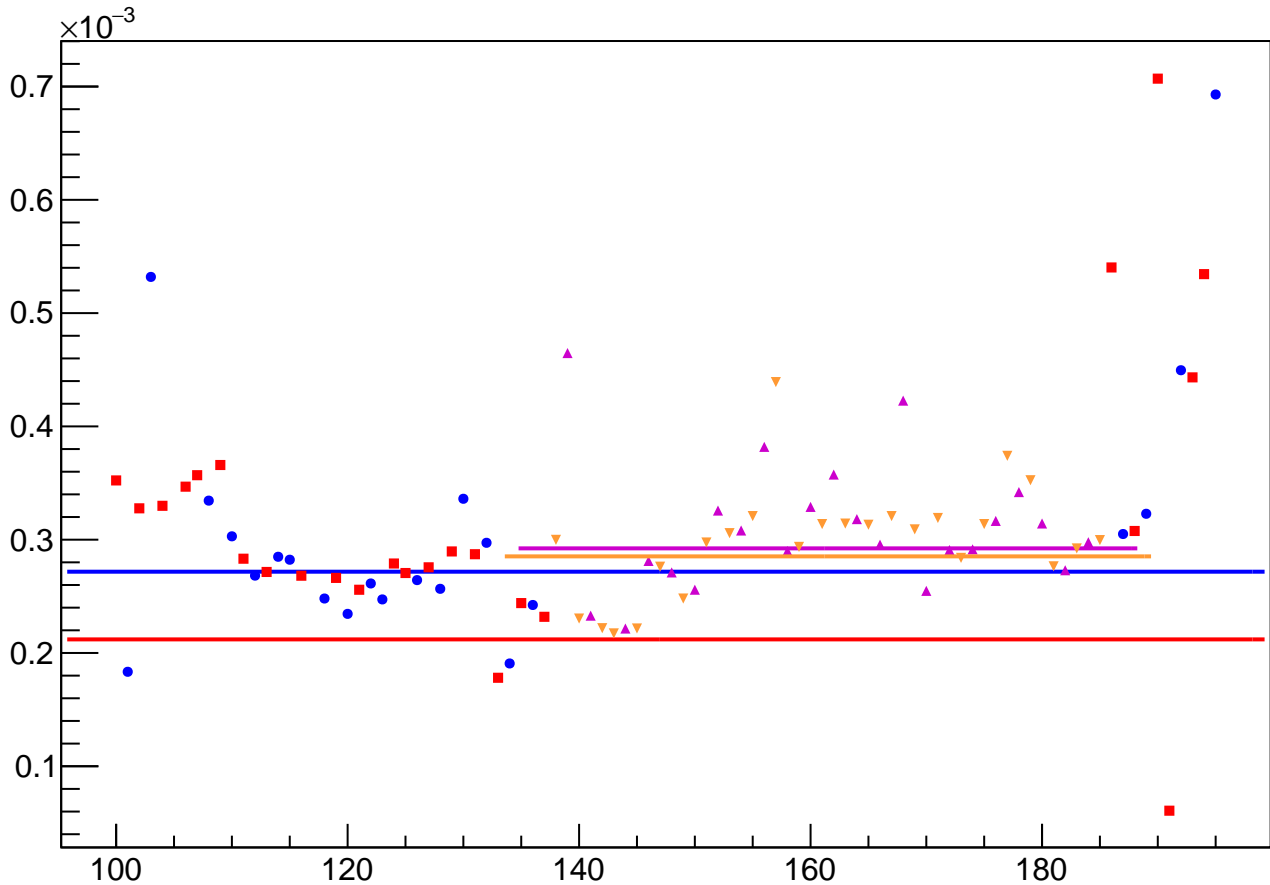
Left In: 0.027+/-0.000  $\chi^2/\text{NDF}$ : 1332033607.7/22

+ sign 0.025+/-0.000  $\chi^2/\text{NDF}$ : 7176318724.7/45

All: 0.023+/-0.000  $\chi^2/\text{NDF}$ : 54524273203.7/9

- sign 0.021+/-0.000  $\chi^2/\text{NDF}$ : 44972478847.8/47

# yield\_atr2\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 1552491.2/20

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:813464.1/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 5168967.9/24

Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:898772.9/22

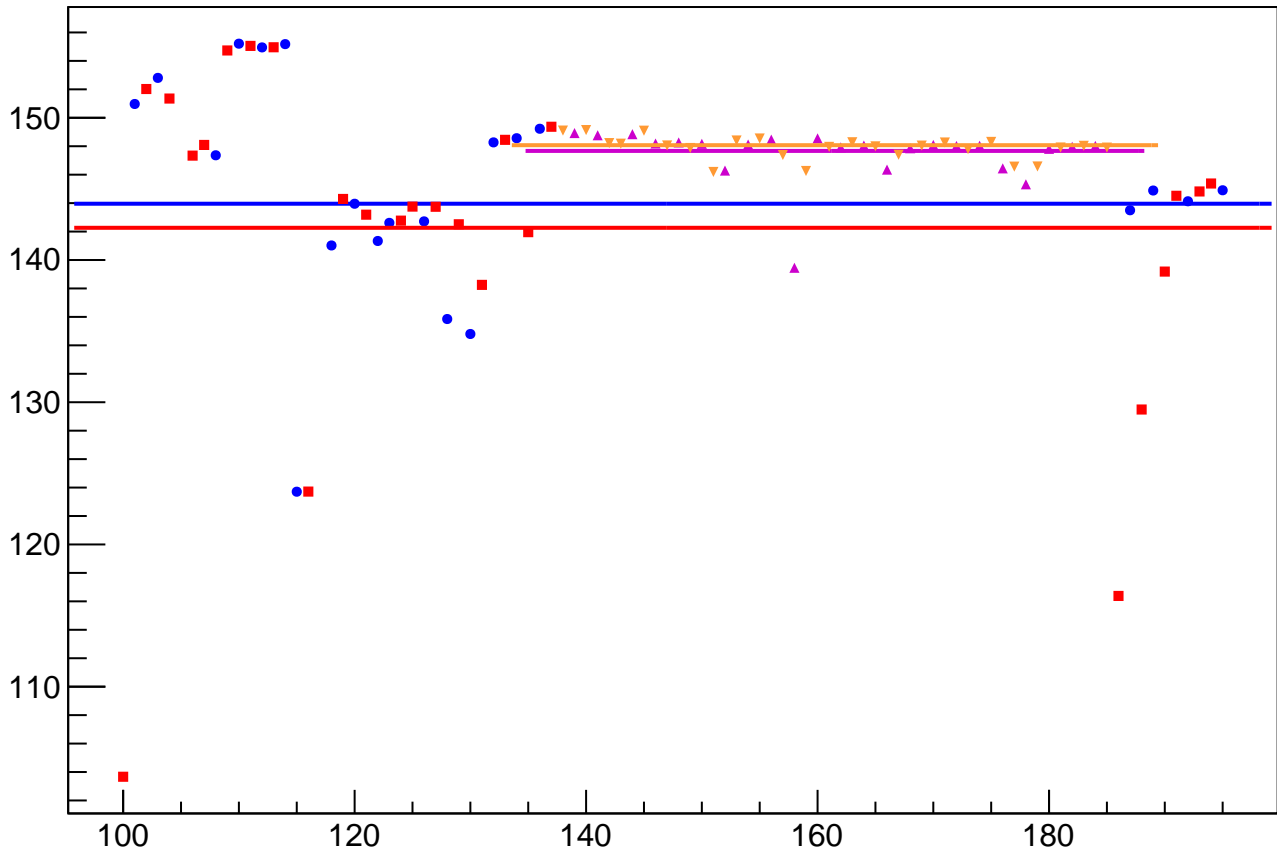
+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 2390503.6/45

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 9749486.2/93

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 7157144.1/47



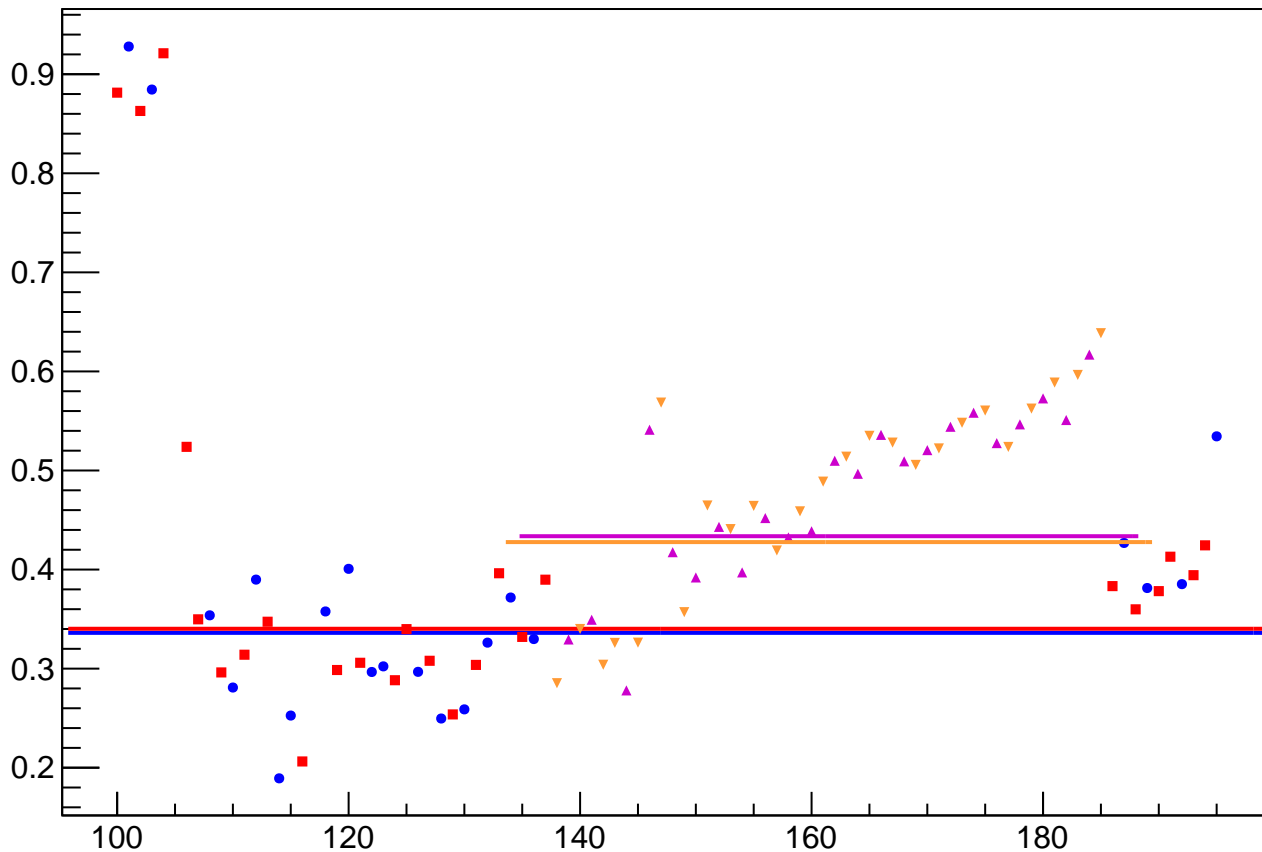
# yield\_bcm\_an\_ds\_mean vs Slug



Right In: 143.957 $\pm$ 0.000  $\chi^2$ /NDF: 3456767802.9/20  
 Left Out: 148.073 $\pm$ 0.000  $\chi^2$ /NDF:65614067.4/24  
 Right Out: 142.265 $\pm$ 0.000  $\chi^2$ /NDF: 7307661343.8/24  
 Left In: 147.670 $\pm$ 0.000  $\chi^2$ /NDF:345222604.4/22

+ sign 146.339 $\pm$ 0.000  $\chi^2$ /NDF: 4184592119.7/45  
 All: 145.710 $\pm$ 0.000  $\chi^2$ /NDF: 13164480181.  
 - sign 145.099 $\pm$ 0.000  $\chi^2$ /NDF: 8854821037.4/47

# yield\_bcm\_an\_ds\_rms vs Slug



Right In:  $0.336 \pm 0.000$   $\chi^2/\text{NDF}: 1584815.9/20$

Left Out:  $0.428 \pm 0.000$   $\chi^2/\text{NDF}: 1896808.7/24$

Right Out:  $0.340 \pm 0.000$   $\chi^2/\text{NDF}: 1384646.3/24$

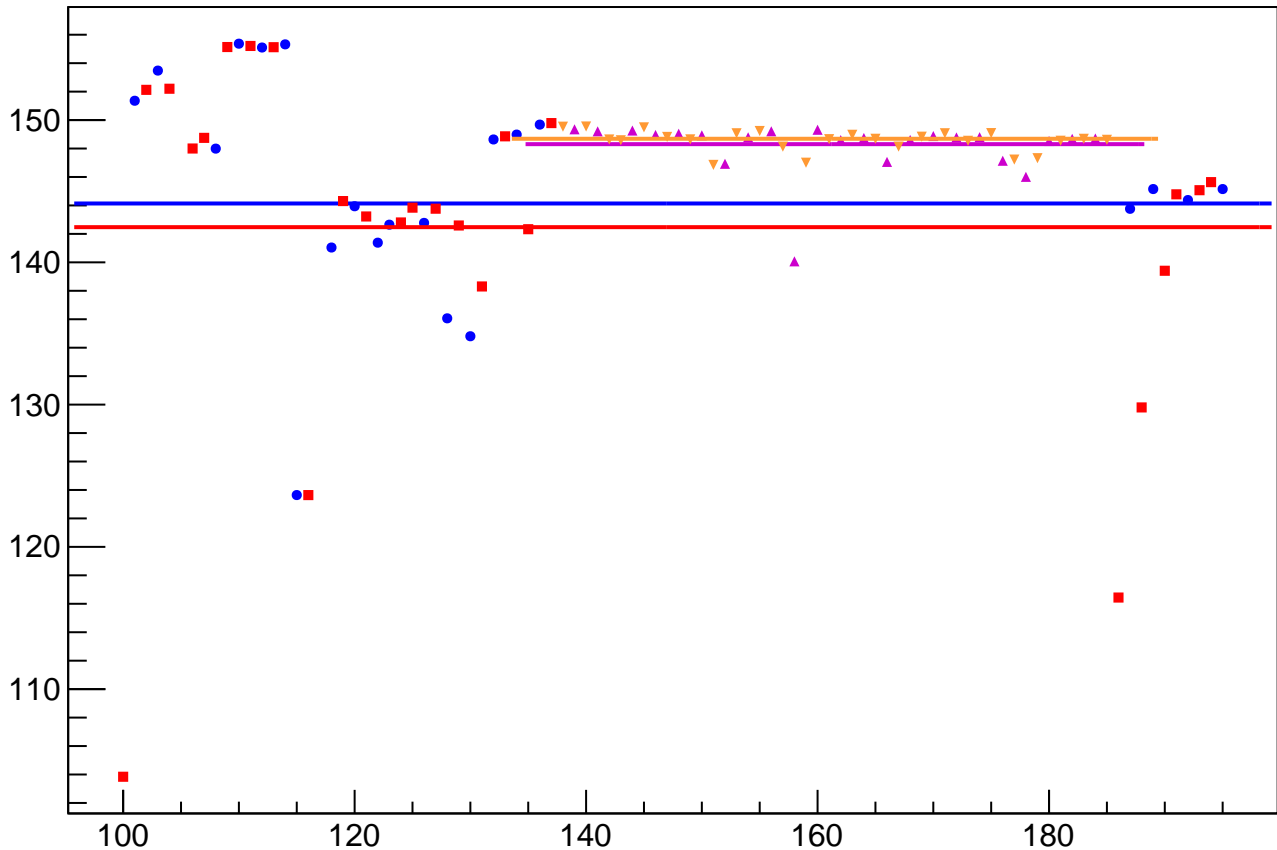
Left In:  $0.434 \pm 0.000$   $\chi^2/\text{NDF}: 1496343.5/22$

+ sign  $0.389 \pm 0.000$   $\chi^2/\text{NDF}: 4137914.8/45$

All:  $0.389 \pm 0.000$   $\chi^2/\text{NDF}: 7737004.3/93$

- sign  $0.389 \pm 0.000$   $\chi^2/\text{NDF}: 3599088.2/47$

# yield\_bcm\_an\_ds3\_mean vs Slug



Right In: 144.137 $\pm$ 0.000  $\chi^2$ /NDF: 3502328498.0/20

Left Out: 148.686 $\pm$ 0.000  $\chi^2$ /NDF: 52218185.1/24

Right Out: 142.473 $\pm$ 0.000  $\chi^2$ /NDF: 7252474865.4/24

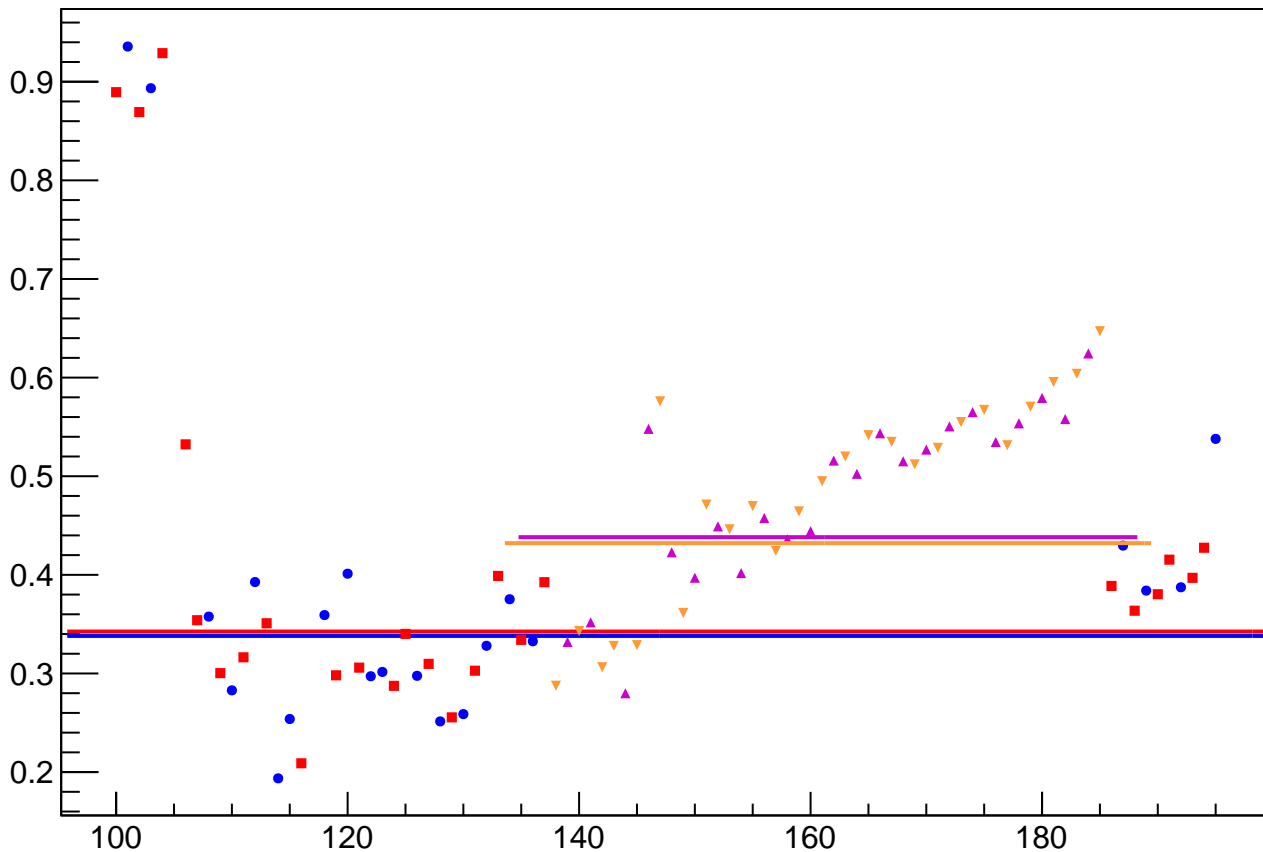
Left In: 148.307 $\pm$ 0.000  $\chi^2$ /NDF: 333585558.2/22

+ sign 146.759 $\pm$ 0.000  $\chi^2$ /NDF: 4350967027.4/45

All: 146.131 $\pm$ 0.000  $\chi^2$ /NDF: 13435812876.

- sign 145.520 $\pm$ 0.000  $\chi^2$ /NDF: 8962206869.4/47

# yield\_bcm\_an\_ds3\_rms vs Slug



Right In: 0.338 $\pm$ 0.000  $\chi^2$ /NDF: 1587205.6/20

Left Out: 0.432 $\pm$ 0.000  $\chi^2$ /NDF:1929031.5/24

Right Out: 0.343 $\pm$ 0.000  $\chi^2$ /NDF: 1389794.1/24

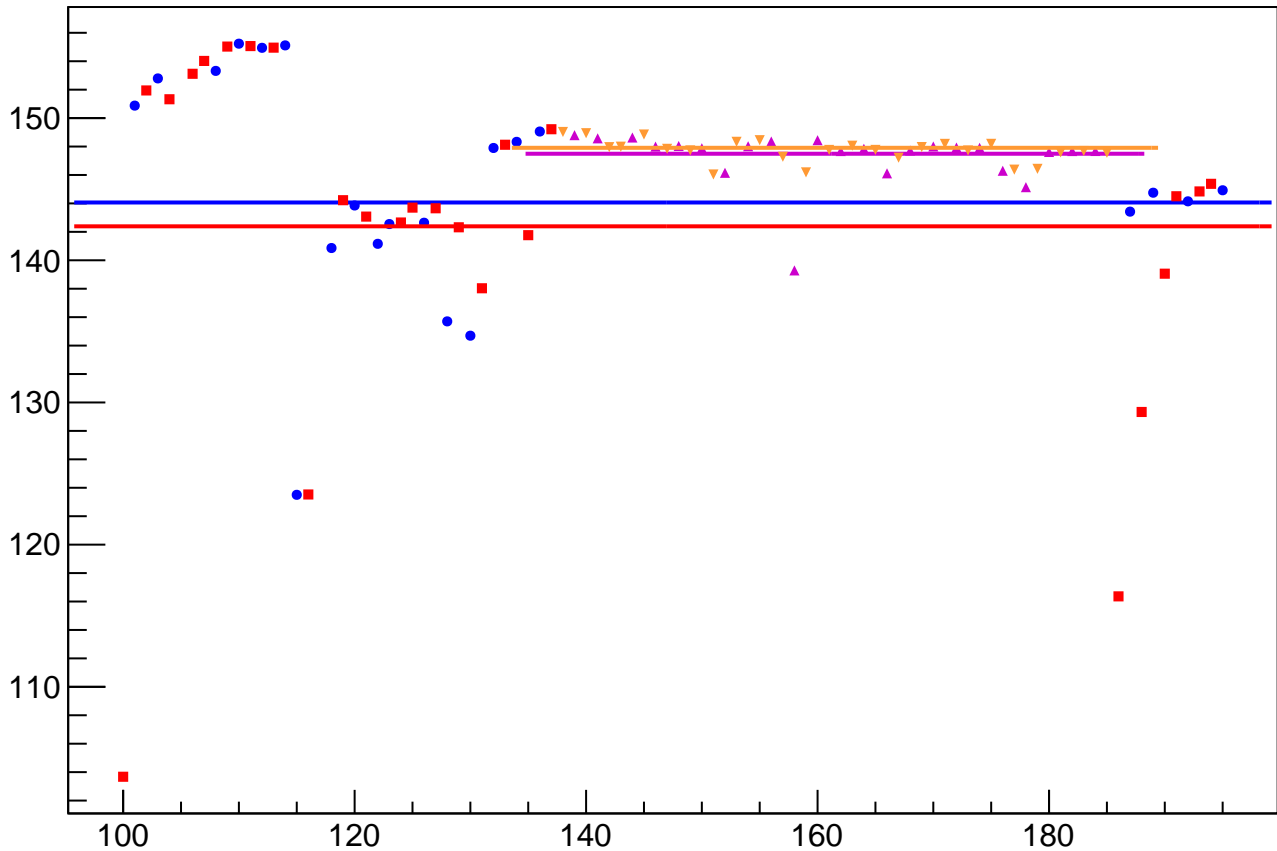
Left In: 0.438 $\pm$ 0.000  $\chi^2$ /NDF:1521893.6/22

+ sign 0.392 $\pm$ 0.000  $\chi^2$ /NDF: 4197261.6/45

All: 0.392 $\pm$ 0.000  $\chi^2$ /NDF: 7849433.7/93

- sign 0.392 $\pm$ 0.000  $\chi^2$ /NDF: 3652164.6/47

# yield\_bcm\_an\_us\_mean vs Slug



Right In: 144.065 $\pm$ 0.000  $\chi^2$ /NDF: 3668597961.8/20

+ sign 146.289 $\pm$ 0.000  $\chi^2$ /NDF: 4307308793.1/45

Left Out: 147.911 $\pm$ 0.000  $\chi^2$ /NDF: 64412407.9/24

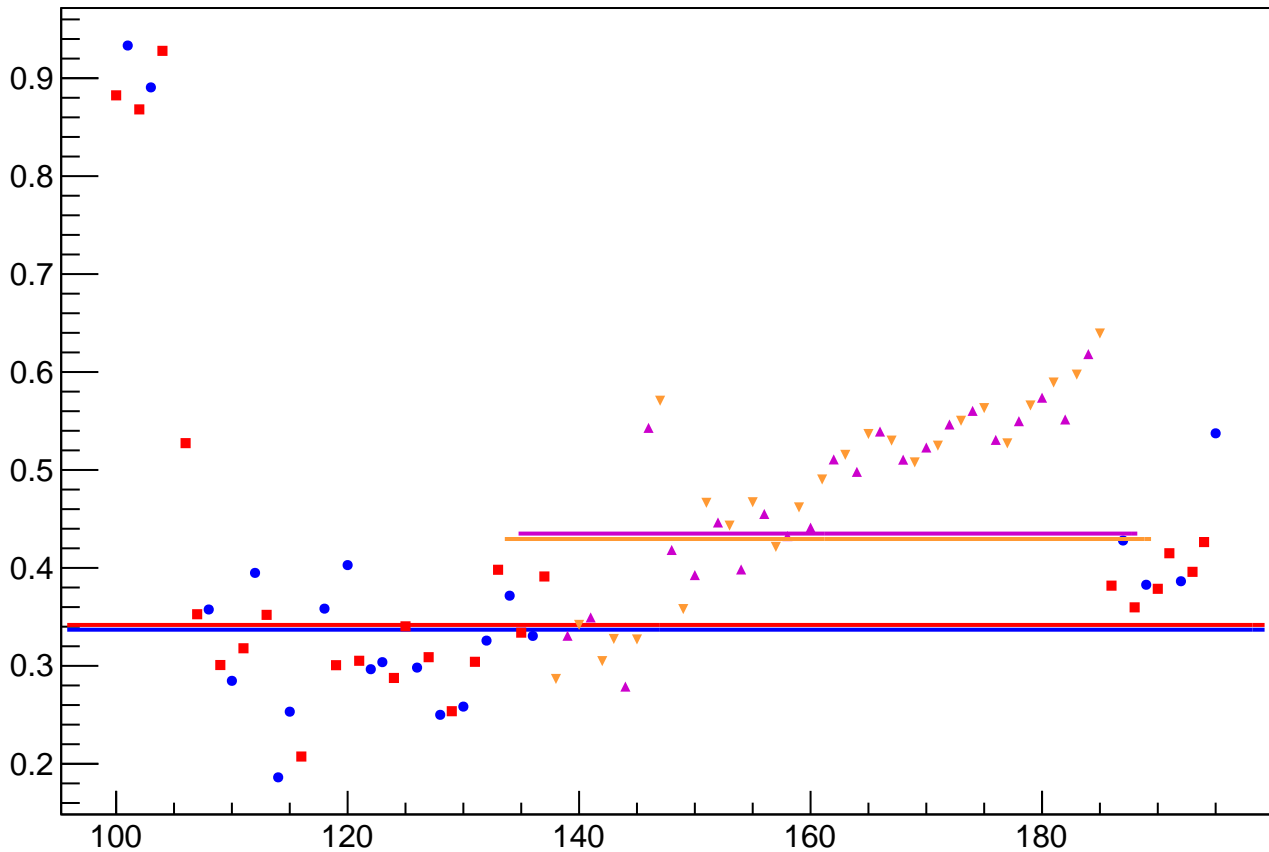
All: 145.670 $\pm$ 0.000  $\chi^2$ /NDF: 13531727318.

Right Out: 142.388 $\pm$ 0.000  $\chi^2$ /NDF: 7696479729.3/24

- sign 145.068 $\pm$ 0.000  $\chi^2$ /NDF: 9104136094.6/47

Left In: 147.493 $\pm$ 0.000  $\chi^2$ /NDF: 343978473.2/22

# yield\_bcm\_an\_us\_rms vs Slug



Right In: 0.337 $\pm$ 0.000  $\chi^2$ /NDF: 1602619.8/20

Left Out: 0.430 $\pm$ 0.000  $\chi^2$ /NDF:1895701.4/24

Right Out: 0.342 $\pm$ 0.000  $\chi^2$ /NDF: 1385595.6/24

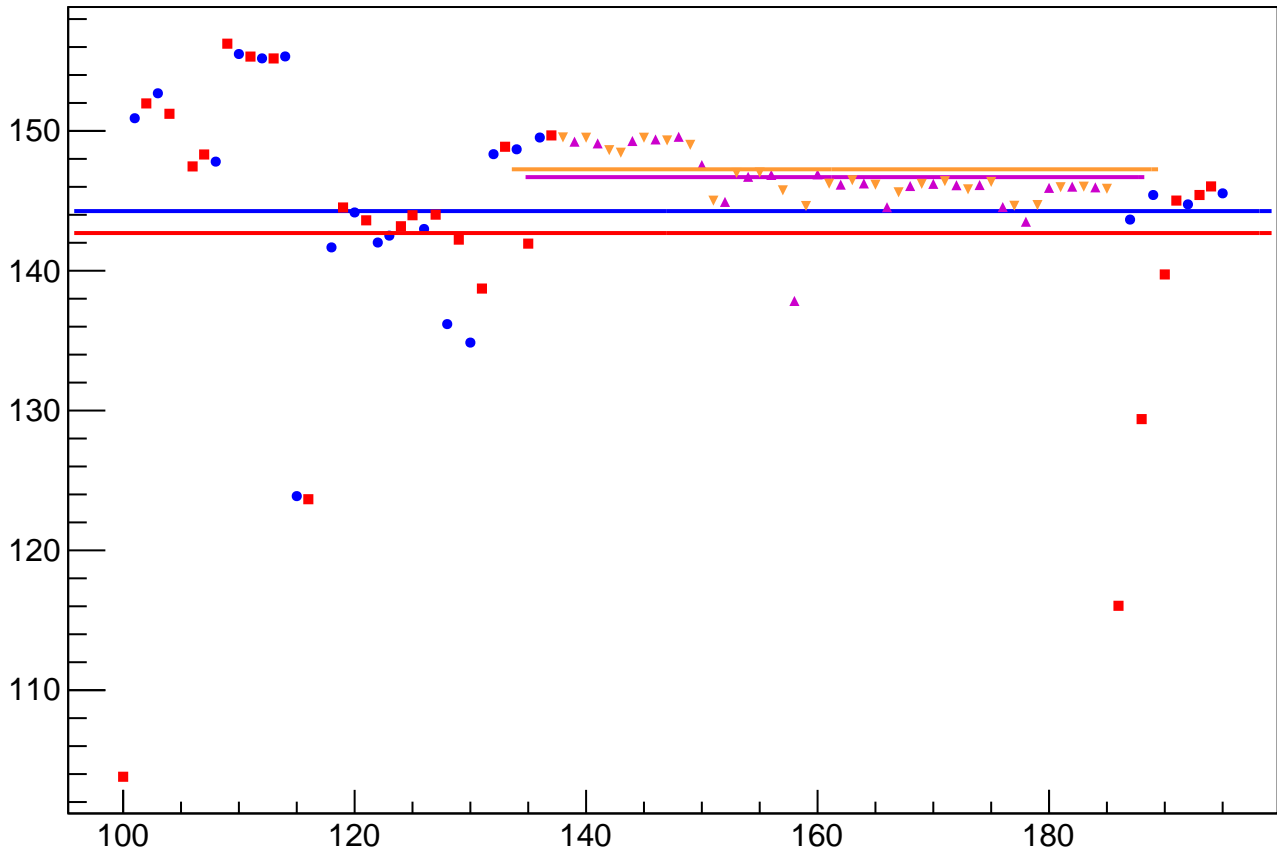
Left In: 0.435 $\pm$ 0.000  $\chi^2$ /NDF:1502712.5/22

+ sign 0.390 $\pm$ 0.000  $\chi^2$ /NDF: 4163987.2/45

All: 0.391 $\pm$ 0.000  $\chi^2$ /NDF: 7762346.0/93

- sign 0.391 $\pm$ 0.000  $\chi^2$ /NDF: 3598346.1/47

# yield\_bcm\_dg\_us\_mean vs Slug



Right In: 144.267 $\pm$ 0.000  $\chi^2$ /NDF: 3173821253.2/20

+ sign 146.011 $\pm$ 0.000  $\chi^2$ /NDF: 3759689961.2/45

Left Out: 147.255 $\pm$ 0.000  $\chi^2$ /NDF: 262138049.8/24

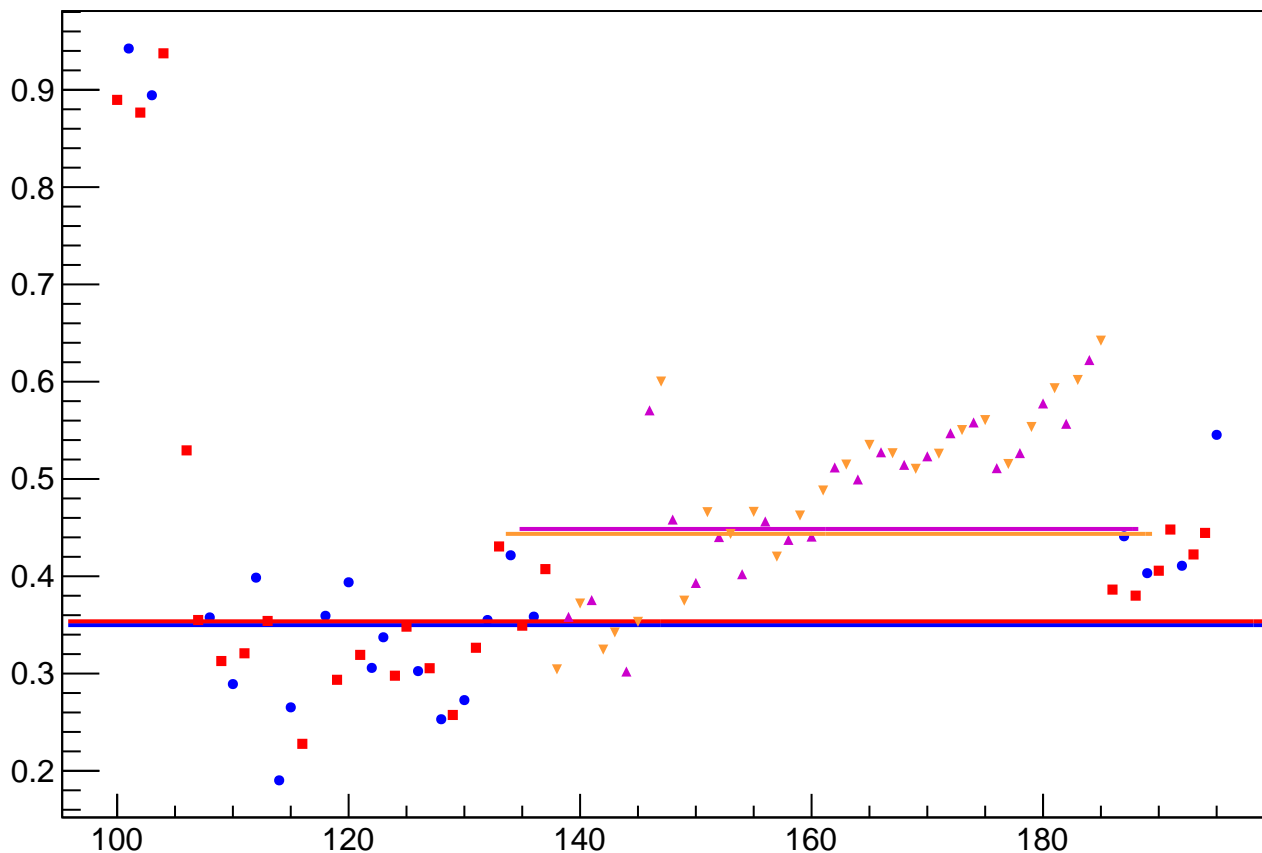
All: 145.404 $\pm$ 0.000  $\chi^2$ /NDF: 12046267297.

Right Out: 142.696 $\pm$ 0.000  $\chi^2$ /NDF: 7007249150.9/24

- sign 144.816 $\pm$ 0.000  $\chi^2$ /NDF: 8178475398.4/47

Left In: 146.695 $\pm$ 0.000  $\chi^2$ /NDF: 557896803.1/22

# yield\_bcm\_dg\_us\_rms vs Slug



Right In: 0.350 $\pm$ 0.000  $\chi^2$ /NDF: 1583082.1/20

Left Out: 0.444 $\pm$ 0.000  $\chi^2$ /NDF:1483434.7/24

Right Out: 0.354 $\pm$ 0.000  $\chi^2$ /NDF: 1380236.8/24

Left In: 0.449 $\pm$ 0.000  $\chi^2$ /NDF:1132620.8/22

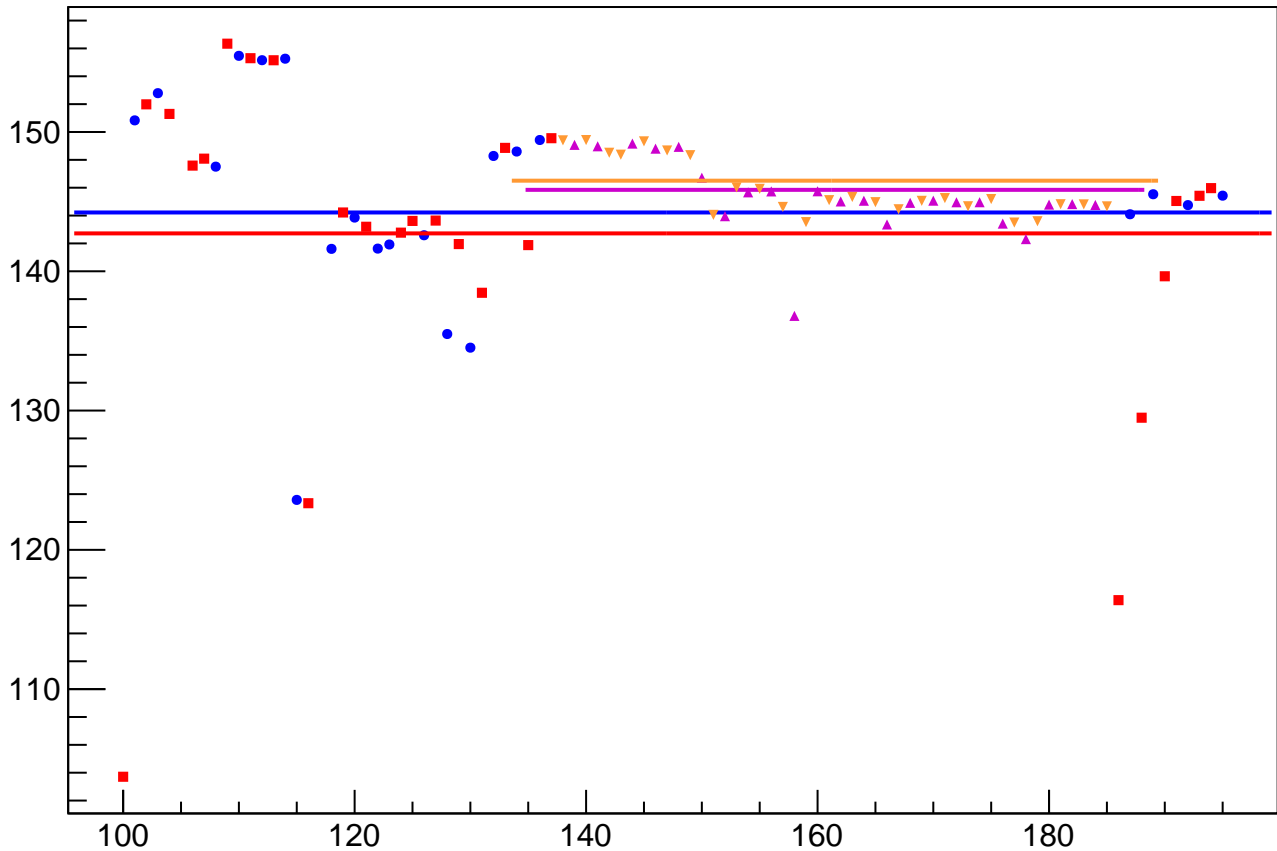
+ sign 0.405 $\pm$ 0.000  $\chi^2$ /NDF: 3704322.1/45

All: 0.404 $\pm$ 0.000  $\chi^2$ /NDF: 6908212.6/93

- sign 0.404 $\pm$ 0.000  $\chi^2$ /NDF: 3203852.0/47



# yield\_bcm\_dg\_ds\_mean vs Slug



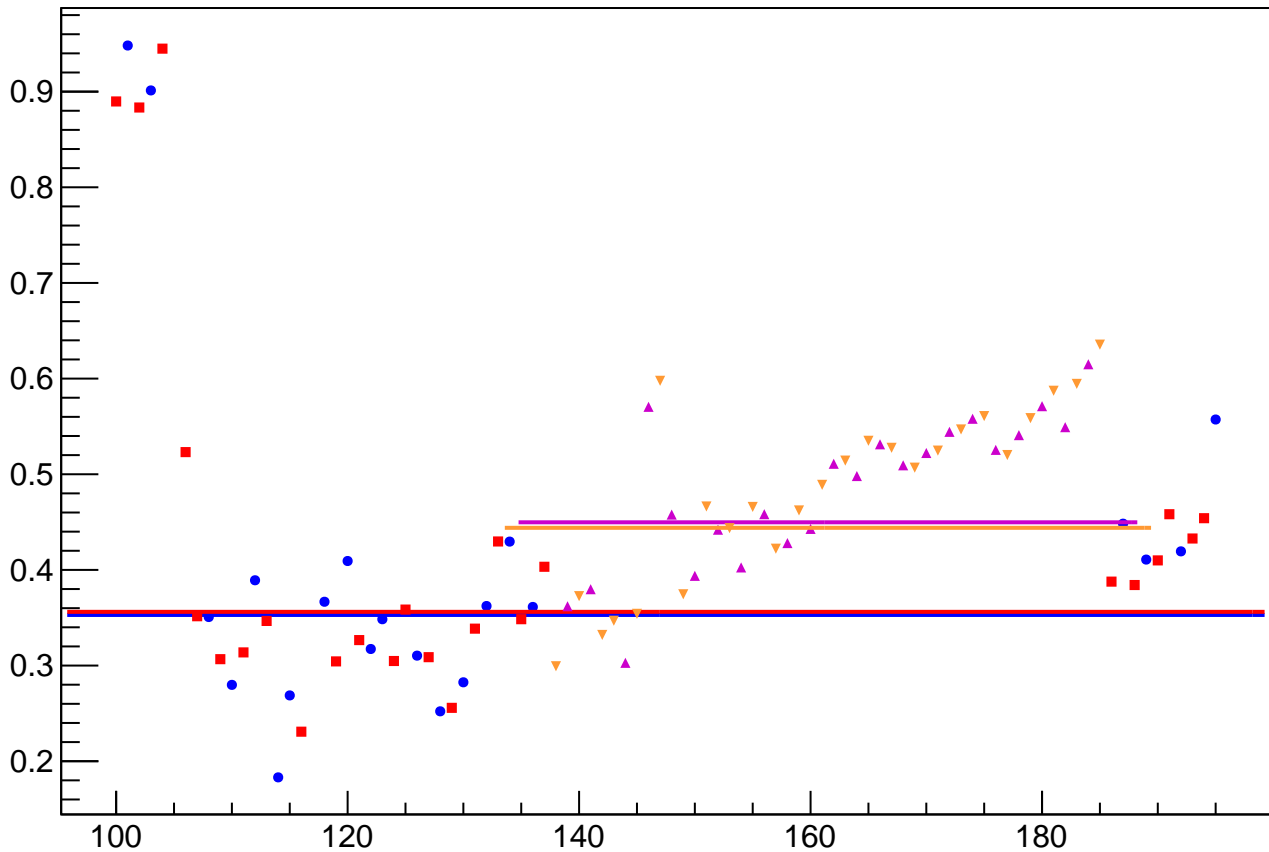
Right In: 144.222 $\pm$ 0.000  $\chi^2$ /NDF: 3293705714.6/20

Left Out: 146.505 $\pm$ 0.000  $\chi^2$ /NDF: 401688176.3/24 + sign 145.566 $\pm$ 0.000  $\chi^2$ /NDF: 3881644817.7/45

Right Out: 142.720 $\pm$ 0.000  $\chi^2$ /NDF: 6981989481.8/24 All: 144.968 $\pm$ 0.000  $\chi^2$ /NDF: 12032939385.

Left In: 145.847 $\pm$ 0.000  $\chi^2$ /NDF: 694764545.6/22 - sign 144.387 $\pm$ 0.000  $\chi^2$ /NDF: 8047166355.3/47

# yield\_bcm\_dg\_ds\_rms vs Slug



Right In:  $0.353 \pm 0.000$   $\chi^2/\text{NDF}: 1618361.8/20$

Left Out:  $0.444 \pm 0.000$   $\chi^2/\text{NDF}: 1463293.5/24$

Right Out:  $0.356 \pm 0.000$   $\chi^2/\text{NDF}: 1389804.2/24$

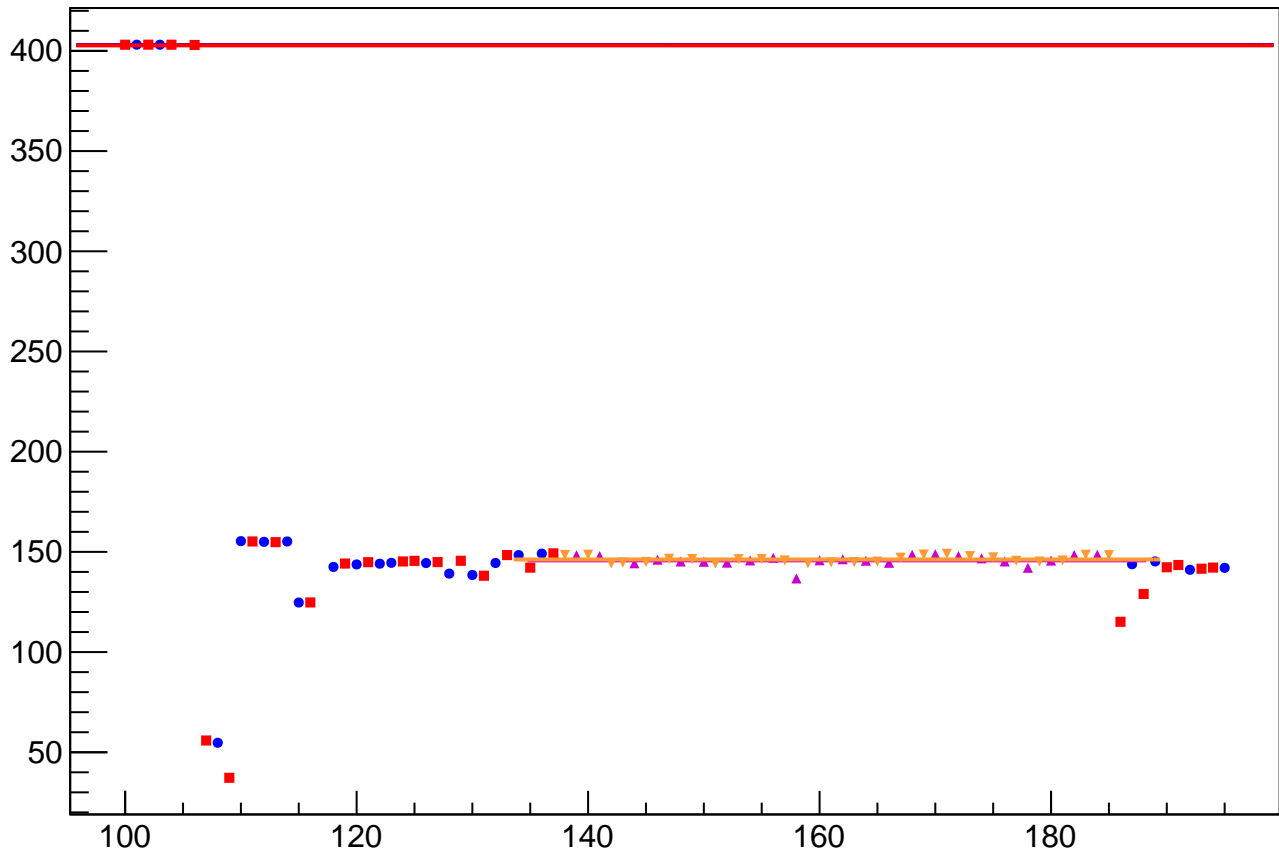
Left In:  $0.450 \pm 0.000$   $\chi^2/\text{NDF}: 1105405.0/22$

+ sign  $0.407 \pm 0.000$   $\chi^2/\text{NDF}: 3674713.8/45$

All:  $0.406 \pm 0.000$   $\chi^2/\text{NDF}: 6833834.2/93$

- sign  $0.406 \pm 0.000$   $\chi^2/\text{NDF}: 3159088.3/47$

# yield\_cav4bQ\_mean vs Slug



Right In: 402.933+/-0.000  $\chi^2/\text{NDF}$ : 1294470761712.1/20

+ sign 402.636+/-0.000  $\chi^2/\text{NDF}$ : 3666010829081.8

Left Out: 146.205+/-0.000  $\chi^2/\text{NDF}$ : 86658381.3/24

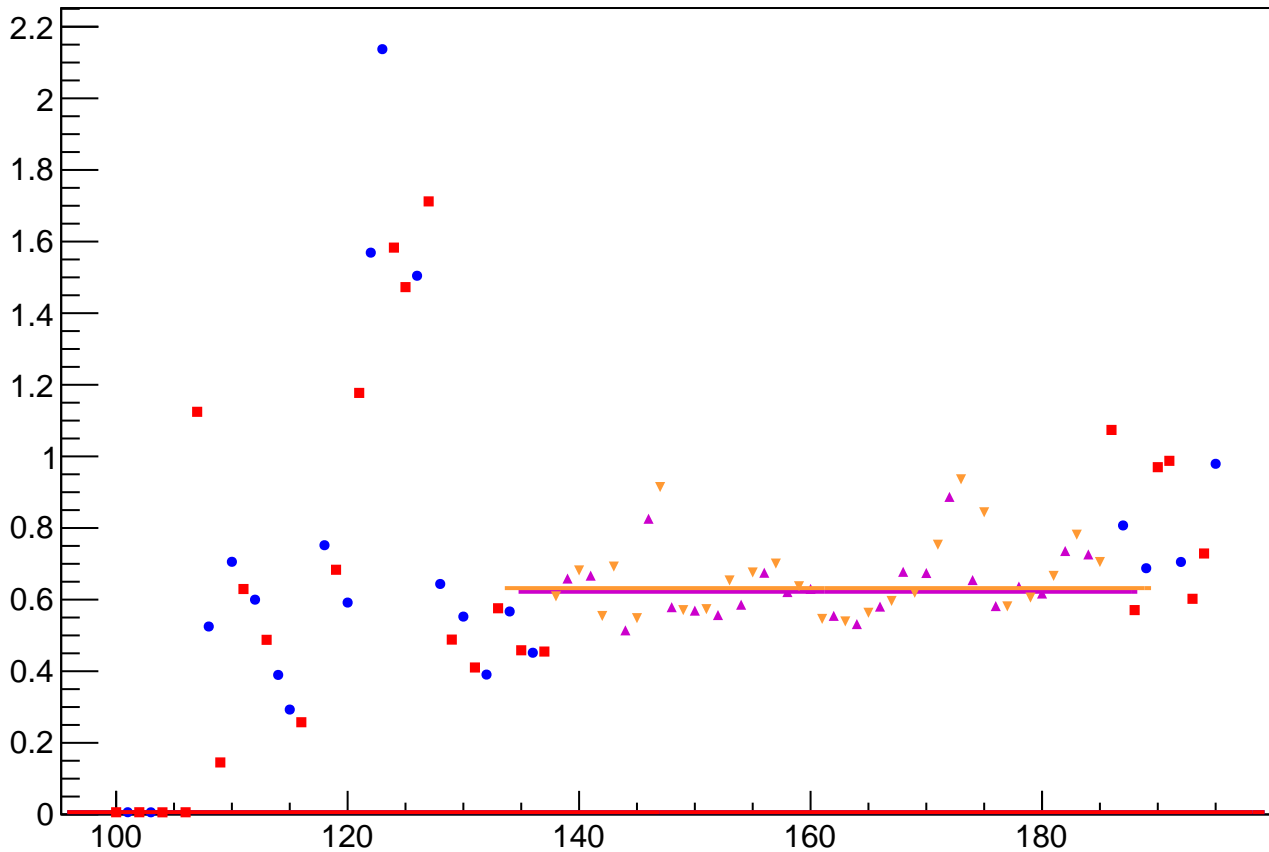
All: 402.561+/-0.000  $\chi^2/\text{NDF}$ : 954882620246

Right Out: 402.753+/-0.000  $\chi^2/\text{NDF}$ : 3535875038581.2/24

- sign 402.494+/-0.000  $\chi^2/\text{NDF}$ : 5882478846433.1/24

Left In: 145.773+/-0.000  $\chi^2/\text{NDF}$ : 207332354.9/22

# yield\_cav4bQ\_rms vs Slug



Right In: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 12597261.6/20

Left Out: 0.632+/-0.000  $\chi^2/\text{NDF}$ :614155.9/24

Right Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 14678068.1/24

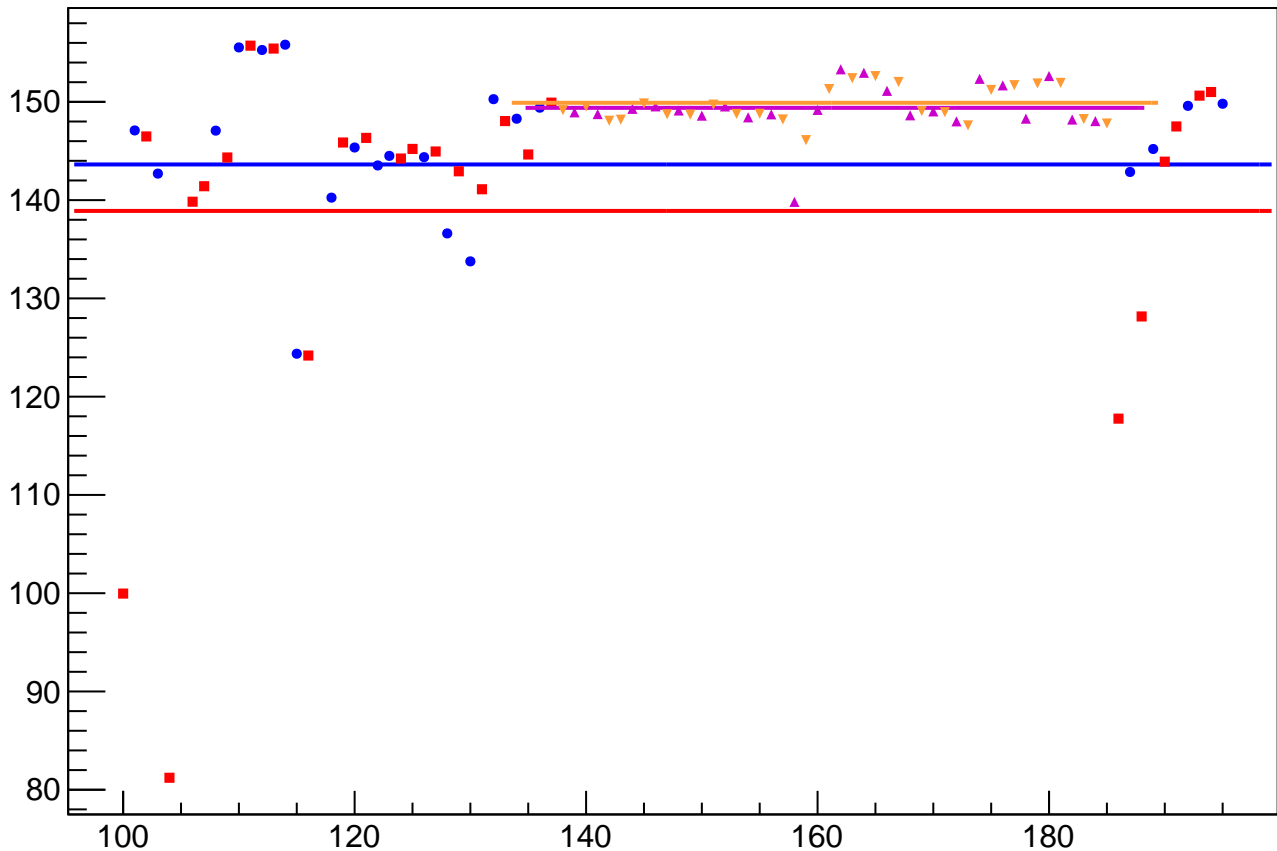
Left In: 0.622+/-0.000  $\chi^2/\text{NDF}$ :404479.0/22

+ sign 0.007+/-0.000  $\chi^2/\text{NDF}$ : 41384443.9/45

All: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 83387891.0/93

- sign 0.007+/-0.000  $\chi^2/\text{NDF}$ : 42003276.5/47

# yield\_cav4cQ\_mean vs Slug



Right In: 143.630 $\pm$ 0.000  $\chi^2$ /NDF: 1134046361.2/20

Left Out: 149.906 $\pm$ 0.000  $\chi^2$ /NDF: 163261802.4/24

Right Out: 138.900 $\pm$ 0.000  $\chi^2$ /NDF: 2719676143.7/24

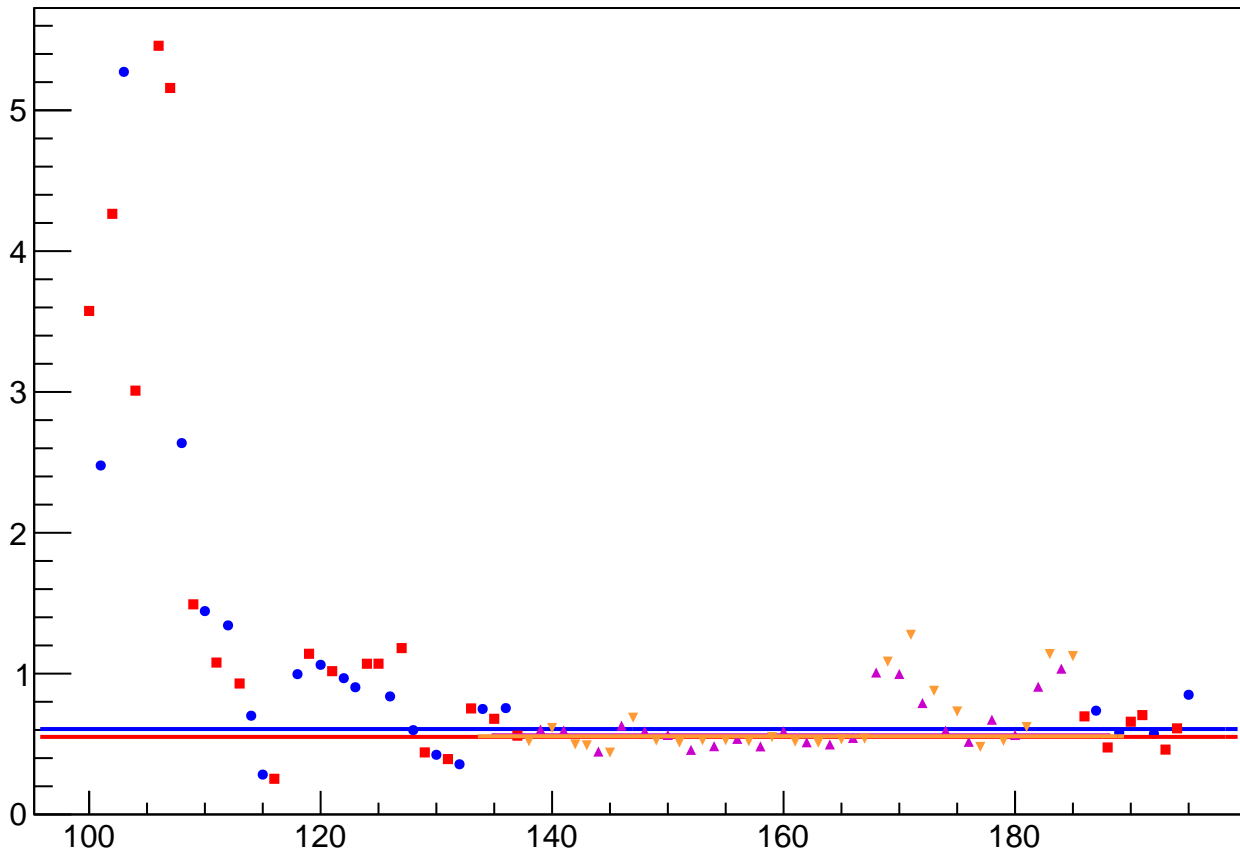
Left In: 149.391 $\pm$ 0.000  $\chi^2$ /NDF: 437129920.4/22

+ sign 148.519 $\pm$ 0.000  $\chi^2$ /NDF: 1740586900.8/45

All: 147.374 $\pm$ 0.000  $\chi^2$ /NDF: 6624798621.6

- sign 146.268 $\pm$ 0.000  $\chi^2$ /NDF: 4715668875.7/47

# yield\_cav4cQ\_rms vs Slug



Right In: 0.607 $\pm$ 0.000  $\chi^2$ /NDF: 3612949.1/20

Left Out: 0.555 $\pm$ 0.000  $\chi^2$ /NDF:1773380.1/24

Right Out: 0.551 $\pm$ 0.000  $\chi^2$ /NDF: 4811315.4/24

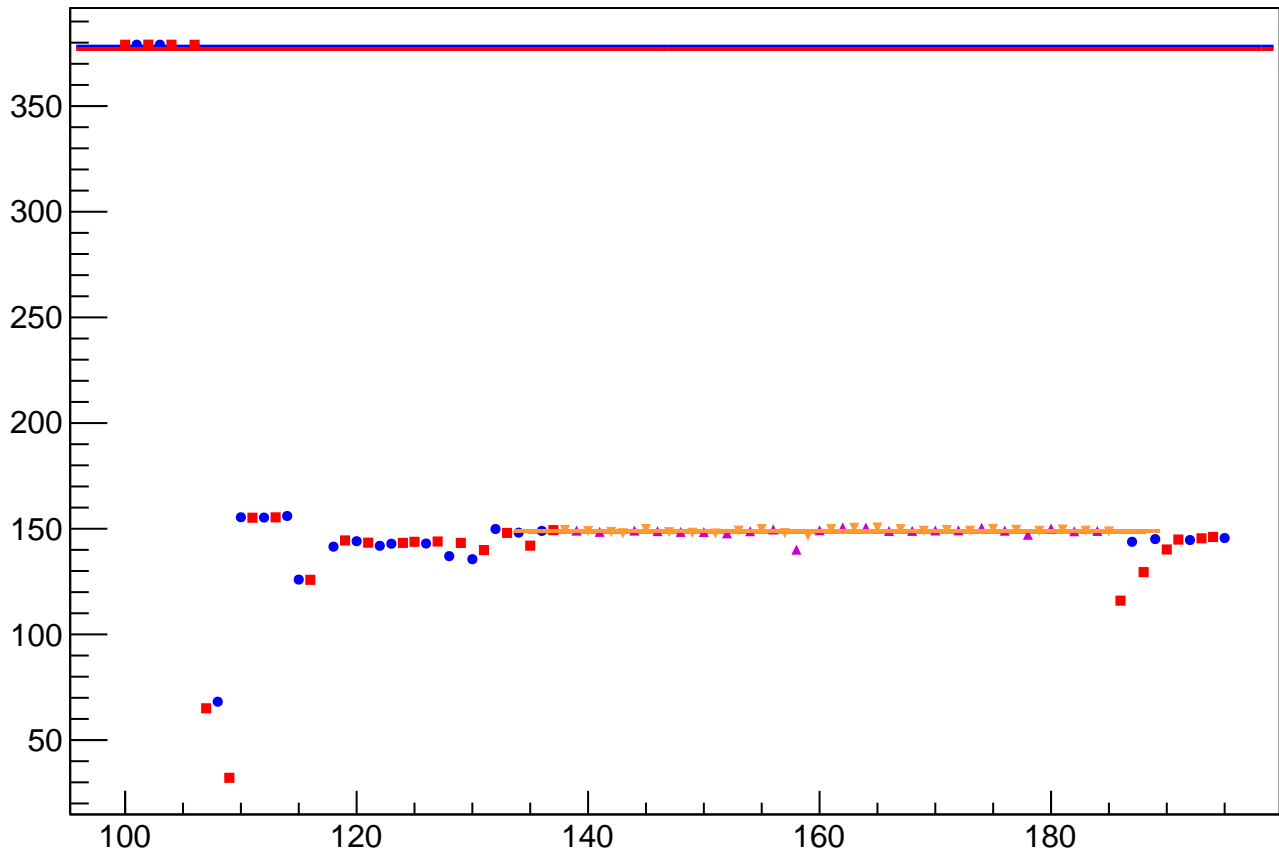
Left In: 0.562 $\pm$ 0.000  $\chi^2$ /NDF:1311075.2/22

+ sign 0.567 $\pm$ 0.000  $\chi^2$ /NDF: 5445183.6/45

All: 0.563 $\pm$ 0.000  $\chi^2$ /NDF: 11575505.2/93

- sign 0.559 $\pm$ 0.000  $\chi^2$ /NDF: 6126051.9/47

# yield\_cav4dQ\_mean vs Slug



Right In: 378.109+/-0.000  $\chi^2/\text{NDF}$ : 3046878246386.6/20

+ sign 376.829+/-0.000  $\chi^2/\text{NDF}$ : 6956301646356.2

Left Out: 148.946+/-0.000  $\chi^2/\text{NDF}$ : 63974844.7/24

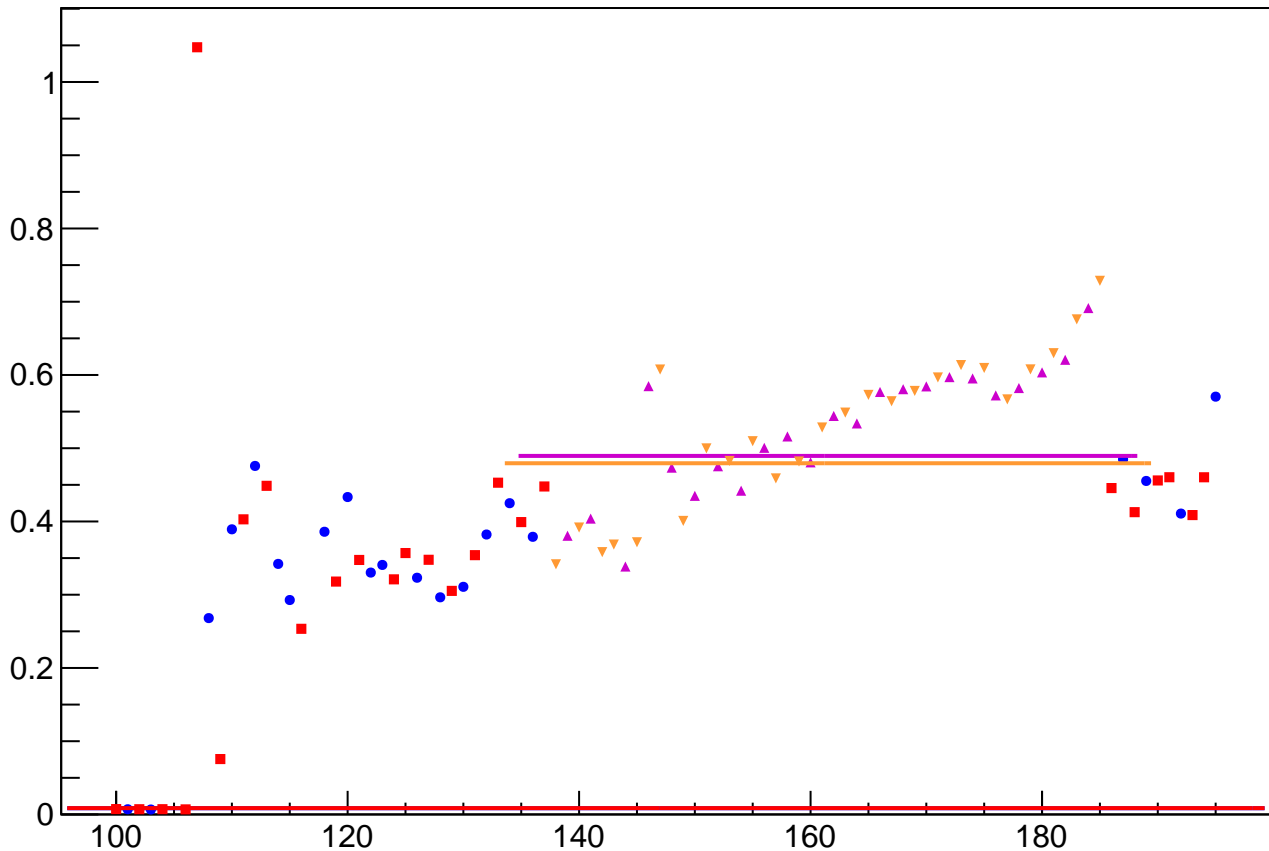
All: 376.376+/-0.000  $\chi^2/\text{NDF}$ : 19837582090

Right Out: 377.009+/-0.000  $\chi^2/\text{NDF}$ : 9299665401684.4/24

- sign 375.979+/-0.000  $\chi^2/\text{NDF}$ : 12876124202111.3

Left In: 148.683+/-0.000  $\chi^2/\text{NDF}$ : 253848207.3/22

# yield\_cav4dQ\_rms vs Slug



Right In: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 14117998.7/20

Left Out: 0.479+/-0.000  $\chi^2/\text{NDF}$ : 1518765.9/24

Right Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 15857883.7/24

Left In: 0.490+/-0.000  $\chi^2/\text{NDF}$ : 1090532.3/22

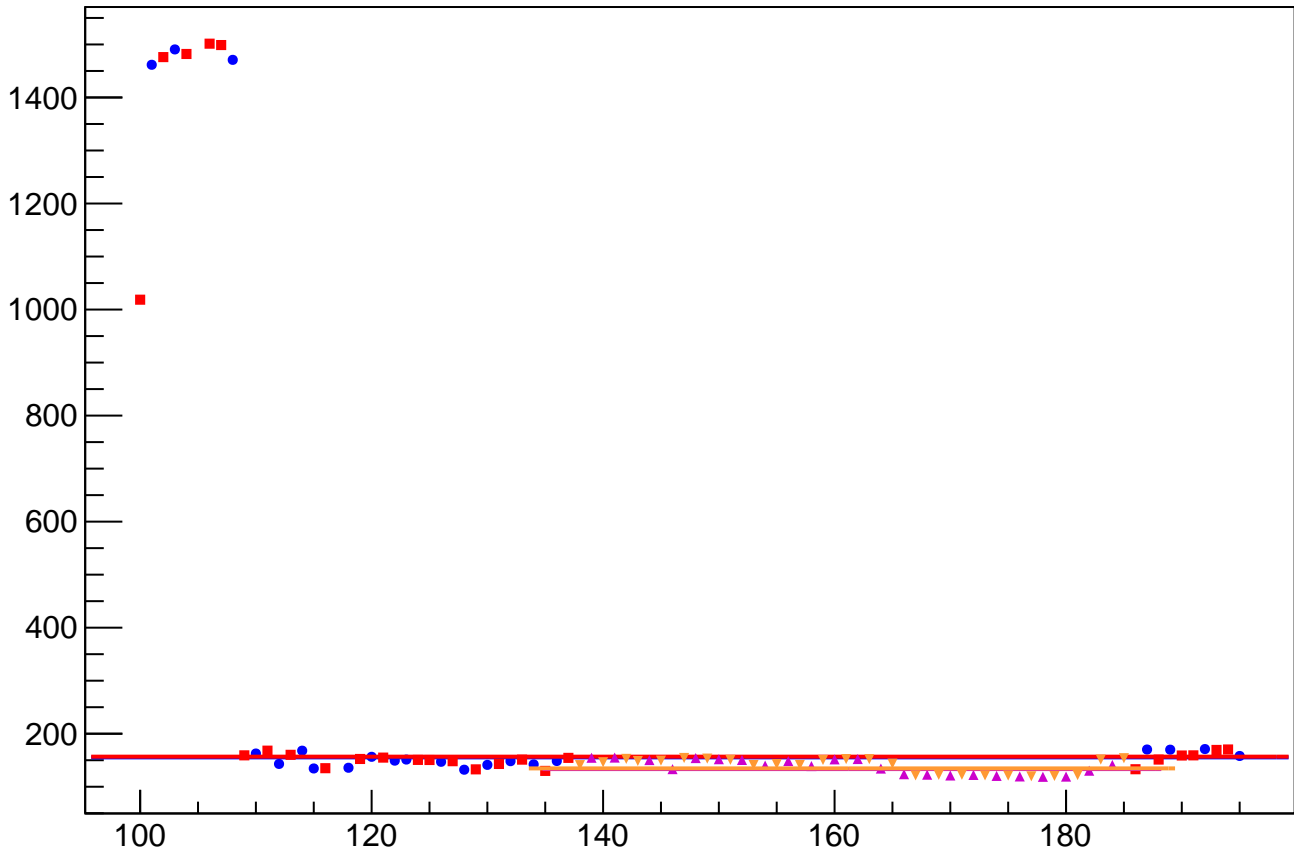
+ sign 0.011+/-0.000  $\chi^2/\text{NDF}$ : 48668727.2/45

All: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 97344261.1/93

- sign 0.011+/-0.000  $\chi^2/\text{NDF}$ : 48674328.3/47



# yield\_bcm0l02\_mean vs Slug



Right In: 155.362+/-0.000  $\chi^2/\text{NDF}$ : 25382769026.4/20

Left Out: 134.585+/-0.000  $\chi^2/\text{NDF}$ : 4387324151.1/24

Right Out: 156.733+/-0.000  $\chi^2/\text{NDF}$ : 34616242296.7/24

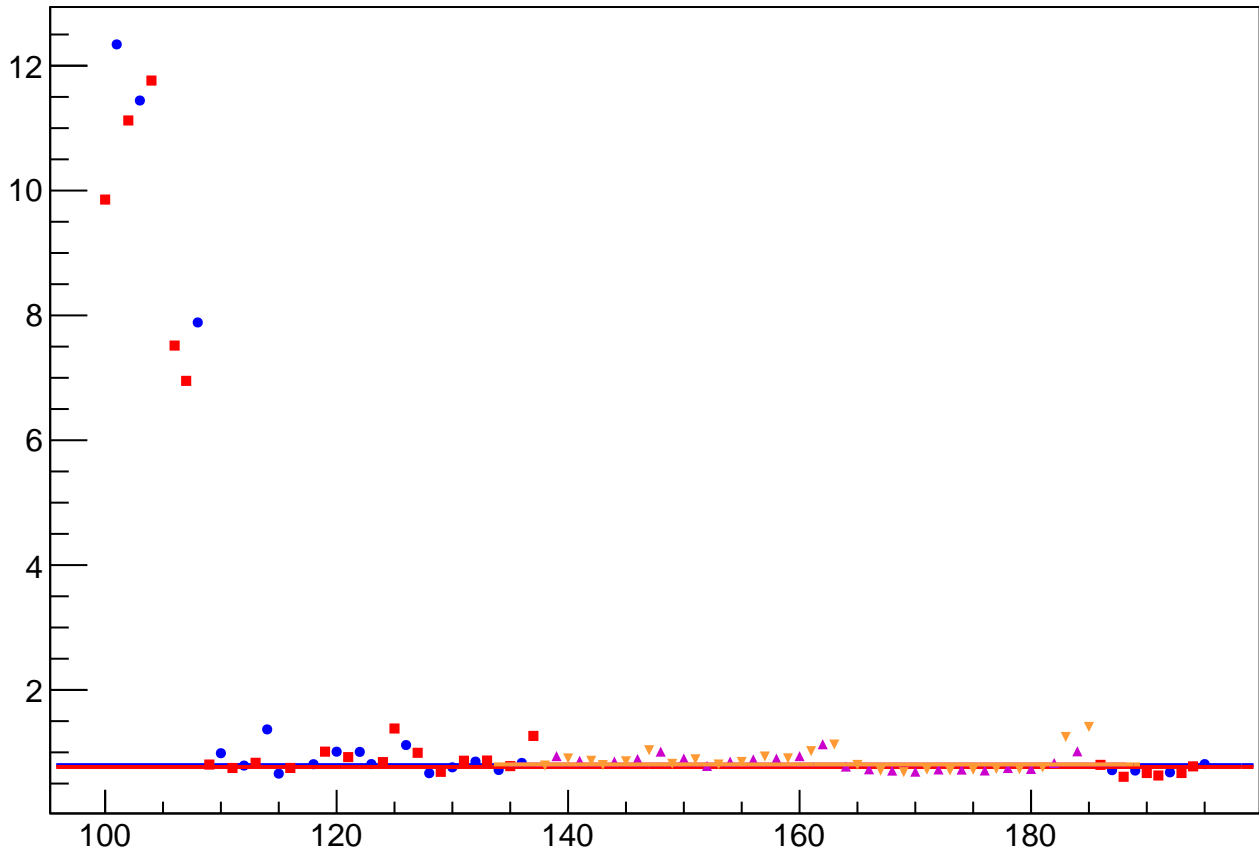
Left In: 133.309+/-0.000  $\chi^2/\text{NDF}$ : 4353039408.6/22

+ sign 140.337+/-0.000  $\chi^2/\text{NDF}$ : 32607377983.8/45

All: 140.815+/-0.000  $\chi^2/\text{NDF}$ : 75868736033.0

- sign 141.267+/-0.000  $\chi^2/\text{NDF}$ : 43246752714.3/47

# yield\_bcm0l02\_rms vs Slug



Right In: 0.795 $\pm$ 0.000  $\chi^2$ /NDF: 2757673.4/20

Left Out: 0.807 $\pm$ 0.000  $\chi^2$ /NDF:704181.3/24

Right Out: 0.766 $\pm$ 0.000  $\chi^2$ /NDF: 3123261.2/24

Left In: 0.805 $\pm$ 0.000  $\chi^2$ /NDF:479689.4/22

+ sign 0.803 $\pm$ 0.000  $\chi^2$ /NDF: 3463581.3/45

All: 0.797 $\pm$ 0.000  $\chi^2$ /NDF: 7094924.8/93

- sign 0.791 $\pm$ 0.000  $\chi^2$ /NDF: 3626376.8/47

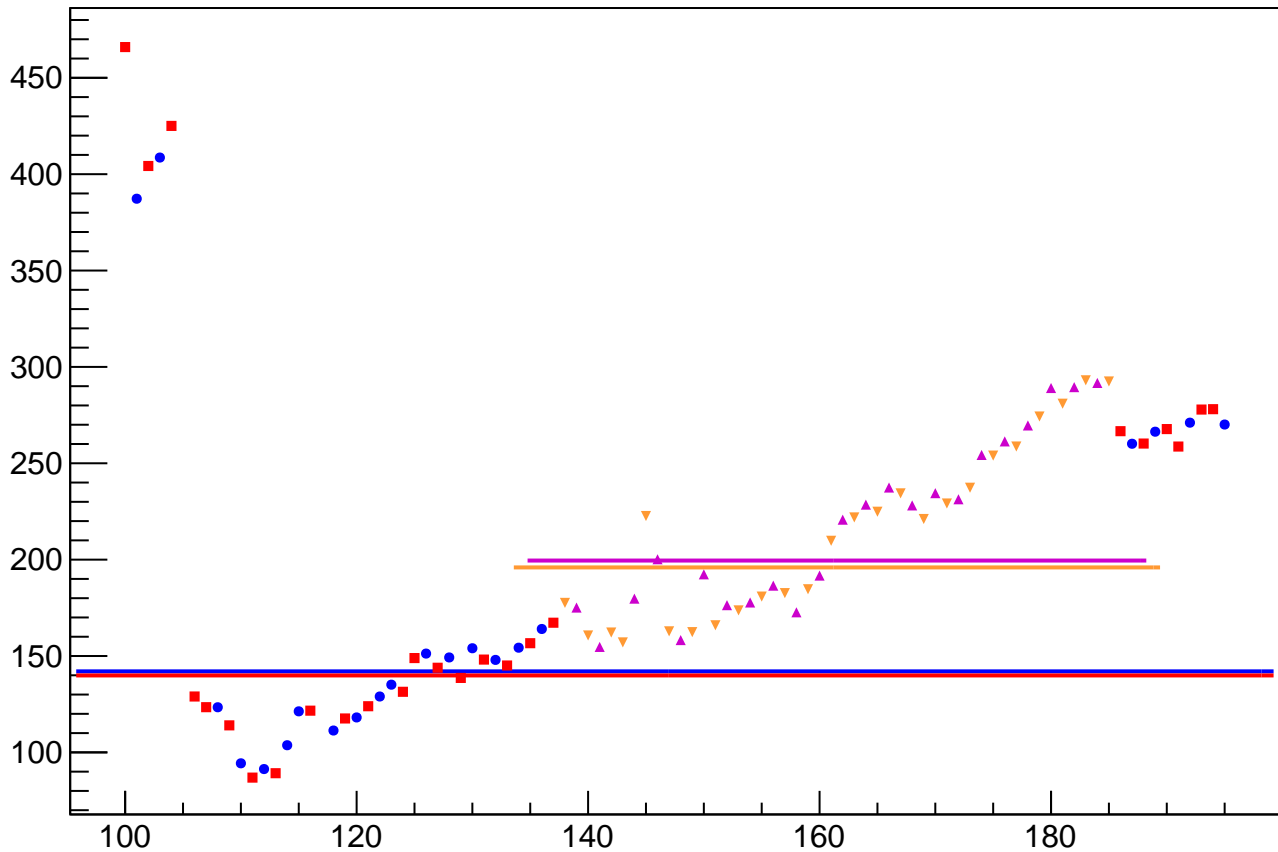
# yield\_bpm2i01WS\_mean vs Slug



Right In: 131896.404 $\pm$ 0.052     $\chi^2$ /NDF: 62112289591.4/20  
 Left Out: 128713.791 $\pm$ 0.047     $\chi^2$ /NDF: 348293942.5/24  
 Right Out: 132727.667 $\pm$ 0.048     $\chi^2$ /NDF: 88560761864.1/24  
 Left In: 128670.094 $\pm$ 0.049     $\chi^2$ /NDF: 334875494.0/22

+ sign 130126.823 $\pm$ 0.035     $\chi^2$ /NDF: 64526922608.  
 All: 130444.869 $\pm$ 0.024     $\chi^2$ /NDF: 157125870.  
 - sign 130750.310 $\pm$ 0.034     $\chi^2$ /NDF: 92435085639.4

# yield\_bpm2i01WS\_rms vs Slug



Right In: 142.037 $\pm$ 0.037  $\chi^2$ /NDF: 2610838.4/20

Left Out: 195.964 $\pm$ 0.033  $\chi^2$ /NDF: 1316091.7/24

Right Out: 139.917 $\pm$ 0.034  $\chi^2$ /NDF: 3299902.4/24

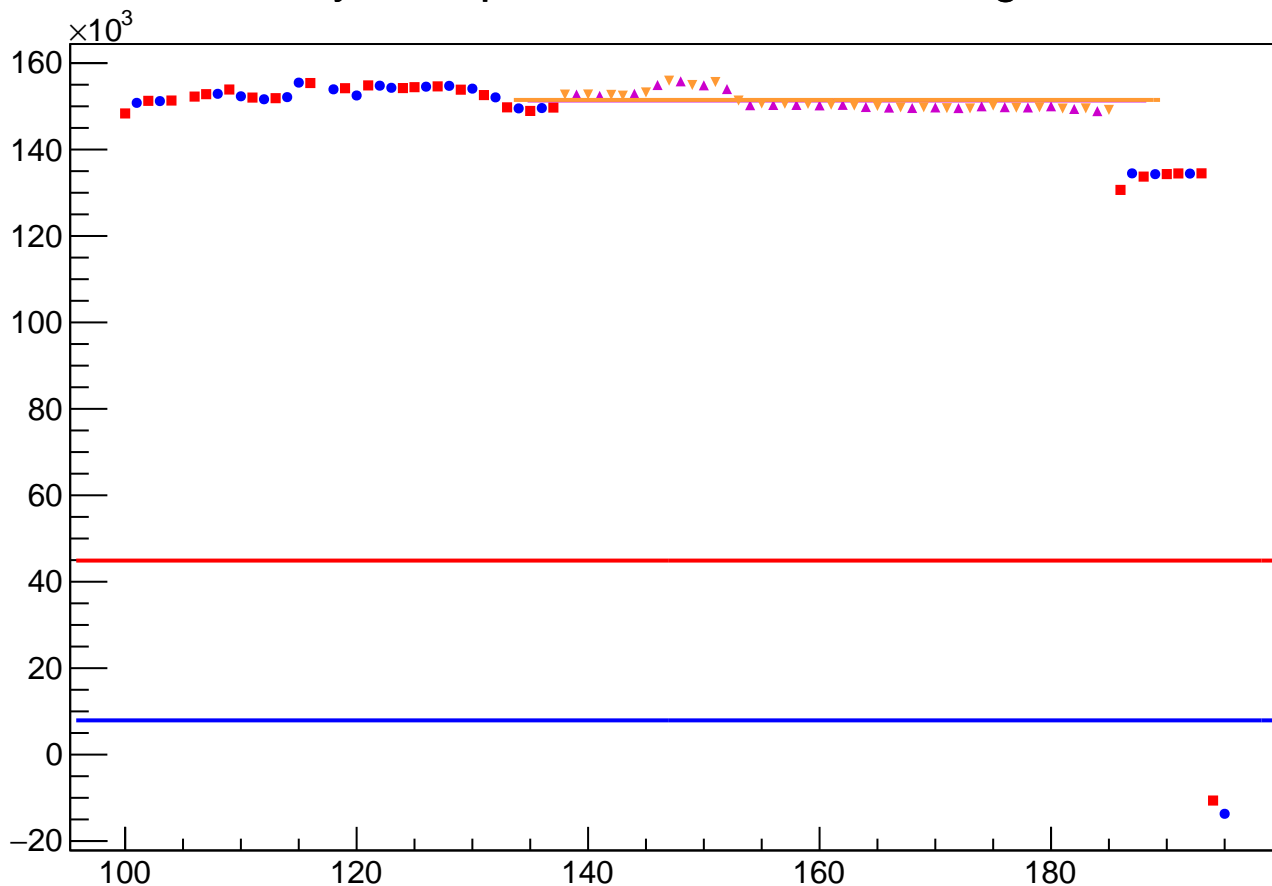
Left In: 199.531 $\pm$ 0.035  $\chi^2$ /NDF: 1175342.5/22

+ sign 172.021 $\pm$ 0.025  $\chi^2$ /NDF: 5113448.5/45

All: 170.464 $\pm$ 0.017  $\chi^2$ /NDF: 11124567.7/90

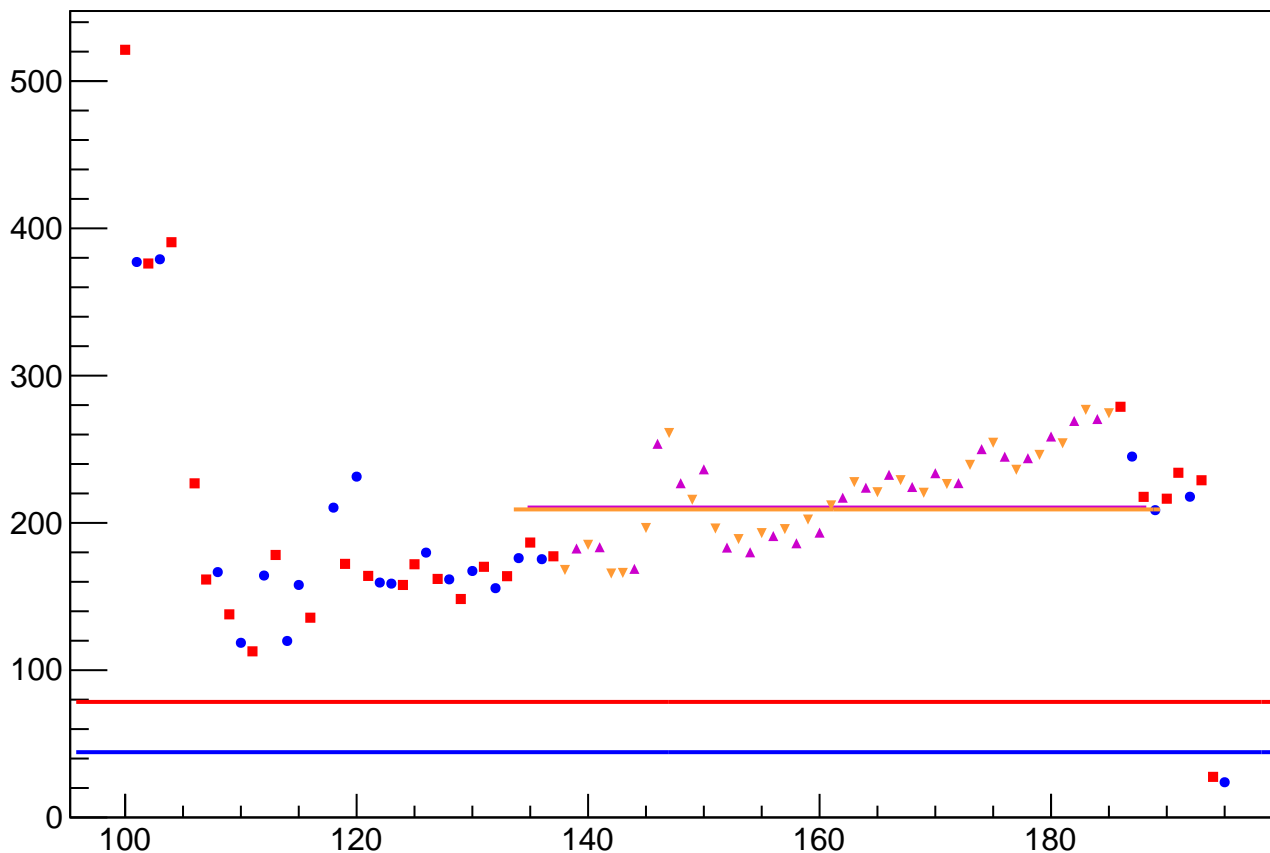
- sign 168.969 $\pm$ 0.024  $\chi^2$ /NDF: 6003263.3/47

# yield\_bpm0i07WS\_mean vs Slug



Right In: 7921.780 $\pm$ 0.024  $\chi^2$ /NDF: 5181002645581.6/20  
 Left Out: 151480.339 $\pm$ 0.049  $\chi^2$ /NDF:1483692735.3/24  
 Right Out: 44895.658 $\pm$ 0.035  $\chi^2$ /NDF: 4651734998368.5/24  
 Left In: 151362.440 $\pm$ 0.051  $\chi^2$ /NDF:1426782789.9/22  
 All: 51585.978 $\pm$ 0.017  $\chi^2$ /NDF: 209522288  
 + sign 35960.734 $\pm$ 0.022  $\chi^2$ /NDF: 1195839600150  
 - sign 79304.051 $\pm$ 0.029  $\chi^2$ /NDF: 7577063857108

# yield\_bpm0i07WS\_rms vs Slug



Right In: 44.325 $\pm$ 0.017  $\chi^2$ /NDF: 10266193.0/20

Left Out: 209.156 $\pm$ 0.035  $\chi^2$ /NDF: 710094.9/24

Right Out: 78.455 $\pm$ 0.025  $\chi^2$ /NDF: 9198579.3/24

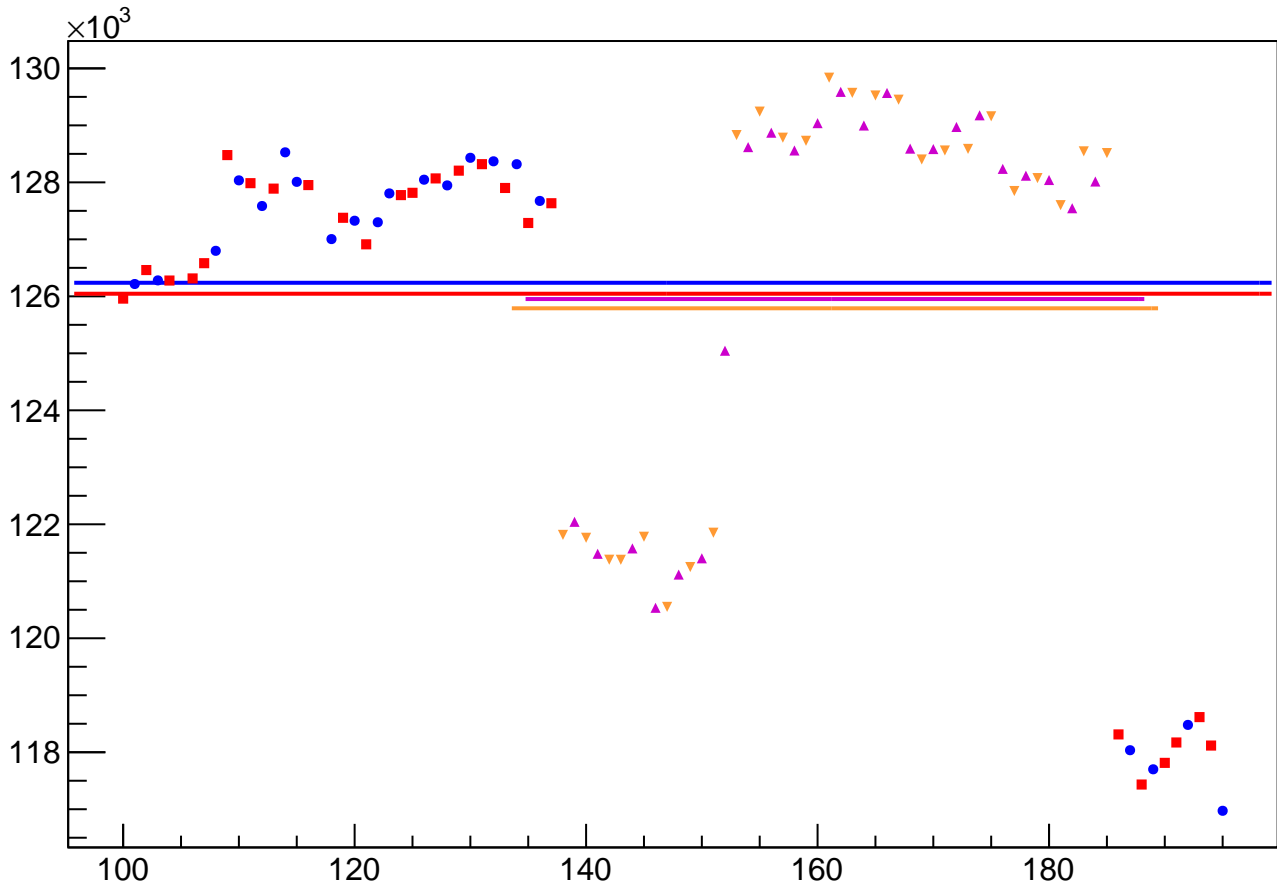
Left In: 210.431 $\pm$ 0.036  $\chi^2$ /NDF: 684015.0/22

+ sign 76.519 $\pm$ 0.015  $\chi^2$ /NDF: 28841802.8/45

All: 92.593 $\pm$ 0.012  $\chi^2$ /NDF: 50708814.5/93

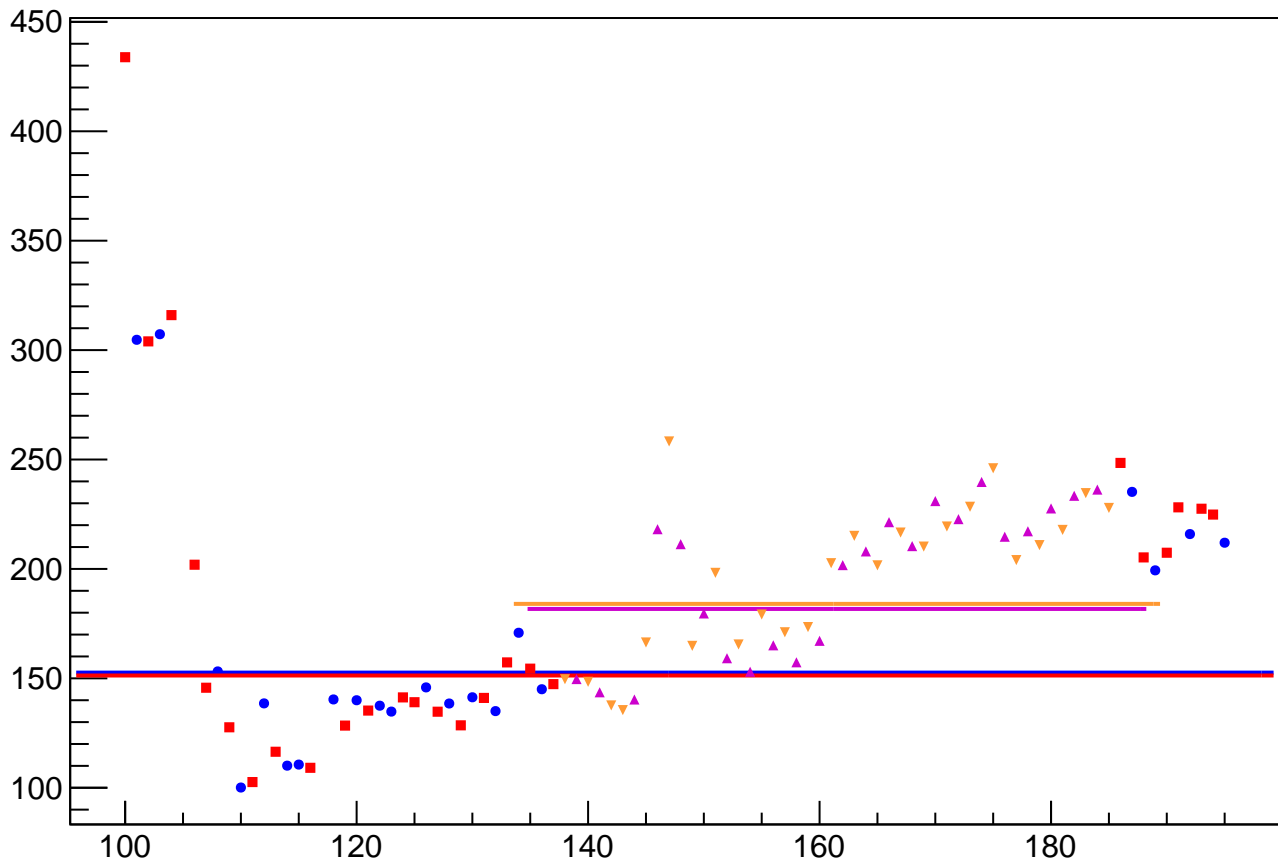
- sign 121.108 $\pm$ 0.021  $\chi^2$ /NDF: 18868272.7/47

# yield\_bpm0l01WS\_mean vs Slug



Right In: 126238.002+/-0.054	$\chi^2/\text{NDF}: 4433473121.1/20$	+ sign 125969.027+/-0.034	$\chi^2/\text{NDF}: 11219243611.$
Left Out: 125790.126+/-0.044	$\chi^2/\text{NDF}: 6744310079.8/24$	All: 125981.949+/-0.024	$\chi^2/\text{NDF}: 22677158$
Right Out: 126045.762+/-0.050	$\chi^2/\text{NDF}: 5613879768.3/24$	- sign 125994.216+/-0.033	$\chi^2/\text{NDF}: 11457634141.1$
Left In: 125952.447+/-0.045	$\chi^2/\text{NDF}: 5841800367.5/22$		

# yield\_bpm0l01WS\_rms vs Slug



Right In: 152.621 $\pm$ 0.038  $\chi^2$ /NDF: 1265718.8/20

Left Out: 184.029 $\pm$ 0.031  $\chi^2$ /NDF:1126592.5/24

Right Out: 151.298 $\pm$ 0.035  $\chi^2$ /NDF: 1778637.1/24

Left In: 181.714 $\pm$ 0.032  $\chi^2$ /NDF:1116142.0/22

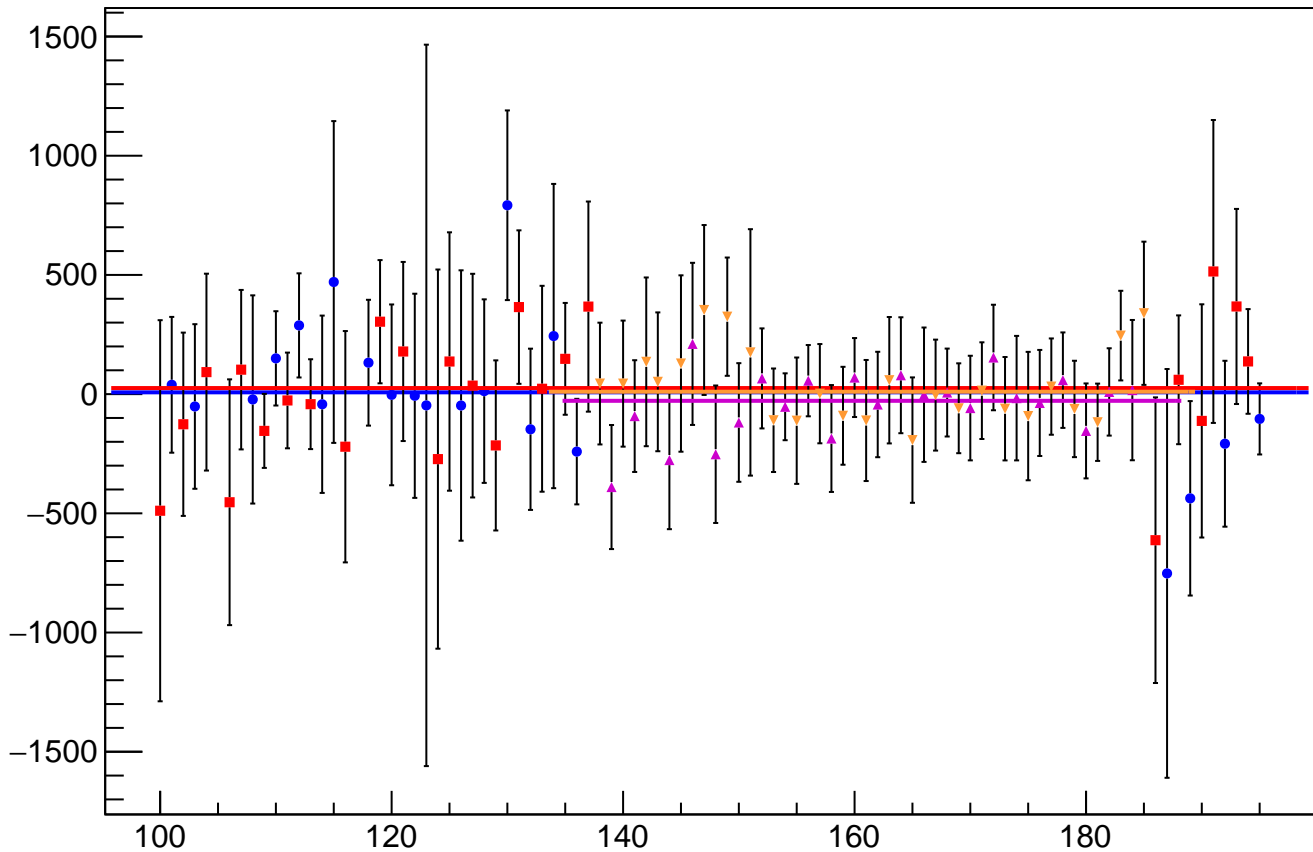
+ sign 171.483 $\pm$ 0.024  $\chi^2$ /NDF: 2800104.2/45

All: 169.747 $\pm$ 0.017  $\chi^2$ /NDF: 6120205.9/93

- sign 168.099 $\pm$ 0.023  $\chi^2$ /NDF: 3309977.6/47



# asym\_bcm\_an\_ds\_mean vs Slug



Right In:  $7.504 \pm 67.806$   $\chi^2/\text{NDF}: 11.4/20$

Left Out:  $10.078 \pm 47.488$   $\chi^2/\text{NDF}: 8.5/24$

Right Out:  $25.480 \pm 62.831$   $\chi^2/\text{NDF}: 10.0/24$

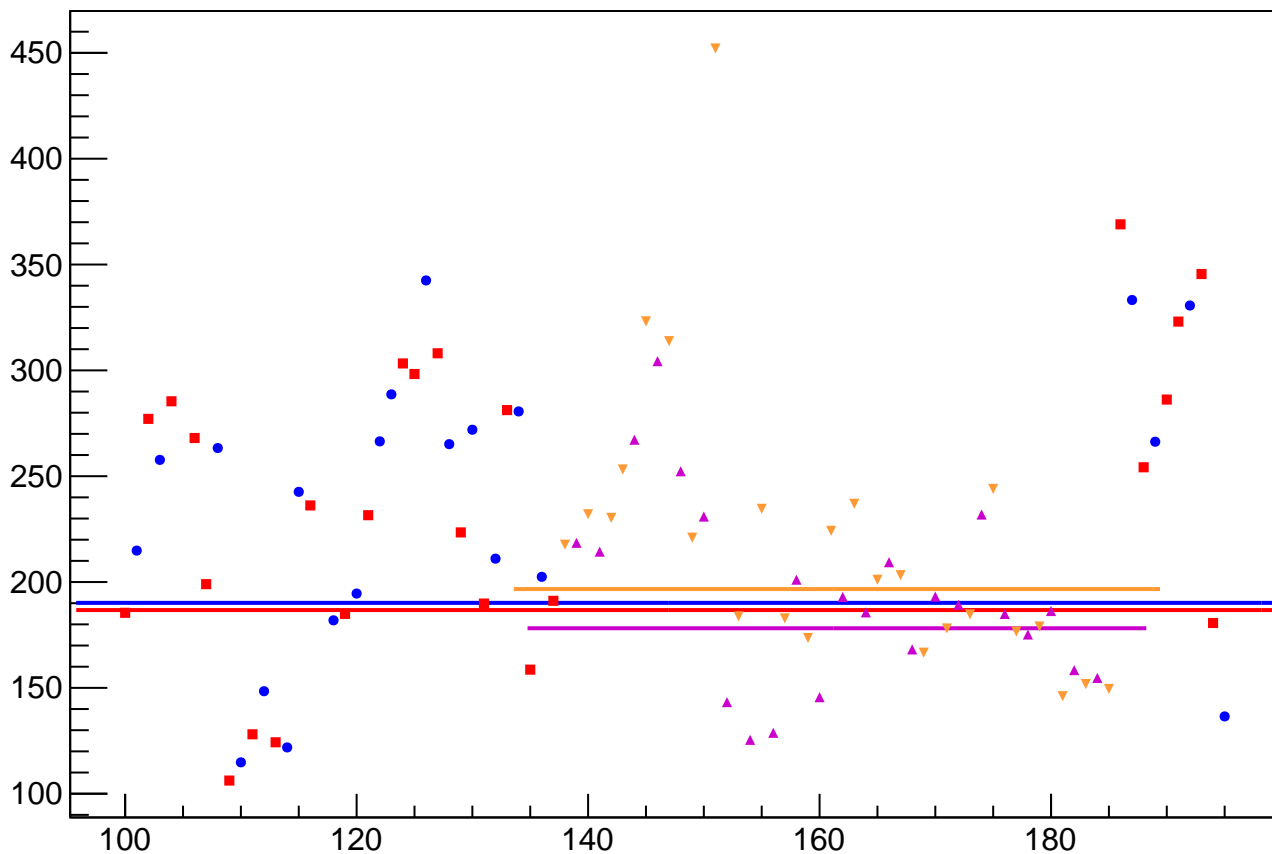
Left In:  $-28.050 \pm 44.573$   $\chi^2/\text{NDF}: 7.0/22$

+ sign  $9.231 \pm 38.897$   $\chi^2/\text{NDF}: 19.8/45$

All:  $-1.103 \pm 26.560$   $\chi^2/\text{NDF}: 37.4/93$

- sign  $-10.129 \pm 36.354$   $\chi^2/\text{NDF}: 17.5/47$

# asym\_bcm\_an\_ds\_rms vs Slug



Right In: 190.165 $\pm$ 0.048  $\chi^2$ /NDF: 1733631.6/20

Left Out: 196.682 $\pm$ 0.034  $\chi^2$ /NDF: 1782715.7/24

Right Out: 186.761 $\pm$ 0.044  $\chi^2$ /NDF: 2450506.1/24

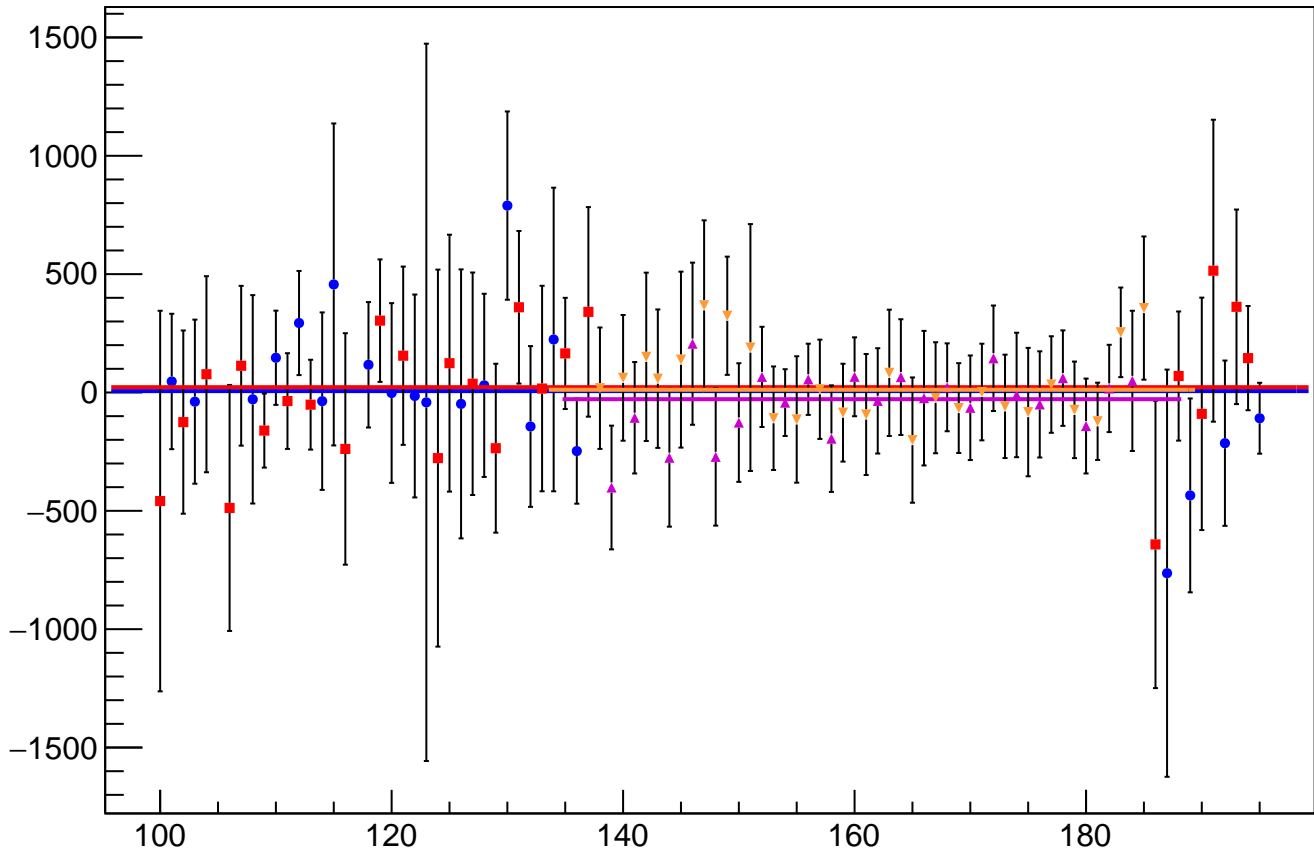
Left In: 178.166 $\pm$ 0.032  $\chi^2$ /NDF: 1618967.9/22

+ sign 194.537 $\pm$ 0.028  $\chi^2$ /NDF: 3528743.1/45

All: 187.335 $\pm$ 0.019  $\chi^2$ /NDF: 7751586.6/93

- sign 181.043 $\pm$ 0.026  $\chi^2$ /NDF: 4094374.8/47

# asym\_bcm\_an\_ds3\_mean vs Slug



Right In:  $5.773 \pm 68.119$   $\chi^2/\text{NDF}: 11.3/20$

Left Out:  $11.479 \pm 47.819$   $\chi^2/\text{NDF}: 8.8/24$

Right Out:  $22.459 \pm 63.170$   $\chi^2/\text{NDF}: 10.3/24$

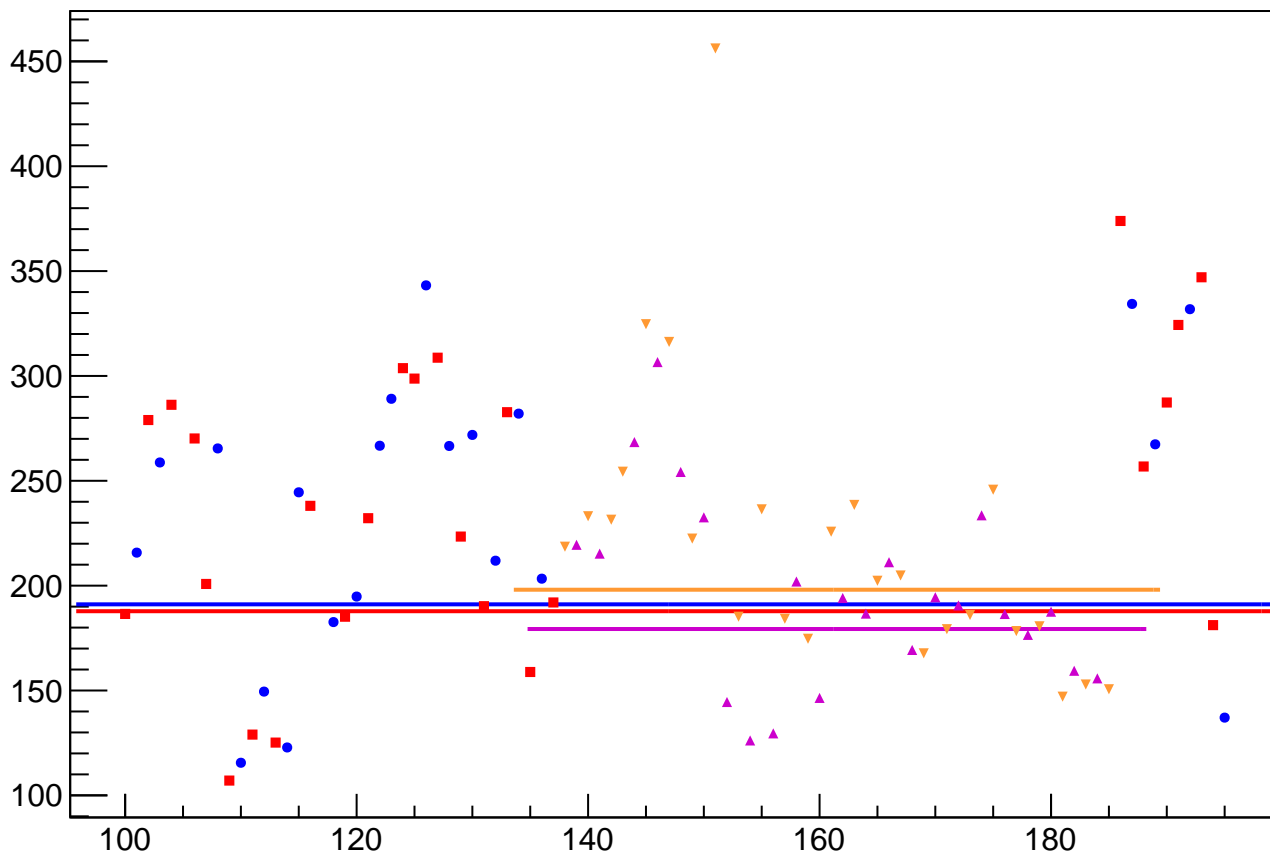
Left In:  $-28.280 \pm 44.863$   $\chi^2/\text{NDF}: 7.1/22$

+ sign  $9.595 \pm 39.138$   $\chi^2/\text{NDF}: 20.2/45$

All:  $-1.541 \pm 26.724$   $\chi^2/\text{NDF}: 38.2/93$

- sign  $-11.268 \pm 36.577$   $\chi^2/\text{NDF}: 17.8/47$

# asym\_bcm\_an\_ds3\_rms vs Slug



Right In: 191.090 $\pm$ 0.048  $\chi^2$ /NDF: 1725206.3/20

Left Out: 198.059 $\pm$ 0.034  $\chi^2$ /NDF:1778526.5/24

Right Out: 187.808 $\pm$ 0.045  $\chi^2$ /NDF: 2442661.2/24

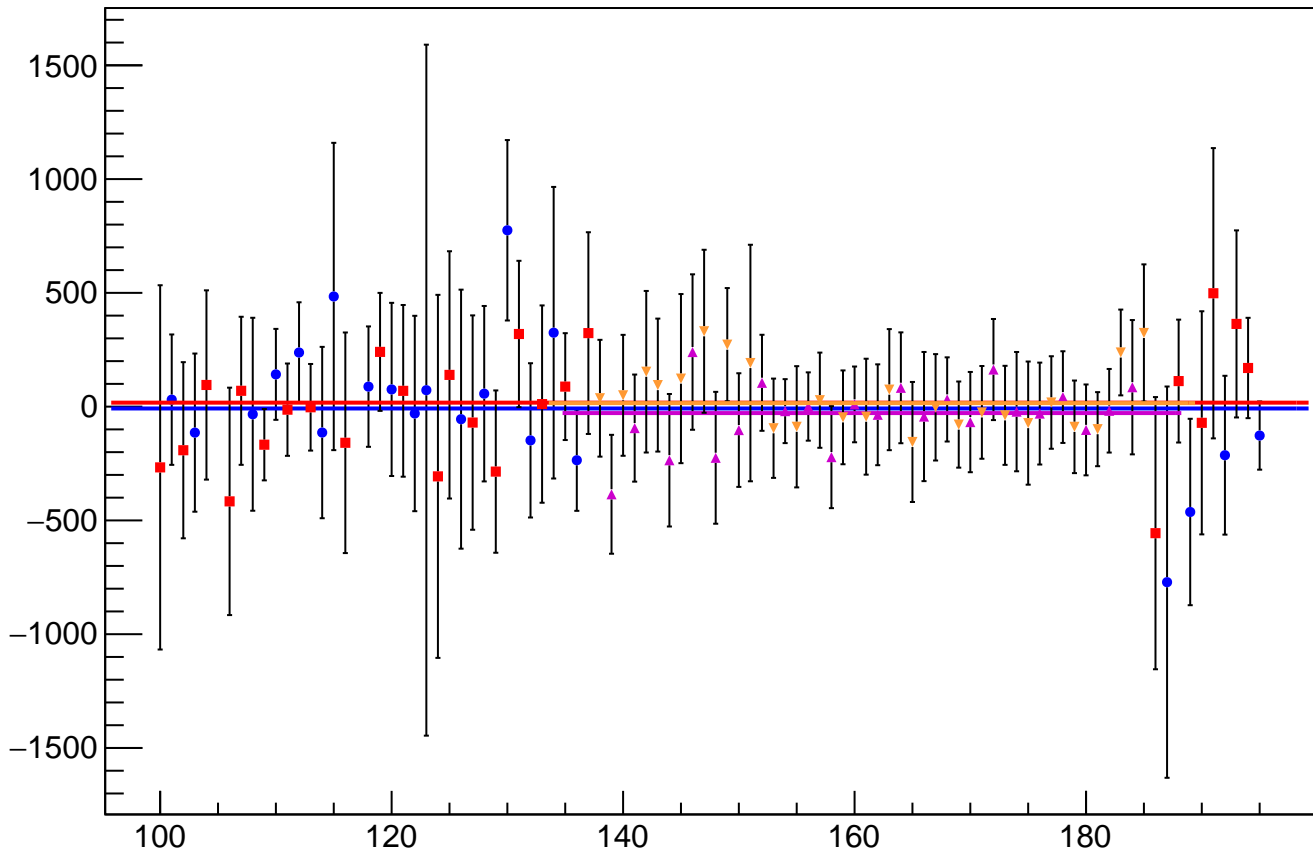
Left In: 179.324 $\pm$ 0.032  $\chi^2$ /NDF:1618266.2/22

+ sign 195.758 $\pm$ 0.028  $\chi^2$ /NDF: 3517755.1/45

All: 188.504 $\pm$ 0.019  $\chi^2$ /NDF: 7731379.4/93

- sign 182.168 $\pm$ 0.026  $\chi^2$ /NDF: 4084907.6/47

# asym\_bcm\_an\_us\_mean vs Slug



Right In:  $-8.078 \pm 68.132$   $\chi^2/\text{NDF}: 11.1/20$

Left Out:  $15.437 \pm 47.695$   $\chi^2/\text{NDF}: 7.0/24$

Right Out:  $17.535 \pm 63.072$   $\chi^2/\text{NDF}: 8.8/24$

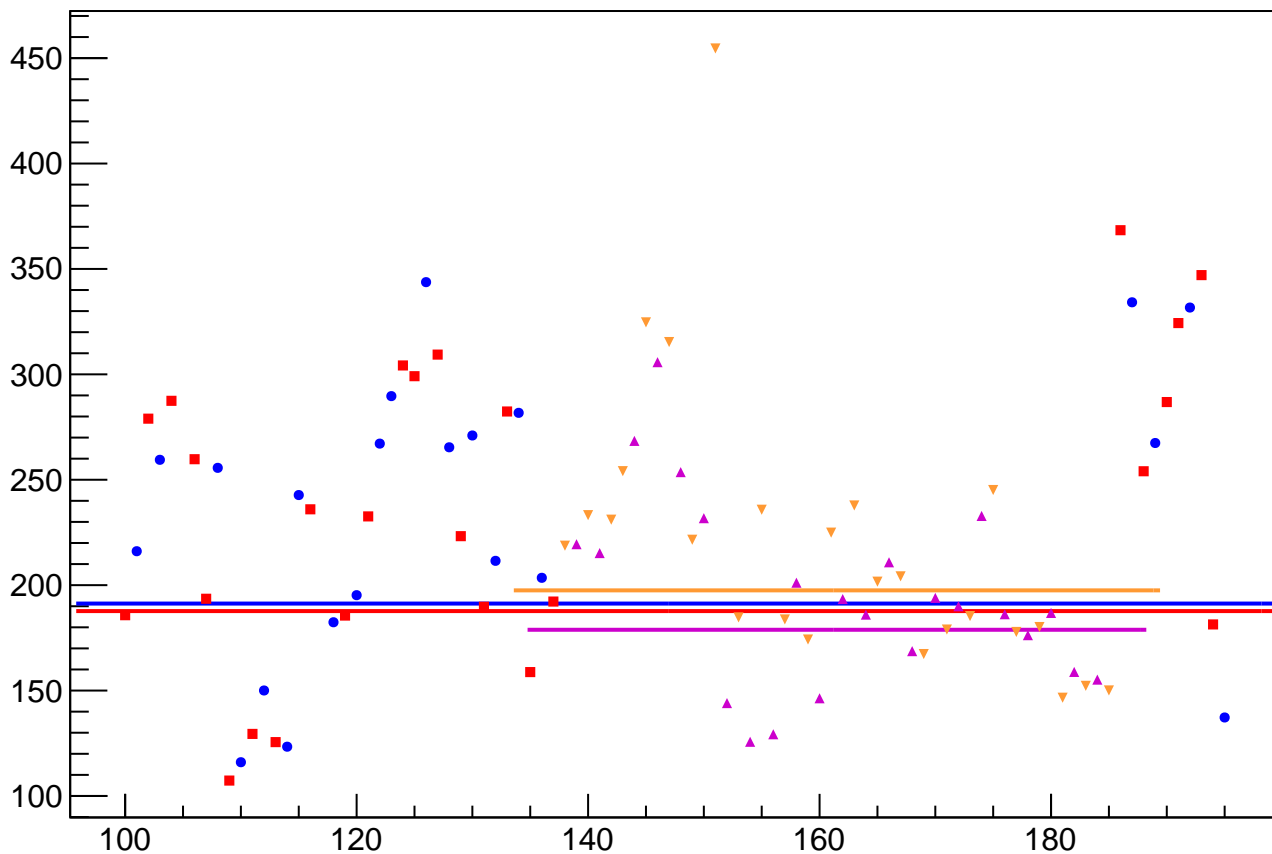
Left In:  $-28.277 \pm 44.743$   $\chi^2/\text{NDF}: 6.4/22$

+ sign  $7.704 \pm 39.072$   $\chi^2/\text{NDF}: 18.2/45$

All:  $-3.322 \pm 26.670$   $\chi^2/\text{NDF}: 33.8/93$

- sign  $-12.940 \pm 36.493$   $\chi^2/\text{NDF}: 15.5/47$

# asym\_bcm\_an\_us\_rms vs Slug



Right In: 191.268 $\pm$ 0.048  $\chi^2$ /NDF: 1701008.5/20

Left Out: 197.527 $\pm$ 0.034  $\chi^2$ /NDF: 1784225.5/24

Right Out: 187.699 $\pm$ 0.045  $\chi^2$ /NDF: 2406198.7/24

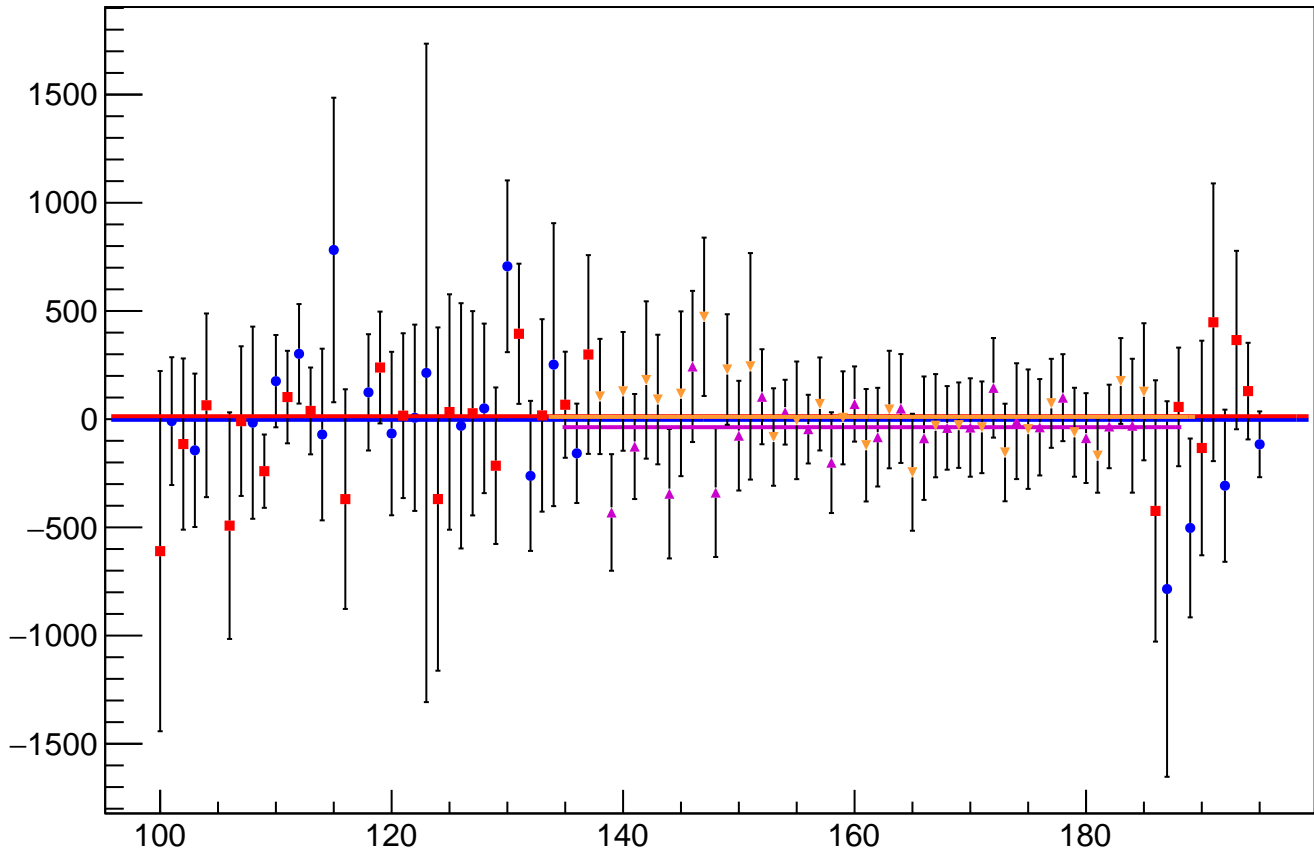
Left In: 178.836 $\pm$ 0.032  $\chi^2$ /NDF: 1622266.9/22

+ sign 195.469 $\pm$ 0.028  $\chi^2$ /NDF: 3496562.0/45

All: 188.170 $\pm$ 0.019  $\chi^2$ /NDF: 7681973.7/93

- sign 181.803 $\pm$ 0.026  $\chi^2$ /NDF: 4054739.6/47

# asym\_bcm\_dg\_us\_mean vs Slug



Right In:  $-2.962 \pm 69.912$   $\chi^2/\text{NDF}: 12.1/20$

Left Out:  $10.534 \pm 49.197$   $\chi^2/\text{NDF}: 7.5/24$

Right Out:  $13.690 \pm 65.322$   $\chi^2/\text{NDF}: 9.9/24$

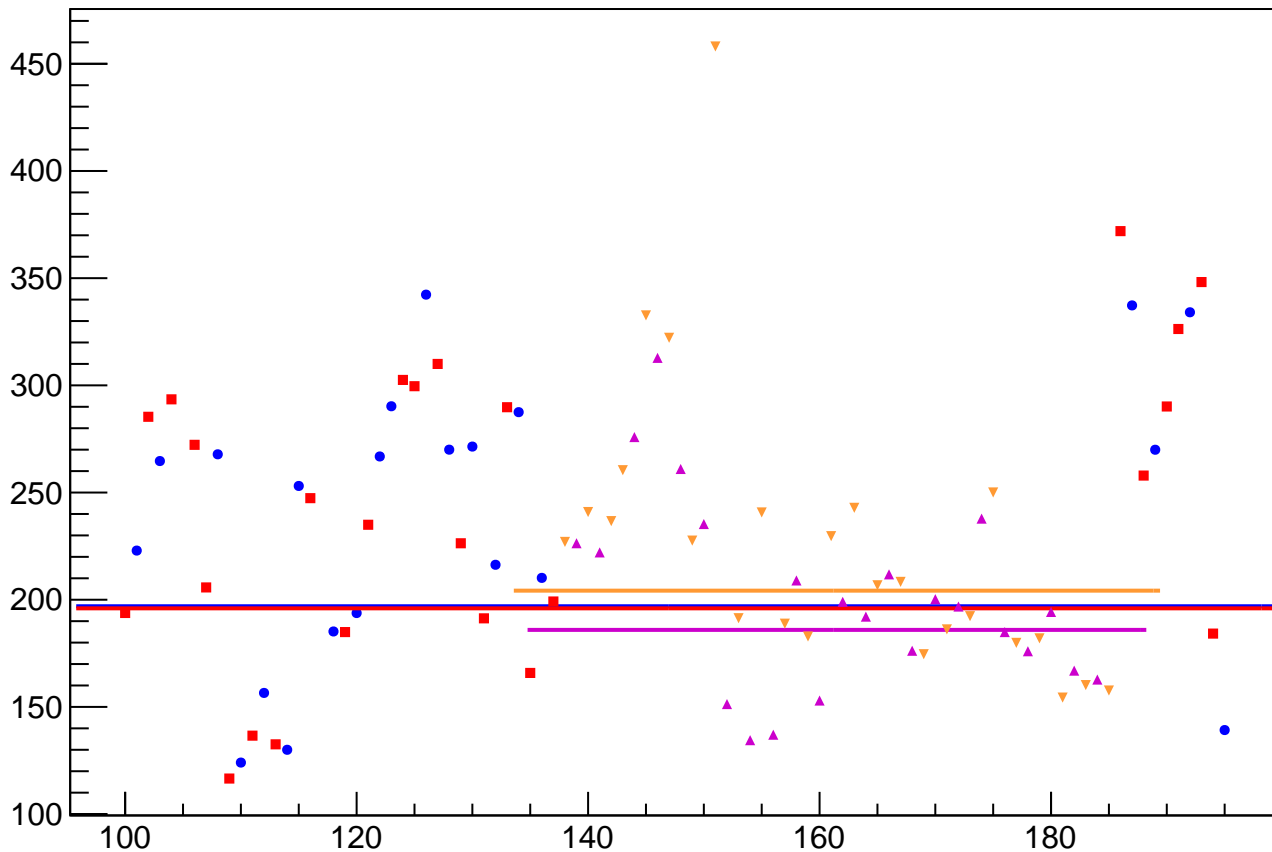
Left In:  $-37.000 \pm 46.358$   $\chi^2/\text{NDF}: 7.9/22$

+ sign  $6.064 \pm 40.233$   $\chi^2/\text{NDF}: 19.6/45$

All:  $-7.790 \pm 27.551$   $\chi^2/\text{NDF}: 38.0/93$

- sign  $-20.021 \pm 37.805$   $\chi^2/\text{NDF}: 18.2/47$

# asym\_bcm\_dg\_us\_rms vs Slug



Right In: 196.953 $\pm$ 0.049  $\chi^2$ /NDF: 1599532.0/20

Left Out: 204.236 $\pm$ 0.035  $\chi^2$ /NDF:1675666.0/24

Right Out: 195.983 $\pm$ 0.046  $\chi^2$ /NDF: 2154673.4/24

Left In: 185.931 $\pm$ 0.033  $\chi^2$ /NDF:1460065.0/22

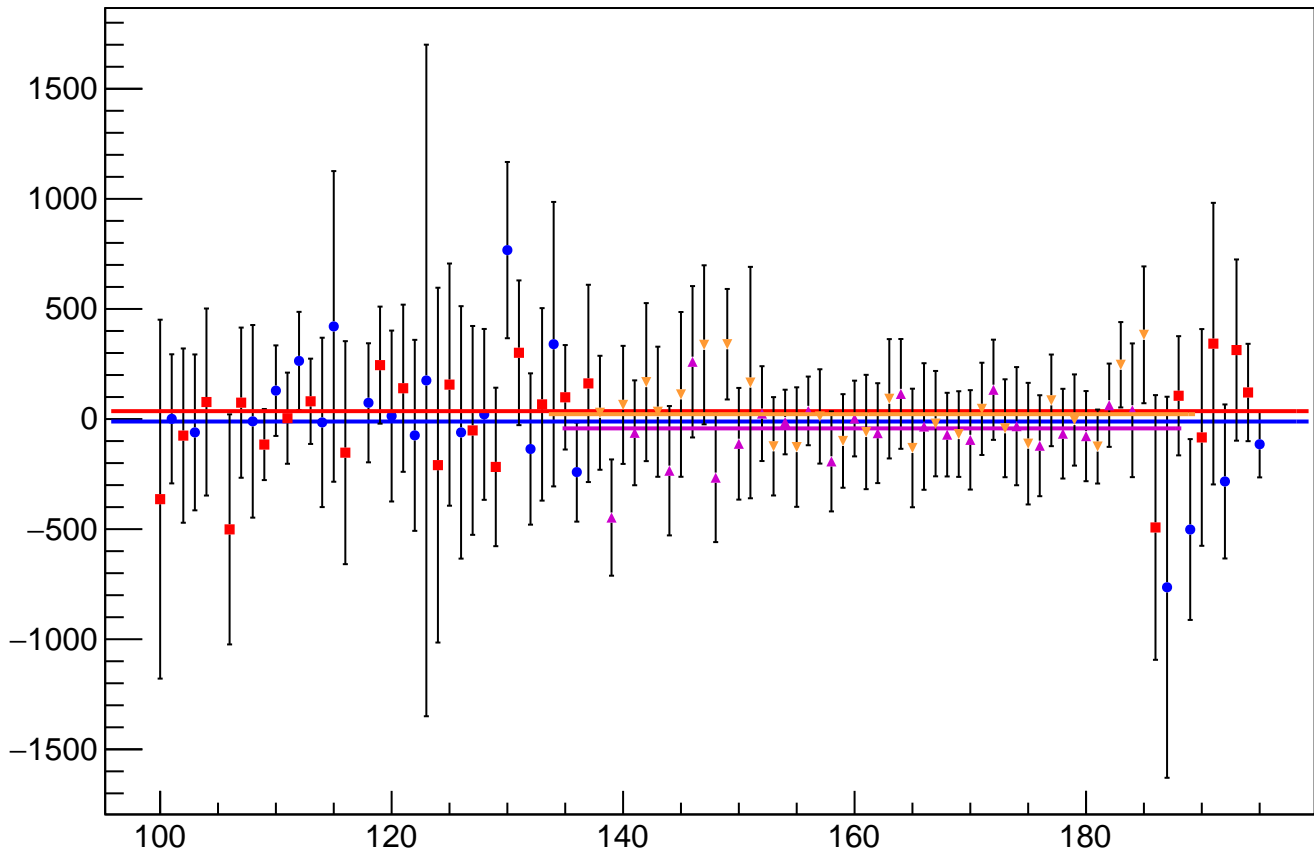
+ sign 201.824 $\pm$ 0.028  $\chi^2$ /NDF: 3289714.6/45

All: 195.172 $\pm$ 0.019  $\chi^2$ /NDF: 7038895.7/93

- sign 189.298 $\pm$ 0.027  $\chi^2$ /NDF: 3646232.5/47



# asym\_bcm\_dg\_ds\_mean vs Slug



Right In:  $-11.195 \pm 69.082$   $\chi^2/\text{NDF}$ : 11.0/20

Left Out:  $22.189 \pm 48.738$   $\chi^2/\text{NDF}$ : 8.4/24

Right Out:  $35.885 \pm 64.188$   $\chi^2/\text{NDF}$ : 6.4/24

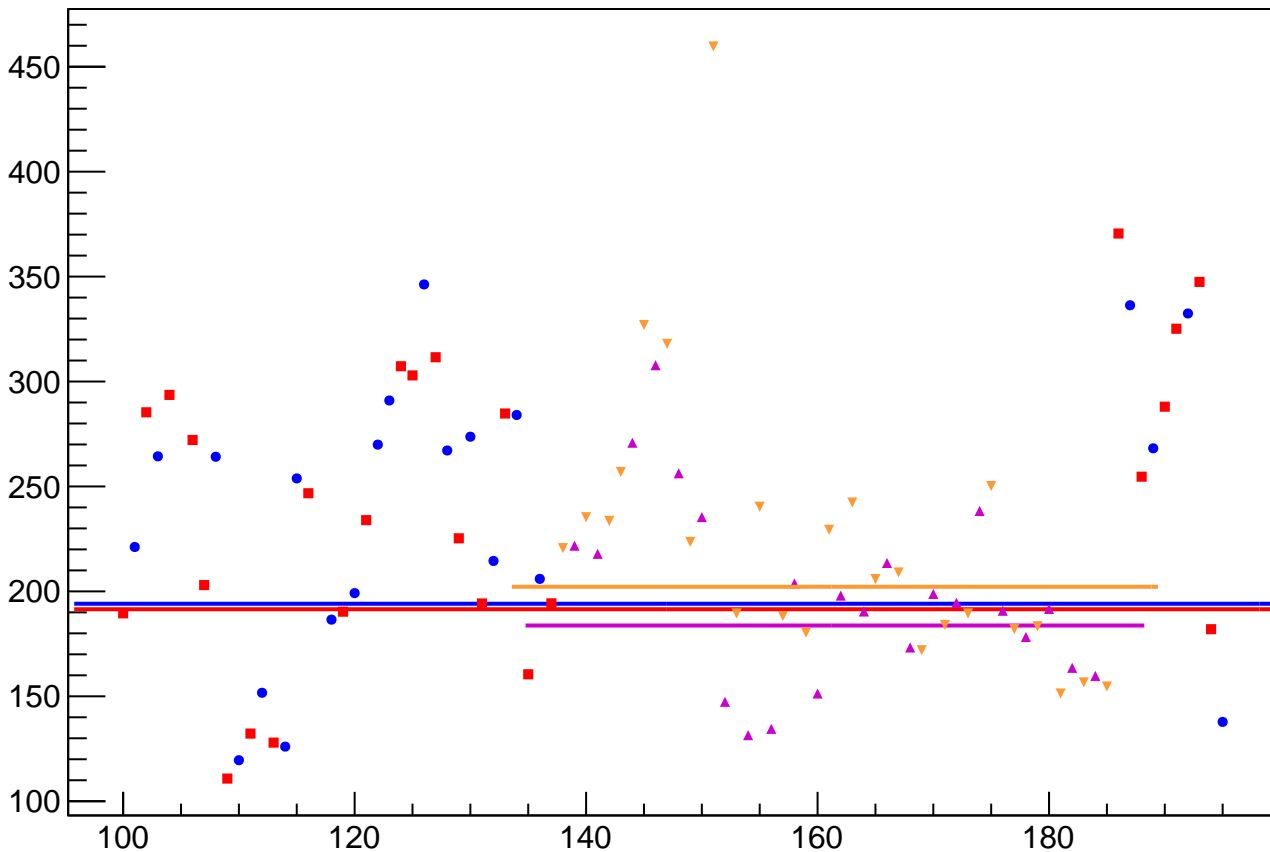
Left In:  $-42.446 \pm 45.861$   $\chi^2/\text{NDF}$ : 6.7/22

+ sign  $11.094 \pm 39.825$   $\chi^2/\text{NDF}$ : 19.6/45

All:  $-3.319 \pm 27.230$   $\chi^2/\text{NDF}$ : 33.9/93

- sign  $-15.973 \pm 37.315$   $\chi^2/\text{NDF}$ : 14.1/47

# asym\_bcm\_dg\_ds\_rms vs Slug



Right In: 194.107 $\pm$ 0.049  $\chi^2$ /NDF: 1684436.5/20

Left Out: 202.186 $\pm$ 0.034  $\chi^2$ /NDF: 1696571.9/24

Right Out: 191.489 $\pm$ 0.045  $\chi^2$ /NDF: 2342785.0/24

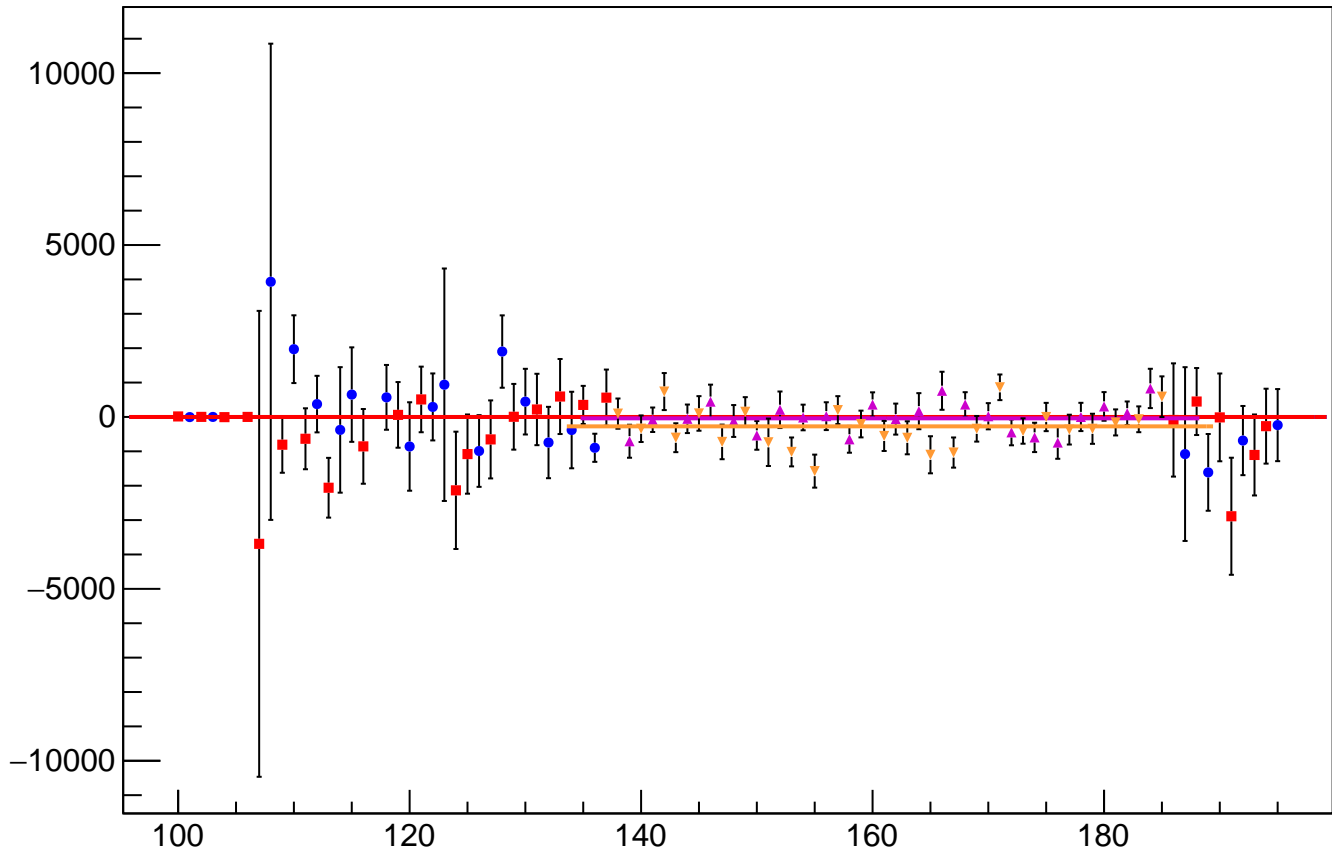
Left In: 183.732 $\pm$ 0.032  $\chi^2$ /NDF: 1495930.4/22

+ sign 199.501 $\pm$ 0.028  $\chi^2$ /NDF: 3399271.1/45

All: 192.500 $\pm$ 0.019  $\chi^2$ /NDF: 7373398.4/93

- sign 186.354 $\pm$ 0.026  $\chi^2$ /NDF: 3858054.4/47

# asym\_cav4bQ\_mean vs Slug



Right In:  $-1.540 \pm 2.251$   $\chi^2/\text{NDF}$ : 19.7/20

Left Out:  $-273.664 \pm 86.869$   $\chi^2/\text{NDF}$ : 38.3/24

Right Out:  $-0.738 \pm 2.111$   $\chi^2/\text{NDF}$ : 22.3/24

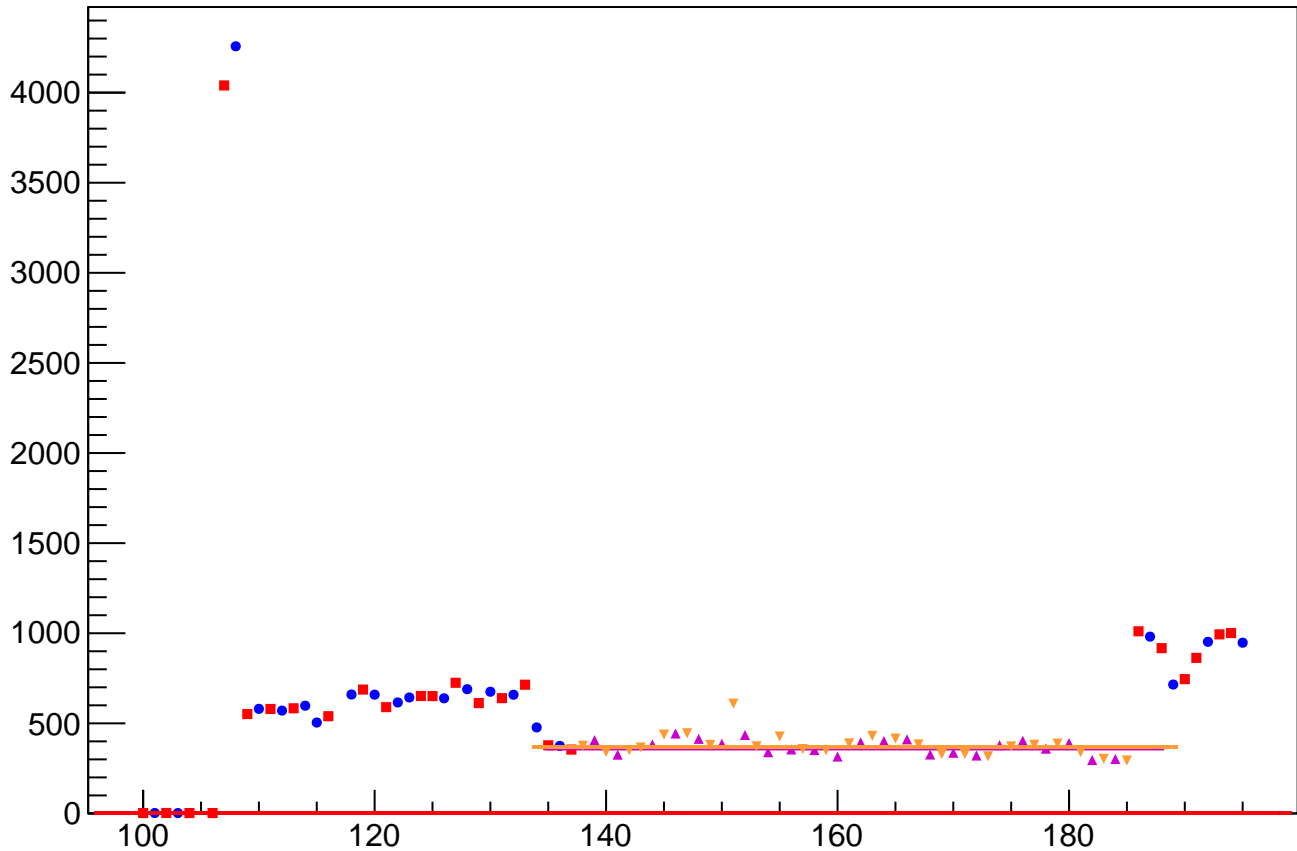
Left In:  $-40.480 \pm 87.470$   $\chi^2/\text{NDF}$ : 20.2/22

+ sign  $-1.723 \pm 2.251$   $\chi^2/\text{NDF}$ : 67.8/45

All:  $-1.211 \pm 1.540$   $\chi^2/\text{NDF}$ : 110.5/93

- sign  $-0.761 \pm 2.110$   $\chi^2/\text{NDF}$ : 42.6/47

# asym\_cav4bQ\_rms vs Slug



Right In: 2.469 $\pm$ 0.002  $\chi^2$ /NDF: 15190779.7/20

Left Out: 368.500 $\pm$ 0.061  $\chi^2$ /NDF:623011.6/24

Right Out: 2.453 $\pm$ 0.001  $\chi^2$ /NDF: 17895507.5/24

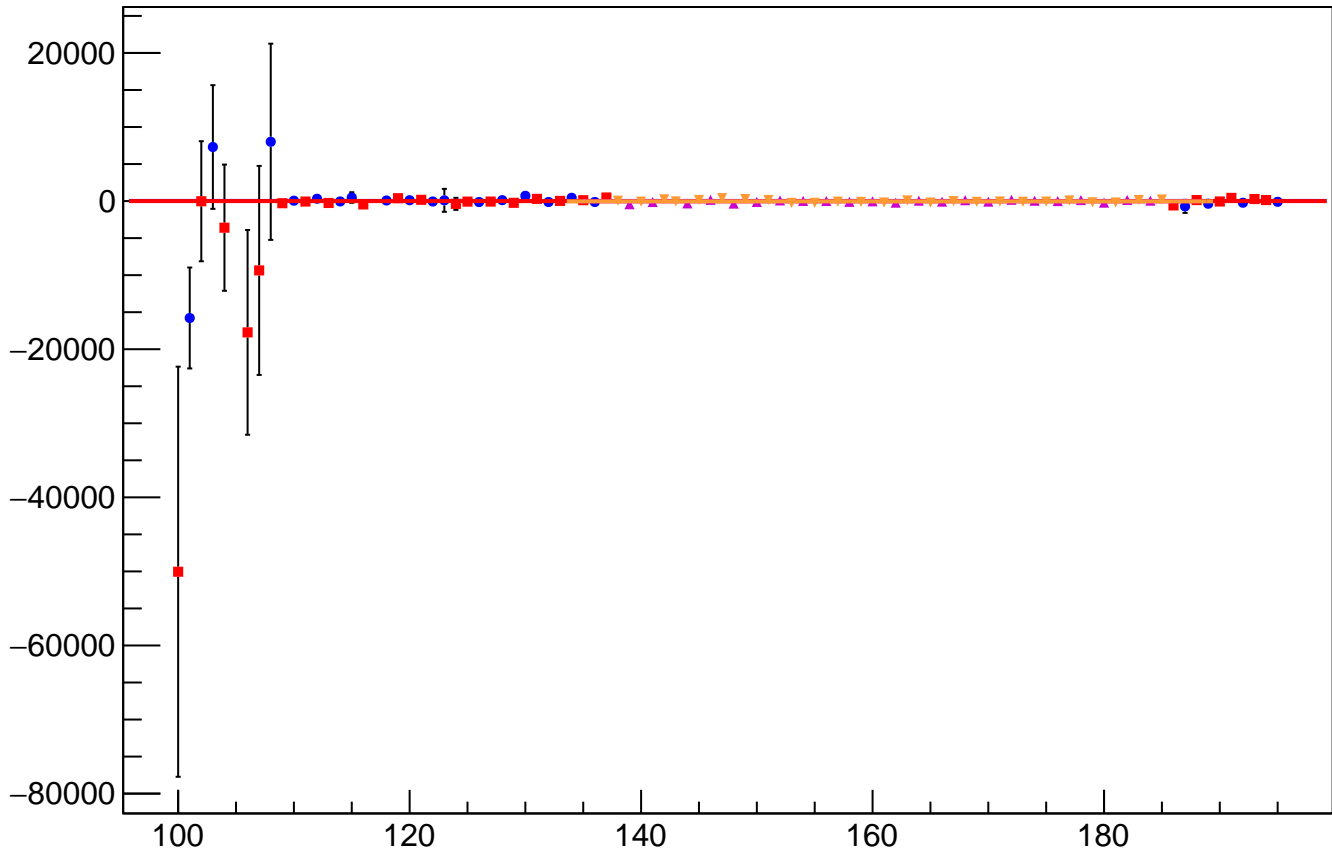
Left In: 360.571 $\pm$ 0.062  $\chi^2$ /NDF:421995.5/22

+ sign 2.714 $\pm$ 0.002  $\chi^2$ /NDF: 51298603.5/45

All: 2.686 $\pm$ 0.001  $\chi^2$ /NDF: 103121969.9/93

- sign 2.661 $\pm$ 0.001  $\chi^2$ /NDF: 51822773.1/47

# asym\_cav4cQ\_mean vs Slug



Right In: 20.393+/-76.839  $\chi^2$ /NDF: 15.2/20

Left Out: -39.036+/-49.576  $\chi^2$ /NDF: 9.1/24

Right Out: -2.015+/-73.560  $\chi^2$ /NDF: 16.7/24

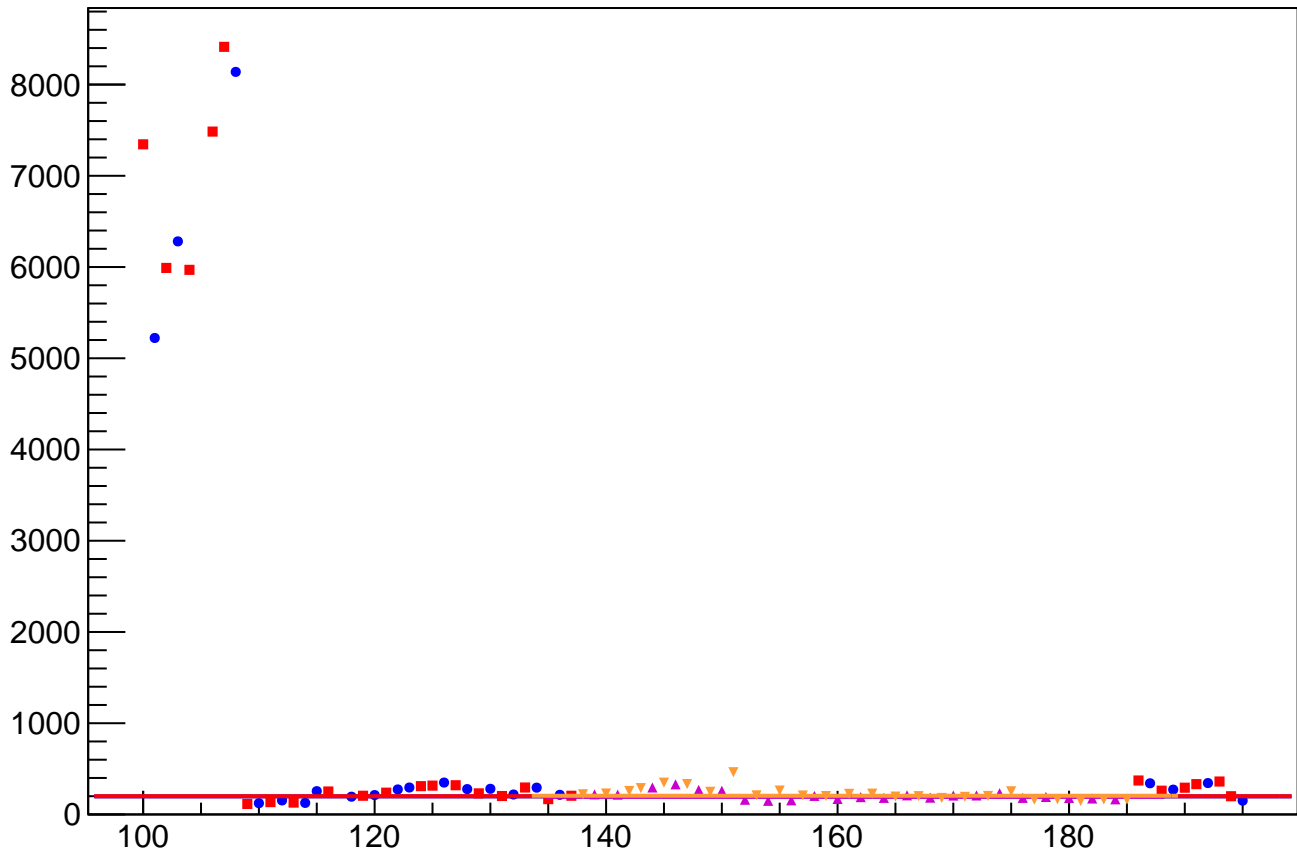
Left In: -28.062+/-48.032  $\chi^2$ /NDF: 9.6/22

+ sign -21.568+/-41.658  $\chi^2$ /NDF: 24.8/45

All: -20.899+/-28.934  $\chi^2$ /NDF: 51.2/93

- sign -20.276+/-40.218  $\chi^2$ /NDF: 26.4/47

# asym\_cav4cQ\_rms vs Slug



Right In: 197.865 $\pm$ 0.054  $\chi^2$ /NDF: 4301995.1/20

Left Out: 205.114 $\pm$ 0.035  $\chi^2$ /NDF: 1957484.4/24

Right Out: 199.959 $\pm$ 0.052  $\chi^2$ /NDF: 5123243.6/24

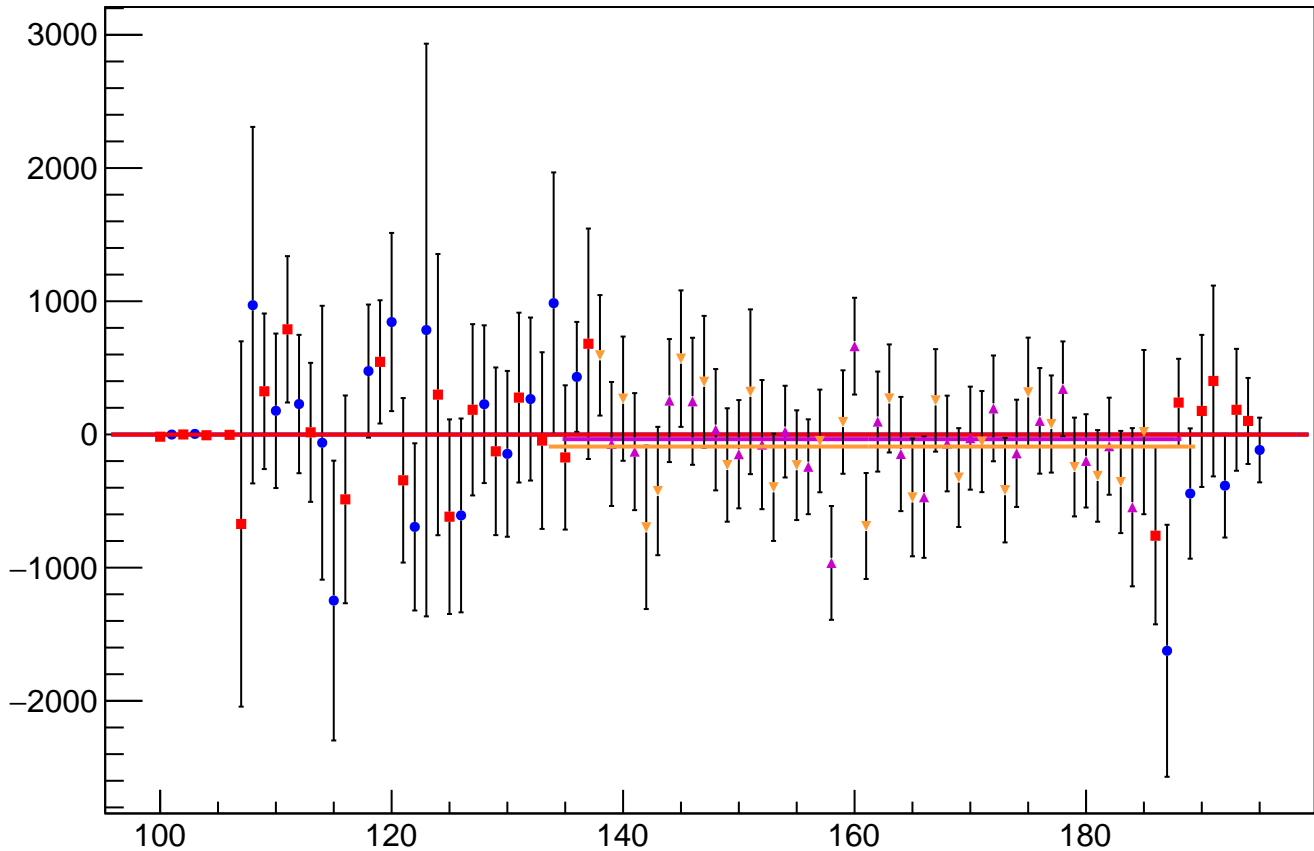
Left In: 193.616 $\pm$ 0.034  $\chi^2$ /NDF: 1179471.1/22

+ sign 202.983 $\pm$ 0.029  $\chi^2$ /NDF: 6272048.5/45

All: 199.116 $\pm$ 0.020  $\chi^2$ /NDF: 12618482.9/90

- sign 195.512 $\pm$ 0.028  $\chi^2$ /NDF: 6313139.9/47

# asym\_cav4dQ\_mean vs Slug



Right In:  $-0.165 \pm 1.737$   $\chi^2/\text{NDF}$ : 15.1/20

Left Out:  $-90.945 \pm 84.079$   $\chi^2/\text{NDF}$ : 16.4/24

Right Out:  $-1.313 \pm 1.622$   $\chi^2/\text{NDF}$ : 11.8/24

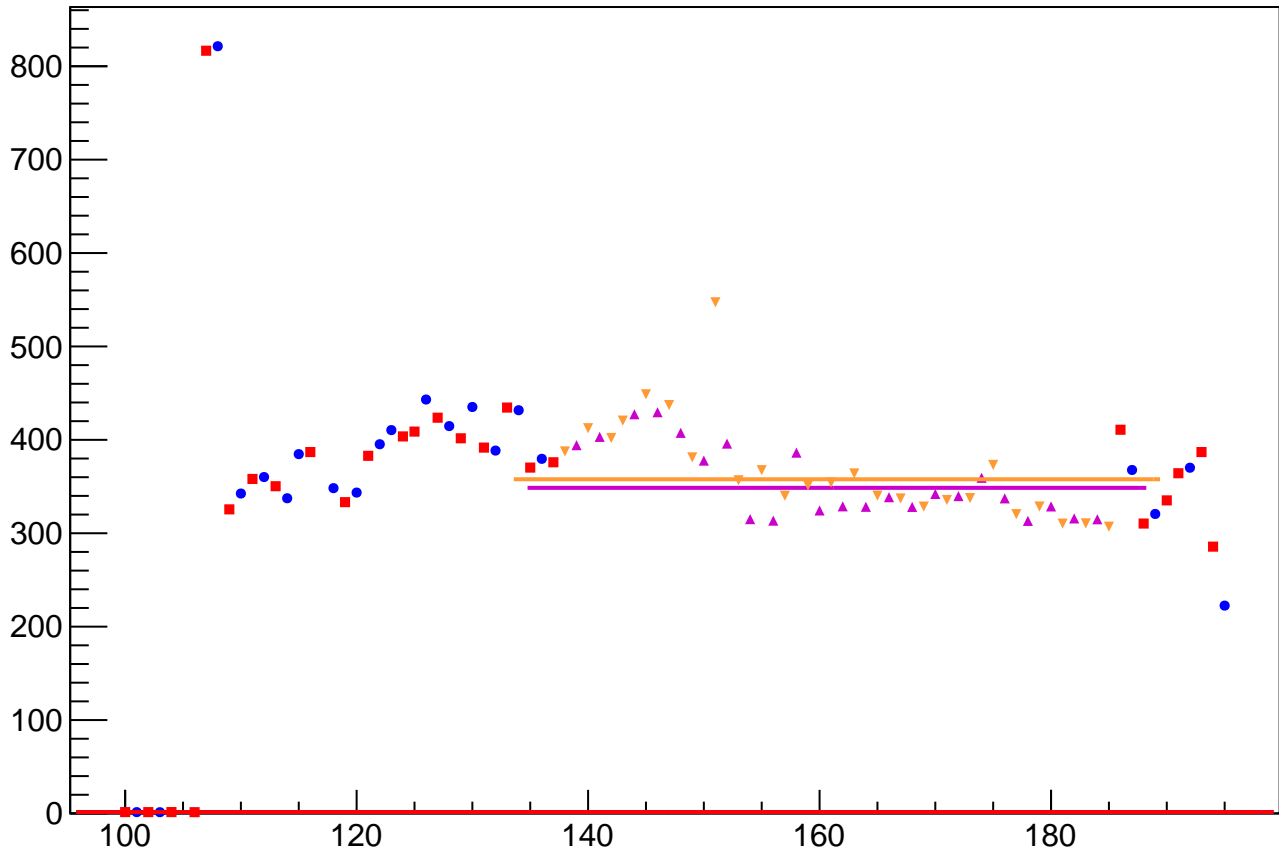
Left In:  $-35.488 \pm 84.382$   $\chi^2/\text{NDF}$ : 13.4/22

+ sign  $-0.204 \pm 1.736$   $\chi^2/\text{NDF}$ : 32.7/45

All:  $-0.803 \pm 1.185$   $\chi^2/\text{NDF}$ : 58.3/93

- sign  $-1.326 \pm 1.622$   $\chi^2/\text{NDF}$ : 25.4/47

# asym\_cav4dQ\_rms vs Slug



Right In: 1.476+/-0.001  $\chi^2/\text{NDF}$ : 15375428.5/20

Left Out: 357.804+/-0.059  $\chi^2/\text{NDF}$ : 547036.5/24

Right Out: 1.477+/-0.001  $\chi^2/\text{NDF}$ : 17516186.3/24

Left In: 348.611+/-0.060  $\chi^2/\text{NDF}$ : 362511.2/22

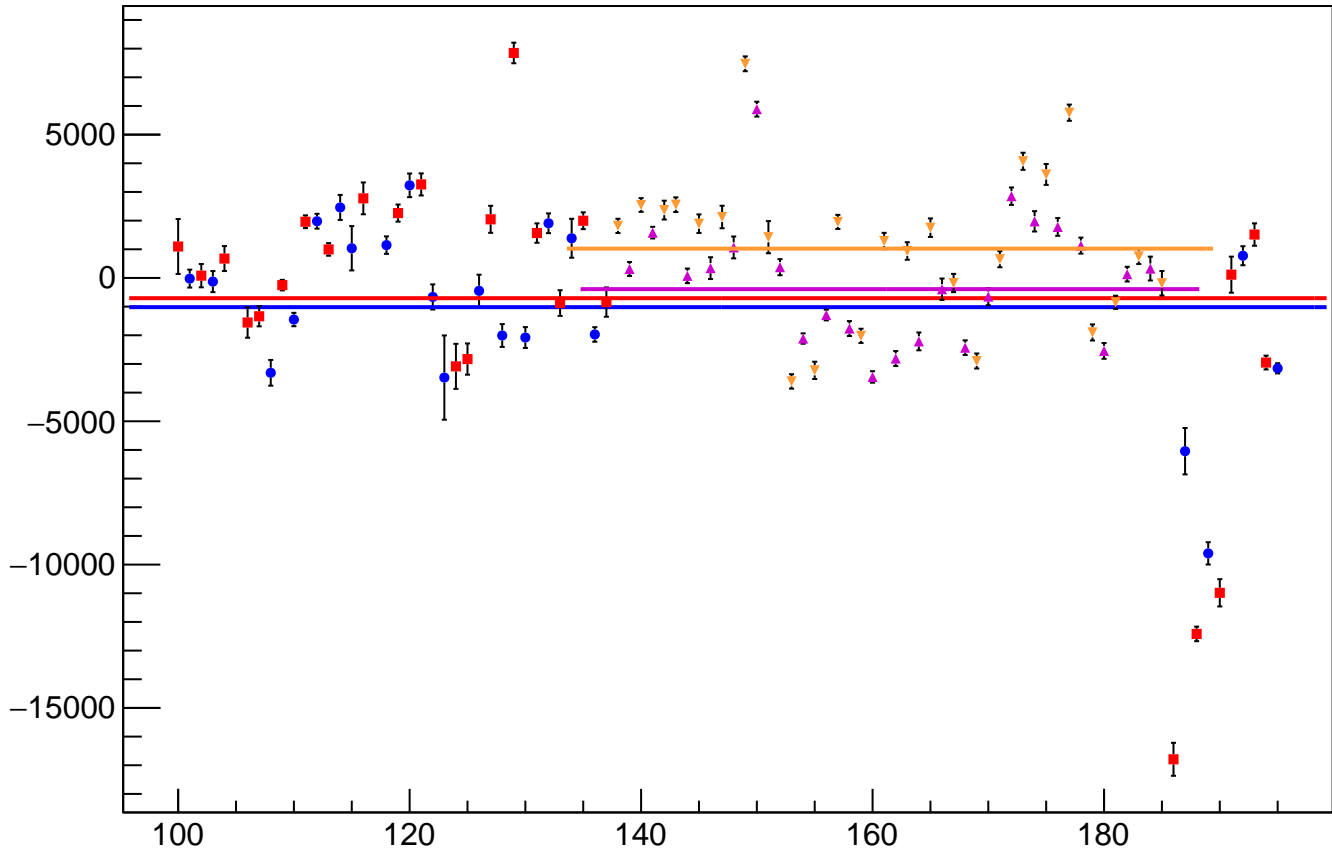
+ sign 1.628+/-0.001  $\chi^2/\text{NDF}$ : 51829109.5/45

All: 1.616+/-0.001  $\chi^2/\text{NDF}$ : 103542459.2/93

- sign 1.606+/-0.001  $\chi^2/\text{NDF}$ : 51713176.6/47



# asym\_bcm0l02\_mean vs Slug



Right In:  $-1019.169 \pm 75.145$   $\chi^2/\text{NDF}: 1224.7/20$

Left Out:  $1023.439 \pm 57.338$   $\chi^2/\text{NDF}: 2309.4/24$

Right Out:  $-705.662 \pm 68.731$   $\chi^2/\text{NDF}: 4727.5/24$

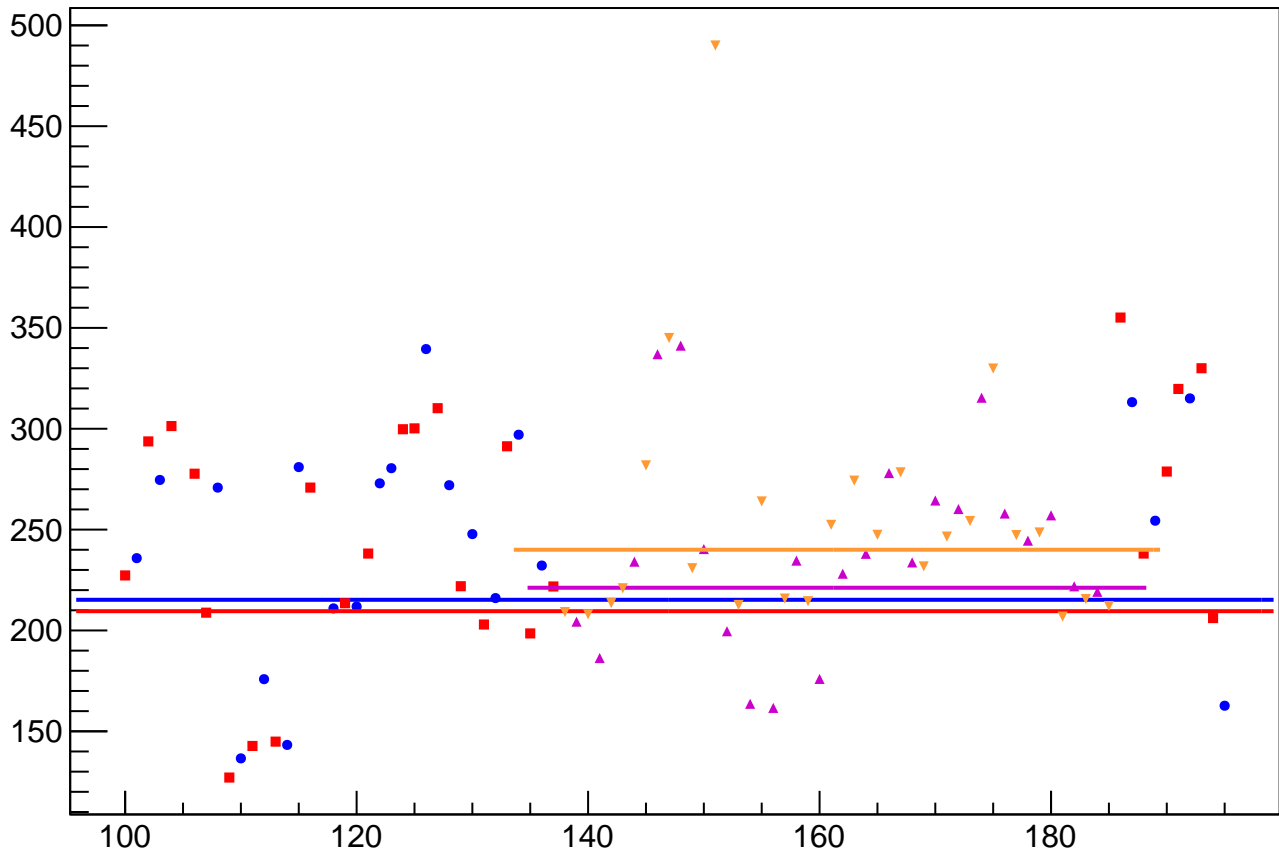
Left In:  $-390.237 \pm 54.931$   $\chi^2/\text{NDF}: 1584.9/22$

+ sign  $271.807 \pm 45.584$   $\chi^2/\text{NDF}: 4001.1/45$

All:  $-144.380 \pm 31.245$   $\chi^2/\text{NDF}: 10483.5/93$

- sign  $-513.184 \pm 42.910$   $\chi^2/\text{NDF}: 6325.2/47$

# asym\_bcm0l02\_rms vs Slug



Right In: 215.205 $\pm$ 0.053  $\chi^2$ /NDF: 1069469.2/20

Left Out: 240.019 $\pm$ 0.041  $\chi^2$ /NDF:1002427.9/24

Right Out: 209.551 $\pm$ 0.049  $\chi^2$ /NDF: 1696414.6/24

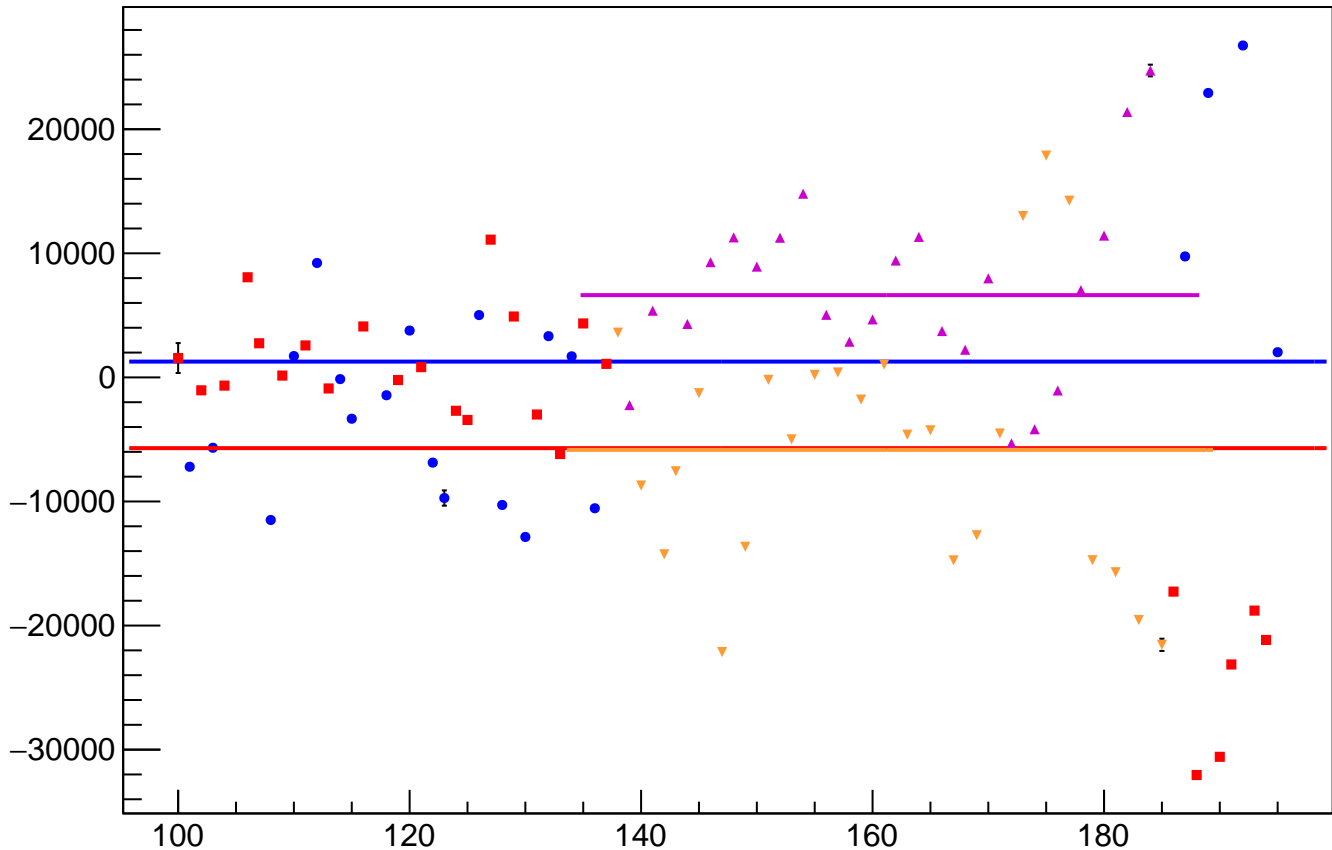
Left In: 221.173 $\pm$ 0.039  $\chi^2$ /NDF:1342517.8/22

+ sign 230.888 $\pm$ 0.032  $\chi^2$ /NDF: 2209737.6/45

All: 223.335 $\pm$ 0.022  $\chi^2$ /NDF: 5387121.0/93

- sign 216.643 $\pm$ 0.030  $\chi^2$ /NDF: 3073827.7/47

# asym\_bpm2i01WS\_mean vs Slug



Right In: 1273.408+/-42.989  $\chi^2$ /NDF: 69891.8/20

Left Out: -5841.615+/-35.848  $\chi^2$ /NDF:63397.3/24

Right Out: -5701.721+/-39.438  $\chi^2$ /NDF: 99789.9/24

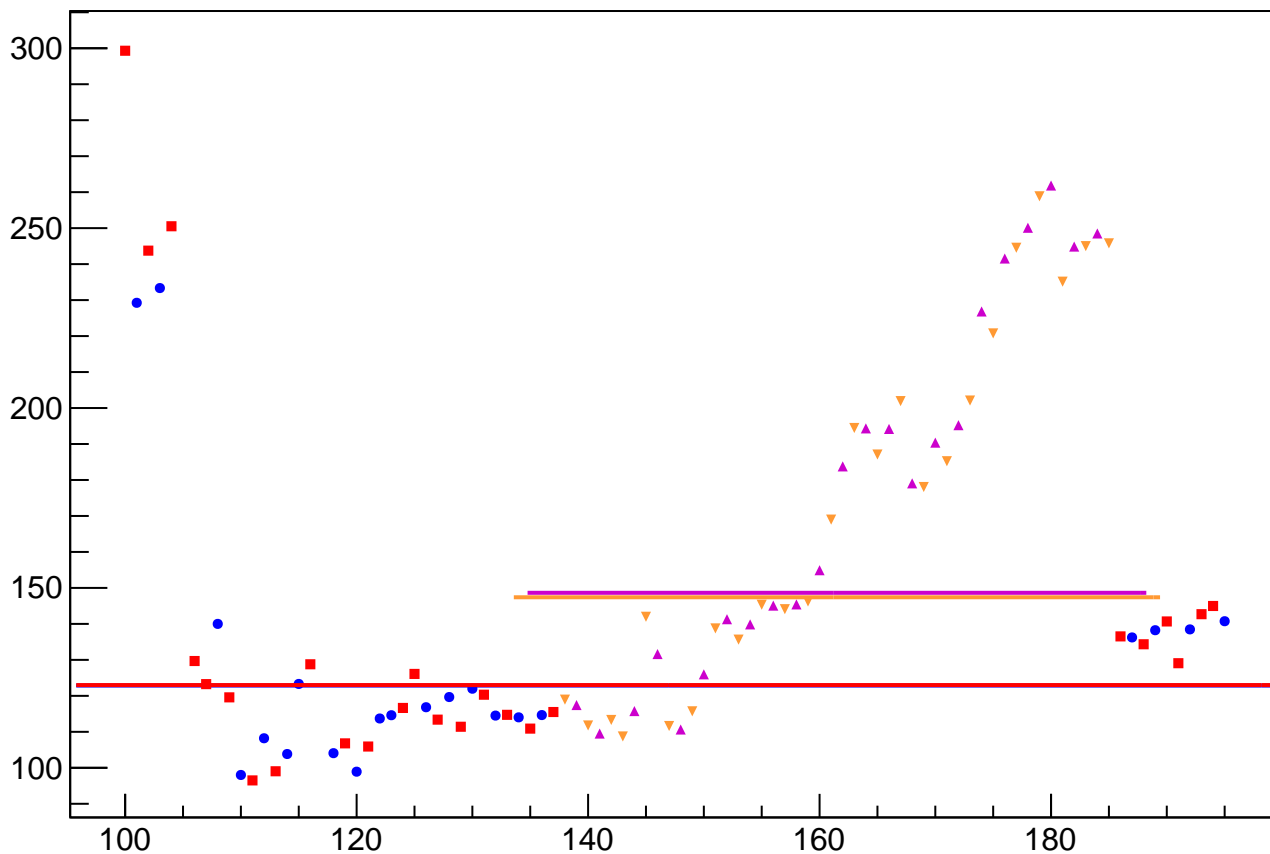
Left In: 6628.388+/-37.160  $\chi^2$ /NDF:21738.0/22

+ sign -2923.392+/-27.532  $\chi^2$ /NDF: 149446.6/45

All: -1013.463+/-19.294  $\chi^2$ /NDF: 332209.5/9

- sign 829.613+/-27.045  $\chi^2$ /NDF: 173306.3/47

# asym\_bpm2i01WS\_rms vs Slug



Right In: 122.869 $\pm$ 0.030  $\chi^2$ /NDF: 718016.6/20

Left Out: 147.396 $\pm$ 0.025  $\chi^2$ /NDF:2517097.1/24

Right Out: 122.993 $\pm$ 0.028  $\chi^2$ /NDF: 822386.7/24

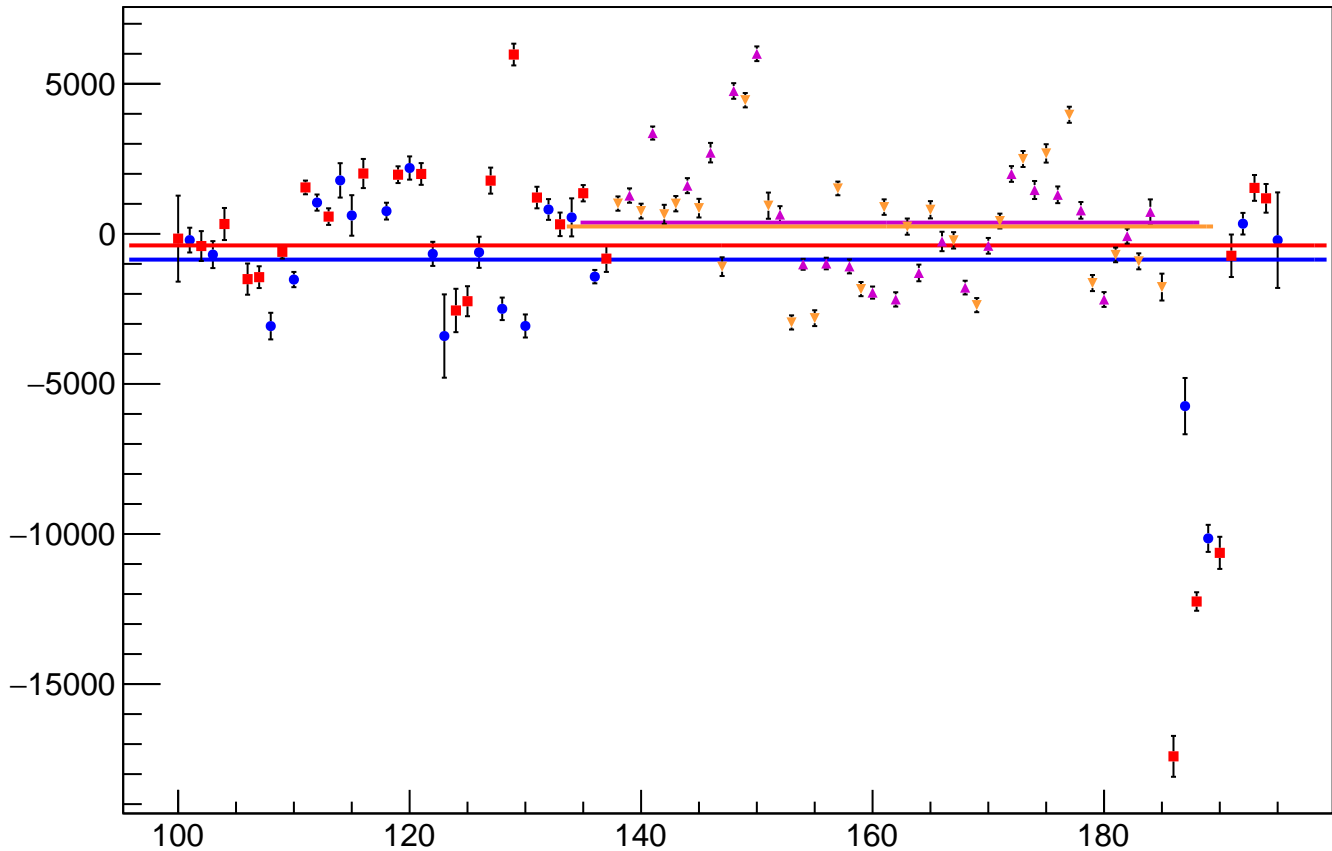
Left In: 148.642 $\pm$ 0.026  $\chi^2$ /NDF:2415531.9/22

+ sign 137.336 $\pm$ 0.019  $\chi^2$ /NDF: 3619121.2/45

All: 136.951 $\pm$ 0.014  $\chi^2$ /NDF: 7305924.9/93

- sign 136.580 $\pm$ 0.019  $\chi^2$ /NDF: 3686034.3/47

# asym\_bpm0i07WS\_mean vs Slug



Right In:  $-857.286 \pm 84.737$   $\chi^2/\text{NDF}: 759.5/20$

Left Out:  $246.120 \pm 53.492$   $\chi^2/\text{NDF}: 1354.8/24$

Right Out:  $-384.505 \pm 75.440$   $\chi^2/\text{NDF}: 3160.1/24$

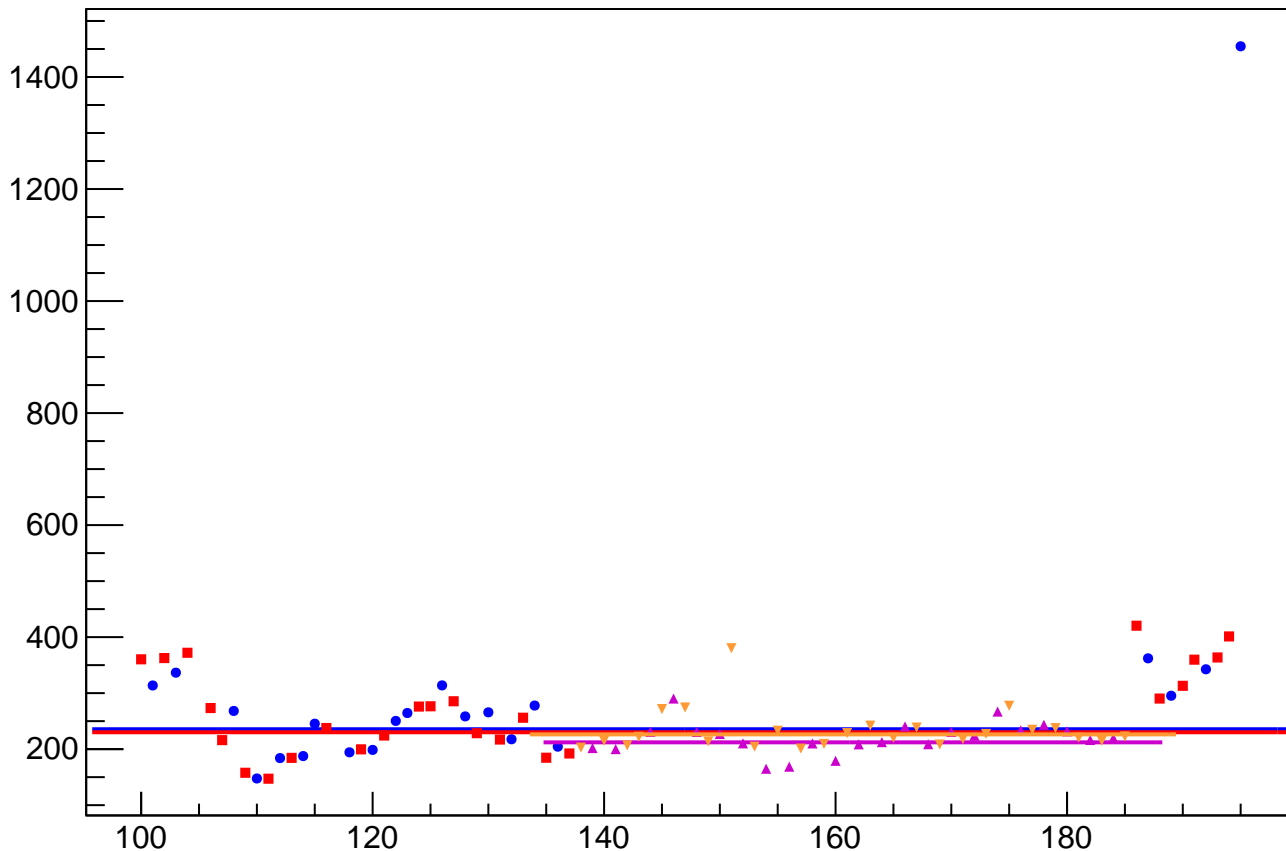
Left In:  $374.465 \pm 51.892$   $\chi^2/\text{NDF}: 1798.3/22$

+ sign  $-68.293 \pm 45.233$   $\chi^2/\text{NDF}: 2235.6/45$

All:  $36.803 \pm 31.071$   $\chi^2/\text{NDF}: 7272.9/93$

- sign  $130.696 \pm 42.754$   $\chi^2/\text{NDF}: 5027.1/47$

# asym\_bpm0i07WS\_rms vs Slug



Right In: 235.522 $\pm$ 0.060  $\chi^2$ /NDF: 2116005.3/20

Left Out: 226.376 $\pm$ 0.038  $\chi^2$ /NDF:521770.1/24

+ sign 228.982 $\pm$ 0.032  $\chi^2$ /NDF: 2654436.7/45

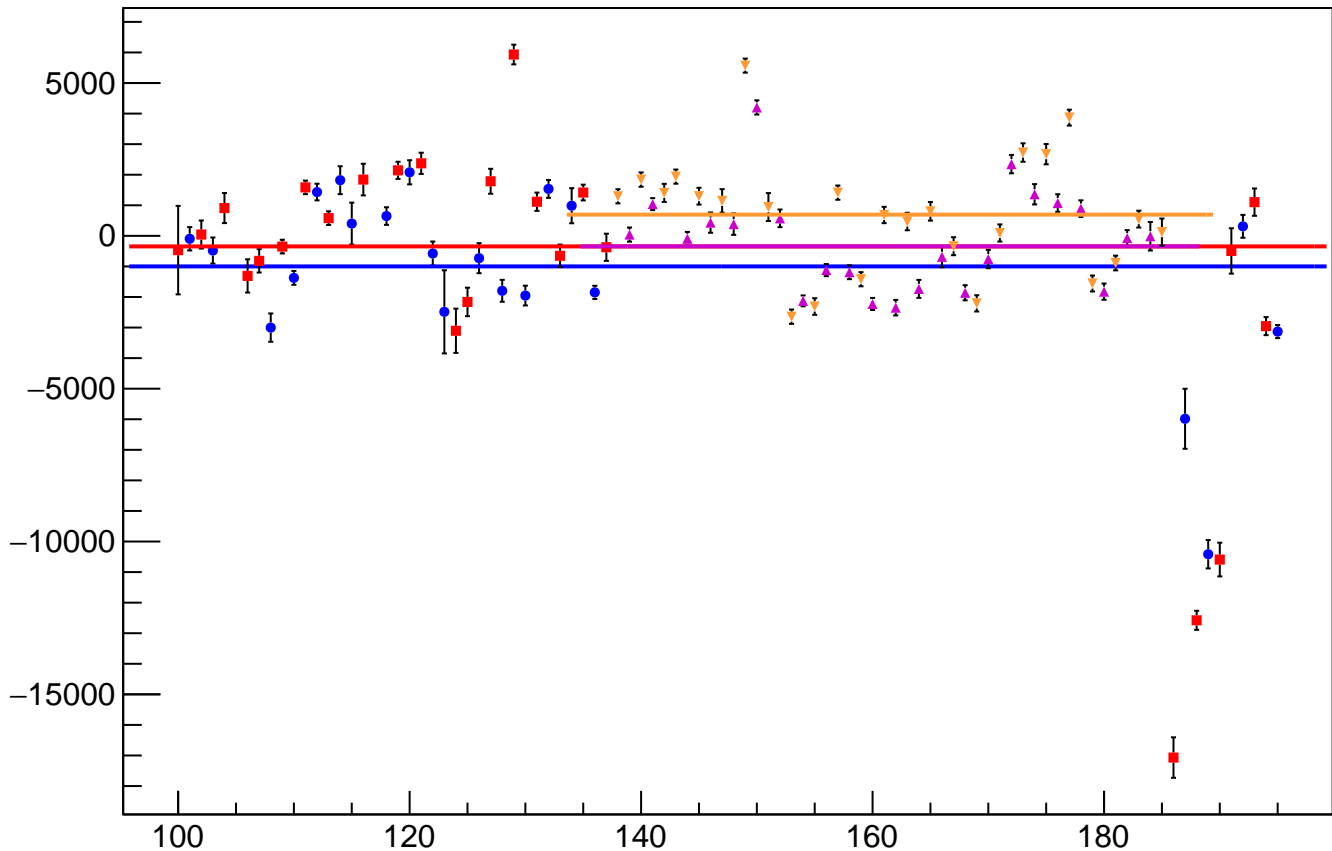
Right Out: 230.162 $\pm$ 0.053  $\chi^2$ /NDF: 1802261.6/24

All: 223.146 $\pm$ 0.022  $\chi^2$ /NDF: 5188872.1/93

Left In: 212.145 $\pm$ 0.037  $\chi^2$ /NDF:591698.6/22

- sign 217.932 $\pm$ 0.030  $\chi^2$ /NDF: 2471397.3/47

# asym\_bpm0l01WS\_mean vs Slug



Right In:  $-999.659 \pm 75.595$   $\chi^2/\text{NDF}$ : 912.6/20

Left Out:  $694.326 \pm 54.246$   $\chi^2/\text{NDF}$ : 1422.1/24

Right Out:  $-345.382 \pm 70.744$   $\chi^2/\text{NDF}$ : 3382.2/24

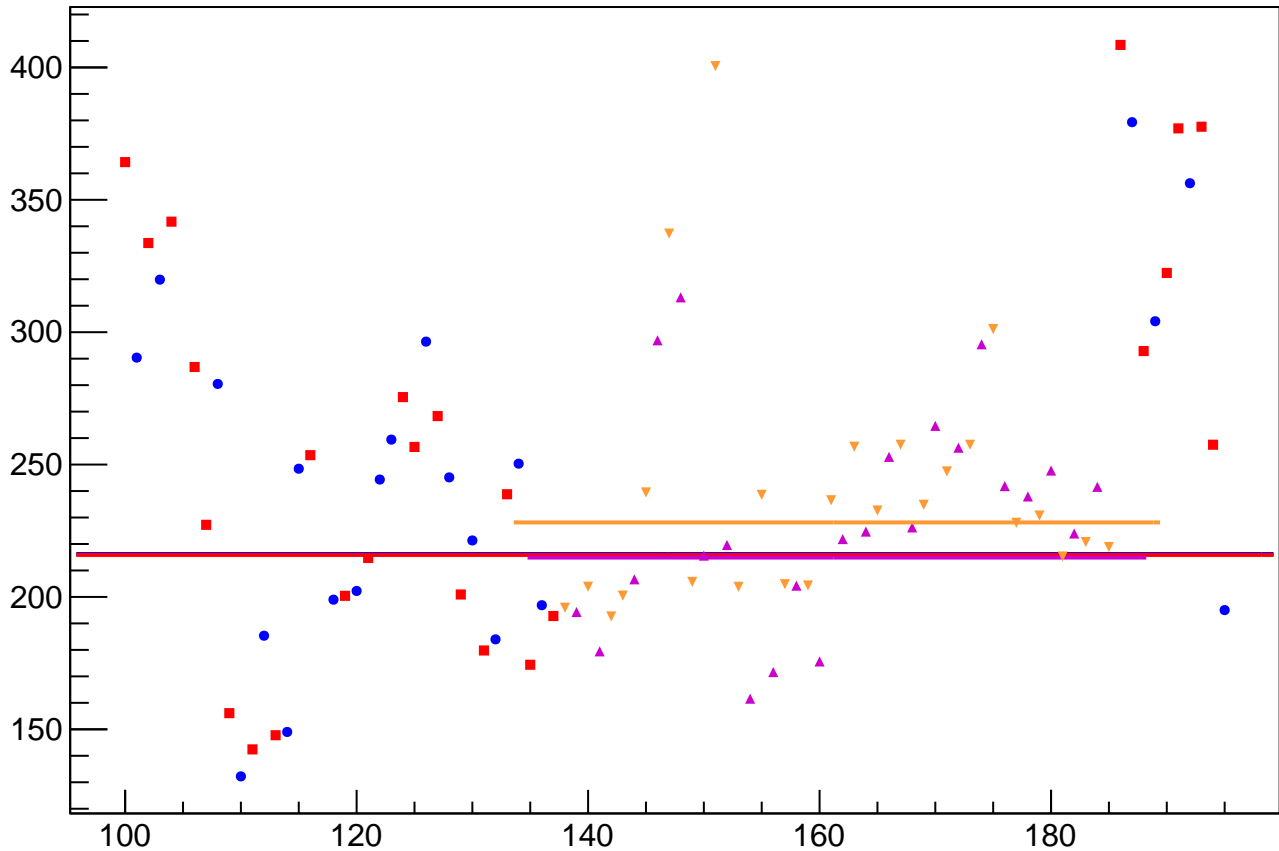
Left In:  $-344.578 \pm 52.954$   $\chi^2/\text{NDF}$ : 985.0/22

+ sign  $118.530 \pm 44.073$   $\chi^2/\text{NDF}$ : 2666.2/45

All:  $-122.169 \pm 30.553$   $\chi^2/\text{NDF}$ : 7090.8/93

- sign  $-344.867 \pm 42.393$   $\chi^2/\text{NDF}$ : 4367.2/47

# asym\_bpm0l01WS\_rms vs Slug



Right In: 216.210 $\pm$ 0.053  $\chi^2$ /NDF: 1142405.5/20

Left Out: 228.144 $\pm$ 0.038  $\chi^2$ /NDF:828399.3/24

Right Out: 215.867 $\pm$ 0.050  $\chi^2$ /NDF: 1807750.8/24

Left In: 214.878 $\pm$ 0.037  $\chi^2$ /NDF:1037509.6/22

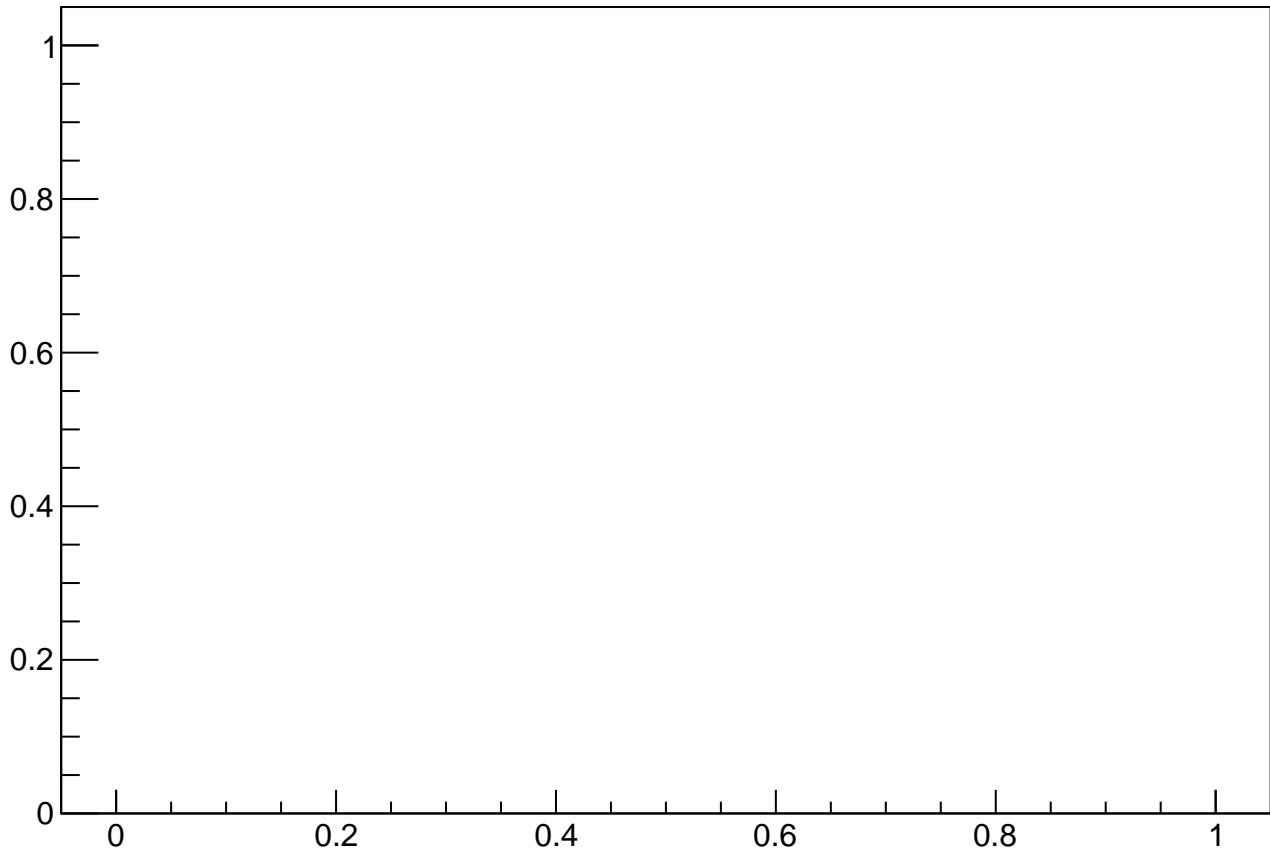
+ sign 224.087 $\pm$ 0.031  $\chi^2$ /NDF: 2003704.8/45

All: 219.488 $\pm$ 0.022  $\chi^2$ /NDF: 4891141.8/93

- sign 215.233 $\pm$ 0.030  $\chi^2$ /NDF: 2845511.0/47



# bcm\_an\_us\_ds\_dd\_mean vs Slug



Right In: 0.000+/-0.000  $\chi^2$ /NDF: 0.0/0

Left Out: 0.000+/-0.000  $\chi^2$ /NDF:0.0/0

Right Out: 0.000+/-0.000  $\chi^2$ /NDF: 0.0/0

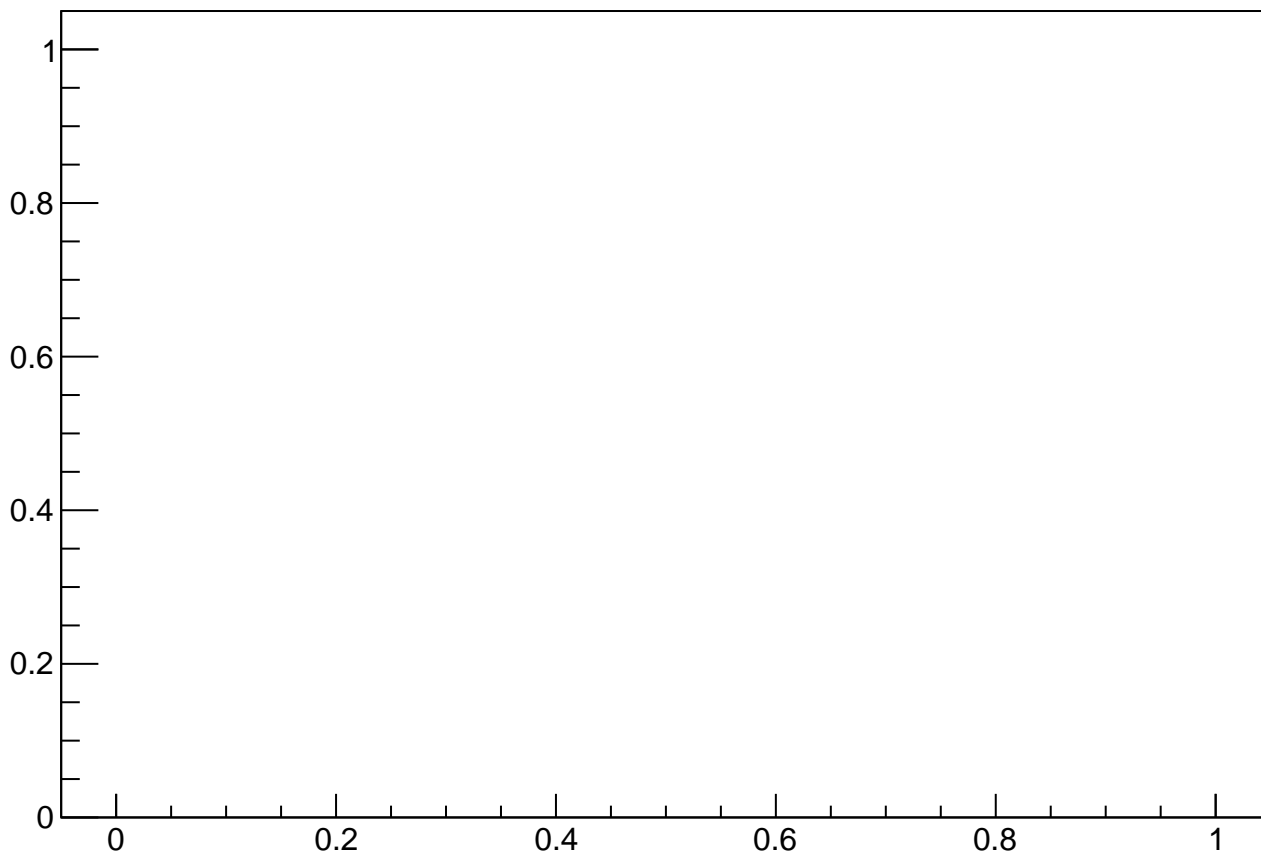
Left In: 0.000+/-0.000  $\chi^2$ /NDF:0.0/0

+ sign 0.000+/-0.000  $\chi^2$ /NDF: 0.0/0

All: 0.000+/-0.000  $\chi^2$ /NDF: 0.0/0

- sign 0.000+/-0.000  $\chi^2$ /NDF: 0.0/0

# bcm\_an\_us\_ds\_dd\_rms vs Slug



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

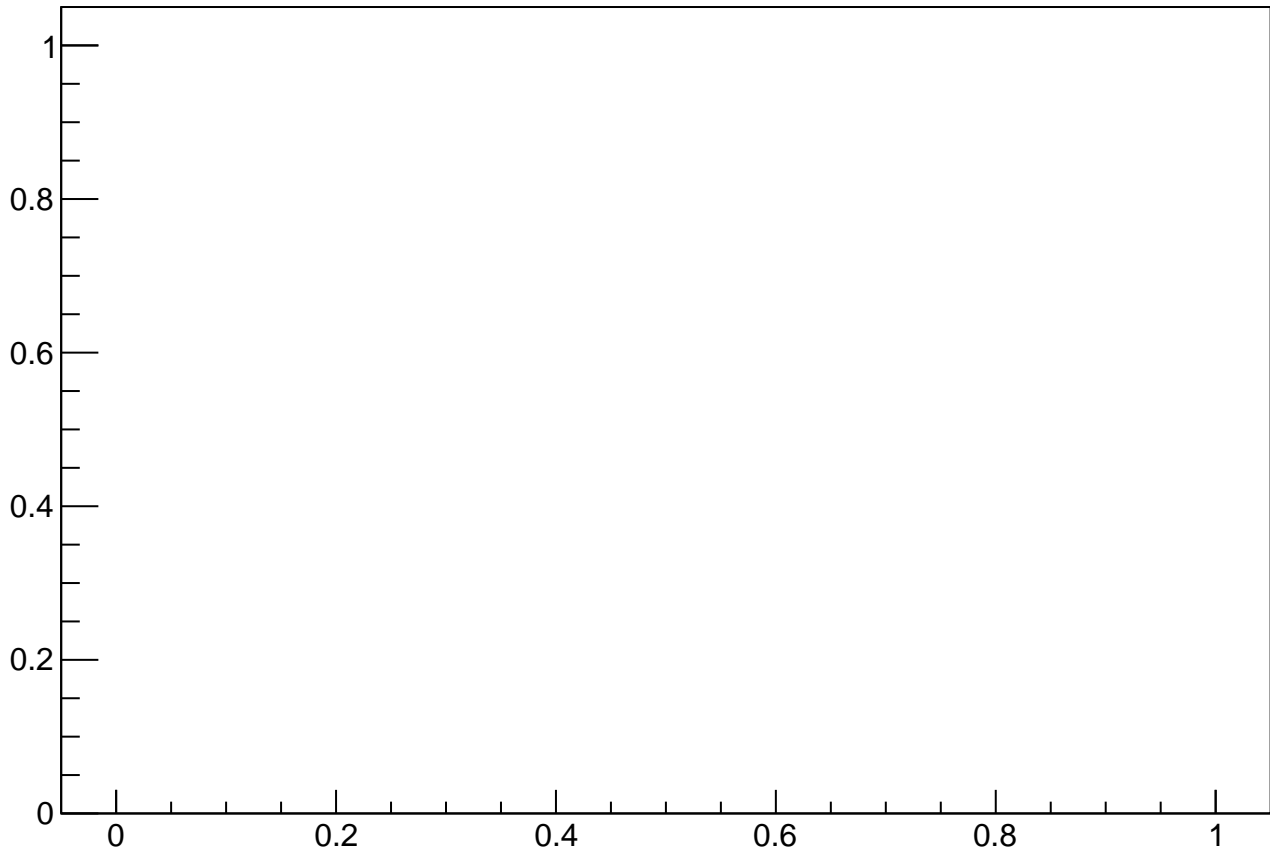
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

# bcm\_dg\_us\_dg\_ds\_dd\_mean vs Slug



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

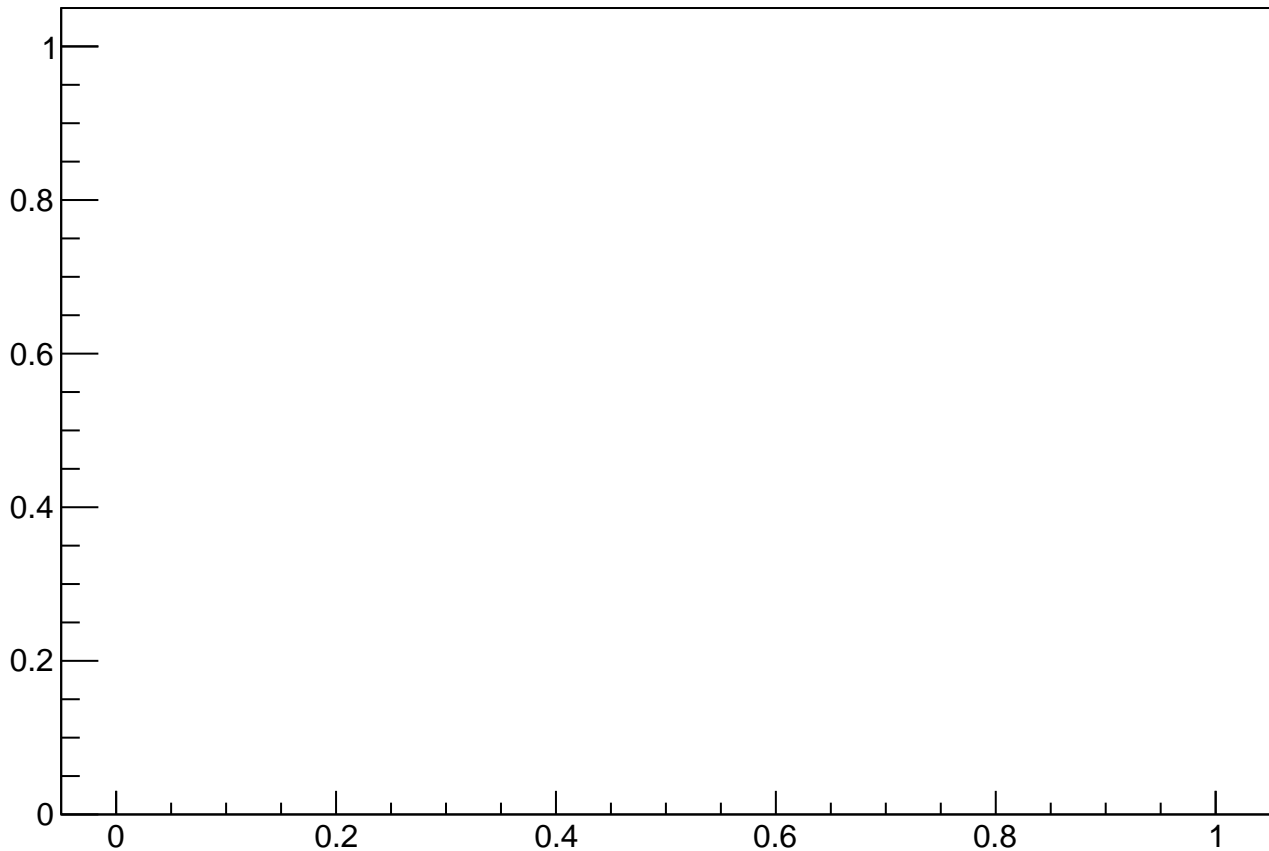
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

# bcm\_dg\_us\_dg\_ds\_dd\_rms vs Slug



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

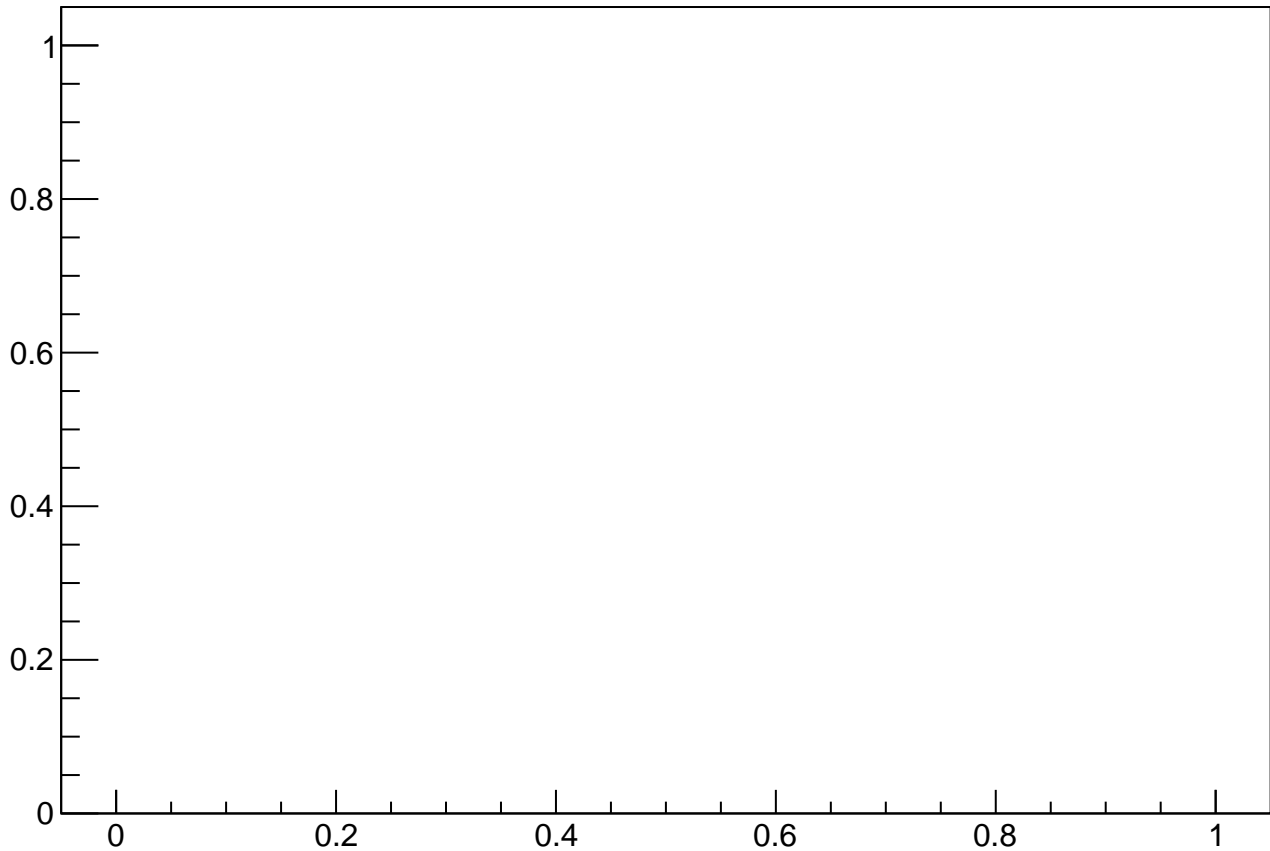
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

# bcm\_dg\_us\_ds\_dd\_mean vs Slug



Right In: 0.000+/-0.000  $\chi^2$ /NDF: 0.0/0

Left Out: 0.000+/-0.000  $\chi^2$ /NDF:0.0/0

Right Out: 0.000+/-0.000  $\chi^2$ /NDF: 0.0/0

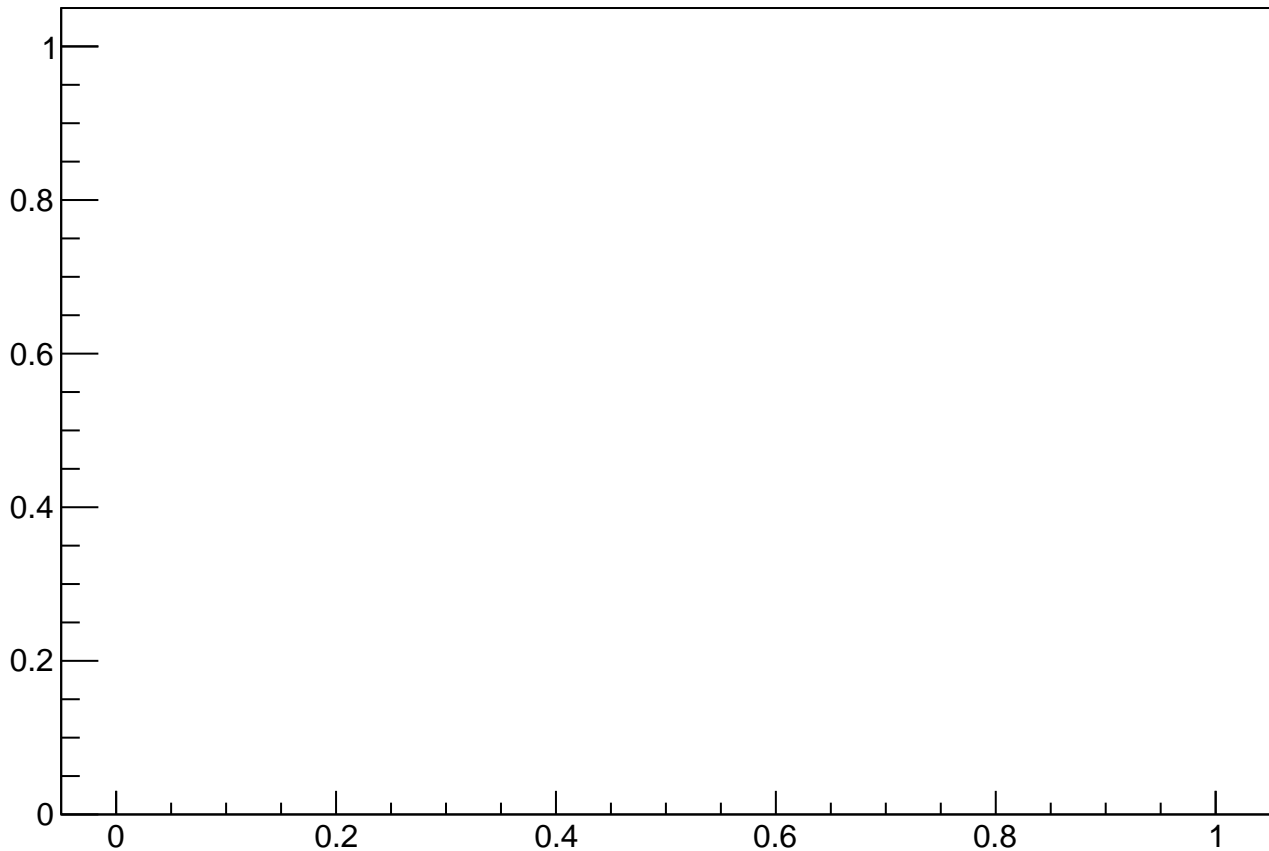
Left In: 0.000+/-0.000  $\chi^2$ /NDF:0.0/0

+ sign 0.000+/-0.000  $\chi^2$ /NDF: 0.0/0

All: 0.000+/-0.000  $\chi^2$ /NDF: 0.0/0

- sign 0.000+/-0.000  $\chi^2$ /NDF: 0.0/0

# bcm\_dg\_us\_ds\_dd\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2$ /NDF: 0.0/0

Left Out: 0.000+/-0.000  $\chi^2$ /NDF:0.0/0

Right Out: 0.000+/-0.000  $\chi^2$ /NDF: 0.0/0

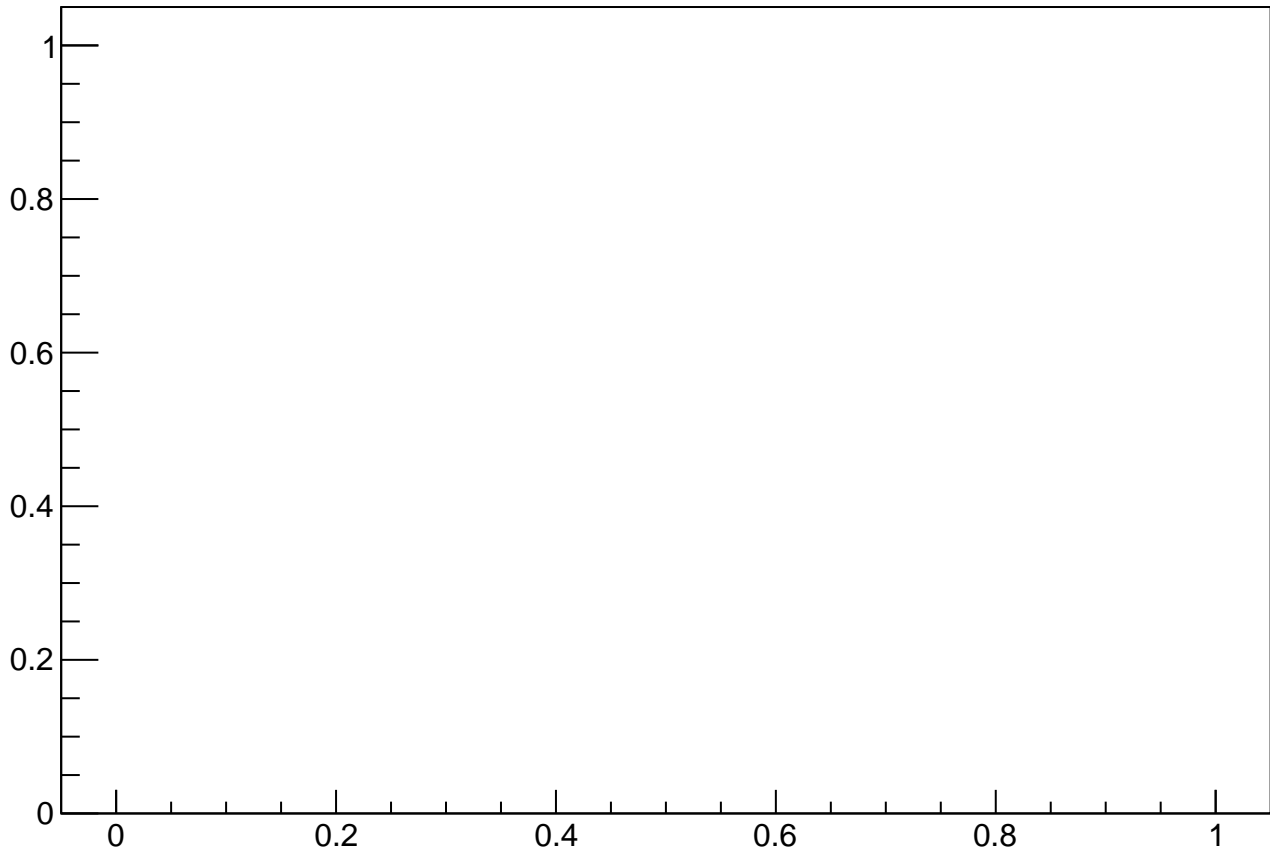
Left In: 0.000+/-0.000  $\chi^2$ /NDF:0.0/0

+ sign 0.000+/-0.000  $\chi^2$ /NDF: 0.0/0

All: 0.000+/-0.000  $\chi^2$ /NDF: 0.0/0

- sign 0.000+/-0.000  $\chi^2$ /NDF: 0.0/0

# bcm\_dg\_ds\_ds\_dd\_mean vs Slug



Right In: 0.000+/-0.000  $\chi^2$ /NDF: 0.0/0

Left Out: 0.000+/-0.000  $\chi^2$ /NDF:0.0/0

Right Out: 0.000+/-0.000  $\chi^2$ /NDF: 0.0/0

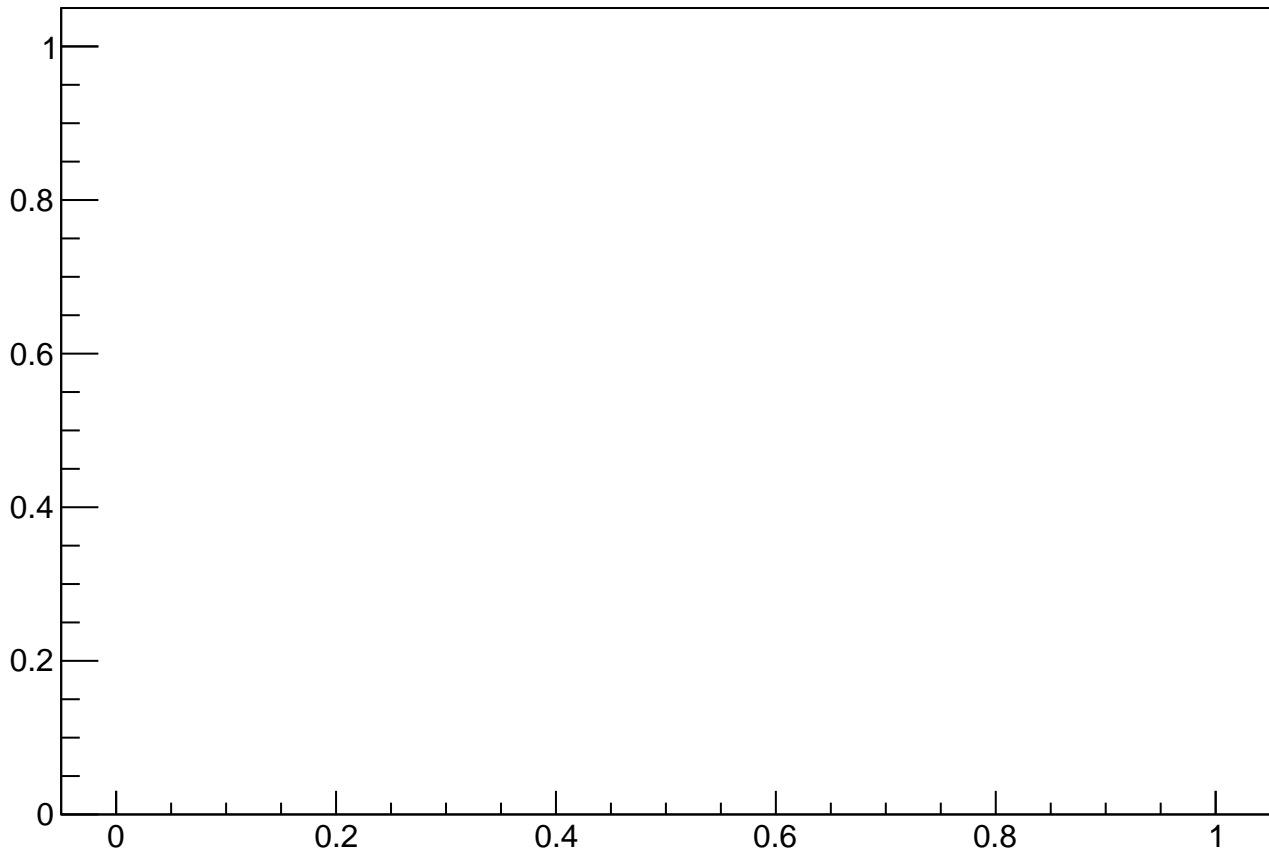
Left In: 0.000+/-0.000  $\chi^2$ /NDF:0.0/0

+ sign 0.000+/-0.000  $\chi^2$ /NDF: 0.0/0

All: 0.000+/-0.000  $\chi^2$ /NDF: 0.0/0

- sign 0.000+/-0.000  $\chi^2$ /NDF: 0.0/0

# bcm\_dg\_ds\_ds\_dd\_rms vs Slug



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

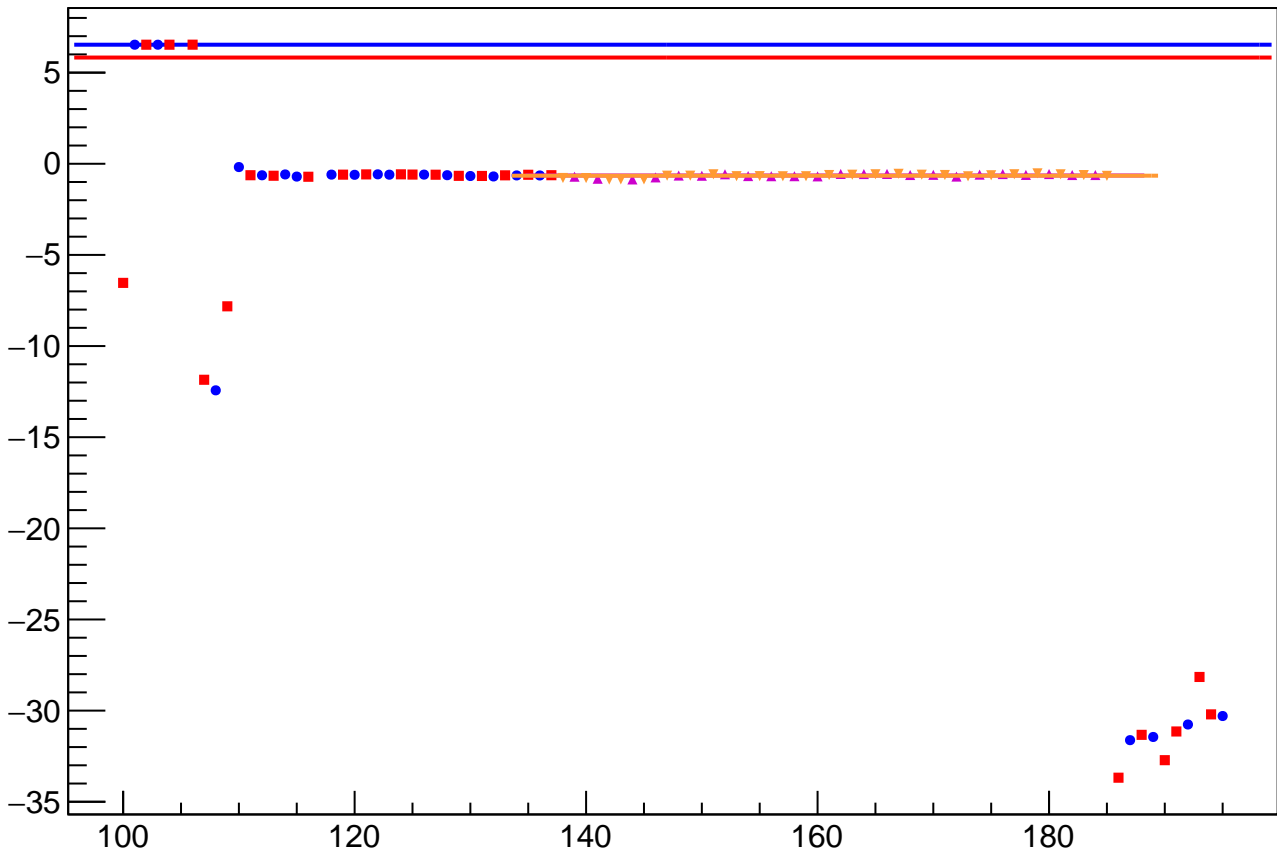
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0



# yield\_cav4bX\_mean vs Slug



Right In: 6.532 $\pm$ 0.000  $\chi^2$ /NDF: 127765854675.7/20

+ sign 6.530 $\pm$ 0.000  $\chi^2$ /NDF: 1001605365093.3/45

Left Out: -0.654 $\pm$ 0.000  $\chi^2$ /NDF: 179069954.8/24

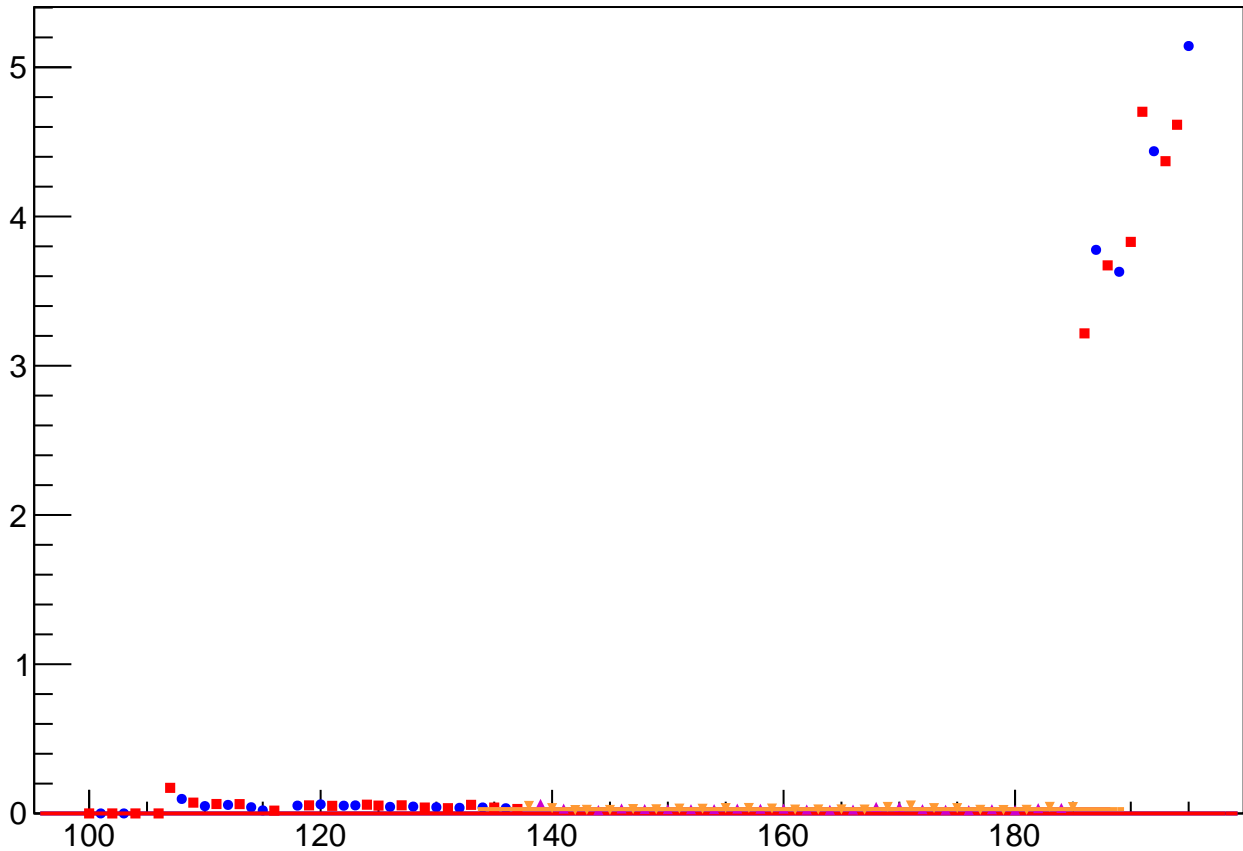
All: 6.153 $\pm$ 0.000  $\chi^2$ /NDF: 77762733760147

Right Out: 5.827 $\pm$ 0.000  $\chi^2$ /NDF: 755962175262634.0/24

- sign 5.826 $\pm$ 0.000  $\chi^2$ /NDF: 756640638405817.6/

Left In: -0.643 $\pm$ 0.000  $\chi^2$ /NDF: 123743747.1/22

# yield\_cav4bX\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13358718.2/20

Left Out: 0.029+/-0.000  $\chi^2/\text{NDF}$ :1484308.2/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 16017244.2/24

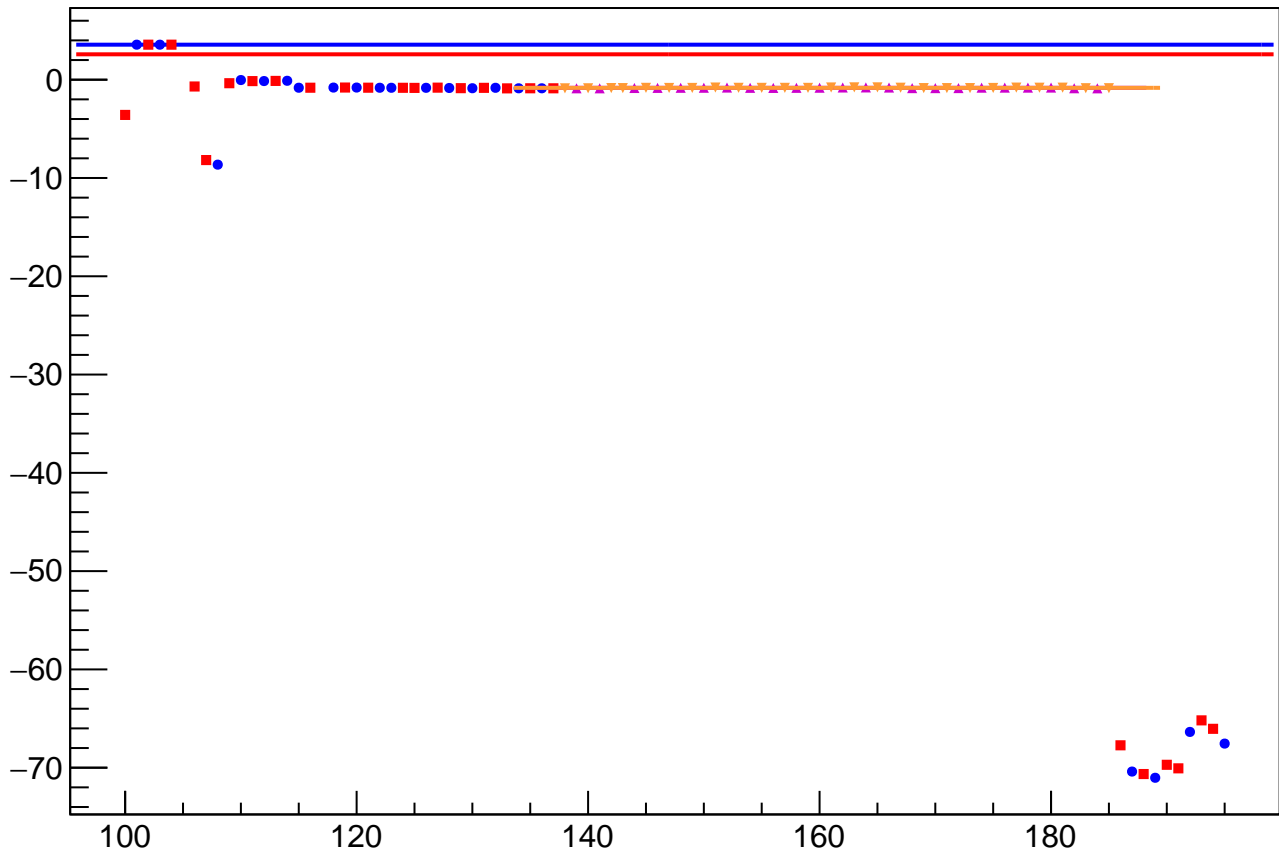
Left In: 0.029+/-0.000  $\chi^2/\text{NDF}$ :1206492.9/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 43322485.9/45

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 87522247.5/93

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 44199093.7/47

# yield\_cav4bY\_mean vs Slug



Right In: 3.563+/-0.000  $\chi^2/\text{NDF}$ : 487671359834.1/20

Left Out: -0.827+/-0.000  $\chi^2/\text{NDF}$ : 170052639.9/24

Right Out: 2.583+/-0.000  $\chi^2/\text{NDF}$ : 1253512042648303.5/24

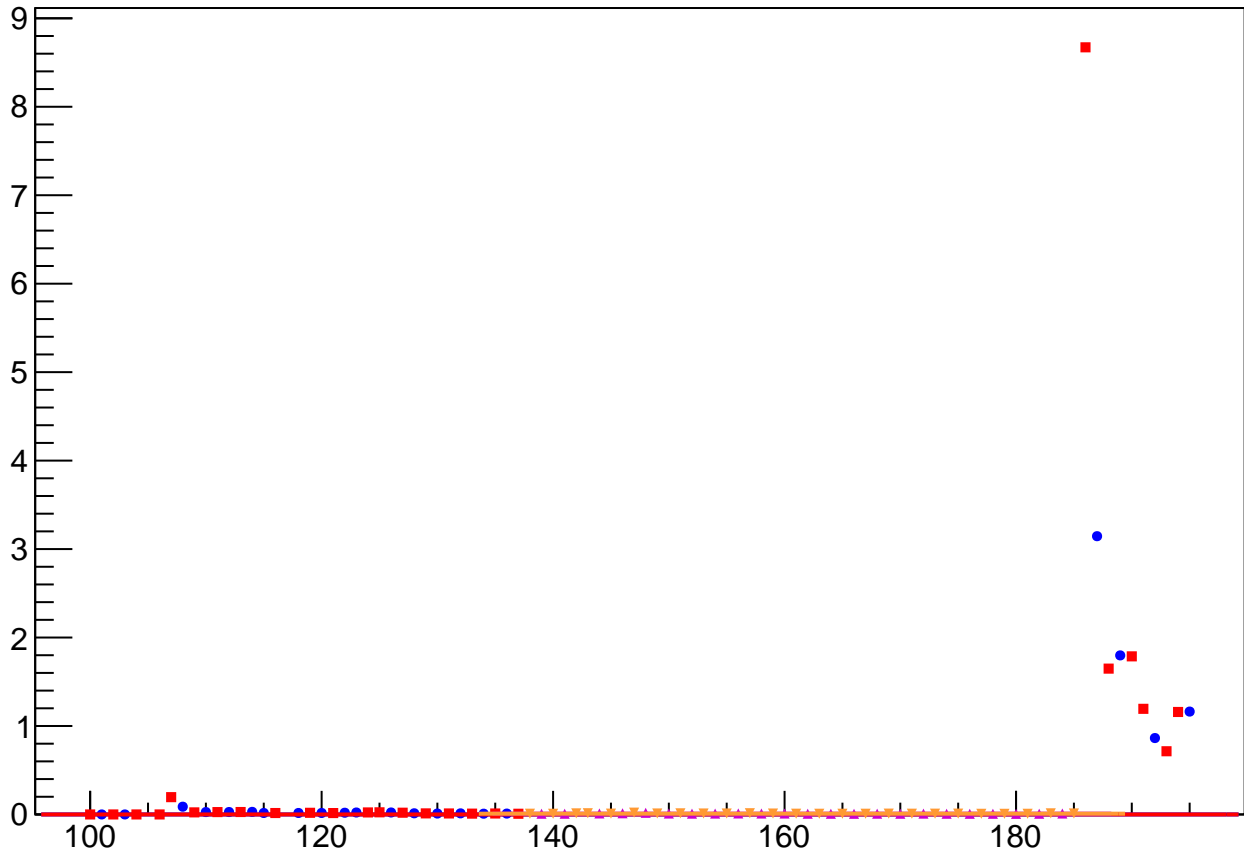
Left In: -0.827+/-0.000  $\chi^2/\text{NDF}$ : 174130375.4/22

+ sign 3.560+/-0.000  $\chi^2/\text{NDF}$ : 4184119816132.2/45

All: 3.038+/-0.000  $\chi^2/\text{NDF}$ : 1387995409922.2/45

- sign 2.581+/-0.000  $\chi^2/\text{NDF}$ : 1255733137241071.0/45

# yield\_cav4bY\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2$ /NDF: 13386255.7/20

Left Out: 0.009+/-0.000  $\chi^2$ /NDF:1455379.3/24

Right Out: 0.000+/-0.000  $\chi^2$ /NDF: 15681669.2/24

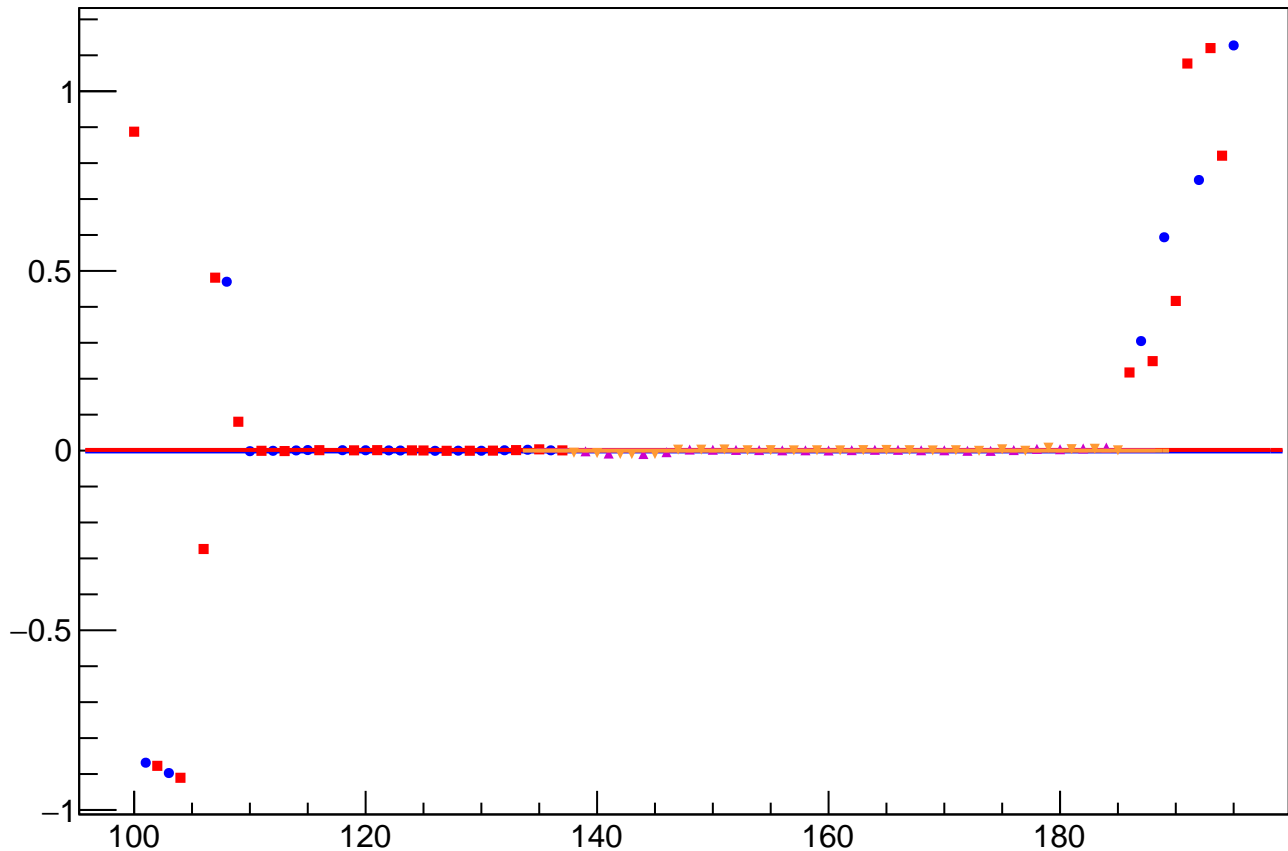
Left In: 0.009+/-0.000  $\chi^2$ /NDF:1042123.1/22

+ sign 0.000+/-0.000  $\chi^2$ /NDF: 44894668.9/45

All: 0.000+/-0.000  $\chi^2$ /NDF: 90384090.9/93

- sign 0.000+/-0.000  $\chi^2$ /NDF: 45488344.7/47

# yield\_cav4cX\_mean vs Slug



Right In:  $-0.002 \pm 0.000$   $\chi^2/\text{NDF}$ : 9795450917.5/20

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 151559332.0/24

Right Out:  $0.002 \pm 0.000$   $\chi^2/\text{NDF}$ : 304200626.1/24

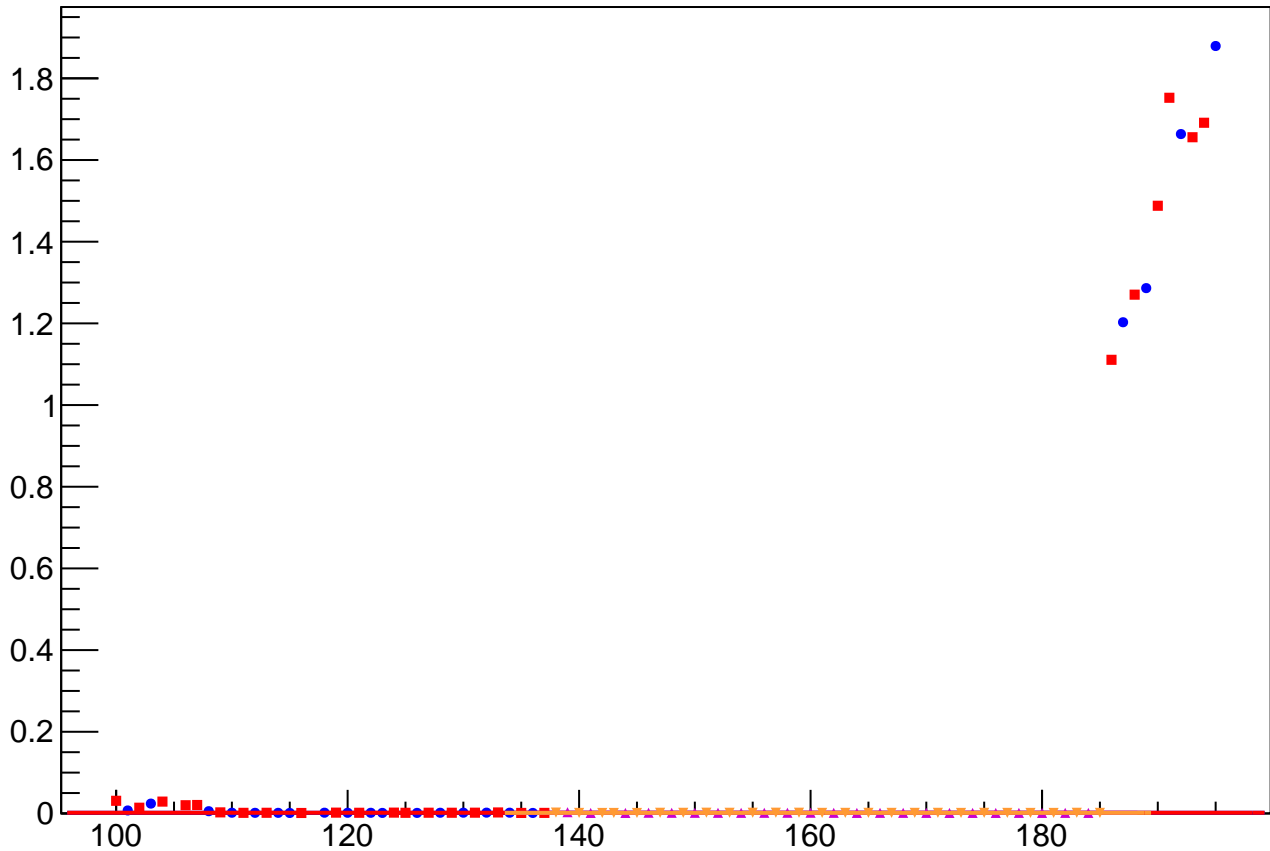
Left In:  $0.001 \pm 0.000$   $\chi^2/\text{NDF}$ : 101468517.6/22

+ sign  $-0.001 \pm 0.000$   $\chi^2/\text{NDF}$ : 9953973315.9/45

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 13106975409.8/95

- sign  $0.001 \pm 0.000$   $\chi^2/\text{NDF}$ : 3145450982.5/47

# yield\_cav4cX\_rms vs Slug



Right In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 6393782.2/20

Left Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ :539040.4/24

Right Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 9695784.6/24

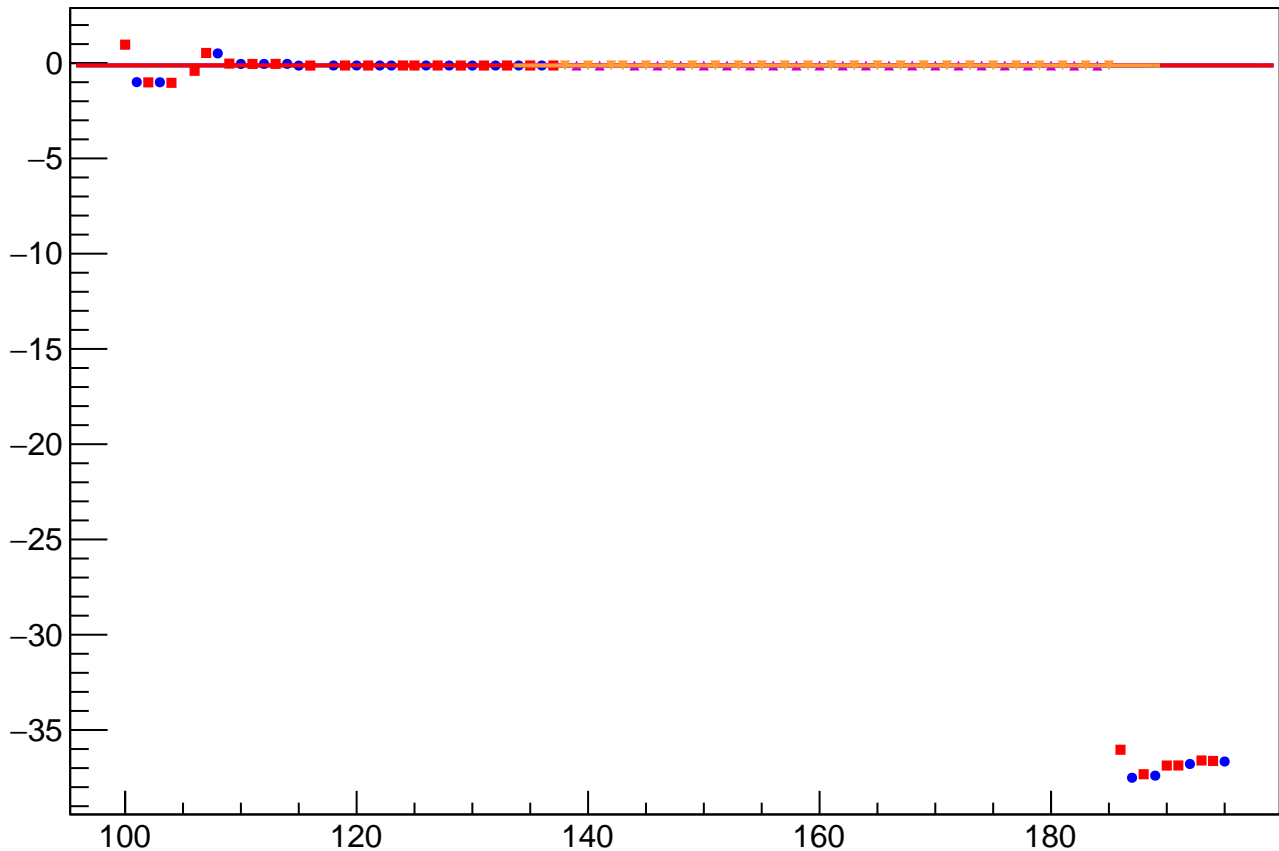
Left In: 0.001+/-0.000  $\chi^2/\text{NDF}$ :659543.3/22

+ sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 7002900.1/45

All: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 17475021.7/93

- sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 10464219.7/47

# yield\_cav4cY\_mean vs Slug



Right In:  $-0.121 \pm 0.000$   $\chi^2/\text{NDF}: 21466143129.8/20$

Left Out:  $-0.121 \pm 0.000$   $\chi^2/\text{NDF}: 58329026.8/24$

Right Out:  $-0.116 \pm 0.000$   $\chi^2/\text{NDF}: 27230569930.3/24$

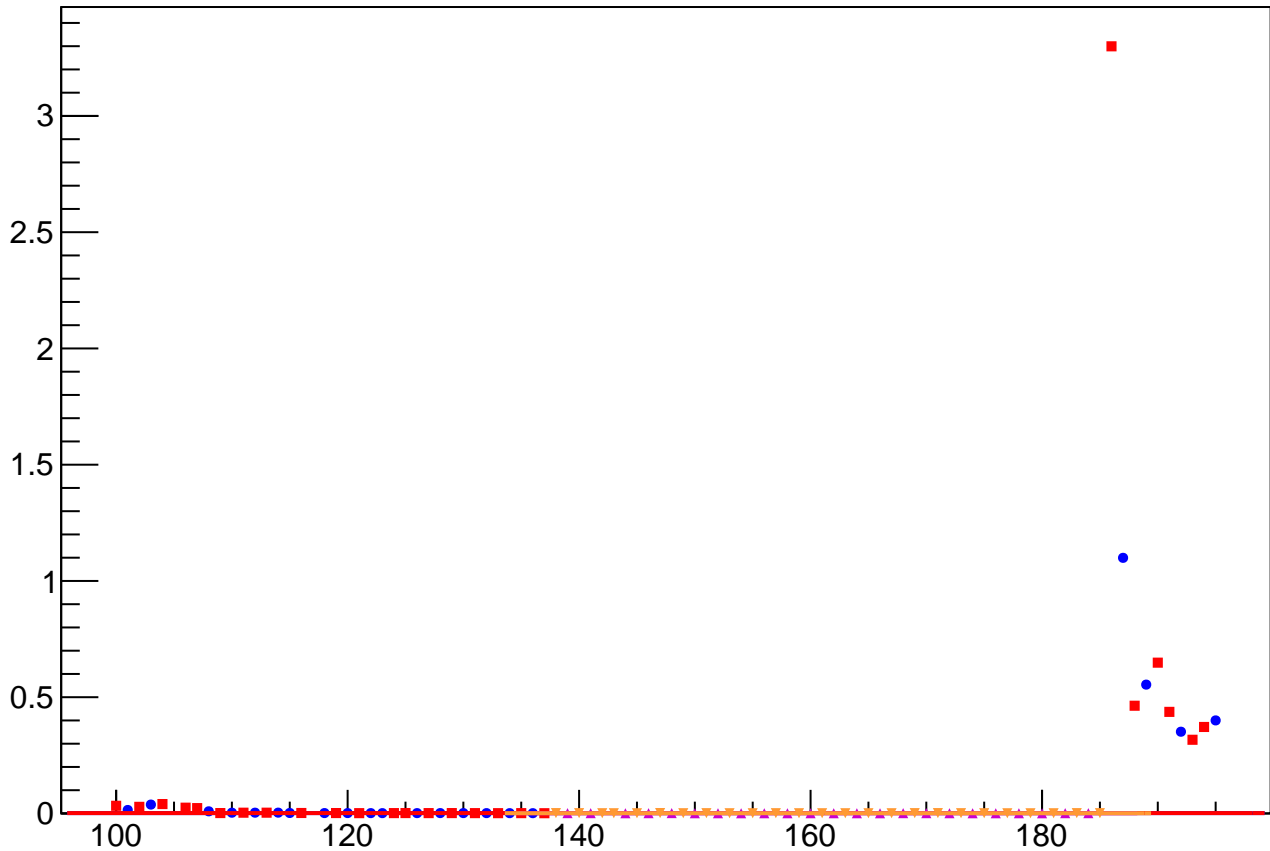
Left In:  $-0.121 \pm 0.000$   $\chi^2/\text{NDF}: 53134323.3/22$

+ sign  $-0.121 \pm 0.000$   $\chi^2/\text{NDF}: 21524923574.5/45$

All:  $-0.121 \pm 0.000$   $\chi^2/\text{NDF}: 48857894149.6/47$

- sign  $-0.120 \pm 0.000$   $\chi^2/\text{NDF}: 27329022180.3/47$

# yield\_cav4cY\_rms vs Slug



Right In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 7165800.1/20

Left Out: 0.001 $\pm$ 0.000  $\chi^2$ /NDF:1362851.8/24

Right Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 9928345.4/24

Left In: 0.001 $\pm$ 0.000  $\chi^2$ /NDF:972588.0/22

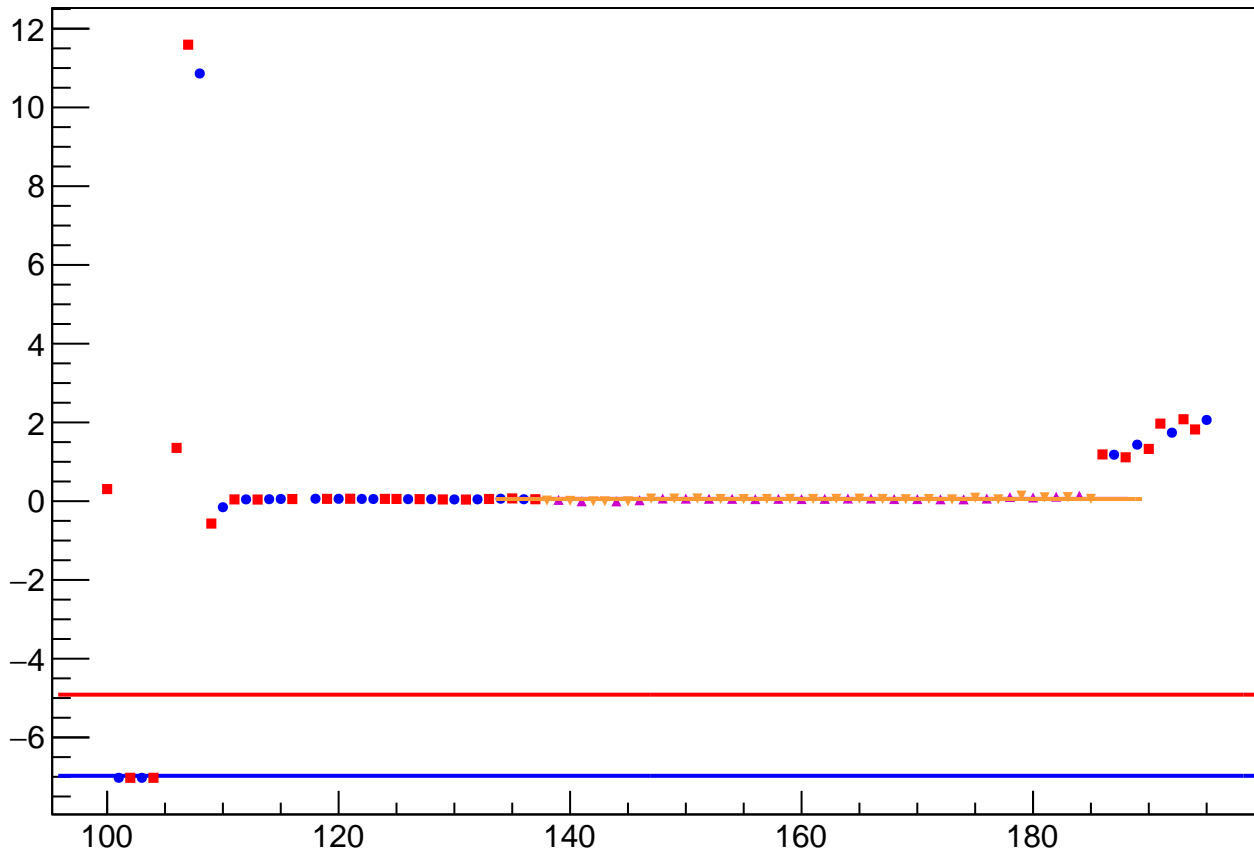
+ sign 0.001 $\pm$ 0.000  $\chi^2$ /NDF: 9694983.7/45

All: 0.001 $\pm$ 0.000  $\chi^2$ /NDF: 21716125.3/93

- sign 0.001 $\pm$ 0.000  $\chi^2$ /NDF: 12019107.0/47



# yield\_cav4dX\_mean vs Slug



Right In:  $-6.975 \pm 0.000$   $\chi^2/\text{NDF}$ : 8762533629153.1/20

Left Out:  $0.055 \pm 0.000$   $\chi^2/\text{NDF}$ : 243733184.3/24

Right Out:  $-4.914 \pm 0.000$   $\chi^2/\text{NDF}$ : 365348616016097.8/24

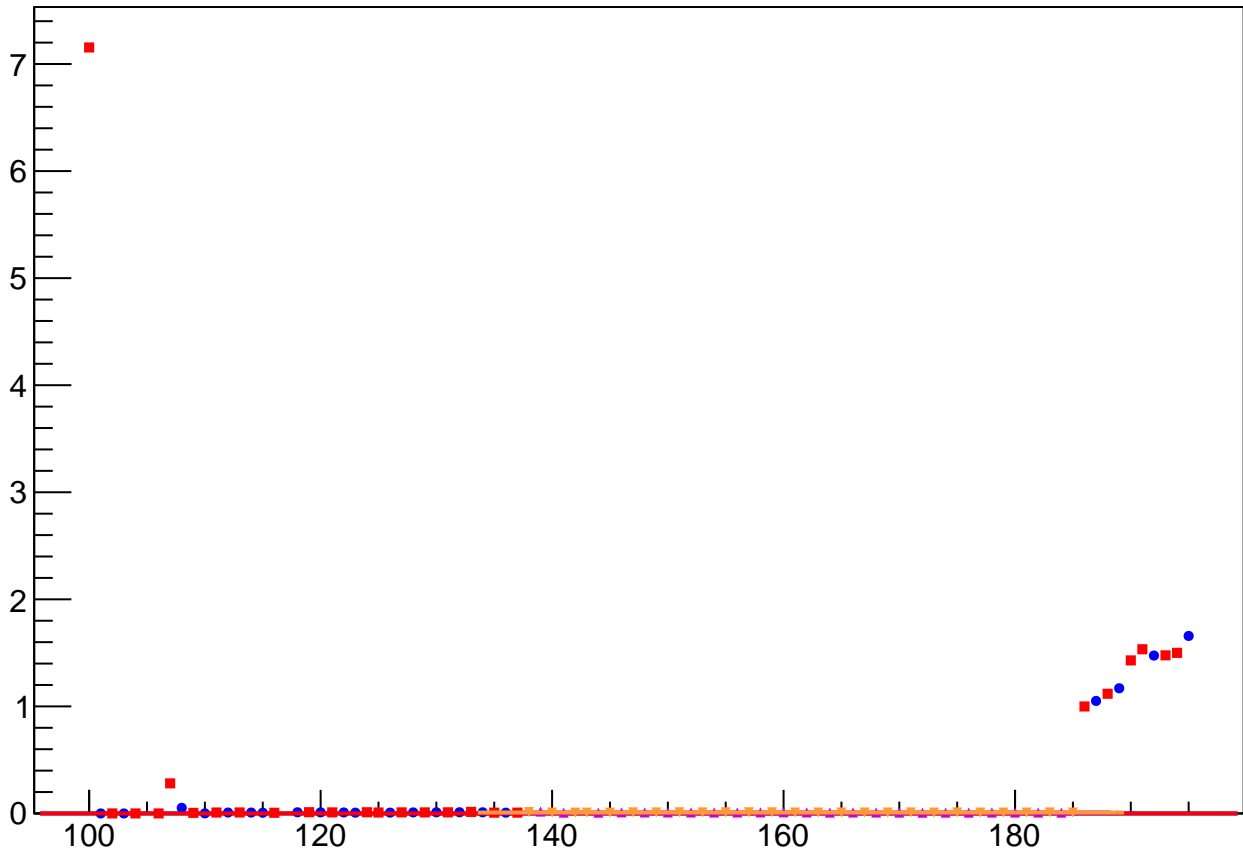
Left In:  $0.059 \pm 0.000$   $\chi^2/\text{NDF}$ : 178713649.9/22

+ sign  $-6.921 \pm 0.000$   $\chi^2/\text{NDF}$ : 18417523324011.9/20

All:  $-5.858 \pm 0.000$   $\chi^2/\text{NDF}$ : 4435813307877.8/24

- sign  $-4.882 \pm 0.000$   $\chi^2/\text{NDF}$ : 369770907318292.1/24

# yield\_cav4dX\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2$ /NDF: 12710391.3/20

Left Out: 0.009+/-0.000  $\chi^2$ /NDF:513737.0/24

Right Out: 0.000+/-0.000  $\chi^2$ /NDF: 15443258.2/24

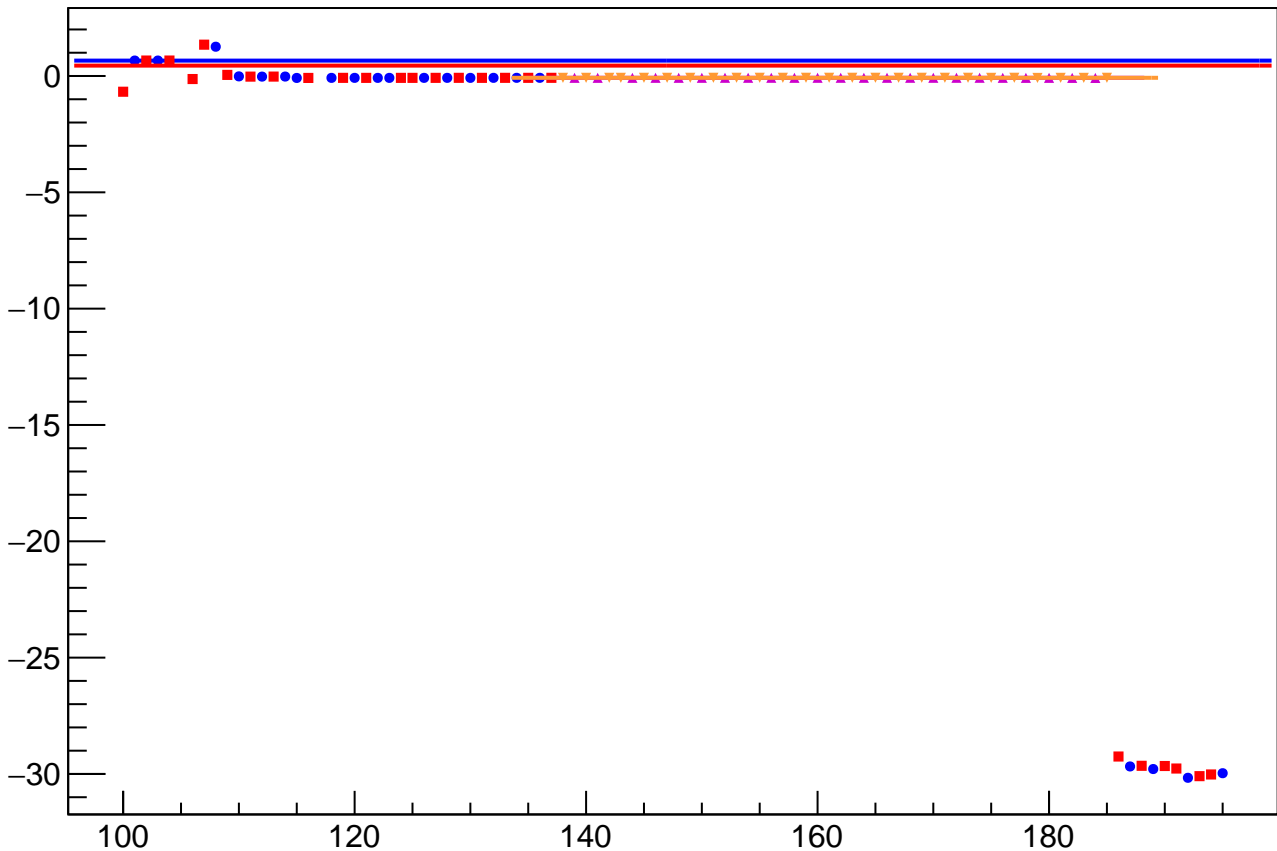
Left In: 0.009+/-0.000  $\chi^2$ /NDF:636557.9/22

+ sign 0.000+/-0.000  $\chi^2$ /NDF: 41698082.3/45

All: 0.000+/-0.000  $\chi^2$ /NDF: 84819877.7/93

- sign 0.000+/-0.000  $\chi^2$ /NDF: 43117344.9/47

# yield\_cav4dY\_mean vs Slug



Right In: 0.661+/-0.000  $\chi^2/\text{NDF}$ : 5603039668920.5/20

Left Out: -0.078+/-0.000  $\chi^2/\text{NDF}$ : 156525648.0/24

Right Out: 0.446+/-0.000  $\chi^2/\text{NDF}$ : 405439526000386.0/24

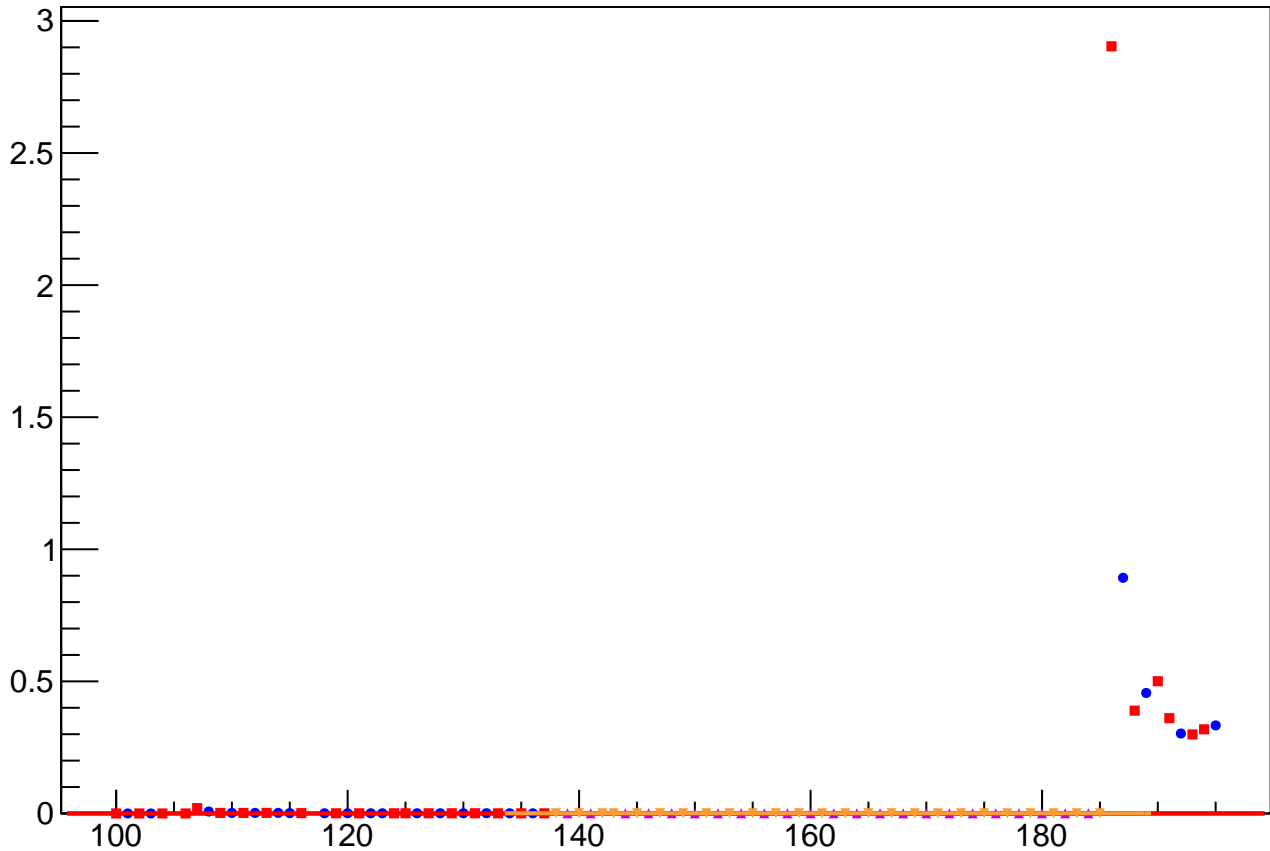
Left In: -0.077+/-0.000  $\chi^2/\text{NDF}$ : 111221084.5/22

+ sign 0.646+/-0.000  $\chi^2/\text{NDF}$ : 35770536198839.9/4

All: 0.537+/-0.000  $\chi^2/\text{NDF}$ : 5160218269984

- sign 0.437+/-0.000  $\chi^2/\text{NDF}$ : 419671064616521.5/4

# yield\_cav4dY\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2$ /NDF: 14287075.9/20

Left Out: 0.001+/-0.000  $\chi^2$ /NDF:466355.6/24

Right Out: 0.000+/-0.000  $\chi^2$ /NDF: 16015662.7/24

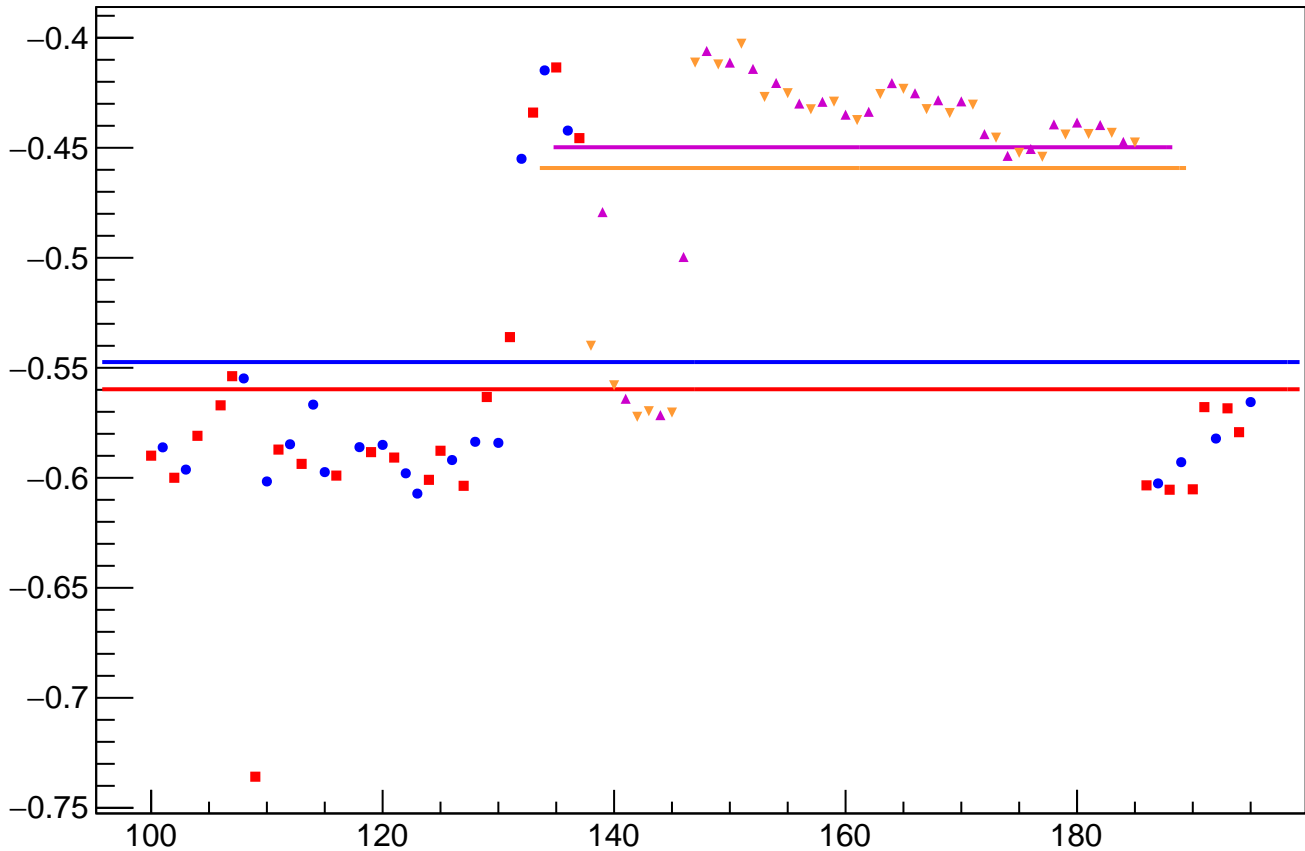
Left In: 0.001+/-0.000  $\chi^2$ /NDF:355587.5/22

+ sign 0.000+/-0.000  $\chi^2$ /NDF: 46936452.4/45

All: 0.000+/-0.000  $\chi^2$ /NDF: 93996148.5/93

- sign 0.000+/-0.000  $\chi^2$ /NDF: 47052552.7/47

# yield\_bpm4aX\_mean vs Slug



Right In:  $-0.547 \pm 0.000$   $\chi^2/\text{NDF}: 47219789.2/20$

Left Out:  $-0.459 \pm 0.000$   $\chi^2/\text{NDF}: 113808762.6/24$

Right Out:  $-0.560 \pm 0.000$   $\chi^2/\text{NDF}: 65242388.5/24$

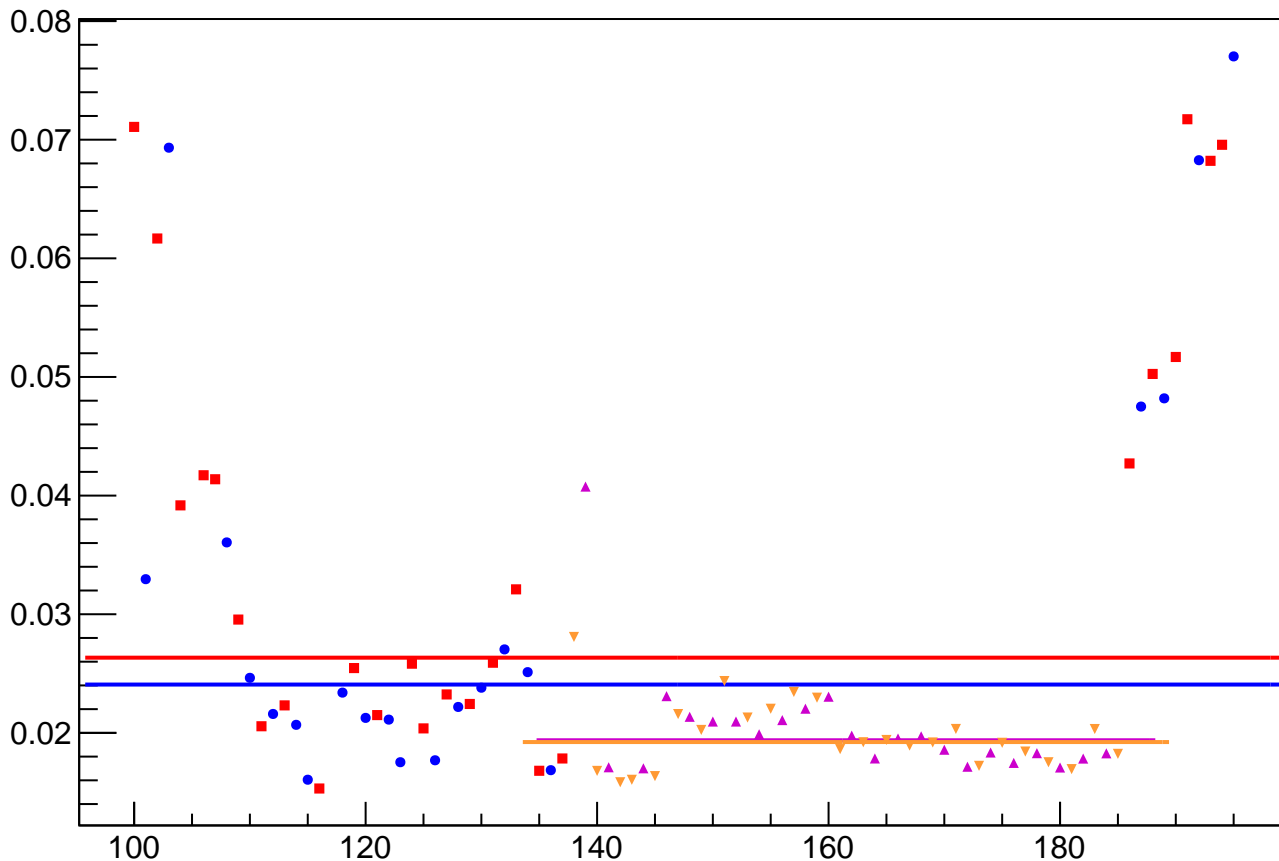
Left In:  $-0.450 \pm 0.000$   $\chi^2/\text{NDF}: 76151485.7/22$

+ sign  $-0.478 \pm 0.000$   $\chi^2/\text{NDF}: 227956865.5/45$

All:  $-0.476 \pm 0.000$   $\chi^2/\text{NDF}: 471455335.4/93$

- sign  $-0.474 \pm 0.000$   $\chi^2/\text{NDF}: 243184038.6/47$

# yield\_bpm4aX\_rms vs Slug



Right In: 0.024 $\pm$ 0.000  $\chi^2$ /NDF: 2819486.5/20

Left Out: 0.019 $\pm$ 0.000  $\chi^2$ /NDF:501253.7/24

Right Out: 0.026 $\pm$ 0.000  $\chi^2$ /NDF: 3377738.1/24

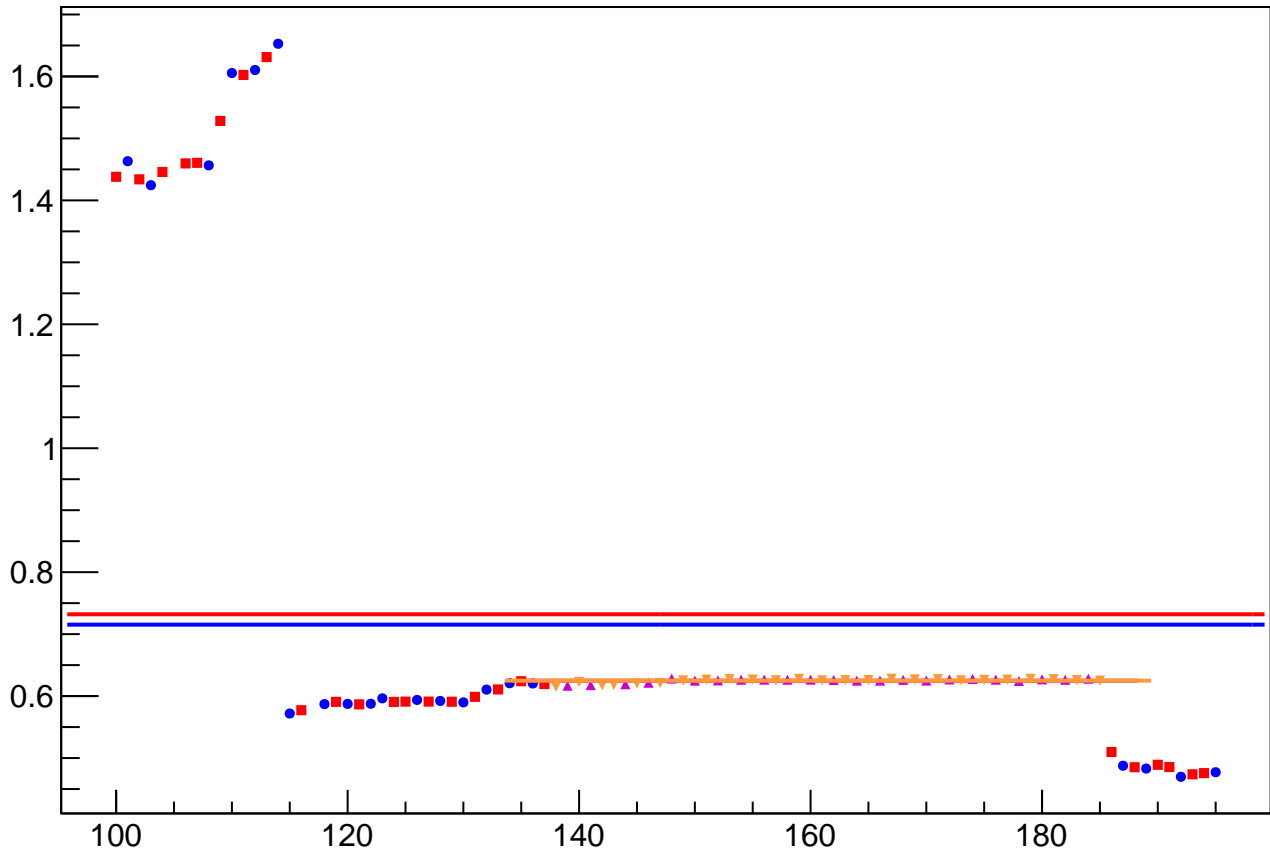
Left In: 0.019 $\pm$ 0.000  $\chi^2$ /NDF:656155.9/22

+ sign 0.020 $\pm$ 0.000  $\chi^2$ /NDF: 3724978.2/45

All: 0.021 $\pm$ 0.000  $\chi^2$ /NDF: 8597313.9/93

- sign 0.021 $\pm$ 0.000  $\chi^2$ /NDF: 4849304.2/47

# yield\_bpm4aY\_mean vs Slug



Right In: 0.715 $\pm$ 0.000  $\chi^2$ /NDF: 4235767099.8/20

Left Out: 0.625 $\pm$ 0.000  $\chi^2$ /NDF:1442225.6/24

Right Out: 0.732 $\pm$ 0.000  $\chi^2$ /NDF: 5164788480.6/24

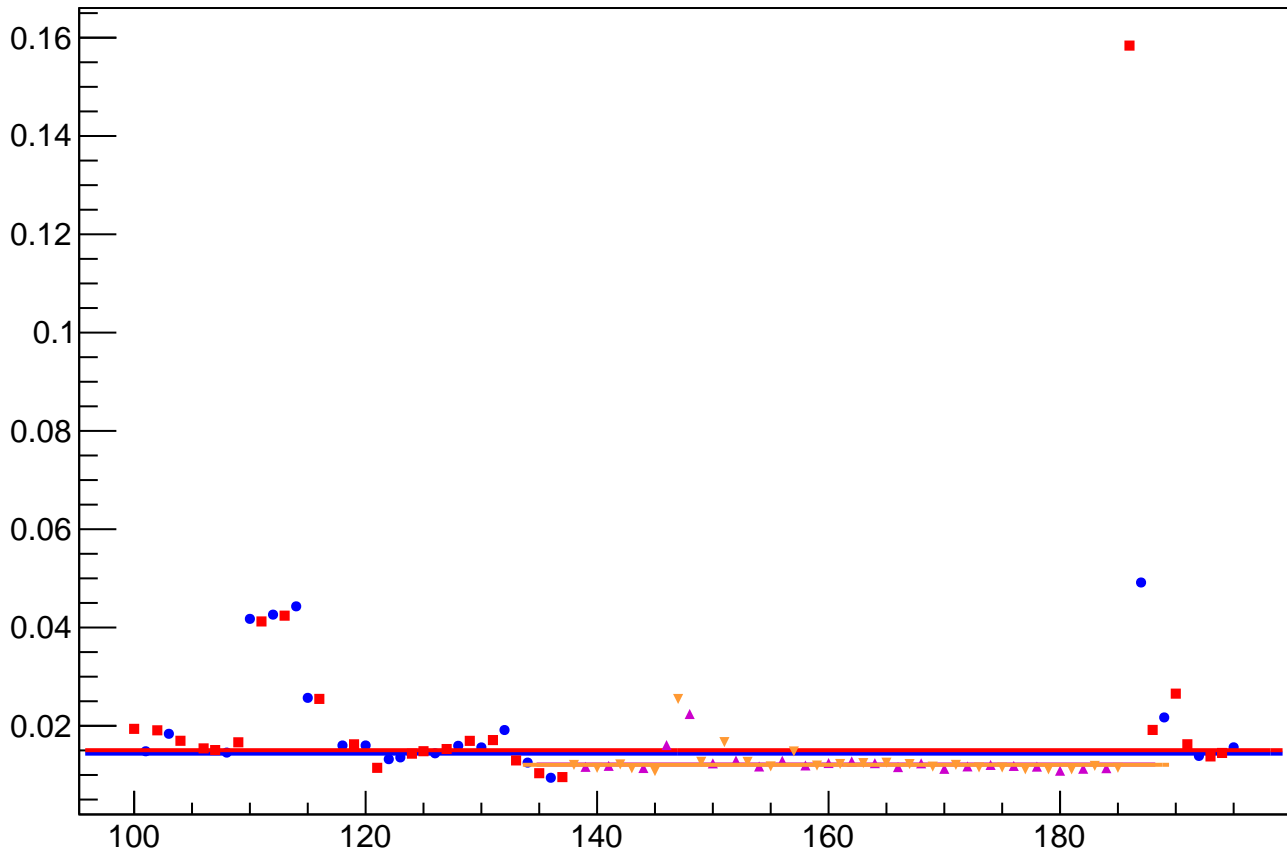
Left In: 0.625 $\pm$ 0.000  $\chi^2$ /NDF:1135039.4/22

+ sign 0.646 $\pm$ 0.000  $\chi^2$ /NDF: 4470287222.0/45

All: 0.649 $\pm$ 0.000  $\chi^2$ /NDF: 9973413002.9/93

- sign 0.652 $\pm$ 0.000  $\chi^2$ /NDF: 5500333676.9/47

# yield\_bpm4aY\_rms vs Slug



Right In: 0.014 $\pm$ 0.000  $\chi^2$ /NDF: 1639245.5/20

Left Out: 0.012 $\pm$ 0.000  $\chi^2$ /NDF:657433.9/24

Right Out: 0.015 $\pm$ 0.000  $\chi^2$ /NDF: 2051741.5/24

Left In: 0.012 $\pm$ 0.000  $\chi^2$ /NDF:488249.4/22

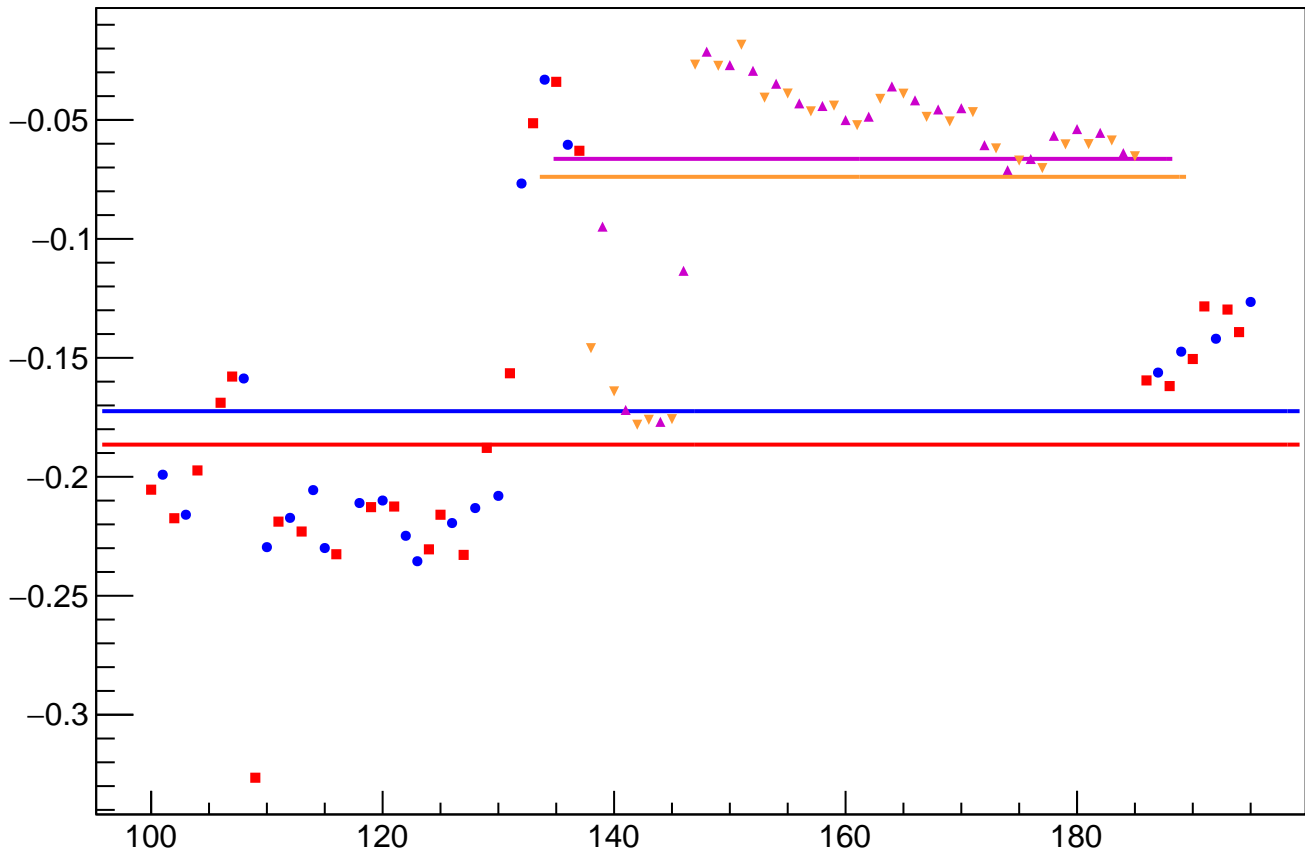
+ sign 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 2589816.8/45

All: 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 5633152.0/93

- sign 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 3031942.1/47



# yield\_bpm4eX\_mean vs Slug



Right In:  $-0.172 \pm 0.000$   $\chi^2/\text{NDF}$ : 67466618.5/20

Left Out:  $-0.074 \pm 0.000$   $\chi^2/\text{NDF}$ : 107858881.3/24

Right Out:  $-0.186 \pm 0.000$   $\chi^2/\text{NDF}$ : 83103863.0/24

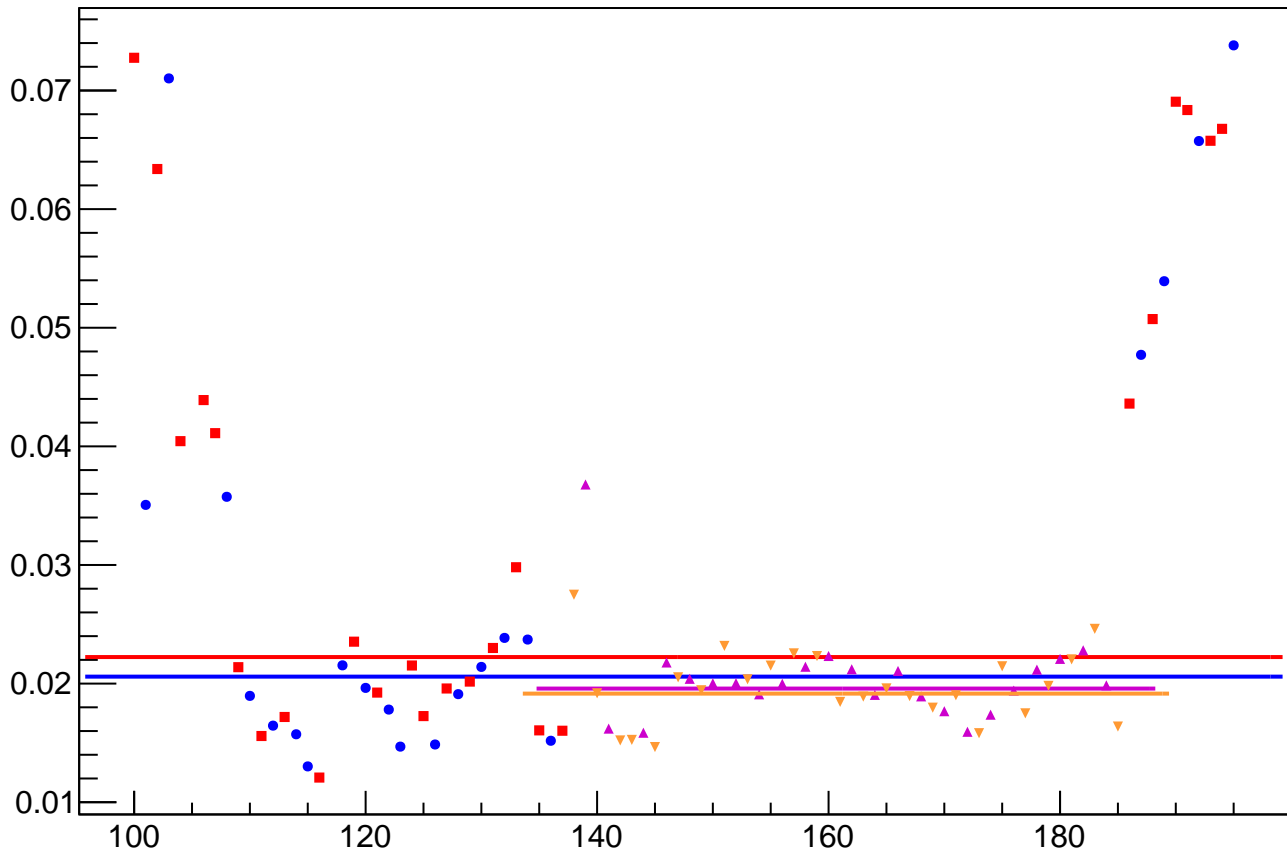
Left In:  $-0.066 \pm 0.000$   $\chi^2/\text{NDF}$ : 76283954.4/22

+ sign  $-0.099 \pm 0.000$   $\chi^2/\text{NDF}$ : 278790969.1/45

All:  $-0.100 \pm 0.000$   $\chi^2/\text{NDF}$ : 588153926.5/93

- sign  $-0.100 \pm 0.000$   $\chi^2/\text{NDF}$ : 309360579.7/47

# yield\_bpm4eX\_rms vs Slug



Right In: 0.021 $\pm$ 0.000  $\chi^2$ /NDF: 3369372.0/20

Left Out: 0.019 $\pm$ 0.000  $\chi^2$ /NDF:641027.3/24

Right Out: 0.022 $\pm$ 0.000  $\chi^2$ /NDF: 4255472.8/24

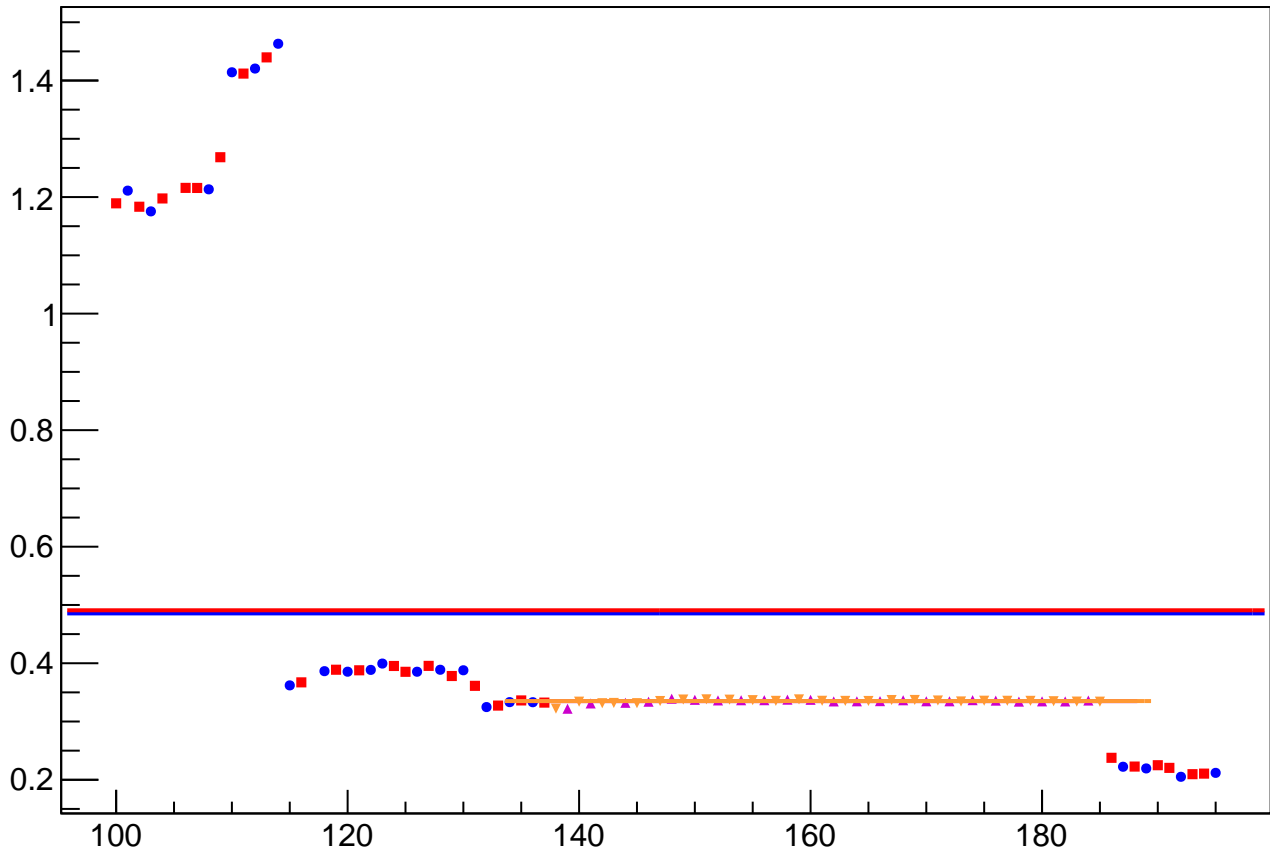
Left In: 0.020 $\pm$ 0.000  $\chi^2$ /NDF:651328.7/22

+ sign 0.020 $\pm$ 0.000  $\chi^2$ /NDF: 4054155.8/45

All: 0.020 $\pm$ 0.000  $\chi^2$ /NDF: 9141435.4/93

- sign 0.020 $\pm$ 0.000  $\chi^2$ /NDF: 5053594.2/47

# yield\_bpm4eY\_mean vs Slug



Right In: 0.486+/-0.000  $\chi^2/\text{NDF}$ : 6118270459.7/20

Left Out: 0.335+/-0.000  $\chi^2/\text{NDF}$ : 1153956.7/24

Right Out: 0.491+/-0.000  $\chi^2/\text{NDF}$ : 7181489122.4/24

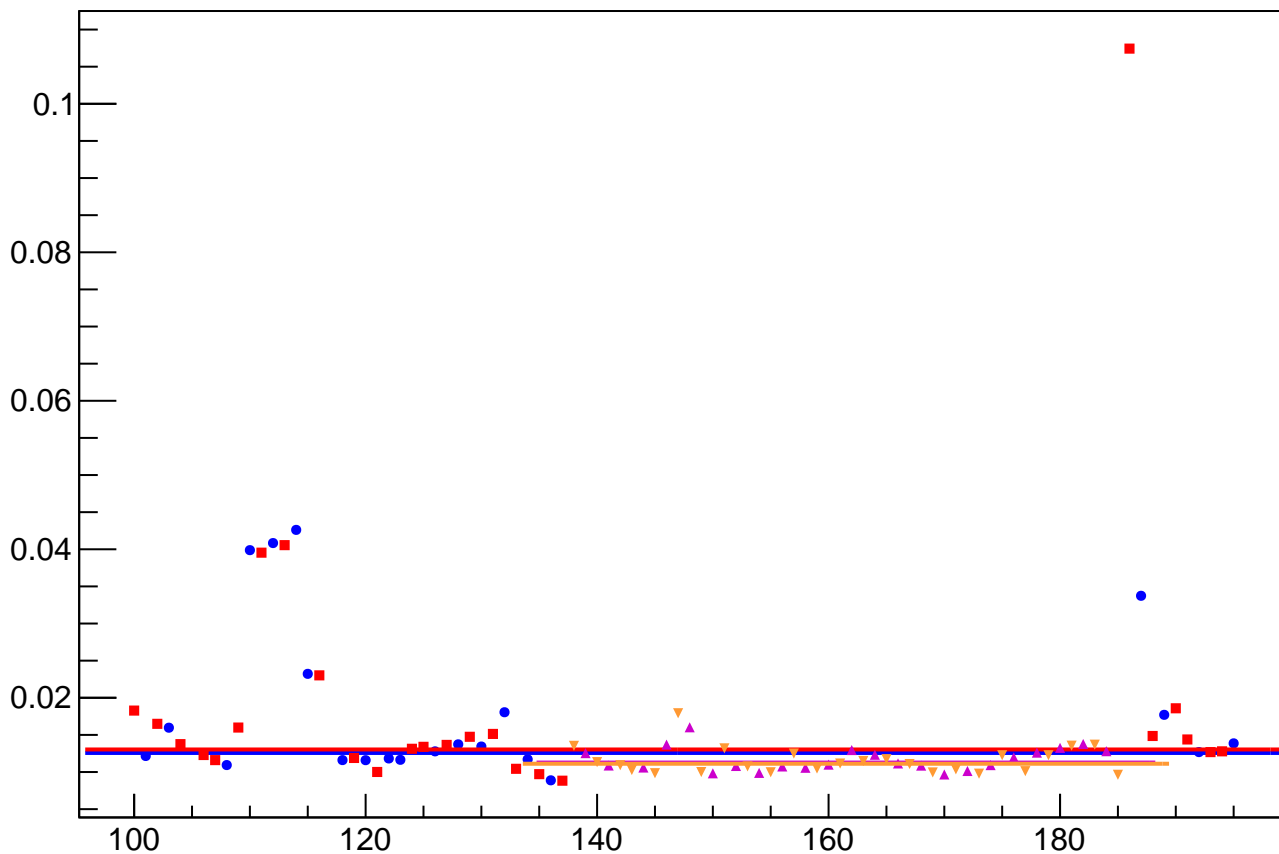
Left In: 0.335+/-0.000  $\chi^2/\text{NDF}$ : 1198302.8/22

+ sign 0.374+/-0.000  $\chi^2/\text{NDF}$ : 6941430310.0/45

All: 0.376+/-0.000  $\chi^2/\text{NDF}$ : 15030794026.3/95

- sign 0.379+/-0.000  $\chi^2/\text{NDF}$ : 8086359191.2/47

# yield\_bpm4eY\_rms vs Slug



Right In: 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 1508768.1/20

Left Out: 0.011 $\pm$ 0.000  $\chi^2$ /NDF:608235.7/24

Right Out: 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 1916043.8/24

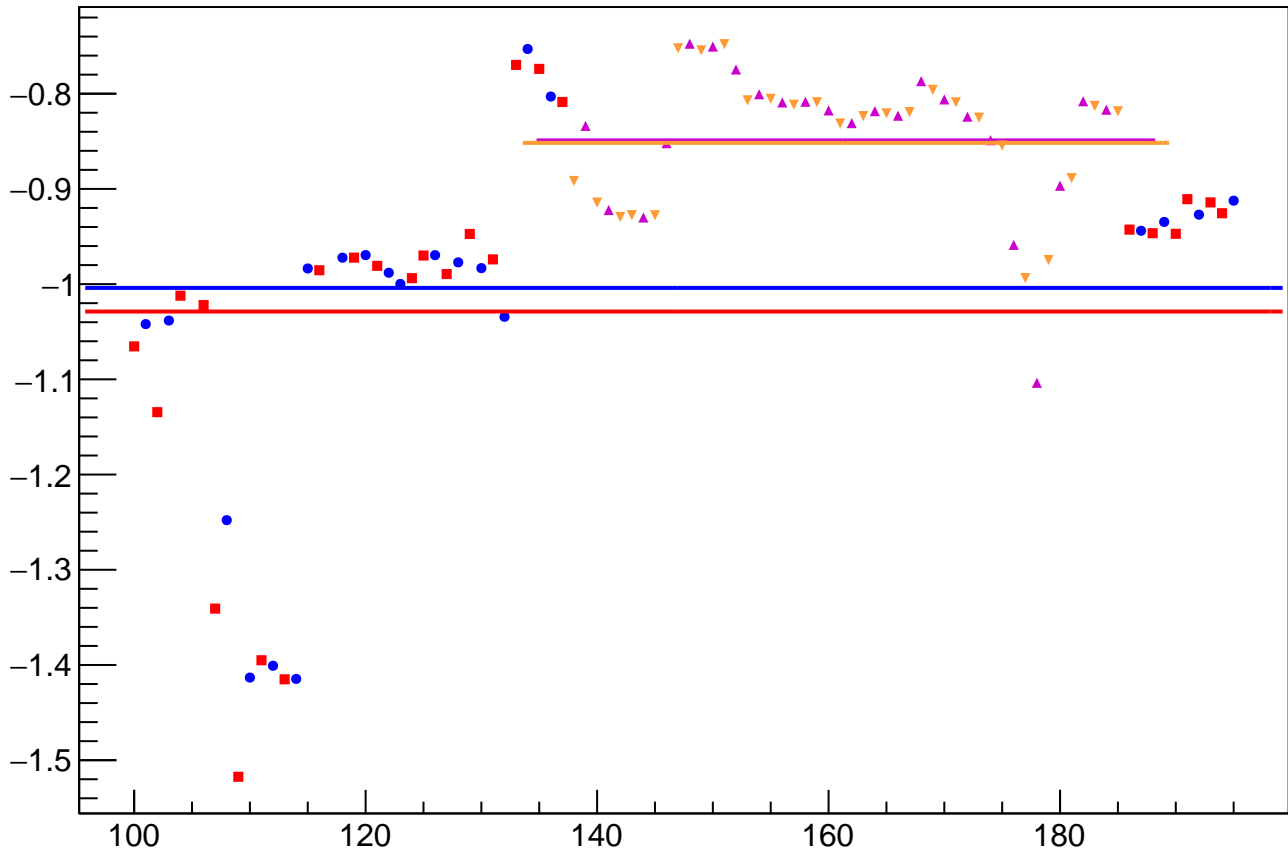
Left In: 0.011 $\pm$ 0.000  $\chi^2$ /NDF:502226.7/22

+ sign 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 2270284.1/45

All: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 4935127.0/93

- sign 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 2649469.6/47

# yield\_bpm4acX\_mean vs Slug



Right In:  $-1.004 \pm 0.000$   $\chi^2/\text{NDF}$ : 396786346.1/20

Left Out:  $-0.852 \pm 0.000$   $\chi^2/\text{NDF}$ : 189276591.7/24

Right Out:  $-1.029 \pm 0.000$   $\chi^2/\text{NDF}$ : 545021224.6/24

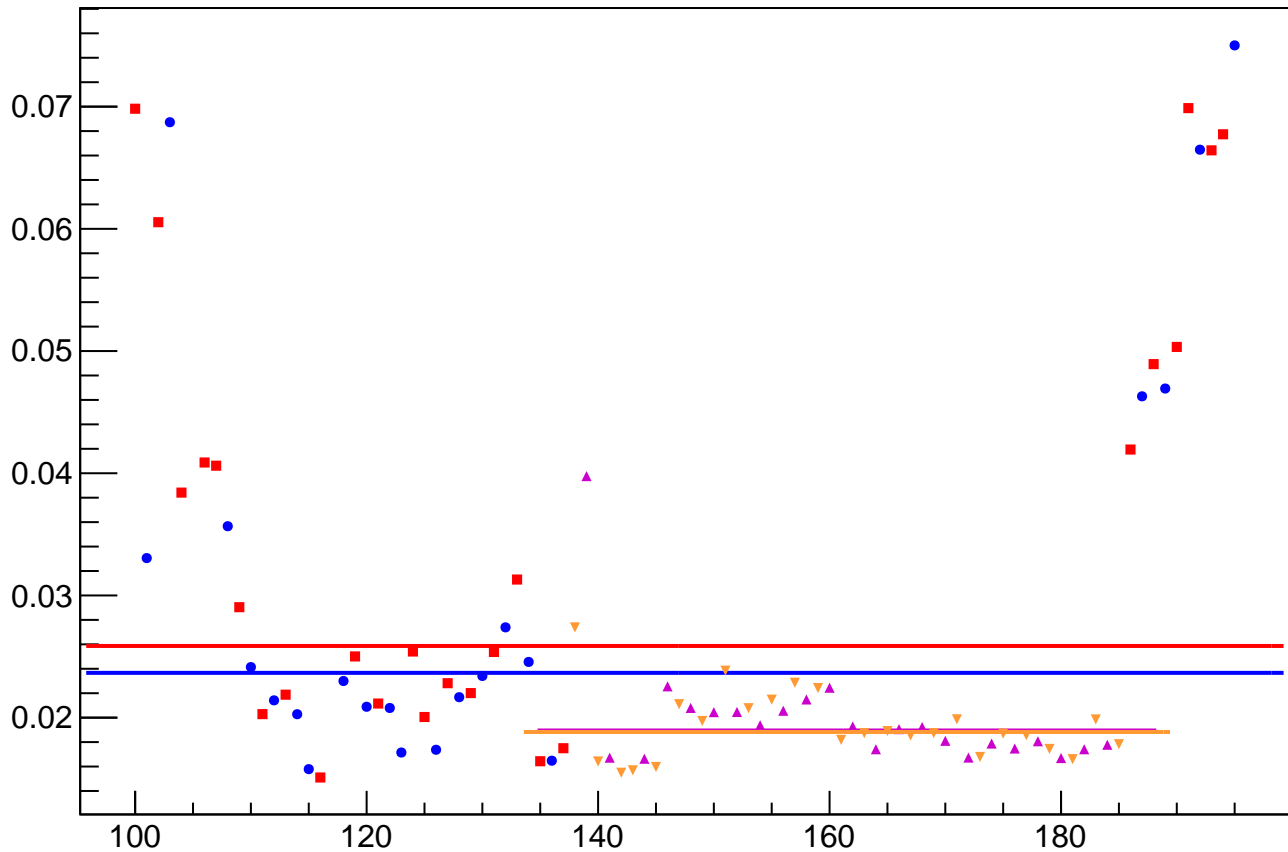
Left In:  $-0.849 \pm 0.000$   $\chi^2/\text{NDF}$ : 256438306.8/22

+ sign  $-0.884 \pm 0.000$   $\chi^2/\text{NDF}$ : 792886234.1/45

All:  $-0.887 \pm 0.000$   $\chi^2/\text{NDF}$ : 1877350175.4/9

- sign  $-0.889 \pm 0.000$   $\chi^2/\text{NDF}$ : 1083770982.0/47

# yield\_bpm4acX\_rms vs Slug



Right In: 0.024 $\pm$ 0.000  $\chi^2$ /NDF: 2825791.9/20

Left Out: 0.019 $\pm$ 0.000  $\chi^2$ /NDF: 490084.5/24

Right Out: 0.026 $\pm$ 0.000  $\chi^2$ /NDF: 3349983.7/24

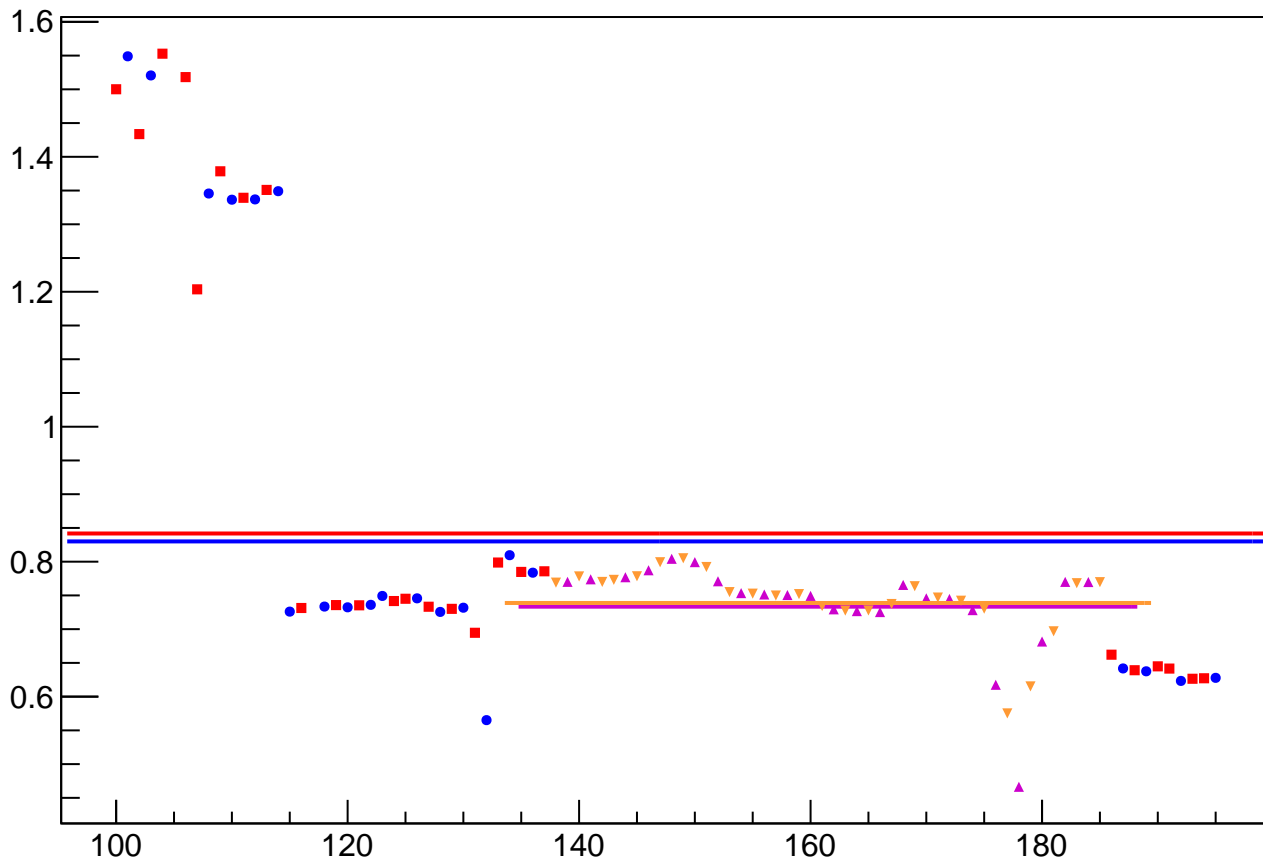
Left In: 0.019 $\pm$ 0.000  $\chi^2$ /NDF: 645048.1/22

+ sign 0.020 $\pm$ 0.000  $\chi^2$ /NDF: 3733270.5/45

All: 0.020 $\pm$ 0.000  $\chi^2$ /NDF: 8585814.1/93

- sign 0.020 $\pm$ 0.000  $\chi^2$ /NDF: 4831456.0/47

# yield\_bpm4acY\_mean vs Slug



Right In: 0.830 $\pm$ 0.000  $\chi^2$ /NDF: 2877377032.3/20

Left Out: 0.739 $\pm$ 0.000  $\chi^2$ /NDF:333086309.0/24

Right Out: 0.842 $\pm$ 0.000  $\chi^2$ /NDF: 3136291368.8/24

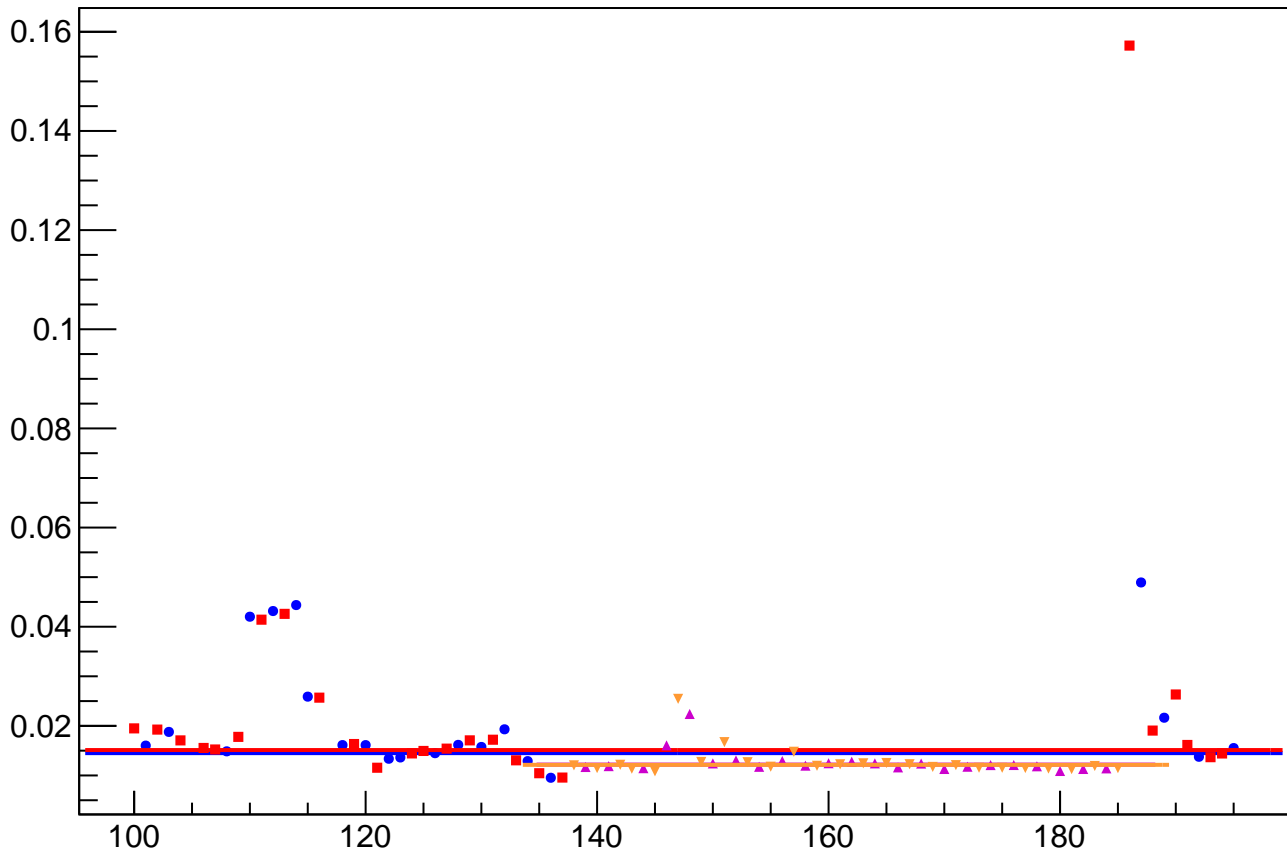
Left In: 0.733 $\pm$ 0.000  $\chi^2$ /NDF:570264411.7/22

+ sign 0.760 $\pm$ 0.000  $\chi^2$ /NDF: 3442433005.5/45

All: 0.760 $\pm$ 0.000  $\chi^2$ /NDF: 7487206185.8/93

- sign 0.761 $\pm$ 0.000  $\chi^2$ /NDF: 4044719077.6/47

# yield\_bpm4acY\_rms vs Slug



Right In: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 1639699.9/20

Left Out: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 638211.9/24

Right Out: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 2052259.2/24

Left In: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 481639.6/22

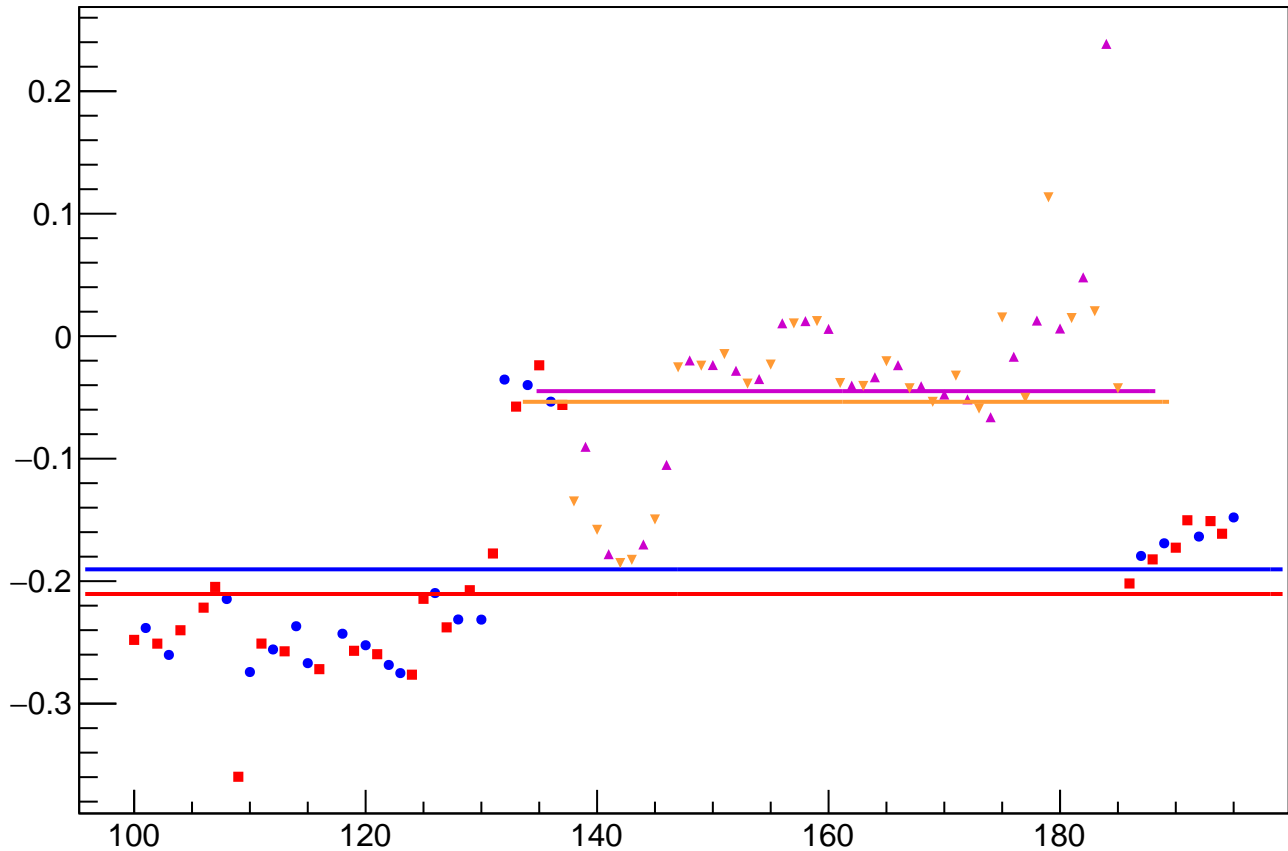
+ sign 0.013+/-0.000  $\chi^2/\text{NDF}$ : 2588719.9/45

All: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 5626541.3/93

- sign 0.013+/-0.000  $\chi^2/\text{NDF}$ : 3028602.1/47



# yield\_bpm4ecX\_mean vs Slug



Right In:  $-0.190 \pm 0.000$   $\chi^2/\text{NDF}: 106445379.0/20$

Left Out:  $-0.054 \pm 0.000$   $\chi^2/\text{NDF}: 167879648.0/24$

+ sign  $-0.089 \pm 0.000$   $\chi^2/\text{NDF}: 469074609.7/45$

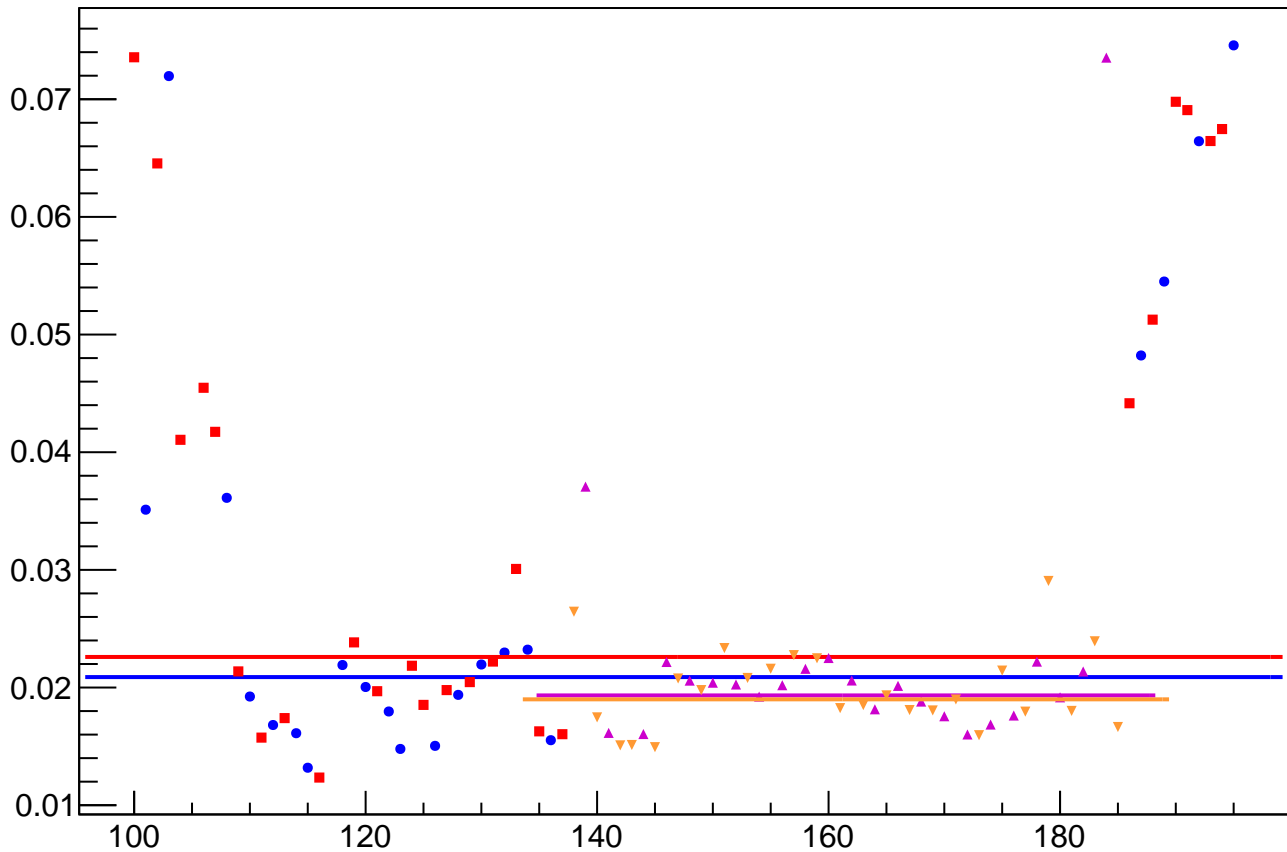
Right Out:  $-0.210 \pm 0.000$   $\chi^2/\text{NDF}: 111280709.6/24$

All:  $-0.089 \pm 0.000$   $\chi^2/\text{NDF}: 985965209.1/93$

- sign  $-0.090 \pm 0.000$   $\chi^2/\text{NDF}: 516850587.6/47$

Left In:  $-0.045 \pm 0.000$   $\chi^2/\text{NDF}: 127324000.1/22$

# yield\_bpm4ecX\_rms vs Slug



Right In: 0.021 $\pm$ 0.000  $\chi^2$ /NDF: 3332855.8/20

Left Out: 0.019 $\pm$ 0.000  $\chi^2$ /NDF:699267.5/24

Right Out: 0.023 $\pm$ 0.000  $\chi^2$ /NDF: 4230414.0/24

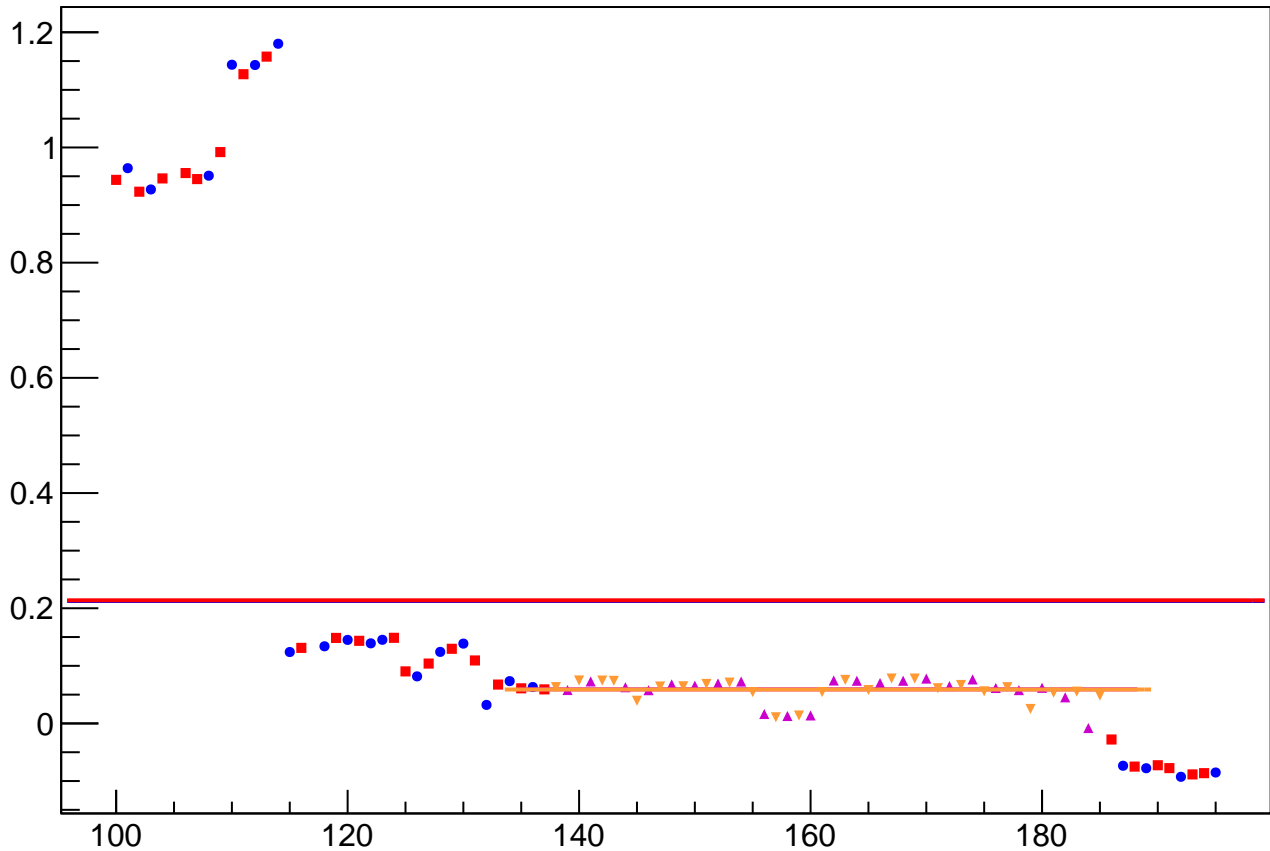
Left In: 0.019 $\pm$ 0.000  $\chi^2$ /NDF:892810.7/22

+ sign 0.019 $\pm$ 0.000  $\chi^2$ /NDF: 4106644.4/45

All: 0.020 $\pm$ 0.000  $\chi^2$ /NDF: 9475384.8/93

- sign 0.020 $\pm$ 0.000  $\chi^2$ /NDF: 5340031.0/47

# yield\_bpm4ecY\_mean vs Slug



Right In: 0.213+/-0.000  $\chi^2/\text{NDF}$ : 6480775969.5/20

Left Out: 0.059+/-0.000  $\chi^2/\text{NDF}$ : 46902918.4/24

Right Out: 0.214+/-0.000  $\chi^2/\text{NDF}$ : 7443693817.5/24

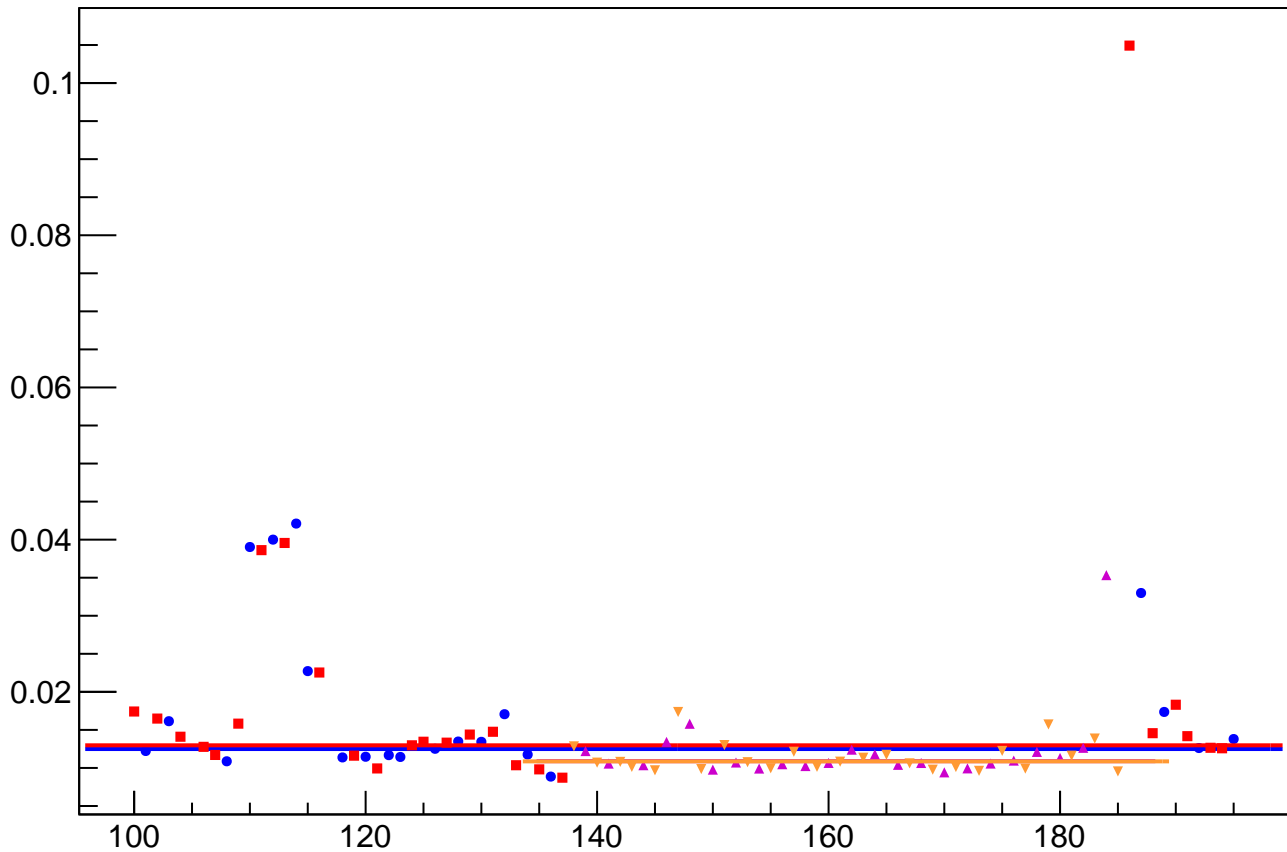
Left In: 0.059+/-0.000  $\chi^2/\text{NDF}$ : 58640898.5/22

+ sign 0.098+/-0.000  $\chi^2/\text{NDF}$ : 7398691170.0/45

All: 0.100+/-0.000  $\chi^2/\text{NDF}$ : 15809448752.2/95

- sign 0.102+/-0.000  $\chi^2/\text{NDF}$ : 8409342606.8/47

# yield\_bpm4ecY\_rms vs Slug



Right In: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 1475796.2/20

Left Out: 0.011 $\pm$ 0.000  $\chi^2$ /NDF:605519.3/24

Right Out: 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 1872184.0/24

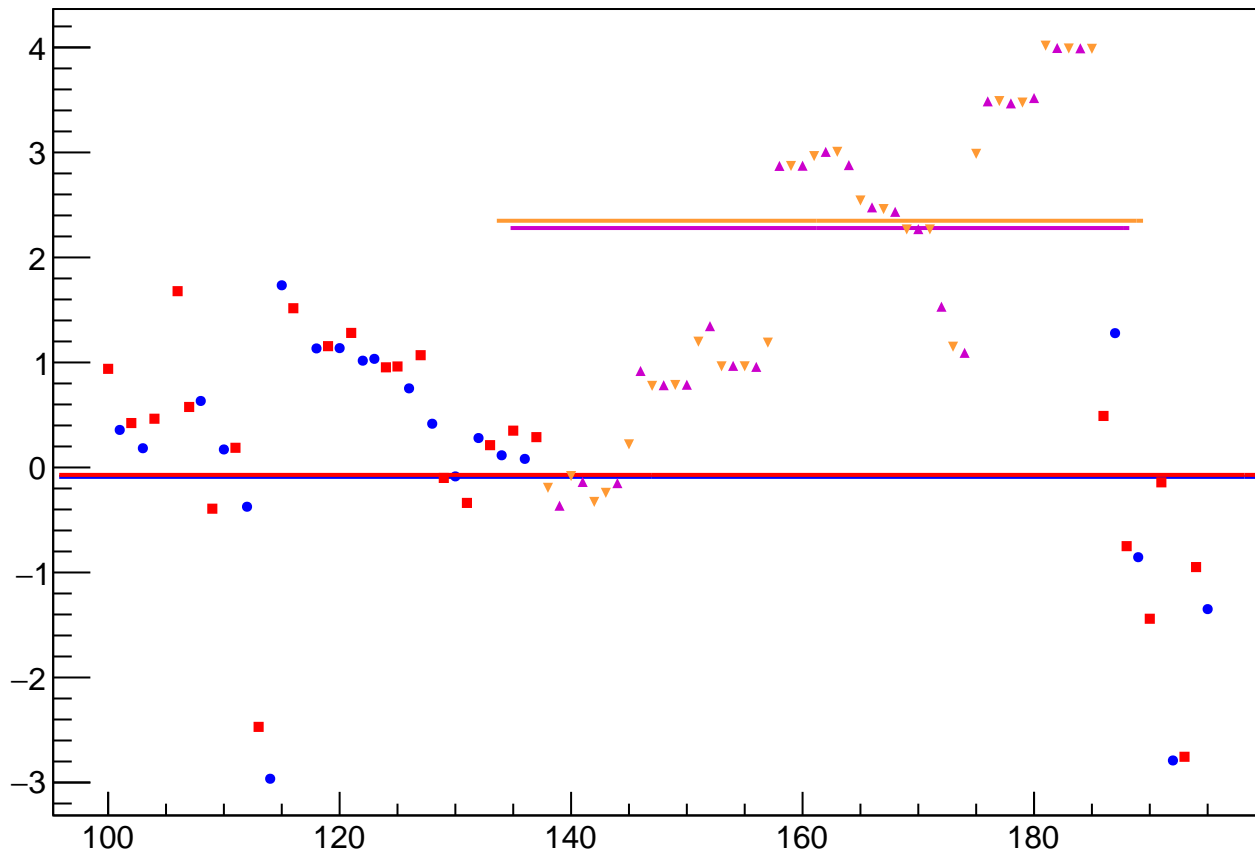
Left In: 0.011 $\pm$ 0.000  $\chi^2$ /NDF:529867.3/22

+ sign 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 2275096.0/45

All: 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 5013362.6/93

- sign 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 2731330.0/47

# yield\_bpm1X\_mean vs Slug



Right In:  $-0.089 \pm 0.000$   $\chi^2/\text{NDF}: 2767185897.1/20$

Left Out:  $2.349 \pm 0.000$   $\chi^2/\text{NDF}: 63600066268.3/24$

Right Out:  $-0.071 \pm 0.000$   $\chi^2/\text{NDF}: 3271010230.2/24$

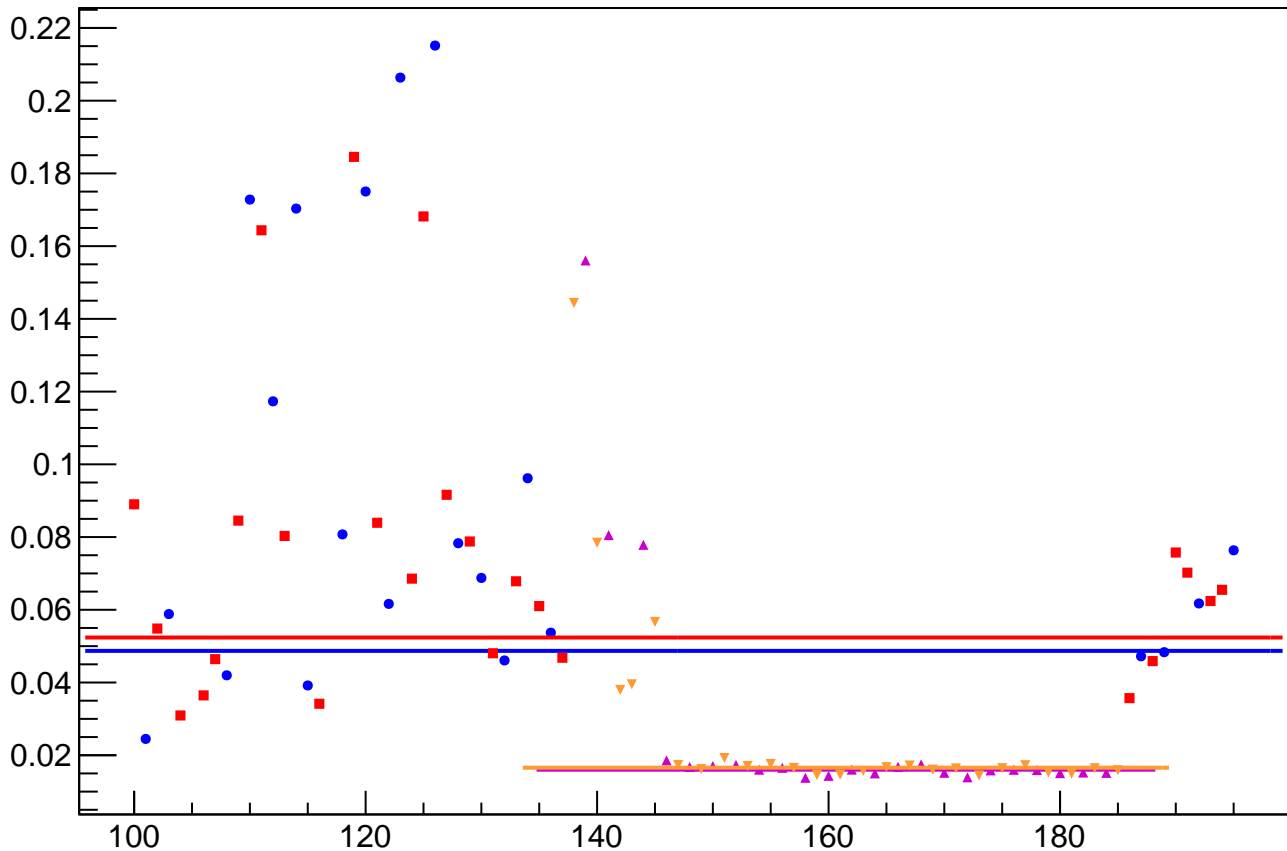
Left In:  $2.280 \pm 0.000$   $\chi^2/\text{NDF}: 61444254541.3/22$

+ sign  $2.243 \pm 0.000$   $\chi^2/\text{NDF}: 79652716060.0/45$

All:  $2.205 \pm 0.000$   $\chi^2/\text{NDF}: 158258806952.4$

- sign  $2.168 \pm 0.000$   $\chi^2/\text{NDF}: 78454671337.0/47$

# yield\_bpm1X\_rms vs Slug



Right In: 0.049 $\pm$ 0.000  $\chi^2$ /NDF: 3114053.1/20

Left Out: 0.017 $\pm$ 0.000  $\chi^2$ /NDF:2623615.6/24

Right Out: 0.052 $\pm$ 0.000  $\chi^2$ /NDF: 2551724.6/24

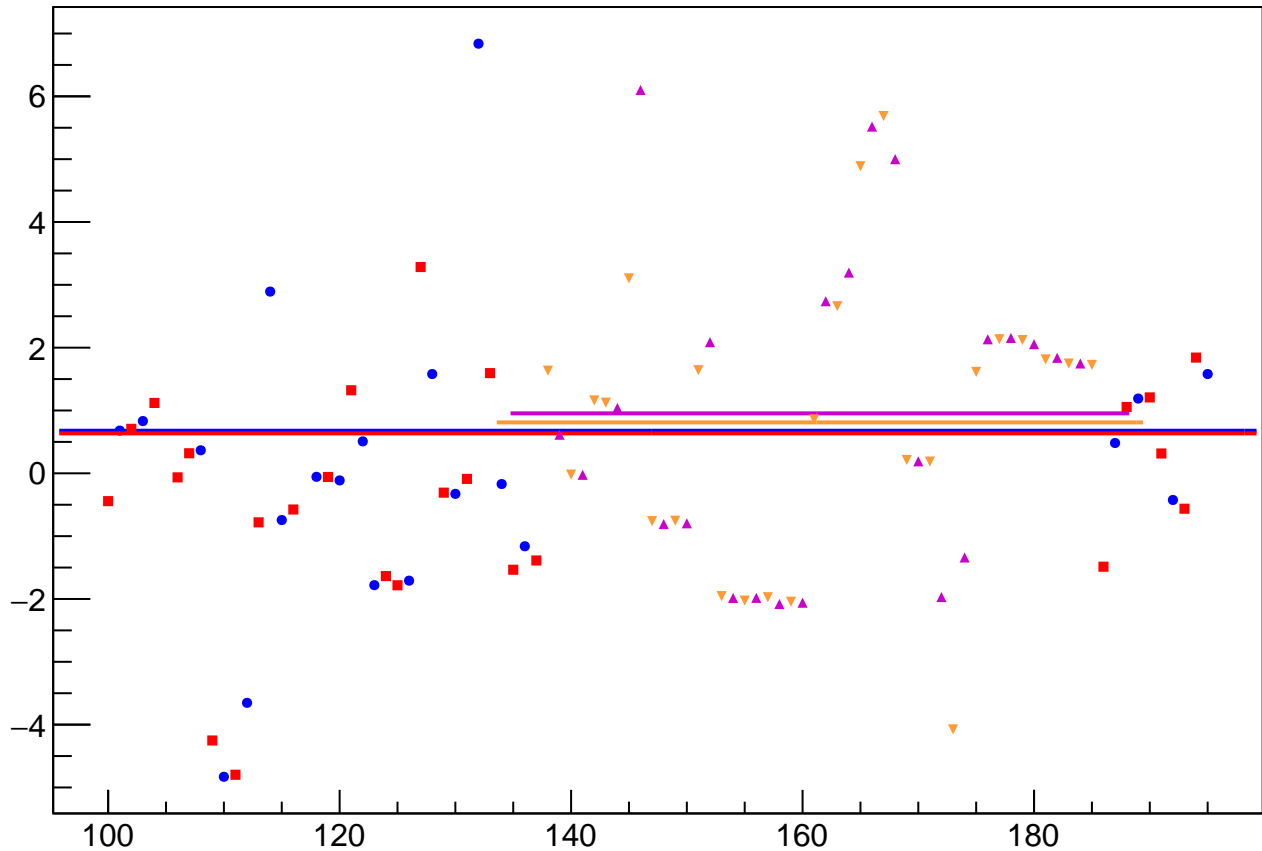
Left In: 0.016 $\pm$ 0.000  $\chi^2$ /NDF:2463853.3/22

+ sign 0.018 $\pm$ 0.000  $\chi^2$ /NDF: 10347246.5/45

All: 0.018 $\pm$ 0.000  $\chi^2$ /NDF: 21934377.1/93

- sign 0.018 $\pm$ 0.000  $\chi^2$ /NDF: 11584562.7/47

# yield\_bpm1Y\_mean vs Slug



Right In: 0.678 $\pm$ 0.000  $\chi^2$ /NDF: 15584582030.6/20

+ sign 0.798 $\pm$ 0.000  $\chi^2$ /NDF: 523309567131.4/45

Left Out: 0.810 $\pm$ 0.000  $\chi^2$ /NDF: 507583198570.2/24

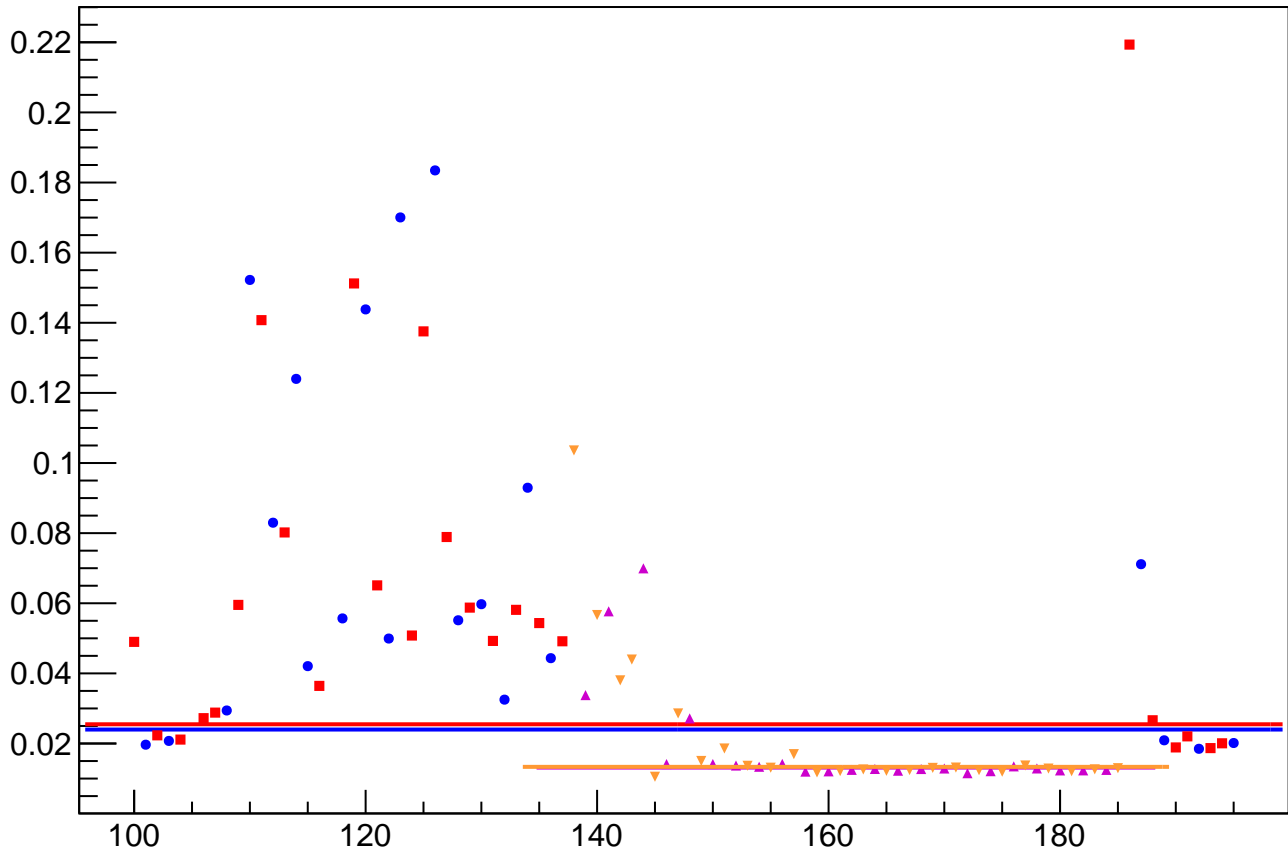
All: 0.861 $\pm$ 0.000  $\chi^2$ /NDF: 1110682579299.

Right Out: 0.635 $\pm$ 0.000  $\chi^2$ /NDF: 10979960922.7/24

- sign 0.923 $\pm$ 0.000  $\chi^2$ /NDF: 586635885218.3/47

Left In: 0.954 $\pm$ 0.000  $\chi^2$ /NDF: 574792794608.3/22

# yield\_bpm1Y\_rms vs Slug



Right In: 0.024 $\pm$ 0.000  $\chi^2$ /NDF: 3524234.8/20

Left Out: 0.013 $\pm$ 0.000  $\chi^2$ /NDF:2829070.5/24

Right Out: 0.025 $\pm$ 0.000  $\chi^2$ /NDF: 4394193.3/24

Left In: 0.013 $\pm$ 0.000  $\chi^2$ /NDF:1968206.9/22

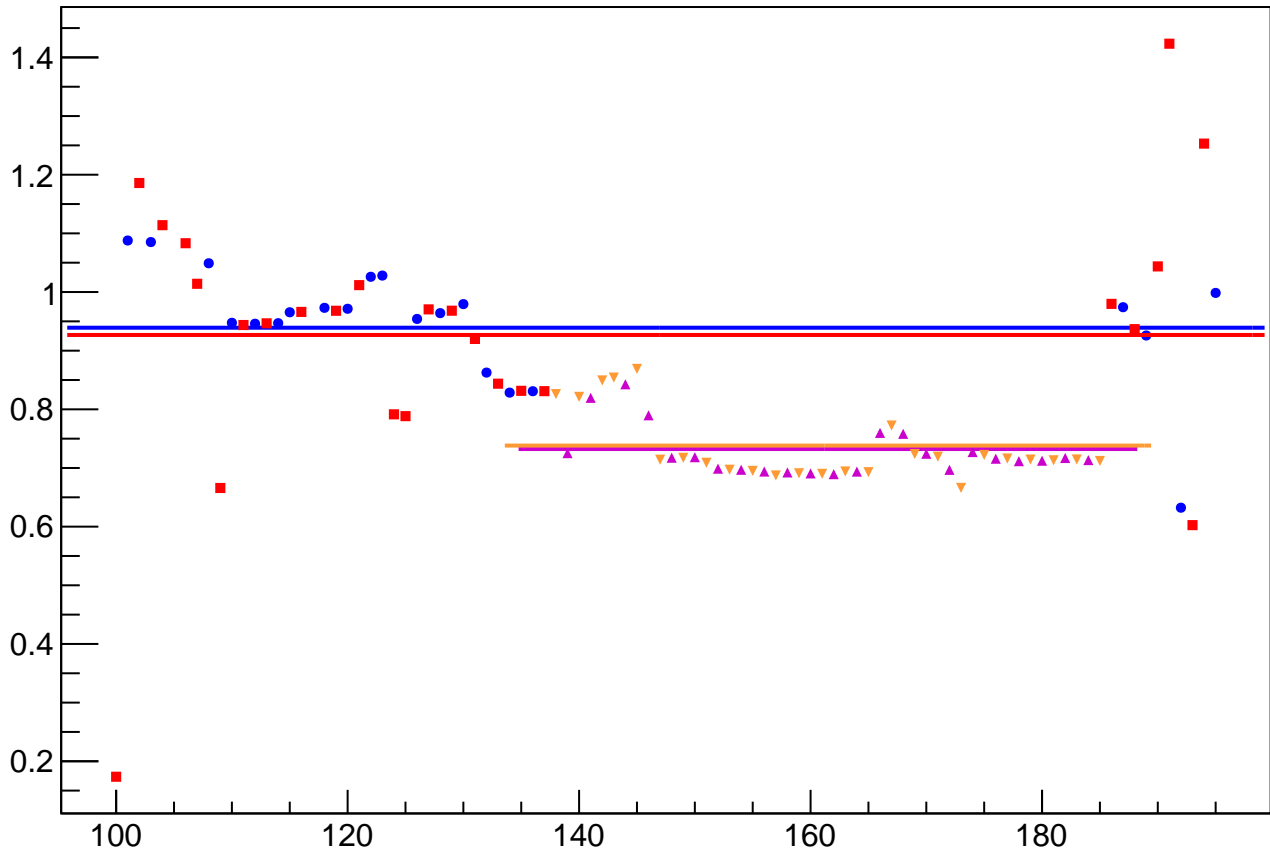
+ sign 0.014 $\pm$ 0.000  $\chi^2$ /NDF: 8178126.0/45

All: 0.014 $\pm$ 0.000  $\chi^2$ /NDF: 17130204.0/93

- sign 0.014 $\pm$ 0.000  $\chi^2$ /NDF: 8952066.4/47



# yield\_bpm11X\_mean vs Slug



Right In: 0.939 $\pm$ 0.000  $\chi^2$ /NDF: 300254654.1/20

Left Out: 0.738 $\pm$ 0.000  $\chi^2$ /NDF:310610047.7/24

Right Out: 0.927 $\pm$ 0.000  $\chi^2$ /NDF: 660516866.4/24

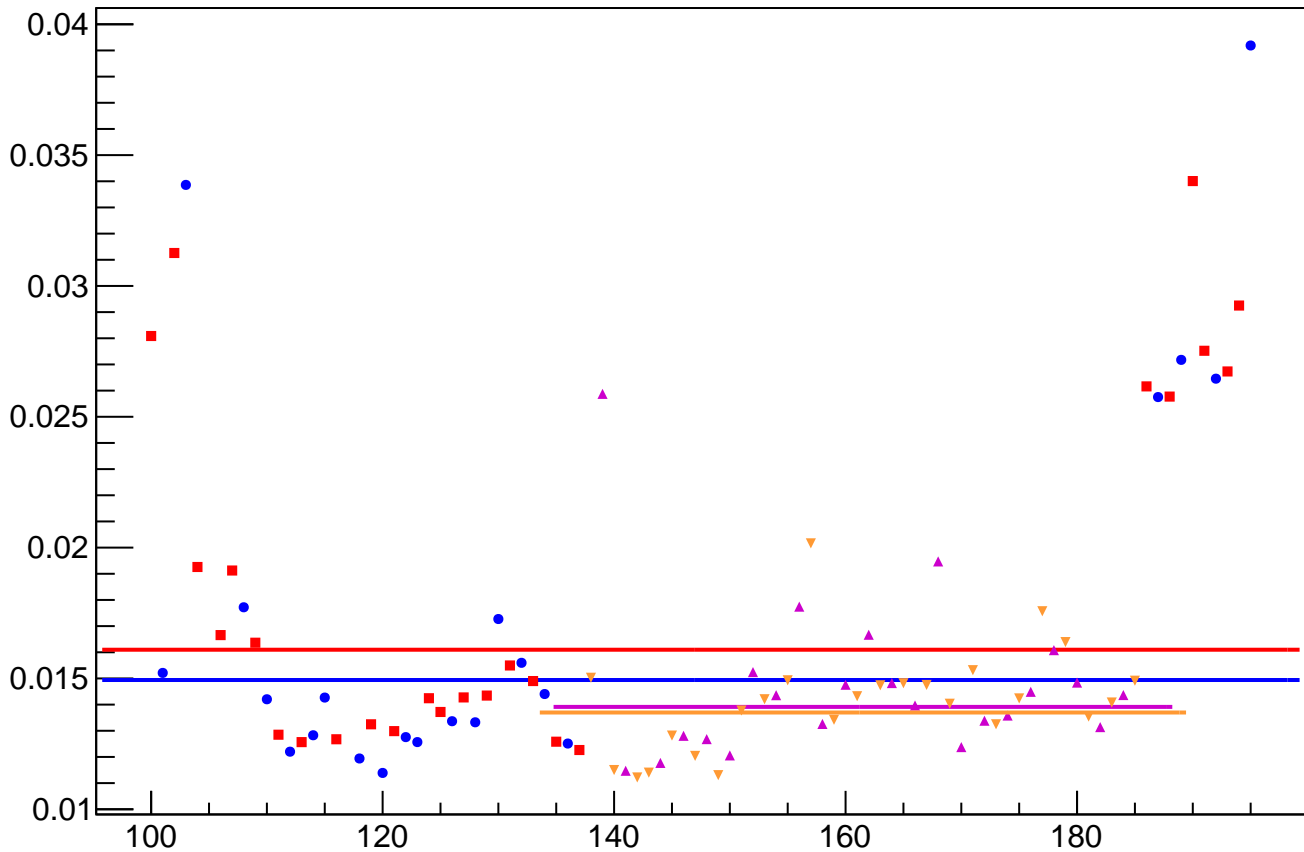
Left In: 0.732 $\pm$ 0.000  $\chi^2$ /NDF:170806298.1/22

+ sign 0.794 $\pm$ 0.000  $\chi^2$ /NDF: 1571359945.1/45

All: 0.792 $\pm$ 0.000  $\chi^2$ /NDF: 3299486765.9/93

- sign 0.790 $\pm$ 0.000  $\chi^2$ /NDF: 1727262342.7/47

# yield\_bpm11X\_rms vs Slug



Right In: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 1758713.4/20

Left Out: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 530851.9/24

Right Out: 0.016+/-0.000  $\chi^2/\text{NDF}$ : 1847581.0/24

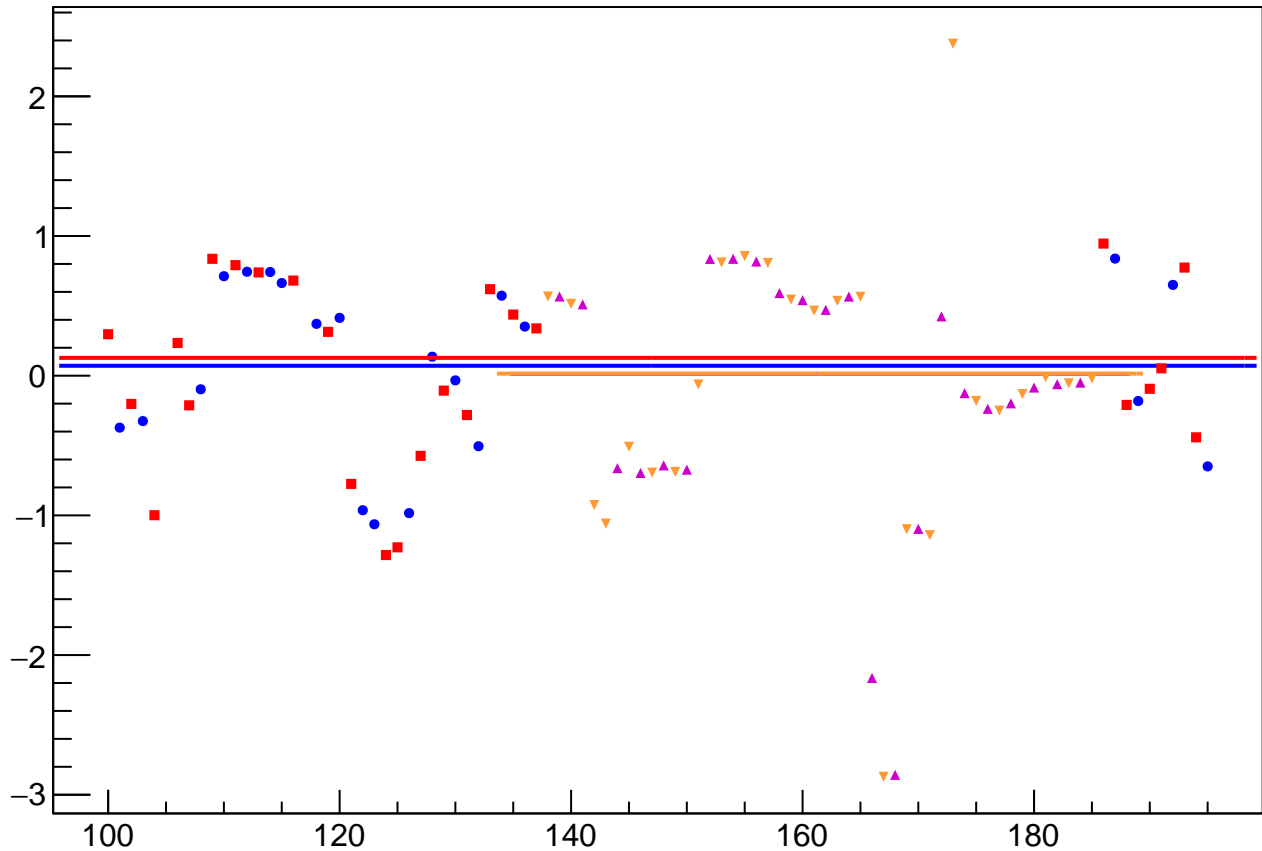
Left In: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 794558.0/22

+ sign 0.014+/-0.000  $\chi^2/\text{NDF}$ : 2362976.8/45

All: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 5262500.3/93

- sign 0.015+/-0.000  $\chi^2/\text{NDF}$ : 2868342.1/47

# yield\_bpm11Y\_mean vs Slug



Right In: 0.071+/-0.000  $\chi^2/\text{NDF}$ : 12192121629.2/20

Left Out: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 96087835995.8/24

Right Out: 0.128+/-0.000  $\chi^2/\text{NDF}$ : 18021843448.9/24

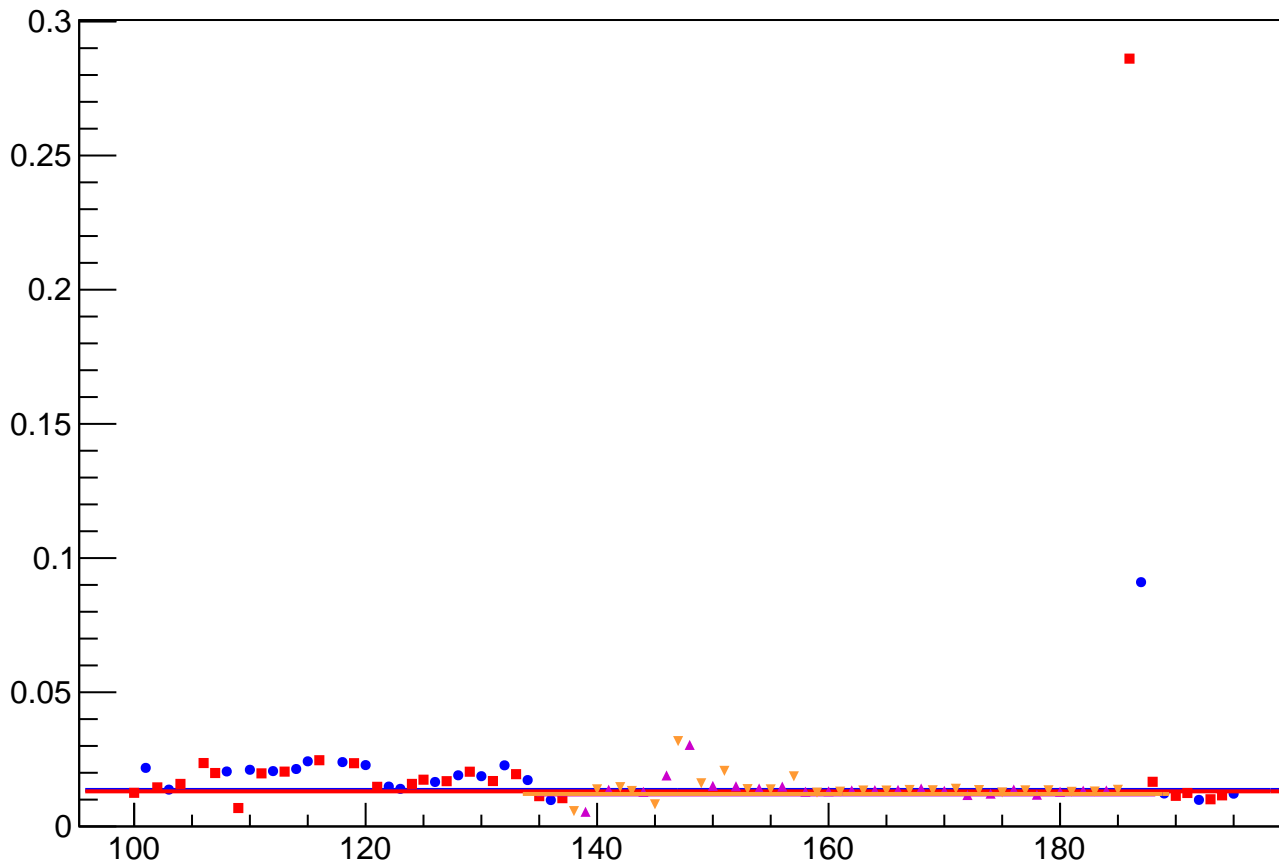
Left In: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 79445696658.6/22

+ sign 0.030+/-0.000  $\chi^2/\text{NDF}$ : 108372786831.9/45

All: 0.039+/-0.000  $\chi^2/\text{NDF}$ : 206300605572.0

- sign 0.049+/-0.000  $\chi^2/\text{NDF}$ : 97901158919.2/47

# yield\_bpm11Y\_rms vs Slug



Right In: 0.014 $\pm$ 0.000  $\chi^2$ /NDF: 1771546.4/20

Left Out: 0.012 $\pm$ 0.000  $\chi^2$ /NDF:3107648.9/24

Right Out: 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 2457924.3/24

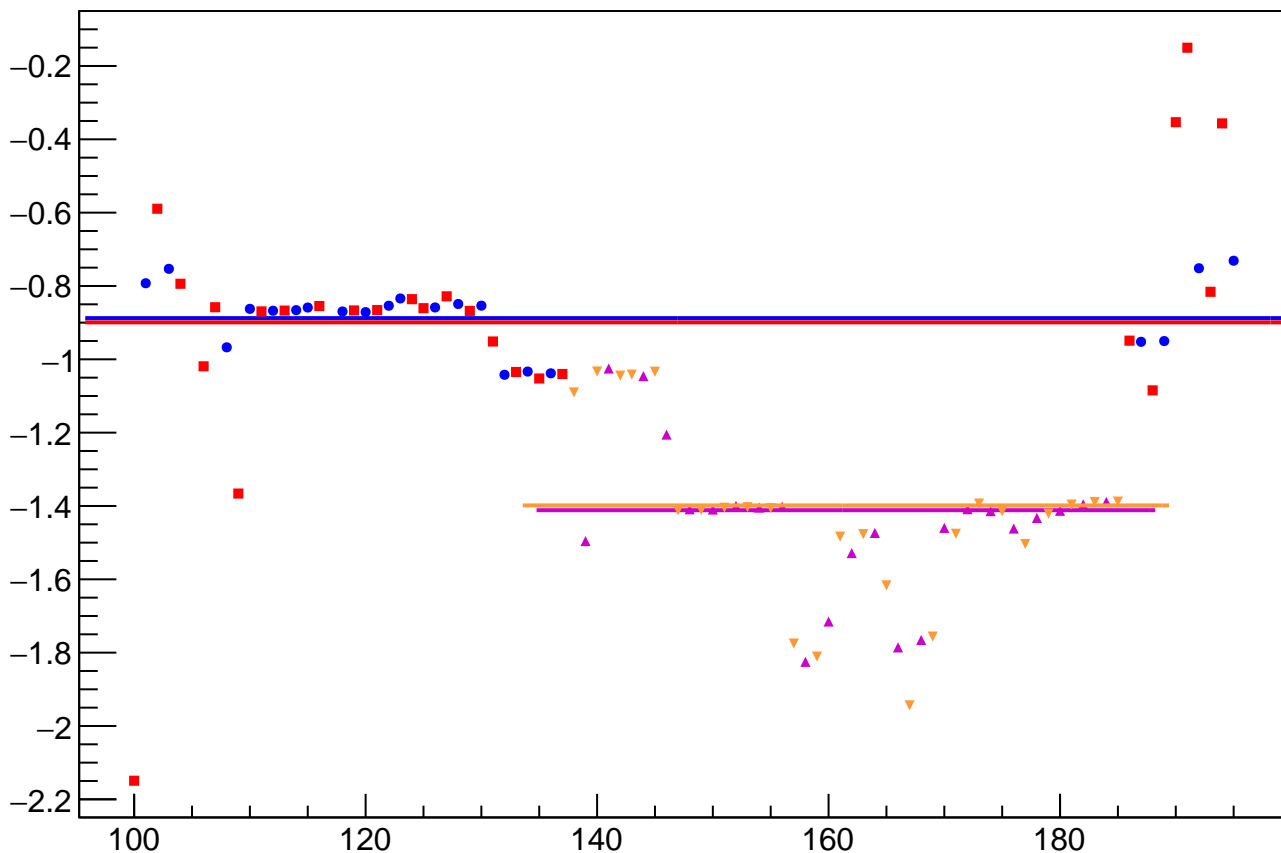
Left In: 0.012 $\pm$ 0.000  $\chi^2$ /NDF:3105948.8/22

+ sign 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 5008866.4/45

All: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 10668253.8/93

- sign 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 5651432.2/47

# yield\_bpm12X\_mean vs Slug



Right In:  $-0.888 \pm 0.000$   $\chi^2/\text{NDF}: 46039404.5/20$

Left Out:  $-1.398 \pm 0.000$   $\chi^2/\text{NDF}: 734579404.3/24$

Right Out:  $-0.899 \pm 0.000$   $\chi^2/\text{NDF}: 242331126.6/24$

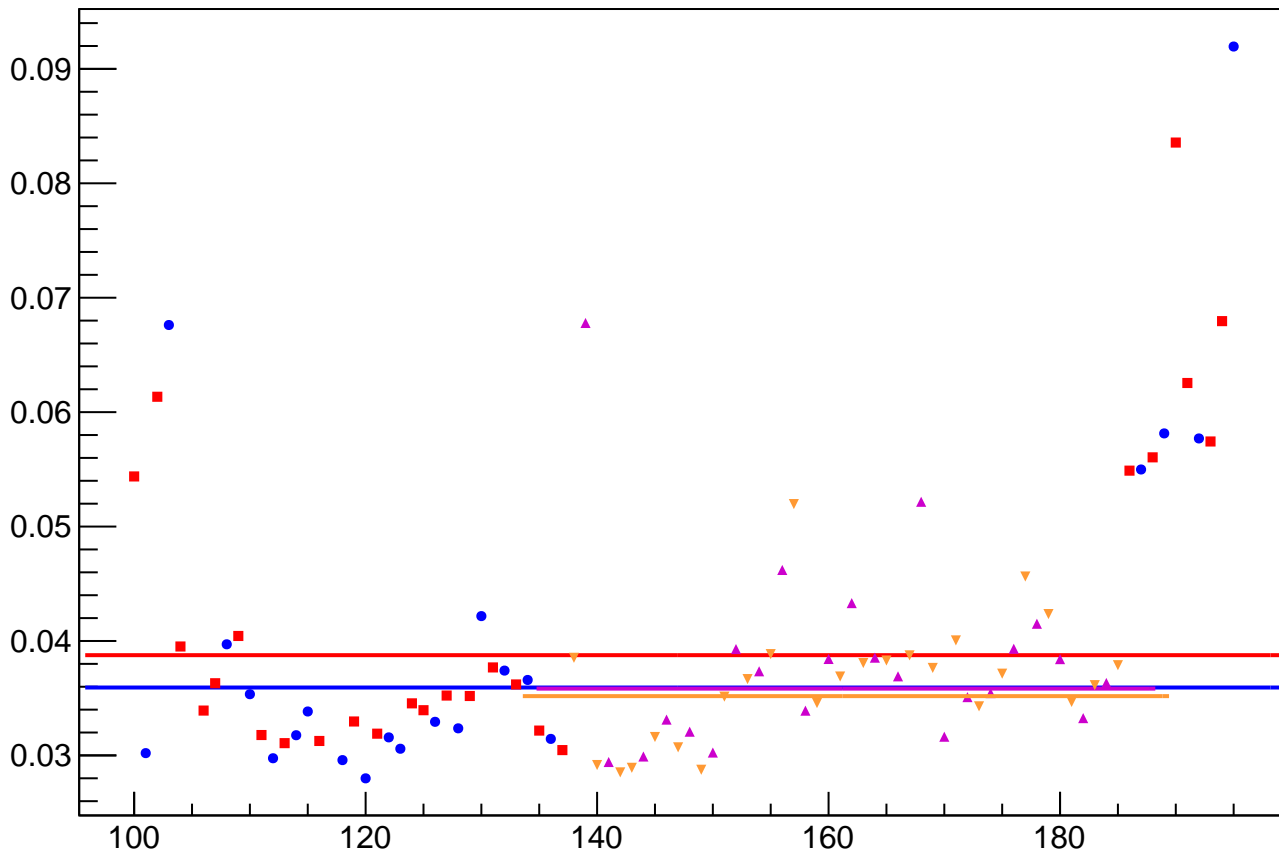
Left In:  $-1.412 \pm 0.000$   $\chi^2/\text{NDF}: 512629872.4/22$

+ sign  $-1.241 \pm 0.000$   $\chi^2/\text{NDF}: 1823928427.8/45$

All:  $-1.242 \pm 0.000$   $\chi^2/\text{NDF}: 3619054229.4/9$

- sign  $-1.242 \pm 0.000$   $\chi^2/\text{NDF}: 1795119773.6/47$

# yield\_bpm12X\_rms vs Slug



Right In: 0.036 $\pm$ 0.000  $\chi^2$ /NDF: 1444022.9/20

Left Out: 0.035 $\pm$ 0.000  $\chi^2$ /NDF:597886.0/24

Right Out: 0.039 $\pm$ 0.000  $\chi^2$ /NDF: 1364985.5/24

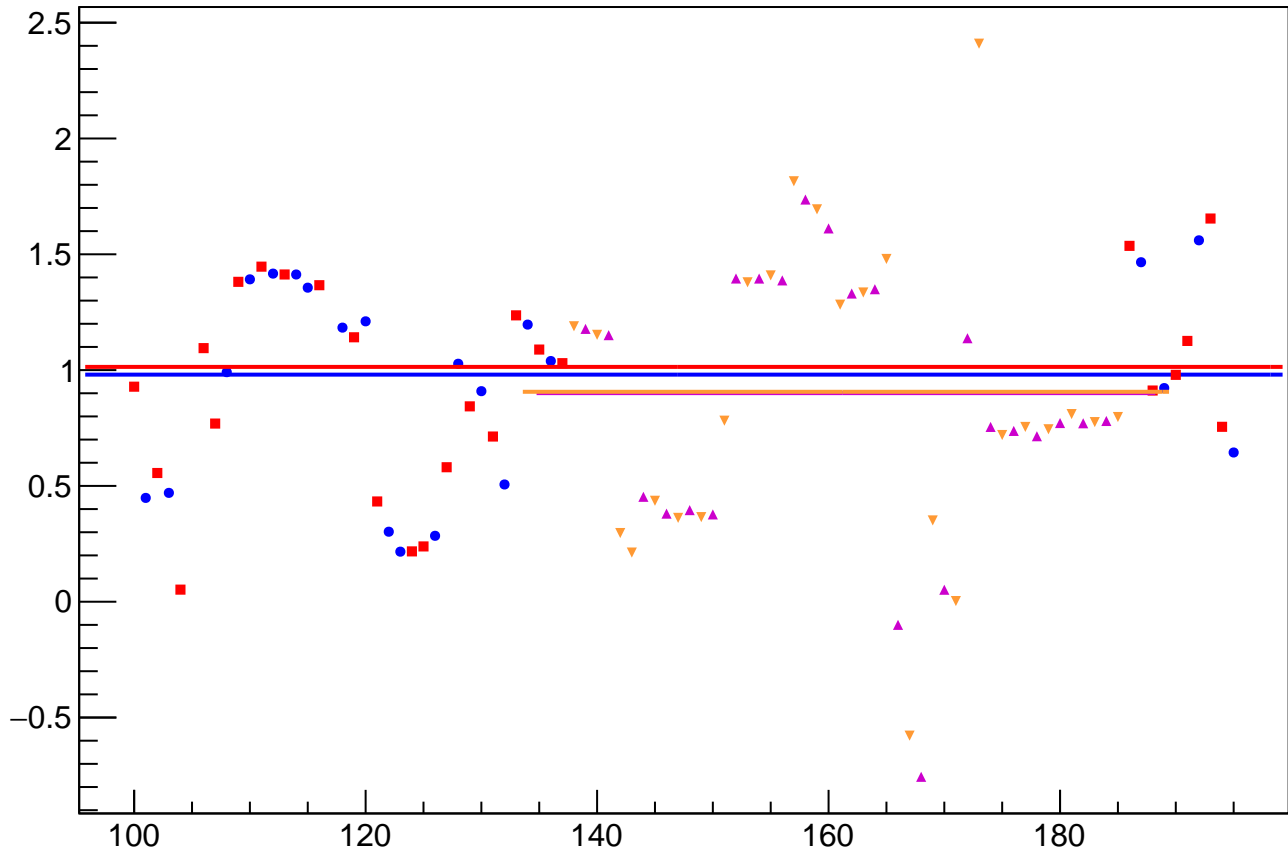
Left In: 0.036 $\pm$ 0.000  $\chi^2$ /NDF:890993.5/22

+ sign 0.035 $\pm$ 0.000  $\chi^2$ /NDF: 2046448.1/45

All: 0.036 $\pm$ 0.000  $\chi^2$ /NDF: 4405683.2/93

- sign 0.037 $\pm$ 0.000  $\chi^2$ /NDF: 2323725.0/47

# yield\_bpm12Y\_mean vs Slug



Right In: 0.980 $\pm$ 0.000  $\chi^2$ /NDF: 13891589525.5/20

Left Out: 0.906 $\pm$ 0.000  $\chi^2$ /NDF:84108410196.2/24

Right Out: 1.014 $\pm$ 0.000  $\chi^2$ /NDF: 16558865998.2/24

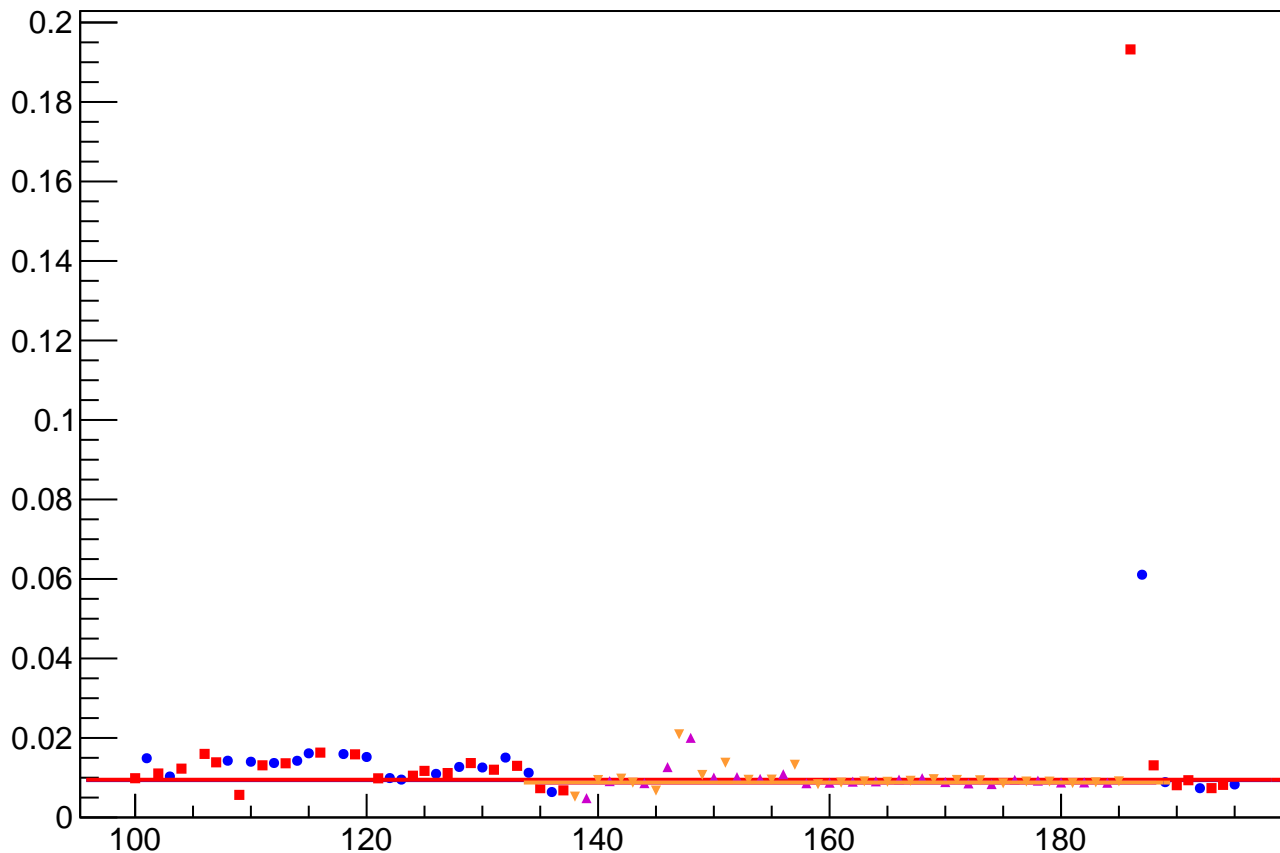
Left In: 0.901 $\pm$ 0.000  $\chi^2$ /NDF:66932223067.8/22

+ sign 0.927 $\pm$ 0.000  $\chi^2$ /NDF: 98334283615.0/45

All: 0.931 $\pm$ 0.000  $\chi^2$ /NDF: 182665574168.9

- sign 0.936 $\pm$ 0.000  $\chi^2$ /NDF: 84319623417.8/47

# yield\_bpm12Y\_rms vs Slug



Right In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 1655402.6/20

Left Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 1698526.2/24

Right Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 2123918.4/24

Left In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 1669983.7/22

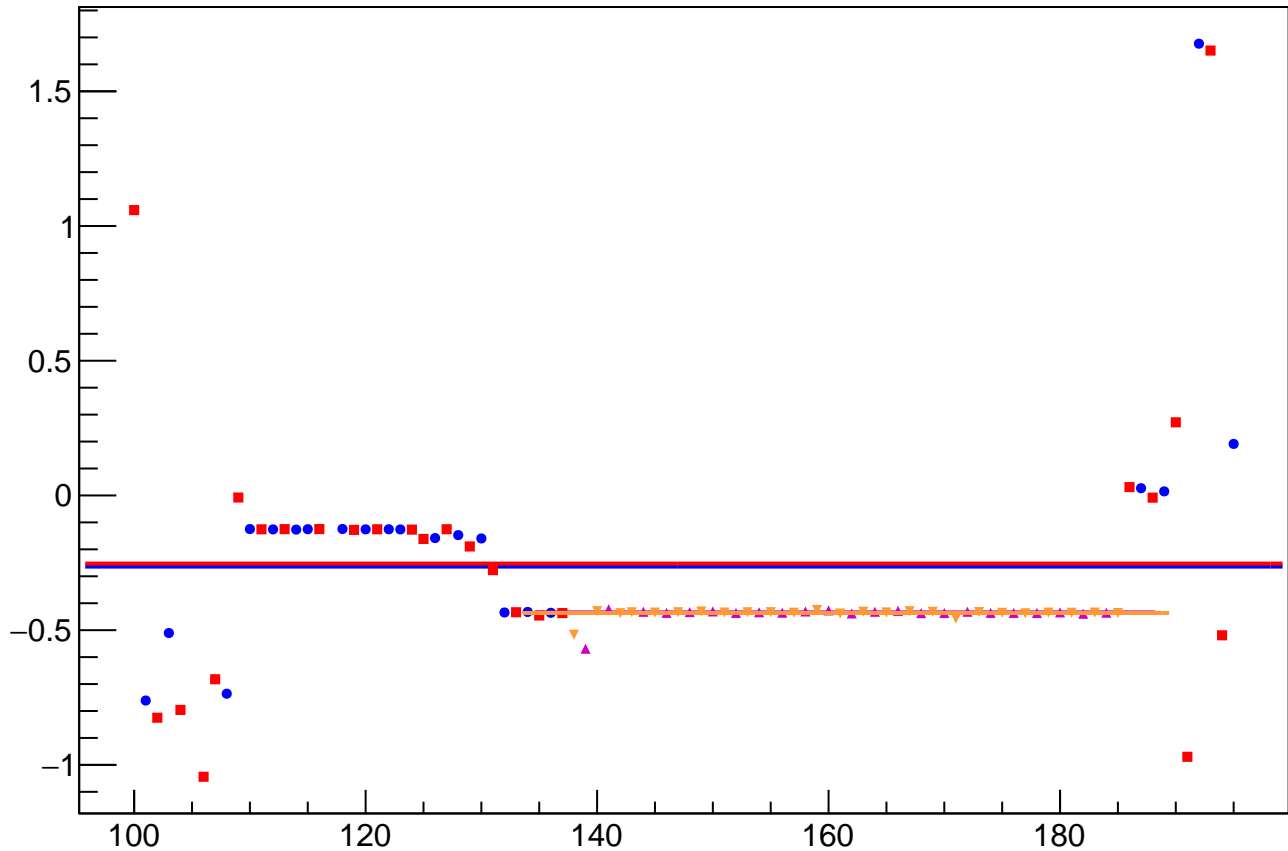
+ sign 0.009+/-0.000  $\chi^2/\text{NDF}$ : 3399687.8/45

All: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 7265999.4/93

- sign 0.009+/-0.000  $\chi^2/\text{NDF}$ : 3866255.1/47



# yield\_bpm16X\_mean vs Slug



Right In:  $-0.264 \pm 0.000$   $\chi^2/\text{NDF}: 1883803044.1/20$

Left Out:  $-0.436 \pm 0.000$   $\chi^2/\text{NDF}: 28776503.9/24$

Right Out:  $-0.253 \pm 0.000$   $\chi^2/\text{NDF}: 1761532120.5/24$

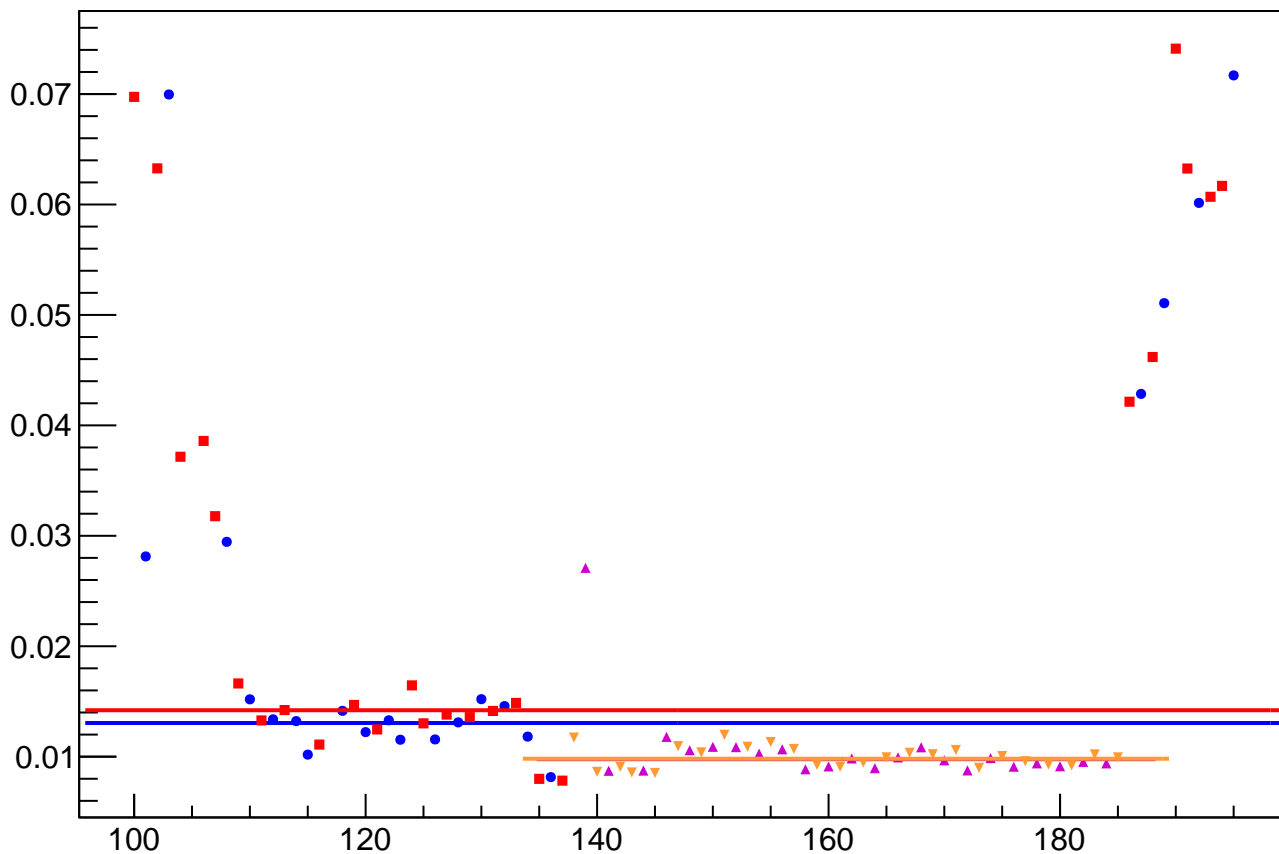
Left In:  $-0.434 \pm 0.000$   $\chi^2/\text{NDF}: 20164730.3/22$

+ sign  $-0.408 \pm 0.000$   $\chi^2/\text{NDF}: 2708112789.0/45$

All:  $-0.406 \pm 0.000$   $\chi^2/\text{NDF}: 5335098187.5/9$

- sign  $-0.404 \pm 0.000$   $\chi^2/\text{NDF}: 2625361667.3/47$

# yield\_bpm16X\_rms vs Slug



Right In: 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 4501882.1/20

Left Out: 0.010 $\pm$ 0.000  $\chi^2$ /NDF:271172.3/24

Right Out: 0.014 $\pm$ 0.000  $\chi^2$ /NDF: 5754017.7/24

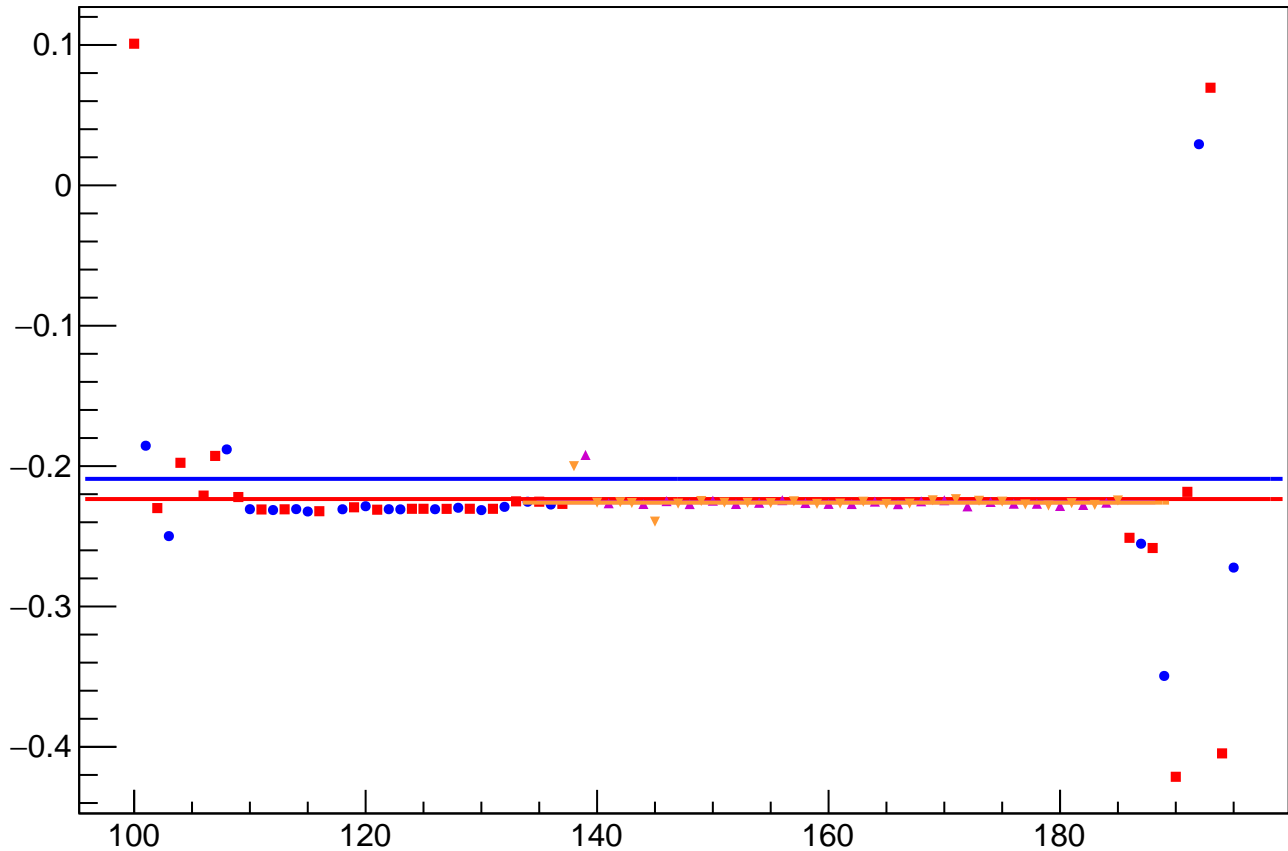
Left In: 0.010 $\pm$ 0.000  $\chi^2$ /NDF:786577.8/22

+ sign 0.010 $\pm$ 0.000  $\chi^2$ /NDF: 5334952.2/45

All: 0.010 $\pm$ 0.000  $\chi^2$ /NDF: 12890782.0/93

- sign 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 7550599.4/47

# yield\_bpm16Y\_mean vs Slug



Right In:  $-0.209 \pm 0.000$   $\chi^2/\text{NDF}: 1961491627.5/20$

Left Out:  $-0.226 \pm 0.000$   $\chi^2/\text{NDF}: 21207366.3/24$

Right Out:  $-0.223 \pm 0.000$   $\chi^2/\text{NDF}: 3222525906.1/24$

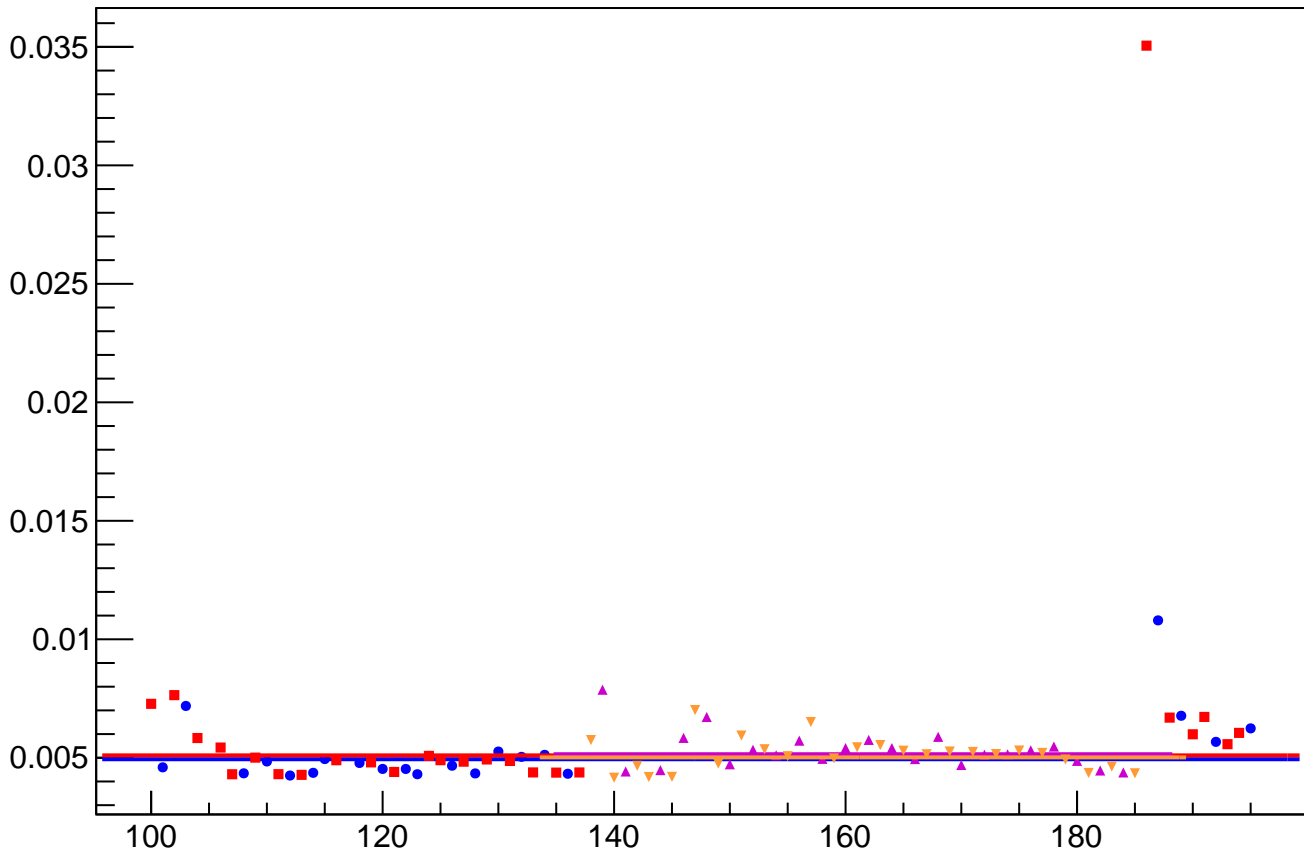
Left In:  $-0.226 \pm 0.000$   $\chi^2/\text{NDF}: 13717302.5/22$

+ sign  $-0.221 \pm 0.000$   $\chi^2/\text{NDF}: 2046650938.2/45$

All:  $-0.223 \pm 0.000$   $\chi^2/\text{NDF}: 5293647942.4/9$

- sign  $-0.225 \pm 0.000$   $\chi^2/\text{NDF}: 3237411100.1/47$

# yield\_bpm16Y\_rms vs Slug



Right In: 0.005 $\pm$ 0.000  $\chi^2$ /NDF: 457185.4/20

Left Out: 0.005 $\pm$ 0.000  $\chi^2$ /NDF:532623.0/24

Right Out: 0.005 $\pm$ 0.000  $\chi^2$ /NDF: 1010093.6/24

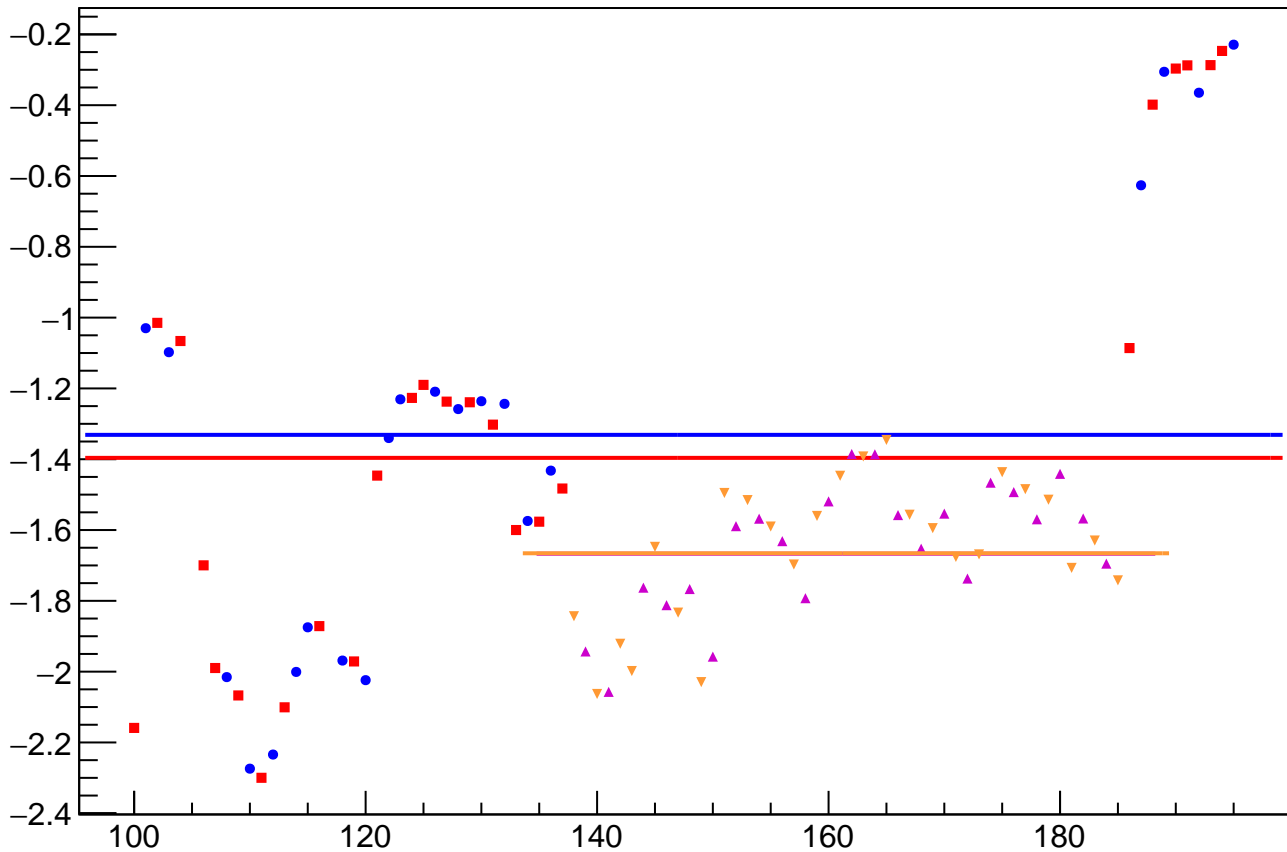
Left In: 0.005 $\pm$ 0.000  $\chi^2$ /NDF:504040.6/22

+ sign 0.005 $\pm$ 0.000  $\chi^2$ /NDF: 992503.8/45

All: 0.005 $\pm$ 0.000  $\chi^2$ /NDF: 2527547.7/93

- sign 0.005 $\pm$ 0.000  $\chi^2$ /NDF: 1515168.1/47

# yield\_bpm0l01X\_mean vs Slug



Right In:  $-1.331 \pm 0.000$   $\chi^2/\text{NDF}: 49593184926.8/20$

Left Out:  $-1.666 \pm 0.000$   $\chi^2/\text{NDF}: 18368038680.8/24$

Right Out:  $-1.396 \pm 0.000$   $\chi^2/\text{NDF}: 72189507955.6/24$

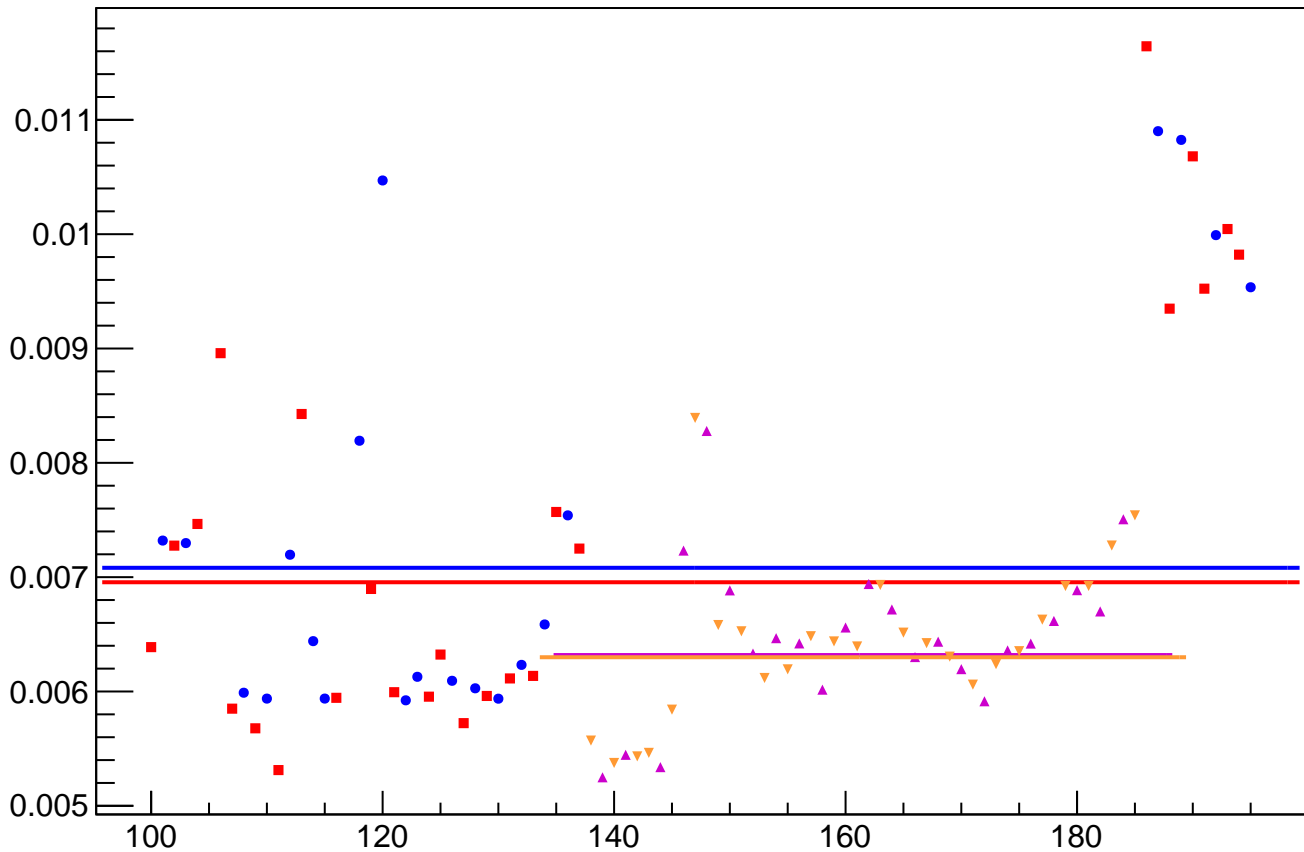
Left In:  $-1.667 \pm 0.000$   $\chi^2/\text{NDF}: 14615453869.3/22$

+ sign  $-1.576 \pm 0.000$   $\chi^2/\text{NDF}: 81137392151.1/45$

All:  $-1.578 \pm 0.000$   $\chi^2/\text{NDF}: 177725712014.5$

- sign  $-1.580 \pm 0.000$   $\chi^2/\text{NDF}: 96585352408.5/47$

# yield\_bpm0l01X\_rms vs Slug



Right In: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 648259.8/20

Left Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 312811.2/24

Right Out: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 966153.4/24

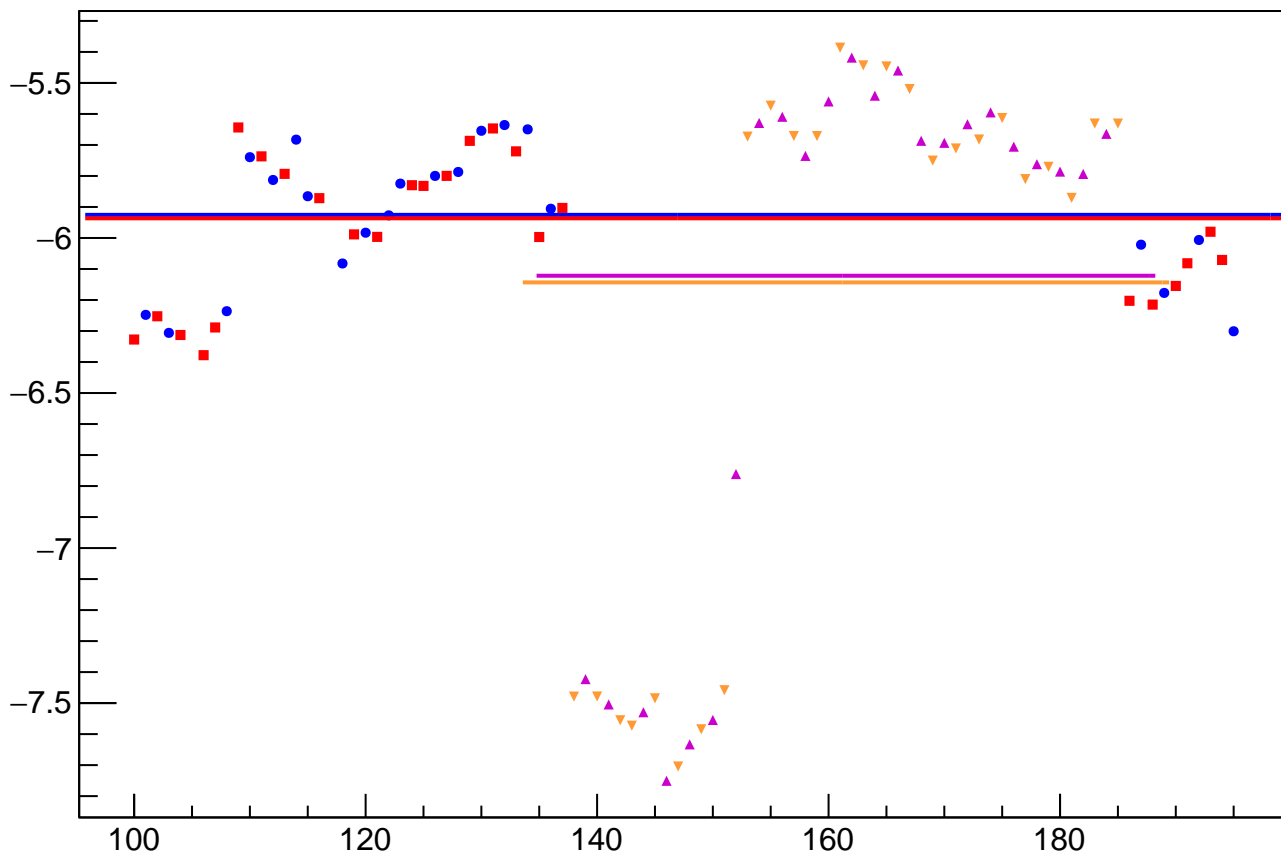
Left In: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 334332.4/22

+ sign 0.007+/-0.000  $\chi^2/\text{NDF}$ : 1105248.0/45

All: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 2514065.0/93

- sign 0.007+/-0.000  $\chi^2/\text{NDF}$ : 1408661.5/47

# yield\_bpm0l01Y\_mean vs Slug



Right In:  $-5.925 \pm 0.000$   $\chi^2/\text{NDF}: 12079456395.4/20$

Left Out:  $-6.143 \pm 0.000$   $\chi^2/\text{NDF}: 185721259239.3/24$

Right Out:  $-5.937 \pm 0.000$   $\chi^2/\text{NDF}: 13716919339.8/24$

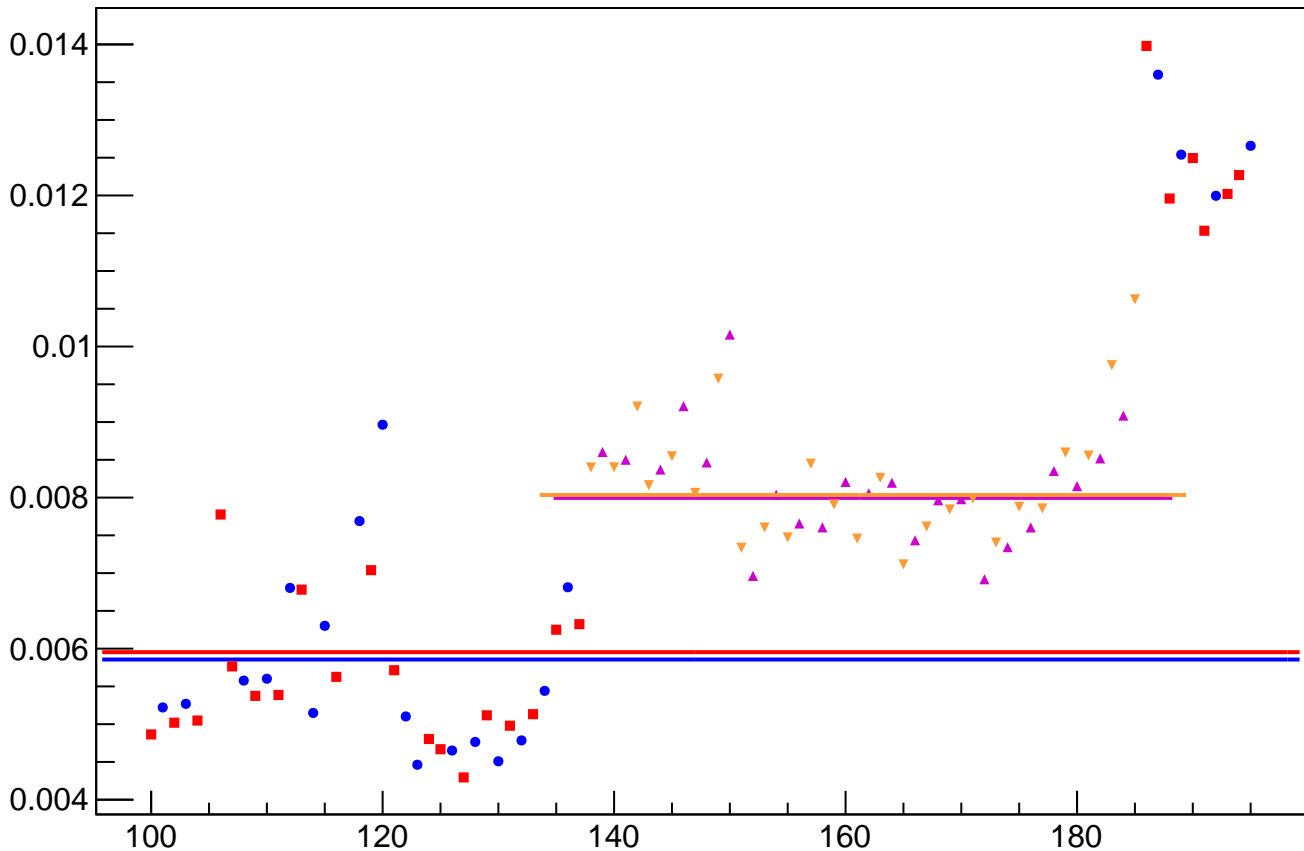
Left In:  $-6.122 \pm 0.000$   $\chi^2/\text{NDF}: 159909473006.6/22$

+ sign  $-6.044 \pm 0.000$   $\chi^2/\text{NDF}: 203374207939.5/45$

All:  $-6.037 \pm 0.000$   $\chi^2/\text{NDF}: 381281909870.7$

- sign  $-6.030 \pm 0.000$   $\chi^2/\text{NDF}: 177859877738.7/47$

# yield\_bpm0l01Y\_rms vs Slug



Right In: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 1678849.6/20

Left Out: 0.008+/-0.000  $\chi^2/\text{NDF}$ :205976.0/24

Right Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 2153326.6/24

Left In: 0.008+/-0.000  $\chi^2/\text{NDF}$ :220203.0/22

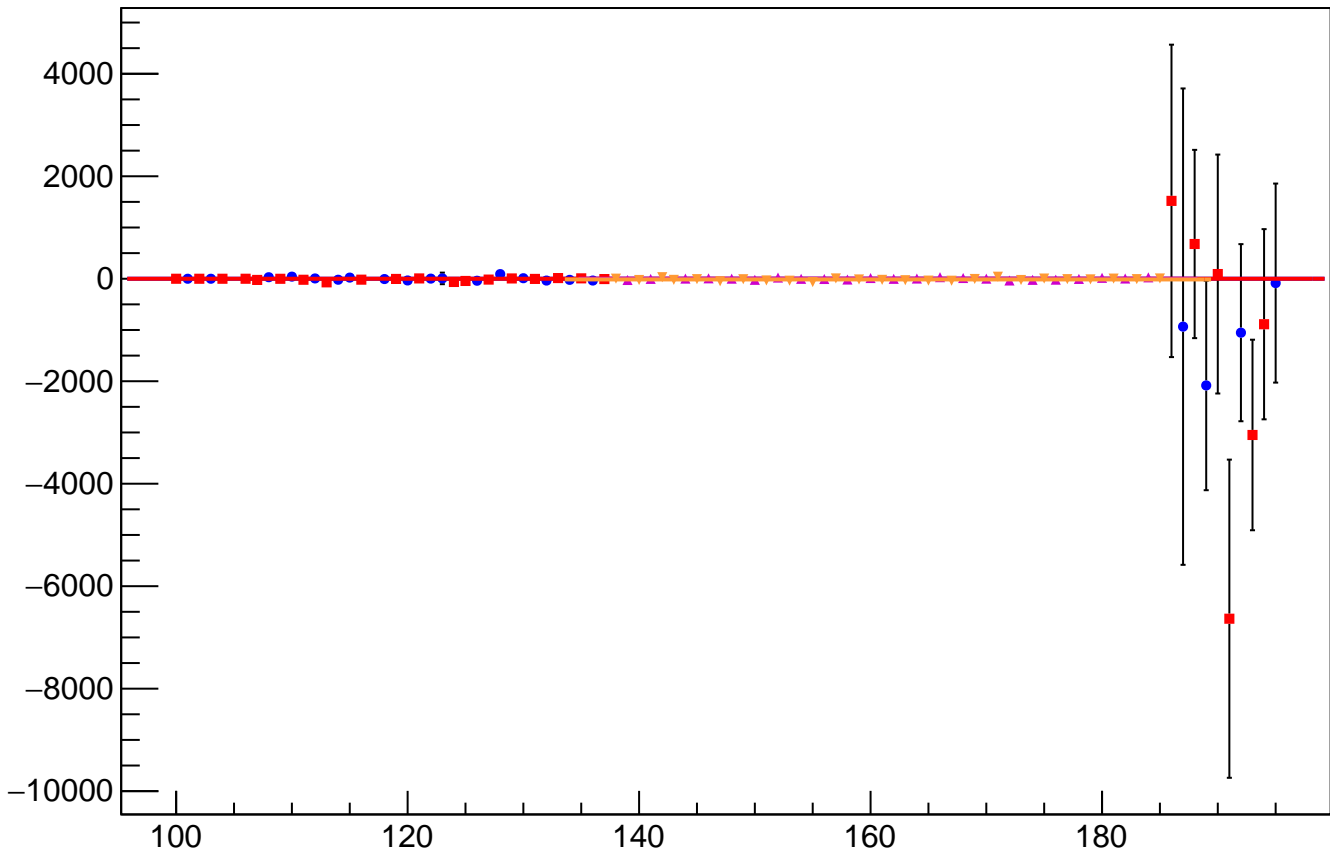
+ sign 0.007+/-0.000  $\chi^2/\text{NDF}$ : 2999434.2/45

All: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 6404662.5/93

- sign 0.007+/-0.000  $\chi^2/\text{NDF}$ : 3403560.1/47



# diff\_cav4bX\_mean vs Slug



Right In: 0.013+/-0.017  $\chi^2/\text{NDF}$ : 17.7/20

Left Out: -13.472+/-2.796  $\chi^2/\text{NDF}$ : 58.5/24

Right Out: 0.003+/-0.016  $\chi^2/\text{NDF}$ : 22.8/24

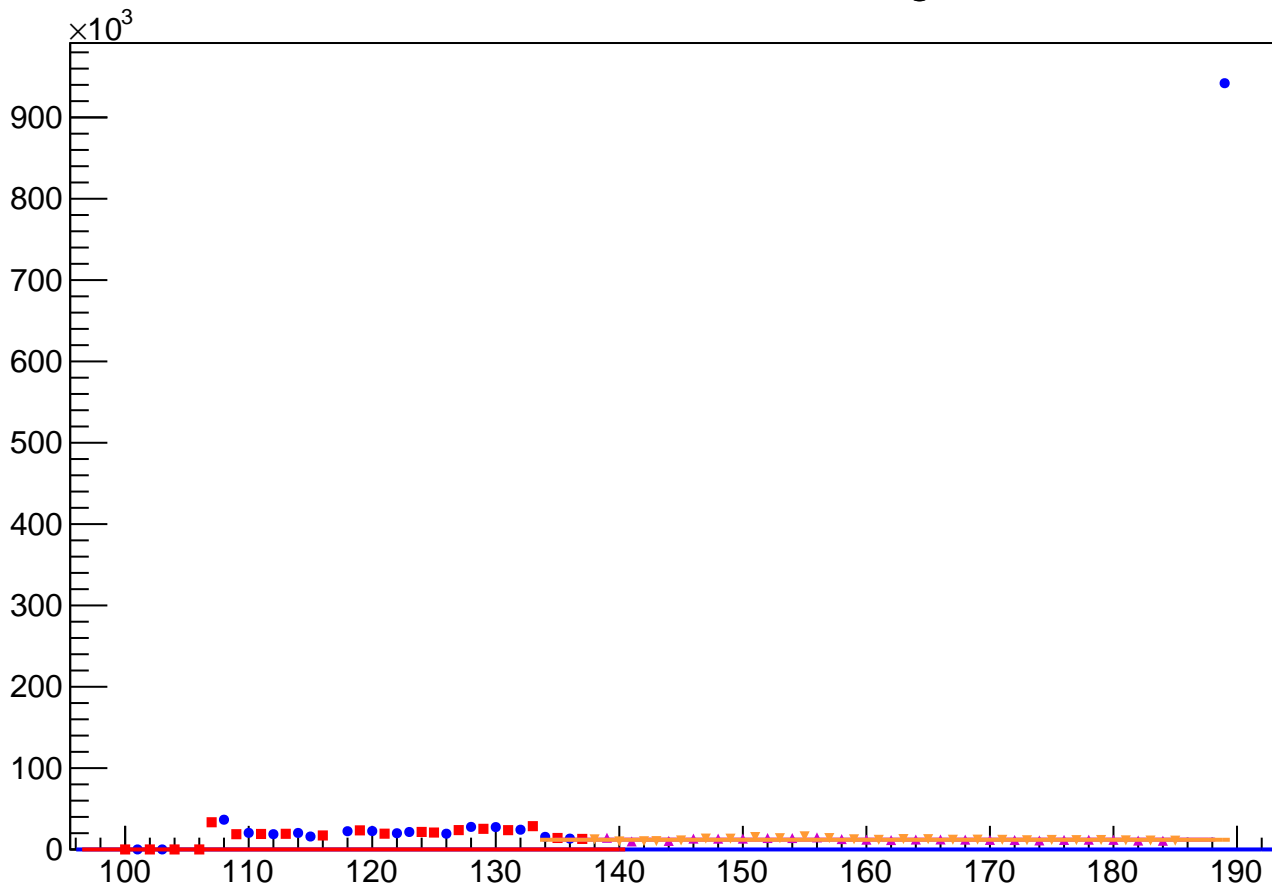
Left In: -0.489+/-2.905  $\chi^2/\text{NDF}$ : 28.7/22

+ sign 0.013+/-0.017  $\chi^2/\text{NDF}$ : 99.5/45

All: 0.008+/-0.012  $\chi^2/\text{NDF}$ : 151.2/93

- sign 0.003+/-0.016  $\chi^2/\text{NDF}$ : 51.5/47

# diff\_cav4bX\_rms vs Slug



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

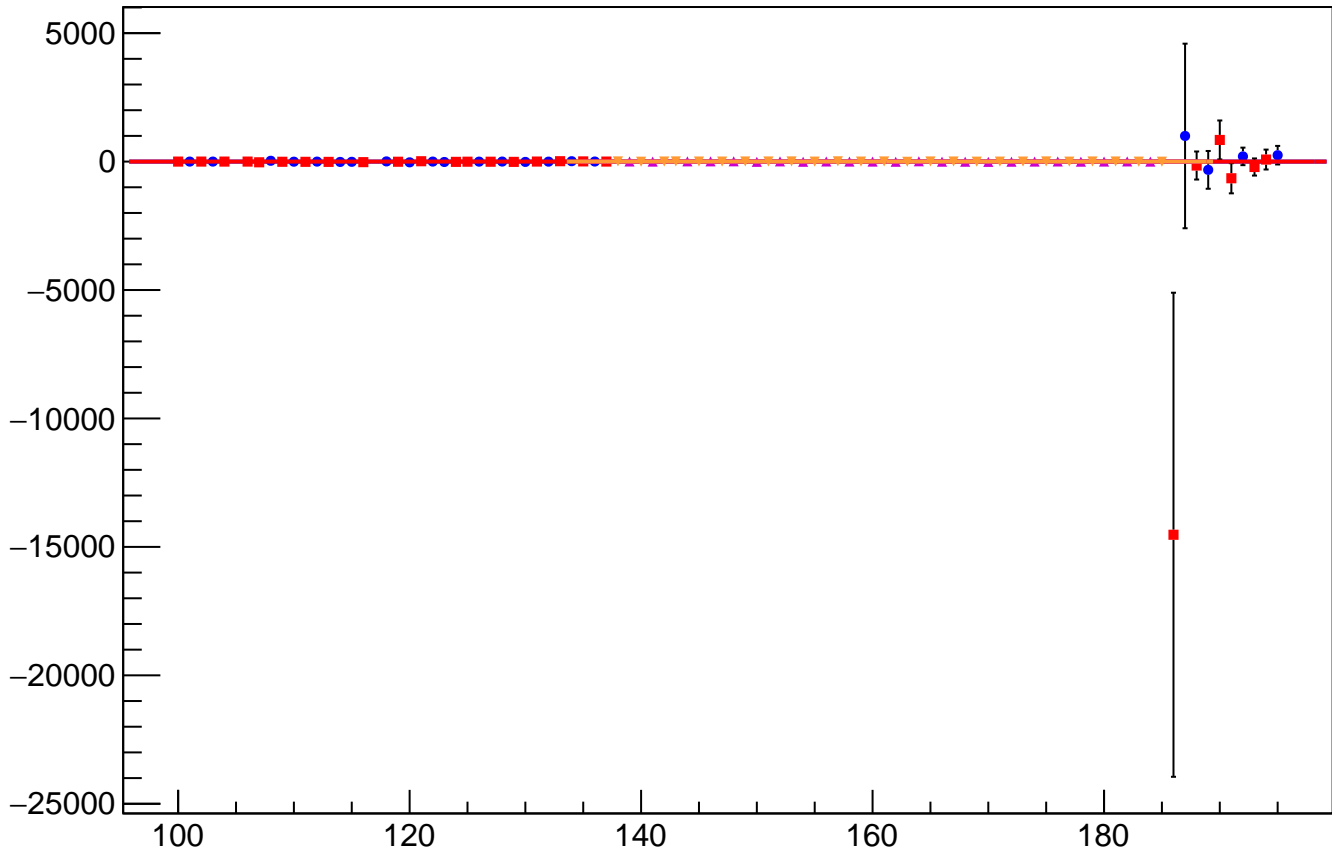
Left In: 12064.321 $\pm$ 2.054  $\chi^2$ /NDF:372586.0/22

+ sign 19.097 $\pm$ 0.012  $\chi^2$ /NDF: 47623008.9/42

All: 18.873 $\pm$ 0.008  $\chi^2$ /NDF: 93432232.0/84

- sign 18.680 $\pm$ 0.011  $\chi^2$ /NDF: 45808598.7/41

# diff\_cav4bY\_mean vs Slug



Right In: 0.001 $\pm$ 0.009  $\chi^2$ /NDF: 15.7/20

Left Out: 1.675 $\pm$ 1.021  $\chi^2$ /NDF:17.9/24

Right Out: 0.014 $\pm$ 0.009  $\chi^2$ /NDF: 24.0/24

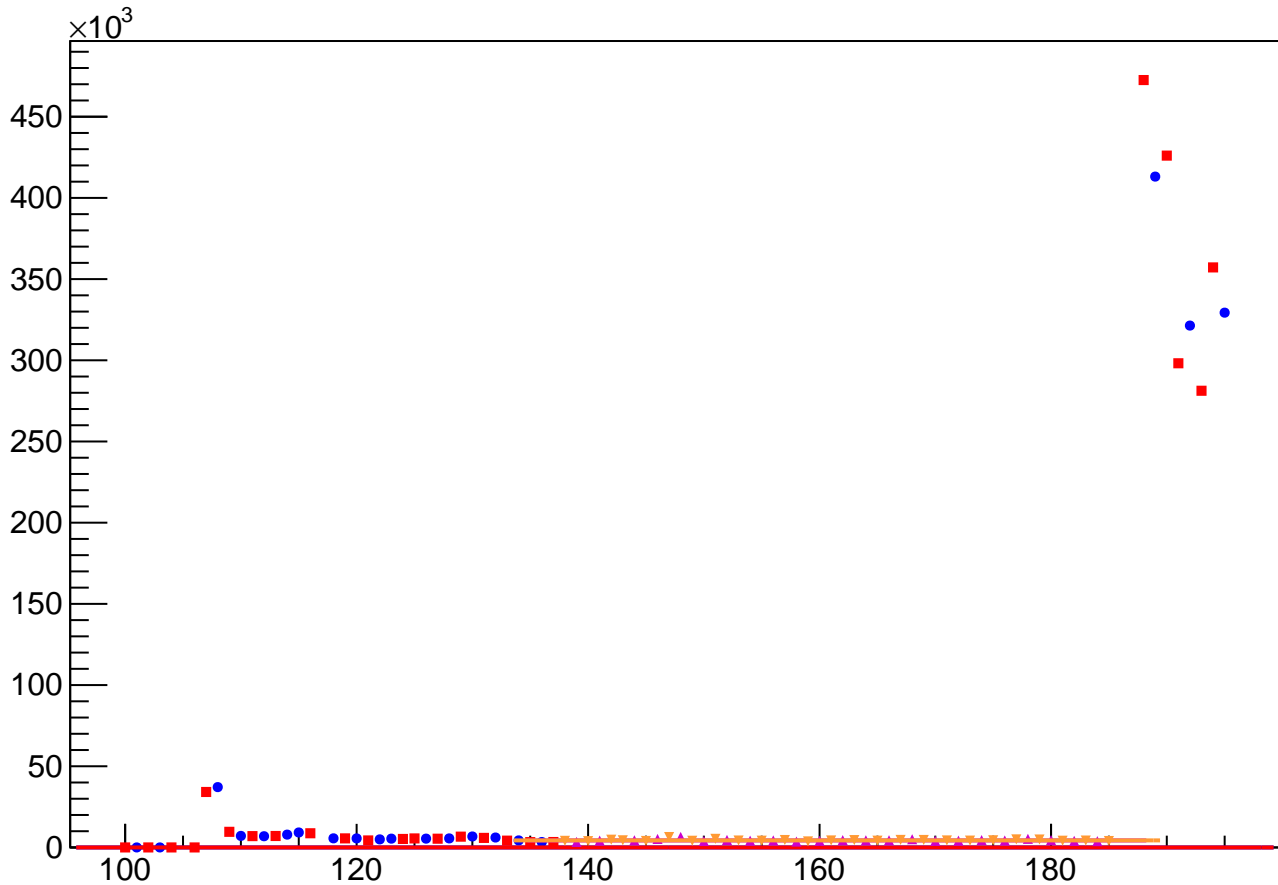
Left In: 0.843 $\pm$ 1.043  $\chi^2$ /NDF:35.7/22

+ sign 0.001 $\pm$ 0.009  $\chi^2$ /NDF: 36.3/45

All: 0.008 $\pm$ 0.006  $\chi^2$ /NDF: 97.7/93

- sign 0.014 $\pm$ 0.009  $\chi^2$ /NDF: 60.3/47

# diff\_cav4bY\_rms vs Slug



Right In: 9.938 +/- 0.007  $\chi^2/\text{NDF}$ : 14970931.4/19

Left Out: 4350.545 +/- 0.722  $\chi^2/\text{NDF}$ : 384749.0/24

Right Out: 9.854 +/- 0.006  $\chi^2/\text{NDF}$ : 16853181.7/23

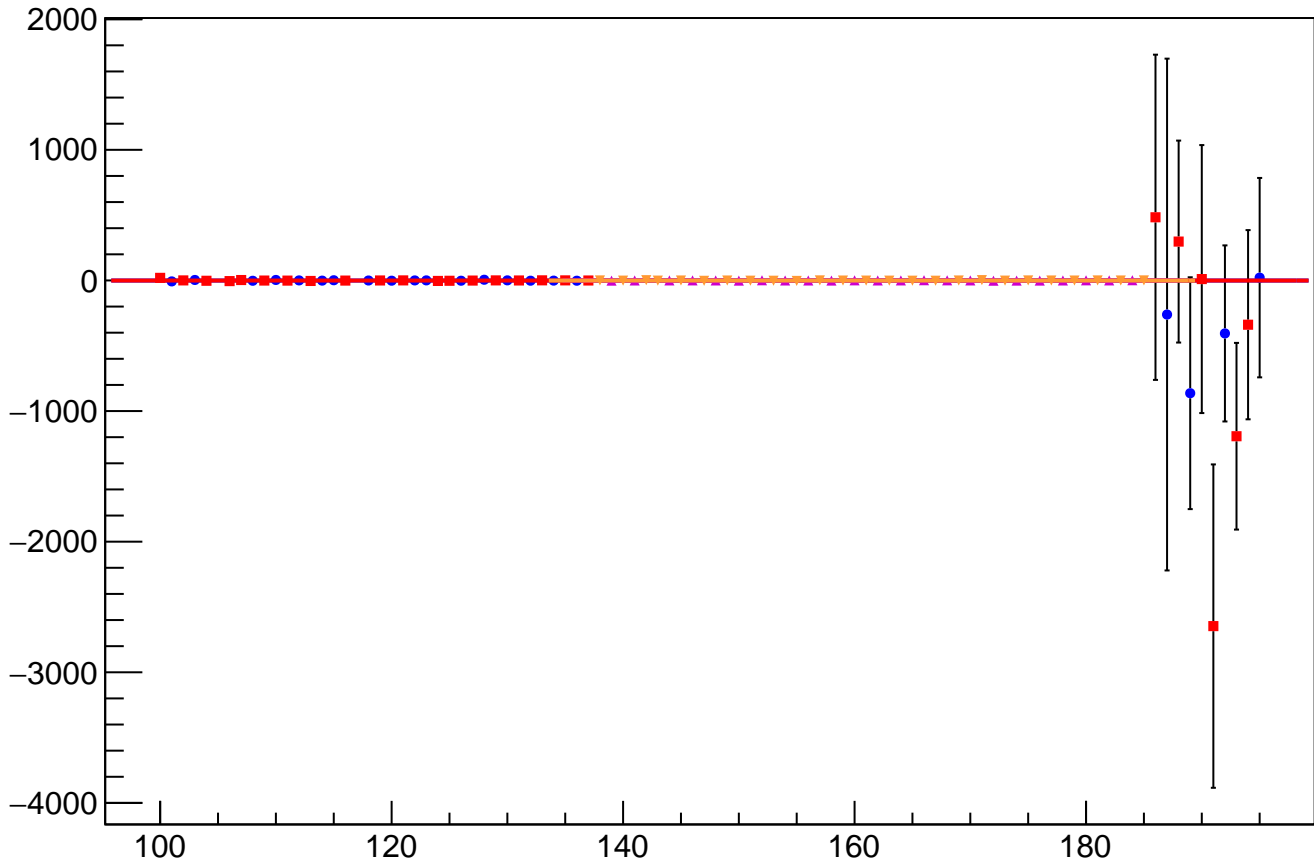
Left In: 4314.568 +/- 0.738  $\chi^2/\text{NDF}$ : 534594.3/22

+ sign 10.291 +/- 0.007  $\chi^2/\text{NDF}$ : 51498920.1/44

All: 10.216 +/- 0.004  $\chi^2/\text{NDF}$ : 102950004.4/9

- sign 10.151 +/- 0.006  $\chi^2/\text{NDF}$ : 51450838.1/46

# diff\_cav4cX\_mean vs Slug



Right In:  $-0.702 \pm 0.485$   $\chi^2/\text{NDF}: 23.8/20$

Left Out:  $-0.774 \pm 0.164$   $\chi^2/\text{NDF}: 58.4/24$

Right Out:  $-0.761 \pm 0.502$   $\chi^2/\text{NDF}: 19.6/24$

Left In:  $-0.020 \pm 0.170$   $\chi^2/\text{NDF}: 29.2/22$

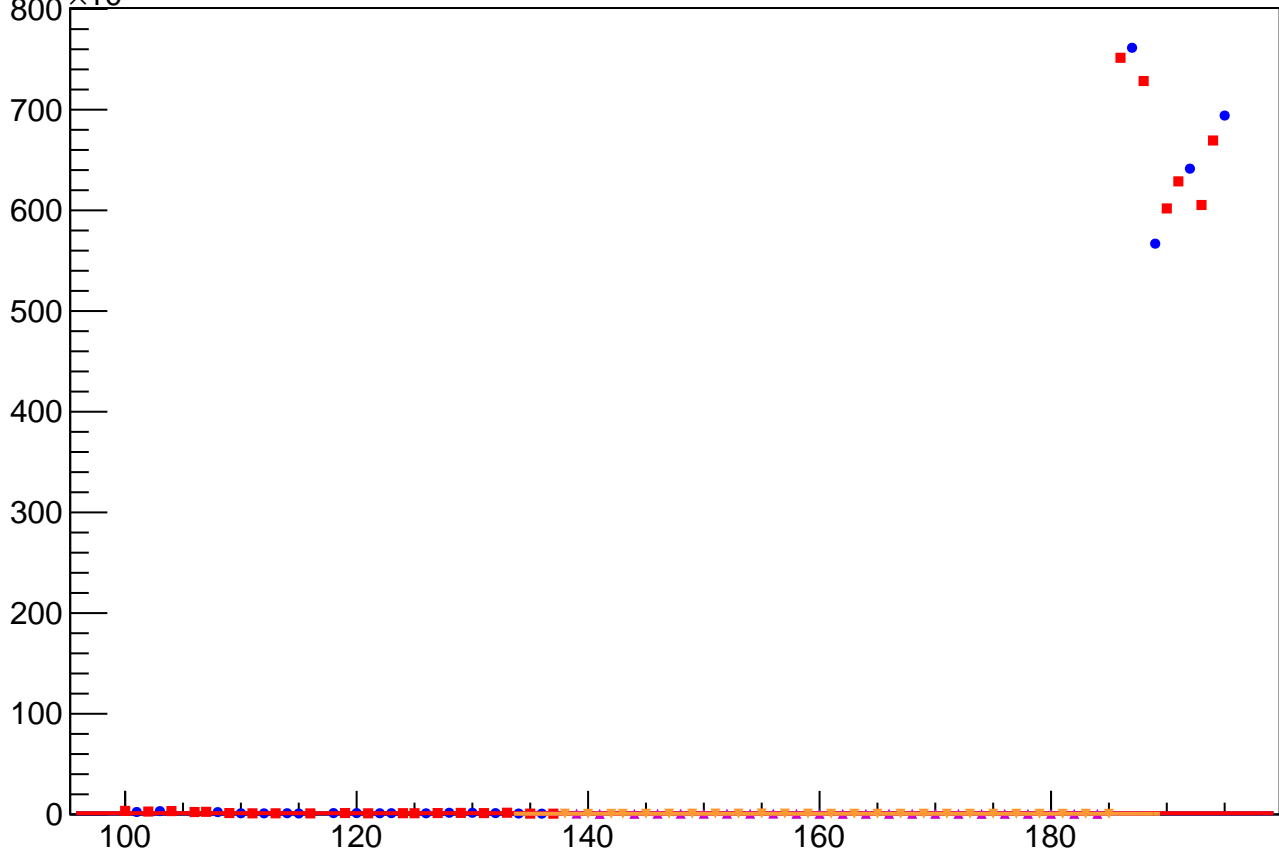
+ sign  $-0.767 \pm 0.156$   $\chi^2/\text{NDF}: 82.2/45$

All:  $-0.444 \pm 0.112$   $\chi^2/\text{NDF}: 142.0/93$

- sign  $-0.097 \pm 0.161$   $\chi^2/\text{NDF}: 50.8/47$

# diff\_cav4cX\_rms vs Slug

$\times 10^3$



Right In: 1165.037 $\pm$ 0.343  $\chi^2$ /NDF: 6145206.7/20

Left Out: 700.797 $\pm$ 0.116  $\chi^2$ /NDF: 392521.4/24

Right Out: 1250.562 $\pm$ 0.355  $\chi^2$ /NDF: 8442974.3/24

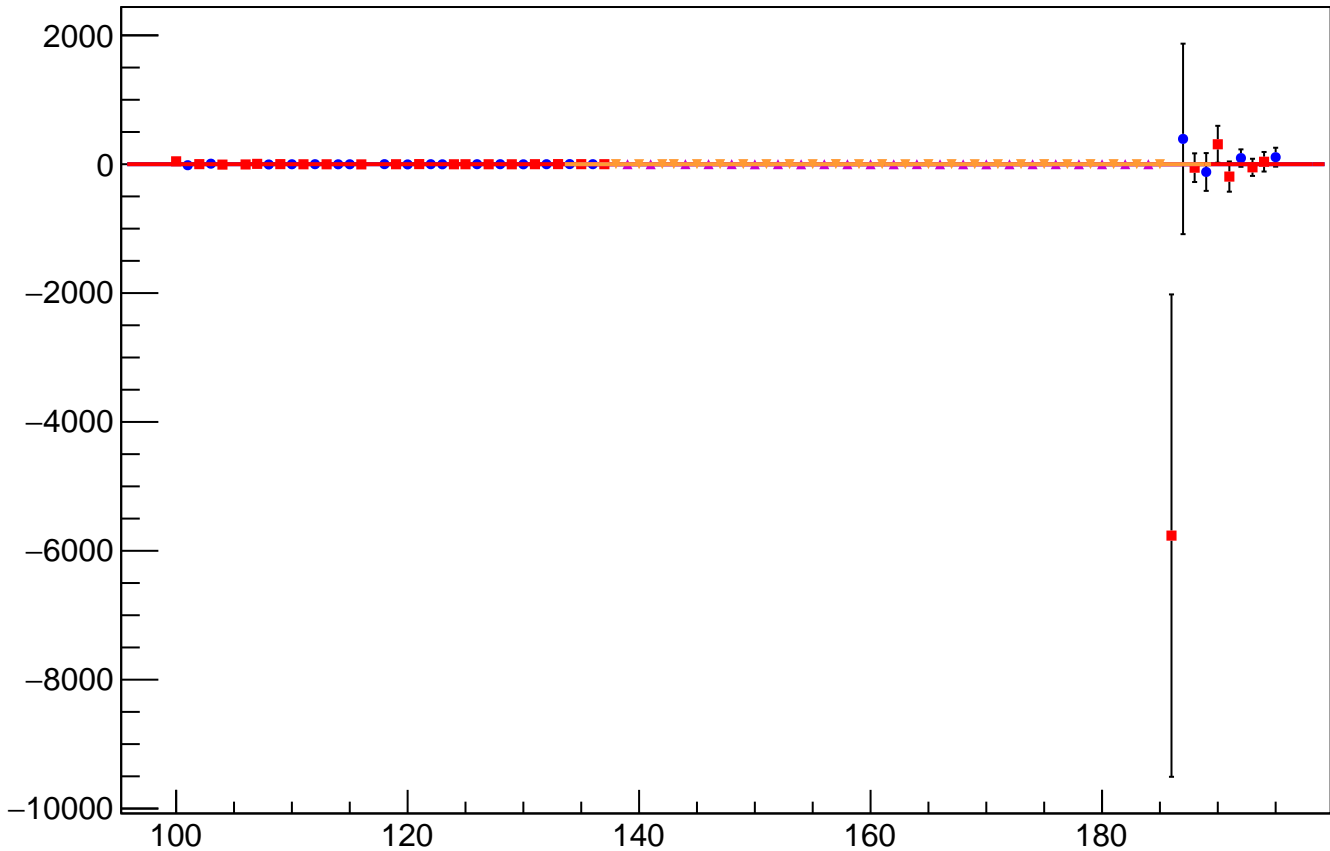
Left In: 706.950 $\pm$ 0.120  $\chi^2$ /NDF: 338177.1/22

+ sign 748.587 $\pm$ 0.110  $\chi^2$ /NDF: 8181449.9/45

All: 755.510 $\pm$ 0.079  $\chi^2$ /NDF: 19073814.4/90

- sign 762.931 $\pm$ 0.114  $\chi^2$ /NDF: 10884163.2/47

# diff\_cav4cY\_mean vs Slug



Right In:  $-0.059 \pm 0.271$   $\chi^2/\text{NDF}: 22.2/20$

Left Out:  $0.236 \pm 0.122$   $\chi^2/\text{NDF}: 17.6/24$

Right Out:  $0.244 \pm 0.265$   $\chi^2/\text{NDF}: 25.2/24$

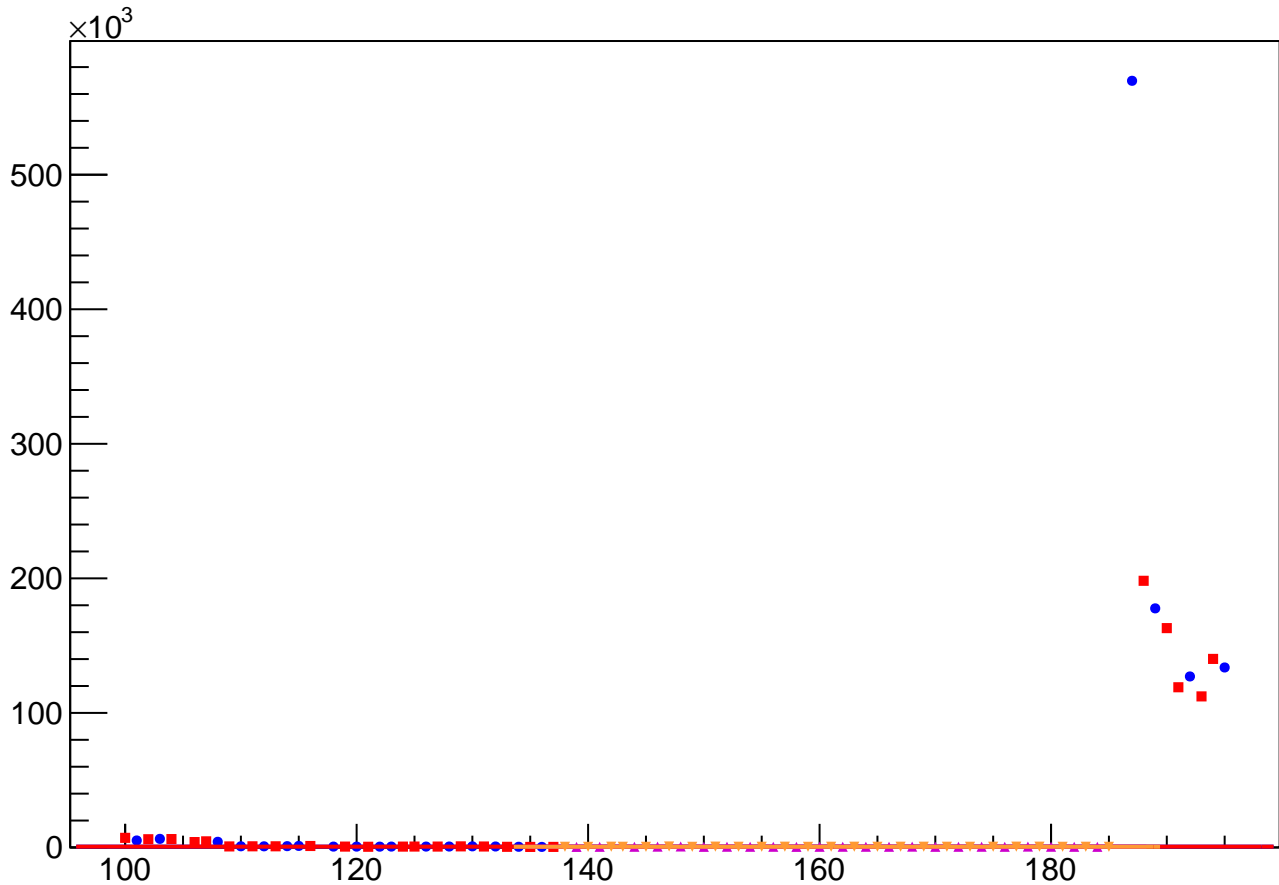
Left In:  $0.115 \pm 0.125$   $\chi^2/\text{NDF}: 35.0/22$

+ sign  $0.186 \pm 0.112$   $\chi^2/\text{NDF}: 40.8/45$

All:  $0.163 \pm 0.080$   $\chi^2/\text{NDF}: 101.2/93$

- sign  $0.139 \pm 0.113$   $\chi^2/\text{NDF}: 60.3/47$

# diff\_cav4cY\_rms vs Slug



Right In: 609.720 $\pm$ 0.191  $\chi^2$ /NDF: 7565267.6/20

Left Out: 522.416 $\pm$ 0.087  $\chi^2$ /NDF: 331573.1/24

Right Out: 601.153 $\pm$ 0.187  $\chi^2$ /NDF: 9378256.8/23

Left In: 519.909 $\pm$ 0.089  $\chi^2$ /NDF: 444746.3/22

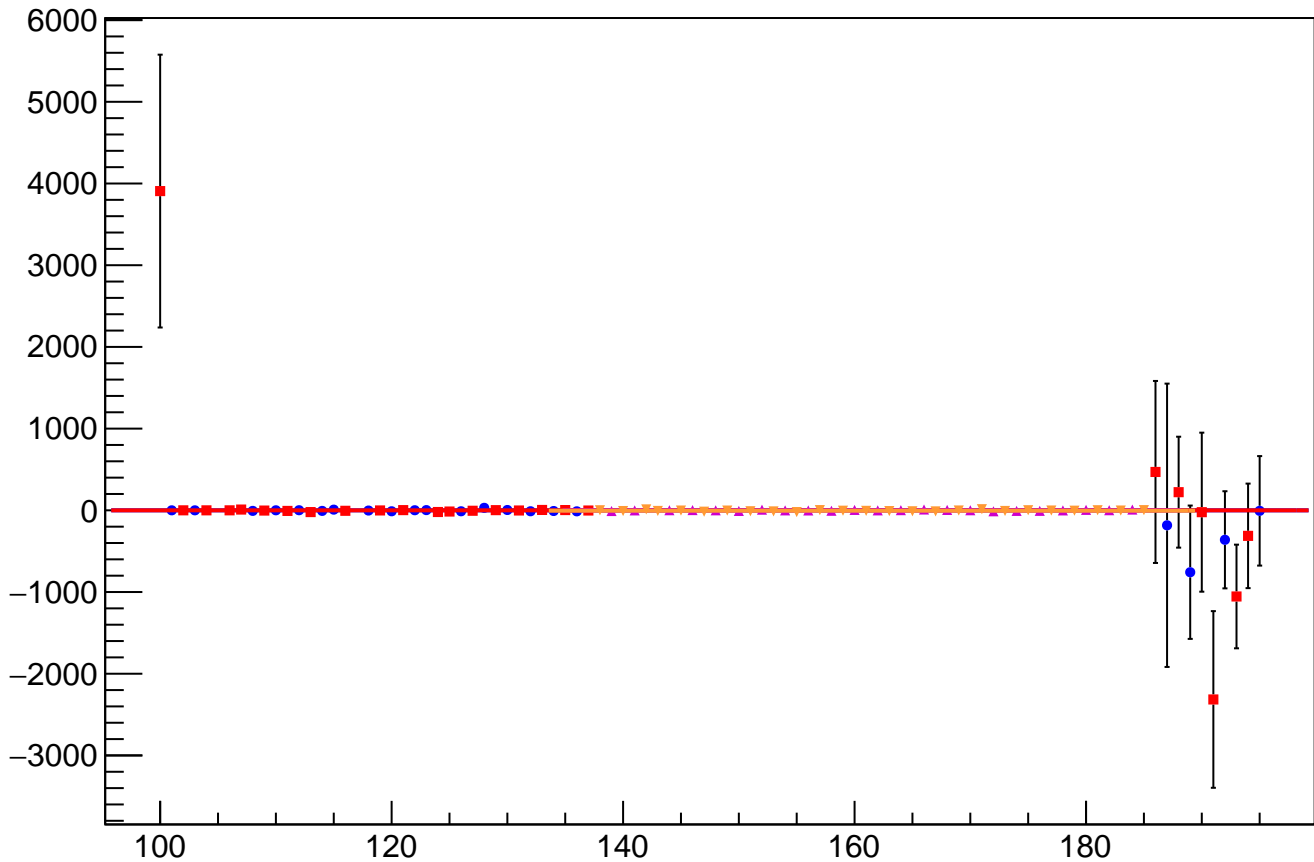
+ sign 537.264 $\pm$ 0.079  $\chi^2$ /NDF: 8069659.0/45

All: 536.055 $\pm$ 0.056  $\chi^2$ /NDF: 18046833.2/92

- sign 534.805 $\pm$ 0.080  $\chi^2$ /NDF: 9976696.4/46



# diff\_cav4dX\_mean vs Slug



Right In:  $-0.022 \pm 0.021$   $\chi^2/\text{NDF}$ : 16.9/20

Left Out:  $-4.474 \pm 0.956$   $\chi^2/\text{NDF}$ : 58.2/24

Right Out:  $-0.027 \pm 0.020$   $\chi^2/\text{NDF}$ : 24.7/24

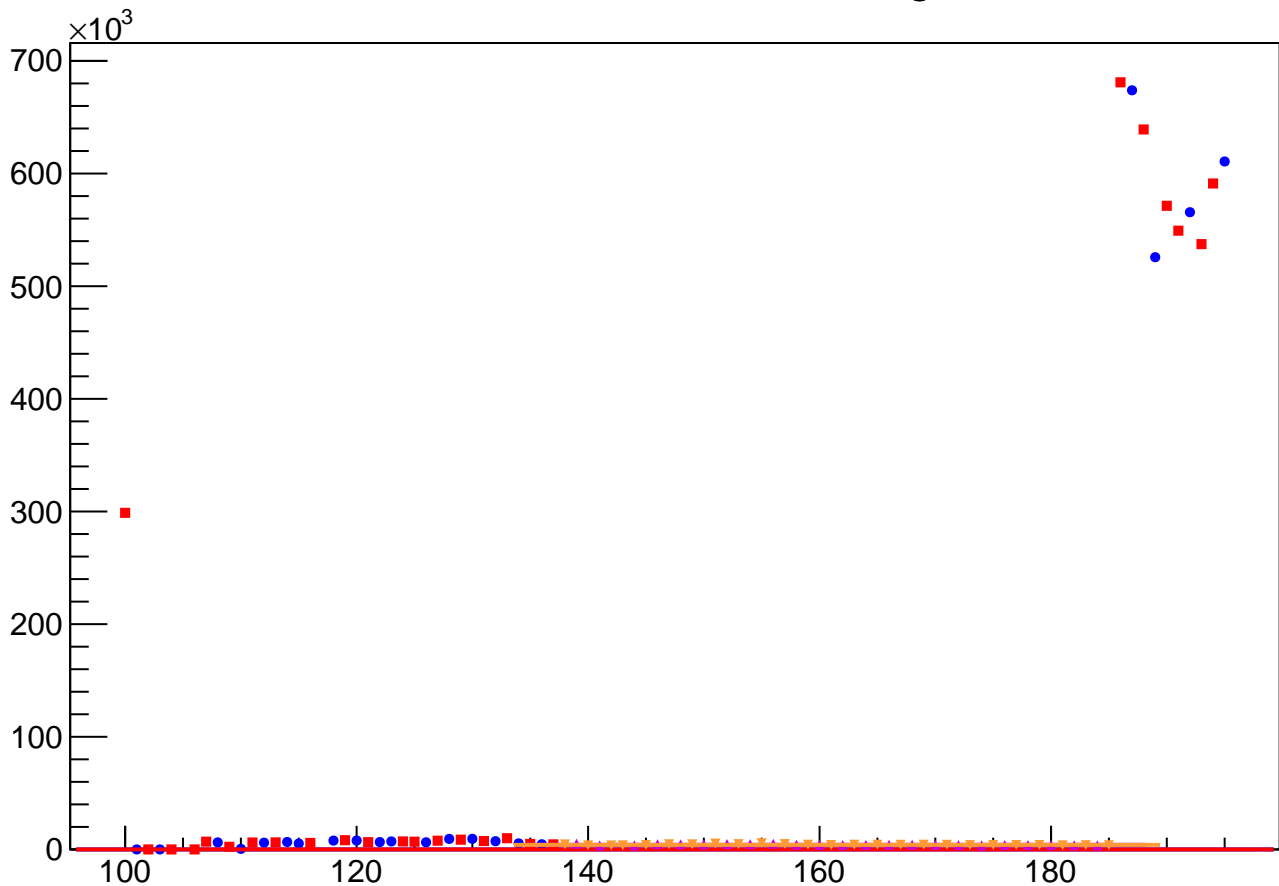
Left In:  $-0.193 \pm 0.990$   $\chi^2/\text{NDF}$ : 29.2/22

+ sign  $-0.024 \pm 0.021$   $\chi^2/\text{NDF}$ : 96.8/45

All:  $-0.025 \pm 0.014$   $\chi^2/\text{NDF}$ : 150.7/93

- sign  $-0.027 \pm 0.020$   $\chi^2/\text{NDF}$ : 54.0/47

# diff\_cav4dX\_rms vs Slug



Right In: 17.337 $\pm$ 0.015  $\chi^2$ /NDF: 14919743.5/20

Left Out: 4074.257 $\pm$ 0.676  $\chi^2$ /NDF: 416916.0/24

Right Out: 17.269 $\pm$ 0.014  $\chi^2$ /NDF: 17627131.3/24

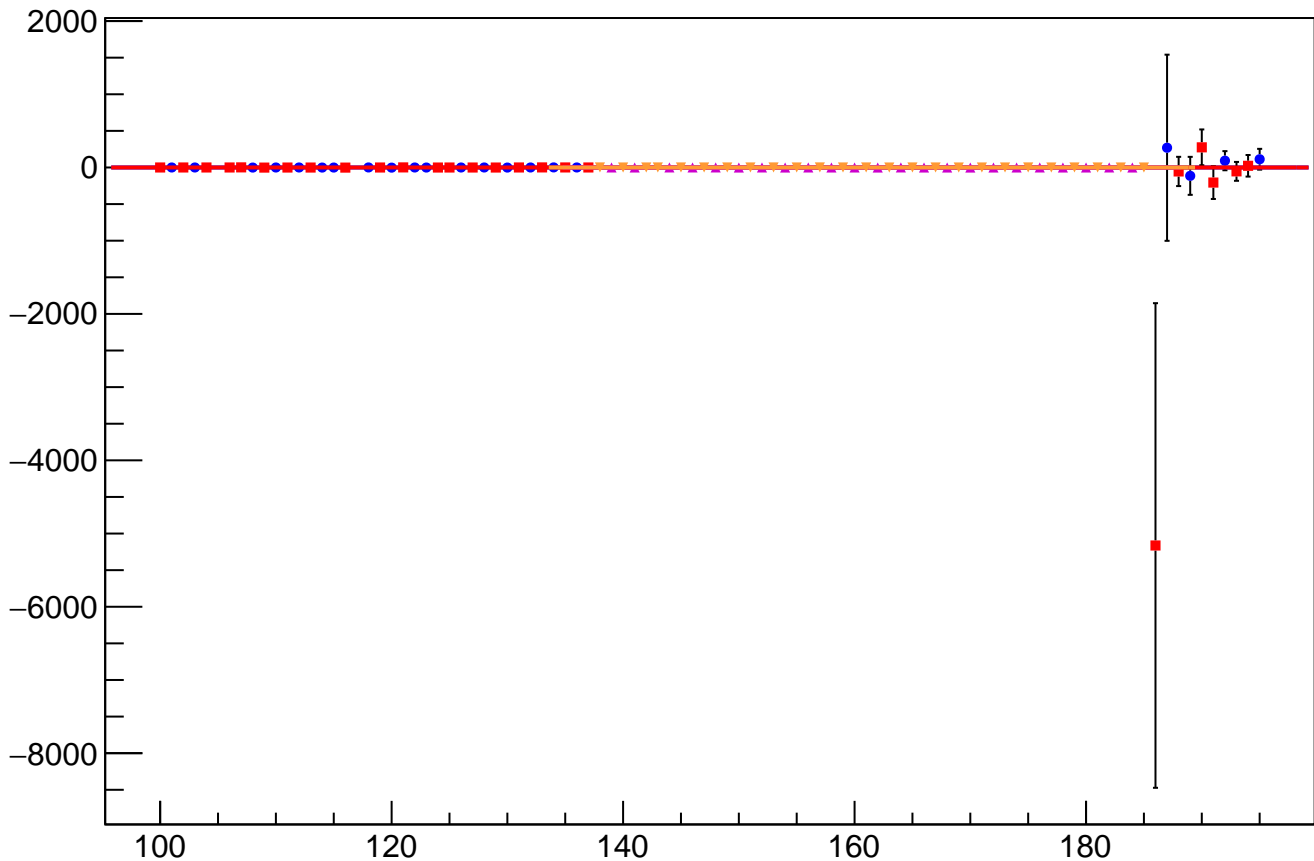
Left In: 4113.744 $\pm$ 0.700  $\chi^2$ /NDF: 354965.8/22

+ sign 19.257 $\pm$ 0.015  $\chi^2$ /NDF: 51369864.9/45

All: 19.071 $\pm$ 0.010  $\chi^2$ /NDF: 103569095.2/93

- sign 18.903 $\pm$ 0.014  $\chi^2$ /NDF: 52198924.6/47

# diff\_cav4dY\_mean vs Slug



Right In: 0.000 $\pm$ 0.002  $\chi^2$ /NDF: 16.7/20

Left Out: 0.151 $\pm$ 0.076  $\chi^2$ /NDF:16.8/24

Right Out: 0.001 $\pm$ 0.002  $\chi^2$ /NDF: 22.9/24

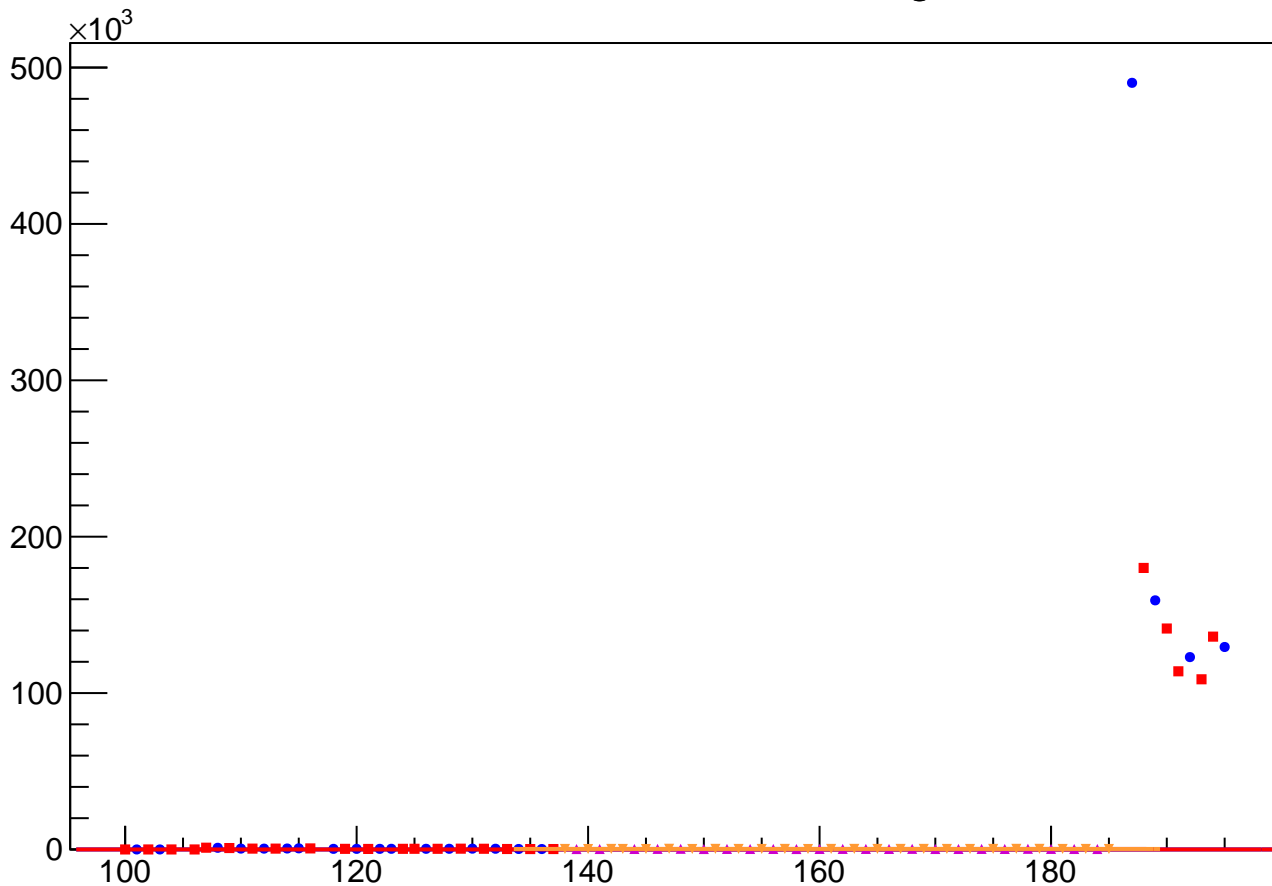
Left In: 0.075 $\pm$ 0.078  $\chi^2$ /NDF:34.8/22

+ sign 0.000 $\pm$ 0.002  $\chi^2$ /NDF: 37.4/45

All: 0.001 $\pm$ 0.001  $\chi^2$ /NDF: 96.0/93

- sign 0.001 $\pm$ 0.002  $\chi^2$ /NDF: 58.6/47

# diff\_cav4dY\_rms vs Slug



Right In: 1.698 $\pm$ 0.001  $\chi^2$ /NDF: 15354454.8/20

Left Out: 325.469 $\pm$ 0.054  $\chi^2$ /NDF: 350046.8/24

Right Out: 1.728 $\pm$ 0.001  $\chi^2$ /NDF: 16628033.0/23

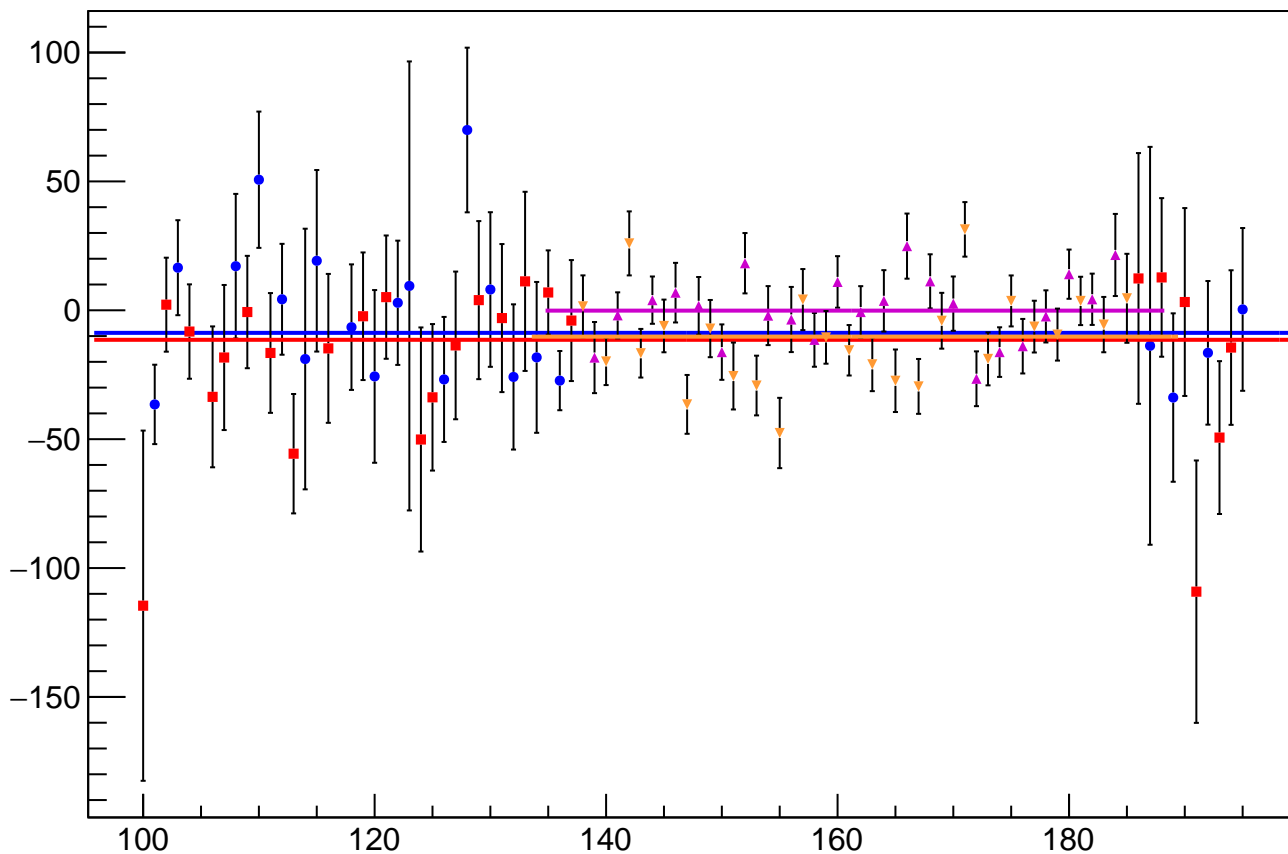
Left In: 325.201 $\pm$ 0.055  $\chi^2$ /NDF: 428069.7/22

+ sign 1.926 $\pm$ 0.001  $\chi^2$ /NDF: 51666817.4/45

All: 1.926 $\pm$ 0.001  $\chi^2$ /NDF: 102693913.2/92

- sign 1.926 $\pm$ 0.001  $\chi^2$ /NDF: 51027095.7/46

# diff\_bpm4aX\_mean vs Slug



Right In:  $-8.754 \pm 5.357$   $\chi^2/\text{NDF}: 23.4/20$

Left Out:  $-10.235 \pm 2.167$   $\chi^2/\text{NDF}: 58.0/24$

Right Out:  $-11.450 \pm 5.290$   $\chi^2/\text{NDF}: 18.1/24$

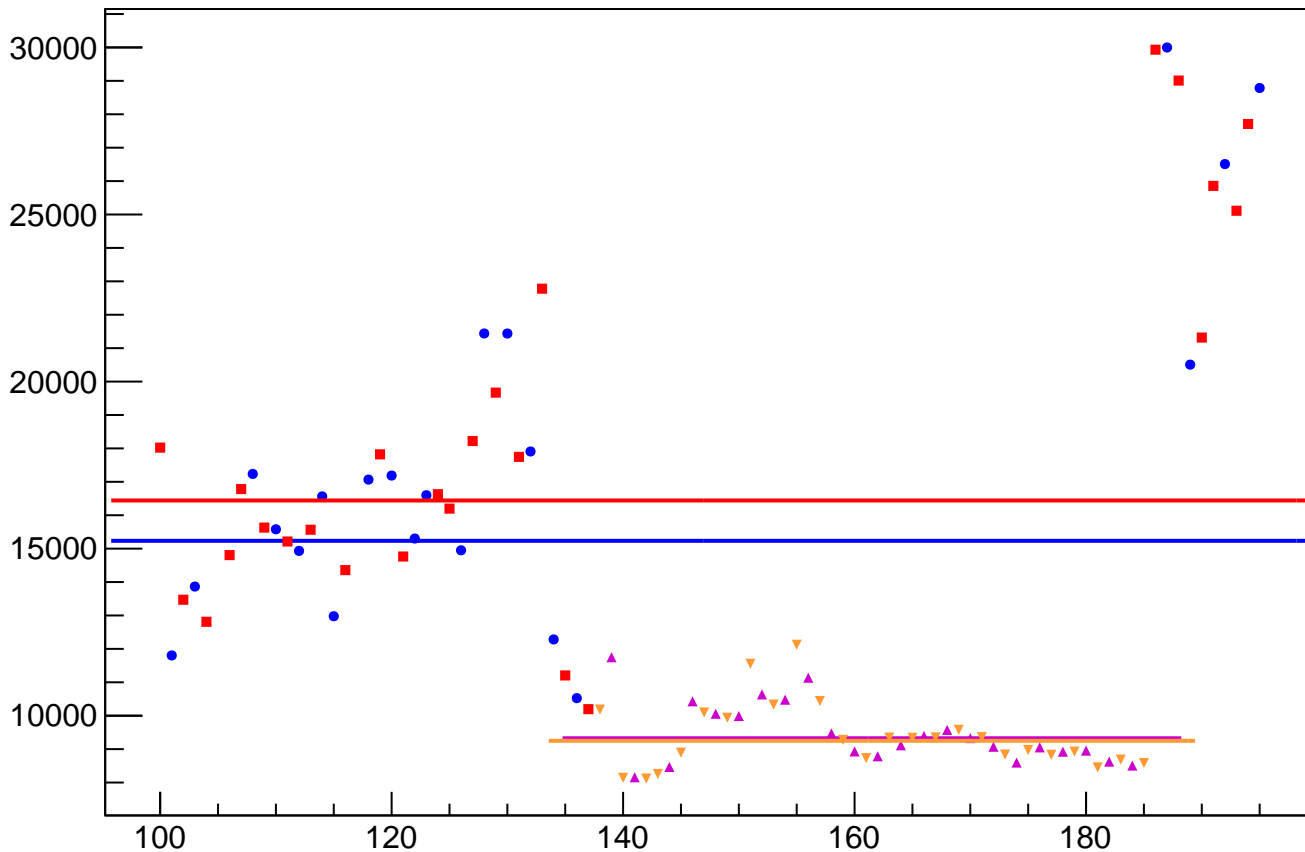
Left In:  $-0.130 \pm 2.242$   $\chi^2/\text{NDF}: 29.8/22$

+ sign  $-10.027 \pm 2.009$   $\chi^2/\text{NDF}: 81.4/45$

All:  $-6.052 \pm 1.440$   $\chi^2/\text{NDF}: 141.3/93$

- sign  $-1.854 \pm 2.064$   $\chi^2/\text{NDF}: 51.8/47$

# diff\_bpm4aX\_rms vs Slug



Right In: 15234.124+/-3.788  $\chi^2$ /NDF: 1506523.2/20

Left Out: 9249.358+/-1.532  $\chi^2$ /NDF:332003.4/24

Right Out: 16441.186+/-3.741  $\chi^2$ /NDF: 1671276.4/24

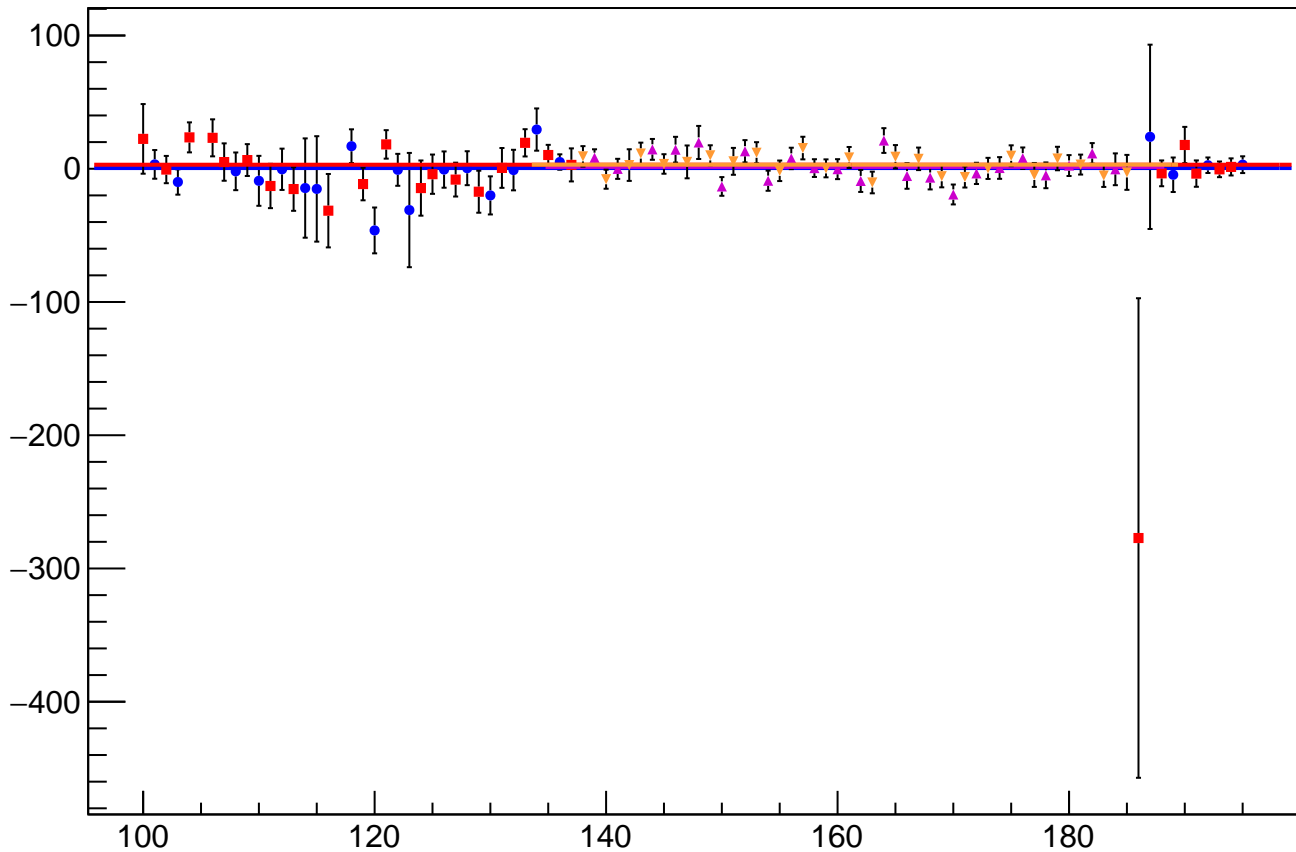
Left In: 9325.112+/-1.585  $\chi^2$ /NDF:280927.7/22

+ sign 10090.755+/-1.420  $\chi^2$ /NDF: 3983902.1/45

All: 10245.378+/-1.018  $\chi^2$ /NDF: 9028032.0/95

- sign 10408.723+/-1.460  $\chi^2$ /NDF: 5019756.7/47

# diff\_bpm4aY\_mean vs Slug



Right In:  $0.515 \pm 2.457$   $\chi^2/\text{NDF}: 18.1/20$

Left Out:  $3.062 \pm 1.659$   $\chi^2/\text{NDF}: 18.3/24$

Right Out:  $3.028 \pm 2.266$   $\chi^2/\text{NDF}: 25.2/24$

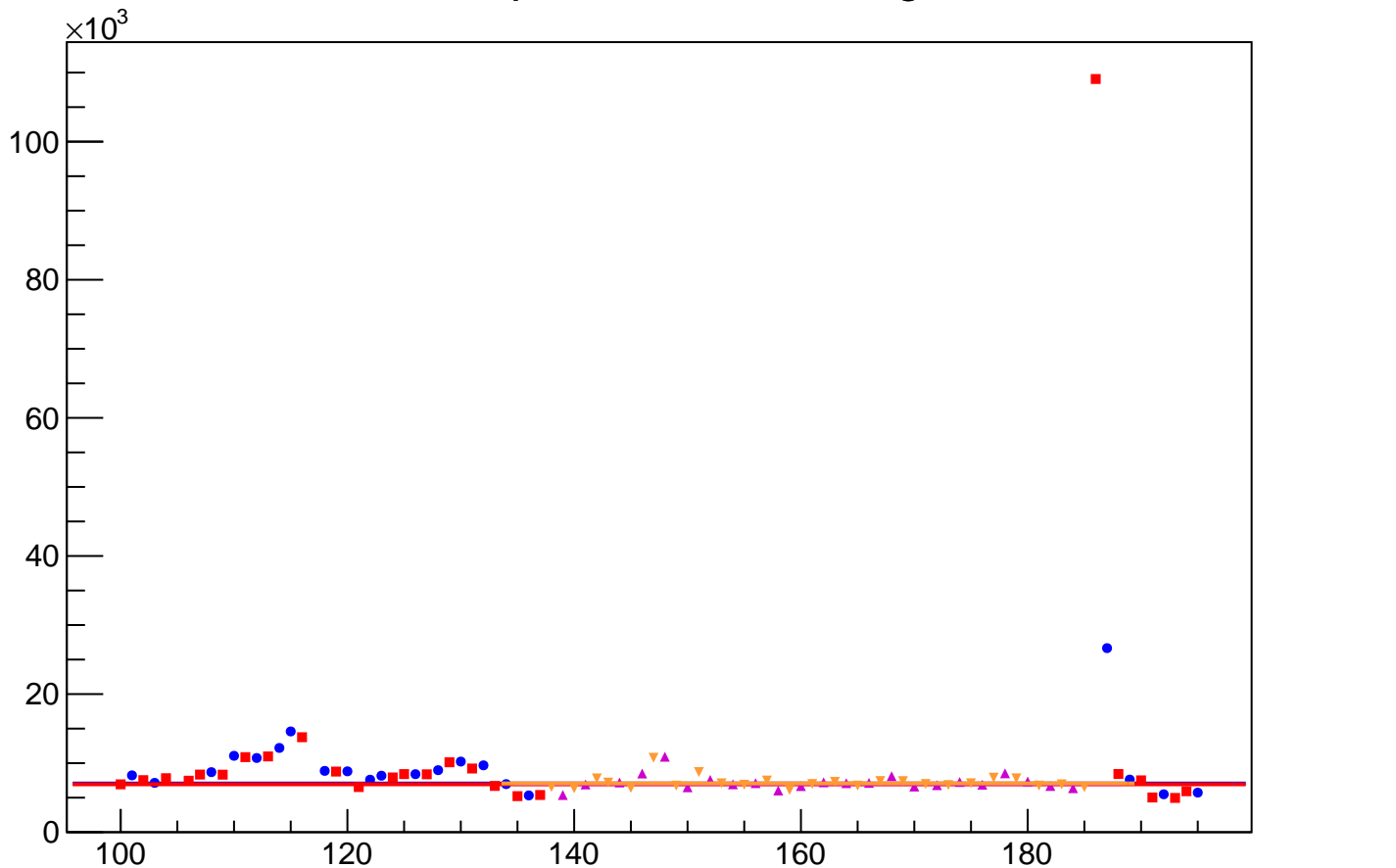
Left In:  $1.394 \pm 1.693$   $\chi^2/\text{NDF}: 35.4/22$

+ sign  $2.264 \pm 1.375$   $\chi^2/\text{NDF}: 37.1/45$

All:  $2.120 \pm 0.966$   $\chi^2/\text{NDF}: 98.1/93$

- sign  $1.980 \pm 1.356$   $\chi^2/\text{NDF}: 60.9/47$

# diff\_bpm4aY\_rms vs Slug

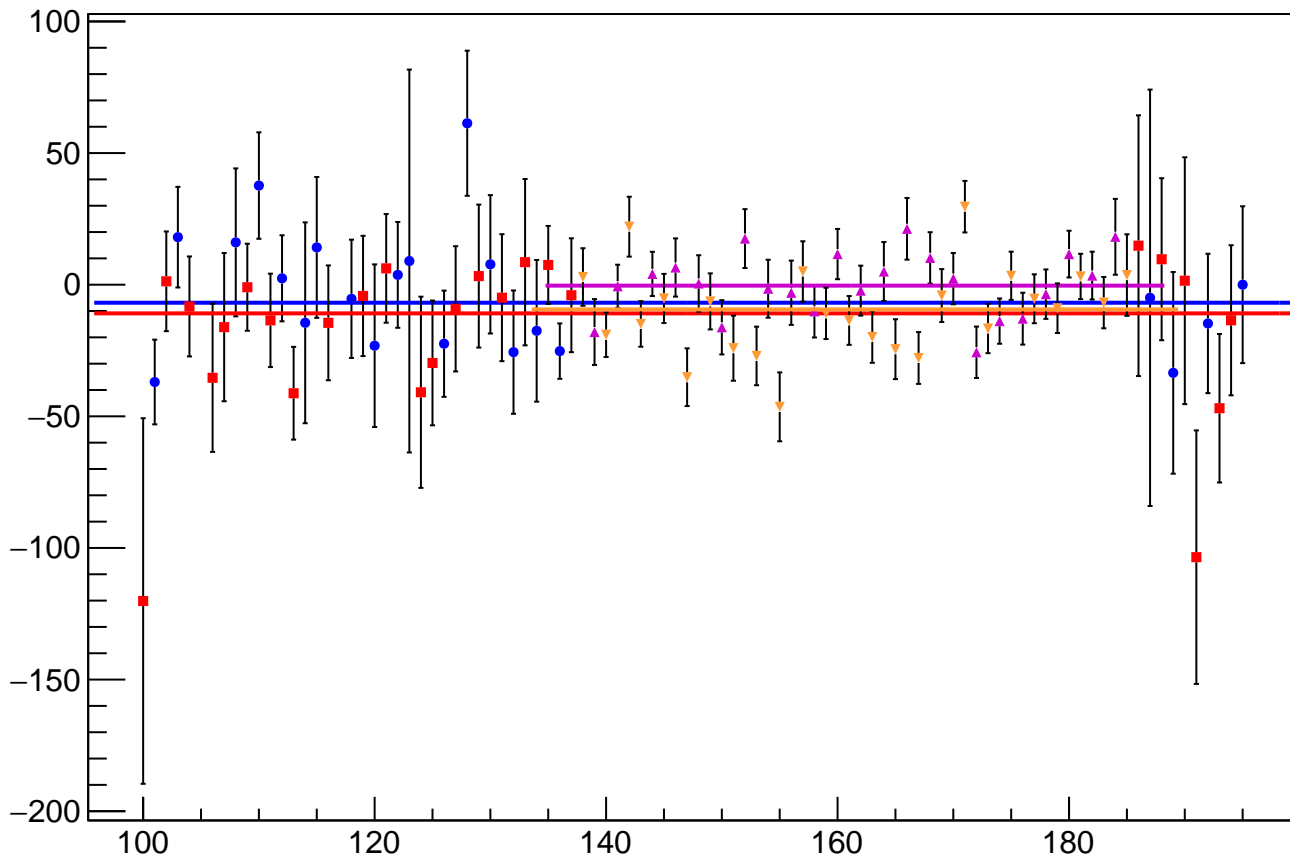


Right In: 7044.627 $\pm$ 1.737  $\chi^2$ /NDF: 1234287.1/20  
Left Out: 7066.826 $\pm$ 1.173  $\chi^2$ /NDF: 387449.8/24  
Right Out: 6936.588 $\pm$ 1.602  $\chi^2$ /NDF: 1830685.4/24  
Left In: 7000.532 $\pm$ 1.197  $\chi^2$ /NDF: 550029.3/22

+ sign 7059.874 $\pm$ 0.972  $\chi^2$ /NDF: 1621849.1/45  
All: 7018.194 $\pm$ 0.683  $\chi^2$ /NDF: 4007213.6/93  
- sign 6977.622 $\pm$ 0.959  $\chi^2$ /NDF: 2381736.7/47



# diff\_bpm4eX\_mean vs Slug



Right In:  $-6.847 \pm 4.840$   $\chi^2/\text{NDF}: 23.8/20$

Left Out:  $-9.376 \pm 2.018$   $\chi^2/\text{NDF}: 58.4/24$

Right Out:  $-10.886 \pm 4.734$   $\chi^2/\text{NDF}: 17.6/24$

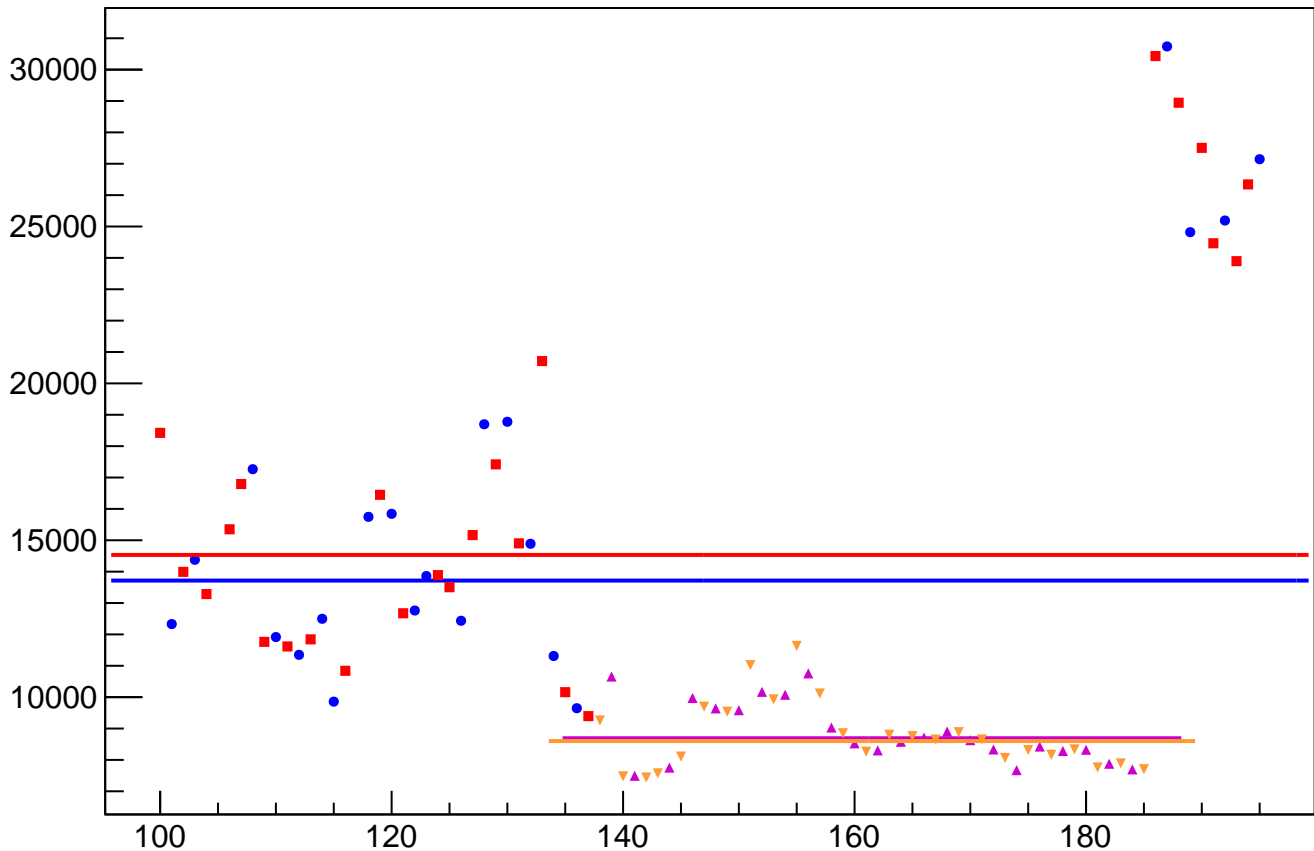
Left In:  $-0.353 \pm 2.092$   $\chi^2/\text{NDF}: 29.6/22$

+ sign  $-9.002 \pm 1.862$   $\chi^2/\text{NDF}: 82.4/45$

All:  $-5.632 \pm 1.335$   $\chi^2/\text{NDF}: 140.6/93$

- sign  $-2.075 \pm 1.914$   $\chi^2/\text{NDF}: 51.4/47$

# diff\_bpm4eX\_rms vs Slug



Right In: 13715.912+/-3.423  $\chi^2$ /NDF: 1691150.5/20

Left Out: 8600.457+/-1.427  $\chi^2$ /NDF:438229.4/24

Right Out: 14533.104+/-3.347  $\chi^2$ /NDF: 2114931.1/24

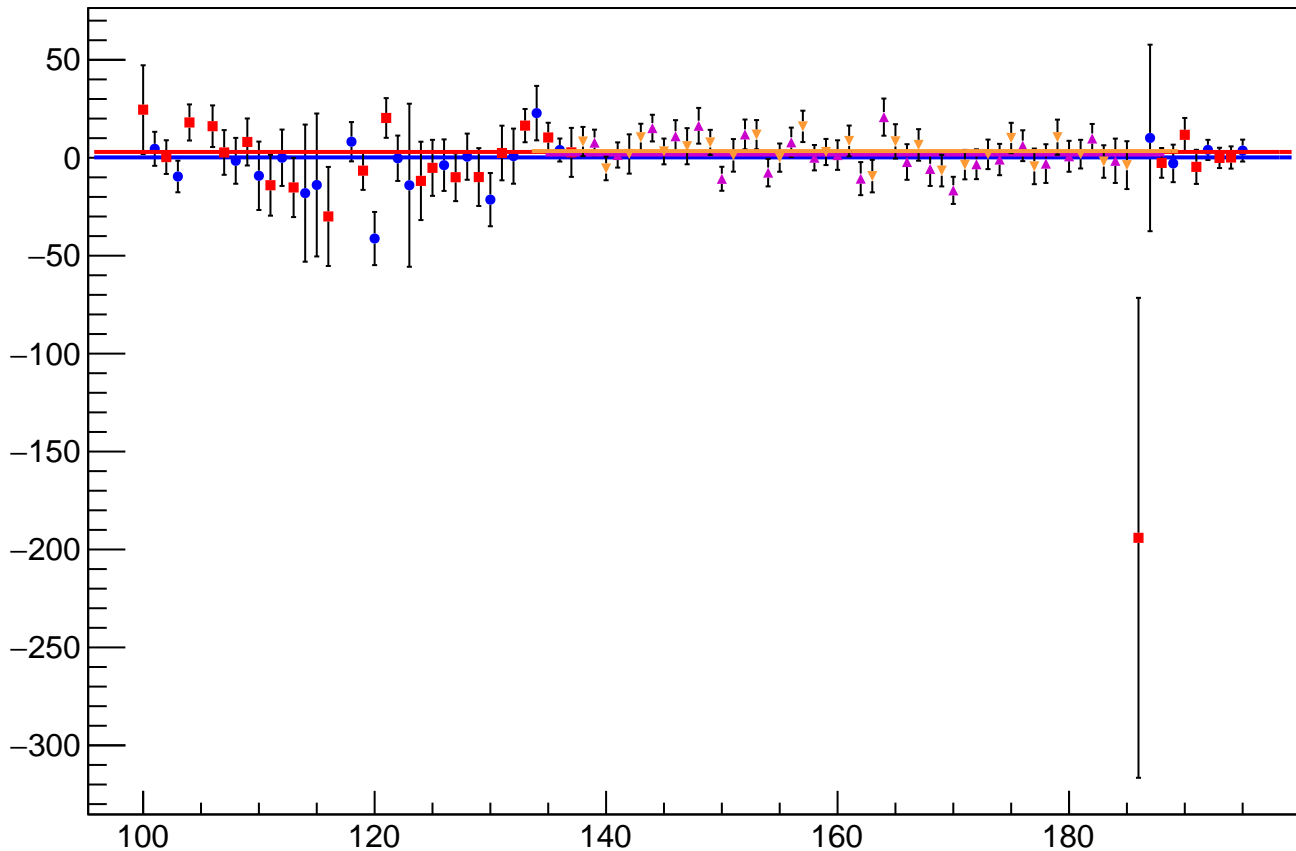
Left In: 8690.209+/-1.479  $\chi^2$ /NDF:370834.1/22

+ sign 9357.775+/-1.317  $\chi^2$ /NDF: 4032458.8/45

All: 9497.564+/-0.944  $\chi^2$ /NDF: 9090676.2/93

- sign 9645.148+/-1.353  $\chi^2$ /NDF: 5035054.3/47

# diff\_bpm4eY\_mean vs Slug



Right In:  $0.186 \pm 2.194$   $\chi^2/\text{NDF}: 19.3/20$

Left Out:  $3.406 \pm 1.550$   $\chi^2/\text{NDF}: 16.8/24$

Right Out:  $2.966 \pm 1.980$   $\chi^2/\text{NDF}: 25.3/24$

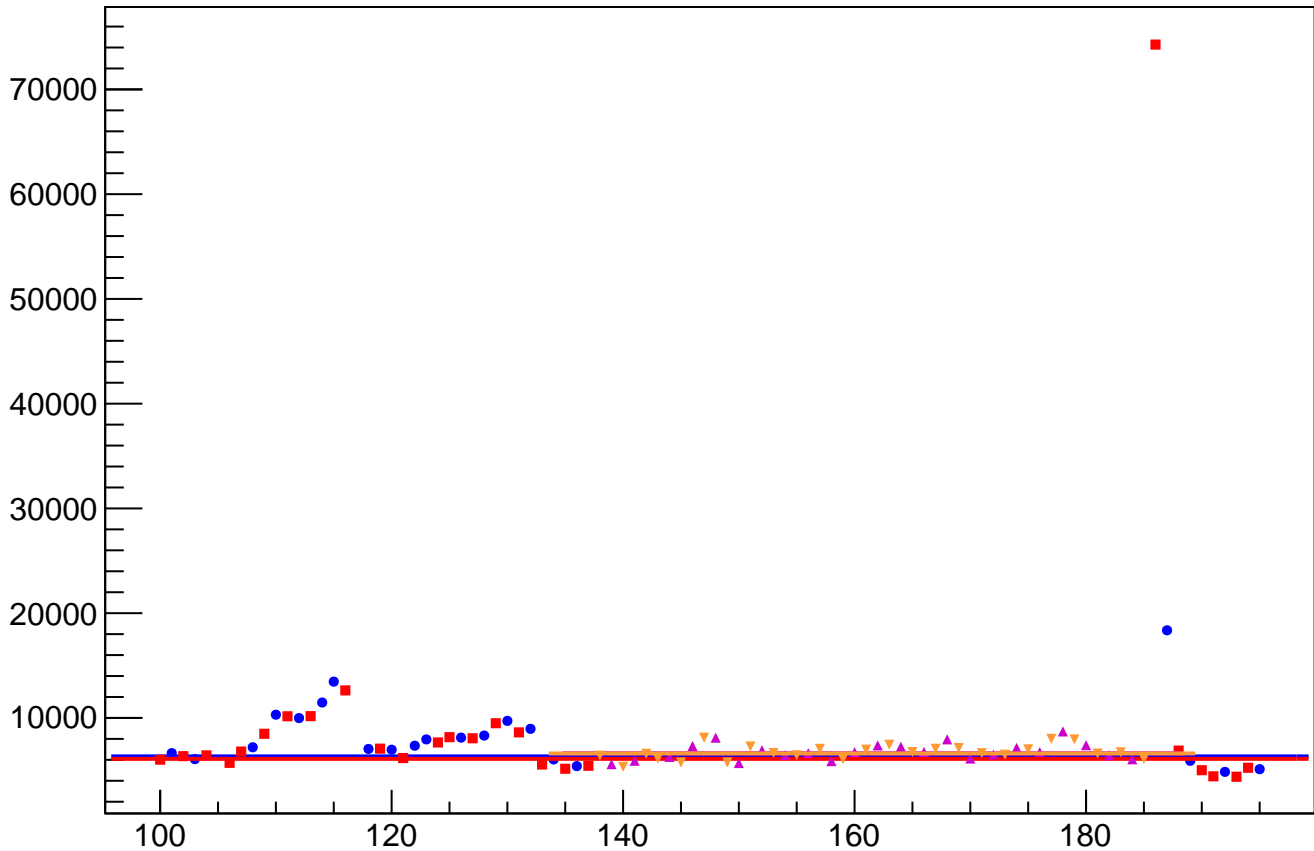
Left In:  $1.627 \pm 1.599$   $\chi^2/\text{NDF}: 33.5/22$

+ sign  $2.334 \pm 1.266$   $\chi^2/\text{NDF}: 37.5/45$

All:  $2.243 \pm 0.887$   $\chi^2/\text{NDF}: 96.6/93$

- sign  $2.155 \pm 1.244$   $\chi^2/\text{NDF}: 59.1/47$

# diff\_bpm4eY\_rms vs Slug



Right In: 6326.811+/-1.552  $\chi^2/\text{NDF}$ : 1132797.3/20

Left Out: 6607.100+/-1.096  $\chi^2/\text{NDF}$ : 398416.1/24

Right Out: 6095.713+/-1.400  $\chi^2/\text{NDF}$ : 1860390.1/24

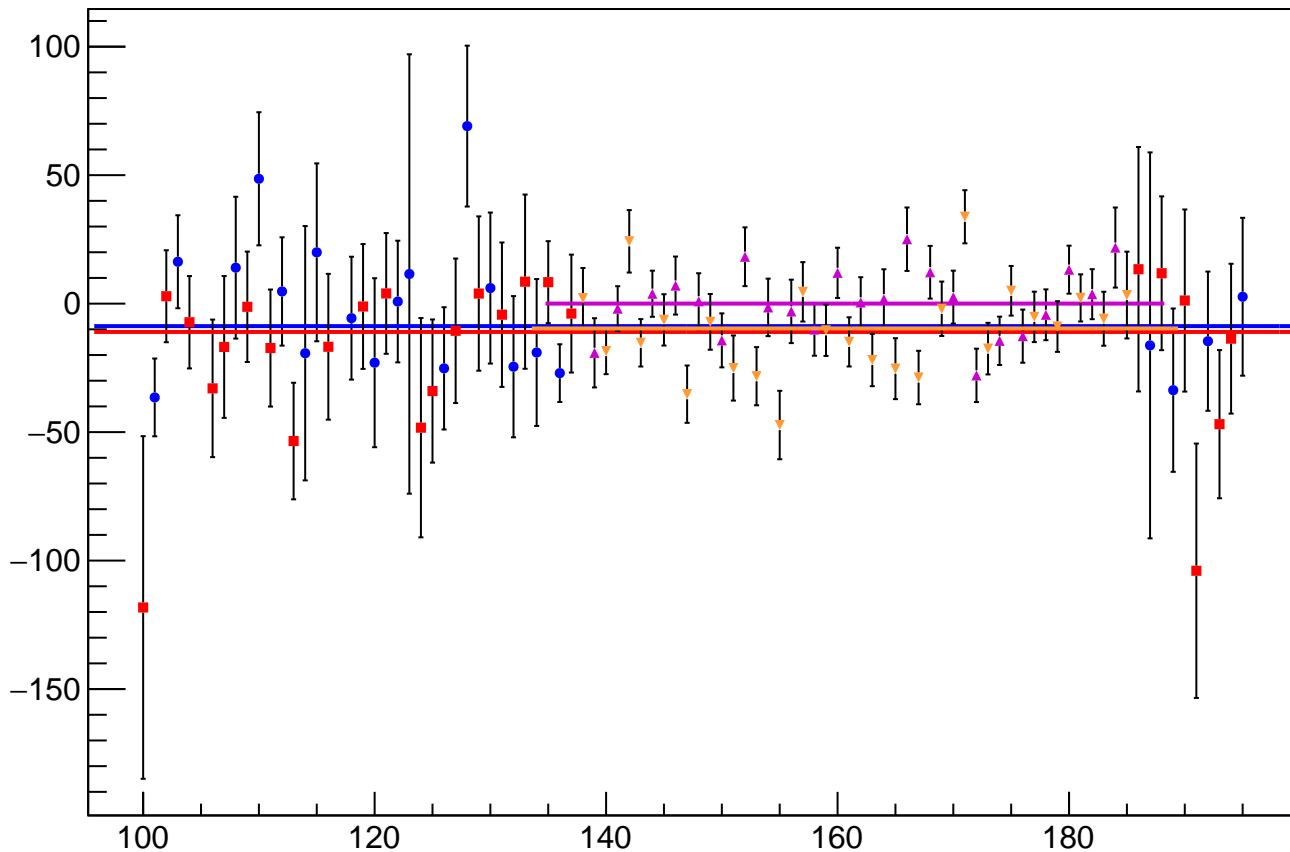
Left In: 6628.653+/-1.131  $\chi^2/\text{NDF}$ : 430282.2/22

+ sign 6513.769+/-0.895  $\chi^2/\text{NDF}$ : 1552977.9/45

All: 6465.204+/-0.628  $\chi^2/\text{NDF}$ : 3937103.9/93

- sign 6418.321+/-0.880  $\chi^2/\text{NDF}$ : 2378344.1/47

# diff\_bpm4acX\_mean vs Slug



Right In:  $-8.752 \pm 5.246$   $\chi^2/\text{NDF}$ : 23.3/20

Left Out:  $-9.649 \pm 2.118$   $\chi^2/\text{NDF}$ : 59.8/24

Right Out:  $-11.016 \pm 5.181$   $\chi^2/\text{NDF}$ : 18.1/24

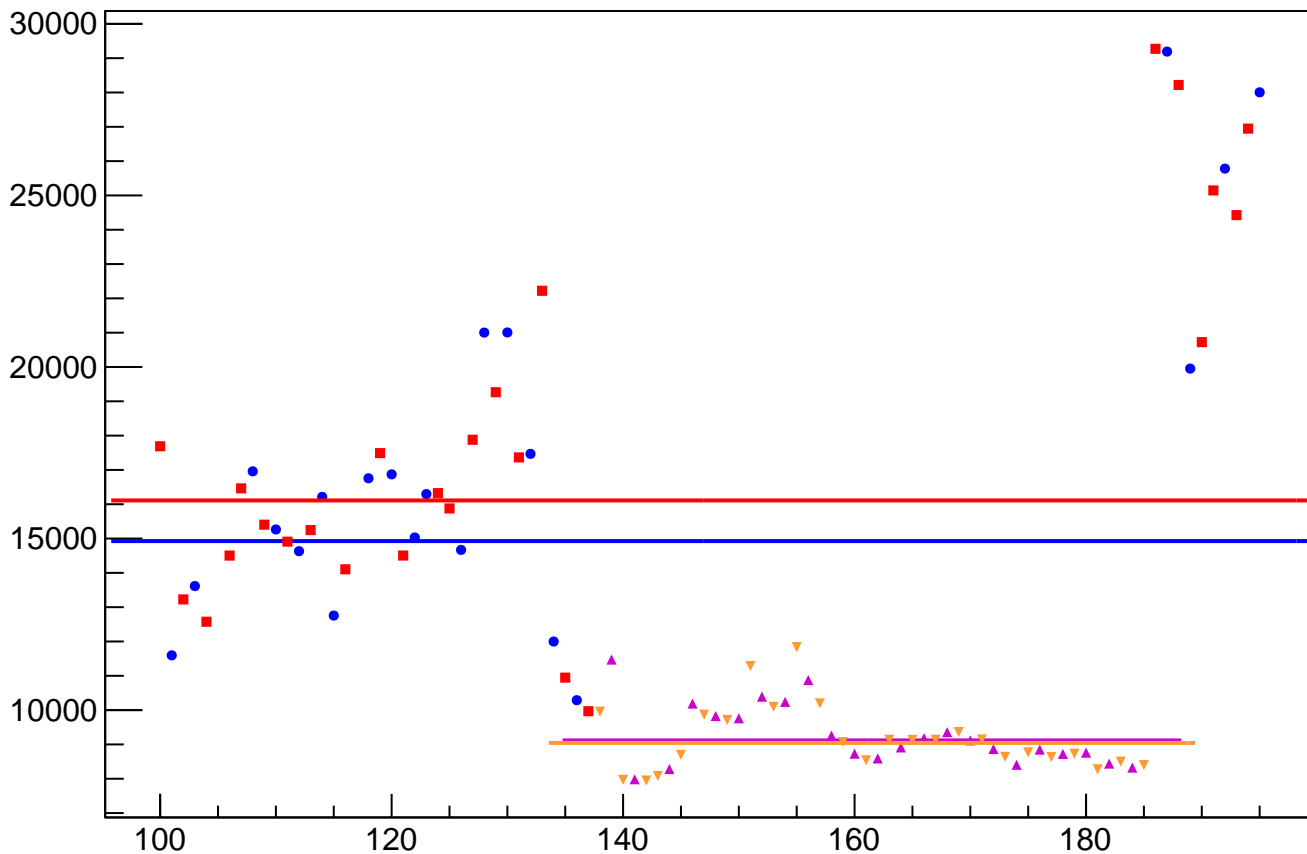
Left In:  $0.019 \pm 2.192$   $\chi^2/\text{NDF}$ : 30.6/22

+ sign  $-9.523 \pm 1.964$   $\chi^2/\text{NDF}$ : 83.1/45

All:  $-5.697 \pm 1.408$   $\chi^2/\text{NDF}$ : 143.4/93

- sign  $-1.656 \pm 2.019$   $\chi^2/\text{NDF}$ : 52.5/47

# diff\_bpm4acX\_rms vs Slug



Right In: 14926.113+/-3.710  $\chi^2/\text{NDF}$ : 1493656.4/20

Left Out: 9043.485+/-1.498  $\chi^2/\text{NDF}$ : 328192.2/24

Right Out: 16111.090+/-3.664  $\chi^2/\text{NDF}$ : 1649797.9/24

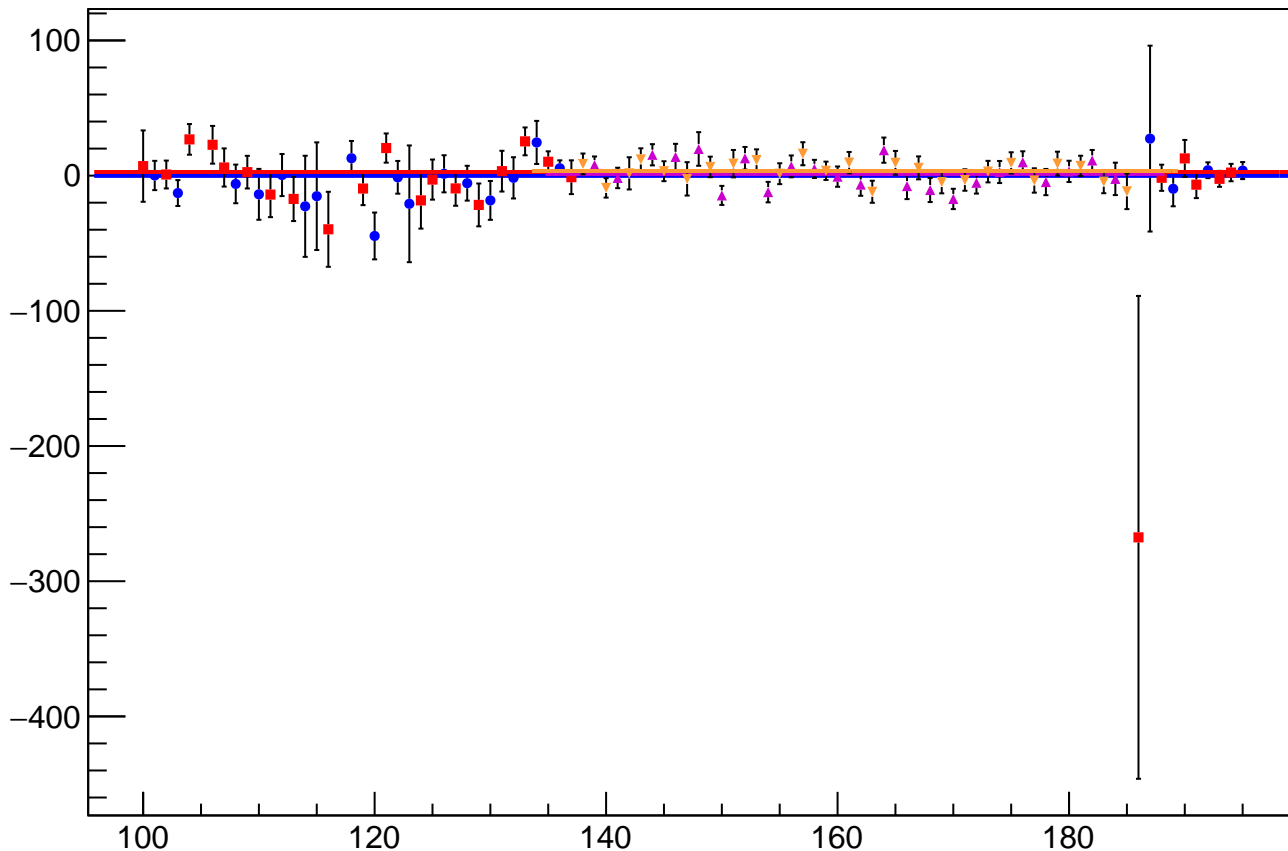
Left In: 9116.921+/-1.550  $\chi^2/\text{NDF}$ : 277594.8/22

+ sign 9868.001+/-1.389  $\chi^2/\text{NDF}$ : 3983843.1/45

All: 10019.095+/-0.995  $\chi^2/\text{NDF}$ : 9026742.0/95

- sign 10178.704+/-1.427  $\chi^2/\text{NDF}$ : 5018562.3/47

# diff\_bpm4acY\_mean vs Slug



Right In:  $-0.164 \pm 2.469$   $\chi^2/\text{NDF}: 17.6/20$

Left Out:  $3.439 \pm 1.666$   $\chi^2/\text{NDF}: 18.9/24$

Right Out:  $2.704 \pm 2.279$   $\chi^2/\text{NDF}: 30.2/24$

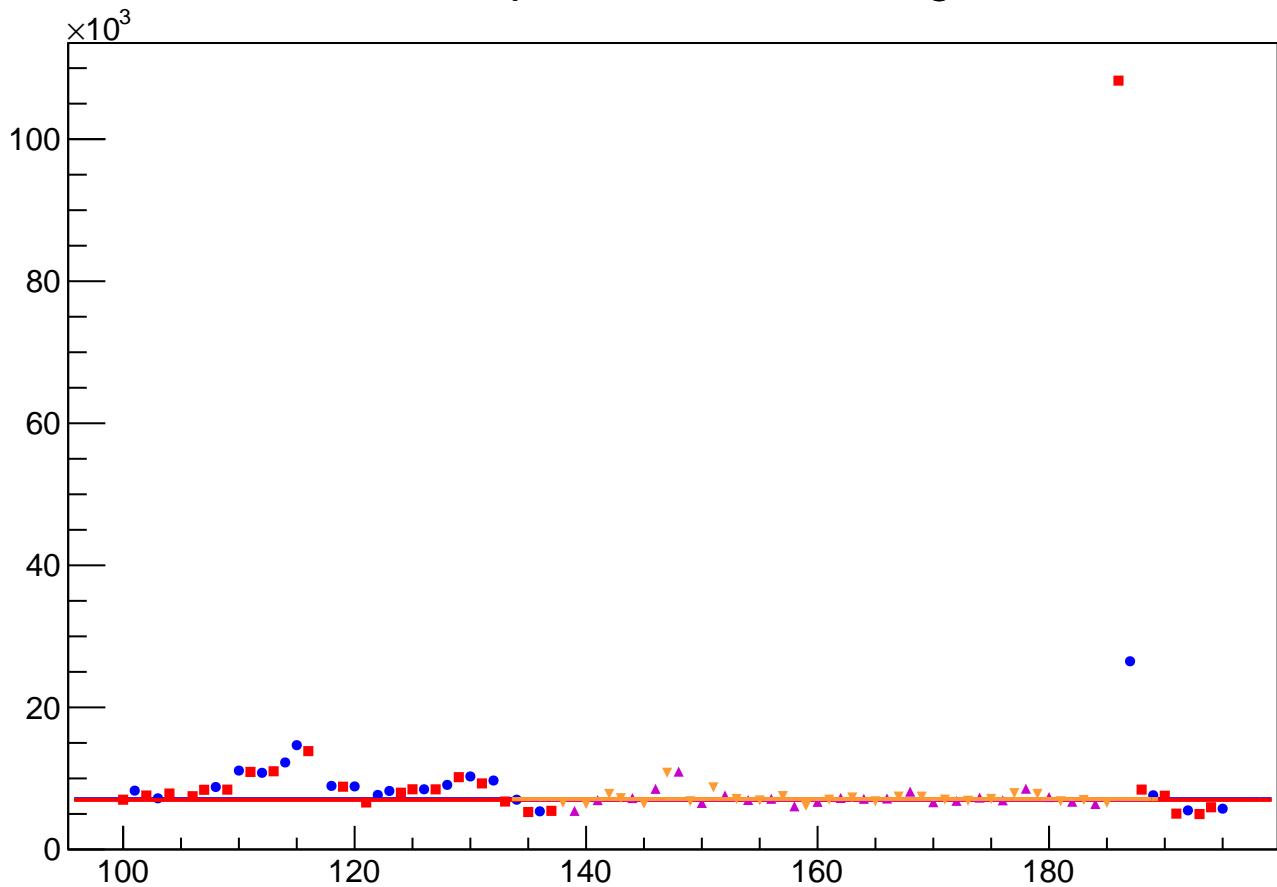
Left In:  $1.291 \pm 1.701$   $\chi^2/\text{NDF}: 36.5/22$

+ sign  $2.312 \pm 1.381$   $\chi^2/\text{NDF}: 38.0/45$

All:  $2.051 \pm 0.970$   $\chi^2/\text{NDF}: 105.0/93$

- sign  $1.796 \pm 1.363$   $\chi^2/\text{NDF}: 67.0/47$

# diff\_bpm4acY\_rms vs Slug



Right In: 7080.888 $\pm$ 1.746  $\chi^2/\text{NDF}$ : 1240536.5/20

Left Out: 7098.726 $\pm$ 1.178  $\chi^2/\text{NDF}$ : 382550.4/24

Right Out: 6975.978 $\pm$ 1.611  $\chi^2/\text{NDF}$ : 1832733.1/24

Left In: 7033.702 $\pm$ 1.203  $\chi^2/\text{NDF}$ : 541035.5/22

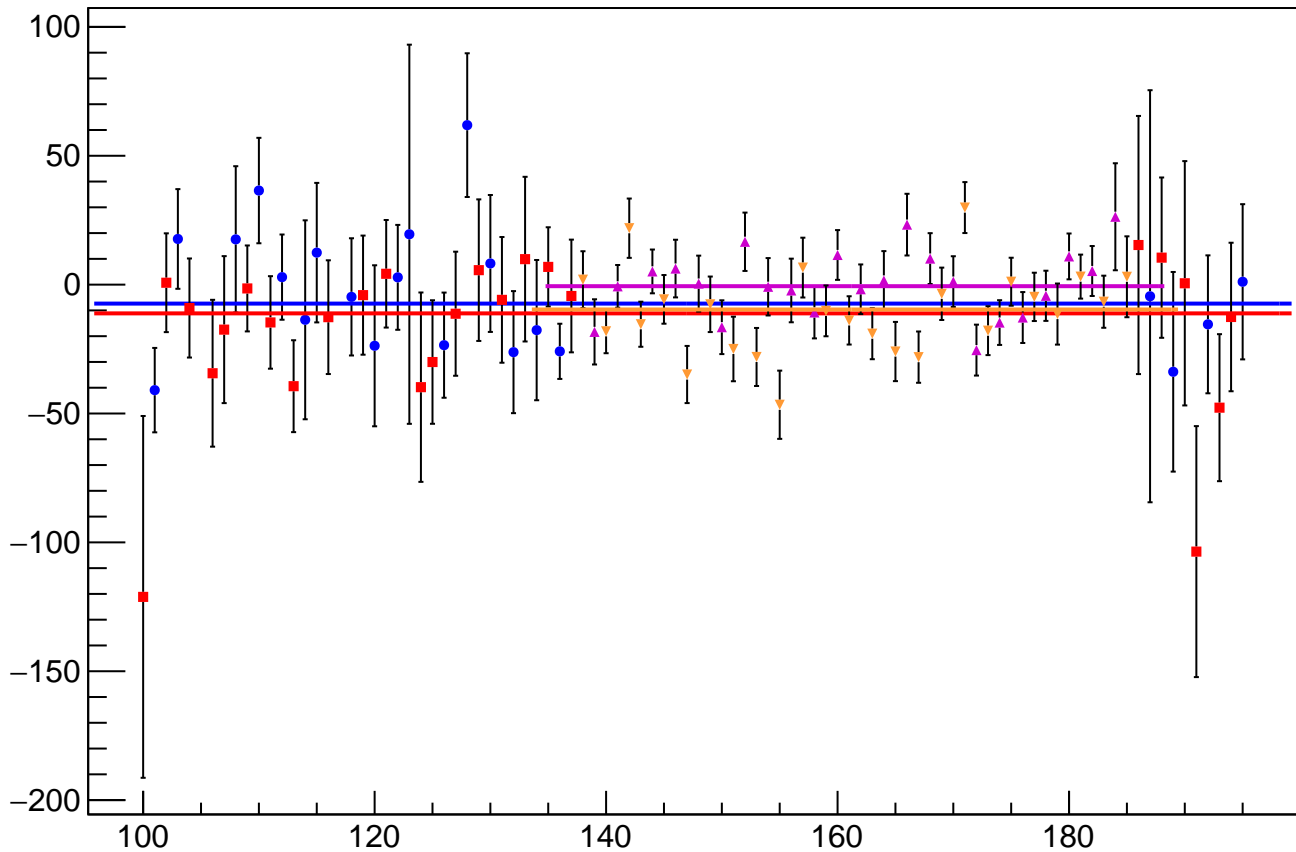
+ sign 7093.146 $\pm$ 0.977  $\chi^2/\text{NDF}$ : 1623158.7/45

All: 7052.567 $\pm$ 0.686  $\chi^2/\text{NDF}$ : 4001159.6/93

- sign 7013.046 $\pm$ 0.964  $\chi^2/\text{NDF}$ : 2374592.9/47



# diff\_bpm4ecX\_mean vs Slug



Right In:  $-7.355 \pm 4.904$   $\chi^2/\text{NDF}: 24.4/20$

Left Out:  $-9.640 \pm 2.057$   $\chi^2/\text{NDF}: 57.6/24$

Right Out:  $-11.151 \pm 4.799$   $\chi^2/\text{NDF}: 16.7/24$

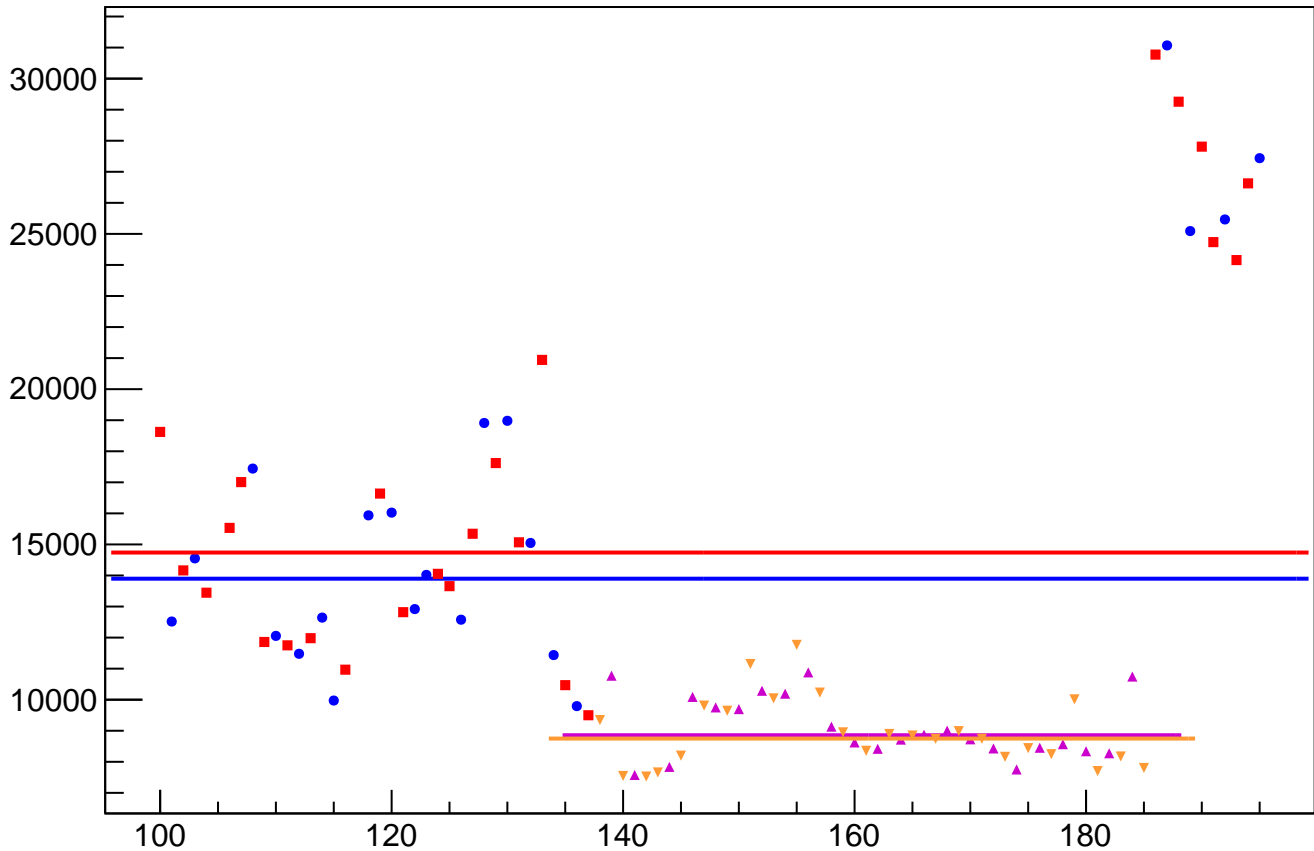
Left In:  $-0.599 \pm 2.135$   $\chi^2/\text{NDF}: 29.7/22$

+ sign  $-9.298 \pm 1.897$   $\chi^2/\text{NDF}: 82.2/45$

All:  $-5.917 \pm 1.360$   $\chi^2/\text{NDF}: 139.2/93$

- sign  $-2.343 \pm 1.951$   $\chi^2/\text{NDF}: 50.4/47$

# diff\_bpm4ecX\_rms vs Slug



Right In: 13896.712+/-3.468  $\chi^2/\text{NDF}: 1679627.8/20$

Left Out: 8748.407+/-1.455  $\chi^2/\text{NDF}: 463394.1/24$

Right Out: 14738.692+/-3.394  $\chi^2/\text{NDF}: 2091919.1/24$

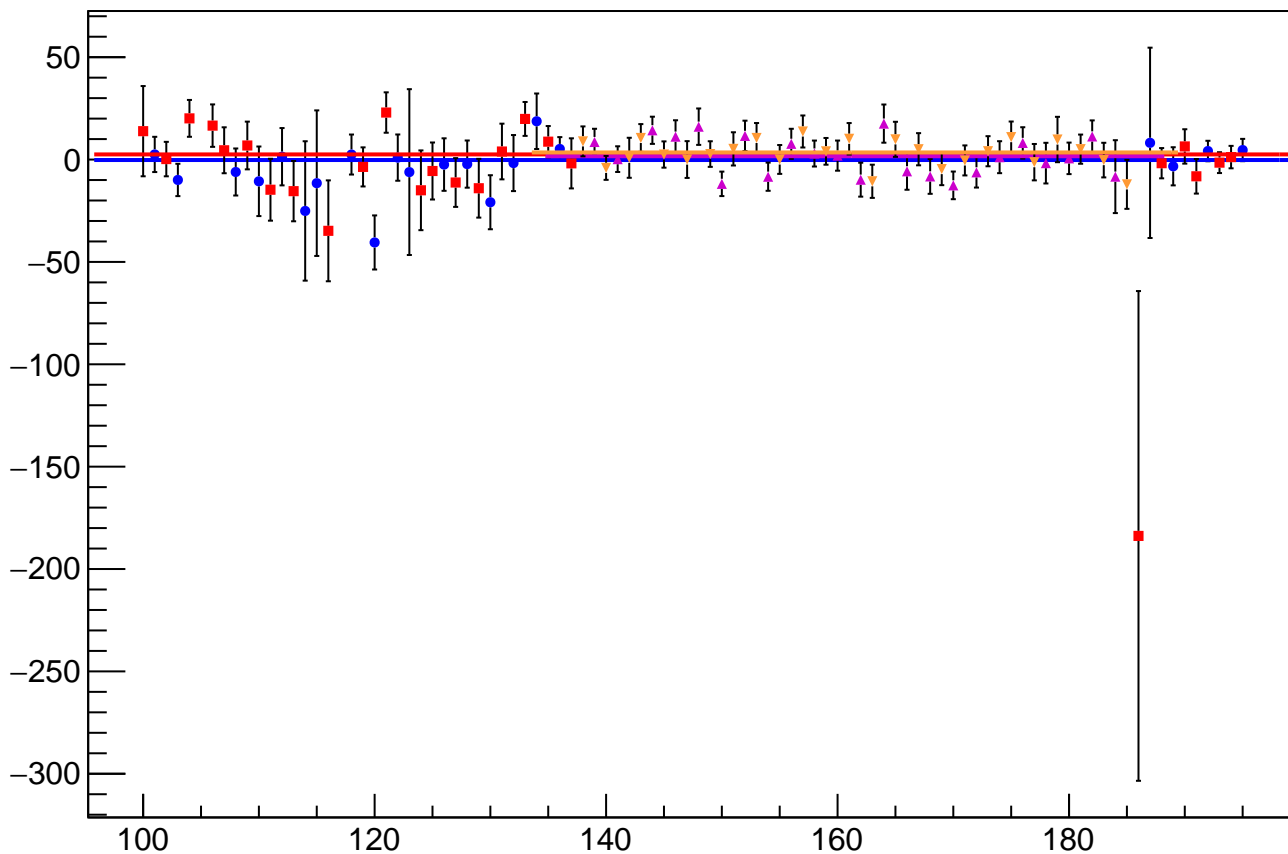
Left In: 8855.591+/-1.510  $\chi^2/\text{NDF}: 367542.7/22$

+ sign 9518.740+/-1.341  $\chi^2/\text{NDF}: 4017126.0/45$

All: 9668.850+/-0.962  $\chi^2/\text{NDF}: 9011230.2/93$

- sign 9827.561+/-1.379  $\chi^2/\text{NDF}: 4968343.5/47$

# diff\_bpm4ecY\_mean vs Slug



Right In:  $-0.228 \pm 2.143$   $\chi^2/\text{NDF}: 19.4/20$

Left Out:  $3.473 \pm 1.524$   $\chi^2/\text{NDF}: 15.8/24$

Right Out:  $2.509 \pm 1.935$   $\chi^2/\text{NDF}: 30.2/24$

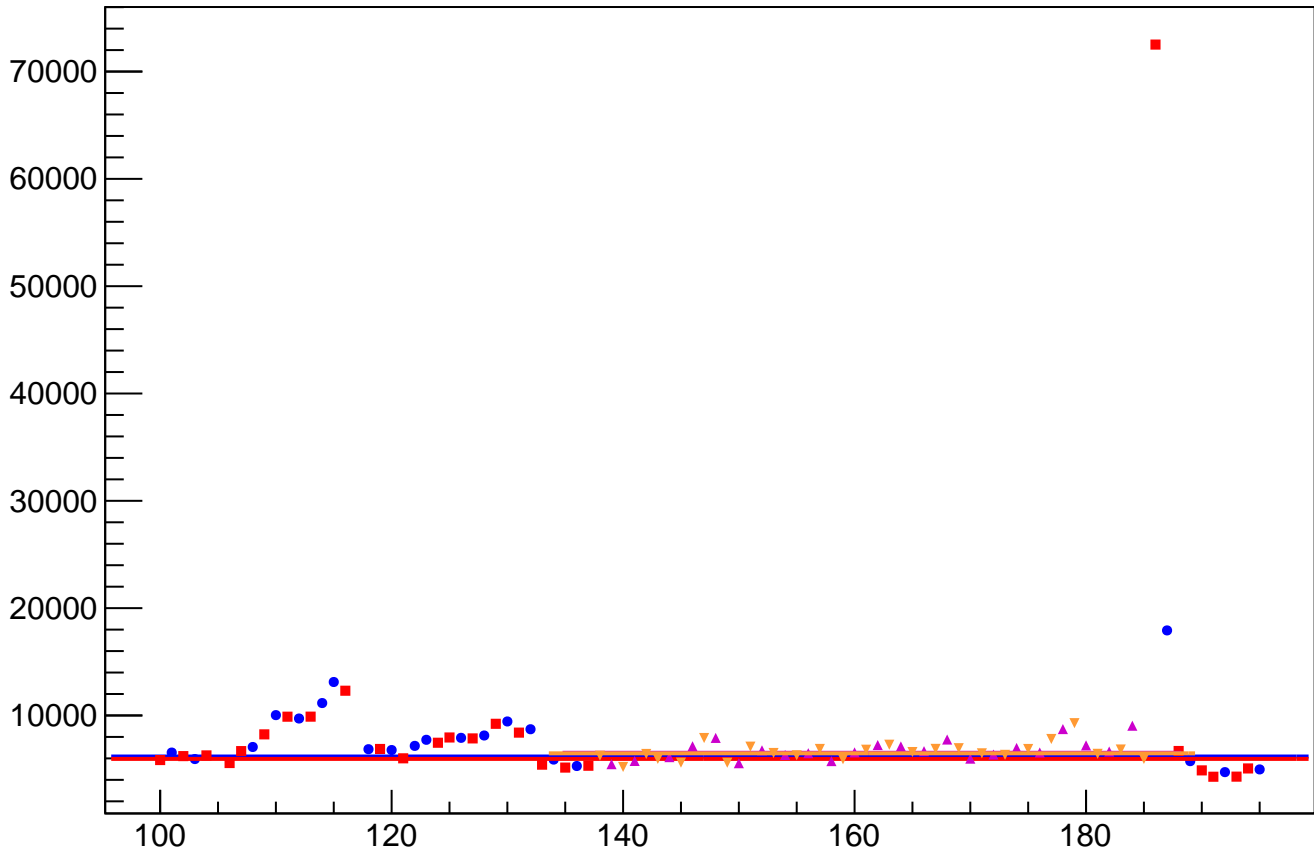
Left In:  $1.638 \pm 1.578$   $\chi^2/\text{NDF}: 33.7/22$

+ sign  $2.230 \pm 1.242$   $\chi^2/\text{NDF}: 37.1/45$

All:  $2.106 \pm 0.871$   $\chi^2/\text{NDF}: 101.2/93$

- sign  $1.986 \pm 1.223$   $\chi^2/\text{NDF}: 64.1/47$

# diff\_bpm4ecY\_rms vs Slug



Right In: 6174.684+/-1.516  $\chi^2$ /NDF: 1132079.7/20

Left Out: 6471.976+/-1.078  $\chi^2$ /NDF:490282.9/24

Right Out: 5953.049+/-1.368  $\chi^2$ /NDF: 1845462.4/24

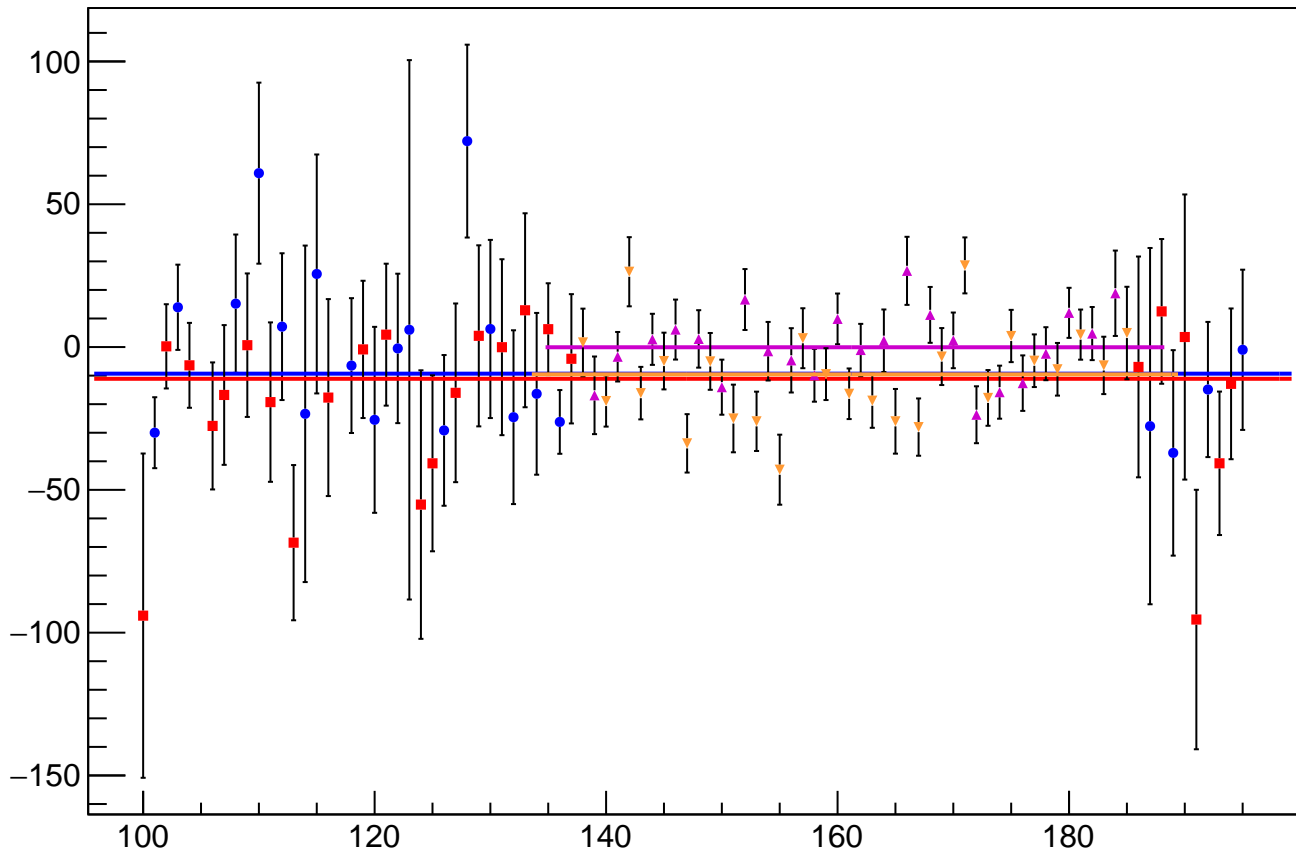
Left In: 6521.975+/-1.116  $\chi^2$ /NDF:480034.7/22

+ sign 6372.118+/-0.878  $\chi^2$ /NDF: 1647916.5/45

All: 6332.840+/-0.616  $\chi^2$ /NDF: 4081187.1/93

- sign 6294.775+/-0.865  $\chi^2$ /NDF: 2429333.2/47

# diff\_bpm1X\_mean vs Slug



Right In:  $-9.318 \pm 5.120$   $\chi^2/\text{NDF}: 22.8/20$

Left Out:  $-9.554 \pm 2.012$   $\chi^2/\text{NDF}: 59.5/24$

Right Out:  $-11.111 \pm 5.068$   $\chi^2/\text{NDF}: 18.5/24$

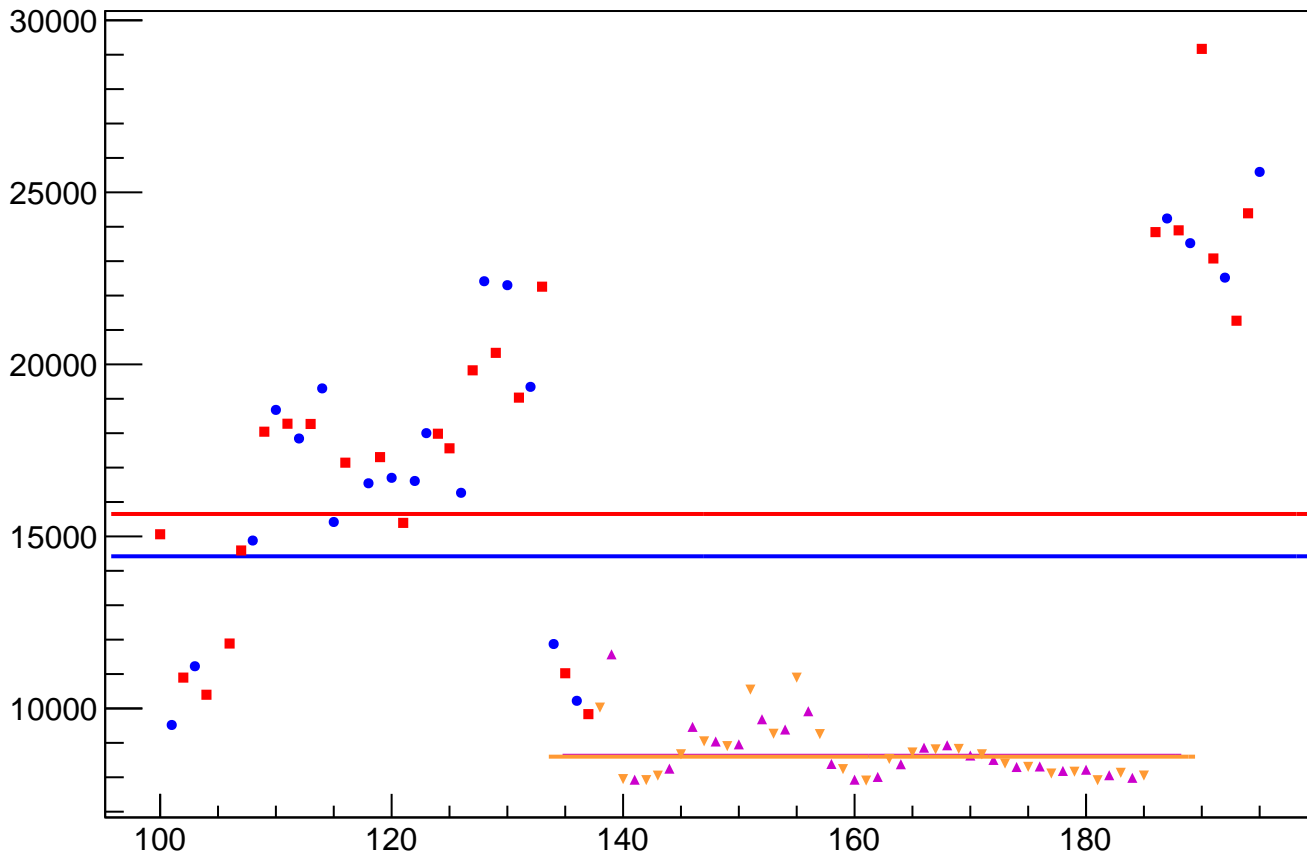
Left In:  $-0.072 \pm 2.073$   $\chi^2/\text{NDF}: 29.8/22$

+ sign  $-9.523 \pm 1.872$   $\chi^2/\text{NDF}: 82.3/45$

All:  $-5.684 \pm 1.340$   $\chi^2/\text{NDF}: 143.3/93$

- sign  $-1.654 \pm 1.918$   $\chi^2/\text{NDF}: 52.4/47$

# diff\_bpm1X\_rms vs Slug



Right In: 14422.340+/-3.621  $\chi^2/\text{NDF}$ : 1863532.9/20

Left Out: 8598.983+/-1.423  $\chi^2/\text{NDF}$ : 249070.5/24

Right Out: 15652.183+/-3.583  $\chi^2/\text{NDF}$ : 1897337.3/24

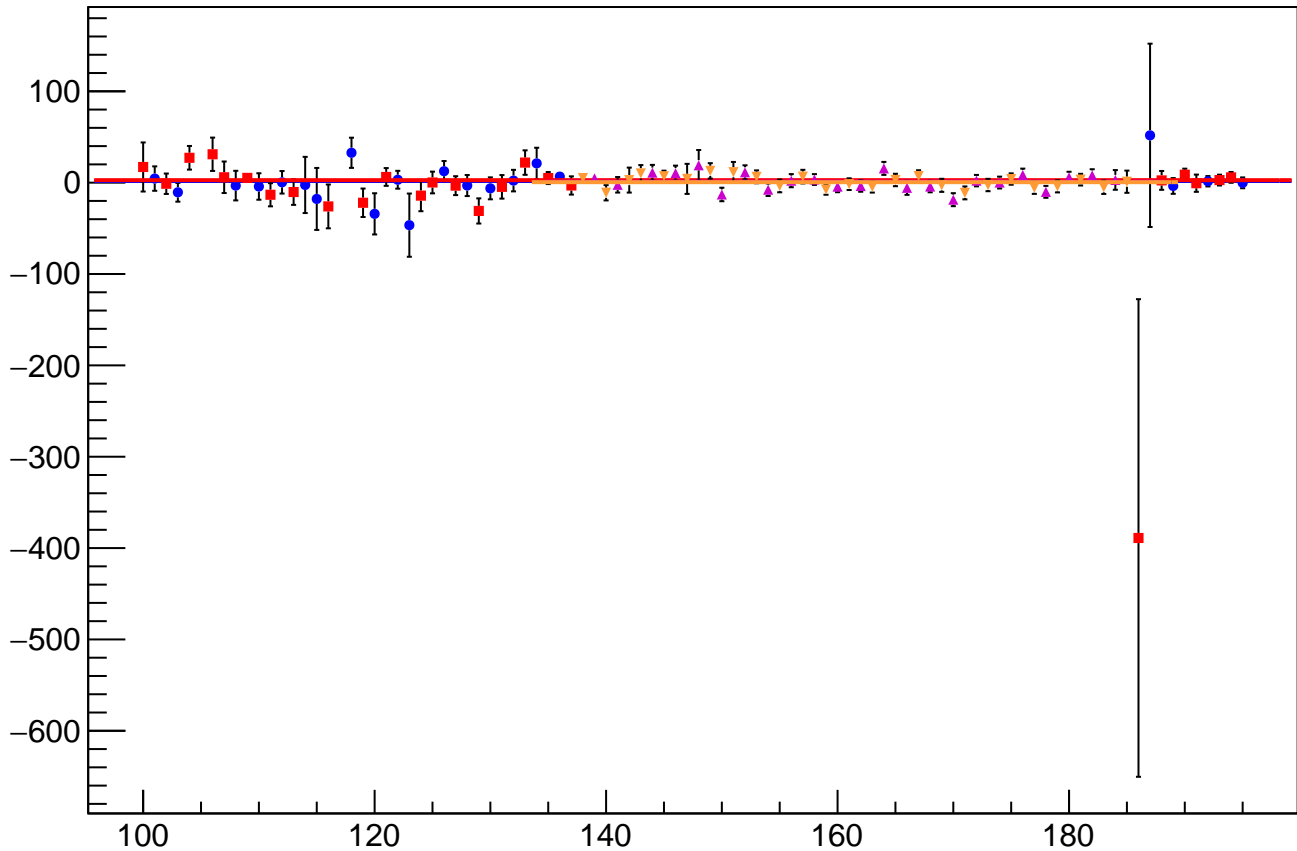
Left In: 8625.233+/-1.466  $\chi^2/\text{NDF}$ : 237310.9/22

+ sign 9377.730+/-1.324  $\chi^2/\text{NDF}$ : 4353630.4/45

All: 9501.948+/-0.948  $\chi^2/\text{NDF}$ : 9800828.3/93

- sign 9632.350+/-1.357  $\chi^2/\text{NDF}$ : 5429155.1/47

# diff\_bpm1Y\_mean vs Slug



Right In: 1.806 $\pm$ 2.215  $\chi^2$ /NDF: 14.9/20

Left Out: 0.528 $\pm$ 1.418  $\chi^2$ /NDF:19.5/24

Right Out: 2.728 $\pm$ 1.933  $\chi^2$ /NDF: 26.9/24

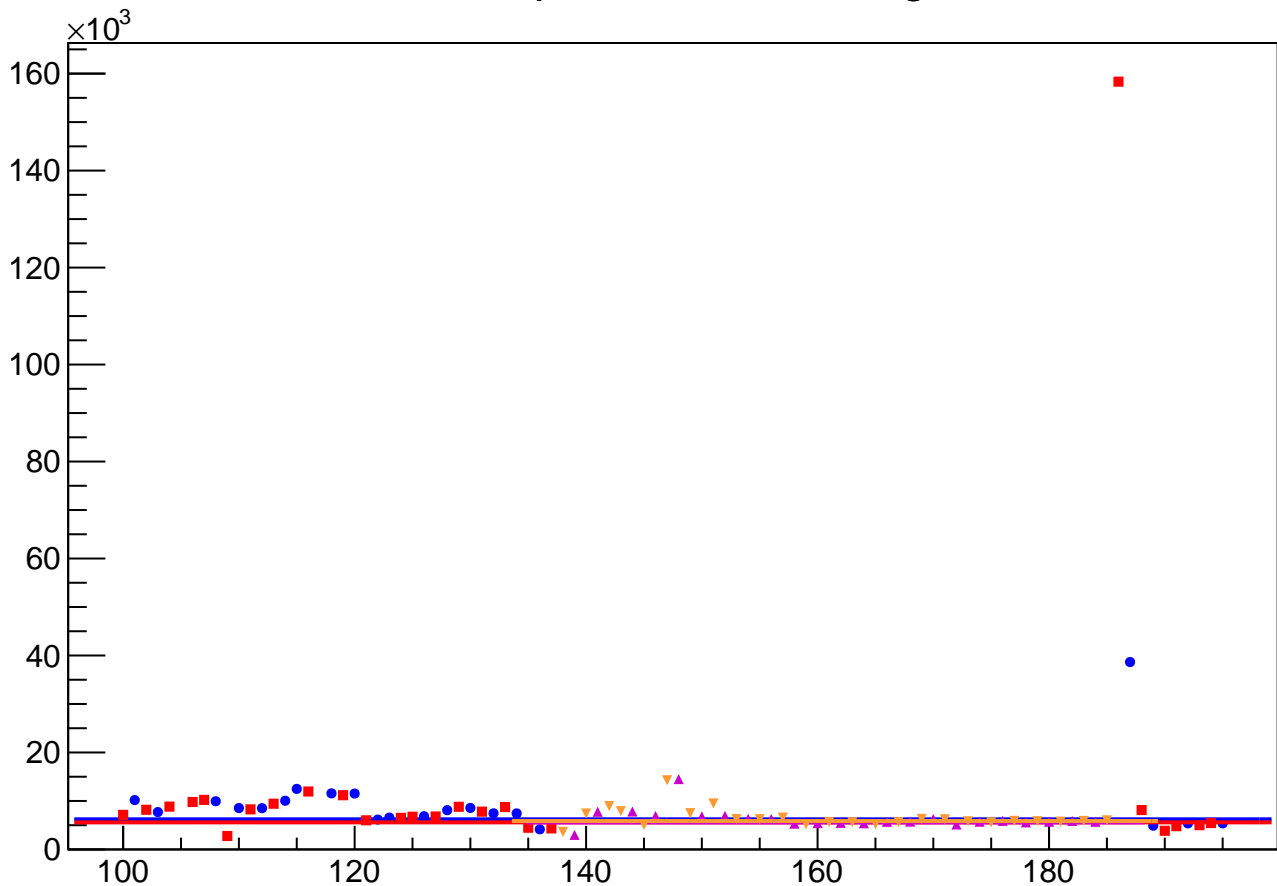
Left In: 1.050 $\pm$ 1.396  $\chi^2$ /NDF:32.5/22

+ sign 0.899 $\pm$ 1.194  $\chi^2$ /NDF: 34.6/45

All: 1.282 $\pm$ 0.821  $\chi^2$ /NDF: 94.7/93

- sign 1.625 $\pm$ 1.131  $\chi^2$ /NDF: 59.9/47

# diff\_bpm1Y\_rms vs Slug

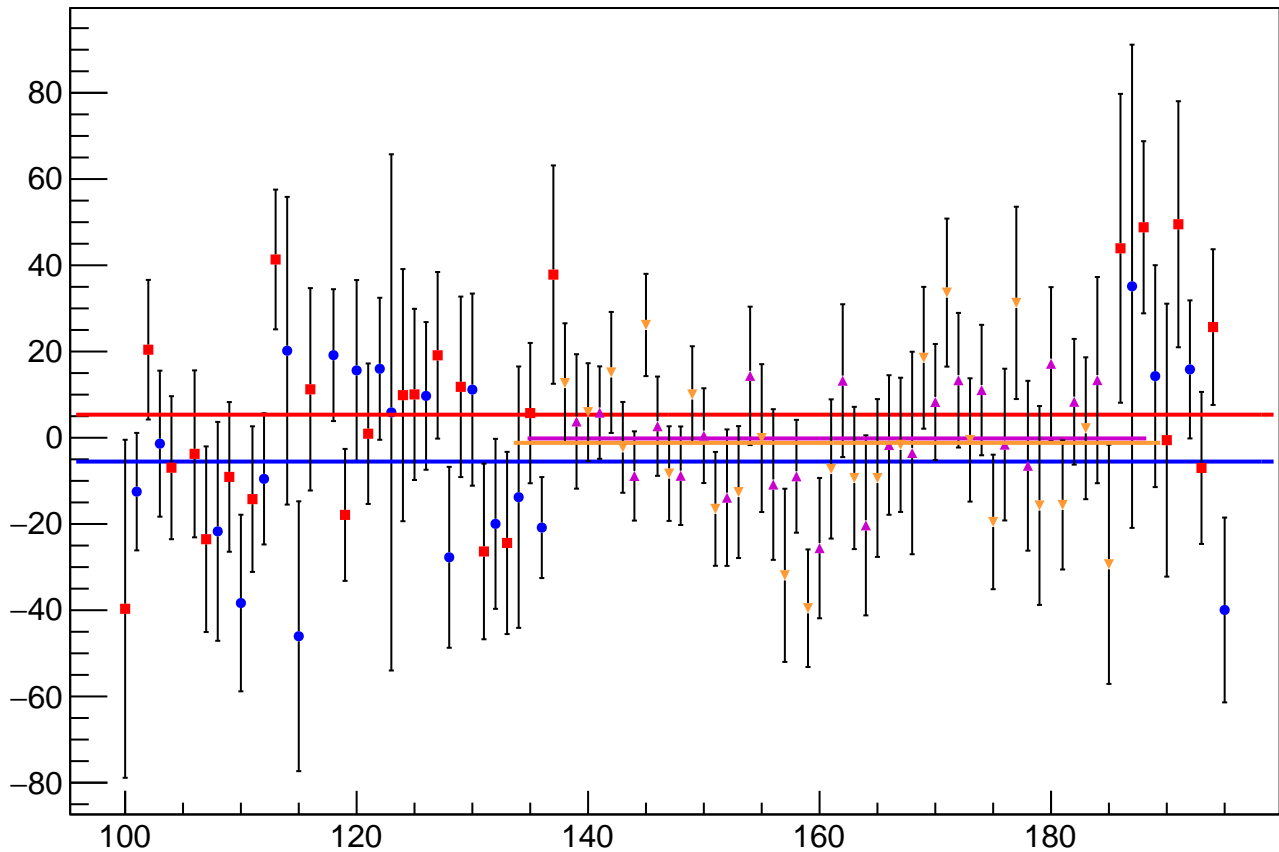


Right In: 6213.923+/-1.566  $\chi^2$ /NDF: 1790415.2/20  
Left Out: 5860.605+/-1.002  $\chi^2$ /NDF: 1690049.2/24  
Right Out: 5589.853+/-1.367  $\chi^2$ /NDF: 3281044.2/24  
Left In: 5571.330+/-0.987  $\chi^2$ /NDF: 2162788.3/22

+ sign 5963.307+/-0.844  $\chi^2$ /NDF: 3516576.4/45  
All: 5760.141+/-0.581  $\chi^2$ /NDF: 9070452.8/93  
- sign 5577.676+/-0.800  $\chi^2$ /NDF: 5443953.2/47



# diff\_bpm11X\_mean vs Slug



Right In:  $-5.525 \pm 4.225$   $\chi^2/\text{NDF}: 21.2/20$

Left Out:  $-1.182 \pm 2.939$   $\chi^2/\text{NDF}: 33.7/24$

Right Out:  $5.354 \pm 3.957$   $\chi^2/\text{NDF}: 31.0/24$

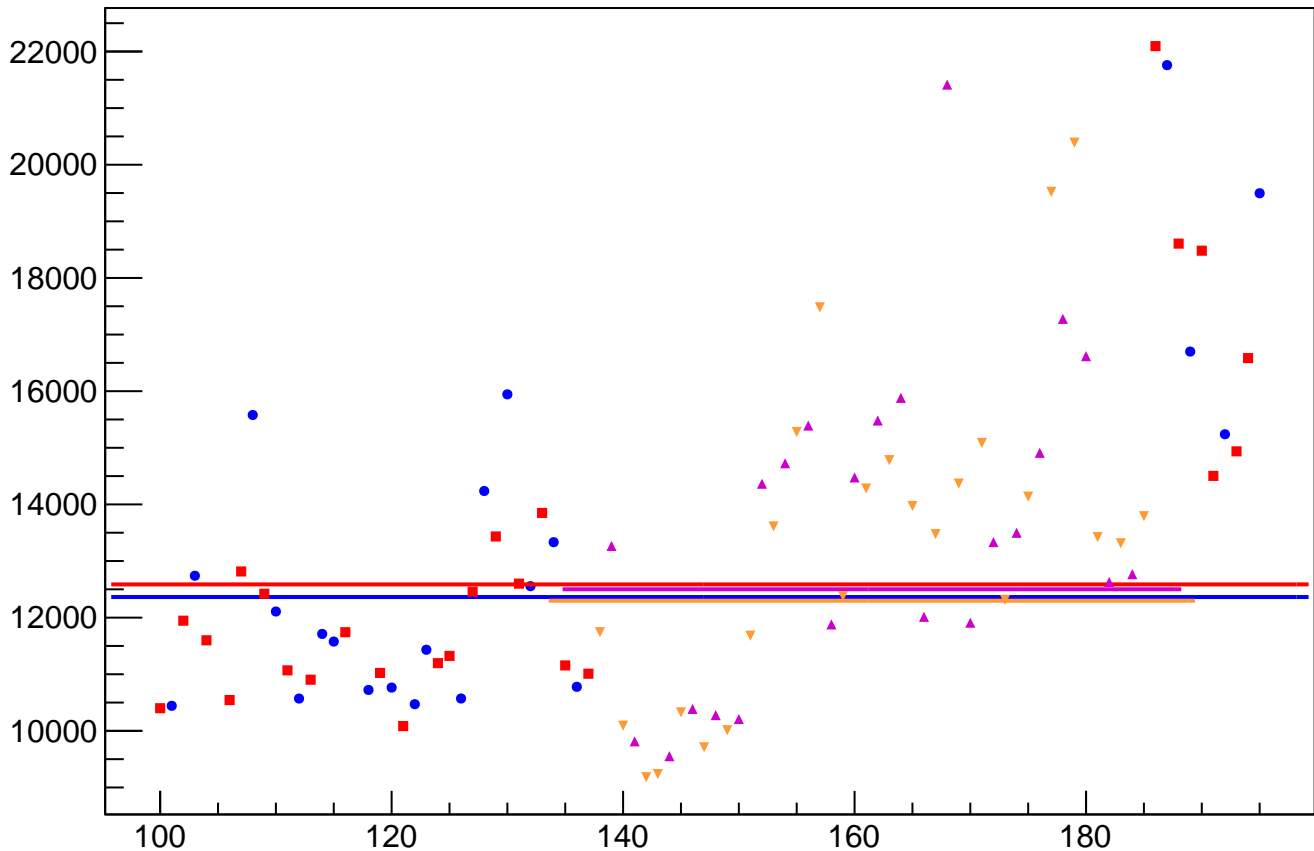
Left In:  $-0.157 \pm 3.058$   $\chi^2/\text{NDF}: 11.5/22$

+ sign  $-2.598 \pm 2.413$   $\chi^2/\text{NDF}: 55.6/45$

All:  $-0.354 \pm 1.708$   $\chi^2/\text{NDF}: 101.1/93$

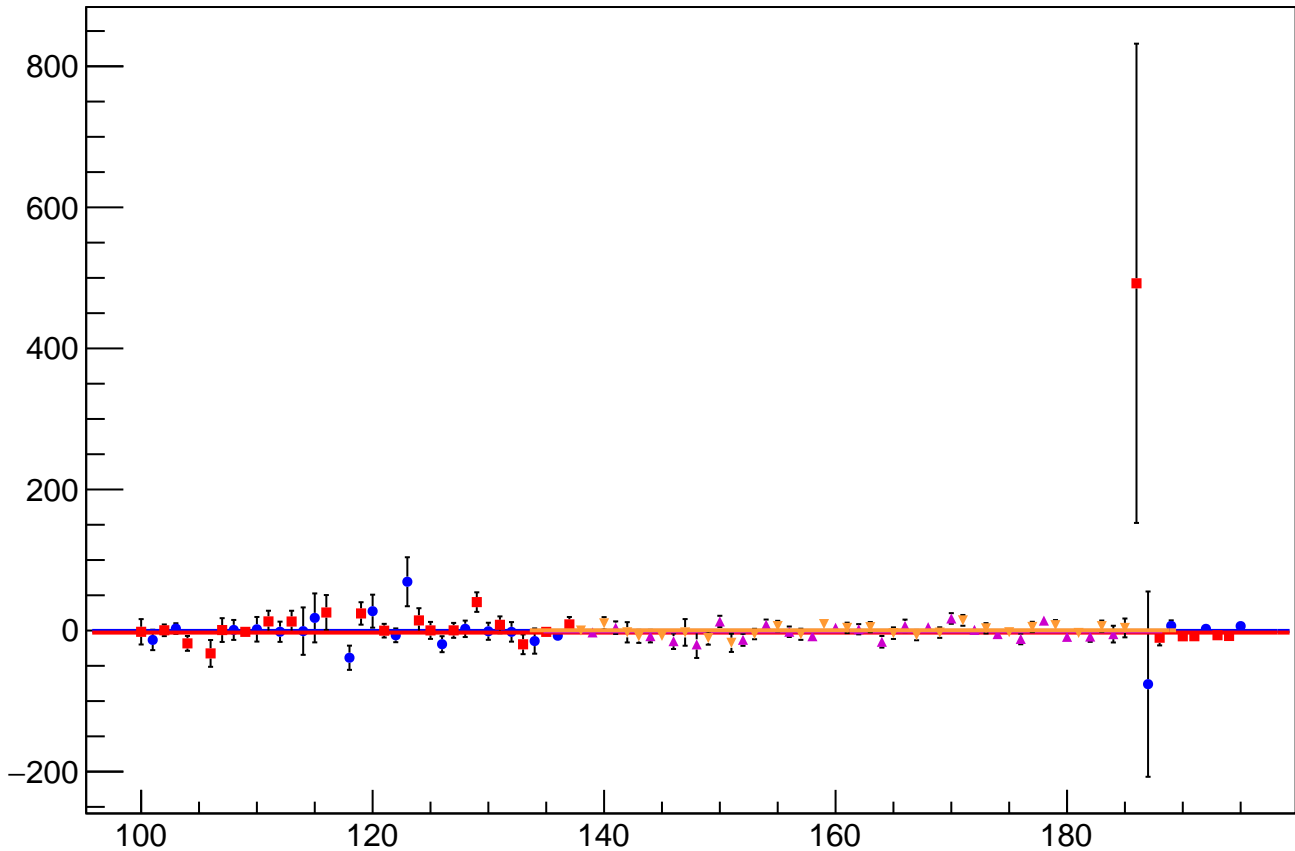
- sign  $1.904 \pm 2.420$   $\chi^2/\text{NDF}: 43.7/47$

# diff\_bpm11X\_rms vs Slug



Right In: 12364.001 $\pm$ 2.988	$\chi^2$ /NDF: 691788.7/20	+ sign 12319.975 $\pm$ 1.706	$\chi^2$ /NDF: 2198137.7/45
Left Out: 12298.676 $\pm$ 2.078	$\chi^2$ /NDF: 1506026.8/24	All: 12426.201 $\pm$ 1.208	$\chi^2$ /NDF: 4293089.6/30
Right Out: 12587.040 $\pm$ 2.798	$\chi^2$ /NDF: 728691.2/24	- sign 12533.045 $\pm$ 1.711	$\chi^2$ /NDF: 2087175.1/47
Left In: 12500.795 $\pm$ 2.162	$\chi^2$ /NDF: 1357889.1/22		

# diff\_bpm11Y\_mean vs Slug



Right In:  $-0.522 \pm 2.044$   $\chi^2/\text{NDF}: 21.2/20$

Left Out:  $0.353 \pm 1.433$   $\chi^2/\text{NDF}: 19.1/24$

Right Out:  $-2.903 \pm 1.797$   $\chi^2/\text{NDF}: 31.0/24$

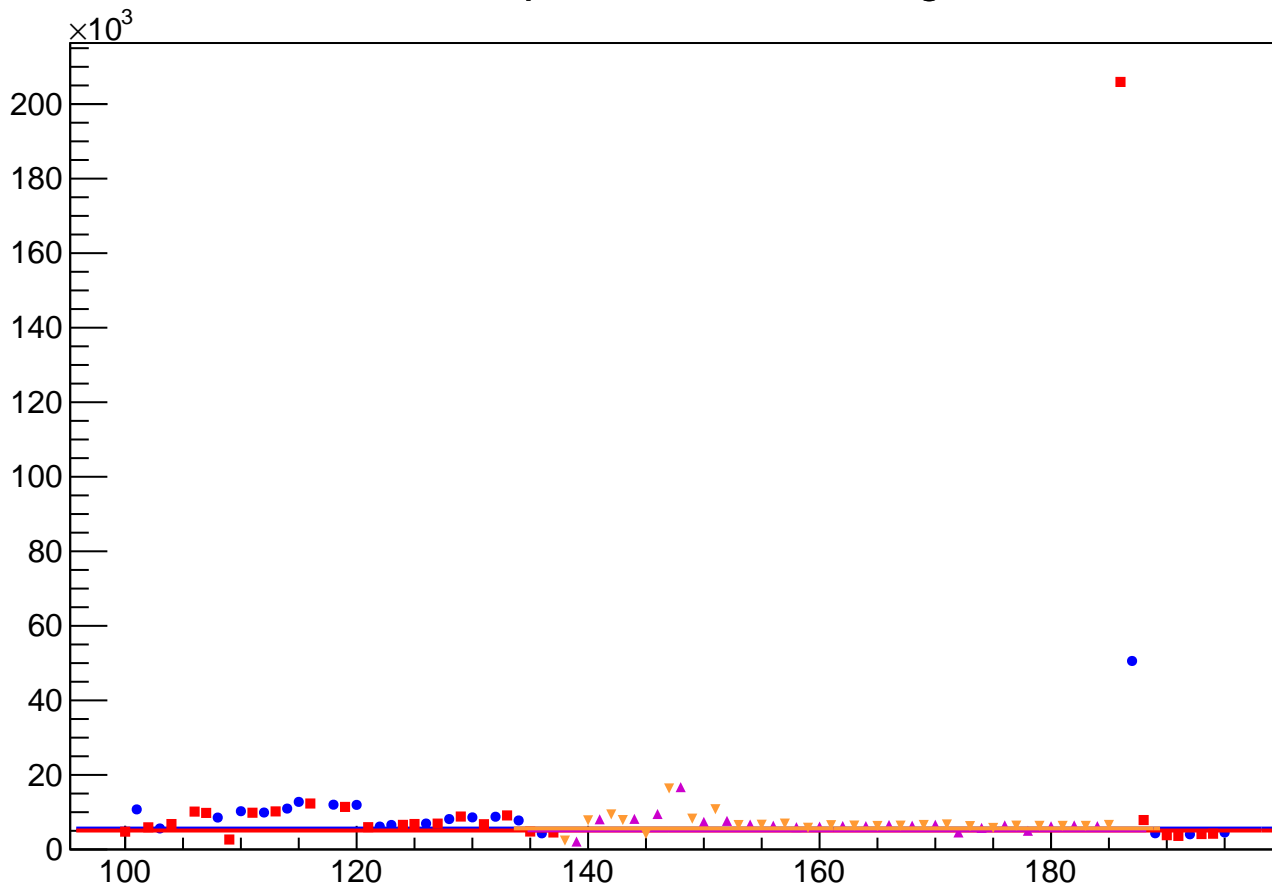
Left In:  $-1.165 \pm 1.371$   $\chi^2/\text{NDF}: 33.6/22$

+ sign  $0.065 \pm 1.174$   $\chi^2/\text{NDF}: 40.4/45$

All:  $-0.939 \pm 0.799$   $\chi^2/\text{NDF}: 107.0/93$

- sign  $-1.805 \pm 1.090$   $\chi^2/\text{NDF}: 65.2/47$

# diff\_bpm11Y\_rms vs Slug



Right In: 5599.464+/-1.445  $\chi^2/\text{NDF}$ : 2394169.4/20

Left Out: 5659.441+/-1.014  $\chi^2/\text{NDF}$ : 4128583.6/24

Right Out: 5082.564+/-1.271  $\chi^2/\text{NDF}$ : 3450580.1/24

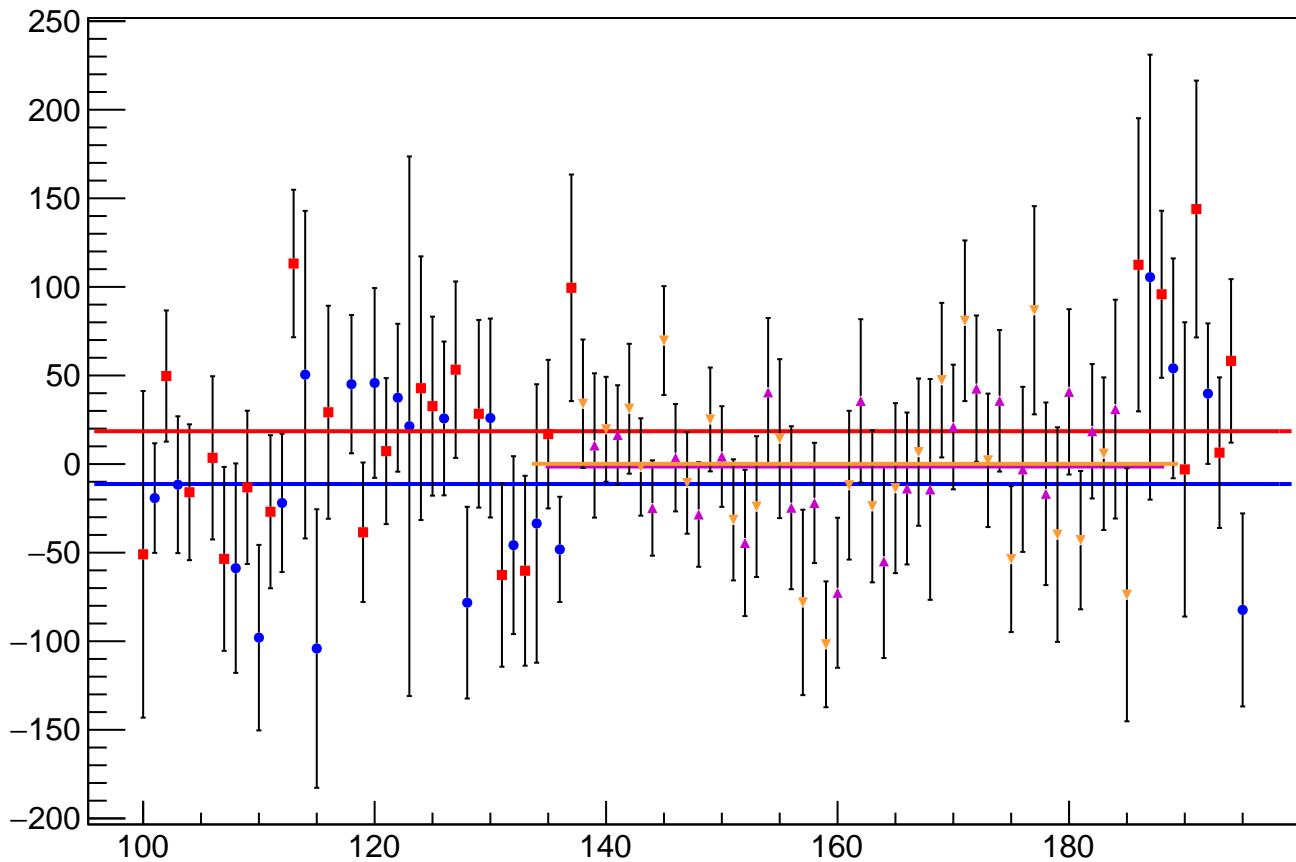
Left In: 5137.772+/-0.970  $\chi^2/\text{NDF}$ : 5495609.7/22

+ sign 5639.671+/-0.830  $\chi^2/\text{NDF}$ : 6523907.2/45

All: 5359.338+/-0.565  $\chi^2/\text{NDF}$ : 15683865.3/95

- sign 5117.451+/-0.771  $\chi^2/\text{NDF}$ : 8947382.8/47

# diff\_bpm12X\_mean vs Slug



Right In:  $-11.265 \pm 10.481$   $\chi^2/\text{NDF}: 20.1/20$

Left Out:  $0.143 \pm 7.683$   $\chi^2/\text{NDF}: 31.3/24$

Right Out:  $18.537 \pm 9.829$   $\chi^2/\text{NDF}: 27.9/24$

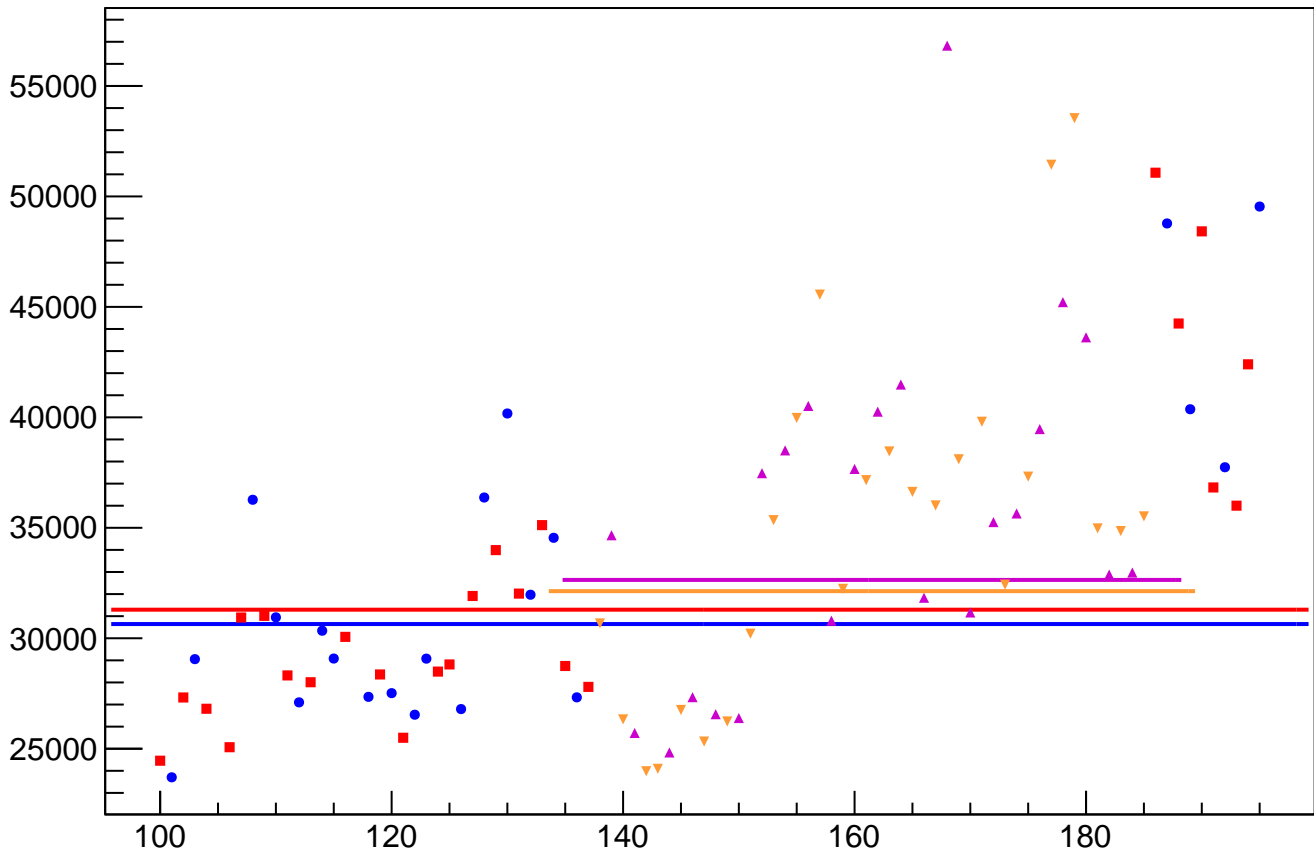
Left In:  $-1.374 \pm 7.990$   $\chi^2/\text{NDF}: 13.3/22$

+ sign  $-3.845 \pm 6.197$   $\chi^2/\text{NDF}: 52.2/45$

All:  $1.349 \pm 4.383$   $\chi^2/\text{NDF}: 97.3/93$

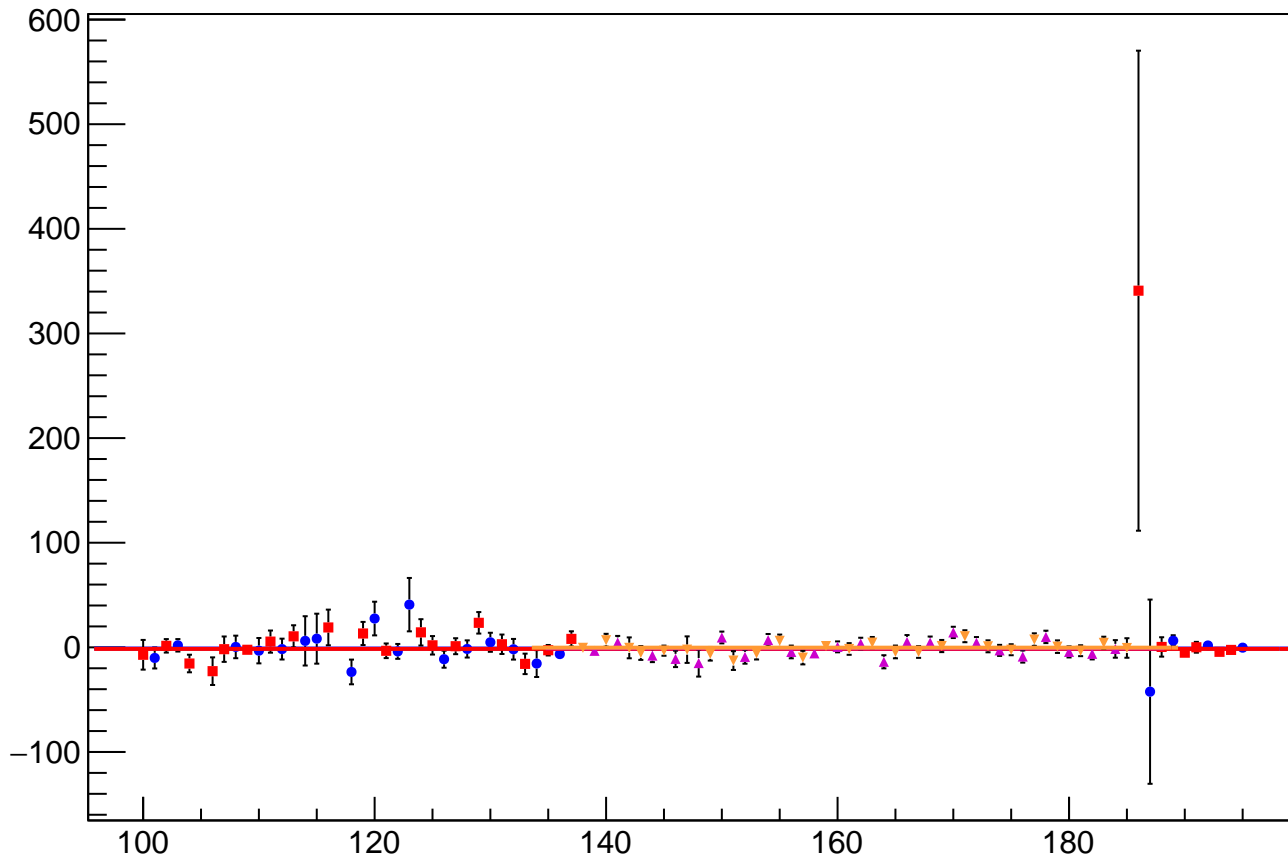
- sign  $6.548 \pm 6.200$   $\chi^2/\text{NDF}: 43.7/47$

# diff\_bpm12X\_rms vs Slug



Right In: 30643.524+/-7.411	$\chi^2/\text{NDF}: 702793.4/20$	+ sign 31611.907+/-4.382	$\chi^2/\text{NDF}: 2269121.9/45$
Left Out: 32132.314+/-5.433	$\chi^2/\text{NDF}: 1540079.4/24$	All: 31858.340+/-3.099	$\chi^2/\text{NDF}: 4411383.4/5$
Right Out: 31293.755+/-6.950	$\chi^2/\text{NDF}: 711140.7/24$	- sign 32105.058+/-4.384	$\chi^2/\text{NDF}: 2135931.4/47$
Left In: 32641.162+/-5.650	$\chi^2/\text{NDF}: 1402162.4/22$		

# diff\_bpm12Y\_mean vs Slug



Right In:  $-1.162 \pm 1.434$   $\chi^2/\text{NDF}: 20.0/20$

Left Out:  $-0.312 \pm 1.172$   $\chi^2/\text{NDF}: 17.6/24$

Right Out:  $-1.484 \pm 1.326$   $\chi^2/\text{NDF}: 26.6/24$

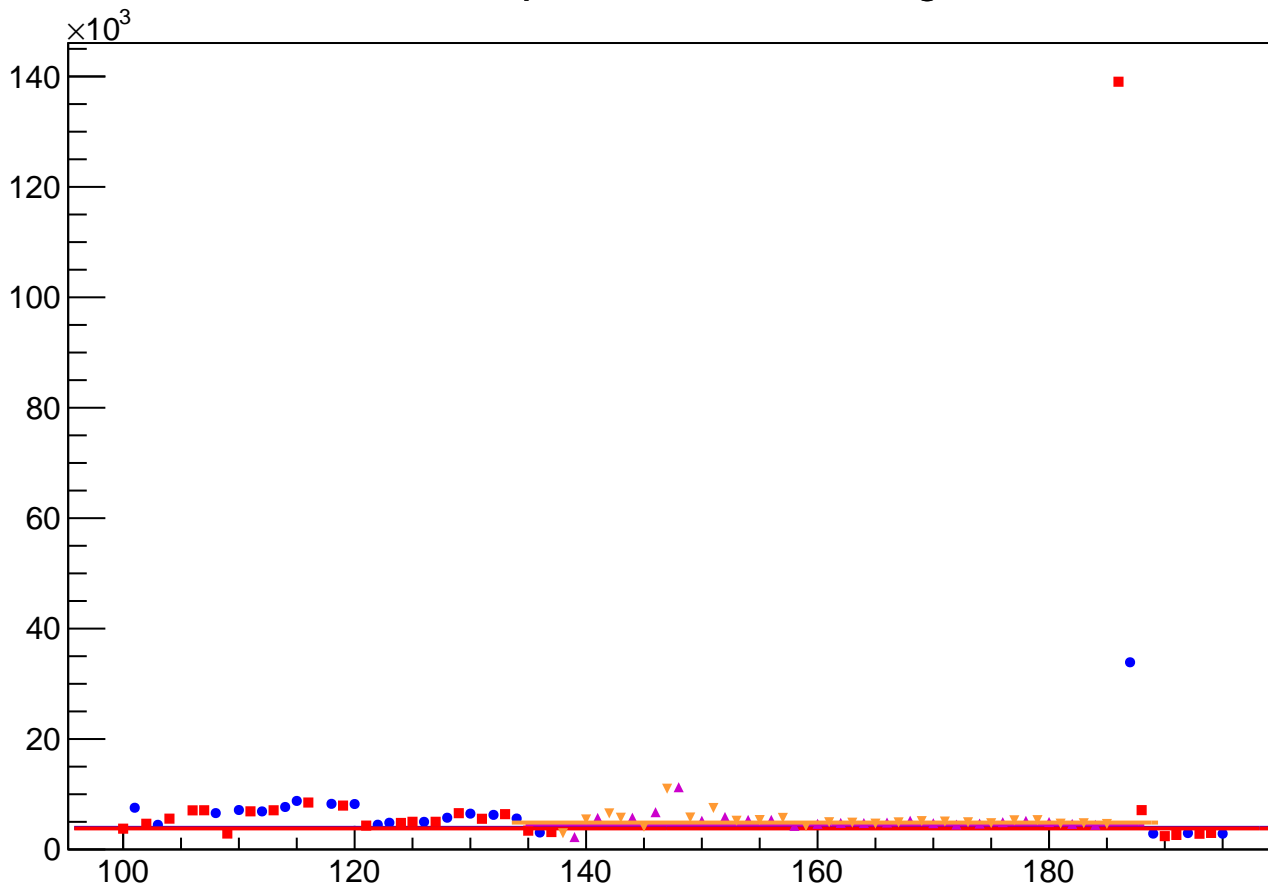
Left In:  $-0.908 \pm 1.142$   $\chi^2/\text{NDF}: 36.2/22$

+ sign  $-0.652 \pm 0.907$   $\chi^2/\text{NDF}: 37.9/45$

All:  $-0.915 \pm 0.626$   $\chi^2/\text{NDF}: 100.9/93$

- sign  $-1.153 \pm 0.865$   $\chi^2/\text{NDF}: 62.8/47$

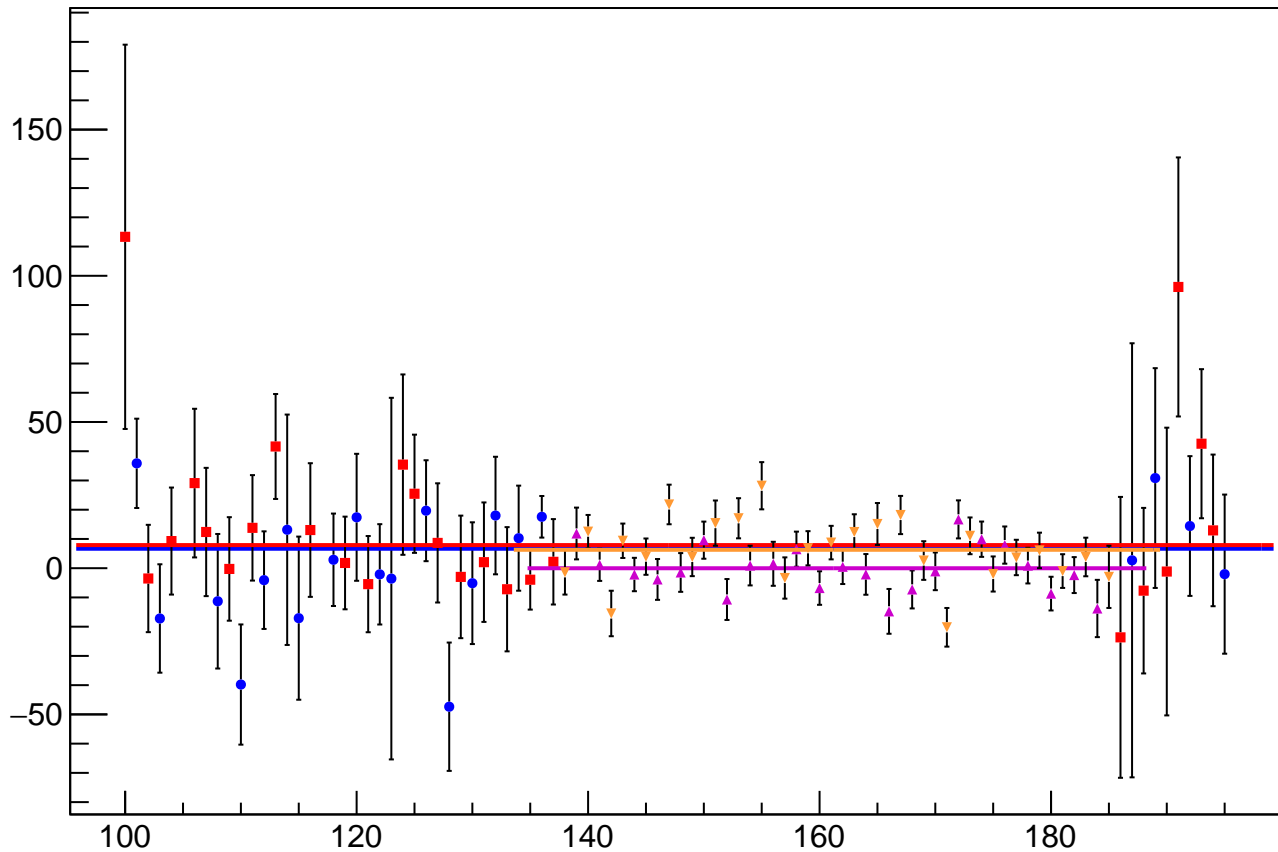
# diff\_bpm12Y\_rms vs Slug



Right In: 3911.144+/-1.014	$\chi^2/\text{NDF}: 2578211.3/20$	+ sign 4485.346+/-0.642	$\chi^2/\text{NDF}: 4623885.1/45$
Left Out: 4868.567+/-0.829	$\chi^2/\text{NDF}: 1511151.0/24$		
Right Out: 3811.865+/-0.938	$\chi^2/\text{NDF}: 3333554.0/24$	All: 4352.832+/-0.443	$\chi^2/\text{NDF}: 11023586.6/9$
Left In: 4544.337+/-0.808	$\chi^2/\text{NDF}: 2634314.4/22$	- sign 4232.308+/-0.612	$\chi^2/\text{NDF}: 6318250.0/47$



# diff\_bpm16X\_mean vs Slug



Right In:  $6.654 \pm 3.959$   $\chi^2/\text{NDF}: 23.1/20$

Left Out:  $6.296 \pm 1.310$   $\chi^2/\text{NDF}: 56.5/24$

Right Out:  $7.903 \pm 4.034$   $\chi^2/\text{NDF}: 18.9/24$

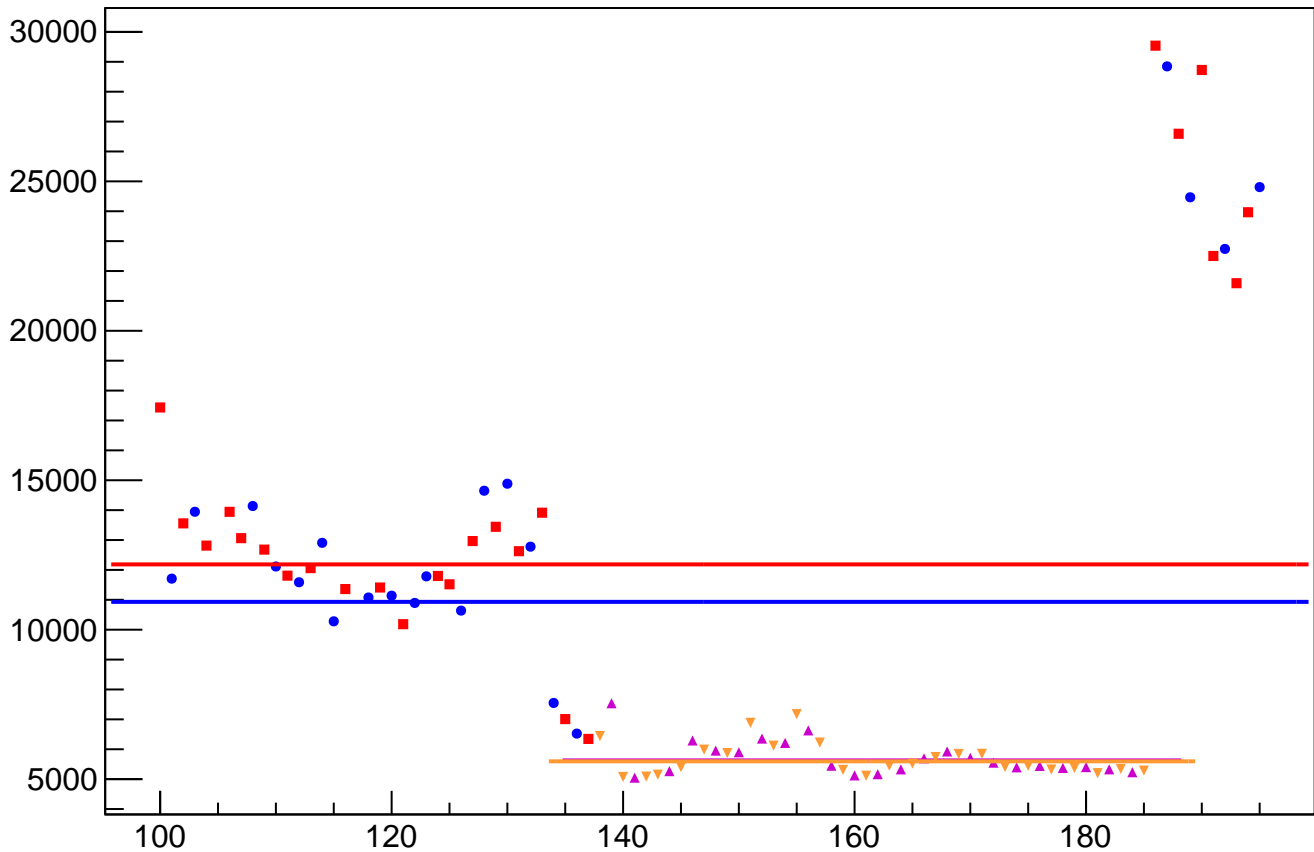
Left In:  $-0.020 \pm 1.353$   $\chi^2/\text{NDF}: 29.9/22$

+ sign  $6.331 \pm 1.244$   $\chi^2/\text{NDF}: 79.6/45$

All:  $3.642 \pm 0.893$   $\chi^2/\text{NDF}: 141.6/93$

- sign  $0.781 \pm 1.283$   $\chi^2/\text{NDF}: 52.3/47$

# diff\_bpm16X\_rms vs Slug



Right In: 10931.231+/-2.799  $\chi^2/\text{NDF}$ : 2483437.2/20

Left Out: 5596.370+/-0.926  $\chi^2/\text{NDF}$ : 283998.1/24

Right Out: 12184.614+/-2.852  $\chi^2/\text{NDF}$ : 2736740.9/24

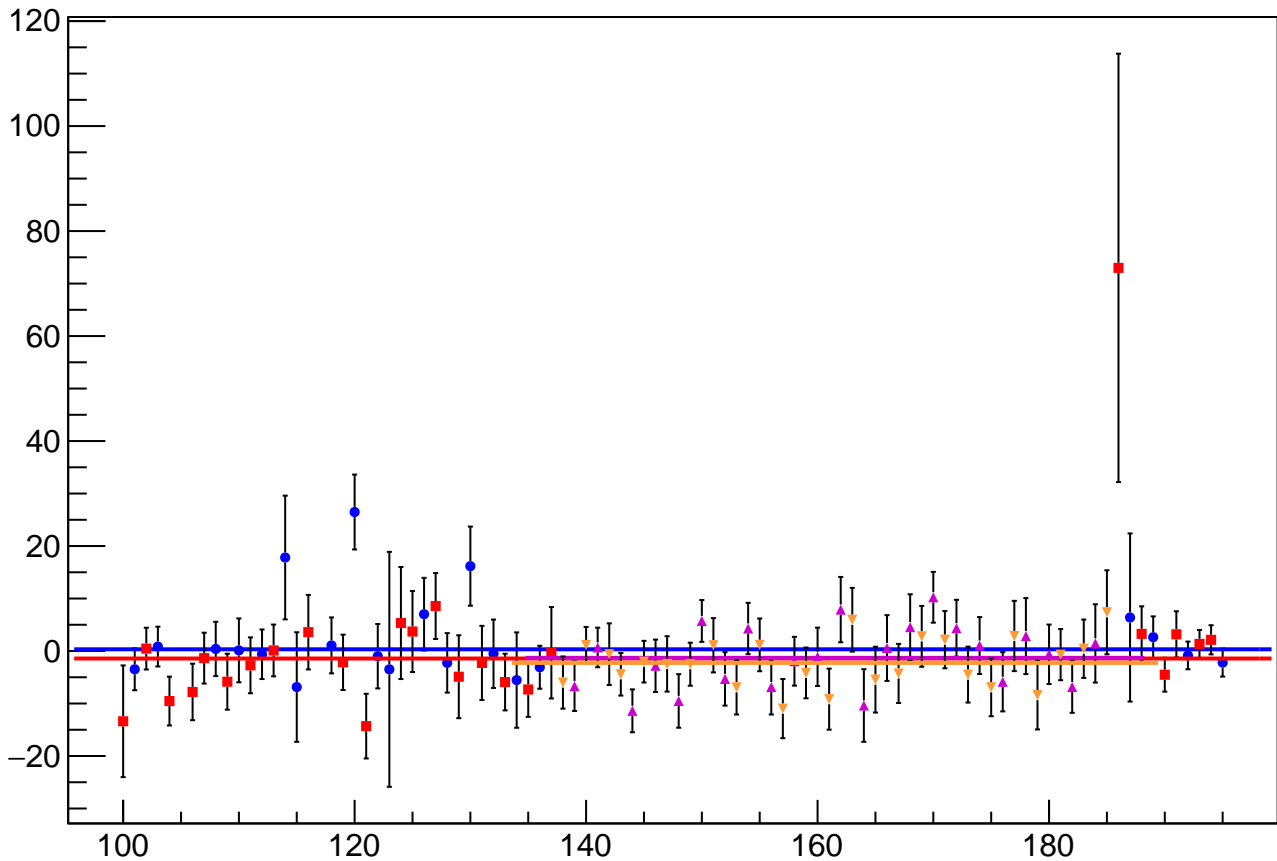
Left In: 5627.283+/-0.957  $\chi^2/\text{NDF}$ : 279318.7/22

+ sign 6123.074+/-0.880  $\chi^2/\text{NDF}$ : 6041260.5/45

All: 6204.193+/-0.631  $\chi^2/\text{NDF}$ : 13825501.7/9

- sign 6290.480+/-0.907  $\chi^2/\text{NDF}$ : 7766686.0/47

# diff\_bpm16Y\_mean vs Slug



Right In:  $0.328 \pm 1.079$   $\chi^2/\text{NDF}: 25.4/20$

Left Out:  $-2.268 \pm 1.029$   $\chi^2/\text{NDF}: 15.4/24$

Right Out:  $-1.429 \pm 0.992$   $\chi^2/\text{NDF}: 26.1/24$

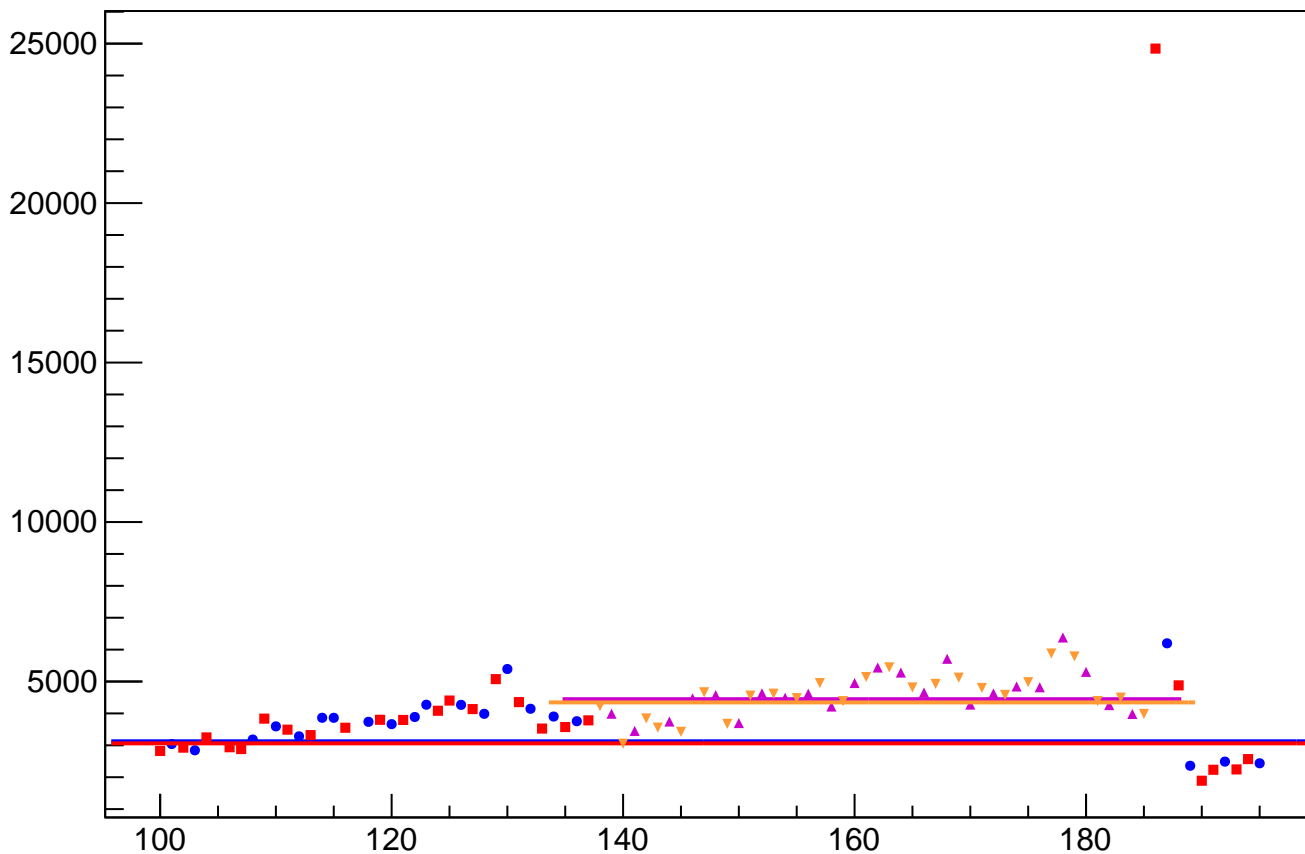
Left In:  $-1.305 \pm 1.077$   $\chi^2/\text{NDF}: 30.8/22$

+ sign  $-1.032 \pm 0.745$   $\chi^2/\text{NDF}: 43.8/45$

All:  $-1.205 \pm 0.521$   $\chi^2/\text{NDF}: 100.9/93$

- sign  $-1.372 \pm 0.730$   $\chi^2/\text{NDF}: 56.9/47$

# diff\_bpm16Y\_rms vs Slug



Right In: 3125.541+/-0.763  $\chi^2$ /NDF: 908896.3/20

Left Out: 4345.381+/-0.728  $\chi^2$ /NDF: 1000636.1/24

Right Out: 3061.182+/-0.701  $\chi^2$ /NDF: 1928006.4/24

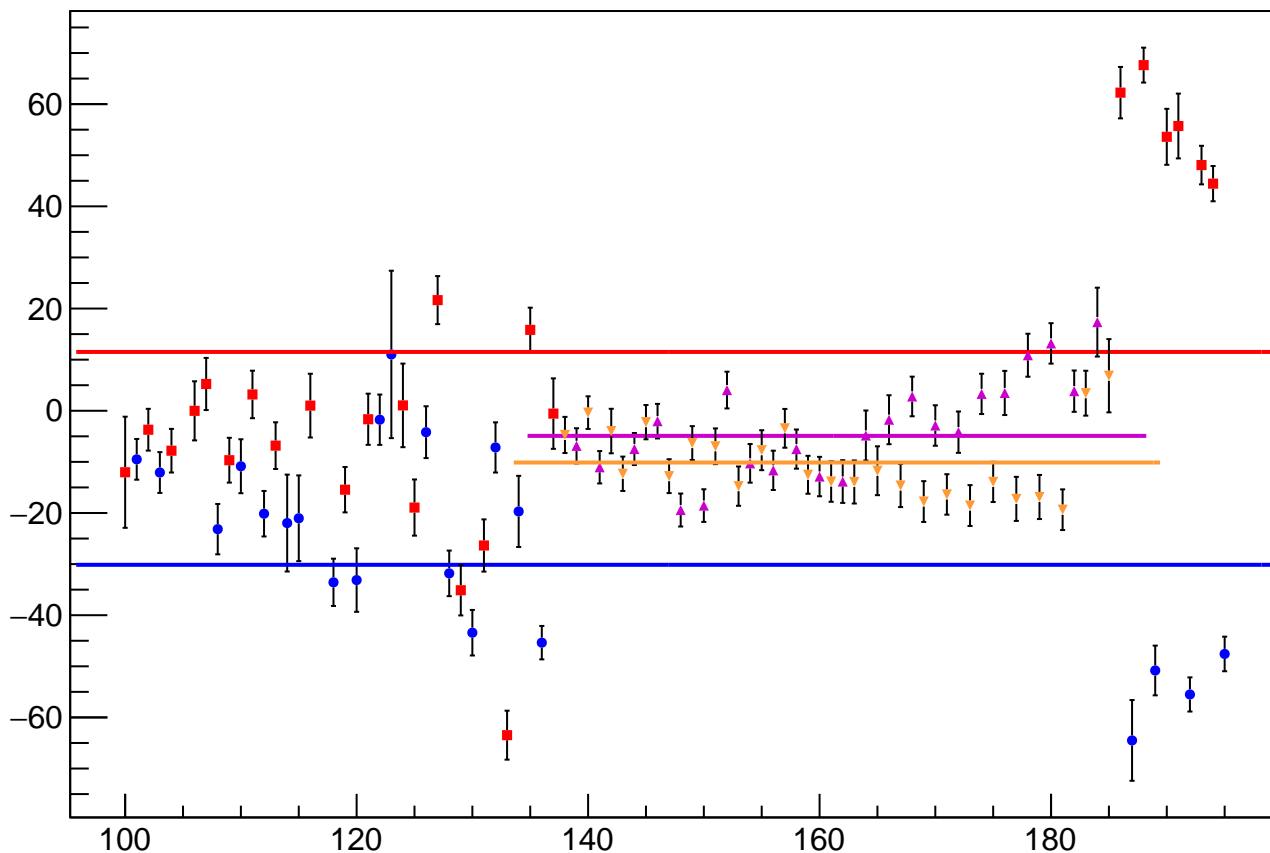
Left In: 4446.181+/-0.762  $\chi^2$ /NDF: 702797.6/22

+ sign 3764.386+/-0.527  $\chi^2$ /NDF: 3247069.4/45

All: 3729.844+/-0.369  $\chi^2$ /NDF: 7675900.2/93

- sign 3696.715+/-0.516  $\chi^2$ /NDF: 4420407.6/47

# diff\_bpm0l01X\_mean vs Slug



Right In:  $-30.138 \pm 1.039$   $\chi^2/\text{NDF}: 312.2/20$

Left Out:  $-10.125 \pm 0.775$   $\chi^2/\text{NDF}: 67.9/24$

Right Out:  $11.513 \pm 0.961$   $\chi^2/\text{NDF}: 1229.3/24$

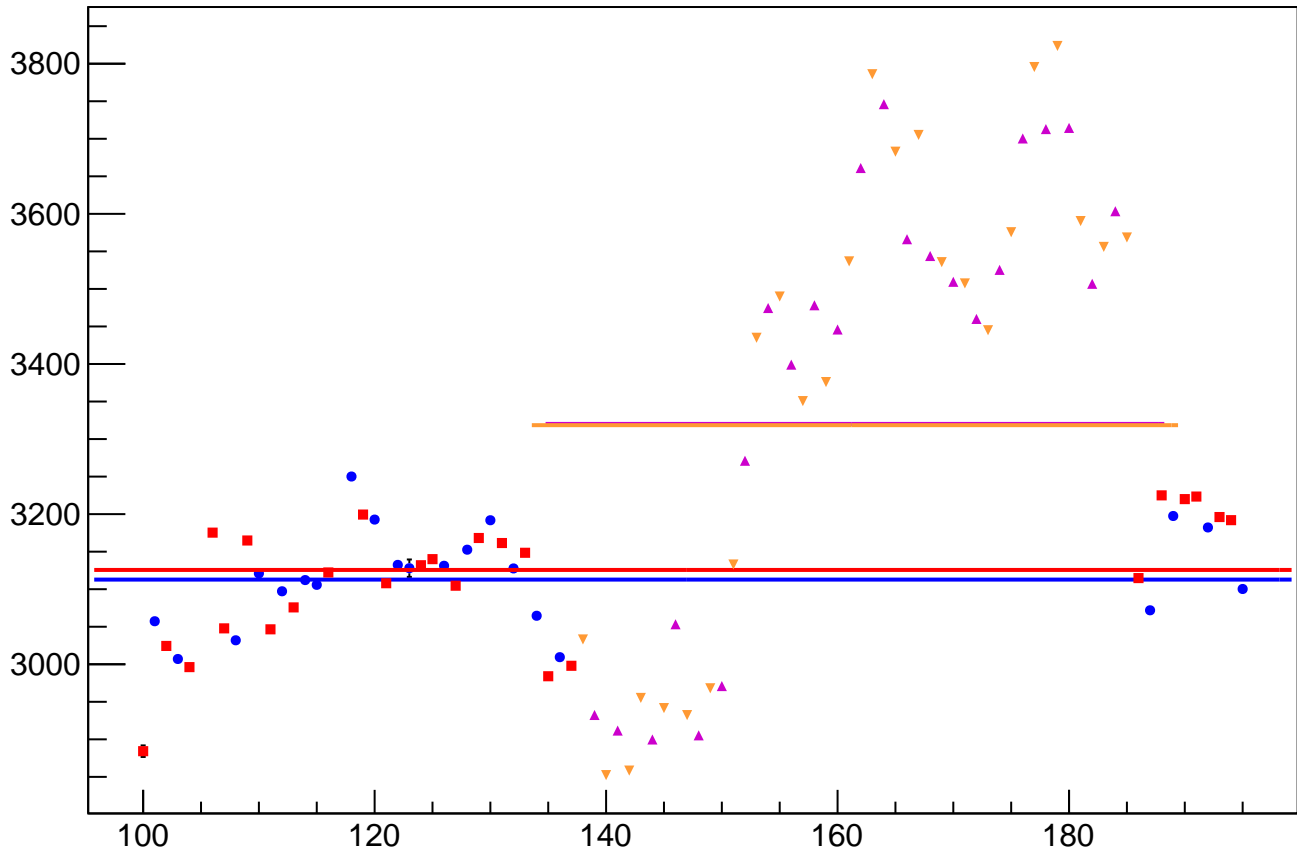
Left In:  $-4.911 \pm 0.797$   $\chi^2/\text{NDF}: 127.9/22$

+ sign  $-17.286 \pm 0.621$   $\chi^2/\text{NDF}: 618.5/45$

All:  $-7.631 \pm 0.437$   $\chi^2/\text{NDF}: 2625.5/93$

- sign  $1.782 \pm 0.614$   $\chi^2/\text{NDF}: 1530.2/47$

# diff\_bpm0l01X\_rms vs Slug



Right In: 3112.800 $\pm$ 0.735  $\chi^2$ /NDF: 8964.6/20

Left Out: 3318.506 $\pm$ 0.548  $\chi^2$ /NDF:337694.2/24

Right Out: 3125.659 $\pm$ 0.680  $\chi^2$ /NDF: 13588.7/24

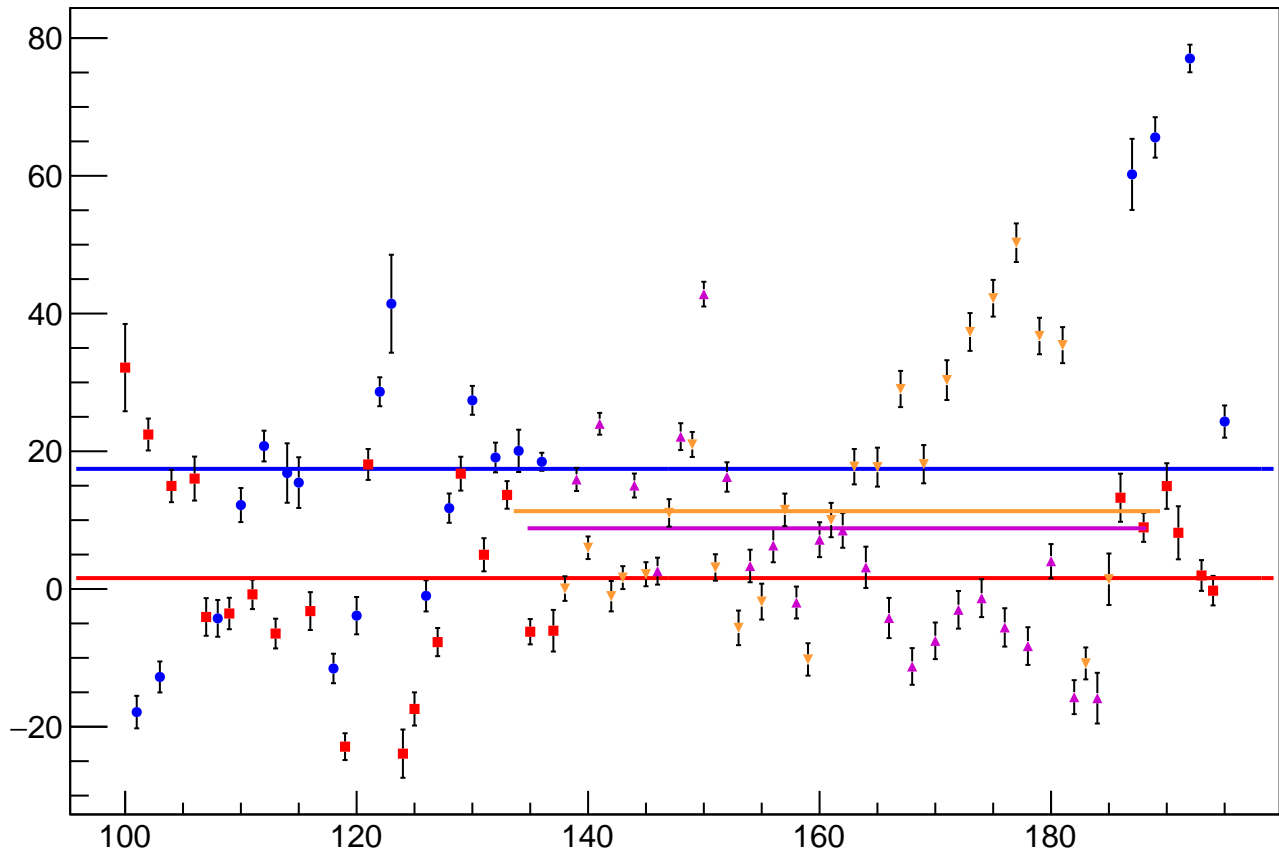
Left In: 3320.170 $\pm$ 0.564  $\chi^2$ /NDF:287634.9/22

+ sign 3244.897 $\pm$ 0.439  $\chi^2$ /NDF: 397019.3/45

All: 3242.873 $\pm$ 0.309  $\chi^2$ /NDF: 746816.5/93

- sign 3240.900 $\pm$ 0.434  $\chi^2$ /NDF: 349755.3/47

# diff\_bpm0l01Y\_mean vs Slug



Right In: 17.446 $\pm$ 0.517  $\chi^2$ /NDF: 2090.9/20

Left Out: 11.305 $\pm$ 0.454  $\chi^2$ /NDF: 1144.3/24

Right Out: 1.585 $\pm$ 0.487  $\chi^2$ /NDF: 677.0/24

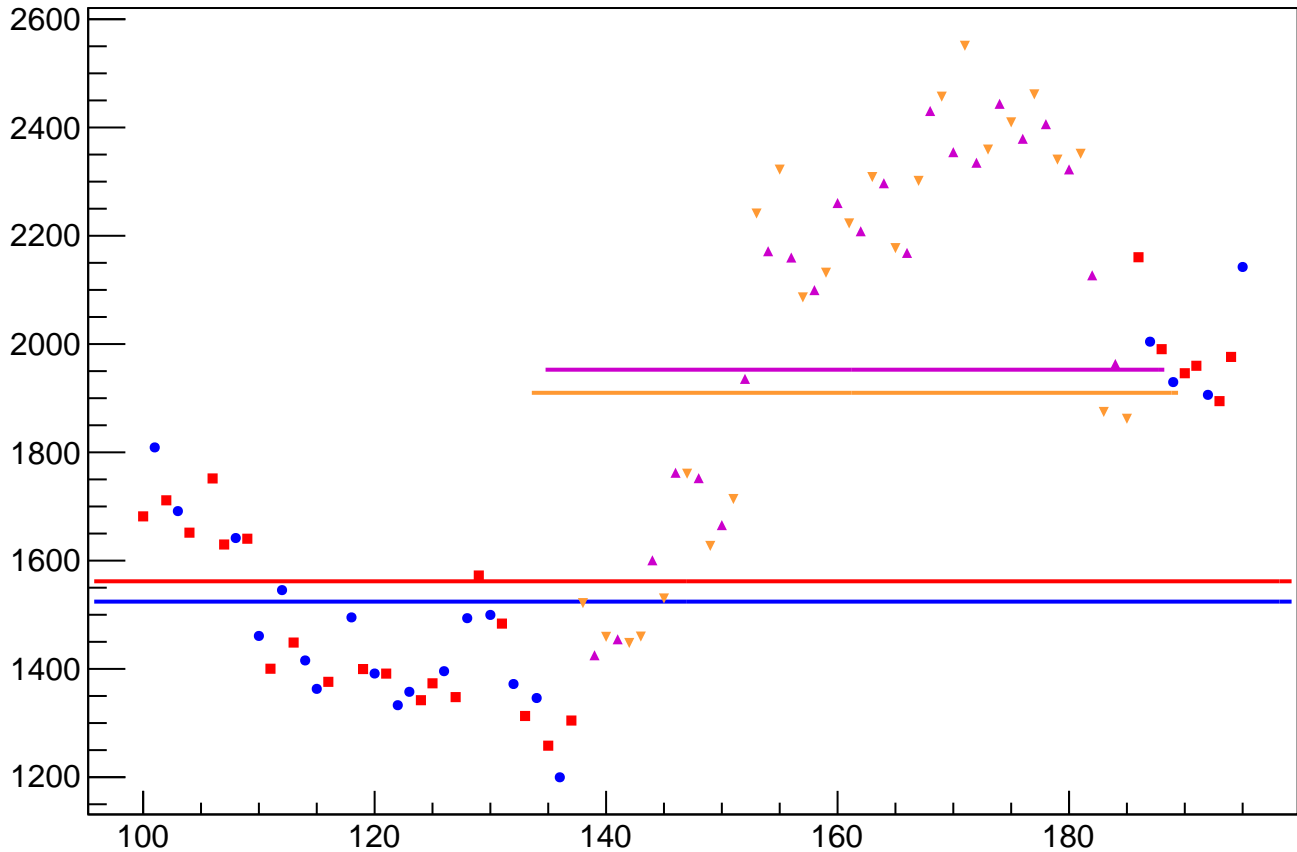
Left In: 8.815 $\pm$ 0.475  $\chi^2$ /NDF: 942.2/22

+ sign 13.979 $\pm$ 0.341  $\chi^2$ /NDF: 3314.9/45

All: 9.623 $\pm$ 0.241  $\chi^2$ /NDF: 5372.4/93

- sign 5.288 $\pm$ 0.340  $\chi^2$ /NDF: 1732.0/47

# diff\_bpm0l01Y\_rms vs Slug



Right In: 1524.285 $\pm$ 0.365  $\chi^2$ /NDF: 488211.4/20

Left Out: 1909.963 $\pm$ 0.321  $\chi^2$ /NDF:1399467.7/24

Right Out: 1561.805 $\pm$ 0.344  $\chi^2$ /NDF: 526976.3/24

Left In: 1952.637 $\pm$ 0.336  $\chi^2$ /NDF:1065333.8/22

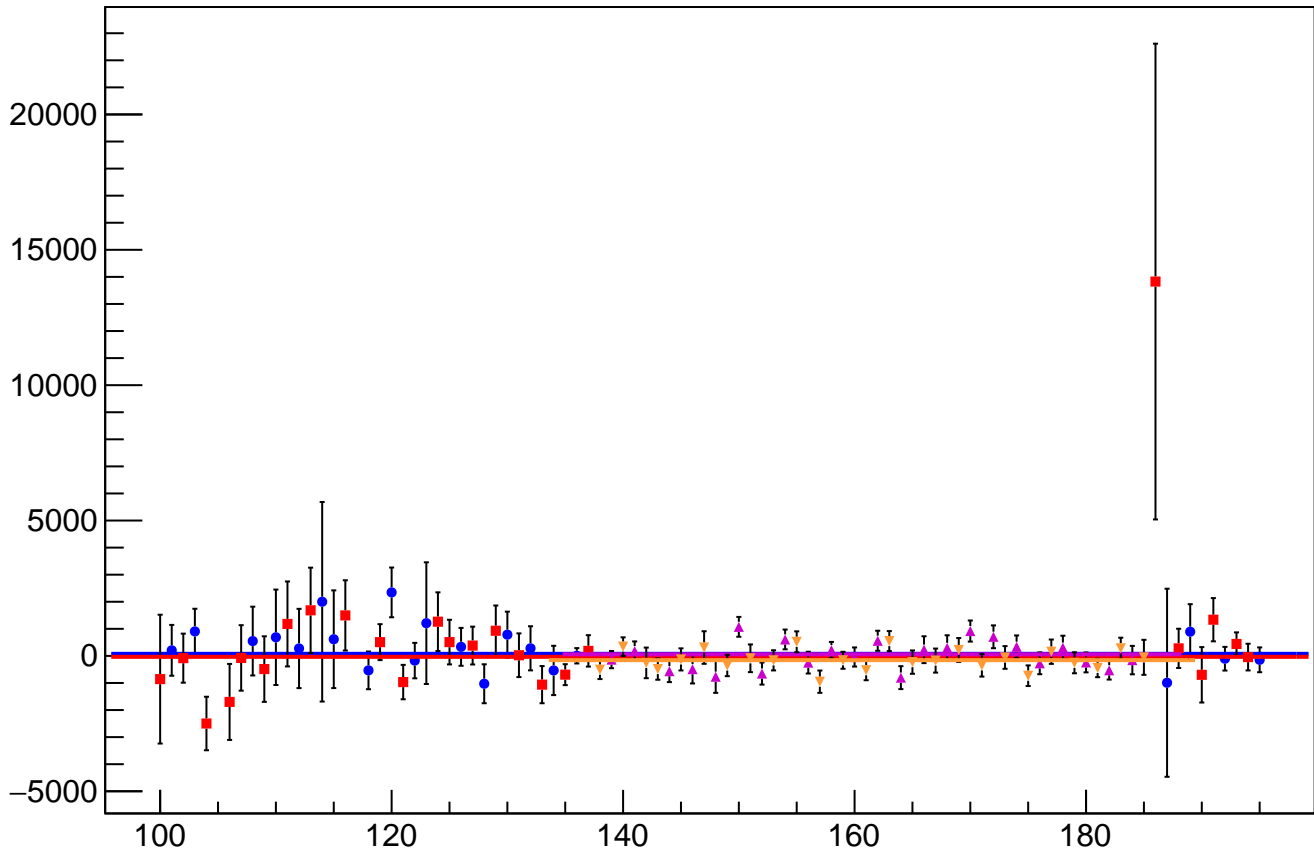
+ sign 1742.034 $\pm$ 0.241  $\chi^2$ /NDF: 2516545.8/45

All: 1752.040 $\pm$ 0.170  $\chi^2$ /NDF: 4771720.4/93

- sign 1762.000 $\pm$ 0.241  $\chi^2$ /NDF: 2251738.4/47



# asym\_sam1\_mean vs Slug



Right In: 76.876+/-154.848  $\chi^2/\text{NDF}$ : 13.8/20

Left Out: -157.242+/-80.796  $\chi^2/\text{NDF}$ :22.0/24

Right Out: -34.866+/-151.955  $\chi^2/\text{NDF}$ : 29.7/24

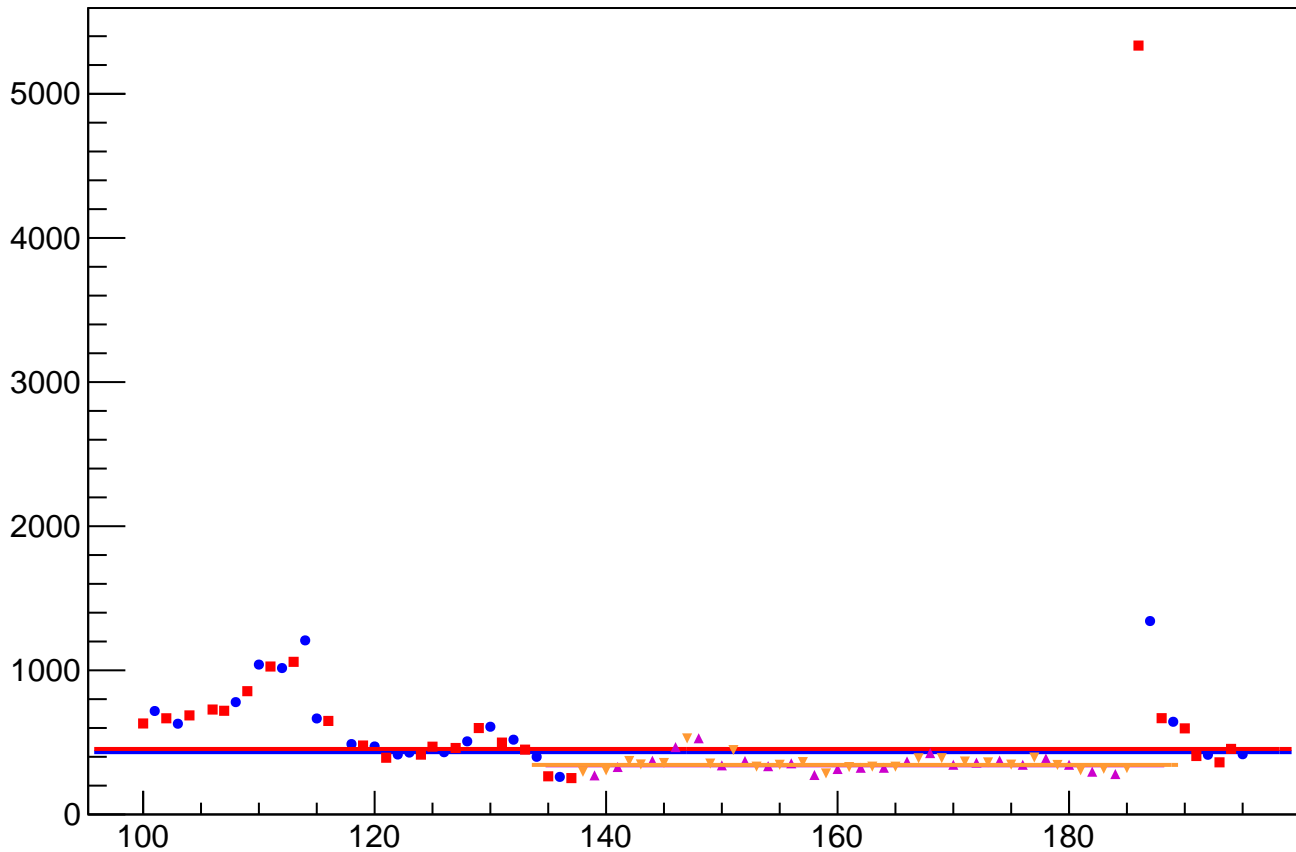
Left In: 58.934+/-82.584  $\chi^2/\text{NDF}$ :38.5/22

+ sign -107.143+/-71.631  $\chi^2/\text{NDF}$ : 37.7/45

All: -35.731+/-50.976  $\chi^2/\text{NDF}$ : 108.2/93

- sign 37.546+/-72.561  $\chi^2/\text{NDF}$ : 68.6/47

# asym\_sam1\_rms vs Slug



Right In: 432.200 $\pm$ 0.109  $\chi^2$ /NDF: 2236449.1/20

Left Out: 343.807 $\pm$ 0.057  $\chi^2$ /NDF: 539431.0/24

Right Out: 454.438 $\pm$ 0.107  $\chi^2$ /NDF: 2963779.8/24

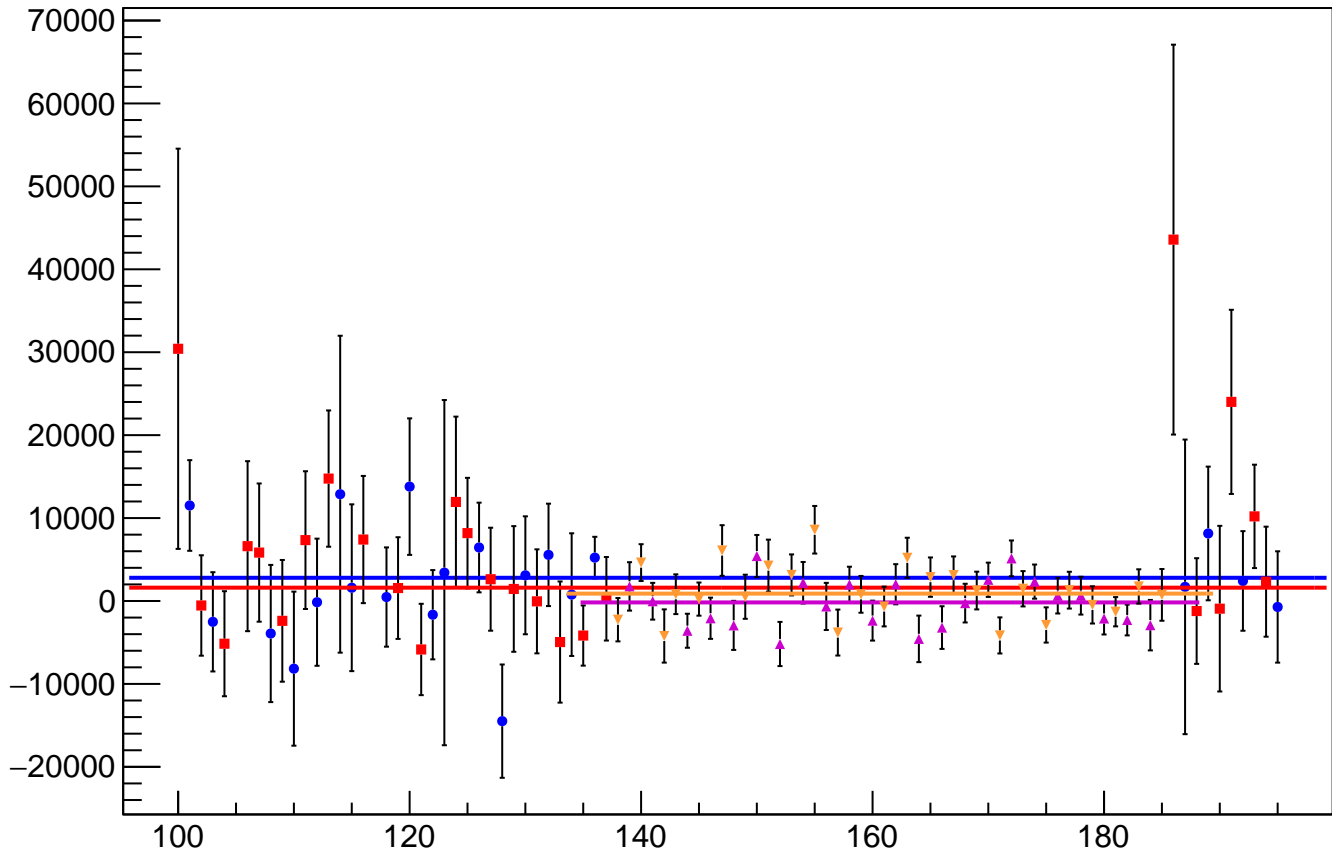
Left In: 340.876 $\pm$ 0.058  $\chi^2$ /NDF: 724672.0/22

+ sign 362.722 $\pm$ 0.051  $\chi^2$ /NDF: 3288139.3/45

All: 364.720 $\pm$ 0.036  $\chi^2$ /NDF: 7842064.0/93

- sign 366.770 $\pm$ 0.051  $\chi^2$ /NDF: 4550771.9/47

# asym\_sam2\_mean vs Slug



Right In: 2798.950+/-1356.332  $\chi^2$ /NDF: 17.2/20

Left Out: 890.395+/-473.262  $\chi^2$ /NDF:38.0/24

Right Out: 1607.662+/-1373.498  $\chi^2$ /NDF: 23.8/24

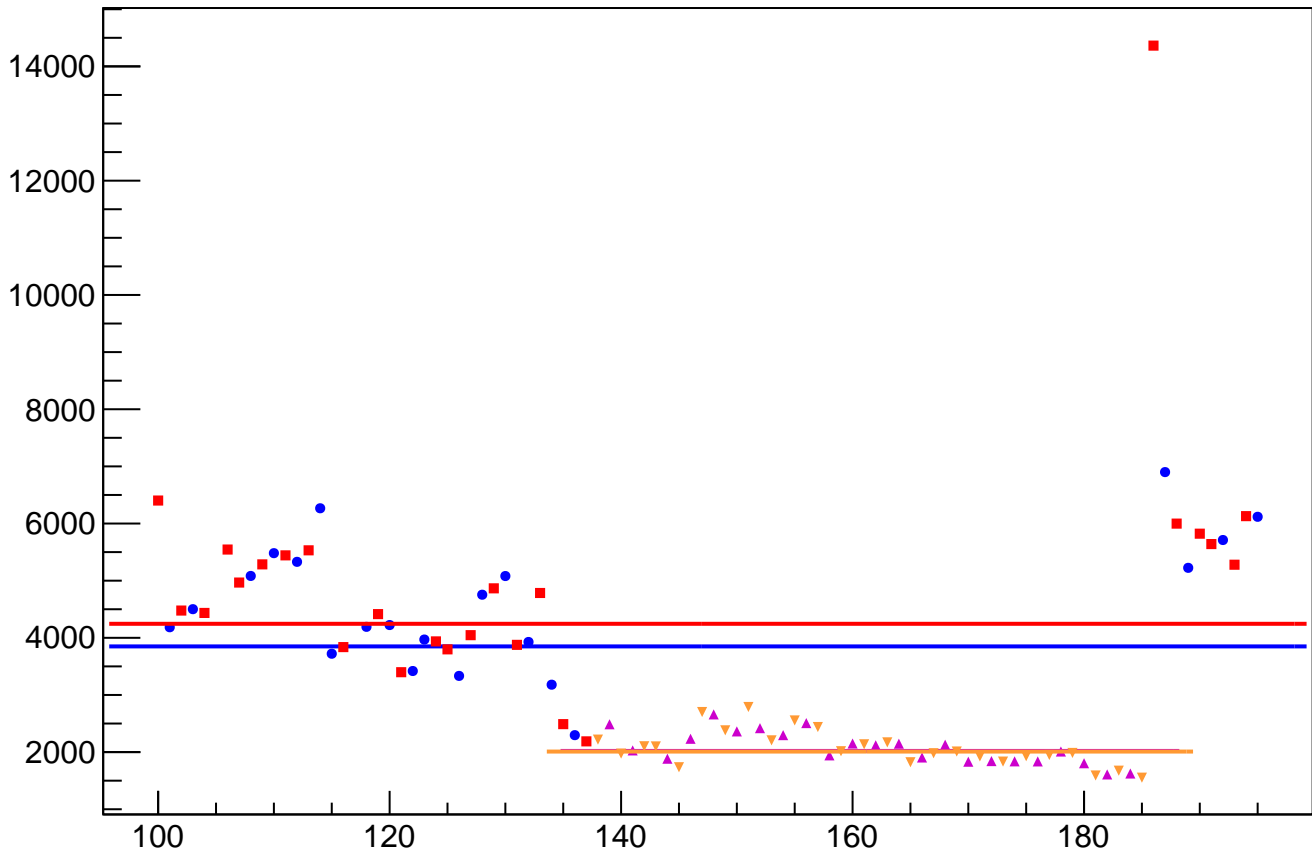
Left In: -172.391+/-488.067  $\chi^2$ /NDF:33.2/22

+ sign 1097.542+/-446.841  $\chi^2$ /NDF: 57.0/45

All: 577.766+/-320.480  $\chi^2$ /NDF: 118.3/93

- sign 27.178+/-459.895  $\chi^2$ /NDF: 58.5/47

# asym\_sam2\_rms vs Slug



Right In:  $3849.690 \pm 0.959$   $\chi^2/\text{NDF}: 1699926.3/20$

Left Out:  $2009.631 \pm 0.335$   $\chi^2/\text{NDF}: 709977.6/24$

Right Out:  $4245.291 \pm 0.971$   $\chi^2/\text{NDF}: 1918426.4/24$

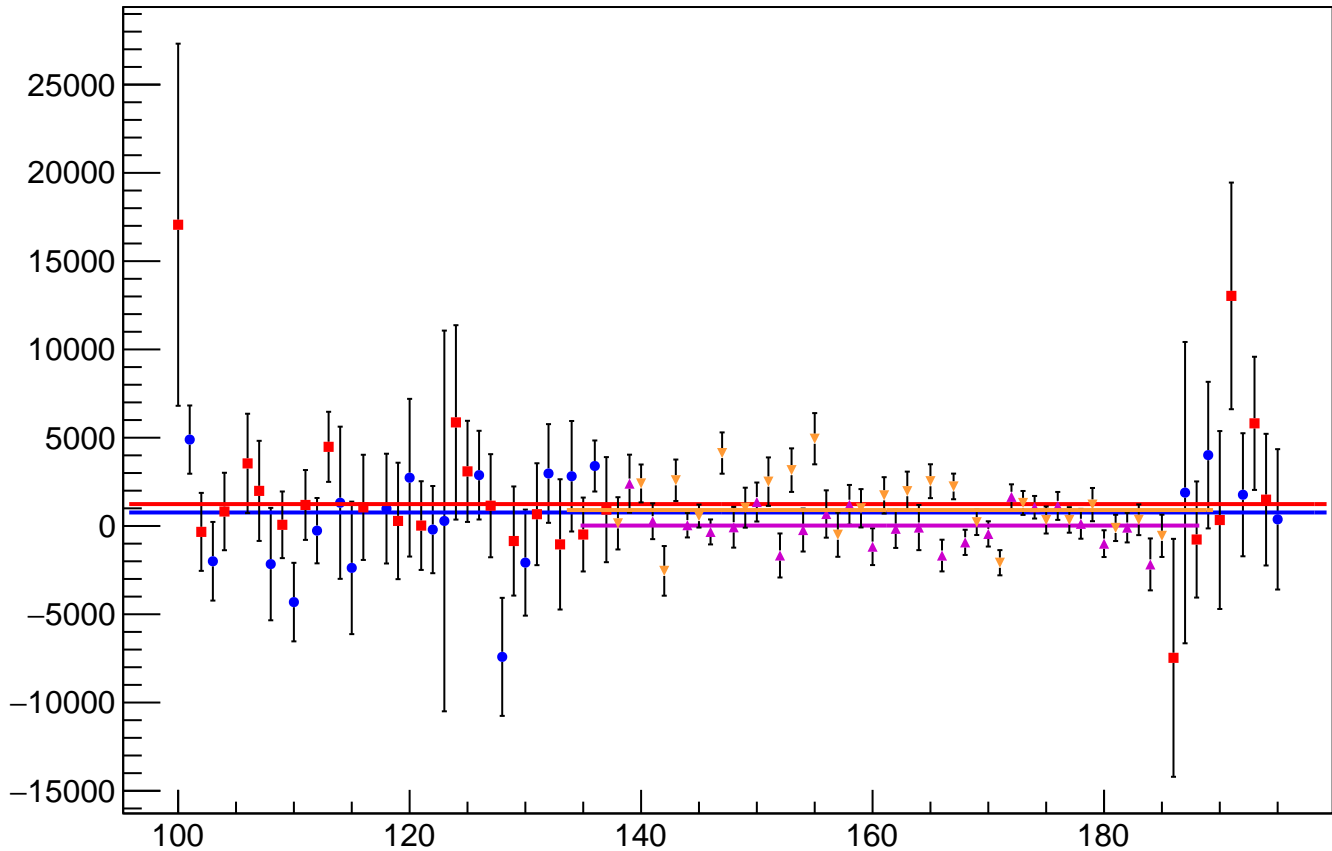
Left In:  $2020.365 \pm 0.345$   $\chi^2/\text{NDF}: 573483.0/22$

+ sign  $2209.344 \pm 0.316$   $\chi^2/\text{NDF}: 5691349.3/45$

All:  $2238.707 \pm 0.227$   $\chi^2/\text{NDF}: 12860787.5/9$

- sign  $2269.811 \pm 0.325$   $\chi^2/\text{NDF}: 7151653.8/47$

# asym\_sam3\_mean vs Slug



Right In:  $764.940 \pm 597.842$   $\chi^2/\text{NDF}: 26.2/20$

Left Out:  $902.091 \pm 185.850$   $\chi^2/\text{NDF}: 63.5/24$

Right Out:  $1240.214 \pm 571.822$   $\chi^2/\text{NDF}: 16.7/24$

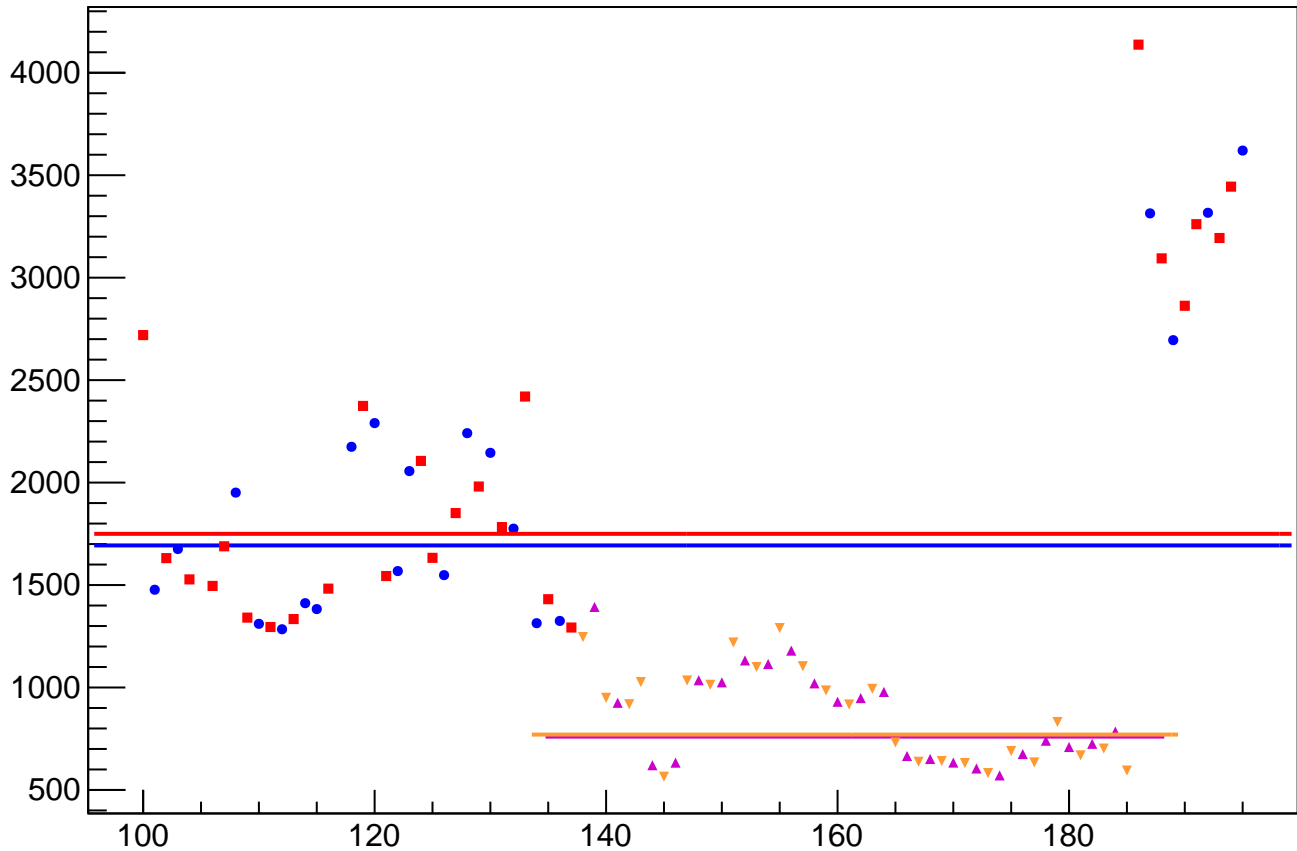
Left In:  $23.529 \pm 188.137$   $\chi^2/\text{NDF}: 28.2/22$

+ sign  $890.005 \pm 177.472$   $\chi^2/\text{NDF}: 89.8/45$

All:  $518.790 \pm 125.928$   $\chi^2/\text{NDF}: 147.6/93$

- sign  $142.370 \pm 178.712$   $\chi^2/\text{NDF}: 49.0/47$

# asym\_sam3\_rms vs Slug



Right In:  $1693.290 \pm 0.423$   $\chi^2/\text{NDF}: 1667561.8/20$

Left Out:  $770.320 \pm 0.131$   $\chi^2/\text{NDF}: 2287655.1/24$

+ sign  $851.655 \pm 0.125$   $\chi^2/\text{NDF}: 8302010.8/45$

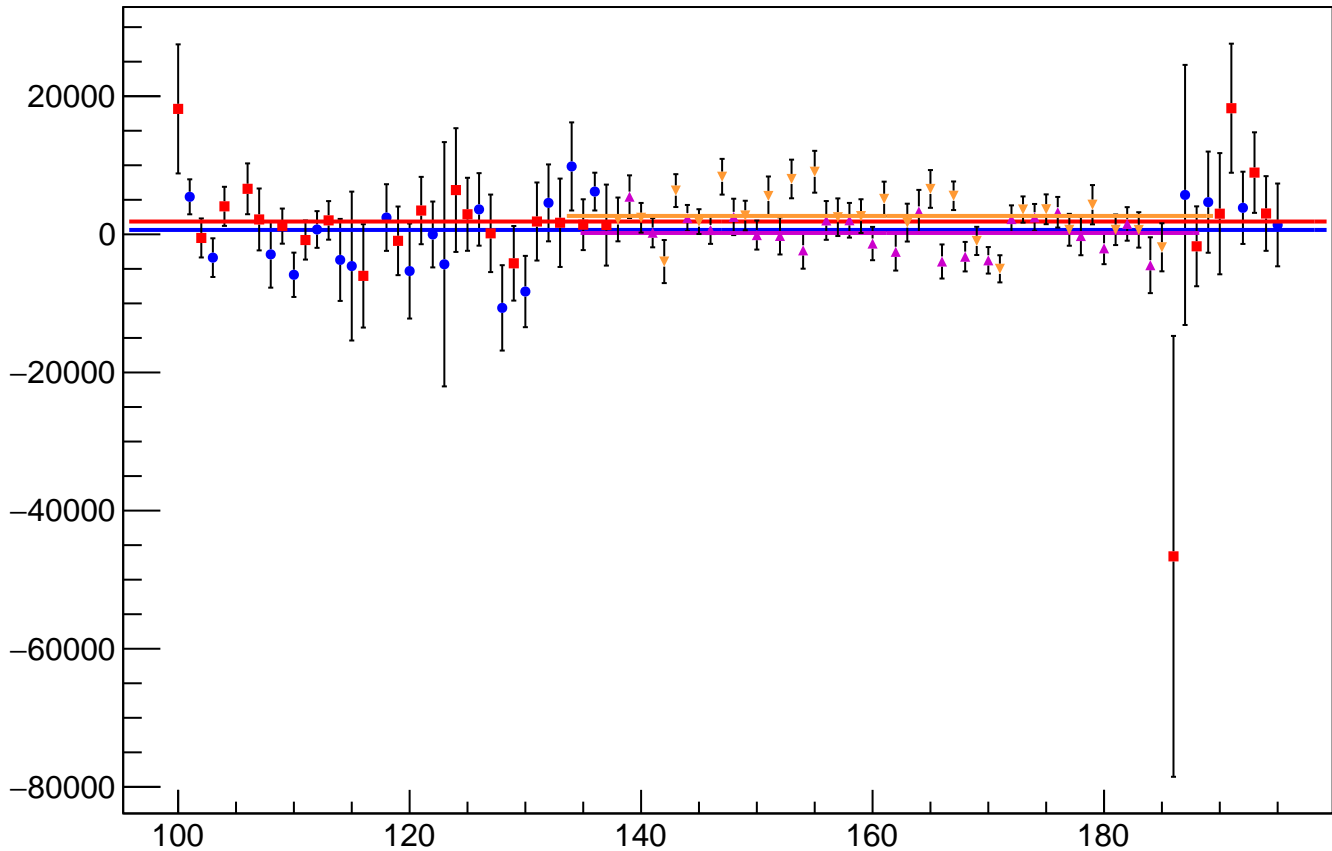
Right Out:  $1749.940 \pm 0.404$   $\chi^2/\text{NDF}: 2134820.8/24$

All:  $854.314 \pm 0.089$   $\chi^2/\text{NDF}: 17829288.9/93$

Left In:  $760.352 \pm 0.133$   $\chi^2/\text{NDF}: 1986749.8/22$

- sign  $857.011 \pm 0.126$   $\chi^2/\text{NDF}: 9526373.6/47$

# asym\_sam4\_mean vs Slug



Right In:  $636.786 \pm 957.923$   $\chi^2/\text{NDF}: 26.1/20$

Left Out:  $2665.587 \pm 479.773$   $\chi^2/\text{NDF}: 49.2/24$

Right Out:  $1854.796 \pm 881.915$   $\chi^2/\text{NDF}: 17.5/24$

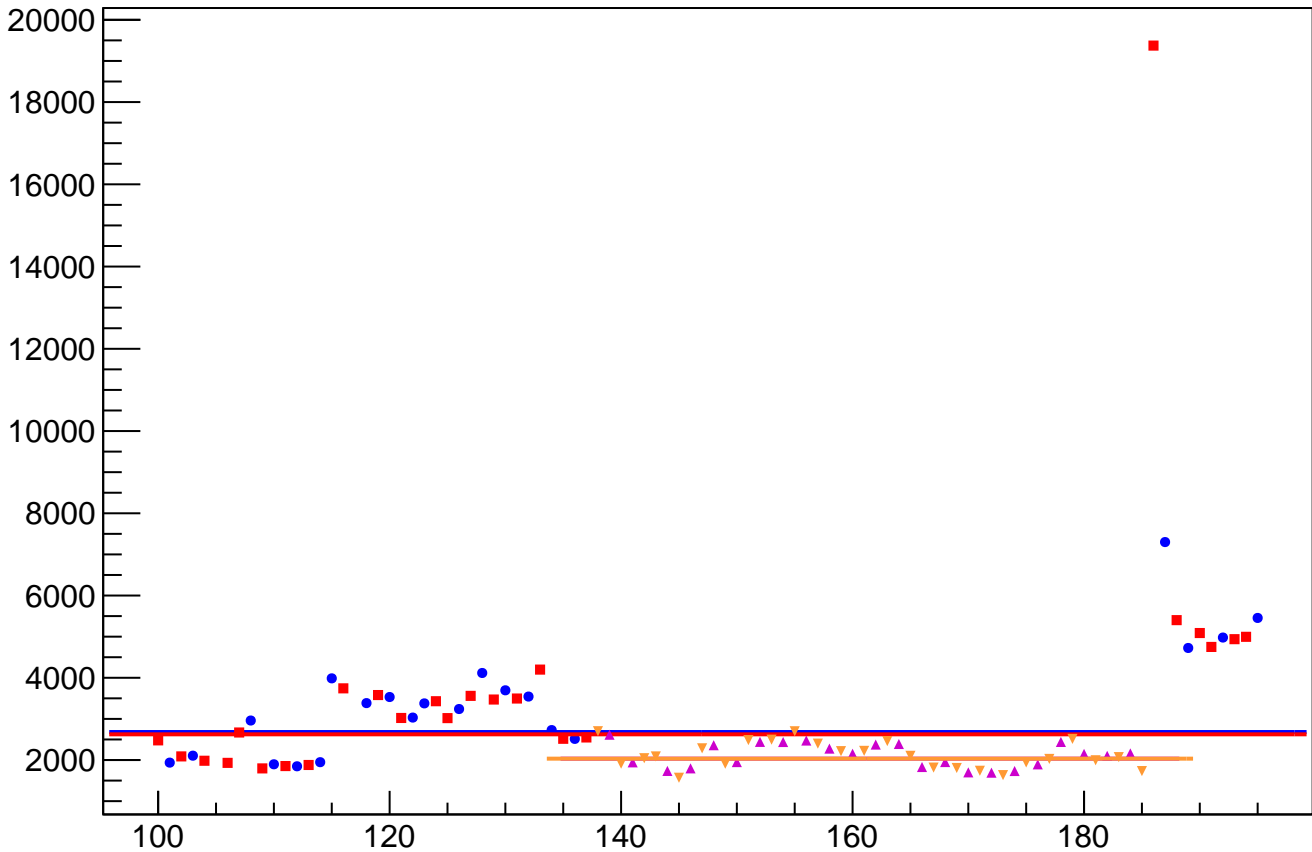
Left In:  $199.371 \pm 492.082$   $\chi^2/\text{NDF}: 25.8/22$

+ sign  $2258.727 \pm 428.977$   $\chi^2/\text{NDF}: 78.9/45$

All:  $1426.995 \pm 303.593$   $\chi^2/\text{NDF}: 132.4/93$

- sign  $592.394 \pm 429.716$   $\chi^2/\text{NDF}: 46.0/47$

# asym\_sam4\_rms vs Slug



Right In: 2680.796 $\pm$ 0.677  $\chi^2$ /NDF: 2080930.0/20

Left Out: 2033.337 $\pm$ 0.339  $\chi^2$ /NDF: 824062.2/24

Right Out: 2625.207 $\pm$ 0.624  $\chi^2$ /NDF: 3157929.1/24

Left In: 2032.655 $\pm$ 0.348  $\chi^2$ /NDF: 652763.7/22

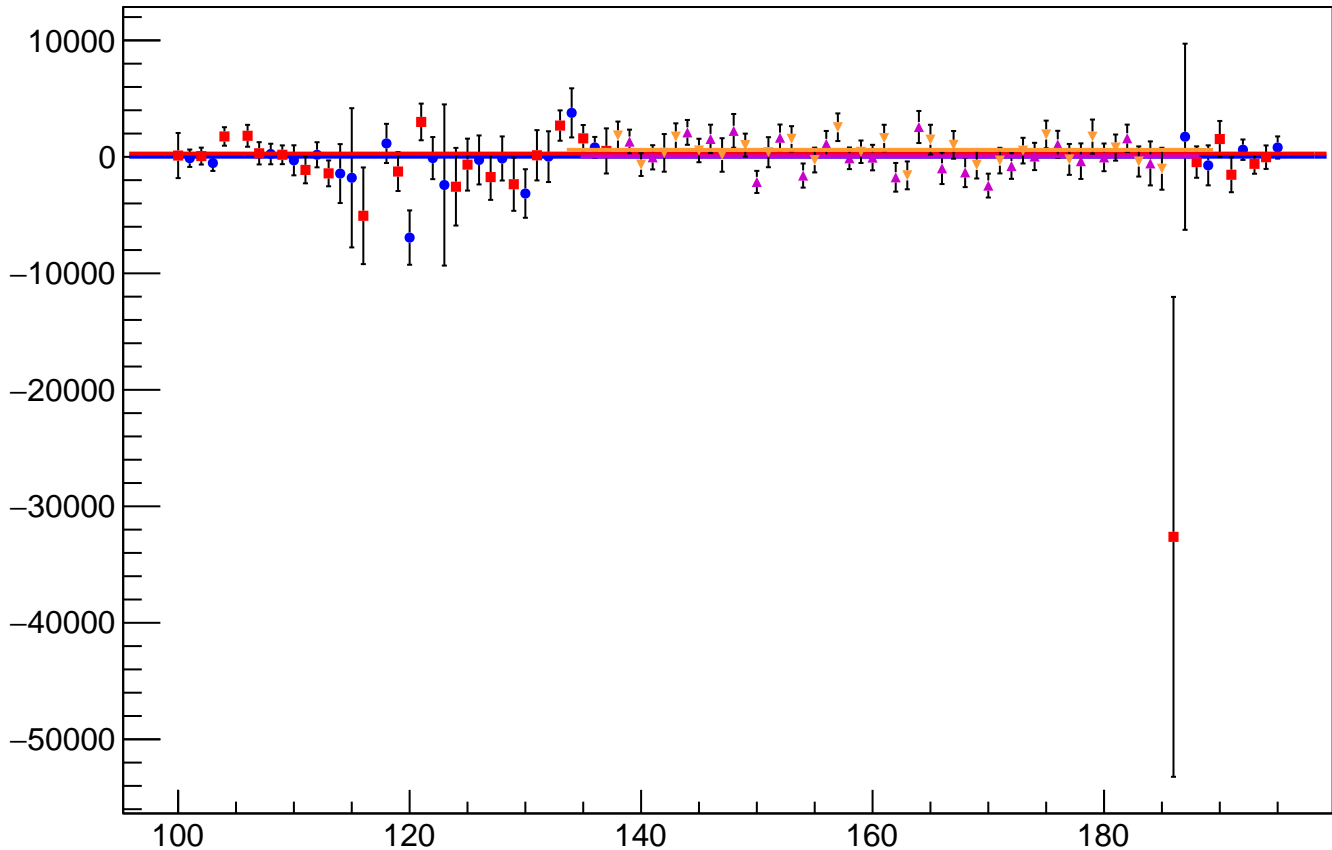
+ sign 2163.180 $\pm$ 0.303  $\chi^2$ /NDF: 3635439.7/45

All: 2168.249 $\pm$ 0.215  $\chi^2$ /NDF: 8135213.8/93

- sign 2173.336 $\pm$ 0.304  $\chi^2$ /NDF: 4499214.6/47



# asym\_sam5\_mean vs Slug



Right In:  $15.806 \pm 278.219$   $\chi^2/\text{NDF}: 18.4/20$

Left Out:  $600.005 \pm 234.968$   $\chi^2/\text{NDF}: 18.5/24$

Right Out:  $279.002 \pm 248.065$   $\chi^2/\text{NDF}: 29.6/24$

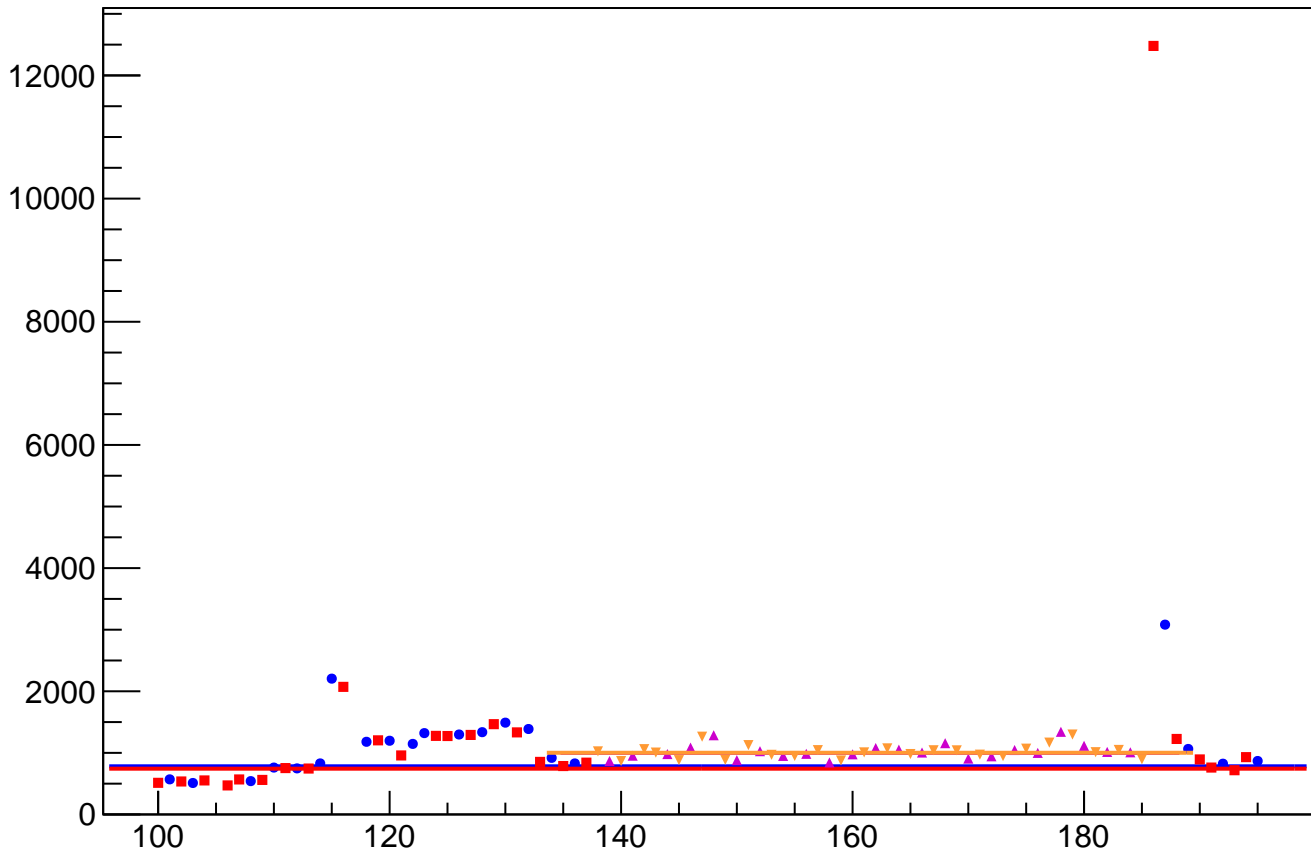
Left In:  $41.559 \pm 240.807$   $\chi^2/\text{NDF}: 36.4/22$

+ sign  $356.794 \pm 179.514$   $\chi^2/\text{NDF}: 39.4/45$

All:  $252.956 \pm 124.488$   $\chi^2/\text{NDF}: 106.5/93$

- sign  $156.757 \pm 172.785$   $\chi^2/\text{NDF}: 66.5/47$

# asym\_sam5\_rms vs Slug



Right In: 781.929 $\pm$ 0.197  $\chi^2$ /NDF: 1945275.6/20

Left Out: 1001.472 $\pm$ 0.166  $\chi^2$ /NDF: 370299.3/24

Right Out: 743.256 $\pm$ 0.175  $\chi^2$ /NDF: 2726816.3/24

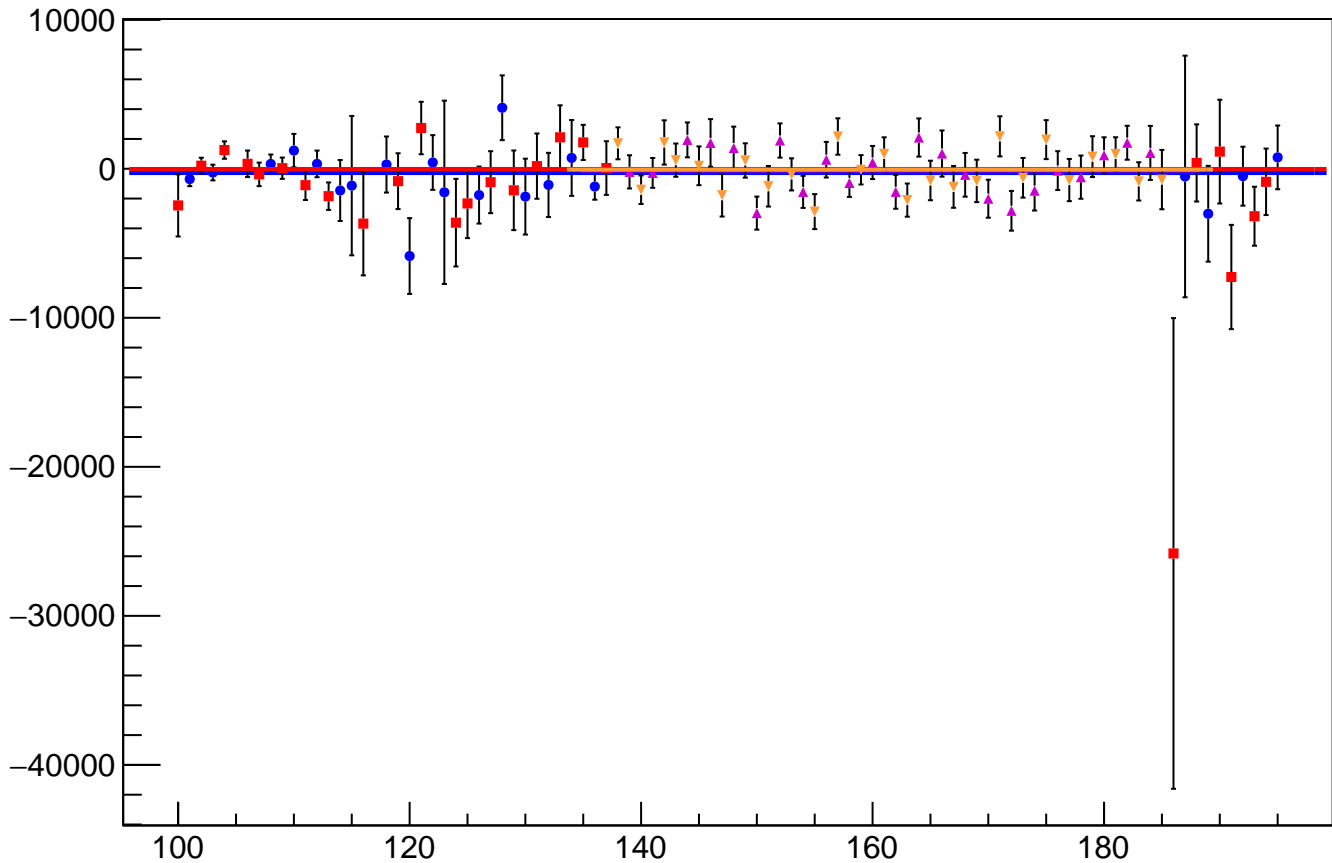
Left In: 998.050 $\pm$ 0.170  $\chi^2$ /NDF: 404656.2/22

+ sign 910.073 $\pm$ 0.127  $\chi^2$ /NDF: 3042469.8/45

All: 891.573 $\pm$ 0.088  $\chi^2$ /NDF: 7301164.1/93

- sign 874.435 $\pm$ 0.122  $\chi^2$ /NDF: 4217777.2/47

# asym\_sam6\_mean vs Slug



Right In:  $-288.885 \pm 246.186$   $\chi^2/\text{NDF}$ : 16.8/20

Left Out:  $-59.827 \pm 246.503$   $\chi^2/\text{NDF}$ : 31.0/24

Right Out:  $-14.753 \pm 240.628$   $\chi^2/\text{NDF}$ : 31.5/24

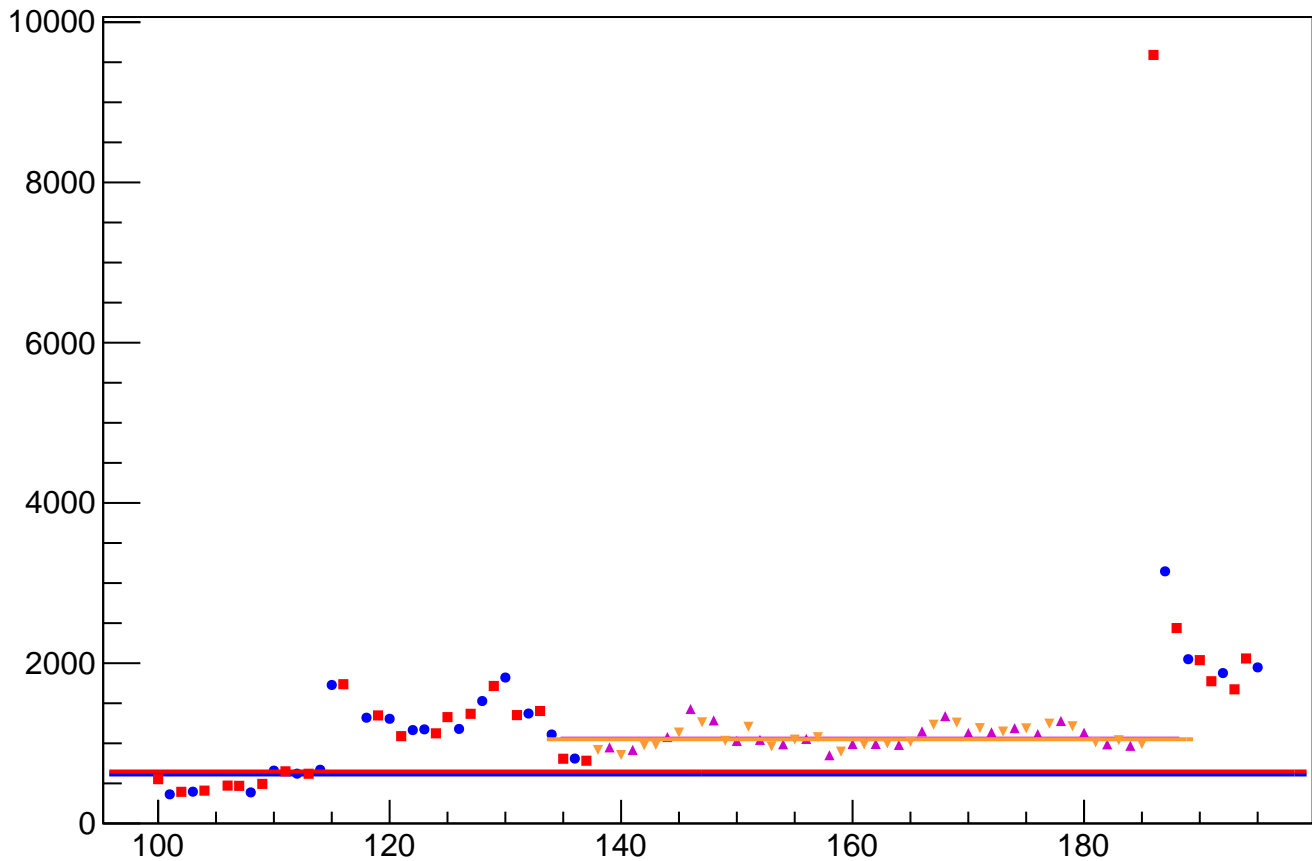
Left In:  $-112.398 \pm 255.409$   $\chi^2/\text{NDF}$ : 34.9/22

+ sign  $-174.504 \pm 174.192$   $\chi^2/\text{NDF}$ : 48.2/45

All:  $-117.896 \pm 123.507$   $\chi^2/\text{NDF}$ : 114.9/93

- sign  $-60.668 \pm 175.142$   $\chi^2/\text{NDF}$ : 66.5/47

# asym\_sam6\_rms vs Slug



Right In: 611.215+/-0.174  $\chi^2/\text{NDF}$ : 5487838.5/20

Left Out: 1050.649+/-0.174  $\chi^2/\text{NDF}$ : 483144.2/24

Right Out: 648.341+/-0.170  $\chi^2/\text{NDF}$ : 6411167.0/24

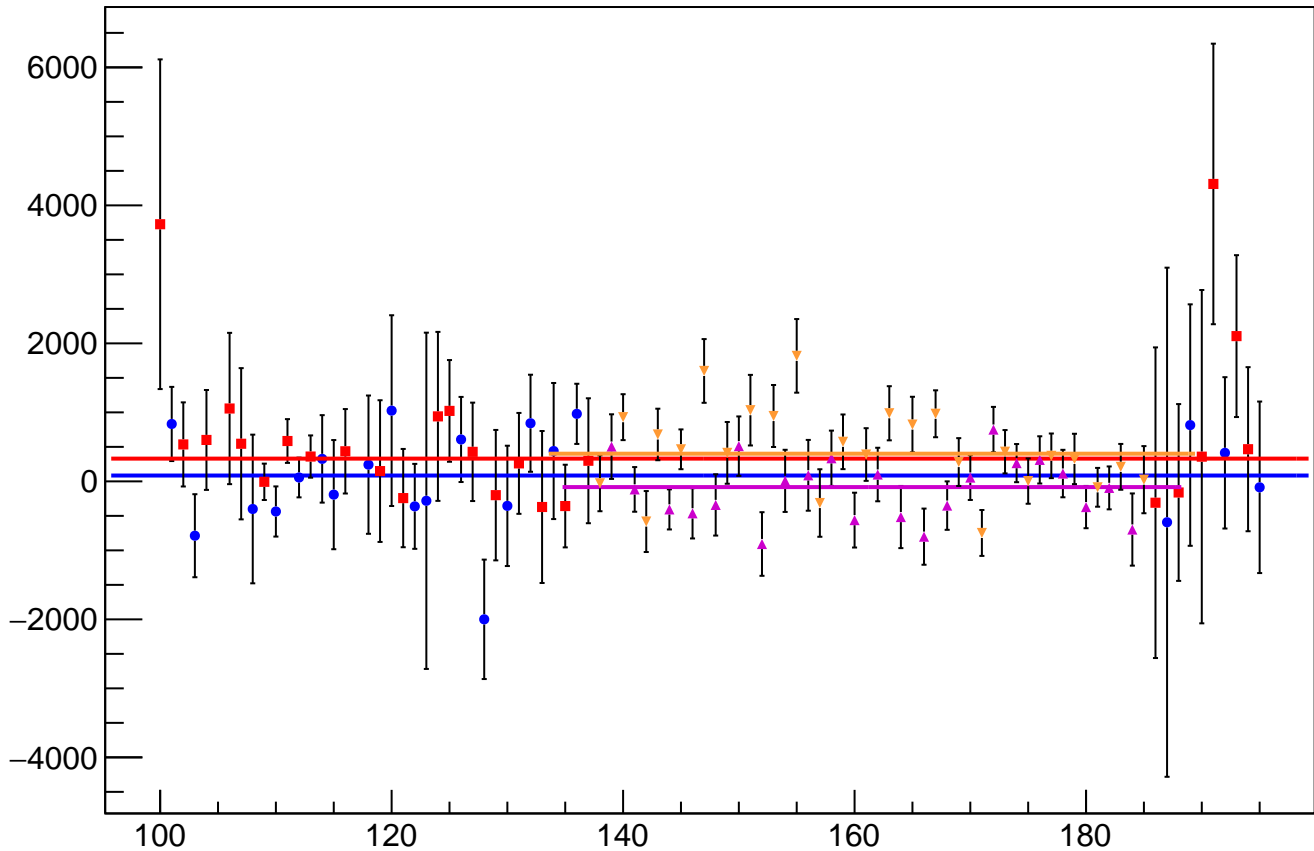
Left In: 1058.097+/-0.181  $\chi^2/\text{NDF}$ : 528574.7/22

+ sign 830.649+/-0.123  $\chi^2/\text{NDF}$ : 9152989.8/45

All: 835.806+/-0.087  $\chi^2/\text{NDF}$ : 18823325.8/90

- sign 841.020+/-0.124  $\chi^2/\text{NDF}$ : 9666810.9/47

# asym\_sam7\_mean vs Slug



Right In:  $84.639 \pm 140.585$   $\chi^2/\text{NDF}: 20.2/20$

Left Out:  $400.988 \pm 74.546$   $\chi^2/\text{NDF}: 52.1/24$

Right Out:  $329.727 \pm 127.005$   $\chi^2/\text{NDF}: 15.3/24$

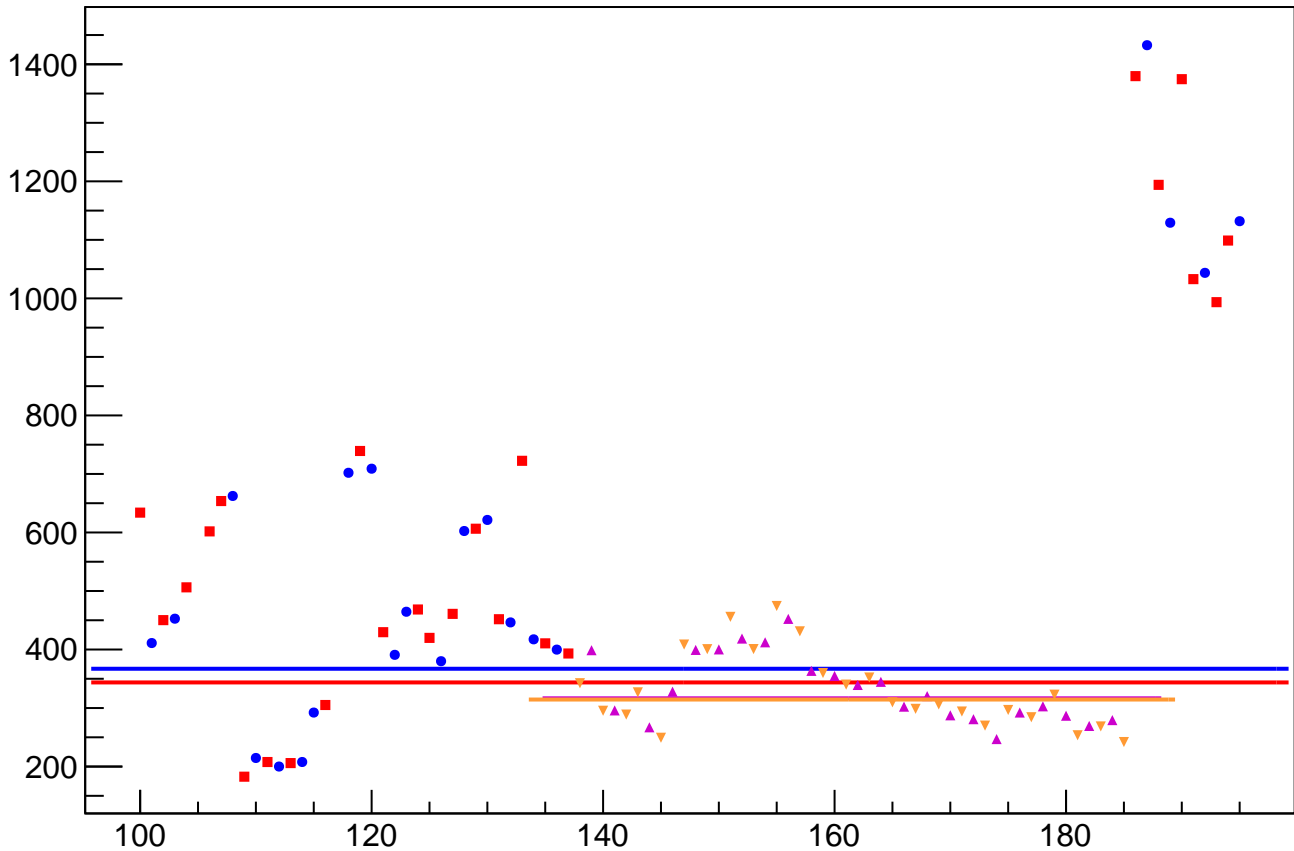
Left In:  $-82.890 \pm 76.904$   $\chi^2/\text{NDF}: 29.0/22$

+ sign  $331.560 \pm 65.860$   $\chi^2/\text{NDF}: 76.2/45$

All:  $179.509 \pm 46.543$   $\chi^2/\text{NDF}: 138.9/93$

- sign  $27.809 \pm 65.784$   $\chi^2/\text{NDF}: 52.0/47$

# asym\_sam7\_rms vs Slug



Right In:  $367.128 \pm 0.099$   $\chi^2/\text{NDF}: 4150688.2/20$

Left Out:  $314.538 \pm 0.053$   $\chi^2/\text{NDF}: 1112445.6/24$

Right Out:  $343.751 \pm 0.090$   $\chi^2/\text{NDF}: 6196050.8/24$

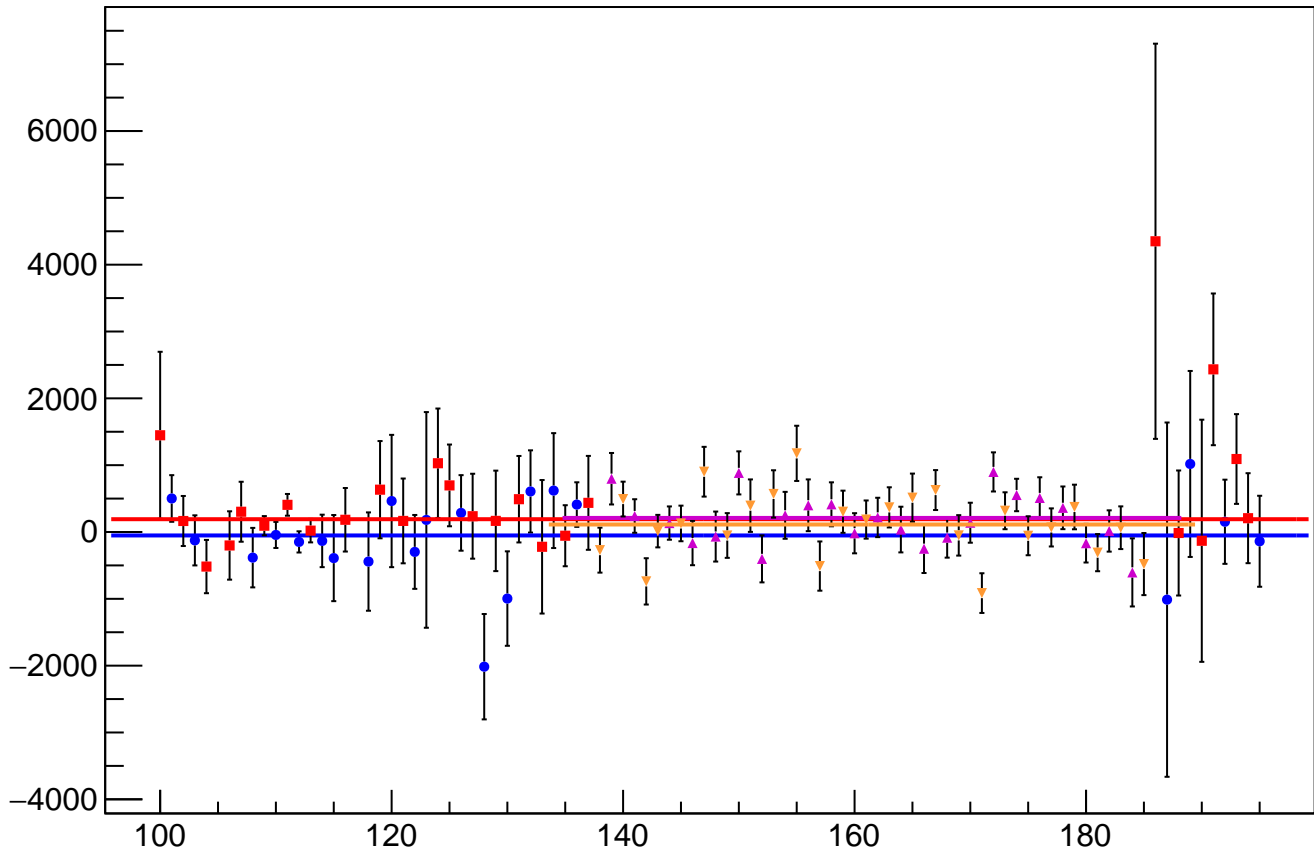
Left In:  $316.647 \pm 0.054$   $\chi^2/\text{NDF}: 920874.0/22$

+ sign  $326.080 \pm 0.047$   $\chi^2/\text{NDF}: 5481579.5/45$

All:  $324.998 \pm 0.033$   $\chi^2/\text{NDF}: 12666234.6/90$

- sign  $323.919 \pm 0.047$   $\chi^2/\text{NDF}: 7183576.9/47$

# asym\_sam8\_mean vs Slug



Right In:  $-51.724 \pm 88.767$   $\chi^2/\text{NDF}: 17.4/20$

Left Out:  $112.242 \pm 62.643$   $\chi^2/\text{NDF}: 49.1/24$

Right Out:  $191.500 \pm 75.471$   $\chi^2/\text{NDF}: 18.6/24$

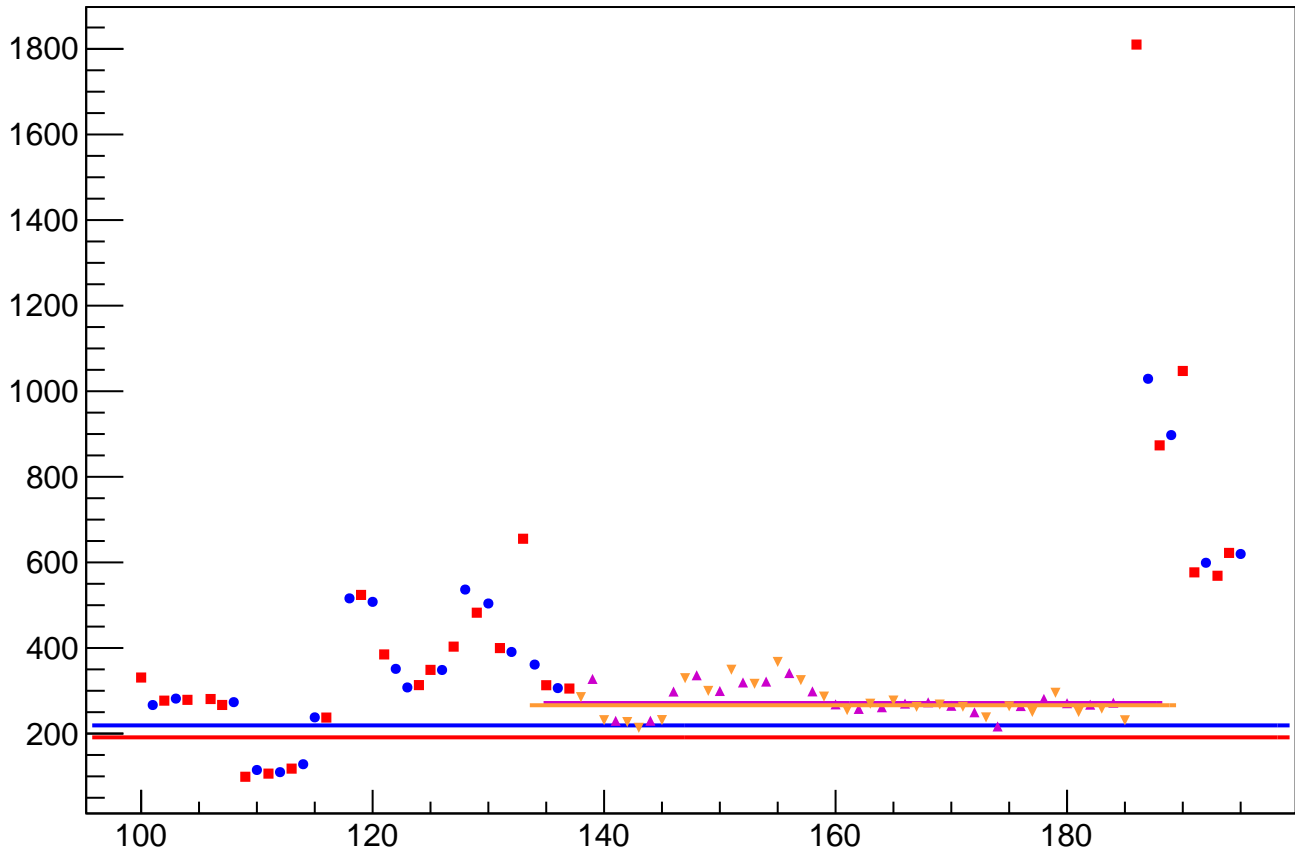
Left In:  $210.453 \pm 65.510$   $\chi^2/\text{NDF}: 29.2/22$

+ sign  $57.731 \pm 51.182$   $\chi^2/\text{NDF}: 68.9/45$

All:  $132.474 \pm 35.571$   $\chi^2/\text{NDF}: 120.8/93$

- sign  $202.309 \pm 49.472$   $\chi^2/\text{NDF}: 47.8/47$

# asym\_sam8\_rms vs Slug



Right In: 219.106 $\pm$ 0.063  $\chi^2$ /NDF: 5551141.3/20

Left Out: 266.207 $\pm$ 0.044  $\chi^2$ /NDF:649629.9/24

Right Out: 191.175 $\pm$ 0.053  $\chi^2$ /NDF: 8006473.6/24

Left In: 271.415 $\pm$ 0.046  $\chi^2$ /NDF:521877.7/22

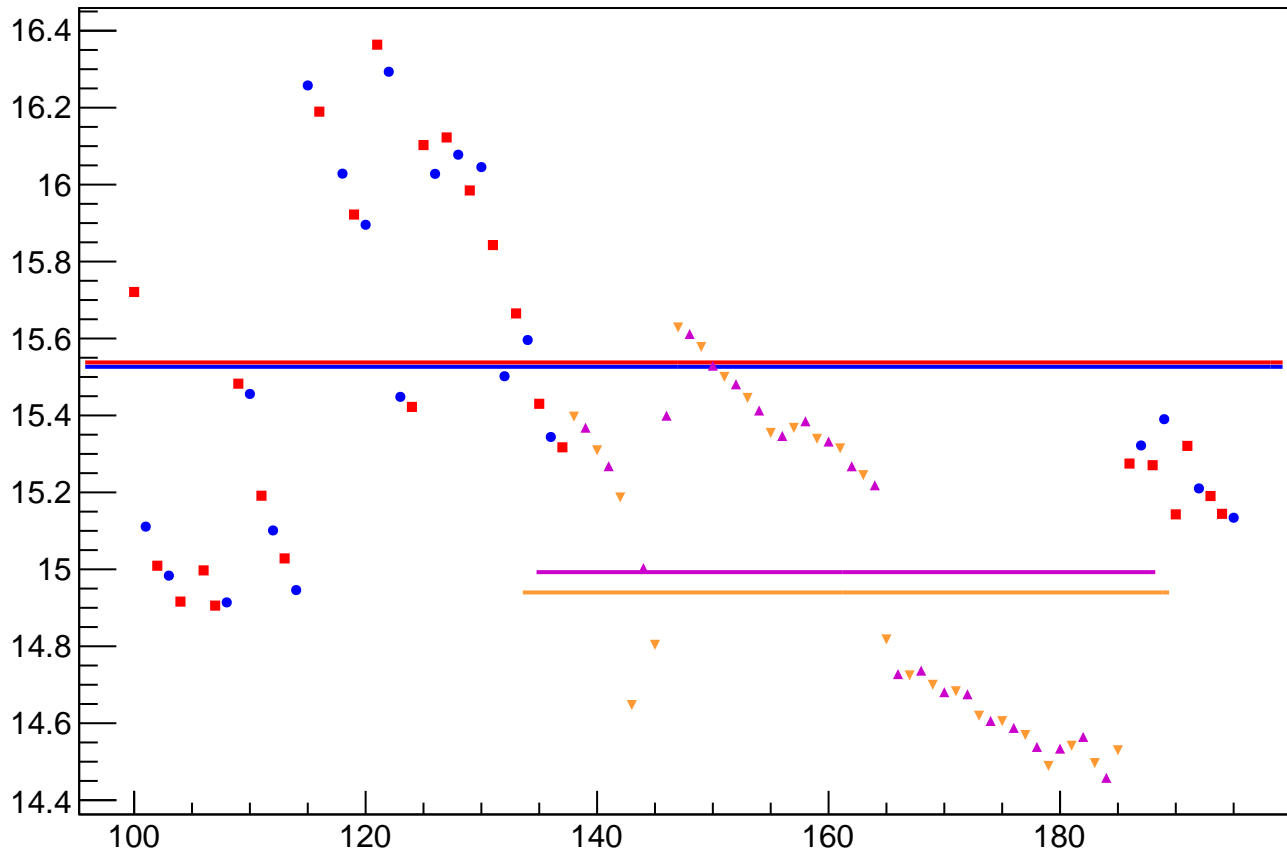
+ sign 250.548 $\pm$ 0.036  $\chi^2$ /NDF: 6576666.3/45

All: 243.511 $\pm$ 0.025  $\chi^2$ /NDF: 16467458.8/93

- sign 236.936 $\pm$ 0.035  $\chi^2$ /NDF: 9817653.5/47



# yield\_sam1\_mean vs Slug



Right In: 15.526+/-0.000  $\chi^2$ /NDF: 7327005895.3/20

+ sign 15.064+/-0.000  $\chi^2$ /NDF: 43746430899.6/45

Left Out: 14.940+/-0.000  $\chi^2$ /NDF: 24199653913.9/24

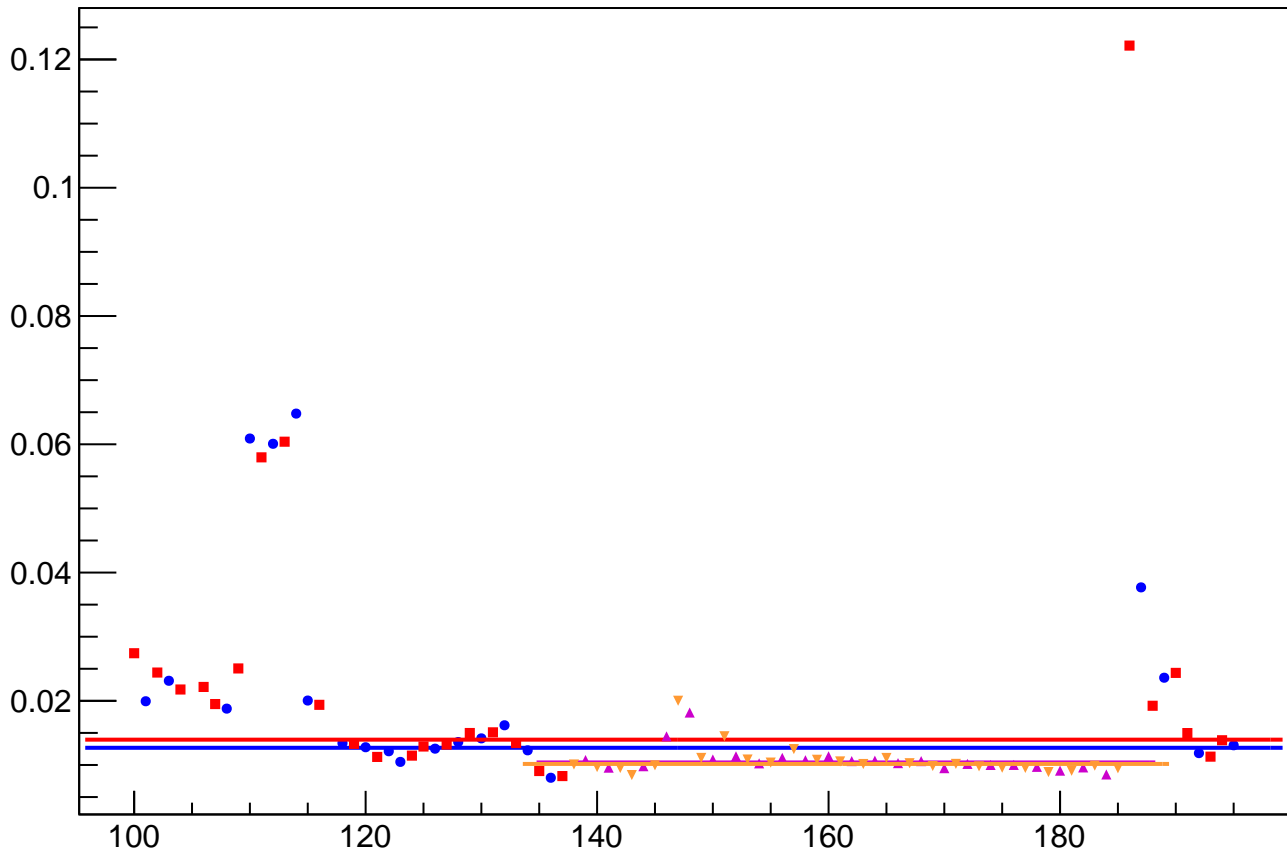
All: 15.087+/-0.000  $\chi^2$ /NDF: 83476604616.8

Right Out: 15.538+/-0.000  $\chi^2$ /NDF: 7560637237.3/24

- sign 15.112+/-0.000  $\chi^2$ /NDF: 39498374159.5/47

Left In: 14.993+/-0.000  $\chi^2$ /NDF: 22023159634.7/22

# yield\_sam1\_rms vs Slug



Right In: 0.013 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2457866.2/20

Left Out: 0.010 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 717351.4/24

Right Out: 0.014 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2973262.2/24

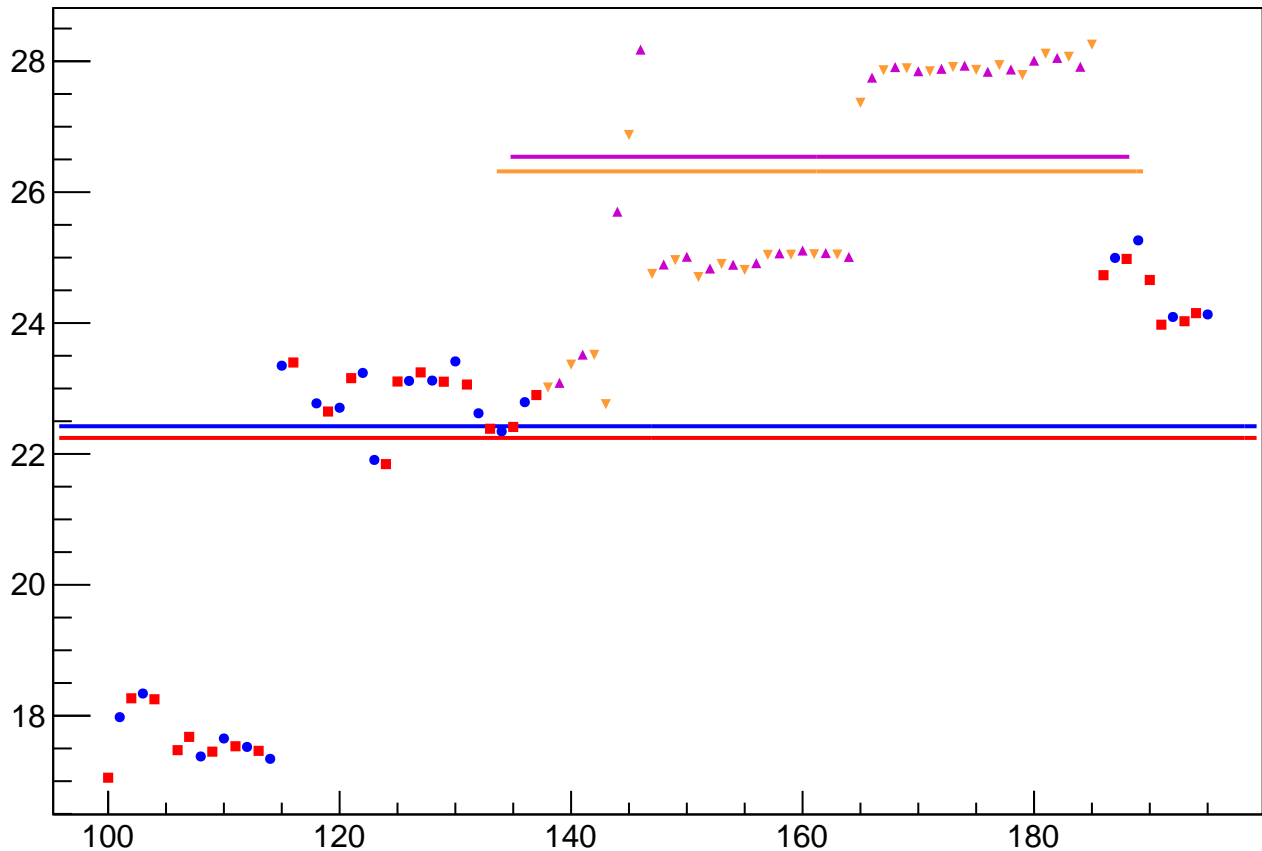
Left In: 0.010 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 544268.8/22

+ sign 0.011 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 3625199.6/45

All: 0.011 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 8030567.5/93

- sign 0.011 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 4358907.3/47

# yield\_sam2\_mean vs Slug



Right In: 22.423+/-0.000  $\chi^2$ /NDF: 1029140650.8/20

Left Out: 26.318+/-0.000  $\chi^2$ /NDF: 4715403741.0/24

Right Out: 22.245+/-0.000  $\chi^2$ /NDF: 1243947578.3/24

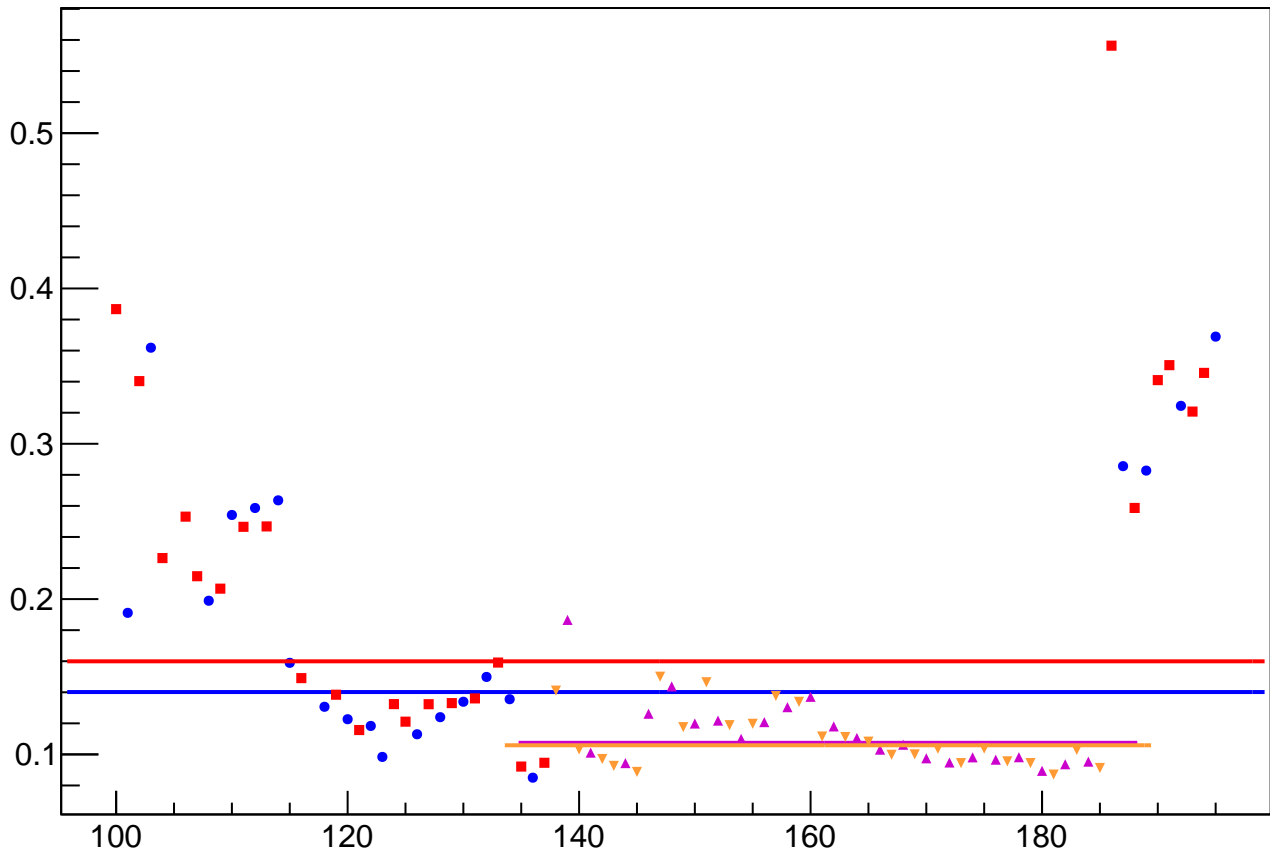
Left In: 26.540+/-0.000  $\chi^2$ /NDF: 3309392772.6/22

+ sign 25.576+/-0.000  $\chi^2$ /NDF: 9817804041.4/45

All: 25.643+/-0.000  $\chi^2$ /NDF: 18973152515.9

- sign 25.716+/-0.000  $\chi^2$ /NDF: 9138932933.1/47

# yield\_sam2\_rms vs Slug



Right In: 0.140 $\pm$ 0.000  $\chi^2$ /NDF: 3072002.8/20

Left Out: 0.106 $\pm$ 0.000  $\chi^2$ /NDF:732883.8/24

Right Out: 0.160 $\pm$ 0.000  $\chi^2$ /NDF: 3449229.1/24

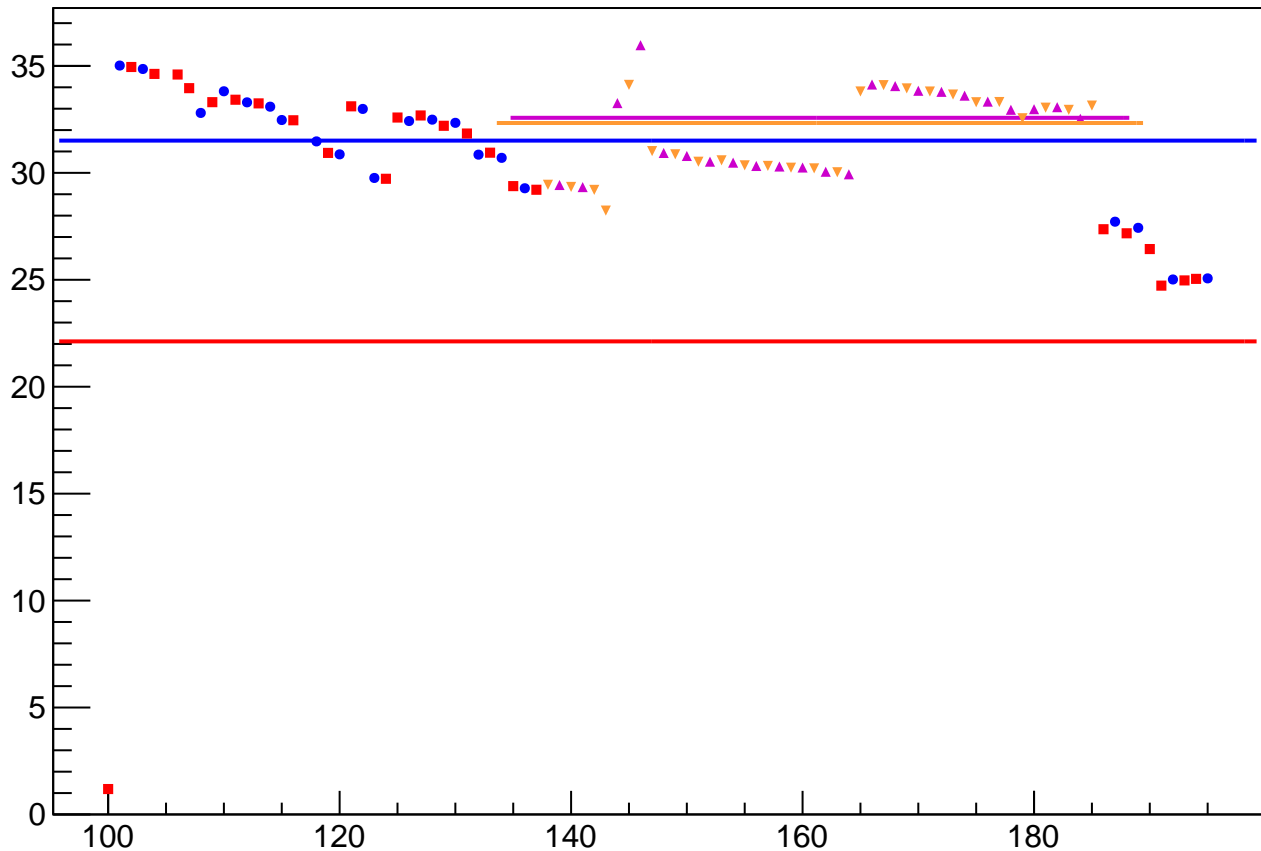
Left In: 0.107 $\pm$ 0.000  $\chi^2$ /NDF:771132.0/22

+ sign 0.112 $\pm$ 0.000  $\chi^2$ /NDF: 4435817.3/45

All: 0.115 $\pm$ 0.000  $\chi^2$ /NDF: 10068550.0/93

- sign 0.118 $\pm$ 0.000  $\chi^2$ /NDF: 5588860.2/47

# yield\_sam3\_mean vs Slug



Right In: 31.508+/-0.000  $\chi^2$ /NDF: 3443988910.3/20

Left Out: 32.331+/-0.000  $\chi^2$ /NDF: 12850475096.2/24

Right Out: 22.120+/-0.000  $\chi^2$ /NDF: 230577165125.7/24

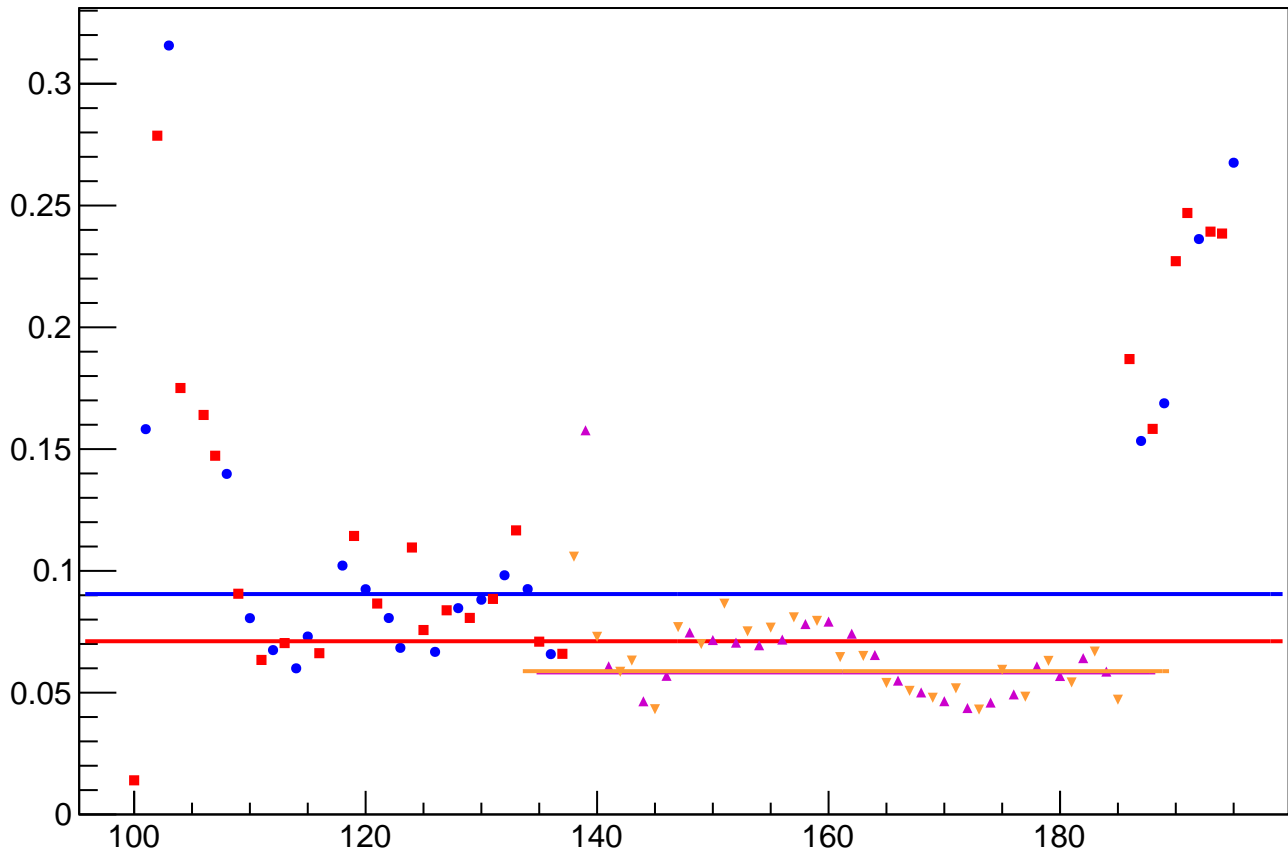
Left In: 32.574+/-0.000  $\chi^2$ /NDF: 11797772603.7/22

+ sign 32.202+/-0.000  $\chi^2$ /NDF: 16731520485.4/45

All: 31.188+/-0.000  $\chi^2$ /NDF: 365549833564.

- sign 30.215+/-0.000  $\chi^2$ /NDF: 339034435877.4/47

# yield\_sam3\_rms vs Slug



Right In: 0.090 $\pm$ 0.000  $\chi^2$ /NDF: 2867161.0/20

Left Out: 0.059 $\pm$ 0.000  $\chi^2$ /NDF:1402605.2/24

Right Out: 0.071 $\pm$ 0.000  $\chi^2$ /NDF: 6703342.0/24

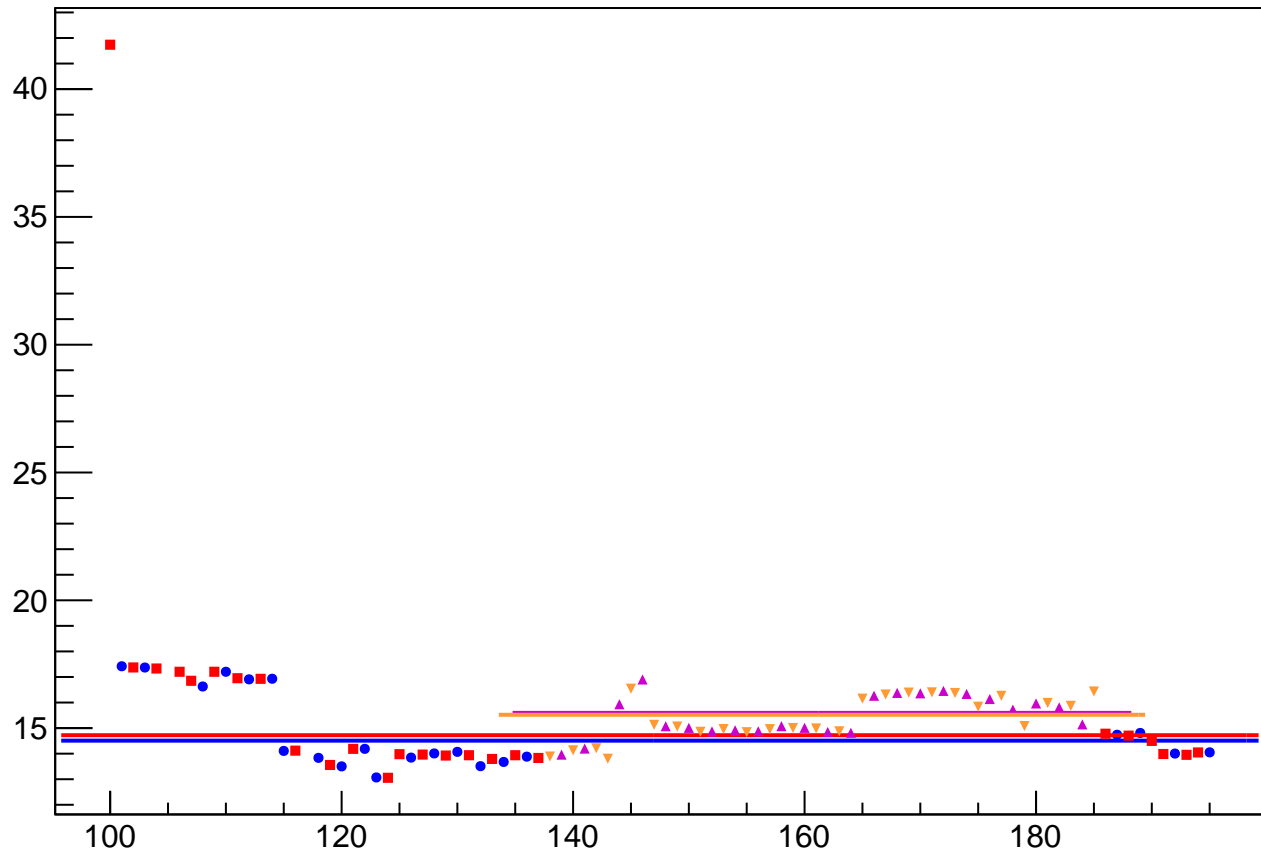
Left In: 0.058 $\pm$ 0.000  $\chi^2$ /NDF:1525476.4/22

+ sign 0.064 $\pm$ 0.000  $\chi^2$ /NDF: 5561620.9/45

All: 0.062 $\pm$ 0.000  $\chi^2$ /NDF: 14114058.1/93

- sign 0.061 $\pm$ 0.000  $\chi^2$ /NDF: 8518736.4/47

# yield\_sam4\_mean vs Slug



Right In: 14.510+/-0.000  $\chi^2$ /NDF: 1495442423.6/20

Left Out: 15.521+/-0.000  $\chi^2$ /NDF: 2591377740.5/24

Right Out: 14.722+/-0.000  $\chi^2$ /NDF: 1926432908.6/24

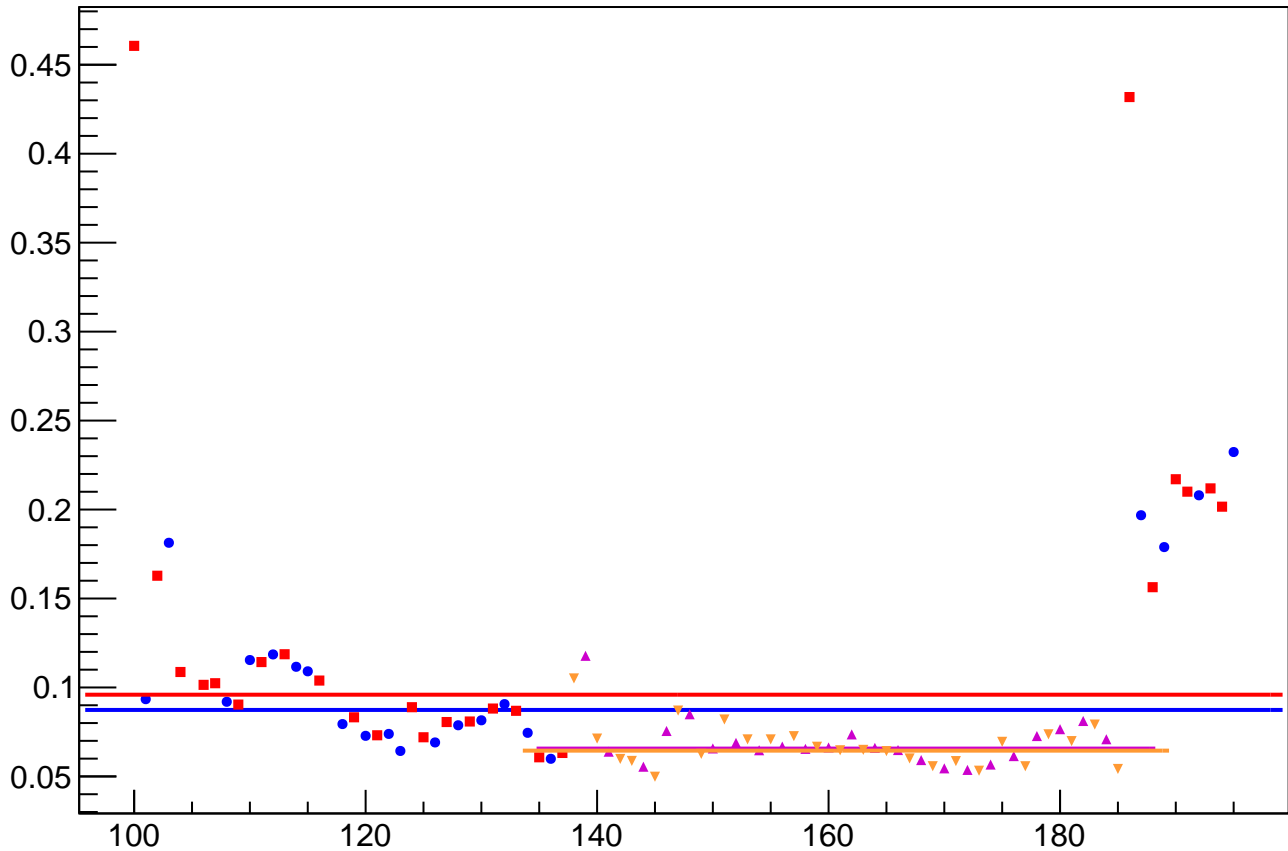
Left In: 15.595+/-0.000  $\chi^2$ /NDF: 1908733580.5/22

+ sign 15.323+/-0.000  $\chi^2$ /NDF: 4836042224.7/45

All: 15.368+/-0.000  $\chi^2$ /NDF: 9228677391.4/9

- sign 15.416+/-0.000  $\chi^2$ /NDF: 4373367342.1/47

# yield\_sam4\_rms vs Slug



Right In: 0.087 $\pm$ 0.000  $\chi^2$ /NDF: 2393957.7/20

Left Out: 0.064 $\pm$ 0.000  $\chi^2$ /NDF:761552.3/24

Right Out: 0.096 $\pm$ 0.000  $\chi^2$ /NDF: 2851717.1/24

Left In: 0.066 $\pm$ 0.000  $\chi^2$ /NDF:714703.1/22

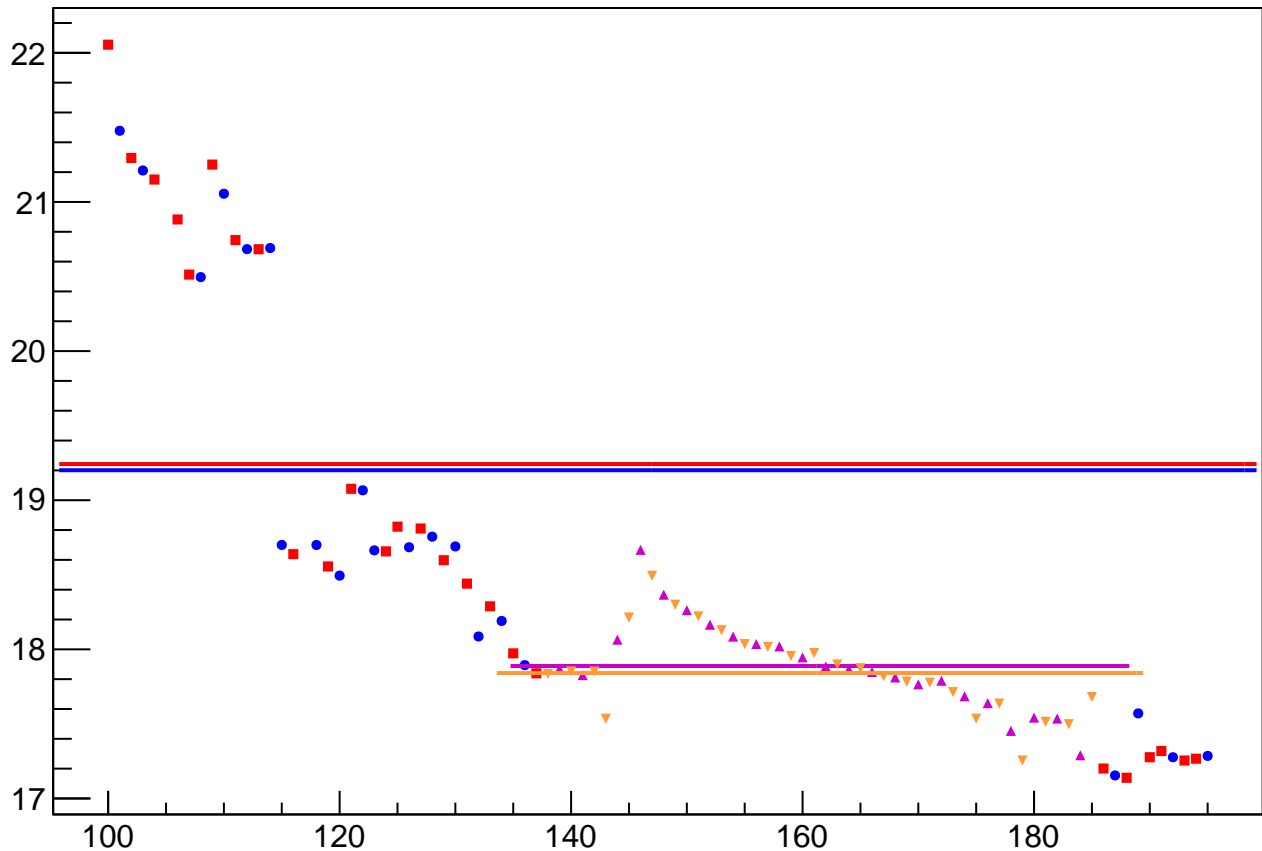
+ sign 0.069 $\pm$ 0.000  $\chi^2$ /NDF: 3922225.3/45

All: 0.070 $\pm$ 0.000  $\chi^2$ /NDF: 8819833.9/93

- sign 0.072 $\pm$ 0.000  $\chi^2$ /NDF: 4860063.6/47



# yield\_sam5\_mean vs Slug



Right In: 19.201 $\pm$ 0.000  $\chi^2$ /NDF: 19230472796.8/20

Left Out: 17.841 $\pm$ 0.000  $\chi^2$ /NDF: 1283287989.7/24

Right Out: 19.243 $\pm$ 0.000  $\chi^2$ /NDF: 21740243553.0/24

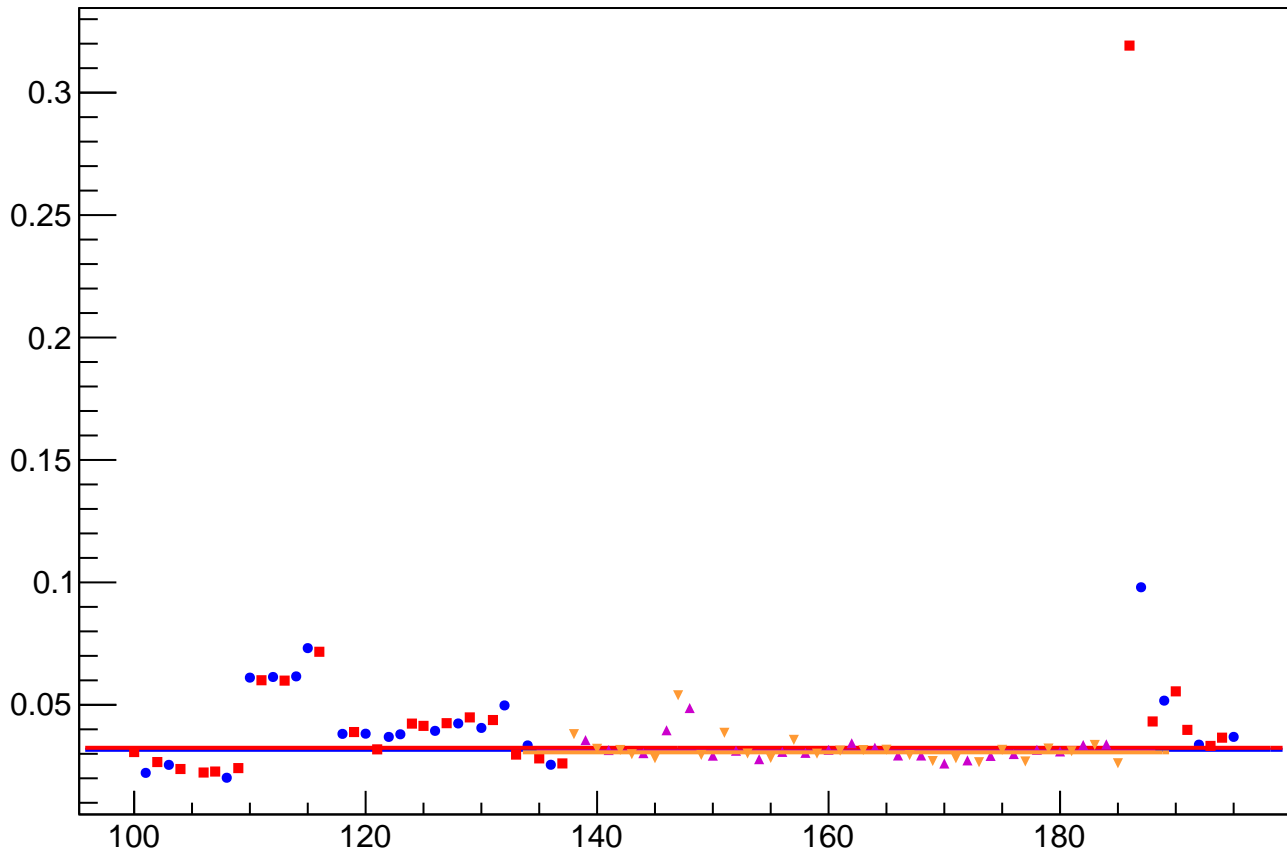
Left In: 17.888 $\pm$ 0.000  $\chi^2$ /NDF: 1203002311.3/22

+ sign 18.236 $\pm$ 0.000  $\chi^2$ /NDF: 30534136590.4/45

All: 18.280 $\pm$ 0.000  $\chi^2$ /NDF: 63865259724.9

- sign 18.326 $\pm$ 0.000  $\chi^2$ /NDF: 33227536920.6/47

# yield\_sam5\_rms vs Slug



Right In: 0.032 $\pm$ 0.000  $\chi^2$ /NDF: 1634393.3/20

Left Out: 0.031 $\pm$ 0.000  $\chi^2$ /NDF:590475.6/24

Right Out: 0.032 $\pm$ 0.000  $\chi^2$ /NDF: 2054473.1/24

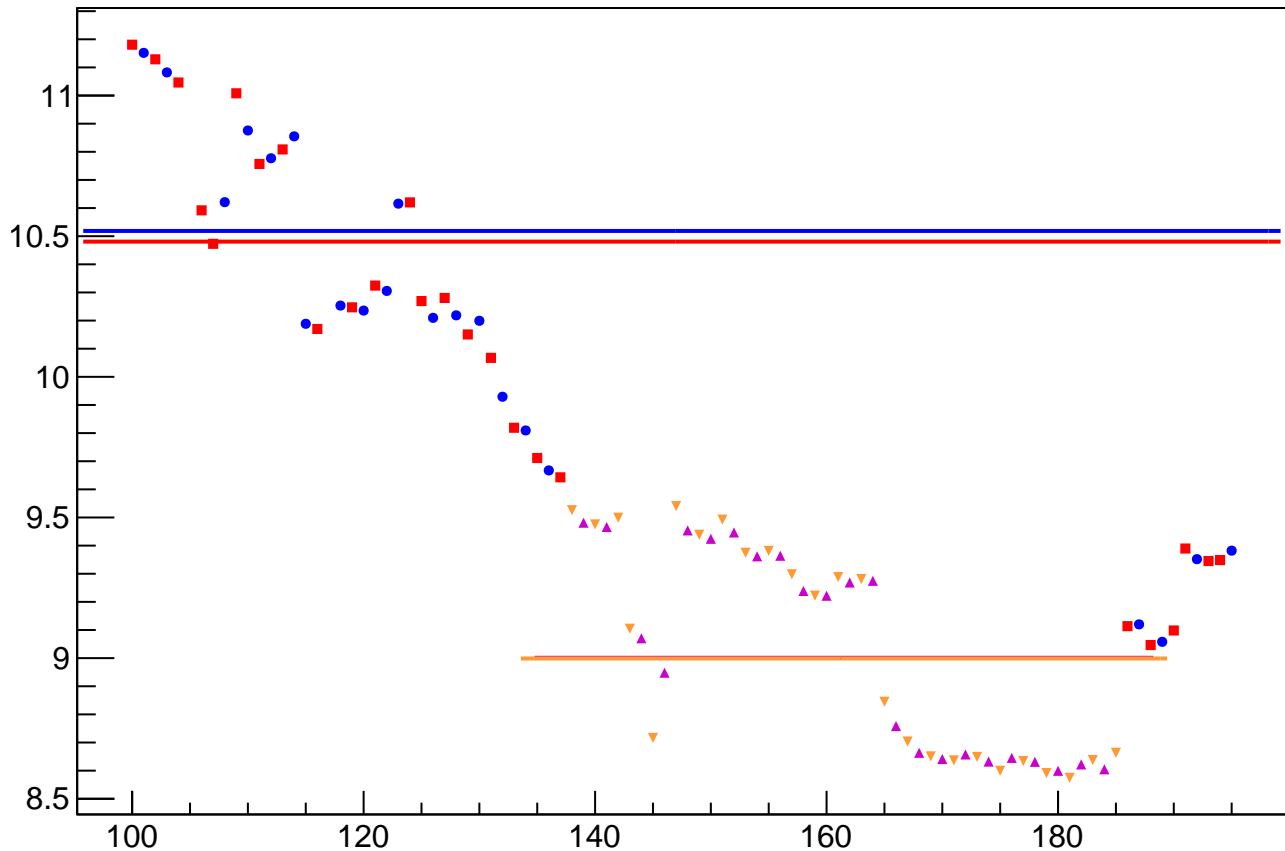
Left In: 0.031 $\pm$ 0.000  $\chi^2$ /NDF:453524.6/22

+ sign 0.031 $\pm$ 0.000  $\chi^2$ /NDF: 2236295.0/45

All: 0.031 $\pm$ 0.000  $\chi^2$ /NDF: 4778092.7/93

- sign 0.031 $\pm$ 0.000  $\chi^2$ /NDF: 2535320.0/47

# yield\_sam6\_mean vs Slug



Right In: 10.519 $\pm$ 0.000  $\chi^2$ /NDF: 9622771096.7/20

Left Out: 8.999 $\pm$ 0.000  $\chi^2$ /NDF: 6392583736.5/24

Right Out: 10.481 $\pm$ 0.000  $\chi^2$ /NDF: 9118712502.1/24

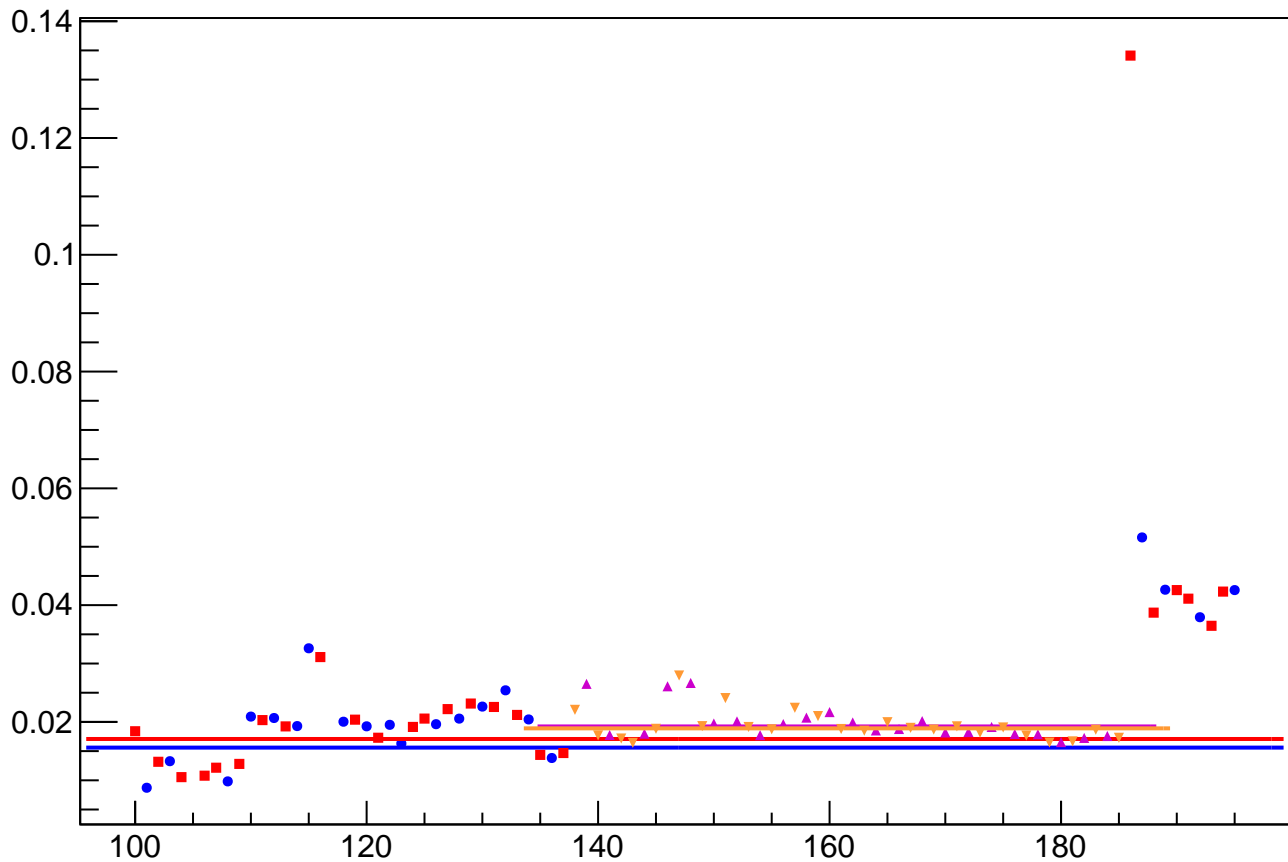
Left In: 9.001 $\pm$ 0.000  $\chi^2$ /NDF: 5314536205.4/22

+ sign 9.558 $\pm$ 0.000  $\chi^2$ /NDF: 55981535524.4/45

All: 9.567 $\pm$ 0.000  $\chi^2$ /NDF: 106811635746.5

- sign 9.576 $\pm$ 0.000  $\chi^2$ /NDF: 50819271299.9/47

# yield\_sam6\_rms vs Slug



Right In: 0.016 $\pm$ 0.000  $\chi^2$ /NDF: 3238613.2/20

Left Out: 0.019 $\pm$ 0.000  $\chi^2$ /NDF:428169.5/24

Right Out: 0.017 $\pm$ 0.000  $\chi^2$ /NDF: 3661864.5/24

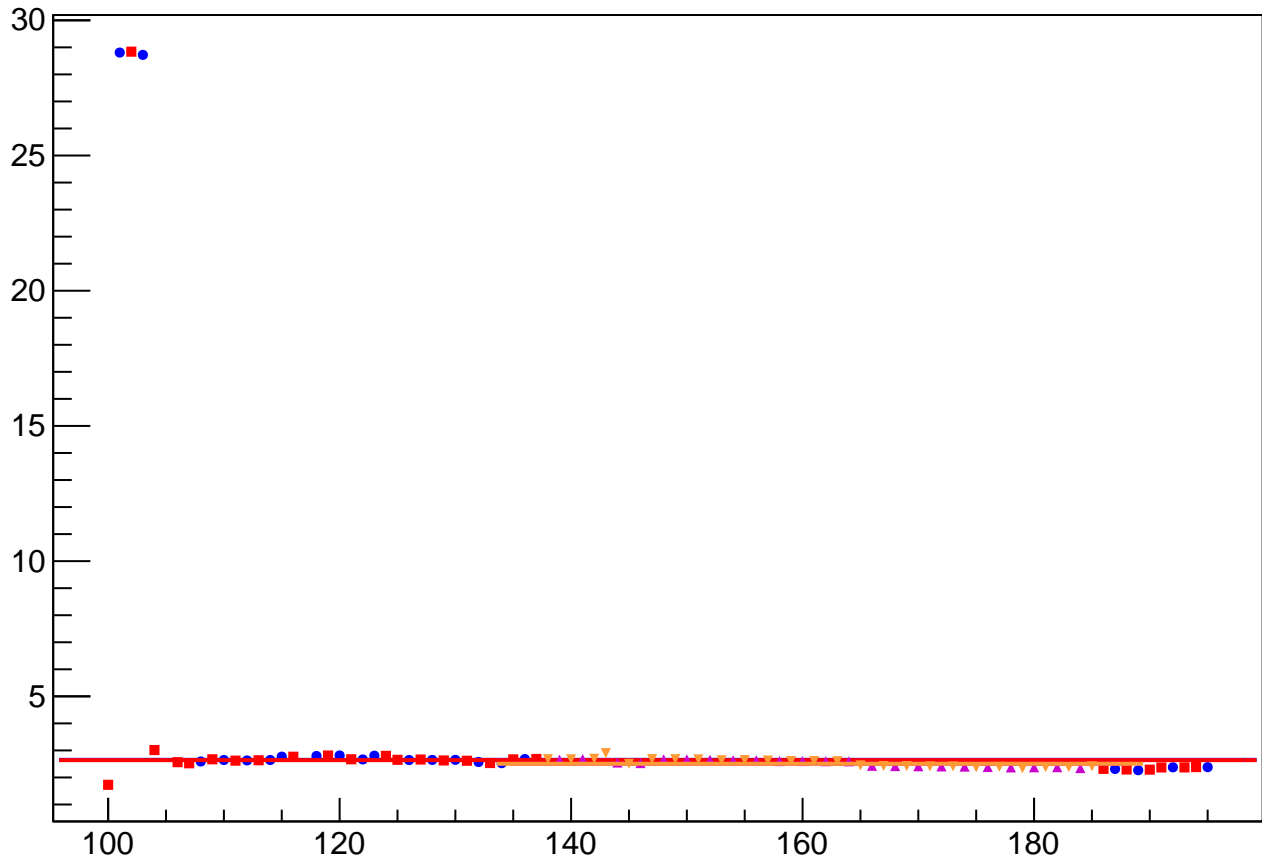
Left In: 0.019 $\pm$ 0.000  $\chi^2$ /NDF:481824.0/22

+ sign 0.018 $\pm$ 0.000  $\chi^2$ /NDF: 4042942.5/45

All: 0.018 $\pm$ 0.000  $\chi^2$ /NDF: 8376082.6/93

- sign 0.018 $\pm$ 0.000  $\chi^2$ /NDF: 4297021.5/47

# yield\_sam7\_mean vs Slug



Right In: 2.652 $\pm$ 0.000  $\chi^2$ /NDF: 168511236433.2/20

Left Out: 2.507 $\pm$ 0.000  $\chi^2$ /NDF:64277969186.7/24

Right Out: 2.641 $\pm$ 0.000  $\chi^2$ /NDF: 79989719905.3/24

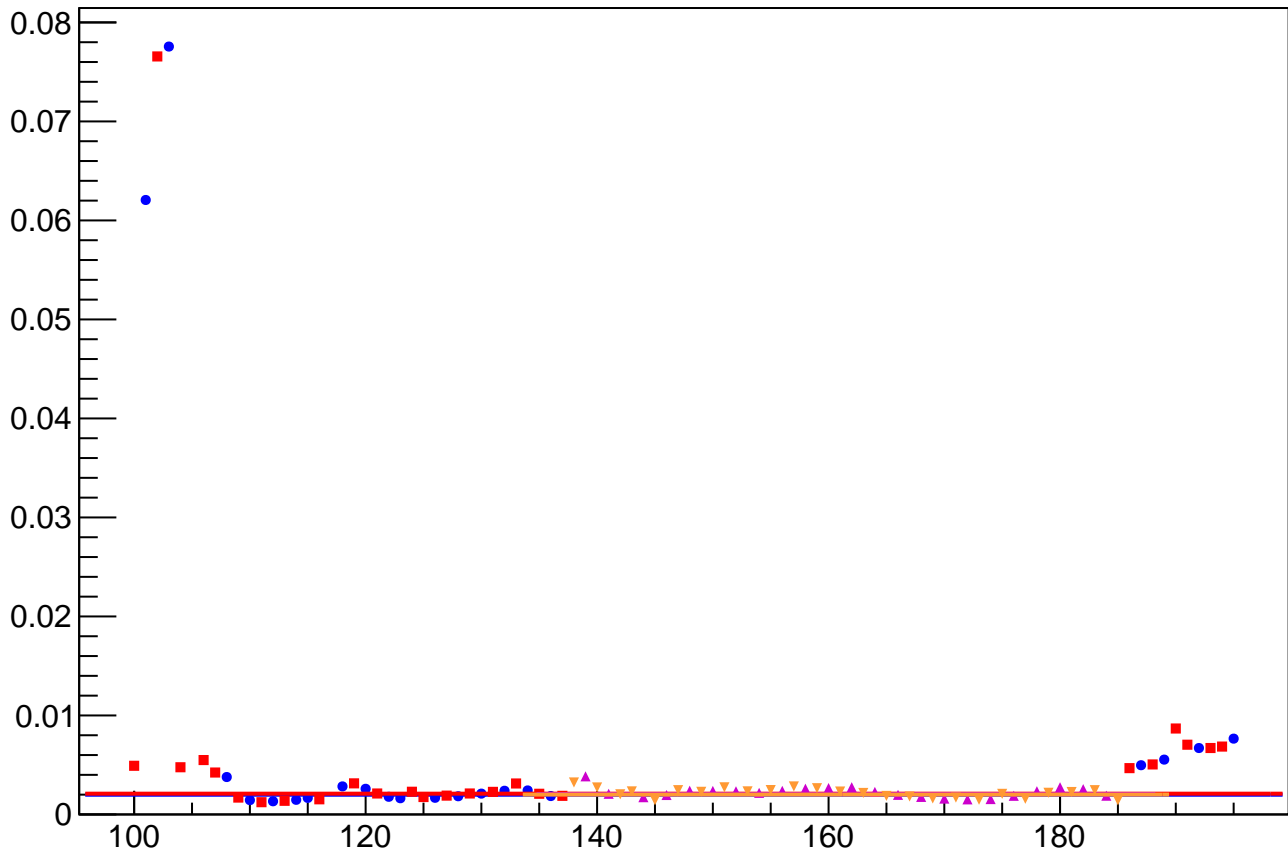
Left In: 2.505 $\pm$ 0.000  $\chi^2$ /NDF:42893630742.5/22

+ sign 2.547 $\pm$ 0.000  $\chi^2$ /NDF: 254094955581.8/45

All: 2.547 $\pm$ 0.000  $\chi^2$ /NDF: 395858824659.3

- sign 2.548 $\pm$ 0.000  $\chi^2$ /NDF: 141762340544.5/47

# yield\_sam7\_rms vs Slug



Right In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 4936570.3/20

Left Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ :1469103.5/24

Right Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 5417797.4/24

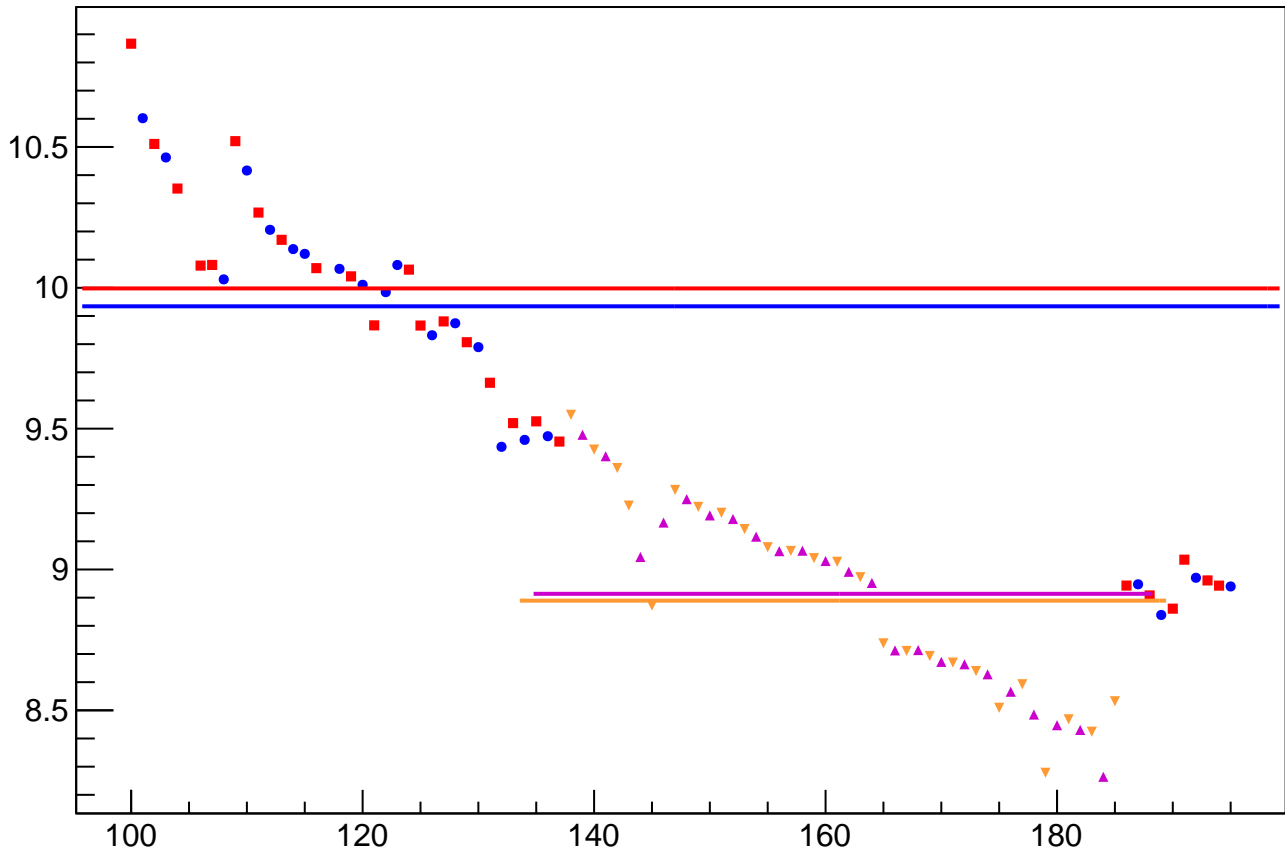
Left In: 0.002+/-0.000  $\chi^2/\text{NDF}$ :1303230.9/22

+ sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 6406118.1/45

All: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 13153595.3/93

- sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 6724186.9/47

# yield\_sam8\_mean vs Slug



Right In: 9.934 $\pm$ 0.000  $\chi^2$ /NDF: 29347467097.6/20

Left Out: 8.889 $\pm$ 0.000  $\chi^2$ /NDF: 34704694045.9/24

Right Out: 9.998 $\pm$ 0.000  $\chi^2$ /NDF: 32970142885.3/24

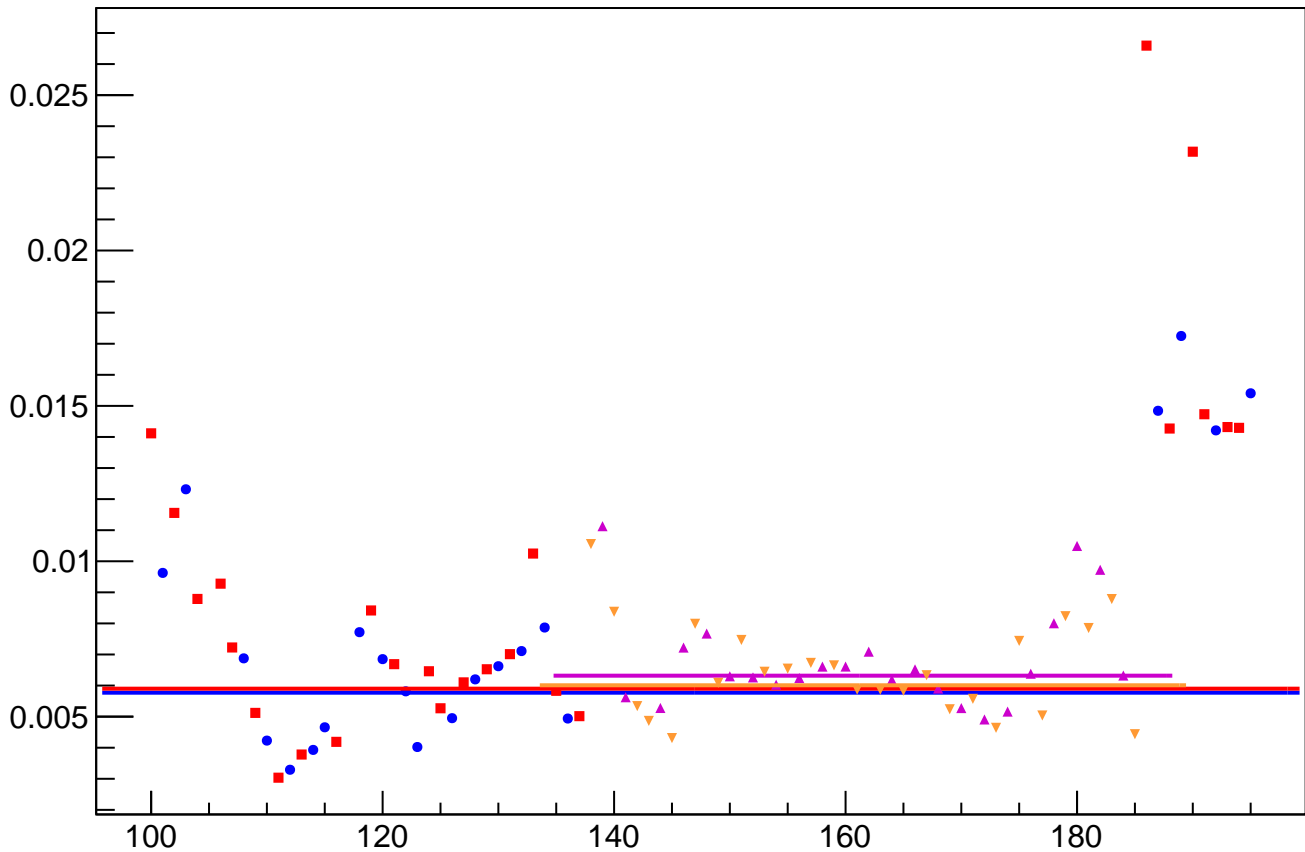
Left In: 8.914 $\pm$ 0.000  $\chi^2$ /NDF: 28497227562.7/22

+ sign 9.226 $\pm$ 0.000  $\chi^2$ /NDF: 205514254665.2/45

All: 9.269 $\pm$ 0.000  $\chi^2$ /NDF: 421351617744.4

- sign 9.316 $\pm$ 0.000  $\chi^2$ /NDF: 213475047686.4/47

# yield\_sam8\_rms vs Slug



Right In: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 3072242.7/20

Left Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ :1312525.9/24

Right Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 4509989.4/24

Left In: 0.006+/-0.000  $\chi^2/\text{NDF}$ :1087051.3/22

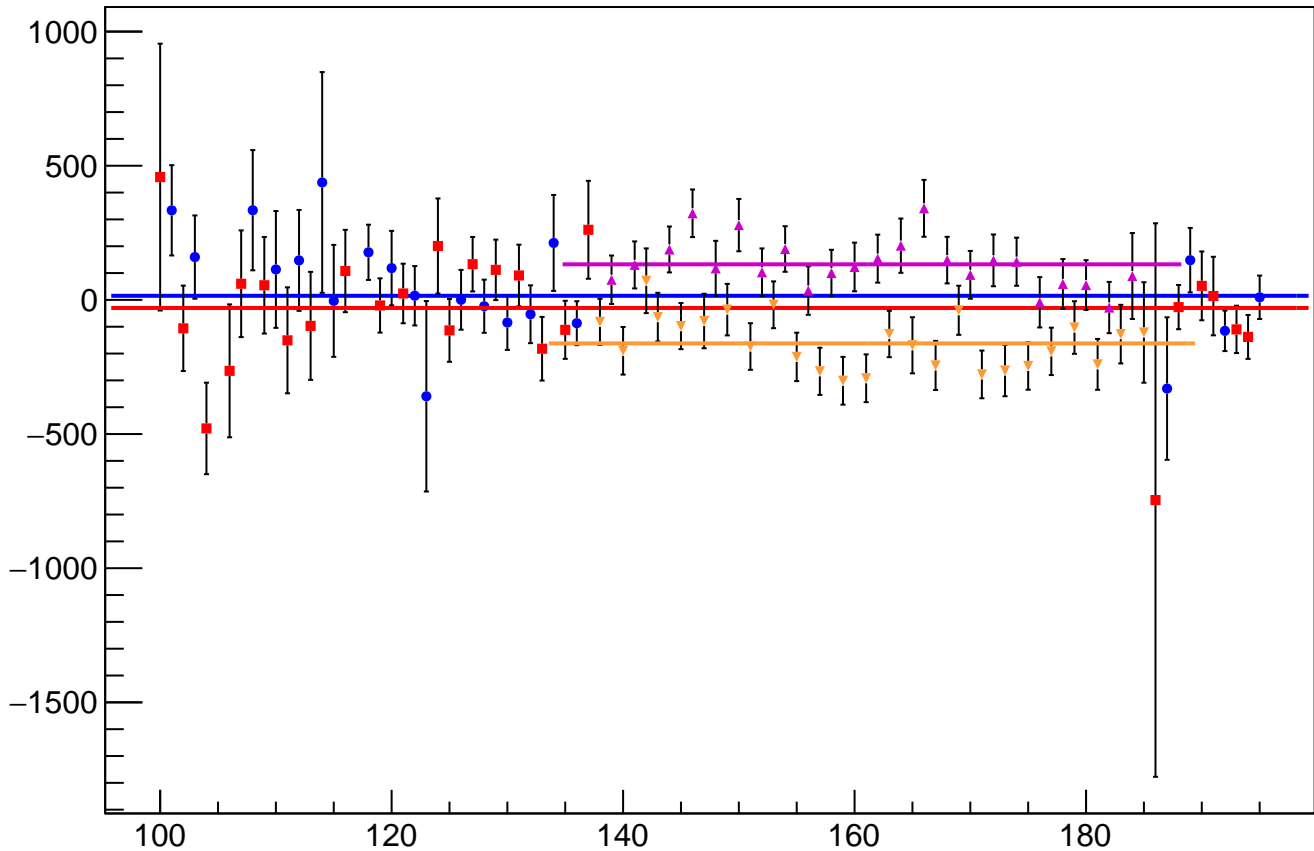
+ sign 0.006+/-0.000  $\chi^2/\text{NDF}$ : 4399513.3/45

All: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 10072210.6/93

- sign 0.006+/-0.000  $\chi^2/\text{NDF}$ : 5642293.6/47



# reg\_asym\_sam1\_mean vs Slug



Right In:  $15.250 \pm 27.042$   $\chi^2/\text{NDF}: 22.6/20$

Left Out:  $-162.161 \pm 18.745$   $\chi^2/\text{NDF}: 25.7/24$

Right Out:  $-30.093 \pm 25.832$   $\chi^2/\text{NDF}: 26.8/24$

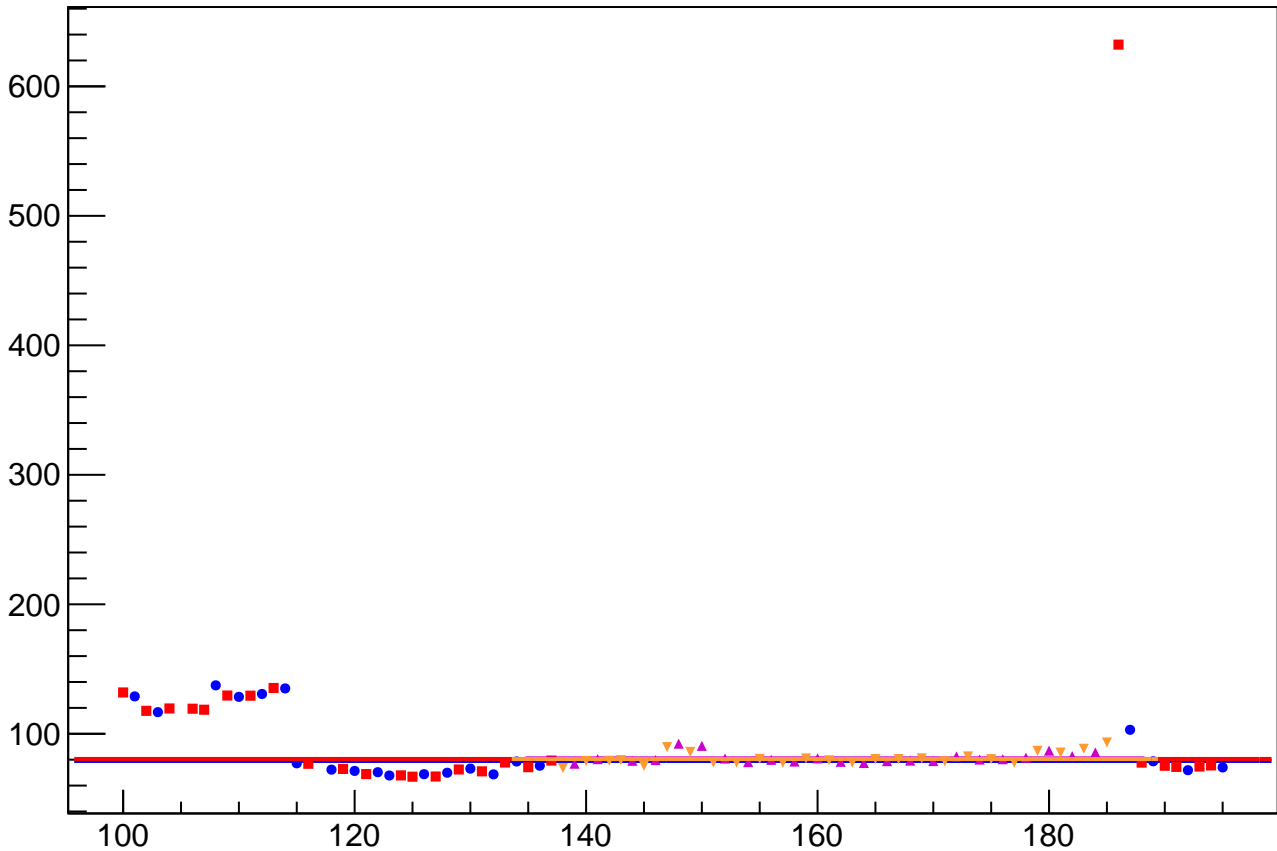
Left In:  $132.557 \pm 19.403$   $\chi^2/\text{NDF}: 20.7/22$

+ sign  $-104.584 \pm 15.406$   $\chi^2/\text{NDF}: 77.3/45$

All:  $-15.974 \pm 10.932$   $\chi^2/\text{NDF}: 216.8/93$

- sign  $73.891 \pm 15.514$   $\chi^2/\text{NDF}: 72.9/47$

# reg\_asym\_sam1\_rms vs Slug



Right In: 79.013 $\pm$ 0.019  $\chi^2$ /NDF: 855623.3/20

Left Out: 80.459 $\pm$ 0.013  $\chi^2$ /NDF: 89942.2/24

Right Out: 80.571 $\pm$ 0.018  $\chi^2$ /NDF: 1514341.2/24

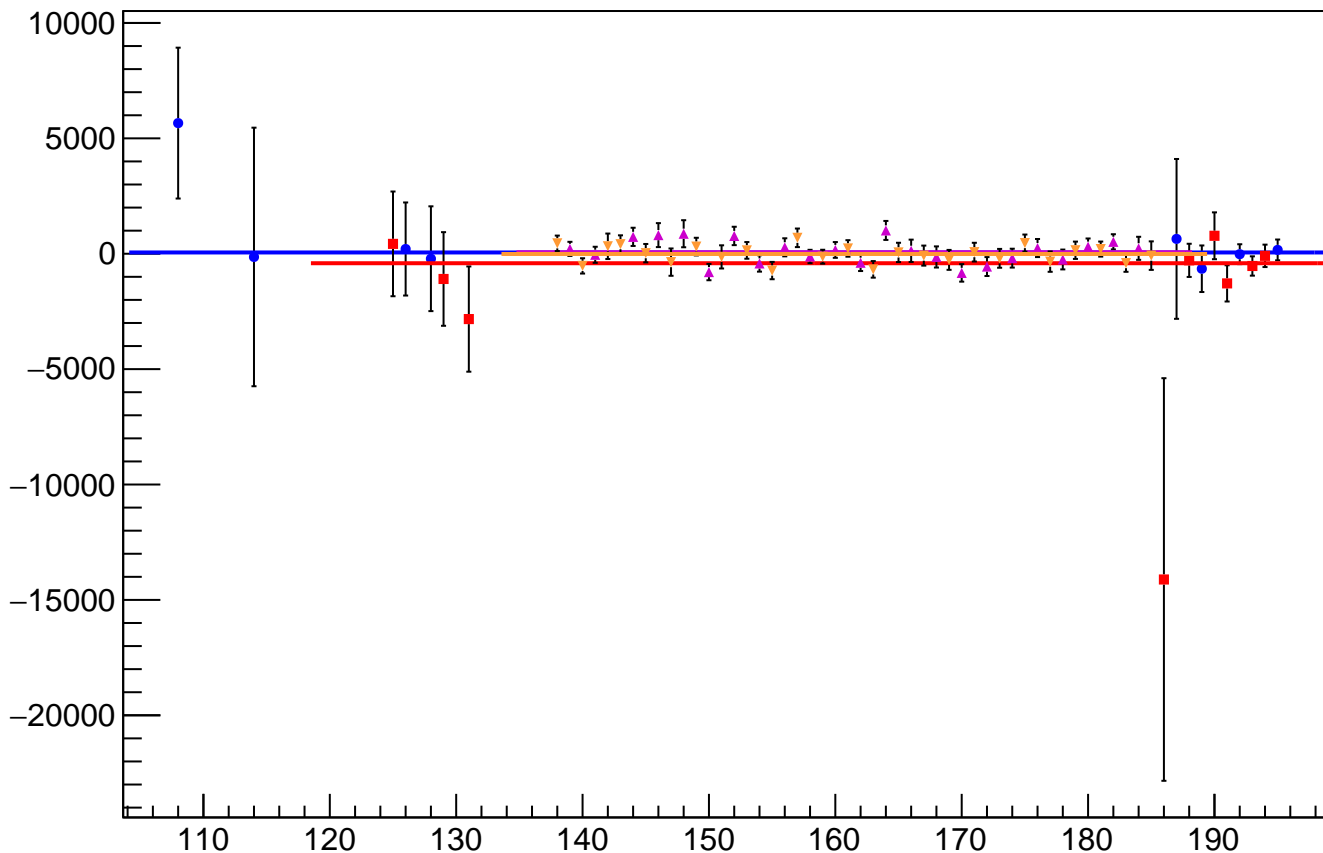
Left In: 81.014 $\pm$ 0.014  $\chi^2$ /NDF: 72250.2/22

+ sign 79.990 $\pm$ 0.011  $\chi^2$ /NDF: 949426.5/45

All: 80.419 $\pm$ 0.008  $\chi^2$ /NDF: 2539521.5/93

- sign 80.854 $\pm$ 0.011  $\chi^2$ /NDF: 1586966.6/47

# asym\_sam1\_correction\_mean vs Slug



Right In: 55.316+/-289.203  $\chi^2$ /NDF: 3.6/7

Left Out: -10.486+/-78.391  $\chi^2$ /NDF:22.5/24

Right Out: -410.929+/-257.132  $\chi^2$ /NDF: 7.0/8

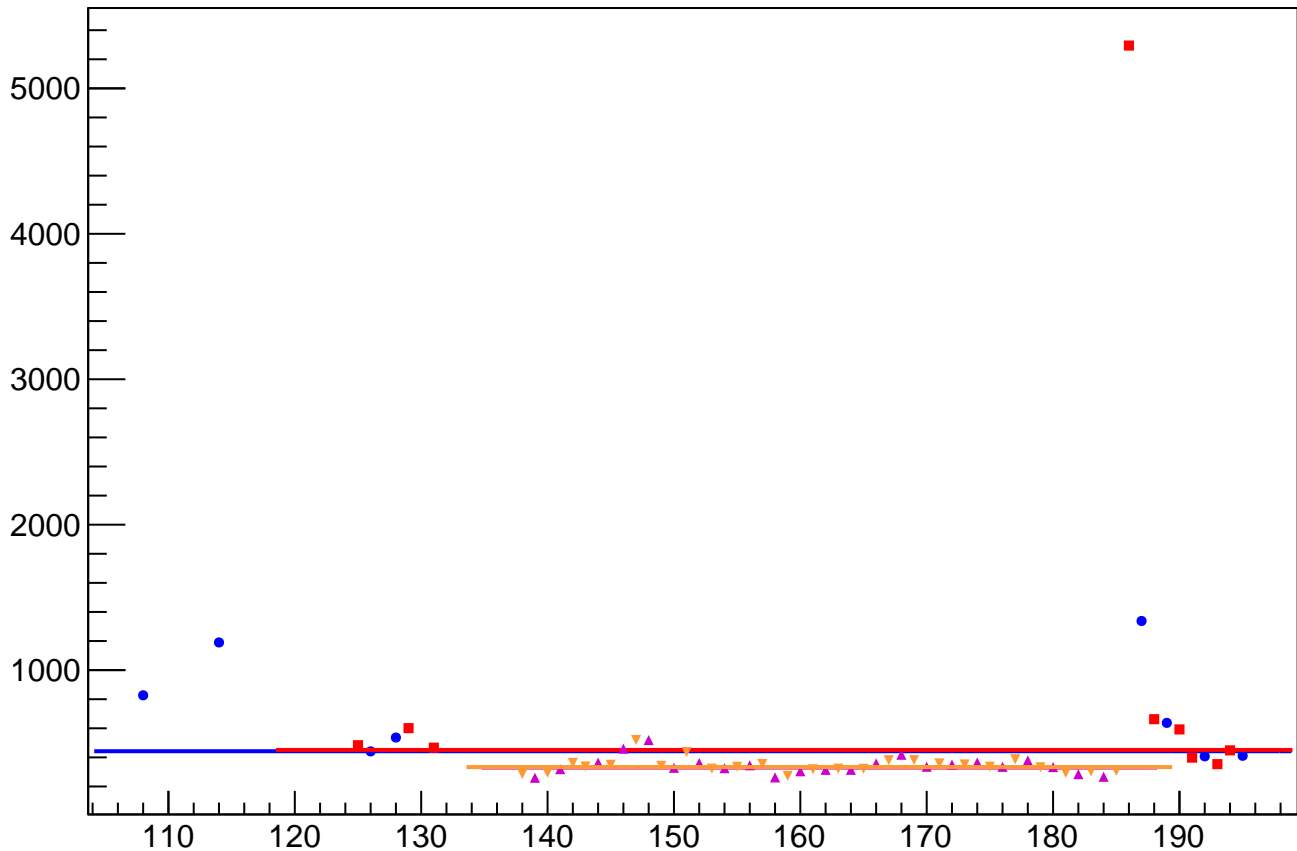
Left In: 64.591+/-80.047  $\chi^2$ /NDF:37.4/22

+ sign -5.982+/-75.661  $\chi^2$ /NDF: 26.2/32

All: 8.154+/-53.770  $\chi^2$ /NDF: 73.8/64

- sign 22.579+/-76.429  $\chi^2$ /NDF: 47.5/31

# asym\_sam1\_correction\_rms vs Slug



Right In: 442.399 $\pm$ 0.204  $\chi^2$ /NDF: 298165.0/7

Left Out: 333.233 $\pm$ 0.055  $\chi^2$ /NDF: 592122.2/24

Right Out: 451.183 $\pm$ 0.182  $\chi^2$ /NDF: 957854.7/8

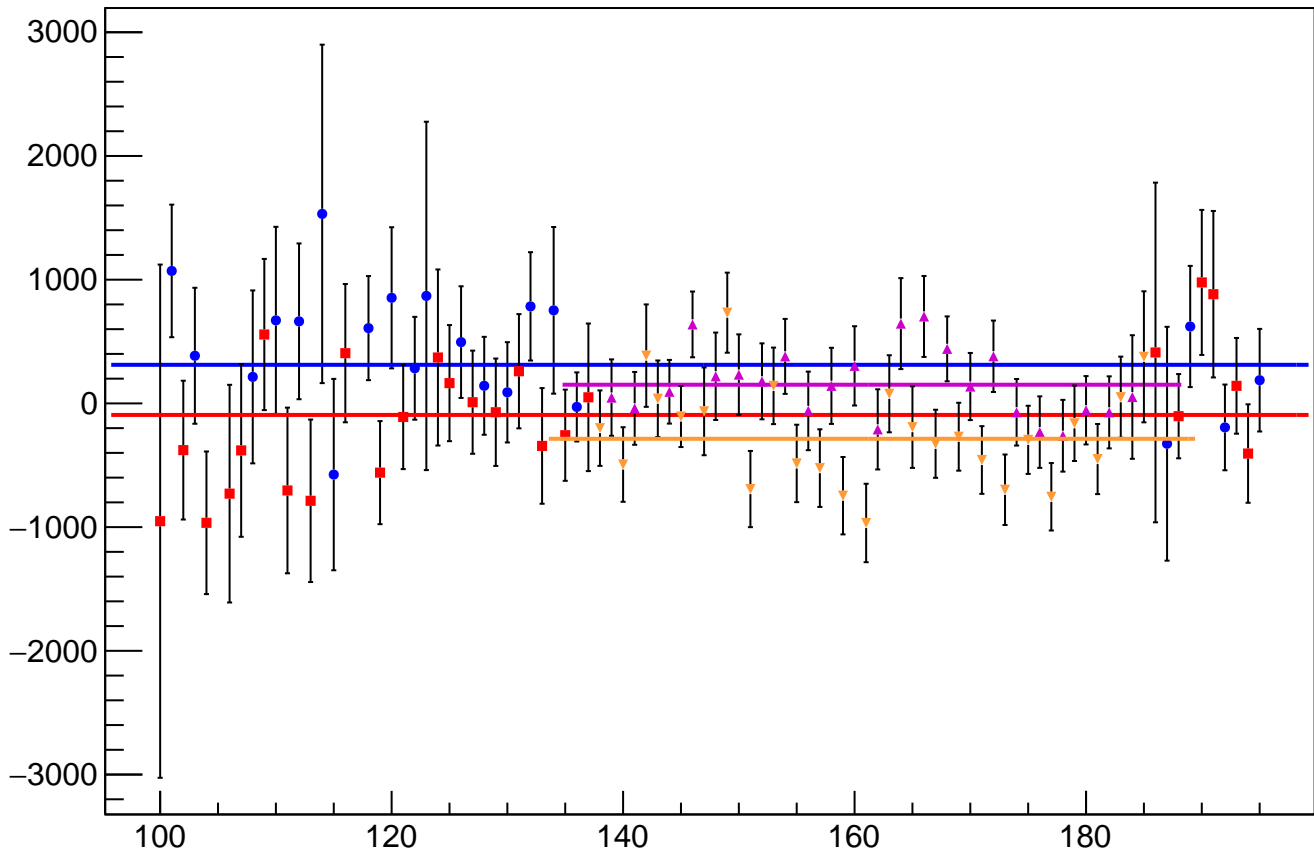
Left In: 329.985 $\pm$ 0.057  $\chi^2$ /NDF: 795969.0/22

+ sign 340.705 $\pm$ 0.054  $\chi^2$ /NDF: 1155750.9/32

All: 340.699 $\pm$ 0.038  $\chi^2$ /NDF: 3314649.2/64

- sign 340.693 $\pm$ 0.054  $\chi^2$ /NDF: 2158898.2/31

# reg\_asym\_sam2\_mean vs Slug



Right In: 311.907 $\pm$ 106.962  $\chi^2$ /NDF: 13.1/20

Left Out: -286.030 $\pm$ 61.095  $\chi^2$ /NDF:36.6/24

Right Out: -93.202 $\pm$ 102.125  $\chi^2$ /NDF: 17.0/24

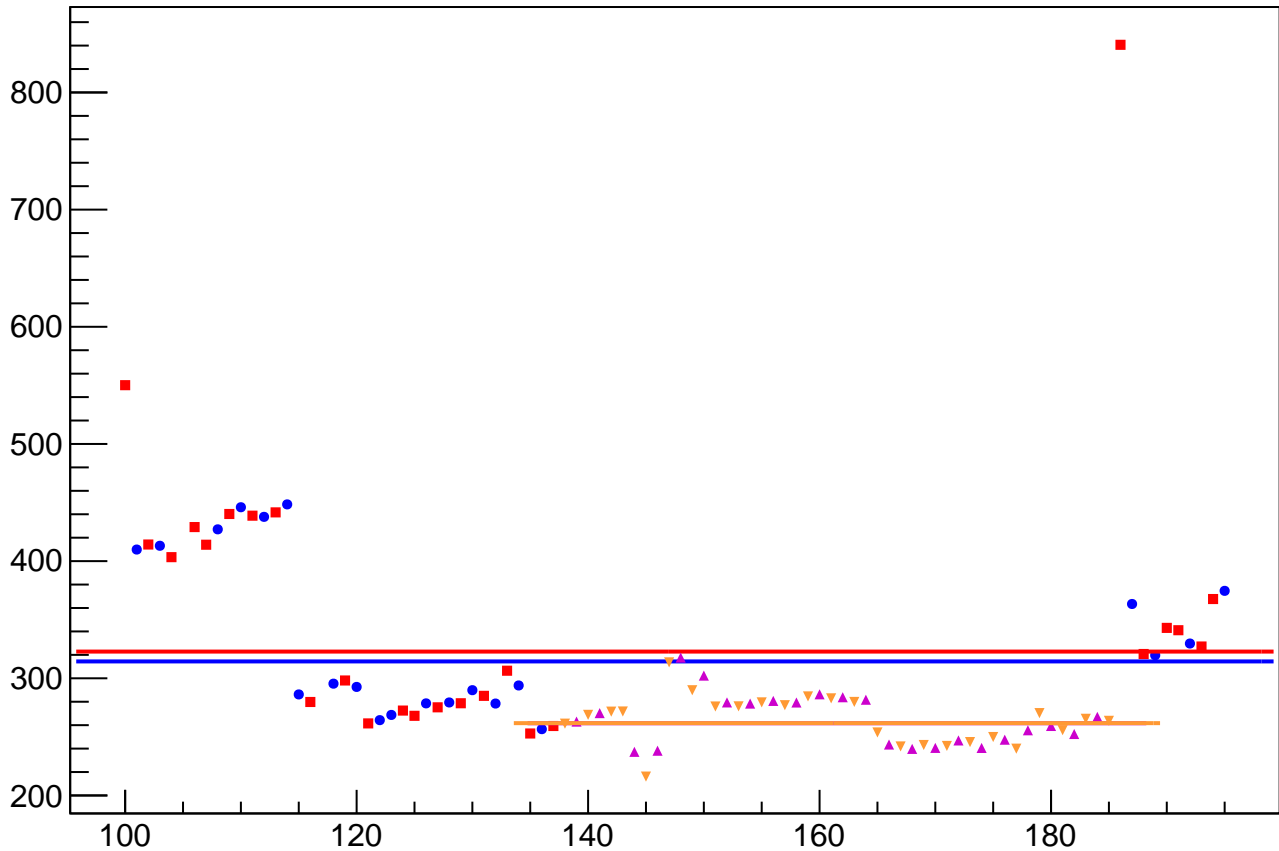
Left In: 150.920 $\pm$ 62.818  $\chi^2$ /NDF:18.7/22

+ sign -138.942 $\pm$ 53.051  $\chi^2$ /NDF: 73.2/45

All: -28.469 $\pm$ 37.672  $\chi^2$ /NDF: 121.8/93

- sign 83.909 $\pm$ 53.506  $\chi^2$ /NDF: 39.9/47

# reg\_asym\_sam2\_rms vs Slug



Right In: 314.400 $\pm$ 0.076  $\chi^2$ /NDF: 565857.4/20

Left Out: 261.722 $\pm$ 0.043  $\chi^2$ /NDF:233222.6/24

Right Out: 322.805 $\pm$ 0.072  $\chi^2$ /NDF: 948705.0/24

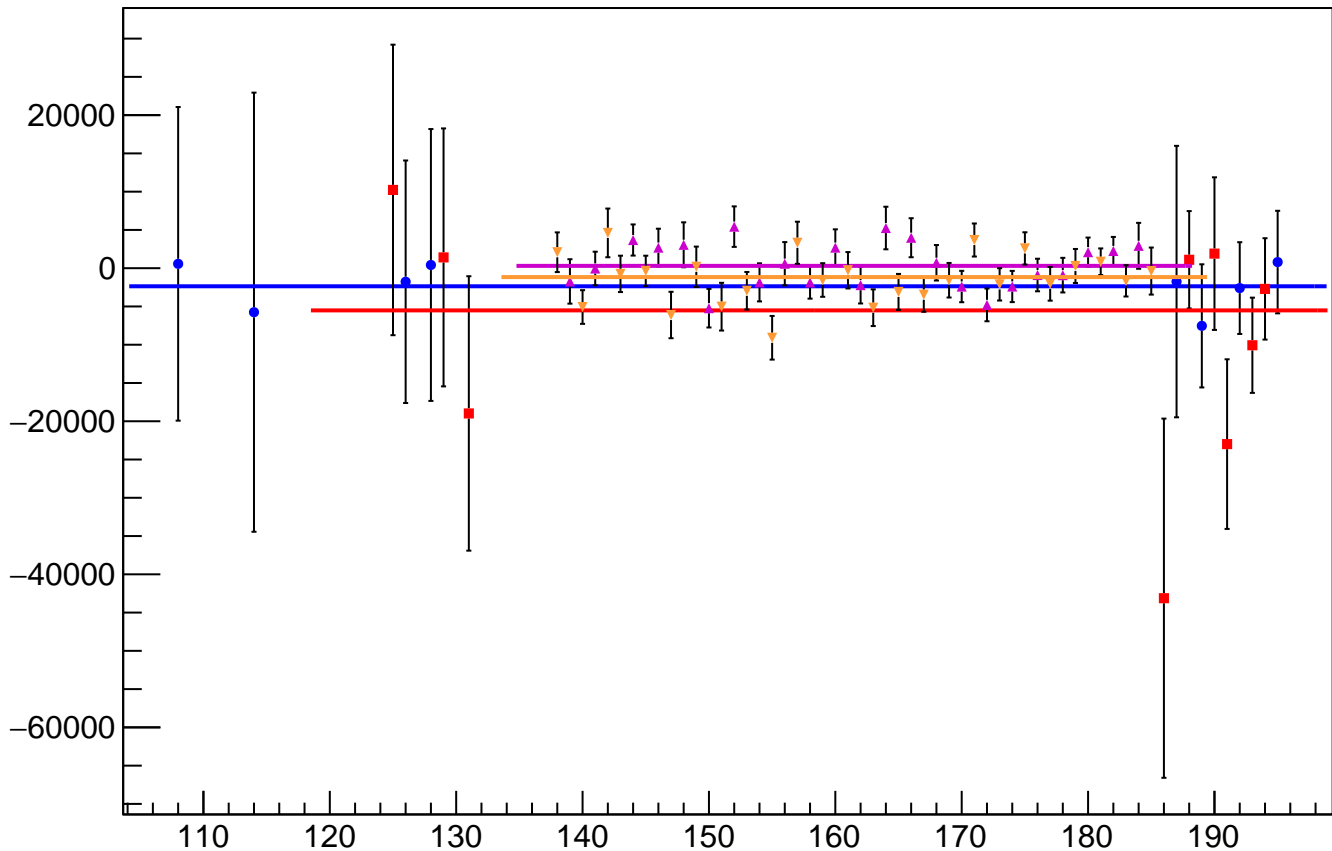
Left In: 261.637 $\pm$ 0.044  $\chi^2$ /NDF:228241.3/22

+ sign 274.680 $\pm$ 0.038  $\chi^2$ /NDF: 1164848.7/45

All: 276.538 $\pm$ 0.027  $\chi^2$ /NDF: 2867284.3/93

- sign 278.427 $\pm$ 0.038  $\chi^2$ /NDF: 1697489.3/47

# asym\_sam2\_correction\_mean vs Slug



Right In:  $-2363.581 \pm 3547.060$   $\chi^2/\text{NDF}: 0.7/7$

Left Out:  $-1161.443 \pm 469.036$   $\chi^2/\text{NDF}: 38.8/24$

Right Out:  $-5513.518 \pm 3119.481$   $\chi^2/\text{NDF}: 8.8/8$

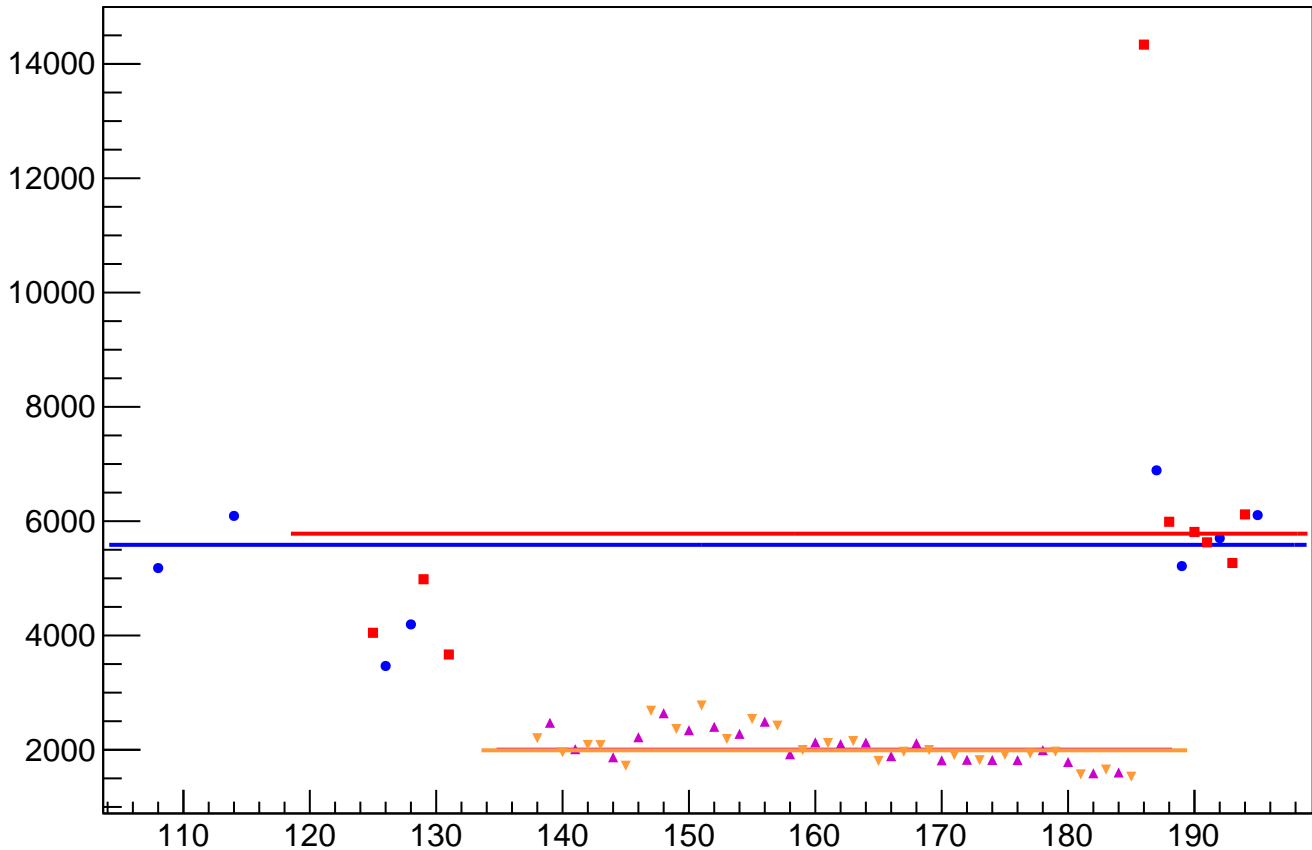
Left In:  $304.366 \pm 483.778$   $\chi^2/\text{NDF}: 35.4/22$

+ sign  $-1182.101 \pm 464.989$   $\chi^2/\text{NDF}: 39.6/32$

All:  $-525.898 \pm 333.323$   $\chi^2/\text{NDF}: 91.3/64$

- sign  $167.728 \pm 478.064$   $\chi^2/\text{NDF}: 47.6/31$

# asym\_sam2\_correction\_rms vs Slug



Right In: 5586.059+/-2.508  $\chi^2$ /NDF: 77353.7/7

Left Out: 1991.105+/-0.332  $\chi^2$ /NDF: 726310.6/24

Right Out: 5781.320+/-2.206  $\chi^2$ /NDF: 336150.1/8

Left In: 2002.154+/-0.342  $\chi^2$ /NDF: 585947.4/22

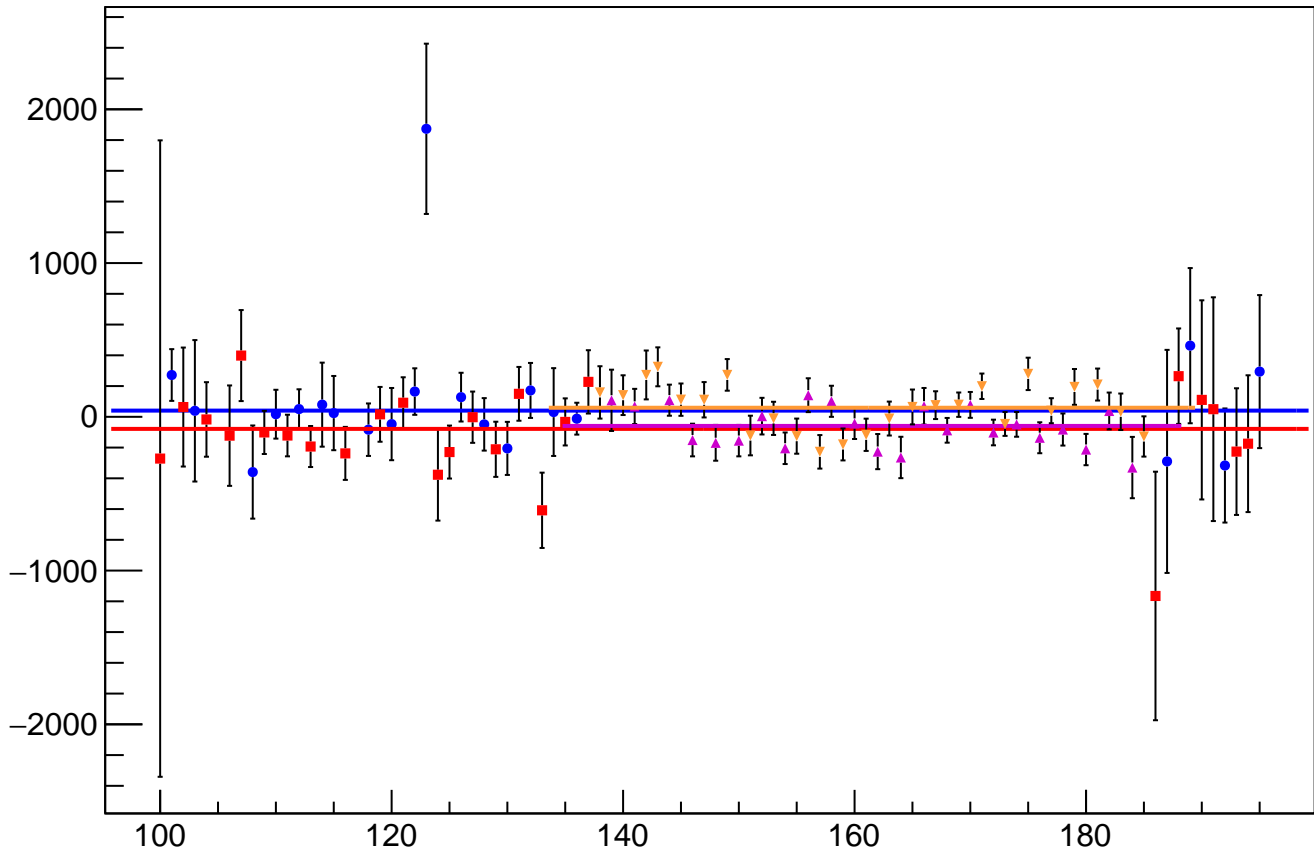
+ sign 2052.884+/-0.329  $\chi^2$ /NDF: 2822735.0/32

All: 2071.370+/-0.236  $\chi^2$ /NDF: 6617729.0/64

- sign 2090.911+/-0.338  $\chi^2$ /NDF: 3788491.3/31



# reg\_asym\_sam3\_mean vs Slug



Right In:  $40.416 \pm 42.938$   $\chi^2/\text{NDF}: 21.5/20$

Left Out:  $58.983 \pm 21.137$   $\chi^2/\text{NDF}: 46.9/24$

Right Out:  $-78.509 \pm 42.158$   $\chi^2/\text{NDF}: 20.4/24$

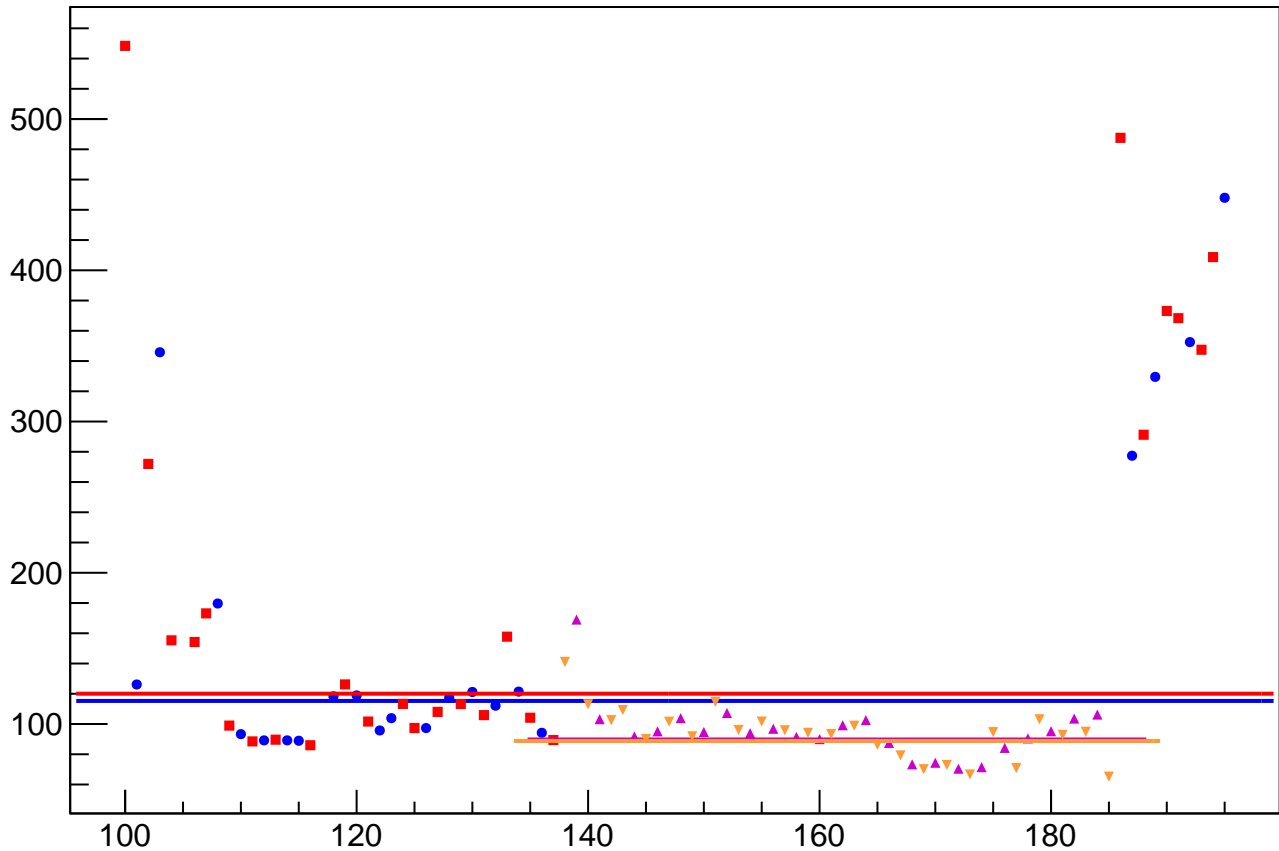
Left In:  $-59.235 \pm 21.921$   $\chi^2/\text{NDF}: 29.4/22$

+ sign  $55.361 \pm 18.964$   $\chi^2/\text{NDF}: 68.5/45$

All:  $-2.490 \pm 13.578$   $\chi^2/\text{NDF}: 137.6/93$

- sign  $-63.337 \pm 19.449$   $\chi^2/\text{NDF}: 49.9/47$

# reg\_asym\_sam3\_rms vs Slug



Right In: 115.257 $\pm$ 0.030  $\chi^2$ /NDF: 3083039.1/20

Left Out: 88.748 $\pm$ 0.015  $\chi^2$ /NDF:1079338.8/24

Right Out: 120.046 $\pm$ 0.030  $\chi^2$ /NDF: 4074020.2/24

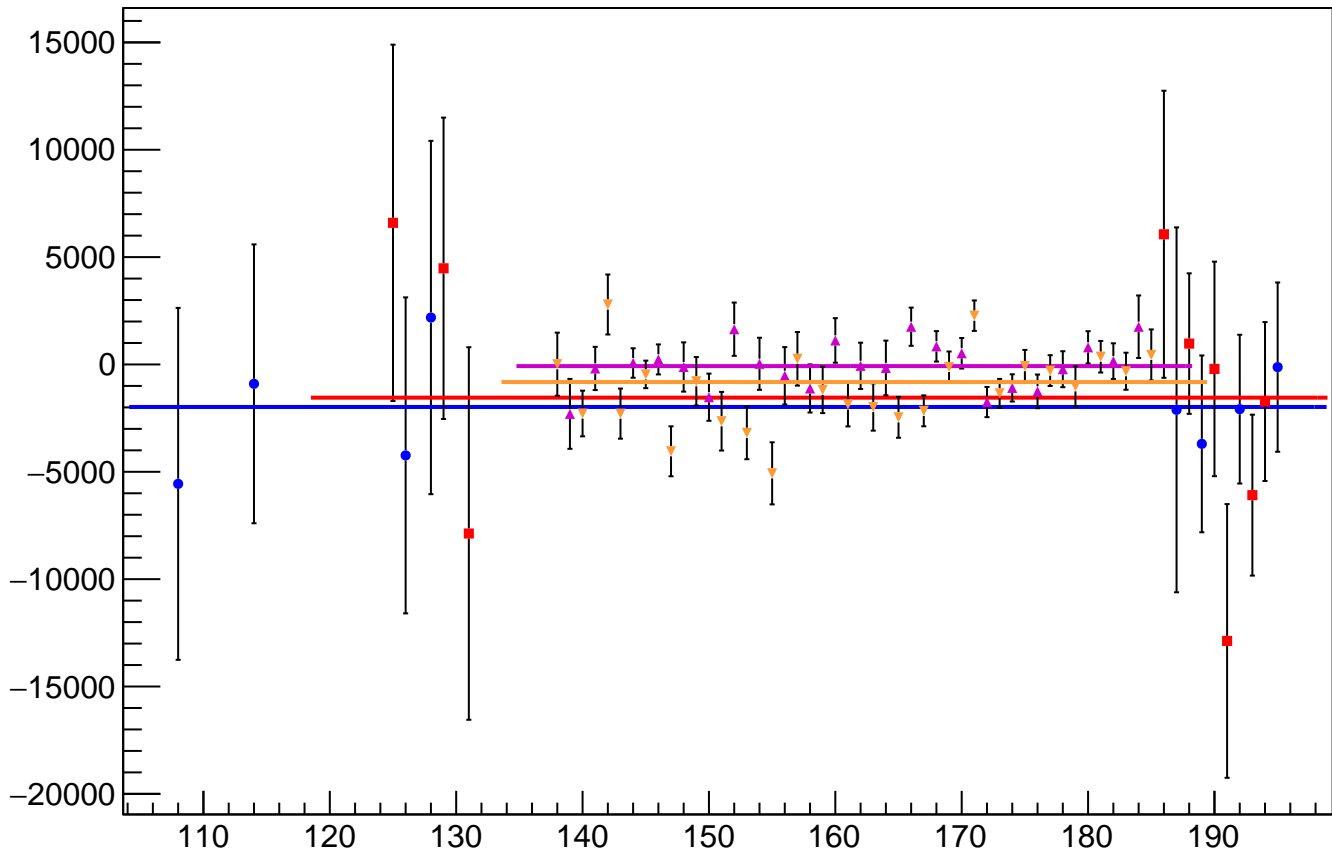
Left In: 89.766 $\pm$ 0.016  $\chi^2$ /NDF:885818.0/22

+ sign 93.919 $\pm$ 0.013  $\chi^2$ /NDF: 4775982.1/45

All: 95.036 $\pm$ 0.010  $\chi^2$ /NDF: 10562224.9/93

- sign 96.210 $\pm$ 0.014  $\chi^2$ /NDF: 5772014.1/47

# asym\_sam3\_correction\_mean vs Slug



Right In:  $-1980.188 \pm 1849.681$   $\chi^2/\text{NDF}$ : 1.0/7

Left Out:  $-818.877 \pm 184.464$   $\chi^2/\text{NDF}$ : 68.2/24

Right Out:  $-1546.443 \pm 1637.956$   $\chi^2/\text{NDF}$ : 8.8/8

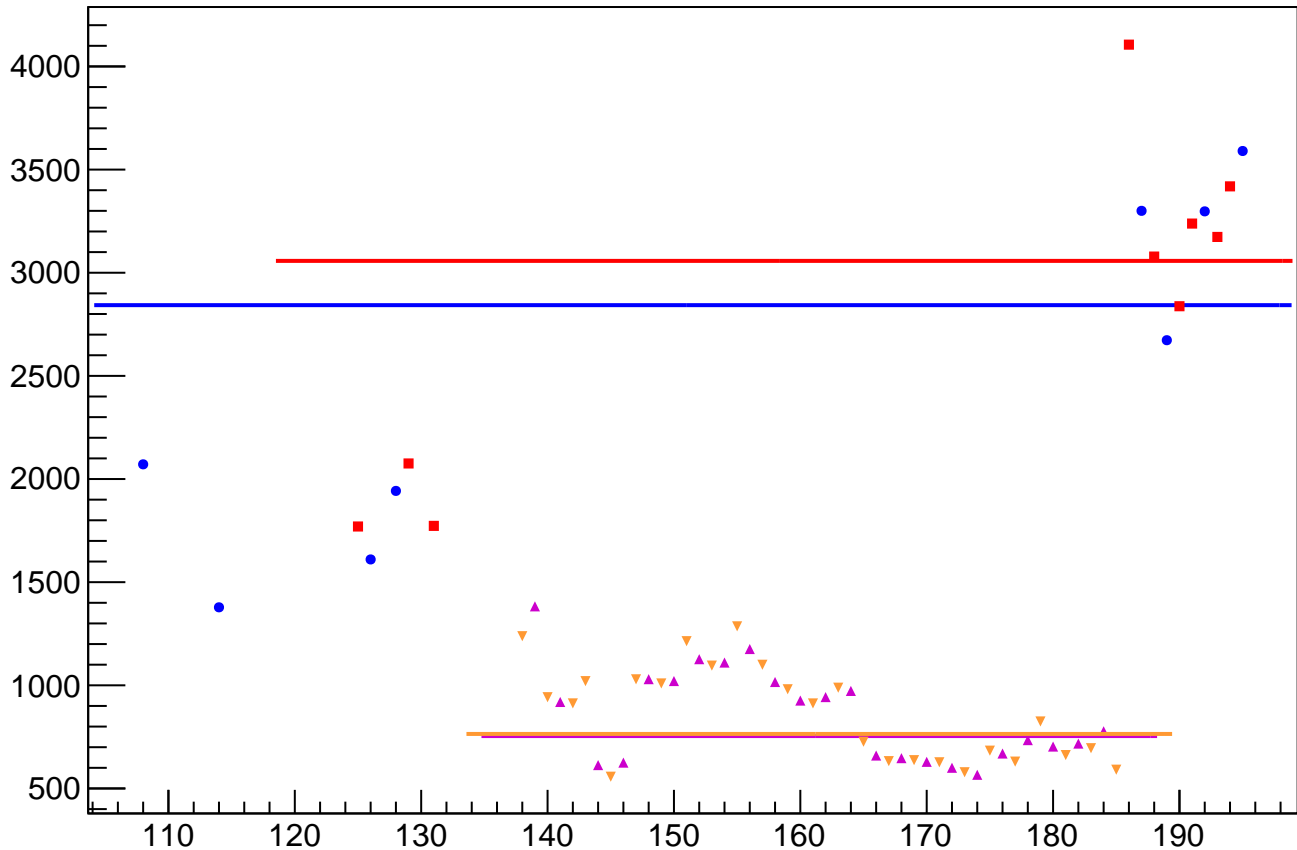
Left In:  $-76.204 \pm 186.651$   $\chi^2/\text{NDF}$ : 28.3/22

+ sign  $-830.313 \pm 183.553$   $\chi^2/\text{NDF}$ : 69.6/32

All:  $-466.462 \pm 130.457$   $\chi^2/\text{NDF}$ : 115.4/64

- sign  $-95.051 \pm 185.451$   $\chi^2/\text{NDF}$ : 37.9/31

# asym\_sam3\_correction\_rms vs Slug



Right In: 2842.860+/-1.308  $\chi^2$ /NDF: 315028.3/7

Left Out: 764.280+/-0.130  $\chi^2$ /NDF:2315985.8/24

Right Out: 3057.462+/-1.158  $\chi^2$ /NDF: 206851.7/8

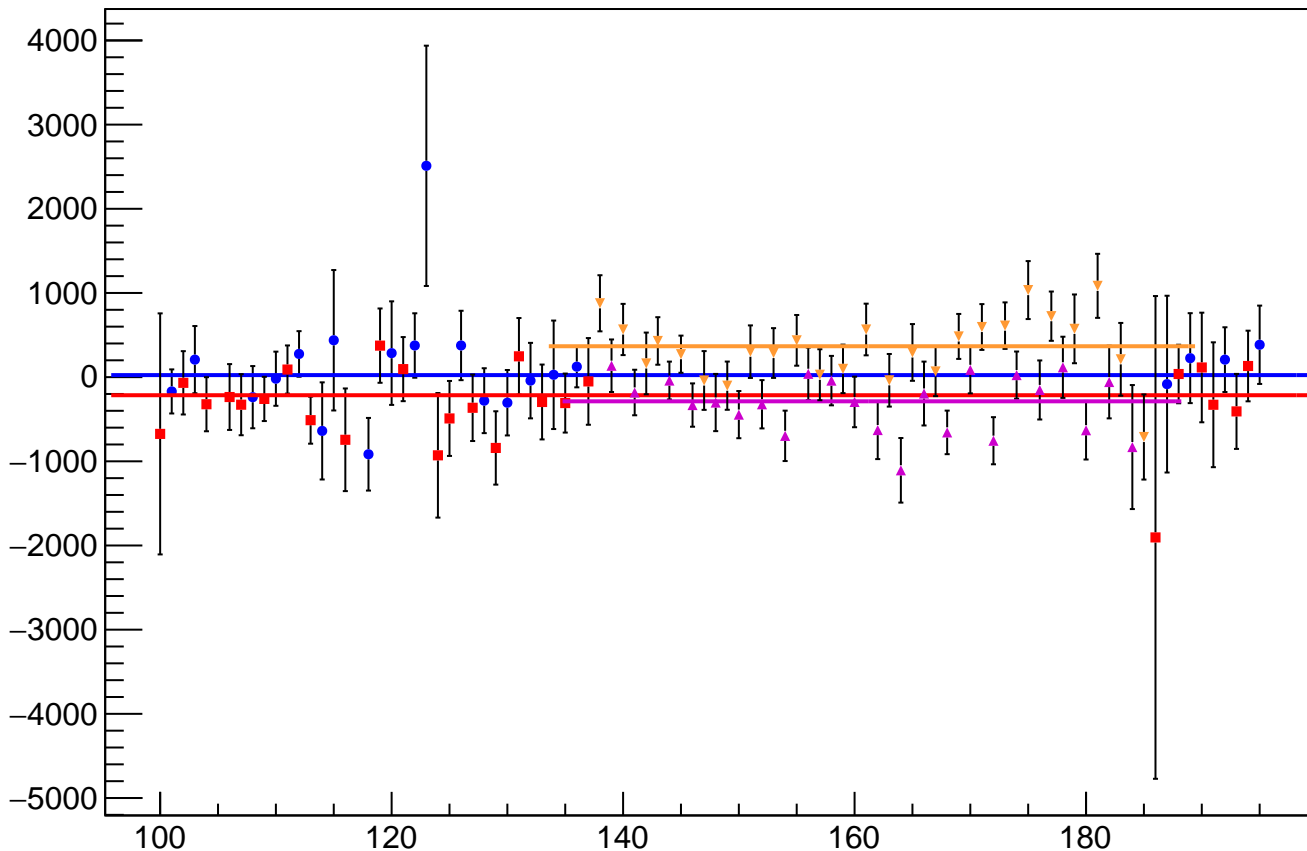
Left In: 754.027+/-0.132  $\chi^2$ /NDF:2013386.7/22

+ sign 784.749+/-0.130  $\chi^2$ /NDF: 5131773.2/32

All: 784.158+/-0.092  $\chi^2$ /NDF: 11256636.0/64

- sign 783.554+/-0.131  $\chi^2$ /NDF: 6124820.8/31

# reg\_asym\_sam4\_mean vs Slug



Right In: 24.209+/-87.613  $\chi^2/\text{NDF}$ : 15.8/20

Left Out: 367.028+/-61.943  $\chi^2/\text{NDF}$ :28.2/24

Right Out: -214.831+/-81.862  $\chi^2/\text{NDF}$ : 12.7/24

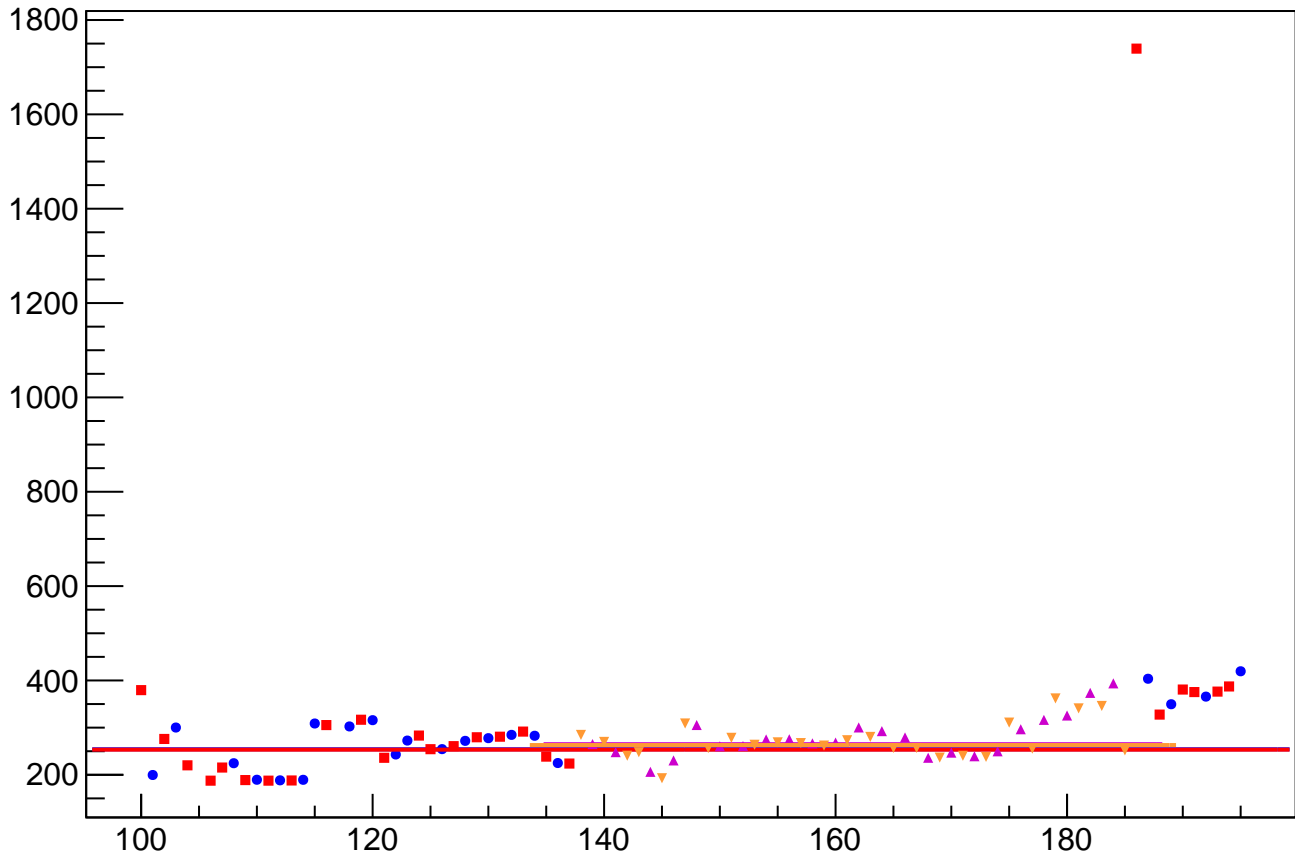
Left In: -287.246+/-64.141  $\chi^2/\text{NDF}$ :23.9/22

+ sign 252.776+/-50.579  $\chi^2/\text{NDF}$ : 54.2/45

All: -3.920+/-35.733  $\chi^2/\text{NDF}$ : 142.7/93

- sign -259.701+/-50.489  $\chi^2/\text{NDF}$ : 37.1/47

# reg\_asym\_sam4\_rms vs Slug



Right In: 254.123+/-0.062  $\chi^2/\text{NDF}$ : 984664.1/20

Left Out: 263.103+/-0.044  $\chi^2/\text{NDF}$ : 642226.0/24

Right Out: 253.284+/-0.058  $\chi^2/\text{NDF}$ : 1676718.3/24

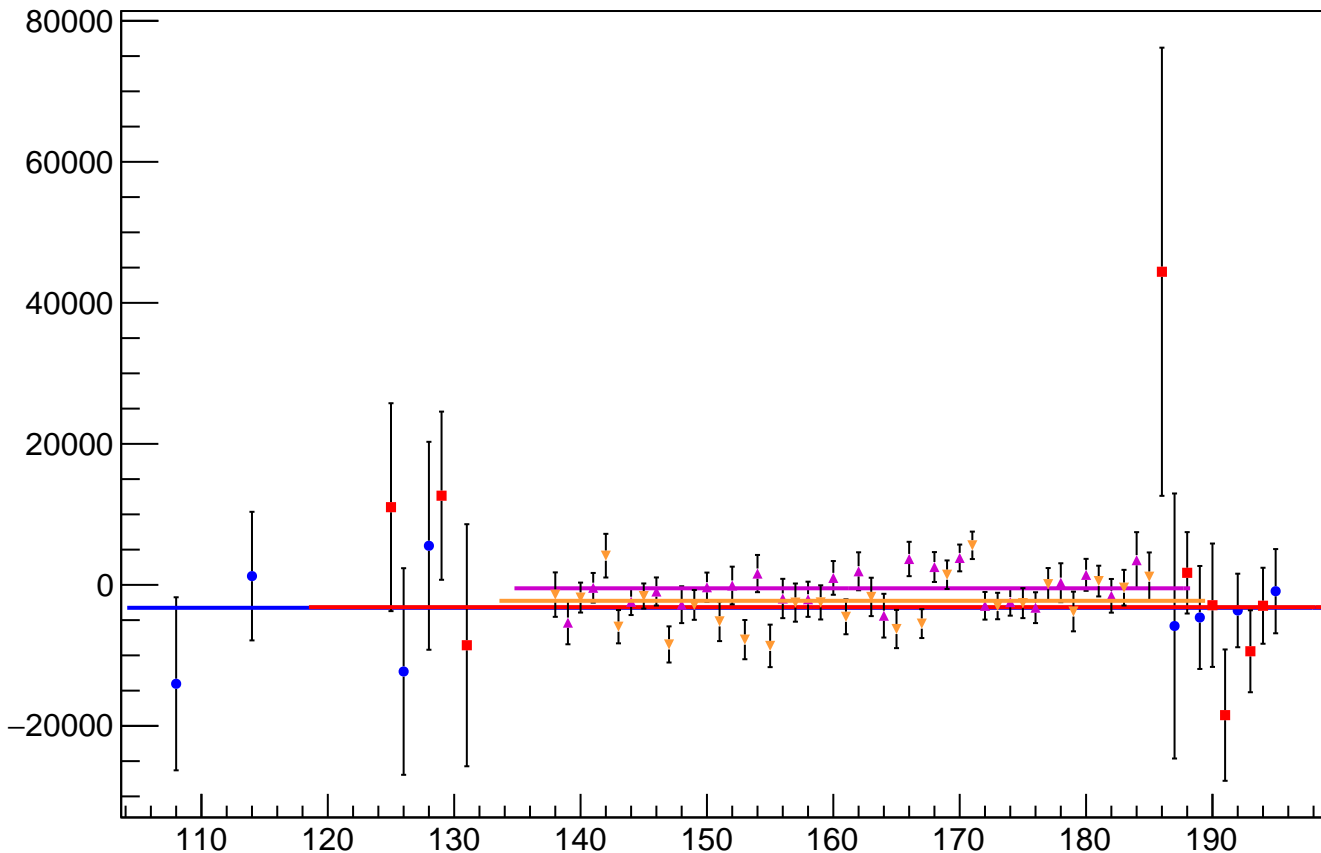
Left In: 264.923+/-0.045  $\chi^2/\text{NDF}$ : 609024.7/22

+ sign 260.110+/-0.036  $\chi^2/\text{NDF}$ : 1640898.1/45

All: 260.303+/-0.025  $\chi^2/\text{NDF}$ : 3951750.7/93

- sign 260.496+/-0.036  $\chi^2/\text{NDF}$ : 2310794.3/47

# asym\_sam4\_correction\_mean vs Slug



Right In:  $-3251.955 \pm 2958.037$   $\chi^2/\text{NDF}: 2.0/7$

Left Out:  $-2260.196 \pm 475.336$   $\chi^2/\text{NDF}: 52.3/24$

Right Out:  $-3159.910 \pm 2725.280$   $\chi^2/\text{NDF}: 9.6/8$

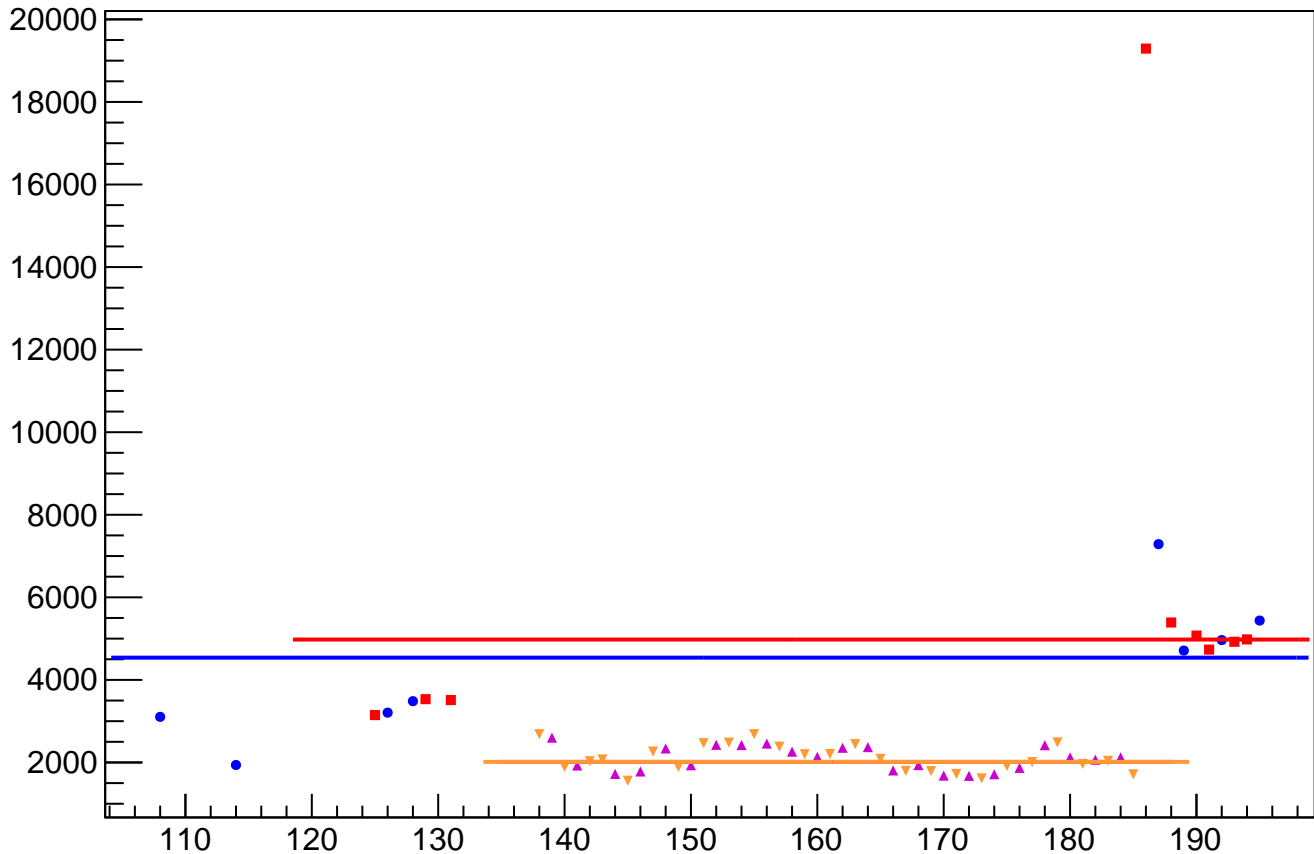
Left In:  $-485.590 \pm 487.465$   $\chi^2/\text{NDF}: 24.8/22$

+ sign  $-2285.161 \pm 469.315$   $\chi^2/\text{NDF}: 54.4/32$

All:  $-1445.881 \pm 335.518$   $\chi^2/\text{NDF}: 96.2/64$

- sign  $-568.499 \pm 479.850$   $\chi^2/\text{NDF}: 35.3/31$

# asym\_sam4\_correction\_rms vs Slug



Right In: 4538.977+/-2.092  $\chi^2$ /NDF: 319217.5/7

Left Out: 2014.106+/-0.336  $\chi^2$ /NDF:835656.9/24

Right Out: 4977.455+/-1.927  $\chi^2$ /NDF: 492399.9/8

Left In: 2013.245+/-0.345  $\chi^2$ /NDF:662077.8/22

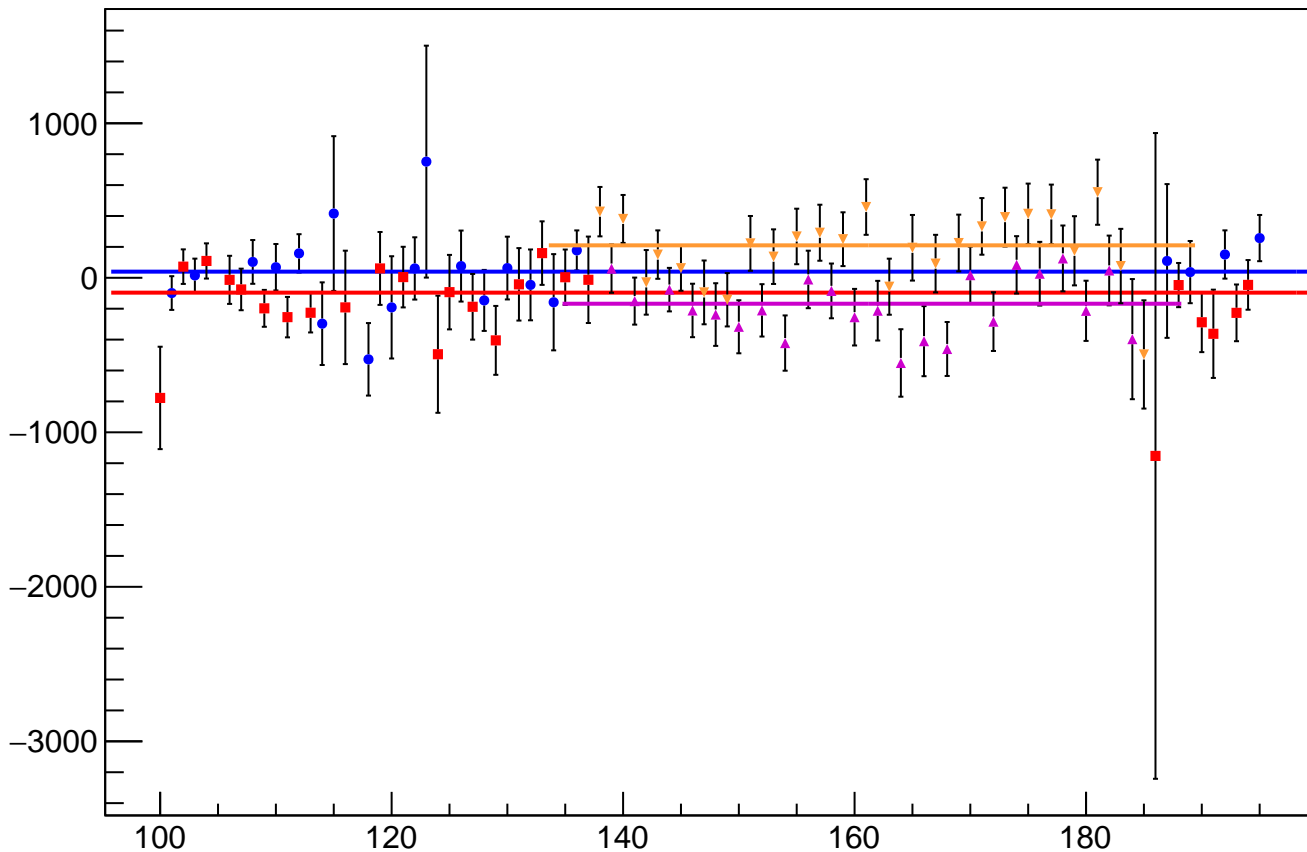
+ sign 2077.662+/-0.332  $\chi^2$ /NDF: 2575334.9/32

All: 2091.097+/-0.237  $\chi^2$ /NDF: 6025871.4/64

- sign 2105.141+/-0.339  $\chi^2$ /NDF: 3447184.3/31



# reg\_asym\_sam5\_mean vs Slug



Right In: 39.813+/-38.588  $\chi^2/\text{NDF}$ : 17.4/20

Left Out: 210.086+/-37.093  $\chi^2/\text{NDF}$ :27.5/24

Right Out: -96.105+/-35.077  $\chi^2/\text{NDF}$ : 22.1/24

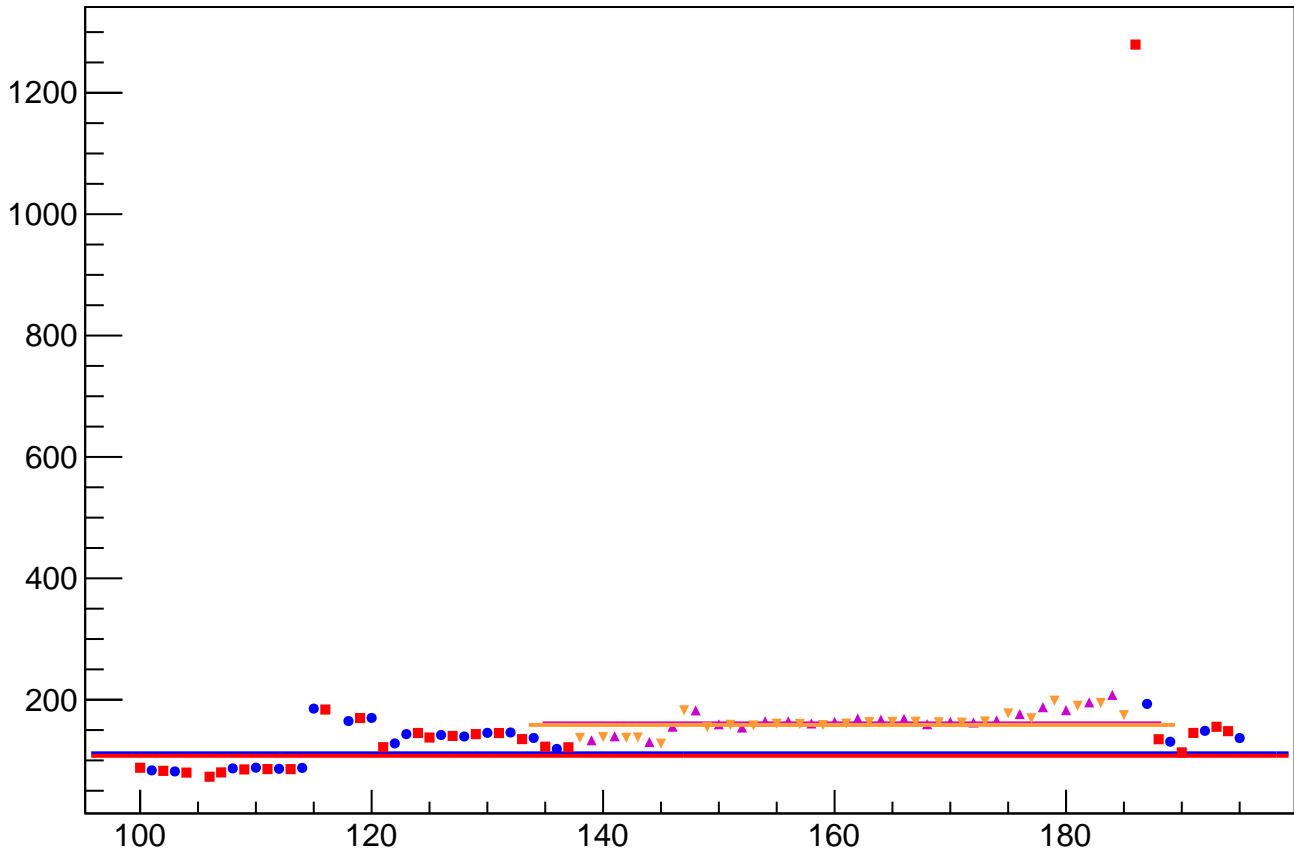
Left In: -167.822+/-38.718  $\chi^2/\text{NDF}$ :21.1/22

+ sign 128.310+/-26.742  $\chi^2/\text{NDF}$ : 55.1/45

All: -3.696+/-18.640  $\chi^2/\text{NDF}$ : 147.6/93

- sign -128.434+/-25.995  $\chi^2/\text{NDF}$ : 45.1/47

# reg\_asym\_sam5\_rms vs Slug



Right In: 111.655 $\pm$ 0.027  $\chi^2$ /NDF: 1153989.0/20

Left Out: 158.440 $\pm$ 0.026  $\chi^2$ /NDF: 434300.9/24

+ sign 135.971 $\pm$ 0.019  $\chi^2$ /NDF: 3116304.1/45

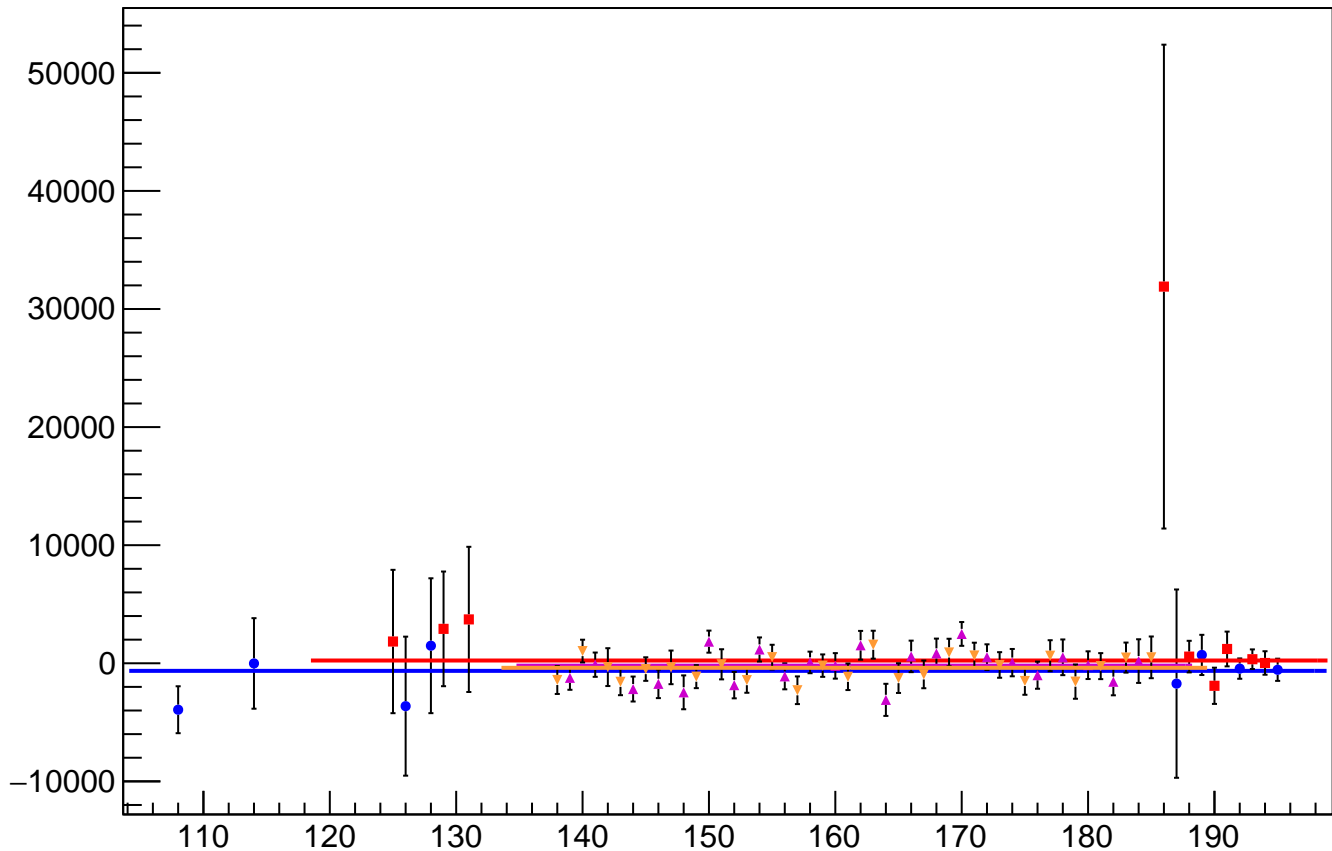
Right Out: 107.621 $\pm$ 0.025  $\chi^2$ /NDF: 2084211.7/24

All: 133.754 $\pm$ 0.013  $\chi^2$ /NDF: 7690635.6/93

Left In: 160.947 $\pm$ 0.027  $\chi^2$ /NDF: 379713.4/22

- sign 131.660 $\pm$ 0.018  $\chi^2$ /NDF: 4547600.3/47

# asym\_sam5\_correction\_mean vs Slug



Right In:  $-642.870 \pm 557.050$   $\chi^2/\text{NDF}: 3.9/7$

Left Out:  $-385.018 \pm 231.833$   $\chi^2/\text{NDF}: 18.1/24$

Right Out:  $234.007 \pm 499.753$   $\chi^2/\text{NDF}: 5.6/8$

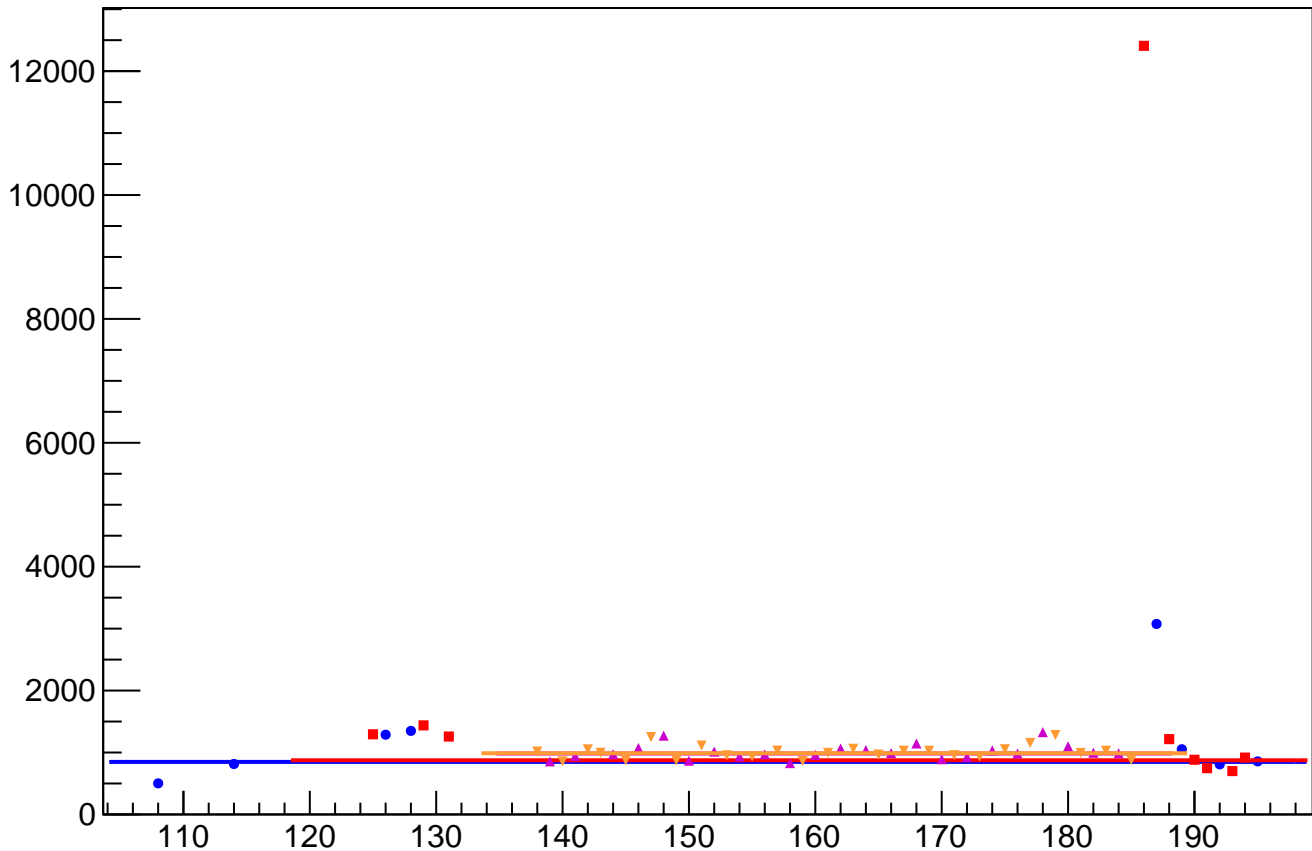
Left In:  $-202.234 \pm 237.460$   $\chi^2/\text{NDF}: 35.5/22$

+ sign  $-423.086 \pm 214.037$   $\chi^2/\text{NDF}: 22.1/32$

All:  $-272.796 \pm 151.503$   $\chi^2/\text{NDF}: 64.8/64$

- sign  $-121.884 \pm 214.479$   $\chi^2/\text{NDF}: 41.7/31$

# asym\_sam5\_correction\_rms vs Slug



Right In: 848.399+/-0.394  $\chi^2/\text{NDF}$ : 276758.8/7

Left Out: 987.869+/-0.164  $\chi^2/\text{NDF}$ : 376958.5/24

Right Out: 874.472+/-0.353  $\chi^2/\text{NDF}$ : 915479.7/8

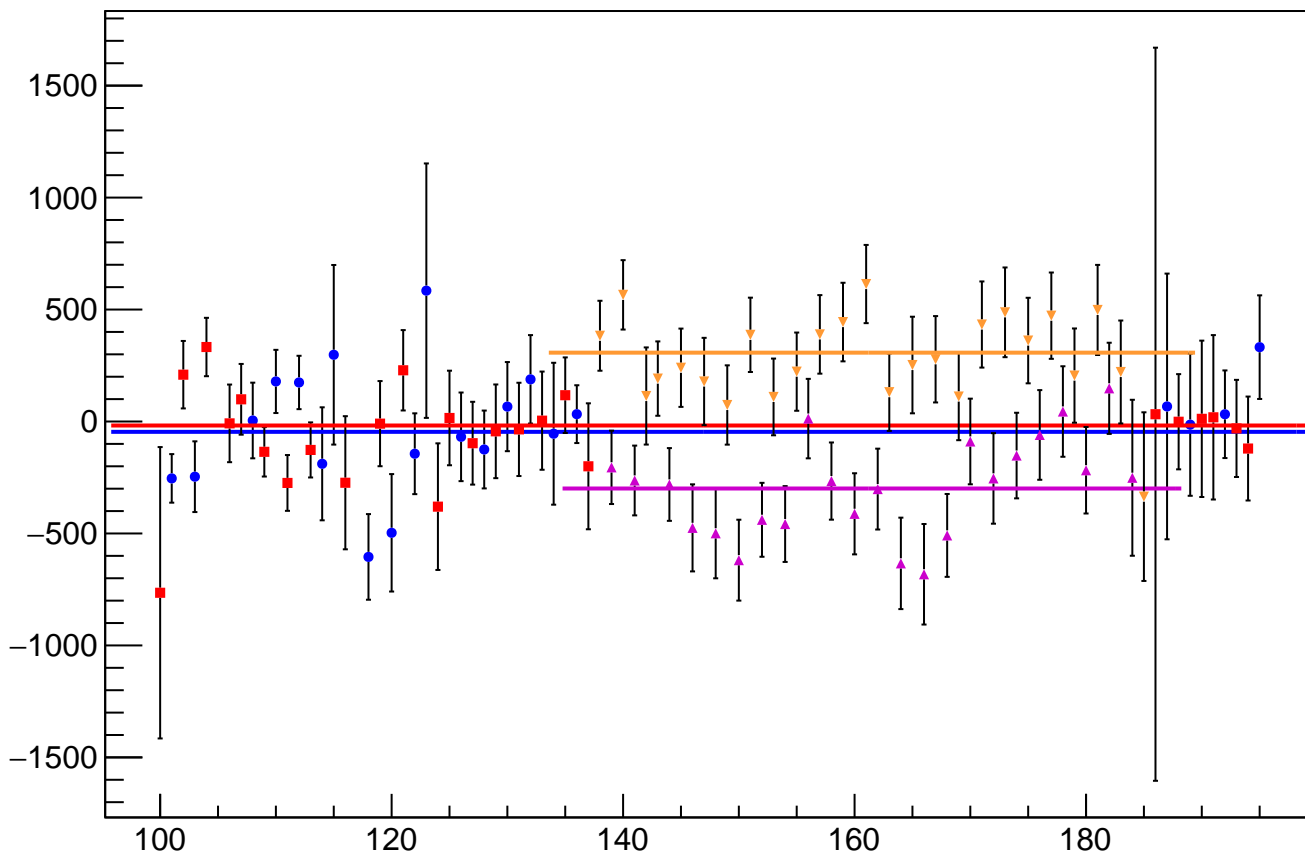
Left In: 983.893+/-0.168  $\chi^2/\text{NDF}$ : 416265.7/22

+ sign 967.278+/-0.151  $\chi^2/\text{NDF}$ : 760580.6/32

All: 965.512+/-0.107  $\chi^2/\text{NDF}$ : 2170817.4/64

- sign 963.739+/-0.152  $\chi^2/\text{NDF}$ : 1409964.0/31

# reg\_asym\_sam6\_mean vs Slug



Right In:  $-46.139 \pm 40.308$   $\chi^2/\text{NDF}: 30.6/20$

Left Out:  $307.487 \pm 37.278$   $\chi^2/\text{NDF}: 20.7/24$

Right Out:  $-17.857 \pm 37.324$   $\chi^2/\text{NDF}: 23.3/24$

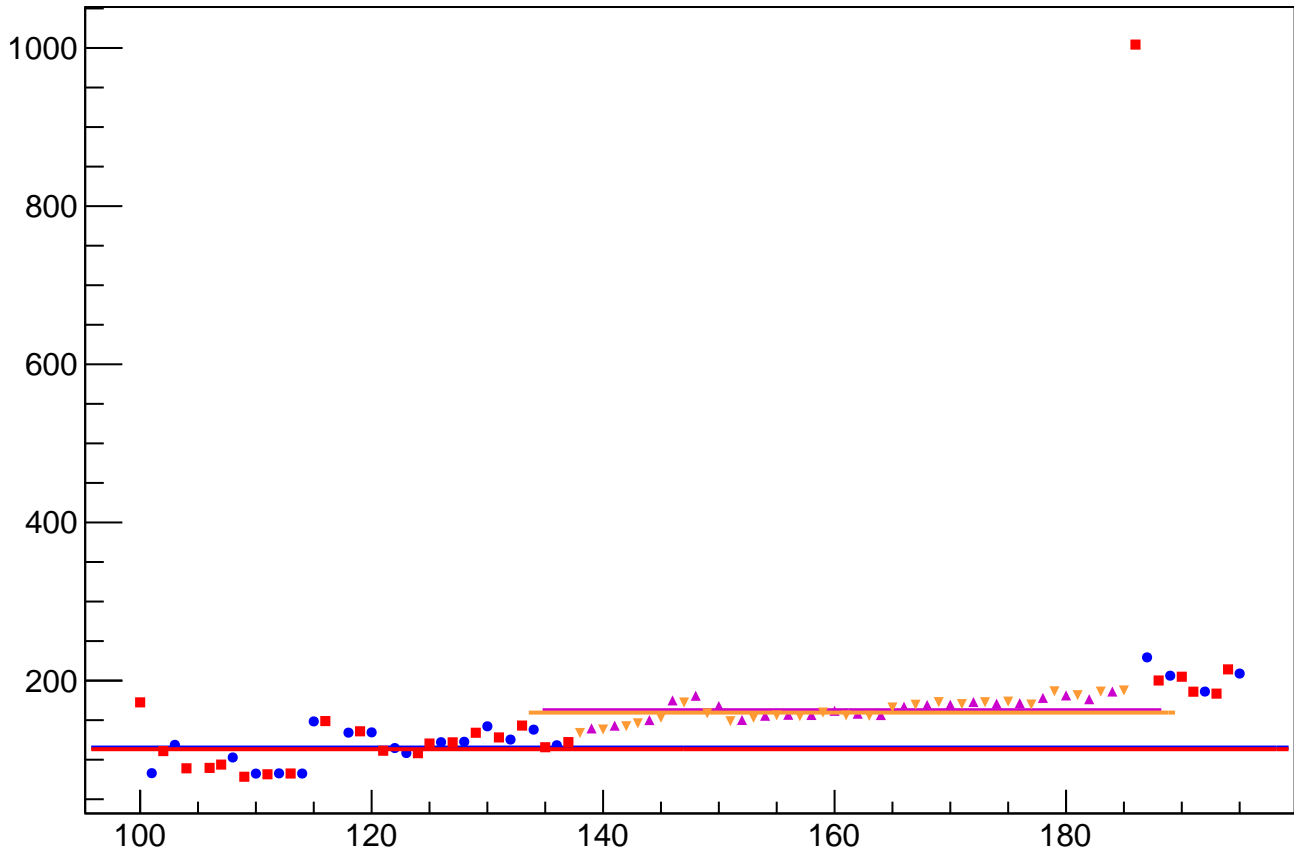
Left In:  $-299.192 \pm 39.009$   $\chi^2/\text{NDF}: 28.5/22$

+ sign  $144.466 \pm 27.368$   $\chi^2/\text{NDF}: 92.8/45$

All:  $-6.110 \pm 19.209$   $\chi^2/\text{NDF}: 231.5/93$

- sign  $-152.318 \pm 26.968$   $\chi^2/\text{NDF}: 79.0/47$

# reg\_asym\_sam6\_rms vs Slug



Right In: 115.373+/-0.029  $\chi^2/\text{NDF}$ : 1412608.7/20

Left Out: 159.568+/-0.026  $\chi^2/\text{NDF}$ :287744.2/24

Right Out: 113.258+/-0.026  $\chi^2/\text{NDF}$ : 2471930.8/24

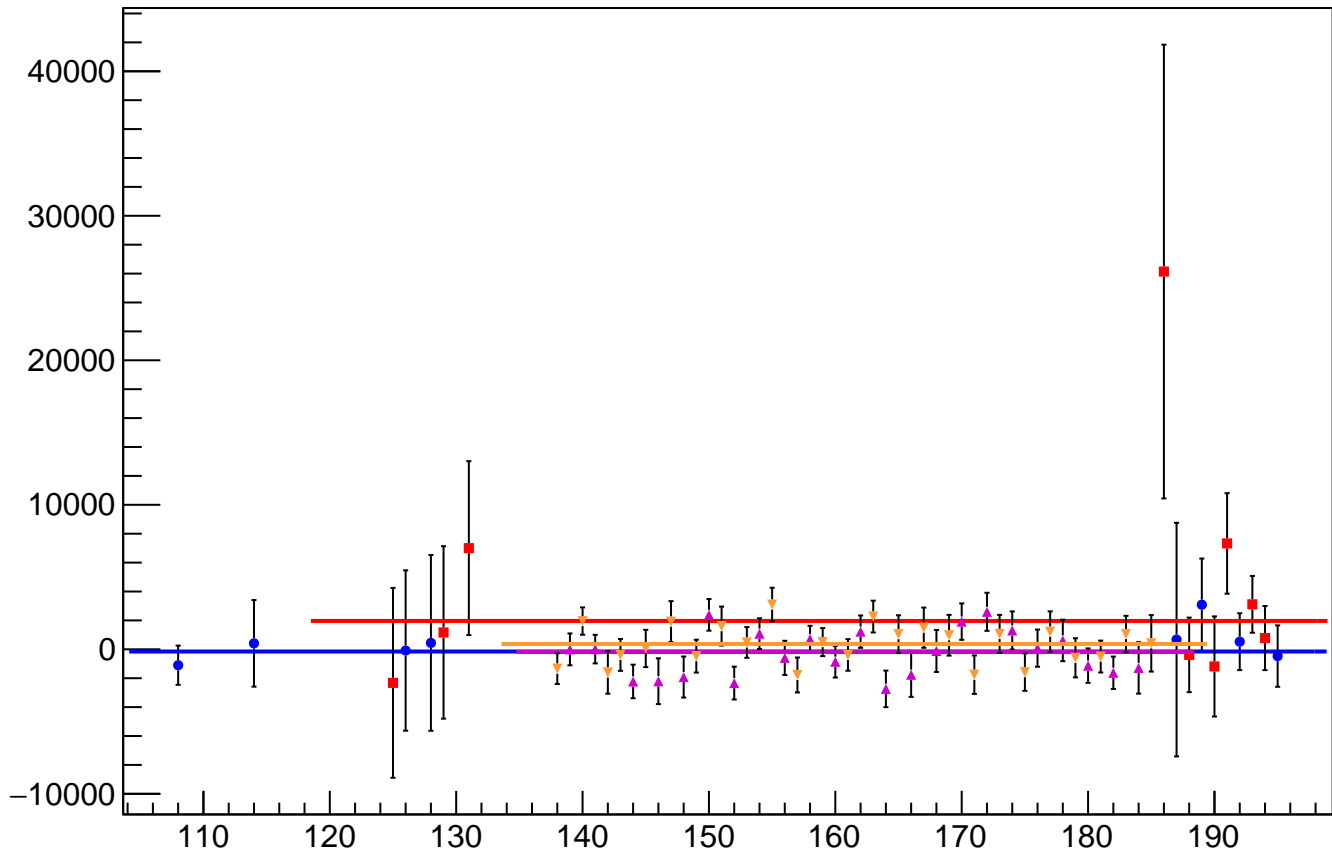
Left In: 162.606+/-0.028  $\chi^2/\text{NDF}$ :199542.3/22

+ sign 139.195+/-0.019  $\chi^2/\text{NDF}$ : 2996280.4/45

All: 138.002+/-0.014  $\chi^2/\text{NDF}$ : 7346237.9/93

- sign 136.843+/-0.019  $\chi^2/\text{NDF}$ : 4342467.7/47

# asym\_sam6\_correction\_mean vs Slug



Right In:  $-151.726 \pm 874.653$   $\chi^2/\text{NDF}: 1.7/7$

Left Out:  $370.001 \pm 243.521$   $\chi^2/\text{NDF}: 30.5/24$

Right Out:  $1962.805 \pm 1077.374$   $\chi^2/\text{NDF}: 8.2/8$

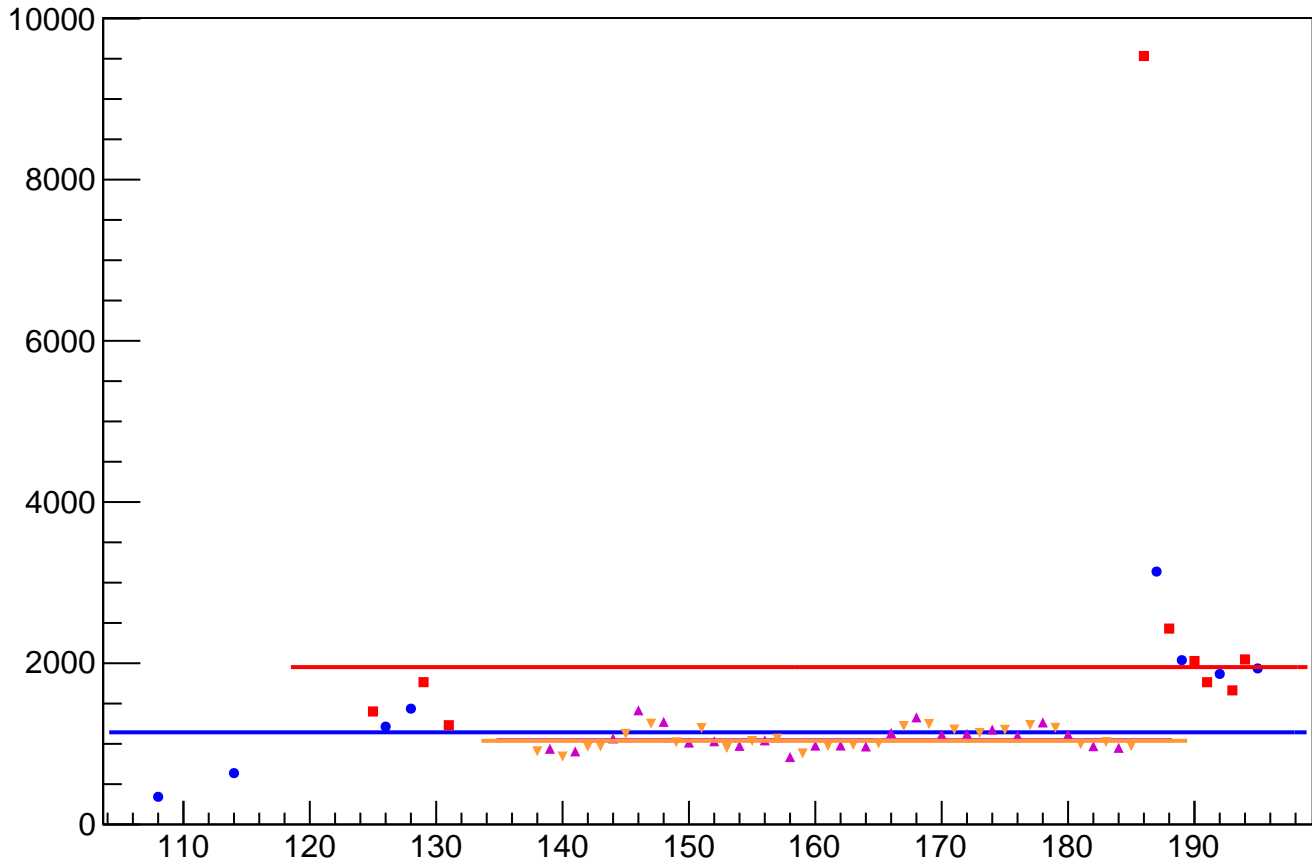
Left In:  $-183.107 \pm 252.258$   $\chi^2/\text{NDF}: 36.5/22$

+ sign  $332.467 \pm 234.598$   $\chi^2/\text{NDF}: 32.5/32$

All:  $139.710 \pm 169.647$   $\chi^2/\text{NDF}: 82.3/64$

- sign  $-71.577 \pm 245.615$   $\chi^2/\text{NDF}: 48.4/31$

# asym\_sam6\_correction\_rms vs Slug



Right In: 1143.103+/-0.618  $\chi^2/\text{NDF}$ : 1585789.0/7

Left Out: 1037.689+/-0.172  $\chi^2/\text{NDF}$ : 494981.4/24

Right Out: 1952.247+/-0.762  $\chi^2/\text{NDF}$ : 633326.2/8

Left In: 1044.746+/-0.178  $\chi^2/\text{NDF}$ : 543315.5/22

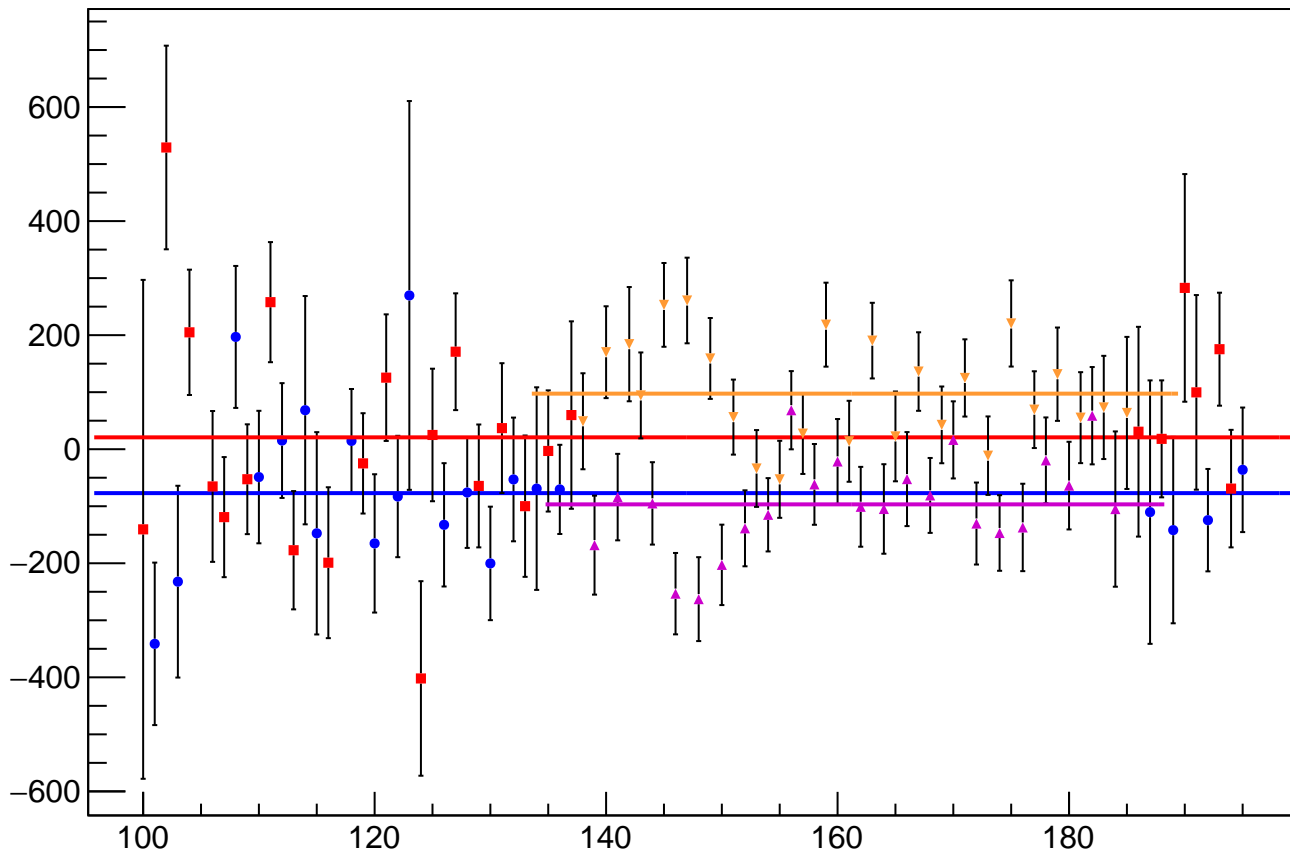
+ sign 1045.273+/-0.166  $\chi^2/\text{NDF}$ : 2107730.7/32

All: 1067.523+/-0.120  $\chi^2/\text{NDF}$ : 4667358.2/64

- sign 1091.911+/-0.174  $\chi^2/\text{NDF}$ : 2521917.8/31



# reg\_asym\_sam7\_mean vs Slug



Right In:  $-76.999 \pm 25.812$   $\chi^2/\text{NDF}: 15.7/20$

Left Out:  $97.445 \pm 14.880$   $\chi^2/\text{NDF}: 36.0/24$

Right Out:  $20.803 \pm 23.815$   $\chi^2/\text{NDF}: 41.6/24$

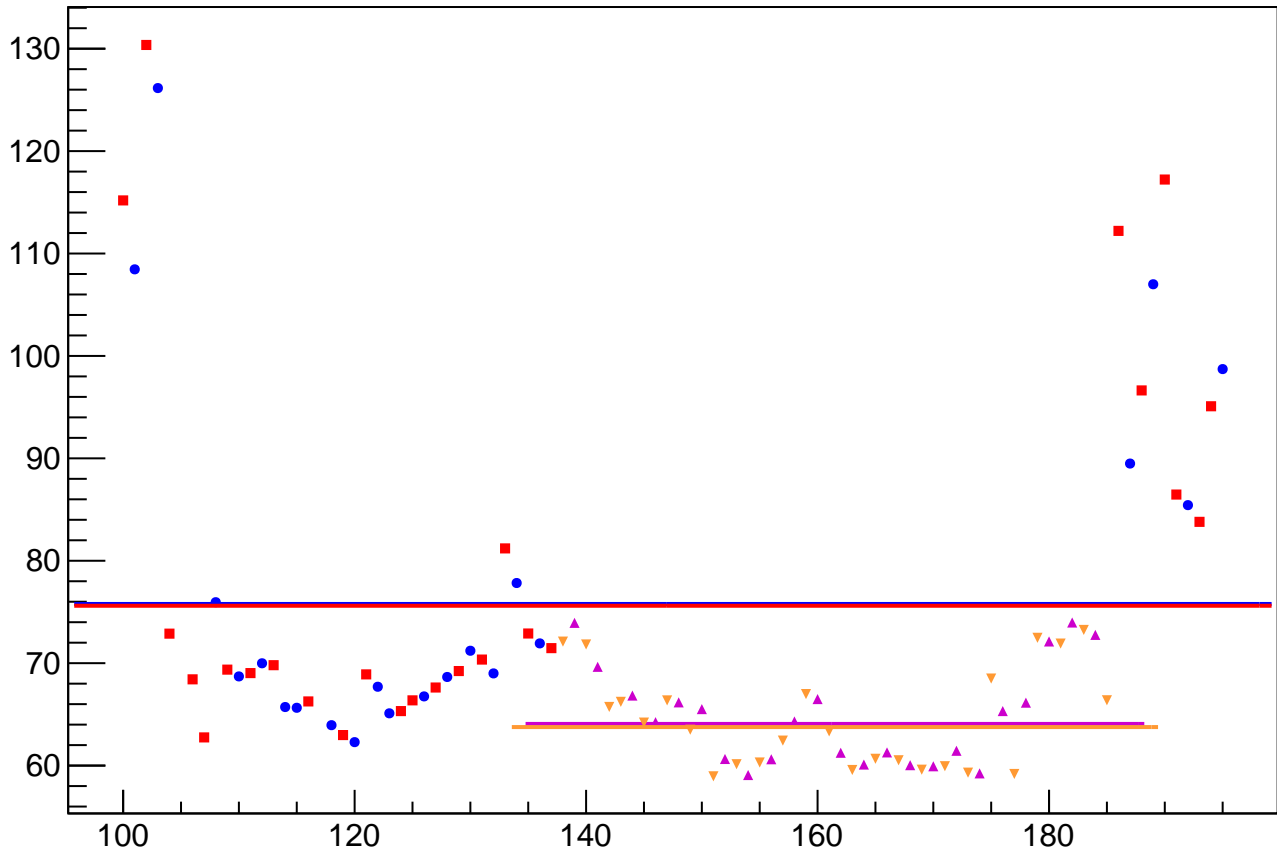
Left In:  $-96.704 \pm 15.369$   $\chi^2/\text{NDF}: 29.2/22$

+ sign  $53.934 \pm 12.891$   $\chi^2/\text{NDF}: 86.0/45$

All:  $-4.009 \pm 9.123$   $\chi^2/\text{NDF}: 214.5/93$

- sign  $-62.153 \pm 12.914$   $\chi^2/\text{NDF}: 88.0/47$

# reg\_asym\_sam7\_rms vs Slug



Right In: 75.782 $\pm$ 0.018  $\chi^2$ /NDF: 615546.0/20

Left Out: 63.761 $\pm$ 0.011  $\chi^2$ /NDF:192803.8/24

Right Out: 75.607 $\pm$ 0.017  $\chi^2$ /NDF: 715794.6/24

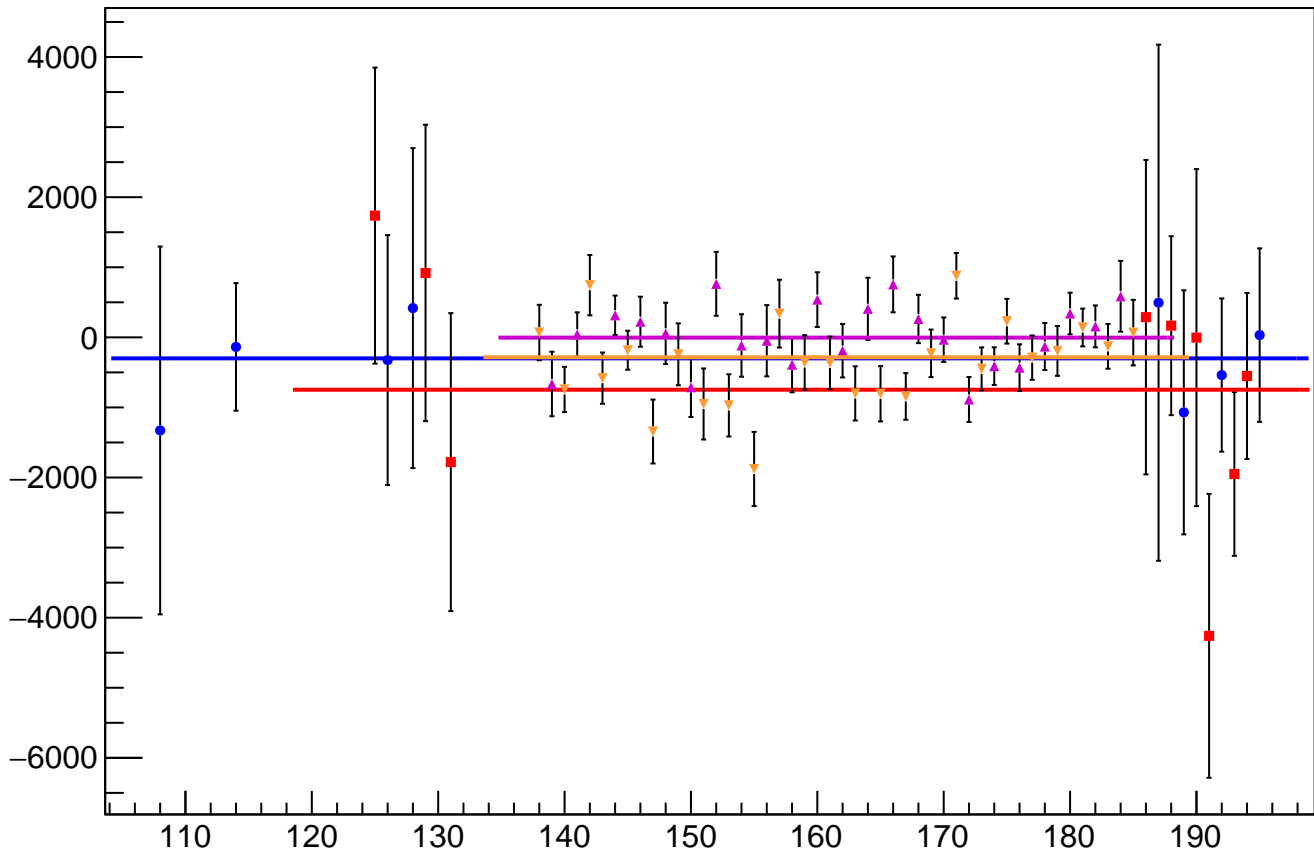
Left In: 64.069 $\pm$ 0.011  $\chi^2$ /NDF:164660.4/22

+ sign 66.759 $\pm$ 0.009  $\chi^2$ /NDF: 1133912.6/45

All: 67.110 $\pm$ 0.006  $\chi^2$ /NDF: 2348785.0/93

- sign 67.461 $\pm$ 0.009  $\chi^2$ /NDF: 1211912.7/47

# asym\_sam7\_correction\_mean vs Slug



Right In:  $-299.984 \pm 516.324$   $\chi^2/\text{NDF}: 0.6/7$

Left Out:  $-284.304 \pm 72.732$   $\chi^2/\text{NDF}: 55.1/24$

Right Out:  $-747.325 \pm 546.917$   $\chi^2/\text{NDF}: 7.2/8$

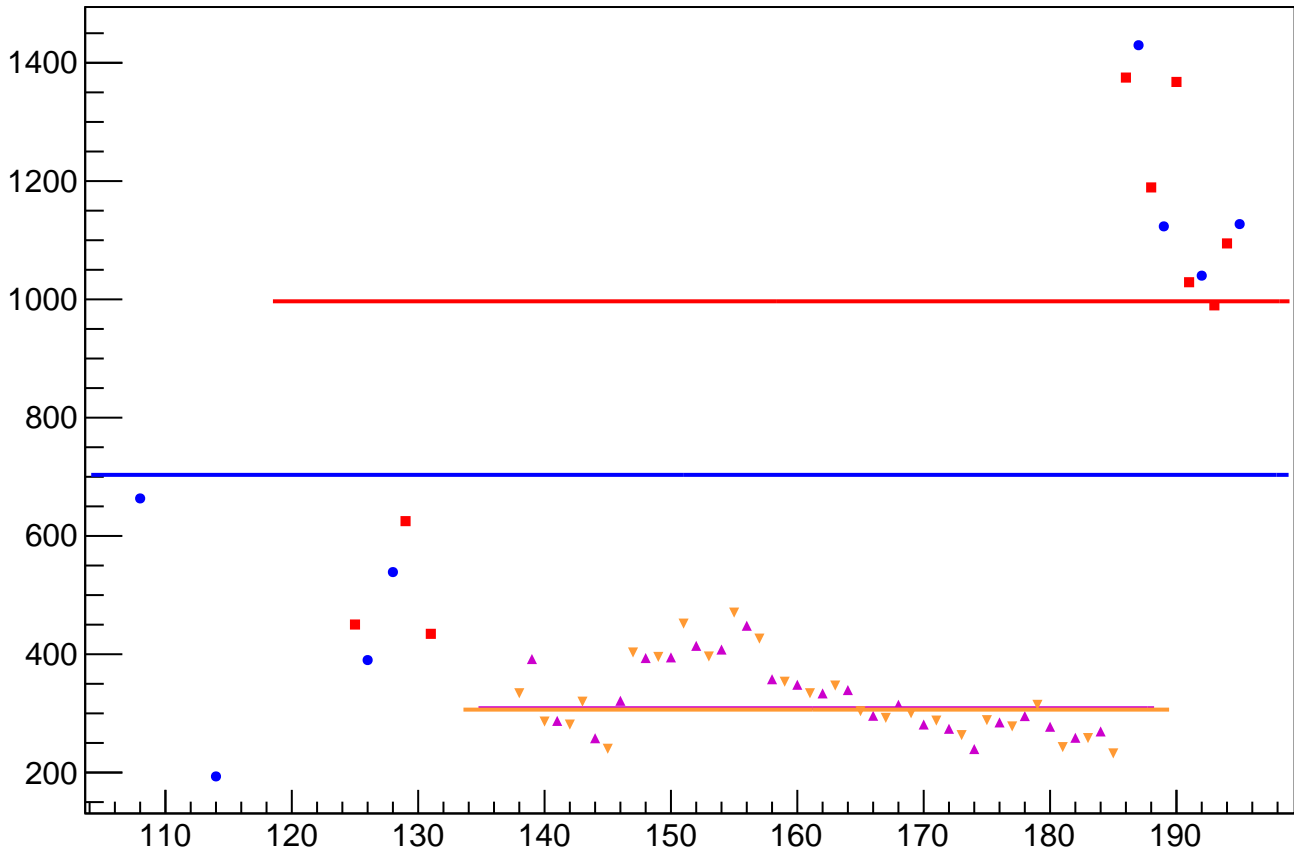
Left In:  $-4.037 \pm 75.084$   $\chi^2/\text{NDF}: 32.4/22$

+ sign  $-284.609 \pm 72.021$   $\chi^2/\text{NDF}: 55.7/32$

All:  $-155.507 \pm 51.743$   $\chi^2/\text{NDF}: 103.7/64$

- sign  $-17.787 \pm 74.387$   $\chi^2/\text{NDF}: 41.3/31$

# asym\_sam7\_correction\_rms vs Slug



Right In: 703.283+/-0.365  $\chi^2/\text{NDF}$ : 1318537.0/7

Left Out: 306.363+/-0.051  $\chi^2/\text{NDF}$ : 1215669.9/24

Right Out: 996.733+/-0.387  $\chi^2/\text{NDF}$ : 499815.2/8

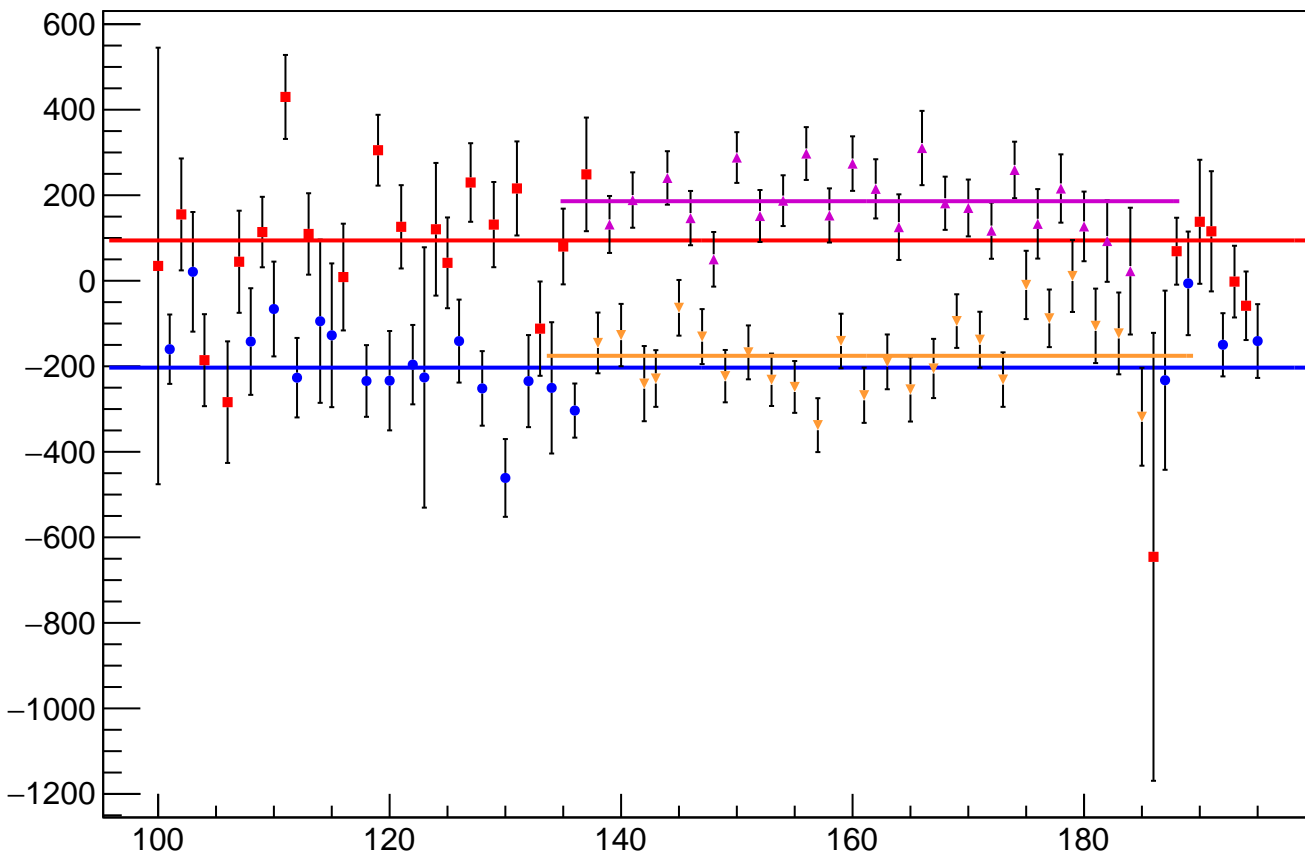
Left In: 308.727+/-0.053  $\chi^2/\text{NDF}$ : 1002947.4/22

+ sign 314.086+/-0.051  $\chi^2/\text{NDF}$ : 3693137.8/32

All: 317.651+/-0.037  $\chi^2/\text{NDF}$ : 8312467.9/64

- sign 321.454+/-0.053  $\chi^2/\text{NDF}$ : 4609201.7/31

# reg\_asym\_sam8\_mean vs Slug



Right In:  $-203.132 \pm 22.272$   $\chi^2/\text{NDF}: 20.6/20$

Left Out:  $-175.471 \pm 13.846$   $\chi^2/\text{NDF}: 34.6/24$

Right Out:  $94.292 \pm 21.288$   $\chi^2/\text{NDF}: 48.9/24$

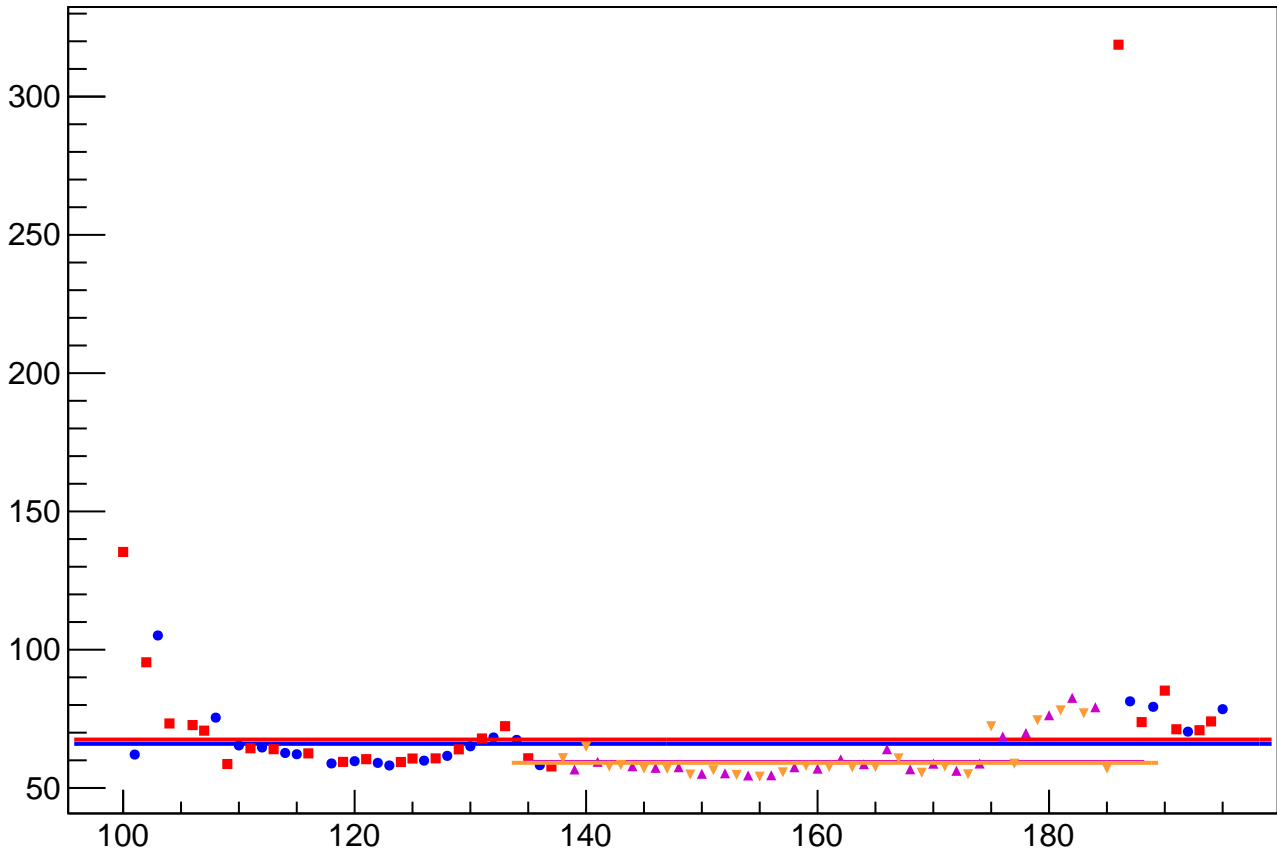
Left In:  $186.047 \pm 14.315$   $\chi^2/\text{NDF}: 23.6/22$

+ sign  $-183.181 \pm 11.759$   $\chi^2/\text{NDF}: 56.3/45$

All:  $-14.591 \pm 8.357$   $\chi^2/\text{NDF}: 557.0/93$

- sign  $157.476 \pm 11.879$   $\chi^2/\text{NDF}: 85.3/47$

# reg\_asym\_sam8\_rms vs Slug



Right In: 65.963 $\pm$ 0.016  $\chi^2$ /NDF: 335927.5/20

Left Out: 59.099 $\pm$ 0.010  $\chi^2$ /NDF: 369788.6/24

Right Out: 67.511 $\pm$ 0.015  $\chi^2$ /NDF: 771875.3/24

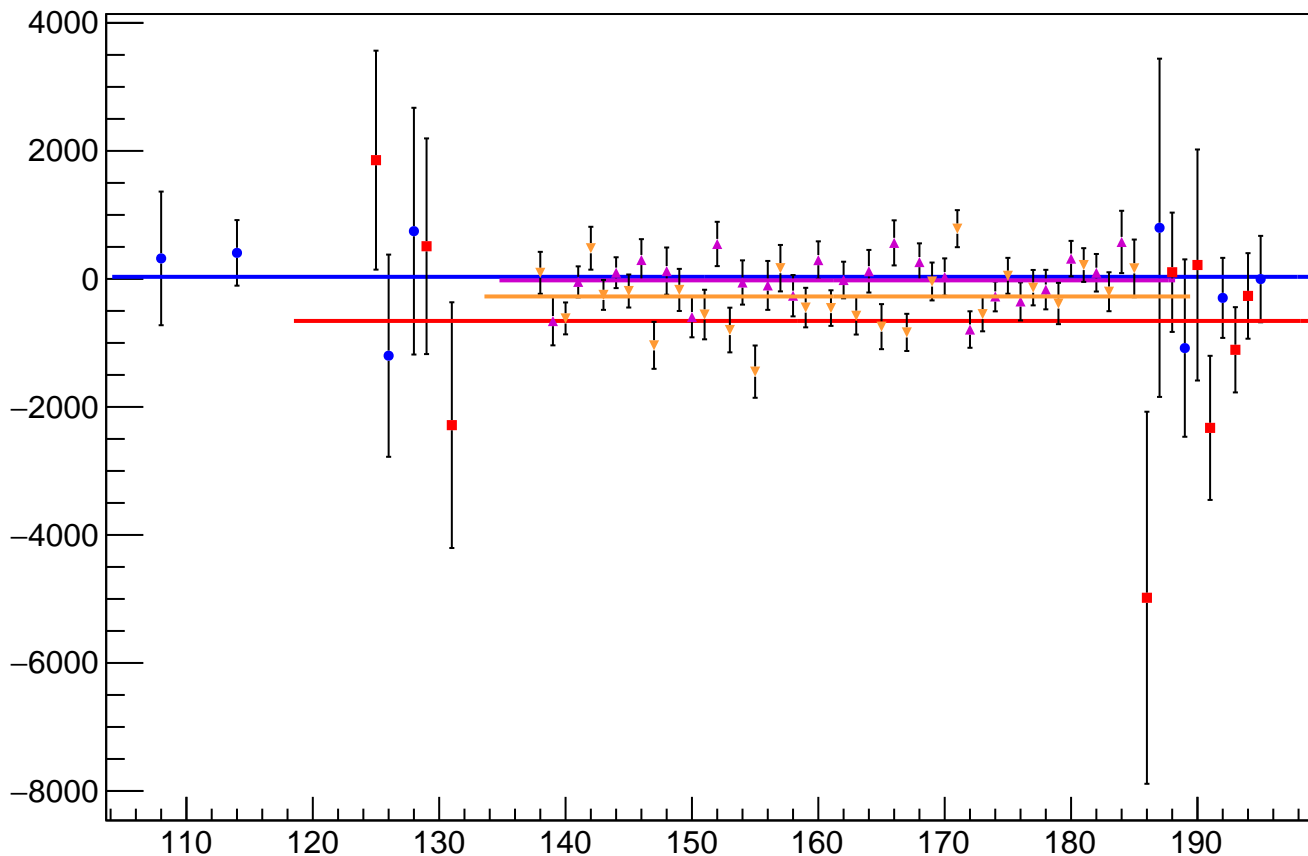
Left In: 59.410 $\pm$ 0.010  $\chi^2$ /NDF: 373052.7/22

+ sign 61.013 $\pm$ 0.008  $\chi^2$ /NDF: 842733.1/45

All: 61.468 $\pm$ 0.006  $\chi^2$ /NDF: 2193139.7/93

- sign 61.933 $\pm$ 0.008  $\chi^2$ /NDF: 1344346.1/47

# asym\_sam8\_correction\_mean vs Slug



Right In:  $32.624 \pm 304.109$   $\chi^2/\text{NDF}: 2.4/7$

Left Out:  $-274.091 \pm 60.799$   $\chi^2/\text{NDF}: 53.9/24$

Right Out:  $-656.477 \pm 357.511$   $\chi^2/\text{NDF}: 9.5/8$

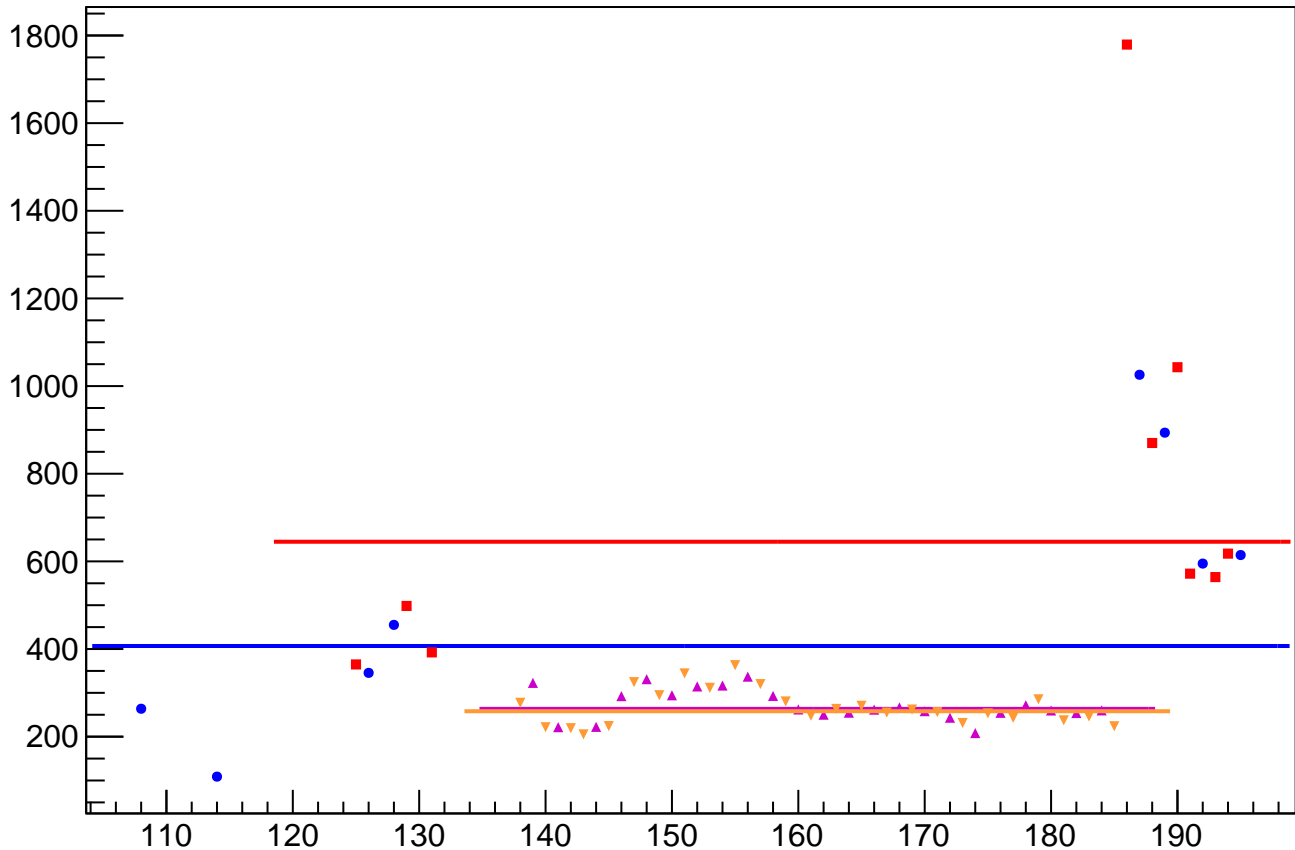
Left In:  $-22.631 \pm 63.643$   $\chi^2/\text{NDF}: 28.9/22$

+ sign  $-262.303 \pm 59.619$   $\chi^2/\text{NDF}: 57.2/32$

All:  $-157.670 \pm 43.192$   $\chi^2/\text{NDF}: 105.1/64$

- sign  $-42.100 \pm 62.658$   $\chi^2/\text{NDF}: 41.4/31$

# asym\_sam8\_correction\_rms vs Slug



Right In: 406.877 $\pm$ 0.215  $\chi^2$ /NDF: 1445549.8/7

Left Out: 258.040 $\pm$ 0.043  $\chi^2$ /NDF: 724823.3/24

Right Out: 644.815 $\pm$ 0.253  $\chi^2$ /NDF: 663317.1/8

Left In: 263.397 $\pm$ 0.045  $\chi^2$ /NDF: 585600.2/22

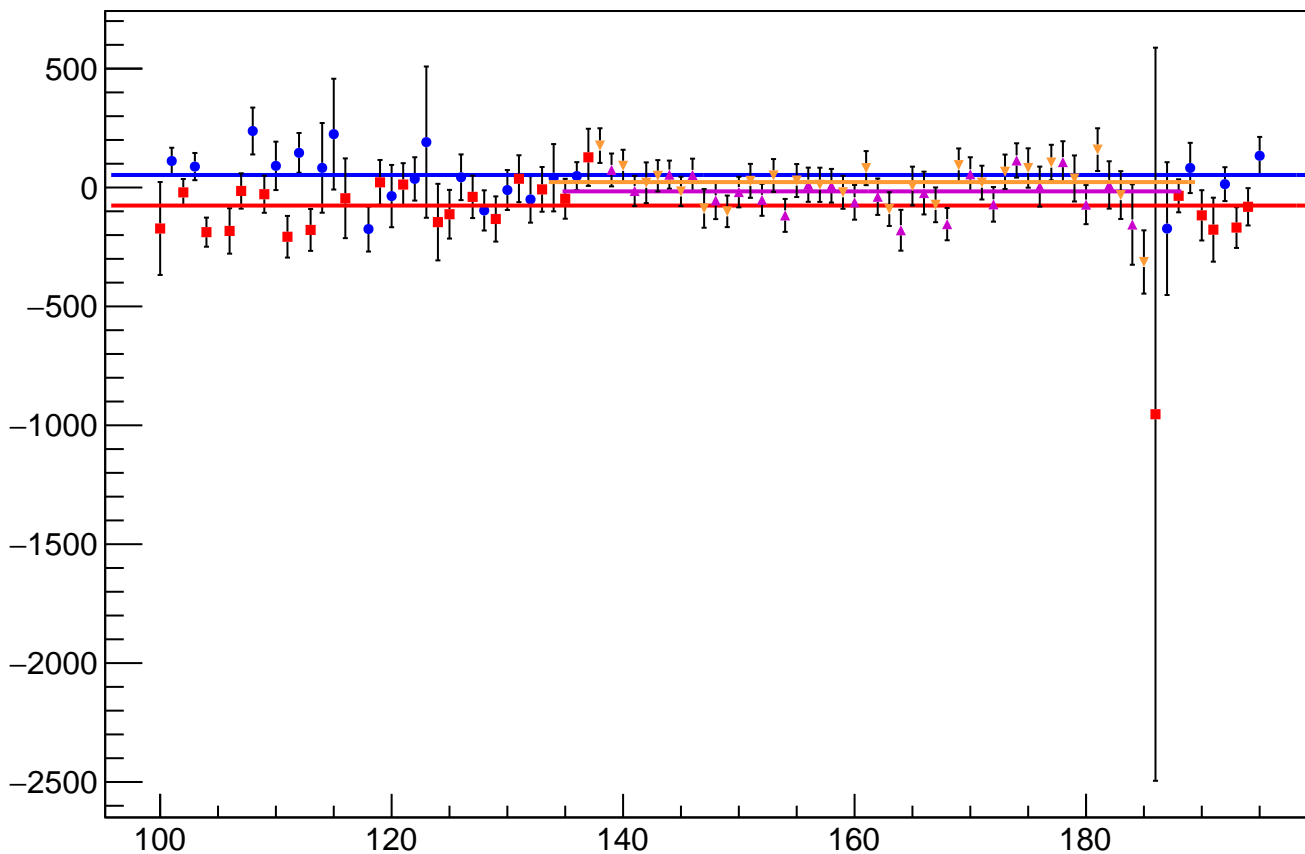
+ sign 263.761 $\pm$ 0.042  $\chi^2$ /NDF: 2631024.4/32

All: 269.155 $\pm$ 0.031  $\chi^2$ /NDF: 6120900.8/64

- sign 275.113 $\pm$ 0.044  $\chi^2$ /NDF: 3455422.0/31



# reg\_asym\_sam\_15\_avg\_mean vs Slug



Right In:  $52.772 \pm 19.566$   $\chi^2/\text{NDF}$ : 20.3/20

Left Out:  $22.871 \pm 14.968$   $\chi^2/\text{NDF}$ : 29.0/24

Right Out:  $-75.842 \pm 18.127$   $\chi^2/\text{NDF}$ : 20.7/24

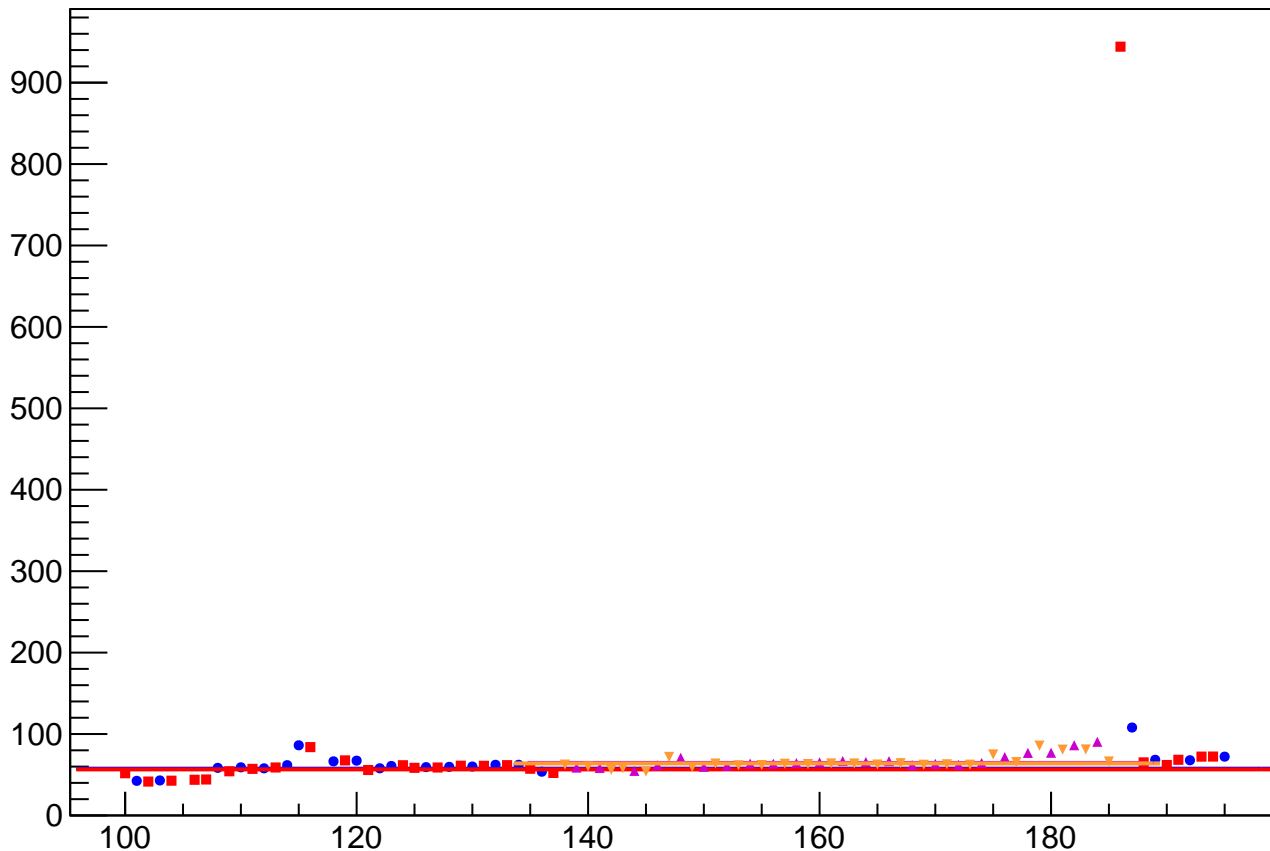
Left In:  $-16.198 \pm 15.531$   $\chi^2/\text{NDF}$ : 23.3/22

+ sign  $33.910 \pm 11.888$   $\chi^2/\text{NDF}$ : 50.7/45

All:  $-4.068 \pm 8.373$   $\chi^2/\text{NDF}$ : 121.3/93

- sign  $-41.446 \pm 11.794$   $\chi^2/\text{NDF}$ : 50.3/47

# reg\_asym\_sam\_15\_avg\_rms vs Slug



Right In: 57.436 $\pm$ 0.014  $\chi^2$ /NDF: 551491.0/20

Left Out: 63.920 $\pm$ 0.011  $\chi^2$ /NDF: 395410.4/24

Right Out: 56.564 $\pm$ 0.013  $\chi^2$ /NDF: 1303860.9/24

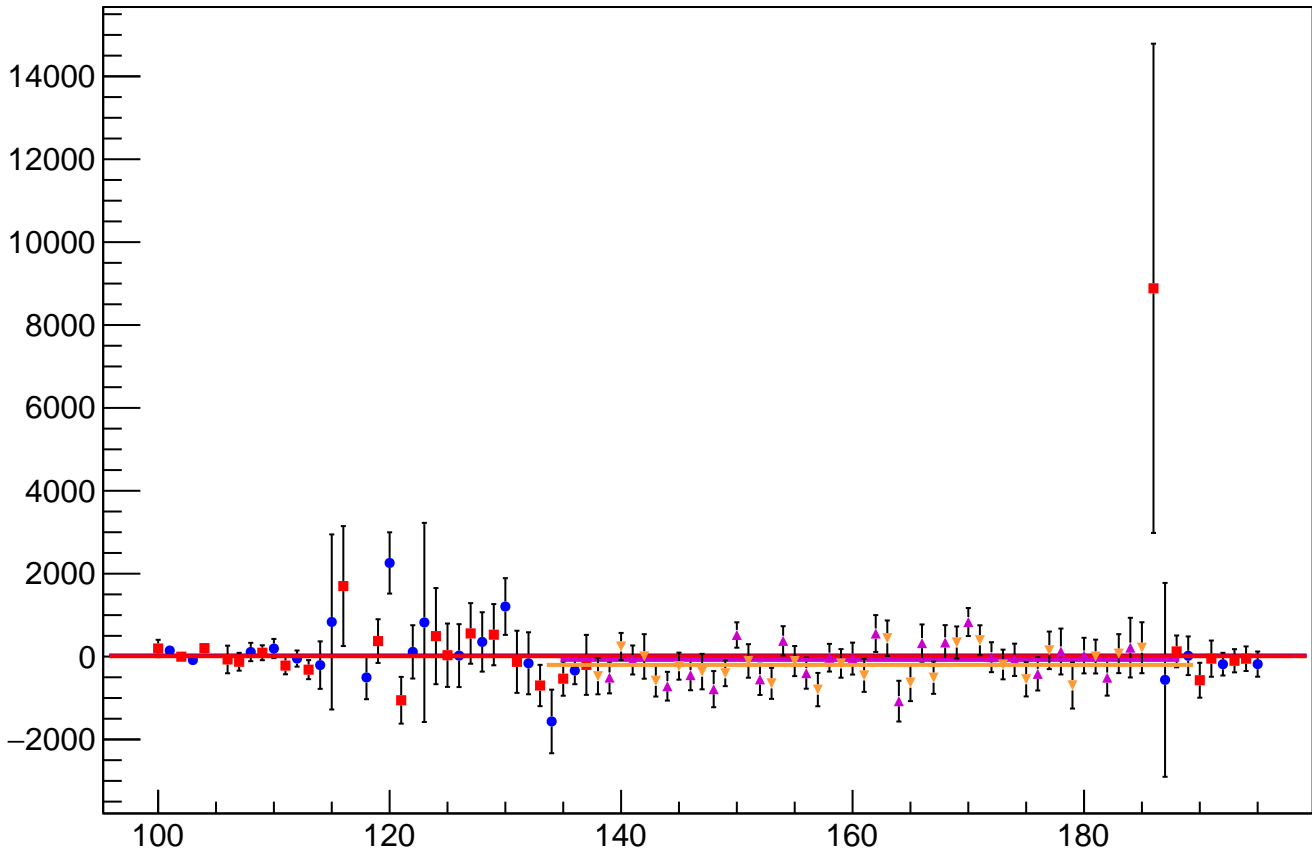
Left In: 64.511 $\pm$ 0.011  $\chi^2$ /NDF: 370515.2/22

+ sign 61.526 $\pm$ 0.008  $\chi^2$ /NDF: 1085470.6/45

All: 61.335 $\pm$ 0.006  $\chi^2$ /NDF: 2982564.0/93

- sign 61.147 $\pm$ 0.008  $\chi^2$ /NDF: 1896066.5/47

# asym\_sam\_15\_avg\_correction\_mean vs Slug



Right In: 25.258+/-49.683  $\chi^2$ /NDF: 25.0/20

Left Out: -201.082+/-79.549  $\chi^2$ /NDF:19.7/24

Right Out: 8.327+/-50.380  $\chi^2$ /NDF: 23.3/24

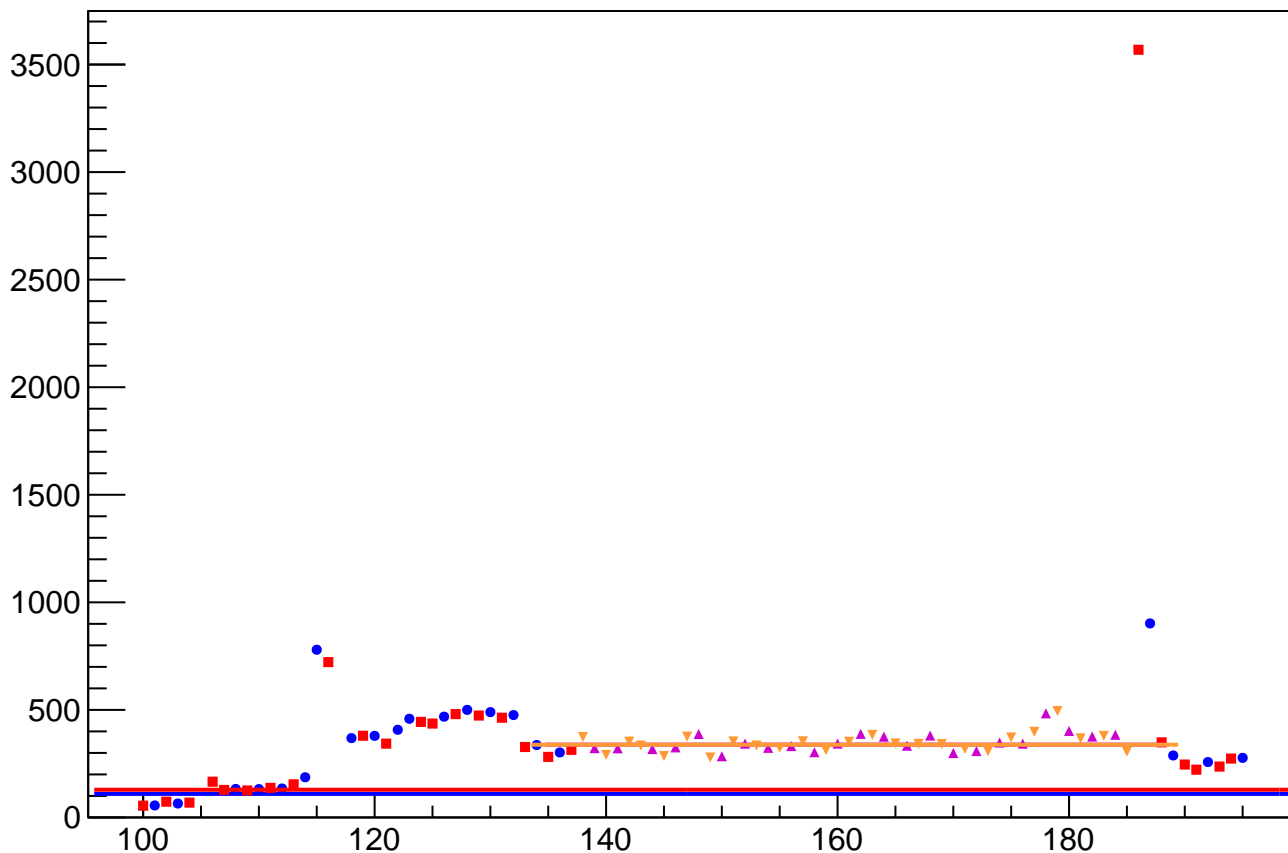
Left In: -79.985+/-81.781  $\chi^2$ /NDF:33.4/22

+ sign -38.256+/-42.139  $\chi^2$ /NDF: 50.5/45

All: -27.310+/-30.060  $\chi^2$ /NDF: 108.2/93

- sign -15.968+/-42.894  $\chi^2$ /NDF: 57.6/47

# asym\_sam\_15\_avg\_correction\_rms vs Slug



Right In: 109.549 $\pm$ 0.035  $\chi^2$ /NDF: 7636299.9/20

Left Out: 338.130 $\pm$ 0.056  $\chi^2$ /NDF: 498601.7/24

+ sign 173.691 $\pm$ 0.030  $\chi^2$ /NDF: 20014659.7/45

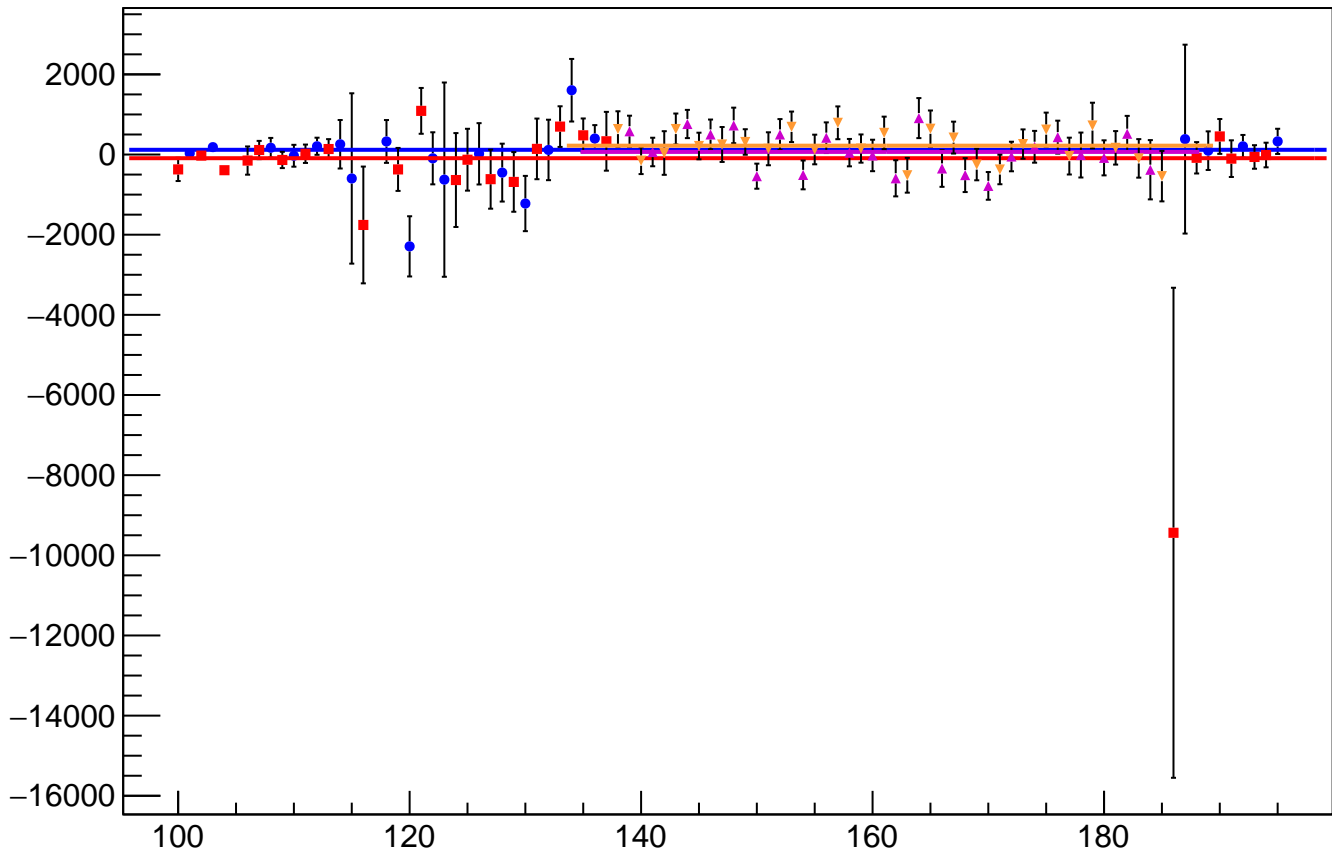
Right Out: 128.882 $\pm$ 0.036  $\chi^2$ /NDF: 7560064.4/24

All: 180.014 $\pm$ 0.021  $\chi^2$ /NDF: 37634321.3/93

Left In: 338.564 $\pm$ 0.058  $\chi^2$ /NDF: 437243.0/22

- sign 186.566 $\pm$ 0.030  $\chi^2$ /NDF: 17527974.3/47

# asym\_sam\_15\_avg\_mean vs Slug



Right In: 118.322 $\pm$ 60.028  $\chi^2$ /NDF: 21.6/20

Left Out: 221.083 $\pm$ 81.018  $\chi^2$ /NDF: 19.7/24

Right Out: -91.497 $\pm$ 56.924  $\chi^2$ /NDF: 25.3/24

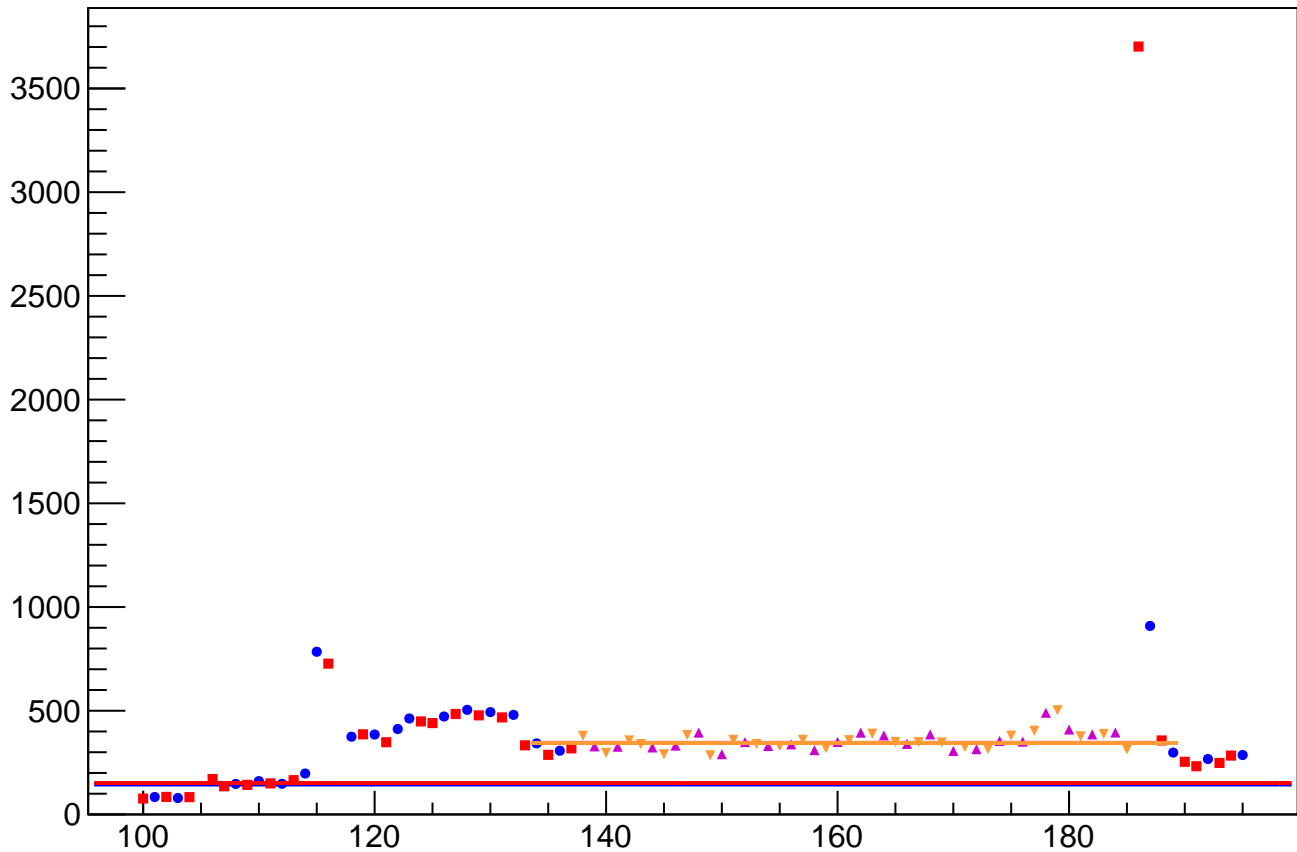
Left In: 65.510 $\pm$ 83.319  $\chi^2$ /NDF: 34.0/22

+ sign 154.741 $\pm$ 48.232  $\chi^2$ /NDF: 42.4/45

All: 54.069 $\pm$ 33.662  $\chi^2$ /NDF: 112.5/93

- sign -41.534 $\pm$ 47.002  $\chi^2$ /NDF: 61.6/47

# asym\_sam\_15\_avg\_rms vs Slug



Right In: 144.423 $\pm$ 0.042  $\chi^2$ /NDF: 6071207.4/20

Left Out: 344.506 $\pm$ 0.057  $\chi^2$ /NDF:488323.4/24

Right Out: 151.537 $\pm$ 0.040  $\chi^2$ /NDF: 6511786.4/24

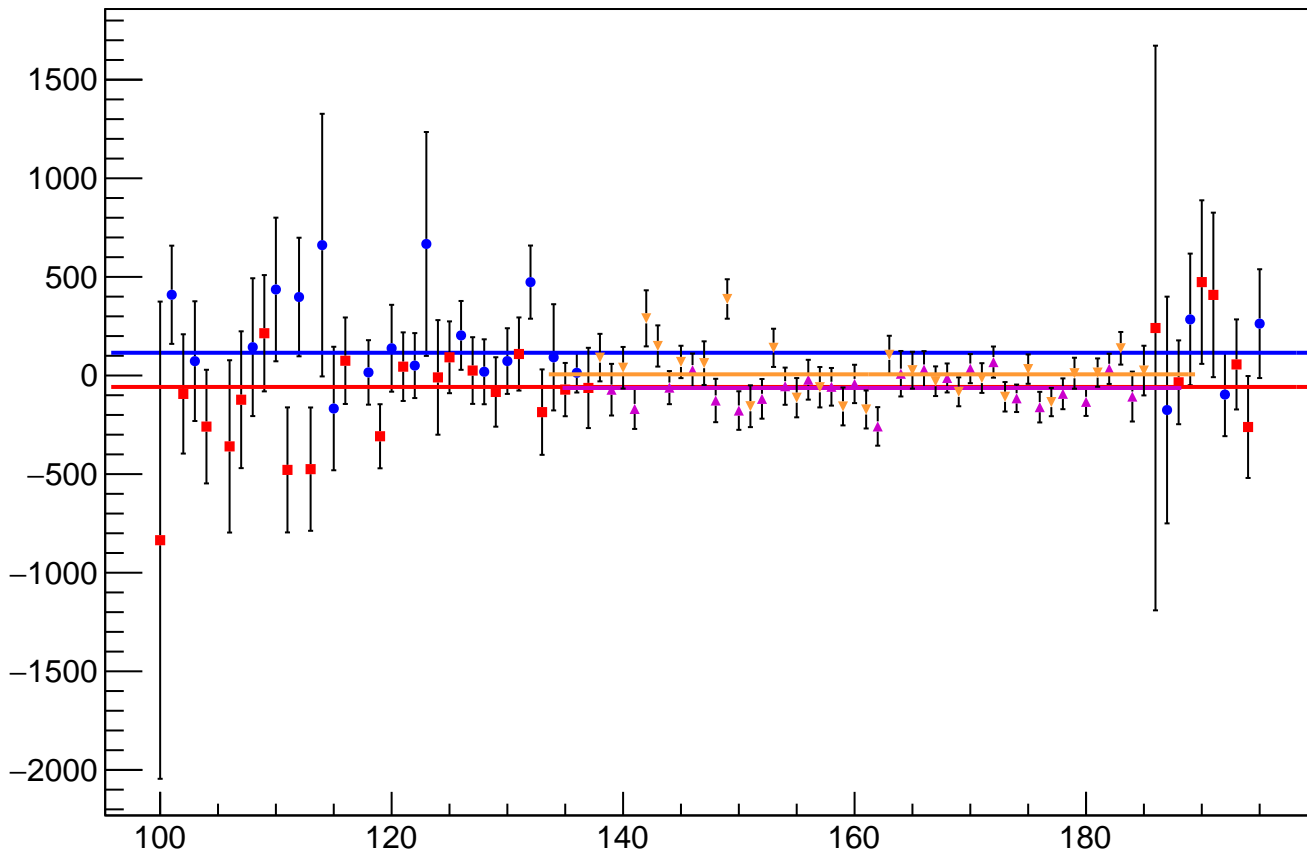
Left In: 345.039 $\pm$ 0.059  $\chi^2$ /NDF:427381.3/22

+ sign 215.333 $\pm$ 0.034  $\chi^2$ /NDF: 14434390.0/45

All: 214.195 $\pm$ 0.024  $\chi^2$ /NDF: 28730278.6/90

- sign 213.114 $\pm$ 0.033  $\chi^2$ /NDF: 14293718.1/47

# reg\_asym\_sam\_26\_avg\_mean vs Slug



Right In:  $115.334 \pm 46.590$   $\chi^2/\text{NDF}: 13.3/20$

Left Out:  $6.020 \pm 17.910$   $\chi^2/\text{NDF}: 46.0/24$

Right Out:  $-58.018 \pm 46.249$   $\chi^2/\text{NDF}: 14.9/24$

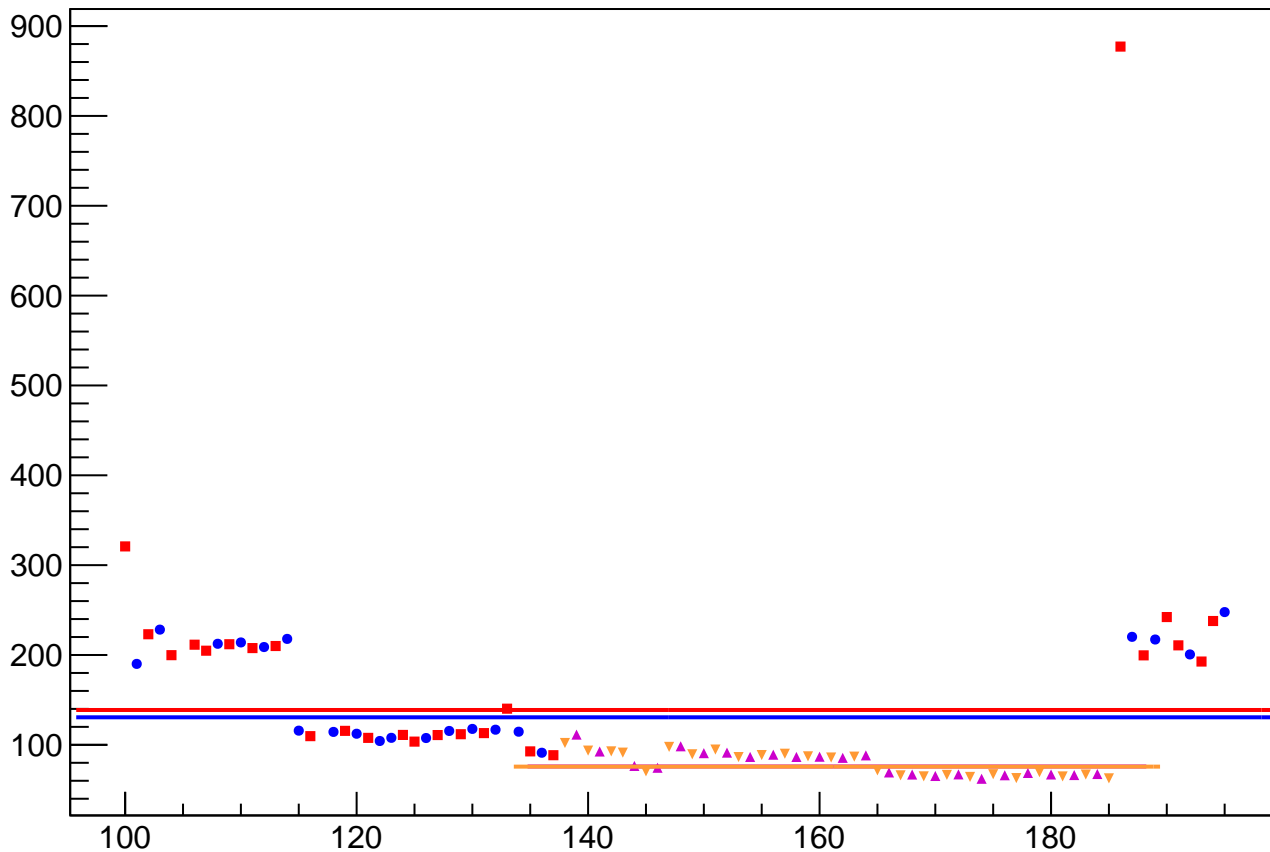
Left In:  $-63.279 \pm 18.447$   $\chi^2/\text{NDF}: 19.8/22$

+ sign  $20.094 \pm 16.717$   $\chi^2/\text{NDF}: 64.1/45$

All:  $-20.215 \pm 11.965$   $\chi^2/\text{NDF}: 110.7/93$

- sign  $-62.557 \pm 17.134$   $\chi^2/\text{NDF}: 34.7/47$

# reg\_asym\_sam\_26\_avg\_rms vs Slug



Right In: 130.642 $\pm$ 0.033  $\chi^2$ /NDF: 1954572.6/20

Left Out: 75.743 $\pm$ 0.013  $\chi^2$ /NDF:937821.8/24

+ sign 82.811 $\pm$ 0.012  $\chi^2$ /NDF: 5311854.0/45

Right Out: 138.787 $\pm$ 0.033  $\chi^2$ /NDF: 2751795.3/24

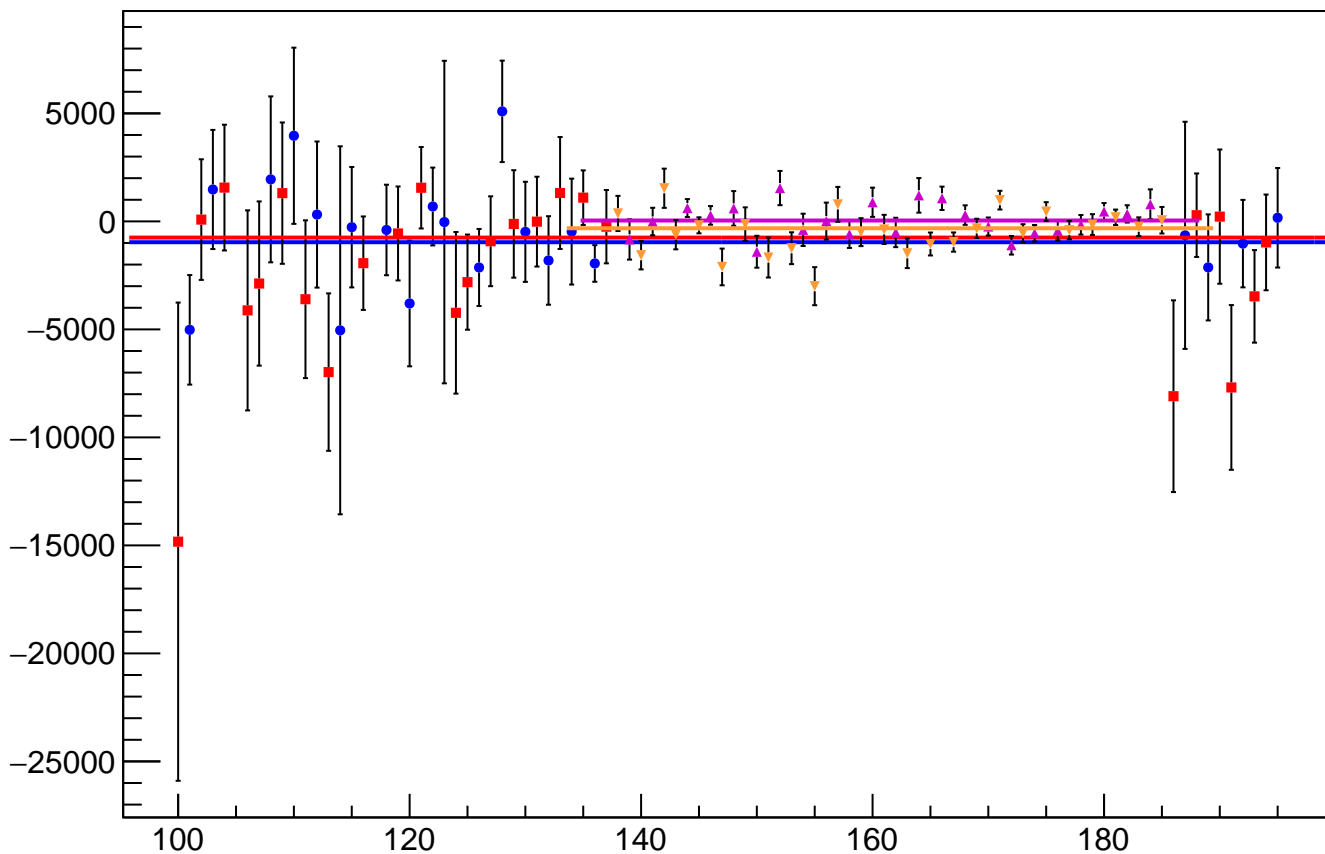
All: 83.654 $\pm$ 0.008  $\chi^2$ /NDF: 12094736.8/93

- sign 84.539 $\pm$ 0.012  $\chi^2$ /NDF: 6772457.0/47

Left In: 75.909 $\pm$ 0.013  $\chi^2$ /NDF:831366.4/22



# asym\_sam\_26\_avg\_correction\_mean vs Slug



Right In:  $-964.561 \pm 475.213$   $\chi^2/\text{NDF}: 16.8/20$

Left Out:  $-318.064 \pm 108.014$   $\chi^2/\text{NDF}: 50.0/24$

Right Out:  $-750.797 \pm 484.663$   $\chi^2/\text{NDF}: 21.8/24$

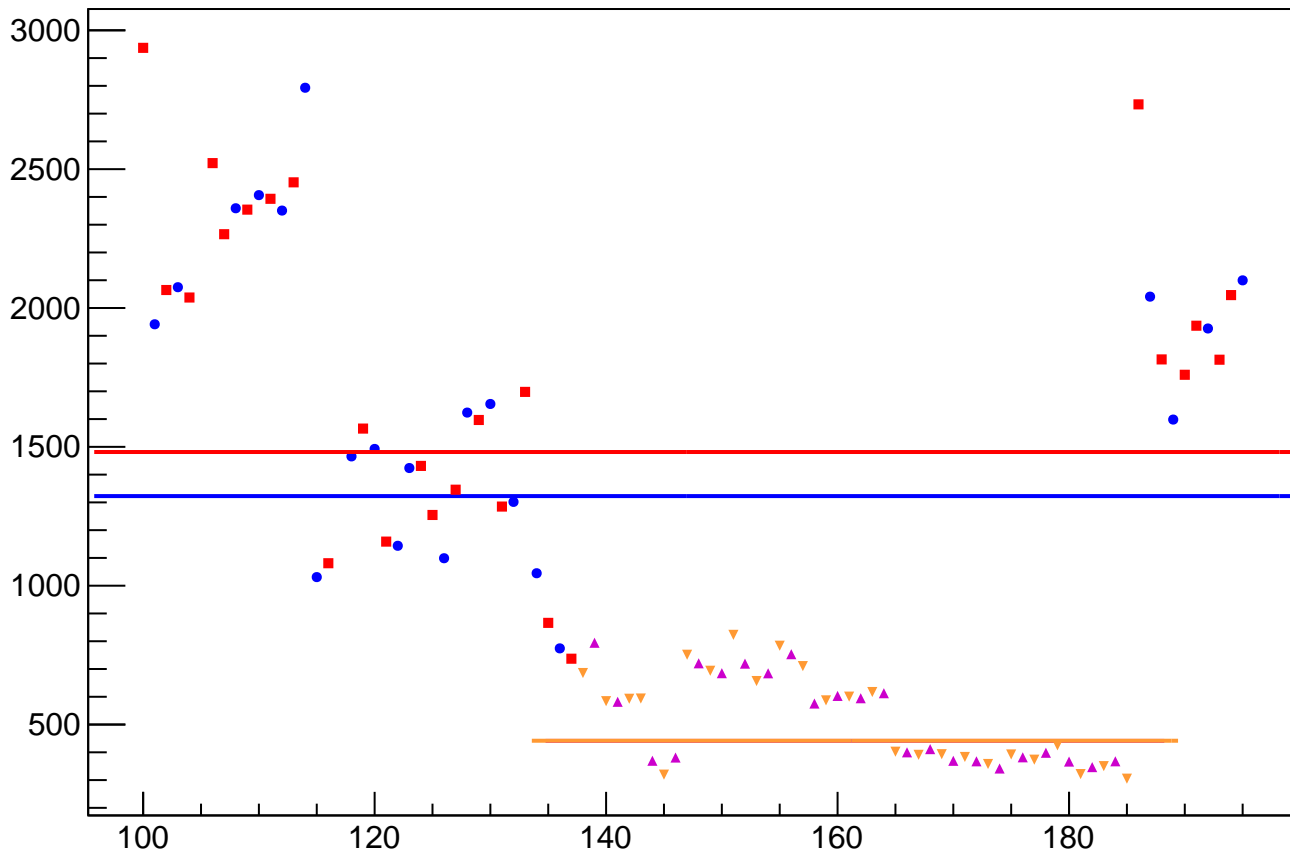
Left In:  $40.473 \pm 110.252$   $\chi^2/\text{NDF}: 34.7/22$

+ sign  $-349.824 \pm 105.327$   $\chi^2/\text{NDF}: 68.6/45$

All:  $-177.738 \pm 75.236$   $\chi^2/\text{NDF}: 133.1/93$

- sign  $1.541 \pm 107.506$   $\chi^2/\text{NDF}: 59.0/47$

# asym\_sam\_26\_avg\_correction\_rms vs Slug



Right In:  $1322.691 \pm 0.336$   $\chi^2/\text{NDF}: 2292331.3/20$

Left Out:  $441.685 \pm 0.076$   $\chi^2/\text{NDF}: 3169140.9/24$

+ sign  $484.964 \pm 0.074$   $\chi^2/\text{NDF}: 11997823.4/45$

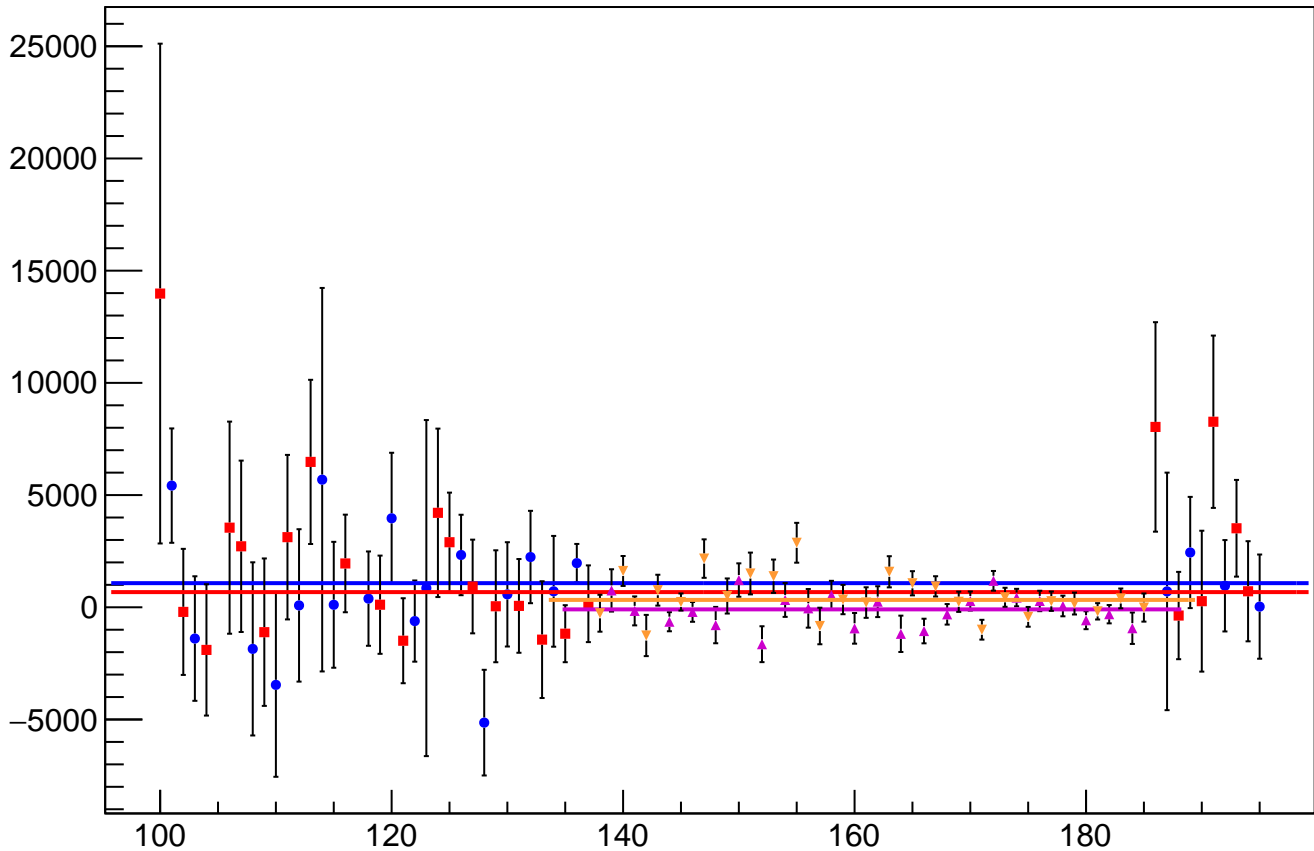
Right Out:  $1481.414 \pm 0.343$   $\chi^2/\text{NDF}: 2286795.1/24$

All:  $488.507 \pm 0.053$   $\chi^2/\text{NDF}: 25649068.4/93$

Left In:  $441.009 \pm 0.078$   $\chi^2/\text{NDF}: 2597018.1/22$

- sign  $492.199 \pm 0.076$   $\chi^2/\text{NDF}: 13646623.6/47$

# asym\_sam\_26\_avg\_mean vs Slug



Right In: 1075.451 $\pm$ 478.035  $\chi^2$ /NDF: 17.4/20

Left Out: 328.599 $\pm$ 109.668  $\chi^2$ /NDF:47.7/24

Right Out: 676.254 $\pm$ 487.604  $\chi^2$ /NDF: 21.3/24

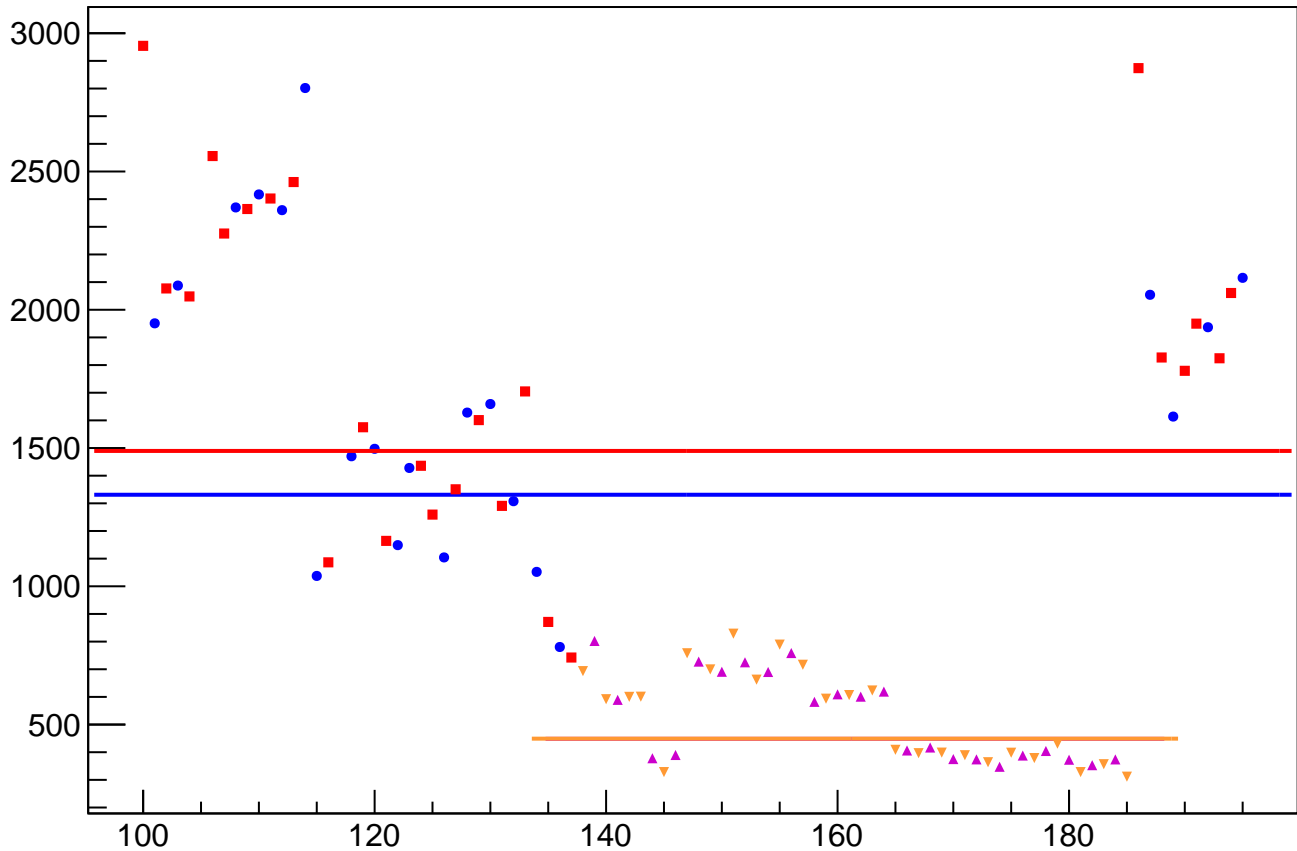
Left In: -93.310 $\pm$ 111.960  $\chi^2$ /NDF:33.3/22

+ sign 365.941 $\pm$ 106.891  $\chi^2$ /NDF: 67.5/45

All: 159.926 $\pm$ 76.359  $\chi^2$ /NDF: 132.1/93

- sign -54.770 $\pm$ 109.120  $\chi^2$ /NDF: 57.0/47

# asym\_sam\_26\_avg\_rms vs Slug



Right In: 1331.047+/-0.338  $\chi^2/\text{NDF}$ : 2281124.3/20

Left Out: 449.016+/-0.078  $\chi^2/\text{NDF}$ : 3090476.2/24

Right Out: 1489.485+/-0.345  $\chi^2/\text{NDF}$ : 2303339.9/24

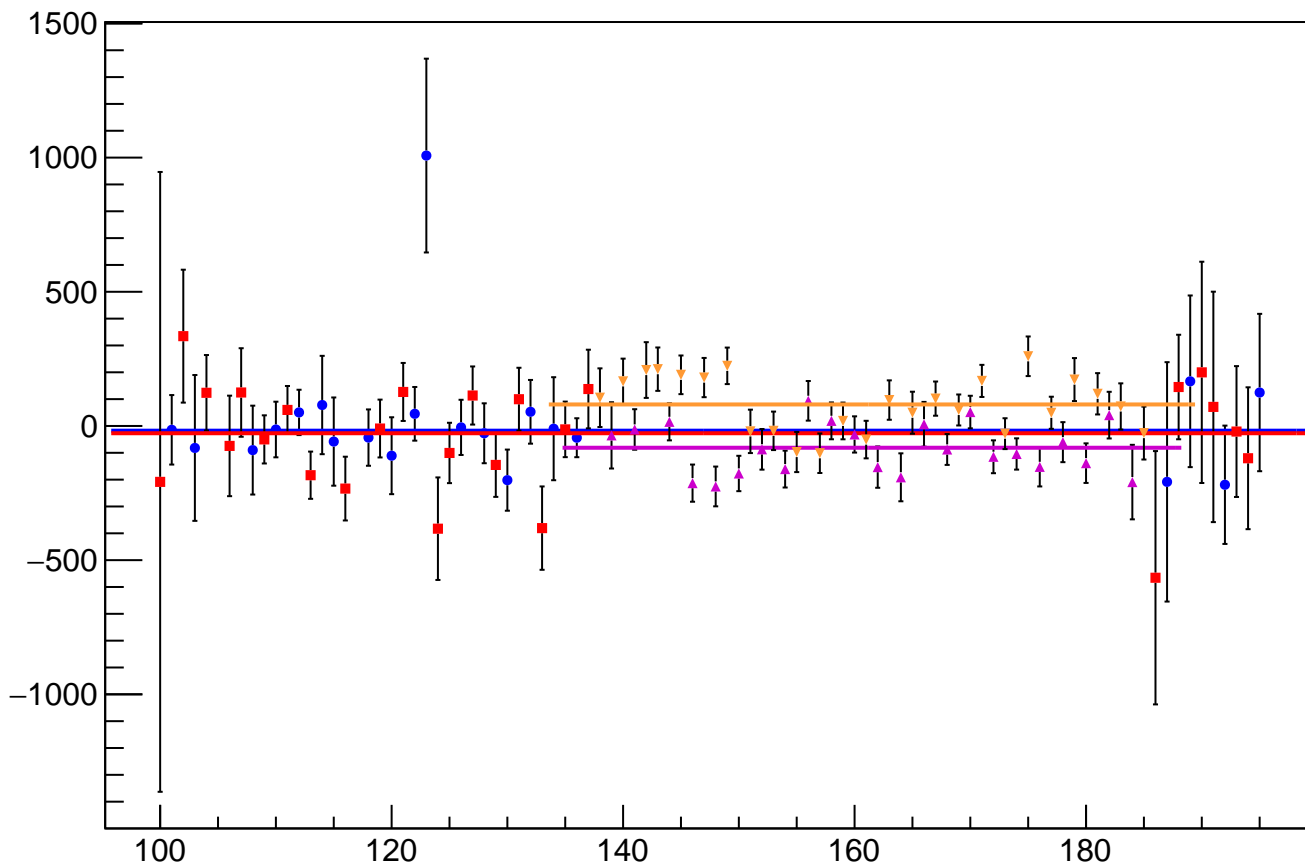
Left In: 448.307+/-0.079  $\chi^2/\text{NDF}$ : 2537376.0/22

+ sign 493.117+/-0.076  $\chi^2/\text{NDF}$ : 11840064.7/45

All: 496.708+/-0.054  $\chi^2/\text{NDF}$ : 25347656.9/93

- sign 500.450+/-0.077  $\chi^2/\text{NDF}$ : 13502983.1/47

# reg\_asym\_sam\_37\_avg\_mean vs Slug



Right In:  $-17.585 \pm 28.355$   $\chi^2/\text{NDF}: 14.9/20$

Left Out:  $80.171 \pm 14.592$   $\chi^2/\text{NDF}: 48.6/24$

Right Out:  $-27.104 \pm 27.274$   $\chi^2/\text{NDF}: 30.2/24$

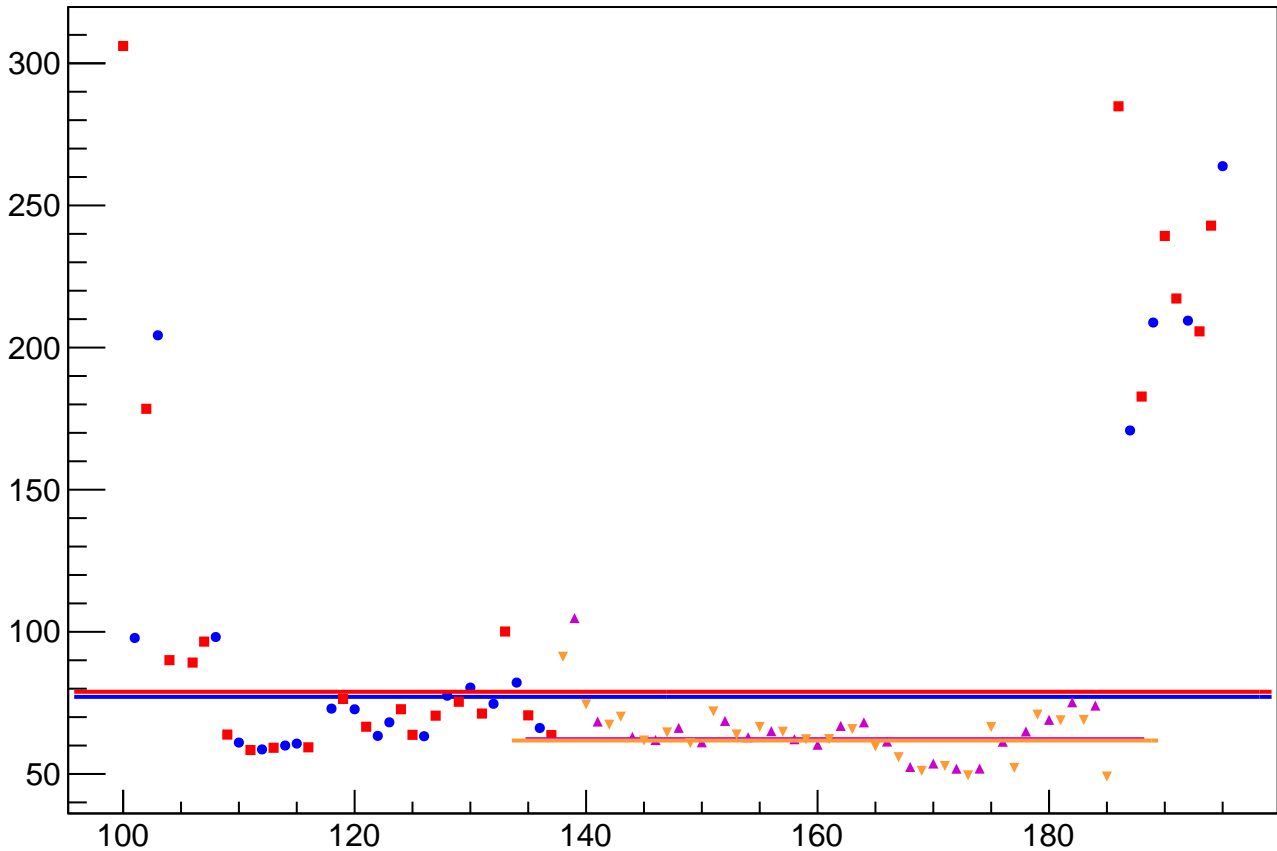
Left In:  $-81.156 \pm 15.105$   $\chi^2/\text{NDF}: 35.3/22$

+ sign  $59.702 \pm 12.975$   $\chi^2/\text{NDF}: 72.8/45$

All:  $-3.212 \pm 9.258$   $\chi^2/\text{NDF}: 189.2/93$

- sign  $-68.468 \pm 13.214$   $\chi^2/\text{NDF}: 68.5/47$

# reg\_asym\_sam\_37\_avg\_rms vs Slug



Right In: 77.126 $\pm$ 0.020  $\chi^2$ /NDF: 2791786.8/20

Left Out: 61.761 $\pm$ 0.010  $\chi^2$ /NDF: 645535.0/24

Right Out: 78.913 $\pm$ 0.019  $\chi^2$ /NDF: 3688208.9/24

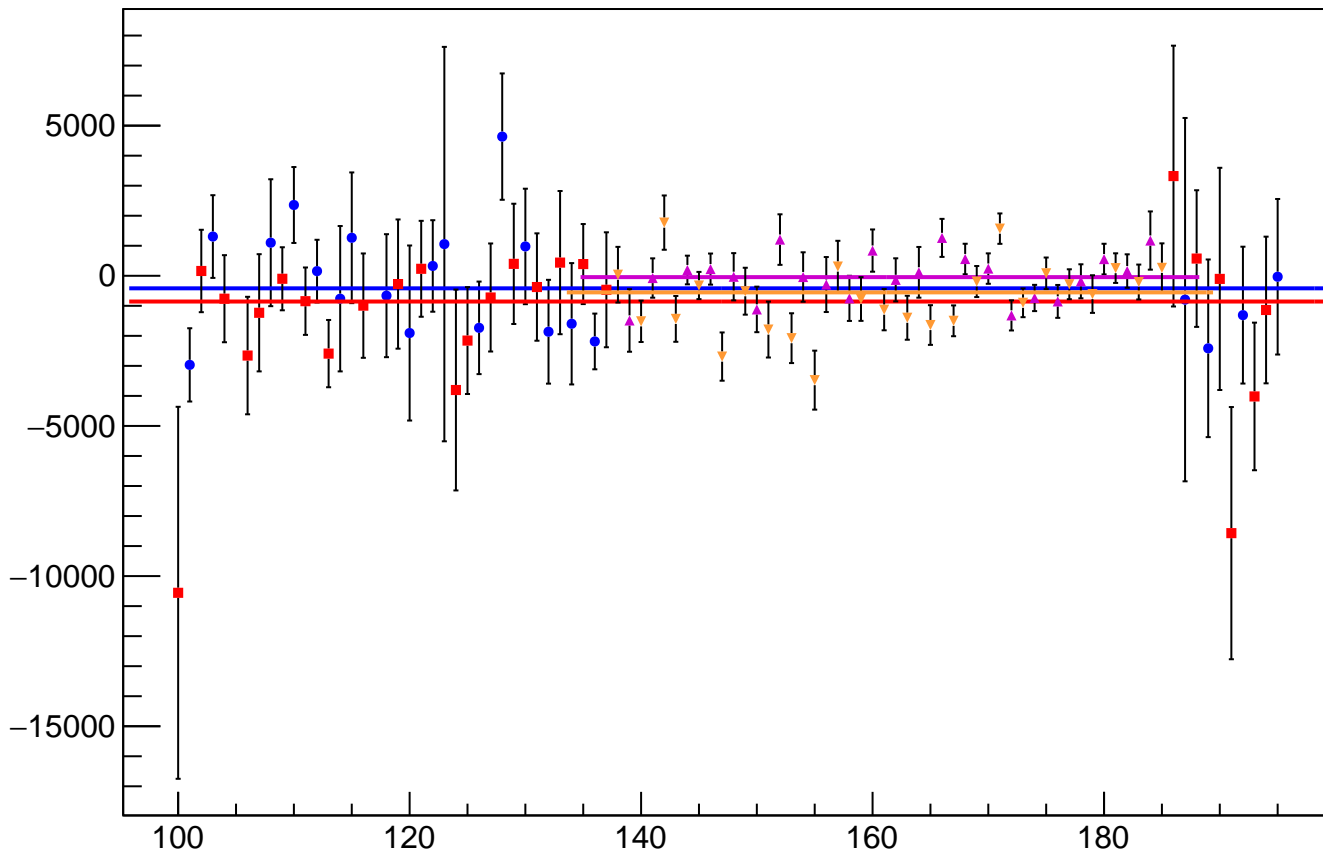
Left In: 62.250 $\pm$ 0.011  $\chi^2$ /NDF: 591085.1/22

+ sign 64.978 $\pm$ 0.009  $\chi^2$ /NDF: 3901643.9/45

All: 65.559 $\pm$ 0.007  $\chi^2$ /NDF: 8760392.5/93

- sign 66.161 $\pm$ 0.009  $\chi^2$ /NDF: 4850587.2/47

# asym\_sam\_37\_avg\_correction\_mean vs Slug



Right In:  $-417.521 \pm 370.085$   $\chi^2/\text{NDF}: 25.1/20$

Left Out:  $-552.511 \pm 126.981$   $\chi^2/\text{NDF}: 65.3/24$

Right Out:  $-857.201 \pm 353.725$   $\chi^2/\text{NDF}: 16.8/24$

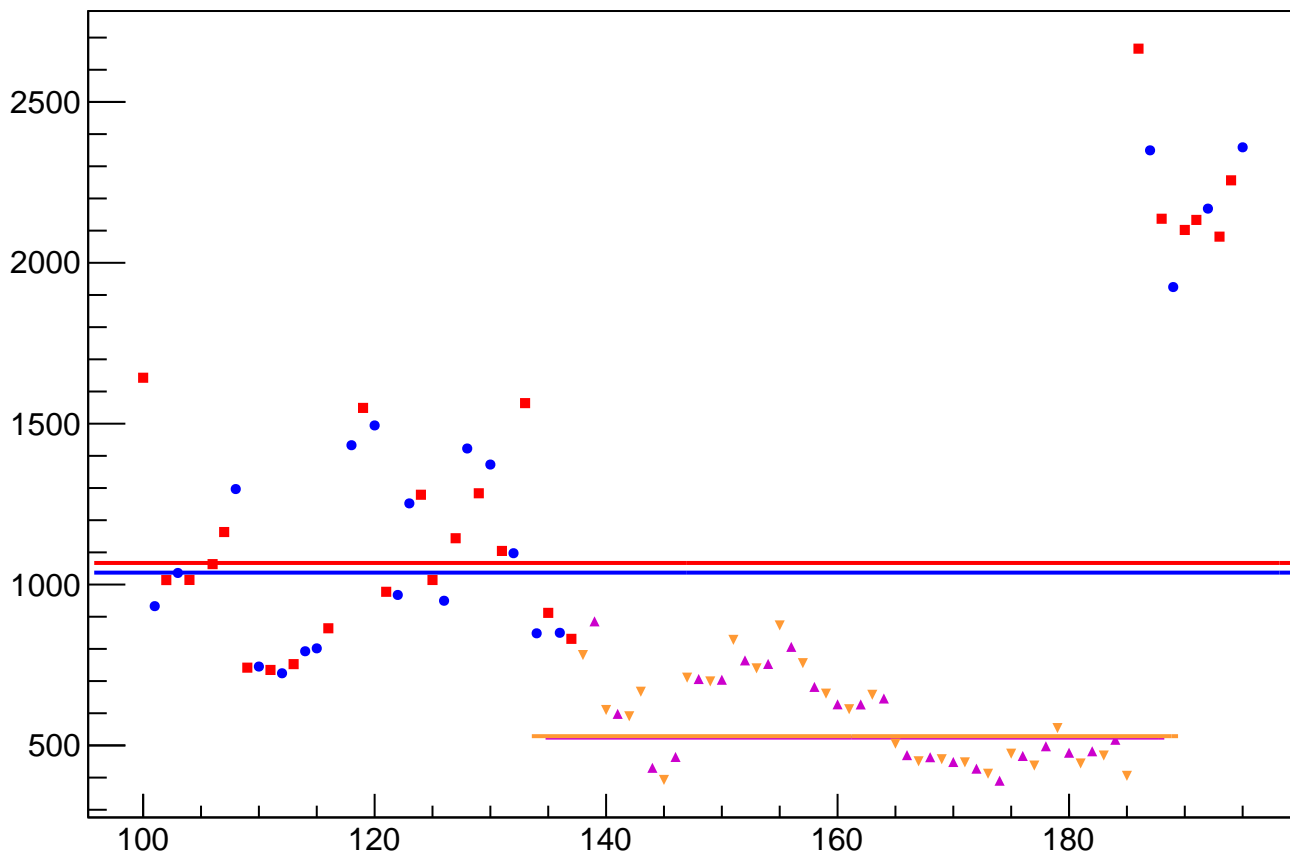
Left In:  $-44.578 \pm 129.095$   $\chi^2/\text{NDF}: 29.6/22$

+ sign  $-538.293 \pm 120.108$   $\chi^2/\text{NDF}: 90.5/45$

All:  $-341.111 \pm 85.337$   $\chi^2/\text{NDF}: 146.9/93$

- sign  $-140.093 \pm 121.271$   $\chi^2/\text{NDF}: 51.0/47$

# asym\_sam\_37\_avg\_correction\_rms vs Slug



Right In: 1037.053+/-0.262  $\chi^2$ /NDF: 2029479.7/20

Left Out: 528.736+/-0.090  $\chi^2$ /NDF: 1983697.7/24

Right Out: 1067.097+/-0.250  $\chi^2$ /NDF: 2682744.1/24

Left In: 524.268+/-0.091  $\chi^2$ /NDF: 1716257.3/22

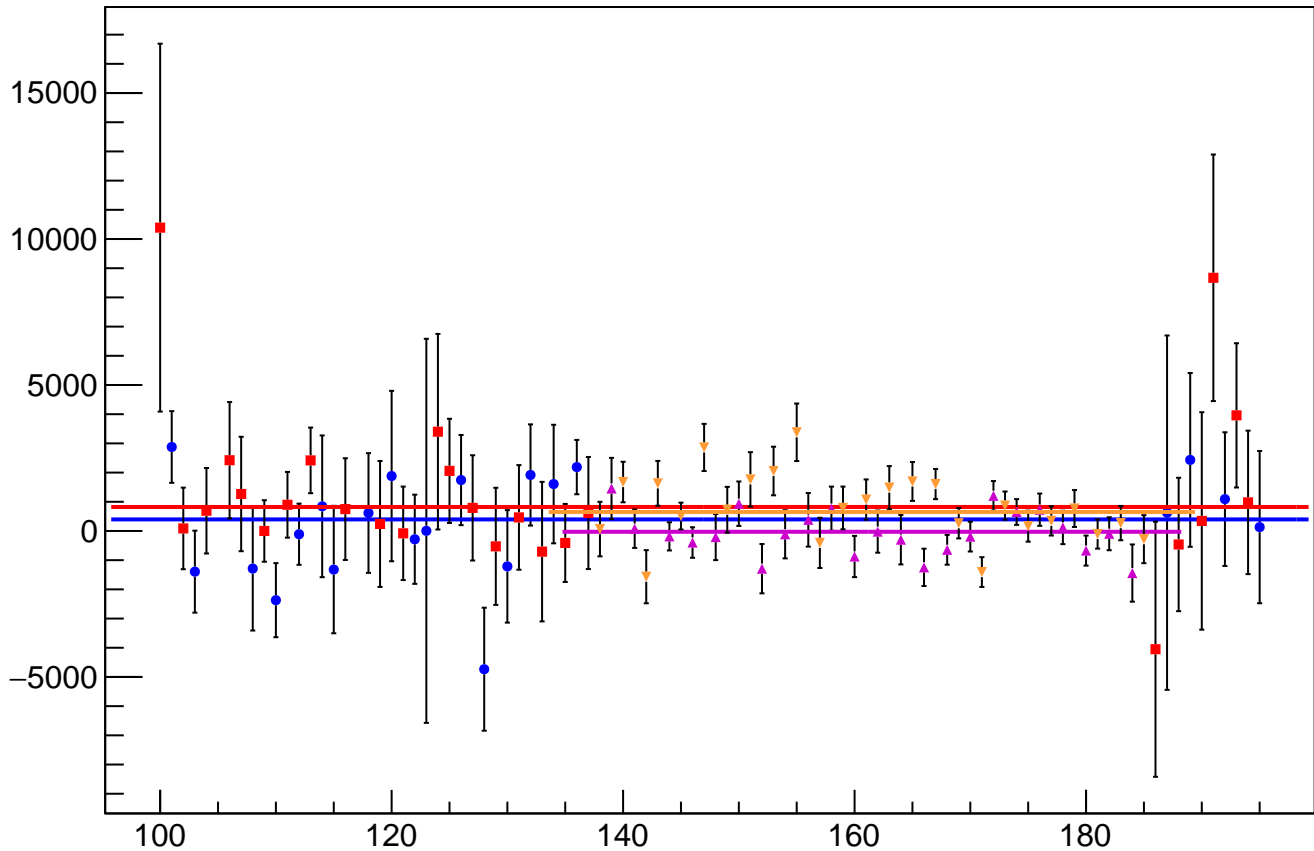
+ sign 582.275+/-0.085  $\chi^2$ /NDF: 7388859.0/45

All: 585.145+/-0.060  $\chi^2$ /NDF: 15946591.1/90

- sign 588.071+/-0.086  $\chi^2$ /NDF: 8555425.8/47



# asym\_sam\_37\_avg\_mean vs Slug



Right In:  $396.029 \pm 371.793$   $\chi^2/\text{NDF}: 25.2/20$

Left Out:  $651.560 \pm 127.961$   $\chi^2/\text{NDF}: 61.1/24$

Right Out:  $822.109 \pm 355.523$   $\chi^2/\text{NDF}: 15.8/24$

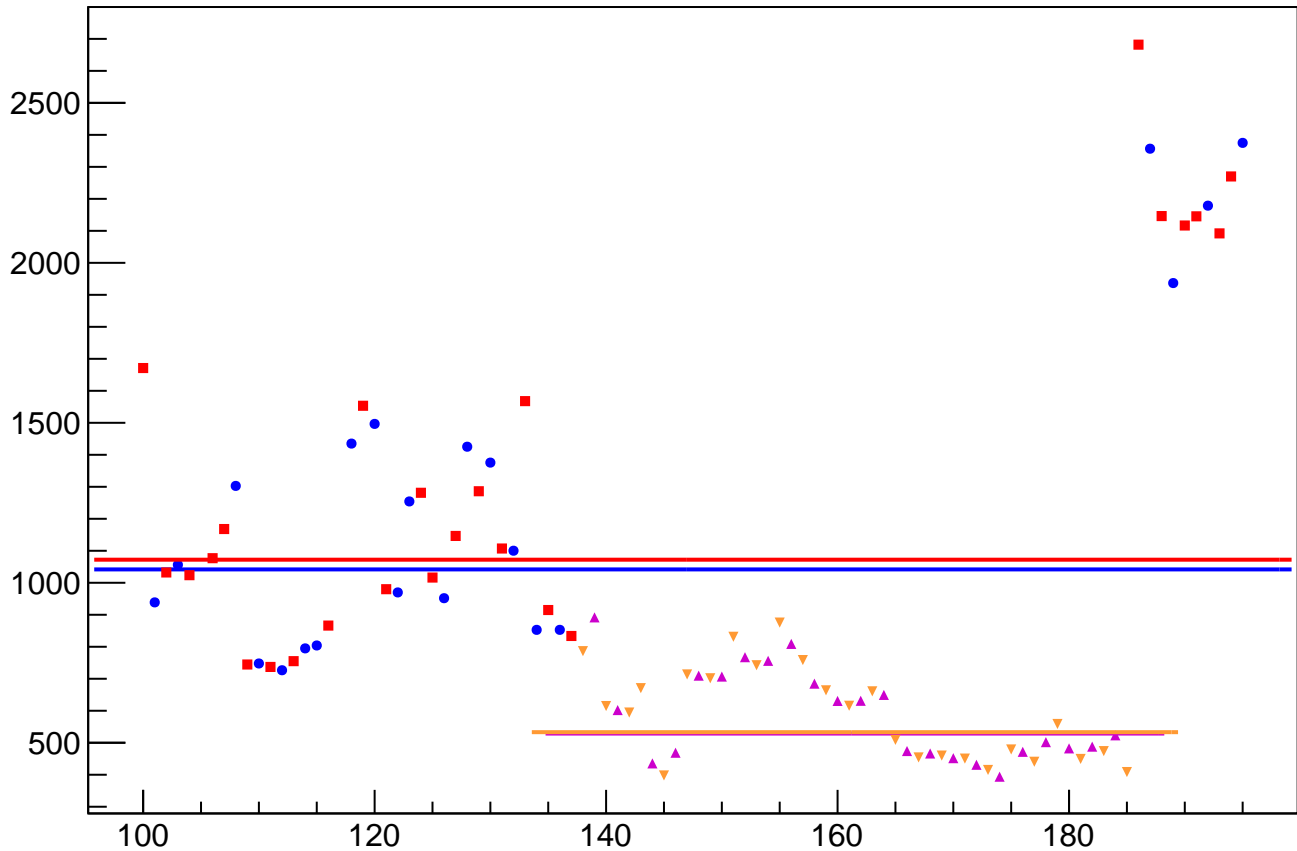
Left In:  $-27.483 \pm 130.127$   $\chi^2/\text{NDF}: 28.5/22$

+ sign  $624.497 \pm 120.995$   $\chi^2/\text{NDF}: 86.8/45$

All:  $351.421 \pm 85.979$   $\chi^2/\text{NDF}: 146.3/93$

- sign  $72.887 \pm 122.199$   $\chi^2/\text{NDF}: 49.3/47$

# asym\_sam\_37\_avg\_rms vs Slug



Right In: 1041.763+/-0.263  $\chi^2/\text{NDF}$ : 2031987.7/20

Left Out: 533.060+/-0.090  $\chi^2/\text{NDF}$ : 1951536.4/24

Right Out: 1072.162+/-0.251  $\chi^2/\text{NDF}$ : 2688098.2/24

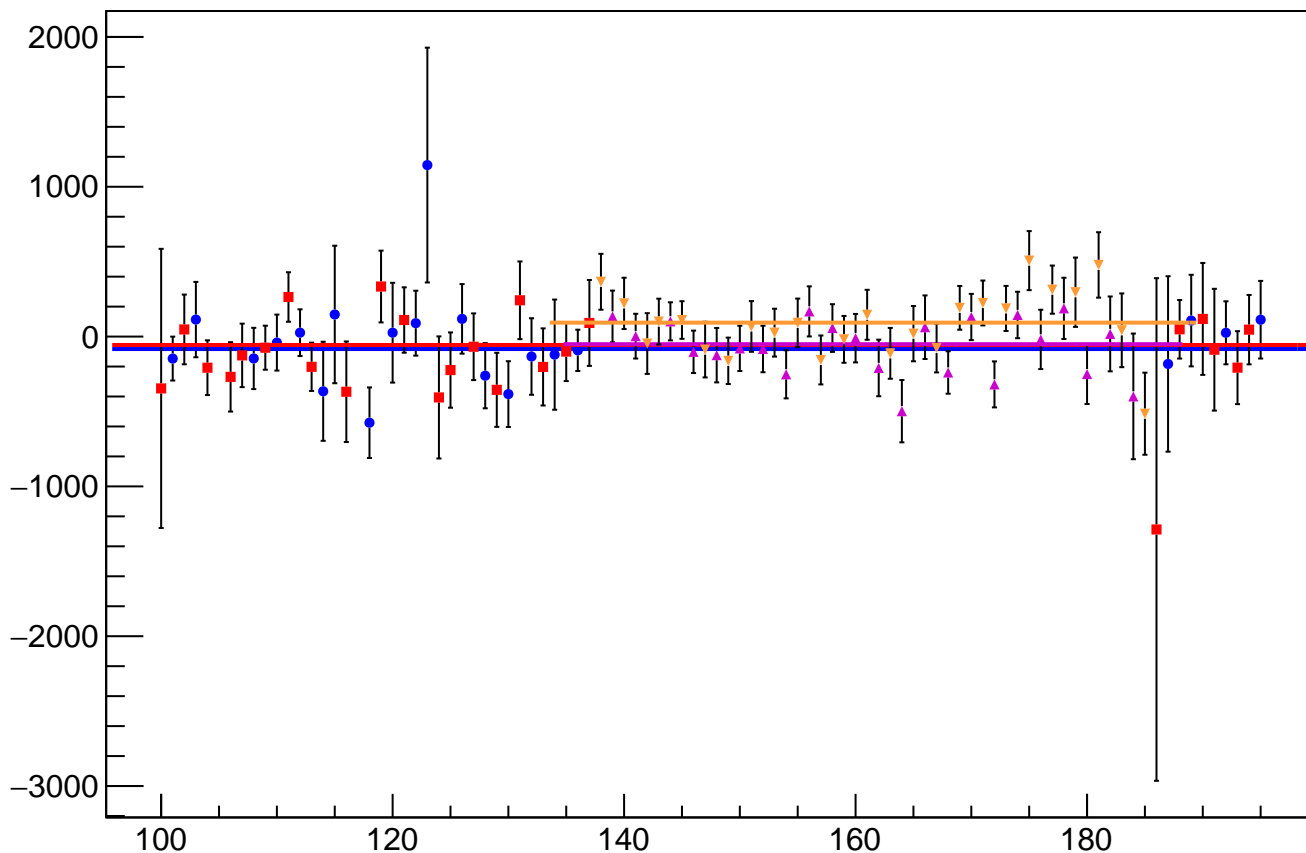
Left In: 528.694+/-0.092  $\chi^2/\text{NDF}$ : 1688511.2/22

+ sign 586.937+/-0.086  $\chi^2/\text{NDF}$ : 7331154.7/45

All: 589.888+/-0.061  $\chi^2/\text{NDF}$ : 15831532.9/93

- sign 592.899+/-0.086  $\chi^2/\text{NDF}$ : 8497973.8/47

# reg\_asym\_sam\_48\_avg\_mean vs Slug



Right In:  $-83.183 \pm 49.576$   $\chi^2/\text{NDF}: 14.6/20$

Left Out:  $92.994 \pm 34.054$   $\chi^2/\text{NDF}: 29.4/24$

Right Out:  $-56.056 \pm 46.579$   $\chi^2/\text{NDF}: 16.9/24$

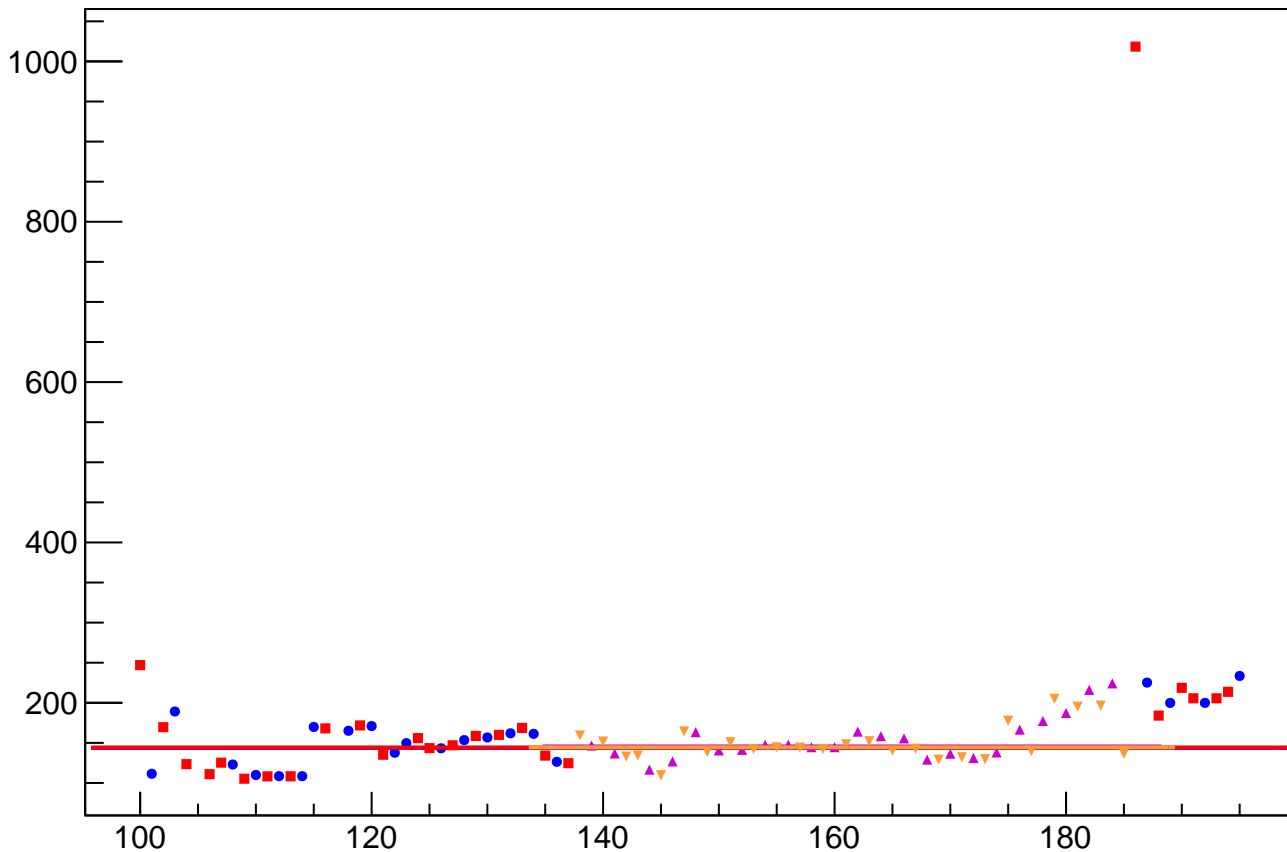
Left In:  $-50.896 \pm 35.280$   $\chi^2/\text{NDF}: 23.5/22$

+ sign  $36.517 \pm 28.070$   $\chi^2/\text{NDF}: 52.6/45$

All:  $-8.044 \pm 19.867$   $\chi^2/\text{NDF}: 98.0/93$

- sign  $-52.777 \pm 28.123$   $\chi^2/\text{NDF}: 40.3/47$

# reg\_asym\_sam\_48\_avg\_rms vs Slug



Right In: 143.804 $\pm$ 0.035  $\chi^2$ /NDF: 957322.0/20

Left Out: 144.475 $\pm$ 0.024  $\chi^2$ /NDF: 670488.7/24

Right Out: 144.150 $\pm$ 0.033  $\chi^2$ /NDF: 1612462.3/24

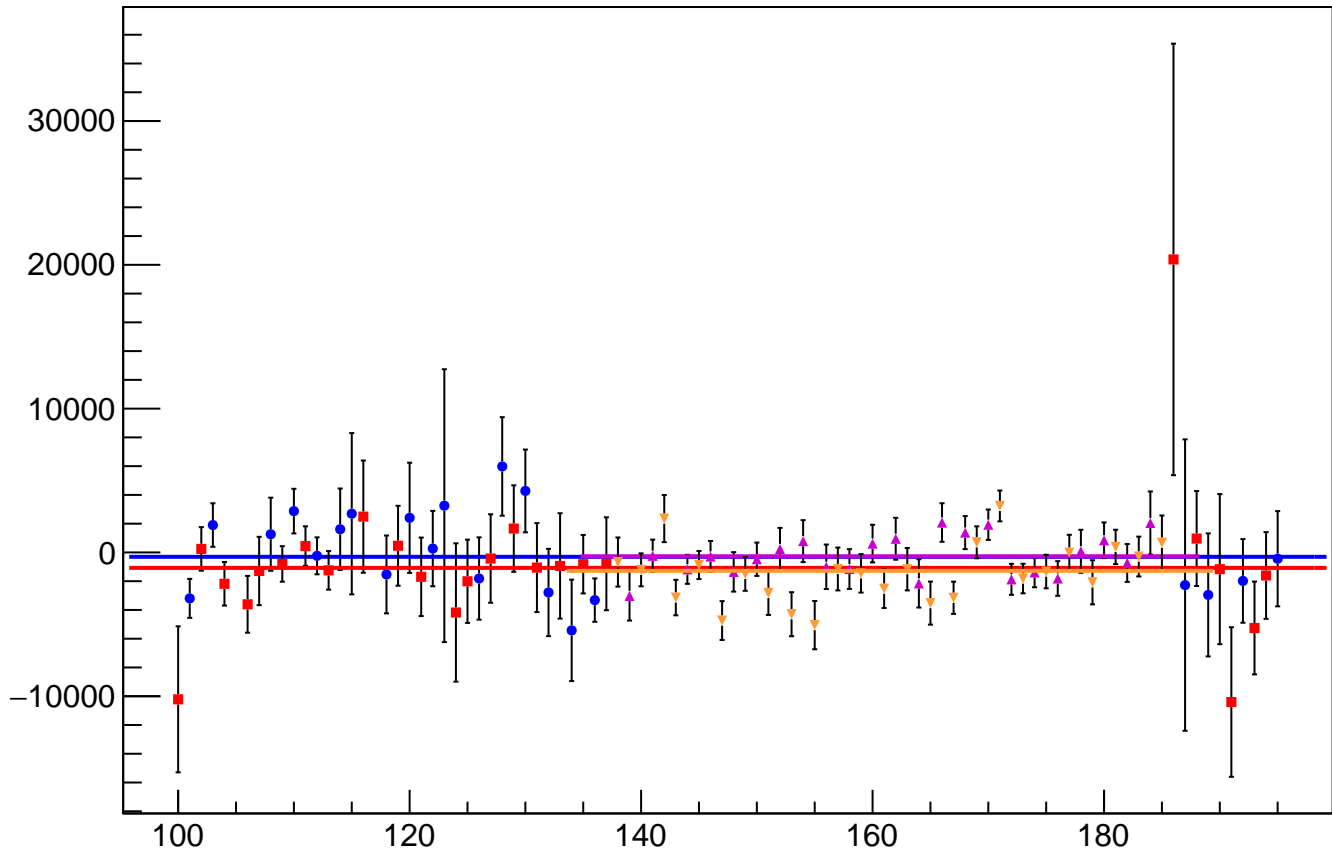
Left In: 145.535 $\pm$ 0.025  $\chi^2$ /NDF: 643529.3/22

+ sign 144.260 $\pm$ 0.020  $\chi^2$ /NDF: 1628059.5/45

All: 144.644 $\pm$ 0.014  $\chi^2$ /NDF: 3885925.0/93

- sign 145.030 $\pm$ 0.020  $\chi^2$ /NDF: 2257115.2/47

# asym\_sam\_48\_avg\_correction\_mean vs Slug



Right In:  $-304.848 \pm 506.147$   $\chi^2/\text{NDF}: 26.6/20$

Left Out:  $-1279.328 \pm 259.299$   $\chi^2/\text{NDF}: 55.9/24$

Right Out:  $-1075.457 \pm 461.870$   $\chi^2/\text{NDF}: 17.4/24$

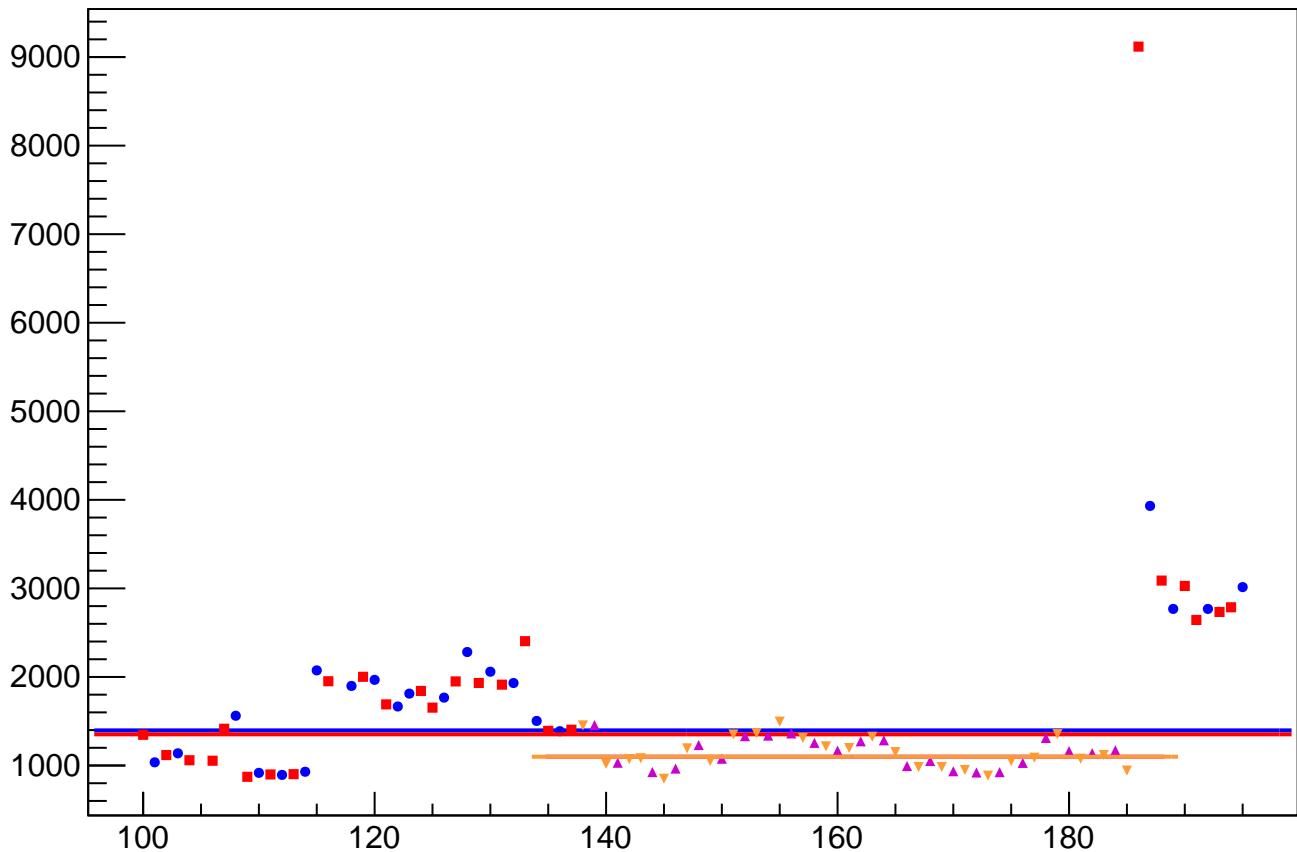
Left In:  $-269.952 \pm 266.245$   $\chi^2/\text{NDF}: 24.3/22$

+ sign  $-1076.743 \pm 230.777$   $\chi^2/\text{NDF}: 85.4/45$

All:  $-773.652 \pm 163.145$   $\chi^2/\text{NDF}: 132.9/93$

- sign  $-470.857 \pm 230.665$   $\chi^2/\text{NDF}: 44.0/47$

# asym\_sam\_48\_avg\_correction\_rms vs Slug



Right In: 1396.656+/-0.358  $\chi^2/\text{NDF}$ : 2517068.5/20

Left Out: 1098.909+/-0.183  $\chi^2/\text{NDF}$ : 824328.7/24

+ sign 1160.808+/-0.163  $\chi^2/\text{NDF}$ : 3889621.2/45

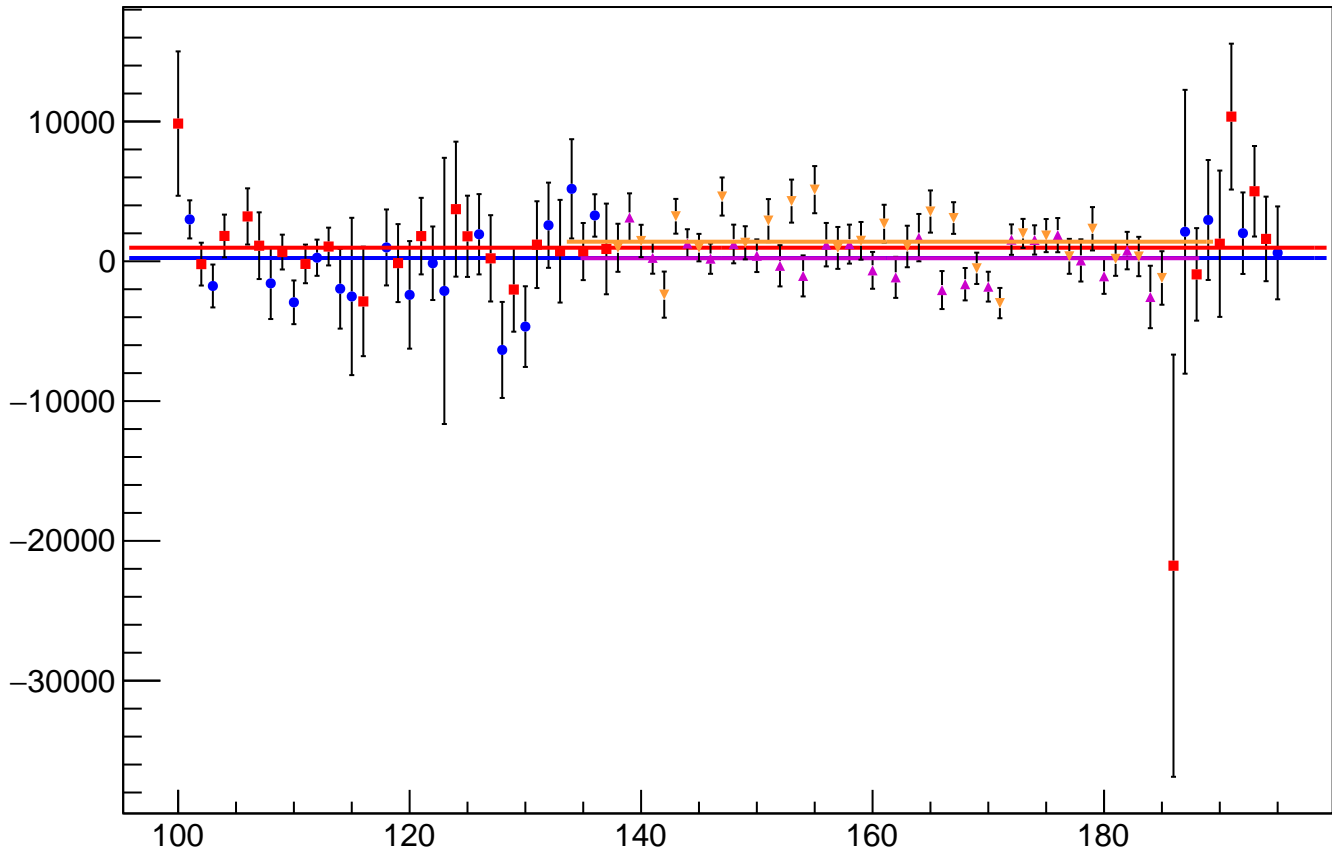
Right Out: 1351.808+/-0.327  $\chi^2/\text{NDF}$ : 3762486.3/24

All: 1161.651+/-0.115  $\chi^2/\text{NDF}$ : 8779728.6/93

Left In: 1099.585+/-0.188  $\chi^2/\text{NDF}$ : 679896.1/22

- sign 1162.493+/-0.163  $\chi^2/\text{NDF}$ : 4890054.0/47

# asym\_sam\_48\_avg\_mean vs Slug



Right In:  $234.119 \pm 509.311$   $\chi^2/\text{NDF}: 26.2/20$

Left Out:  $1400.458 \pm 261.804$   $\chi^2/\text{NDF}: 52.2/24$

Right Out:  $970.972 \pm 465.225$   $\chi^2/\text{NDF}: 16.0/24$

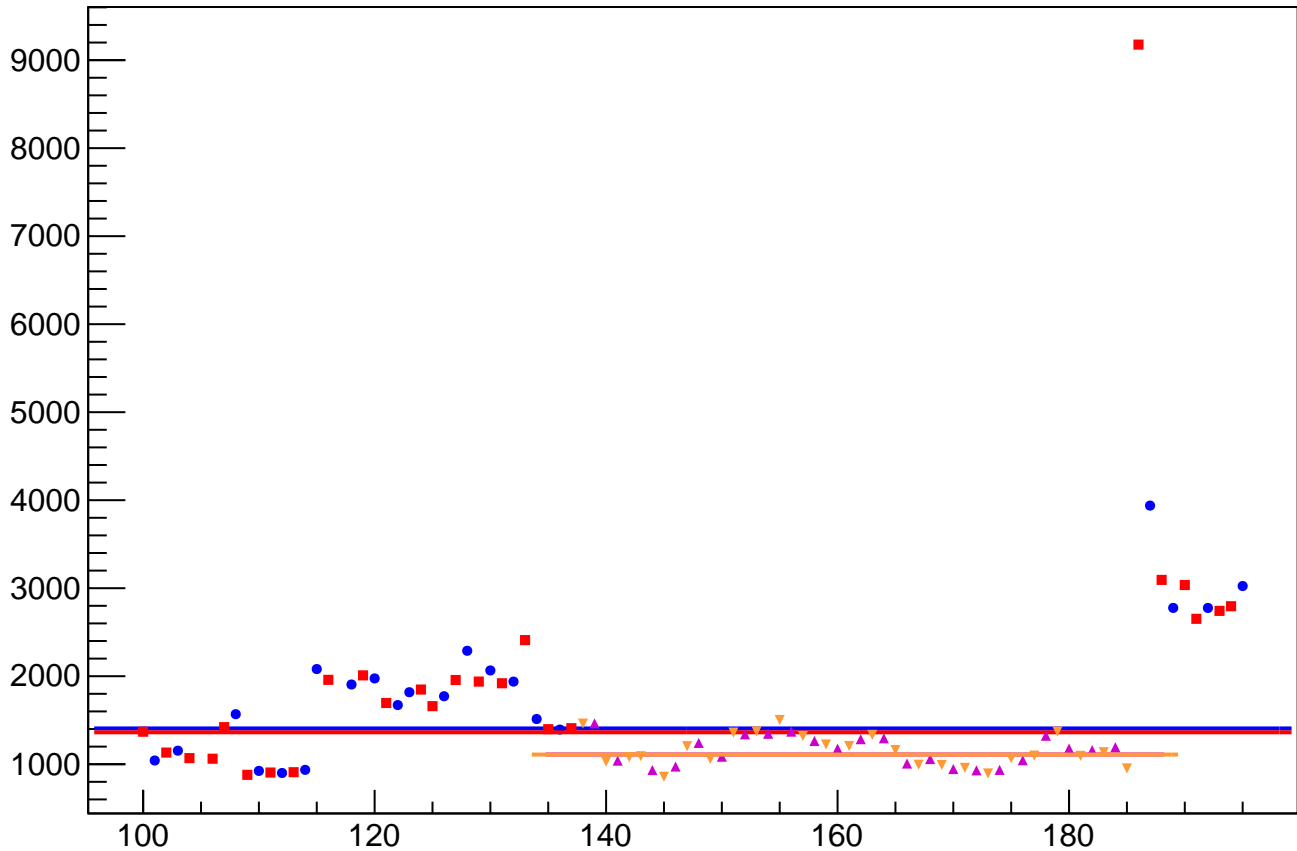
Left In:  $219.393 \pm 268.852$   $\chi^2/\text{NDF}: 25.0/22$

+ sign  $1156.685 \pm 232.843$   $\chi^2/\text{NDF}: 82.6/45$

All:  $782.015 \pm 164.622$   $\chi^2/\text{NDF}: 130.7/93$

- sign  $407.555 \pm 232.778$   $\chi^2/\text{NDF}: 42.9/47$

# asym\_sam\_48\_avg\_rms vs Slug



Right In: 1406.474+/-0.360  $\chi^2$ /NDF: 2494641.7/20

Left Out: 1109.761+/-0.185  $\chi^2$ /NDF: 812174.9/24

Right Out: 1362.472+/-0.329  $\chi^2$ /NDF: 3731902.1/24

Left In: 1110.542+/-0.190  $\chi^2$ /NDF: 669928.9/22

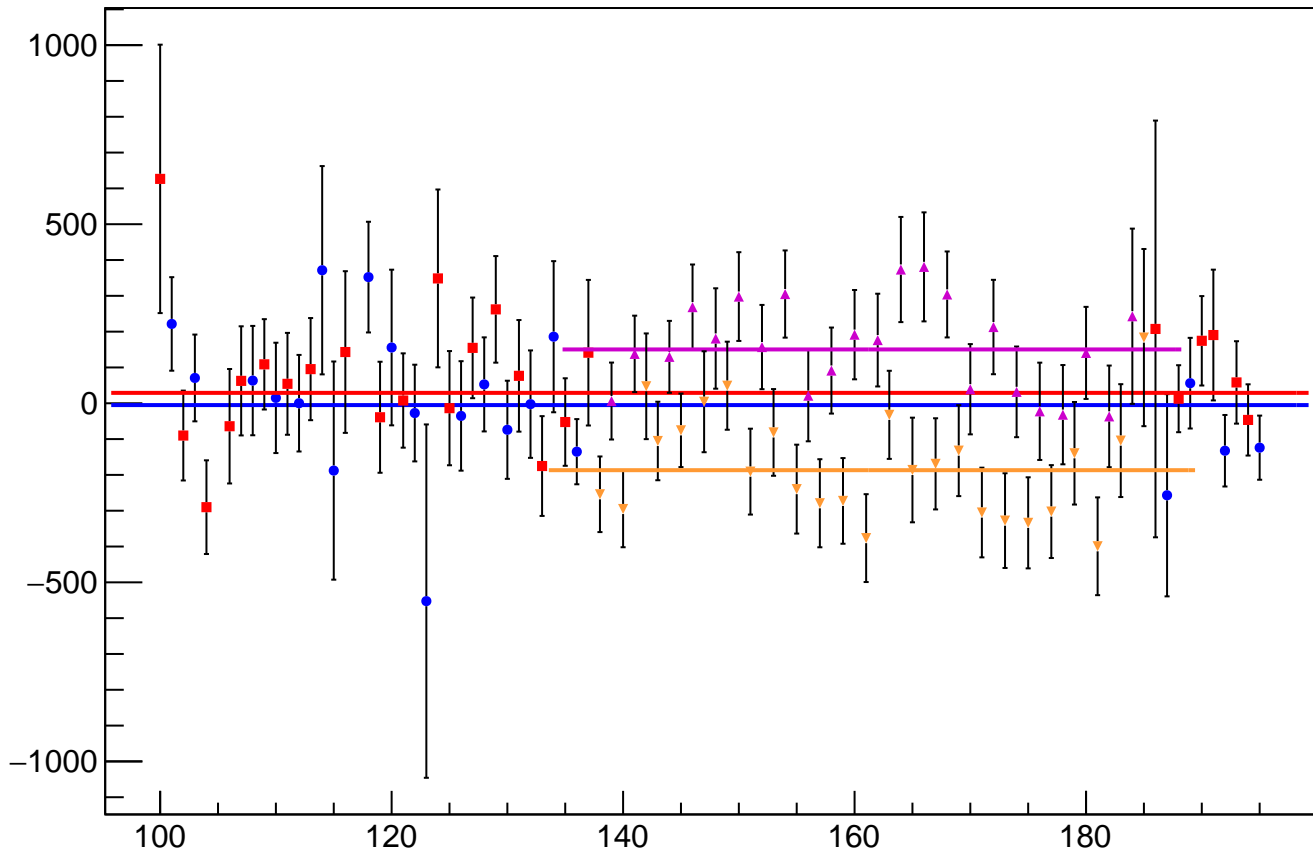
+ sign 1171.776+/-0.165  $\chi^2$ /NDF: 3843736.9/45

All: 1172.695+/-0.116  $\chi^2$ /NDF: 8685291.2/93

- sign 1173.614+/-0.165  $\chi^2$ /NDF: 4841492.1/47



# reg\_asym\_sam\_15\_dd\_mean vs Slug



Right In:  $-5.054 \pm 30.814$   $\chi^2/\text{NDF}: 20.6/20$

Left Out:  $-186.838 \pm 25.308$   $\chi^2/\text{NDF}: 26.6/24$

Right Out:  $29.055 \pm 28.688$   $\chi^2/\text{NDF}: 21.8/24$

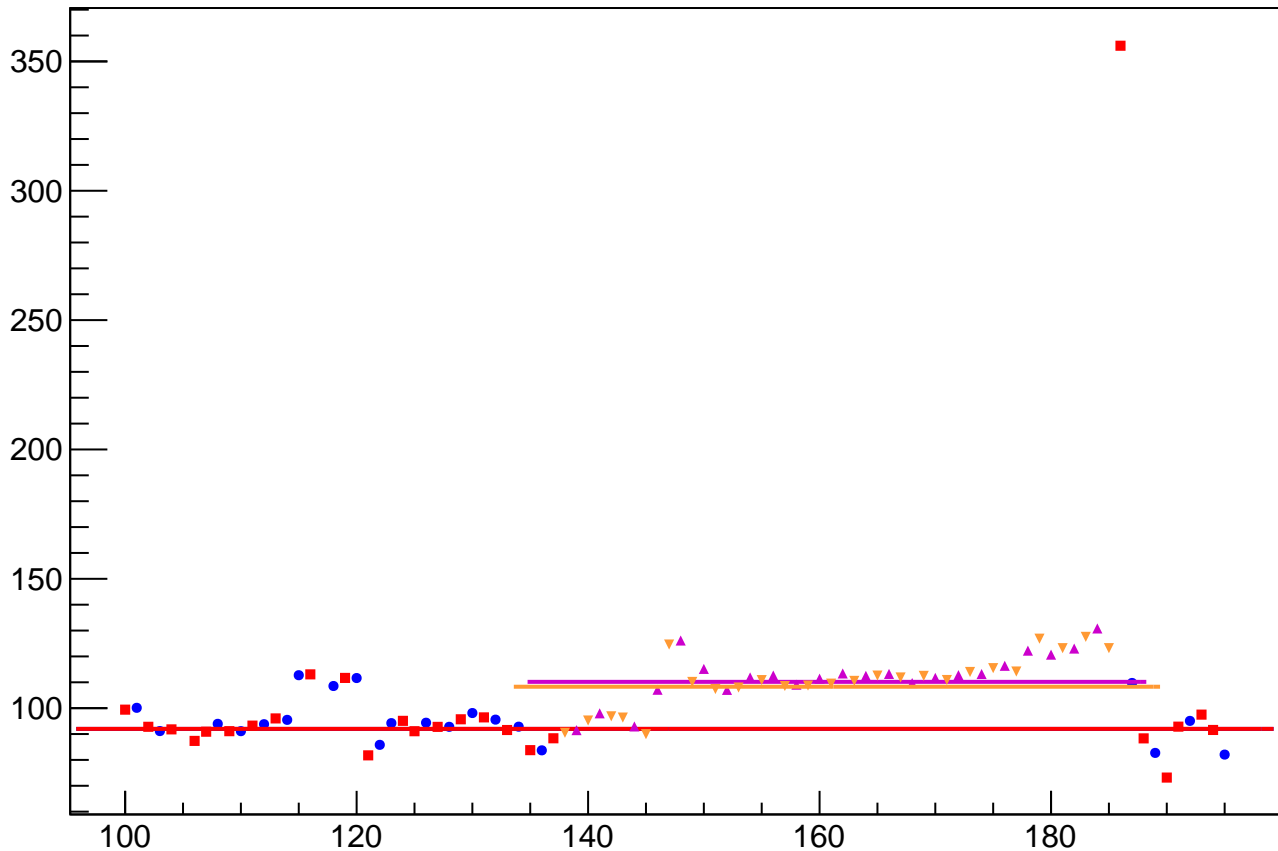
Left In:  $150.315 \pm 26.445$   $\chi^2/\text{NDF}: 20.7/22$

+ sign  $-113.610 \pm 19.557$   $\chi^2/\text{NDF}: 68.0/45$

All:  $-8.896 \pm 13.789$   $\chi^2/\text{NDF}: 177.1/93$

- sign  $94.611 \pm 19.444$   $\chi^2/\text{NDF}: 52.1/47$

# reg\_asym\_sam\_15\_dd\_rms vs Slug



Right In: 91.972 $\pm$ 0.022  $\chi^2$ /NDF: 129309.5/20

Left Out: 108.287 $\pm$ 0.018  $\chi^2$ /NDF: 330693.5/24

Right Out: 92.001 $\pm$ 0.020  $\chi^2$ /NDF: 544584.5/24

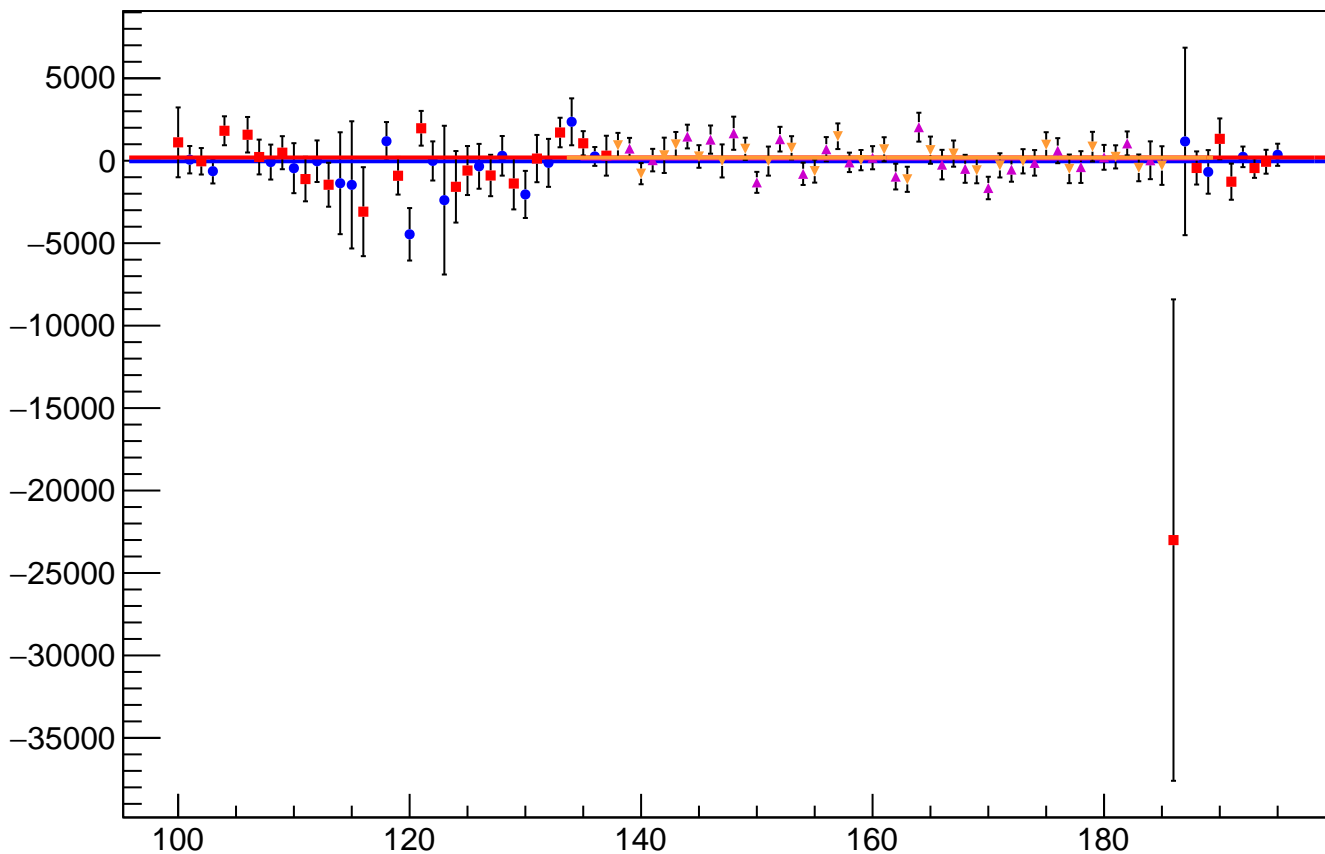
Left In: 110.173 $\pm$ 0.019  $\chi^2$ /NDF: 246967.7/22

+ sign 101.715 $\pm$ 0.014  $\chi^2$ /NDF: 794846.2/45

All: 101.770 $\pm$ 0.010  $\chi^2$ /NDF: 2020281.3/93

- sign 101.825 $\pm$ 0.014  $\chi^2$ /NDF: 1225403.1/47

# asym\_sam\_15\_dd\_correction\_mean vs Slug



Right In:  $-33.181 \pm 233.009$   $\chi^2/\text{NDF}: 16.2/20$

Left Out:  $185.392 \pm 153.683$   $\chi^2/\text{NDF}: 18.4/24$

Right Out:  $197.987 \pm 213.563$   $\chi^2/\text{NDF}: 26.9/24$

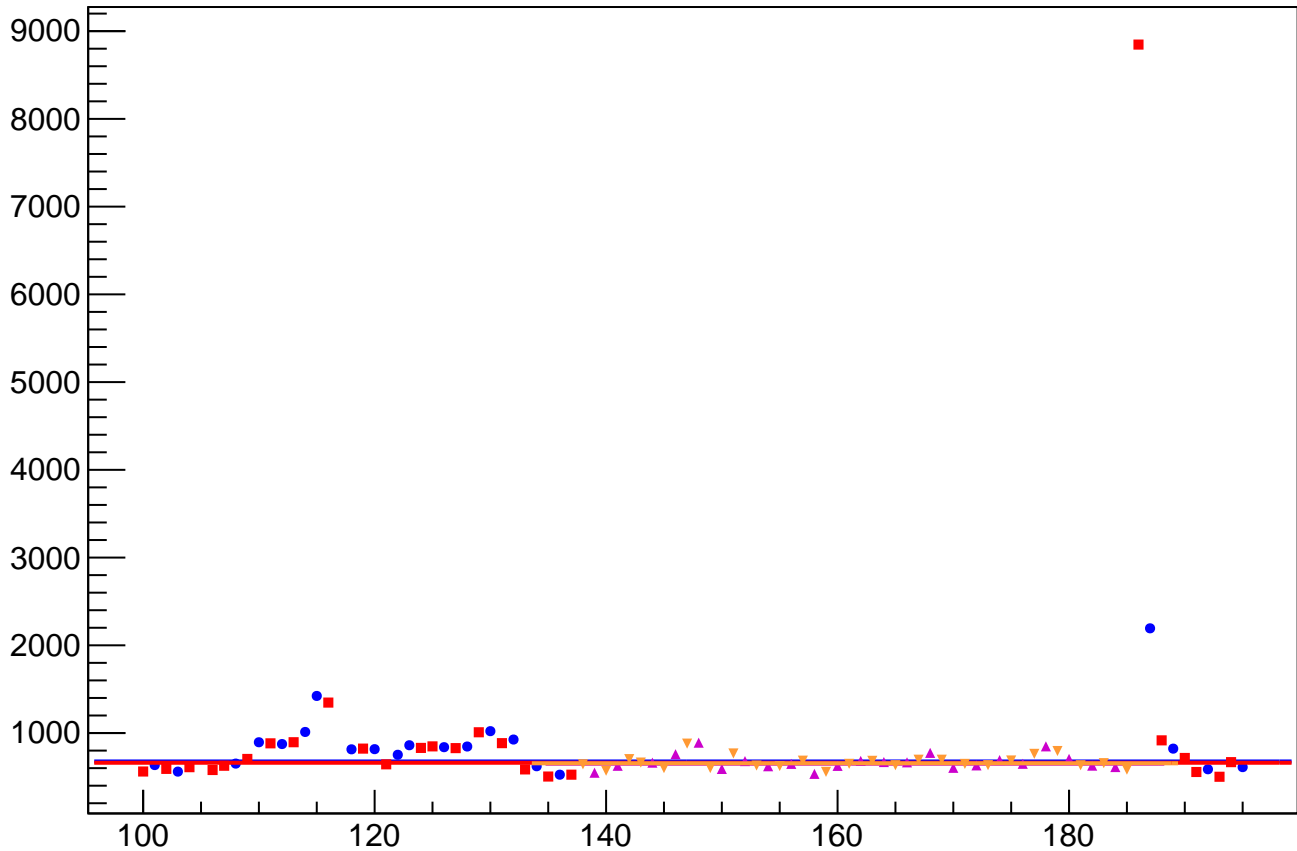
Left In:  $128.782 \pm 157.155$   $\chi^2/\text{NDF}: 36.2/22$

+ sign  $119.133 \pm 128.291$   $\chi^2/\text{NDF}: 35.2/45$

All:  $136.341 \pm 90.104$   $\chi^2/\text{NDF}: 98.4/93$

- sign  $153.093 \pm 126.577$   $\chi^2/\text{NDF}: 63.2/47$

# asym\_sam\_15\_dd\_correction\_rms vs Slug



Right In: 676.273+/-0.165  $\chi^2$ /NDF: 912943.5/20

Left Out: 655.155+/-0.109  $\chi^2$ /NDF:367349.8/24

Right Out: 661.474+/-0.151  $\chi^2$ /NDF: 1609636.3/24

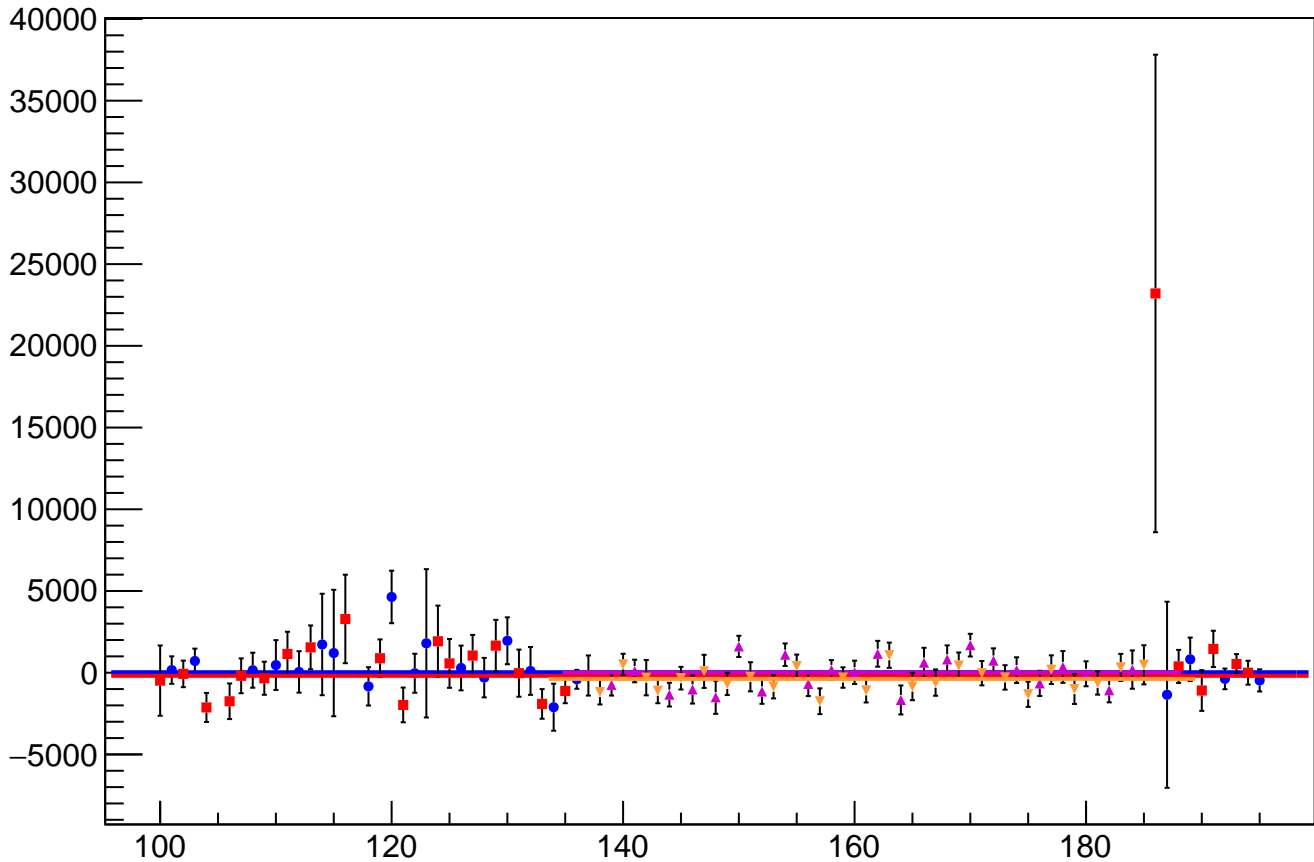
Left In: 650.883+/-0.111  $\chi^2$ /NDF:466116.8/22

+ sign 661.557+/-0.091  $\chi^2$ /NDF: 1291740.8/45

All: 658.033+/-0.064  $\chi^2$ /NDF: 3373661.9/93

- sign 654.604+/-0.090  $\chi^2$ /NDF: 2078943.9/47

# asym\_sam\_15\_dd\_mean vs Slug



Right In: 29.707+/-235.408  $\chi^2$ /NDF: 16.3/20

Left Out: -379.470+/-155.892  $\chi^2$ /NDF:18.8/24

Right Out: -190.843+/-215.960  $\chi^2$ /NDF: 30.6/24

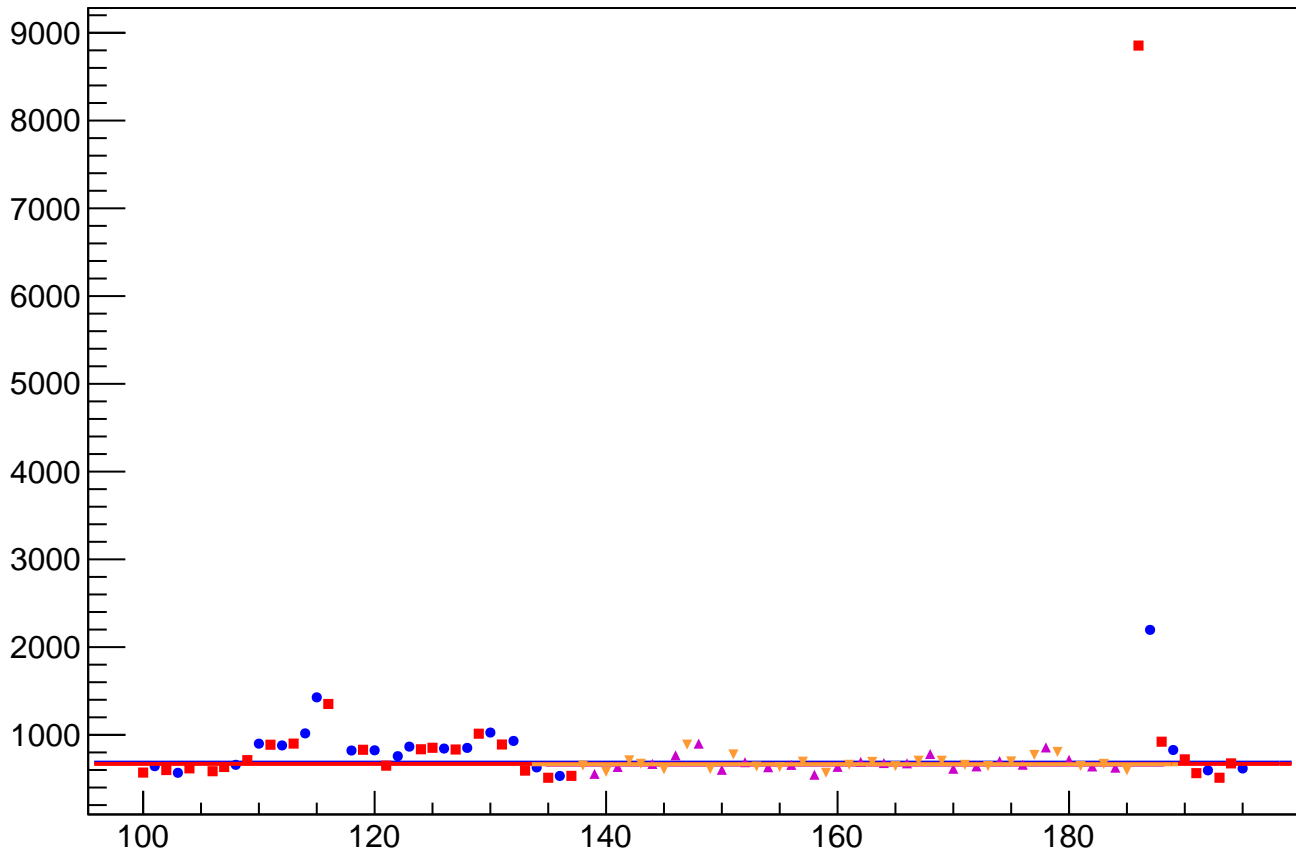
Left In: 14.768+/-159.513  $\chi^2$ /NDF:37.2/22

+ sign -254.733+/-129.976  $\chi^2$ /NDF: 37.2/45

All: -155.000+/-91.311  $\chi^2$ /NDF: 106.8/93

- sign -57.810+/-128.308  $\chi^2$ /NDF: 68.4/47

# asym\_sam\_15\_dd\_rms vs Slug



Right In: 683.757 $\pm$ 0.166  $\chi^2$ /NDF: 892066.5/20

Left Out: 664.773 $\pm$ 0.110  $\chi^2$ /NDF:357053.8/24

Right Out: 669.603 $\pm$ 0.153  $\chi^2$ /NDF: 1577759.3/24

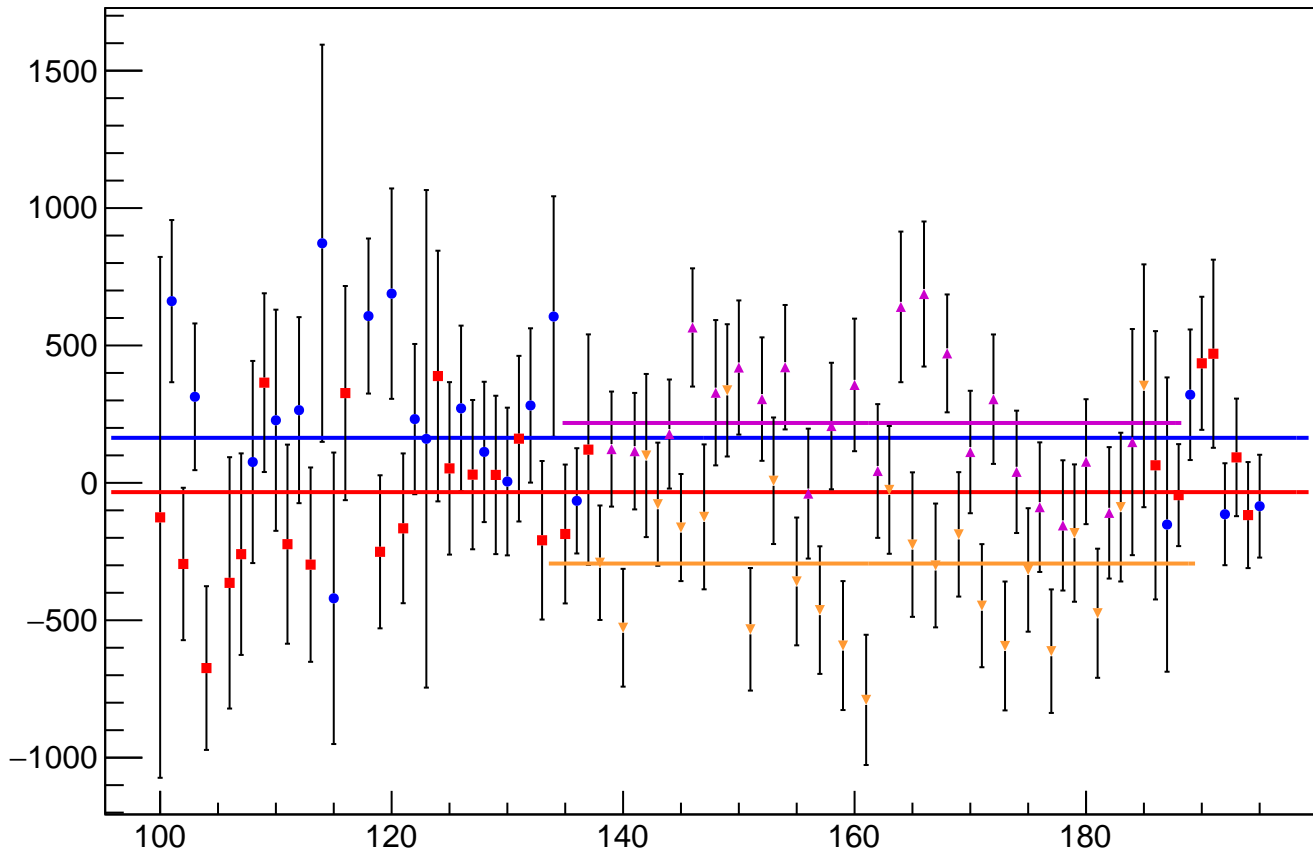
Left In: 660.890 $\pm$ 0.113  $\chi^2$ /NDF:449180.0/22

+ sign 670.560 $\pm$ 0.092  $\chi^2$ /NDF: 1258162.4/45

All: 667.220 $\pm$ 0.065  $\chi^2$ /NDF: 3289815.1/93

- sign 663.966 $\pm$ 0.091  $\chi^2$ /NDF: 2029045.6/47

# reg\_asym\_sam\_26\_dd\_mean vs Slug



Right In:  $163.878 \pm 63.057$   $\chi^2/\text{NDF}: 17.8/20$

Left Out:  $-293.590 \pm 47.203$   $\chi^2/\text{NDF}: 30.3/24$

Right Out:  $-33.709 \pm 58.919$   $\chi^2/\text{NDF}: 19.3/24$

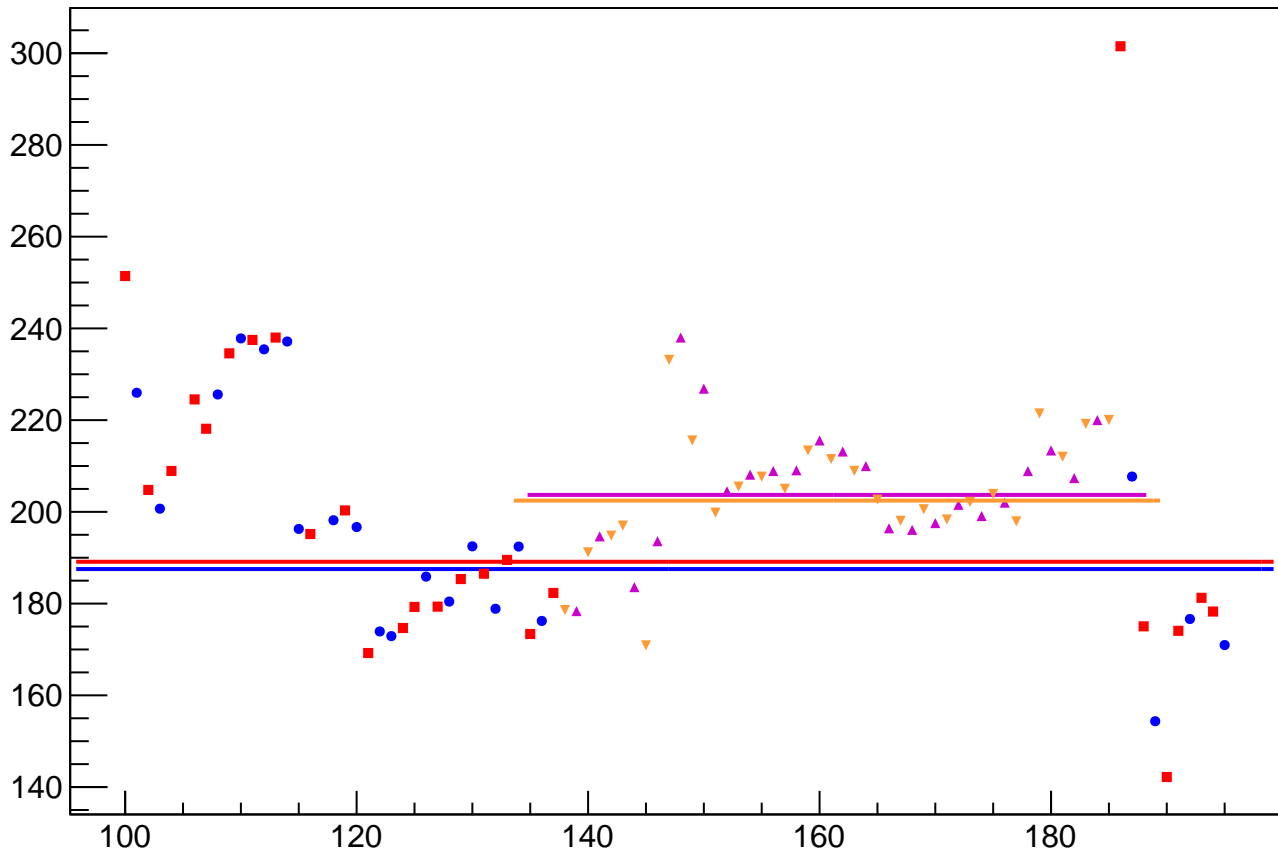
Left In:  $217.964 \pm 48.819$   $\chi^2/\text{NDF}: 21.3/22$

+ sign  $-129.304 \pm 37.788$   $\chi^2/\text{NDF}: 81.9/45$

All:  $-6.256 \pm 26.650$   $\chi^2/\text{NDF}: 154.4/93$

- sign  $115.515 \pm 37.592$   $\chi^2/\text{NDF}: 51.4/47$

# reg\_asym\_sam\_26\_dd\_rms vs Slug



Right In: 187.532 $\pm$ 0.045  $\chi^2$ /NDF: 226760.7/20

Left Out: 202.459 $\pm$ 0.033  $\chi^2$ /NDF: 158582.3/24

Right Out: 189.122 $\pm$ 0.042  $\chi^2$ /NDF: 396475.5/24

Left In: 203.699 $\pm$ 0.035  $\chi^2$ /NDF: 136193.4/22

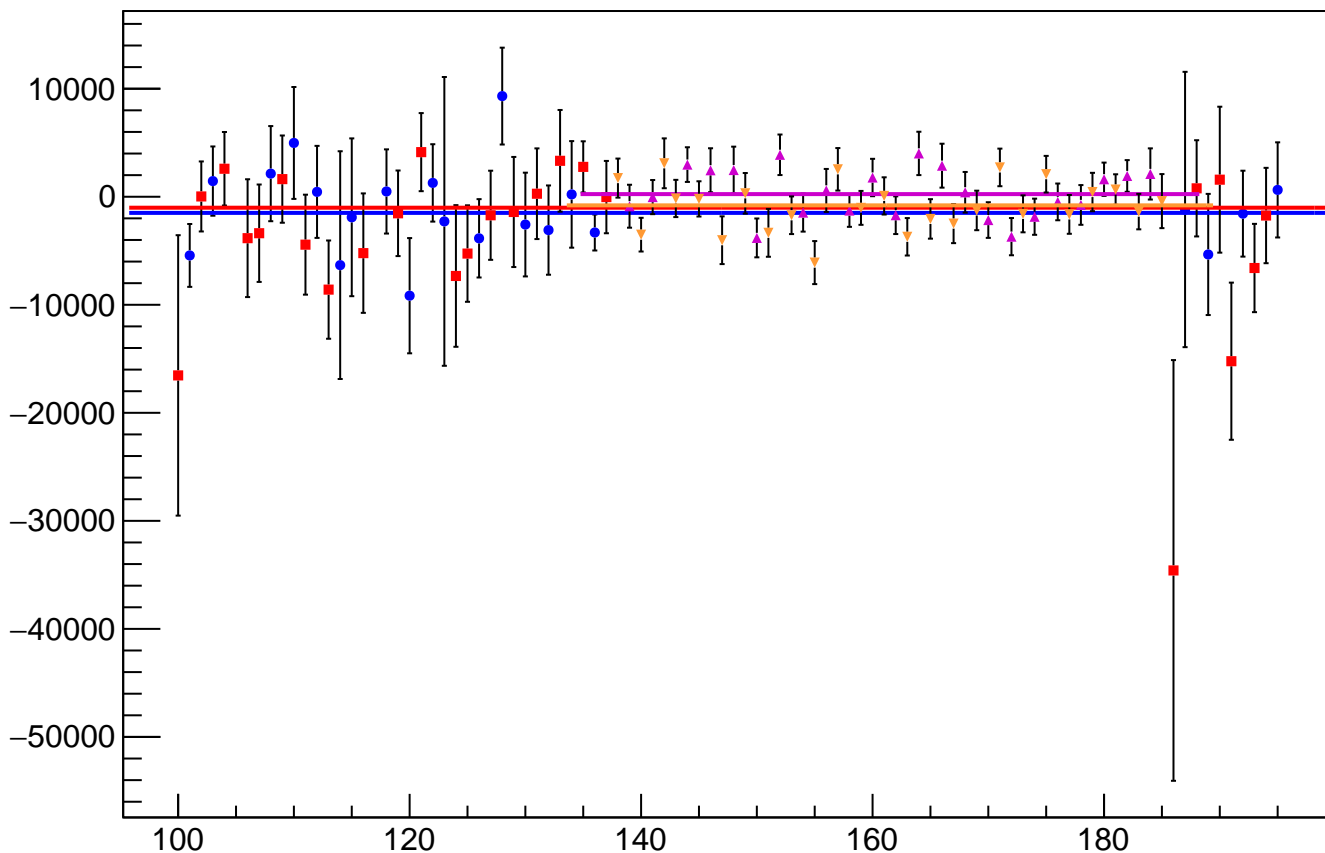
+ sign 197.098 $\pm$ 0.027  $\chi^2$ /NDF: 457165.2/45

All: 197.433 $\pm$ 0.019  $\chi^2$ /NDF: 1062727.9/93

- sign 197.765 $\pm$ 0.027  $\chi^2$ /NDF: 605249.5/47



# asym\_sam\_26\_dd\_correction\_mean vs Slug



Right In:  $-1493.477 \pm 859.514$   $\chi^2/\text{NDF}$ : 16.7/20

Left Out:  $-796.528 \pm 357.851$   $\chi^2/\text{NDF}$ : 35.7/24

Right Out:  $-1013.593 \pm 862.195$   $\chi^2/\text{NDF}$ : 24.0/24

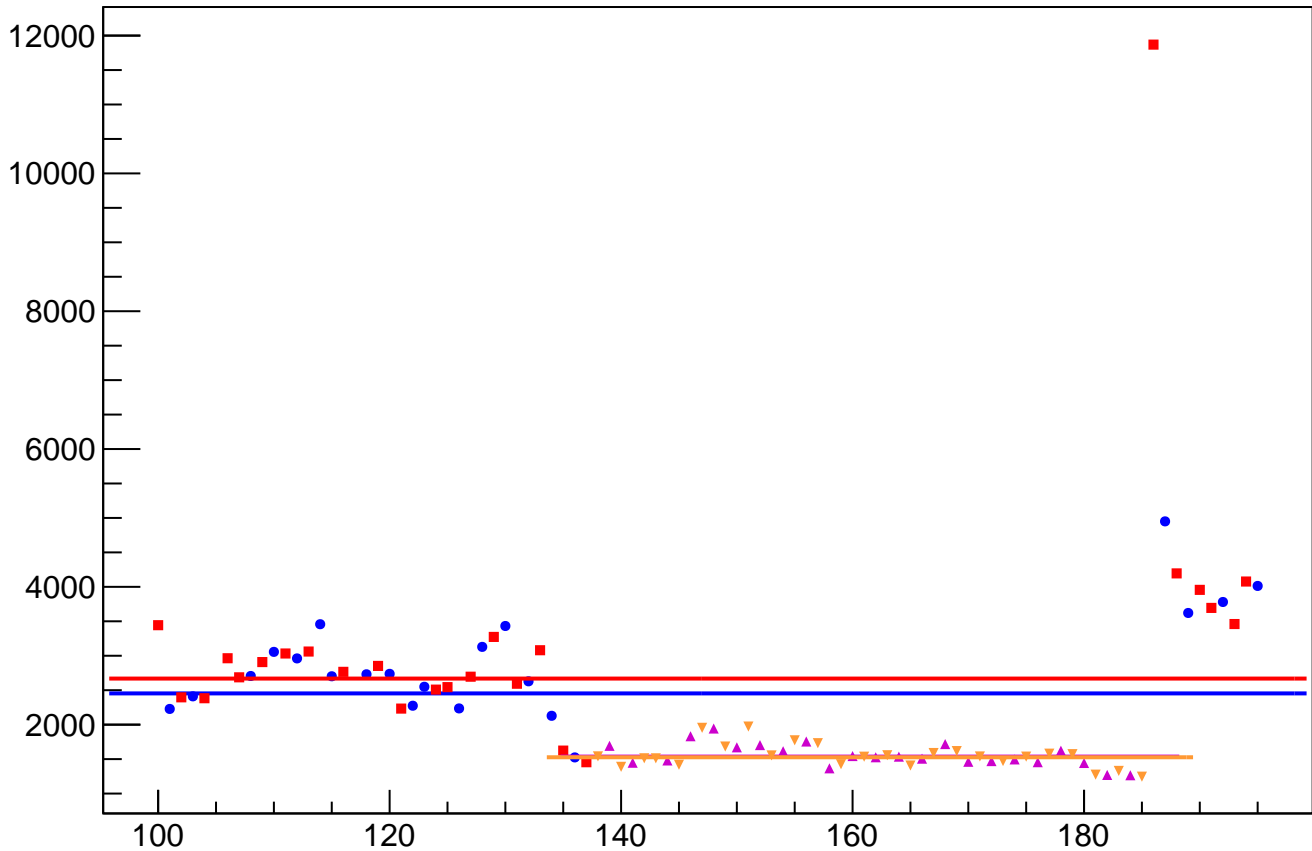
Left In:  $245.102 \pm 369.846$   $\chi^2/\text{NDF}$ : 35.7/22

+ sign  $-899.490 \pm 330.362$   $\chi^2/\text{NDF}$ : 53.0/45

All:  $-438.494 \pm 236.900$   $\chi^2/\text{NDF}$ : 118.5/93

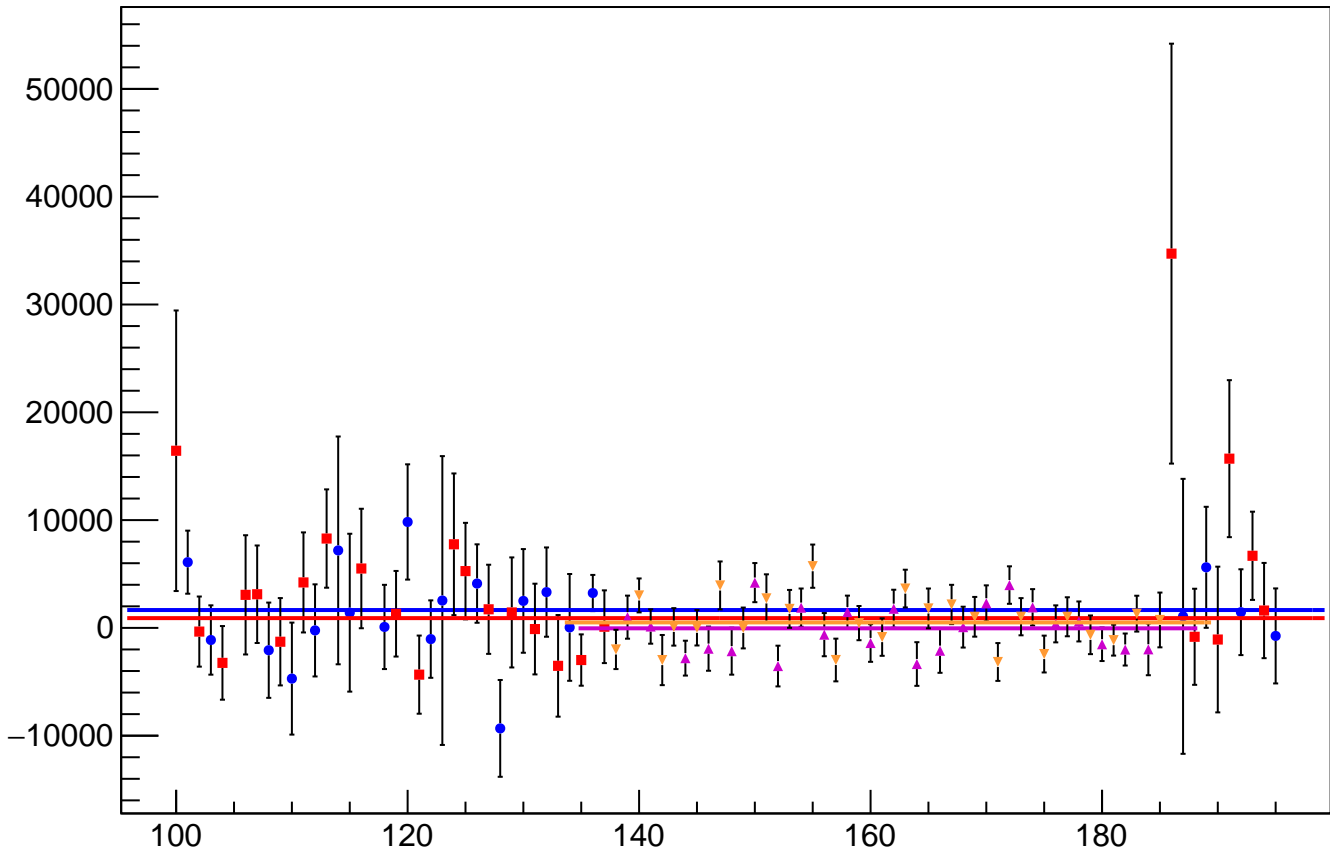
- sign  $49.489 \pm 339.895$   $\chi^2/\text{NDF}$ : 61.5/47

# asym\_sam\_26\_dd\_correction\_rms vs Slug



Right In: 2453.547 $\pm$ 0.608	$\chi^2$ /NDF: 1522286.8/20	+ sign 1663.635 $\pm$ 0.234	$\chi^2$ /NDF: 3899188.1/45
Left Out: 1526.712 $\pm$ 0.253	$\chi^2$ /NDF: 394892.7/24	All: 1687.373 $\pm$ 0.168	$\chi^2$ /NDF: 9065773.7/93
Right Out: 2668.789 $\pm$ 0.610	$\chi^2$ /NDF: 1881886.5/24	- sign 1712.500 $\pm$ 0.240	$\chi^2$ /NDF: 5145329.0/47
Left In: 1536.538 $\pm$ 0.262	$\chi^2$ /NDF: 350373.3/22		

# asym\_sam\_26\_dd\_mean vs Slug



Right In: 1656.835 $\pm$ 862.979  $\chi^2$ /NDF: 17.2/20

Left Out: 507.982 $\pm$ 361.172  $\chi^2$ /NDF: 35.4/24

Right Out: 906.011 $\pm$ 865.315  $\chi^2$ /NDF: 24.8/24

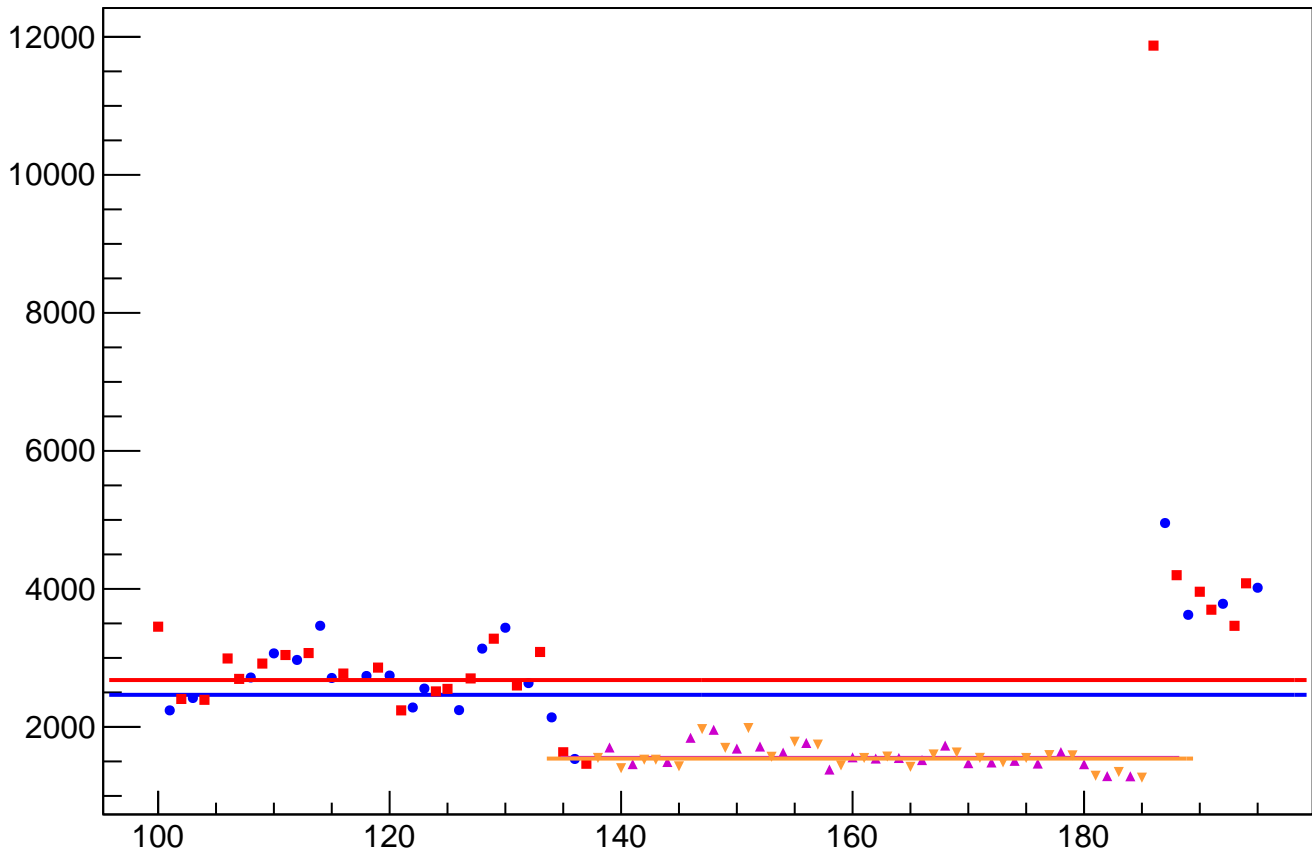
Left In: -40.080 $\pm$ 373.261  $\chi^2$ /NDF: 33.6/22

+ sign 679.218 $\pm$ 333.170  $\chi^2$ /NDF: 54.1/45

All: 401.857 $\pm$ 238.897  $\chi^2$ /NDF: 114.9/93

- sign 108.343 $\pm$ 342.734  $\chi^2$ /NDF: 59.4/47

# asym\_sam\_26\_dd\_rms vs Slug



Right In: 2465.048 $\pm$ 0.610  $\chi^2$ /NDF: 1502337.9/20

Left Out: 1541.258 $\pm$ 0.255  $\chi^2$ /NDF: 382045.4/24

Right Out: 2679.296 $\pm$ 0.612  $\chi^2$ /NDF: 1864802.7/24

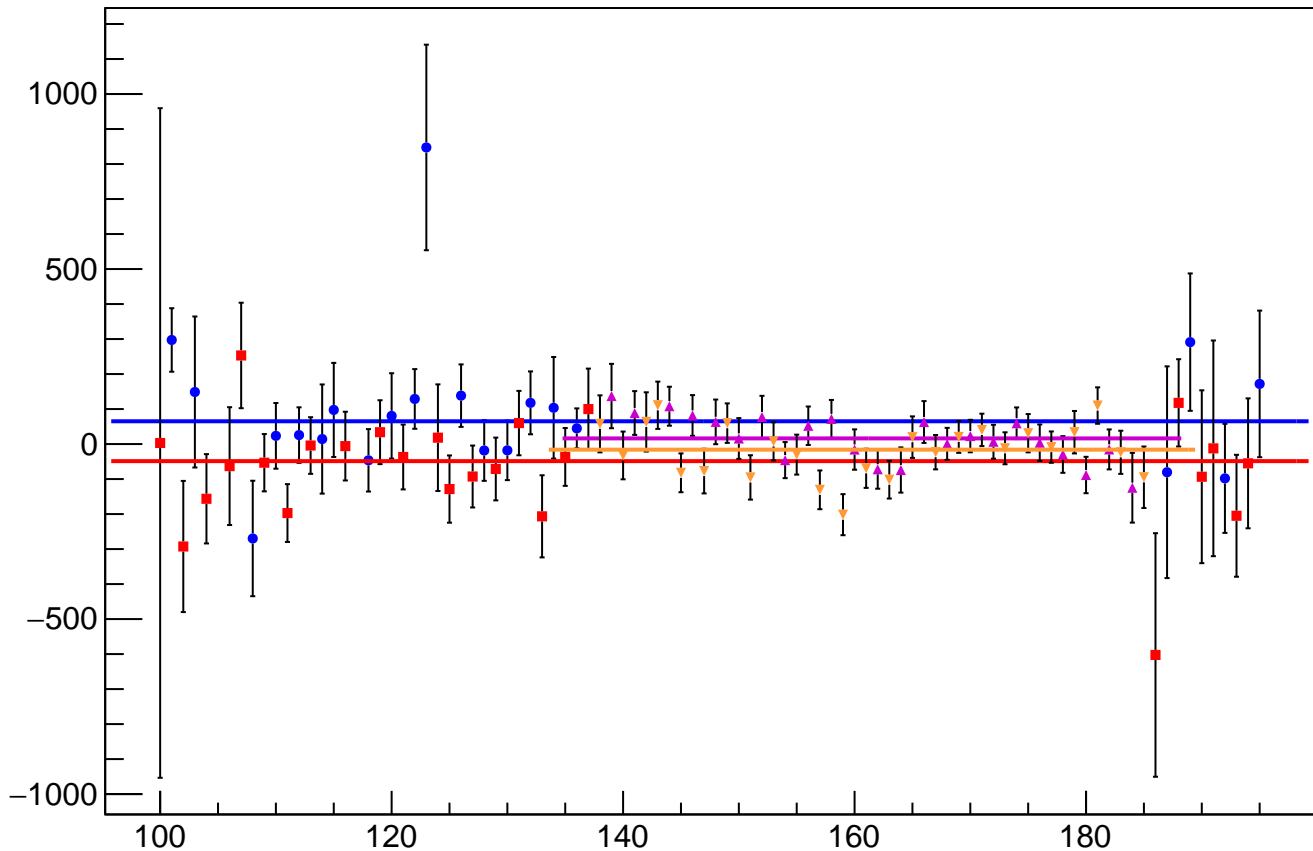
Left In: 1551.063 $\pm$ 0.264  $\chi^2$ /NDF: 338898.9/22

+ sign 1678.949 $\pm$ 0.236  $\chi^2$ /NDF: 3834582.5/45

All: 1702.810 $\pm$ 0.169  $\chi^2$ /NDF: 8926006.4/93

- sign 1728.060 $\pm$ 0.242  $\chi^2$ /NDF: 5070310.5/47

# reg\_asym\_sam\_37\_dd\_mean vs Slug



Right In:  $65.082 \pm 23.142$   $\chi^2/\text{NDF}: 26.7/20$

Left Out:  $-16.049 \pm 11.340$   $\chi^2/\text{NDF}: 39.7/24$

Right Out:  $-48.773 \pm 22.720$   $\chi^2/\text{NDF}: 22.2/24$

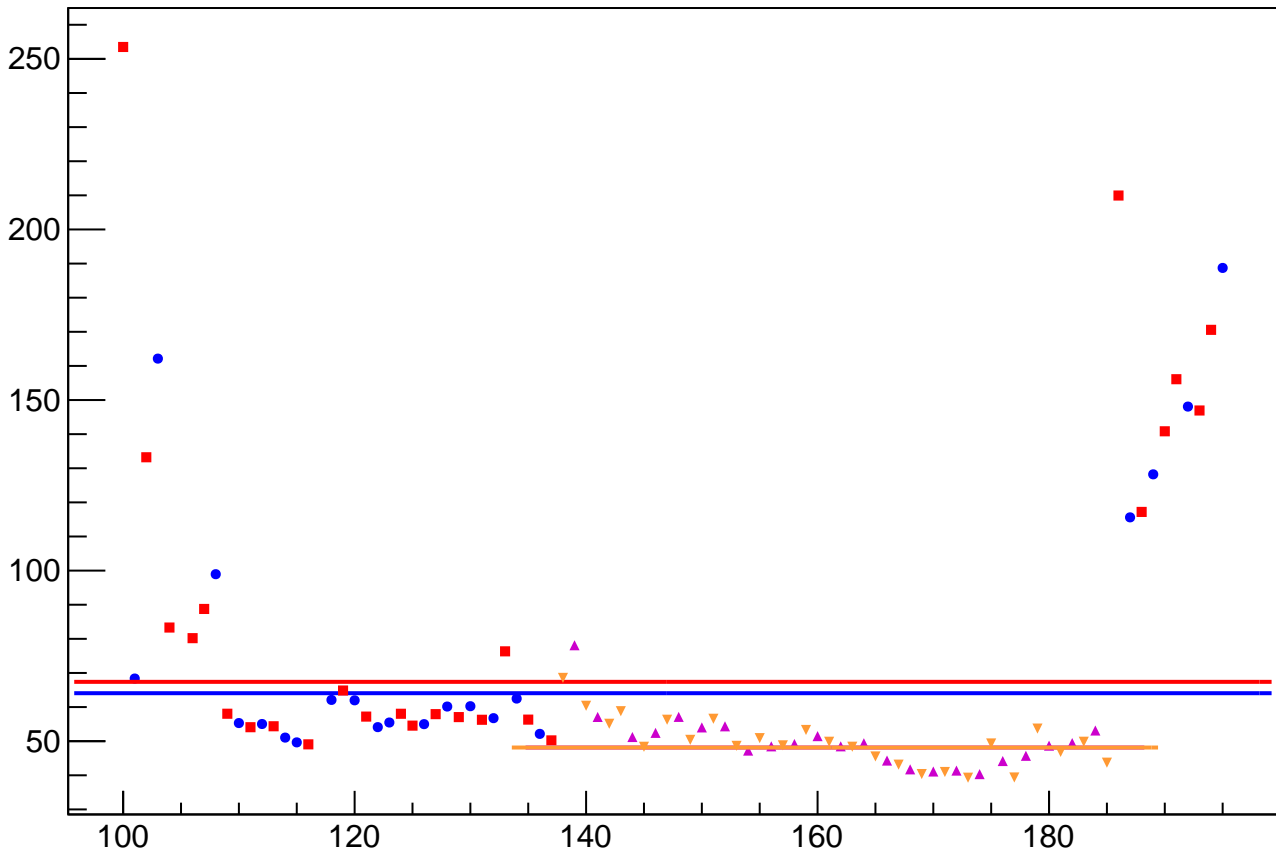
Left In:  $16.162 \pm 11.649$   $\chi^2/\text{NDF}: 25.2/22$

+ sign  $-0.341 \pm 10.183$   $\chi^2/\text{NDF}: 76.3/45$

All:  $1.125 \pm 7.264$   $\chi^2/\text{NDF}: 130.2/93$

- sign  $2.644 \pm 10.366$   $\chi^2/\text{NDF}: 53.9/47$

# reg\_asym\_sam\_37\_dd\_rms vs Slug



Right In: 64.065 $\pm$ 0.016  $\chi^2$ /NDF: 2309458.6/20

Left Out: 48.141 $\pm$ 0.008  $\chi^2$ /NDF: 655250.3/24

Right Out: 67.394 $\pm$ 0.016  $\chi^2$ /NDF: 2877238.4/24

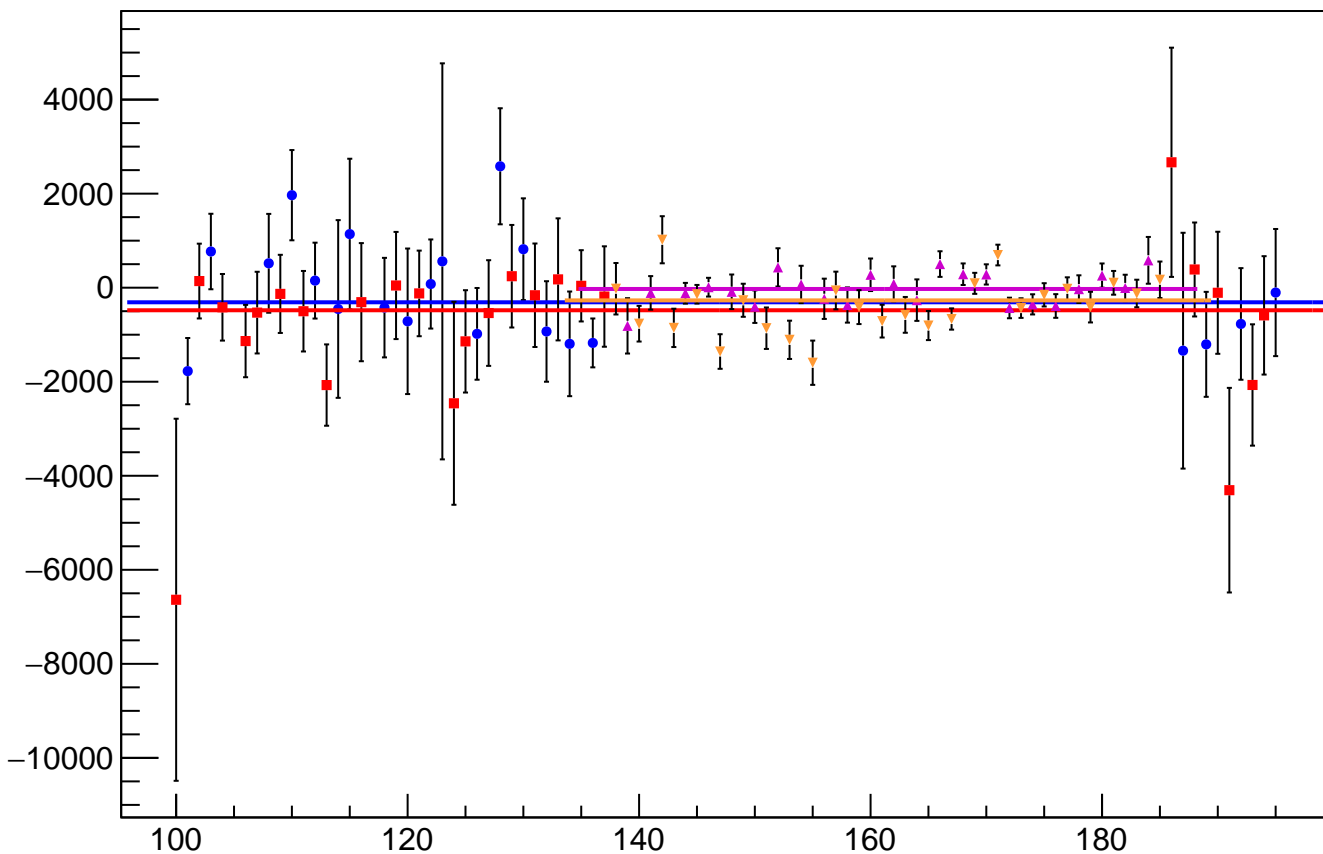
Left In: 48.139 $\pm$ 0.008  $\chi^2$ /NDF: 575025.5/22

+ sign 51.224 $\pm$ 0.007  $\chi^2$ /NDF: 3728387.9/45

All: 51.677 $\pm$ 0.005  $\chi^2$ /NDF: 8326119.5/93

- sign 52.147 $\pm$ 0.007  $\chi^2$ /NDF: 4589656.9/47

# asym\_sam\_37\_dd\_correction\_mean vs Slug



Right In:  $-310.494 \pm 221.354$   $\chi^2/\text{NDF}: 25.6/20$

Left Out:  $-270.214 \pm 60.177$   $\chi^2/\text{NDF}: 70.1/24$

Right Out:  $-480.212 \pm 206.939$   $\chi^2/\text{NDF}: 17.5/24$

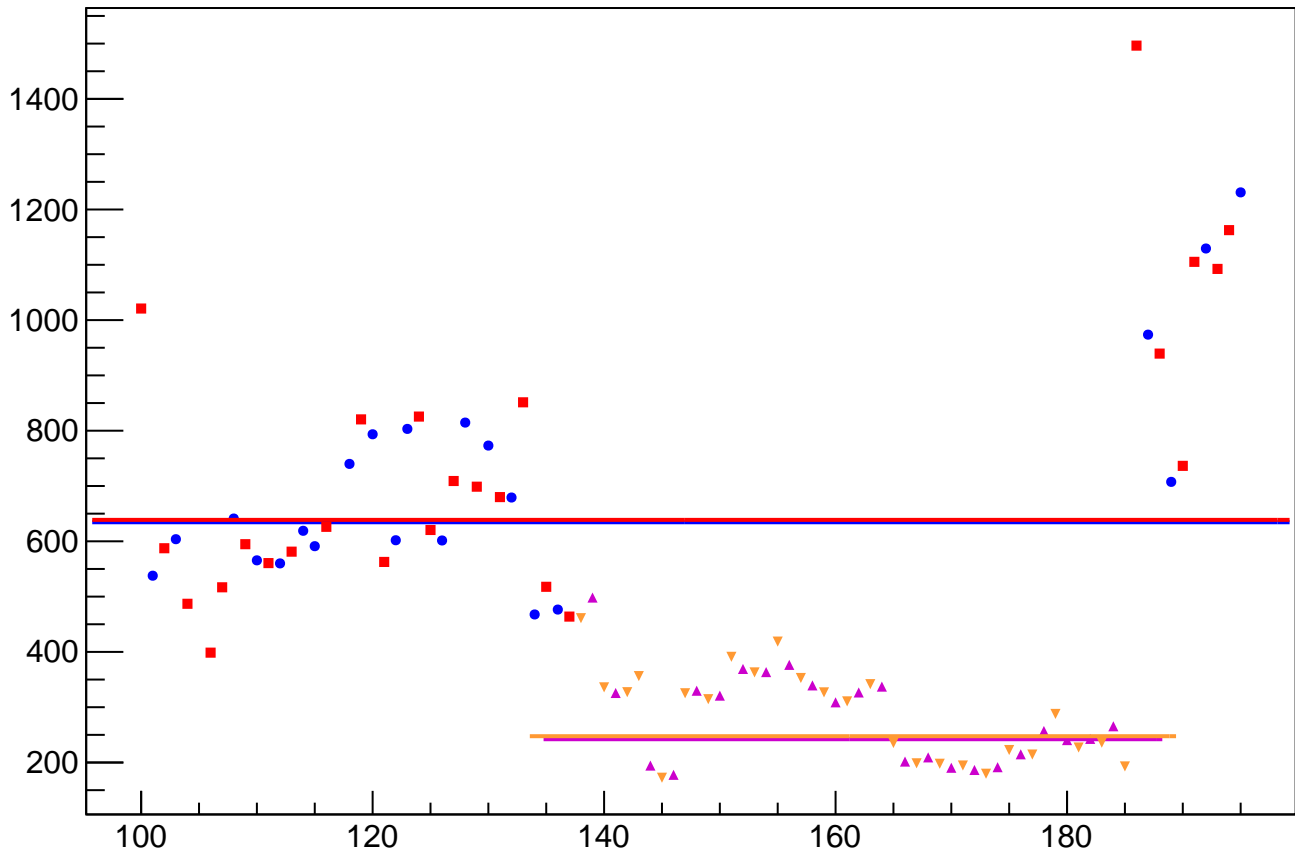
Left In:  $-27.271 \pm 60.430$   $\chi^2/\text{NDF}: 25.1/22$

+ sign  $-272.986 \pm 58.070$   $\chi^2/\text{NDF}: 95.7/45$

All:  $-167.811 \pm 41.040$   $\chi^2/\text{NDF}: 149.3/93$

- sign  $-62.861 \pm 58.007$   $\chi^2/\text{NDF}: 47.0/47$

# asym\_sam\_37\_dd\_correction\_rms vs Slug



Right In:  $634.446 \pm 0.157$   $\chi^2/\text{NDF}: 1209271.9/20$

Left Out:  $247.570 \pm 0.043$   $\chi^2/\text{NDF}: 2780931.0/24$

Right Out:  $638.764 \pm 0.146$   $\chi^2/\text{NDF}: 1766383.1/24$

Left In:  $242.117 \pm 0.043$   $\chi^2/\text{NDF}: 2466108.9/22$

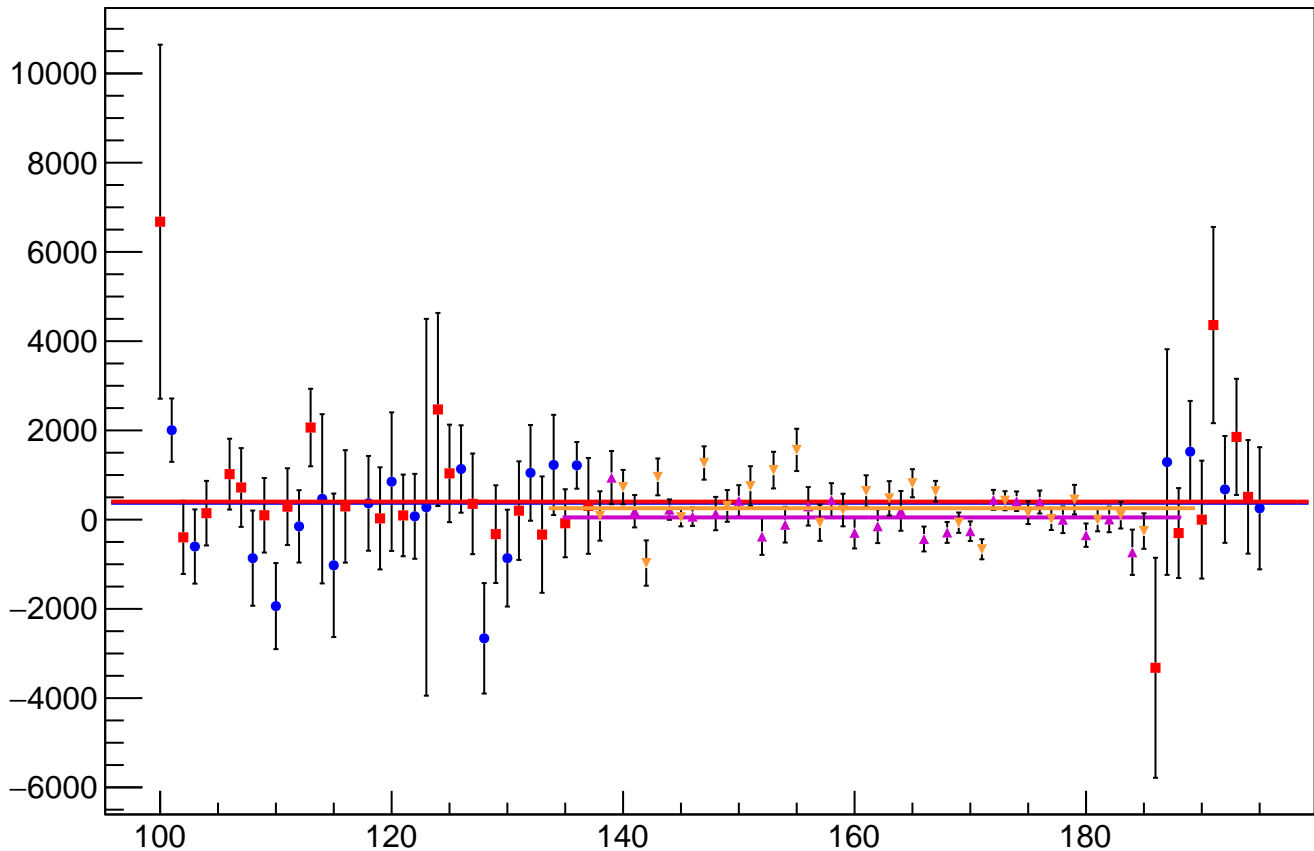
+ sign  $274.196 \pm 0.041$   $\chi^2/\text{NDF}: 9679163.0/45$

All:  $273.739 \pm 0.029$   $\chi^2/\text{NDF}: 20682319.3/90$

- sign  $273.283 \pm 0.041$   $\chi^2/\text{NDF}: 11002909.1/47$



# asym\_sam\_37\_dd\_mean vs Slug



Right In:  $377.835 \pm 223.347$   $\chi^2/\text{NDF}: 27.8/20$

Left Out:  $255.995 \pm 61.418$   $\chi^2/\text{NDF}: 63.6/24$

Right Out:  $403.571 \pm 209.305$   $\chi^2/\text{NDF}: 18.2/24$

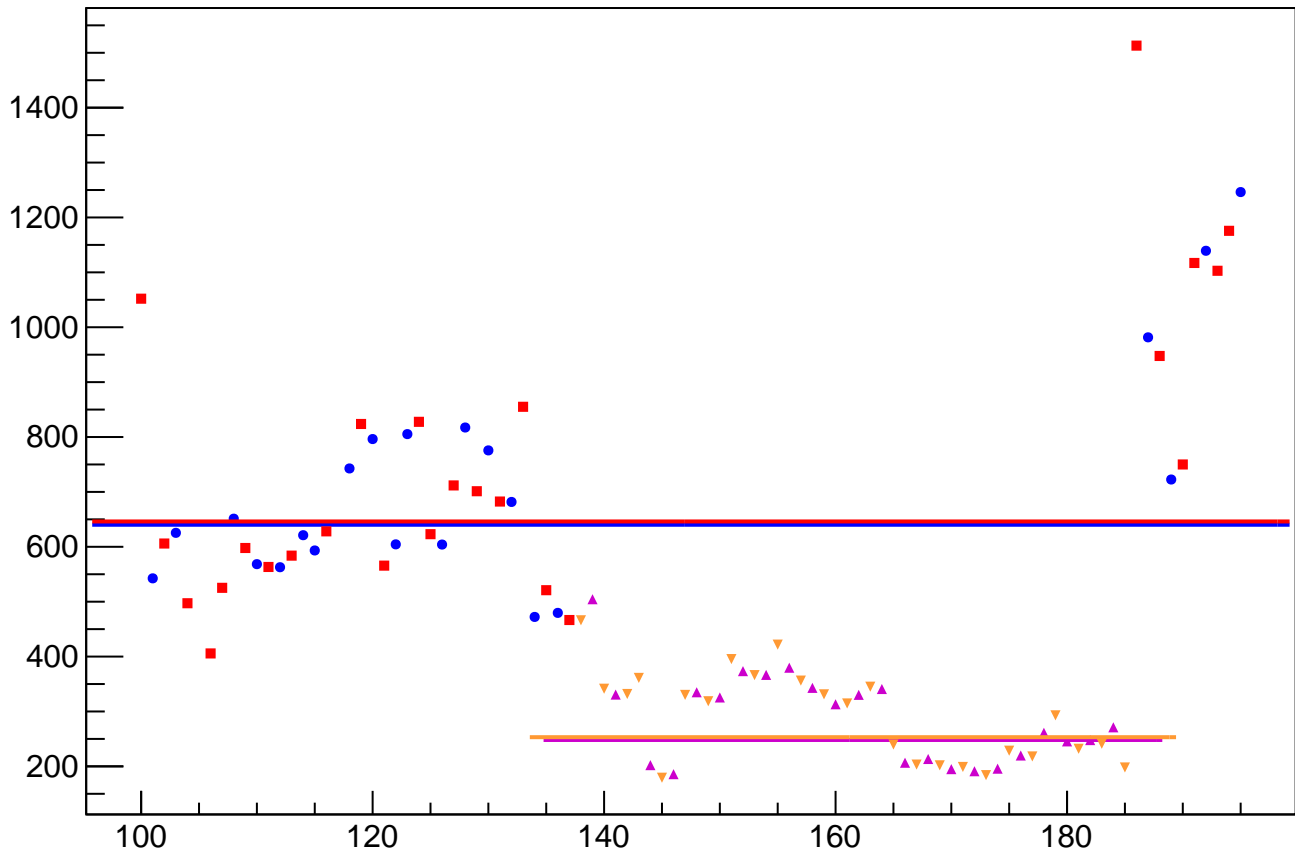
Left In:  $49.832 \pm 61.781$   $\chi^2/\text{NDF}: 27.5/22$

+ sign  $264.561 \pm 59.220$   $\chi^2/\text{NDF}: 91.7/45$

All:  $171.424 \pm 41.887$   $\chi^2/\text{NDF}: 144.9/93$

- sign  $78.182 \pm 59.254$   $\chi^2/\text{NDF}: 48.3/47$

# asym\_sam\_37\_dd\_rms vs Slug



Right In: 640.178+/-0.158  $\chi^2/\text{NDF}$ : 1212053.8/20

Left Out: 253.137+/-0.043  $\chi^2/\text{NDF}$ :2665975.8/24

+ sign 280.347+/-0.042  $\chi^2/\text{NDF}$ : 9461781.6/45

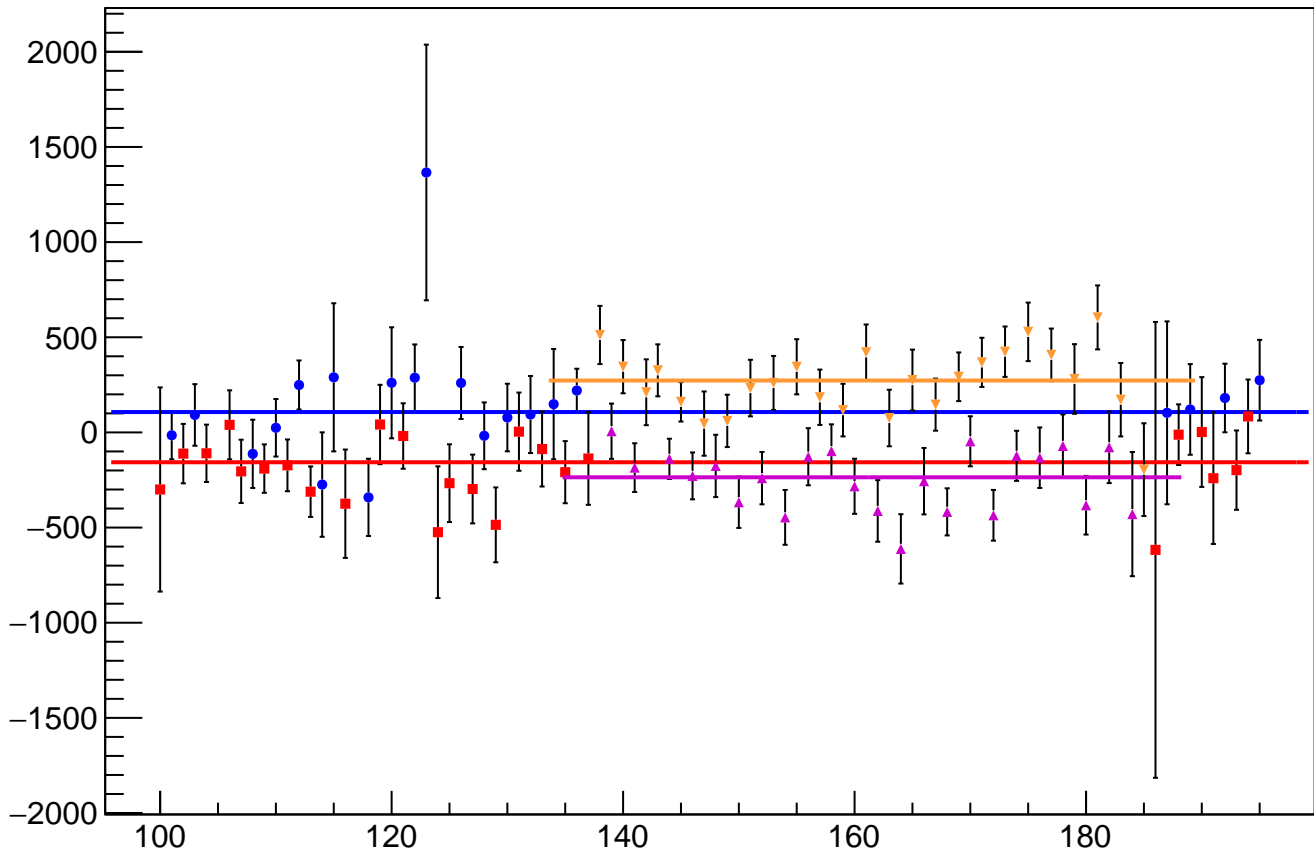
Right Out: 646.179+/-0.148  $\chi^2/\text{NDF}$ : 1743519.0/24

All: 280.161+/-0.030  $\chi^2/\text{NDF}$ : 20204368.7/90

- sign 279.975+/-0.042  $\chi^2/\text{NDF}$ : 10742547.6/47

Left In: 248.069+/-0.044  $\chi^2/\text{NDF}$ :2343295.0/22

# reg\_asym\_sam\_48\_dd\_mean vs Slug



Right In: 107.044+/-40.622  $\chi^2$ /NDF: 18.8/20

Left Out: 272.684+/-29.221  $\chi^2$ /NDF:27.4/24

Right Out: -156.821+/-37.803  $\chi^2$ /NDF: 13.7/24

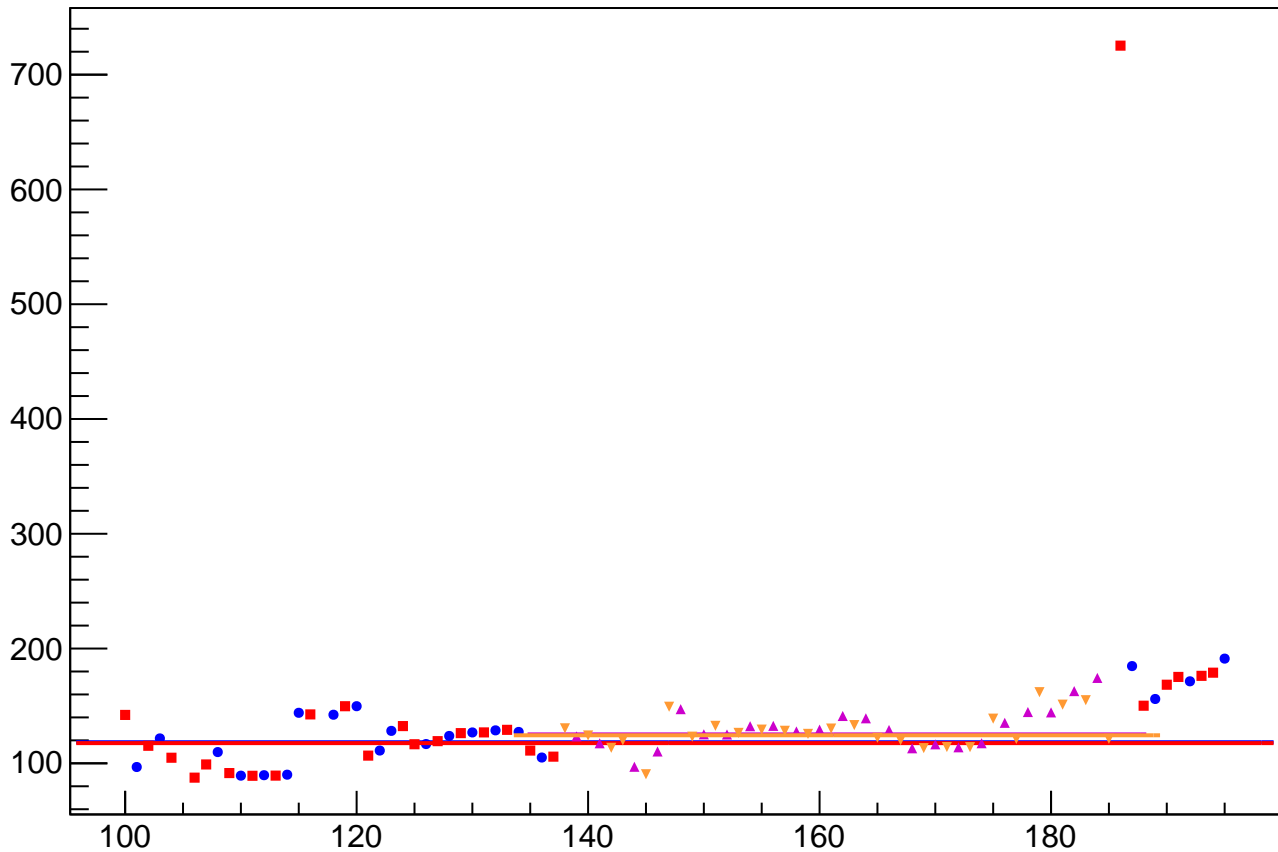
Left In: -235.801+/-30.232  $\chi^2$ /NDF:24.6/22

+ sign 216.200+/-23.721  $\chi^2$ /NDF: 57.2/45

All: 4.614+/-16.734  $\chi^2$ /NDF: 256.5/93

- sign -204.993+/-23.610  $\chi^2$ /NDF: 41.0/47

# reg\_asym\_sam\_48\_dd\_rms vs Slug



Right In: 118.367 $\pm$ 0.029  $\chi^2$ /NDF: 861109.5/20

Left Out: 124.429 $\pm$ 0.021  $\chi^2$ /NDF: 539731.8/24

Right Out: 117.597 $\pm$ 0.027  $\chi^2$ /NDF: 1534812.1/24

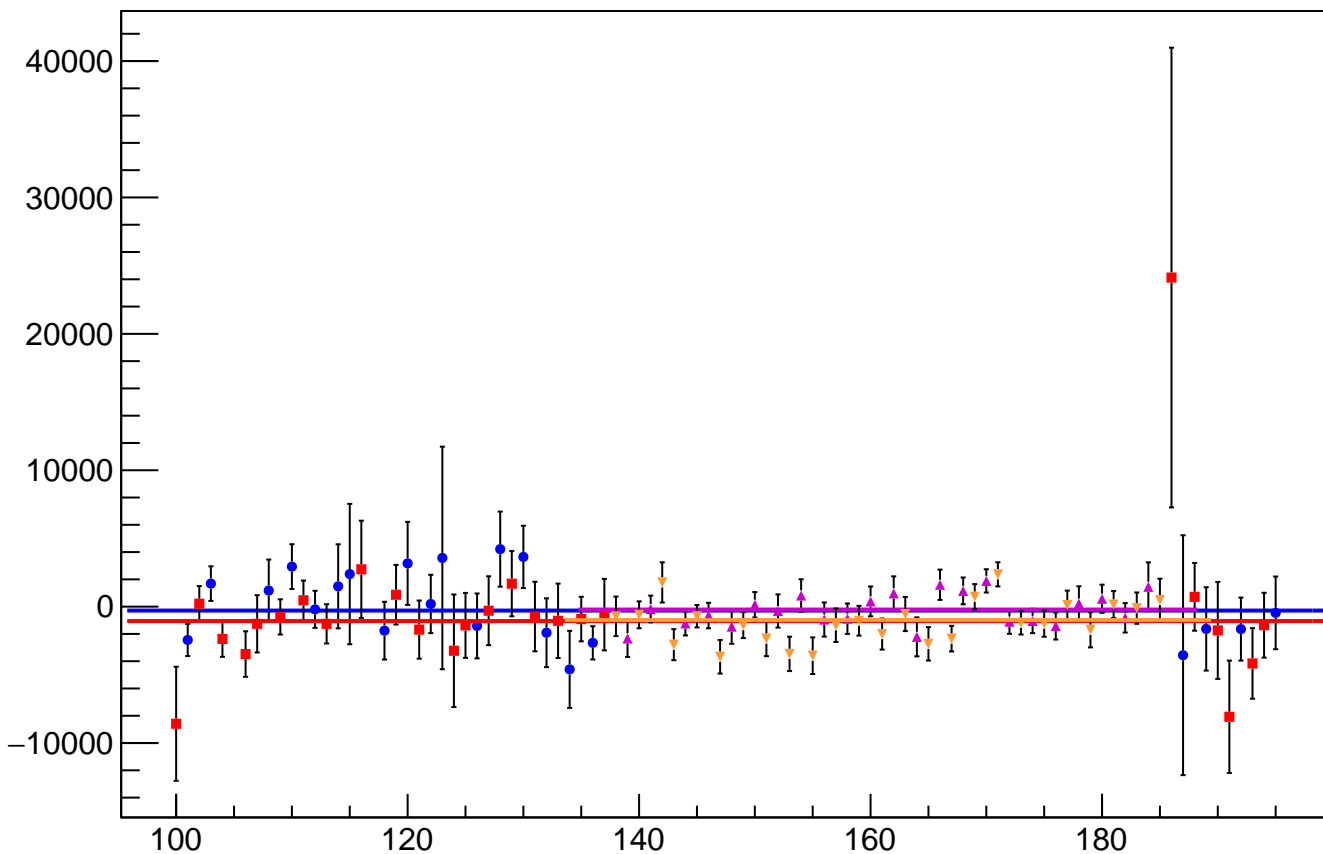
Left In: 125.205 $\pm$ 0.021  $\chi^2$ /NDF: 501388.2/22

+ sign 122.362 $\pm$ 0.017  $\chi^2$ /NDF: 1430185.5/45

All: 122.299 $\pm$ 0.012  $\chi^2$ /NDF: 3515825.1/93

- sign 122.237 $\pm$ 0.017  $\chi^2$ /NDF: 2085611.9/47

# asym\_sam\_48\_dd\_correction\_mean vs Slug



Right In:  $-287.456 \pm 444.642$   $\chi^2/\text{NDF}: 25.8/20$

Left Out:  $-982.839 \pm 218.021$   $\chi^2/\text{NDF}: 47.2/24$

Right Out:  $-1055.642 \pm 411.872$   $\chi^2/\text{NDF}: 19.4/24$

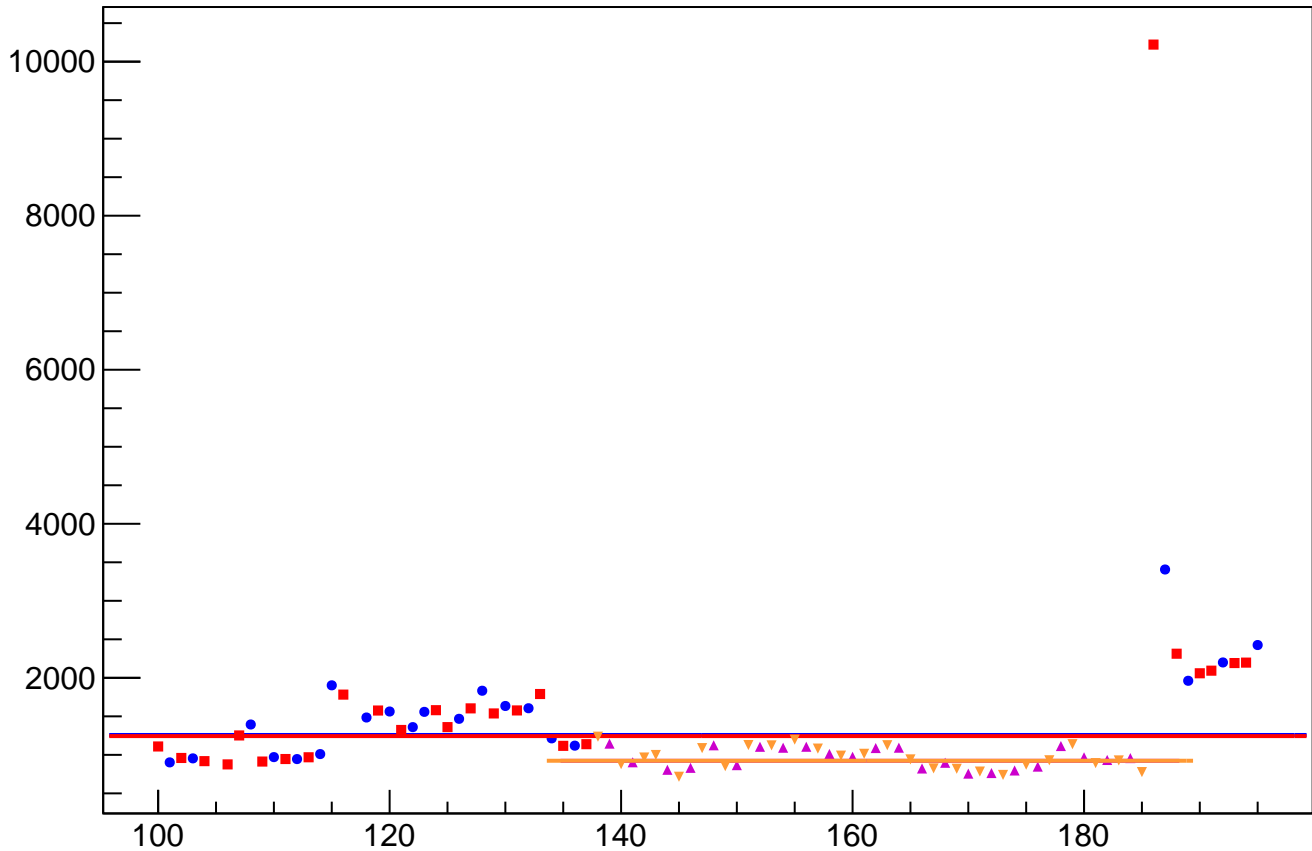
Left In:  $-211.420 \pm 223.296$   $\chi^2/\text{NDF}: 25.7/22$

+ sign  $-848.057 \pm 195.755$   $\chi^2/\text{NDF}: 74.9/45$

All:  $-626.246 \pm 138.613$   $\chi^2/\text{NDF}: 125.8/93$

- sign  $-403.193 \pm 196.303$   $\chi^2/\text{NDF}: 48.3/47$

# asym\_sam\_48\_dd\_correction\_rms vs Slug



Right In: 1258.067+/-0.314  $\chi^2/\text{NDF}$ : 1728344.3/20

Left Out: 923.586+/-0.154  $\chi^2/\text{NDF}$ : 842758.6/24

+ sign 988.417+/-0.138  $\chi^2/\text{NDF}$ : 3483498.6/45

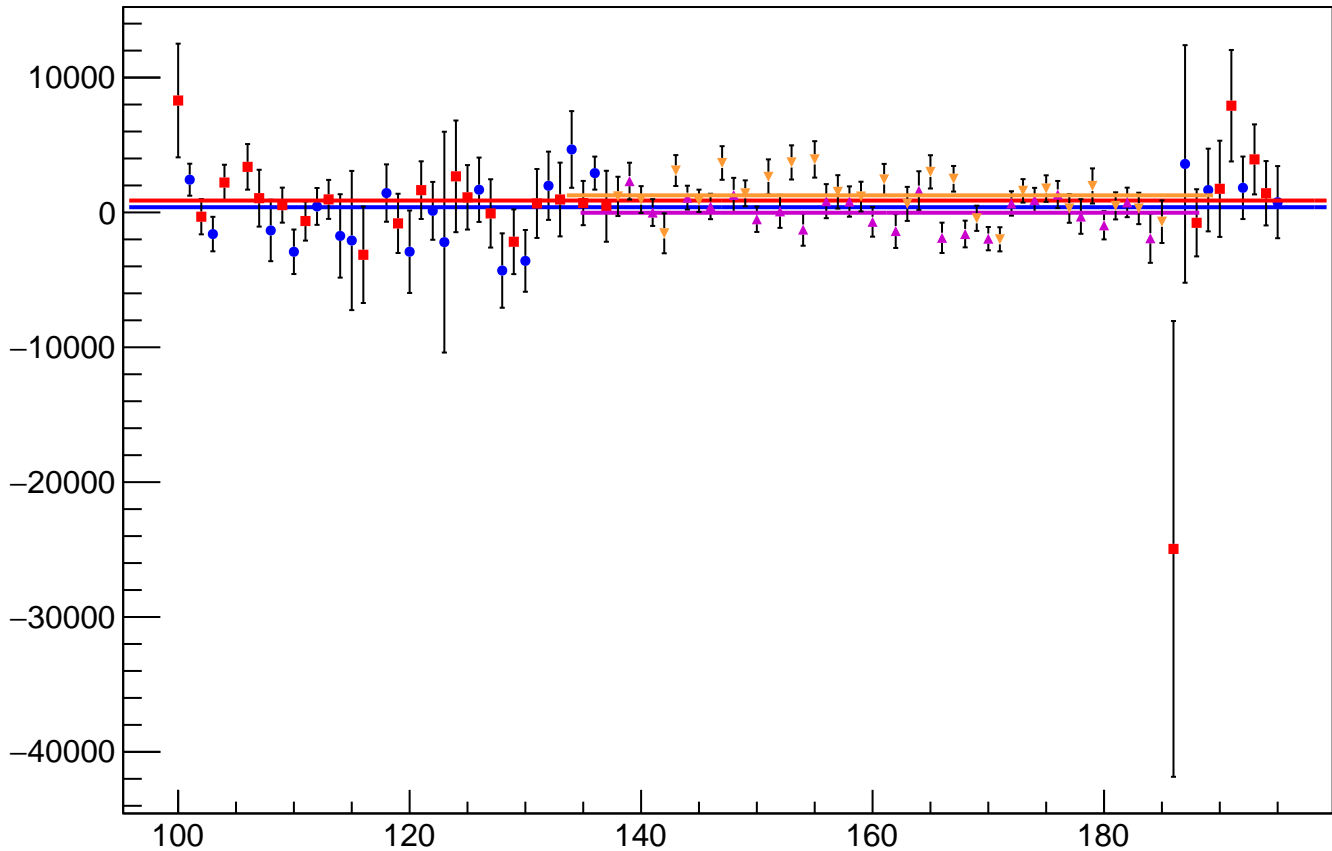
Right Out: 1243.606+/-0.291  $\chi^2/\text{NDF}$ : 2639421.2/24

All: 991.821+/-0.098  $\chi^2/\text{NDF}$ : 7699829.0/93

- sign 995.245+/-0.139  $\chi^2/\text{NDF}$ : 4215117.0/47

Left In: 922.245+/-0.158  $\chi^2/\text{NDF}$ : 634712.1/22

# asym\_sam\_48\_dd\_mean vs Slug



Right In:  $386.795 \pm 446.758$   $\chi^2/\text{NDF}: 26.0/20$

Left Out:  $1267.344 \pm 220.133$   $\chi^2/\text{NDF}: 44.9/24$

Right Out:  $881.364 \pm 414.020$   $\chi^2/\text{NDF}: 19.5/24$

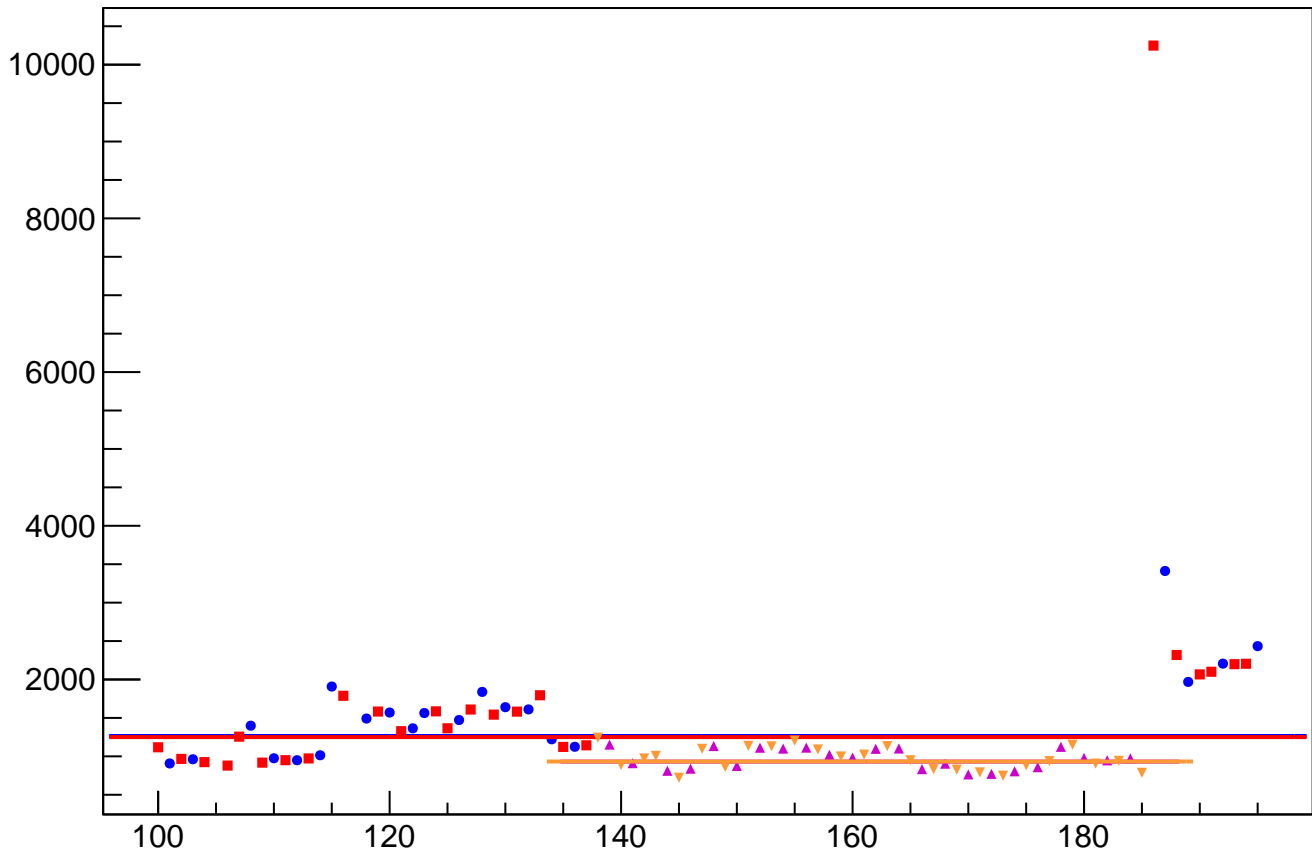
Left In:  $-23.478 \pm 225.490$   $\chi^2/\text{NDF}: 27.2/22$

+ sign  $1095.322 \pm 197.464$   $\chi^2/\text{NDF}: 74.1/45$

All:  $640.716 \pm 139.826$   $\chi^2/\text{NDF}: 135.1/93$

- sign  $183.522 \pm 198.025$   $\chi^2/\text{NDF}: 50.3/47$

# asym\_sam\_48\_dd\_rms vs Slug



Right In: 1264.494+/-0.316  $\chi^2$ /NDF: 1718417.0/20

Left Out: 932.764+/-0.156  $\chi^2$ /NDF:829798.4/24

Right Out: 1250.295+/-0.293  $\chi^2$ /NDF: 2626153.2/24

Left In: 931.493+/-0.159  $\chi^2$ /NDF:624436.4/22

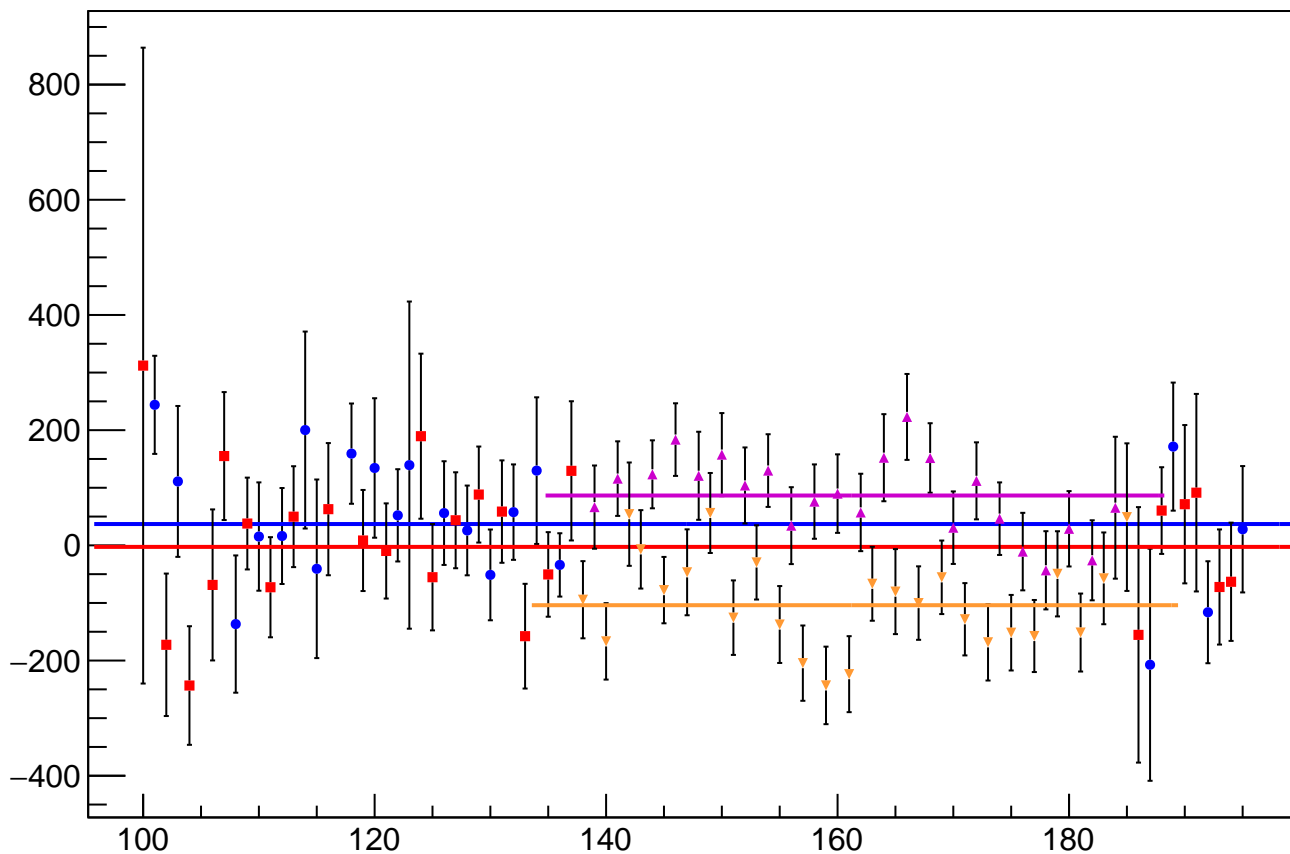
+ sign 997.570+/-0.140  $\chi^2$ /NDF: 3435490.4/45

All: 1000.988+/-0.099  $\chi^2$ /NDF: 7601845.4/93

- sign 1004.425+/-0.140  $\chi^2$ /NDF: 4165153.3/47



# reg\_asym\_sam\_13\_57\_dd\_mean vs Slug



Right In: 37.024+/-20.981  $\chi^2$ /NDF: 21.9/20

Left Out: -103.899+/-13.642  $\chi^2$ /NDF:30.0/24

Right Out: -2.651+/-19.963  $\chi^2$ /NDF: 22.8/24

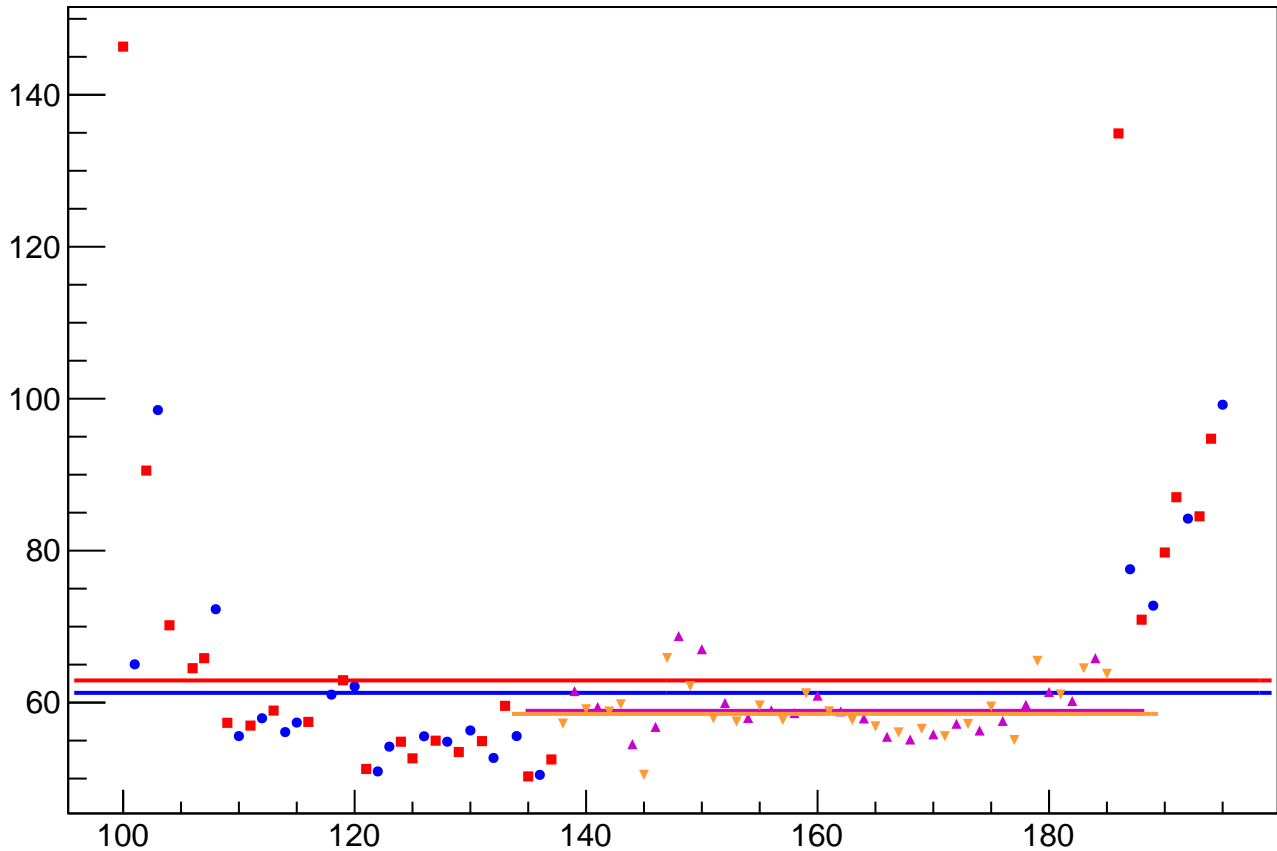
Left In: 86.542+/-14.120  $\chi^2$ /NDF:21.4/22

+ sign -62.025+/-11.437  $\chi^2$ /NDF: 83.6/45

All: -3.082+/-8.119  $\chi^2$ /NDF: 194.6/93

- sign 56.801+/-11.528  $\chi^2$ /NDF: 57.5/47

# reg\_asym\_sam\_13\_57\_dd\_rms vs Slug



Right In: 61.283+/-0.015  $\chi^2$ /NDF: 770443.2/20

Left Out: 58.513+/-0.010  $\chi^2$ /NDF: 123221.6/24

Right Out: 62.916+/-0.014  $\chi^2$ /NDF: 980623.6/24

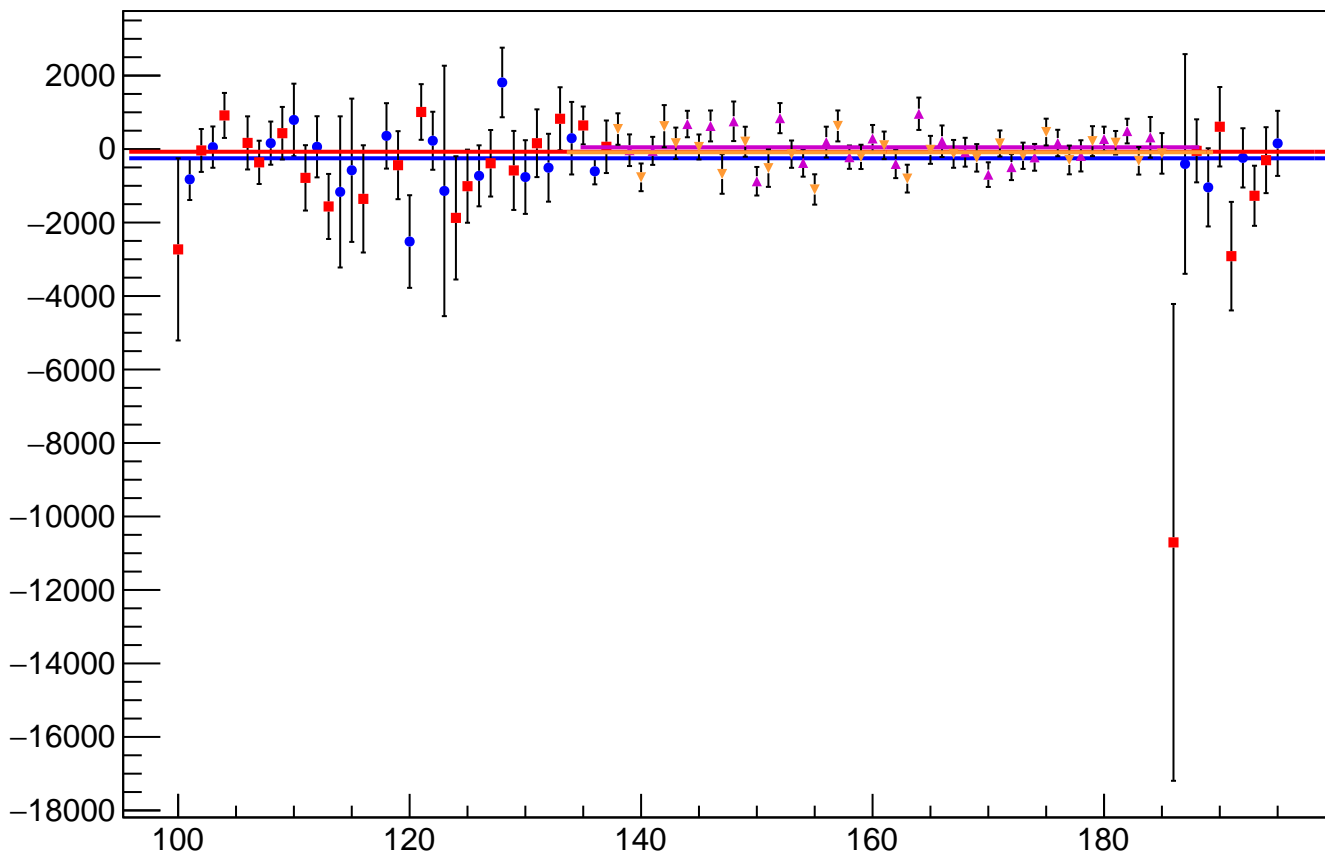
Left In: 58.913+/-0.010  $\chi^2$ /NDF: 109968.0/22

+ sign 59.336+/-0.008  $\chi^2$ /NDF: 918169.8/45

All: 59.788+/-0.006  $\chi^2$ /NDF: 2068656.2/93

- sign 60.248+/-0.008  $\chi^2$ /NDF: 1144178.8/47

# asym\_sam\_13\_57\_dd\_correction\_mean vs Slug



Right In:  $-251.287 \pm 173.516$   $\chi^2/\text{NDF}$ : 14.9/20

Left Out:  $-87.459 \pm 78.556$   $\chi^2/\text{NDF}$ : 27.7/24

Right Out:  $-72.906 \pm 167.663$   $\chi^2/\text{NDF}$ : 25.5/24

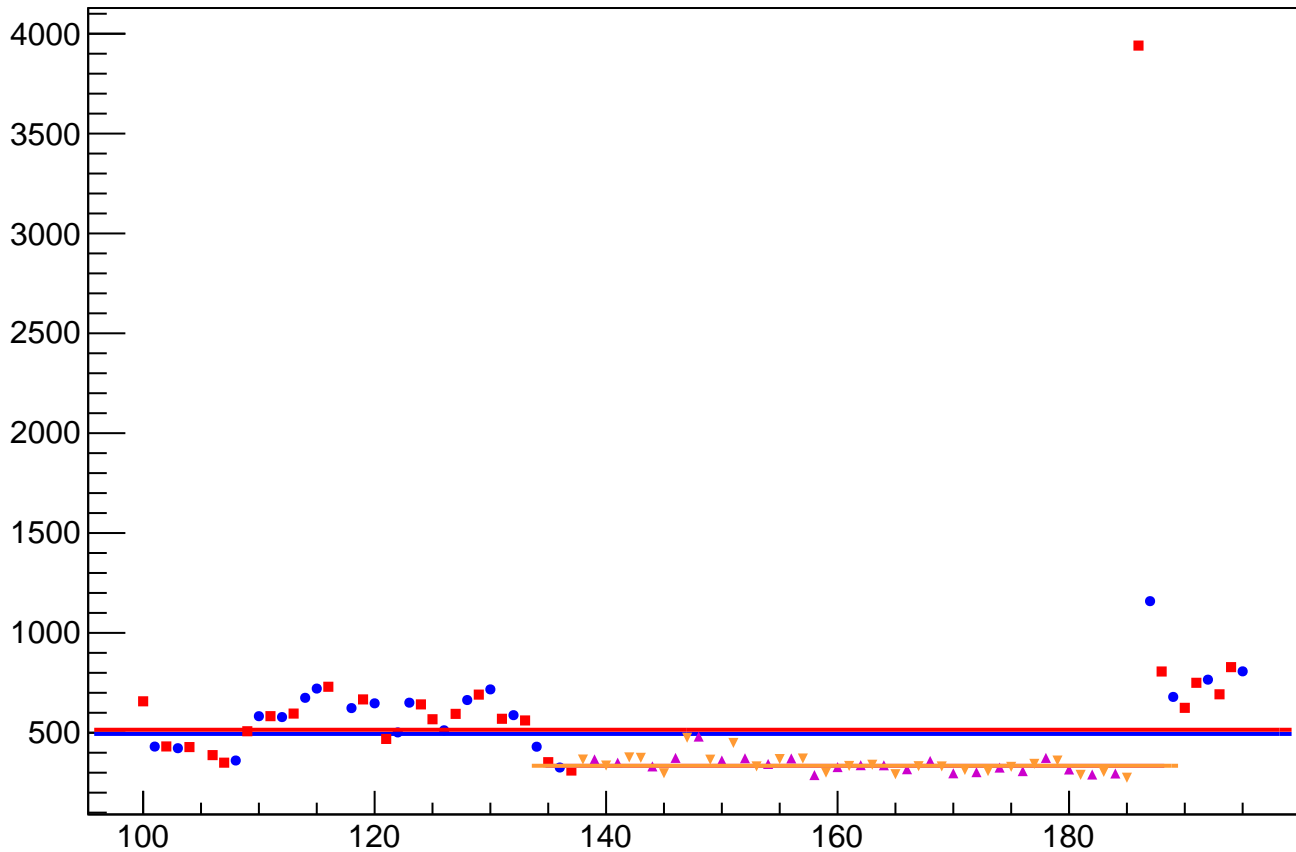
Left In:  $48.742 \pm 80.548$   $\chi^2/\text{NDF}$ : 35.3/22

+ sign  $-115.326 \pm 71.564$   $\chi^2/\text{NDF}$ : 43.4/45

All:  $-45.716 \pm 50.967$   $\chi^2/\text{NDF}$ : 106.6/93

- sign  $25.931 \pm 72.604$   $\chi^2/\text{NDF}$ : 61.3/47

# asym\_sam\_13\_57\_dd\_correction\_rms vs Slug



Right In: 494.119+/-0.123  $\chi^2/\text{NDF}$ : 1591900.2/20

Left Out: 334.749+/-0.056  $\chi^2/\text{NDF}$ : 491370.4/24

Right Out: 515.014+/-0.119  $\chi^2/\text{NDF}$ : 2098335.0/24

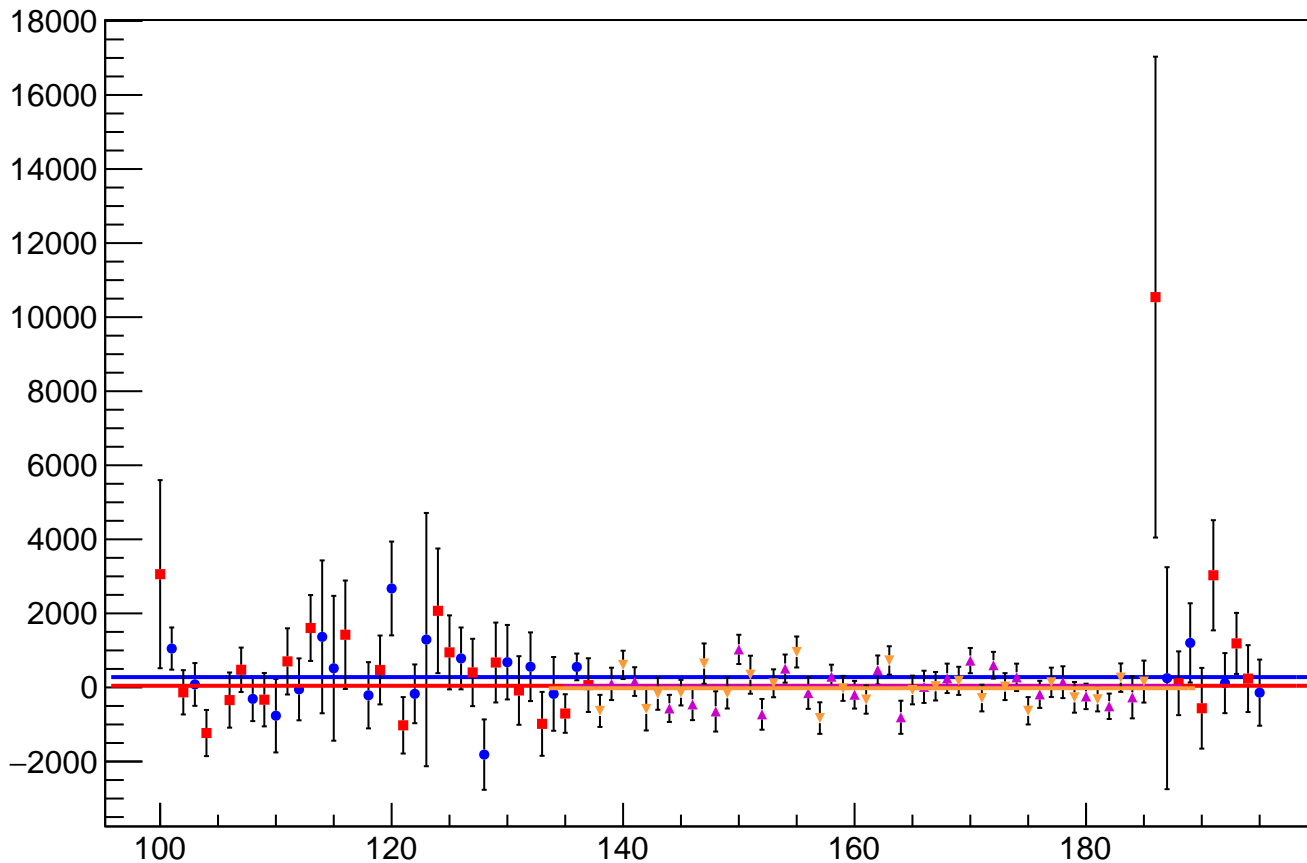
Left In: 334.147+/-0.057  $\chi^2/\text{NDF}$ : 397200.6/22

+ sign 361.858+/-0.051  $\chi^2/\text{NDF}$ : 3483470.3/45

All: 364.915+/-0.036  $\chi^2/\text{NDF}$ : 7877403.2/93

- sign 368.063+/-0.051  $\chi^2/\text{NDF}$ : 4386524.0/47

# asym\_sam\_13\_57\_dd\_mean vs Slug



Right In: 279.513+/-175.463  $\chi^2$ /NDF: 16.0/20

Left Out: -20.895+/-79.812  $\chi^2$ /NDF:27.2/24

Right Out: 45.051+/-169.583  $\chi^2$ /NDF: 28.6/24

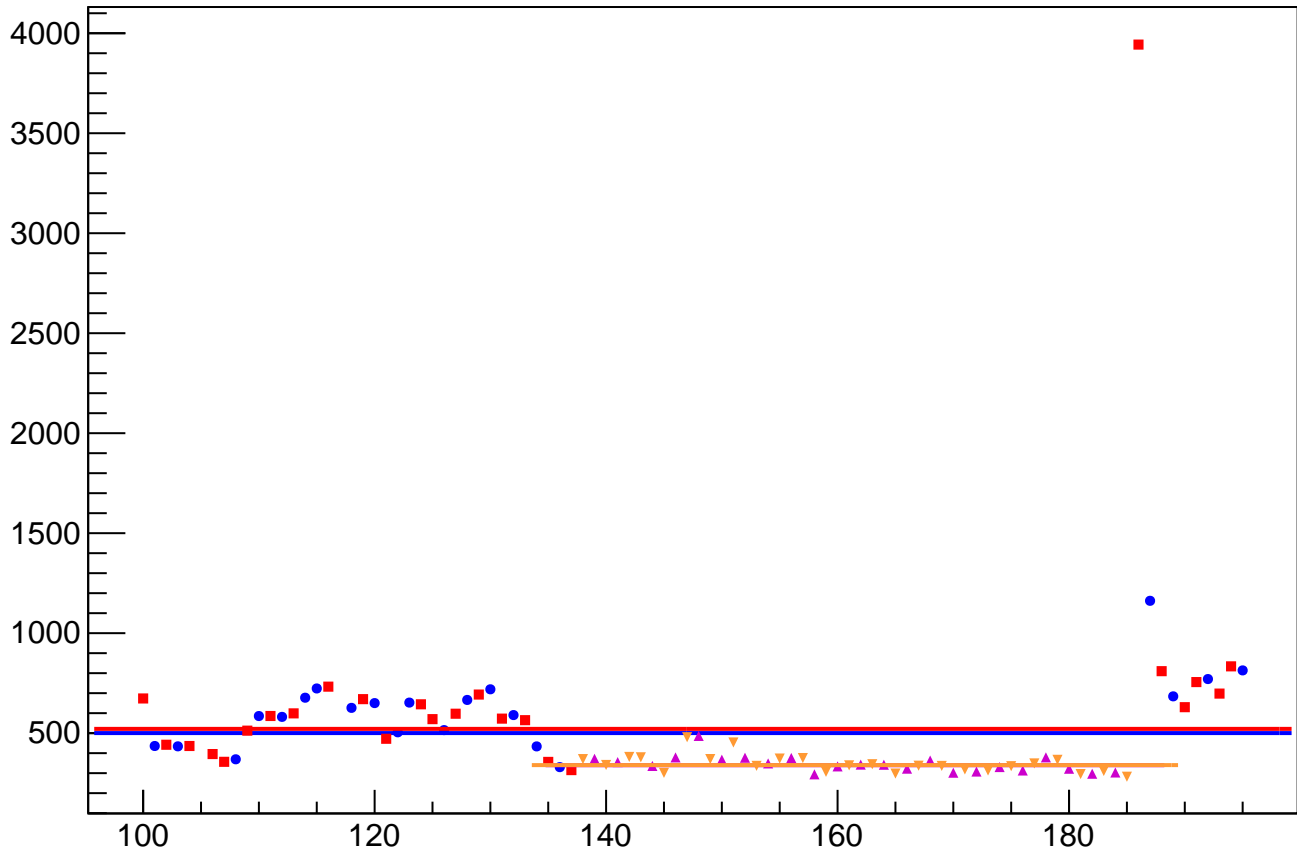
Left In: 31.800+/-81.839  $\chi^2$ /NDF:34.0/22

+ sign 30.604+/-72.649  $\chi^2$ /NDF: 45.6/45

All: 32.427+/-51.740  $\chi^2$ /NDF: 108.3/93

- sign 34.303+/-73.705  $\chi^2$ /NDF: 62.7/47

# asym\_sam\_13\_57\_dd\_rms vs Slug



Right In:  $500.380 \pm 0.124$   $\chi^2/\text{NDF}: 1547512.1/20$

Left Out:  $340.238 \pm 0.056$   $\chi^2/\text{NDF}: 468863.6/24$

Right Out:  $521.468 \pm 0.120$   $\chi^2/\text{NDF}: 2049742.9/24$

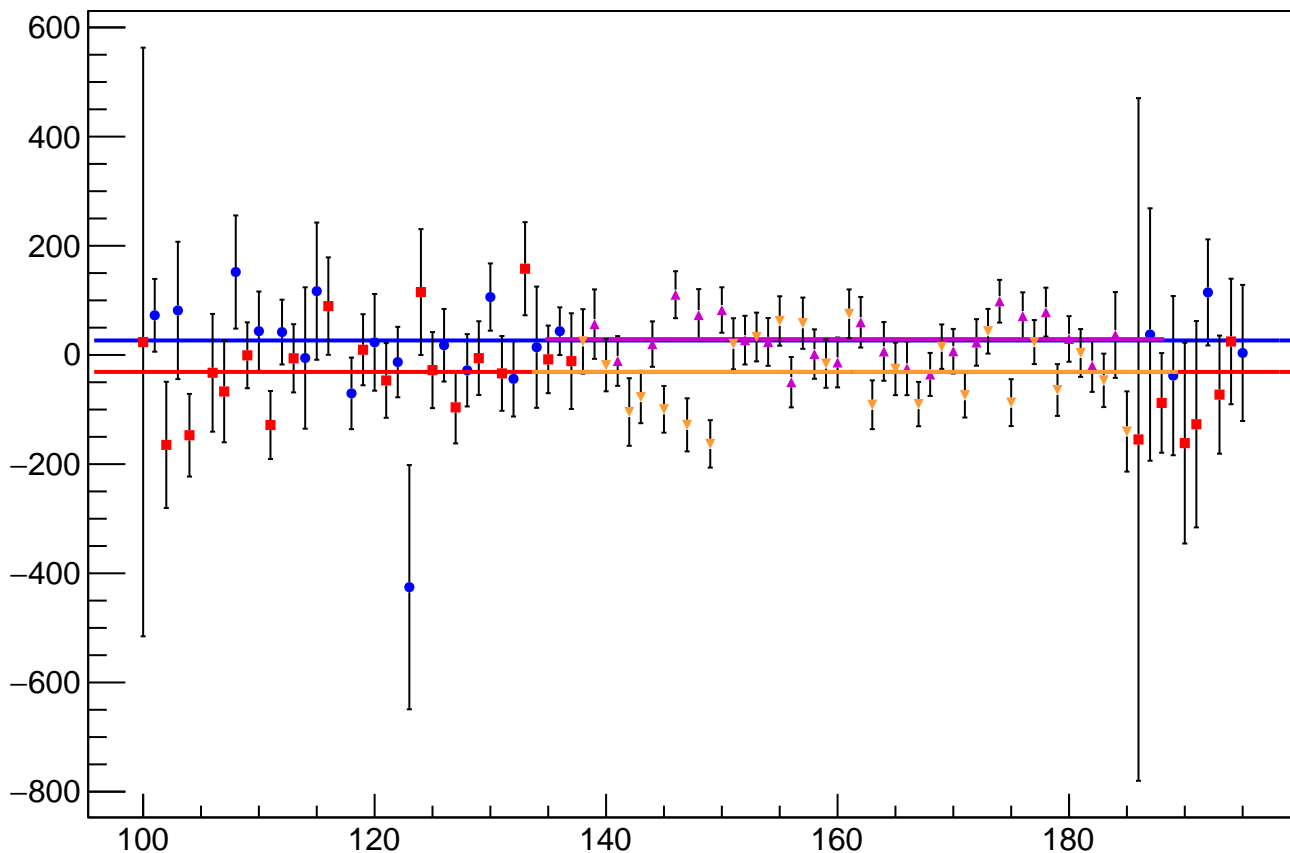
Left In:  $339.621 \pm 0.058$   $\chi^2/\text{NDF}: 379808.1/22$

+ sign  $367.691 \pm 0.051$   $\chi^2/\text{NDF}: 3396750.4/45$

All:  $370.786 \pm 0.037$   $\chi^2/\text{NDF}: 7698974.4/93$

- sign  $373.972 \pm 0.052$   $\chi^2/\text{NDF}: 4294857.0/47$

# reg\_asym\_sam\_15\_37\_dd\_mean vs Slug



Right In:  $26.578 \pm 17.234$   $\chi^2/\text{NDF}: 14.1/20$

Left Out:  $-31.063 \pm 9.170$   $\chi^2/\text{NDF}: 52.6/24$

Right Out:  $-31.051 \pm 16.596$   $\chi^2/\text{NDF}: 18.4/24$

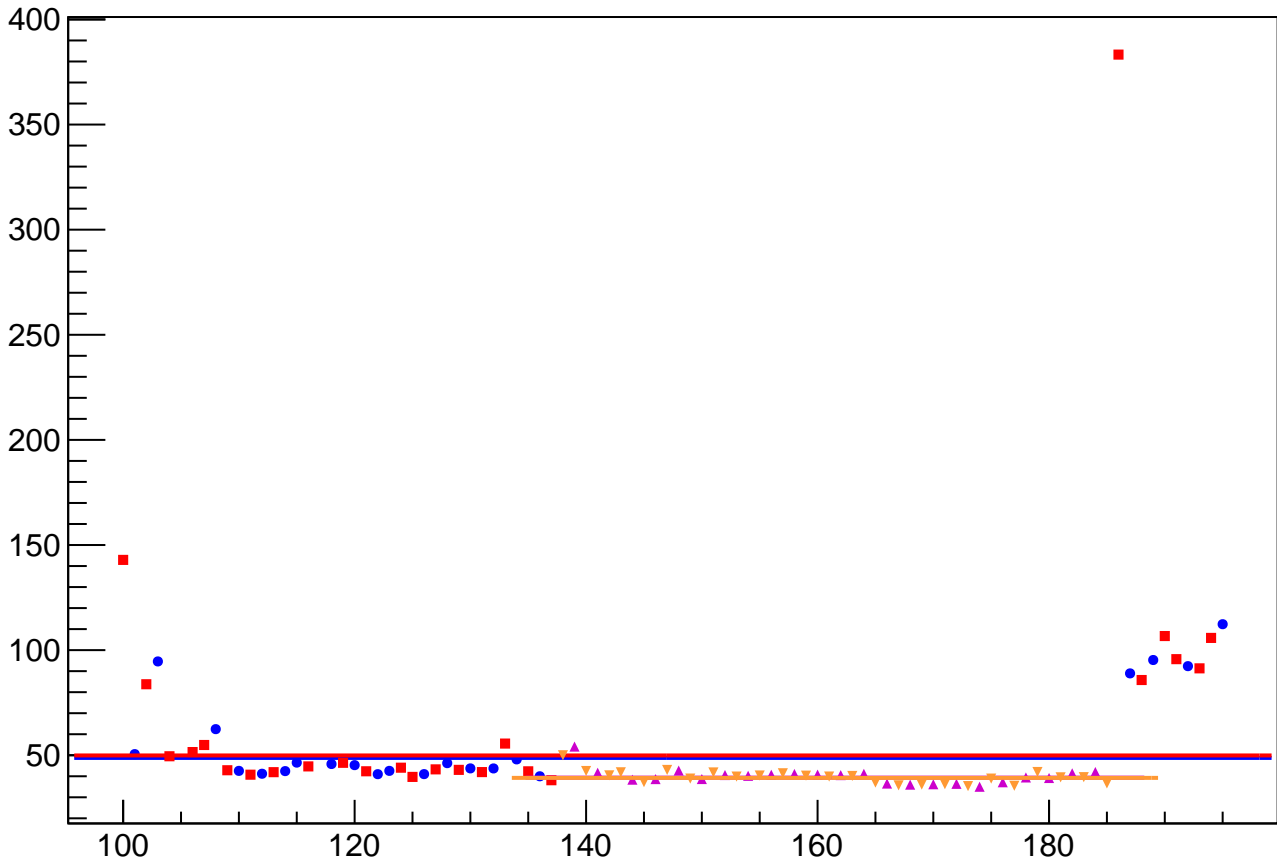
Left In:  $29.055 \pm 9.449$   $\chi^2/\text{NDF}: 22.4/22$

+ sign  $-18.345 \pm 8.095$   $\chi^2/\text{NDF}: 75.4/45$

All:  $-2.236 \pm 5.765$   $\chi^2/\text{NDF}: 134.1/93$

- sign  $14.340 \pm 8.212$   $\chi^2/\text{NDF}: 50.7/47$

# reg\_asym\_sam\_15\_37\_dd\_rms vs Slug



Right In: 48.732 $\pm$ 0.012  $\chi^2$ /NDF: 1713189.8/20

Left Out: 39.235 $\pm$ 0.006  $\chi^2$ /NDF:201960.7/24

Right Out: 49.902 $\pm$ 0.012  $\chi^2$ /NDF: 2519369.1/24

Left In: 39.338 $\pm$ 0.007  $\chi^2$ /NDF:215671.3/22

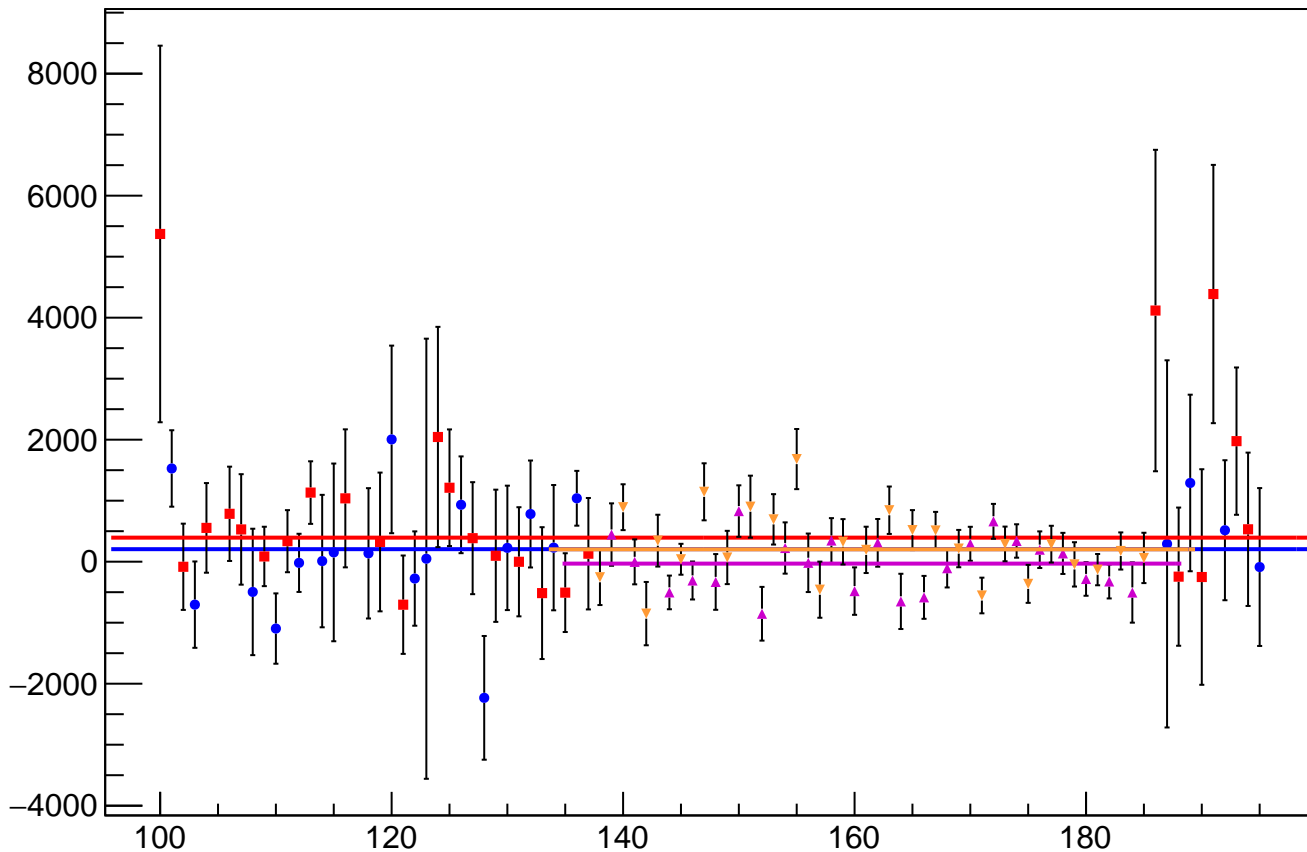
+ sign 41.330 $\pm$ 0.006  $\chi^2$ /NDF: 2388445.9/45

All: 41.623 $\pm$ 0.004  $\chi^2$ /NDF: 5740649.7/93

- sign 41.924 $\pm$ 0.006  $\chi^2$ /NDF: 3346895.9/47



# asym\_sam\_15\_37\_dd\_correction\_mean vs Slug



Right In: 205.134 $\pm$ 182.798  $\chi^2$ /NDF: 24.9/20

Left Out: 202.369 $\pm$ 70.426  $\chi^2$ /NDF:44.8/24

Right Out: 394.191 $\pm$ 172.117  $\chi^2$ /NDF: 20.4/24

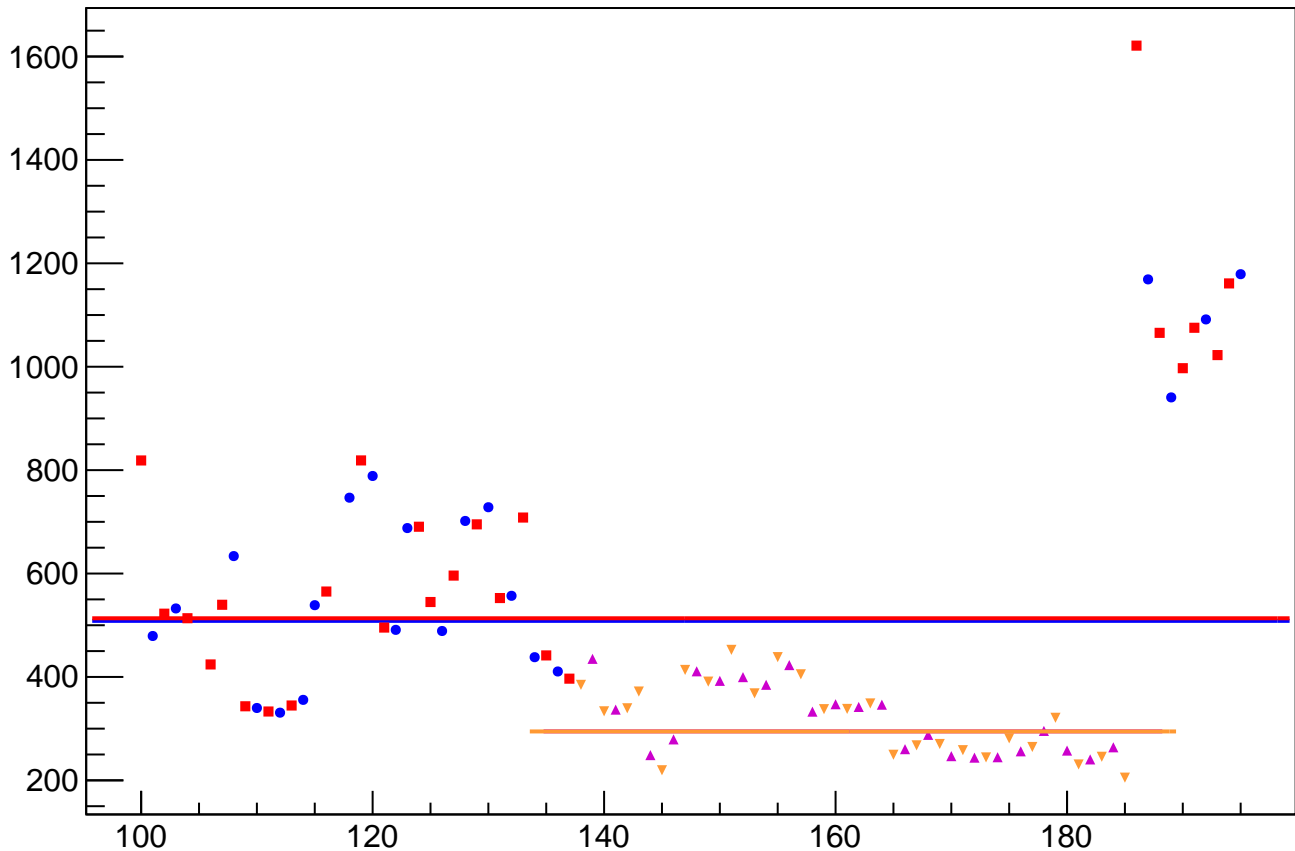
Left In: -31.548 $\pm$ 72.100  $\chi^2$ /NDF:33.4/22

+ sign 202.727 $\pm$ 65.717  $\chi^2$ /NDF: 69.7/45

All: 118.378 $\pm$ 46.744  $\chi^2$ /NDF: 132.0/93

- sign 32.007 $\pm$ 66.501  $\chi^2$ /NDF: 58.9/47

# asym\_sam\_15\_37\_dd\_correction\_rms vs Slug



Right In: 508.487 $\pm$ 0.129  $\chi^2$ /NDF: 2301818.8/20

Left Out: 294.591 $\pm$ 0.050  $\chi^2$ /NDF: 1680474.5/24

+ sign 322.237 $\pm$ 0.046  $\chi^2$ /NDF: 6366726.4/45

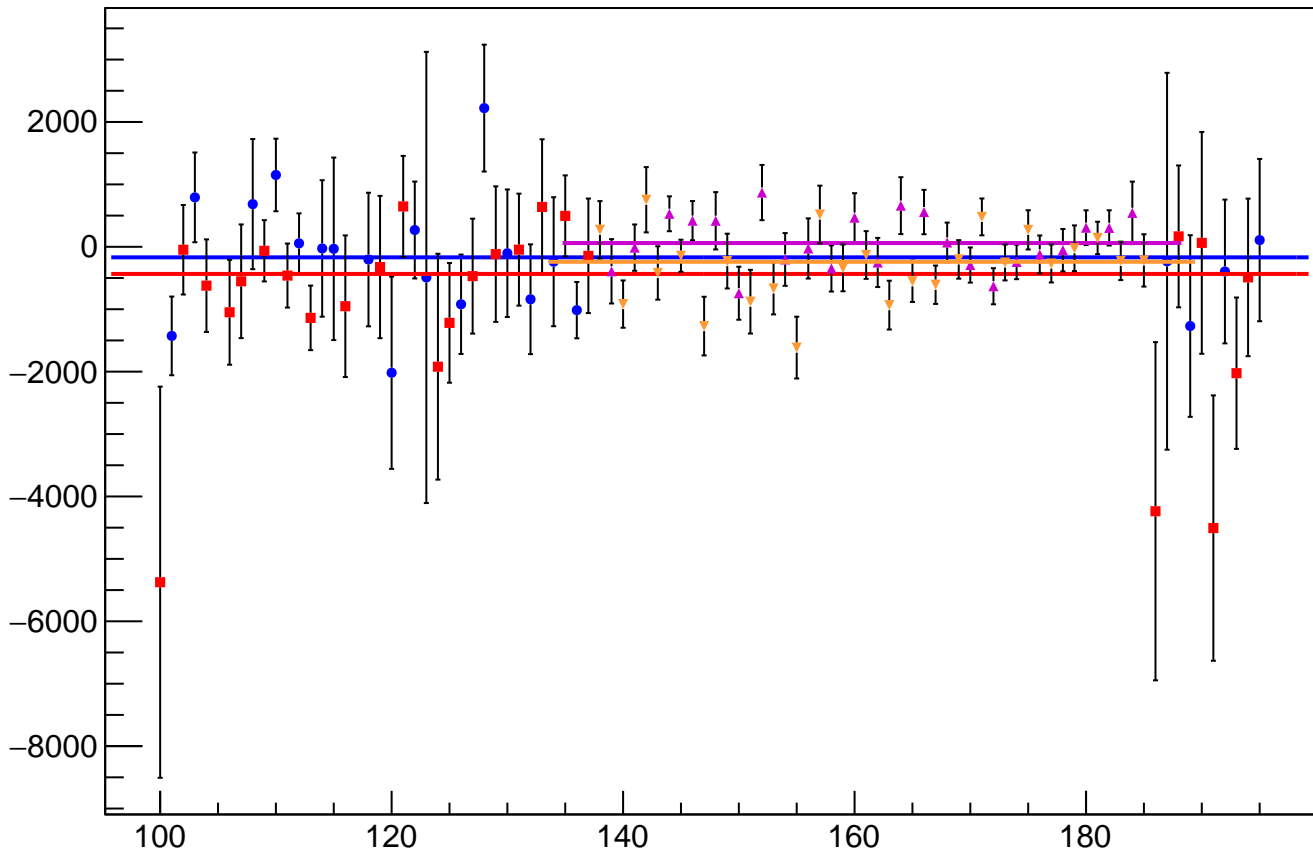
Right Out: 513.459 $\pm$ 0.122  $\chi^2$ /NDF: 3135531.7/24

All: 324.776 $\pm$ 0.033  $\chi^2$ /NDF: 13553580.0/93

Left In: 294.722 $\pm$ 0.051  $\chi^2$ /NDF: 1297310.3/22

- sign 327.375 $\pm$ 0.047  $\chi^2$ /NDF: 7180811.4/47

# asym\_sam\_15\_37\_dd\_mean vs Slug



Right In:  $-168.824 \pm 183.911$   $\chi^2/\text{NDF}: 24.8/20$

Left Out:  $-240.357 \pm 71.100$   $\chi^2/\text{NDF}: 42.9/24$

Right Out:  $-434.769 \pm 173.850$   $\chi^2/\text{NDF}: 20.3/24$

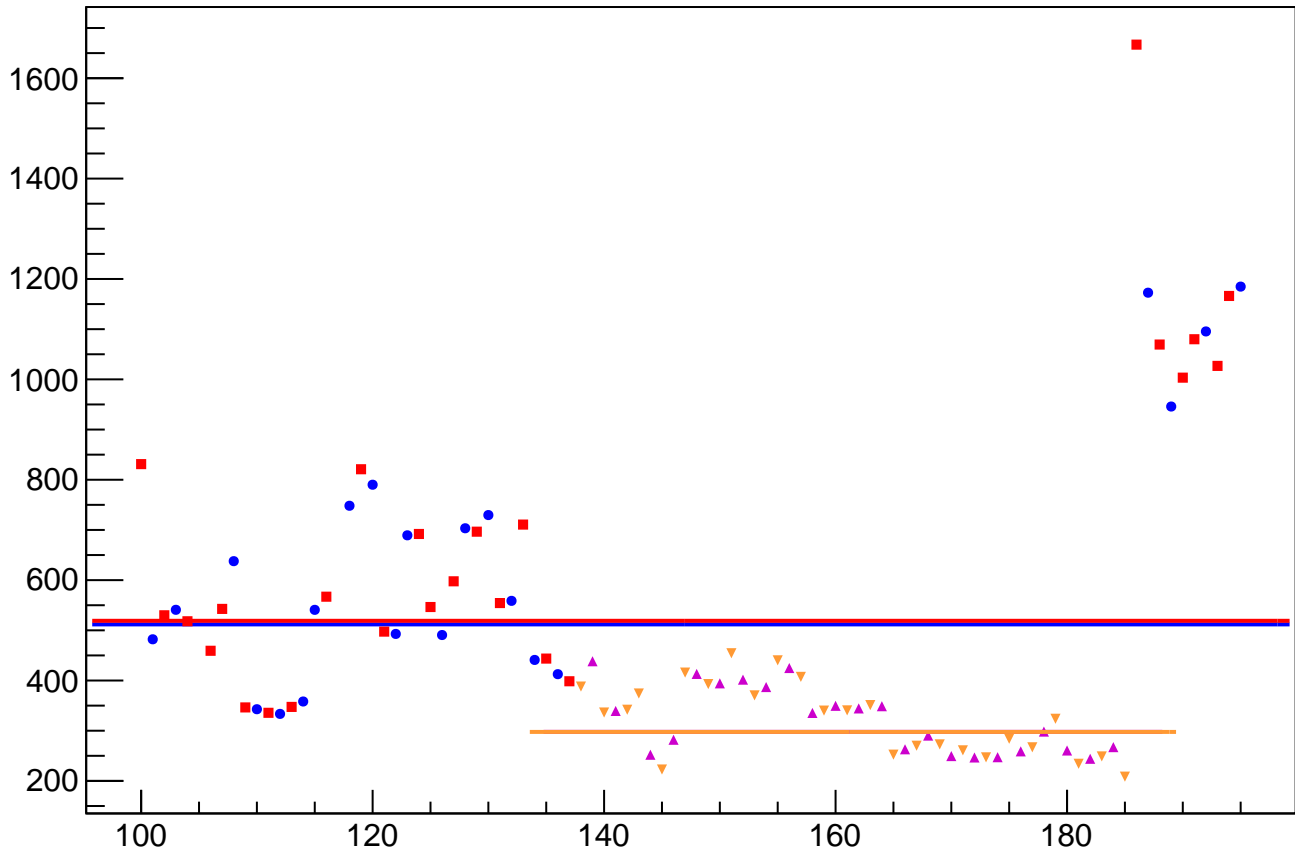
Left In:  $60.330 \pm 72.788$   $\chi^2/\text{NDF}: 30.9/22$

+ sign  $-231.056 \pm 66.317$   $\chi^2/\text{NDF}: 67.9/45$

All:  $-123.628 \pm 47.182$   $\chi^2/\text{NDF}: 131.3/93$

- sign  $-13.515 \pm 67.141$   $\chi^2/\text{NDF}: 58.1/47$

# asym\_sam\_15\_37\_dd\_rms vs Slug



Right In: 511.817 $\pm$ 0.130  $\chi^2$ /NDF: 2288394.9/20

Left Out: 297.613 $\pm$ 0.050  $\chi^2$ /NDF: 1637757.8/24

Right Out: 518.985 $\pm$ 0.123  $\chi^2$ /NDF: 3107211.0/24

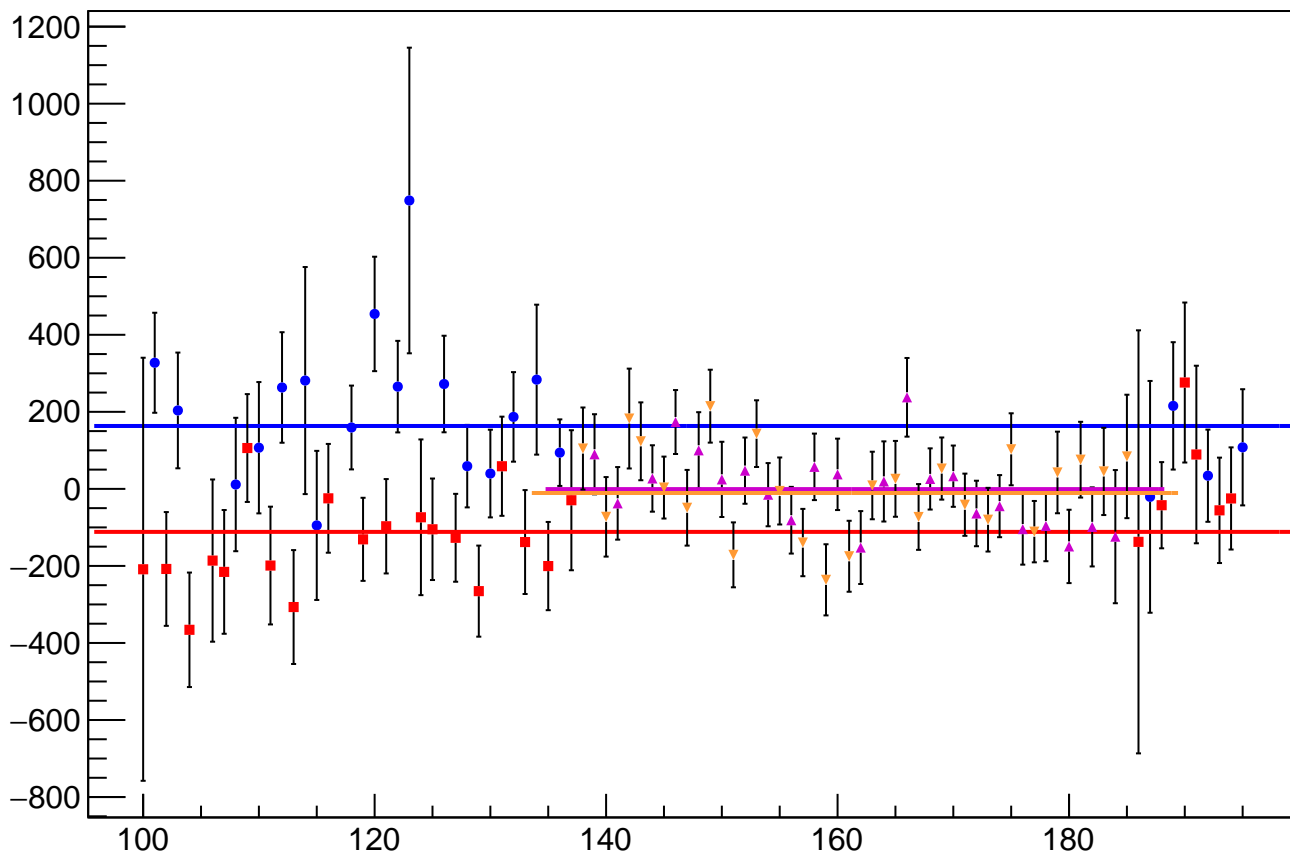
Left In: 297.699 $\pm$ 0.051  $\chi^2$ /NDF: 1266306.2/22

+ sign 325.465 $\pm$ 0.047  $\chi^2$ /NDF: 6286507.6/45

All: 328.052 $\pm$ 0.033  $\chi^2$ /NDF: 13423216.6/93

- sign 330.704 $\pm$ 0.047  $\chi^2$ /NDF: 7130545.6/47

# reg\_asym\_sam\_24\_68\_dd\_mean vs Slug



Right In: 163.293 $\pm$ 30.302  $\chi^2$ /NDF: 17.4/20

Left Out: -10.667 $\pm$ -18.610  $\chi^2$ /NDF:36.3/24

Right Out: -111.635 $\pm$ -29.038  $\chi^2$ /NDF: 18.4/24

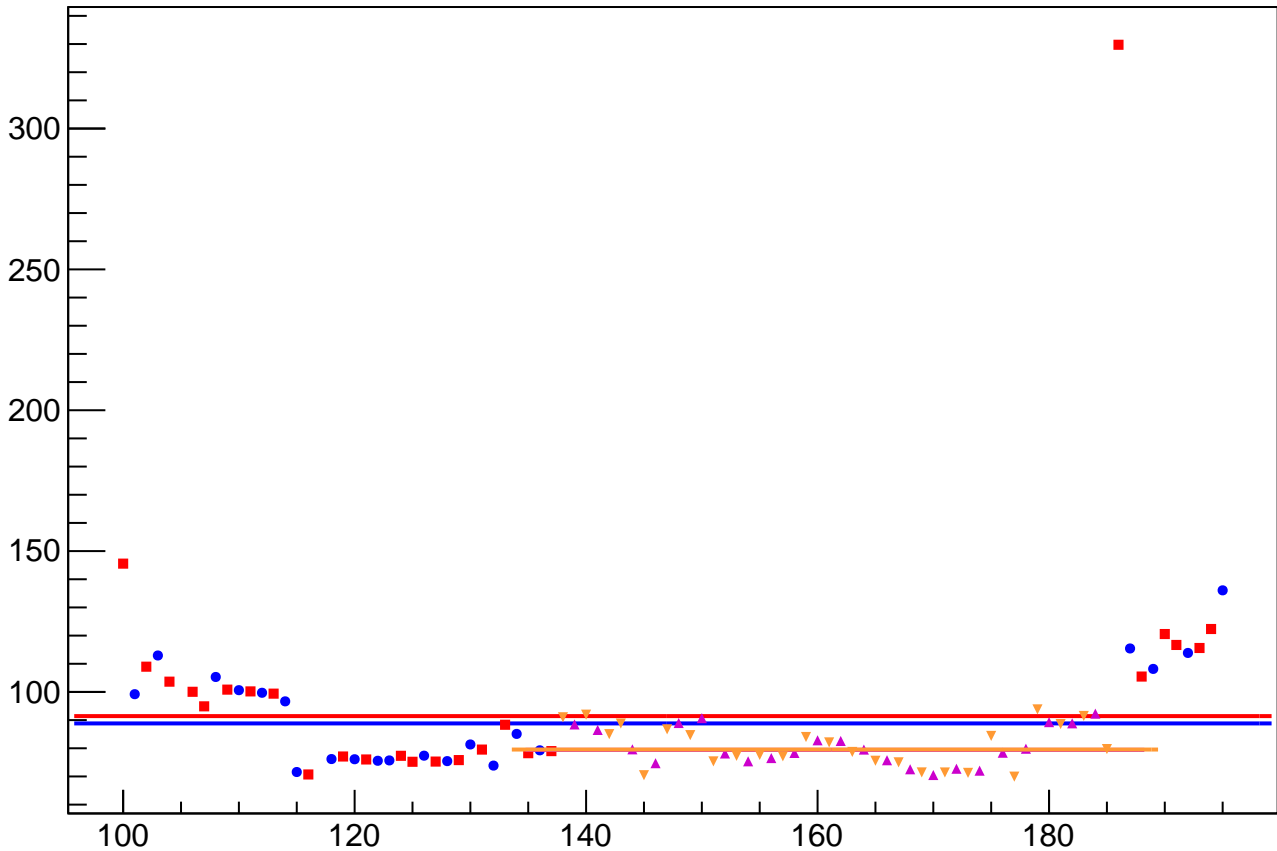
Left In: -0.575 $\pm$ -19.091  $\chi^2$ /NDF:23.8/22

+ sign 36.976 $\pm$ -15.858  $\chi^2$ /NDF: 77.7/45

All: 1.653 $\pm$ -11.247  $\chi^2$ /NDF: 140.1/93

- sign -34.092 $\pm$ -15.953  $\chi^2$ /NDF: 52.4/47

# reg\_asym\_sam\_24\_68\_dd\_rms vs Slug



Right In: 88.825+/-0.021  $\chi^2$ /NDF: 631299.0/20

Left Out: 79.551+/-0.013  $\chi^2$ /NDF:309075.2/24

Right Out: 91.422+/-0.021  $\chi^2$ /NDF: 1008443.6/24

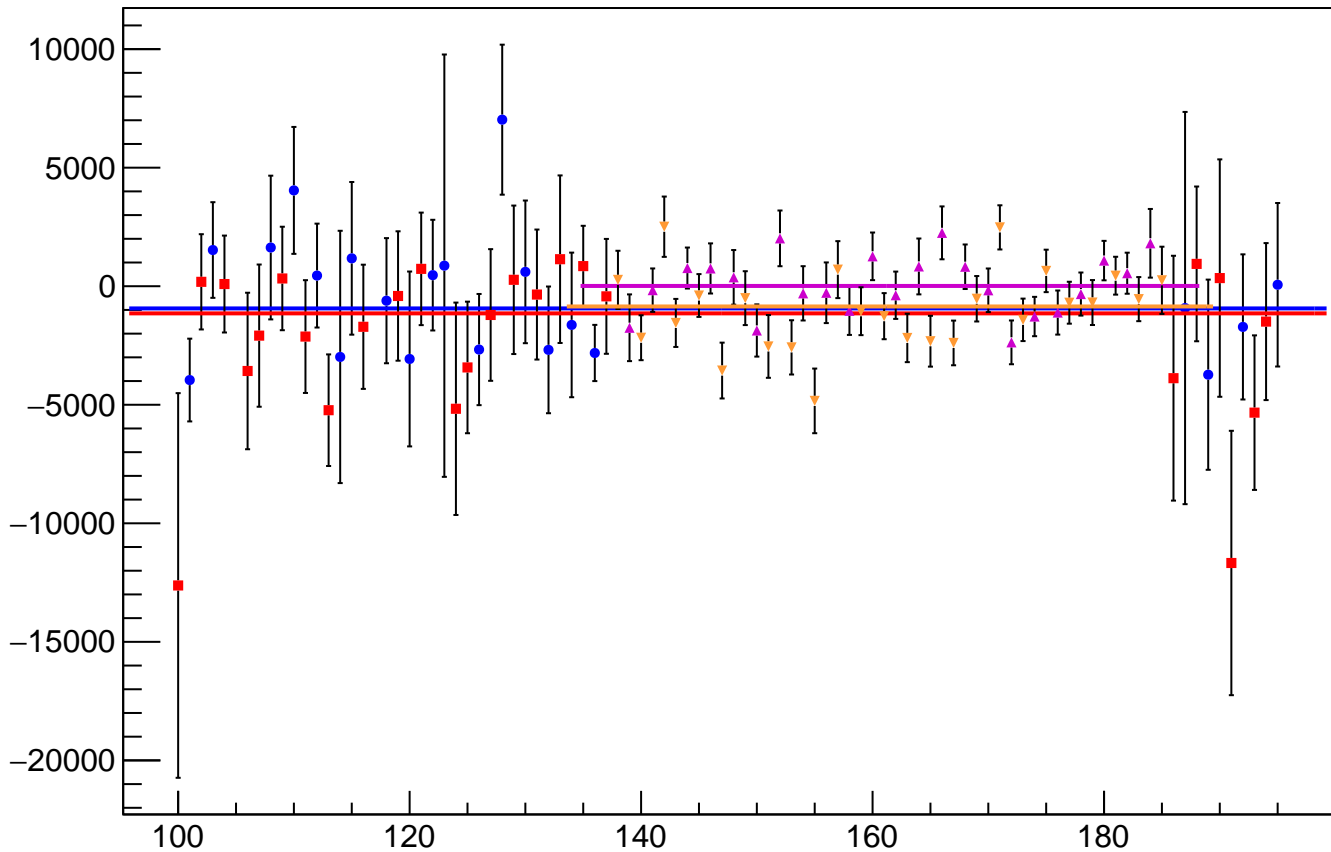
Left In: 79.436+/-0.013  $\chi^2$ /NDF:212440.1/22

+ sign 82.091+/-0.011  $\chi^2$ /NDF: 1076417.0/45

All: 82.569+/-0.008  $\chi^2$ /NDF: 2538850.2/93

- sign 83.054+/-0.011  $\chi^2$ /NDF: 1458771.0/47

# asym\_sam\_24\_68\_dd\_correction\_mean vs Slug



Right In:  $-936.770 \pm 559.488$   $\chi^2/\text{NDF}: 21.2/20$

Left Out:  $-854.130 \pm 204.090$   $\chi^2/\text{NDF}: 56.0/24$

Right Out:  $-1145.256 \pm 553.868$   $\chi^2/\text{NDF}: 17.5/24$

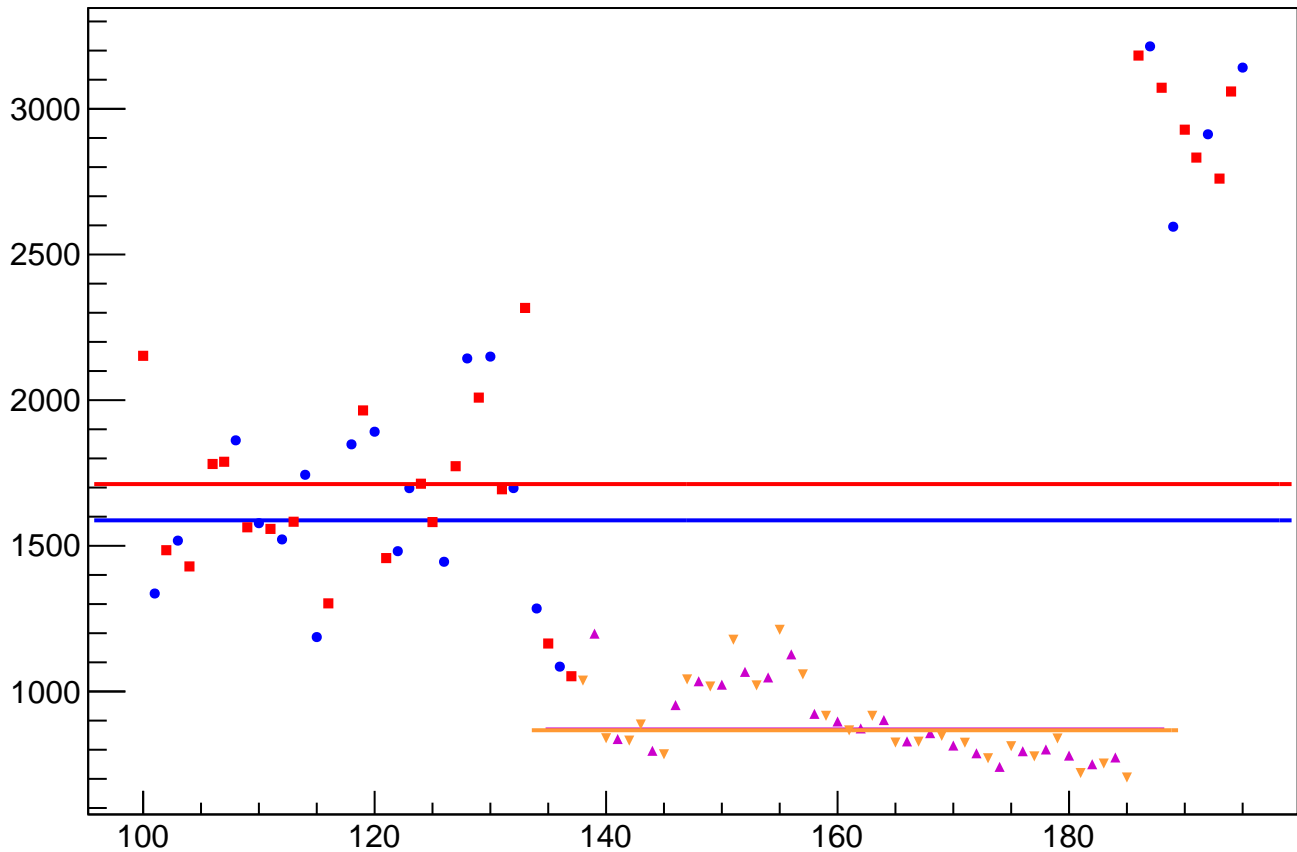
Left In:  $11.687 \pm 210.073$   $\chi^2/\text{NDF}: 31.2/22$

+ sign  $-863.835 \pm 191.732$   $\chi^2/\text{NDF}: 77.2/45$

All:  $-507.639 \pm 137.202$   $\chi^2/\text{NDF}: 136.7/93$

- sign  $-133.815 \pm 196.419$   $\chi^2/\text{NDF}: 52.5/47$

# asym\_sam\_24\_68\_dd\_correction\_rms vs Slug



Right In:  $1587.426 \pm 0.396$   $\chi^2/\text{NDF}: 1638034.3/20$

Left Out:  $866.893 \pm 0.144$   $\chi^2/\text{NDF}: 661712.5/24$

+ sign  $951.511 \pm 0.136$   $\chi^2/\text{NDF}: 5227276.0/45$

Right Out:  $1711.901 \pm 0.392$   $\chi^2/\text{NDF}: 1869159.7/24$

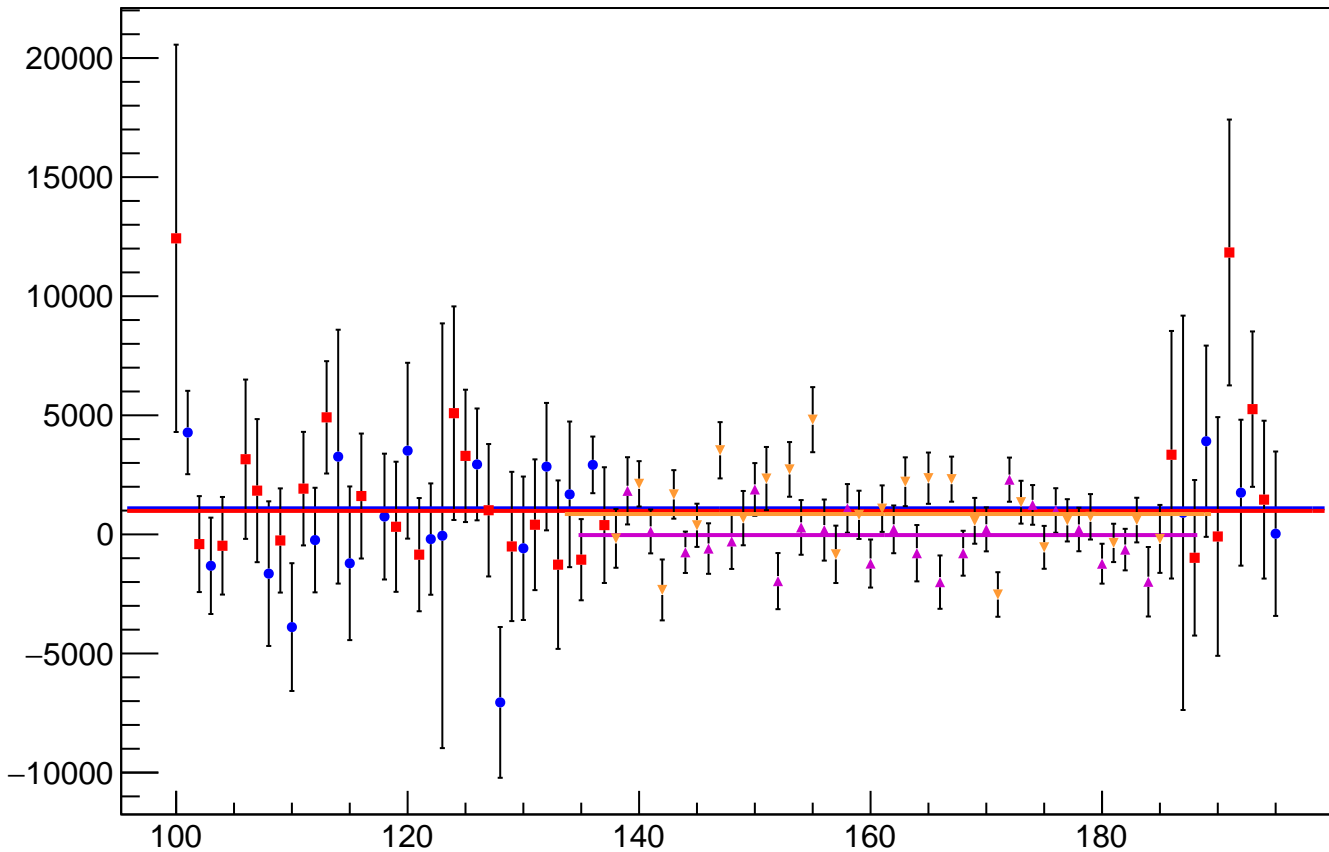
All:  $963.218 \pm 0.097$   $\chi^2/\text{NDF}: 11738035.3/90$

Left In:  $869.569 \pm 0.149$   $\chi^2/\text{NDF}: 582301.2/22$

- sign  $975.504 \pm 0.139$   $\chi^2/\text{NDF}: 6495477.8/47$



# asym\_sam\_24\_68\_dd\_mean vs Slug



Right In:  $1094.781 \pm 560.593$   $\chi^2/\text{NDF}: 21.8/20$

Left Out:  $855.664 \pm 205.047$   $\chi^2/\text{NDF}: 54.1/24$

Right Out:  $986.435 \pm 555.050$   $\chi^2/\text{NDF}: 17.3/24$

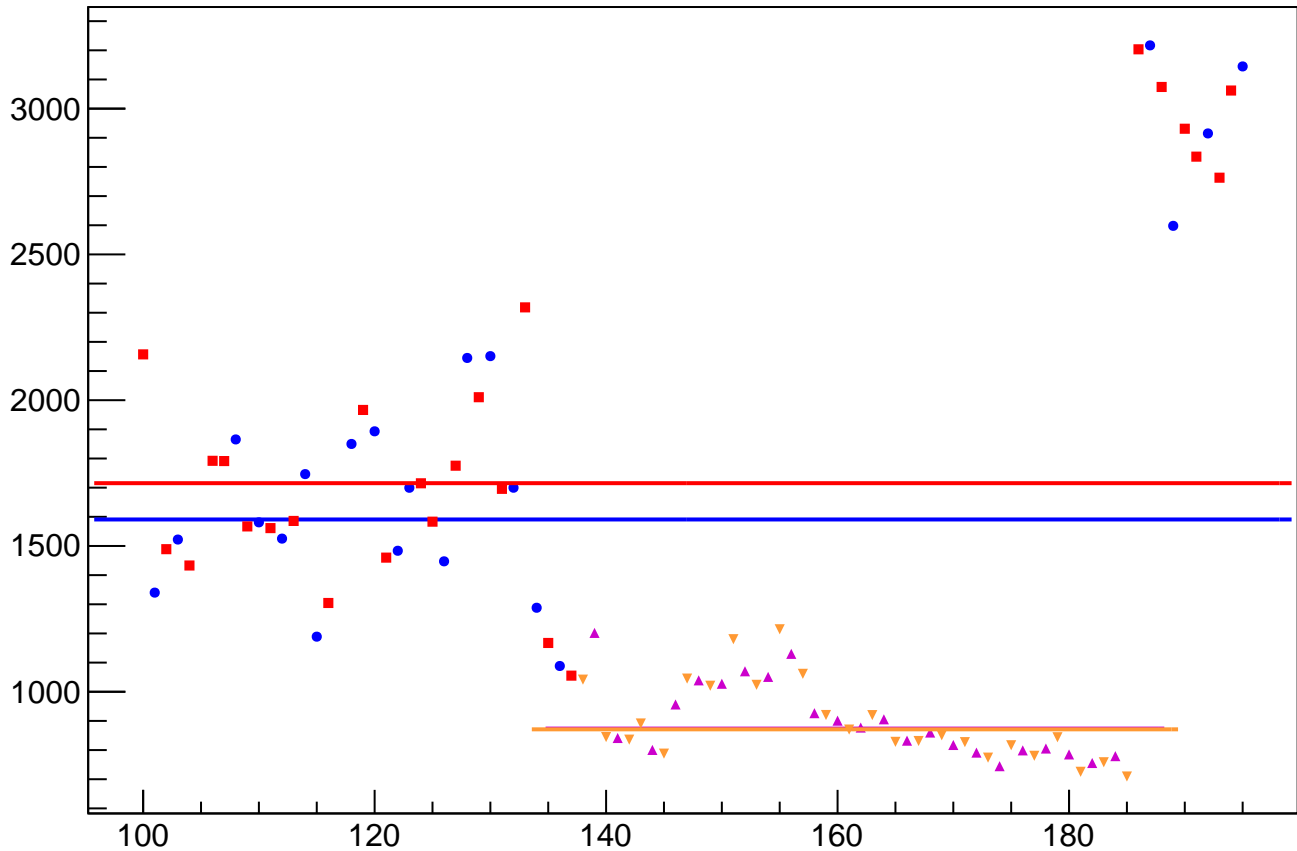
Left In:  $-28.553 \pm 211.034$   $\chi^2/\text{NDF}: 29.7/22$

+ sign  $883.880 \pm 192.569$   $\chi^2/\text{NDF}: 76.0/45$

All:  $501.190 \pm 137.795$   $\chi^2/\text{NDF}: 134.1/93$

- sign  $99.640 \pm 197.257$   $\chi^2/\text{NDF}: 49.9/47$

# asym\_sam\_24\_68\_dd\_rms vs Slug



Right In: 1590.910 $\pm$ 0.396  $\chi^2$ /NDF: 1631577.1/20

Left Out: 871.109 $\pm$ 0.145  $\chi^2$ /NDF:651751.1/24

Right Out: 1715.390 $\pm$ 0.392  $\chi^2$ /NDF: 1865161.3/24

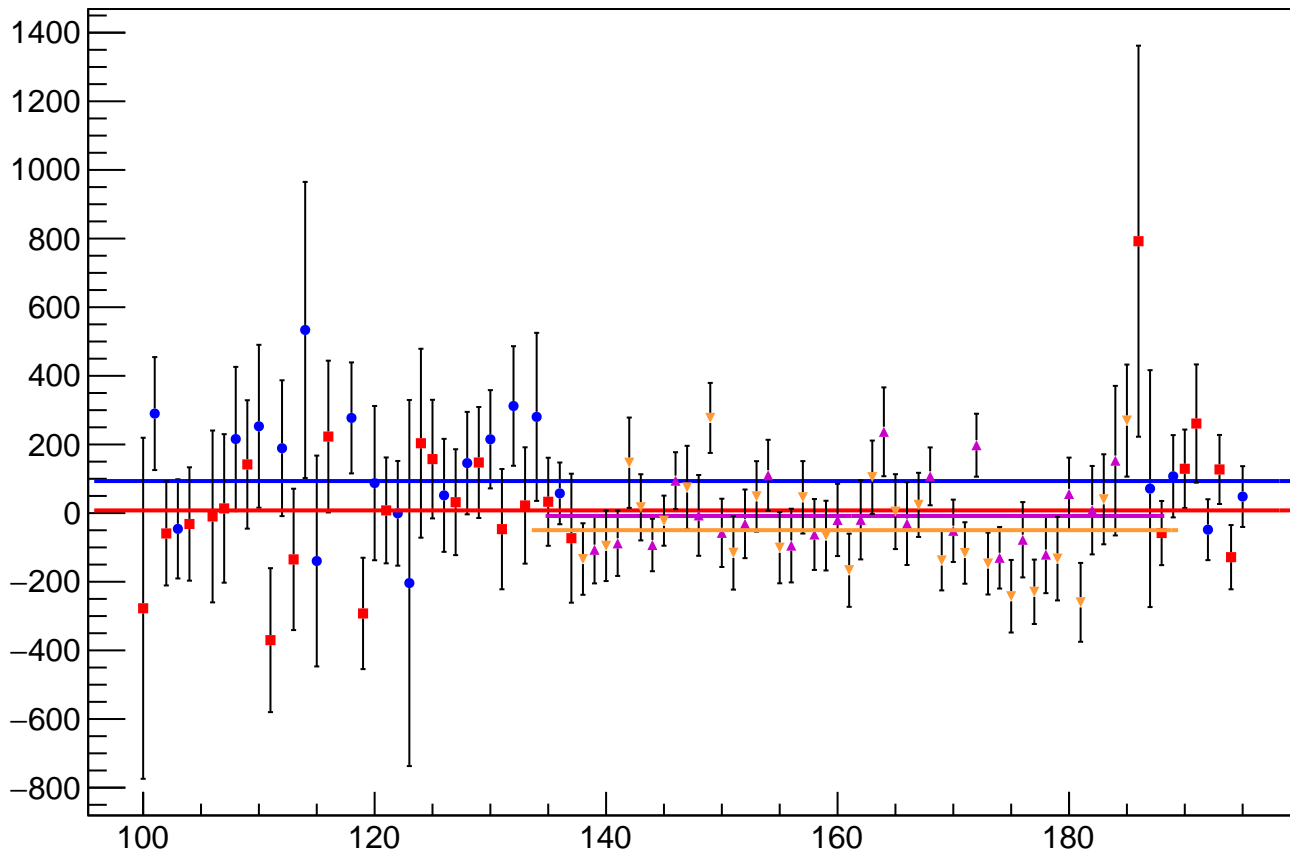
Left In: 873.675 $\pm$ 0.149  $\chi^2$ /NDF:573822.5/22

+ sign 956.045 $\pm$ 0.136  $\chi^2$ /NDF: 5191556.0/45

All: 967.726 $\pm$ 0.097  $\chi^2$ /NDF: 11664075.0/93

- sign 979.984 $\pm$ 0.139  $\chi^2$ /NDF: 6457437.4/47

# reg\_asym\_sam\_26\_48\_dd\_mean vs Slug



Right In: 93.426 $\pm$ 33.196  $\chi^2$ /NDF: 13.0/20

Left Out: -49.717 $\pm$ 20.580  $\chi^2$ /NDF:39.4/24

Right Out: 7.882 $\pm$ 31.299  $\chi^2$ /NDF: 20.8/24

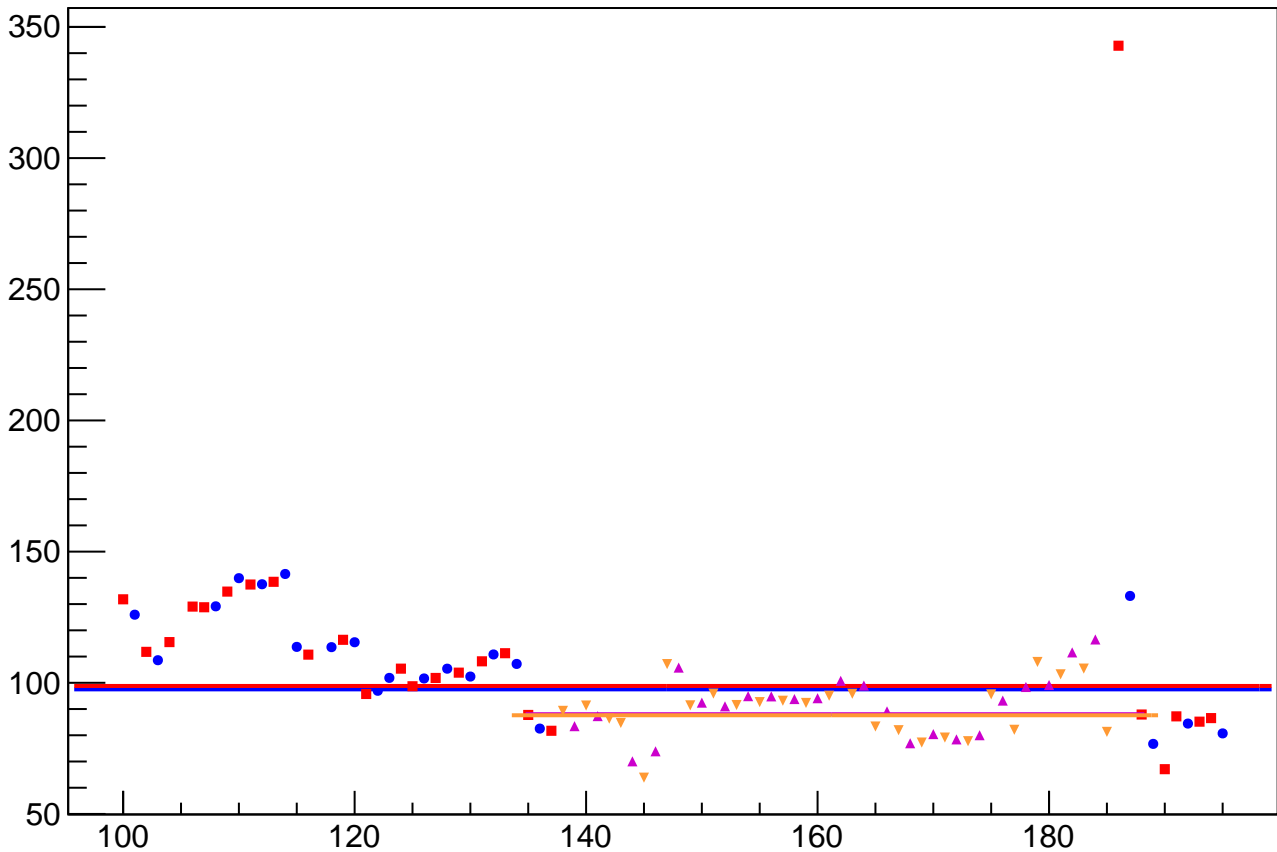
Left In: -8.343 $\pm$ 21.271  $\chi^2$ /NDF:22.0/22

+ sign -9.976 $\pm$ 17.491  $\chi^2$ /NDF: 65.9/45

All: -6.616 $\pm$ 12.404  $\chi^2$ /NDF: 108.9/93

- sign -3.217 $\pm$ 17.593  $\chi^2$ /NDF: 42.9/47

# reg\_asym\_sam\_26\_48\_dd\_rms vs Slug



Right In: 97.497+/-0.023  $\chi^2$ /NDF: 597451.9/20

Left Out: 87.625+/-0.015  $\chi^2$ /NDF: 554690.7/24

Right Out: 98.795+/-0.022  $\chi^2$ /NDF: 1037819.3/24

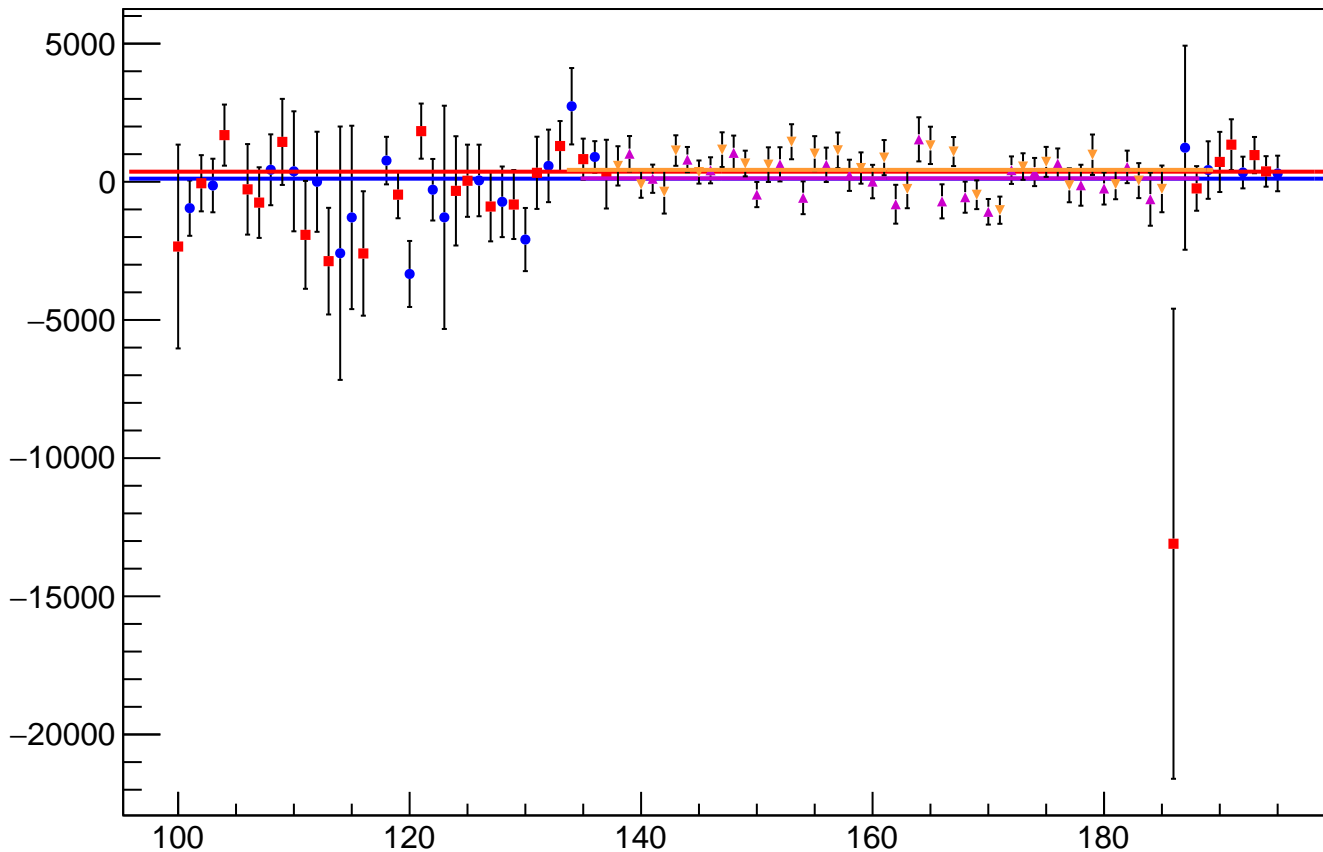
Left In: 88.032+/-0.015  $\chi^2$ /NDF: 523710.9/22

+ sign 90.366+/-0.012  $\chi^2$ /NDF: 1279895.7/45

All: 90.896+/-0.009  $\chi^2$ /NDF: 3006911.1/93

- sign 91.433+/-0.012  $\chi^2$ /NDF: 1723318.0/47

# asym\_sam\_26\_48\_dd\_correction\_mean vs Slug



Right In: 113.061 $\pm$ 230.484  $\chi^2$ /NDF: 21.1/20

Left Out: 431.658 $\pm$ 115.706  $\chi^2$ /NDF:30.5/24

Right Out: 366.186 $\pm$ 213.599  $\chi^2$ /NDF: 21.2/24

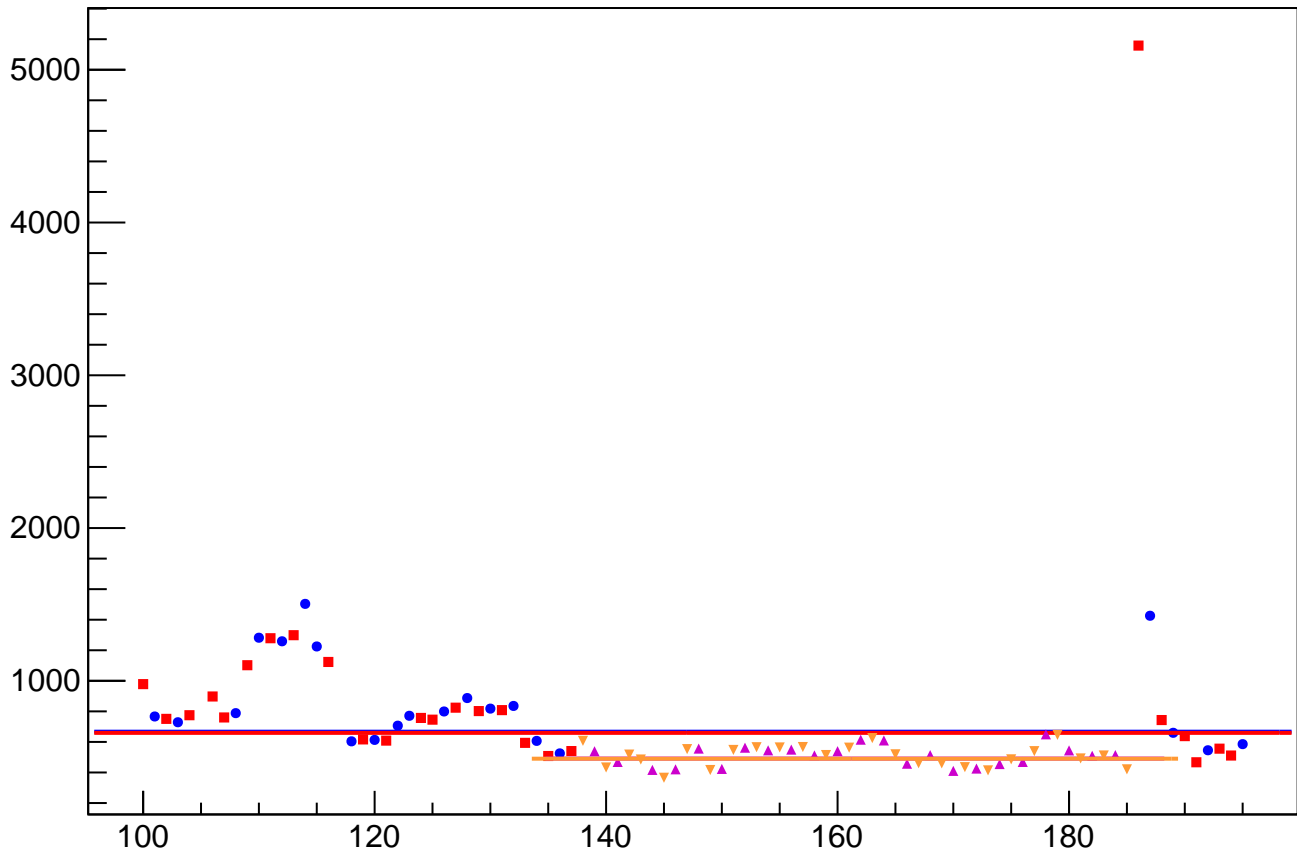
Left In: 123.017 $\pm$ 118.849  $\chi^2$ /NDF:29.3/22

+ sign 367.528 $\pm$ 103.407  $\chi^2$ /NDF: 53.1/45

All: 274.420 $\pm$ 73.278  $\chi^2$ /NDF: 106.2/93

- sign 180.503 $\pm$ 103.855  $\chi^2$ /NDF: 51.5/47

# asym\_sam\_26\_48\_dd\_correction\_rms vs Slug



Right In: 667.030 $\pm$ 0.163  $\chi^2$ /NDF: 1043160.9/20

Left Out: 490.267 $\pm$ 0.082  $\chi^2$ /NDF: 750277.0/24

+ sign 525.847 $\pm$ 0.073  $\chi^2$ /NDF: 2732991.9/45

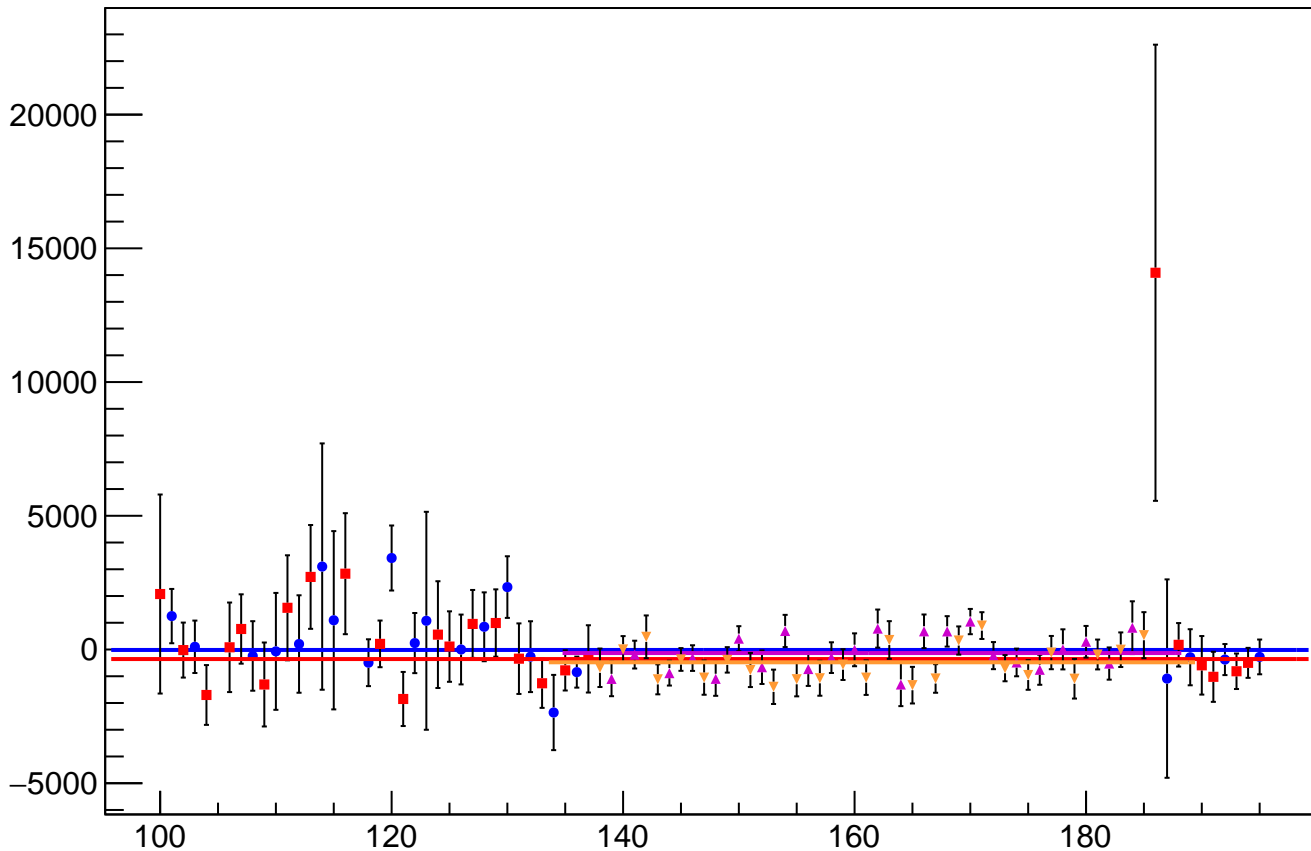
Right Out: 659.335 $\pm$ 0.151  $\chi^2$ /NDF: 1861391.6/24

All: 528.276 $\pm$ 0.052  $\chi^2$ /NDF: 6135365.4/93

Left In: 490.910 $\pm$ 0.084  $\chi^2$ /NDF: 589235.5/22

- sign 530.726 $\pm$ 0.073  $\chi^2$ /NDF: 3400157.0/47

# asym\_sam\_26\_48\_dd\_mean vs Slug



Right In:  $-17.063 \pm 233.168$   $\chi^2/\text{NDF}: 20.8/20$

Left Out:  $-478.197 \pm 117.659$   $\chi^2/\text{NDF}: 27.8/24$

Right Out:  $-357.014 \pm 216.319$   $\chi^2/\text{NDF}: 19.4/24$

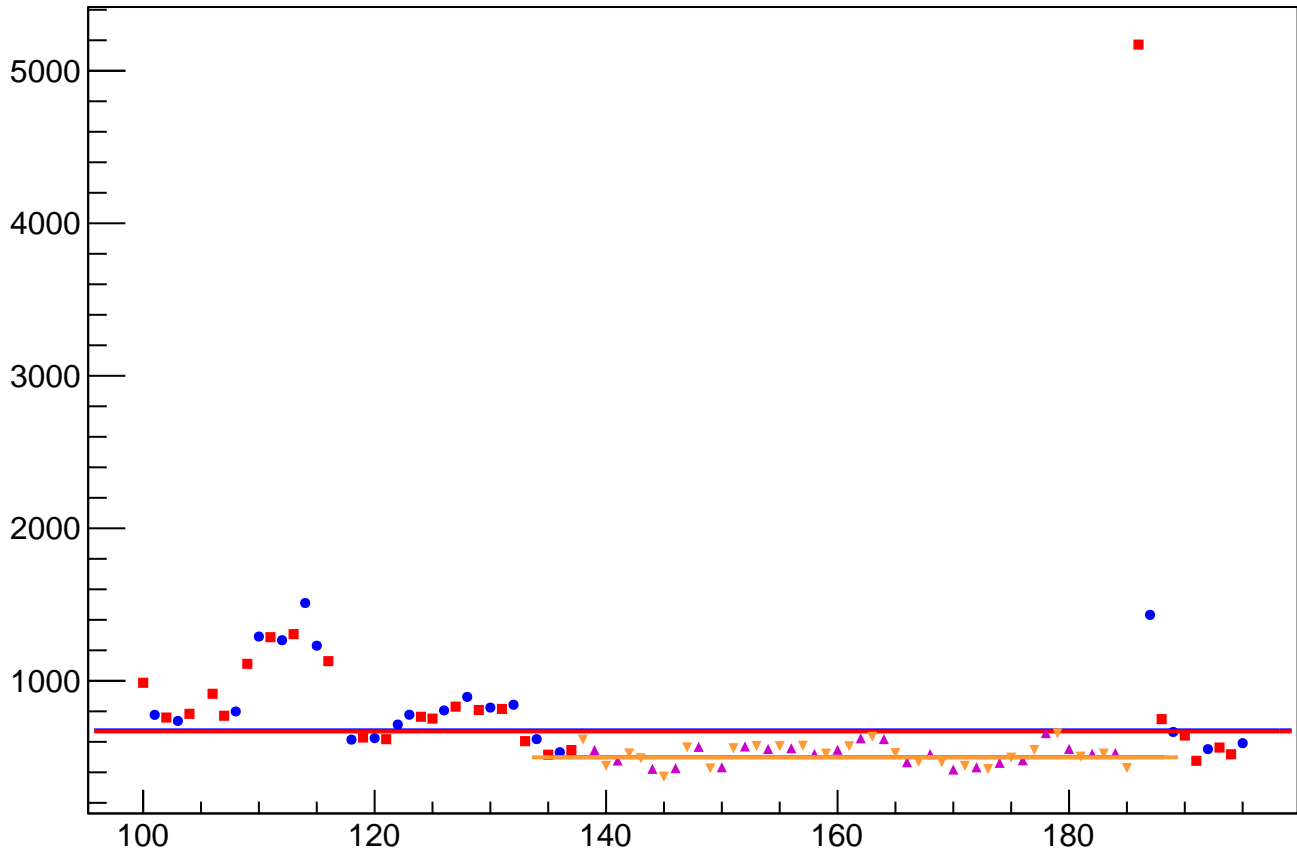
Left In:  $-132.543 \pm 120.866$   $\chi^2/\text{NDF}: 29.5/22$

+ sign  $-384.608 \pm 105.043$   $\chi^2/\text{NDF}: 51.7/45$

All:  $-285.722 \pm 74.442$   $\chi^2/\text{NDF}: 103.3/93$

- sign  $-185.948 \pm 105.513$   $\chi^2/\text{NDF}: 49.8/47$

# asym\_sam\_26\_48\_dd\_rms vs Slug



Right In: 675.142 $\pm$ 0.165  $\chi^2$ /NDF: 1029442.8/20

Left Out: 498.754 $\pm$ 0.083  $\chi^2$ /NDF:734302.8/24

Right Out: 668.198 $\pm$ 0.153  $\chi^2$ /NDF: 1836882.0/24

Left In: 499.393 $\pm$ 0.085  $\chi^2$ /NDF:576539.2/22

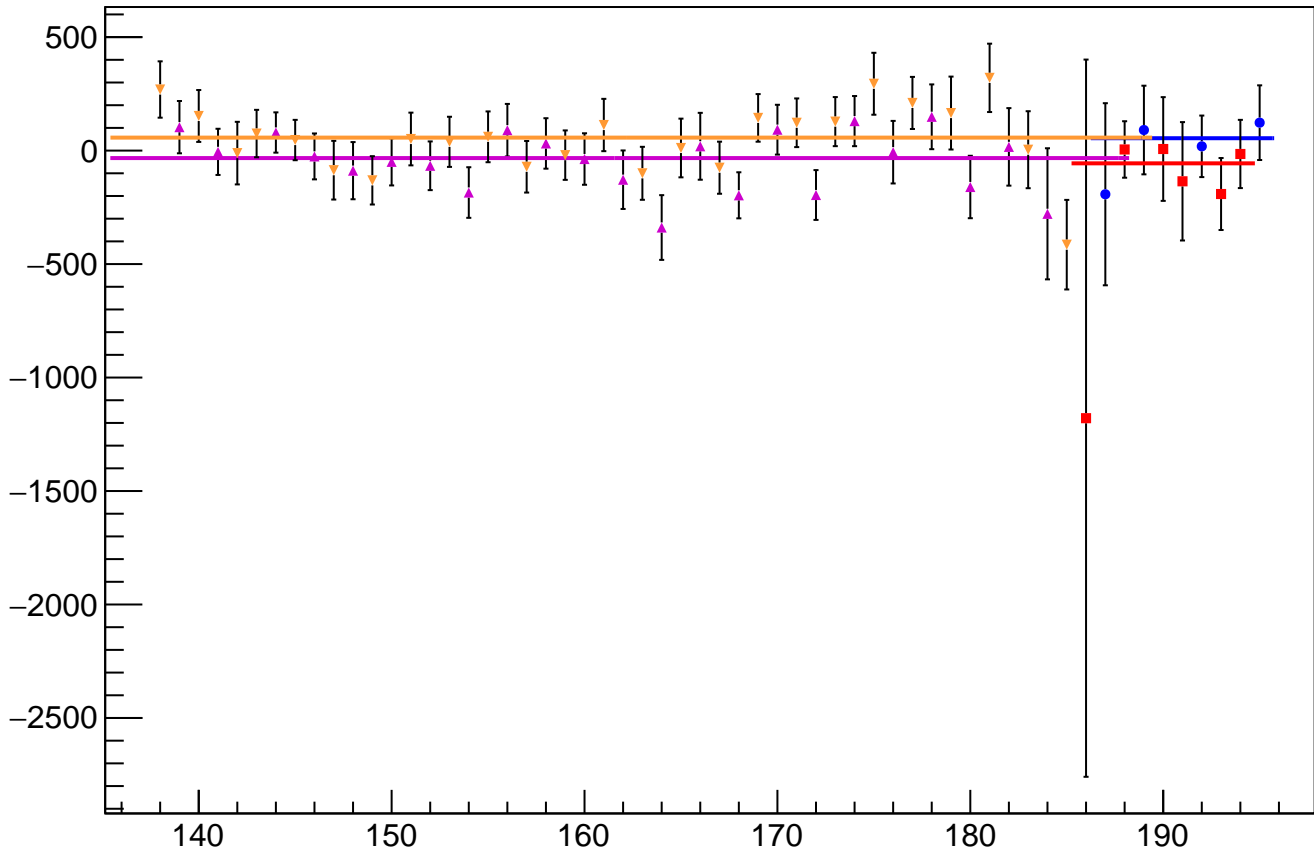
+ sign 534.553 $\pm$ 0.074  $\chi^2$ /NDF: 2675987.5/45

All: 537.042 $\pm$ 0.053  $\chi^2$ /NDF: 6019812.2/93

- sign 539.554 $\pm$ 0.075  $\chi^2$ /NDF: 3341567.4/47



# reg\_asym\_sam\_1548\_avg\_mean vs Slug



Right In: 54.540 $\pm$ 89.876  $\chi^2$ /NDF: 0.7/3

Left Out: 57.211 $\pm$ 23.714  $\chi^2$ /NDF:29.2/24

Right Out: -56.155 $\pm$ 73.956  $\chi^2$ /NDF: 1.7/5

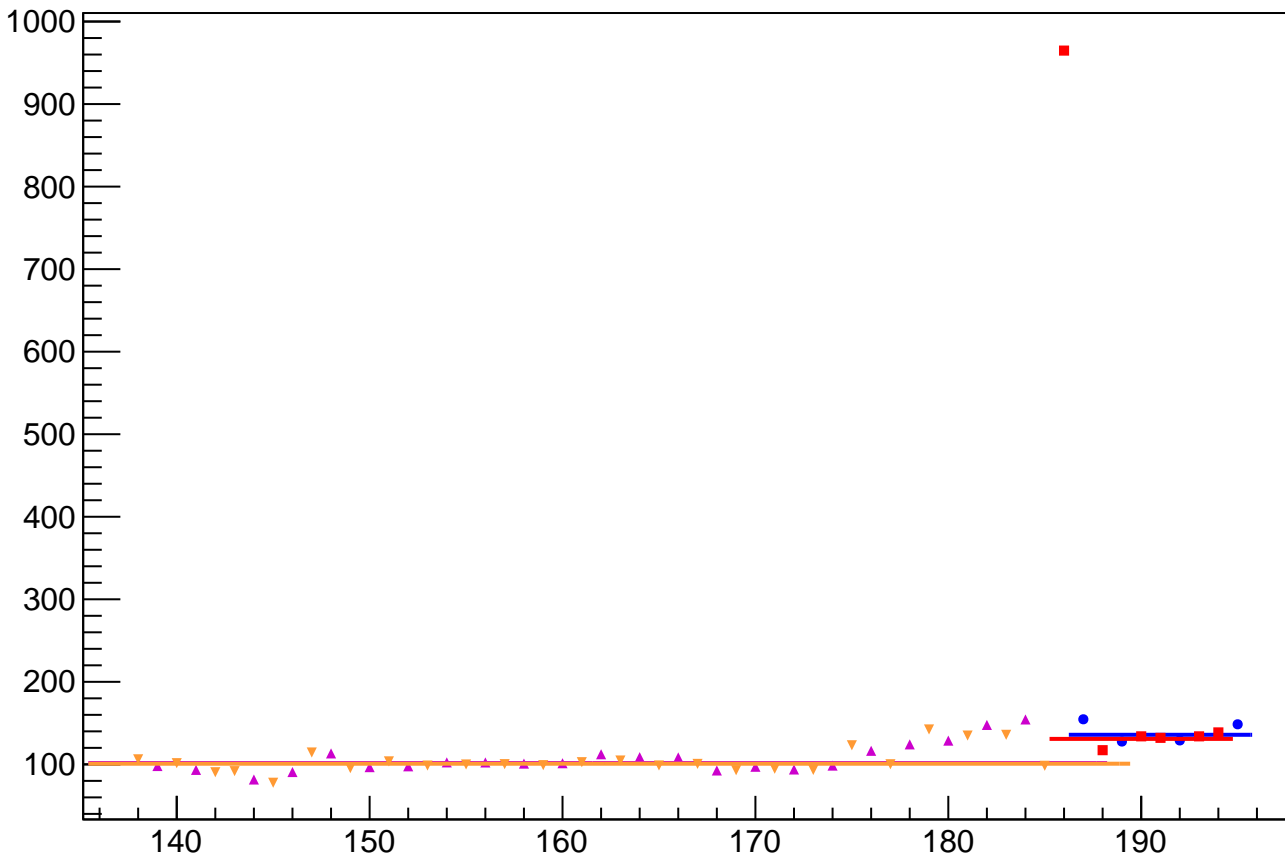
Left In: -32.948 $\pm$ 24.587  $\chi^2$ /NDF:23.6/22

+ sign 57.037 $\pm$ 22.929  $\chi^2$ /NDF: 29.8/28

All: 11.693 $\pm$ 16.354  $\chi^2$ /NDF: 63.2/57

- sign -35.258 $\pm$ 23.332  $\chi^2$ /NDF: 25.4/28

# reg\_asym\_sam\_1548\_avg\_rms vs Slug



Right In: 135.840 $\pm$ 0.064  $\chi^2$ /NDF: 24926.6/3

Left Out: 100.801 $\pm$ 0.017  $\chi^2$ /NDF:600502.4/24

Right Out: 130.864 $\pm$ 0.052  $\chi^2$ /NDF: 587846.7/5

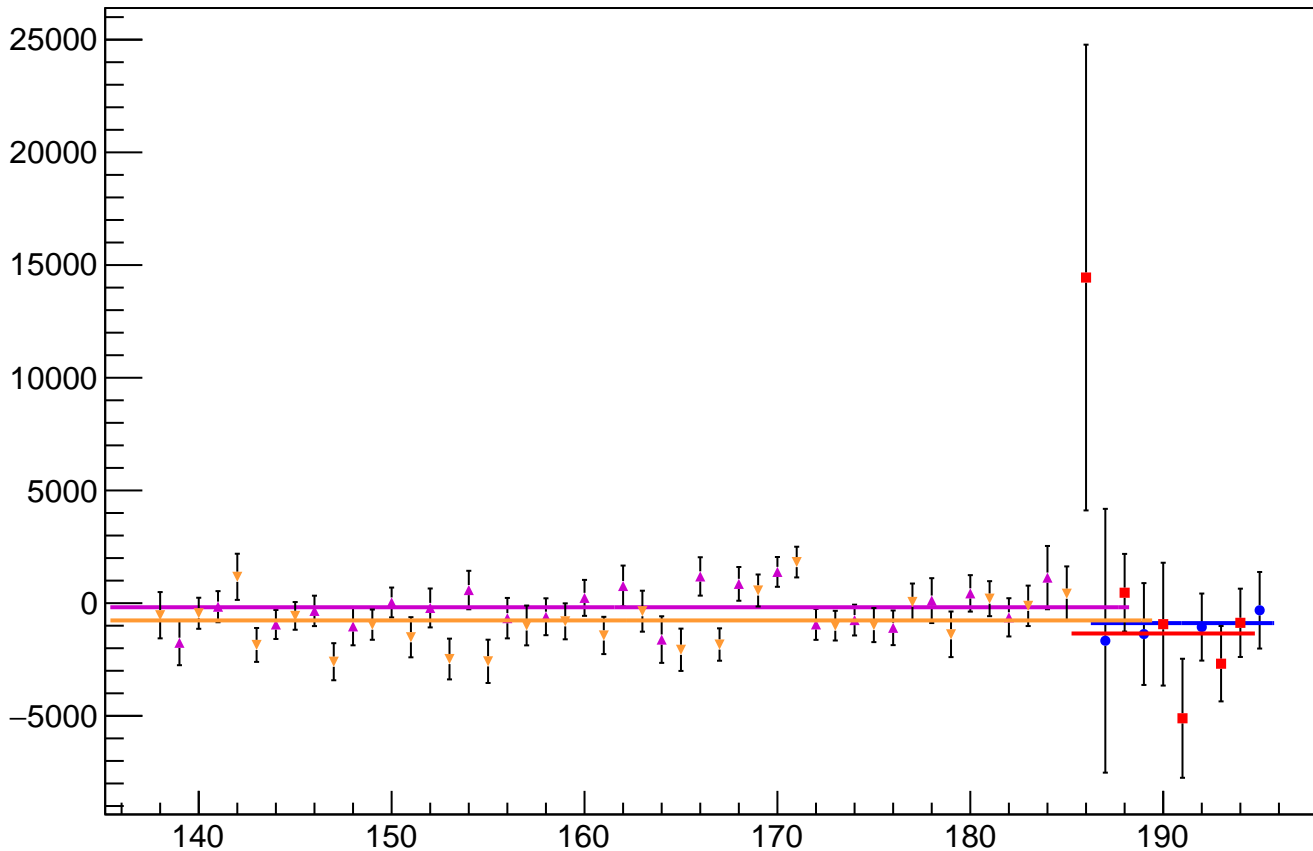
Left In: 101.622 $\pm$ 0.017  $\chi^2$ /NDF:582329.3/22

+ sign 103.081 $\pm$ 0.016  $\chi^2$ /NDF: 909627.4/28

All: 103.794 $\pm$ 0.012  $\chi^2$ /NDF: 2365297.5/57

- sign 104.532 $\pm$ 0.016  $\chi^2$ /NDF: 1451734.8/28

# asym\_sam\_1548\_avg\_correction\_mean vs Slug



Right In:  $-885.129 \pm 988.359$   $\chi^2/\text{NDF}$ : 0.2/3

Left Out:  $-766.358 \pm 161.066$   $\chi^2/\text{NDF}$ : 46.5/24

Right Out:  $-1345.723 \pm 839.804$   $\chi^2/\text{NDF}$ : 6.2/5

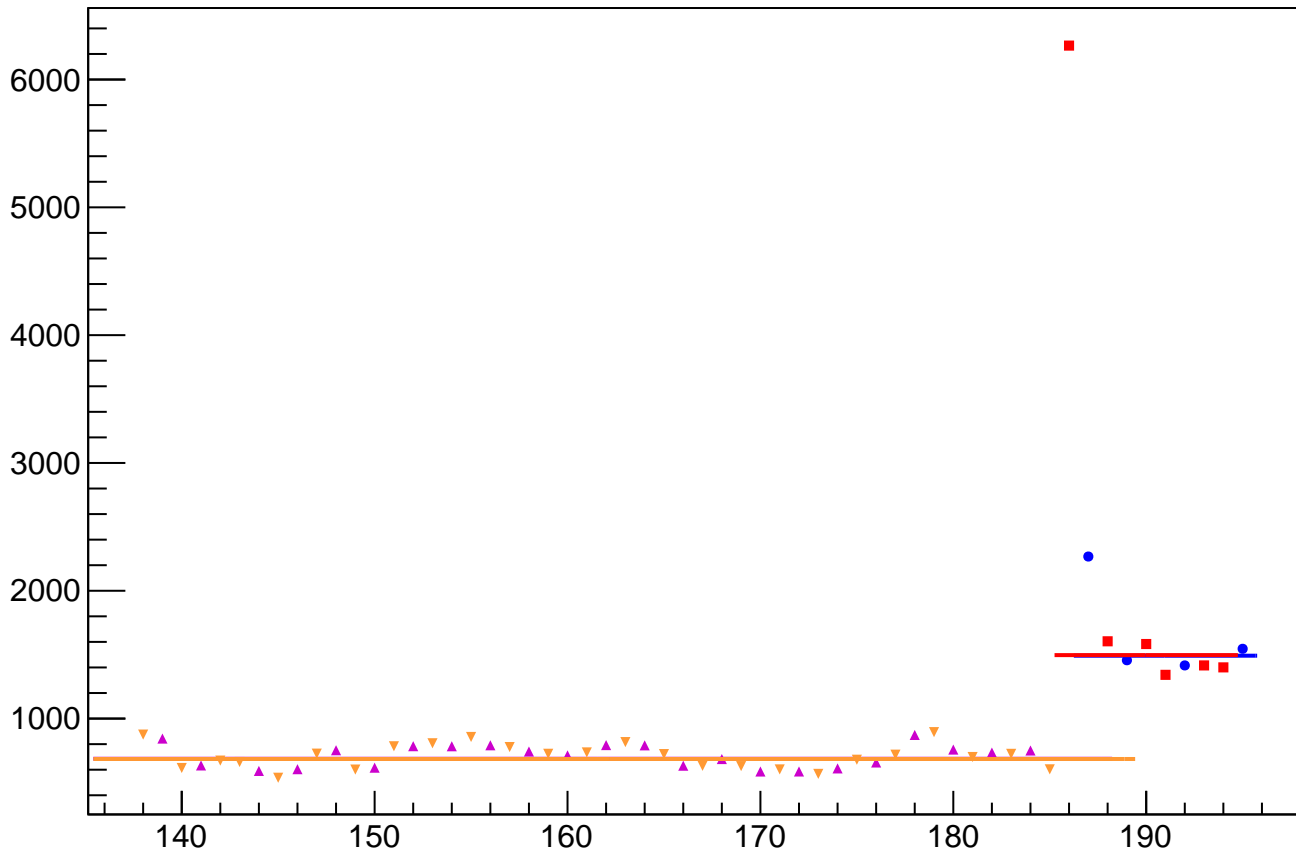
Left In:  $-181.584 \pm 165.671$   $\chi^2/\text{NDF}$ : 25.0/22

+ sign  $-769.430 \pm 158.969$   $\chi^2/\text{NDF}$ : 46.7/28

All:  $-503.352 \pm 113.649$   $\chi^2/\text{NDF}$ : 85.6/57

- sign  $-225.191 \pm 162.538$   $\chi^2/\text{NDF}$ : 33.1/28

# asym\_sam\_1548\_avg\_correction\_rms vs Slug



Right In: 1492.028 $\pm$ 0.699  $\chi^2/\text{NDF}$ : 42896.0/3

Left Out: 683.884 $\pm$ 0.114  $\chi^2/\text{NDF}$ :667158.2/24

Right Out: 1496.574 $\pm$ 0.594  $\chi^2/\text{NDF}$ : 455530.4/5

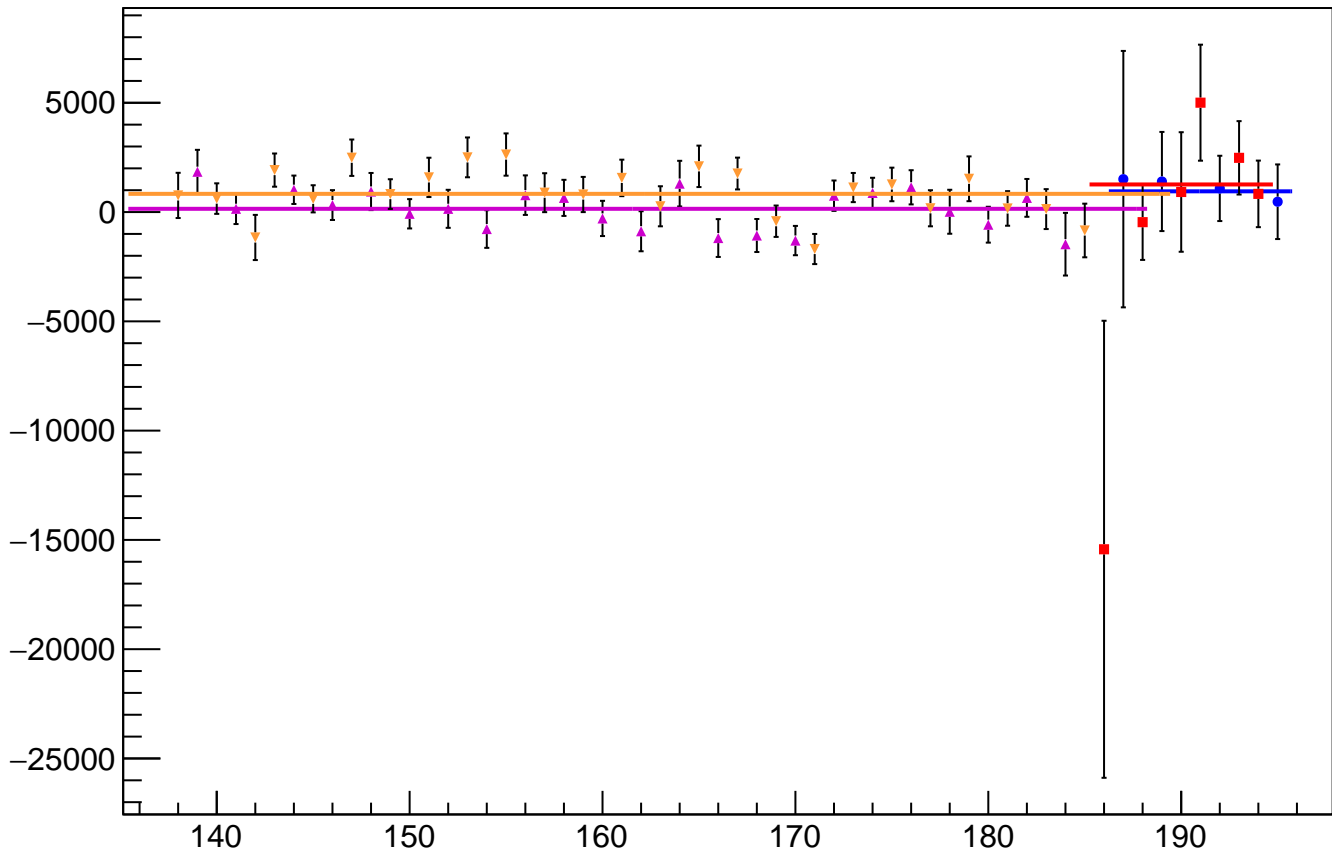
Left In: 685.593 $\pm$ 0.117  $\chi^2/\text{NDF}$ :529353.6/22

+ sign 704.791 $\pm$ 0.112  $\chi^2/\text{NDF}$ : 2012605.5/28

All: 710.257 $\pm$ 0.080  $\chi^2/\text{NDF}$ : 4797535.1/57

- sign 715.971 $\pm$ 0.115  $\chi^2/\text{NDF}$ : 2780093.2/28

# asym\_sam\_1548\_avg\_mean vs Slug



Right In:  $948.843 \pm 992.682$   $\chi^2/\text{NDF}: 0.1/3$

Left Out:  $833.395 \pm 162.965$   $\chi^2/\text{NDF}: 43.2/24$

Right Out:  $1263.509 \pm 843.467$   $\chi^2/\text{NDF}: 6.2/5$

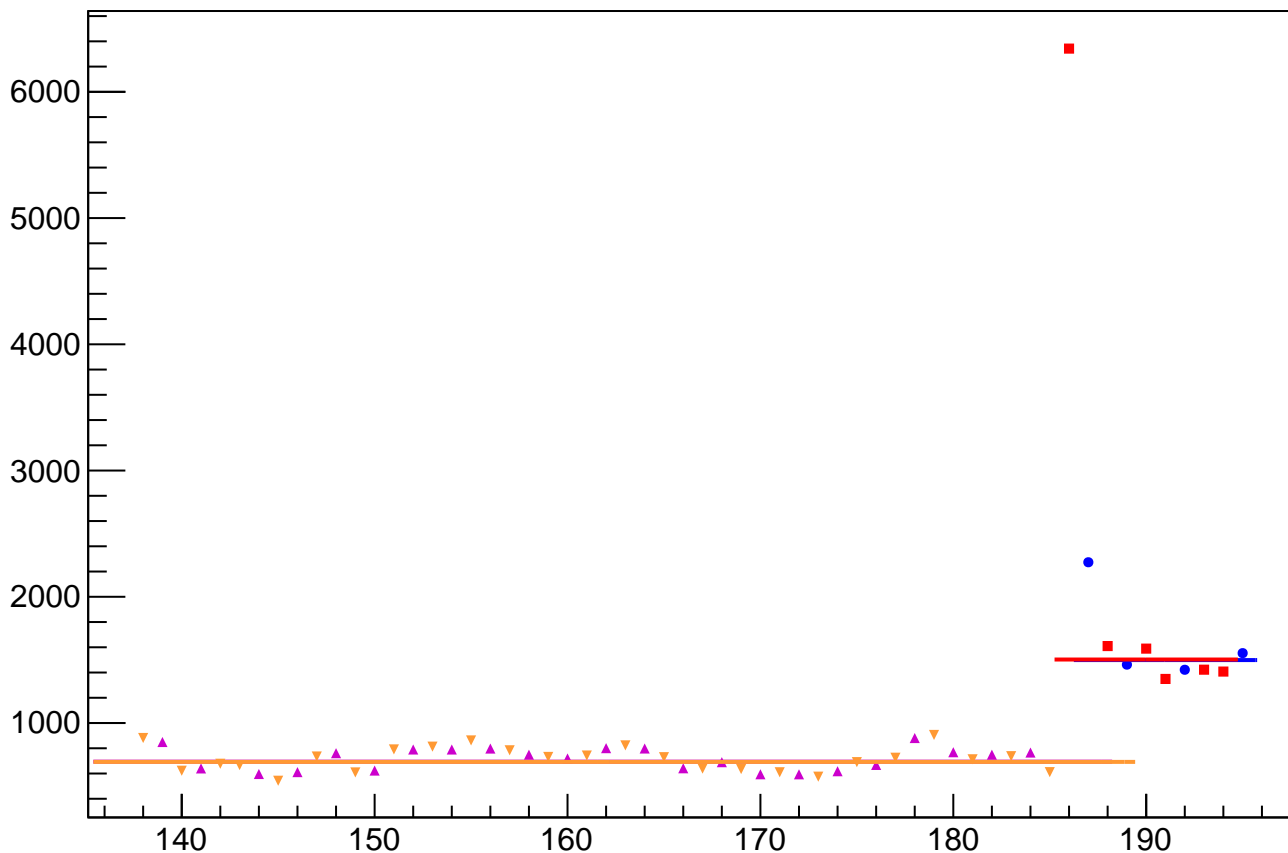
Left In:  $148.814 \pm 167.644$   $\chi^2/\text{NDF}: 26.0/22$

+ sign  $836.425 \pm 160.812$   $\chi^2/\text{NDF}: 43.4/28$

All:  $520.972 \pm 114.968$   $\chi^2/\text{NDF}: 85.1/57$

- sign  $191.175 \pm 164.428$   $\chi^2/\text{NDF}: 33.9/28$

# asym\_sam\_1548\_avg\_rms vs Slug



Right In: 1498.610 $\pm$ 0.702  $\chi^2$ /NDF: 42756.1/3

Left Out: 692.097 $\pm$ 0.115  $\chi^2$ /NDF: 657259.6/24

Right Out: 1503.037 $\pm$ 0.596  $\chi^2$ /NDF: 457255.7/5

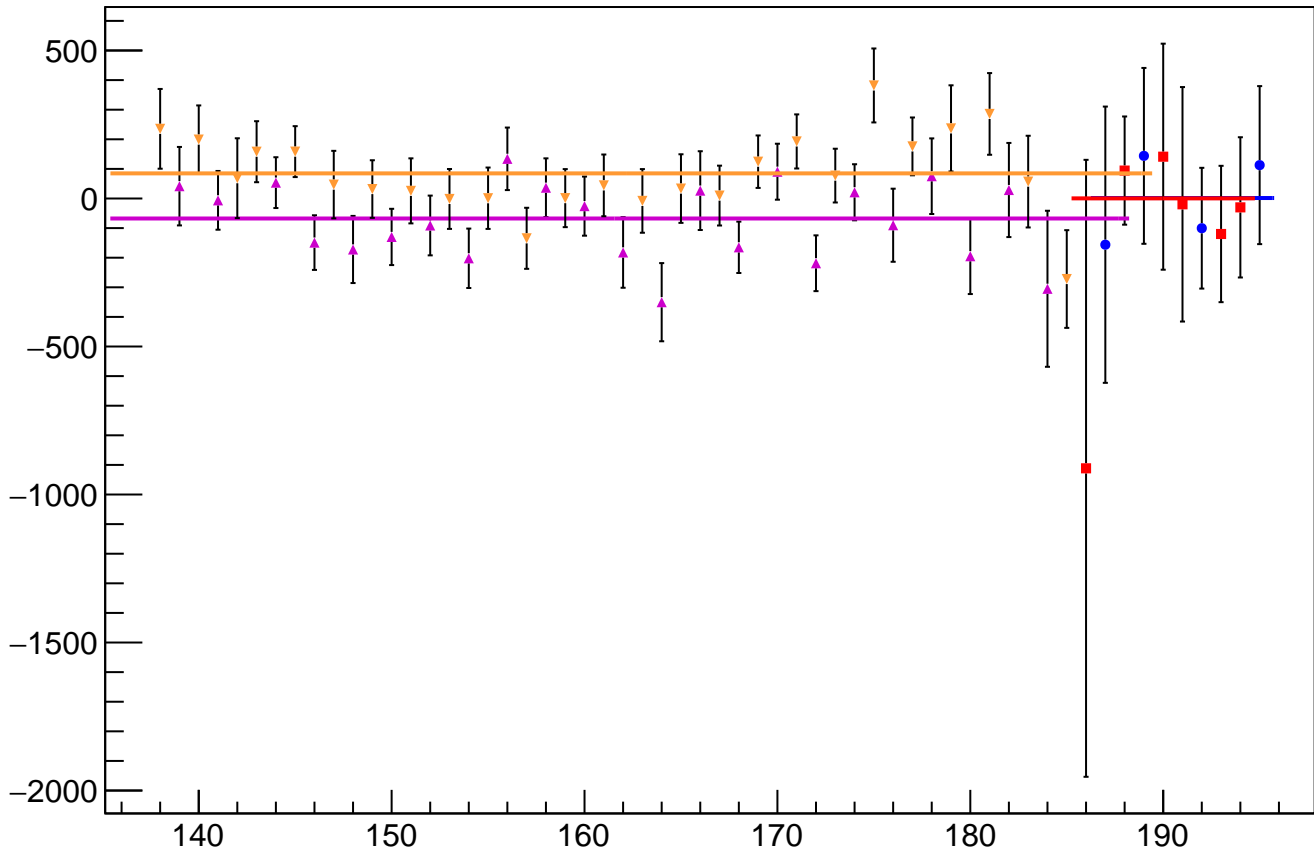
Left In: 693.867 $\pm$ 0.119  $\chi^2$ /NDF: 522053.5/22

+ sign 713.262 $\pm$ 0.114  $\chi^2$ /NDF: 1985548.4/28

All: 718.814 $\pm$ 0.081  $\chi^2$ /NDF: 4740443.2/57

- sign 724.618 $\pm$ 0.116  $\chi^2$ /NDF: 2750019.5/28

# reg\_asym\_sam\_3748\_avg\_mean vs Slug



Right In:  $1.608 \pm 136.091$   $\chi^2/\text{NDF}: 0.8/3$

Left Out:  $84.860 \pm 21.643$   $\chi^2/\text{NDF}: 28.5/24$

Right Out:  $0.434 \pm 111.269$   $\chi^2/\text{NDF}: 1.5/5$

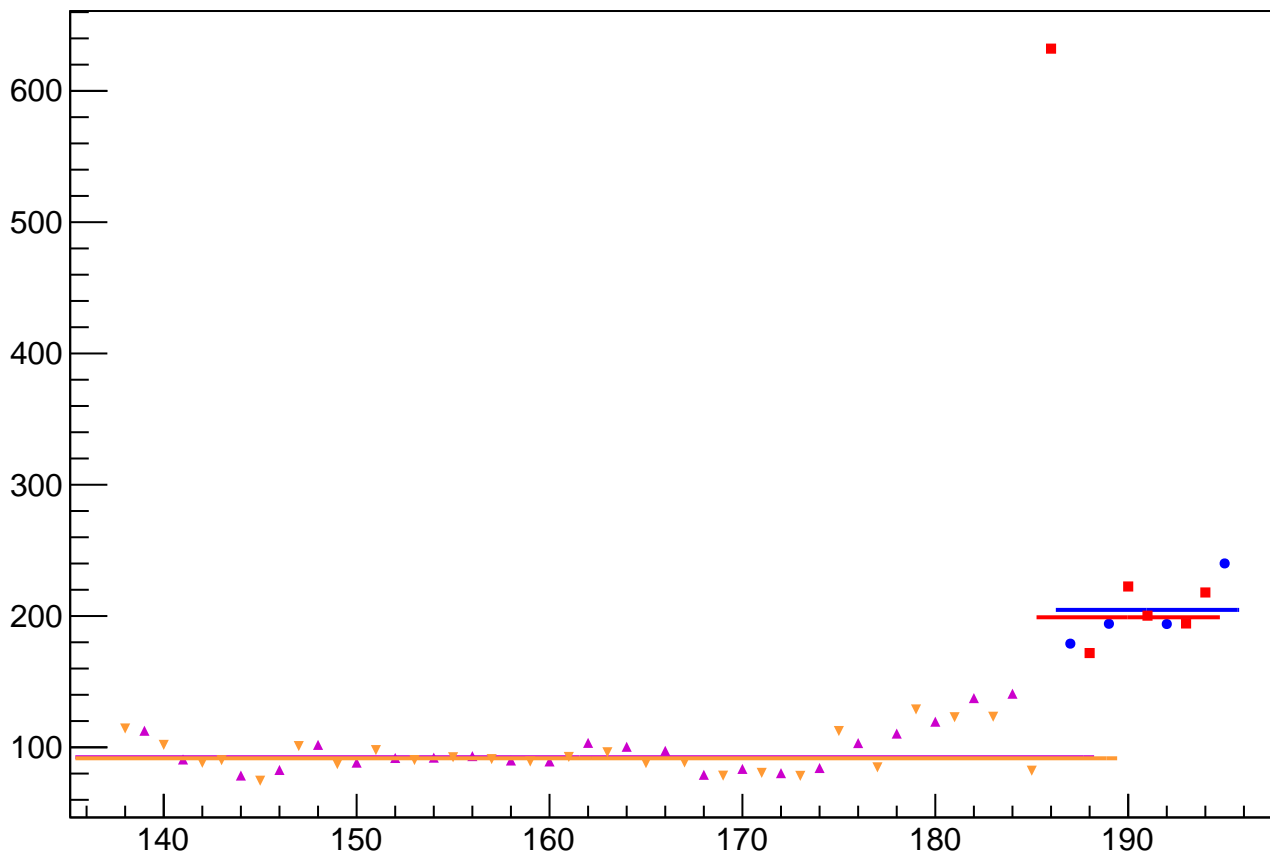
Left In:  $-67.552 \pm 22.449$   $\chi^2/\text{NDF}: 28.9/22$

+ sign  $82.806 \pm 21.374$   $\chi^2/\text{NDF}: 29.6/28$

All:  $11.106 \pm 15.332$   $\chi^2/\text{NDF}: 83.5/57$

- sign  $-64.893 \pm 22.006$   $\chi^2/\text{NDF}: 30.7/28$

# reg\_asym\_sam\_3748\_avg\_rms vs Slug



Right In: 204.678 $\pm$ 0.096  $\chi^2$ /NDF: 49334.4/3

Left Out: 91.633 $\pm$ 0.015  $\chi^2$ /NDF:693122.0/24

Right Out: 199.044 $\pm$ 0.079  $\chi^2$ /NDF: 411104.0/5

Left In: 92.466 $\pm$ 0.016  $\chi^2$ /NDF:655700.4/22

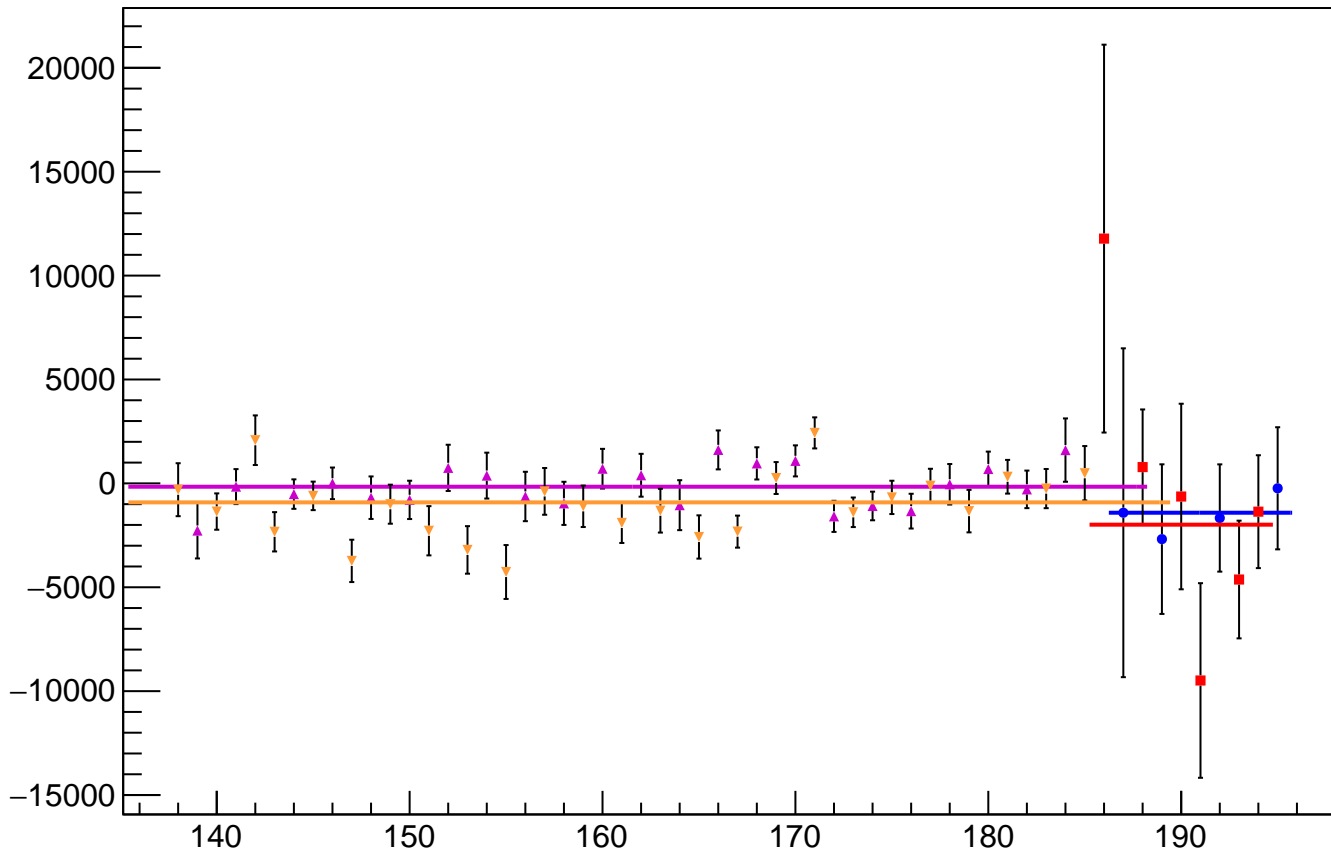
+ sign 94.421 $\pm$ 0.015  $\chi^2$ /NDF: 2088416.8/28

All: 95.496 $\pm$ 0.011  $\chi^2$ /NDF: 4928774.0/57

- sign 96.635 $\pm$ 0.016  $\chi^2$ /NDF: 2829947.0/28



# asym\_sam\_3748\_avg\_correction\_mean vs Slug



Right In:  $-1412.459 \pm 1669.093$   $\chi^2/\text{NDF}: 0.3/3$

Left Out:  $-914.719 \pm 185.341$   $\chi^2/\text{NDF}: 64.2/24$

Right Out:  $-1987.760 \pm 1417.991$   $\chi^2/\text{NDF}: 6.8/5$

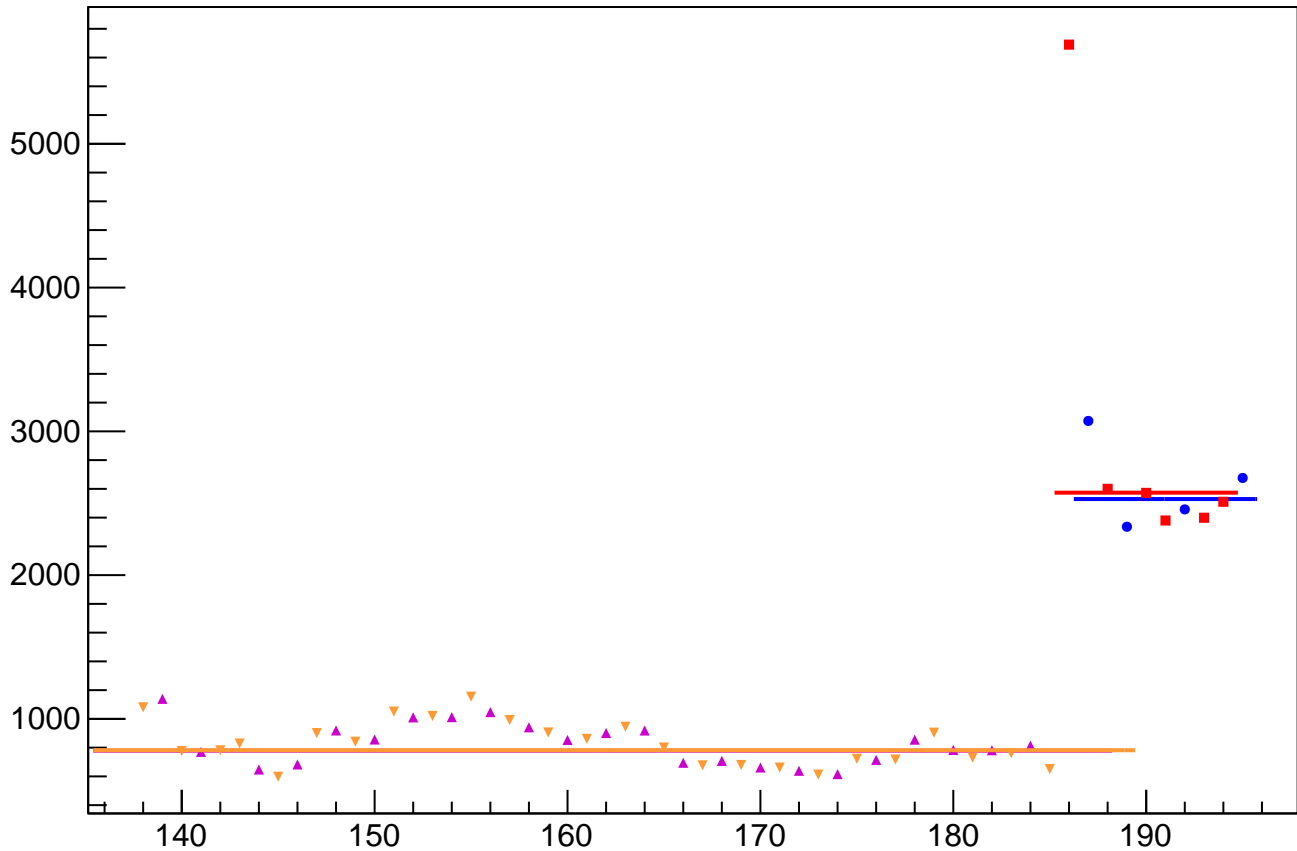
Left In:  $-161.076 \pm 189.491$   $\chi^2/\text{NDF}: 25.1/22$

+ sign  $-920.782 \pm 184.209$   $\chi^2/\text{NDF}: 64.6/28$

All:  $-564.018 \pm 131.514$   $\chi^2/\text{NDF}: 105.7/57$

- sign  $-193.125 \pm 187.821$   $\chi^2/\text{NDF}: 33.5/28$

# asym\_sam\_3748\_avg\_correction\_rms vs Slug



Right In: 2529.154 $\pm$ 1.180  $\chi^2/\text{NDF}$ : 21687.4/3

Left Out: 782.042 $\pm$ 0.131  $\chi^2/\text{NDF}$ : 1130984.3/24

Right Out: 2573.514 $\pm$ 1.003  $\chi^2/\text{NDF}$ : 235236.6/5

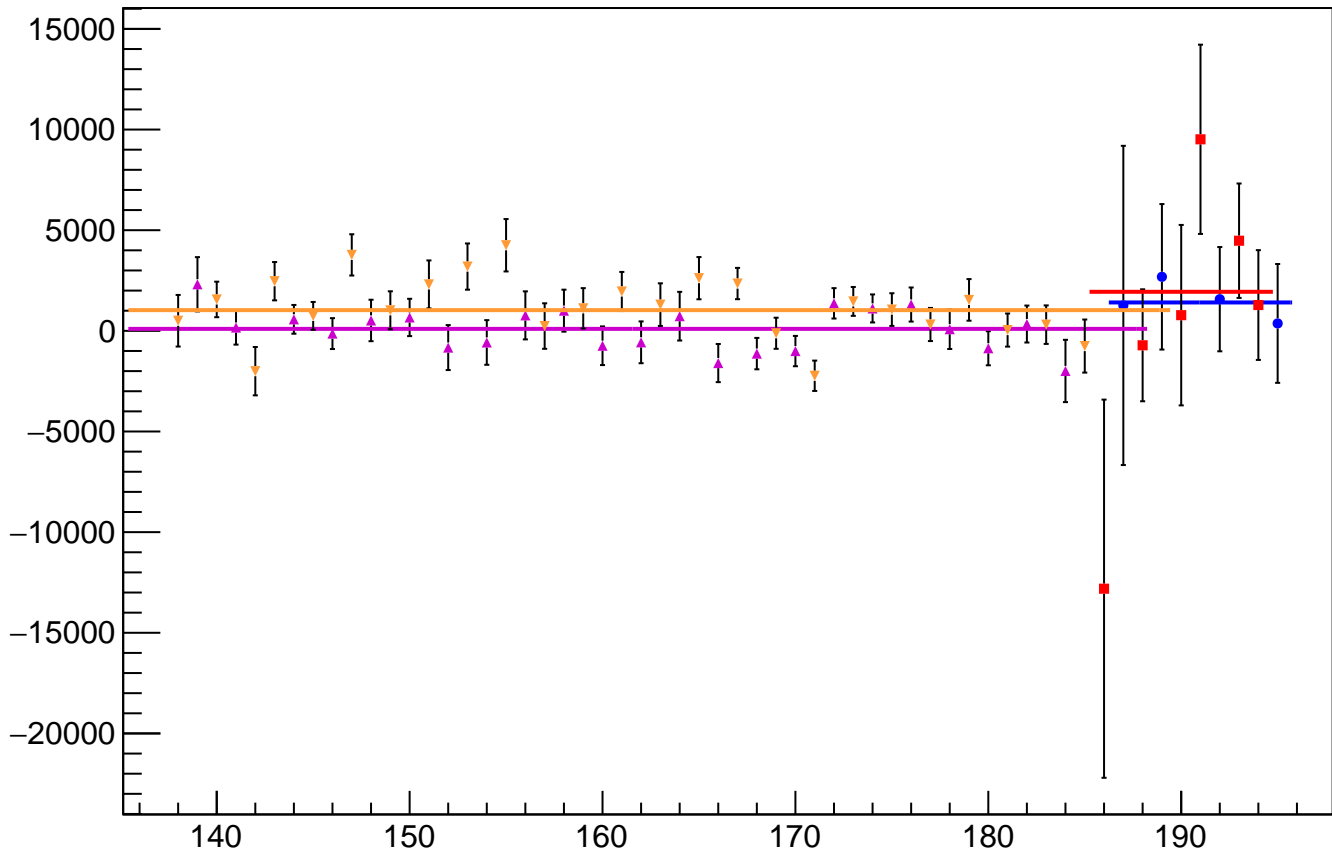
Left In: 778.995 $\pm$ 0.134  $\chi^2/\text{NDF}$ : 980243.4/22

+ sign 803.322 $\pm$ 0.130  $\chi^2/\text{NDF}$ : 3317323.5/28

All: 806.831 $\pm$ 0.093  $\chi^2/\text{NDF}$ : 7681251.4/57

- sign 810.479 $\pm$ 0.133  $\chi^2/\text{NDF}$ : 4362447.9/28

# asym\_sam\_3748\_avg\_mean vs Slug



Right In: 1410.235+/-1675.163  $\chi^2/\text{NDF}$ : 0.3/3

Left Out: 1028.864+/-186.810  $\chi^2/\text{NDF}$ :60.2/24

Right Out: 1939.805+/-1422.904  $\chi^2/\text{NDF}$ : 6.9/5

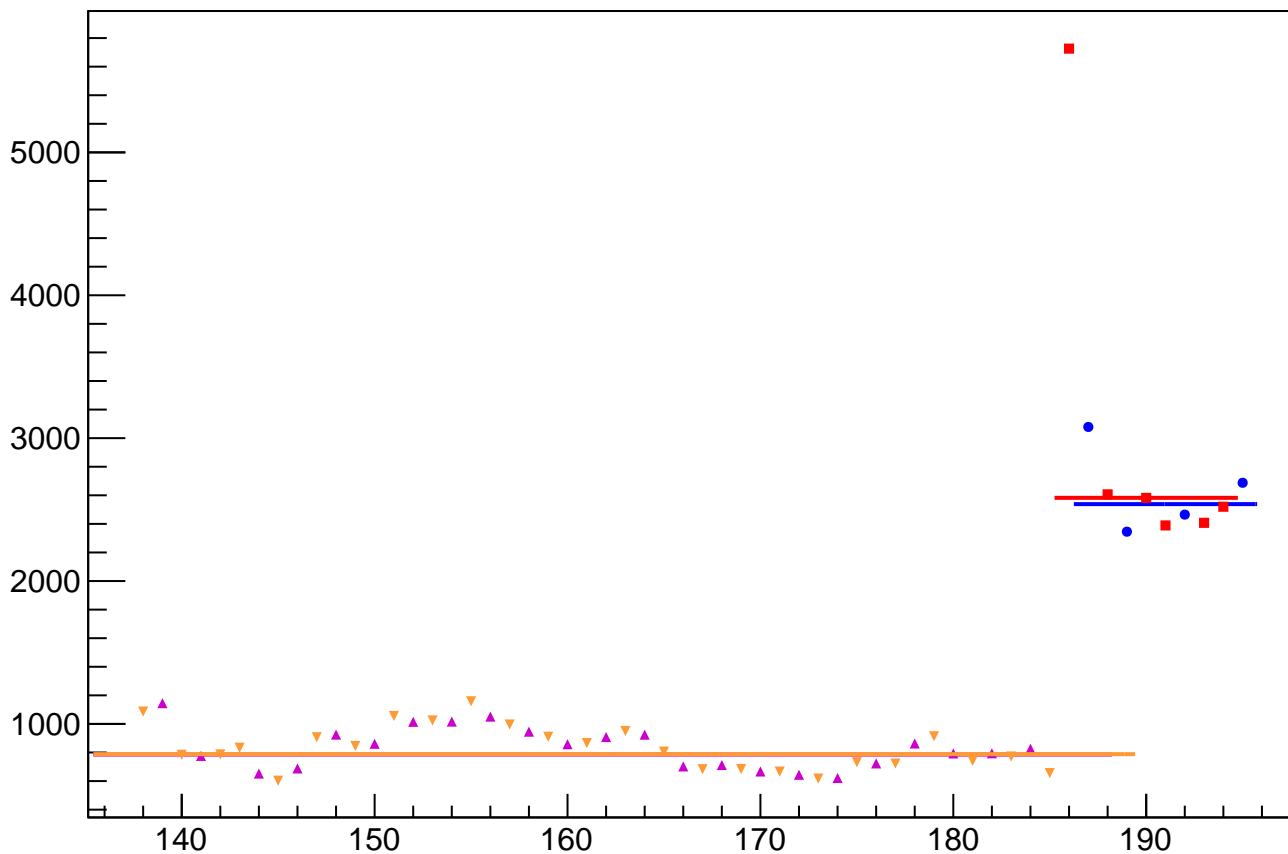
Left In: 98.691+/-191.027  $\chi^2/\text{NDF}$ :25.4/22

+ sign 1033.548+/-185.659  $\chi^2/\text{NDF}$ : 60.5/28

All: 591.245+/-132.559  $\chi^2/\text{NDF}$ : 106.0/57

- sign 131.287+/-189.328  $\chi^2/\text{NDF}$ : 33.9/28

# asym\_sam\_3748\_avg\_rms vs Slug



Right In: 2538.344+/-1.185  $\chi^2/\text{NDF}$ : 21708.0/3

Left Out: 788.442+/-0.132  $\chi^2/\text{NDF}$ : 1113741.6/24

Right Out: 2582.338+/-1.006  $\chi^2/\text{NDF}$ : 236174.6/5

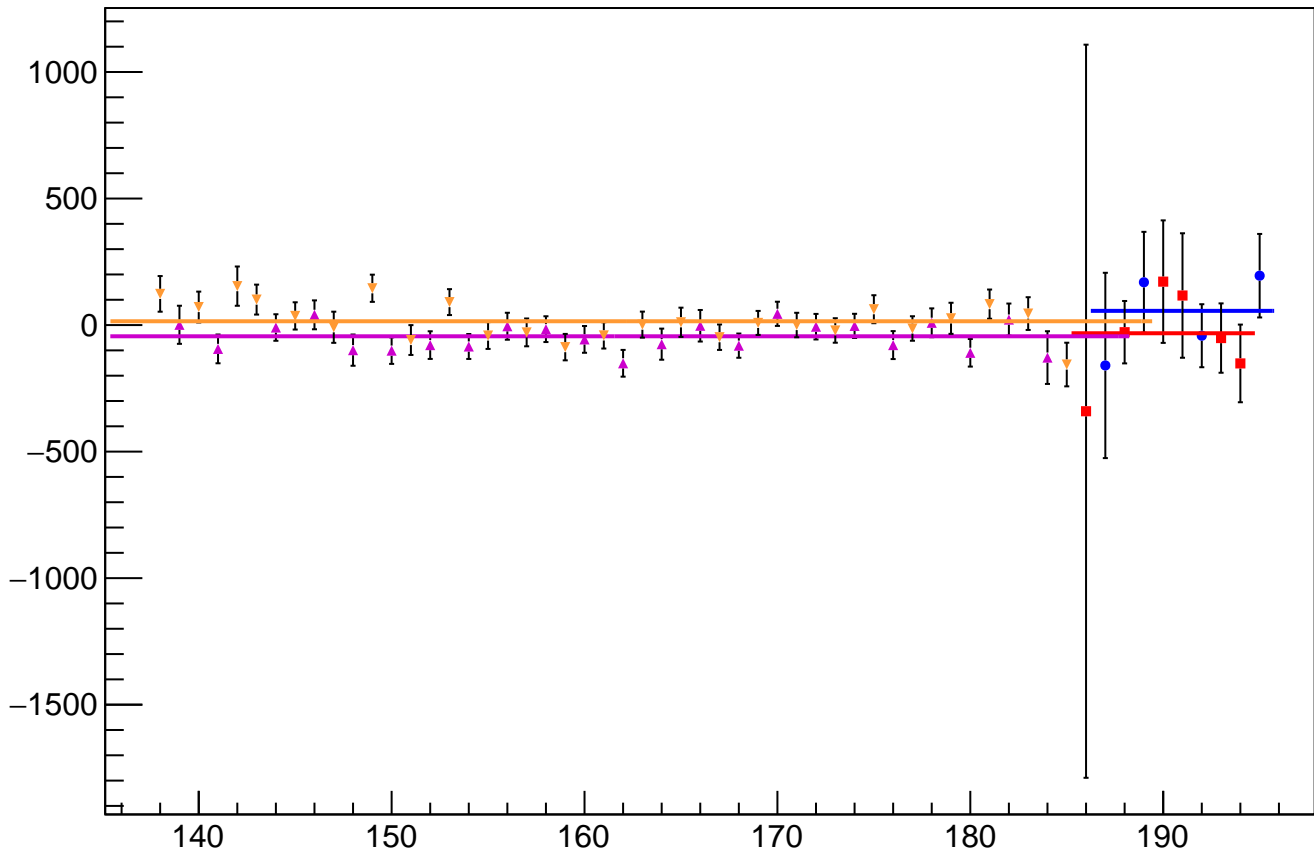
Left In: 785.490+/-0.135  $\chi^2/\text{NDF}$ : 965338.9/22

+ sign 809.937+/-0.131  $\chi^2/\text{NDF}$ : 3291088.5/28

All: 813.548+/-0.094  $\chi^2/\text{NDF}$ : 7627026.7/57

- sign 817.302+/-0.134  $\chi^2/\text{NDF}$ : 4334395.0/28

# reg\_asym\_sam\_1526\_avg\_mean vs Slug



Right In:  $56.179 \pm 86.414$   $\chi^2/\text{NDF}: 2.0/3$

Left Out:  $15.099 \pm 11.154$   $\chi^2/\text{NDF}: 34.2/24$

Right Out:  $-32.314 \pm 71.505$   $\chi^2/\text{NDF}: 1.7/5$

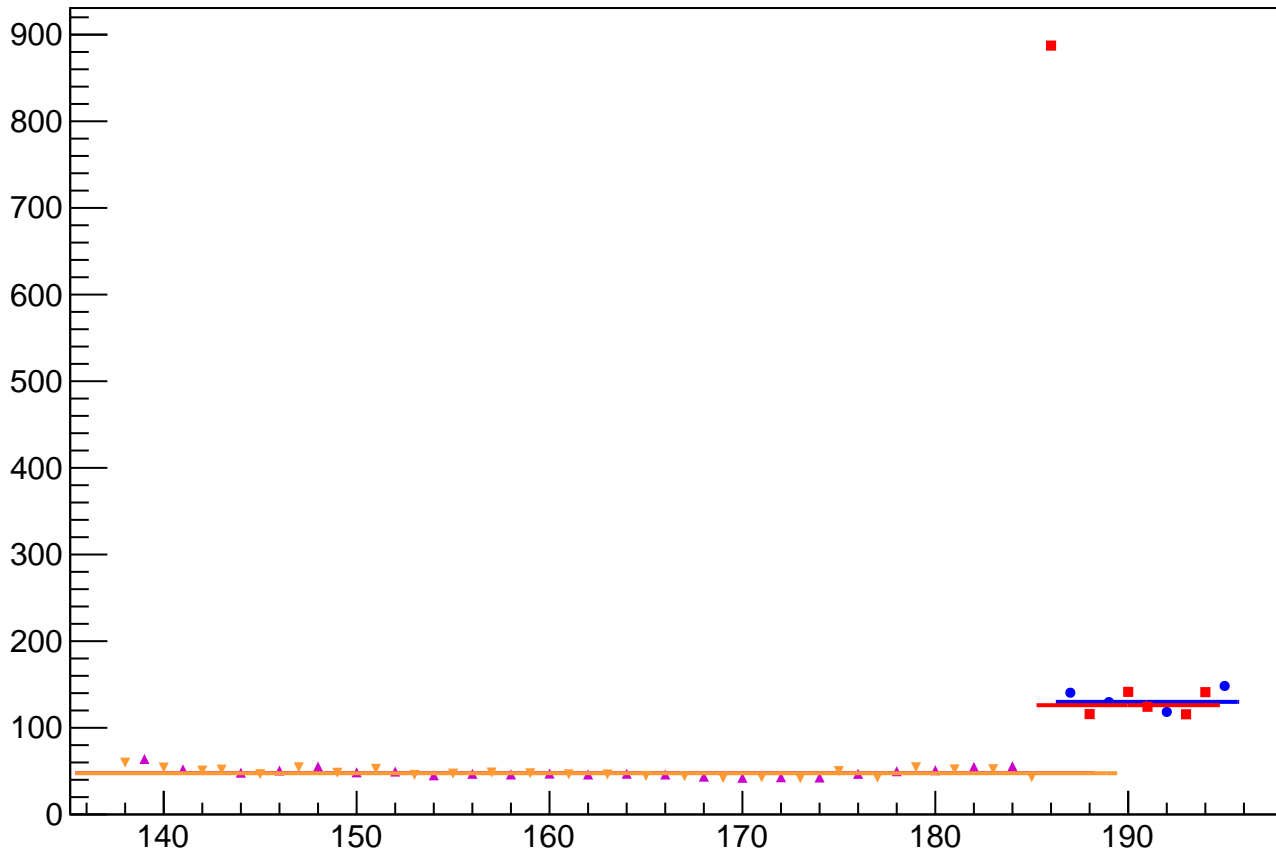
Left In:  $-44.297 \pm 11.530$   $\chi^2/\text{NDF}: 22.3/22$

+ sign  $15.772 \pm 11.062$   $\chi^2/\text{NDF}: 36.4/28$

All:  $-13.258 \pm 7.933$   $\chi^2/\text{NDF}: 74.7/57$

- sign  $-43.994 \pm 11.383$   $\chi^2/\text{NDF}: 24.1/28$

# reg\_asym\_sam\_1526\_avg\_rms vs Slug



Right In: 129.934 $\pm$ 0.061  $\chi^2$ /NDF: 43852.9/3

Left Out: 47.586 $\pm$ 0.008  $\chi^2$ /NDF:312874.8/24

Right Out: 126.094 $\pm$ 0.051  $\chi^2$ /NDF: 605569.3/5

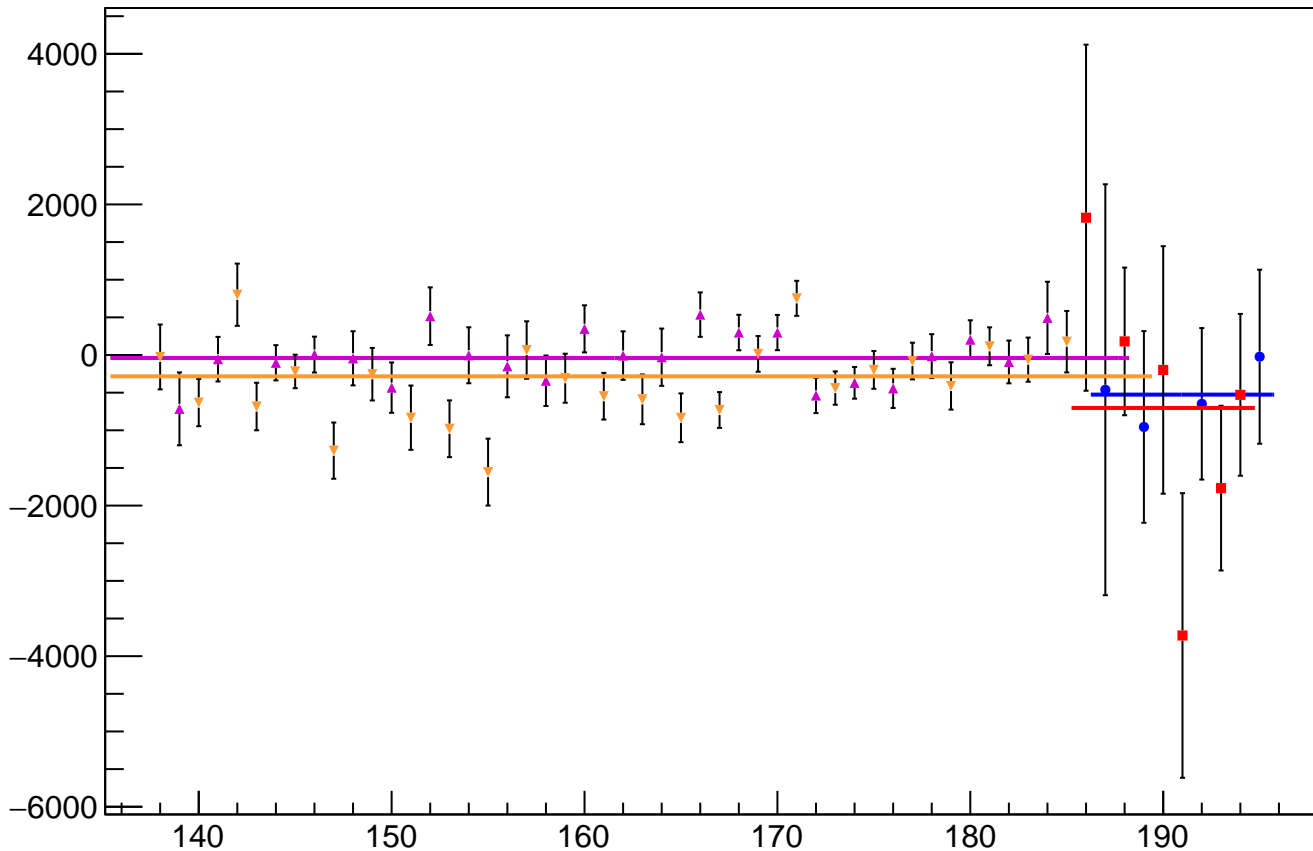
Left In: 47.846 $\pm$ 0.008  $\chi^2$ /NDF:281790.1/22

+ sign 48.936 $\pm$ 0.008  $\chi^2$ /NDF: 2143161.8/28

All: 49.370 $\pm$ 0.006  $\chi^2$ /NDF: 5371144.4/57

- sign 49.829 $\pm$ 0.008  $\chi^2$ /NDF: 3221650.4/28

# asym\_sam\_1526\_avg\_correction\_mean vs Slug



Right In:  $-525.949 \pm 633.993$   $\chi^2/\text{NDF}$ : 0.3/3

Left Out:  $-282.798 \pm 59.690$   $\chi^2/\text{NDF}$ : 66.5/24

Right Out:  $-703.124 \pm 528.466$   $\chi^2/\text{NDF}$ : 5.6/5

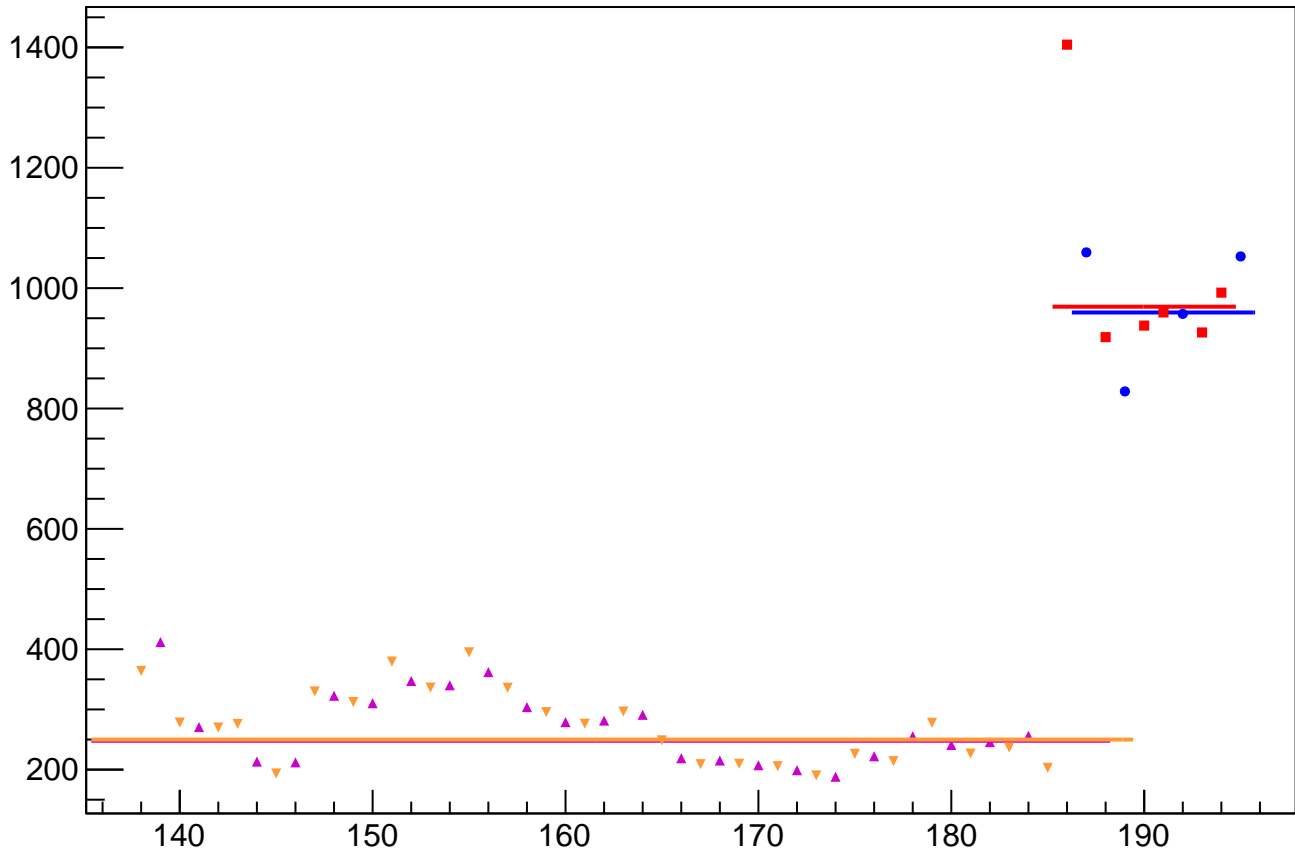
Left In:  $-39.432 \pm 60.759$   $\chi^2/\text{NDF}$ : 27.5/22

+ sign  $-284.935 \pm 59.427$   $\chi^2/\text{NDF}$ : 67.0/28

All:  $-168.359 \pm 42.348$   $\chi^2/\text{NDF}$ : 109.5/57

- sign  $-48.090 \pm 60.361$   $\chi^2/\text{NDF}$ : 34.7/28

# asym\_sam\_1526\_avg\_correction\_rms vs Slug



Right In: 959.529 $\pm$ 0.448  $\chi^2$ /NDF: 36896.1/3

Left Out: 249.956 $\pm$ 0.042  $\chi^2$ /NDF: 1614205.9/24

Right Out: 969.172 $\pm$ 0.374  $\chi^2$ /NDF: 81887.7/5

Left In: 247.917 $\pm$ 0.043  $\chi^2$ /NDF: 1410847.5/22

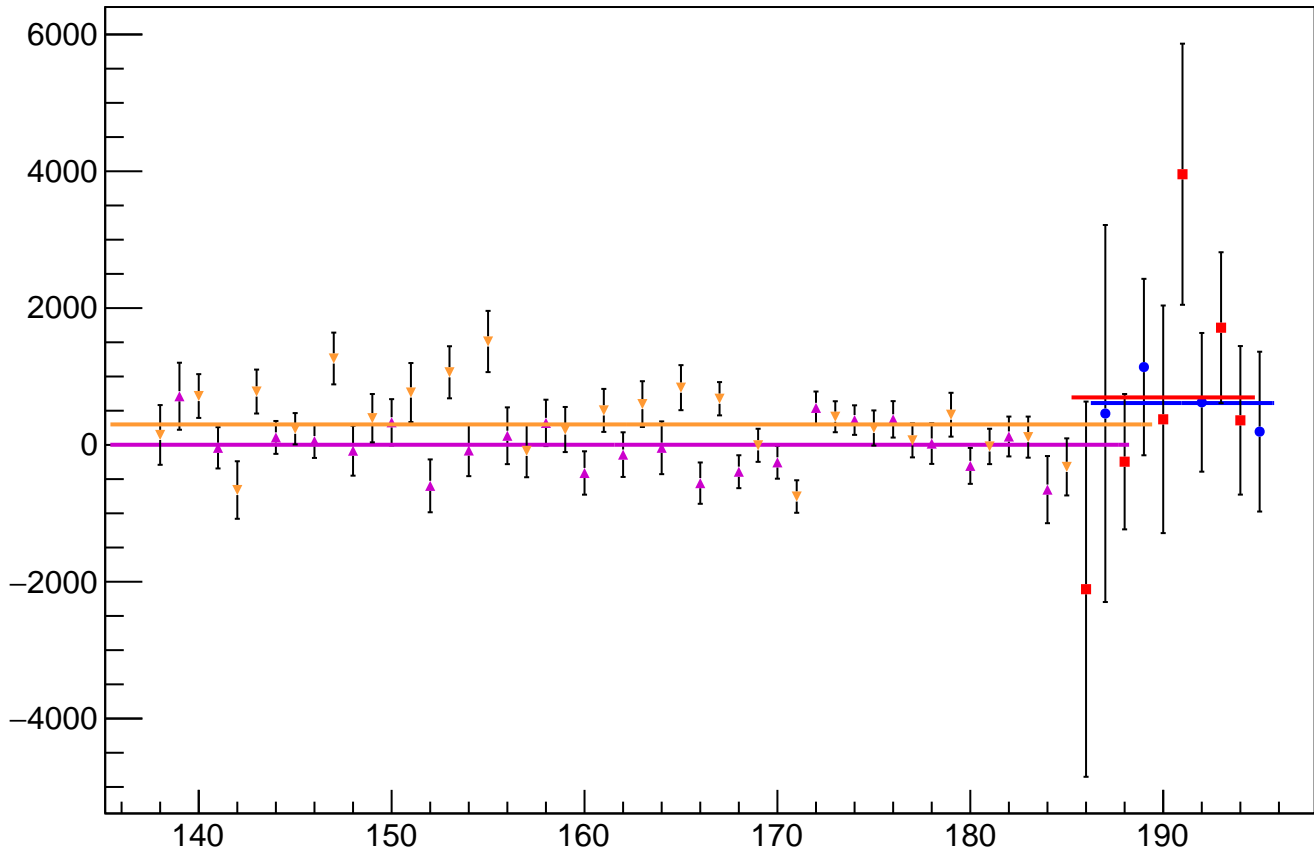
+ sign 256.191 $\pm$ 0.042  $\chi^2$ /NDF: 4134361.7/28

All: 256.750 $\pm$ 0.030  $\chi^2$ /NDF: 9304258.4/57

- sign 257.327 $\pm$ 0.043  $\chi^2$ /NDF: 5169537.2/28



# asym\_sam\_1526\_avg\_mean vs Slug



Right In:  $612.105 \pm 640.355$   $\chi^2/\text{NDF}: 0.3/3$

Left Out:  $299.562 \pm 60.860$   $\chi^2/\text{NDF}: 62.5/24$

Right Out:  $694.499 \pm 537.549$   $\chi^2/\text{NDF}: 5.9/5$

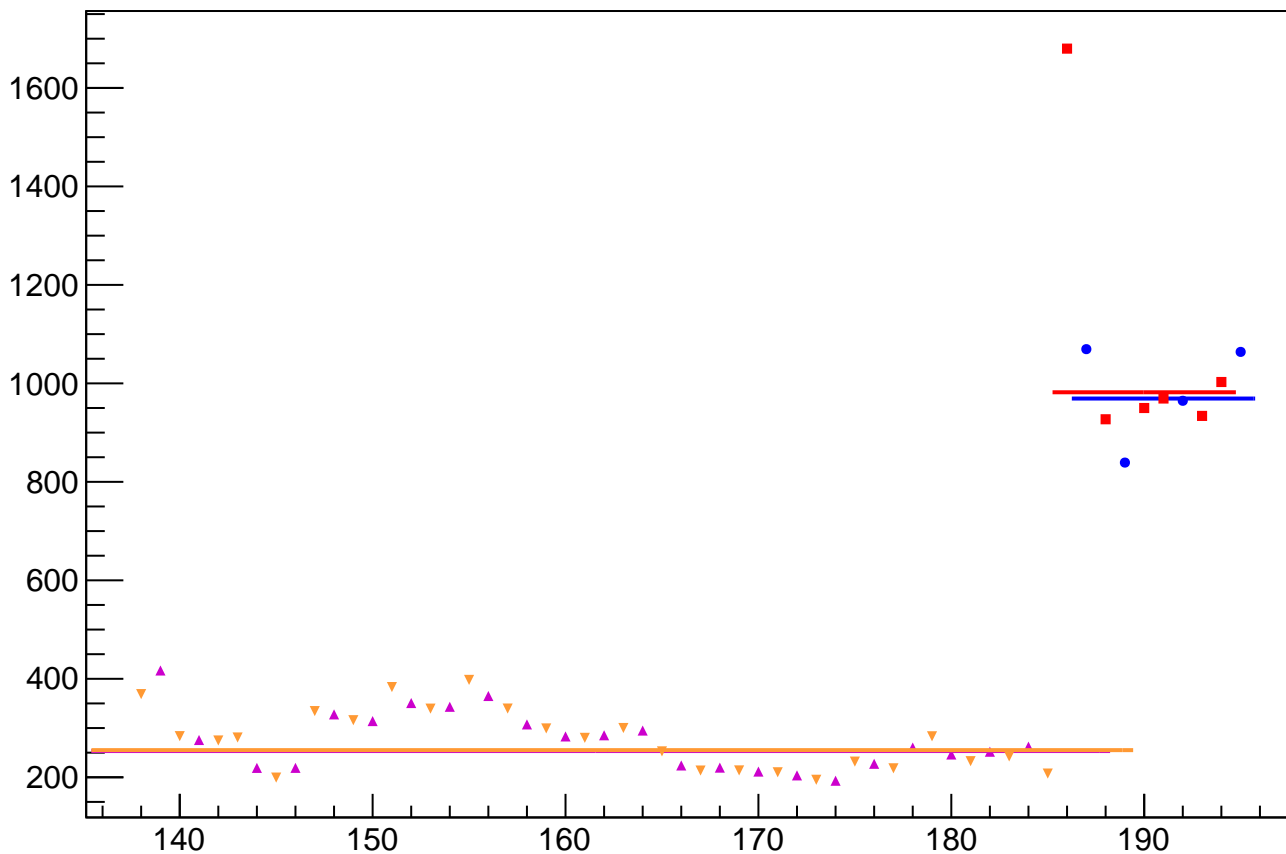
Left In:  $2.185 \pm 62.005$   $\chi^2/\text{NDF}: 29.2/22$

+ sign  $302.360 \pm 60.587$   $\chi^2/\text{NDF}: 63.0/28$

All:  $159.223 \pm 43.194$   $\chi^2/\text{NDF}: 111.0/57$

- sign  $11.275 \pm 61.596$   $\chi^2/\text{NDF}: 36.7/28$

# asym\_sam\_1526\_avg\_rms vs Slug



Right In: 969.190 $\pm$ 0.453  $\chi^2$ /NDF: 36194.3/3

Left Out: 255.135 $\pm$ 0.043  $\chi^2$ /NDF: 1542039.5/24

Right Out: 981.920 $\pm$ 0.380  $\chi^2$ /NDF: 141024.3/5

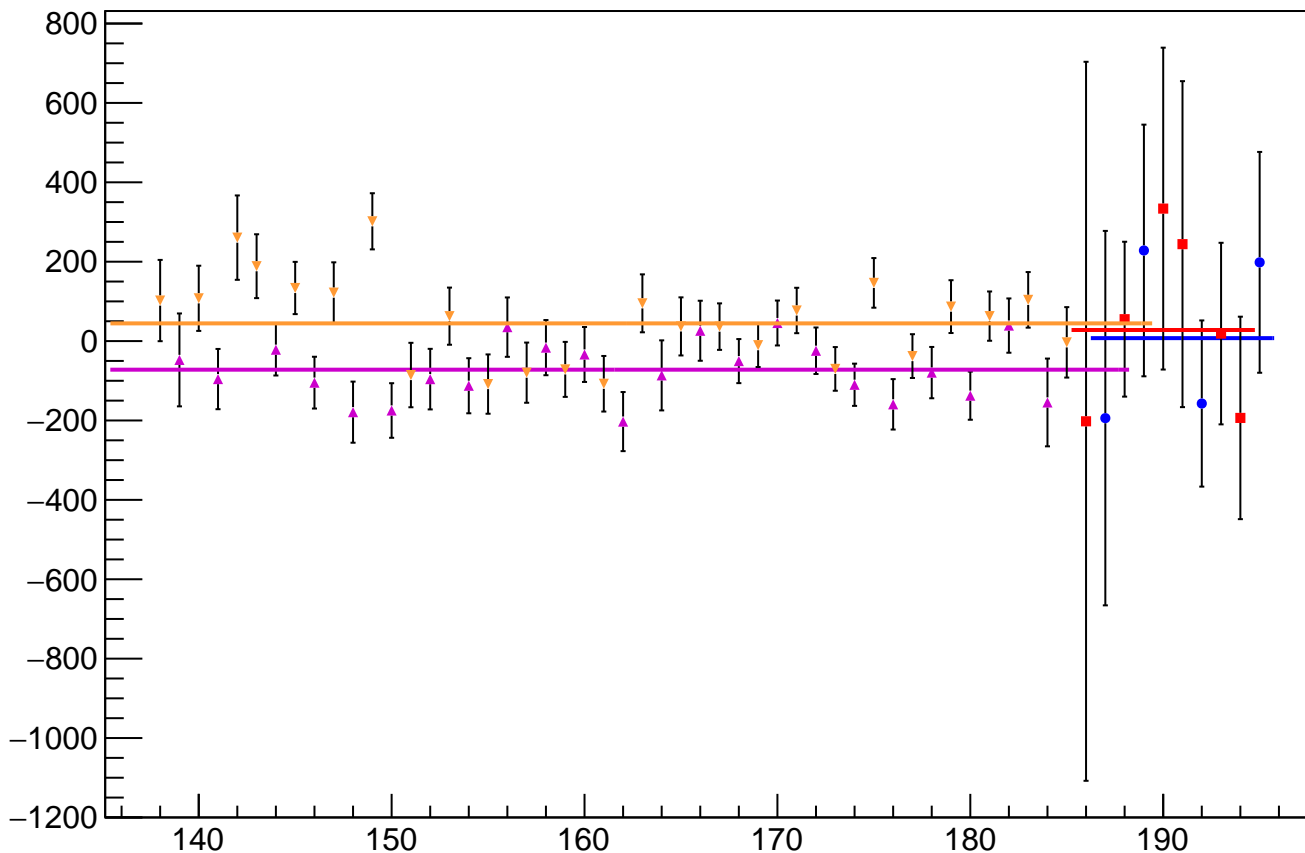
Left In: 253.287 $\pm$ 0.044  $\chi^2$ /NDF: 1341662.3/22

+ sign 261.527 $\pm$ 0.043  $\chi^2$ /NDF: 4042834.8/28

All: 262.180 $\pm$ 0.031  $\chi^2$ /NDF: 9152353.7/57

- sign 262.855 $\pm$ 0.044  $\chi^2$ /NDF: 5109047.0/28

# reg\_asym\_sam\_3726\_avg\_mean vs Slug



Right In: 7.426+/-141.150  $\chi^2/\text{NDF}$ : 1.8/3

Left Out: 44.602+/-13.824  $\chi^2/\text{NDF}$ : 53.9/24

Right Out: 27.941+/-116.247  $\chi^2/\text{NDF}$ : 1.7/5

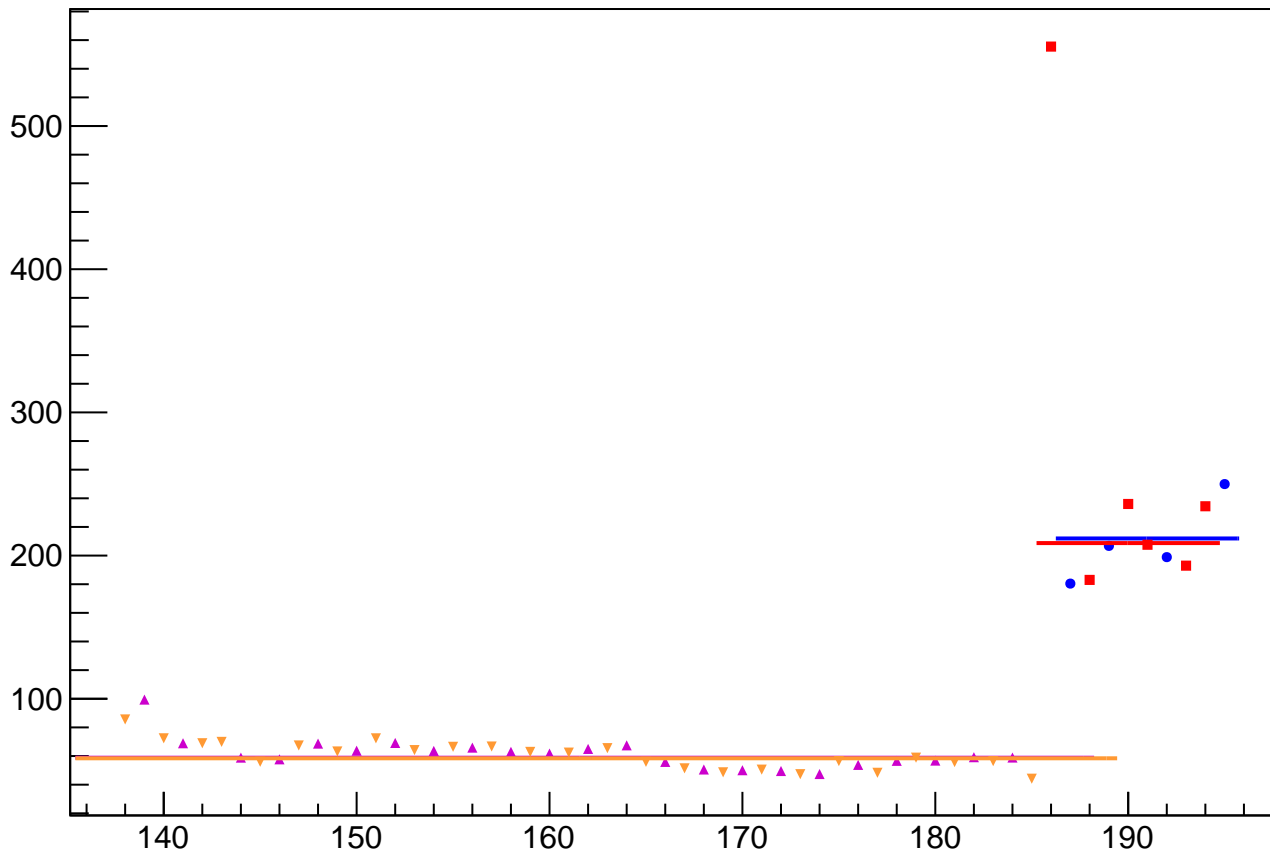
Left In: -72.037+/-14.296  $\chi^2/\text{NDF}$ : 25.3/22

+ sign 44.249+/-13.758  $\chi^2/\text{NDF}$ : 55.7/28

All: -11.379+/-9.878  $\chi^2/\text{NDF}$ : 117.2/57

- sign -70.547+/-14.189  $\chi^2/\text{NDF}$ : 27.7/28

# reg\_asym\_sam\_3726\_avg\_rms vs Slug



Right In: 211.955+/-0.100  $\chi^2/\text{NDF}$ : 54523.1/3

Left Out: 58.423+/-0.010  $\chi^2/\text{NDF}$ : 790091.3/24

Right Out: 208.733+/-0.082  $\chi^2/\text{NDF}$ : 366859.5/5

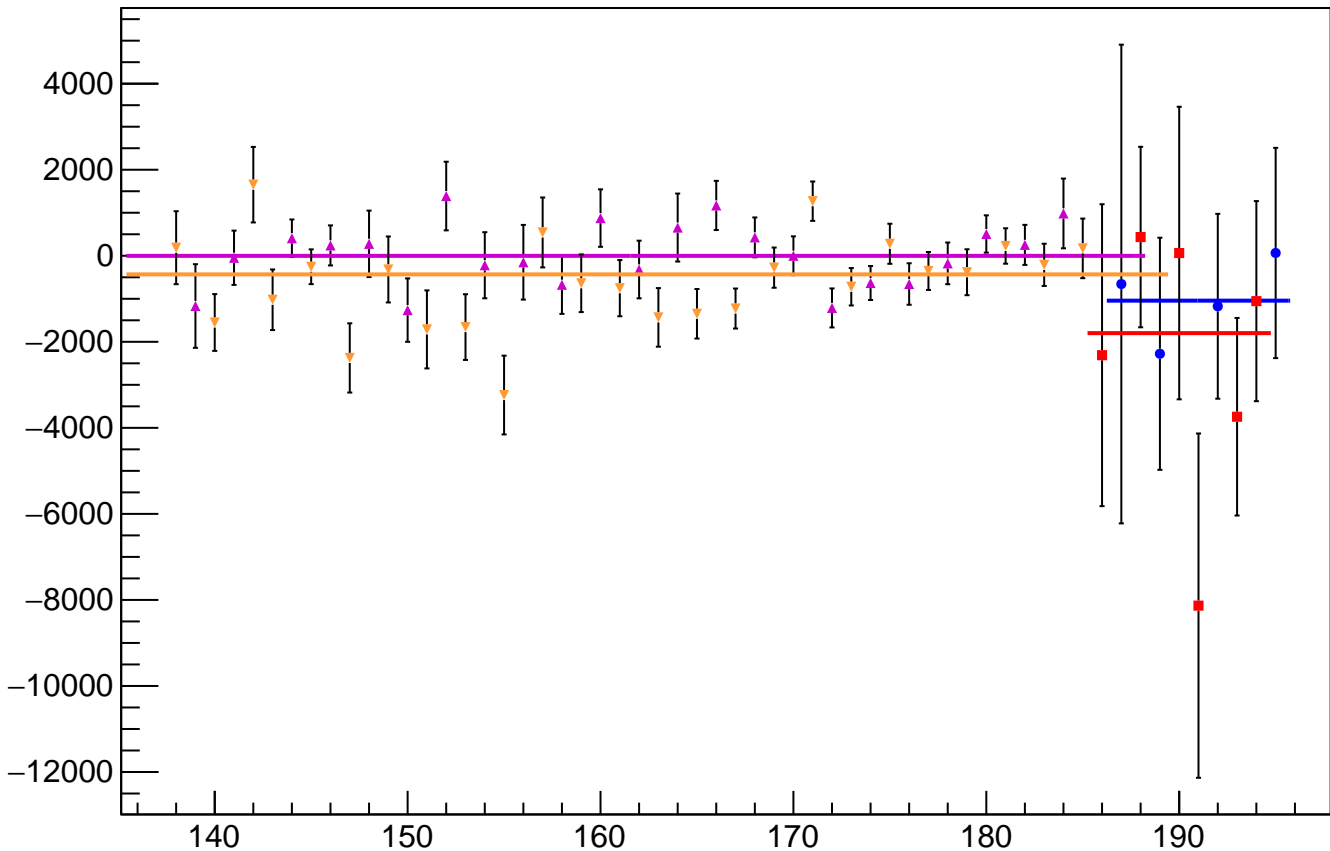
Left In: 58.840+/-0.010  $\chi^2/\text{NDF}$ : 679925.7/22

+ sign 59.882+/-0.010  $\chi^2/\text{NDF}$ : 3188415.5/28

All: 60.459+/-0.007  $\chi^2/\text{NDF}$ : 7518251.1/57

- sign 61.073+/-0.010  $\chi^2/\text{NDF}$ : 4322566.9/28

# asym\_sam\_3726\_avg\_correction\_mean vs Slug



Right In:  $-1043.329 \pm 1343.755$   $\chi^2/\text{NDF}: 0.4/3$

Left Out:  $-432.330 \pm 114.408$   $\chi^2/\text{NDF}: 59.4/24$

Right Out:  $-1797.969 \pm 1096.437$   $\chi^2/\text{NDF}: 4.8/5$

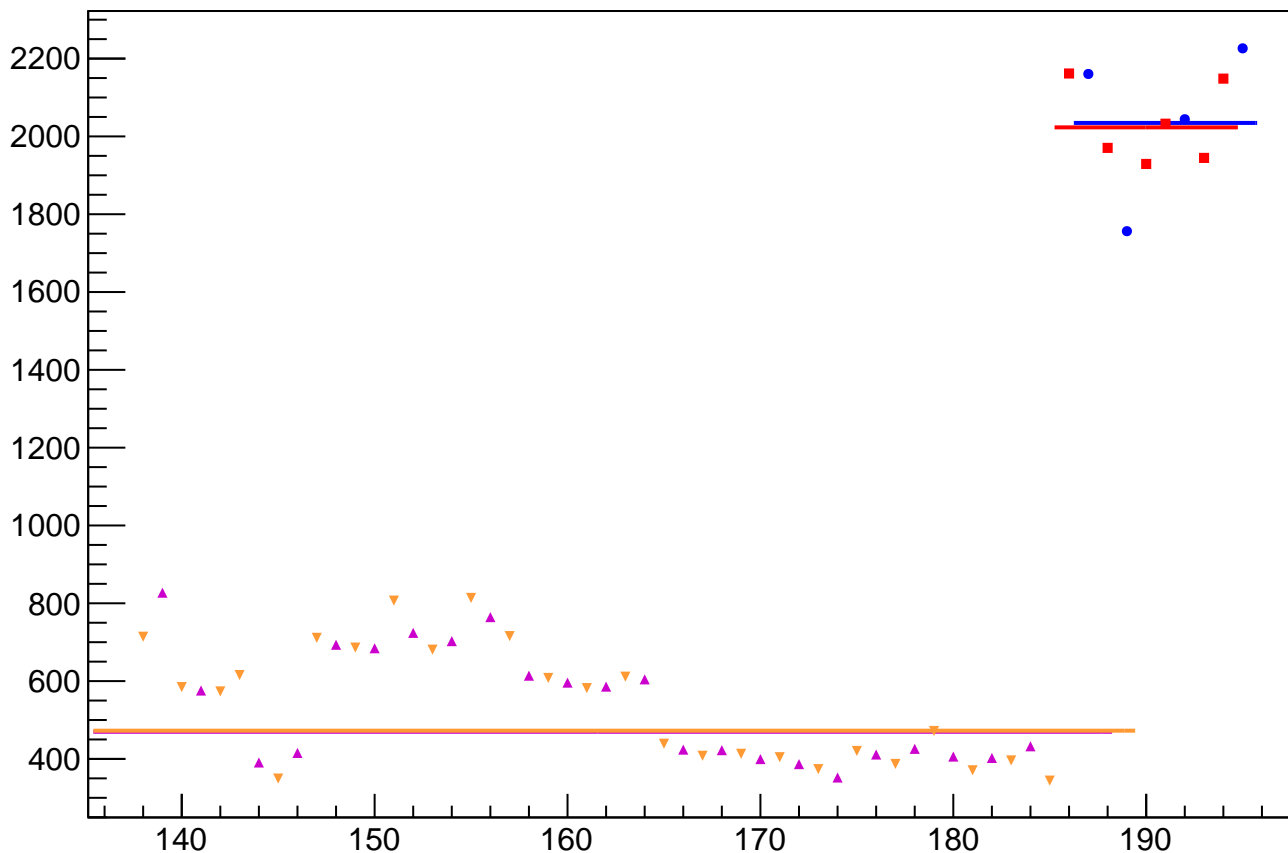
Left In:  $-1.825 \pm 116.459$   $\chi^2/\text{NDF}: 32.3/22$

+ sign  $-436.727 \pm 113.996$   $\chi^2/\text{NDF}: 60.0/28$

All:  $-232.566 \pm 81.240$   $\chi^2/\text{NDF}: 106.3/57$

- sign  $-21.863 \pm 115.807$   $\chi^2/\text{NDF}: 39.7/28$

# asym\_sam\_3726\_avg\_correction\_rms vs Slug



Right In: 2034.643+/-0.950  $\chi^2/\text{NDF}$ : 34642.4/3

Left Out: 472.569+/-0.081  $\chi^2/\text{NDF}$ :2508168.9/24

Right Out: 2023.225+/-0.775  $\chi^2/\text{NDF}$ : 14058.3/5

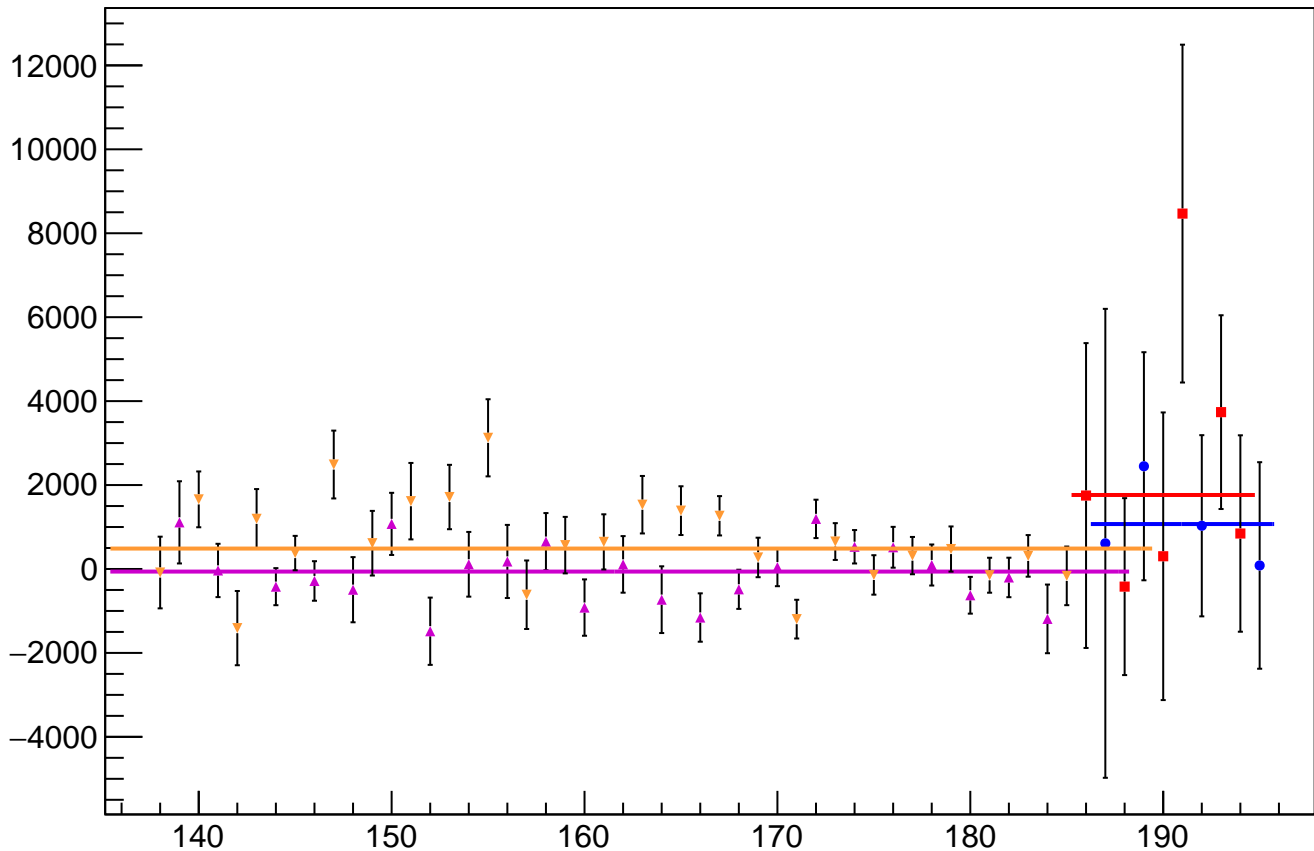
Left In: 469.761+/-0.082  $\chi^2/\text{NDF}$ :2116885.7/22

+ sign 483.811+/-0.081  $\chi^2/\text{NDF}$ : 5226030.3/28

All: 485.425+/-0.057  $\chi^2/\text{NDF}$ : 11327808.6/57

- sign 487.092+/-0.082  $\chi^2/\text{NDF}$ : 6100963.1/28

# asym\_sam\_3726\_avg\_mean vs Slug



Right In: 1070.755+/-1351.852  $\chi^2/\text{NDF}$ : 0.4/3

Left Out: 486.645+/-115.346  $\chi^2/\text{NDF}$ : 56.0/24

Right Out: 1763.253+/-1105.703  $\chi^2/\text{NDF}$ : 4.9/5

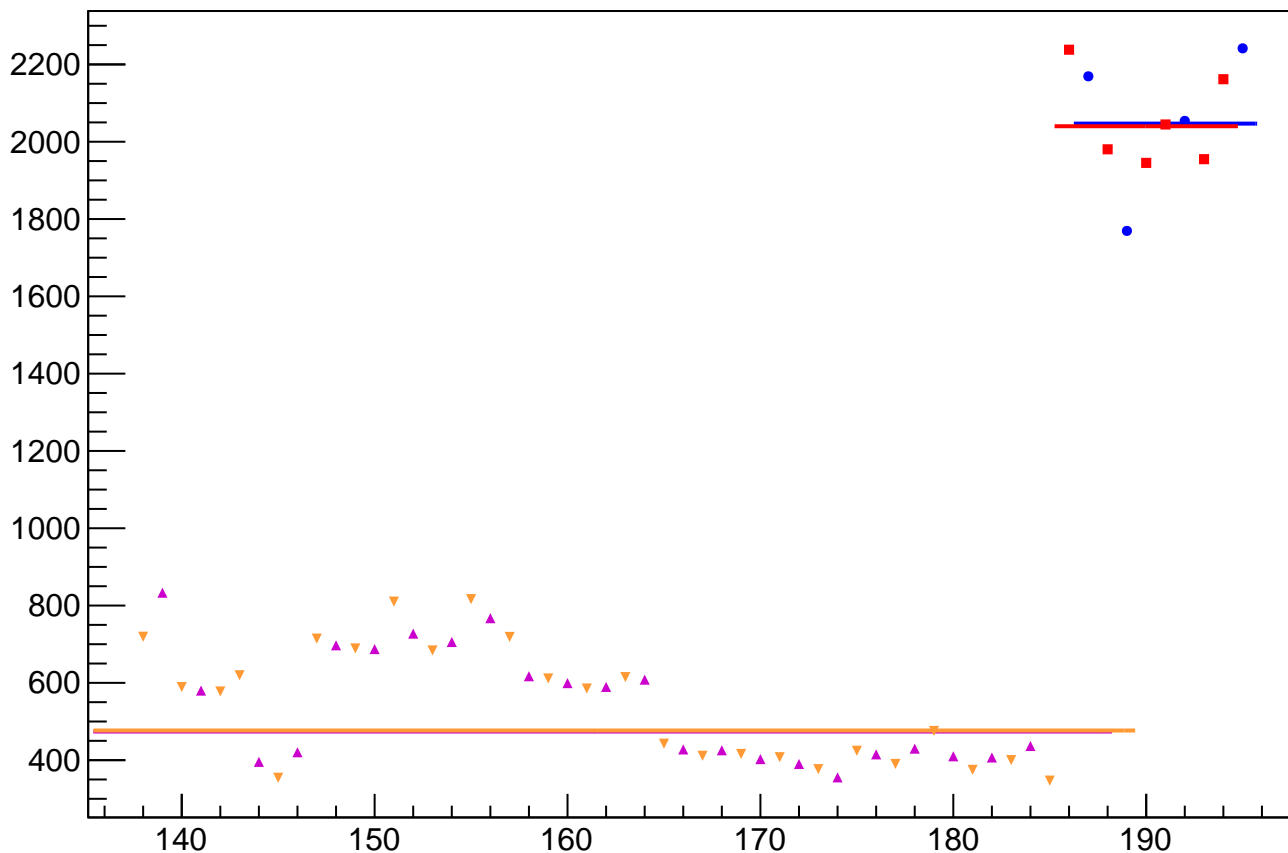
Left In: -61.775+/-117.449  $\chi^2/\text{NDF}$ : 31.2/22

+ sign 490.867+/-114.929  $\chi^2/\text{NDF}$ : 56.6/28

All: 229.007+/-81.918  $\chi^2/\text{NDF}$ : 106.0/57

- sign -41.413+/-116.792  $\chi^2/\text{NDF}$ : 38.8/28

# asym\_sam\_3726\_avg\_rms vs Slug



Right In: 2046.905 $\pm$ 0.956  $\chi^2$ /NDF: 34369.6/3

Left Out: 476.690 $\pm$ 0.082  $\chi^2$ /NDF:2472737.6/24

Right Out: 2040.102 $\pm$ 0.782  $\chi^2$ /NDF: 17213.6/5

Left In: 473.983 $\pm$ 0.083  $\chi^2$ /NDF:2087113.7/22

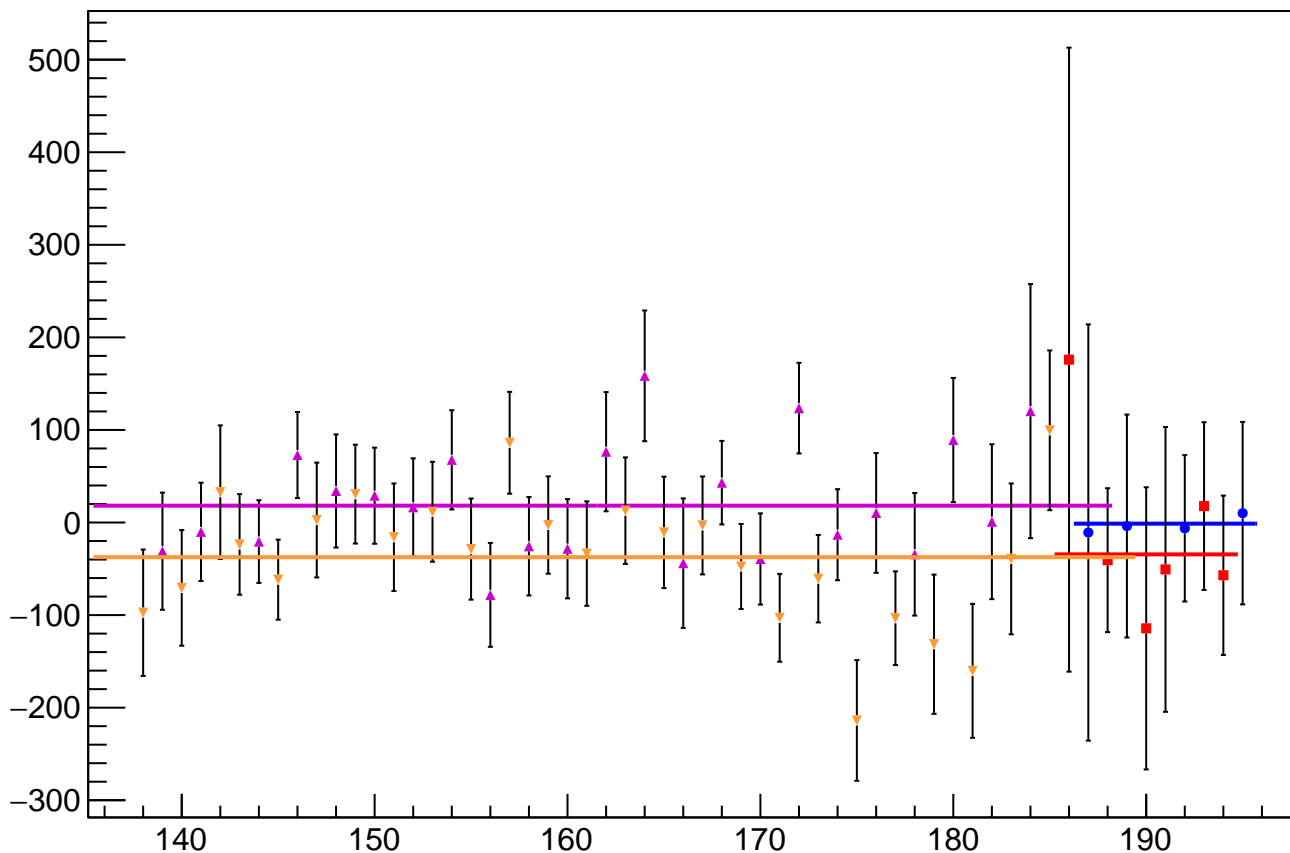
+ sign 488.039 $\pm$ 0.081  $\chi^2$ /NDF: 5185902.2/28

All: 489.720 $\pm$ 0.058  $\chi^2$ /NDF: 11258717.6/57

- sign 491.457 $\pm$ 0.083  $\chi^2$ /NDF: 6071945.3/28



# reg\_asym\_sam\_15\_48\_dd\_mean vs Slug



Right In:  $-1.235 \pm 53.320$   $\chi^2/\text{NDF}: 0.0/3$

Left Out:  $-37.413 \pm 11.390$   $\chi^2/\text{NDF}: 30.5/24$

Right Out:  $-34.427 \pm 44.009$   $\chi^2/\text{NDF}: 1.1/5$

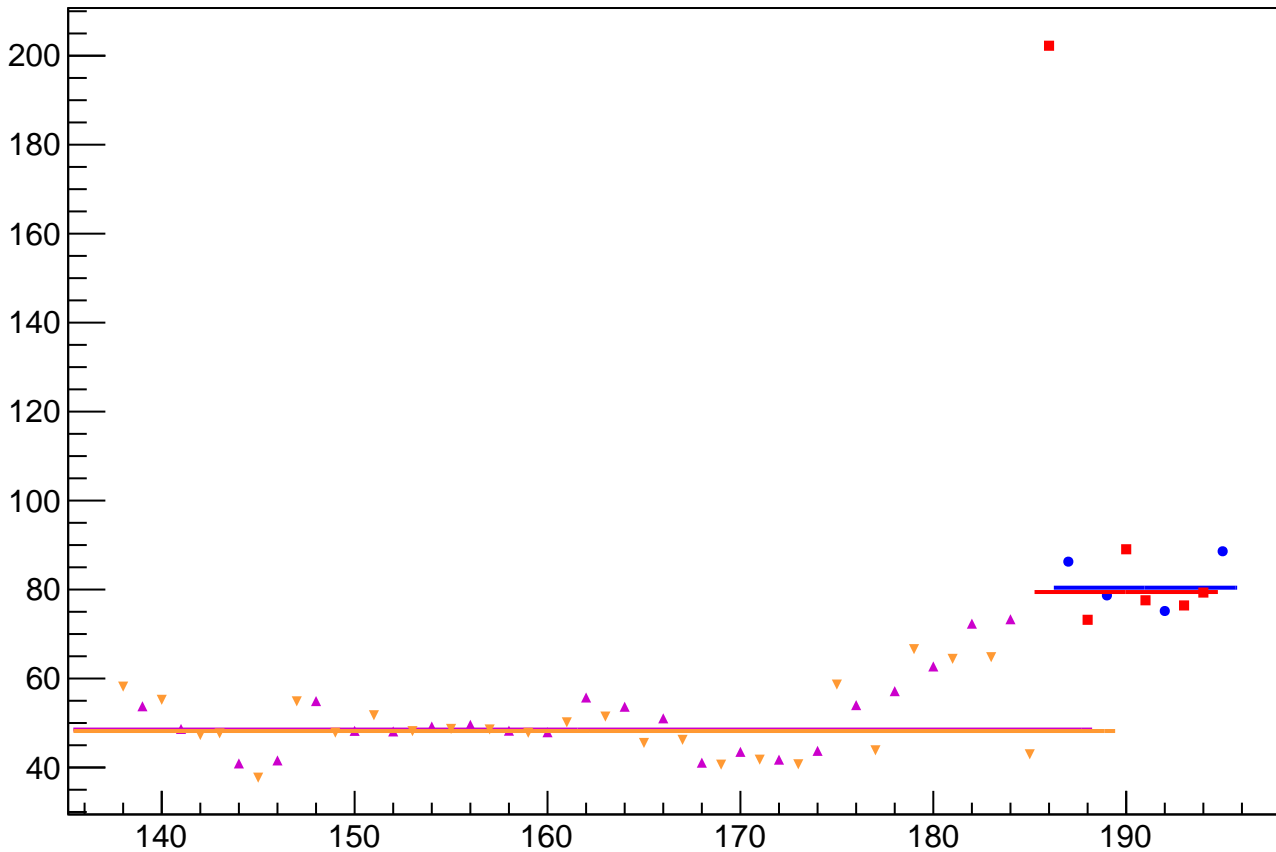
Left In:  $18.210 \pm 11.788$   $\chi^2/\text{NDF}: 23.0/22$

+ sign  $-35.834 \pm 11.138$   $\chi^2/\text{NDF}: 30.9/28$

All:  $-11.130 \pm 7.962$   $\chi^2/\text{NDF}: 66.4/57$

- sign  $14.687 \pm 11.386$   $\chi^2/\text{NDF}: 25.4/28$

# reg\_asym\_sam\_15\_48\_dd\_rms vs Slug



Right In: 80.419+/-0.038  $\chi^2$ /NDF: 24358.8/3

Left Out: 48.200+/-0.008  $\chi^2$ /NDF: 750196.2/24

Right Out: 79.444+/-0.031  $\chi^2$ /NDF: 288885.0/5

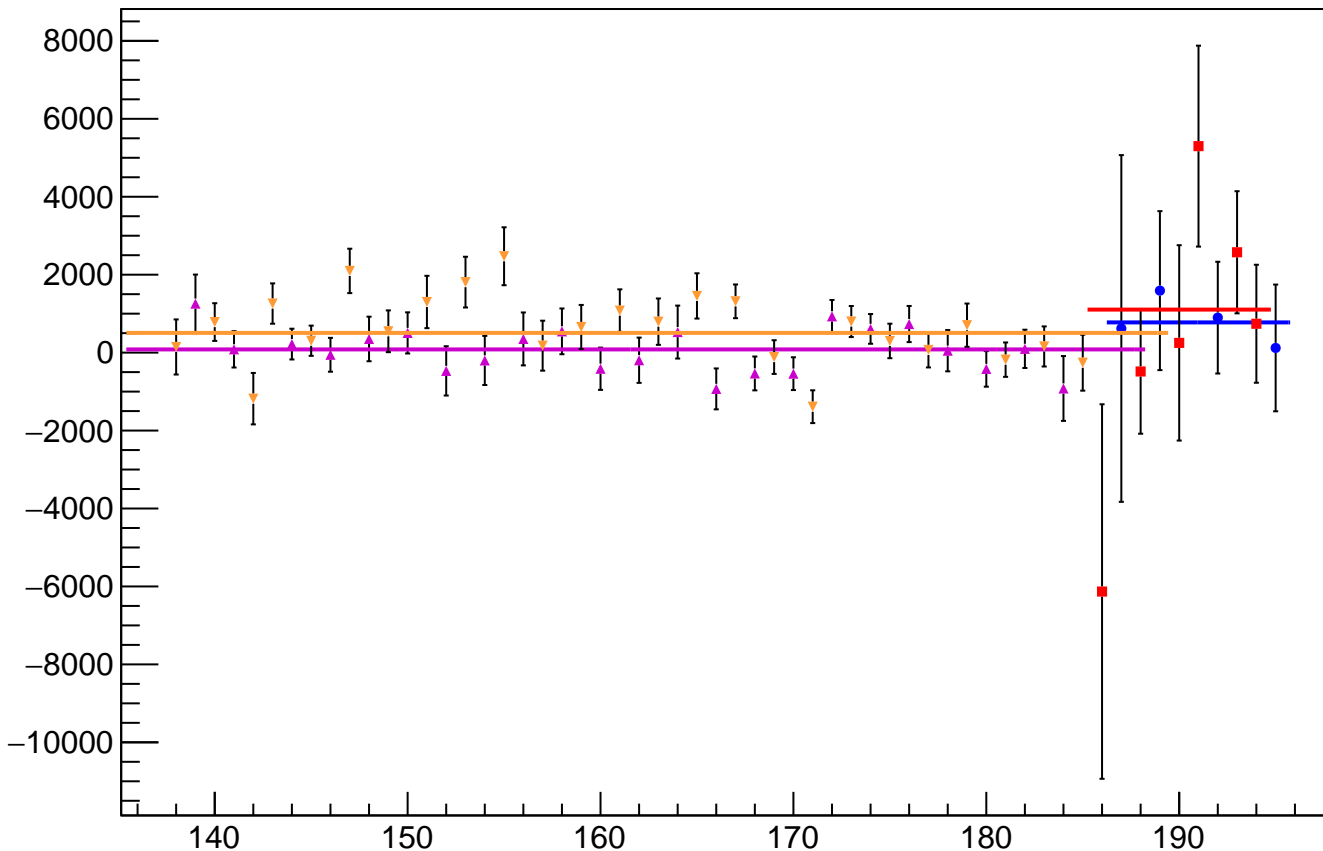
Left In: 48.527+/-0.008  $\chi^2$ /NDF: 675340.8/22

+ sign 49.606+/-0.008  $\chi^2$ /NDF: 1472956.0/28

All: 50.090+/-0.006  $\chi^2$ /NDF: 3365904.5/57

- sign 50.596+/-0.008  $\chi^2$ /NDF: 1885211.2/28

# asym\_sam\_15\_48\_dd\_correction\_mean vs Slug



Right In: 775.451+/-930.257  $\chi^2/\text{NDF}$ : 0.3/3

Left Out: 506.205+/-103.468  $\chi^2/\text{NDF}$ : 65.7/24

Right Out: 1104.343+/-793.514  $\chi^2/\text{NDF}$ : 7.0/5

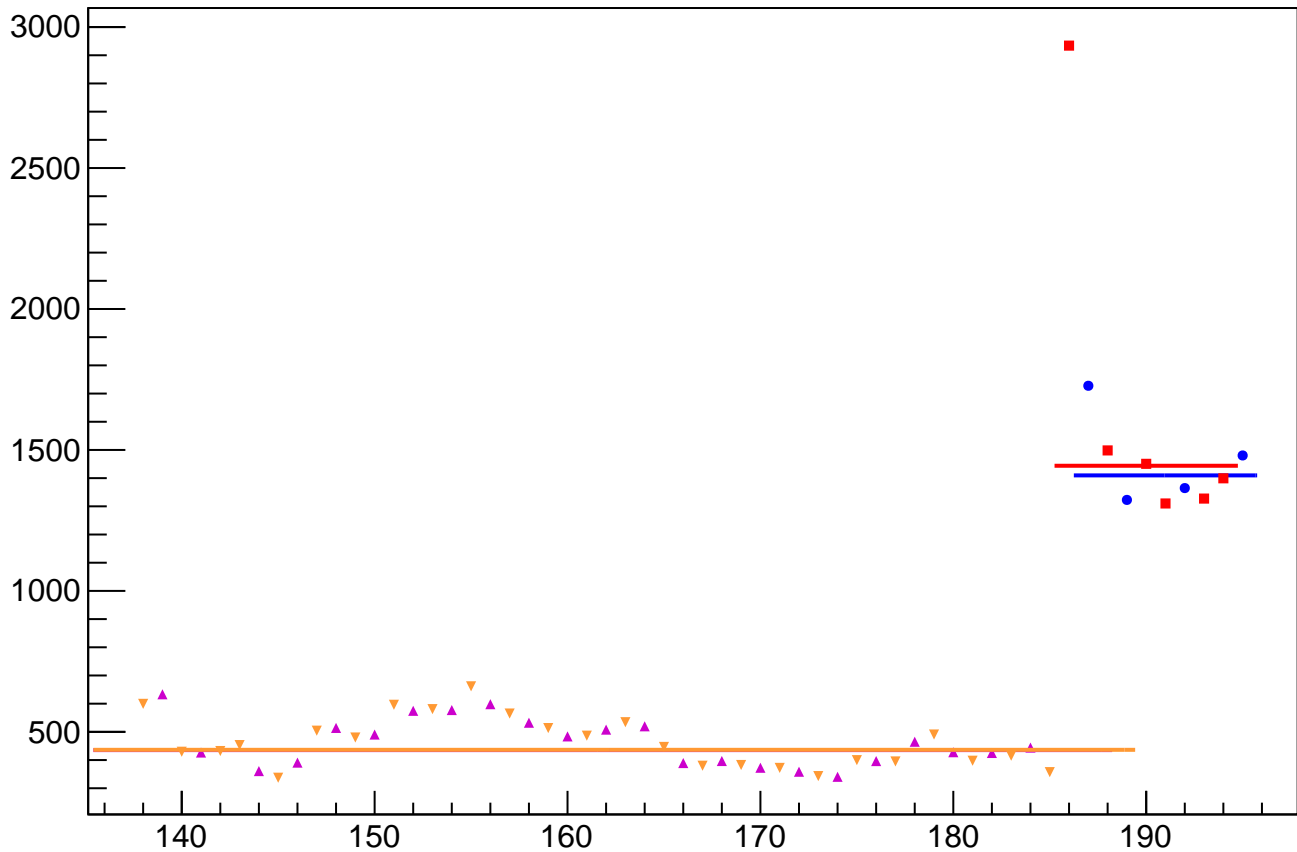
Left In: 82.421+/-105.935  $\chi^2/\text{NDF}$ : 25.3/22

+ sign 509.495+/-102.834  $\chi^2/\text{NDF}$ : 66.1/28

All: 309.177+/-73.470  $\chi^2/\text{NDF}$ : 107.8/57

- sign 100.315+/-105.004  $\chi^2/\text{NDF}$ : 33.9/28

# asym\_sam\_15\_48\_dd\_correction\_rms vs Slug



Right In: 1409.749 $\pm$ 0.658  $\chi^2/\text{NDF}$ : 19598.4/3

Left Out: 436.301 $\pm$ 0.073  $\chi^2/\text{NDF}$ : 1179348.4/24

Right Out: 1443.920 $\pm$ 0.561  $\chi^2/\text{NDF}$ : 212838.6/5

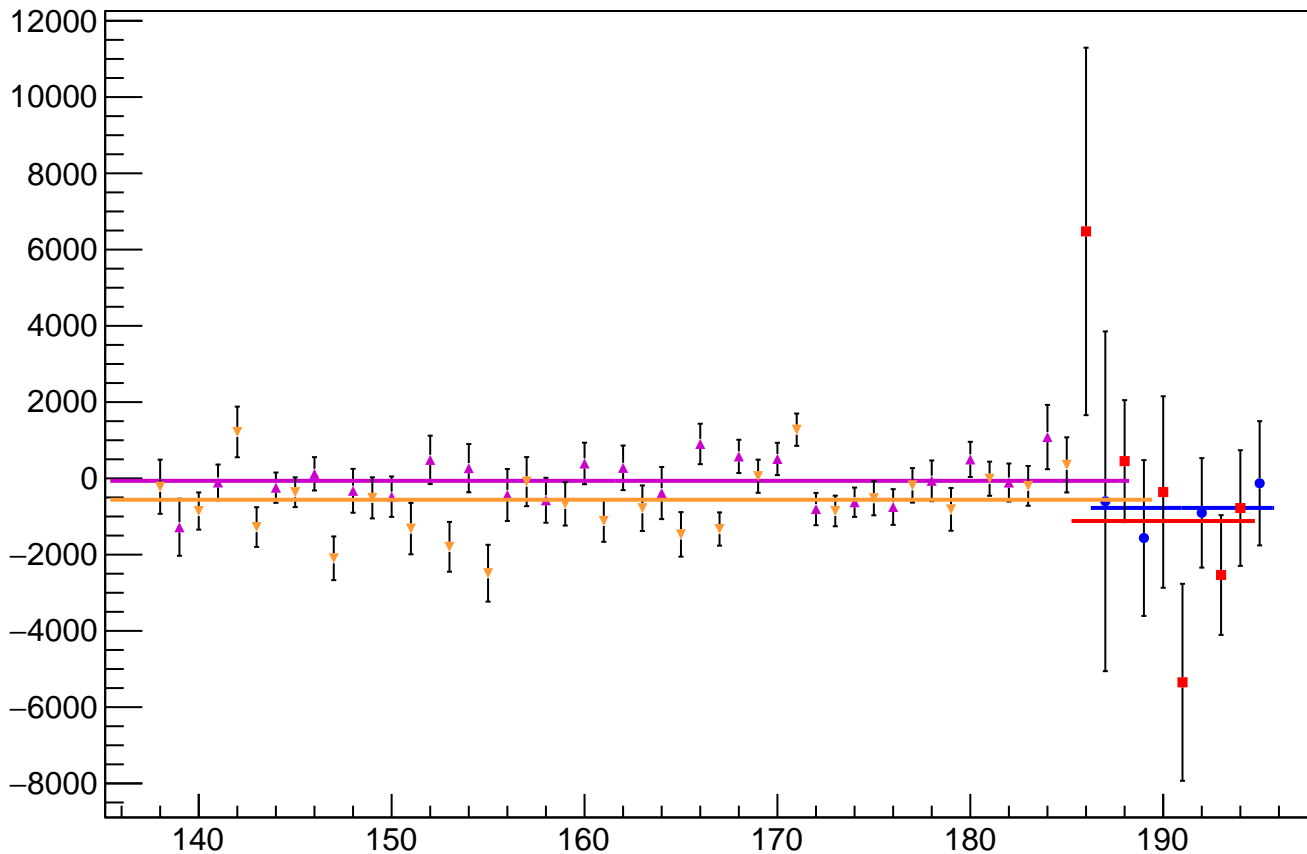
Left In: 435.275 $\pm$ 0.075  $\chi^2/\text{NDF}$ : 1027713.1/22

+ sign 448.197 $\pm$ 0.073  $\chi^2/\text{NDF}$ : 3362207.6/28

All: 450.517 $\pm$ 0.052  $\chi^2/\text{NDF}$ : 7779710.9/57

- sign 452.937 $\pm$ 0.074  $\chi^2/\text{NDF}$ : 4415422.8/28

# asym\_sam\_15\_48\_dd\_mean vs Slug



Right In:  $-774.608 \pm 931.902$   $\chi^2/\text{NDF}$ : 0.3/3

Left Out:  $-560.684 \pm 104.207$   $\chi^2/\text{NDF}$ : 61.8/24

Right Out:  $-1117.680 \pm 794.851$   $\chi^2/\text{NDF}$ : 7.1/5

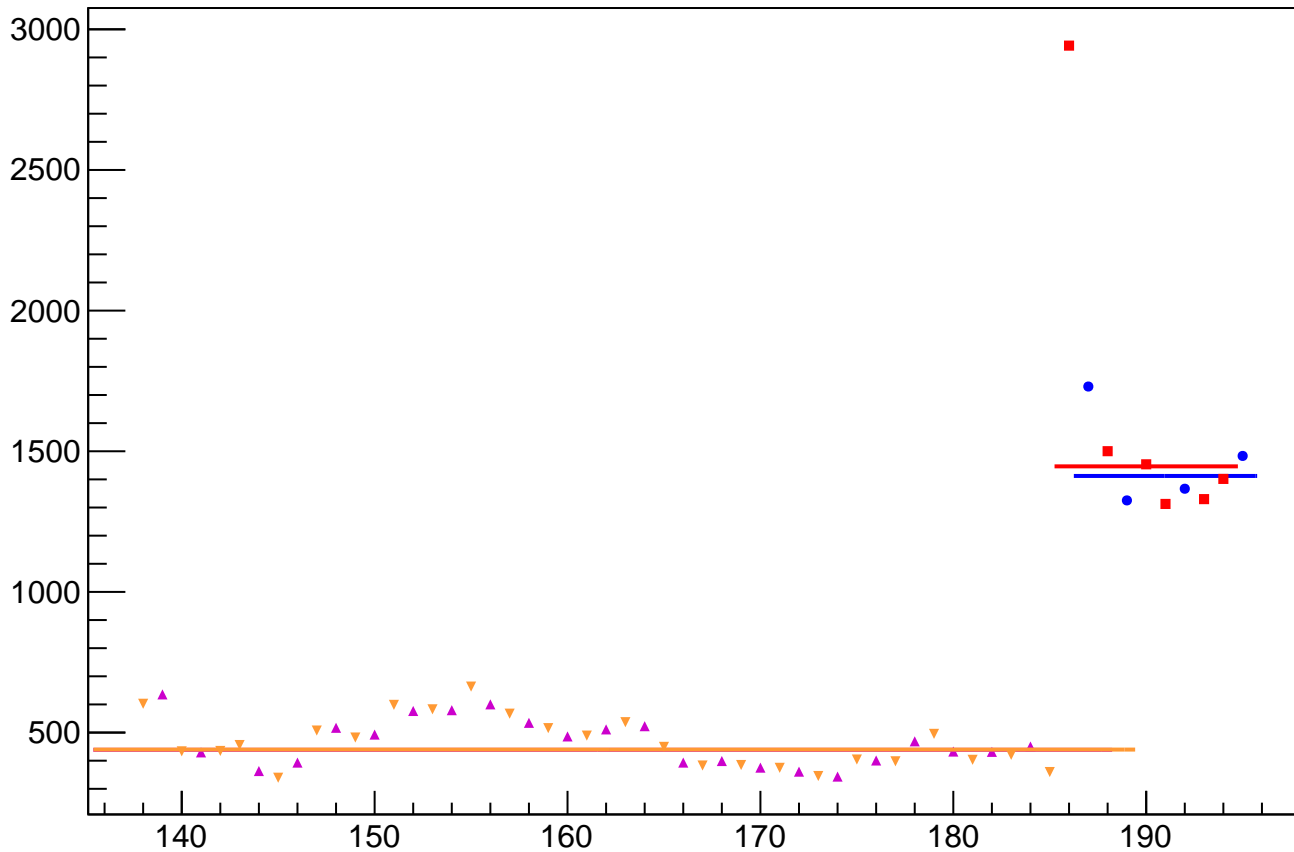
Left In:  $-64.594 \pm 106.708$   $\chi^2/\text{NDF}$ : 25.2/22

+ sign  $-563.326 \pm 103.562$   $\chi^2/\text{NDF}$ : 62.1/28

All:  $-328.320 \pm 73.994$   $\chi^2/\text{NDF}$ : 106.6/57

- sign  $-83.238 \pm 105.759$   $\chi^2/\text{NDF}$ : 34.0/28

# asym\_sam\_15\_48\_dd\_rms vs Slug



Right In: 1412.241+/-0.659  $\chi^2/\text{NDF}$ : 19620.0/3

Left Out: 439.527+/-0.074  $\chi^2/\text{NDF}$ : 1163352.8/24

Right Out: 1446.342+/-0.562  $\chi^2/\text{NDF}$ : 213067.9/5

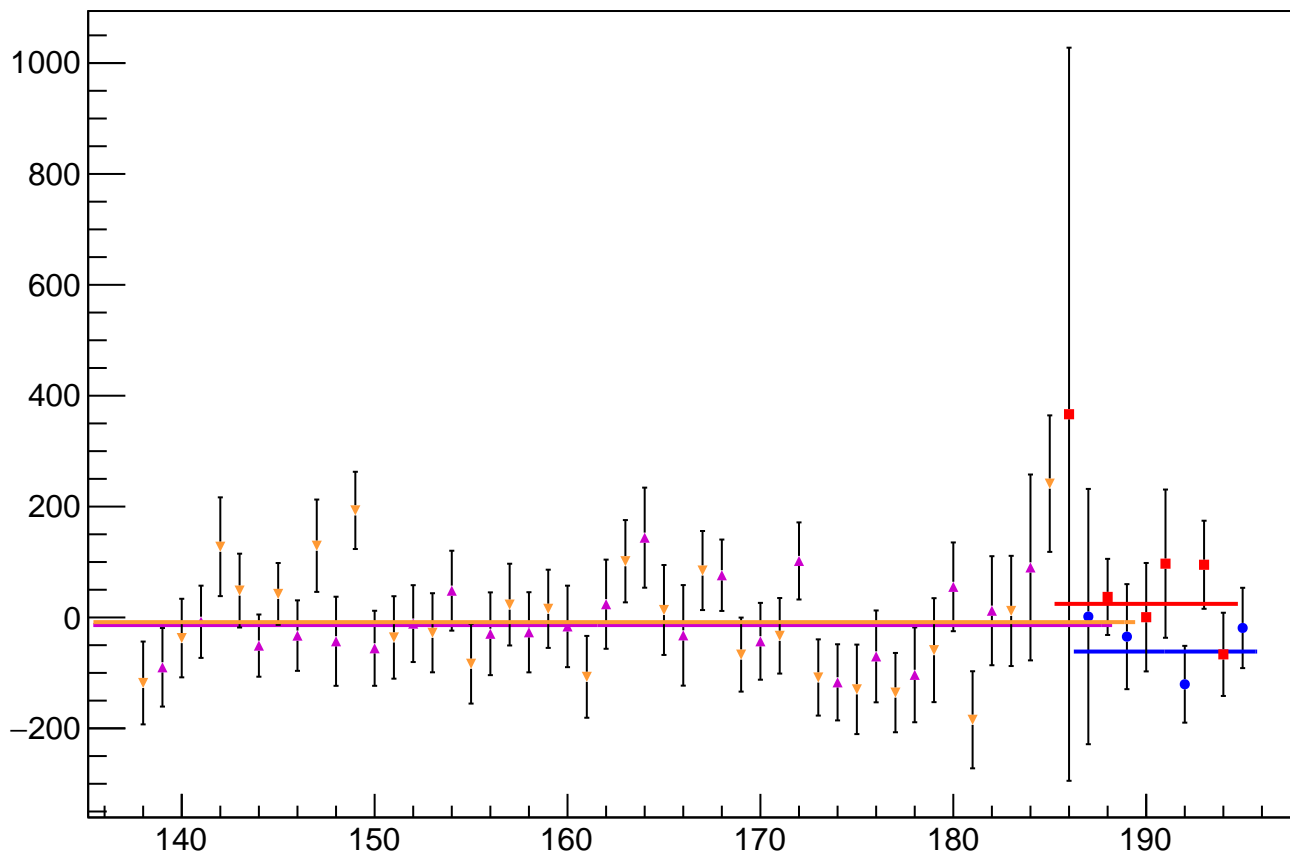
Left In: 438.548+/-0.075  $\chi^2/\text{NDF}$ : 1013071.4/22

+ sign 451.540+/-0.073  $\chi^2/\text{NDF}$ : 3335078.0/28

All: 453.914+/-0.052  $\chi^2/\text{NDF}$ : 7721601.3/57

- sign 456.389+/-0.075  $\chi^2/\text{NDF}$ : 4384376.5/28

# reg\_asym\_sam\_37\_48\_dd\_mean vs Slug



Right In:  $-61.487 \pm 43.464$   $\chi^2/\text{NDF}$ : 1.2/3

Left Out:  $-8.416 \pm 14.935$   $\chi^2/\text{NDF}$ : 41.6/24

Right Out:  $24.528 \pm 37.503$   $\chi^2/\text{NDF}$ : 2.9/5

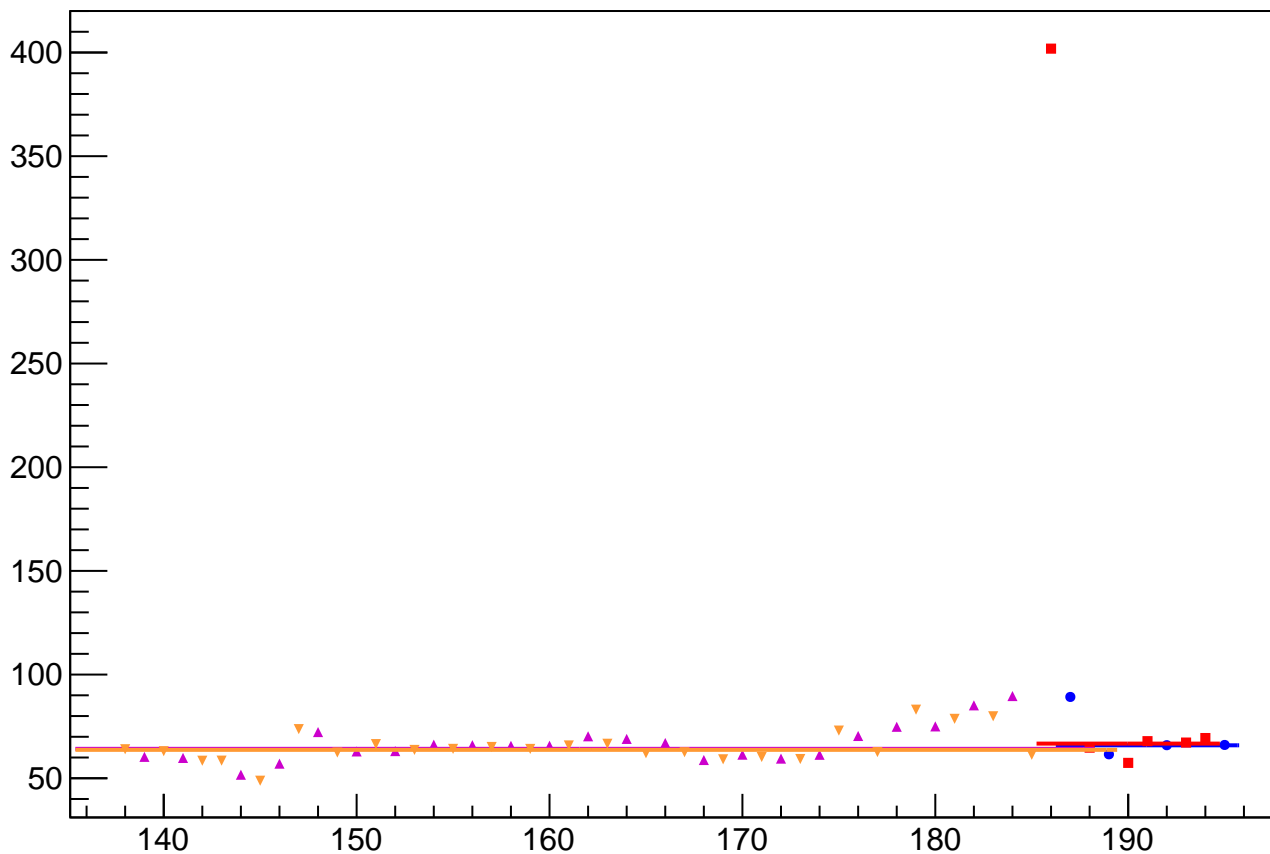
Left In:  $-13.723 \pm 15.478$   $\chi^2/\text{NDF}$ : 16.3/22

+ sign  $-14.020 \pm 14.124$   $\chi^2/\text{NDF}$ : 44.2/28

All:  $-11.126 \pm 10.051$   $\chi^2/\text{NDF}$ : 64.3/57

- sign  $-8.156 \pm 14.307$   $\chi^2/\text{NDF}$ : 20.1/28

# reg\_asym\_sam\_37\_48\_dd\_rms vs Slug



Right In: 65.889 $\pm$ 0.031  $\chi^2$ /NDF: 24742.5/3

Left Out: 63.696 $\pm$ 0.011  $\chi^2$ /NDF: 448439.3/24

Right Out: 66.710 $\pm$ 0.027  $\chi^2$ /NDF: 536363.7/5

Left In: 64.189 $\pm$ 0.011  $\chi^2$ /NDF: 429670.3/22

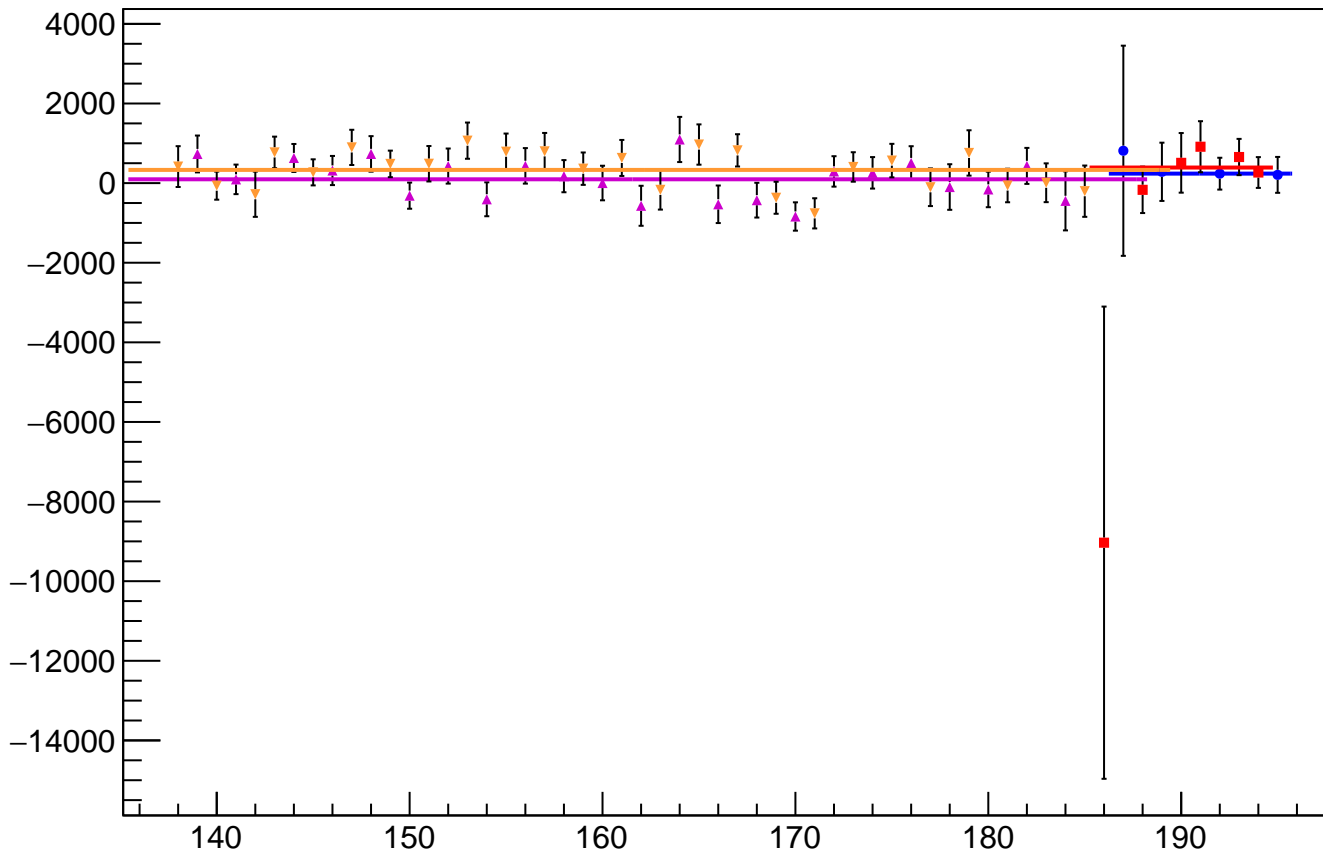
+ sign 63.928 $\pm$ 0.010  $\chi^2$ /NDF: 477735.5/28

All: 64.238 $\pm$ 0.007  $\chi^2$ /NDF: 1453444.3/57

- sign 64.556 $\pm$ 0.010  $\chi^2$ /NDF: 973754.6/28



# asym\_sam\_37\_48\_dd\_correction\_mean vs Slug



Right In:  $238.758 \pm 275.434$   $\chi^2/\text{NDF}$ : 0.1/3

Left Out:  $331.739 \pm 86.071$   $\chi^2/\text{NDF}$ : 29.9/24

Right Out:  $391.446 \pm 231.318$   $\chi^2/\text{NDF}$ : 4.6/5

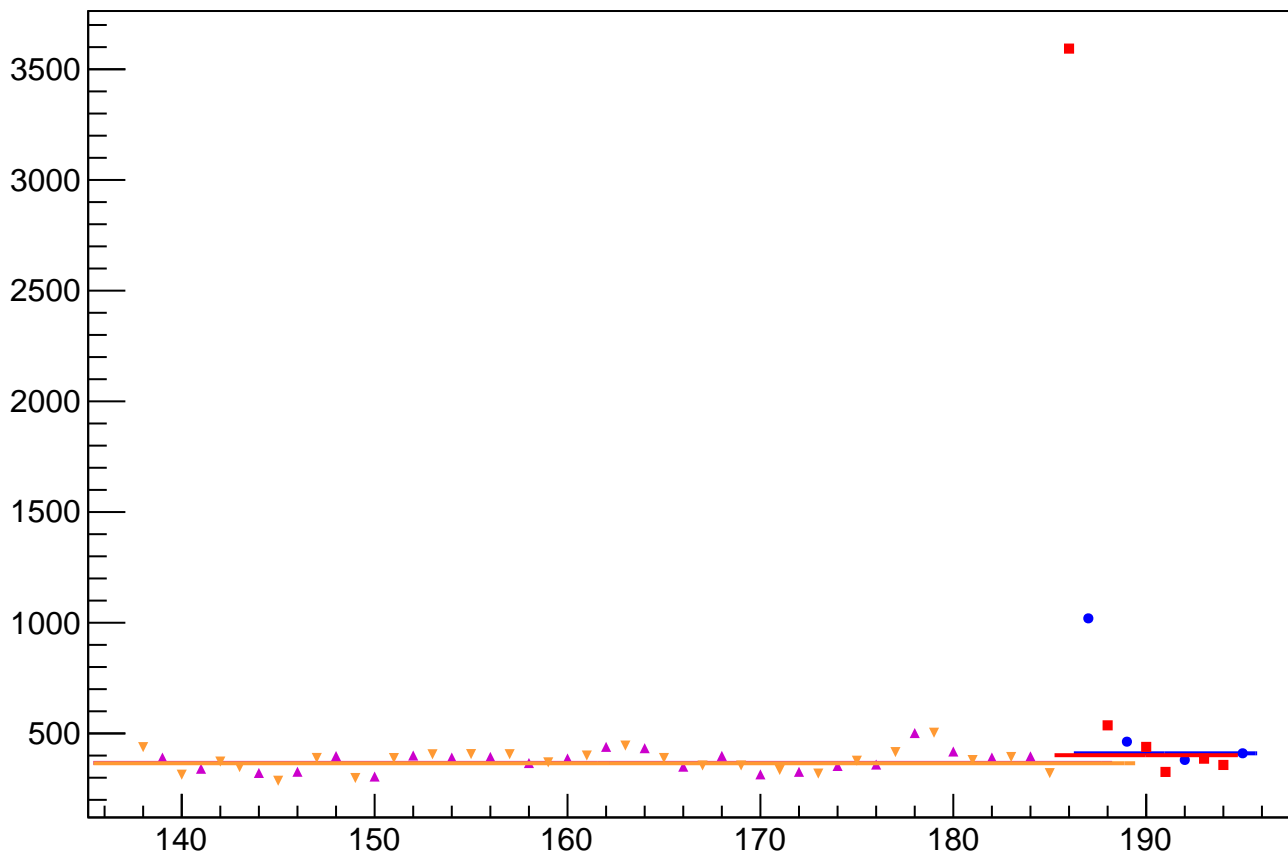
Left In:  $95.910 \pm 88.656$   $\chi^2/\text{NDF}$ : 28.7/22

+ sign  $323.467 \pm 82.153$   $\chi^2/\text{NDF}$ : 30.0/28

All:  $229.340 \pm 58.313$   $\chi^2/\text{NDF}$ : 67.4/57

- sign  $133.761 \pm 82.784$   $\chi^2/\text{NDF}$ : 34.7/28

# asym\_sam\_37\_48\_dd\_correction\_rms vs Slug



Right In: 410.149+/-0.195  $\chi^2/\text{NDF}$ : 128150.4/3

Left Out: 365.355+/-0.061  $\chi^2/\text{NDF}$ : 618453.7/24

Right Out: 401.675+/-0.164  $\chi^2/\text{NDF}$ : 747162.0/5

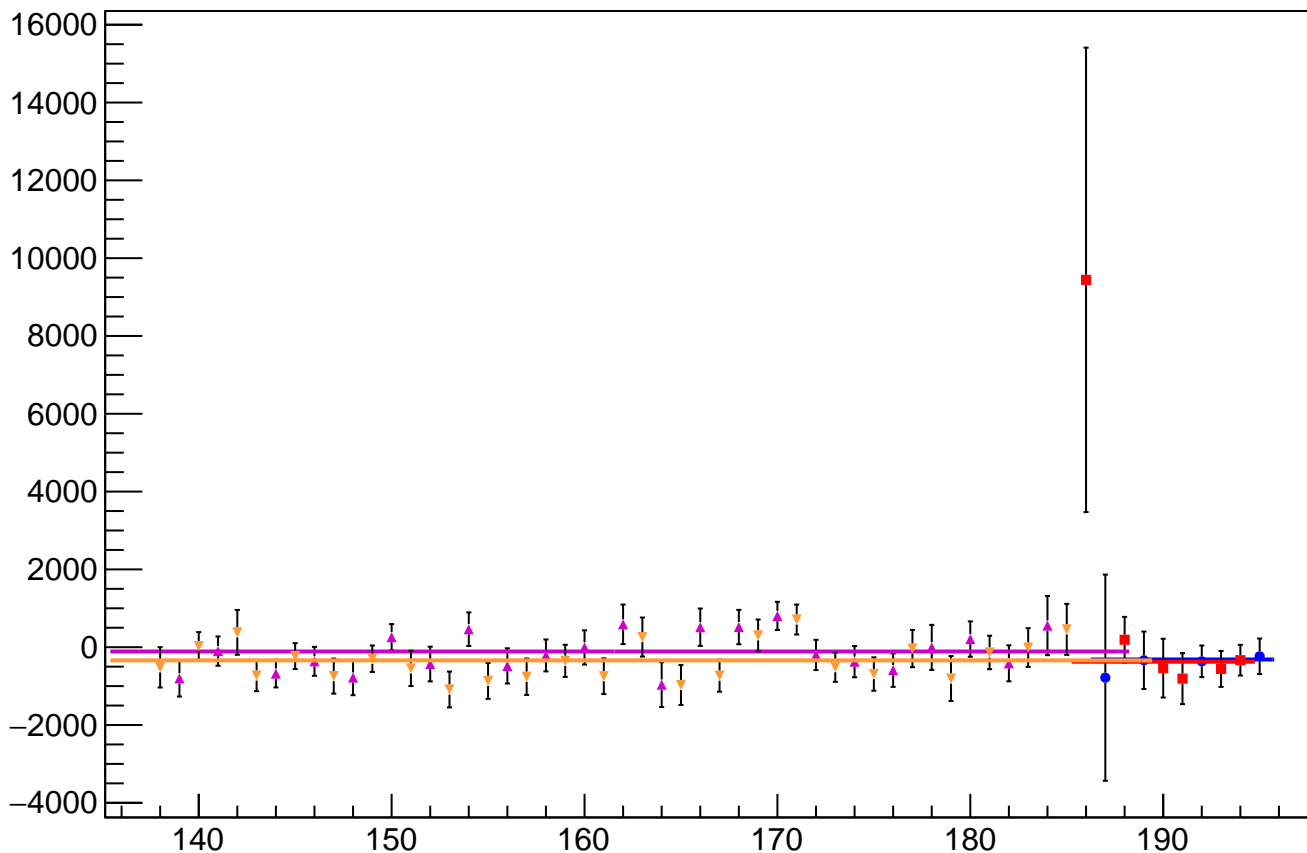
Left In: 366.925+/-0.063  $\chi^2/\text{NDF}$ : 478082.1/22

+ sign 369.340+/-0.058  $\chi^2/\text{NDF}$ : 794794.6/28

All: 370.350+/-0.041  $\chi^2/\text{NDF}$ : 2060004.3/57

- sign 371.375+/-0.059  $\chi^2/\text{NDF}$ : 1264600.7/28

# asym\_sam\_37\_48\_dd\_mean vs Slug



Right In:  $-315.736 \pm 279.137$   $\chi^2/\text{NDF}$ : 0.1/3

Left Out:  $-338.528 \pm 87.450$   $\chi^2/\text{NDF}$ : 28.2/24

Right Out:  $-373.383 \pm 234.939$   $\chi^2/\text{NDF}$ : 4.3/5

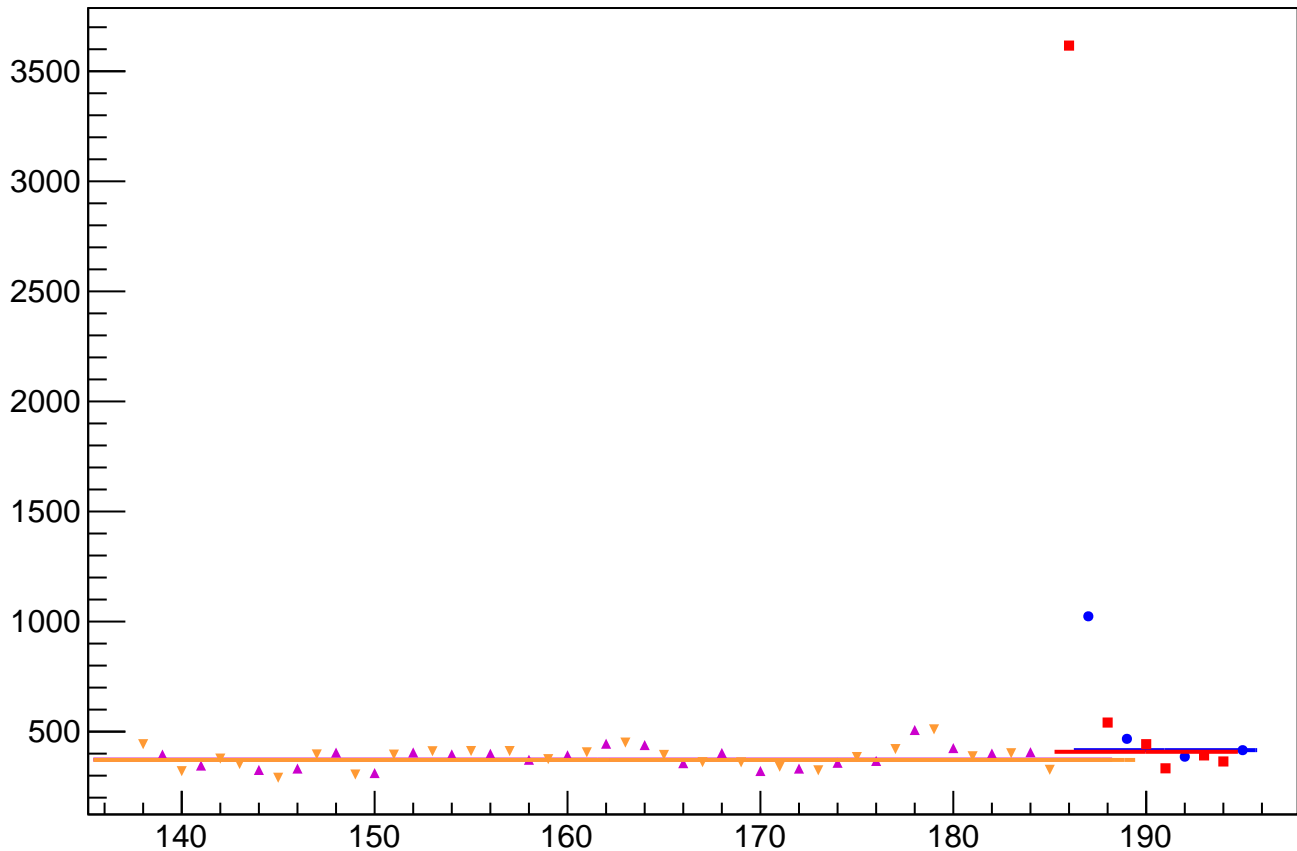
Left In:  $-110.341 \pm 90.084$   $\chi^2/\text{NDF}$ : 29.2/22

+ sign  $-336.491 \pm 83.451$   $\chi^2/\text{NDF}$ : 28.3/28

All:  $-241.034 \pm 59.241$   $\chi^2/\text{NDF}$ : 65.5/57

- sign  $-144.056 \pm 84.113$   $\chi^2/\text{NDF}$ : 34.6/28

# asym\_sam\_37\_48\_dd\_rms vs Slug



Right In: 415.844 $\pm$ 0.197  $\chi^2/\text{NDF}$ : 125694.7/3

Left Out: 371.356 $\pm$ 0.062  $\chi^2/\text{NDF}$ :604070.6/24

Right Out: 408.371 $\pm$ 0.166  $\chi^2/\text{NDF}$ : 737666.6/5

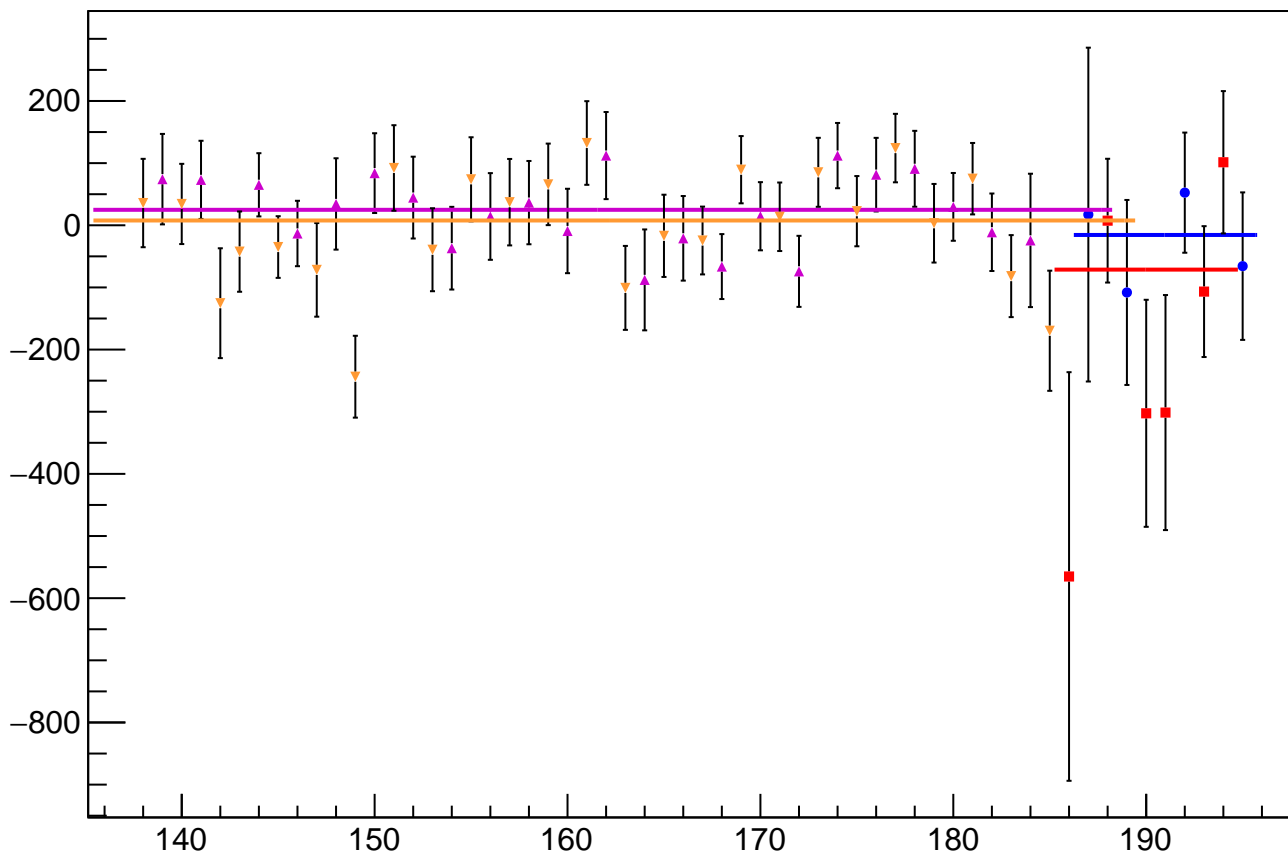
Left In: 372.938 $\pm$ 0.064  $\chi^2/\text{NDF}$ :467340.9/22

+ sign 375.332 $\pm$ 0.059  $\chi^2/\text{NDF}$ : 776027.9/28

All: 376.397 $\pm$ 0.042  $\chi^2/\text{NDF}$ : 2021354.7/57

- sign 377.479 $\pm$ 0.059  $\chi^2/\text{NDF}$ : 1244669.8/28

# reg\_asym\_sam\_15\_26\_dd\_mean vs Slug



Right In:  $-15.578 \pm 64.952$   $\chi^2/\text{NDF}$ : 1.1/3

Left Out:  $7.723 \pm 12.656$   $\chi^2/\text{NDF}$ : 45.4/24

Right Out:  $-71.333 \pm 54.673$   $\chi^2/\text{NDF}$ : 8.4/5

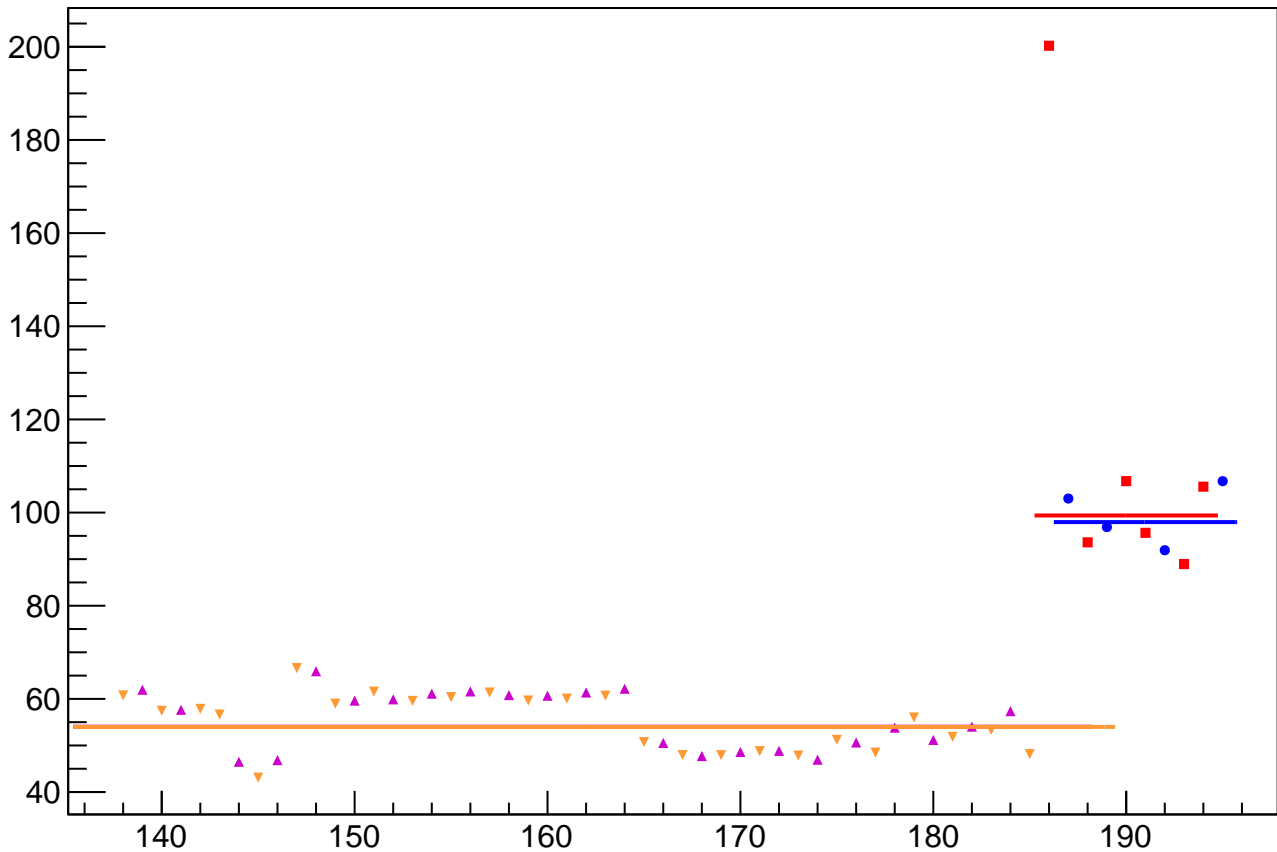
Left In:  $24.887 \pm 13.029$   $\chi^2/\text{NDF}$ : 19.7/22

+ sign  $6.871 \pm 12.422$   $\chi^2/\text{NDF}$ : 46.6/28

All:  $13.165 \pm 8.871$   $\chi^2/\text{NDF}$ : 78.2/57

- sign  $19.717 \pm 12.674$   $\chi^2/\text{NDF}$ : 31.0/28

# reg\_asym\_sam\_15\_26\_dd\_rms vs Slug



Right In: 97.956 $\pm$ 0.046  $\chi^2$ /NDF: 19575.4/3

Left Out: 53.984 $\pm$ 0.009  $\chi^2$ /NDF: 458972.1/24

Right Out: 99.378 $\pm$ 0.039  $\chi^2$ /NDF: 224408.2/5

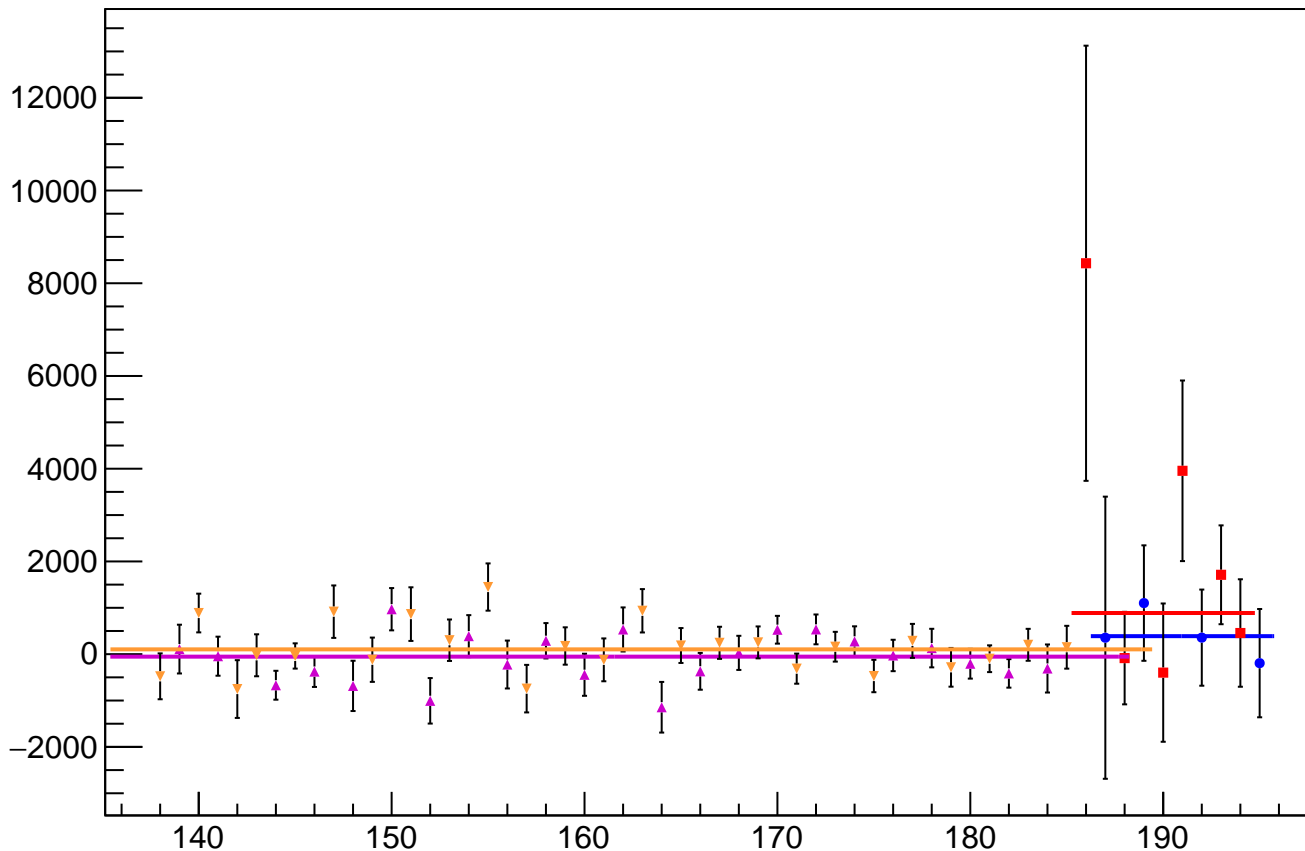
Left In: 54.028 $\pm$ 0.009  $\chi^2$ /NDF: 443819.5/22

+ sign 55.592 $\pm$ 0.009  $\chi^2$ /NDF: 1361669.6/28

All: 56.020 $\pm$ 0.006  $\chi^2$ /NDF: 3336845.3/57

- sign 56.465 $\pm$ 0.009  $\chi^2$ /NDF: 1970340.1/28

# asym\_sam\_15\_26\_dd\_correction\_mean vs Slug



Right In: 388.526+/-643.277  $\chi^2/\text{NDF}$ : 0.6/3

Left Out: 103.768+/-79.344  $\chi^2/\text{NDF}$ :31.0/24

Right Out: 887.844+/-543.274  $\chi^2/\text{NDF}$ : 7.5/5

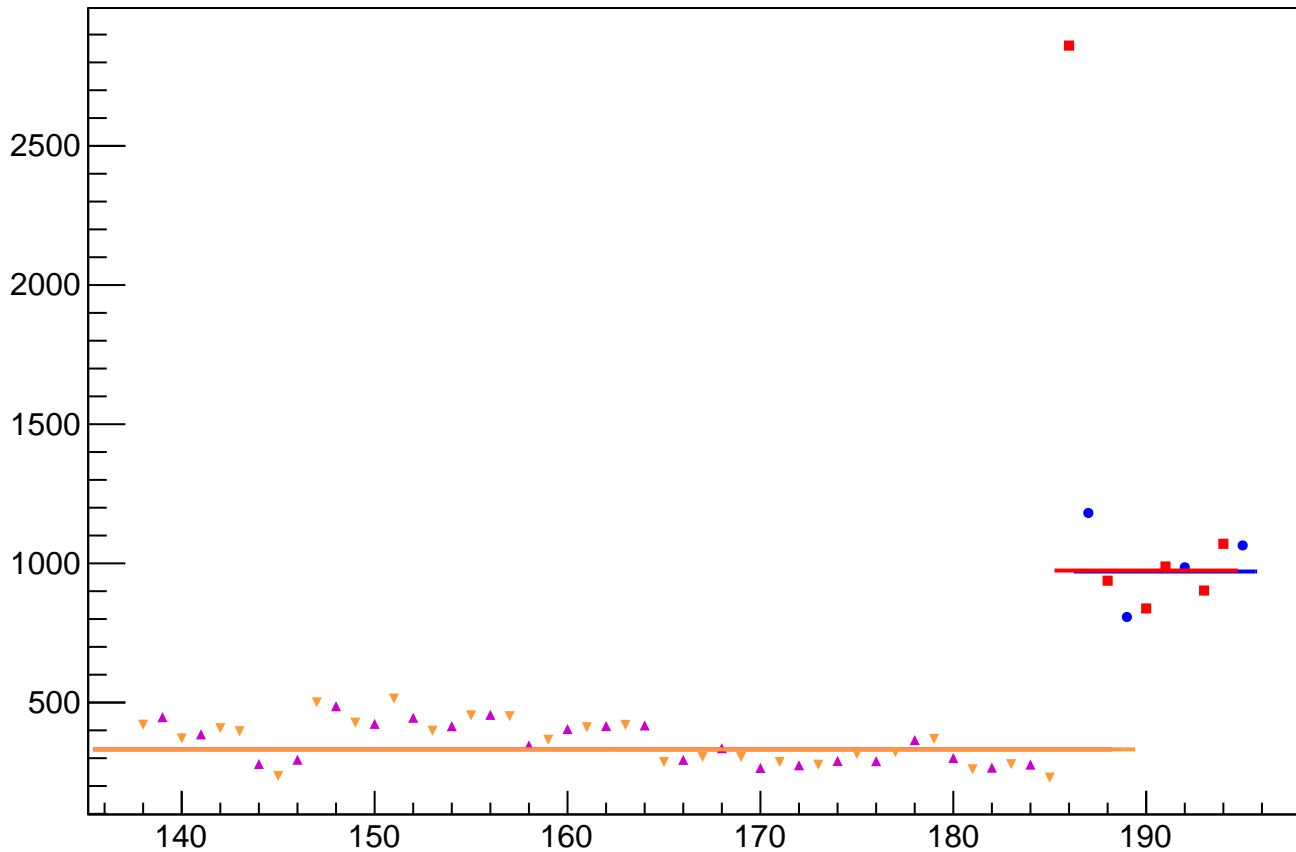
Left In: -53.493+/-81.201  $\chi^2/\text{NDF}$ :34.1/22

+ sign 108.035+/-78.747  $\chi^2/\text{NDF}$ : 31.7/28

All: 38.940+/-56.227  $\chi^2/\text{NDF}$ : 77.8/57

- sign -32.923+/-80.309  $\chi^2/\text{NDF}$ : 44.5/28

# asym\_sam\_15\_26\_dd\_correction\_rms vs Slug



Right In: 970.738 $\pm$ 0.455  $\chi^2$ /NDF: 57271.5/3

Left Out: 331.770 $\pm$ 0.056  $\chi^2$ /NDF: 1711721.9/24

Right Out: 974.171 $\pm$ 0.384  $\chi^2$ /NDF: 365417.5/5

Left In: 331.666 $\pm$ 0.057  $\chi^2$ /NDF: 1303192.2/22

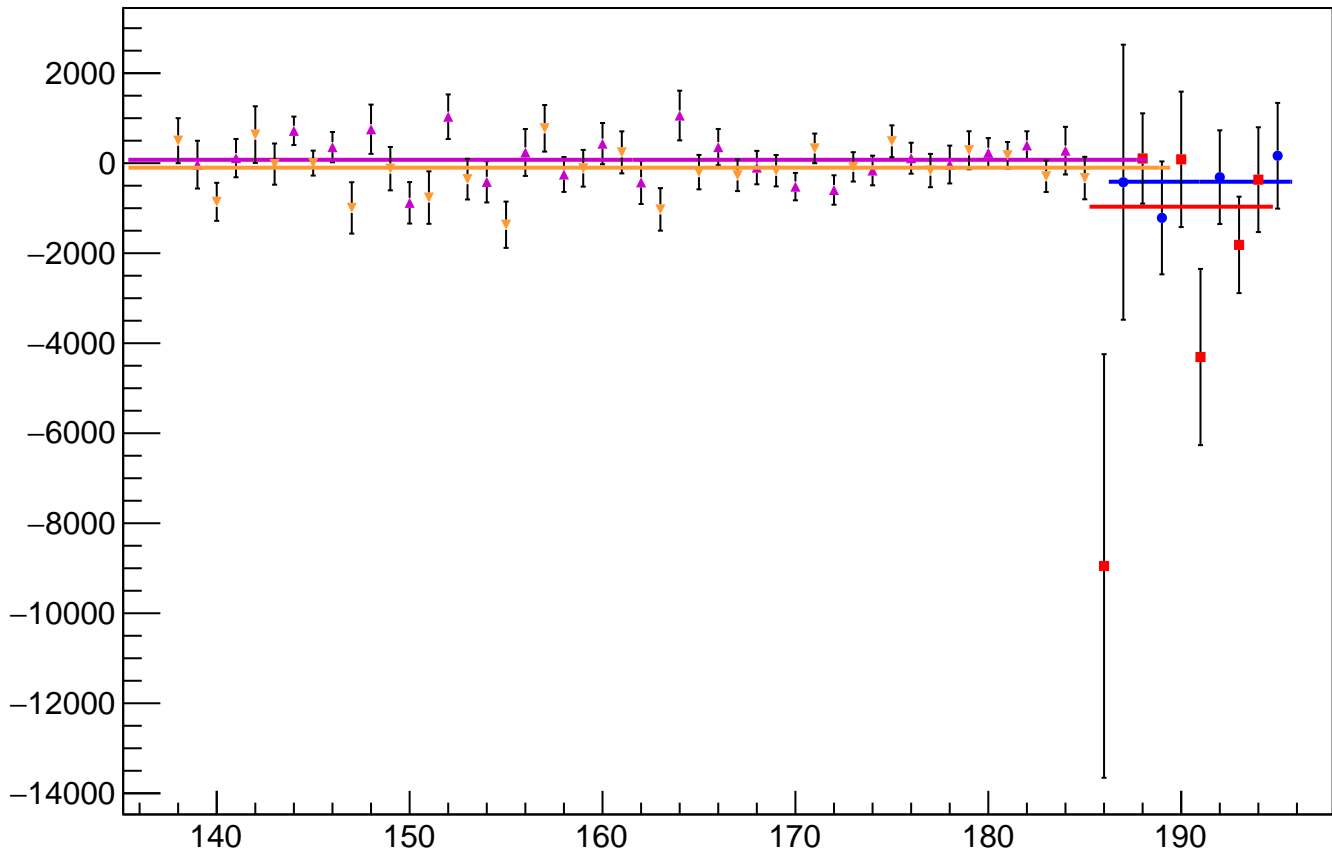
+ sign 341.346 $\pm$ 0.056  $\chi^2$ /NDF: 3712713.3/28

All: 343.483 $\pm$ 0.040  $\chi^2$ /NDF: 8120541.7/57

- sign 345.706 $\pm$ 0.057  $\chi^2$ /NDF: 4404823.1/28



# asym\_sam\_15\_26\_dd\_mean vs Slug



Right In:  $-411.716 \pm 646.856$   $\chi^2/\text{NDF}: 0.7/3$

Left Out:  $-99.785 \pm 80.428$   $\chi^2/\text{NDF}: 30.7/24$

Right Out:  $-966.373 \pm 546.338$   $\chi^2/\text{NDF}: 8.3/5$

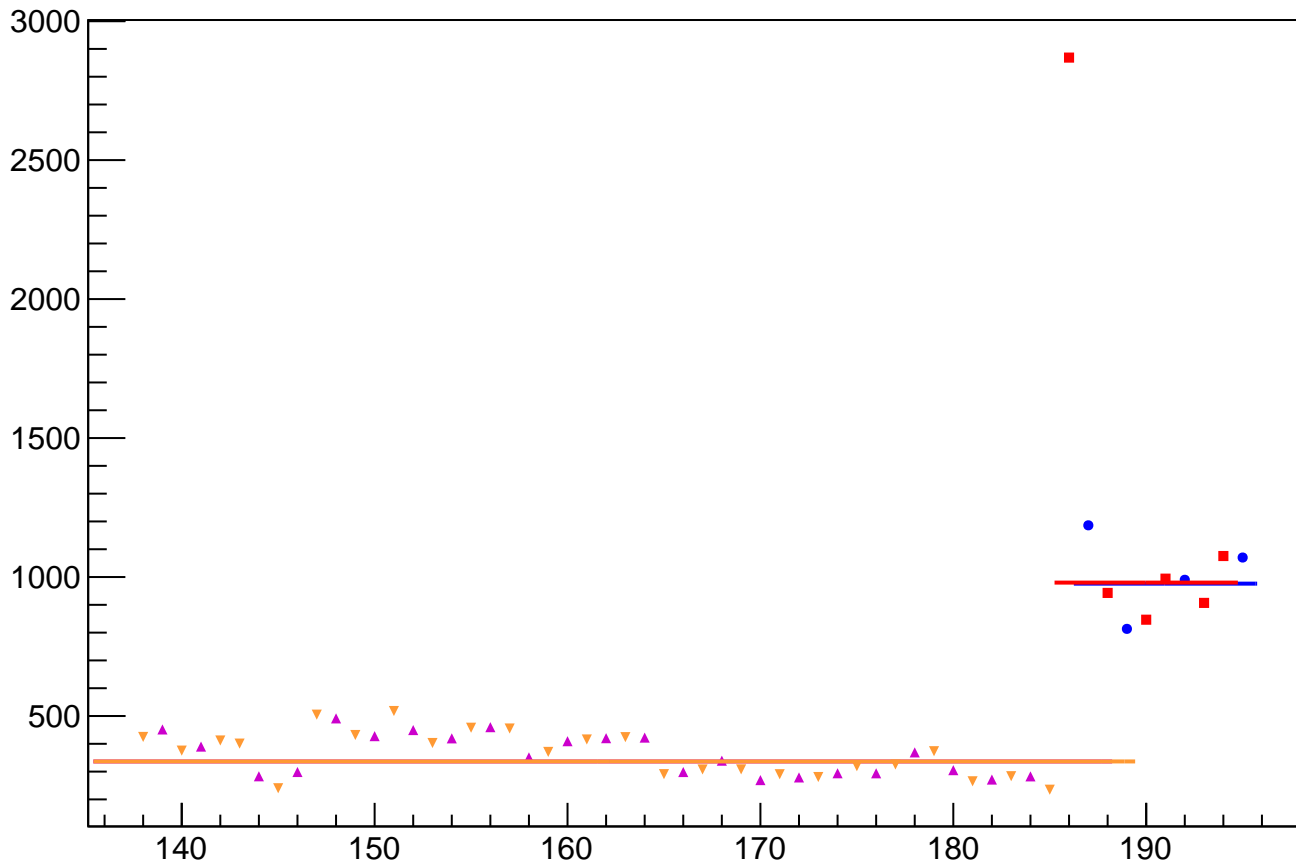
Left In:  $75.579 \pm 82.319$   $\chi^2/\text{NDF}: 32.1/22$

+ sign  $-104.534 \pm 79.813$   $\chi^2/\text{NDF}: 31.5/28$

All:  $-27.587 \pm 56.989$   $\chi^2/\text{NDF}: 77.4/57$

- sign  $52.449 \pm 81.400$   $\chi^2/\text{NDF}: 44.0/28$

# asym\_sam\_15\_26\_dd\_rms vs Slug



Right In: 976.237 $\pm$ 0.457  $\chi^2$ /NDF: 56225.5/3

Left Out: 336.557 $\pm$ 0.057  $\chi^2$ /NDF: 1665919.4/24

Right Out: 979.968 $\pm$ 0.386  $\chi^2$ /NDF: 363512.3/5

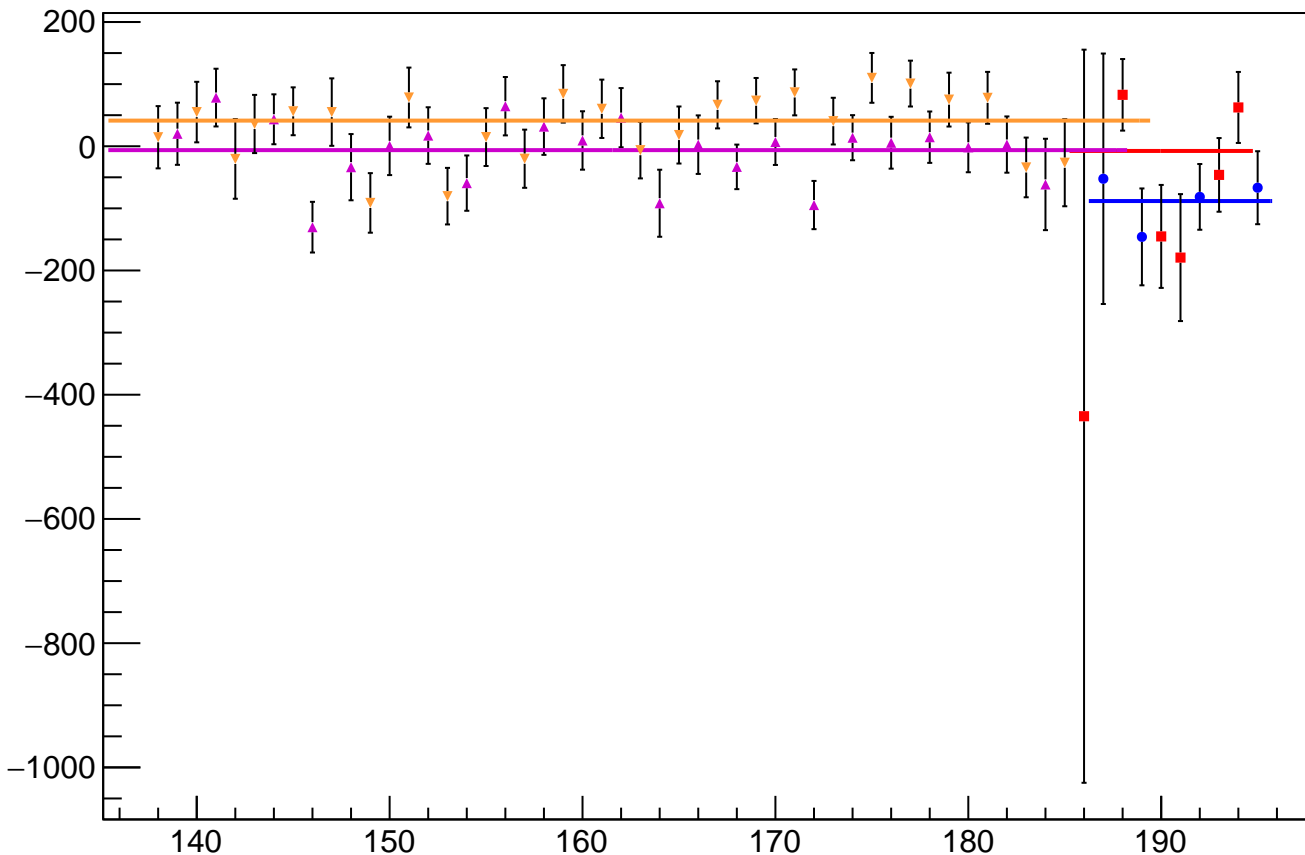
Left In: 336.439 $\pm$ 0.058  $\chi^2$ /NDF: 1269066.3/22

+ sign 346.296 $\pm$ 0.056  $\chi^2$ /NDF: 3648237.6/28

All: 348.467 $\pm$ 0.040  $\chi^2$ /NDF: 7997103.2/57

- sign 350.725 $\pm$ 0.058  $\chi^2$ /NDF: 4345847.2/28

# reg\_asym\_sam\_37\_26\_dd\_mean vs Slug



Right In:  $-88.215 \pm 34.585$   $\chi^2/\text{NDF}$ : 0.7/3

Left Out:  $41.283 \pm 8.889$   $\chi^2/\text{NDF}$ : 34.4/24

Right Out:  $-7.575 \pm 29.673$   $\chi^2/\text{NDF}$ : 10.5/5

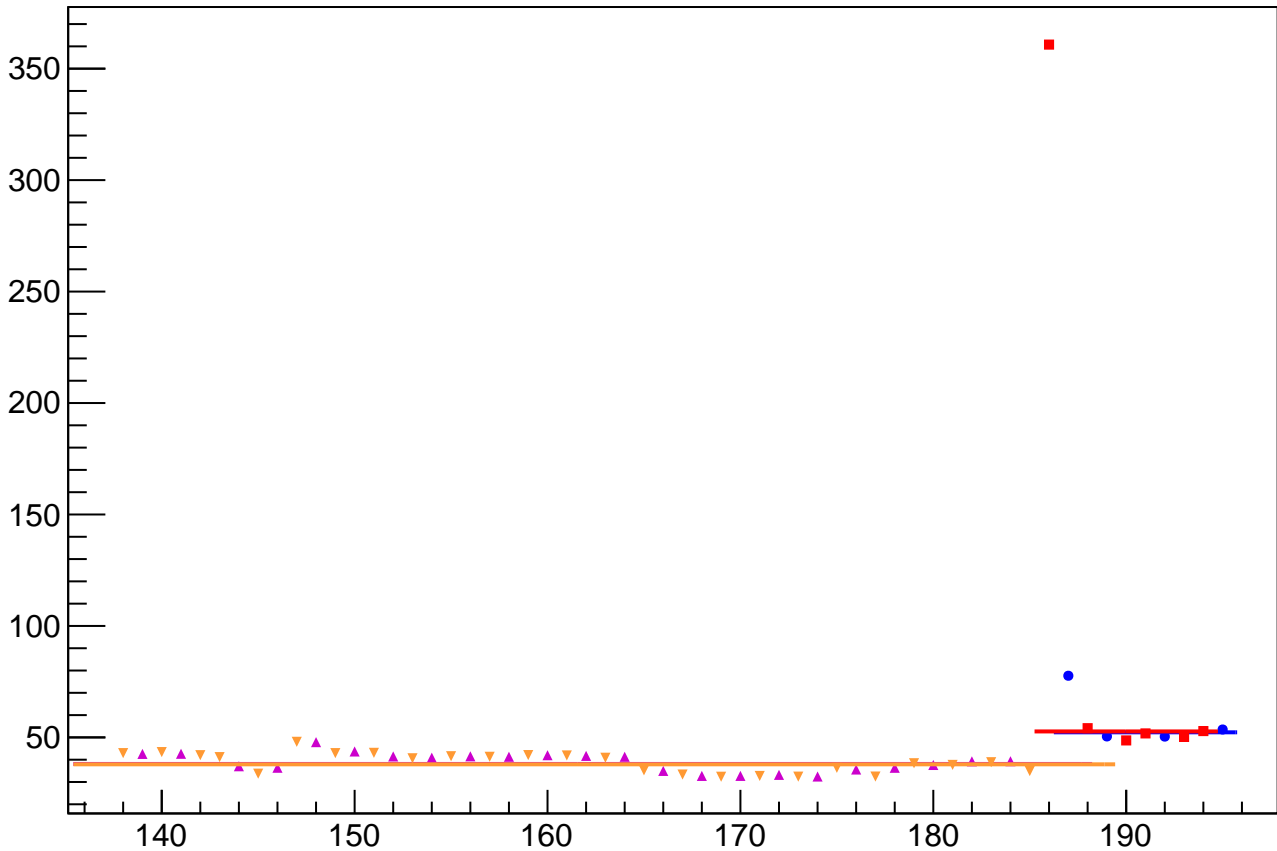
Left In:  $-6.254 \pm 9.175$   $\chi^2/\text{NDF}$ : 30.3/22

+ sign  $33.258 \pm 8.609$   $\chi^2/\text{NDF}$ : 48.2/28

All:  $13.800 \pm 6.142$   $\chi^2/\text{NDF}$ : 99.4/57

- sign  $-6.369 \pm 8.765$   $\chi^2/\text{NDF}$ : 40.8/28

# reg\_asym\_sam\_37\_26\_dd\_rms vs Slug



Right In: 52.283 $\pm$ 0.024  $\chi^2$ /NDF: 36353.5/3

Left Out: 37.925 $\pm$ 0.006  $\chi^2$ /NDF: 487085.3/24

Right Out: 52.679 $\pm$ 0.021  $\chi^2$ /NDF: 554856.6/5

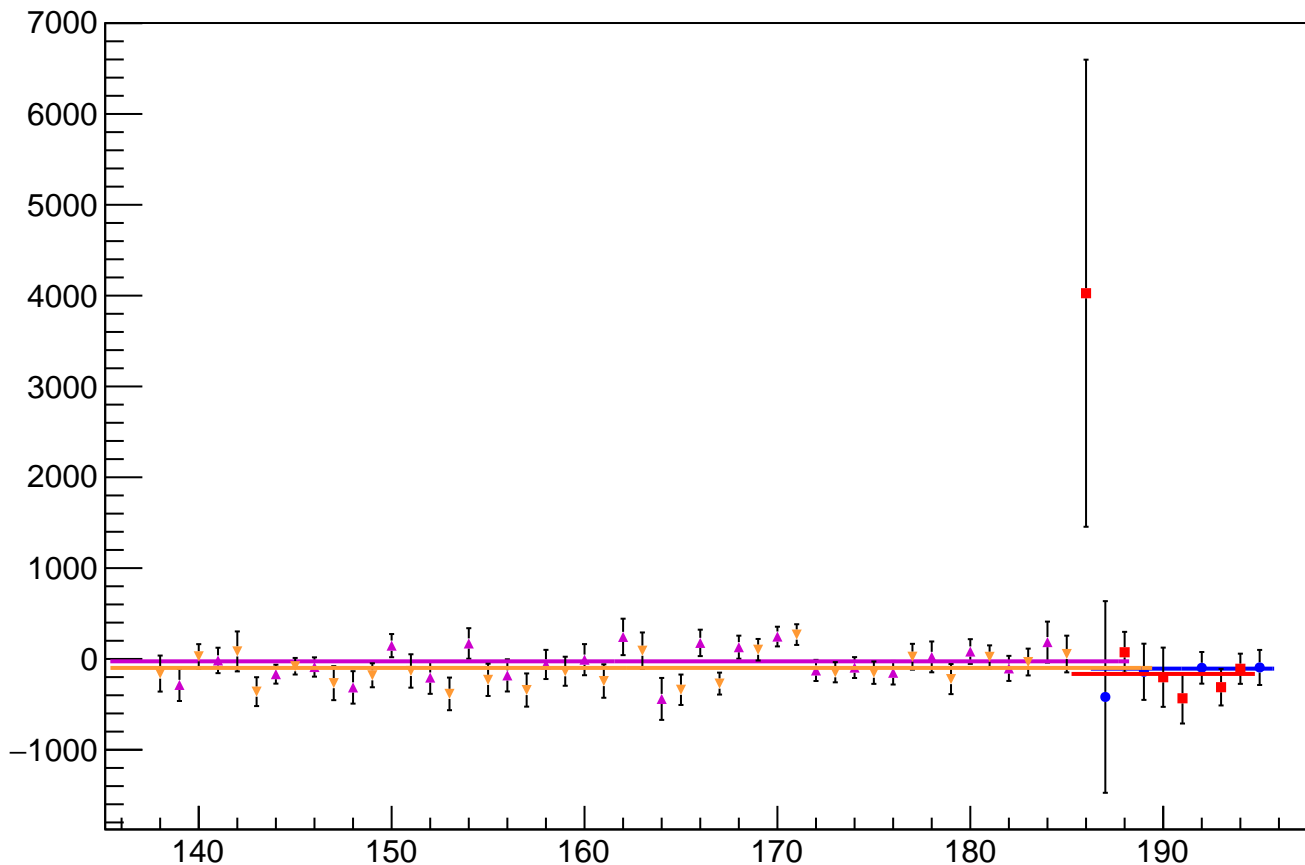
Left In: 38.087 $\pm$ 0.006  $\chi^2$ /NDF: 396334.5/22

+ sign 38.815 $\pm$ 0.006  $\chi^2$ /NDF: 846769.8/28

All: 39.083 $\pm$ 0.004  $\chi^2$ /NDF: 2243356.3/57

- sign 39.361 $\pm$ 0.006  $\chi^2$ /NDF: 1392640.5/28

# asym\_sam\_37\_26\_dd\_correction\_mean vs Slug



Right In:  $-106.718 \pm 118.580$   $\chi^2/\text{NDF}$ : 0.1/3

Left Out:  $-98.741 \pm 29.095$   $\chi^2/\text{NDF}$ : 32.7/24

Right Out:  $-165.050 \pm 98.375$   $\chi^2/\text{NDF}$ : 5.4/5

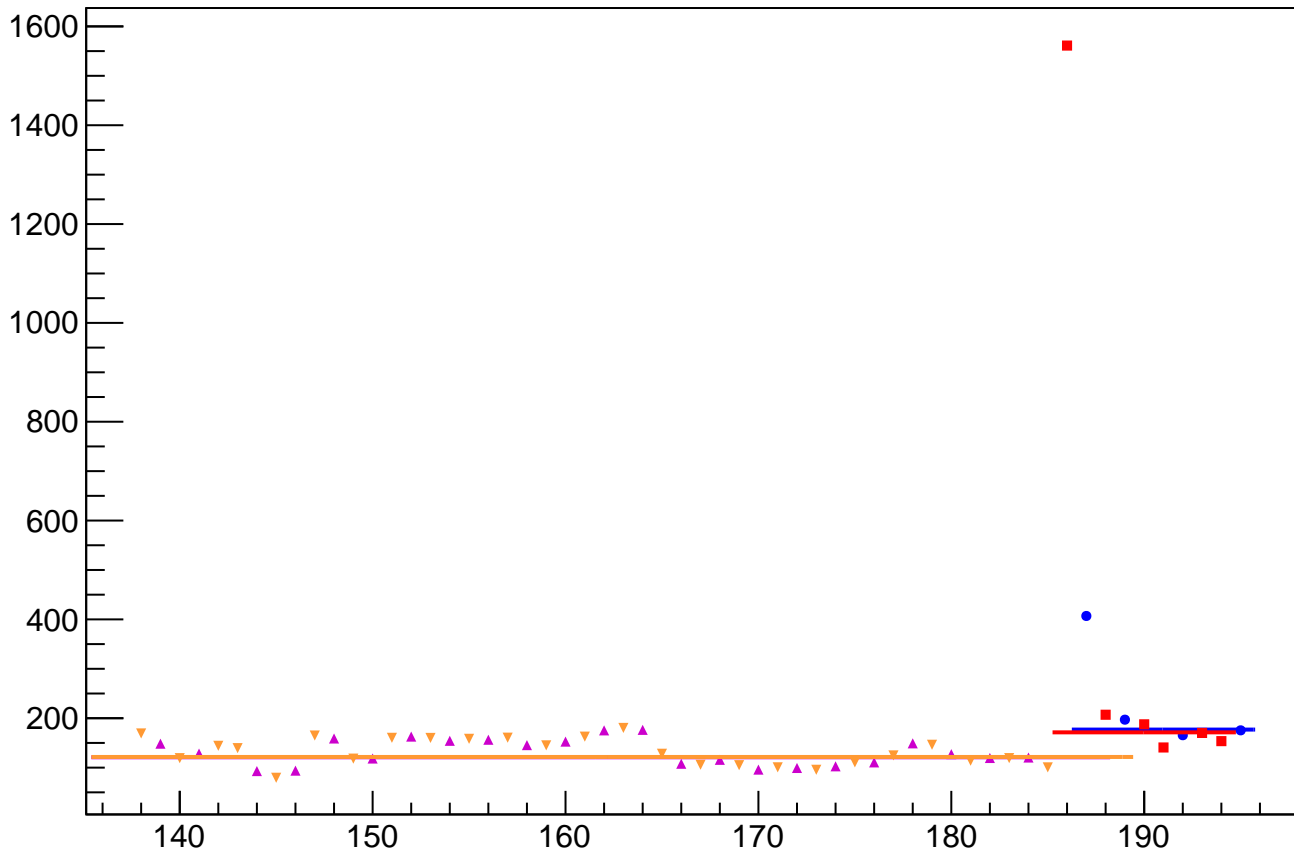
Left In:  $-26.223 \pm 29.676$   $\chi^2/\text{NDF}$ : 30.7/22

+ sign  $-99.194 \pm 28.257$   $\chi^2/\text{NDF}$ : 32.9/28

All:  $-68.665 \pm 20.035$   $\chi^2/\text{NDF}$ : 73.1/57

- sign  $-37.802 \pm 28.411$   $\chi^2/\text{NDF}$ : 37.9/28

# asym\_sam\_37\_26\_dd\_correction\_rms vs Slug



Right In: 177.003+/-0.084  $\chi^2/\text{NDF}$ : 112054.8/3

Left Out: 121.592+/-0.021  $\chi^2/\text{NDF}$ : 1711423.9/24

Right Out: 171.398+/-0.070  $\chi^2/\text{NDF}$ : 686923.4/5

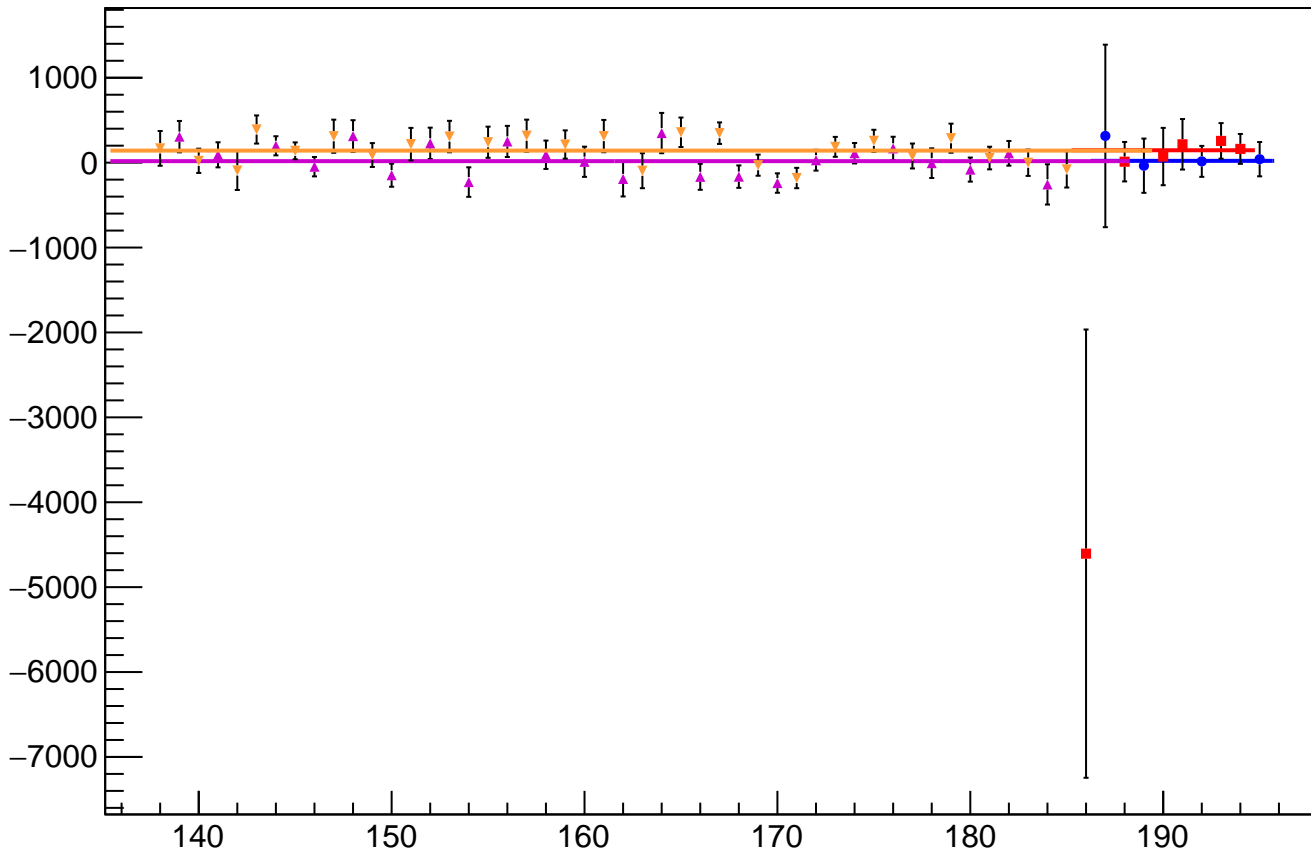
Left In: 120.927+/-0.021  $\chi^2/\text{NDF}$ : 1382861.4/22

+ sign 124.738+/-0.020  $\chi^2/\text{NDF}$ : 2235395.6/28

All: 124.936+/-0.014  $\chi^2/\text{NDF}$ : 4787910.9/57

- sign 125.137+/-0.020  $\chi^2/\text{NDF}$ : 2552317.8/28

# asym\_sam\_37\_26\_dd\_mean vs Slug



Right In: 21.115+/-123.790  $\chi^2$ /NDF: 0.1/3

Left Out: 142.014+/-30.574  $\chi^2$ /NDF:26.9/24

Right Out: 145.860+/-103.264  $\chi^2$ /NDF: 4.0/5

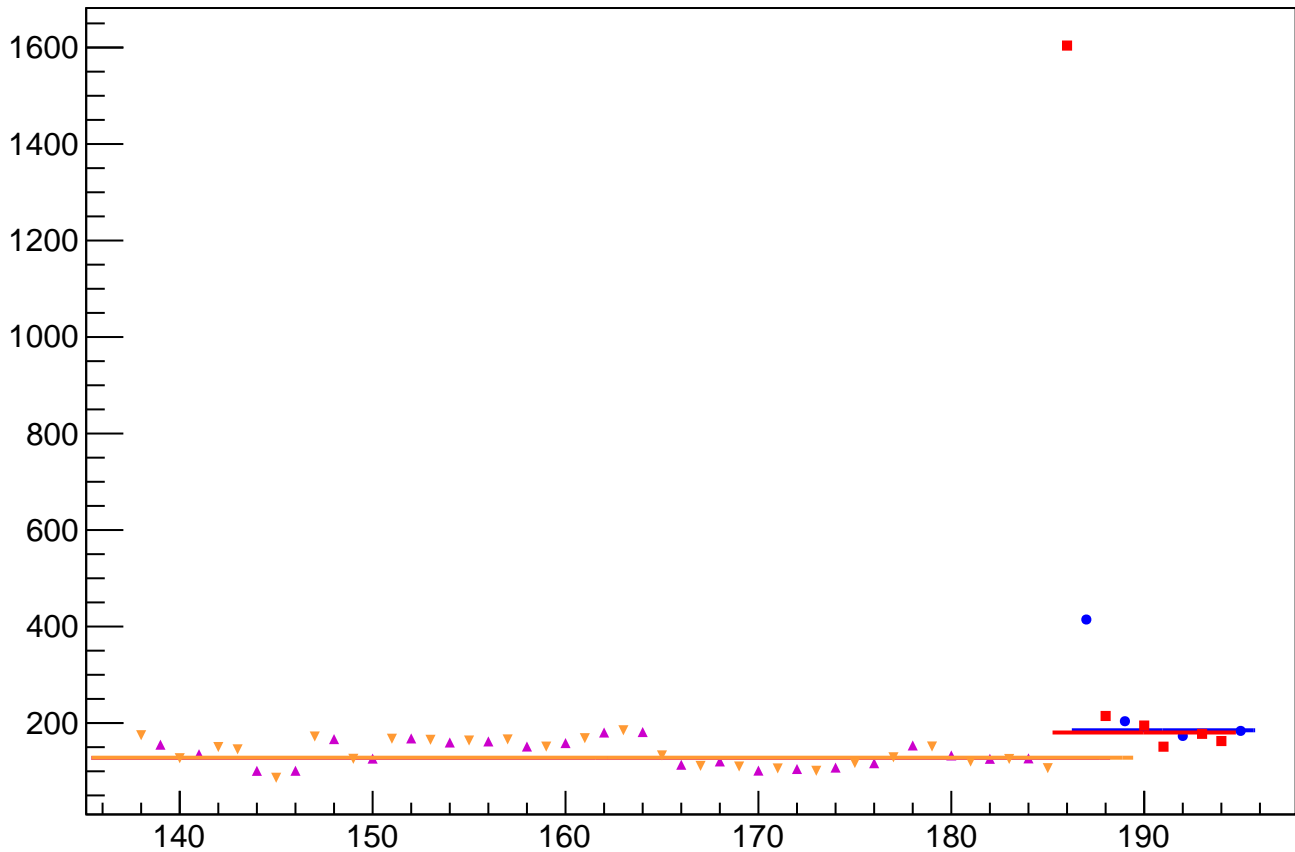
Left In: 17.679+/-31.209  $\chi^2$ /NDF:30.1/22

+ sign 135.063+/-29.682  $\chi^2$ /NDF: 27.9/28

All: 82.079+/-21.056  $\chi^2$ /NDF: 69.8/57

- sign 28.407+/-29.874  $\chi^2$ /NDF: 35.5/28

# asym\_sam\_37\_26\_dd\_rms vs Slug



Right In: 184.983 +/- 0.088  $\chi^2/\text{NDF}$ : 106474.1/3

Left Out: 128.175 +/- 0.022  $\chi^2/\text{NDF}$ : 1532922.0/24

Right Out: 180.379 +/- 0.073  $\chi^2/\text{NDF}$ : 668658.6/5

Left In: 127.544 +/- 0.022  $\chi^2/\text{NDF}$ : 1235705.3/22

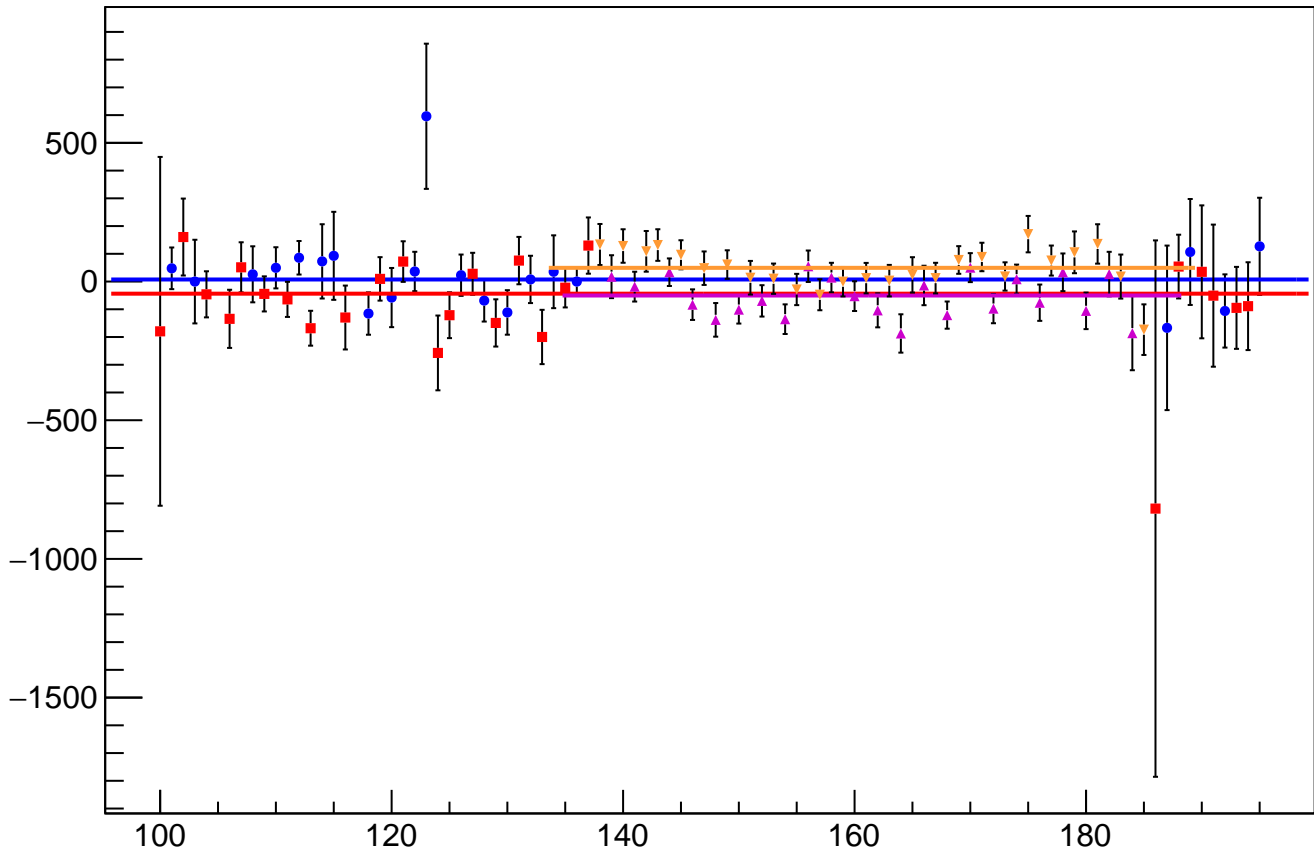
+ sign 131.441 +/- 0.021  $\chi^2/\text{NDF}$ : 2036375.0/28

All: 131.702 +/- 0.015  $\chi^2/\text{NDF}$ : 4420802.2/57

- sign 131.966 +/- 0.021  $\chi^2/\text{NDF}$ : 2384117.1/28



# reg\_asym\_sam\_1357\_avg\_mean vs Slug



Right In:  $7.411 \pm 19.676$   $\chi^2/\text{NDF}: 16.2/20$

Left Out:  $49.402 \pm 11.806$   $\chi^2/\text{NDF}: 28.1/24$

Right Out:  $-43.740 \pm 18.777$   $\chi^2/\text{NDF}: 26.6/24$

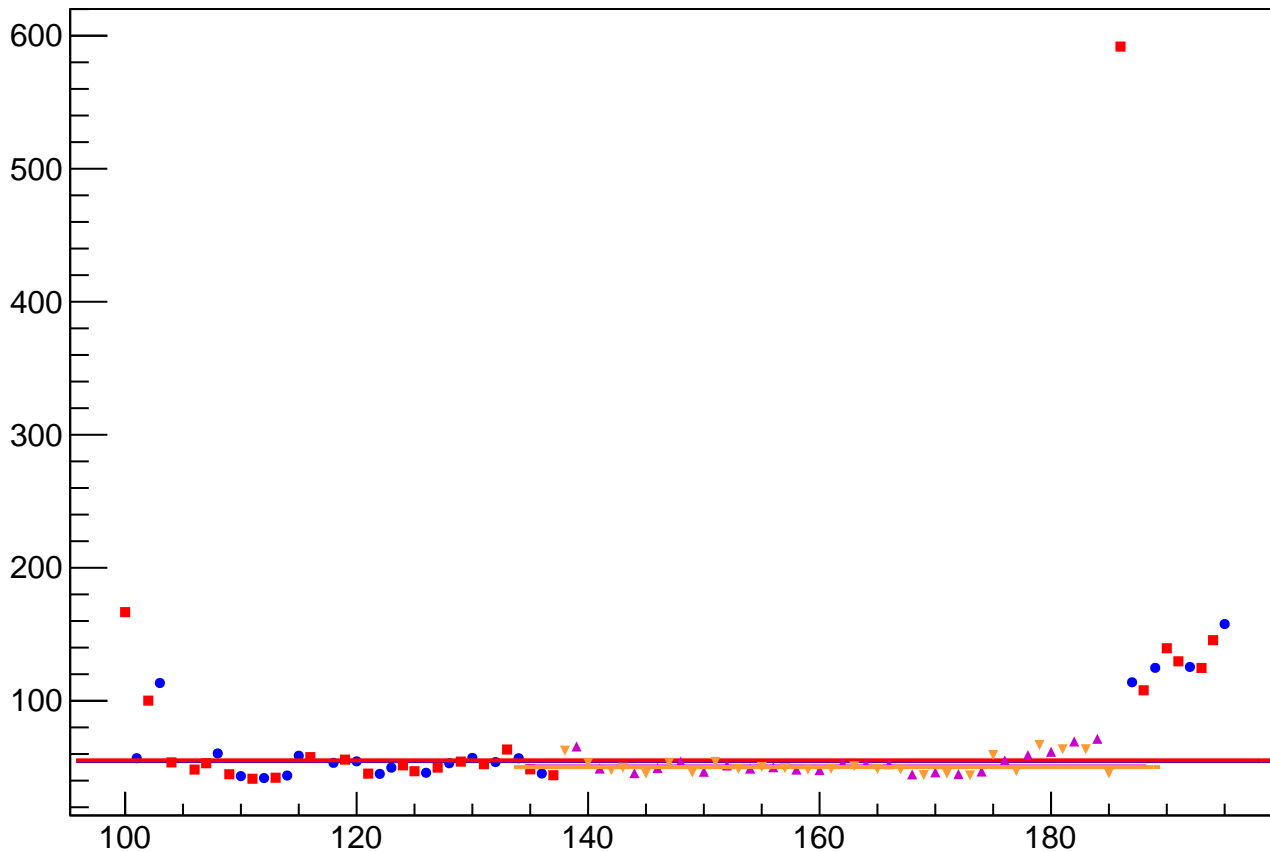
Left In:  $-50.331 \pm 12.253$   $\chi^2/\text{NDF}: 32.2/22$

+ sign  $38.286 \pm 10.123$   $\chi^2/\text{NDF}: 47.6/45$

All:  $-4.449 \pm 7.207$   $\chi^2/\text{NDF}: 142.6/93$

- sign  $-48.362 \pm 10.262$   $\chi^2/\text{NDF}: 58.9/47$

# reg\_asym\_sam\_1357\_avg\_rms vs Slug



Right In: 54.717 $\pm$ 0.014  $\chi^2$ /NDF: 2217112.4/20

Left Out: 50.189 $\pm$ 0.008  $\chi^2$ /NDF: 467679.2/24

Right Out: 55.259 $\pm$ 0.013  $\chi^2$ /NDF: 3192911.4/24

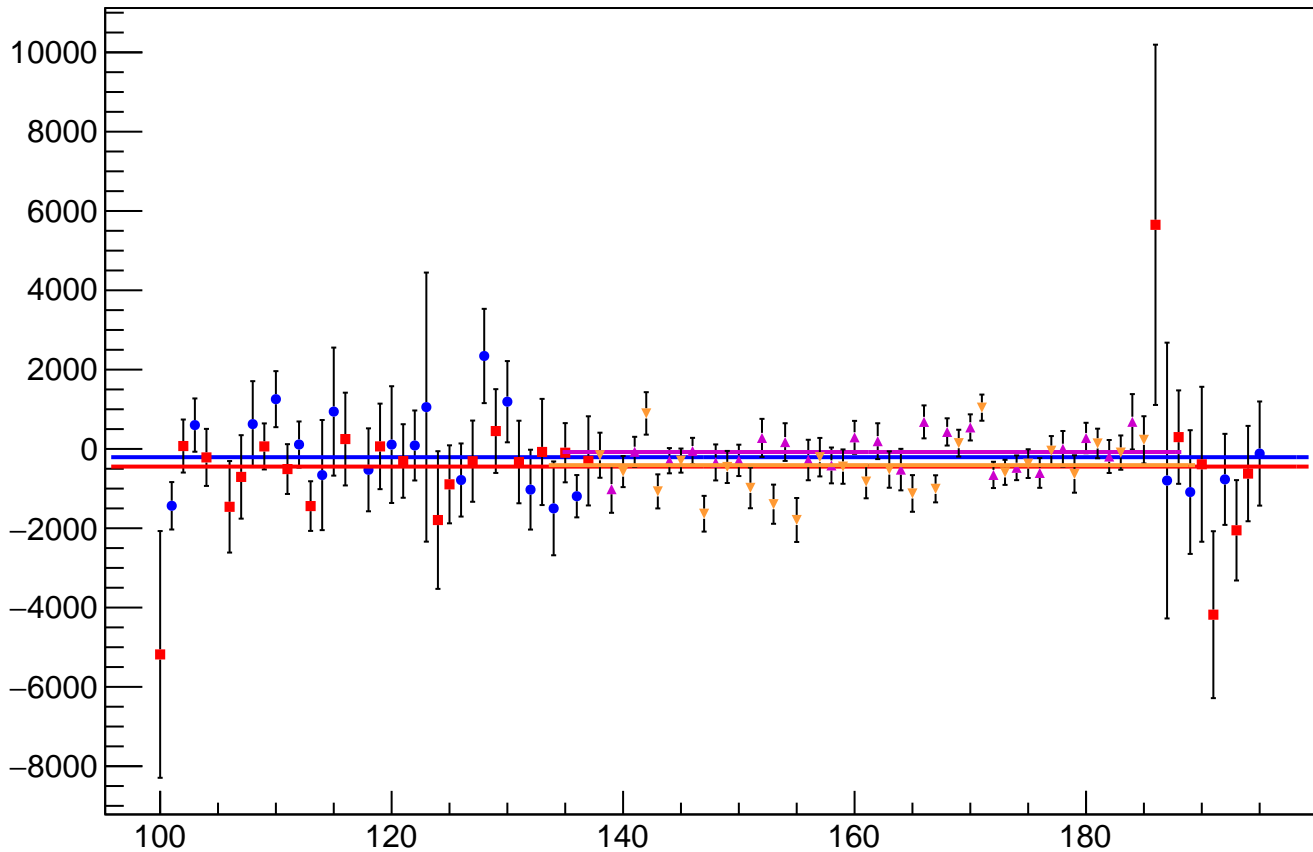
Left In: 50.683 $\pm$ 0.009  $\chi^2$ /NDF: 469292.3/22

+ sign 51.388 $\pm$ 0.007  $\chi^2$ /NDF: 2762654.5/45

All: 51.714 $\pm$ 0.005  $\chi^2$ /NDF: 6512384.7/93

- sign 52.050 $\pm$ 0.007  $\chi^2$ /NDF: 3745512.8/47

# asym\_sam\_1357\_avg\_correction\_mean vs Slug



Right In:  $-208.056 \pm 202.592$   $\chi^2/\text{NDF}: 24.5/20$

Left Out:  $-409.164 \pm 82.348$   $\chi^2/\text{NDF}: 61.7/24$

Right Out:  $-445.315 \pm 193.919$   $\chi^2/\text{NDF}: 16.6/24$

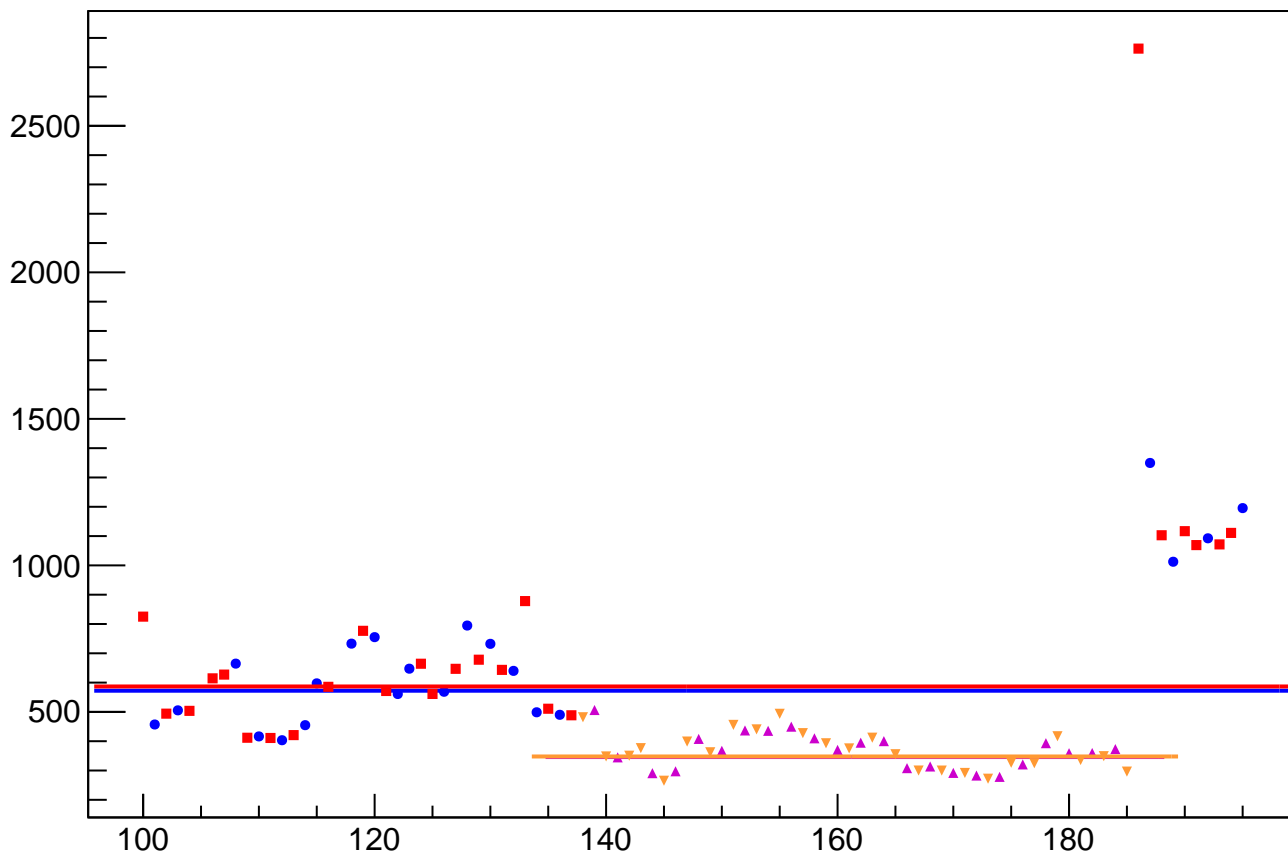
Left In:  $-77.872 \pm 84.072$   $\chi^2/\text{NDF}: 24.8/22$

+ sign  $-380.648 \pm 76.287$   $\chi^2/\text{NDF}: 87.1/45$

All:  $-259.681 \pm 54.240$   $\chi^2/\text{NDF}: 136.6/93$

- sign  $-136.009 \pm 77.135$   $\chi^2/\text{NDF}: 44.5/47$

# asym\_sam\_1357\_avg\_correction\_rms vs Slug



Right In: 572.318 $\pm$ 0.143  $\chi^2$ /NDF: 1772842.2/20

Left Out: 347.875 $\pm$ 0.058  $\chi^2$ /NDF: 1044096.7/24

Right Out: 586.777 $\pm$ 0.137  $\chi^2$ /NDF: 255555.2/24

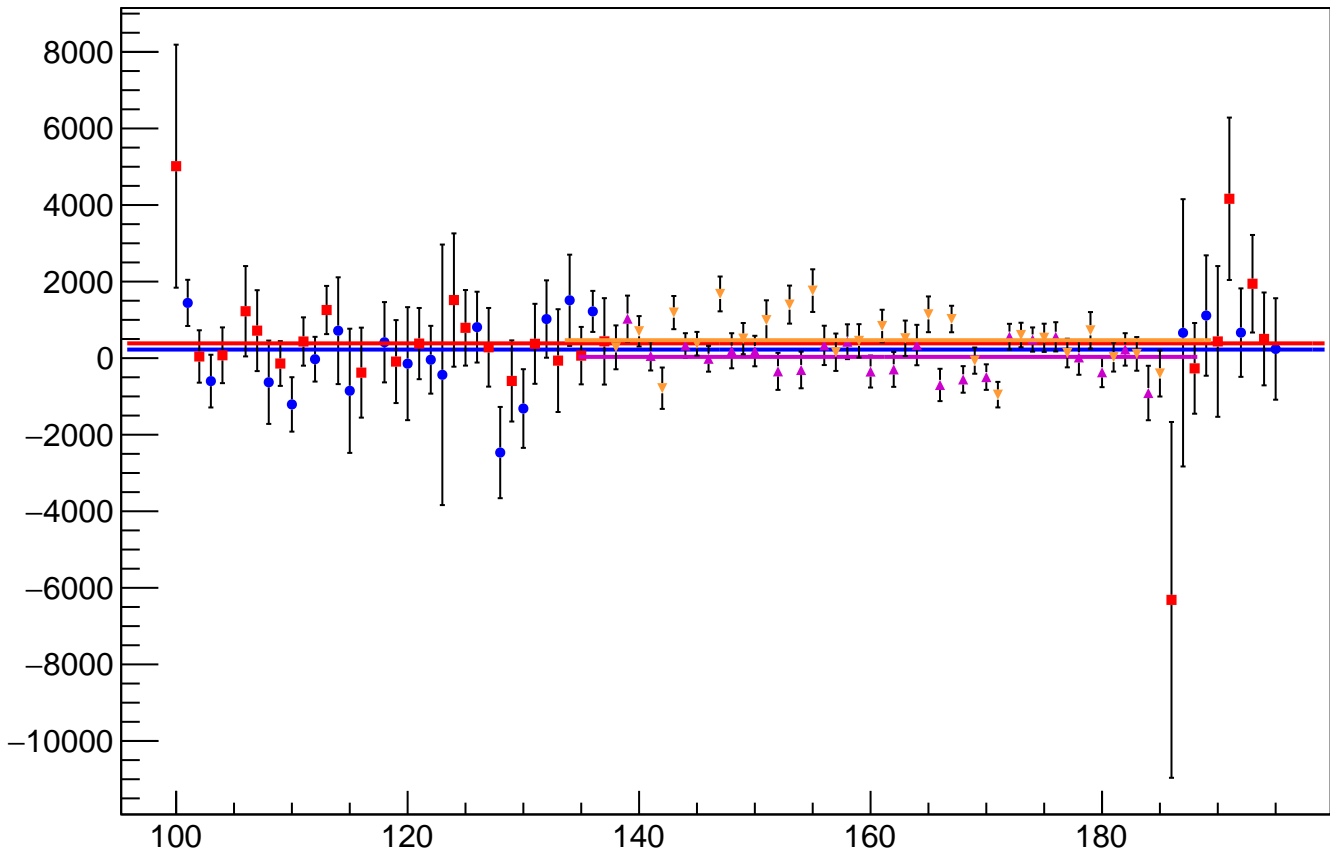
Left In: 345.954 $\pm$ 0.059  $\chi^2$ /NDF: 900847.0/22

+ sign 379.700 $\pm$ 0.054  $\chi^2$ /NDF: 4923560.8/45

All: 381.854 $\pm$ 0.038  $\chi^2$ /NDF: 10979653.7/93

- sign 384.057 $\pm$ 0.055  $\chi^2$ /NDF: 6052866.2/47

# asym\_sam\_1357\_avg\_mean vs Slug



Right In: 224.090 $\pm$ 204.030  $\chi^2$ /NDF: 24.6/20

Left Out: 468.863 $\pm$ 83.295  $\chi^2$ /NDF: 57.5/24

Right Out: 386.213 $\pm$ 195.415  $\chi^2$ /NDF: 15.3/24

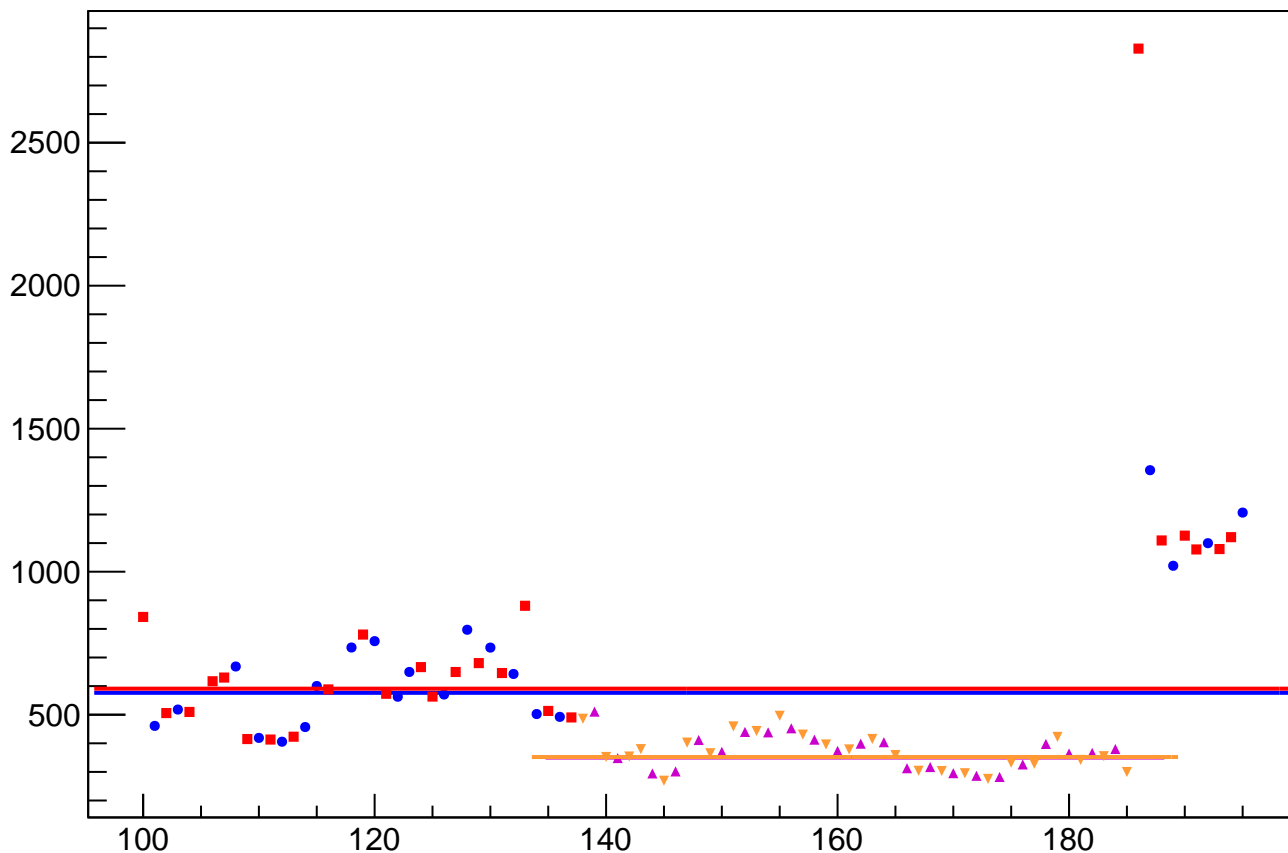
Left In: 32.801 $\pm$ 85.064  $\chi^2$ /NDF: 25.7/22

+ sign 433.895 $\pm$ 77.117  $\chi^2$ /NDF: 83.4/45

All: 263.449 $\pm$ 54.837  $\chi^2$ /NDF: 137.0/93

- sign 89.099 $\pm$ 77.995  $\chi^2$ /NDF: 43.8/47

# asym\_sam\_1357\_avg\_rms vs Slug



Right In: 576.513 $\pm$ 0.144  $\chi^2$ /NDF: 1766233.2/20

Left Out: 352.015 $\pm$ 0.059  $\chi^2$ /NDF: 1017195.6/24

+ sign 384.086 $\pm$ 0.055  $\chi^2$ /NDF: 4858923.6/45

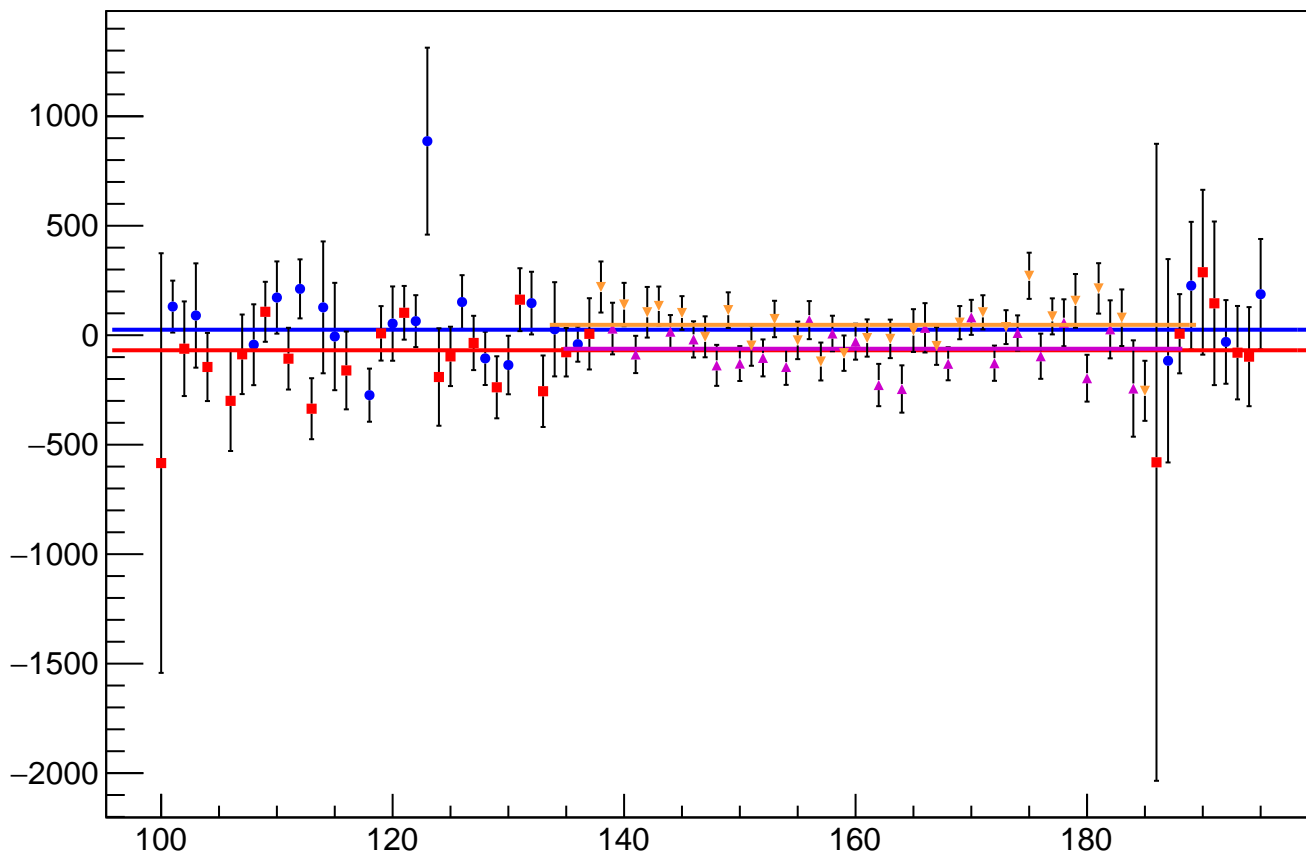
Right Out: 591.039 $\pm$ 0.138  $\chi^2$ /NDF: 2553123.2/24

All: 386.284 $\pm$ 0.039  $\chi^2$ /NDF: 10848492.0/90

Left In: 350.160 $\pm$ 0.060  $\chi^2$ /NDF: 878380.0/22

- sign 388.532 $\pm$ 0.055  $\chi^2$ /NDF: 5986282.3/47

# reg\_asym\_sam\_2468\_avg\_mean vs Slug



Right In: 25.118+/-33.463  $\chi^2$ /NDF: 20.3/20

Left Out: 47.426+/-18.253  $\chi^2$ /NDF:29.4/24

Right Out: -68.774+/-33.105  $\chi^2$ /NDF: 17.1/24

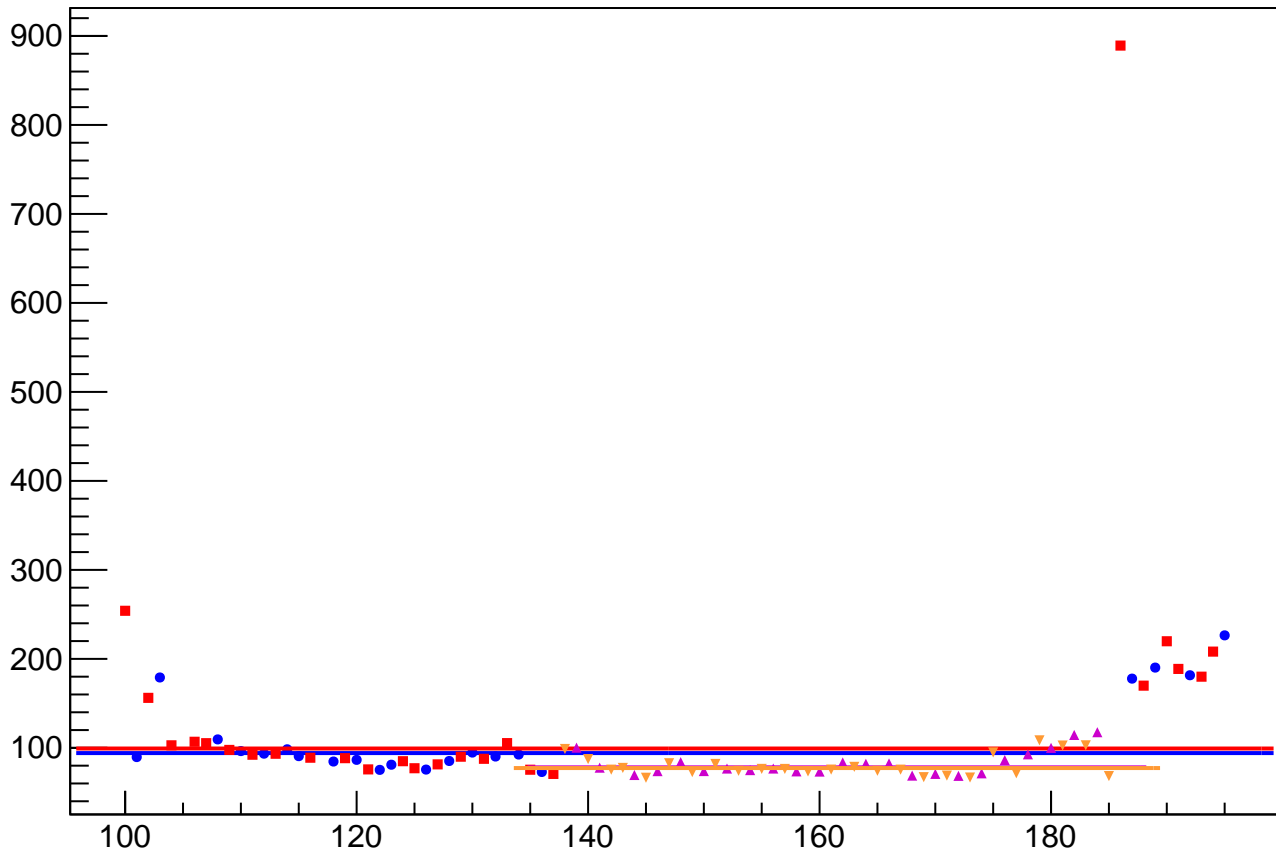
Left In: -61.830+/-18.958  $\chi^2$ /NDF:24.0/22

+ sign 42.310+/-16.024  $\chi^2$ /NDF: 50.0/45

All: -9.225+/-11.479  $\chi^2$ /NDF: 112.3/93

- sign -63.545+/-16.451  $\chi^2$ /NDF: 41.1/47

# reg\_asym\_sam\_2468\_avg\_rms vs Slug



Right In: 94.143+/-0.024  $\chi^2$ /NDF: 1791873.9/20

Left Out: 77.316+/-0.013  $\chi^2$ /NDF:635622.3/24

Right Out: 99.270+/-0.023  $\chi^2$ /NDF: 2545279.6/24

Left In: 78.139+/-0.013  $\chi^2$ /NDF:582108.1/22

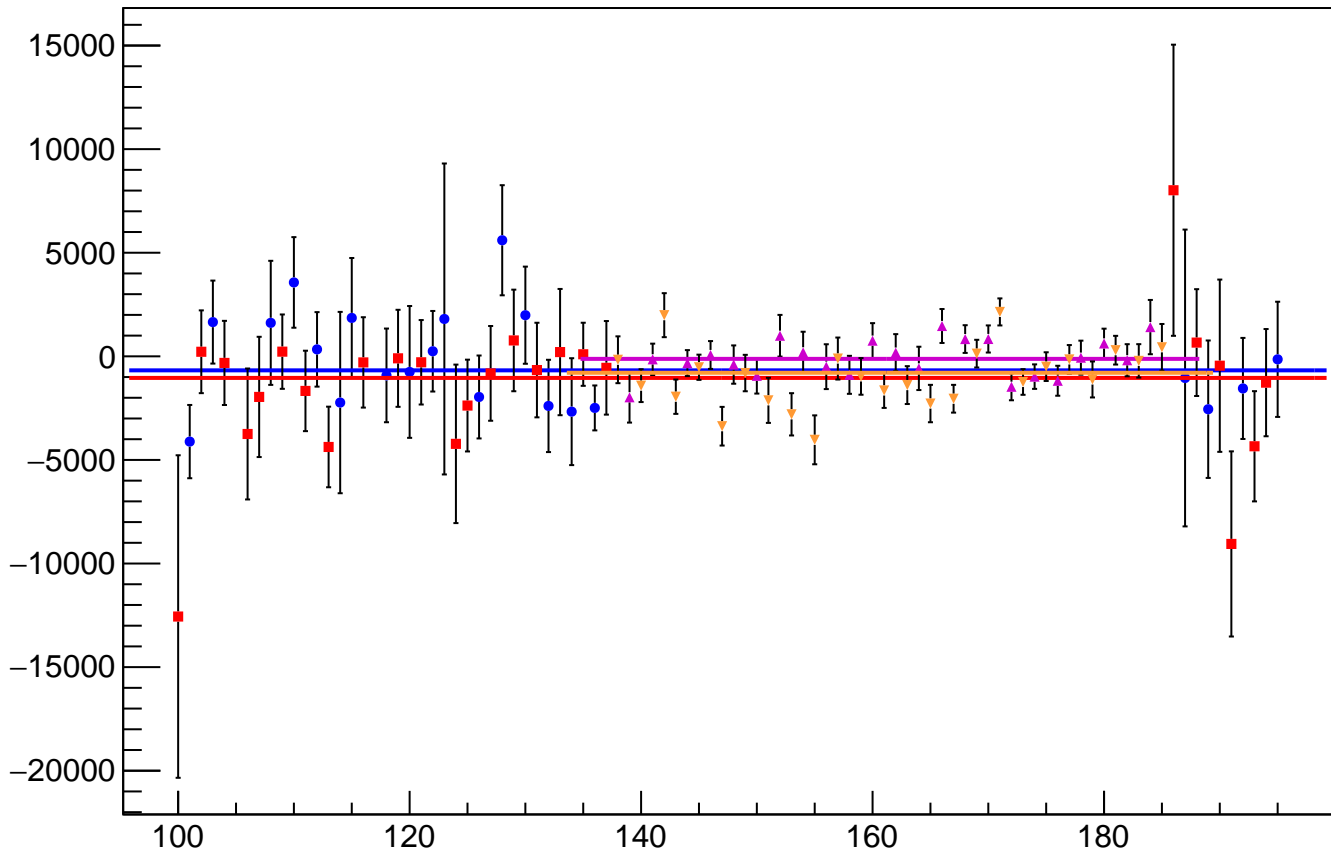
+ sign 81.175+/-0.011  $\chi^2$ /NDF: 2817241.7/45

All: 82.237+/-0.008  $\chi^2$ /NDF: 6576372.3/93

- sign 83.357+/-0.012  $\chi^2$ /NDF: 3741065.4/47



# asym\_sam\_2468\_avg\_correction\_mean vs Slug



Right In:  $-676.368 \pm 491.973$   $\chi^2/\text{NDF}: 22.8/20$

Left Out:  $-792.776 \pm 162.659$   $\chi^2/\text{NDF}: 66.6/24$

Right Out:  $-1041.688 \pm 480.657$   $\chi^2/\text{NDF}: 16.8/24$

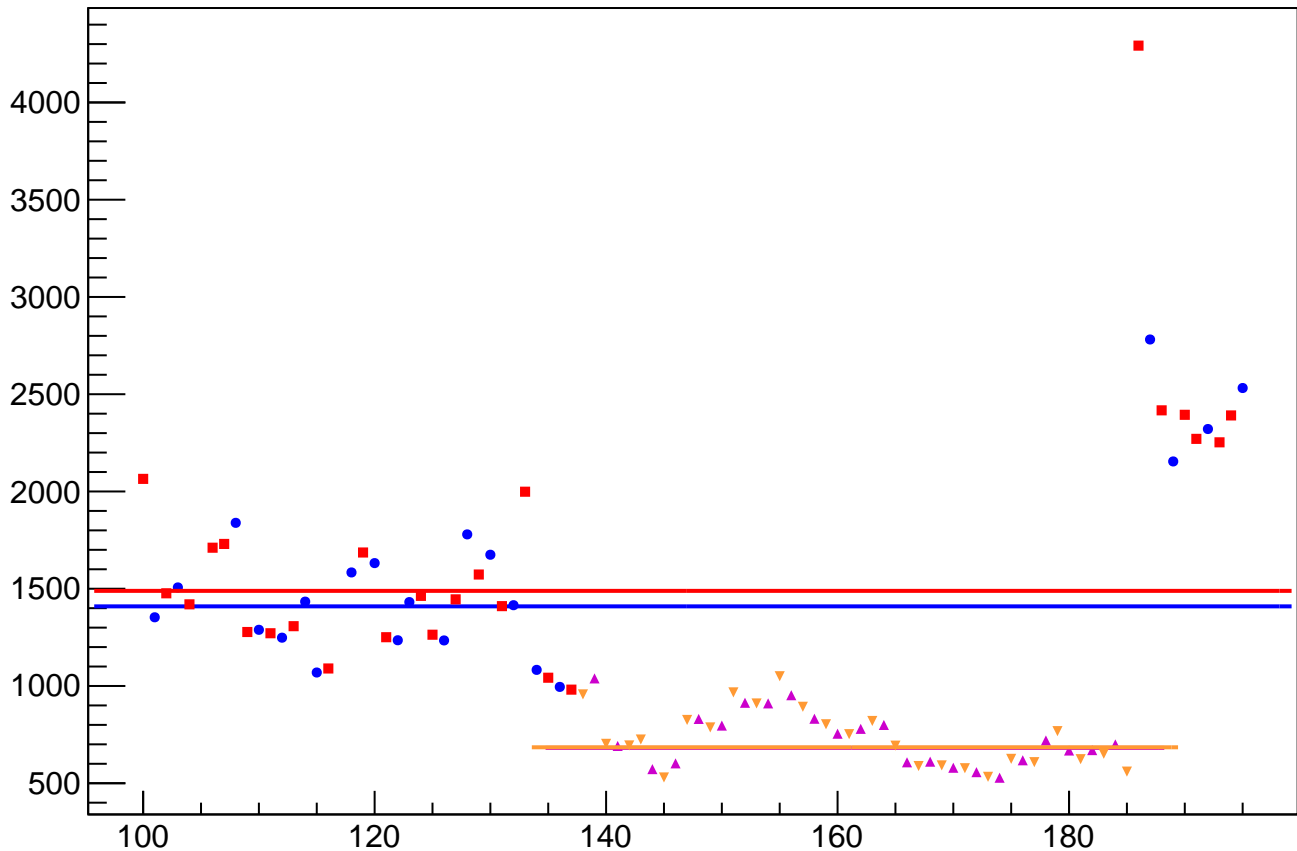
Left In:  $-122.198 \pm 166.193$   $\chi^2/\text{NDF}: 25.9/22$

+ sign  $-781.305 \pm 154.437$   $\chi^2/\text{NDF}: 89.5/45$

All:  $-505.586 \pm 110.122$   $\chi^2/\text{NDF}: 142.0/93$

- sign  $-220.386 \pm 157.069$   $\chi^2/\text{NDF}: 46.0/47$

# asym\_sam\_2468\_avg\_correction\_rms vs Slug



Right In:  $1409.352 \pm 0.348$   $\chi^2/\text{NDF}: 1318879.0/20$

Left Out:  $684.785 \pm 0.115$   $\chi^2/\text{NDF}: 1280146.2/24$

+ sign  $756.185 \pm 0.109$   $\chi^2/\text{NDF}: 6509694.7/45$

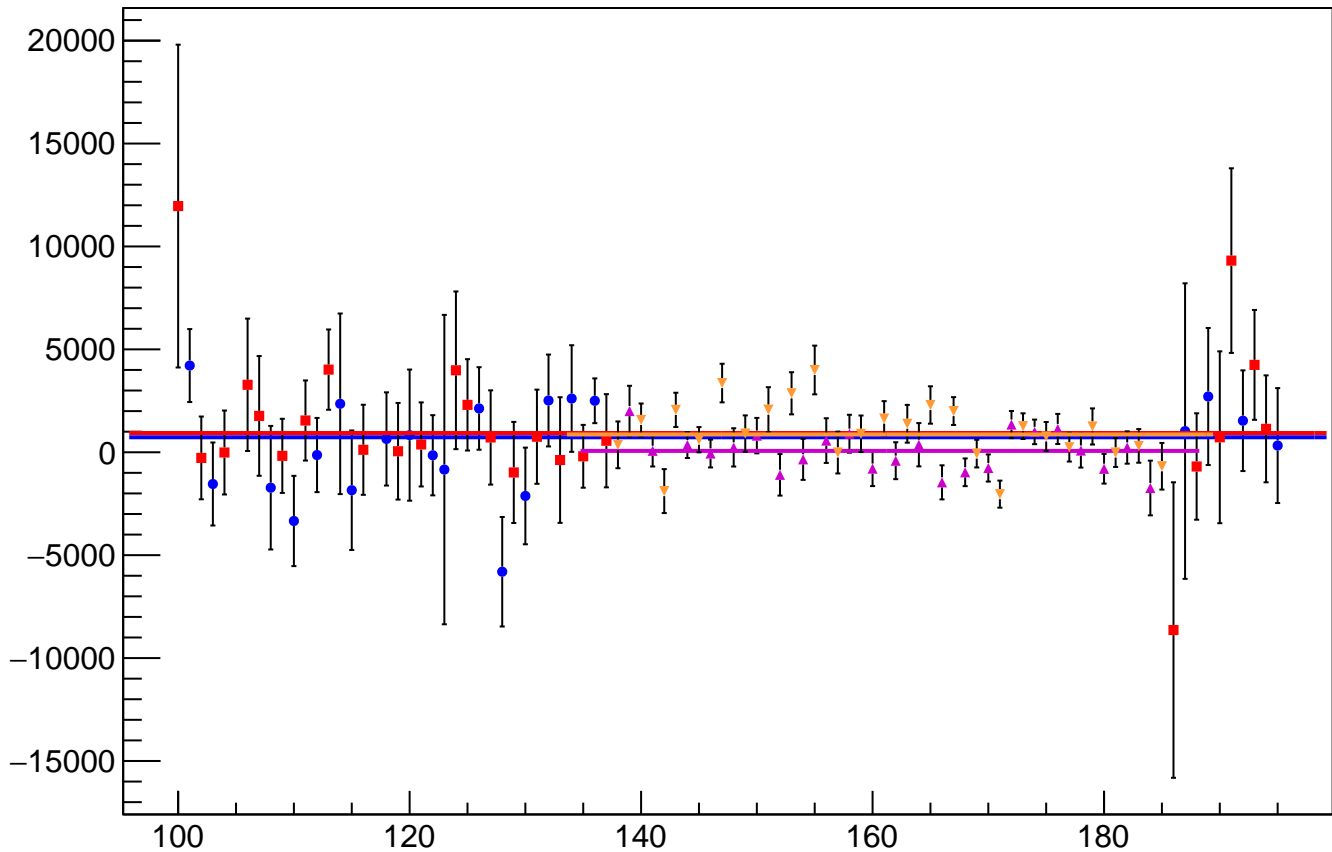
Right Out:  $1488.984 \pm 0.340$   $\chi^2/\text{NDF}: 1712707.8/24$

All:  $761.952 \pm 0.078$   $\chi^2/\text{NDF}: 14386837.9/93$

Left In:  $681.712 \pm 0.118$   $\chi^2/\text{NDF}: 1119637.0/22$

- sign  $767.917 \pm 0.111$   $\chi^2/\text{NDF}: 7871469.4/47$

# asym\_sam\_2468\_avg\_mean vs Slug



Right In: 728.006+/-493.416  $\chi^2/\text{NDF}$ : 22.9/20

Left Out: 865.597+/-163.885  $\chi^2/\text{NDF}$ : 62.8/24

Right Out: 936.098+/-482.303  $\chi^2/\text{NDF}$ : 16.1/24

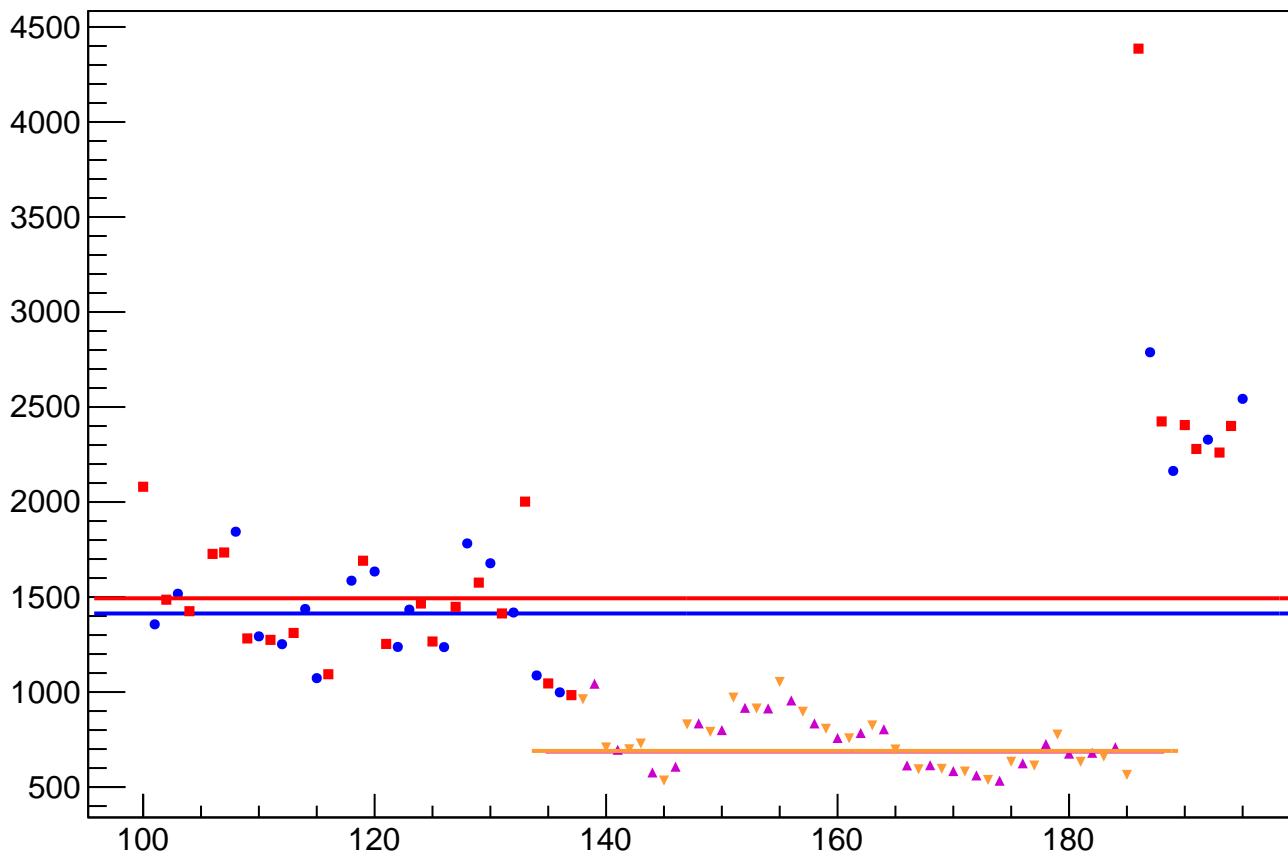
Left In: 65.924+/-167.485  $\chi^2/\text{NDF}$ : 26.4/22

+ sign 851.926+/-155.531  $\chi^2/\text{NDF}$ : 85.8/45

All: 511.672+/-110.914  $\chi^2/\text{NDF}$ : 141.0/93

- sign 159.566+/-158.216  $\chi^2/\text{NDF}$ : 45.4/47

# asym\_sam\_2468\_avg\_rms vs Slug



Right In:  $1413.458 \pm 0.349$   $\chi^2/\text{NDF}: 1319823.5/20$

Left Out:  $690.166 \pm 0.116$   $\chi^2/\text{NDF}: 1258158.2/24$

Right Out:  $1493.372 \pm 0.341$   $\chi^2/\text{NDF}: 1721874.4/24$

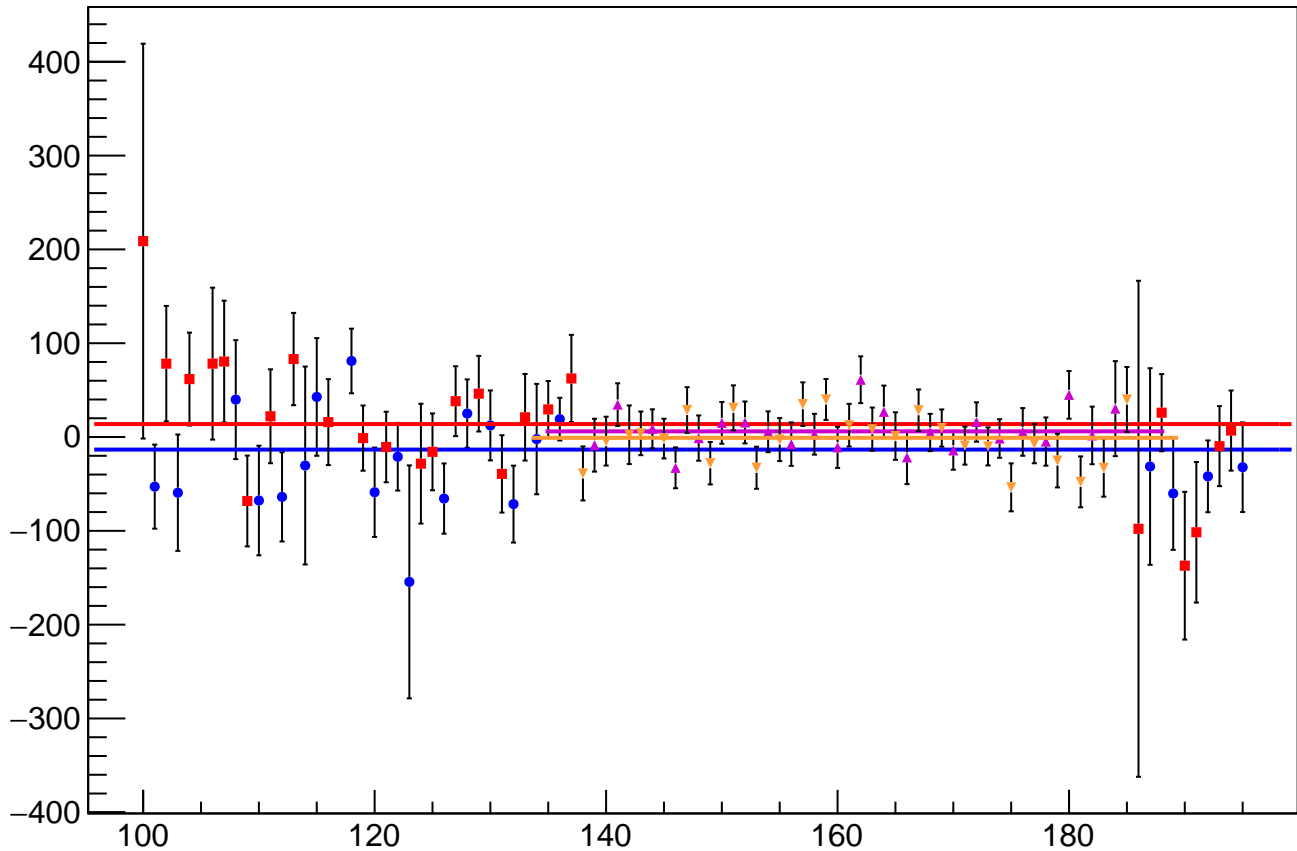
Left In:  $687.216 \pm 0.118$   $\chi^2/\text{NDF}: 1099706.1/22$

+ sign  $762.032 \pm 0.110$   $\chi^2/\text{NDF}: 6448615.5/45$

All:  $767.898 \pm 0.078$   $\chi^2/\text{NDF}: 14262310.8/93$

- sign  $773.969 \pm 0.112$   $\chi^2/\text{NDF}: 7807905.4/47$

# reg\_asym\_sam\_1357\_2468\_dd\_mean vs Slug



Right In:  $-13.390 \pm 9.669$   $\chi^2/\text{NDF}: 23.6/20$

Left Out:  $-0.861 \pm 4.760$   $\chi^2/\text{NDF}: 27.9/24$

Right Out:  $13.805 \pm 9.463$   $\chi^2/\text{NDF}: 21.8/24$

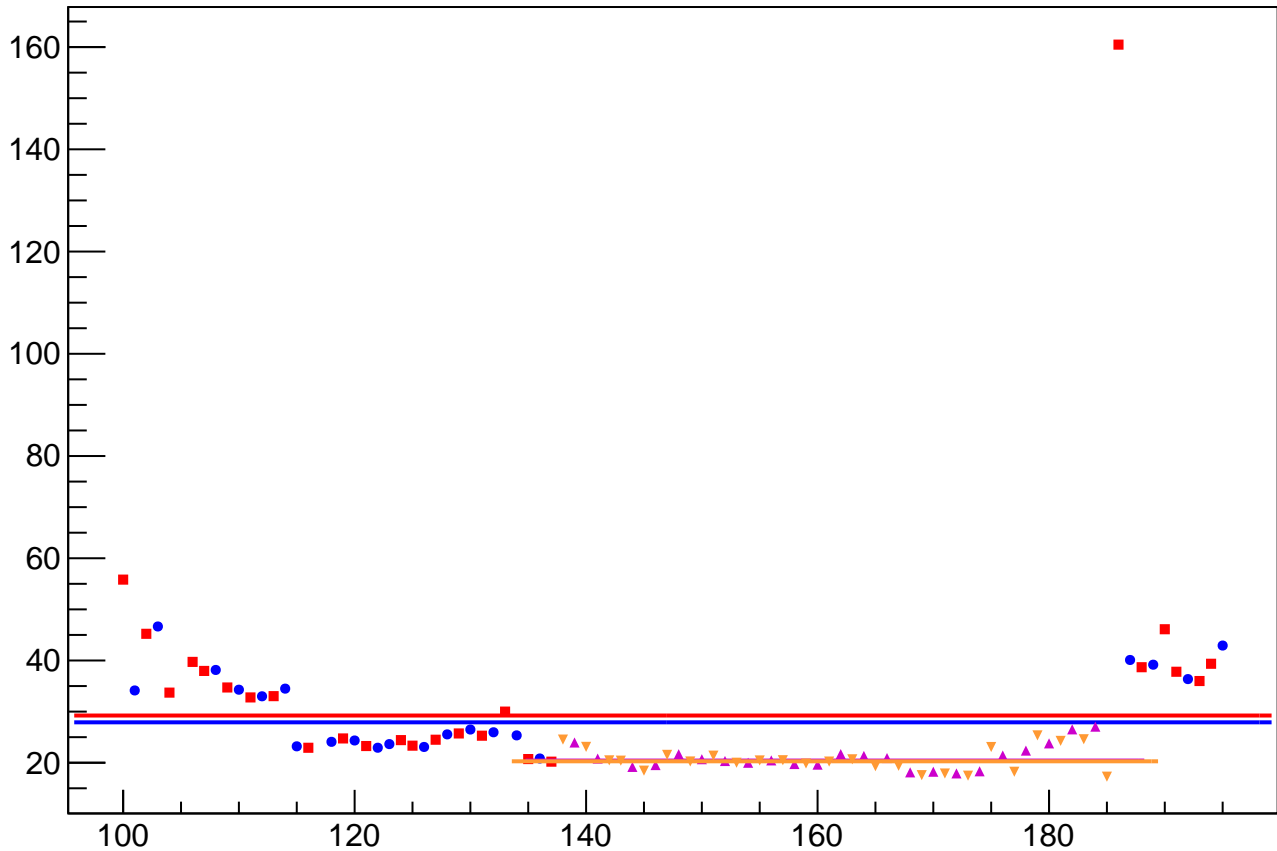
Left In:  $6.042 \pm 4.925$   $\chi^2/\text{NDF}: 16.9/22$

+ sign  $-3.305 \pm 4.271$   $\chi^2/\text{NDF}: 52.8/45$

All:  $2.070 \pm 3.054$   $\chi^2/\text{NDF}: 95.3/93$

- sign  $7.696 \pm 4.369$   $\chi^2/\text{NDF}: 39.3/47$

# reg\_asym\_sam\_1357\_2468\_dd\_rms vs Slug



Right In: 27.903+/-0.007  $\chi^2$ /NDF: 1054562.5/20

Left Out: 20.279+/-0.003  $\chi^2$ /NDF:407056.4/24

Right Out: 29.234+/-0.007  $\chi^2$ /NDF: 1653725.8/24

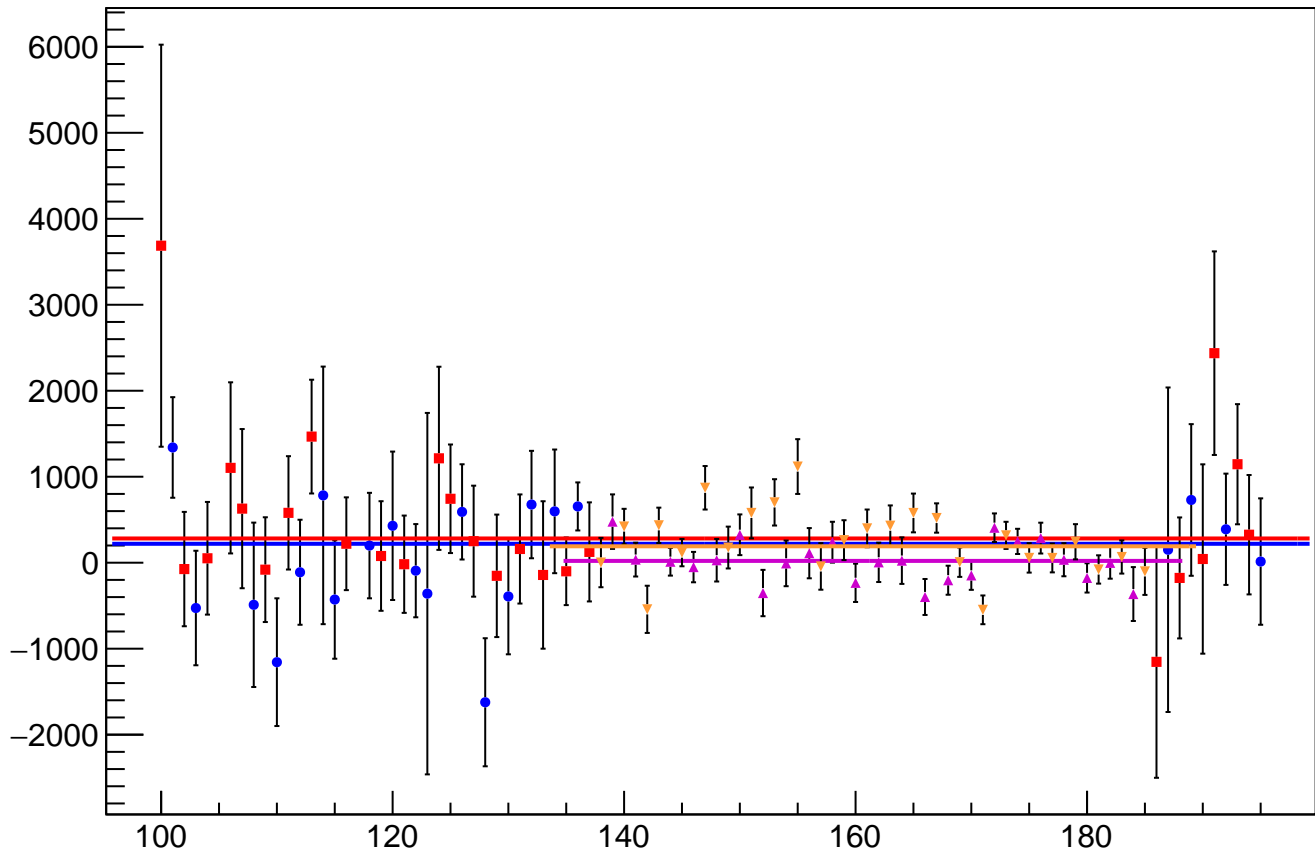
Left In: 20.424+/-0.003  $\chi^2$ /NDF:323427.4/22

+ sign 21.767+/-0.003  $\chi^2$ /NDF: 2462467.0/45

All: 22.028+/-0.002  $\chi^2$ /NDF: 5819076.8/93

- sign 22.302+/-0.003  $\chi^2$ /NDF: 3341271.5/47

# asym\_sam\_1357\_2468\_dd\_correction\_mean vs Slug



Right In: 220.033+/-139.565  $\chi^2$ /NDF: 21.8/20

Left Out: 190.867+/-41.314  $\chi^2$ /NDF:67.9/24

Right Out: 281.810+/-137.928  $\chi^2$ /NDF: 16.9/24

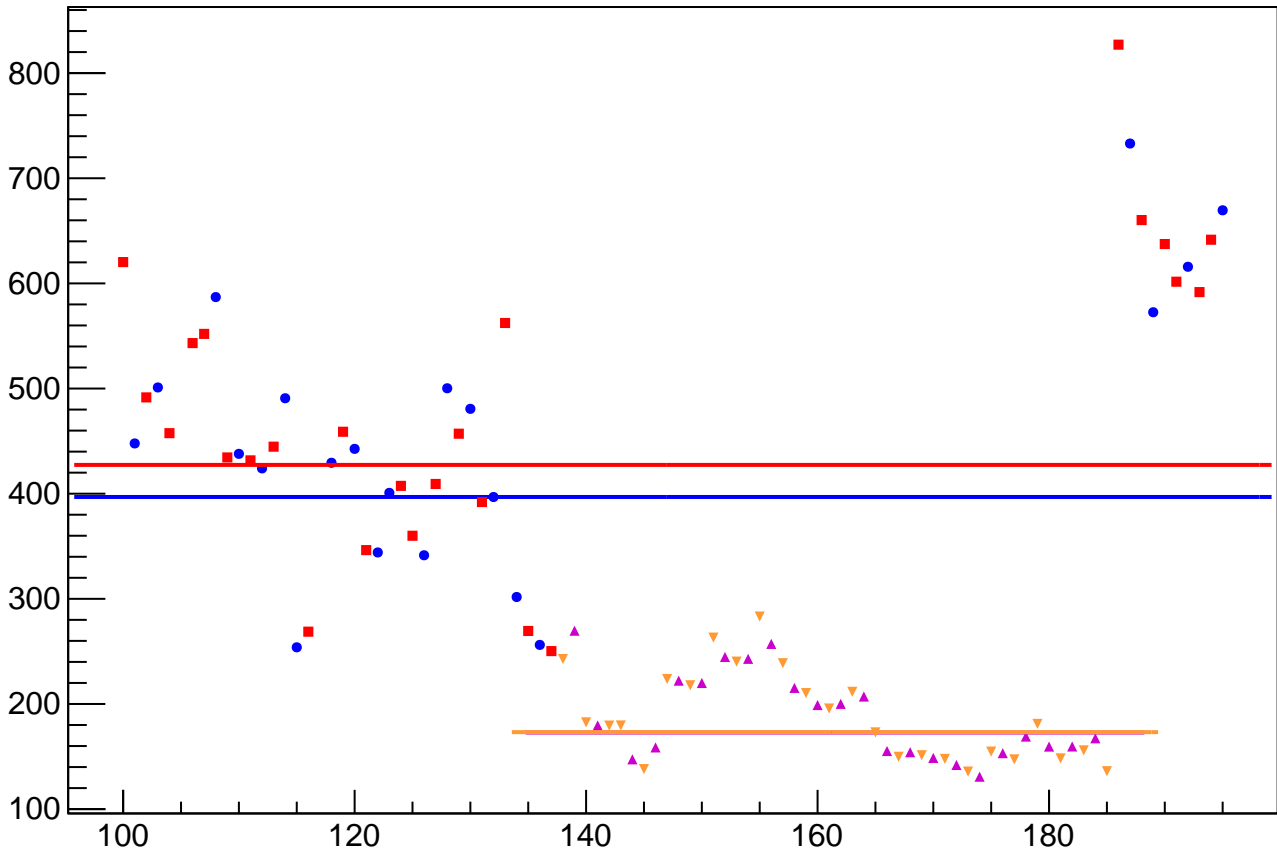
Left In: 20.998+/-42.291  $\chi^2$ /NDF:27.7/22

+ sign 193.217+/-39.615  $\chi^2$ /NDF: 89.7/45

All: 119.845+/-28.297  $\chi^2$ /NDF: 144.7/93

- sign 43.411+/-40.433  $\chi^2$ /NDF: 47.9/47

# asym\_sam\_1357\_2468\_dd\_correction\_rms vs Slug



Right In:  $396.873 \pm 0.099$   $\chi^2/\text{NDF}: 1556380.6/20$

Left Out:  $173.210 \pm 0.029$   $\chi^2/\text{NDF}: 1561250.6/24$

Right Out:  $427.379 \pm 0.098$   $\chi^2/\text{NDF}: 1728015.5/24$

Left In:  $172.828 \pm 0.030$   $\chi^2/\text{NDF}: 1372131.7/22$

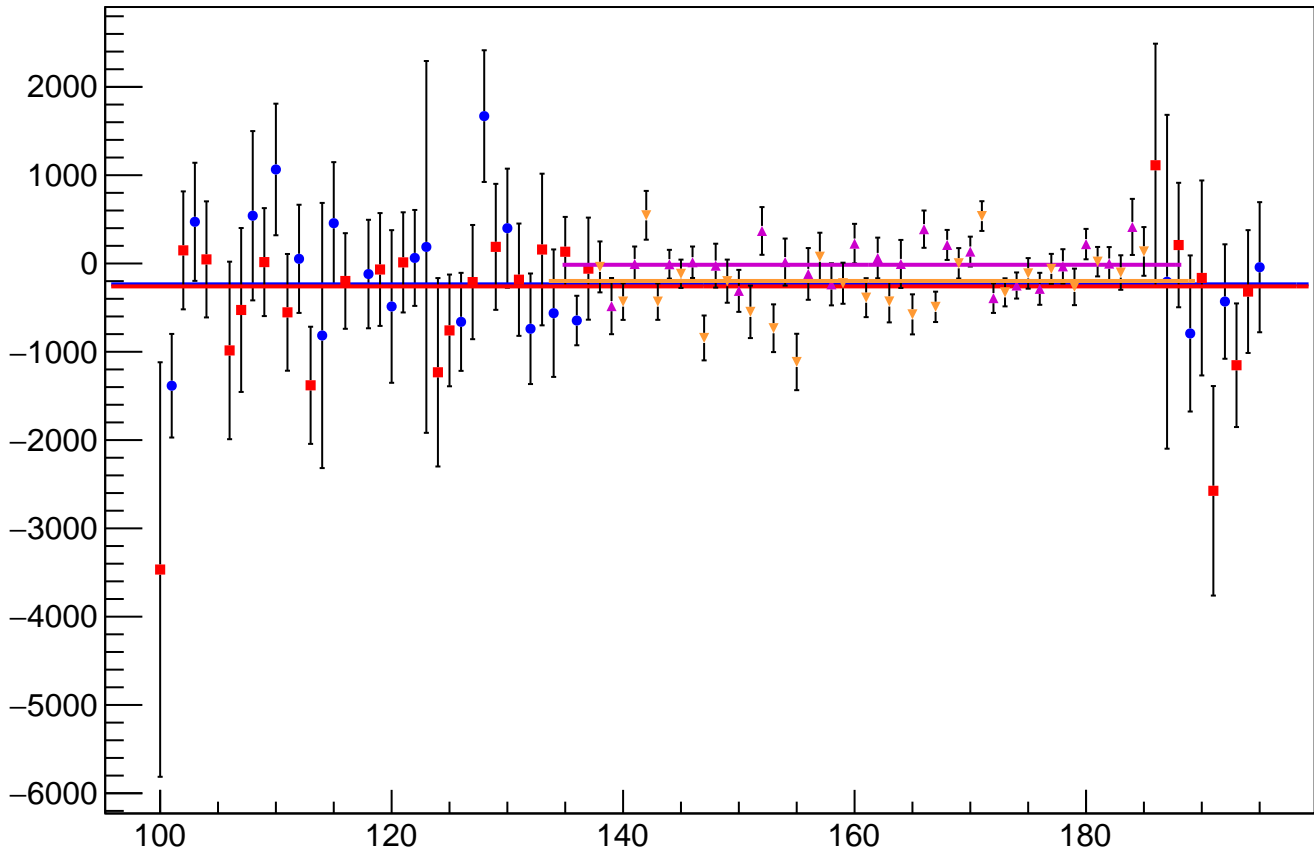
+ sign  $191.230 \pm 0.028$   $\chi^2/\text{NDF}: 7840309.8/45$

All:  $192.931 \pm 0.020$   $\chi^2/\text{NDF}: 17174602.3/93$

- sign  $194.702 \pm 0.029$   $\chi^2/\text{NDF}: 9326766.8/47$



# asym\_sam\_1357\_2468\_dd\_mean vs Slug



Right In:  $-236.339 \pm 139.959$   $\chi^2/\text{NDF}: 22.0/20$

Left Out:  $-197.918 \pm 41.638$   $\chi^2/\text{NDF}: 64.3/24$

Right Out:  $-259.678 \pm 138.348$   $\chi^2/\text{NDF}: 16.7/24$

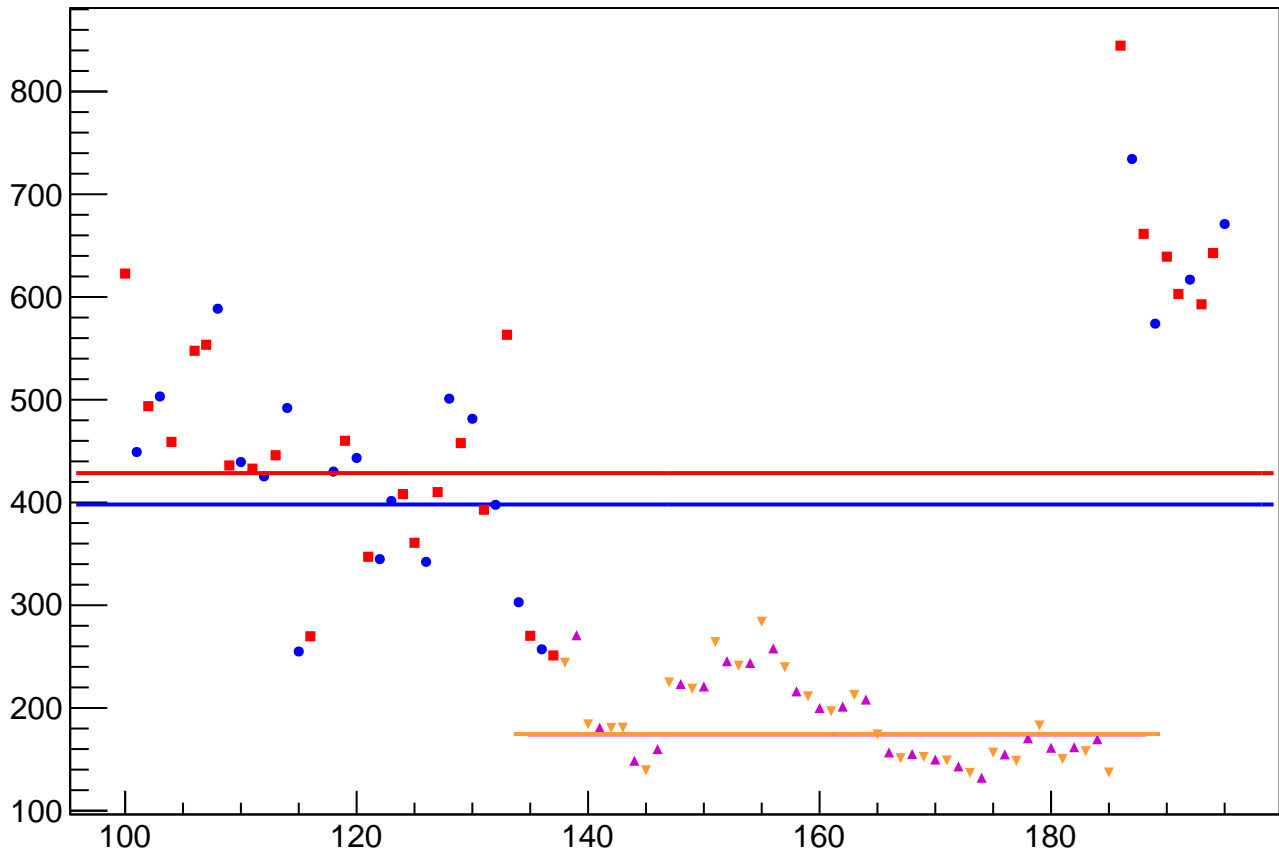
Left In:  $-14.616 \pm 42.629$   $\chi^2/\text{NDF}: 27.7/22$

+ sign  $-201.042 \pm 39.909$   $\chi^2/\text{NDF}: 86.4/45$

All:  $-120.153 \pm 28.509$   $\chi^2/\text{NDF}: 142.1/93$

- sign  $-35.865 \pm 40.739$   $\chi^2/\text{NDF}: 47.3/47$

# asym\_sam\_1357\_2468\_dd\_rms vs Slug



Right In: 398.059 $\pm$ 0.099  $\chi^2$ /NDF: 1551717.9/20

Left Out: 174.648 $\pm$ 0.029  $\chi^2$ /NDF: 1531999.5/24

Right Out: 428.609 $\pm$ 0.098  $\chi^2$ /NDF: 1732686.1/24

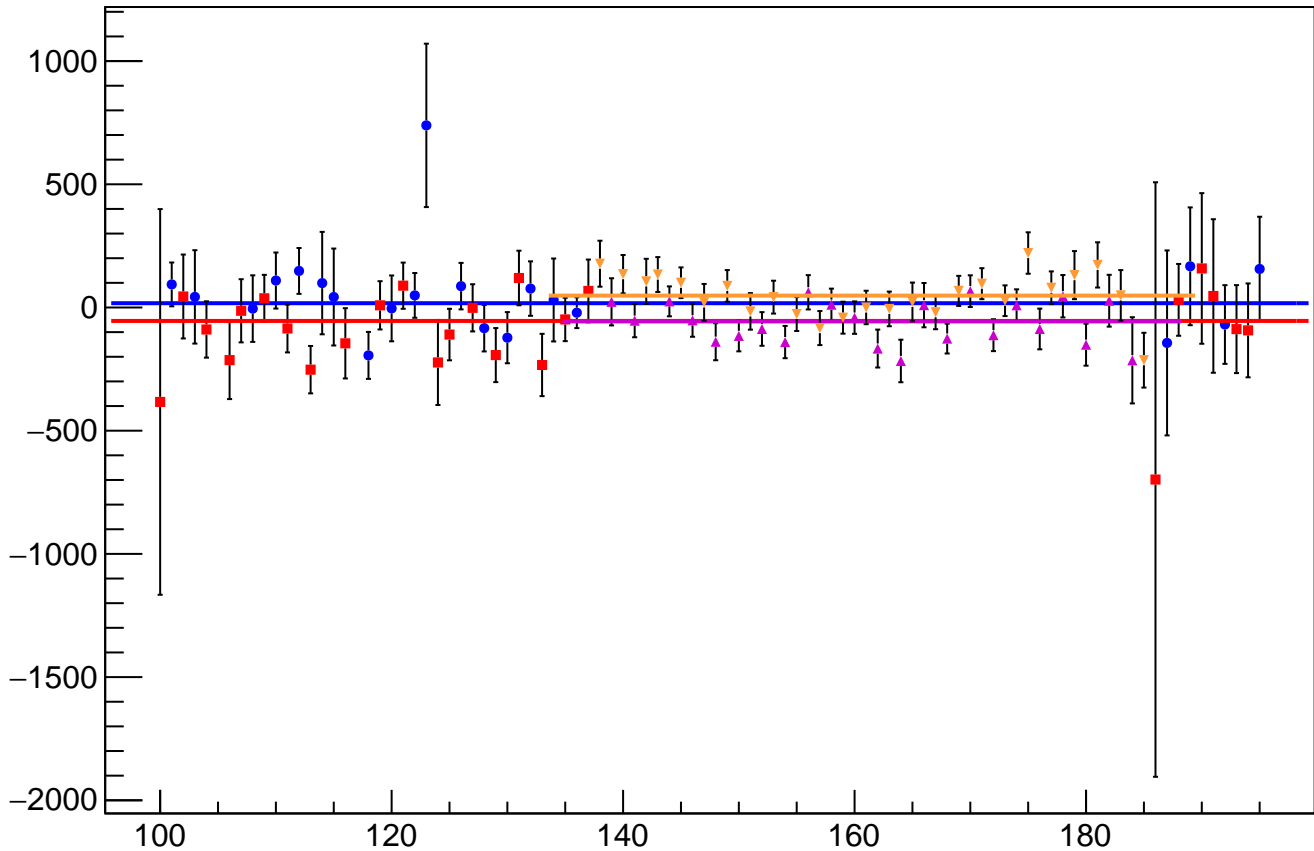
Left In: 174.288 $\pm$ 0.030  $\chi^2$ /NDF: 1344779.5/22

+ sign 192.814 $\pm$ 0.028  $\chi^2$ /NDF: 7765447.6/45

All: 194.541 $\pm$ 0.020  $\chi^2$ /NDF: 17022967.5/93

- sign 196.341 $\pm$ 0.029  $\chi^2$ /NDF: 9249869.8/47

# reg\_asym\_sam\_12345678\_avg\_mean vs Slug



Right In:  $17.388 \pm 25.620$   $\chi^2/\text{NDF}: 18.9/20$

Left Out:  $48.233 \pm 14.616$   $\chi^2/\text{NDF}: 29.3/24$

Right Out:  $-54.539 \pm 25.118$   $\chi^2/\text{NDF}: 20.0/24$

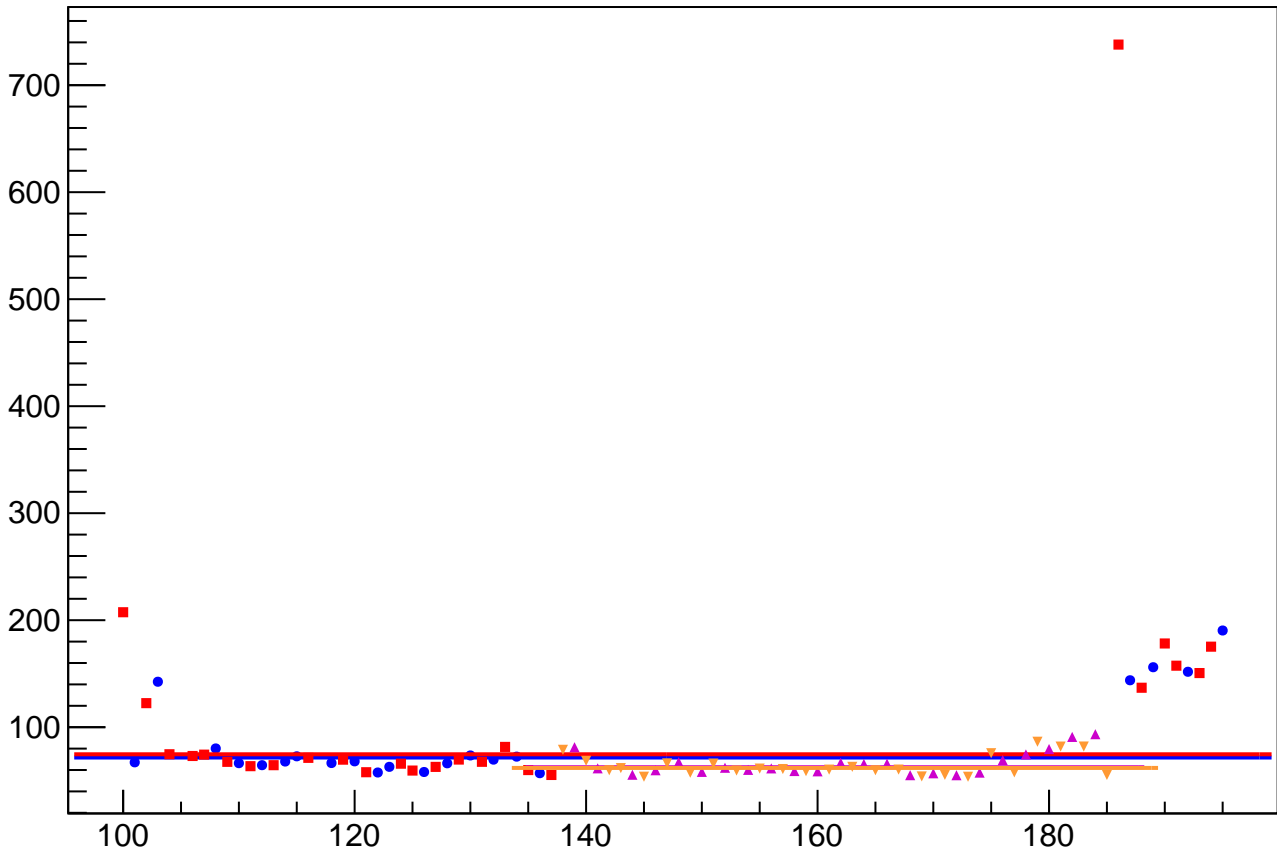
Left In:  $-56.403 \pm 15.182$   $\chi^2/\text{NDF}: 27.5/22$

+ sign  $40.660 \pm 12.695$   $\chi^2/\text{NDF}: 49.2/45$

All:  $-6.503 \pm 9.080$   $\chi^2/\text{NDF}: 124.9/93$

- sign  $-55.904 \pm 12.993$   $\chi^2/\text{NDF}: 47.4/47$

# reg\_asym\_sam\_12345678\_avg\_rms vs Slug



Right In: 71.664 $\pm$ 0.018  $\chi^2$ /NDF: 1979077.8/20

Left Out: 61.946 $\pm$ 0.010  $\chi^2$ /NDF: 604989.2/24

Right Out: 74.696 $\pm$ 0.018  $\chi^2$ /NDF: 2801677.2/24

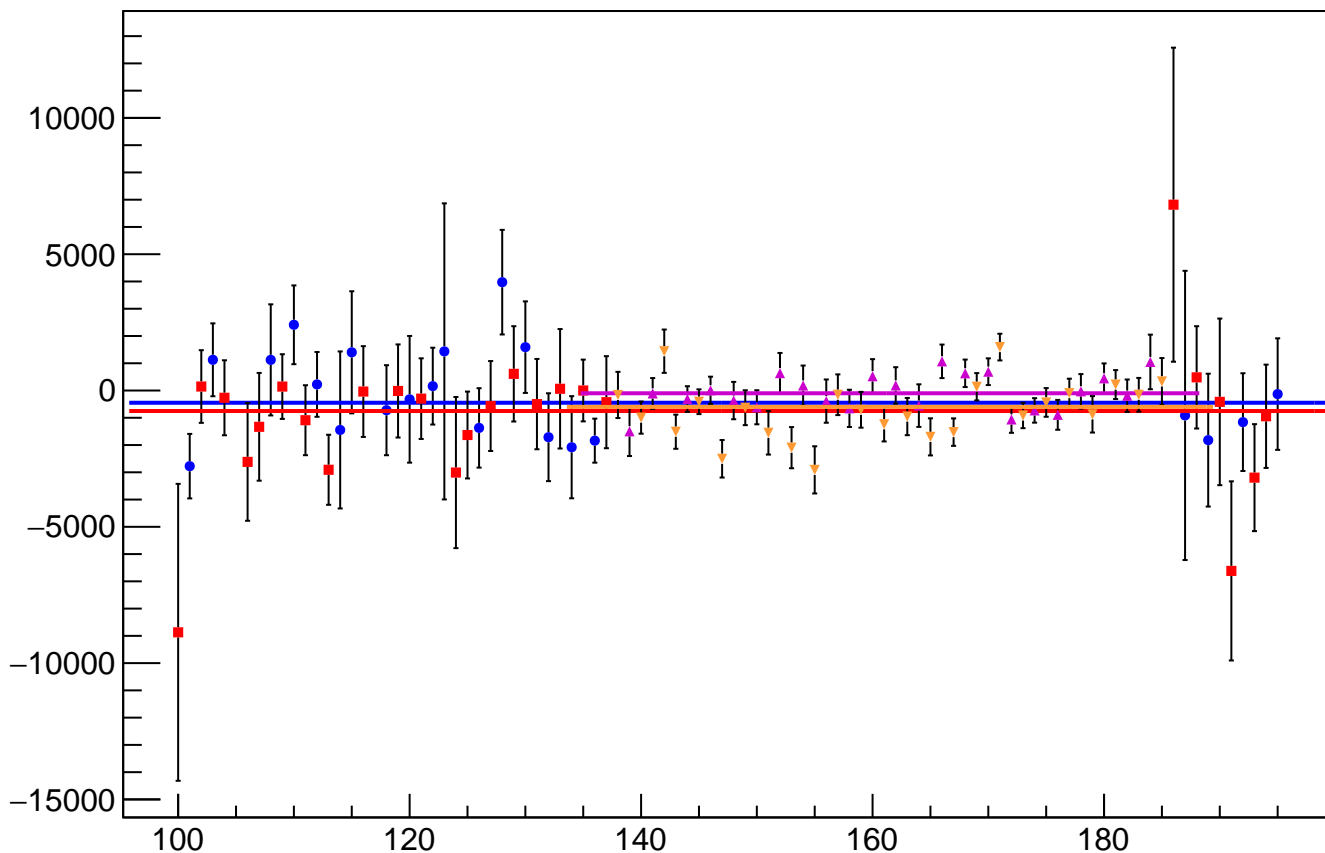
Left In: 62.607 $\pm$ 0.011  $\chi^2$ /NDF: 575516.1/22

+ sign 64.332 $\pm$ 0.009  $\chi^2$ /NDF: 2801140.2/45

All: 65.070 $\pm$ 0.006  $\chi^2$ /NDF: 6531455.1/93

- sign 65.842 $\pm$ 0.009  $\chi^2$ /NDF: 3716506.4/47

# asym\_sam\_12345678\_avg\_correction\_mean vs Slug



Right In:  $-448.664 \pm 349.930$   $\chi^2/\text{NDF}$ : 23.3/20

Left Out:  $-601.486 \pm 122.119$   $\chi^2/\text{NDF}$ : 65.4/24

Right Out:  $-751.696 \pm 339.929$   $\chi^2/\text{NDF}$ : 16.7/24

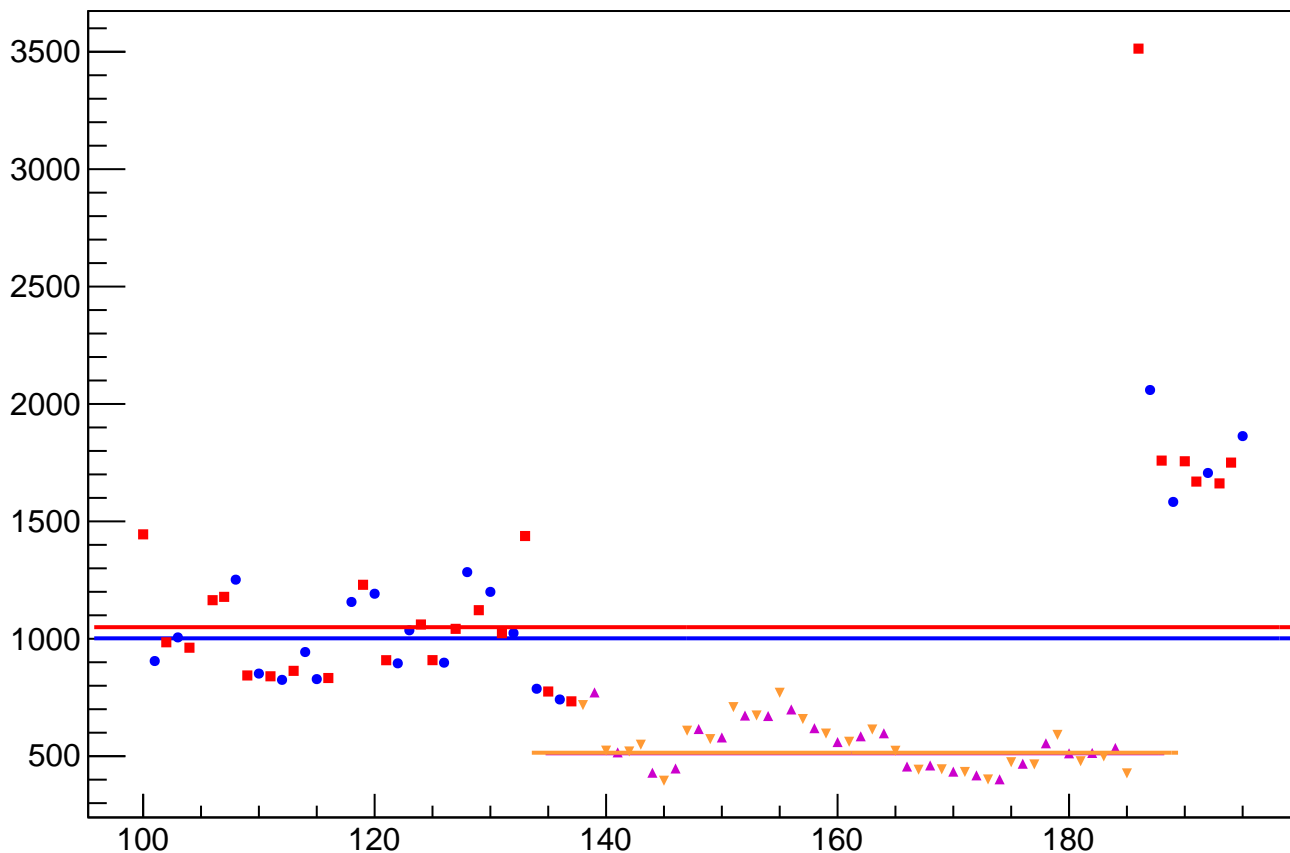
Left In:  $-100.548 \pm 124.725$   $\chi^2/\text{NDF}$ : 25.5/22

+ sign  $-584.895 \pm 115.299$   $\chi^2/\text{NDF}$ : 88.8/45

All:  $-384.491 \pm 82.155$   $\chi^2/\text{NDF}$ : 140.3/93

- sign  $-177.808 \pm 117.092$   $\chi^2/\text{NDF}$ : 45.4/47

# asym\_sam\_12345678\_avg\_correction\_rms vs Slug



Right In:  $1001.927 \pm 0.247$   $\chi^2/\text{NDF}: 1336767.2/20$

Left Out:  $514.758 \pm 0.086$   $\chi^2/\text{NDF}: 1194945.9/24$

Right Out:  $1049.380 \pm 0.240$   $\chi^2/\text{NDF}: 1834849.6/24$

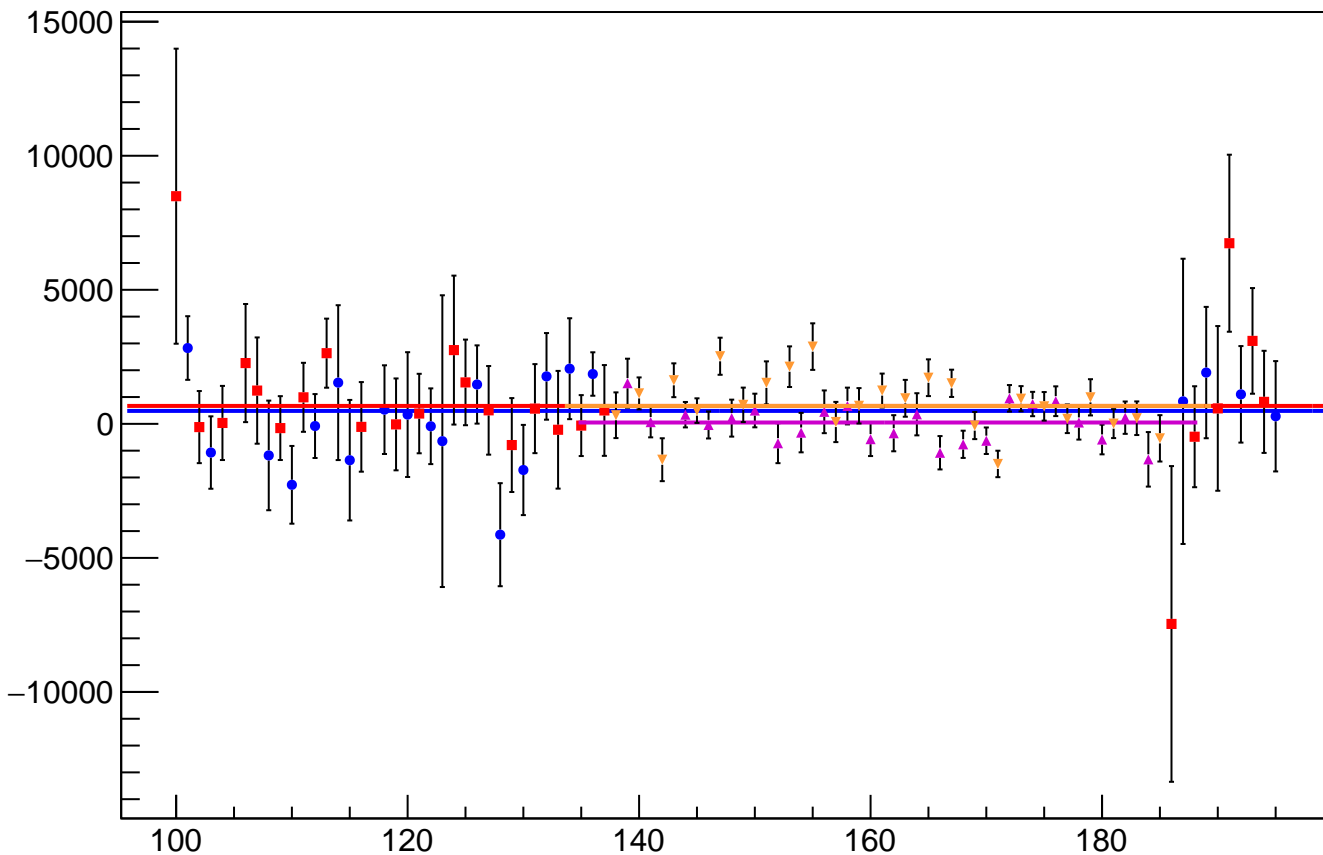
Left In:  $512.199 \pm 0.088$   $\chi^2/\text{NDF}: 1041302.8/22$

+ sign  $567.647 \pm 0.082$   $\chi^2/\text{NDF}: 5987250.8/45$

All:  $571.728 \pm 0.058$   $\chi^2/\text{NDF}: 13270406.4/93$

- sign  $575.937 \pm 0.083$   $\chi^2/\text{NDF}: 7278066.1/47$

# asym\_sam\_12345678\_avg\_mean vs Slug



Right In: 482.920 $\pm$ 351.169  $\chi^2$ /NDF: 23.4/20

Left Out: 667.625 $\pm$ 123.146  $\chi^2$ /NDF:61.5/24

Right Out: 668.952 $\pm$ 341.325  $\chi^2$ /NDF: 15.8/24

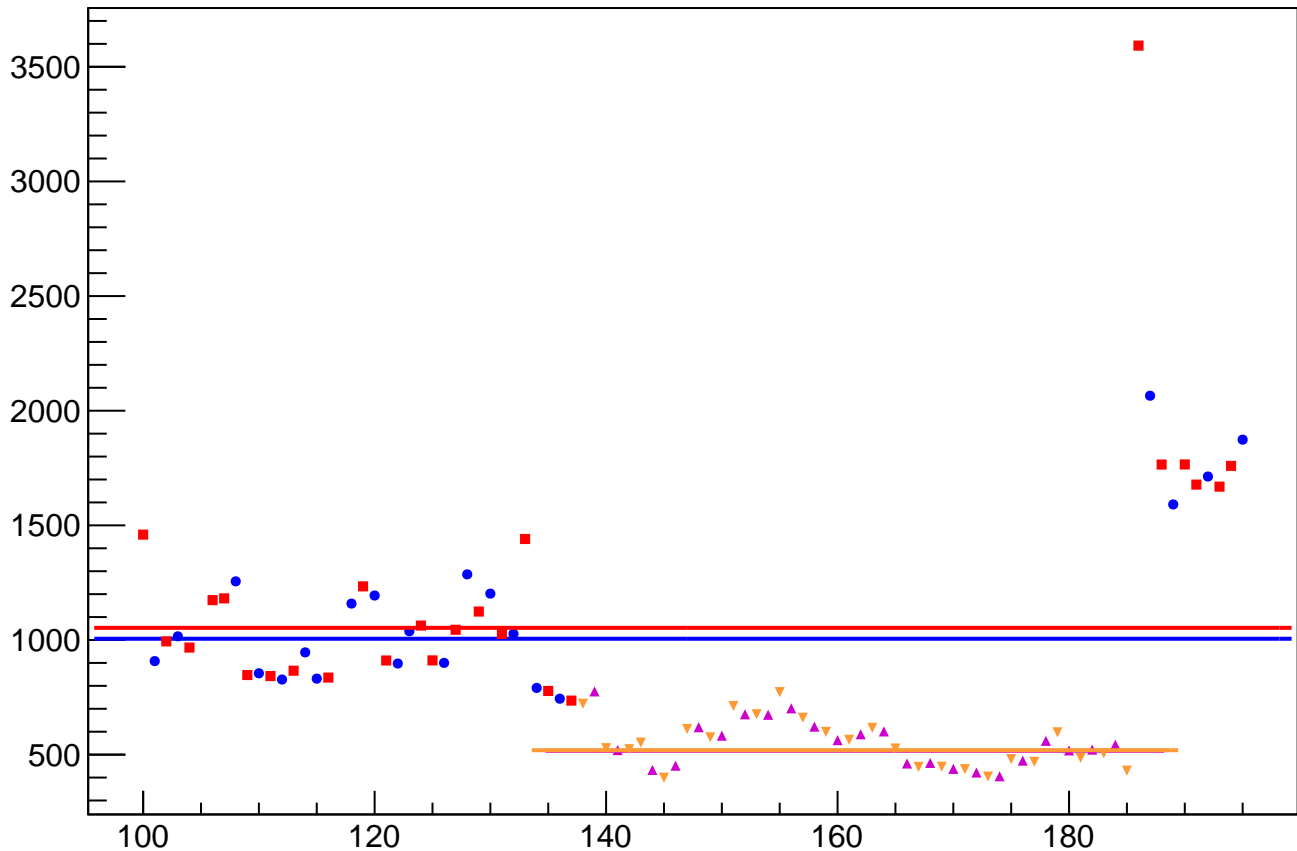
Left In: 50.079 $\pm$ 125.805  $\chi^2$ /NDF:26.1/22

+ sign 647.398 $\pm$ 116.208  $\chi^2$ /NDF: 85.1/45

All: 389.846 $\pm$ 82.812  $\chi^2$ /NDF: 139.9/93

- sign 124.097 $\pm$ 118.042  $\chi^2$ /NDF: 44.8/47

# asym\_sam\_12345678\_avg\_rms vs Slug



Right In: 1005.420+/-0.248  $\chi^2$ /NDF: 1338749.7/20

Left Out: 519.254+/-0.087  $\chi^2$ /NDF:1172411.1/24

Right Out: 1053.089+/-0.241  $\chi^2$ /NDF: 1844127.5/24

Left In: 516.792+/-0.089  $\chi^2$ /NDF:1021374.1/22

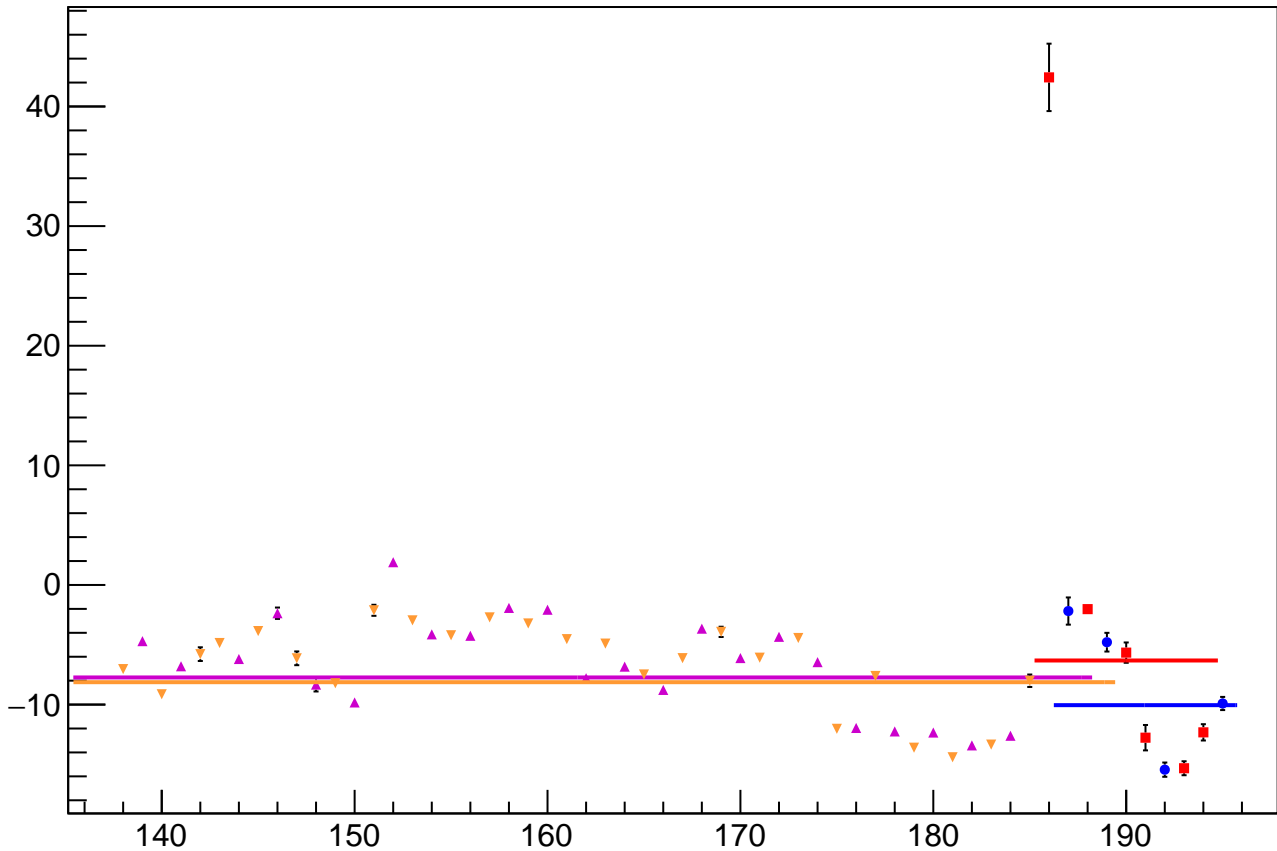
+ sign 572.492+/-0.082  $\chi^2$ /NDF: 5924659.8/45

All: 576.647+/-0.059  $\chi^2$ /NDF: 13142302.7/93

- sign 580.934+/-0.083  $\chi^2$ /NDF: 7212448.0/47



# reg\_asym\_sam1\_diff\_bpm1X\_slope vs Slug



Right In:  $-10.048 \pm 0.343$   $\chi^2/\text{NDF}: 175.1/3$

Left Out:  $-8.127 \pm 0.067$   $\chi^2/\text{NDF}: 3635.5/24$

Right Out:  $-6.313 \pm 0.247$   $\chi^2/\text{NDF}: 815.8/5$

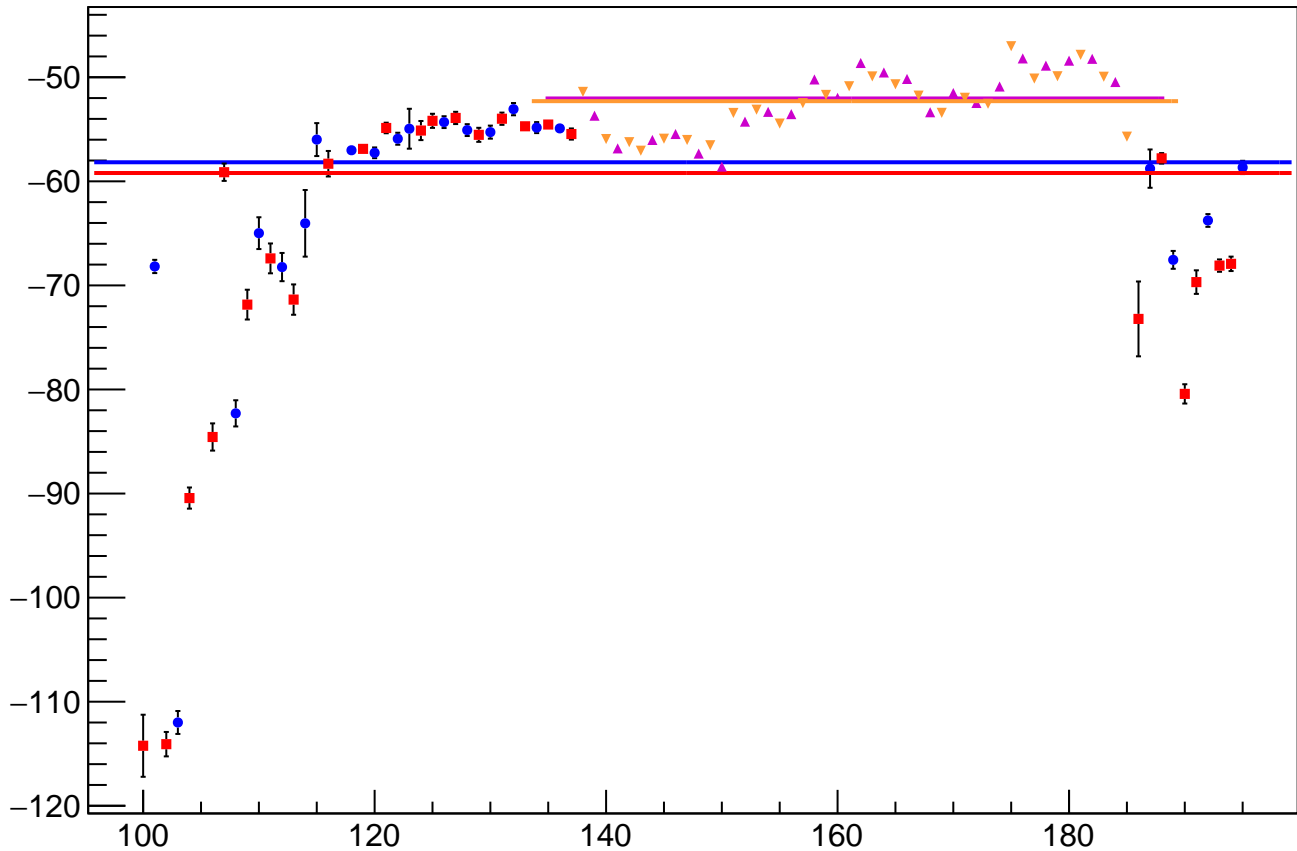
Left In:  $-7.732 \pm 0.069$   $\chi^2/\text{NDF}: 3719.0/22$

+ sign  $-8.199 \pm 0.066$   $\chi^2/\text{NDF}: 3840.8/28$

All:  $-7.915 \pm 0.047$   $\chi^2/\text{NDF}: 8443.0/57$

- sign  $-7.630 \pm 0.066$   $\chi^2/\text{NDF}: 4565.4/28$

# reg\_asym\_sam1\_diff\_bpm4aY\_slope vs Slug



Right In:  $-58.169 \pm 0.134$   $\chi^2/\text{NDF}: 3678.6/20$

Left Out:  $-52.297 \pm 0.055$   $\chi^2/\text{NDF}: 2657.5/24$

Right Out:  $-59.200 \pm 0.129$   $\chi^2/\text{NDF}: 5822.9/24$

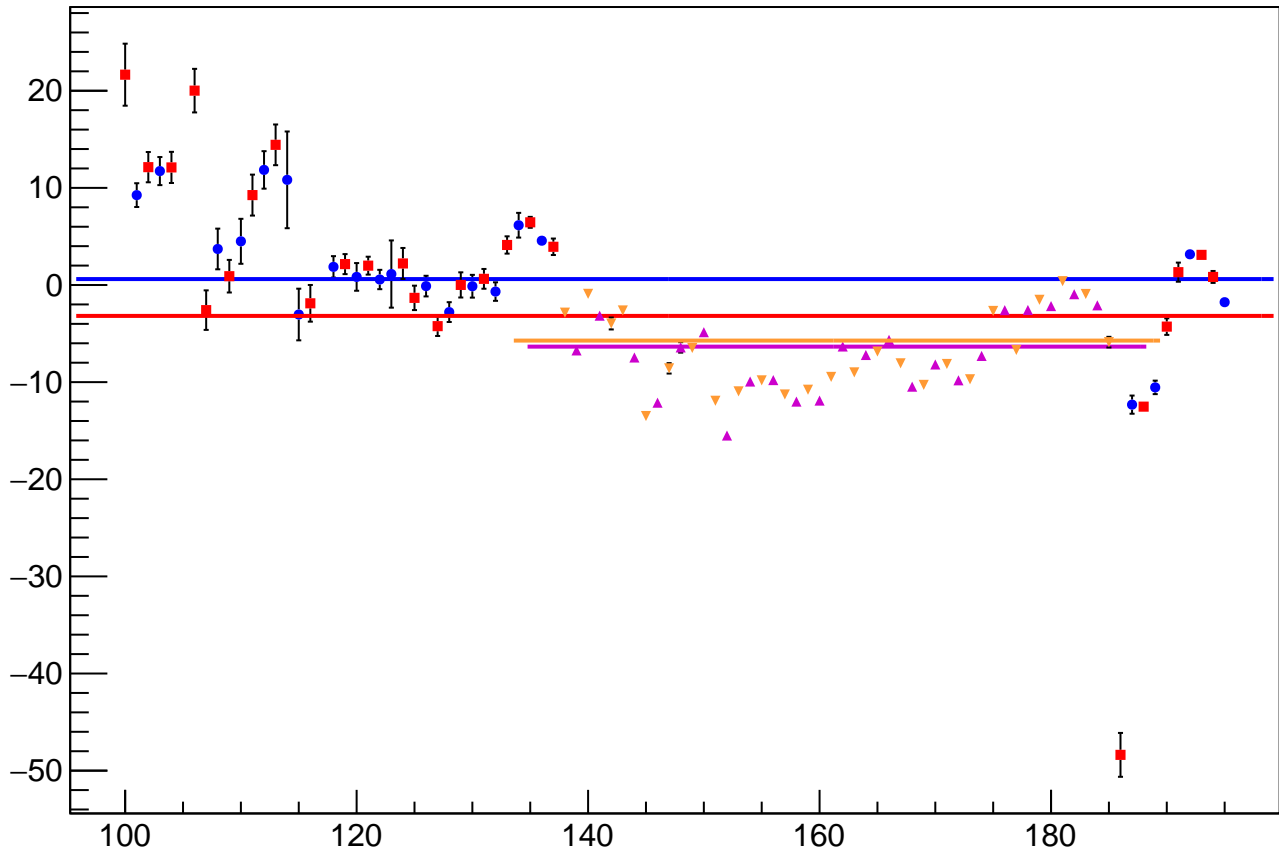
Left In:  $-52.038 \pm 0.057$   $\chi^2/\text{NDF}: 3180.4/22$

+ sign  $-53.143 \pm 0.051$   $\chi^2/\text{NDF}: 7975.3/45$

All:  $-53.174 \pm 0.036$   $\chi^2/\text{NDF}: 19541.0/93$

- sign  $-53.206 \pm 0.052$   $\chi^2/\text{NDF}: 11564.9/47$

# reg\_asym\_sam1\_diff\_bpm4eX\_slope vs Slug



Right In:  $0.612 \pm 0.196$   $\chi^2/\text{NDF}: 781.4/20$

Left Out:  $-5.722 \pm 0.068$   $\chi^2/\text{NDF}: 3983.0/24$

Right Out:  $-3.181 \pm 0.165$   $\chi^2/\text{NDF}: 2785.5/24$

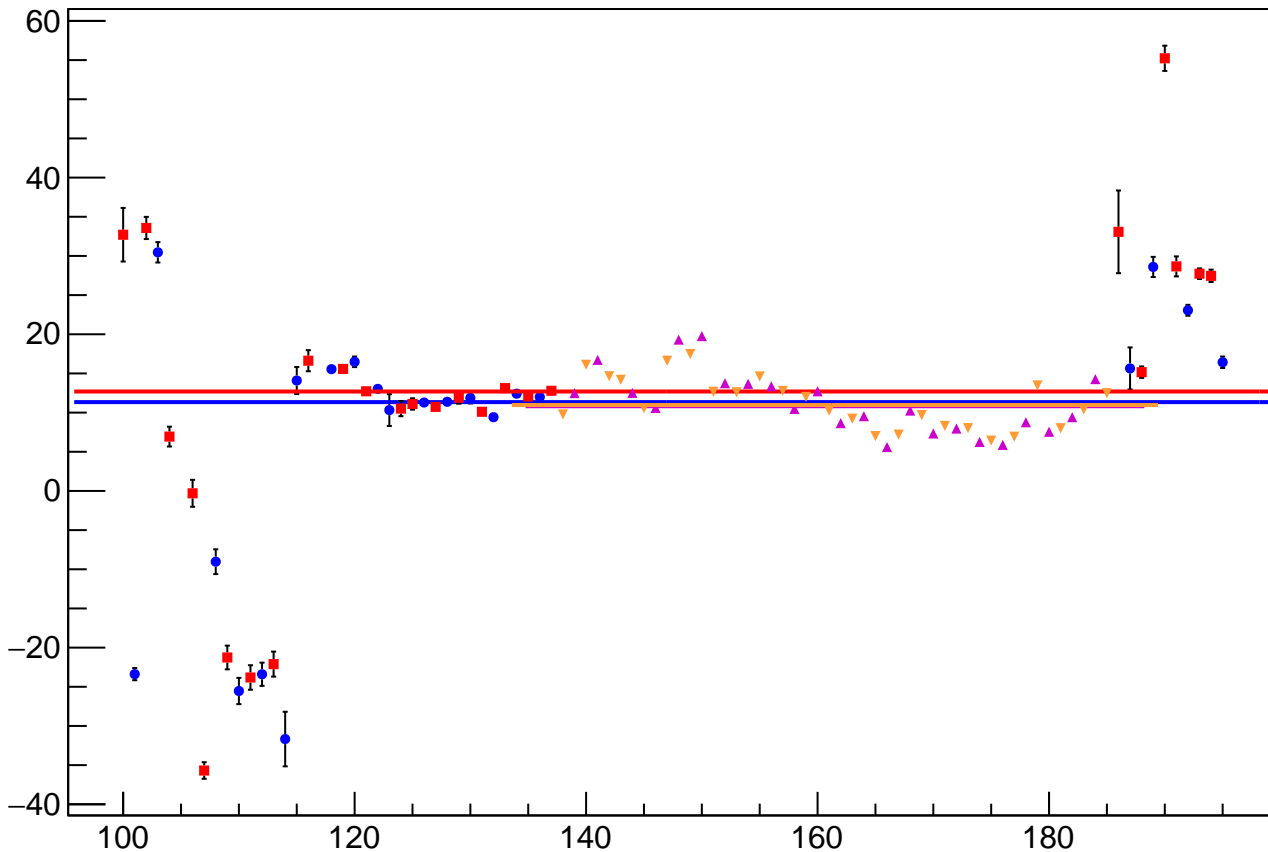
Left In:  $-6.344 \pm 0.069$   $\chi^2/\text{NDF}: 3383.7/22$

+ sign  $-5.049 \pm 0.064$   $\chi^2/\text{NDF}: 5698.2/45$

All:  $-5.467 \pm 0.045$   $\chi^2/\text{NDF}: 12264.6/93$

- sign  $-5.880 \pm 0.063$   $\chi^2/\text{NDF}: 6481.1/47$

# reg\_asym\_sam1\_diff\_bpm4eY\_slope vs Slug



Right In: 11.340 $\pm$ 0.150  $\chi^2$ /NDF: 4247.8/20

Left Out: 10.967 $\pm$ 0.061  $\chi^2$ /NDF:2637.7/24

Right Out: 12.695 $\pm$ 0.148  $\chi^2$ /NDF: 5757.0/24

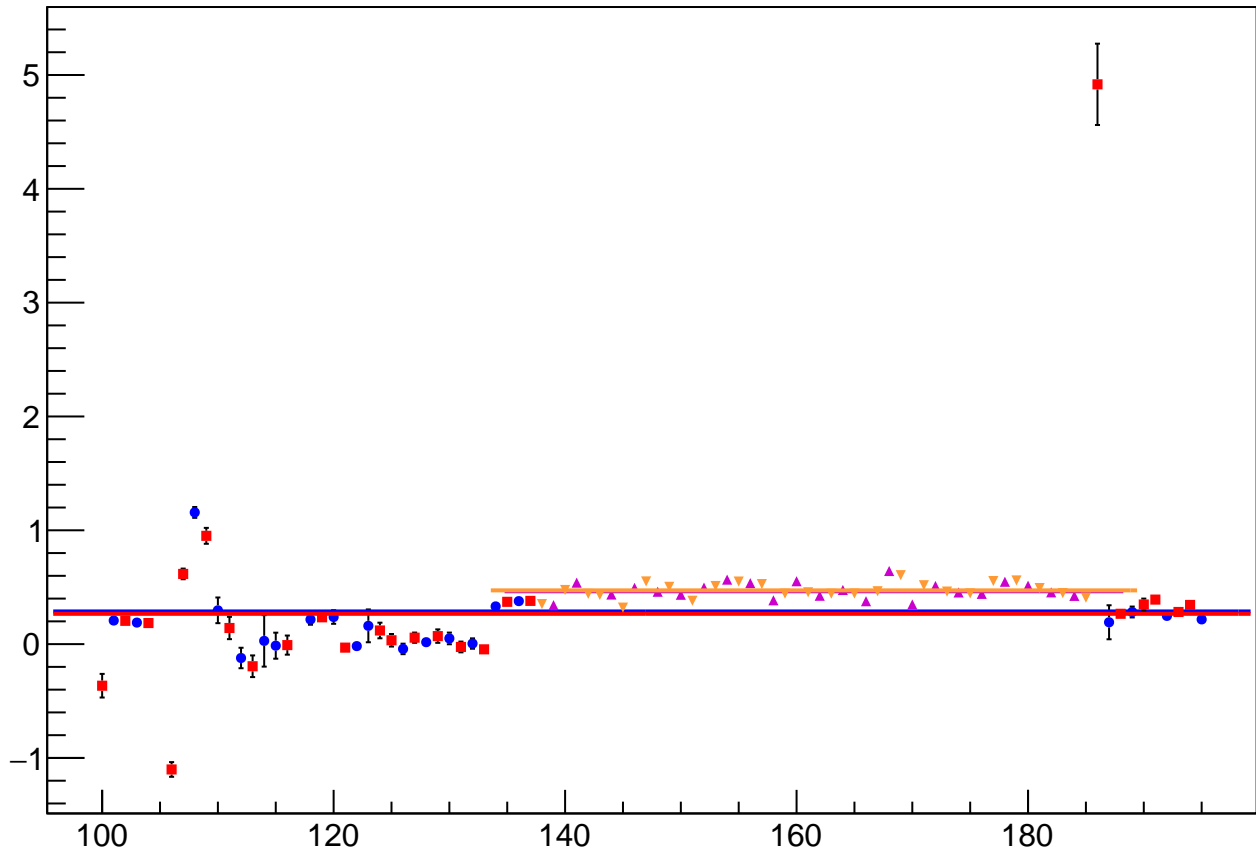
Left In: 10.813 $\pm$ 0.063  $\chi^2$ /NDF:3546.8/22

+ sign 11.021 $\pm$ 0.057  $\chi^2$ /NDF: 6890.8/45

All: 11.061 $\pm$ 0.041  $\chi^2$ /NDF: 16332.3/93

- sign 11.103 $\pm$ 0.058  $\chi^2$ /NDF: 9440.5/47

# reg\_asym\_sam1\_diff\_bpm12X\_slope vs Slug



Right In: 0.287 $\pm$ 0.007  $\chi^2$ /NDF: 665.1/20

Left Out: 0.472 $\pm$ 0.003  $\chi^2$ /NDF: 519.0/24

Right Out: 0.266 $\pm$ 0.007  $\chi^2$ /NDF: 1189.2/24

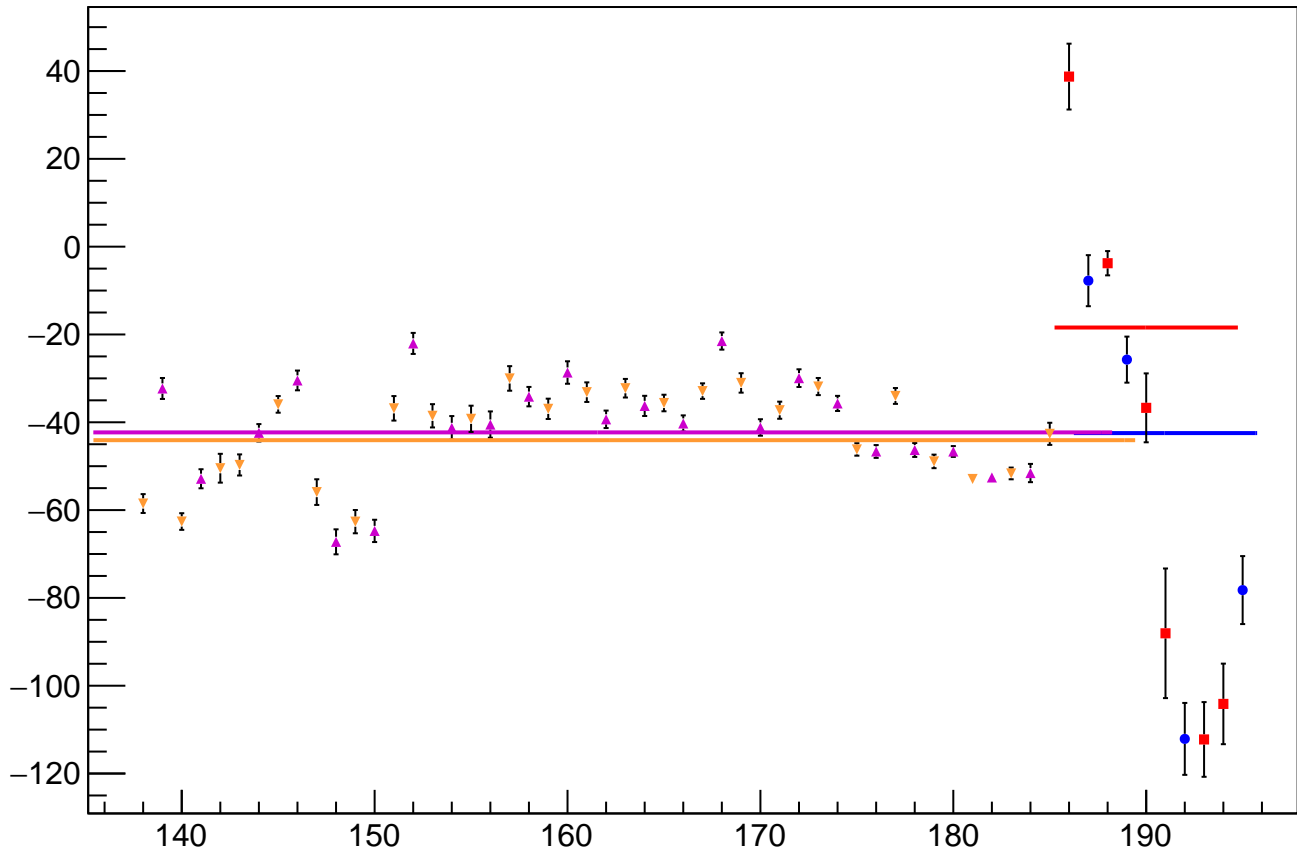
Left In: 0.464 $\pm$ 0.003  $\chi^2$ /NDF: 733.1/22

+ sign 0.448 $\pm$ 0.003  $\chi^2$ /NDF: 1766.2/45

All: 0.443 $\pm$ 0.002  $\chi^2$ /NDF: 4378.4/93

- sign 0.438 $\pm$ 0.003  $\chi^2$ /NDF: 2603.6/47

# reg\_asym\_sam2\_diff\_bpm1X\_slope vs Slug



Right In:  $-42.462 \pm 3.202$   $\chi^2/\text{NDF}: 139.5/3$

Left Out:  $-44.077 \pm 0.389$   $\chi^2/\text{NDF}: 632.6/24$

Right Out:  $-18.417 \pm 2.264$   $\chi^2/\text{NDF}: 322.7/5$

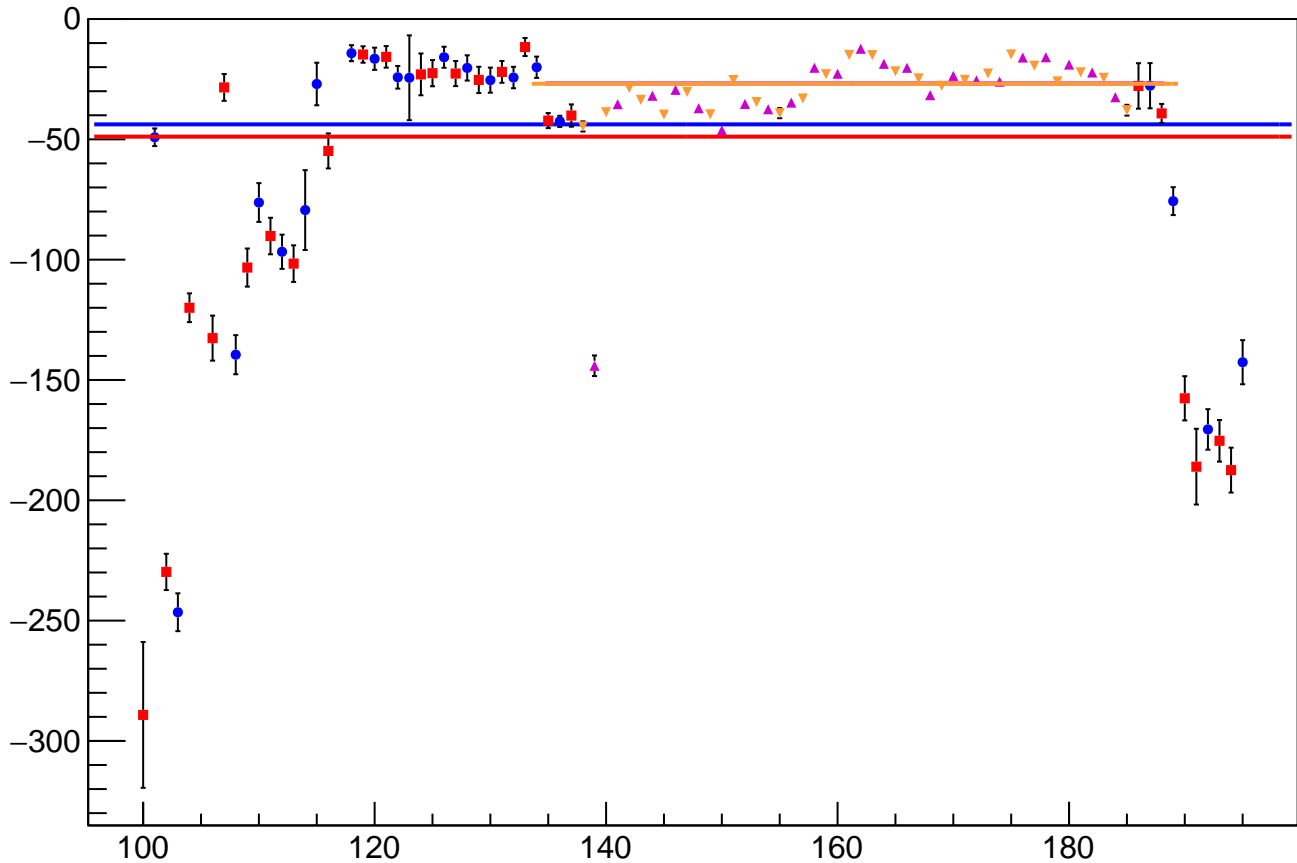
Left In:  $-42.304 \pm 0.399$   $\chi^2/\text{NDF}: 640.6/22$

+ sign  $-44.054 \pm 0.386$   $\chi^2/\text{NDF}: 772.3/28$

All:  $-42.842 \pm 0.275$   $\chi^2/\text{NDF}: 1863.7/57$

- sign  $-41.584 \pm 0.393$   $\chi^2/\text{NDF}: 1071.3/28$

# reg\_asym\_sam2\_diff\_bpm4aY\_slope vs Slug



Right In:  $-43.783 \pm 1.102$   $\chi^2/\text{NDF}: 1516.2/20$

Left Out:  $-26.902 \pm 0.316$   $\chi^2/\text{NDF}: 631.0/24$

Right Out:  $-48.885 \pm 1.120$   $\chi^2/\text{NDF}: 2033.8/24$

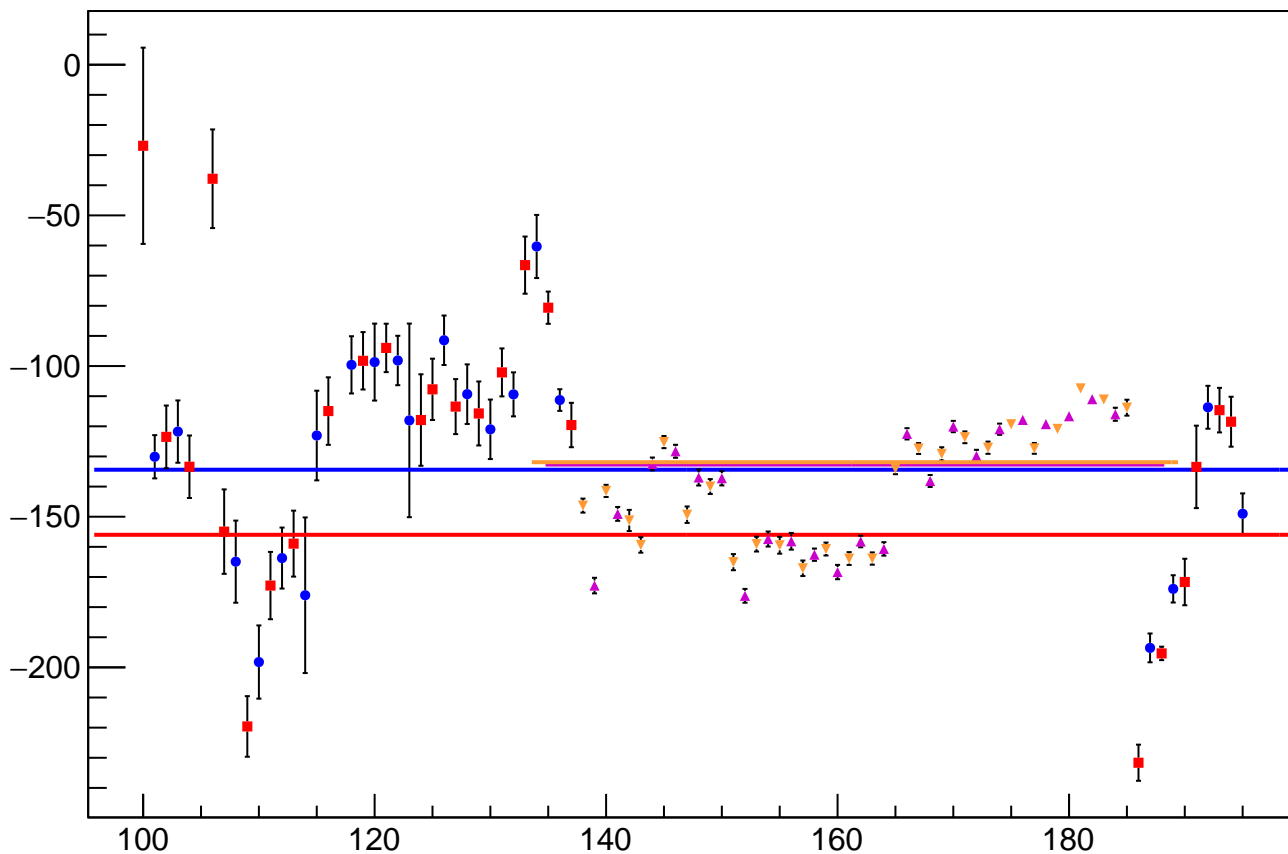
Left In:  $-26.774 \pm 0.326$   $\chi^2/\text{NDF}: 1394.5/22$

+ sign  $-28.187 \pm 0.304$   $\chi^2/\text{NDF}: 2364.1/45$

All:  $-28.341 \pm 0.218$   $\chi^2/\text{NDF}: 6152.2/93$

- sign  $-28.504 \pm 0.313$   $\chi^2/\text{NDF}: 3787.6/47$

# reg\_asym\_sam2\_diff\_bpm4eX\_slope vs Slug



Right In:  $-134.405 \pm 1.656$   $\chi^2/\text{NDF}: 468.4/20$

Left Out:  $-131.912 \pm 0.391$   $\chi^2/\text{NDF}: 2439.3/24$

Right Out:  $-156.004 \pm 1.431$   $\chi^2/\text{NDF}: 1186.8/24$

Left In:  $-132.690 \pm 0.399$   $\chi^2/\text{NDF}: 2480.2/22$

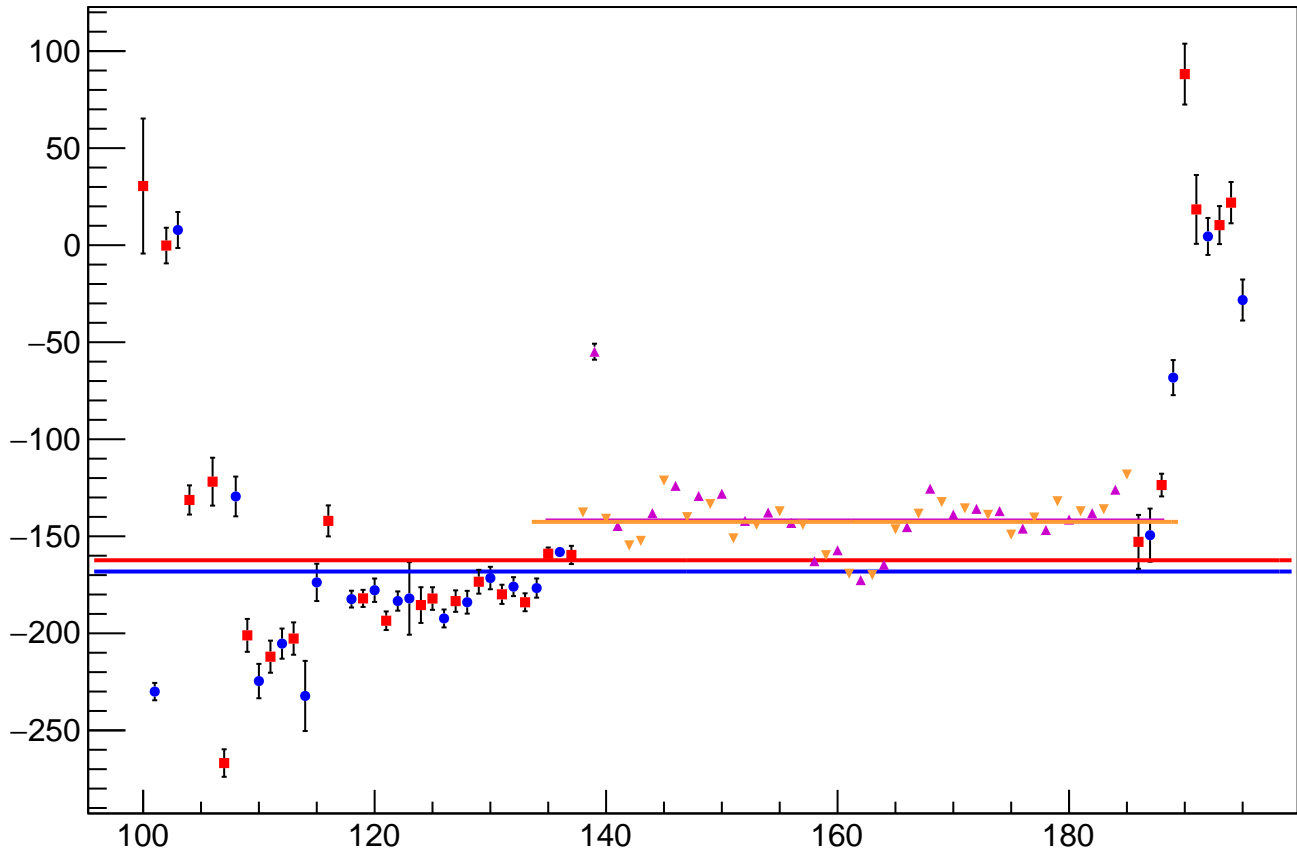
+ sign  $-132.044 \pm 0.381$   $\chi^2/\text{NDF}: 2909.8/45$

All:  $-133.198 \pm 0.271$   $\chi^2/\text{NDF}: 6841.5/93$

- sign  $-134.374 \pm 0.385$   $\chi^2/\text{NDF}: 3913.2/47$



# reg\_asym\_sam2\_diff\_bpm4eY\_slope vs Slug



Right In:  $-168.155 \pm 1.241$   $\chi^2/\text{NDF}: 1351.7/20$

Left Out:  $-142.564 \pm 0.354$   $\chi^2/\text{NDF}: 1147.7/24$

Right Out:  $-162.354 \pm 1.288$   $\chi^2/\text{NDF}: 1823.6/24$

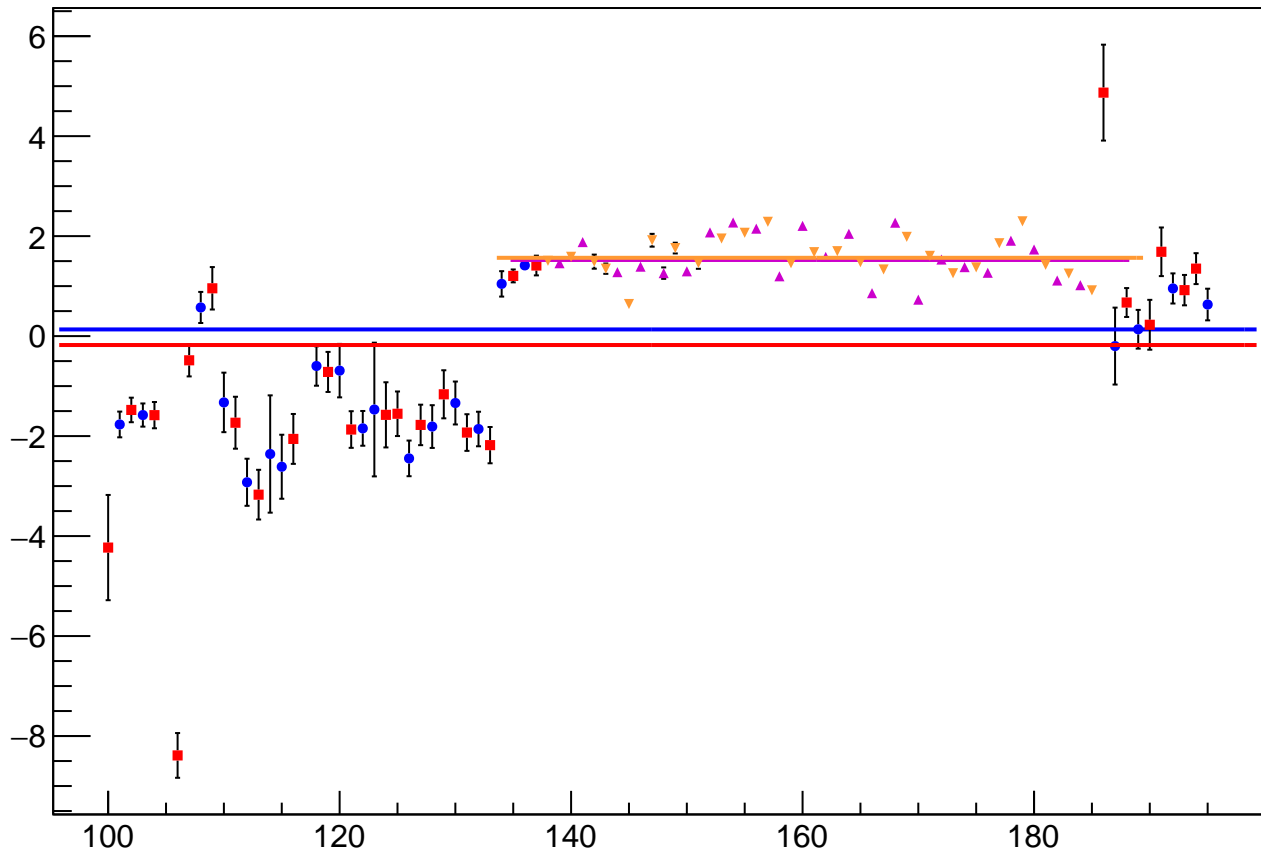
Left In:  $-141.856 \pm 0.364$   $\chi^2/\text{NDF}: 1544.3/22$

+ sign  $-144.489 \pm 0.340$   $\chi^2/\text{NDF}: 2892.5/45$

All:  $-143.945 \pm 0.244$   $\chi^2/\text{NDF}: 6500.1/93$

- sign  $-143.370 \pm 0.350$   $\chi^2/\text{NDF}: 3602.3/47$

# reg\_asym\_sam2\_diff\_bpm12X\_slope vs Slug



Right In:  $0.134 \pm 0.063$   $\chi^2/\text{NDF}: 536.0/20$

Left Out:  $1.566 \pm 0.016$   $\chi^2/\text{NDF}: 542.8/24$

Right Out:  $-0.178 \pm 0.065$   $\chi^2/\text{NDF}: 854.2/24$

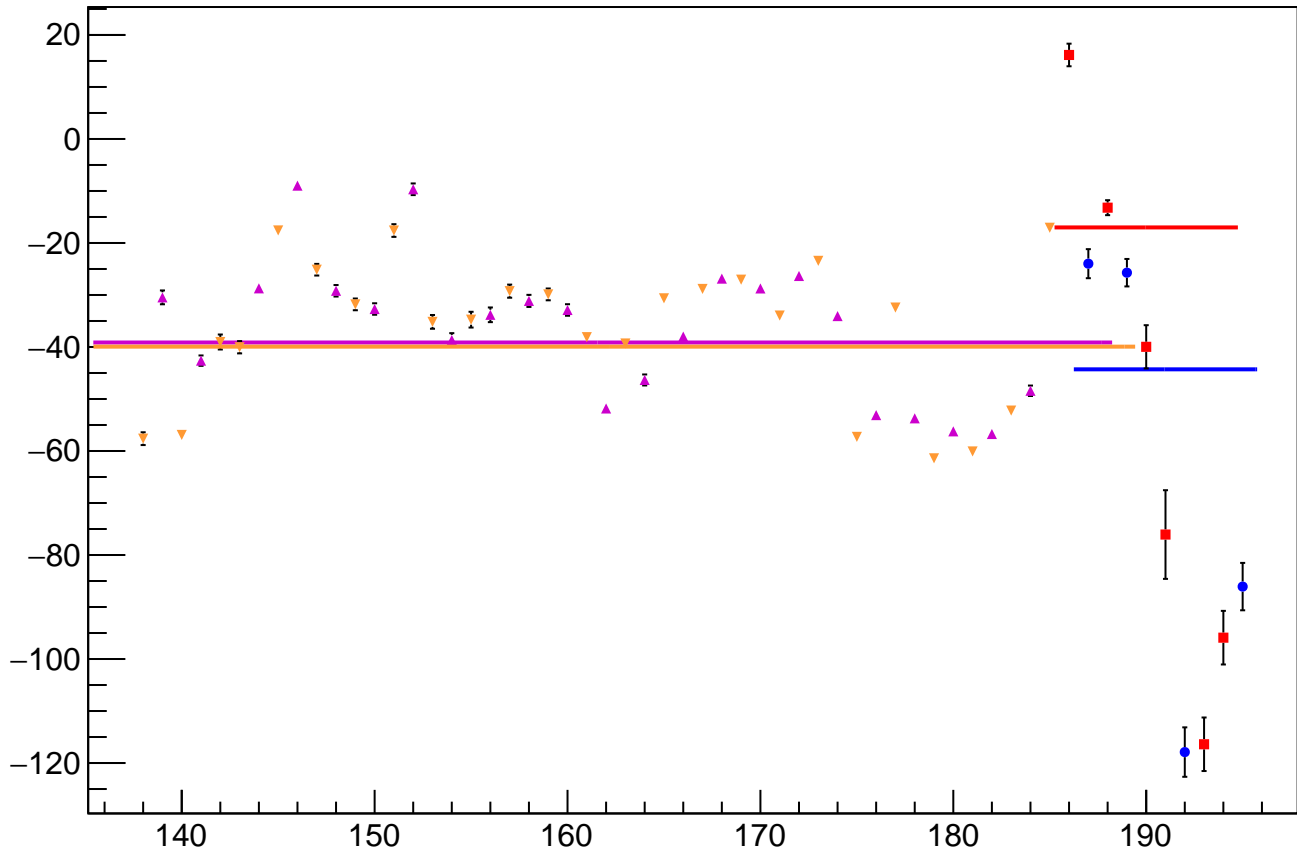
Left In:  $1.523 \pm 0.017$   $\chi^2/\text{NDF}: 738.5/22$

+ sign  $1.478 \pm 0.016$   $\chi^2/\text{NDF}: 1562.0/45$

All:  $1.449 \pm 0.011$   $\chi^2/\text{NDF}: 3810.6/93$

- sign  $1.419 \pm 0.016$   $\chi^2/\text{NDF}: 2241.7/47$

# reg\_asym\_sam3\_diff\_bpm1X\_slope vs Slug



Right In:  $-44.297 \pm 1.658$   $\chi^2/\text{NDF}: 426.2/3$

Left Out:  $-39.935 \pm 0.153$   $\chi^2/\text{NDF}: 9806.5/24$

Right Out:  $-17.009 \pm 1.090$   $\chi^2/\text{NDF}: 925.6/5$

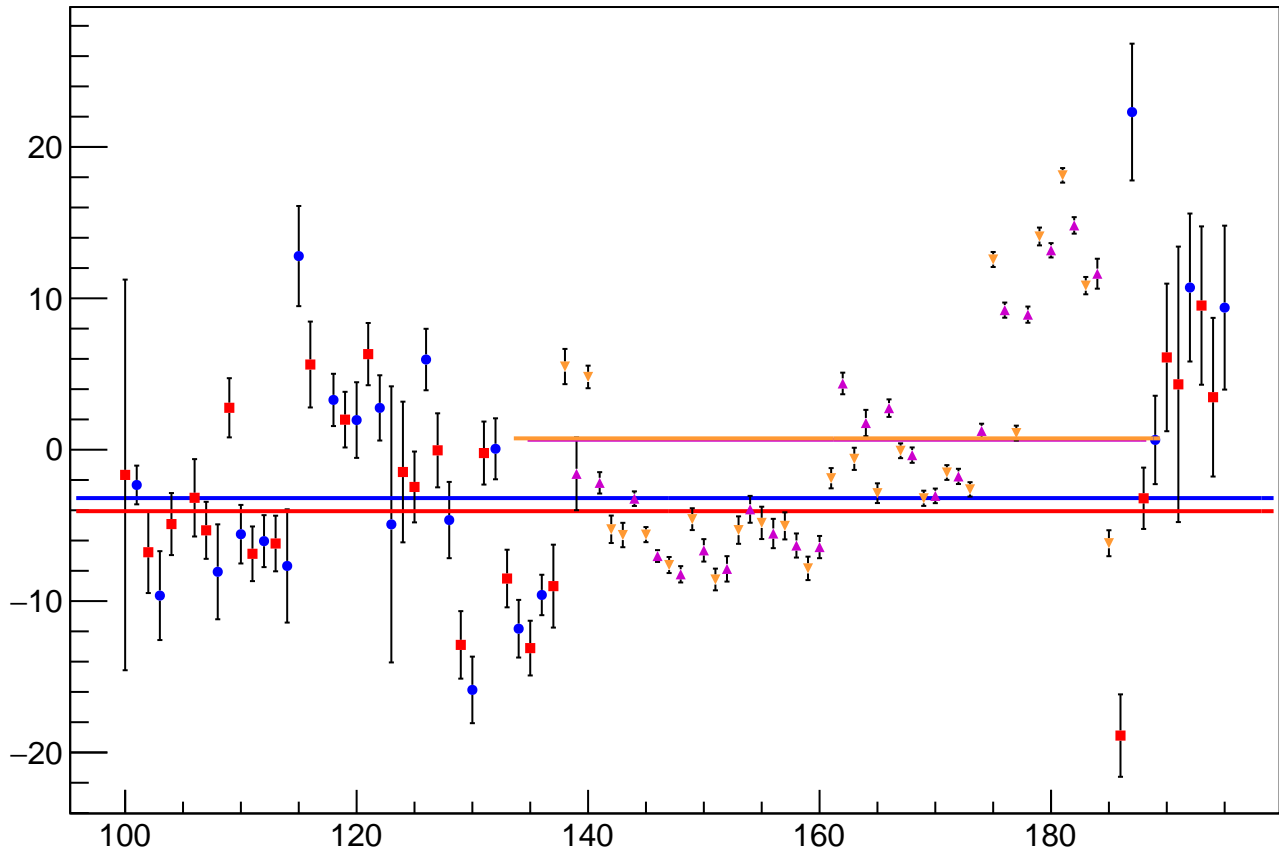
Left In:  $-39.137 \pm 0.155$   $\chi^2/\text{NDF}: 8534.5/22$

+ sign  $-39.972 \pm 0.153$   $\chi^2/\text{NDF}: 10239.6/28$

All:  $-39.339 \pm 0.108$   $\chi^2/\text{NDF}: 20138.1/57$

- sign  $-38.701 \pm 0.153$   $\chi^2/\text{NDF}: 9863.9/28$

# reg\_asym\_sam3\_diff\_bpm4aY\_slope vs Slug



Right In:  $-3.196 \pm 0.485$   $\chi^2/\text{NDF}: 209.9/20$

Left Out:  $0.749 \pm 0.124$   $\chi^2/\text{NDF}: 3970.9/24$

Right Out:  $-4.060 \pm 0.477$   $\chi^2/\text{NDF}: 165.9/24$

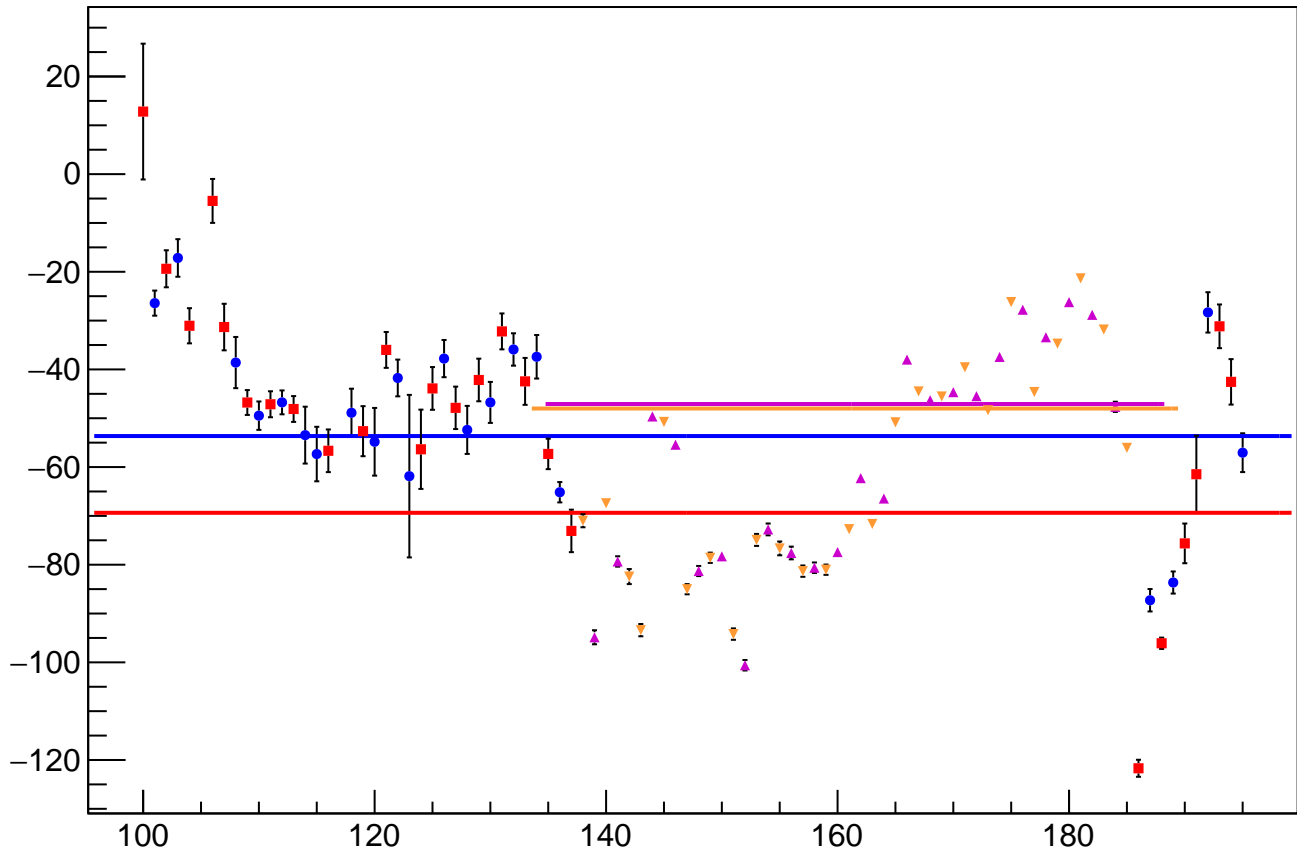
Left In:  $0.660 \pm 0.124$   $\chi^2/\text{NDF}: 3337.8/22$

+ sign  $0.506 \pm 0.120$   $\chi^2/\text{NDF}: 4242.9/45$

All:  $0.433 \pm 0.085$   $\chi^2/\text{NDF}: 7838.9/93$

- sign  $0.360 \pm 0.120$   $\chi^2/\text{NDF}: 3595.3/47$

# reg\_asym\_sam3\_diff\_bpm4eX\_slope vs Slug



Right In:  $-53.648 \pm 0.749$   $\chi^2/\text{NDF}: 752.8/20$

Left Out:  $-48.008 \pm 0.155$   $\chi^2/\text{NDF}: 16950.0/24$

Right Out:  $-69.369 \pm 0.628$   $\chi^2/\text{NDF}: 2690.4/24$

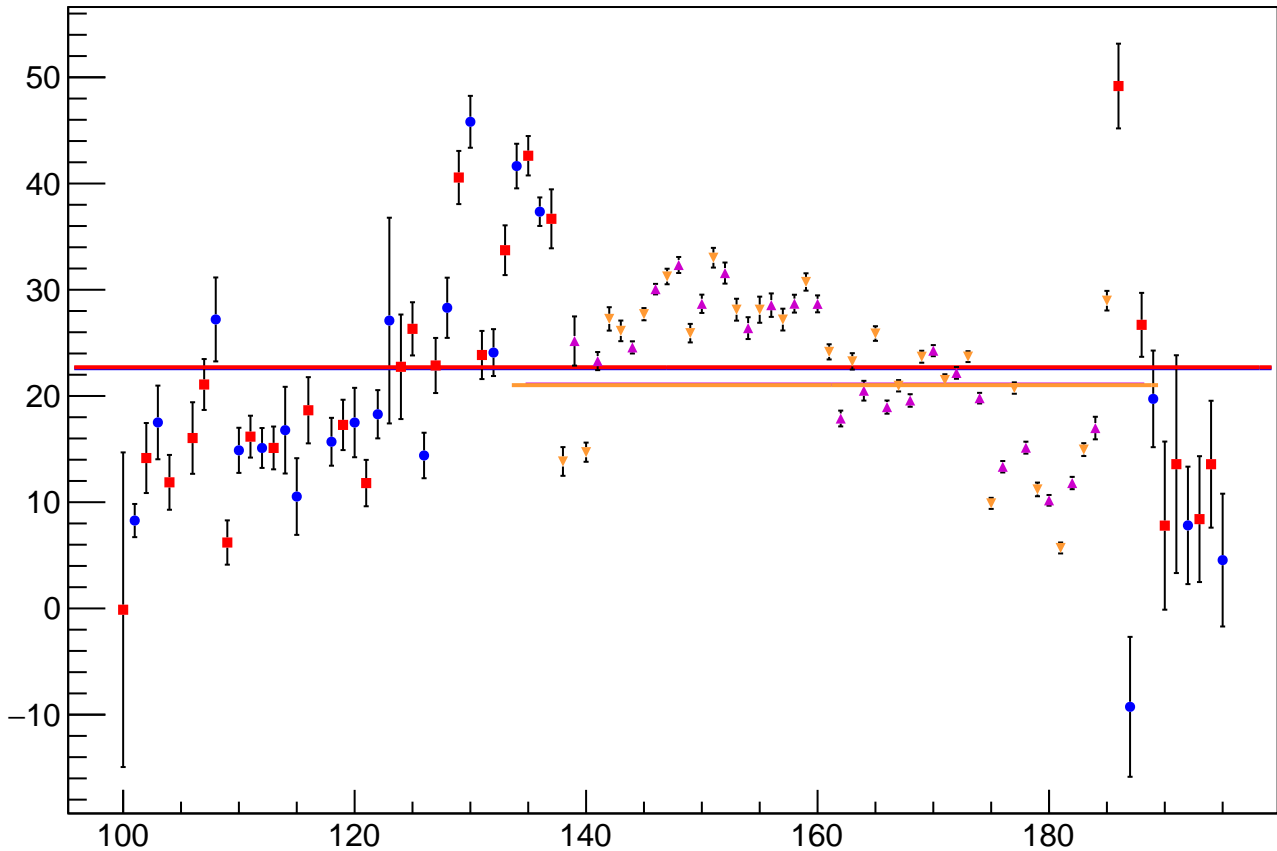
Left In:  $-47.085 \pm 0.155$   $\chi^2/\text{NDF}: 15515.2/22$

+ sign  $-48.238 \pm 0.151$   $\chi^2/\text{NDF}: 17757.2/45$

All:  $-48.305 \pm 0.107$   $\chi^2/\text{NDF}: 37150.9/93$

- sign  $-48.371 \pm 0.151$   $\chi^2/\text{NDF}: 19393.3/47$

# reg\_asym\_sam3\_diff\_bpm4eY\_slope vs Slug



Right In: 22.614 $\pm$ 0.549  $\chi^2$ /NDF: 497.3/20

Left Out: 21.020 $\pm$ 0.139  $\chi^2$ /NDF:2799.3/24

Right Out: 22.704 $\pm$ 0.551  $\chi^2$ /NDF: 425.0/24

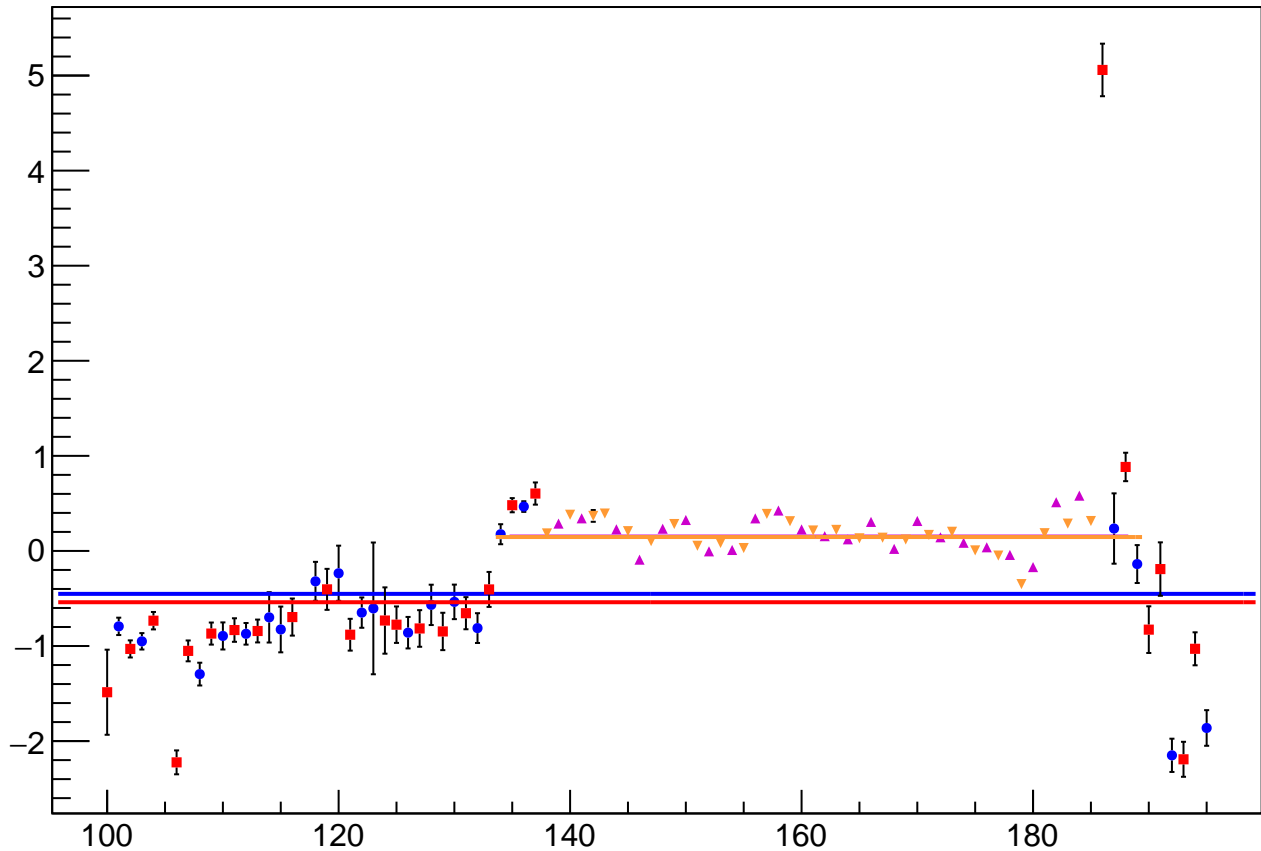
Left In: 21.079 $\pm$ 0.140  $\chi^2$ /NDF:2173.2/22

+ sign 21.116 $\pm$ 0.135  $\chi^2$ /NDF: 3304.5/45

All: 21.146 $\pm$ 0.095  $\chi^2$ /NDF: 5911.1/93

- sign 21.177 $\pm$ 0.135  $\chi^2$ /NDF: 2606.4/47

# reg\_asym\_sam3\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.452 \pm 0.029$   $\chi^2/\text{NDF}: 600.7/20$

Left Out:  $0.146 \pm 0.006$   $\chi^2/\text{NDF}: 610.2/24$

Right Out:  $-0.540 \pm 0.028$   $\chi^2/\text{NDF}: 1148.1/24$

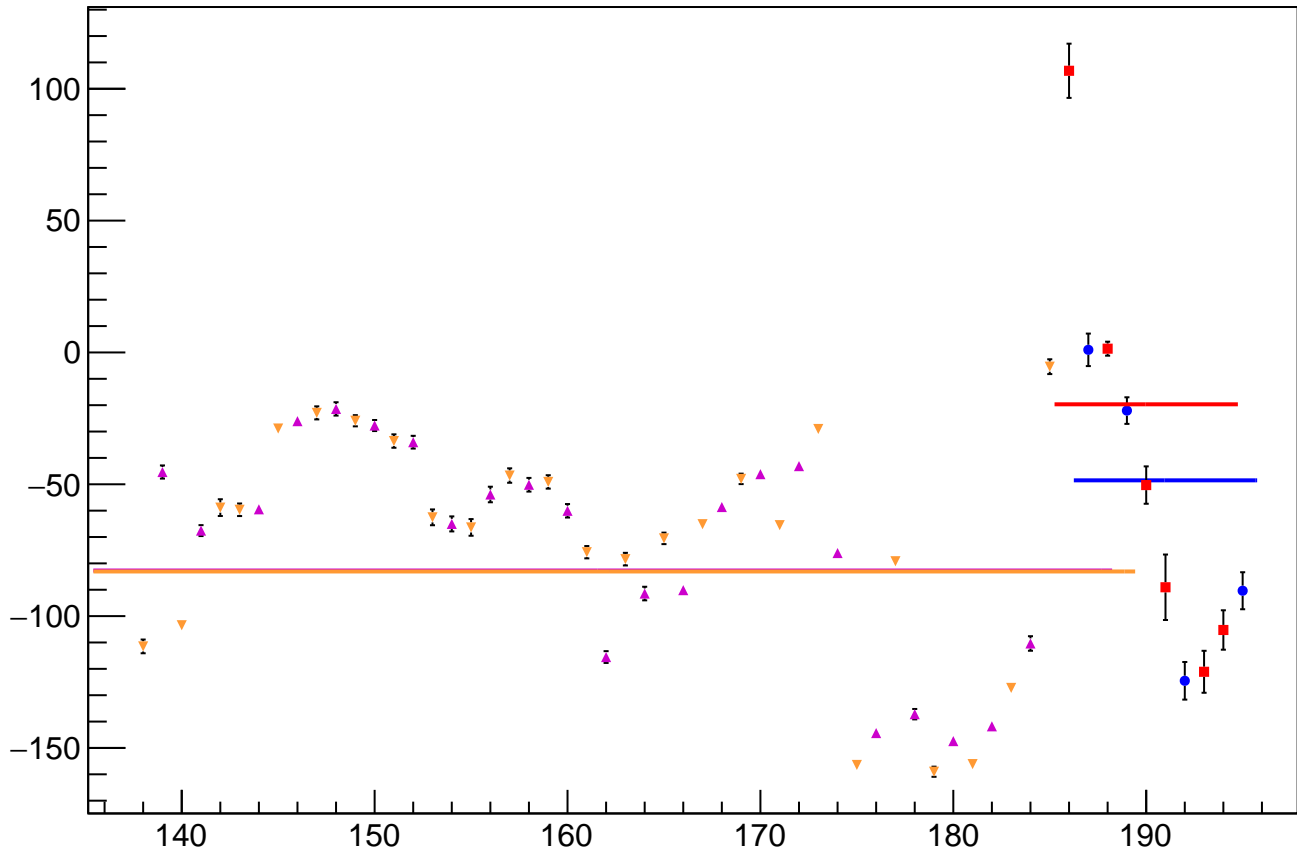
Left In:  $0.151 \pm 0.006$   $\chi^2/\text{NDF}: 869.5/22$

+ sign  $0.119 \pm 0.006$   $\chi^2/\text{NDF}: 1617.9/45$

All:  $0.118 \pm 0.004$   $\chi^2/\text{NDF}: 4199.6/93$

- sign  $0.118 \pm 0.006$   $\chi^2/\text{NDF}: 2581.7/47$

# reg\_asym\_sam4\_diff\_bpm1X\_slope vs Slug



Right In:  $-48.507 \pm 3.078$   $\chi^2/\text{NDF}: 241.1/3$

Left Out:  $-83.068 \pm 0.406$   $\chi^2/\text{NDF}: 13817.3/24$

Right Out:  $-19.669 \pm 2.174$   $\chi^2/\text{NDF}: 558.2/5$

Left In:  $-82.711 \pm 0.415$   $\chi^2/\text{NDF}: 10841.4/22$

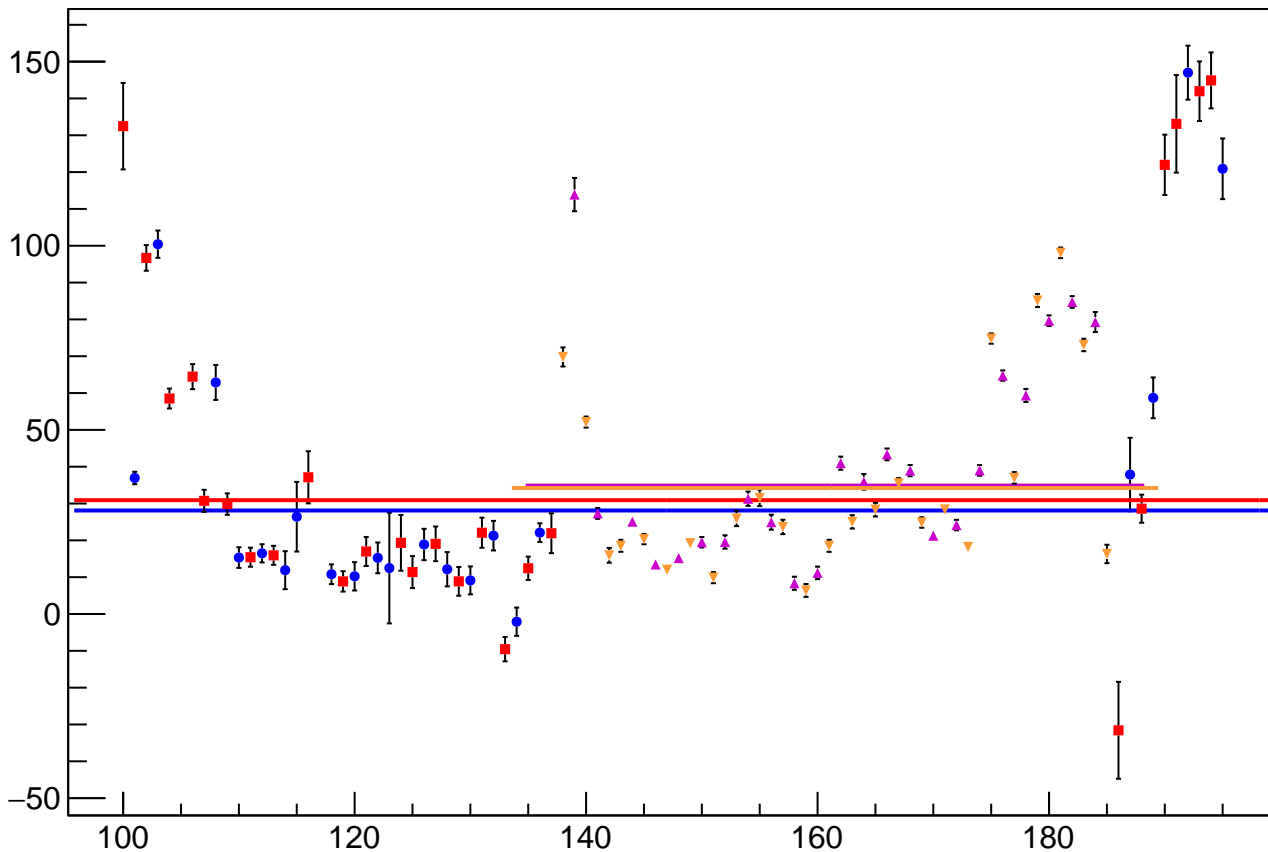
+ sign  $-82.476 \pm 0.403$   $\chi^2/\text{NDF}: 14182.4/28$

All:  $-81.496 \pm 0.287$   $\chi^2/\text{NDF}: 26405.4/57$

- sign  $-80.492 \pm 0.408$   $\chi^2/\text{NDF}: 12211.0/28$



# reg\_asym\_sam4\_diff\_bpm4aY\_slope vs Slug



Right In: 28.110 $\pm$ 0.788  $\chi^2$ /NDF: 1121.8/20

Left Out: 34.219 $\pm$ 0.320  $\chi^2$ /NDF:6192.6/24

Right Out: 30.914 $\pm$ 0.779  $\chi^2$ /NDF: 1650.2/24

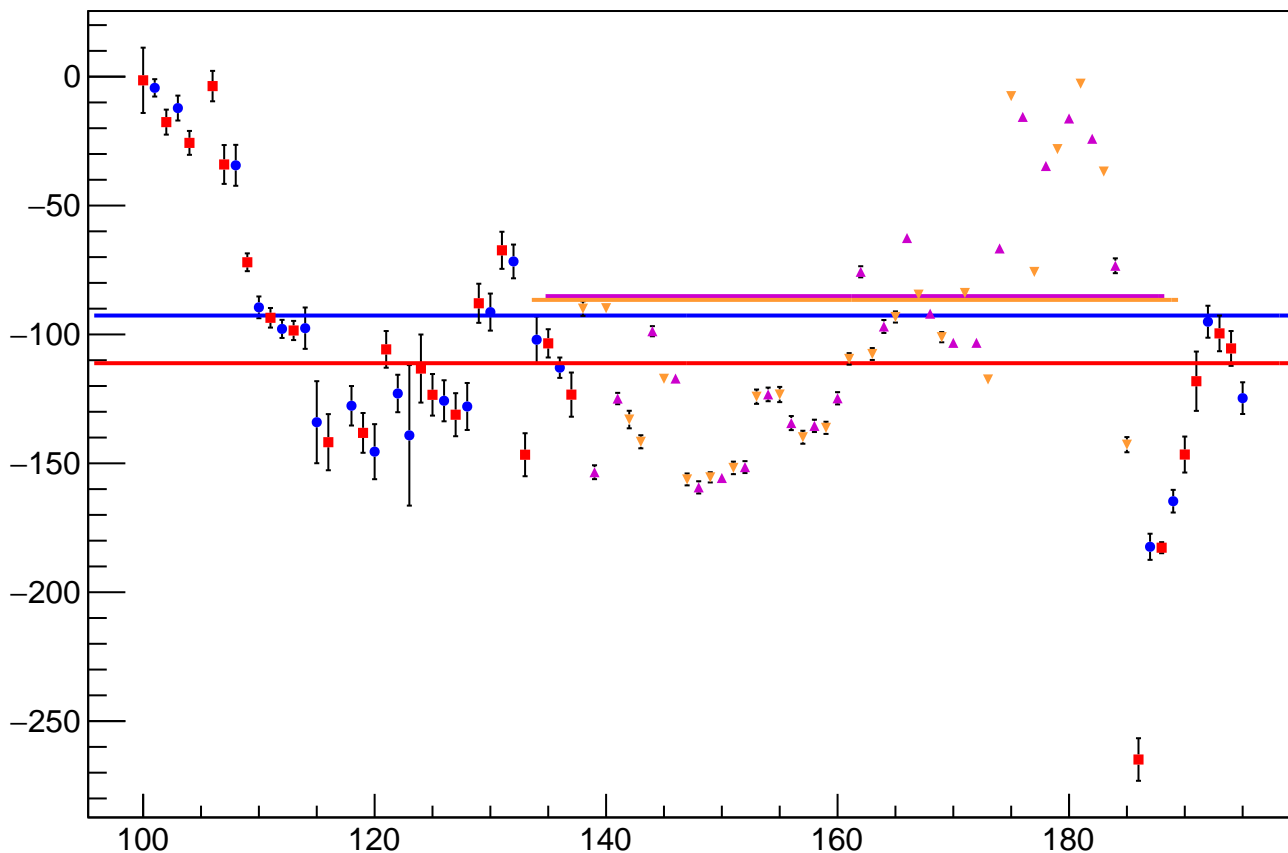
Left In: 34.870 $\pm$ 0.329  $\chi^2$ /NDF:4716.1/22

+ sign 33.354 $\pm$ 0.297  $\chi^2$ /NDF: 7365.9/45

All: 33.802 $\pm$ 0.212  $\chi^2$ /NDF: 13758.8/93

- sign 34.270 $\pm$ 0.303  $\chi^2$ /NDF: 6388.2/47

# reg\_asym\_sam4\_diff\_bpm4eX\_slope vs Slug



Right In:  $-92.664 \pm 1.250$   $\chi^2/\text{NDF}: 1772.7/20$

Left Out:  $-86.595 \pm 0.408$   $\chi^2/\text{NDF}: 14515.7/24$

Right Out:  $-111.154 \pm 1.086$   $\chi^2/\text{NDF}: 2972.6/24$

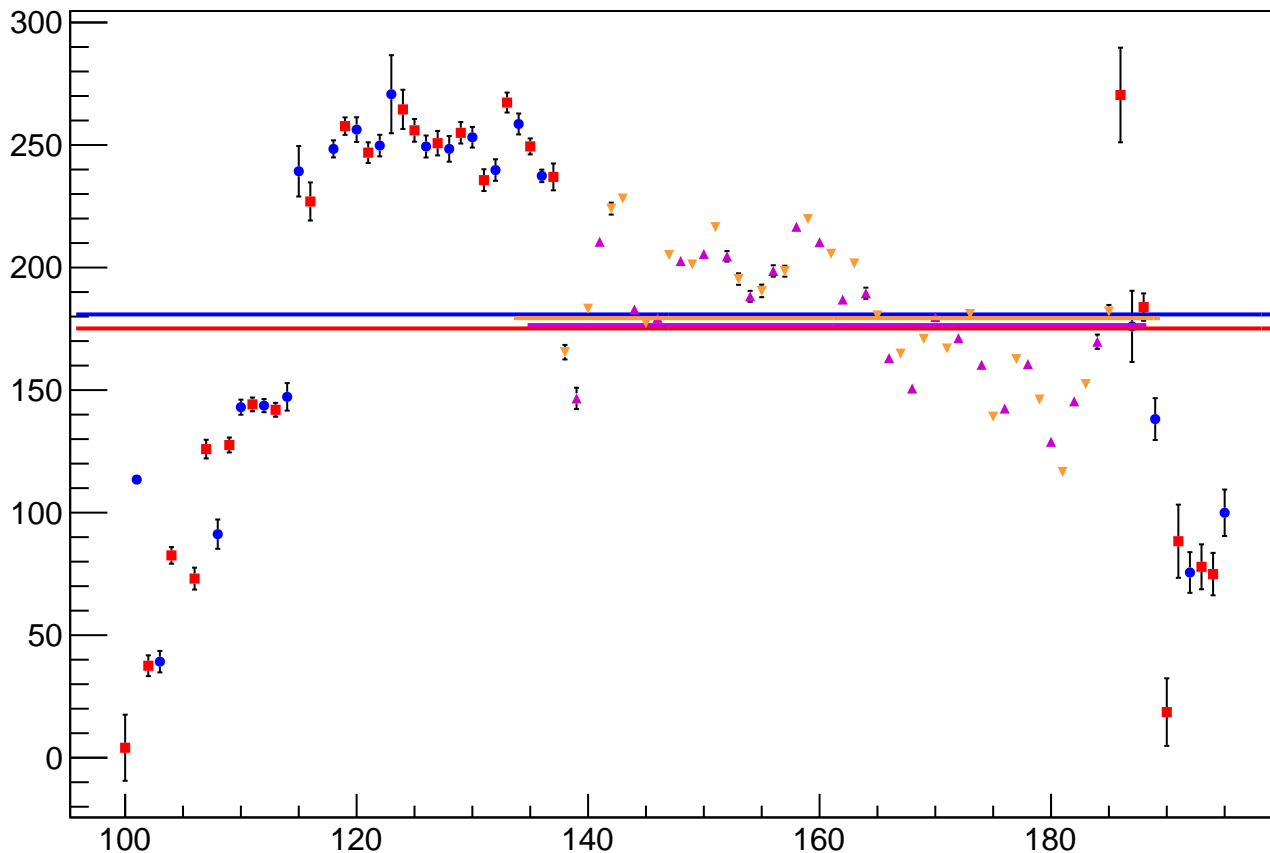
Left In:  $-85.134 \pm 0.415$   $\chi^2/\text{NDF}: 12841.3/22$

+ sign  $-87.180 \pm 0.388$   $\chi^2/\text{NDF}: 16309.7/45$

All:  $-87.817 \pm 0.274$   $\chi^2/\text{NDF}: 32630.1/93$

- sign  $-88.452 \pm 0.388$   $\chi^2/\text{NDF}: 16315.1/47$

# reg\_asym\_sam4\_diff\_bpm4eY\_slope vs Slug



Right In: 180.874 $\pm$ 0.904  $\chi^2$ /NDF: 5585.2/20

Left Out: 179.359 $\pm$ 0.362  $\chi^2$ /NDF:5982.2/24

Right Out: 175.152 $\pm$ 0.899  $\chi^2$ /NDF: 6781.3/24

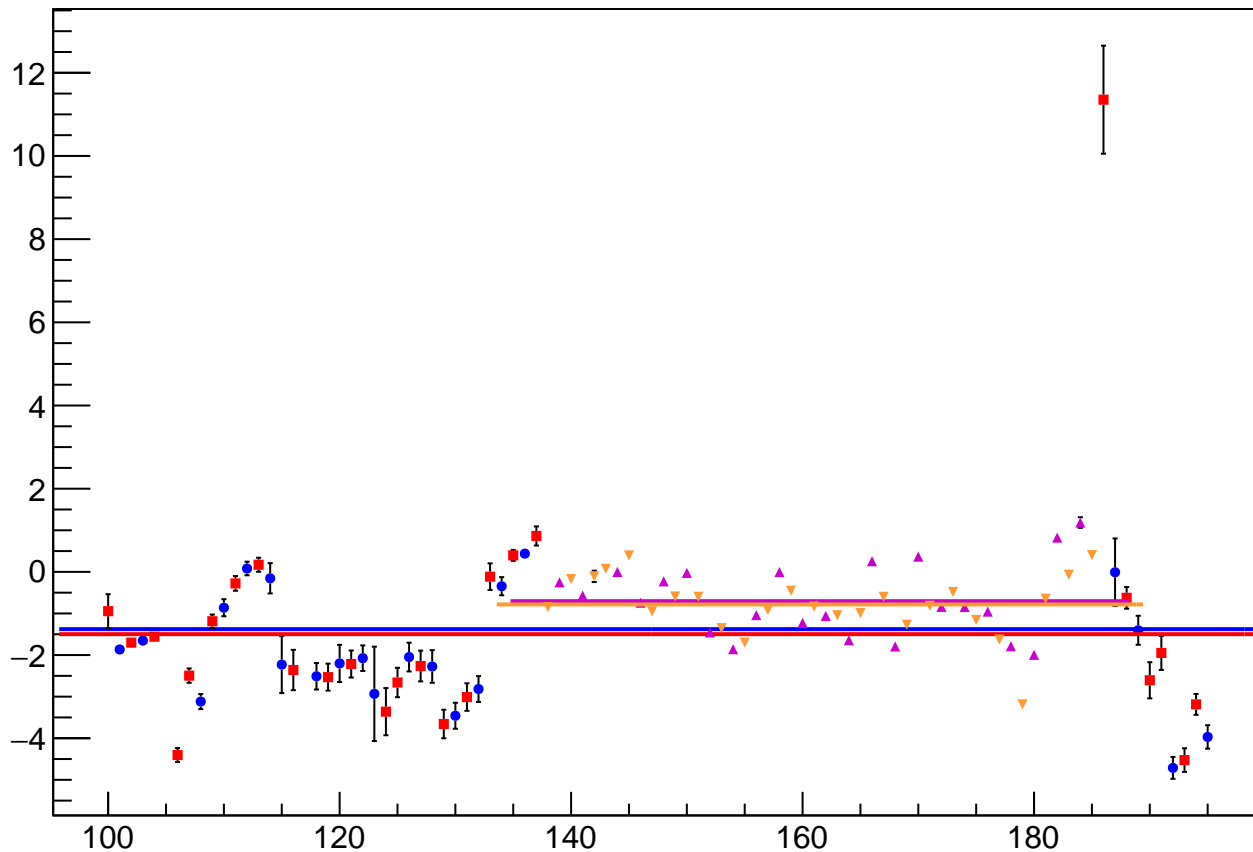
Left In: 176.531 $\pm$ 0.371  $\chi^2$ /NDF:4426.0/22

+ sign 179.568 $\pm$ 0.336  $\chi^2$ /NDF: 11569.9/45

All: 177.983 $\pm$ 0.240  $\chi^2$ /NDF: 22824.7/93

- sign 176.331 $\pm$ 0.343  $\chi^2$ /NDF: 11209.3/47

# reg\_asym\_sam4\_diff\_bpm12X\_slope vs Slug



Right In:  $-1.377 \pm 0.046$   $\chi^2/\text{NDF}$ : 883.4/20

Left Out:  $-0.783 \pm 0.017$   $\chi^2/\text{NDF}$ : 1771.6/24

Right Out:  $-1.497 \pm 0.043$   $\chi^2/\text{NDF}$ : 1200.2/24

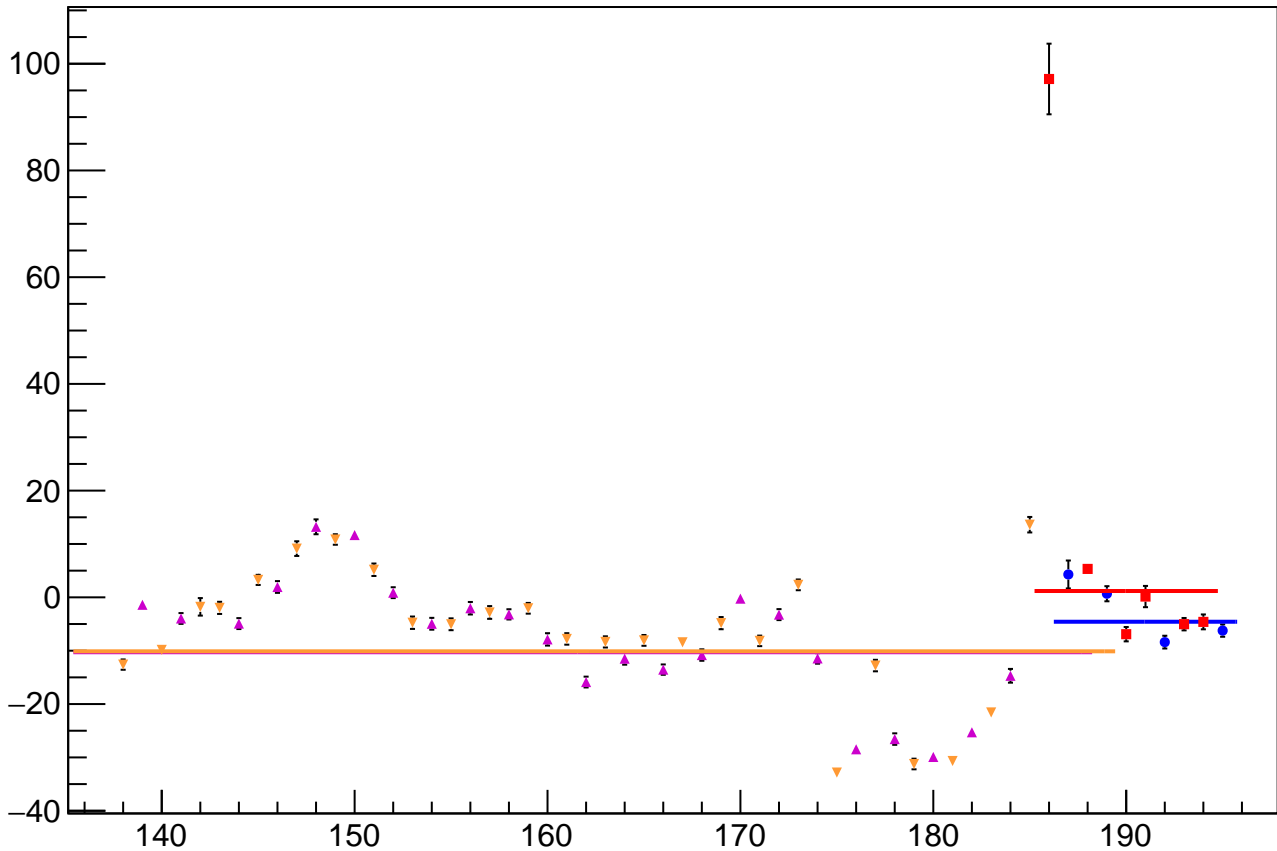
Left In:  $-0.705 \pm 0.017$   $\chi^2/\text{NDF}$ : 2407.7/22

+ sign  $-0.851 \pm 0.016$   $\chi^2/\text{NDF}$ : 2800.9/45

All:  $-0.830 \pm 0.011$   $\chi^2/\text{NDF}$ : 6701.7/93

- sign  $-0.809 \pm 0.016$   $\chi^2/\text{NDF}$ : 3897.2/47

# reg\_asym\_sam5\_diff\_bpm1X\_slope vs Slug



Right In:  $-4.574 \pm 0.692$   $\chi^2/\text{NDF}: 37.4/3$

Left Out:  $-10.117 \pm 0.201$   $\chi^2/\text{NDF}: 4138.1/24$

Right Out:  $1.186 \pm 0.470$   $\chi^2/\text{NDF}: 334.3/5$

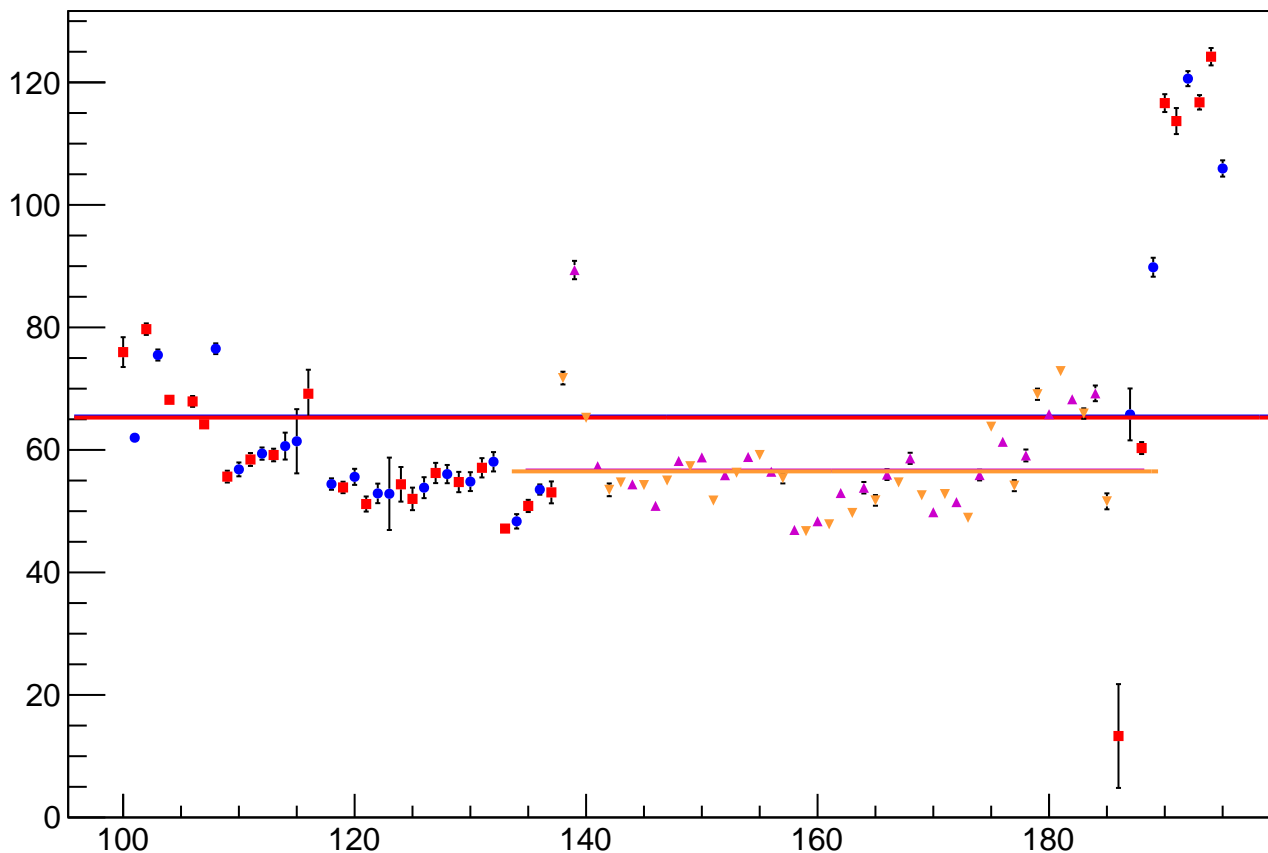
Left In:  $-10.290 \pm 0.205$   $\chi^2/\text{NDF}: 3451.0/22$

+ sign  $-9.684 \pm 0.193$   $\chi^2/\text{NDF}: 4234.8/28$

All:  $-9.051 \pm 0.135$   $\chi^2/\text{NDF}: 8541.3/57$

- sign  $-8.451 \pm 0.188$   $\chi^2/\text{NDF}: 4285.6/28$

# reg\_asym\_sam5\_diff\_bpm4aY\_slope vs Slug



Right In: 65.453+/-0.249  $\chi^2$ /NDF: 4451.7/20

Left Out: 56.496+/-0.159  $\chi^2$ /NDF:1968.0/24

Right Out: 65.281+/-0.228  $\chi^2$ /NDF: 7330.3/24

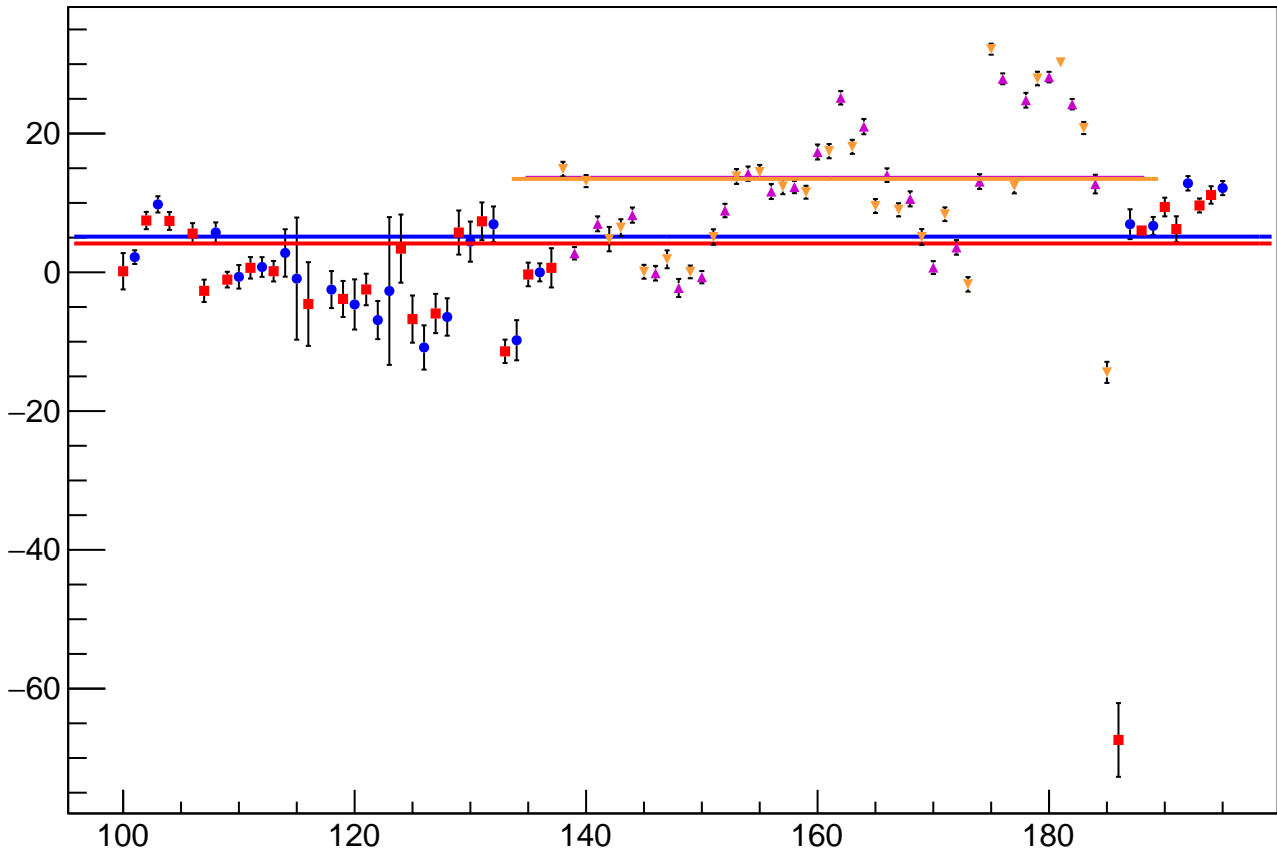
Left In: 56.635+/-0.165  $\chi^2$ /NDF:1607.9/22

+ sign 59.087+/-0.134  $\chi^2$ /NDF: 7339.1/45

All: 59.349+/-0.095  $\chi^2$ /NDF: 17228.4/93

- sign 59.610+/-0.134  $\chi^2$ /NDF: 9881.7/47

# reg\_asym\_sam5\_diff\_bpm4eX\_slope vs Slug



Right In: 5.141 $\pm$ 0.367  $\chi^2$ /NDF: 271.8/20

Left Out: 13.462 $\pm$ 0.202  $\chi^2$ /NDF:2736.3/24

Right Out: 4.152 $\pm$ 0.292  $\chi^2$ /NDF: 477.3/24

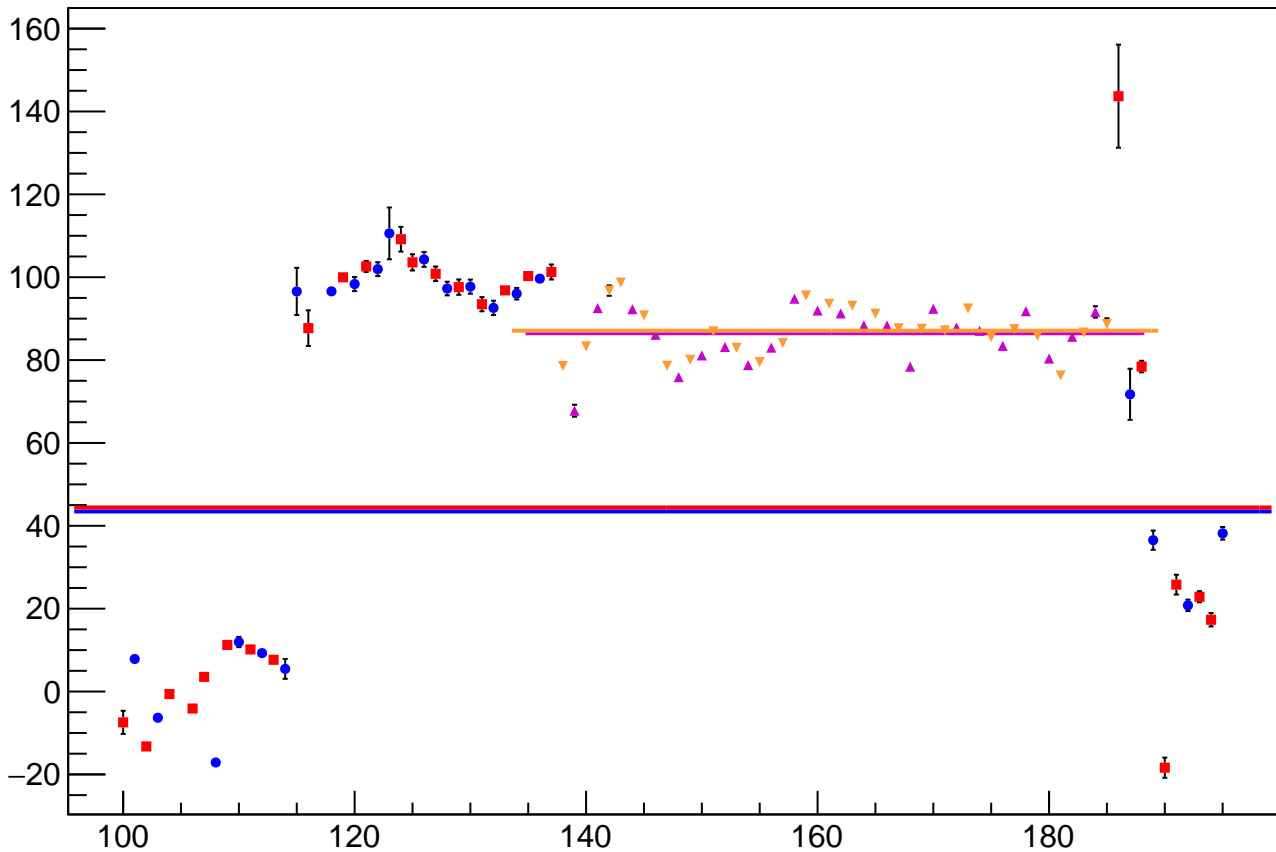
Left In: 13.620 $\pm$ 0.204  $\chi^2$ /NDF:2315.4/22

+ sign 11.533 $\pm$ 0.177  $\chi^2$ /NDF: 3403.5/45

All: 10.991 $\pm$ 0.122  $\chi^2$ /NDF: 6919.8/93

- sign 10.504 $\pm$ 0.167  $\chi^2$ /NDF: 3498.5/47

# reg\_asym\_sam5\_diff\_bpm4eY\_slope vs Slug



Right In: 43.463 $\pm$ 0.290  $\chi^2$ /NDF: 25027.9/20

Left Out: 87.087 $\pm$ 0.179  $\chi^2$ /NDF: 1085.8/24

Right Out: 44.433 $\pm$ 0.270  $\chi^2$ /NDF: 30161.8/24

Left In: 86.482 $\pm$ 0.185  $\chi^2$ /NDF: 1003.2/22

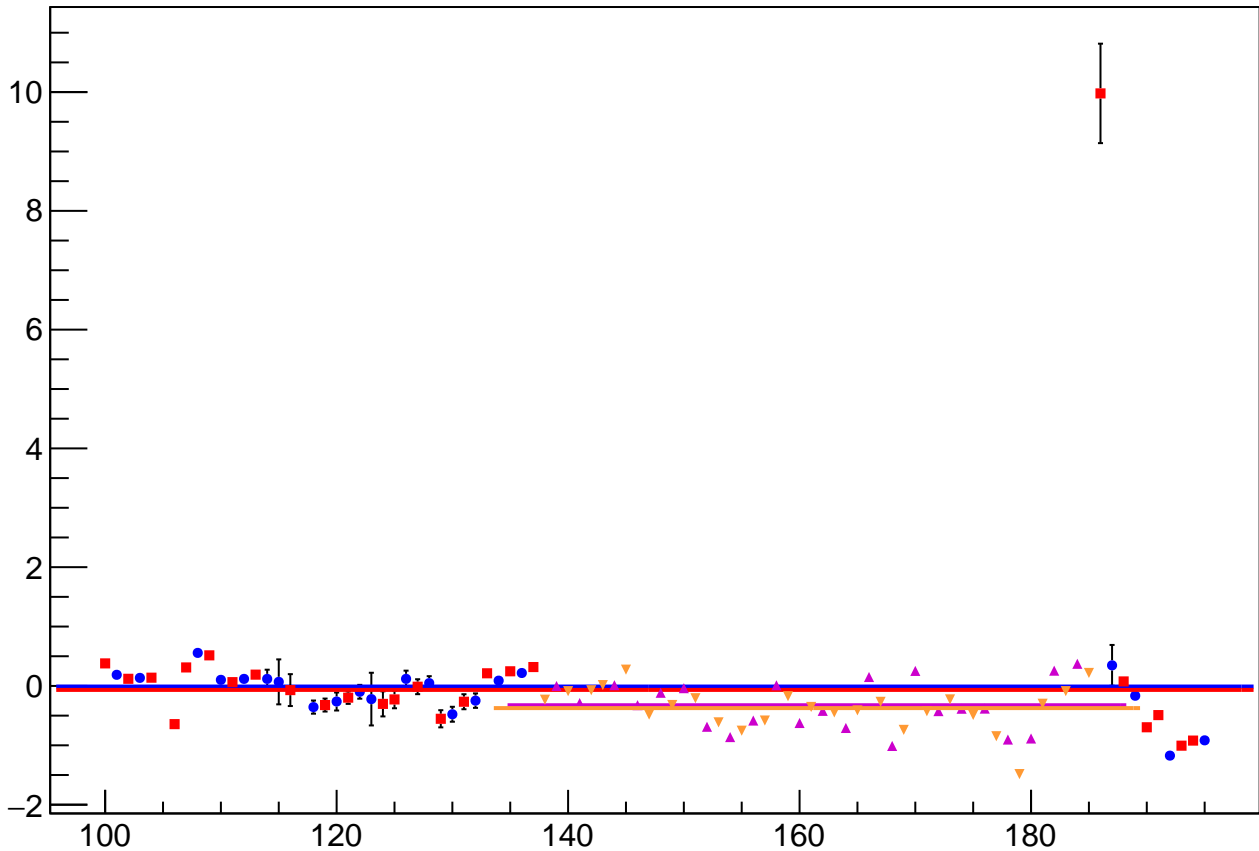
+ sign 75.029 $\pm$ 0.152  $\chi^2$ /NDF: 42515.9/45

All: 74.059 $\pm$ 0.108  $\chi^2$ /NDF: 90288.0/93

- sign 73.087 $\pm$ 0.152  $\chi^2$ /NDF: 47690.9/47



# reg\_asym\_sam5\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.010 \pm 0.013$   $\chi^2/\text{NDF}: 1558.4/20$

Left Out:  $-0.373 \pm 0.008$   $\chi^2/\text{NDF}: 1668.6/24$

Right Out:  $-0.067 \pm 0.011$   $\chi^2/\text{NDF}: 1800.2/24$

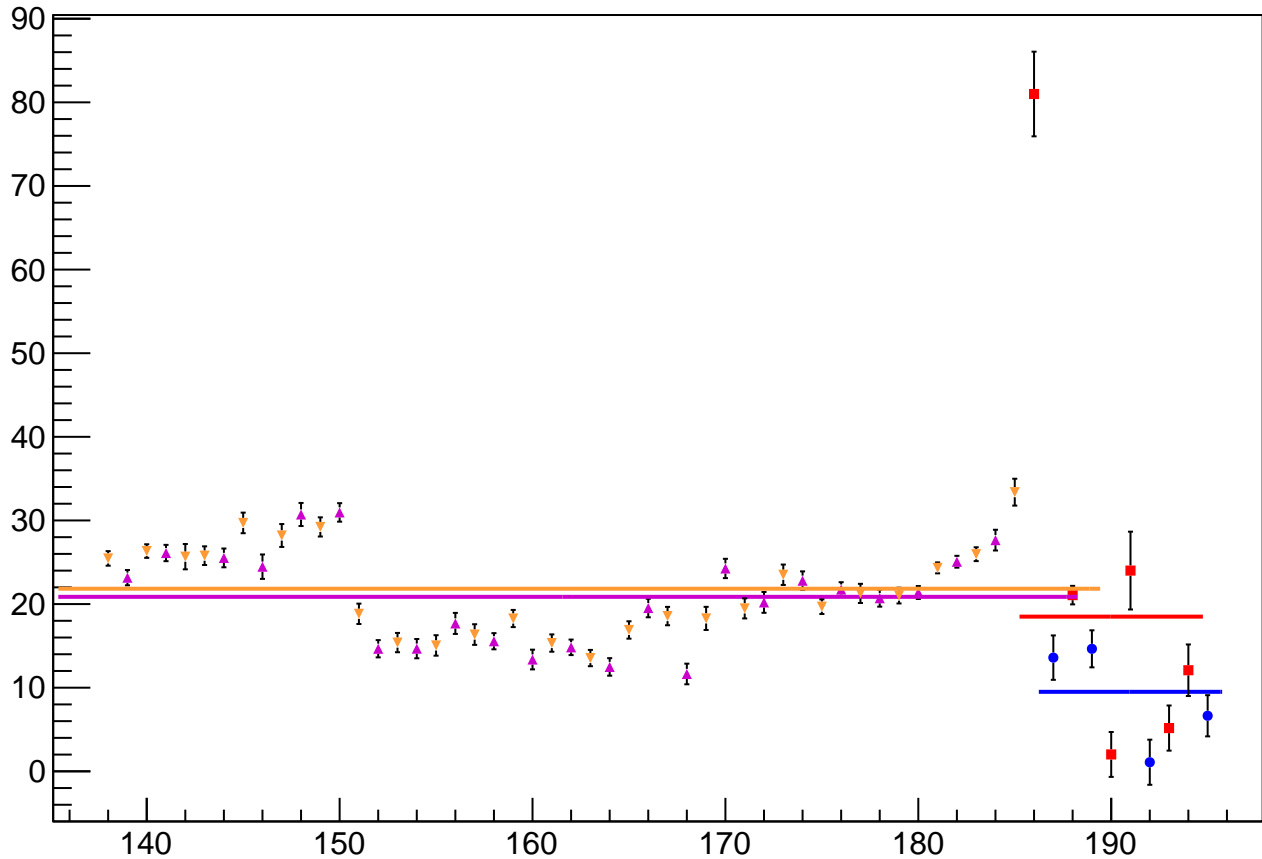
Left In:  $-0.325 \pm 0.008$   $\chi^2/\text{NDF}: 2284.1/22$

+ sign  $-0.267 \pm 0.007$   $\chi^2/\text{NDF}: 3809.8/45$

All:  $-0.252 \pm 0.005$   $\chi^2/\text{NDF}: 8238.9/93$

- sign  $-0.238 \pm 0.007$   $\chi^2/\text{NDF}: 4419.4/47$

# reg\_asym\_sam6\_diff\_bpm1X\_slope vs Slug



Right In: 9.506+/-1.242  $\chi^2$ /NDF: 18.9/3

Left Out: 21.836+/-0.210  $\chi^2$ /NDF:524.3/24

Right Out: 18.499+/-0.883  $\chi^2$ /NDF: 225.6/5

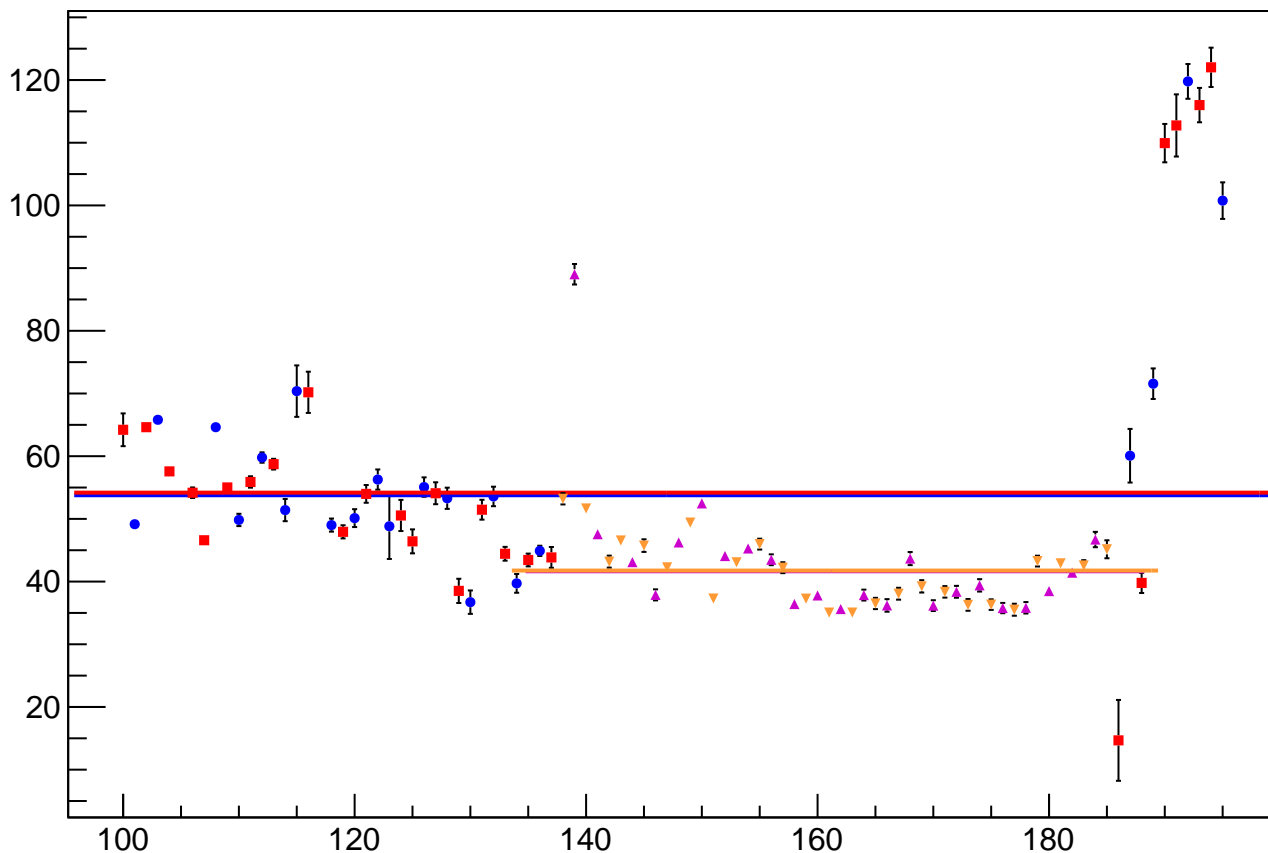
Left In: 20.866+/-0.217  $\chi^2$ /NDF:576.9/22

+ sign 21.494+/-0.207  $\chi^2$ /NDF: 639.0/28

All: 21.119+/-0.147  $\chi^2$ /NDF: 1455.0/57

- sign 20.731+/-0.210  $\chi^2$ /NDF: 809.3/28

# reg\_asym\_sam6\_diff\_bpm4aY\_slope vs Slug



Right In: 53.771 $\pm$ 0.209  $\chi^2$ /NDF: 2093.5/20

Left Out: 41.757 $\pm$ 0.165  $\chi^2$ /NDF: 1015.7/24

Right Out: 54.187 $\pm$ 0.222  $\chi^2$ /NDF: 2456.5/24

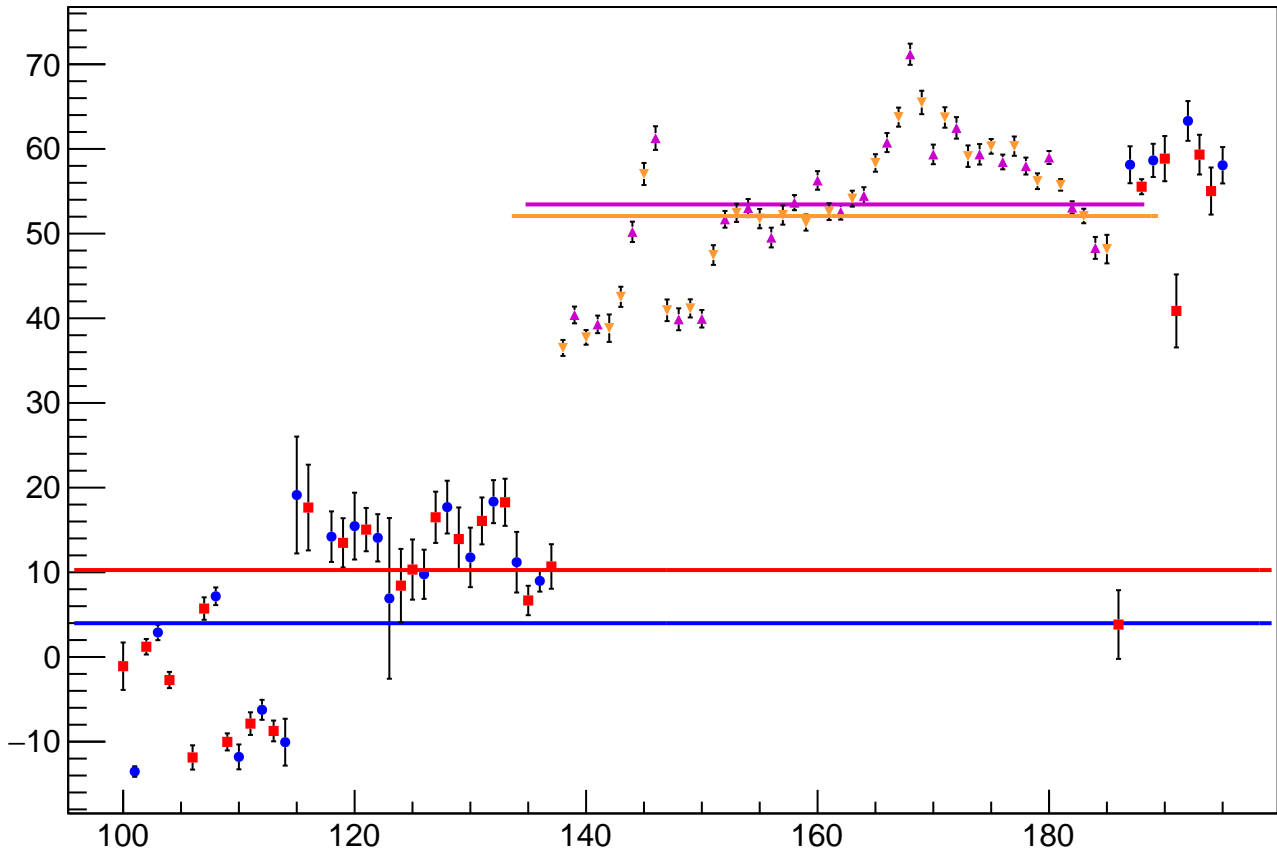
Left In: 41.643 $\pm$ 0.174  $\chi^2$ /NDF: 1611.0/22

+ sign 46.386 $\pm$ 0.130  $\chi^2$ /NDF: 5143.1/45

All: 46.393 $\pm$ 0.094  $\chi^2$ /NDF: 11186.5/93

- sign 46.400 $\pm$ 0.137  $\chi^2$ /NDF: 6043.5/47

# reg\_asym\_sam6\_diff\_bpm4eX\_slope vs Slug



Right In:  $3.989 \pm 0.345$   $\chi^2/\text{NDF}: 3805.7/20$

Left Out:  $52.076 \pm 0.210$   $\chi^2/\text{NDF}: 1450.9/24$

Right Out:  $10.265 \pm 0.336$   $\chi^2/\text{NDF}: 5057.6/24$

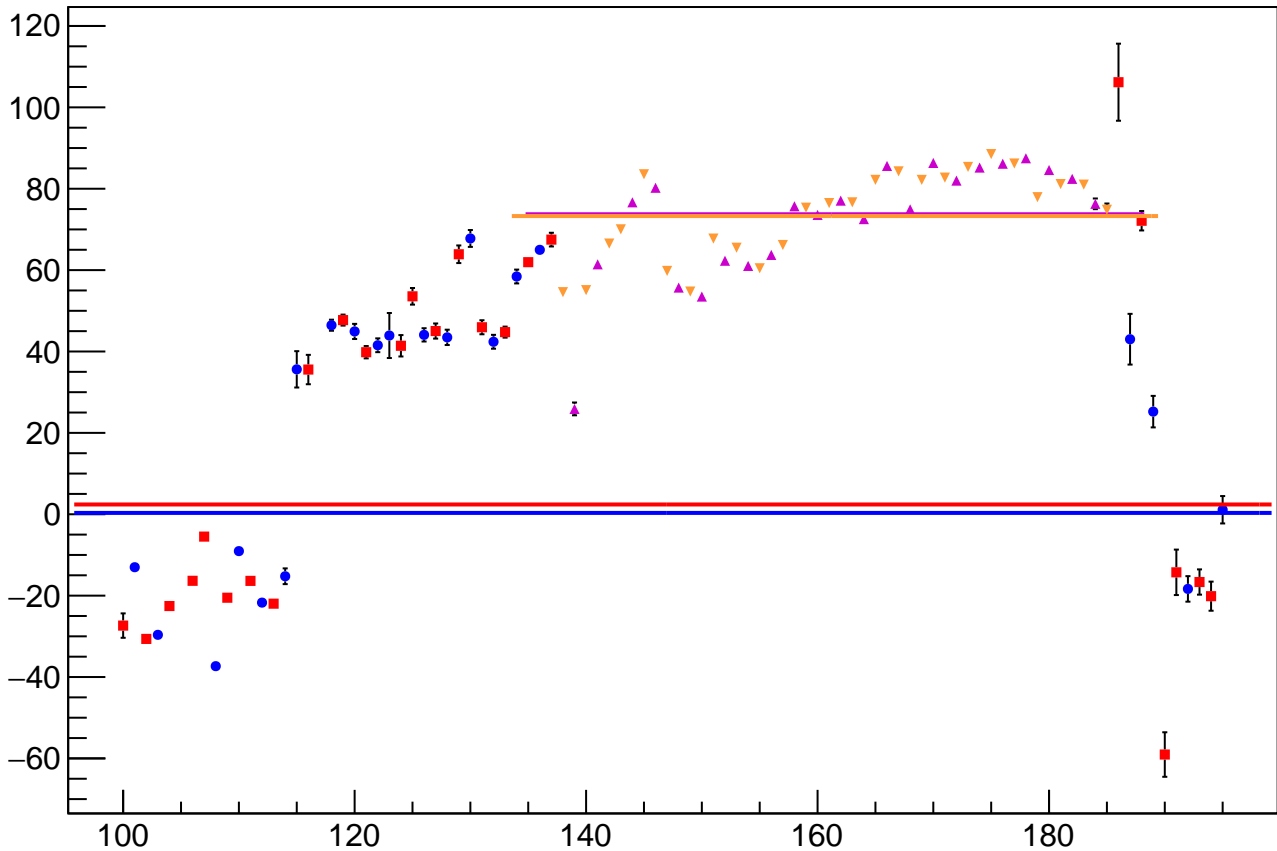
Left In:  $53.447 \pm 0.215$   $\chi^2/\text{NDF}: 1169.0/22$

+ sign  $39.089 \pm 0.179$   $\chi^2/\text{NDF}: 19417.1/45$

All:  $39.977 \pm 0.128$   $\chi^2/\text{NDF}: 37391.1/93$

- sign  $40.884 \pm 0.181$   $\chi^2/\text{NDF}: 17924.5/47$

# reg\_asym\_sam6\_diff\_bpm4eY\_slope vs Slug



Right In:  $0.332 \pm 0.246$   $\chi^2/\text{NDF}: 18343.9/20$

Left Out:  $73.284 \pm 0.187$   $\chi^2/\text{NDF}: 3144.2/24$

Right Out:  $2.404 \pm 0.263$   $\chi^2/\text{NDF}: 16605.4/24$

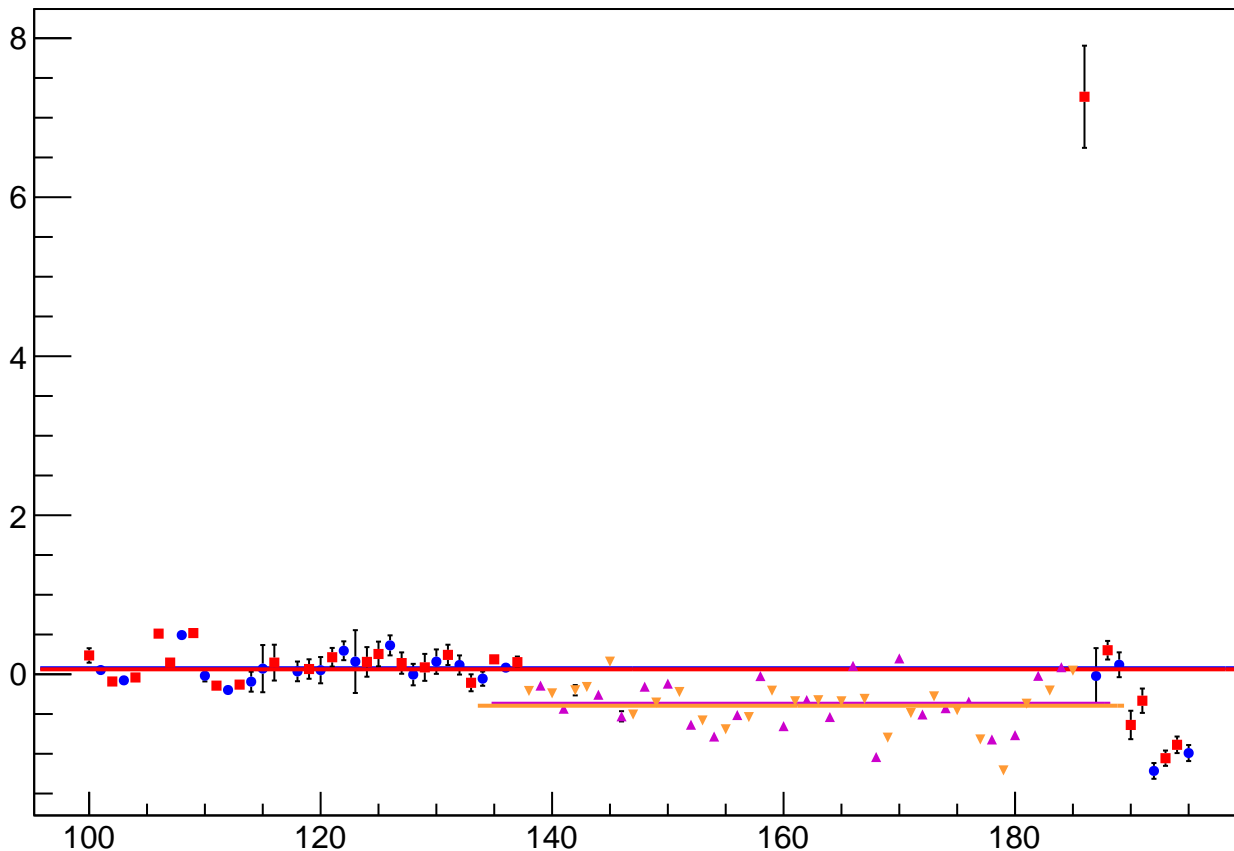
Left In:  $73.730 \pm 0.194$   $\chi^2/\text{NDF}: 3775.8/22$

+ sign  $46.530 \pm 0.149$   $\chi^2/\text{NDF}: 77394.7/45$

All:  $47.470 \pm 0.108$   $\chi^2/\text{NDF}: 145494.1/93$

- sign  $48.509 \pm 0.156$   $\chi^2/\text{NDF}: 68015.3/47$

# reg\_asym\_sam6\_diff\_bpm12X\_slope vs Slug



Right In: 0.076 $\pm$ 0.011  $\chi^2$ /NDF: 689.5/20

Left Out: -0.396 $\pm$ 0.009  $\chi^2$ /NDF: 950.0/24

Right Out: 0.062 $\pm$ 0.011  $\chi^2$ /NDF: 765.7/24

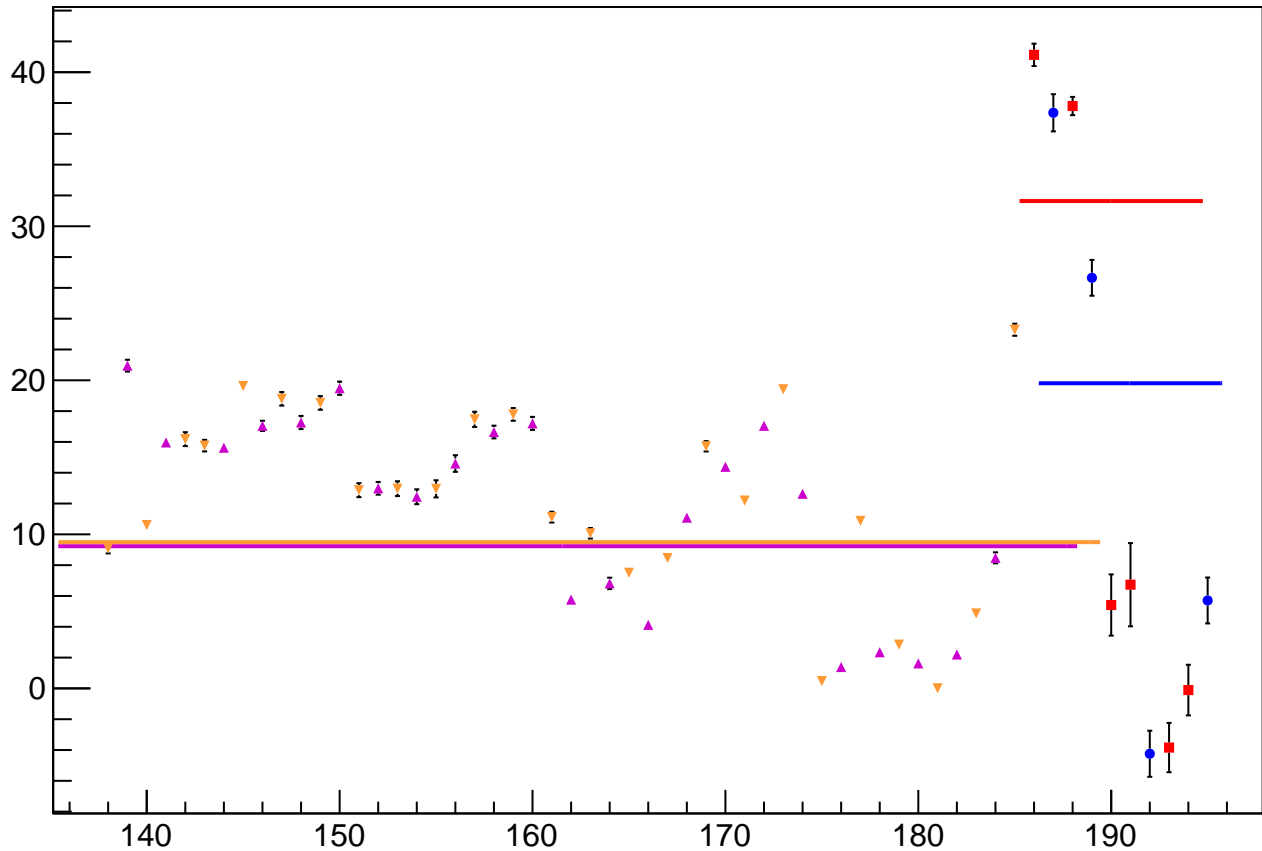
Left In: -0.371 $\pm$ 0.009  $\chi^2$ /NDF: 1313.7/22

+ sign -0.216 $\pm$ 0.007  $\chi^2$ /NDF: 2802.0/45

All: -0.208 $\pm$ 0.005  $\chi^2$ /NDF: 5858.1/93

- sign -0.200 $\pm$ 0.007  $\chi^2$ /NDF: 3053.3/47

# reg\_asym\_sam7\_diff\_bpm1X\_slope vs Slug



Right In: 19.808+/-0.656  $\chi^2$ /NDF: 593.8/3

Left Out: 9.495+/-0.061  $\chi^2$ /NDF:12609.1/24

Right Out: 31.635+/-0.411  $\chi^2$ /NDF: 1402.7/5

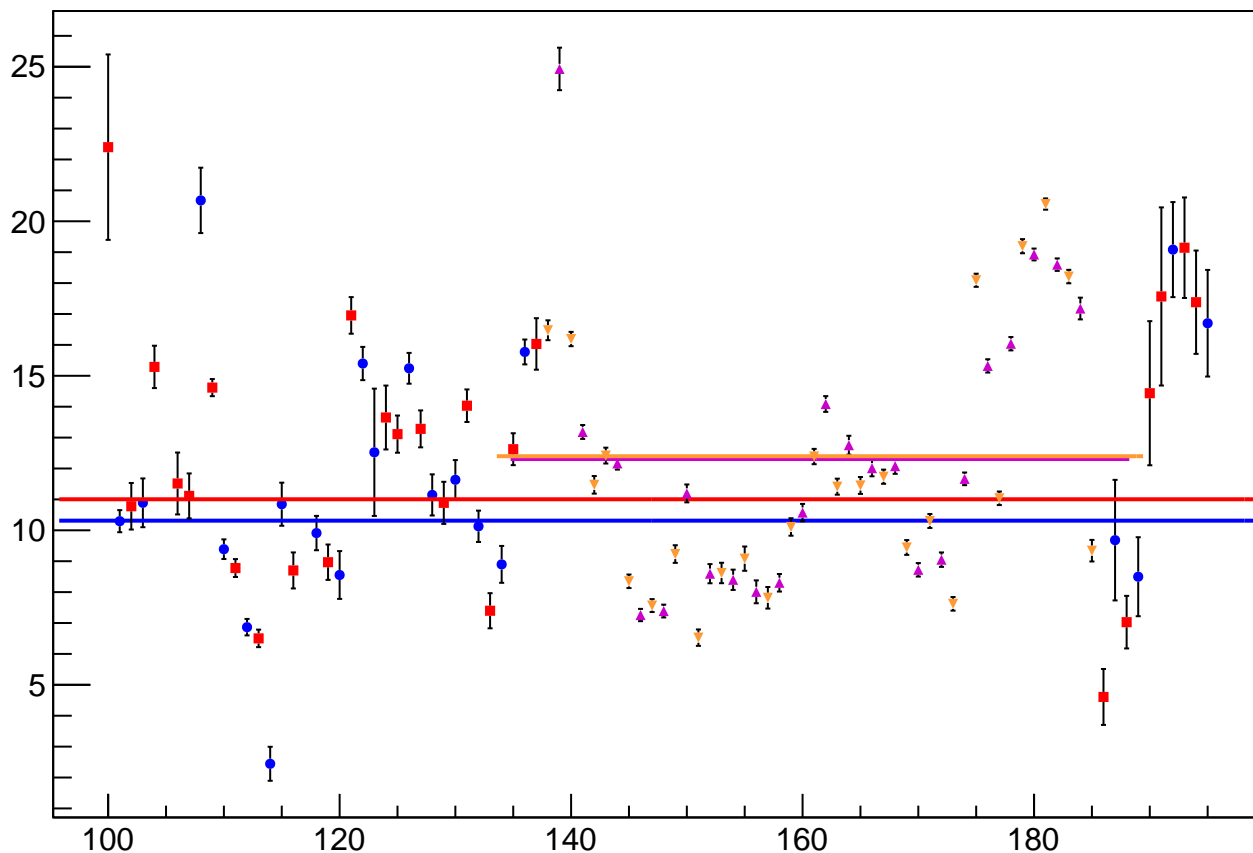
Left In: 9.231+/-0.063  $\chi^2$ /NDF:10736.2/22

+ sign 9.584+/-0.061  $\chi^2$ /NDF: 13447.7/28

All: 9.662+/-0.044  $\chi^2$ /NDF: 28487.1/57

- sign 9.745+/-0.062  $\chi^2$ /NDF: 15036.0/28

# reg\_asym\_sam7\_diff\_bpm4aY\_slope vs Slug



Right In: 10.312 $\pm$ 0.118  $\chi^2$ /NDF: 914.8/20

Left Out: 12.397 $\pm$ 0.050  $\chi^2$ /NDF: 7542.8/24

Right Out: 11.004 $\pm$ 0.114  $\chi^2$ /NDF: 935.9/24

Left In: 12.307 $\pm$ 0.051  $\chi^2$ /NDF: 5601.8/22

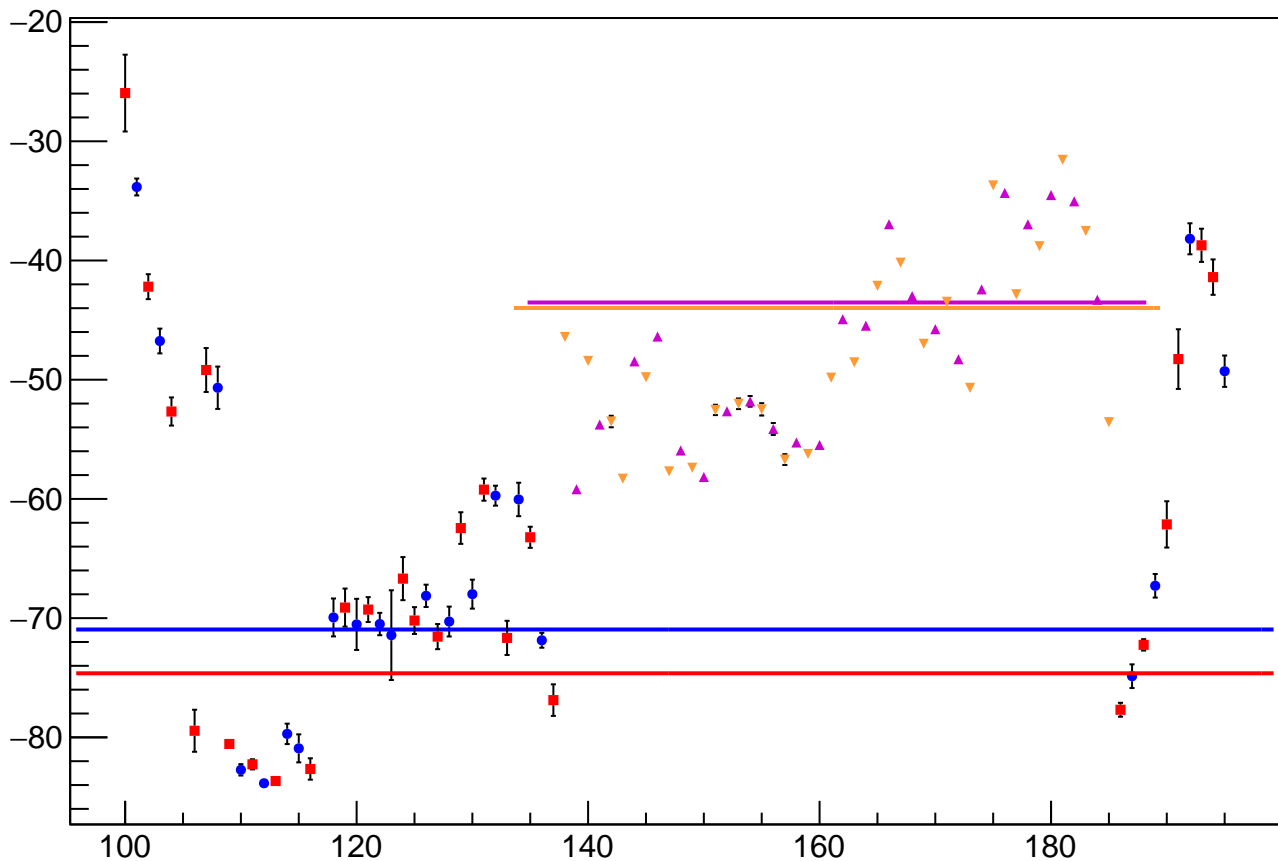
+ sign 12.084 $\pm$ 0.046  $\chi^2$ /NDF: 8721.8/45

All: 12.086 $\pm$ 0.033  $\chi^2$ /NDF: 15368.6/93

- sign 12.087 $\pm$ 0.047  $\chi^2$ /NDF: 6646.8/47



# reg\_asym\_sam7\_diff\_bpm4eX\_slope vs Slug



Right In:  $-70.953 \pm 0.187$   $\chi^2/\text{NDF}: 6538.0/20$

Left Out:  $-43.982 \pm 0.062$   $\chi^2/\text{NDF}: 17736.8/24$

Right Out:  $-74.627 \pm 0.160$   $\chi^2/\text{NDF}: 4889.7/24$

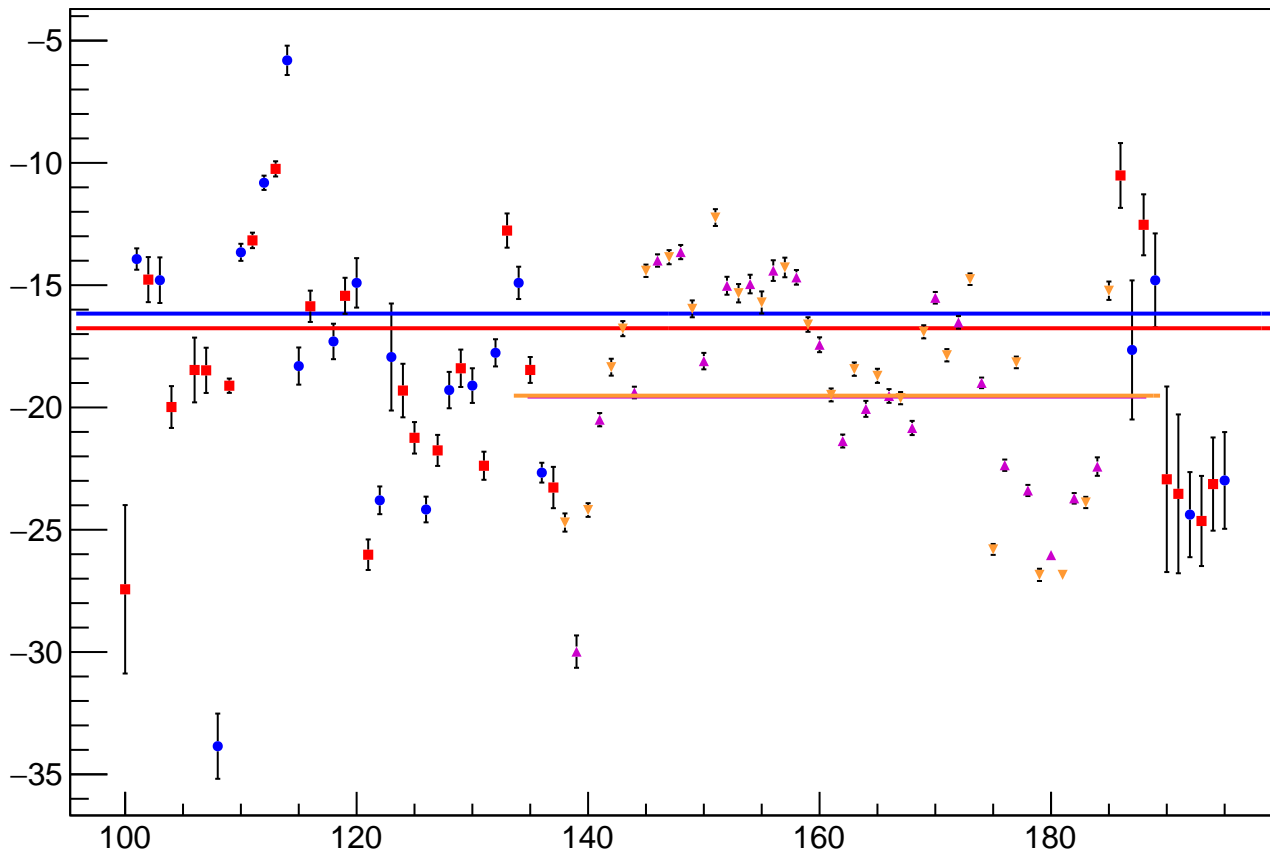
Left In:  $-43.523 \pm 0.063$   $\chi^2/\text{NDF}: 15267.1/22$

+ sign  $-46.648 \pm 0.059$   $\chi^2/\text{NDF}: 43022.7/45$

All:  $-47.196 \pm 0.042$   $\chi^2/\text{NDF}: 96111.1/93$

- sign  $-47.746 \pm 0.059$   $\chi^2/\text{NDF}: 52914.3/47$

# reg\_asym\_sam7\_diff\_bpm4eY\_slope vs Slug



Right In:  $-16.163 \pm 0.132$   $\chi^2/\text{NDF}: 1656.0/20$

Left Out:  $-19.517 \pm 0.056$   $\chi^2/\text{NDF}: 6518.3/24$

Right Out:  $-16.761 \pm 0.126$   $\chi^2/\text{NDF}: 1281.4/24$

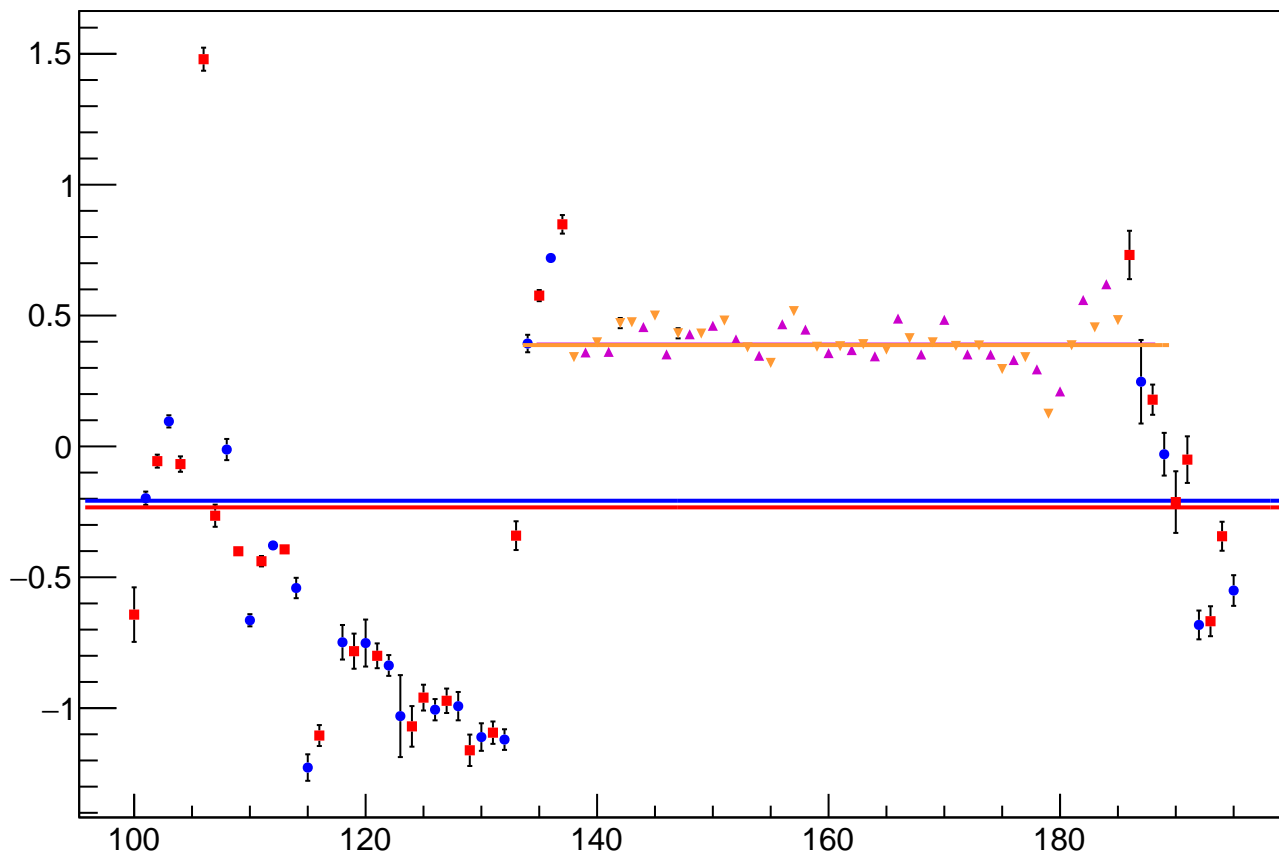
Left In:  $-19.555 \pm 0.057$   $\chi^2/\text{NDF}: 4311.2/22$

+ sign  $-19.007 \pm 0.051$   $\chi^2/\text{NDF}: 8724.6/45$

All:  $-19.042 \pm 0.037$   $\chi^2/\text{NDF}: 14723.7/93$

- sign  $-19.078 \pm 0.052$   $\chi^2/\text{NDF}: 5998.2/47$

# reg\_asym\_sam7\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.208 \pm 0.007$   $\chi^2/\text{NDF}: 6440.6/20$

Left Out:  $0.387 \pm 0.003$   $\chi^2/\text{NDF}: 995.0/24$

Right Out:  $-0.233 \pm 0.007$   $\chi^2/\text{NDF}: 6402.8/24$

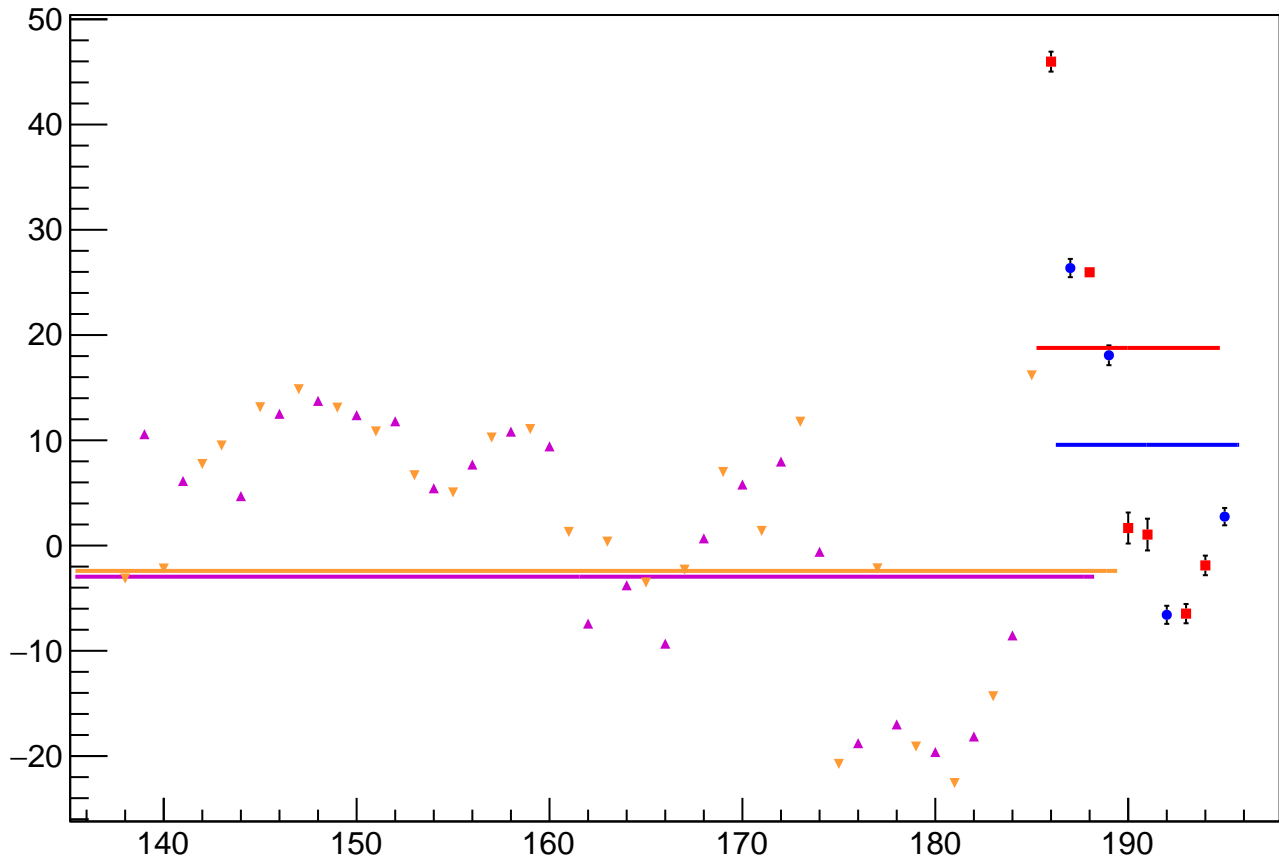
Left In:  $0.389 \pm 0.003$   $\chi^2/\text{NDF}: 1256.9/22$

+ sign  $0.323 \pm 0.002$   $\chi^2/\text{NDF}: 13220.2/45$

All:  $0.318 \pm 0.002$   $\chi^2/\text{NDF}: 27882.6/93$

- sign  $0.312 \pm 0.002$   $\chi^2/\text{NDF}: 14651.4/47$

# reg\_asym\_sam8\_diff\_bpm1X\_slope vs Slug



Right In:  $9.570 \pm 0.435$   $\chi^2/\text{NDF}: 878.4/3$

Left Out:  $-2.407 \pm 0.053$   $\chi^2/\text{NDF}: 56368.5/24$

Right Out:  $18.777 \pm 0.319$   $\chi^2/\text{NDF}: 2631.3/5$

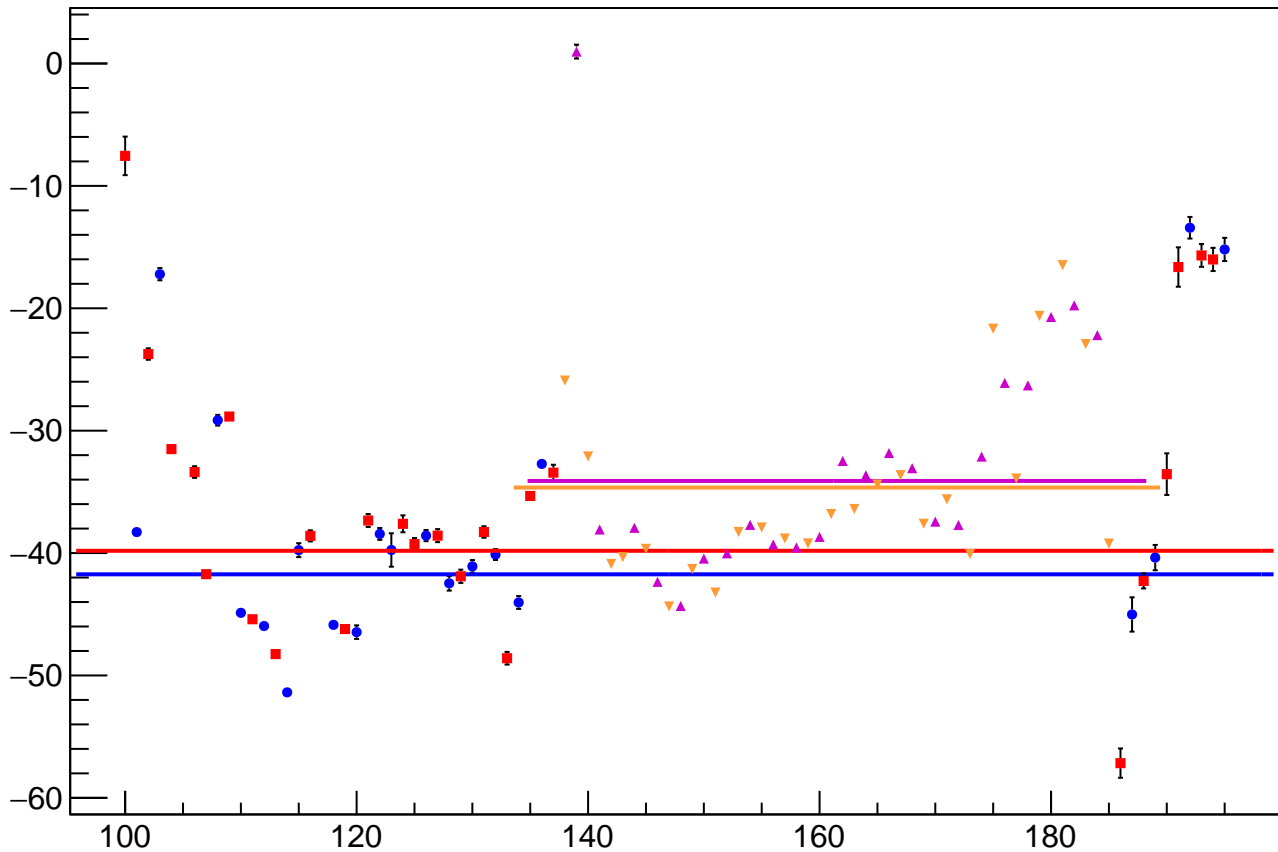
Left In:  $-2.959 \pm 0.055$   $\chi^2/\text{NDF}: 45922.6/22$

+ sign  $-2.233 \pm 0.052$   $\chi^2/\text{NDF}: 57993.9/28$

All:  $-2.283 \pm 0.038$   $\chi^2/\text{NDF}: 111058.7/57$

- sign  $-2.335 \pm 0.054$   $\chi^2/\text{NDF}: 53063.0/28$

# reg\_asym\_sam8\_diff\_bpm4aY\_slope vs Slug



Right In:  $-41.736 \pm 0.077$   $\chi^2/\text{NDF}: 8398.3/20$

Left Out:  $-34.646 \pm 0.042$   $\chi^2/\text{NDF}: 34674.7/24$

Right Out:  $-39.813 \pm 0.072$   $\chi^2/\text{NDF}: 13082.6/24$

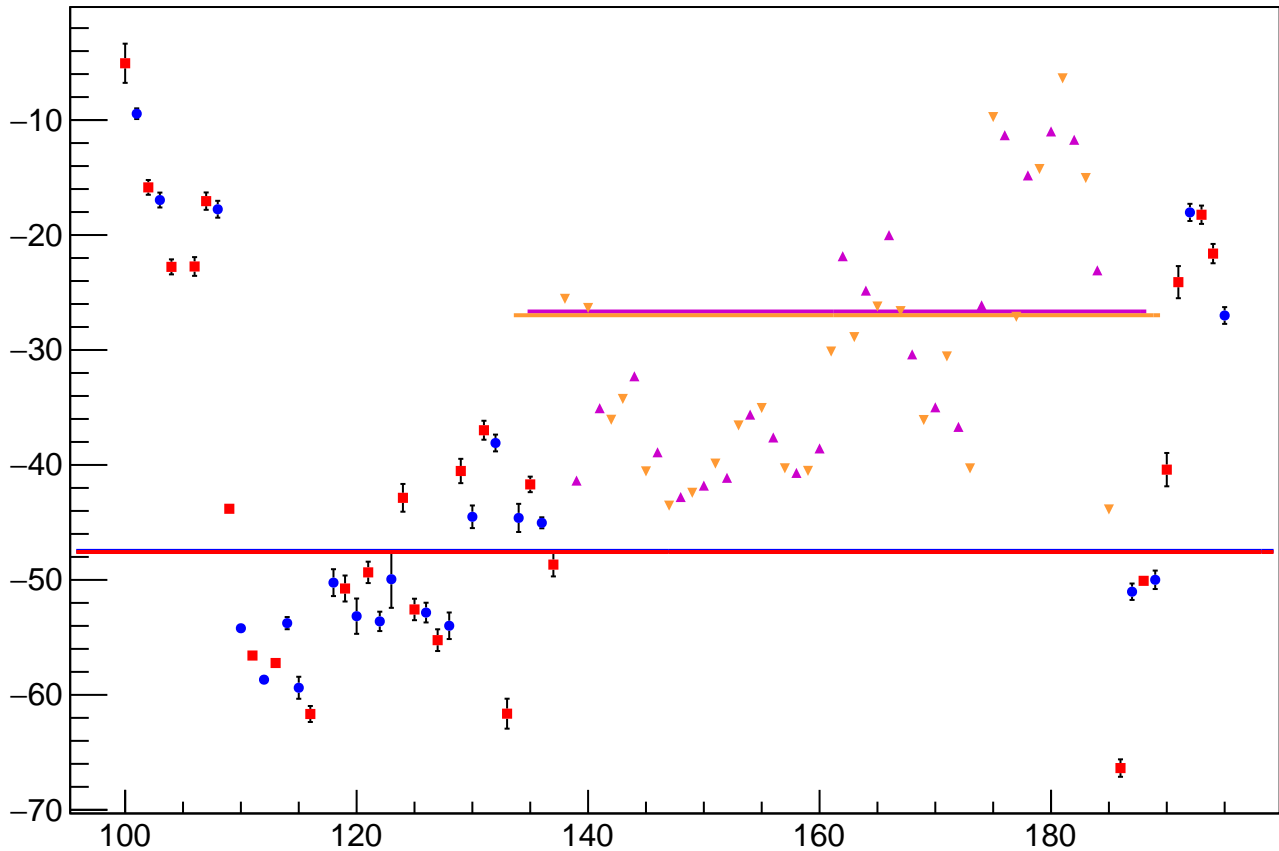
Left In:  $-34.108 \pm 0.044$   $\chi^2/\text{NDF}: 29052.8/22$

+ sign  $-36.250 \pm 0.037$   $\chi^2/\text{NDF}: 49588.6/45$

All:  $-35.965 \pm 0.026$   $\chi^2/\text{NDF}: 96455.0/93$

- sign  $-35.669 \pm 0.037$   $\chi^2/\text{NDF}: 46744.1/47$

# reg\_asym\_sam8\_diff\_bpm4eX\_slope vs Slug



Right In:  $-47.476 \pm 0.118$   $\chi^2/\text{NDF}: 17137.7/20$

Left Out:  $-26.978 \pm 0.053$   $\chi^2/\text{NDF}: 49361.1/24$

Right Out:  $-47.573 \pm 0.100$   $\chi^2/\text{NDF}: 15037.6/24$

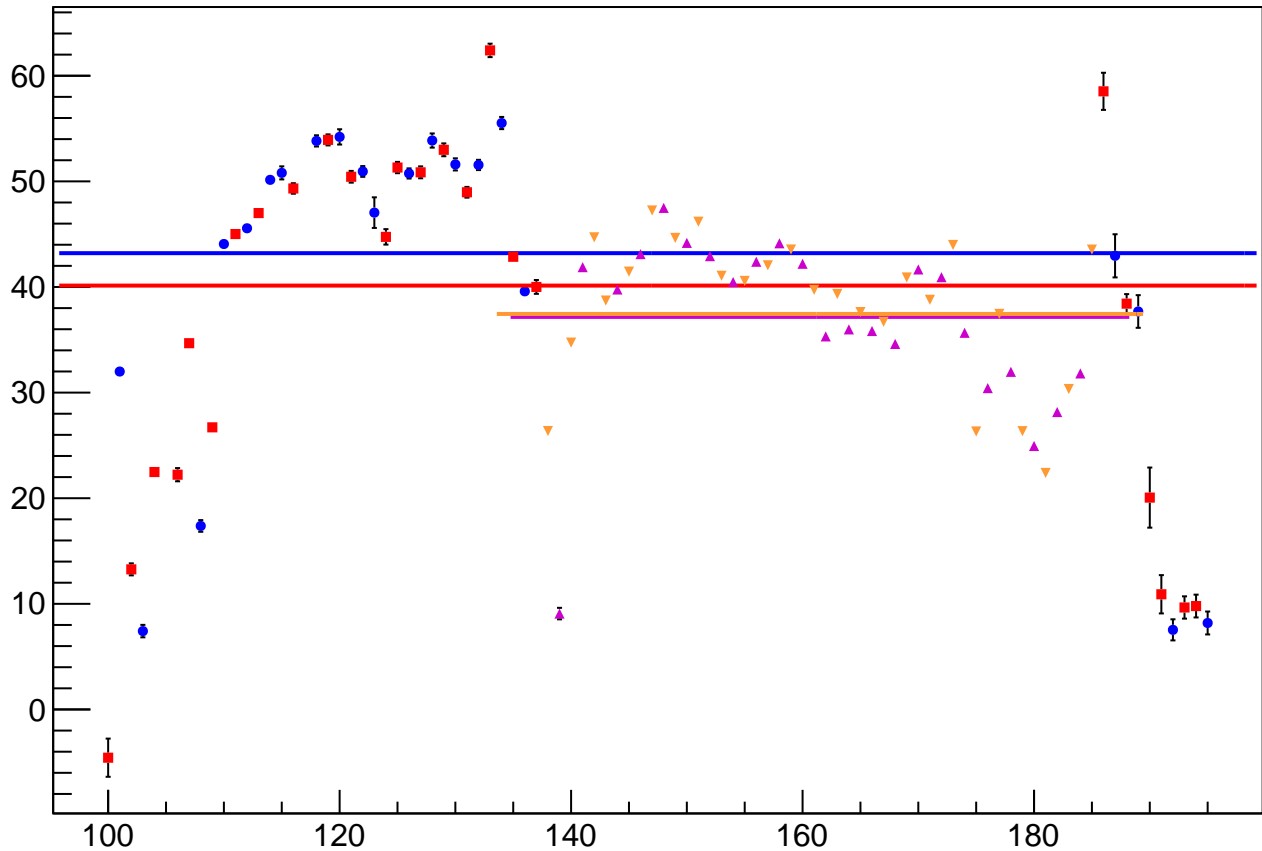
Left In:  $-26.654 \pm 0.055$   $\chi^2/\text{NDF}: 42106.8/22$

+ sign  $-30.421 \pm 0.049$   $\chi^2/\text{NDF}: 91448.9/45$

All:  $-30.985 \pm 0.034$   $\chi^2/\text{NDF}: 182725.8/93$

- sign  $-31.539 \pm 0.048$   $\chi^2/\text{NDF}: 91009.0/47$

# reg\_asym\_sam8\_diff\_bpm4eY\_slope vs Slug



Right In: 43.202 $\pm$ 0.086  $\chi^2$ /NDF: 12927.2/20

Left Out: 37.447 $\pm$ 0.047  $\chi^2$ /NDF:21570.6/24

Right Out: 40.132 $\pm$ 0.079  $\chi^2$ /NDF: 19649.8/24

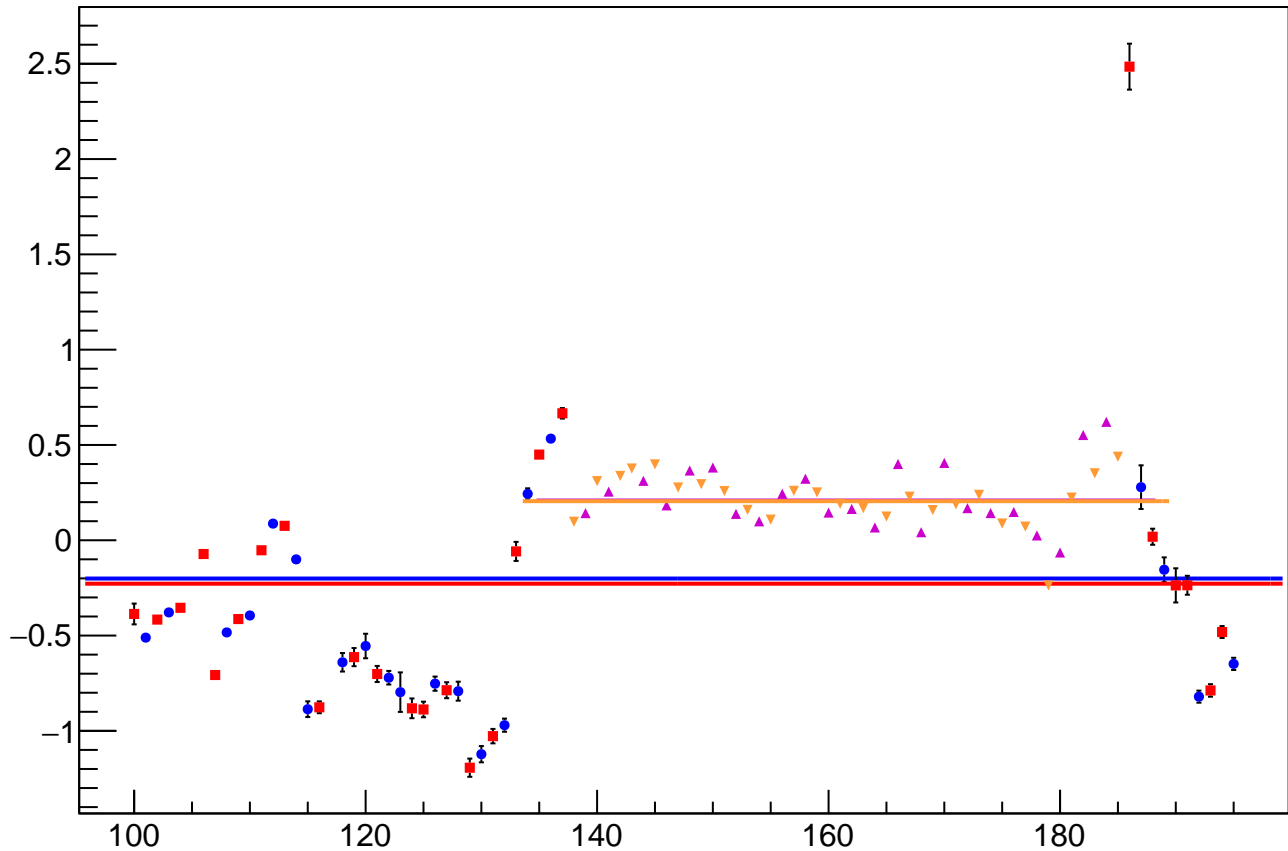
Left In: 37.169 $\pm$ 0.049  $\chi^2$ /NDF:17236.9/22

+ sign 38.772 $\pm$ 0.041  $\chi^2$ /NDF: 37928.3/45

All: 38.388 $\pm$ 0.029  $\chi^2$ /NDF: 75997.4/93

- sign 37.995 $\pm$ 0.042  $\chi^2$ /NDF: 37894.5/47

# reg\_asym\_sam8\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.201 \pm 0.005$   $\chi^2/\text{NDF}: 7975.0/20$

Left Out:  $0.205 \pm 0.002$   $\chi^2/\text{NDF}: 3826.2/24$

Right Out:  $-0.228 \pm 0.004$   $\chi^2/\text{NDF}: 8319.2/24$

Left In:  $0.208 \pm 0.002$   $\chi^2/\text{NDF}: 5094.6/22$

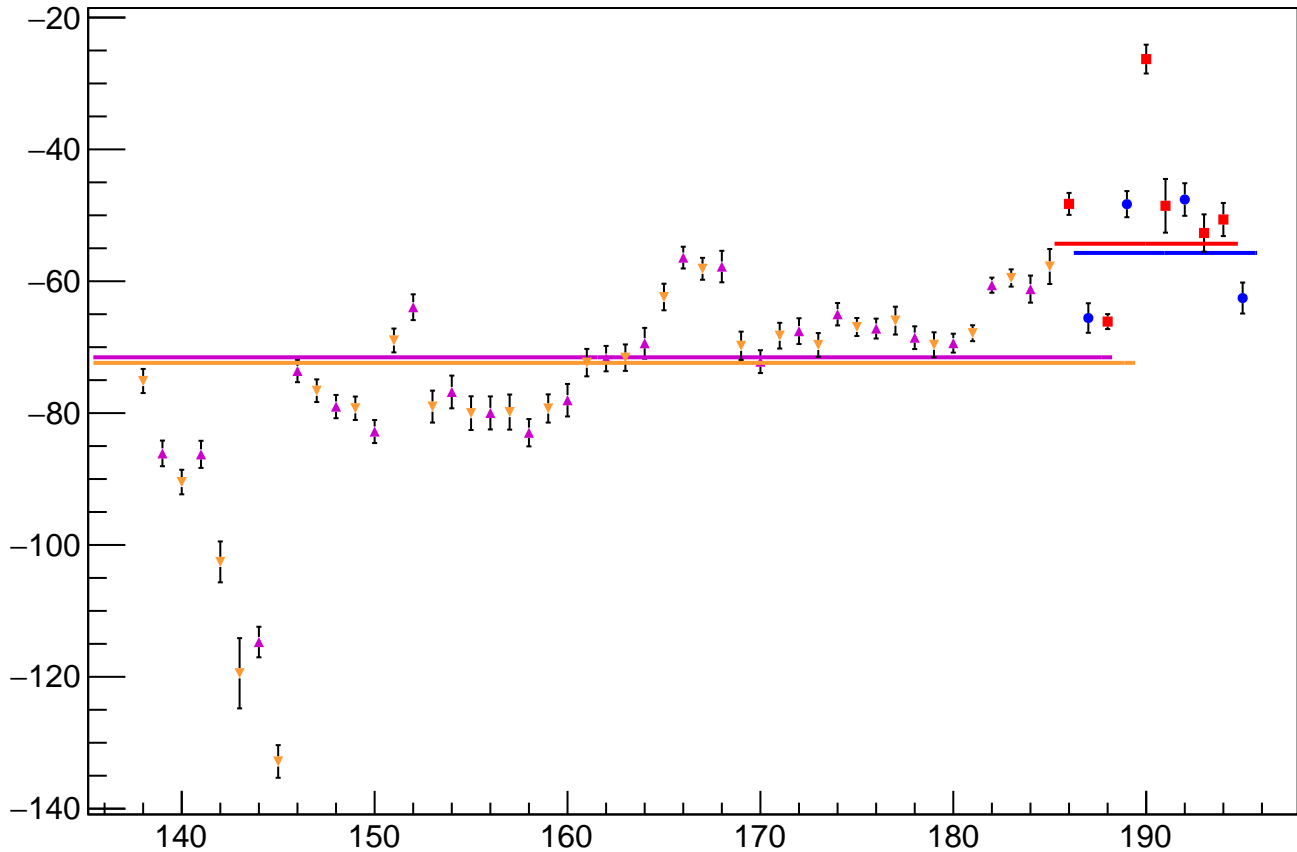
+ sign  $0.134 \pm 0.002$   $\chi^2/\text{NDF}: 17895.3/45$

All:  $0.123 \pm 0.001$   $\chi^2/\text{NDF}: 39817.1/93$

- sign  $0.111 \pm 0.002$   $\chi^2/\text{NDF}: 21853.2/47$



# reg\_asym\_usl\_diff\_bpm1X\_slope vs Slug



Right In:  $-55.704 \pm 1.119$   $\chi^2/\text{NDF}: 52.6/3$

Left Out:  $-72.381 \pm 0.382$   $\chi^2/\text{NDF}: 1199.9/24$

Right Out:  $-54.309 \pm 0.769$   $\chi^2/\text{NDF}: 290.1/5$

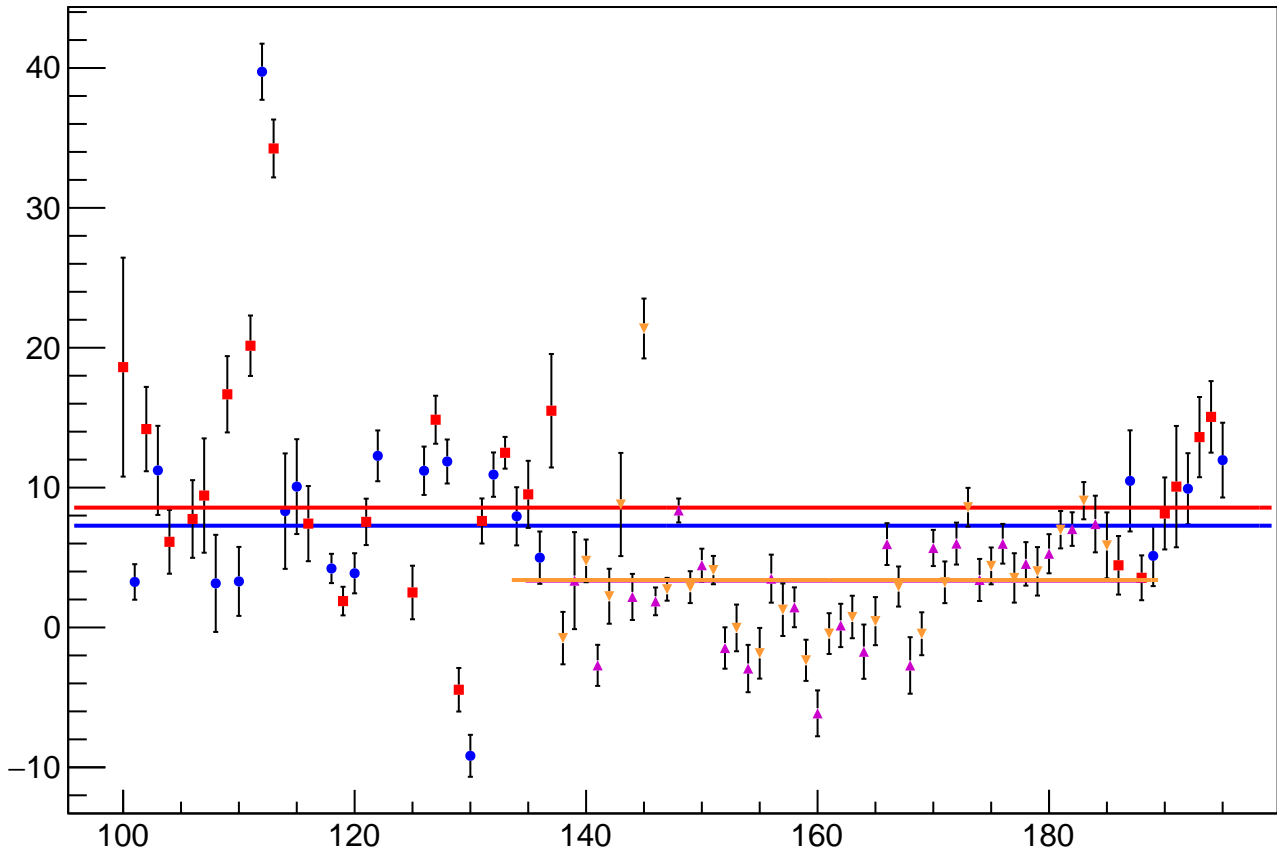
Left In:  $-71.534 \pm 0.382$   $\chi^2/\text{NDF}: 851.4/22$

+ sign  $-70.642 \pm 0.361$   $\chi^2/\text{NDF}: 1451.4/28$

All:  $-69.317 \pm 0.248$   $\chi^2/\text{NDF}: 3020.7/57$

- sign  $-68.131 \pm 0.342$   $\chi^2/\text{NDF}: 1543.9/28$

# reg\_asym\_usl\_diff\_bpm4aY\_slope vs Slug



Right In:  $7.277 \pm 0.417$   $\chi^2/\text{NDF}: 446.5/19$

Left Out:  $3.392 \pm 0.294$   $\chi^2/\text{NDF}: 169.9/24$

Right Out:  $8.568 \pm 0.406$   $\chi^2/\text{NDF}: 373.3/23$

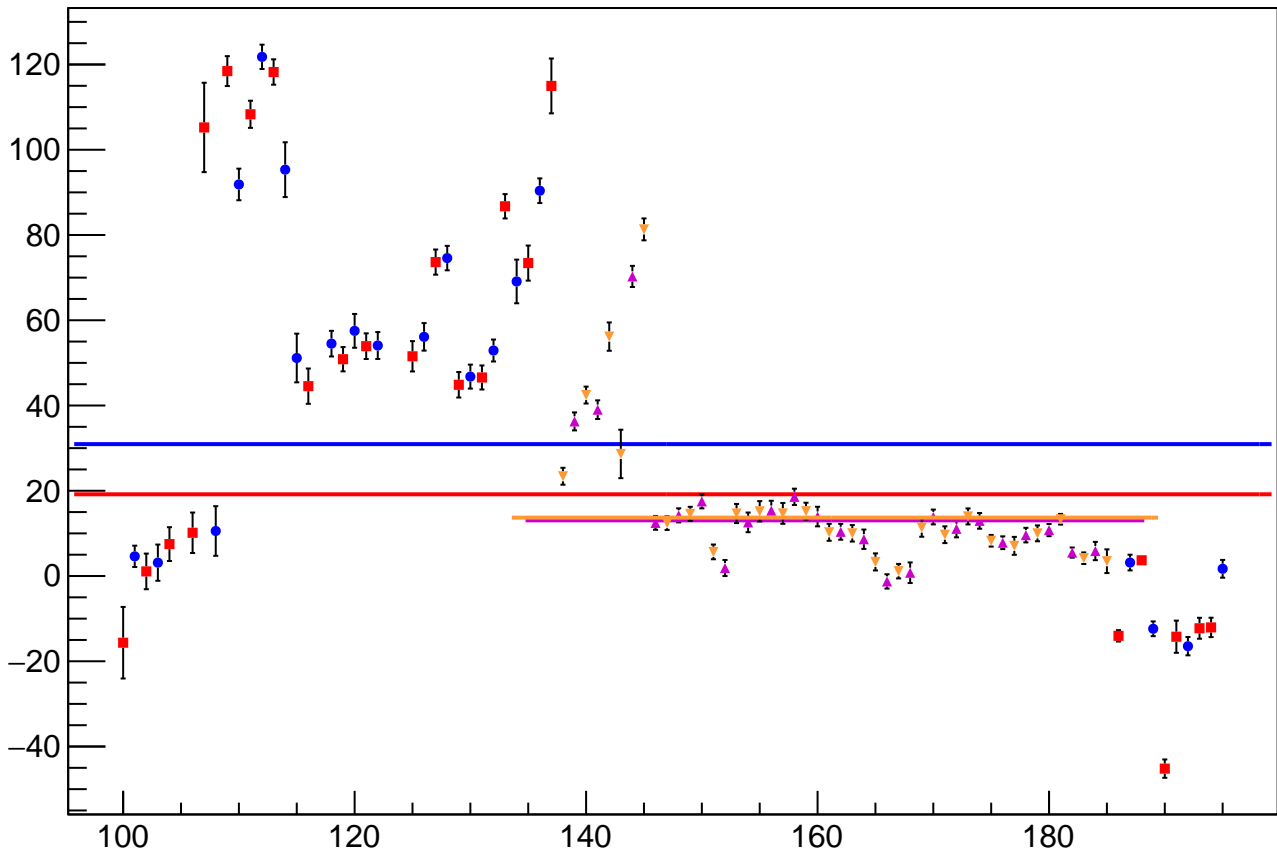
Left In:  $3.349 \pm 0.298$   $\chi^2/\text{NDF}: 163.5/22$

+ sign  $4.680 \pm 0.240$   $\chi^2/\text{NDF}: 674.3/44$

All:  $4.929 \pm 0.170$   $\chi^2/\text{NDF}: 1320.7/91$

- sign  $5.178 \pm 0.240$   $\chi^2/\text{NDF}: 644.2/46$

# reg\_asym\_usl\_diff\_bpm4eX\_slope vs Slug



Right In: 30.942+/-0.633  $\chi^2$ /NDF: 4134.9/19

Left Out: 13.700+/-0.381  $\chi^2$ /NDF:1307.0/24

Right Out: 19.170+/-0.513  $\chi^2$ /NDF: 6876.2/23

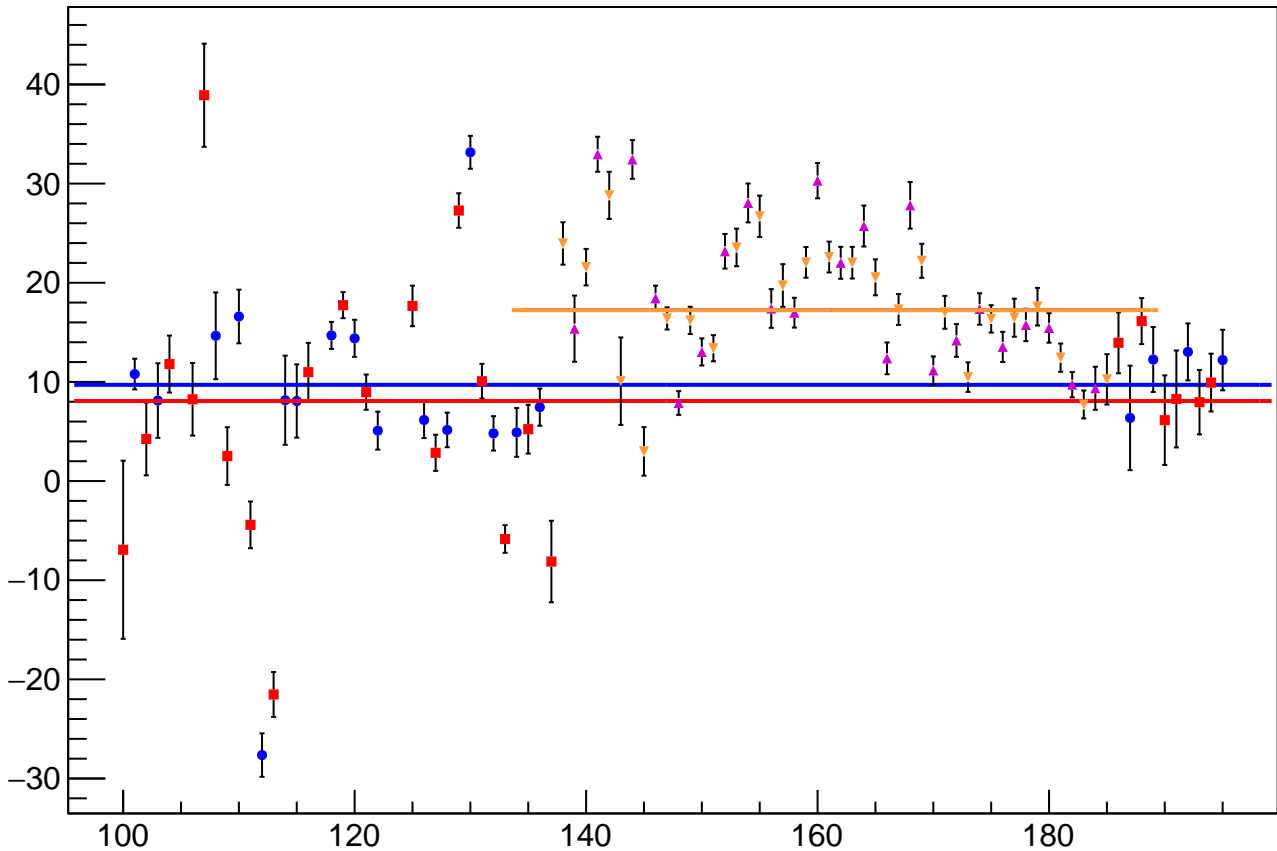
Left In: 13.058+/-0.380  $\chi^2$ /NDF:1024.7/22

+ sign 18.286+/-0.326  $\chi^2$ /NDF: 5986.9/44

All: 16.651+/-0.223  $\chi^2$ /NDF: 14026.6/91

- sign 15.221+/-0.305  $\chi^2$ /NDF: 7992.6/46

# reg\_asym\_usl\_diff\_bpm4eY\_slope vs Slug



Right In: 9.702 $\pm$ 0.486  $\chi^2$ /NDF: 550.4/19

Left Out: 17.238 $\pm$ 0.336  $\chi^2$ /NDF:246.5/24

Right Out: 8.074 $\pm$ 0.479  $\chi^2$ /NDF: 584.6/23

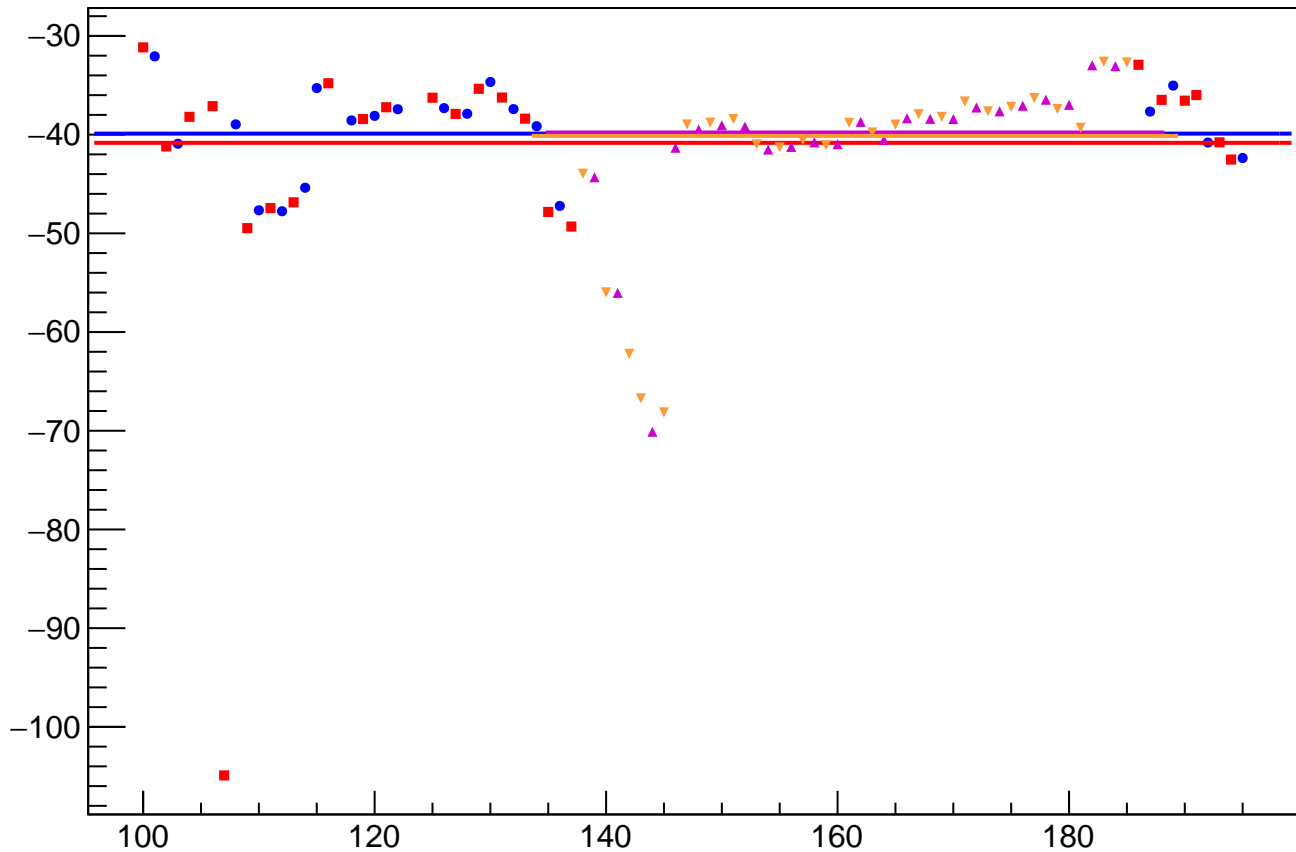
Left In: 17.245 $\pm$ 0.339  $\chi^2$ /NDF:440.8/22

+ sign 14.799 $\pm$ 0.276  $\chi^2$ /NDF: 959.6/44

All: 14.491 $\pm$ 0.196  $\chi^2$ /NDF: 2231.3/91

- sign 14.182 $\pm$ 0.277  $\chi^2$ /NDF: 1269.2/46

# reg\_asym\_usl\_diff\_bpm12X\_slope vs Slug



Right In:  $-39.897 \pm 0.027$   $\chi^2/\text{NDF}: 28387.3/19$

Left Out:  $-40.126 \pm 0.016$   $\chi^2/\text{NDF}: 185897.0/24$

Right Out:  $-40.830 \pm 0.026$   $\chi^2/\text{NDF}: 100847.5/23$

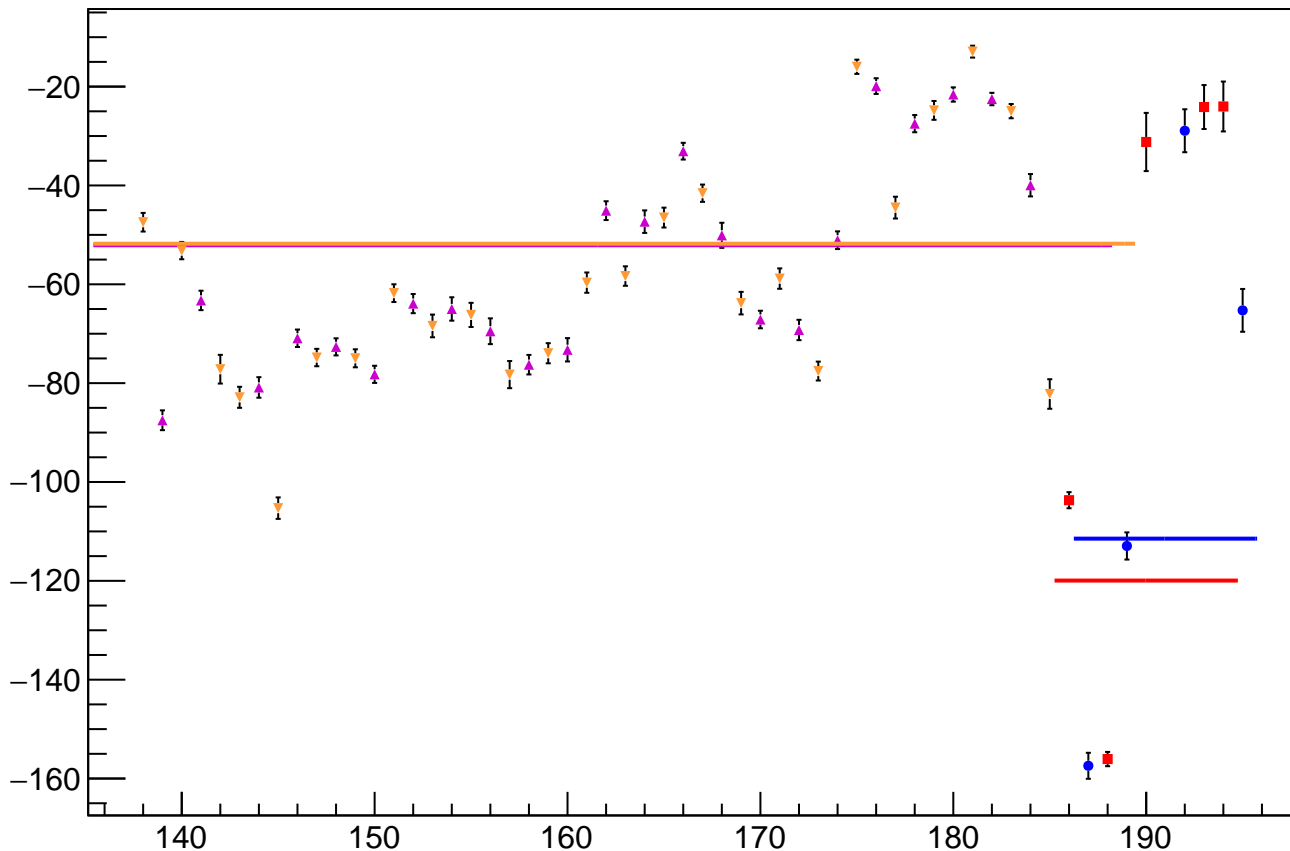
Left In:  $-39.785 \pm 0.016$   $\chi^2/\text{NDF}: 144494.5/22$

+ sign  $-40.069 \pm 0.014$   $\chi^2/\text{NDF}: 214337.0/44$

All:  $-40.066 \pm 0.010$   $\chi^2/\text{NDF}: 460868.9/91$

- sign  $-40.063 \pm 0.013$   $\chi^2/\text{NDF}: 246531.8/46$

# reg\_asym\_usr\_diff\_bpm1X\_slope vs Slug



Right In:  $-111.460 \pm 1.616$   $\chi^2/\text{NDF}: 779.8/3$

Left Out:  $-51.787 \pm 0.383$   $\chi^2/\text{NDF}: 4164.8/24$

Right Out:  $-119.945 \pm 1.014$   $\chi^2/\text{NDF}: 1776.2/4$

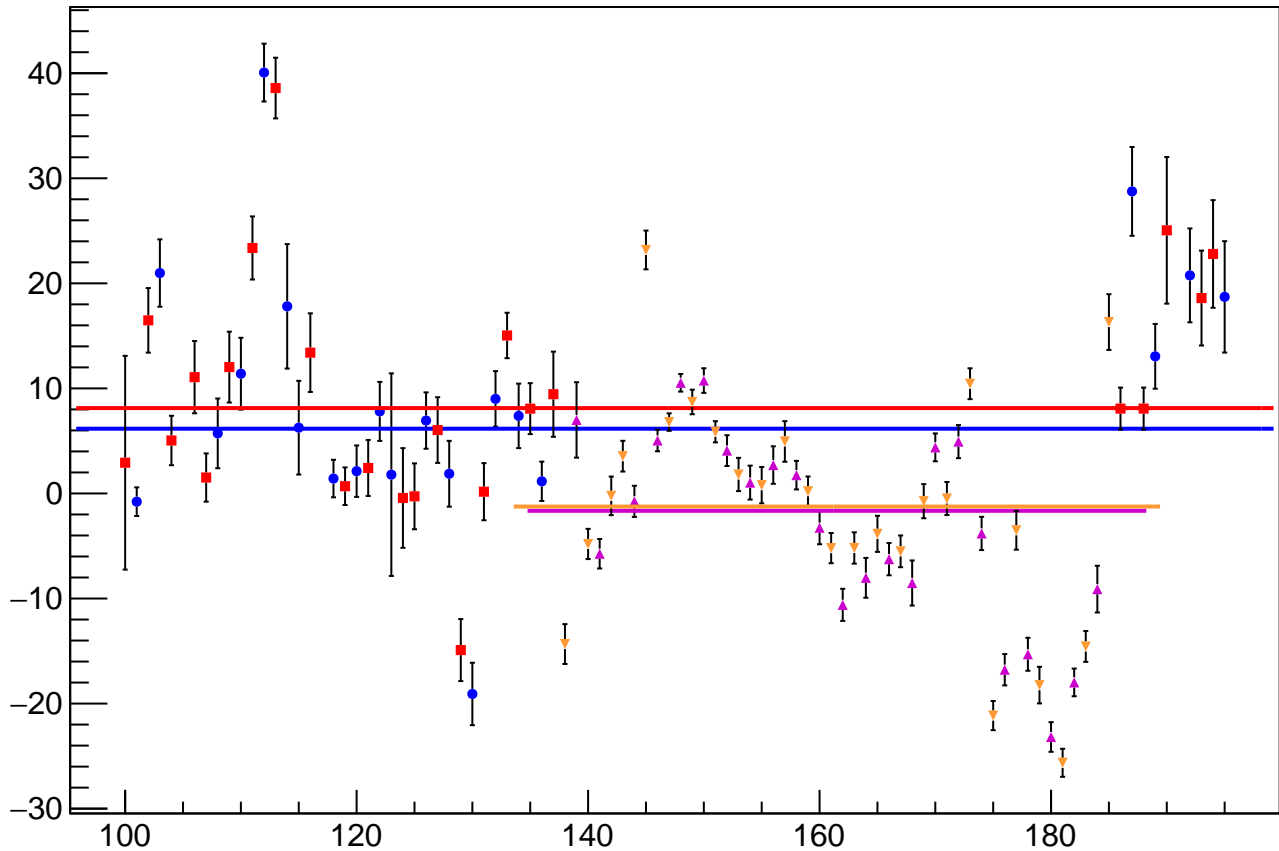
Left In:  $-52.104 \pm 0.389$   $\chi^2/\text{NDF}: 3280.2/22$

+ sign  $-54.955 \pm 0.372$   $\chi^2/\text{NDF}: 6235.7/28$

All:  $-57.950 \pm 0.260$   $\chi^2/\text{NDF}: 15322.0/56$

- sign  $-60.796 \pm 0.363$   $\chi^2/\text{NDF}: 8960.1/27$

# reg\_asym\_usr\_diff\_bpm4aY\_slope vs Slug



Right In:  $6.163 \pm 0.600$   $\chi^2/\text{NDF}: 348.1/20$

Left Out:  $-1.245 \pm 0.292$   $\chi^2/\text{NDF}: 1322.6/24$

Right Out:  $8.125 \pm 0.581$   $\chi^2/\text{NDF}: 290.8/23$

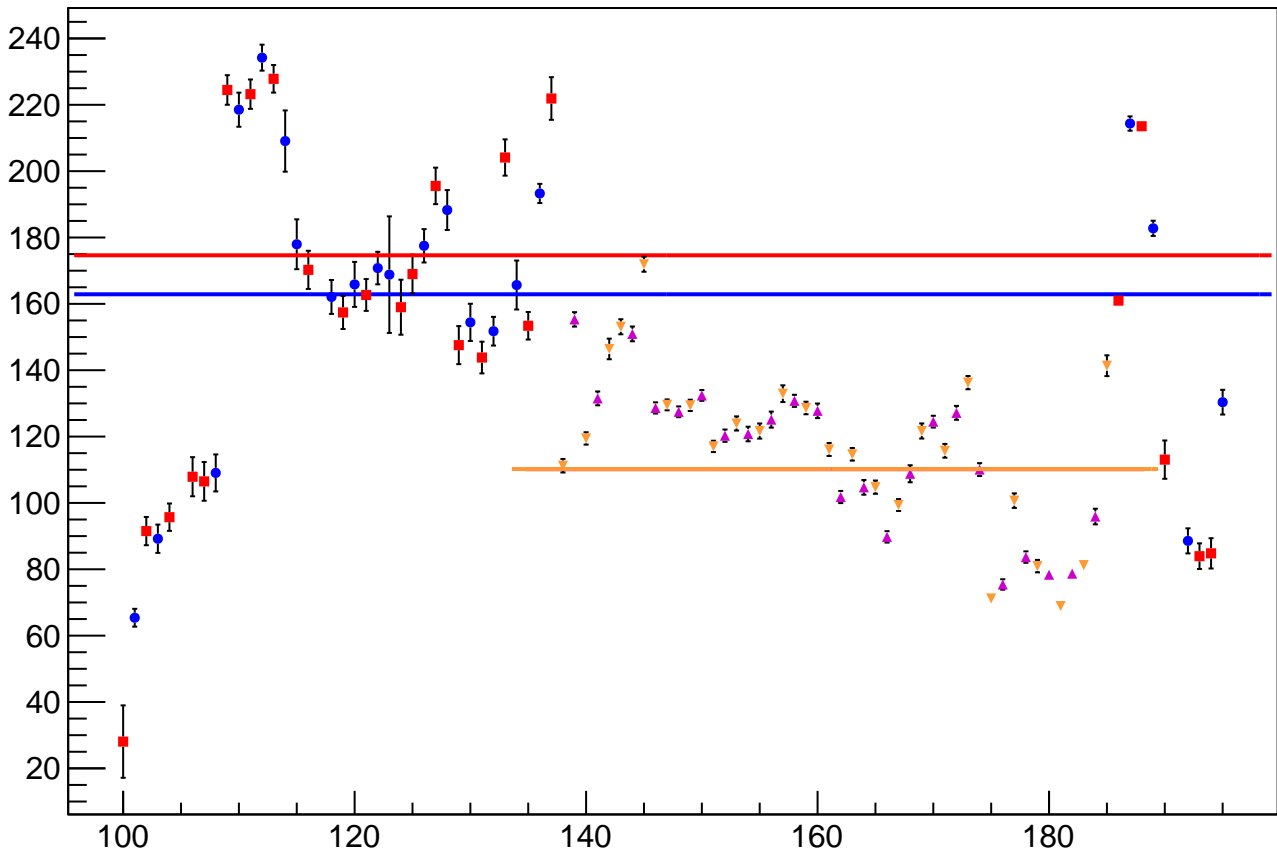
Left In:  $-1.650 \pm 0.300$   $\chi^2/\text{NDF}: 1092.2/22$

+ sign  $0.171 \pm 0.262$   $\chi^2/\text{NDF}: 1794.0/45$

All:  $0.289 \pm 0.187$   $\chi^2/\text{NDF}: 3401.1/92$

- sign  $0.411 \pm 0.267$   $\chi^2/\text{NDF}: 1606.6/46$

# reg\_asym\_usr\_diff\_bpm4eX\_slope vs Slug



Right In: 162.887 $\pm$ 0.877  $\chi^2$ /NDF: 3441.5/20

Left Out: 110.213 $\pm$ 0.382  $\chi^2$ /NDF:4593.7/24

Right Out: 174.640 $\pm$ 0.675  $\chi^2$ /NDF: 4095.6/23

Left In: 110.171 $\pm$ 0.386  $\chi^2$ /NDF:3702.6/22

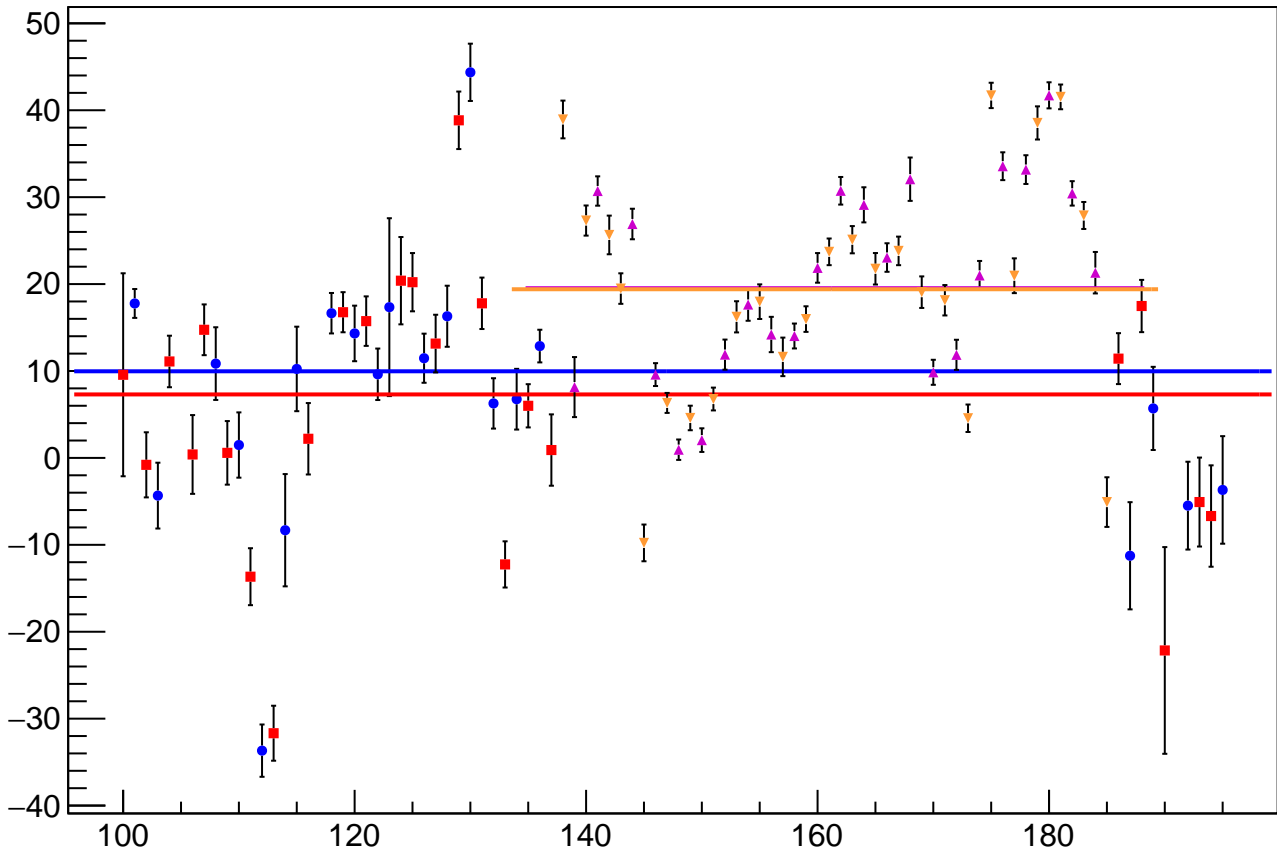
+ sign 118.613 $\pm$ 0.350  $\chi^2$ /NDF: 11066.8/45

All: 122.499 $\pm$ 0.242  $\chi^2$ /NDF: 25974.5/92

- sign 126.056 $\pm$ 0.335  $\chi^2$ /NDF: 14672.0/46



# reg\_asym\_usr\_diff\_bpm4eY\_slope vs Slug



Right In: 9.966 $\pm$ 0.697  $\chi^2$ /NDF: 414.7/20

Left Out: 19.405 $\pm$ 0.335  $\chi^2$ /NDF:1453.4/24

Right Out: 7.304 $\pm$ 0.692  $\chi^2$ /NDF: 454.7/23

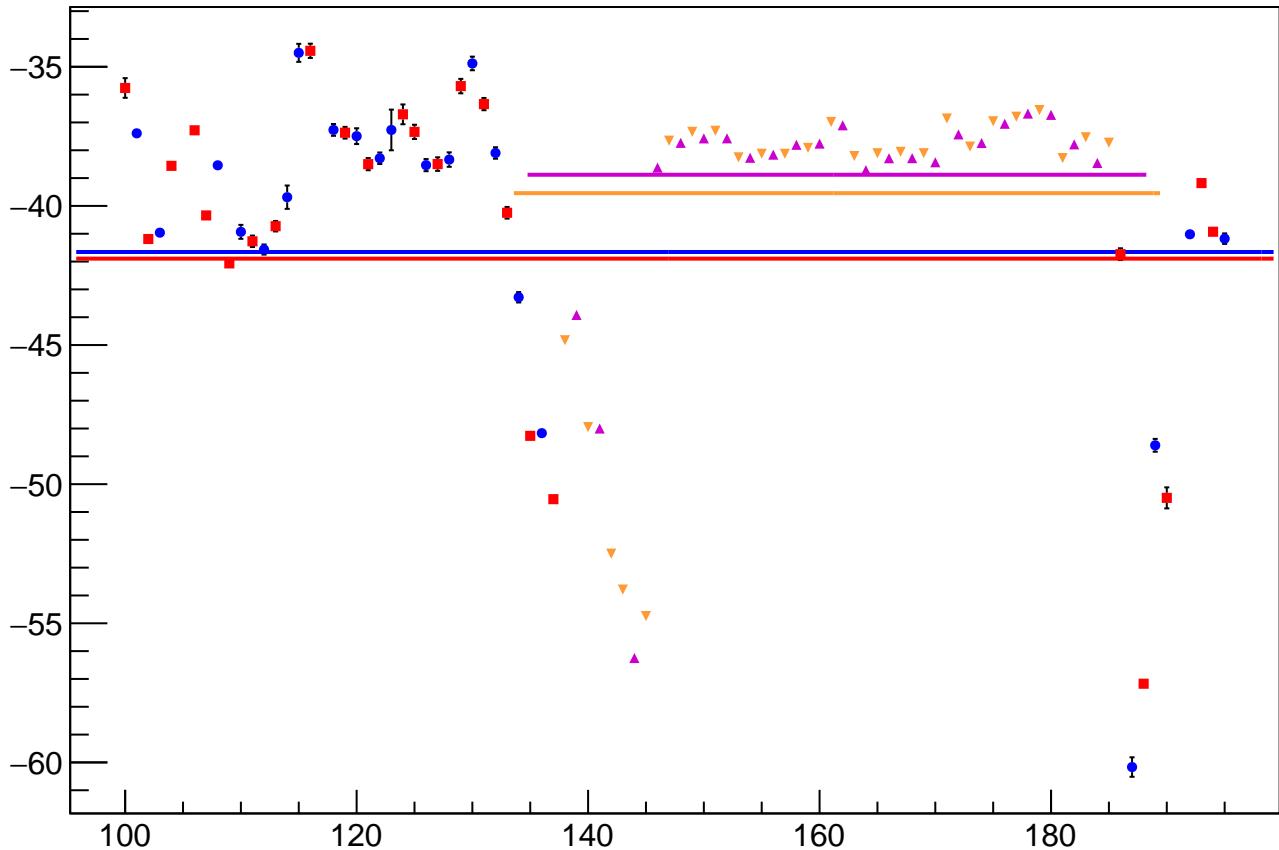
Left In: 19.530 $\pm$ 0.342  $\chi^2$ /NDF:1181.3/22

+ sign 17.635 $\pm$ 0.302  $\chi^2$ /NDF: 2017.3/45

All: 17.385 $\pm$ 0.215  $\chi^2$ /NDF: 3905.1/92

- sign 17.127 $\pm$ 0.307  $\chi^2$ /NDF: 1886.5/46

# reg\_asym\_usr\_diff\_bpm12X\_slope vs Slug



Right In:  $-41.656 \pm 0.036$   $\chi^2/\text{NDF}: 16316.2/20$

Left Out:  $-39.542 \pm 0.016$   $\chi^2/\text{NDF}: 92024.1/24$

Right Out:  $-41.894 \pm 0.035$   $\chi^2/\text{NDF}: 22517.1/23$

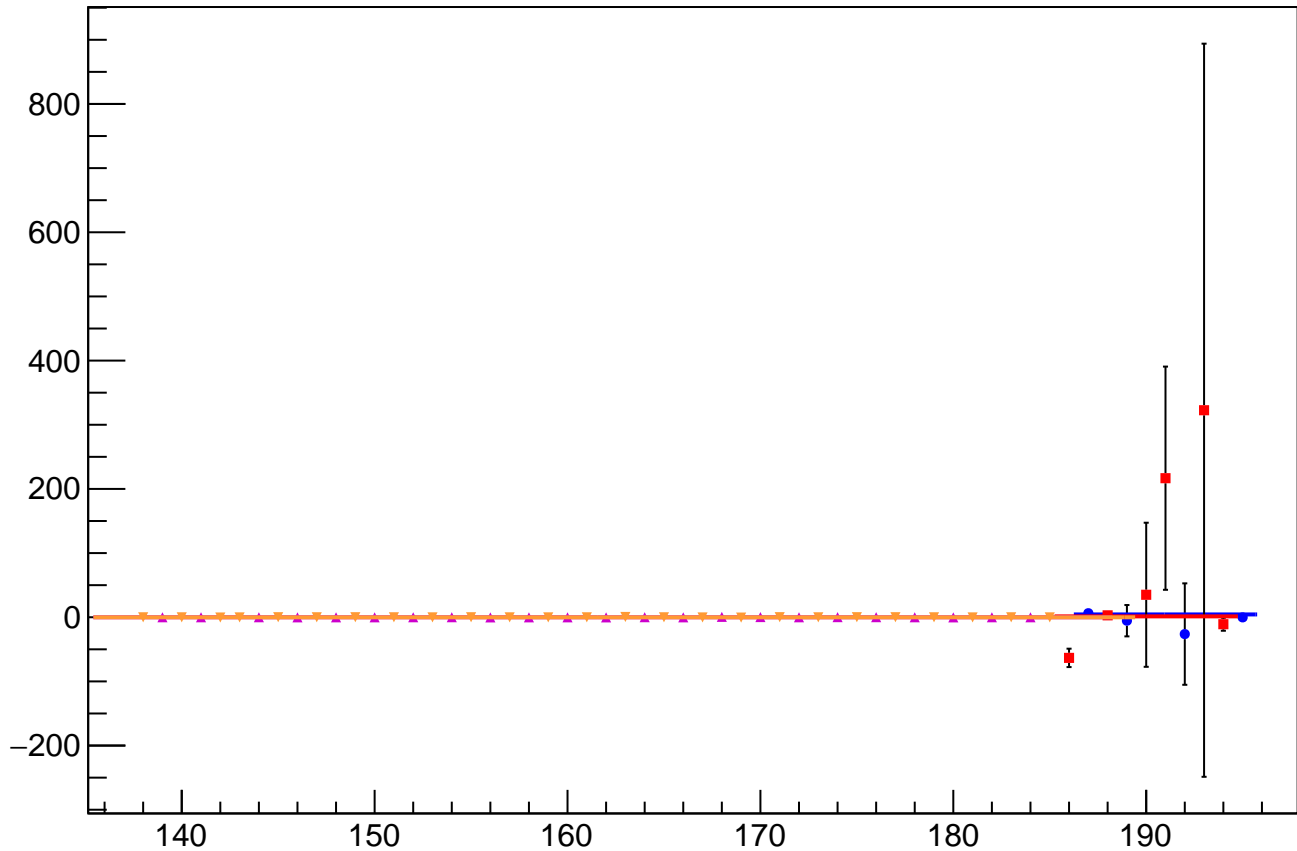
Left In:  $-38.880 \pm 0.016$   $\chi^2/\text{NDF}: 53409.9/22$

+ sign  $-39.878 \pm 0.014$   $\chi^2/\text{NDF}: 111211.3/45$

All:  $-39.635 \pm 0.010$   $\chi^2/\text{NDF}: 193828.4/92$

- sign  $-39.391 \pm 0.014$   $\chi^2/\text{NDF}: 82048.3/46$

# reg\_asym\_dsl\_diff\_bpm1X\_slope vs Slug



Right In:  $4.372 \pm 2.545$   $\chi^2/\text{NDF}: 1.6/3$

Left Out:  $-0.095 \pm 0.022$   $\chi^2/\text{NDF}: 41.8/24$

Right Out:  $1.349 \pm 1.910$   $\chi^2/\text{NDF}: 24.5/5$

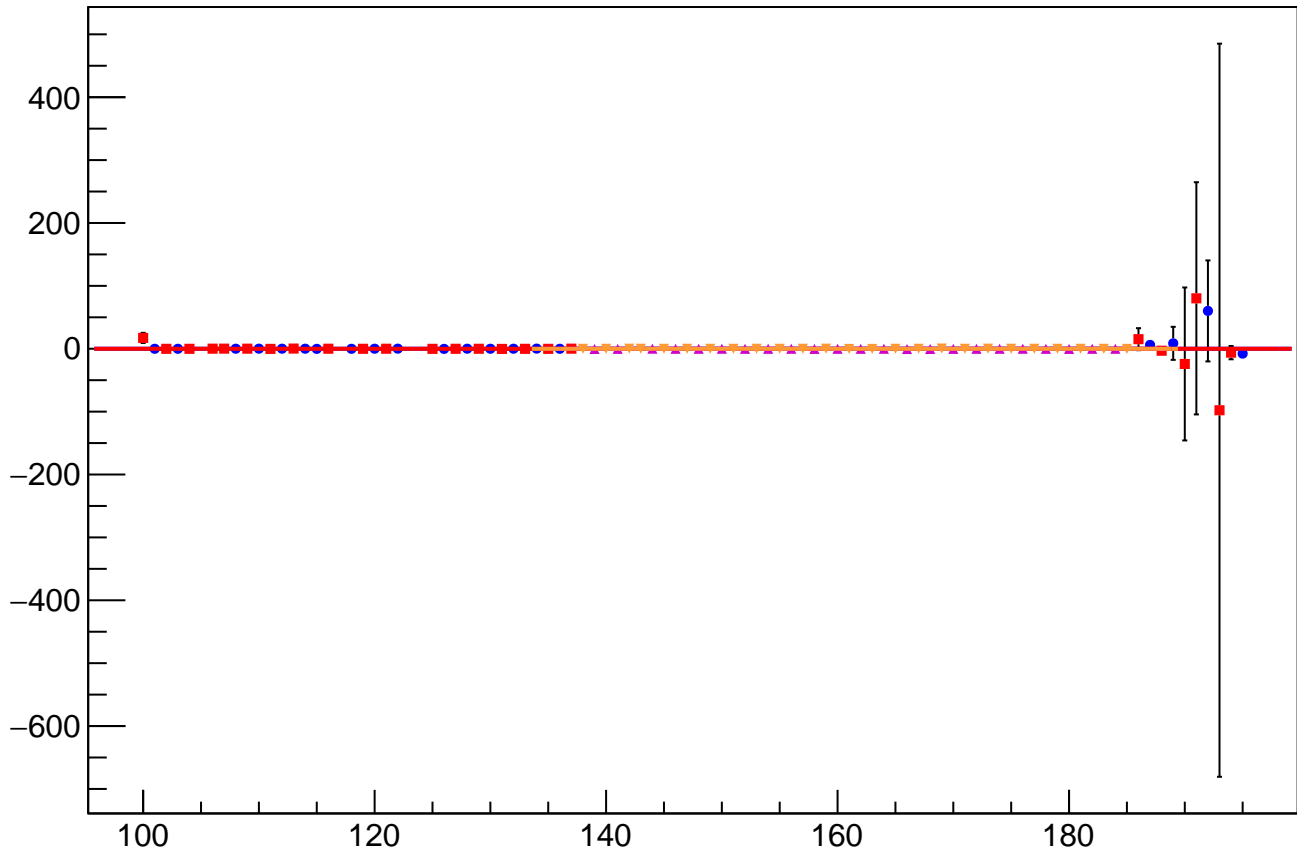
Left In:  $-0.026 \pm 0.022$   $\chi^2/\text{NDF}: 33.3/22$

+ sign  $-0.094 \pm 0.022$   $\chi^2/\text{NDF}: 46.5/28$

All:  $-0.061 \pm 0.016$   $\chi^2/\text{NDF}: 109.8/57$

- sign  $-0.025 \pm 0.022$   $\chi^2/\text{NDF}: 58.3/28$

# reg\_asym\_dsl\_diff\_bpm4aY\_slope vs Slug



Right In:  $-0.002 \pm 0.029$   $\chi^2/\text{NDF}: 16.7/19$

Left Out:  $-0.078 \pm 0.017$   $\chi^2/\text{NDF}: 26.6/24$

Right Out:  $-0.050 \pm 0.029$   $\chi^2/\text{NDF}: 27.8/23$

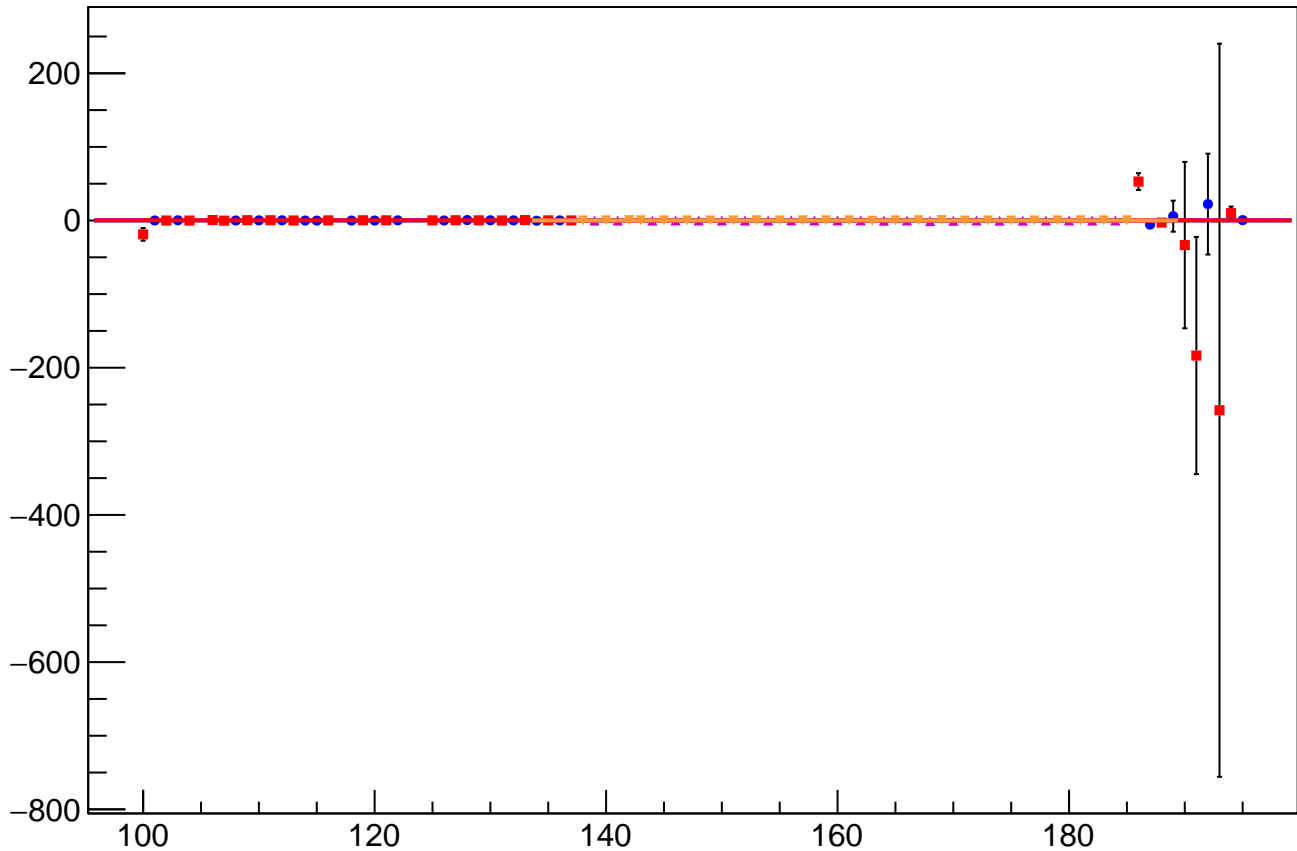
Left In:  $-0.052 \pm 0.018$   $\chi^2/\text{NDF}: 31.7/22$

+ sign  $-0.058 \pm 0.015$   $\chi^2/\text{NDF}: 48.5/44$

All:  $-0.055 \pm 0.010$   $\chi^2/\text{NDF}: 108.1/91$

- sign  $-0.052 \pm 0.015$   $\chi^2/\text{NDF}: 59.5/46$

# reg\_asym\_dsl\_diff\_bpm4eX\_slope vs Slug



Right In: 0.172 $\pm$ 0.053  $\chi^2$ /NDF: 18.0/19

Left Out: 0.088 $\pm$ 0.022  $\chi^2$ /NDF:40.7/24

Right Out: 0.233 $\pm$ 0.054  $\chi^2$ /NDF: 49.2/23

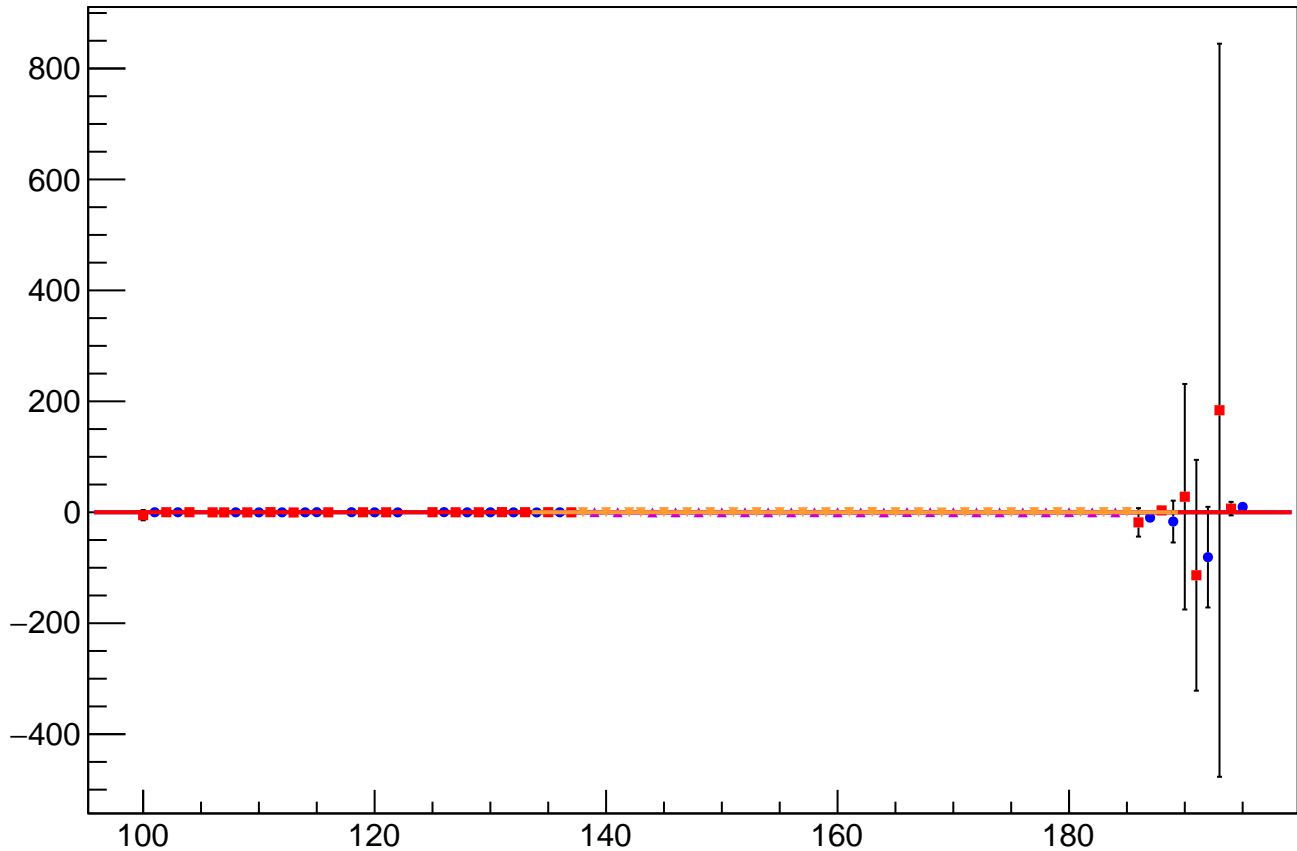
Left In: 0.020 $\pm$ 0.022  $\chi^2$ /NDF:35.6/22

+ sign 0.100 $\pm$ 0.020  $\chi^2$ /NDF: 60.9/44

All: 0.076 $\pm$ 0.014  $\chi^2$ /NDF: 161.9/91

- sign 0.051 $\pm$ 0.021  $\chi^2$ /NDF: 98.2/46

# reg\_asym\_dsl\_diff\_bpm4eY\_slope vs Slug



Right In:  $-0.006 \pm 0.033$   $\chi^2/\text{NDF}: 19.0/19$

Left Out:  $0.102 \pm 0.019$   $\chi^2/\text{NDF}: 30.2/24$

Right Out:  $0.057 \pm 0.034$   $\chi^2/\text{NDF}: 22.0/23$

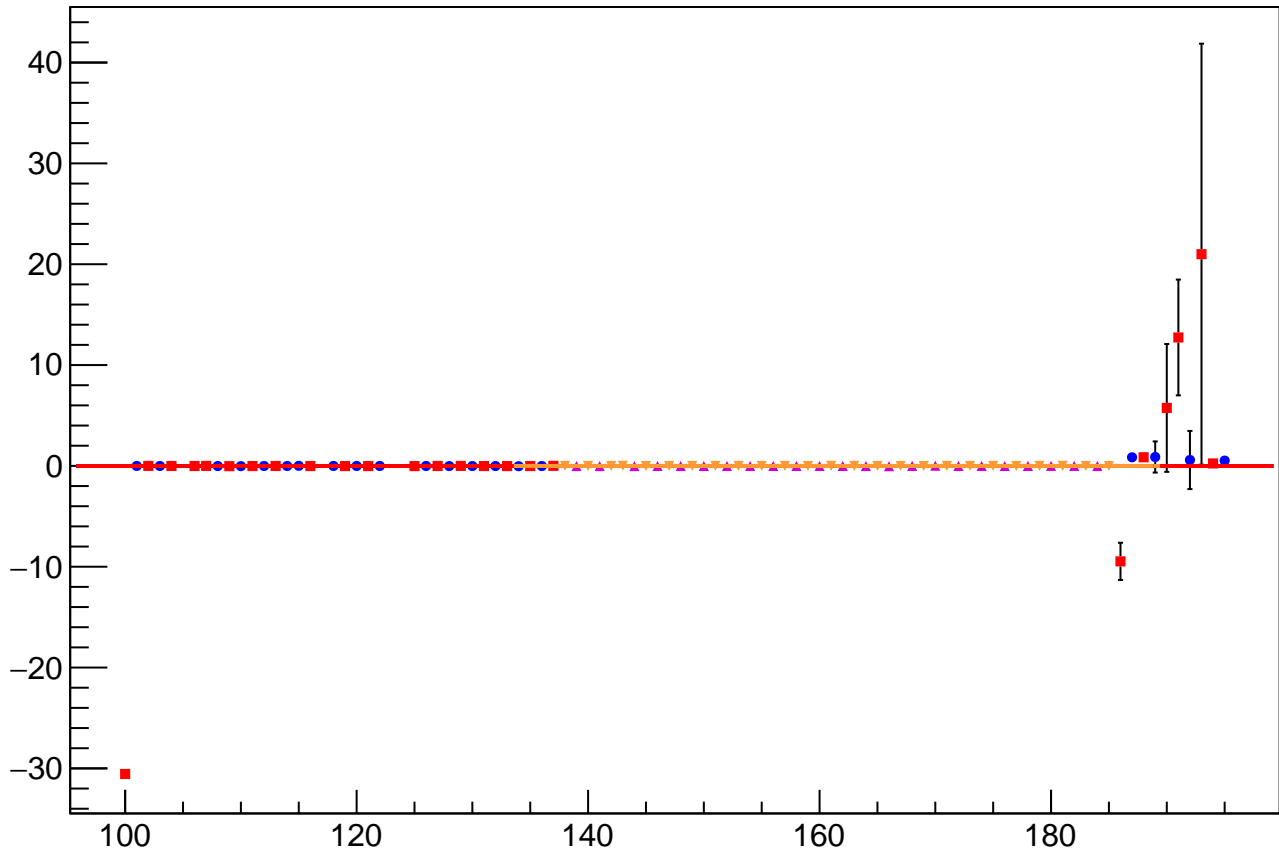
Left In:  $0.069 \pm 0.020$   $\chi^2/\text{NDF}: 31.3/22$

+ sign  $0.074 \pm 0.017$   $\chi^2/\text{NDF}: 57.3/44$

All:  $0.070 \pm 0.012$   $\chi^2/\text{NDF}: 110.9/91$

- sign  $0.066 \pm 0.017$   $\chi^2/\text{NDF}: 53.5/46$

# reg\_asym\_dsl\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.012 \pm 0.002$   $\chi^2/\text{NDF}: 24.9/19$

Left Out:  $-0.008 \pm 0.001$   $\chi^2/\text{NDF}: 34.7/24$

Right Out:  $-0.012 \pm 0.002$   $\chi^2/\text{NDF}: 11937.1/23$

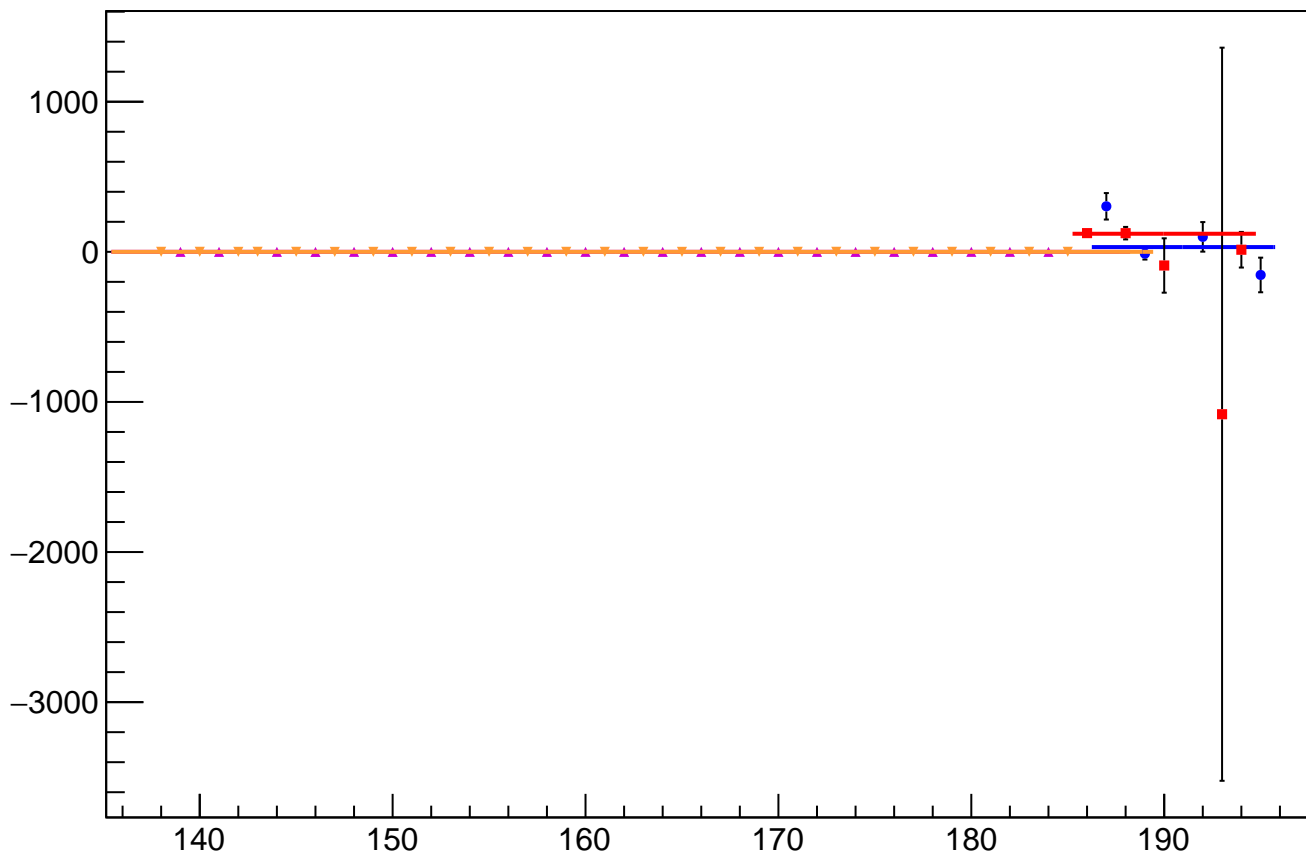
Left In:  $-0.009 \pm 0.001$   $\chi^2/\text{NDF}: 40.8/22$

+ sign  $-0.008 \pm 0.001$   $\chi^2/\text{NDF}: 64.0/44$

All:  $-0.009 \pm 0.001$   $\chi^2/\text{NDF}: 12045.3/91$

- sign  $-0.009 \pm 0.001$   $\chi^2/\text{NDF}: 11980.6/46$

# reg\_asym\_dsr\_diff\_bpm1X\_slope vs Slug



Right In: 31.698+/-32.467  $\chi^2$ /NDF: 13.8/3

Left Out: 0.017+/-0.027  $\chi^2$ /NDF:30.9/24

Right Out: 120.475+/-16.899  $\chi^2$ /NDF: 2.5/4

Left In: 0.002+/-0.028  $\chi^2$ /NDF:29.0/22

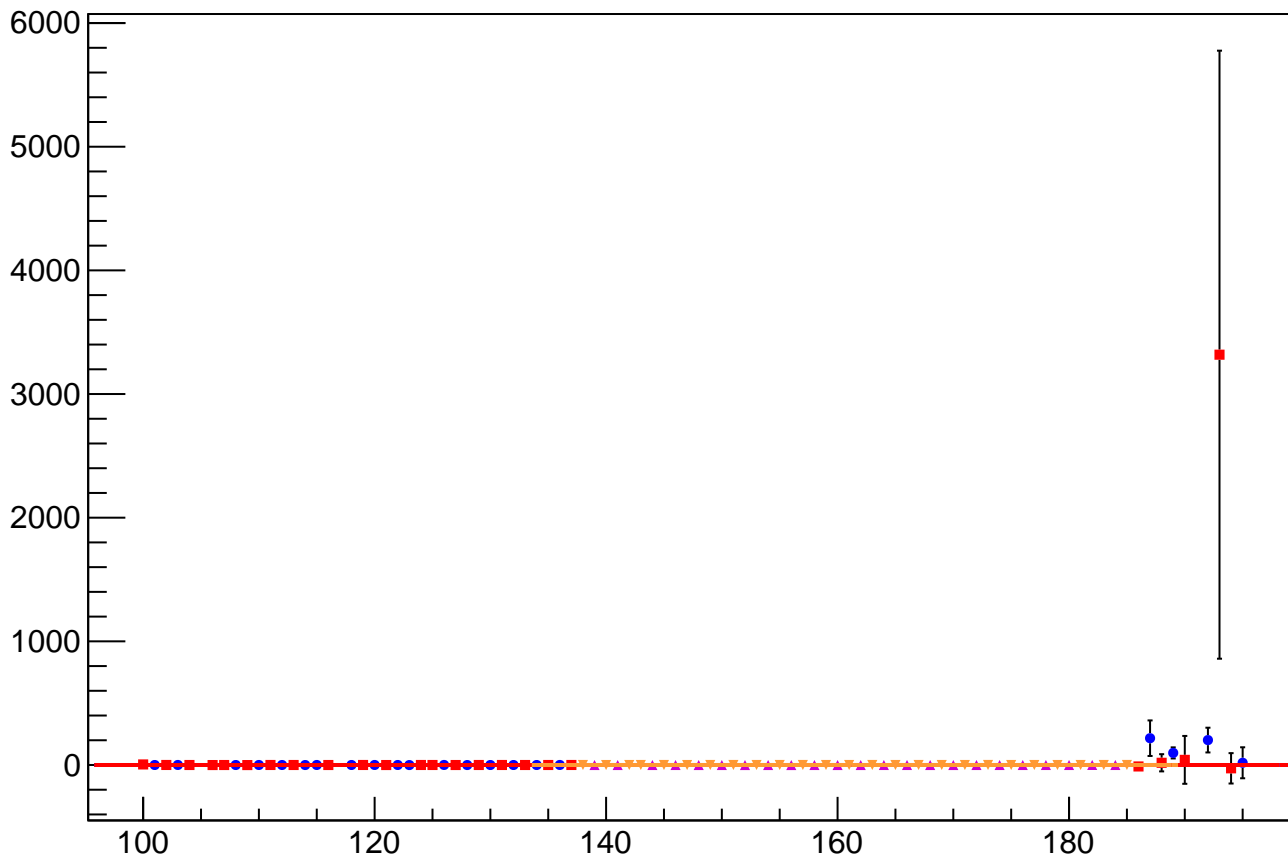
+ sign 0.017+/-0.027  $\chi^2$ /NDF: 45.7/28

All: 0.010+/-0.019  $\chi^2$ /NDF: 128.1/56

- sign 0.003+/-0.028  $\chi^2$ /NDF: 82.3/27



# reg\_asym\_dsr\_diff\_bpm4aY\_slope vs Slug



Right In:  $-0.022 \pm 0.037$   $\chi^2/\text{NDF}: 34.0/20$

Left Out:  $-0.060 \pm 0.021$   $\chi^2/\text{NDF}: 24.6/24$

Right Out:  $-0.120 \pm 0.039$   $\chi^2/\text{NDF}: 20.7/23$

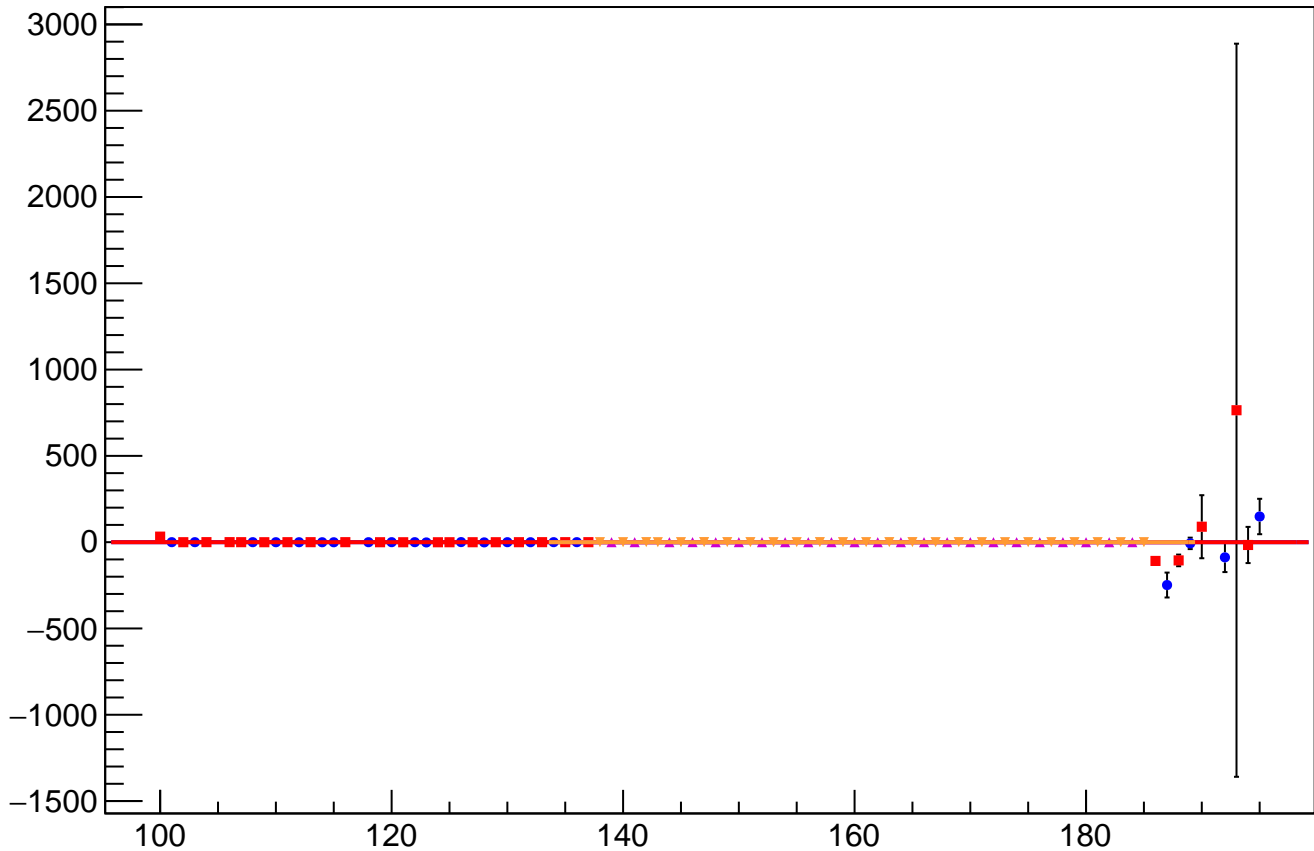
Left In:  $-0.071 \pm 0.022$   $\chi^2/\text{NDF}: 49.0/22$

+ sign  $-0.050 \pm 0.018$   $\chi^2/\text{NDF}: 59.5/45$

All:  $-0.066 \pm 0.013$   $\chi^2/\text{NDF}: 131.8/92$

- sign  $-0.083 \pm 0.019$   $\chi^2/\text{NDF}: 70.8/46$

# reg\_asym\_dsr\_diff\_bpm4eX\_slope vs Slug



Right In:  $-0.135 \pm 0.067$   $\chi^2/\text{NDF}: 39.8/20$

Left Out:  $-0.018 \pm 0.027$   $\chi^2/\text{NDF}: 29.0/24$

Right Out:  $-0.167 \pm 0.071$   $\chi^2/\text{NDF}: 76.2/23$

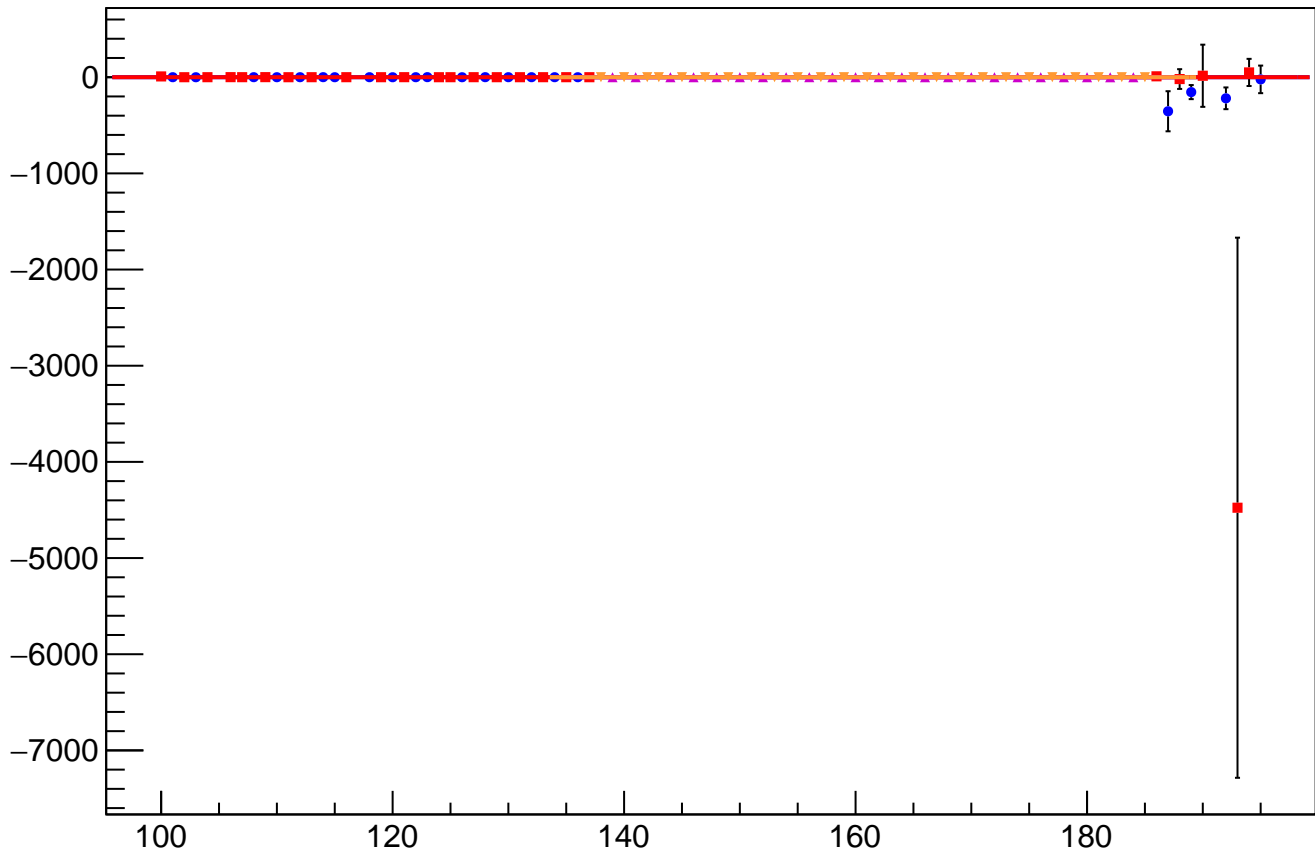
Left In:  $-0.033 \pm 0.027$   $\chi^2/\text{NDF}: 28.5/22$

+ sign  $-0.035 \pm 0.025$   $\chi^2/\text{NDF}: 71.4/45$

All:  $-0.042 \pm 0.018$   $\chi^2/\text{NDF}: 179.4/92$

- sign  $-0.050 \pm 0.026$   $\chi^2/\text{NDF}: 107.8/46$

# reg\_asym\_dsr\_diff\_bpm4eY\_slope vs Slug



Right In: 0.018 $\pm$ 0.043  $\chi^2$ /NDF: 32.8/20

Left Out: 0.063 $\pm$ 0.024  $\chi^2$ /NDF:24.6/24

Right Out: 0.144 $\pm$ 0.045  $\chi^2$ /NDF: 19.6/23

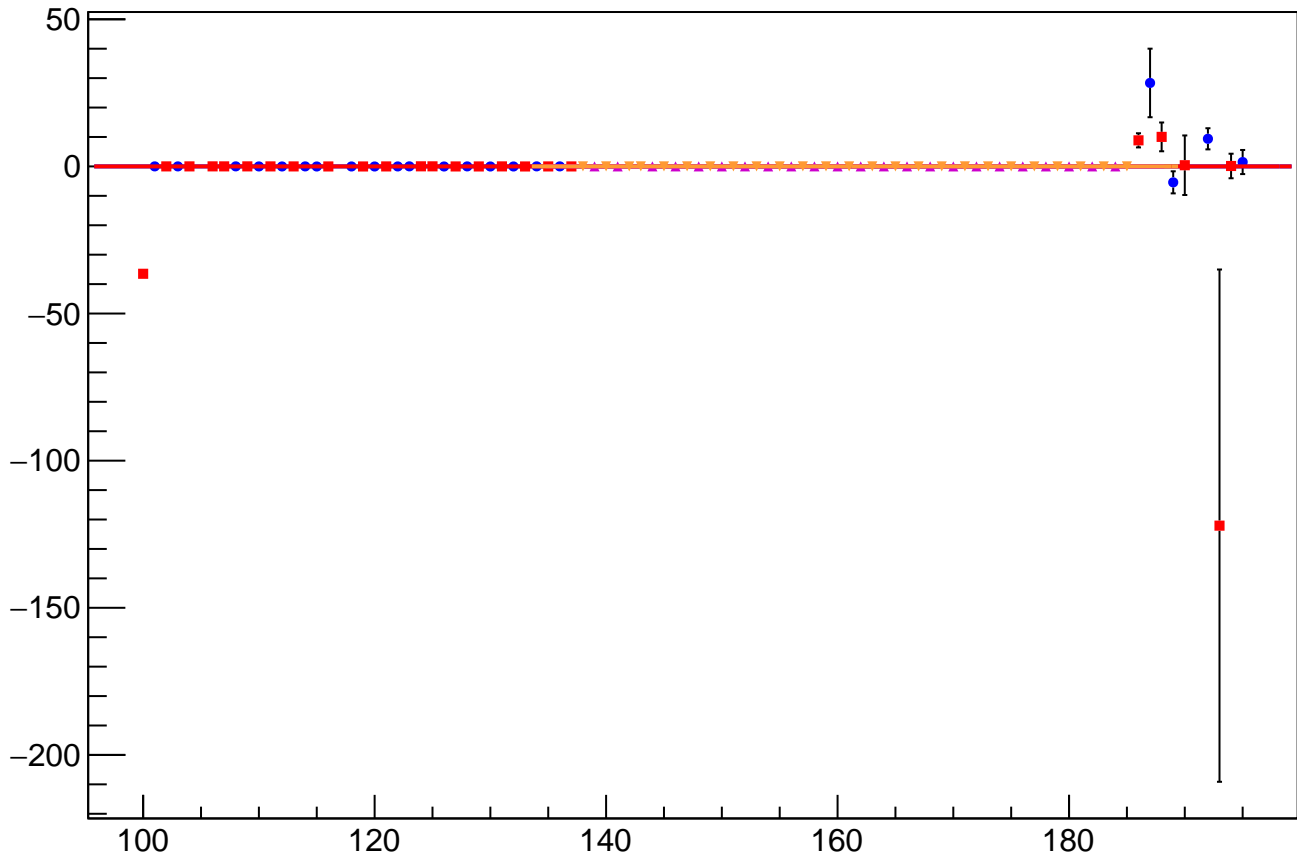
Left In: 0.069 $\pm$ 0.025  $\chi^2$ /NDF:51.8/22

+ sign 0.052 $\pm$ 0.021  $\chi^2$ /NDF: 58.2/45

All: 0.069 $\pm$ 0.015  $\chi^2$ /NDF: 133.0/92

- sign 0.086 $\pm$ 0.022  $\chi^2$ /NDF: 73.5/46

# reg\_asym\_dsr\_diff\_bpm12X\_slope vs Slug



Right In: 0.001 $\pm$ 0.002  $\chi^2$ /NDF: 45.4/20

Left Out: 0.008 $\pm$ 0.001  $\chi^2$ /NDF: 26.3/24

Right Out: 0.001 $\pm$ 0.002  $\chi^2$ /NDF: 10468.9/23

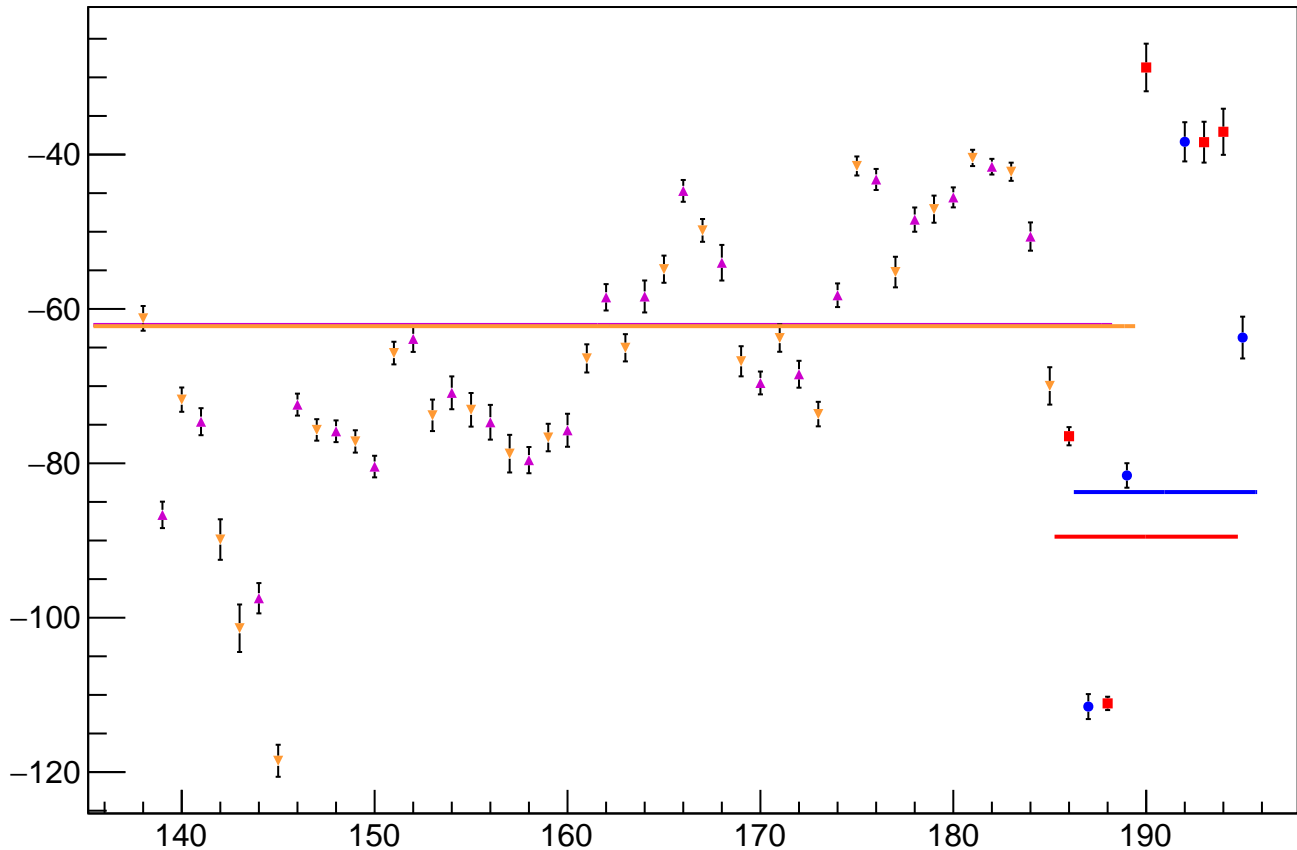
Left In: 0.009 $\pm$ 0.001  $\chi^2$ /NDF: 15.0/22

+ sign 0.007 $\pm$ 0.001  $\chi^2$ /NDF: 79.8/45

All: 0.007 $\pm$ 0.001  $\chi^2$ /NDF: 10574.2/92

- sign 0.007 $\pm$ 0.001  $\chi^2$ /NDF: 10494.3/46

# reg\_asym\_us\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-83.722 \pm 0.966$   $\chi^2/\text{NDF}: 671.0/3$

Left Out:  $-62.232 \pm 0.332$   $\chi^2/\text{NDF}: 2668.5/24$

Right Out:  $-89.502 \pm 0.643$   $\chi^2/\text{NDF}: 1816.4/4$

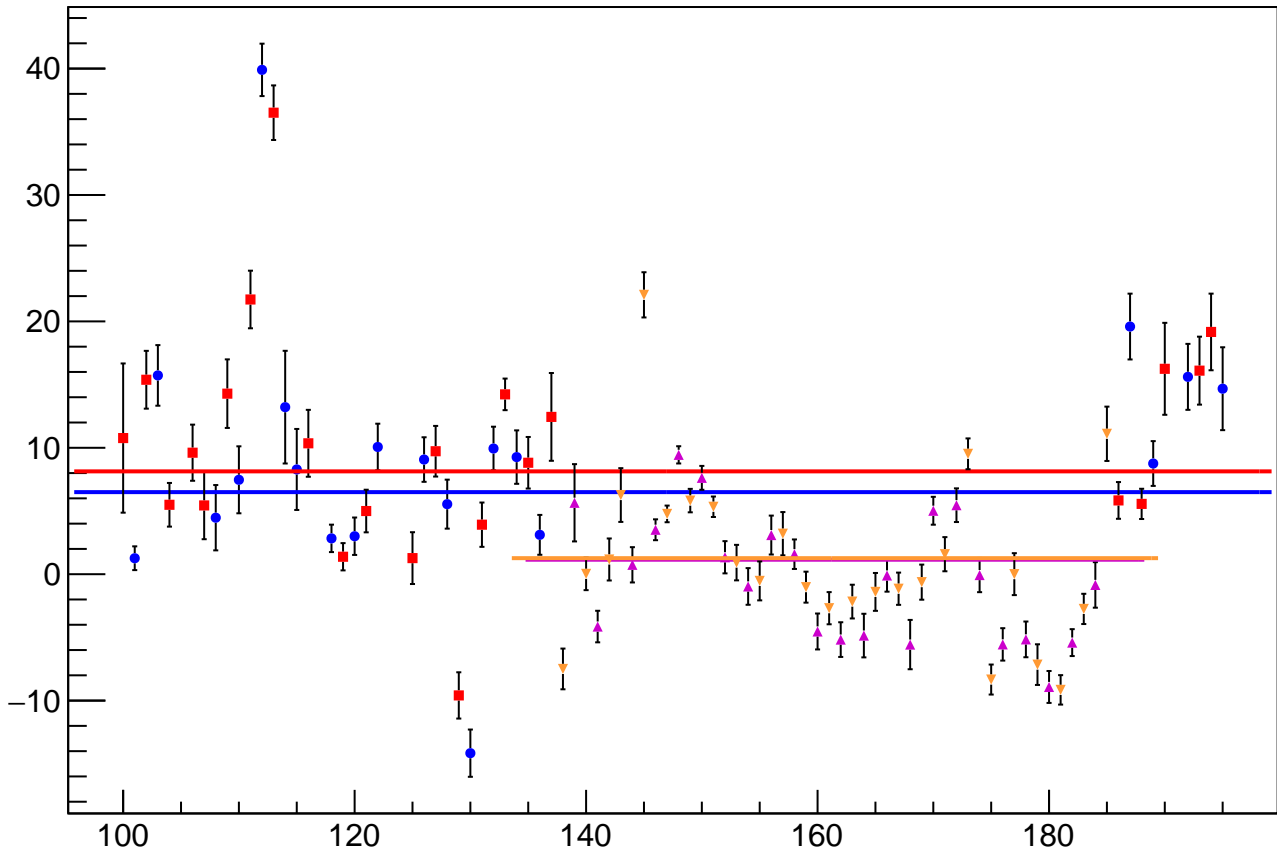
Left In:  $-62.073 \pm 0.332$   $\chi^2/\text{NDF}: 2192.0/22$

+ sign  $-64.499 \pm 0.314$   $\chi^2/\text{NDF}: 3781.8/28$

All:  $-66.281 \pm 0.215$   $\chi^2/\text{NDF}: 9287.3/56$

- sign  $-67.857 \pm 0.295$   $\chi^2/\text{NDF}: 5444.8/27$

# reg\_asym\_us\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $6.493 \pm 0.404$   $\chi^2/\text{NDF}: 509.6/19$

Left Out:  $1.269 \pm 0.251$   $\chi^2/\text{NDF}: 531.9/24$

Right Out:  $8.135 \pm 0.396$   $\chi^2/\text{NDF}: 441.8/22$

Left In:  $1.146 \pm 0.255$   $\chi^2/\text{NDF}: 462.9/22$

+ sign  $2.721 \pm 0.213$   $\chi^2/\text{NDF}: 1162.1/44$

All:  $2.956 \pm 0.151$   $\chi^2/\text{NDF}: 2289.0/90$

- sign  $3.195 \pm 0.215$   $\chi^2/\text{NDF}: 1124.4/45$

# reg\_asym\_us\_avg\_diff\_bpm4eX\_slope vs Slug



Right In: 93.560+/-0.575  $\chi^2$ /NDF: 4038.6/19

Left Out: 61.812+/-0.331  $\chi^2$ /NDF:2686.4/24

Right Out: 95.180+/-0.444  $\chi^2$ /NDF: 5285.2/22

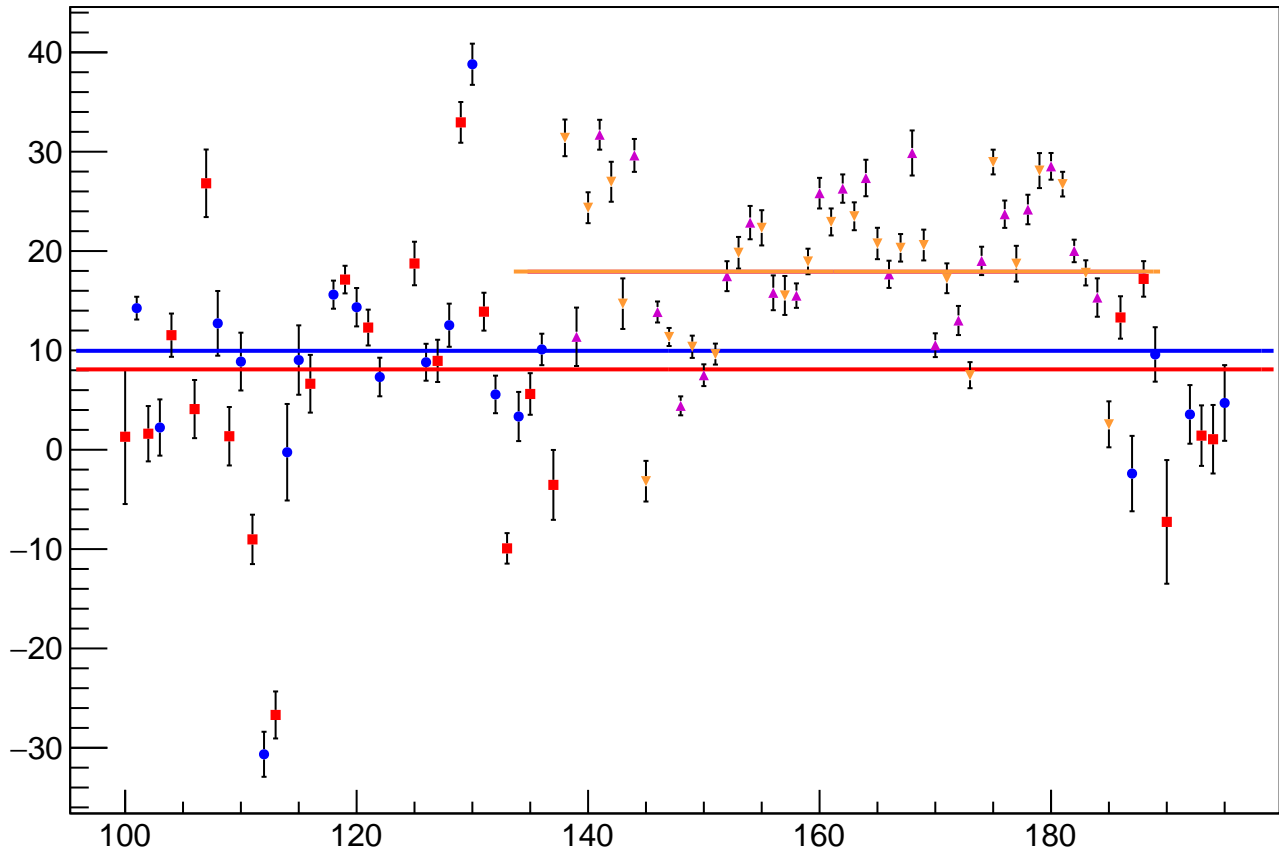
Left In: 61.762+/-0.330  $\chi^2$ /NDF:2418.2/22

+ sign 69.709+/-0.287  $\chi^2$ /NDF: 9018.4/44

All: 71.827+/-0.195  $\chi^2$ /NDF: 20467.8/90

- sign 73.637+/-0.265  $\chi^2$ /NDF: 11348.2/45

# reg\_asym\_us\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $9.958 \pm 0.476$   $\chi^2/\text{NDF}: 596.1/19$

Left Out:  $17.937 \pm 0.289$   $\chi^2/\text{NDF}: 676.0/24$

Right Out:  $8.089 \pm 0.477$   $\chi^2/\text{NDF}: 734.9/22$

Left In:  $17.916 \pm 0.292$   $\chi^2/\text{NDF}: 726.5/22$

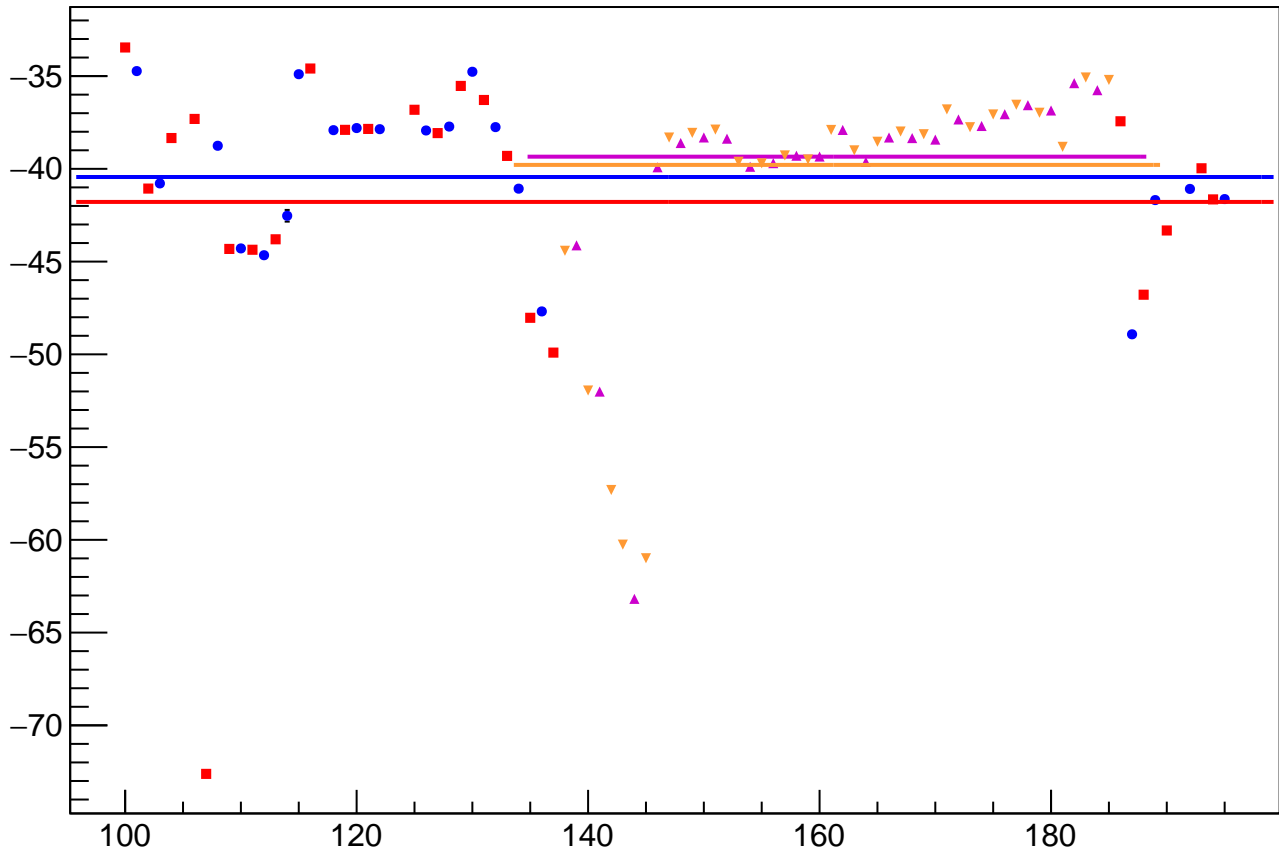
+ sign  $15.788 \pm 0.247$   $\chi^2/\text{NDF}: 1477.6/44$

All:  $15.514 \pm 0.175$   $\chi^2/\text{NDF}: 3249.7/90$

- sign  $15.235 \pm 0.249$   $\chi^2/\text{NDF}: 1769.7/45$



# reg\_asym\_us\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-40.440 \pm 0.026$   $\chi^2/\text{NDF}: 27012.4/19$

Left Out:  $-39.788 \pm 0.014$   $\chi^2/\text{NDF}: 165493.8/24$

Right Out:  $-41.784 \pm 0.025$   $\chi^2/\text{NDF}: 65920.1/22$

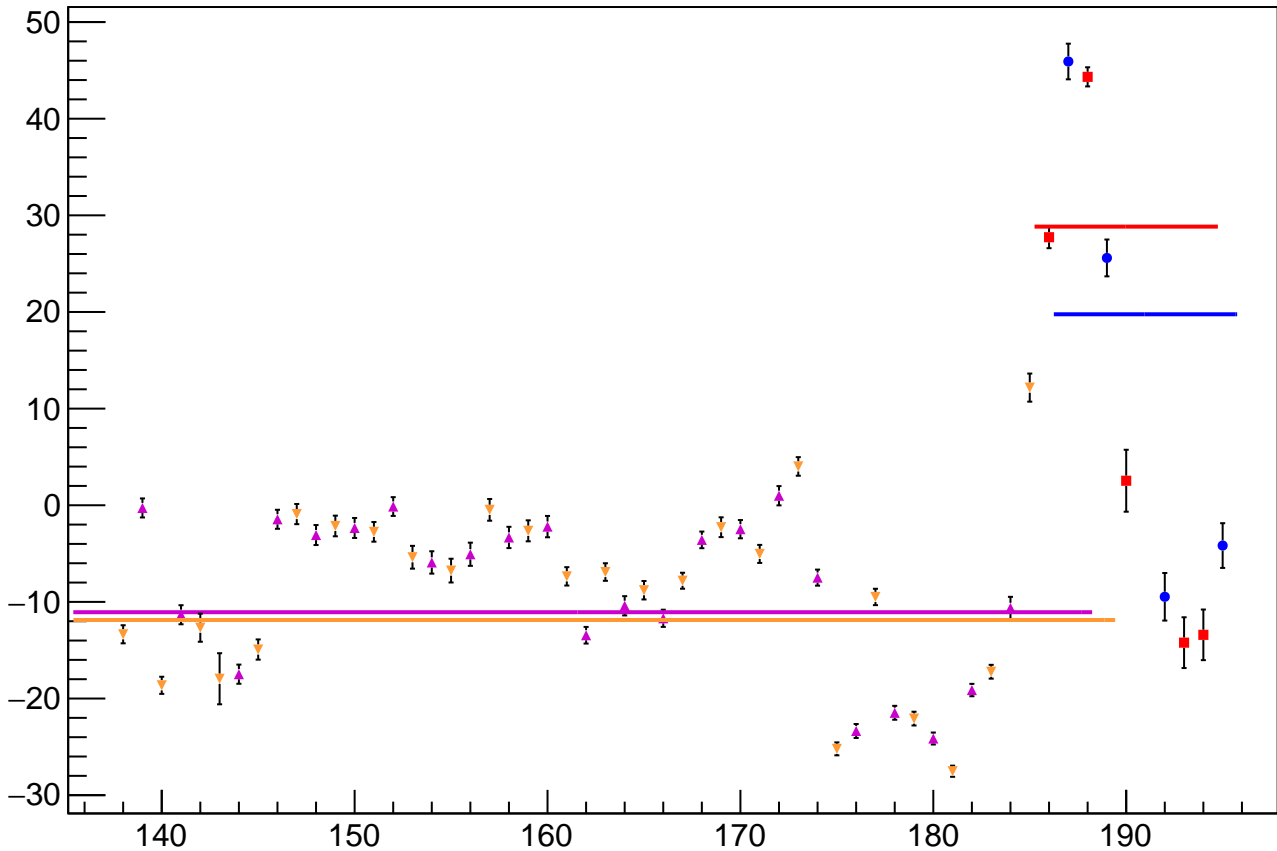
Left In:  $-39.344 \pm 0.014$   $\chi^2/\text{NDF}: 116615.7/22$

+ sign  $-39.931 \pm 0.012$   $\chi^2/\text{NDF}: 193009.2/44$

All:  $-39.919 \pm 0.008$   $\chi^2/\text{NDF}: 382963.5/90$

- sign  $-39.906 \pm 0.012$   $\chi^2/\text{NDF}: 189952.0/45$

# reg\_asym\_us\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $19.762 \pm 1.042$   $\chi^2/\text{NDF}: 458.3/3$

Left Out:  $-11.873 \pm 0.186$   $\chi^2/\text{NDF}: 2745.2/24$

Right Out:  $28.834 \pm 0.677$   $\chi^2/\text{NDF}: 842.0/4$

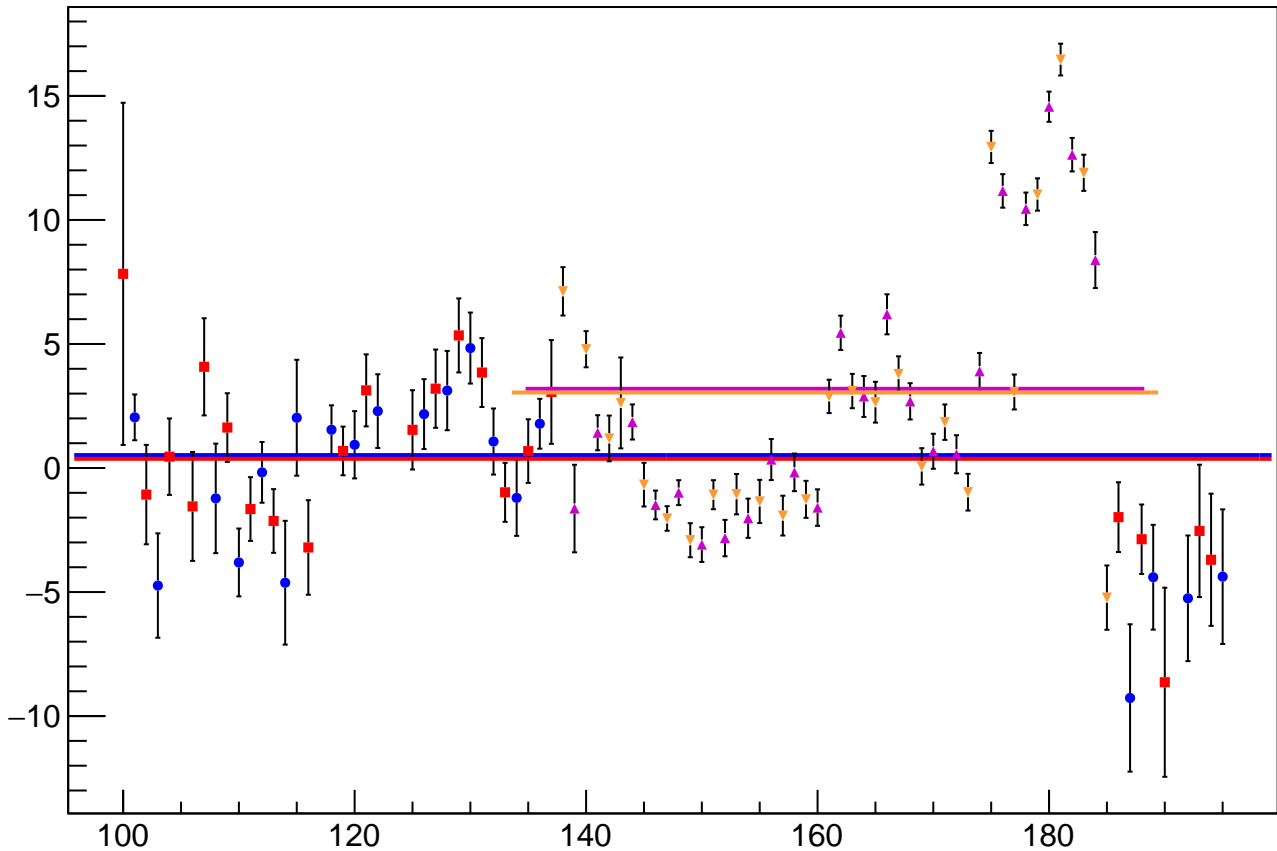
Left In:  $-11.067 \pm 0.188$   $\chi^2/\text{NDF}: 2104.8/22$

+ sign  $-10.893 \pm 0.183$   $\chi^2/\text{NDF}: 4096.4/28$

All:  $-9.533 \pm 0.129$   $\chi^2/\text{NDF}: 10380.8/56$

- sign  $-8.207 \pm 0.181$   $\chi^2/\text{NDF}: 6175.9/27$

# reg\_asym\_us\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $0.521 \pm 0.330$   $\chi^2/\text{NDF}: 68.1/19$

Left Out:  $3.044 \pm 0.147$   $\chi^2/\text{NDF}: 1457.3/24$

Right Out:  $0.372 \pm 0.327$   $\chi^2/\text{NDF}: 61.8/22$

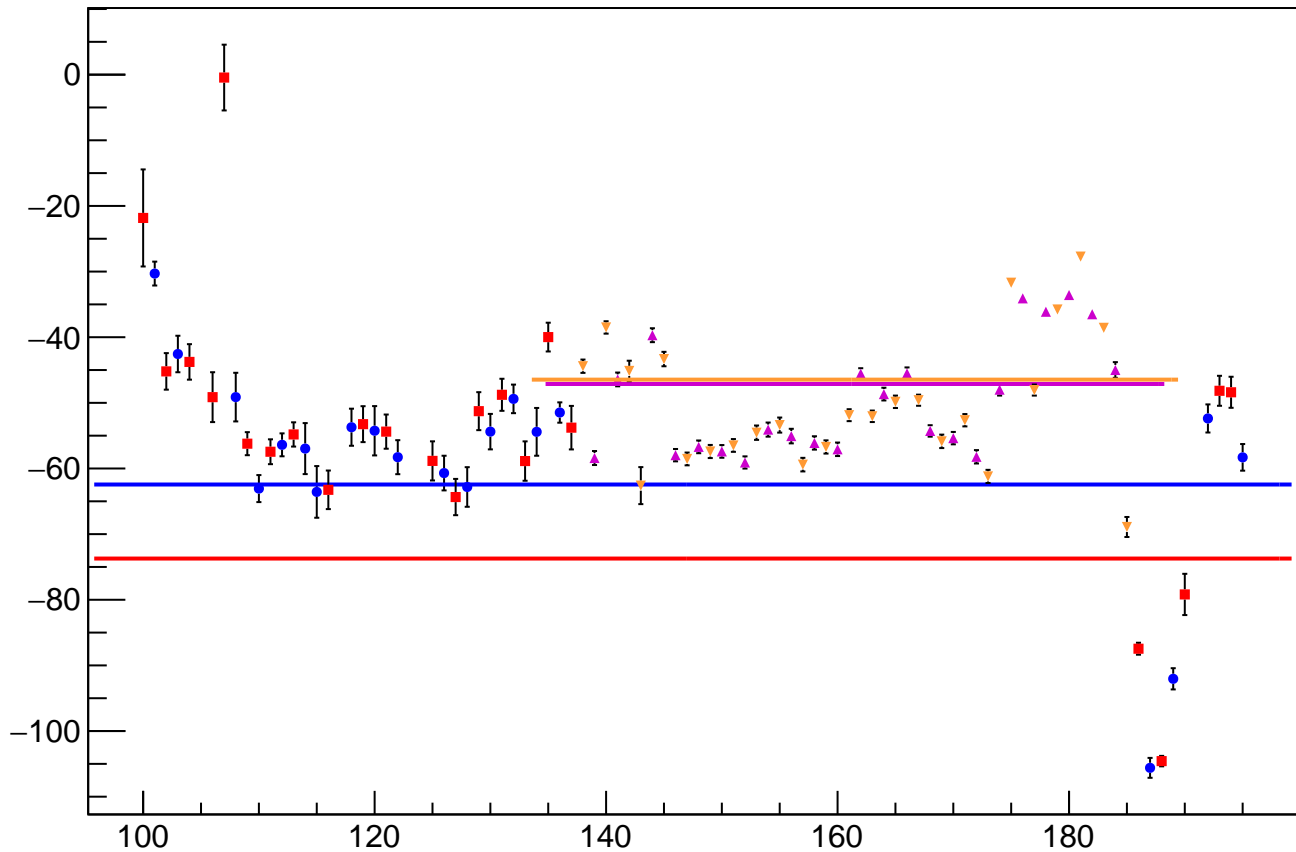
Left In:  $3.194 \pm 0.150$   $\chi^2/\text{NDF}: 1295.0/22$

+ sign  $2.625 \pm 0.135$   $\chi^2/\text{NDF}: 1574.0/44$

All:  $2.664 \pm 0.096$   $\chi^2/\text{NDF}: 2992.5/90$

- sign  $2.704 \pm 0.136$   $\chi^2/\text{NDF}: 1418.3/45$

# reg\_asym\_us\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-62.441 \pm 0.505$   $\chi^2/\text{NDF}: 1679.9/19$

Left Out:  $-46.463 \pm 0.186$   $\chi^2/\text{NDF}: 3319.7/24$

Right Out:  $-73.721 \pm 0.413$   $\chi^2/\text{NDF}: 3399.8/22$

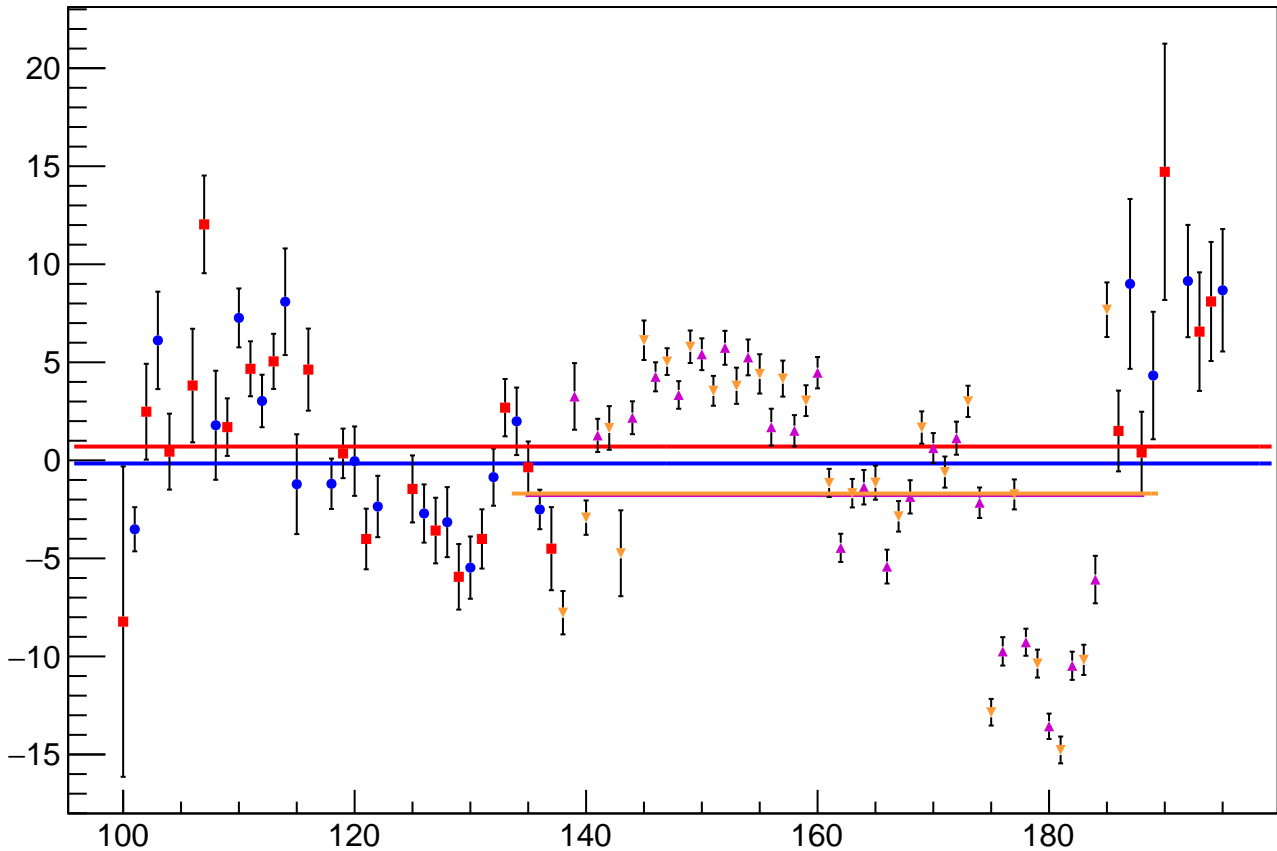
Left In:  $-47.128 \pm 0.187$   $\chi^2/\text{NDF}: 2516.0/22$

+ sign  $-48.373 \pm 0.175$   $\chi^2/\text{NDF}: 5880.0/44$

All:  $-50.060 \pm 0.122$   $\chi^2/\text{NDF}: 15423.8/90$

- sign  $-51.668 \pm 0.170$   $\chi^2/\text{NDF}: 9361.5/45$

# reg\_asym\_us\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-0.159 \pm 0.377$   $\chi^2/\text{NDF}: 106.9/19$

Left Out:  $-1.693 \pm 0.167$   $\chi^2/\text{NDF}: 1485.7/24$

Right Out:  $0.704 \pm 0.379$   $\chi^2/\text{NDF}: 111.2/22$

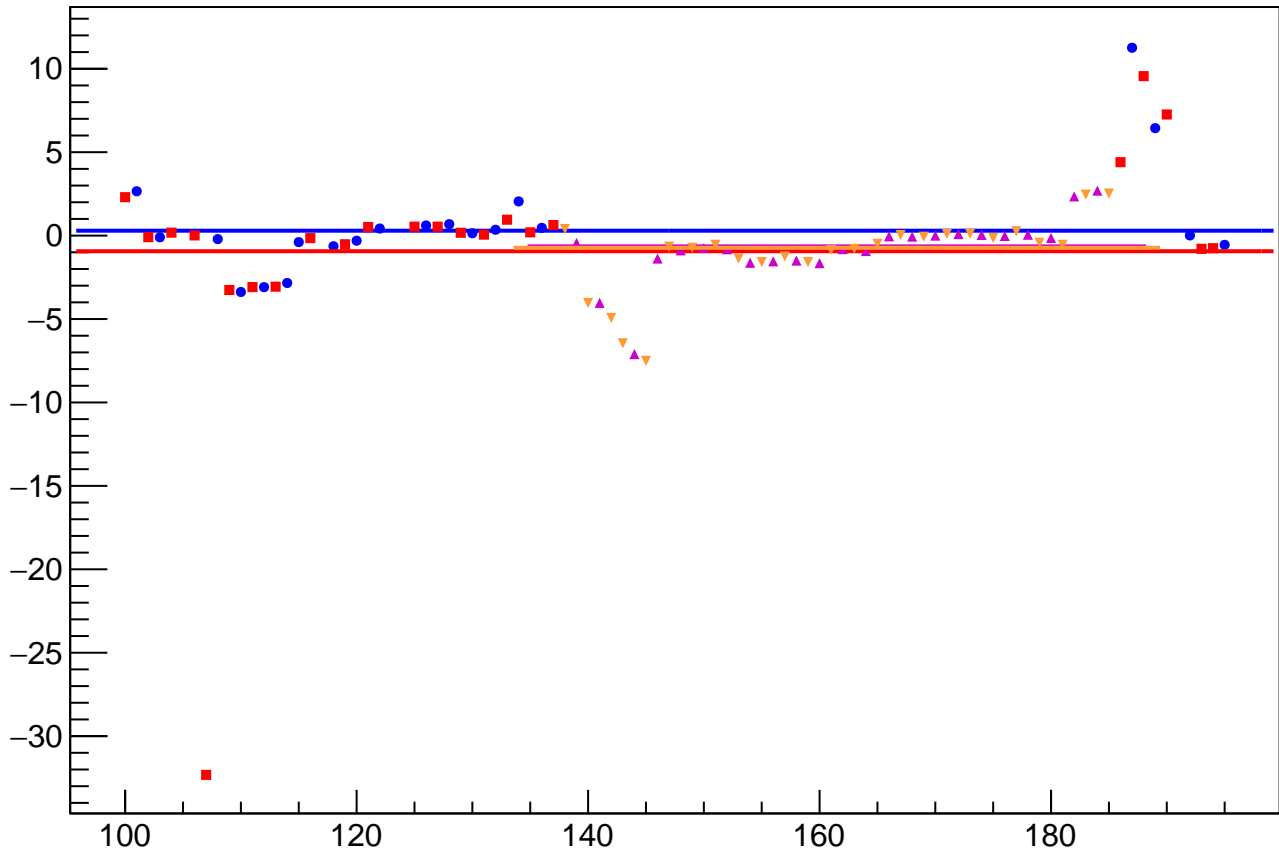
Left In:  $-1.771 \pm 0.169$   $\chi^2/\text{NDF}: 1251.3/22$

+ sign  $-1.443 \pm 0.152$   $\chi^2/\text{NDF}: 1606.5/44$

All:  $-1.403 \pm 0.108$   $\chi^2/\text{NDF}: 3004.6/90$

- sign  $-1.361 \pm 0.154$   $\chi^2/\text{NDF}: 1398.0/45$

# reg\_asym\_us\_dd\_diff\_bpm12X\_slope vs Slug



Right In: 0.295+/-0.020  $\chi^2/\text{NDF}$ : 9192.3/19

Left Out: -0.728+/-0.008  $\chi^2/\text{NDF}$ : 56403.8/24

Right Out: -0.936+/-0.020  $\chi^2/\text{NDF}$ : 92236.5/22

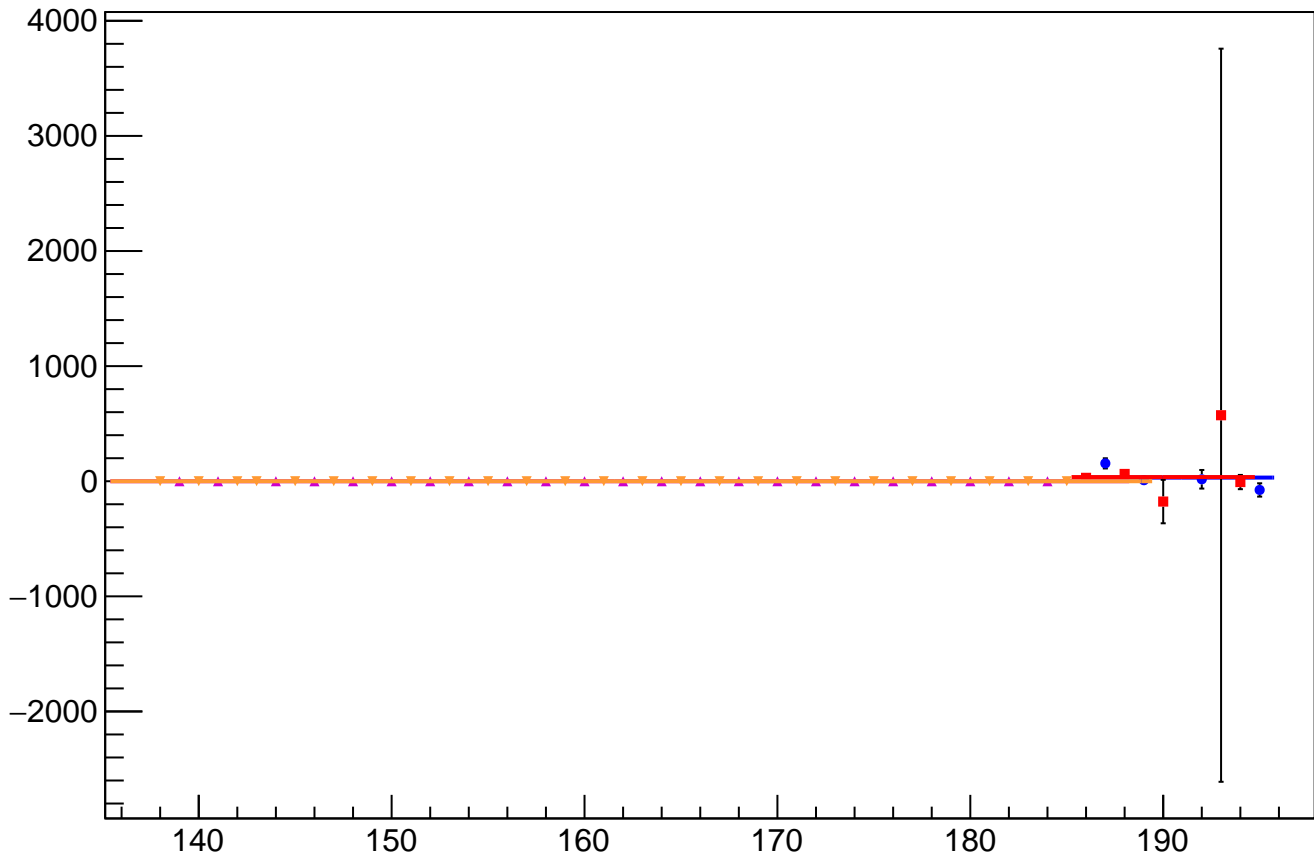
Left In: -0.644+/-0.008  $\chi^2/\text{NDF}$ : 44169.2/22

+ sign -0.600+/-0.007  $\chi^2/\text{NDF}$ : 67839.0/44

All: -0.641+/-0.005  $\chi^2/\text{NDF}$ : 204494.8/90

- sign -0.681+/-0.007  $\chi^2/\text{NDF}$ : 136591.5/45

# reg\_asym\_ds\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $31.708 \pm 21.158$   $\chi^2/\text{NDF}: 12.0/3$

Left Out:  $-0.036 \pm 0.018$   $\chi^2/\text{NDF}: 35.6/24$

Right Out:  $36.166 \pm 10.301$   $\chi^2/\text{NDF}: 3.8/4$

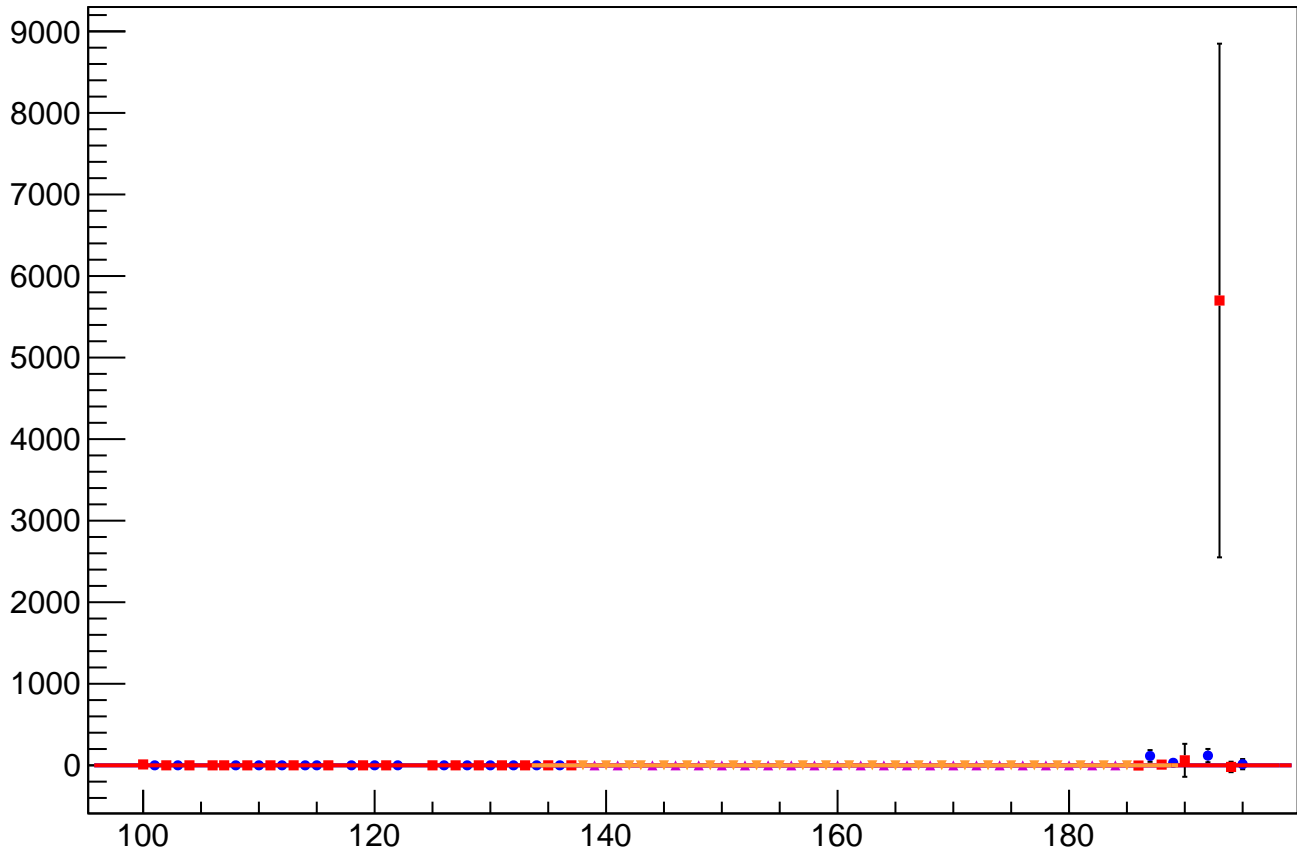
Left In:  $-0.010 \pm 0.018$   $\chi^2/\text{NDF}: 35.1/22$

+ sign  $-0.036 \pm 0.018$   $\chi^2/\text{NDF}: 49.8/28$

All:  $-0.023 \pm 0.013$   $\chi^2/\text{NDF}: 102.1/56$

- sign  $-0.010 \pm 0.018$   $\chi^2/\text{NDF}: 51.3/27$

# reg\_asym\_ds\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $-0.013 \pm 0.023$   $\chi^2/\text{NDF}$ : 17.7/19

Left Out:  $-0.071 \pm 0.014$   $\chi^2/\text{NDF}$ : 28.3/24

Right Out:  $-0.088 \pm 0.025$   $\chi^2/\text{NDF}$ : 16.5/22

Left In:  $-0.064 \pm 0.014$   $\chi^2/\text{NDF}$ : 41.1/22

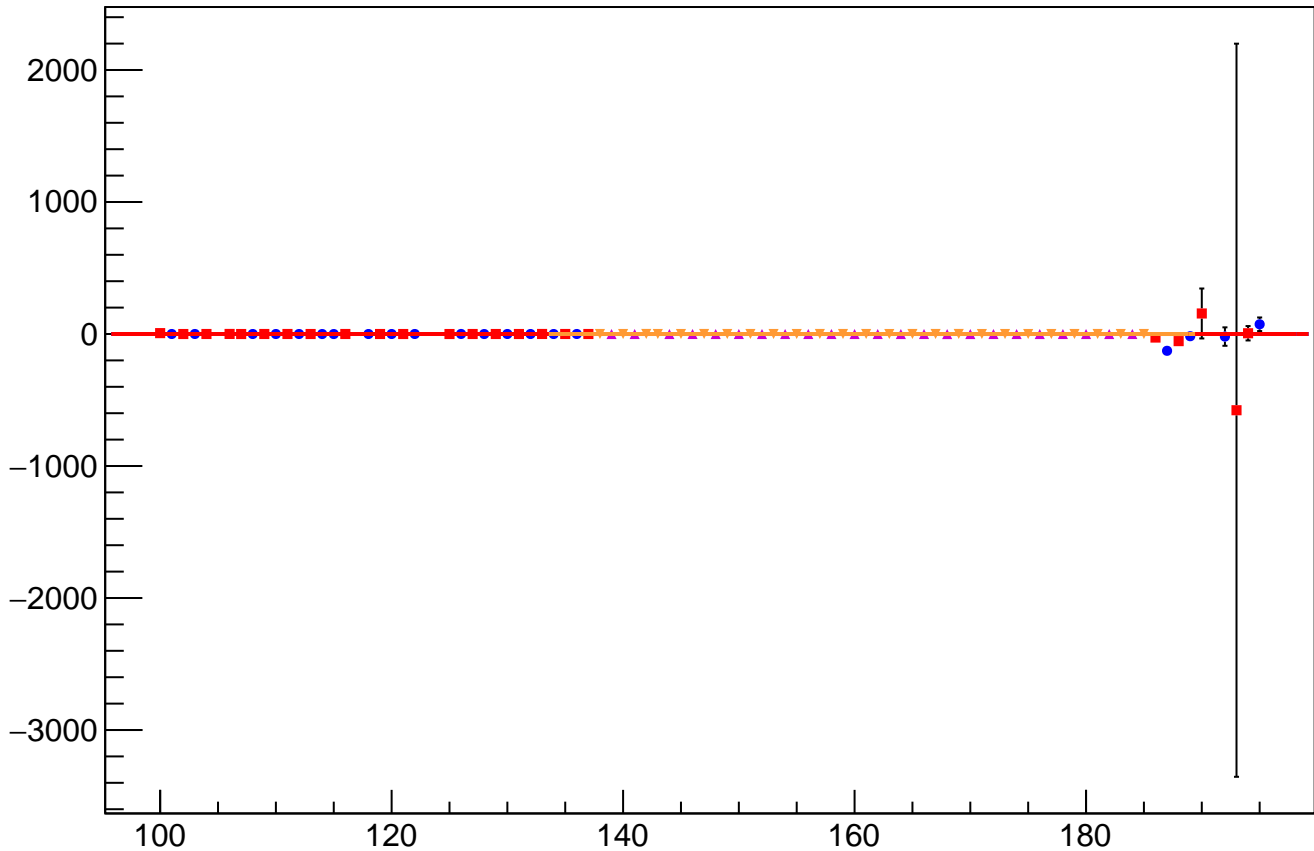
+ sign  $-0.056 \pm 0.012$   $\chi^2/\text{NDF}$ : 50.5/44

All:  $-0.063 \pm 0.009$   $\chi^2/\text{NDF}$ : 109.4/90

- sign  $-0.070 \pm 0.012$   $\chi^2/\text{NDF}$ : 58.2/45



# reg\_asym\_ds\_avg\_diff\_bpm4eX\_slope vs Slug



Right In: 0.016 $\pm$ 0.043  $\chi^2$ /NDF: 24.1/19

Left Out: 0.033 $\pm$ 0.018  $\chi^2$ /NDF:32.6/24

Right Out: 0.031 $\pm$ 0.045  $\chi^2$ /NDF: 27.7/22

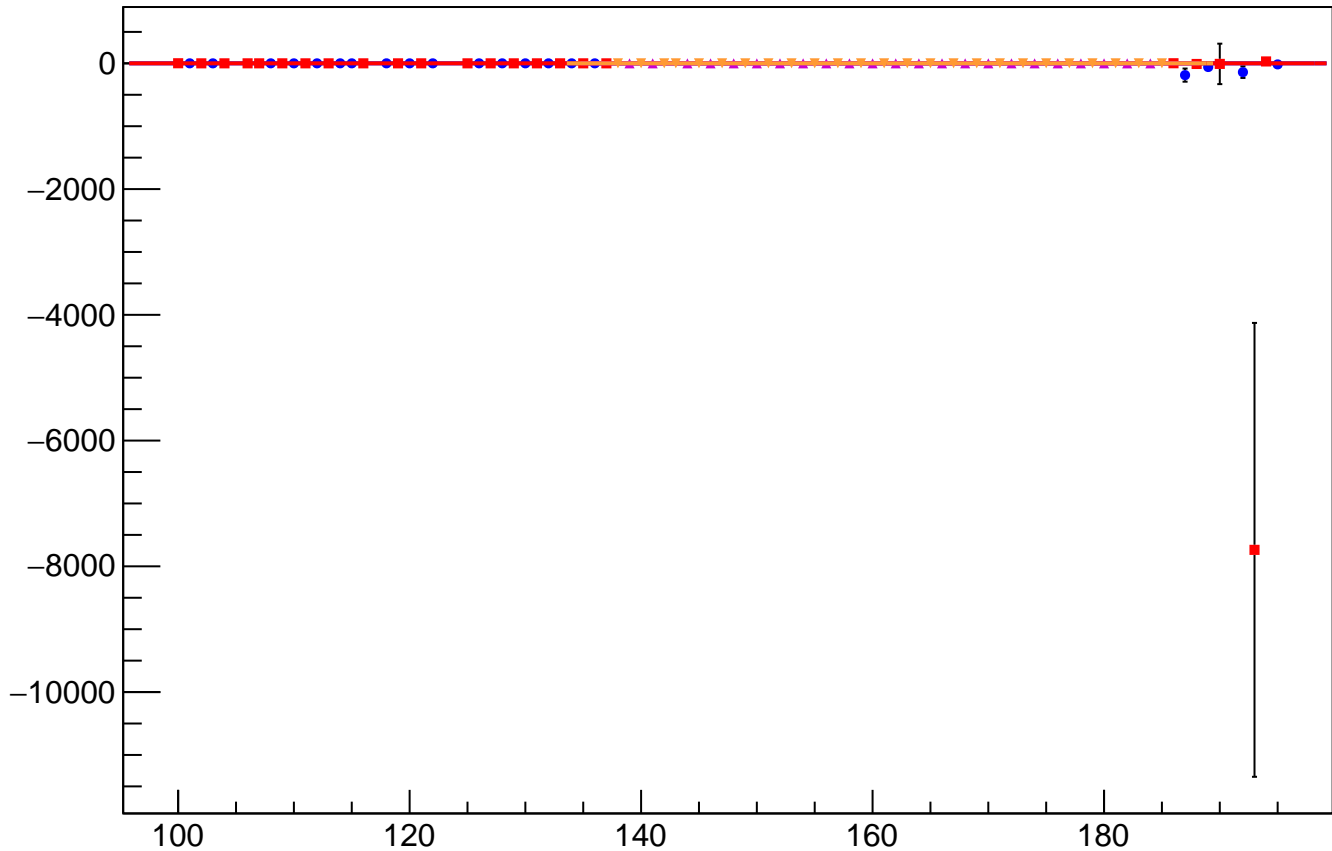
Left In: -0.009 $\pm$ 0.018  $\chi^2$ /NDF:36.8/22

+ sign 0.031 $\pm$ 0.016  $\chi^2$ /NDF: 56.8/44

All: 0.014 $\pm$ 0.012  $\chi^2$ /NDF: 124.2/90

- sign -0.003 $\pm$ 0.017  $\chi^2$ /NDF: 65.2/45

# reg\_asym\_ds\_avg\_diff\_bpm4eY\_slope vs Slug



Right In: 0.008 $\pm$ 0.027  $\chi^2$ /NDF: 18.5/19

Left Out: 0.084 $\pm$ 0.016  $\chi^2$ /NDF:28.1/24

Right Out: 0.105 $\pm$ 0.029  $\chi^2$ /NDF: 12.9/22

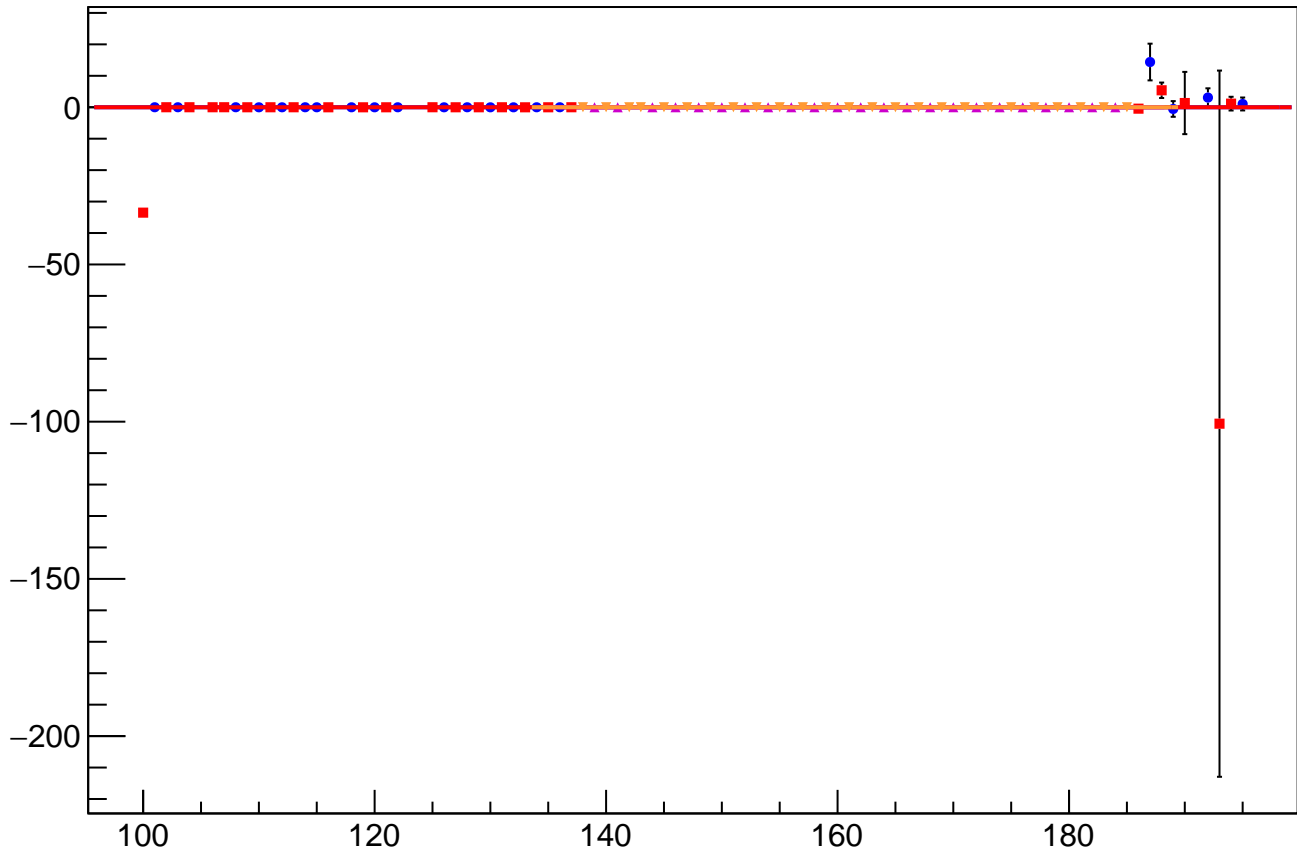
Left In: 0.070 $\pm$ 0.016  $\chi^2$ /NDF:44.8/22

+ sign 0.065 $\pm$ 0.014  $\chi^2$ /NDF: 52.5/44

All: 0.071 $\pm$ 0.010  $\chi^2$ /NDF: 111.9/90

- sign 0.078 $\pm$ 0.014  $\chi^2$ /NDF: 58.9/45

# reg\_asym\_ds\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.005 \pm 0.001$   $\chi^2/\text{NDF}: 29.0/19$

Left Out:  $0.001 \pm 0.001$   $\chi^2/\text{NDF}: 26.1/24$

Right Out:  $-0.006 \pm 0.001$   $\chi^2/\text{NDF}: 26515.0/22$

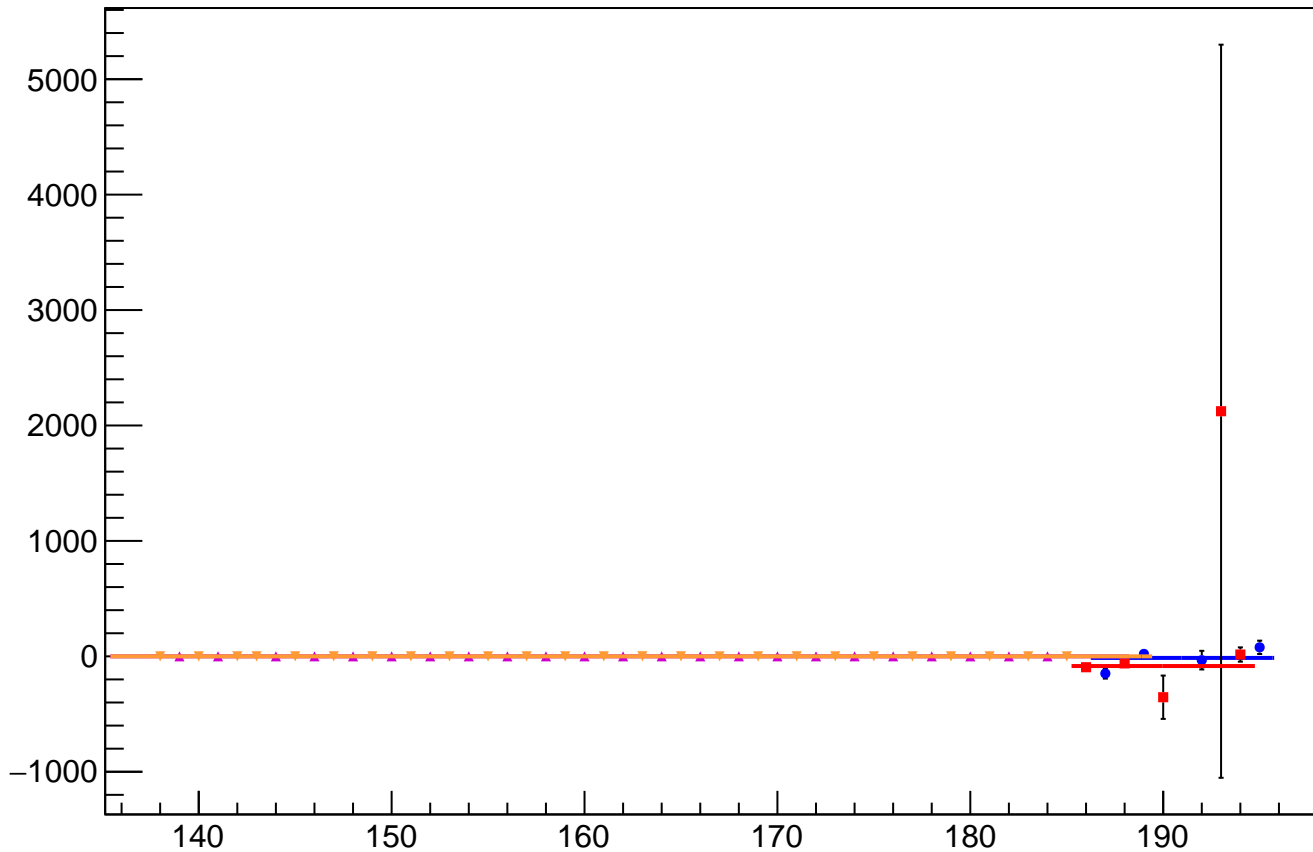
Left In:  $0.000 \pm 0.001$   $\chi^2/\text{NDF}: 22.3/22$

+ sign  $-0.001 \pm 0.001$   $\chi^2/\text{NDF}: 68.9/44$

All:  $-0.001 \pm 0.000$   $\chi^2/\text{NDF}: 26620.4/90$

- sign  $-0.001 \pm 0.001$   $\chi^2/\text{NDF}: 26551.2/45$

# reg\_asym\_ds\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-13.695 \pm 21.141$   $\chi^2/\text{NDF}$ : 13.4/3

Left Out:  $-0.059 \pm 0.018$   $\chi^2/\text{NDF}$ : 41.7/24

Right Out:  $-84.064 \pm 10.304$   $\chi^2/\text{NDF}$ : 7.1/4

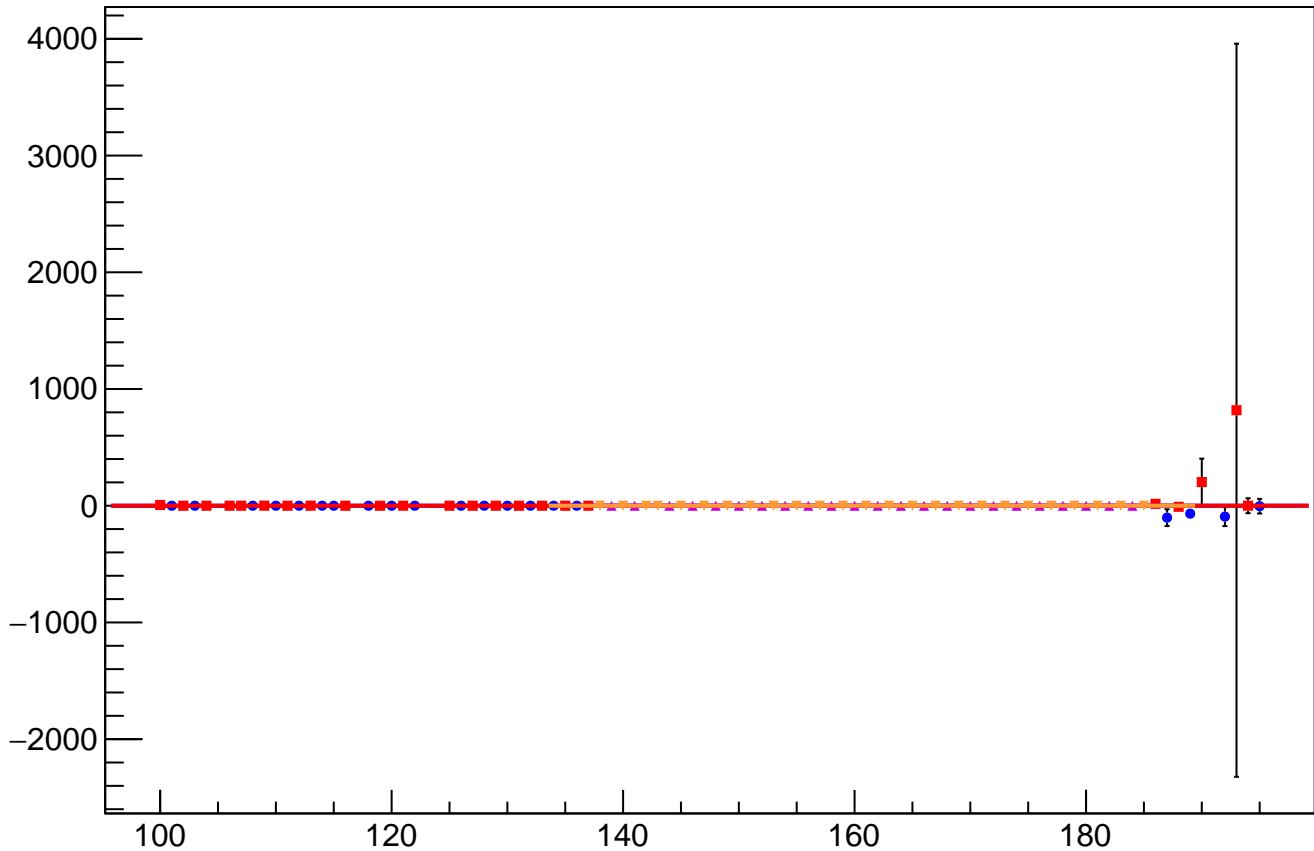
Left In:  $-0.009 \pm 0.018$   $\chi^2/\text{NDF}$ : 35.1/22

+ sign  $-0.059 \pm 0.018$   $\chi^2/\text{NDF}$ : 55.5/28

All:  $-0.035 \pm 0.013$   $\chi^2/\text{NDF}$ : 168.2/56

- sign  $-0.009 \pm 0.018$   $\chi^2/\text{NDF}$ : 108.8/27

# reg\_asym\_ds\_dd\_diff\_bpm4aY\_slope vs Slug



Right In: 0.008 $\pm$ 0.023  $\chi^2$ /NDF: 33.0/19

Left Out: -0.010 $\pm$ 0.014  $\chi^2$ /NDF:29.7/24

Right Out: 0.037 $\pm$ 0.025  $\chi^2$ /NDF: 31.0/22

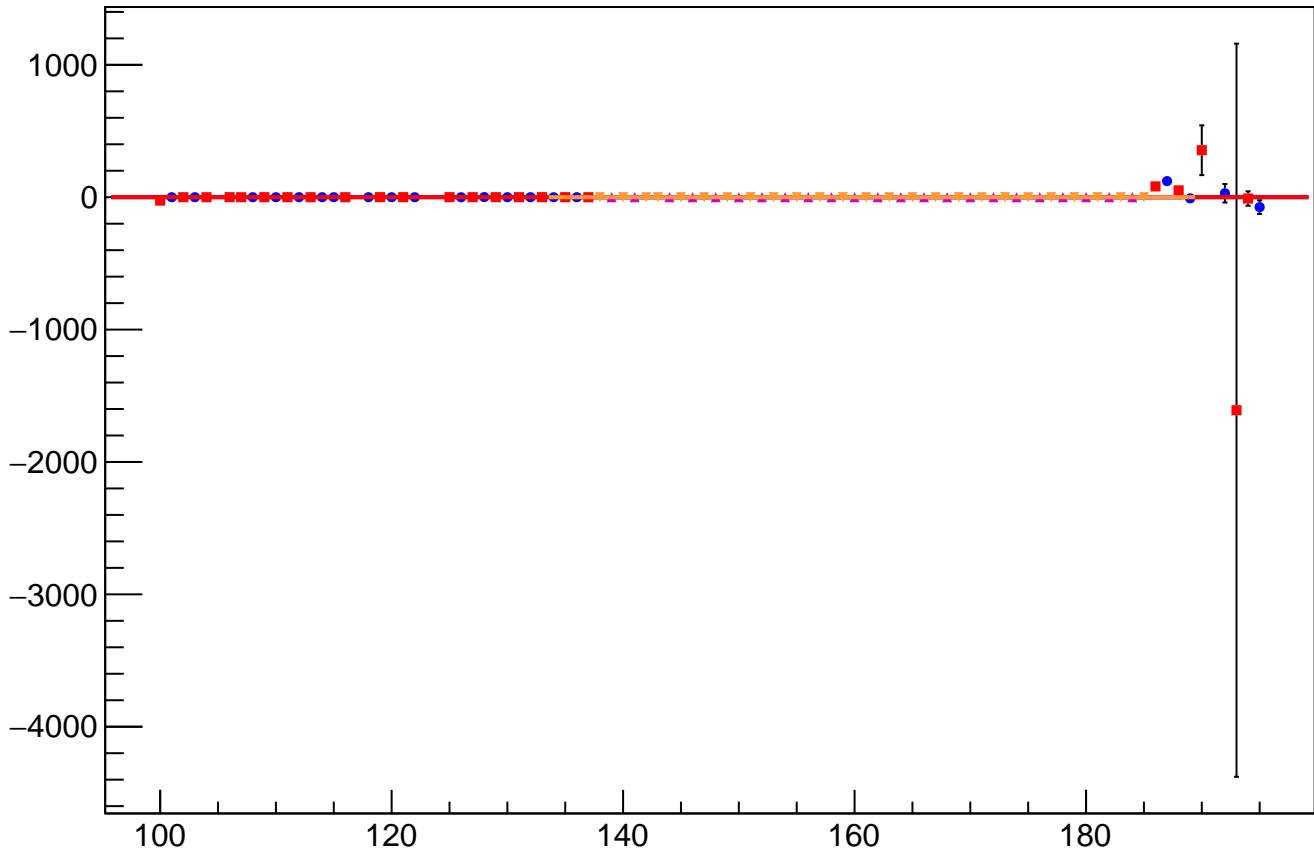
Left In: 0.005 $\pm$ 0.014  $\chi^2$ /NDF:49.6/22

+ sign -0.005 $\pm$ 0.012  $\chi^2$ /NDF: 63.1/44

All: 0.003 $\pm$ 0.009  $\chi^2$ /NDF: 146.0/90

- sign 0.013 $\pm$ 0.012  $\chi^2$ /NDF: 81.8/45

# reg\_asym\_ds\_dd\_diff\_bpm4eX\_slope vs Slug



Right In: 0.157 $\pm$ 0.043  $\chi^2$ /NDF: 43.4/19

Left Out: 0.055 $\pm$ 0.018  $\chi^2$ /NDF:41.0/24

Right Out: 0.197 $\pm$ 0.045  $\chi^2$ /NDF: 105.9/22

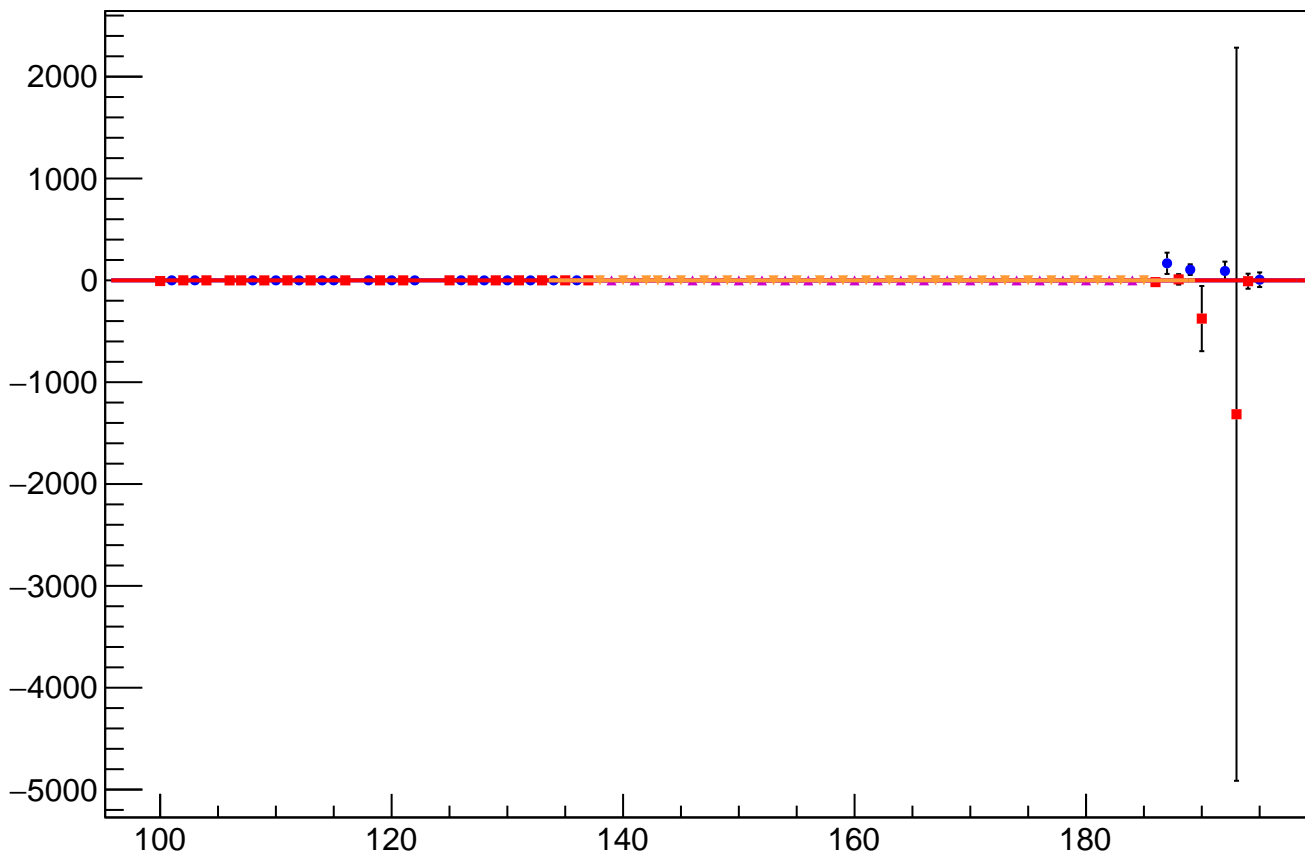
Left In: 0.020 $\pm$ 0.018  $\chi^2$ /NDF:35.8/22

+ sign 0.070 $\pm$ 0.016  $\chi^2$ /NDF: 89.1/44

All: 0.057 $\pm$ 0.012  $\chi^2$ /NDF: 245.3/90

- sign 0.044 $\pm$ 0.017  $\chi^2$ /NDF: 155.0/45

# reg\_asym\_ds\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-0.010 \pm 0.027$   $\chi^2/\text{NDF}: 32.3/19$

Left Out:  $0.021 \pm 0.016$   $\chi^2/\text{NDF}: 33.4/24$

Right Out:  $-0.046 \pm 0.029$   $\chi^2/\text{NDF}: 28.4/22$

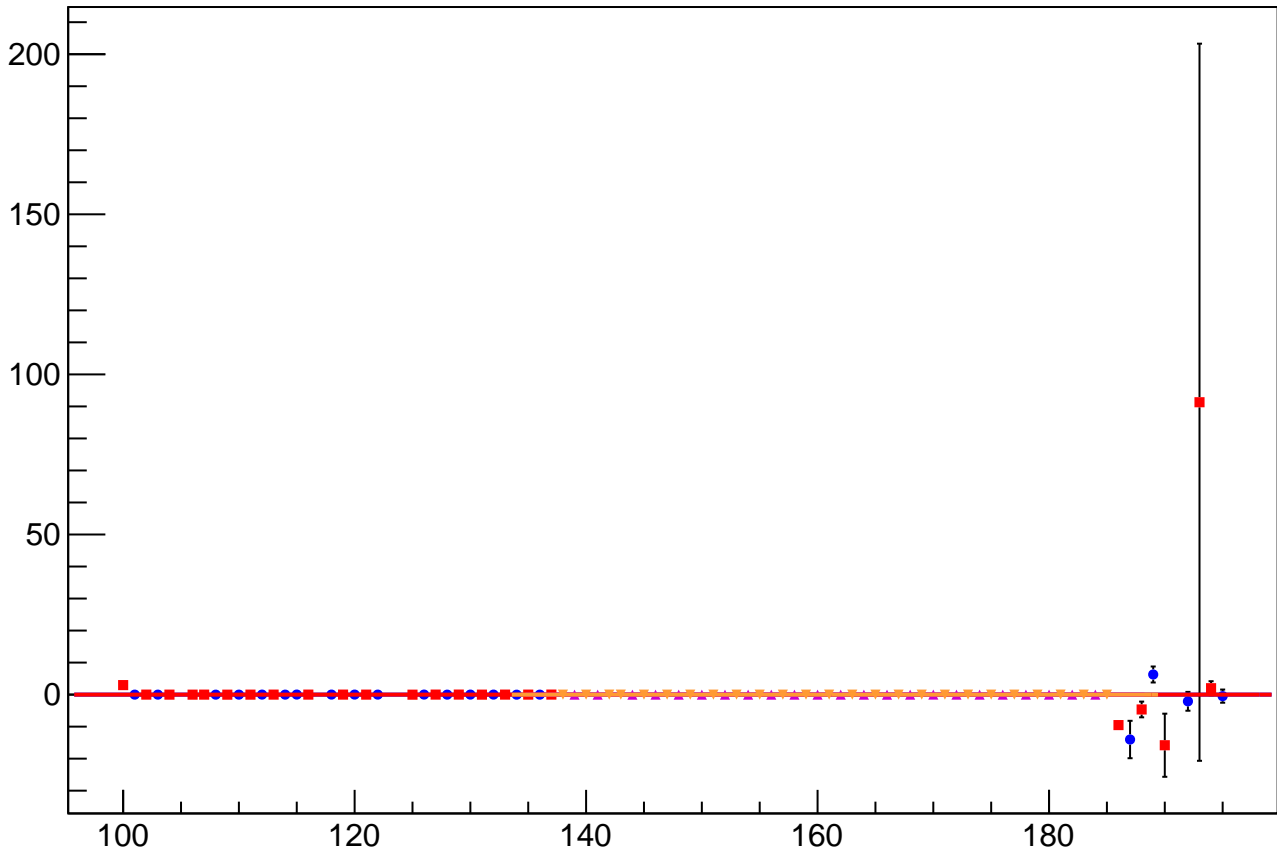
Left In:  $0.006 \pm 0.016$   $\chi^2/\text{NDF}: 50.1/22$

+ sign  $0.013 \pm 0.014$   $\chi^2/\text{NDF}: 66.6/44$

All:  $0.003 \pm 0.010$   $\chi^2/\text{NDF}: 148.7/90$

- sign  $-0.007 \pm 0.014$   $\chi^2/\text{NDF}: 81.1/45$

# reg\_asym\_ds\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.006 \pm 0.001$   $\chi^2/\text{NDF}: 40.1/19$

Left Out:  $-0.008 \pm 0.001$   $\chi^2/\text{NDF}: 32.7/24$

Right Out:  $-0.006 \pm 0.001$   $\chi^2/\text{NDF}: 210.5/22$

Left In:  $-0.009 \pm 0.001$   $\chi^2/\text{NDF}: 37.2/22$

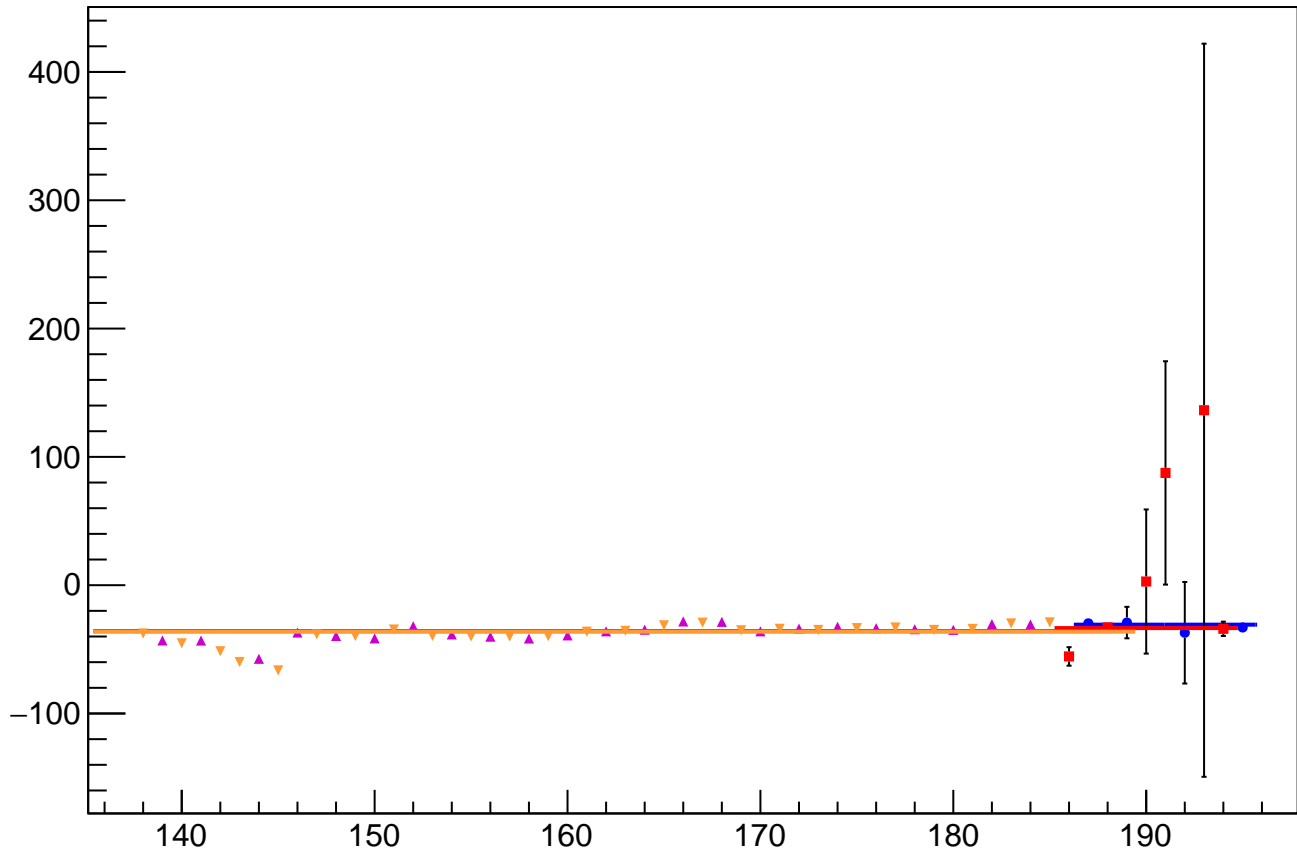
+ sign  $-0.008 \pm 0.001$   $\chi^2/\text{NDF}: 74.4/44$

All:  $-0.008 \pm 0.000$   $\chi^2/\text{NDF}: 325.3/90$

- sign  $-0.008 \pm 0.001$   $\chi^2/\text{NDF}: 250.7/45$



# reg\_asym\_left\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-30.760 \pm 1.533$   $\chi^2/\text{NDF}: 1.0/3$

Left Out:  $-36.243 \pm 0.191$   $\chi^2/\text{NDF}: 1193.9/24$

Right Out:  $-33.435 \pm 1.139$   $\chi^2/\text{NDF}: 12.3/5$

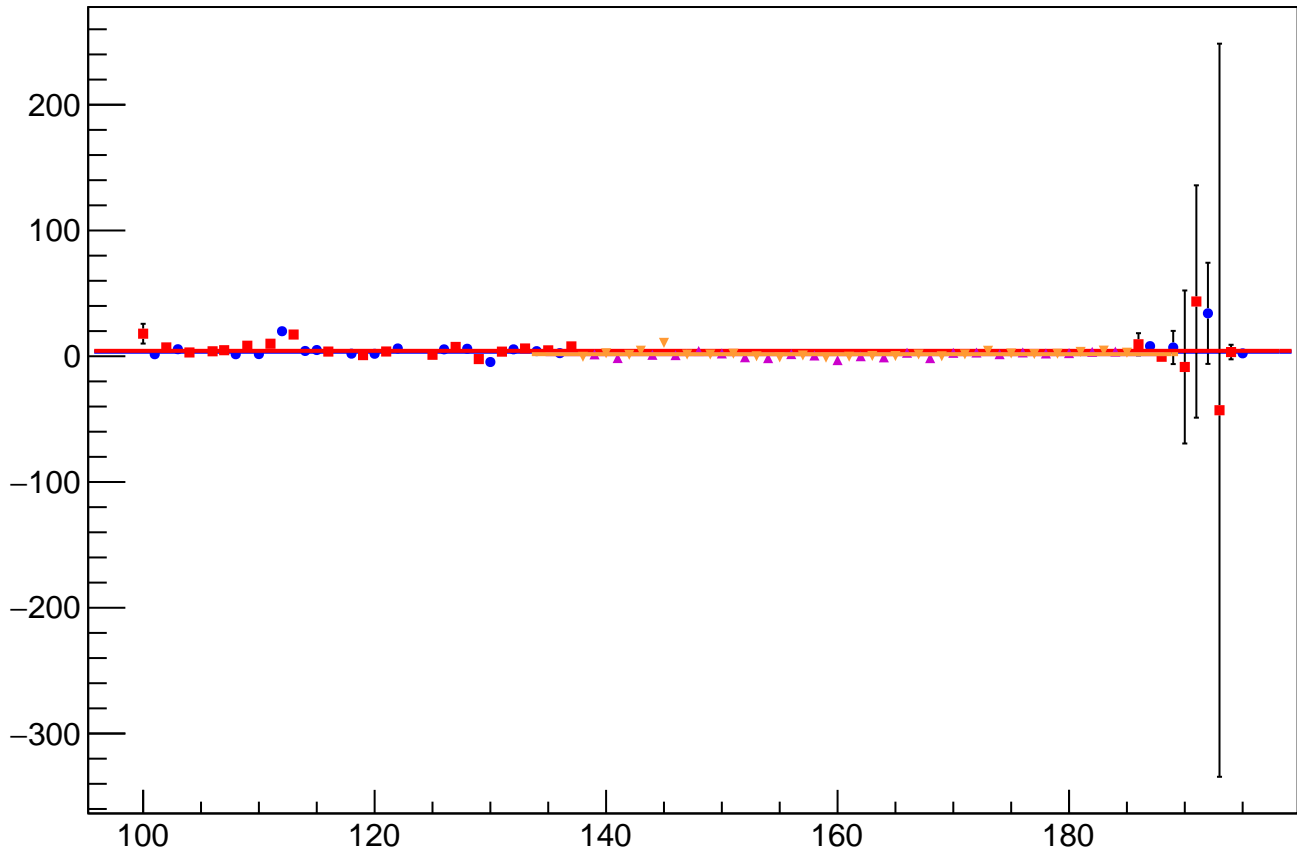
Left In:  $-35.779 \pm 0.191$   $\chi^2/\text{NDF}: 854.1/22$

+ sign  $-36.159 \pm 0.190$   $\chi^2/\text{NDF}: 1207.5/28$

All:  $-35.935 \pm 0.134$   $\chi^2/\text{NDF}: 2080.7/57$

- sign  $-35.715 \pm 0.189$   $\chi^2/\text{NDF}: 870.5/28$

# reg\_asym\_left\_avg\_diff\_bpm4aY\_slope vs Slug



Right In: 3.572 $\pm$ 0.220  $\chi^2$ /NDF: 442.9/19

Left Out: 1.652 $\pm$ 0.147  $\chi^2$ /NDF: 168.8/24

Right Out: 4.309 $\pm$ 0.223  $\chi^2$ /NDF: 360.1/23

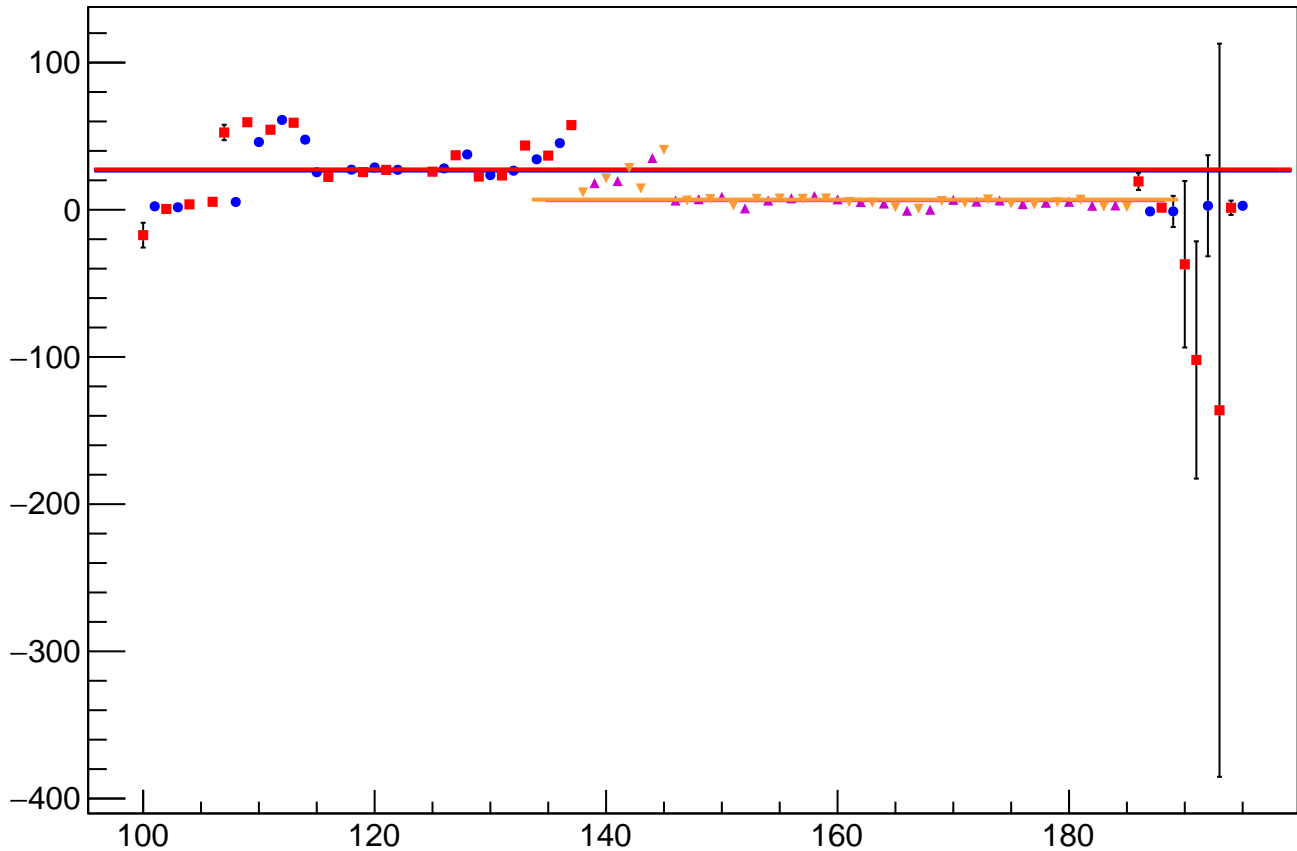
Left In: 1.641 $\pm$ 0.150  $\chi^2$ /NDF: 163.2/22

+ sign 2.248 $\pm$ 0.122  $\chi^2$ /NDF: 664.4/44

All: 2.355 $\pm$ 0.087  $\chi^2$ /NDF: 1287.8/91

- sign 2.466 $\pm$ 0.124  $\chi^2$ /NDF: 621.8/46

# reg\_asym\_left\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $26.640 \pm 0.399$   $\chi^2/\text{NDF}: 1967.8/19$

Left Out:  $6.900 \pm 0.191$   $\chi^2/\text{NDF}: 1302.8/24$

Right Out:  $27.420 \pm 0.385$   $\chi^2/\text{NDF}: 2597.9/23$

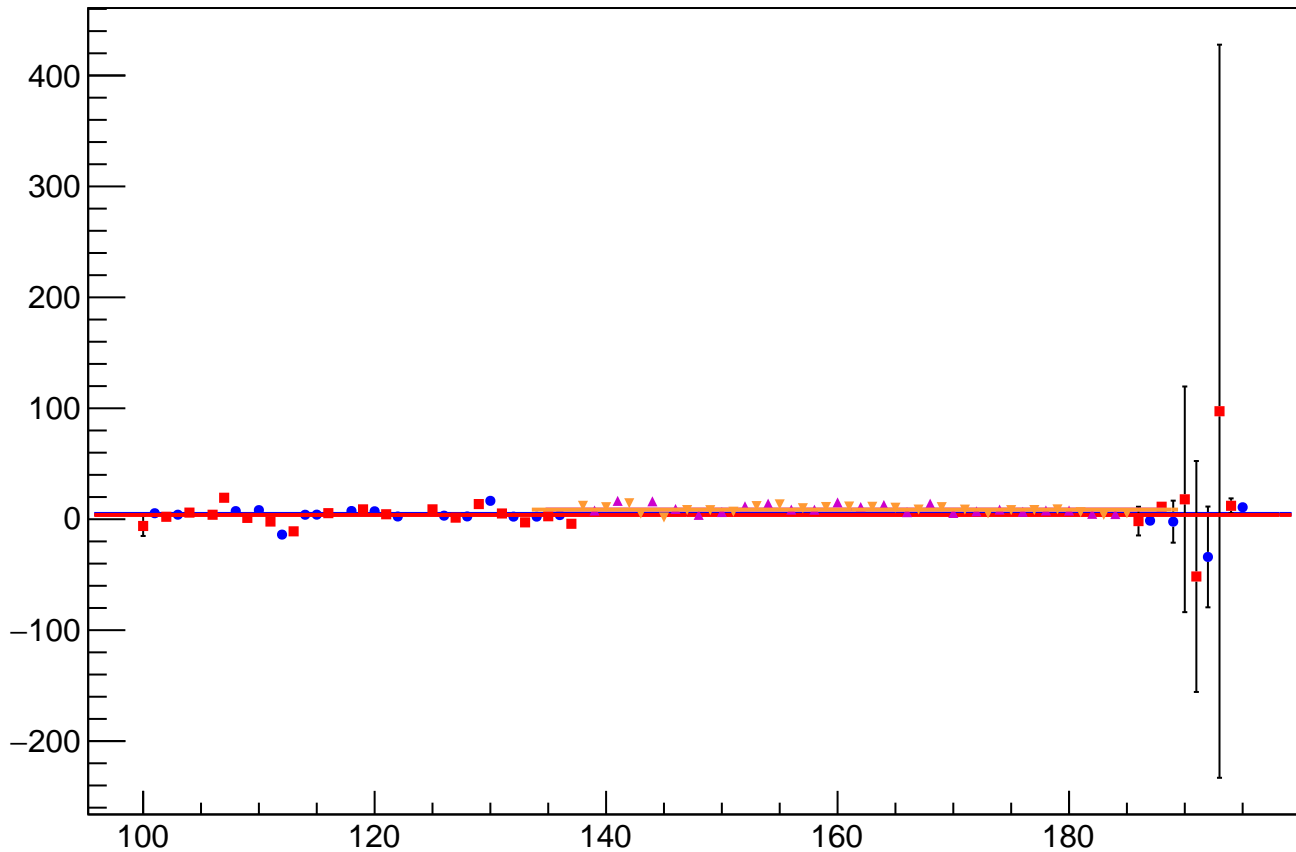
Left In:  $6.537 \pm 0.190$   $\chi^2/\text{NDF}: 1025.1/22$

+ sign  $10.572 \pm 0.172$   $\chi^2/\text{NDF}: 5258.0/44$

All:  $10.605 \pm 0.121$   $\chi^2/\text{NDF}: 11244.6/91$

- sign  $10.639 \pm 0.171$   $\chi^2/\text{NDF}: 5986.5/46$

# reg\_asym\_left\_avg\_diff\_bpm4eY\_slope vs Slug



Right In: 4.756 $\pm$ 0.253  $\chi^2$ /NDF: 551.9/19

Left Out: 8.674 $\pm$ 0.168  $\chi^2$ /NDF:243.7/24

Right Out: 3.862 $\pm$ 0.258  $\chi^2$ /NDF: 574.0/23

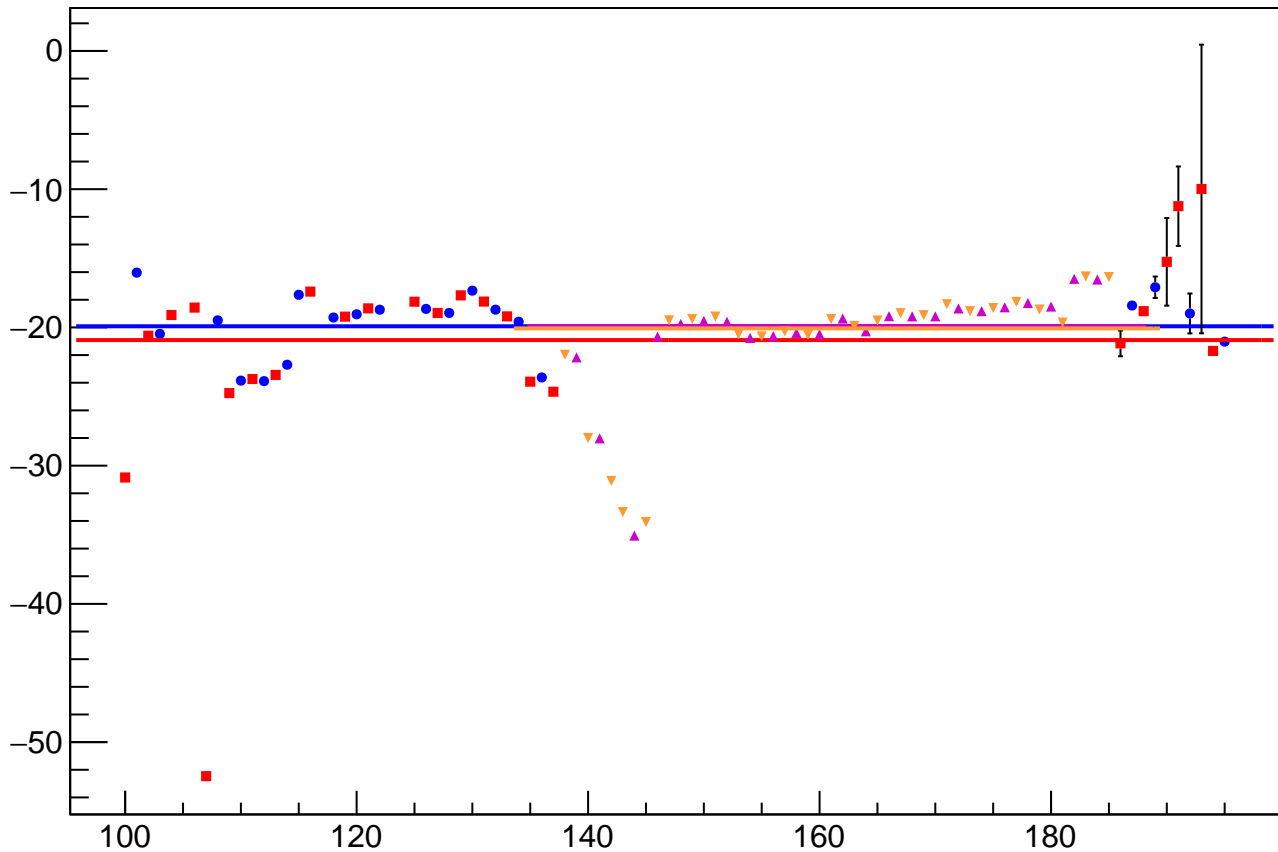
Left In: 8.668 $\pm$ 0.170  $\chi^2$ /NDF:436.7/22

+ sign 7.473 $\pm$ 0.140  $\chi^2$ /NDF: 961.3/44

All: 7.342 $\pm$ 0.100  $\chi^2$ /NDF: 2216.0/91

- sign 7.208 $\pm$ 0.142  $\chi^2$ /NDF: 1252.9/46

# reg\_asym\_left\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-19.917 \pm 0.015$   $\chi^2/\text{NDF}: 26172.4/19$

Left Out:  $-20.069 \pm 0.008$   $\chi^2/\text{NDF}: 185373.7/24$

Right Out:  $-20.915 \pm 0.016$   $\chi^2/\text{NDF}: 94233.6/23$

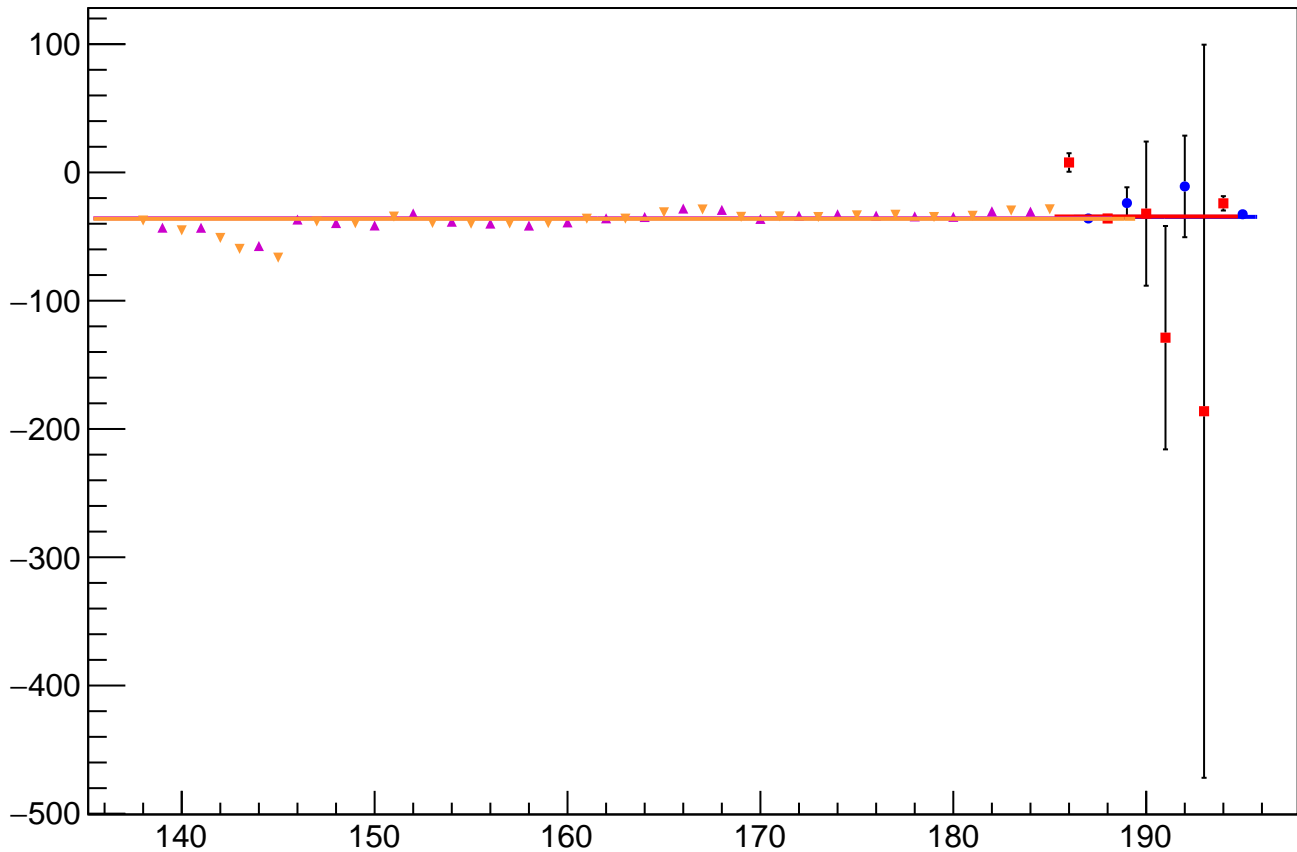
Left In:  $-19.898 \pm 0.008$   $\chi^2/\text{NDF}: 144191.9/22$

+ sign  $-20.038 \pm 0.007$   $\chi^2/\text{NDF}: 211623.0/44$

All:  $-20.071 \pm 0.005$   $\chi^2/\text{NDF}: 453487.5/91$

- sign  $-20.103 \pm 0.007$   $\chi^2/\text{NDF}: 241821.0/46$

# reg\_asym\_left\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-34.646 \pm 1.538$   $\chi^2/\text{NDF}: 2.1/3$

Left Out:  $-36.152 \pm 0.191$   $\chi^2/\text{NDF}: 1199.2/24$

Right Out:  $-34.335 \pm 1.142$   $\chi^2/\text{NDF}: 40.6/5$

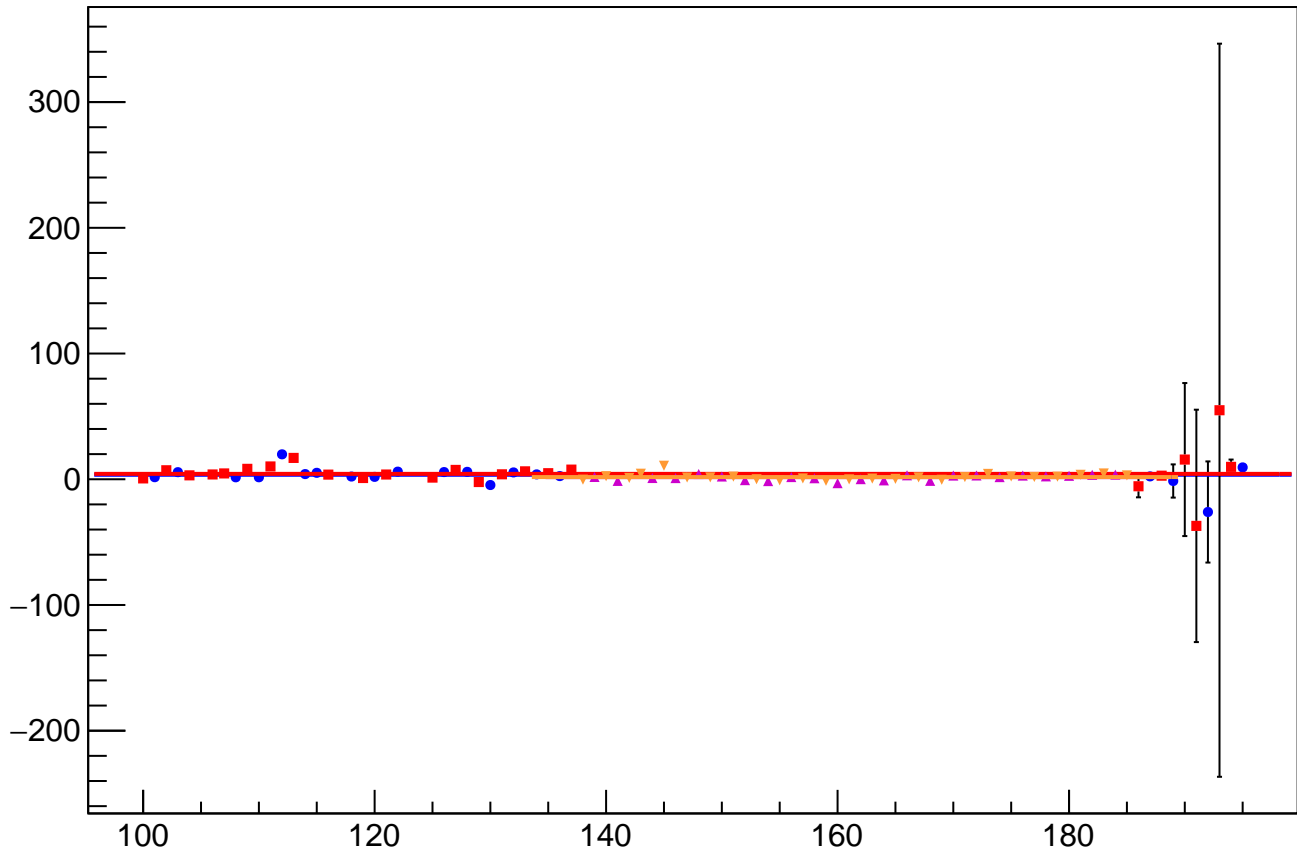
Left In:  $-35.766 \pm 0.191$   $\chi^2/\text{NDF}: 842.6/22$

+ sign  $-36.129 \pm 0.190$   $\chi^2/\text{NDF}: 1202.3/28$

All:  $-35.927 \pm 0.134$   $\chi^2/\text{NDF}: 2089.3/57$

- sign  $-35.727 \pm 0.189$   $\chi^2/\text{NDF}: 884.7/28$

# reg\_asym\_left\_dd\_diff\_bpm4aY\_slope vs Slug



Right In: 3.577 $\pm$ 0.219  $\chi^2$ /NDF: 441.3/19

Left Out: 1.741 $\pm$ 0.147  $\chi^2$ /NDF: 170.2/24

Right Out: 4.289 $\pm$ 0.220  $\chi^2$ /NDF: 355.1/23

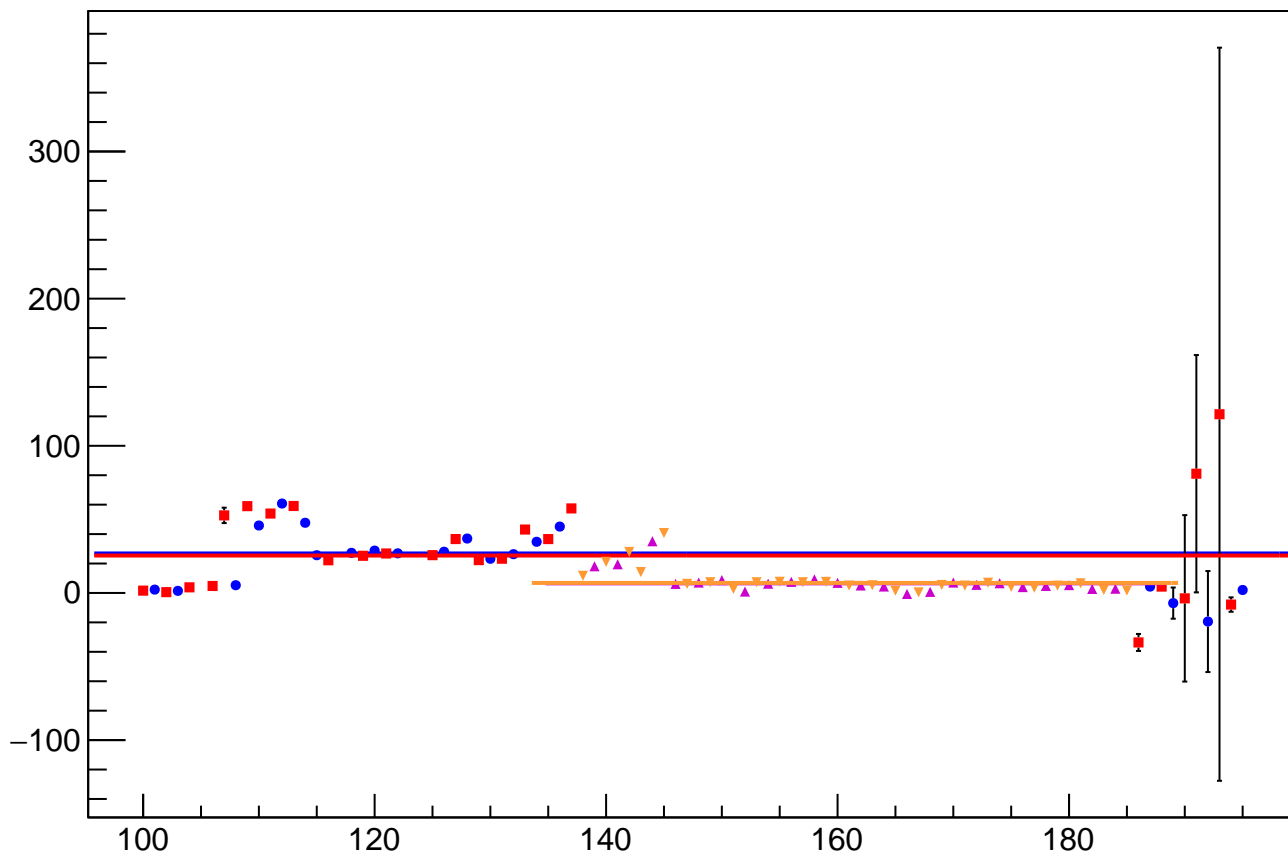
Left In: 1.705 $\pm$ 0.149  $\chi^2$ /NDF: 163.0/22

+ sign 2.311 $\pm$ 0.122  $\chi^2$ /NDF: 659.9/44

All: 2.416 $\pm$ 0.087  $\chi^2$ /NDF: 1274.1/91

- sign 2.523 $\pm$ 0.124  $\chi^2$ /NDF: 612.8/46

# reg\_asym\_left\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $26.837 \pm 0.399$   $\chi^2/\text{NDF}: 1849.3/19$

Left Out:  $6.813 \pm 0.191$   $\chi^2/\text{NDF}: 1304.5/24$

Right Out:  $25.432 \pm 0.370$   $\chi^2/\text{NDF}: 2879.8/23$

Left In:  $6.532 \pm 0.190$   $\chi^2/\text{NDF}: 1018.2/22$

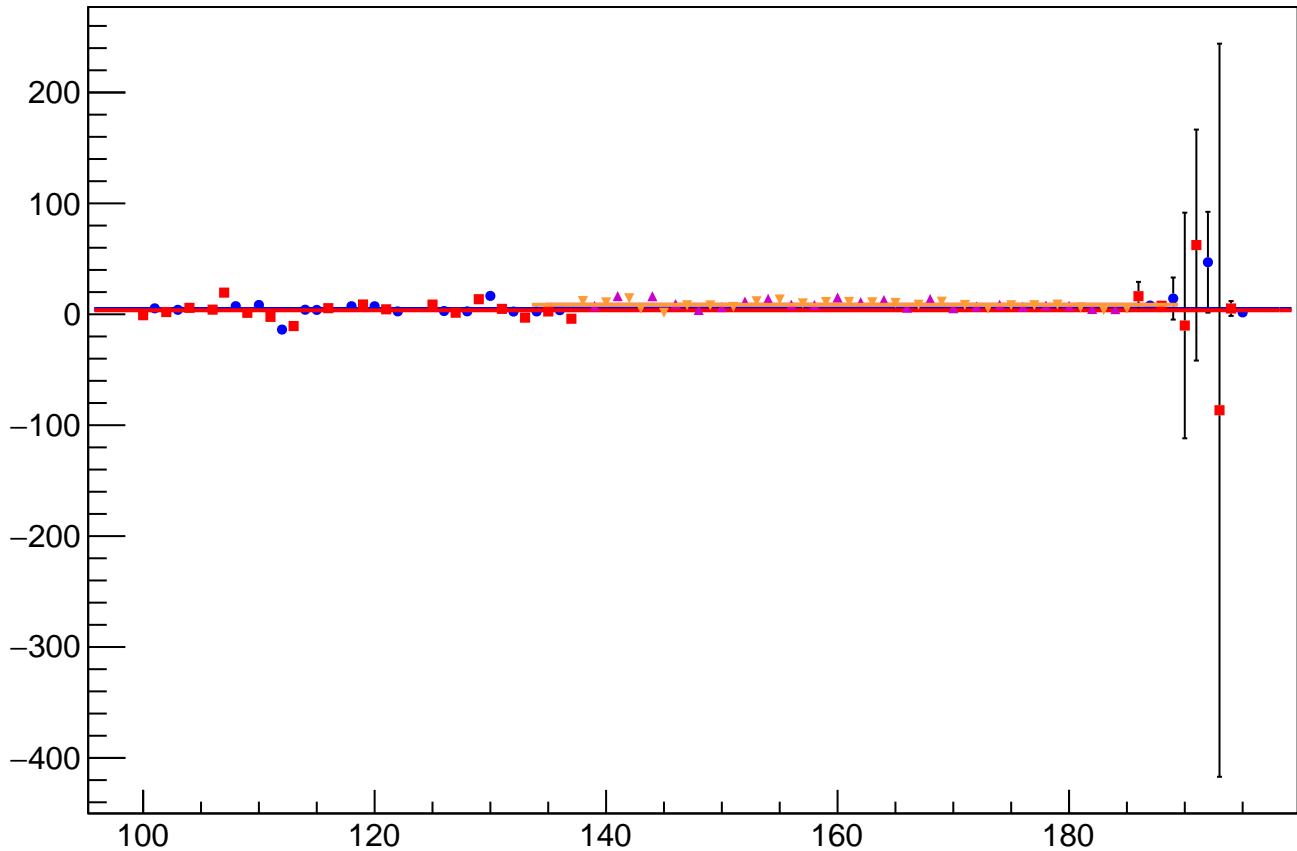
+ sign  $10.535 \pm 0.172$   $\chi^2/\text{NDF}: 5200.5/44$

All:  $10.513 \pm 0.121$   $\chi^2/\text{NDF}: 11165.3/91$

- sign  $10.491 \pm 0.169$   $\chi^2/\text{NDF}: 5964.8/46$



# reg\_asym\_left\_dd\_diff\_bpm4eY\_slope vs Slug



Right In: 4.748 $\pm$ 0.253  $\chi^2$ /NDF: 545.3/19

Left Out: 8.565 $\pm$ 0.168  $\chi^2$ /NDF:248.1/24

Right Out: 3.615 $\pm$ 0.253  $\chi^2$ /NDF: 574.0/23

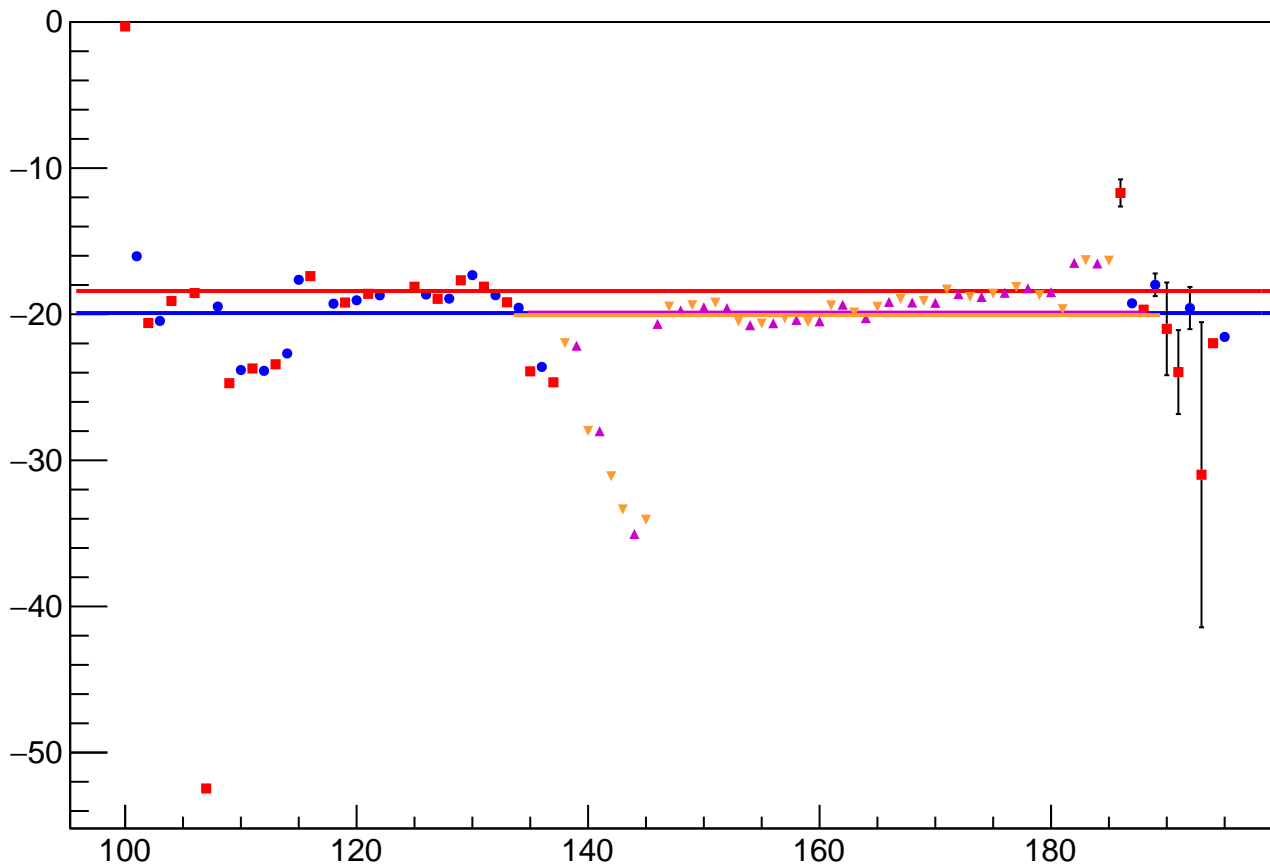
Left In: 8.585 $\pm$ 0.170  $\chi^2$ /NDF:441.8/22

+ sign 7.395 $\pm$ 0.140  $\chi^2$ /NDF: 950.8/44

All: 7.219 $\pm$ 0.099  $\chi^2$ /NDF: 2235.2/91

- sign 7.040 $\pm$ 0.141  $\chi^2$ /NDF: 1281.2/46

# reg\_asym\_left\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $-19.919 \pm 0.015$   $\chi^2/\text{NDF}: 26244.2/19$

Left Out:  $-20.061 \pm 0.008$   $\chi^2/\text{NDF}: 185580.2/24$

Right Out:  $-18.409 \pm 0.015$   $\chi^2/\text{NDF}: 301464.5/23$

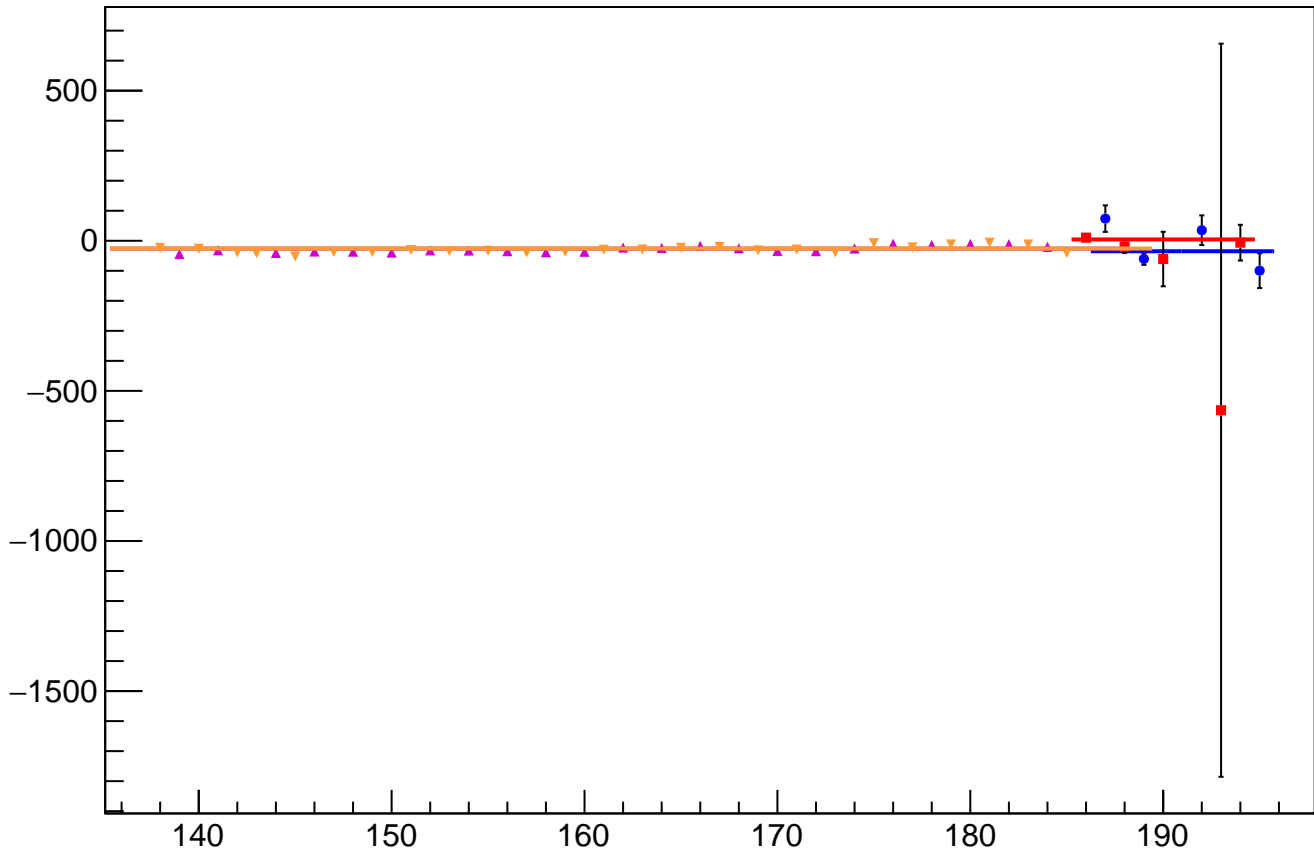
Left In:  $-19.890 \pm 0.008$   $\chi^2/\text{NDF}: 144055.2/22$

+ sign  $-20.032 \pm 0.007$   $\chi^2/\text{NDF}: 211891.8/44$

All:  $-19.793 \pm 0.005$   $\chi^2/\text{NDF}: 667650.2/91$

- sign  $-19.561 \pm 0.007$   $\chi^2/\text{NDF}: 453466.4/46$

# reg\_asym\_right\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-34.874 \pm 16.280$   $\chi^2/\text{NDF}: 11.0/3$

Left Out:  $-25.884 \pm 0.192$   $\chi^2/\text{NDF}: 4158.0/24$

Right Out:  $4.484 \pm 8.479$   $\chi^2/\text{NDF}: 2.5/4$

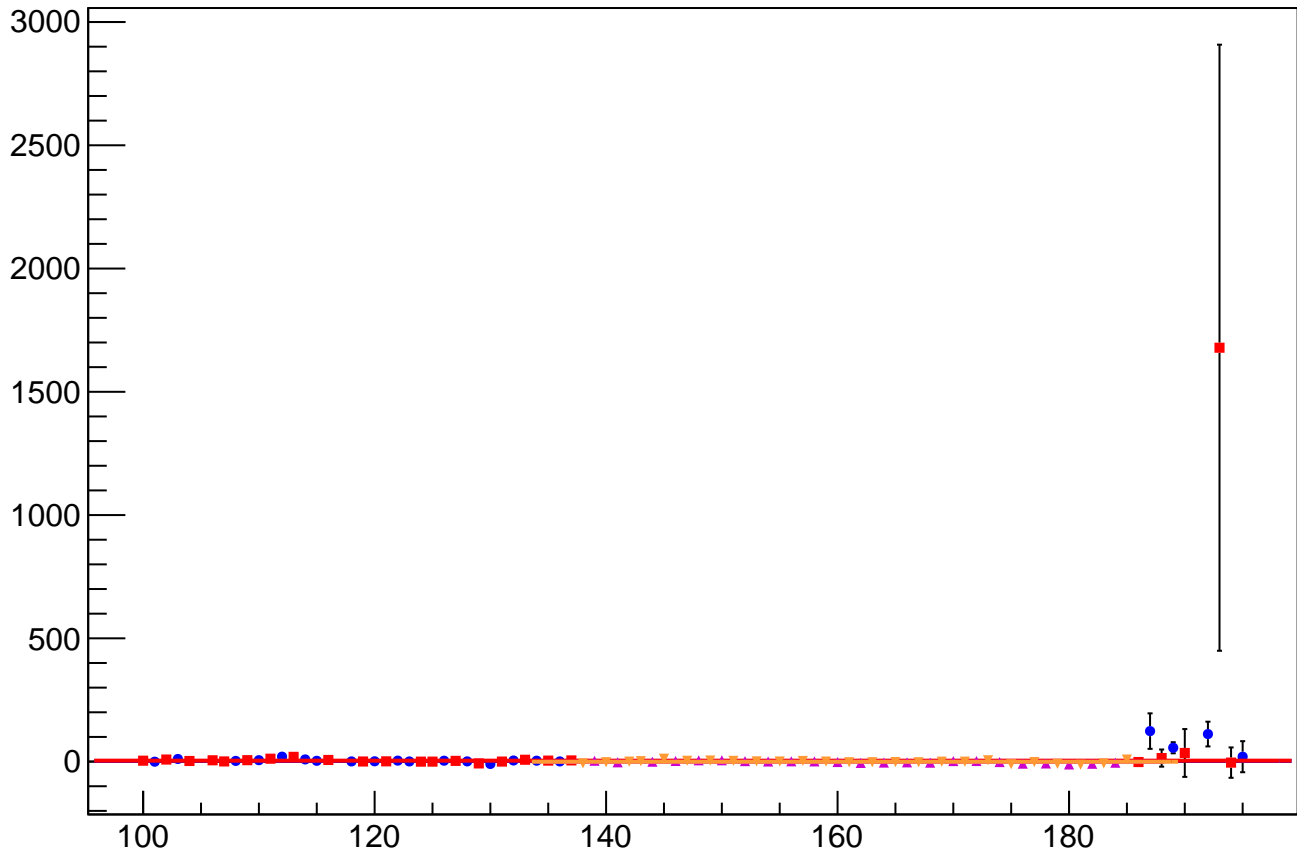
Left In:  $-26.052 \pm 0.195$   $\chi^2/\text{NDF}: 3279.5/22$

+ sign  $-25.886 \pm 0.192$   $\chi^2/\text{NDF}: 4169.3/28$

All:  $-25.960 \pm 0.137$   $\chi^2/\text{NDF}: 7464.5/56$

- sign  $-26.036 \pm 0.195$   $\chi^2/\text{NDF}: 3294.9/27$

# reg\_asym\_right\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $2.472 \pm 0.315$   $\chi^2/\text{NDF}: 307.7/20$

Left Out:  $-0.654 \pm 0.146$   $\chi^2/\text{NDF}: 1320.8/24$

Right Out:  $3.710 \pm 0.327$   $\chi^2/\text{NDF}: 271.4/23$

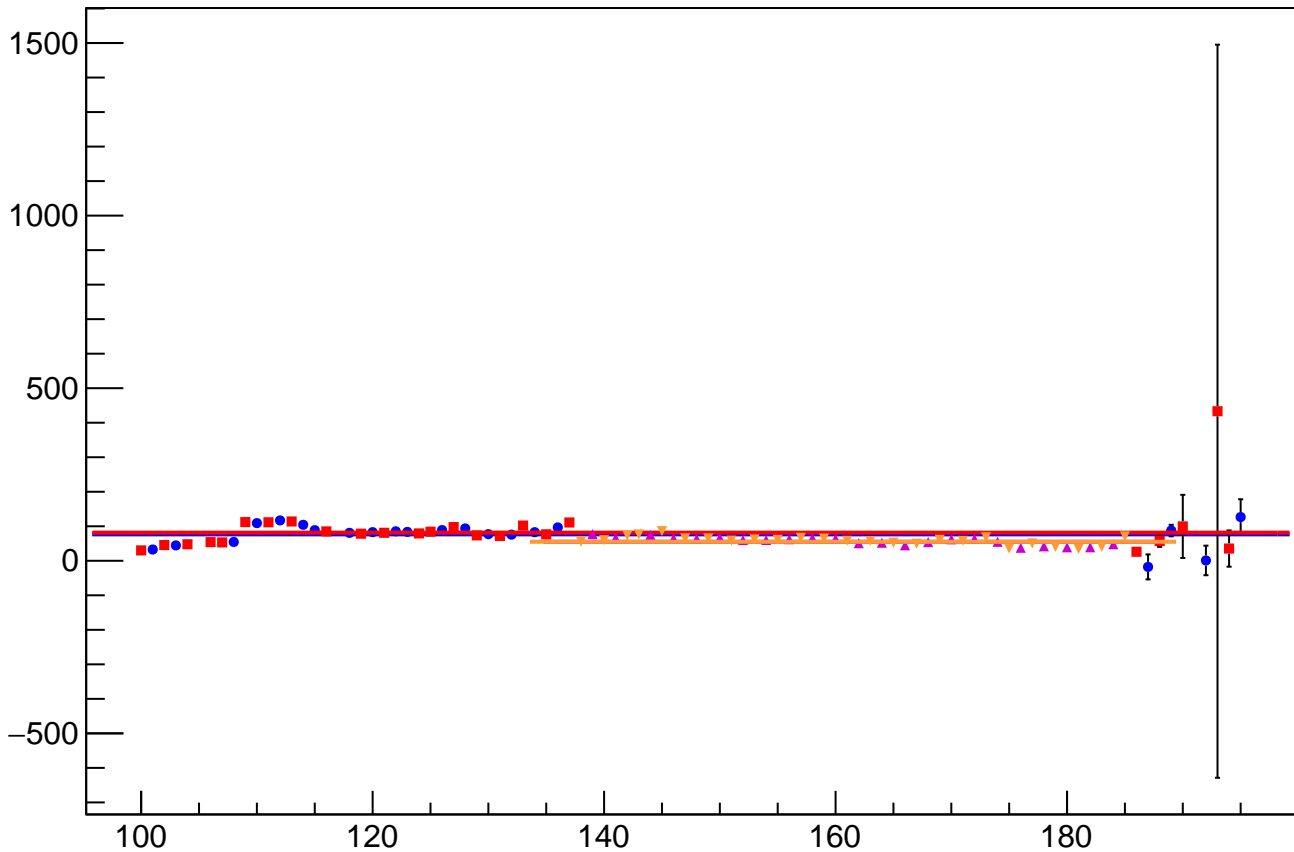
Left In:  $-0.863 \pm 0.150$   $\chi^2/\text{NDF}: 1066.5/22$

+ sign  $-0.100 \pm 0.133$   $\chi^2/\text{NDF}: 1709.6/45$

All:  $-0.082 \pm 0.095$   $\chi^2/\text{NDF}: 3209.3/92$

- sign  $-0.063 \pm 0.137$   $\chi^2/\text{NDF}: 1499.7/46$

# reg\_asym\_right\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $76.536 \pm 0.576$   $\chi^2/\text{NDF}: 2264.1/20$

Left Out:  $55.098 \pm 0.191$   $\chi^2/\text{NDF}: 4579.3/24$

Right Out:  $81.512 \pm 0.591$   $\chi^2/\text{NDF}: 1627.5/23$

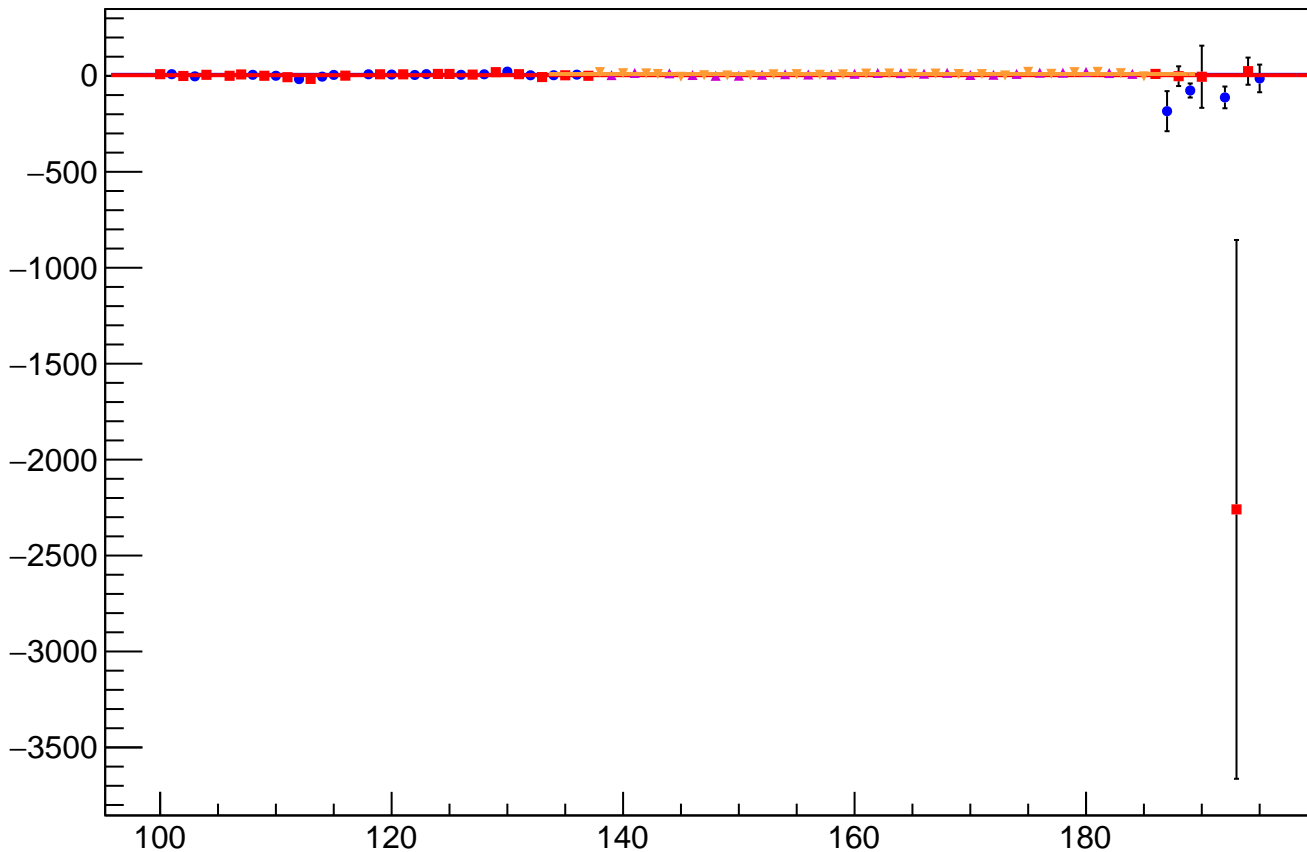
Left In:  $55.070 \pm 0.193$   $\chi^2/\text{NDF}: 3702.8/22$

+ sign  $57.229 \pm 0.182$   $\chi^2/\text{NDF}: 8089.3/45$

All:  $57.428 \pm 0.129$   $\chi^2/\text{NDF}: 15231.9/92$

- sign  $57.632 \pm 0.184$   $\chi^2/\text{NDF}: 7140.2/46$

# reg\_asym\_right\_avg\_diff\_bpm4eY\_slope vs Slug



Right In: 5.413 $\pm$ 0.361  $\chi^2$ /NDF: 398.3/20

Left Out: 9.737 $\pm$ 0.168  $\chi^2$ /NDF:1450.2/24

Right Out: 3.585 $\pm$ 0.375  $\chi^2$ /NDF: 424.5/23

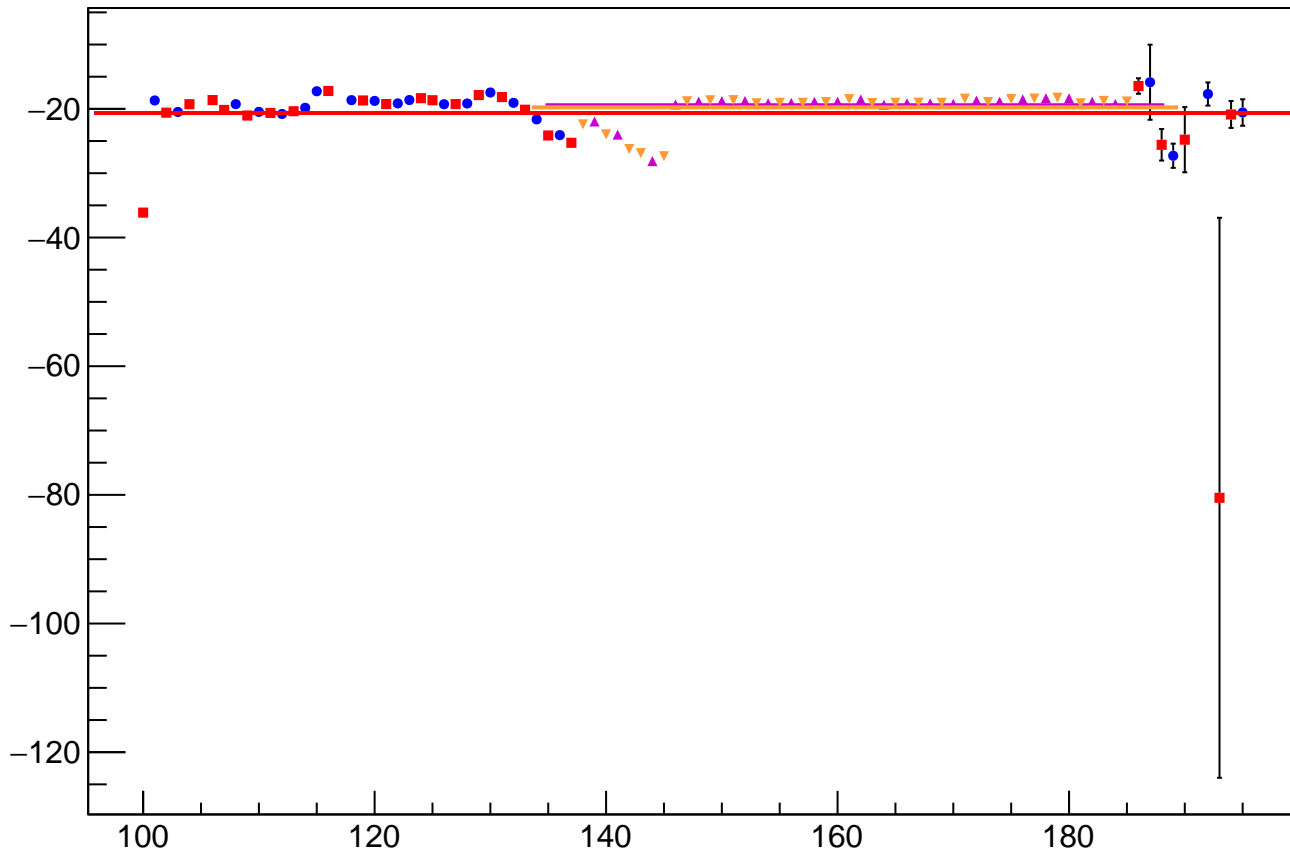
Left In: 9.803 $\pm$ 0.172  $\chi^2$ /NDF:1158.7/22

+ sign 8.969 $\pm$ 0.152  $\chi^2$ /NDF: 1966.6/45

All: 8.852 $\pm$ 0.109  $\chi^2$ /NDF: 3777.8/92

- sign 8.728 $\pm$ 0.156  $\chi^2$ /NDF: 1810.1/46

# reg\_asym\_right\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-20.644 \pm 0.019$   $\chi^2/\text{NDF}: 12440.0/20$

Left Out:  $-19.767 \pm 0.008$   $\chi^2/\text{NDF}: 91617.3/24$

Right Out:  $-20.639 \pm 0.019$   $\chi^2/\text{NDF}: 13804.6/23$

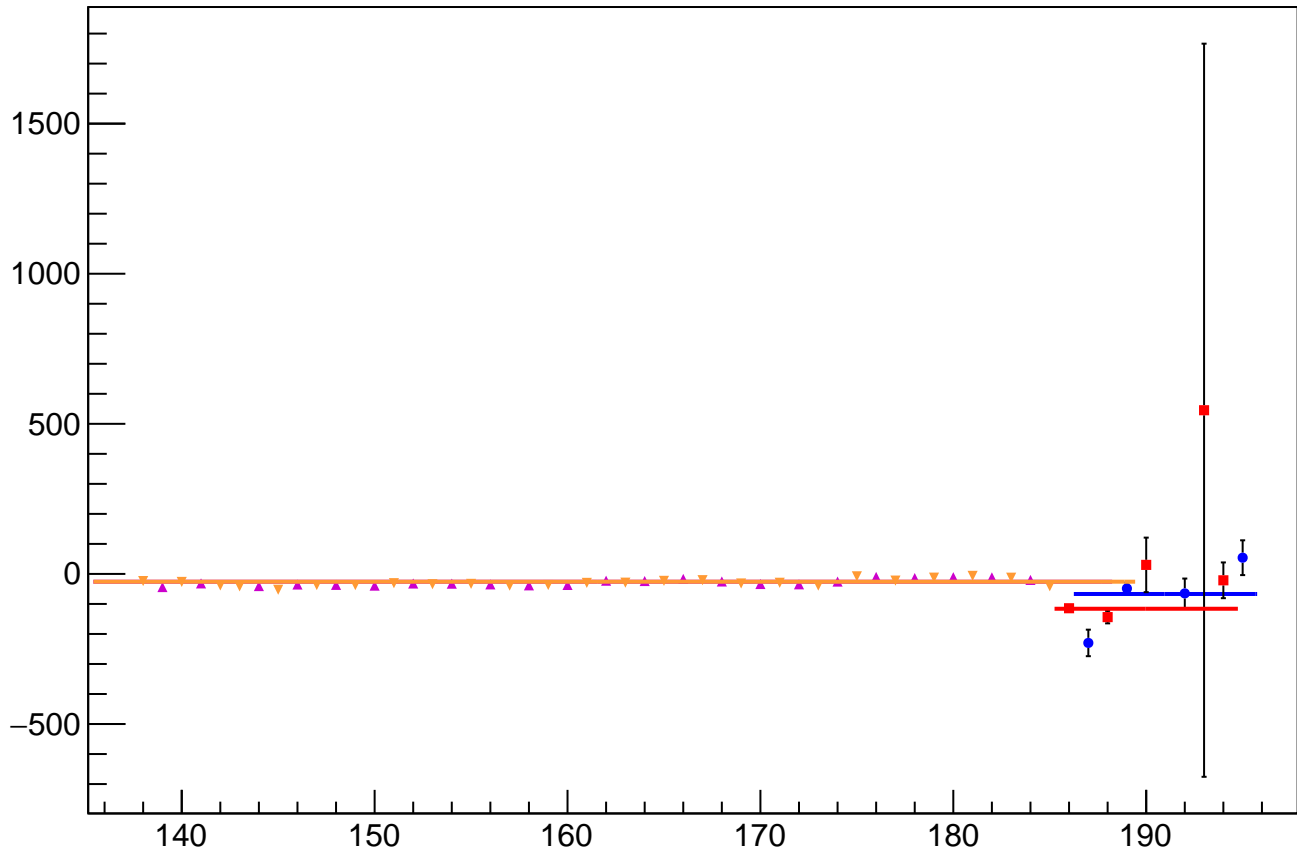
Left In:  $-19.435 \pm 0.008$   $\chi^2/\text{NDF}: 53170.9/22$

+ sign  $-19.892 \pm 0.007$   $\chi^2/\text{NDF}: 105820.1/45$

All:  $-19.751 \pm 0.005$   $\chi^2/\text{NDF}: 176825.0/92$

- sign  $-19.607 \pm 0.007$   $\chi^2/\text{NDF}: 70252.5/46$

# reg\_asym\_right\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-66.846 \pm 16.294$   $\chi^2/\text{NDF}: 18.8/3$

Left Out:  $-25.899 \pm 0.192$   $\chi^2/\text{NDF}: 4127.5/24$

Right Out:  $-116.041 \pm 8.485$   $\chi^2/\text{NDF}: 7.2/4$

Left In:  $-26.046 \pm 0.195$   $\chi^2/\text{NDF}: 3246.7/22$

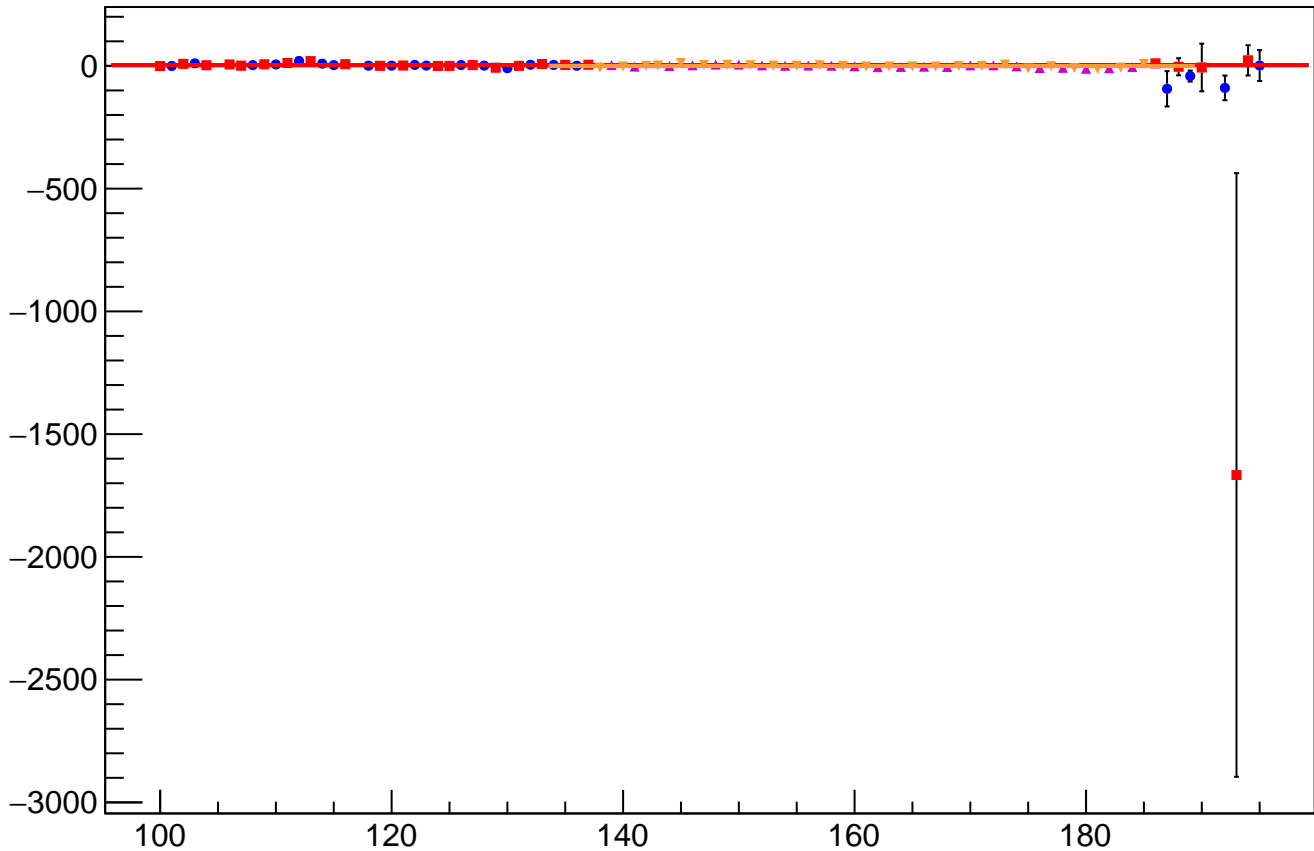
+ sign  $-25.905 \pm 0.192$   $\chi^2/\text{NDF}: 4152.7/28$

All:  $-25.998 \pm 0.137$   $\chi^2/\text{NDF}: 7519.6/56$

- sign  $-26.094 \pm 0.195$   $\chi^2/\text{NDF}: 3366.4/27$



# reg\_asym\_right\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $2.441 \pm 0.315$   $\chi^2/\text{NDF}: 301.3/20$

Left Out:  $-0.596 \pm 0.146$   $\chi^2/\text{NDF}: 1310.7/24$

Right Out:  $3.596 \pm 0.318$   $\chi^2/\text{NDF}: 282.4/23$

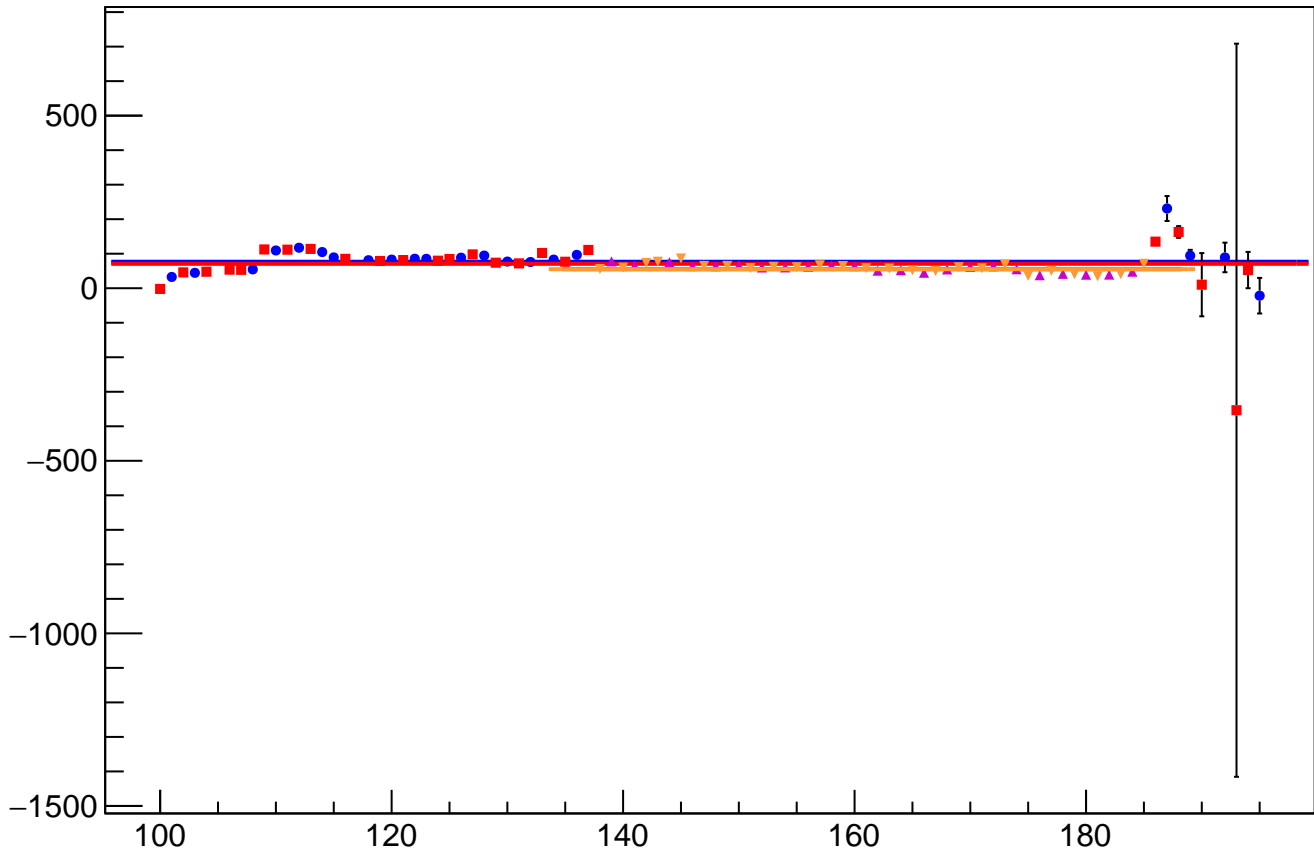
Left In:  $-0.795 \pm 0.151$   $\chi^2/\text{NDF}: 1106.3/22$

+ sign  $-0.057 \pm 0.133$   $\chi^2/\text{NDF}: 1688.5/45$

All:  $-0.025 \pm 0.095$   $\chi^2/\text{NDF}: 3233.1/92$

- sign  $0.009 \pm 0.136$   $\chi^2/\text{NDF}: 1544.4/46$

# reg\_asym\_right\_dd\_diff\_bpm4eX\_slope vs Slug



Right In: 76.725 $\pm$ 0.577  $\chi^2$ /NDF: 2287.9/20

Left Out: 55.111 $\pm$ 0.192  $\chi^2$ /NDF: 4560.2/24

Right Out: 70.747 $\pm$ 0.549  $\chi^2$ /NDF: 4489.9/23

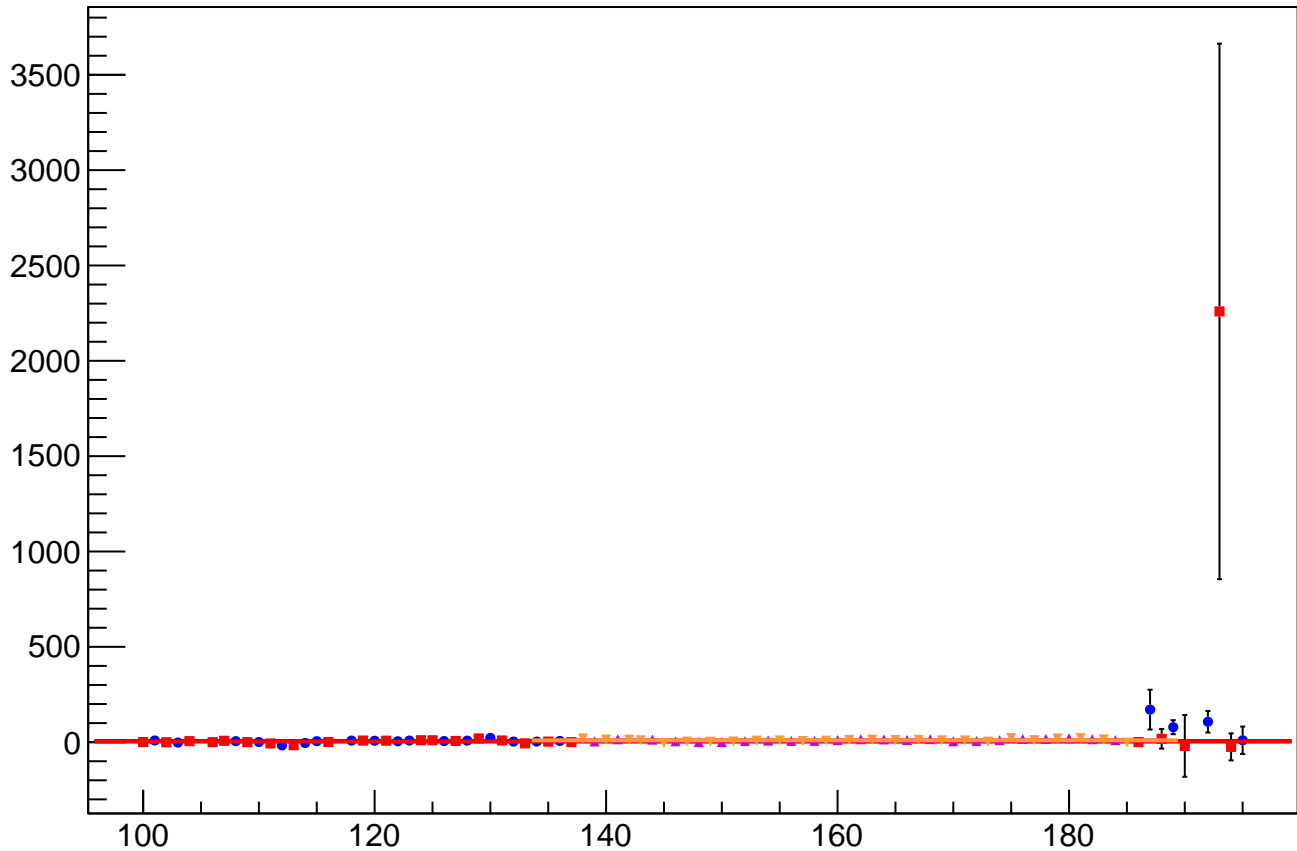
Left In: 55.094 $\pm$ 0.194  $\chi^2$ /NDF: 3664.6/22

+ sign 57.259 $\pm$ 0.182  $\chi^2$ /NDF: 8113.1/45

All: 57.044 $\pm$ 0.129  $\chi^2$ /NDF: 16994.0/92

- sign 56.827 $\pm$ 0.183  $\chi^2$ /NDF: 8878.1/46

# reg\_asym\_right\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $5.441 \pm 0.361$   $\chi^2/\text{NDF}: 393.9/20$

Left Out:  $9.675 \pm 0.168$   $\chi^2/\text{NDF}: 1441.3/24$

Right Out:  $3.279 \pm 0.366$   $\chi^2/\text{NDF}: 427.9/23$

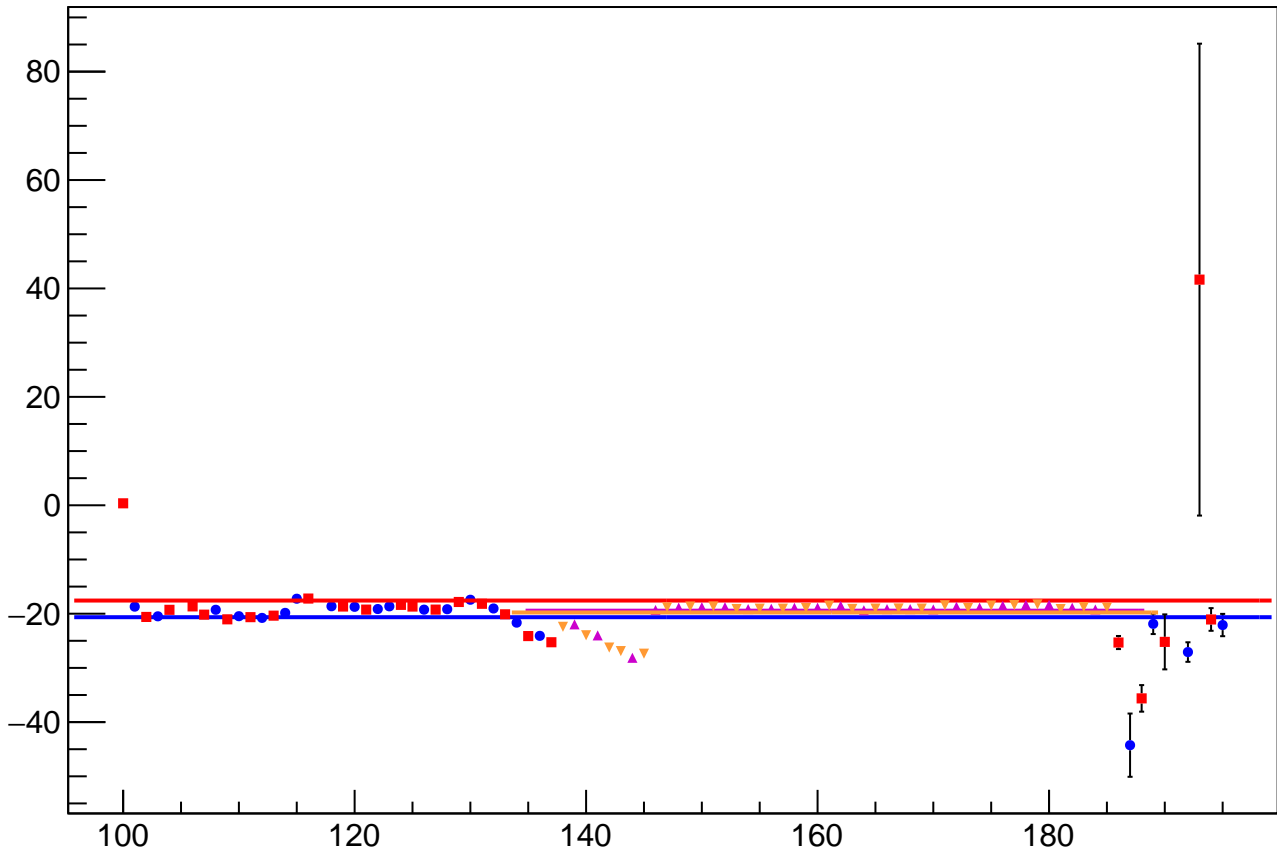
Left In:  $9.738 \pm 0.172$   $\chi^2/\text{NDF}: 1191.1/22$

+ sign  $8.923 \pm 0.152$   $\chi^2/\text{NDF}: 1948.3/45$

All:  $8.750 \pm 0.109$   $\chi^2/\text{NDF}: 3825.8/92$

- sign  $8.569 \pm 0.155$   $\chi^2/\text{NDF}: 1874.8/46$

# reg\_asym\_right\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $-20.646 \pm 0.019$   $\chi^2/\text{NDF}: 12492.7/20$

Left Out:  $-19.775 \pm 0.008$   $\chi^2/\text{NDF}: 91510.1/24$

Right Out:  $-17.574 \pm 0.018$   $\chi^2/\text{NDF}: 178420.3/23$

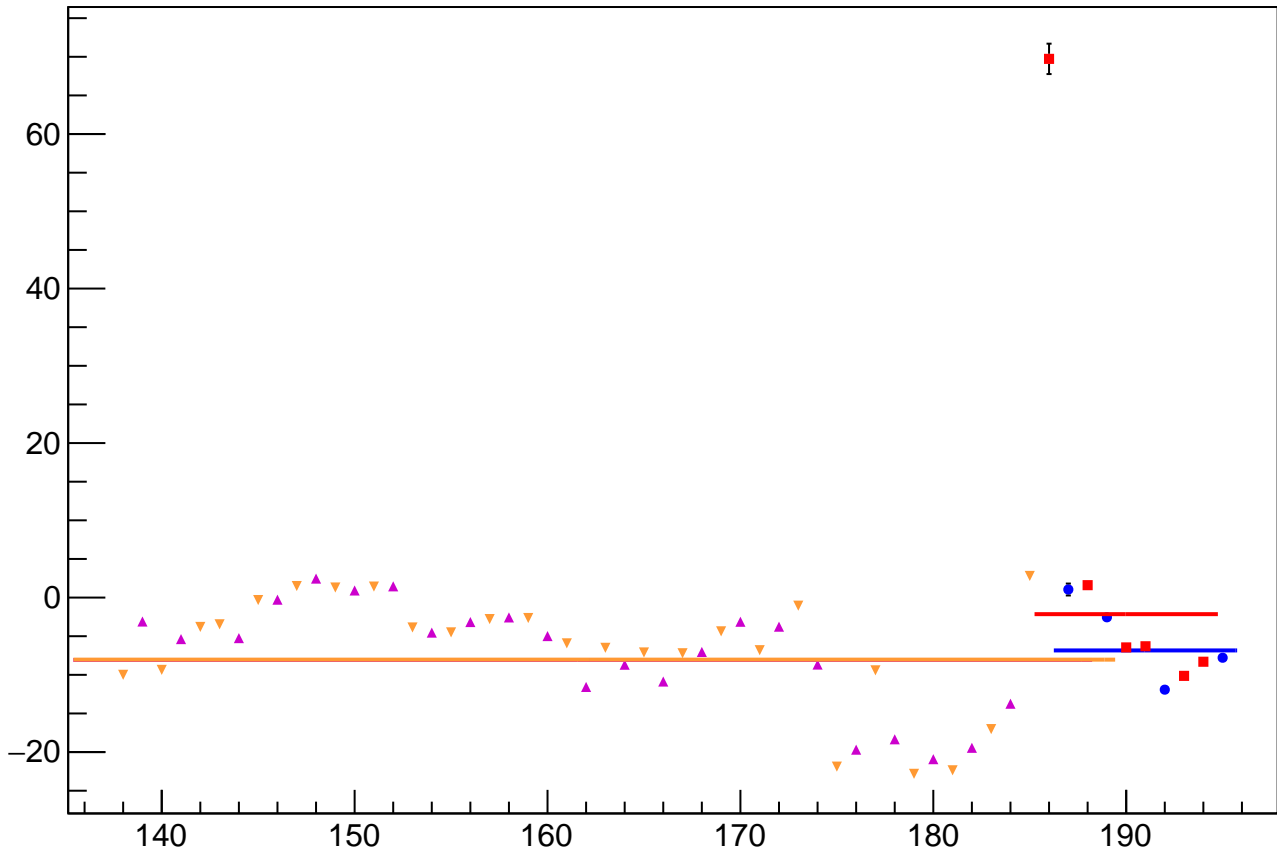
Left In:  $-19.445 \pm 0.008$   $\chi^2/\text{NDF}: 53124.1/22$

+ sign  $-19.899 \pm 0.007$   $\chi^2/\text{NDF}: 105740.5/45$

All:  $-19.518 \pm 0.005$   $\chi^2/\text{NDF}: 351694.2/92$

- sign  $-19.140 \pm 0.007$   $\chi^2/\text{NDF}: 240541.6/46$

# reg\_asym\_sam\_15\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-6.841 \pm 0.215$   $\chi^2/\text{NDF}$ : 399.8/3

Left Out:  $-8.034 \pm 0.070$   $\chi^2/\text{NDF}$ : 12568.0/24

Right Out:  $-2.145 \pm 0.139$   $\chi^2/\text{NDF}$ : 2539.3/5

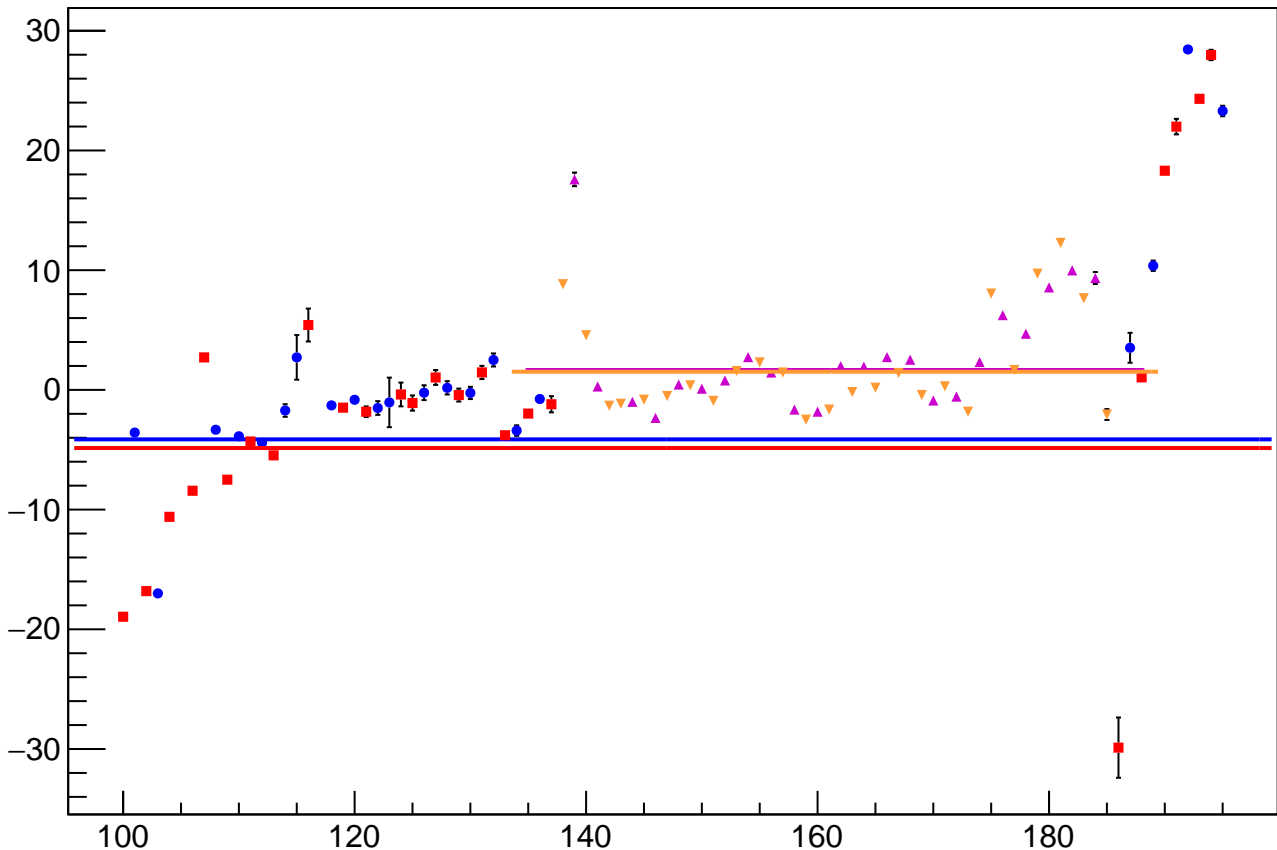
Left In:  $-8.078 \pm 0.072$   $\chi^2/\text{NDF}$ : 10541.6/22

+ sign  $-7.919 \pm 0.067$   $\chi^2/\text{NDF}$ : 12995.7/28

All:  $-7.351 \pm 0.046$   $\chi^2/\text{NDF}$ : 27644.4/57

- sign  $-6.832 \pm 0.064$   $\chi^2/\text{NDF}$ : 14510.5/28

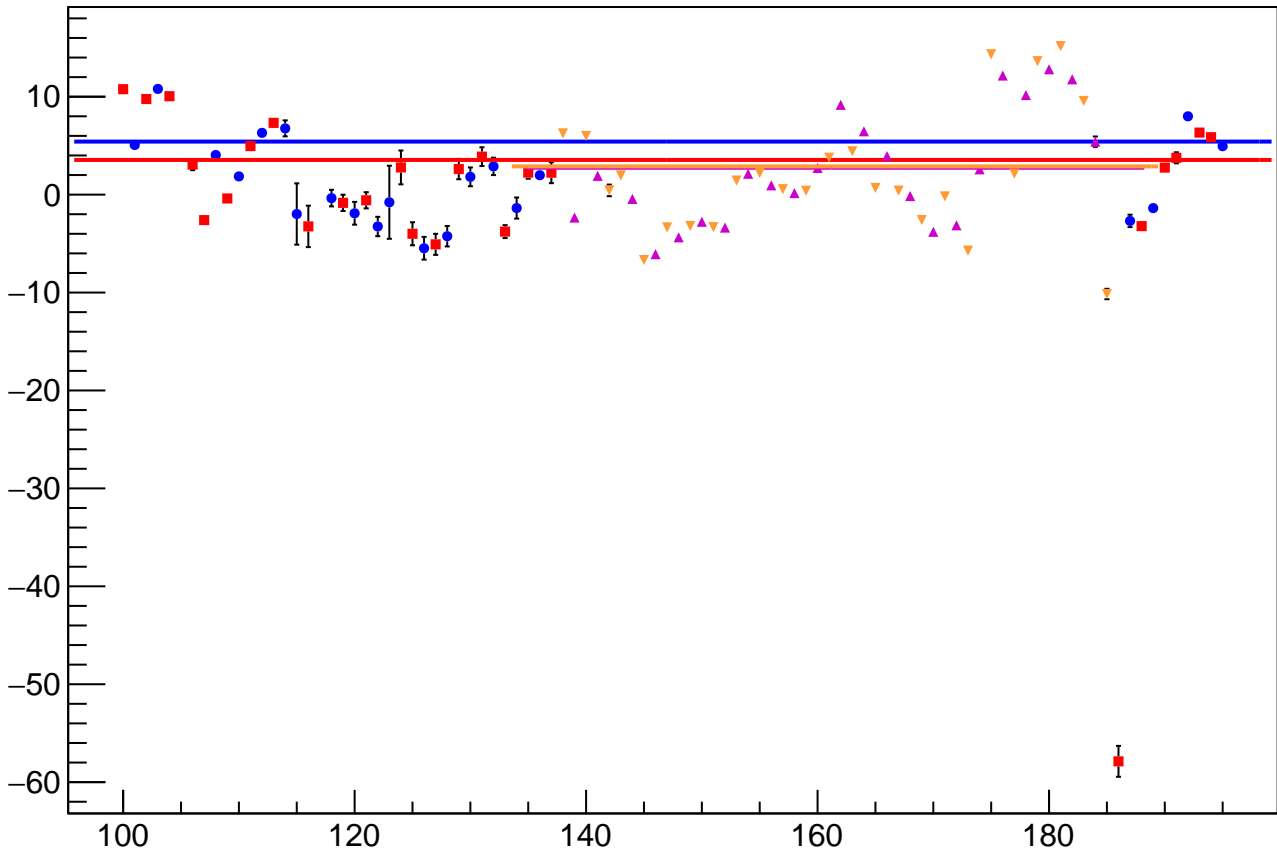
# reg\_asym\_sam\_15\_avg\_diff\_bpm4aY\_slope vs Slug



Right In: -4.133+/-0.053  $\chi^2$ /NDF: 21609.1/20  
Left Out: 1.518+/-0.054  $\chi^2$ /NDF:4847.5/24  
Right Out: -4.858+/-0.056  $\chi^2$ /NDF: 30307.5/24  
Left In: 1.662+/-0.057  $\chi^2$ /NDF:4034.2/22

+ sign -1.353+/-0.038  $\chi^2$ /NDF: 31947.2/45  
All: -1.488+/-0.028  $\chi^2$ /NDF: 73033.0/93  
- sign -1.635+/-0.040  $\chi^2$ /NDF: 41059.6/47

# reg\_asym\_sam\_15\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $5.417 \pm 0.081$   $\chi^2/\text{NDF}: 2030.4/20$

Left Out:  $2.884 \pm 0.070$   $\chi^2/\text{NDF}: 8893.2/24$

Right Out:  $3.542 \pm 0.074$   $\chi^2/\text{NDF}: 7025.5/24$

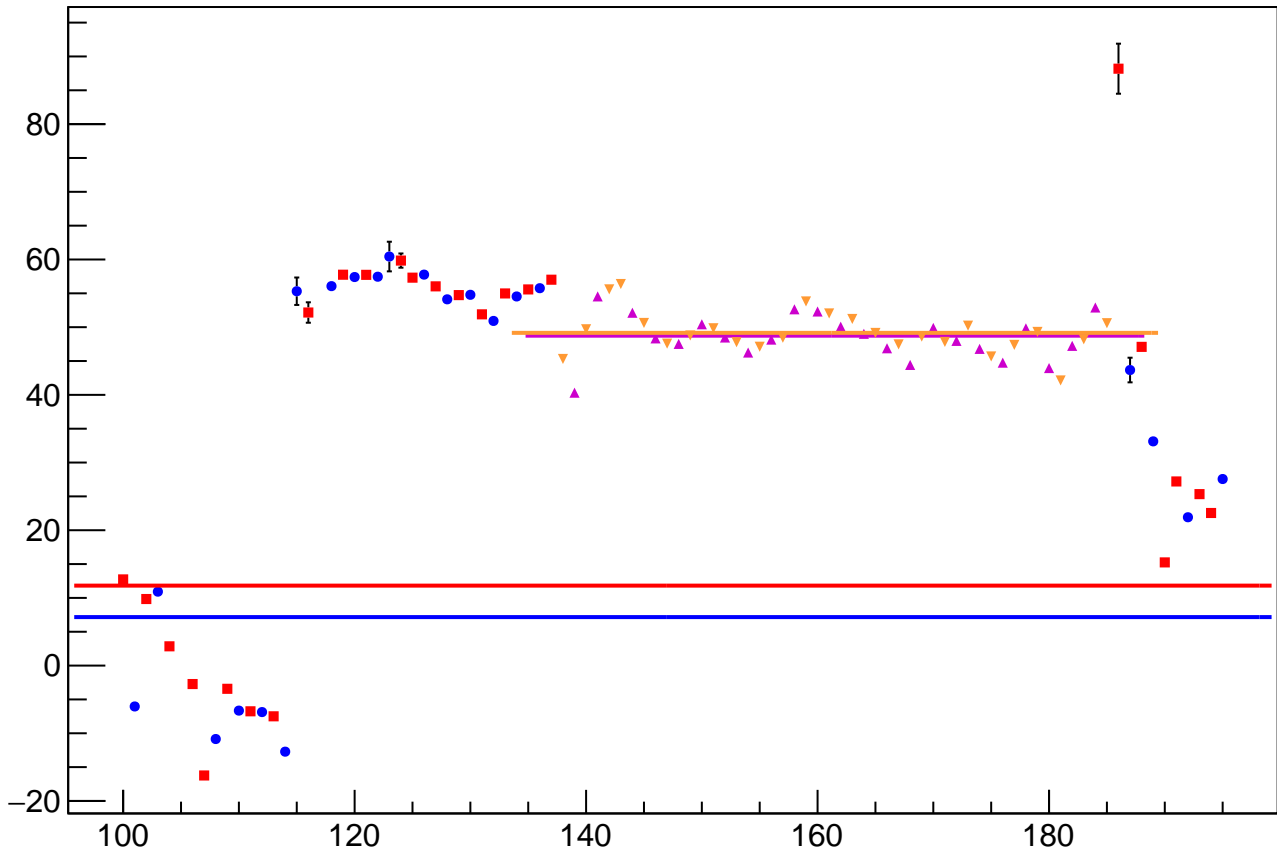
Left In:  $2.745 \pm 0.071$   $\chi^2/\text{NDF}: 7183.1/22$

+ sign  $3.970 \pm 0.053$   $\chi^2/\text{NDF}: 11481.0/45$

All:  $3.537 \pm 0.037$   $\chi^2/\text{NDF}: 25879.0/93$

- sign  $3.132 \pm 0.051$   $\chi^2/\text{NDF}: 14269.1/47$

# reg\_asym\_sam\_15\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $7.165 \pm 0.063$   $\chi^2/\text{NDF}: 125513.3/20$

Left Out:  $49.163 \pm 0.062$   $\chi^2/\text{NDF}: 2259.9/24$

Right Out:  $11.815 \pm 0.067$   $\chi^2/\text{NDF}: 132201.4/24$

Left In:  $48.744 \pm 0.064$   $\chi^2/\text{NDF}: 2097.7/22$

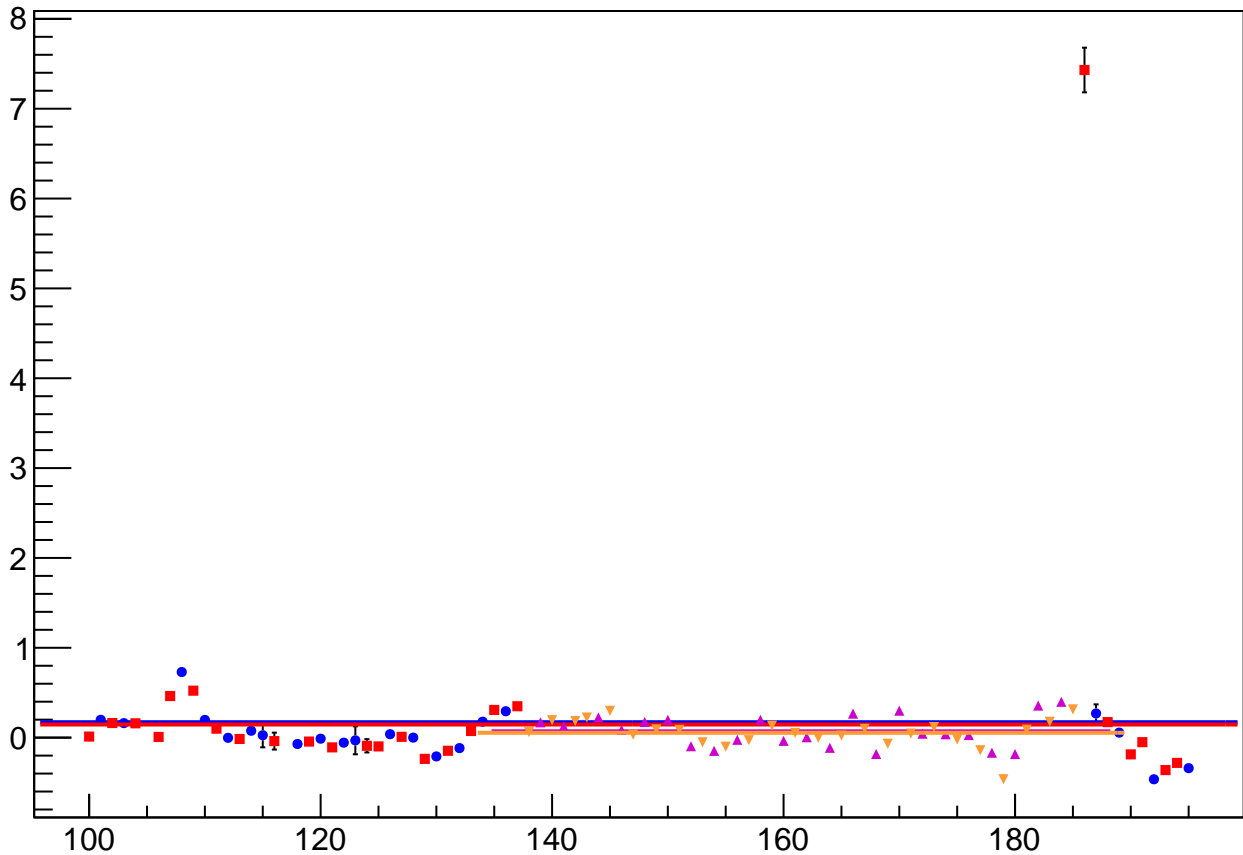
+ sign  $28.701 \pm 0.044$   $\chi^2/\text{NDF}: 353217.3/45$

All:  $29.861 \pm 0.032$   $\chi^2/\text{NDF}: 648990.4/93$

- sign  $31.122 \pm 0.046$   $\chi^2/\text{NDF}: 294336.2/47$



# reg\_asym\_sam\_15\_avg\_diff\_bpm12X\_slope vs Slug



Right In: 0.172 $\pm$ 0.003  $\chi^2$ /NDF: 7392.7/20

Left Out: 0.054 $\pm$ 0.003  $\chi^2$ /NDF: 2379.8/24

Right Out: 0.146 $\pm$ 0.003  $\chi^2$ /NDF: 6268.0/24

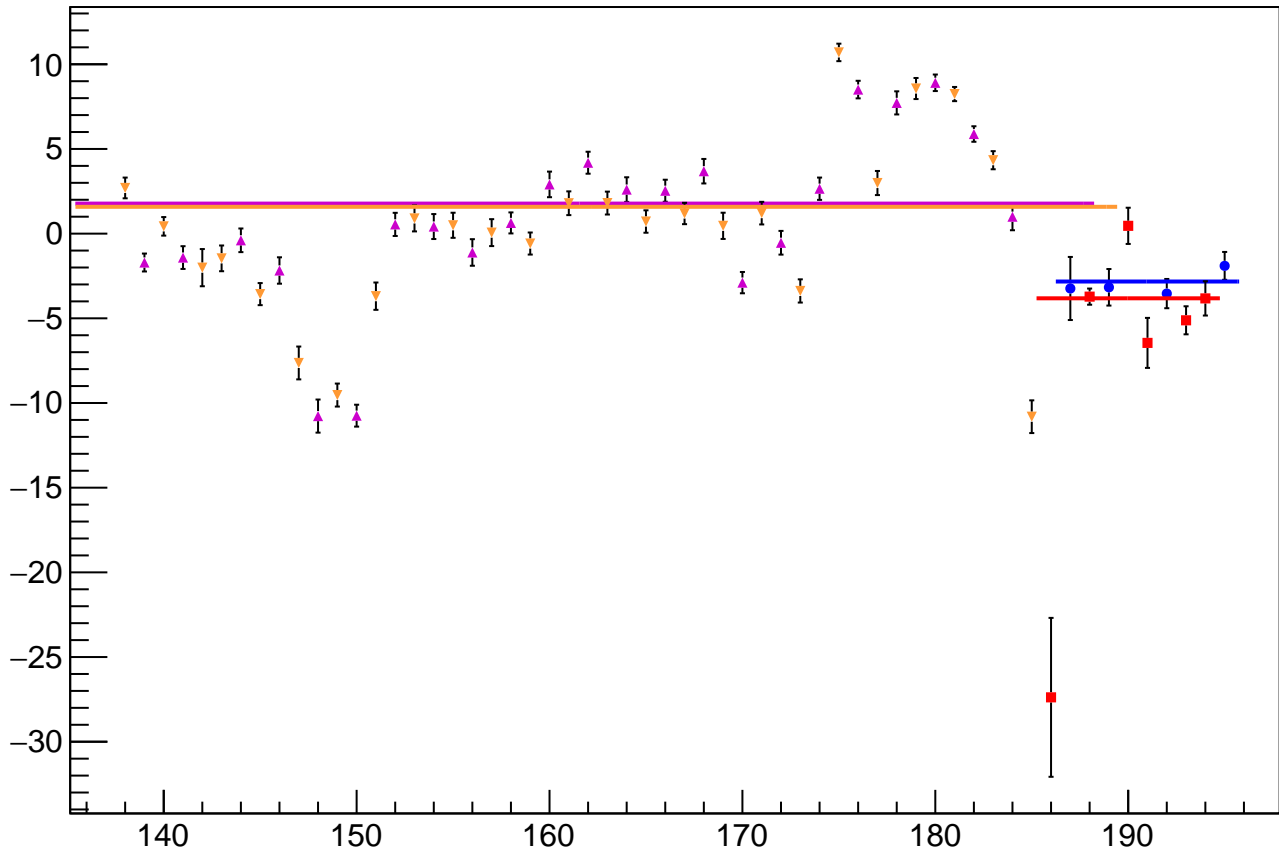
Left In: 0.070 $\pm$ 0.003  $\chi^2$ /NDF: 3233.8/22

+ sign 0.116 $\pm$ 0.002  $\chi^2$ /NDF: 10692.2/45

All: 0.115 $\pm$ 0.001  $\chi^2$ /NDF: 20587.6/93

- sign 0.113 $\pm$ 0.002  $\chi^2$ /NDF: 9893.7/47

# reg\_asym\_sam\_15\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-2.827 \pm 0.502$   $\chi^2/\text{NDF}: 2.1/3$

Left Out:  $1.584 \pm 0.133$   $\chi^2/\text{NDF}: 1458.8/24$

Right Out:  $-3.819 \pm 0.349$   $\chi^2/\text{NDF}: 46.9/5$

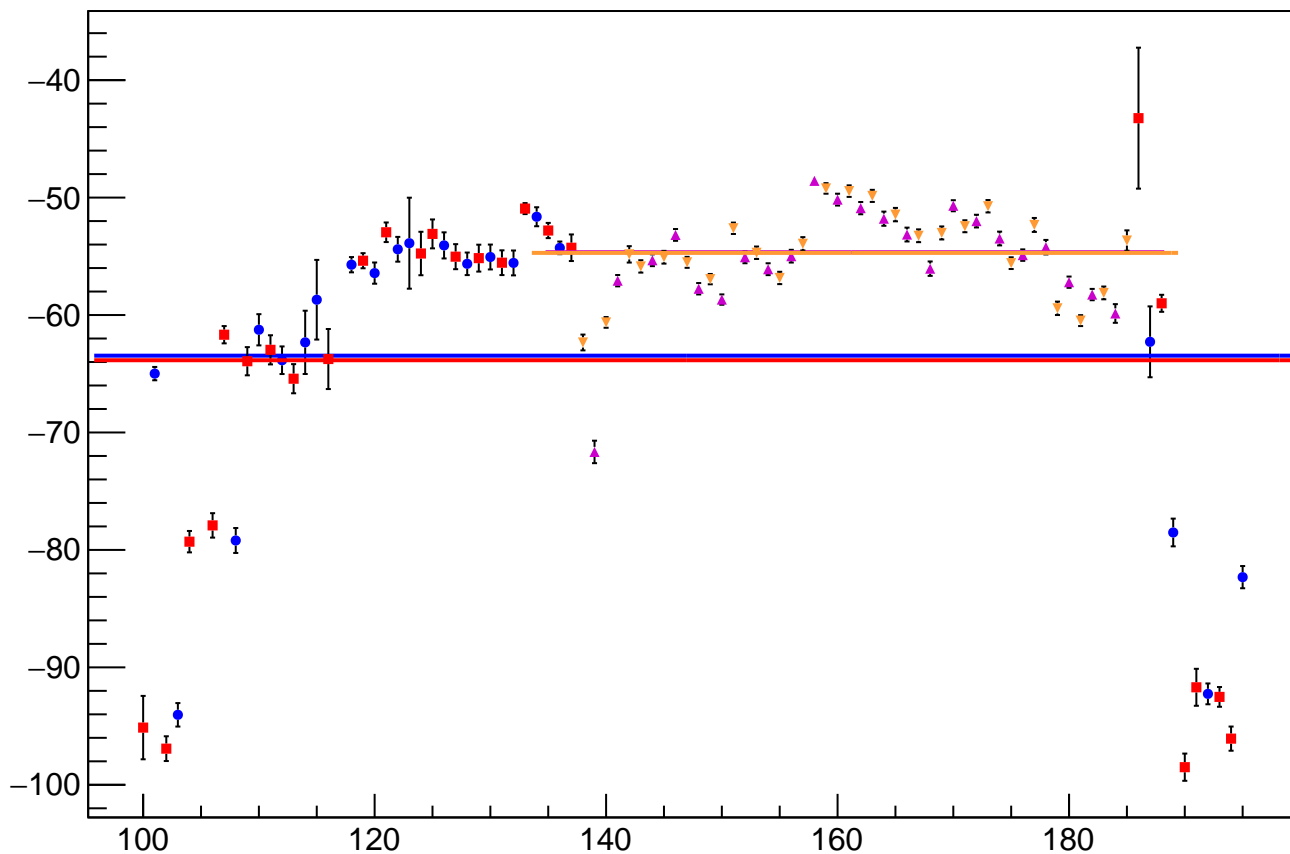
Left In:  $1.774 \pm 0.135$   $\chi^2/\text{NDF}: 1297.3/22$

+ sign  $1.296 \pm 0.128$   $\chi^2/\text{NDF}: 1533.1/28$

All:  $1.168 \pm 0.090$   $\chi^2/\text{NDF}: 3102.6/57$

- sign  $1.044 \pm 0.126$   $\chi^2/\text{NDF}: 1567.5/28$

# reg\_asym\_sam\_15\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-63.460 \pm 0.209$   $\chi^2/\text{NDF}: 3825.2/20$

Left Out:  $-54.707 \pm 0.106$   $\chi^2/\text{NDF}: 1126.0/24$

Right Out:  $-63.849 \pm 0.190$   $\chi^2/\text{NDF}: 6758.8/24$

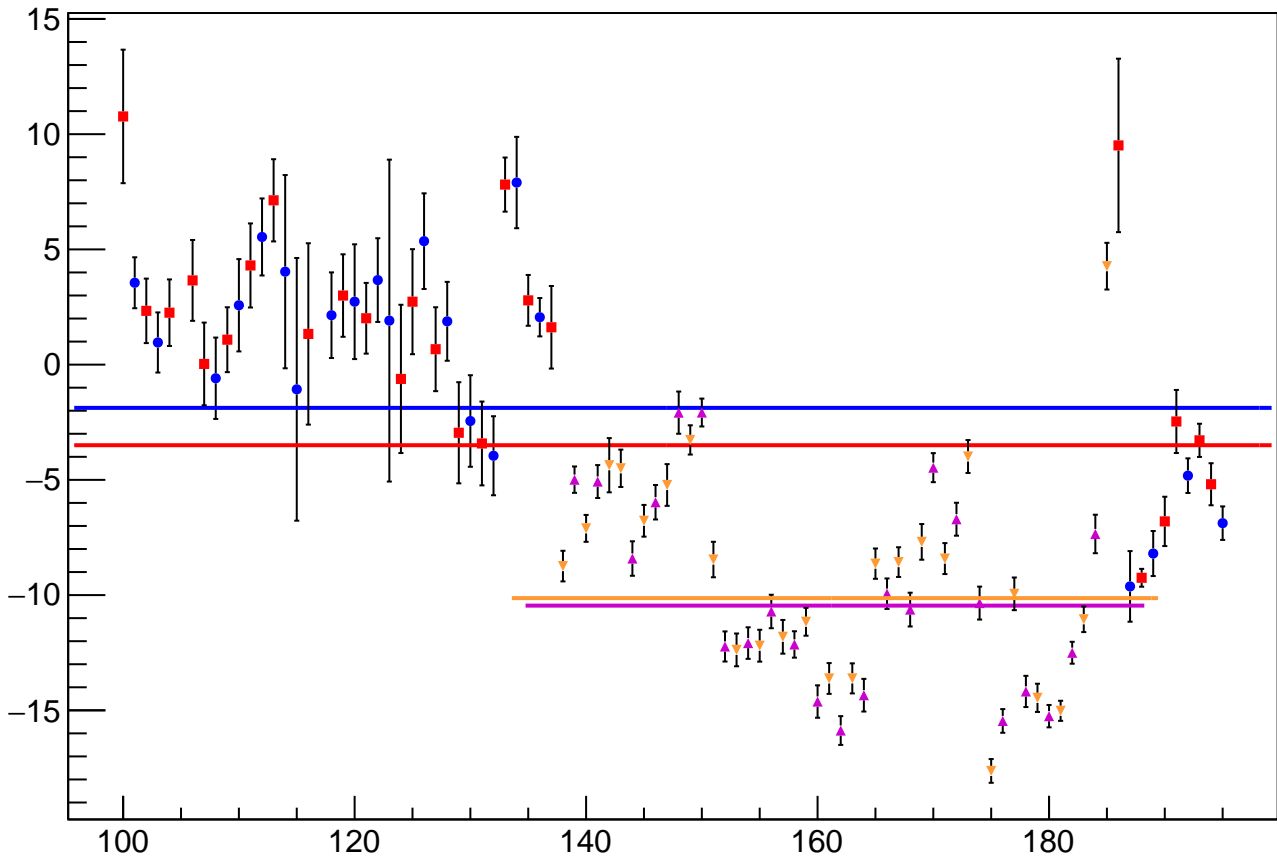
Left In:  $-54.650 \pm 0.110$   $\chi^2/\text{NDF}: 1077.1/22$

+ sign  $-56.493 \pm 0.094$   $\chi^2/\text{NDF}: 6350.1/45$

All:  $-56.719 \pm 0.067$   $\chi^2/\text{NDF}: 15953.2/93$

- sign  $-56.950 \pm 0.095$   $\chi^2/\text{NDF}: 9591.5/47$

# reg\_asym\_sam\_15\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-1.876 \pm 0.299$   $\chi^2/\text{NDF}: 269.1/20$

Left Out:  $-10.131 \pm 0.133$   $\chi^2/\text{NDF}: 1055.4/24$

Right Out:  $-3.496 \pm 0.236$   $\chi^2/\text{NDF}: 562.9/24$

Left In:  $-10.456 \pm 0.135$   $\chi^2/\text{NDF}: 1002.7/22$

+ sign  $-8.769 \pm 0.121$   $\chi^2/\text{NDF}: 1962.0/45$

All:  $-8.760 \pm 0.084$   $\chi^2/\text{NDF}: 4182.1/93$

- sign  $-8.751 \pm 0.117$   $\chi^2/\text{NDF}: 2220.1/47$

# reg\_asym\_sam\_15\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-29.148 \pm 0.239$   $\chi^2/\text{NDF}: 6226.6/20$

Left Out:  $-38.006 \pm 0.119$   $\chi^2/\text{NDF}: 946.0/24$

Right Out:  $-27.772 \pm 0.223$   $\chi^2/\text{NDF}: 9580.2/24$

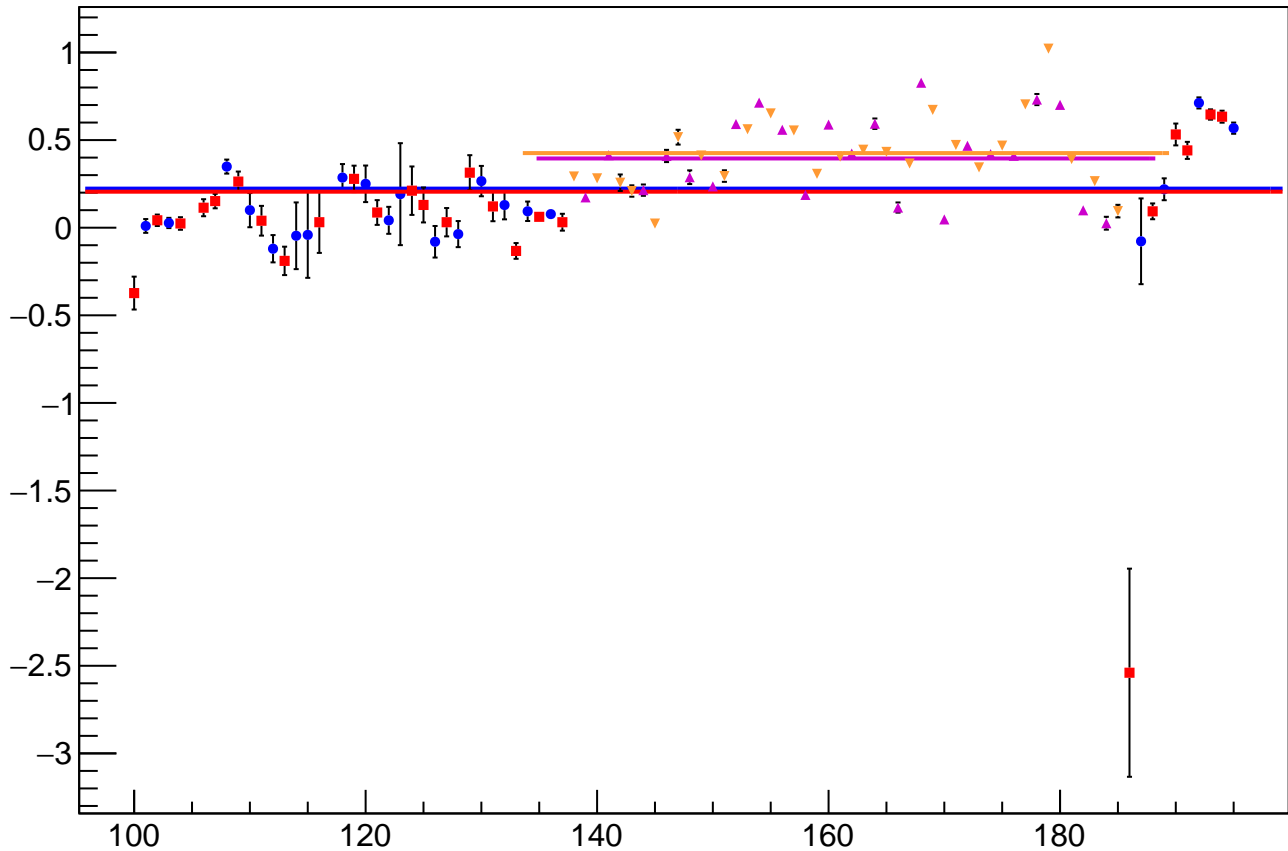
Left In:  $-37.809 \pm 0.122$   $\chi^2/\text{NDF}: 1039.9/22$

+ sign  $-36.255 \pm 0.106$   $\chi^2/\text{NDF}: 8272.6/45$

All:  $-35.876 \pm 0.076$   $\chi^2/\text{NDF}: 20474.9/93$

- sign  $-35.489 \pm 0.107$   $\chi^2/\text{NDF}: 12176.7/47$

# reg\_asym\_sam\_15\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $0.223 \pm 0.011$   $\chi^2/\text{NDF}: 544.7/20$

Left Out:  $0.426 \pm 0.005$   $\chi^2/\text{NDF}: 1303.7/24$

Right Out:  $0.206 \pm 0.010$   $\chi^2/\text{NDF}: 692.1/24$

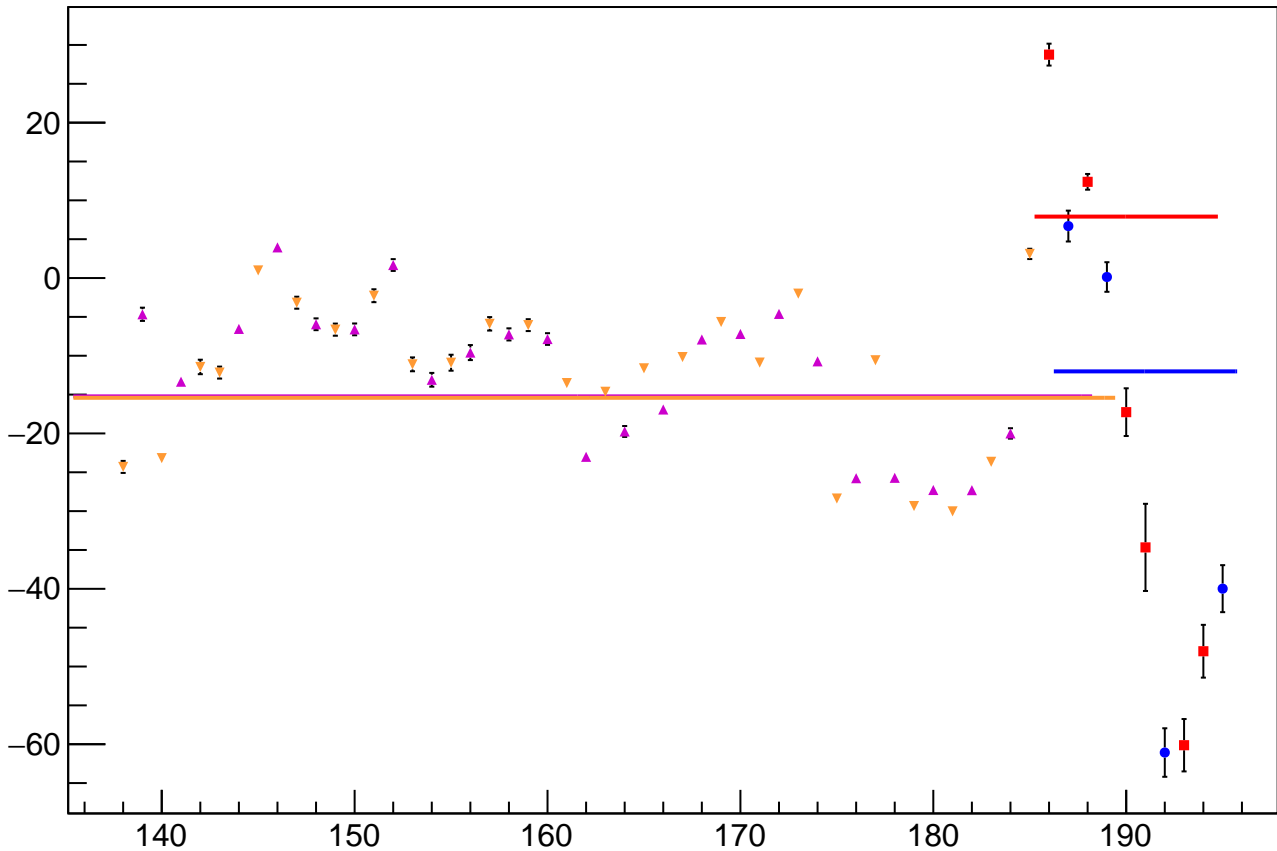
Left In:  $0.395 \pm 0.005$   $\chi^2/\text{NDF}: 1798.2/22$

+ sign  $0.386 \pm 0.005$   $\chi^2/\text{NDF}: 2126.2/45$

All:  $0.369 \pm 0.003$   $\chi^2/\text{NDF}: 4917.6/93$

- sign  $0.352 \pm 0.005$   $\chi^2/\text{NDF}: 2766.3/47$

# reg\_asym\_sam\_37\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-12.013 \pm 1.162$   $\chi^2/\text{NDF}: 461.5/3$

Left Out:  $-15.413 \pm 0.105$   $\chi^2/\text{NDF}: 10509.1/24$

Right Out:  $7.908 \pm 0.747$   $\chi^2/\text{NDF}: 1041.5/5$

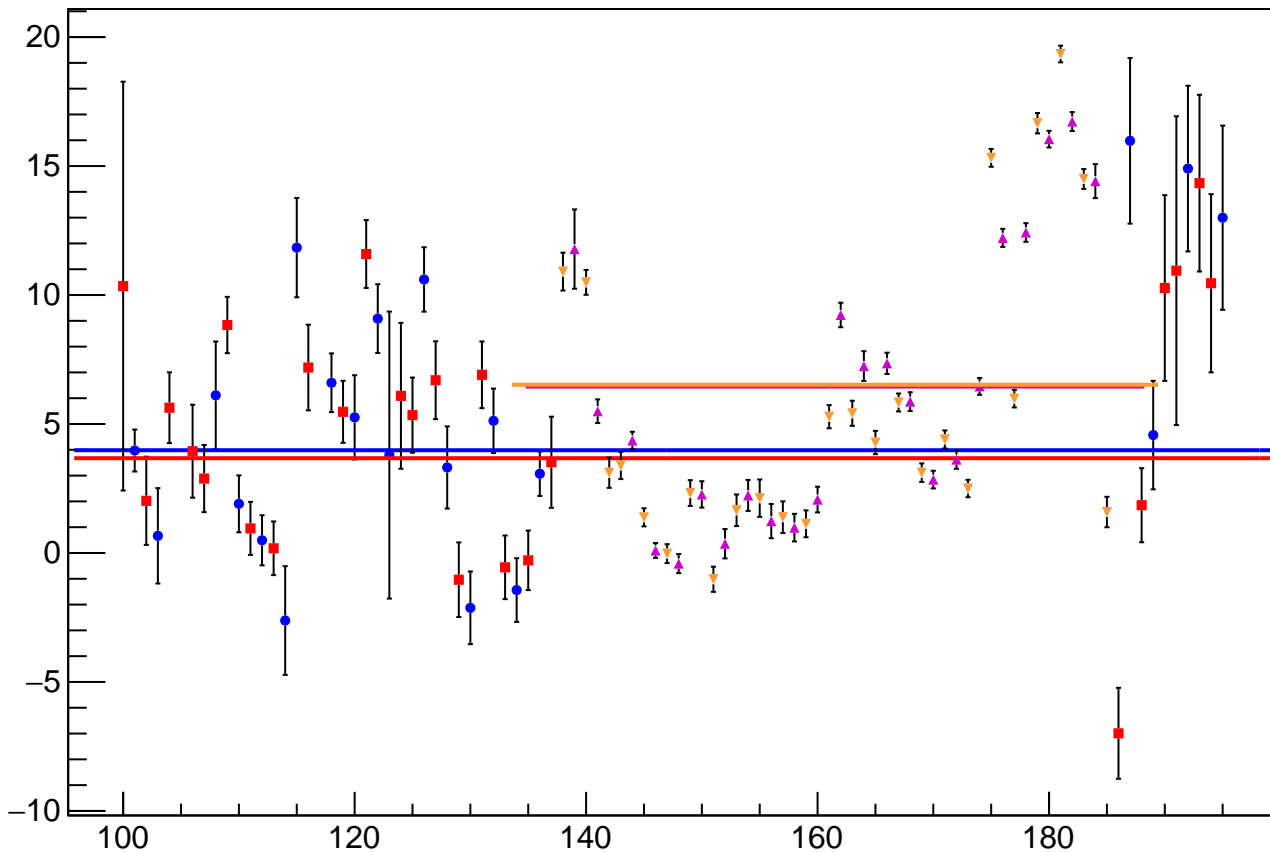
Left In:  $-15.229 \pm 0.107$   $\chi^2/\text{NDF}: 8657.3/22$

+ sign  $-15.385 \pm 0.105$   $\chi^2/\text{NDF}: 10979.1/28$

All:  $-15.079 \pm 0.074$   $\chi^2/\text{NDF}: 21634.7/57$

- sign  $-14.767 \pm 0.106$   $\chi^2/\text{NDF}: 10638.3/28$

# reg\_asym\_sam\_37\_avg\_diff\_bpm4aY\_slope vs Slug



Right In: 3.983 $\pm$ 0.304  $\chi^2$ /NDF: 168.0/20

Left Out: 6.521 $\pm$ 0.085  $\chi^2$ /NDF:4985.2/24

Right Out: 3.674 $\pm$ 0.301  $\chi^2$ /NDF: 190.7/24

Left In: 6.452 $\pm$ 0.086  $\chi^2$ /NDF:3948.0/22

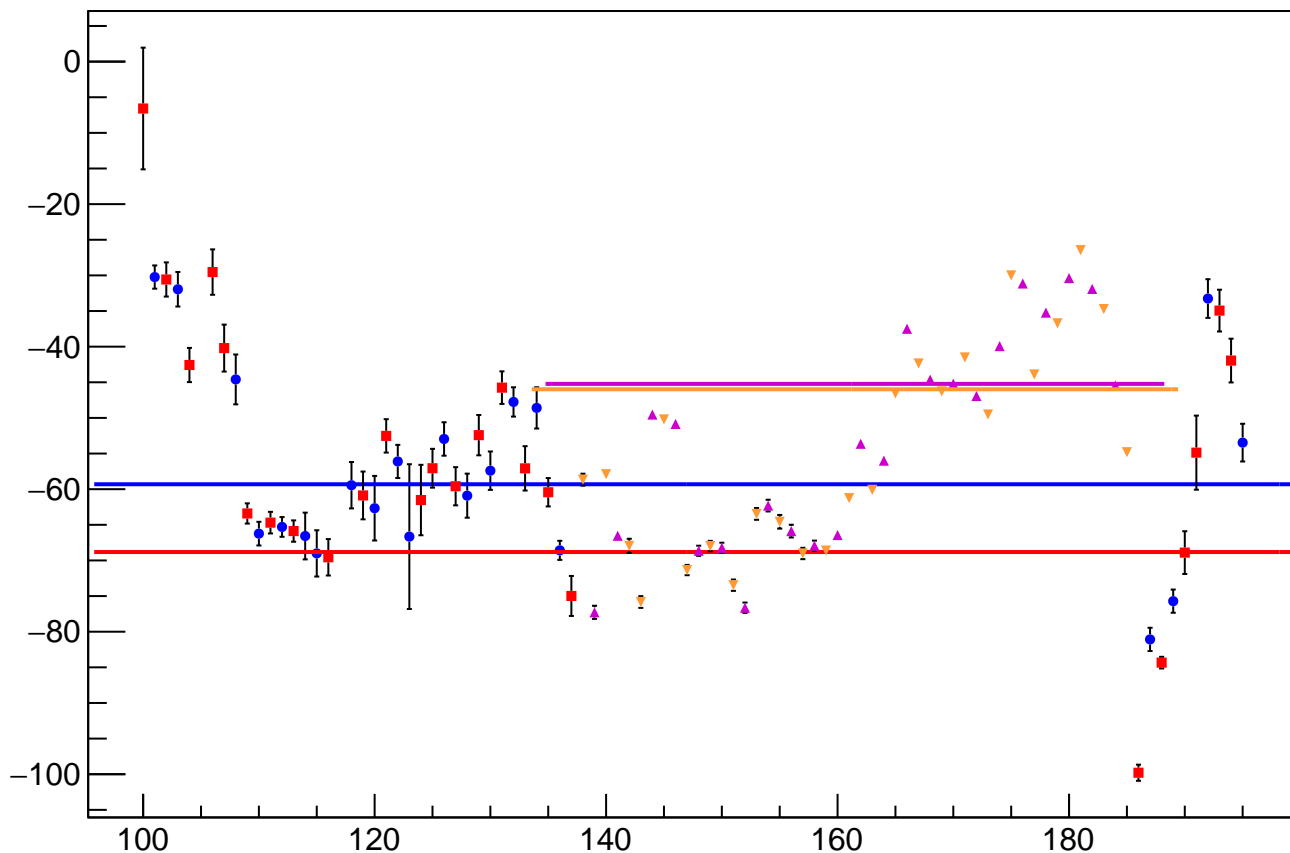
+ sign 6.335 $\pm$ 0.082  $\chi^2$ /NDF: 5217.9/45

All: 6.289 $\pm$ 0.058  $\chi^2$ /NDF: 9436.2/93

- sign 6.241 $\pm$ 0.083  $\chi^2$ /NDF: 4217.6/47



# reg\_asym\_sam\_37\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $-59.310 \pm 0.476$   $\chi^2/\text{NDF}: 993.3/20$

Left Out:  $-45.982 \pm 0.106$   $\chi^2/\text{NDF}: 17360.1/24$

Right Out:  $-68.819 \pm 0.404$   $\chi^2/\text{NDF}: 2266.1/24$

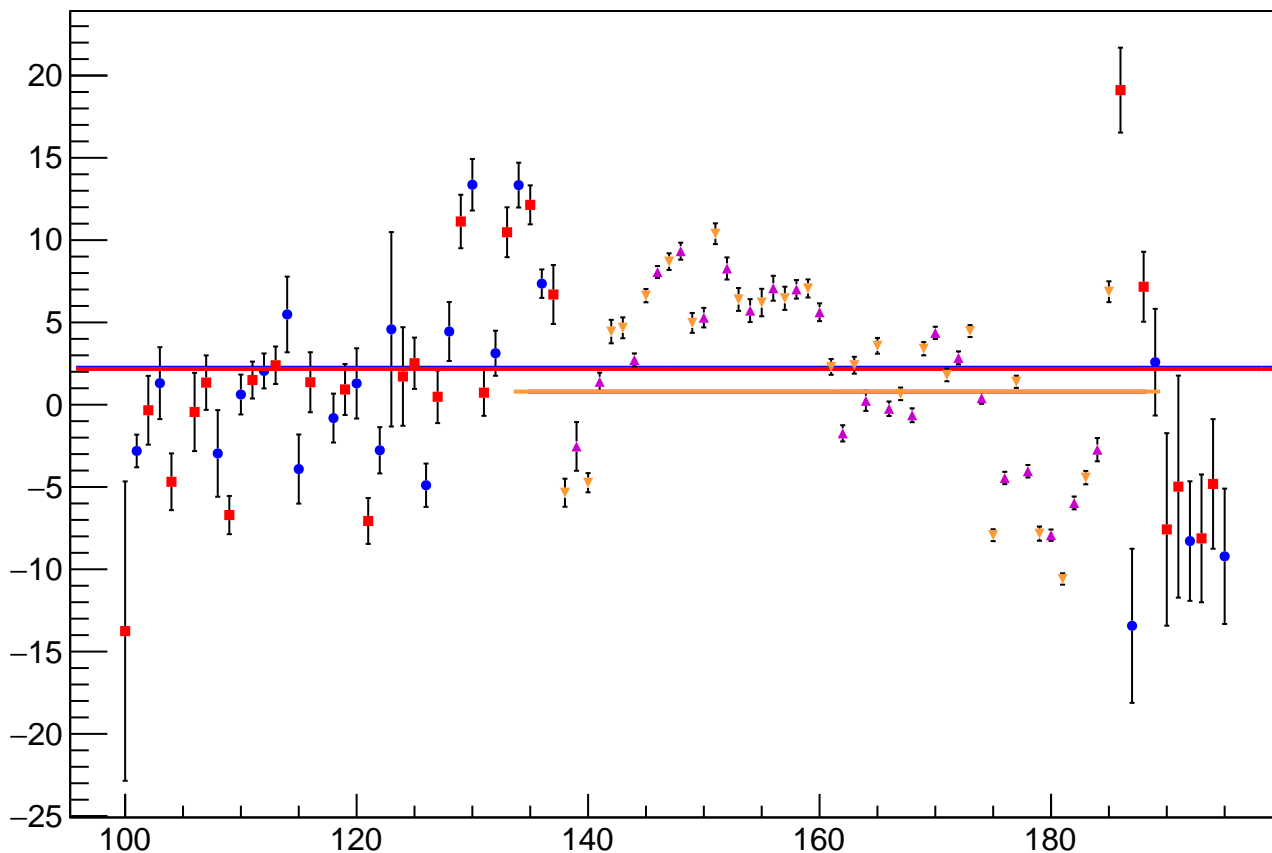
Left In:  $-45.222 \pm 0.107$   $\chi^2/\text{NDF}: 15600.2/22$

+ sign  $-46.614 \pm 0.104$   $\chi^2/\text{NDF}: 19099.1/45$

All:  $-46.693 \pm 0.073$   $\chi^2/\text{NDF}: 40149.9/93$

- sign  $-46.772 \pm 0.104$   $\chi^2/\text{NDF}: 21049.6/47$

# reg\_asym\_sam\_37\_avg\_diff\_bpm4eY\_slope vs Slug



Right In: 2.248 $\pm$ 0.342  $\chi^2$ /NDF: 270.2/20

Left Out: 0.797 $\pm$ 0.096  $\chi^2$ /NDF:3760.0/24

Right Out: 2.173 $\pm$ 0.344  $\chi^2$ /NDF: 327.8/24

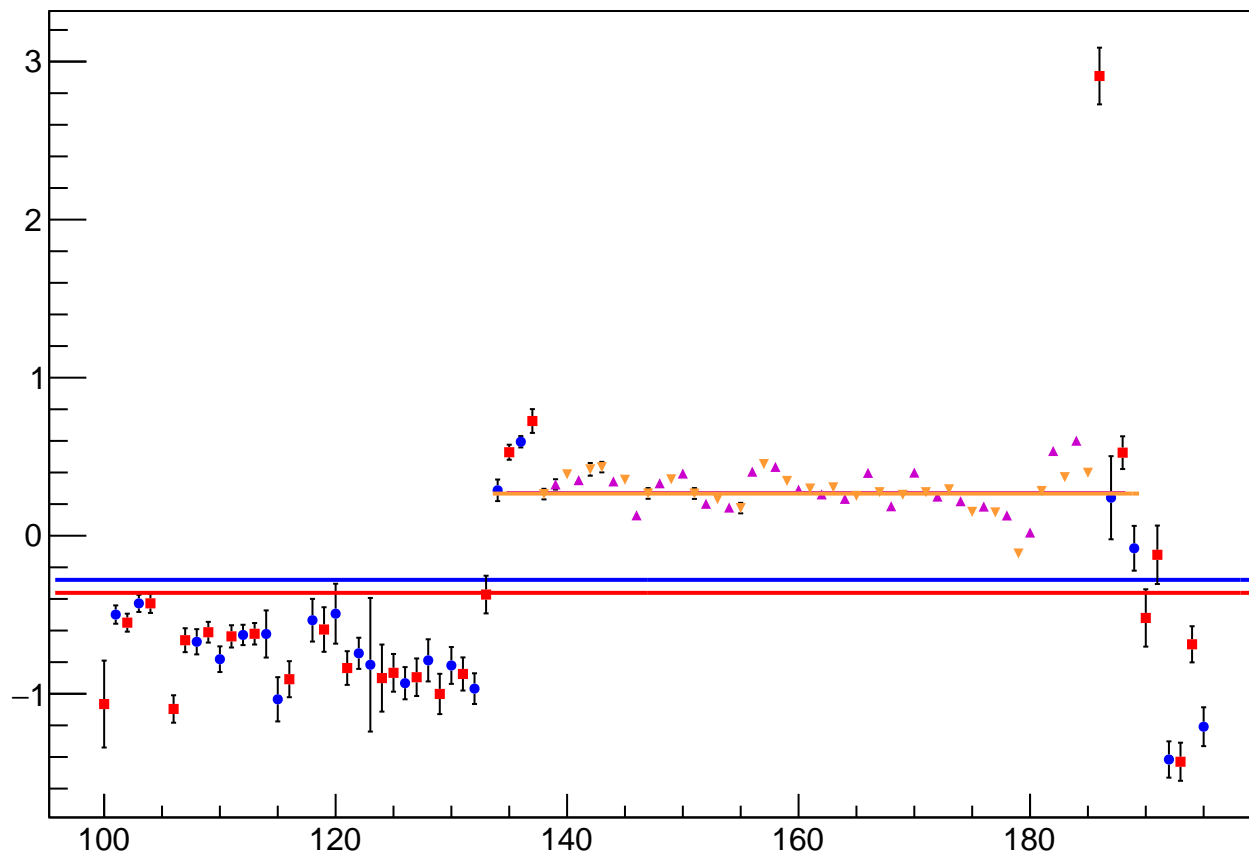
Left In: 0.792 $\pm$ 0.097  $\chi^2$ /NDF:2692.5/22

+ sign 0.902 $\pm$ 0.092  $\chi^2$ /NDF: 4046.8/45

All: 0.898 $\pm$ 0.065  $\chi^2$ /NDF: 7082.1/93

- sign 0.893 $\pm$ 0.093  $\chi^2$ /NDF: 3035.3/47

# reg\_asym\_sam\_37\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.279 \pm 0.018$   $\chi^2/\text{NDF}: 1124.0/20$

Left Out:  $0.267 \pm 0.004$   $\chi^2/\text{NDF}: 699.8/24$

Right Out:  $-0.361 \pm 0.018$   $\chi^2/\text{NDF}: 1342.2/24$

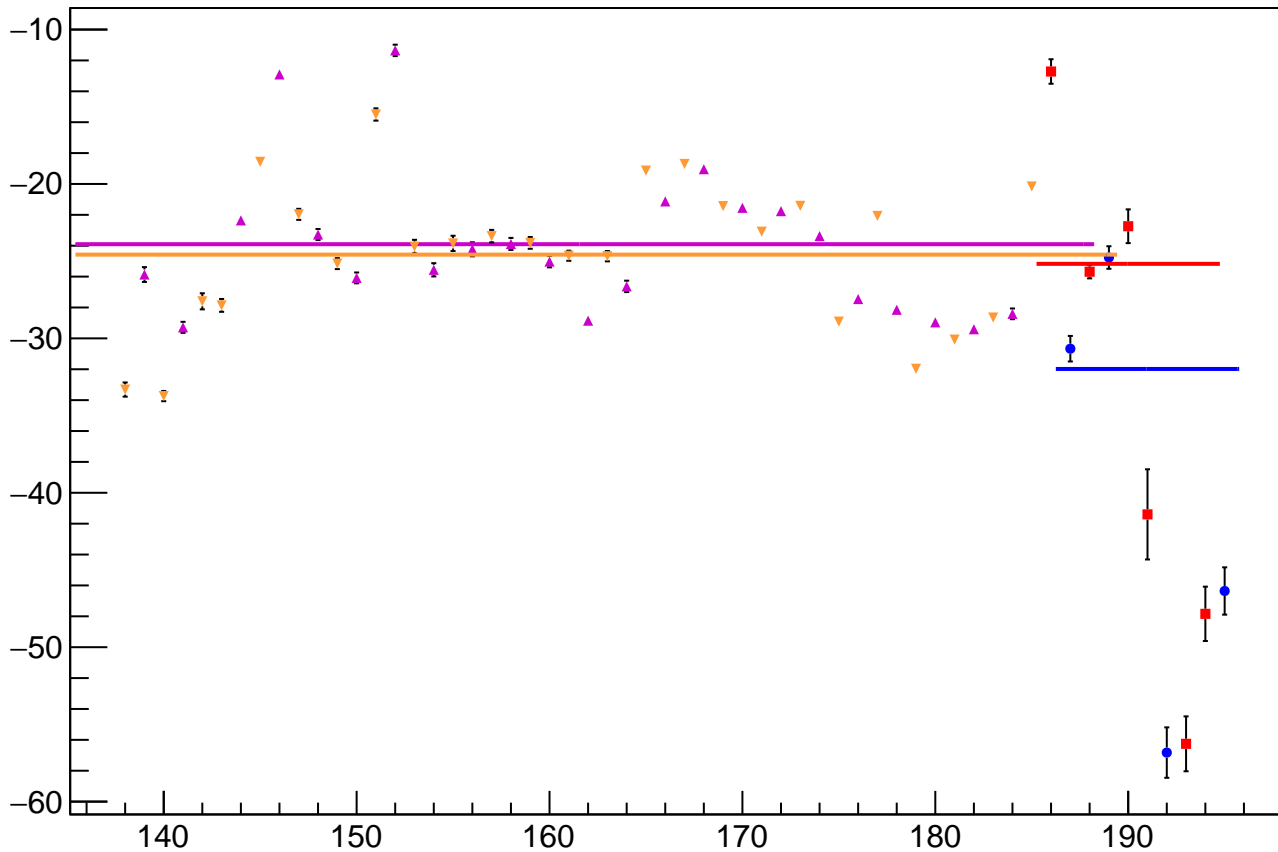
Left In:  $0.270 \pm 0.004$   $\chi^2/\text{NDF}: 969.9/22$

+ sign  $0.237 \pm 0.004$   $\chi^2/\text{NDF}: 2668.9/45$

All:  $0.236 \pm 0.003$   $\chi^2/\text{NDF}: 6147.1/93$

- sign  $0.234 \pm 0.004$   $\chi^2/\text{NDF}: 3477.9/47$

# reg\_asym\_sam\_37\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-31.981 \pm 0.492$   $\chi^2/\text{NDF}: 419.7/3$

Left Out:  $-24.577 \pm 0.051$   $\chi^2/\text{NDF}: 8590.4/24$

Right Out:  $-25.173 \pm 0.342$   $\chi^2/\text{NDF}: 755.2/5$

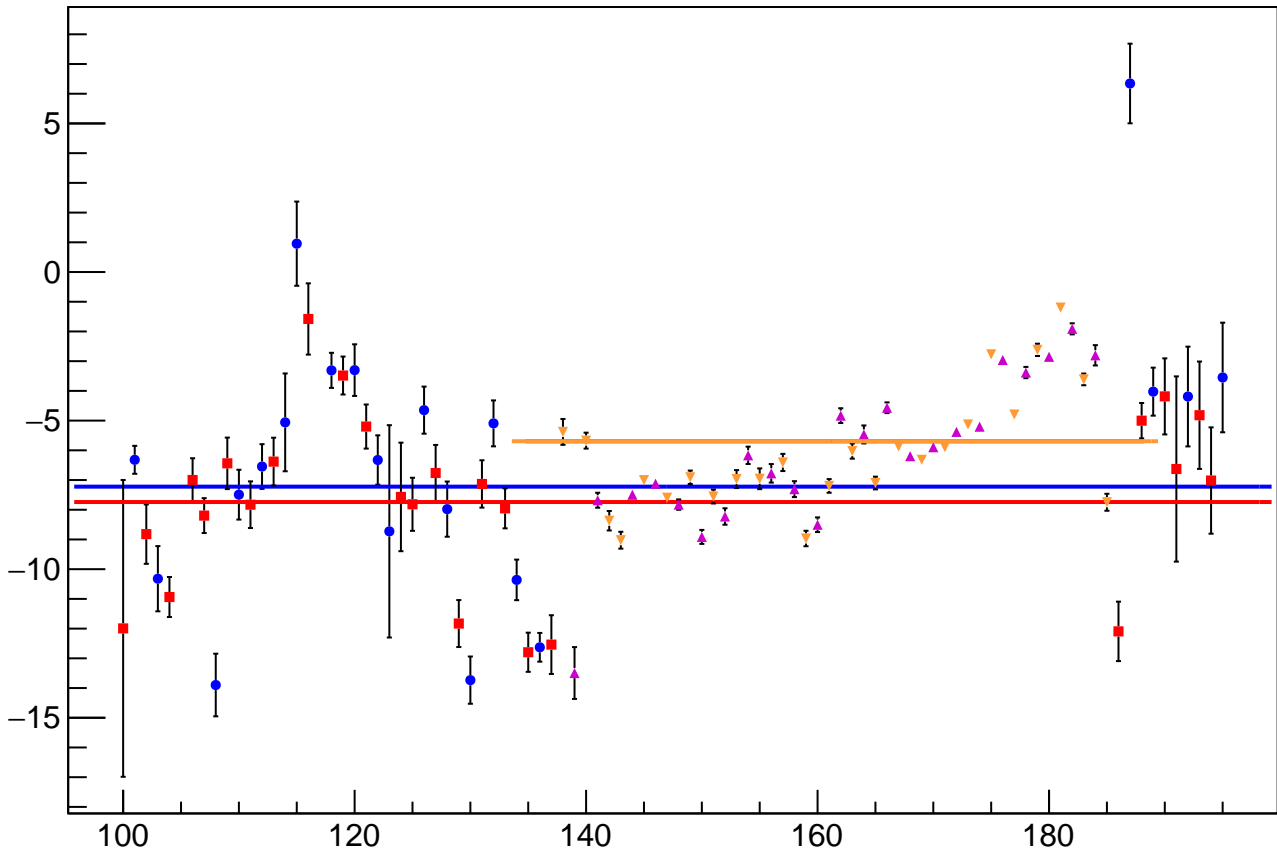
Left In:  $-23.901 \pm 0.051$   $\chi^2/\text{NDF}: 9154.9/22$

+ sign  $-24.656 \pm 0.051$   $\chi^2/\text{NDF}: 9234.4/28$

All:  $-24.291 \pm 0.036$   $\chi^2/\text{NDF}: 19261.2/57$

- sign  $-23.929 \pm 0.051$   $\chi^2/\text{NDF}: 9923.6/28$

# reg\_asym\_sam\_37\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-7.223 \pm 0.179$   $\chi^2/\text{NDF}: 511.0/20$

Left Out:  $-5.694 \pm 0.041$   $\chi^2/\text{NDF}: 2258.3/24$

Right Out:  $-7.740 \pm 0.171$   $\chi^2/\text{NDF}: 275.5/24$

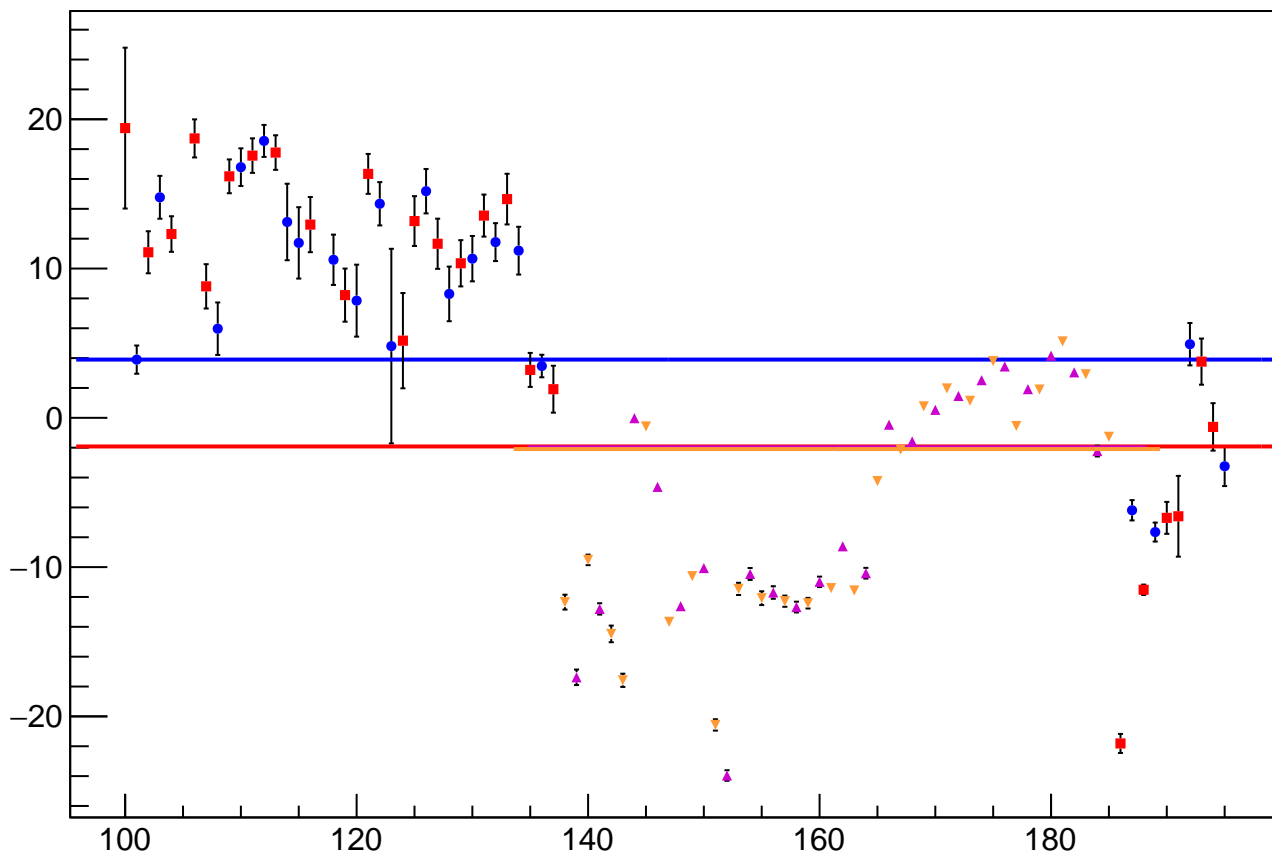
Left In:  $-5.696 \pm 0.041$   $\chi^2/\text{NDF}: 2309.8/22$

+ sign  $-5.771 \pm 0.040$   $\chi^2/\text{NDF}: 2838.6/45$

All:  $-5.788 \pm 0.028$   $\chi^2/\text{NDF}: 5558.7/93$

- sign  $-5.806 \pm 0.040$   $\chi^2/\text{NDF}: 2719.8/47$

# reg\_asym\_sam\_37\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $3.902 \pm 0.263$   $\chi^2/\text{NDF}: 1165.7/20$

Left Out:  $-2.092 \pm 0.051$   $\chi^2/\text{NDF}: 16305.3/24$

Right Out:  $-1.917 \pm 0.215$   $\chi^2/\text{NDF}: 3907.4/24$

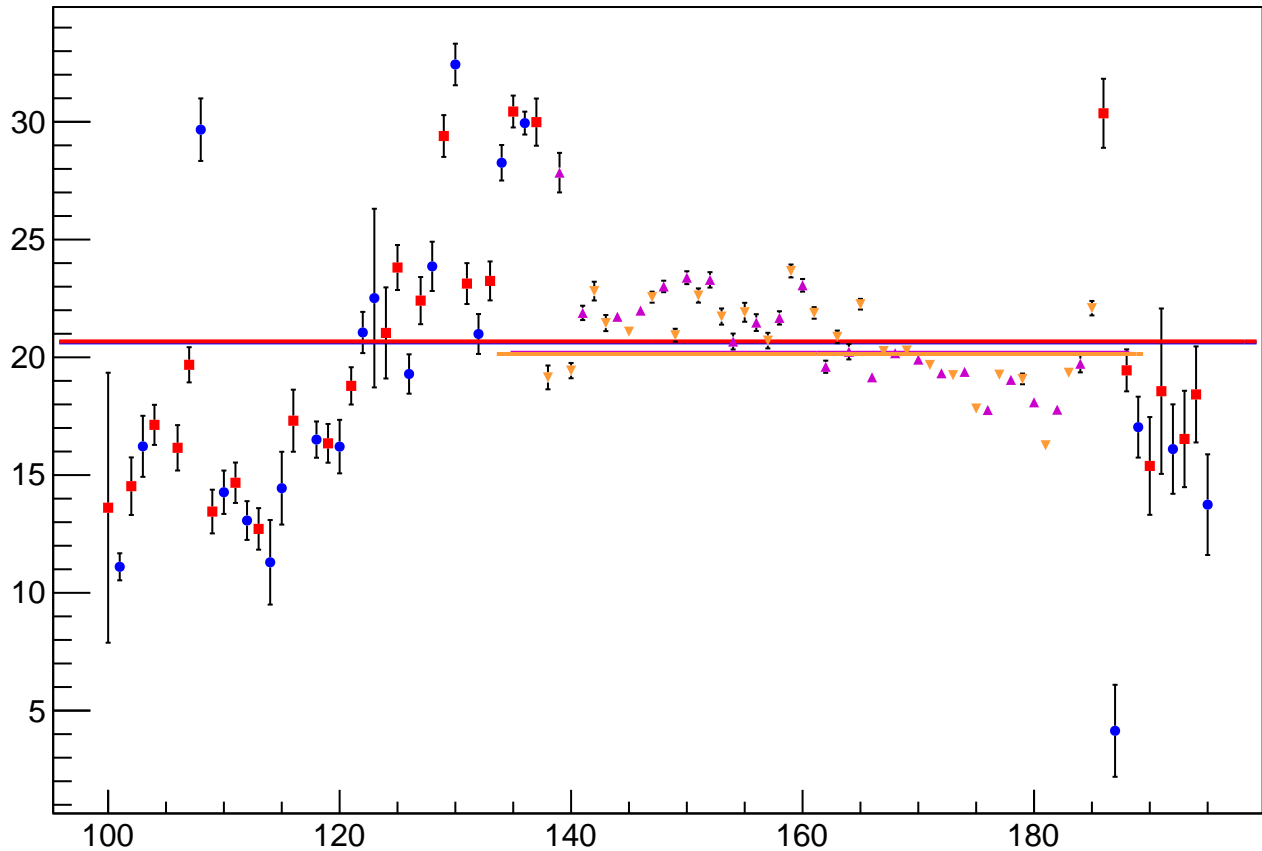
Left In:  $-1.980 \pm 0.051$   $\chi^2/\text{NDF}: 15382.3/22$

+ sign  $-1.872 \pm 0.050$   $\chi^2/\text{NDF}: 17970.1/45$

All:  $-1.925 \pm 0.035$   $\chi^2/\text{NDF}: 37262.1/93$

- sign  $-1.977 \pm 0.050$   $\chi^2/\text{NDF}: 19289.8/47$

# reg\_asym\_sam\_37\_dd\_diff\_bpm4eY\_slope vs Slug



Right In: 20.633 $\pm$ 0.205  $\chi^2$ /NDF: 1308.2/20

Left Out: 20.141 $\pm$ 0.046  $\chi^2$ /NDF: 1419.1/24

Right Out: 20.675 $\pm$ 0.202  $\chi^2$ /NDF: 779.4/24

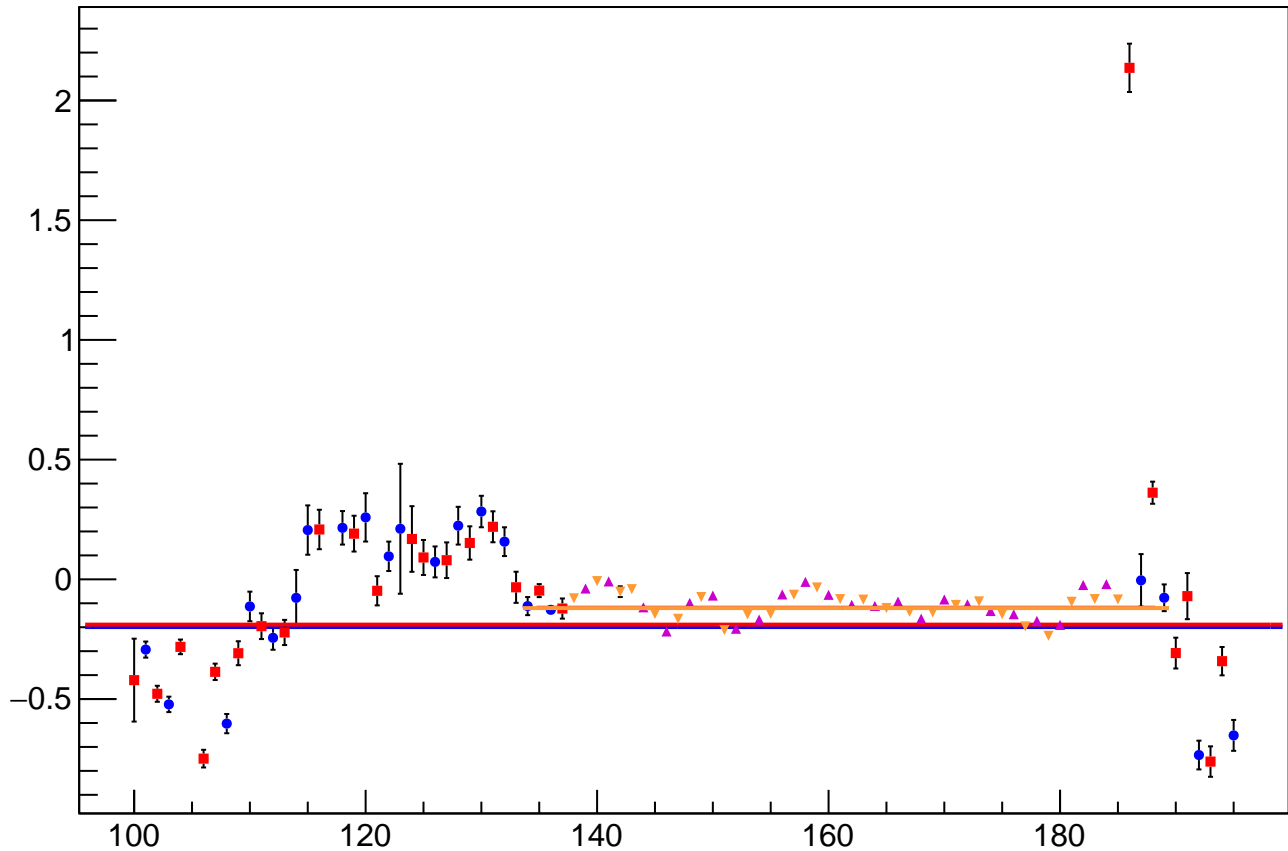
Left In: 20.194 $\pm$ 0.046  $\chi^2$ /NDF: 1447.4/22

+ sign 20.164 $\pm$ 0.045  $\chi^2$ /NDF: 2732.8/45

All: 20.191 $\pm$ 0.032  $\chi^2$ /NDF: 4965.7/93

- sign 20.218 $\pm$ 0.045  $\chi^2$ /NDF: 2232.2/47

# reg\_asym\_sam\_37\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.199 \pm 0.011$   $\chi^2/\text{NDF}: 599.6/20$

Left Out:  $-0.120 \pm 0.002$   $\chi^2/\text{NDF}: 530.4/24$

Right Out:  $-0.189 \pm 0.010$   $\chi^2/\text{NDF}: 1308.5/24$

Left In:  $-0.119 \pm 0.002$   $\chi^2/\text{NDF}: 721.8/22$

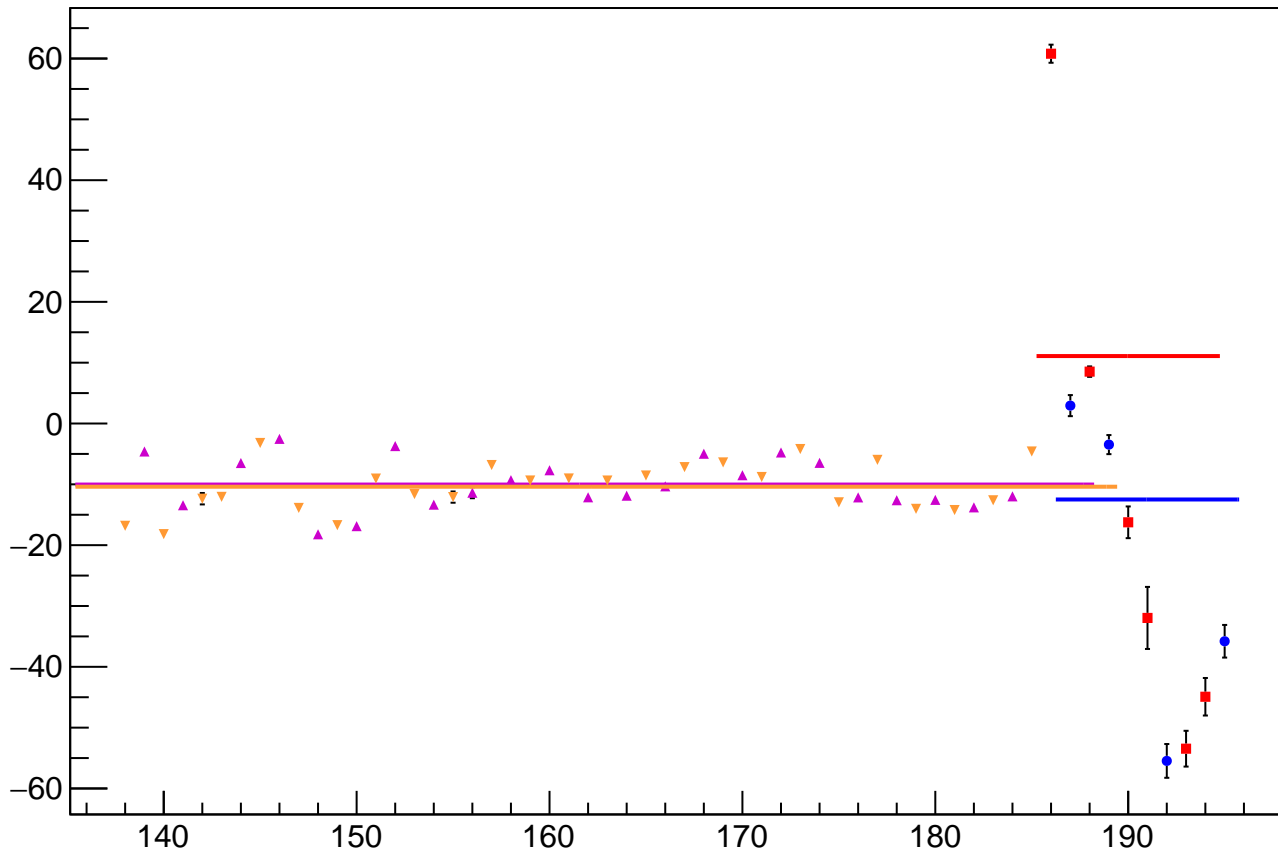
+ sign  $-0.123 \pm 0.002$   $\chi^2/\text{NDF}: 1183.5/45$

All:  $-0.122 \pm 0.001$   $\chi^2/\text{NDF}: 3260.5/93$

- sign  $-0.122 \pm 0.002$   $\chi^2/\text{NDF}: 2076.7/47$



# reg\_asym\_sam\_26\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-12.491 \pm 0.996$   $\chi^2/\text{NDF}: 427.5/3$

Left Out:  $-10.391 \pm 0.088$   $\chi^2/\text{NDF}: 2111.6/24$

Right Out:  $11.088 \pm 0.672$   $\chi^2/\text{NDF}: 2119.3/5$

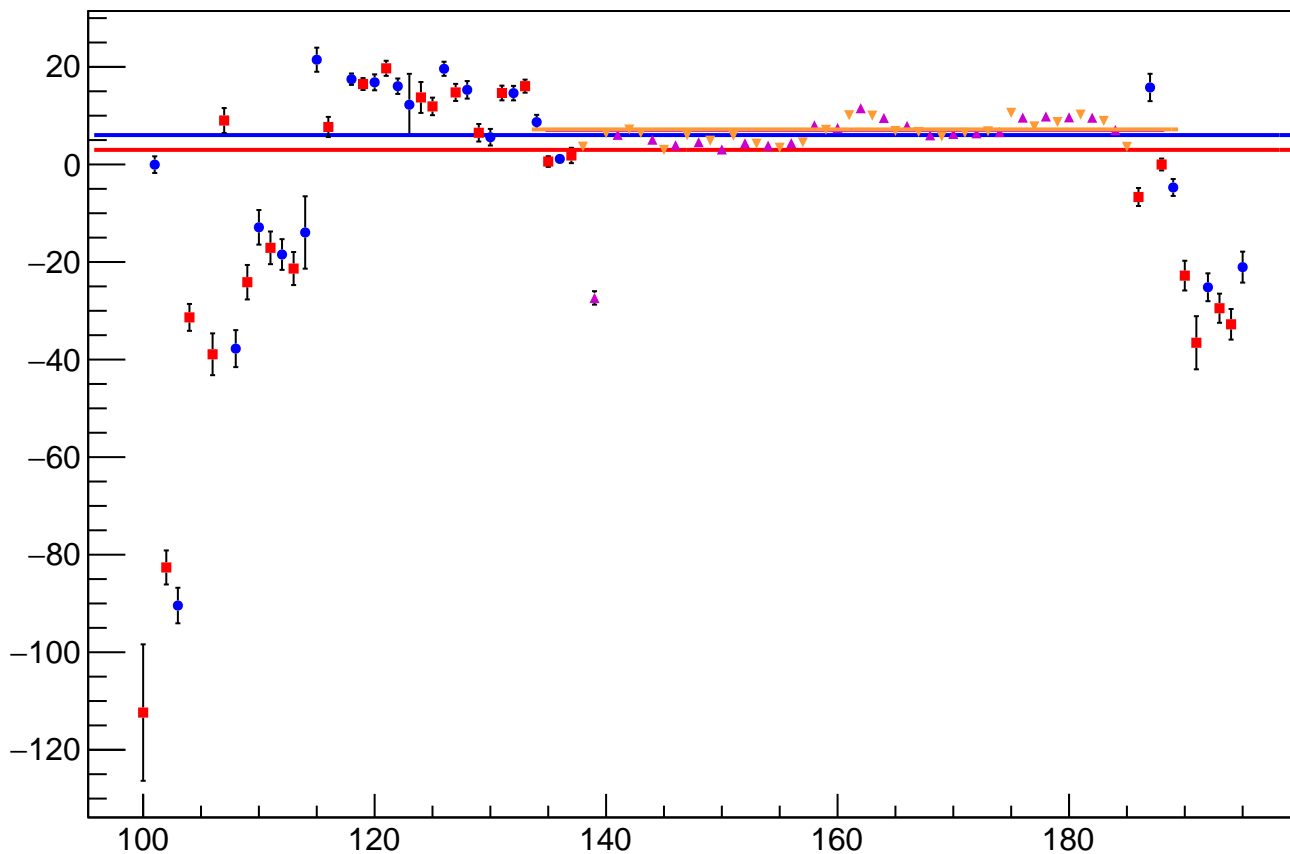
Left In:  $-10.036 \pm 0.090$   $\chi^2/\text{NDF}: 1758.7/22$

+ sign  $-10.407 \pm 0.087$   $\chi^2/\text{NDF}: 2543.5/28$

All:  $-10.042 \pm 0.062$   $\chi^2/\text{NDF}: 7427.3/57$

- sign  $-9.668 \pm 0.089$   $\chi^2/\text{NDF}: 4848.6/28$

# reg\_asym\_sam\_26\_avg\_diff\_bpm4aY\_slope vs Slug



Right In: 6.024 $\pm$ 0.386  $\chi^2$ /NDF: 1596.1/20

Left Out: 7.184 $\pm$ 0.073  $\chi^2$ /NDF: 917.3/24

Right Out: 2.990 $\pm$ 0.389  $\chi^2$ /NDF: 1967.5/24

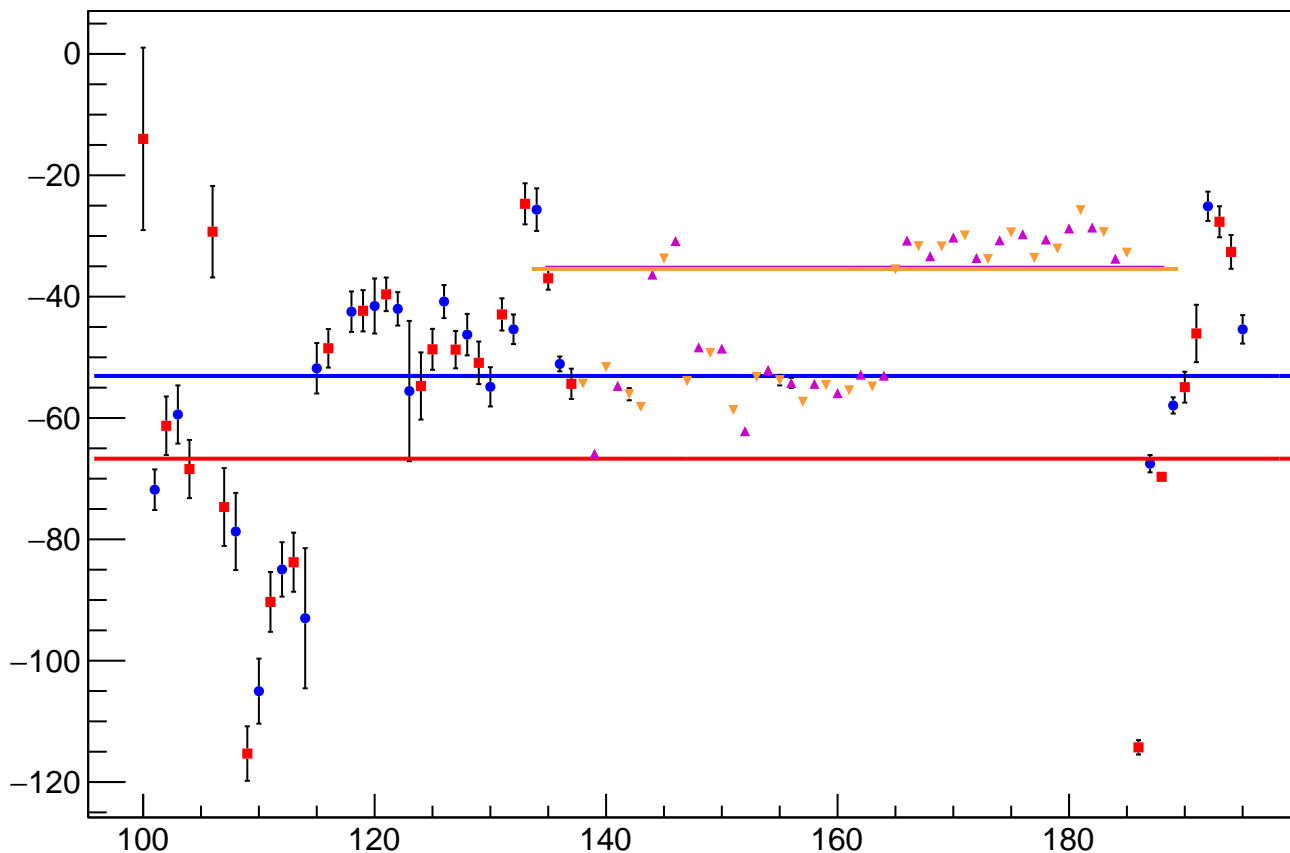
Left In: 7.053 $\pm$ 0.074  $\chi^2$ /NDF: 1535.8/22

+ sign 7.144 $\pm$ 0.072  $\chi^2$ /NDF: 2522.2/45

All: 7.028 $\pm$ 0.051  $\chi^2$ /NDF: 6136.0/93

- sign 6.910 $\pm$ 0.073  $\chi^2$ /NDF: 3608.6/47

# reg\_asym\_sam\_26\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $-53.071 \pm 0.557$   $\chi^2/\text{NDF}: 598.3/20$

Left Out:  $-35.434 \pm 0.089$   $\chi^2/\text{NDF}: 12782.8/24$

Right Out:  $-66.705 \pm 0.455$   $\chi^2/\text{NDF}: 3015.6/24$

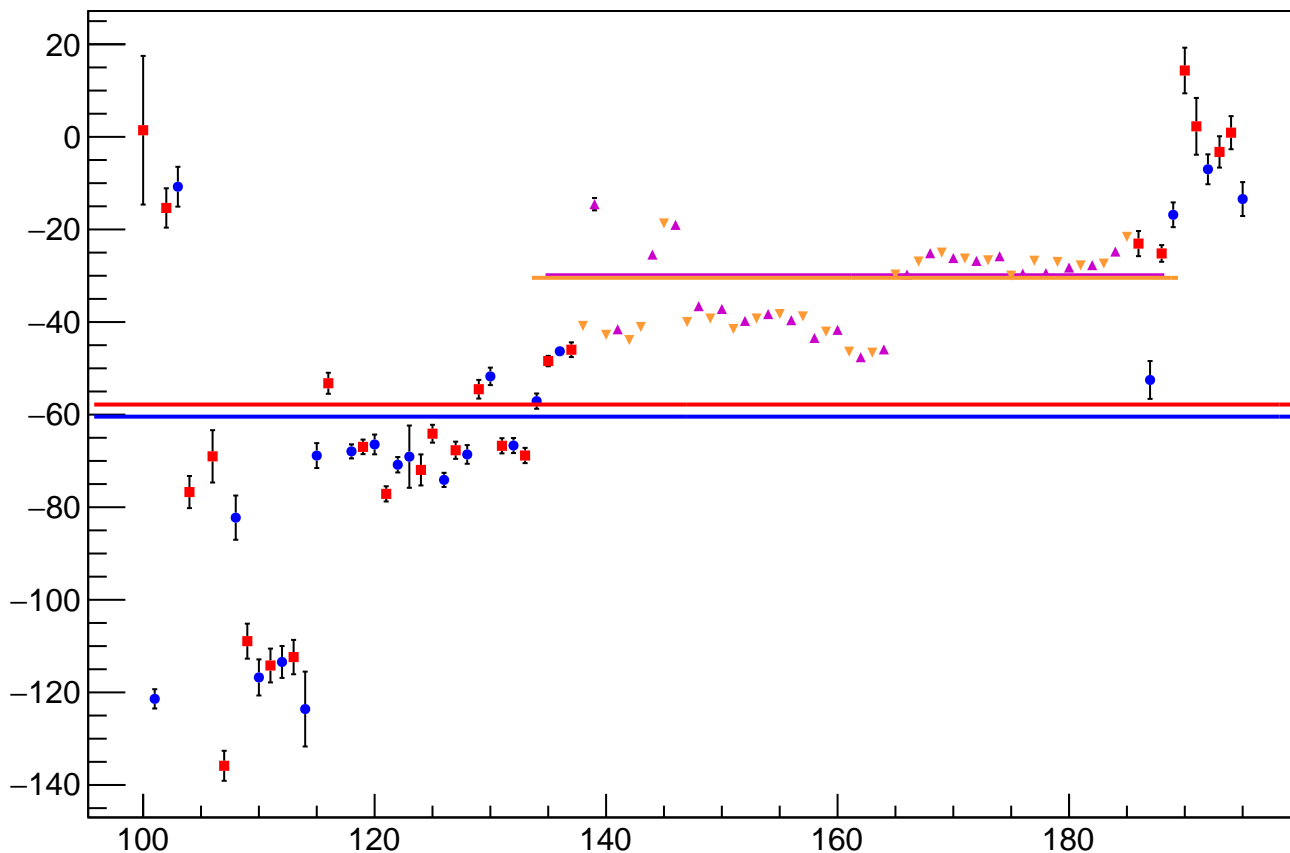
Left In:  $-35.229 \pm 0.090$   $\chi^2/\text{NDF}: 11602.9/22$

+ sign  $-35.874 \pm 0.088$   $\chi^2/\text{NDF}: 14359.0/45$

All:  $-36.144 \pm 0.062$   $\chi^2/\text{NDF}: 33607.5/93$

- sign  $-36.418 \pm 0.088$   $\chi^2/\text{NDF}: 19229.5/47$

# reg\_asym\_sam\_26\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $-60.433 \pm 0.433$   $\chi^2/\text{NDF}: 2761.2/20$

Left Out:  $-30.448 \pm 0.082$   $\chi^2/\text{NDF}: 8167.7/24$

Right Out:  $-57.819 \pm 0.450$   $\chi^2/\text{NDF}: 3128.5/24$

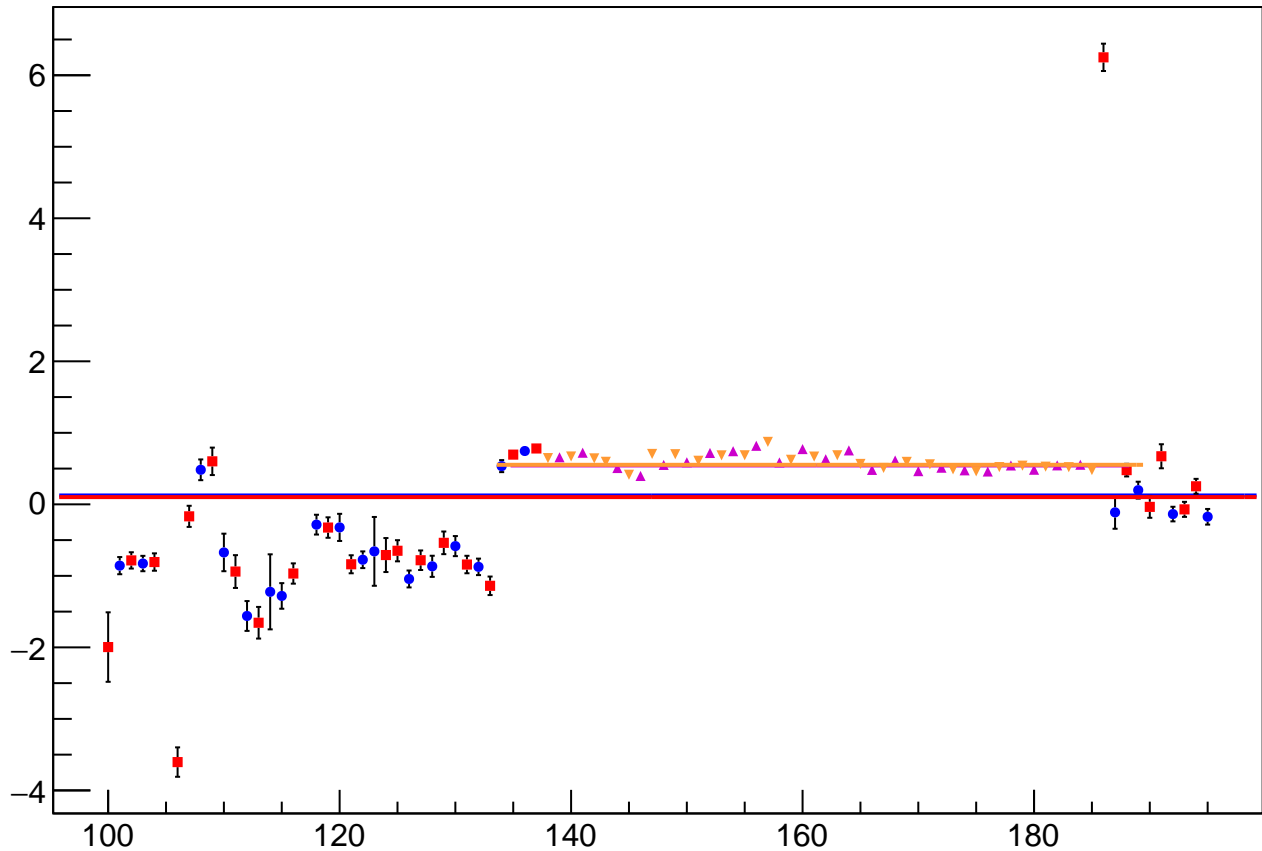
Left In:  $-29.892 \pm 0.083$   $\chi^2/\text{NDF}: 7115.0/22$

+ sign  $-31.473 \pm 0.080$   $\chi^2/\text{NDF}: 15553.5/45$

All:  $-31.143 \pm 0.057$   $\chi^2/\text{NDF}: 29564.6/93$

- sign  $-30.804 \pm 0.081$   $\chi^2/\text{NDF}: 13976.7/47$

# reg\_asym\_sam\_26\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $0.124 \pm 0.022$   $\chi^2/\text{NDF}: 1004.1/20$

Left Out:  $0.553 \pm 0.004$   $\chi^2/\text{NDF}: 542.1/24$

Right Out:  $0.101 \pm 0.023$   $\chi^2/\text{NDF}: 2266.8/24$

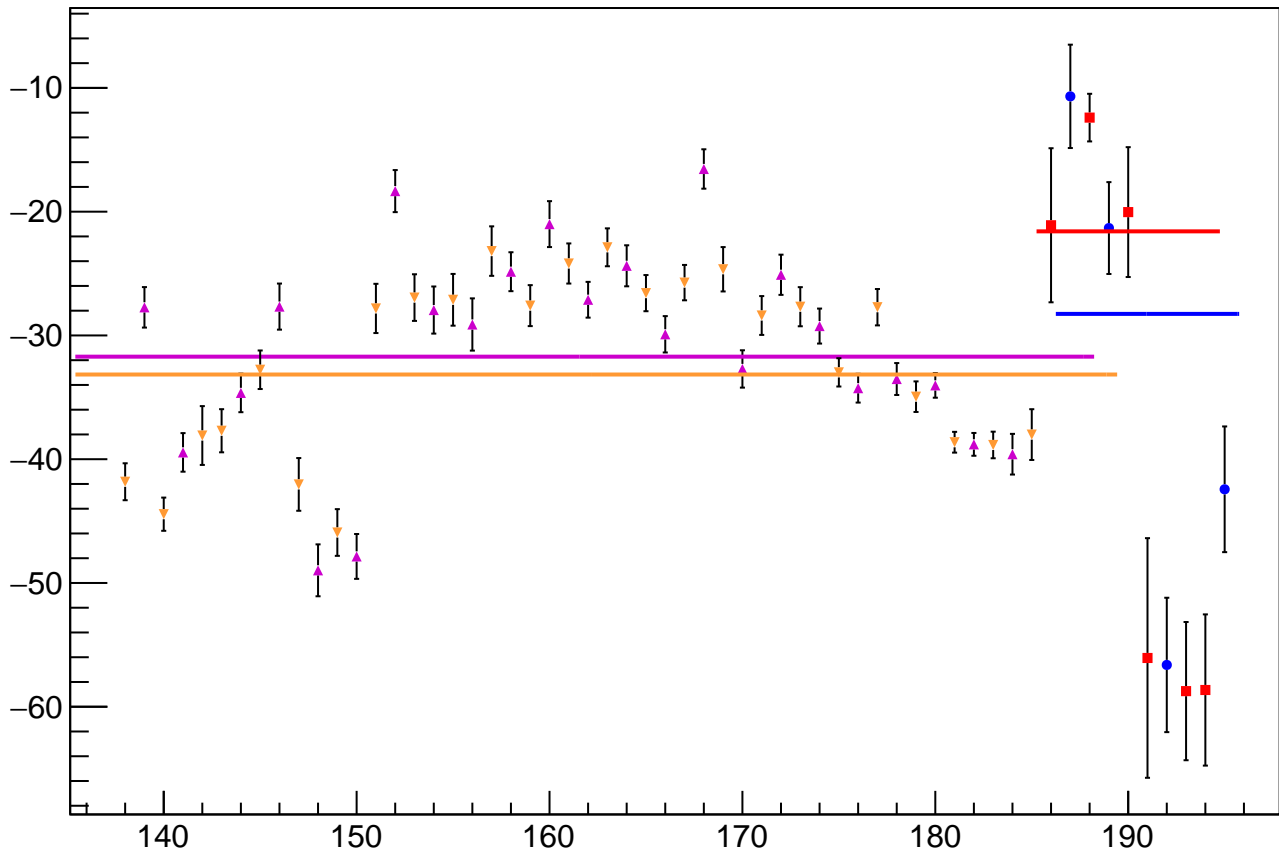
Left In:  $0.544 \pm 0.004$   $\chi^2/\text{NDF}: 655.9/22$

+ sign  $0.541 \pm 0.004$   $\chi^2/\text{NDF}: 1903.8/45$

All:  $0.537 \pm 0.003$   $\chi^2/\text{NDF}: 5184.4/93$

- sign  $0.532 \pm 0.004$   $\chi^2/\text{NDF}: 3277.5/47$

# reg\_asym\_sam\_26\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-28.259 \pm 2.221$   $\chi^2/\text{NDF}: 56.3/3$

Left Out:  $-33.157 \pm 0.300$   $\chi^2/\text{NDF}: 500.1/24$

Right Out:  $-21.590 \pm 1.578$   $\chi^2/\text{NDF}: 116.6/5$

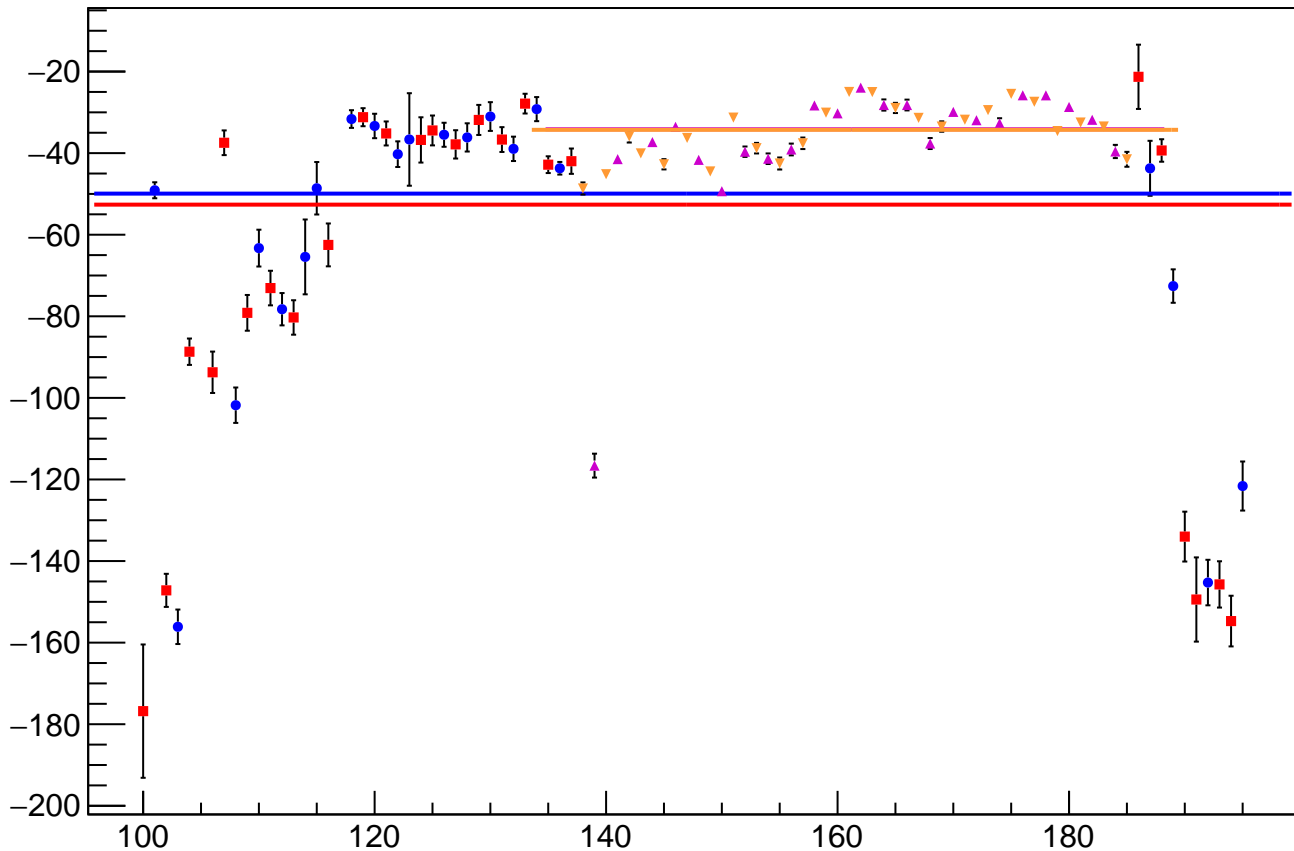
Left In:  $-31.714 \pm 0.309$   $\chi^2/\text{NDF}: 542.3/22$

+ sign  $-33.069 \pm 0.298$   $\chi^2/\text{NDF}: 561.2/28$

All:  $-32.221 \pm 0.212$   $\chi^2/\text{NDF}: 1276.3/57$

- sign  $-31.340 \pm 0.303$   $\chi^2/\text{NDF}: 698.6/28$

# reg\_asym\_sam\_26\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-49.925 \pm 0.704$   $\chi^2/\text{NDF}: 1562.2/20$

Left Out:  $-34.287 \pm 0.241$   $\chi^2/\text{NDF}: 695.3/24$

Right Out:  $-52.626 \pm 0.716$   $\chi^2/\text{NDF}: 2144.9/24$

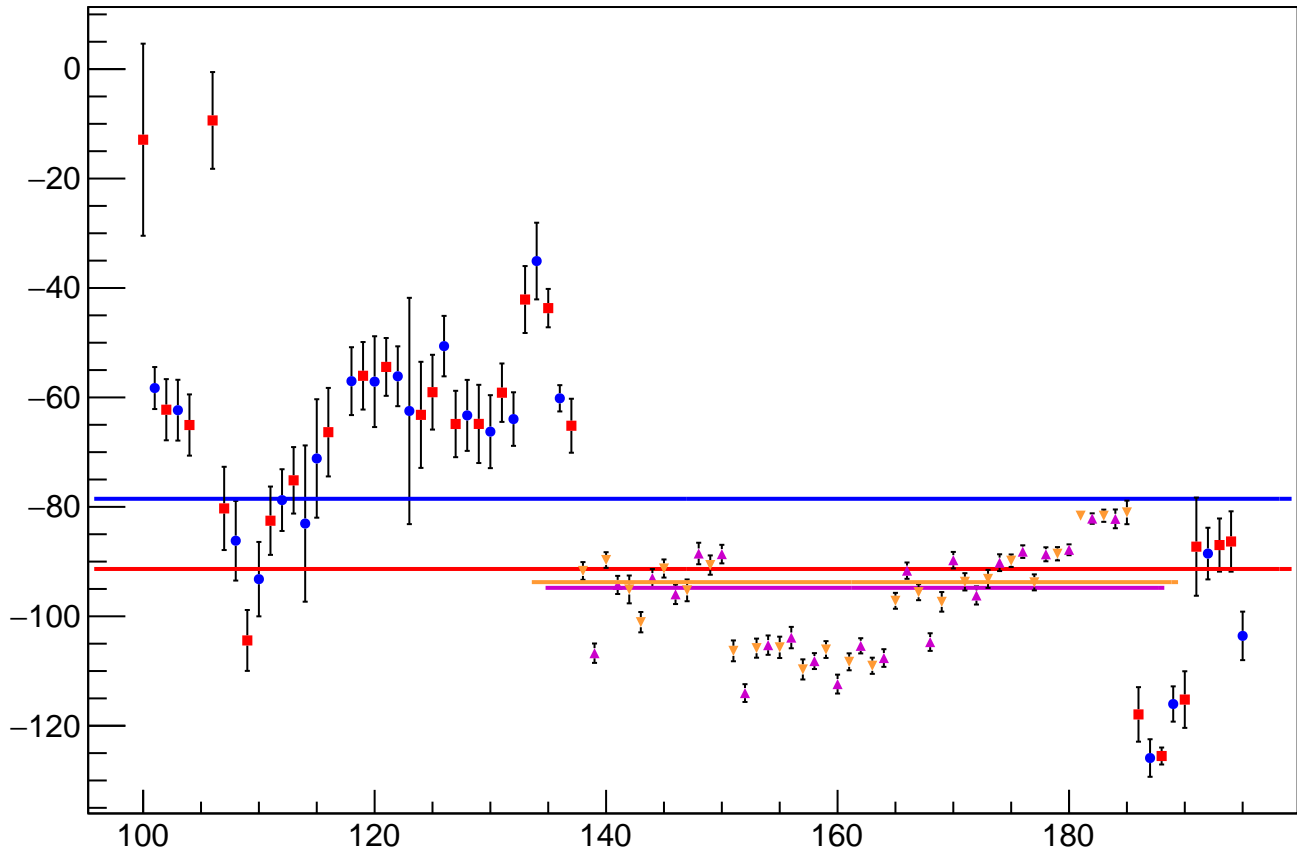
Left In:  $-34.145 \pm 0.251$   $\chi^2/\text{NDF}: 1452.6/22$

+ sign  $-35.931 \pm 0.228$   $\chi^2/\text{NDF}: 2698.6/45$

All:  $-36.045 \pm 0.164$   $\chi^2/\text{NDF}: 6890.4/93$

- sign  $-36.166 \pm 0.237$   $\chi^2/\text{NDF}: 4191.3/47$

# reg\_asym\_sam\_26\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-78.523 \pm 1.083$   $\chi^2/\text{NDF}: 581.2/20$

Left Out:  $-93.754 \pm 0.302$   $\chi^2/\text{NDF}: 883.1/24$

Right Out:  $-91.348 \pm 0.952$   $\chi^2/\text{NDF}: 1178.1/24$

Left In:  $-94.796 \pm 0.308$   $\chi^2/\text{NDF}: 974.7/22$

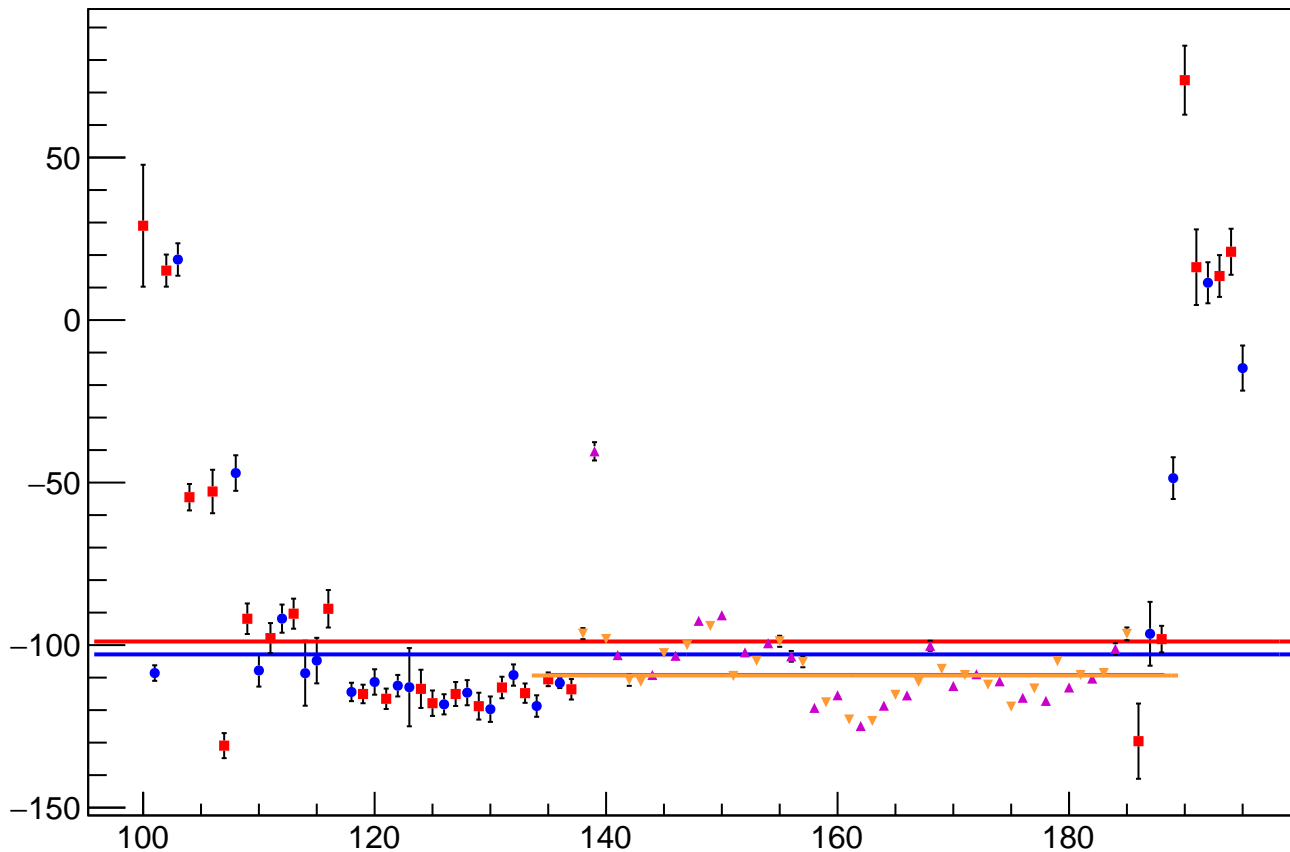
+ sign  $-92.656 \pm 0.291$   $\chi^2/\text{NDF}: 1647.9/45$

All:  $-93.554 \pm 0.206$   $\chi^2/\text{NDF}: 3831.9/93$

- sign  $-94.468 \pm 0.293$   $\chi^2/\text{NDF}: 2164.7/47$



# reg\_asym\_sam\_26\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-102.857 \pm 0.797$   $\chi^2/\text{NDF}: 1412.2/20$

Left Out:  $-109.351 \pm 0.271$   $\chi^2/\text{NDF}: 826.8/24$

Right Out:  $-98.885 \pm 0.824$   $\chi^2/\text{NDF}: 2022.5/24$

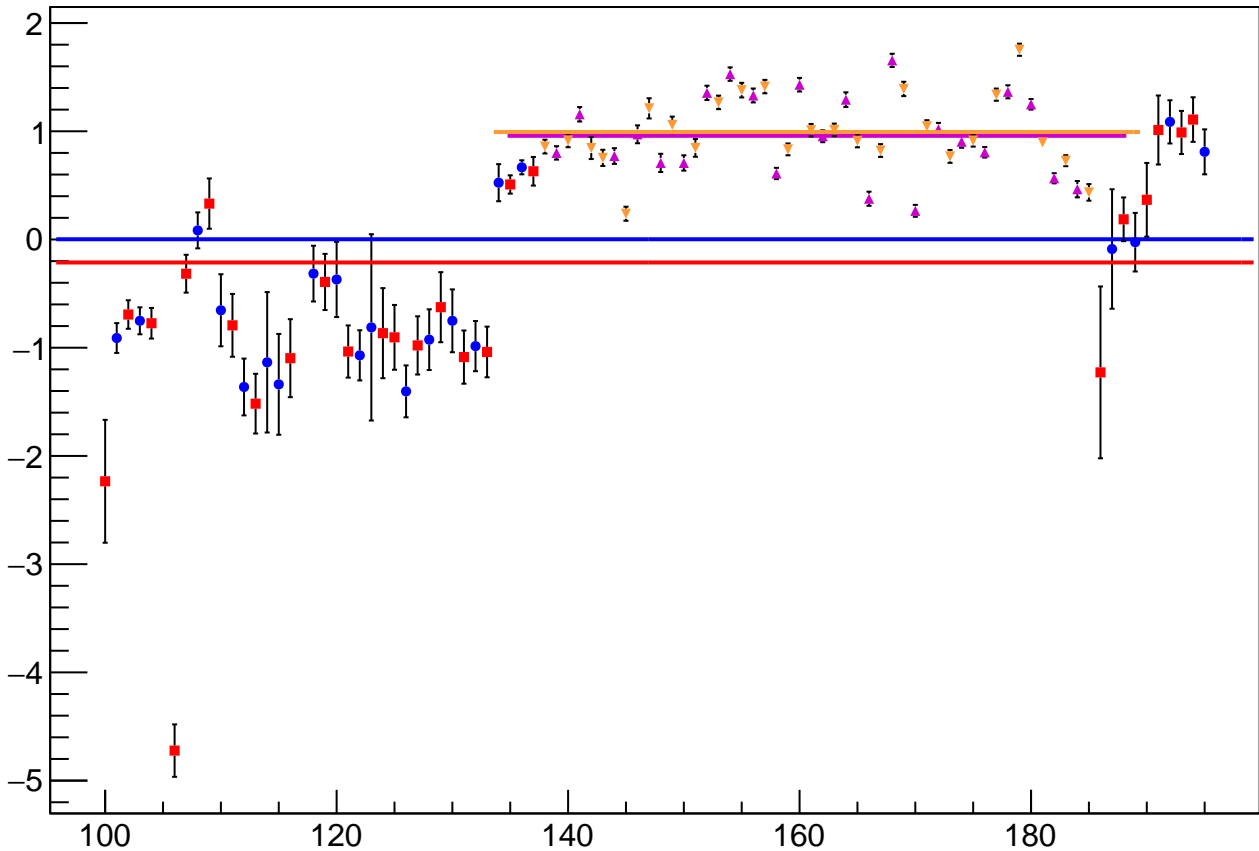
Left In:  $-109.184 \pm 0.280$   $\chi^2/\text{NDF}: 1501.1/22$

+ sign  $-108.677 \pm 0.257$   $\chi^2/\text{NDF}: 2298.6/45$

All:  $-108.407 \pm 0.184$   $\chi^2/\text{NDF}: 5964.4/93$

- sign  $-108.120 \pm 0.265$   $\chi^2/\text{NDF}: 3663.6/47$

# reg\_asym\_sam\_26\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $0.002 \pm 0.040$   $\chi^2/\text{NDF}: 376.9/20$

Left Out:  $0.993 \pm 0.012$   $\chi^2/\text{NDF}: 638.6/24$

Right Out:  $-0.212 \pm 0.041$   $\chi^2/\text{NDF}: 695.2/24$

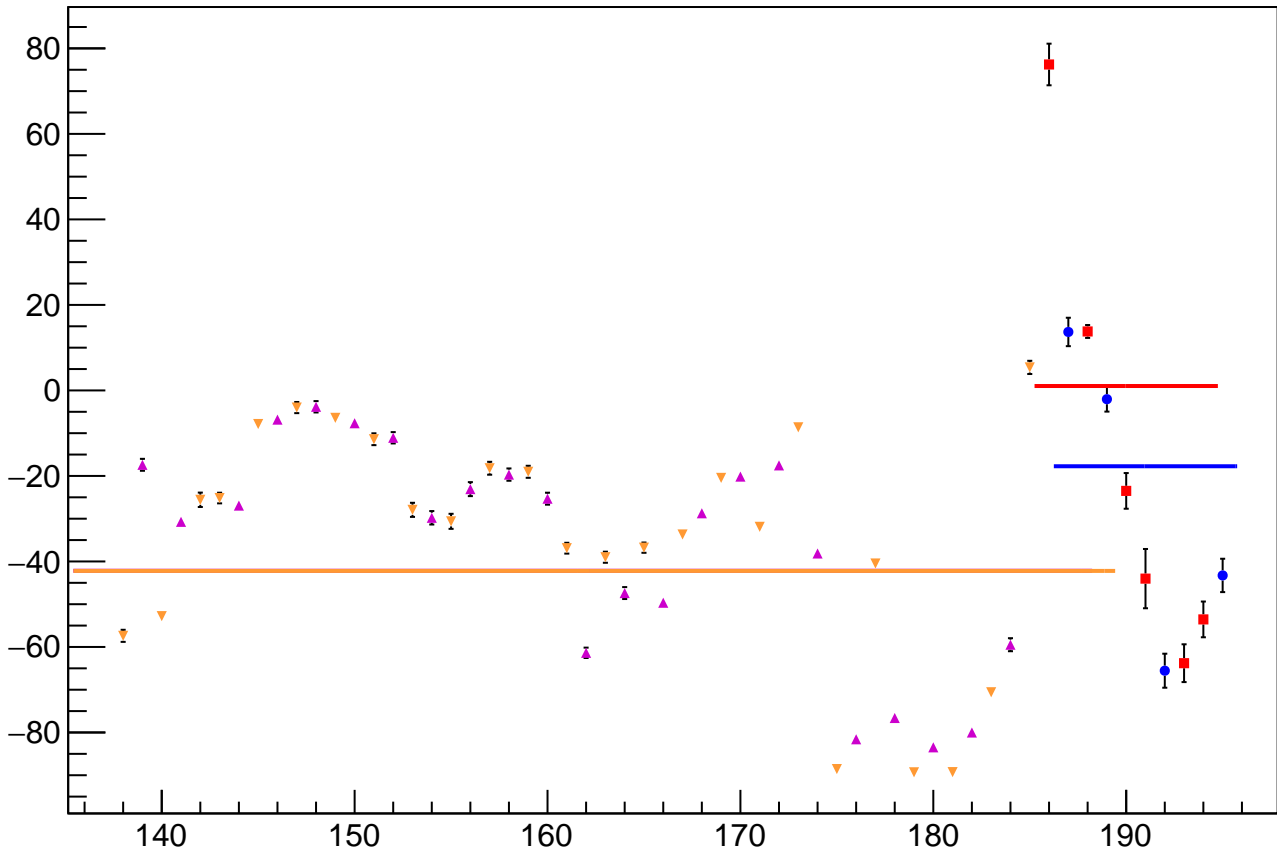
Left In:  $0.958 \pm 0.013$   $\chi^2/\text{NDF}: 894.5/22$

+ sign  $0.906 \pm 0.012$   $\chi^2/\text{NDF}: 1574.6/45$

All:  $0.880 \pm 0.008$   $\chi^2/\text{NDF}: 3933.4/93$

- sign  $0.854 \pm 0.012$   $\chi^2/\text{NDF}: 2349.3/47$

# reg\_asym\_sam\_48\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-17.736 \pm 1.721$   $\chi^2/\text{NDF}: 305.8/3$

Left Out:  $-42.213 \pm 0.222$   $\chi^2/\text{NDF}: 18309.1/24$

Right Out:  $1.032 \pm 1.223$   $\chi^2/\text{NDF}: 772.8/5$

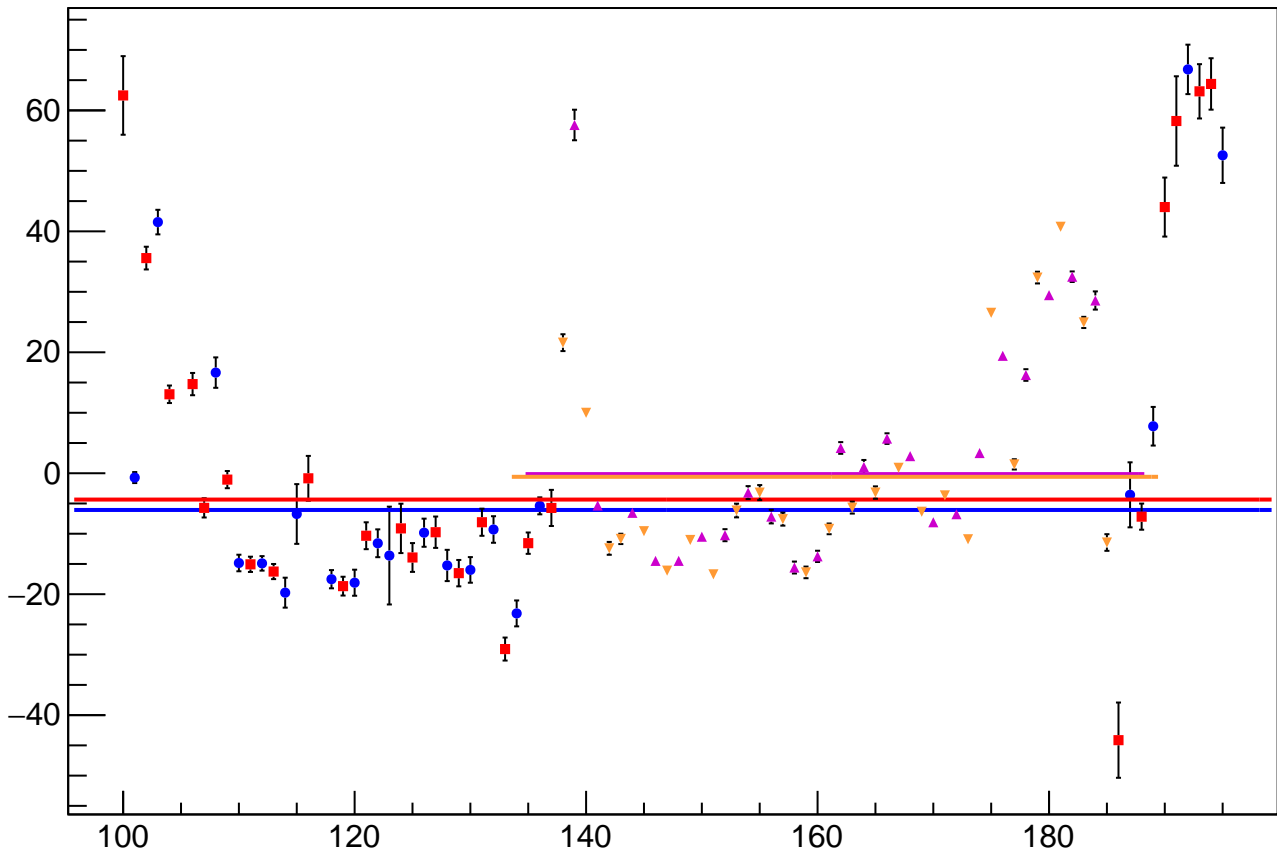
Left In:  $-42.176 \pm 0.227$   $\chi^2/\text{NDF}: 14575.9/22$

+ sign  $-41.812 \pm 0.220$   $\chi^2/\text{NDF}: 18814.0/28$

All:  $-41.281 \pm 0.157$   $\chi^2/\text{NDF}: 35381.4/57$

- sign  $-40.736 \pm 0.223$   $\chi^2/\text{NDF}: 16555.6/28$

# reg\_asym\_sam\_48\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $-6.072 \pm 0.421$   $\chi^2/\text{NDF}: 1490.6/20$

Left Out:  $-0.590 \pm 0.174$   $\chi^2/\text{NDF}: 8750.9/24$

Right Out:  $-4.352 \pm 0.414$   $\chi^2/\text{NDF}: 2012.1/24$

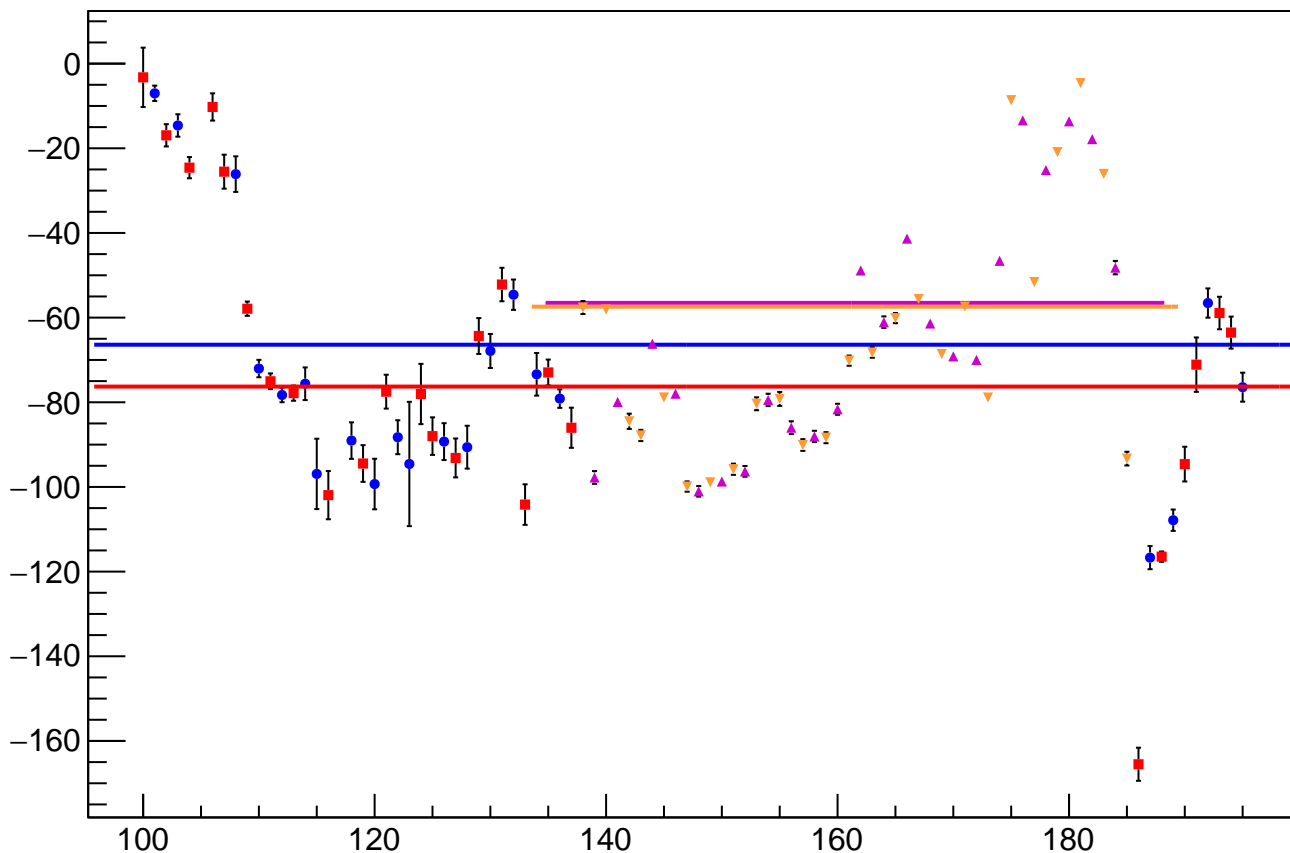
Left In:  $-0.142 \pm 0.179$   $\chi^2/\text{NDF}: 6862.5/22$

+ sign  $-1.390 \pm 0.161$   $\chi^2/\text{NDF}: 10386.0/45$

All:  $-1.104 \pm 0.115$   $\chi^2/\text{NDF}: 19354.1/93$

- sign  $-0.805 \pm 0.164$   $\chi^2/\text{NDF}: 8961.6/47$

# reg\_asym\_sam\_48\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $-66.401 \pm 0.666$   $\chi^2/\text{NDF}: 2432.8/20$

Left Out:  $-57.413 \pm 0.223$   $\chi^2/\text{NDF}: 18604.1/24$

Right Out:  $-76.290 \pm 0.580$   $\chi^2/\text{NDF}: 3548.2/24$

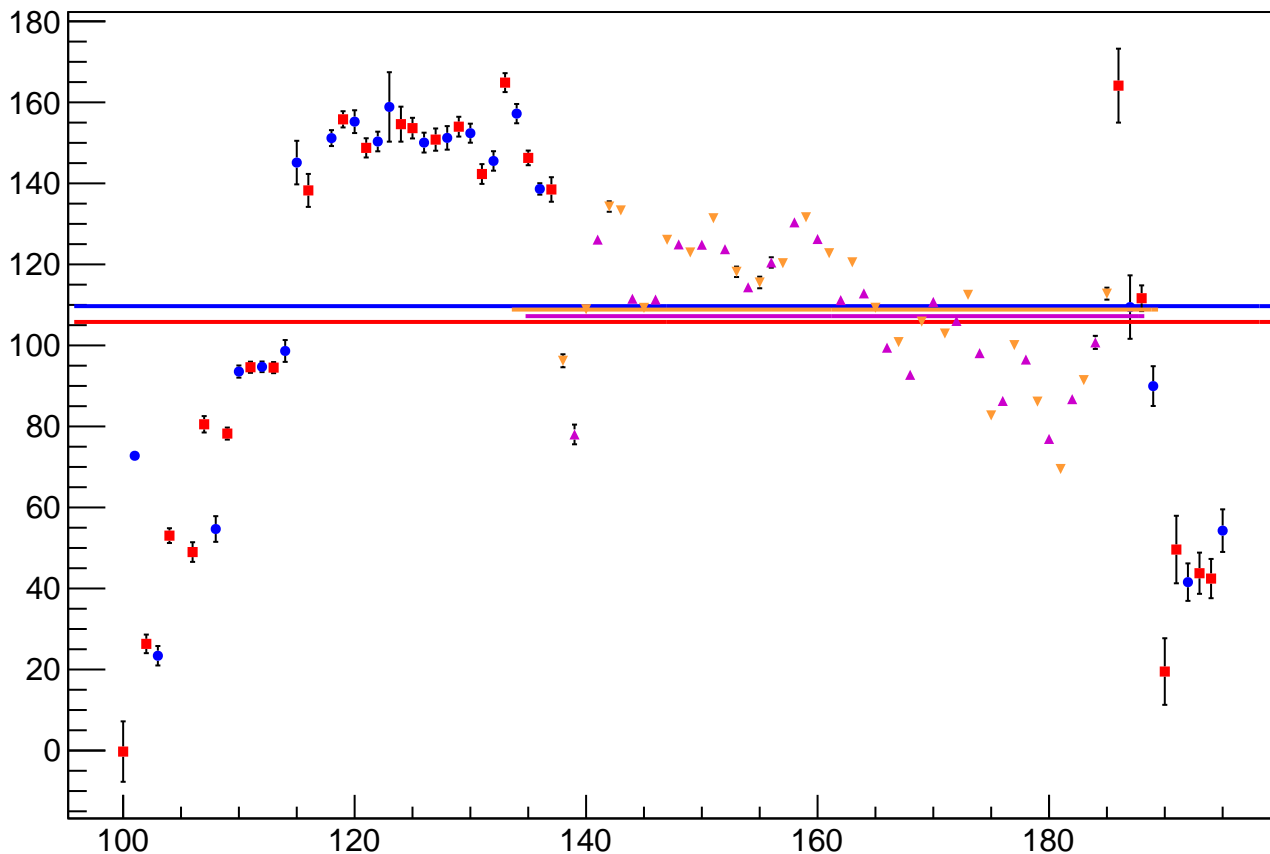
Left In:  $-56.519 \pm 0.227$   $\chi^2/\text{NDF}: 16352.6/22$

+ sign  $-58.320 \pm 0.212$   $\chi^2/\text{NDF}: 21200.4/45$

All:  $-58.734 \pm 0.150$   $\chi^2/\text{NDF}: 42116.5/93$

- sign  $-59.146 \pm 0.211$   $\chi^2/\text{NDF}: 20908.4/47$

# reg\_asym\_sam\_48\_avg\_diff\_bpm4eY\_slope vs Slug



Right In: 109.696 $\pm$ 0.482  $\chi^2$ /NDF: 6216.5/20

Left Out: 108.846 $\pm$ 0.197  $\chi^2$ /NDF: 7400.2/24

Right Out: 105.795 $\pm$ 0.476  $\chi^2$ /NDF: 7570.8/24

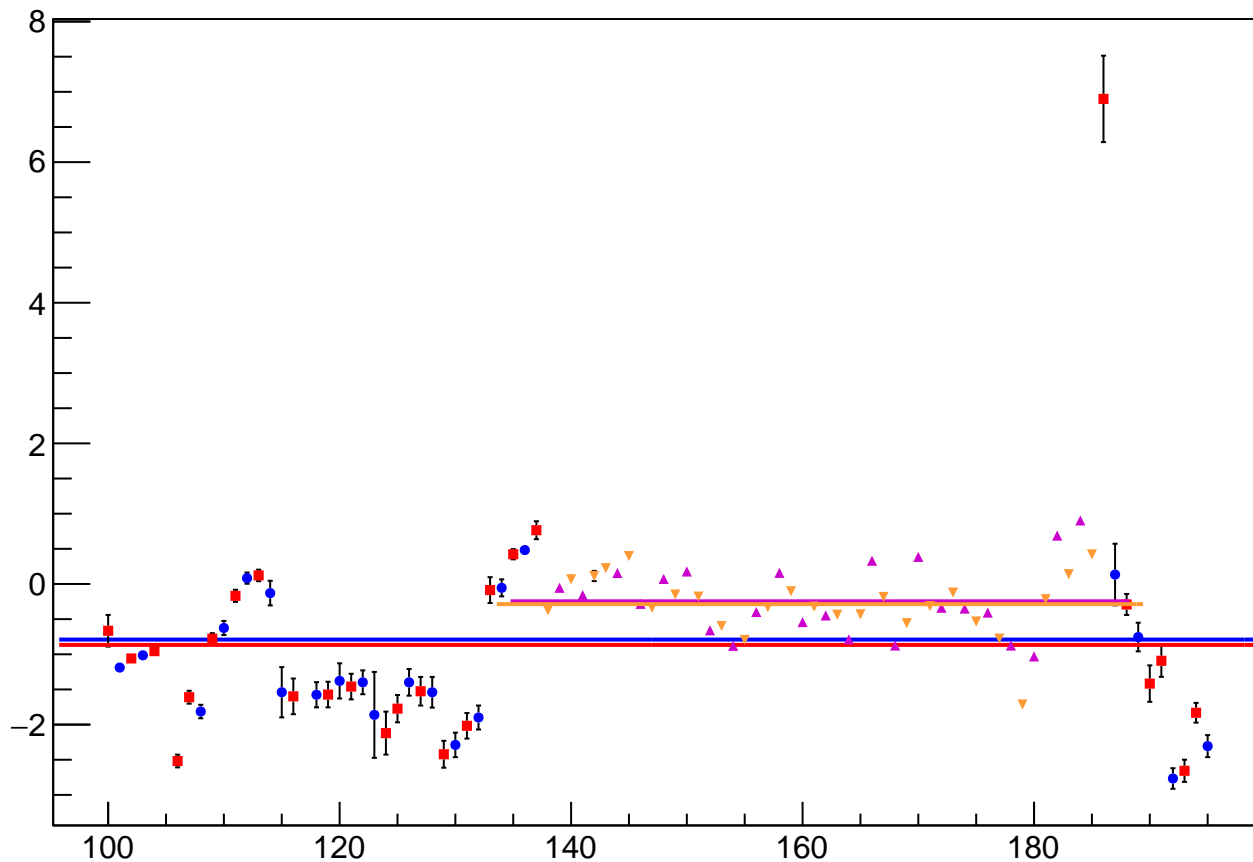
Left In: 107.225 $\pm$ 0.202  $\chi^2$ /NDF: 5565.3/22

+ sign 108.968 $\pm$ 0.183  $\chi^2$ /NDF: 13619.4/45

All: 108.006 $\pm$ 0.130  $\chi^2$ /NDF: 26819.7/93

- sign 107.006 $\pm$ 0.186  $\chi^2$ /NDF: 13143.7/47

# reg\_asym\_sam\_48\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.791 \pm 0.025$   $\chi^2/\text{NDF}: 1284.2/20$

Left Out:  $-0.287 \pm 0.009$   $\chi^2/\text{NDF}: 2052.9/24$

Right Out:  $-0.866 \pm 0.023$   $\chi^2/\text{NDF}: 1662.3/24$

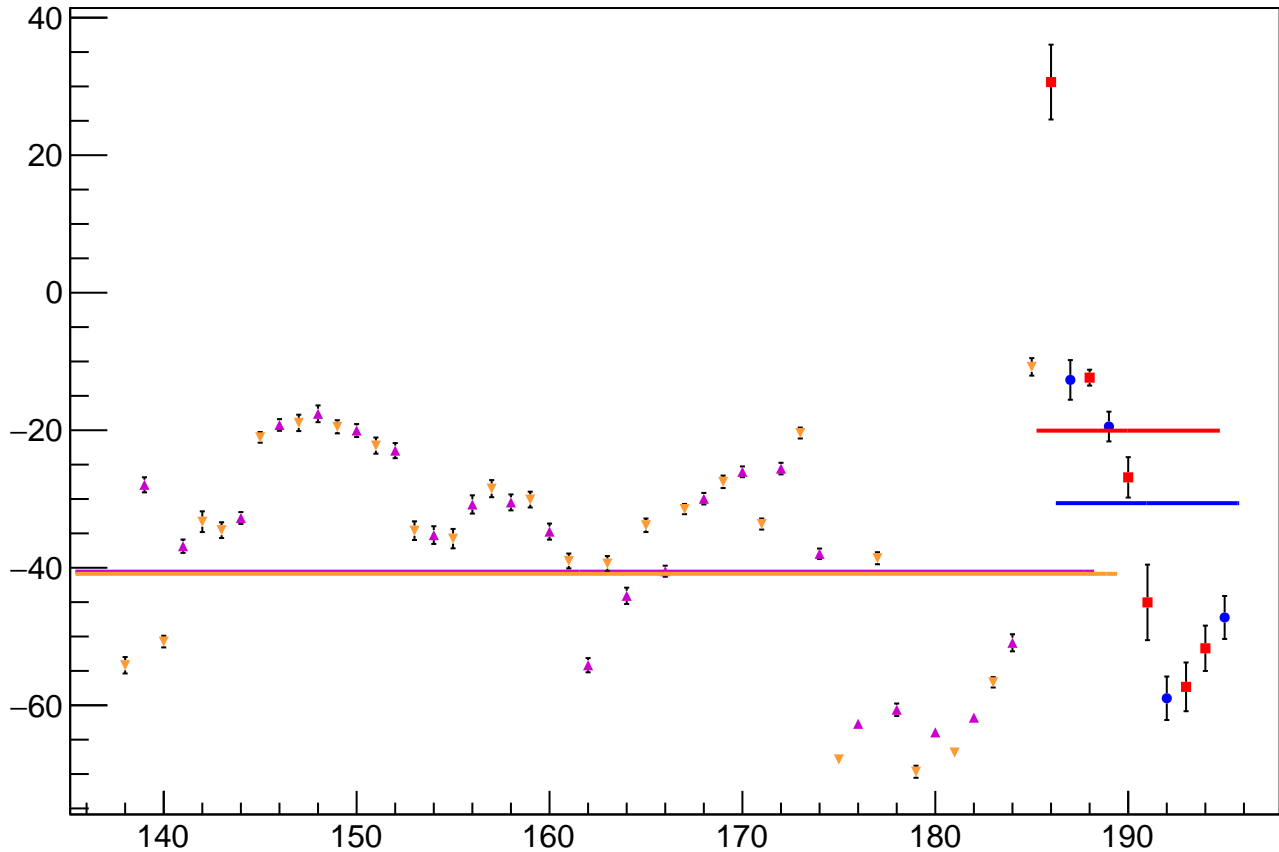
Left In:  $-0.247 \pm 0.009$   $\chi^2/\text{NDF}: 2792.8/22$

+ sign  $-0.346 \pm 0.009$   $\chi^2/\text{NDF}: 3698.4/45$

All:  $-0.339 \pm 0.006$   $\chi^2/\text{NDF}: 8769.5/93$

- sign  $-0.332 \pm 0.009$   $\chi^2/\text{NDF}: 5069.7/47$

# reg\_asym\_sam\_48\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-30.607 \pm 1.365$   $\chi^2/\text{NDF}: 174.0/3$

Left Out:  $-40.880 \pm 0.186$   $\chi^2/\text{NDF}: 9123.2/24$

Right Out:  $-20.060 \pm 0.952$   $\chi^2/\text{NDF}: 360.0/5$

Left In:  $-40.567 \pm 0.190$   $\chi^2/\text{NDF}: 6954.7/22$

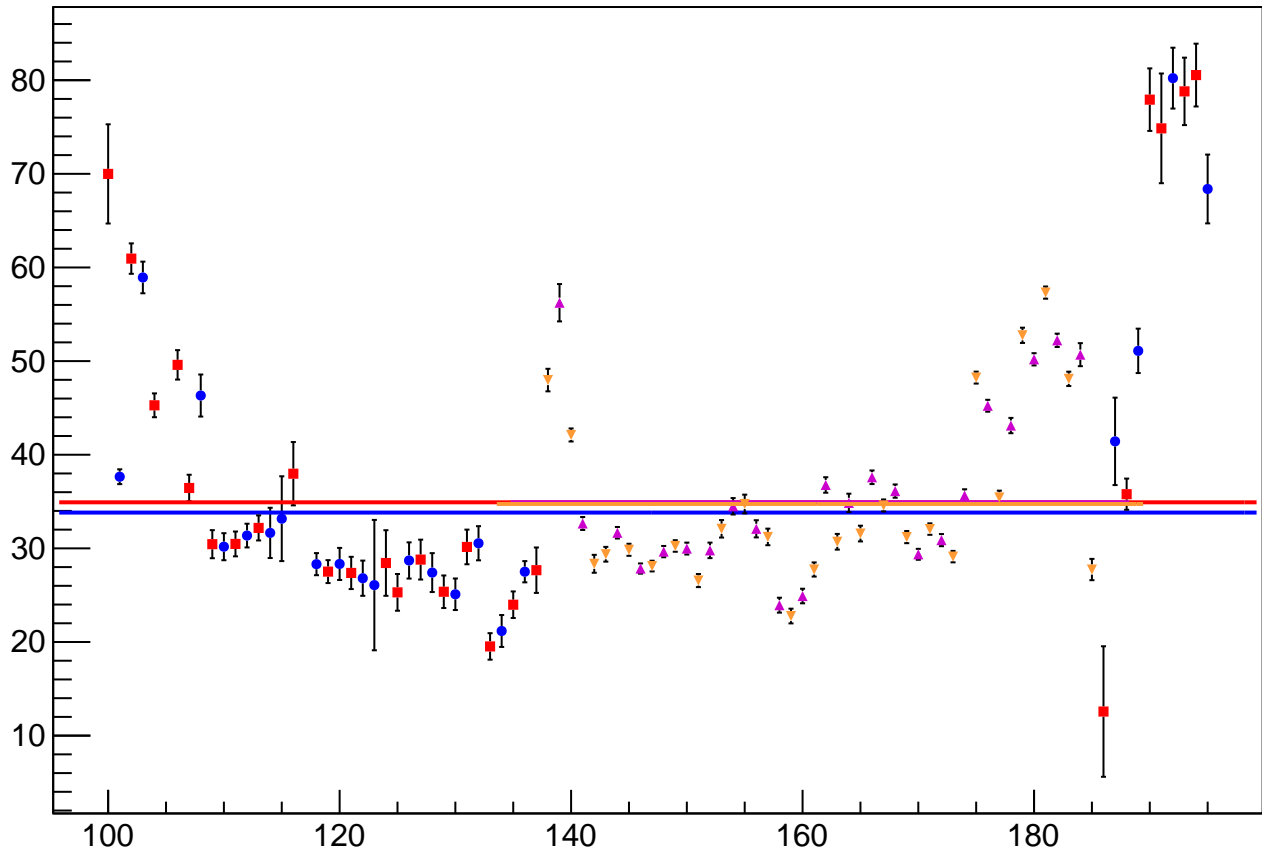
+ sign  $-40.692 \pm 0.184$   $\chi^2/\text{NDF}: 9352.8/28$

All:  $-40.241 \pm 0.131$   $\chi^2/\text{NDF}: 17126.1/57$

- sign  $-39.782 \pm 0.186$   $\chi^2/\text{NDF}: 7761.2/28$



# reg\_asym\_sam\_48\_dd\_diff\_bpm4aY\_slope vs Slug



Right In: 33.822 $\pm$ 0.366  $\chi^2$ /NDF: 813.7/20

Left Out: 34.741 $\pm$ 0.147  $\chi^2$ /NDF:3693.2/24

Right Out: 34.918 $\pm$ 0.362  $\chi^2$ /NDF: 1351.6/24

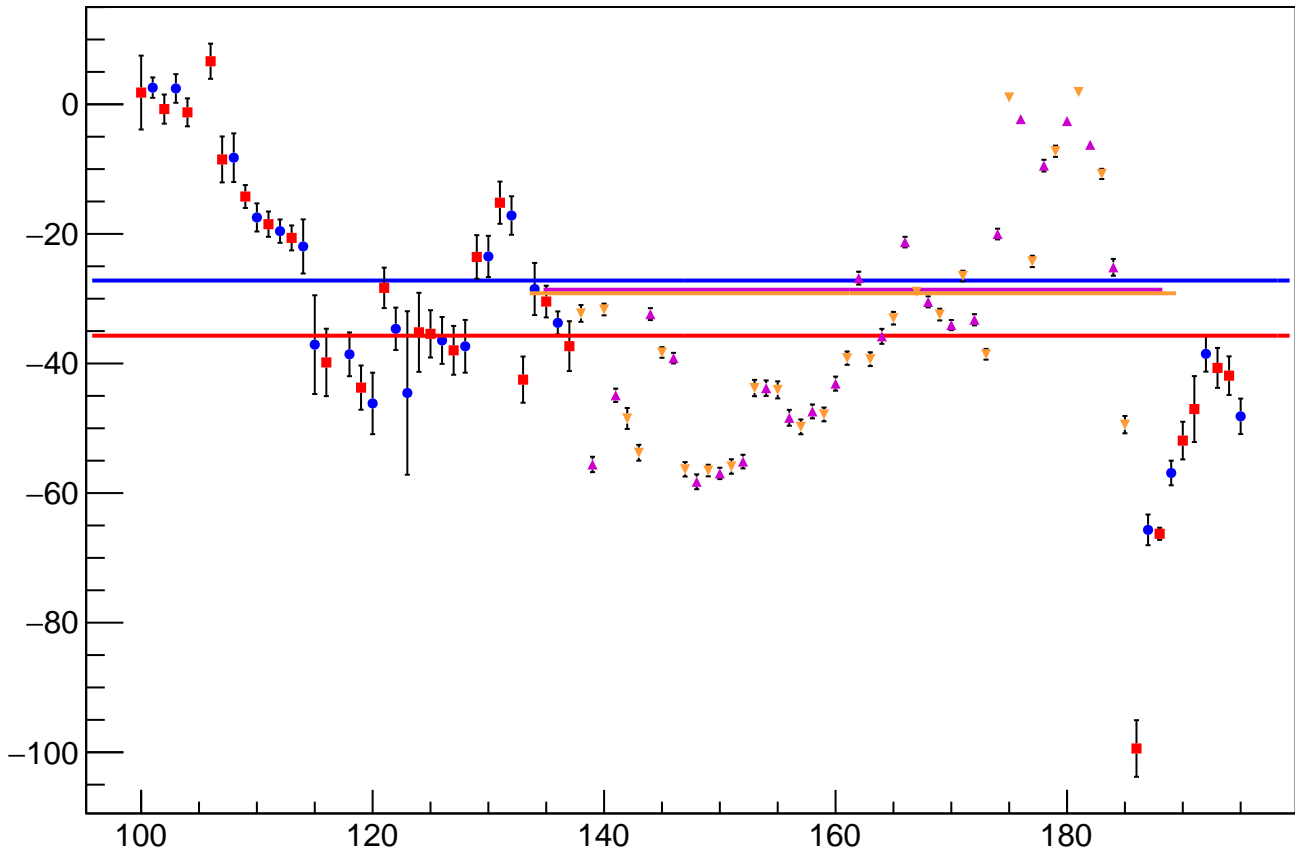
Left In: 34.922 $\pm$ 0.152  $\chi^2$ /NDF:2672.9/22

+ sign 34.613 $\pm$ 0.137  $\chi^2$ /NDF: 4512.3/45

All: 34.764 $\pm$ 0.098  $\chi^2$ /NDF: 8539.2/93

- sign 34.922 $\pm$ 0.140  $\chi^2$ /NDF: 4024.5/47

# reg\_asym\_sam\_48\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-27.198 \pm 0.582$   $\chi^2/\text{NDF}: 1261.2/20$

Left Out:  $-29.163 \pm 0.187$   $\chi^2/\text{NDF}: 10126.0/24$

Right Out:  $-35.710 \pm 0.501$   $\chi^2/\text{NDF}: 2530.6/24$

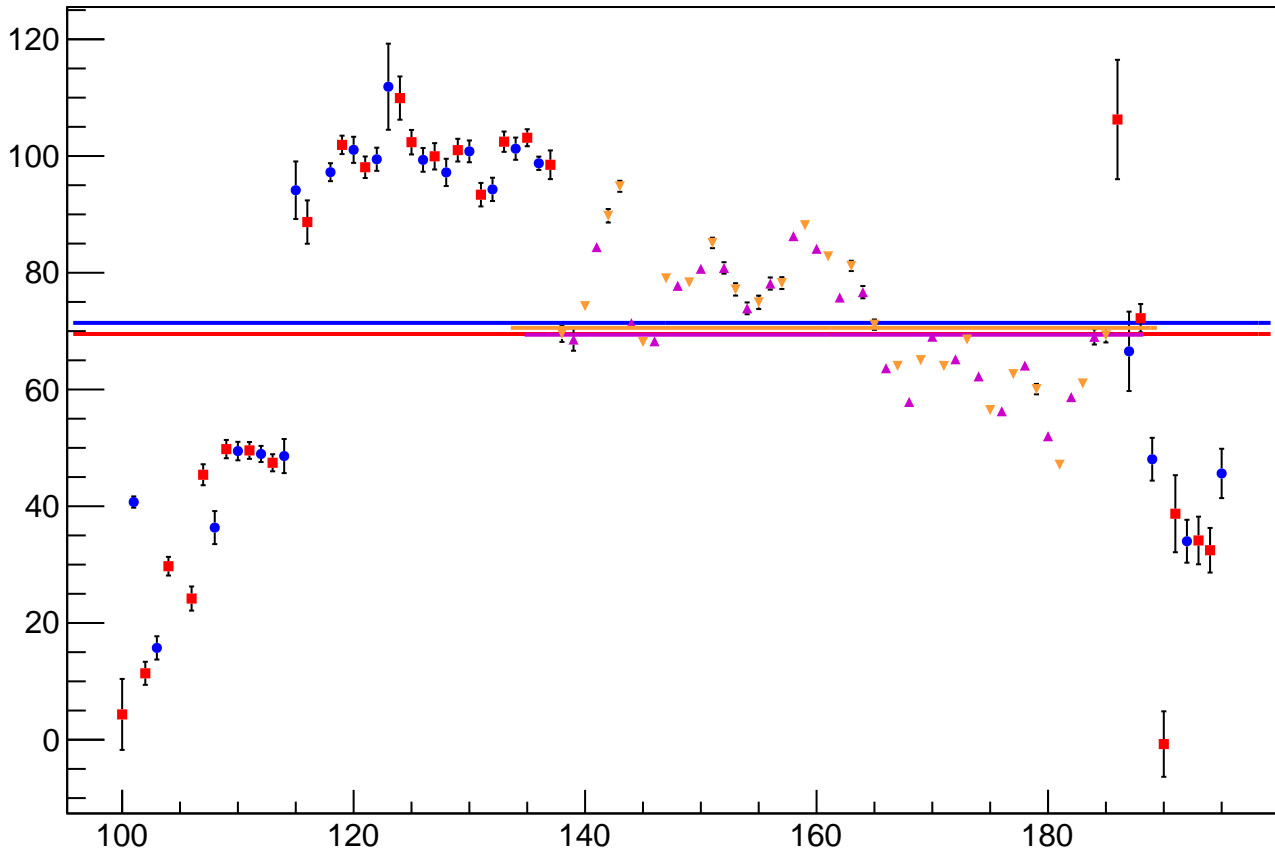
Left In:  $-28.616 \pm 0.190$   $\chi^2/\text{NDF}: 9040.9/22$

+ sign  $-28.979 \pm 0.178$   $\chi^2/\text{NDF}: 11397.6/45$

All:  $-29.243 \pm 0.126$   $\chi^2/\text{NDF}: 23148.7/93$

- sign  $-29.506 \pm 0.178$   $\chi^2/\text{NDF}: 11746.7/47$

# reg\_asym\_sam\_48\_dd\_diff\_bpm4eY\_slope vs Slug



Right In: 71.414+/-0.420  $\chi^2$ /NDF: 4860.8/20

Left Out: 70.563+/-0.166  $\chi^2$ /NDF:4589.1/24

Right Out: 69.511+/-0.420  $\chi^2$ /NDF: 5865.2/24

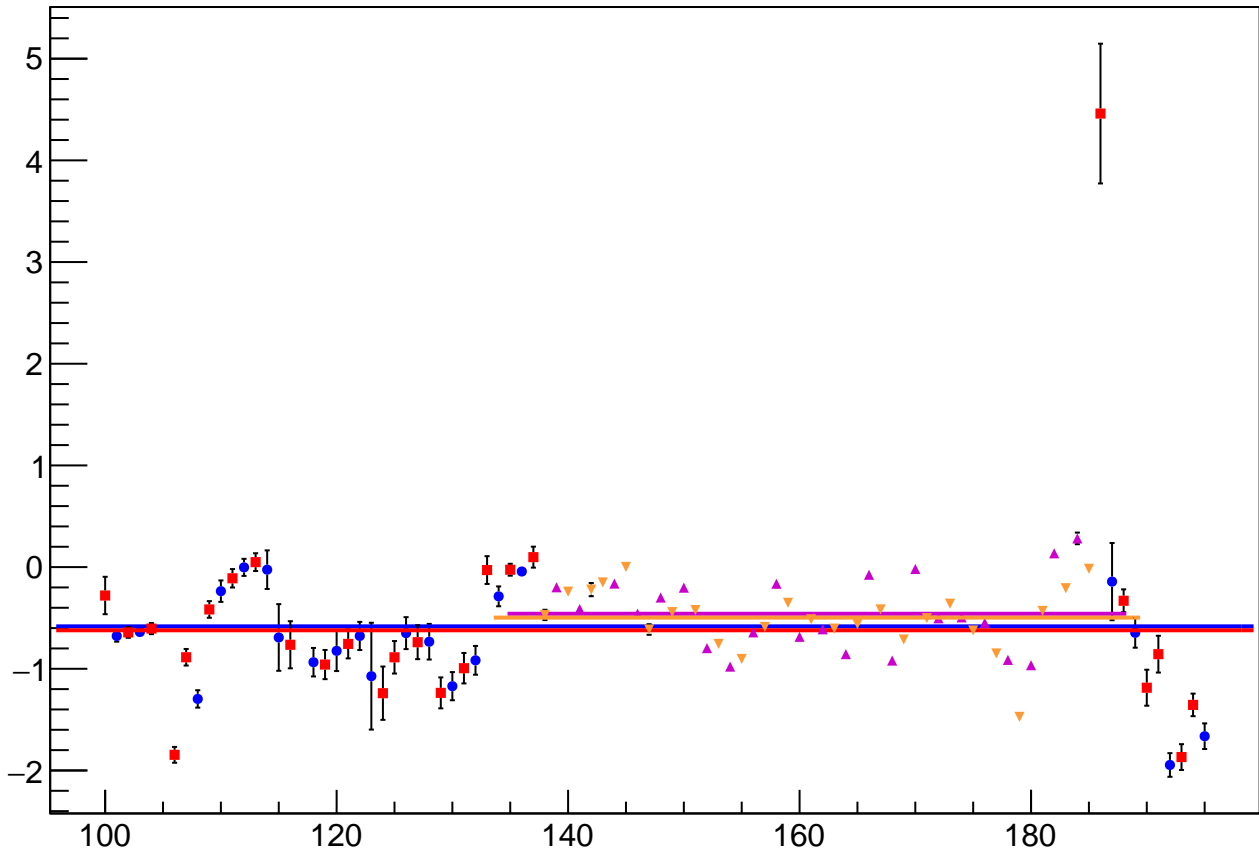
Left In: 69.387+/-0.170  $\chi^2$ /NDF:3321.8/22

+ sign 70.678+/-0.155  $\chi^2$ /NDF: 9453.5/45

All: 70.054+/-0.110  $\chi^2$ /NDF: 18673.8/93

- sign 69.405+/-0.158  $\chi^2$ /NDF: 9187.1/47

# reg\_asym\_sam\_48\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.583 \pm 0.021$   $\chi^2/\text{NDF}: 528.7/20$

Left Out:  $-0.497 \pm 0.008$   $\chi^2/\text{NDF}: 1449.3/24$

Right Out:  $-0.621 \pm 0.020$   $\chi^2/\text{NDF}: 781.6/24$

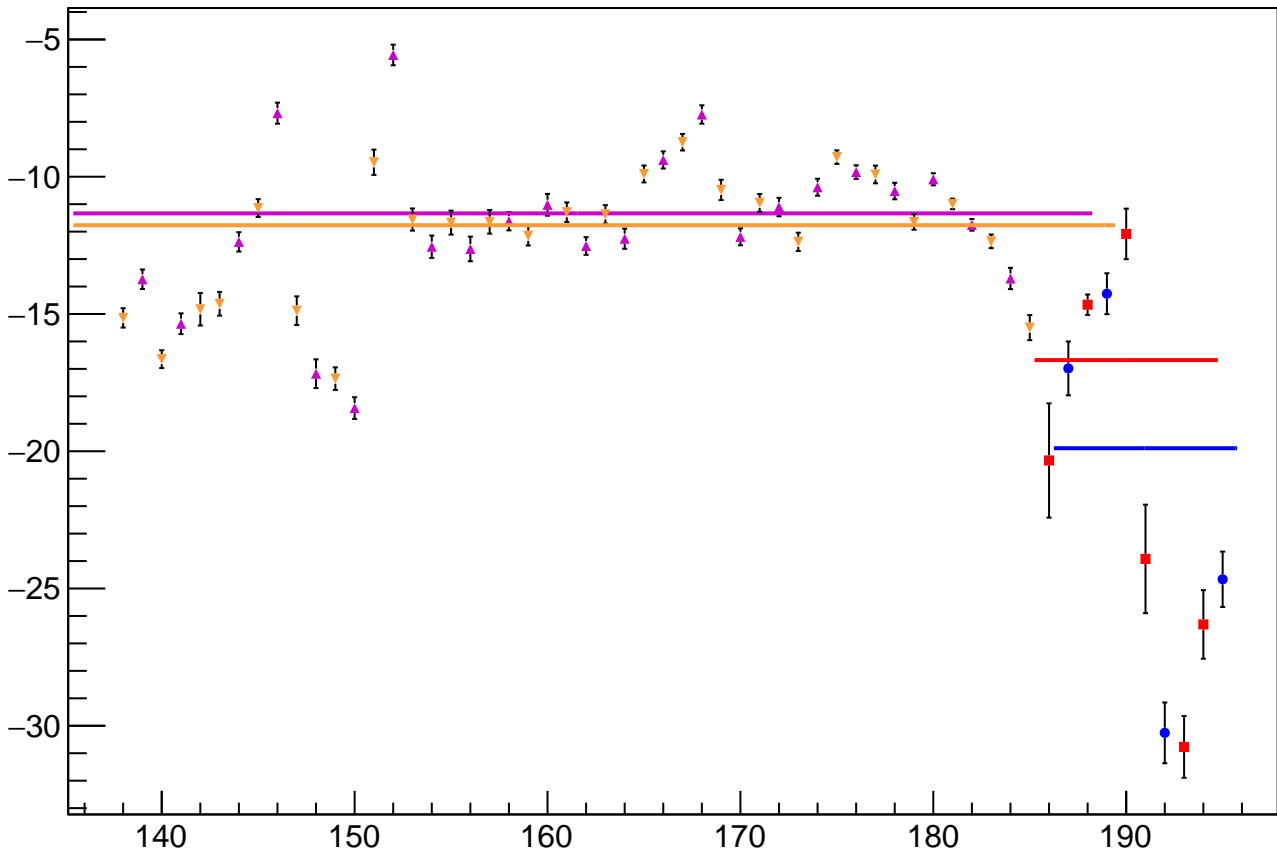
Left In:  $-0.459 \pm 0.008$   $\chi^2/\text{NDF}: 1958.4/22$

+ sign  $-0.506 \pm 0.007$   $\chi^2/\text{NDF}: 1992.4/45$

All:  $-0.493 \pm 0.005$   $\chi^2/\text{NDF}: 4796.0/93$

- sign  $-0.480 \pm 0.007$   $\chi^2/\text{NDF}: 2796.7/47$

# reg\_asym\_sam\_13\_57\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-19.890 \pm 0.464$   $\chi^2/\text{NDF}: 176.1/3$   
Left Out:  $-11.767 \pm 0.067$   $\chi^2/\text{NDF}: 1020.8/24$   
Right Out:  $-16.680 \pm 0.311$   $\chi^2/\text{NDF}: 287.2/5$   
Left In:  $-11.336 \pm 0.068$   $\chi^2/\text{NDF}: 1269.3/22$

+ sign  $-11.931 \pm 0.066$   $\chi^2/\text{NDF}: 1496.9/28$   
All:  $-11.757 \pm 0.047$   $\chi^2/\text{NDF}: 3348.7/57$   
- sign  $-11.579 \pm 0.066$   $\chi^2/\text{NDF}: 1837.7/28$

# reg\_asym\_sam\_13\_57\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-34.588 \pm 0.146$   $\chi^2/\text{NDF}: 1570.7/20$

Left Out:  $-30.212 \pm 0.054$   $\chi^2/\text{NDF}: 734.0/24$

Right Out:  $-34.831 \pm 0.141$   $\chi^2/\text{NDF}: 2064.3/24$

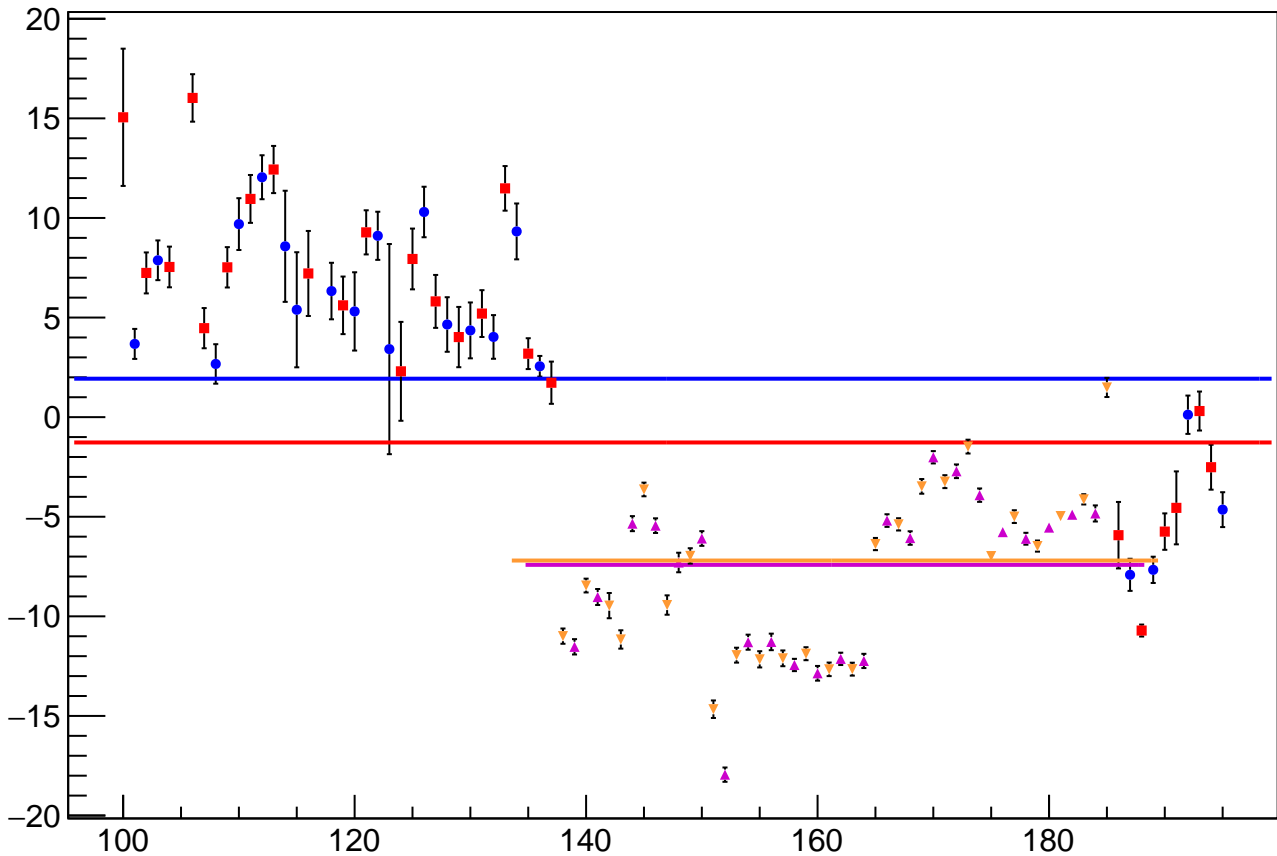
Left In:  $-30.124 \pm 0.056$   $\chi^2/\text{NDF}: 1226.2/22$

+ sign  $-30.734 \pm 0.051$   $\chi^2/\text{NDF}: 3091.5/45$

All:  $-30.743 \pm 0.036$   $\chi^2/\text{NDF}: 7342.0/93$

- sign  $-30.752 \pm 0.052$   $\chi^2/\text{NDF}: 4250.4/47$

# reg\_asym\_sam\_13\_57\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $1.930 \pm 0.224$   $\chi^2/\text{NDF}: 720.0/20$

Left Out:  $-7.199 \pm 0.067$   $\chi^2/\text{NDF}: 3037.3/24$

Right Out:  $-1.272 \pm 0.189$   $\chi^2/\text{NDF}: 2158.3/24$

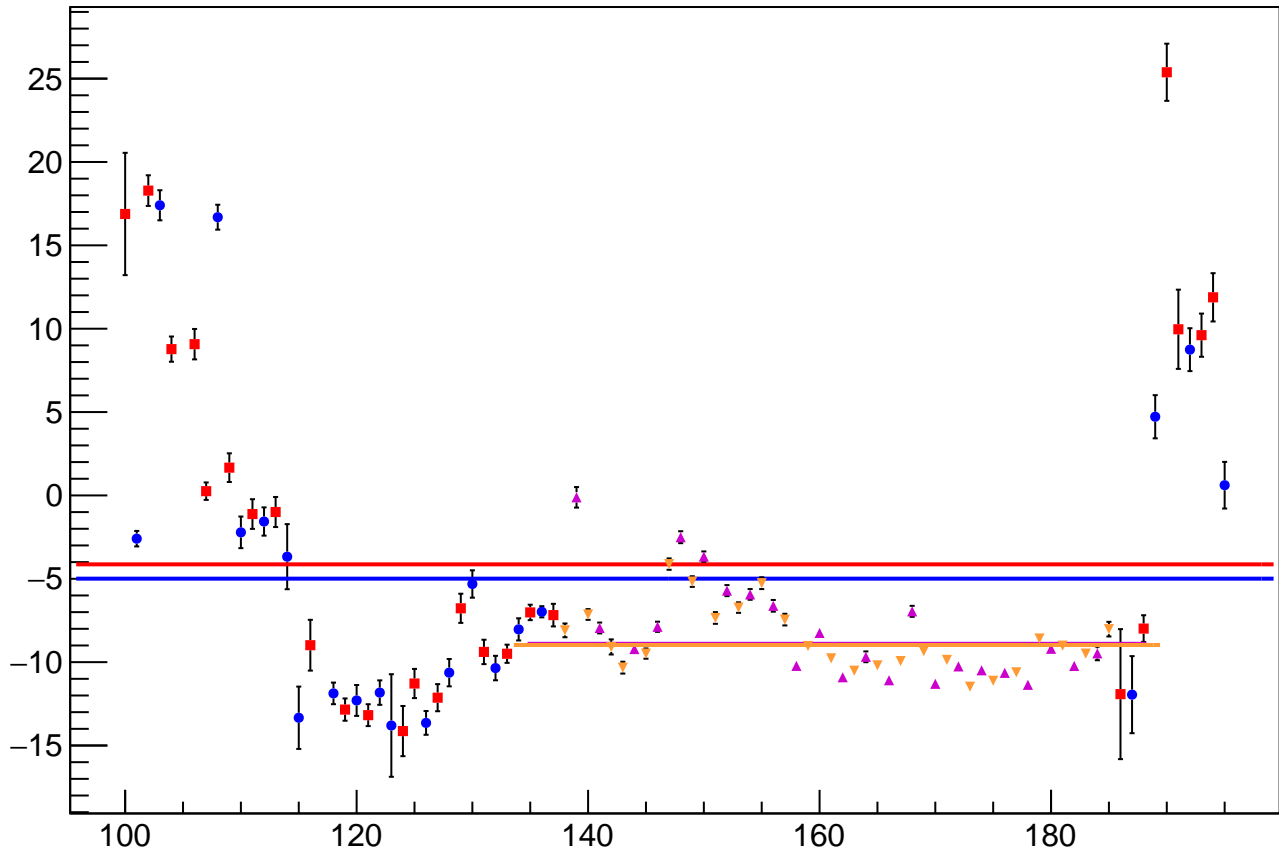
Left In:  $-7.415 \pm 0.068$   $\chi^2/\text{NDF}: 3123.3/22$

+ sign  $-6.454 \pm 0.064$   $\chi^2/\text{NDF}: 5277.8/45$

All:  $-6.584 \pm 0.045$   $\chi^2/\text{NDF}: 11504.1/93$

- sign  $-6.713 \pm 0.064$   $\chi^2/\text{NDF}: 6218.1/47$

# reg\_asym\_sam\_13\_57\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-4.992 \pm 0.166$   $\chi^2/\text{NDF}: 2299.6/20$

Left Out:  $-8.970 \pm 0.060$   $\chi^2/\text{NDF}: 878.8/24$

Right Out:  $-4.134 \pm 0.165$   $\chi^2/\text{NDF}: 2655.5/24$

Left In:  $-8.900 \pm 0.062$   $\chi^2/\text{NDF}: 1533.9/22$

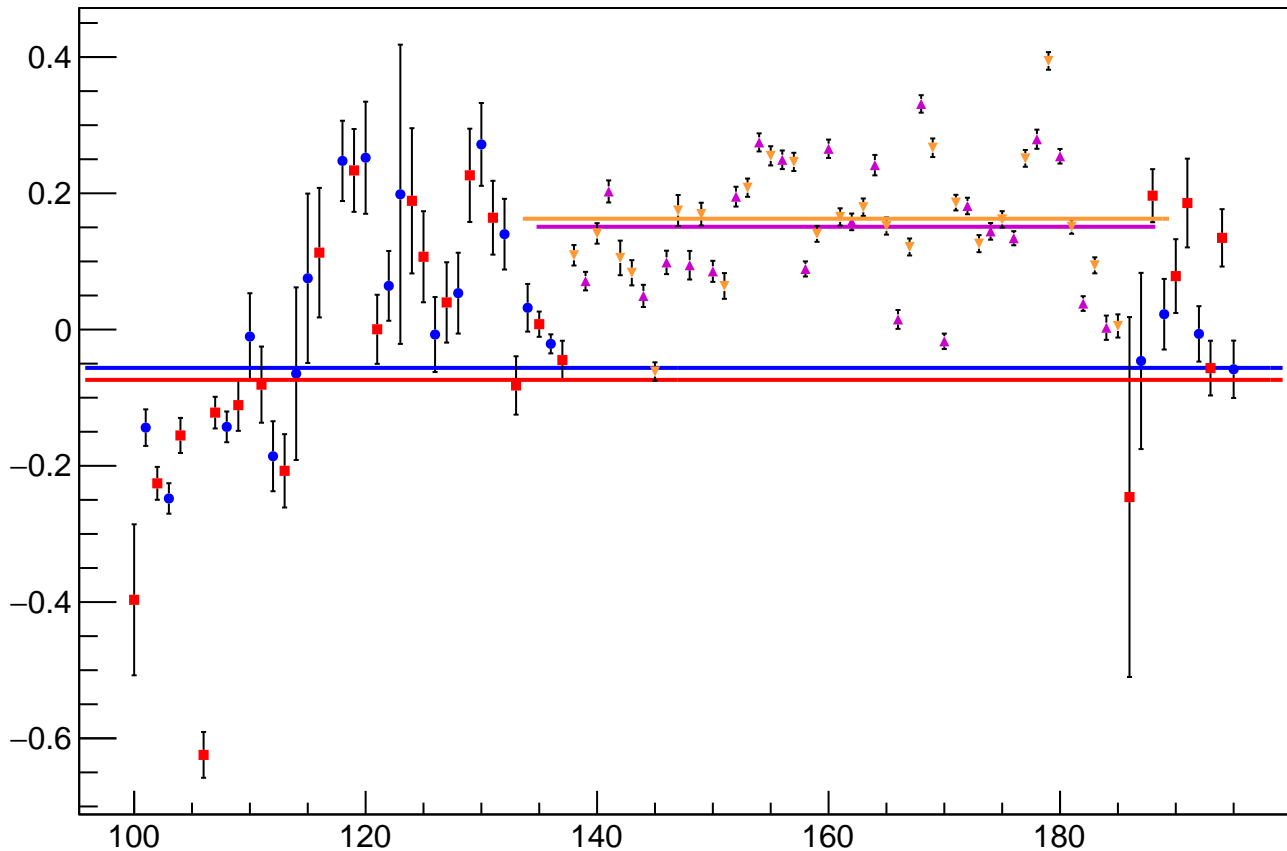
+ sign  $-8.510 \pm 0.057$   $\chi^2/\text{NDF}: 3683.3/45$

All:  $-8.417 \pm 0.040$   $\chi^2/\text{NDF}: 8607.6/93$

- sign  $-8.319 \pm 0.058$   $\chi^2/\text{NDF}: 4918.8/47$



# reg\_asym\_sam\_13\_57\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.056 \pm 0.008$   $\chi^2/\text{NDF}$ : 218.6/20

Left Out:  $0.163 \pm 0.003$   $\chi^2/\text{NDF}$ : 1018.1/24

Right Out:  $-0.074 \pm 0.008$   $\chi^2/\text{NDF}$ : 542.5/24

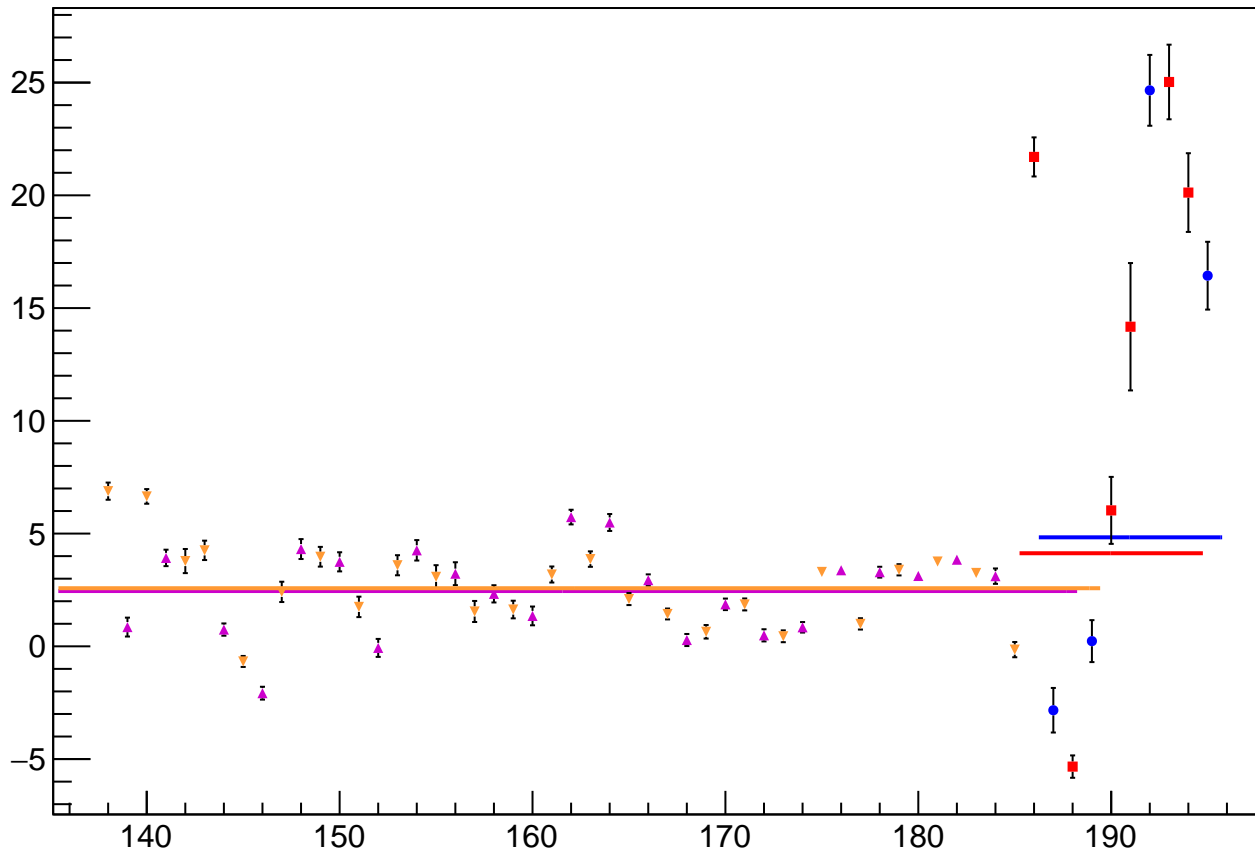
Left In:  $0.151 \pm 0.003$   $\chi^2/\text{NDF}$ : 1286.5/22

+ sign  $0.140 \pm 0.003$   $\chi^2/\text{NDF}$ : 1912.4/45

All:  $0.133 \pm 0.002$   $\chi^2/\text{NDF}$ : 4494.2/93

- sign  $0.126 \pm 0.003$   $\chi^2/\text{NDF}$ : 2567.3/47

# reg\_asym\_sam\_15\_37\_dd\_diff\_bpm1X\_slope vs Slug



Right In: 4.834 $\pm$ 0.575  $\chi^2$ /NDF: 303.5/3

Left Out: 2.577 $\pm$ 0.058  $\chi^2$ /NDF:867.5/24

Right Out: 4.128 $\pm$ 0.387  $\chi^2$ /NDF: 1032.6/5

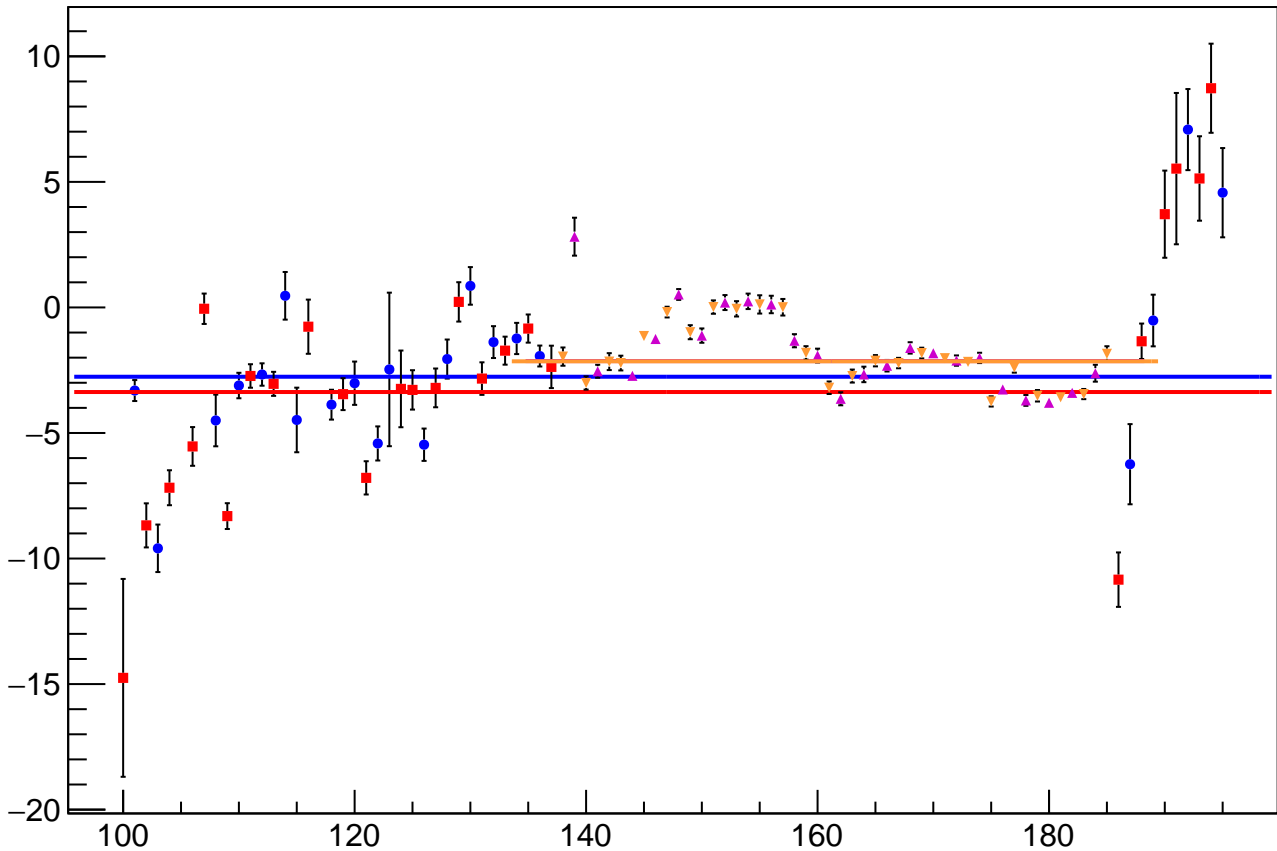
Left In: 2.452 $\pm$ 0.059  $\chi^2$ /NDF:871.3/22

+ sign 2.600 $\pm$ 0.058  $\chi^2$ /NDF: 1186.2/28

All: 2.546 $\pm$ 0.041  $\chi^2$ /NDF: 3110.1/57

- sign 2.491 $\pm$ 0.059  $\chi^2$ /NDF: 1922.2/28

# reg\_asym\_sam\_15\_37\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-2.760 \pm 0.151$   $\chi^2/\text{NDF}: 209.7/20$

Left Out:  $-2.146 \pm 0.048$   $\chi^2/\text{NDF}: 573.4/24$

Right Out:  $-3.369 \pm 0.148$   $\chi^2/\text{NDF}: 445.5/24$

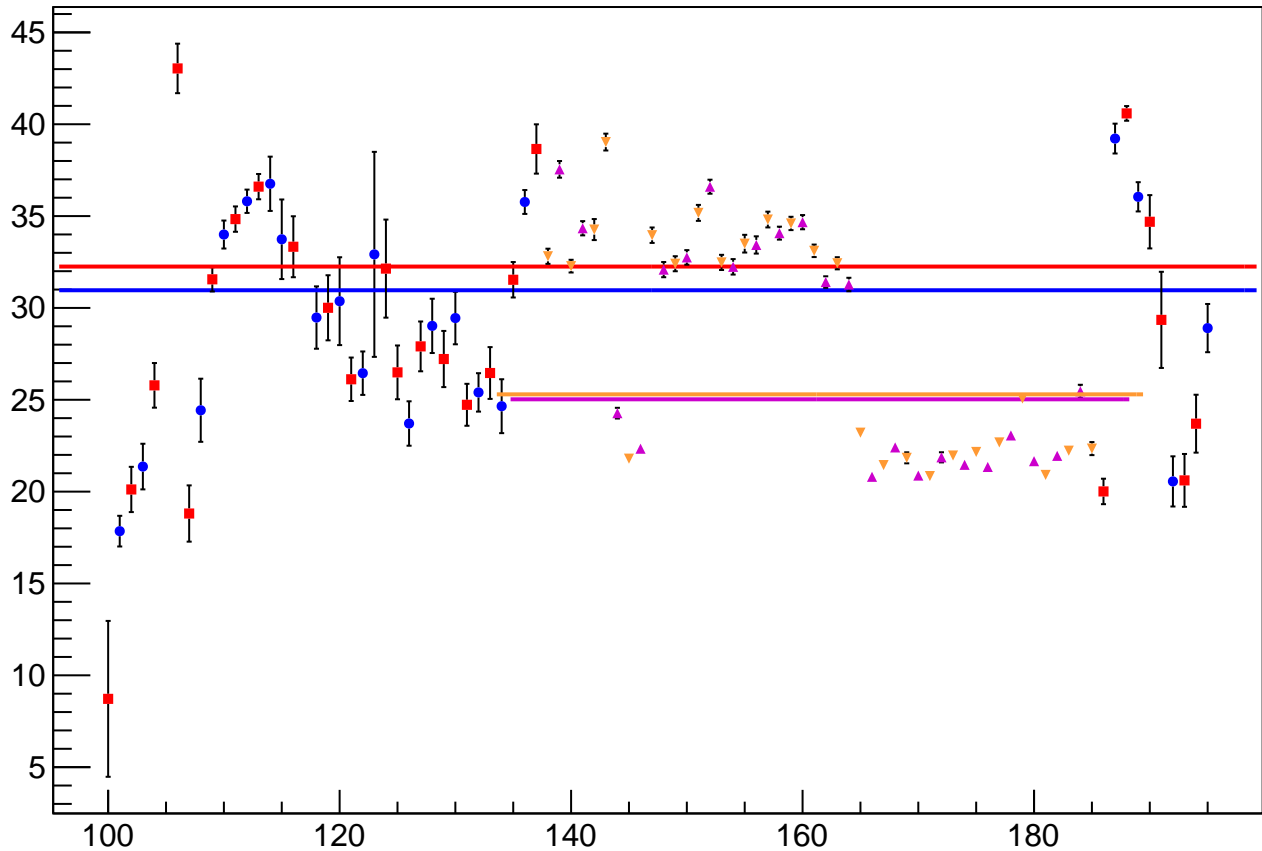
Left In:  $-2.136 \pm 0.048$   $\chi^2/\text{NDF}: 691.2/22$

+ sign  $-2.201 \pm 0.045$   $\chi^2/\text{NDF}: 798.1/45$

All:  $-2.228 \pm 0.032$   $\chi^2/\text{NDF}: 1998.2/93$

- sign  $-2.256 \pm 0.046$   $\chi^2/\text{NDF}: 1199.4/47$

# reg\_asym\_sam\_15\_37\_dd\_diff\_bpm4eX\_slope vs Slug



Right In: 30.962 $\pm$ 0.235  $\chi^2$ /NDF: 772.2/20

Left Out: 25.296 $\pm$ 0.059  $\chi^2$ /NDF:8272.3/24

Right Out: 32.252 $\pm$ 0.202  $\chi^2$ /NDF: 1346.4/24

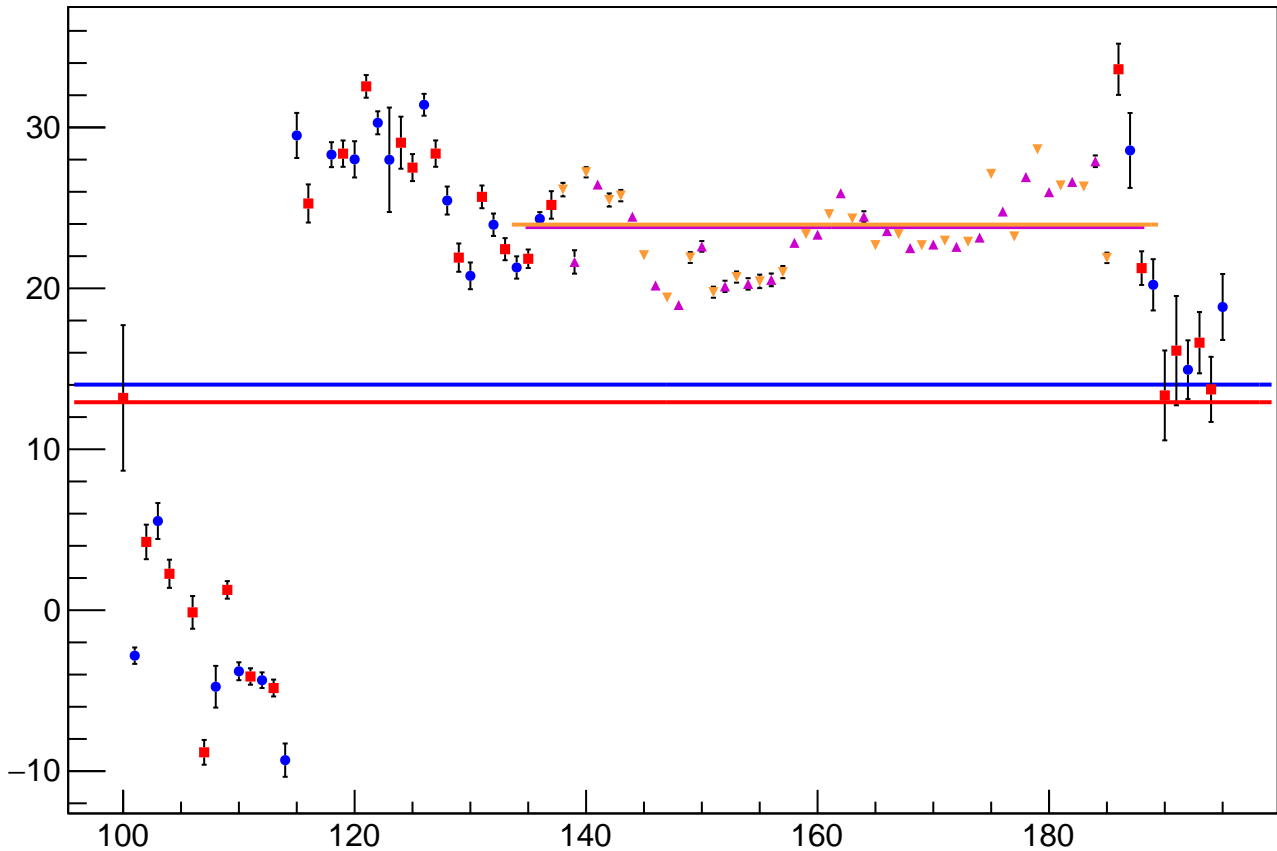
Left In: 25.025 $\pm$ 0.060  $\chi^2$ /NDF:7610.5/22

+ sign 25.631 $\pm$ 0.057  $\chi^2$ /NDF: 9592.9/45

All: 25.618 $\pm$ 0.040  $\chi^2$ /NDF: 19730.5/93

- sign 25.606 $\pm$ 0.057  $\chi^2$ /NDF: 10137.5/47

# reg\_asym\_sam\_15\_37\_dd\_diff\_bpm4eY\_slope vs Slug



Right In: 14.018 $\pm$ 0.170  $\chi^2$ /NDF: 7336.0/20

Left Out: 23.962 $\pm$ 0.053  $\chi^2$ /NDF: 1922.4/24

Right Out: 12.924 $\pm$ 0.169  $\chi^2$ /NDF: 7199.2/24

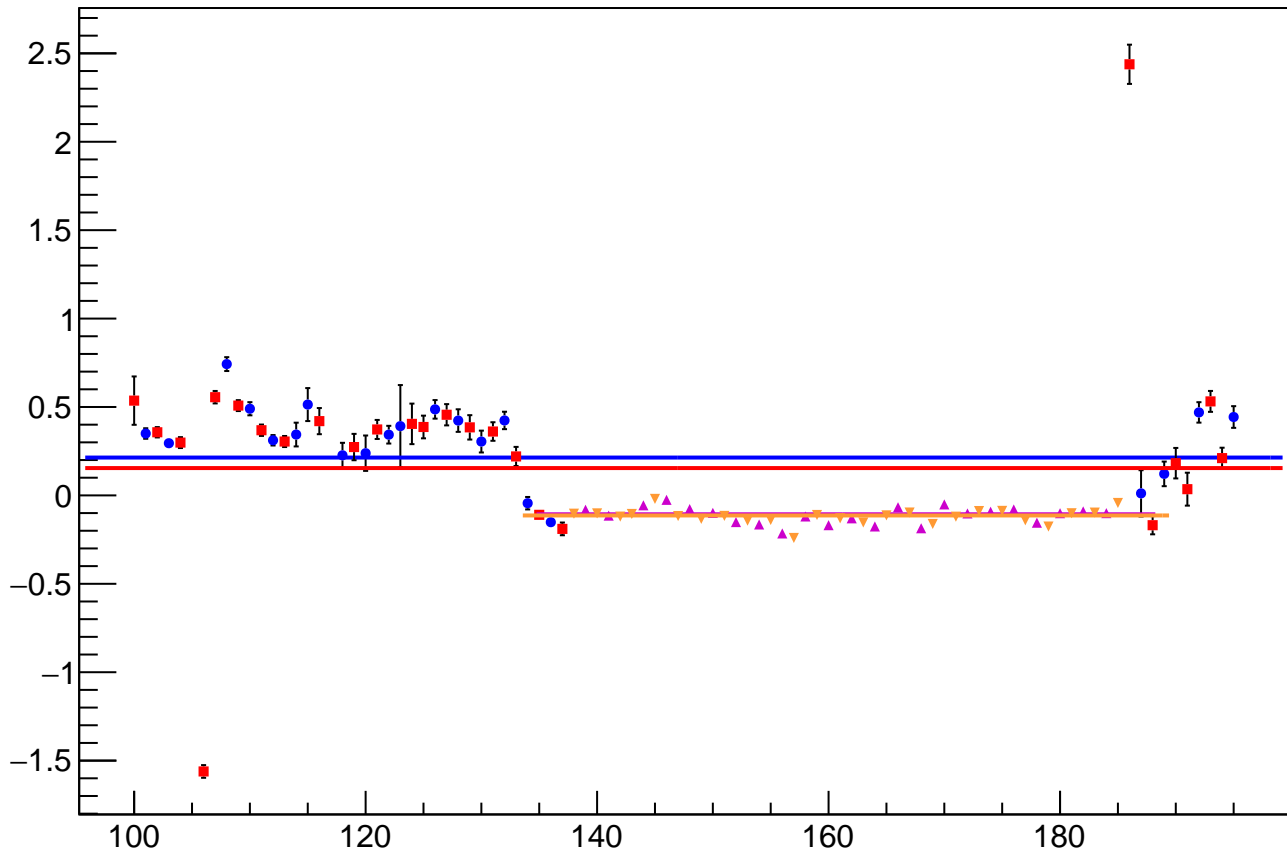
Left In: 23.805 $\pm$ 0.054  $\chi^2$ /NDF: 1761.3/22

+ sign 23.078 $\pm$ 0.051  $\chi^2$ /NDF: 12368.5/45

All: 22.938 $\pm$ 0.036  $\chi^2$ /NDF: 25111.7/93

- sign 22.794 $\pm$ 0.051  $\chi^2$ /NDF: 12727.8/47

# reg\_asym\_sam\_15\_37\_dd\_diff\_bpm12X\_slope vs Slug



Right In: 0.214 $\pm$ 0.009  $\chi^2$ /NDF: 885.1/20

Left Out: -0.113 $\pm$ 0.002  $\chi^2$ /NDF: 291.0/24

Right Out: 0.155 $\pm$ 0.009  $\chi^2$ /NDF: 3522.6/24

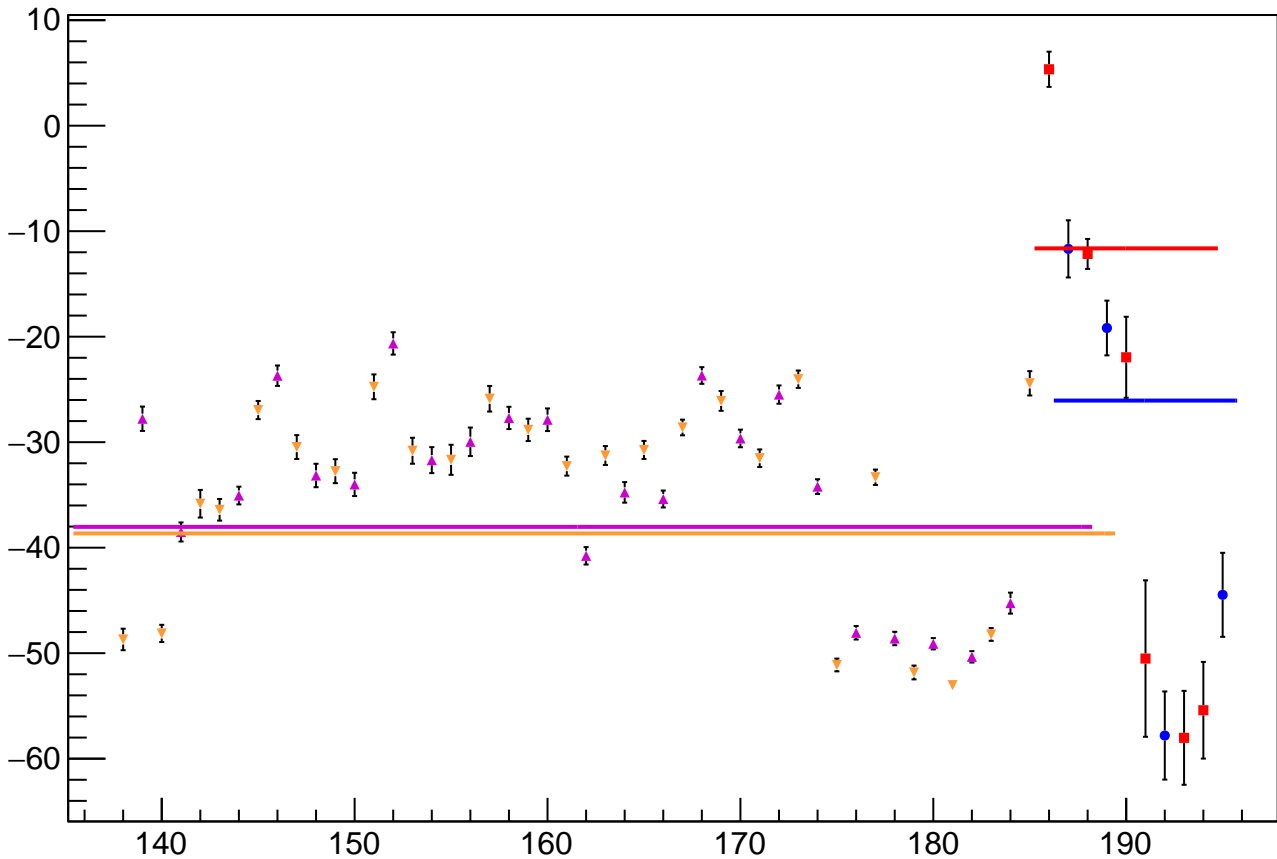
Left In: -0.107 $\pm$ 0.002  $\chi^2$ /NDF: 321.8/22

+ sign -0.092 $\pm$ 0.002  $\chi^2$ /NDF: 2395.5/45

All: -0.090 $\pm$ 0.002  $\chi^2$ /NDF: 7066.7/93

- sign -0.088 $\pm$ 0.002  $\chi^2$ /NDF: 4669.7/47

# reg\_asym\_sam\_24\_68\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-26.056 \pm 1.571$   $\chi^2/\text{NDF}: 114.3/3$

Left Out:  $-38.650 \pm 0.169$   $\chi^2/\text{NDF}: 4077.2/24$

Right Out:  $-11.630 \pm 0.981$   $\chi^2/\text{NDF}: 338.2/5$

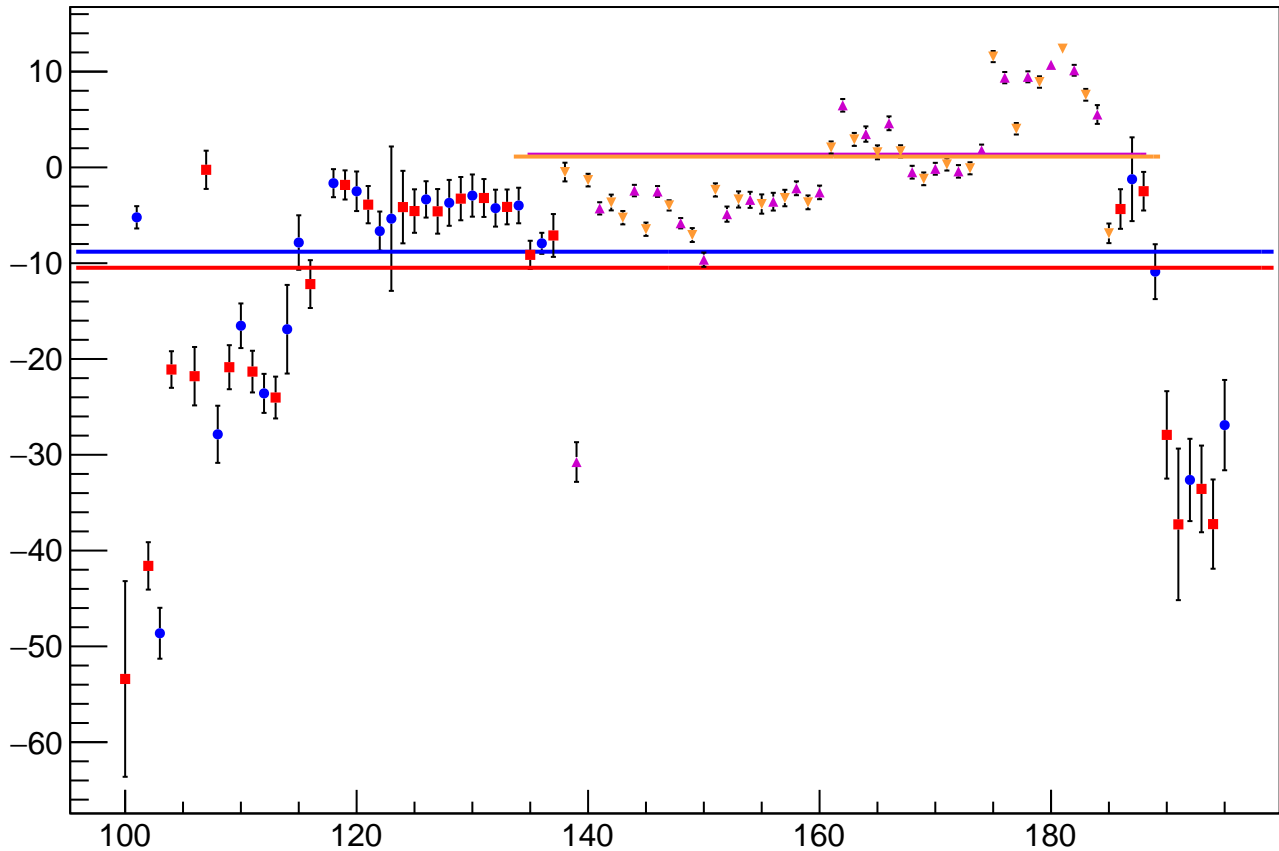
Left In:  $-38.027 \pm 0.173$   $\chi^2/\text{NDF}: 3091.9/22$

+ sign  $-38.505 \pm 0.168$   $\chi^2/\text{NDF}: 4255.0/28$

All:  $-37.877 \pm 0.120$   $\chi^2/\text{NDF}: 8415.1/57$

- sign  $-37.230 \pm 0.171$   $\chi^2/\text{NDF}: 4131.7/28$

# reg\_asym\_sam\_24\_68\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-8.801 \pm 0.453$   $\chi^2/\text{NDF}: 458.4/20$

Left Out:  $1.130 \pm 0.136$   $\chi^2/\text{NDF}: 1799.3/24$

Right Out:  $-10.477 \pm 0.458$   $\chi^2/\text{NDF}: 539.5/24$

Left In:  $1.329 \pm 0.140$   $\chi^2/\text{NDF}: 2048.0/22$

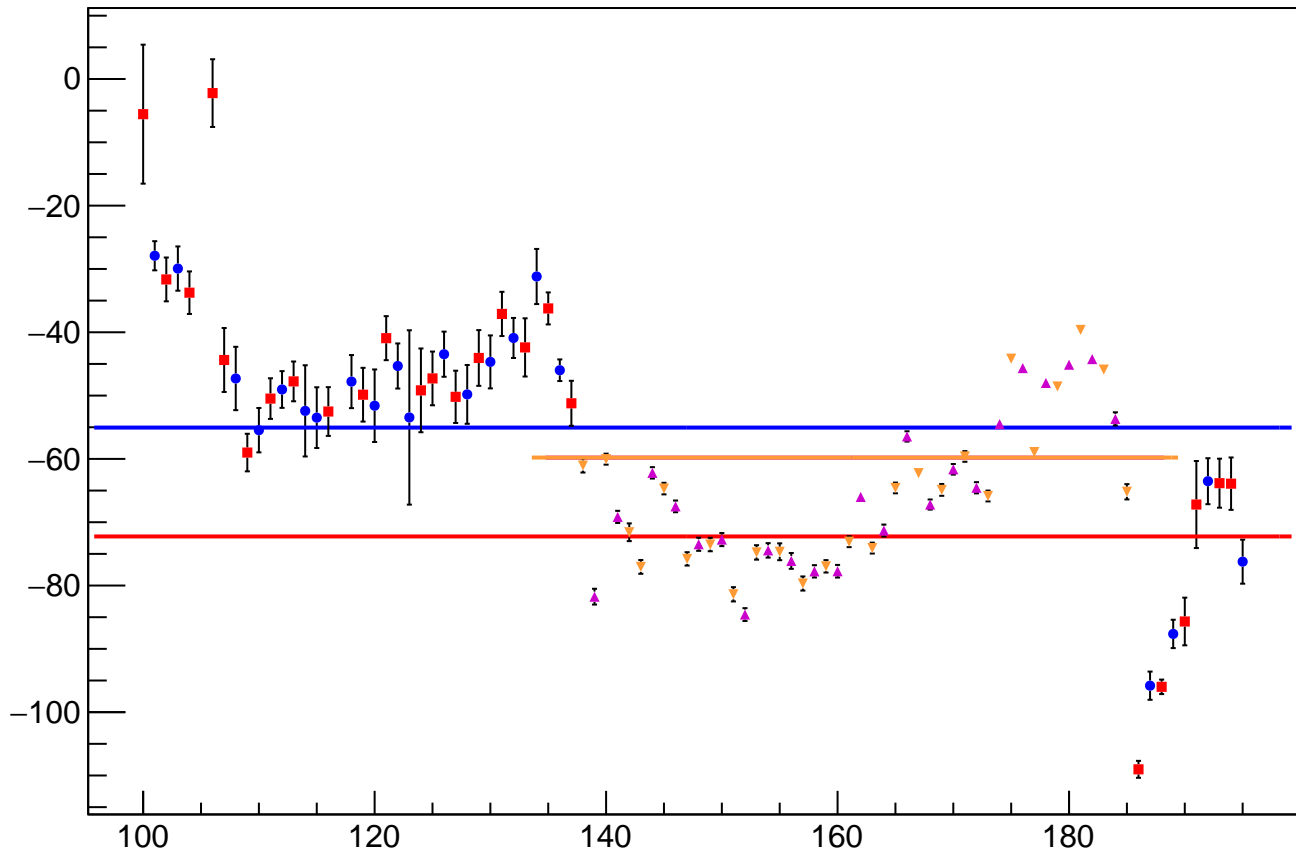
+ sign  $0.310 \pm 0.130$   $\chi^2/\text{NDF}: 2698.1/45$

All:  $0.315 \pm 0.093$   $\chi^2/\text{NDF}: 5894.4/93$

- sign  $0.321 \pm 0.134$   $\chi^2/\text{NDF}: 3196.3/47$



# reg\_asym\_sam\_24\_68\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-55.053 \pm 0.710$   $\chi^2/\text{NDF}: 893.8/20$

Left Out:  $-59.789 \pm 0.170$   $\chi^2/\text{NDF}: 5837.7/24$

Right Out:  $-72.248 \pm 0.591$   $\chi^2/\text{NDF}: 2474.5/24$

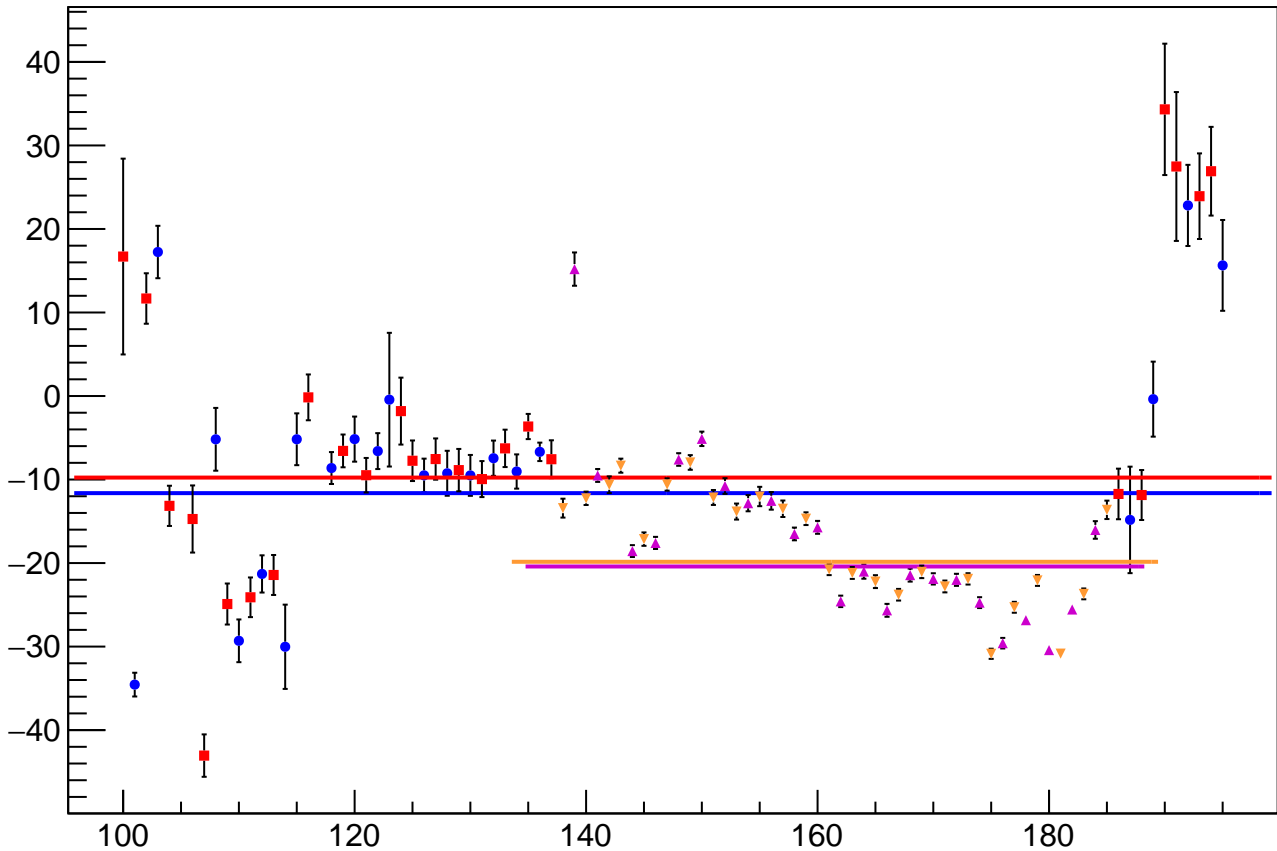
Left In:  $-59.802 \pm 0.173$   $\chi^2/\text{NDF}: 5217.5/22$

+ sign  $-59.532 \pm 0.165$   $\chi^2/\text{NDF}: 6773.5/45$

All:  $-60.156 \pm 0.117$   $\chi^2/\text{NDF}: 14902.6/93$

- sign  $-60.788 \pm 0.166$   $\chi^2/\text{NDF}: 8100.4/47$

# reg\_asym\_sam\_24\_68\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-11.627 \pm 0.513$   $\chi^2/\text{NDF}: 557.7/20$

Left Out:  $-19.847 \pm 0.153$   $\chi^2/\text{NDF}: 1931.3/24$

Right Out:  $-9.765 \pm 0.529$   $\chi^2/\text{NDF}: 510.0/24$

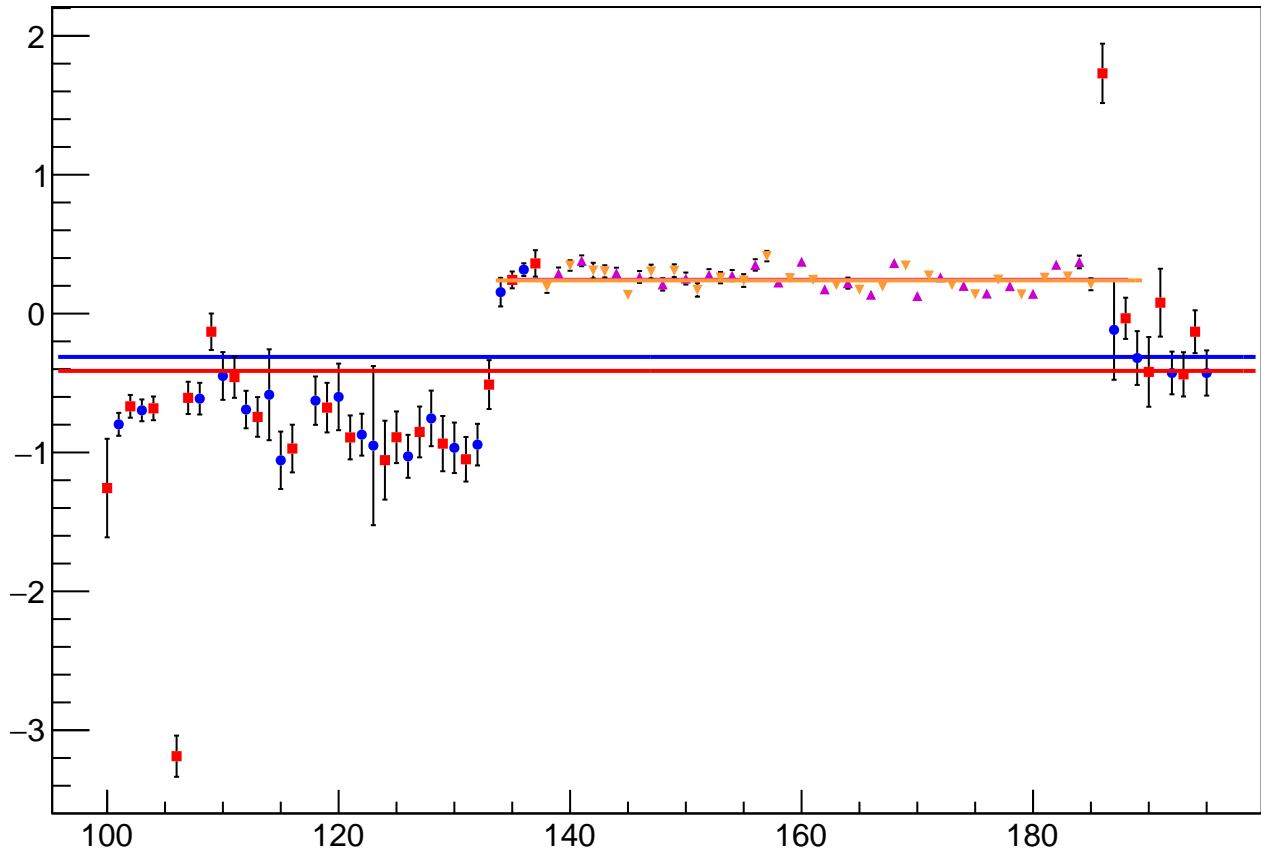
Left In:  $-20.410 \pm 0.157$   $\chi^2/\text{NDF}: 2302.0/22$

+ sign  $-19.179 \pm 0.146$   $\chi^2/\text{NDF}: 2724.6/45$

All:  $-19.360 \pm 0.105$   $\chi^2/\text{NDF}: 5912.0/93$

- sign  $-19.552 \pm 0.150$   $\chi^2/\text{NDF}: 3184.3/47$

# reg\_asym\_sam\_24\_68\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.312 \pm 0.026$   $\chi^2/\text{NDF}: 373.1/20$

Left Out:  $0.239 \pm 0.007$   $\chi^2/\text{NDF}: 93.0/24$

Right Out:  $-0.413 \pm 0.027$   $\chi^2/\text{NDF}: 747.8/24$

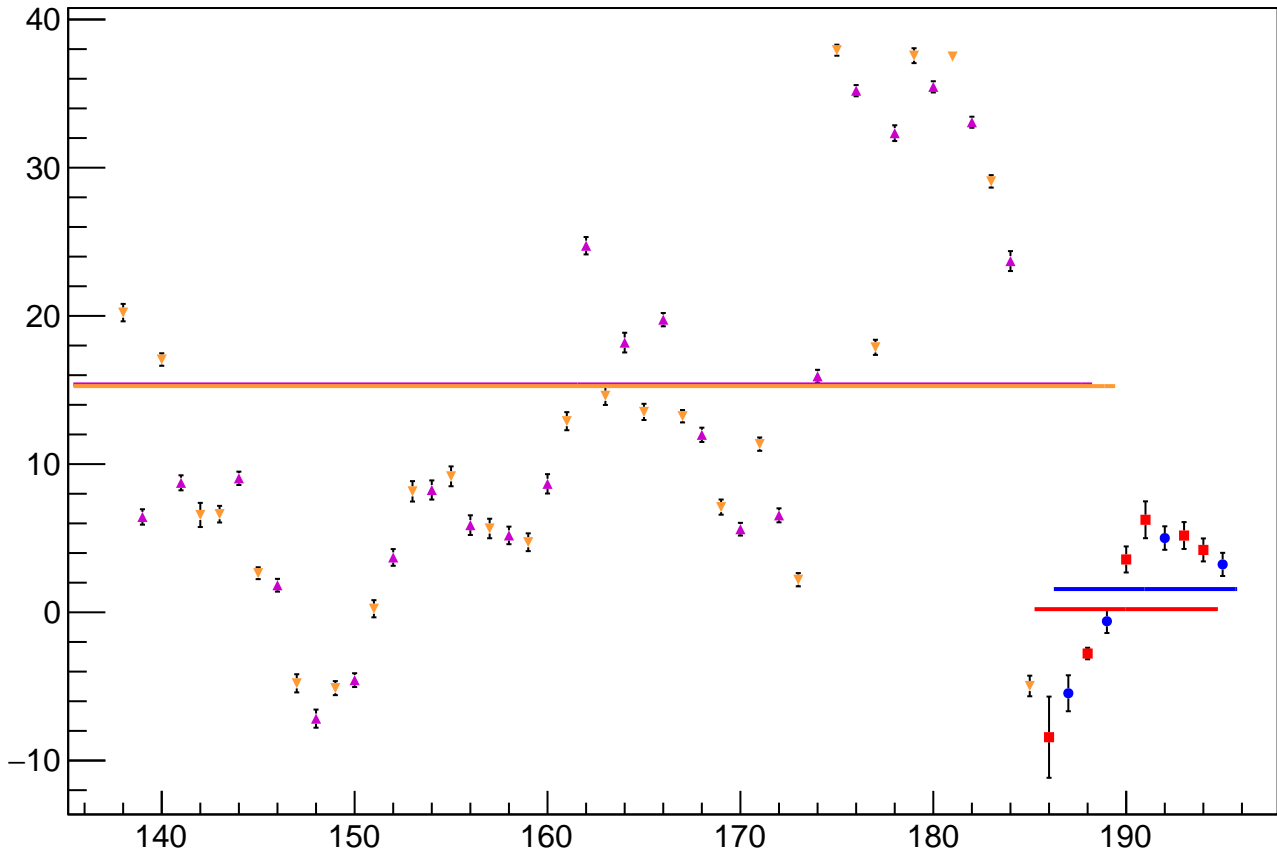
Left In:  $0.243 \pm 0.007$   $\chi^2/\text{NDF}: 138.3/22$

+ sign  $0.203 \pm 0.007$   $\chi^2/\text{NDF}: 870.9/45$

All:  $0.201 \pm 0.005$   $\chi^2/\text{NDF}: 2319.8/93$

- sign  $0.199 \pm 0.007$   $\chi^2/\text{NDF}: 1448.8/47$

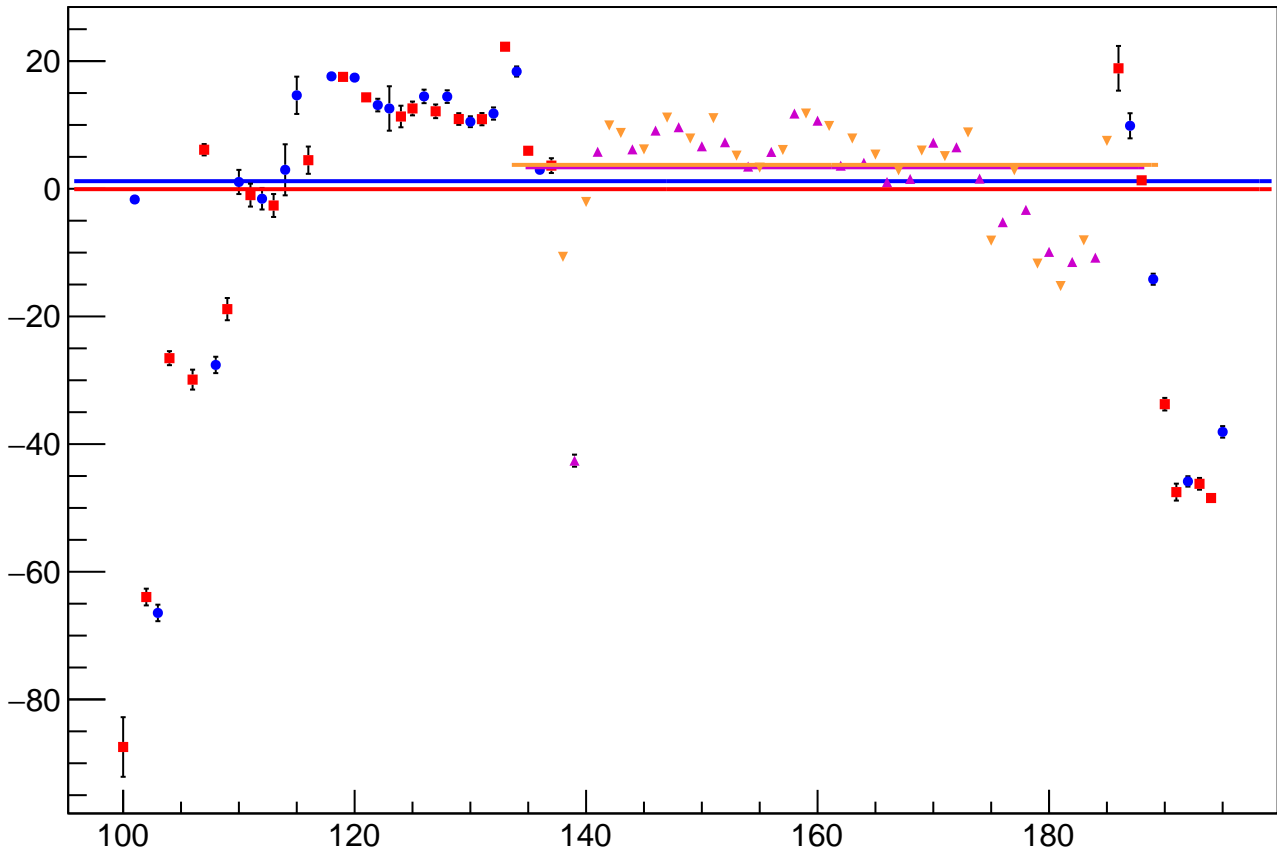
# reg\_asym\_sam\_26\_48\_dd\_diff\_bpm1X\_slope vs Slug



Right In: 1.569 $\pm$ 0.427  $\chi^2$ /NDF: 64.4/3  
 Left Out: 15.263 $\pm$ 0.100  $\chi^2$ /NDF:19175.2/24  
 Right Out: 0.214 $\pm$ 0.294  $\chi^2$ /NDF: 163.9/5  
 Left In: 15.377 $\pm$ 0.103  $\chi^2$ /NDF:16268.9/22

+ sign 14.544 $\pm$ 0.098  $\chi^2$ /NDF: 20214.6/28  
 All: 14.131 $\pm$ 0.069  $\chi^2$ /NDF: 39053.1/57  
 - sign 13.726 $\pm$ 0.097  $\chi^2$ /NDF: 18803.3/28

# reg\_asym\_sam\_26\_48\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $1.193 \pm 0.199$   $\chi^2/\text{NDF}: 11761.7/20$

Left Out:  $3.746 \pm 0.079$   $\chi^2/\text{NDF}: 9247.4/24$

Right Out:  $-0.061 \pm 0.184$   $\chi^2/\text{NDF}: 17098.1/24$

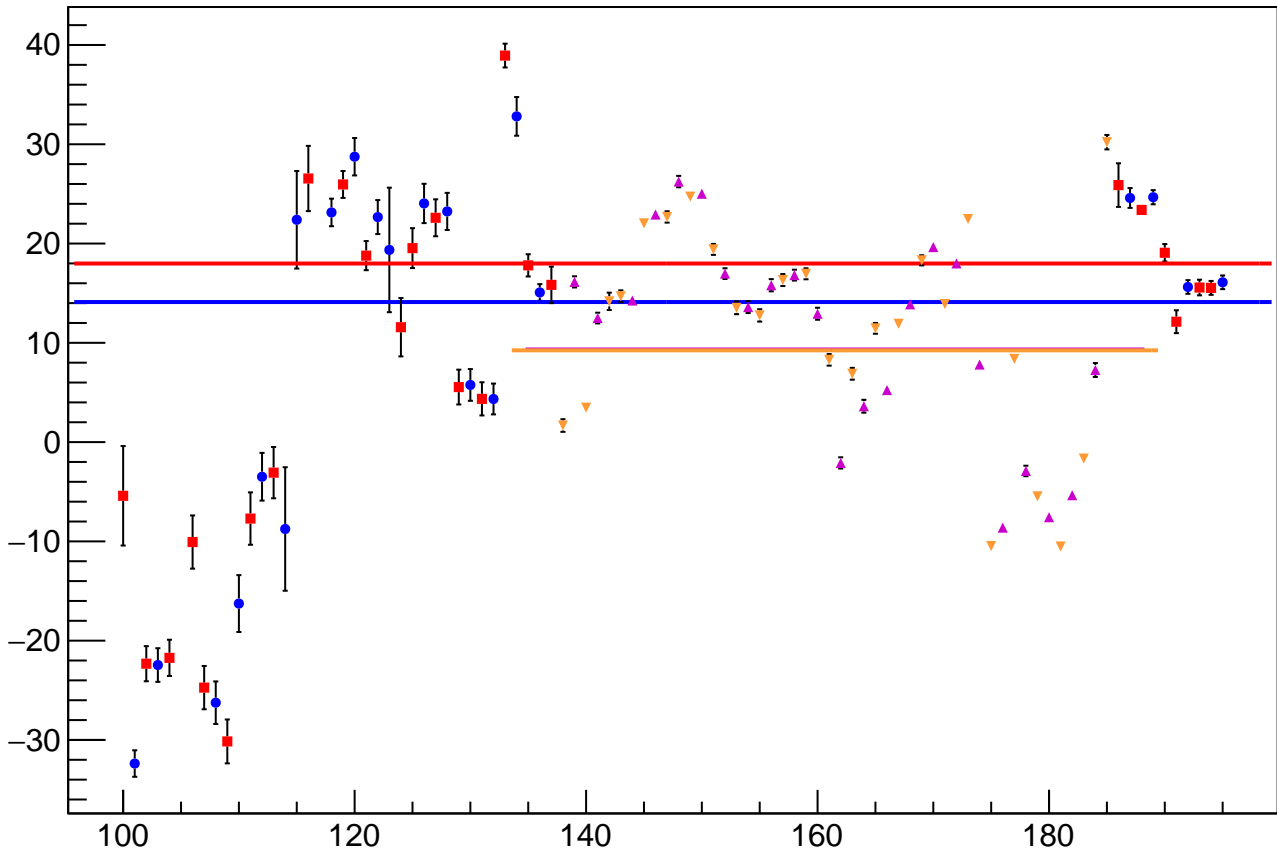
Left In:  $3.365 \pm 0.081$   $\chi^2/\text{NDF}: 8527.0/22$

+ sign  $3.399 \pm 0.073$   $\chi^2/\text{NDF}: 21151.6/45$

All:  $3.108 \pm 0.052$   $\chi^2/\text{NDF}: 47098.4/93$

- sign  $2.807 \pm 0.074$   $\chi^2/\text{NDF}: 25914.6/47$

# reg\_asym\_sam\_26\_48\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $14.108 \pm 0.279$   $\chi^2/\text{NDF}: 2896.6/20$

Left Out:  $9.242 \pm 0.101$   $\chi^2/\text{NDF}: 13633.2/24$

Right Out:  $17.988 \pm 0.215$   $\chi^2/\text{NDF}: 2975.5/24$

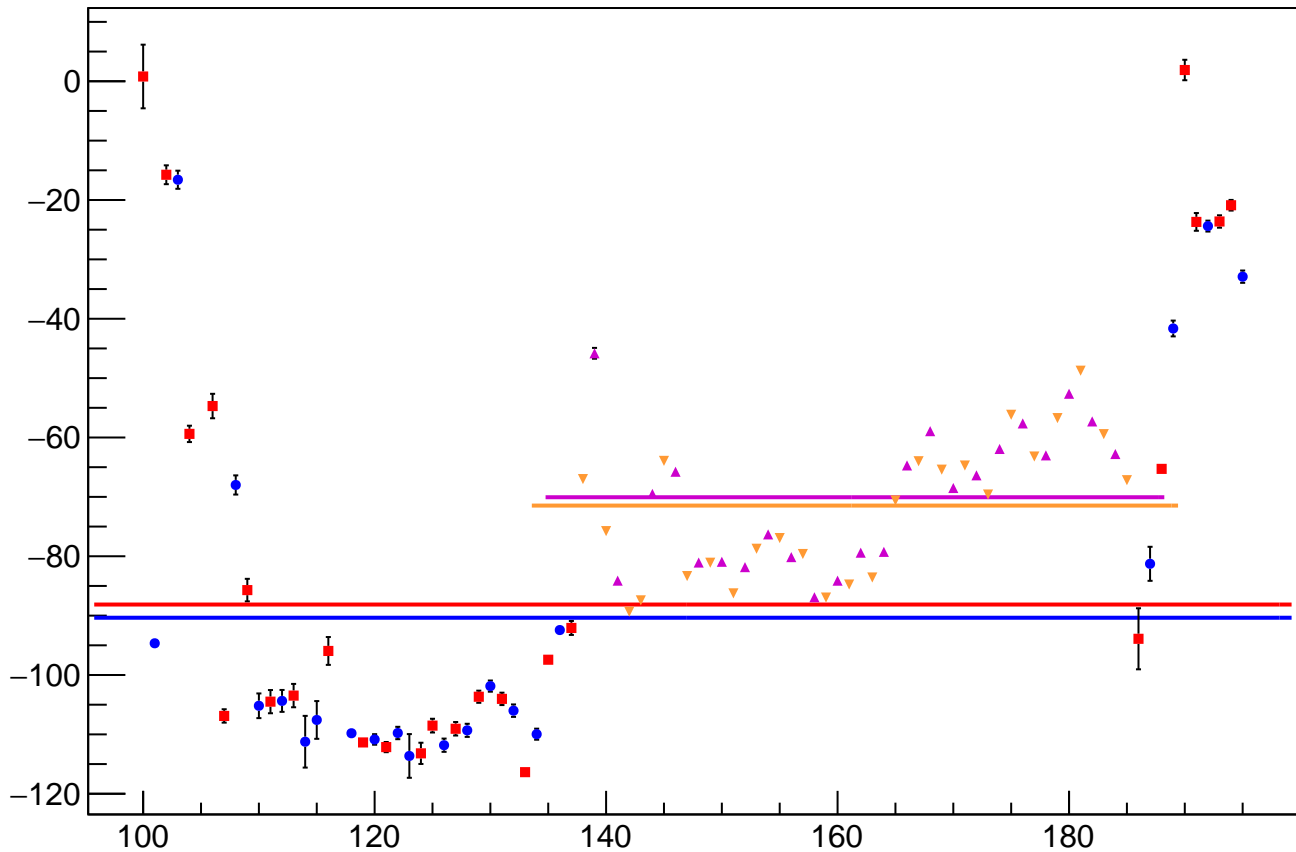
Left In:  $9.328 \pm 0.103$   $\chi^2/\text{NDF}: 11968.5/22$

+ sign  $9.806 \pm 0.095$   $\chi^2/\text{NDF}: 16799.2/45$

All:  $10.386 \pm 0.066$   $\chi^2/\text{NDF}: 33141.2/93$

- sign  $10.937 \pm 0.093$   $\chi^2/\text{NDF}: 16269.1/47$

# reg\_asym\_sam\_26\_48\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-90.354 \pm 0.231$   $\chi^2/\text{NDF}: 15636.3/20$

Left Out:  $-71.465 \pm 0.089$   $\chi^2/\text{NDF}: 16409.7/24$

Right Out:  $-88.131 \pm 0.219$   $\chi^2/\text{NDF}: 24236.4/24$

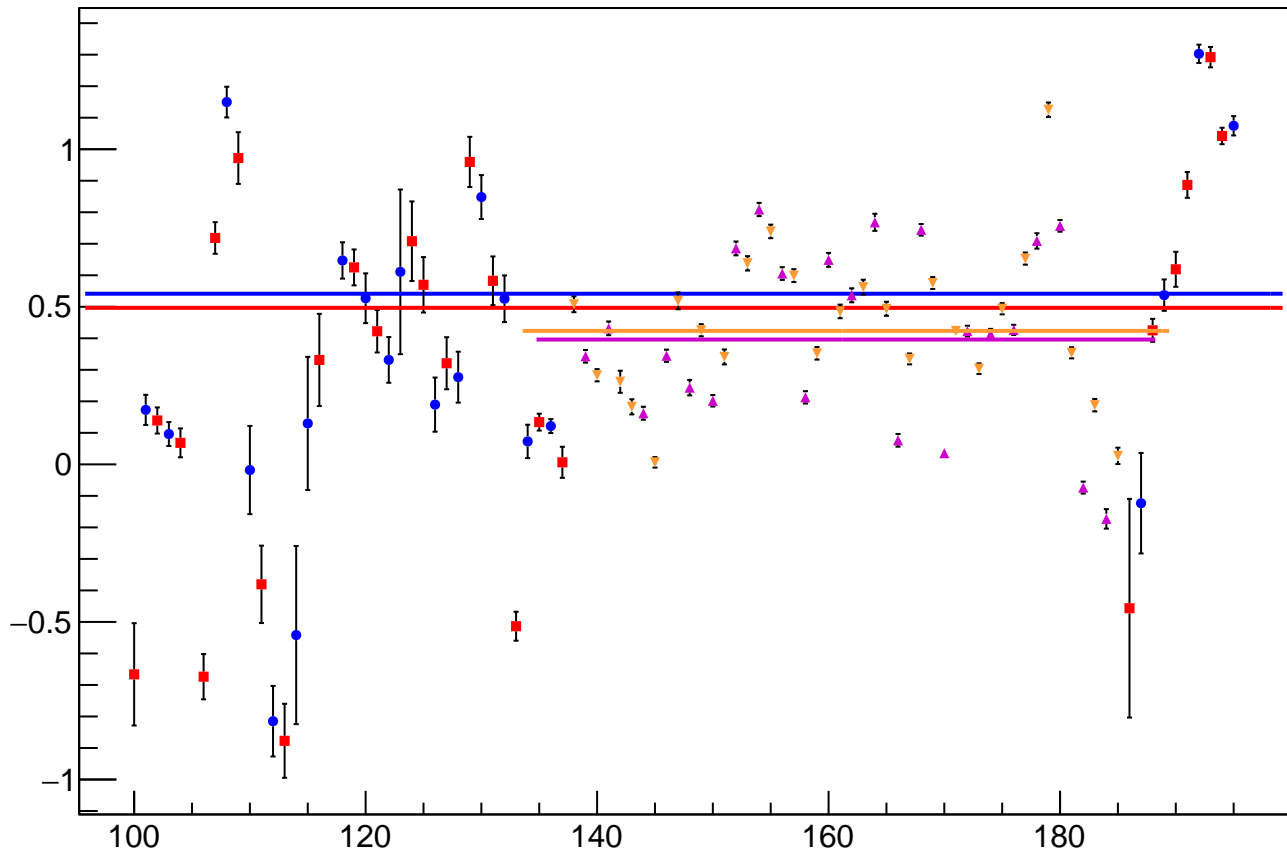
Left In:  $-70.061 \pm 0.092$   $\chi^2/\text{NDF}: 13058.5/22$

+ sign  $-73.912 \pm 0.083$   $\chi^2/\text{NDF}: 37843.6/45$

All:  $-73.345 \pm 0.059$   $\chi^2/\text{NDF}: 81031.0/93$

- sign  $-72.761 \pm 0.085$   $\chi^2/\text{NDF}: 43093.4/47$

# reg\_asym\_sam\_26\_48\_dd\_diff\_bpm12X\_slope vs Slug



Right In: 0.541 $\pm$ 0.011  $\chi^2$ /NDF: 2035.9/20

Left Out: 0.424 $\pm$ 0.004  $\chi^2$ /NDF:2885.0/24

Right Out: 0.497 $\pm$ 0.010  $\chi^2$ /NDF: 2682.7/24

Left In: 0.396 $\pm$ 0.004  $\chi^2$ /NDF:4051.5/22

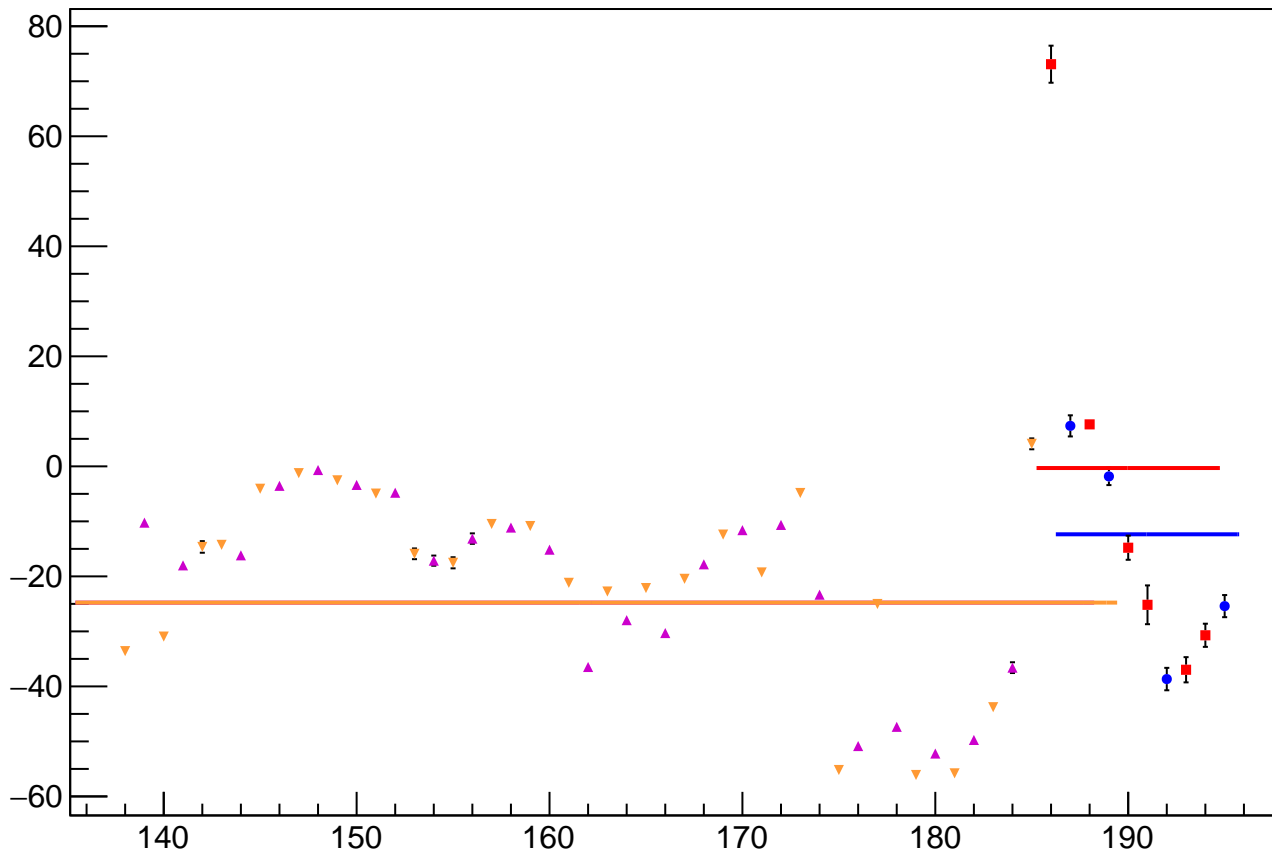
+ sign 0.438 $\pm$ 0.004  $\chi^2$ /NDF: 5020.7/45

All: 0.424 $\pm$ 0.003  $\chi^2$ /NDF: 11863.3/93

- sign 0.410 $\pm$ 0.004  $\chi^2$ /NDF: 6817.6/47



# reg\_asym\_sam\_1548\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-12.352 \pm 0.929$   $\chi^2/\text{NDF}: 358.6/3$

Left Out:  $-24.769 \pm 0.139$   $\chi^2/\text{NDF}: 18318.8/24$

Right Out:  $-0.306 \pm 0.652$   $\chi^2/\text{NDF}: 1130.9/5$

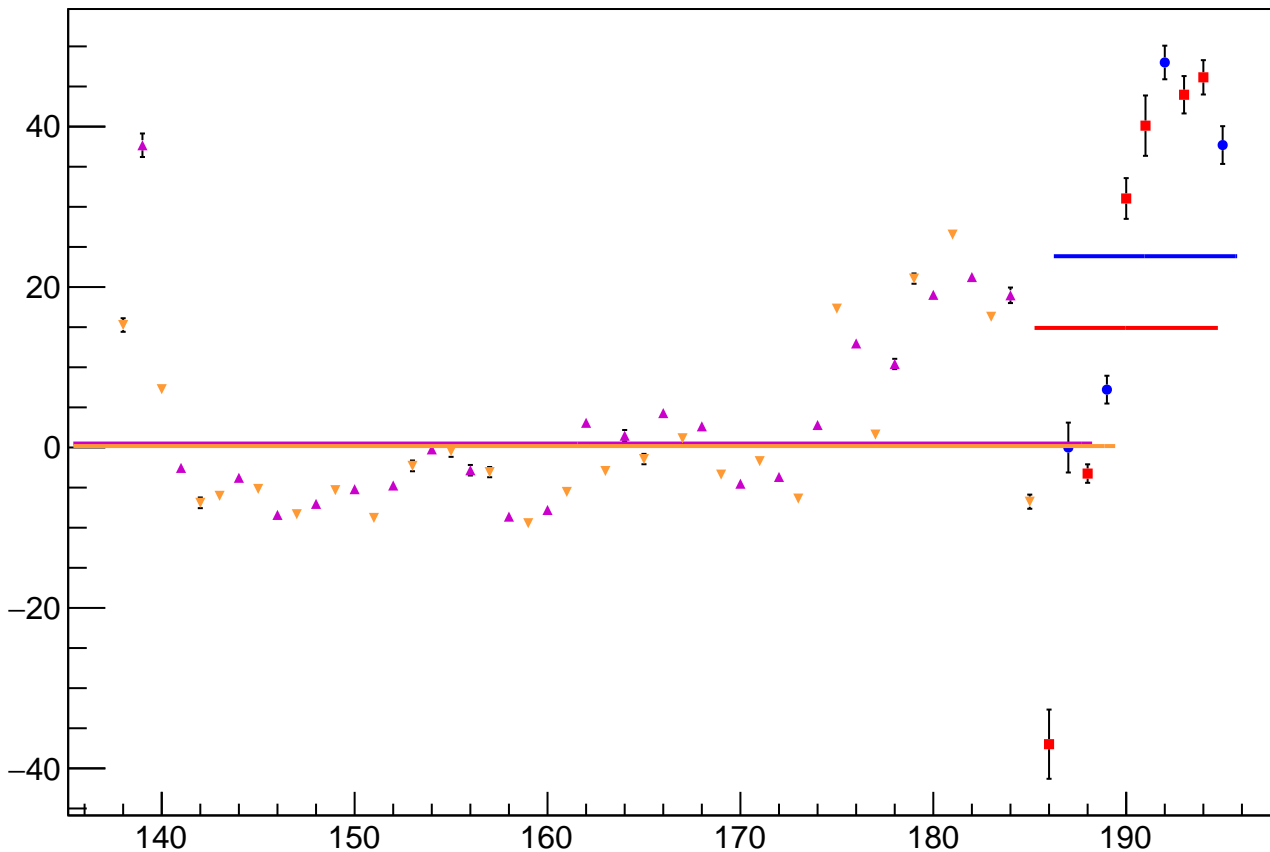
Left In:  $-24.775 \pm 0.143$   $\chi^2/\text{NDF}: 14807.4/22$

+ sign  $-24.495 \pm 0.138$   $\chi^2/\text{NDF}: 18852.3/28$

All:  $-24.080 \pm 0.098$   $\chi^2/\text{NDF}: 36152.8/57$

- sign  $-23.655 \pm 0.139$   $\chi^2/\text{NDF}: 17282.2/28$

# reg\_asym\_sam\_1548\_avg\_diff\_bpm4aY\_slope vs Slug



Right In: 23.844+/-1.088  $\chi^2$ /NDF: 318.7/3

Left Out: 0.177+/-0.109  $\chi^2$ /NDF:8295.6/24

Right Out: 14.905+/-0.835  $\chi^2$ /NDF: 846.7/5

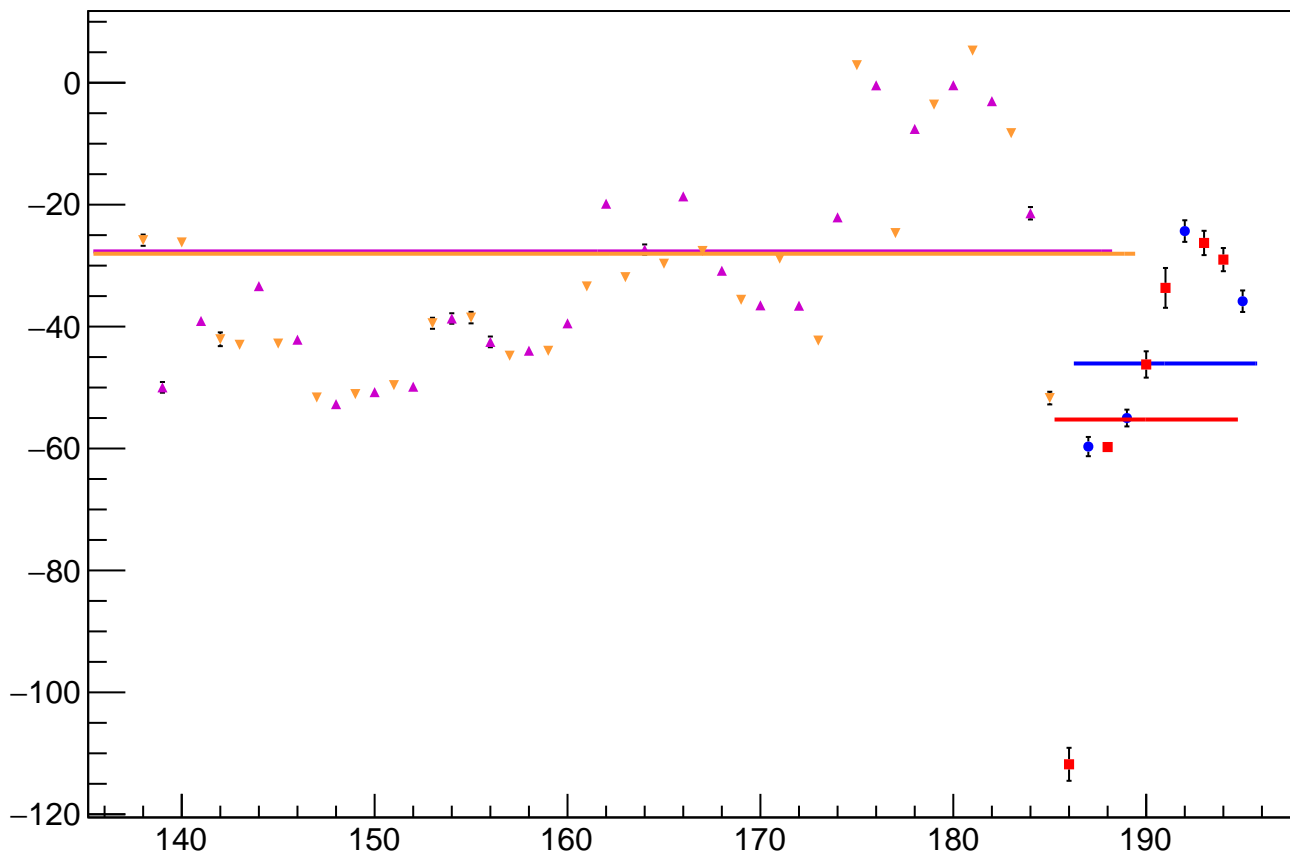
Left In: 0.493+/-0.112  $\chi^2$ /NDF:6555.4/22

+ sign 0.411+/-0.108  $\chi^2$ /NDF: 9082.9/28

All: 0.575+/-0.077  $\chi^2$ /NDF: 16782.4/57

- sign 0.749+/-0.111  $\chi^2$ /NDF: 7694.7/28

# reg\_asym\_sam\_1548\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $-46.053 \pm 0.798$   $\chi^2/\text{NDF}: 300.5/3$

Left Out:  $-28.050 \pm 0.140$   $\chi^2/\text{NDF}: 17144.5/24$

Right Out:  $-55.244 \pm 0.546$   $\chi^2/\text{NDF}: 948.0/5$

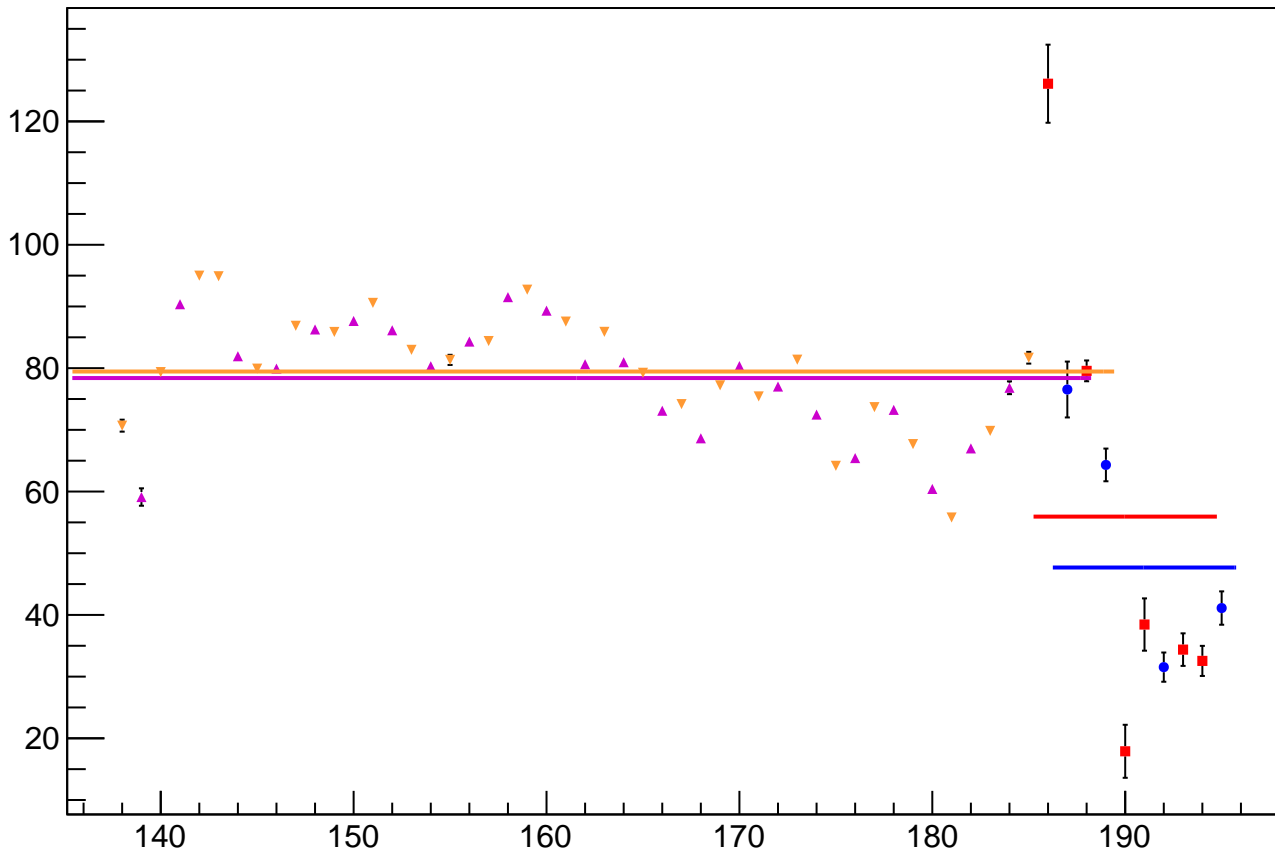
Left In:  $-27.666 \pm 0.142$   $\chi^2/\text{NDF}: 15003.2/22$

+ sign  $-28.586 \pm 0.138$   $\chi^2/\text{NDF}: 17938.2/28$

All:  $-29.006 \pm 0.097$   $\chi^2/\text{NDF}: 36298.8/57$

- sign  $-29.425 \pm 0.138$   $\chi^2/\text{NDF}: 18342.0/28$

# reg\_asym\_sam\_1548\_avg\_diff\_bpm4eY\_slope vs Slug



Right In: 47.685 $\pm$ 1.406  $\chi^2$ /NDF: 132.3/3

Left Out: 79.456 $\pm$ 0.123  $\chi^2$ /NDF: 6077.1/24

Right Out: 55.937 $\pm$ 1.119  $\chi^2$ /NDF: 573.3/5

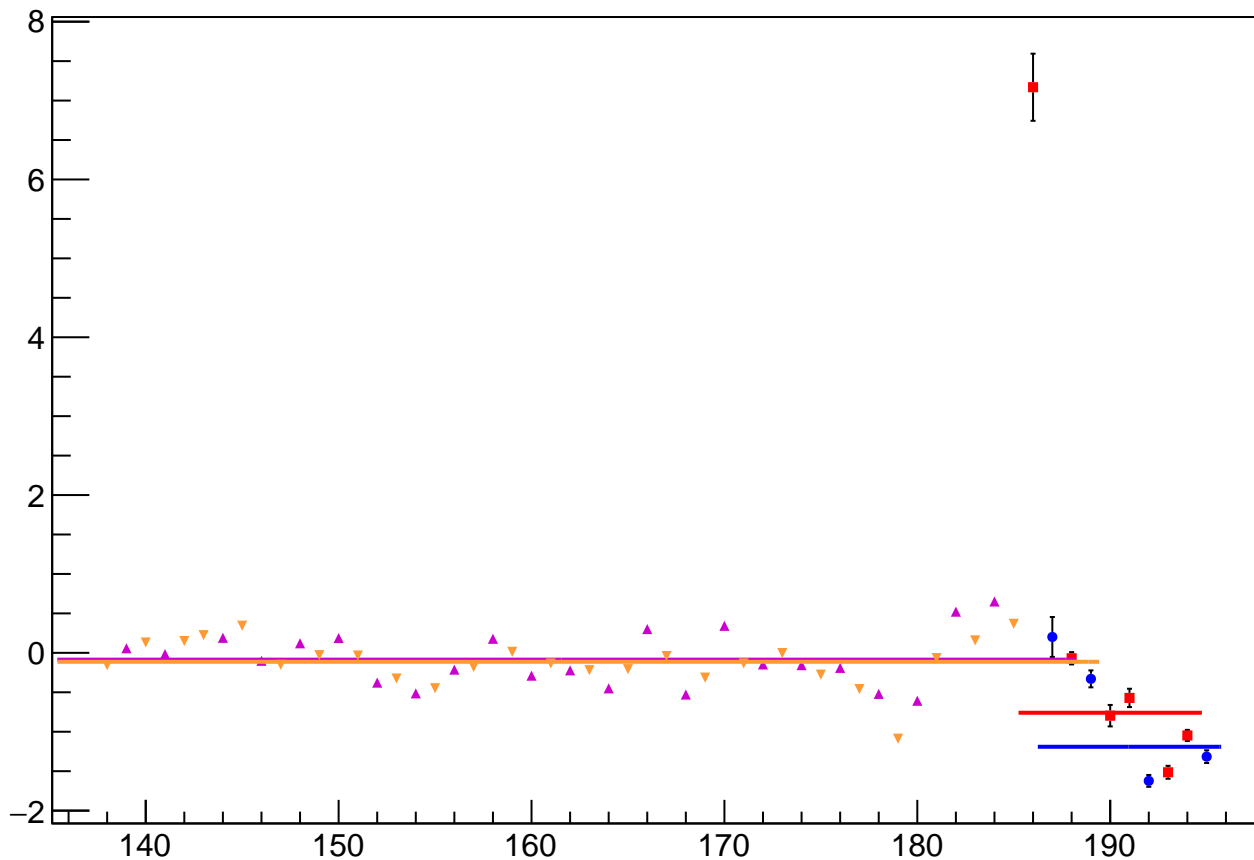
Left In: 78.396 $\pm$ 0.127  $\chi^2$ /NDF: 4707.3/22

+ sign 79.214 $\pm$ 0.123  $\chi^2$ /NDF: 6716.4/28

All: 78.677 $\pm$ 0.088  $\chi^2$ /NDF: 12433.9/57

- sign 78.112 $\pm$ 0.126  $\chi^2$ /NDF: 5678.2/28

# reg\_asym\_sam\_1548\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-1.191 \pm 0.048$   $\chi^2/\text{NDF}: 130.1/3$

Left Out:  $-0.113 \pm 0.006$   $\chi^2/\text{NDF}: 2303.1/24$

Right Out:  $-0.759 \pm 0.039$   $\chi^2/\text{NDF}: 530.0/5$

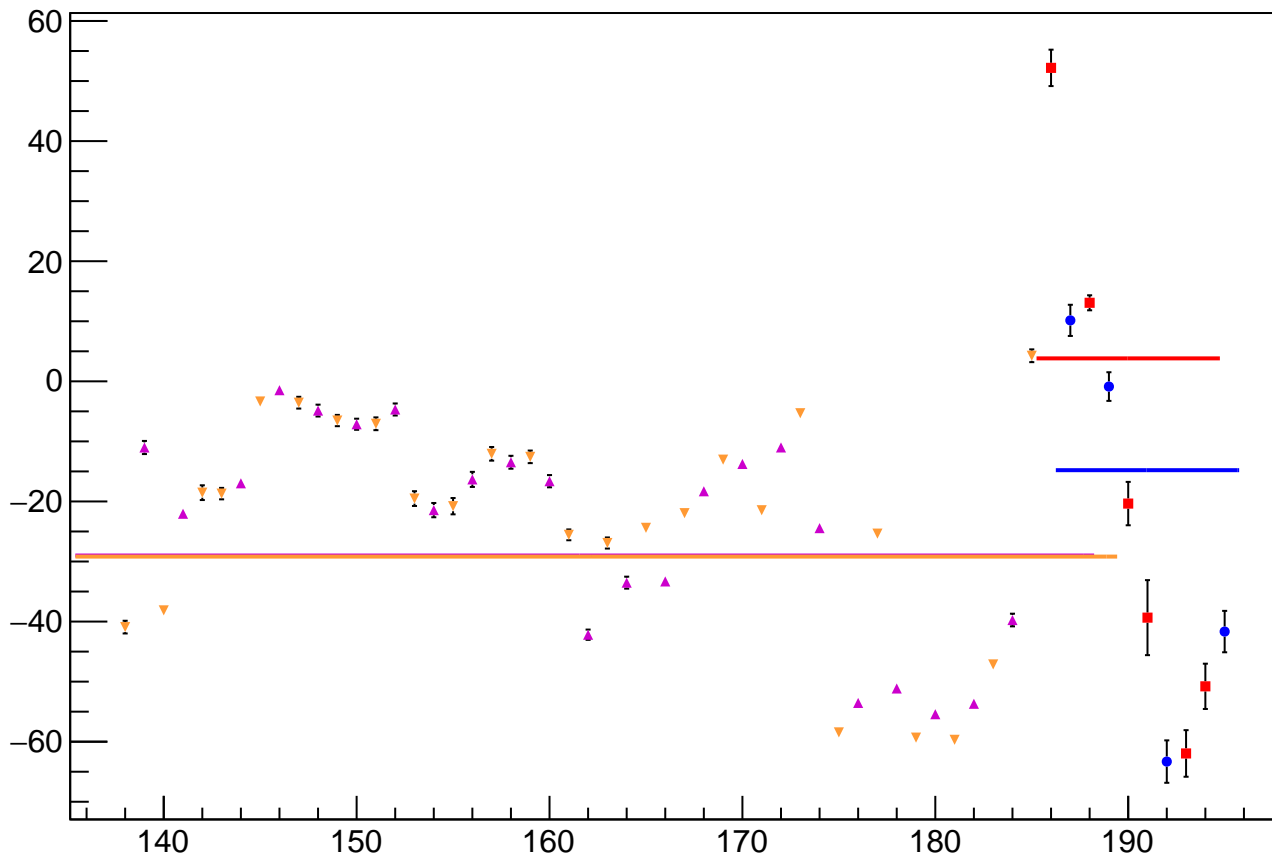
Left In:  $-0.086 \pm 0.006$   $\chi^2/\text{NDF}: 3132.1/22$

+ sign  $-0.128 \pm 0.006$   $\chi^2/\text{NDF}: 2930.7/28$

All:  $-0.115 \pm 0.004$   $\chi^2/\text{NDF}: 6891.5/57$

- sign  $-0.101 \pm 0.006$   $\chi^2/\text{NDF}: 3948.8/28$

# reg\_asym\_sam\_3748\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-14.793 \pm 1.431$   $\chi^2/\text{NDF}: 375.8/3$

Left Out:  $-29.180 \pm 0.157$   $\chi^2/\text{NDF}: 16912.2/24$

Right Out:  $3.821 \pm 1.007$   $\chi^2/\text{NDF}: 899.3/5$

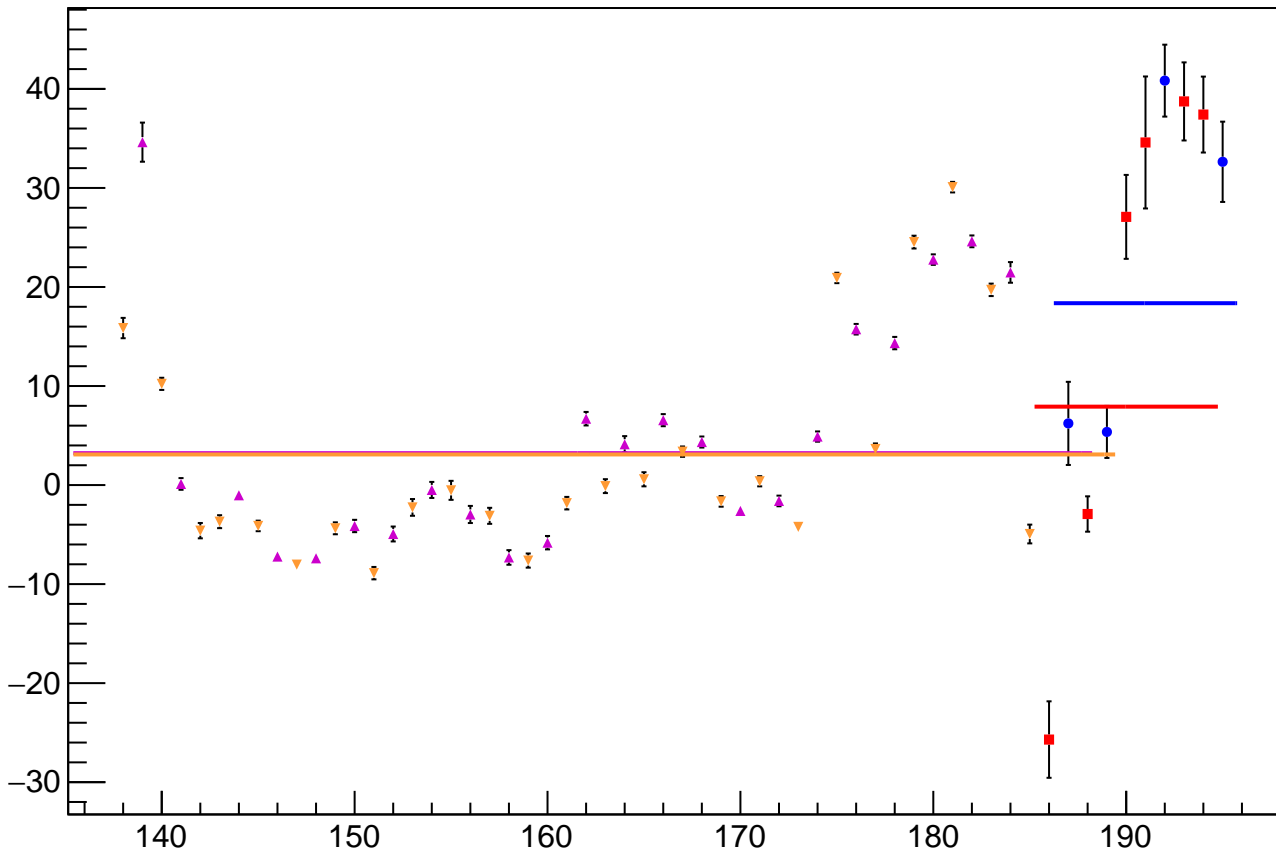
Left In:  $-29.003 \pm 0.160$   $\chi^2/\text{NDF}: 13416.8/22$

+ sign  $-29.010 \pm 0.156$   $\chi^2/\text{NDF}: 17387.9/28$

All:  $-28.608 \pm 0.111$   $\chi^2/\text{NDF}: 32753.4/57$

- sign  $-28.197 \pm 0.158$   $\chi^2/\text{NDF}: 15352.0/28$

# reg\_asym\_sam\_3748\_avg\_diff\_bpm4aY\_slope vs Slug



Right In: 18.363+/-1.719  $\chi^2$ /NDF: 83.5/3

Left Out: 3.091+/-0.124  $\chi^2$ /NDF:8084.1/24

Right Out: 7.918+/-1.300  $\chi^2$ /NDF: 269.5/5

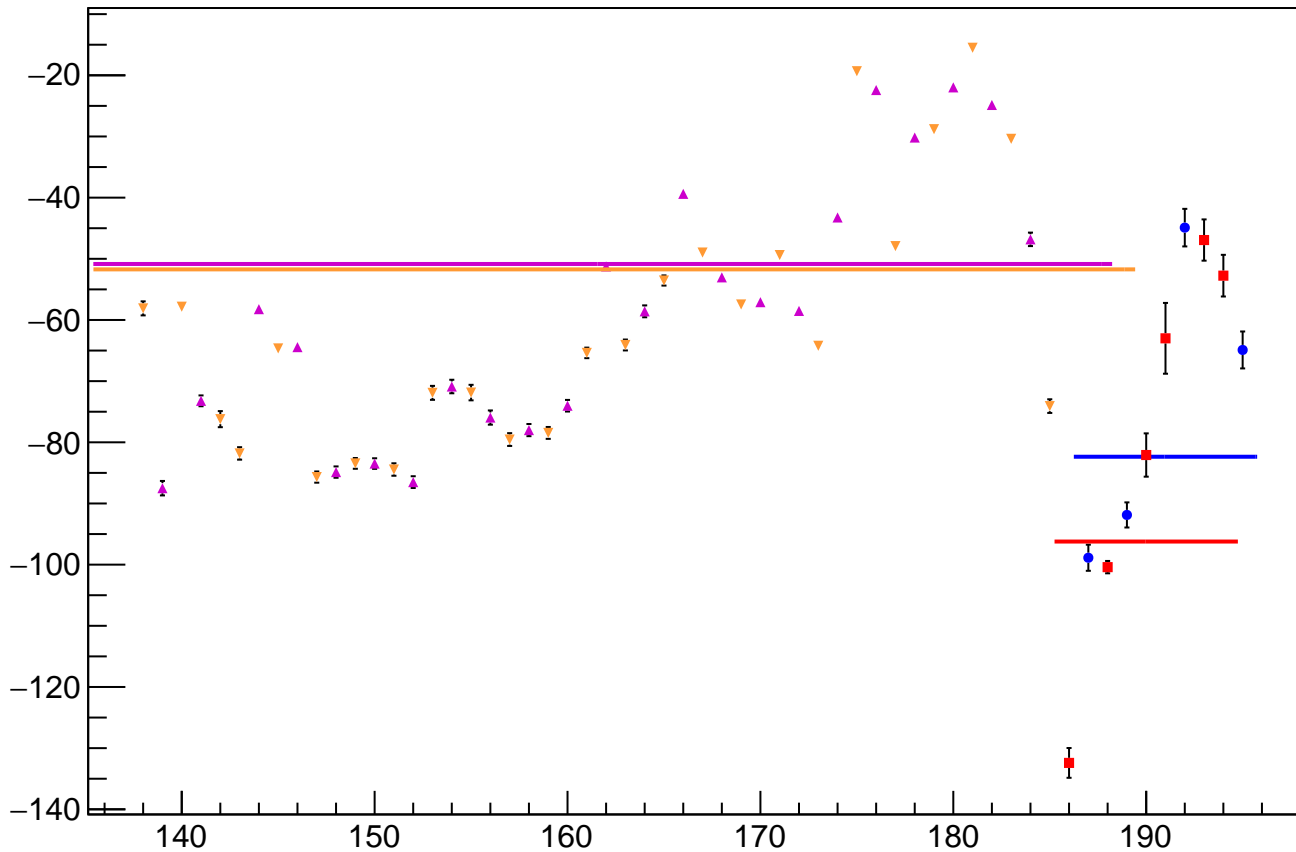
Left In: 3.221+/-0.127  $\chi^2$ /NDF:6237.6/22

+ sign 3.170+/-0.124  $\chi^2$ /NDF: 8246.1/28

All: 3.217+/-0.089  $\chi^2$ /NDF: 14766.4/57

- sign 3.266+/-0.126  $\chi^2$ /NDF: 6520.0/28

# reg\_asym\_sam\_3748\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $-82.359 \pm 1.219$   $\chi^2/\text{NDF}: 263.5/3$

Left Out:  $-51.729 \pm 0.158$   $\chi^2/\text{NDF}: 19538.0/24$

Right Out:  $-96.224 \pm 0.836$   $\chi^2/\text{NDF}: 663.4/5$

Left In:  $-50.844 \pm 0.160$   $\chi^2/\text{NDF}: 17272.0/22$

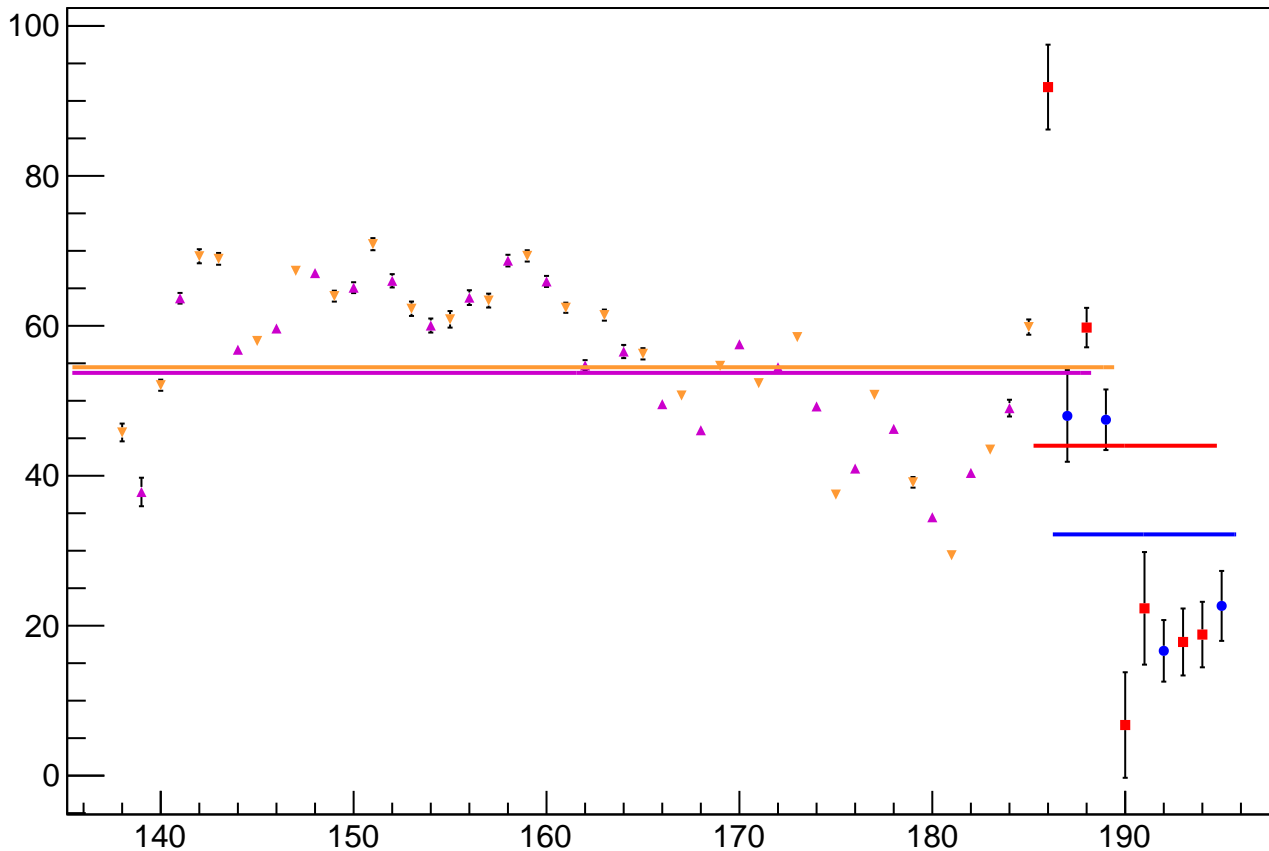
+ sign  $-52.234 \pm 0.157$   $\chi^2/\text{NDF}: 20422.0/28$

All:  $-52.342 \pm 0.111$   $\chi^2/\text{NDF}: 41201.5/57$

- sign  $-52.450 \pm 0.157$   $\chi^2/\text{NDF}: 20778.5/28$



# reg\_asym\_sam\_3748\_avg\_diff\_bpm4eY\_slope vs Slug



Right In: 32.179 $\pm$ 2.275  $\chi^2$ /NDF: 39.5/3

Left Out: 54.476 $\pm$ 0.140  $\chi^2$ /NDF:6266.9/24

Right Out: 44.007 $\pm$ 1.779  $\chi^2$ /NDF: 211.3/5

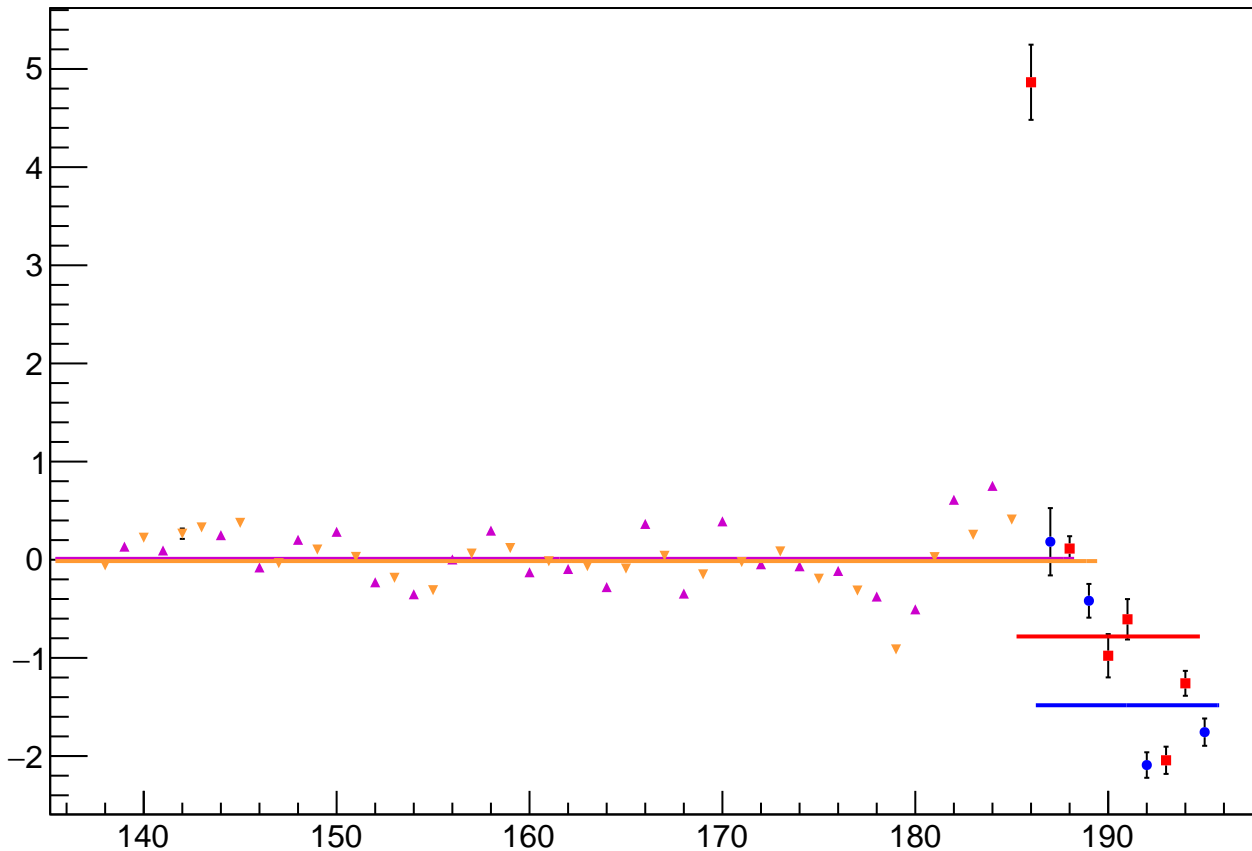
Left In: 53.724 $\pm$ 0.143  $\chi^2$ /NDF:4585.7/22

+ sign 54.392 $\pm$ 0.140  $\chi^2$ /NDF: 6402.1/28

All: 54.033 $\pm$ 0.100  $\chi^2$ /NDF: 11242.1/57

- sign 53.661 $\pm$ 0.143  $\chi^2$ /NDF: 4826.6/28

# reg\_asym\_sam\_3748\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-1.483 \pm 0.081$   $\chi^2/\text{NDF}: 87.8/3$

Left Out:  $-0.014 \pm 0.006$   $\chi^2/\text{NDF}: 1654.7/24$

Right Out:  $-0.782 \pm 0.066$   $\chi^2/\text{NDF}: 366.4/5$

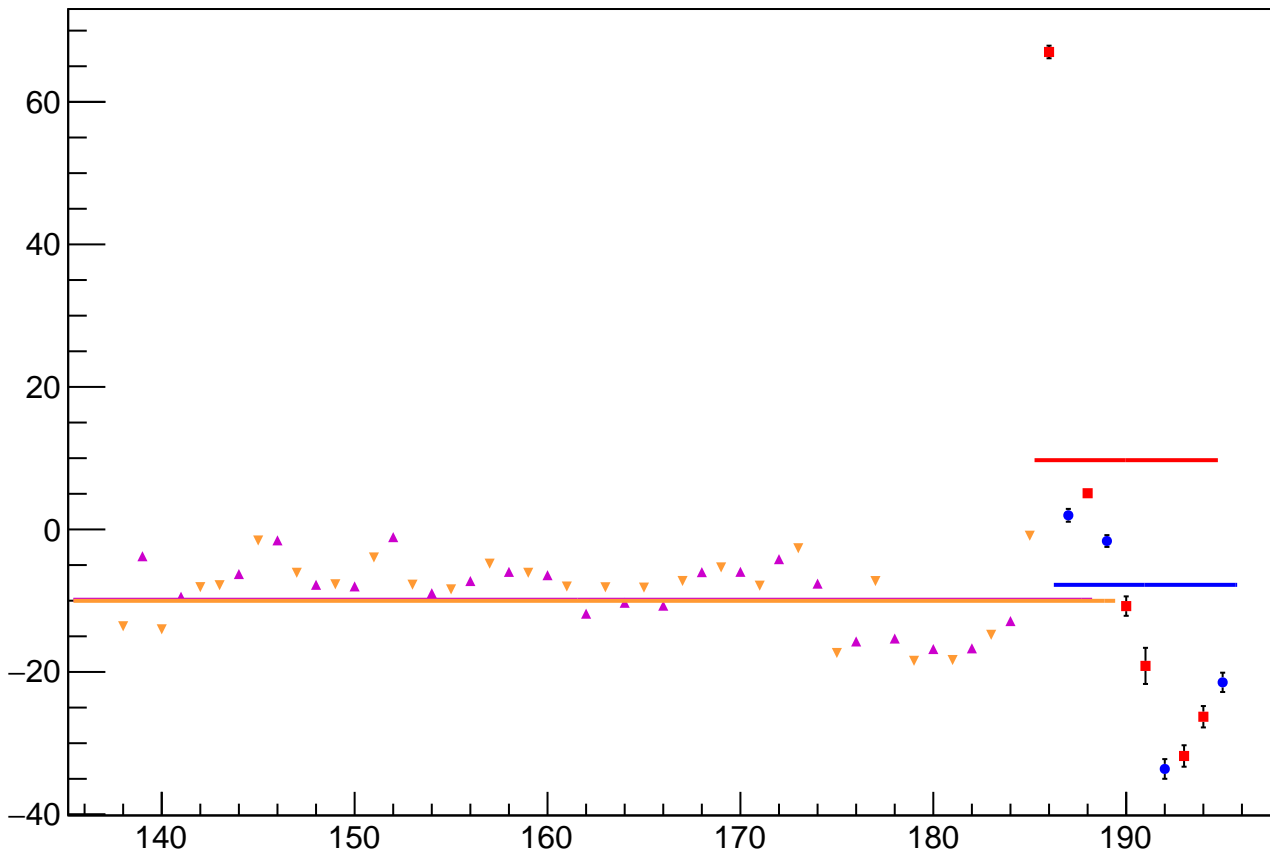
Left In:  $0.009 \pm 0.007$   $\chi^2/\text{NDF}: 2220.5/22$

+ sign  $-0.023 \pm 0.006$   $\chi^2/\text{NDF}: 2071.1/28$

All:  $-0.011 \pm 0.005$   $\chi^2/\text{NDF}: 4806.4/57$

- sign  $0.001 \pm 0.007$   $\chi^2/\text{NDF}: 2728.2/28$

# reg\_asym\_sam\_1526\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-7.776 \pm 0.516$   $\chi^2/\text{NDF}$ : 623.3/3

Left Out:  $-10.017 \pm 0.051$   $\chi^2/\text{NDF}$ : 12552.8/24

Right Out:  $9.719 \pm 0.356$   $\chi^2/\text{NDF}$ : 5990.2/5

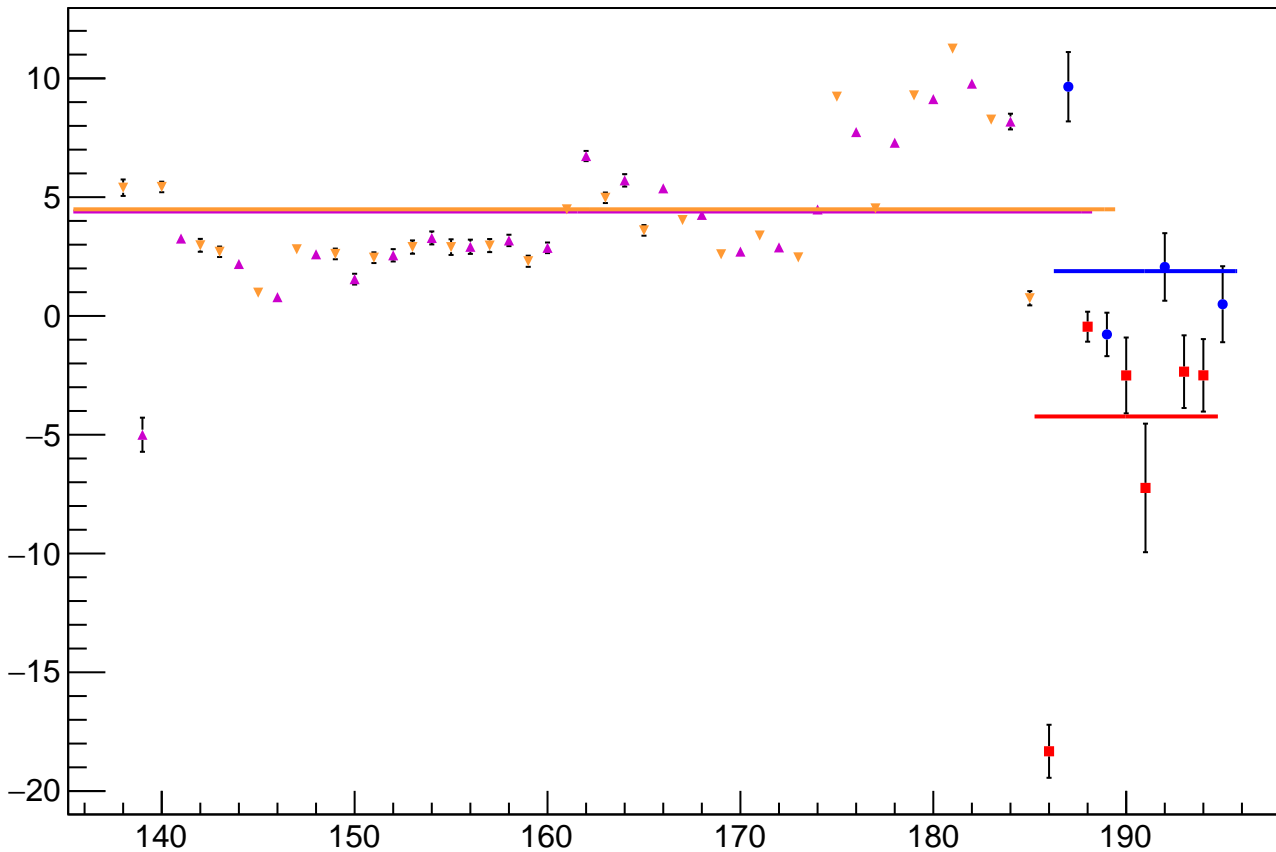
Left In:  $-9.865 \pm 0.051$   $\chi^2/\text{NDF}$ : 9345.4/22

+ sign  $-9.995 \pm 0.050$   $\chi^2/\text{NDF}$ : 13194.7/28

All:  $-9.733 \pm 0.036$   $\chi^2/\text{NDF}$ : 31550.1/57

- sign  $-9.465 \pm 0.051$   $\chi^2/\text{NDF}$ : 18300.7/28

# reg\_asym\_sam\_1526\_avg\_diff\_bpm4aY\_slope vs Slug



Right In: 1.886 $\pm$ 0.626  $\chi^2$ /NDF: 37.5/3

Left Out: 4.489 $\pm$ 0.041  $\chi^2$ /NDF: 4832.3/24

Right Out: -4.231 $\pm$ 0.461  $\chi^2$ /NDF: 200.5/5

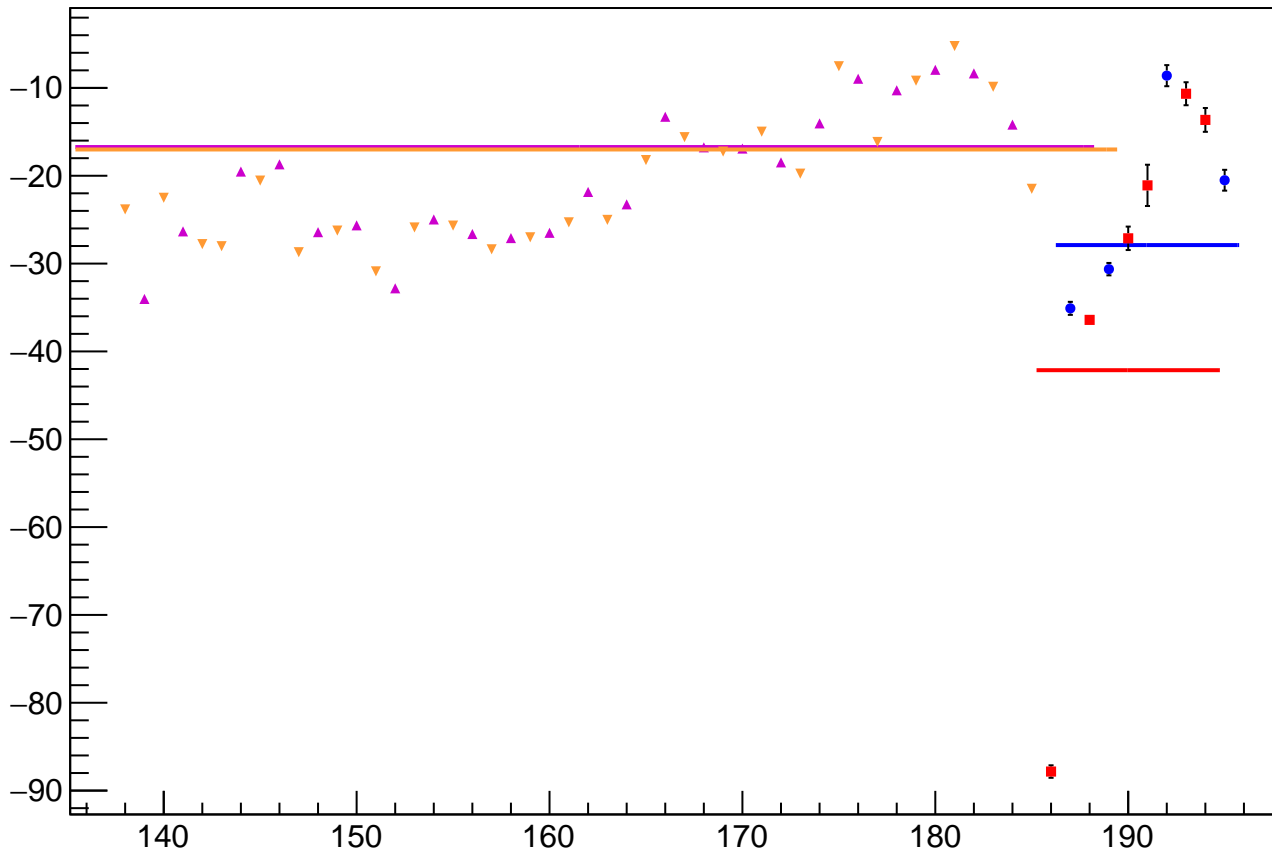
Left In: 4.396 $\pm$ 0.041  $\chi^2$ /NDF: 4230.4/22

+ sign 4.478 $\pm$ 0.041  $\chi^2$ /NDF: 4887.0/28

All: 4.404 $\pm$ 0.029  $\chi^2$ /NDF: 9671.9/57

- sign 4.328 $\pm$ 0.041  $\chi^2$ /NDF: 4778.1/28

# reg\_asym\_sam\_1526\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $-27.892 \pm 0.437$   $\chi^2/\text{NDF}: 405.7/3$

Left Out:  $-17.008 \pm 0.051$   $\chi^2/\text{NDF}: 22094.7/24$

Right Out:  $-42.137 \pm 0.294$   $\chi^2/\text{NDF}: 5611.5/5$

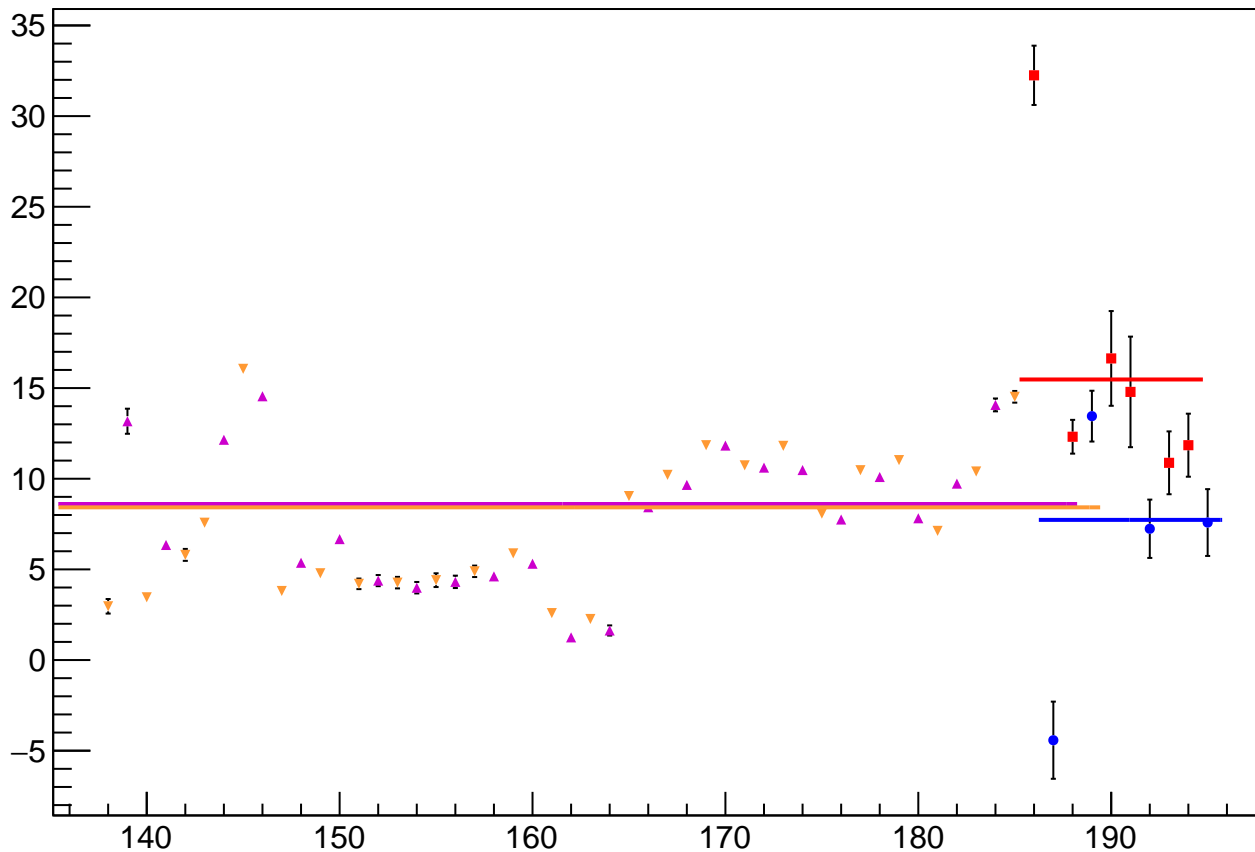
Left In:  $-16.732 \pm 0.052$   $\chi^2/\text{NDF}: 18777.2/22$

+ sign  $-17.155 \pm 0.051$   $\chi^2/\text{NDF}: 23111.3/28$

All:  $-17.322 \pm 0.036$   $\chi^2/\text{NDF}: 54776.7/57$

- sign  $-17.490 \pm 0.051$   $\chi^2/\text{NDF}: 31643.5/28$

# reg\_asym\_sam\_1526\_avg\_diff\_bpm4eY\_slope vs Slug



Right In: 7.730 $\pm$ 0.842  $\chi^2$ /NDF: 49.4/3

Left Out: 8.422 $\pm$ 0.046  $\chi^2$ /NDF:6470.1/24

Right Out: 15.474 $\pm$ 0.640  $\chi^2$ /NDF: 128.4/5

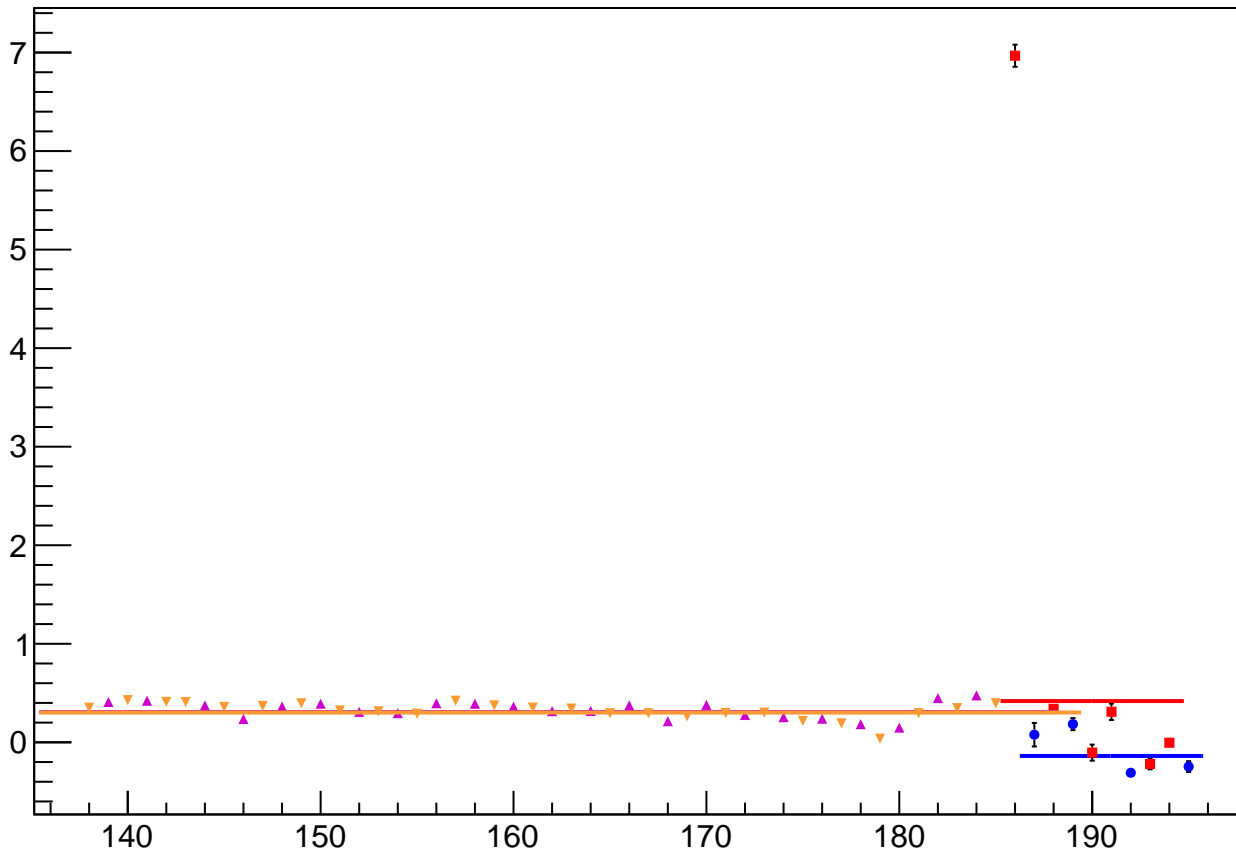
Left In: 8.606 $\pm$ 0.046  $\chi^2$ /NDF:5504.2/22

+ sign 8.420 $\pm$ 0.045  $\chi^2$ /NDF: 6520.2/28

All: 8.529 $\pm$ 0.032  $\chi^2$ /NDF: 12279.2/57

- sign 8.642 $\pm$ 0.046  $\chi^2$ /NDF: 5747.3/28

# reg\_asym\_sam\_1526\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.138 \pm 0.031$   $\chi^2/\text{NDF}: 46.3/3$

Left Out:  $0.302 \pm 0.002$   $\chi^2/\text{NDF}: 1590.9/24$

Right Out:  $0.419 \pm 0.025$   $\chi^2/\text{NDF}: 3664.6/5$

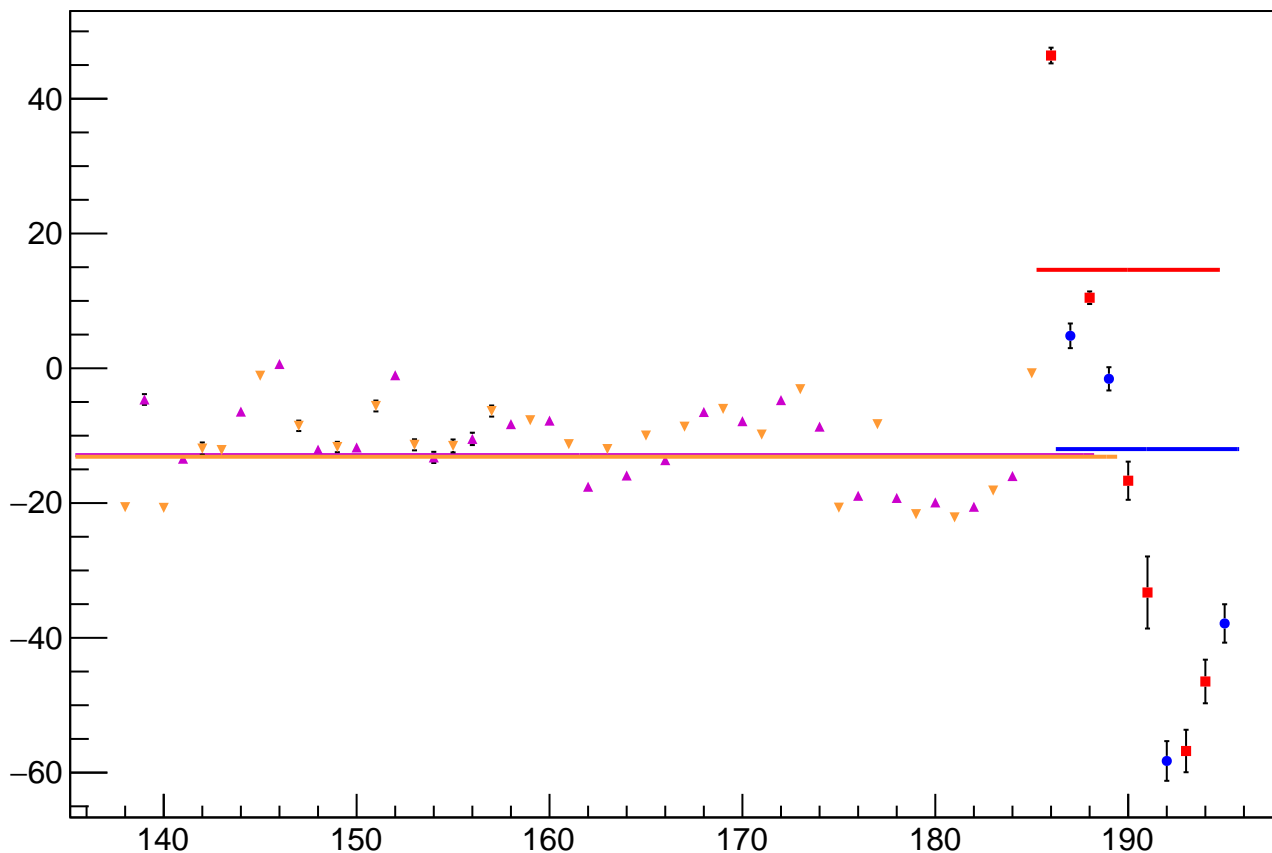
Left In:  $0.307 \pm 0.002$   $\chi^2/\text{NDF}: 1699.5/22$

+ sign  $0.300 \pm 0.002$   $\chi^2/\text{NDF}: 1841.0/28$

All:  $0.304 \pm 0.001$   $\chi^2/\text{NDF}: 7231.5/57$

- sign  $0.308 \pm 0.002$   $\chi^2/\text{NDF}: 5384.0/28$

# reg\_asym\_sam\_3726\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-11.991 \pm 1.070$   $\chi^2/\text{NDF}: 450.6/3$

Left Out:  $-13.125 \pm 0.094$   $\chi^2/\text{NDF}: 5977.6/24$

Right Out:  $14.611 \pm 0.668$   $\chi^2/\text{NDF}: 1835.2/5$

Left In:  $-12.885 \pm 0.095$   $\chi^2/\text{NDF}: 4776.2/22$

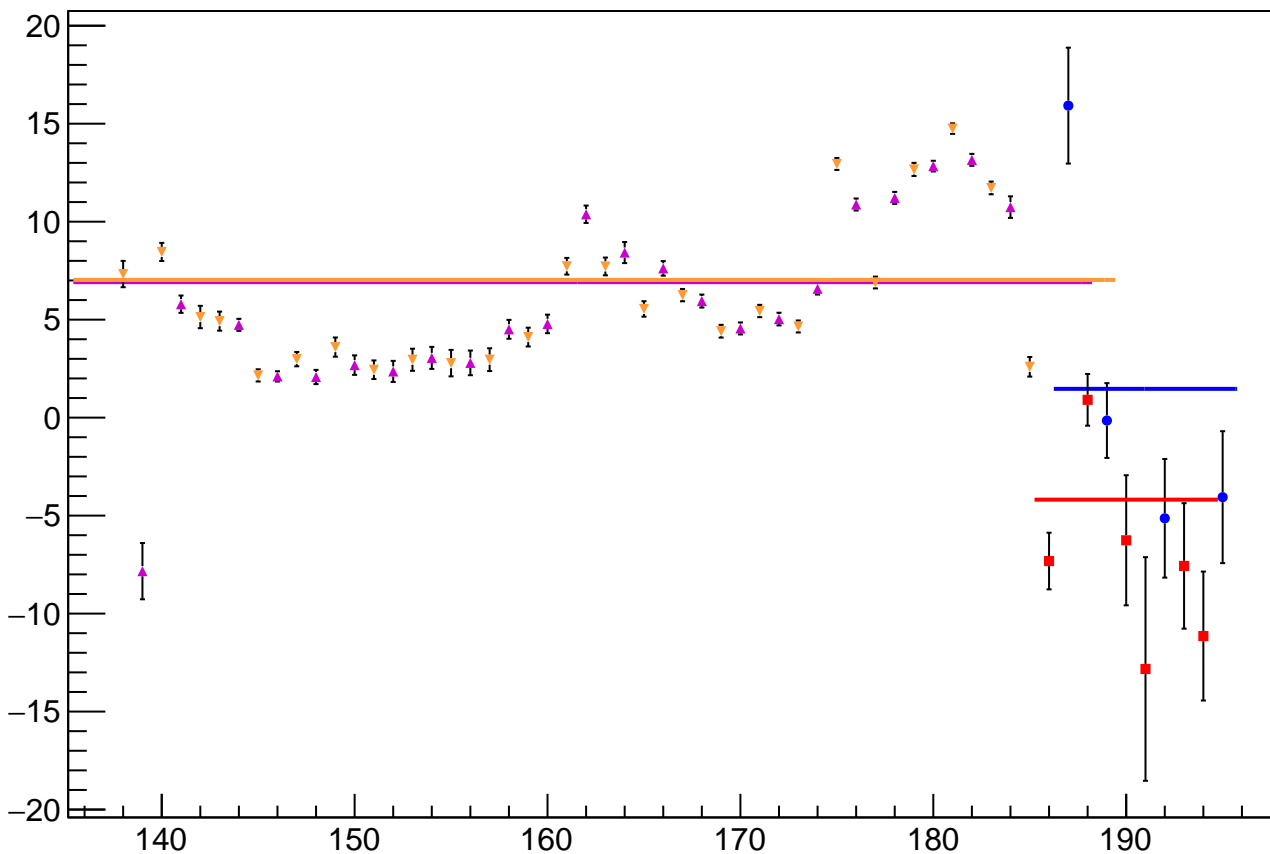
+ sign  $-13.116 \pm 0.093$   $\chi^2/\text{NDF}: 6429.3/28$

All:  $-12.731 \pm 0.066$   $\chi^2/\text{NDF}: 14736.2/57$

- sign  $-12.339 \pm 0.094$   $\chi^2/\text{NDF}: 8272.6/28$



# reg\_asym\_sam\_3726\_avg\_diff\_bpm4aY\_slope vs Slug



Right In: 1.469 $\pm$ 1.306  $\chi^2$ /NDF: 32.1/3

Left Out: 7.028 $\pm$ 0.077  $\chi^2$ /NDF:2665.3/24

Right Out: -4.186 $\pm$ 0.856  $\chi^2$ /NDF: 27.9/5

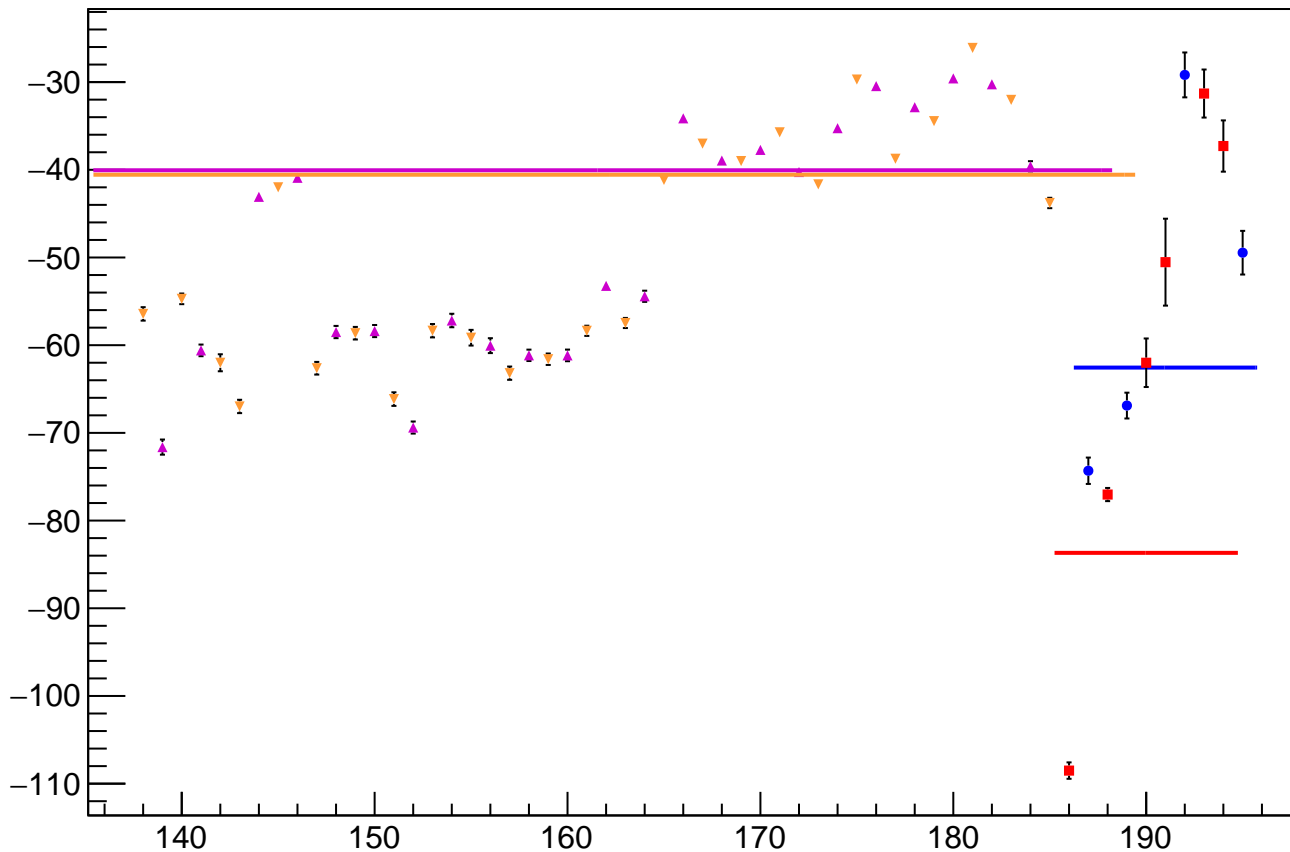
Left In: 6.914 $\pm$ 0.078  $\chi^2$ /NDF:2428.2/22

+ sign 7.008 $\pm$ 0.077  $\chi^2$ /NDF: 2715.4/28

All: 6.916 $\pm$ 0.055  $\chi^2$ /NDF: 5341.1/57

- sign 6.823 $\pm$ 0.077  $\chi^2$ /NDF: 2622.8/28

# reg\_asym\_sam\_3726\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $-62.553 \pm 0.906$   $\chi^2/\text{NDF}: 267.6/3$

Left Out:  $-40.563 \pm 0.095$   $\chi^2/\text{NDF}: 15637.6/24$

Right Out:  $-83.681 \pm 0.548$   $\chi^2/\text{NDF}: 1506.1/5$

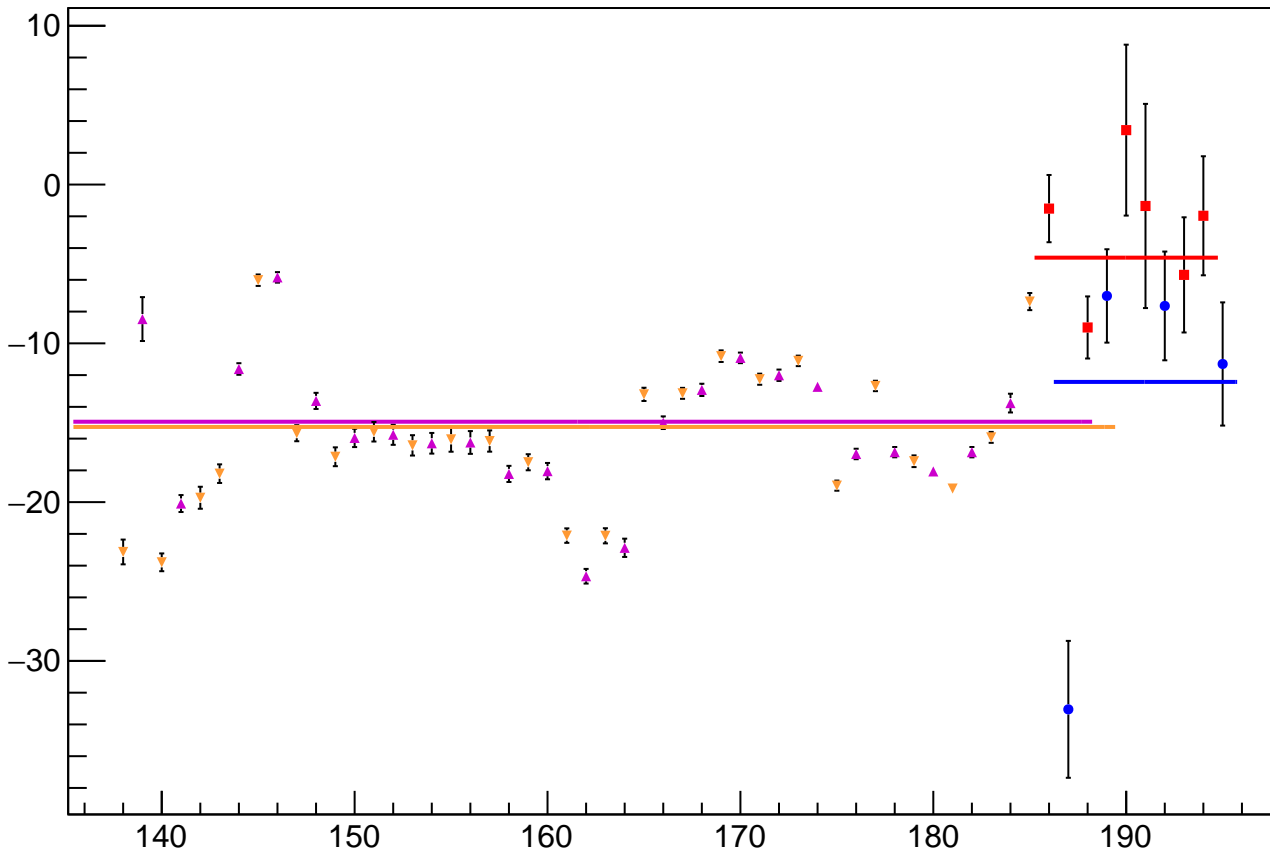
Left In:  $-40.053 \pm 0.096$   $\chi^2/\text{NDF}: 13927.3/22$

+ sign  $-40.800 \pm 0.094$   $\chi^2/\text{NDF}: 16487.8/28$

All:  $-41.073 \pm 0.067$   $\chi^2/\text{NDF}: 38096.7/57$

- sign  $-41.345 \pm 0.094$   $\chi^2/\text{NDF}: 21592.2/28$

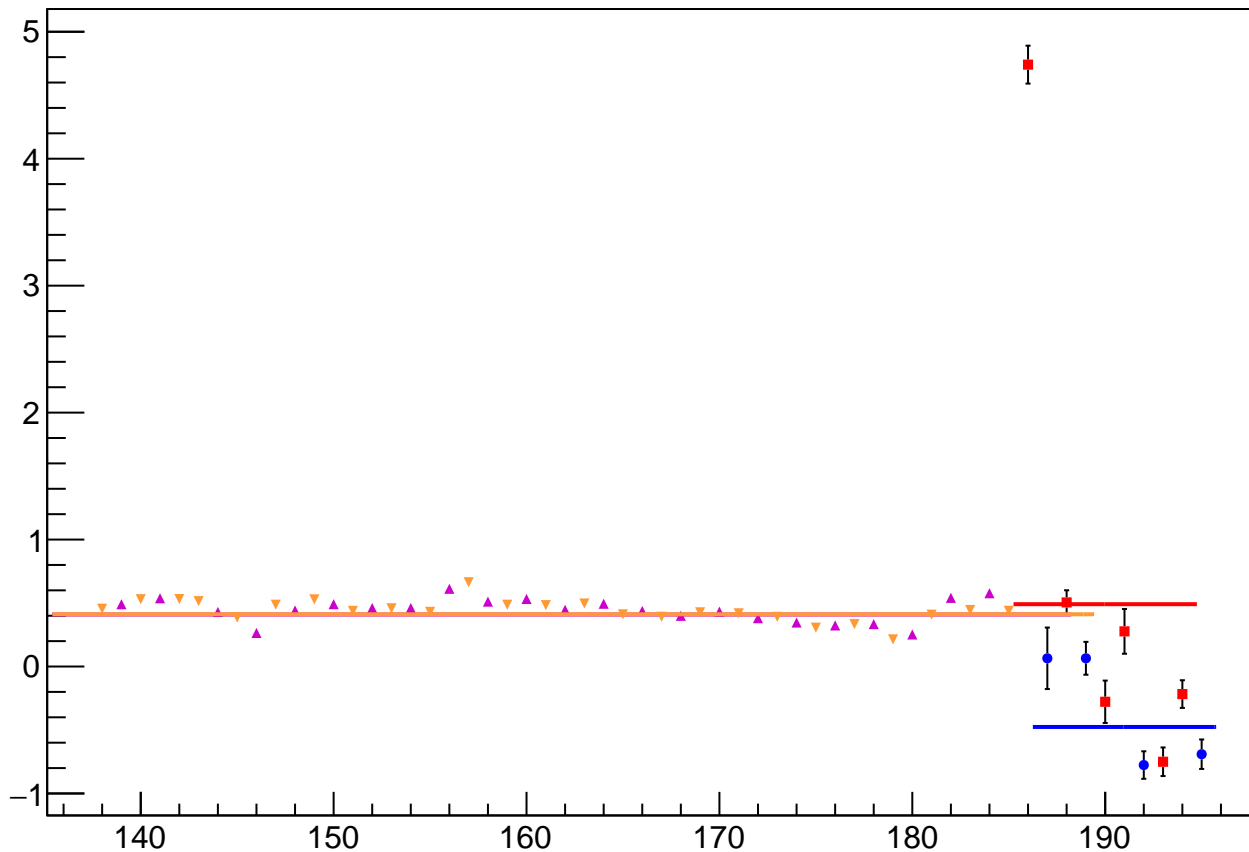
# reg\_asym\_sam\_3726\_avg\_diff\_bpm4eY\_slope vs Slug



Right In: -12.429+/-1.764  $\chi^2/\text{NDF}$ : 28.3/3  
 Left Out: -15.266+/-0.086  $\chi^2/\text{NDF}$ : 2595.5/24  
 Right Out: -4.604+/-1.203  $\chi^2/\text{NDF}$ : 10.3/5  
 Left In: -14.936+/-0.087  $\chi^2/\text{NDF}$ : 2199.7/22

+ sign -15.259+/-0.086  $\chi^2/\text{NDF}$ : 2626.3/28  
 All: -15.073+/-0.061  $\chi^2/\text{NDF}$ : 4919.2/57  
 - sign -14.883+/-0.087  $\chi^2/\text{NDF}$ : 2283.3/28

# reg\_asym\_sam\_3726\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.476 \pm 0.065$   $\chi^2/\text{NDF}: 33.5/3$

Left Out:  $0.411 \pm 0.004$   $\chi^2/\text{NDF}: 428.7/24$

Right Out:  $0.491 \pm 0.051$   $\chi^2/\text{NDF}: 995.9/5$

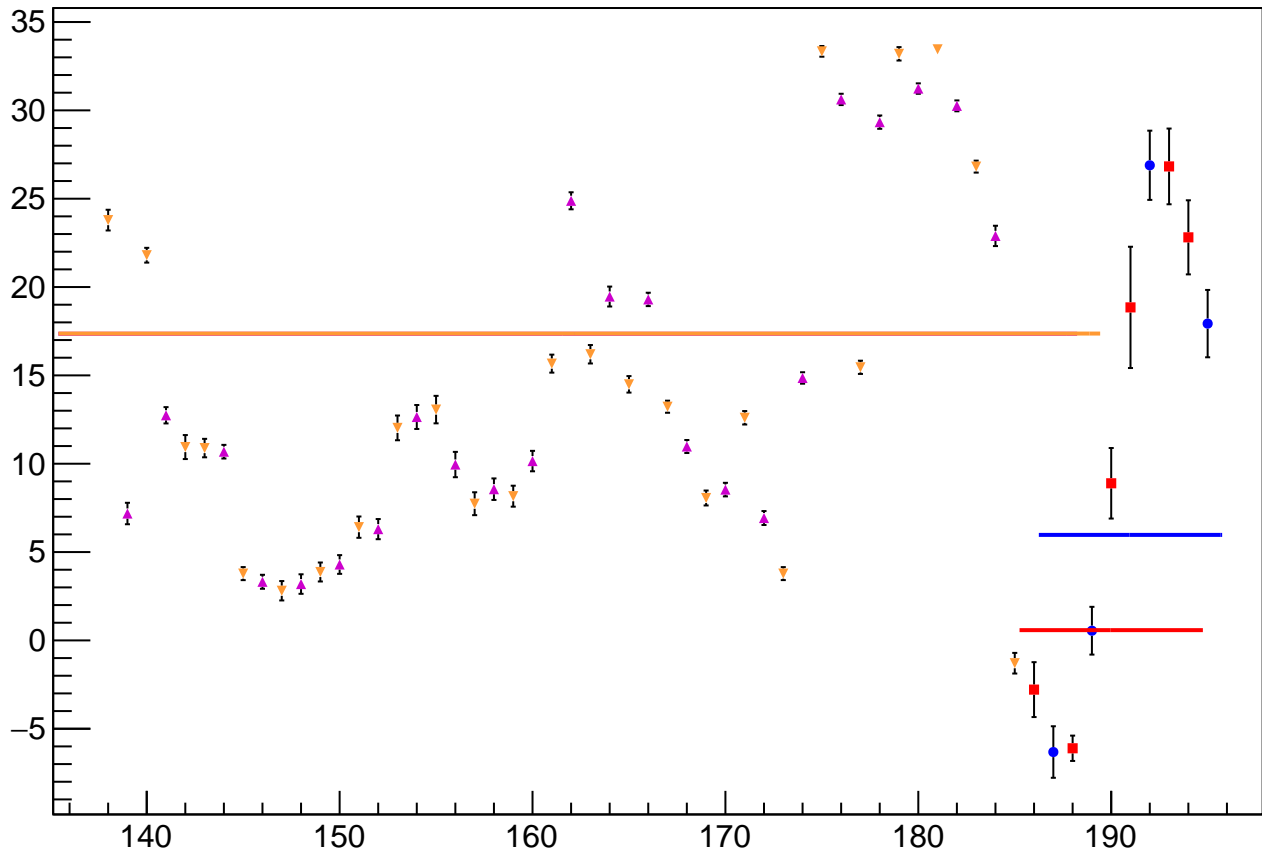
Left In:  $0.409 \pm 0.004$   $\chi^2/\text{NDF}: 557.8/22$

+ sign  $0.408 \pm 0.004$   $\chi^2/\text{NDF}: 647.7/28$

All:  $0.409 \pm 0.003$   $\chi^2/\text{NDF}: 2204.1/57$

- sign  $0.410 \pm 0.004$   $\chi^2/\text{NDF}: 1556.3/28$

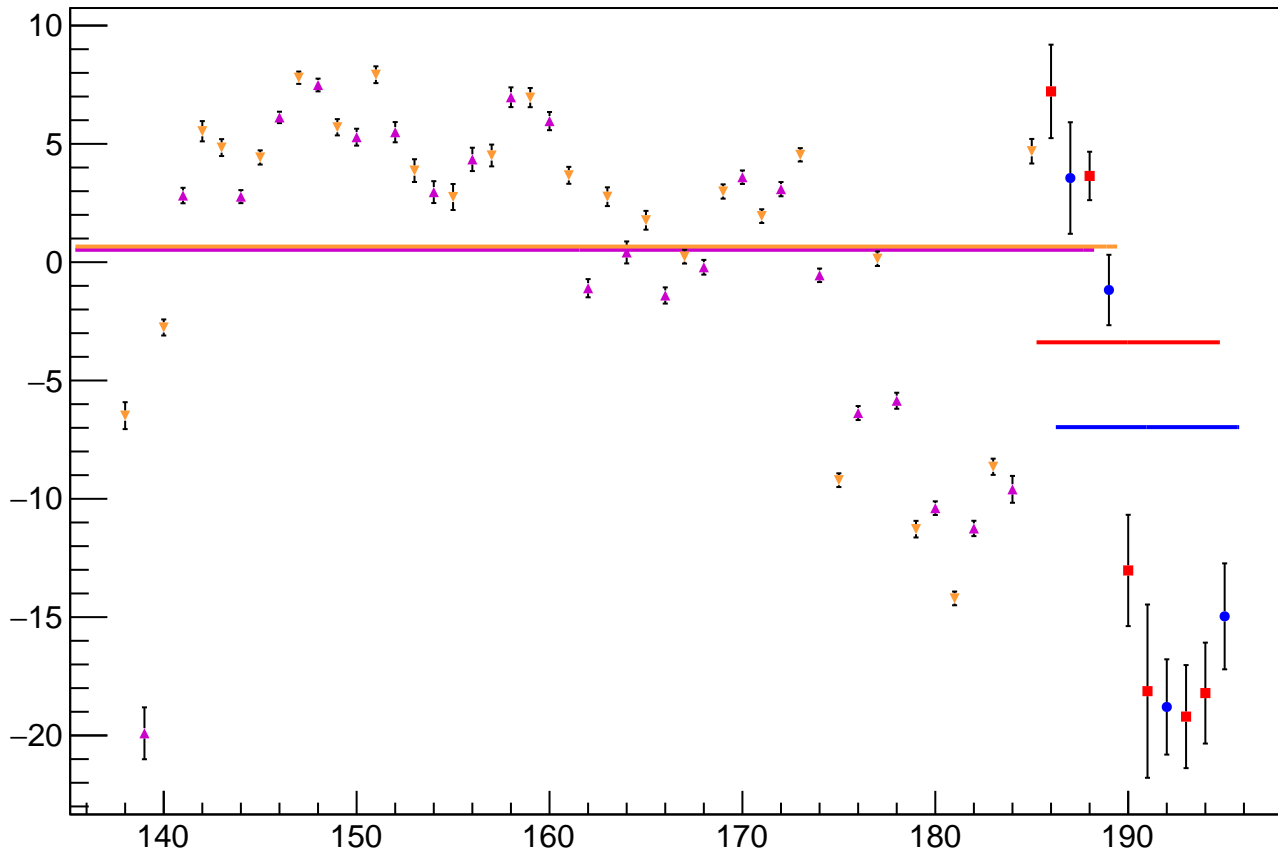
# reg\_asym\_sam\_15\_48\_dd\_diff\_bpm1X\_slope vs Slug



Right In: 5.972 $\pm$ 0.802  $\chi^2$ /NDF: 240.5/3  
 Left Out: 17.367 $\pm$ 0.087  $\chi^2$ /NDF:16337.6/24  
 Right Out: 0.581 $\pm$ 0.564  $\chi^2$ /NDF: 399.8/5  
 Left In: 17.355 $\pm$ 0.089  $\chi^2$ /NDF:12745.1/22

+ sign 17.235 $\pm$ 0.087  $\chi^2$ /NDF: 16777.5/28  
 All: 17.094 $\pm$ 0.062  $\chi^2$ /NDF: 30790.3/57  
 - sign 16.949 $\pm$ 0.088  $\chi^2$ /NDF: 14007.5/28

# reg\_asym\_sam\_15\_48\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-6.970 \pm 0.963$   $\chi^2/\text{NDF}: 82.4/3$

Left Out:  $0.661 \pm 0.069$   $\chi^2/\text{NDF}: 8553.9/24$

Right Out:  $-3.386 \pm 0.726$   $\chi^2/\text{NDF}: 210.2/5$

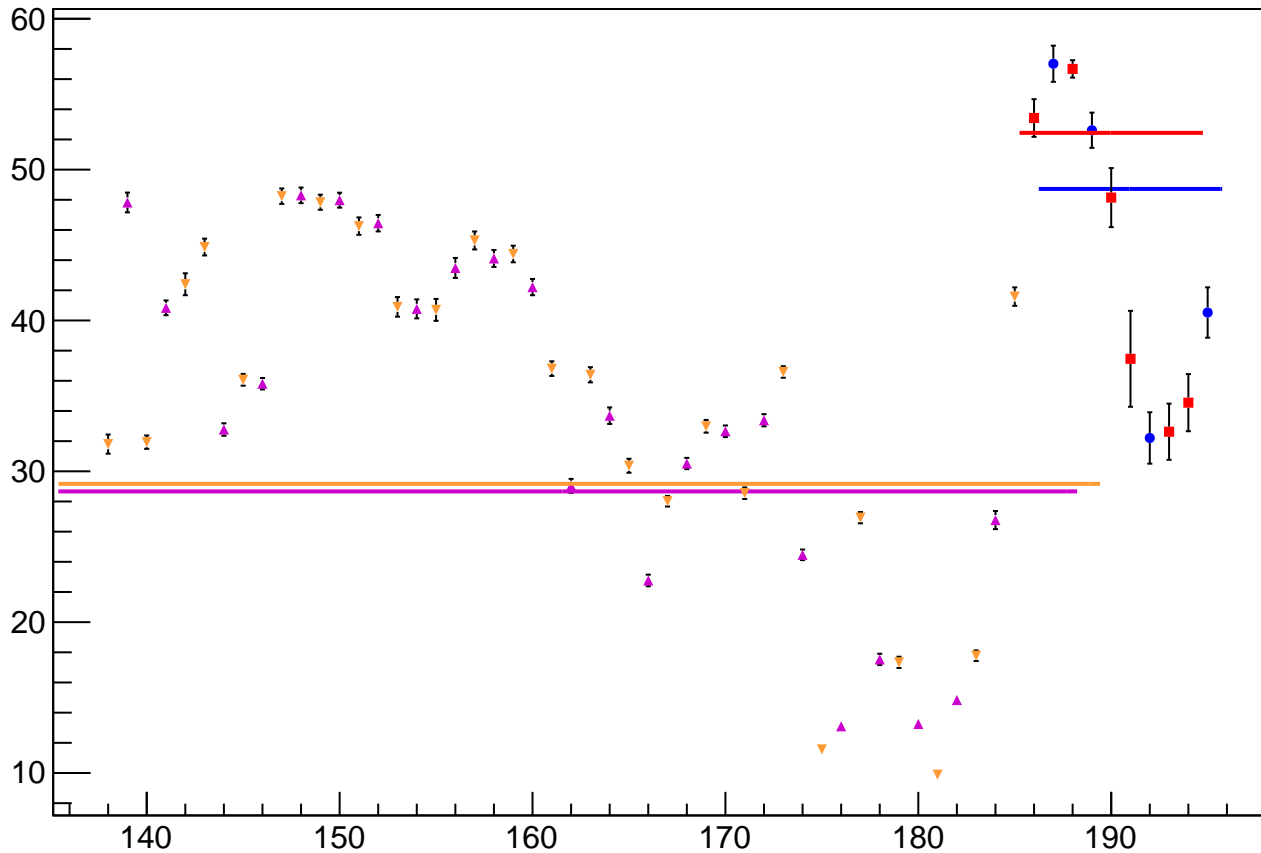
Left In:  $0.524 \pm 0.071$   $\chi^2/\text{NDF}: 6729.7/22$

+ sign  $0.621 \pm 0.069$   $\chi^2/\text{NDF}: 8698.7/28$

All:  $0.555 \pm 0.049$   $\chi^2/\text{NDF}: 15669.1/57$

- sign  $0.487 \pm 0.070$   $\chi^2/\text{NDF}: 6968.6/28$

# reg\_asym\_sam\_15\_48\_dd\_diff\_bpm4eX\_slope vs Slug



Right In: 48.721 $\pm$ 0.685  $\chi^2$ /NDF: 177.1/3

Left Out: 29.171 $\pm$ 0.088  $\chi^2$ /NDF: 18974.7/24

Right Out: 52.439 $\pm$ 0.468  $\chi^2$ /NDF: 283.6/5

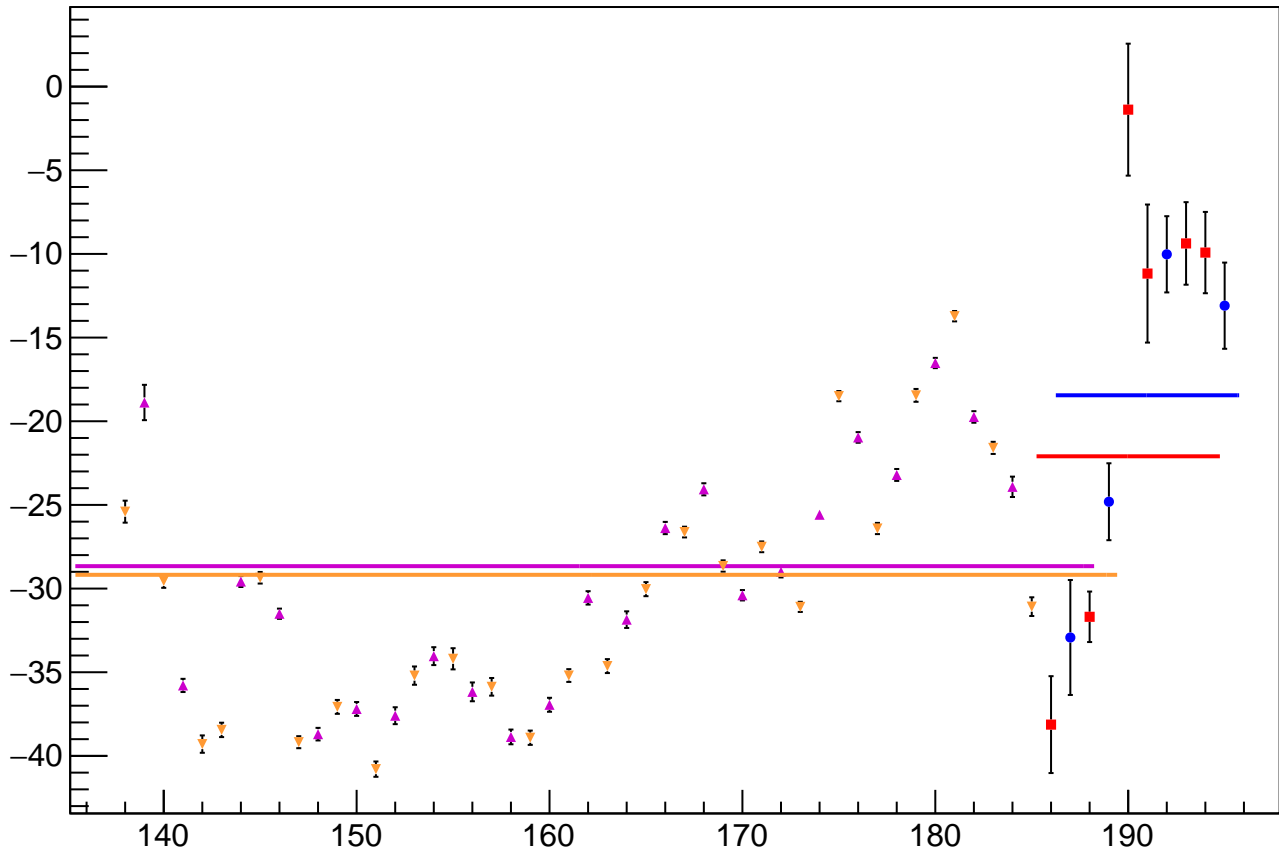
Left In: 28.667 $\pm$ 0.089  $\chi^2$ /NDF: 16847.2/22

+ sign 29.487 $\pm$ 0.087  $\chi^2$ /NDF: 19954.0/28

All: 29.492 $\pm$ 0.062  $\chi^2$ /NDF: 39569.7/57

- sign 29.497 $\pm$ 0.088  $\chi^2$ /NDF: 19615.6/28

# reg\_asym\_sam\_15\_48\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-18.448 \pm 1.273$   $\chi^2/\text{NDF}: 43.4/3$

Left Out:  $-29.178 \pm 0.078$   $\chi^2/\text{NDF}: 9081.4/24$

Right Out:  $-22.095 \pm 0.993$   $\chi^2/\text{NDF}: 157.4/5$

Left In:  $-28.660 \pm 0.080$   $\chi^2/\text{NDF}: 6670.1/22$

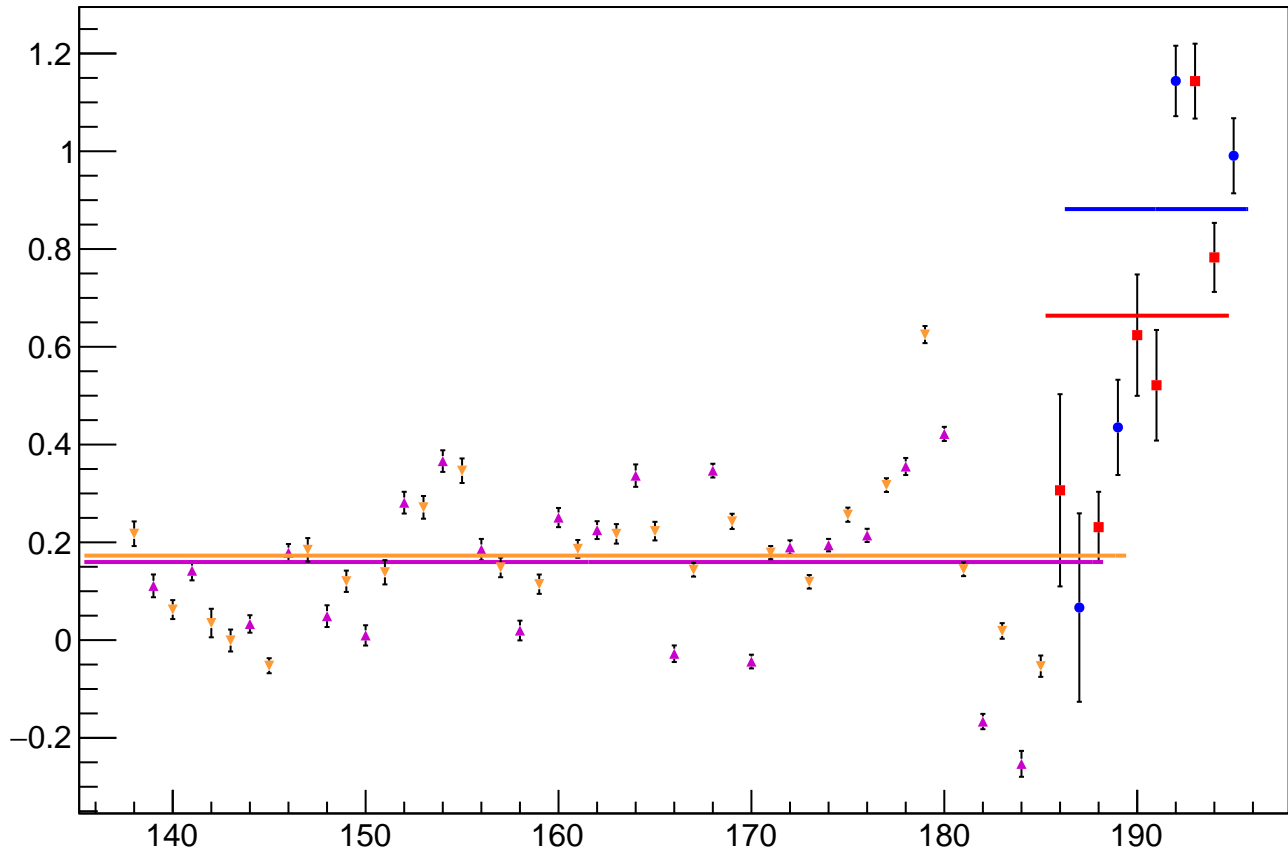
+ sign  $-29.138 \pm 0.078$   $\chi^2/\text{NDF}: 9195.6/28$

All:  $-28.883 \pm 0.056$   $\chi^2/\text{NDF}: 16088.4/57$

- sign  $-28.618 \pm 0.080$   $\chi^2/\text{NDF}: 6871.0/28$



# reg\_asym\_sam\_15\_48\_dd\_diff\_bpm12X\_slope vs Slug



Right In: 0.882 $\pm$ 0.045  $\chi^2$ /NDF: 54.1/3

Left Out: 0.173 $\pm$ 0.004  $\chi^2$ /NDF: 1478.5/24

Right Out: 0.664 $\pm$ 0.037  $\chi^2$ /NDF: 82.8/5

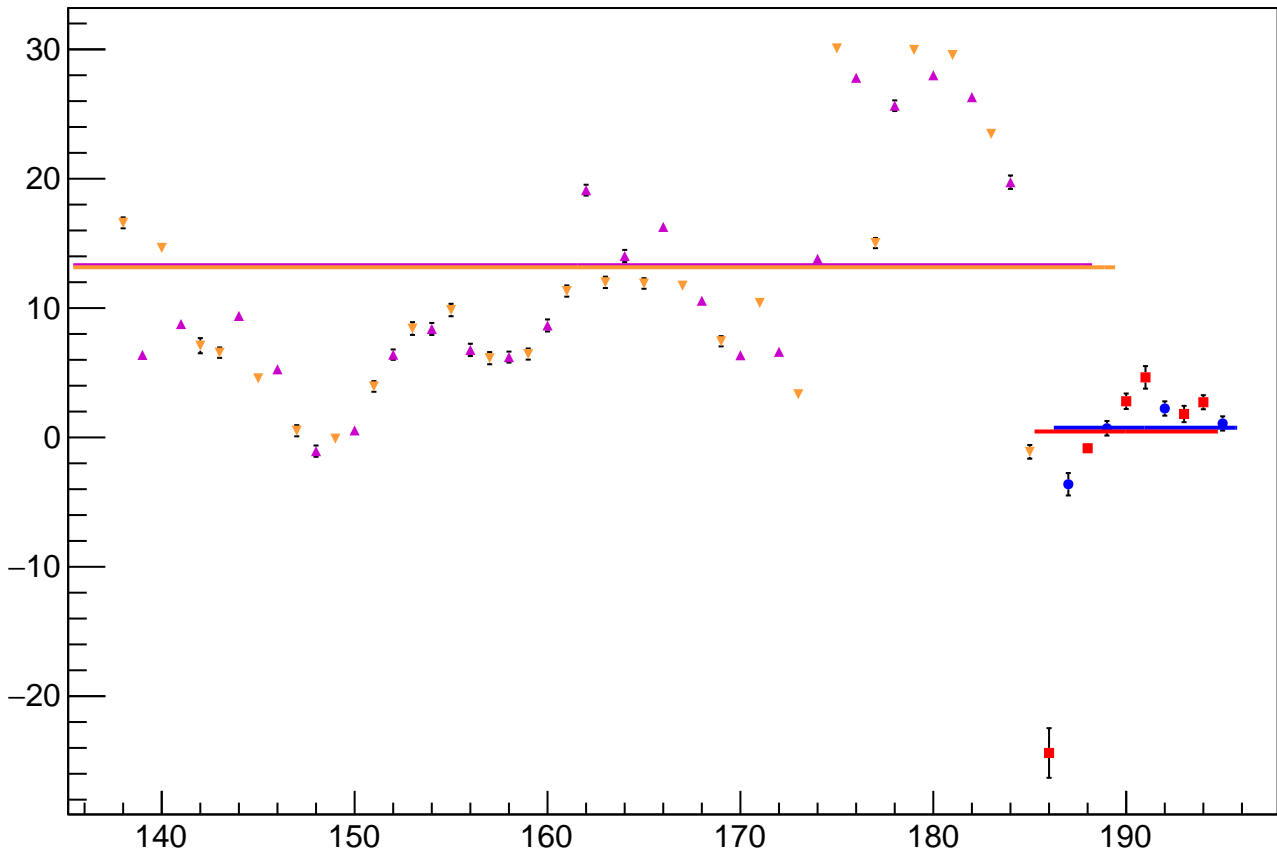
Left In: 0.160 $\pm$ 0.004  $\chi^2$ /NDF: 2057.9/22

+ sign 0.177 $\pm$ 0.004  $\chi^2$ /NDF: 1779.5/28

All: 0.171 $\pm$ 0.003  $\chi^2$ /NDF: 4110.3/57

- sign 0.165 $\pm$ 0.004  $\chi^2$ /NDF: 2324.6/28

# reg\_asym\_sam\_37\_48\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $0.751 \pm 0.301$   $\chi^2/\text{NDF}: 32.9/3$

Left Out:  $13.153 \pm 0.075$   $\chi^2/\text{NDF}: 17079.7/24$

Right Out:  $0.461 \pm 0.209$   $\chi^2/\text{NDF}: 249.0/5$

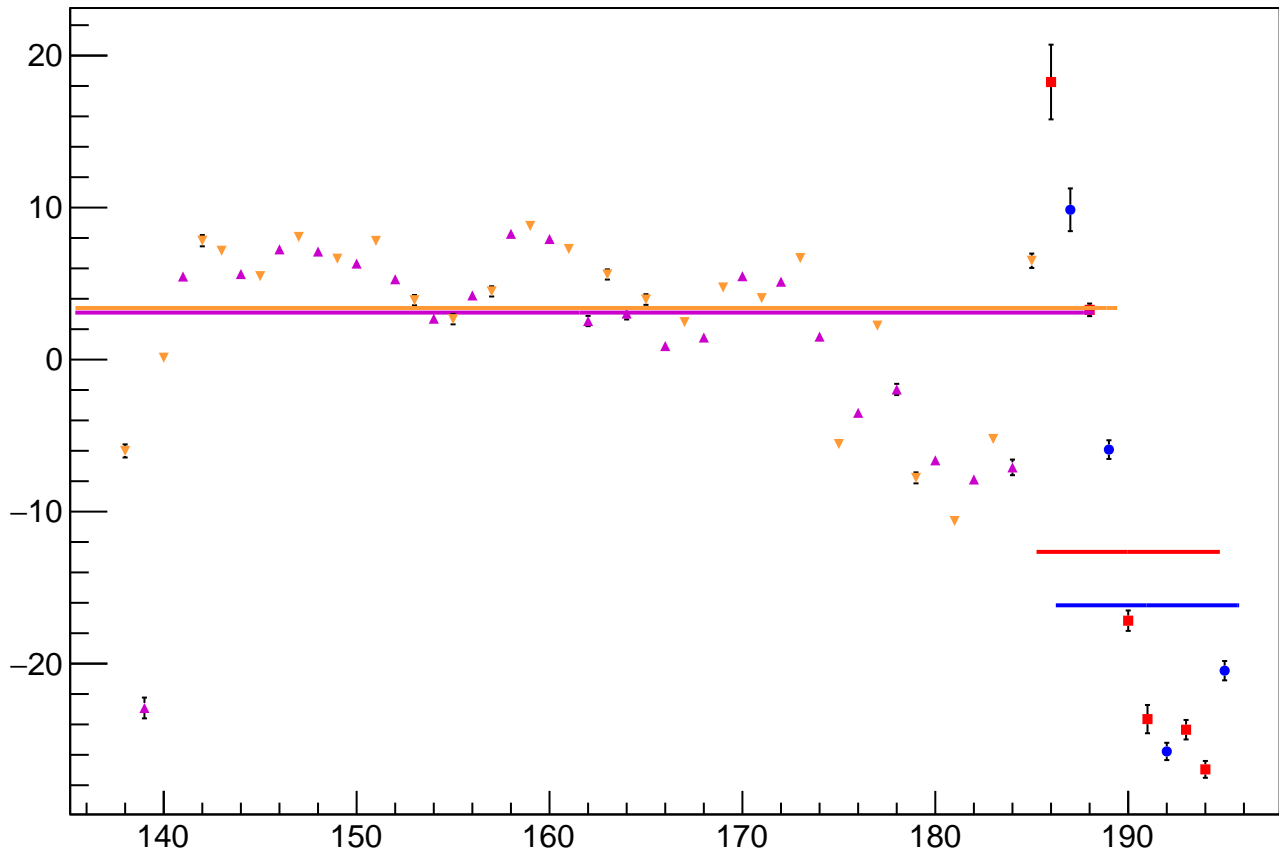
Left In:  $13.315 \pm 0.077$   $\chi^2/\text{NDF}: 13977.7/22$

+ sign  $12.424 \pm 0.073$   $\chi^2/\text{NDF}: 18711.8/28$

All:  $12.098 \pm 0.051$   $\chi^2/\text{NDF}: 36300.7/57$

- sign  $11.778 \pm 0.072$   $\chi^2/\text{NDF}: 17549.5/28$

# reg\_asym\_sam\_37\_48\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-16.164 \pm 0.339$   $\chi^2/\text{NDF}: 952.3/3$

Left Out:  $3.396 \pm 0.058$   $\chi^2/\text{NDF}: 8101.5/24$

Right Out:  $-12.649 \pm 0.258$   $\chi^2/\text{NDF}: 2819.4/5$

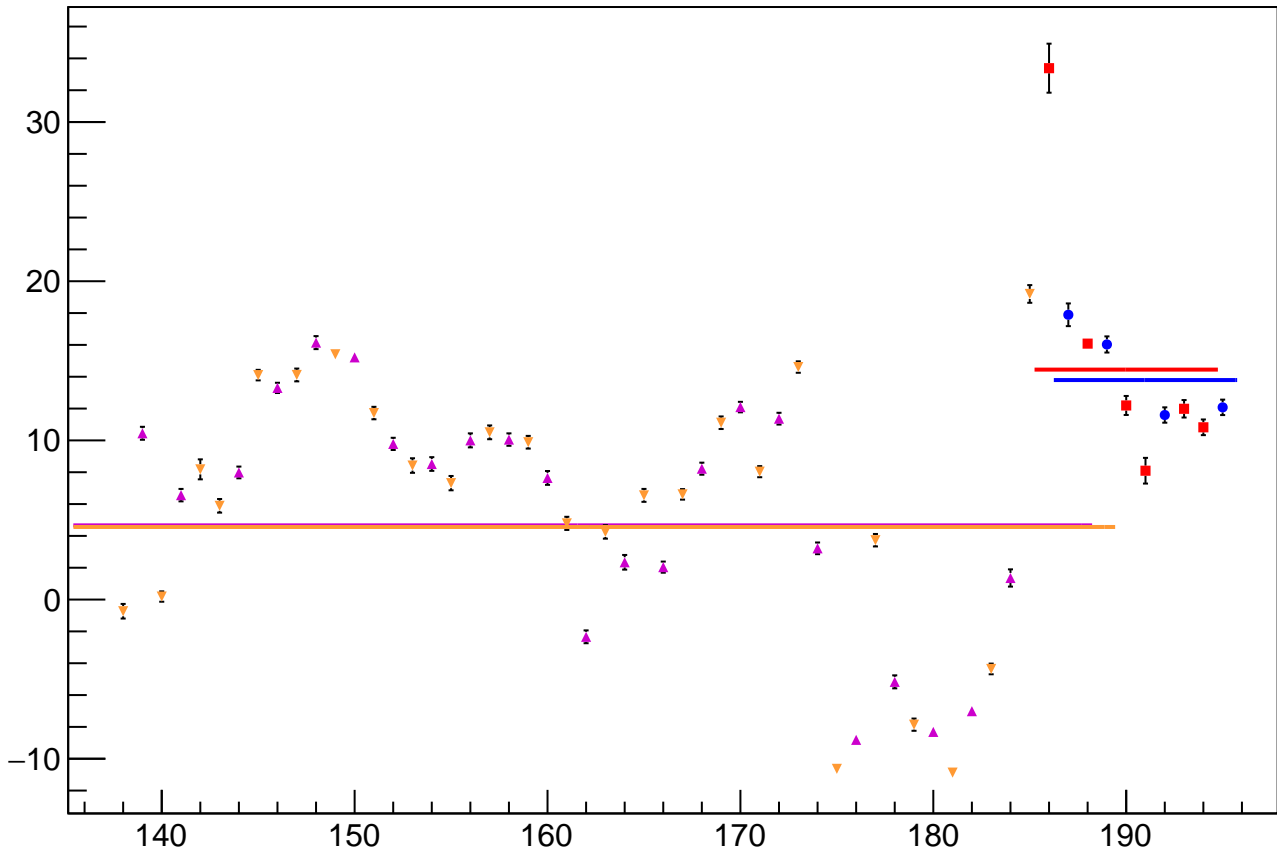
Left In:  $3.092 \pm 0.061$   $\chi^2/\text{NDF}: 7104.4/22$

+ sign  $2.831 \pm 0.058$   $\chi^2/\text{NDF}: 12295.3/28$

All:  $2.557 \pm 0.041$   $\chi^2/\text{NDF}: 25801.0/57$

- sign  $2.268 \pm 0.059$   $\chi^2/\text{NDF}: 13459.0/28$

# reg\_asym\_sam\_37\_48\_dd\_diff\_bpm4eX\_slope vs Slug



Right In: 13.791 $\pm$ 0.263  $\chi^2$ /NDF: 85.7/3

Left Out: 4.561 $\pm$ 0.075  $\chi^2$ /NDF:13592.1/24

Right Out: 14.448 $\pm$ 0.179  $\chi^2$ /NDF: 352.7/5

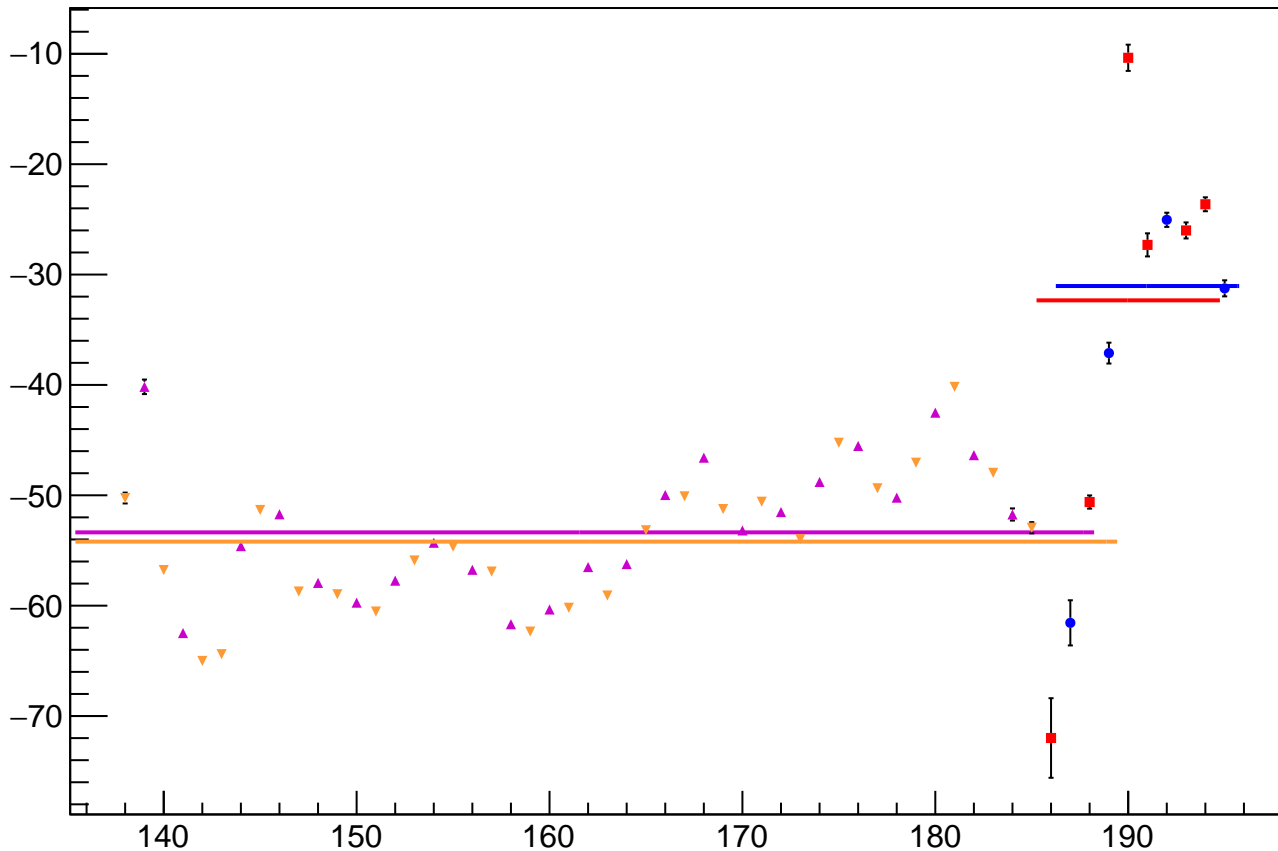
Left In: 4.662 $\pm$ 0.077  $\chi^2$ /NDF:11281.5/22

+ sign 5.259 $\pm$ 0.072  $\chi^2$ /NDF: 14812.4/28

All: 5.736 $\pm$ 0.051  $\chi^2$ /NDF: 29063.0/57

- sign 6.189 $\pm$ 0.071  $\chi^2$ /NDF: 14166.2/28

# reg\_asym\_sam\_37\_48\_dd\_diff\_bpm4eY\_slope vs Slug



Right In: -31.039±/0.420  $\chi^2/\text{NDF}$ : 350.7/3

Left Out: -54.199±/0.066  $\chi^2/\text{NDF}$ : 8454.7/24

Right Out: -32.337±/0.335  $\chi^2/\text{NDF}$ : 1682.8/5

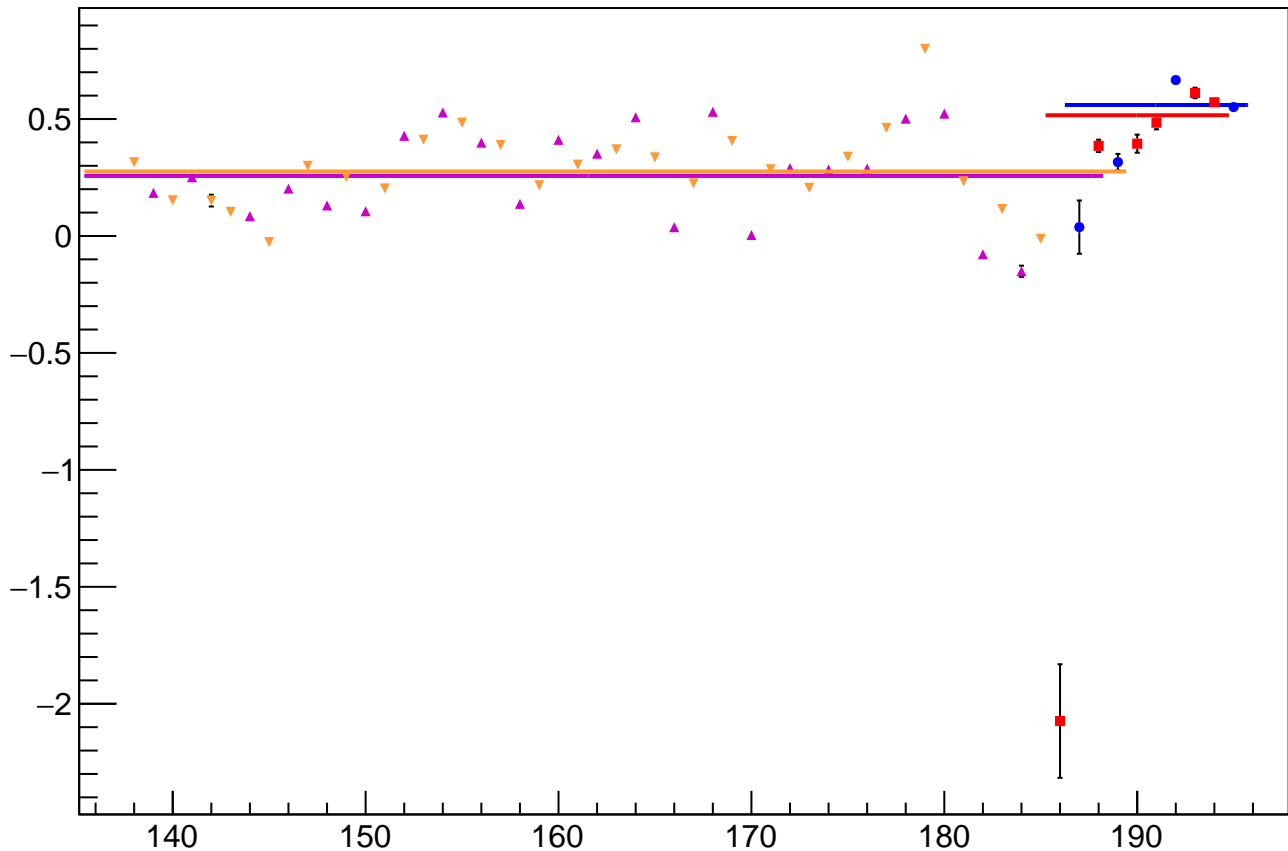
Left In: -53.359±/0.068  $\chi^2/\text{NDF}$ : 6882.0/22

+ sign -53.635±/0.066  $\chi^2/\text{NDF}$ : 11767.9/28

All: -53.089±/0.047  $\chi^2/\text{NDF}$ : 24244.7/57

- sign -52.518±/0.067  $\chi^2/\text{NDF}$ : 12334.9/28

# reg\_asym\_sam\_37\_48\_dd\_diff\_bpm12X\_slope vs Slug



Right In: 0.560 $\pm$ 0.014  $\chi^2$ /NDF: 97.0/3

Left Out: 0.276 $\pm$ 0.003  $\chi^2$ /NDF:2623.6/24

Right Out: 0.516 $\pm$ 0.011  $\chi^2$ /NDF: 176.6/5

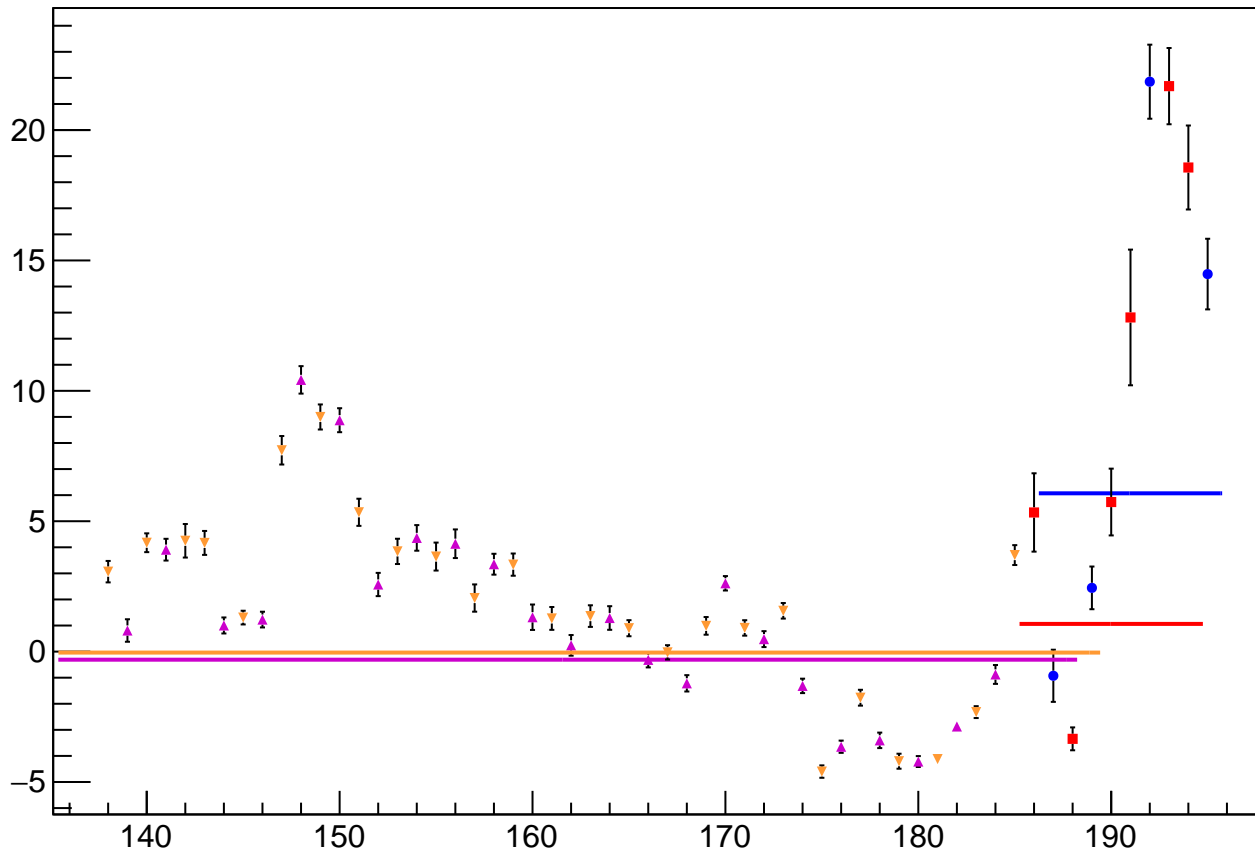
Left In: 0.257 $\pm$ 0.003  $\chi^2$ /NDF:3623.9/22

+ sign 0.290 $\pm$ 0.003  $\chi^2$ /NDF: 3139.8/28

All: 0.283 $\pm$ 0.002  $\chi^2$ /NDF: 7467.7/57

- sign 0.276 $\pm$ 0.003  $\chi^2$ /NDF: 4317.2/28

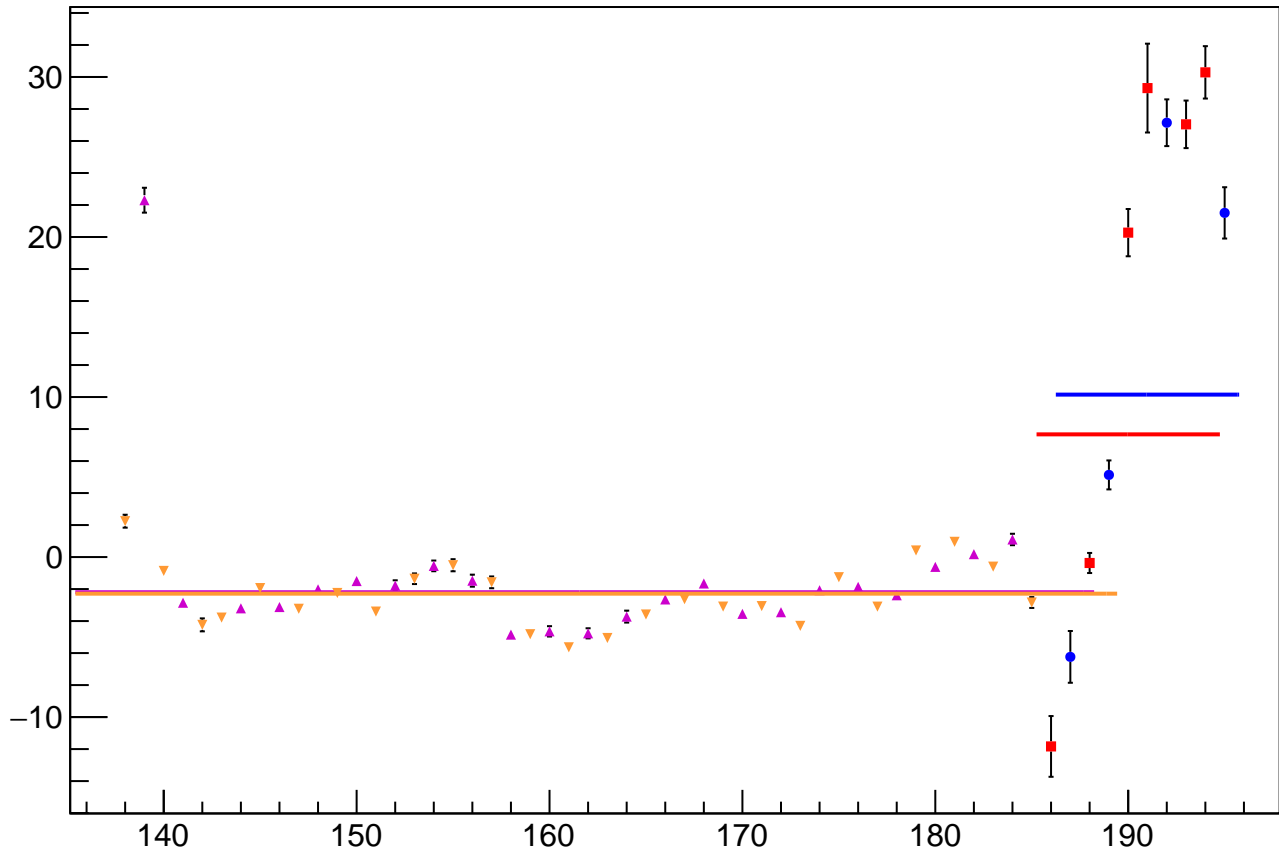
# reg\_asym\_sam\_15\_26\_dd\_diff\_bpm1X\_slope vs Slug



Right In: 6.070 $\pm$ 0.532  $\chi^2$ /NDF: 230.7/3  
 Left Out: -0.037 $\pm$ 0.066  $\chi^2$ /NDF:2637.7/24  
 Right Out: 1.062 $\pm$ 0.372  $\chi^2$ /NDF: 459.7/5  
 Left In: -0.310 $\pm$ 0.067  $\chi^2$ /NDF:2250.5/22

+ sign 0.055 $\pm$ 0.066  $\chi^2$ /NDF: 2998.1/28  
 All: -0.104 $\pm$ 0.047  $\chi^2$ /NDF: 5733.5/57  
 - sign -0.266 $\pm$ 0.066  $\chi^2$ /NDF: 2723.4/28

# reg\_asym\_sam\_15\_26\_dd\_diff\_bpm4aY\_slope vs Slug

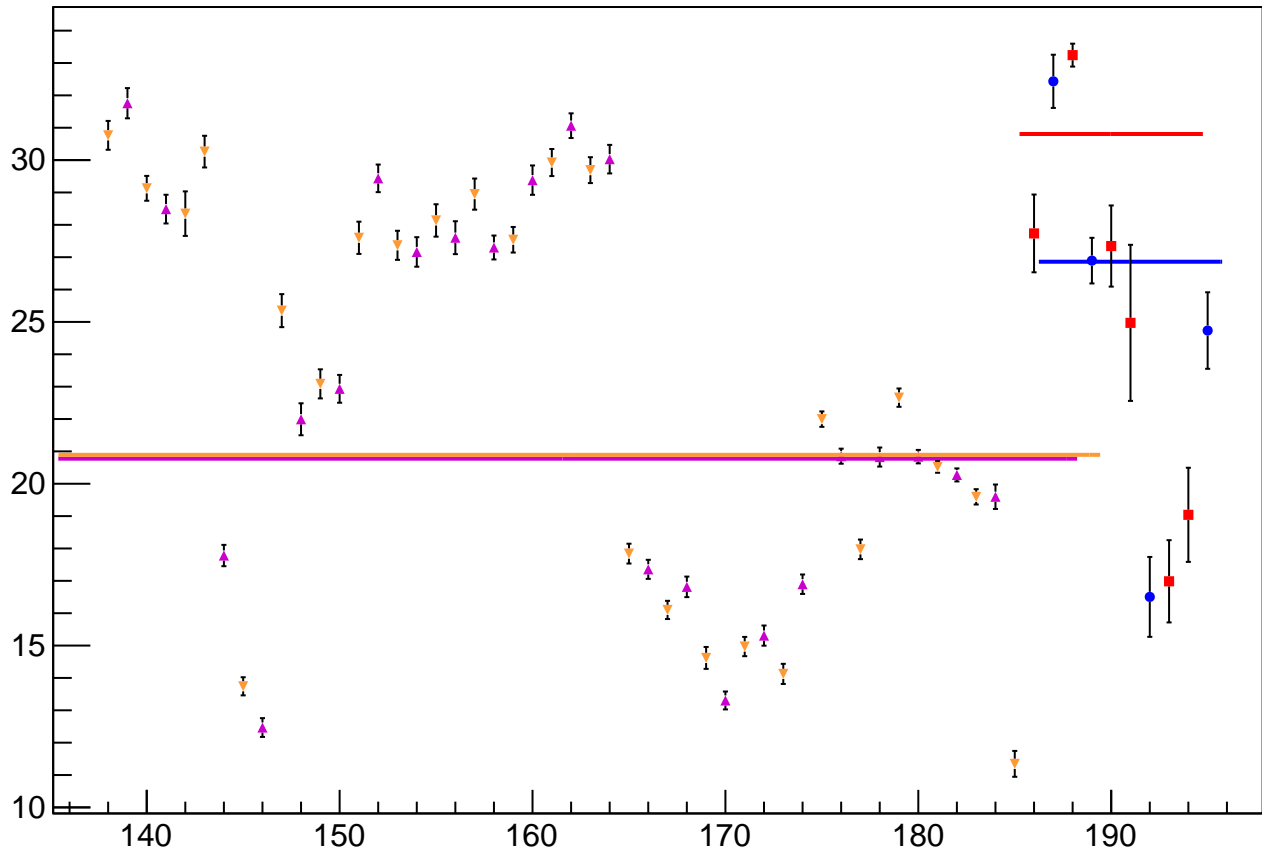


Right In:  $10.151 \pm 0.638$   $\chi^2/\text{NDF}: 318.9/3$   
 Left Out:  $-2.288 \pm 0.054$   $\chi^2/\text{NDF}: 1137.7/24$   
 Right Out:  $7.667 \pm 0.486$   $\chi^2/\text{NDF}: 764.1/5$   
 Left In:  $-2.198 \pm 0.055$   $\chi^2/\text{NDF}: 1673.9/22$

+ sign  $-2.199 \pm 0.054$   $\chi^2/\text{NDF}: 1834.6/28$   
 All:  $-2.137 \pm 0.038$   $\chi^2/\text{NDF}: 4681.7/57$   
 - sign  $-2.073 \pm 0.055$   $\chi^2/\text{NDF}: 2844.4/28$



# reg\_asym\_sam\_15\_26\_dd\_diff\_bpm4eX\_slope vs Slug



Right In: 26.860 $\pm$ 0.453  $\chi^2$ /NDF: 119.6/3

Left Out: 20.894 $\pm$ 0.067  $\chi^2$ /NDF:6655.4/24

Right Out: 30.807 $\pm$ 0.308  $\chi^2$ /NDF: 251.1/5

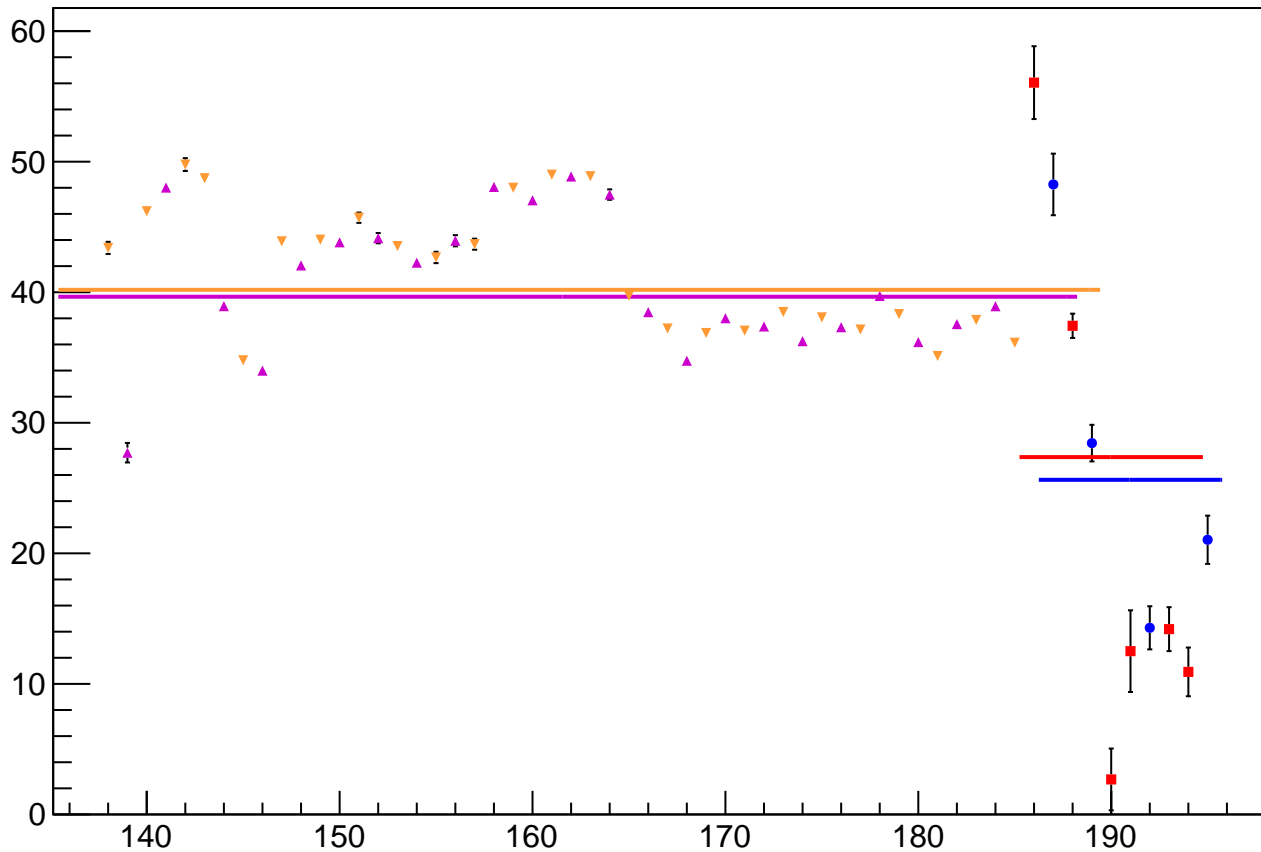
Left In: 20.774 $\pm$ 0.068  $\chi^2$ /NDF:5927.9/22

+ sign 21.020 $\pm$ 0.066  $\chi^2$ /NDF: 6944.4/28

All: 21.128 $\pm$ 0.047  $\chi^2$ /NDF: 14144.0/57

- sign 21.236 $\pm$ 0.066  $\chi^2$ /NDF: 7194.3/28

# reg\_asym\_sam\_15\_26\_dd\_diff\_bpm4eY\_slope vs Slug



Right In: 25.632 $\pm$ 0.862  $\chi^2$ /NDF: 149.4/3

Left Out: 40.186 $\pm$ 0.060  $\chi^2$ /NDF: 5932.7/24

Right Out: 27.372 $\pm$ 0.673  $\chi^2$ /NDF: 493.4/5

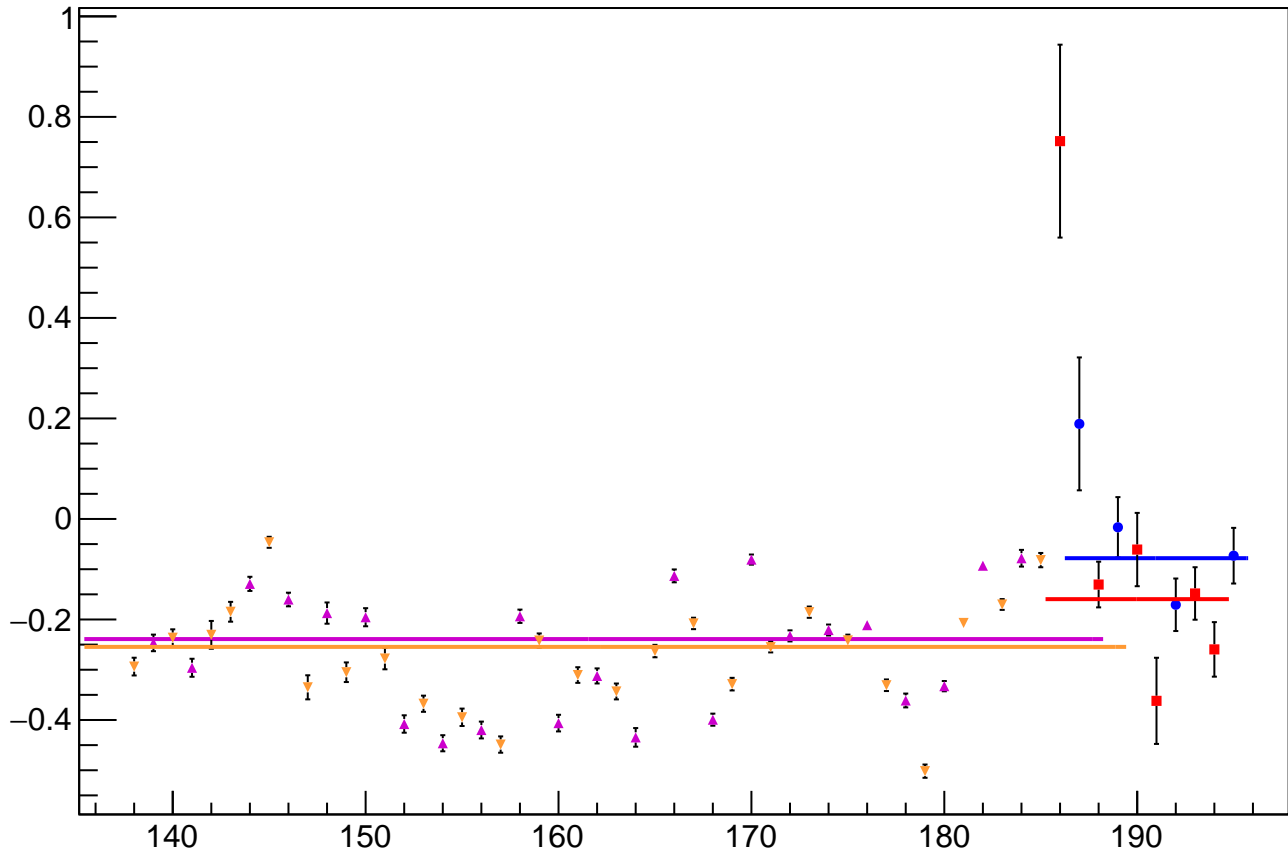
Left In: 39.655 $\pm$ 0.061  $\chi^2$ /NDF: 5298.6/22

+ sign 40.115 $\pm$ 0.060  $\chi^2$ /NDF: 6366.0/28

All: 39.839 $\pm$ 0.043  $\chi^2$ /NDF: 12530.8/57

- sign 39.554 $\pm$ 0.061  $\chi^2$ /NDF: 6122.0/28

# reg\_asym\_sam\_15\_26\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.078 \pm 0.031$   $\chi^2/\text{NDF}: 8.3/3$

Left Out:  $-0.255 \pm 0.003$   $\chi^2/\text{NDF}: 1420.4/24$

Right Out:  $-0.160 \pm 0.025$   $\chi^2/\text{NDF}: 33.8/5$

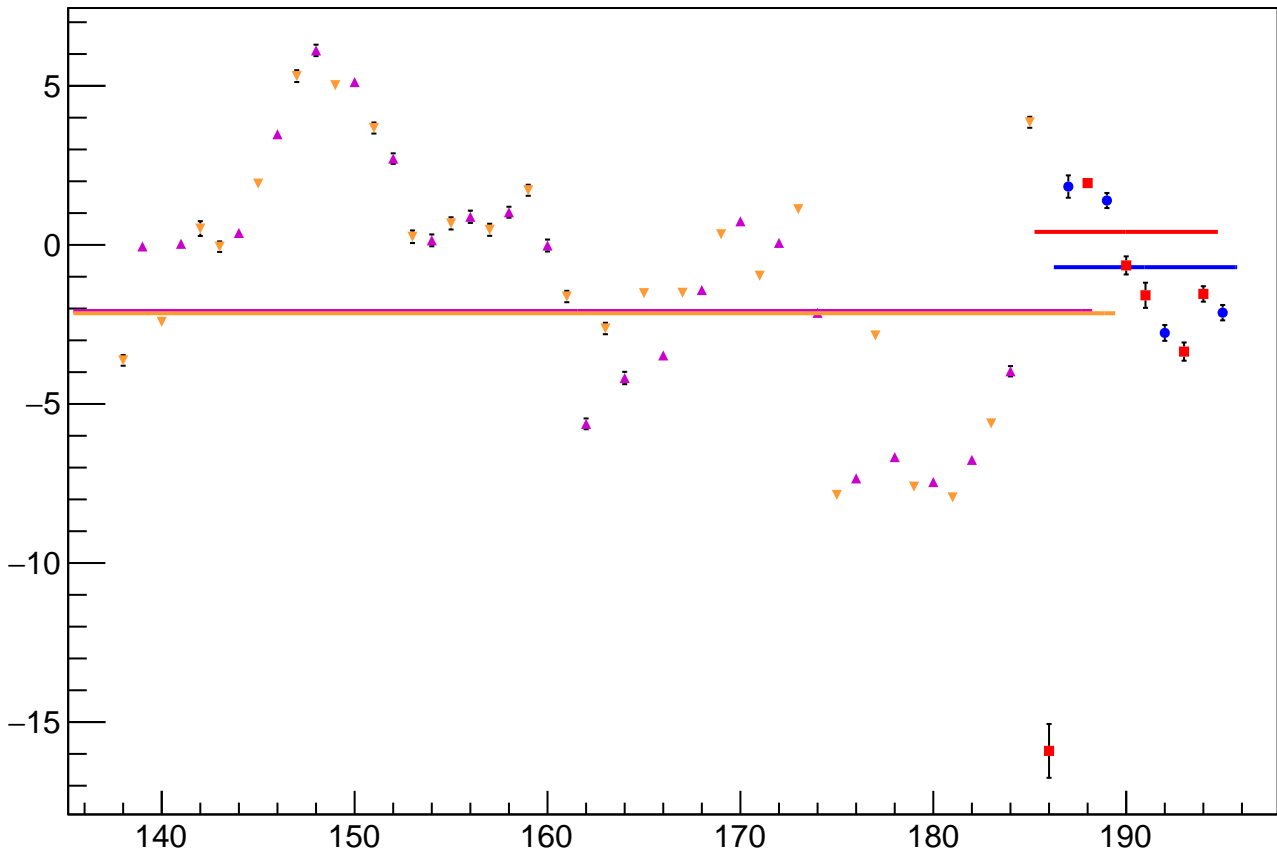
Left In:  $-0.239 \pm 0.003$   $\chi^2/\text{NDF}: 1750.5/22$

+ sign  $-0.253 \pm 0.003$   $\chi^2/\text{NDF}: 1460.5/28$

All:  $-0.246 \pm 0.002$   $\chi^2/\text{NDF}: 3269.5/57$

- sign  $-0.238 \pm 0.003$   $\chi^2/\text{NDF}: 1793.9/28$

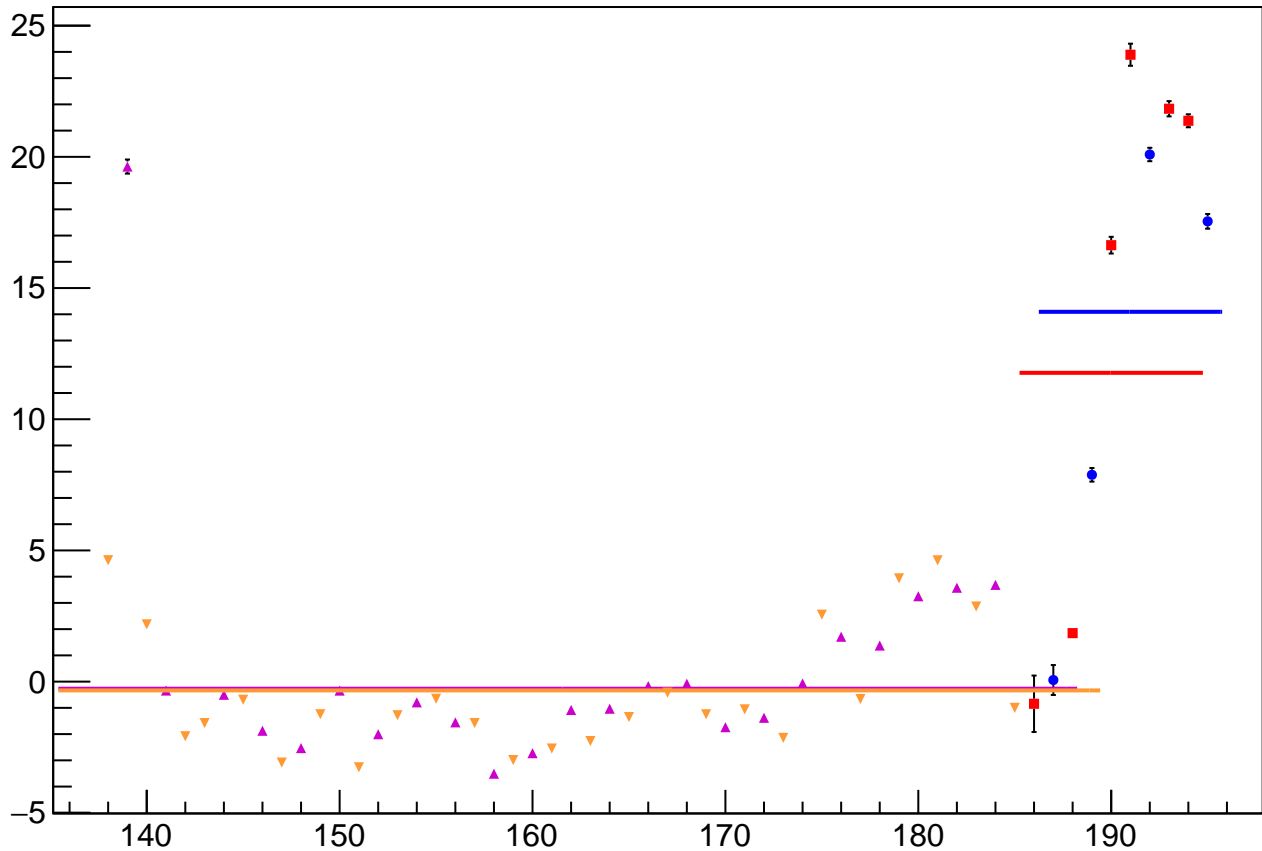
# reg\_asym\_sam\_37\_26\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-0.700 \pm 0.130$   $\chi^2/\text{NDF}: 234.0/3$   
Left Out:  $-2.149 \pm 0.026$   $\chi^2/\text{NDF}: 24536.3/24$   
Right Out:  $0.410 \pm 0.087$   $\chi^2/\text{NDF}: 844.3/5$   
Left In:  $-2.078 \pm 0.026$   $\chi^2/\text{NDF}: 23245.8/22$

+ sign  $-2.094 \pm 0.025$   $\chi^2/\text{NDF}: 24889.6/28$   
All:  $-1.983 \pm 0.018$   $\chi^2/\text{NDF}: 49770.6/57$   
- sign  $-1.873 \pm 0.025$   $\chi^2/\text{NDF}: 24841.8/28$

# reg\_asym\_sam\_37\_26\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $14.095 \pm 0.147$   $\chi^2/\text{NDF}: 1880.8/3$

Left Out:  $-0.335 \pm 0.021$   $\chi^2/\text{NDF}: 12596.1/24$

Right Out:  $11.769 \pm 0.110$   $\chi^2/\text{NDF}: 7677.9/5$

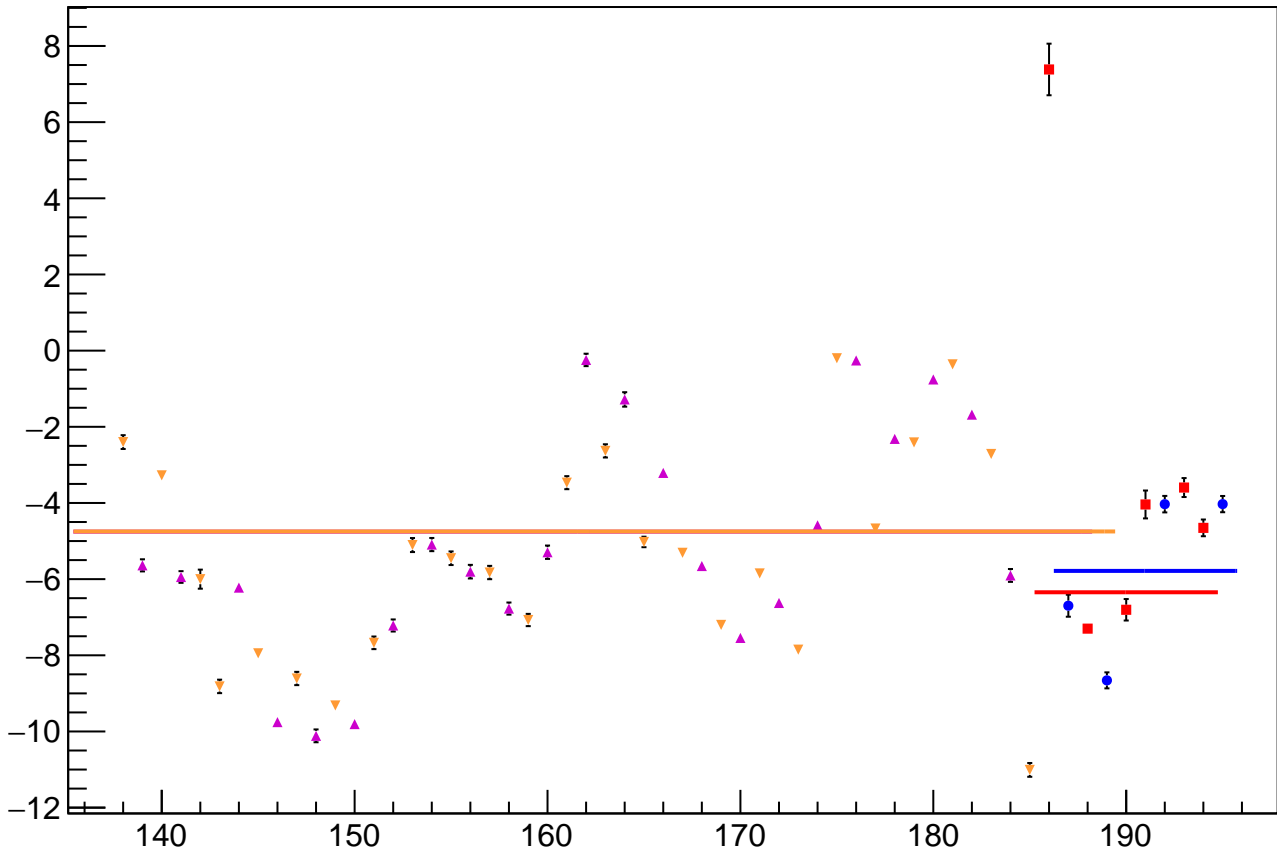
Left In:  $-0.269 \pm 0.021$   $\chi^2/\text{NDF}: 13323.1/22$

+ sign  $-0.059 \pm 0.020$   $\chi^2/\text{NDF}: 23868.0/28$

All:  $0.046 \pm 0.014$   $\chi^2/\text{NDF}: 56509.9/57$

- sign  $0.153 \pm 0.021$   $\chi^2/\text{NDF}: 32588.2/28$

# reg\_asym\_sam\_37\_26\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-5.784 \pm 0.113$   $\chi^2/\text{NDF}: 330.0/3$

Left Out:  $-4.748 \pm 0.026$   $\chi^2/\text{NDF}: 13289.8/24$

Right Out:  $-6.345 \pm 0.073$   $\chi^2/\text{NDF}: 749.9/5$

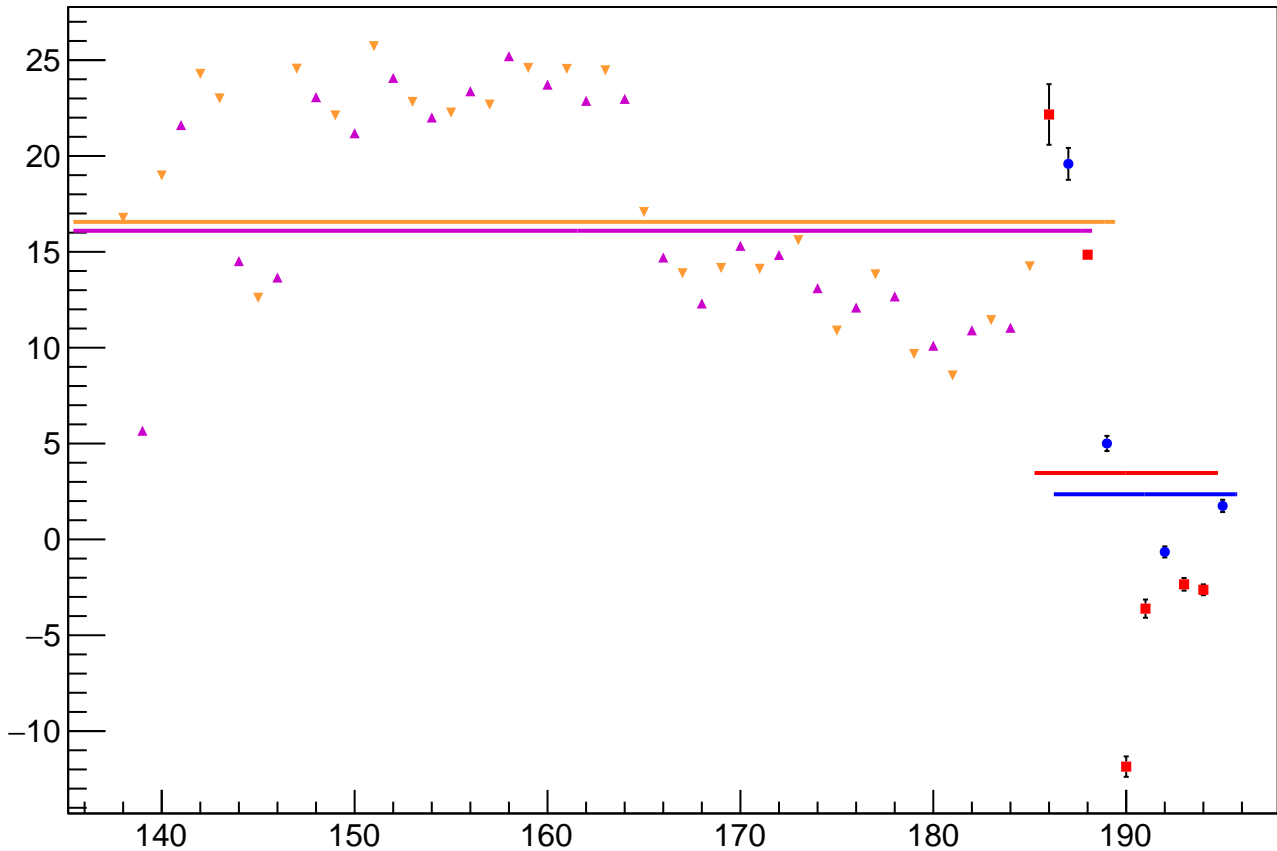
Left In:  $-4.753 \pm 0.026$   $\chi^2/\text{NDF}: 14119.2/22$

+ sign  $-4.799 \pm 0.025$   $\chi^2/\text{NDF}: 13699.1/28$

All:  $-4.867 \pm 0.018$   $\chi^2/\text{NDF}: 28999.9/57$

- sign  $-4.932 \pm 0.025$   $\chi^2/\text{NDF}: 15286.5/28$

# reg\_asym\_sam\_37\_26\_dd\_diff\_bpm4eY\_slope vs Slug



Right In: 2.354 $\pm$ 0.184  $\chi^2$ /NDF: 586.7/3

Left Out: 16.563 $\pm$ 0.023  $\chi^2$ /NDF: 53858.5/24

Right Out: 3.463 $\pm$ 0.144  $\chi^2$ /NDF: 4338.6/5

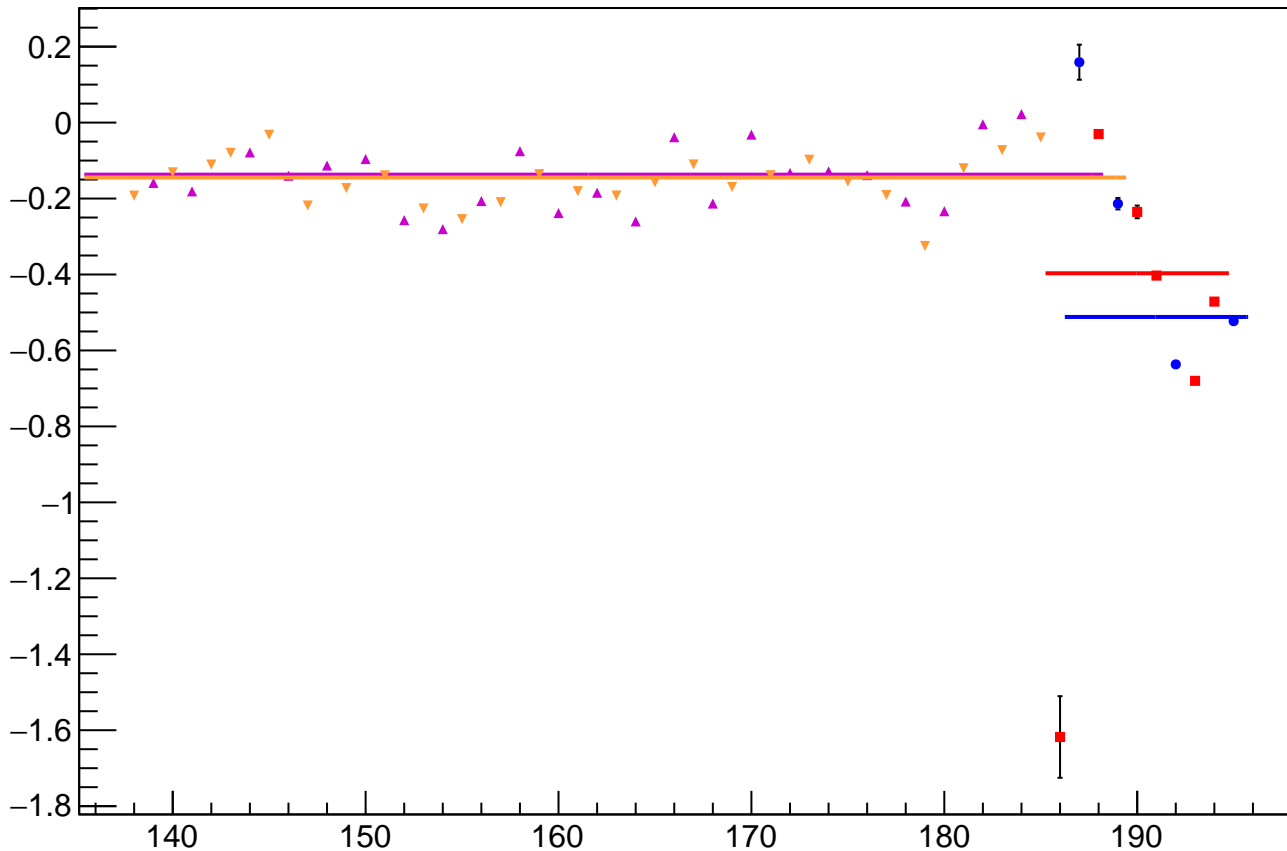
Left In: 16.098 $\pm$ 0.024  $\chi^2$ /NDF: 42345.7/22

+ sign 16.342 $\pm$ 0.023  $\chi^2$ /NDF: 60303.7/28

All: 16.058 $\pm$ 0.016  $\chi^2$ /NDF: 114822.8/57

- sign 15.768 $\pm$ 0.023  $\chi^2$ /NDF: 54210.5/28

# reg\_asym\_sam\_37\_26\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.512 \pm 0.006$   $\chi^2/\text{NDF}$ : 788.0/3

Left Out:  $-0.145 \pm 0.001$   $\chi^2/\text{NDF}$ : 3769.7/24

Right Out:  $-0.397 \pm 0.005$   $\chi^2/\text{NDF}$ : 2310.7/5

Left In:  $-0.137 \pm 0.001$   $\chi^2/\text{NDF}$ : 5392.6/22

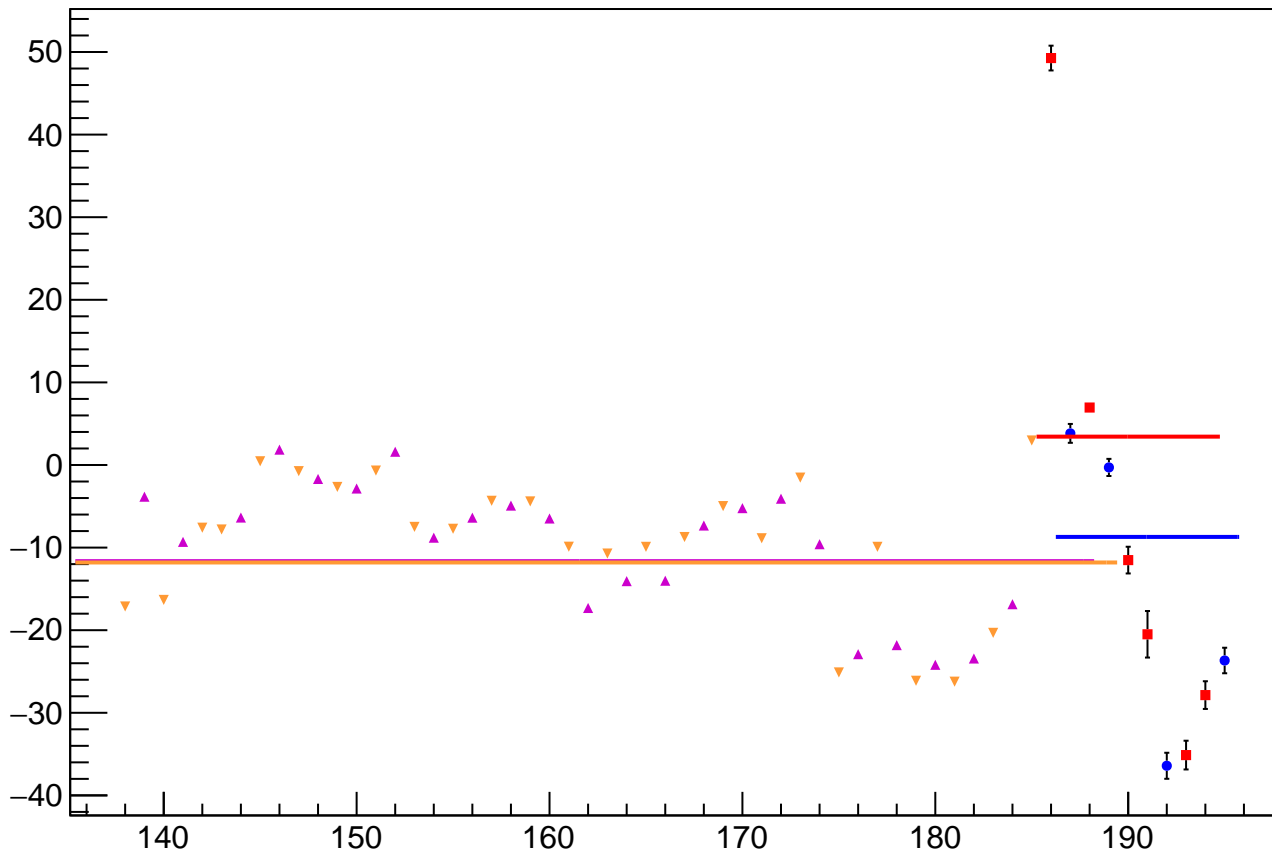
+ sign  $-0.156 \pm 0.001$   $\chi^2/\text{NDF}$ : 8198.7/28

All:  $-0.153 \pm 0.001$   $\chi^2/\text{NDF}$ : 18695.6/57

- sign  $-0.149 \pm 0.001$   $\chi^2/\text{NDF}$ : 10478.6/28



# reg\_asym\_sam\_1357\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-8.706 \pm 0.630$   $\chi^2/\text{NDF}: 589.0/3$

Left Out:  $-11.801 \pm 0.070$   $\chi^2/\text{NDF}: 17308.2/24$

Right Out:  $3.433 \pm 0.442$   $\chi^2/\text{NDF}: 1974.0/5$

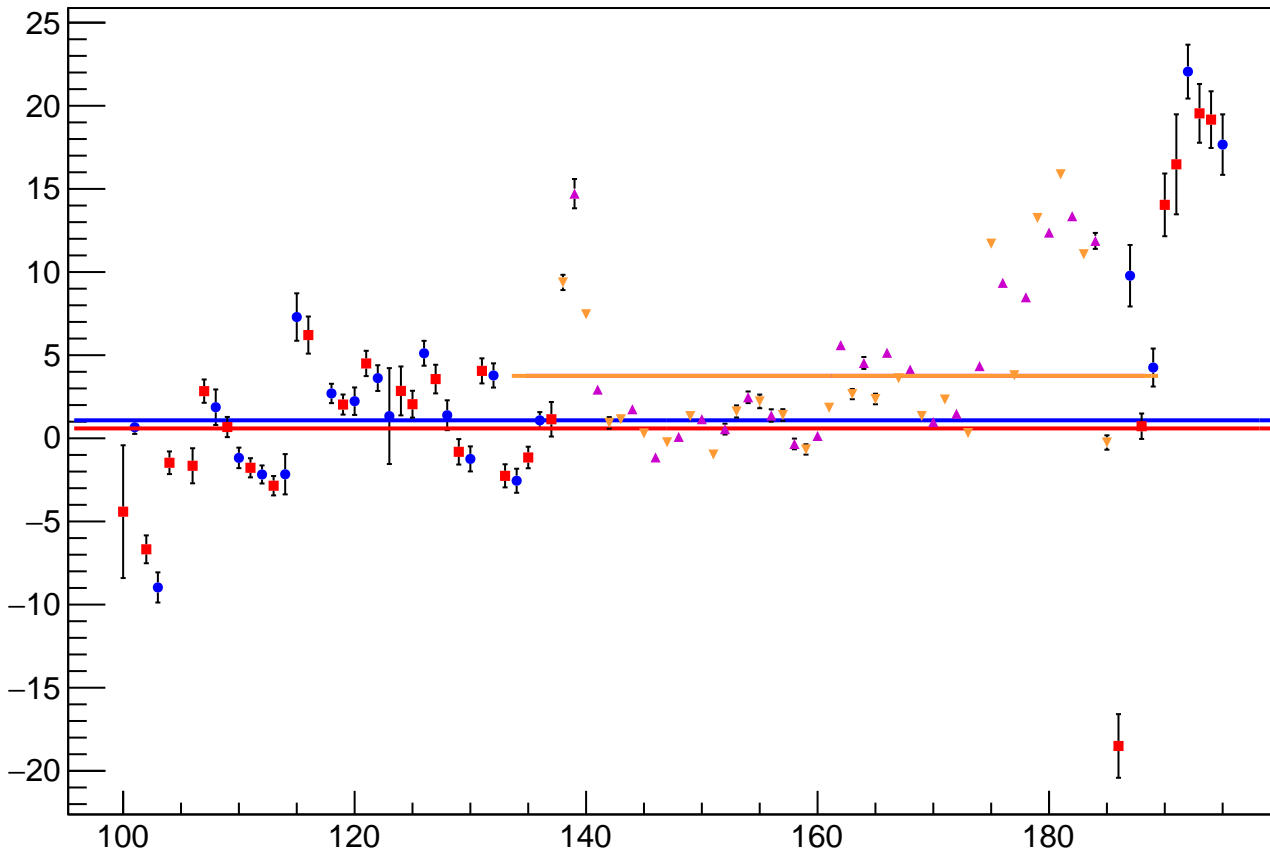
Left In:  $-11.642 \pm 0.072$   $\chi^2/\text{NDF}: 14121.2/22$

+ sign  $-11.763 \pm 0.070$   $\chi^2/\text{NDF}: 17921.0/28$

All:  $-11.513 \pm 0.050$   $\chi^2/\text{NDF}: 35173.6/57$

- sign  $-11.258 \pm 0.071$   $\chi^2/\text{NDF}: 17226.6/28$

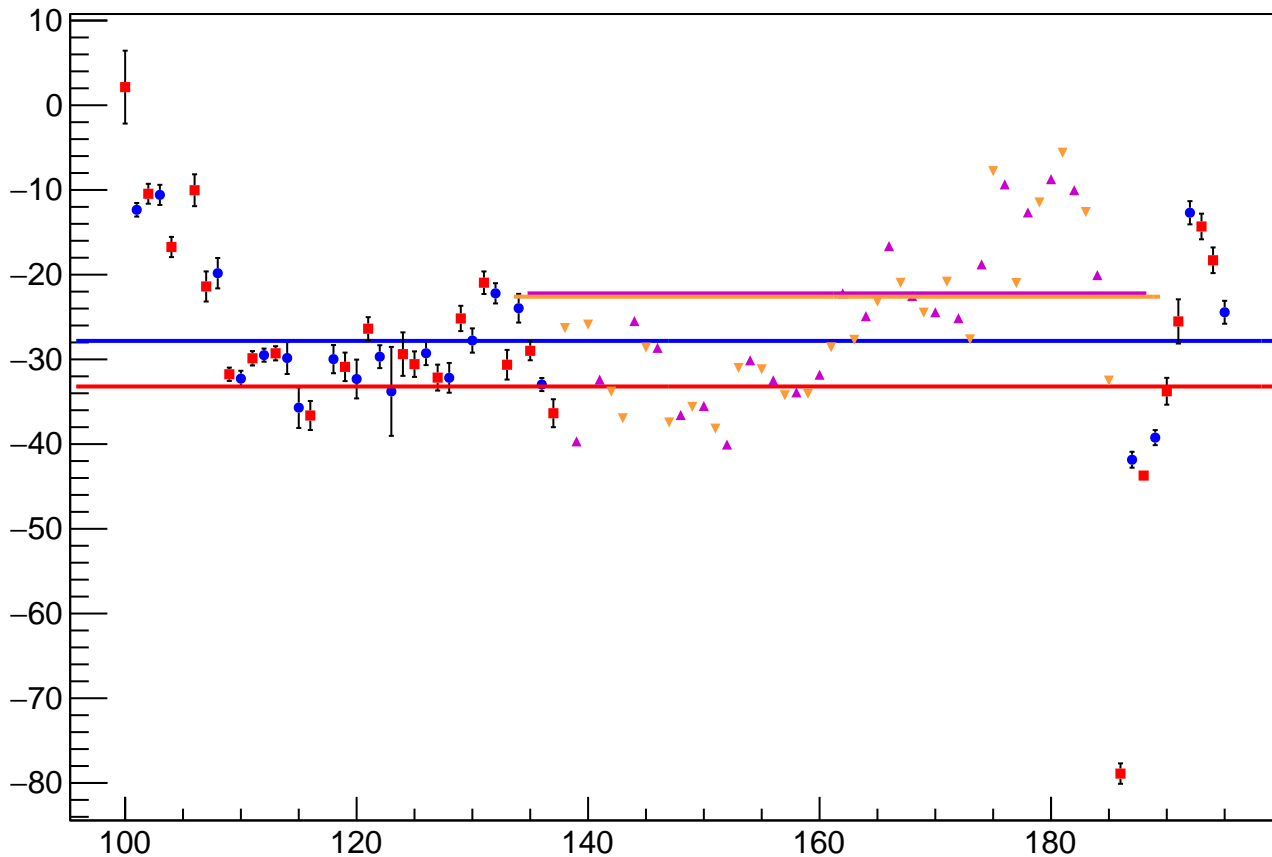
# reg\_asym\_sam\_1357\_avg\_diff\_bpm4aY\_slope vs Slug



Right In: 1.083+/-0.166  $\chi^2$ /NDF: 578.5/20  
Left Out: 3.757+/-0.056  $\chi^2$ /NDF:7450.7/24  
Right Out: 0.594+/-0.167  $\chi^2$ /NDF: 688.3/24  
Left In: 3.757+/-0.057  $\chi^2$ /NDF:5629.4/22

+ sign 3.488+/-0.053  $\chi^2$ /NDF: 8261.8/45  
All: 3.461+/-0.038  $\chi^2$ /NDF: 14900.9/93  
- sign 3.432+/-0.054  $\chi^2$ /NDF: 6638.5/47

# reg\_asym\_sam\_1357\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $-27.817 \pm 0.262$   $\chi^2/\text{NDF}: 1244.7/20$

Left Out:  $-22.598 \pm 0.071$   $\chi^2/\text{NDF}: 19933.4/24$

Right Out:  $-33.197 \pm 0.231$   $\chi^2/\text{NDF}: 3326.7/24$

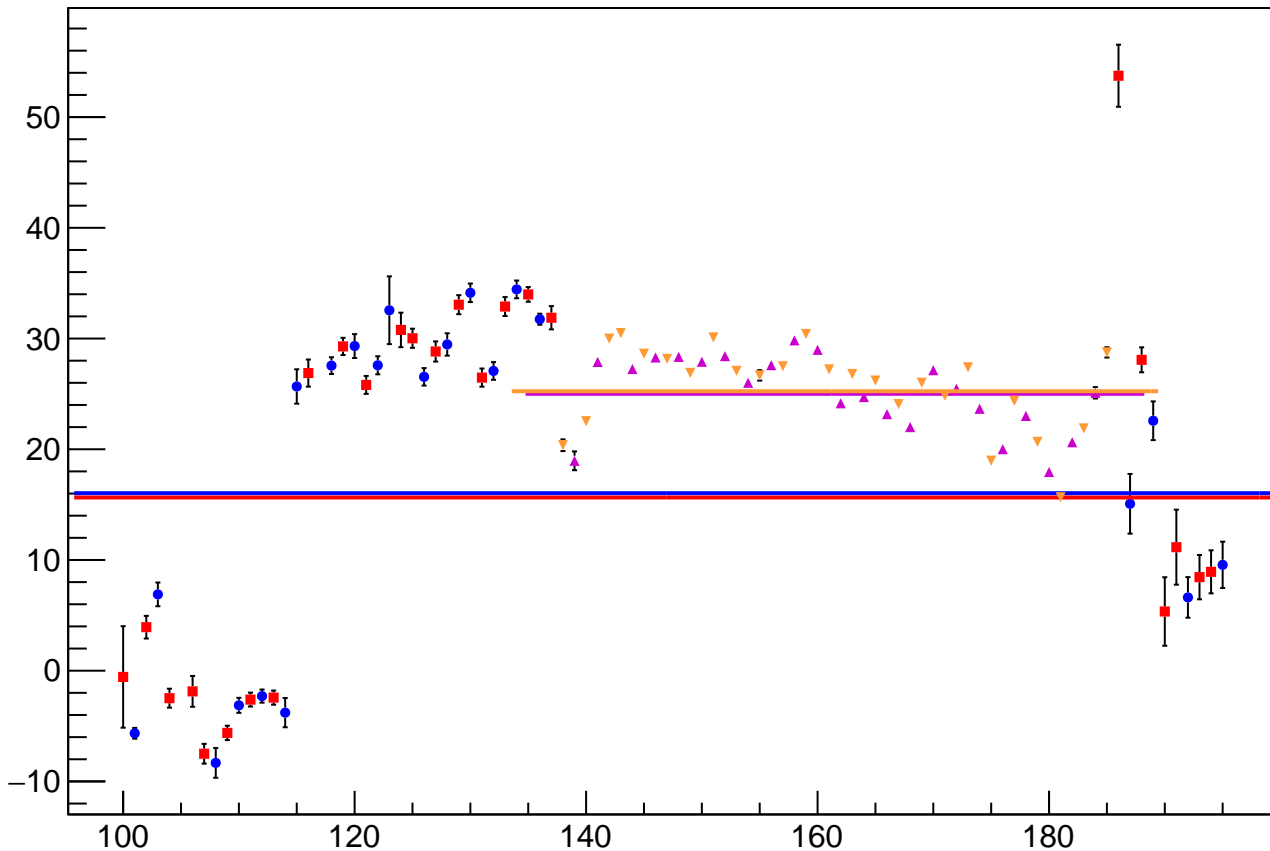
Left In:  $-22.209 \pm 0.072$   $\chi^2/\text{NDF}: 17627.4/22$

+ sign  $-22.951 \pm 0.068$   $\chi^2/\text{NDF}: 21546.7/45$

All:  $-23.060 \pm 0.048$   $\chi^2/\text{NDF}: 44564.6/93$

- sign  $-23.169 \pm 0.068$   $\chi^2/\text{NDF}: 23012.7/47$

# reg\_asym\_sam\_1357\_avg\_diff\_bpm4eY\_slope vs Slug



Right In: 16.031+/-0.189  $\chi^2$ /NDF: 7592.3/20

Left Out: 25.242+/-0.063  $\chi^2$ /NDF:3786.5/24

Right Out: 15.643+/-0.191  $\chi^2$ /NDF: 7609.2/24

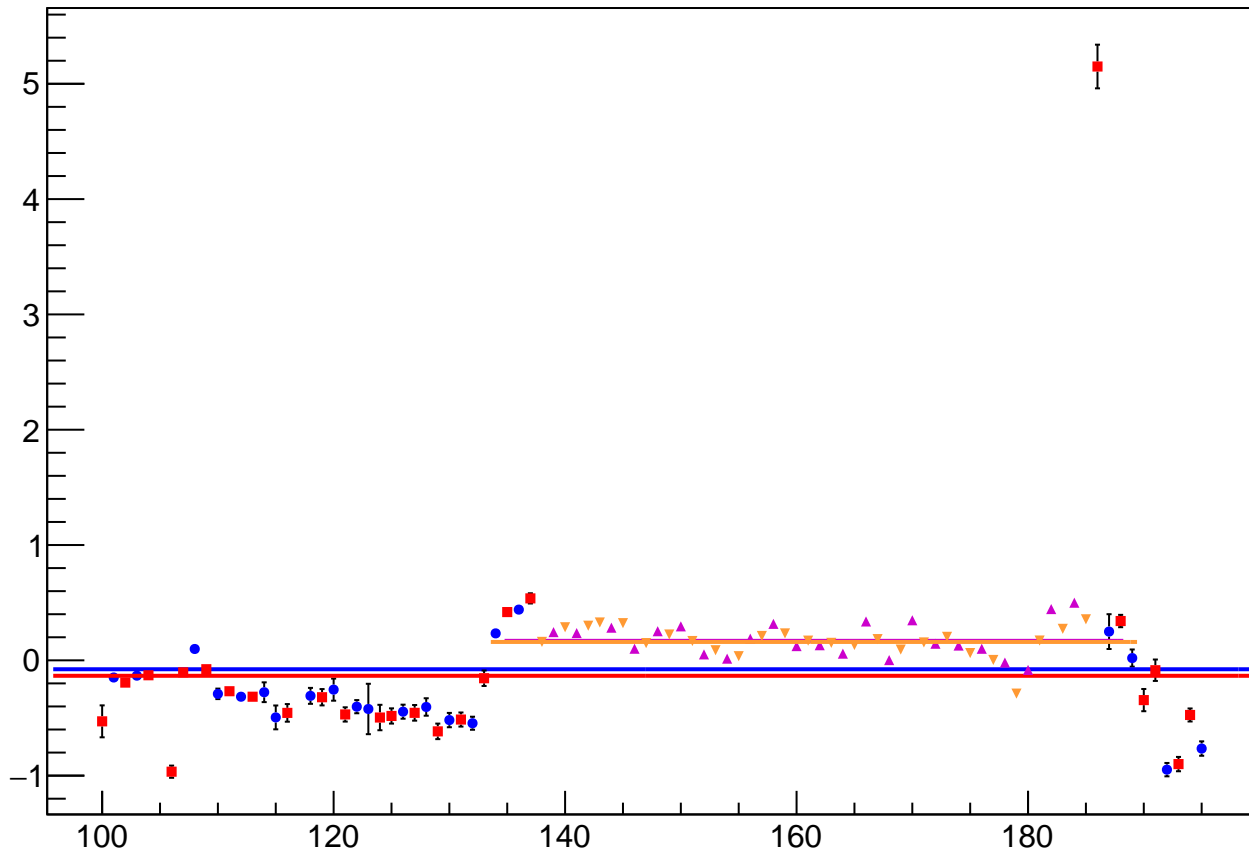
Left In: 25.009+/-0.064  $\chi^2$ /NDF:2722.0/22

+ sign 24.330+/-0.059  $\chi^2$ /NDF: 13519.5/45

All: 24.203+/-0.042  $\chi^2$ /NDF: 26014.7/93

- sign 24.071+/-0.061  $\chi^2$ /NDF: 12485.9/47

# reg\_asym\_sam\_1357\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.077 \pm 0.010$   $\chi^2/\text{NDF}: 1381.8/20$

Left Out:  $0.159 \pm 0.003$   $\chi^2/\text{NDF}: 1864.2/24$

Right Out:  $-0.134 \pm 0.010$   $\chi^2/\text{NDF}: 2210.2/24$

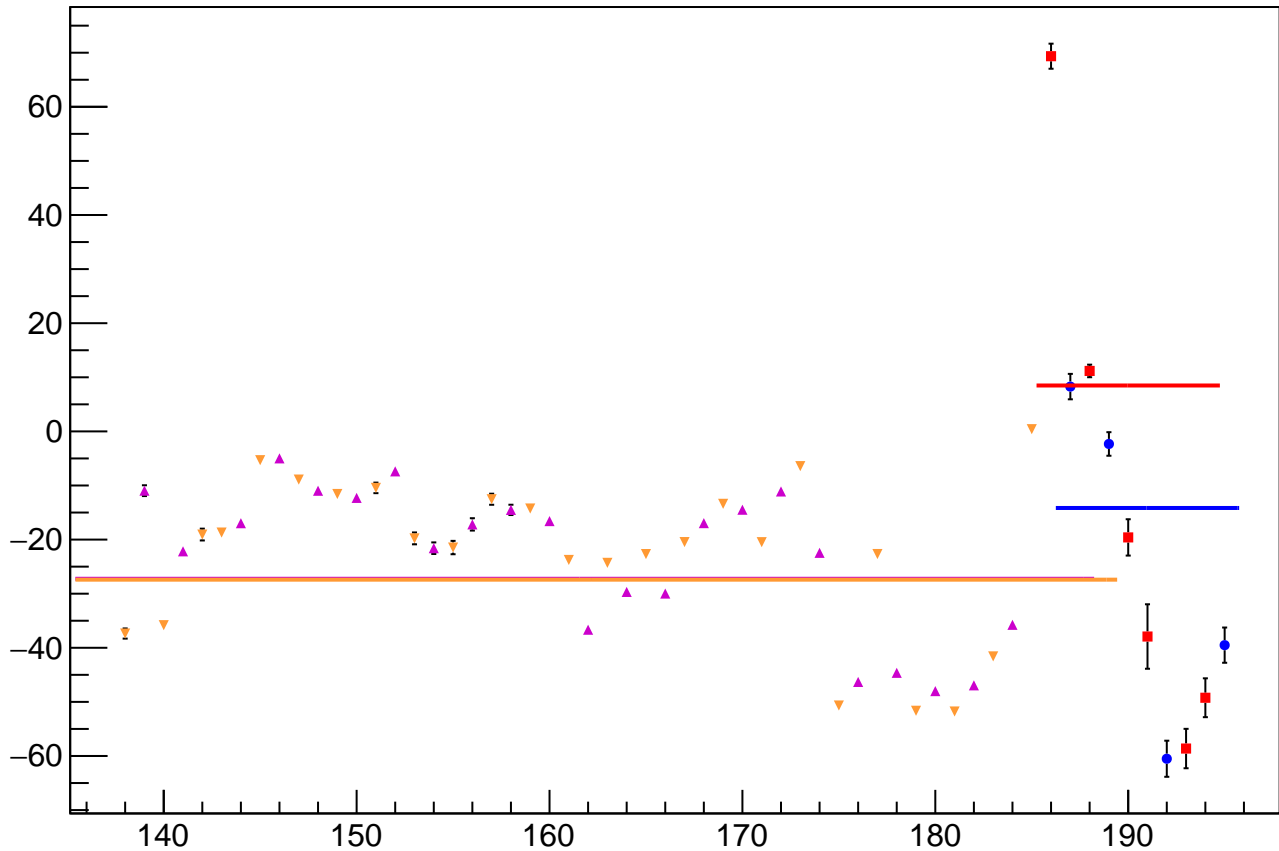
Left In:  $0.169 \pm 0.003$   $\chi^2/\text{NDF}: 2418.8/22$

+ sign  $0.141 \pm 0.003$   $\chi^2/\text{NDF}: 3770.1/45$

All:  $0.143 \pm 0.002$   $\chi^2/\text{NDF}: 9280.5/93$

- sign  $0.144 \pm 0.003$   $\chi^2/\text{NDF}: 5509.8/47$

# reg\_asym\_sam\_2468\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-14.156 \pm 1.318$   $\chi^2/\text{NDF}: 374.3/3$

Left Out:  $-27.408 \pm 0.137$   $\chi^2/\text{NDF}: 14850.5/24$

Right Out:  $8.485 \pm 0.914$   $\chi^2/\text{NDF}: 1423.5/5$

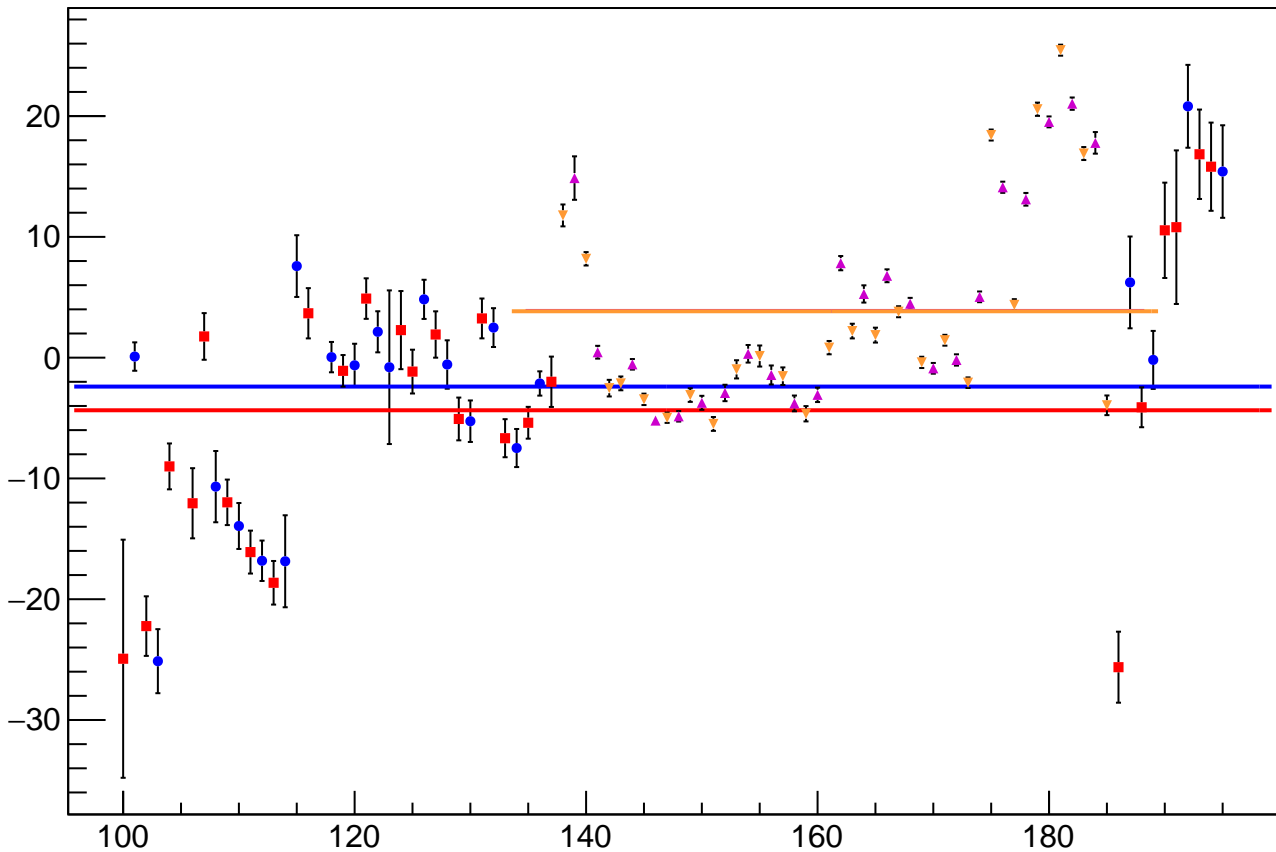
Left In:  $-27.243 \pm 0.139$   $\chi^2/\text{NDF}: 11305.2/22$

+ sign  $-27.266 \pm 0.136$   $\chi^2/\text{NDF}: 15324.8/28$

All:  $-26.854 \pm 0.097$   $\chi^2/\text{NDF}: 29566.3/57$

- sign  $-26.431 \pm 0.138$   $\chi^2/\text{NDF}: 14222.9/28$

# reg\_asym\_sam\_2468\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $-2.395 \pm 0.398$   $\chi^2/\text{NDF}: 355.1/20$

Left Out:  $3.841 \pm 0.109$   $\chi^2/\text{NDF}: 6939.2/24$

Right Out:  $-4.356 \pm 0.402$   $\chi^2/\text{NDF}: 433.1/24$

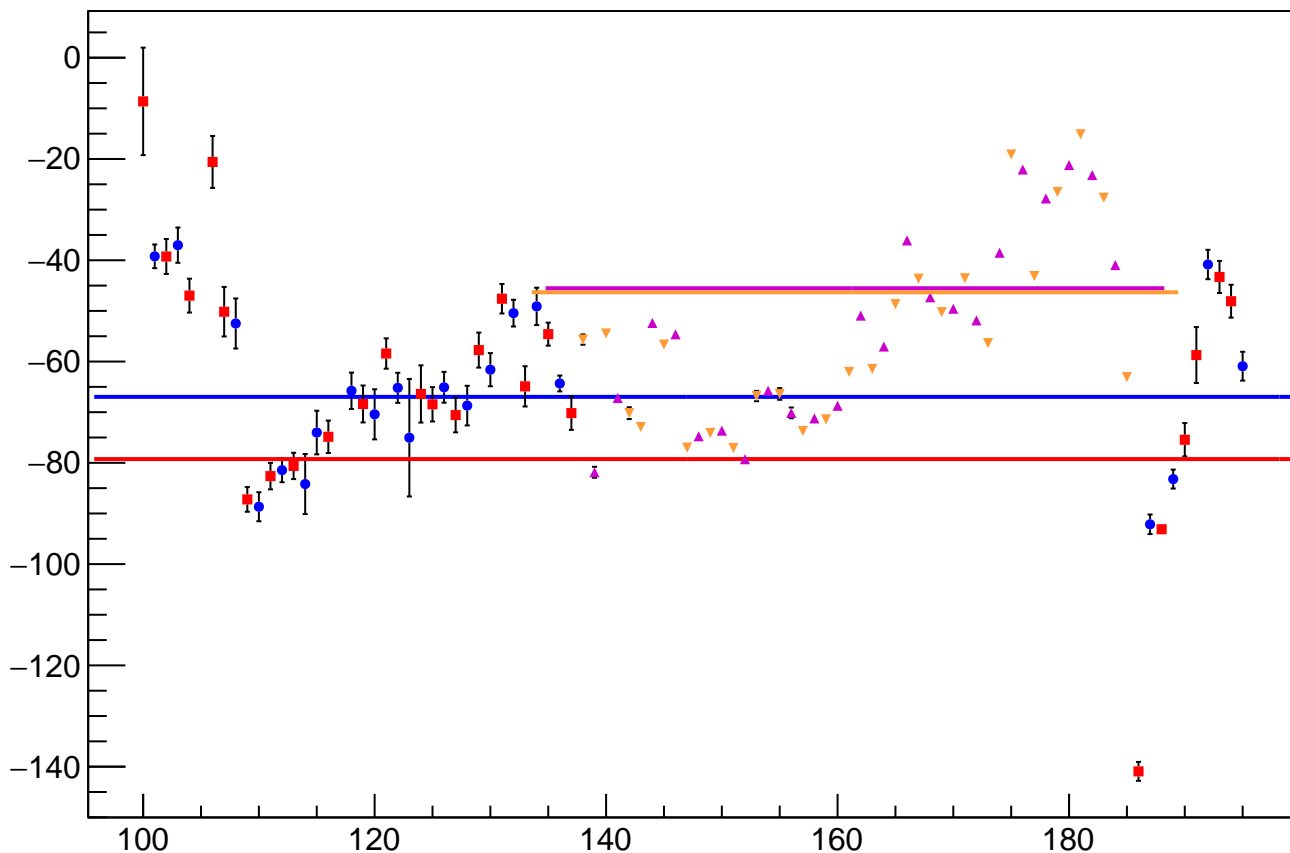
Left In:  $3.866 \pm 0.111$   $\chi^2/\text{NDF}: 5424.0/22$

+ sign  $3.405 \pm 0.105$   $\chi^2/\text{NDF}: 7522.2/45$

All:  $3.344 \pm 0.075$   $\chi^2/\text{NDF}: 13769.4/93$

- sign  $3.280 \pm 0.107$   $\chi^2/\text{NDF}: 6246.5/47$

# reg\_asym\_sam\_2468\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $-66.973 \pm 0.619$   $\chi^2/\text{NDF}: 729.6/20$

Left Out:  $-46.318 \pm 0.138$   $\chi^2/\text{NDF}: 20134.6/24$

Right Out:  $-79.256 \pm 0.534$   $\chi^2/\text{NDF}: 2378.5/24$

Left In:  $-45.522 \pm 0.140$   $\chi^2/\text{NDF}: 17525.4/22$

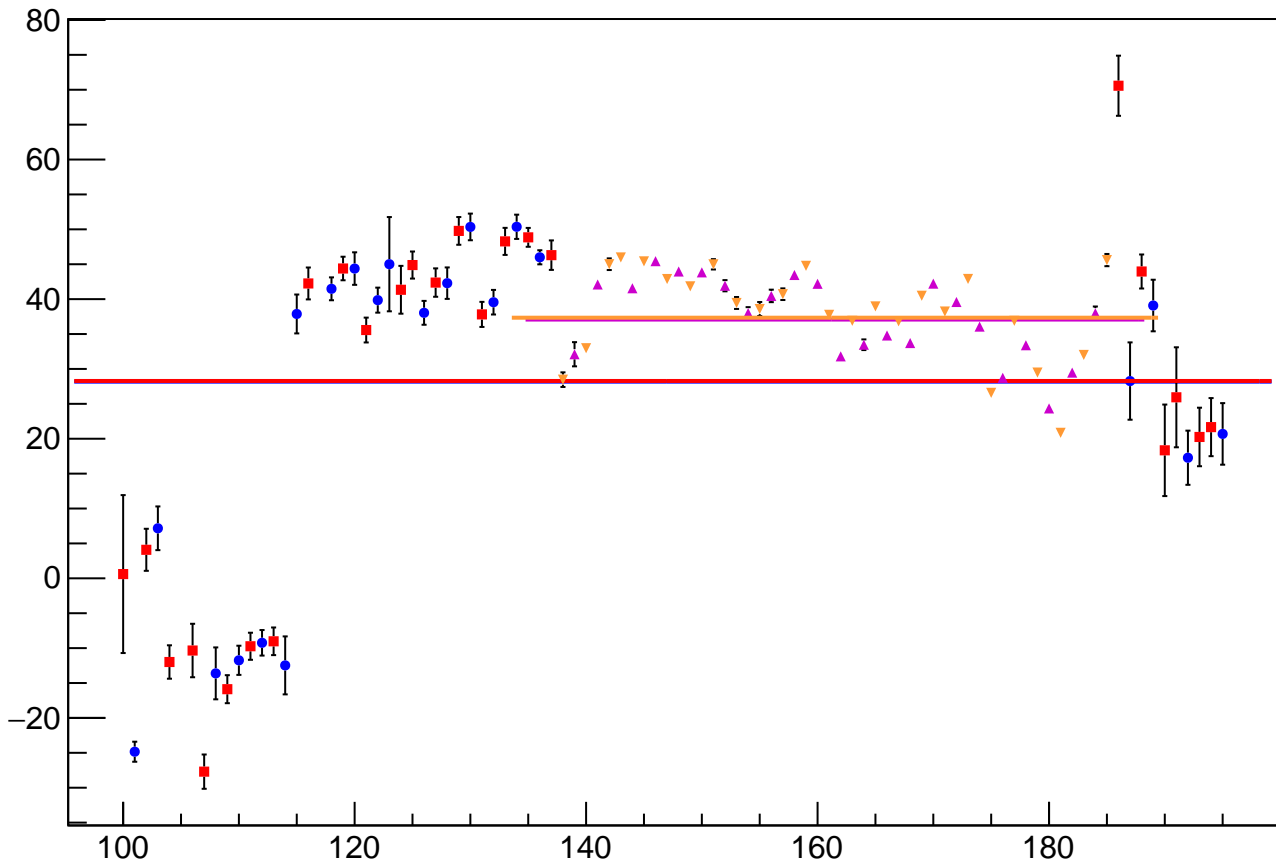
+ sign  $-47.296 \pm 0.135$   $\chi^2/\text{NDF}: 21926.2/45$

All:  $-47.490 \pm 0.095$   $\chi^2/\text{NDF}: 45573.3/93$

- sign  $-47.686 \pm 0.135$   $\chi^2/\text{NDF}: 23643.0/47$



# reg\_asym\_sam\_2468\_avg\_diff\_bpm4eY\_slope vs Slug



Right In: 28.182 $\pm$ 0.450  $\chi^2$ /NDF: 3330.4/20

Left Out: 37.340 $\pm$ 0.123  $\chi^2$ /NDF:3149.1/24

Right Out: 28.275 $\pm$ 0.460  $\chi^2$ /NDF: 3181.2/24

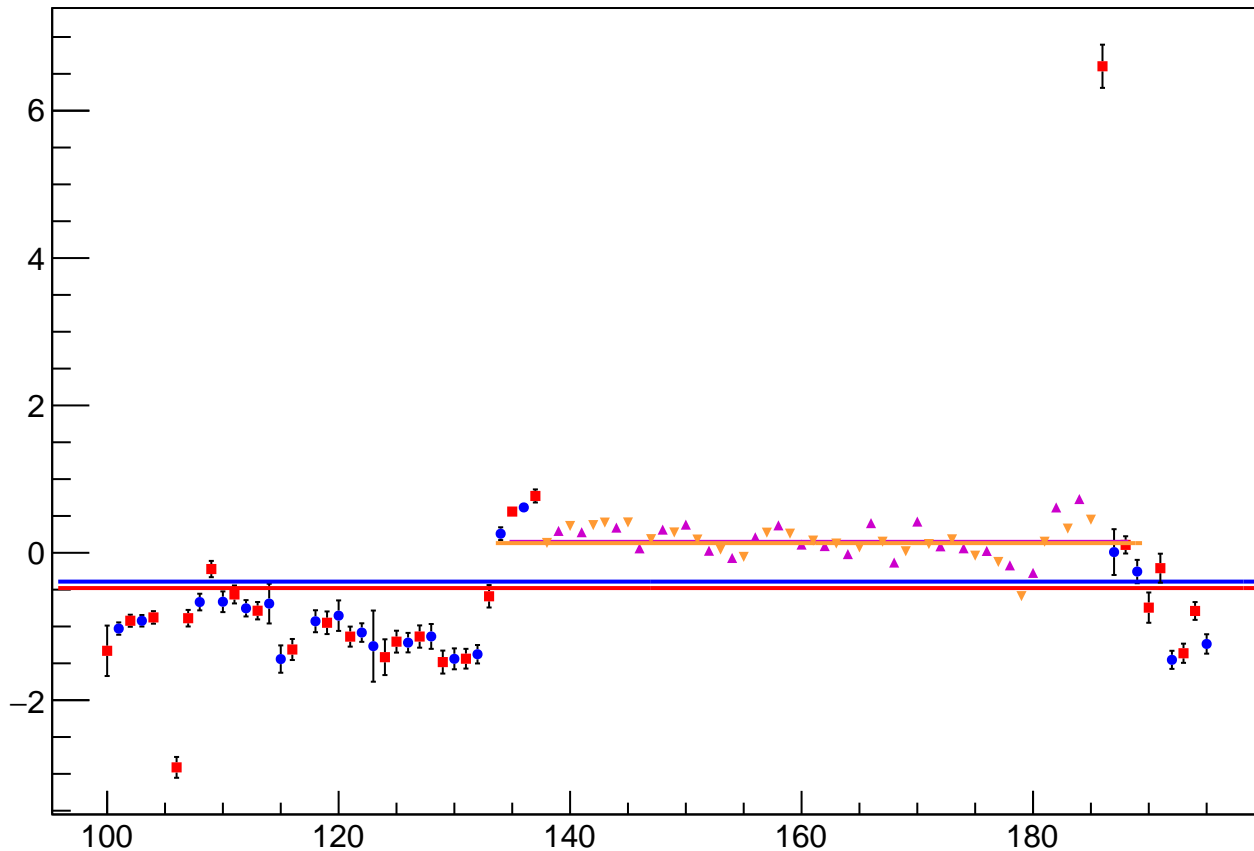
Left In: 37.074 $\pm$ 0.125  $\chi^2$ /NDF:2397.3/22

+ sign 36.705 $\pm$ 0.119  $\chi^2$ /NDF: 6864.5/45

All: 36.588 $\pm$ 0.085  $\chi^2$ /NDF: 12785.7/93

- sign 36.467 $\pm$ 0.121  $\chi^2$ /NDF: 5919.3/47

# reg\_asym\_sam\_2468\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.391 \pm 0.024$   $\chi^2/\text{NDF}: 1136.1/20$

Left Out:  $0.131 \pm 0.006$   $\chi^2/\text{NDF}: 1426.3/24$

Right Out:  $-0.479 \pm 0.024$   $\chi^2/\text{NDF}: 1825.7/24$

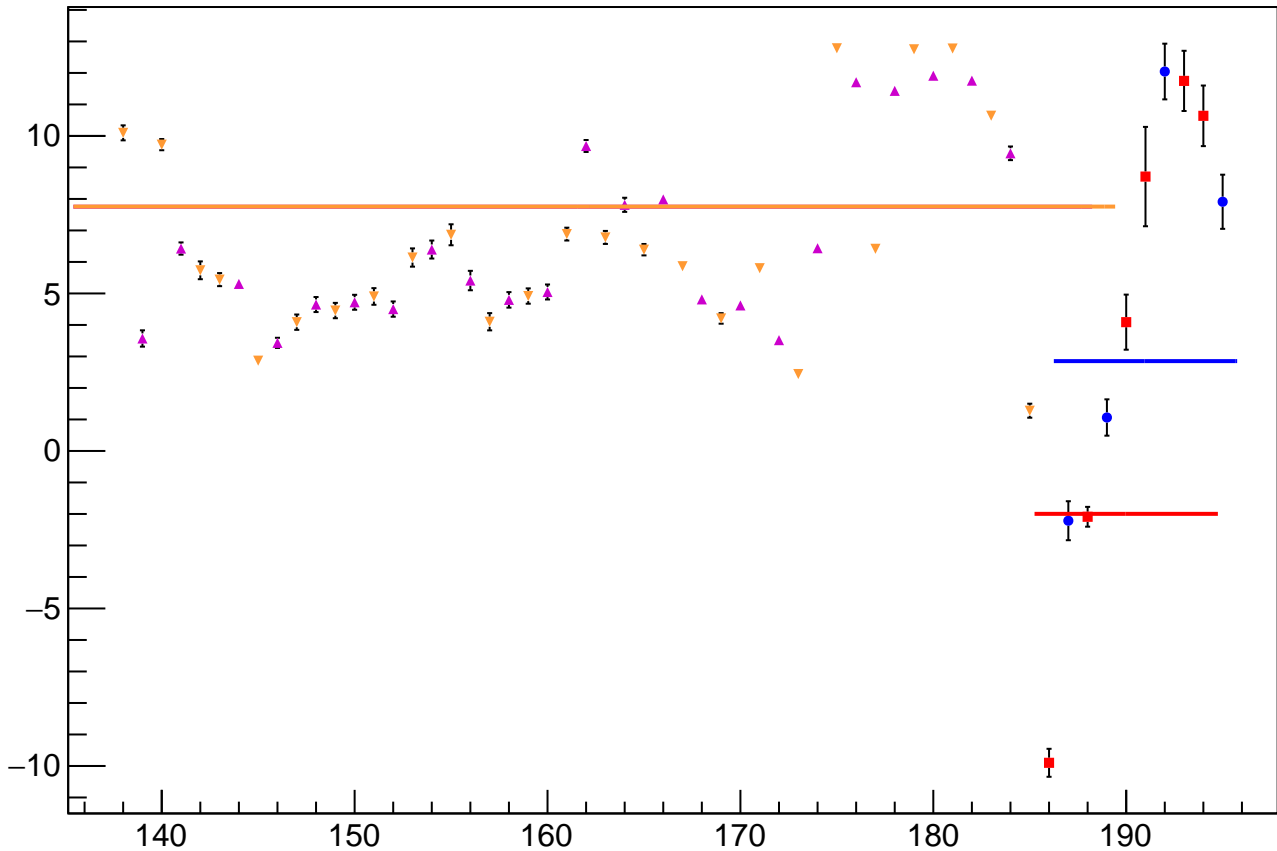
Left In:  $0.149 \pm 0.006$   $\chi^2/\text{NDF}: 1803.6/22$

+ sign  $0.103 \pm 0.005$   $\chi^2/\text{NDF}: 3021.1/45$

All:  $0.109 \pm 0.004$   $\chi^2/\text{NDF}: 7309.3/93$

- sign  $0.114 \pm 0.006$   $\chi^2/\text{NDF}: 4286.3/47$

# reg\_asym\_sam\_1357\_2468\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $2.852 \pm 0.348$   $\chi^2/\text{NDF}: 219.4/3$

Left Out:  $7.757 \pm 0.034$   $\chi^2/\text{NDF}: 11728.6/24$

Right Out:  $-1.996 \pm 0.229$   $\chi^2/\text{NDF}: 790.6/5$

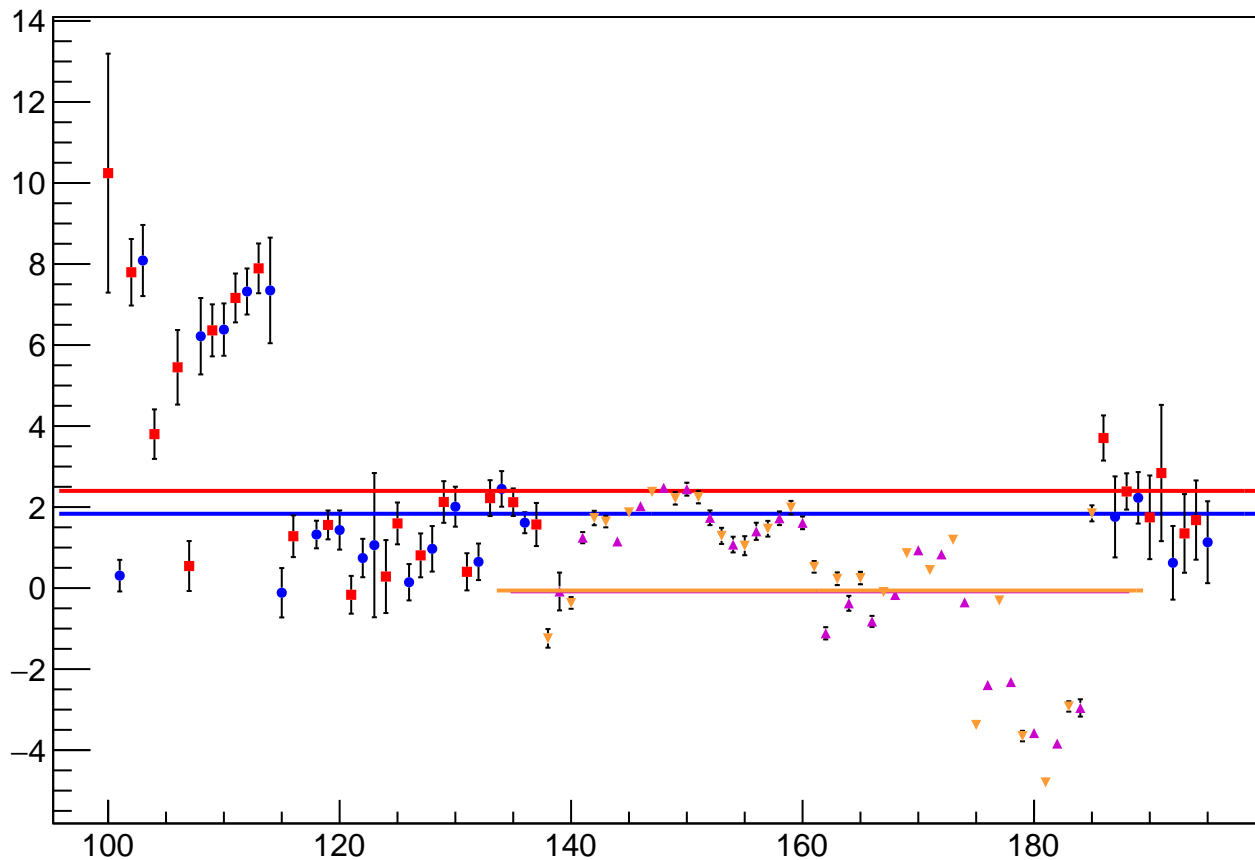
Left In:  $7.753 \pm 0.035$   $\chi^2/\text{NDF}: 8345.2/22$

+ sign  $7.710 \pm 0.034$   $\chi^2/\text{NDF}: 12144.5/28$

All:  $7.621 \pm 0.024$   $\chi^2/\text{NDF}: 23063.9/57$

- sign  $7.530 \pm 0.035$   $\chi^2/\text{NDF}: 10905.6/28$

# reg\_asym\_sam\_1357\_2468\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $1.835 \pm 0.113$   $\chi^2/\text{NDF}: 295.9/20$

Left Out:  $-0.059 \pm 0.028$   $\chi^2/\text{NDF}: 6068.8/24$

Right Out:  $2.399 \pm 0.113$   $\chi^2/\text{NDF}: 343.3/24$

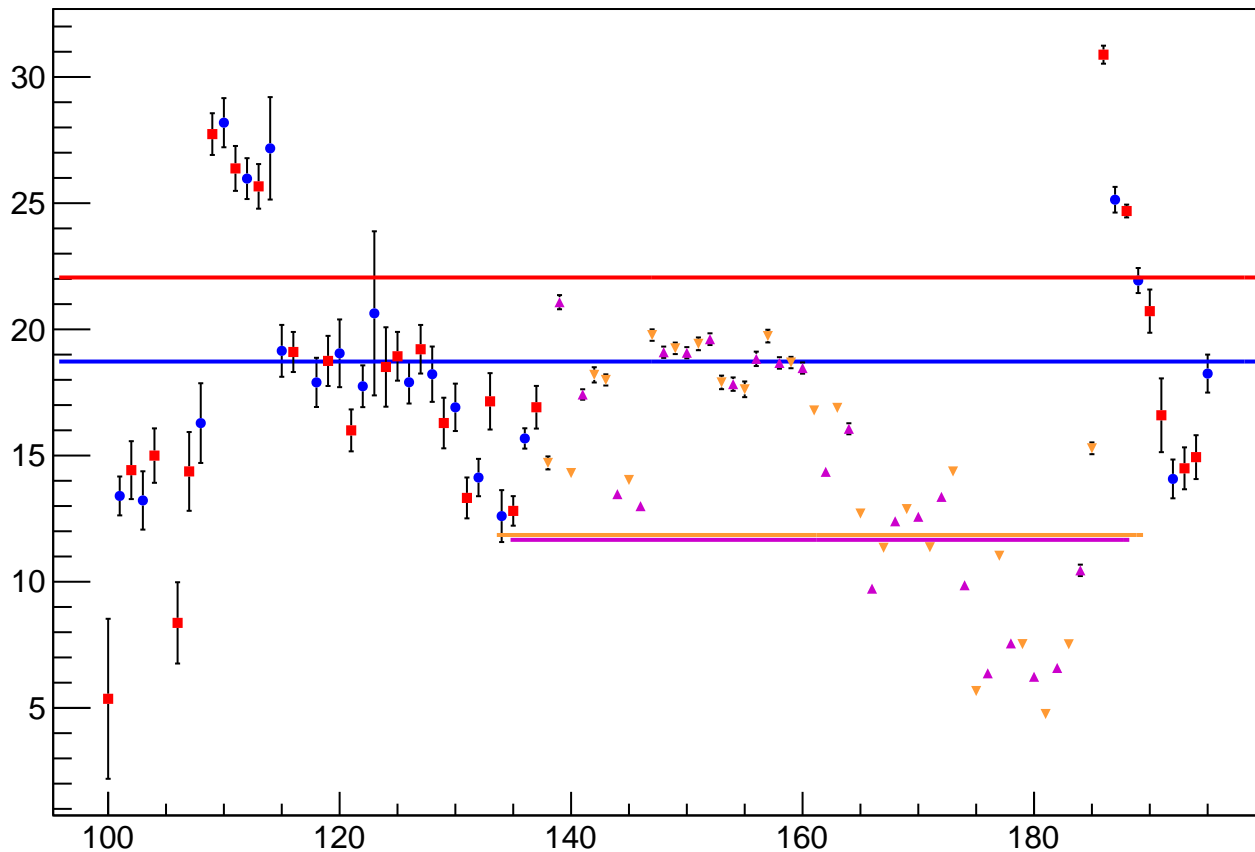
Left In:  $-0.080 \pm 0.028$   $\chi^2/\text{NDF}: 4979.5/22$

+ sign  $0.048 \pm 0.027$   $\chi^2/\text{NDF}: 6629.8/45$

All:  $0.057 \pm 0.019$   $\chi^2/\text{NDF}: 12404.2/93$

- sign  $0.065 \pm 0.027$   $\chi^2/\text{NDF}: 5774.2/47$

# reg\_asym\_sam\_1357\_2468\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $18.725 \pm 0.173$   $\chi^2/\text{NDF}: 641.3/20$

Left Out:  $11.853 \pm 0.035$   $\chi^2/\text{NDF}: 19149.4/24$

Right Out:  $22.056 \pm 0.143$   $\chi^2/\text{NDF}: 1742.2/24$

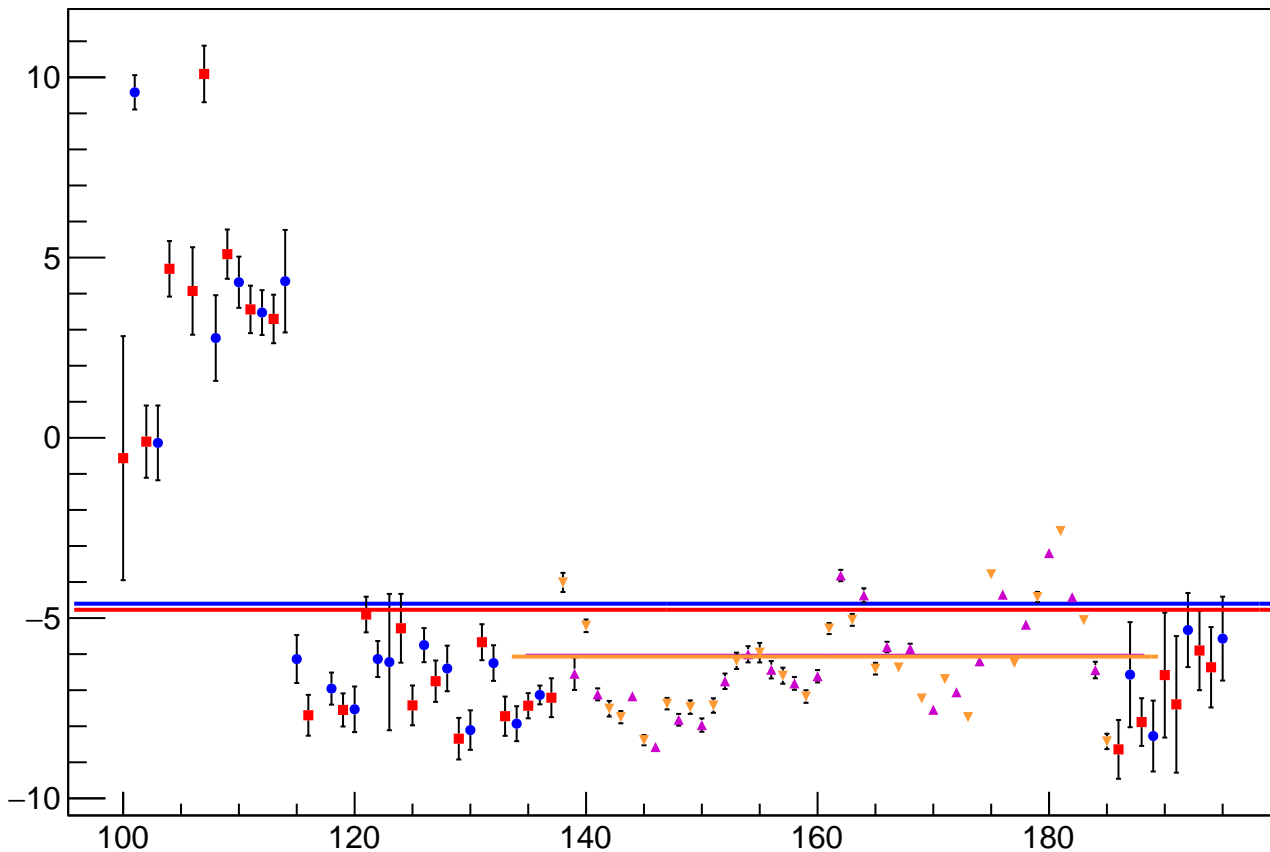
Left In:  $11.660 \pm 0.035$   $\chi^2/\text{NDF}: 16710.2/22$

+ sign  $12.119 \pm 0.034$   $\chi^2/\text{NDF}: 21309.6/45$

All:  $12.185 \pm 0.024$   $\chi^2/\text{NDF}: 44736.9/93$

- sign  $12.252 \pm 0.034$   $\chi^2/\text{NDF}: 23419.6/47$

# reg\_asym\_sam\_1357\_2468\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-4.601 \pm 0.127$   $\chi^2/\text{NDF}: 1600.4/20$

Left Out:  $-6.068 \pm 0.031$   $\chi^2/\text{NDF}: 2671.7/24$

Right Out:  $-4.769 \pm 0.130$   $\chi^2/\text{NDF}: 1396.5/24$

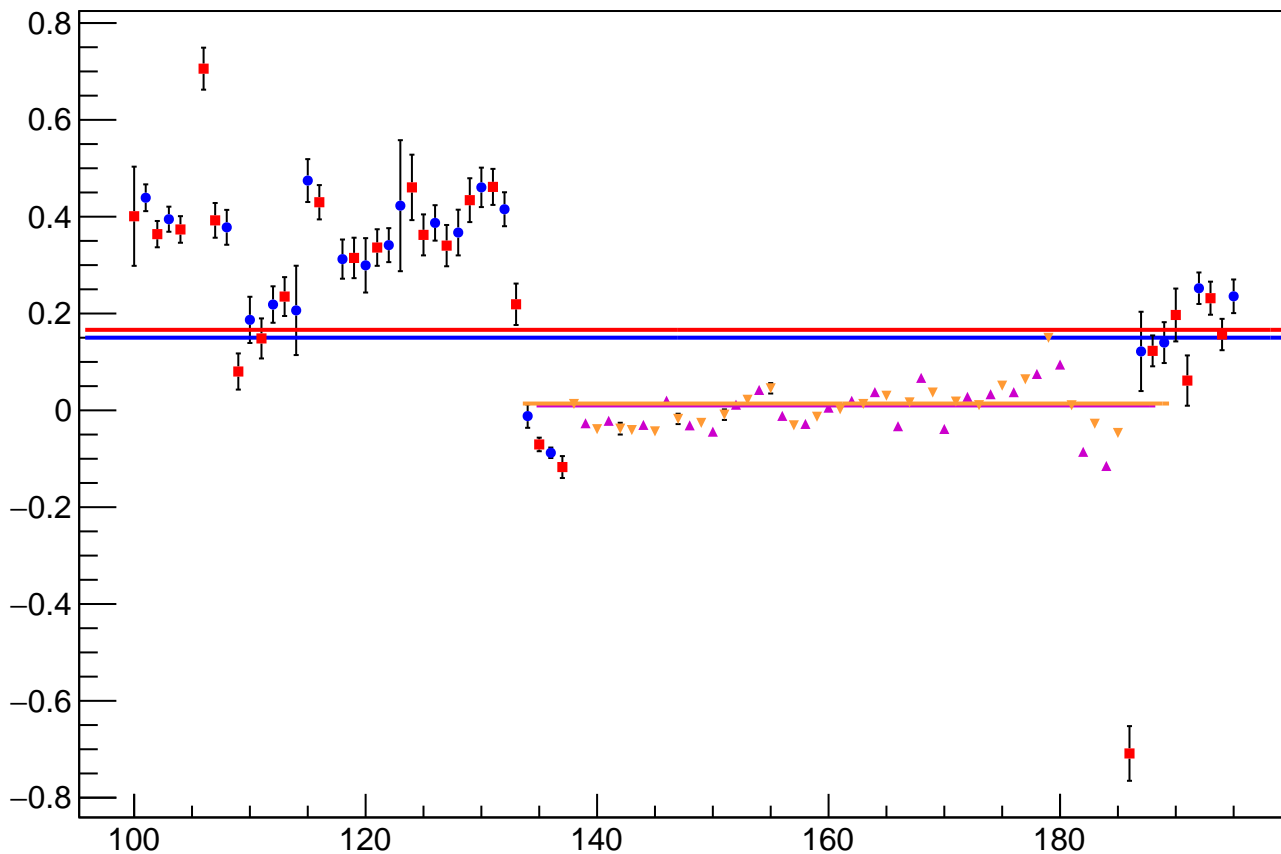
Left In:  $-6.045 \pm 0.032$   $\chi^2/\text{NDF}: 2293.7/22$

+ sign  $-5.986 \pm 0.030$   $\chi^2/\text{NDF}: 4397.8/45$

All:  $-5.980 \pm 0.022$   $\chi^2/\text{NDF}: 8178.9/93$

- sign  $-5.973 \pm 0.031$   $\chi^2/\text{NDF}: 3781.1/47$

# reg\_asym\_sam\_1357\_2468\_dd\_diff\_bpm12X\_slope vs Slug



Right In: 0.150 $\pm$ 0.007  $\chi^2$ /NDF: 1075.0/20

Left Out: 0.014 $\pm$ 0.001  $\chi^2$ /NDF: 956.2/24

Right Out: 0.166 $\pm$ 0.007  $\chi^2$ /NDF: 1254.0/24

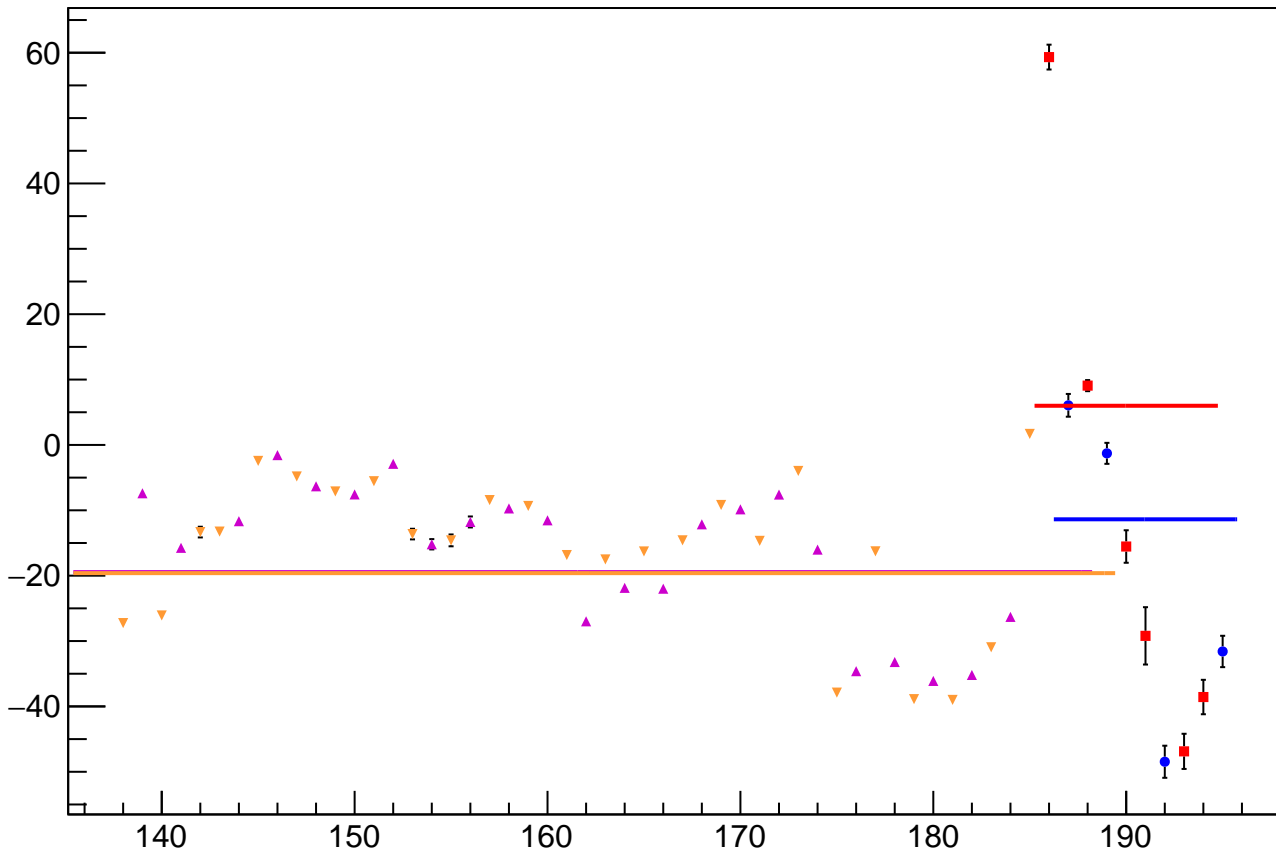
Left In: 0.010 $\pm$ 0.001  $\chi^2$ /NDF: 1216.1/22

+ sign 0.020 $\pm$ 0.001  $\chi^2$ /NDF: 2428.9/45

All: 0.019 $\pm$ 0.001  $\chi^2$ /NDF: 5414.4/93

- sign 0.017 $\pm$ 0.001  $\chi^2$ /NDF: 2983.2/47

# reg\_asym\_sam\_12345678\_avg\_diff\_bpm1X\_slope vs Slug

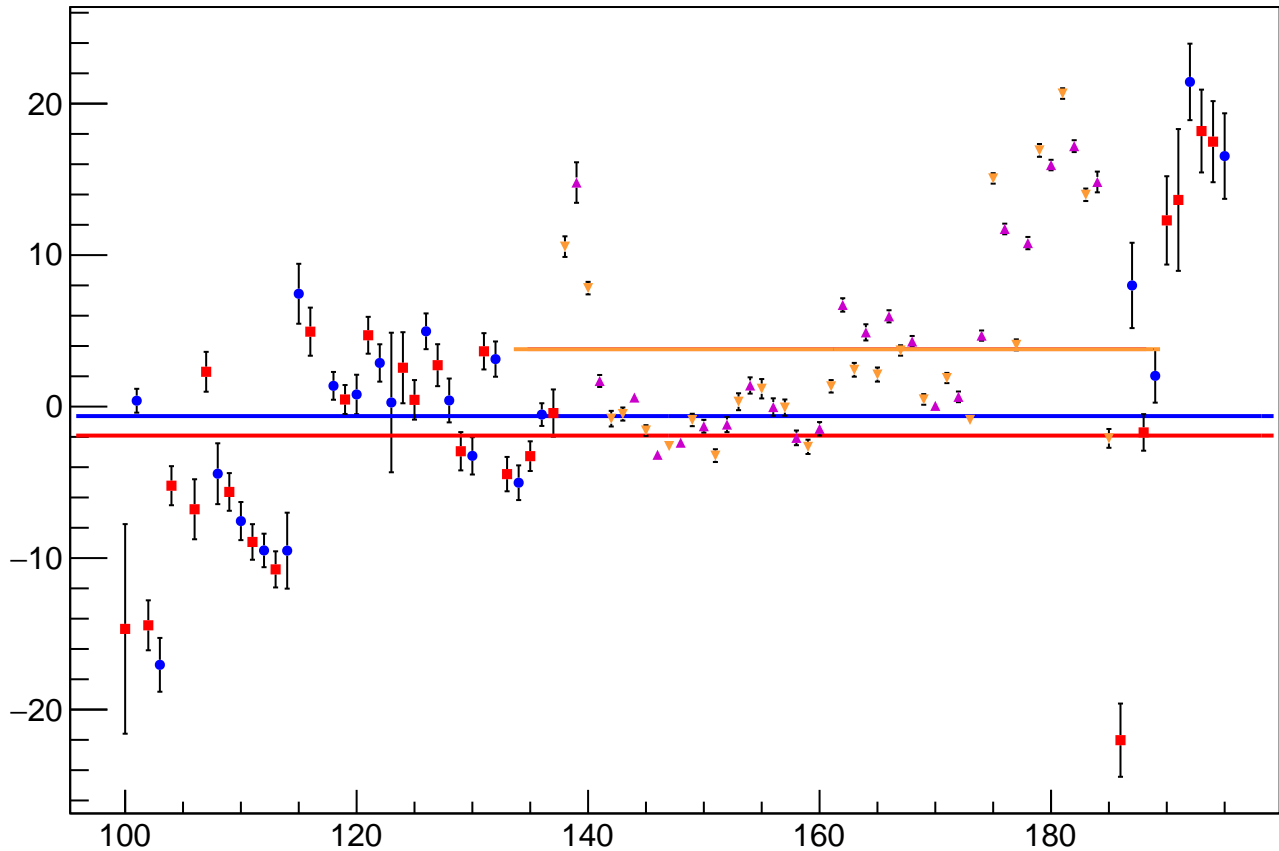


Right In:  $-11.377 \pm 0.972$   $\chi^2/\text{NDF}: 439.0/3$   
 Left Out:  $-19.612 \pm 0.103$   $\chi^2/\text{NDF}: 15761.3/24$   
 Right Out:  $5.992 \pm 0.680$   $\chi^2/\text{NDF}: 1612.9/5$   
 Left In:  $-19.450 \pm 0.105$   $\chi^2/\text{NDF}: 12283.1/22$

+ sign  $-19.520 \pm 0.103$   $\chi^2/\text{NDF}: 16271.2/28$   
 All:  $-19.193 \pm 0.073$   $\chi^2/\text{NDF}: 31555.8/57$   
 - sign  $-18.857 \pm 0.104$   $\chi^2/\text{NDF}: 15264.0/28$



# reg\_asym\_sam\_12345678\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $-0.627 \pm 0.284$   $\chi^2/\text{NDF}: 406.4/20$

Left Out:  $3.788 \pm 0.082$   $\chi^2/\text{NDF}: 7150.5/24$

Right Out:  $-1.914 \pm 0.286$   $\chi^2/\text{NDF}: 496.9/24$

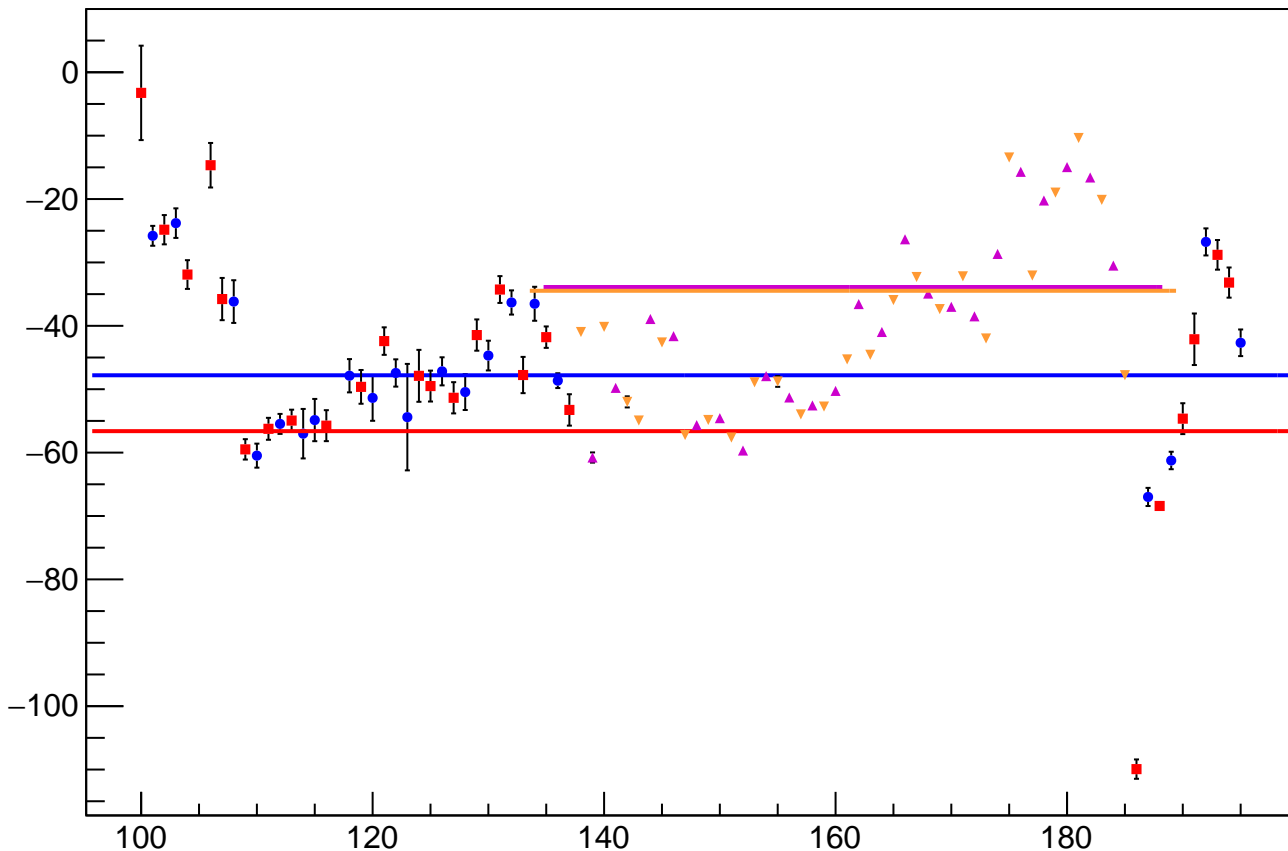
Left In:  $3.799 \pm 0.084$   $\chi^2/\text{NDF}: 5517.0/22$

+ sign  $3.448 \pm 0.079$   $\chi^2/\text{NDF}: 7779.8/45$

All:  $3.400 \pm 0.056$   $\chi^2/\text{NDF}: 14161.4/93$

- sign  $3.350 \pm 0.080$   $\chi^2/\text{NDF}: 6380.9/47$

# reg\_asym\_sam\_12345678\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $-47.801 \pm 0.443$   $\chi^2/\text{NDF}: 829.6/20$

Left Out:  $-34.471 \pm 0.104$   $\chi^2/\text{NDF}: 20196.3/24$

Right Out:  $-56.615 \pm 0.386$   $\chi^2/\text{NDF}: 2618.0/24$

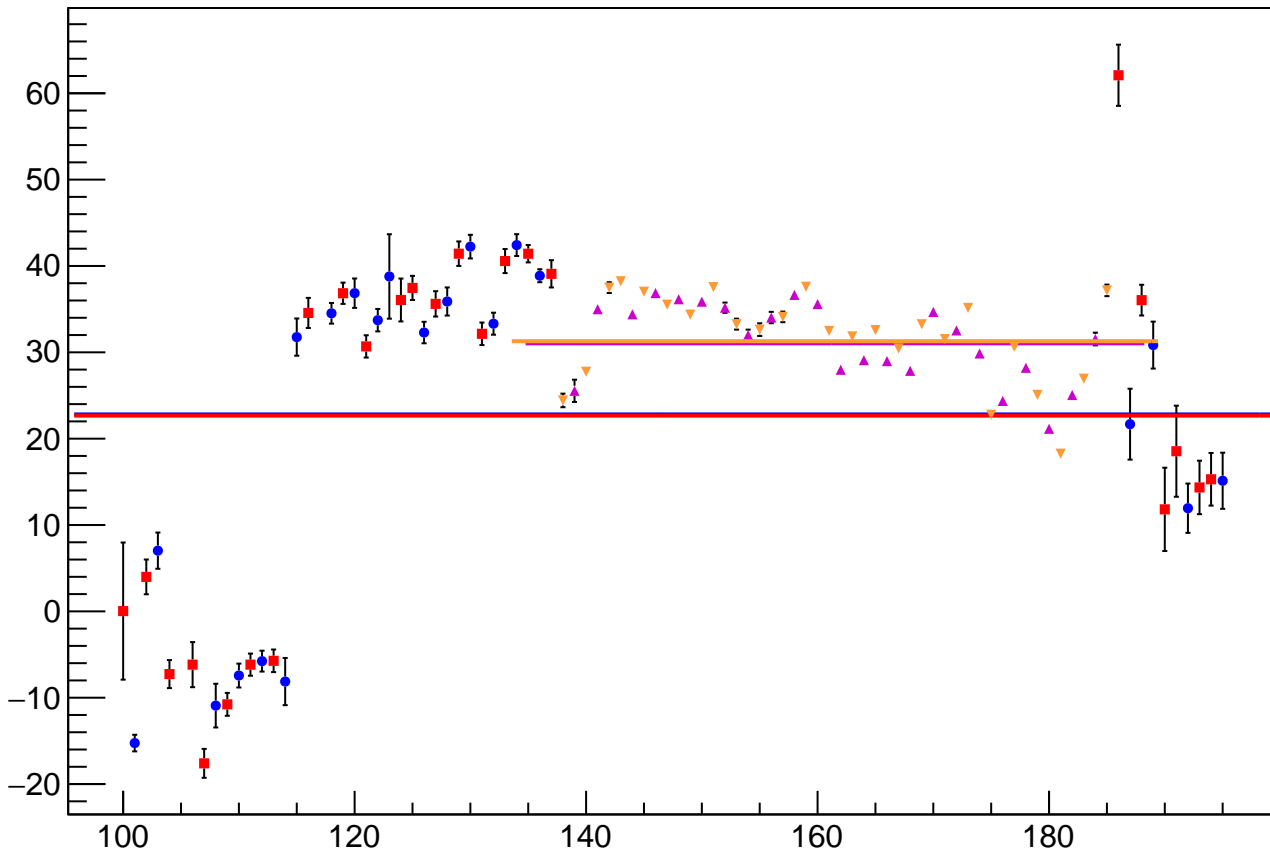
Left In:  $-33.875 \pm 0.105$   $\chi^2/\text{NDF}: 17638.7/22$

+ sign  $-35.165 \pm 0.101$   $\chi^2/\text{NDF}: 21882.6/45$

All:  $-35.308 \pm 0.072$   $\chi^2/\text{NDF}: 45377.2/93$

- sign  $-35.451 \pm 0.102$   $\chi^2/\text{NDF}: 23490.6/47$

# reg\_asym\_sam\_12345678\_avg\_diff\_bpm4eY\_slope vs Slug



Right In: 22.805 $\pm$ 0.322  $\chi^2$ /NDF: 4346.2/20

Left Out: 31.286 $\pm$ 0.092  $\chi^2$ /NDF:3345.7/24

Right Out: 22.668 $\pm$ 0.328  $\chi^2$ /NDF: 4231.9/24

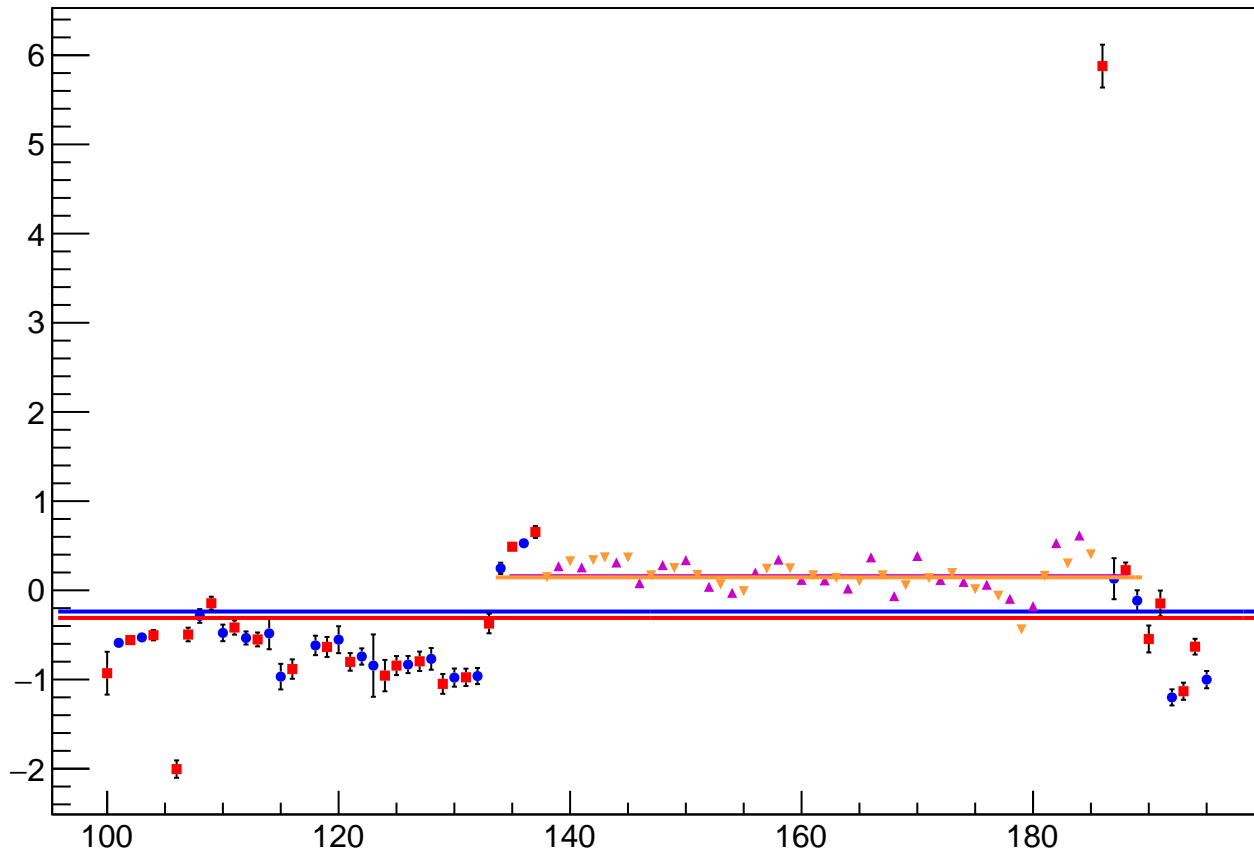
Left In: 31.039 $\pm$ 0.094  $\chi^2$ /NDF:2480.0/22

+ sign 30.640 $\pm$ 0.089  $\chi^2$ /NDF: 8334.5/45

All: 30.522 $\pm$ 0.063  $\chi^2$ /NDF: 15652.5/93

- sign 30.401 $\pm$ 0.090  $\chi^2$ /NDF: 7314.4/47

# reg\_asym\_sam\_12345678\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.238 \pm 0.017$   $\chi^2/\text{NDF}: 1184.9/20$

Left Out:  $0.145 \pm 0.004$   $\chi^2/\text{NDF}: 1579.6/24$

Right Out:  $-0.310 \pm 0.017$   $\chi^2/\text{NDF}: 1967.6/24$

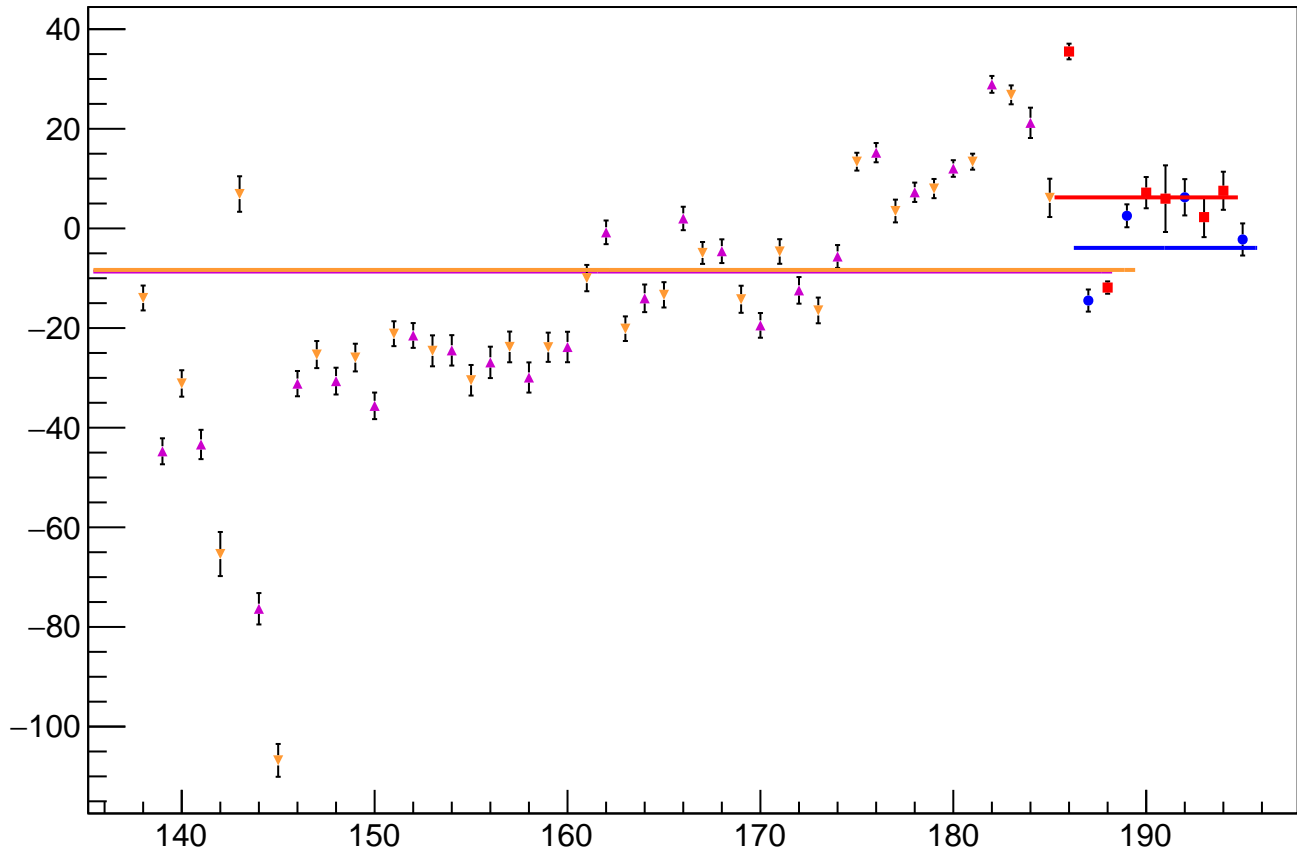
Left In:  $0.159 \pm 0.004$   $\chi^2/\text{NDF}: 2009.8/22$

+ sign  $0.123 \pm 0.004$   $\chi^2/\text{NDF}: 3245.9/45$

All:  $0.127 \pm 0.003$   $\chi^2/\text{NDF}: 7945.5/93$

- sign  $0.130 \pm 0.004$   $\chi^2/\text{NDF}: 4698.0/47$

# reg\_asym\_atl1\_diff\_bpm1X\_slope vs Slug



Right In:  $-3.908 \pm 1.332$   $\chi^2/\text{NDF}: 38.6/3$

Left Out:  $-8.332 \pm 0.500$   $\chi^2/\text{NDF}: 2226.2/24$

Right Out:  $6.230 \pm 0.873$   $\chi^2/\text{NDF}: 562.1/5$

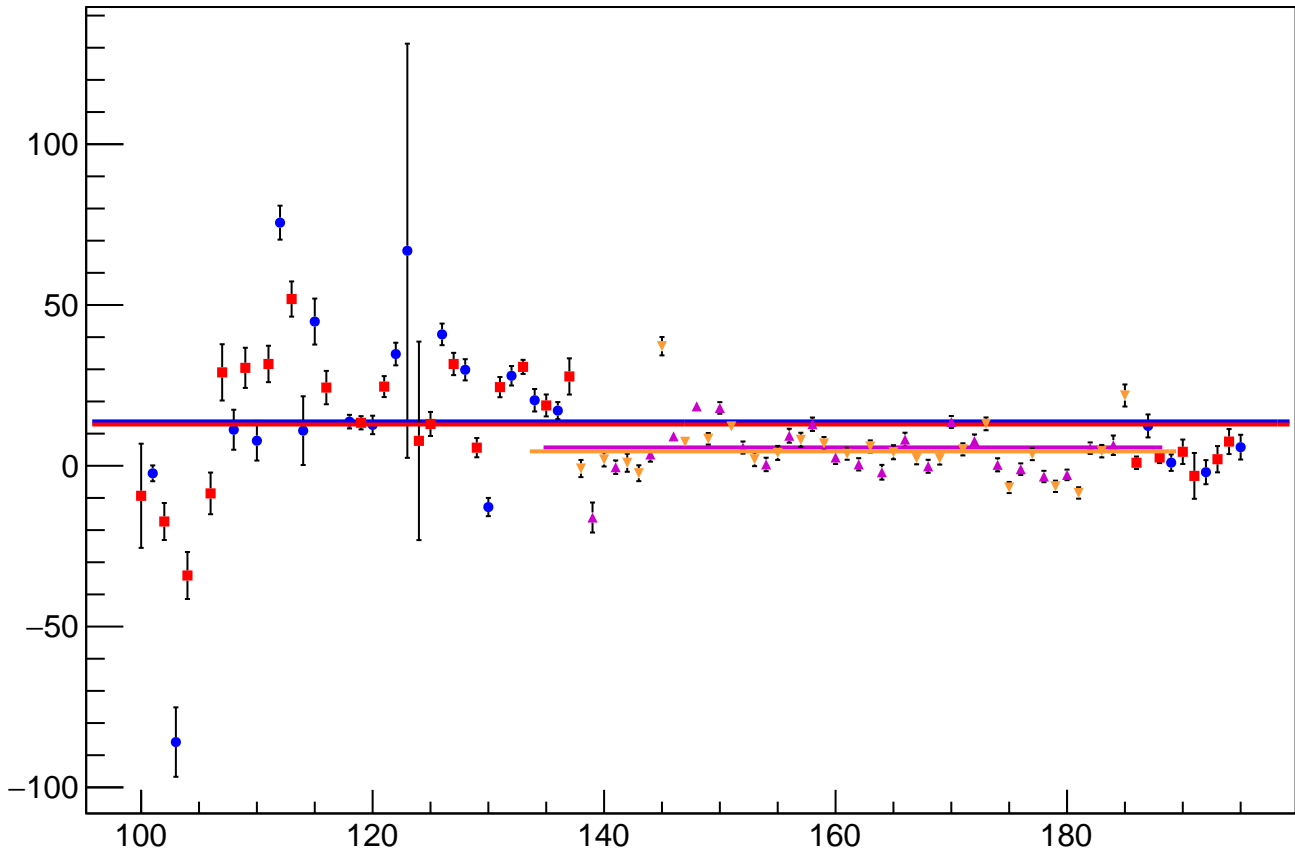
Left In:  $-8.652 \pm 0.507$   $\chi^2/\text{NDF}: 2223.8/22$

+ sign  $-7.787 \pm 0.468$   $\chi^2/\text{NDF}: 2274.4/28$

All:  $-6.250 \pm 0.320$   $\chi^2/\text{NDF}: 5297.8/57$

- sign  $-4.898 \pm 0.439$   $\chi^2/\text{NDF}: 3003.1/28$

# reg\_asym\_atl1\_diff\_bpm4aY\_slope vs Slug



Right In: 13.799 $\pm$ 0.762  $\chi^2$ /NDF: 572.6/20

Left Out: 4.484 $\pm$ 0.392  $\chi^2$ /NDF: 371.9/24

Right Out: 12.842 $\pm$ 0.698  $\chi^2$ /NDF: 390.2/24

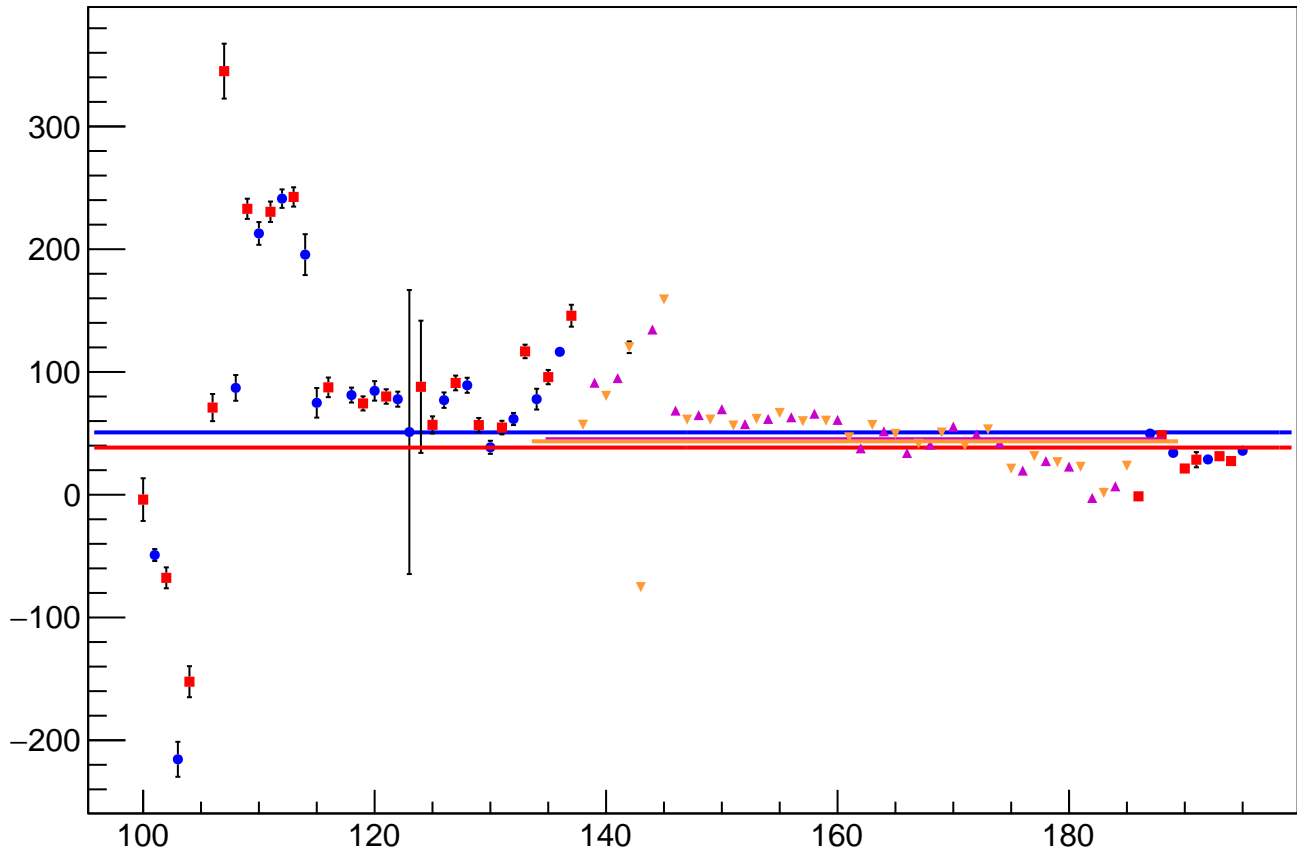
Left In: 5.705 $\pm$ 0.404  $\chi^2$ /NDF: 324.1/22

+ sign 6.434 $\pm$ 0.349  $\chi^2$ /NDF: 1062.6/45

All: 6.965 $\pm$ 0.247  $\chi^2$ /NDF: 1859.8/93

- sign 7.498 $\pm$ 0.350  $\chi^2$ /NDF: 792.6/47

# reg\_asym\_atl1\_diff\_bpm4eX\_slope vs Slug



Right In: 50.779 $\pm$ 0.928  $\chi^2$ /NDF: 2358.0/20

Left Out: 43.524 $\pm$ 0.498  $\chi^2$ /NDF: 3830.7/24

Right Out: 38.423 $\pm$ 0.663  $\chi^2$ /NDF: 4170.0/24

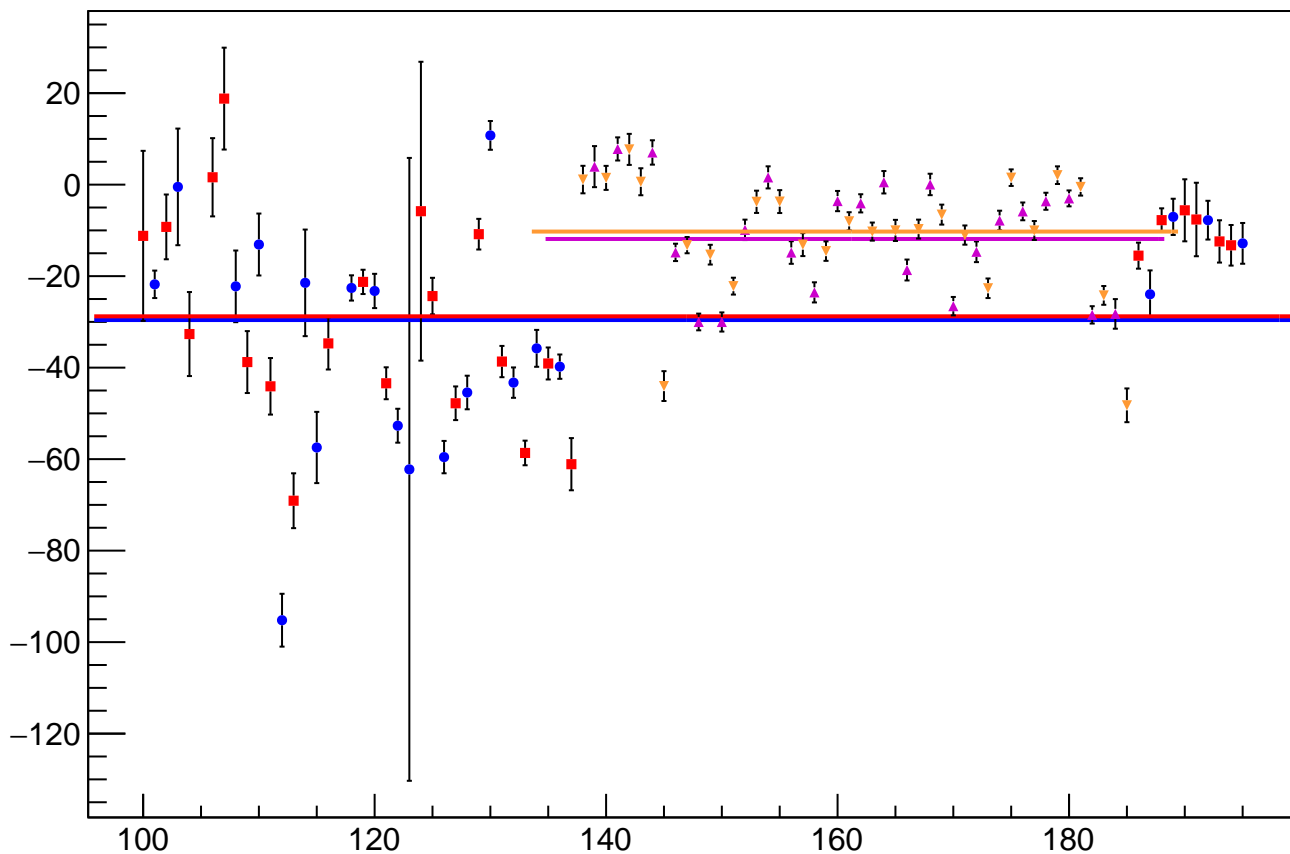
Left In: 45.211 $\pm$ 0.504  $\chi^2$ /NDF: 3048.5/22

+ sign 45.149 $\pm$ 0.439  $\chi^2$ /NDF: 6236.1/45

All: 43.827 $\pm$ 0.296  $\chi^2$ /NDF: 13537.7/93

- sign 42.722 $\pm$ 0.401  $\chi^2$ /NDF: 7284.9/47

# reg\_asym\_atl1\_diff\_bpm4eY\_slope vs Slug



Right In:  $-29.597 \pm 0.898$   $\chi^2/\text{NDF}: 573.0/20$

Left Out:  $-10.257 \pm 0.444$   $\chi^2/\text{NDF}: 552.4/24$

Right Out:  $-28.783 \pm 0.858$   $\chi^2/\text{NDF}: 480.7/24$

Left In:  $-11.877 \pm 0.456$   $\chi^2/\text{NDF}: 666.2/22$

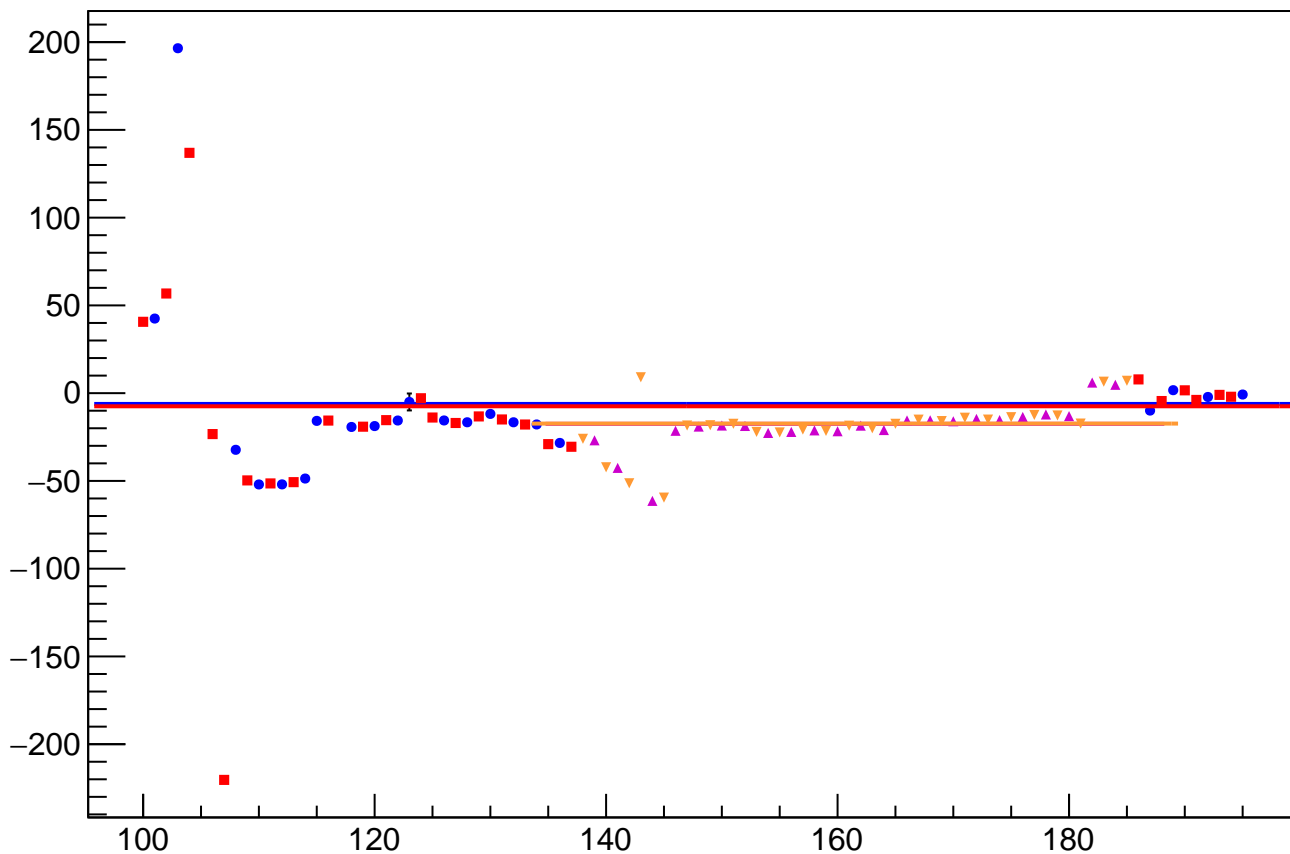
+ sign  $-14.060 \pm 0.398$   $\chi^2/\text{NDF}: 1498.1/45$

All:  $-14.821 \pm 0.283$   $\chi^2/\text{NDF}: 2955.1/93$

- sign  $-15.600 \pm 0.403$   $\chi^2/\text{NDF}: 1449.6/47$



# reg\_asym\_atl1\_diff\_bpm12X\_slope vs Slug



Right In:  $-6.139 \pm 0.048$   $\chi^2/\text{NDF}: 581826.5/20$

Left Out:  $-17.333 \pm 0.020$   $\chi^2/\text{NDF}: 325197.2/24$

Right Out:  $-7.481 \pm 0.045$   $\chi^2/\text{NDF}: 578509.9/24$

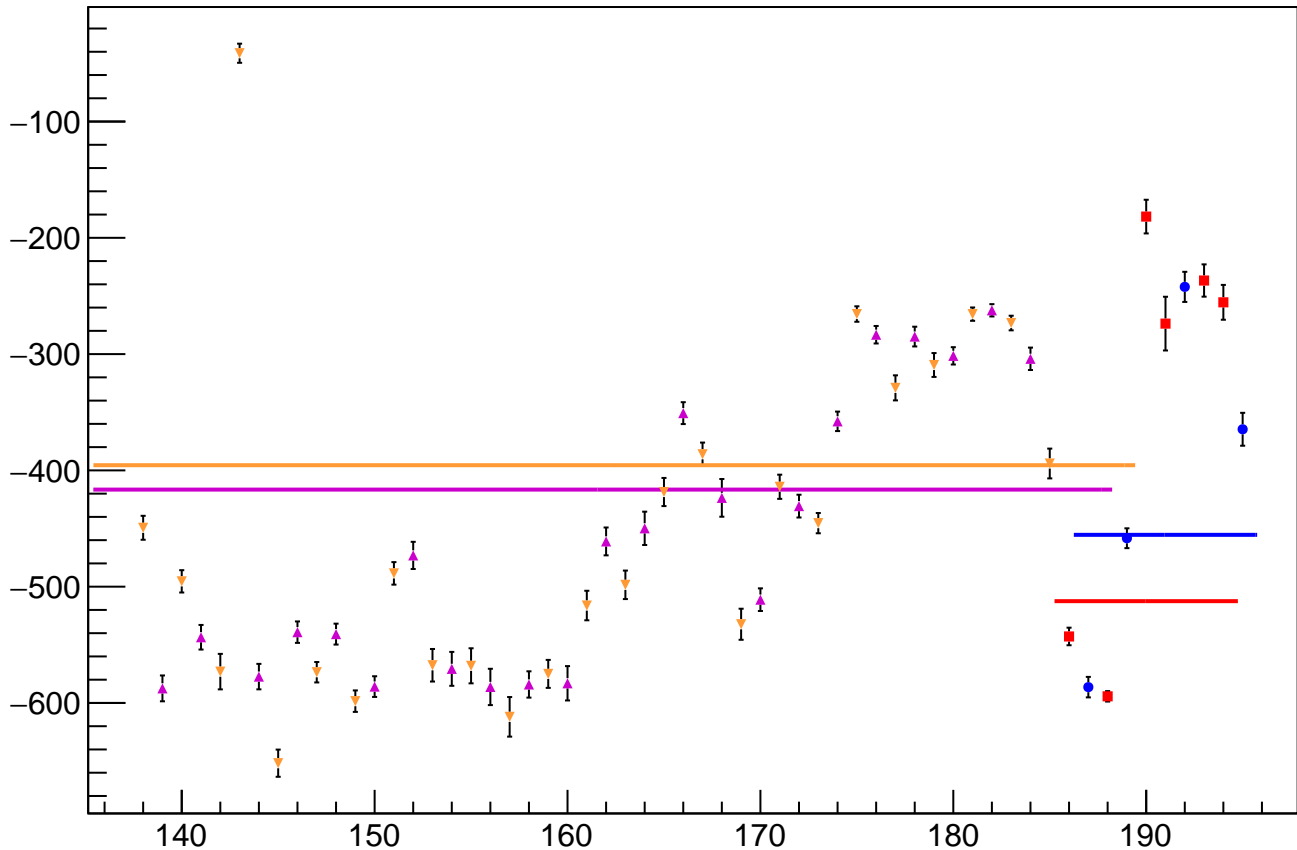
Left In:  $-17.491 \pm 0.021$   $\chi^2/\text{NDF}: 259215.8/22$

+ sign  $-15.604 \pm 0.019$   $\chi^2/\text{NDF}: 953519.3/45$

All:  $-15.674 \pm 0.013$   $\chi^2/\text{NDF}: 1832155.4/93$

- sign  $-15.745 \pm 0.019$   $\chi^2/\text{NDF}: 878607.9/47$

# reg\_asym\_atl2\_diff\_bpm1X\_slope vs Slug



Right In:  $-455.429 \pm 5.158$   $\chi^2/\text{NDF}: 533.1/3$

Left Out:  $-395.547 \pm 1.953$   $\chi^2/\text{NDF}: 5946.5/24$

Right Out:  $-512.457 \pm 3.460$   $\chi^2/\text{NDF}: 1666.8/5$

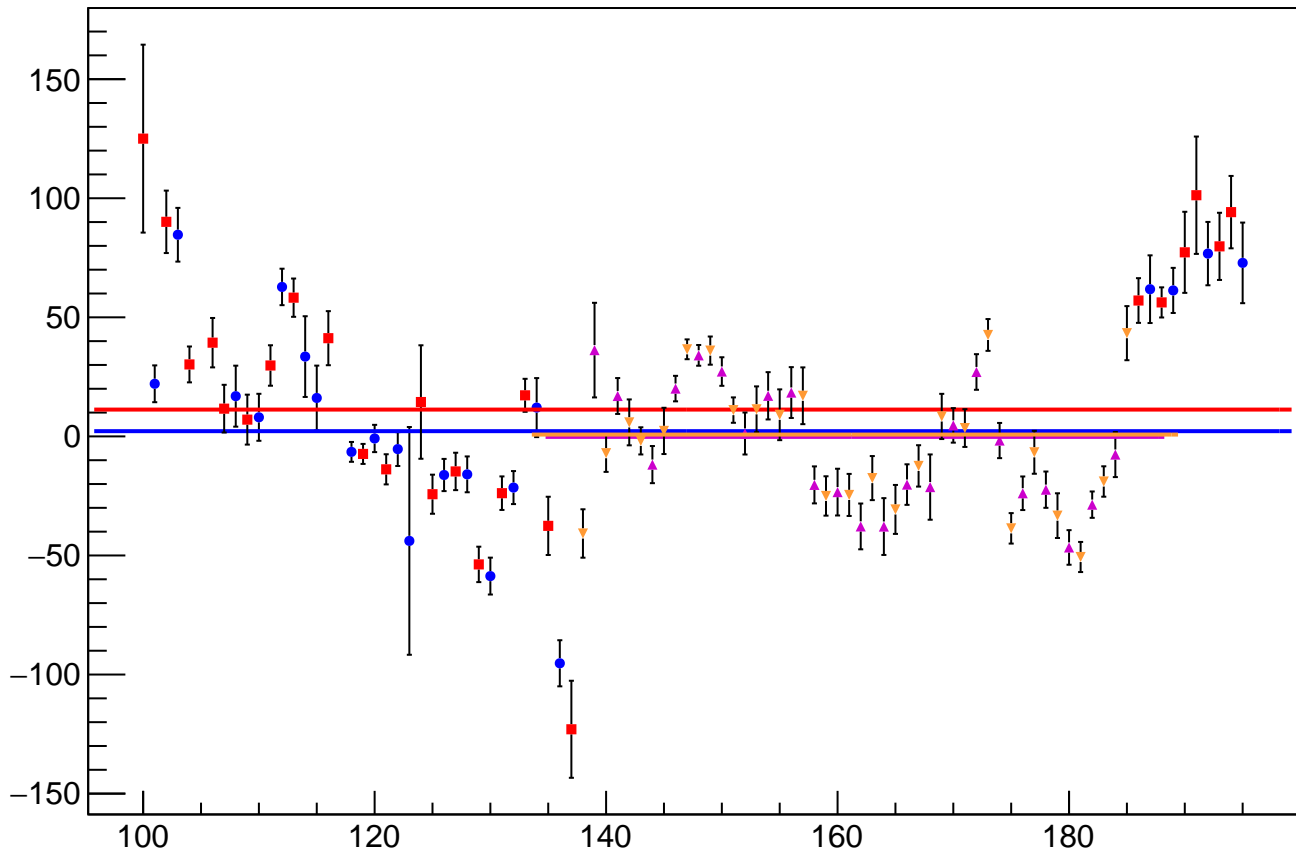
Left In:  $-416.521 \pm 2.005$   $\chi^2/\text{NDF}: 3917.0/22$

+ sign  $-403.058 \pm 1.827$   $\chi^2/\text{NDF}: 6597.5/28$

All:  $-422.819 \pm 1.258$   $\chi^2/\text{NDF}: 12979.3/57$

- sign  $-440.635 \pm 1.735$   $\chi^2/\text{NDF}: 6159.4/28$

# reg\_asym\_atl2\_diff\_bpm4aY\_slope vs Slug



Right In:  $2.198 \pm 1.842$   $\chi^2/\text{NDF}: 429.5/20$

Left Out:  $0.767 \pm 1.503$   $\chi^2/\text{NDF}: 350.1/24$

Right Out:  $11.262 \pm 1.760$   $\chi^2/\text{NDF}: 486.7/24$

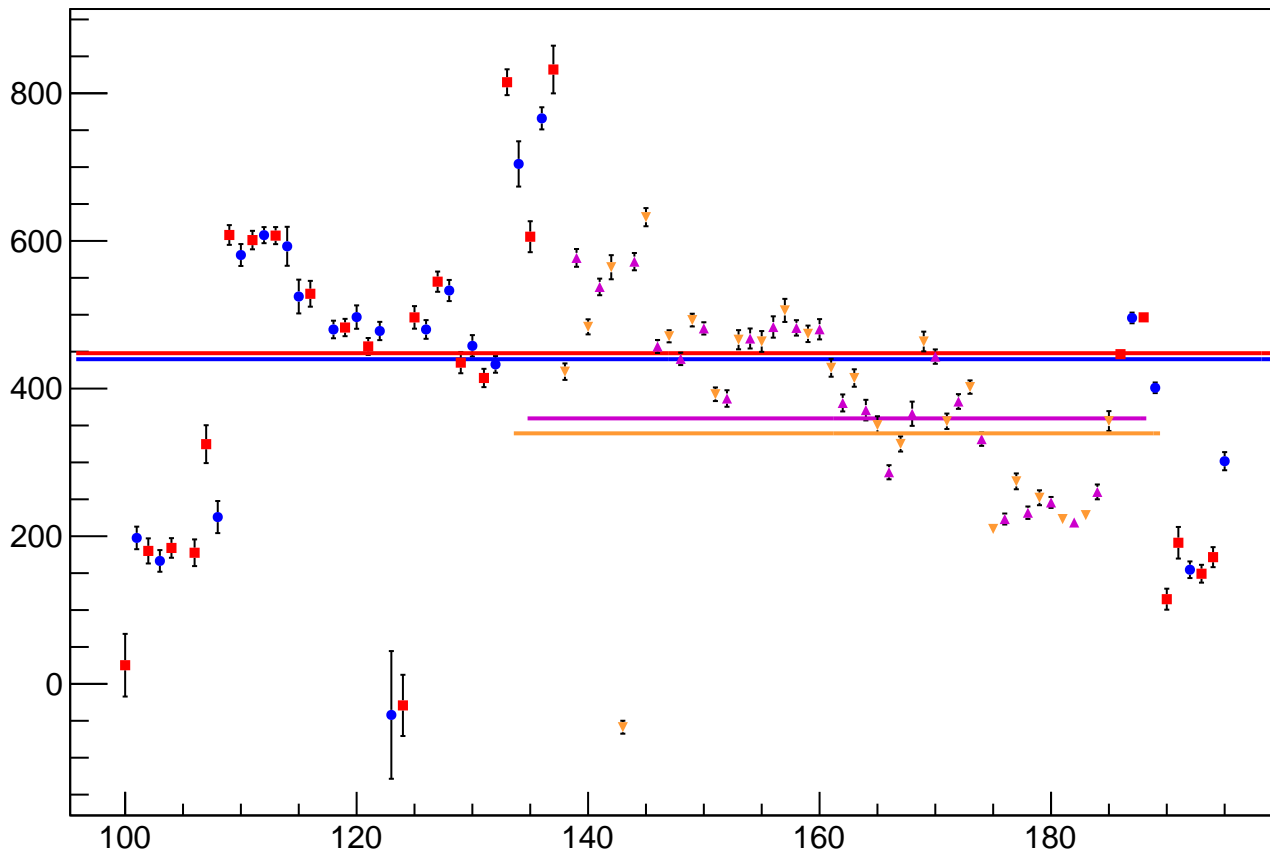
Left In:  $-0.202 \pm 1.575$   $\chi^2/\text{NDF}: 260.8/22$

+ sign  $1.339 \pm 1.164$   $\chi^2/\text{NDF}: 779.9/45$

All:  $3.104 \pm 0.827$   $\chi^2/\text{NDF}: 1555.6/93$

- sign  $4.897 \pm 1.174$   $\chi^2/\text{NDF}: 771.1/47$

# reg\_asym\_atl2\_diff\_bpm4eX\_slope vs Slug



Right In: 439.798 $\pm$ 2.805  $\chi^2$ /NDF: 2592.6/20

Left Out: 339.355 $\pm$ 1.963  $\chi^2$ /NDF: 5502.5/24

Right Out: 447.916 $\pm$ 2.217  $\chi^2$ /NDF: 4239.7/24

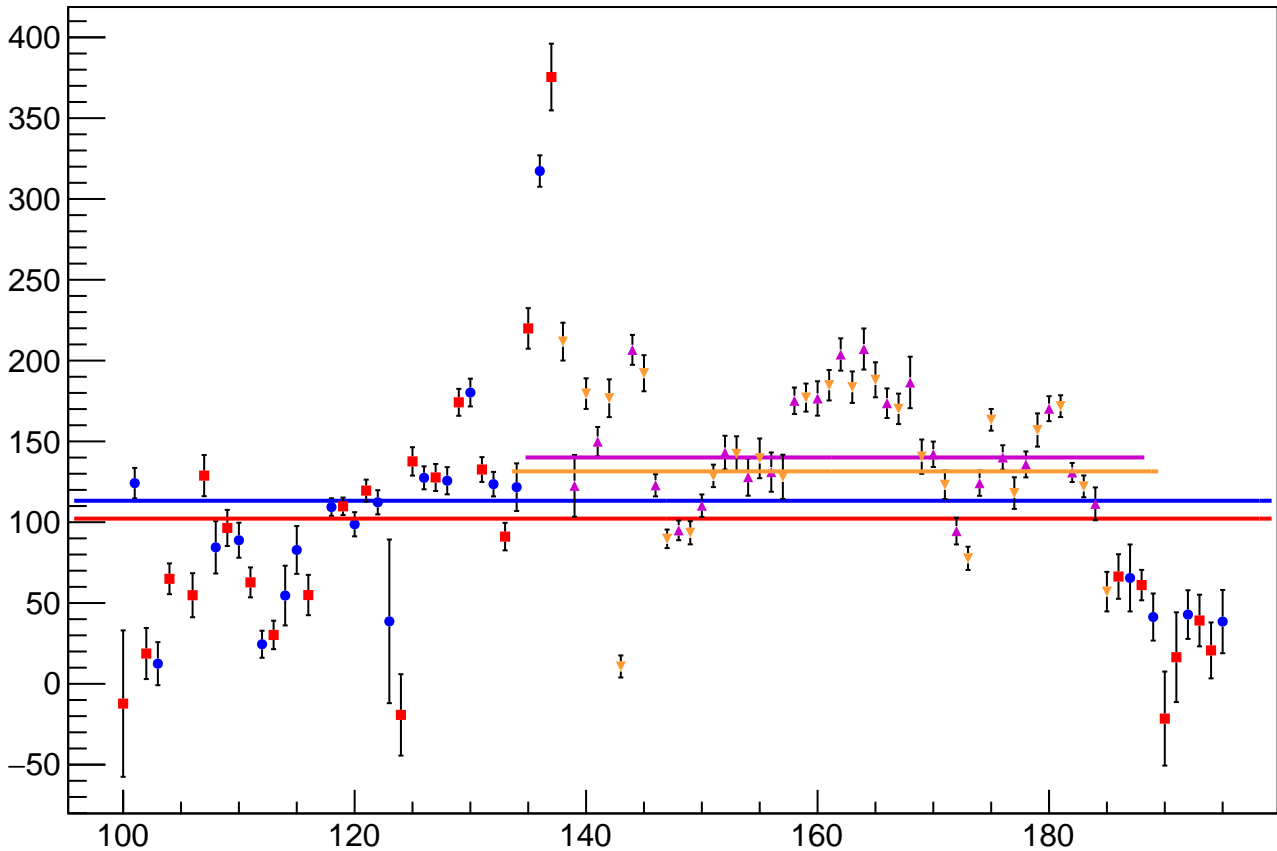
Left In: 359.609 $\pm$ 2.003  $\chi^2$ /NDF: 3398.5/22

+ sign 372.360 $\pm$ 1.608  $\chi^2$ /NDF: 8955.8/45

All: 386.880 $\pm$ 1.091  $\chi^2$ /NDF: 17618.6/93

- sign 399.281 $\pm$ 1.486  $\chi^2$ /NDF: 8511.7/47

# reg\_asym\_atl2\_diff\_bpm4eY\_slope vs Slug



Right In: 113.278 $\pm$ 2.156  $\chi^2$ /NDF: 775.8/20

Left Out: 131.464 $\pm$ 1.728  $\chi^2$ /NDF: 809.3/24

Right Out: 102.228 $\pm$ 2.080  $\chi^2$ /NDF: 669.4/24

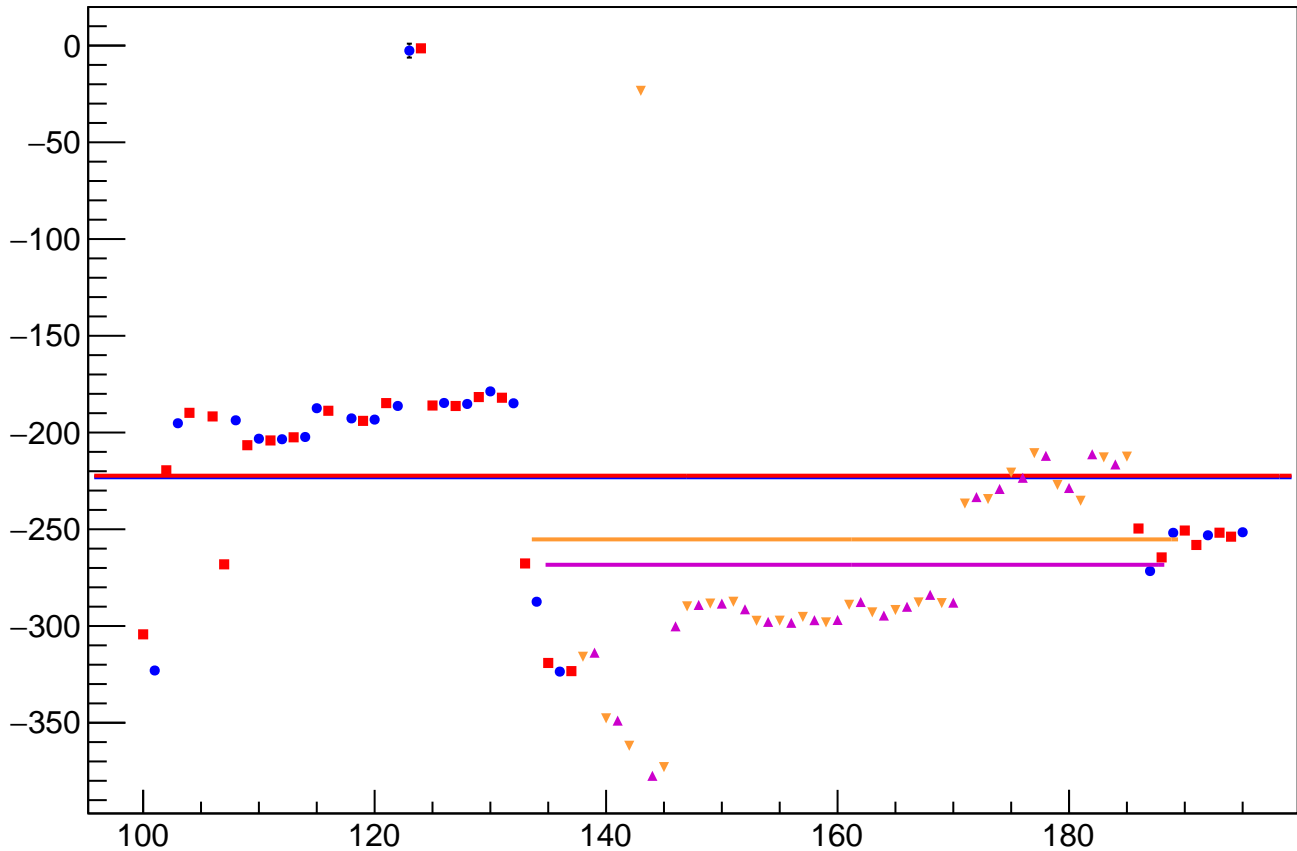
Left In: 140.069 $\pm$ 1.795  $\chi^2$ /NDF: 316.5/22

+ sign 124.354 $\pm$ 1.348  $\chi^2$ /NDF: 1628.4/45

All: 124.136 $\pm$ 0.957  $\chi^2$ /NDF: 2804.1/93

- sign 123.914 $\pm$ 1.359  $\chi^2$ /NDF: 1175.6/47

# reg\_asym\_atl2\_diff\_bpm12X\_slope vs Slug



Right In:  $-223.119 \pm 0.125$   $\chi^2/\text{NDF}: 158249.5/20$

Left Out:  $-255.232 \pm 0.082$   $\chi^2/\text{NDF}: 728016.7/24$

Right Out:  $-222.308 \pm 0.115$   $\chi^2/\text{NDF}: 140402.8/24$

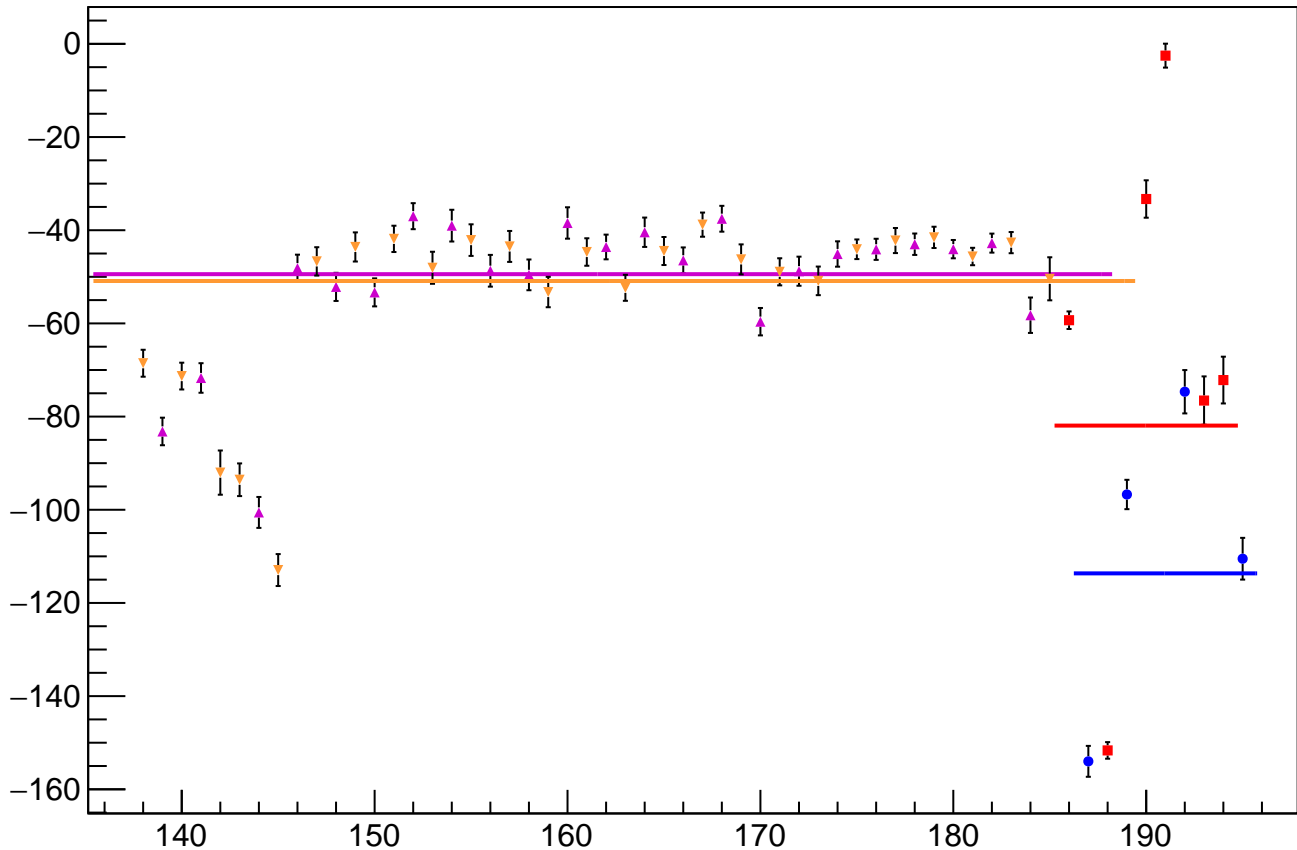
Left In:  $-268.353 \pm 0.084$   $\chi^2/\text{NDF}: 262479.3/22$

+ sign  $-245.599 \pm 0.069$   $\chi^2/\text{NDF}: 932316.4/45$

All:  $-249.074 \pm 0.048$   $\chi^2/\text{NDF}: 1444933.8/93$

- sign  $-252.457 \pm 0.068$   $\chi^2/\text{NDF}: 507549.7/47$

# reg\_asym\_atr1\_diff\_bpm1X\_slope vs Slug



Right In:  $-113.654 \pm 1.865$   $\chi^2/\text{NDF}: 247.5/3$

Left Out:  $-50.897 \pm 0.573$   $\chi^2/\text{NDF}: 761.1/24$

Right Out:  $-81.934 \pm 1.062$   $\chi^2/\text{NDF}: 2784.8/5$

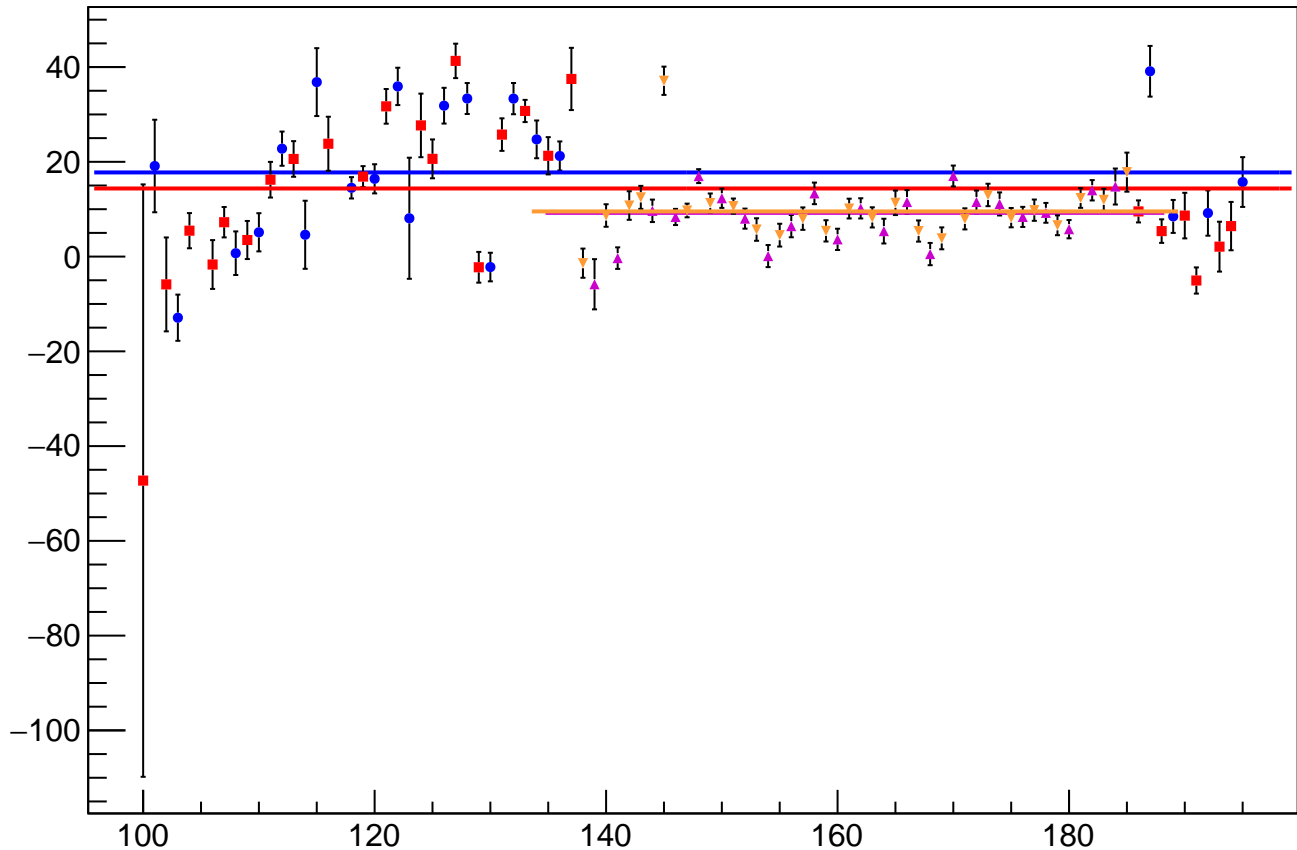
Left In:  $-49.432 \pm 0.584$   $\chi^2/\text{NDF}: 543.4/22$

+ sign  $-56.308 \pm 0.548$   $\chi^2/\text{NDF}: 2043.7/28$

All:  $-56.667 \pm 0.374$   $\chi^2/\text{NDF}: 6092.3/57$

- sign  $-56.980 \pm 0.512$   $\chi^2/\text{NDF}: 4047.8/28$

# reg\_asym\_atr1\_diff\_bpm4aY\_slope vs Slug



Right In:  $17.760 \pm 0.850$   $\chi^2/\text{NDF}: 233.2/20$

Left Out:  $9.530 \pm 0.446$   $\chi^2/\text{NDF}: 134.4/24$

Right Out:  $14.374 \pm 0.719$   $\chi^2/\text{NDF}: 301.1/24$

Left In:  $9.231 \pm 0.462$   $\chi^2/\text{NDF}: 124.0/22$

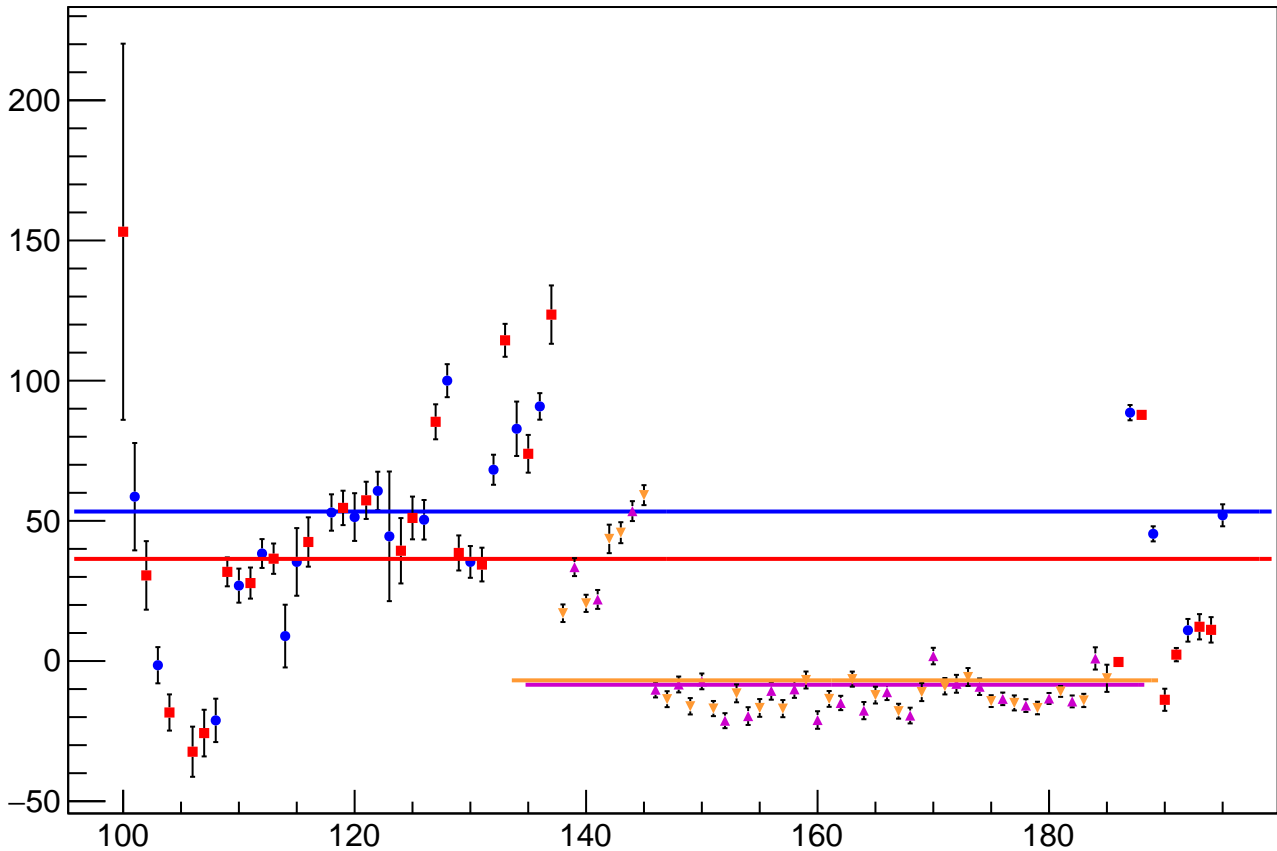
+ sign  $11.305 \pm 0.395$   $\chi^2/\text{NDF}: 441.0/45$

All:  $11.014 \pm 0.277$   $\chi^2/\text{NDF}: 903.4/93$

- sign  $10.733 \pm 0.388$   $\chi^2/\text{NDF}: 461.3/47$



# reg\_asym\_atr1\_diff\_bpm4eX\_slope vs Slug



Right In: 53.326+/-1.153  $\chi^2$ /NDF: 650.3/20

Left Out: -6.888+/-0.571  $\chi^2$ /NDF:914.2/24

Right Out: 36.431+/-0.778  $\chi^2$ /NDF: 2856.0/24

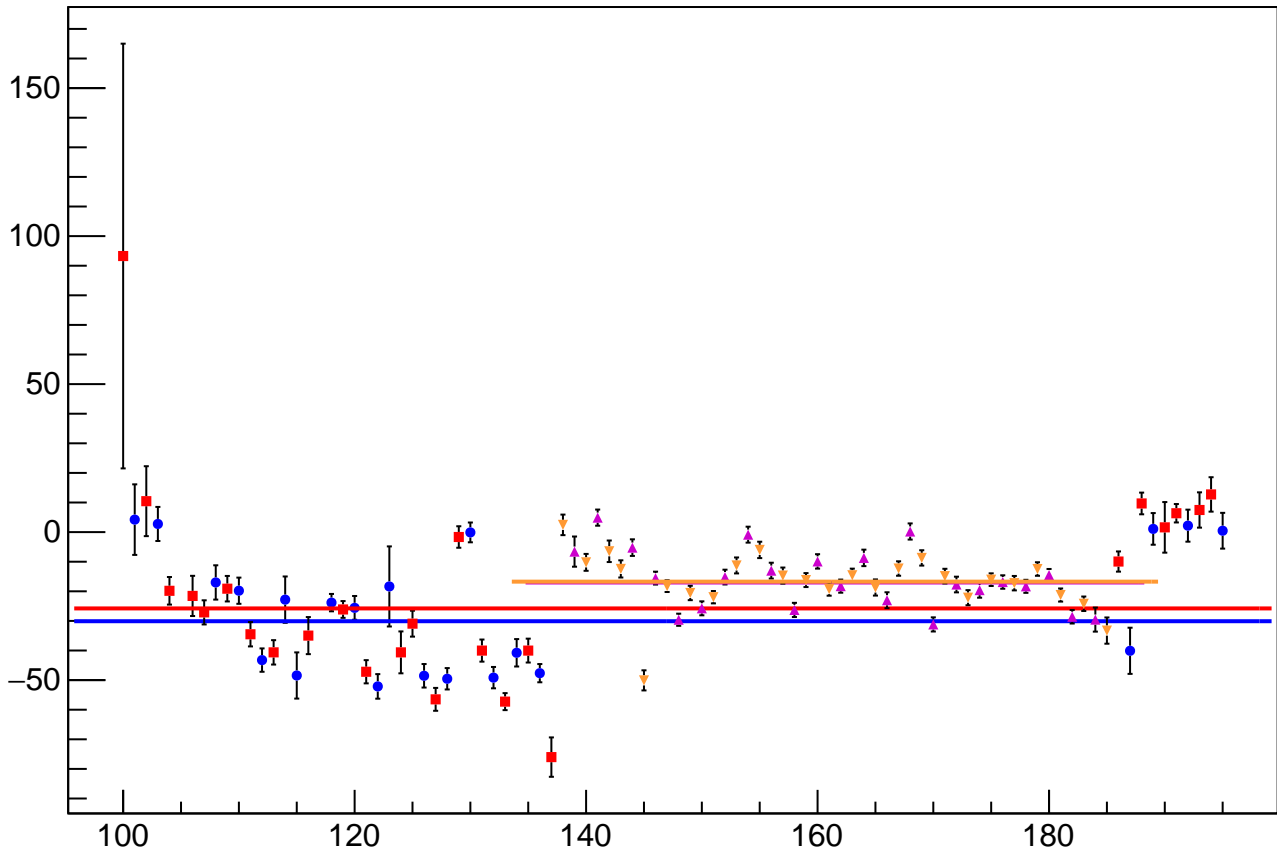
Left In: -8.451+/-0.580  $\chi^2$ /NDF:688.9/22

+ sign 4.974+/-0.512  $\chi^2$ /NDF: 3755.4/45

All: 6.393+/-0.344  $\chi^2$ /NDF: 9452.5/93

- sign 7.565+/-0.465  $\chi^2$ /NDF: 5683.0/47

# reg\_asym\_atr1\_diff\_bpm4eY\_slope vs Slug



Right In:  $-30.105 \pm 0.986$   $\chi^2/\text{NDF}: 397.2/20$

Left Out:  $-16.733 \pm 0.507$   $\chi^2/\text{NDF}: 223.3/24$

Right Out:  $-25.783 \pm 0.861$   $\chi^2/\text{NDF}: 690.8/24$

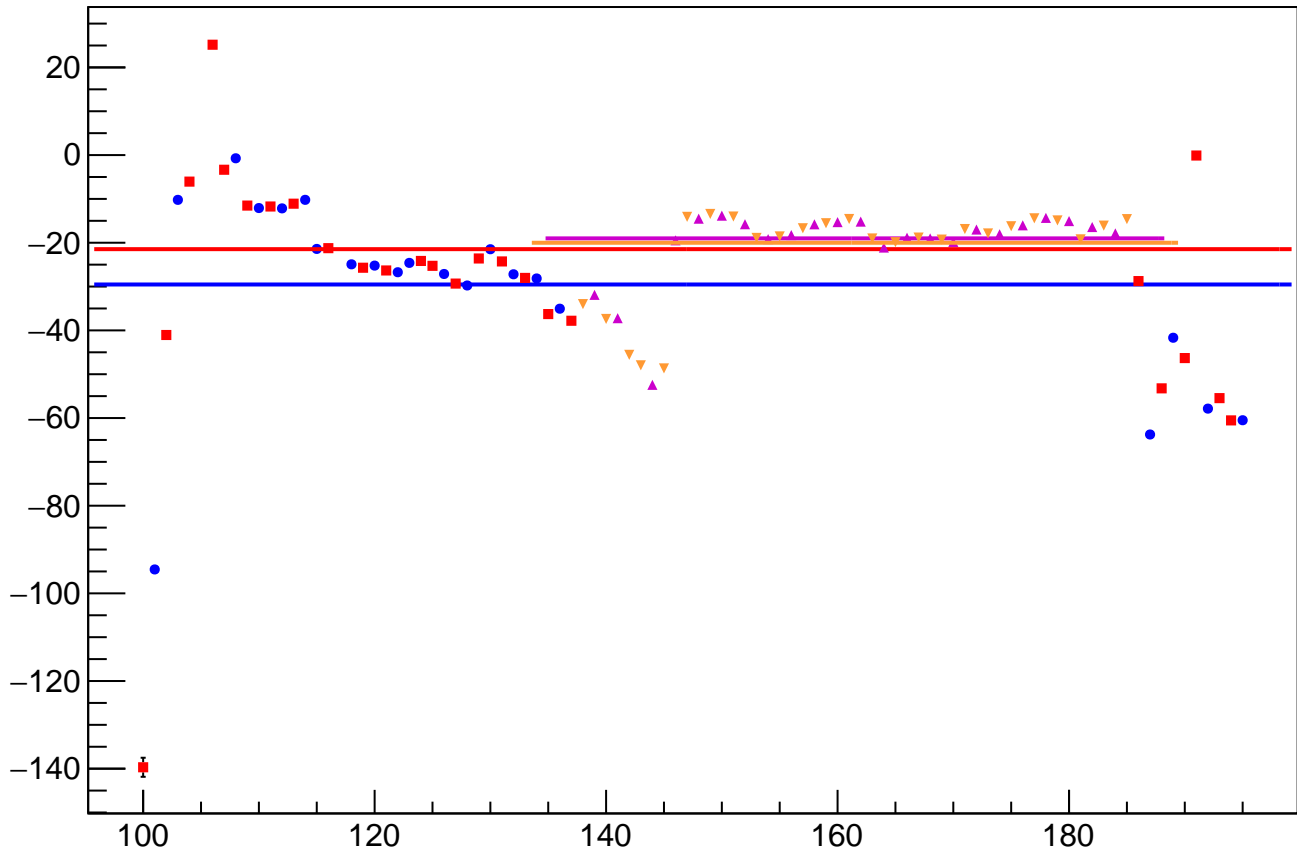
Left In:  $-17.023 \pm 0.522$   $\chi^2/\text{NDF}: 327.6/22$

+ sign  $-19.525 \pm 0.451$   $\chi^2/\text{NDF}: 765.9/45$

All:  $-19.450 \pm 0.317$   $\chi^2/\text{NDF}: 1860.1/93$

- sign  $-19.377 \pm 0.446$   $\chi^2/\text{NDF}: 1094.1/47$

# reg\_asym\_atr1\_diff\_bpm12X\_slope vs Slug



Right In:  $-29.527 \pm 0.052$   $\chi^2/\text{NDF}: 133516.1/20$

Left Out:  $-20.006 \pm 0.023$   $\chi^2/\text{NDF}: 145623.8/24$

Right Out:  $-21.465 \pm 0.042$   $\chi^2/\text{NDF}: 275380.6/24$

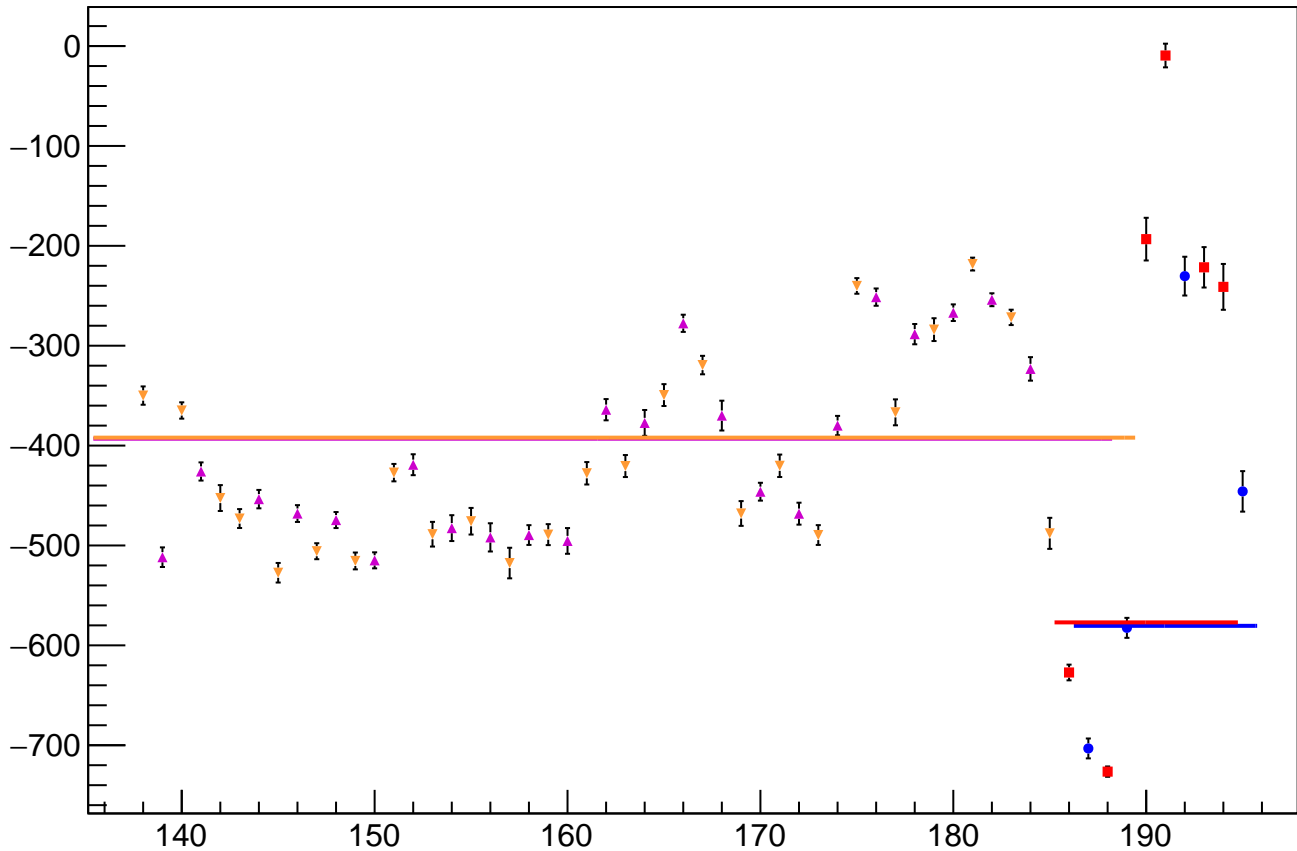
Left In:  $-19.007 \pm 0.024$   $\chi^2/\text{NDF}: 90873.3/22$

+ sign  $-21.621 \pm 0.021$   $\chi^2/\text{NDF}: 307467.8/45$

All:  $-20.581 \pm 0.015$   $\chi^2/\text{NDF}: 680980.7/93$

- sign  $-19.600 \pm 0.021$   $\chi^2/\text{NDF}: 368853.8/47$

# reg\_asym\_atr2\_diff\_bpm1X\_slope vs Slug



Right In:  $-580.464 \pm 6.305$   $\chi^2/\text{NDF}: 521.1/3$

Left Out:  $-392.054 \pm 1.967$   $\chi^2/\text{NDF}: 2717.2/24$

Right Out:  $-577.013 \pm 3.860$   $\chi^2/\text{NDF}: 4009.7/5$

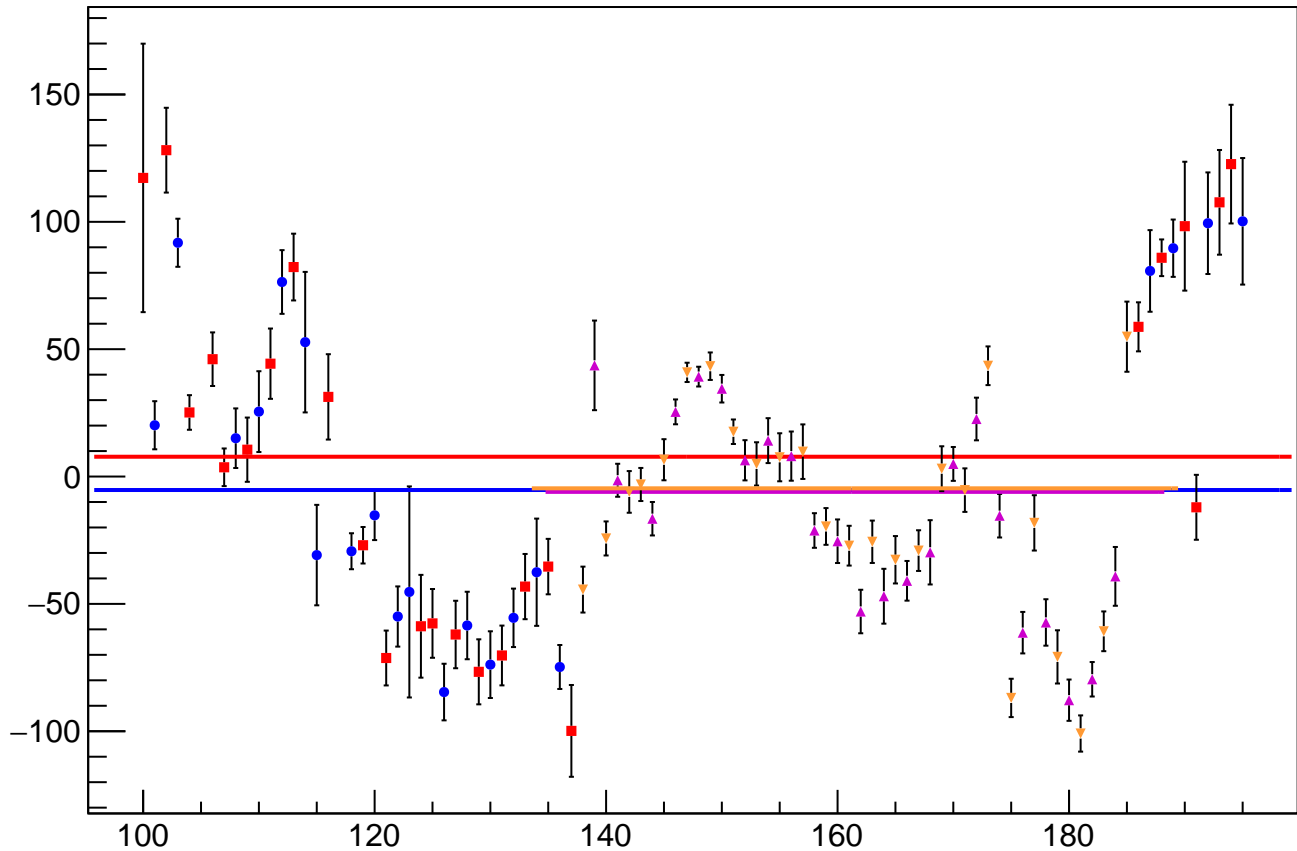
Left In:  $-393.113 \pm 2.006$   $\chi^2/\text{NDF}: 2253.3/22$

+ sign  $-408.757 \pm 1.877$   $\chi^2/\text{NDF}: 4052.0/28$

All:  $-421.106 \pm 1.292$   $\chi^2/\text{NDF}: 12184.4/57$

- sign  $-432.204 \pm 1.780$   $\chi^2/\text{NDF}: 8050.3/28$

# reg\_asym\_atr2\_diff\_bpm4aY\_slope vs Slug



Right In:  $-5.291 \pm 2.661$   $\chi^2/\text{NDF}: 526.1/20$

Left Out:  $-4.624 \pm 1.462$   $\chi^2/\text{NDF}: 772.9/24$

Right Out:  $7.778 \pm 2.302$   $\chi^2/\text{NDF}: 621.5/24$

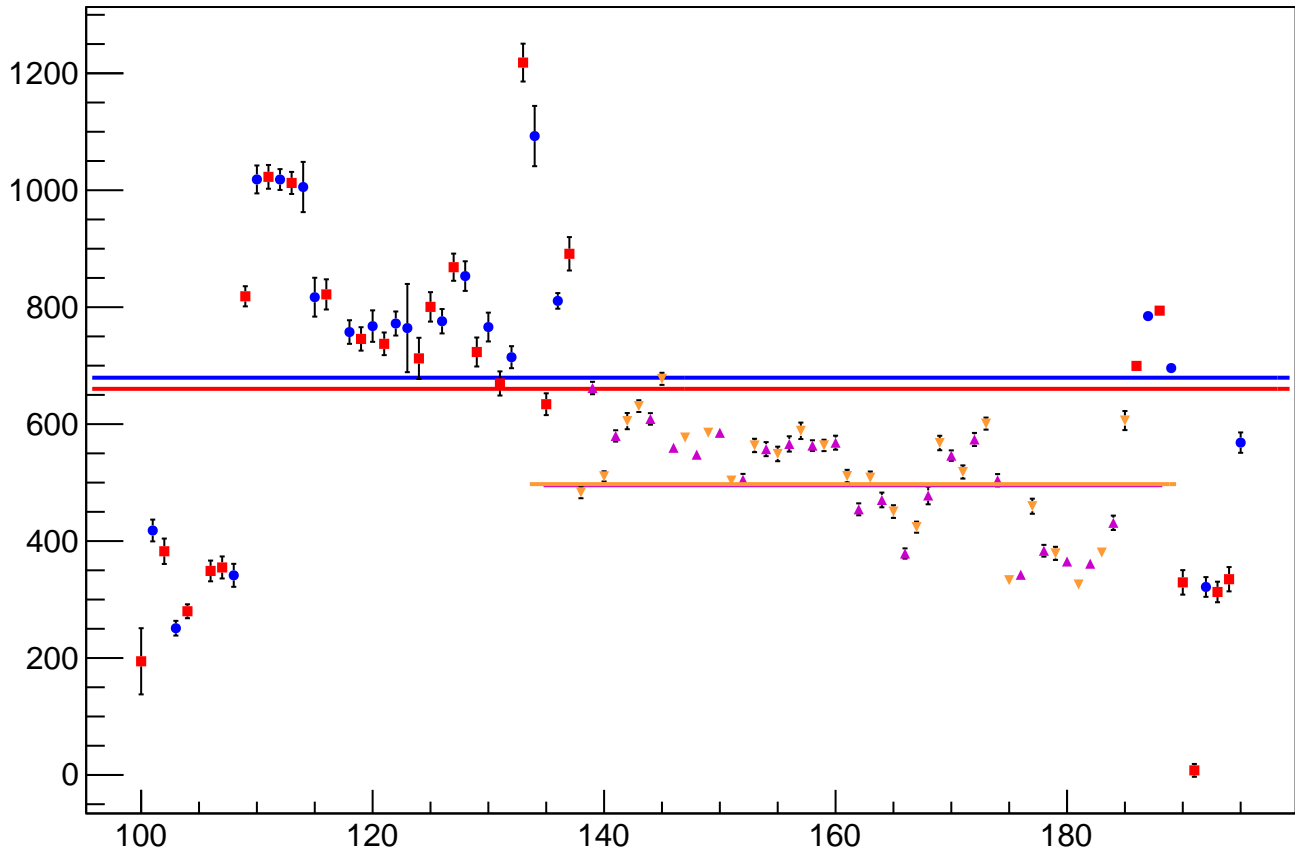
Left In:  $-6.019 \pm 1.516$   $\chi^2/\text{NDF}: 654.1/22$

+ sign  $-4.779 \pm 1.282$   $\chi^2/\text{NDF}: 1299.1/45$

All:  $-3.294 \pm 0.901$   $\chi^2/\text{NDF}: 2602.4/93$

- sign  $-1.845 \pm 1.266$   $\chi^2/\text{NDF}: 1300.7/47$

# reg\_asym\_atr2\_diff\_bpm4eX\_slope vs Slug



Right In: 679.398 $\pm$ 3.650  $\chi^2$ /NDF: 3241.3/20

Left Out: 497.381 $\pm$ 1.966  $\chi^2$ /NDF:2614.6/24

Right Out: 660.356 $\pm$ 2.640  $\chi^2$ /NDF: 8620.3/24

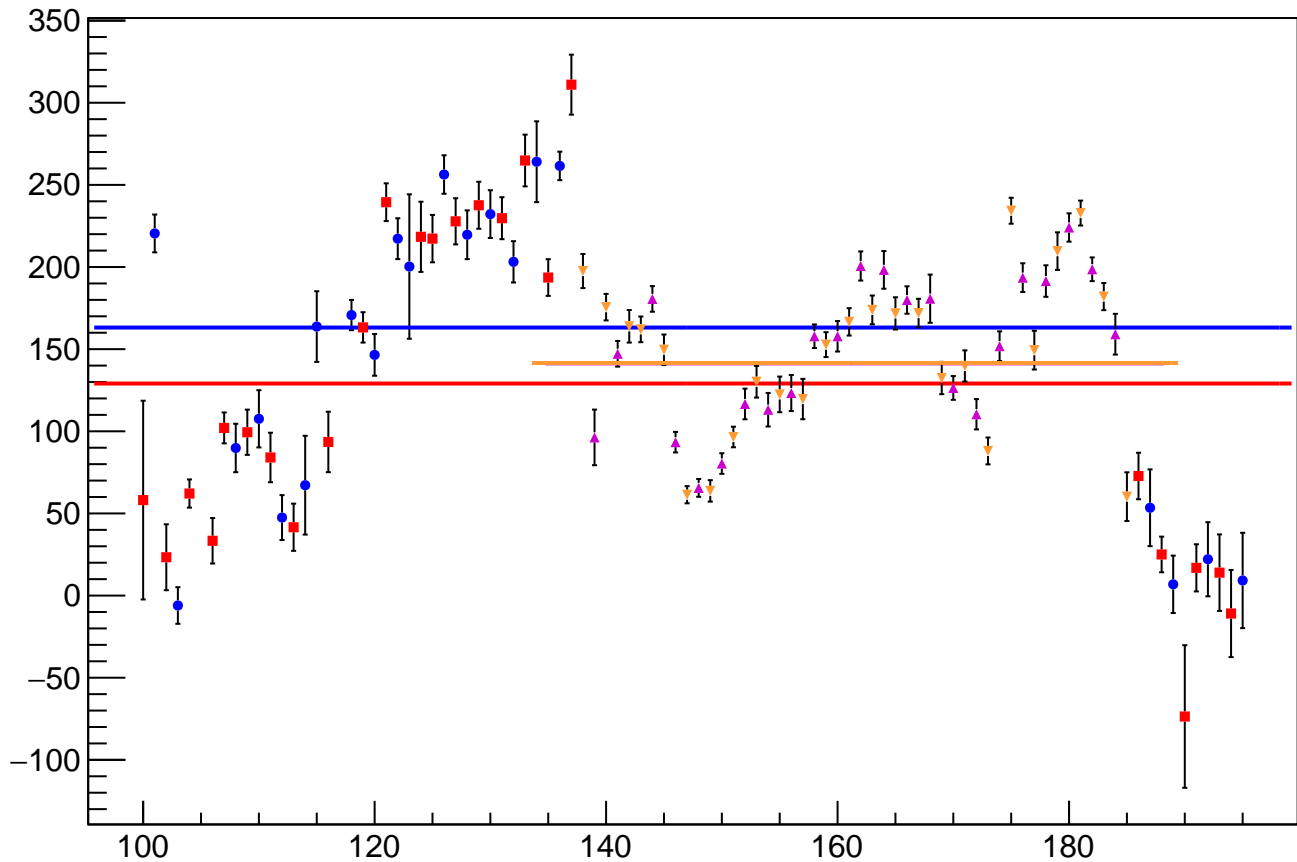
Left In: 495.454 $\pm$ 1.992  $\chi^2$ /NDF:2253.8/22

+ sign 538.310 $\pm$ 1.731  $\chi^2$ /NDF: 7783.4/45

All: 547.509 $\pm$ 1.171  $\chi^2$ /NDF: 21195.2/93

- sign 555.275 $\pm$ 1.590  $\chi^2$ /NDF: 13359.7/47

# reg\_asym\_atr2\_diff\_bpm4eY\_slope vs Slug



Right In:  $163.154 \pm 3.113$   $\chi^2/\text{NDF}: 819.2/20$

Left Out:  $141.588 \pm 1.698$   $\chi^2/\text{NDF}: 959.6/24$

Right Out:  $129.086 \pm 2.774$   $\chi^2/\text{NDF}: 980.4/24$

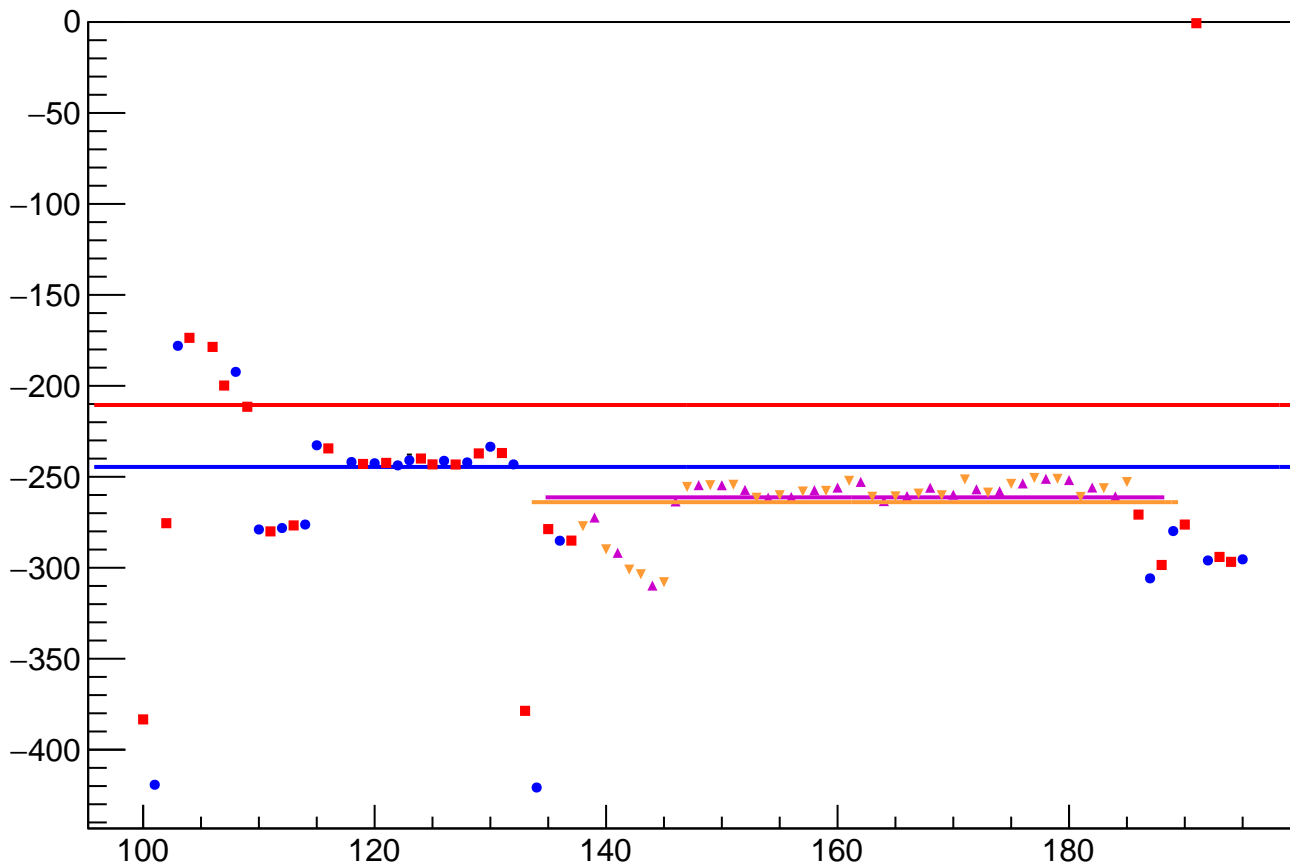
Left In:  $141.360 \pm 1.748$   $\chi^2/\text{NDF}: 741.2/22$

+ sign  $146.536 \pm 1.491$   $\chi^2/\text{NDF}: 1815.8/45$

All:  $142.169 \pm 1.050$   $\chi^2/\text{NDF}: 3568.5/93$

- sign  $137.873 \pm 1.479$   $\chi^2/\text{NDF}: 1735.7/47$

# reg\_asym\_atr2\_diff\_bpm12X\_slope vs Slug



Right In:  $-244.575 \pm 0.151$   $\chi^2/\text{NDF}: 180935.8/20$

Left Out:  $-263.943 \pm 0.081$   $\chi^2/\text{NDF}: 39085.0/24$

Right Out:  $-210.530 \pm 0.131$   $\chi^2/\text{NDF}: 452884.8/24$

Left In:  $-261.286 \pm 0.082$   $\chi^2/\text{NDF}: 23348.4/22$

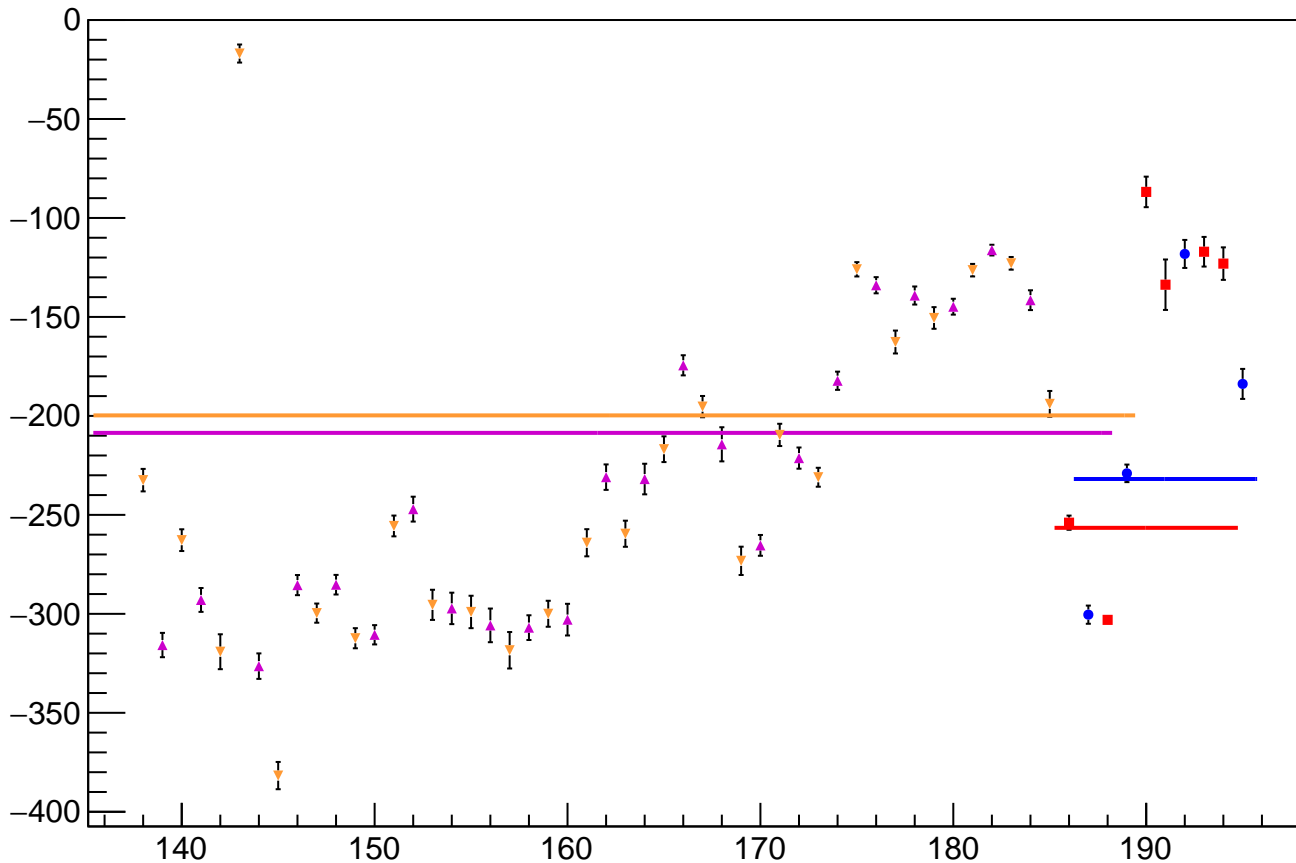
+ sign  $-259.591 \pm 0.072$   $\chi^2/\text{NDF}: 232790.9/45$

All:  $-253.127 \pm 0.050$   $\chi^2/\text{NDF}: 832628.2/93$

- sign  $-247.024 \pm 0.070$   $\chi^2/\text{NDF}: 583963.3/47$



# reg\_asym\_atl\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-231.877 \pm 2.715$   $\chi^2/\text{NDF}: 521.5/3$

Left Out:  $-199.741 \pm 1.061$   $\chi^2/\text{NDF}: 6361.5/24$

Right Out:  $-256.549 \pm 1.793$   $\chi^2/\text{NDF}: 1572.9/5$

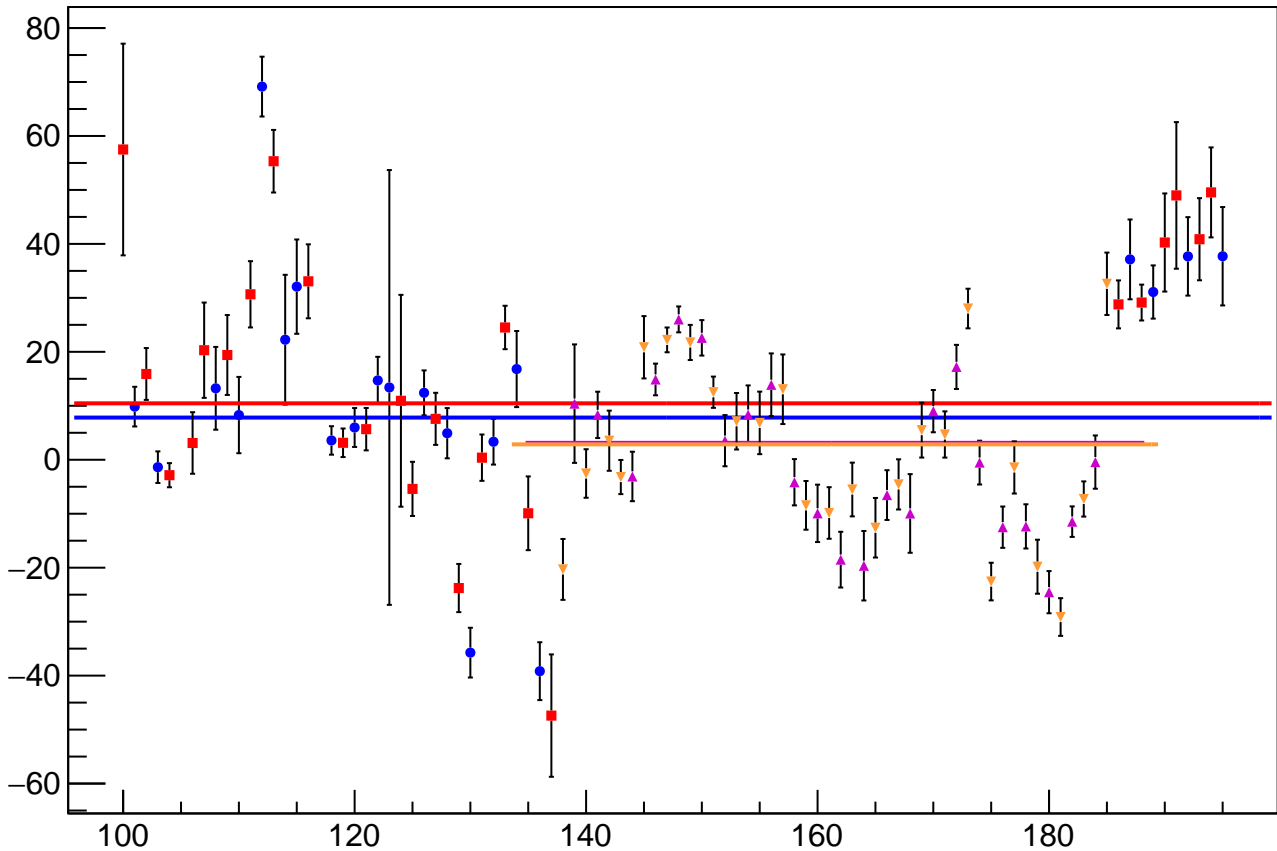
Left In:  $-208.579 \pm 1.082$   $\chi^2/\text{NDF}: 4805.1/22$

+ sign  $-204.001 \pm 0.988$   $\chi^2/\text{NDF}: 7004.6/28$

All:  $-213.258 \pm 0.676$   $\chi^2/\text{NDF}: 14072.2/57$

- sign  $-221.394 \pm 0.927$   $\chi^2/\text{NDF}: 6902.8/28$

# reg\_asym\_atl\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $7.819 \pm 1.051$   $\chi^2/\text{NDF}: 383.7/20$

Left Out:  $2.853 \pm 0.820$   $\chi^2/\text{NDF}: 419.8/24$

Right Out:  $10.457 \pm 0.970$   $\chi^2/\text{NDF}: 364.6/24$

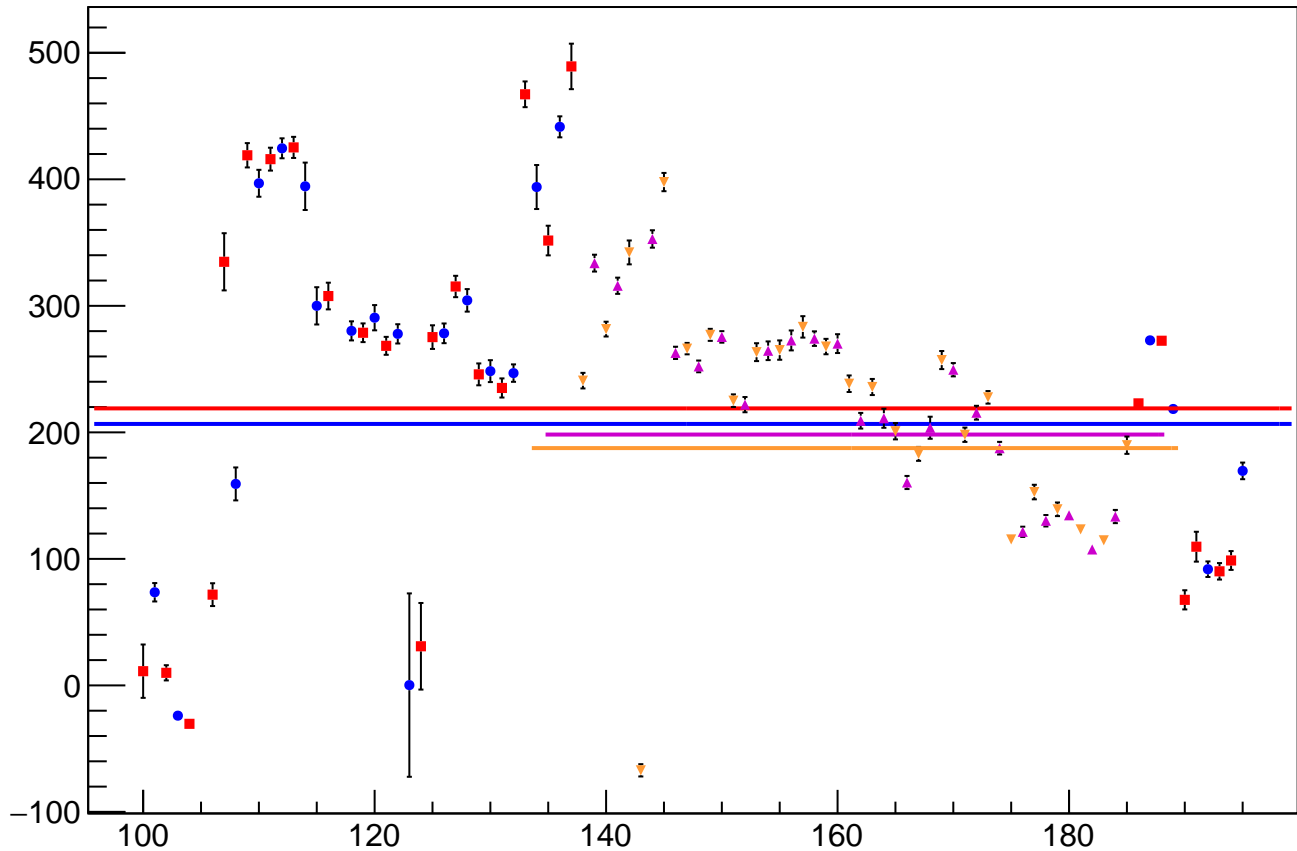
Left In:  $3.136 \pm 0.857$   $\chi^2/\text{NDF}: 319.8/22$

+ sign  $4.733 \pm 0.646$   $\chi^2/\text{NDF}: 817.4/45$

All:  $5.545 \pm 0.455$   $\chi^2/\text{NDF}: 1537.0/93$

- sign  $6.345 \pm 0.642$   $\chi^2/\text{NDF}: 716.4/47$

# reg\_asym\_atl\_avg\_diff\_bpm4eX\_slope vs Slug



Right In: 206.653 $\pm$ 1.499  $\chi^2$ /NDF: 7424.5/20

Left Out: 187.565 $\pm$ 1.066  $\chi^2$ /NDF:7082.0/24

Right Out: 218.941 $\pm$ 1.169  $\chi^2$ /NDF: 10325.8/24

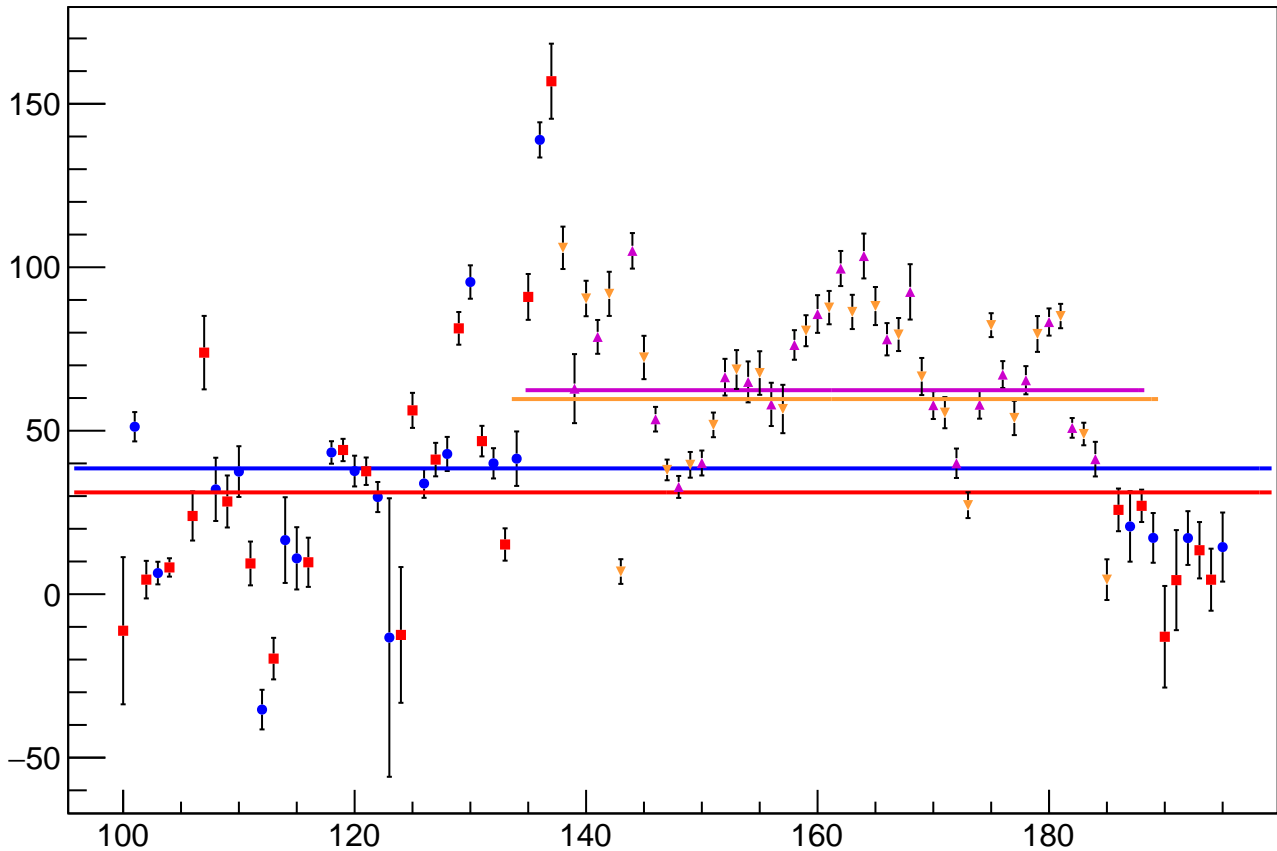
Left In: 198.269 $\pm$ 1.082  $\chi^2$ /NDF:4515.8/22

+ sign 193.972 $\pm$ 0.869  $\chi^2$ /NDF: 14614.1/45

All: 201.509 $\pm$ 0.586  $\chi^2$ /NDF: 29762.4/93

- sign 207.803 $\pm$ 0.794  $\chi^2$ /NDF: 15010.1/47

# reg\_asym\_atl\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $38.477 \pm 1.236$   $\chi^2/\text{NDF}: 758.2/20$

Left Out:  $59.682 \pm 0.941$   $\chi^2/\text{NDF}: 757.6/24$

Right Out:  $31.133 \pm 1.167$   $\chi^2/\text{NDF}: 576.4/24$

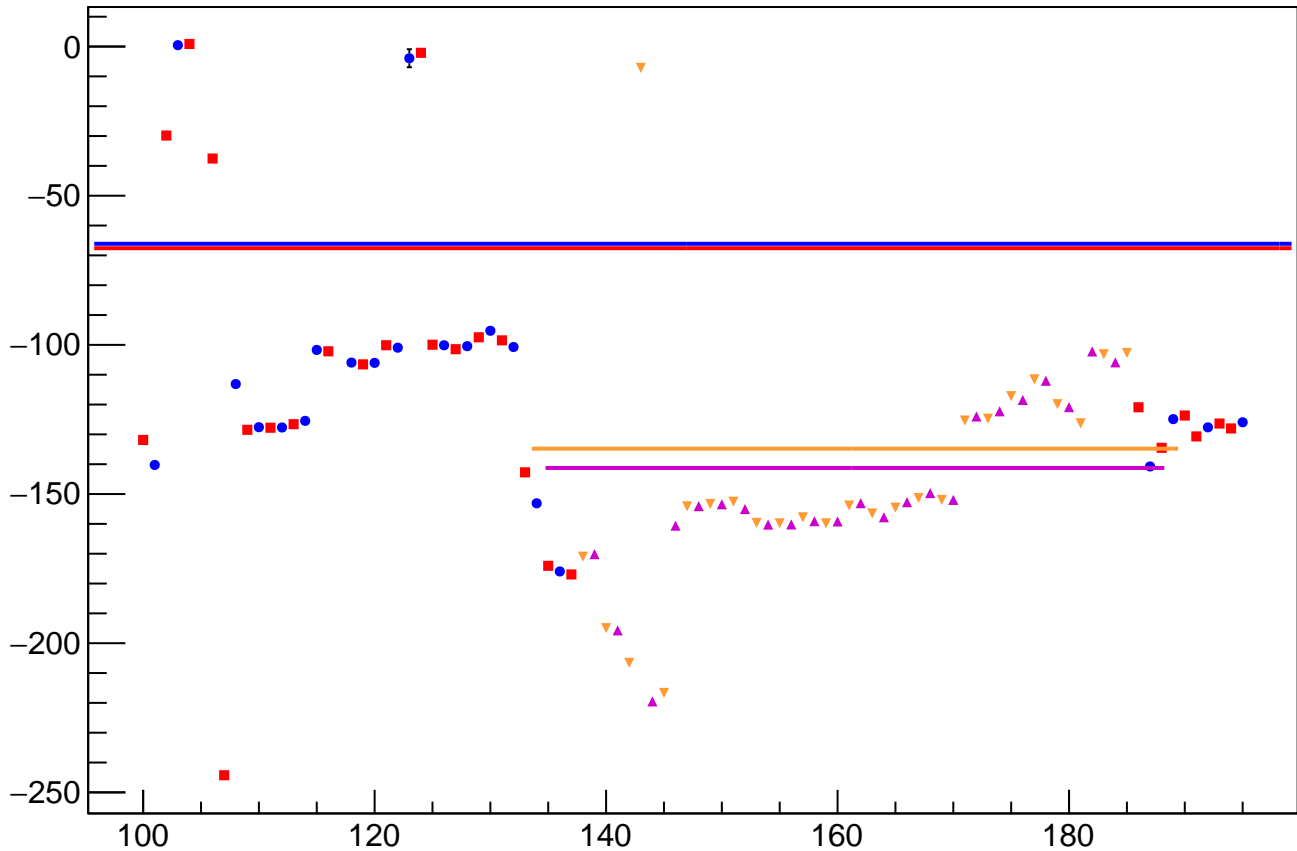
Left In:  $62.400 \pm 0.974$   $\chi^2/\text{NDF}: 406.3/22$

+ sign  $51.904 \pm 0.749$   $\chi^2/\text{NDF}: 1702.1/45$

All:  $50.728 \pm 0.529$   $\chi^2/\text{NDF}: 3113.0/93$

- sign  $49.555 \pm 0.748$   $\chi^2/\text{NDF}: 1405.9/47$

# reg\_asym\_atl\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-66.114 \pm 0.058$   $\chi^2/\text{NDF}: 1253574.1/20$

Left Out:  $-134.780 \pm 0.045$   $\chi^2/\text{NDF}: 804747.3/24$

Right Out:  $-67.604 \pm 0.055$   $\chi^2/\text{NDF}: 1262574.1/24$

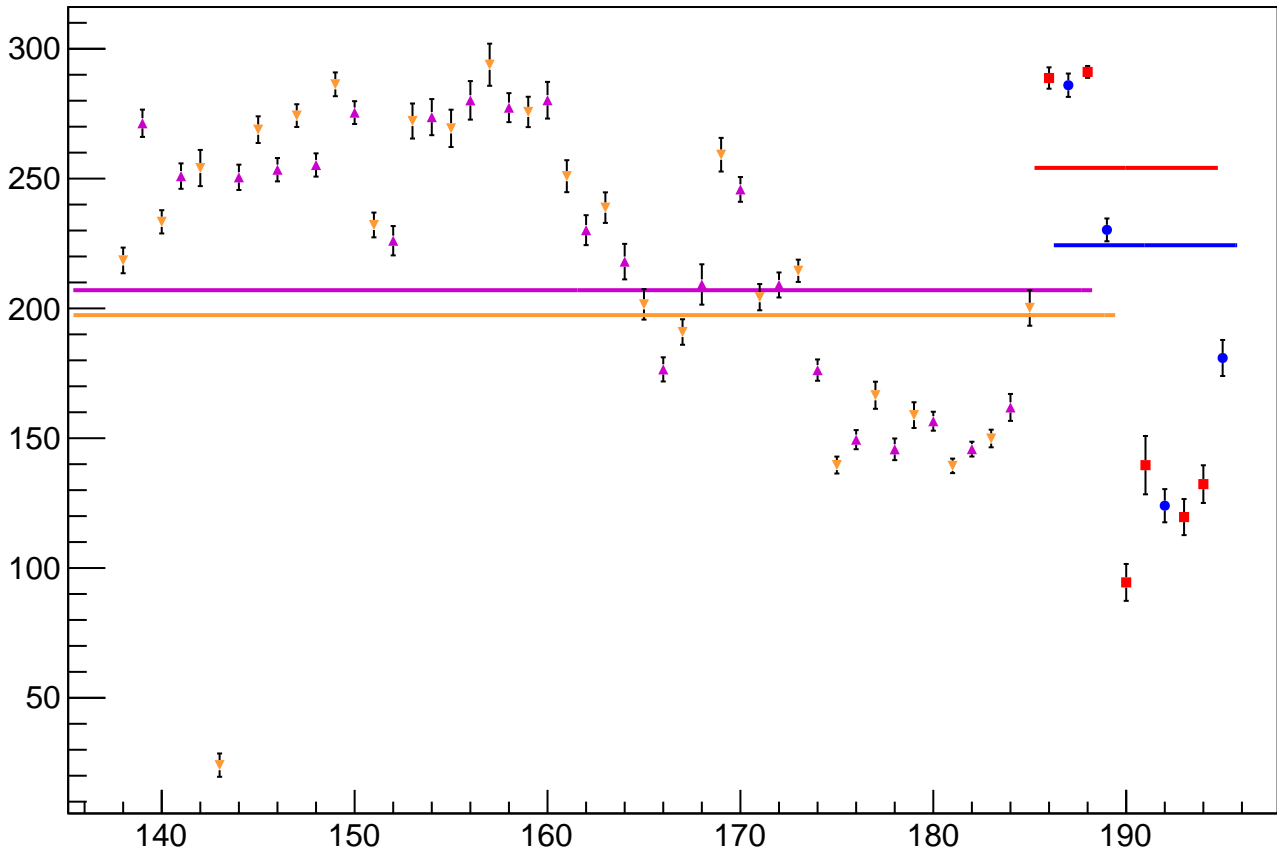
Left In:  $-141.255 \pm 0.045$   $\chi^2/\text{NDF}: 347229.8/22$

+ sign  $-109.340 \pm 0.035$   $\chi^2/\text{NDF}: 2940337.4/45$

All:  $-110.364 \pm 0.025$   $\chi^2/\text{NDF}: 5625032.3/93$

- sign  $-111.365 \pm 0.035$   $\chi^2/\text{NDF}: 2683032.4/47$

# reg\_asym\_atl\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $224.328 \pm 2.614$   $\chi^2/\text{NDF}: 474.7/3$

Left Out:  $197.408 \pm 0.963$   $\chi^2/\text{NDF}: 4384.2/24$

Right Out:  $254.127 \pm 1.770$   $\chi^2/\text{NDF}: 1599.0/5$

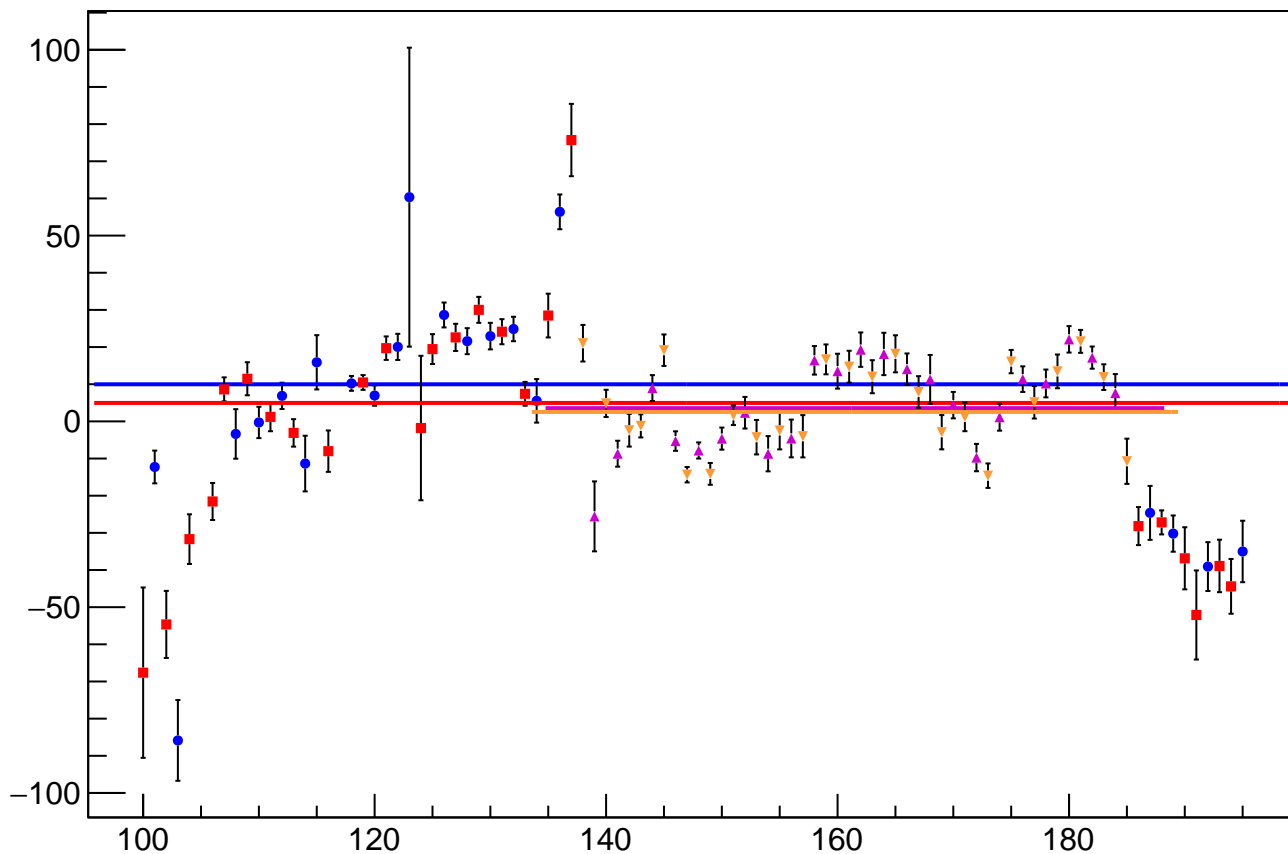
Left In:  $207.014 \pm 0.990$   $\chi^2/\text{NDF}: 2611.5/22$

+ sign  $200.624 \pm 0.904$   $\chi^2/\text{NDF}: 4952.3/28$

All:  $209.825 \pm 0.625$   $\chi^2/\text{NDF}: 9900.9/57$

- sign  $218.242 \pm 0.864$   $\chi^2/\text{NDF}: 4750.0/28$

# reg\_asym\_atl\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $9.983 \pm 0.900$   $\chi^2/\text{NDF}: 484.2/20$

Left Out:  $2.548 \pm 0.741$   $\chi^2/\text{NDF}: 275.4/24$

Right Out:  $4.966 \pm 0.849$   $\chi^2/\text{NDF}: 617.2/24$

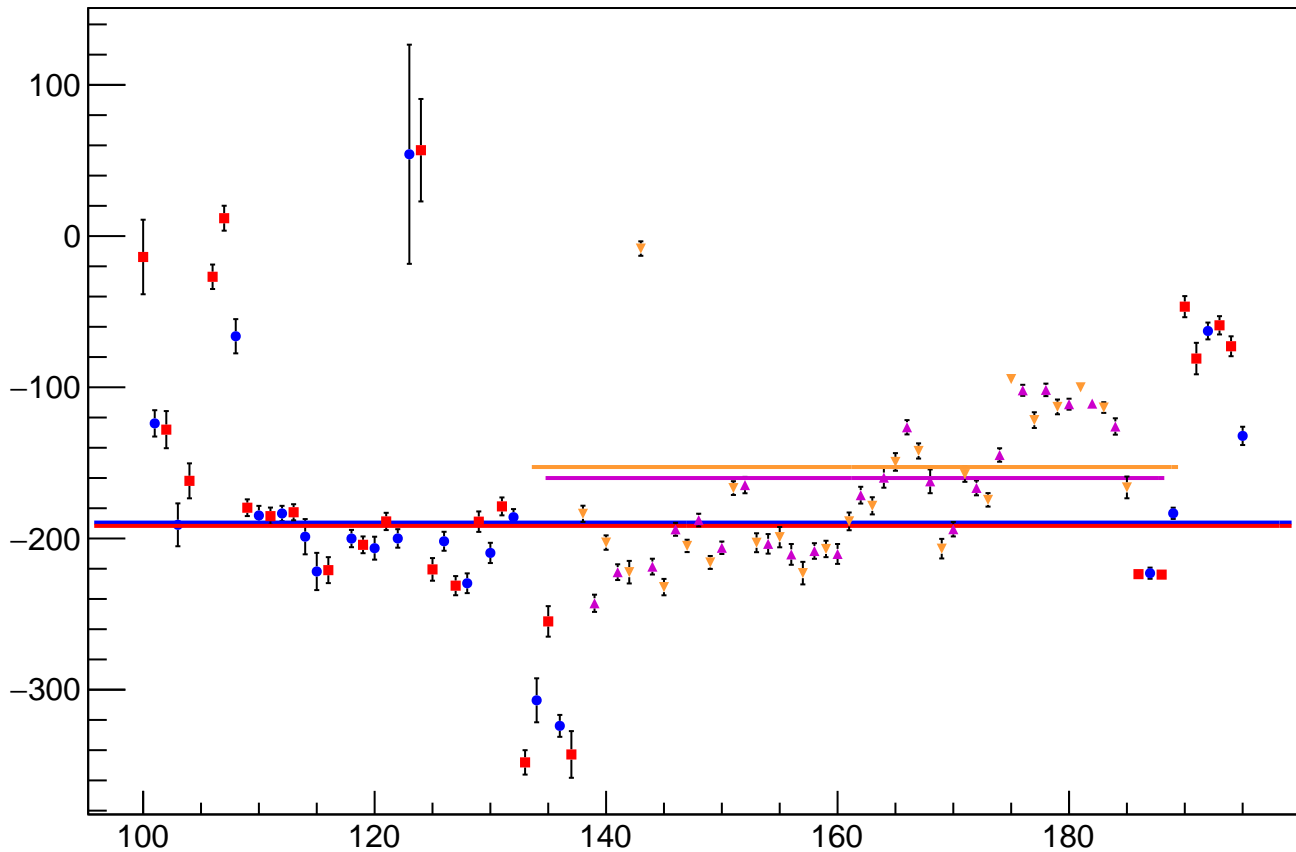
Left In:  $3.559 \pm 0.774$   $\chi^2/\text{NDF}: 192.0/22$

+ sign  $5.552 \pm 0.572$   $\chi^2/\text{NDF}: 800.4/45$

All:  $4.875 \pm 0.404$   $\chi^2/\text{NDF}: 1613.9/93$

- sign  $4.198 \pm 0.572$   $\chi^2/\text{NDF}: 810.7/47$

# reg\_asym\_atl\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-189.470 \pm 1.395$   $\chi^2/\text{NDF}: 1361.9/20$

Left Out:  $-152.738 \pm 0.967$   $\chi^2/\text{NDF}: 3077.8/24$

Right Out:  $-191.665 \pm 1.108$   $\chi^2/\text{NDF}: 3512.2/24$

Left In:  $-160.021 \pm 0.989$   $\chi^2/\text{NDF}: 2024.4/22$

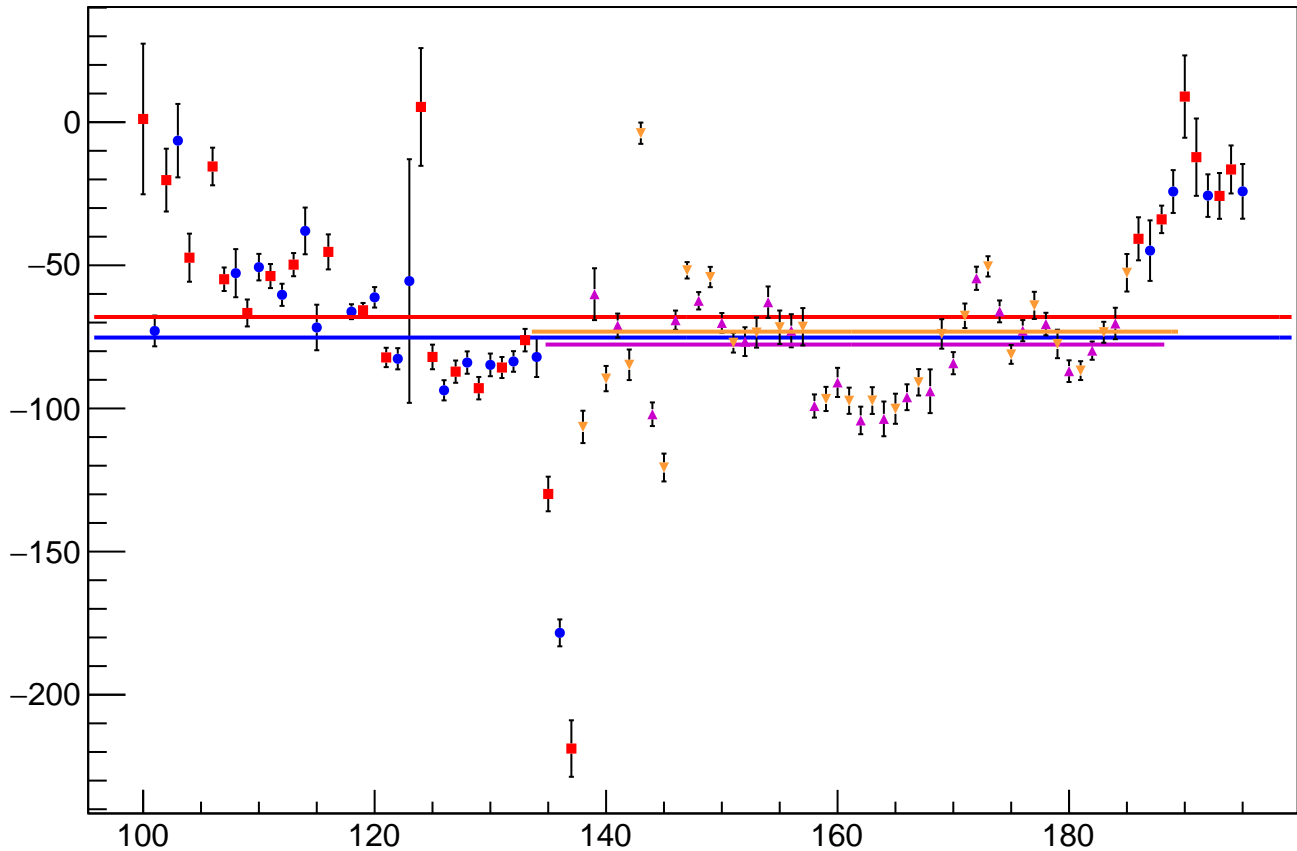
+ sign  $-164.661 \pm 0.795$   $\chi^2/\text{NDF}: 4908.1/45$

All:  $-169.701 \pm 0.541$   $\chi^2/\text{NDF}: 10973.5/93$

- sign  $-174.045 \pm 0.738$   $\chi^2/\text{NDF}: 5990.5/47$



# reg\_asym\_atl\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-75.233 \pm 1.050$   $\chi^2/\text{NDF}: 785.9/20$

Left Out:  $-73.165 \pm 0.851$   $\chi^2/\text{NDF}: 788.6/24$

Right Out:  $-68.051 \pm 0.999$   $\chi^2/\text{NDF}: 798.7/24$

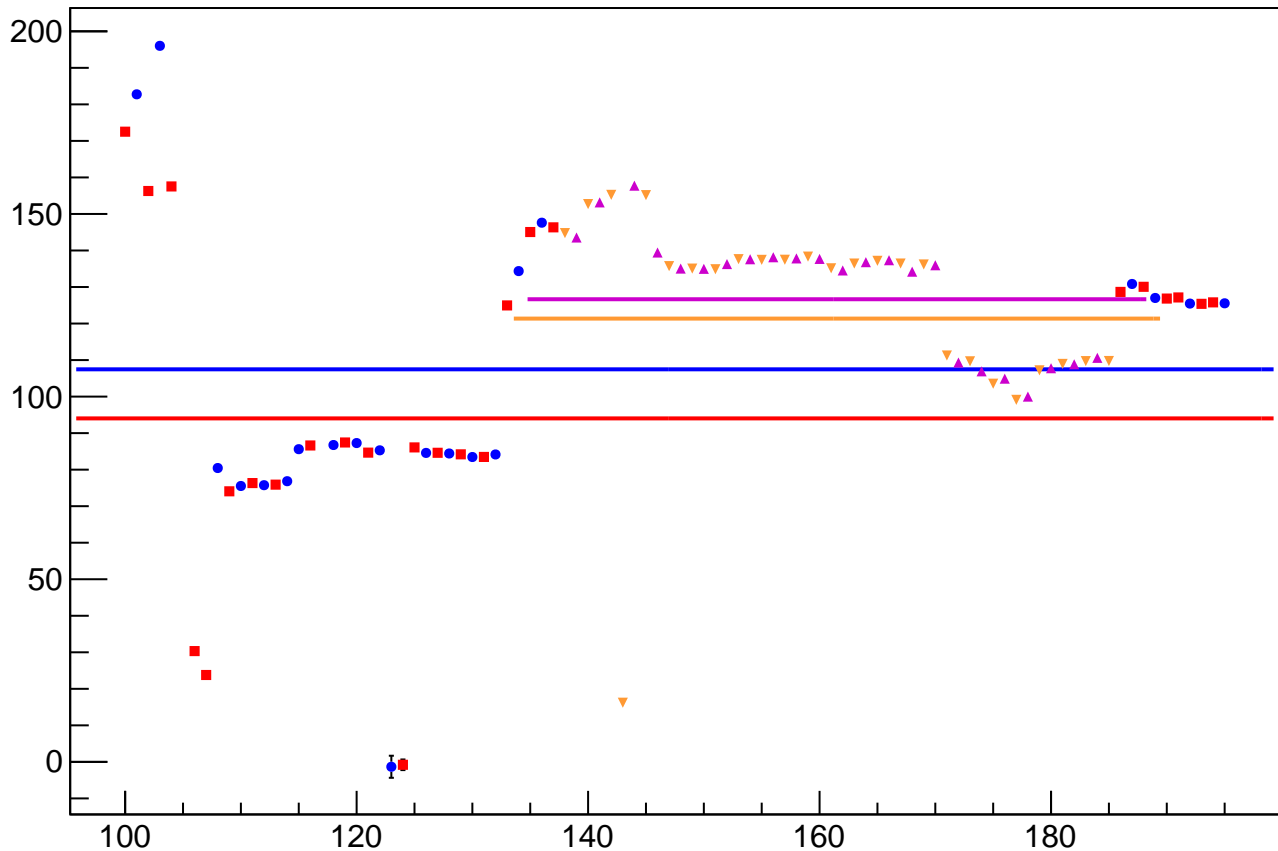
Left In:  $-77.678 \pm 0.883$   $\chi^2/\text{NDF}: 248.3/22$

+ sign  $-73.985 \pm 0.661$   $\chi^2/\text{NDF}: 1576.8/45$

All:  $-73.721 \pm 0.468$   $\chi^2/\text{NDF}: 2676.2/93$

- sign  $-73.457 \pm 0.662$   $\chi^2/\text{NDF}: 1099.1/47$

# reg\_asym\_atl\_dd\_diff\_bpm12X\_slope vs Slug



Right In: 107.467 $\pm$ 0.065  $\chi^2$ /NDF: 290373.3/20

Left Out: 121.356 $\pm$ 0.040  $\chi^2$ /NDF: 481977.3/24

Right Out: 94.032 $\pm$ 0.057  $\chi^2$ /NDF: 515702.5/24

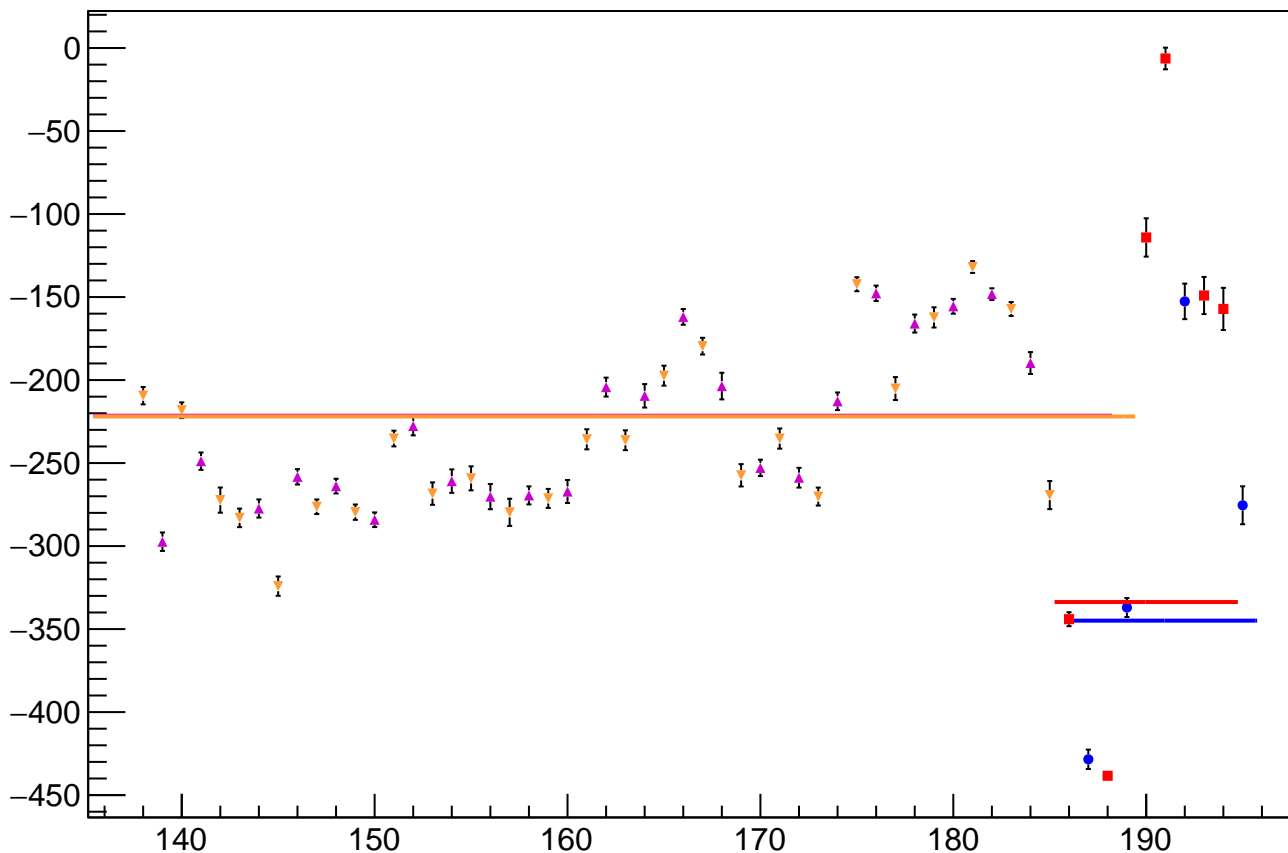
Left In: 126.653 $\pm$ 0.041  $\chi^2$ /NDF: 163046.1/22

+ sign 117.457 $\pm$ 0.034  $\chi^2$ /NDF: 805686.2/45

All: 116.402 $\pm$ 0.024  $\chi^2$ /NDF: 1703776.5/93

- sign 115.404 $\pm$ 0.033  $\chi^2$ /NDF: 896236.5/47

# reg\_asym\_atr\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-344.912 \pm 3.612$   $\chi^2/\text{NDF}: 567.0/3$

Left Out:  $-221.934 \pm 1.084$   $\chi^2/\text{NDF}: 2578.4/24$

Right Out:  $-333.704 \pm 2.181$   $\chi^2/\text{NDF}: 4544.5/5$

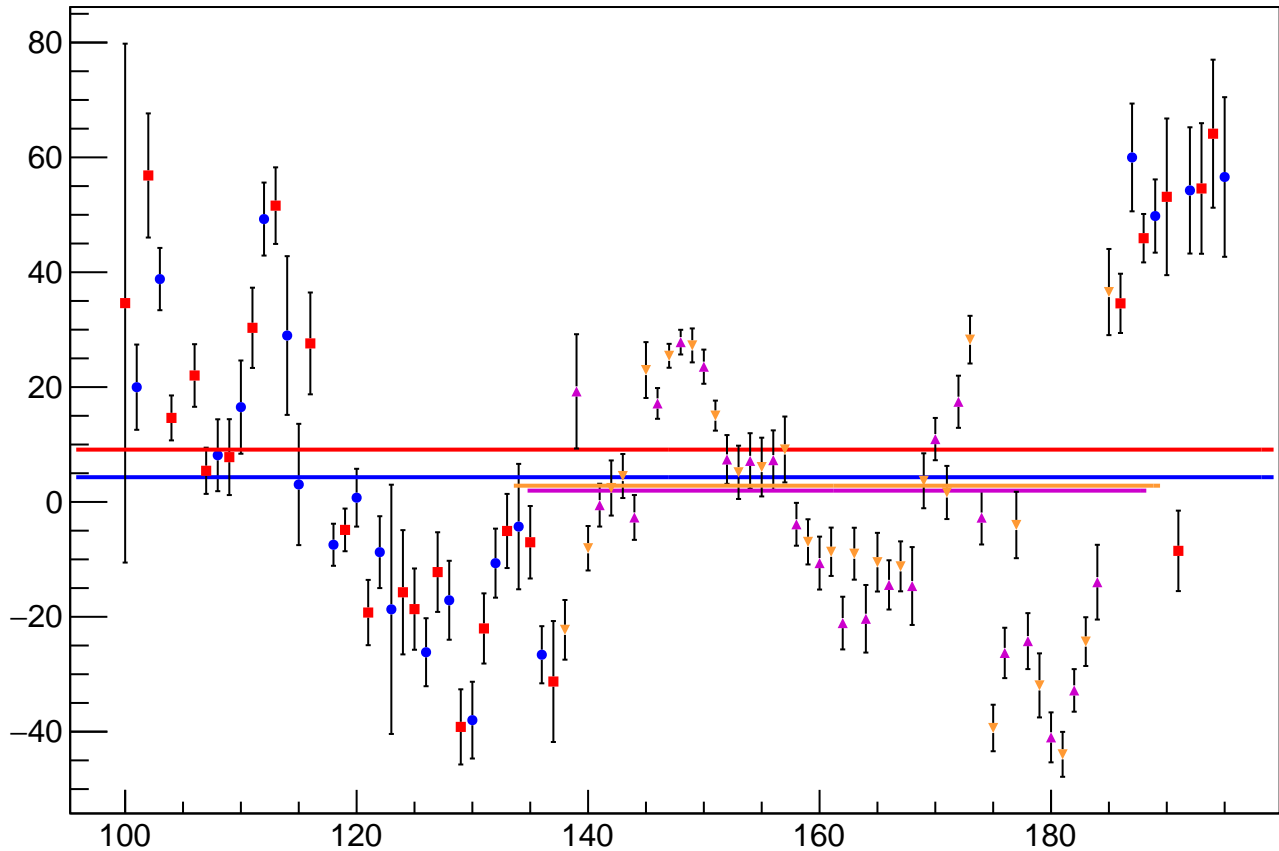
Left In:  $-221.483 \pm 1.102$   $\chi^2/\text{NDF}: 2149.8/22$

+ sign  $-232.103 \pm 1.039$   $\chi^2/\text{NDF}: 4208.7/28$

All:  $-238.538 \pm 0.714$   $\chi^2/\text{NDF}: 13084.5/57$

- sign  $-244.312 \pm 0.984$   $\chi^2/\text{NDF}: 8803.0/28$

# reg\_asym\_atr\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $4.310 \pm 1.456$   $\chi^2/\text{NDF}: 359.7/20$

Left Out:  $2.832 \pm 0.807$   $\chi^2/\text{NDF}: 686.9/24$

Right Out:  $9.113 \pm 1.247$   $\chi^2/\text{NDF}: 409.6/24$

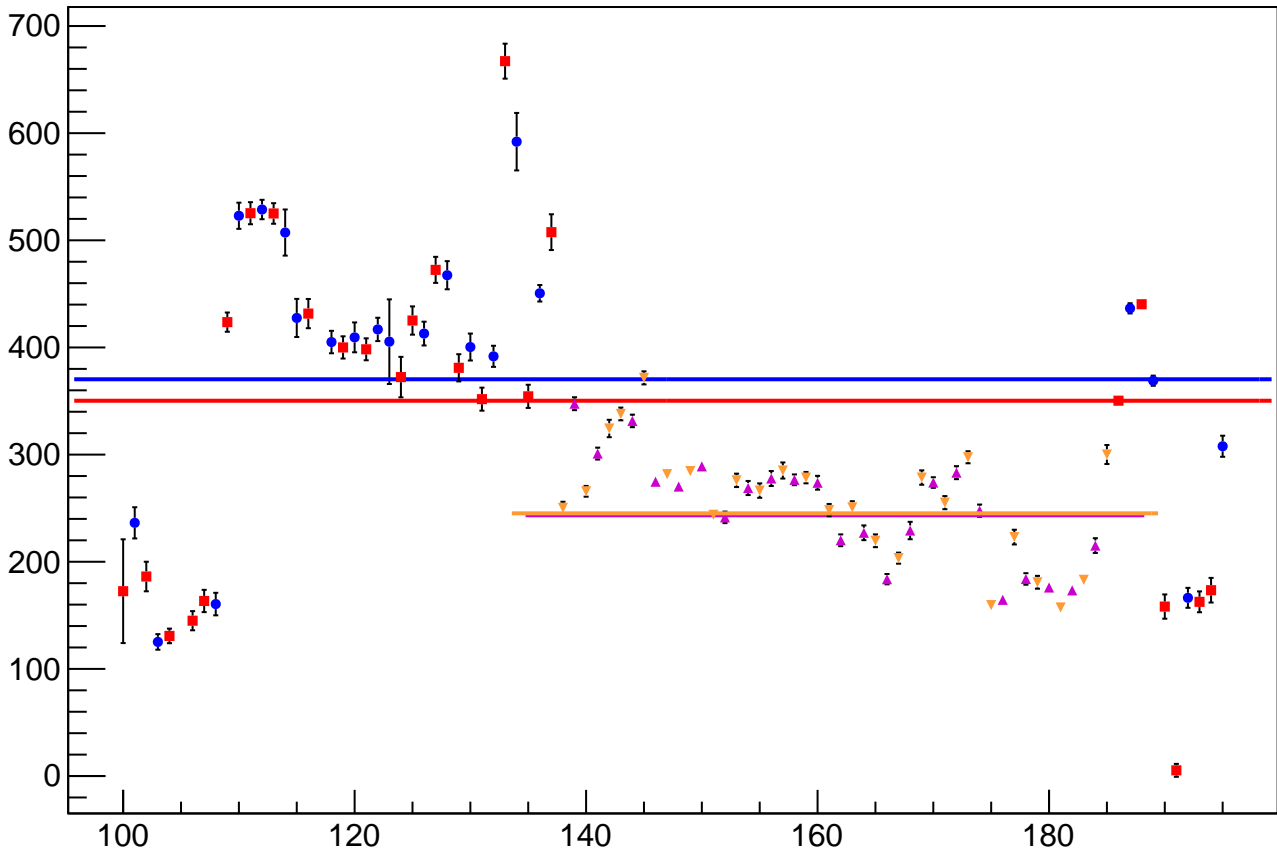
Left In:  $1.969 \pm 0.835$   $\chi^2/\text{NDF}: 589.1/22$

+ sign  $3.179 \pm 0.706$   $\chi^2/\text{NDF}: 1047.4/45$

All:  $3.688 \pm 0.495$   $\chi^2/\text{NDF}: 2069.7/93$

- sign  $4.179 \pm 0.694$   $\chi^2/\text{NDF}: 1021.4/47$

# reg\_asym\_atr\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $370.310 \pm 2.046$   $\chi^2/\text{NDF}: 3142.4/20$

Left Out:  $245.179 \pm 1.082$   $\chi^2/\text{NDF}: 2597.4/24$

Right Out:  $350.281 \pm 1.471$   $\chi^2/\text{NDF}: 8942.1/24$

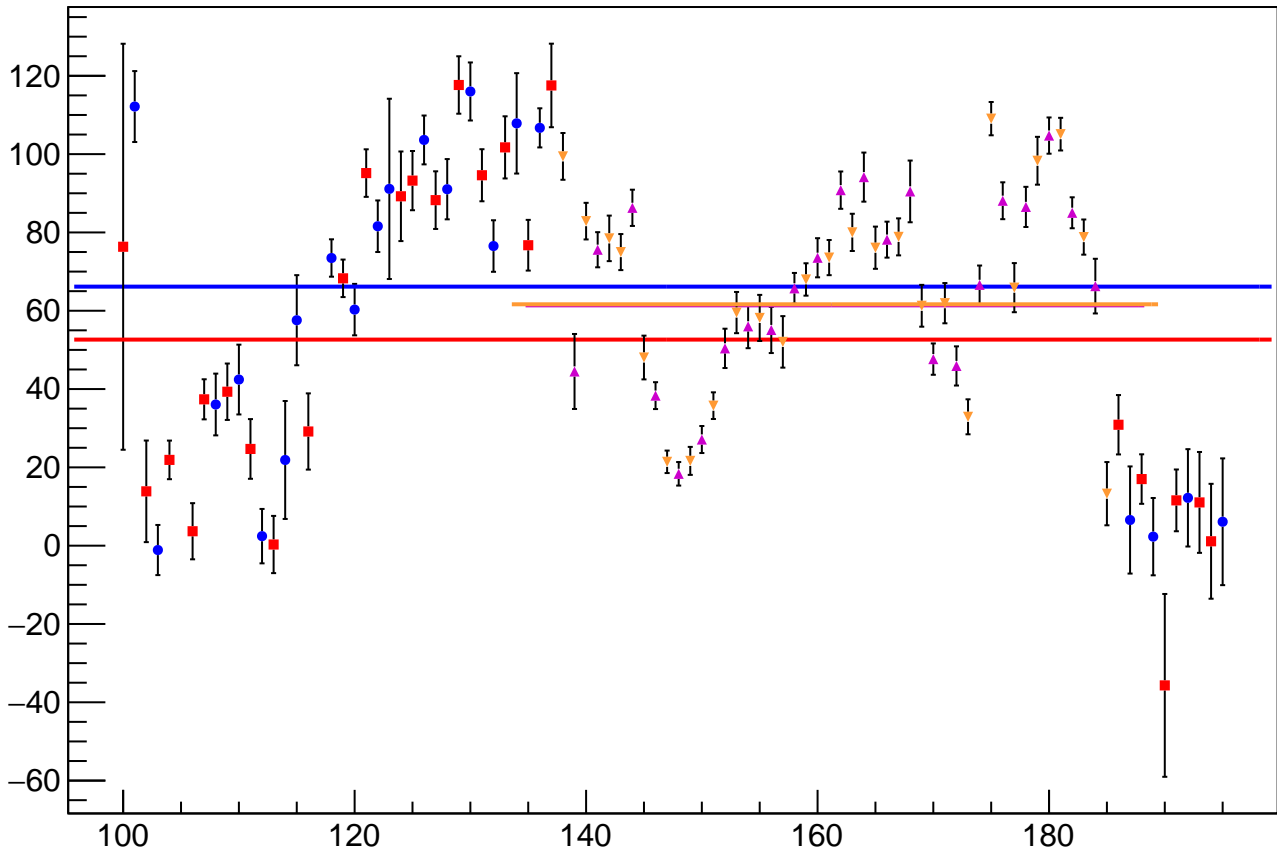
Left In:  $243.366 \pm 1.094$   $\chi^2/\text{NDF}: 2236.7/22$

+ sign  $272.522 \pm 0.957$   $\chi^2/\text{NDF}: 8662.1/45$

All:  $277.356 \pm 0.647$   $\chi^2/\text{NDF}: 23290.2/93$

- sign  $281.426 \pm 0.878$   $\chi^2/\text{NDF}: 14581.0/47$

# reg\_asym\_atr\_avg\_diff\_bpm4eY\_slope vs Slug



Right In: 66.160 $\pm$ 1.701  $\chi^2$ /NDF: 525.0/20

Left Out: 61.647 $\pm$ 0.936  $\chi^2$ /NDF: 871.5/24

Right Out: 52.632 $\pm$ 1.498  $\chi^2$ /NDF: 611.3/24

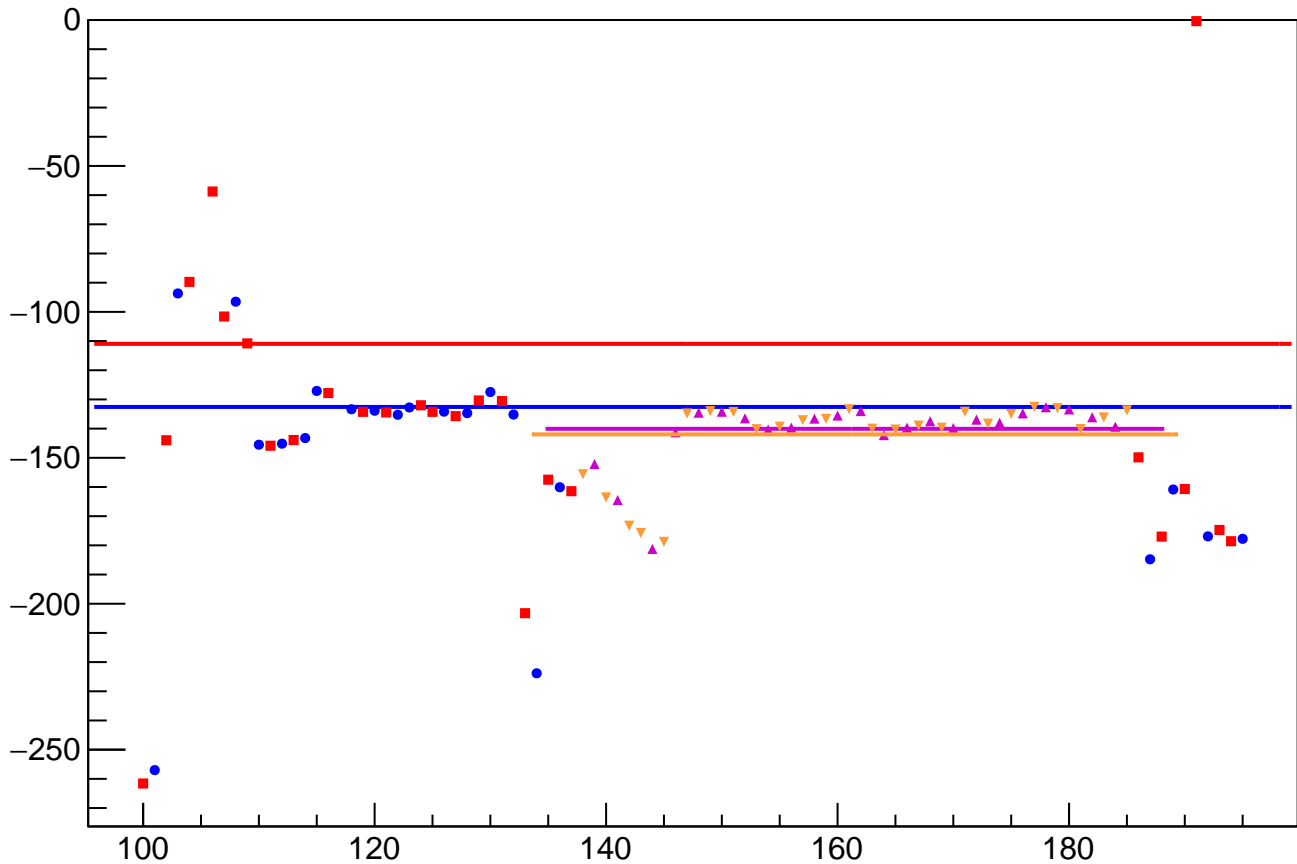
Left In: 61.375 $\pm$ 0.961  $\chi^2$ /NDF: 699.7/22

+ sign 62.697 $\pm$ 0.820  $\chi^2$ /NDF: 1402.0/45

All: 60.734 $\pm$ 0.576  $\chi^2$ /NDF: 2748.3/93

- sign 58.825 $\pm$ 0.809  $\chi^2$ /NDF: 1335.1/47

# reg\_asym\_atr\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-132.570 \pm 0.084$   $\chi^2/\text{NDF}: 200032.7/20$

Left Out:  $-141.969 \pm 0.045$   $\chi^2/\text{NDF}: 80252.6/24$

Right Out:  $-110.951 \pm 0.072$   $\chi^2/\text{NDF}: 532761.6/24$

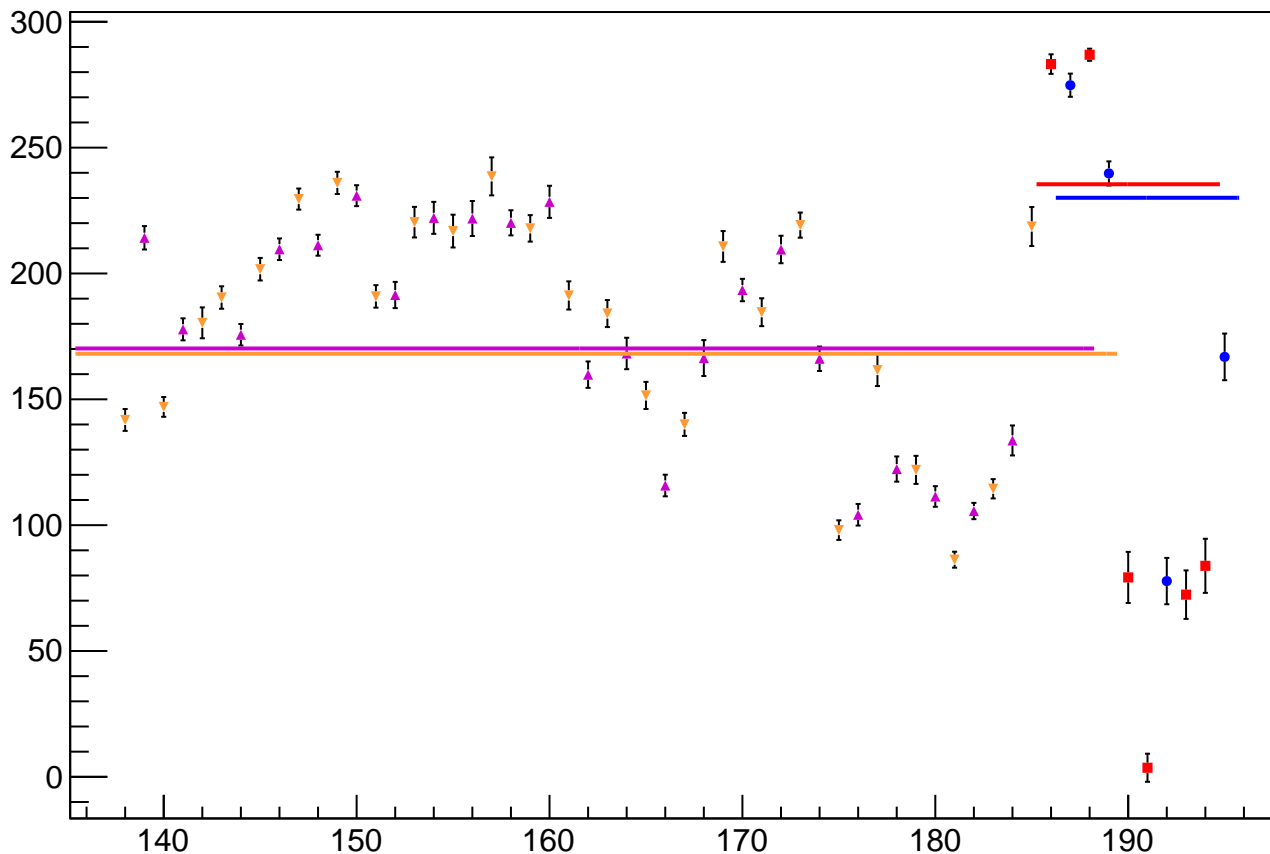
Left In:  $-140.068 \pm 0.045$   $\chi^2/\text{NDF}: 48030.7/22$

+ sign  $-139.908 \pm 0.039$   $\chi^2/\text{NDF}: 289978.1/45$

All:  $-135.768 \pm 0.027$   $\chi^2/\text{NDF}: 1009438.1/93$

- sign  $-131.901 \pm 0.038$   $\chi^2/\text{NDF}: 698210.7/47$

# reg\_asym\_atr\_dd\_diff\_bpm1X\_slope vs Slug



Right In: 230.078 $\pm$ 2.961  $\chi^2$ /NDF: 418.5/3

Left Out: 168.106 $\pm$ 0.970  $\chi^2$ /NDF:2468.8/24

Right Out: 235.452 $\pm$ 1.827  $\chi^2$ /NDF: 3052.4/5

Left In: 170.198 $\pm$ 0.995  $\chi^2$ /NDF:2024.5/22

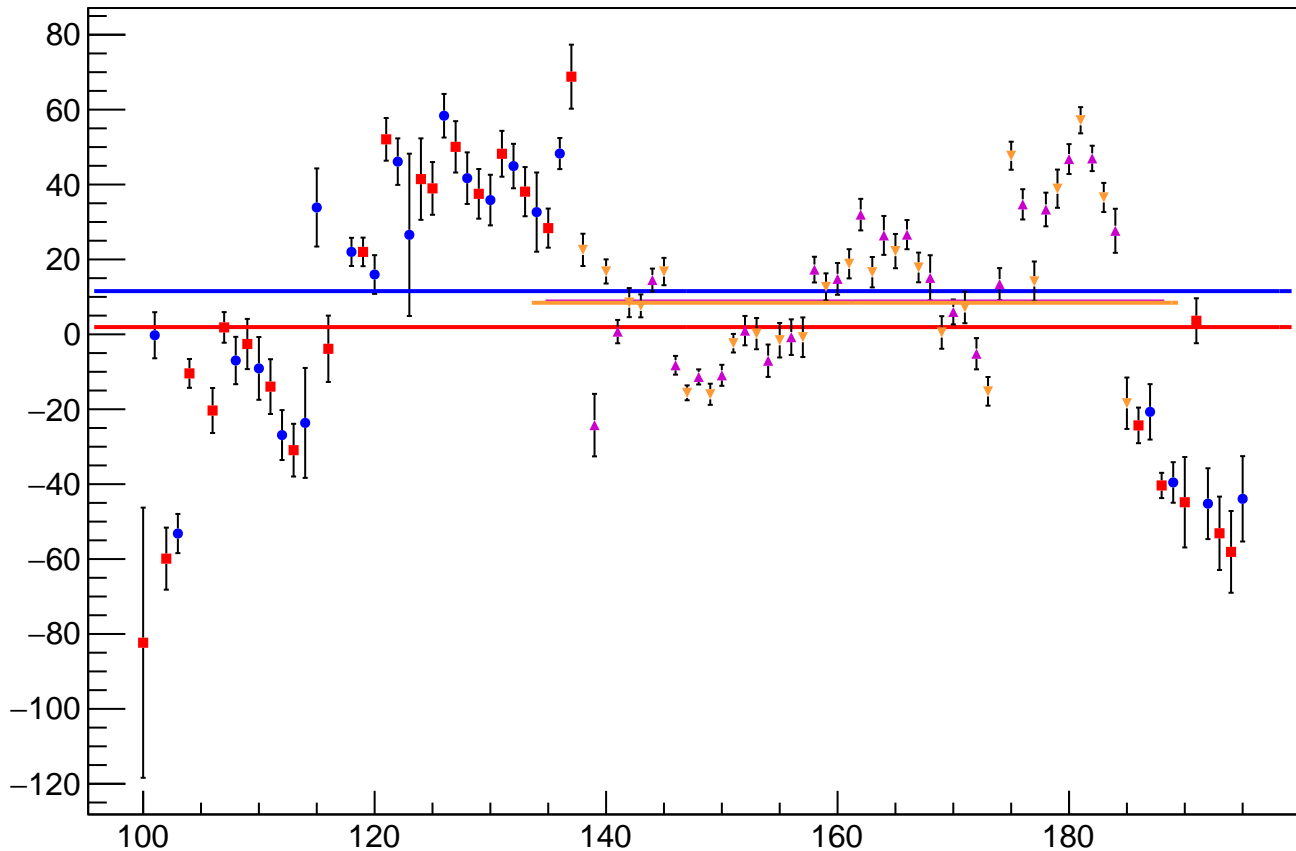
+ sign 174.115 $\pm$ 0.922  $\chi^2$ /NDF: 3282.9/28

All: 179.917 $\pm$ 0.634  $\chi^2$ /NDF: 9418.5/57

- sign 185.131 $\pm$ 0.874  $\chi^2$ /NDF: 6060.4/28



# reg\_asym\_atr\_dd\_diff\_bpm4aY\_slope vs Slug



Right In: 11.541 $\pm$ 1.395  $\chi^2$ /NDF: 633.3/20

Left Out: 8.436 $\pm$ 0.728  $\chi^2$ /NDF: 752.0/24

Right Out: 1.940 $\pm$ 1.193  $\chi^2$ /NDF: 775.6/24

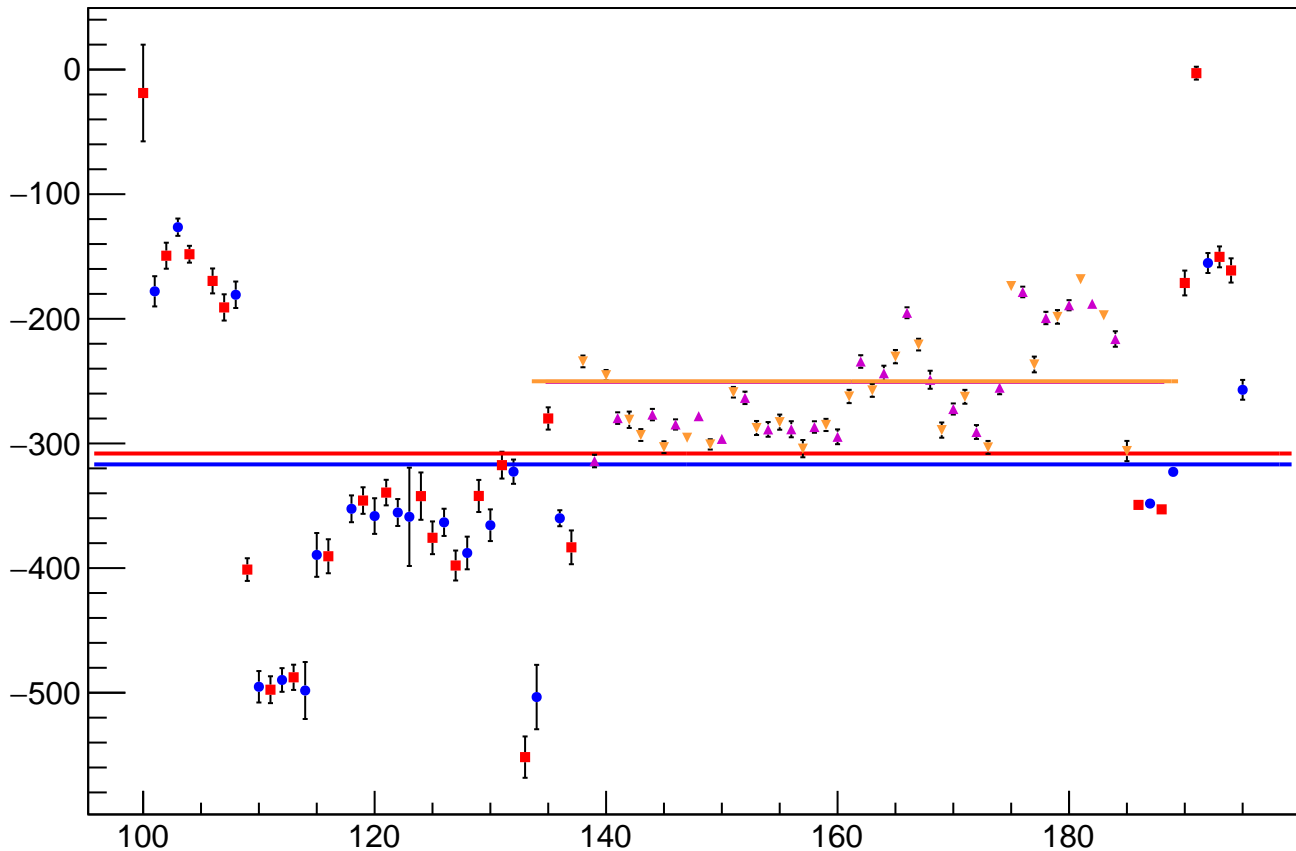
Left In: 8.769 $\pm$ 0.758  $\chi^2$ /NDF: 626.8/22

+ sign 9.101 $\pm$ 0.645  $\chi^2$ /NDF: 1389.2/45

All: 7.943 $\pm$ 0.454  $\chi^2$ /NDF: 2821.3/93

- sign 6.804 $\pm$ 0.640  $\chi^2$ /NDF: 1425.8/47

# reg\_asym\_atr\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-316.801 \pm 1.816$   $\chi^2/\text{NDF}$ : 2387.8/20

Left Out:  $-250.119 \pm 0.972$   $\chi^2/\text{NDF}$ : 2246.9/24

Right Out:  $-308.071 \pm 1.291$   $\chi^2/\text{NDF}$ : 7265.6/24

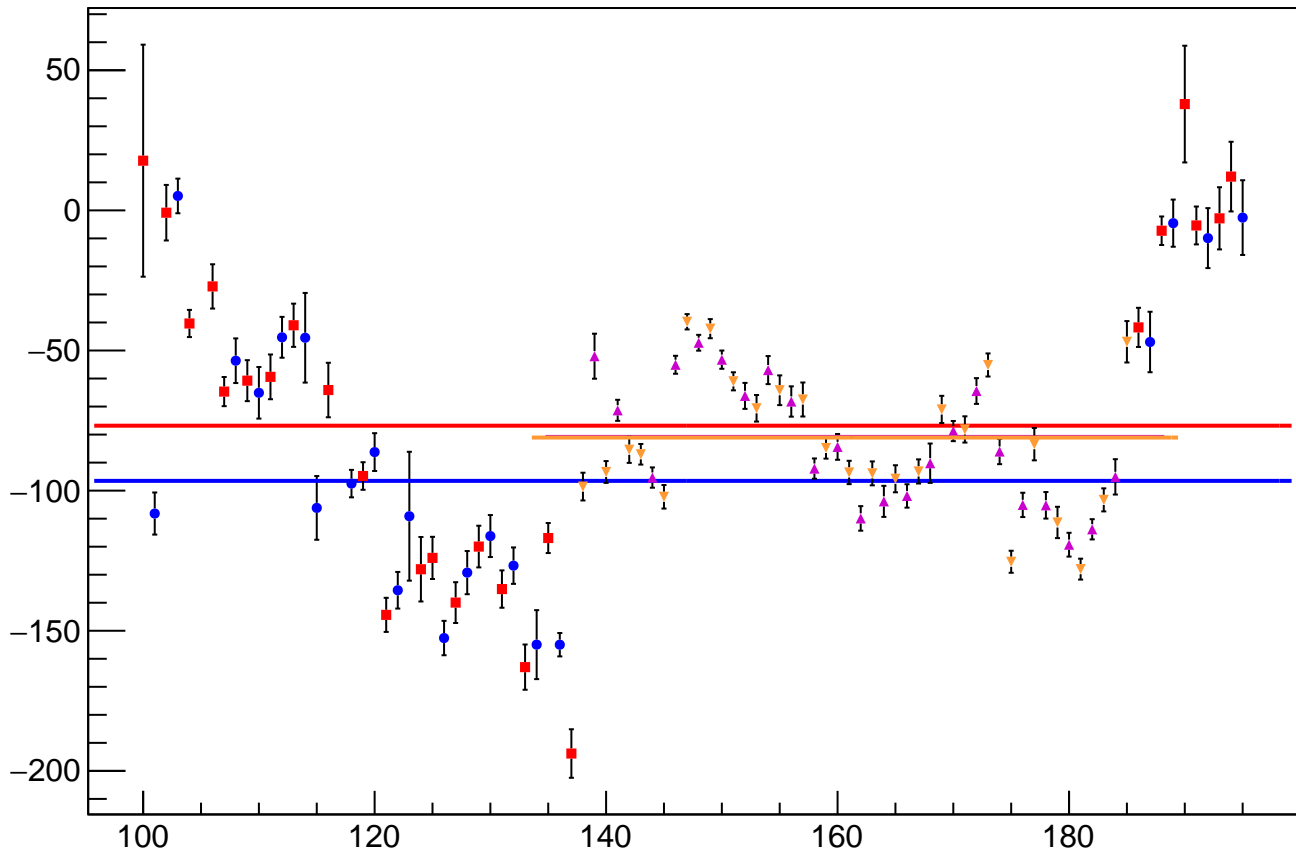
Left In:  $-250.628 \pm 0.990$   $\chi^2/\text{NDF}$ : 1937.1/22

+ sign  $-264.974 \pm 0.857$   $\chi^2/\text{NDF}$ : 5682.5/45

All:  $-268.746 \pm 0.579$   $\chi^2/\text{NDF}$ : 16167.5/93

- sign  $-271.915 \pm 0.786$   $\chi^2/\text{NDF}$ : 10449.4/47

# reg\_asym\_atr\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-96.518 \pm 1.629$   $\chi^2/\text{NDF}: 1017.1/20$

Left Out:  $-81.057 \pm 0.843$   $\chi^2/\text{NDF}: 913.0/24$

Right Out:  $-76.829 \pm 1.440$   $\chi^2/\text{NDF}: 1381.8/24$

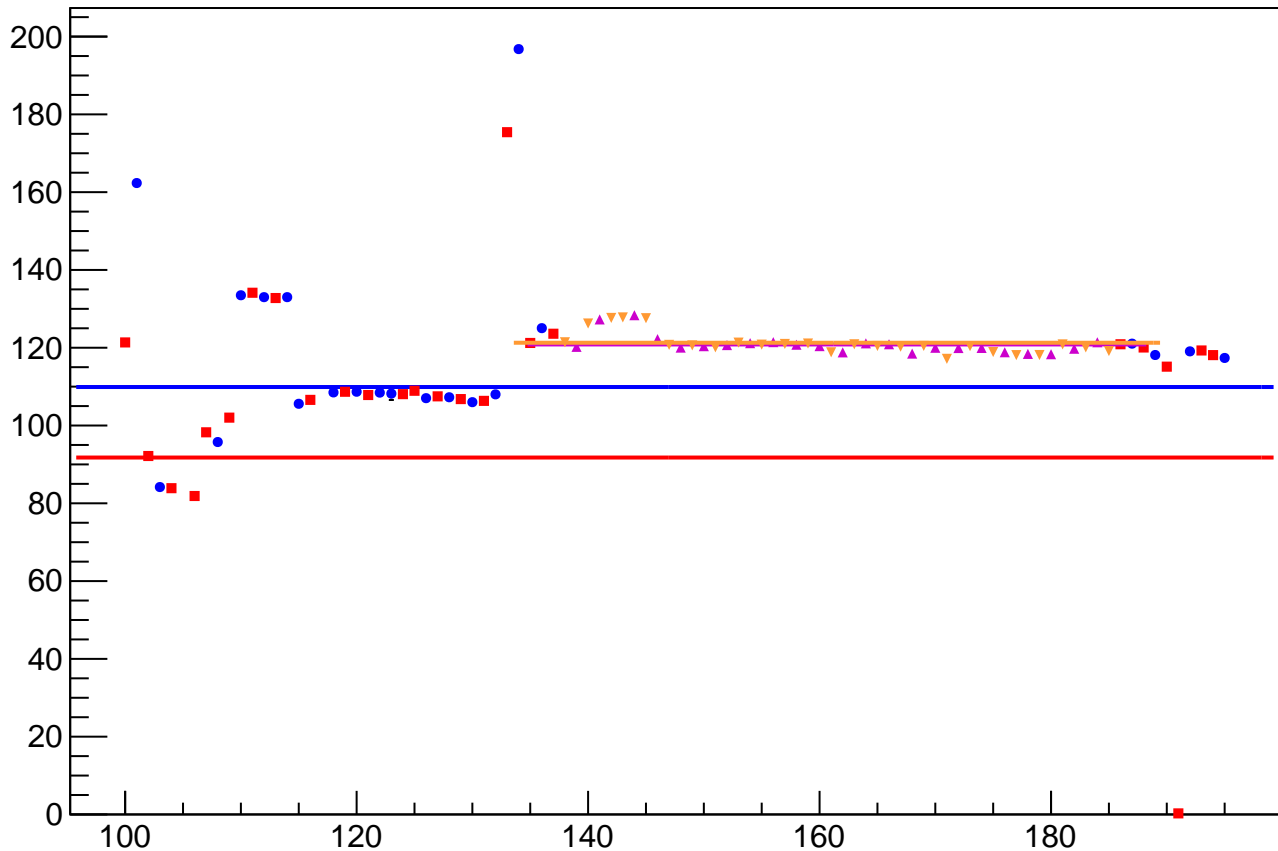
Left In:  $-80.834 \pm 0.872$   $\chi^2/\text{NDF}: 693.1/22$

+ sign  $-84.323 \pm 0.749$   $\chi^2/\text{NDF}: 2001.2/45$

All:  $-82.032 \pm 0.528$   $\chi^2/\text{NDF}: 4100.5/93$

- sign  $-79.759 \pm 0.746$   $\chi^2/\text{NDF}: 2080.6/47$

# reg\_asym\_atr\_dd\_diff\_bpm12X\_slope vs Slug



Right In: 109.900 $\pm$ 0.079  $\chi^2$ /NDF: 75329.8/20

Left Out: 121.283 $\pm$ 0.040  $\chi^2$ /NDF: 4939.3/24

Right Out: 91.768 $\pm$ 0.067  $\chi^2$ /NDF: 342025.4/24

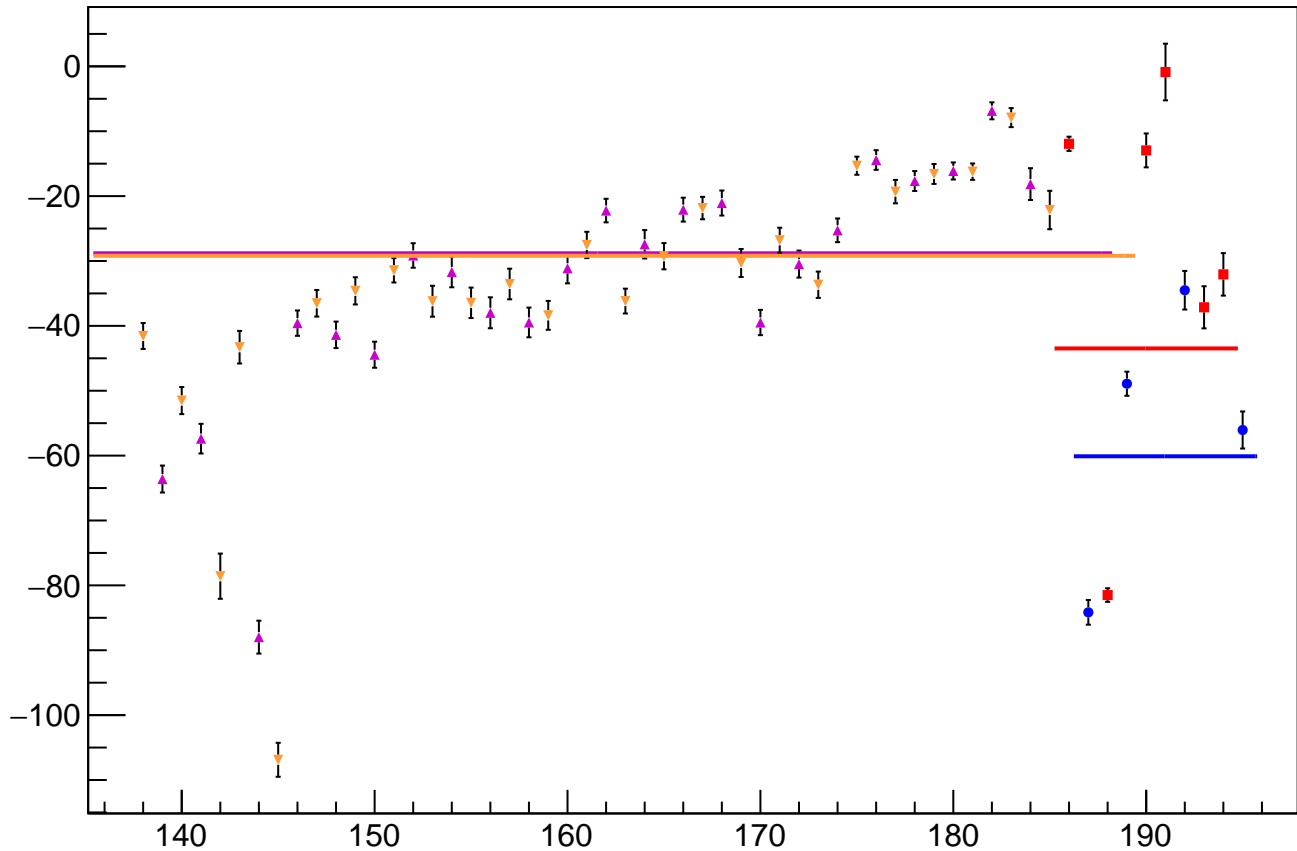
Left In: 120.843 $\pm$ 0.041  $\chi^2$ /NDF: 3368.2/22

+ sign 118.941 $\pm$ 0.036  $\chi^2$ /NDF: 96848.9/45

All: 115.900 $\pm$ 0.025  $\chi^2$ /NDF: 593733.3/93

- sign 113.018 $\pm$ 0.035  $\chi^2$ /NDF: 482783.5/47

# reg\_asym\_at1\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-60.104 \pm 1.118$   $\chi^2/\text{NDF}: 271.4/3$

Left Out:  $-29.199 \pm 0.389$   $\chi^2/\text{NDF}: 1881.5/24$

Right Out:  $-43.479 \pm 0.686$   $\chi^2/\text{NDF}: 2385.0/5$

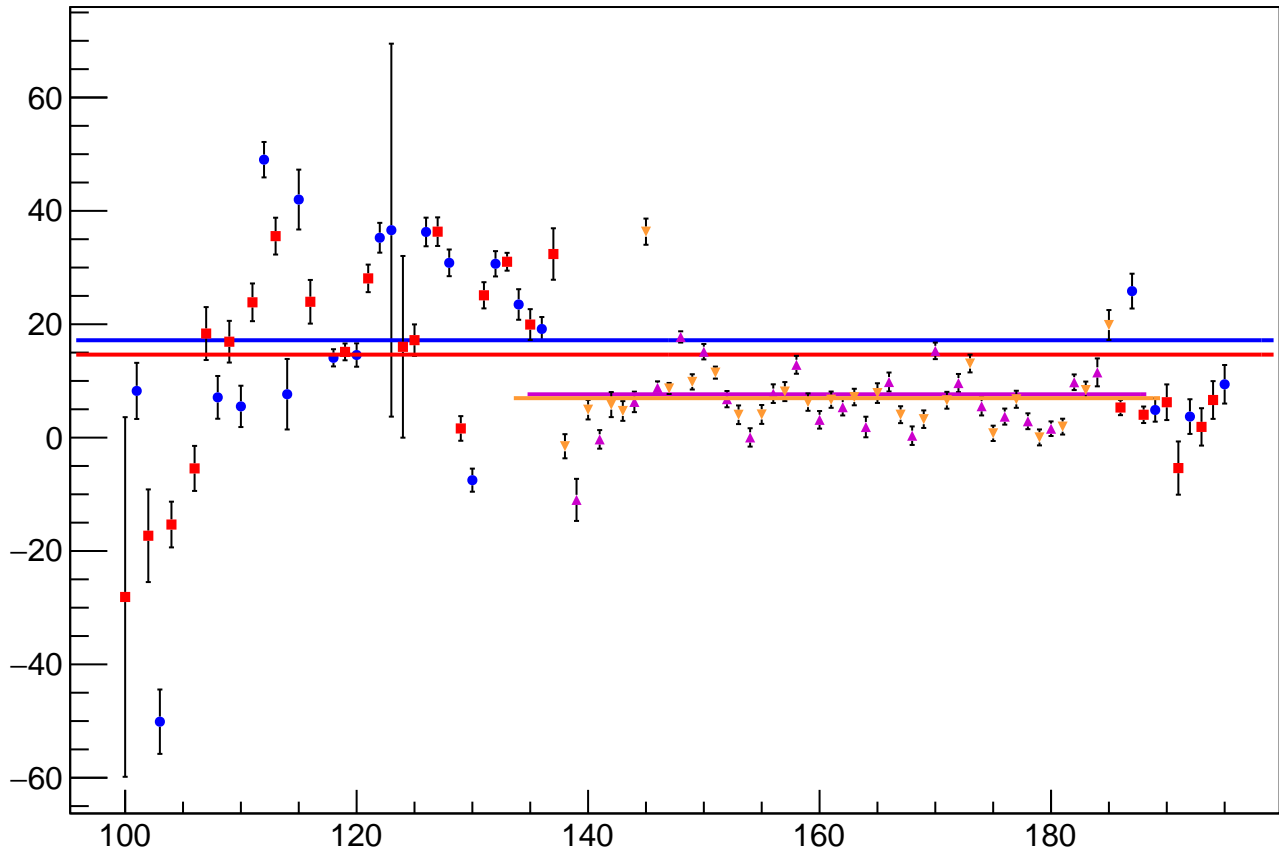
Left In:  $-28.810 \pm 0.395$   $\chi^2/\text{NDF}: 1763.8/22$

+ sign  $-32.530 \pm 0.367$   $\chi^2/\text{NDF}: 2834.7/28$

All:  $-32.496 \pm 0.250$   $\chi^2/\text{NDF}: 7326.7/57$

- sign  $-32.466 \pm 0.343$   $\chi^2/\text{NDF}: 4492.0/28$

# reg\_asym\_at1\_avg\_diff\_bpm4aY\_slope vs Slug



Right In: 17.177 $\pm$ 0.590  $\chi^2$ /NDF: 691.4/20

Left Out: 6.960 $\pm$ 0.303  $\chi^2$ /NDF:321.3/24

Right Out: 14.642 $\pm$ 0.515  $\chi^2$ /NDF: 590.7/24

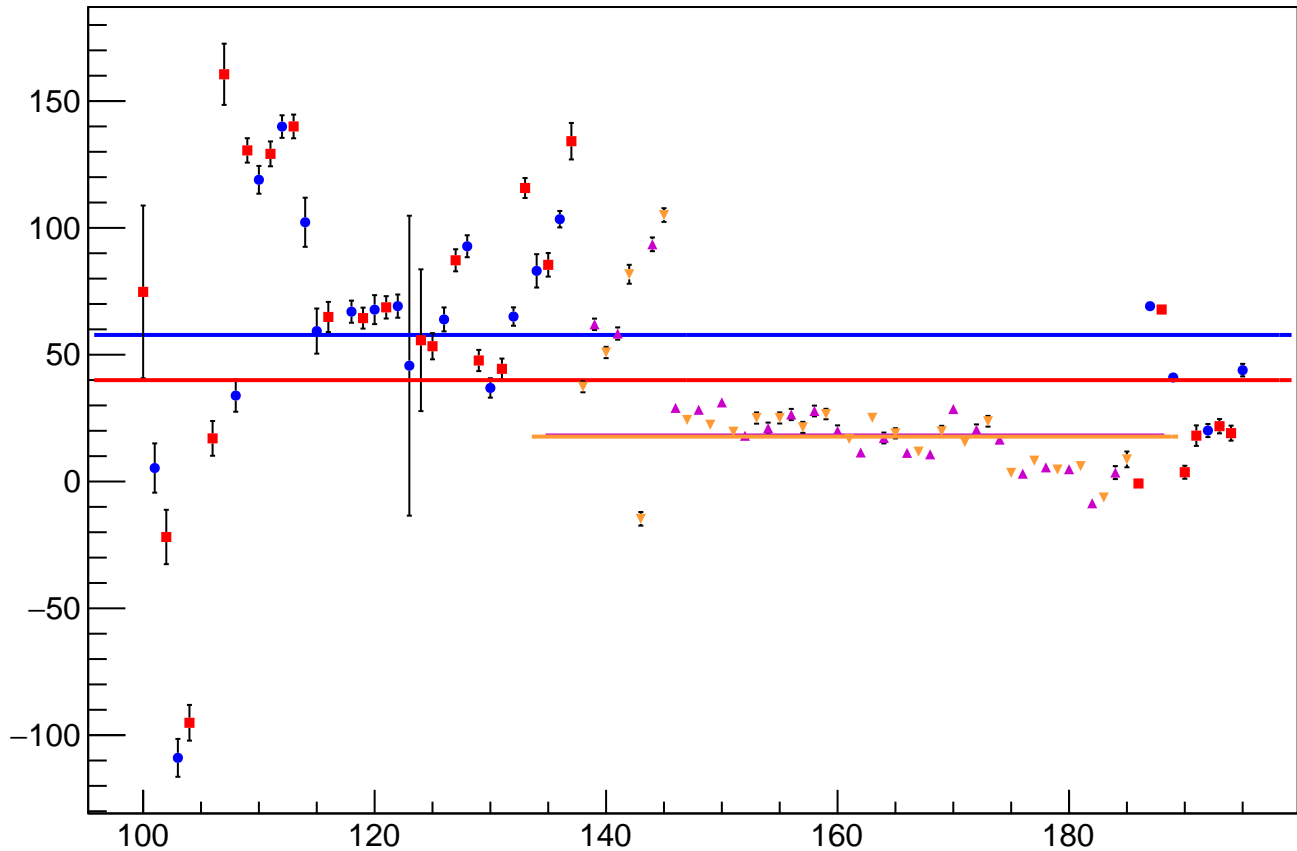
Left In: 7.638 $\pm$ 0.313  $\chi^2$ /NDF:337.7/22

+ sign 9.092 $\pm$ 0.270  $\chi^2$ /NDF: 1250.0/45

All: 9.313 $\pm$ 0.190  $\chi^2$ /NDF: 2314.7/93

- sign 9.531 $\pm$ 0.268  $\chi^2$ /NDF: 1063.3/47

# reg\_asym\_at1\_avg\_diff\_bpm4eX\_slope vs Slug



Right In: 57.791 $\pm$ 0.751  $\chi^2$ /NDF: 1764.0/20

Left Out: 17.705 $\pm$ 0.387  $\chi^2$ /NDF:2432.2/24

Right Out: 39.973 $\pm$ 0.512  $\chi^2$ /NDF: 6077.7/24

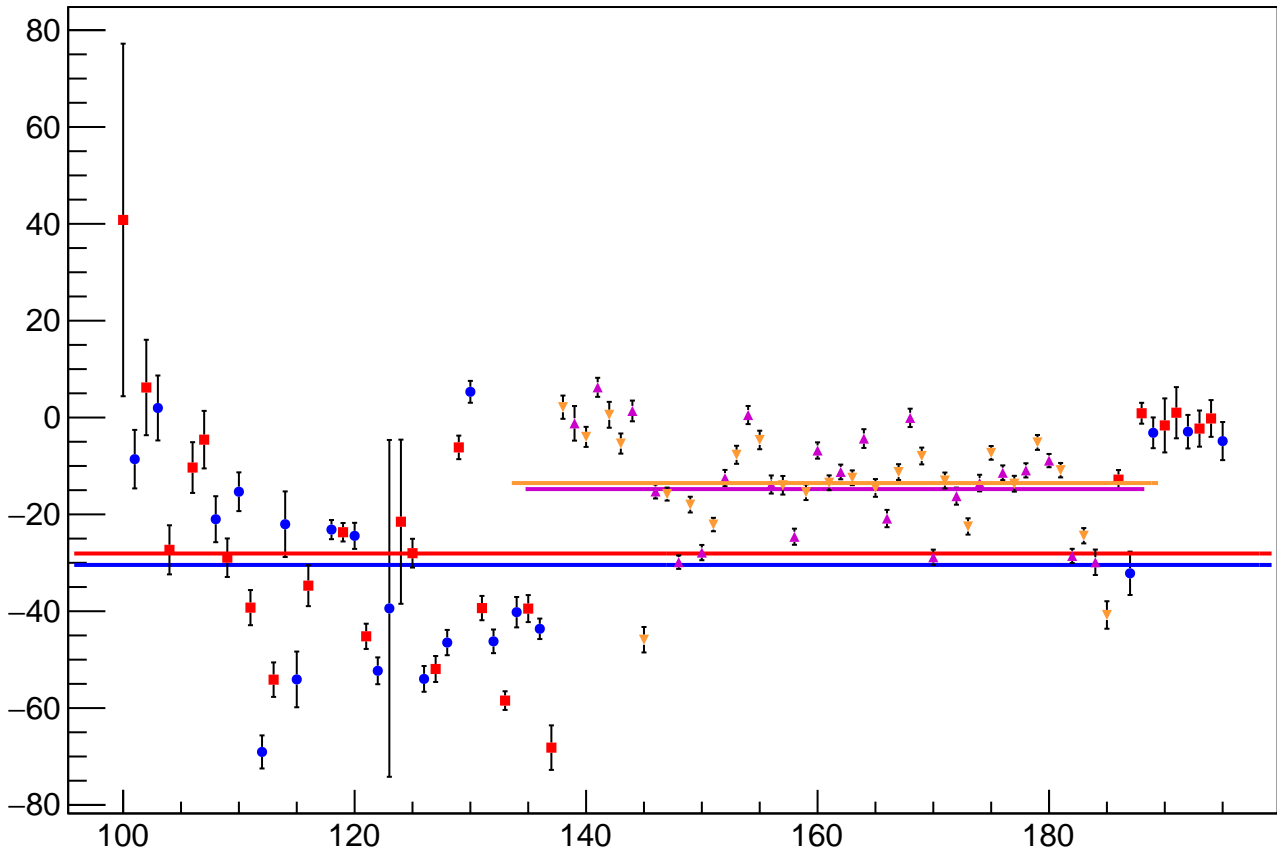
Left In: 18.150 $\pm$ 0.393  $\chi^2$ /NDF:2339.4/22

+ sign 26.131 $\pm$ 0.344  $\chi^2$ /NDF: 6448.9/45

All: 26.187 $\pm$ 0.231  $\chi^2$ /NDF: 16010.5/93

- sign 26.232 $\pm$ 0.312  $\chi^2$ /NDF: 9561.5/47

# reg\_asym\_at1\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $-30.439 \pm 0.691$   $\chi^2/\text{NDF}: 918.3/20$

Left Out:  $-13.531 \pm 0.344$   $\chi^2/\text{NDF}: 572.8/24$

Right Out:  $-28.080 \pm 0.630$   $\chi^2/\text{NDF}: 1073.0/24$

Left In:  $-14.778 \pm 0.354$   $\chi^2/\text{NDF}: 838.0/22$

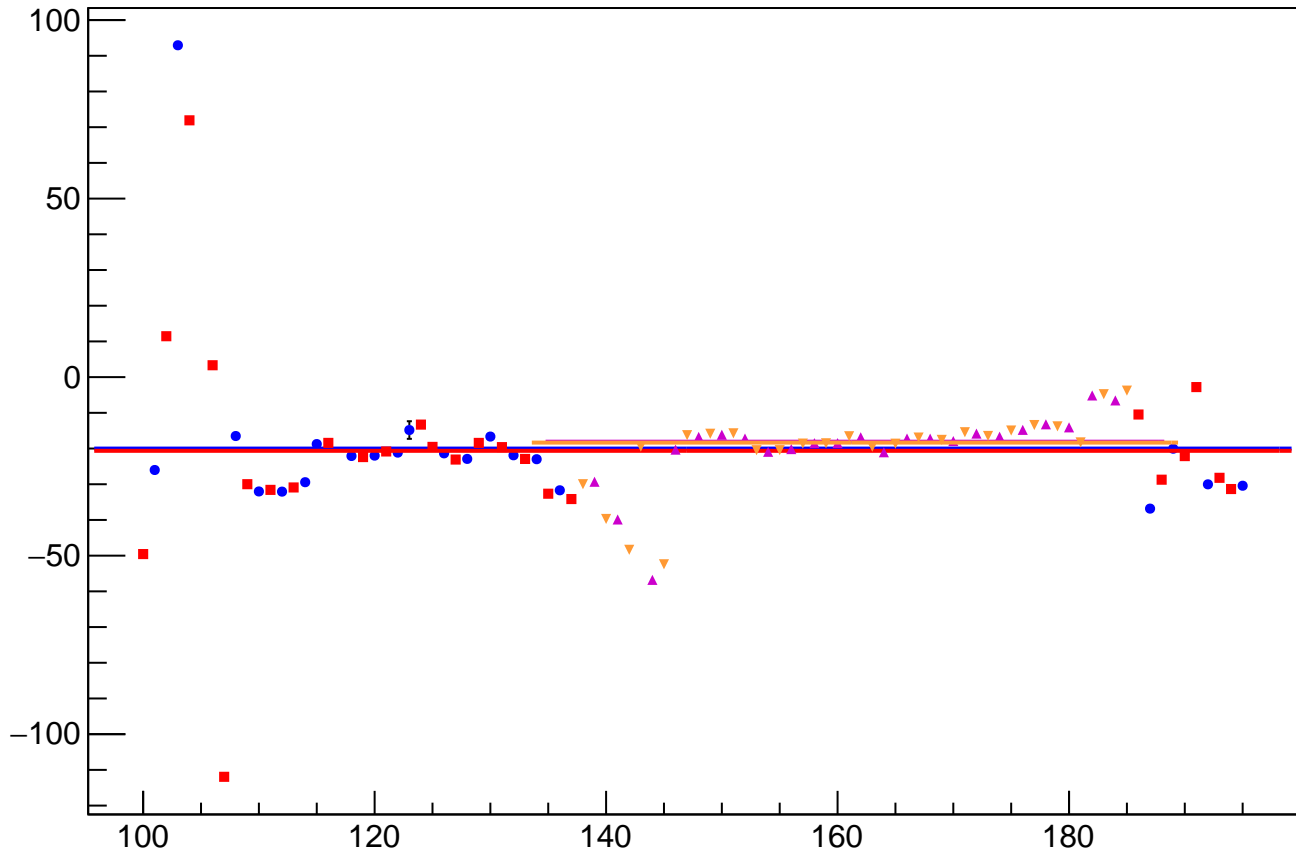
+ sign  $-16.888 \pm 0.308$   $\chi^2/\text{NDF}: 1970.7/45$

All:  $-17.428 \pm 0.218$   $\chi^2/\text{NDF}: 4226.6/93$

- sign  $-17.971 \pm 0.309$   $\chi^2/\text{NDF}: 2249.8/47$



# reg\_asym\_at1\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-20.014 \pm 0.037$   $\chi^2/\text{NDF}: 501431.2/20$

Left Out:  $-18.334 \pm 0.016$   $\chi^2/\text{NDF}: 284152.1/24$

Right Out:  $-20.638 \pm 0.034$   $\chi^2/\text{NDF}: 475232.9/24$

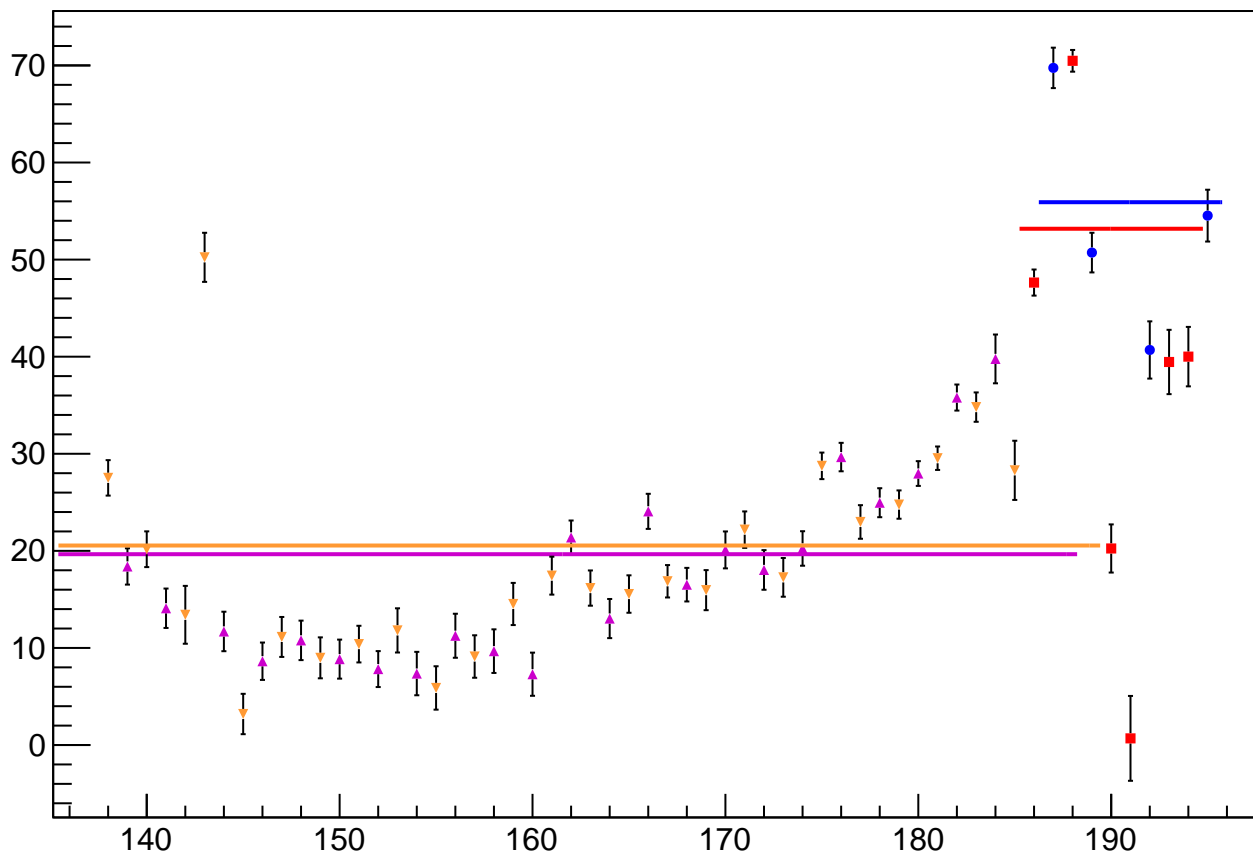
Left In:  $-18.083 \pm 0.016$   $\chi^2/\text{NDF}: 241949.5/22$

+ sign  $-18.591 \pm 0.015$   $\chi^2/\text{NDF}: 787304.1/45$

All:  $-18.570 \pm 0.010$   $\chi^2/\text{NDF}: 1509084.0/93$

- sign  $-18.548 \pm 0.015$   $\chi^2/\text{NDF}: 721775.6/47$

# reg\_asym\_at1\_dd\_diff\_bpm1X\_slope vs Slug



Right In: 55.912+/-1.174  $\chi^2$ /NDF: 77.5/3

Left Out: 20.550+/-0.373  $\chi^2$ /NDF:626.4/24

Right Out: 53.178+/-0.752  $\chi^2$ /NDF: 612.6/5

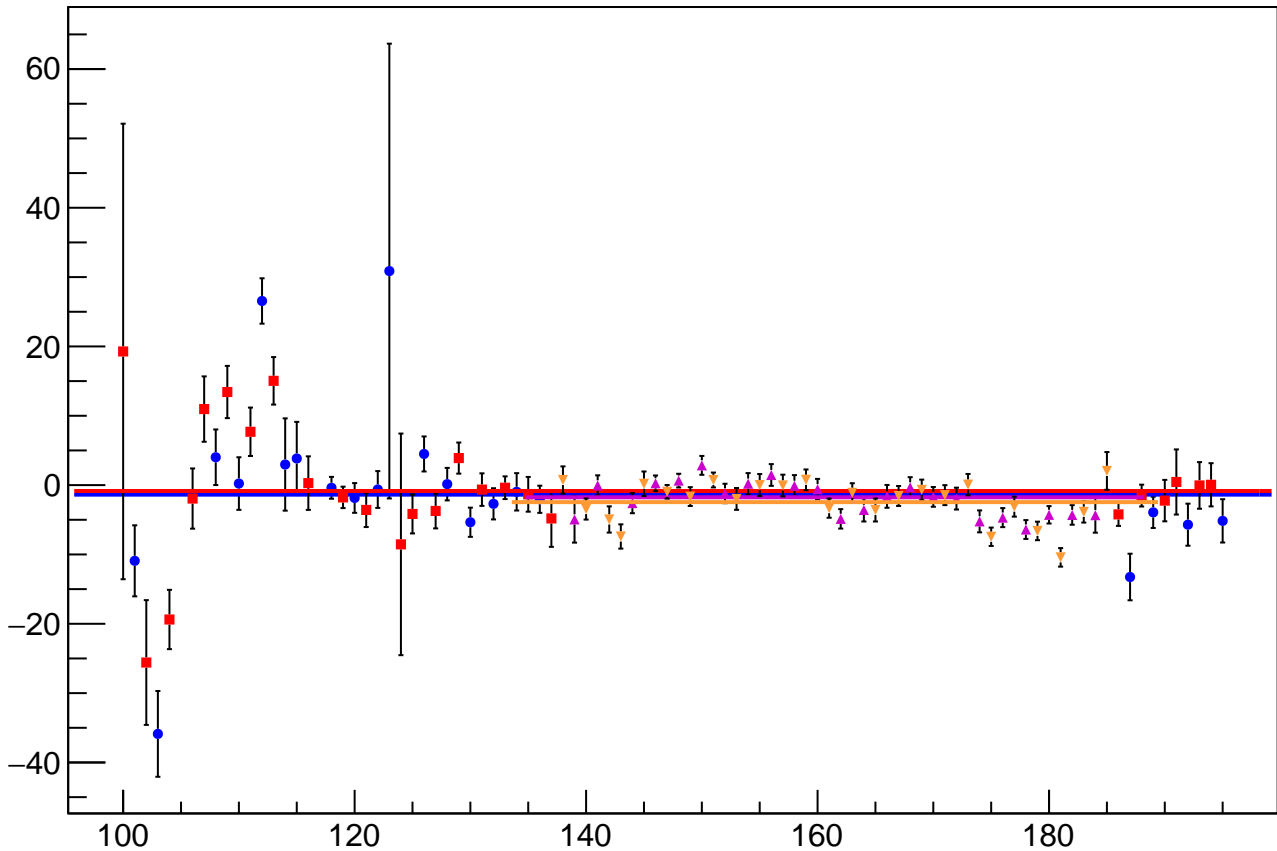
Left In: 19.656+/-0.380  $\chi^2$ /NDF:571.8/22

+ sign 23.795+/-0.356  $\chi^2$ /NDF: 1528.3/28

All: 25.200+/-0.246  $\chi^2$ /NDF: 4323.5/57

- sign 26.480+/-0.339  $\chi^2$ /NDF: 2765.4/28

# reg\_asym\_at1\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-1.372 \pm 0.601$   $\chi^2/\text{NDF}: 139.5/20$

Left Out:  $-2.455 \pm 0.292$   $\chi^2/\text{NDF}: 106.0/24$

Right Out:  $-0.850 \pm 0.540$   $\chi^2/\text{NDF}: 89.8/24$

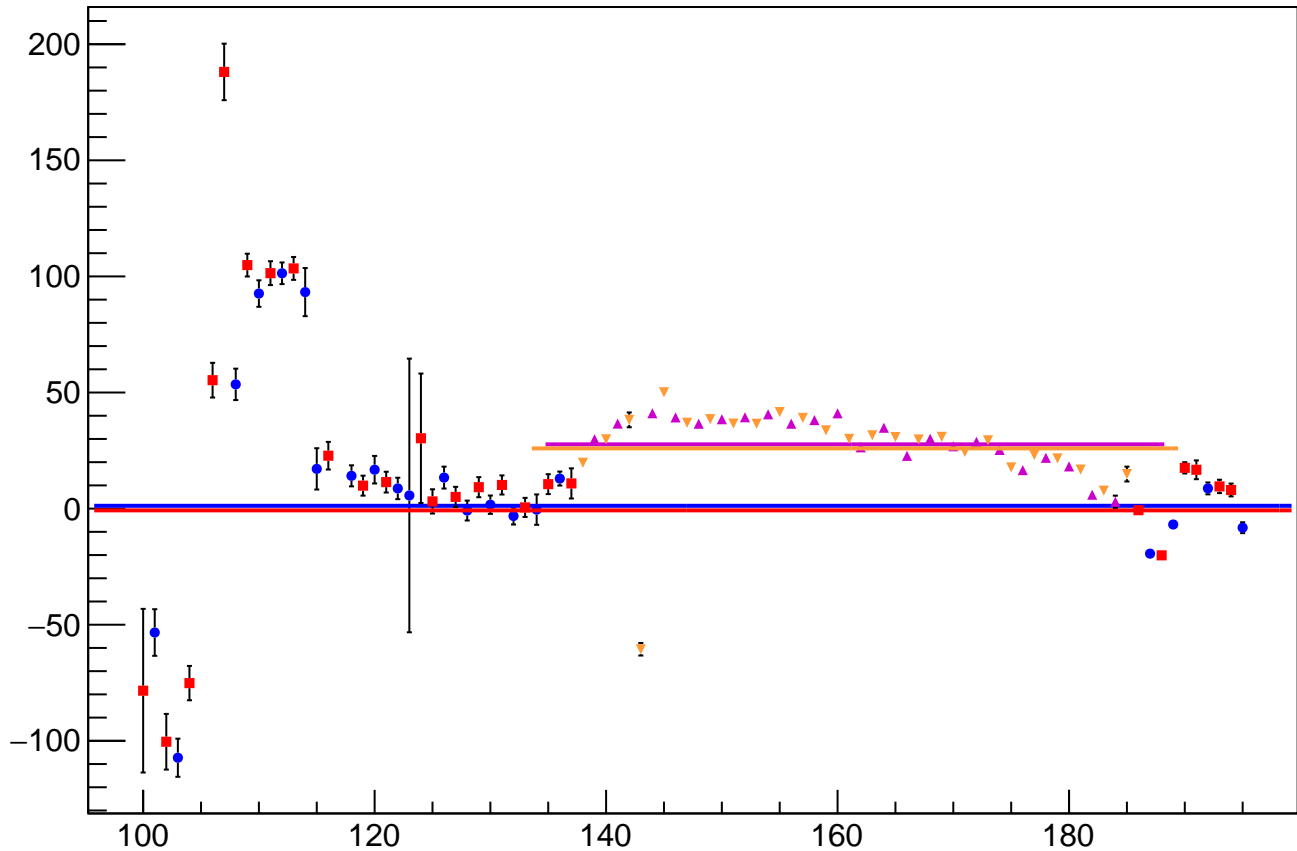
Left In:  $-1.758 \pm 0.302$   $\chi^2/\text{NDF}: 67.4/22$

+ sign  $-2.248 \pm 0.263$   $\chi^2/\text{NDF}: 248.1/45$

All:  $-1.896 \pm 0.186$   $\chi^2/\text{NDF}: 411.0/93$

- sign  $-1.542 \pm 0.264$   $\chi^2/\text{NDF}: 159.4/47$

# reg\_asym\_at1\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $1.217 \pm 0.779$   $\chi^2/\text{NDF}: 1296.0/20$

Left Out:  $25.938 \pm 0.372$   $\chi^2/\text{NDF}: 1711.6/24$

Right Out:  $-0.752 \pm 0.557$   $\chi^2/\text{NDF}: 2393.0/24$

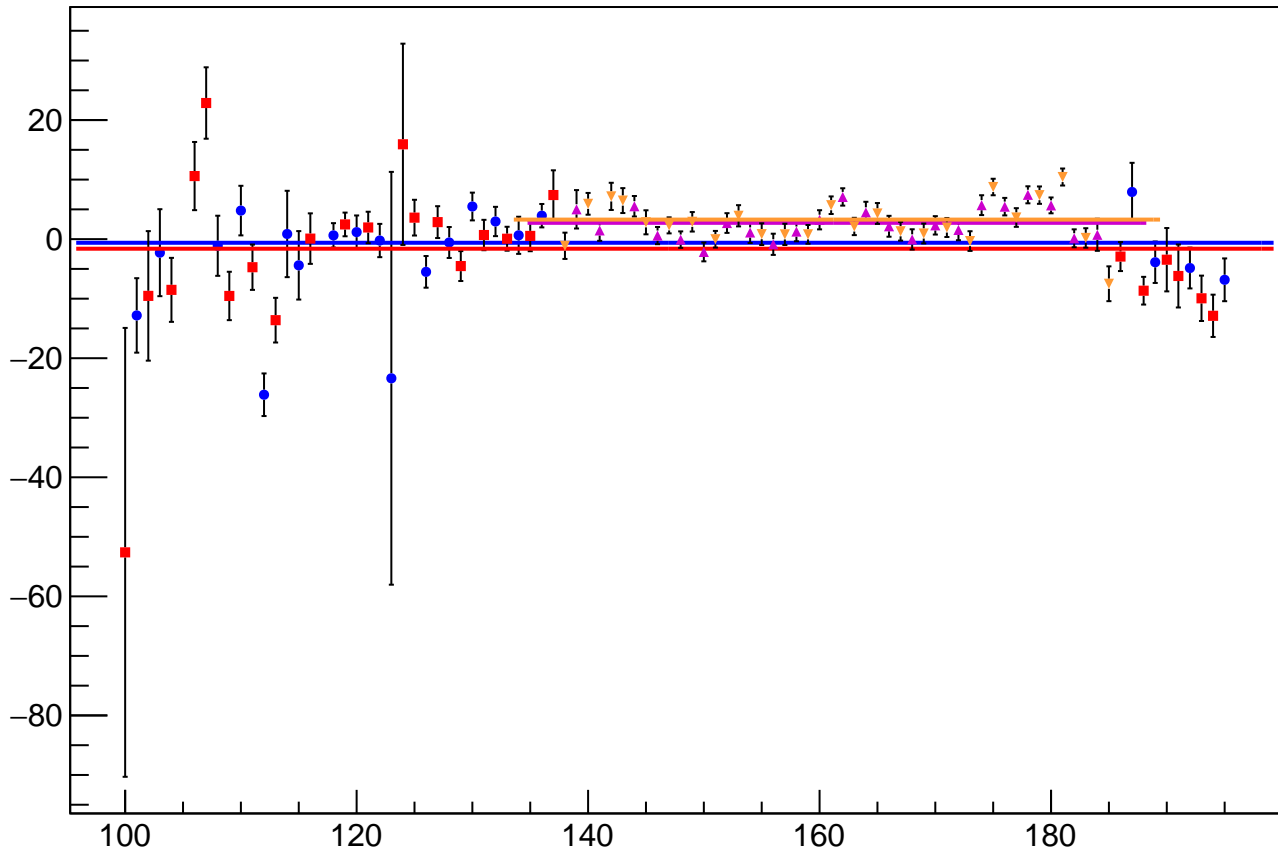
Left In:  $27.677 \pm 0.378$   $\chi^2/\text{NDF}: 803.9/22$

+ sign  $21.345 \pm 0.336$   $\chi^2/\text{NDF}: 3826.5/45$

All:  $19.936 \pm 0.229$   $\chi^2/\text{NDF}: 8837.7/93$

- sign  $18.713 \pm 0.313$   $\chi^2/\text{NDF}: 4978.3/47$

# reg\_asym\_at1\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-0.611 \pm 0.698$   $\chi^2/\text{NDF}: 84.4/20$

Left Out:  $3.283 \pm 0.331$   $\chi^2/\text{NDF}: 102.3/24$

Right Out:  $-1.609 \pm 0.652$   $\chi^2/\text{NDF}: 86.5/24$

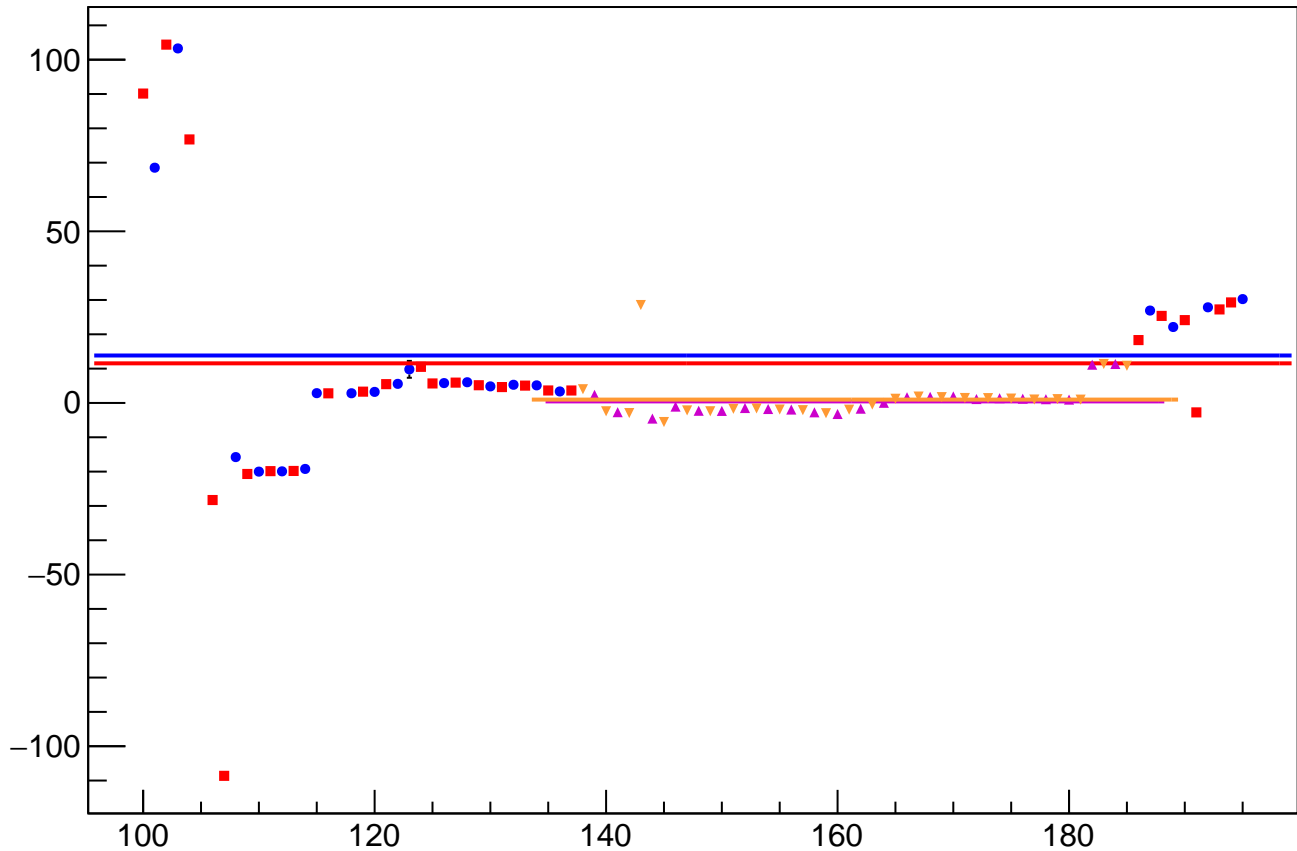
Left In:  $2.738 \pm 0.341$   $\chi^2/\text{NDF}: 64.5/22$

+ sign  $2.567 \pm 0.299$   $\chi^2/\text{NDF}: 212.1/45$

All:  $2.189 \pm 0.213$   $\chi^2/\text{NDF}: 401.1/93$

- sign  $1.804 \pm 0.302$   $\chi^2/\text{NDF}: 185.8/47$

# reg\_asym\_at1\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $13.824 \pm 0.037$   $\chi^2/\text{NDF}: 421438.9/20$

Left Out:  $0.979 \pm 0.015$   $\chi^2/\text{NDF}: 117391.3/24$

Right Out:  $11.539 \pm 0.035$   $\chi^2/\text{NDF}: 620438.3/24$

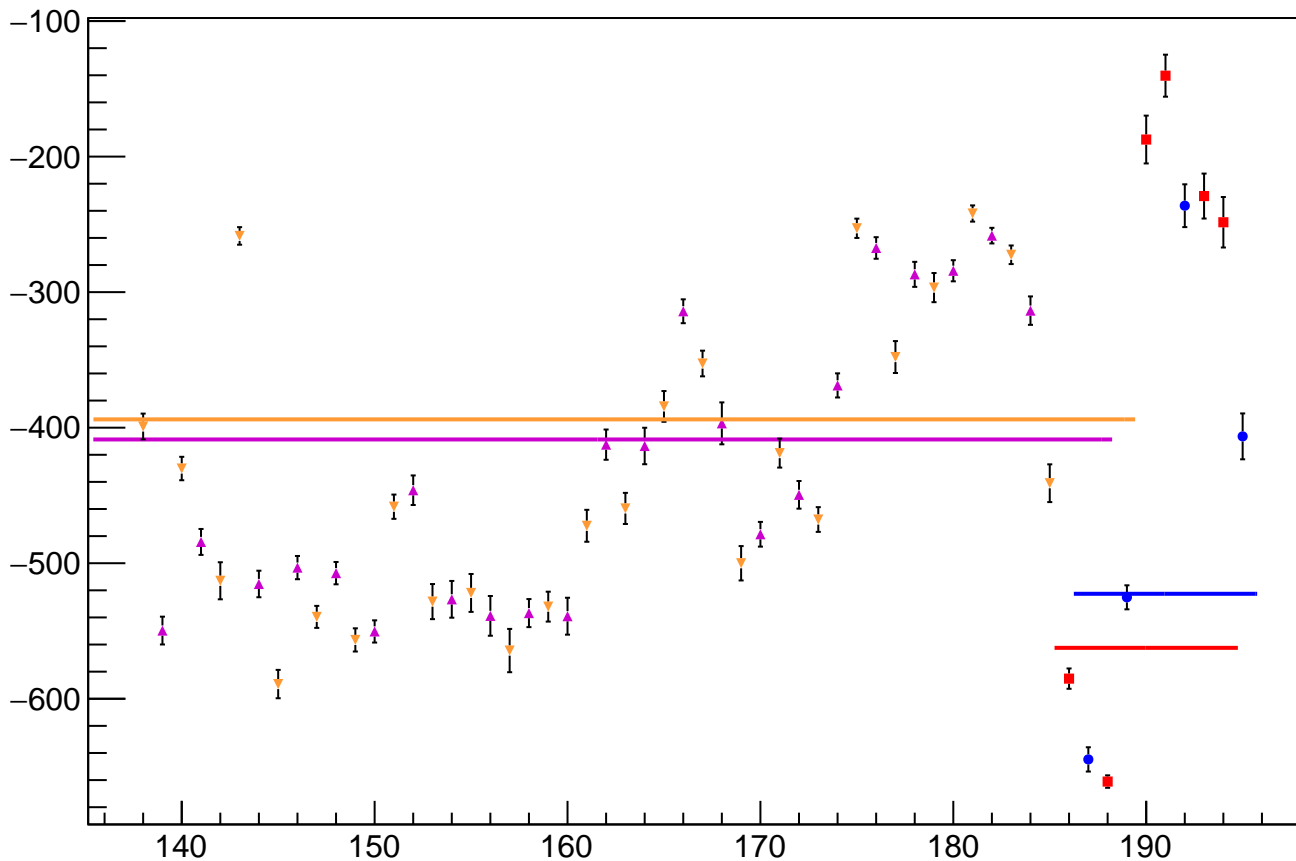
Left In:  $0.451 \pm 0.015$   $\chi^2/\text{NDF}: 50699.8/22$

+ sign  $2.830 \pm 0.014$   $\chi^2/\text{NDF}: 641883.3/45$

All:  $2.564 \pm 0.010$   $\chi^2/\text{NDF}: 1399647.8/93$

- sign  $2.296 \pm 0.014$   $\chi^2/\text{NDF}: 757043.2/47$

# reg\_asym\_at2\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-522.551 \pm 5.532$   $\chi^2/\text{NDF}$ : 561.8/3

Left Out:  $-393.871 \pm 1.897$   $\chi^2/\text{NDF}$ : 3772.8/24

Right Out:  $-562.433 \pm 3.556$   $\chi^2/\text{NDF}$ : 2352.1/5

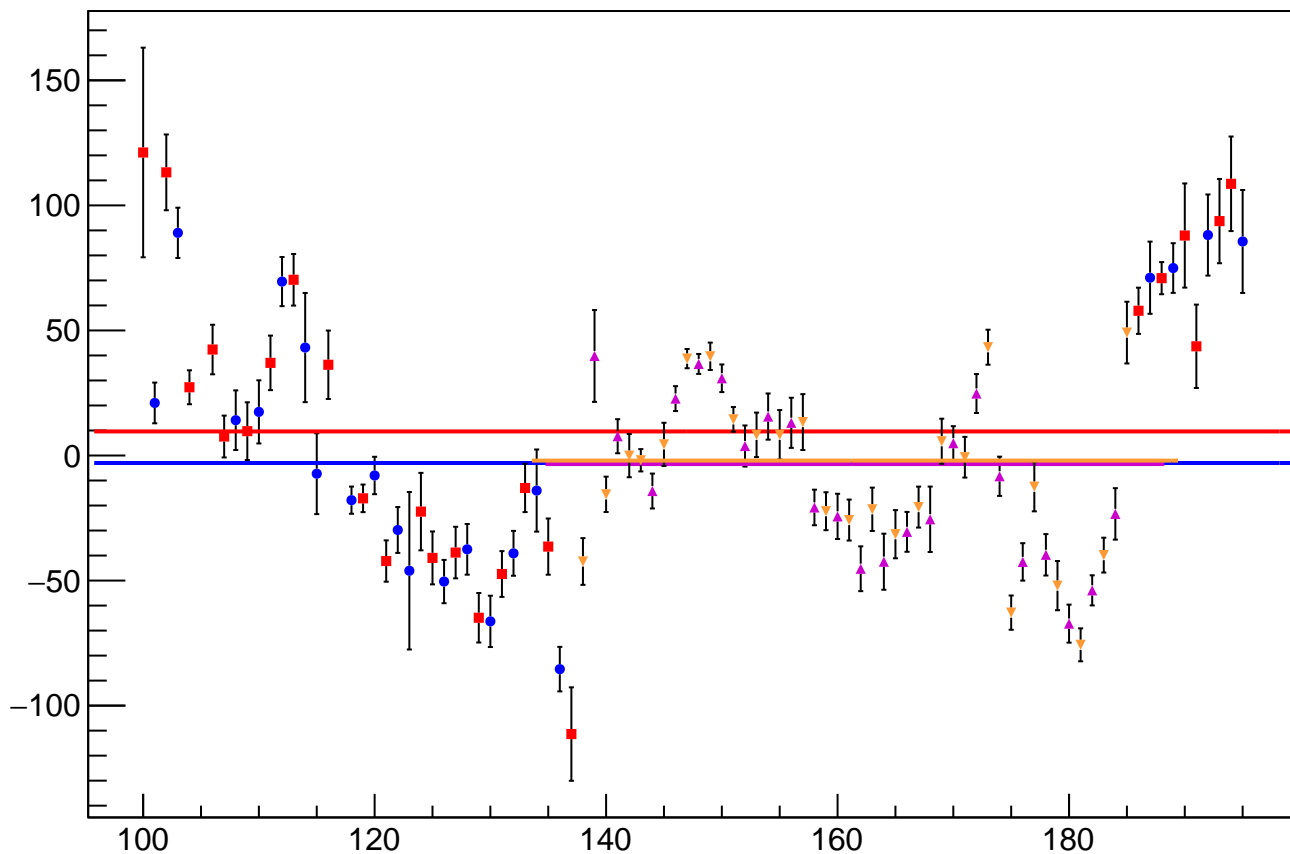
Left In:  $-408.696 \pm 1.979$   $\chi^2/\text{NDF}$ : 3062.9/22

+ sign  $-407.411 \pm 1.794$   $\chi^2/\text{NDF}$ : 4818.7/28

All:  $-426.925 \pm 1.245$   $\chi^2/\text{NDF}$ : 11888.7/57

- sign  $-445.046 \pm 1.729$   $\chi^2/\text{NDF}$ : 6841.9/28

# reg\_asym\_at2\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $-2.987 \pm 2.227$   $\chi^2/\text{NDF}: 494.6/20$

Left Out:  $-2.037 \pm 1.424$   $\chi^2/\text{NDF}: 563.8/24$

Right Out:  $9.619 \pm 2.026$   $\chi^2/\text{NDF}: 577.0/24$

Left In:  $-3.420 \pm 1.520$   $\chi^2/\text{NDF}: 451.0/22$

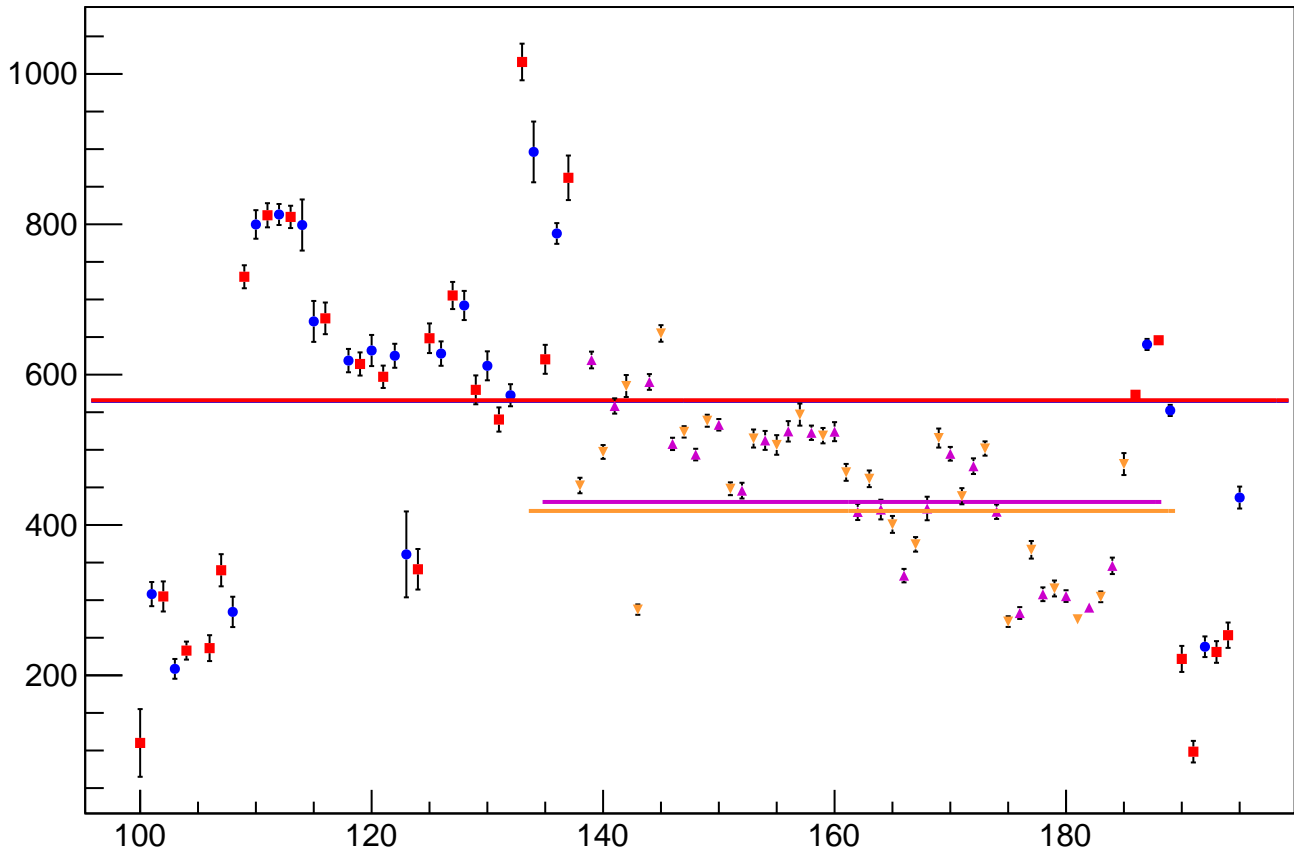
+ sign  $-2.313 \pm 1.200$   $\chi^2/\text{NDF}: 1058.6/45$

All:  $-0.541 \pm 0.854$   $\chi^2/\text{NDF}: 2117.4/93$

- sign  $1.278 \pm 1.216$   $\chi^2/\text{NDF}: 1054.5/47$



# reg\_asym\_at2\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $565.069 \pm 3.173$   $\chi^2/\text{NDF}: 2905.8/20$

Left Out:  $418.680 \pm 1.905$   $\chi^2/\text{NDF}: 3296.5/24$

Right Out:  $565.907 \pm 2.383$   $\chi^2/\text{NDF}: 5590.5/24$

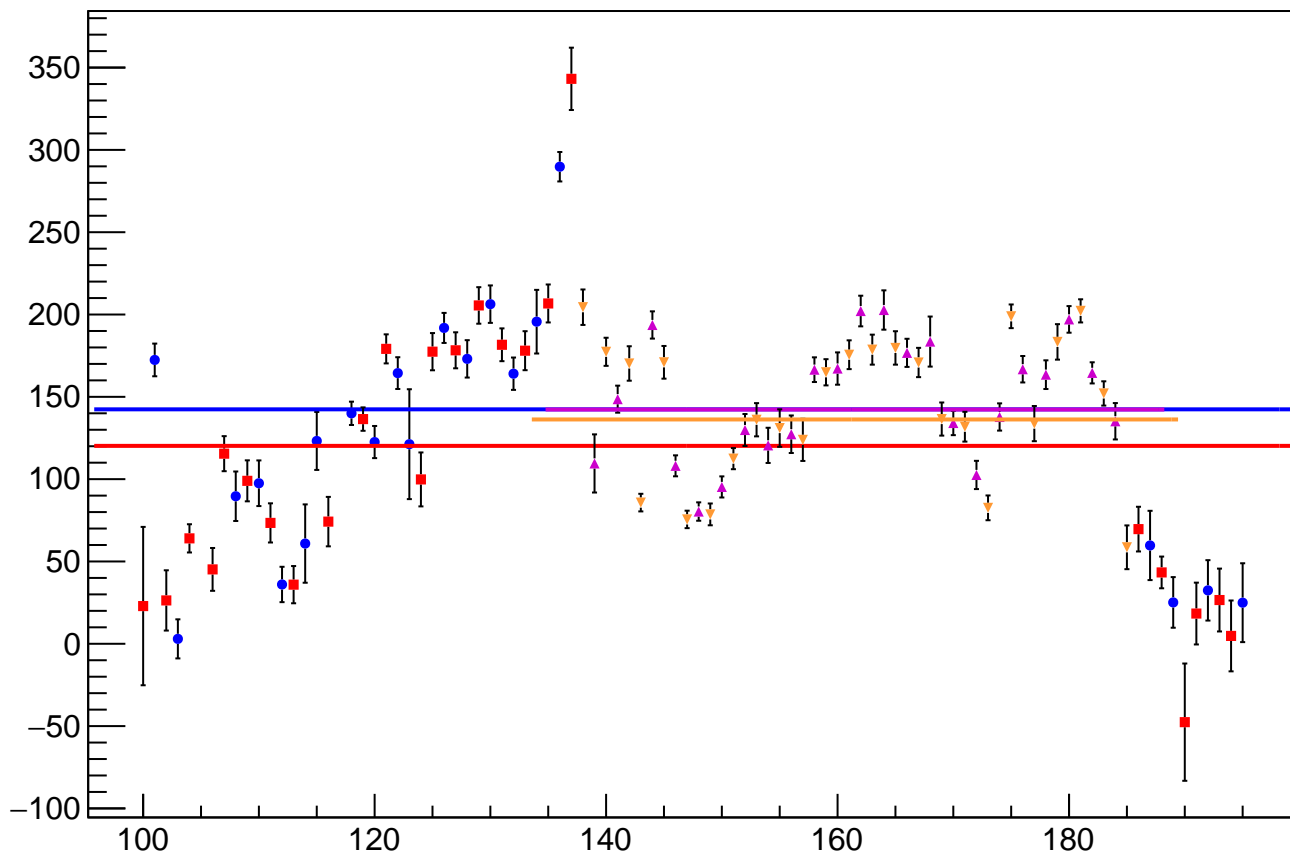
Left In:  $430.640 \pm 1.971$   $\chi^2/\text{NDF}: 2850.6/22$

+ sign  $457.456 \pm 1.633$   $\chi^2/\text{NDF}: 7766.6/45$

All:  $472.541 \pm 1.112$   $\chi^2/\text{NDF}: 18280.3/93$

- sign  $485.583 \pm 1.519$   $\chi^2/\text{NDF}: 10354.7/47$

# reg\_asym\_at2\_avg\_diff\_bpm4eY\_slope vs Slug



Right In: 142.408 $\pm$ 2.610  $\chi^2$ /NDF: 776.7/20

Left Out: 136.258 $\pm$ 1.651  $\chi^2$ /NDF: 758.3/24

Right Out: 120.215 $\pm$ 2.422  $\chi^2$ /NDF: 793.2/24

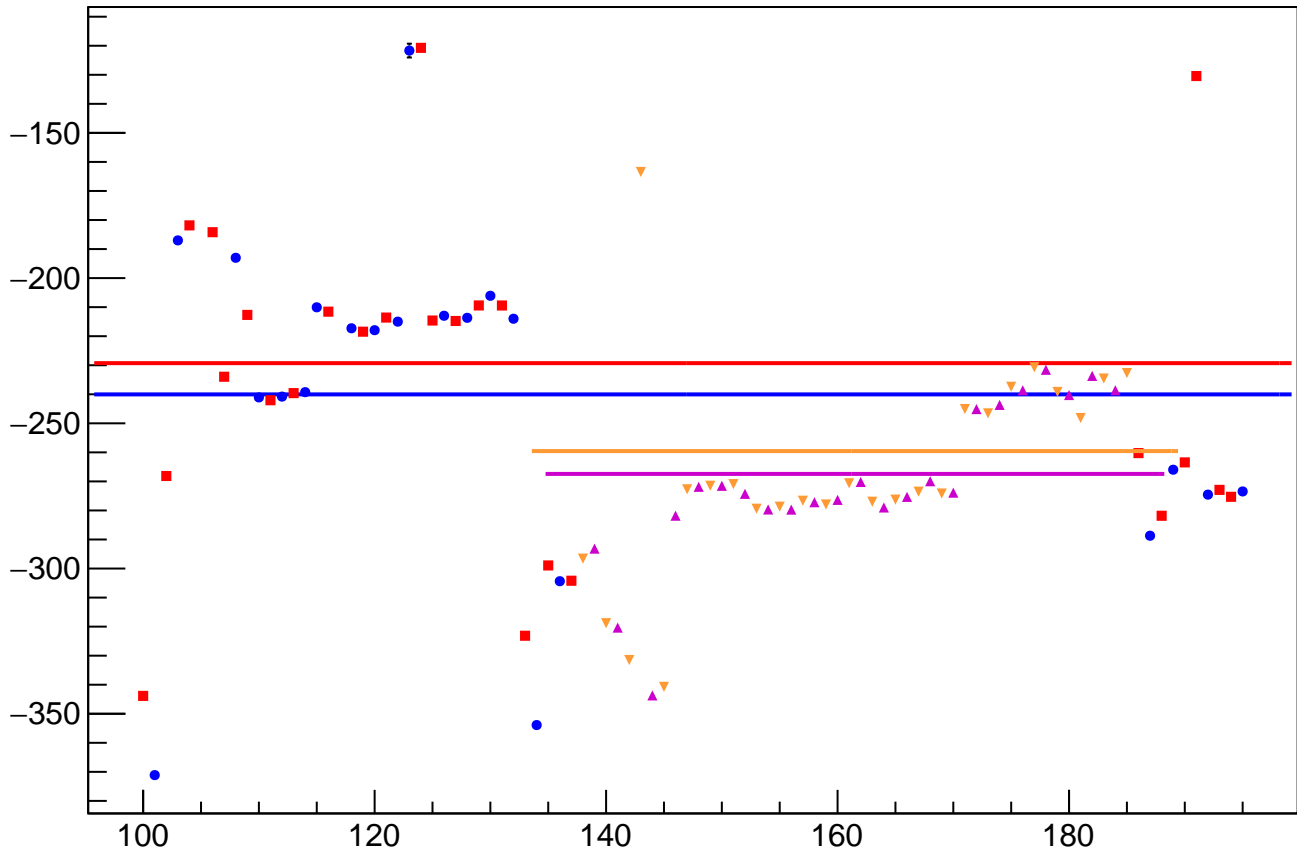
Left In: 142.296 $\pm$ 1.745  $\chi^2$ /NDF: 459.8/22

+ sign 138.016 $\pm$ 1.395  $\chi^2$ /NDF: 1538.9/45

All: 136.409 $\pm$ 0.994  $\chi^2$ /NDF: 2849.3/93

- sign 134.754 $\pm$ 1.416  $\chi^2$ /NDF: 1307.7/47

# reg\_asym\_at2\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-240.040 \pm 0.138$   $\chi^2/\text{NDF}: 154926.5/20$

Left Out:  $-259.557 \pm 0.079$   $\chi^2/\text{NDF}: 238235.2/24$

Right Out:  $-229.281 \pm 0.124$   $\chi^2/\text{NDF}: 159756.8/24$

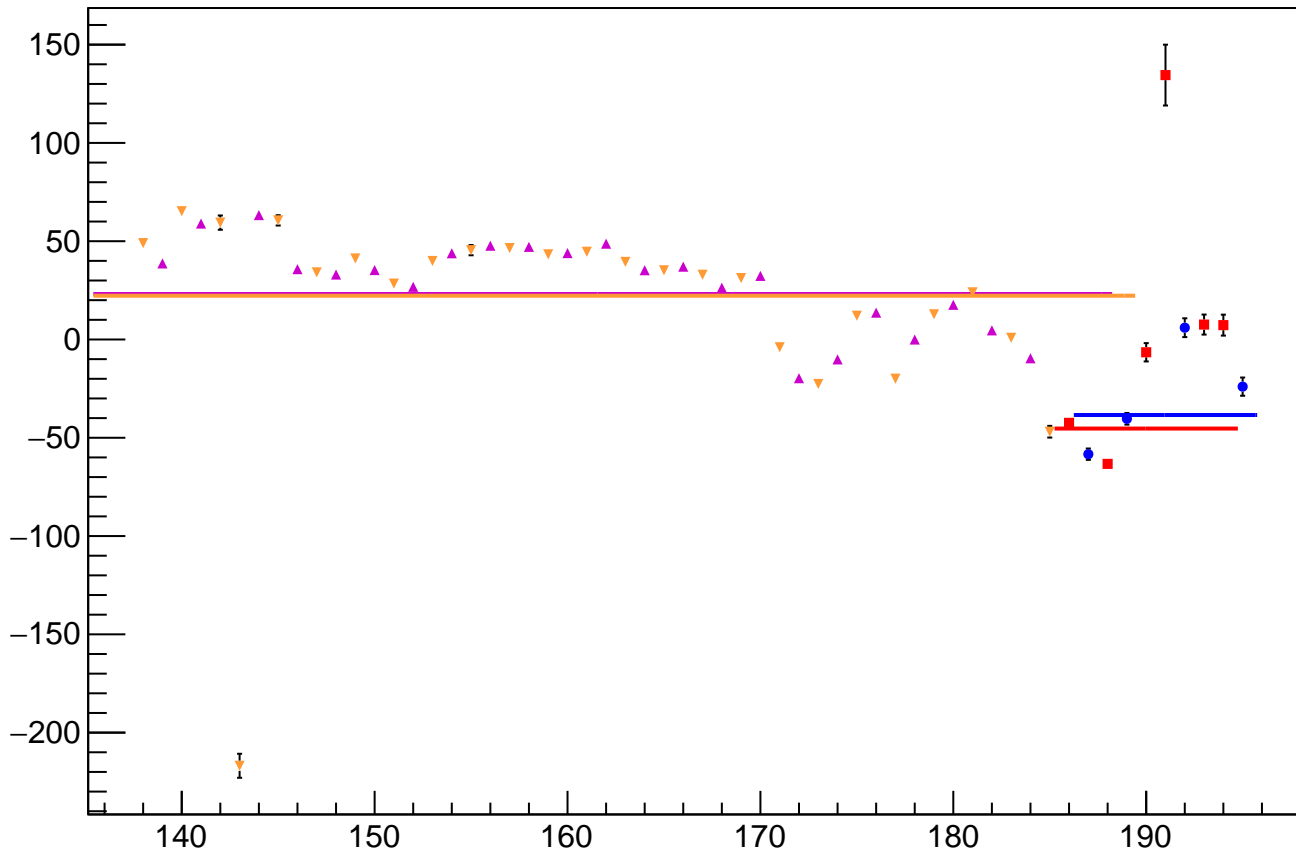
Left In:  $-267.417 \pm 0.082$   $\chi^2/\text{NDF}: 98035.5/22$

+ sign  $-254.745 \pm 0.069$   $\chi^2/\text{NDF}: 408175.4/45$

All:  $-255.327 \pm 0.048$   $\chi^2/\text{NDF}: 731946.2/93$

- sign  $-255.902 \pm 0.068$   $\chi^2/\text{NDF}: 323627.9/47$

# reg\_asym\_at2\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-38.419 \pm 1.755$   $\chi^2/\text{NDF}: 143.8/3$

Left Out:  $22.279 \pm 0.399$   $\chi^2/\text{NDF}: 5171.0/24$

Right Out:  $-45.313 \pm 1.077$   $\chi^2/\text{NDF}: 545.0/5$

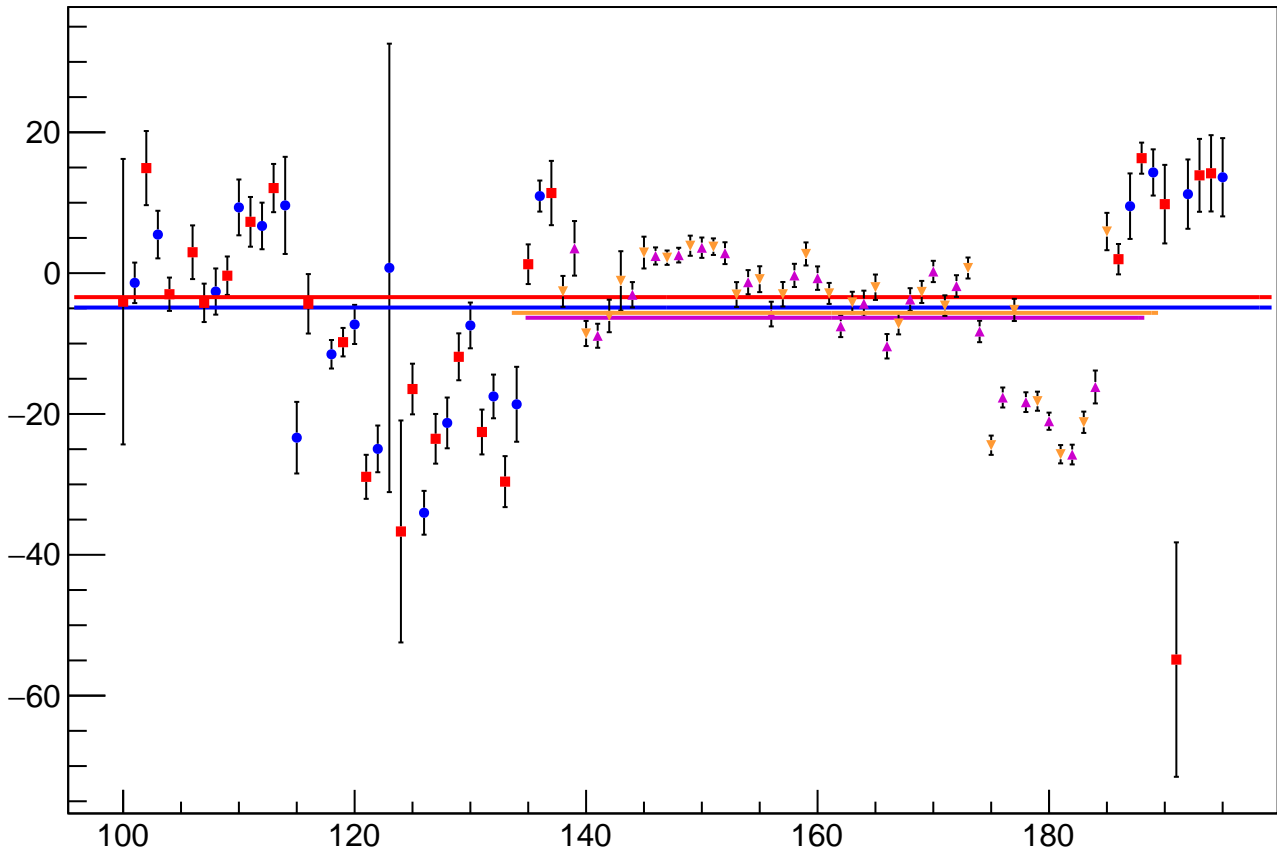
Left In:  $23.136 \pm 0.401$   $\chi^2/\text{NDF}: 2744.7/22$

+ sign  $19.301 \pm 0.389$   $\chi^2/\text{NDF}: 6451.7/28$

All:  $16.966 \pm 0.270$   $\chi^2/\text{NDF}: 13359.8/57$

- sign  $14.781 \pm 0.376$   $\chi^2/\text{NDF}: 6838.3/28$

# reg\_asym\_at2\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-4.884 \pm 0.743$   $\chi^2/\text{NDF}: 351.6/20$

Left Out:  $-5.642 \pm 0.316$   $\chi^2/\text{NDF}: 893.7/24$

Right Out:  $-3.408 \pm 0.667$   $\chi^2/\text{NDF}: 403.9/24$

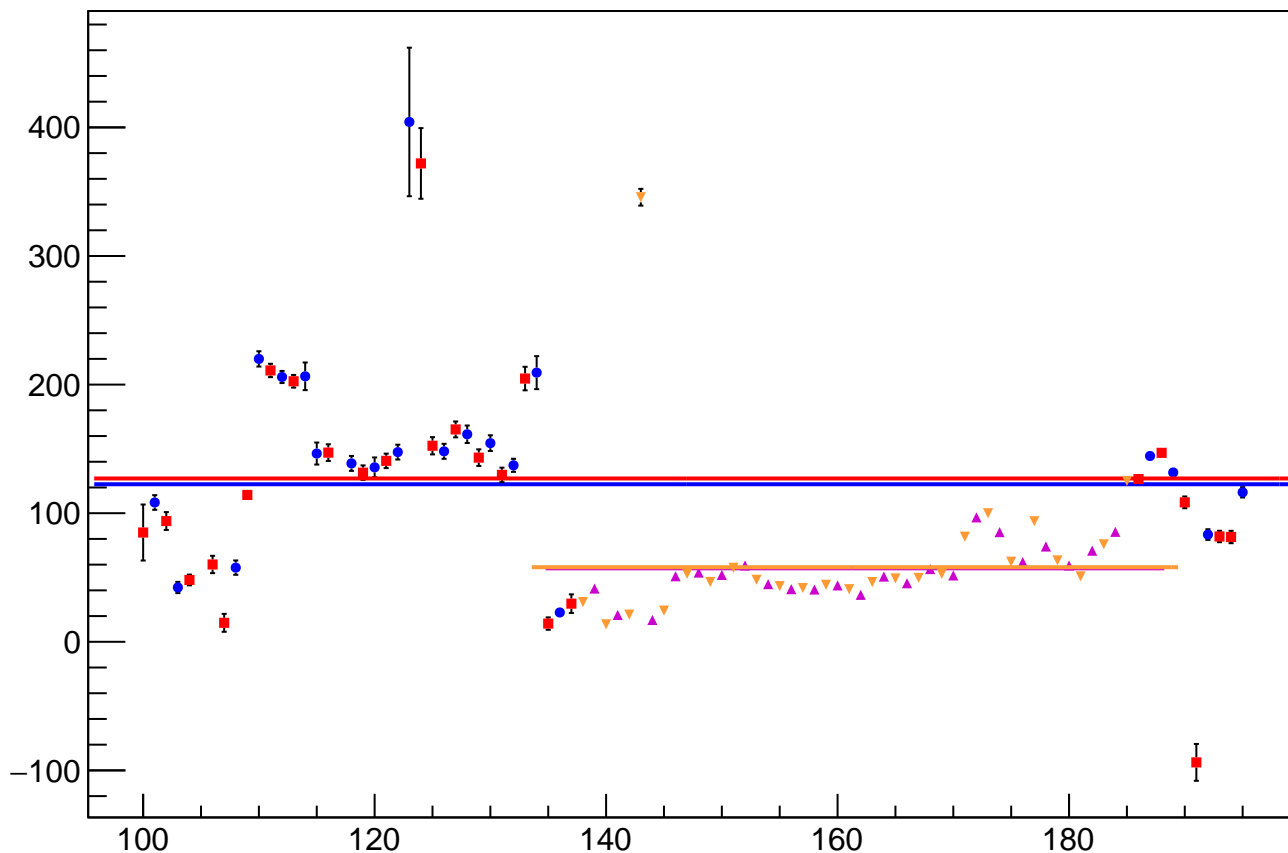
Left In:  $-6.337 \pm 0.321$   $\chi^2/\text{NDF}: 783.0/22$

+ sign  $-5.526 \pm 0.290$   $\chi^2/\text{NDF}: 1246.2/45$

All:  $-5.656 \pm 0.205$   $\chi^2/\text{NDF}: 2449.2/93$

- sign  $-5.785 \pm 0.289$   $\chi^2/\text{NDF}: 1202.6/47$

# reg\_asym\_at2\_dd\_diff\_bpm4eX\_slope vs Slug



Right In: 122.513+/-1.024  $\chi^2$ /NDF: 2363.7/20

Left Out: 57.990+/-0.398  $\chi^2$ /NDF:4635.7/24

Right Out: 126.991+/-0.740  $\chi^2$ /NDF: 2905.1/24

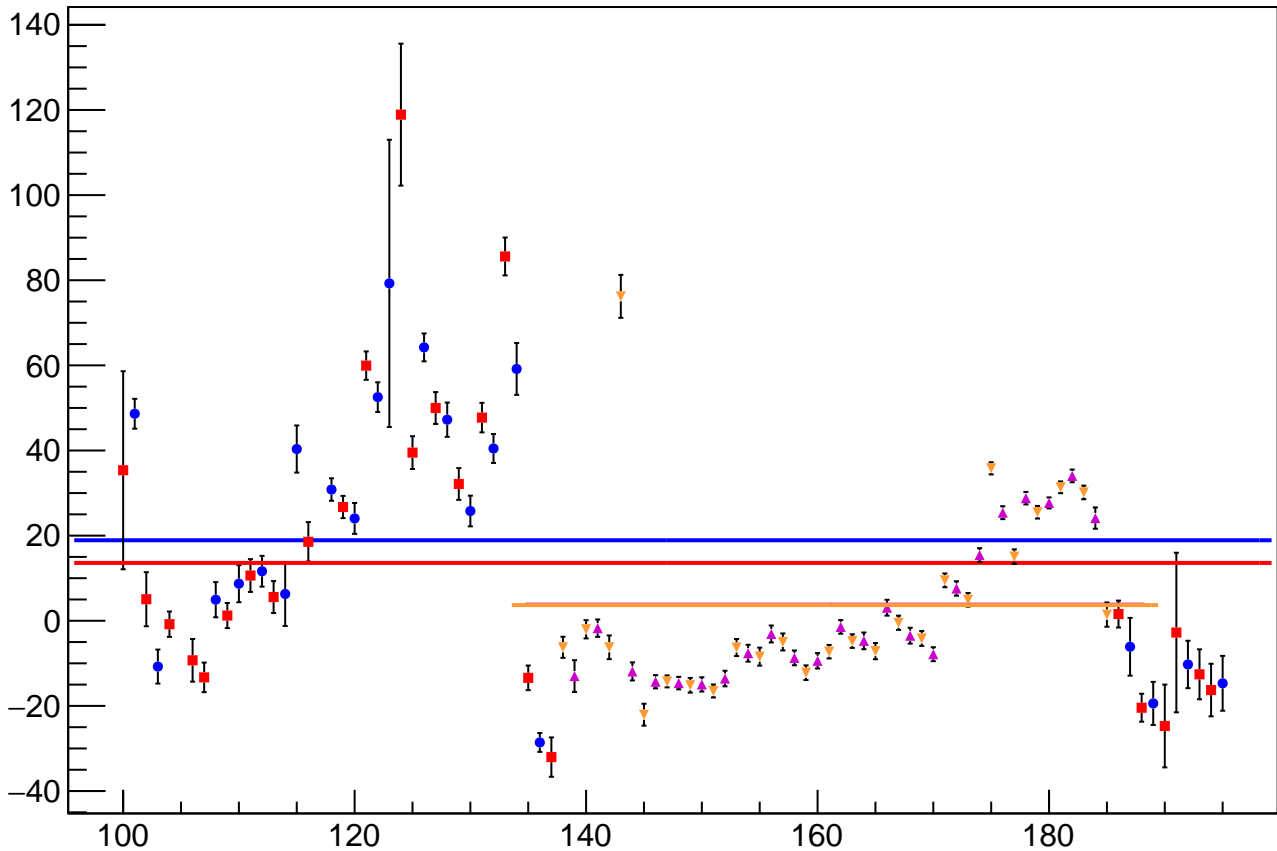
Left In: 57.139+/-0.400  $\chi^2$ /NDF:1803.4/22

+ sign 66.452+/-0.371  $\chi^2$ /NDF: 10447.2/45

All: 69.858+/-0.255  $\chi^2$ /NDF: 22219.4/93

- sign 72.917+/-0.352  $\chi^2$ /NDF: 11612.2/47

# reg\_asym\_at2\_dd\_diff\_bpm4eY\_slope vs Slug



Right In: 18.910 $\pm$ 0.860  $\chi^2$ /NDF: 1198.4/20

Left Out: 3.684 $\pm$ 0.357  $\chi^2$ /NDF:2541.7/24

Right Out: 13.591 $\pm$ 0.797  $\chi^2$ /NDF: 1278.2/24

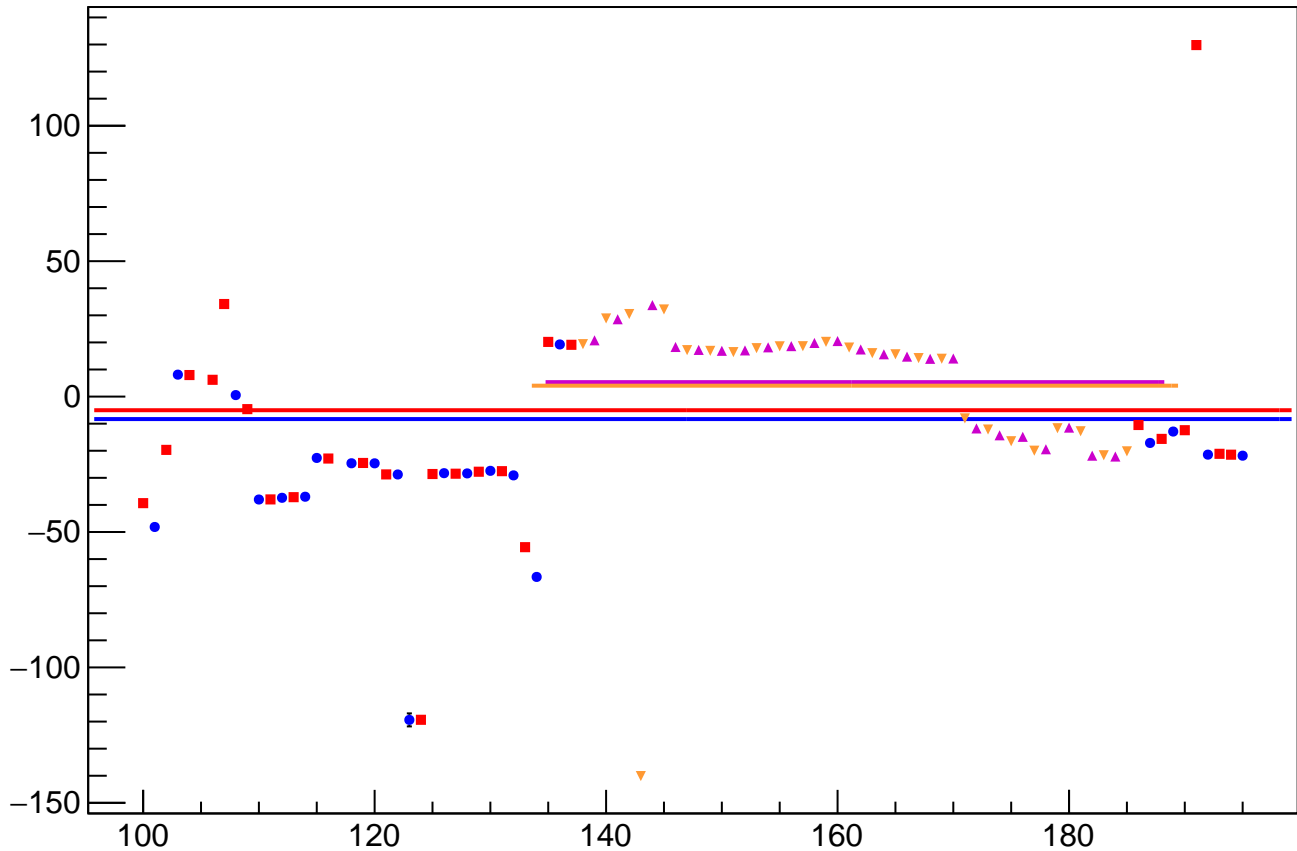
Left In: 3.786 $\pm$ 0.362  $\chi^2$ /NDF:2198.8/22

+ sign 5.918 $\pm$ 0.330  $\chi^2$ /NDF: 4007.3/45

All: 5.690 $\pm$ 0.233  $\chi^2$ /NDF: 7610.9/93

- sign 5.462 $\pm$ 0.329  $\chi^2$ /NDF: 3602.6/47

# reg\_asym\_at2\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $-8.304 \pm 0.043$   $\chi^2/\text{NDF}: 277291.1/20$

Left Out:  $4.026 \pm 0.016$   $\chi^2/\text{NDF}: 1383143.9/24$

Right Out:  $-5.034 \pm 0.040$   $\chi^2/\text{NDF}: 357740.5/24$

Left In:  $5.335 \pm 0.016$   $\chi^2/\text{NDF}: 1077818.8/22$

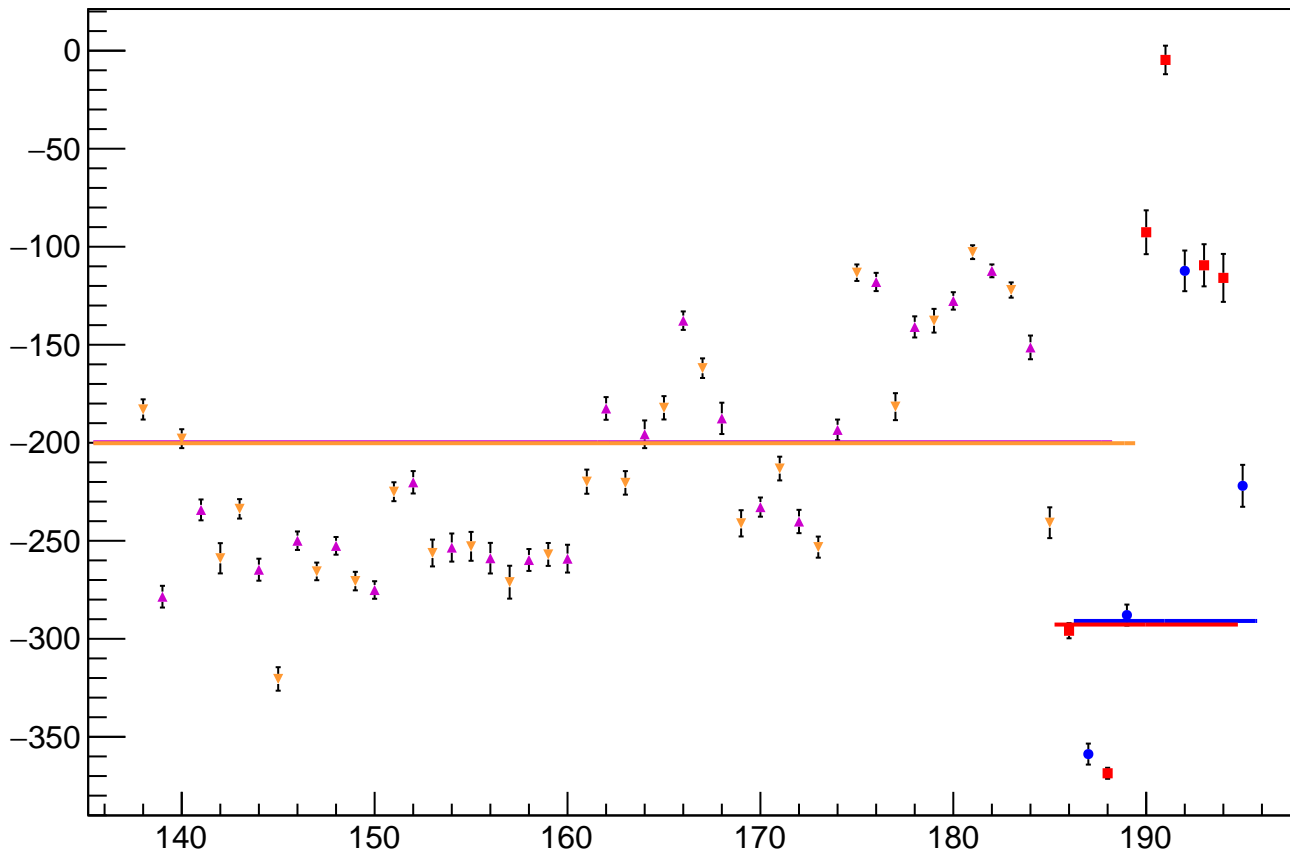
+ sign  $2.443 \pm 0.015$   $\chi^2/\text{NDF}: 1733312.5/45$

All:  $3.159 \pm 0.011$   $\chi^2/\text{NDF}: 3229564.0/93$

- sign  $3.870 \pm 0.015$   $\chi^2/\text{NDF}: 1491870.3/47$



# reg\_asym\_atl1r2\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-290.892 \pm 3.374$   $\chi^2/\text{NDF}: 499.1/3$

Left Out:  $-200.228 \pm 1.078$   $\chi^2/\text{NDF}: 3225.0/24$

Right Out:  $-292.731 \pm 2.059$   $\chi^2/\text{NDF}: 3114.1/5$

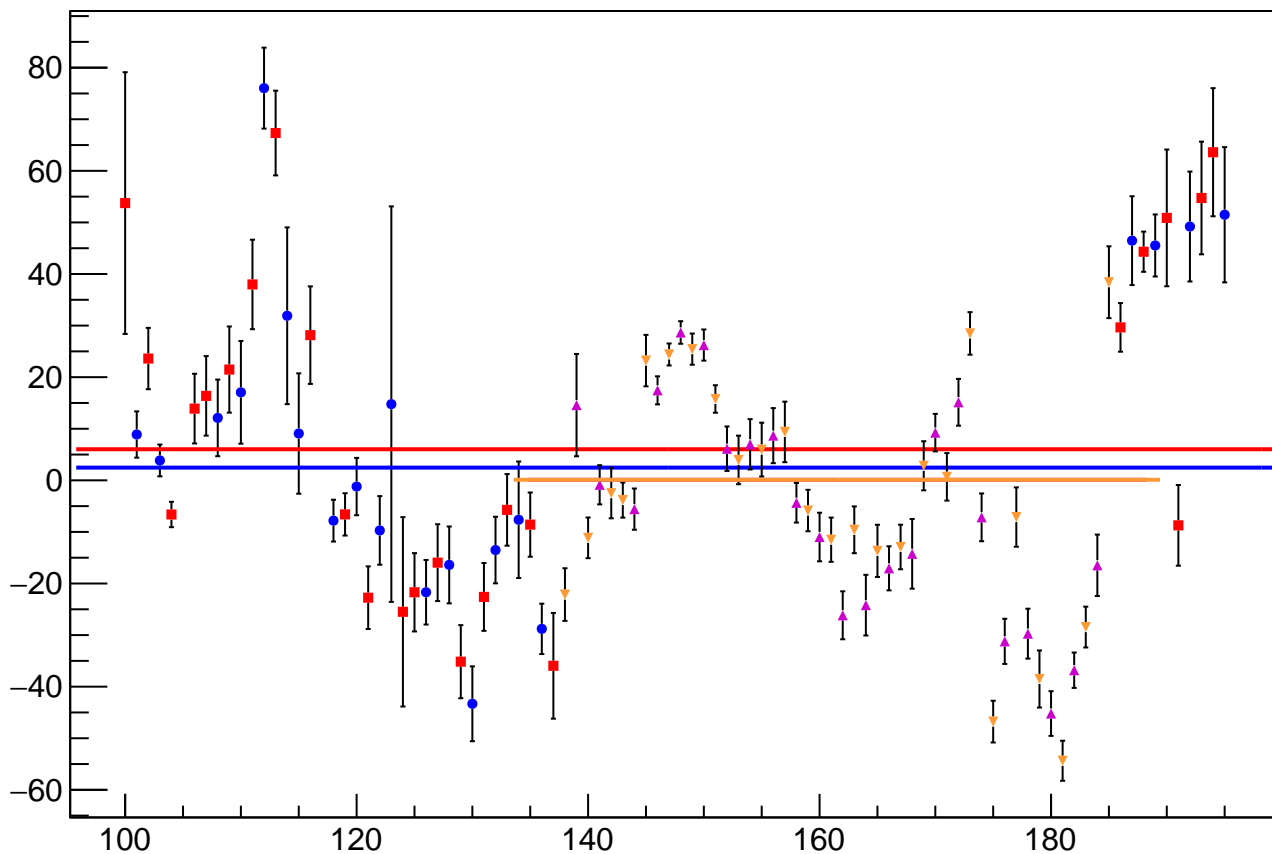
Left In:  $-199.739 \pm 1.097$   $\chi^2/\text{NDF}: 2968.0/22$

+ sign  $-208.622 \pm 1.027$   $\chi^2/\text{NDF}: 4379.2/28$

All:  $-214.810 \pm 0.704$   $\chi^2/\text{NDF}: 12118.7/57$

- sign  $-220.315 \pm 0.968$   $\chi^2/\text{NDF}: 7670.9/28$

# reg\_asym\_atl1r2\_avg\_diff\_bpm4aY\_slope vs Slug



Right In: 2.468 $\pm$ 1.388  $\chi^2$ /NDF: 327.4/20

Left Out: 0.109 $\pm$ 0.807  $\chi^2$ /NDF:831.2/24

Right Out: 6.028 $\pm$ 1.231  $\chi^2$ /NDF: 432.9/24

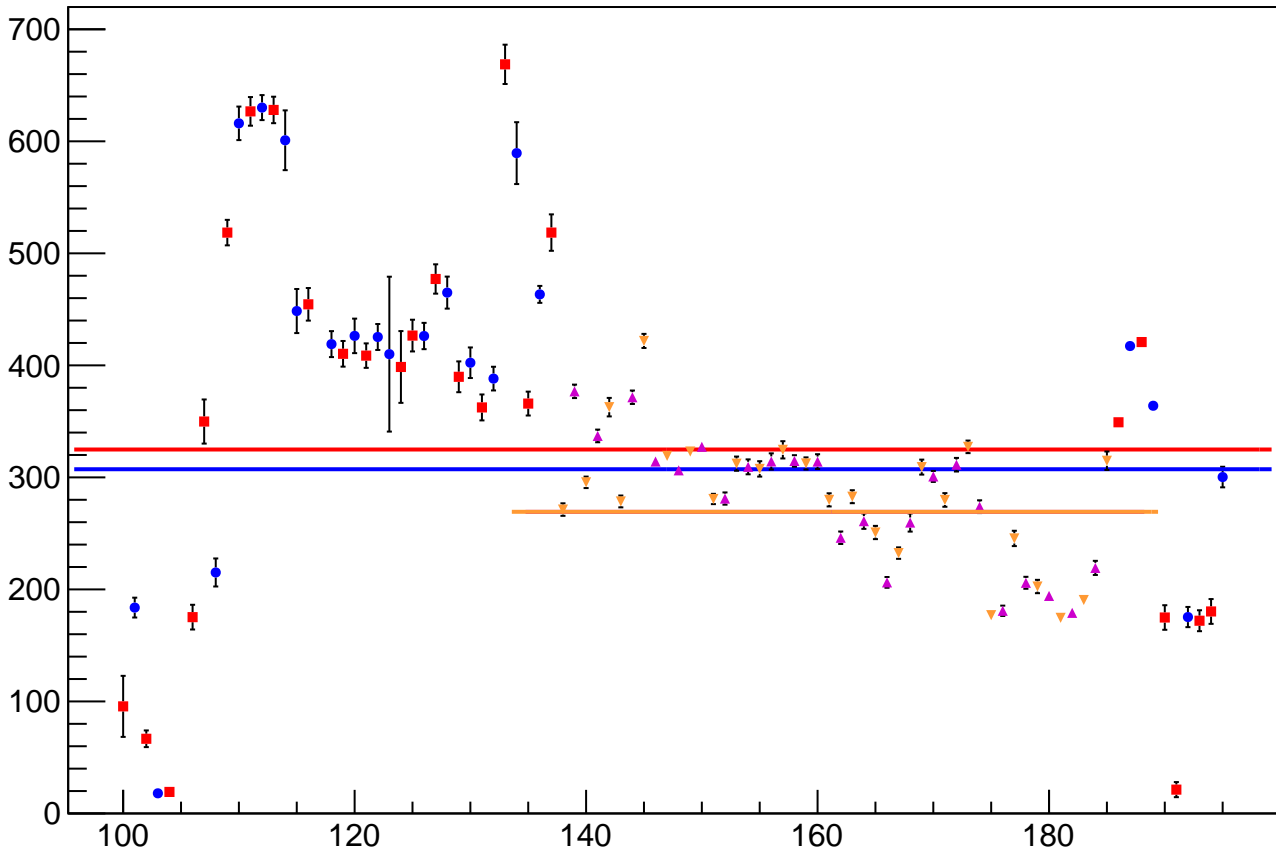
Left In: 0.097 $\pm$ 0.838  $\chi^2$ /NDF:715.5/22

+ sign 0.705 $\pm$ 0.698  $\chi^2$ /NDF: 1160.8/45

All: 1.344 $\pm$ 0.492  $\chi^2$ /NDF: 2326.7/93

- sign 1.975 $\pm$ 0.693  $\chi^2$ /NDF: 1164.2/47

# reg\_asym\_atl1r2\_avg\_diff\_bpm4eX\_slope vs Slug



Right In: 307.269 $\pm$ 1.865  $\chi^2$ /NDF: 8905.5/20

Left Out: 269.278 $\pm$ 1.078  $\chi^2$ /NDF:3146.7/24

Right Out: 324.888 $\pm$ 1.391  $\chi^2$ /NDF: 13388.7/24

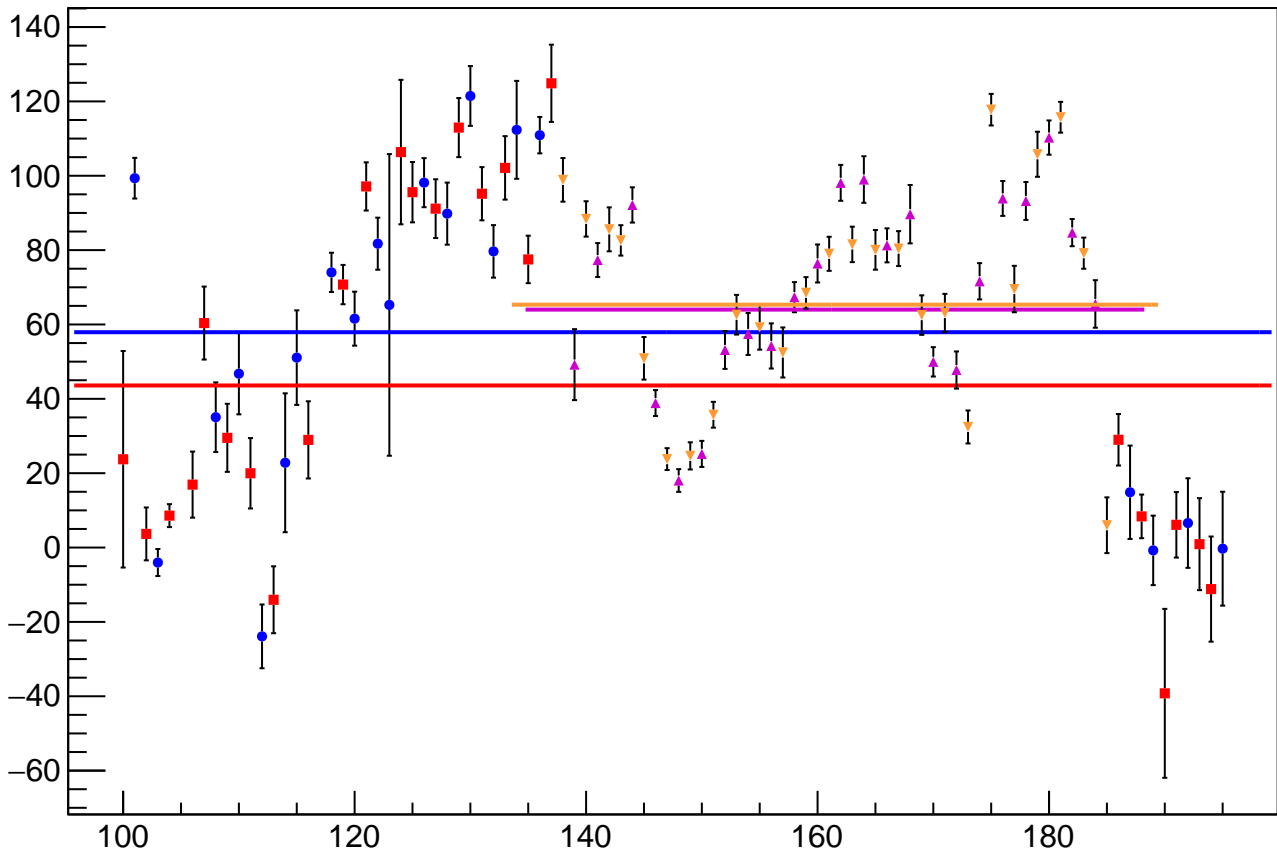
Left In: 269.191 $\pm$ 1.091  $\chi^2$ /NDF:3170.2/22

+ sign 278.785 $\pm$ 0.933  $\chi^2$ /NDF: 12363.3/45

All: 285.078 $\pm$ 0.632  $\chi^2$ /NDF: 29999.4/93

- sign 290.401 $\pm$ 0.858  $\chi^2$ /NDF: 17552.1/47

# reg\_asym\_atl1r2\_avg\_diff\_bpm4eY\_slope vs Slug



Right In: 57.920 $\pm$ 1.630  $\chi^2$ /NDF: 811.6/20

Left Out: 65.323 $\pm$ 0.935  $\chi^2$ /NDF: 1007.1/24

Right Out: 43.594 $\pm$ 1.497  $\chi^2$ /NDF: 769.7/24

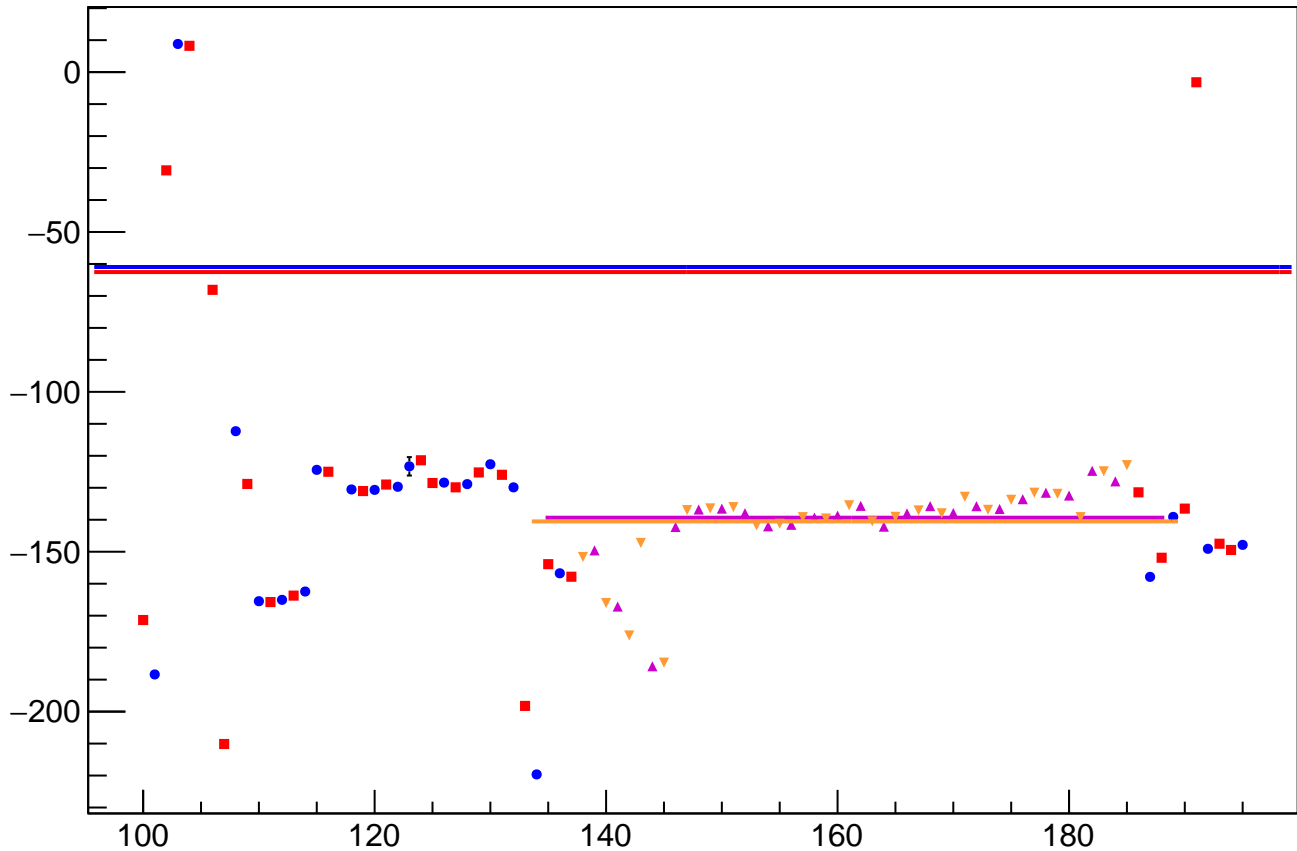
Left In: 63.999 $\pm$ 0.963  $\chi^2$ /NDF: 799.5/22

+ sign 63.491 $\pm$ 0.811  $\chi^2$ /NDF: 1834.2/45

All: 60.756 $\pm$ 0.573  $\chi^2$ /NDF: 3557.6/93

- sign 58.028 $\pm$ 0.810  $\chi^2$ /NDF: 1700.6/47

# reg\_asym\_atl1r2\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-60.952 \pm 0.067$   $\chi^2/\text{NDF}: 1371714.1/20$

Left Out:  $-140.519 \pm 0.045$   $\chi^2/\text{NDF}: 77489.0/24$

Right Out:  $-62.535 \pm 0.065$   $\chi^2/\text{NDF}: 1240604.3/24$

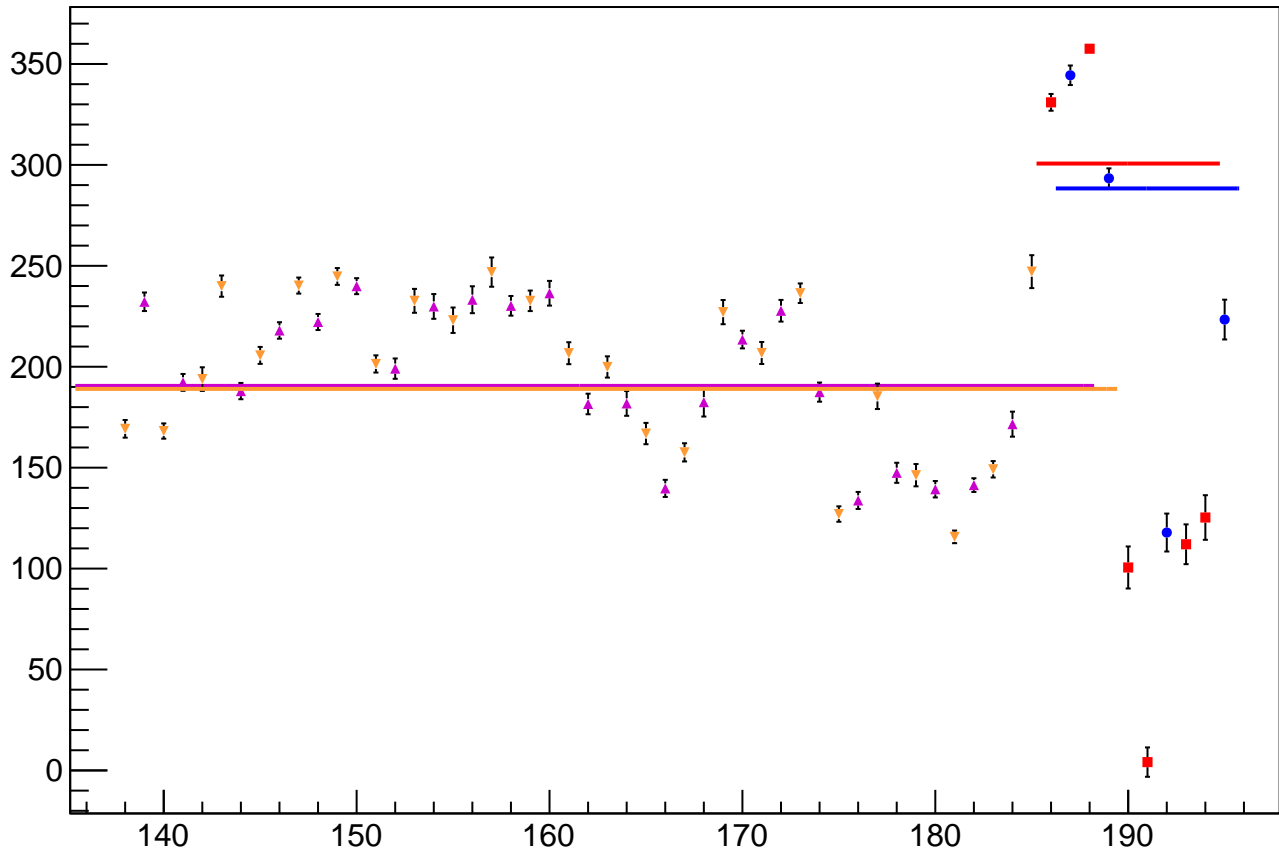
Left In:  $-139.360 \pm 0.045$   $\chi^2/\text{NDF}: 62449.0/22$

+ sign  $-116.359 \pm 0.037$   $\chi^2/\text{NDF}: 2417643.9/45$

All:  $-115.325 \pm 0.026$   $\chi^2/\text{NDF}: 4672366.1/93$

- sign  $-114.305 \pm 0.037$   $\chi^2/\text{NDF}: 2253187.0/47$

# reg\_asym\_atl1r2\_dd\_diff\_bpm1X\_slope vs Slug



Right In: 288.345 $\pm$ 3.075  $\chi^2$ /NDF: 508.1/3

Left Out: 189.030 $\pm$ 0.956  $\chi^2$ /NDF: 1980.9/24

Right Out: 300.669 $\pm$ 1.947  $\chi^2$ /NDF: 3216.2/5

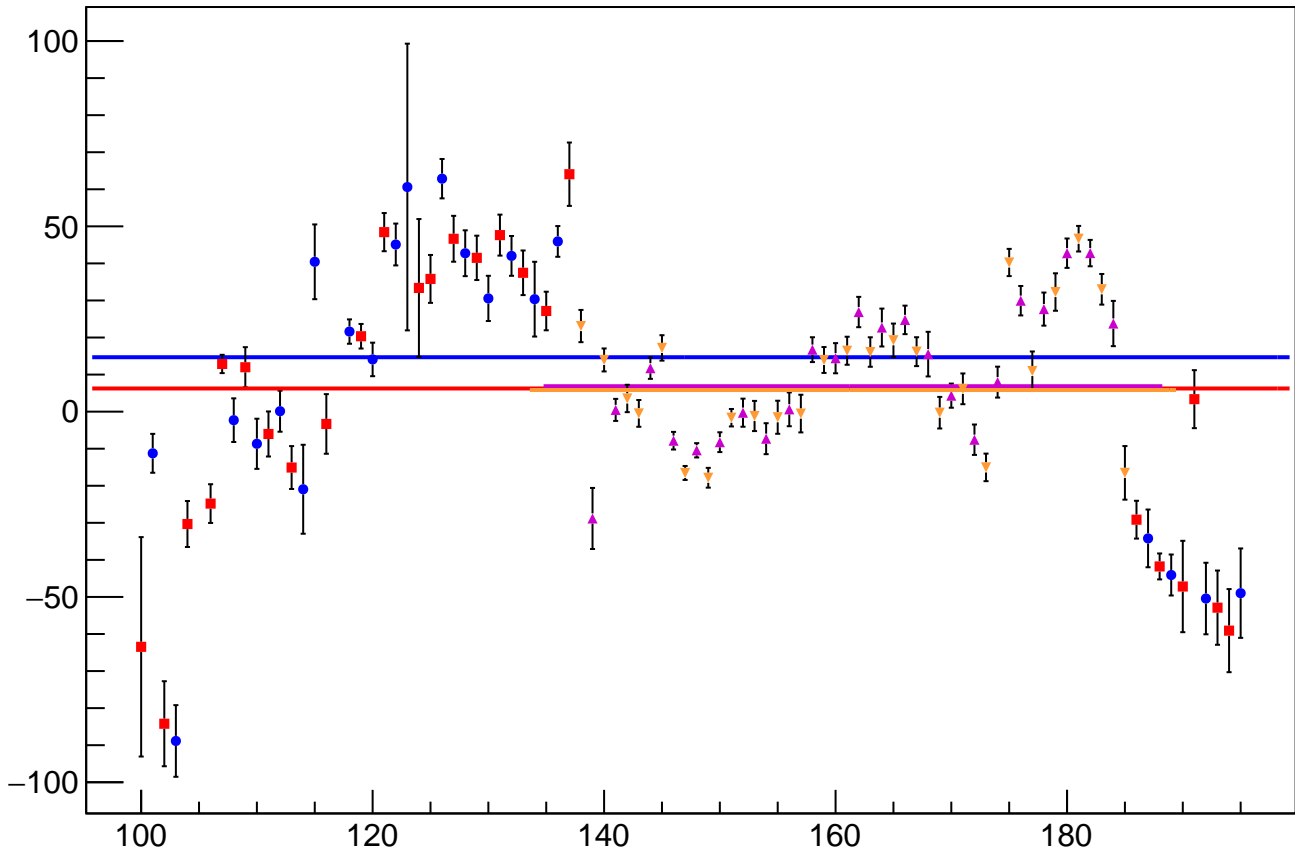
Left In: 190.506 $\pm$ 0.975  $\chi^2$ /NDF: 1412.7/22

+ sign 197.779 $\pm$ 0.913  $\chi^2$ /NDF: 3440.0/28

All: 205.528 $\pm$ 0.630  $\chi^2$ /NDF: 10766.4/57

- sign 212.598 $\pm$ 0.872  $\chi^2$ /NDF: 7188.6/28

# reg\_asym\_atl1r2\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $14.683 \pm 1.315$   $\chi^2/\text{NDF}: 636.8/20$

Left Out:  $5.834 \pm 0.712$   $\chi^2/\text{NDF}: 652.2/24$

Right Out:  $6.250 \pm 1.102$   $\chi^2/\text{NDF}: 819.5/24$

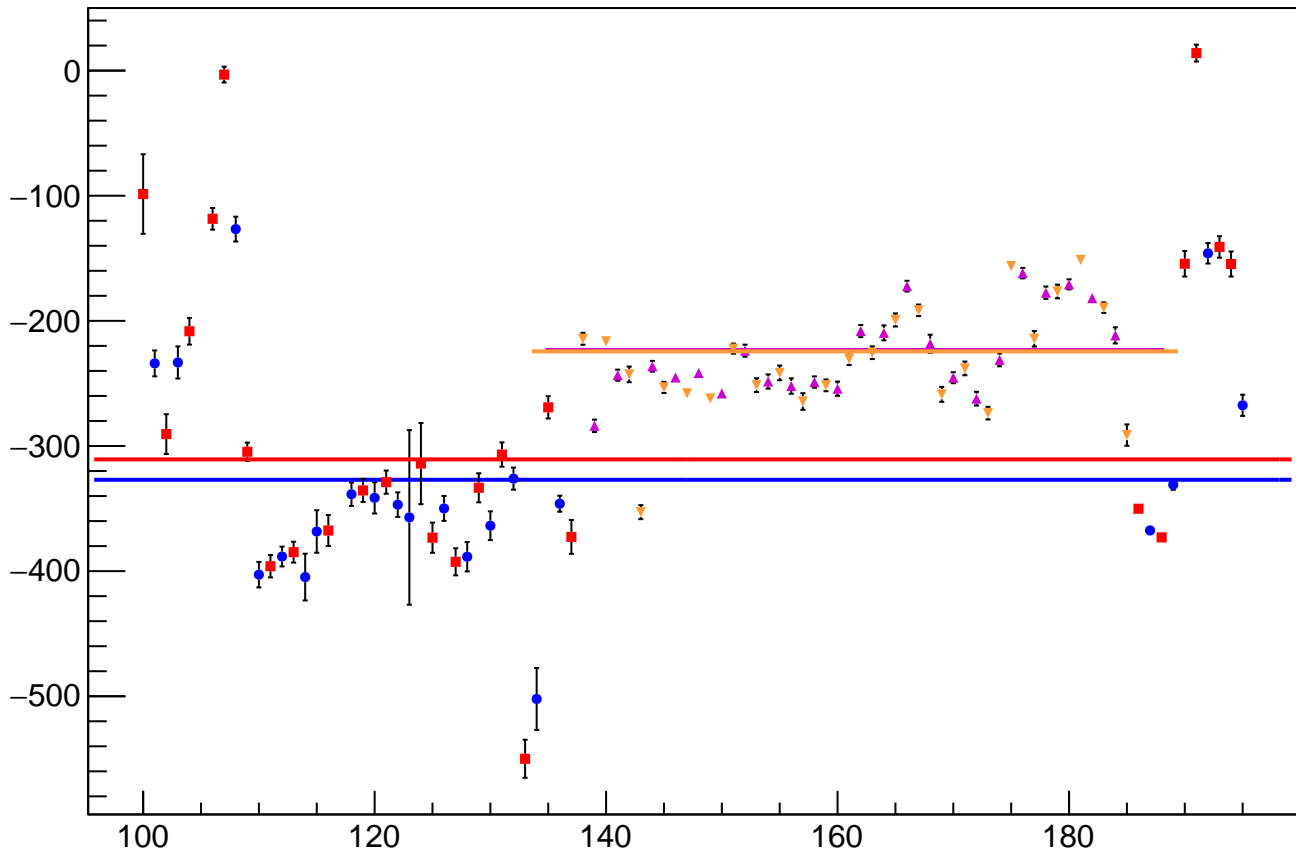
Left In:  $6.862 \pm 0.736$   $\chi^2/\text{NDF}: 522.7/22$

+ sign  $7.843 \pm 0.626$   $\chi^2/\text{NDF}: 1324.0/45$

All:  $7.244 \pm 0.438$   $\chi^2/\text{NDF}: 2668.3/93$

- sign  $6.673 \pm 0.612$   $\chi^2/\text{NDF}: 1342.5/47$

# reg\_asym\_atl1r2\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-326.991 \pm 1.819$   $\chi^2/\text{NDF}: 1434.5/20$

Left Out:  $-224.364 \pm 0.956$   $\chi^2/\text{NDF}: 2103.2/24$

Right Out:  $-310.709 \pm 1.315$   $\chi^2/\text{NDF}: 7877.5/24$

Left In:  $-223.223 \pm 0.969$   $\chi^2/\text{NDF}: 1269.3/22$

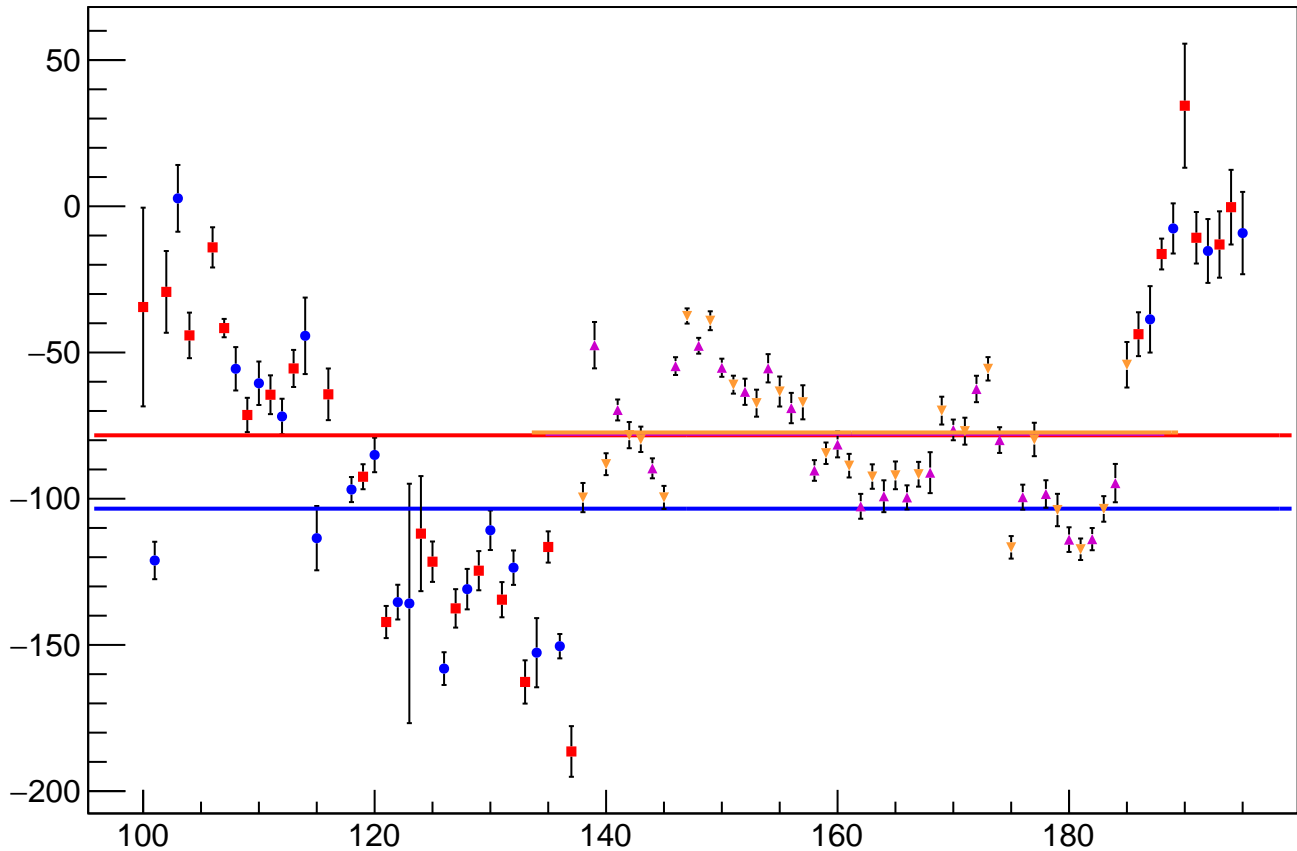
+ sign  $-246.570 \pm 0.846$   $\chi^2/\text{NDF}: 6031.2/45$

All:  $-250.590 \pm 0.574$   $\chi^2/\text{NDF}: 18086.9/93$

- sign  $-254.007 \pm 0.780$   $\chi^2/\text{NDF}: 12014.0/47$



# reg\_asym\_atl1r2\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-103.403 \pm 1.534$   $\chi^2/\text{NDF}: 795.3/20$

Left Out:  $-77.343 \pm 0.827$   $\chi^2/\text{NDF}: 846.2/24$

Right Out:  $-78.321 \pm 1.326$   $\chi^2/\text{NDF}: 1336.2/24$

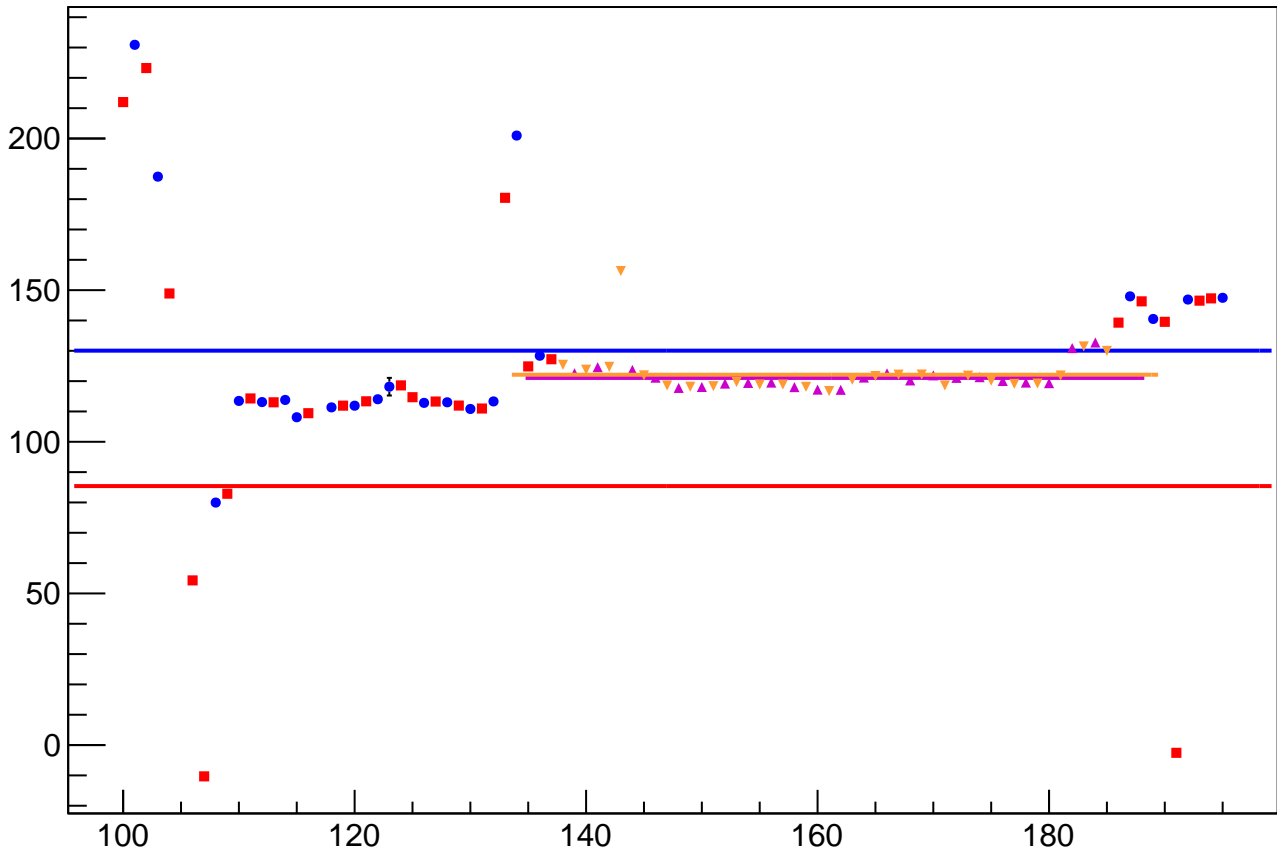
Left In:  $-77.838 \pm 0.849$   $\chi^2/\text{NDF}: 622.8/22$

+ sign  $-83.208 \pm 0.728$   $\chi^2/\text{NDF}: 1865.3/45$

All:  $-80.547 \pm 0.510$   $\chi^2/\text{NDF}: 3850.6/93$

- sign  $-77.978 \pm 0.715$   $\chi^2/\text{NDF}: 1959.0/47$

# reg\_asym\_atl1r2\_dd\_diff\_bpm12X\_slope vs Slug



Right In: 130.052 $\pm$ 0.083  $\chi^2$ /NDF: 194033.0/20

Left Out: 122.119 $\pm$ 0.039  $\chi^2$ /NDF:30480.7/24

Right Out: 85.396 $\pm$ 0.066  $\chi^2$ /NDF: 1019611.1/24

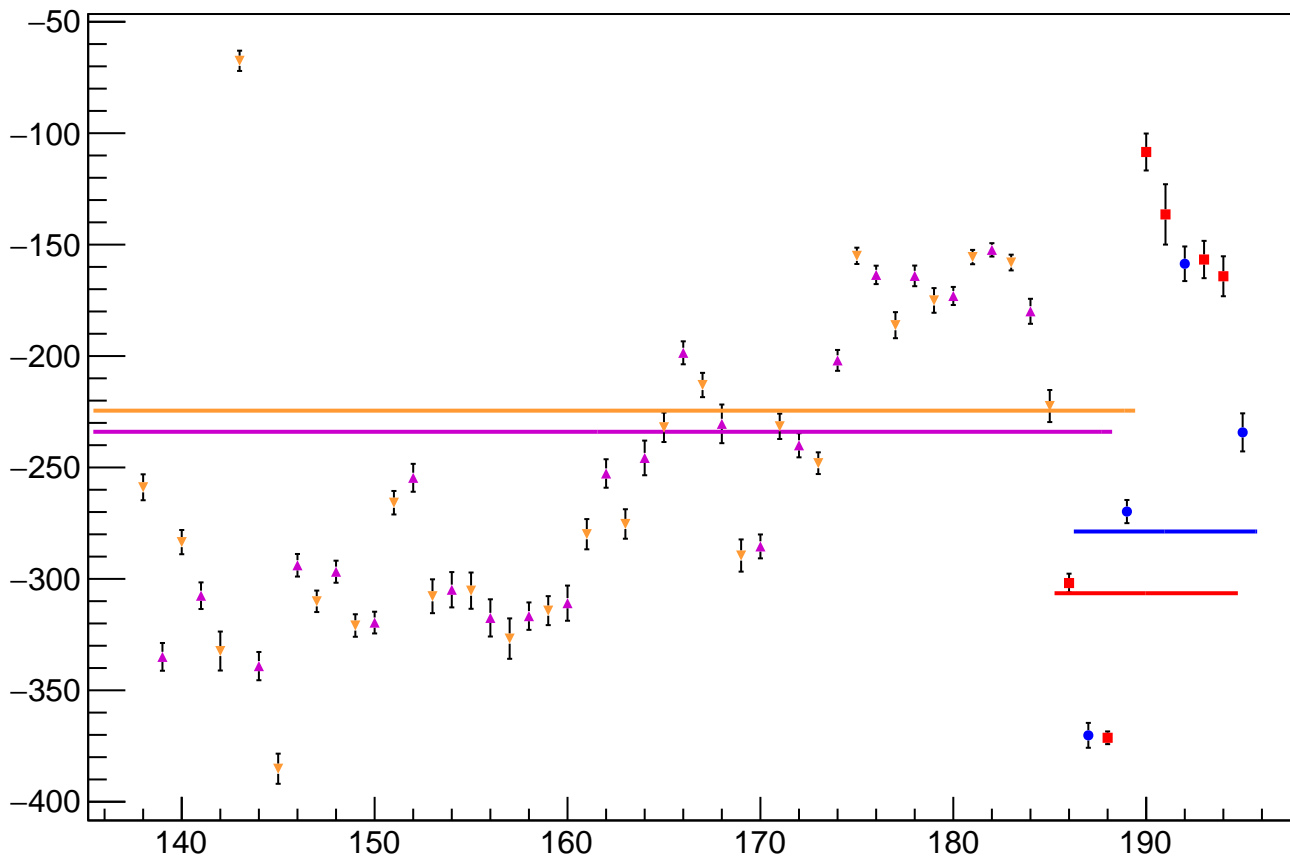
Left In: 121.055 $\pm$ 0.040  $\chi^2$ /NDF:7931.6/22

+ sign 123.588 $\pm$ 0.036  $\chi^2$ /NDF: 232018.2/45

All: 117.376 $\pm$ 0.025  $\chi^2$ /NDF: 1530149.7/93

- sign 111.665 $\pm$ 0.034  $\chi^2$ /NDF: 1239600.9/47

# reg\_asym\_atr1l2\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-278.733 \pm 3.172$   $\chi^2/\text{NDF}: 537.8/3$

Left Out:  $-224.501 \pm 1.079$   $\chi^2/\text{NDF}: 4870.6/24$

Right Out:  $-306.433 \pm 2.102$   $\chi^2/\text{NDF}: 1818.2/5$

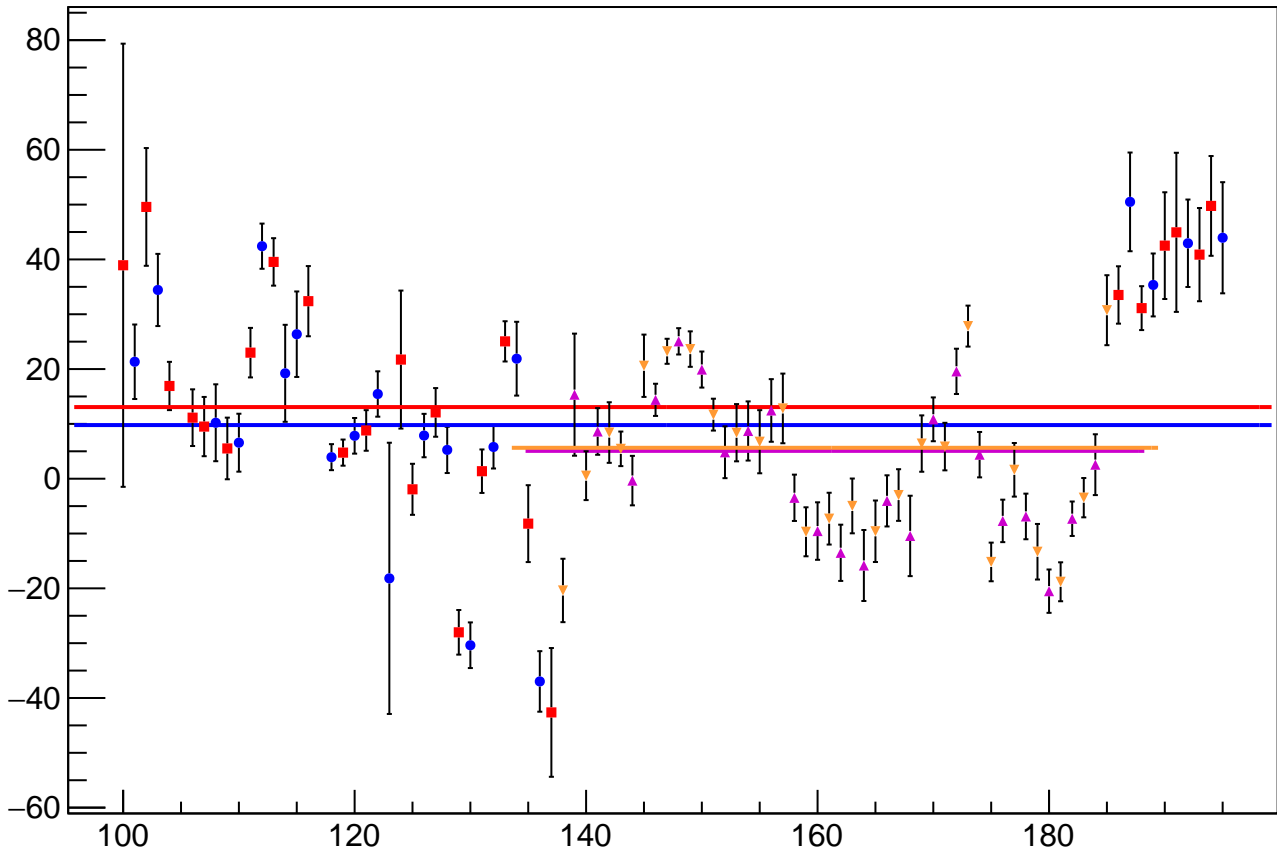
Left In:  $-233.988 \pm 1.109$   $\chi^2/\text{NDF}: 3538.4/22$

+ sign  $-230.126 \pm 1.022$   $\chi^2/\text{NDF}: 5670.4/28$

All:  $-240.338 \pm 0.707$   $\chi^2/\text{NDF}: 12148.0/57$

- sign  $-249.747 \pm 0.981$   $\chi^2/\text{NDF}: 6285.6/28$

# reg\_asym\_atr1l2\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $9.785 \pm 1.062$   $\chi^2/\text{NDF}: 334.6/20$

Left Out:  $5.638 \pm 0.828$   $\chi^2/\text{NDF}: 313.6/24$

Right Out:  $13.067 \pm 0.995$   $\chi^2/\text{NDF}: 320.3/24$

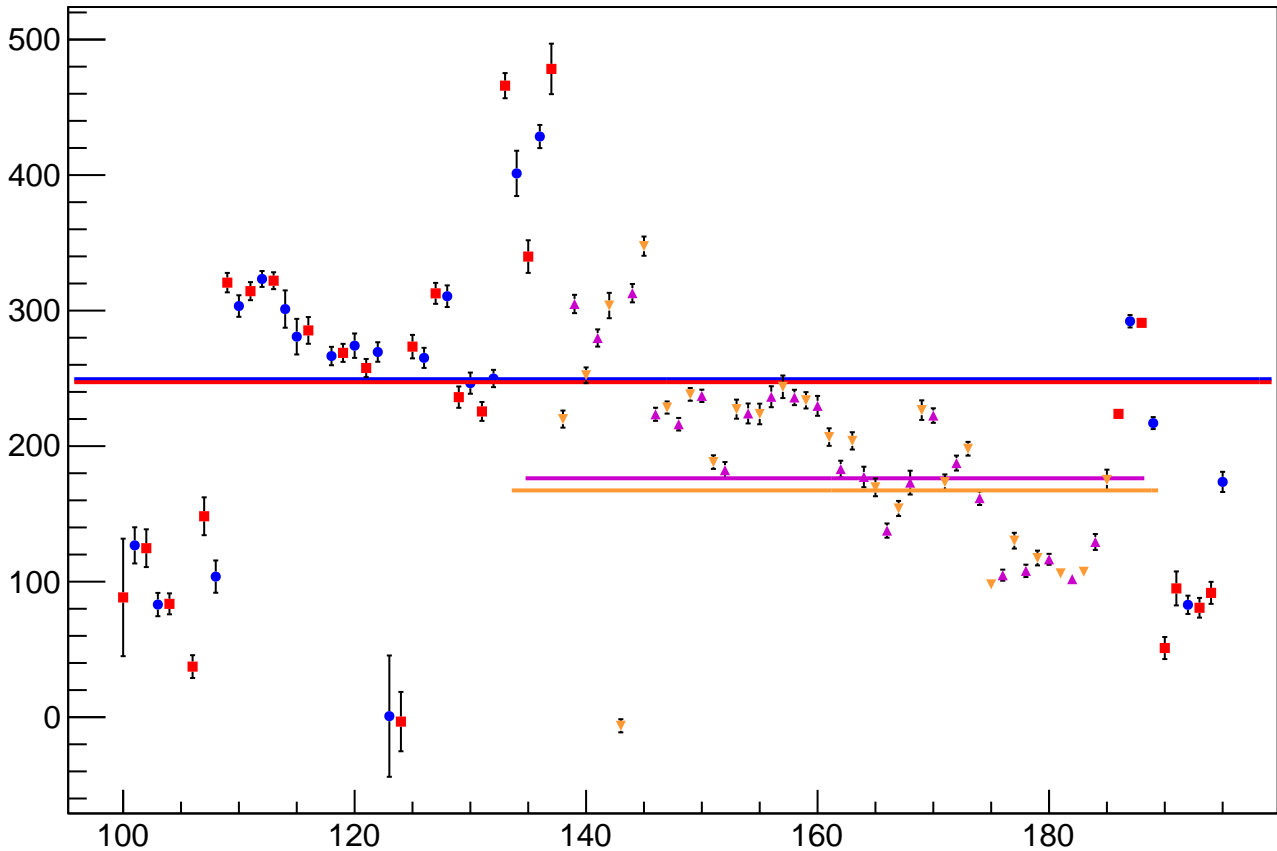
Left In:  $5.077 \pm 0.869$   $\chi^2/\text{NDF}: 239.7/22$

+ sign  $7.206 \pm 0.653$   $\chi^2/\text{NDF}: 657.7/45$

All:  $7.867 \pm 0.462$   $\chi^2/\text{NDF}: 1256.3/93$

- sign  $8.532 \pm 0.655$   $\chi^2/\text{NDF}: 596.6/47$

# reg\_asym\_atr1l2\_avg\_diff\_bpm4eX\_slope vs Slug



Right In: 249.386 $\pm$ 1.652  $\chi^2$ /NDF: 2321.8/20

Left Out: 167.327 $\pm$ 1.082  $\chi^2$ /NDF:4454.5/24

Right Out: 247.202 $\pm$ 1.304  $\chi^2$ /NDF: 4607.9/24

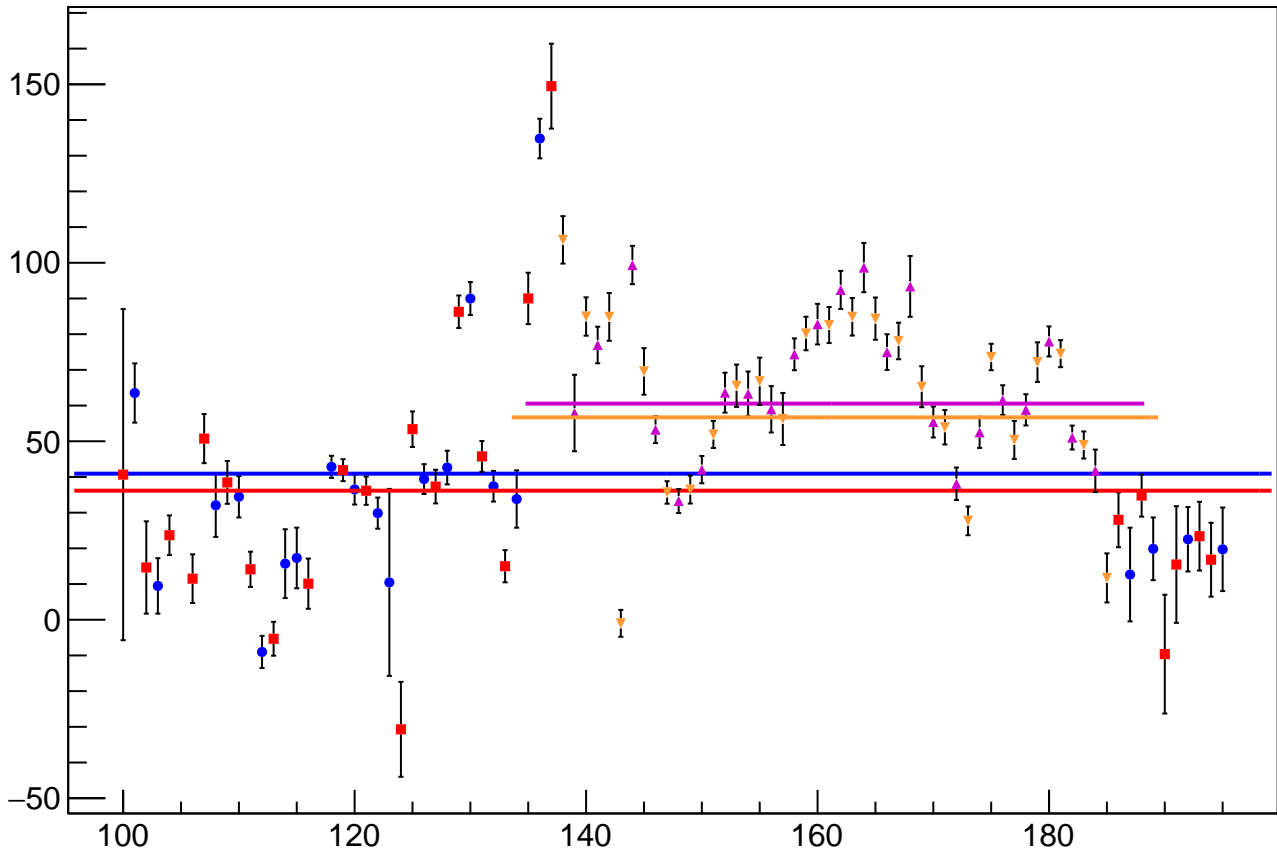
Left In: 176.272 $\pm$ 1.106  $\chi^2$ /NDF:3169.5/22

+ sign 191.979 $\pm$ 0.905  $\chi^2$ /NDF: 8502.6/45

All: 199.448 $\pm$ 0.617  $\chi^2$ /NDF: 18127.7/93

- sign 205.929 $\pm$ 0.843  $\chi^2$ /NDF: 9498.0/47

# reg\_asym\_atr1l2\_avg\_diff\_bpm4eY\_slope vs Slug



Right In: 40.923+/-1.239  $\chi^2$ /NDF: 592.0/20

Left Out: 56.695+/-0.952  $\chi^2$ /NDF:690.4/24

Right Out: 36.159+/-1.173  $\chi^2$ /NDF: 487.0/24

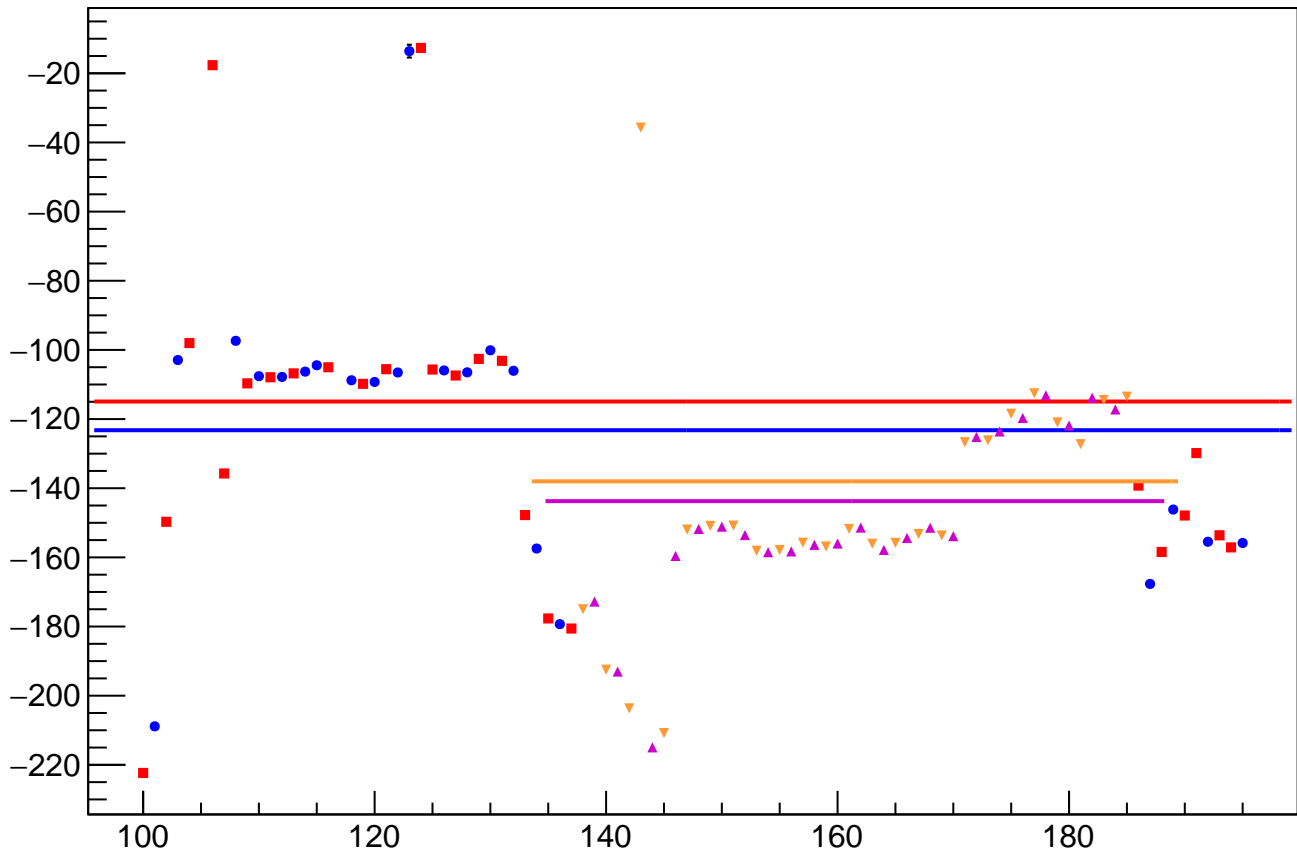
Left In: 60.555+/-0.990  $\chi^2$ /NDF:335.6/22

+ sign 50.839+/-0.755  $\chi^2$ /NDF: 1384.4/45

All: 50.623+/-0.534  $\chi^2$ /NDF: 2459.6/93

- sign 50.406+/-0.757  $\chi^2$ /NDF: 1075.1/47

# reg\_asym\_atr1l2\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-123.223 \pm 0.072$   $\chi^2/\text{NDF}: 175491.5/20$

Left Out:  $-138.008 \pm 0.045$   $\chi^2/\text{NDF}: 565767.2/24$

Right Out:  $-114.926 \pm 0.065$   $\chi^2/\text{NDF}: 405847.6/24$

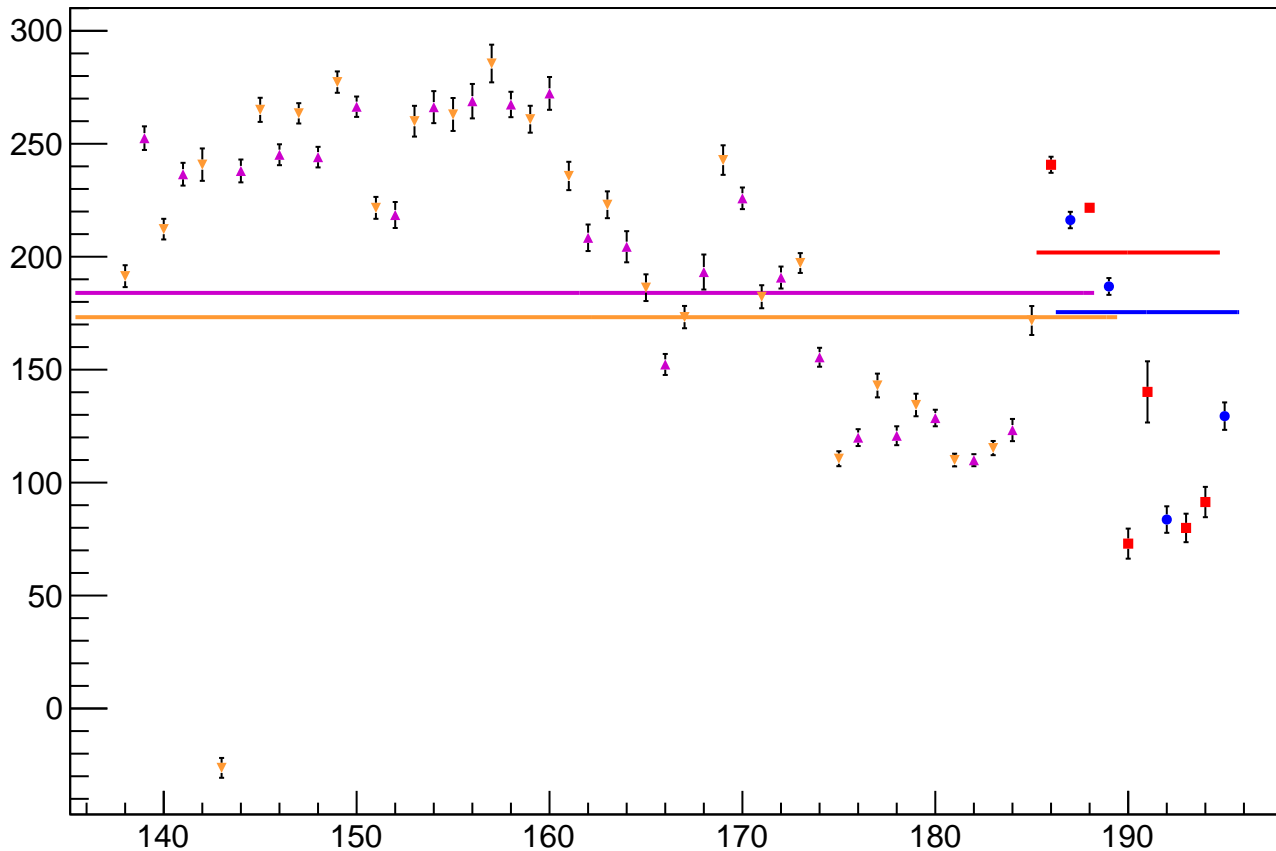
Left In:  $-143.735 \pm 0.046$   $\chi^2/\text{NDF}: 258408.3/22$

+ sign  $-133.872 \pm 0.038$   $\chi^2/\text{NDF}: 771289.1/45$

All:  $-134.011 \pm 0.027$   $\chi^2/\text{NDF}: 1565581.4/93$

- sign  $-134.145 \pm 0.038$   $\chi^2/\text{NDF}: 794266.4/47$

# reg\_asym\_atr1l2\_dd\_diff\_bpm1X\_slope vs Slug



Right In: 175.469 $\pm$ 2.213  $\chi^2$ /NDF: 437.7/3

Left Out: 173.229 $\pm$ 0.966  $\chi^2$ /NDF:5846.0/24

Right Out: 201.869 $\pm$ 1.504  $\chi^2$ /NDF: 1272.4/5

Left In: 183.984 $\pm$ 0.991  $\chi^2$ /NDF:3613.7/22

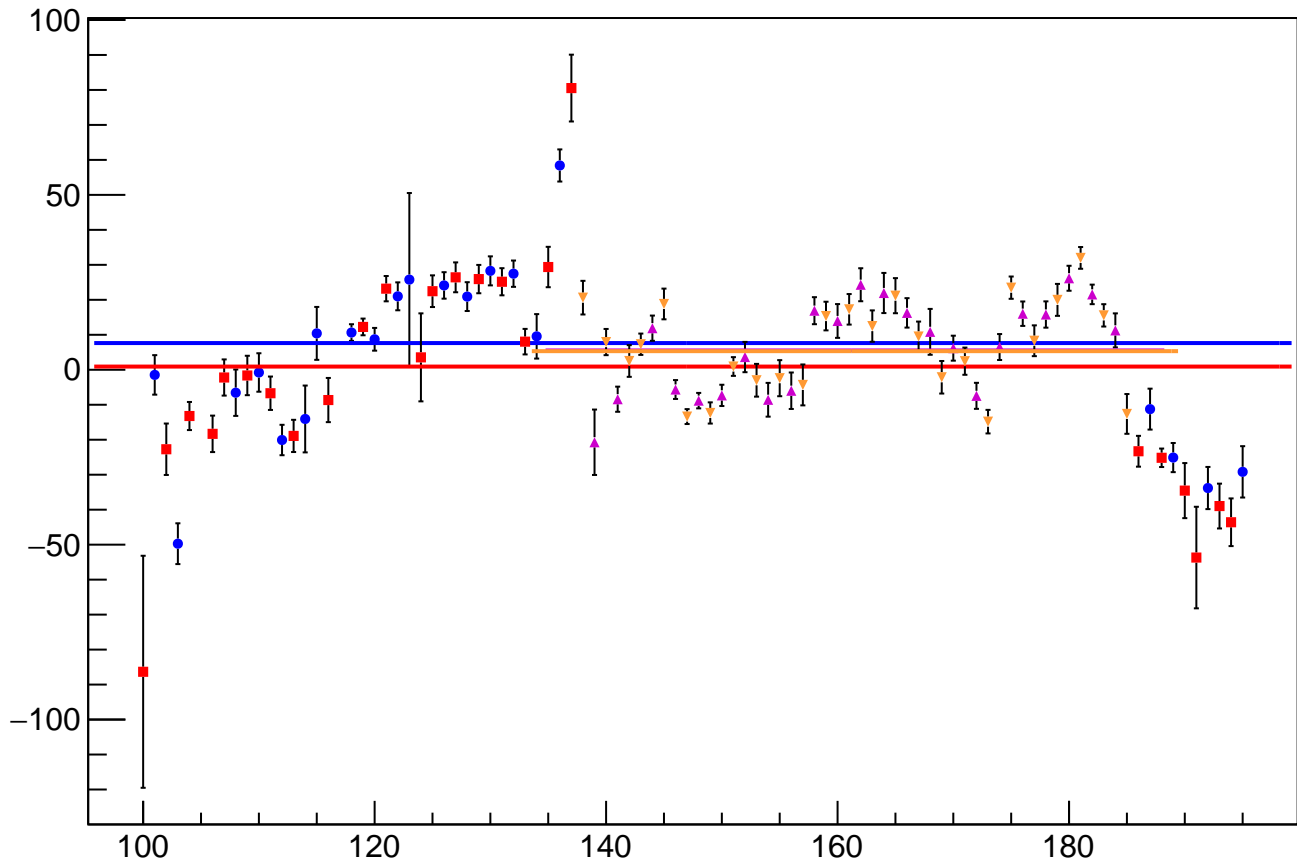
+ sign 173.588 $\pm$ 0.885  $\chi^2$ /NDF: 6284.5/28

All: 182.024 $\pm$ 0.604  $\chi^2$ /NDF: 11439.6/57

- sign 189.399 $\pm$ 0.827  $\chi^2$ /NDF: 4984.7/28



# reg\_asym\_atr1l2\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $7.636 \pm 1.002$   $\chi^2/\text{NDF}: 514.4/20$

Left Out:  $5.321 \pm 0.747$   $\chi^2/\text{NDF}: 345.5/24$

Right Out:  $0.915 \pm 0.924$   $\chi^2/\text{NDF}: 604.4/24$

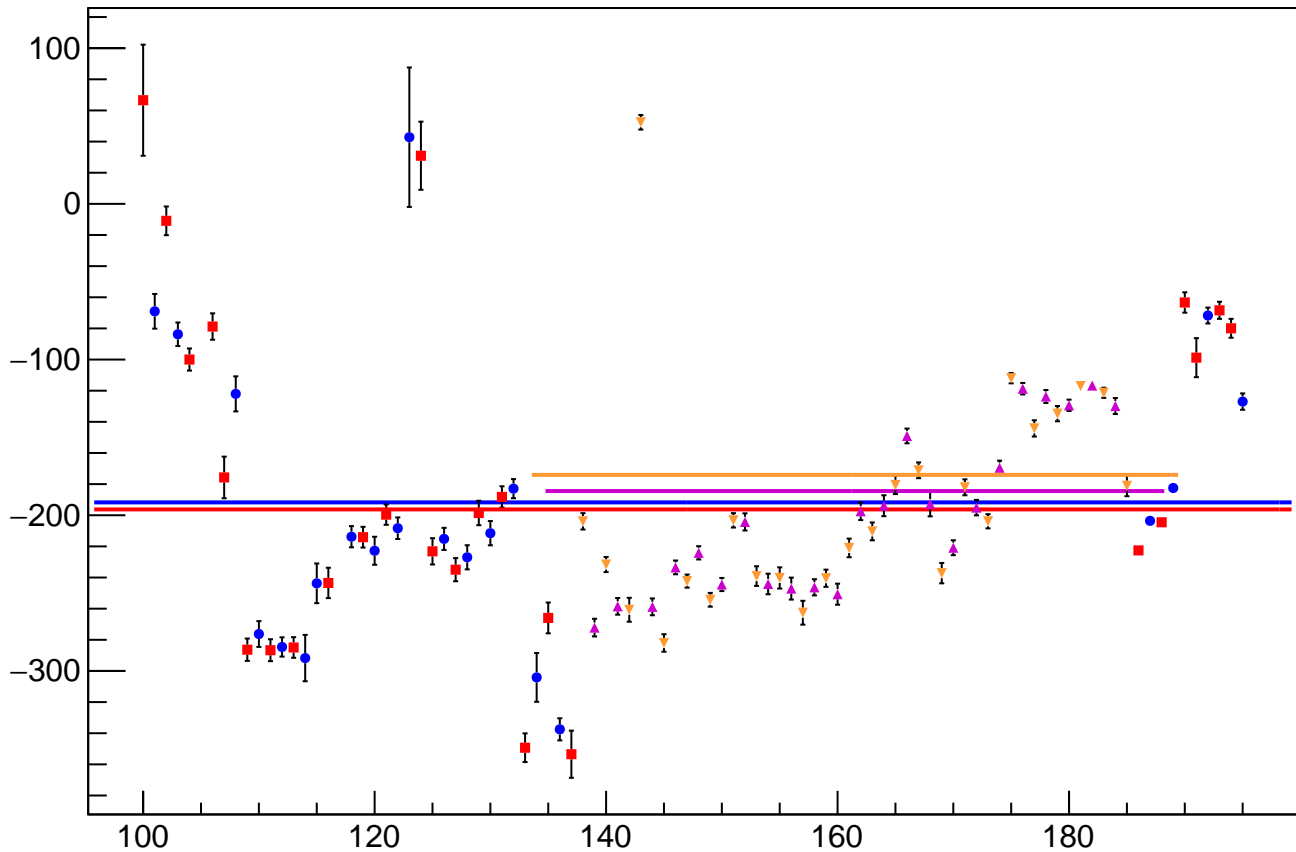
Left In:  $5.527 \pm 0.781$   $\chi^2/\text{NDF}: 256.3/22$

+ sign  $6.149 \pm 0.599$   $\chi^2/\text{NDF}: 863.4/45$

All:  $4.872 \pm 0.423$   $\chi^2/\text{NDF}: 1747.7/93$

- sign  $3.606 \pm 0.597$   $\chi^2/\text{NDF}: 875.3/47$

# reg\_asym\_atr1l2\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-191.736 \pm 1.368$   $\chi^2/\text{NDF}: 2051.6/20$

Left Out:  $-174.061 \pm 0.971$   $\chi^2/\text{NDF}: 5443.3/24$

Right Out:  $-196.251 \pm 1.038$   $\chi^2/\text{NDF}: 3451.1/24$

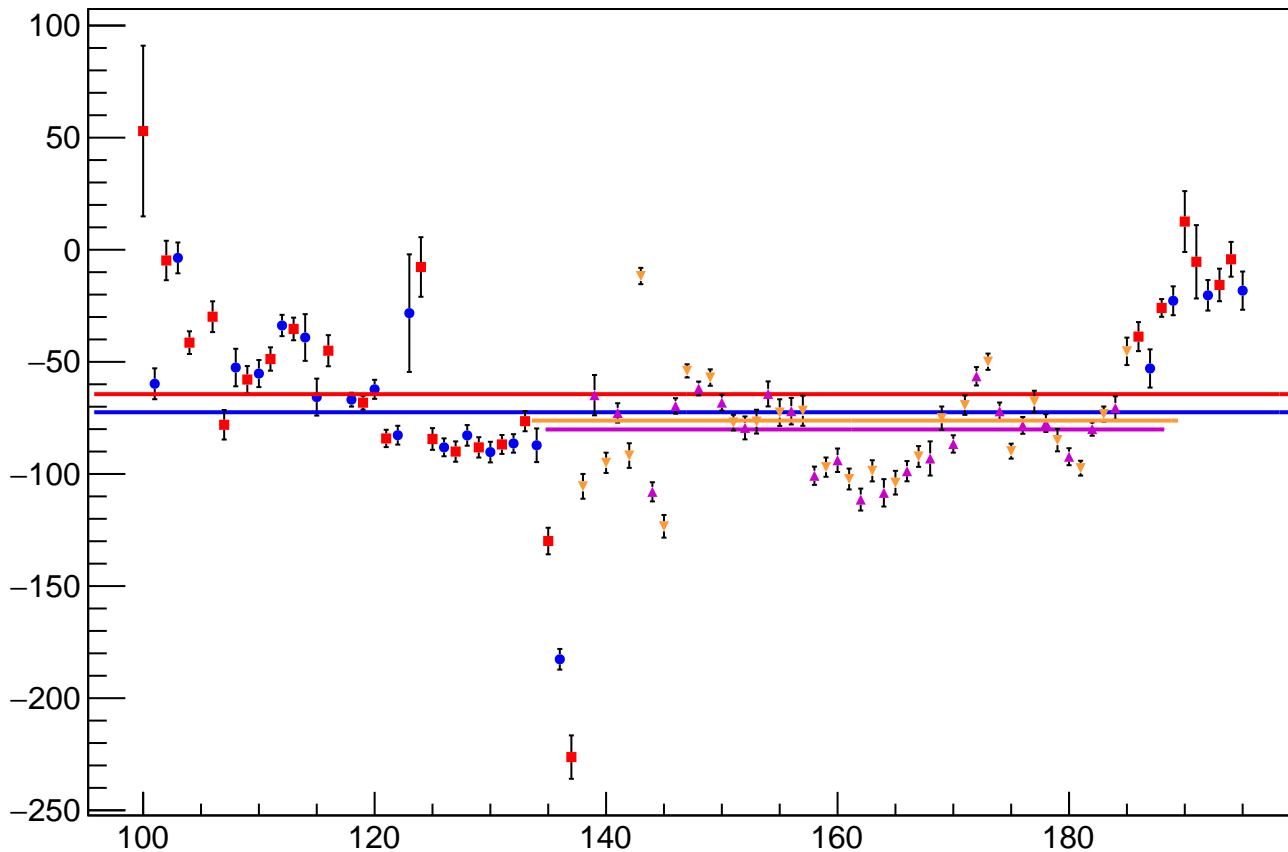
Left In:  $-184.456 \pm 0.991$   $\chi^2/\text{NDF}: 3051.6/22$

+ sign  $-179.978 \pm 0.792$   $\chi^2/\text{NDF}: 7605.8/45$

All:  $-185.530 \pm 0.531$   $\chi^2/\text{NDF}: 14265.5/93$

- sign  $-190.078 \pm 0.717$   $\chi^2/\text{NDF}: 6570.2/47$

# reg\_asym\_atr1l2\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-72.470 \pm 1.175$   $\chi^2/\text{NDF}: 997.3/20$

Left Out:  $-76.182 \pm 0.857$   $\chi^2/\text{NDF}: 801.0/24$

Right Out:  $-64.403 \pm 1.106$   $\chi^2/\text{NDF}: 977.1/24$

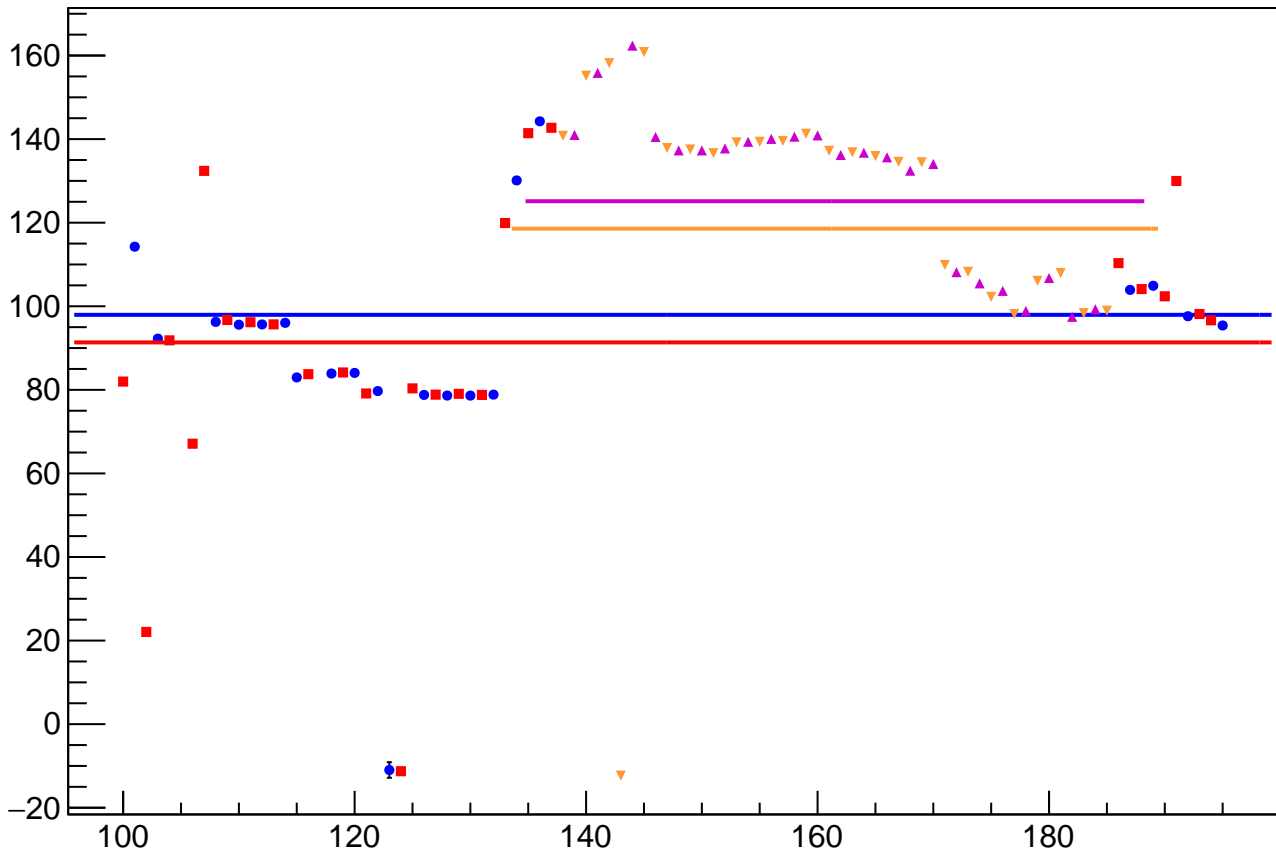
Left In:  $-80.149 \pm 0.889$   $\chi^2/\text{NDF}: 283.3/22$

+ sign  $-74.893 \pm 0.693$   $\chi^2/\text{NDF}: 1804.8/45$

All:  $-74.432 \pm 0.490$   $\chi^2/\text{NDF}: 3189.1/93$

- sign  $-73.970 \pm 0.693$   $\chi^2/\text{NDF}: 1383.4/47$

# reg\_asym\_atr1l2\_dd\_diff\_bpm12X\_slope vs Slug



Right In: 97.952 $\pm$ 0.065  $\chi^2$ /NDF: 94693.5/20

Left Out: 118.569 $\pm$ 0.040  $\chi^2$ /NDF: 728689.7/24

Right Out: 91.352 $\pm$ 0.059  $\chi^2$ /NDF: 239545.6/24

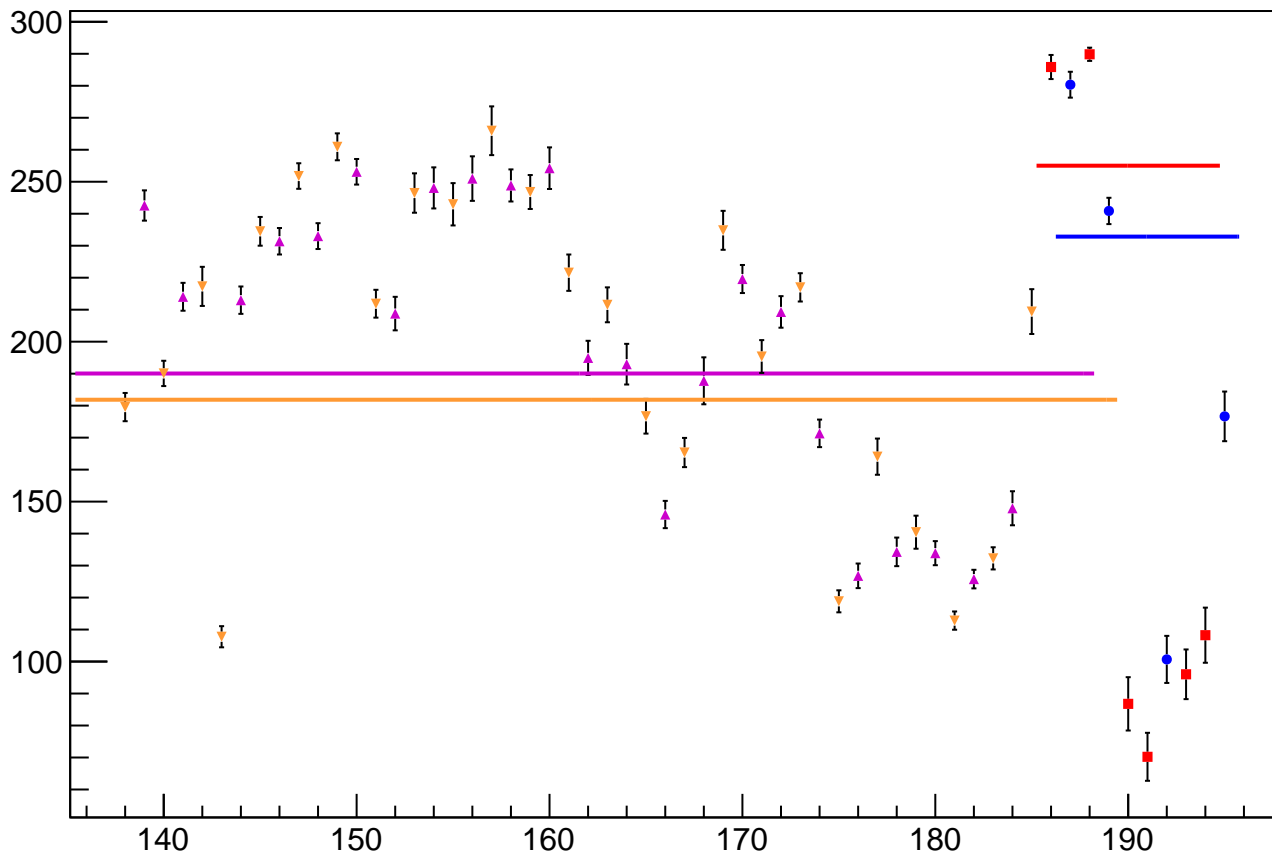
Left In: 125.139 $\pm$ 0.041  $\chi^2$ /NDF: 220927.1/22

+ sign 112.835 $\pm$ 0.034  $\chi^2$ /NDF: 895474.4/45

All: 113.383 $\pm$ 0.024  $\chi^2$ /NDF: 1579075.6/93

- sign 113.909 $\pm$ 0.034  $\chi^2$ /NDF: 683104.6/47

# reg\_asym\_atl\_dd\_atr\_dd\_avg\_diff\_bpm1X\_slope vs Slug



Right In: 232.845 $\pm$ 2.538  $\chi^2$ /NDF: 516.5/3

Left Out: 181.850 $\pm$ 0.913  $\chi^2$ /NDF:3303.4/24

Right Out: 255.016 $\pm$ 1.652  $\chi^2$ /NDF: 2074.2/5

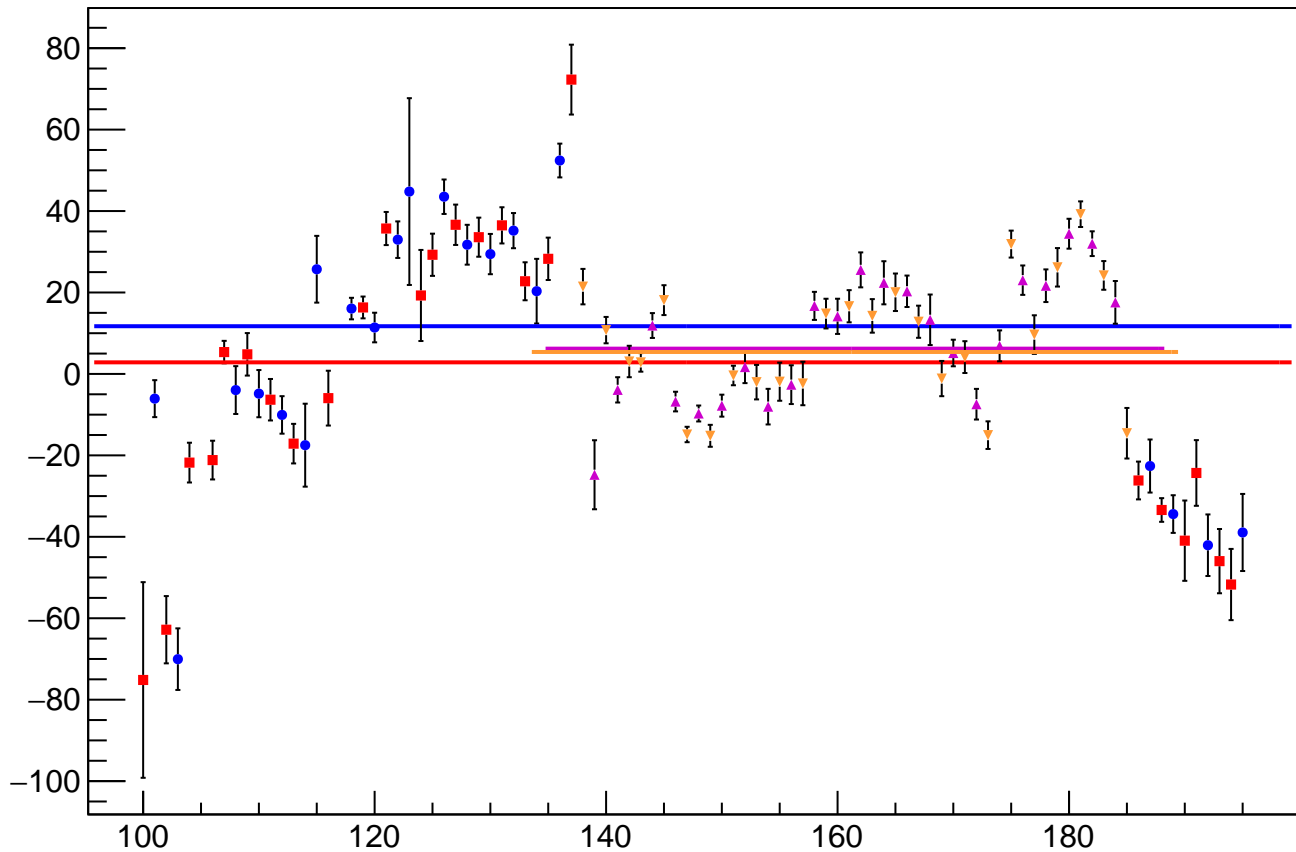
Left In: 190.048 $\pm$ 0.953  $\chi^2$ /NDF:2438.4/22

+ sign 187.697 $\pm$ 0.859  $\chi^2$ /NDF: 4177.3/28

All: 197.358 $\pm$ 0.595  $\chi^2$ /NDF: 10093.6/57

- sign 206.269 $\pm$ 0.825  $\chi^2$ /NDF: 5673.4/28

# reg\_asym\_atl\_dd\_atr\_dd\_avg\_diff\_bpm4aY\_slope vs Slug



Right In: 11.716+/-1.096  $\chi^2$ /NDF: 627.8/20

Left Out: 5.394+/-0.688  $\chi^2$ /NDF:526.5/24

Right Out: 2.843+/-0.967  $\chi^2$ /NDF: 821.6/24

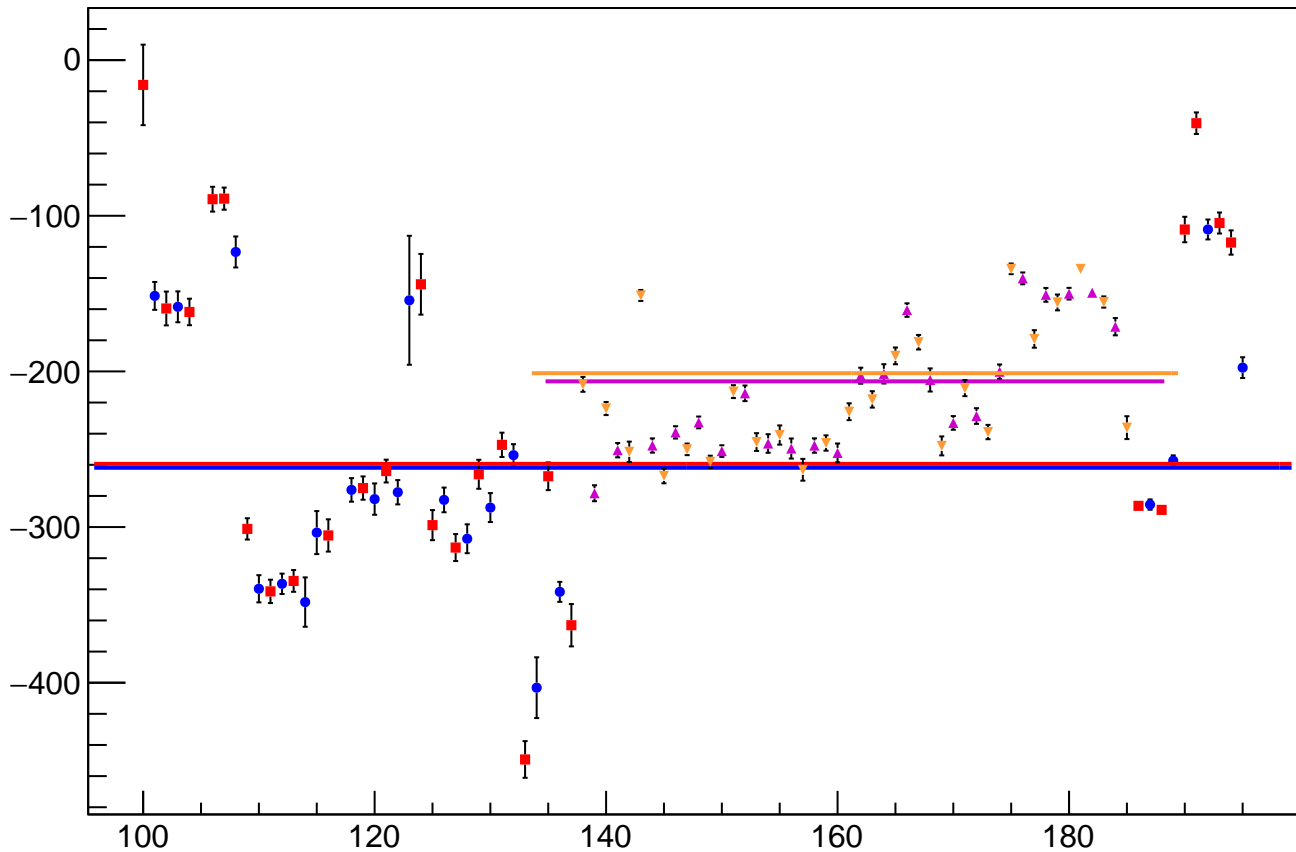
Left In: 6.206+/-0.732  $\chi^2$ /NDF:407.5/22

+ sign 7.180+/-0.583  $\chi^2$ /NDF: 1178.2/45

All: 6.082+/-0.412  $\chi^2$ /NDF: 2422.1/93

- sign 4.982+/-0.583  $\chi^2$ /NDF: 1236.8/47

# reg\_asym\_atl\_dd\_atr\_dd\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $-261.898 \pm 1.522$   $\chi^2/\text{NDF}: 1683.9/20$

Left Out:  $-201.144 \pm 0.918$   $\chi^2/\text{NDF}: 2488.8/24$

Right Out:  $-259.392 \pm 1.124$   $\chi^2/\text{NDF}: 4628.6/24$

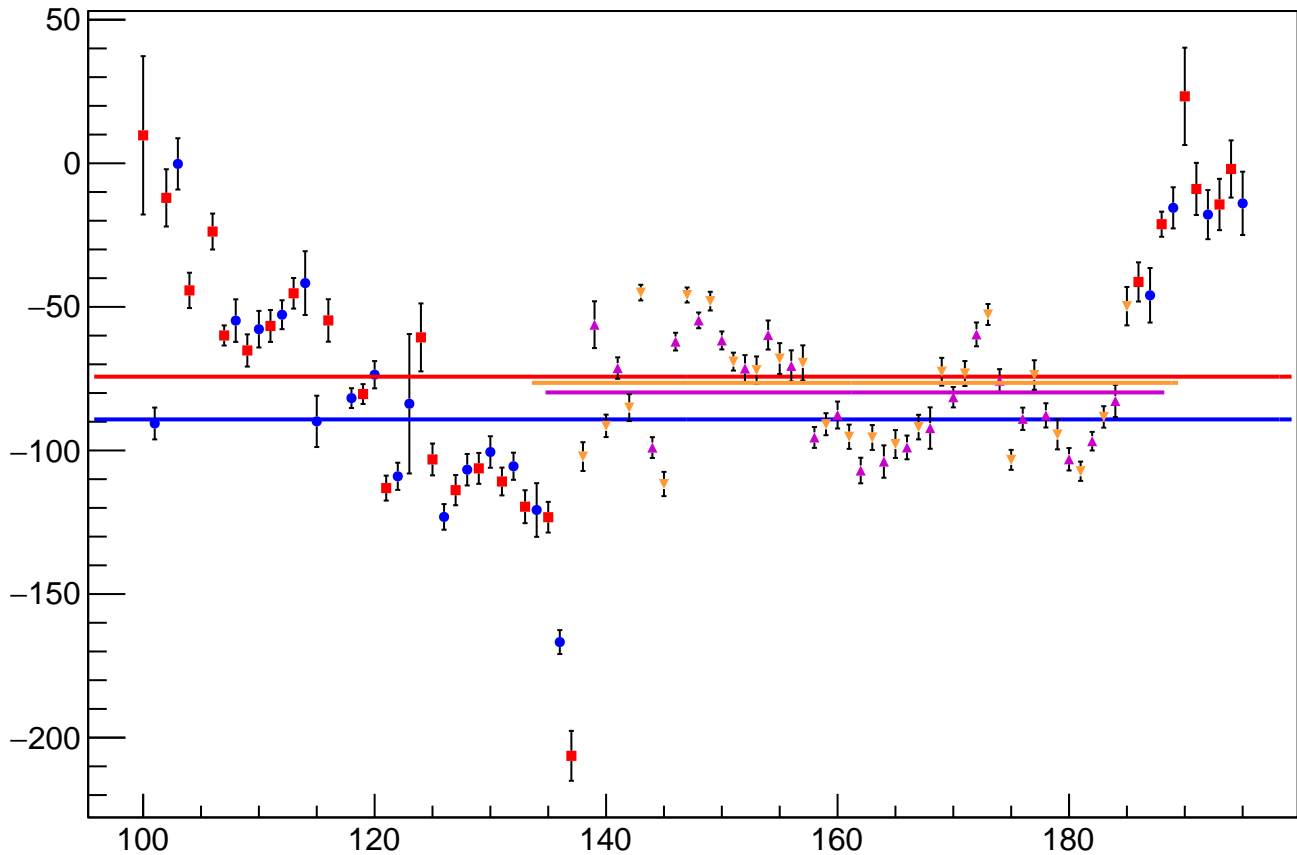
Left In:  $-206.379 \pm 0.950$   $\chi^2/\text{NDF}: 2111.6/22$

+ sign  $-217.344 \pm 0.786$   $\chi^2/\text{NDF}: 5341.0/45$

All:  $-223.345 \pm 0.533$   $\chi^2/\text{NDF}: 13487.1/93$

- sign  $-228.457 \pm 0.725$   $\chi^2/\text{NDF}: 8038.1/47$

# reg\_asym\_atl\_dd\_atr\_dd\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $-89.183 \pm 1.284$   $\chi^2/\text{NDF}: 933.9/20$

Left Out:  $-76.460 \pm 0.797$   $\chi^2/\text{NDF}: 781.3/24$

Right Out:  $-74.300 \pm 1.160$   $\chi^2/\text{NDF}: 1194.4/24$

Left In:  $-79.792 \pm 0.840$   $\chi^2/\text{NDF}: 412.3/22$

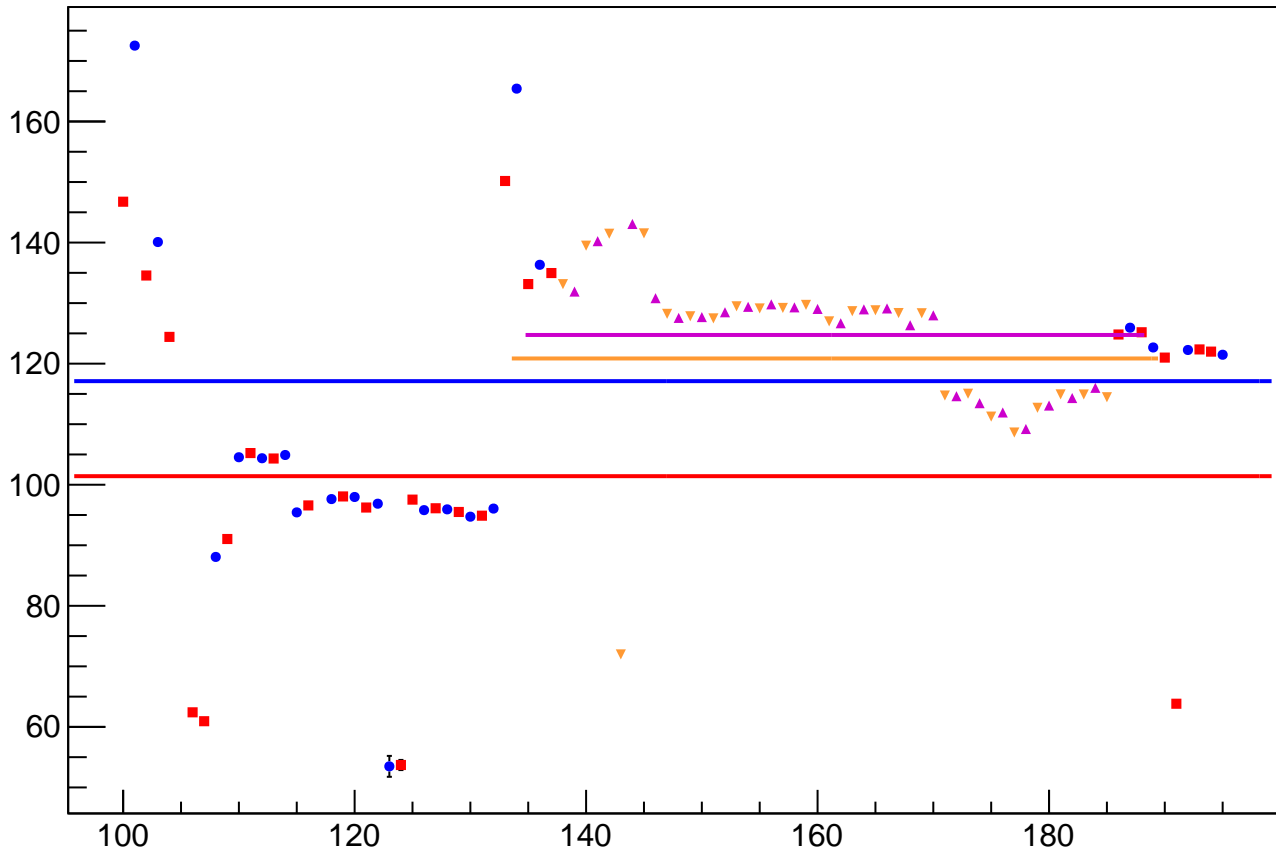
+ sign  $-79.996 \pm 0.677$   $\chi^2/\text{NDF}: 1786.2/45$

All:  $-78.955 \pm 0.480$   $\chi^2/\text{NDF}: 3412.2/93$

- sign  $-77.904 \pm 0.680$   $\chi^2/\text{NDF}: 1621.3/47$



# reg\_asym\_atl\_dd\_atr\_dd\_avg\_diff\_bpm12X\_slope vs Slug



Right In: 117.110 $\pm$ 0.071  $\chi^2$ /NDF: 106915.6/20

Left Out: 120.855 $\pm$ 0.038  $\chi^2$ /NDF: 182759.1/24

Right Out: 101.414 $\pm$ 0.060  $\chi^2$ /NDF: 221817.3/24

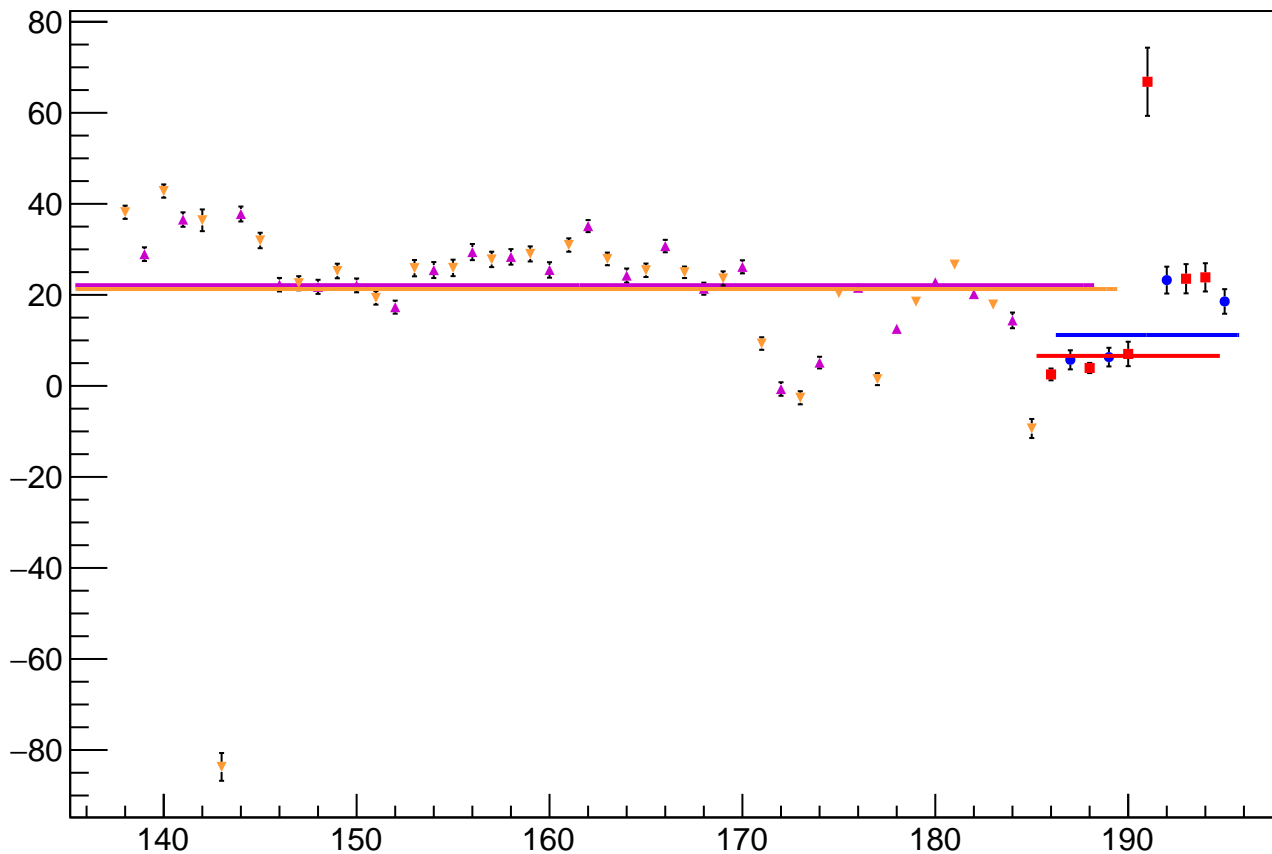
Left In: 124.738 $\pm$ 0.039  $\chi^2$ /NDF: 51298.3/22

+ sign 120.027 $\pm$ 0.034  $\chi^2$ /NDF: 291817.1/45

All: 118.845 $\pm$ 0.023  $\chi^2$ /NDF: 673661.8/93

- sign 117.717 $\pm$ 0.033  $\chi^2$ /NDF: 379423.9/47

# reg\_asym\_atl\_dd\_atr\_dd\_dd\_diff\_bpm1X\_slope vs Slug



Right In: 11.186+/-1.181  $\chi^2$ /NDF: 36.5/3

Left Out: 21.282+/-0.282  $\chi^2$ /NDF:2600.5/24

Right Out: 6.594+/-0.754  $\chi^2$ /NDF: 139.0/5

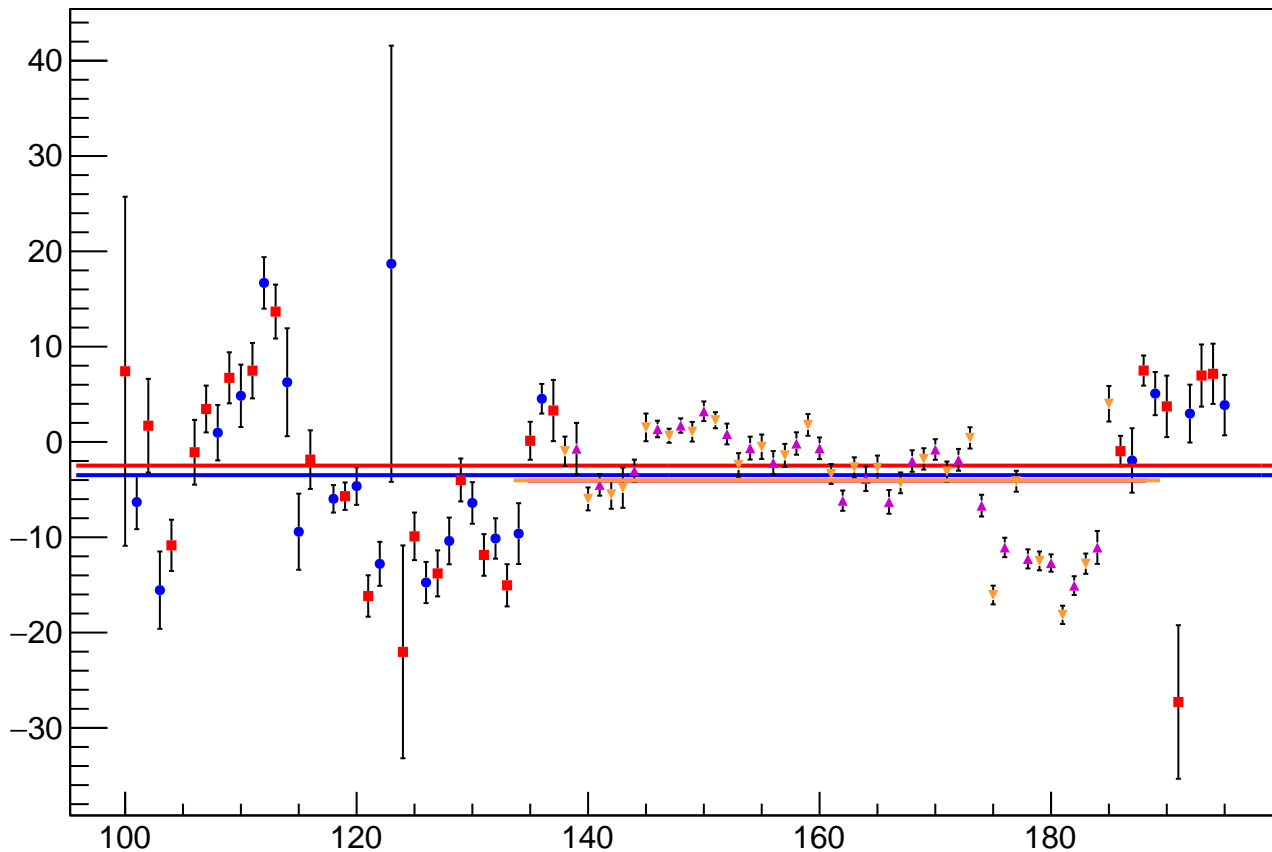
Left In: 22.127+/-0.285  $\chi^2$ /NDF:900.2/22

+ sign 20.736+/-0.275  $\chi^2$ /NDF: 2706.1/28

All: 20.449+/-0.191  $\chi^2$ /NDF: 4118.9/57

- sign 20.178+/-0.267  $\chi^2$ /NDF: 1410.6/28

# reg\_asym\_atl\_dd\_atr\_dd\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-3.484 \pm 0.544$   $\chi^2/\text{NDF}: 201.4/20$

Left Out:  $-4.022 \pm 0.223$   $\chi^2/\text{NDF}: 734.1/24$

Right Out:  $-2.480 \pm 0.499$   $\chi^2/\text{NDF}: 279.0/24$

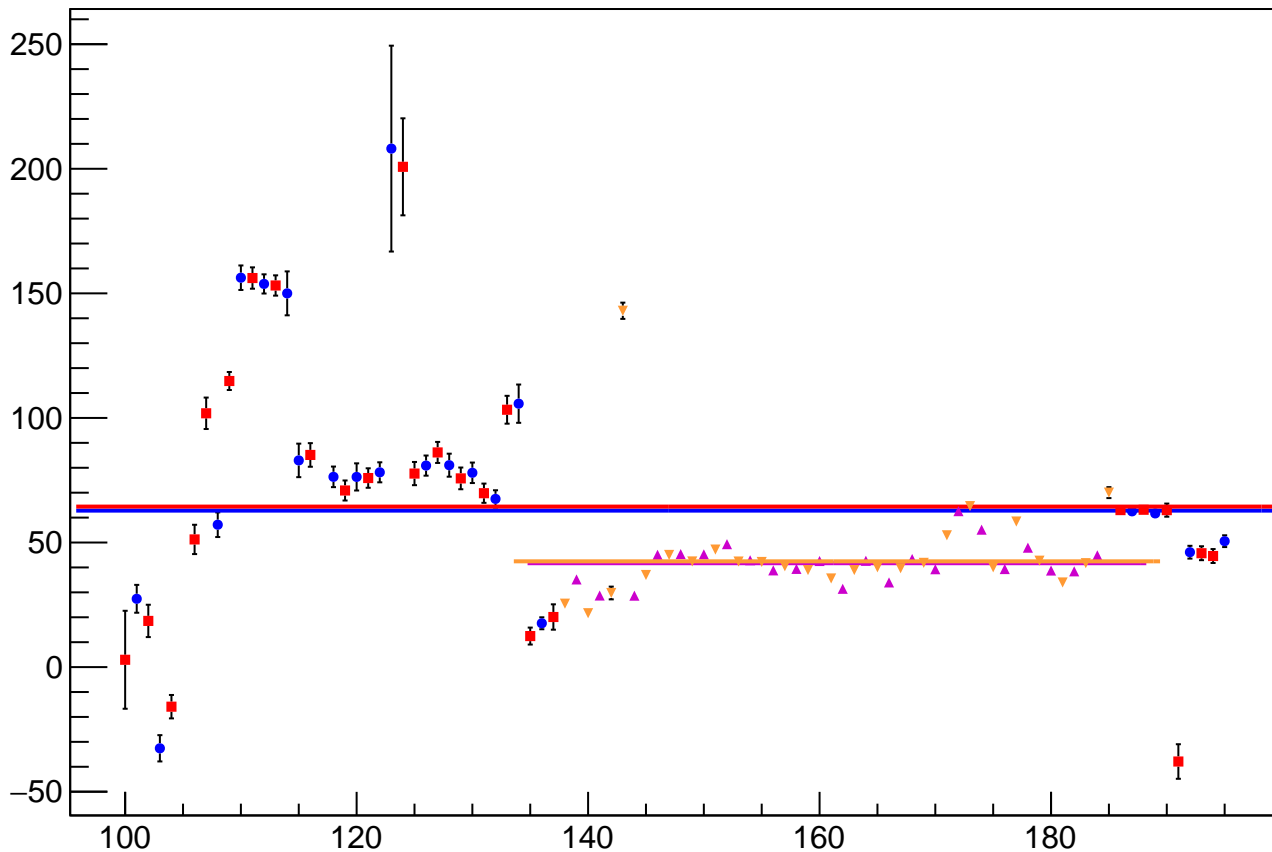
Left In:  $-4.059 \pm 0.228$   $\chi^2/\text{NDF}: 577.2/22$

+ sign  $-3.944 \pm 0.206$   $\chi^2/\text{NDF}: 936.4/45$

All:  $-3.866 \pm 0.146$   $\chi^2/\text{NDF}: 1801.2/93$

- sign  $-3.786 \pm 0.207$   $\chi^2/\text{NDF}: 864.5/47$

# reg\_asym\_atl\_dd\_atr\_dd\_dd\_diff\_bpm4eX\_slope vs Slug



Right In: 62.805 $\pm$ 0.738  $\chi^2$ /NDF: 1945.4/20

Left Out: 42.452 $\pm$ 0.282  $\chi^2$ /NDF:2016.0/24

Right Out: 64.421 $\pm$ 0.538  $\chi^2$ /NDF: 2316.9/24

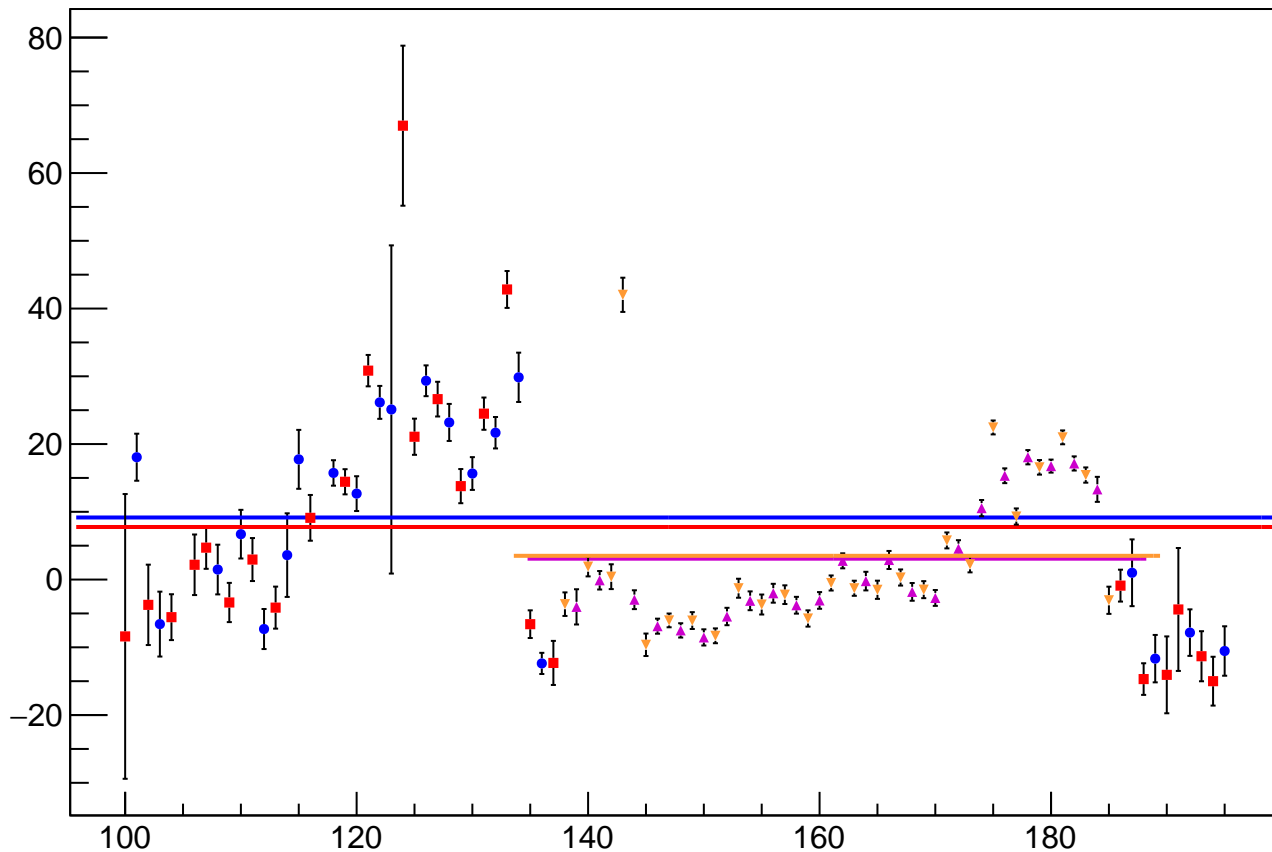
Left In: 41.695 $\pm$ 0.284  $\chi^2$ /NDF:630.2/22

+ sign 45.047 $\pm$ 0.263  $\chi^2$ /NDF: 4625.7/45

All: 45.887 $\pm$ 0.182  $\chi^2$ /NDF: 8988.0/93

- sign 46.652 $\pm$ 0.251  $\chi^2$ /NDF: 4342.8/47

# reg\_asym\_atl\_dd\_atr\_dd\_diff\_bpm4eY\_slope vs Slug



Right In: 9.163 $\pm$ 0.629  $\chi^2$ /NDF: 577.2/20

Left Out: 3.505 $\pm$ 0.252  $\chi^2$ /NDF:1691.3/24

Right Out: 7.759 $\pm$ 0.596  $\chi^2$ /NDF: 768.2/24

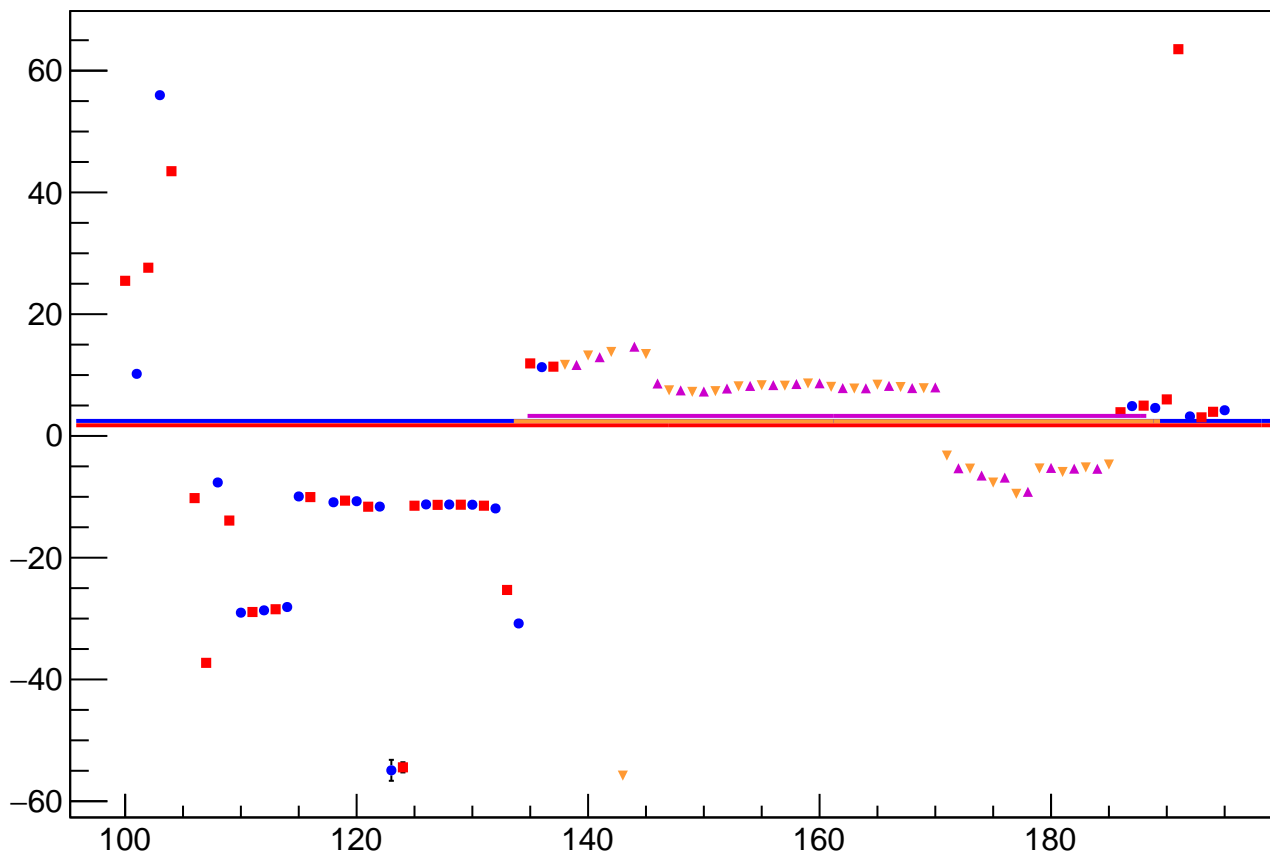
Left In: 3.081 $\pm$ 0.257  $\chi^2$ /NDF:1265.7/22

+ sign 4.290 $\pm$ 0.234  $\chi^2$ /NDF: 2338.2/45

All: 4.055 $\pm$ 0.166  $\chi^2$ /NDF: 4426.1/93

- sign 3.815 $\pm$ 0.236  $\chi^2$ /NDF: 2085.9/47

# reg\_asym\_atl\_dd\_atr\_dd\_diff\_bpm12X\_slope vs Slug



Right In: 2.468 $\pm$ 0.032  $\chi^2$ /NDF: 358612.5/20

Left Out: 2.425 $\pm$ 0.012  $\chi^2$ /NDF: 616382.5/24

Right Out: 1.752 $\pm$ 0.031  $\chi^2$ /NDF: 428979.2/24

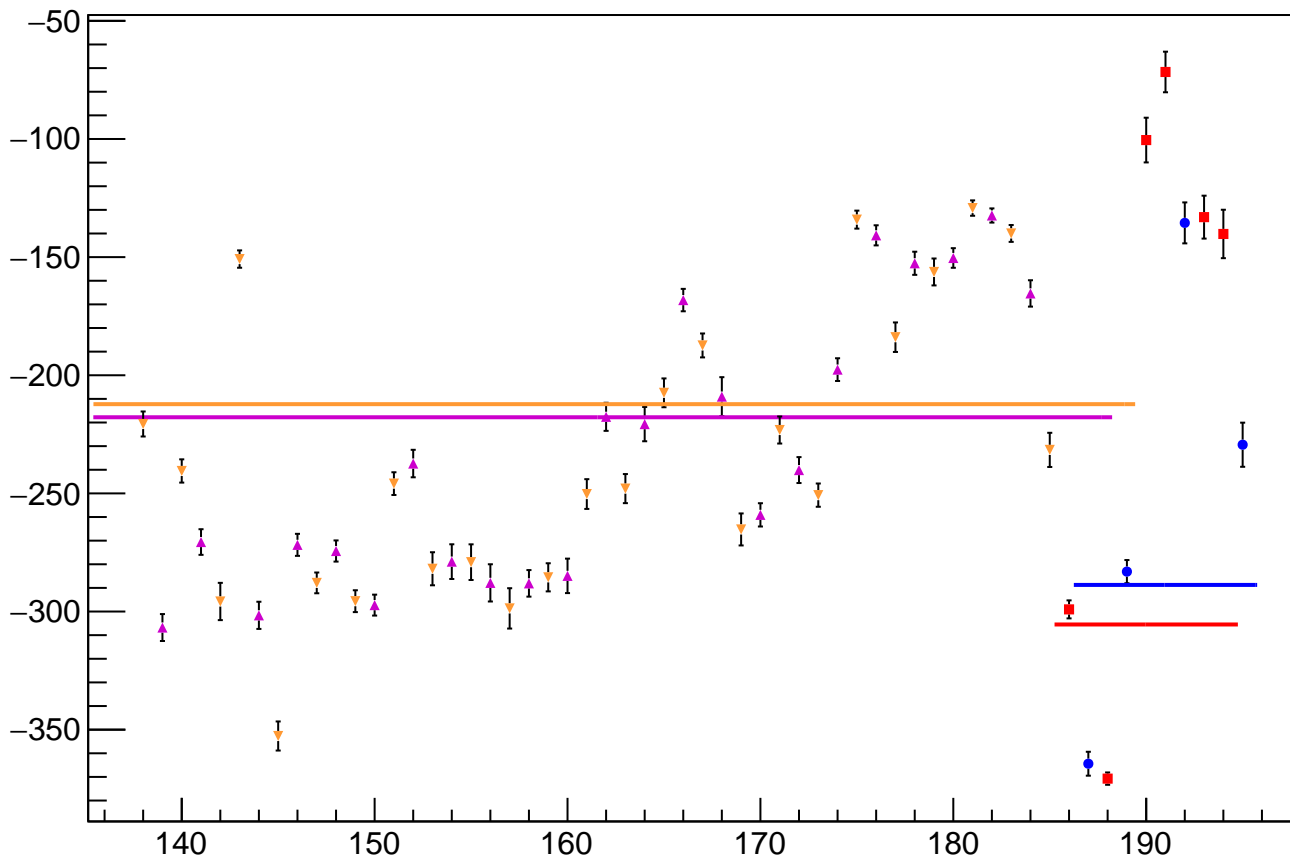
Left In: 3.293 $\pm$ 0.012  $\chi^2$ /NDF: 404323.8/22

+ sign 2.430 $\pm$ 0.011  $\chi^2$ /NDF: 974996.5/45

All: 2.765 $\pm$ 0.008  $\chi^2$ /NDF: 1812374.0/93

- sign 3.100 $\pm$ 0.011  $\chi^2$ /NDF: 835489.1/47

# reg\_asym\_atl\_avg\_atr\_avg\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-288.738 \pm 3.079$   $\chi^2/\text{NDF}: 577.6/3$

Left Out:  $-212.231 \pm 1.029$   $\chi^2/\text{NDF}: 3875.4/24$

Right Out:  $-305.483 \pm 1.954$   $\chi^2/\text{NDF}: 2457.0/5$

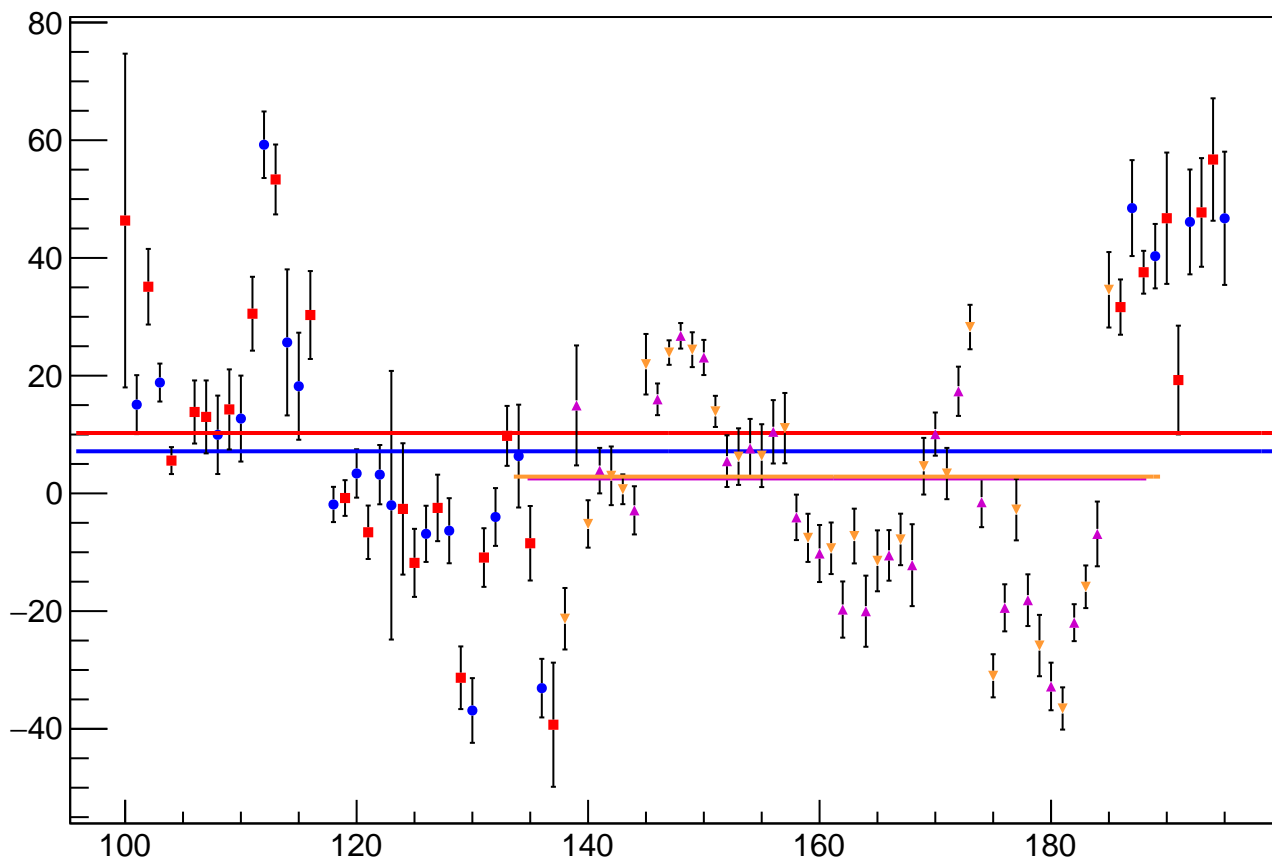
Left In:  $-217.779 \pm 1.067$   $\chi^2/\text{NDF}: 3448.9/22$

+ sign  $-219.922 \pm 0.976$   $\chi^2/\text{NDF}: 5008.2/28$

All:  $-229.291 \pm 0.676$   $\chi^2/\text{NDF}: 12642.4/57$

- sign  $-237.911 \pm 0.936$   $\chi^2/\text{NDF}: 7457.4/28$

# reg\_asym\_atl\_avg\_atr\_avg\_avg\_diff\_bpm4aY\_slope vs Slug



Right In: 7.153+/-1.184  $\chi^2/\text{NDF}$ : 358.8/20

Left Out: 2.848+/-0.775  $\chi^2/\text{NDF}$ :582.1/24

Right Out: 10.259+/-1.050  $\chi^2/\text{NDF}$ : 375.2/24

Left In: 2.540+/-0.822  $\chi^2/\text{NDF}$ :473.6/22

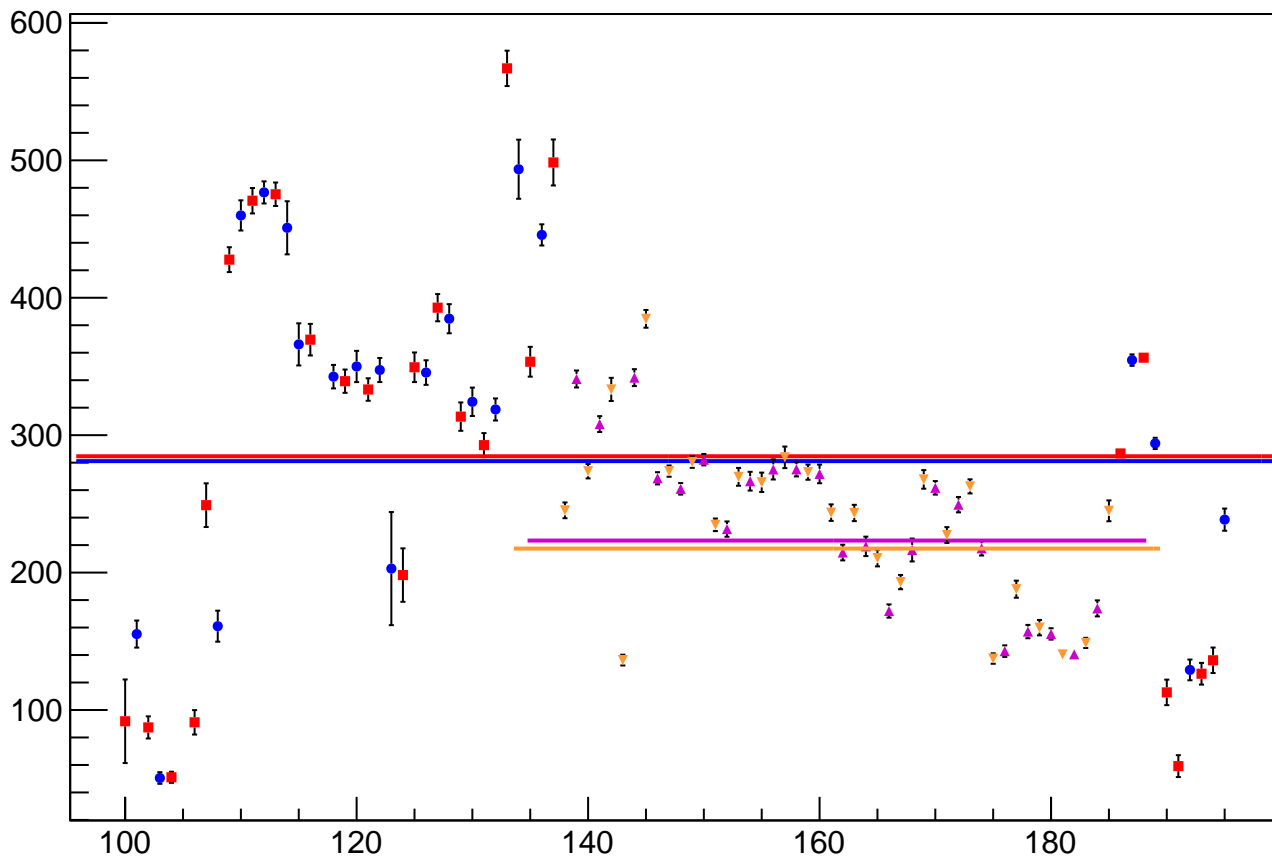
+ sign 4.138+/-0.648  $\chi^2/\text{NDF}$ : 950.2/45

All: 4.807+/-0.458  $\chi^2/\text{NDF}$ : 1834.6/93

- sign 5.475+/-0.648  $\chi^2/\text{NDF}$ : 882.3/47



# reg\_asym\_atl\_avg\_atr\_avg\_avg\_diff\_bpm4eX\_slope vs Slug



Right In: 281.108 $\pm$ 1.678  $\chi^2$ /NDF: 5861.9/20

Left Out: 217.484 $\pm$ 1.032  $\chi^2$ /NDF:3769.5/24

Right Out: 284.647 $\pm$ 1.269  $\chi^2$ /NDF: 9596.4/24

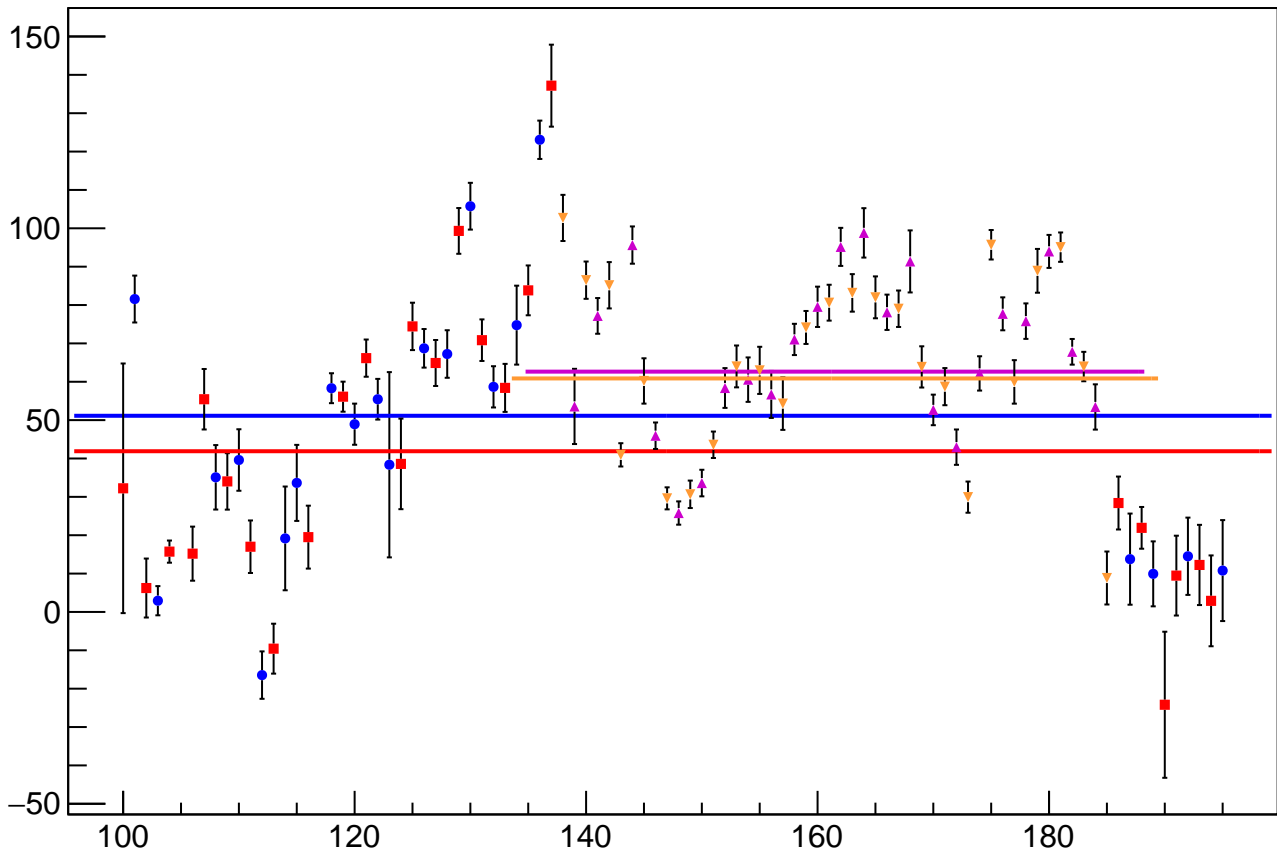
Left In: 223.309 $\pm$ 1.062  $\chi^2$ /NDF:3378.0/22

+ sign 234.953 $\pm$ 0.879  $\chi^2$ /NDF: 10674.3/45

All: 242.276 $\pm$ 0.598  $\chi^2$ /NDF: 25151.1/93

- sign 248.560 $\pm$ 0.815  $\chi^2$ /NDF: 14348.0/47

# reg\_asym\_atl\_avg\_atr\_avg\_avg\_diff\_bpm4eY\_slope vs Slug



Right In: 51.134 $\pm$ 1.389  $\chi^2$ /NDF: 693.7/20

Left Out: 60.863 $\pm$ 0.897  $\chi^2$ /NDF: 731.6/24

Right Out: 41.892 $\pm$ 1.265  $\chi^2$ /NDF: 593.5/24

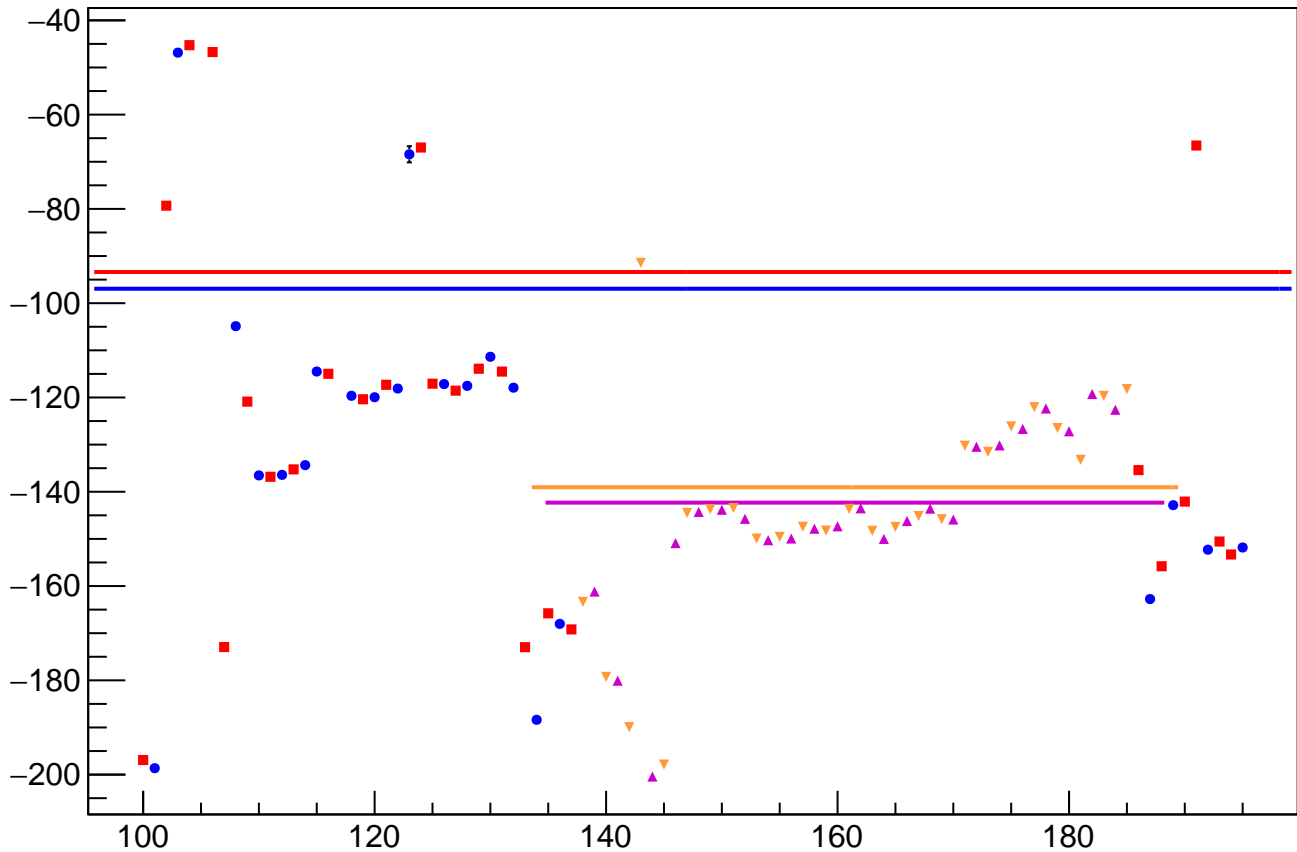
Left In: 62.640 $\pm$ 0.943  $\chi^2$ /NDF: 515.4/22

+ sign 58.001 $\pm$ 0.753  $\chi^2$ /NDF: 1460.0/45

All: 56.623 $\pm$ 0.534  $\chi^2$ /NDF: 2748.5/93

- sign 55.235 $\pm$ 0.756  $\chi^2$ /NDF: 1281.8/47

# reg\_asym\_atl\_avg\_atr\_avg\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-96.931 \pm 0.064$   $\chi^2/\text{NDF}: 613210.6/20$

Left Out:  $-139.040 \pm 0.043$   $\chi^2/\text{NDF}: 258113.4/24$

Right Out:  $-93.380 \pm 0.059$   $\chi^2/\text{NDF}: 641175.2/24$

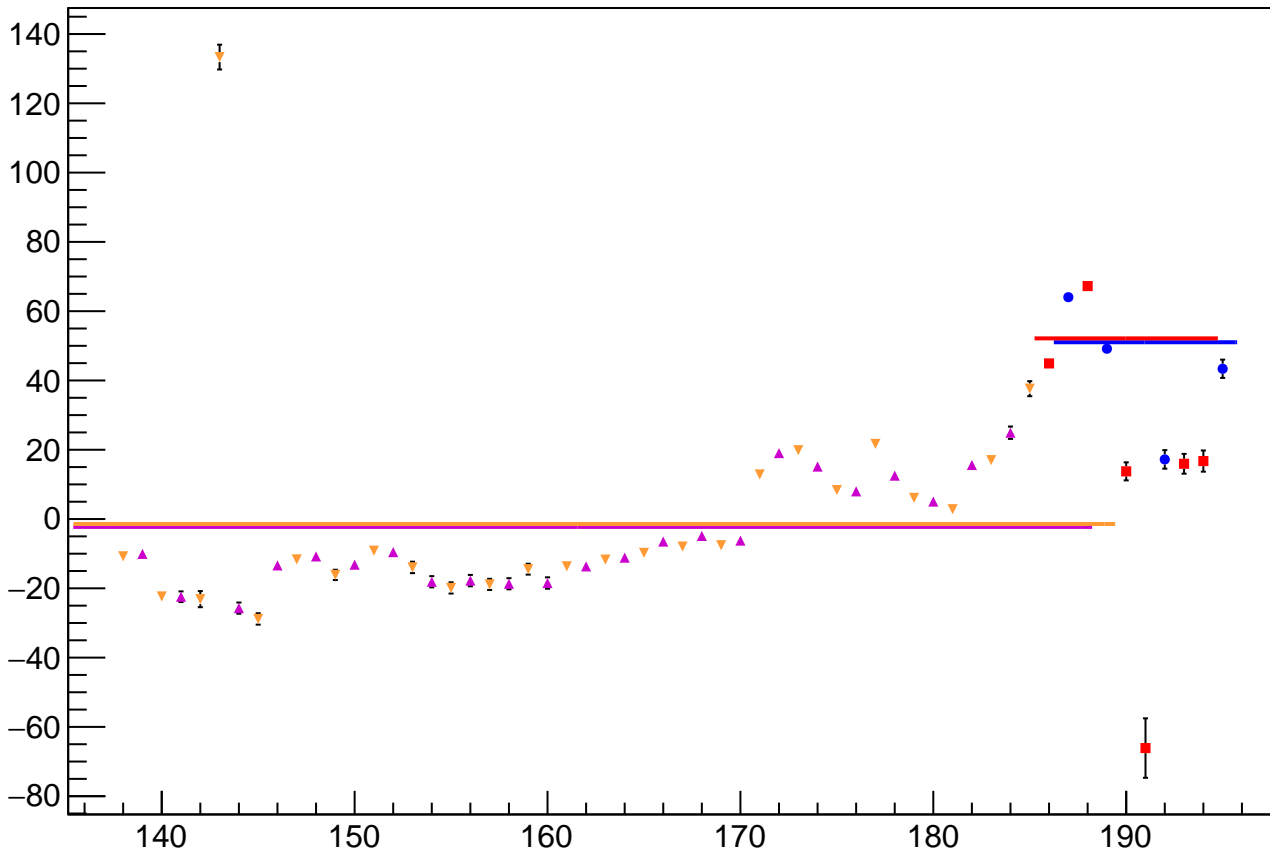
Left In:  $-142.305 \pm 0.044$   $\chi^2/\text{NDF}: 143351.8/22$

+ sign  $-126.071 \pm 0.036$   $\chi^2/\text{NDF}: 1168486.5/45$

All:  $-125.452 \pm 0.025$   $\chi^2/\text{NDF}: 2393323.1/93$

- sign  $-124.844 \pm 0.035$   $\chi^2/\text{NDF}: 1224239.5/47$

# reg\_asym\_atl\_avg\_atr\_avg\_dd\_diff\_bpm1X\_slope vs Slug



Right In: 51.032+/-0.887  $\chi^2$ /NDF: 257.0/3

Left Out: -1.427+/-0.268  $\chi^2$ /NDF:4339.0/24

Right Out: 52.151+/-0.543  $\chi^2$ /NDF: 1152.2/5

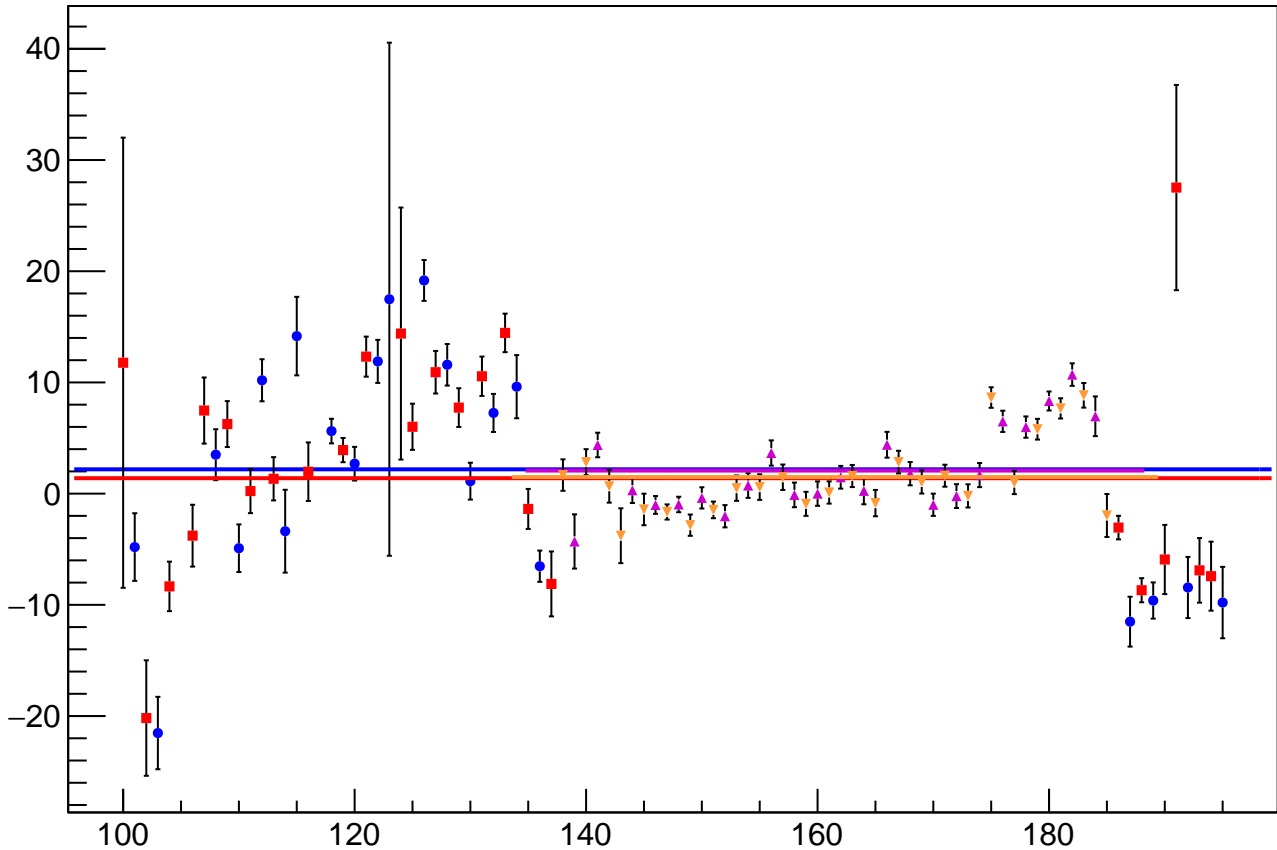
Left In: -2.270+/-0.271  $\chi^2$ /NDF:2521.6/22

+ sign 2.948+/-0.256  $\chi^2$ /NDF: 7800.6/28

All: 5.919+/-0.176  $\chi^2$ /NDF: 19780.7/57

- sign 8.575+/-0.242  $\chi^2$ /NDF: 11725.5/28

# reg\_asym\_atl\_avg\_atr\_avg\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $2.187 \pm 0.435$   $\chi^2/\text{NDF}: 420.6/20$

Left Out:  $1.491 \pm 0.210$   $\chi^2/\text{NDF}: 259.1/24$

Right Out:  $1.388 \pm 0.391$   $\chi^2/\text{NDF}: 367.2/24$

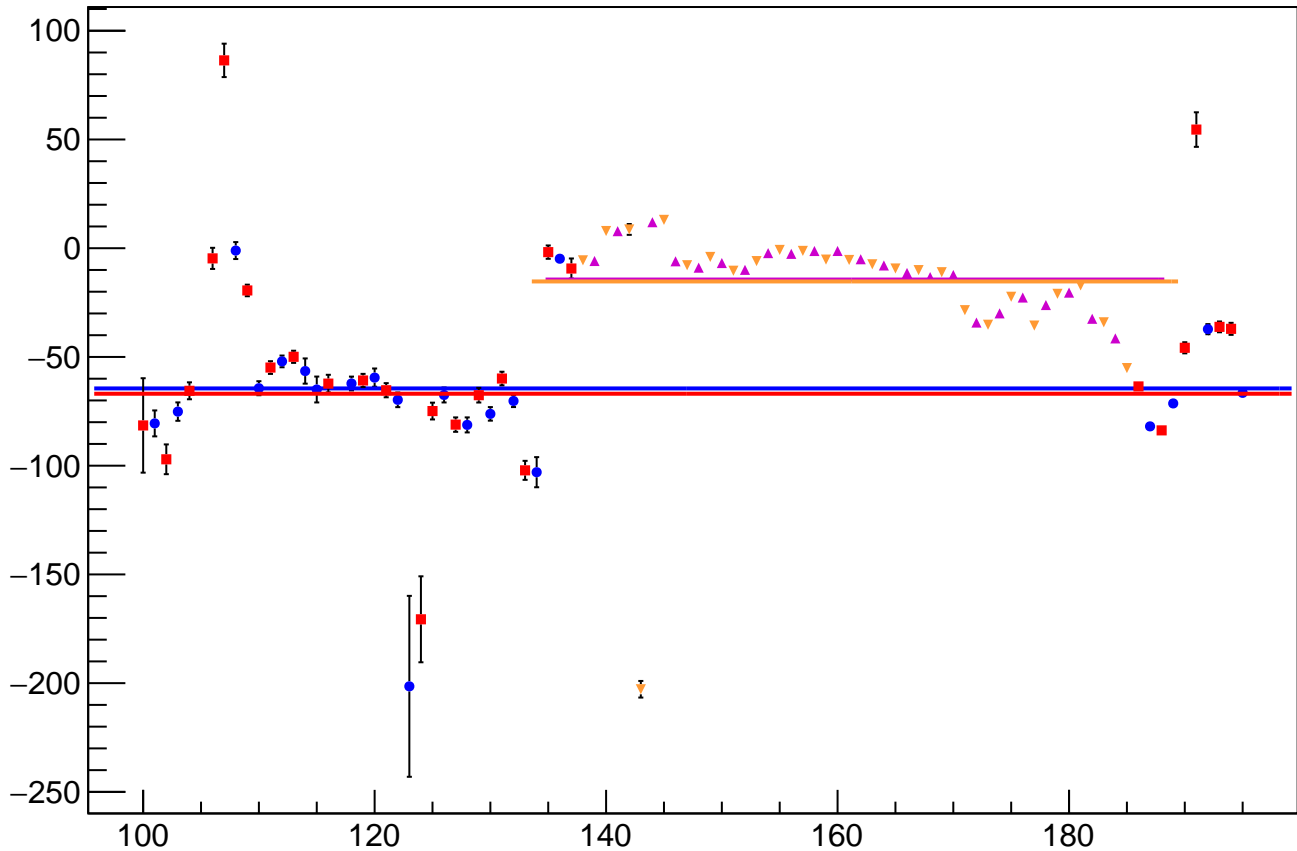
Left In:  $2.075 \pm 0.215$   $\chi^2/\text{NDF}: 274.6/22$

+ sign  $1.623 \pm 0.189$   $\chi^2/\text{NDF}: 681.7/45$

All:  $1.769 \pm 0.134$   $\chi^2/\text{NDF}: 1327.1/93$

- sign  $1.915 \pm 0.189$   $\chi^2/\text{NDF}: 644.1/47$

# reg\_asym\_atl\_avg\_atr\_avg\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-64.477 \pm 0.564$   $\chi^2/\text{NDF}: 1552.2/20$

Left Out:  $-15.279 \pm 0.267$   $\chi^2/\text{NDF}: 4820.1/24$

Right Out:  $-66.916 \pm 0.393$   $\chi^2/\text{NDF}: 3012.4/24$

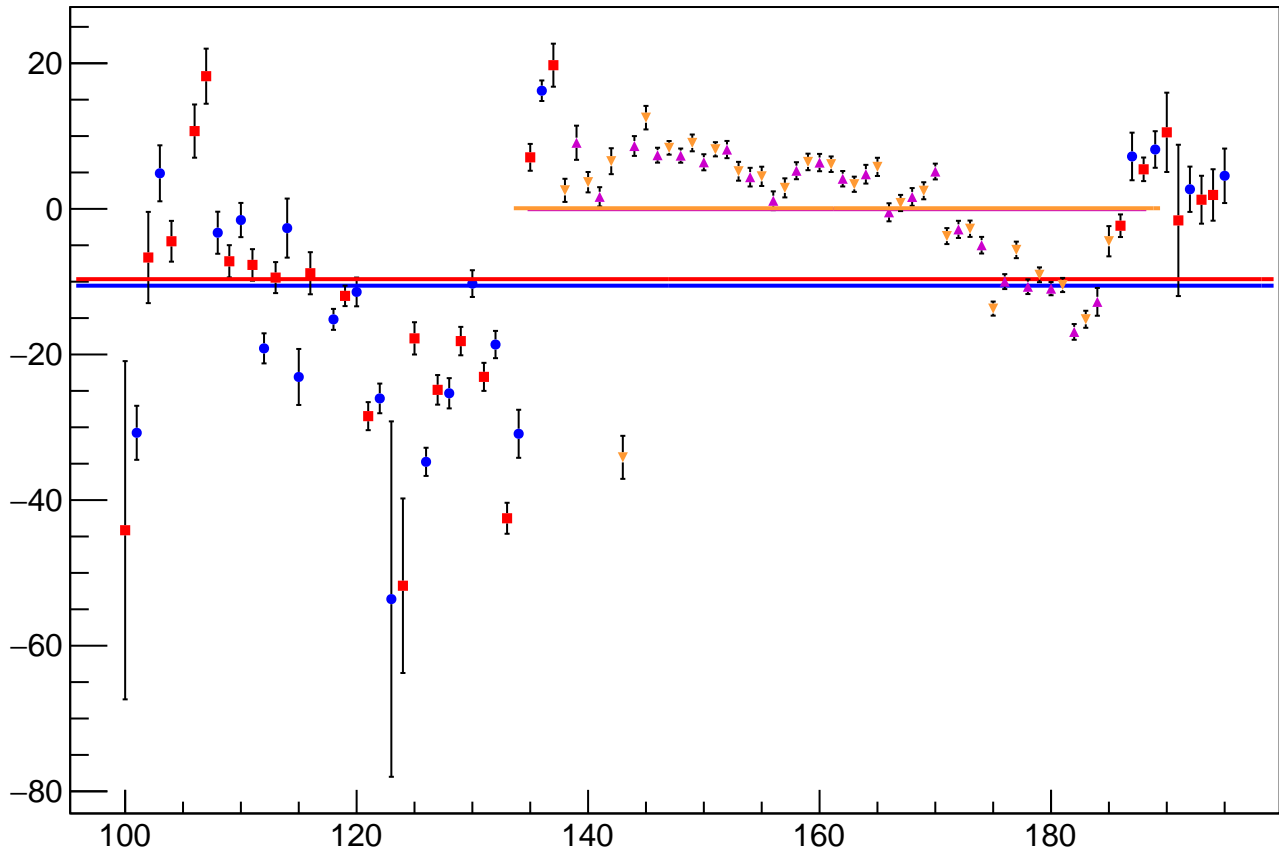
Left In:  $-14.406 \pm 0.269$   $\chi^2/\text{NDF}: 2032.4/22$

+ sign  $-24.266 \pm 0.241$   $\chi^2/\text{NDF}: 12584.1/45$

All:  $-28.013 \pm 0.163$   $\chi^2/\text{NDF}: 30242.2/93$

- sign  $-31.187 \pm 0.222$   $\chi^2/\text{NDF}: 17212.4/47$

# reg\_asym\_atl\_avg\_atr\_avg\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-10.549 \pm 0.507$   $\chi^2/\text{NDF}: 913.5/20$

Left Out:  $0.087 \pm 0.238$   $\chi^2/\text{NDF}: 1172.3/24$

Right Out:  $-9.653 \pm 0.474$   $\chi^2/\text{NDF}: 905.1/24$

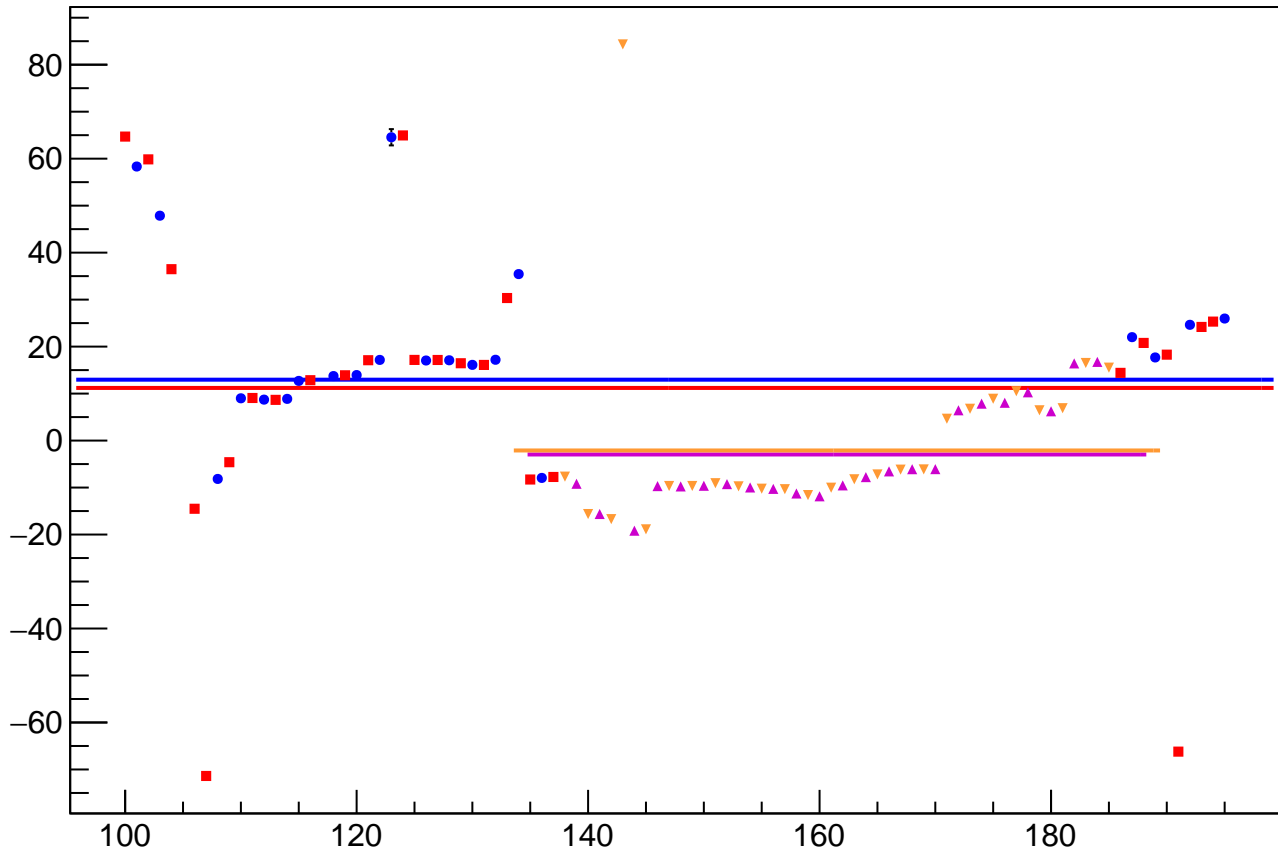
Left In:  $-0.044 \pm 0.243$   $\chi^2/\text{NDF}: 1028.2/22$

+ sign  $-1.835 \pm 0.216$   $\chi^2/\text{NDF}: 2446.0/45$

All:  $-1.941 \pm 0.153$   $\chi^2/\text{NDF}: 4705.5/93$

- sign  $-2.047 \pm 0.216$   $\chi^2/\text{NDF}: 2259.1/47$

# reg\_asym\_atl\_avg\_atr\_avg\_dd\_diff\_bpm12X\_slope vs Slug



Right In: 12.960+/-0.027  $\chi^2$ /NDF: 419242.5/20

Left Out: -2.105+/-0.011  $\chi^2$ /NDF:1093120.2/24

Right Out: 11.204+/-0.026  $\chi^2$ /NDF: 680470.0/24

Left In: -2.959+/-0.011  $\chi^2$ /NDF:763000.9/22

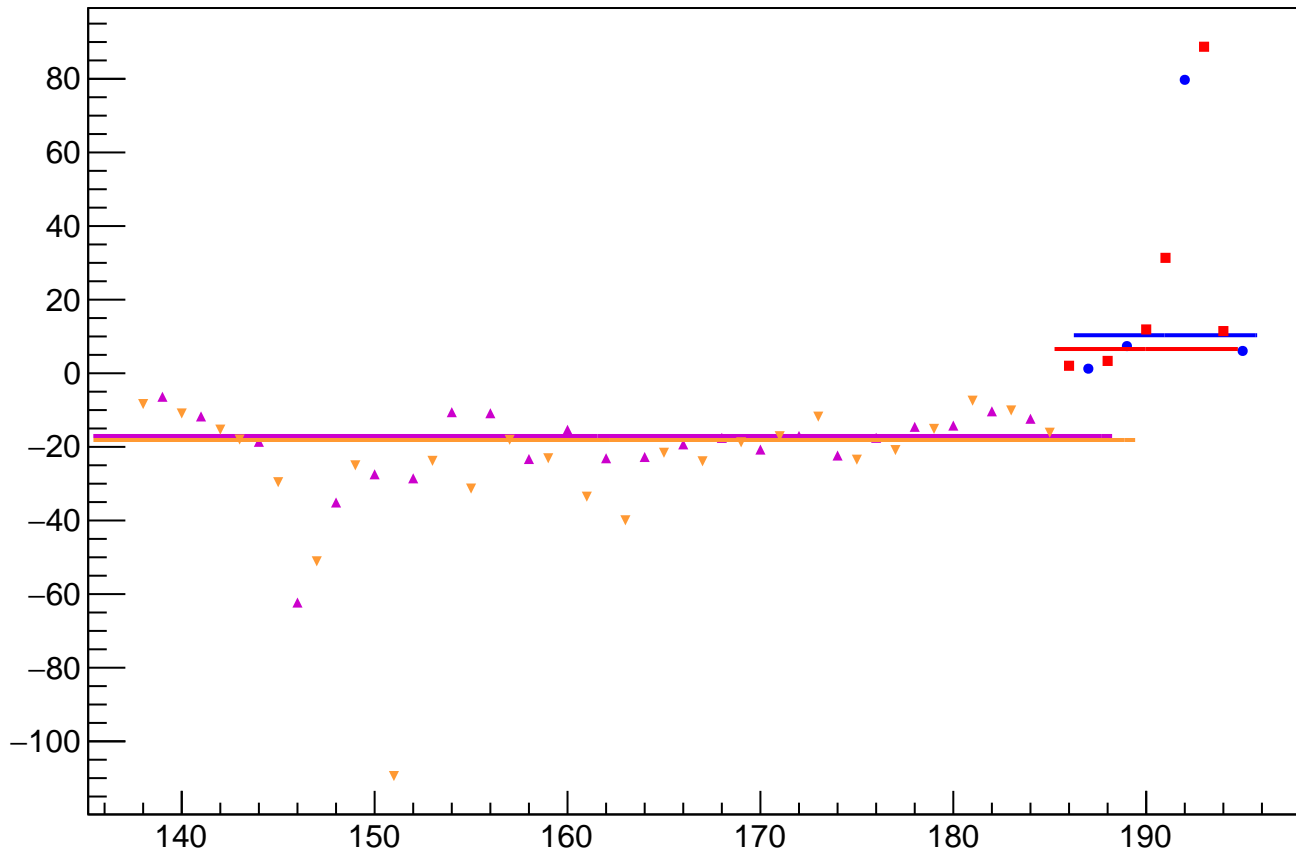
+ sign -0.031+/-0.010  $\chi^2$ /NDF: 1774329.5/45

All: -0.421+/-0.007  $\chi^2$ /NDF: 3472236.6/93

- sign -0.810+/-0.010  $\chi^2$ /NDF: 1694952.0/47



# reg\_asym\_bcm\_an\_ds3\_diff\_bpm1X\_slope vs Slug



Right In:  $10.334 \pm 0.122$   $\chi^2/\text{NDF}: 22997.8/3$

Left Out:  $-18.128 \pm 0.039$   $\chi^2/\text{NDF}: 88551.6/24$

Right Out:  $6.592 \pm 0.087$   $\chi^2/\text{NDF}: 24135.2/5$

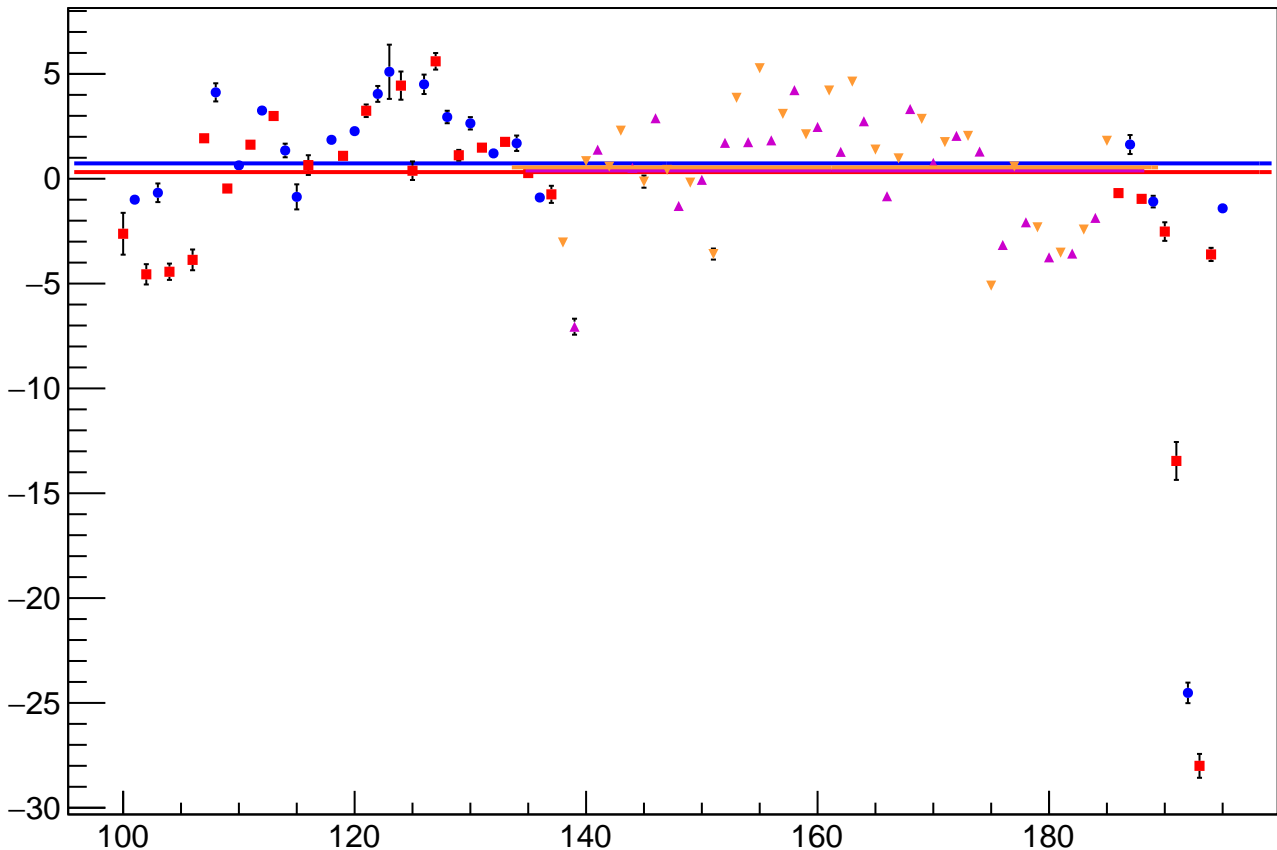
Left In:  $-17.038 \pm 0.038$   $\chi^2/\text{NDF}: 44141.1/22$

+ sign  $-15.514 \pm 0.037$   $\chi^2/\text{NDF}: 160681.9/28$

All:  $-14.314 \pm 0.025$   $\chi^2/\text{NDF}: 292455.8/57$

- sign  $-13.248 \pm 0.035$   $\chi^2/\text{NDF}: 129798.1/28$

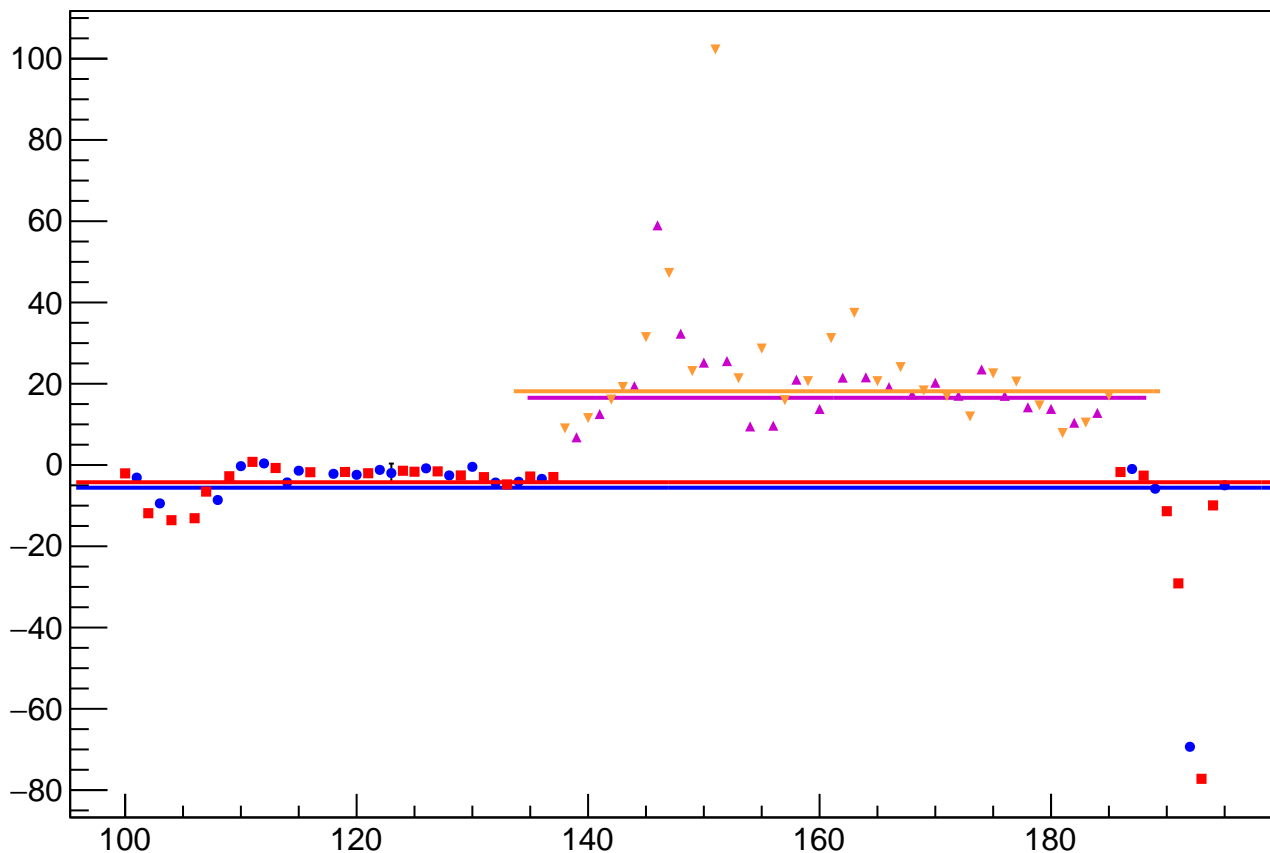
# reg\_asym\_bcm\_an\_ds3\_diff\_bpm4aY\_slope vs Slug



Right In: 0.732 $\pm$ 0.057  $\chi^2$ /NDF: 3570.1/20  
Left Out: 0.543 $\pm$ 0.032  $\chi^2$ /NDF:7085.3/24  
Right Out: 0.317 $\pm$ 0.052  $\chi^2$ /NDF: 4094.2/24  
Left In: 0.397 $\pm$ 0.031  $\chi^2$ /NDF:6235.6/22

+ sign 0.589 $\pm$ 0.028  $\chi^2$ /NDF: 10663.6/45  
All: 0.476 $\pm$ 0.019  $\chi^2$ /NDF: 21025.5/93  
- sign 0.376 $\pm$ 0.026  $\chi^2$ /NDF: 10331.6/47

# reg\_asym\_bcm\_an\_ds3\_diff\_bpm4eX\_slope vs Slug



Right In:  $-5.583 \pm 0.076$   $\chi^2/\text{NDF}: 25395.9/20$

Left Out:  $18.150 \pm 0.039$   $\chi^2/\text{NDF}: 77847.8/24$

Right Out:  $-4.237 \pm 0.058$   $\chi^2/\text{NDF}: 25938.2/24$

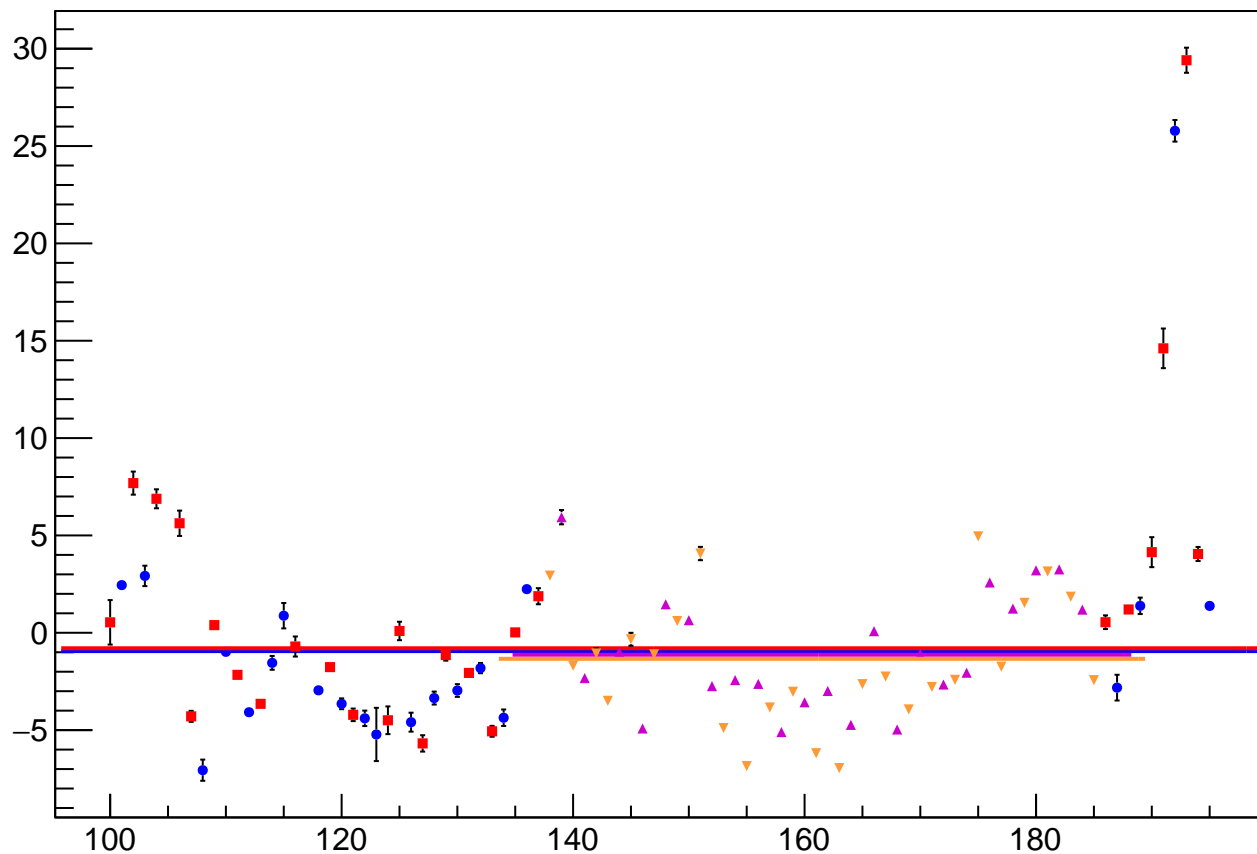
Left In:  $16.543 \pm 0.038$   $\chi^2/\text{NDF}: 40855.0/22$

+ sign  $13.208 \pm 0.035$   $\chi^2/\text{NDF}: 179988.6/45$

All:  $11.649 \pm 0.023$   $\chi^2/\text{NDF}: 340584.6/93$

- sign  $10.359 \pm 0.032$   $\chi^2/\text{NDF}: 156925.9/47$

# reg\_asym\_bcm\_an\_ds3\_diff\_bpm4eY\_slope vs Slug



Right In:  $-0.941 \pm 0.067$   $\chi^2/\text{NDF}: 3817.2/20$

Left Out:  $-1.338 \pm 0.036$   $\chi^2/\text{NDF}: 7943.1/24$

Right Out:  $-0.795 \pm 0.061$   $\chi^2/\text{NDF}: 4363.4/24$

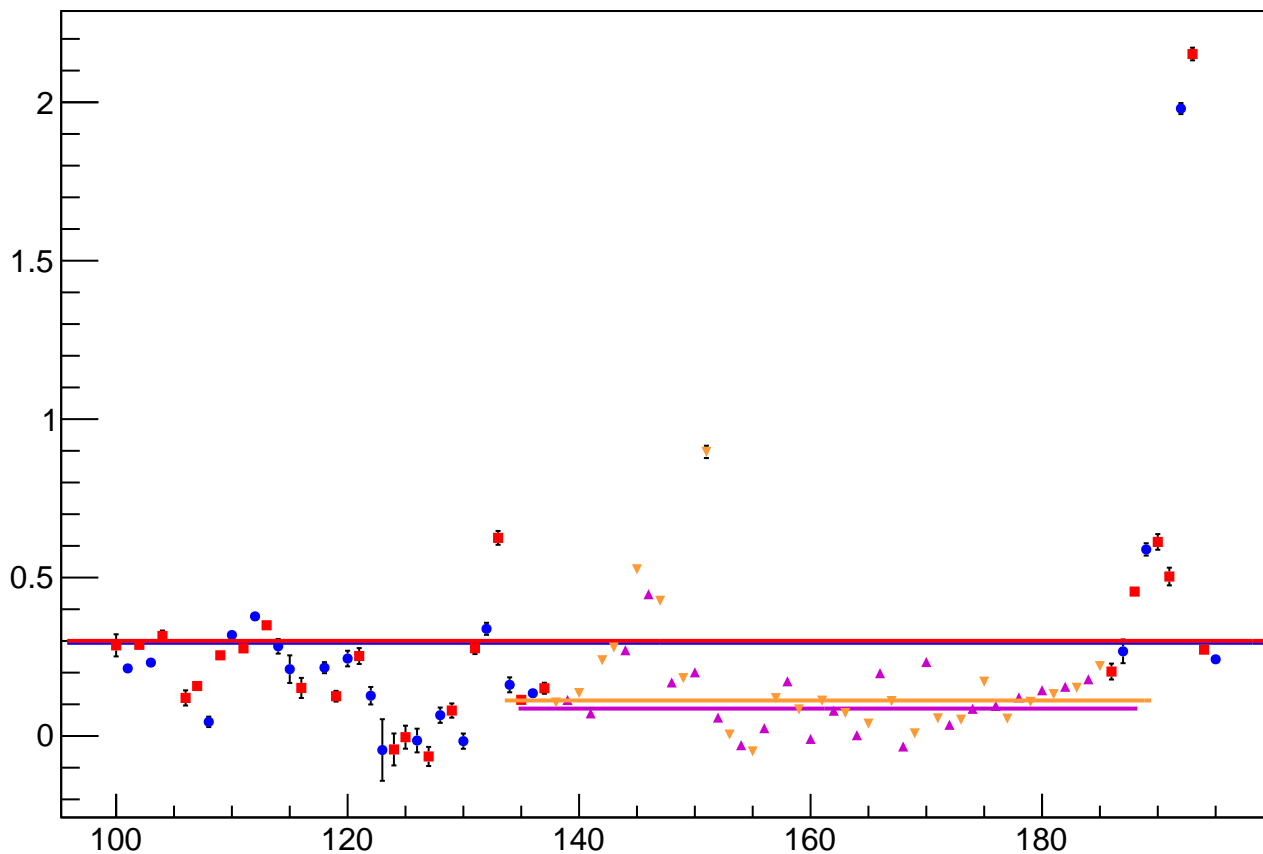
Left In:  $-1.129 \pm 0.034$   $\chi^2/\text{NDF}: 6740.3/22$

+ sign  $-1.248 \pm 0.032$   $\chi^2/\text{NDF}: 11787.8/45$

All:  $-1.143 \pm 0.022$   $\chi^2/\text{NDF}: 22935.3/93$

- sign  $-1.049 \pm 0.030$   $\chi^2/\text{NDF}: 11126.6/47$

# reg\_asym\_bcm\_an\_ds3\_diff\_bpm12X\_slope vs Slug



Right In: 0.294 $\pm$ 0.003  $\chi^2$ /NDF: 10681.1/20

Left Out: 0.112 $\pm$ 0.002  $\chi^2$ /NDF:4503.9/24

Right Out: 0.300 $\pm$ 0.003  $\chi^2$ /NDF: 10466.0/24

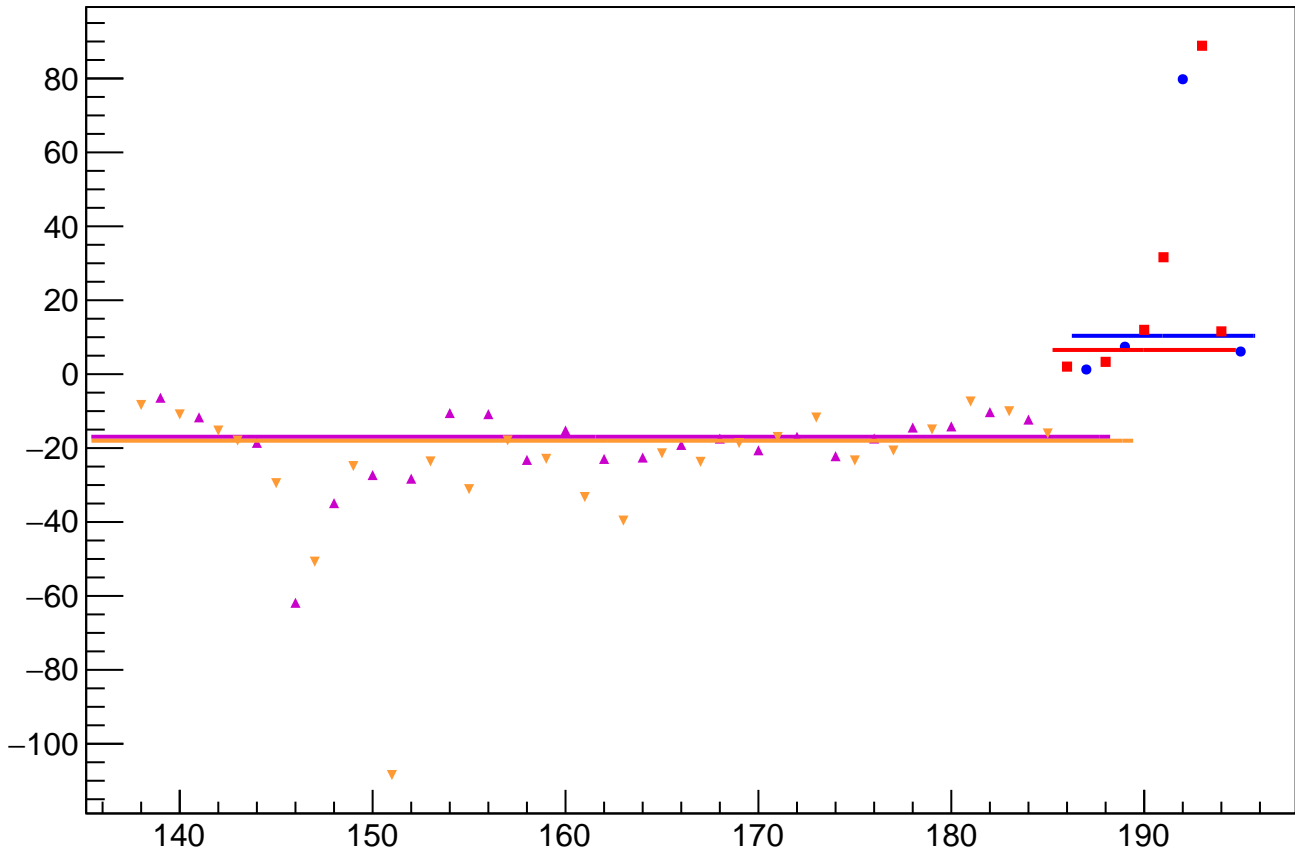
Left In: 0.087 $\pm$ 0.002  $\chi^2$ /NDF:3655.4/22

+ sign 0.145 $\pm$ 0.001  $\chi^2$ /NDF: 17483.5/45

All: 0.134 $\pm$ 0.001  $\chi^2$ /NDF: 35290.2/93

- sign 0.124 $\pm$ 0.001  $\chi^2$ /NDF: 17703.4/47

# reg\_asym\_bcm\_an\_ds\_diff\_bpm1X\_slope vs Slug



Right In:  $10.375 \pm 0.122$   $\chi^2/\text{NDF}: 23175.2/3$

Left Out:  $-18.005 \pm 0.039$   $\chi^2/\text{NDF}: 88391.0/24$

Right Out:  $6.549 \pm 0.086$   $\chi^2/\text{NDF}: 24491.7/5$

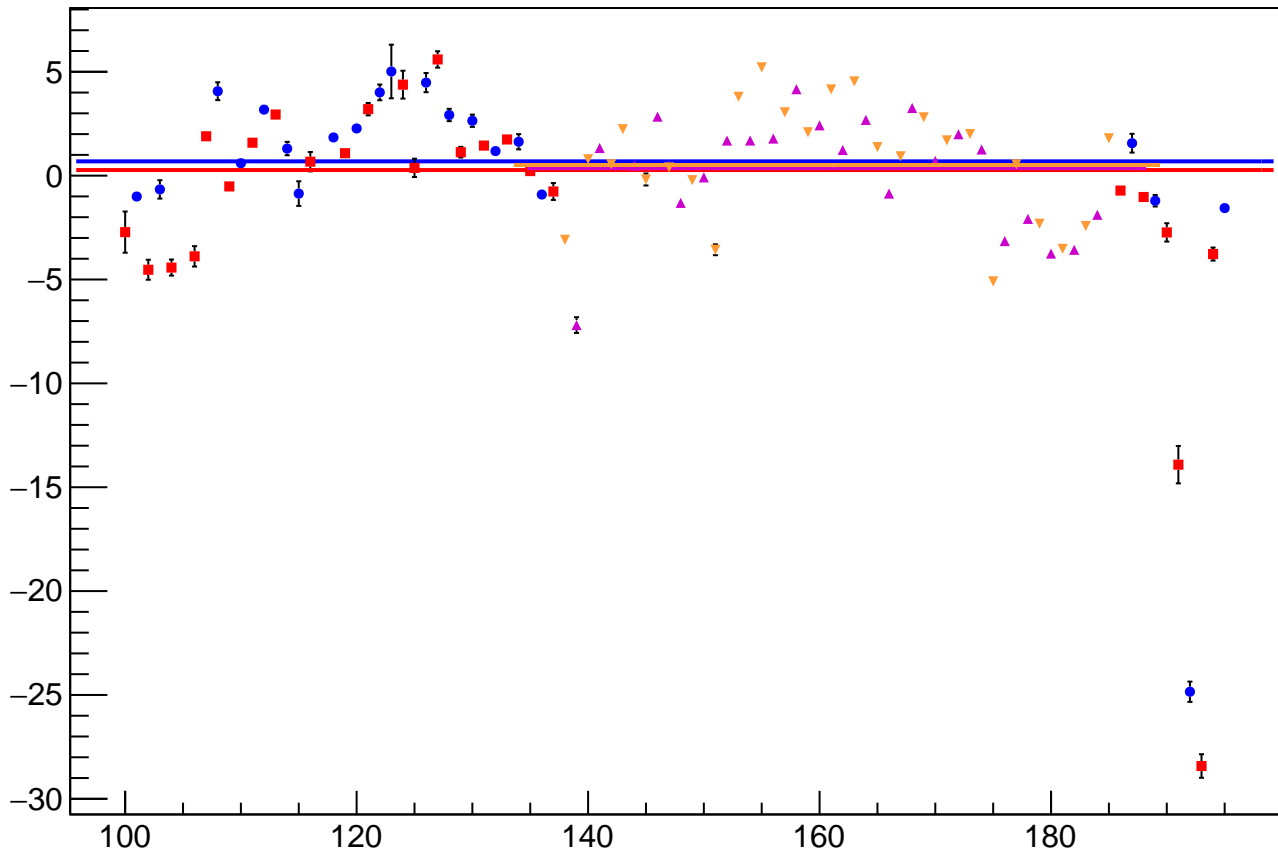
Left In:  $-16.934 \pm 0.038$   $\chi^2/\text{NDF}: 44060.6/22$

+ sign  $-15.412 \pm 0.037$   $\chi^2/\text{NDF}: 160841.7/28$

All:  $-14.210 \pm 0.025$   $\chi^2/\text{NDF}: 293383.4/57$

- sign  $-13.142 \pm 0.035$   $\chi^2/\text{NDF}: 130530.0/28$

# reg\_asym\_bcm\_an\_ds\_diff\_bpm4aY\_slope vs Slug



Right In:  $0.688 \pm 0.057$   $\chi^2/\text{NDF}: 3670.0/20$

Left Out:  $0.511 \pm 0.032$   $\chi^2/\text{NDF}: 7070.4/24$

Right Out:  $0.270 \pm 0.052$   $\chi^2/\text{NDF}: 4231.3/24$

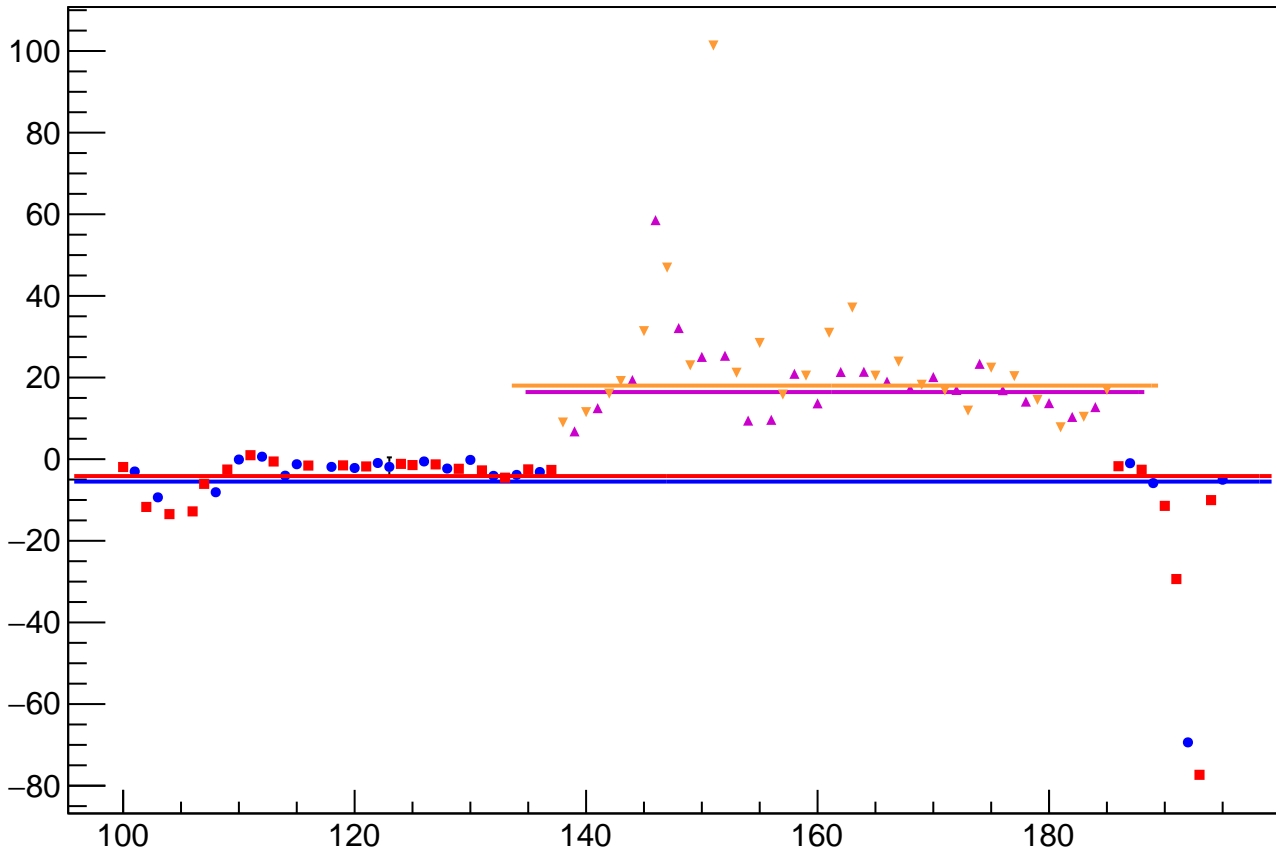
Left In:  $0.360 \pm 0.031$   $\chi^2/\text{NDF}: 6221.1/22$

+ sign  $0.554 \pm 0.028$   $\chi^2/\text{NDF}: 10747.7/45$

All:  $0.438 \pm 0.019$   $\chi^2/\text{NDF}: 21234.5/93$

- sign  $0.336 \pm 0.026$   $\chi^2/\text{NDF}: 10454.6/47$

# reg\_asym\_bcm\_an\_ds\_diff\_bpm4eX\_slope vs Slug



Right In:  $-5.492 \pm 0.076$   $\chi^2/\text{NDF}: 25728.8/20$

Left Out:  $18.027 \pm 0.039$   $\chi^2/\text{NDF}: 77718.1/24$

Right Out:  $-4.142 \pm 0.057$   $\chi^2/\text{NDF}: 26371.0/24$

Left In:  $16.443 \pm 0.038$   $\chi^2/\text{NDF}: 40780.6/22$

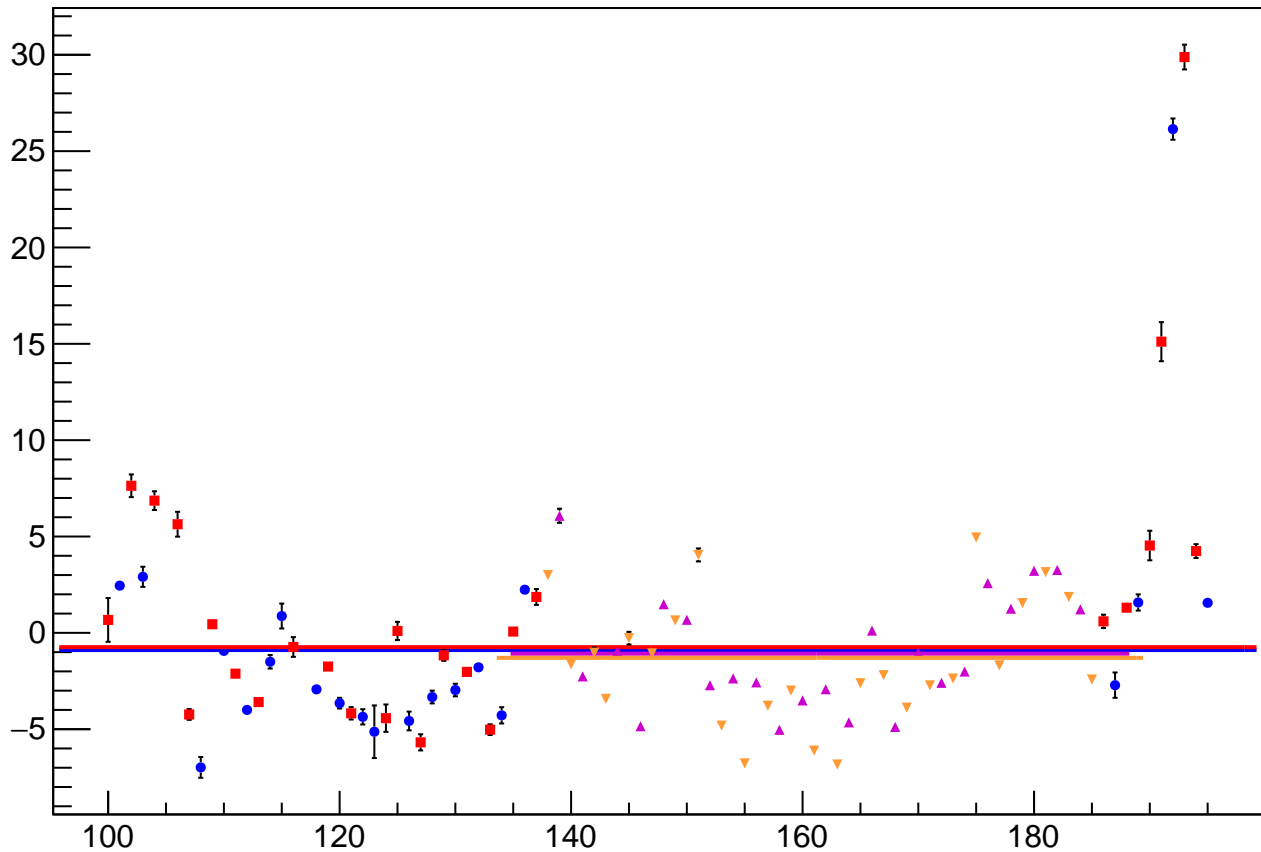
+ sign  $13.149 \pm 0.035$   $\chi^2/\text{NDF}: 179572.2/45$

All:  $11.587 \pm 0.023$   $\chi^2/\text{NDF}: 340370.5/93$

- sign  $10.297 \pm 0.031$   $\chi^2/\text{NDF}: 157069.6/47$



# reg\_asym\_bcm\_an\_ds\_diff\_bpm4eY\_slope vs Slug



Right In:  $-0.892 \pm 0.066$   $\chi^2/\text{NDF}: 3906.4/20$

Left Out:  $-1.297 \pm 0.036$   $\chi^2/\text{NDF}: 7925.1/24$

Right Out:  $-0.743 \pm 0.061$   $\chi^2/\text{NDF}: 4497.4/24$

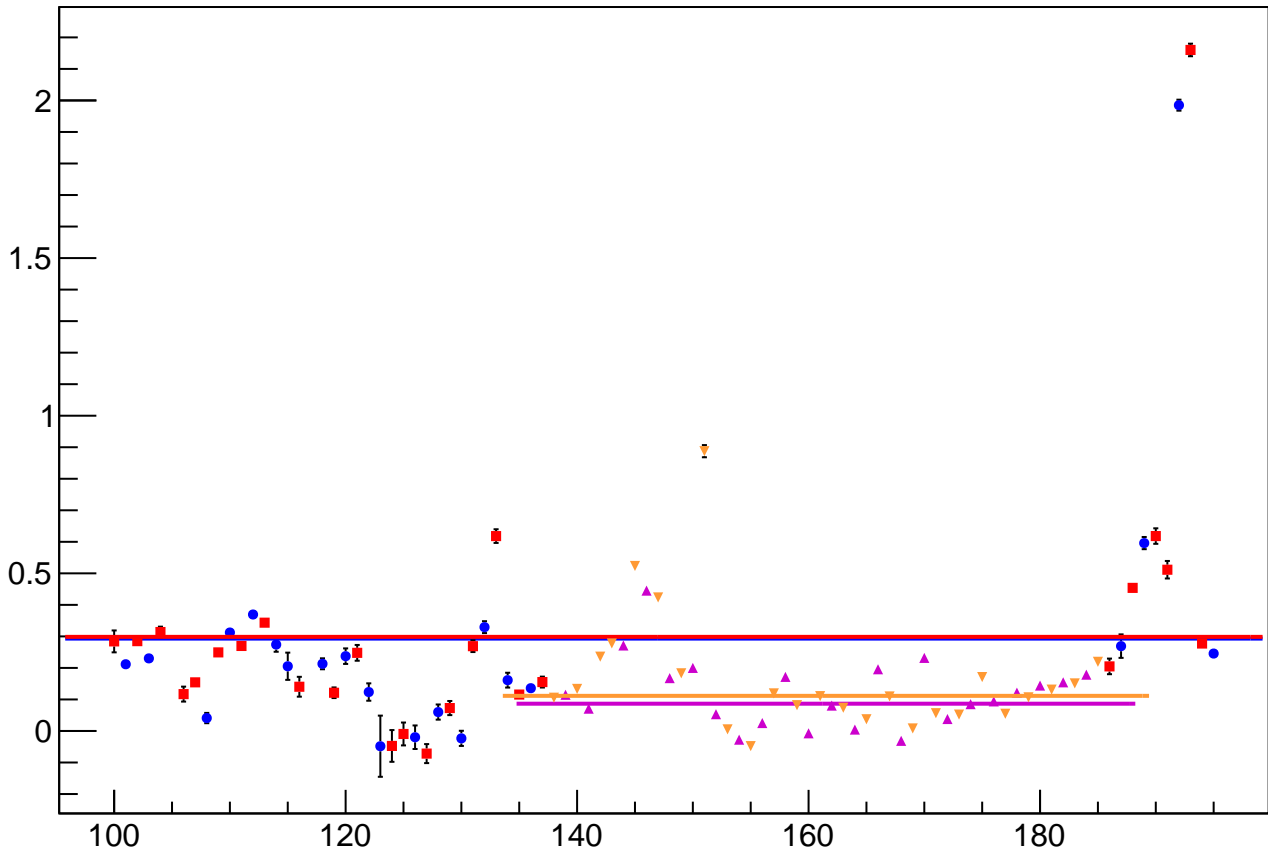
Left In:  $-1.082 \pm 0.034$   $\chi^2/\text{NDF}: 6724.1/22$

+ sign  $-1.206 \pm 0.031$   $\chi^2/\text{NDF}: 11860.6/45$

All:  $-1.097 \pm 0.022$   $\chi^2/\text{NDF}: 23128.5/93$

- sign  $-1.001 \pm 0.030$   $\chi^2/\text{NDF}: 11245.3/47$

# reg\_asym\_bcm\_an\_ds\_diff\_bpm12X\_slope vs Slug



Right In:  $0.293 \pm 0.003$   $\chi^2/\text{NDF}: 10834.2/20$

Left Out:  $0.111 \pm 0.002$   $\chi^2/\text{NDF}: 4496.0/24$

Right Out:  $0.299 \pm 0.003$   $\chi^2/\text{NDF}: 10652.2/24$

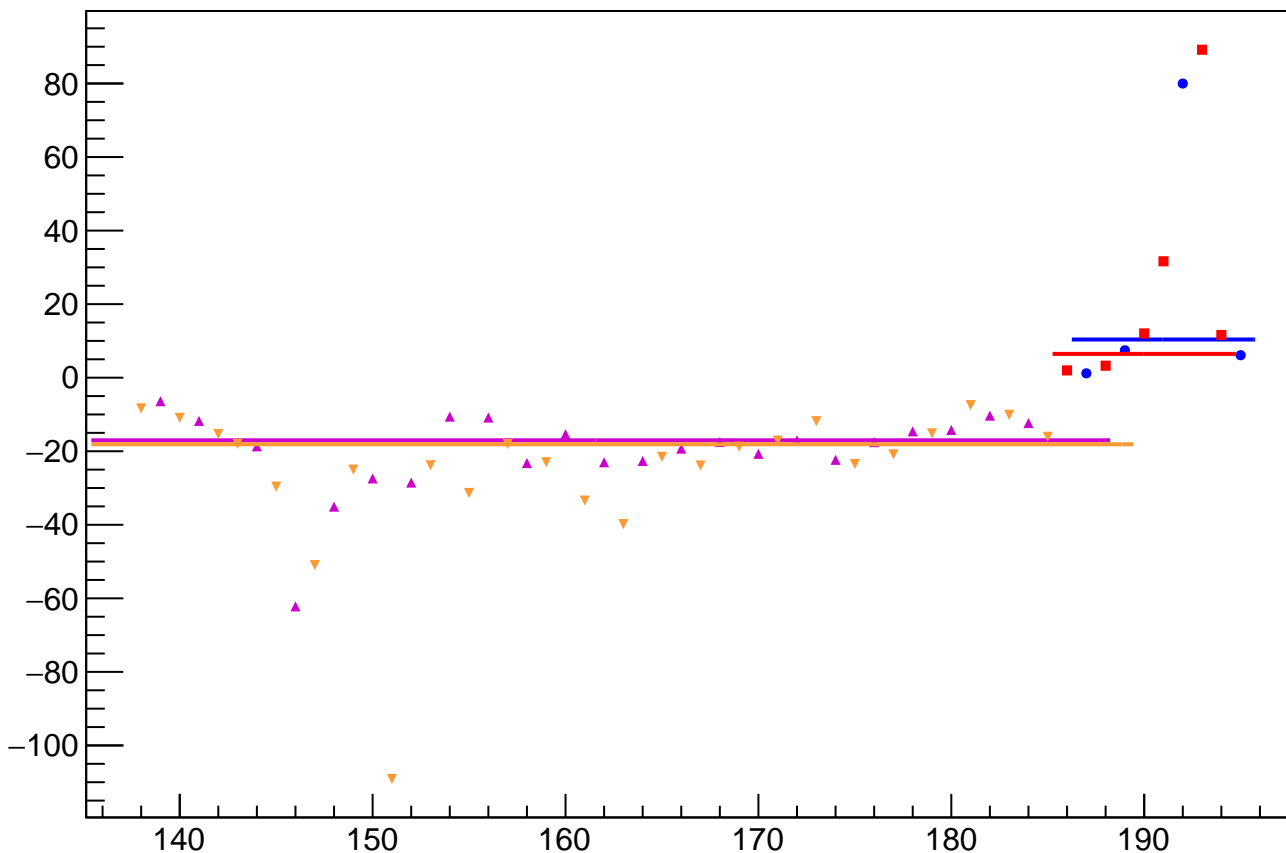
Left In:  $0.087 \pm 0.001$   $\chi^2/\text{NDF}: 3625.5/22$

+ sign  $0.144 \pm 0.001$   $\chi^2/\text{NDF}: 17639.8/45$

All:  $0.133 \pm 0.001$   $\chi^2/\text{NDF}: 35581.9/93$

- sign  $0.124 \pm 0.001$   $\chi^2/\text{NDF}: 17843.0/47$

# reg\_asym\_bcm\_an\_us\_diff\_bpm1X\_slope vs Slug



Right In:  $10.382 \pm 0.122$   $\chi^2/\text{NDF}: 23168.6/3$

Left Out:  $-18.112 \pm 0.039$   $\chi^2/\text{NDF}: 88529.7/24$

Right Out:  $6.470 \pm 0.086$   $\chi^2/\text{NDF}: 24521.8/5$

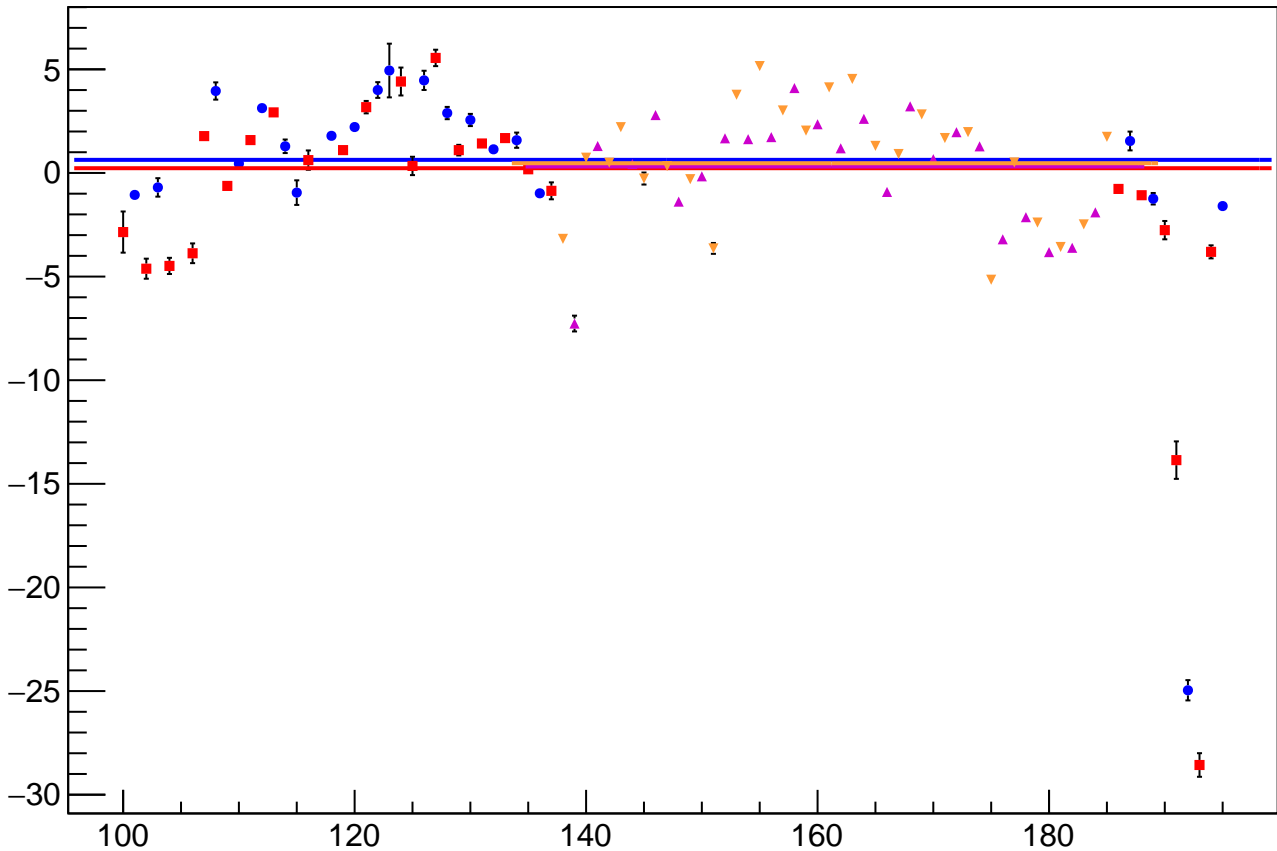
Left In:  $-17.024 \pm 0.038$   $\chi^2/\text{NDF}: 44141.8/22$

+ sign  $-15.511 \pm 0.037$   $\chi^2/\text{NDF}: 160916.3/28$

All:  $-14.286 \pm 0.025$   $\chi^2/\text{NDF}: 293689.2/57$

- sign  $-13.200 \pm 0.035$   $\chi^2/\text{NDF}: 130703.7/28$

# reg\_asym\_bcm\_an\_us\_diff\_bpm4aY\_slope vs Slug



Right In:  $0.632 \pm 0.057$   $\chi^2/\text{NDF}: 3664.3/20$

Left Out:  $0.469 \pm 0.032$   $\chi^2/\text{NDF}: 7093.0/24$

Right Out:  $0.229 \pm 0.052$   $\chi^2/\text{NDF}: 4229.9/24$

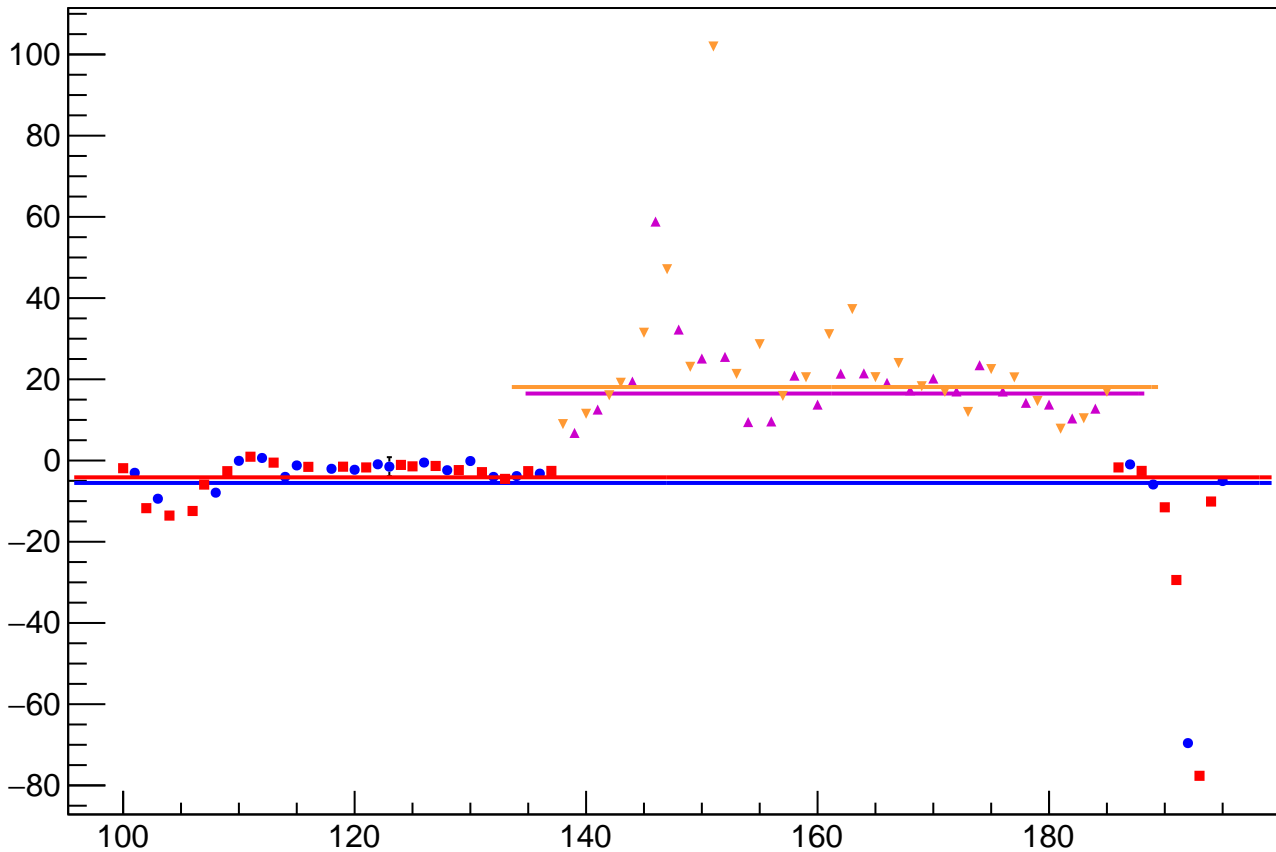
Left In:  $0.311 \pm 0.031$   $\chi^2/\text{NDF}: 6183.1/22$

+ sign  $0.508 \pm 0.028$   $\chi^2/\text{NDF}: 10763.5/45$

All:  $0.392 \pm 0.019$   $\chi^2/\text{NDF}: 21210.7/93$

- sign  $0.289 \pm 0.026$   $\chi^2/\text{NDF}: 10414.9/47$

# reg\_asym\_bcm\_an\_us\_diff\_bpm4eX\_slope vs Slug



Right In:  $-5.521 \pm 0.076$   $\chi^2/\text{NDF}: 25709.2/20$

Left Out:  $18.101 \pm 0.039$   $\chi^2/\text{NDF}: 77839.7/24$

Right Out:  $-4.136 \pm 0.058$   $\chi^2/\text{NDF}: 26361.4/24$

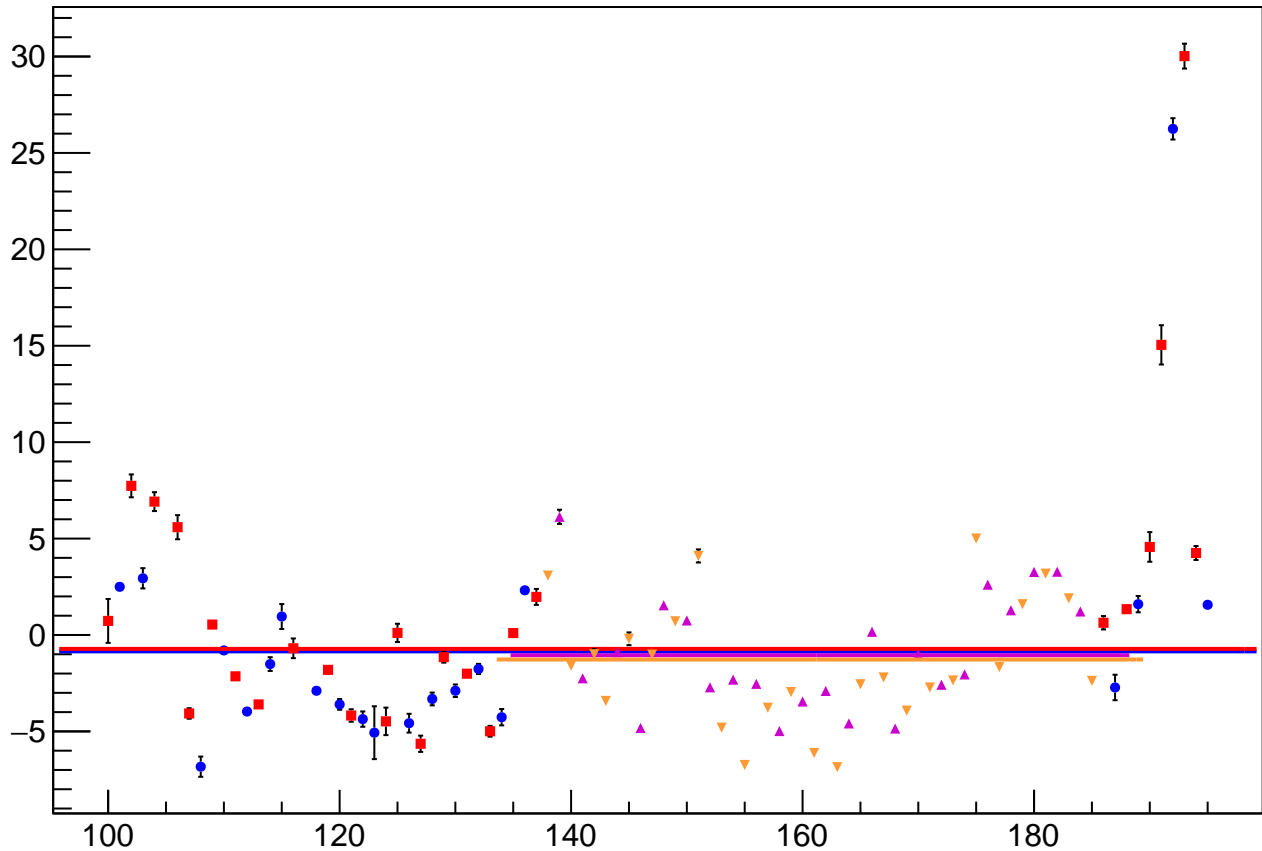
Left In:  $16.496 \pm 0.038$   $\chi^2/\text{NDF}: 40867.3/22$

+ sign  $13.207 \pm 0.035$   $\chi^2/\text{NDF}: 179604.6/45$

All:  $11.619 \pm 0.023$   $\chi^2/\text{NDF}: 340636.7/93$

- sign  $10.312 \pm 0.032$   $\chi^2/\text{NDF}: 157218.8/47$

# reg\_asym\_bcm\_an\_us\_diff\_bpm4eY\_slope vs Slug



Right In:  $-0.849 \pm 0.067$   $\chi^2/\text{NDF}: 3900.9/20$

Left Out:  $-1.273 \pm 0.036$   $\chi^2/\text{NDF}: 7951.6/24$

Right Out:  $-0.721 \pm 0.061$   $\chi^2/\text{NDF}: 4498.5/24$

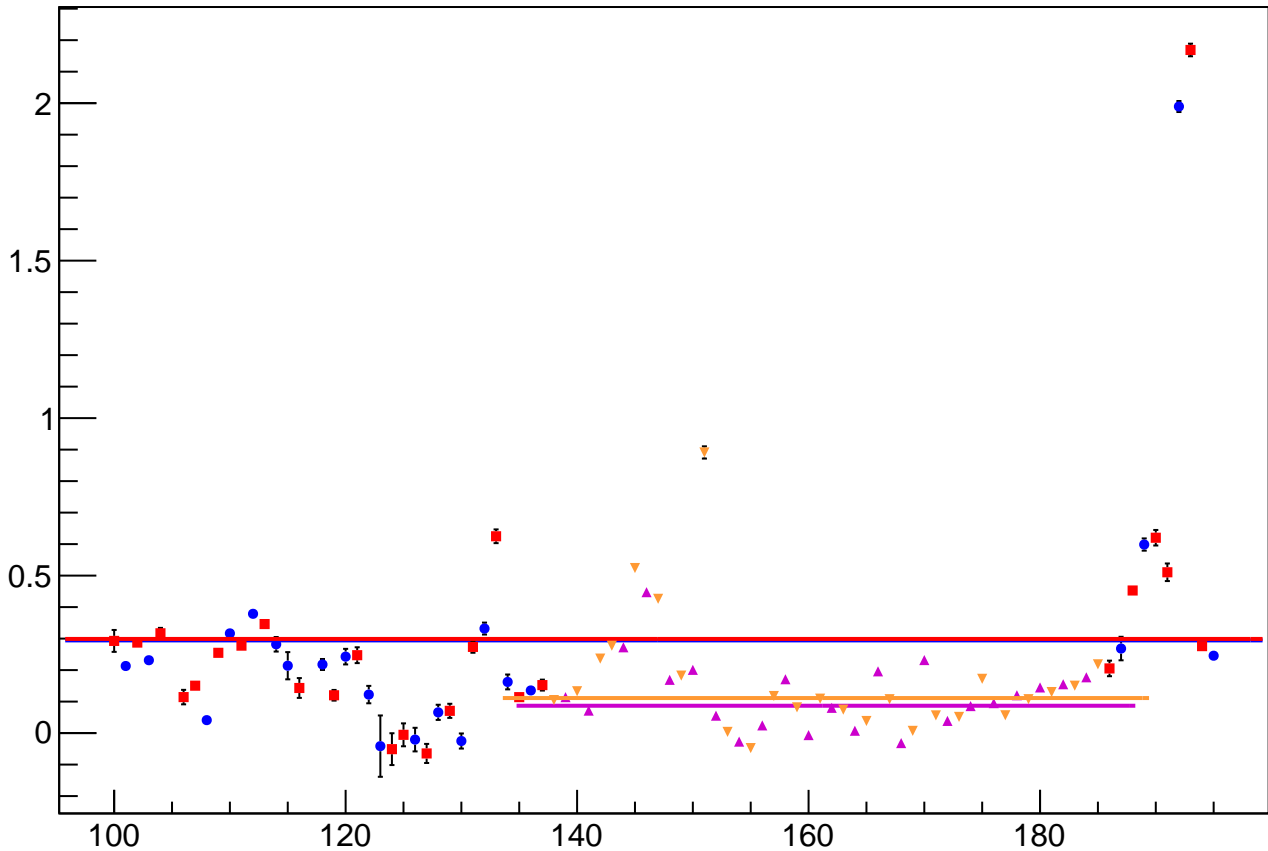
Left In:  $-1.050 \pm 0.034$   $\chi^2/\text{NDF}: 6673.4/22$

+ sign  $-1.178 \pm 0.032$   $\chi^2/\text{NDF}: 11884.0/45$

All:  $-1.068 \pm 0.022$   $\chi^2/\text{NDF}: 23101.0/93$

- sign  $-0.972 \pm 0.030$   $\chi^2/\text{NDF}: 11194.3/47$

# reg\_asym\_bcm\_an\_us\_diff\_bpm12X\_slope vs Slug



Right In: 0.294 $\pm$ 0.003  $\chi^2$ /NDF: 10835.9/20

Left Out: 0.111 $\pm$ 0.002  $\chi^2$ /NDF:4474.5/24

Right Out: 0.299 $\pm$ 0.003  $\chi^2$ /NDF: 10674.0/24

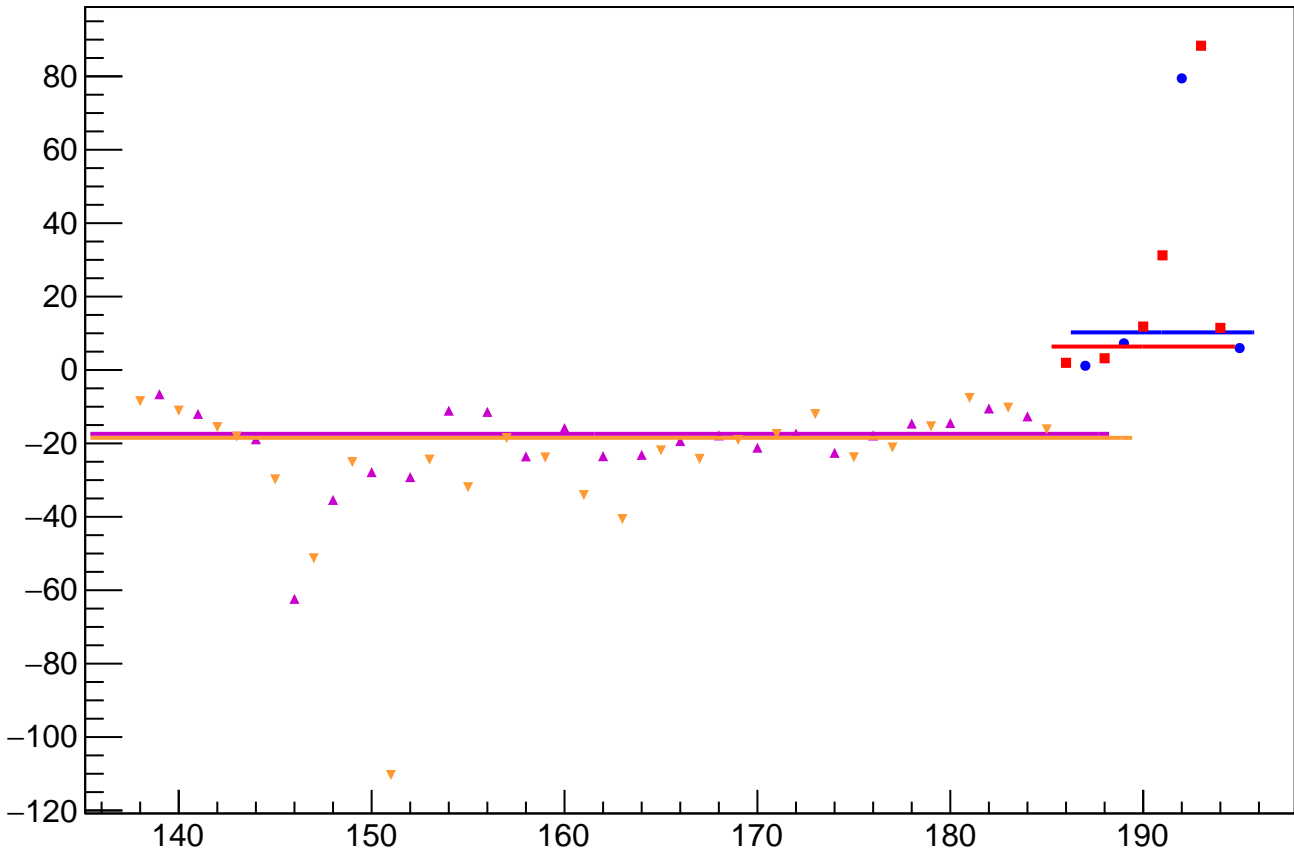
Left In: 0.087 $\pm$ 0.001  $\chi^2$ /NDF:3598.5/22

+ sign 0.144 $\pm$ 0.001  $\chi^2$ /NDF: 17637.6/45

All: 0.133 $\pm$ 0.001  $\chi^2$ /NDF: 35557.1/93

- sign 0.124 $\pm$ 0.001  $\chi^2$ /NDF: 17824.8/47

# reg\_asym\_bcm\_dg\_ds\_diff\_bpm1X\_slope vs Slug



Right In: 10.246 +/- 0.123  $\chi^2/\text{NDF}$ : 22789.7/3

Left Out: -18.479 +/- 0.040  $\chi^2/\text{NDF}$ : 87883.4/24

Right Out: 6.384 +/- 0.087  $\chi^2/\text{NDF}$ : 24001.4/5

Left In: -17.393 +/- 0.039  $\chi^2/\text{NDF}$ : 43178.9/22

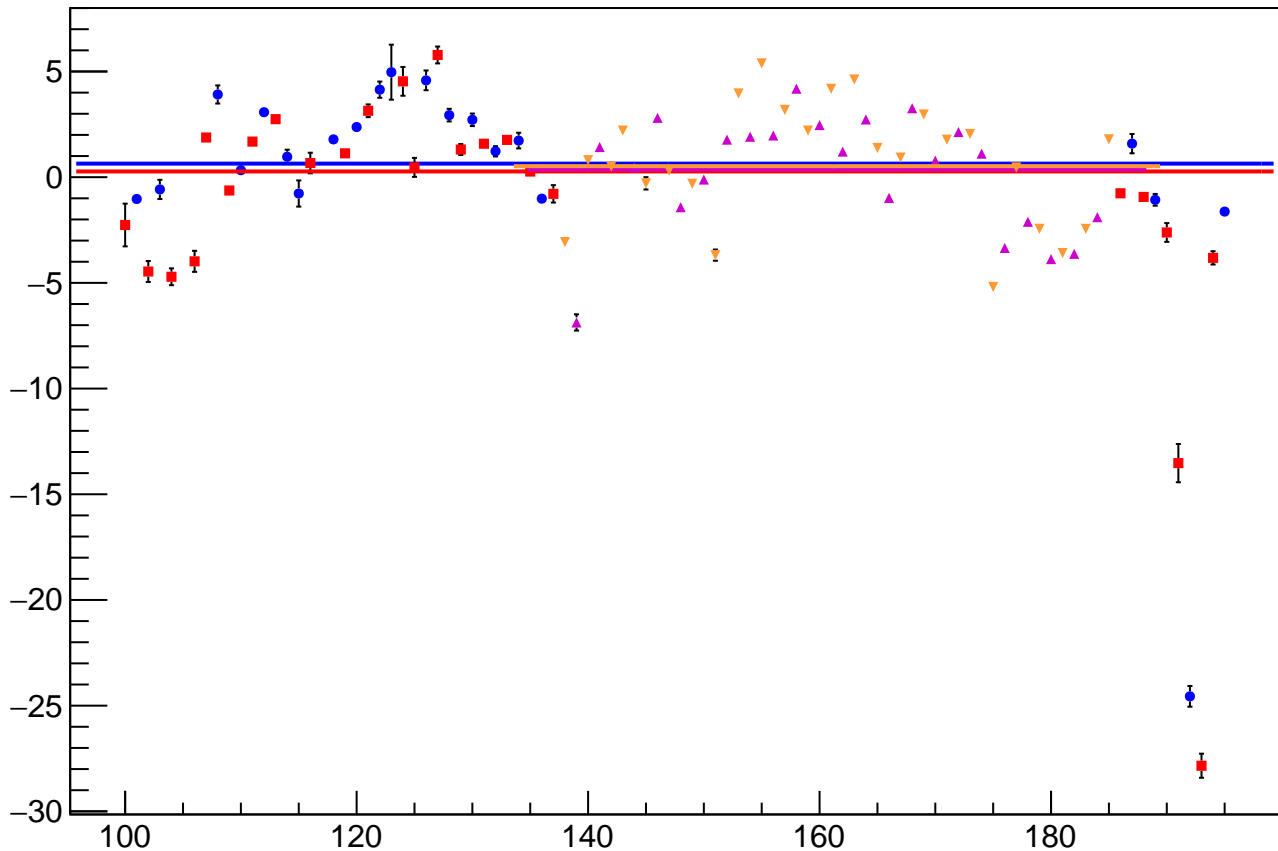
+ sign -15.764 +/- 0.038  $\chi^2/\text{NDF}$ : 160167.2/28

All: -14.503 +/- 0.026  $\chi^2/\text{NDF}$ : 292186.8/57

- sign -13.388 +/- 0.036  $\chi^2/\text{NDF}$ : 129920.8/28



# reg\_asym\_bcm\_dg\_ds\_diff\_bpm4aY\_slope vs Slug



Right In:  $0.641 \pm 0.058$   $\chi^2/\text{NDF}: 3563.0/20$

Left Out:  $0.522 \pm 0.033$   $\chi^2/\text{NDF}: 7055.1/24$

Right Out:  $0.272 \pm 0.053$   $\chi^2/\text{NDF}: 4051.9/24$

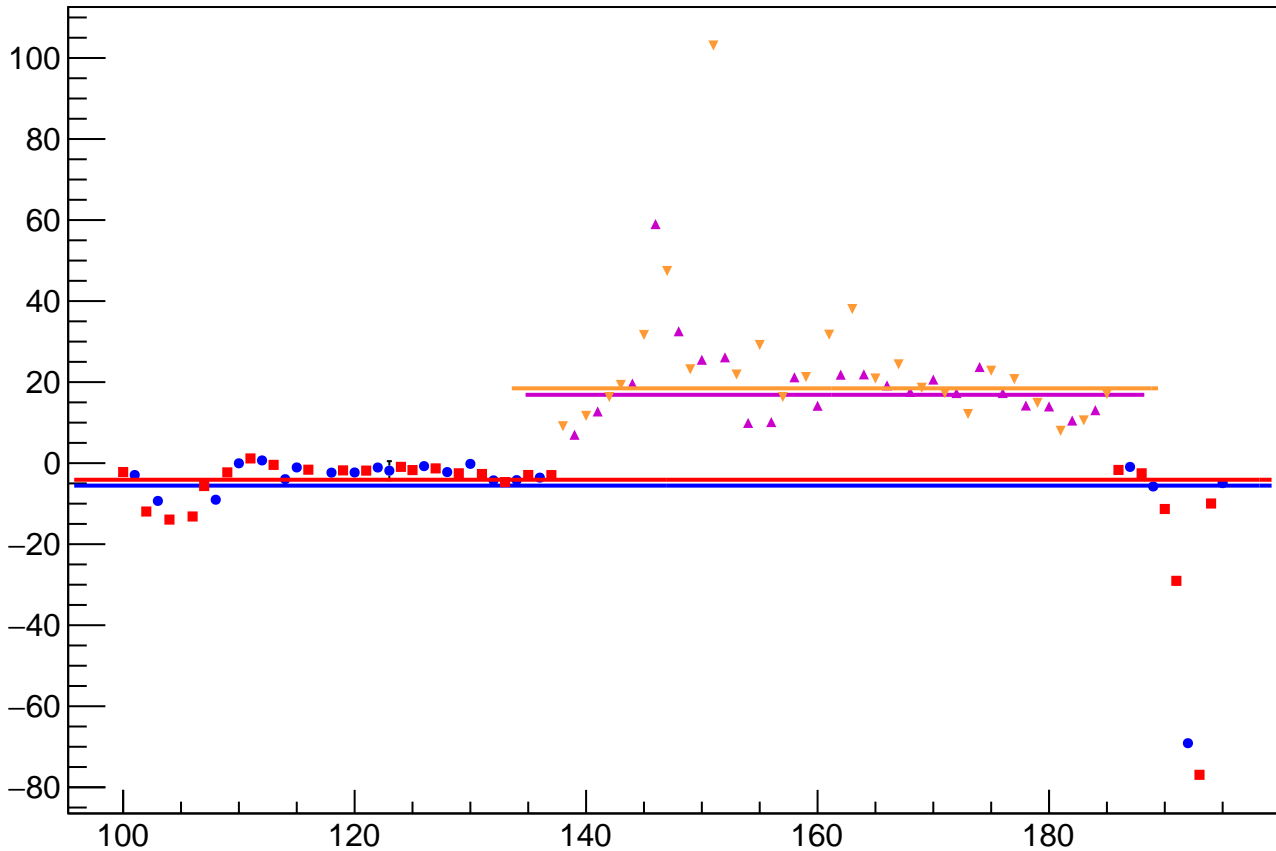
Left In:  $0.371 \pm 0.031$   $\chi^2/\text{NDF}: 6217.4/22$

+ sign  $0.551 \pm 0.029$   $\chi^2/\text{NDF}: 10621.2/45$

All:  $0.441 \pm 0.020$   $\chi^2/\text{NDF}: 20920.5/93$

- sign  $0.345 \pm 0.027$   $\chi^2/\text{NDF}: 10272.0/47$

# reg\_asym\_bcm\_dg\_ds\_diff\_bpm4eX\_slope vs Slug



Right In:  $-5.547 \pm 0.077$   $\chi^2/\text{NDF}: 25203.3/20$

Left Out:  $18.467 \pm 0.040$   $\chi^2/\text{NDF}: 77226.7/24$

Right Out:  $-4.095 \pm 0.058$   $\chi^2/\text{NDF}: 25837.7/24$

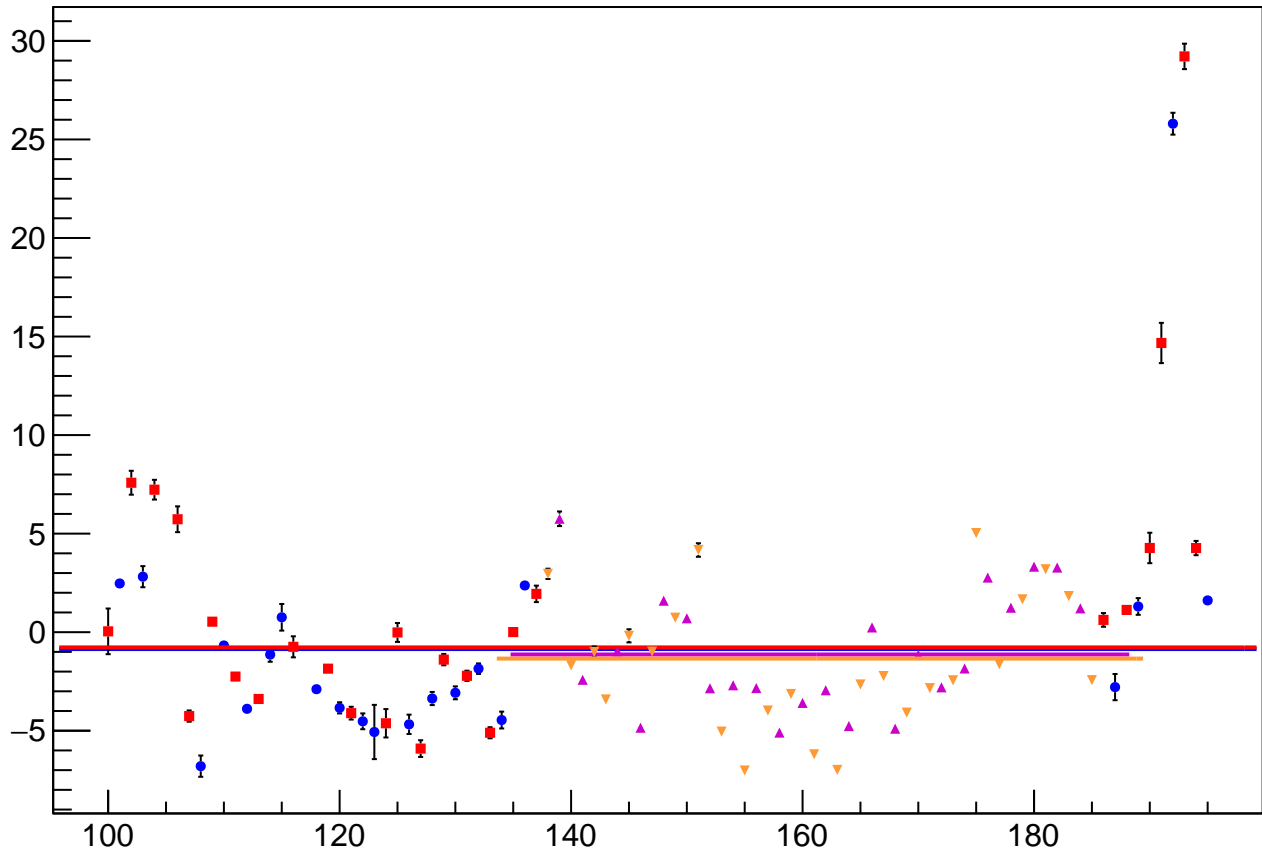
Left In:  $16.867 \pm 0.039$   $\chi^2/\text{NDF}: 39779.0/22$

+ sign  $13.391 \pm 0.035$   $\chi^2/\text{NDF}: 179063.9/45$

All:  $11.778 \pm 0.024$   $\chi^2/\text{NDF}: 338871.6/93$

- sign  $10.452 \pm 0.032$   $\chi^2/\text{NDF}: 156030.0/47$

# reg\_asym\_bcm\_dg\_ds\_diff\_bpm4eY\_slope vs Slug



Right In:  $-0.855 \pm 0.068$   $\chi^2/\text{NDF}$ : 3798.2/20

Left Out:  $-1.340 \pm 0.037$   $\chi^2/\text{NDF}$ : 7907.4/24

Right Out:  $-0.773 \pm 0.062$   $\chi^2/\text{NDF}$ : 4318.3/24

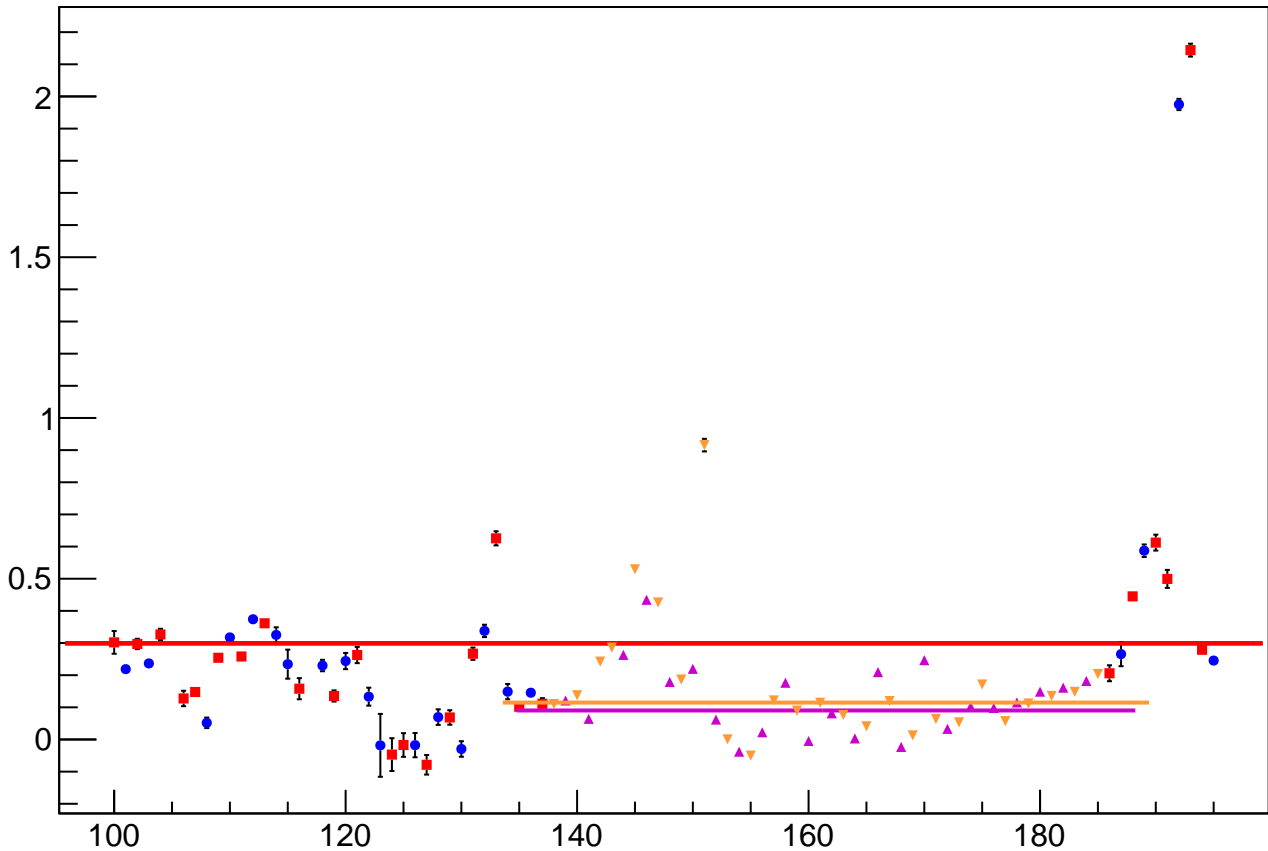
Left In:  $-1.132 \pm 0.035$   $\chi^2/\text{NDF}$ : 6708.5/22

+ sign  $-1.230 \pm 0.032$   $\chi^2/\text{NDF}$ : 11745.4/45

All:  $-1.132 \pm 0.022$   $\chi^2/\text{NDF}$ : 22815.3/93

- sign  $-1.045 \pm 0.030$   $\chi^2/\text{NDF}$ : 11052.4/47

# reg\_asym\_bcm\_dg\_ds\_diff\_bpm12X\_slope vs Slug



Right In: 0.299 $\pm$ 0.003  $\chi^2$ /NDF: 10503.3/20

Left Out: 0.115 $\pm$ 0.002  $\chi^2$ /NDF:4431.9/24

Right Out: 0.298 $\pm$ 0.003  $\chi^2$ /NDF: 10469.7/24

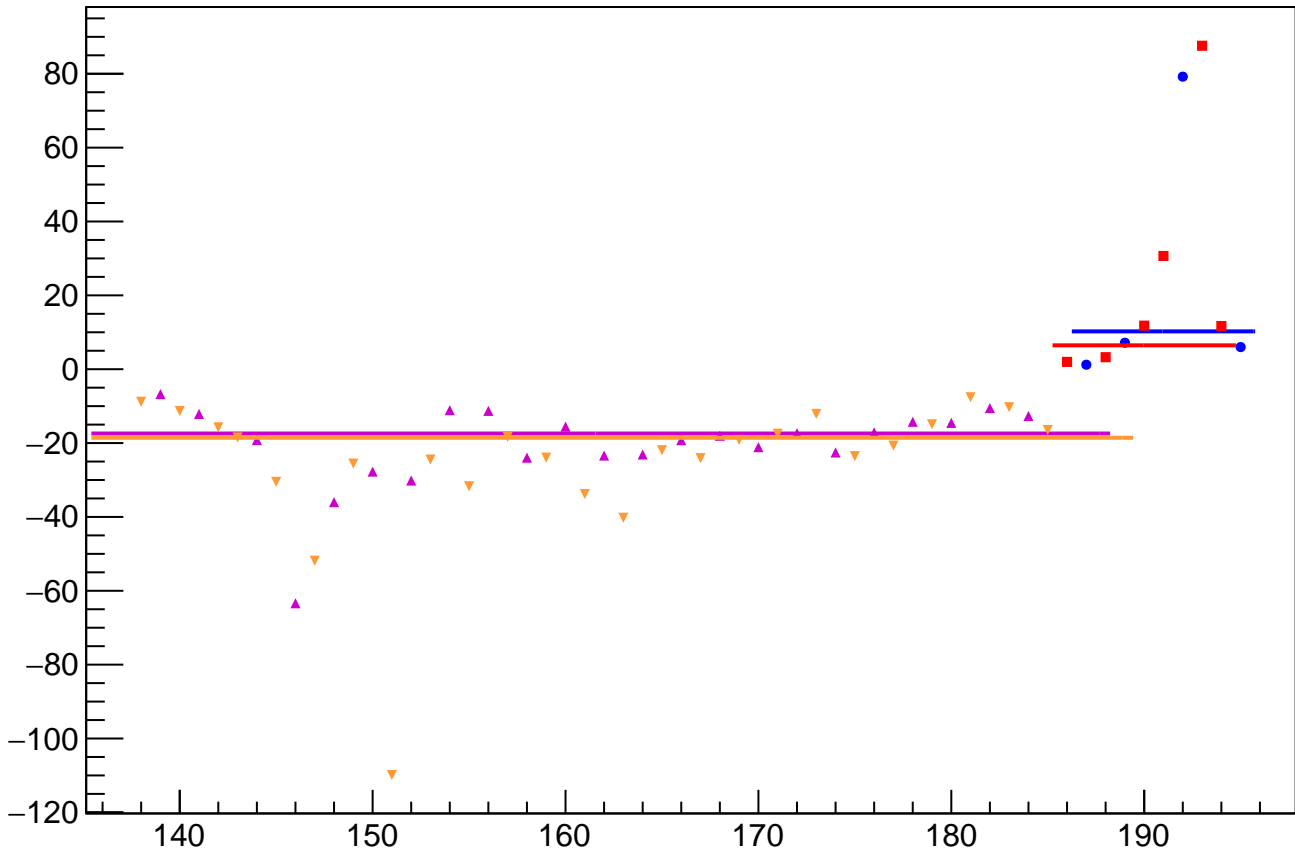
Left In: 0.090 $\pm$ 0.002  $\chi^2$ /NDF:3676.5/22

+ sign 0.148 $\pm$ 0.001  $\chi^2$ /NDF: 17233.1/45

All: 0.137 $\pm$ 0.001  $\chi^2$ /NDF: 34774.5/93

- sign 0.128 $\pm$ 0.001  $\chi^2$ /NDF: 17439.7/47

# reg\_asym\_bcm\_dg\_us\_diff\_bpm1X\_slope vs Slug



Right In:  $10.244 \pm 0.124$   $\chi^2/\text{NDF}: 22417.8/3$

Left Out:  $-18.566 \pm 0.040$   $\chi^2/\text{NDF}: 86389.6/24$

Right Out:  $6.468 \pm 0.088$   $\chi^2/\text{NDF}: 23432.0/5$

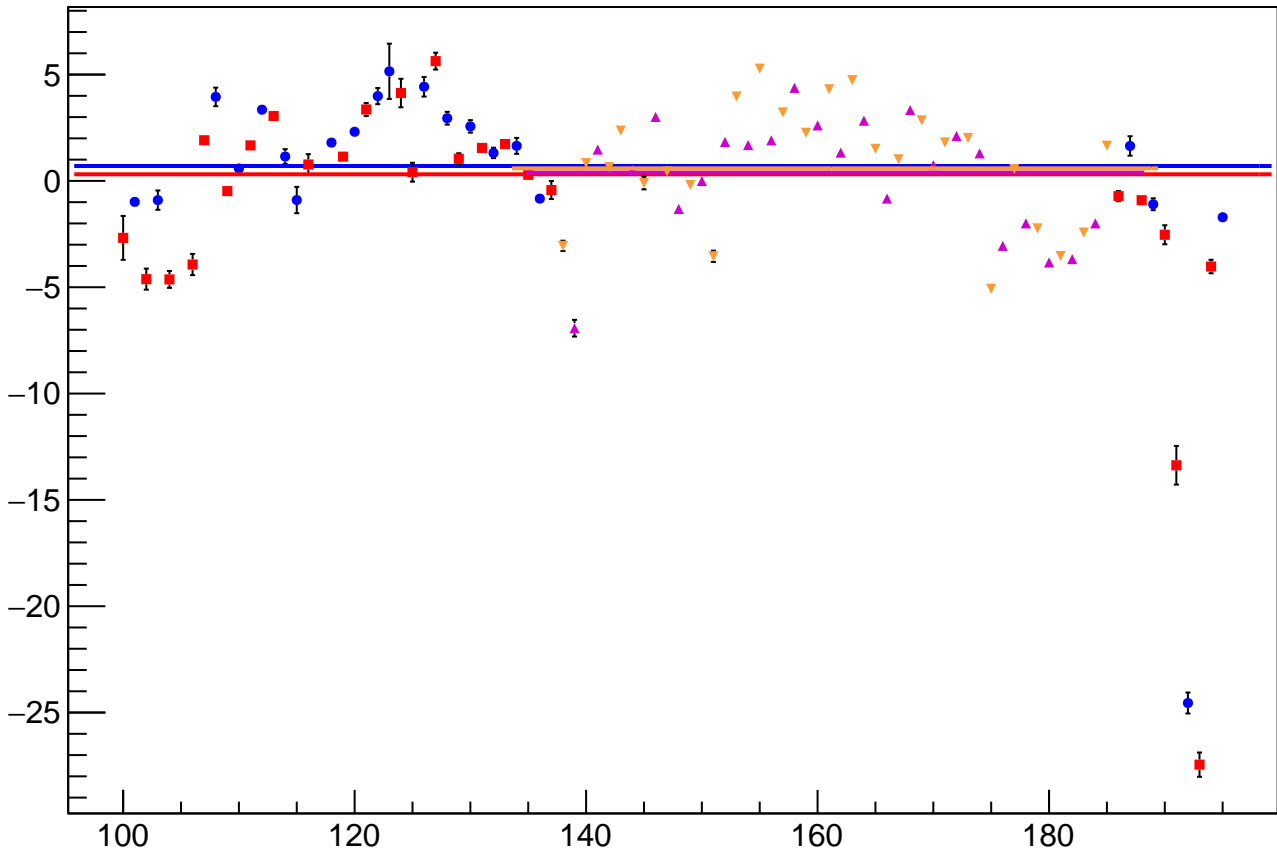
Left In:  $-17.414 \pm 0.039$   $\chi^2/\text{NDF}: 43504.1/22$

+ sign  $-15.828 \pm 0.038$   $\chi^2/\text{NDF}: 157867.0/28$

All:  $-14.543 \pm 0.026$   $\chi^2/\text{NDF}: 288886.8/57$

- sign  $-13.408 \pm 0.036$   $\chi^2/\text{NDF}: 128881.6/28$

# reg\_asym\_bcm\_dg\_us\_diff\_bpm4aY\_slope vs Slug



Right In: 0.700 $\pm$ 0.059  $\chi^2$ /NDF: 3533.4/20

Left Out: 0.591 $\pm$ 0.033  $\chi^2$ /NDF:6796.5/24

Right Out: 0.310 $\pm$ 0.053  $\chi^2$ /NDF: 3981.9/24

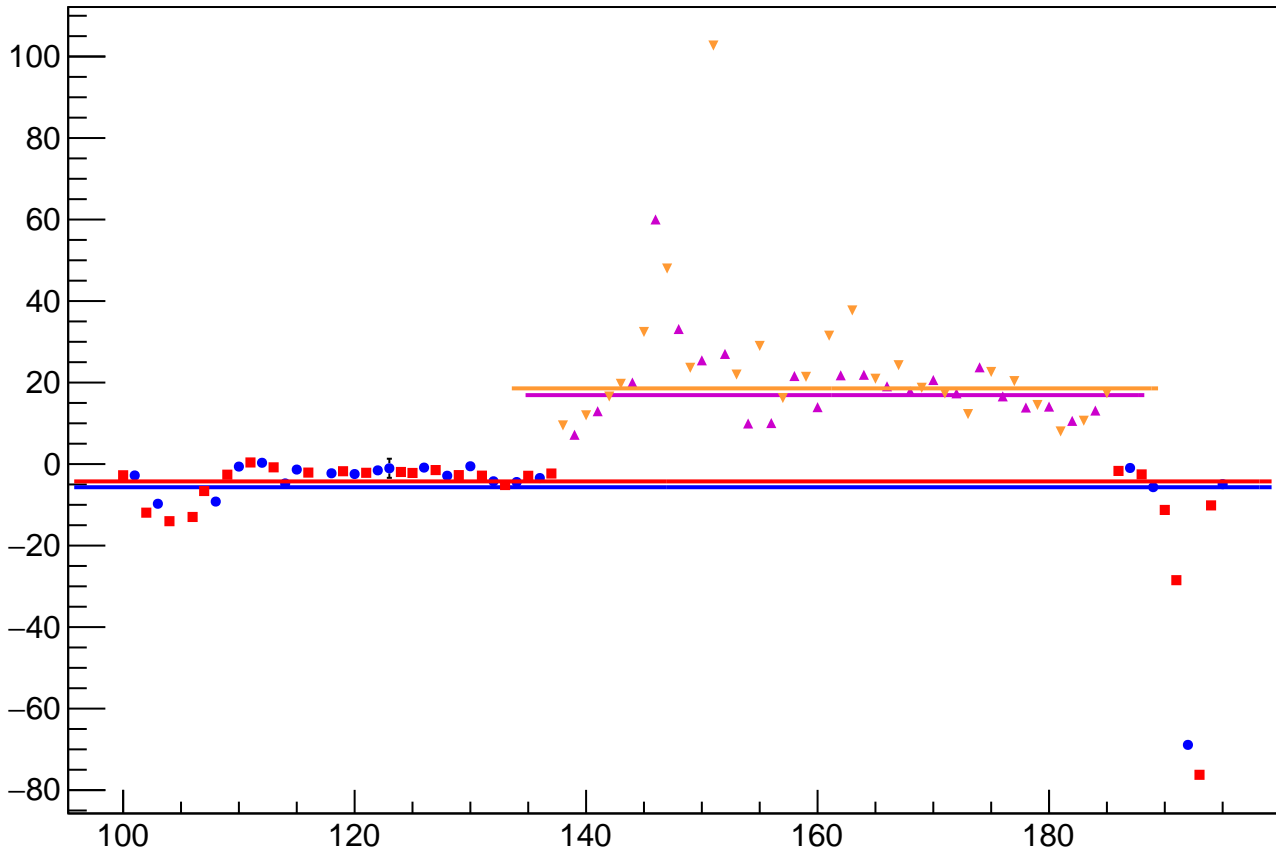
Left In: 0.394 $\pm$ 0.032  $\chi^2$ /NDF:6059.8/22

+ sign 0.617 $\pm$ 0.029  $\chi^2$ /NDF: 10332.5/45

All: 0.487 $\pm$ 0.020  $\chi^2$ /NDF: 20414.1/93

- sign 0.372 $\pm$ 0.027  $\chi^2$ /NDF: 10043.5/47

# reg\_asym\_bcm\_dg\_us\_diff\_bpm4eX\_slope vs Slug



Right In:  $-5.682 \pm 0.078$   $\chi^2/\text{NDF}: 24596.1/20$

Left Out:  $18.573 \pm 0.040$   $\chi^2/\text{NDF}: 76029.9/24$

Right Out:  $-4.251 \pm 0.059$   $\chi^2/\text{NDF}: 25070.2/24$

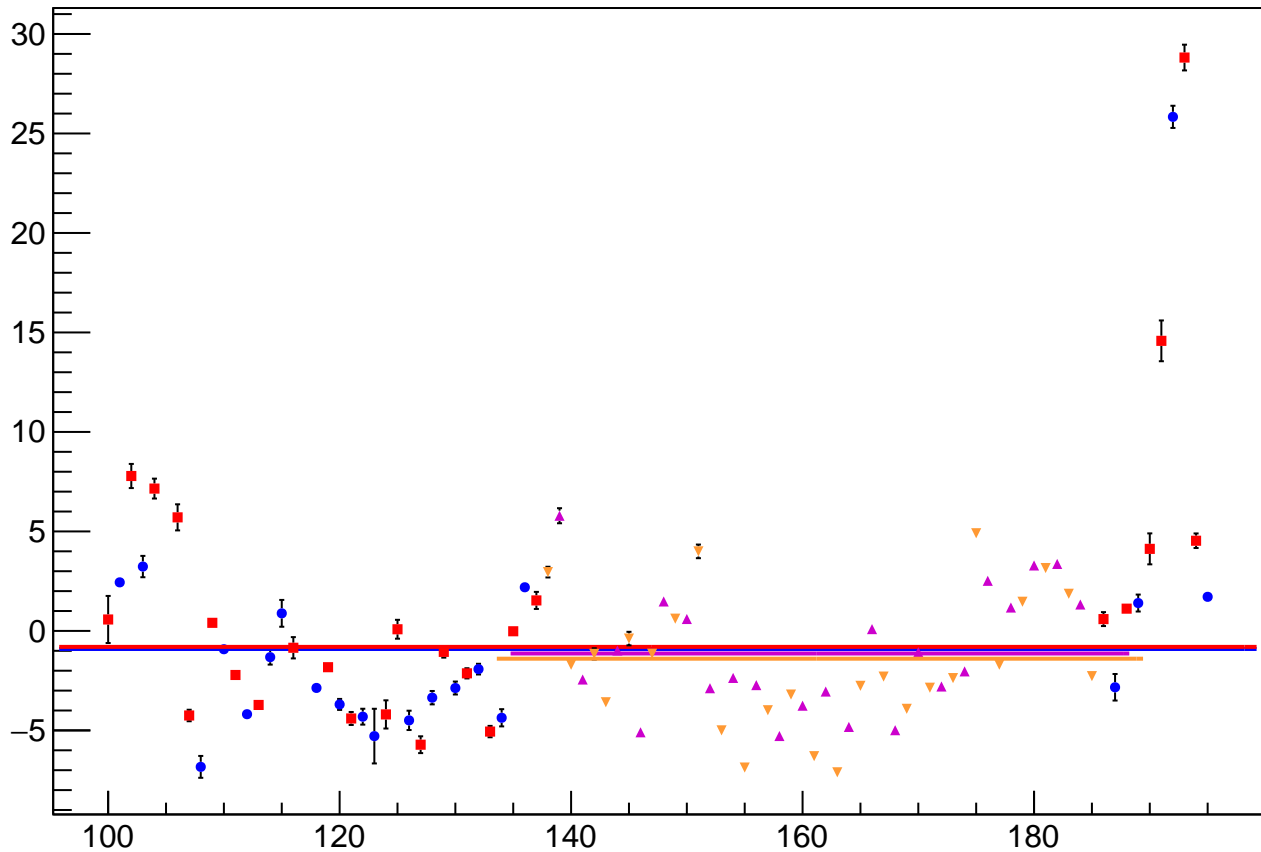
Left In:  $16.919 \pm 0.039$   $\chi^2/\text{NDF}: 40154.5/22$

+ sign  $13.456 \pm 0.036$   $\chi^2/\text{NDF}: 177201.5/45$

All:  $11.832 \pm 0.024$   $\chi^2/\text{NDF}: 336059.3/93$

- sign  $10.493 \pm 0.032$   $\chi^2/\text{NDF}: 155095.0/47$

# reg\_asym\_bcm\_dg\_us\_diff\_bpm4eY\_slope vs Slug



Right In:  $-0.908 \pm 0.068$   $\chi^2/\text{NDF}: 3753.7/20$

Left Out:  $-1.396 \pm 0.037$   $\chi^2/\text{NDF}: 7651.5/24$

Right Out:  $-0.803 \pm 0.063$   $\chi^2/\text{NDF}: 4244.6/24$

Left In:  $-1.135 \pm 0.035$   $\chi^2/\text{NDF}: 6597.7/22$

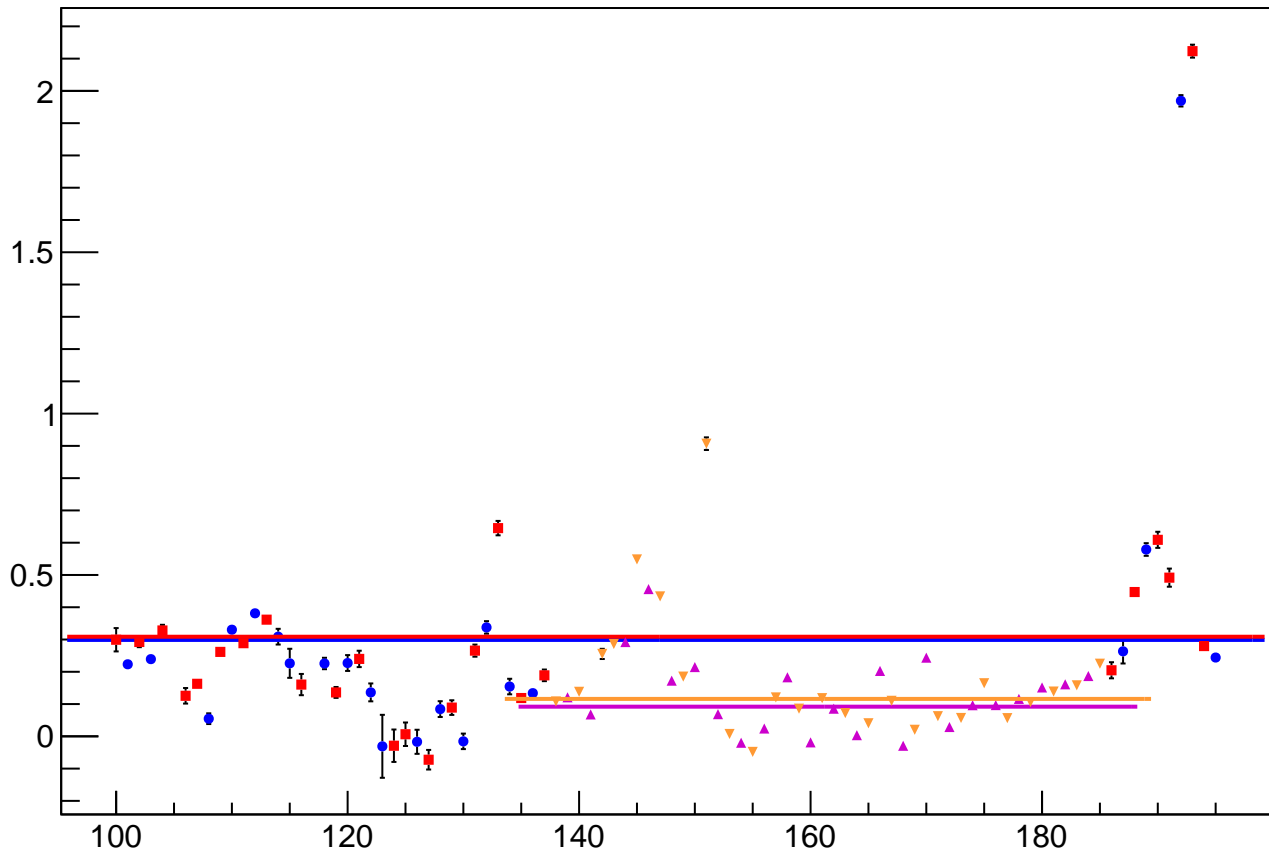
+ sign  $-1.286 \pm 0.032$   $\chi^2/\text{NDF}: 11444.8/45$

All:  $-1.164 \pm 0.022$   $\chi^2/\text{NDF}: 22335.1/93$

- sign  $-1.055 \pm 0.031$   $\chi^2/\text{NDF}: 10863.6/47$



# reg\_asym\_bcm\_dg\_us\_diff\_bpm12X\_slope vs Slug



Right In: 0.299 $\pm$ 0.004  $\chi^2$ /NDF: 10340.6/20

Left Out: 0.116 $\pm$ 0.002  $\chi^2$ /NDF:4463.0/24

Right Out: 0.309 $\pm$ 0.003  $\chi^2$ /NDF: 9978.3/24

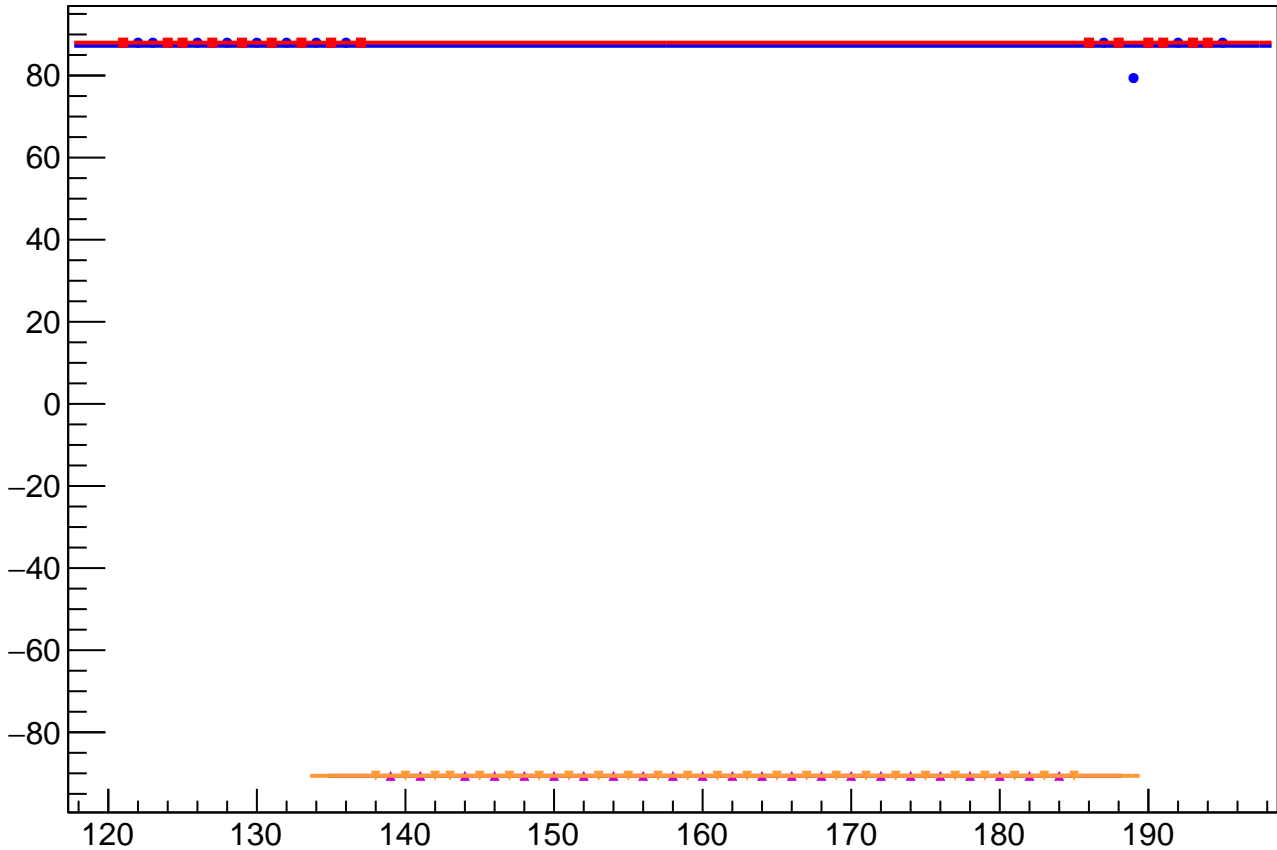
Left In: 0.092 $\pm$ 0.002  $\chi^2$ /NDF:3631.4/22

+ sign 0.149 $\pm$ 0.001  $\chi^2$ /NDF: 17005.6/45

All: 0.139 $\pm$ 0.001  $\chi^2$ /NDF: 34160.8/93

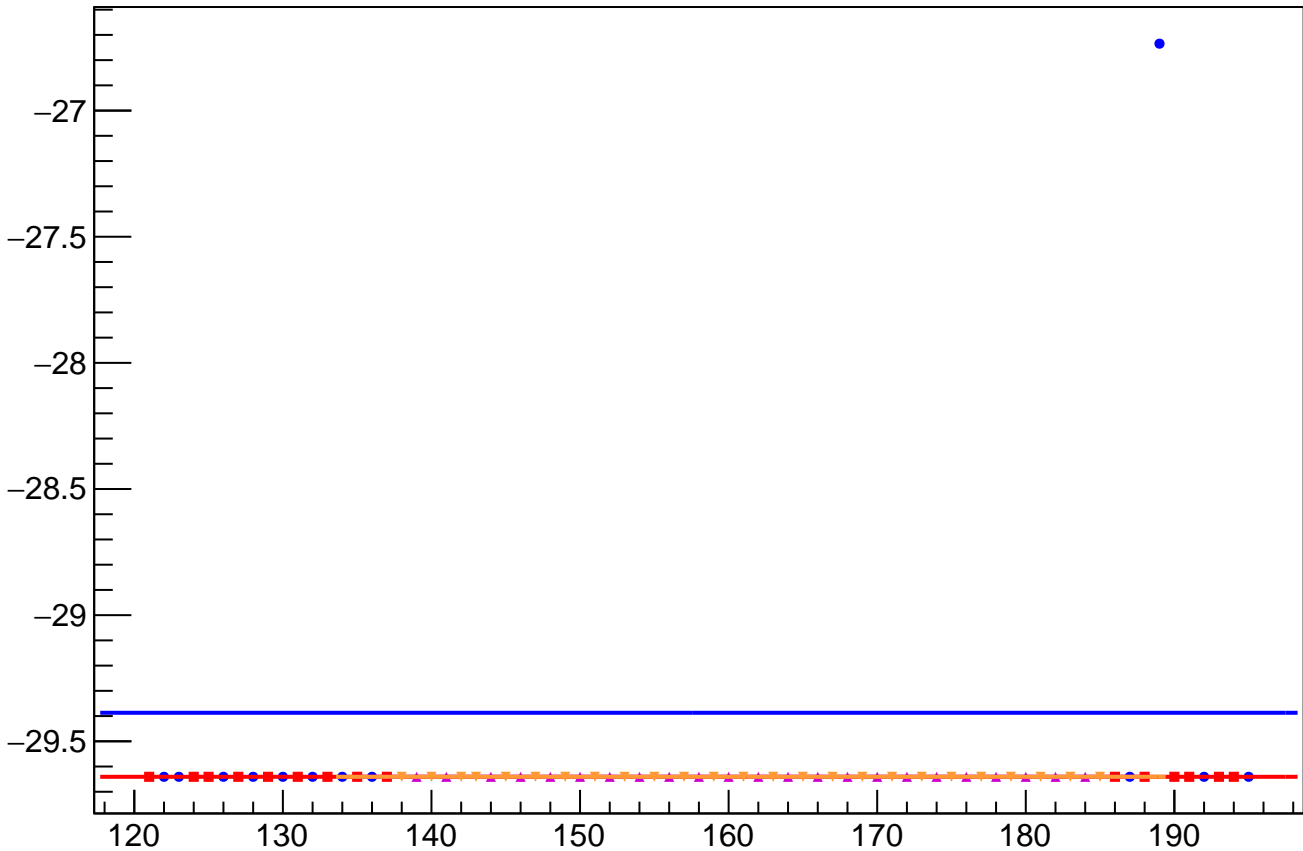
- sign 0.130 $\pm$ 0.001  $\chi^2$ /NDF: 17074.8/47

# VWienAngle\_mean vs Slug



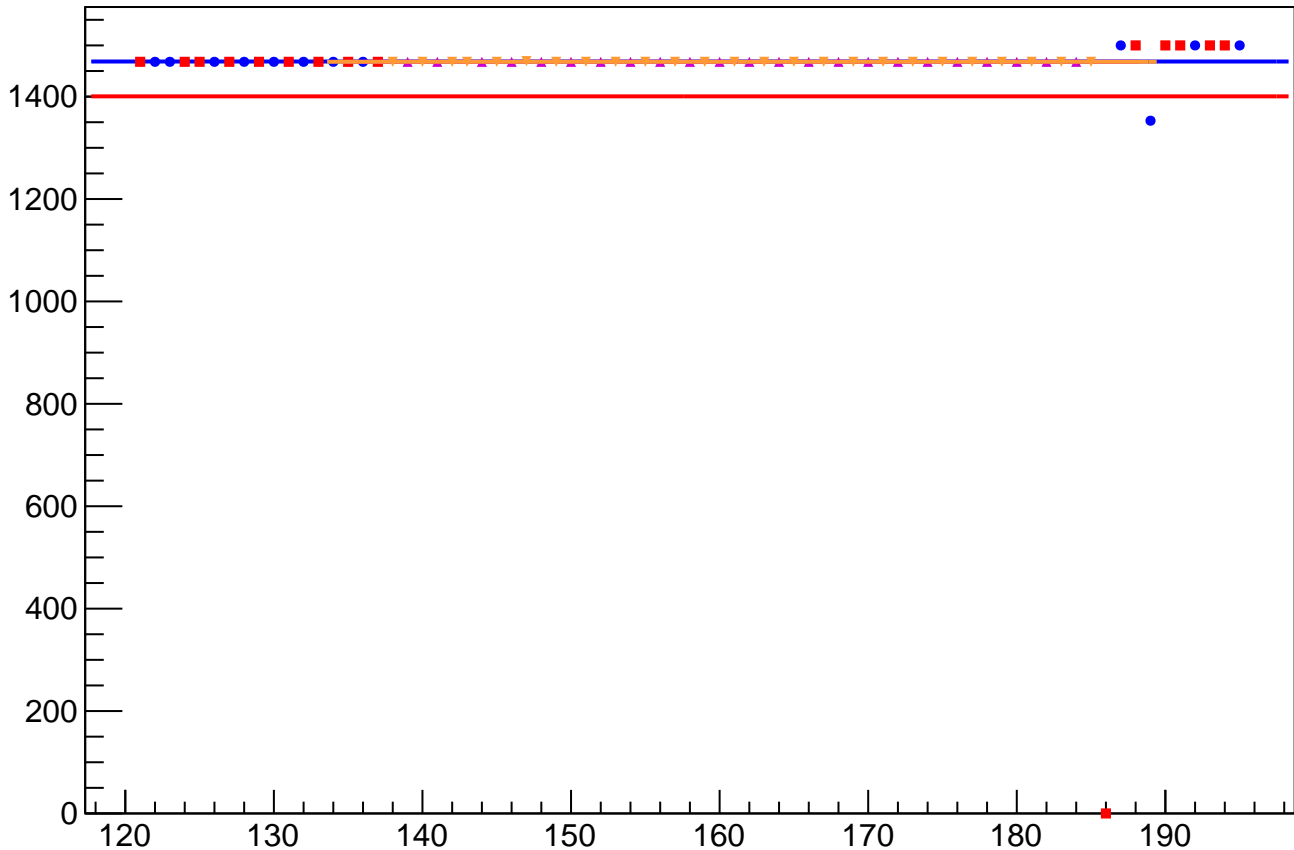
Right In: 87.247+/-0.000  $\chi^2$ /NDF: 3464626946526282996857700016455680.0/11  
Left Out: -90.599+/-0.000  $\chi^2$ /NDF:6053403.0/24 + sign -48.954+/-0.000  $\chi^2$ /NDF: 141496957464566  
Right Out: 88.001+/-0.000  $\chi^2$ /NDF: 348966.8/14 All: -45.536+/-0.000  $\chi^2$ /NDF: 298930726106  
Left In: -90.599+/-0.000  $\chi^2$ /NDF:5932436.0/22 - sign -42.106+/-0.000  $\chi^2$ /NDF: 1568498139702330

# HWienAngle\_mean vs Slug



Right In:  $-29.387 \pm 0.000$   $\chi^2/\text{NDF}$ : 393062124941034551811187777994752.0/11  
Left Out:  $-29.641 \pm 0.000$   $\chi^2/\text{NDF}$ : 654199.2/24 + sign  $-29.581 \pm 0.000$   $\chi^2/\text{NDF}$ : 421865347677851  
Right Out:  $-29.641 \pm 0.000$   $\chi^2/\text{NDF}$ : 773563.3/14 All:  $-29.611 \pm 0.000$   $\chi^2/\text{NDF}$ : 426261698531  
Left In:  $-29.641 \pm 0.000$   $\chi^2/\text{NDF}$ : 511825.6/22 - sign  $-29.641 \pm 0.000$   $\chi^2/\text{NDF}$ : 2170213.1/37

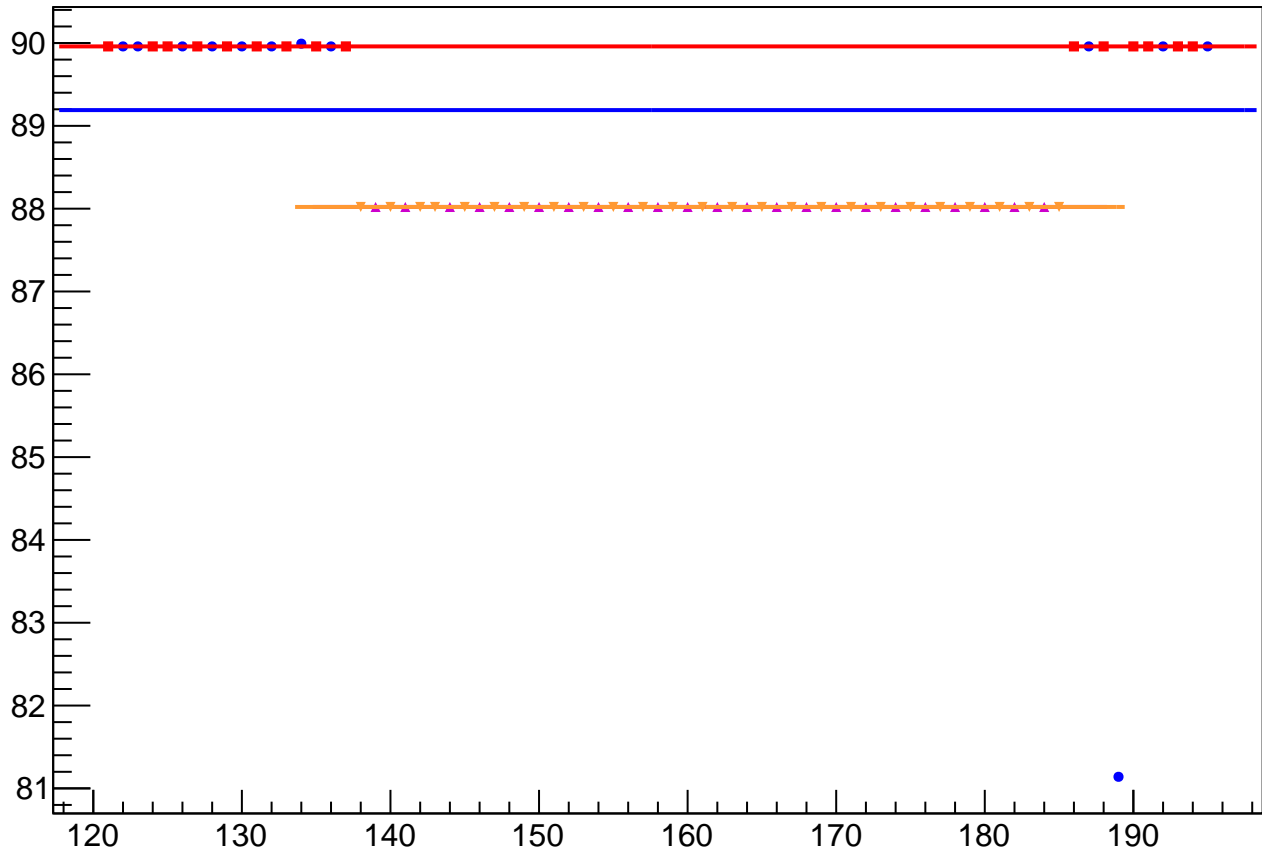
# psub\_pl\_pos\_mean vs Slug



Right In: 1468.570+/-0.000  $\chi^2/\text{NDF}$ : 873632559050777034310875655763394560.0/11  
Left Out: 1468.048+/-0.000  $\chi^2/\text{NDF}$ : 127960980922965975039069502046208.0/24  
Right Out: 1400.519+/-0.000  $\chi^2/\text{NDF}$ : 79143781585723859106983667304178384896.0/14  
Left In: 1467.994+/-0.000  $\chi^2/\text{NDF}$ : 145848702340275035310993178624.0/22

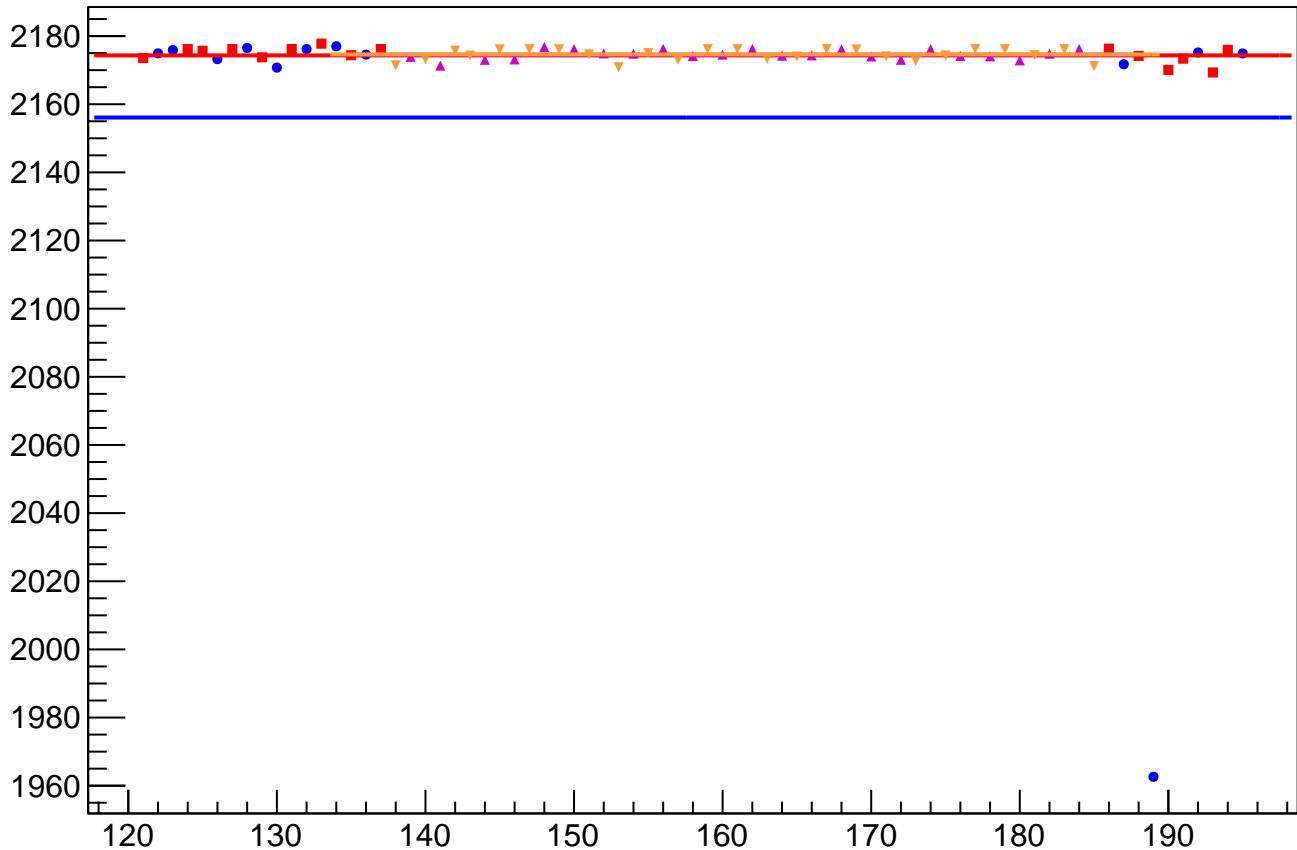
+ sign 1468.170+/-0.000  $\chi^2/\text{NDF}$ : 87388270985533  
All: 1458.936+/-0.000  $\chi^2/\text{NDF}$ : 82682410018  
- sign 1449.673+/-0.000  $\chi^2/\text{NDF}$ : 81382549185058

# Phi\_FG\_mean vs Slug



Right In: 89.190+/-0.000  $\chi^2$ /NDF: 3621655781974890227763223885512704.0/11  
+ sign 88.295+/-0.000  $\chi^2$ /NDF: 4233458829150310  
Left Out: 88.021+/-0.000  $\chi^2$ /NDF: 5326388.8/24  
All: 88.421+/-0.000  $\chi^2$ /NDF: 6160801886388  
Right Out: 89.959+/-0.000  $\chi^2$ /NDF: 2135200.3/14  
- sign 88.547+/-0.000  $\chi^2$ /NDF: 1847969143599066  
Left In: 88.021+/-0.000  $\chi^2$ /NDF: 6084099.2/22

# HALLA\_p\_mean vs Slug



Right In: 2156.096+/-0.000  $\chi^2/\text{NDF}$ : 2093313906167101625015386119725907968.0/11

Left Out: 2174.622+/-0.000  $\chi^2/\text{NDF}$ : 5110578135476093110874911595823104.0/24

Right Out: 2174.333+/-0.000  $\chi^2/\text{NDF}$ : 3929203543902501868735915156832256.0/14

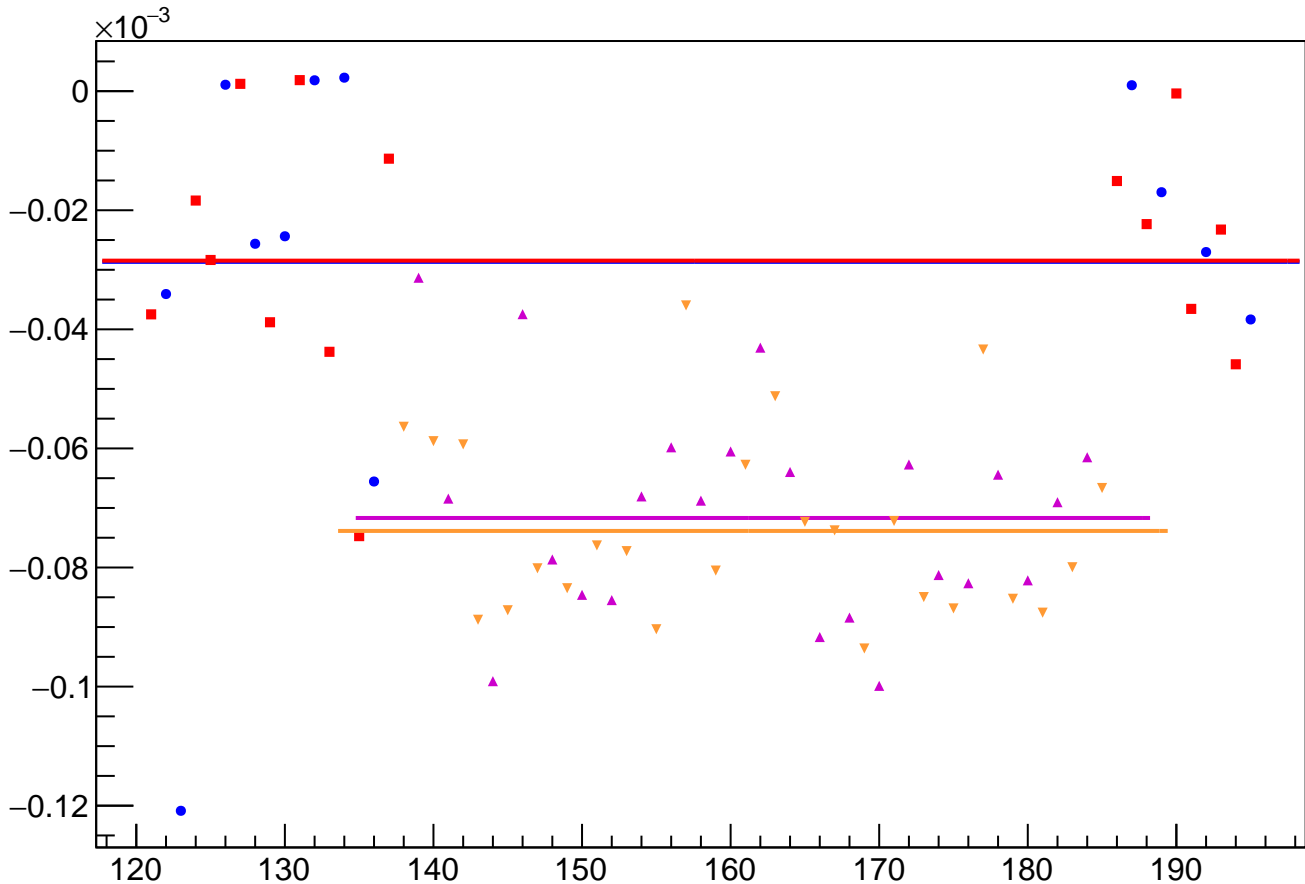
Left In: 2174.539+/-0.000  $\chi^2/\text{NDF}$ : 3400742562425168967494665391570944.0/22

+ sign 2170.284+/-0.000  $\chi^2/\text{NDF}$ : 22519321955590

All: 2172.380+/-0.000  $\chi^2/\text{NDF}$ : 22812356230

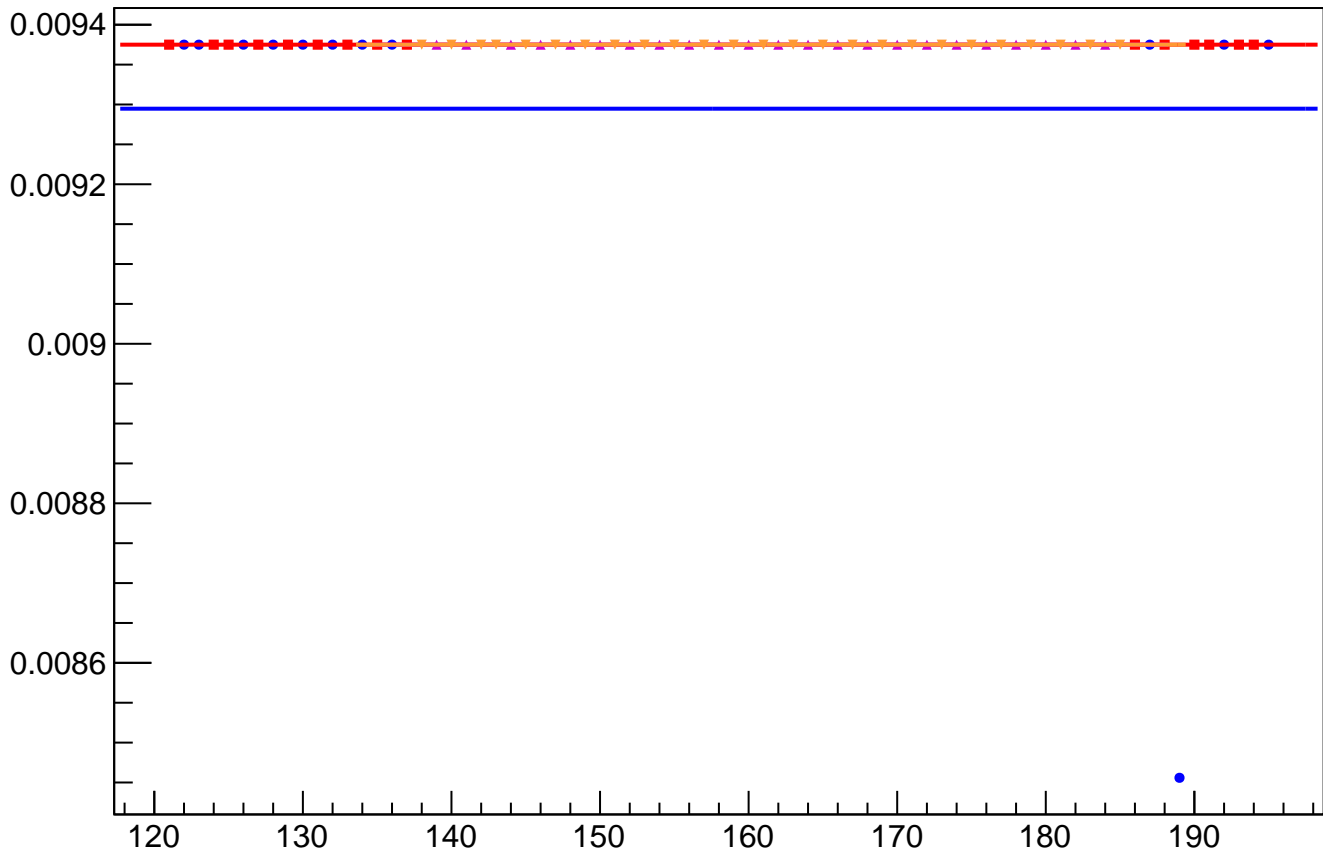
- sign 2174.483+/-0.000  $\chi^2/\text{NDF}$ : 73508813491100

# HALLA\_dpp\_mean vs Slug



Right In: -0.000+/-0.000	$\chi^2$ /NDF: 278443831084912474062848.0/11	+ sign -0.000+/-0.000	$\chi^2$ /NDF: 1642129419963219
Left Out: -0.000+/-0.000	$\chi^2$ /NDF: 450400934180541069000704.0/24	All: -0.000+/-0.000	$\chi^2$ /NDF: 3403959335740
Right Out: -0.000+/-0.000	$\chi^2$ /NDF: 267457499269542327615488.0/14	- sign -0.000+/-0.000	$\chi^2$ /NDF: 1748024210975751
Left In: -0.000+/-0.000	$\chi^2$ /NDF: 562166279020739416817664.0/22		

# MQ171LM\_mean vs Slug



Right In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 39321198567183025323376640.0/11

Left Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ :0.1/24

Right Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 0.1/14

Left In: 0.009+/-0.000  $\chi^2/\text{NDF}$ :0.1/22

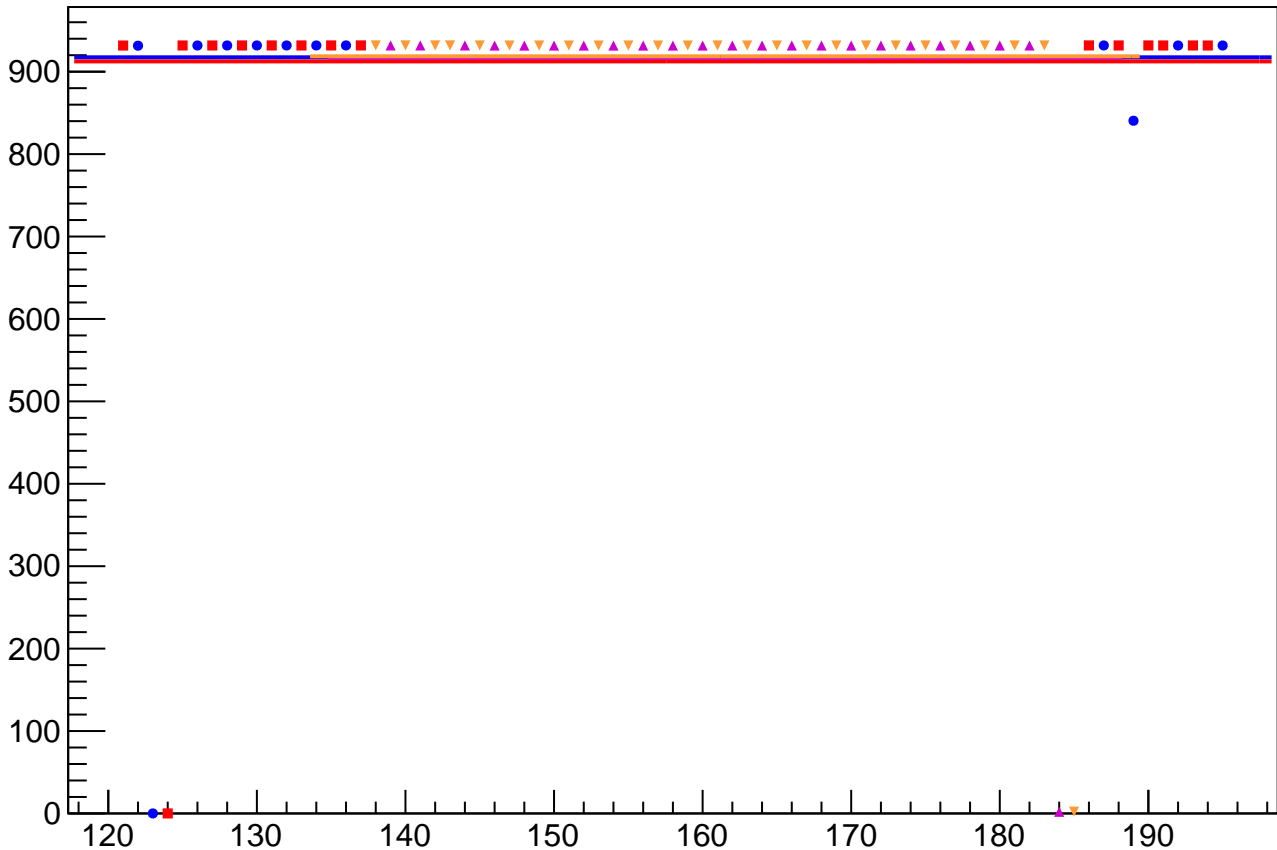
+ sign 0.009+/-0.000  $\chi^2/\text{NDF}$ : 42202619006201950

All: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 42642421708893

- sign 0.009+/-0.000  $\chi^2/\text{NDF}$ : 0.2/37

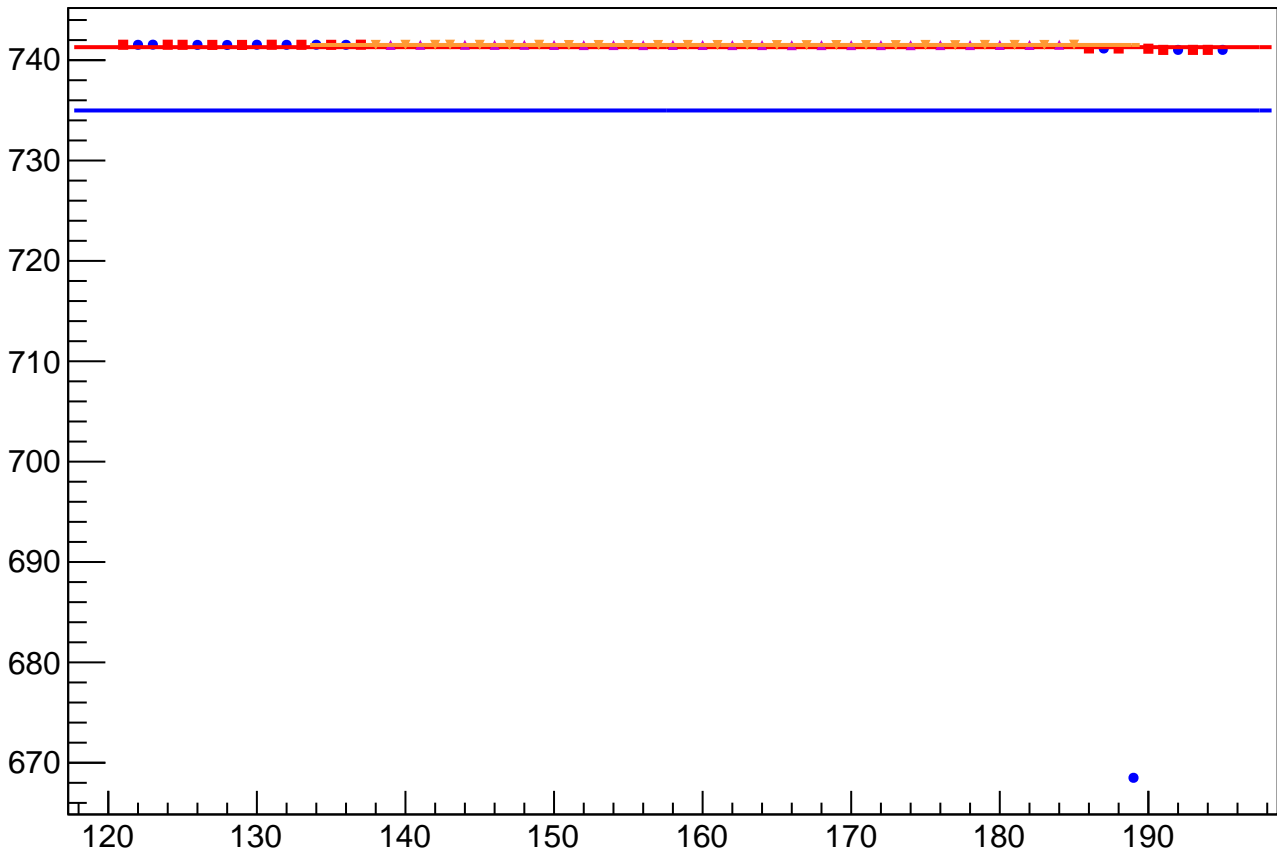


# HacL\_Q2\_HP3458A\_IOUT\_mean vs Slug



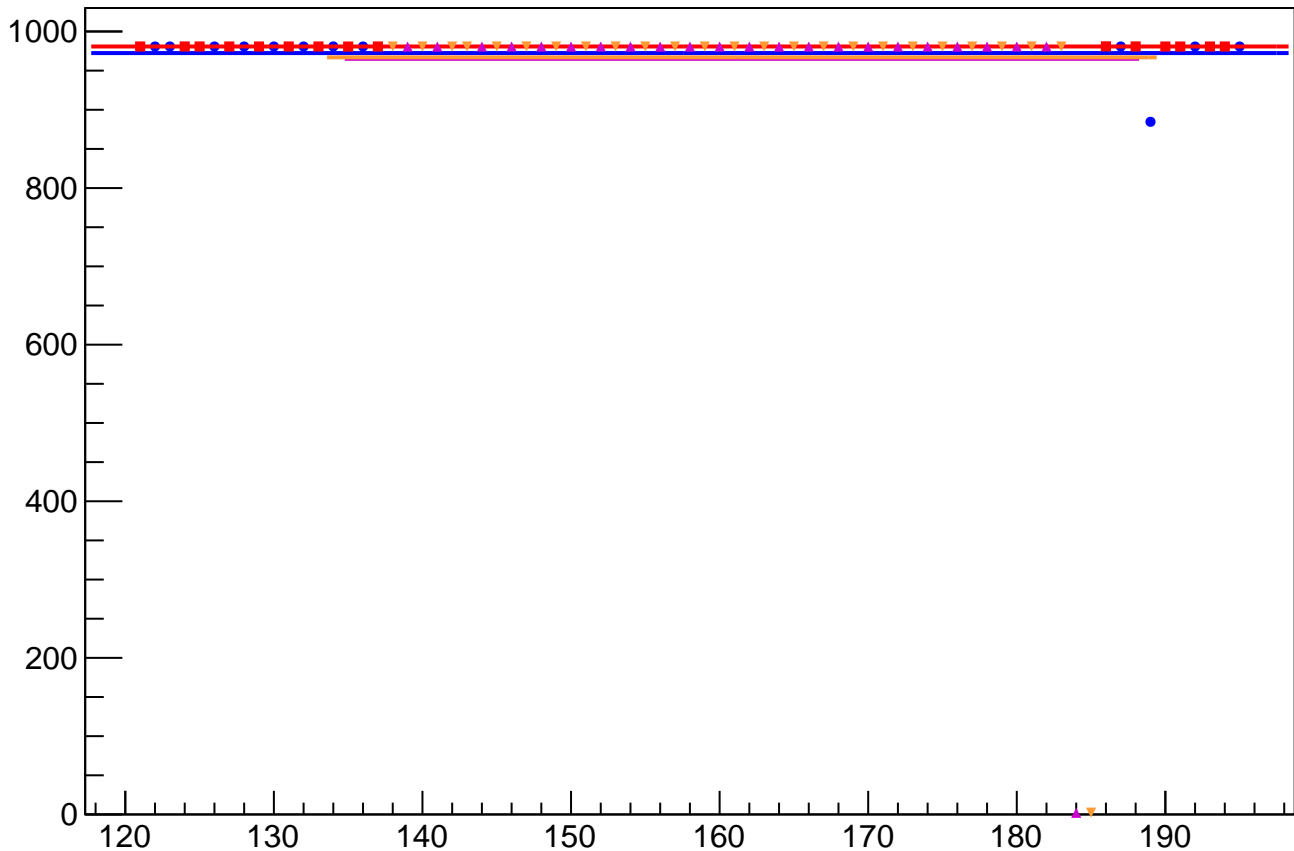
Right In: 917.438+/-0.000  $\chi^2/\text{NDF}$ : 3777515256990711943713212544197853184.0/11  
 + sign 918.362+/-0.000  $\chi^2/\text{NDF}$ : 267816650196616  
 Left Out: 918.645+/-0.000  $\chi^2/\text{NDF}$ : 23003498704056084939752432521336324096.0/24  
 All: 917.031+/-0.000  $\chi^2/\text{NDF}$ : 63370968737  
 Right Out: 912.492+/-0.000  $\chi^2/\text{NDF}$ : 11903045653083517487396082673180999680.0/14  
 - sign 915.696+/-0.000  $\chi^2/\text{NDF}$ : 365804514390156  
 Left In: 916.890+/-0.000  $\chi^2/\text{NDF}$ : 24667894917476231250286944388888133632.0/22

# HacL\_D1\_HP3458A\_IOUT\_mean vs Slug



Right In: 734.987+/-0.000  $\chi^2/\text{NDF}$ : 247044793494099417244258393202360320.0/11  
 Left Out: 741.513+/-0.000  $\chi^2/\text{NDF}$ : 244782737401533731539808944128.0/24  
 Right Out: 741.295+/-0.000  $\chi^2/\text{NDF}$ : 34176201228776484349865386573824.0/14  
 Left In: 741.512+/-0.000  $\chi^2/\text{NDF}$ : 215375309108434607405602439168.0/22  
 All: 740.718+/-0.000  $\chi^2/\text{NDF}$ : 268833654317.0/11  
 + sign 739.985+/-0.000  $\chi^2/\text{NDF}$ : 266091115002424.0/11  
 - sign 741.453+/-0.000  $\chi^2/\text{NDF}$ : 575735562482272.0/11

# HacL\_Q3\_HP3458A\_IOUT\_mean vs Slug



Right In: 972.417+/-0.000  $\chi^2/\text{NDF}$ : 430547875071204393049715651995762688.0/11

Left Out: 966.936+/-0.000  $\chi^2/\text{NDF}$ : 25485578616543458629432284645183979520.0/24

Right Out: 980.834+/-0.000  $\chi^2/\text{NDF}$ : 2205575238634965497410670821376.0/14

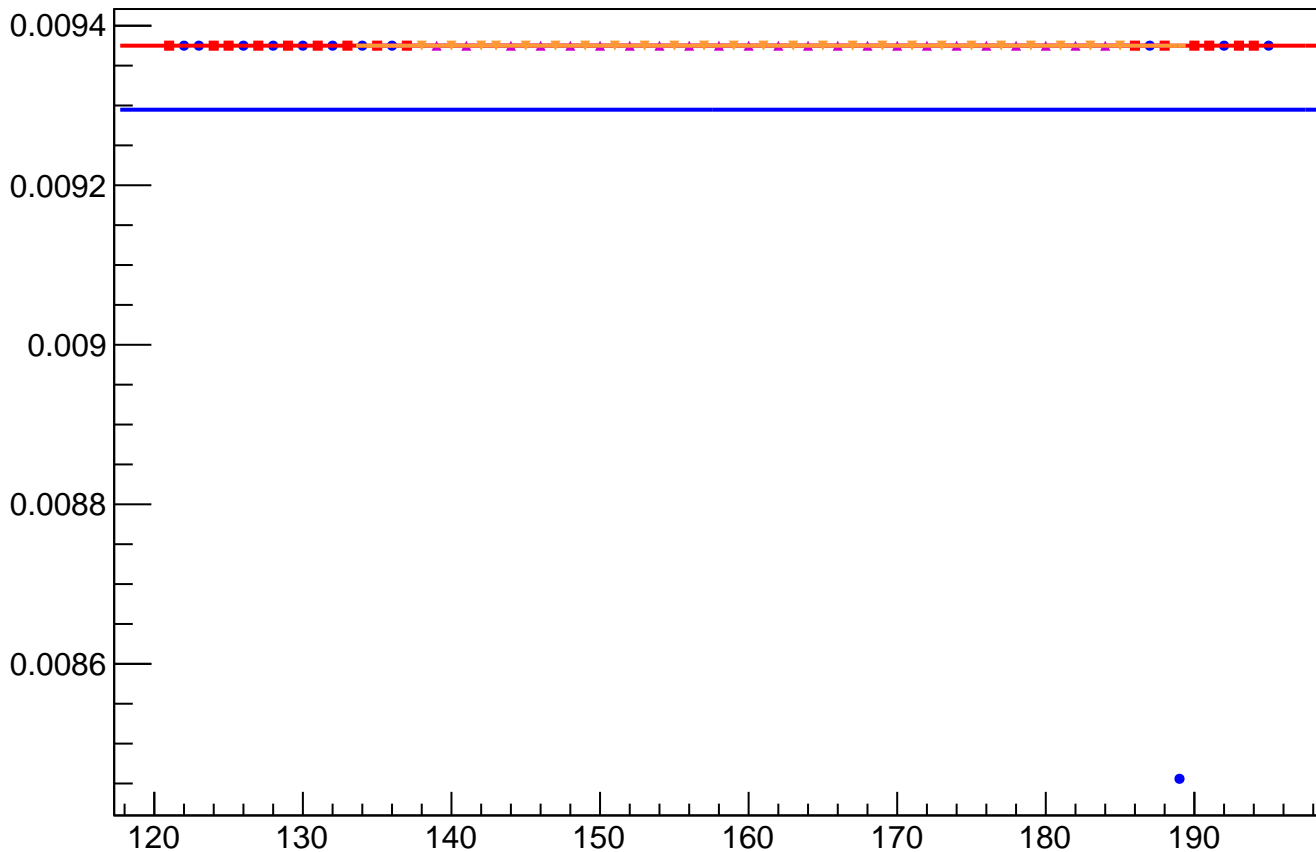
Left In: 965.102+/-0.000  $\chi^2/\text{NDF}$ : 27330319430012441419356351914146004992.0/22

+ sign 968.220+/-0.000  $\chi^2/\text{NDF}$ : 259295645796781

All: 968.796+/-0.000  $\chi^2/\text{NDF}$ : 533832472892

- sign 969.374+/-0.000  $\chi^2/\text{NDF}$ : 274520241641295

# MQ172RM\_mean vs Slug



Right In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 39321198567183025323376640.0/11

Left Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ :0.1/24

Right Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 0.1/14

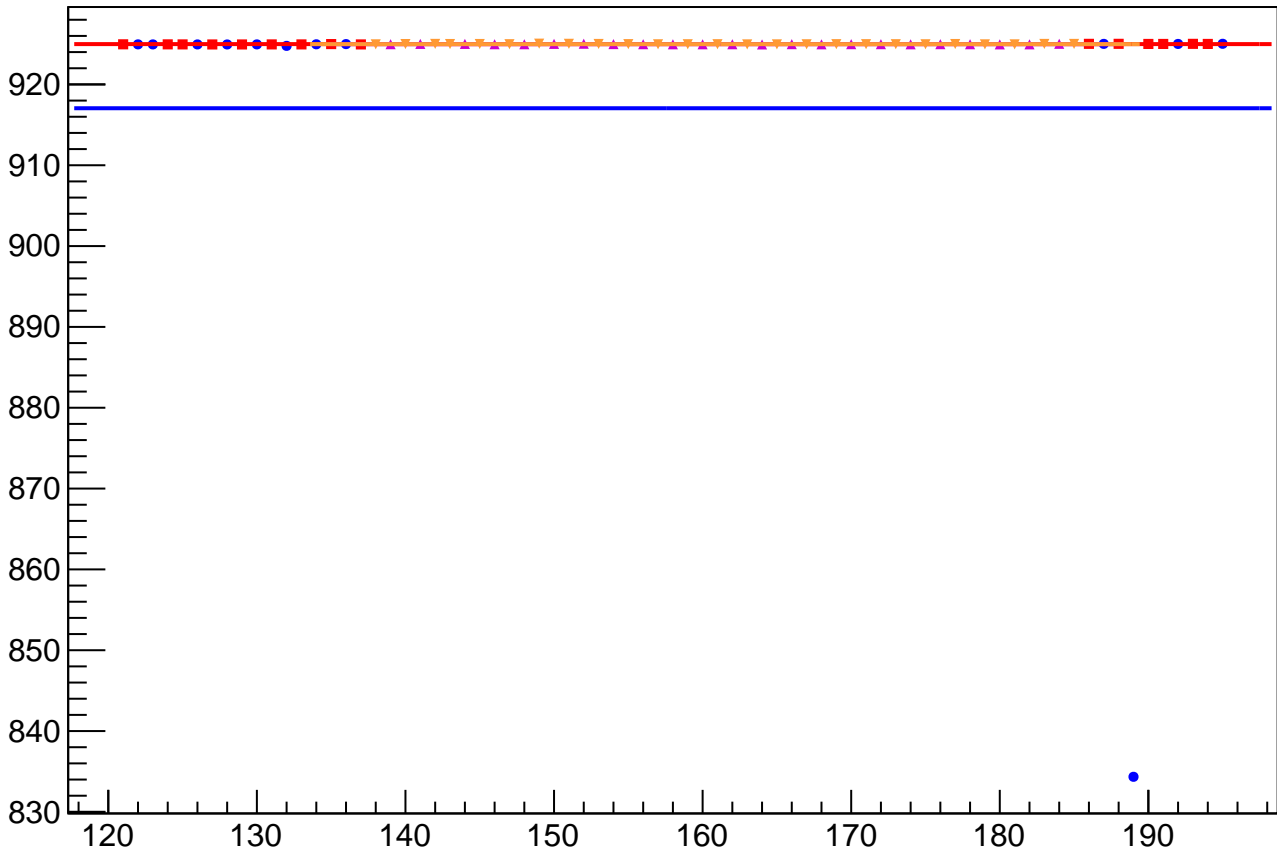
Left In: 0.009+/-0.000  $\chi^2/\text{NDF}$ :0.1/22

+ sign 0.009+/-0.000  $\chi^2/\text{NDF}$ : 42202619006201950

All: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 42642421708893

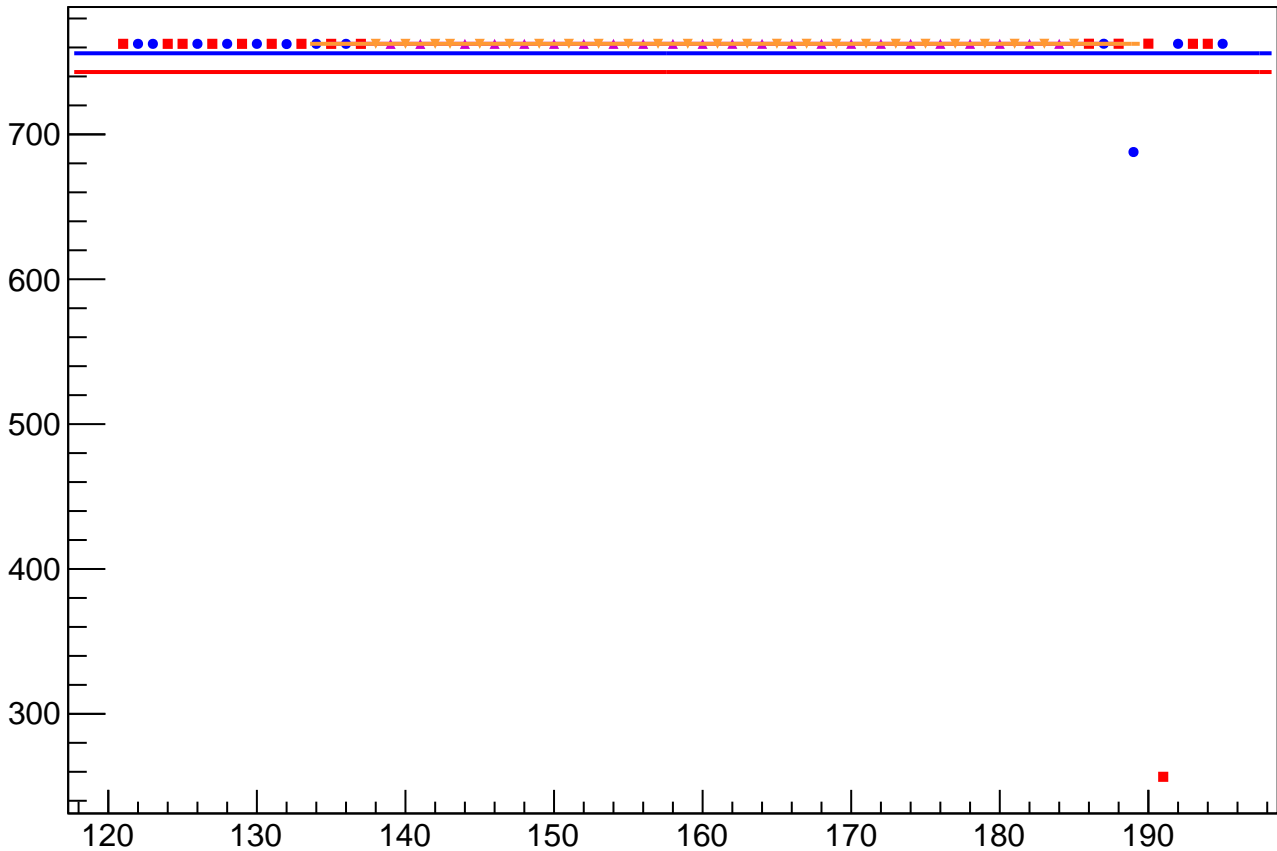
- sign 0.009+/-0.000  $\chi^2/\text{NDF}$ : 0.2/37

# HacR\_Q2\_HP3458A\_IOUT\_mean vs Slug



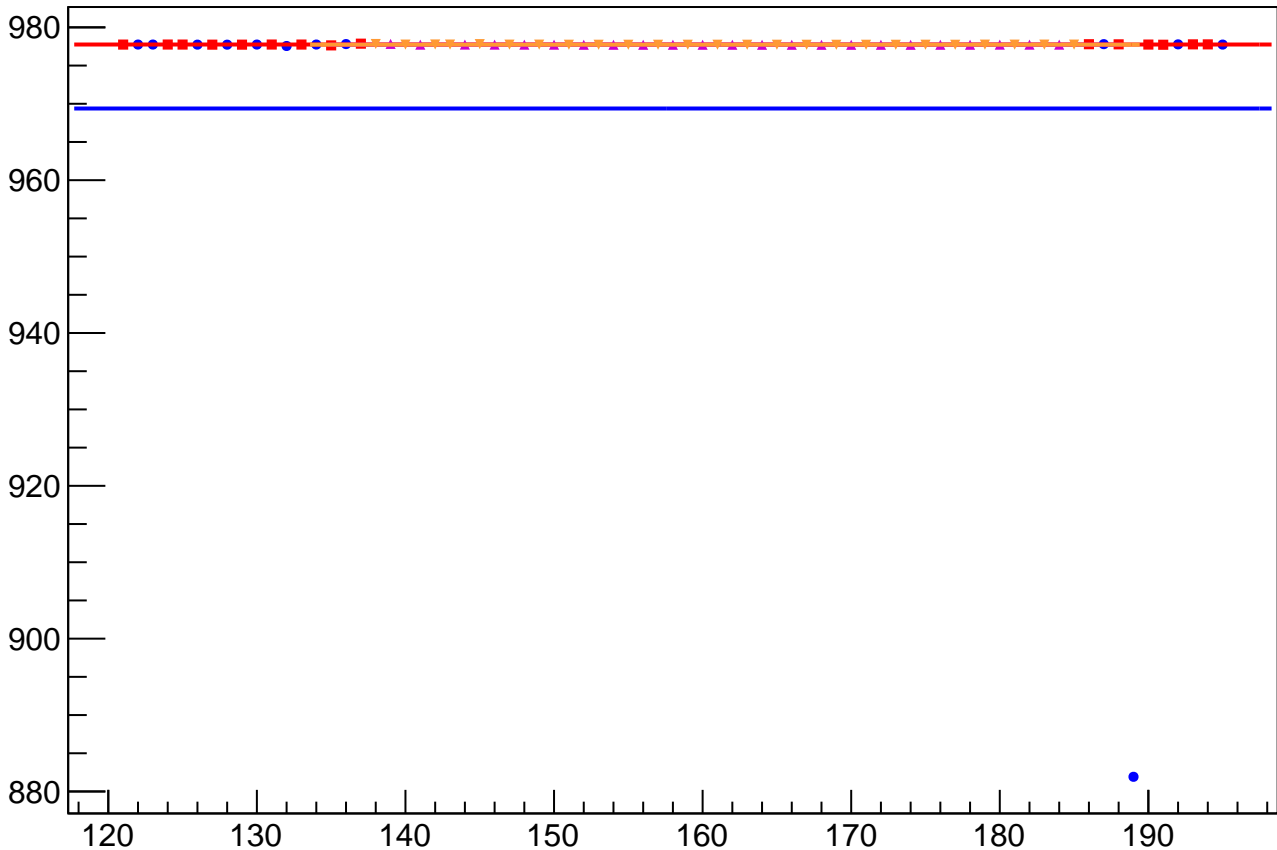
Right In: 917.053+/-0.000  $\chi^2/\text{NDF}$ : 382297033784759375108134664478392320.0/11  
Left Out: 924.983+/-0.000  $\chi^2/\text{NDF}$ : 1041831865443970524066476982272.0/24  
Right Out: 924.988+/-0.000  $\chi^2/\text{NDF}$ : 667869139607952282907245019136.0/14  
Left In: 924.983+/-0.000  $\chi^2/\text{NDF}$ : 888539224321534960792212865024.0/22  
+ sign 923.126+/-0.000  $\chi^2/\text{NDF}$ : 410417993956870  
All: 924.054+/-0.000  $\chi^2/\text{NDF}$ : 414719818975  
- sign 924.984+/-0.000  $\chi^2/\text{NDF}$ : 157098084279522

# HacR\_D1\_HP3458A\_IOUT\_mean vs Slug



Right In: 755.979+/-0.000  $\chi^2/\text{NDF}$ : 259662381935853714767513217893662720.0/11  
 Left Out: 762.518+/-0.000  $\chi^2/\text{NDF}$ : 731741258759628909874415403008.0/24  
 Right Out: 743.040+/-0.000  $\chi^2/\text{NDF}$ : 6399977791819170497402919828548747264.0/14  
 Left In: 762.519+/-0.000  $\chi^2/\text{NDF}$ : 629058355419214408155297480704.0/22  
 All: 759.112+/-0.000  $\chi^2/\text{NDF}$ : 688291754542  
 + sign 760.987+/-0.000  $\chi^2/\text{NDF}$ : 278789683248284  
 - sign 757.230+/-0.000  $\chi^2/\text{NDF}$ : 658655519590838

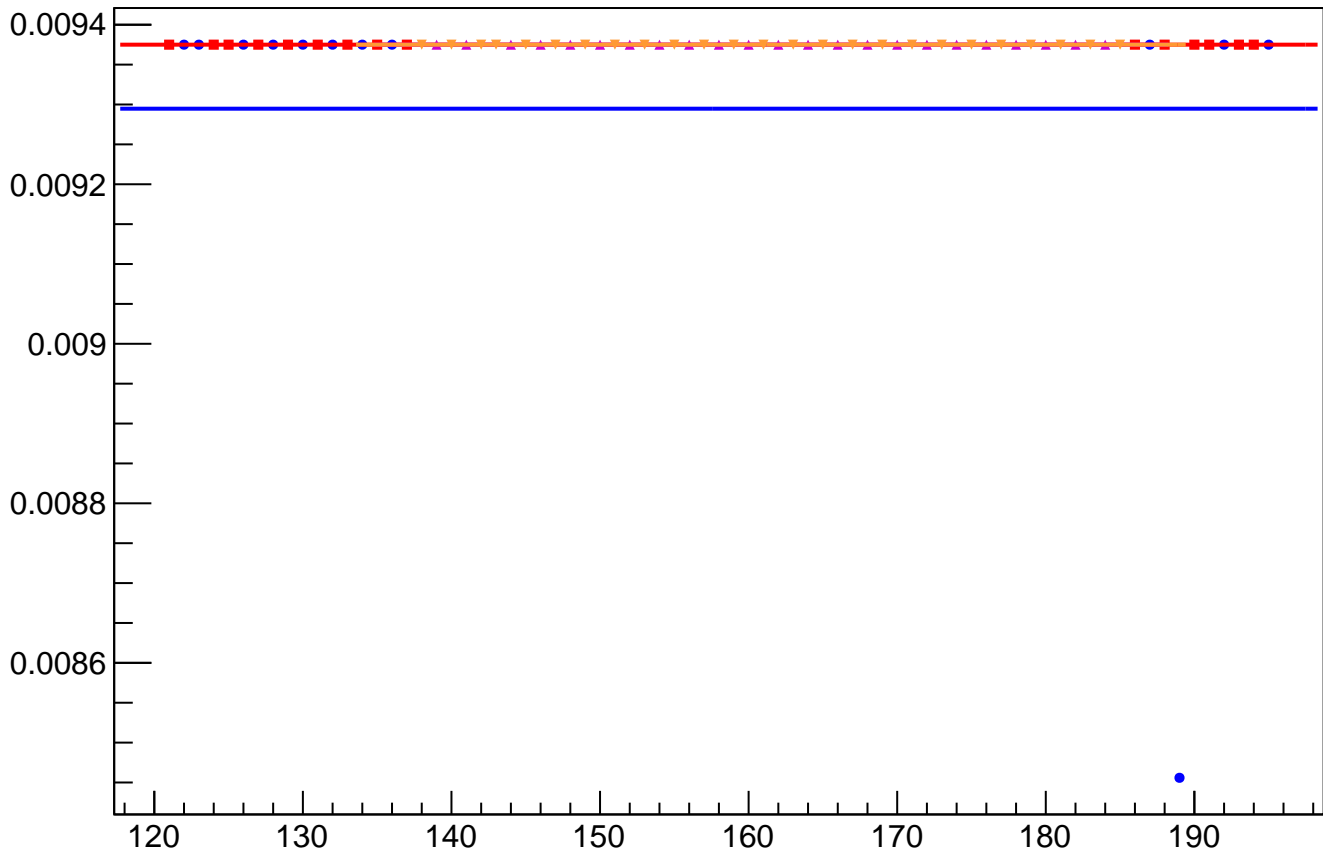
# HacR\_Q3\_HP3458A\_IOUT\_mean vs Slug



Right In: 969.381 $\pm$ 0.000  $\chi^2$ /NDF: 427450921087193950476237867036180480.0/11  
Left Out: 977.738 $\pm$ 0.000  $\chi^2$ /NDF: 1154150409979077132991401558016.0/24  
Right Out: 977.755 $\pm$ 0.000  $\chi^2$ /NDF: 1076254059334422706405341396992.0/14  
Left In: 977.735 $\pm$ 0.000  $\chi^2$ /NDF: 976503887937607318263199432704.0/22

All: 976.759 $\pm$ 0.000  $\chi^2$ /NDF: 463469939874  
+ sign 975.781 $\pm$ 0.000  $\chi^2$ /NDF: 458687074892621  
- sign 977.740 $\pm$ 0.000  $\chi^2$ /NDF: 225981369561579

# hesDipole\_current\_mean vs Slug



Right In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 39321198567183025323376640.0/11

Left Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ :0.1/24

Right Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 0.1/14

Left In: 0.009+/-0.000  $\chi^2/\text{NDF}$ :0.1/22

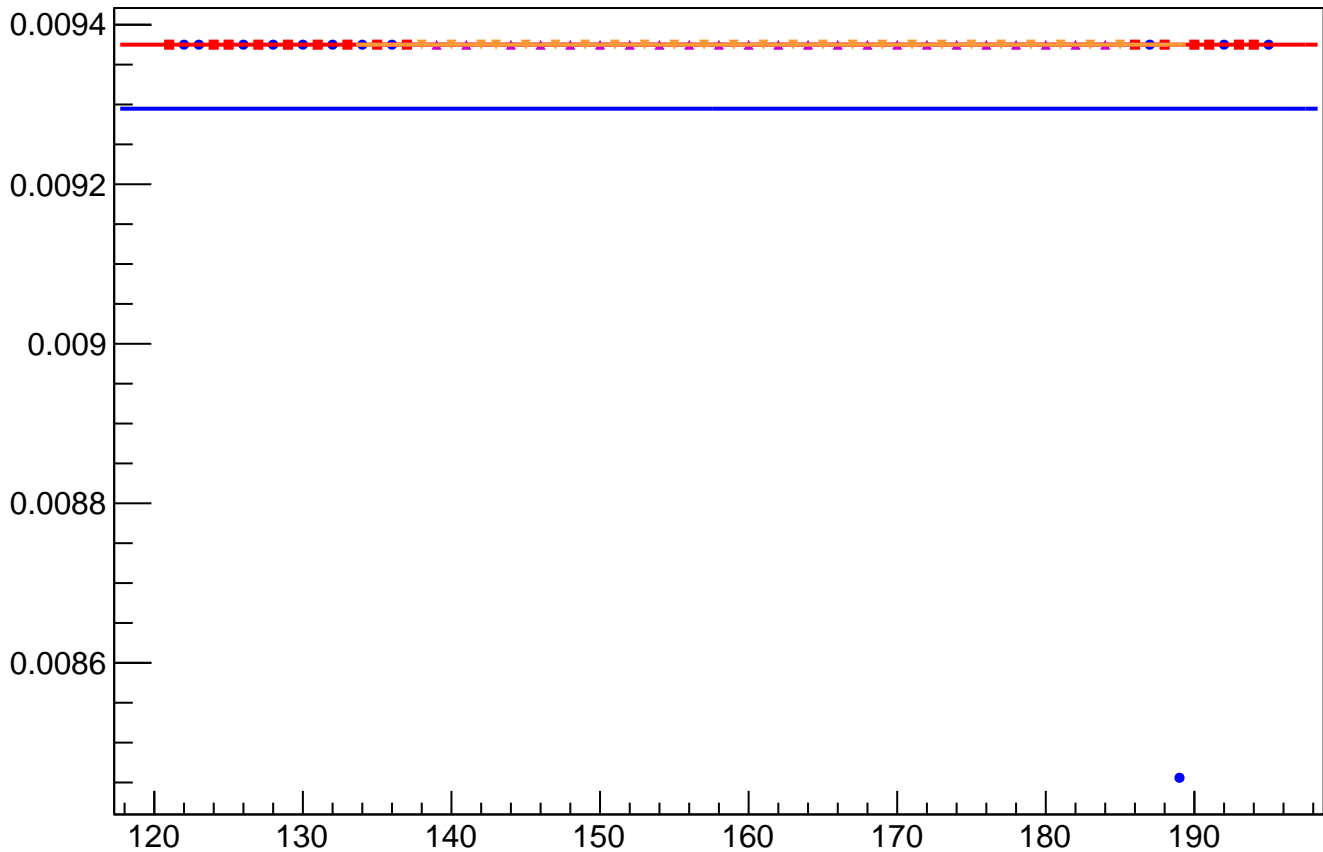
+ sign 0.009+/-0.000  $\chi^2/\text{NDF}$ : 42202619006201950

All: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 42642421708893

- sign 0.009+/-0.000  $\chi^2/\text{NDF}$ : 0.2/37



# MSUPERBIGBITereadcalc\_mean vs Slug



Right In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 39321198567183025323376640.0/11

Left Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ :0.1/24

Right Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 0.1/14

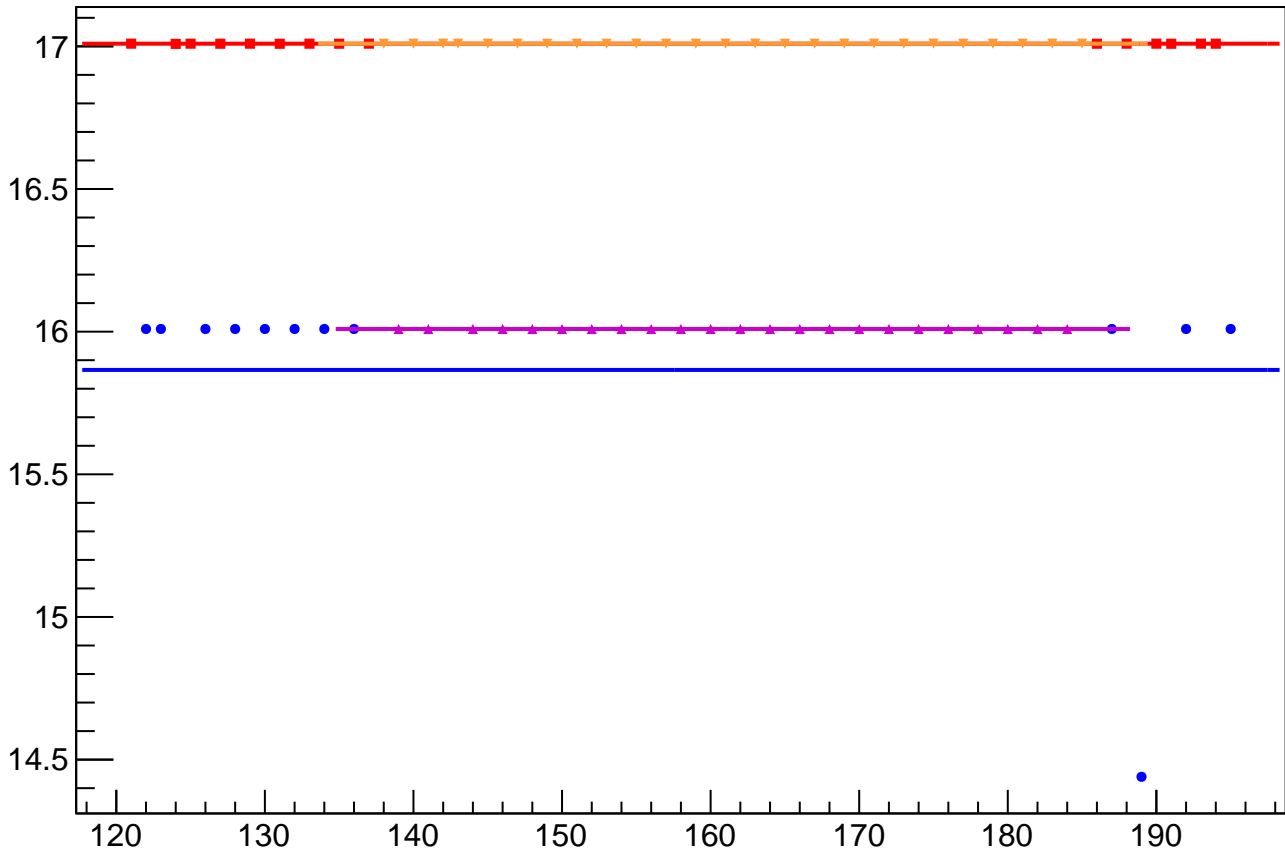
Left In: 0.009+/-0.000  $\chi^2/\text{NDF}$ :0.1/22

+ sign 0.009+/-0.000  $\chi^2/\text{NDF}$ : 42202619006201950

All: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 42642421708893

- sign 0.009+/-0.000  $\chi^2/\text{NDF}$ : 0.2/37

# IGL1I00DI24\_24M\_mean vs Slug



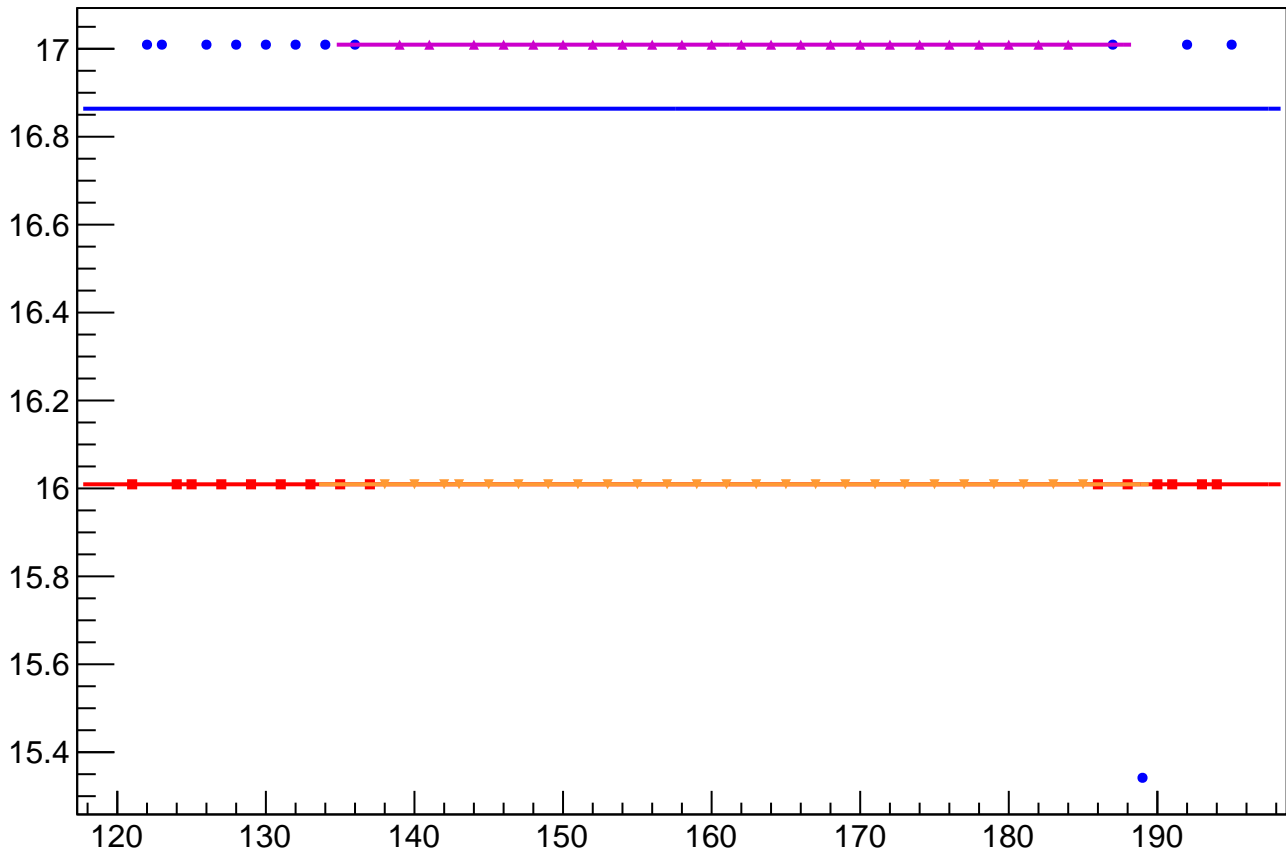
Right In: 15.866+/-0.000  $\chi^2/\text{NDF}$ : 114154319137453233696957240705024.0/11

Left Out: 17.009+/-0.000  $\chi^2/\text{NDF}$ : 26284444608576238643052544.0/24 + sign 16.736+/-0.000  $\chi^2/\text{NDF}$ : 6691271111065714

Right Out: 17.009+/-0.000  $\chi^2/\text{NDF}$ : 12246271882223308763037696.0/14 All: 16.513+/-0.000  $\chi^2/\text{NDF}$ : 1374120366026

Left In: 16.009+/-0.000  $\chi^2/\text{NDF}$ : 127973174512756677672960.0/22 - sign 16.291+/-0.000  $\chi^2/\text{NDF}$ : 4734735293415633

# IGL1I00OD16\_16\_mean vs Slug



Right In: 16.864 $\pm$ 0.000  $\chi^2$ /NDF: 129437735525535194682278010683392.0/11

Left Out: 16.009 $\pm$ 0.000  $\chi^2$ /NDF: 89740.8/24

Right Out: 16.009 $\pm$ 0.000  $\chi^2$ /NDF: 178383.5/14

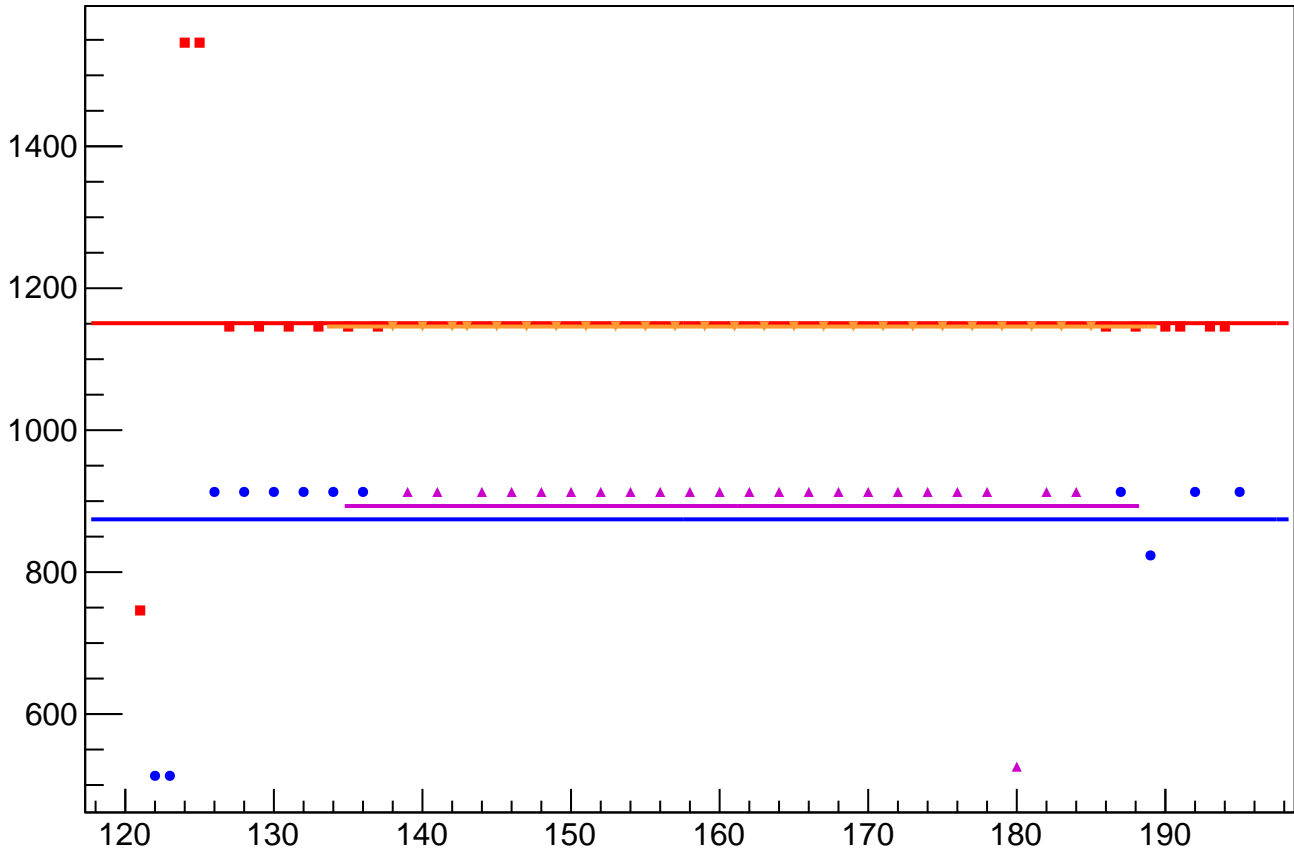
Left In: 17.009 $\pm$ 0.000  $\chi^2$ /NDF: 115033472633445654986752.0/22

+ sign 16.211 $\pm$ 0.000  $\chi^2$ /NDF: 4549380271805519

All: 16.471 $\pm$ 0.000  $\chi^2$ /NDF: 1277129495708

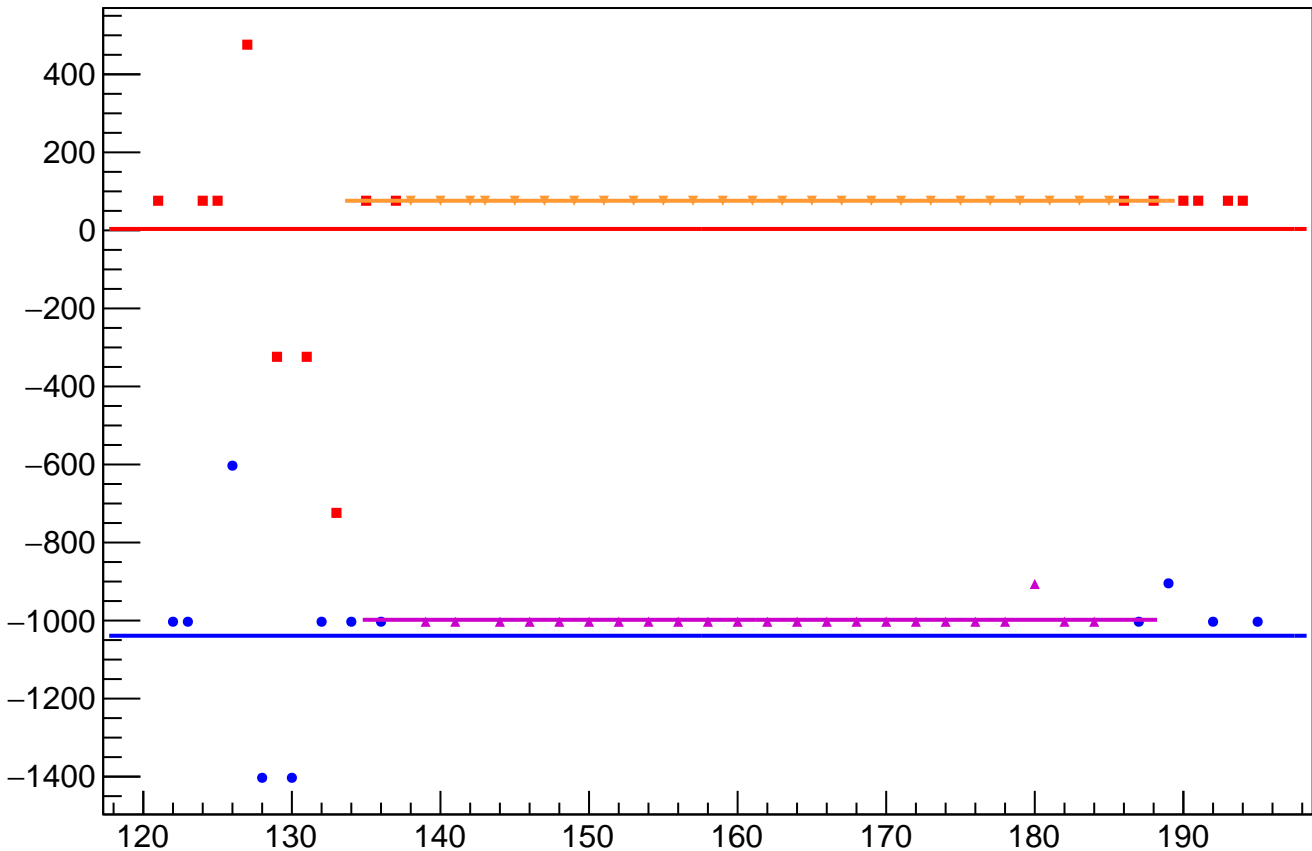
- sign 16.733 $\pm$ 0.000  $\chi^2$ /NDF: 4883432124270593

# RTPAPOSUCNT\_mean vs Slug



Right In: 874.354+/-0.000  $\chi^2/\text{NDF}$ : 6736742070619831753989073320118583296.0/11  
 Left Out: 1146.011+/-0.000  $\chi^2/\text{NDF}$ : 8041760976861450519237885952.0/24  
 Right Out: 1150.751+/-0.000  $\chi^2/\text{NDF}$ : 13745492009467254785936395826381193216.0/14  
 Left In: 893.116+/-0.000  $\chi^2/\text{NDF}$ : 13219826761707982974212661987208331264.0/22  
 All: 1022.830+/-0.000  $\chi^2/\text{NDF}$ : 11707473230  
 + sign 1082.399+/-0.000  $\chi^2/\text{NDF}$ : 39742626499903  
 - sign 963.070+/-0.000  $\chi^2/\text{NDF}$ : 596038388376008

# RTPAPOSVCNT\_mean vs Slug



Right In:  $-1038.923 \pm 0.000$   $\chi^2/\text{NDF}: 22938713455365142237506792866906636288.0/11$   
 Left Out:  $76.011 \pm 0.000$   $\chi^2/\text{NDF}: 11003263624957134120836661248.0/24$   
 Right Out:  $3.714 \pm 0.000$   $\chi^2/\text{NDF}: 43511650877114488946233768310002941952.0/14$   
 Left In:  $-998.020 \pm 0.000$   $\chi^2/\text{NDF}: 826231736084035689068445378231140352.0/22$   
 All:  $-455.112 \pm 0.000$   $\chi^2/\text{NDF}: 14810120144$   
 + sign  $-185.064 \pm 0.000$   $\chi^2/\text{NDF}: 57890427193999$   
 - sign  $-726.029 \pm 0.000$   $\chi^2/\text{NDF}: 537768353787690$