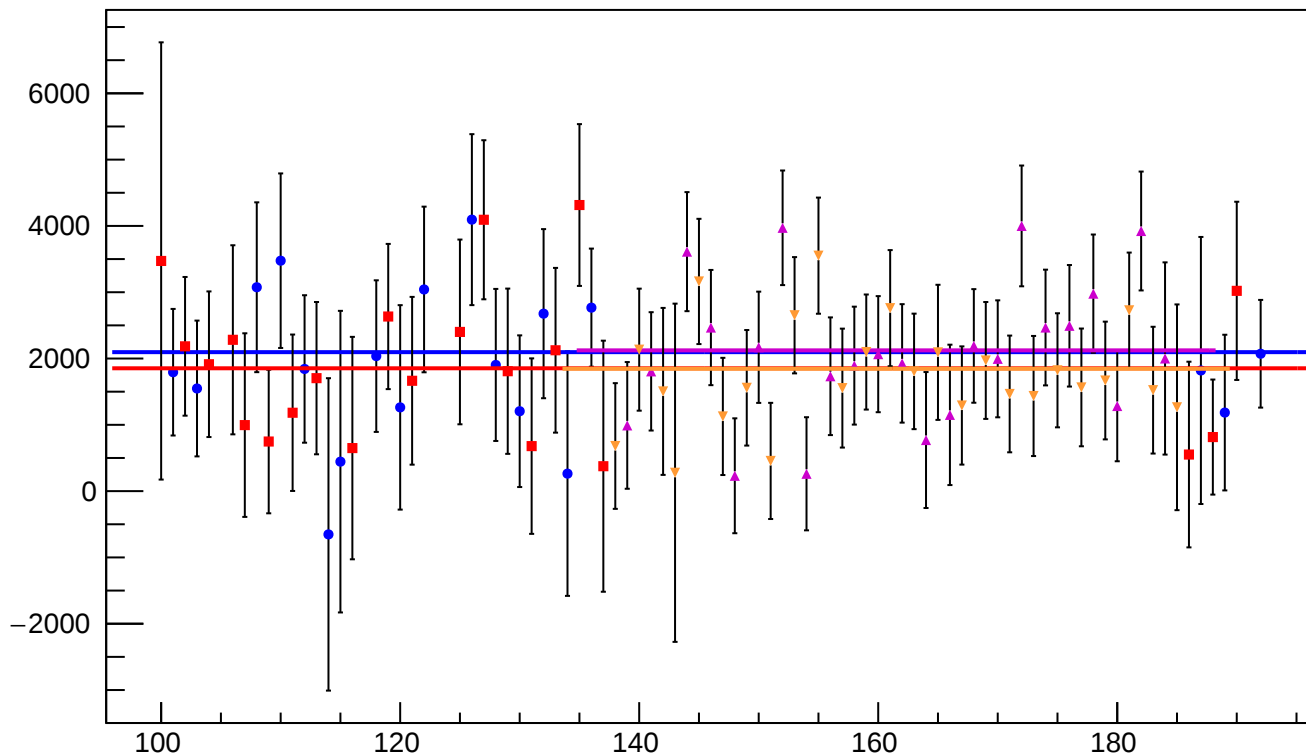


# reg\_asym\_us\_avg\_mean vs Slug, Sign Corrected



Right In: 2096.211+/-277.038

Left Out: 1845.799+/-186.902

Right Out: 1852.727+/-273.111

Left In: 2123.138+/-188.684

$\chi^2/\text{NDF}$ : 10.3/18

$\chi^2/\text{NDF}$ : 15.5/24

$\chi^2/\text{NDF}$ : 15.5/20

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

Left: 1983.152+/-132.785

Right: 1972.732+/-194.492

In: 2114.606+/-155.950

Out: 1848.009+/-154.242

All: 1979.839+/-109.664

$\chi^2/\text{NDF}$ : 48.6/47

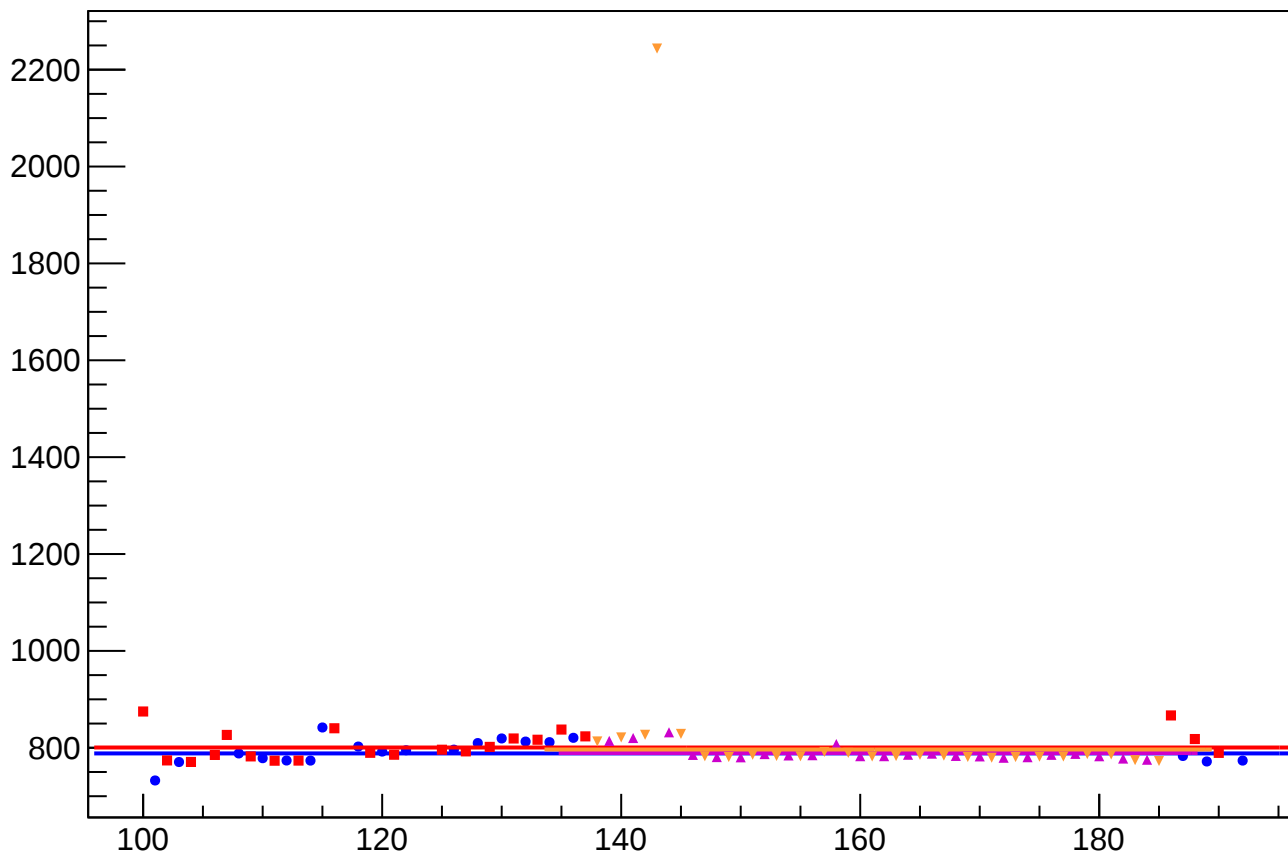
$\chi^2/\text{NDF}$ : 26.1/39

$\chi^2/\text{NDF}$ : 42.3/41

$\chi^2/\text{NDF}$ : 30.9/45

$\chi^2/\text{NDF}$ : 74.7/87

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



Right In: 788.332+/-0.196  $\chi^2/\text{NDF}$ : 16440.0/18

Left Out: 796.441+/-0.132  $\chi^2/\text{NDF}$ : 658708.8/24

Right Out: 800.541+/-0.193  $\chi^2/\text{NDF}$ : 17468.2/20

Left In: 789.185+/-0.133  $\chi^2/\text{NDF}$ : 11343.2/22

Left: 792.847+/-0.094  $\chi^2/\text{NDF}$ : 671545.0/47

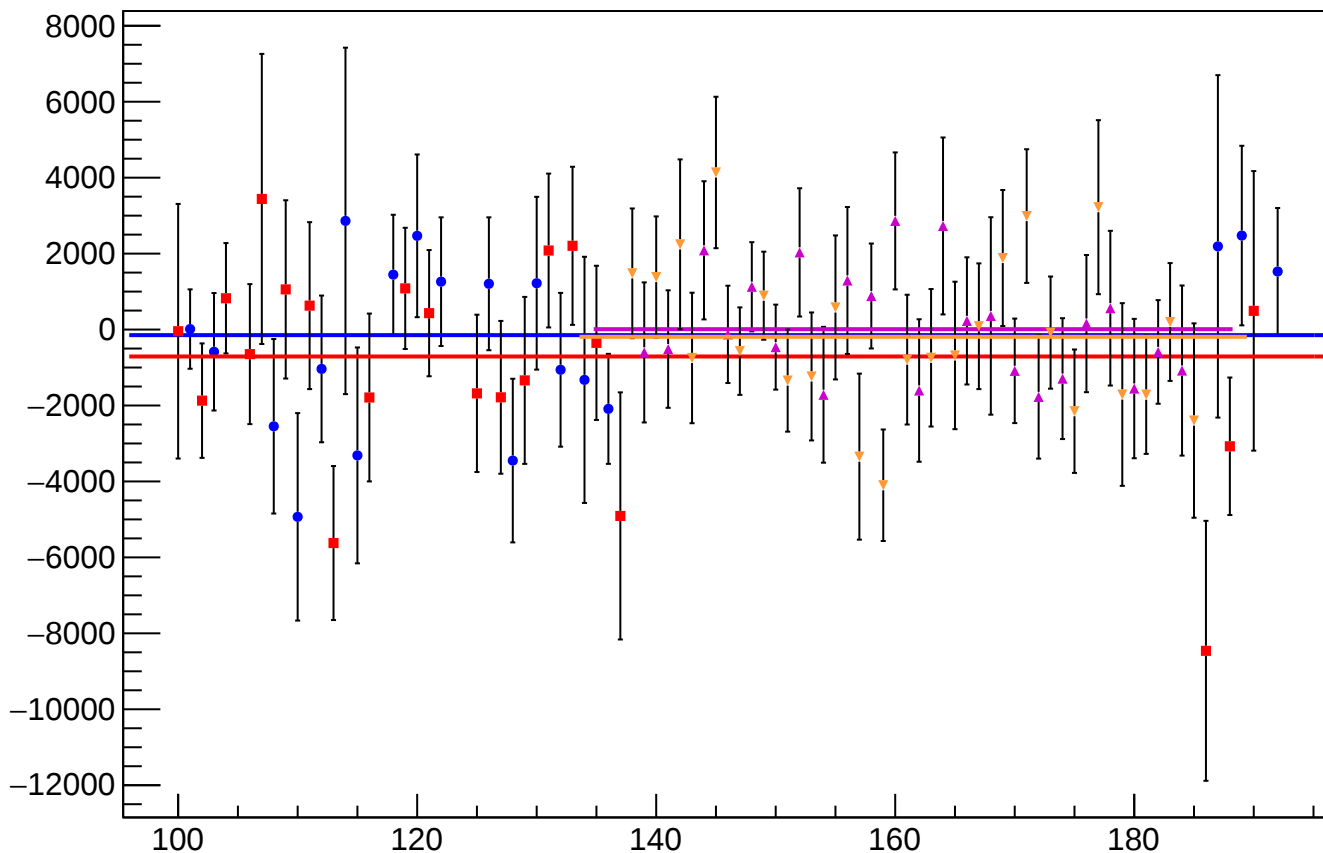
Right: 794.524+/-0.138  $\chi^2/\text{NDF}$ : 35878.1/39

In: 788.914+/-0.110  $\chi^2/\text{NDF}$ : 27796.1/41

Out: 797.749+/-0.109  $\chi^2/\text{NDF}$ : 676484.0/45

All: 793.380+/-0.078  $\chi^2/\text{NDF}$ : 707524.5/87

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



Right In: -146.931 $\pm$ 438.469  $\chi^2$ /NDF: 17.3/18

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

Right Out: -709.134 $\pm$ 450.918  $\chi^2$ /NDF: 24.8/20

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

Left: -91.637 $\pm$ 237.475  $\chi^2$ /NDF: 44.5/47

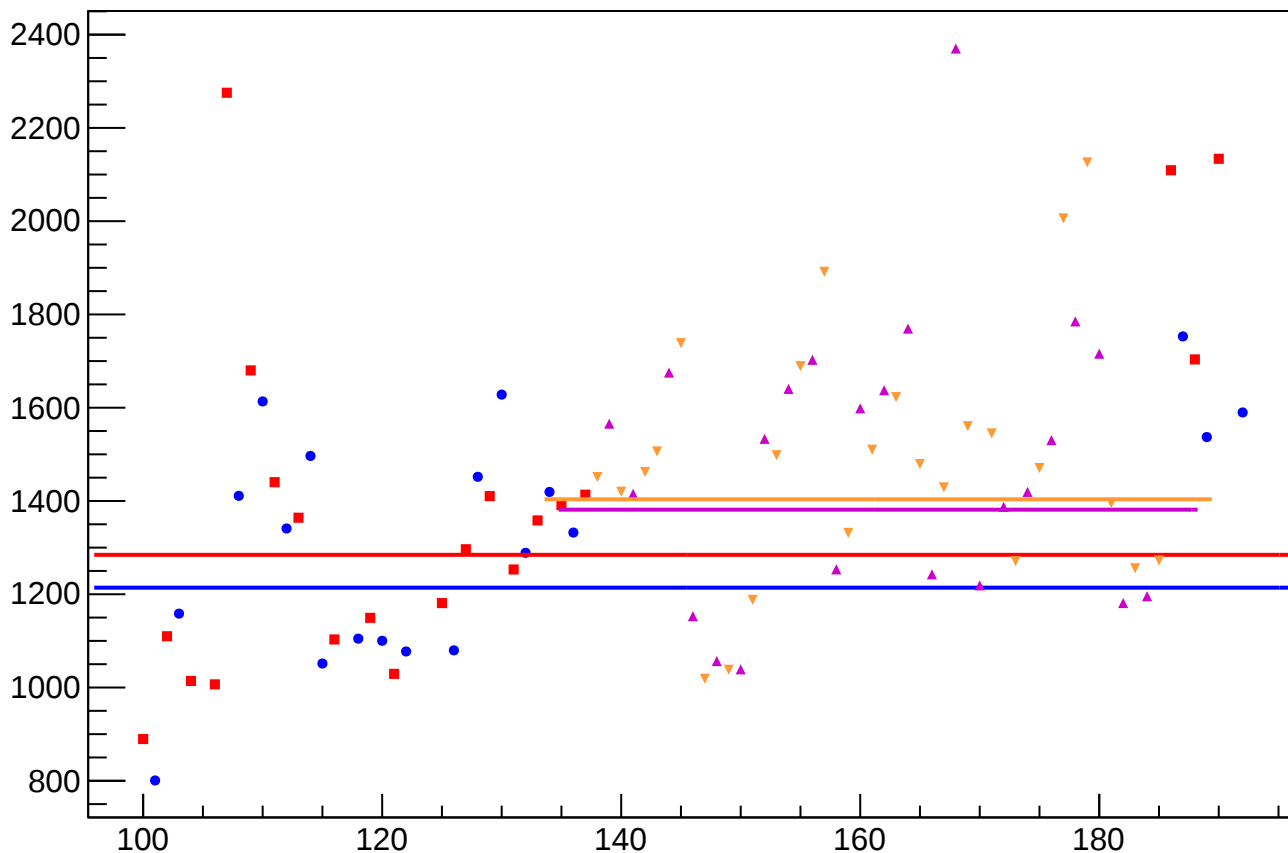
Right: -420.165 $\pm$ 314.354  $\chi^2$ /NDF: 42.9/39

In: -48.395 $\pm$ 267.601  $\chi^2$ /NDF:31.6/41

Out: -374.512 $\pm$ 268.342  $\chi^2$ /NDF:55.8/45

All: -211.003 $\pm$ 189.484  $\chi^2$ /NDF: 88.1/87

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



Right In: 1214.144+/-0.310  $\chi^2/\text{NDF}$ : 717329.4/18

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

Right Out: 1284.566+/-0.319  $\chi^2/\text{NDF}$ : 801596.7/20

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

Left: 1392.613+/-0.168  $\chi^2/\text{NDF}$ : 2407402.2/47

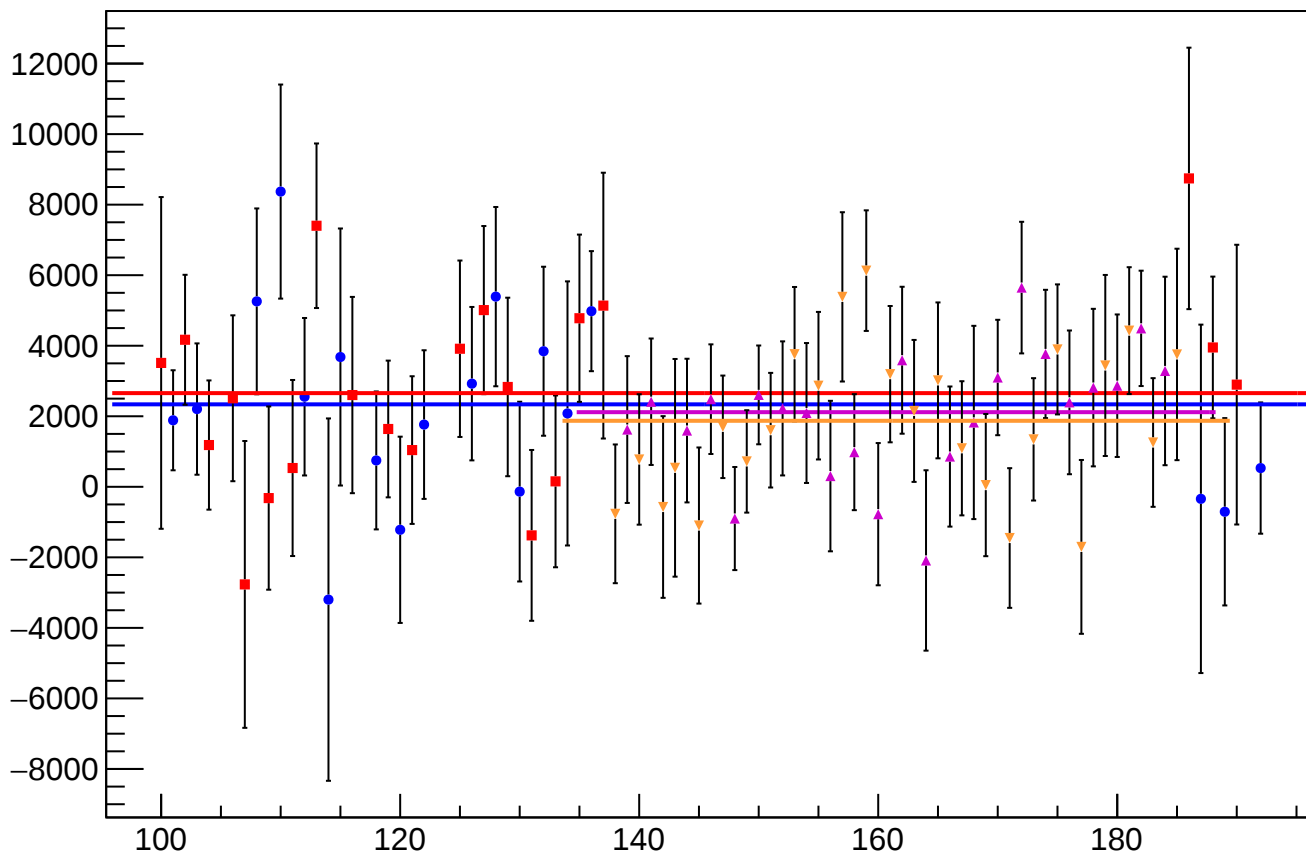
Right: 1248.369+/-0.222  $\chi^2/\text{NDF}$ : 1543999.4/39

In: 1319.075+/-0.189  $\chi^2/\text{NDF}$ :2176346.7/41

Out: 1361.451+/-0.190  $\chi^2/\text{NDF}$ :2018150.2/45

All: 1340.204+/-0.134  $\chi^2/\text{NDF}$ : 4219503.4/87

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



Right In: 2338.078+/-529.660  $\chi^2/\text{NDF}$ : 17.0/18

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

Right Out: 2656.313+/-537.725  $\chi^2/\text{NDF}$ : 19.6/20

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

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

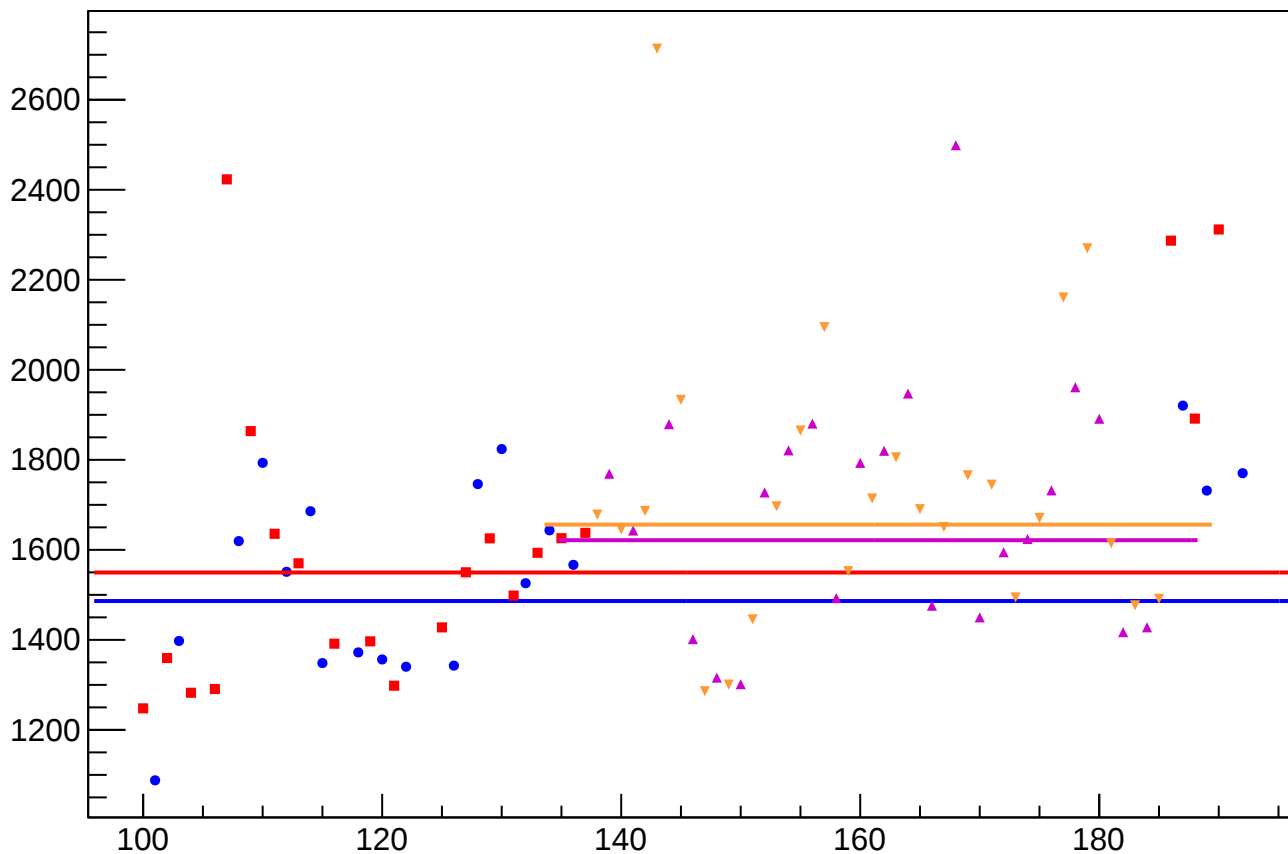
Right: 2494.791+/-377.345  $\chi^2/\text{NDF}$ : 36.7/39

In: 2194.925+/-315.608  $\chi^2/\text{NDF}$ : 35.9/41

Out: 2143.647+/-316.598  $\chi^2/\text{NDF}$ : 47.1/45

All: 2169.366+/-223.518  $\chi^2/\text{NDF}$ : 83.0/87

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



Right In: 1486.319 $\pm$ 0.375  $\chi^2$ /NDF: 369110.4/18

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

Right Out: 1549.678 $\pm$ 0.380  $\chi^2$ /NDF: 490316.5/20

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

Left: 1638.826 $\pm$ 0.196  $\chi^2$ /NDF: 1693706.9/47

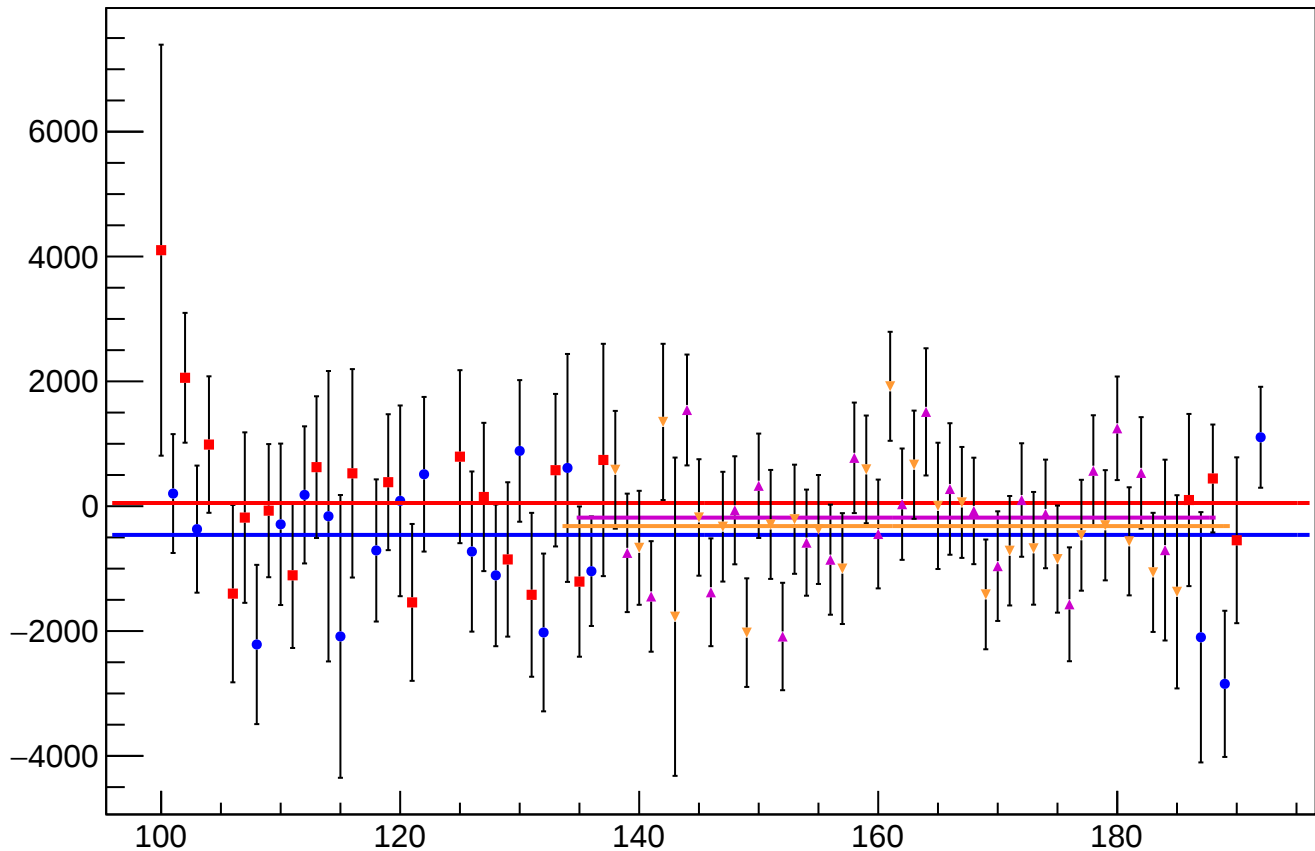
Right: 1517.520 $\pm$ 0.267  $\chi^2$ /NDF: 873520.3/39

In: 1573.449 $\pm$ 0.223  $\chi^2$ /NDF: 1228338.0/41

Out: 1619.221 $\pm$ 0.224  $\chi^2$ /NDF: 1452090.2/45

All: 1596.263 $\pm$ 0.158  $\chi^2$ /NDF: 2701395.8/87

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



Right In:  $-459.699 \pm 274.895$   $\chi^2/\text{NDF}$ : 16.7/18

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

Right Out:  $51.402 \pm 270.587$   $\chi^2/\text{NDF}$ : 14.0/20

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

Left:  $-251.259 \pm 132.174$   $\chi^2/\text{NDF}$ : 46.8/47

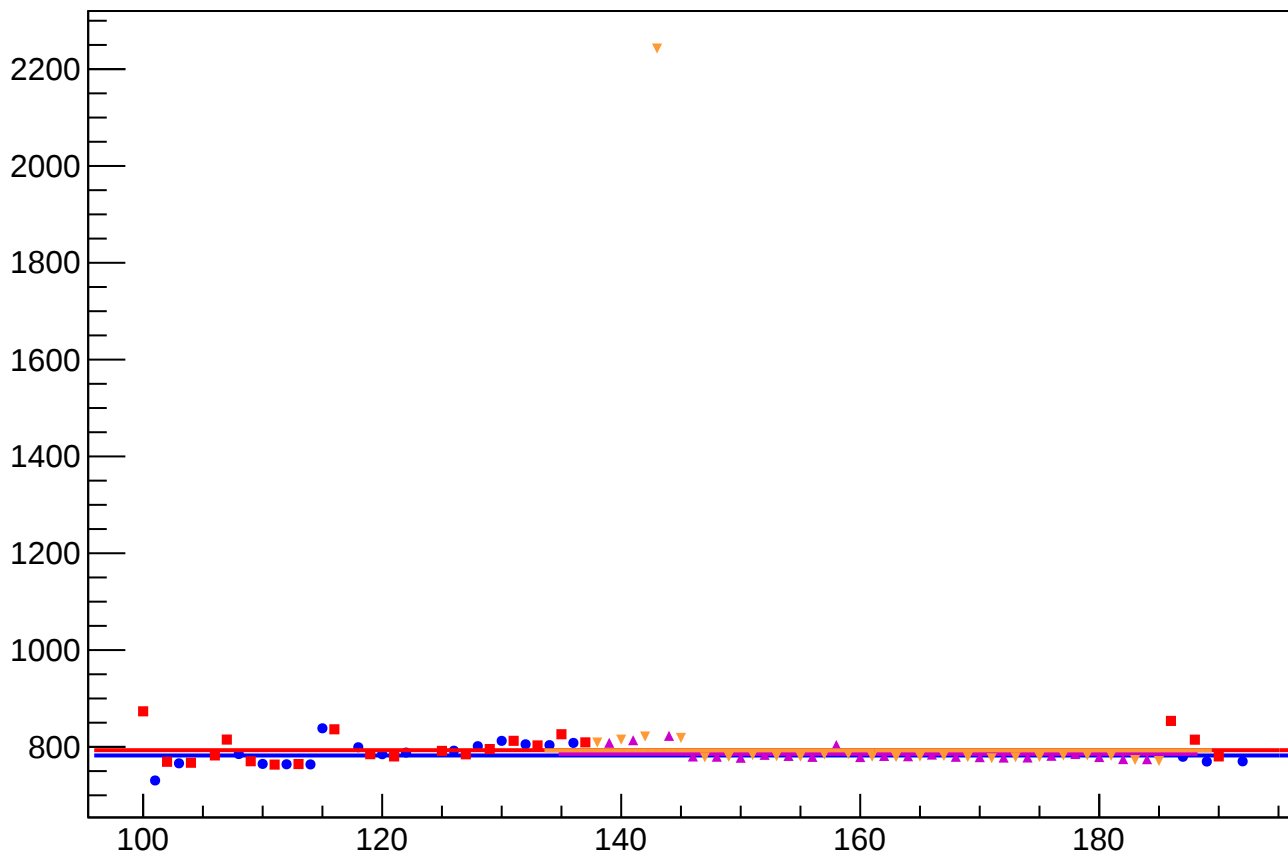
Right:  $-200.112 \pm 192.839$   $\chi^2/\text{NDF}$ : 32.5/39

In:  $-270.987 \pm 155.078$   $\chi^2/\text{NDF}$ : 43.5/41

Out:  $-199.656 \pm 153.302$   $\chi^2/\text{NDF}$ : 35.6/45

All:  $-234.911 \pm 109.023$   $\chi^2/\text{NDF}$ : 79.3/87

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



Right In: 782.279+/-0.194  $\chi^2/\text{NDF}$ : 14646.2/18

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

Right Out: 793.175+/-0.191  $\chi^2/\text{NDF}$ : 16781.6/20

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

Left: 789.226+/-0.093  $\chi^2/\text{NDF}$ : 670367.6/47

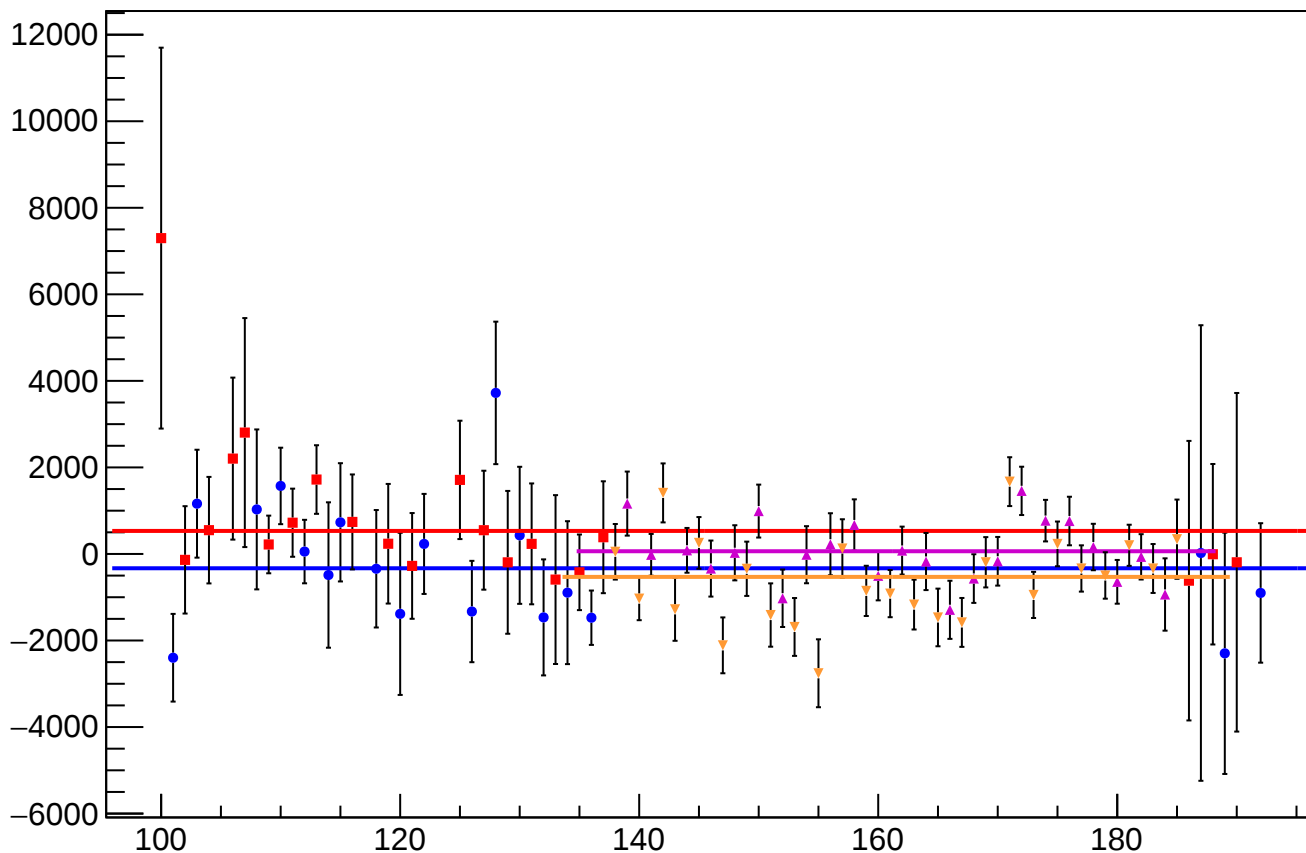
Right: 787.813+/-0.136  $\chi^2/\text{NDF}$ : 33023.8/39

In: 784.538+/-0.110  $\chi^2/\text{NDF}$ : 24218.0/41

Out: 792.915+/-0.108  $\chi^2/\text{NDF}$ : 676295.0/45

All: 788.774+/-0.077  $\chi^2/\text{NDF}$ : 703464.4/87

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



Right In: -330.639 $\pm$ 277.146  $\chi^2$ /NDF: 24.0/18

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

Right Out: 532.188 $\pm$ 269.414  $\chi^2$ /NDF: 10.0/20

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

Left: -239.807 $\pm$ 85.401  $\chi^2$ /NDF: 102.5/47

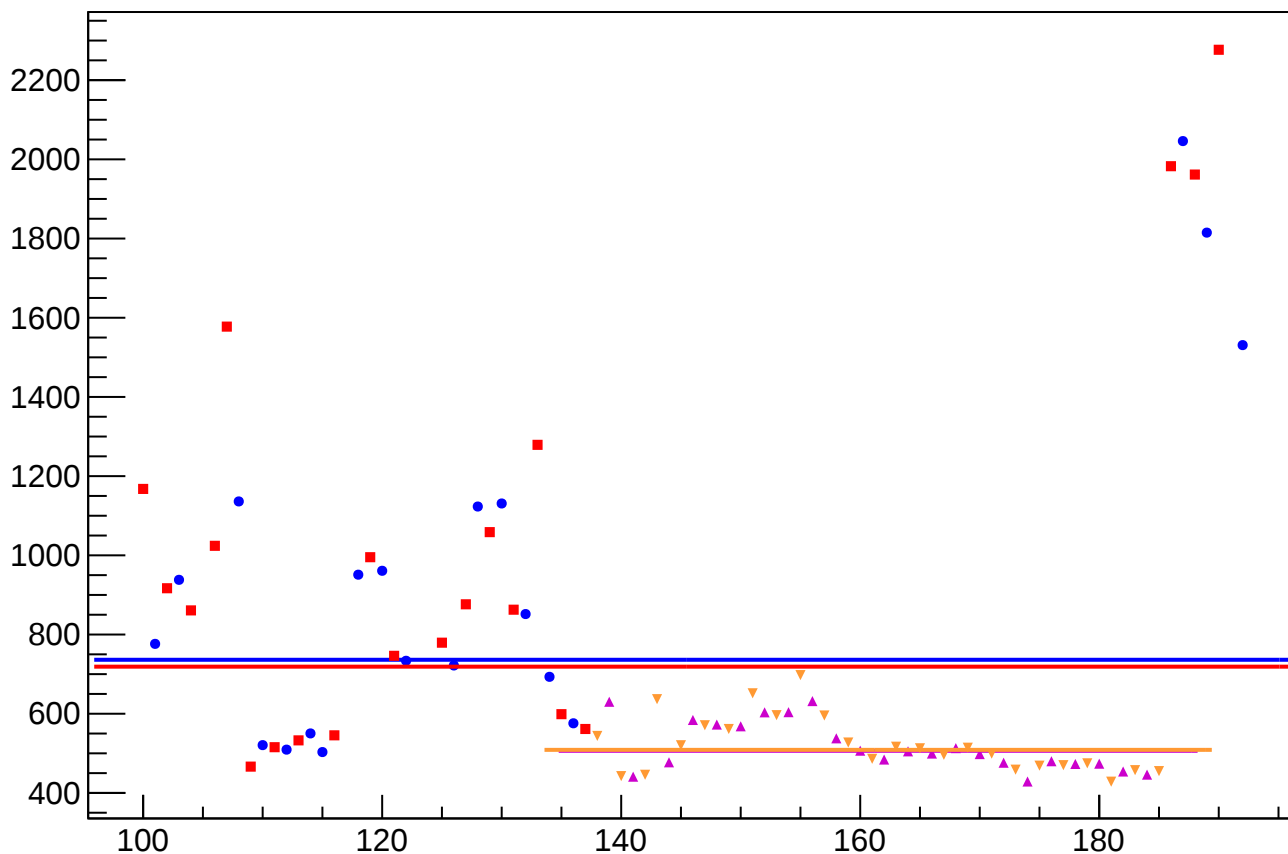
Right: 112.978 $\pm$ 193.180  $\chi^2$ /NDF: 39.0/39

In: -1.131 $\pm$ 111.695  $\chi^2$ /NDF:54.5/41

Out: -355.359 $\pm$ 109.269  $\chi^2$ /NDF:84.6/45

All: -182.133 $\pm$ 78.109  $\chi^2$ /NDF: 144.2/87

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



Right In: 736.262 $\pm$ 0.196  $\chi^2$ /NDF: 1912296.6/18

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

Right Out: 718.881 $\pm$ 0.191  $\chi^2$ /NDF: 2725713.7/20

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

Left: 507.601 $\pm$ 0.060  $\chi^2$ /NDF: 985931.7/47

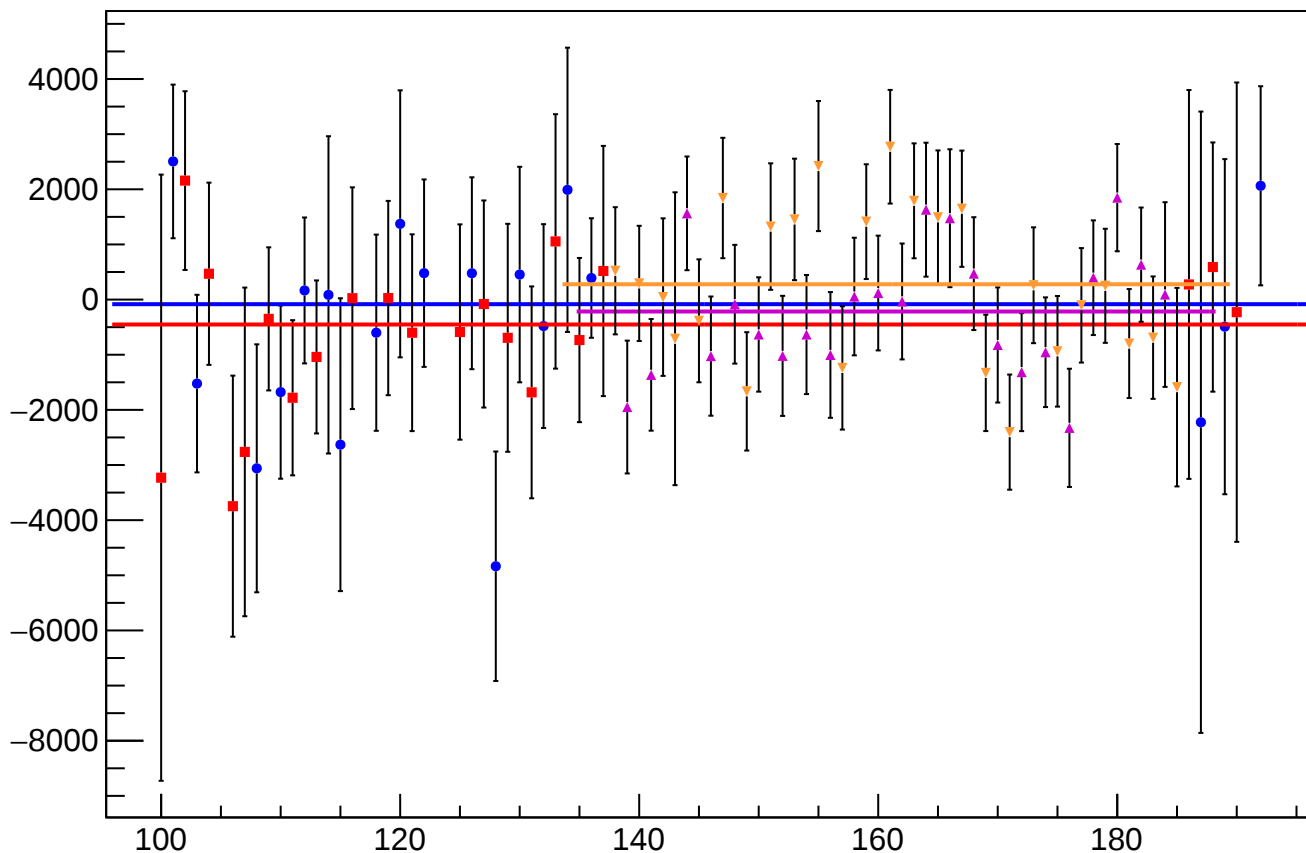
Right: 727.325 $\pm$ 0.137  $\chi^2$ /NDF: 4642054.9/39

In: 543.719 $\pm$ 0.079  $\chi^2$ /NDF: 3501108.8/41

Out: 543.335 $\pm$ 0.077  $\chi^2$ /NDF: 4291261.2/45

All: 543.522 $\pm$ 0.055  $\chi^2$ /NDF: 7792382.1/87

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



Right In:  $-83.375 \pm 417.582$   $\chi^2/\text{NDF}$ : 16.4/18

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

Right Out:  $-451.868 \pm 415.521$   $\chi^2/\text{NDF}$ : 8.3/20

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

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

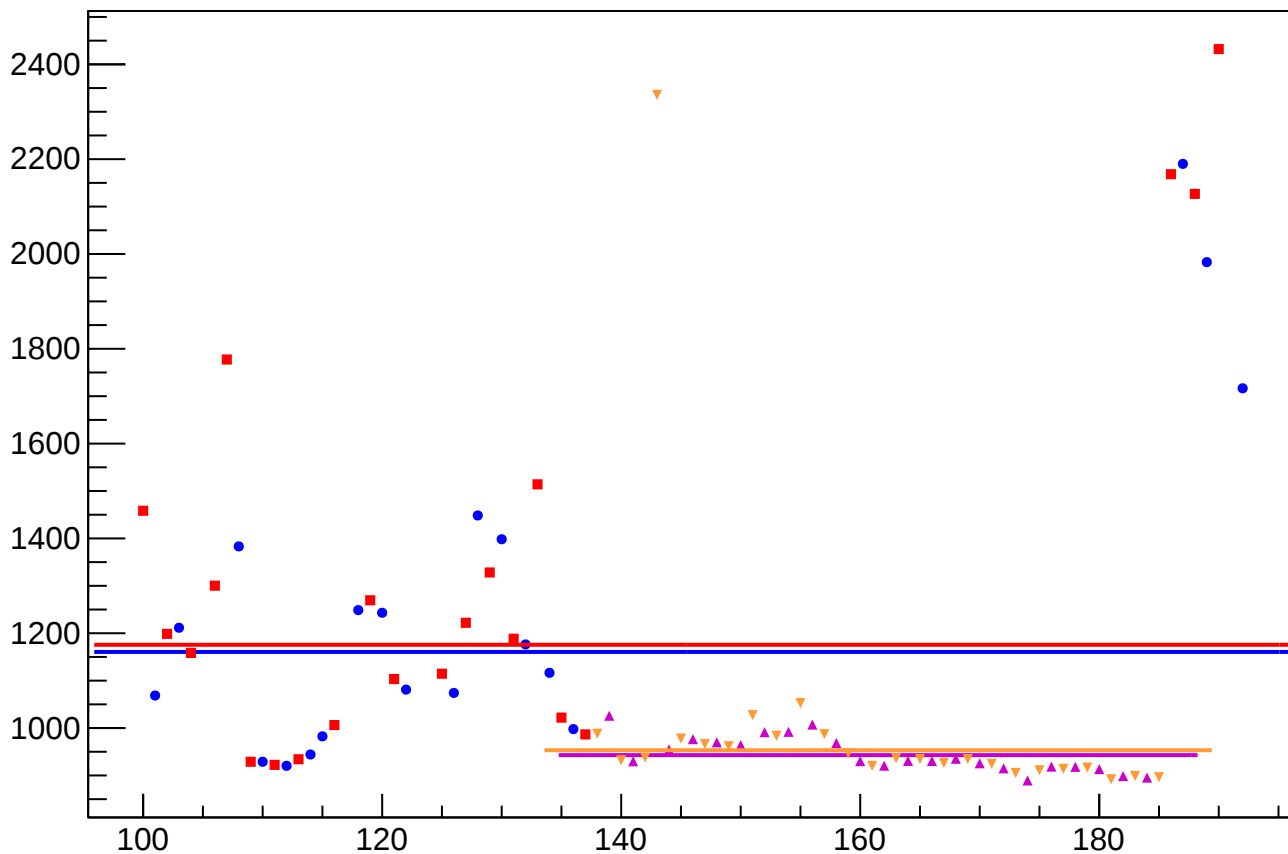
Right:  $-268.533 \pm 294.543$   $\chi^2/\text{NDF}$ : 25.1/39

In:  $-186.130 \pm 198.486$   $\chi^2/\text{NDF}$ : 40.9/41

Out:  $114.200 \pm 196.888$   $\chi^2/\text{NDF}$ : 49.1/45

All:  $-34.751 \pm 139.782$   $\chi^2/\text{NDF}$ : 91.1/87

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



Right In: 1160.543 $\pm$ 0.295  $\chi^2$ /NDF: 693273.7/18

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

Right Out: 1175.617 $\pm$ 0.294  $\chi^2$ /NDF: 1101288.9/20

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

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

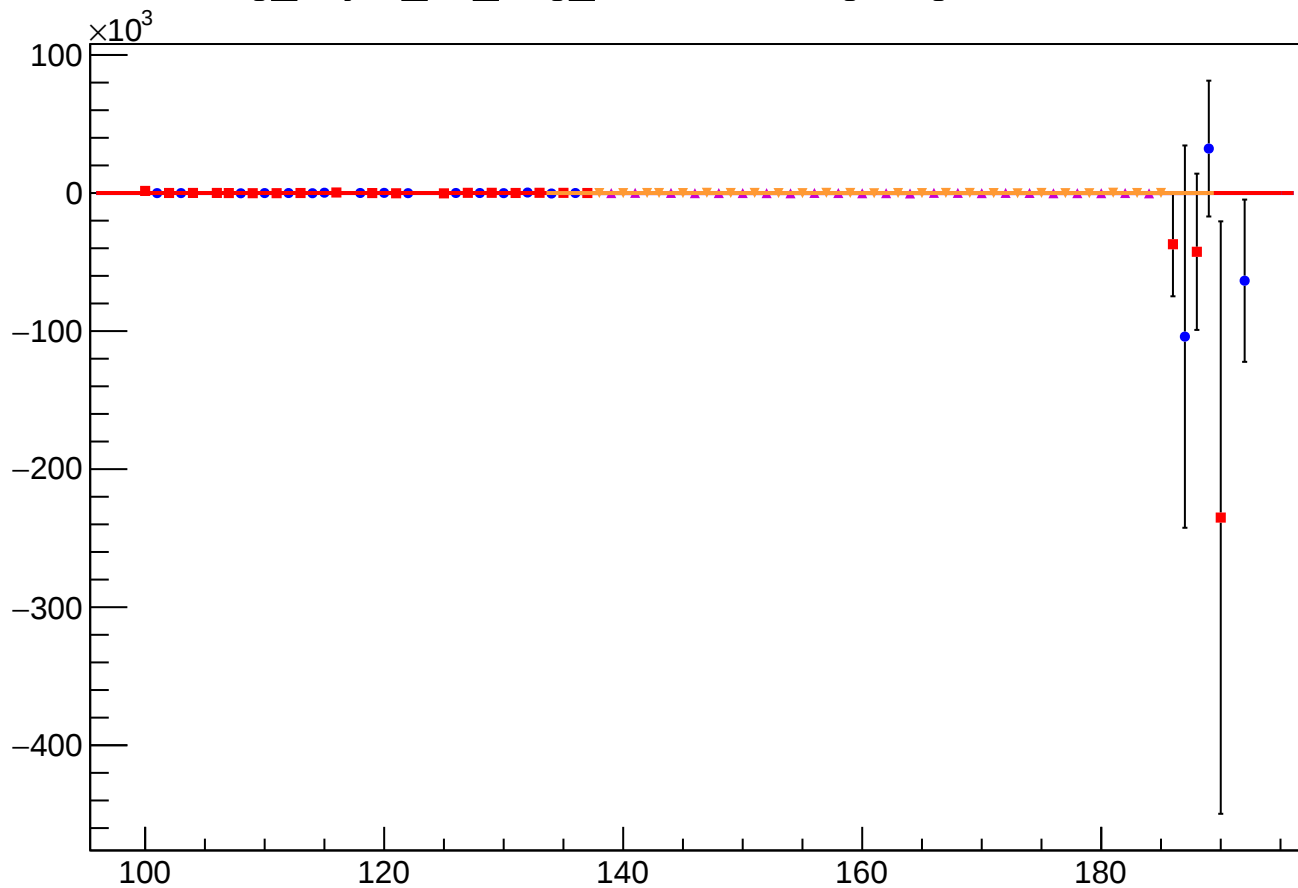
Right: 1168.117 $\pm$ 0.208  $\chi^2$ /NDF: 1795872.3/39

In: 992.093 $\pm$ 0.140  $\chi^2$ /NDF: 1162122.3/41

Out: 1003.153 $\pm$ 0.139  $\chi^2$ /NDF: 2151856.5/45

All: 997.668 $\pm$ 0.099  $\chi^2$ /NDF: 3317109.1/87

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



Right In:  $-15.561 \pm 30.032$   $\chi^2/\text{NDF}$ : 18.1/18

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

Right Out:  $31.713 \pm 30.492$   $\chi^2/\text{NDF}$ : 19.5/20

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

Left:  $-8.784 \pm 15.037$   $\chi^2/\text{NDF}$ : 45.8/47

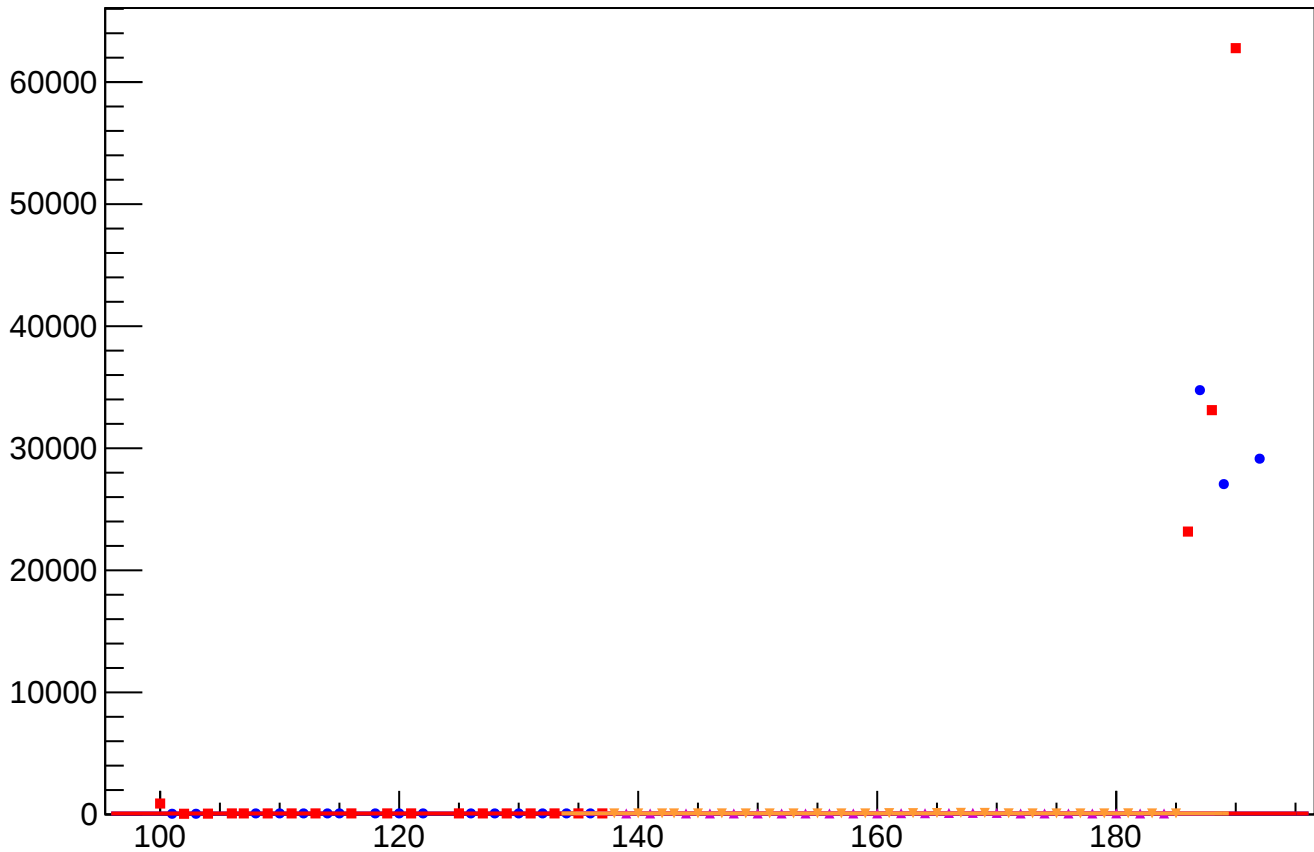
Right:  $7.717 \pm 21.397$   $\chi^2/\text{NDF}$ : 38.9/39

In:  $-20.421 \pm 17.527$   $\chi^2/\text{NDF}$ : 40.7/41

Out:  $13.270 \pm 17.272$   $\chi^2/\text{NDF}$ : 42.6/45

All:  $-3.328 \pm 12.302$   $\chi^2/\text{NDF}$ : 85.1/87

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



Right In: 76.073+/-0.021  $\chi^2/\text{NDF}$ : 1637270.8/18

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

Right Out: 79.397+/-0.022  $\chi^2/\text{NDF}$ : 2016978.3/20

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

Left: 89.538+/-0.011  $\chi^2/\text{NDF}$ : 978869.2/47

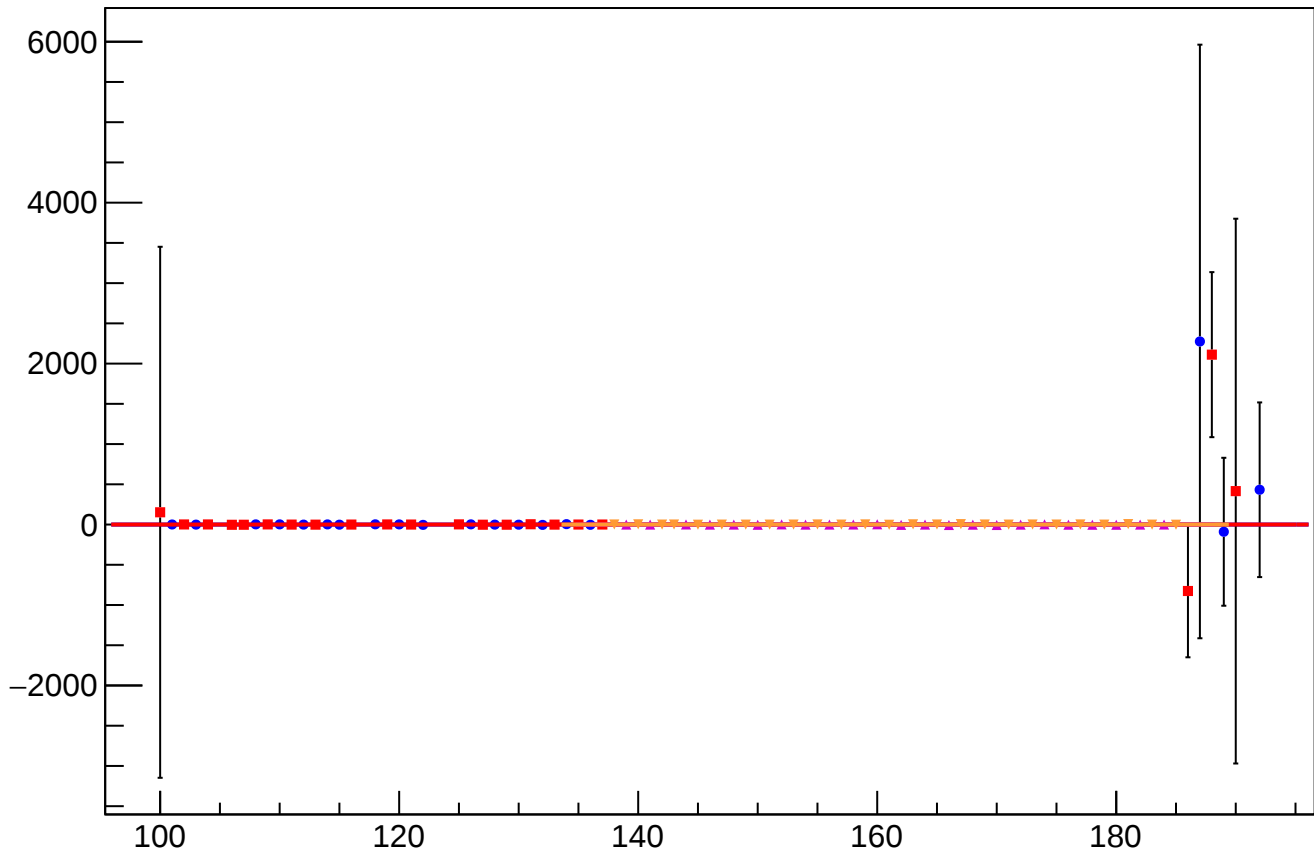
Right: 77.710+/-0.015  $\chi^2/\text{NDF}$ : 3666316.4/39

In: 84.990+/-0.012  $\chi^2/\text{NDF}$ : 2413163.5/41

Out: 86.247+/-0.012  $\chi^2/\text{NDF}$ : 2635923.4/45

All: 85.627+/-0.009  $\chi^2/\text{NDF}$ : 5054307.7/87

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



Right In:  $-0.290 \pm 0.502$   $\chi^2/\text{NDF}$ : 21.5/18

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

Right Out:  $0.039 \pm 0.525$   $\chi^2/\text{NDF}$ : 15.2/20

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

Left:  $-0.175 \pm 0.266$   $\chi^2/\text{NDF}$ : 49.2/47

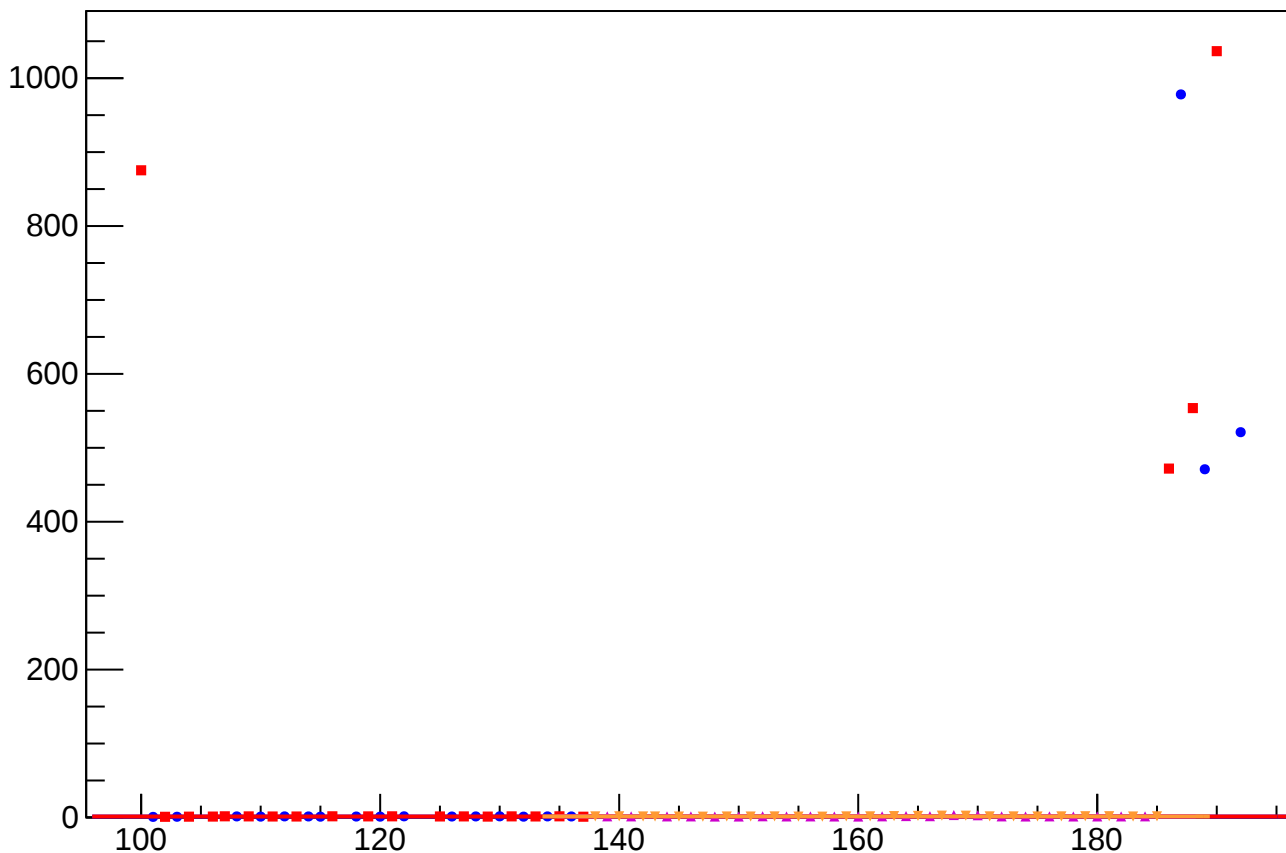
Right:  $-0.133 \pm 0.363$   $\chi^2/\text{NDF}$ : 36.9/39

In:  $-0.433 \pm 0.306$   $\chi^2/\text{NDF}$ : 47.9/41

Out:  $0.103 \pm 0.301$   $\chi^2/\text{NDF}$ : 36.6/45

All:  $-0.160 \pm 0.215$   $\chi^2/\text{NDF}$ : 86.0/87

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



Right In: 1.152+/-0.000  $\chi^2/\text{NDF}$ : 1628216.4/18

Left Out: 1.404+/-0.000  $\chi^2/\text{NDF}$ :992478.0/24

Right Out: 1.259+/-0.000  $\chi^2/\text{NDF}$ : 1909469.8/20

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

Left: 1.427+/-0.000  $\chi^2/\text{NDF}$ : 2005229.5/47

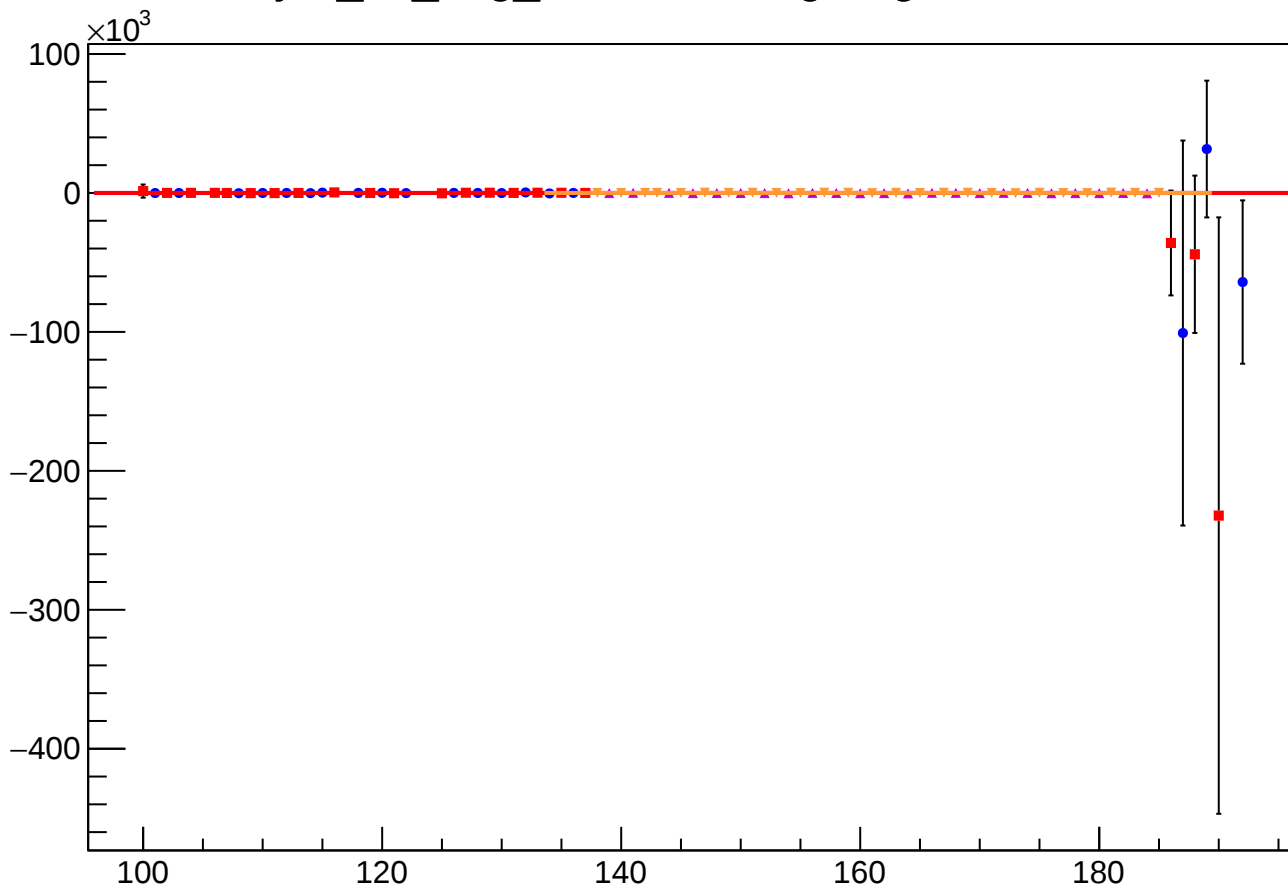
Right: 1.203+/-0.000  $\chi^2/\text{NDF}$ : 3581135.7/39

In: 1.341+/-0.000  $\chi^2/\text{NDF}$ :3075018.9/41

Out: 1.357+/-0.000  $\chi^2/\text{NDF}$ :3004040.7/45

All: 1.349+/-0.000  $\chi^2/\text{NDF}$ : 6081709.9/87

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



Right In:  $-14.497 \pm 30.040$   $\chi^2/\text{NDF}$ : 18.4/18

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

Right Out:  $31.992 \pm 30.500$   $\chi^2/\text{NDF}$ : 19.5/20

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

Left:  $-8.619 \pm 15.041$   $\chi^2/\text{NDF}$ : 45.3/47

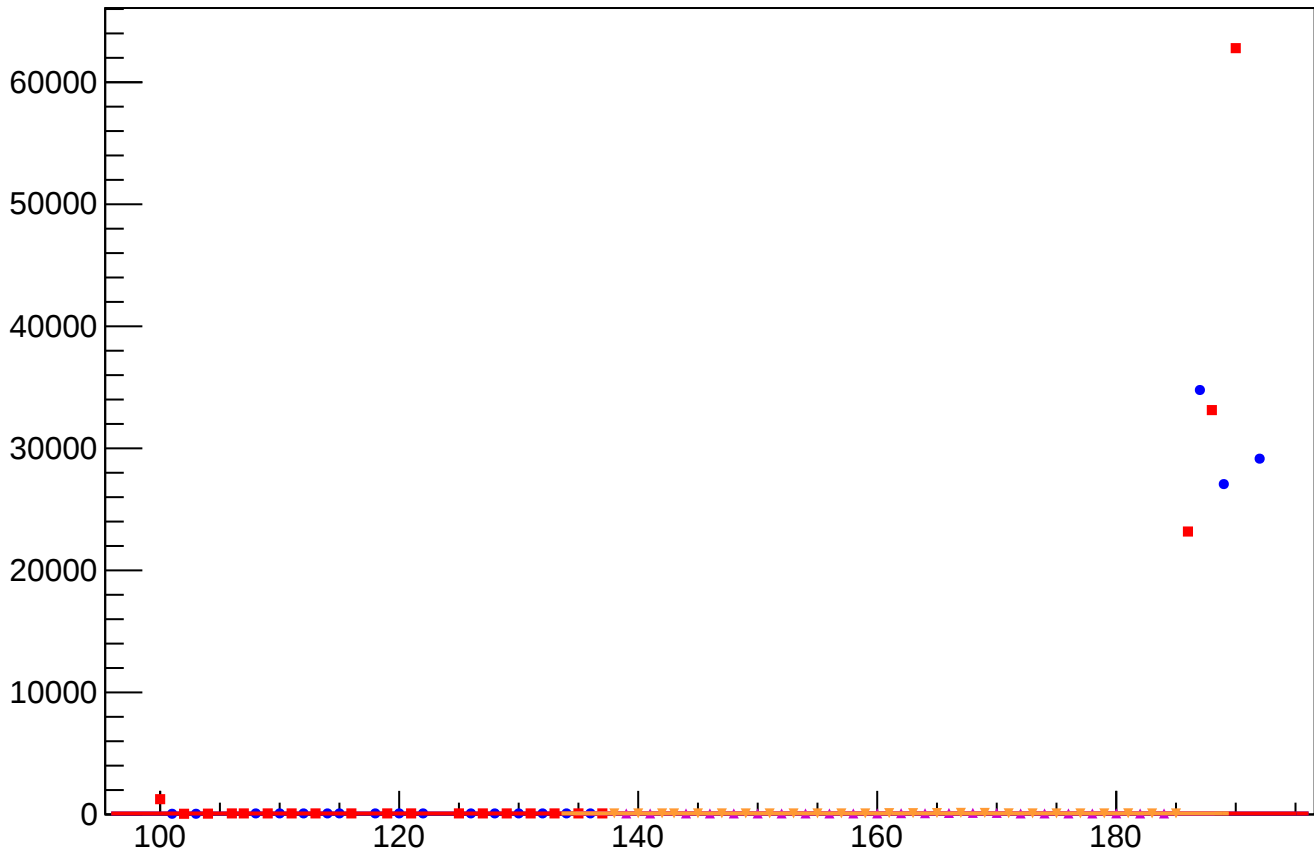
Right:  $8.394 \pm 21.402$   $\chi^2/\text{NDF}$ : 39.0/39

In:  $-19.738 \pm 17.532$   $\chi^2/\text{NDF}$ : 40.7/41

Out:  $13.266 \pm 17.277$   $\chi^2/\text{NDF}$ : 42.2/45

All:  $-2.994 \pm 12.306$   $\chi^2/\text{NDF}$ : 84.7/87

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



Right In: 76.093+/-0.021  $\chi^2/\text{NDF}$ : 1637293.8/18

Left Out: 89.510+/-0.015  $\chi^2/\text{NDF}$ : 471081.1/24

Right Out: 79.401+/-0.022  $\chi^2/\text{NDF}$ : 2023508.4/20

Left In: 89.622+/-0.015  $\chi^2/\text{NDF}$ : 509391.8/22

Left: 89.564+/-0.011  $\chi^2/\text{NDF}$ : 980500.8/47

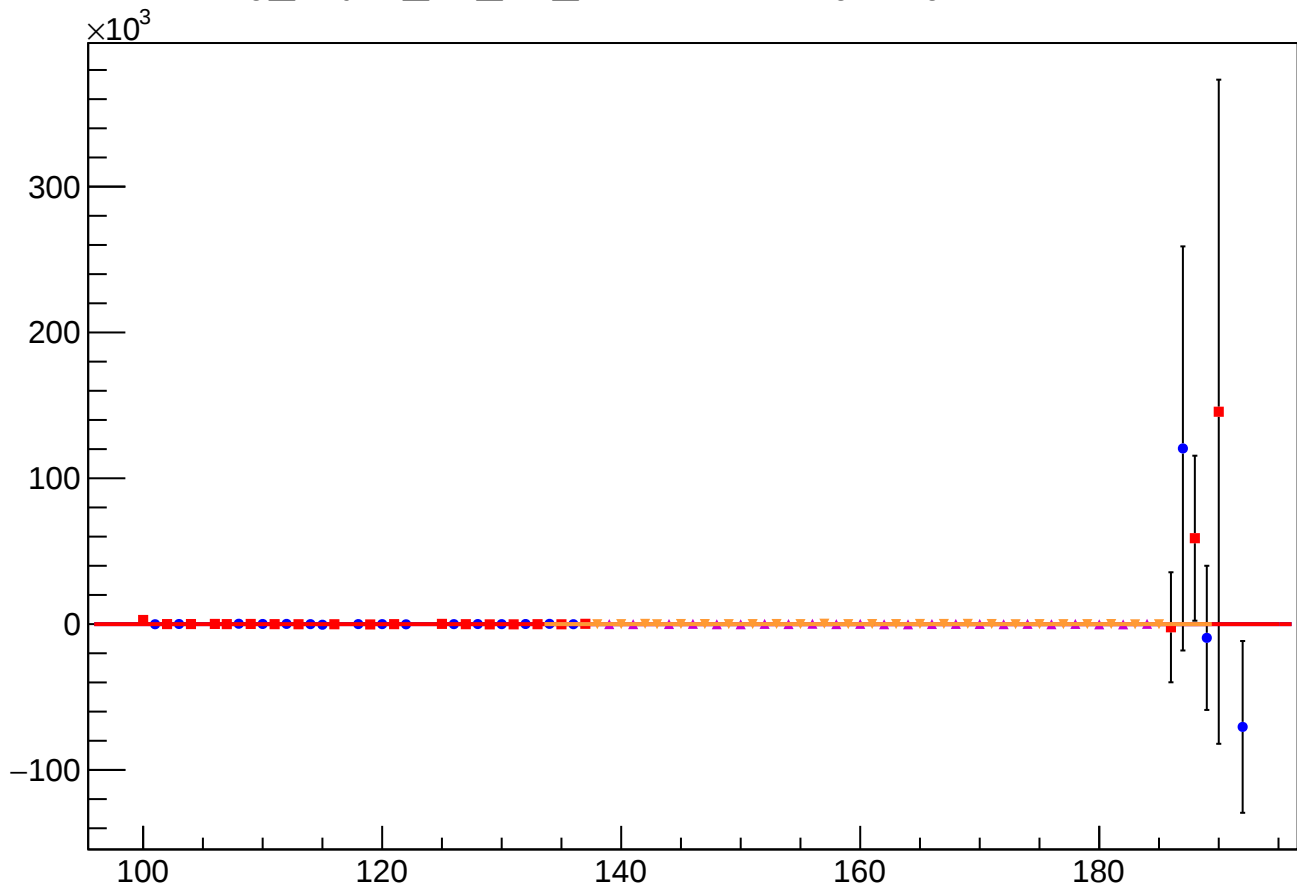
Right: 77.721+/-0.015  $\chi^2/\text{NDF}$ : 3672744.0/39

In: 85.014+/-0.012  $\chi^2/\text{NDF}$ : 2414189.5/41

Out: 86.266+/-0.012  $\chi^2/\text{NDF}$ : 2643799.1/45

All: 85.649+/-0.009  $\chi^2/\text{NDF}$ : 5063164.4/87

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



Right In:  $8.097 \pm 30.012$   $\chi^2/\text{NDF}: 16.2/18$

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

Right Out:  $-25.756 \pm 30.473$   $\chi^2/\text{NDF}: 14.3/20$

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

Left:  $26.155 \pm 15.042$   $\chi^2/\text{NDF}: 51.2/47$

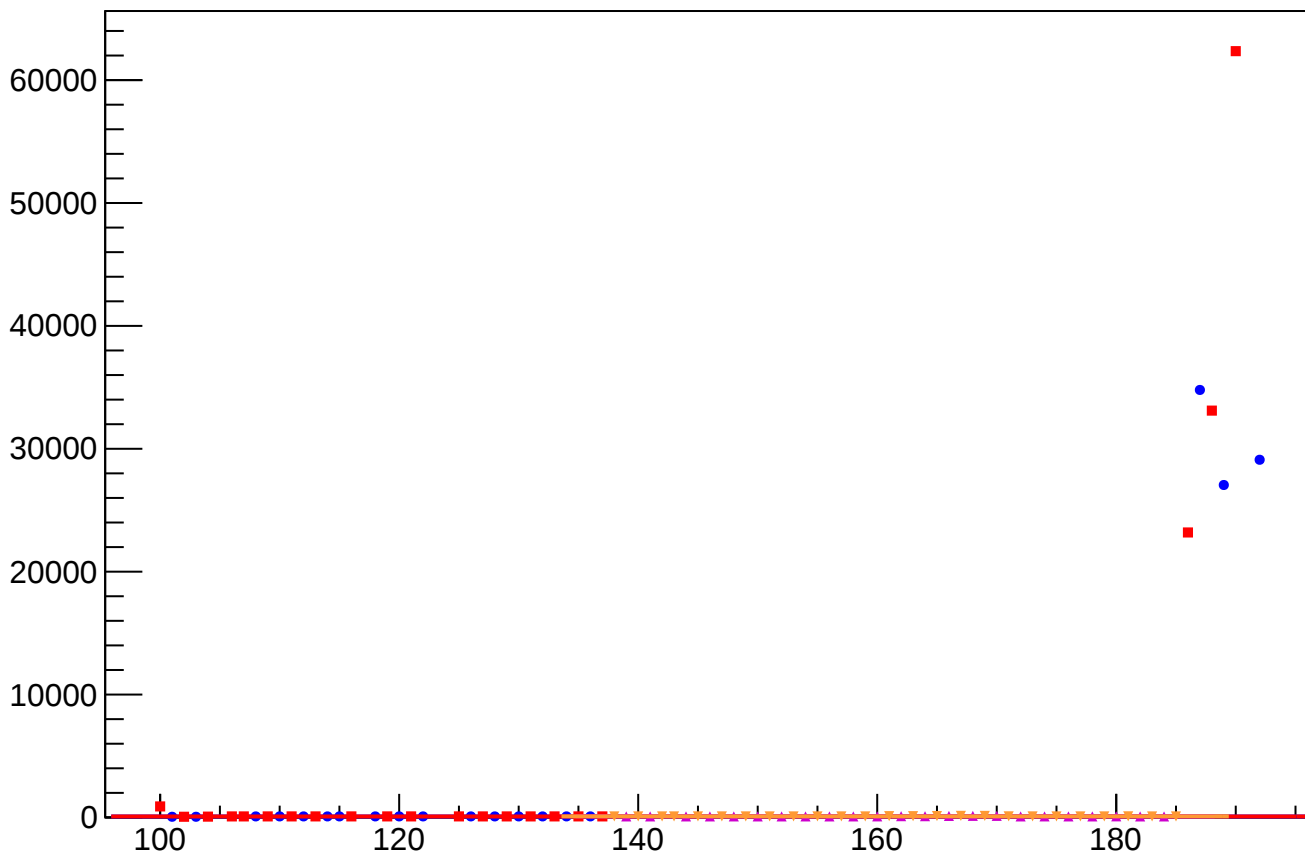
Right:  $-8.572 \pm 21.383$   $\chi^2/\text{NDF}: 31.1/39$

In:  $31.374 \pm 17.528$   $\chi^2/\text{NDF}: 48.6/41$

Out:  $-1.570 \pm 17.272$   $\chi^2/\text{NDF}: 33.7/45$

All:  $14.660 \pm 12.303$   $\chi^2/\text{NDF}: 84.1/87$

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



Right In: 76.023+/-0.021  $\chi^2/\text{NDF}$ : 1636645.4/18

Left Out: 89.507+/-0.015  $\chi^2/\text{NDF}$ : 468988.9/24

Right Out: 79.349+/-0.022  $\chi^2/\text{NDF}$ : 2016282.7/20

Left In: 89.628+/-0.015  $\chi^2/\text{NDF}$ : 511042.3/22

Left: 89.566+/-0.011  $\chi^2/\text{NDF}$ : 980063.3/47

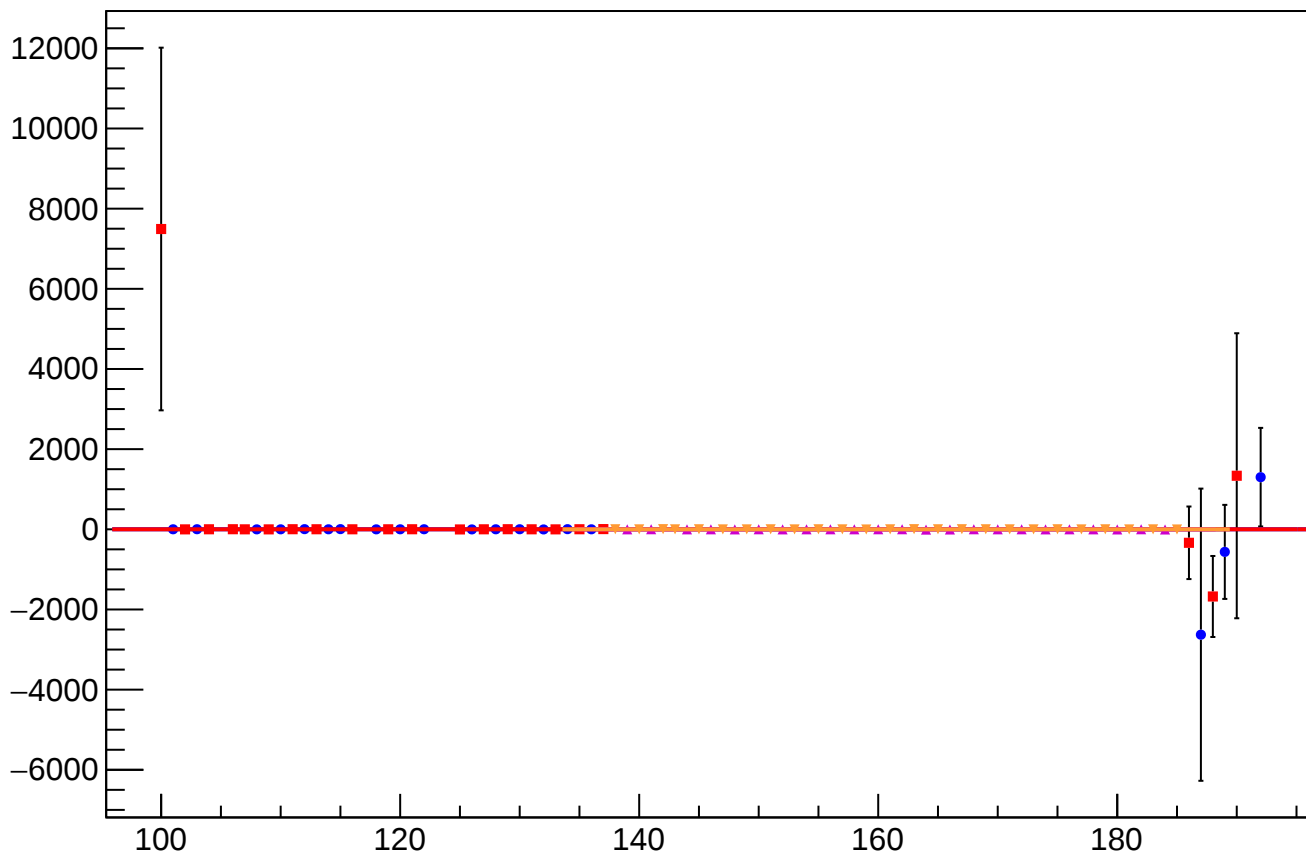
Right: 77.661+/-0.015  $\chi^2/\text{NDF}$ : 3665016.3/39

In: 84.987+/-0.012  $\chi^2/\text{NDF}$ : 2418461.0/41

Out: 86.244+/-0.012  $\chi^2/\text{NDF}$ : 2636134.0/45

All: 85.625+/-0.009  $\chi^2/\text{NDF}$ : 5059807.3/87

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



Right In:  $0.892 \pm 0.531$   $\chi^2/\text{NDF}: 13.8/18$

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

Right Out:  $0.347 \pm 0.549$   $\chi^2/\text{NDF}: 16.5/20$

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

Left:  $-0.299 \pm 0.273$   $\chi^2/\text{NDF}: 41.7/47$

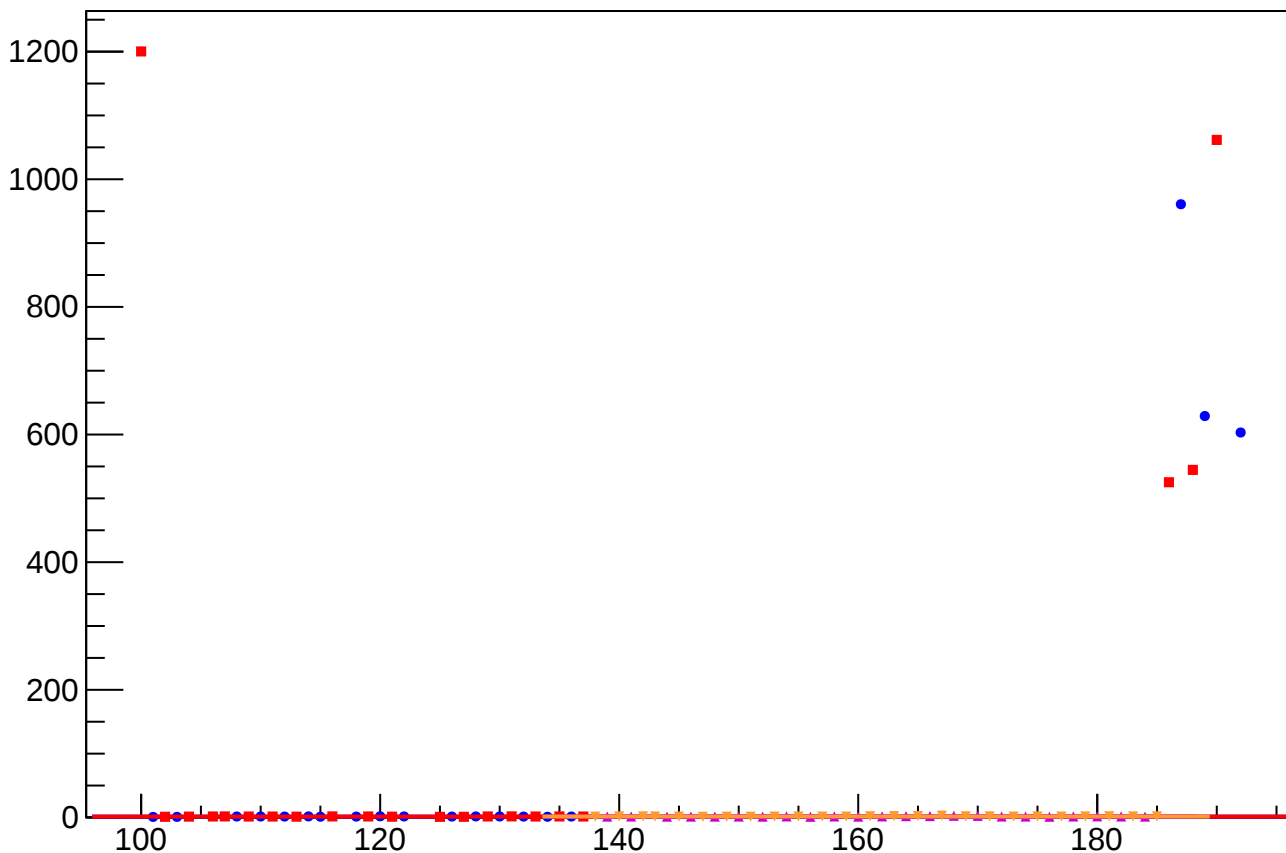
Right:  $0.628 \pm 0.382$   $\chi^2/\text{NDF}: 30.8/39$

In:  $0.266 \pm 0.315$   $\chi^2/\text{NDF}: 36.3/41$

Out:  $-0.235 \pm 0.314$   $\chi^2/\text{NDF}: 38.9/45$

All:  $0.015 \pm 0.222$   $\chi^2/\text{NDF}: 76.4/87$

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



Right In: 1.233+/-0.000  $\chi^2/\text{NDF}$ : 1816268.5/18

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

Right Out: 1.316+/-0.000  $\chi^2/\text{NDF}$ : 1943402.4/20

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

Left: 1.467+/-0.000  $\chi^2/\text{NDF}$ : 2205449.5/47

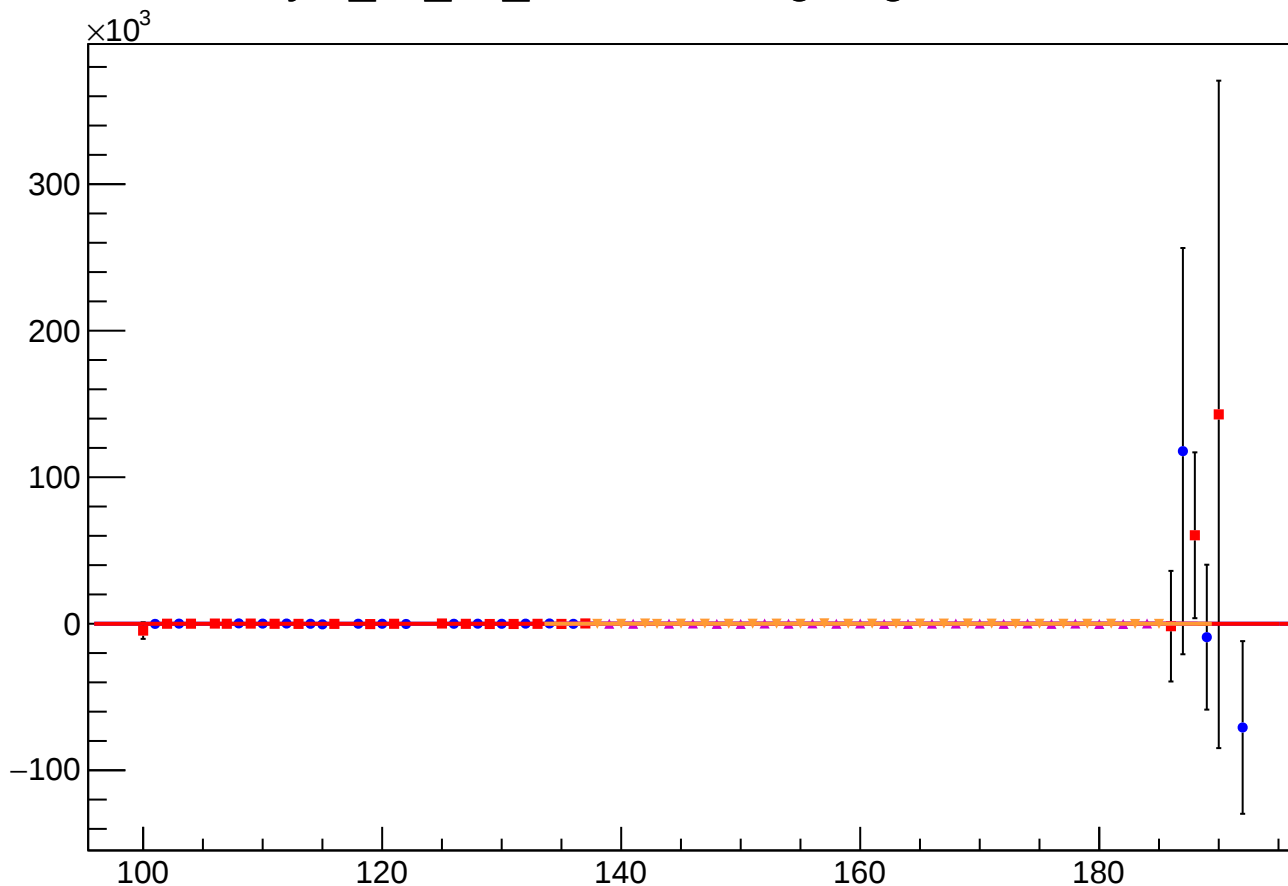
Right: 1.273+/-0.000  $\chi^2/\text{NDF}$ : 3782908.3/39

In: 1.381+/-0.000  $\chi^2/\text{NDF}$ :3103417.2/41

Out: 1.421+/-0.000  $\chi^2/\text{NDF}$ :3209188.7/45

All: 1.401+/-0.000  $\chi^2/\text{NDF}$ : 6328760.3/87

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



Right In:  $7.390 \pm 30.020$   $\chi^2/\text{NDF}: 16.1/18$

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

Right Out:  $-26.365 \pm 30.482$   $\chi^2/\text{NDF}: 14.5/20$

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

Left:  $26.670 \pm 15.046$   $\chi^2/\text{NDF}: 50.7/47$

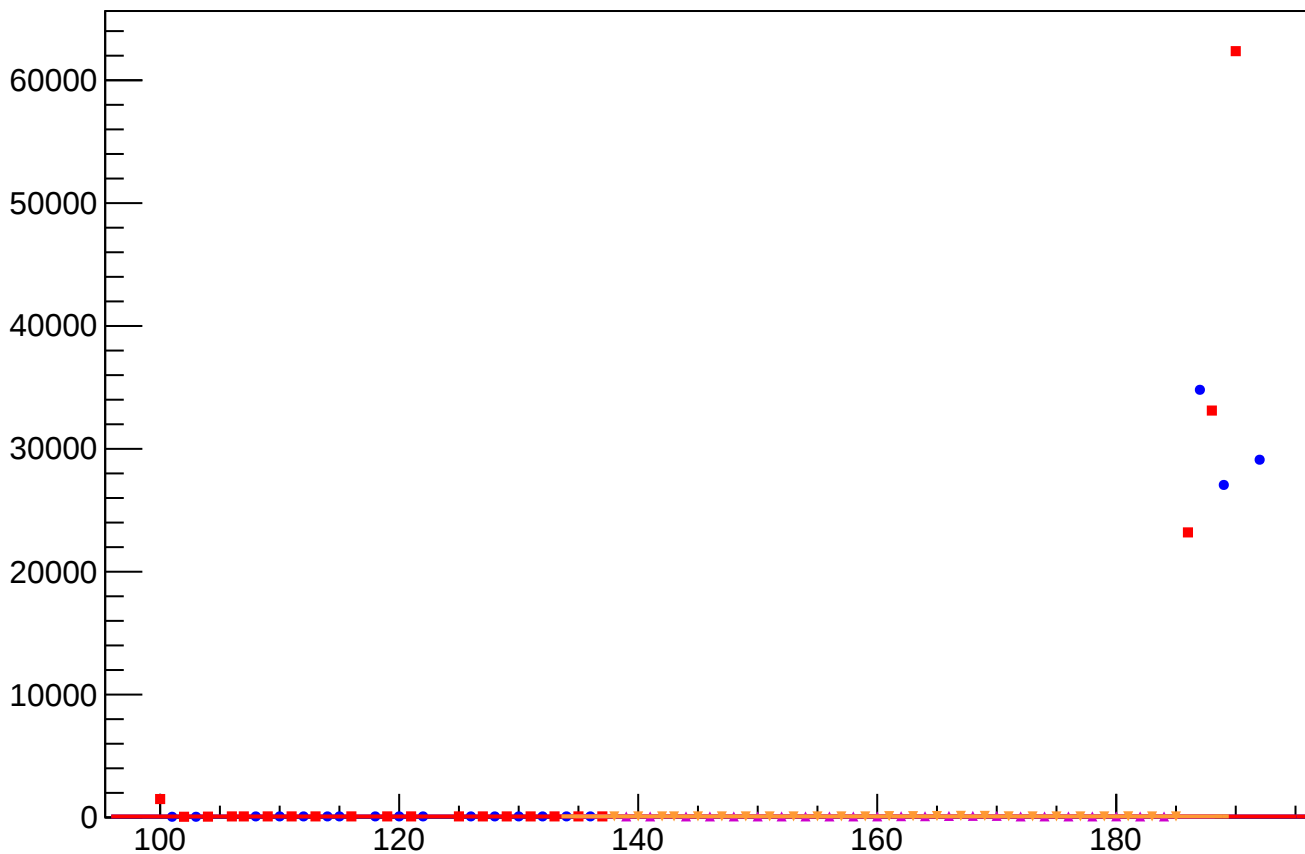
Right:  $-9.230 \pm 21.389$   $\chi^2/\text{NDF}: 31.3/39$

In:  $31.449 \pm 17.533$   $\chi^2/\text{NDF}: 48.2/41$

Out:  $-1.396 \pm 17.277$   $\chi^2/\text{NDF}: 33.9/45$

All:  $14.785 \pm 12.306$   $\chi^2/\text{NDF}: 83.9/87$

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



Right In: 76.044+/-0.021  $\chi^2/\text{NDF}$ : 1636696.9/18

Left Out: 89.535+/-0.015  $\chi^2/\text{NDF}$ : 469743.0/24

Right Out: 79.345+/-0.022  $\chi^2/\text{NDF}$ : 2025531.9/20

Left In: 89.655+/-0.015  $\chi^2/\text{NDF}$ : 511848.9/22

Left: 89.593+/-0.011  $\chi^2/\text{NDF}$ : 981623.6/47

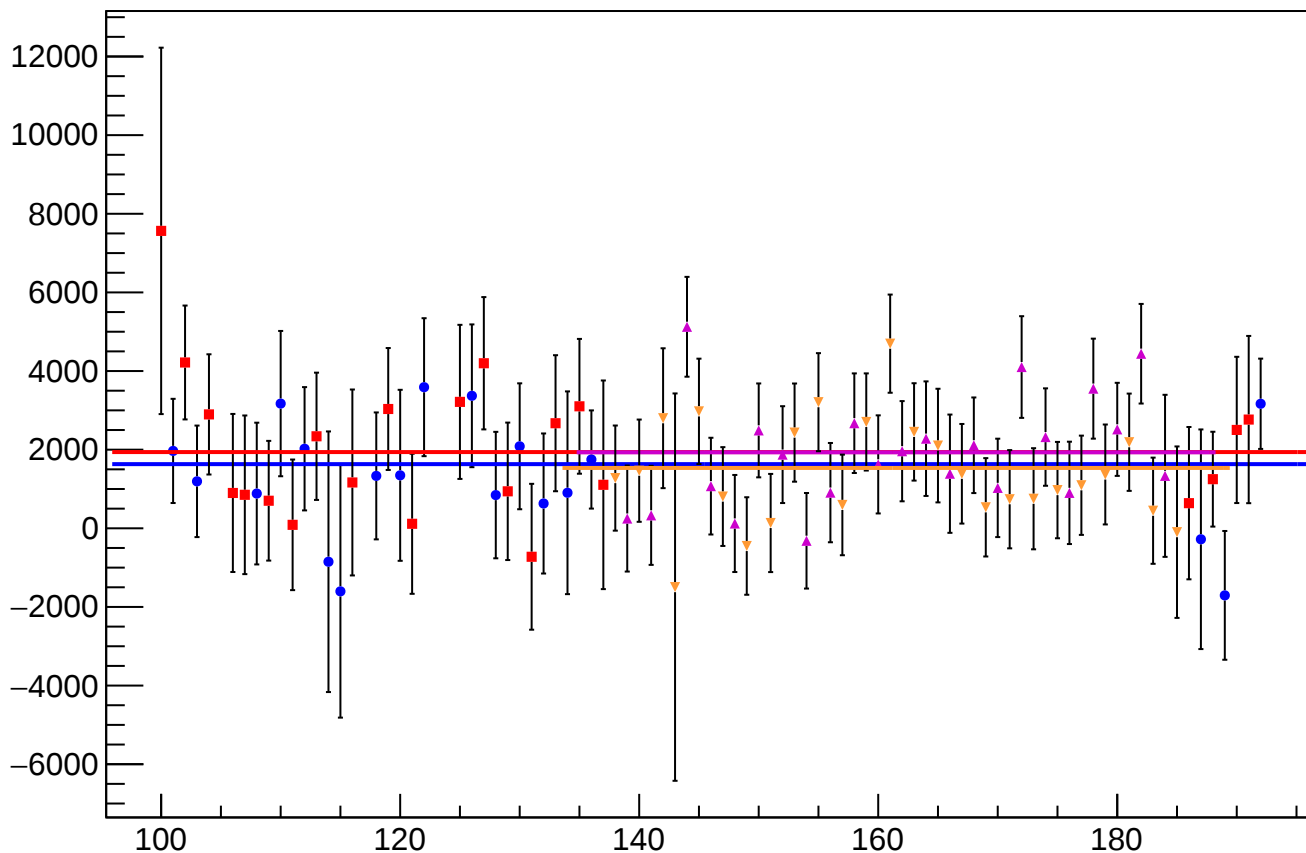
Right: 77.669+/-0.015  $\chi^2/\text{NDF}$ : 3674137.3/39

In: 85.012+/-0.012  $\chi^2/\text{NDF}$ : 2419415.1/41

Out: 86.261+/-0.012  $\chi^2/\text{NDF}$ : 2646957.7/45

All: 85.646+/-0.009  $\chi^2/\text{NDF}$ : 5071523.8/87

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



Right In: 1632.220 $\pm$ 388.407  $\chi^2$ /NDF: 12.0/18

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

Right Out: 1939.104 $\pm$ 376.851  $\chi^2$ /NDF: 14.9/21

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

Left: 1732.540 $\pm$ 188.753  $\chi^2$ /NDF: 48.5/47

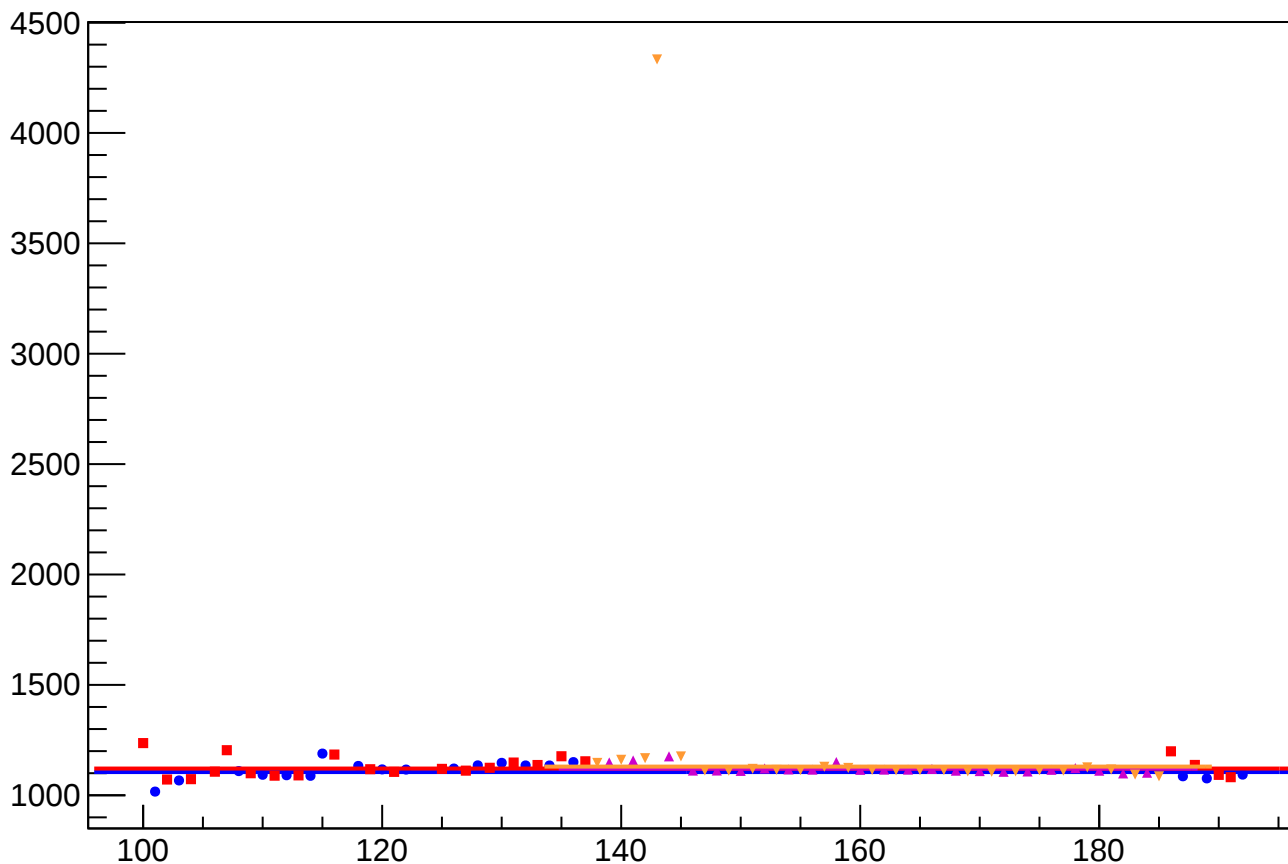
Right: 1790.295 $\pm$ 270.467  $\chi^2$ /NDF: 27.2/40

In: 1835.984 $\pm$ 220.589  $\chi^2$ /NDF: 39.4/41

Out: 1669.466 $\pm$ 217.252  $\chi^2$ /NDF: 36.0/46

All: 1751.456 $\pm$ 154.787  $\chi^2$ /NDF: 75.7/88

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



Right In: 1105.141+/-0.275  $\chi^2/\text{NDF}$ : 19322.3/18

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

Right Out: 1121.063+/-0.266  $\chi^2/\text{NDF}$ : 20364.8/21

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

Left: 1125.481+/-0.133  $\chi^2/\text{NDF}$ : 869015.8/47

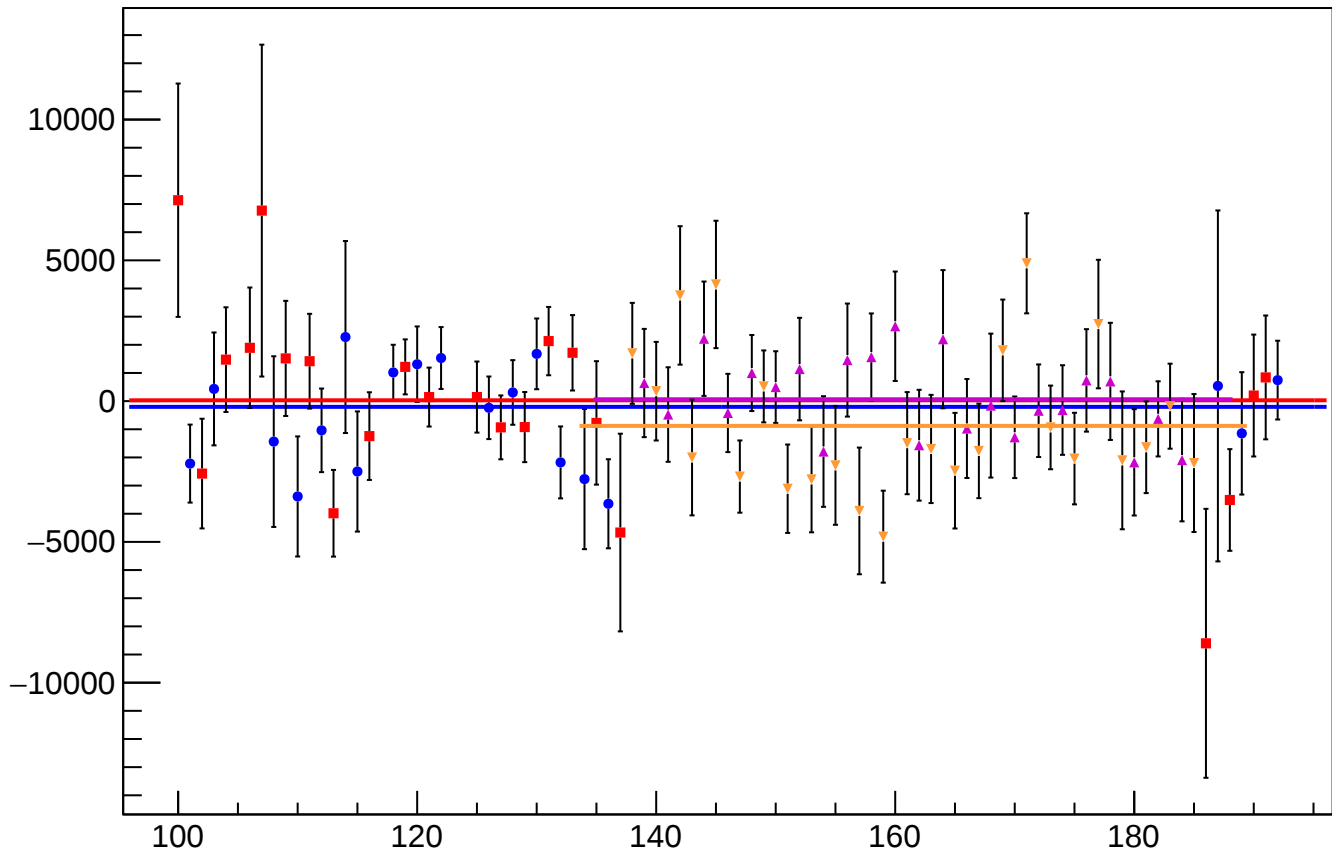
Right: 1113.342+/-0.191  $\chi^2/\text{NDF}$ : 41418.3/40

In: 1115.879+/-0.156  $\chi^2/\text{NDF}$ : 31220.4/41

Out: 1126.964+/-0.154  $\chi^2/\text{NDF}$ : 879359.1/46

All: 1121.506+/-0.109  $\chi^2/\text{NDF}$ : 913143.4/88

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



Right In: -203.185 $\pm$ 345.009  $\chi^2/\text{NDF}$ : 23.2/18

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

Right Out: 28.752 $\pm$ 341.139  $\chi^2/\text{NDF}$ : 32.6/21

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

Left: -411.067 $\pm$ 252.599  $\chi^2/\text{NDF}$ : 59.2/47

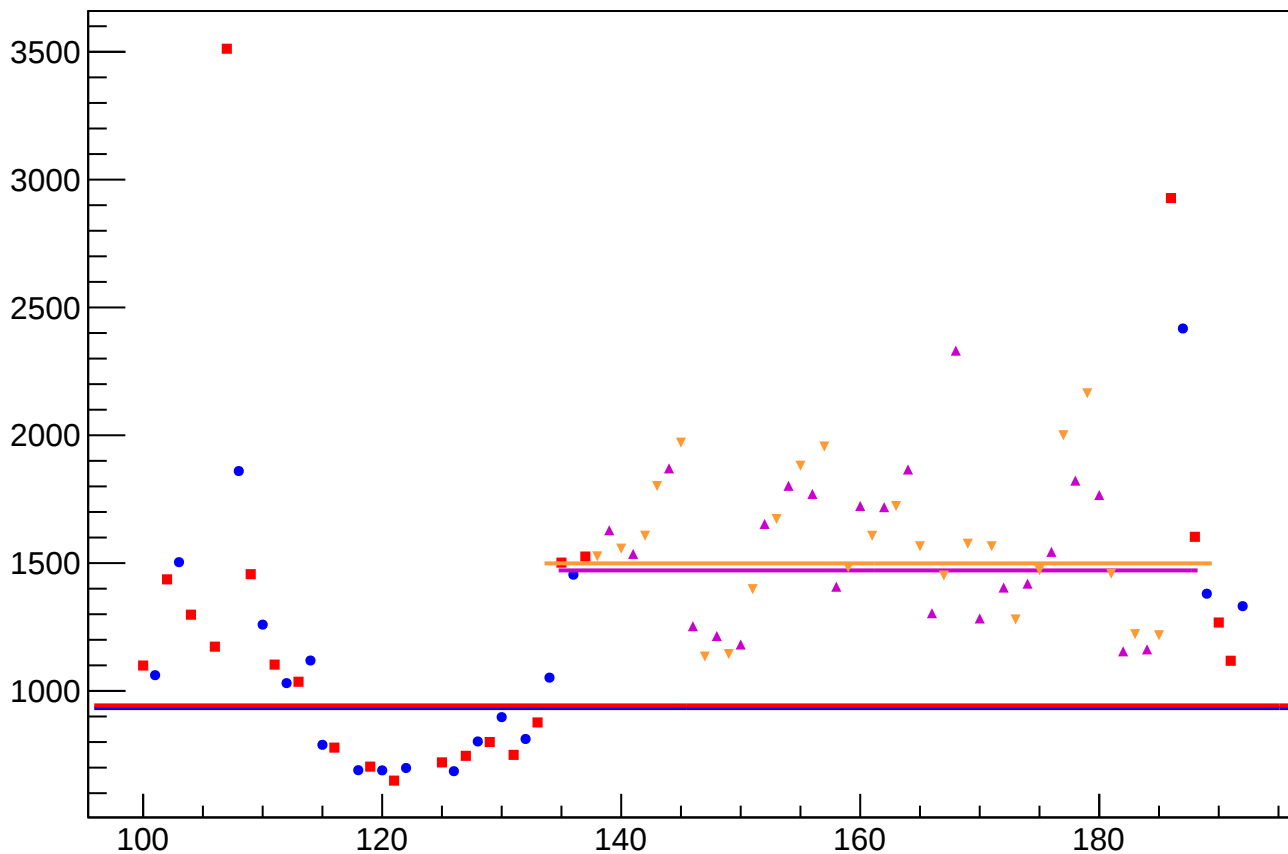
Right: -85.908 $\pm$ 242.578  $\chi^2/\text{NDF}$ : 56.1/40

In: -73.986 $\pm$ 248.686  $\chi^2/\text{NDF}$ : 35.6/41

Out: -406.503 $\pm$ 246.206  $\chi^2/\text{NDF}$ : 79.6/46

All: -241.911 $\pm$ 174.964  $\chi^2/\text{NDF}$ : 116.1/88

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



Right In: 932.814+/-0.244  $\chi^2/\text{NDF}$ : 1443141.6/18

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

Right Out: 943.421+/-0.241  $\chi^2/\text{NDF}$ : 2118469.5/21

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

Left: 1485.240+/-0.179  $\chi^2/\text{NDF}$ : 2165123.0/47

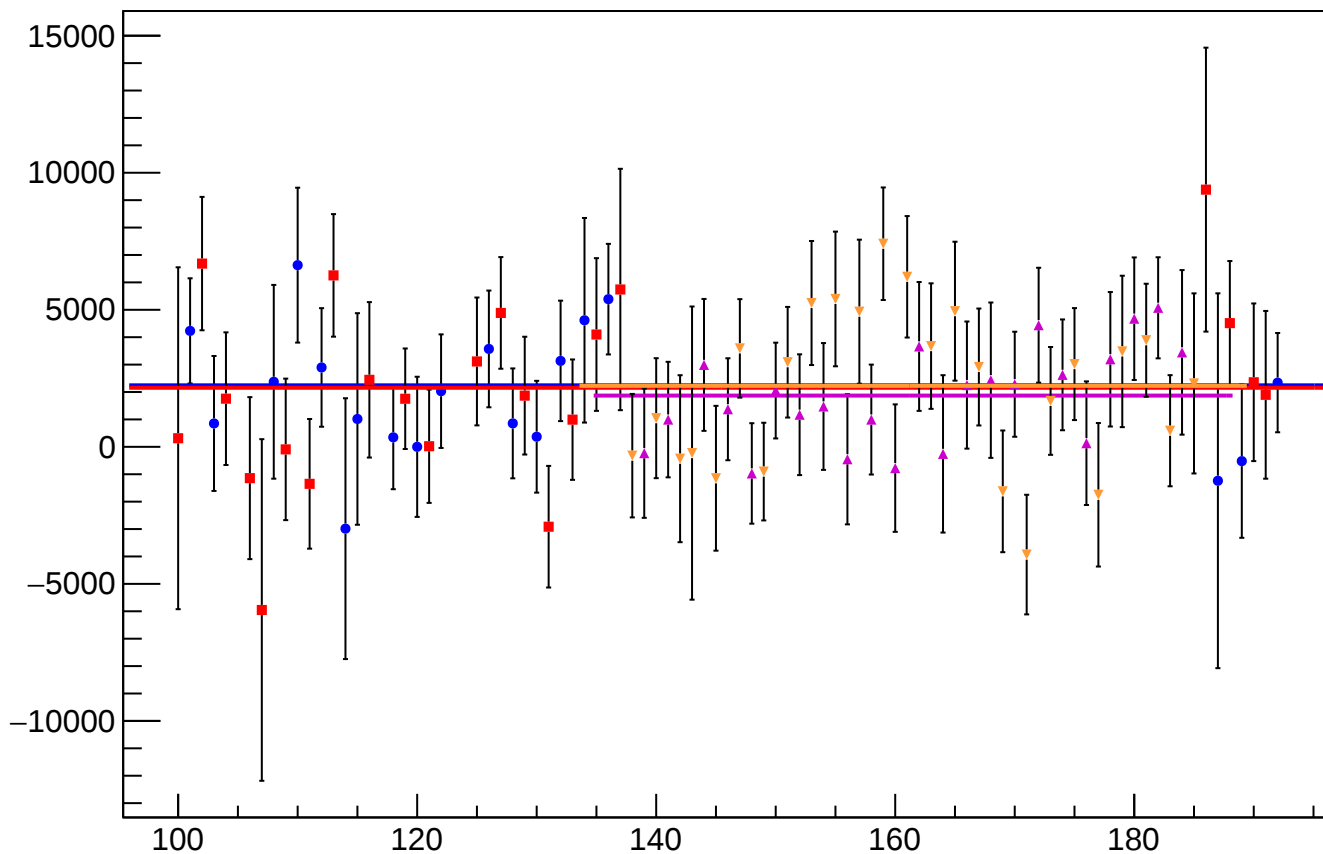
Right: 938.177+/-0.172  $\chi^2/\text{NDF}$ : 3562567.0/40

In: 1191.565+/-0.176  $\chi^2/\text{NDF}$ :4889996.3/41

Out: 1209.540+/-0.174  $\chi^2/\text{NDF}$ :5712588.6/46

All: 1200.643+/-0.124  $\chi^2/\text{NDF}$ : 10607861.8/86

# asym\_usl\_mean vs Slug, Sign Corrected



Right In: 2243.940 $\pm$ 548.827  $\chi^2$ /NDF: 12.9/18

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

Right Out: 2155.123 $\pm$ 543.744  $\chi^2$ /NDF: 25.6/21

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

Left: 2048.415 $\pm$ 321.834  $\chi^2$ /NDF: 54.0/47

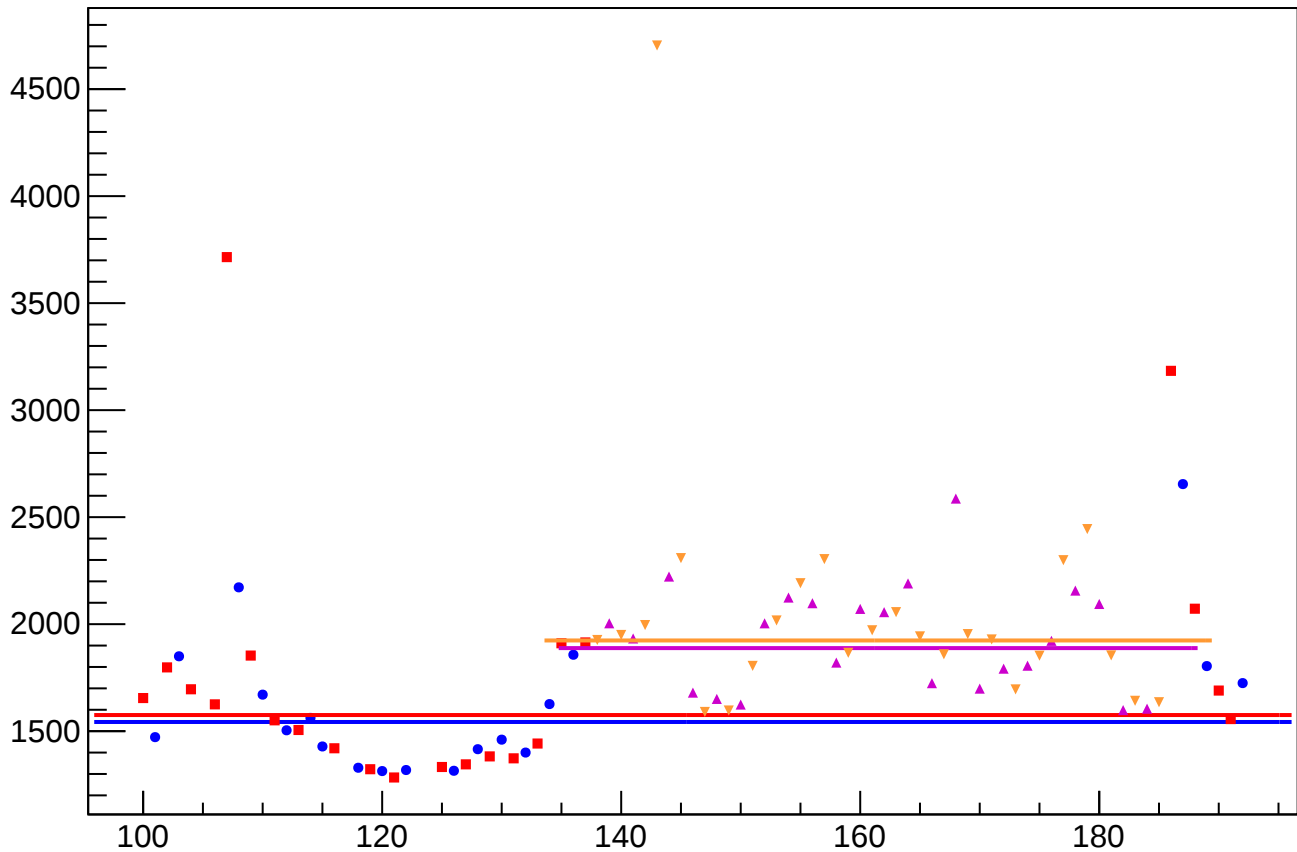
Right: 2199.118 $\pm$ 386.270  $\chi^2$ /NDF: 38.6/40

In: 2022.382 $\pm$ 350.491  $\chi^2$ /NDF: 28.1/41

Out: 2197.137 $\pm$ 348.866  $\chi^2$ /NDF: 64.4/46

All: 2110.166 $\pm$ 247.258  $\chi^2$ /NDF: 92.6/88

# asym\_usl\_rms vs Slug, Sign Corrected



Right In: 1542.939 $\pm$ 0.388  $\chi^2/\text{NDF}$ : 351379.0/18

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

Right Out: 1575.371 $\pm$ 0.384  $\chi^2/\text{NDF}$ : 788141.7/21

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

Left: 1906.002 $\pm$ 0.228  $\chi^2/\text{NDF}$ : 1516877.3/47

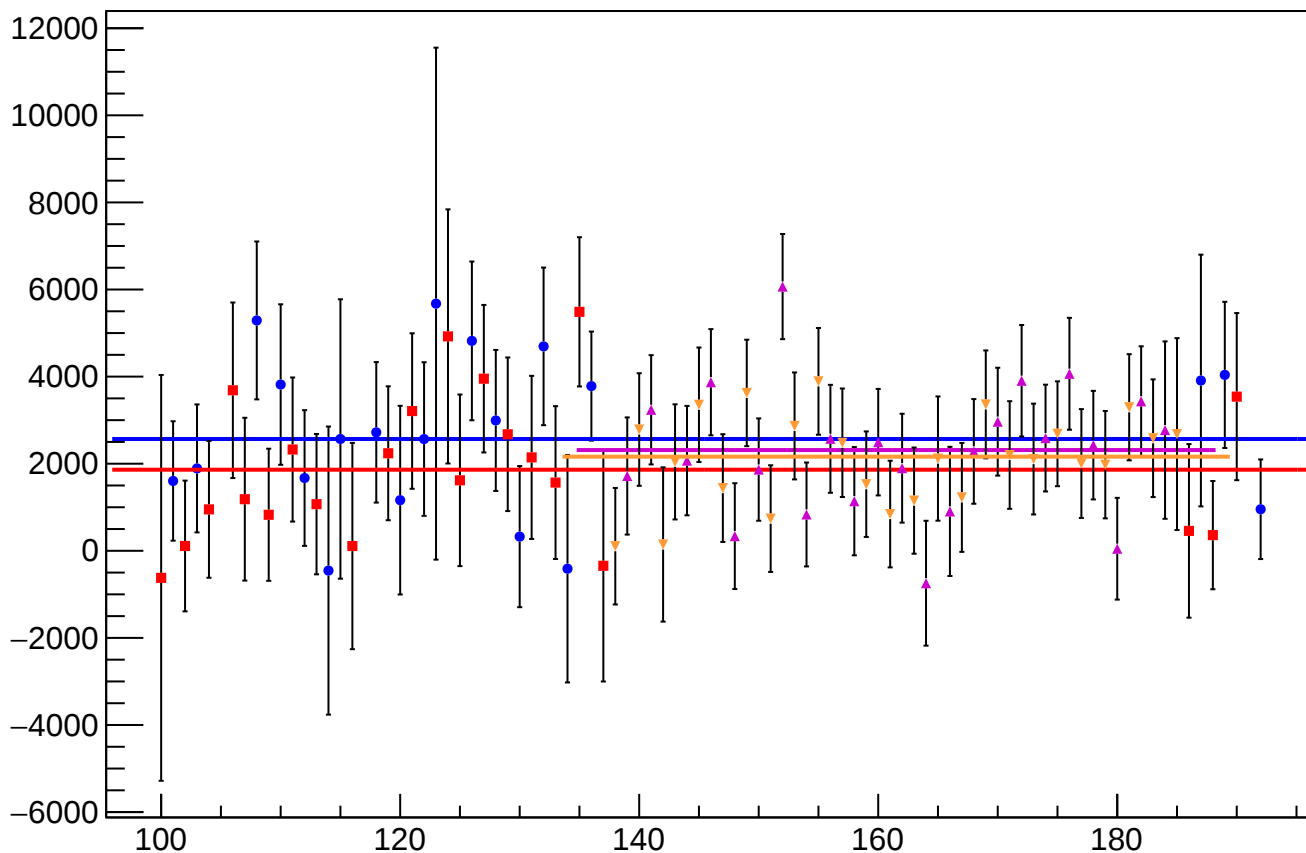
Right: 1559.306 $\pm$ 0.273  $\chi^2/\text{NDF}$ : 1143045.2/40

In: 1747.344 $\pm$ 0.248  $\chi^2/\text{NDF}$ : 1324436.4/41

Out: 1780.389 $\pm$ 0.247  $\chi^2/\text{NDF}$ : 2277560.3/46

All: 1763.944 $\pm$ 0.175  $\chi^2/\text{NDF}$ : 3610927.0/88

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



Right In: 2567.458 $\pm$ 391.195  $\chi^2$ /NDF: 15.4/19

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

Right Out: 1862.493 $\pm$ 382.482  $\chi^2$ /NDF: 15.7/21

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

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

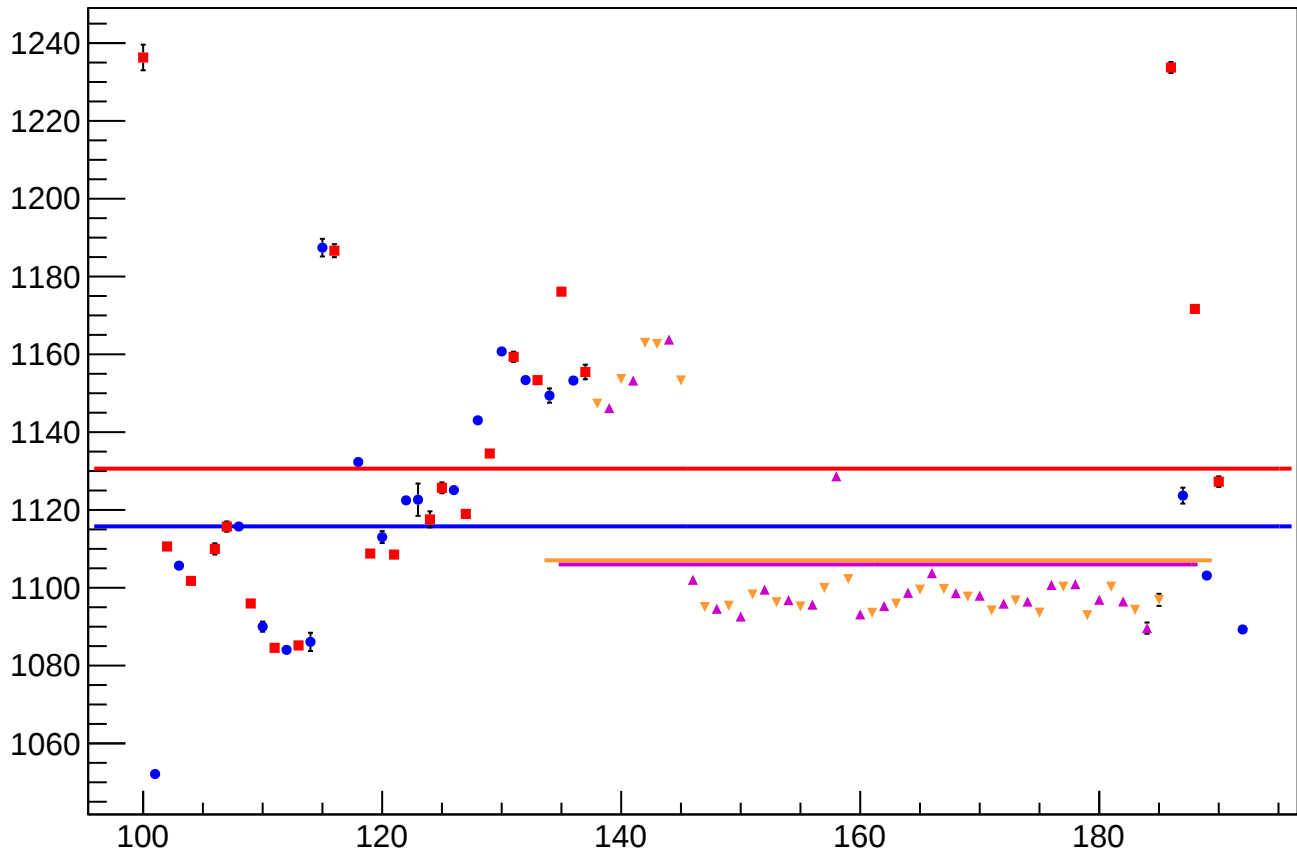
Right: 2207.037 $\pm$ 273.484  $\chi^2$ /NDF: 32.7/41

In: 2393.149 $\pm$ 219.075  $\chi^2$ /NDF:47.0/42

Out: 2068.185 $\pm$ 213.613  $\chi^2$ /NDF:31.2/46

All: 2226.566 $\pm$ 152.942  $\chi^2$ /NDF: 79.3/89

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



Right In: 1115.783 $\pm$ 0.277  $\chi^2$ /NDF: 13378.5/19

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

Right Out: 1130.621 $\pm$ 0.270  $\chi^2$ /NDF: 18496.6/21

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

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

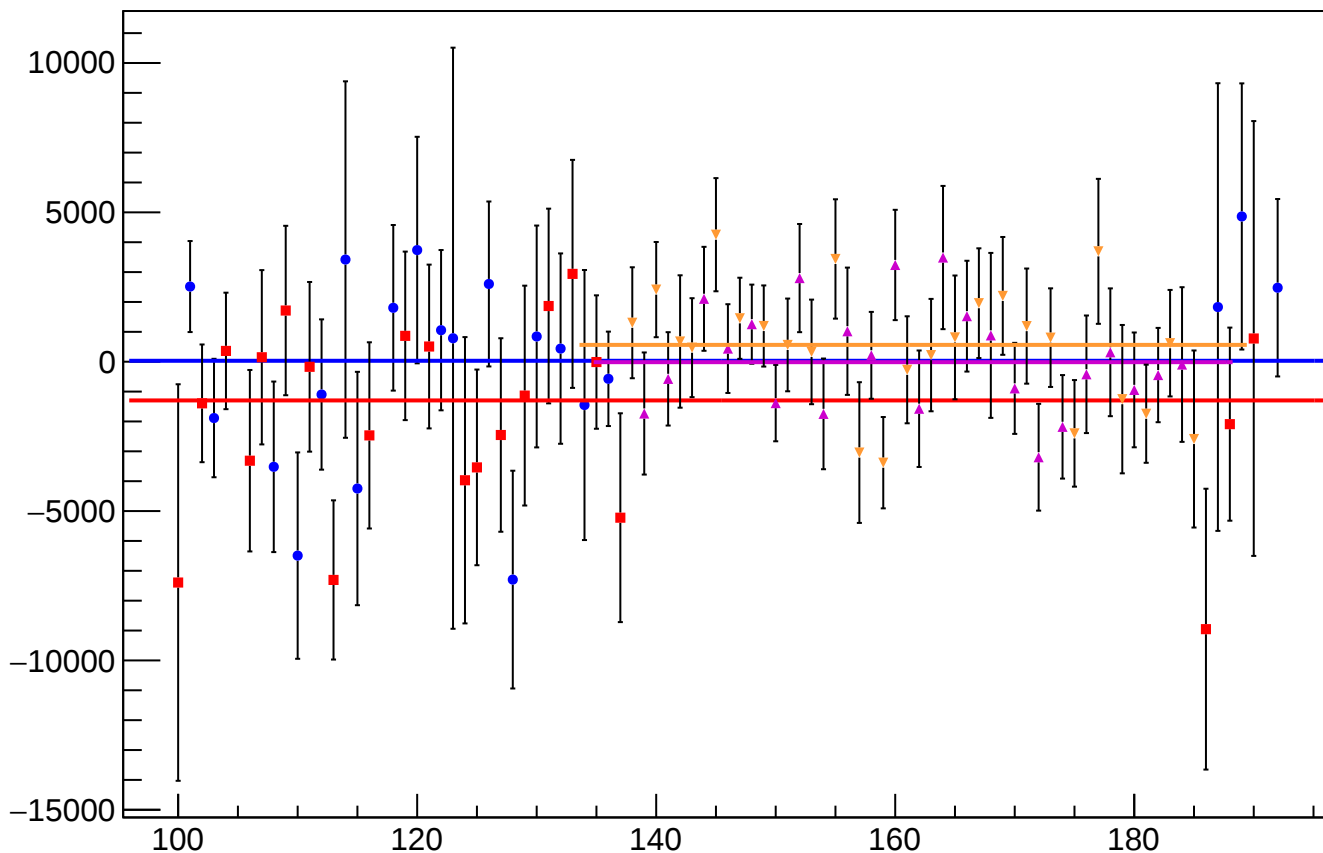
Right: 1123.369 $\pm$ 0.193  $\chi^2$ /NDF: 33346.2/41

In: 1109.066 $\pm$ 0.155  $\chi^2$ /NDF:25789.0/42

Out: 1114.407 $\pm$ 0.151  $\chi^2$ /NDF:38895.6/46

All: 1111.804 $\pm$ 0.108  $\chi^2$ /NDF: 65294.0/89

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



Right In: 30.964 $\pm$ 632.347  $\chi^2$ /NDF: 19.1/19

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

Right Out: -1296.251 $\pm$ 641.381  $\chi^2$ /NDF: 17.3/21

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

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

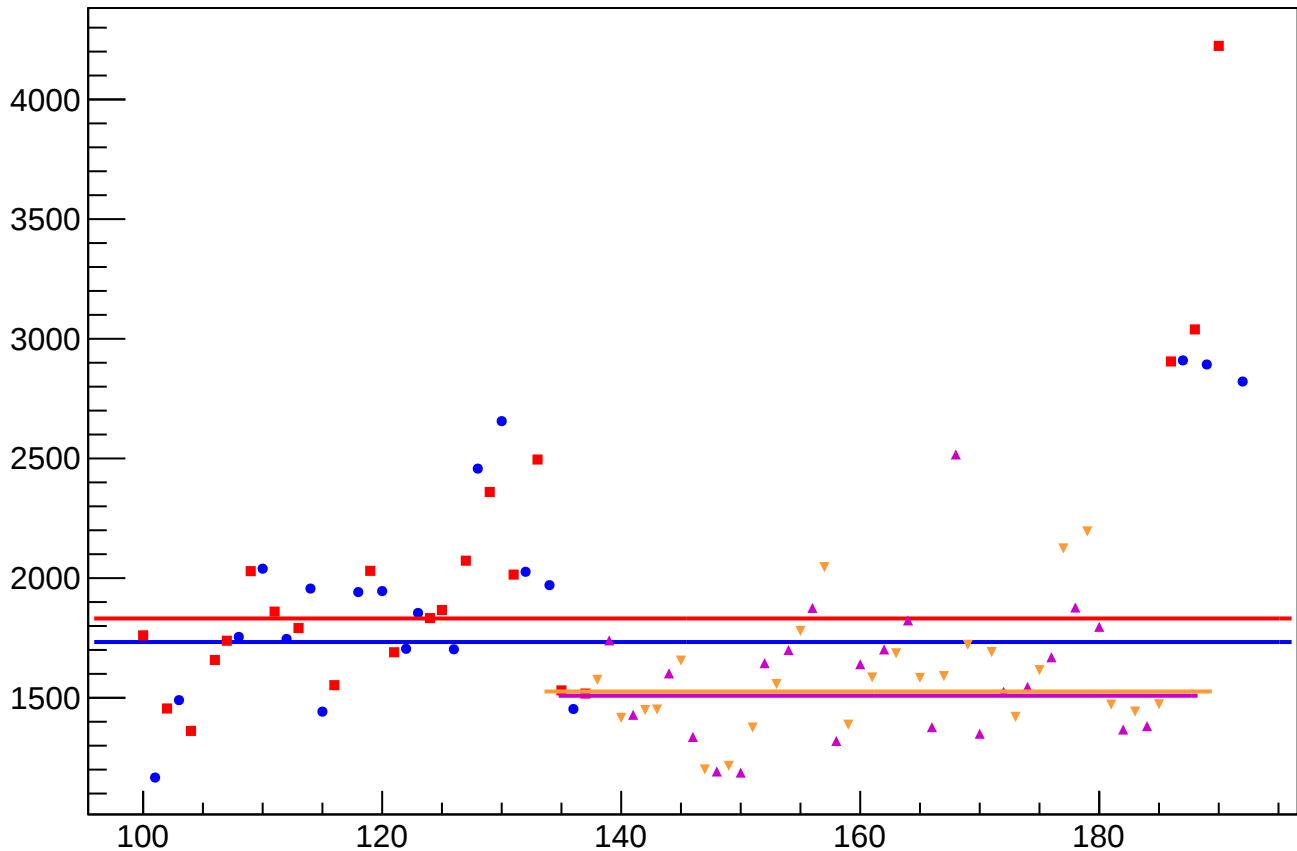
Right: -623.231 $\pm$ 450.297  $\chi^2$ /NDF: 38.5/41

In: -3.815 $\pm$ 317.320  $\chi^2$ /NDF:39.2/42

Out: 116.097 $\pm$ 314.527  $\chi^2$ /NDF:50.4/46

All: 56.672 $\pm$ 223.385  $\chi^2$ /NDF: 89.7/89

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



Right In: 1733.013 $\pm$ 0.447  $\chi^2/\text{NDF}$ : 1095620.3/19

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

Right Out: 1831.443 $\pm$ 0.454  $\chi^2/\text{NDF}$ : 1010889.0/21

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

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

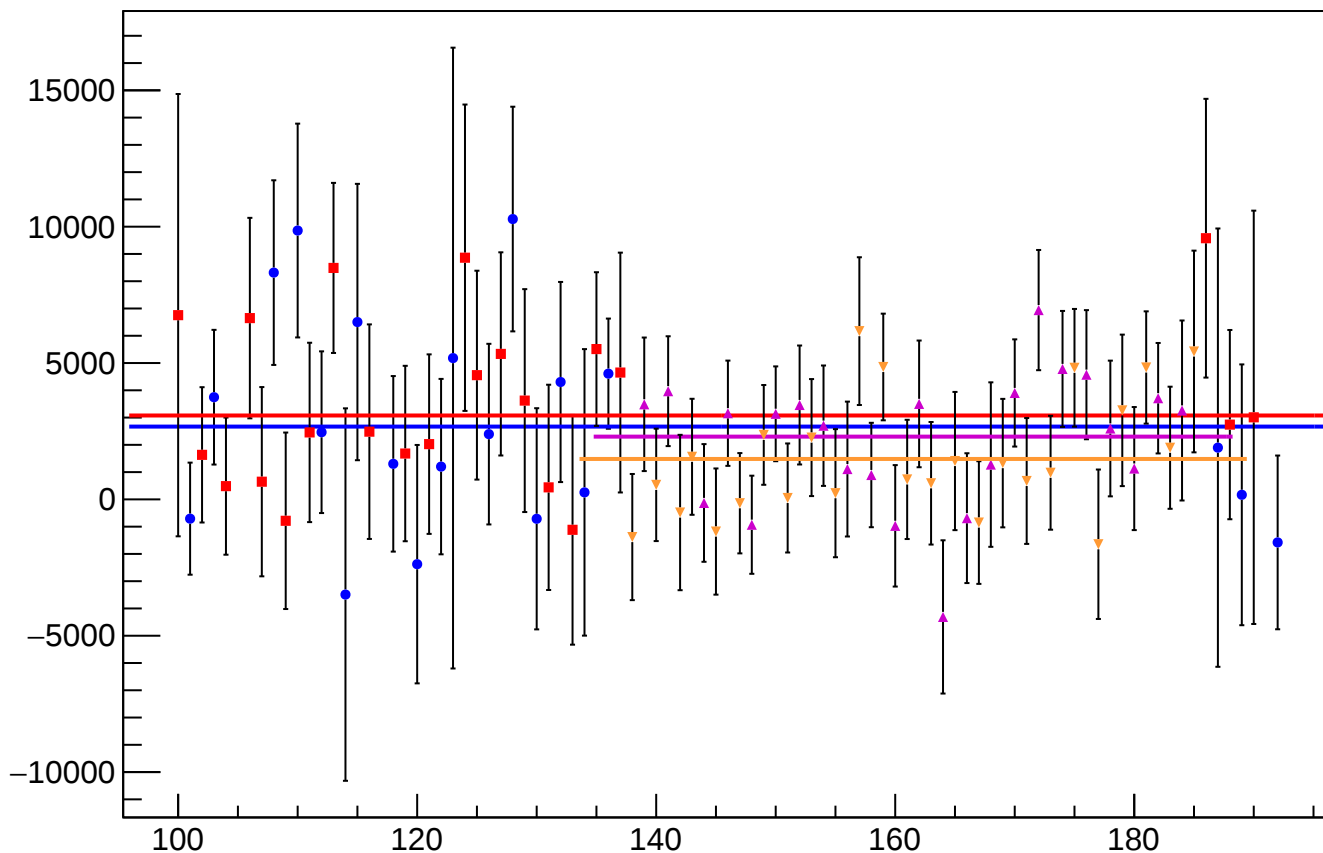
Right: 1781.530 $\pm$ 0.318  $\chi^2/\text{NDF}$ : 2130395.5/41

In: 1565.097 $\pm$ 0.224  $\chi^2/\text{NDF}$ : 2215797.9/42

Out: 1599.751 $\pm$ 0.222  $\chi^2/\text{NDF}$ : 2108227.8/46

All: 1582.577 $\pm$ 0.158  $\chi^2/\text{NDF}$ : 4336057.8/89

# asym\_usr\_mean vs Slug, Sign Corrected



Right In: 2669.457 $\pm$ 765.905  $\chi^2$ /NDF: 19.7/19

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

Right Out: 3076.318 $\pm$ 764.178  $\chi^2$ /NDF: 13.4/21

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

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

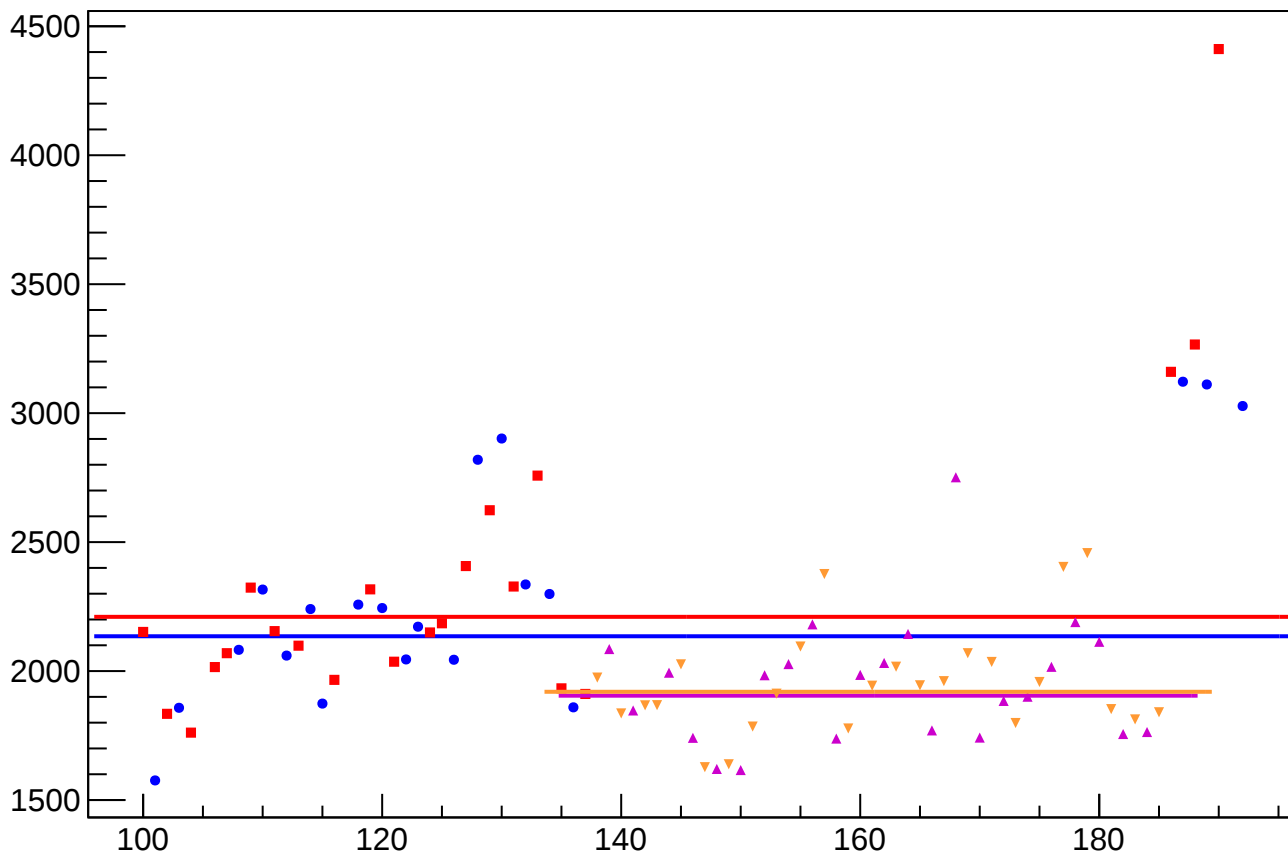
Right: 2873.347 $\pm$ 540.965  $\chi^2$ /NDF: 33.2/41

In: 2398.558 $\pm$ 393.738  $\chi^2$ /NDF:44.7/42

Out: 1892.754 $\pm$ 387.752  $\chi^2$ /NDF:37.6/46

All: 2141.782 $\pm$ 276.274  $\chi^2$ /NDF: 83.1/89

# asym\_usr\_rms vs Slug, Sign Corrected



Right In: 2134.982+/-0.542  $\chi^2/\text{NDF}$ : 634698.0/19

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

Right Out: 2210.300+/-0.540  $\chi^2/\text{NDF}$ : 653506.2/21

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

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

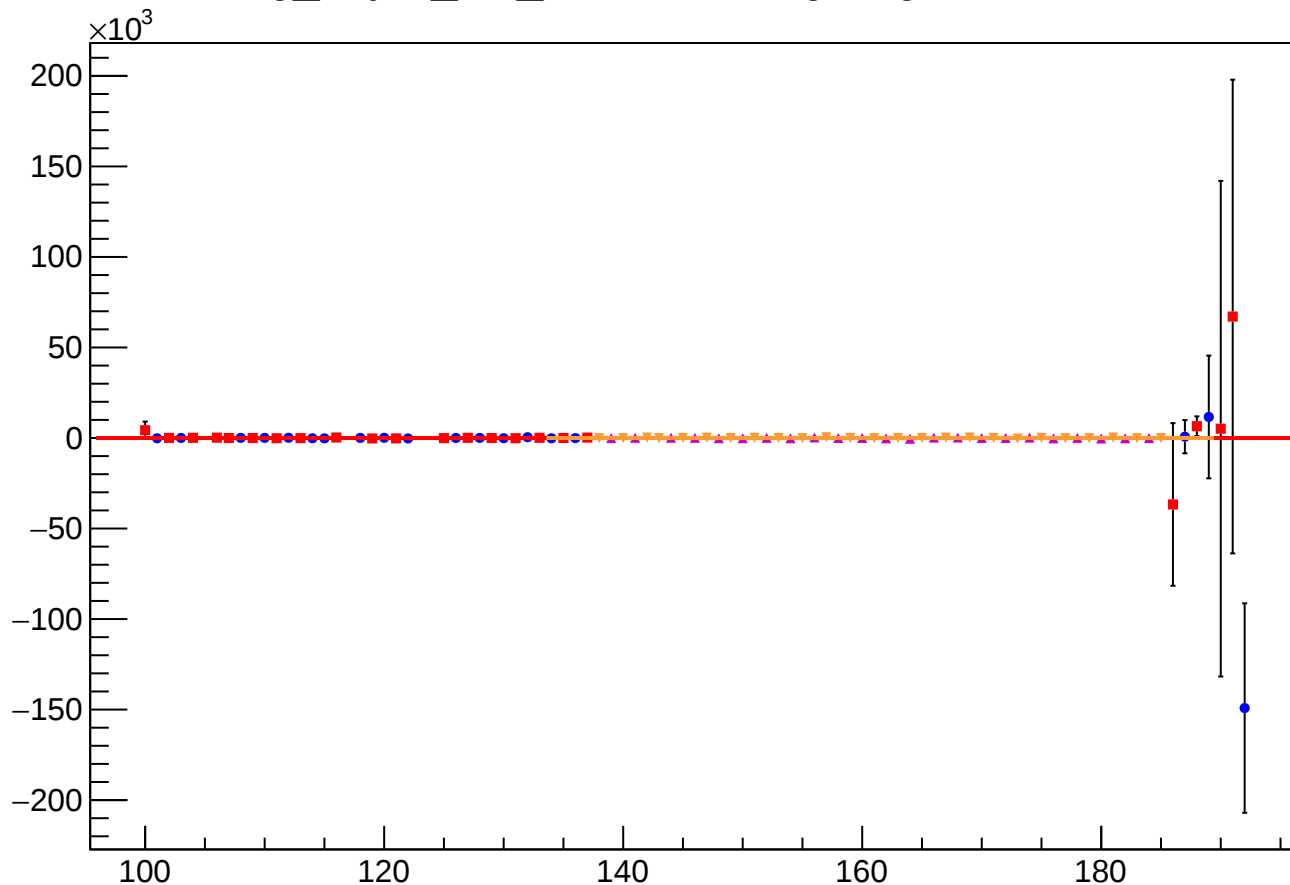
Right: 2172.726+/-0.383  $\chi^2/\text{NDF}$ : 1297896.5/41

In: 1965.506+/-0.278  $\chi^2/\text{NDF}$ : 1215150.0/42

Out: 1994.543+/-0.274  $\chi^2/\text{NDF}$ : 1234435.2/46

All: 1980.247+/-0.195  $\chi^2/\text{NDF}$ : 2455107.1/89

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



Right In:  $-0.805 \pm 36.771$   $\chi^2/\text{NDF}$ : 23.3/18

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

Right Out:  $1.741 \pm 36.755$   $\chi^2/\text{NDF}$ : 16.1/21

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

Left:  $15.942 \pm 18.349$   $\chi^2/\text{NDF}$ : 73.1/47

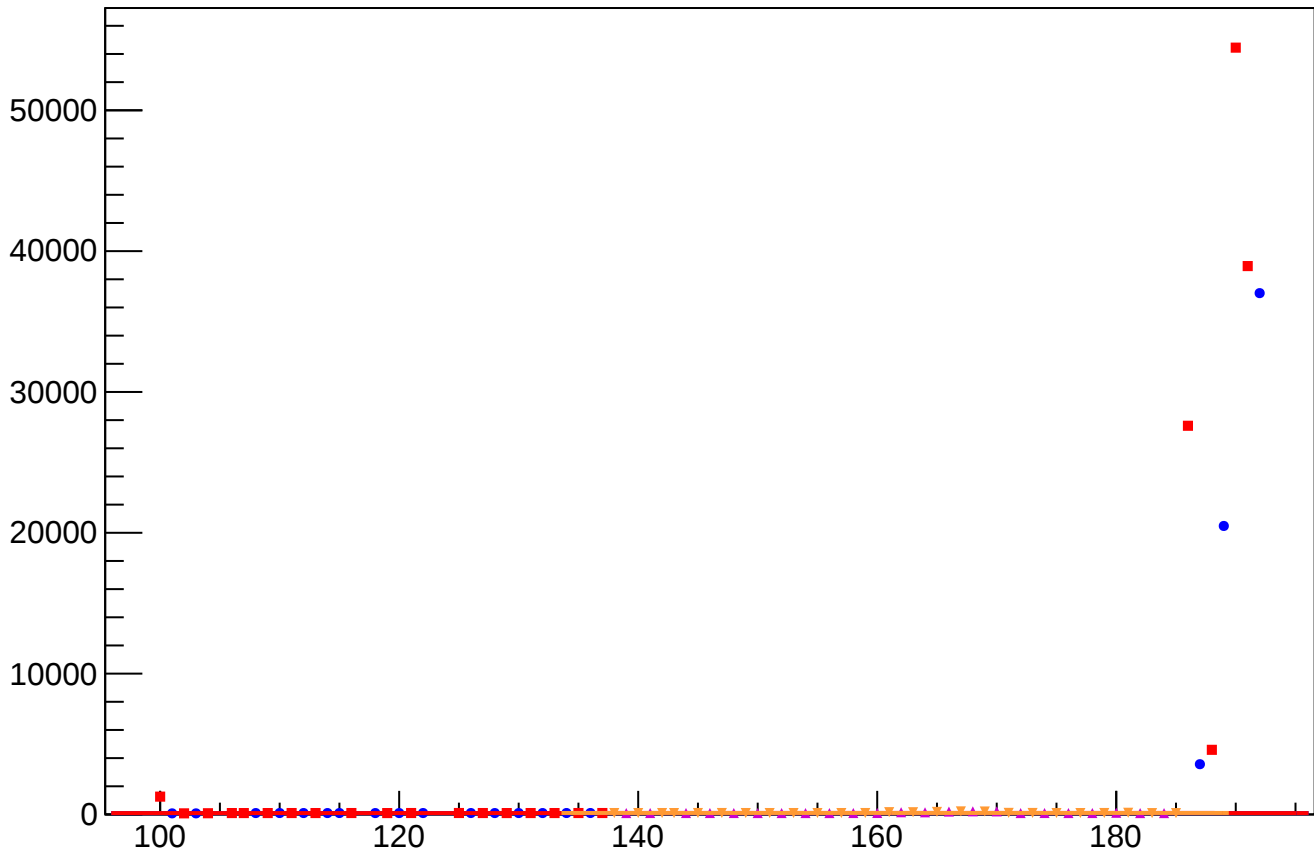
Right:  $0.468 \pm 25.995$   $\chi^2/\text{NDF}$ : 39.4/40

In:  $16.106 \pm 21.415$   $\chi^2/\text{NDF}$ : 60.0/41

Out:  $5.695 \pm 20.992$   $\chi^2/\text{NDF}$ : 52.7/46

All:  $10.797 \pm 14.991$   $\chi^2/\text{NDF}$ : 112.8/88

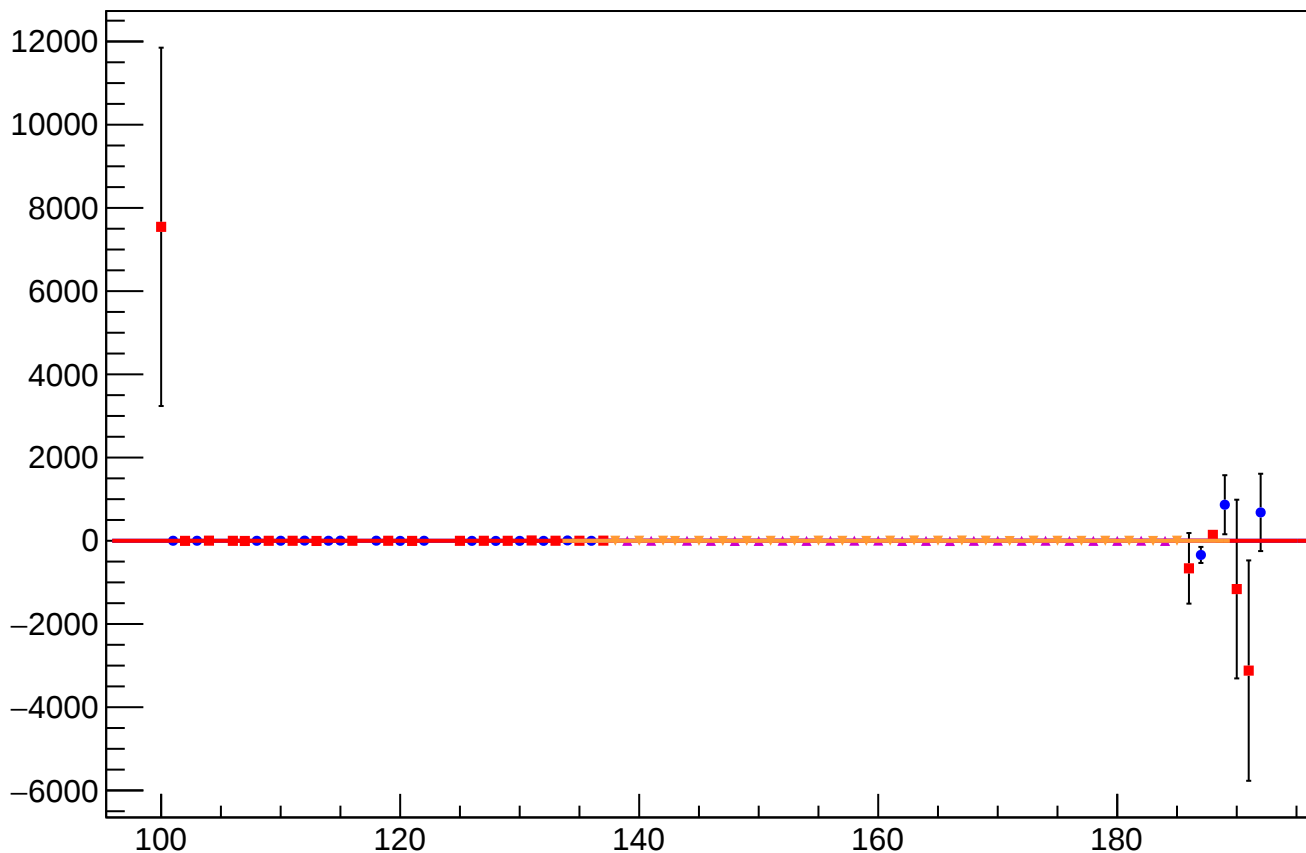
# reg\_asym\_dsl\_rms vs Slug, Sign Corrected



Right In: 94.142+/-0.026  $\chi^2/\text{NDF}$ : 1989805.7/18  
 Left Out: 107.590+/-0.018  $\chi^2/\text{NDF}$ : 1447372.1/24  
 Right Out: 96.591+/-0.026  $\chi^2/\text{NDF}$ : 2869639.5/21  
 Left In: 107.672+/-0.019  $\chi^2/\text{NDF}$ : 1491034.7/22

Left: 107.630+/-0.013  $\chi^2/\text{NDF}$ : 2938417.0/47  
 Right: 95.367+/-0.018  $\chi^2/\text{NDF}$ : 4863882.1/40  
 In: 103.083+/-0.015  $\chi^2/\text{NDF}$ : 3659789.9/41  
 Out: 104.002+/-0.015  $\chi^2/\text{NDF}$ : 4437691.5/46  
 All: 103.552+/-0.011  $\chi^2/\text{NDF}$ : 8099358.7/88

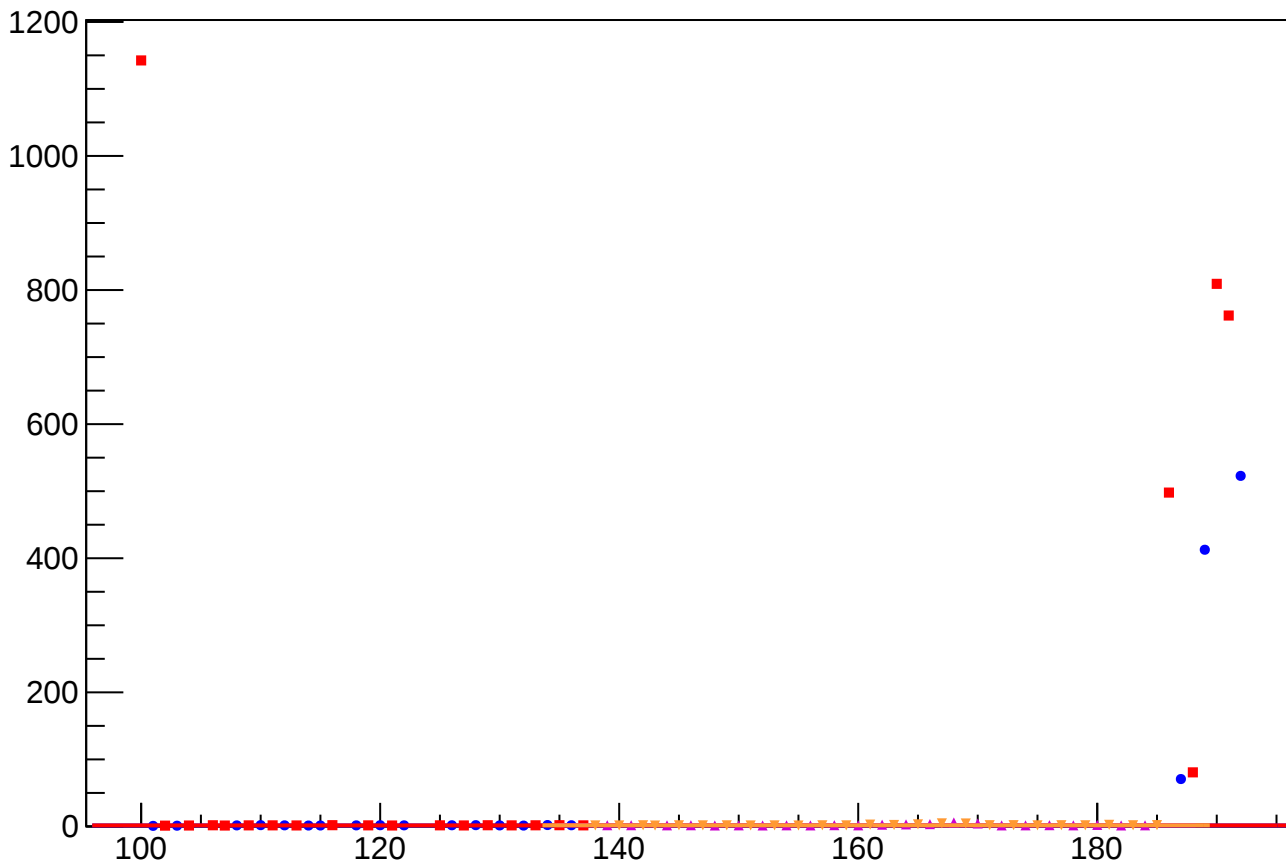
# asym\_dsl\_correction\_mean vs Slug, Sign Corrected



Right In: 0.387 $\pm$ 0.617  $\chi^2$ /NDF: 15.6/18  
Left Out: -0.765 $\pm$ 0.459  $\chi^2$ /NDF:34.1/24  
Right Out: -0.339 $\pm$ 0.644  $\chi^2$ /NDF: 25.2/21  
Left In: -0.067 $\pm$ 0.485  $\chi^2$ /NDF:25.0/22

Left: -0.435 $\pm$ 0.333  $\chi^2$ /NDF: 60.2/47  
Right: 0.039 $\pm$ 0.445  $\chi^2$ /NDF: 41.5/40  
In: 0.106 $\pm$ 0.381  $\chi^2$ /NDF:40.9/41  
Out: -0.621 $\pm$ 0.374  $\chi^2$ /NDF:59.6/46  
All: -0.265 $\pm$ 0.267  $\chi^2$ /NDF: 102.4/88

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



Right In: 1.421+/-0.000  $\chi^2/\text{NDF}$ : 2273180.3/18

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

Right Out: 1.558+/-0.000  $\chi^2/\text{NDF}$ : 2650661.0/21

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

Left: 1.773+/-0.000  $\chi^2/\text{NDF}$ : 3619133.7/47

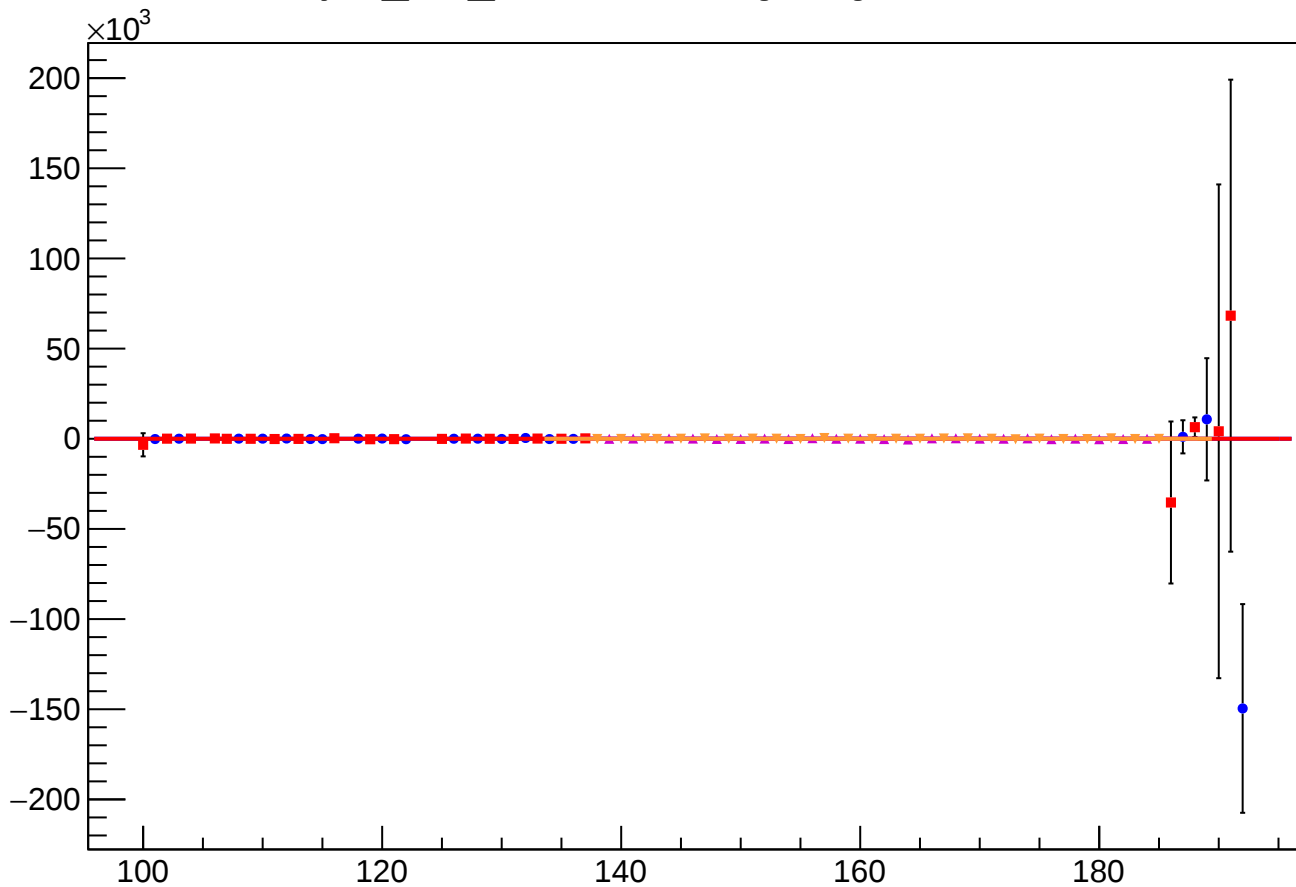
Right: 1.487+/-0.000  $\chi^2/\text{NDF}$ : 4971192.1/40

In: 1.657+/-0.000  $\chi^2/\text{NDF}$ :4666572.5/41

Out: 1.683+/-0.000  $\chi^2/\text{NDF}$ :4447377.1/46

All: 1.670+/-0.000  $\chi^2/\text{NDF}$ : 9118668.2/88

# asym\_dsl\_mean vs Slug, Sign Corrected



Right In: -0.504+/-36.781     $\chi^2/\text{NDF}$ : 23.5/18

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

Right Out: 1.501+/-36.765     $\chi^2/\text{NDF}$ : 15.6/21

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

Left: 16.611+/-18.355     $\chi^2/\text{NDF}$ : 72.2/47

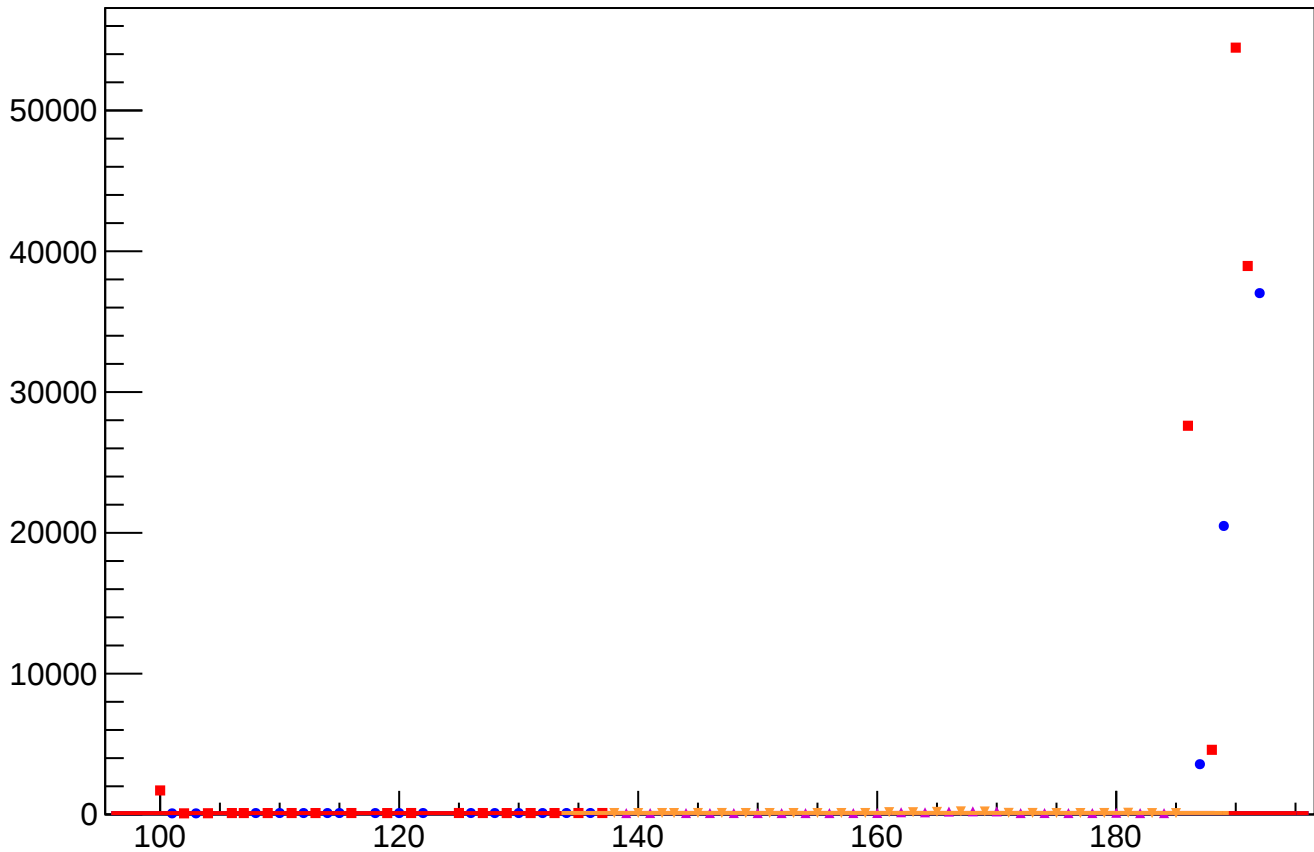
Right: 0.499+/-26.002     $\chi^2/\text{NDF}$ : 39.1/40

In: 16.555+/-21.421     $\chi^2/\text{NDF}$ : 59.5/41

Out: 6.157+/-20.998     $\chi^2/\text{NDF}$ : 52.0/46

All: 11.253+/-14.995     $\chi^2/\text{NDF}$ : 111.6/88

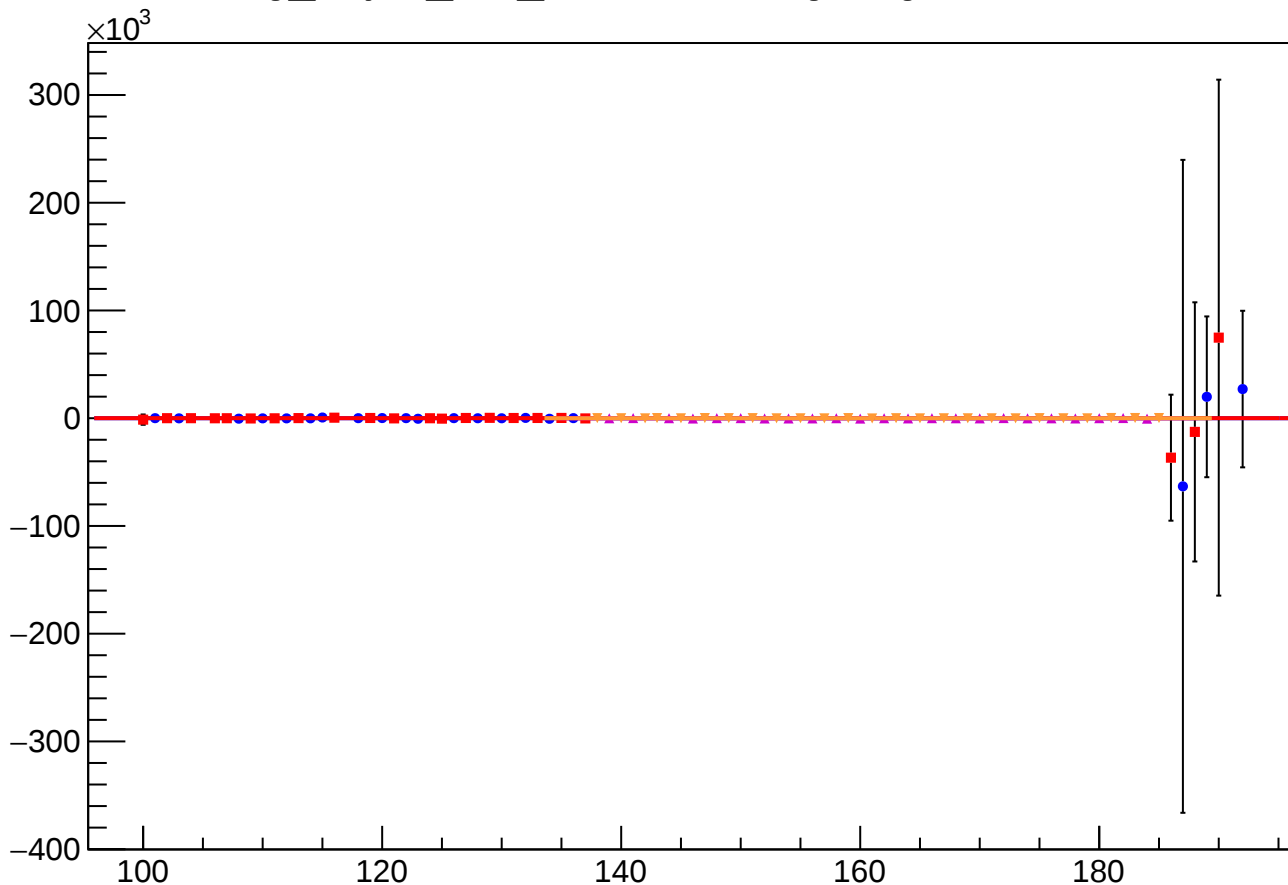
# asym\_dsl\_rms vs Slug, Sign Corrected



Right In: 94.166+/-0.026  $\chi^2/\text{NDF}$ : 1989793.4/18  
 Left Out: 107.620+/-0.018  $\chi^2/\text{NDF}$ : 1448769.2/24  
 Right Out: 96.600+/-0.026  $\chi^2/\text{NDF}$ : 2874815.8/21  
 Left In: 107.703+/-0.019  $\chi^2/\text{NDF}$ : 1492338.5/22

Left: 107.660+/-0.013  $\chi^2/\text{NDF}$ : 2941117.9/47  
 Right: 95.383+/-0.018  $\chi^2/\text{NDF}$ : 4868988.0/40  
 In: 103.112+/-0.015  $\chi^2/\text{NDF}$ : 3661153.9/41  
 Out: 104.025+/-0.015  $\chi^2/\text{NDF}$ : 4444671.0/46  
 All: 103.578+/-0.011  $\chi^2/\text{NDF}$ : 8107681.0/88

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



Right In: -26.780+/-46.841  $\chi^2$ /NDF: 14.7/19

Left Out: -12.829+/-32.063  $\chi^2$ /NDF:12.0/24

Right Out: 53.361+/-47.775  $\chi^2$ /NDF: 15.9/21

Left In: -65.335+/-32.944  $\chi^2$ /NDF:19.3/22

Left: -38.371+/-22.977  $\chi^2$ /NDF: 32.6/47

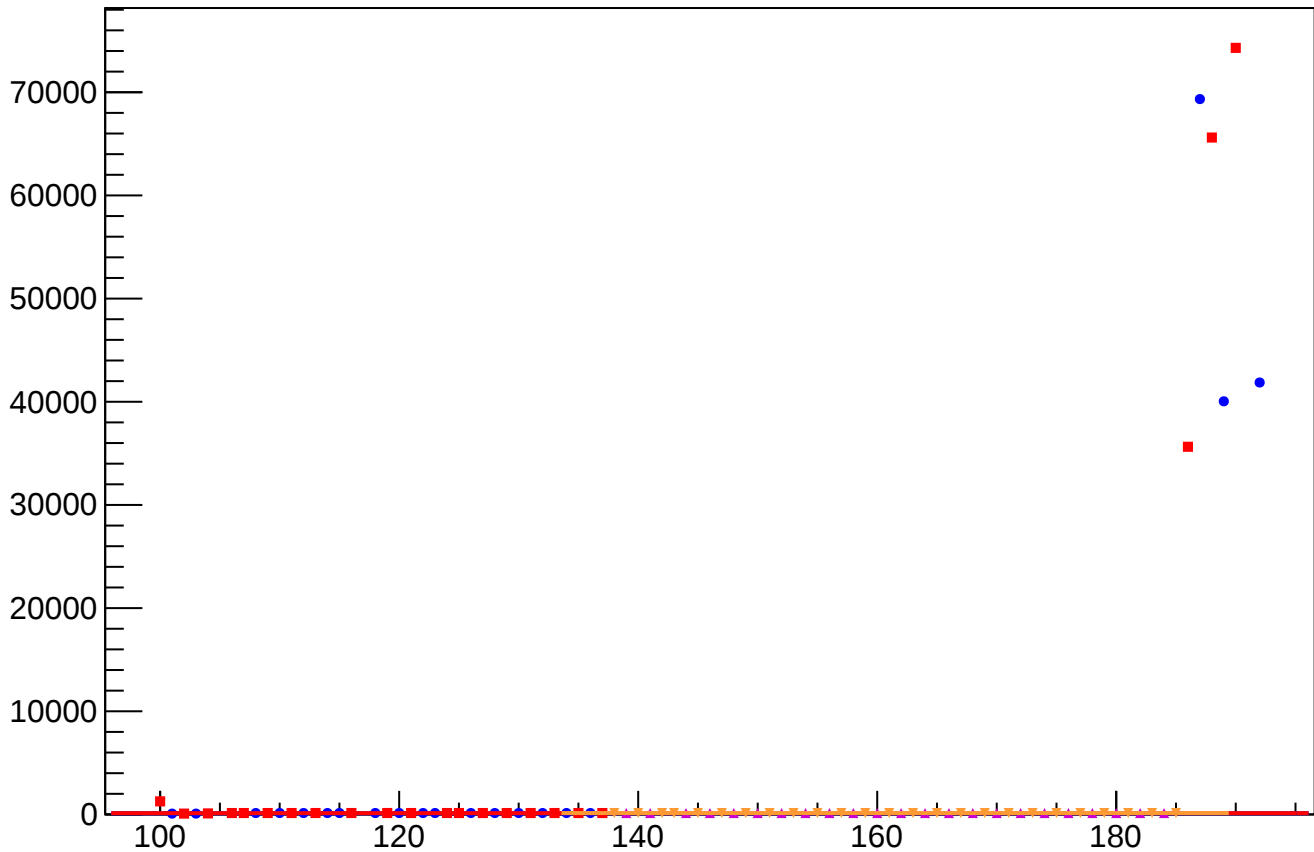
Right: 12.500+/-33.447  $\chi^2$ /NDF: 32.0/41

In: -52.575+/-26.947  $\chi^2$ /NDF:34.4/42

Out: 7.725+/-26.623  $\chi^2$ /NDF:29.2/46

All: -22.061+/-18.939  $\chi^2$ /NDF: 66.2/89

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



Right In: 117.798 $\pm$ 0.033  $\chi^2$ /NDF: 2071378.0/19

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

Right Out: 124.764 $\pm$ 0.034  $\chi^2$ /NDF: 2260988.7/21

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

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

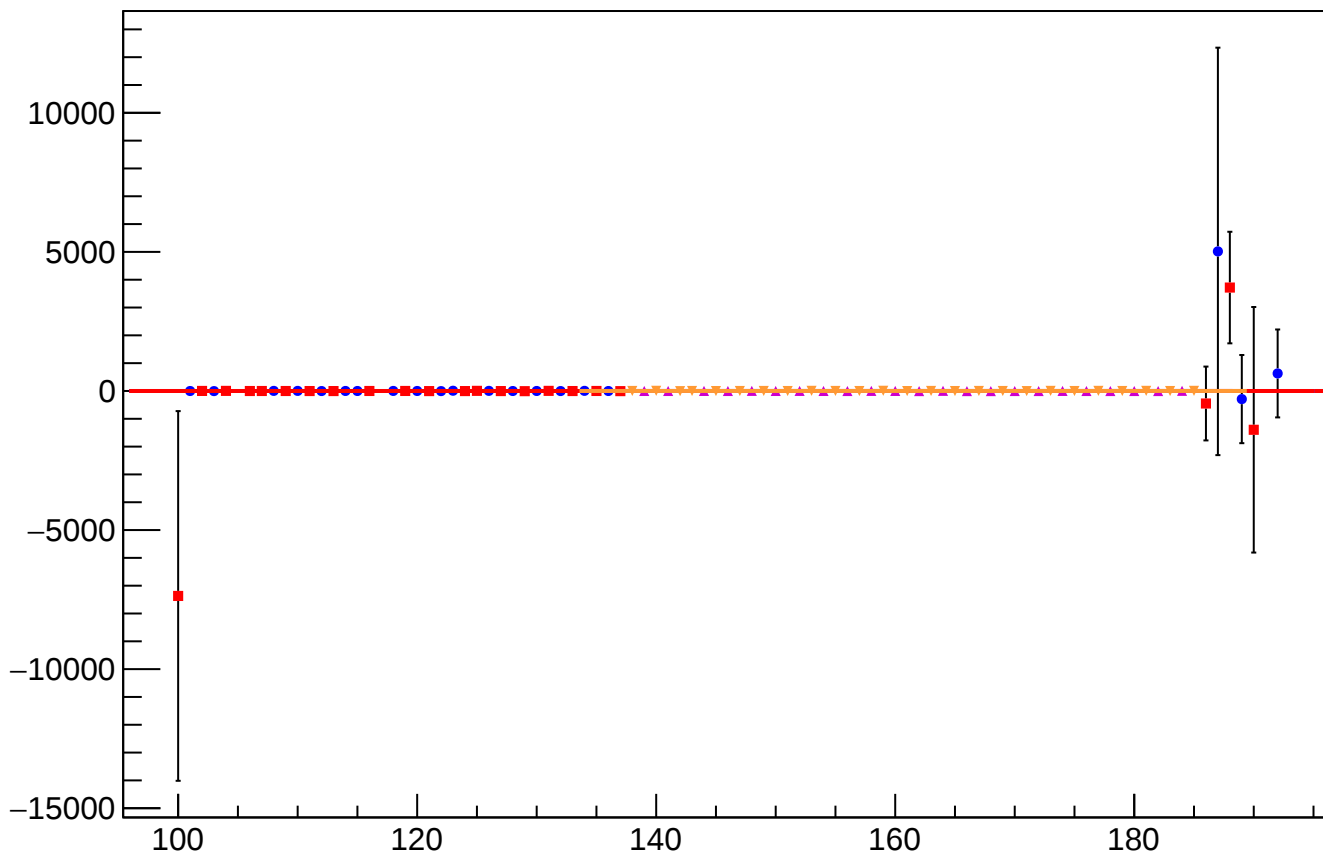
Right: 121.212 $\pm$ 0.024  $\chi^2$ /NDF: 4354047.3/41

In: 131.183 $\pm$ 0.019  $\chi^2$ /NDF:2315946.7/42

Out: 133.791 $\pm$ 0.019  $\chi^2$ /NDF:2364992.2/46

All: 132.503 $\pm$ 0.013  $\chi^2$ /NDF: 4690414.9/89

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



Right In:  $-0.719 \pm 0.810$   $\chi^2/\text{NDF}: 12.9/19$

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

Right Out:  $-0.638 \pm 0.852$   $\chi^2/\text{NDF}: 18.4/21$

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

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

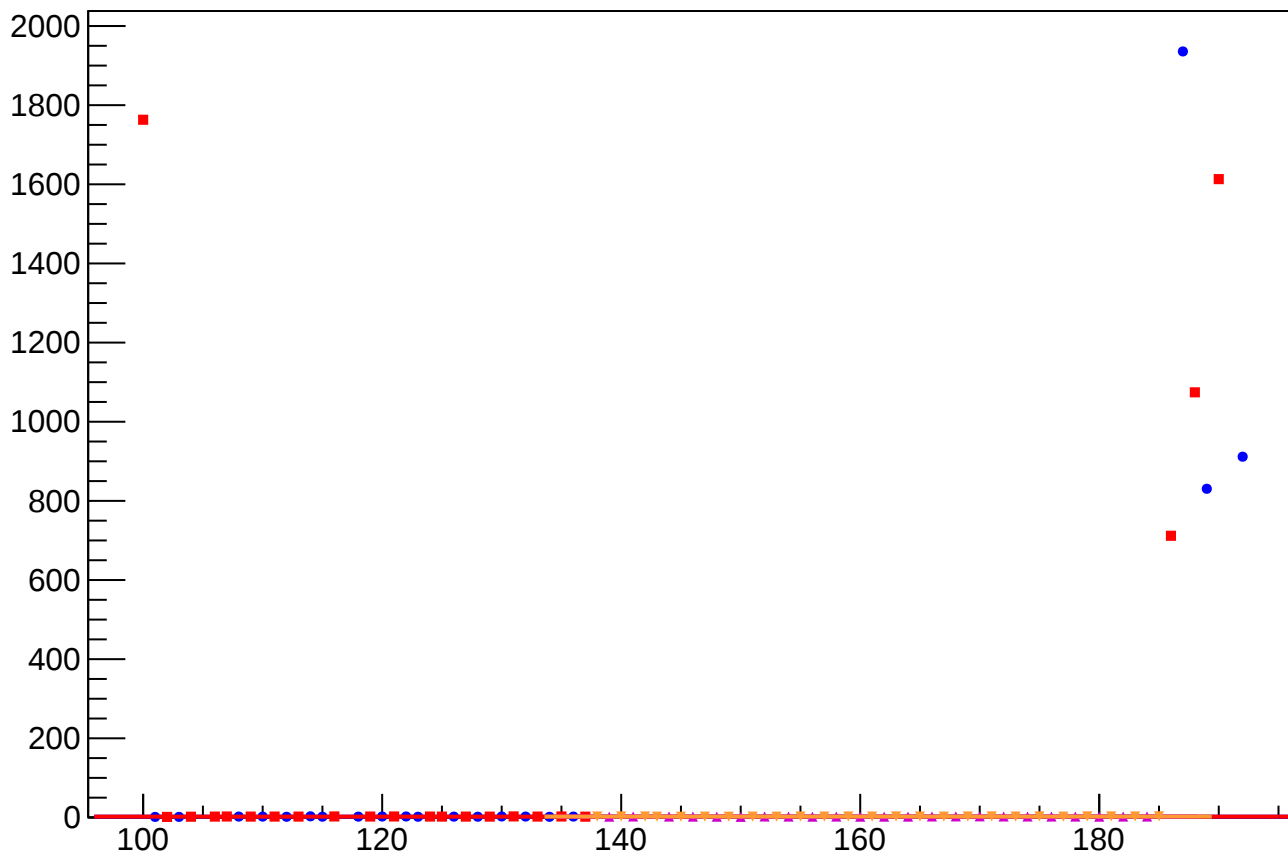
Right:  $-0.680 \pm 0.587$   $\chi^2/\text{NDF}: 31.2/41$

In:  $-0.052 \pm 0.471$   $\chi^2/\text{NDF}: 34.6/42$

Out:  $0.139 \pm 0.475$   $\chi^2/\text{NDF}: 48.5/46$

All:  $0.043 \pm 0.334$   $\chi^2/\text{NDF}: 83.2/89$

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



Right In: 1.866 $\pm$ 0.001  $\chi^2$ /NDF: 1838789.0/19

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

Right Out: 2.064 $\pm$ 0.001  $\chi^2$ /NDF: 1932125.7/21

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

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

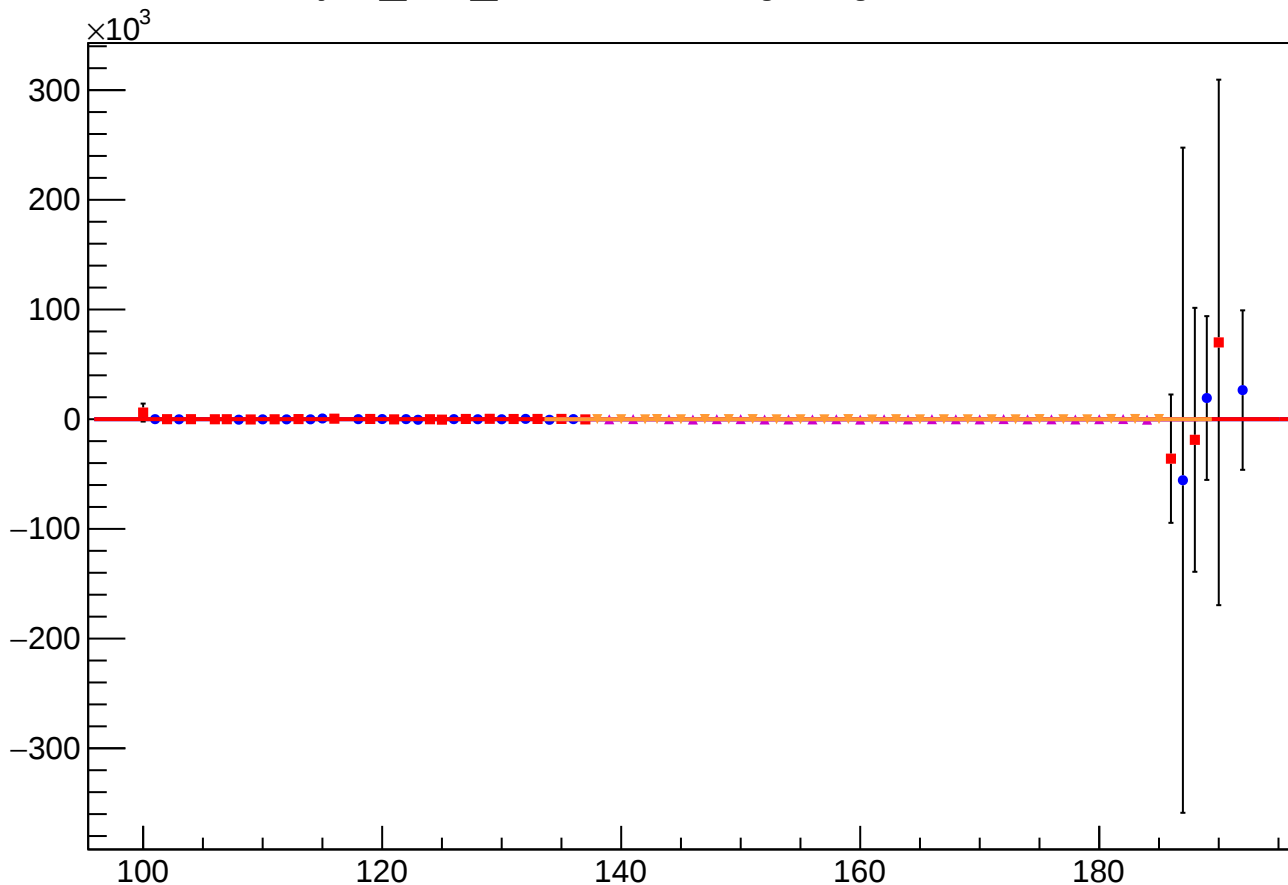
Right: 1.960 $\pm$ 0.000  $\chi^2$ /NDF: 3827821.3/41

In: 2.082 $\pm$ 0.000  $\chi^2$ /NDF:2565588.8/42

Out: 2.200 $\pm$ 0.000  $\chi^2$ /NDF:2381362.7/46

All: 2.141 $\pm$ 0.000  $\chi^2$ /NDF: 5009376.7/89

# asym\_dsr\_mean vs Slug, Sign Corrected



Right In: -25.042+/-46.854  $\chi^2$ /NDF: 14.7/19

Left Out: -13.383+/-32.072  $\chi^2$ /NDF:11.8/24

Right Out: 54.261+/-47.789  $\chi^2$ /NDF: 16.6/21

Left In: -65.231+/-32.953  $\chi^2$ /NDF:19.4/22

Left: -38.605+/-22.983  $\chi^2$ /NDF: 32.4/47

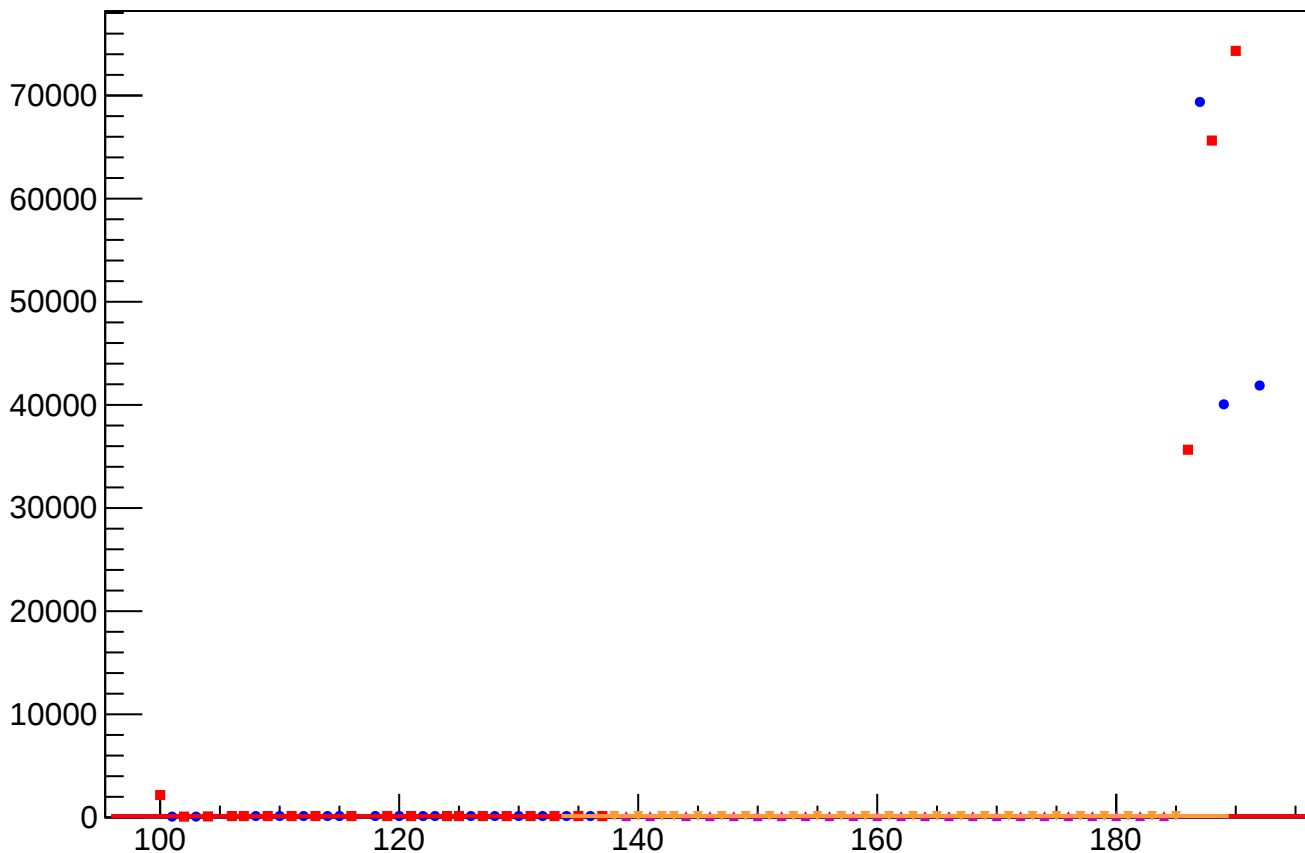
Right: 13.826+/-33.456  $\chi^2$ /NDF: 32.7/41

In: -51.931+/-26.954  $\chi^2$ /NDF:34.6/42

Out: 7.623+/-26.631  $\chi^2$ /NDF:29.7/46

All: -21.794+/-18.944  $\chi^2$ /NDF: 66.8/89

# asym\_dsr\_rms vs Slug, Sign Corrected



Right In: 117.830 $\pm$ 0.033  $\chi^2$ /NDF: 2071423.1/19

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

Right Out: 124.753 $\pm$ 0.034  $\chi^2$ /NDF: 2271575.4/21

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

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

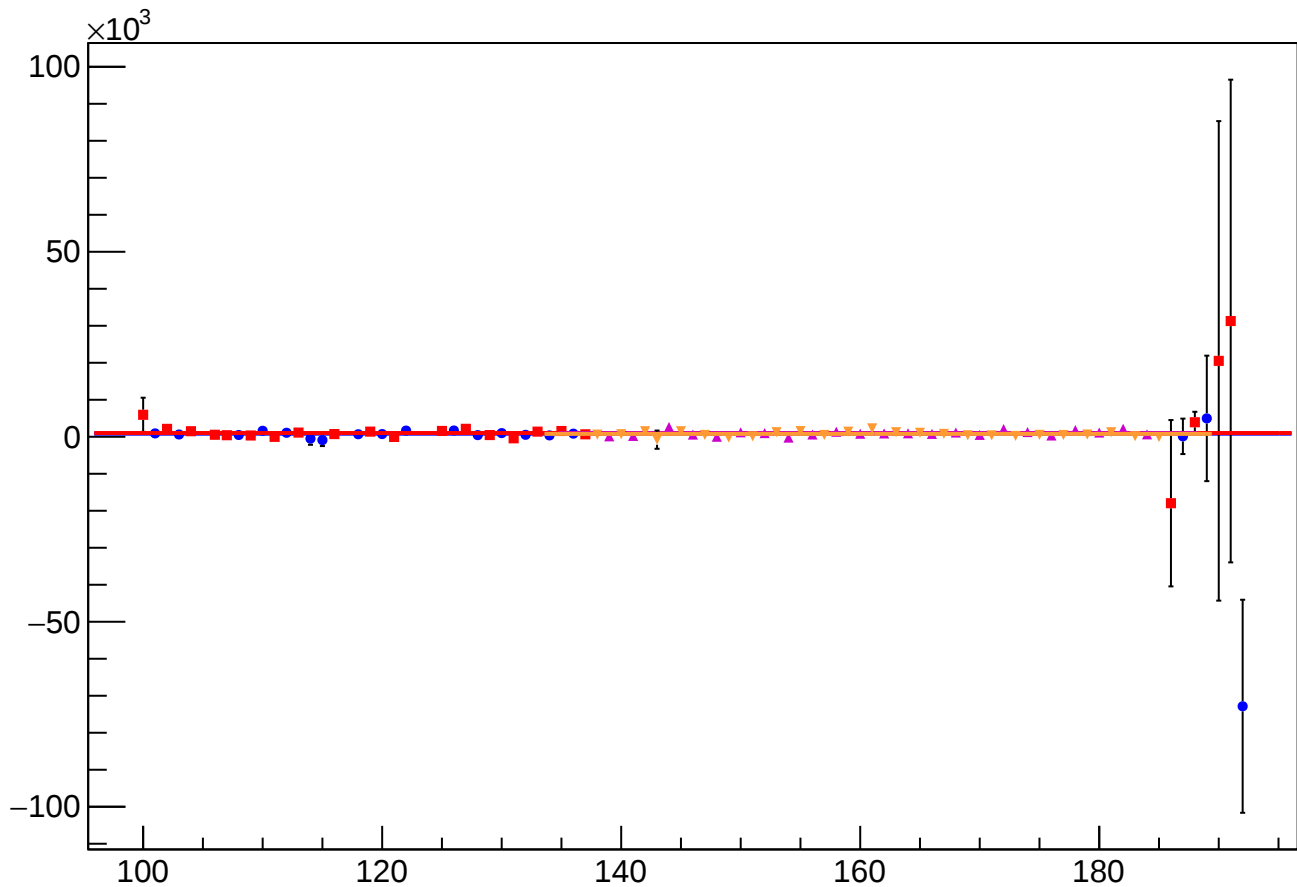
Right: 121.223 $\pm$ 0.024  $\chi^2$ /NDF: 4364400.9/41

In: 131.220 $\pm$ 0.019  $\chi^2$ /NDF:2316027.1/42

Out: 133.814 $\pm$ 0.019  $\chi^2$ /NDF:2376303.1/46

All: 132.533 $\pm$ 0.013  $\chi^2$ /NDF: 4701705.8/89

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



Right In: 842.045 $\pm$ 216.421  $\chi^2$ /NDF: 11.9/18

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

Right Out: 1012.477 $\pm$ 212.648  $\chi^2$ /NDF: 16.1/21

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

Left: 876.294 $\pm$ 95.028  $\chi^2$ /NDF: 48.1/47

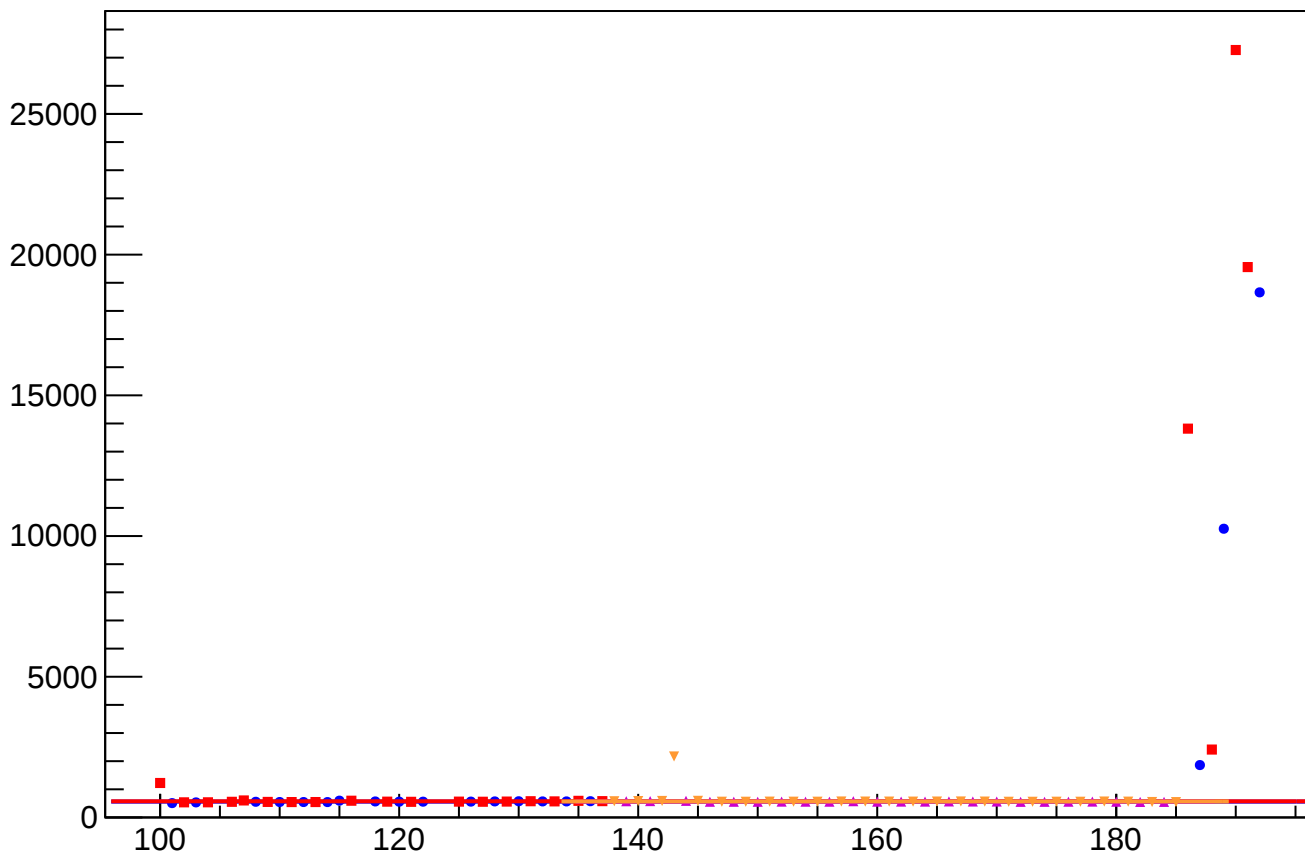
Right: 928.760 $\pm$ 151.682  $\chi^2$ /NDF: 28.3/40

In: 937.354 $\pm$ 114.501  $\chi^2$ /NDF:39.6/41

Out: 845.791 $\pm$ 113.281  $\chi^2$ /NDF:36.6/46

All: 891.082 $\pm$ 80.530  $\chi^2$ /NDF: 76.5/88

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



Right In: 562.142+/-0.153  $\chi^2/\text{NDF}$ : 1614385.0/18

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

Right Out: 574.594+/-0.150  $\chi^2/\text{NDF}$ : 2114784.6/21

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

Left: 566.647+/-0.067  $\chi^2/\text{NDF}$ : 864040.9/47

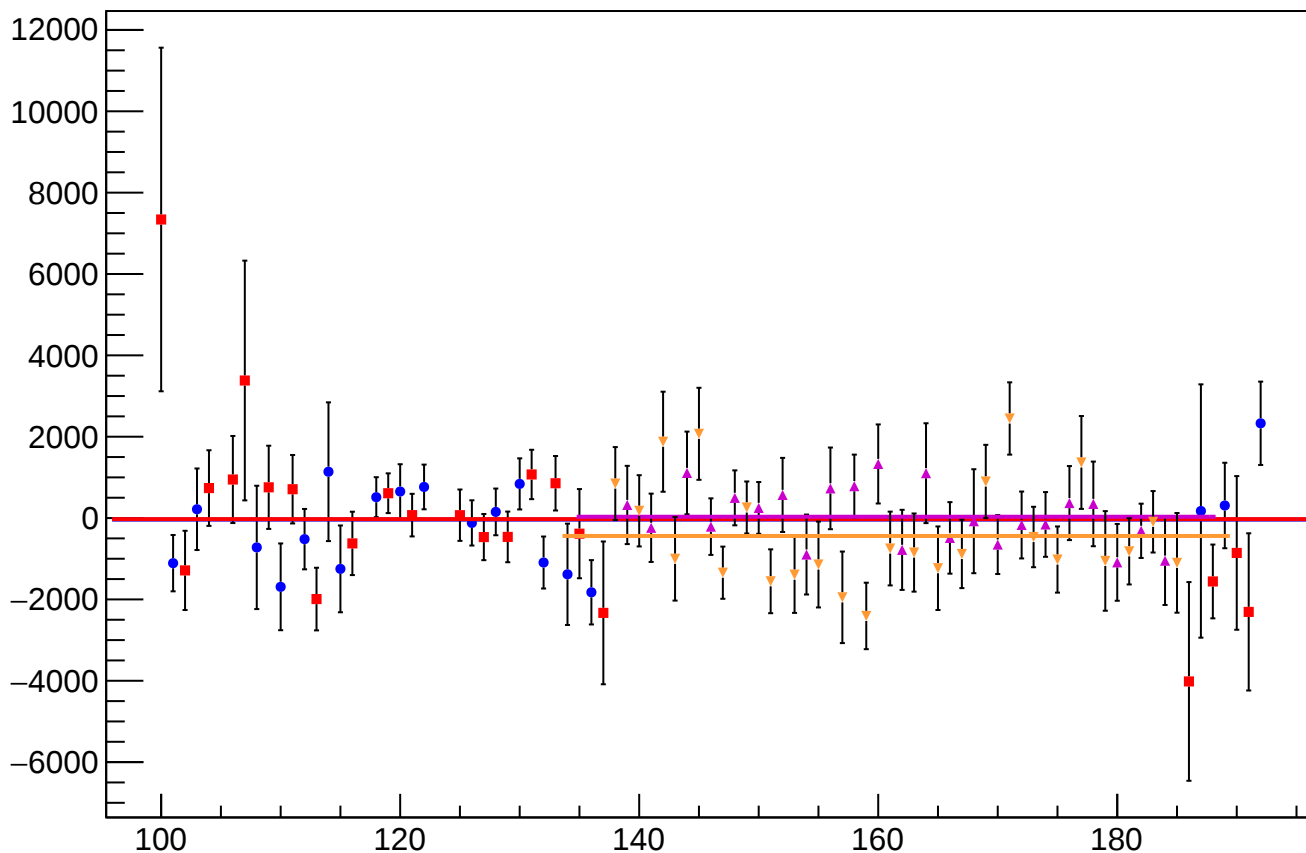
Right: 568.478+/-0.107  $\chi^2/\text{NDF}$ : 3732538.2/40

In: 563.756+/-0.081  $\chi^2/\text{NDF}$ : 1623748.9/41

Out: 570.498+/-0.080  $\chi^2/\text{NDF}$ : 2969535.5/46

All: 567.163+/-0.057  $\chi^2/\text{NDF}$ : 4596788.3/88

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



Right In:  $-37.138 \pm 175.258$   $\chi^2/\text{NDF}: 28.2/18$

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

Right Out:  $-26.228 \pm 174.009$   $\chi^2/\text{NDF}: 32.8/21$

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

Left:  $-205.851 \pm 126.326$   $\chi^2/\text{NDF}: 59.2/47$

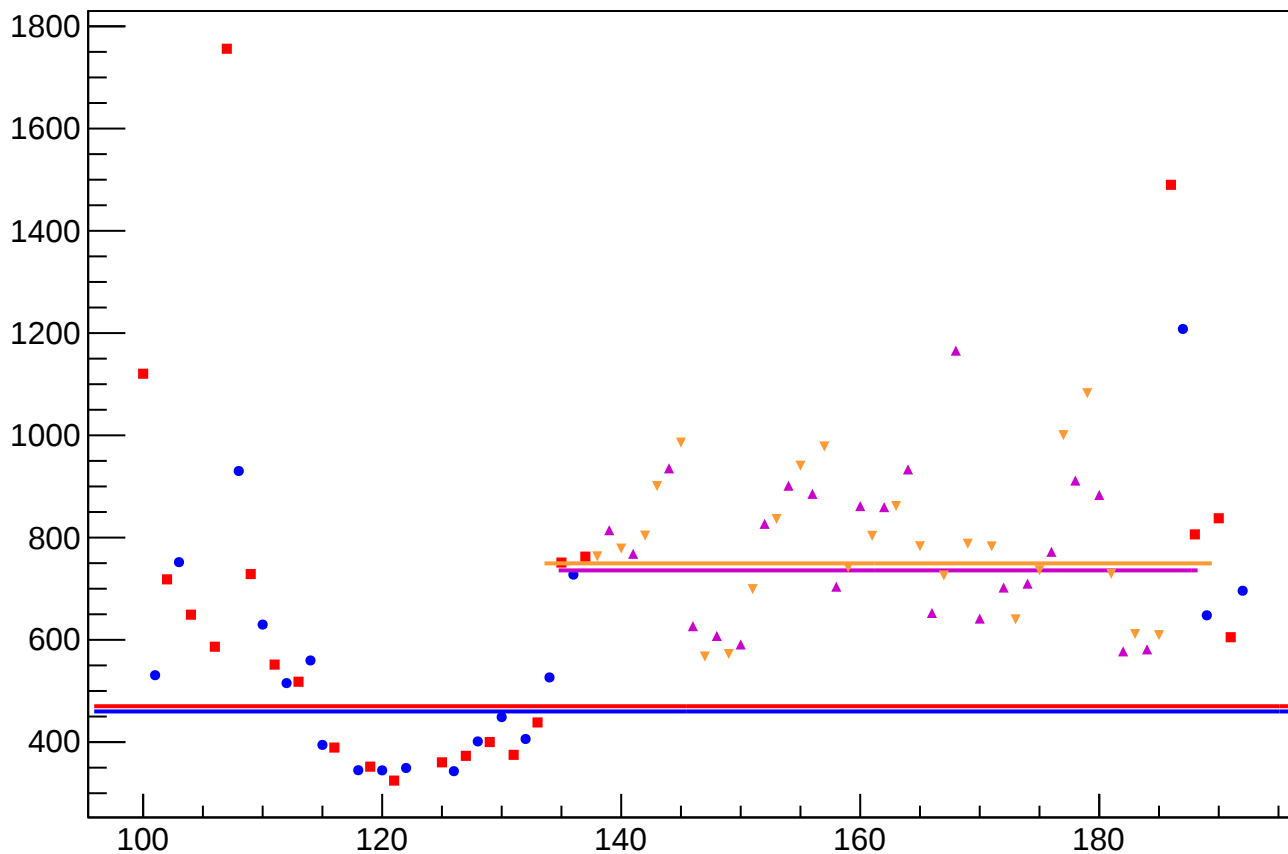
Right:  $-31.644 \pm 123.482$   $\chi^2/\text{NDF}: 61.0/40$

In:  $-3.181 \pm 125.375$   $\chi^2/\text{NDF}: 40.5/41$

Out:  $-228.570 \pm 124.390$   $\chi^2/\text{NDF}: 79.1/46$

All:  $-116.764 \pm 88.303$   $\chi^2/\text{NDF}: 121.2/88$

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



Right In: 459.947+/-0.124  $\chi^2/\text{NDF}$ : 1352930.4/18

Left Out: 749.578+/-0.126  $\chi^2/\text{NDF}$ :1053455.5/24

Right Out: 470.148+/-0.123  $\chi^2/\text{NDF}$ : 2196744.6/21

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

Left: 742.773+/-0.089  $\chi^2/\text{NDF}$ : 2164765.1/47

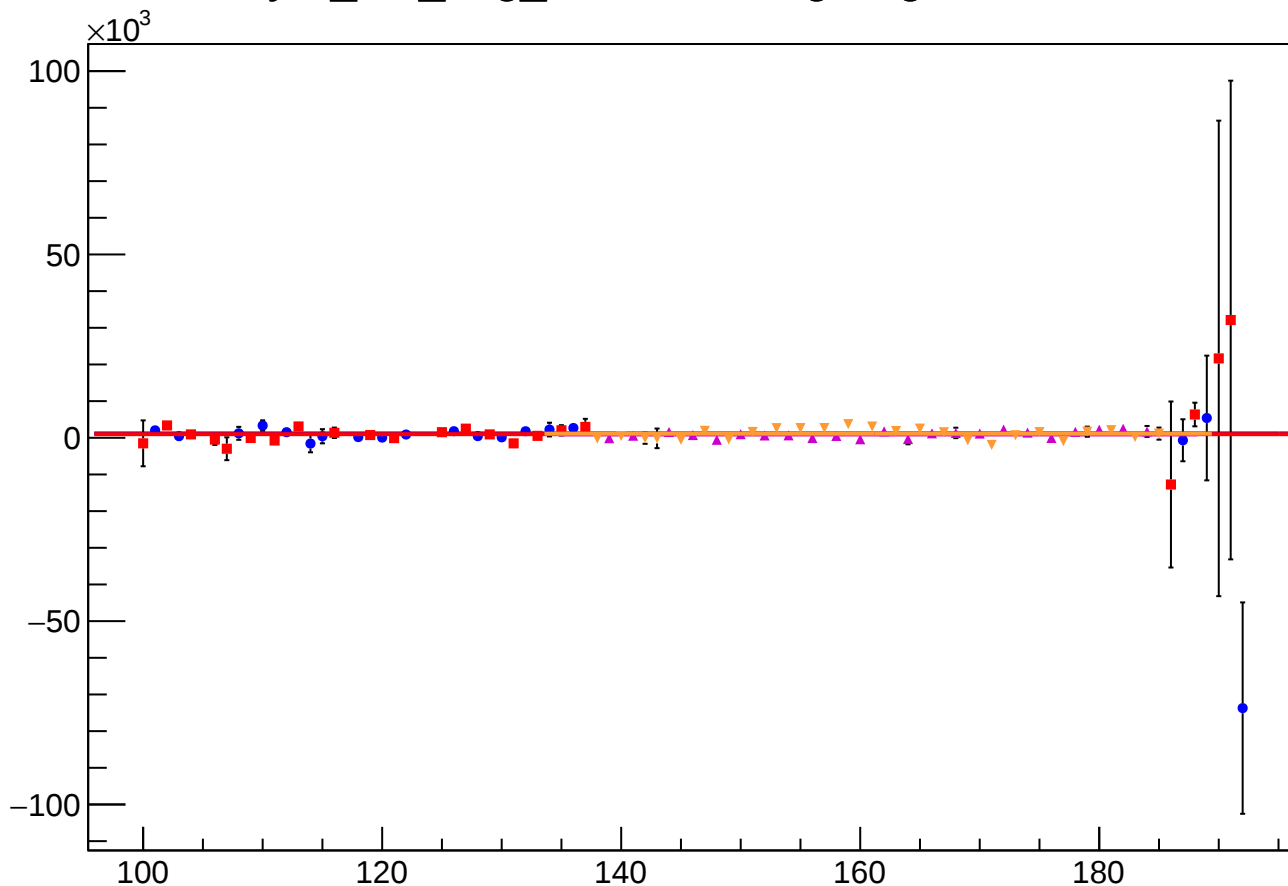
Right: 465.084+/-0.087  $\chi^2/\text{NDF}$ : 3553087.3/40

In: 594.653+/-0.089  $\chi^2/\text{NDF}$ :4878355.1/41

Out: 606.787+/-0.088  $\chi^2/\text{NDF}$ :5772118.9/46

All: 600.768+/-0.062  $\chi^2/\text{NDF}$ : 10659913.8/88

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



Right In: 1184.584 $\pm$ 295.643  $\chi^2$ /NDF: 18.6/18

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

Right Out: 986.272 $\pm$ 292.972  $\chi^2$ /NDF: 26.6/21

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

Left: 1035.284 $\pm$ 161.335  $\chi^2$ /NDF: 54.2/47

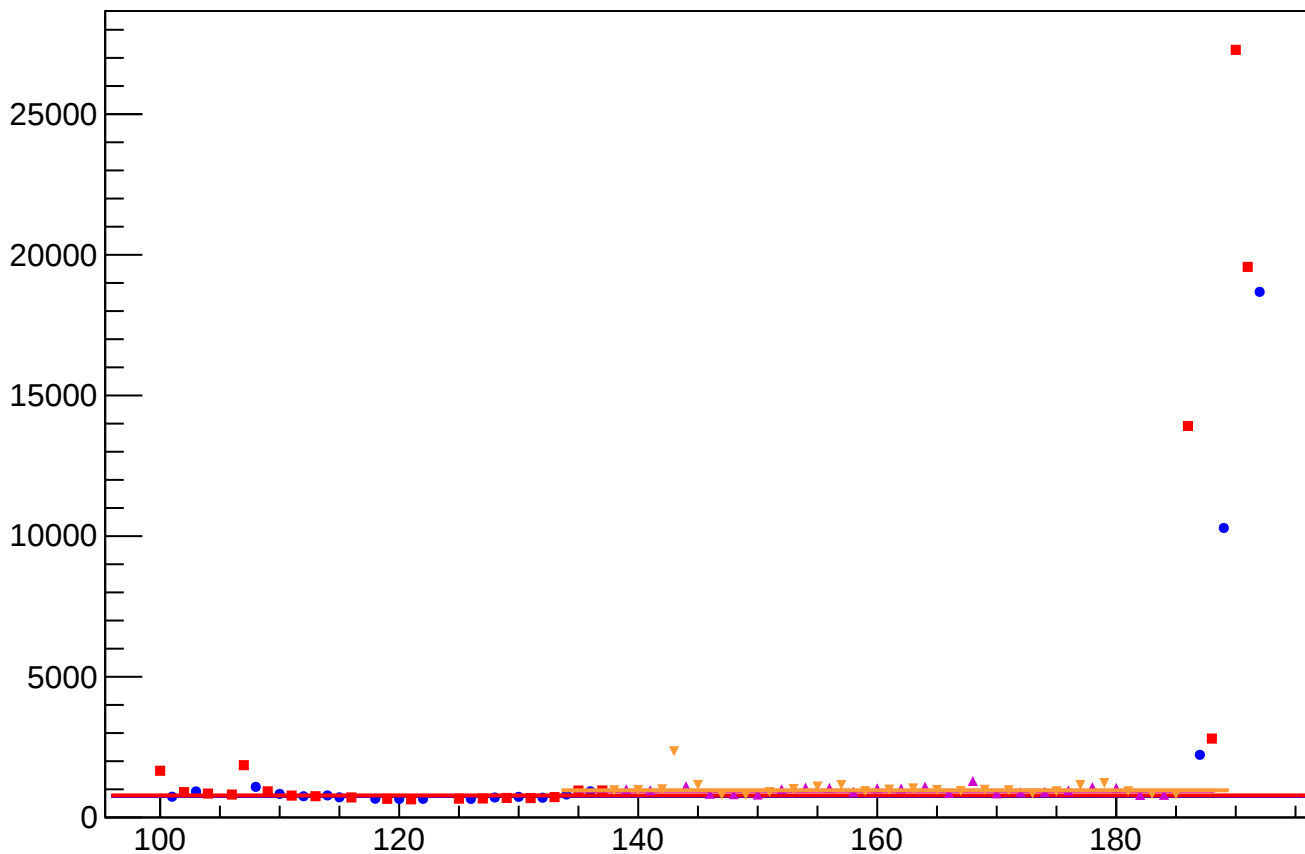
Right: 1084.528 $\pm$ 208.100  $\chi^2$ /NDF: 45.5/40

In: 1032.444 $\pm$ 180.707  $\chi^2$ /NDF:33.8/41

Out: 1074.915 $\pm$ 179.933  $\chi^2$ /NDF:65.9/46

All: 1053.770 $\pm$ 127.505  $\chi^2$ /NDF: 99.7/88

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



Right In: 762.509+/-0.209  $\chi^2/\text{NDF}$ : 1786682.7/18

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

Right Out: 782.330+/-0.207  $\chi^2/\text{NDF}$ : 2488989.9/21

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

Left: 955.545+/-0.114  $\chi^2/\text{NDF}$ : 1510298.5/47

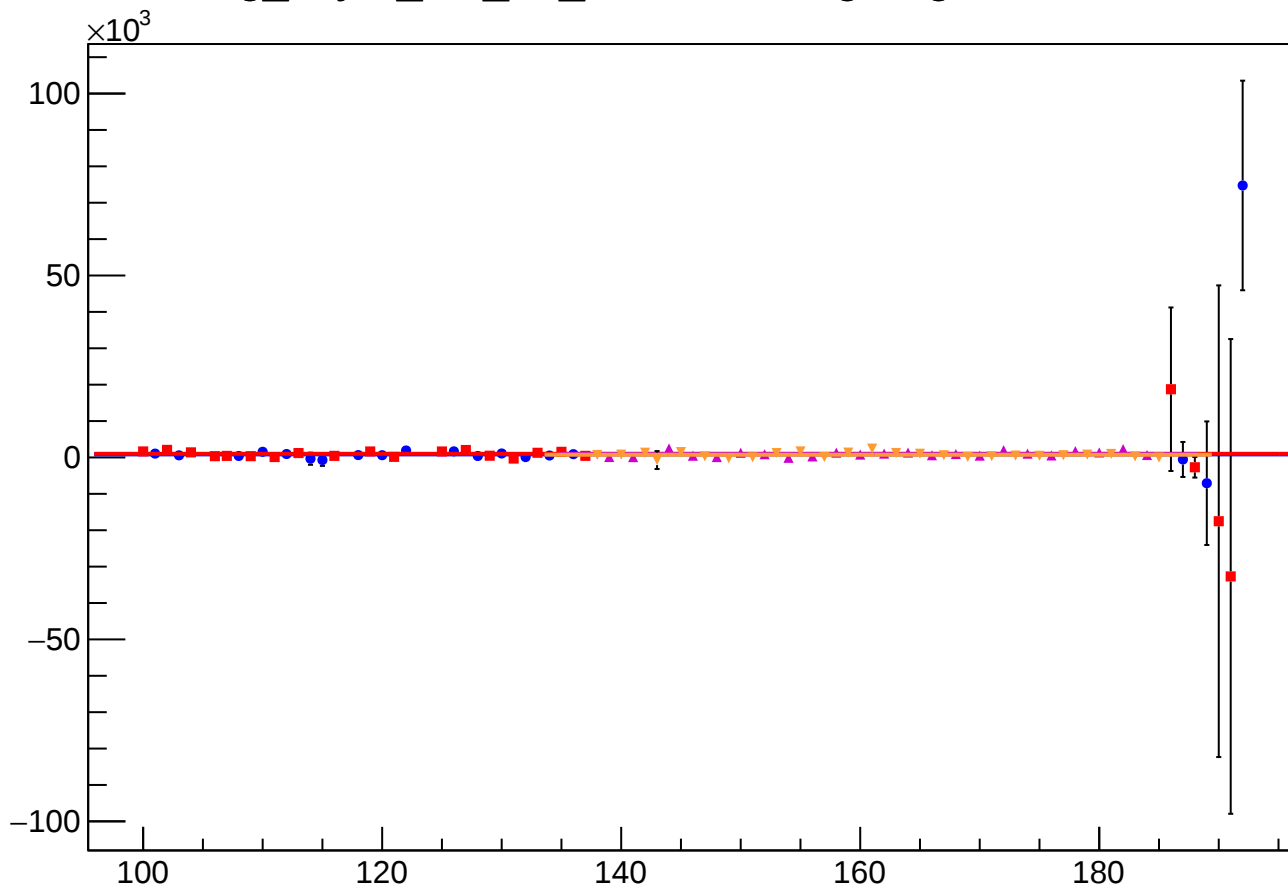
Right: 772.509+/-0.147  $\chi^2/\text{NDF}$ : 4280208.7/40

In: 877.805+/-0.128  $\chi^2/\text{NDF}$ : 2773652.4/41

Out: 895.781+/-0.127  $\chi^2/\text{NDF}$ : 3973306.6/46

All: 886.832+/-0.090  $\chi^2/\text{NDF}$ : 6756897.1/88

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



Right In:  $845.422 \pm 216.255$   $\chi^2/\text{NDF}: 13.0/18$

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

Right Out:  $1004.026 \pm 207.658$   $\chi^2/\text{NDF}: 15.0/21$

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

Left:  $855.088 \pm 94.951$   $\chi^2/\text{NDF}: 49.4/47$

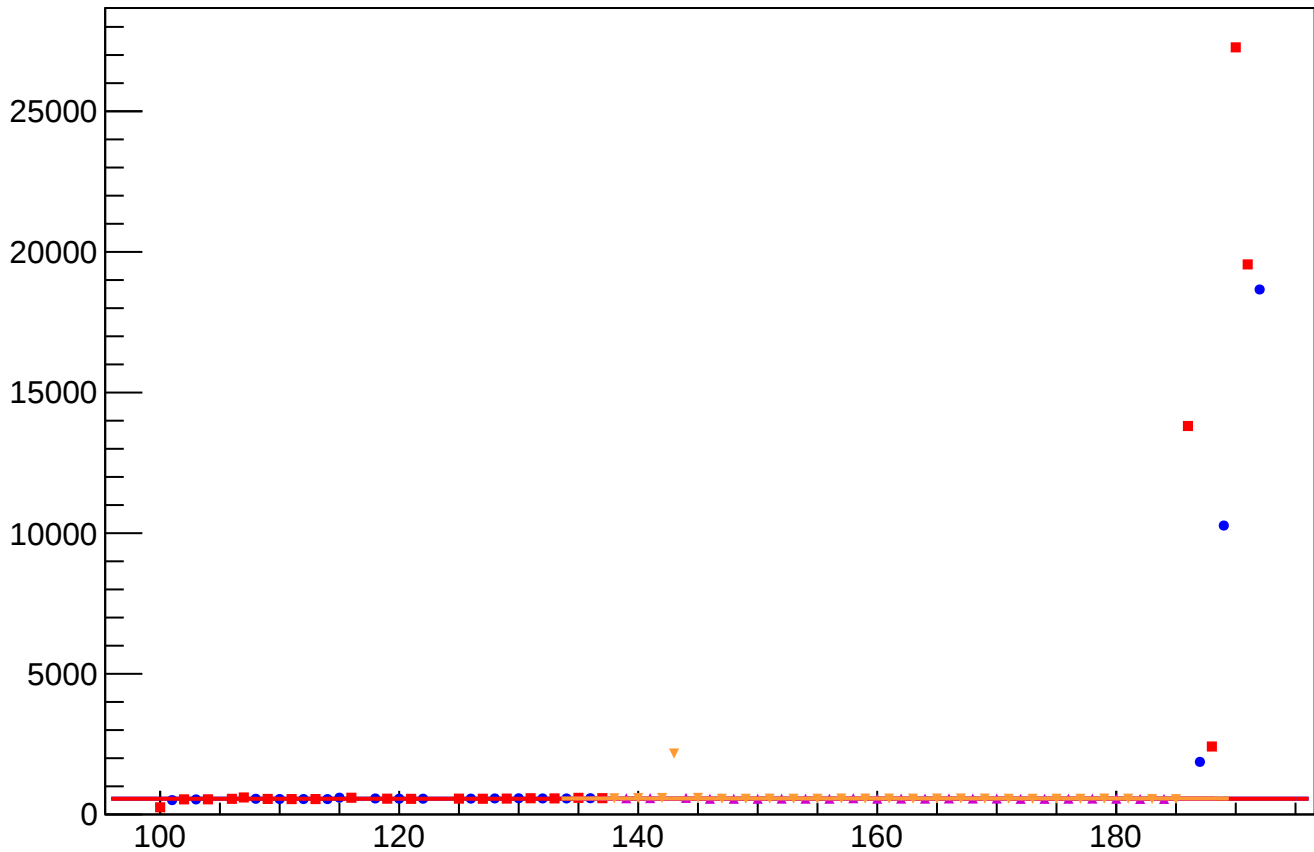
Right:  $927.939 \pm 149.783$   $\chi^2/\text{NDF}: 28.3/40$

In:  $926.862 \pm 114.411$   $\chi^2/\text{NDF}: 40.0/41$

Out:  $826.818 \pm 112.441$   $\chi^2/\text{NDF}: 37.4/46$

All:  $875.971 \pm 80.195$   $\chi^2/\text{NDF}: 77.8/88$

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



Right In: 561.693+/-0.153  $\chi^2/\text{NDF}$ : 1615561.0/18

Left Out: 568.400+/-0.095  $\chi^2/\text{NDF}$ : 854012.8/24

Right Out: 557.819+/-0.147  $\chi^2/\text{NDF}$ : 2285901.9/21

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

Left: 566.185+/-0.067  $\chi^2/\text{NDF}$ : 864323.4/47

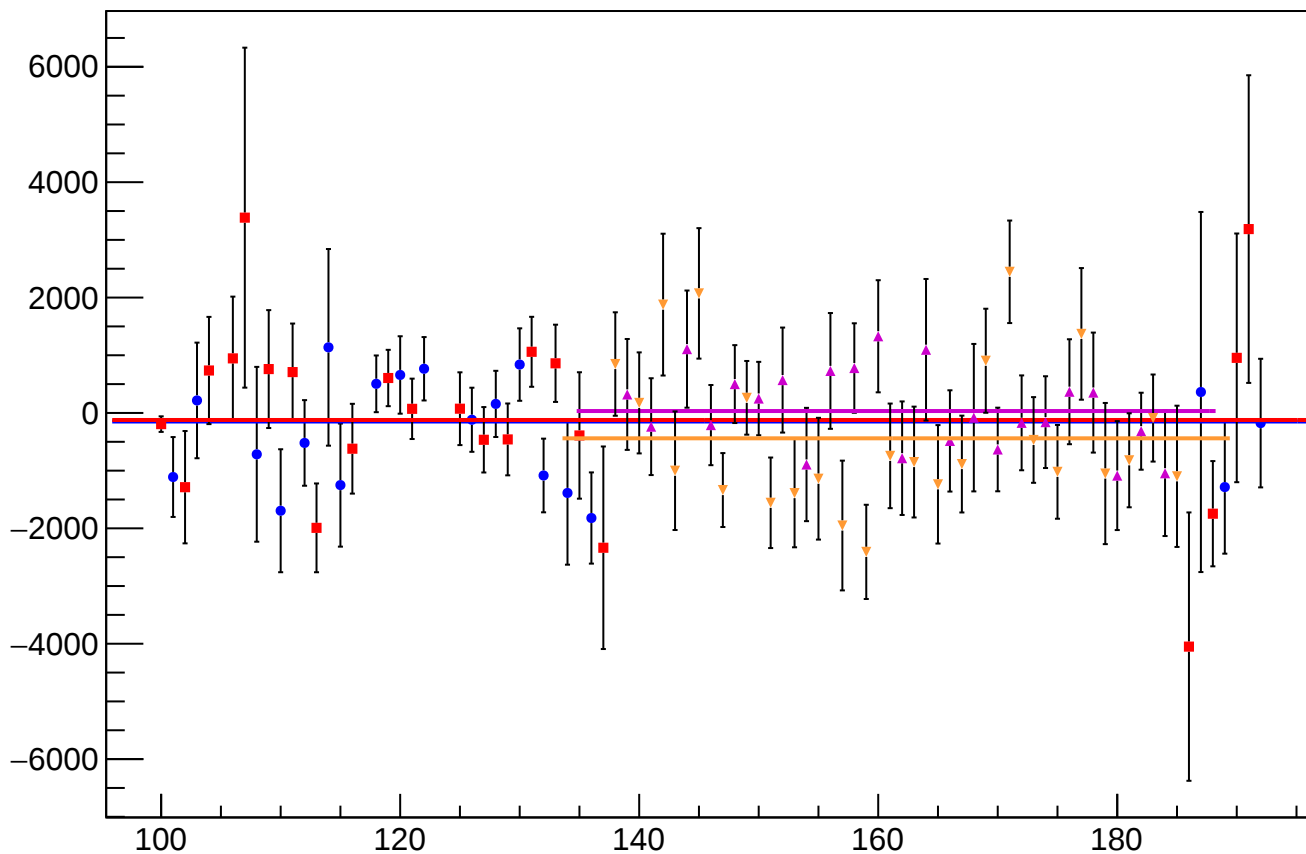
Right: 559.678+/-0.106  $\chi^2/\text{NDF}$ : 3901796.8/40

In: 563.307+/-0.081  $\chi^2/\text{NDF}$ : 1624920.2/41

Out: 565.298+/-0.080  $\chi^2/\text{NDF}$ : 3143584.5/46

All: 564.320+/-0.057  $\chi^2/\text{NDF}$ : 4768812.8/88

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



Right In: -148.073+/-175.997  $\chi^2/\text{NDF}$ : 23.5/18

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

Right Out: -121.836+/-106.776  $\chi^2/\text{NDF}$ : 31.5/21

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

Left: -205.215+/-126.273  $\chi^2/\text{NDF}$ : 59.2/47

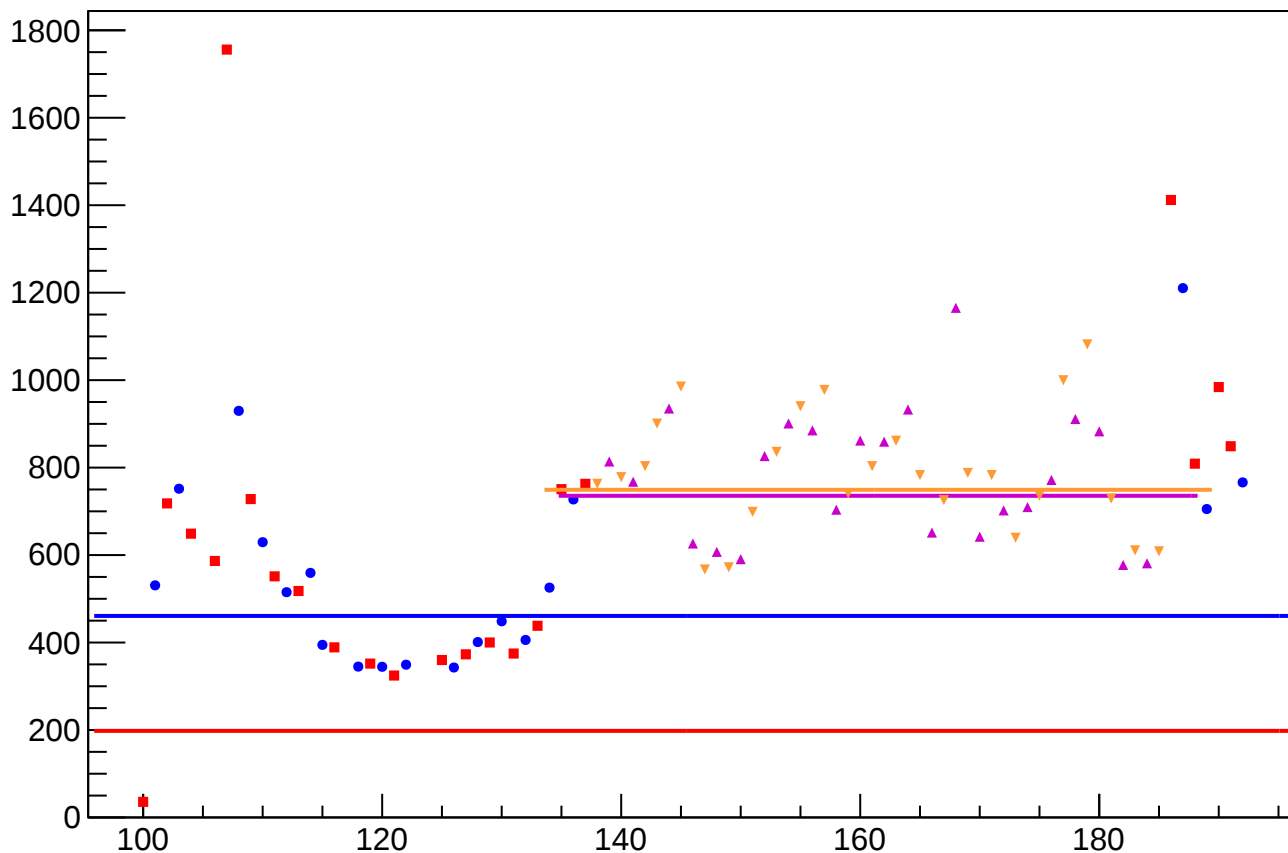
Right: -128.895+/-91.289  $\chi^2/\text{NDF}$ : 55.1/40

In: -59.088+/-125.619  $\chi^2/\text{NDF}$ : 36.2/41

Out: -206.071+/-91.539  $\chi^2/\text{NDF}$ : 77.5/46

All: -155.092+/-73.981  $\chi^2/\text{NDF}$ : 114.5/88

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



Right In: 460.826 $\pm$ 0.124  $\chi^2/\text{NDF}$ : 1424417.9/18

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

Right Out: 198.018 $\pm$ 0.076  $\chi^2/\text{NDF}$ : 9933964.8/21

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

Left: 742.466 $\pm$ 0.089  $\chi^2/\text{NDF}$ : 2165483.4/47

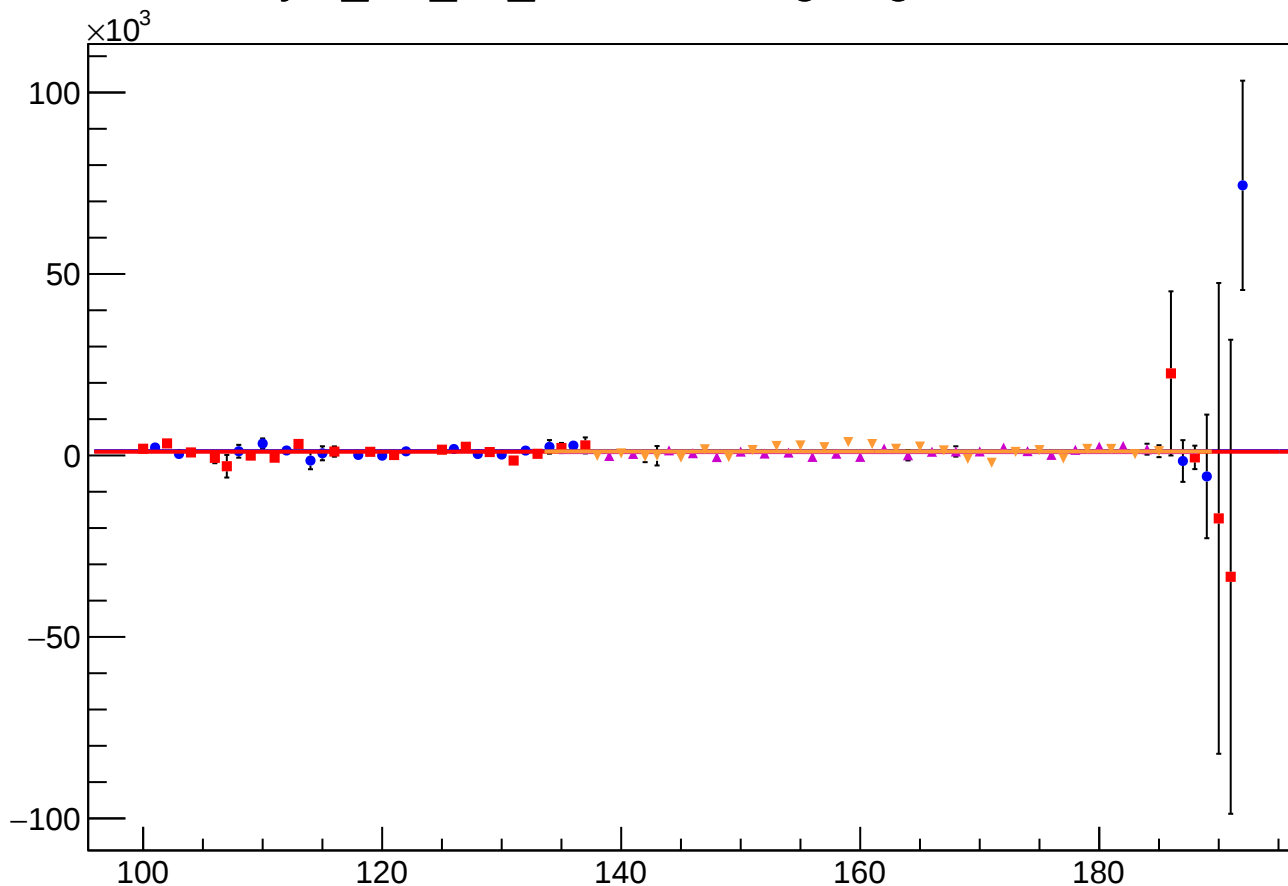
Right: 268.725 $\pm$ 0.065  $\chi^2/\text{NDF}$ : 14618159.2/40

In: 595.589 $\pm$ 0.089  $\chi^2/\text{NDF}$ : 4920047.1/41

Out: 344.120 $\pm$ 0.065  $\chi^2/\text{NDF}$ : 25116663.2/46

All: 431.338 $\pm$ 0.052  $\chi^2/\text{NDF}$ : 35271626.9/80

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



Right In: 1185.378 $\pm$ 295.446  $\chi^2/\text{NDF}$ : 18.5/18

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

Right Out: 1038.086 $\pm$ 280.546  $\chi^2/\text{NDF}$ : 23.9/21

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

Left: 1011.528 $\pm$ 161.243  $\chi^2/\text{NDF}$ : 53.8/47

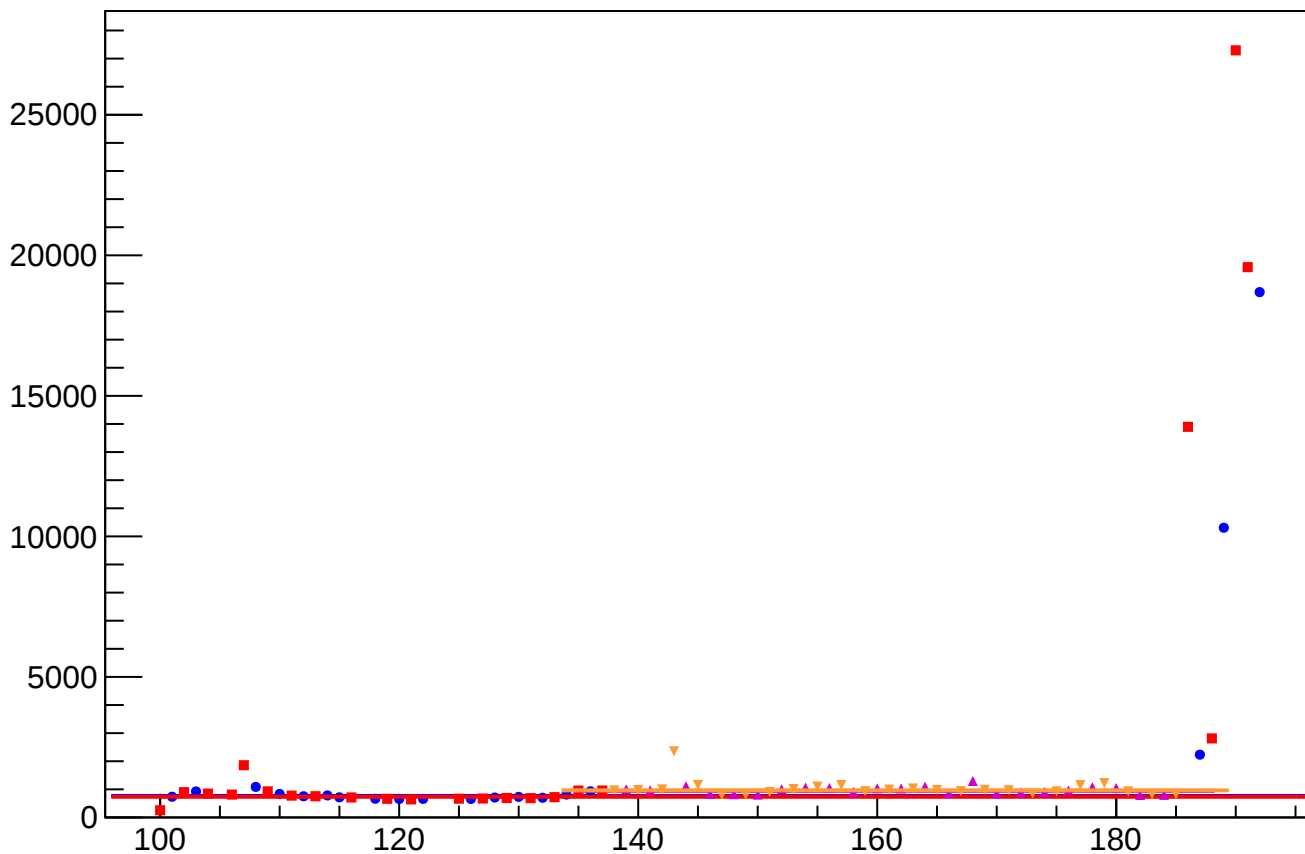
Right: 1107.924 $\pm$ 203.440  $\chi^2/\text{NDF}$ : 42.5/40

In: 1023.094 $\pm$ 180.599  $\chi^2/\text{NDF}$ : 34.1/41

Out: 1073.300 $\pm$ 176.875  $\chi^2/\text{NDF}$ : 62.4/46

All: 1048.720 $\pm$ 126.366  $\chi^2/\text{NDF}$ : 96.5/88

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



Right In: 761.970+/-0.209  $\chi^2/\text{NDF}$ : 1788082.7/18

Left Out: 963.933+/-0.161  $\chi^2/\text{NDF}$ :1003095.2/24

Right Out: 736.010+/-0.198  $\chi^2/\text{NDF}$ : 2985925.9/21

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

Left: 955.000+/-0.114  $\chi^2/\text{NDF}$ : 1510694.5/47

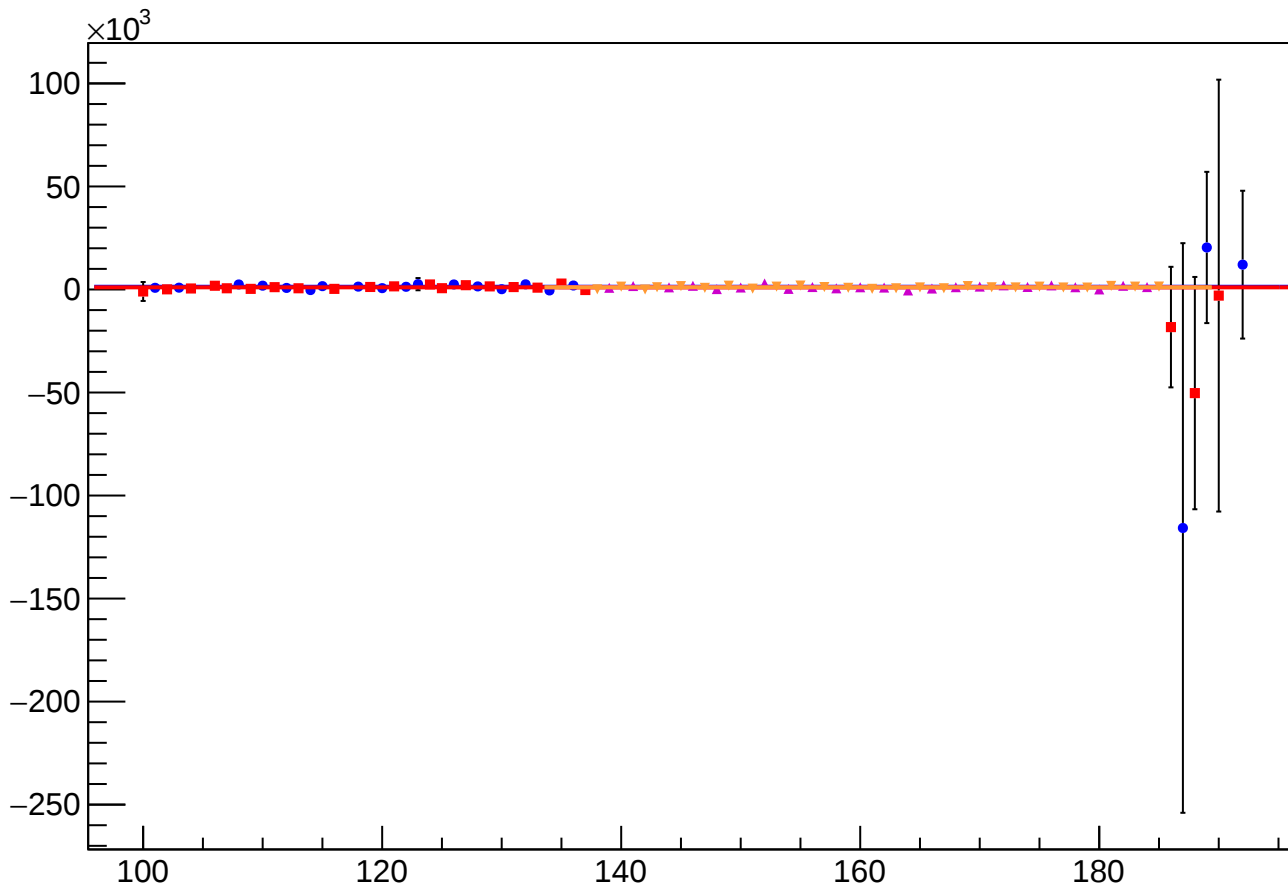
Right: 748.319+/-0.144  $\chi^2/\text{NDF}$ : 4782128.0/40

In: 877.261+/-0.128  $\chi^2/\text{NDF}$ :2775772.7/41

Out: 873.336+/-0.125  $\chi^2/\text{NDF}$ :4784380.4/46

All: 875.258+/-0.089  $\chi^2/\text{NDF}$ : 7560635.3/88

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



Right In: 1324.833 $\pm$ 218.592  $\chi^2$ /NDF: 13.9/19

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

Right Out: 1038.744 $\pm$ 212.072  $\chi^2$ /NDF: 14.8/21

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

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

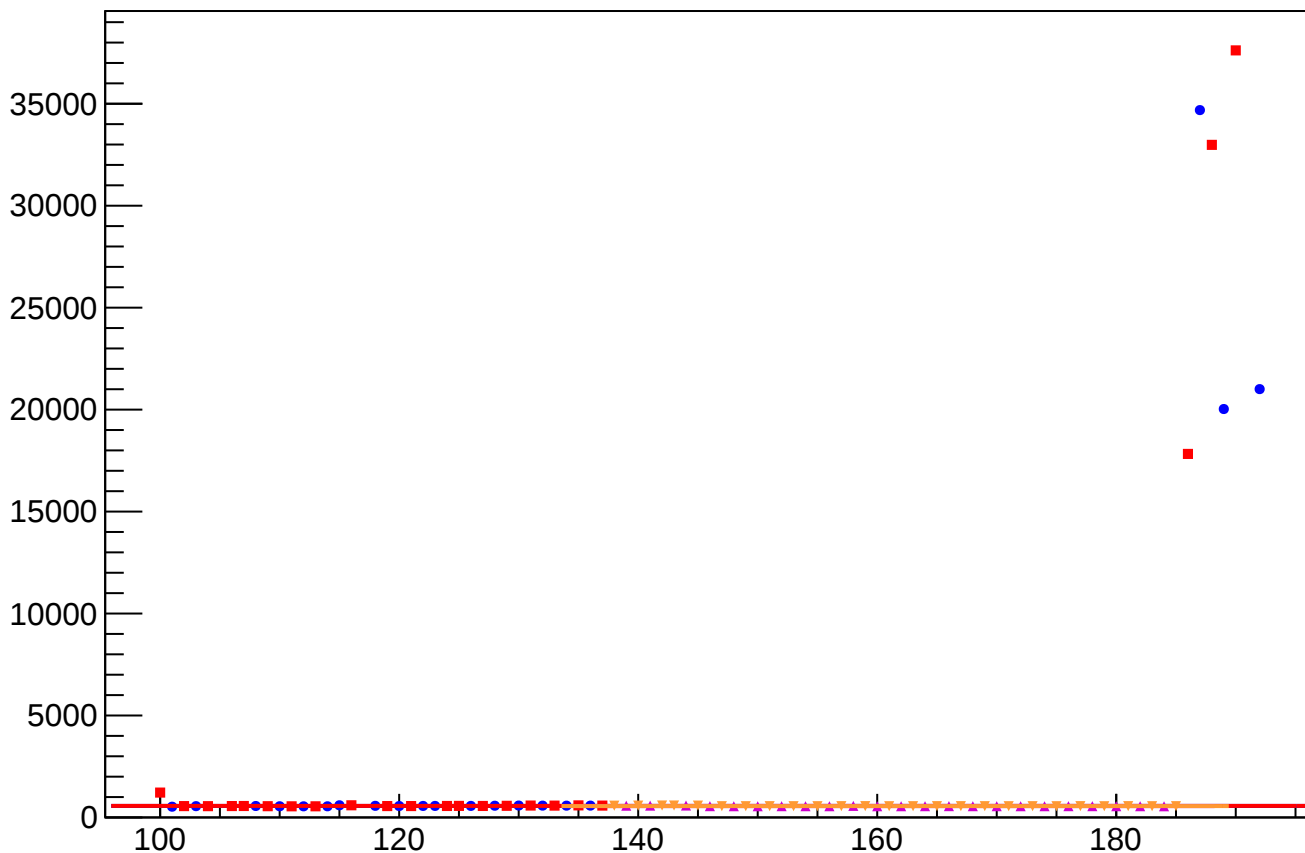
Right: 1177.458 $\pm$ 152.210  $\chi^2$ /NDF: 29.5/41

In: 1178.253 $\pm$ 113.723  $\chi^2$ /NDF:44.5/42

Out: 1064.131 $\pm$ 110.641  $\chi^2$ /NDF:29.9/46

All: 1119.625 $\pm$ 79.302  $\chi^2$ /NDF: 74.9/89

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



Right In: 565.066+/-0.155  $\chi^2/\text{NDF}$ : 1356634.4/19

Left Out: 557.534+/-0.092  $\chi^2/\text{NDF}$ : 14752.8/24

Right Out: 566.864+/-0.150  $\chi^2/\text{NDF}$ : 1685991.1/21

Left In: 556.969+/-0.094  $\chi^2/\text{NDF}$ : 11209.7/22

Left: 557.259+/-0.066  $\chi^2/\text{NDF}$ : 25980.9/47

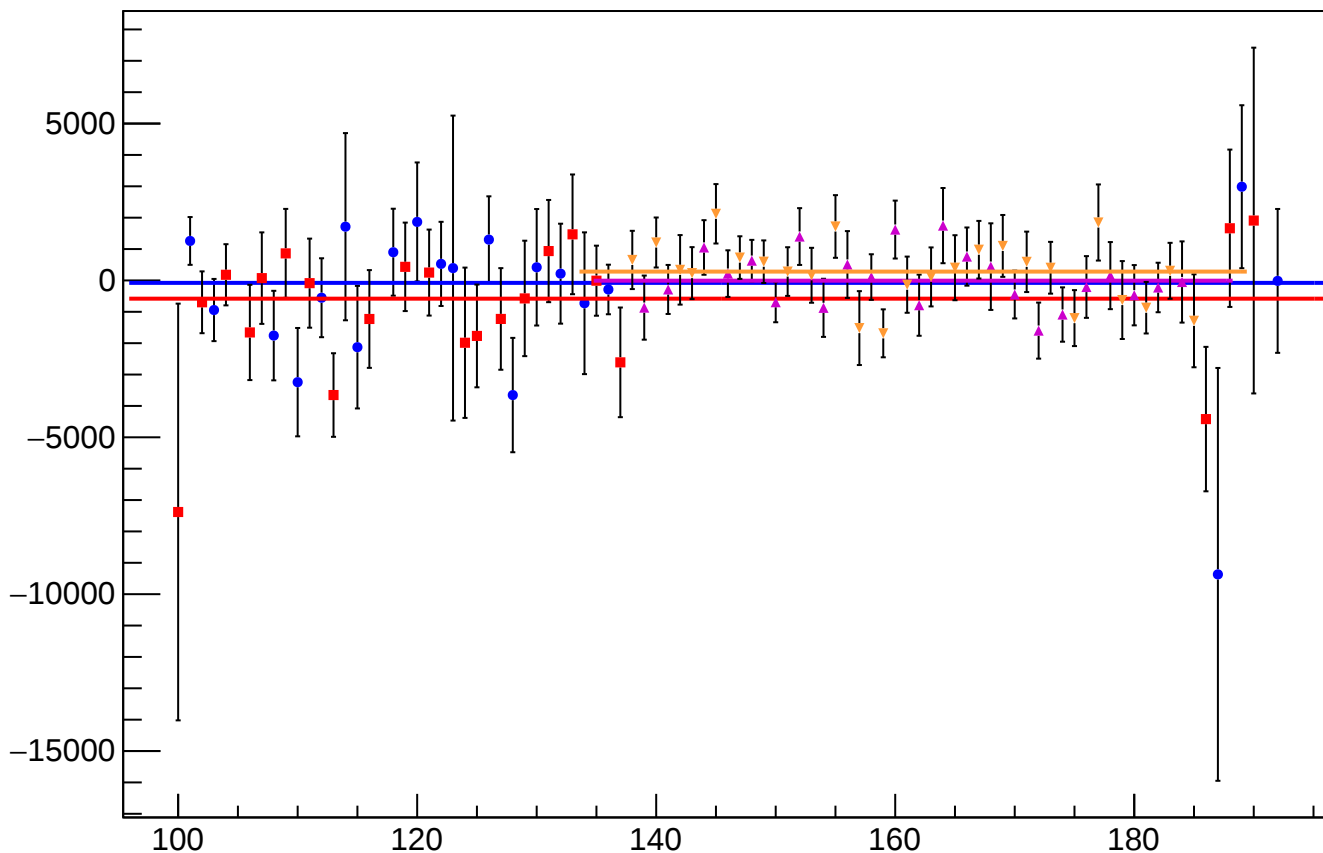
Right: 565.992+/-0.108  $\chi^2/\text{NDF}$ : 3042695.2/41

In: 559.160+/-0.080  $\chi^2/\text{NDF}$ : 1369845.4/42

Out: 560.074+/-0.078  $\chi^2/\text{NDF}$ : 1703561.2/46

All: 559.630+/-0.056  $\chi^2/\text{NDF}$ : 3073472.9/89

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



Right In:  $-77.716 \pm 322.053$   $\chi^2/\text{NDF}$ : 20.4/19

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

Right Out:  $-581.269 \pm 326.168$   $\chi^2/\text{NDF}$ : 18.4/21

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

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

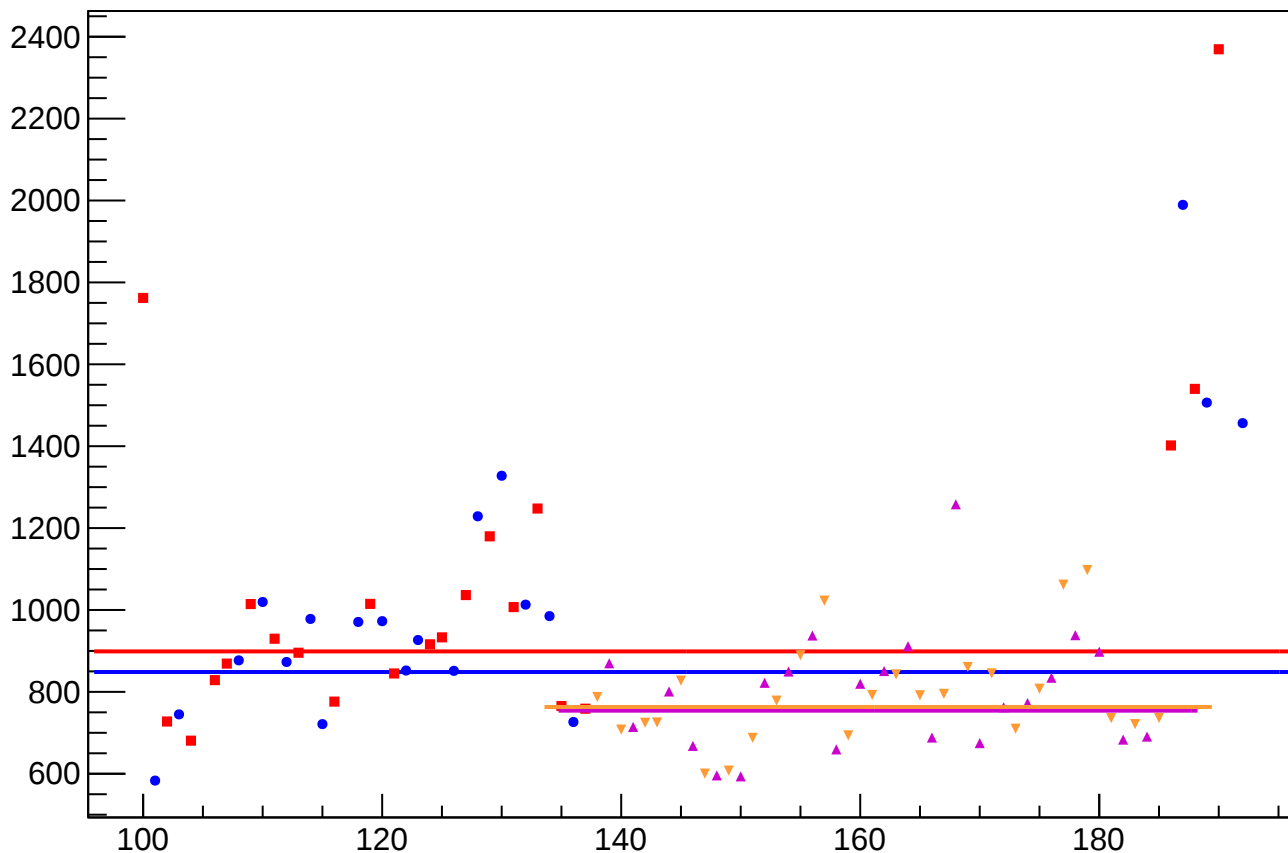
Right:  $-326.297 \pm 229.167$   $\chi^2/\text{NDF}$ : 40.0/41

In:  $-25.229 \pm 159.358$   $\chi^2/\text{NDF}$ : 40.6/42

Out:  $79.644 \pm 157.879$   $\chi^2/\text{NDF}$ : 50.4/46

All:  $27.696 \pm 112.156$   $\chi^2/\text{NDF}$ : 91.3/89

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



Right In: 848.472 $\pm$ 0.228  $\chi^2$ /NDF: 948132.3/19

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

Right Out: 898.823 $\pm$ 0.231  $\chi^2$ /NDF: 790470.9/21

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

Left: 758.665 $\pm$ 0.091  $\chi^2$ /NDF: 1687969.6/47

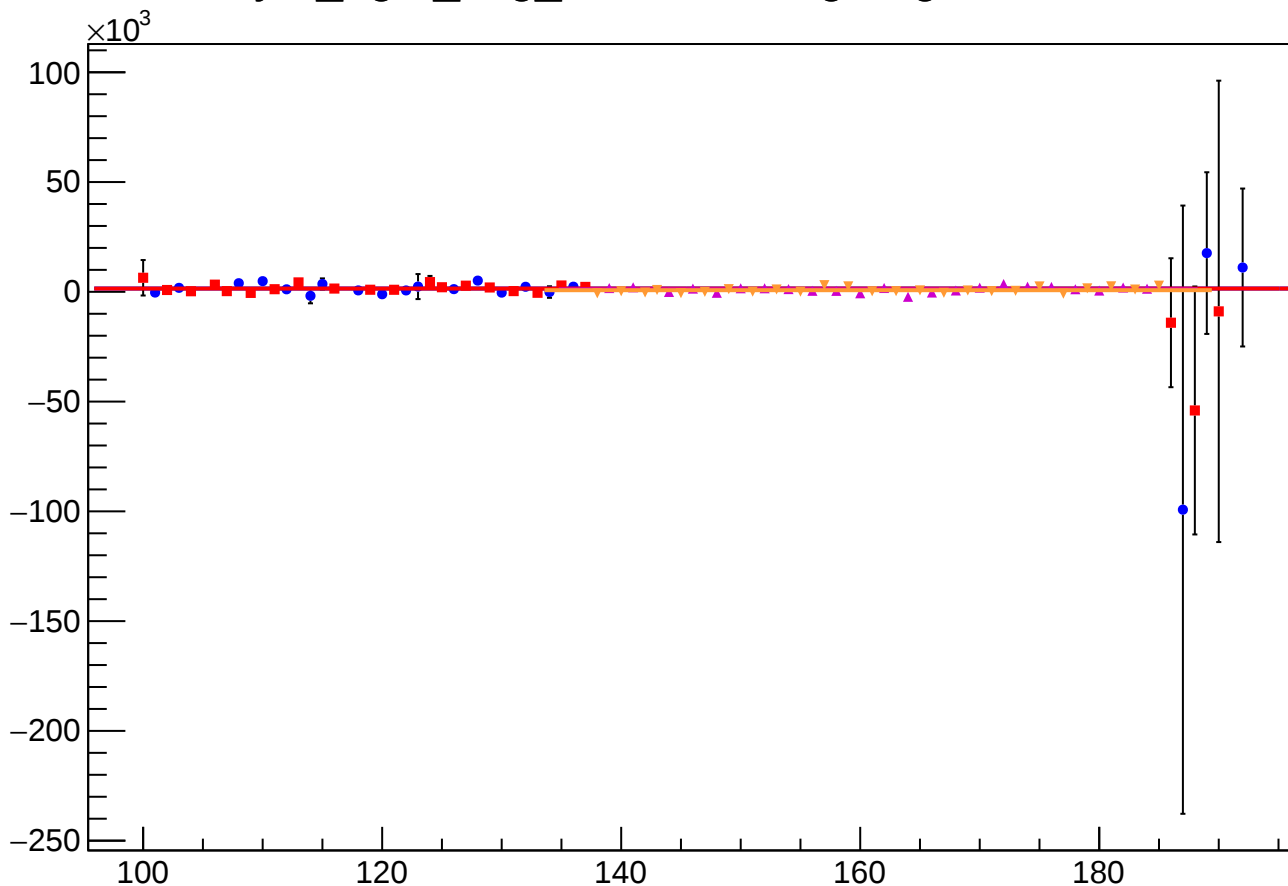
Right: 873.328 $\pm$ 0.162  $\chi^2$ /NDF: 1762736.0/41

In: 777.206 $\pm$ 0.113  $\chi^2$ /NDF: 2009651.8/42

Out: 794.888 $\pm$ 0.112  $\chi^2$ /NDF: 1809394.1/46

All: 786.129 $\pm$ 0.079  $\chi^2$ /NDF: 3831472.3/89

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



Right In: 1500.245 $\pm$ 402.616  $\chi^2$ /NDF: 17.9/19

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

Right Out: 1481.911 $\pm$ 400.668  $\chi^2$ /NDF: 13.3/21

Left In: 1124.587 $\pm$ 230.065  $\chi^2$ /NDF: 25.4/22

Left: 928.287 $\pm$ 161.055  $\chi^2$ /NDF: 48.3/47

Right: 1491.034 $\pm$ 284.001  $\chi^2$ /NDF: 31.2/41

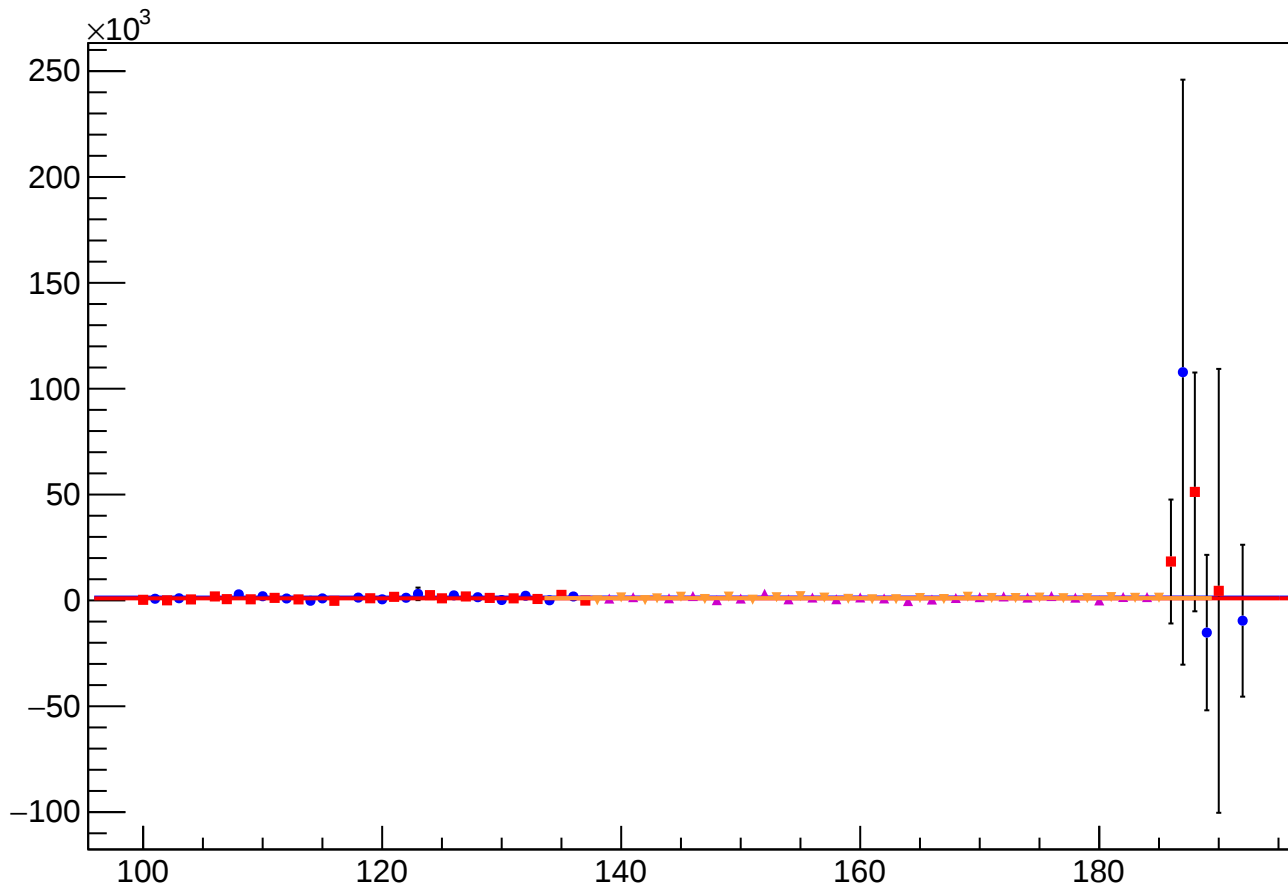
In: 1217.056 $\pm$ 199.753  $\chi^2$ /NDF: 43.9/42

Out: 918.242 $\pm$ 196.537  $\chi^2$ /NDF: 37.4/46

All: 1065.225 $\pm$ 140.096  $\chi^2$ /NDF: 82.5/89



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



Right In: 1344.674 $\pm$ 218.846  $\chi^2$ /NDF: 12.9/19

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

Right Out: 967.025 $\pm$ 208.607  $\chi^2$ /NDF: 13.4/21

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

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

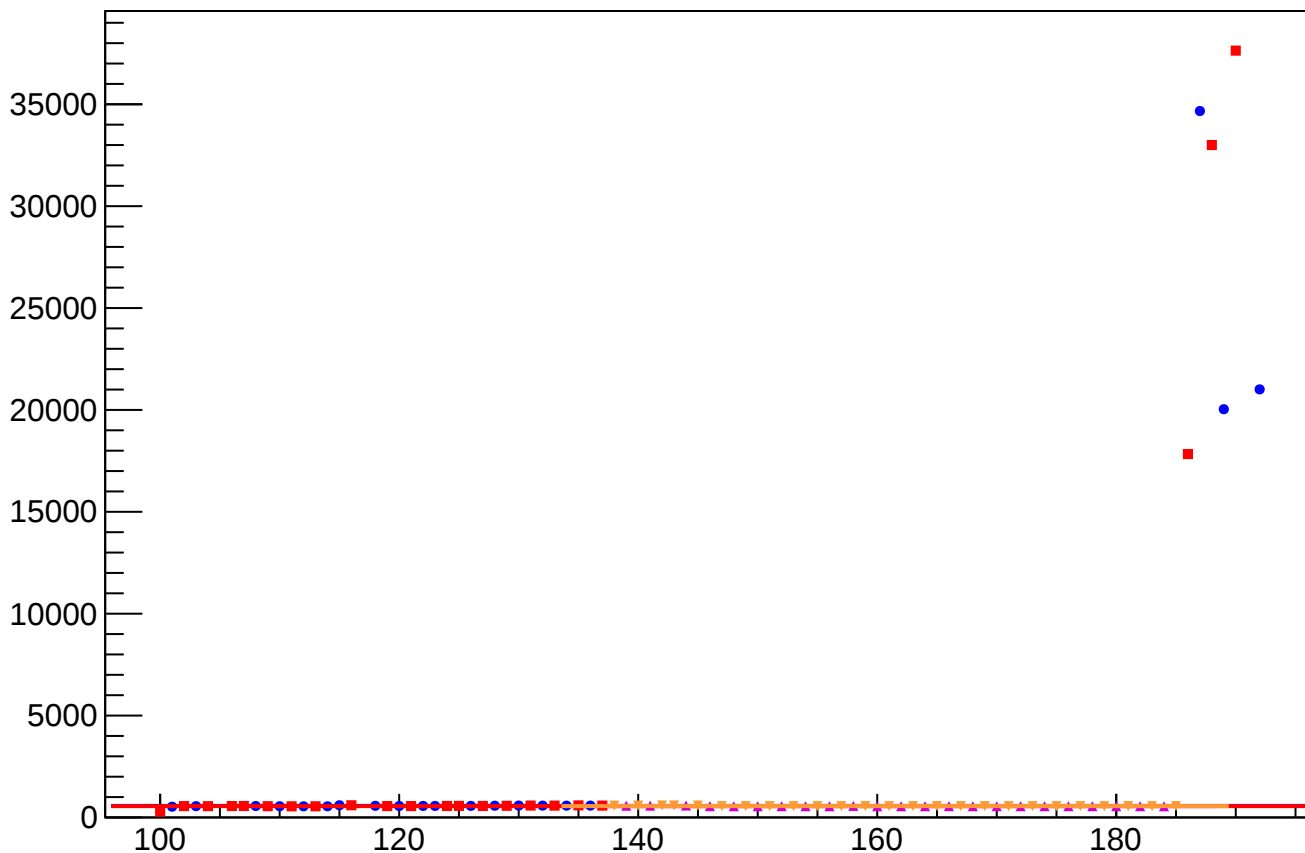
Right: 1146.808 $\pm$ 150.997  $\chi^2$ /NDF: 27.8/41

In: 1231.484 $\pm$ 113.852  $\chi^2$ /NDF:45.4/42

Out: 1053.958 $\pm$ 110.221  $\chi^2$ /NDF:28.6/46

All: 1139.844 $\pm$ 79.191  $\chi^2$ /NDF: 75.2/89

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



Right In: 565.722+/-0.155  $\chi^2/\text{NDF}$ : 1356681.2/19

Left Out: 558.099+/-0.092  $\chi^2/\text{NDF}$ :14785.2/24

Right Out: 555.950+/-0.148  $\chi^2/\text{NDF}$ : 1770733.6/21

Left In: 557.597+/-0.094  $\chi^2/\text{NDF}$ :11276.8/22

Left: 557.854+/-0.066  $\chi^2/\text{NDF}$ : 26076.6/47

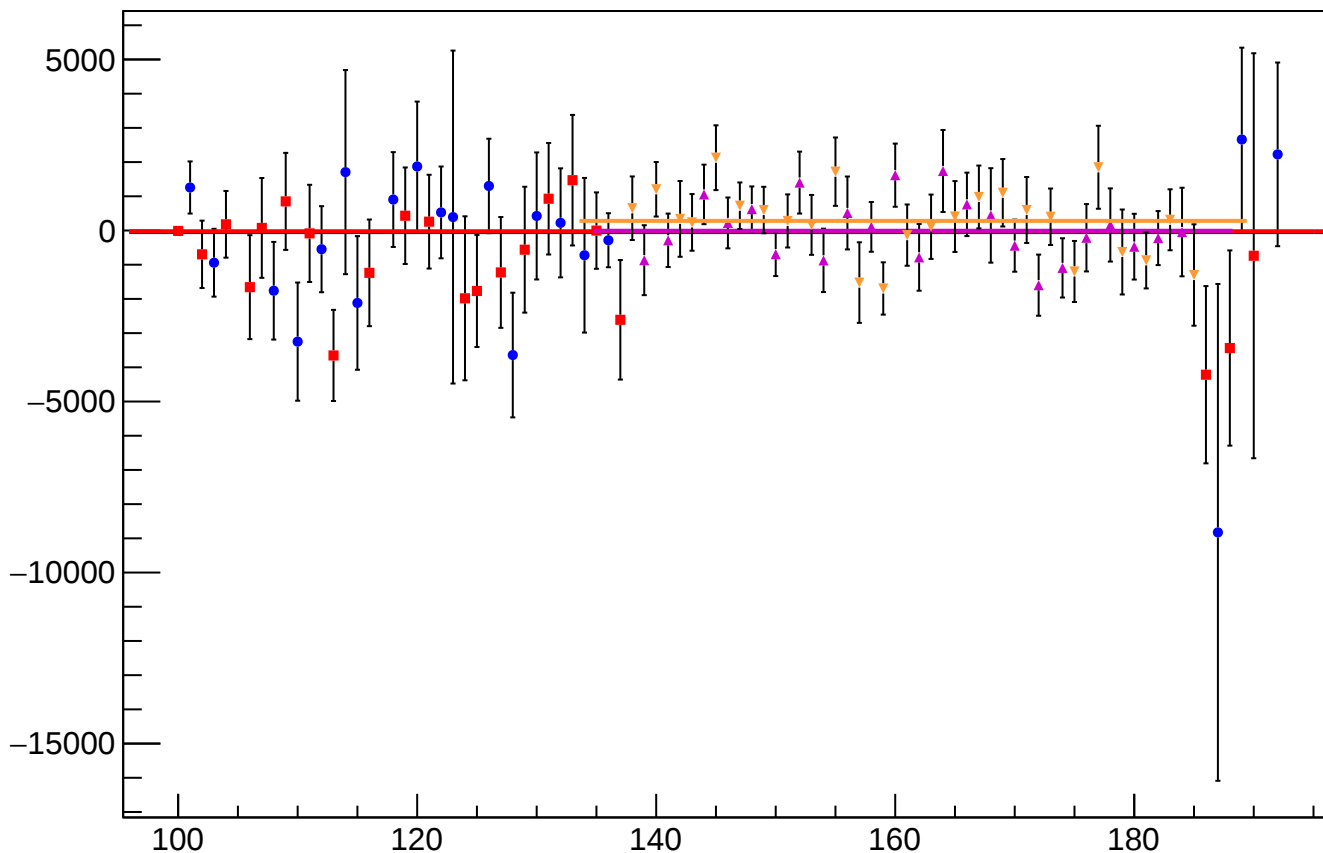
Right: 560.602+/-0.107  $\chi^2/\text{NDF}$ : 3129504.1/41

In: 559.796+/-0.081  $\chi^2/\text{NDF}$ :1369968.7/42

Out: 557.499+/-0.078  $\chi^2/\text{NDF}$ :1785671.9/46

All: 558.610+/-0.056  $\chi^2/\text{NDF}$ : 3156060.6/89

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



Right In: -46.037 $\pm$ 323.241  $\chi^2$ /NDF: 20.2/19

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

Right Out: -21.695 $\pm$ 38.946  $\chi^2$ /NDF: 19.9/21

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

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

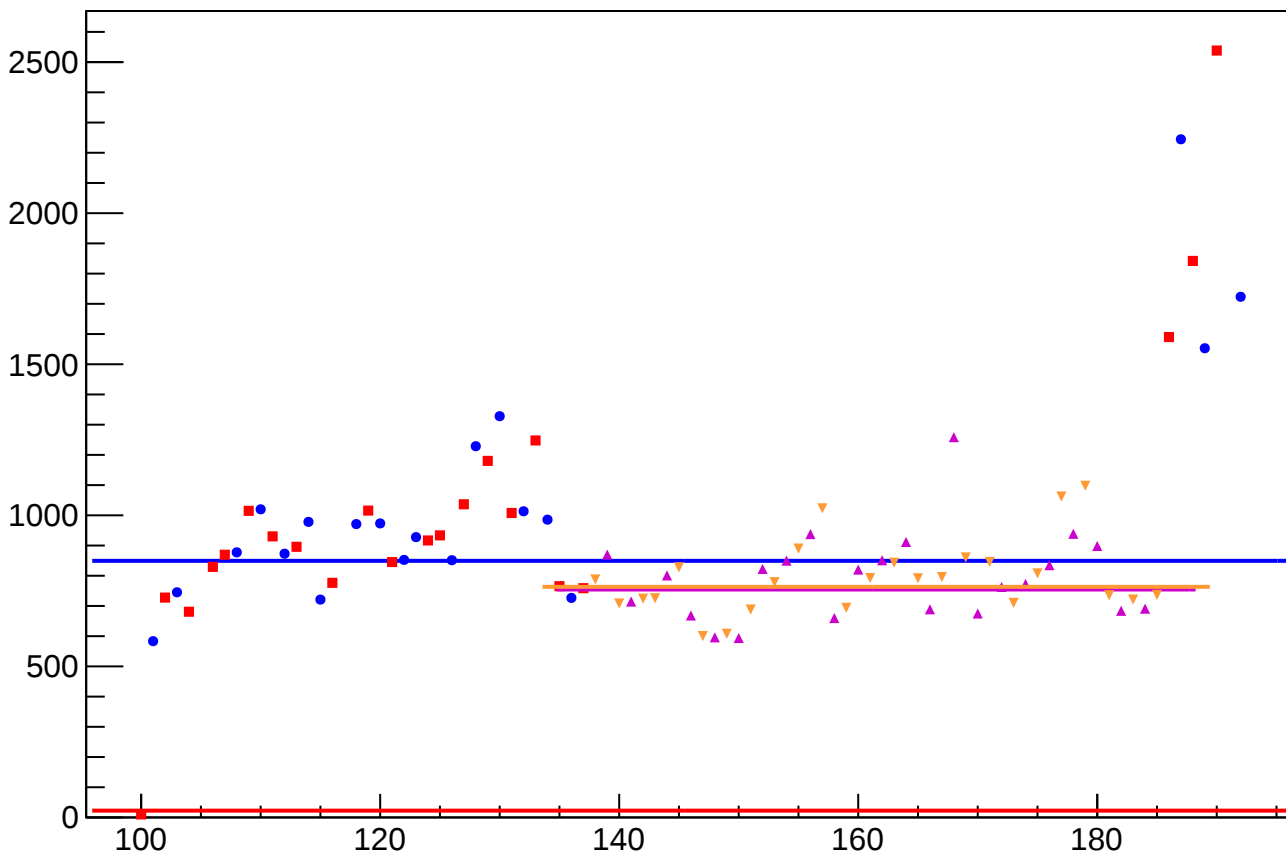
Right: -22.043 $\pm$ 38.667  $\chi^2$ /NDF: 40.2/41

In: -16.744 $\pm$ 159.561  $\chi^2$ /NDF:40.4/42

Out: -8.208 $\pm$ 38.070  $\chi^2$ /NDF:49.4/46

All: -8.668 $\pm$ 37.030  $\chi^2$ /NDF: 89.8/89

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



Right In: 849.365+/-0.229

$\chi^2/\text{NDF}$ : 1042740.4/19

Left Out: 763.307+/-0.128

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

Right Out: 22.573+/-0.028

$\chi^2/\text{NDF}$ : 15385097.0/21

Left In: 754.483+/-0.130

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

Left: 758.967+/-0.091

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

Right: 34.404+/-0.027

$\chi^2/\text{NDF}$ : 29325441.6/41

In: 777.603+/-0.113

$\chi^2/\text{NDF}$ : 2104610.2/42

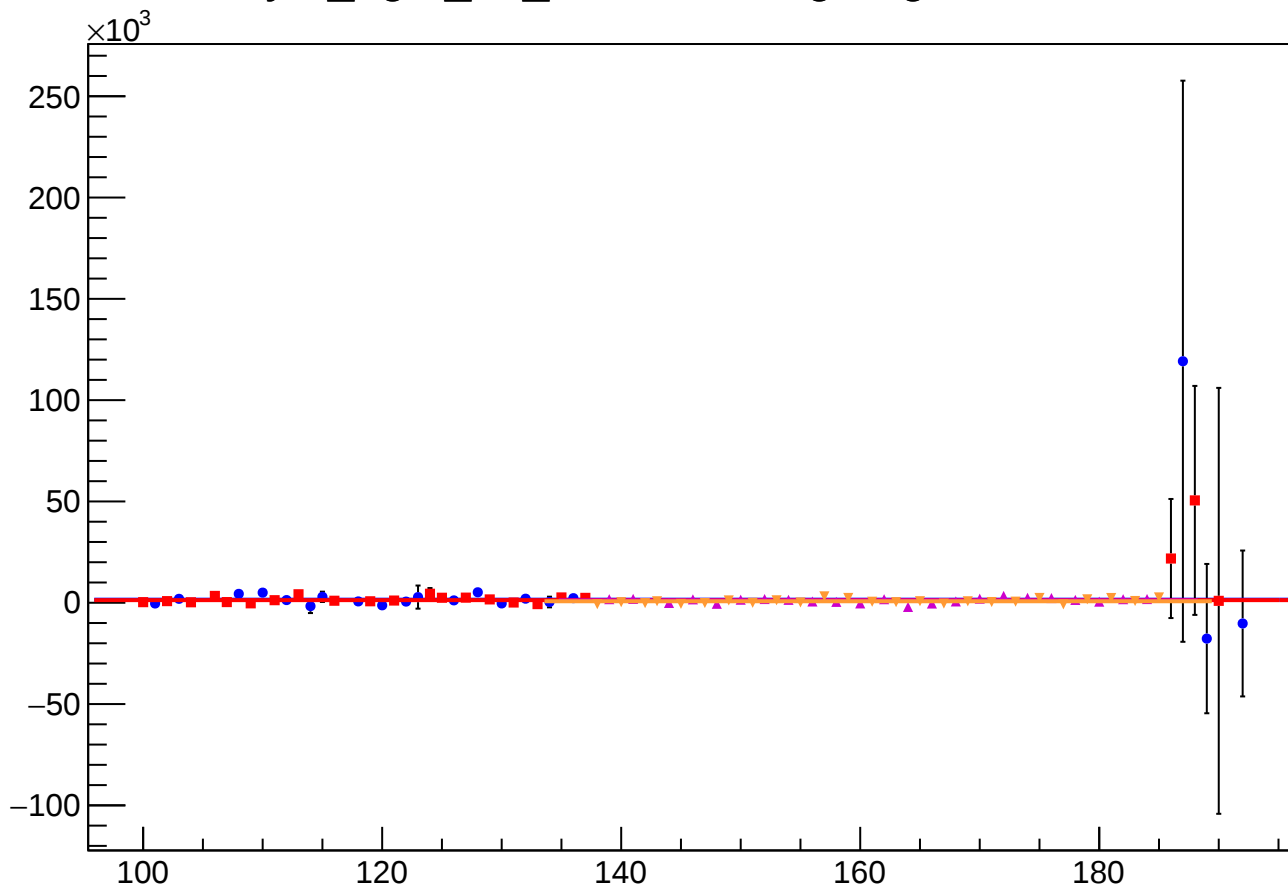
Out: 55.532+/-0.027

$\chi^2/\text{NDF}$ : 48330060.2/46

All: 94.423+/-0.026

$\chi^2/\text{NDF}$ : 89186160.1/89

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



Right In: 1516.714+/-402.839  $\chi^2/\text{NDF}$ : 18.9/19

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

Right Out: 1293.094+/-376.637  $\chi^2/\text{NDF}$ : 13.6/21

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

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

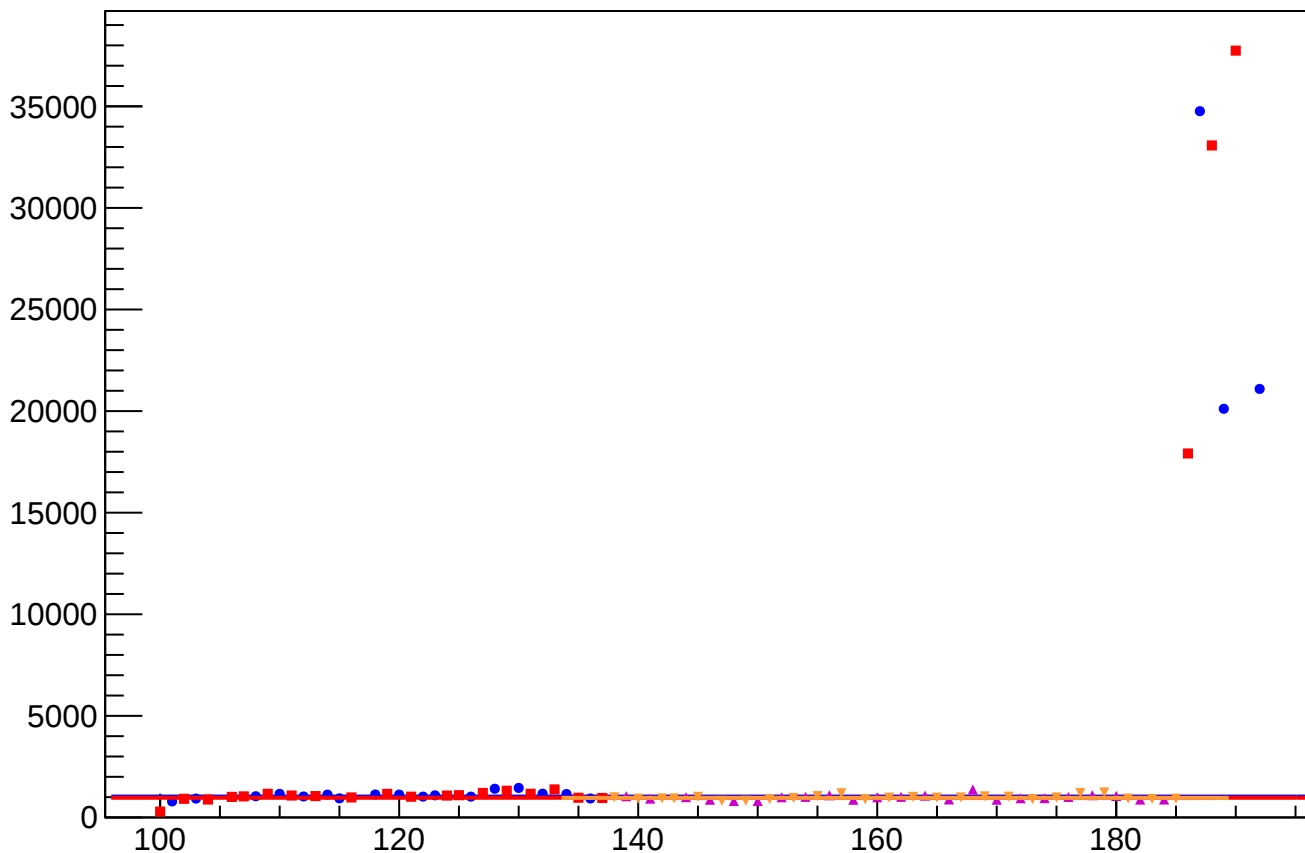
Right: 1397.396+/-275.120  $\chi^2/\text{NDF}$ : 32.7/41

In: 1260.104+/-199.887  $\chi^2/\text{NDF}$ : 43.7/42

Out: 888.177+/-193.574  $\chi^2/\text{NDF}$ : 35.4/46

All: 1068.174+/-139.056  $\chi^2/\text{NDF}$ : 80.9/89

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



Right In: 1027.692+/-0.285  $\chi^2/\text{NDF}$ : 1622801.5/19

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

Right Out: 968.891+/-0.266  $\chi^2/\text{NDF}$ : 2652556.9/21

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

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

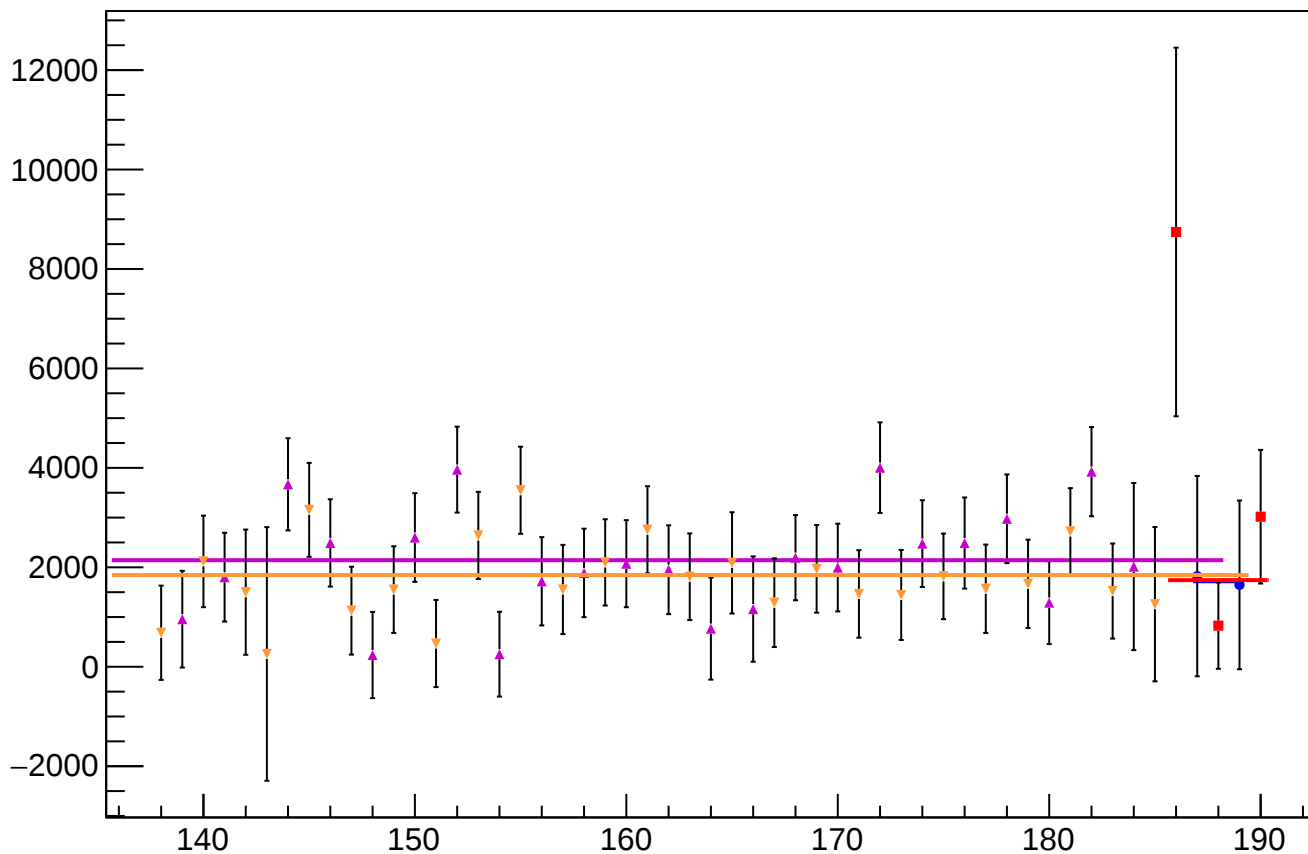
Right: 996.317+/-0.195  $\chi^2/\text{NDF}$ : 4298095.4/41

In: 973.147+/-0.141  $\chi^2/\text{NDF}$ : 2114514.5/42

Out: 964.392+/-0.137  $\chi^2/\text{NDF}$ : 3015782.6/46

All: 968.629+/-0.098  $\chi^2/\text{NDF}$ : 5132277.1/89

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



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

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

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

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

Left: 1991.243 $\pm$ 133.294  $\chi^2$ /NDF: 49.0/47

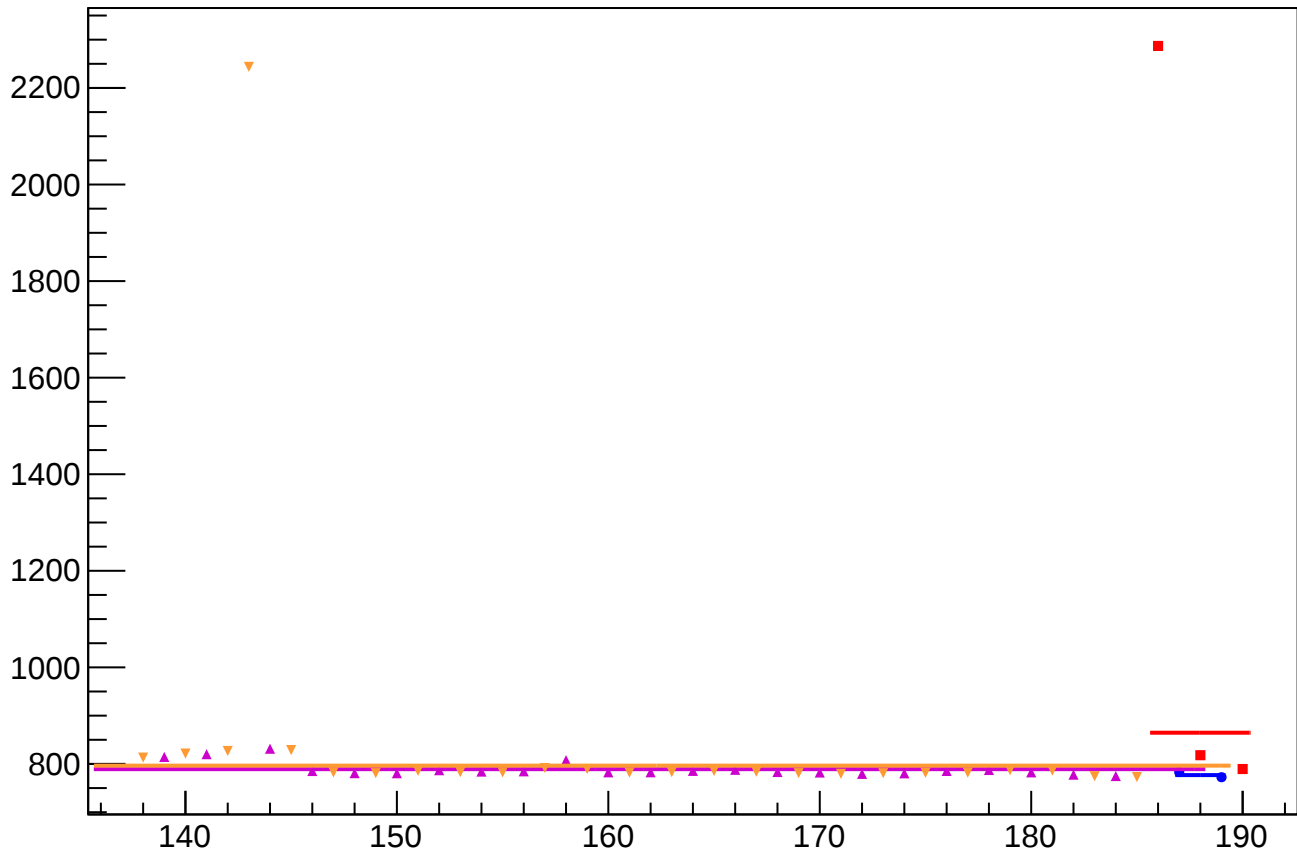
Right: 1737.192 $\pm$ 626.421  $\chi^2$ /NDF: 5.6/4

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

Out: 1837.843 $\pm$ 180.837  $\chi^2$ /NDF:21.0/27

All: 1980.238 $\pm$ 130.375  $\chi^2$ /NDF: 54.7/52

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



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

Left: 792.886 $\pm$ 0.094  $\chi^2$ /NDF: 671086.4/47

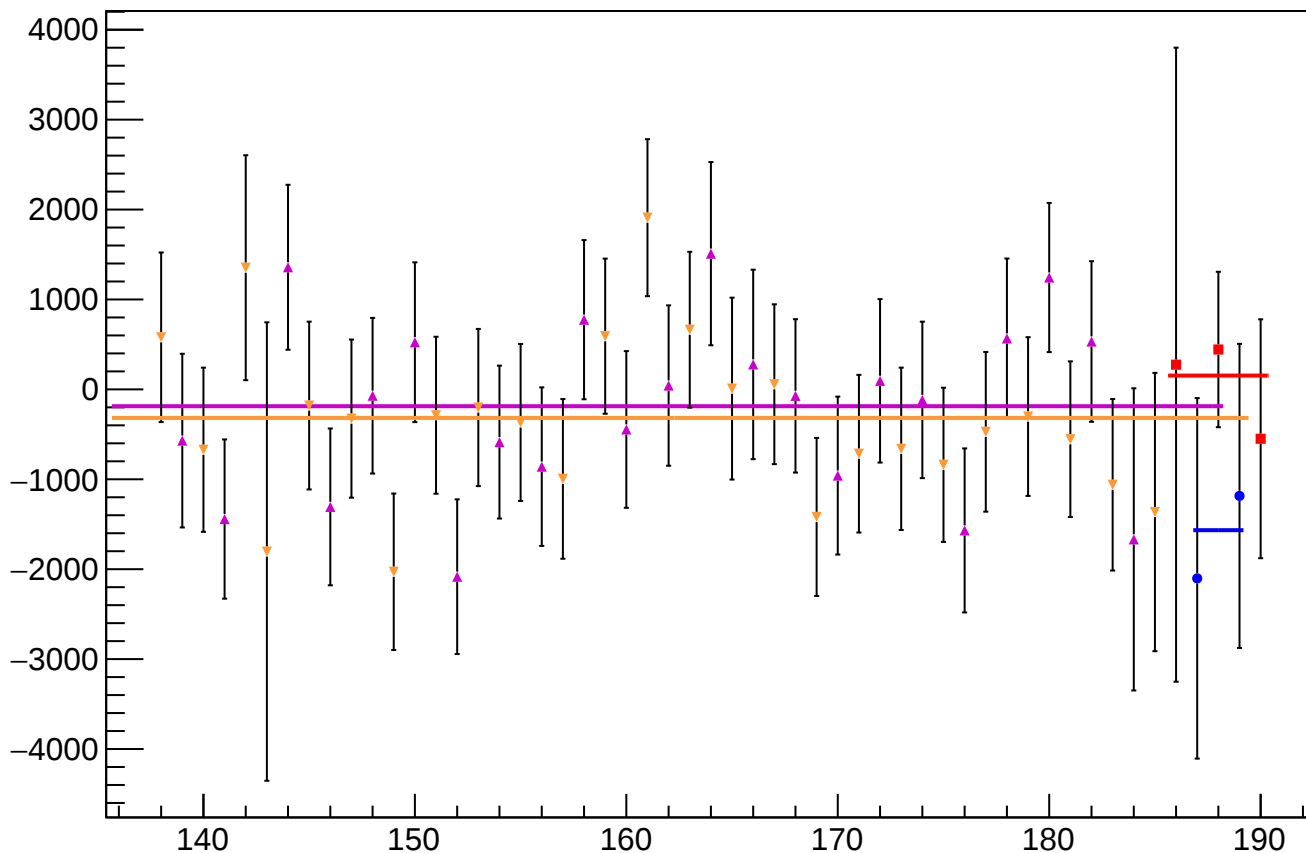
Right: 844.207 $\pm$ 0.443  $\chi^2$ /NDF: 313539.0/4

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

Out: 800.829 $\pm$ 0.128  $\chi^2$ /NDF: 982233.5/27

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

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



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

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

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

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

Left: -253.478 $\pm$ 132.678  $\chi^2$ /NDF: 46.1/47

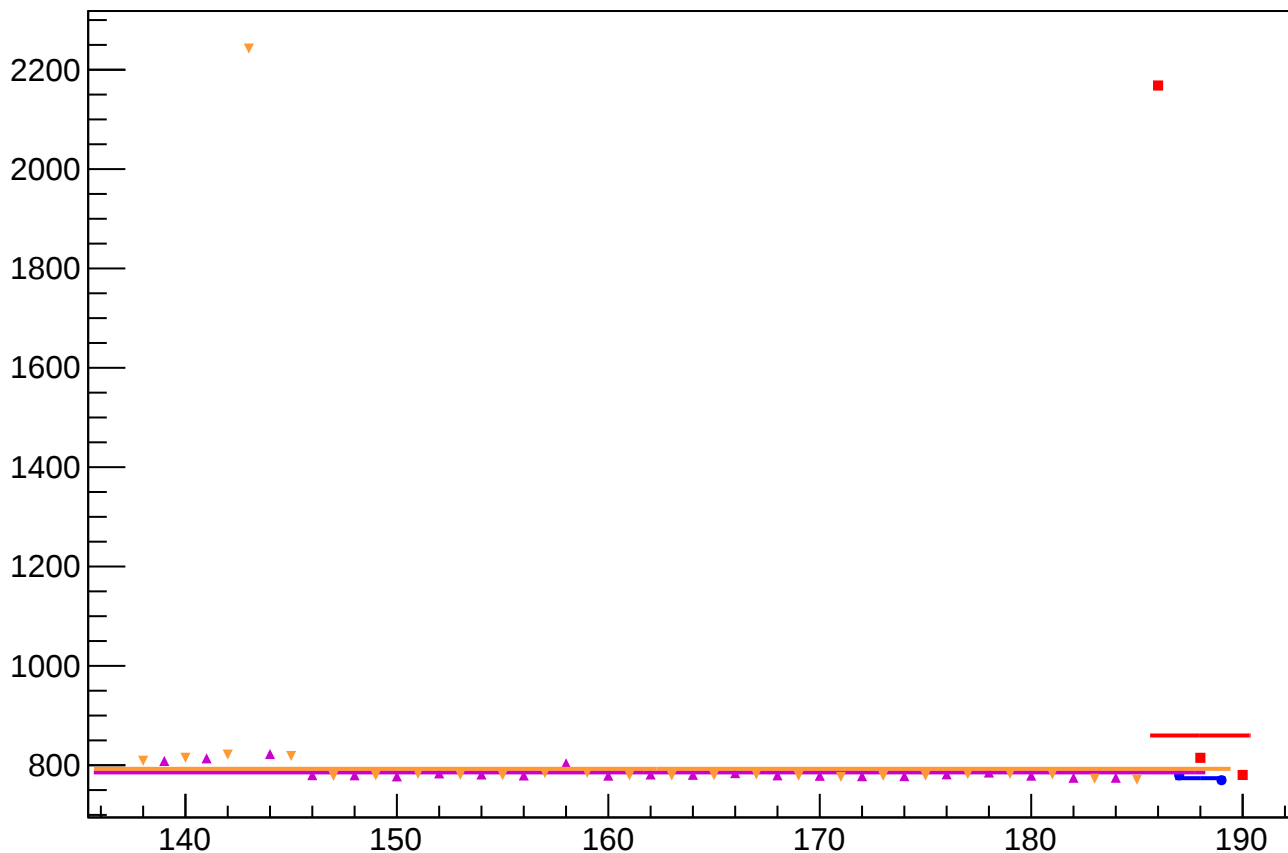
Right: -244.818 $\pm$ 622.066  $\chi^2$ /NDF: 1.9/4

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

Out: -287.322 $\pm$ 179.963  $\chi^2$ /NDF:21.1/27

All: -253.101 $\pm$ 129.759  $\chi^2$ /NDF: 48.0/52

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



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

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

Left:  $789.249 \pm 0.094$   $\chi^2/\text{NDF}$ : 670033.9/47

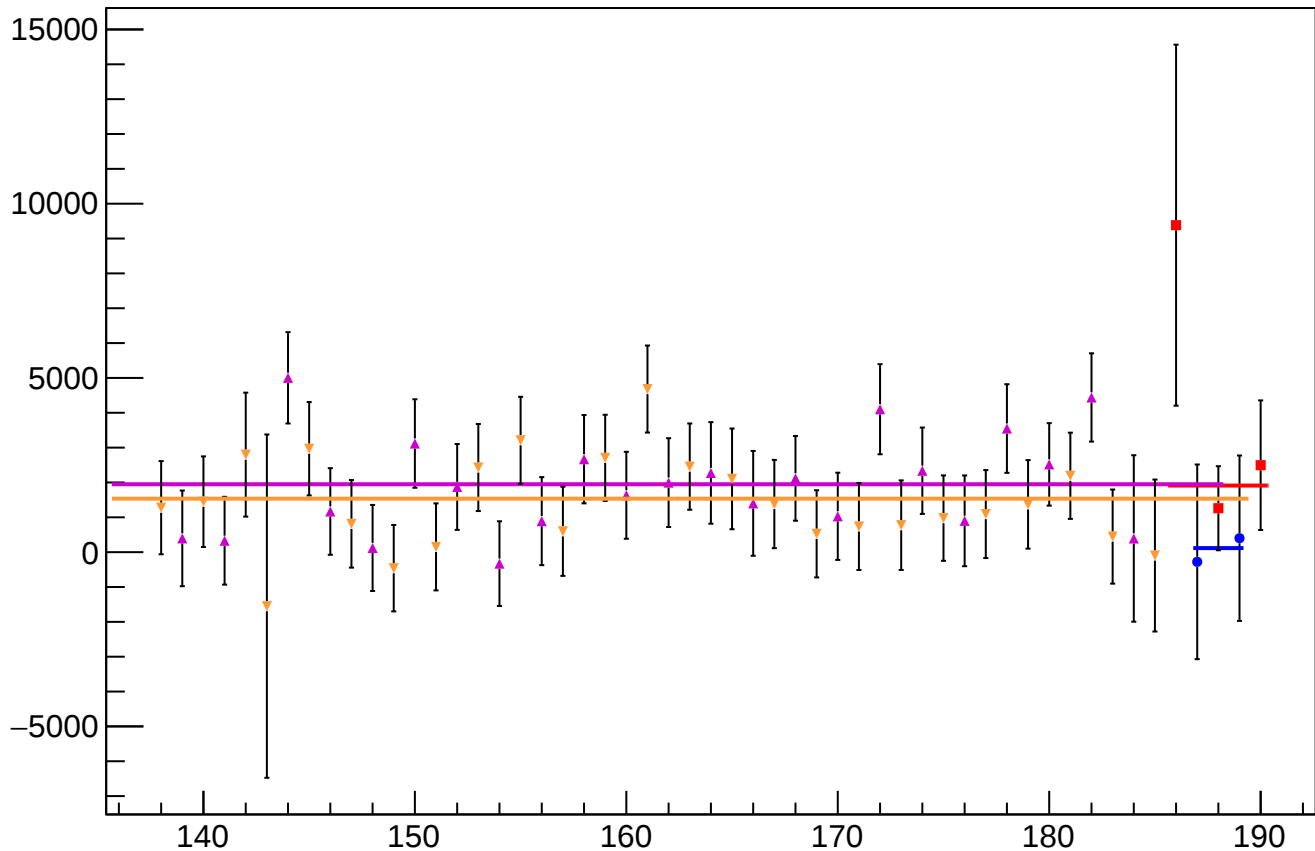
Right:  $839.990 \pm 0.440$   $\chi^2/\text{NDF}$ : 294774.5/4

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

Out:  $797.126 \pm 0.127$   $\chi^2/\text{NDF}$ : 964183.2/27

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

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



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

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

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

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

Left: 1738.660 $\pm$ 189.477  $\chi^2$ /NDF: 48.3/47

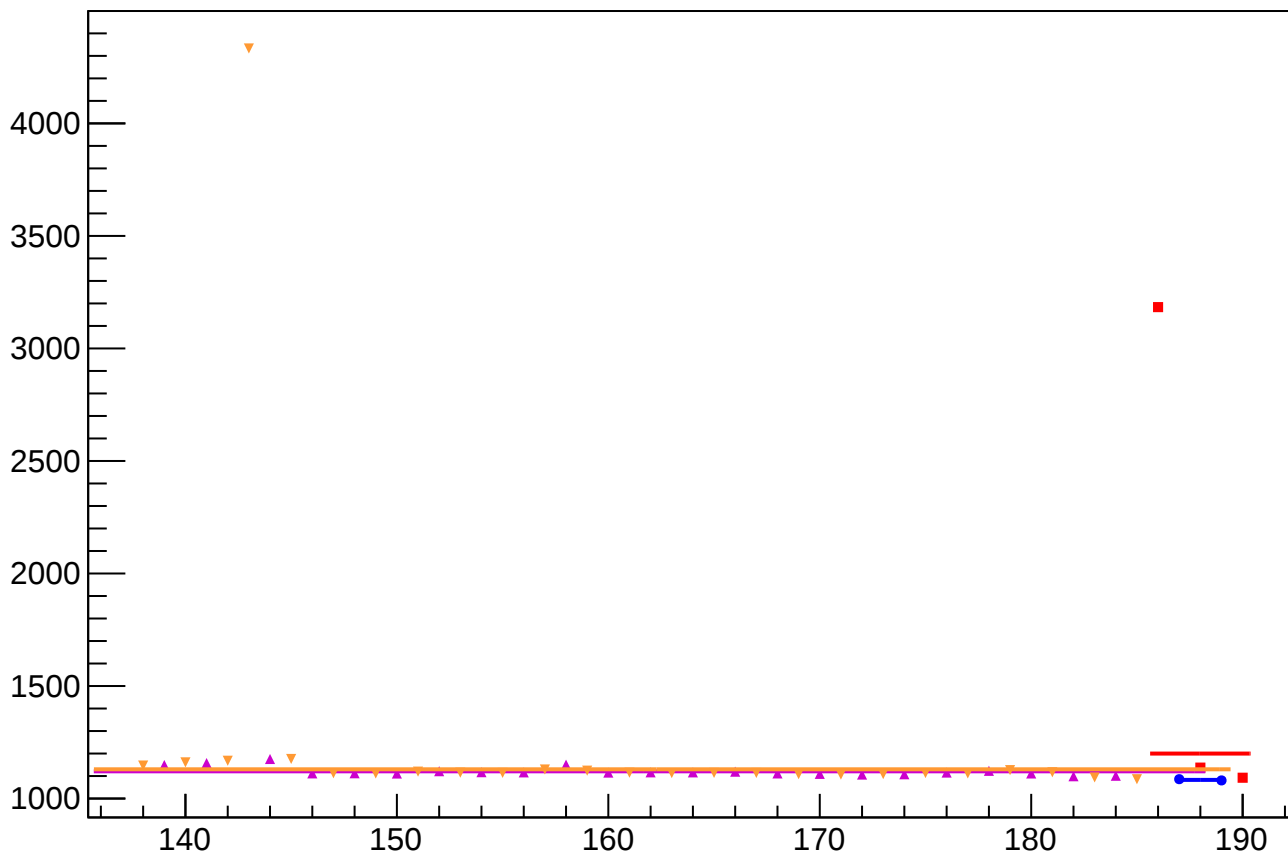
Right: 1495.731 $\pm$ 870.601  $\chi^2$ /NDF: 3.3/4

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

Out: 1559.928 $\pm$ 256.846  $\chi^2$ /NDF: 22.9/27

All: 1727.673 $\pm$ 185.143  $\chi^2$ /NDF: 51.6/52

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



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

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

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

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

Left:  $1125.527 \pm 0.134$   $\chi^2/\text{NDF}$ : 868647.2/47

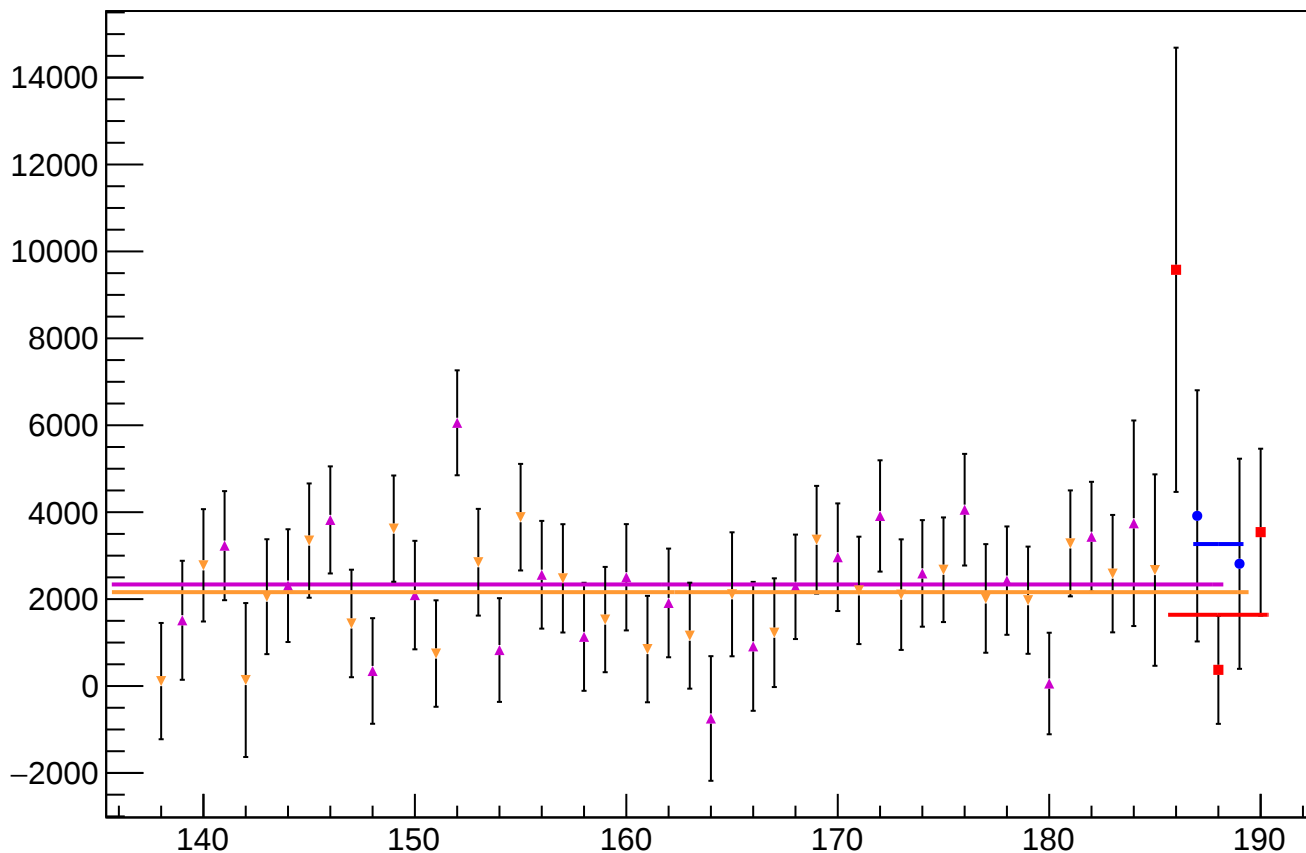
Right:  $1172.741 \pm 0.616$   $\chi^2/\text{NDF}$ : 311788.3/4

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

Out:  $1134.612 \pm 0.182$   $\chi^2/\text{NDF}$ : 1172871.0/27

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

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



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

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

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

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

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

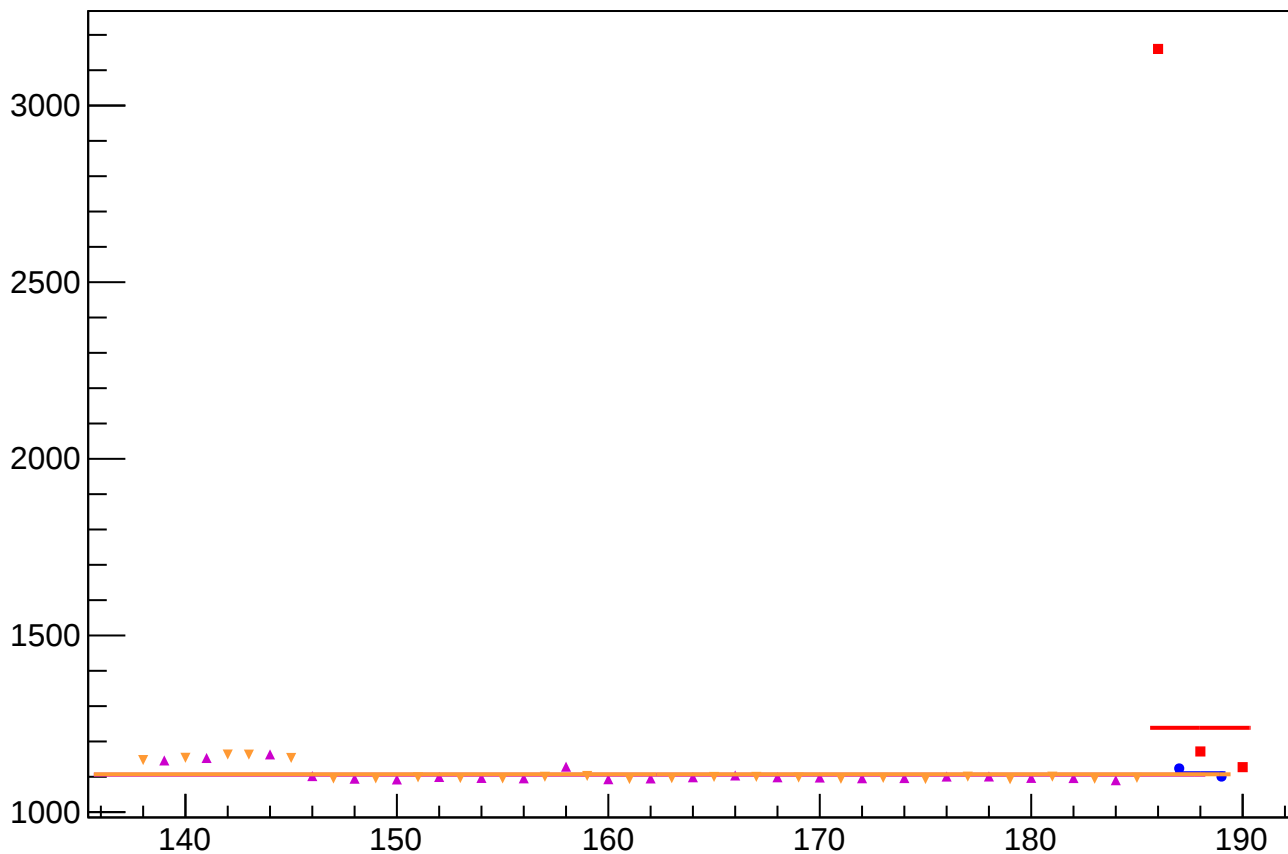
Right: 2018.696 $\pm$ 895.144  $\chi^2$ /NDF: 5.1/4

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

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

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

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



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

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

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

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

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

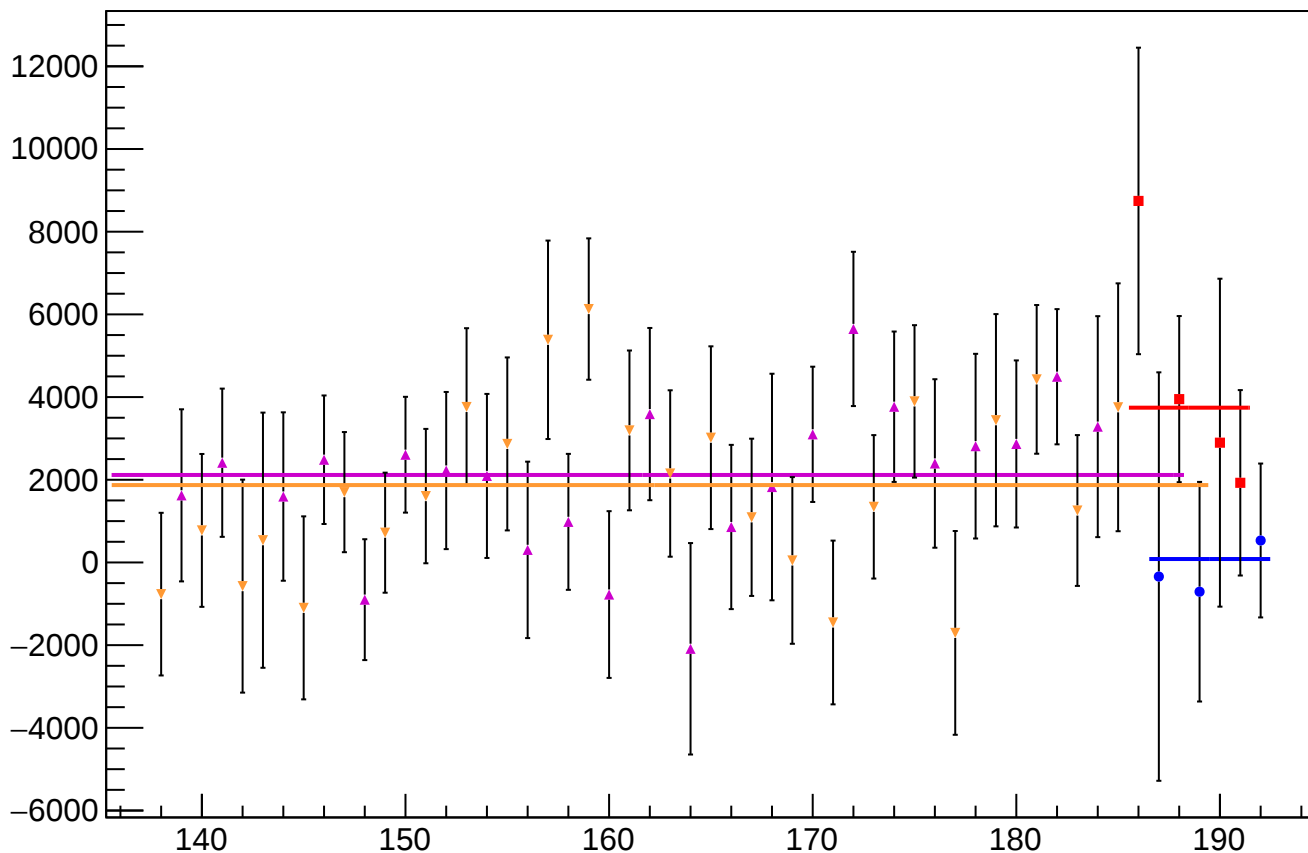
Right: 1208.687 $\pm$ 0.633  $\chi^2/\text{NDF}$ : 302689.7/4

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

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

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

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



Right In: 82.947+/-1456.338  $\chi^2/\text{NDF}$ : 0.2/2

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

Right Out: 3743.610+/-1309.735  $\chi^2/\text{NDF}$ : 2.5/3

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

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

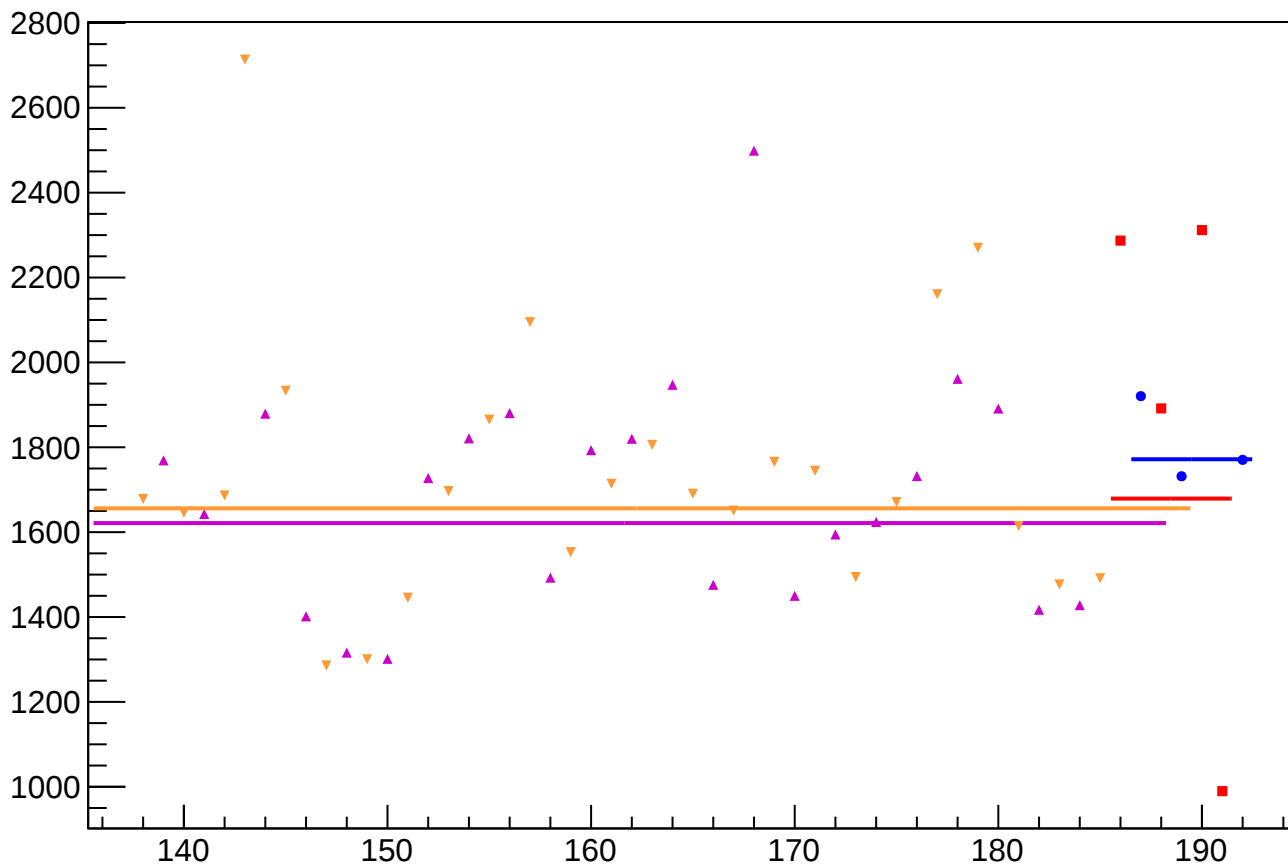
Right: 2106.752+/-973.841  $\chi^2/\text{NDF}$ : 6.2/6

In: 1978.108+/-379.424  $\chi^2/\text{NDF}$ :20.8/25

Out: 2025.313+/-375.262  $\chi^2/\text{NDF}$ :30.5/28

All: 2001.971+/-266.810  $\chi^2/\text{NDF}$ : 51.3/54

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



Right In: 1771.774+/-1.030  $\chi^2/\text{NDF}$ : 2268.9/2

Left Out: 1656.119+/-0.277  $\chi^2/\text{NDF}$ : 910573.4/24

Right Out: 1679.112+/-0.926  $\chi^2/\text{NDF}$ : 316083.0/3

Left In: 1621.417+/-0.278  $\chi^2/\text{NDF}$ : 775310.1/22

Left: 1638.826+/-0.196  $\chi^2/\text{NDF}$ : 1693706.9/47

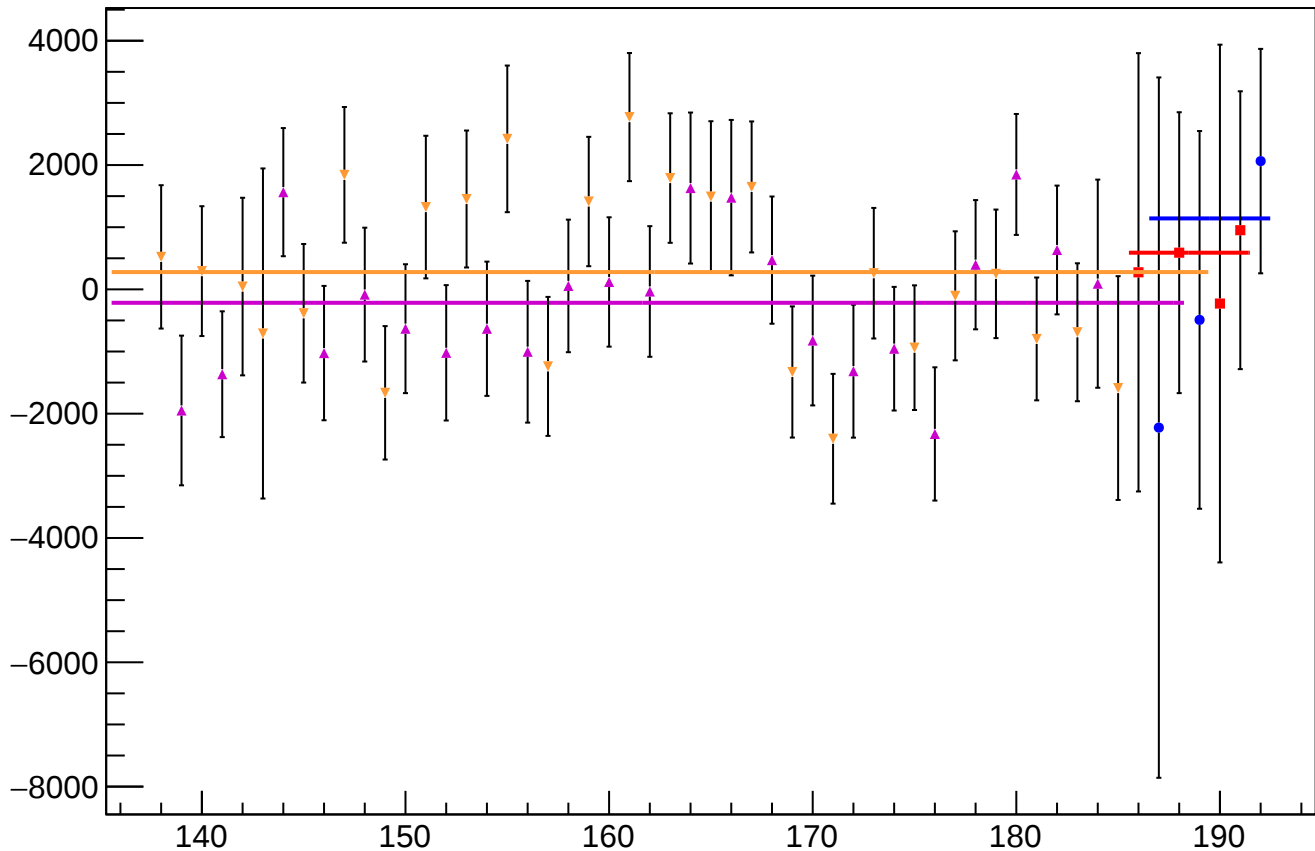
Right: 1720.546+/-0.689  $\chi^2/\text{NDF}$ : 322828.2/6

In: 1631.623+/-0.268  $\chi^2/\text{NDF}$ : 797450.3/25

Out: 1658.007+/-0.265  $\chi^2/\text{NDF}$ : 1227222.2/28

All: 1644.960+/-0.189  $\chi^2/\text{NDF}$ : 2029561.3/54

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



Right In: 1141.469 $\pm$ 1496.468  $\chi^2/\text{NDF}$ : 0.9/2

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

Right Out: 589.750 $\pm$ 1368.377  $\chi^2/\text{NDF}$ : 0.1/3

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

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

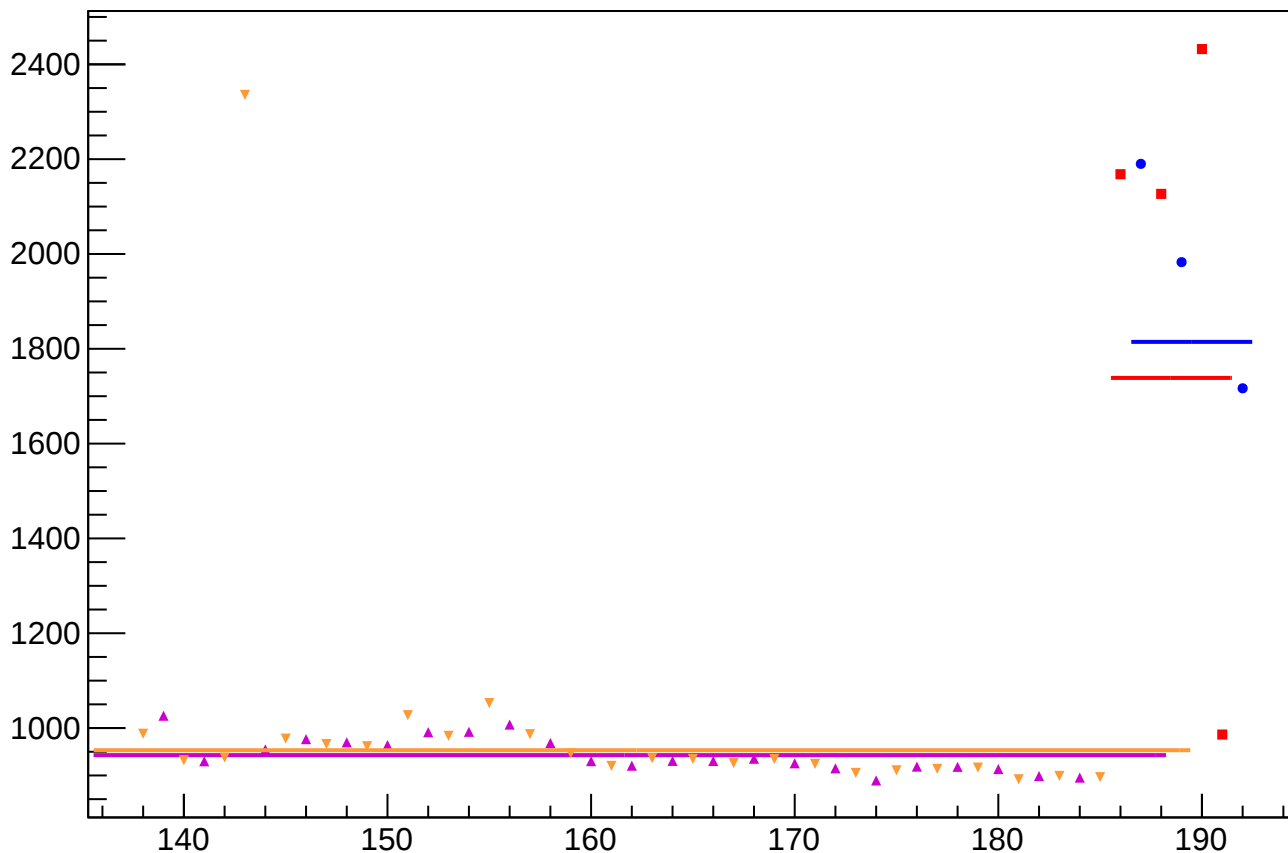
Right: 840.991 $\pm$ 1009.842  $\chi^2/\text{NDF}$ : 1.1/6

In: -185.952 $\pm$ 223.080  $\chi^2/\text{NDF}$ : 26.1/25

Out: 286.194 $\pm$ 220.655  $\chi^2/\text{NDF}$ : 38.5/28

All: 52.701 $\pm$ 156.877  $\chi^2/\text{NDF}$ : 66.9/54

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



Right In: 1814.609+/-1.058  $\chi^2/\text{NDF}$ : 20892.6/2

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

Right Out: 1738.599+/-0.968  $\chi^2/\text{NDF}$ : 370758.1/3

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

Left: 948.120+/-0.112  $\chi^2/\text{NDF}$ : 656777.0/47

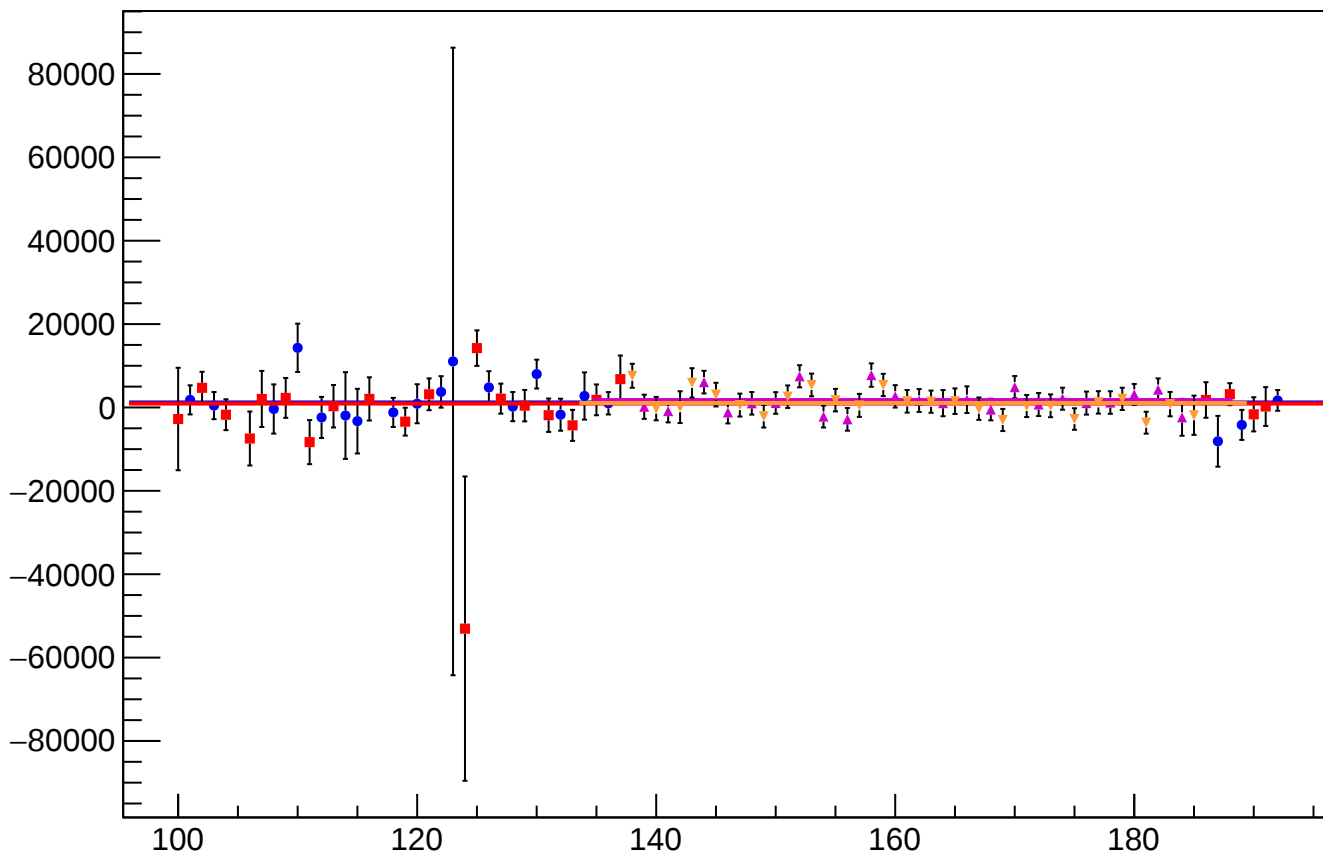
Right: 1773.212+/-0.714  $\chi^2/\text{NDF}$ : 394460.9/6

In: 962.297+/-0.158  $\chi^2/\text{NDF}$ : 732812.9/25

Out: 973.643+/-0.156  $\chi^2/\text{NDF}$ : 1618732.8/28

All: 968.032+/-0.111  $\chi^2/\text{NDF}$ : 2354160.6/54

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



Right In: 1201.500+/-900.113  $\chi^2/\text{NDF}$ : 17.3/19

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

Right Out: 934.377+/-893.511  $\chi^2/\text{NDF}$ : 25.3/22

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

Left: 1420.287+/-402.950  $\chi^2/\text{NDF}$ : 48.4/47

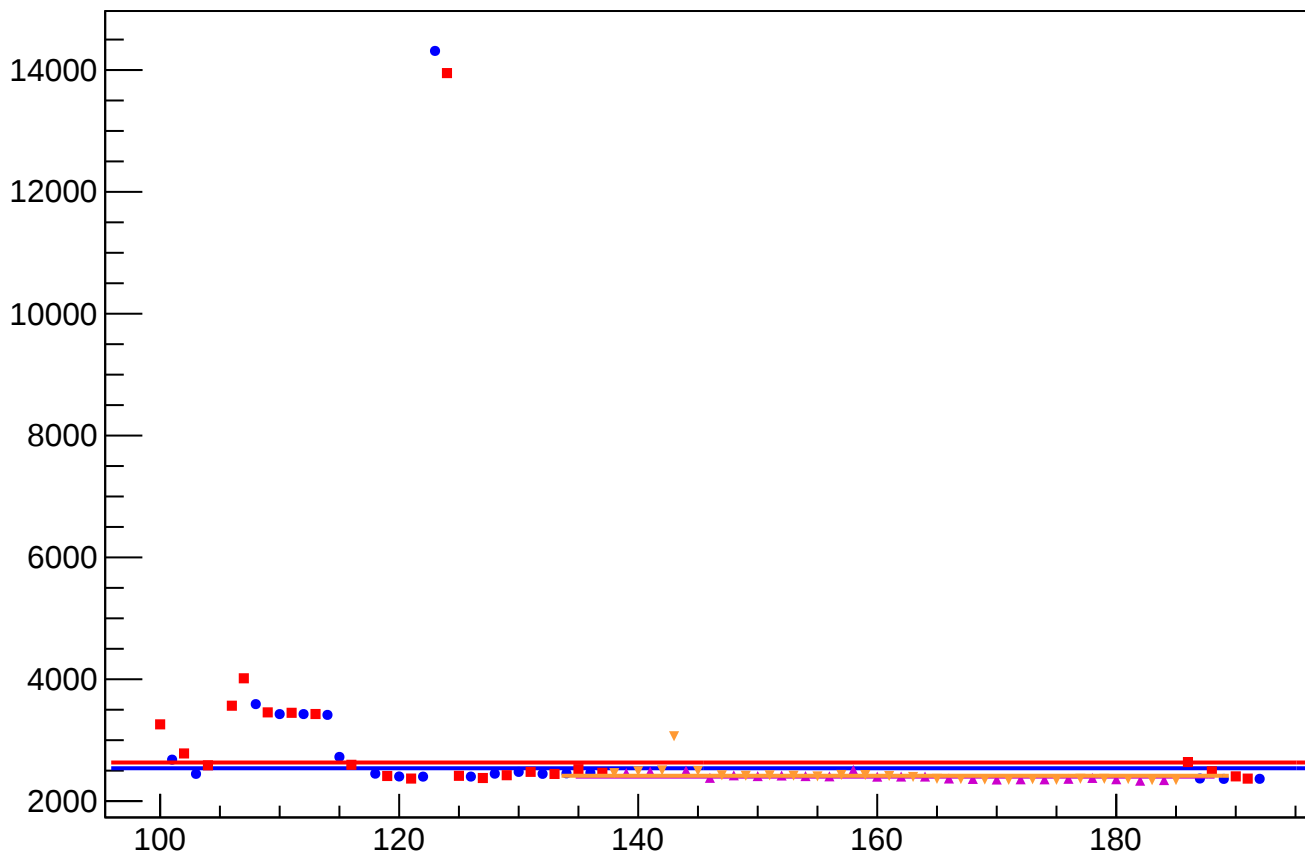
Right: 1066.955+/-634.129  $\chi^2/\text{NDF}$ : 42.6/42

In: 1609.916+/-485.103  $\chi^2/\text{NDF}$ : 41.6/42

Out: 1037.118+/-476.937  $\chi^2/\text{NDF}$ : 48.9/47

All: 1318.655+/-340.096  $\chi^2/\text{NDF}$ : 91.2/90

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



Right In: 2539.053+/-0.636  $\chi^2/\text{NDF}$ : 274067.5/19

Left Out: 2416.019+/-0.399  $\chi^2/\text{NDF}$ : 82636.1/24

Right Out: 2633.470+/-0.632  $\chi^2/\text{NDF}$ : 552109.8/22

Left In: 2401.422+/-0.407  $\chi^2/\text{NDF}$ : 13747.6/22

Left: 2408.873+/-0.285  $\chi^2/\text{NDF}$ : 97039.6/47

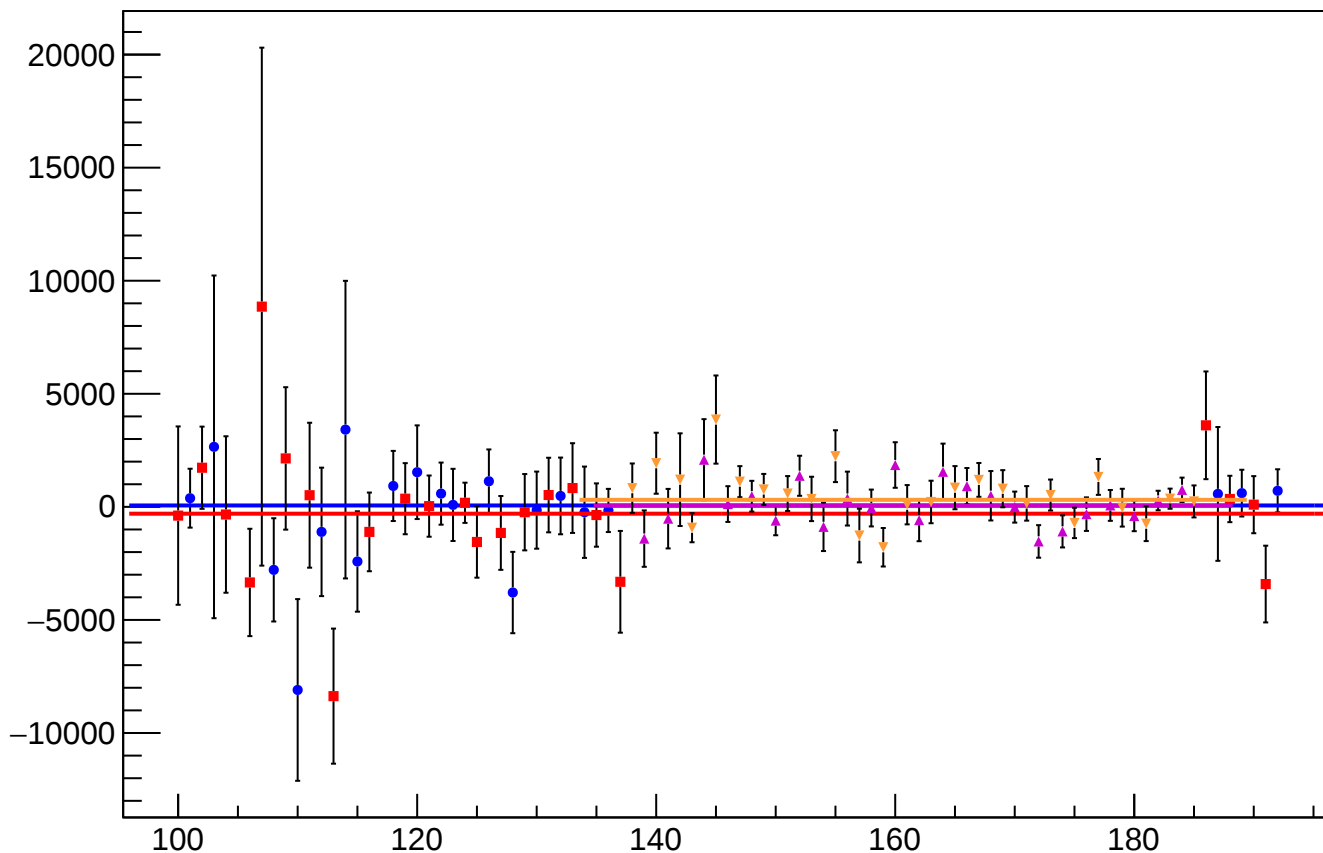
Right: 2586.609+/-0.448  $\chi^2/\text{NDF}$ : 837261.3/42

In: 2441.397+/-0.343  $\chi^2/\text{NDF}$ : 320993.1/42

Out: 2477.975+/-0.337  $\chi^2/\text{NDF}$ : 719450.5/47

All: 2459.996+/-0.240  $\chi^2/\text{NDF}$ : 1046225.7/90

asym\_atl1\_correction\_mean vs Slug, Sign Corrected



Right In: 61.627+/-358.344  $\chi^2/\text{NDF}$ : 14.6/19

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

Right Out: -302.253+/-352.460  $\chi^2/\text{NDF}$ : 22.1/22

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

Left: 182.044+/-113.982  $\chi^2/\text{NDF}$ : 54.9/47

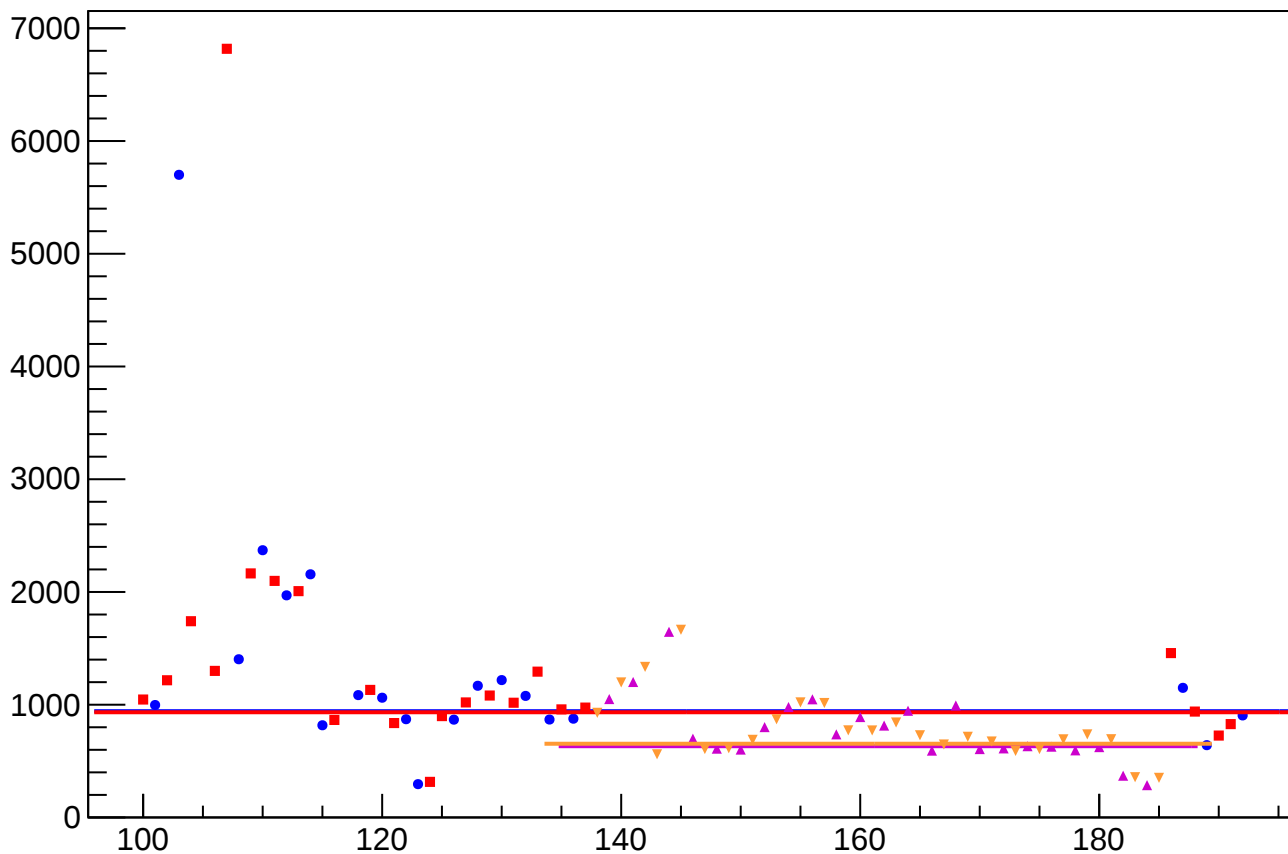
Right: -123.324+/-251.281  $\chi^2/\text{NDF}$ : 37.2/42

In: 53.176+/-147.423  $\chi^2/\text{NDF}$ : 38.4/42

Out: 205.406+/-146.182  $\chi^2/\text{NDF}$ : 54.3/47

All: 129.934+/-103.802  $\chi^2/\text{NDF}$ : 93.3/90

# asym\_atl1\_correction\_rms vs Slug, Sign Corrected



Right In: 942.530+/-0.253     $\chi^2/\text{NDF}$ : 2118247.5/19

Left Out: 653.803+/-0.114     $\chi^2/\text{NDF}$ : 3254694.4/24

Right Out: 933.137+/-0.249     $\chi^2/\text{NDF}$ : 2826494.7/22

Left In: 632.053+/-0.114     $\chi^2/\text{NDF}$ : 3942853.4/22

Left: 643.002+/-0.081     $\chi^2/\text{NDF}$ : 7215752.9/47

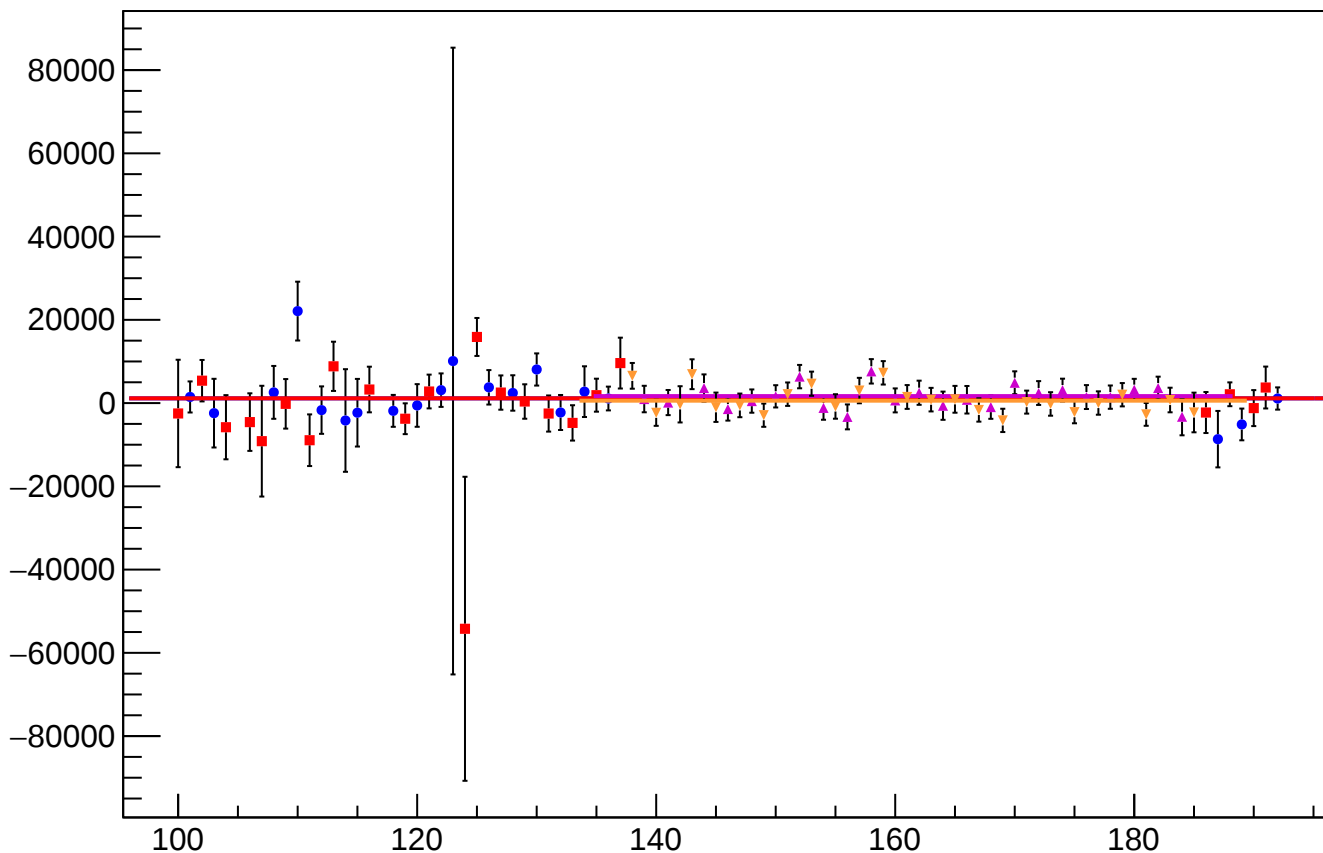
Right: 937.756+/-0.178     $\chi^2/\text{NDF}$ : 4945440.7/42

In: 684.601+/-0.104     $\chi^2/\text{NDF}$ : 7308373.5/42

Out: 701.852+/-0.103     $\chi^2/\text{NDF}$ : 7121303.5/47

All: 693.300+/-0.073     $\chi^2/\text{NDF}$ : 14443485.9/90

# asym\_atl1\_mean vs Slug, Sign Corrected



Right In: 1131.266+/-1015.692  $\chi^2/\text{NDF}$ : 19.9/19

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

Right Out: 1144.668+/-1019.831  $\chi^2/\text{NDF}$ : 28.0/22

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

Left: 1118.453+/-426.766  $\chi^2/\text{NDF}$ : 45.2/47

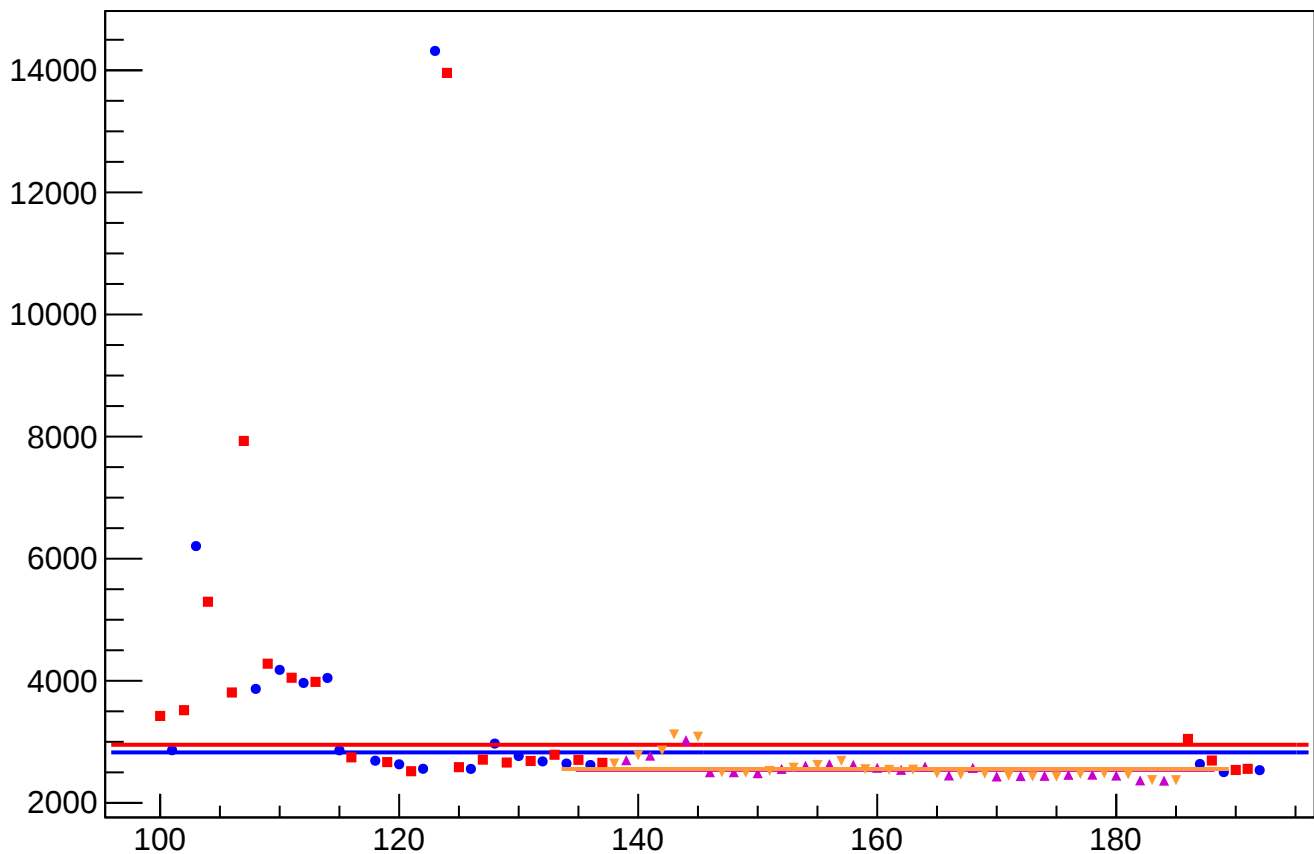
Right: 1137.940+/-719.662  $\chi^2/\text{NDF}$ : 47.9/42

In: 1534.189+/-523.007  $\chi^2/\text{NDF}$ : 38.3/42

Out: 724.833+/-515.325  $\chi^2/\text{NDF}$ : 53.6/47

All: 1123.523+/-367.076  $\chi^2/\text{NDF}$ : 93.0/90

# asym\_atl1\_rms vs Slug, Sign Corrected



Right In: 2827.172+/-0.718  $\chi^2/\text{NDF}$ : 688490.7/19

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

Right Out: 2951.908+/-0.721  $\chi^2/\text{NDF}$ : 1066310.6/22

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

Left: 2548.287+/-0.302  $\chi^2/\text{NDF}$ : 250060.8/47

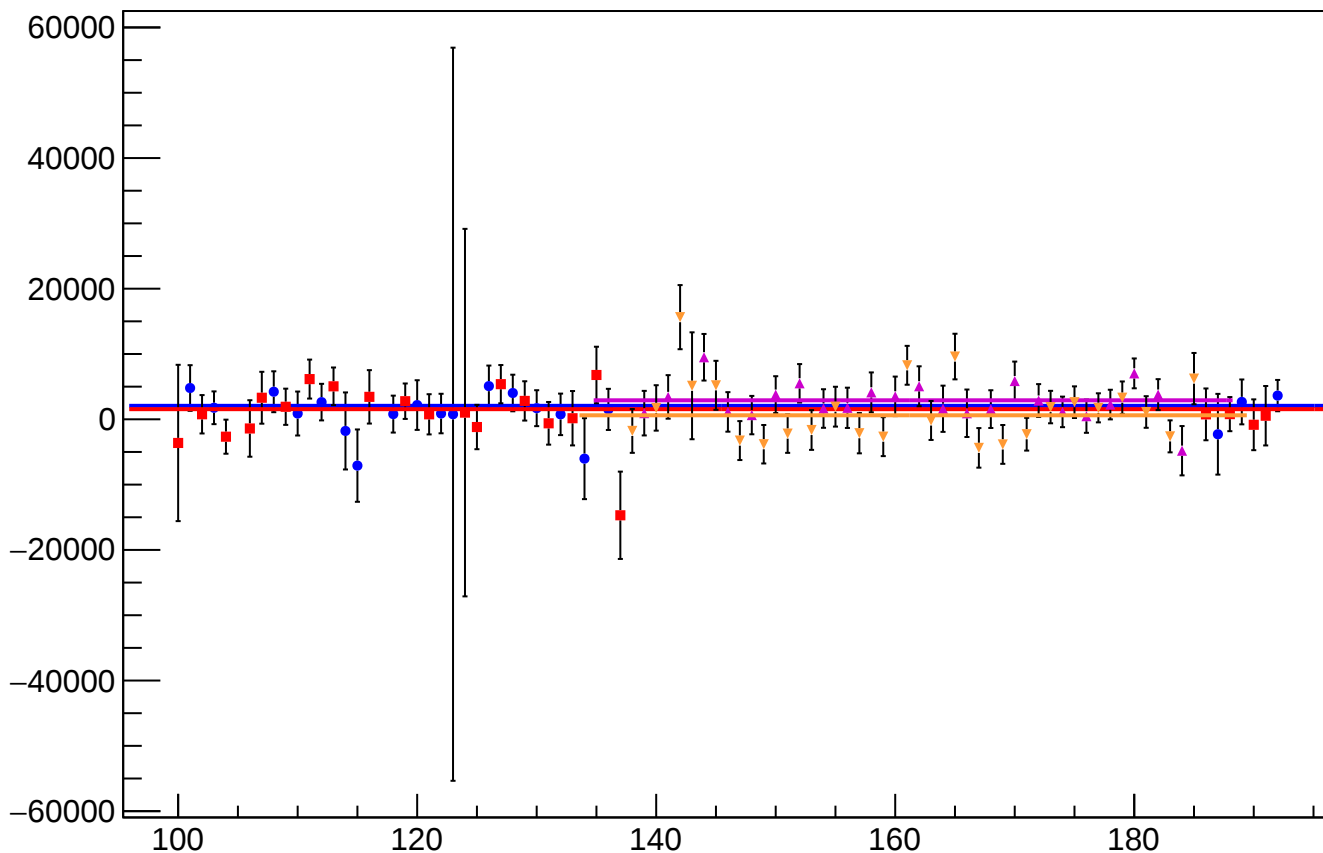
Right: 2889.286+/-0.509  $\chi^2/\text{NDF}$ : 1769822.1/42

In: 2616.869+/-0.370  $\chi^2/\text{NDF}$ :899927.0/42

Out: 2656.552+/-0.364  $\chi^2/\text{NDF}$ :1446325.2/47

All: 2637.004+/-0.260  $\chi^2/\text{NDF}$ : 2352094.1/90

# reg\_asym\_atl2\_mean vs Slug, Sign Corrected



Right In: 2062.917+/-746.261  $\chi^2/\text{NDF}$ : 9.1/19

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

Right Out: 1552.167+/-722.236  $\chi^2/\text{NDF}$ : 18.9/22

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

Left: 1745.562+/-420.986  $\chi^2/\text{NDF}$ : 70.0/47

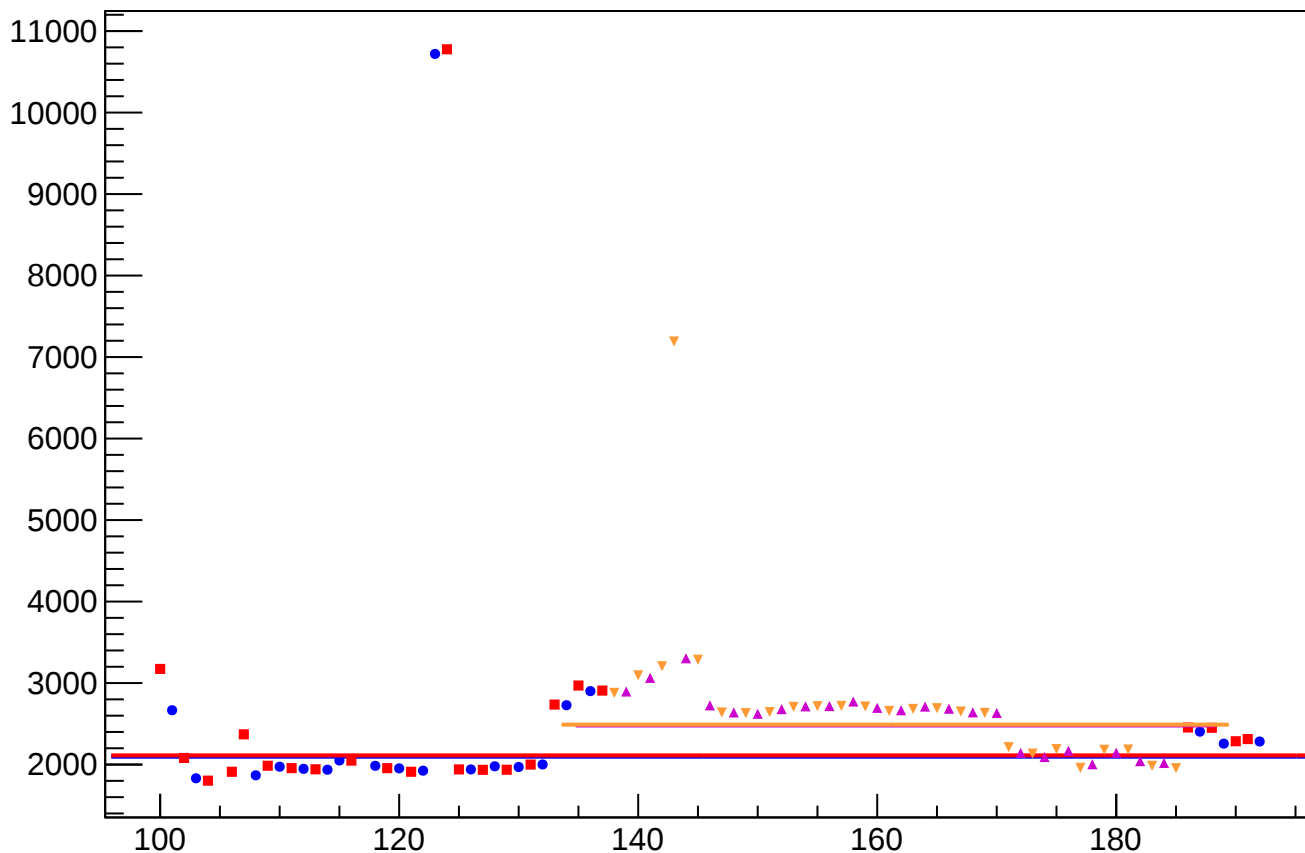
Right: 1799.188+/-518.983  $\chi^2/\text{NDF}$ : 28.2/42

In: 2577.091+/-467.451  $\chi^2/\text{NDF}$ : 27.2/42

Out: 990.888+/-457.452  $\chi^2/\text{NDF}$ : 65.1/47

All: 1766.845+/-326.945  $\chi^2/\text{NDF}$ : 98.2/90

# reg\_asym\_atl2\_rms vs Slug, Sign Corrected



Right In: 2096.517+/-0.528  $\chi^2/\text{NDF}$ : 342872.0/19

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

Right Out: 2112.709+/-0.511  $\chi^2/\text{NDF}$ : 508627.9/22

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

Left: 2484.536+/-0.298  $\chi^2/\text{NDF}$ : 2032896.6/47

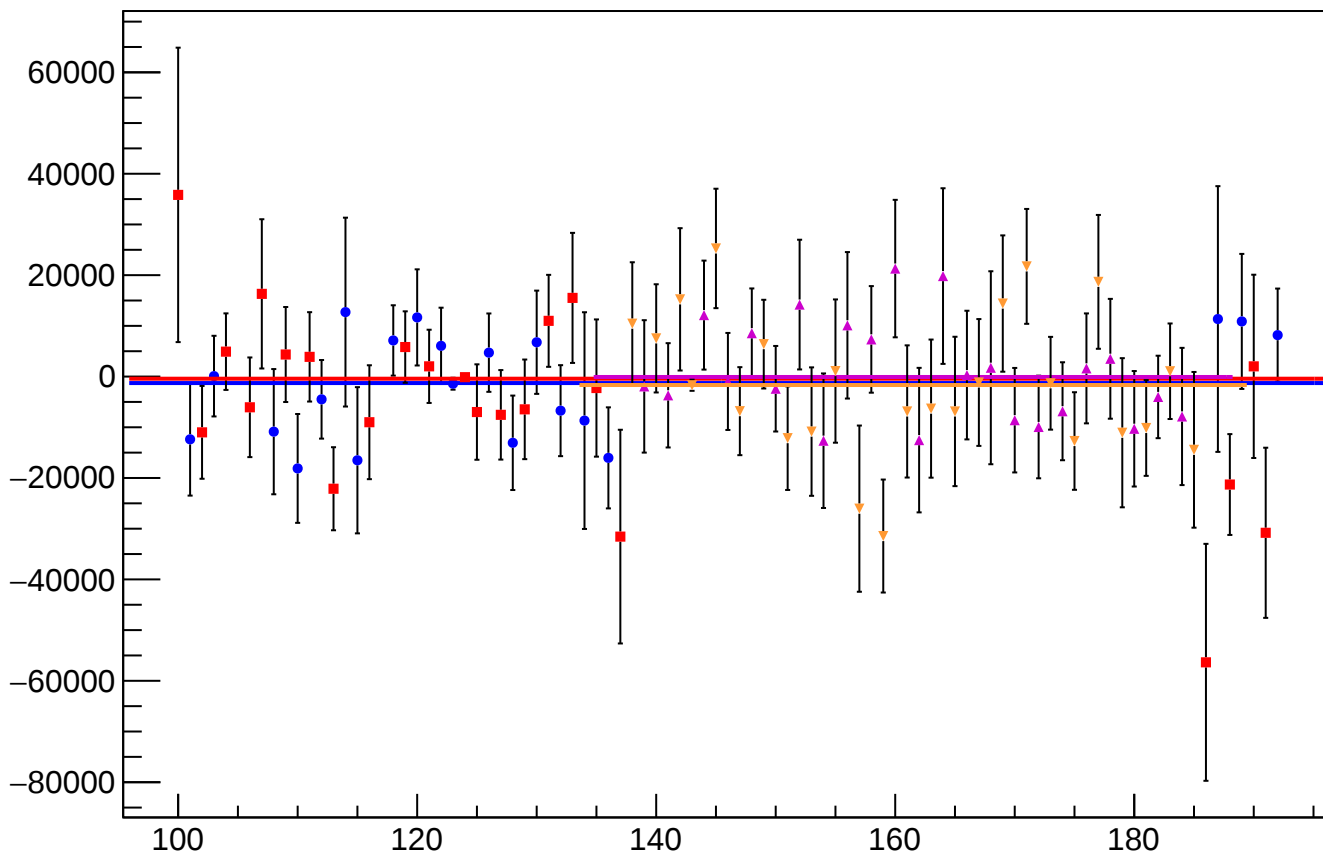
Right: 2104.878+/-0.367  $\chi^2/\text{NDF}$ : 851986.0/42

In: 2329.139+/-0.331  $\chi^2/\text{NDF}$ :1331090.8/42

Out: 2338.386+/-0.323  $\chi^2/\text{NDF}$ :2198932.1/47

All: 2333.862+/-0.231  $\chi^2/\text{NDF}$ : 3530422.7/90

# asym\_atl2\_correction\_mean vs Slug, Sign Corrected



Right In: -1278.620+/-1043.712  $\chi^2/\text{NDF}$ : 17.9/19

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

Right Out: -420.160+/-692.239  $\chi^2/\text{NDF}$ : 34.5/22

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

Left: -1422.008+/-913.639  $\chi^2/\text{NDF}$ : 46.6/47

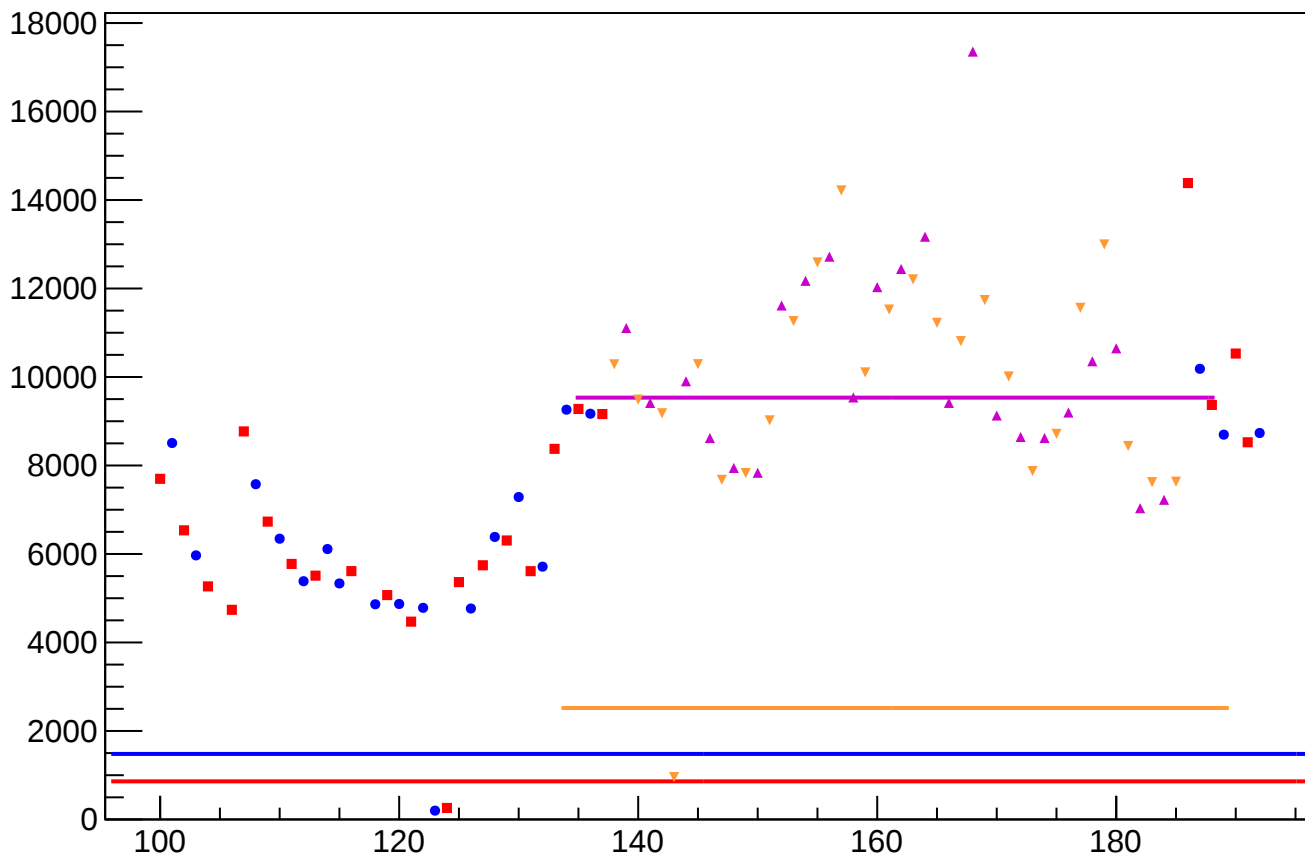
Right: -682.424+/-576.886  $\chi^2/\text{NDF}$ : 52.8/42

In: -1078.570+/-952.619  $\chi^2/\text{NDF}$ : 31.9/42

Out: -827.376+/-567.883  $\chi^2/\text{NDF}$ : 67.9/47

All: -893.238+/-487.787  $\chi^2/\text{NDF}$ : 99.9/90

asym\_atl2\_correction\_rms vs Slug, Sign Corrected



Right In: 1481.156+/-0.738

$\chi^2/\text{NDF}$ : 12127294.8/19

Left Out: 2519.359+/-0.702

$\chi^2/\text{NDF}$ : 23642118.3/24

Right Out: 860.862+/-0.489

$\chi^2/\text{NDF}$ : 14557330.1/22

Left In: 9533.563+/-1.649

$\chi^2/\text{NDF}$ : 1316640.0/22

Left: 3596.432+/-0.646

$\chi^2/\text{NDF}$ : 40280305.8/47

Right: 1050.365+/-0.408

$\chi^2/\text{NDF}$ : 27175229.8/42

In: 2825.412+/-0.674

$\chi^2/\text{NDF}$ : 33317517.3/42

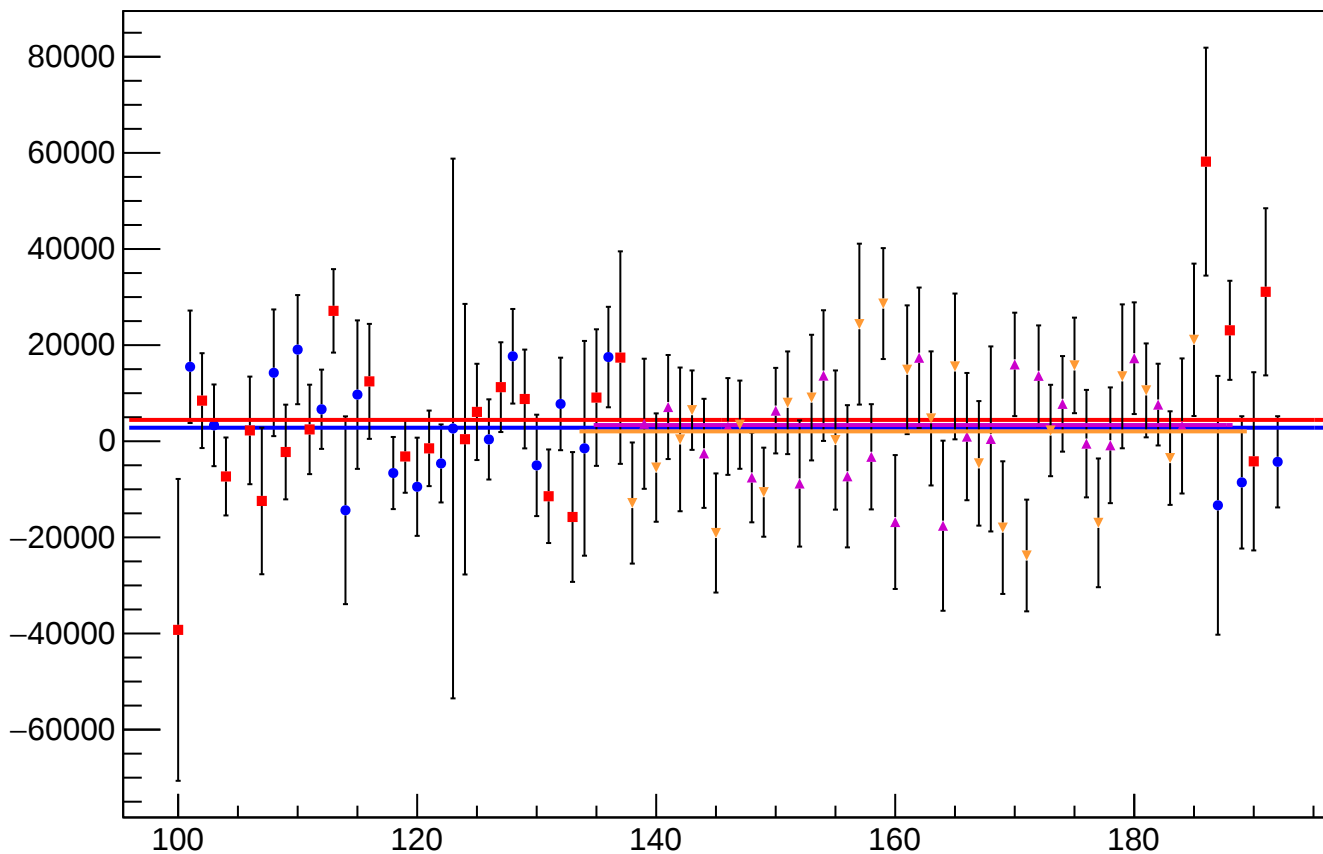
Out: 1403.214+/-0.402

$\chi^2/\text{NDF}$ : 41953621.2/47

All: 1776.105+/-0.345

$\chi^2/\text{NDF}$ : 78560064.5/95

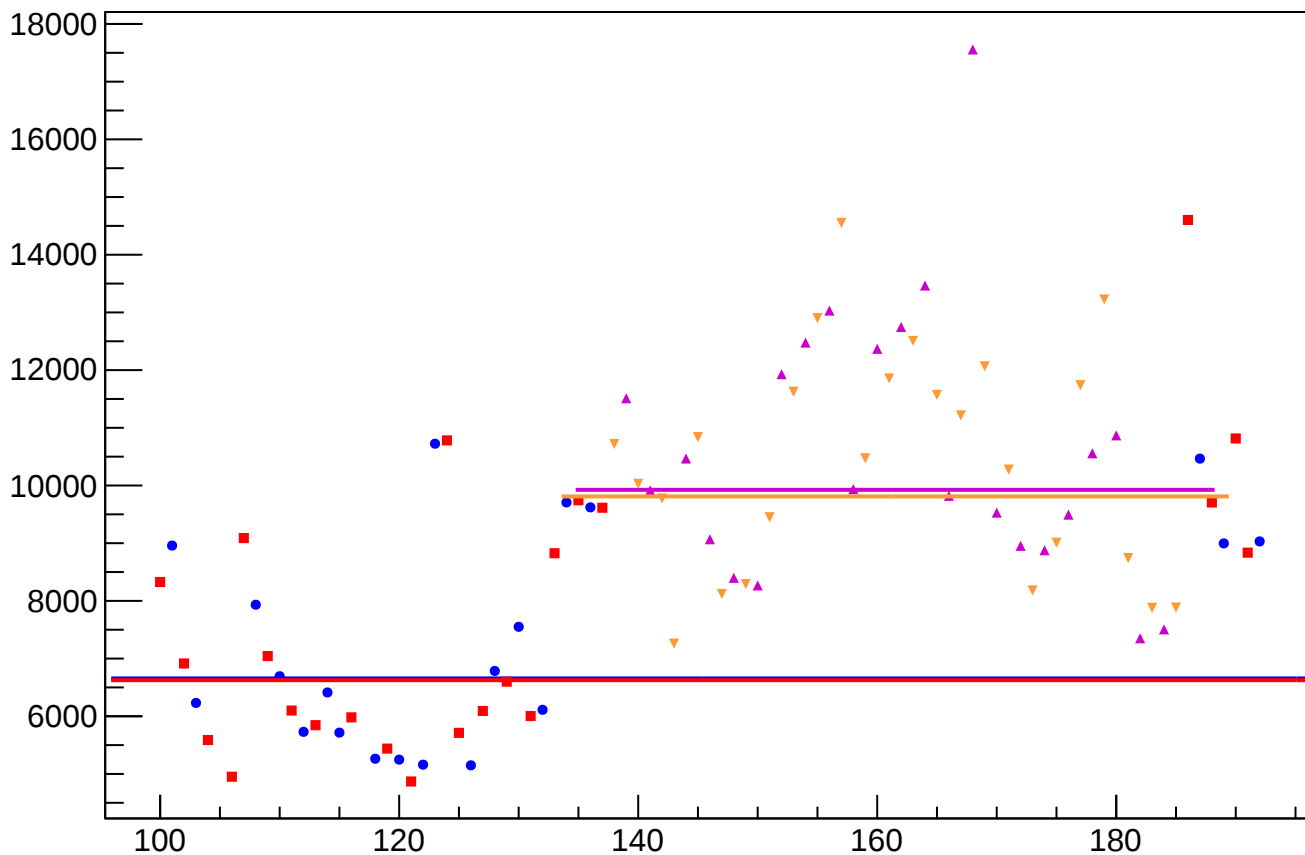
# asym\_atl2\_mean vs Slug, Sign Corrected



Right In: 2816.570 $\pm$ 2408.549  $\chi^2/\text{NDF}$ : 15.8/19  
Left Out: 2055.950 $\pm$ 2333.494  $\chi^2/\text{NDF}$ : 30.7/24  
Right Out: 4442.489 $\pm$ 2311.357  $\chi^2/\text{NDF}$ : 31.9/22  
Left In: 3371.931 $\pm$ 2423.242  $\chi^2/\text{NDF}$ : 13.1/22

Left: 2689.120 $\pm$ 1680.862  $\chi^2/\text{NDF}$ : 44.0/47  
Right: 3662.996 $\pm$ 1667.678  $\chi^2/\text{NDF}$ : 48.0/42  
In: 3092.562 $\pm$ 1708.272  $\chi^2/\text{NDF}$ : 29.0/42  
Out: 3260.593 $\pm$ 1642.147  $\chi^2/\text{NDF}$ : 63.2/47  
All: 3179.892 $\pm$ 1183.860  $\chi^2/\text{NDF}$ : 92.1/90

# asym\_atl2\_rms vs Slug, Sign Corrected



Right In: 6655.374+/-1.703  $\chi^2/\text{NDF}$ : 826920.8/19

Left Out: 9811.053+/-1.650  $\chi^2/\text{NDF}$ : 1213831.0/24

Right Out: 6624.797+/-1.634  $\chi^2/\text{NDF}$ : 1118619.4/22

Left In: 9925.337+/-1.713  $\chi^2/\text{NDF}$ : 1211554.7/22

Left: 9866.039+/-1.189  $\chi^2/\text{NDF}$ : 2427693.8/47

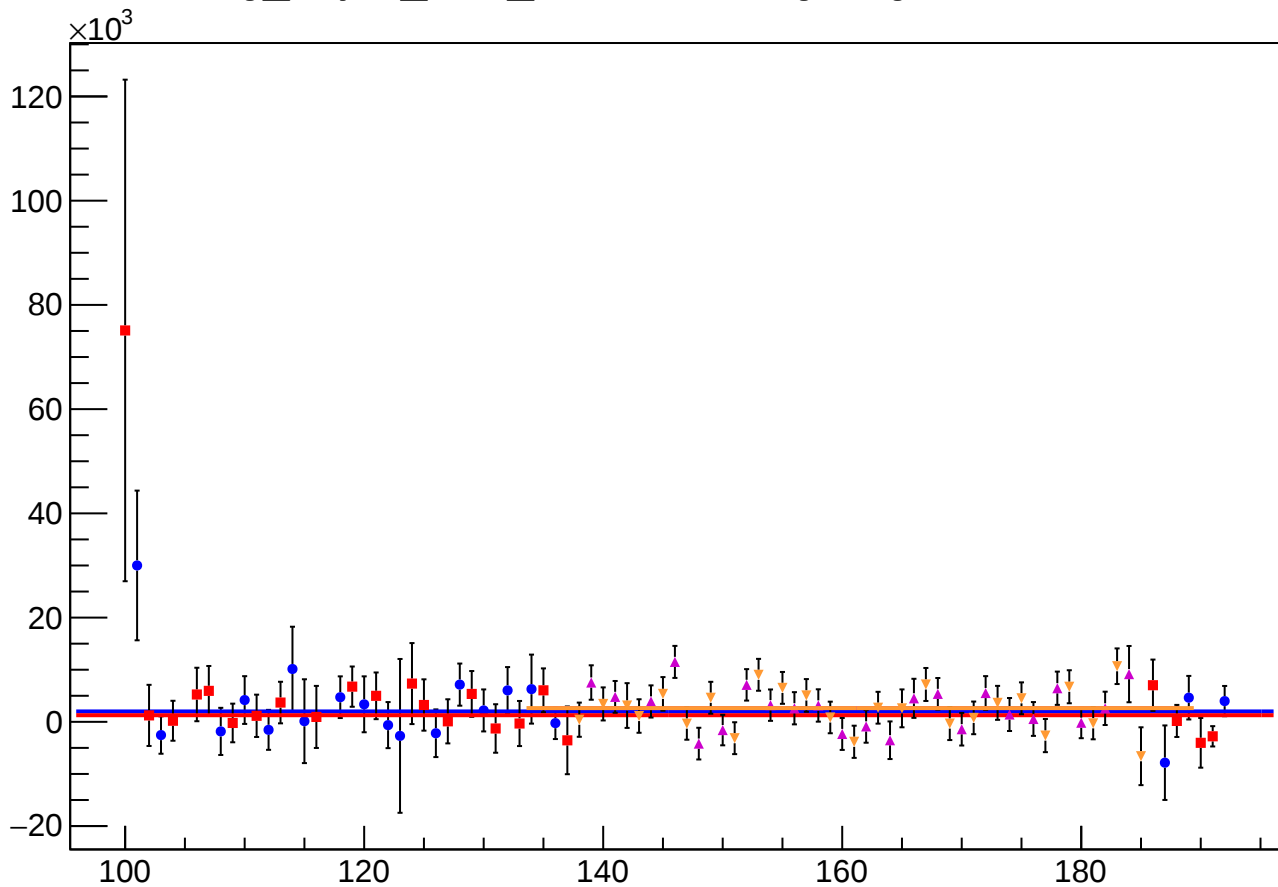
Right: 6639.456+/-1.179  $\chi^2/\text{NDF}$ : 1945708.0/42

In: 8280.405+/-1.208  $\chi^2/\text{NDF}$ : 3870482.3/42

Out: 8202.672+/-1.161  $\chi^2/\text{NDF}$ : 4214737.9/47

All: 8240.004+/-0.837  $\chi^2/\text{NDF}$ : 8087372.5/90

# reg\_asym\_atr1\_mean vs Slug, Sign Corrected



Right In:  $1994.370 \pm 1011.768$   $\chi^2/\text{NDF}$ : 16.2/19

Left Out:  $2635.833 \pm 646.121$   $\chi^2/\text{NDF}$ : 35.1/24

Right Out:  $1269.091 \pm 870.225$   $\chi^2/\text{NDF}$ : 18.3/22

Left In:  $2638.607 \pm 664.569$   $\chi^2/\text{NDF}$ : 35.2/22

Left:  $2637.181 \pm 463.261$   $\chi^2/\text{NDF}$ : 70.3/47

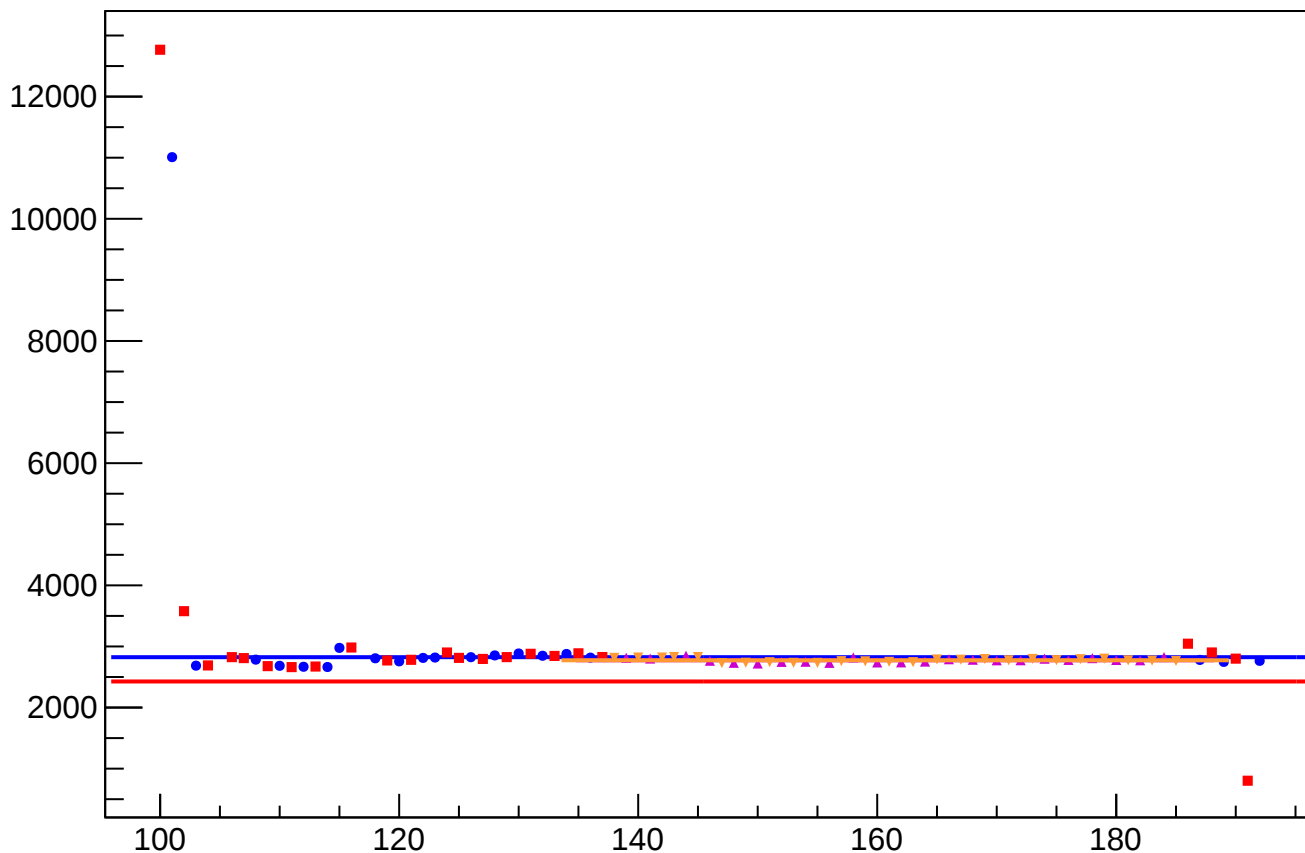
Right:  $1577.490 \pm 659.758$   $\chi^2/\text{NDF}$ : 34.8/42

In:  $2444.433 \pm 555.462$   $\chi^2/\text{NDF}$ : 51.7/42

Out:  $2150.138 \pm 518.764$   $\chi^2/\text{NDF}$ : 54.9/47

All:  $2287.244 \pm 379.132$   $\chi^2/\text{NDF}$ : 106.8/90

# reg\_asym\_atr1\_rms vs Slug, Sign Corrected



Right In: 2824.434+/-0.715  $\chi^2/\text{NDF}$ : 662139.4/19

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

Right Out: 2426.761+/-0.615  $\chi^2/\text{NDF}$ : 1875670.5/22

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

Left: 2773.870+/-0.328  $\chi^2/\text{NDF}$ : 9602.0/47

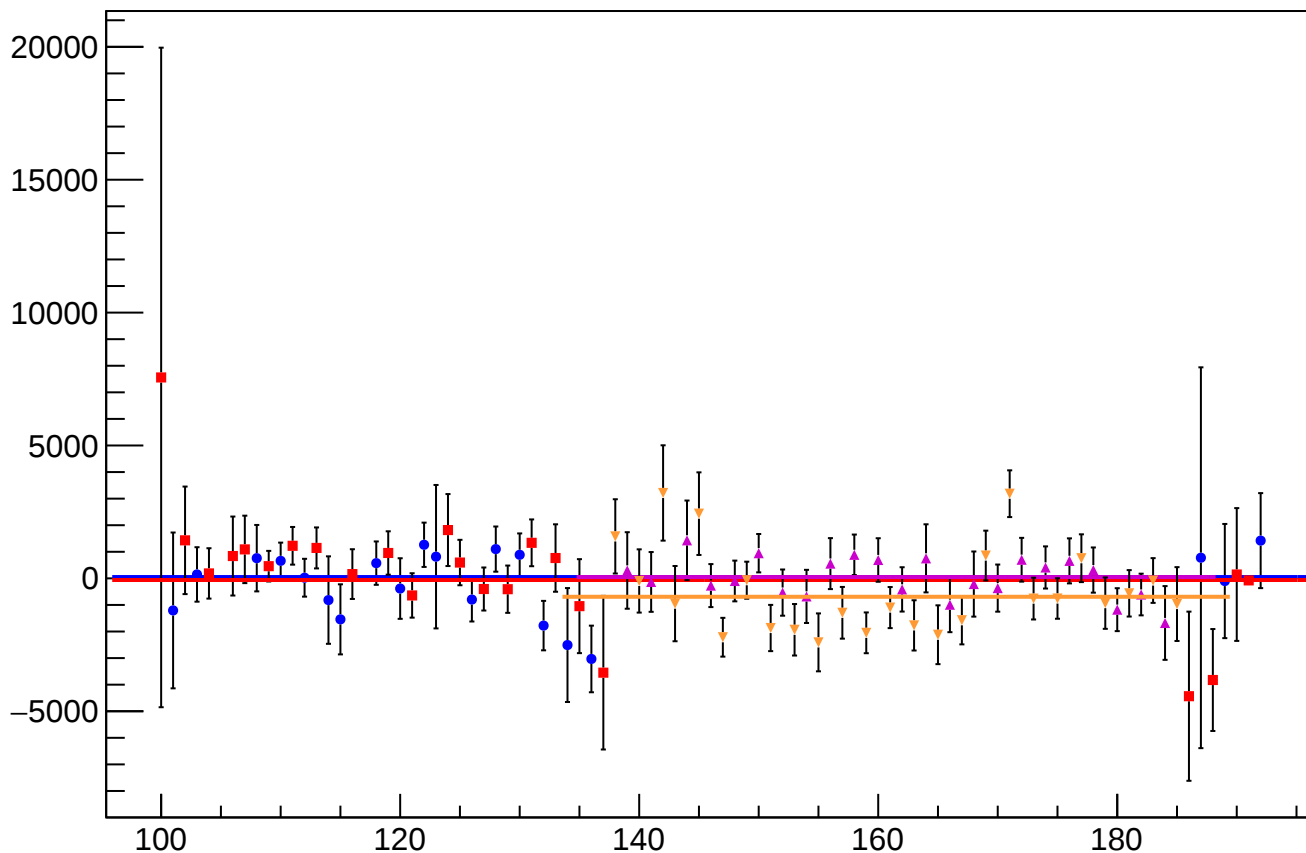
Right: 2595.857+/-0.467  $\chi^2/\text{NDF}$ : 2715403.0/42

In: 2789.226+/-0.393  $\chi^2/\text{NDF}$ : 670591.4/42

Out: 2650.418+/-0.367  $\chi^2/\text{NDF}$ : 2085223.8/47

All: 2715.085+/-0.268  $\chi^2/\text{NDF}$ : 2822525.3/90

# asym\_atr1\_correction\_mean vs Slug, Sign Corrected



Right In: 49.871+/-238.634  $\chi^2/\text{NDF}$ : 21.4/19

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

Right Out: -61.851+/-37.925  $\chi^2/\text{NDF}$ : 24.3/22

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

Left: -325.512+/-133.103  $\chi^2/\text{NDF}$ : 77.4/47

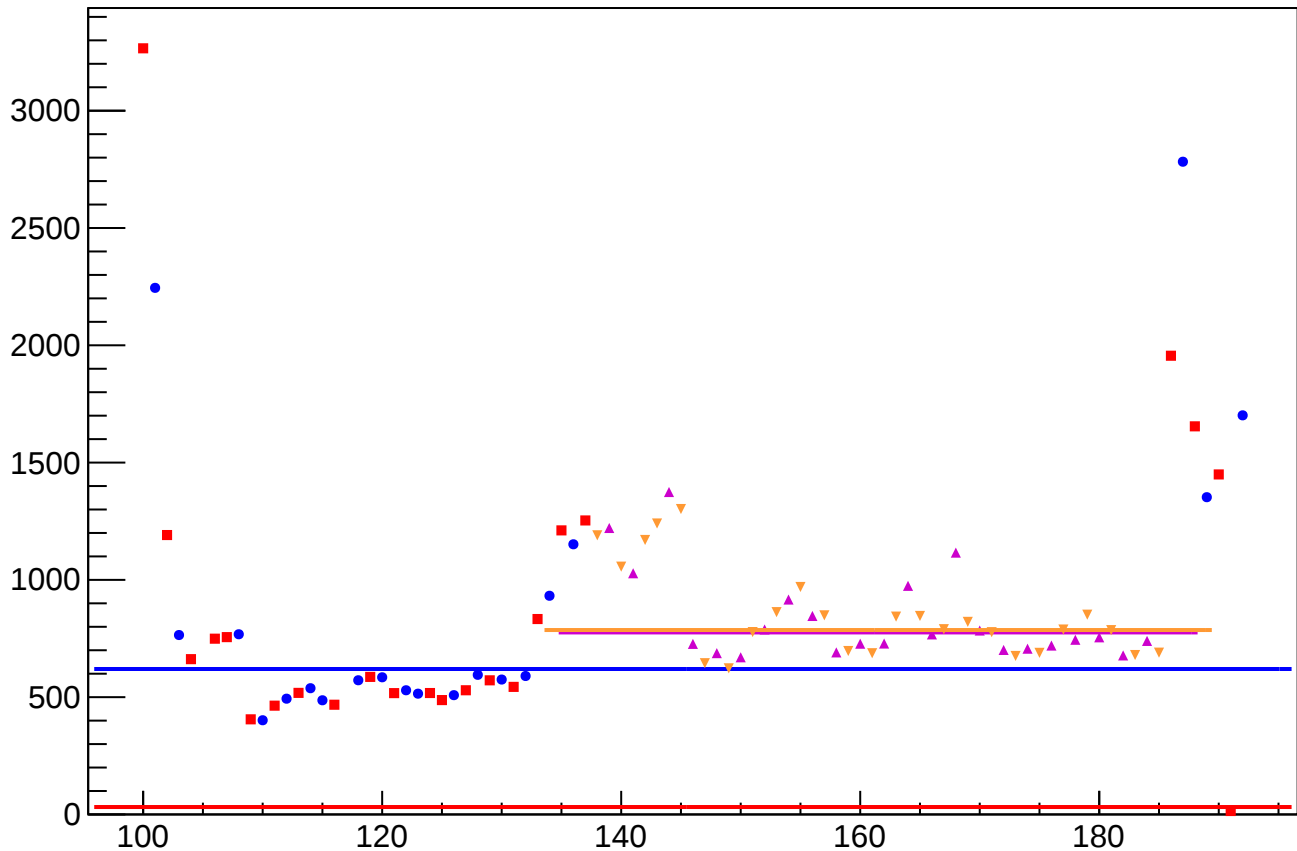
Right: -59.098+/-37.455  $\chi^2/\text{NDF}$ : 45.9/42

In: 49.486+/-148.251  $\chi^2/\text{NDF}$ :35.0/42

Out: -86.702+/-37.171  $\chi^2/\text{NDF}$ :91.2/47

All: -78.647+/-36.055  $\chi^2/\text{NDF}$ : 127.0/90

# asym\_atr1\_correction\_rms vs Slug, Sign Corrected



Right In: 620.084+/-0.169  $\chi^2/\text{NDF}$ : 2604806.0/19

Left Out: 786.173+/-0.132  $\chi^2/\text{NDF}$ :1249536.1/24

Right Out: 31.694+/-0.027  $\chi^2/\text{NDF}$ : 15452532.7/22

Left In: 775.930+/-0.134  $\chi^2/\text{NDF}$ :1056766.5/22

Left: 781.103+/-0.094  $\chi^2/\text{NDF}$ : 2309263.4/47

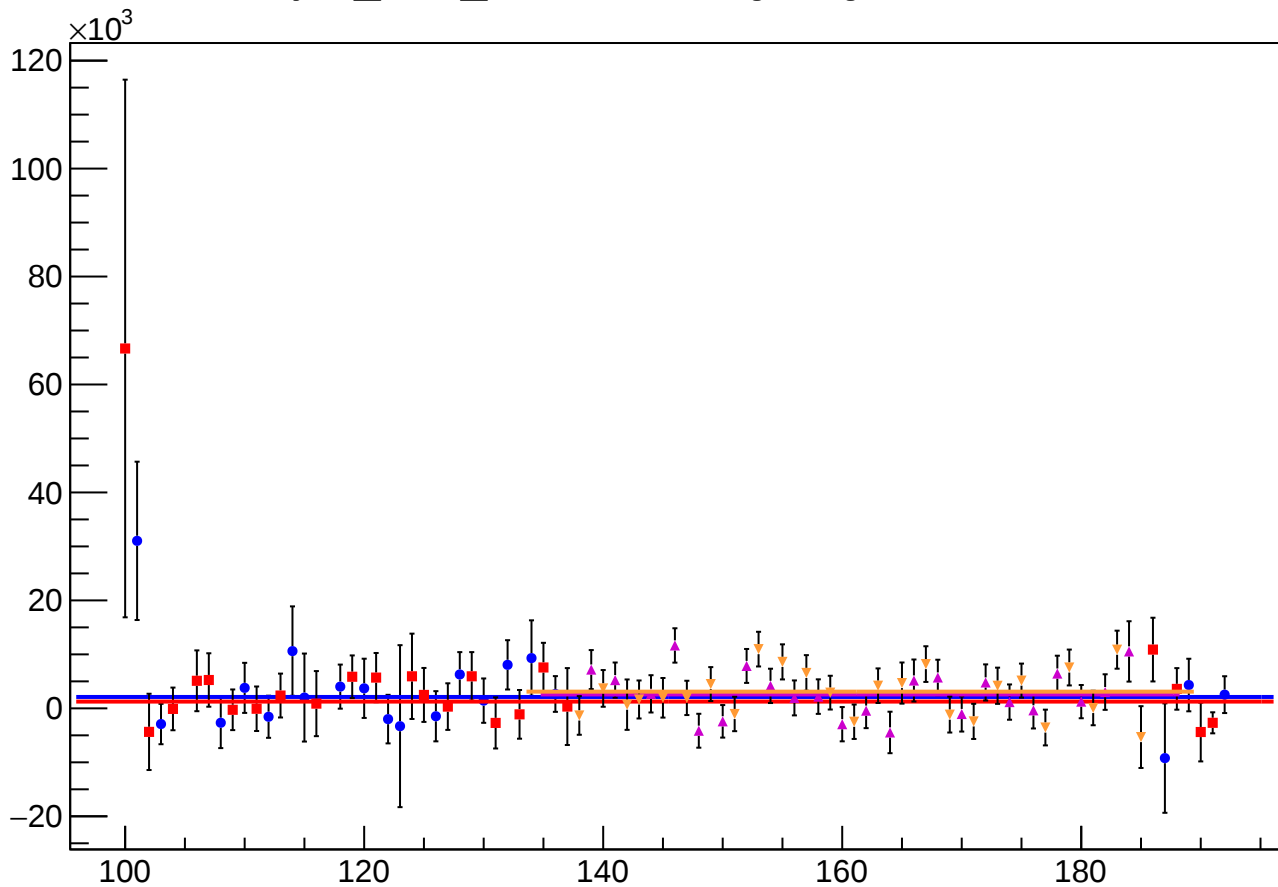
Right: 46.189+/-0.026  $\chi^2/\text{NDF}$ : 29916751.3/42

In: 715.781+/-0.105  $\chi^2/\text{NDF}$ :4185370.0/42

Out: 61.410+/-0.026  $\chi^2/\text{NDF}$ :47877361.8/47

All: 100.114+/-0.025  $\chi^2/\text{NDF}$ : 88723563.2/90

# asym\_atr1\_mean vs Slug, Sign Corrected



Right In: 2110.023+/-1070.990  $\chi^2/\text{NDF}$ : 15.9/19

Left Out: 3094.826+/-678.510  $\chi^2/\text{NDF}$ : 38.7/24

Right Out: 1254.538+/-912.722  $\chi^2/\text{NDF}$ : 18.9/22

Left In: 2573.184+/-695.795  $\chi^2/\text{NDF}$ : 35.7/22

Left: 2840.565+/-485.775  $\chi^2/\text{NDF}$ : 74.6/47

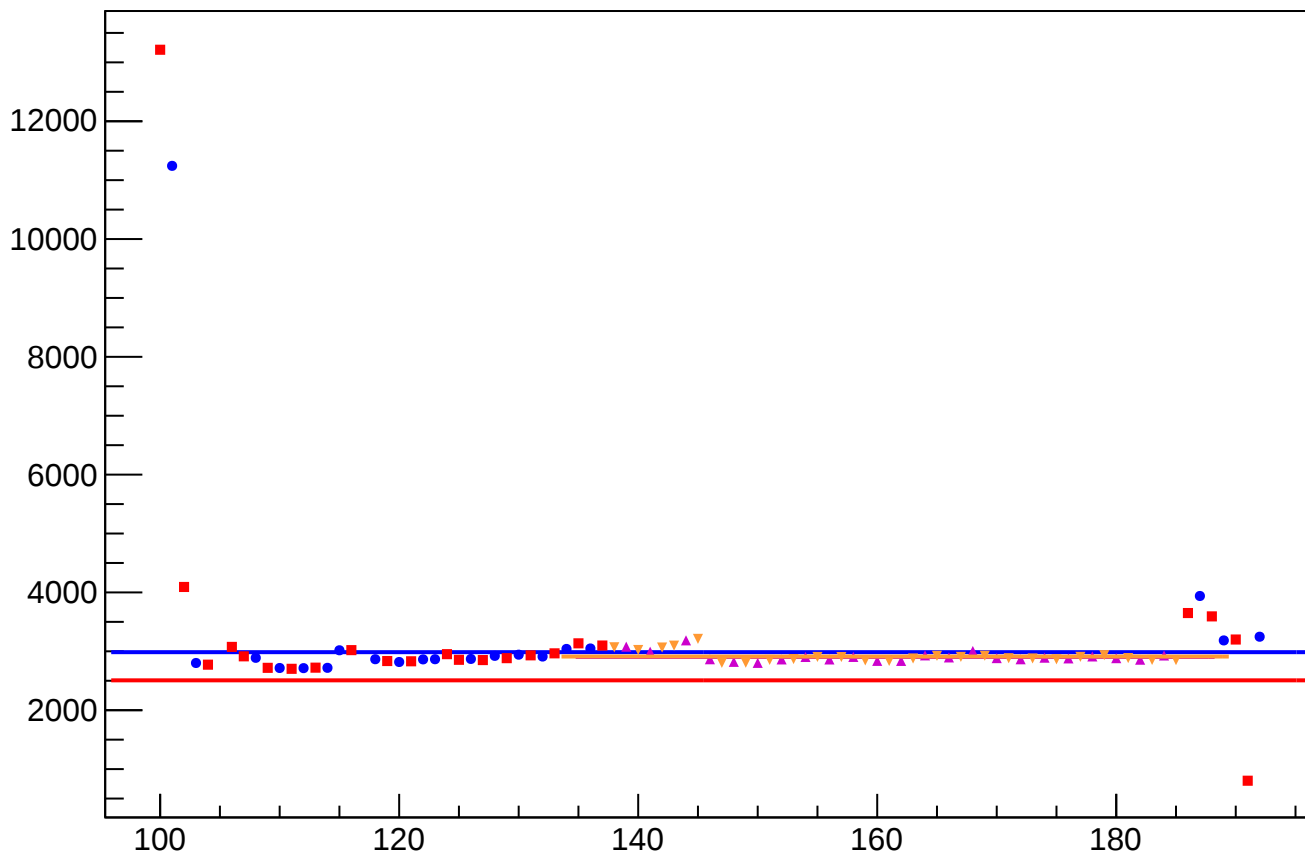
Right: 1614.458+/-694.676  $\chi^2/\text{NDF}$ : 35.2/42

In: 2435.717+/-583.471  $\chi^2/\text{NDF}$ : 51.8/42

Out: 2439.808+/-544.530  $\chi^2/\text{NDF}$ : 60.2/47

All: 2437.903+/-398.096  $\chi^2/\text{NDF}$ : 111.9/90

# asym\_atr1\_rms vs Slug, Sign Corrected



Right In: 2985.429+/-0.757  $\chi^2/\text{NDF}$ : 699448.1/19

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

Right Out: 2507.078+/-0.645  $\chi^2/\text{NDF}$ : 2218478.2/22

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

Left: 2907.416+/-0.343  $\chi^2/\text{NDF}$ : 65612.1/47

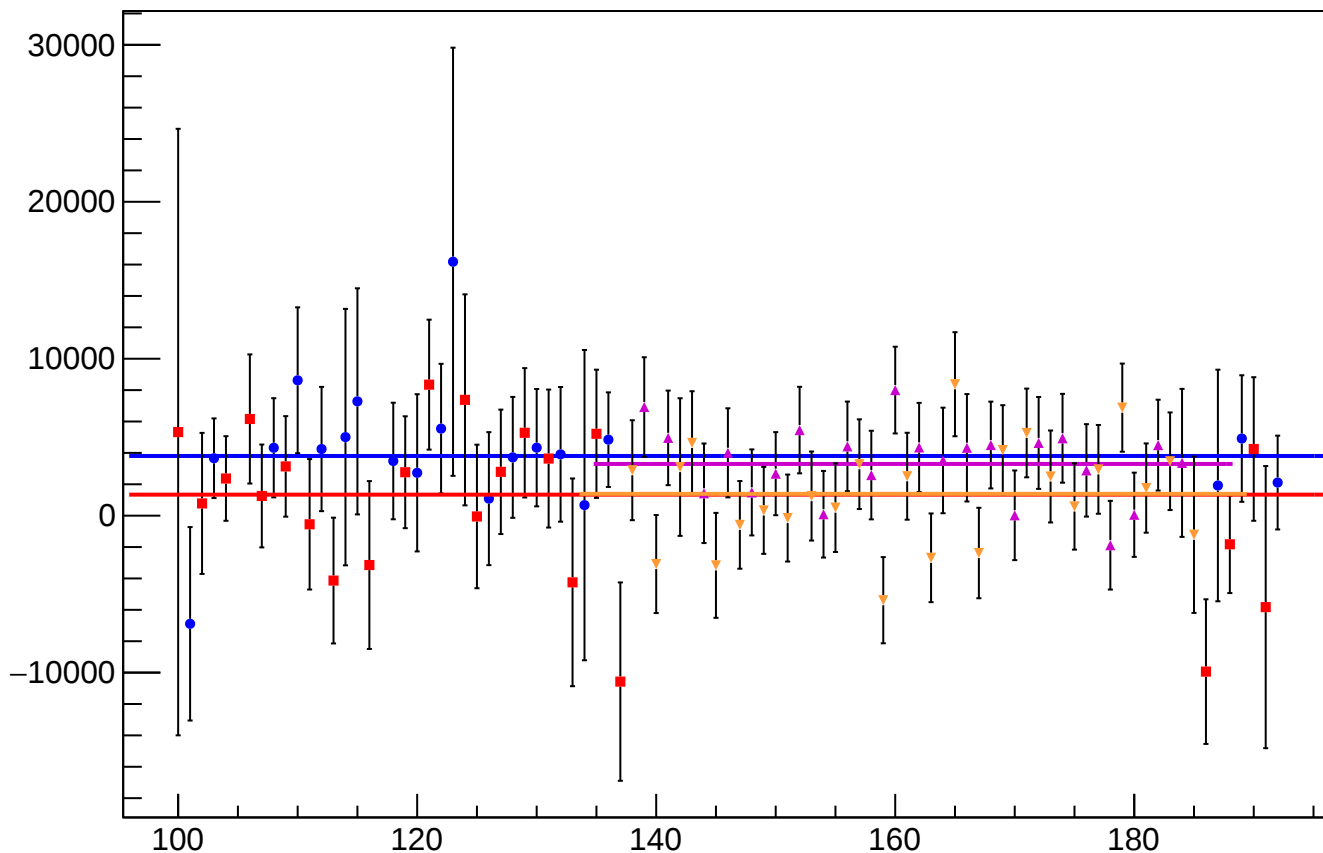
Right: 2708.330+/-0.491  $\chi^2/\text{NDF}$ : 3149047.5/42

In: 2927.754+/-0.413  $\chi^2/\text{NDF}$ : 736534.7/42

Out: 2767.376+/-0.385  $\chi^2/\text{NDF}$ : 2507682.9/47

All: 2842.035+/-0.281  $\chi^2/\text{NDF}$ : 3324980.1/90

# reg\_asym\_atr2\_mean vs Slug, Sign Corrected



Right In: 3803.741+/-927.056  $\chi^2/\text{NDF}$ : 6.6/19

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

Right Out: 1339.793+/-878.895  $\chi^2/\text{NDF}$ : 23.1/22

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

Left: 2321.546+/-426.485  $\chi^2/\text{NDF}$ : 49.0/47

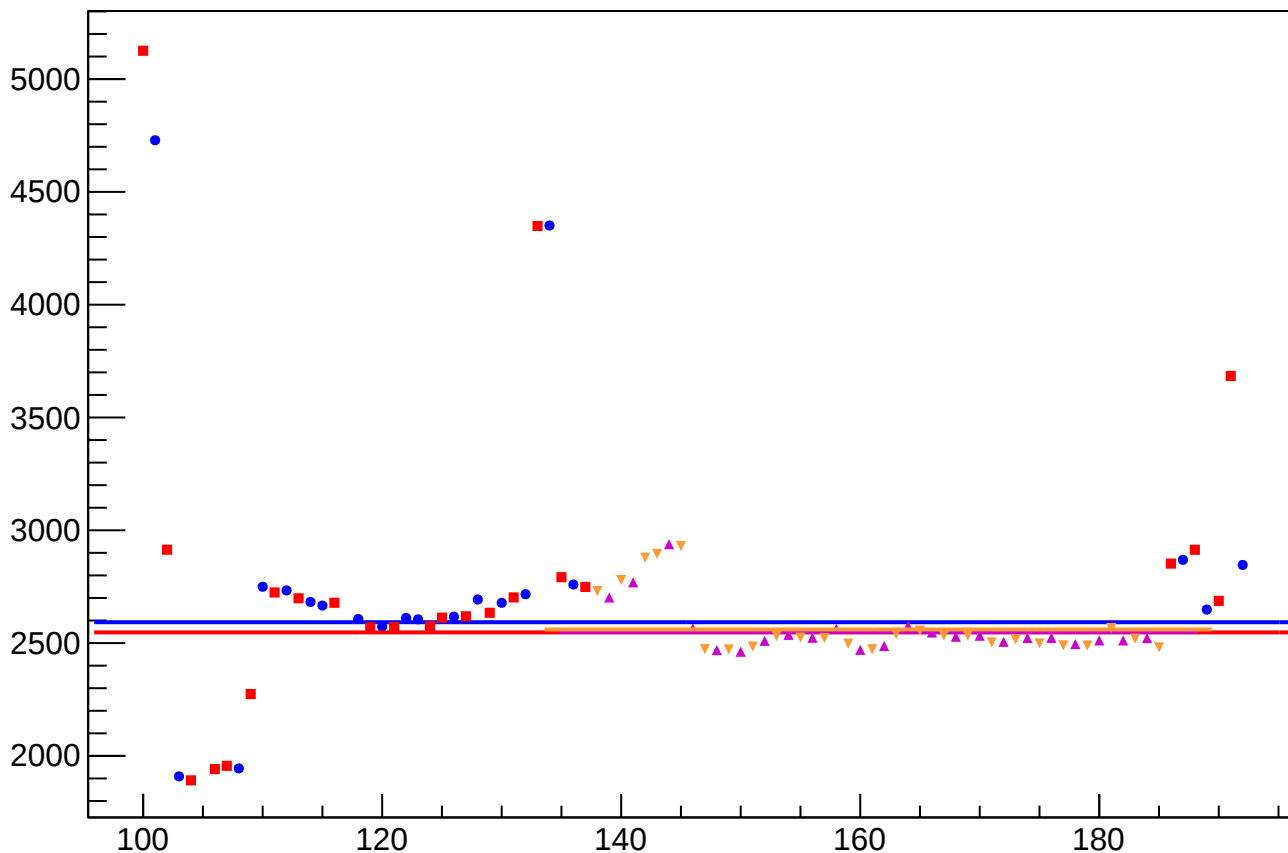
Right: 2506.106+/-637.819  $\chi^2/\text{NDF}$ : 33.4/42

In: 3448.966+/-509.575  $\chi^2/\text{NDF}$ :21.6/42

Out: 1374.354+/-493.571  $\chi^2/\text{NDF}$ :52.3/47

All: 2378.569+/-354.530  $\chi^2/\text{NDF}$ : 82.5/90

# reg\_asym\_atr2\_rms vs Slug, Sign Corrected



Right In: 2592.535 $\pm$ 0.656  $\chi^2$ /NDF: 566210.1/19

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

Right Out: 2547.350 $\pm$ 0.621  $\chi^2$ /NDF: 530570.8/22

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

Left: 2554.831 $\pm$ 0.302  $\chi^2$ /NDF: 142411.2/47

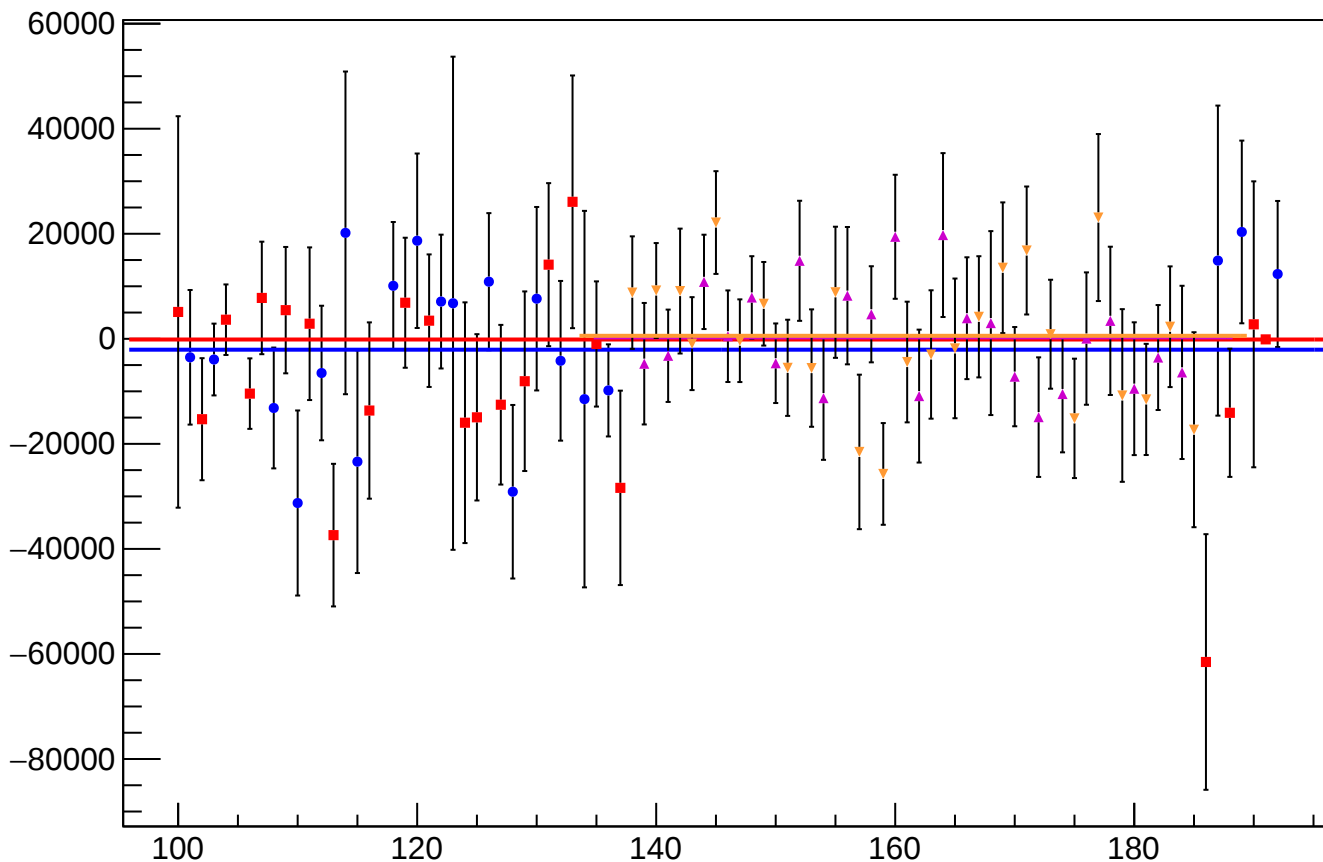
Right: 2568.738 $\pm$ 0.451  $\chi^2$ /NDF: 1099283.2/42

In: 2562.063 $\pm$ 0.360  $\chi^2$ /NDF:624572.7/42

Out: 2556.374 $\pm$ 0.349  $\chi^2$ /NDF:617650.2/47

All: 2559.128 $\pm$ 0.251  $\chi^2$ /NDF: 1242351.5/90

# asym\_atr2\_correction\_mean vs Slug, Sign Corrected



Right In: -2071.932 $\pm$ 3082.699  $\chi^2$ /NDF: 16.4/19

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

Right Out: -132.164 $\pm$ 195.058  $\chi^2$ /NDF: 28.1/22

Left In: 275.116 $\pm$ 2242.836  $\chi^2$ /NDF: 15.7/22

Left: 427.723 $\pm$ 1564.847  $\chi^2$ /NDF: 43.9/47

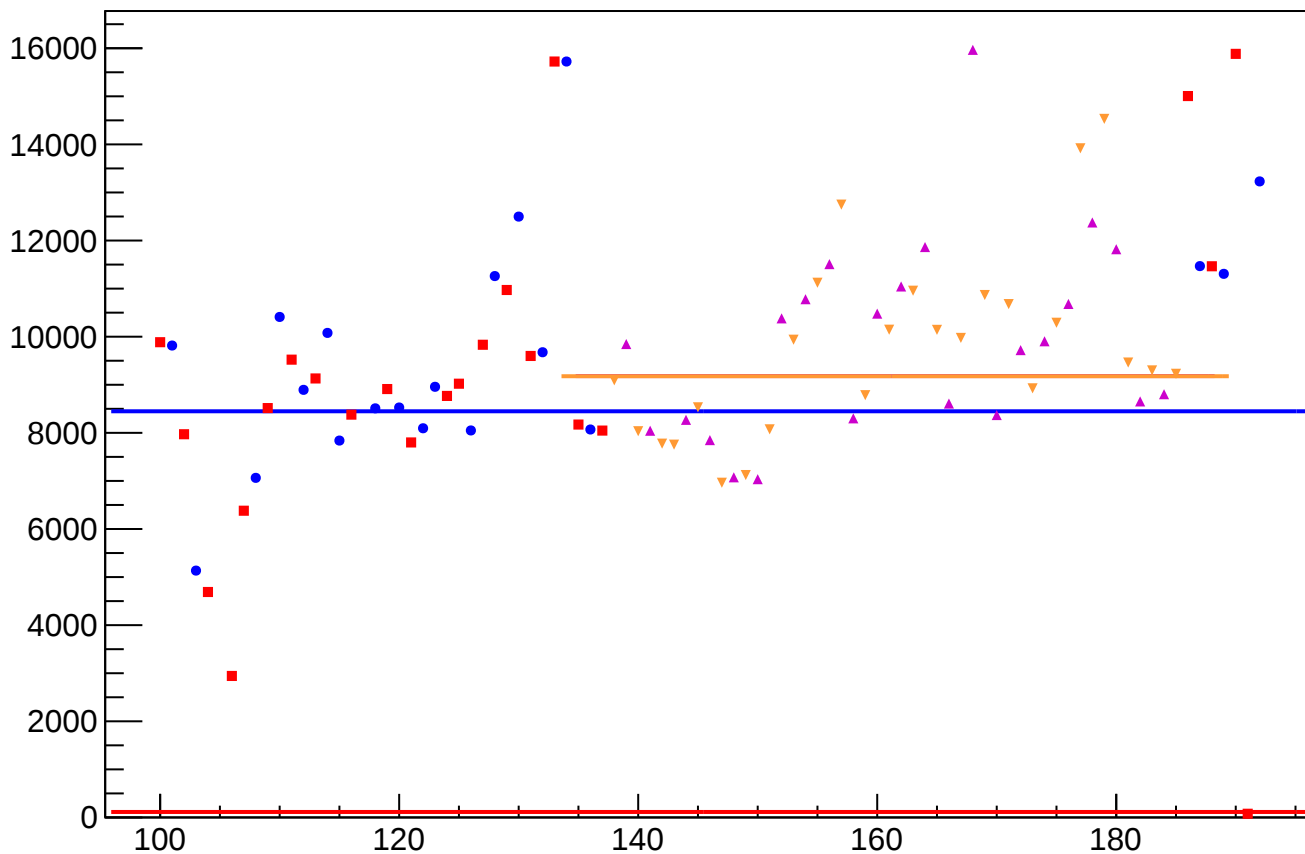
Right: -139.900 $\pm$ 194.669  $\chi^2$ /NDF: 44.9/42

In: -537.249 $\pm$ 1813.618  $\chi^2$ /NDF: 32.5/42

Out: -126.590 $\pm$ 194.285  $\chi^2$ /NDF: 56.4/47

All: -131.249 $\pm$ 193.180  $\chi^2$ /NDF: 89.0/90

# asym\_atr2\_correction\_rms vs Slug, Sign Corrected



Right In: 8448.591 $\pm$ 2.180

$\chi^2$ /NDF: 1136406.5/19

Left Out: 9177.688 $\pm$ 1.545

$\chi^2$ /NDF: 1176195.8/24

Right Out: 114.172 $\pm$ 0.138

$\chi^2$ /NDF: 16589717.8/22

Left In: 9181.254 $\pm$ 1.586

$\chi^2$ /NDF: 1236469.7/22

Left: 9179.424 $\pm$ 1.107

$\chi^2$ /NDF: 2412668.1/47

Right: 147.408 $\pm$ 0.138

$\chi^2$ /NDF: 32286846.7/42

In: 8927.663 $\pm$ 1.282

$\chi^2$ /NDF: 2446747.1/42

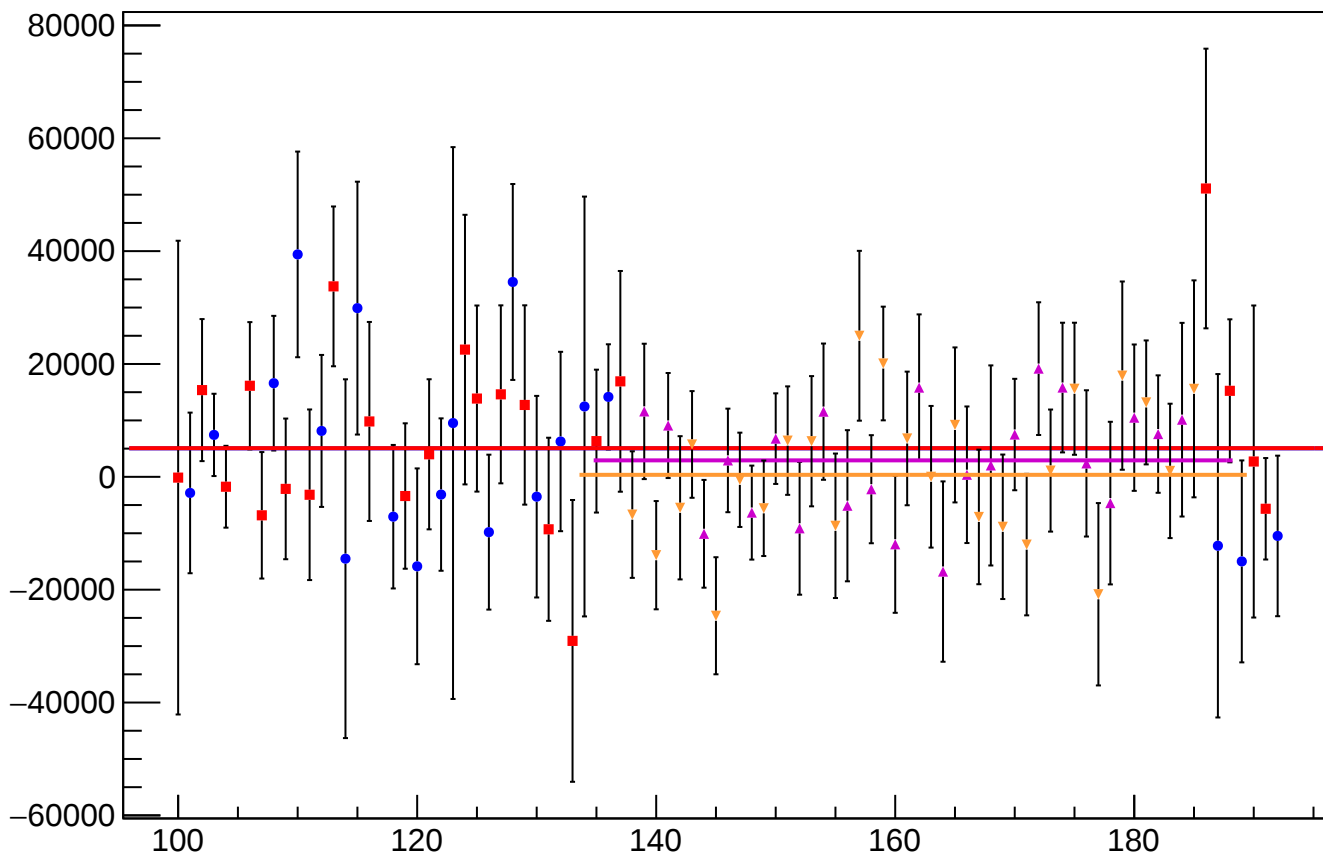
Out: 185.873 $\pm$ 0.137

$\chi^2$ /NDF: 51926020.9/47

All: 285.055 $\pm$ 0.137

$\chi^2$ /NDF: 100311974.7/9

# asym\_atr2\_mean vs Slug, Sign Corrected



Right In: 5042.983+/-3248.617  $\chi^2/\text{NDF}$ : 17.4/19

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

Right Out: 5081.659+/-2876.706  $\chi^2/\text{NDF}$ : 18.8/22

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

Left: 1605.548+/-1633.097  $\chi^2/\text{NDF}$ : 41.8/47

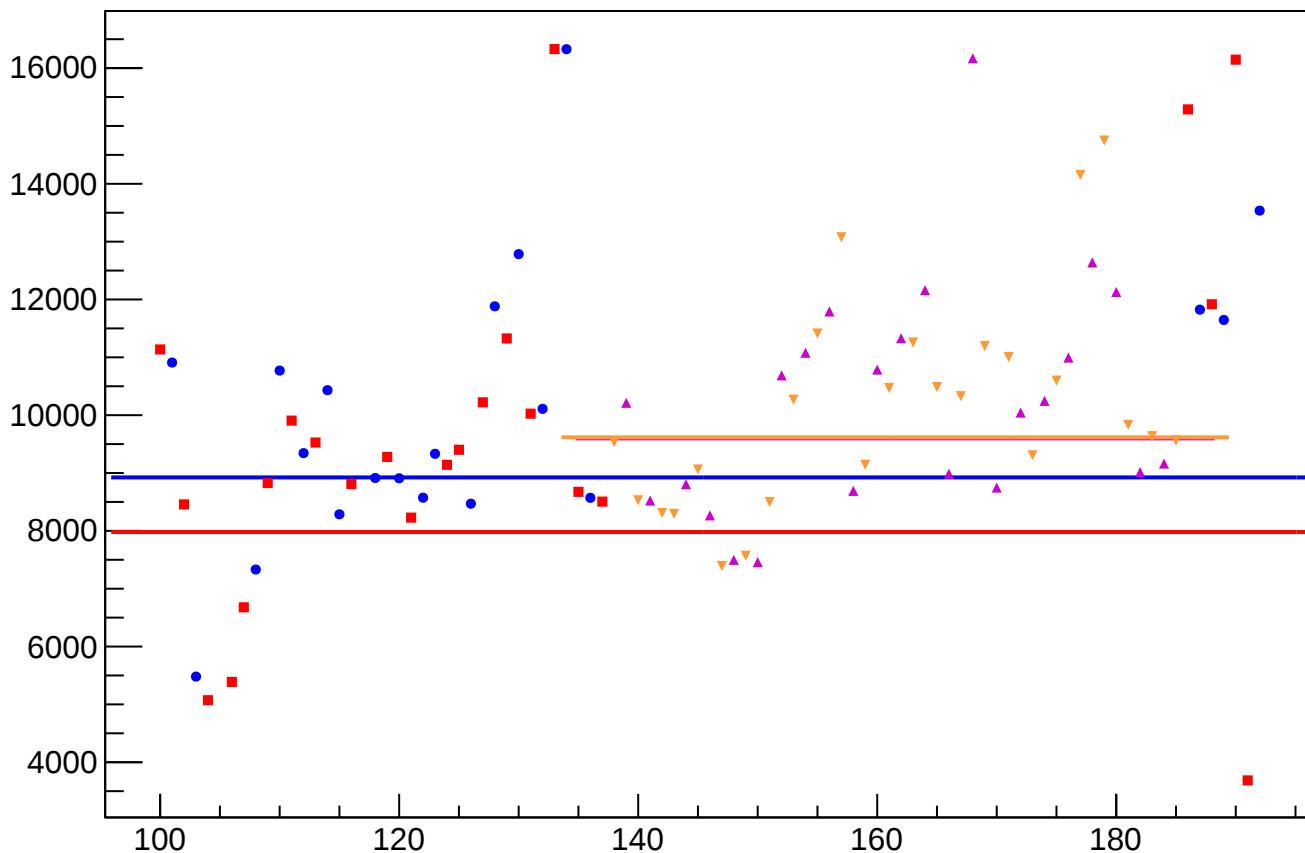
Right: 5064.661+/-2153.679  $\chi^2/\text{NDF}$ : 36.2/42

In: 3643.507+/-1897.892  $\chi^2/\text{NDF}$ : 32.6/42

Out: 2180.706+/-1787.645  $\chi^2/\text{NDF}$ : 46.7/47

All: 2868.388+/-1301.286  $\chi^2/\text{NDF}$ : 79.6/90

# asym\_atr2\_rms vs Slug, Sign Corrected



Right In: 8923.882+/-2.297

$\chi^2/\text{NDF}$ : 1072197.2/19

Left Out: 9616.245+/-1.613

$\chi^2/\text{NDF}$ : 1011665.6/24

Right Out: 7980.600+/-2.034

$\chi^2/\text{NDF}$ : 1951730.8/22

Left In: 9598.531+/-1.654

$\chi^2/\text{NDF}$ : 1082171.6/22

Left: 9607.606+/-1.155

$\chi^2/\text{NDF}$ : 2093896.0/47

Right: 8395.160+/-1.523

$\chi^2/\text{NDF}$ : 3118443.2/42

In: 9368.268+/-1.342

$\chi^2/\text{NDF}$ : 2211184.9/42

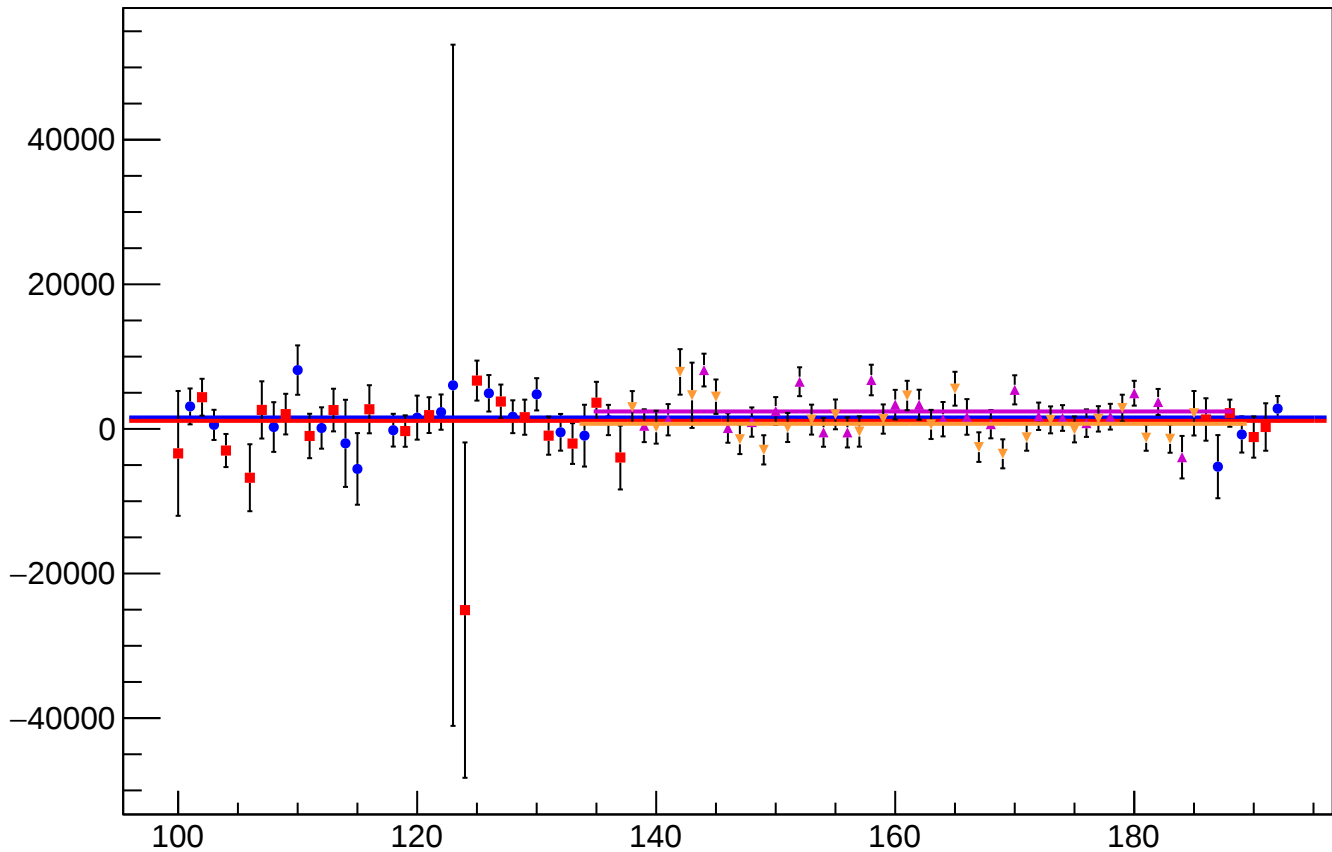
Out: 8984.588+/-1.264

$\chi^2/\text{NDF}$ : 3360304.9/47

All: 9164.958+/-0.920

$\chi^2/\text{NDF}$ : 5614802.6/90

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



Right In: 1583.646+/-602.469  $\chi^2/\text{NDF}$ : 16.5/19

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

Right Out: 1117.338+/-595.093  $\chi^2/\text{NDF}$ : 21.4/22

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

Left: 1549.879+/-297.262  $\chi^2/\text{NDF}$ : 77.0/47

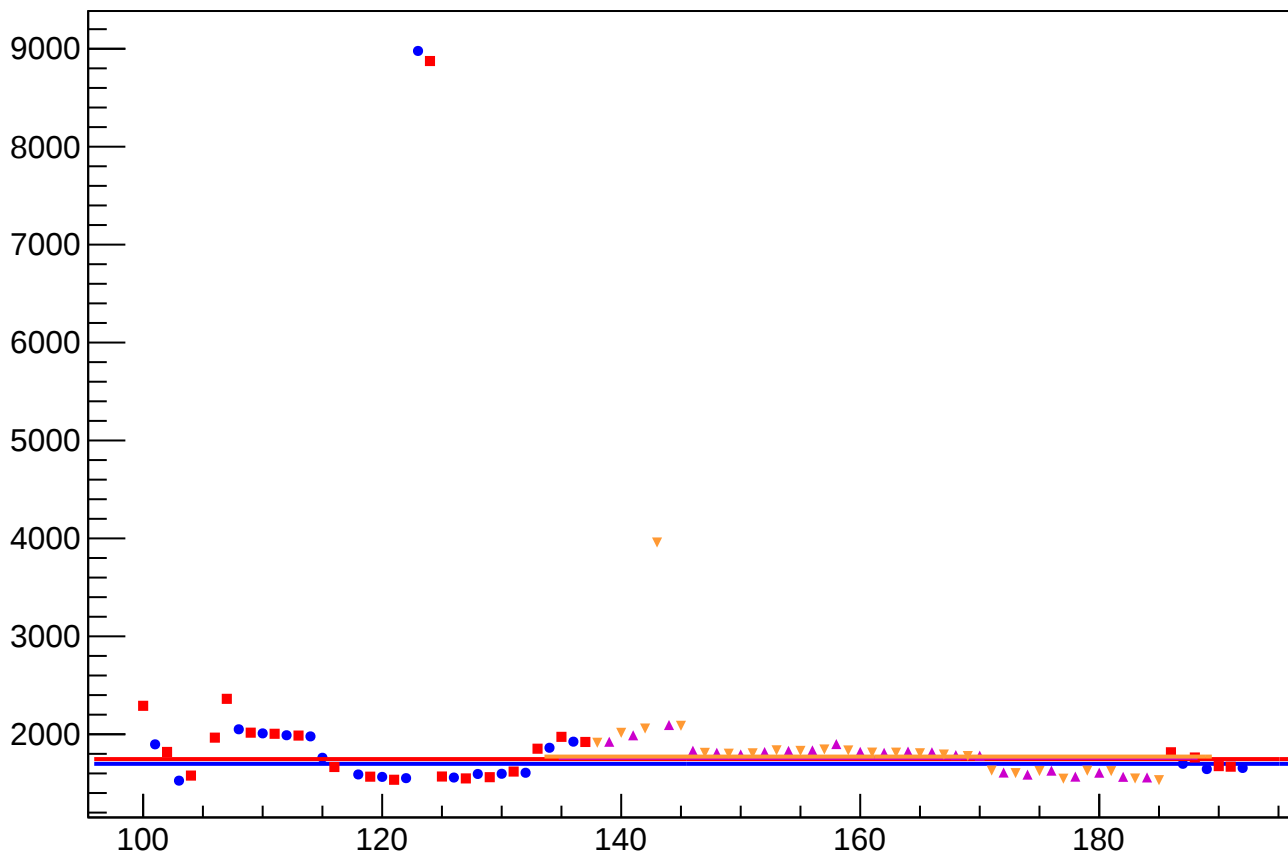
Right: 1347.620+/-423.378  $\chi^2/\text{NDF}$ : 38.1/42

In: 2139.918+/-346.450  $\chi^2/\text{NDF}$ : 51.7/42

Out: 844.121+/-341.710  $\chi^2/\text{NDF}$ : 56.5/47

All: 1483.094+/-243.284  $\chi^2/\text{NDF}$ : 115.3/90

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



Right In: 1698.061 $\pm$ 0.426  $\chi^2$ /NDF: 198327.1/19

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

Right Out: 1746.544 $\pm$ 0.419  $\chi^2$ /NDF: 400019.8/22

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

Left: 1765.913 $\pm$ 0.210  $\chi^2$ /NDF: 918240.2/47

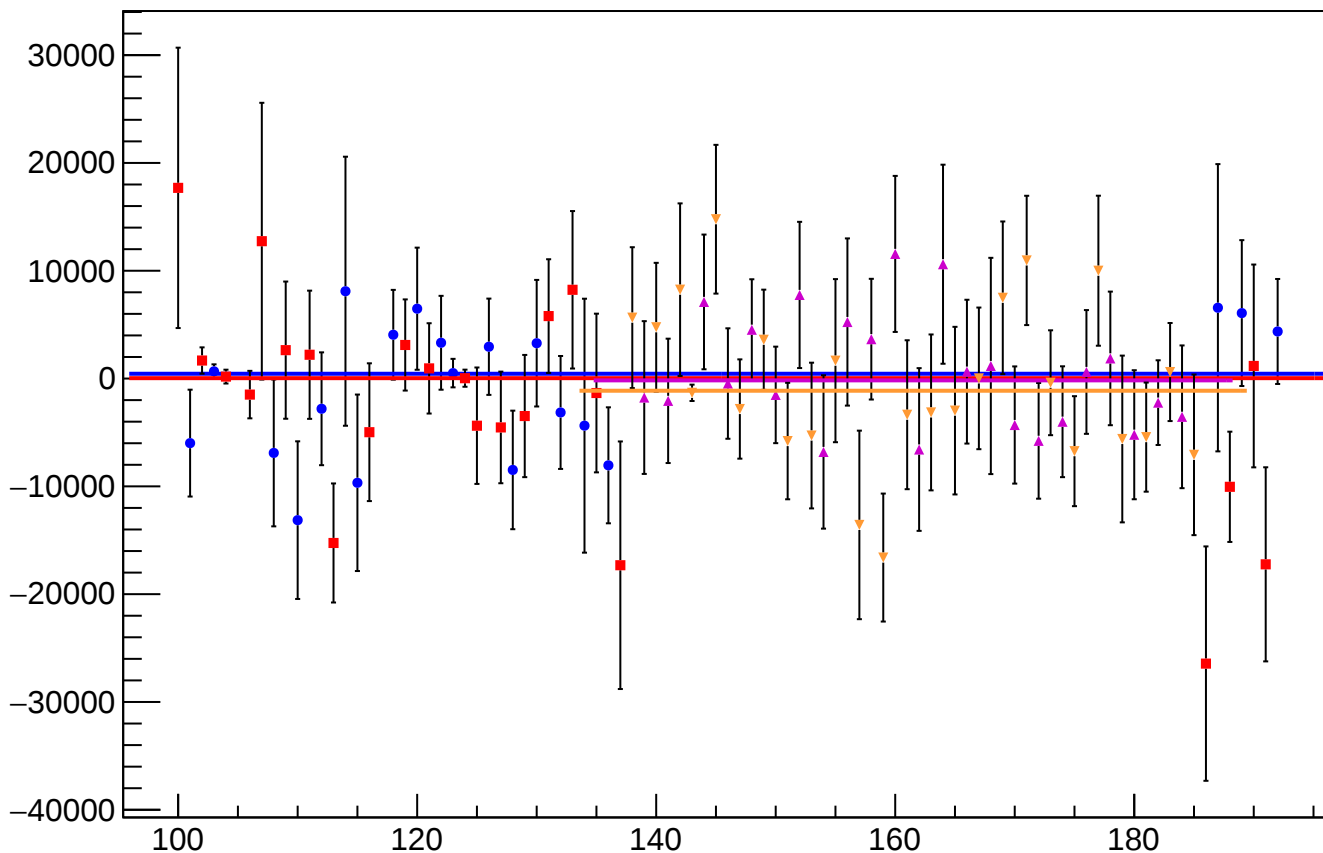
Right: 1722.687 $\pm$ 0.299  $\chi^2$ /NDF: 604925.5/42

In: 1739.250 $\pm$ 0.245  $\chi^2$ /NDF: 427185.0/42

Out: 1763.598 $\pm$ 0.241  $\chi^2$ /NDF: 1104965.6/47

All: 1751.606 $\pm$ 0.172  $\chi^2$ /NDF: 1537163.4/90

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



Right In: 444.978+/-535.243  $\chi^2/\text{NDF}$ : 18.9/19

Left Out: -1129.807+/-647.600  $\chi^2/\text{NDF}$ :31.5/24

Right Out: 35.941+/-430.833  $\chi^2/\text{NDF}$ : 34.4/22

Left In: -168.182+/-1232.411  $\chi^2/\text{NDF}$ :14.2/22

Left: -921.734+/-573.272  $\chi^2/\text{NDF}$ : 46.1/47

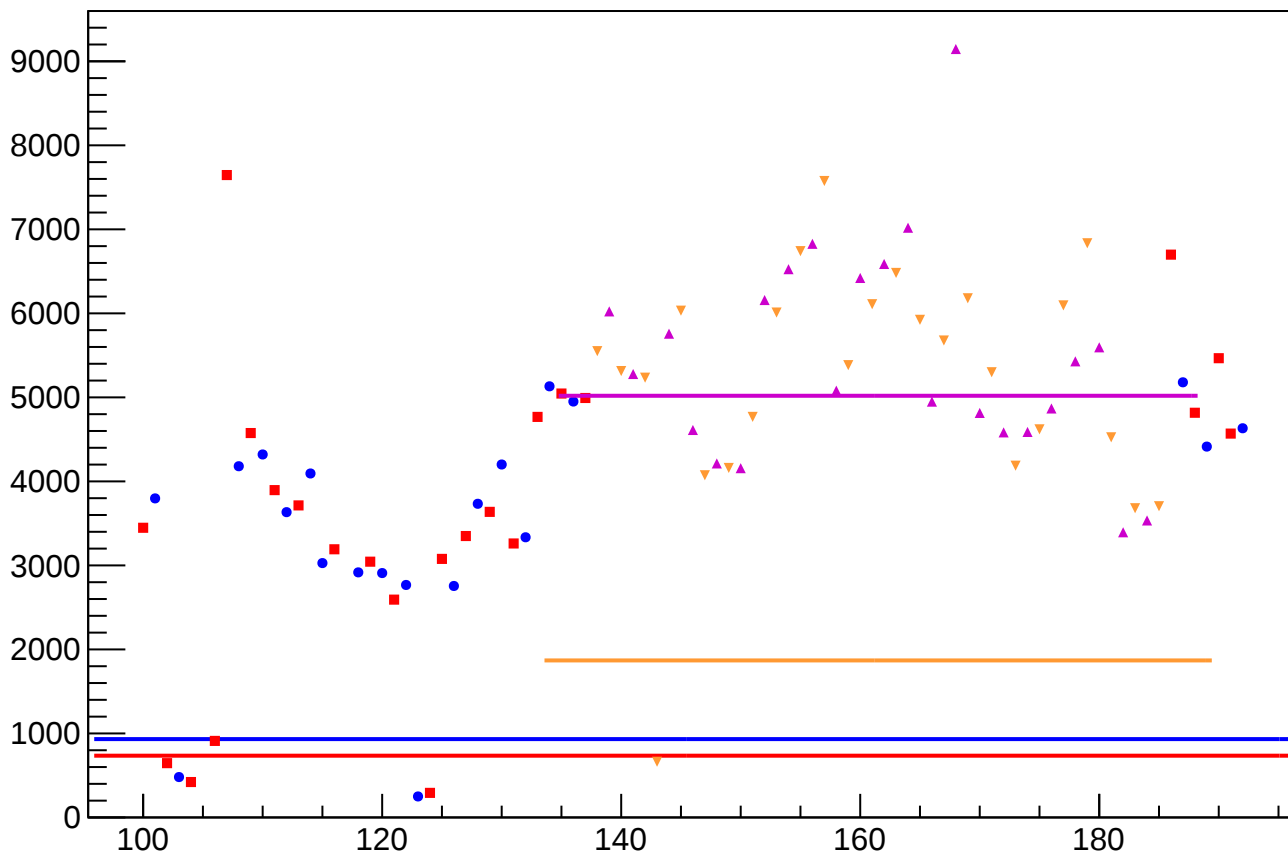
Right: 196.762+/-335.615  $\chi^2/\text{NDF}$ : 53.7/42

In: 347.676+/-490.941  $\chi^2/\text{NDF}$ :33.3/42

Out: -321.714+/-358.704  $\chi^2/\text{NDF}$ :68.2/47

All: -88.737+/-289.632  $\chi^2/\text{NDF}$ : 102.6/90

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



Right In: 932.628 $\pm$ 0.378  $\chi^2/\text{NDF}$ : 10052085.3/19

Left Out: 1868.983 $\pm$ 0.458  $\chi^2/\text{NDF}$ :19852416.6/24

Right Out: 735.164 $\pm$ 0.305  $\chi^2/\text{NDF}$ : 11137453.5/22

Left In: 5019.114 $\pm$ 0.871  $\chi^2/\text{NDF}$ :1569031.9/22

Left: 2550.597 $\pm$ 0.405  $\chi^2/\text{NDF}$ : 31661059.7/47

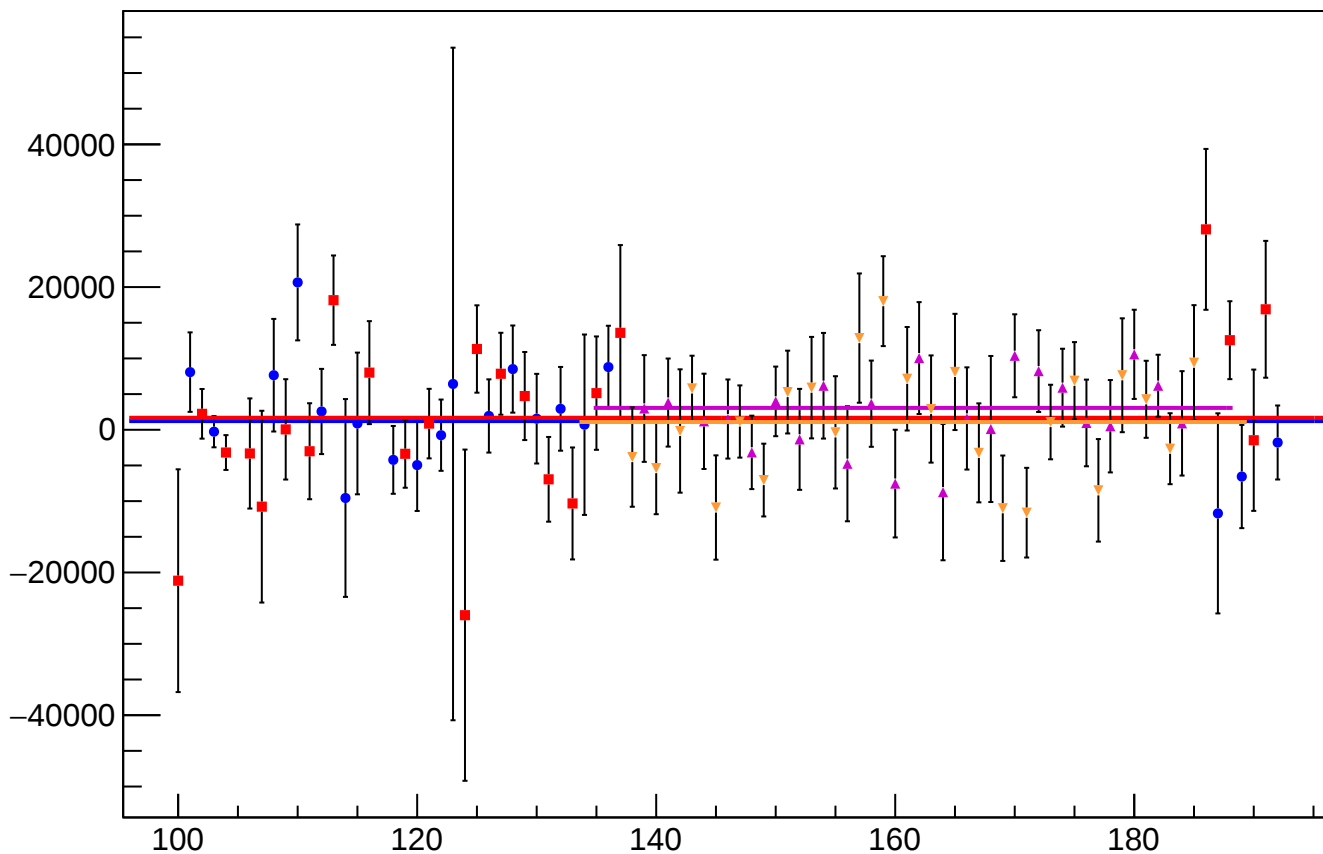
Right: 812.801 $\pm$ 0.237  $\chi^2/\text{NDF}$ : 21354724.4/42

In: 1581.108 $\pm$ 0.347  $\chi^2/\text{NDF}$ :30121268.7/42

Out: 1083.023 $\pm$ 0.254  $\chi^2/\text{NDF}$ :35239596.8/47

All: 1256.379 $\pm$ 0.205  $\chi^2/\text{NDF}$ : 66703003.6/9

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



Right In: 1216.364+/-1248.825  $\chi^2/\text{NDF}$ : 17.0/19

Left Out: 1094.317+/-1273.113  $\chi^2/\text{NDF}$ : 32.0/24

Right Out: 1683.930+/-1226.395  $\chi^2/\text{NDF}$ : 39.8/22

Left In: 3064.775+/-1318.173  $\chi^2/\text{NDF}$ : 12.6/22

Left: 2045.291+/-915.742  $\chi^2/\text{NDF}$ : 45.7/47

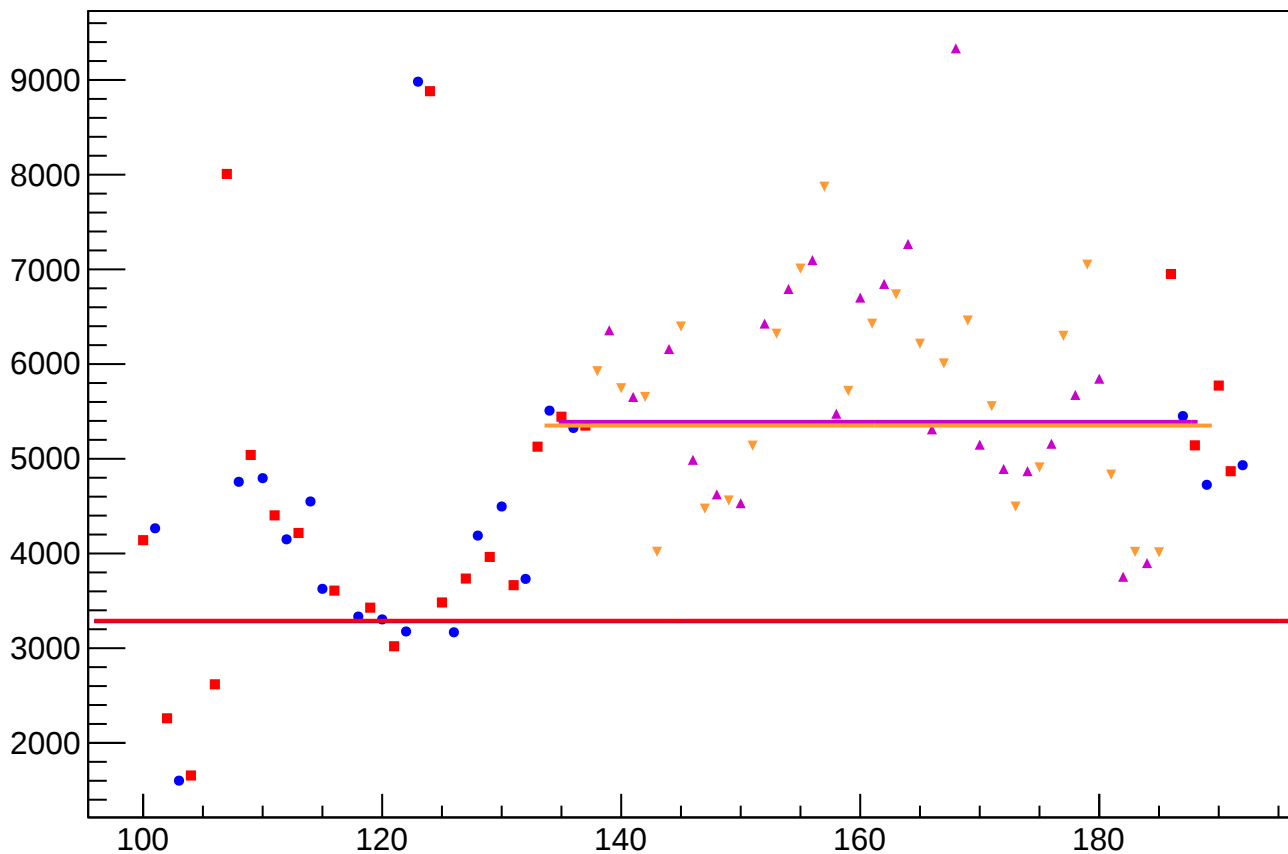
Right: 1454.384+/-875.015  $\chi^2/\text{NDF}$ : 56.8/42

In: 2090.671+/-906.578  $\chi^2/\text{NDF}$ : 30.6/42

Out: 1400.140+/-883.246  $\chi^2/\text{NDF}$ : 71.8/47

All: 1736.405+/-632.637  $\chi^2/\text{NDF}$ : 102.8/90

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



Right In: 3284.750+/-0.883  $\chi^2/\text{NDF}$ : 2245907.3/19

Left Out: 5350.804+/-0.900  $\chi^2/\text{NDF}$ : 1241497.9/24

Right Out: 3289.484+/-0.856  $\chi^2/\text{NDF}$ : 2685795.2/22

Left In: 5389.724+/-0.932  $\chi^2/\text{NDF}$ : 1309863.0/22

Left: 5369.587+/-0.648  $\chi^2/\text{NDF}$ : 2552263.0/47

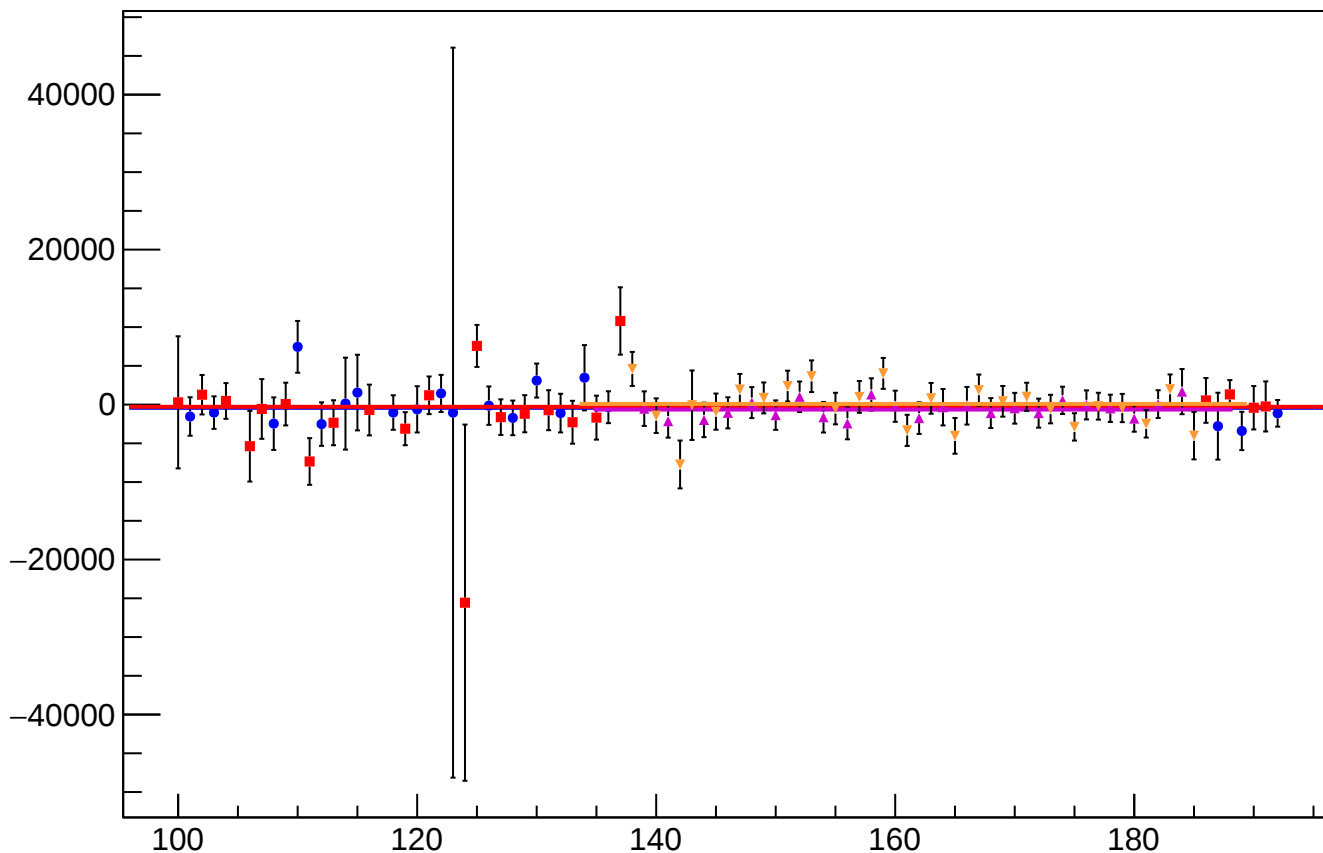
Right: 3287.191+/-0.615  $\chi^2/\text{NDF}$ : 4931717.3/42

In: 4280.407+/-0.641  $\chi^2/\text{NDF}$ : 6243510.5/42

Out: 4267.974+/-0.620  $\chi^2/\text{NDF}$ : 6681533.8/47

All: 4273.986+/-0.446  $\chi^2/\text{NDF}$ : 12925238.6/95

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



Right In:  $-413.978 \pm 594.398$   $\chi^2/\text{NDF}: 13.4/19$

Left Out:  $86.214 \pm 411.530$   $\chi^2/\text{NDF}: 36.0/24$

Right Out:  $-286.038 \pm 586.409$   $\chi^2/\text{NDF}: 28.1/22$

Left In:  $-640.235 \pm 417.645$   $\chi^2/\text{NDF}: 6.2/22$

Left:  $-271.653 \pm 293.134$   $\chi^2/\text{NDF}: 43.7/47$

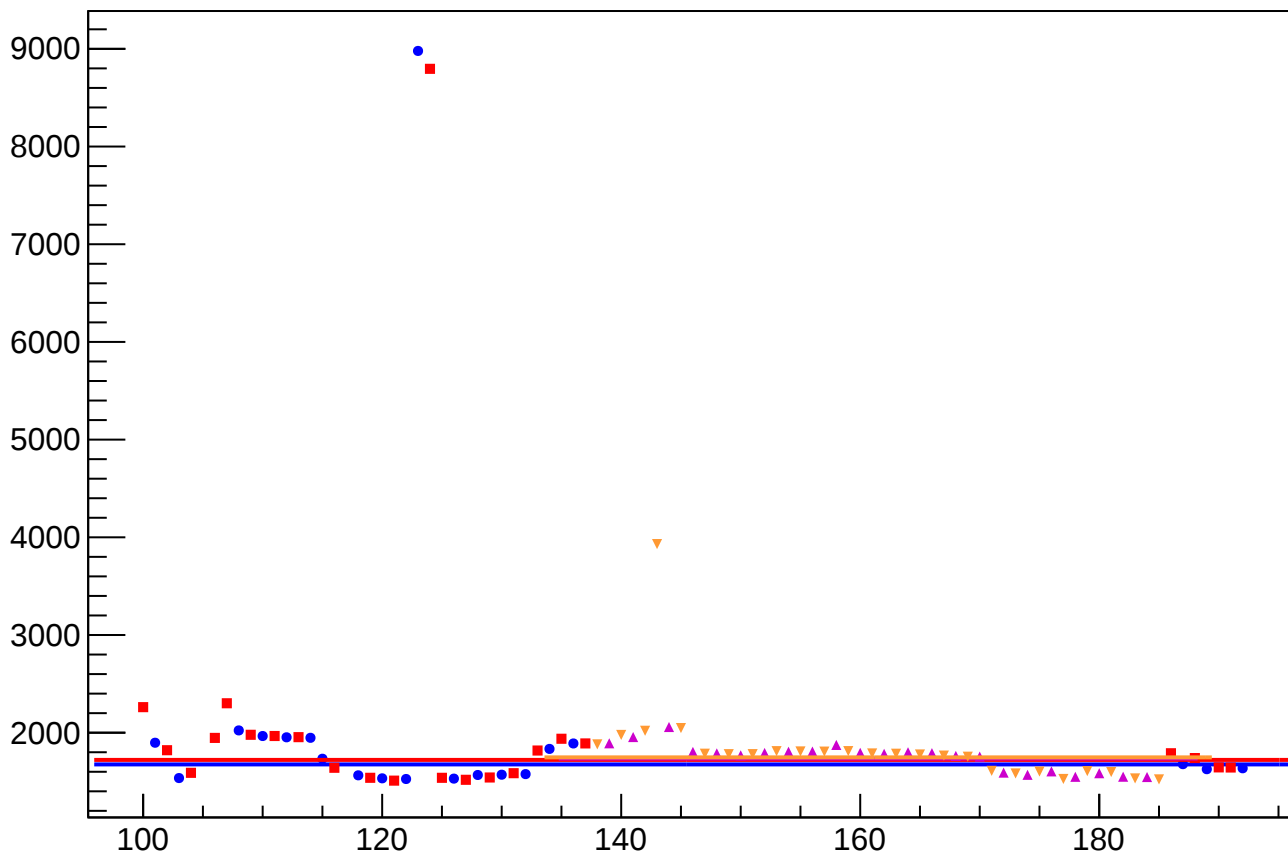
Right:  $-349.143 \pm 417.450$   $\chi^2/\text{NDF}: 41.5/42$

In:  $-565.453 \pm 341.724$   $\chi^2/\text{NDF}: 19.7/42$

Out:  $-36.622 \pm 336.857$   $\chi^2/\text{NDF}: 64.4/47$

All:  $-297.244 \pm 239.896$   $\chi^2/\text{NDF}: 85.3/90$

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



Right In: 1675.381+/-0.420  $\chi^2/\text{NDF}$ : 196242.9/19

Left Out: 1747.320+/-0.291  $\chi^2/\text{NDF}$ : 698192.3/24

Right Out: 1721.470+/-0.413  $\chi^2/\text{NDF}$ : 396536.3/22

Left In: 1735.540+/-0.295  $\chi^2/\text{NDF}$ : 206766.6/22

Left: 1741.517+/-0.207  $\chi^2/\text{NDF}$ : 905766.2/47

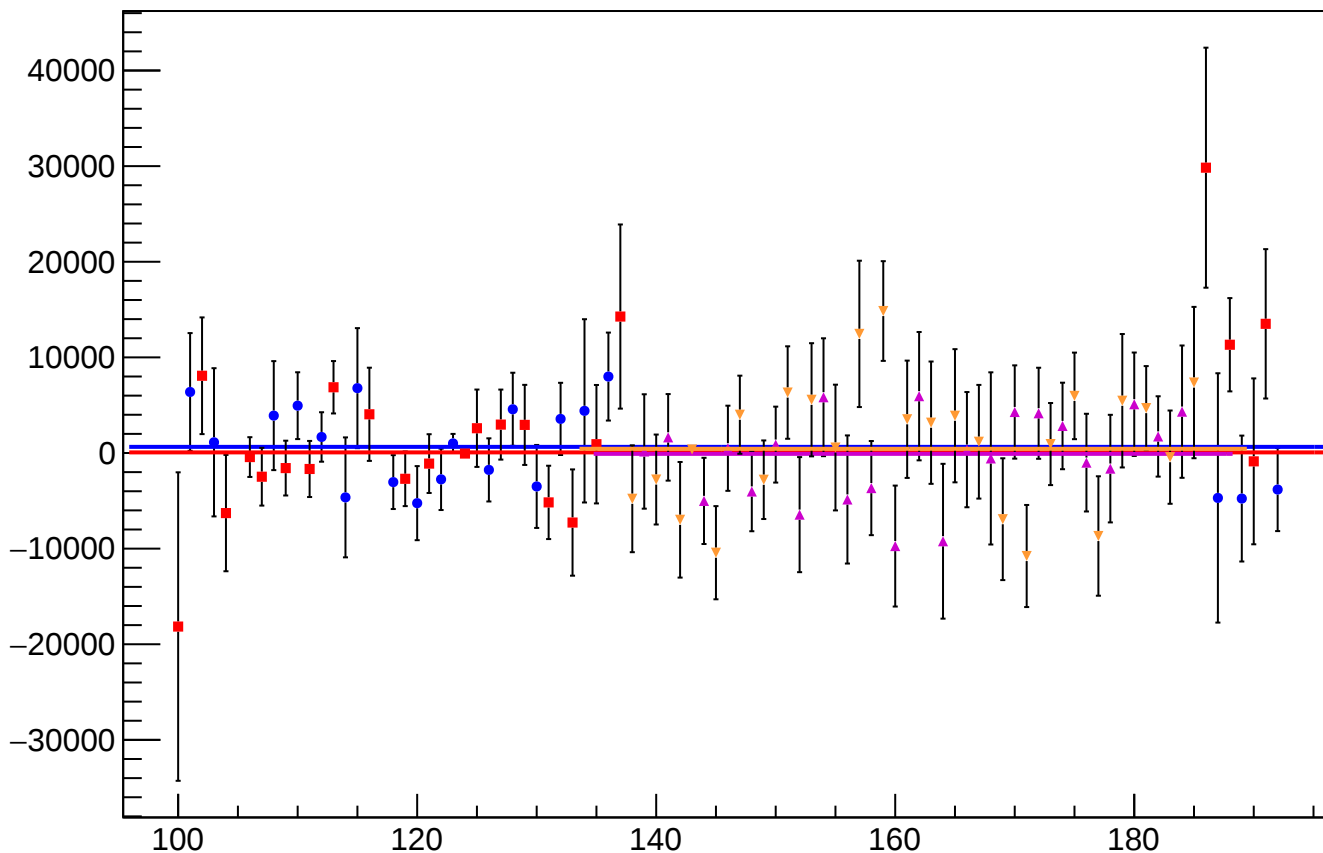
Right: 1698.816+/-0.295  $\chi^2/\text{NDF}$ : 598893.5/42

In: 1715.656+/-0.242  $\chi^2/\text{NDF}$ : 416725.5/42

Out: 1738.751+/-0.238  $\chi^2/\text{NDF}$ : 1097344.5/47

All: 1727.383+/-0.170  $\chi^2/\text{NDF}$ : 1518708.1/90

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



Right In: 642.132 $\pm$ 692.802  $\chi^2$ /NDF: 17.5/19

Left Out: 442.187 $\pm$ 440.335  $\chi^2$ /NDF:33.9/24

Right Out: 63.542 $\pm$ 355.540  $\chi^2$ /NDF: 34.8/22

Left In: -88.508 $\pm$ 1094.838  $\chi^2$ /NDF:13.4/22

Left: 368.296 $\pm$ 408.531  $\chi^2$ /NDF: 47.5/47

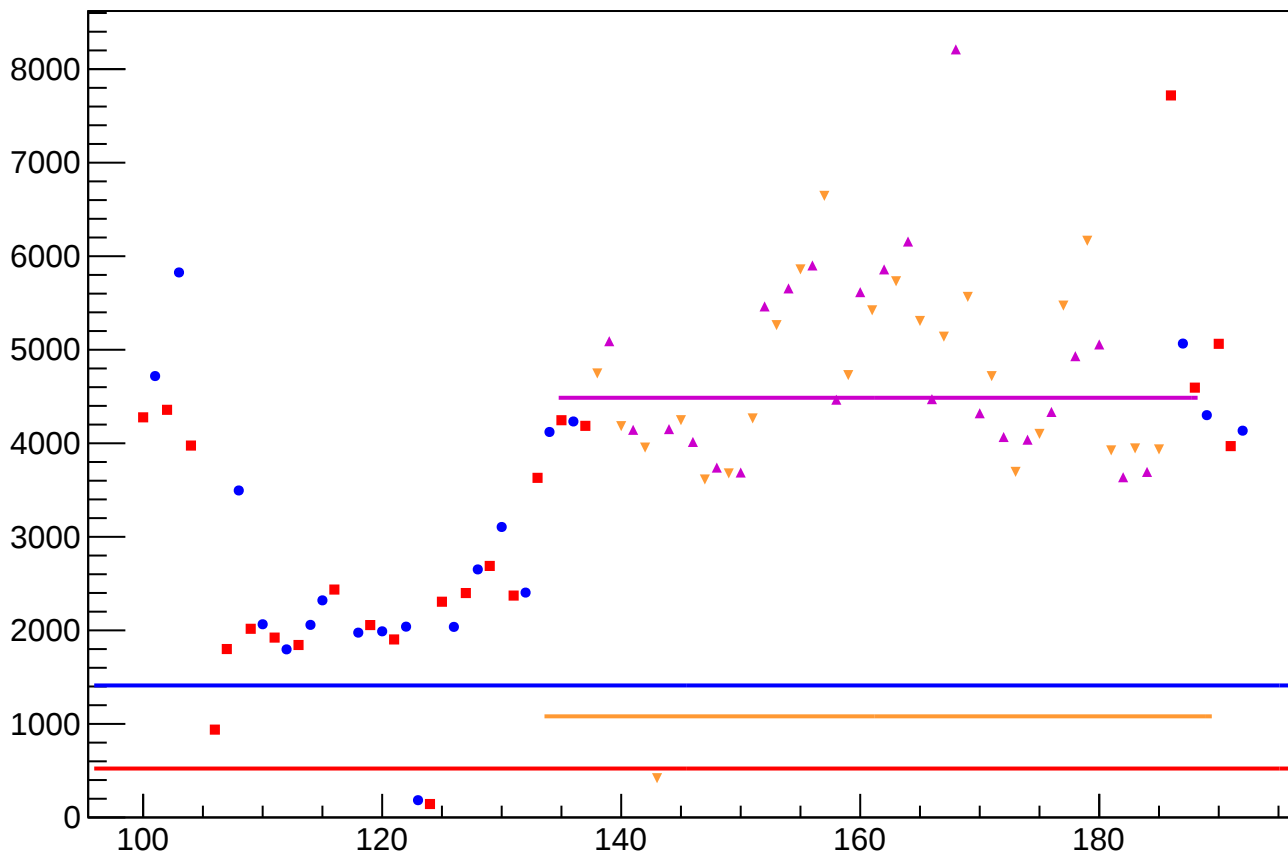
Right: 184.157 $\pm$ 316.318  $\chi^2$ /NDF: 52.9/42

In: 433.220 $\pm$ 585.436  $\chi^2$ /NDF:31.3/42

Out: 212.976 $\pm$ 276.625  $\chi^2$ /NDF:69.1/47

All: 253.174 $\pm$ 250.110  $\chi^2$ /NDF: 100.5/90

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



Right In: 1411.184 $\pm$ 0.490

$\chi^2/NDF$ : 7891662.9/19

Left Out: 1081.004 $\pm$ 0.311

$\chi^2/NDF$ : 24456244.2/24

Right Out: 522.997 $\pm$ 0.251

$\chi^2/NDF$ : 13133517.6/22

Left In: 4486.570 $\pm$ 0.774

$\chi^2/NDF$ : 1181598.1/22

Left: 1555.179 $\pm$ 0.289

$\chi^2/NDF$ : 42294704.7/47

Right: 708.152 $\pm$ 0.224

$\chi^2/NDF$ : 23627084.5/42

In: 2290.529 $\pm$ 0.414

$\chi^2/NDF$ : 20341866.7/42

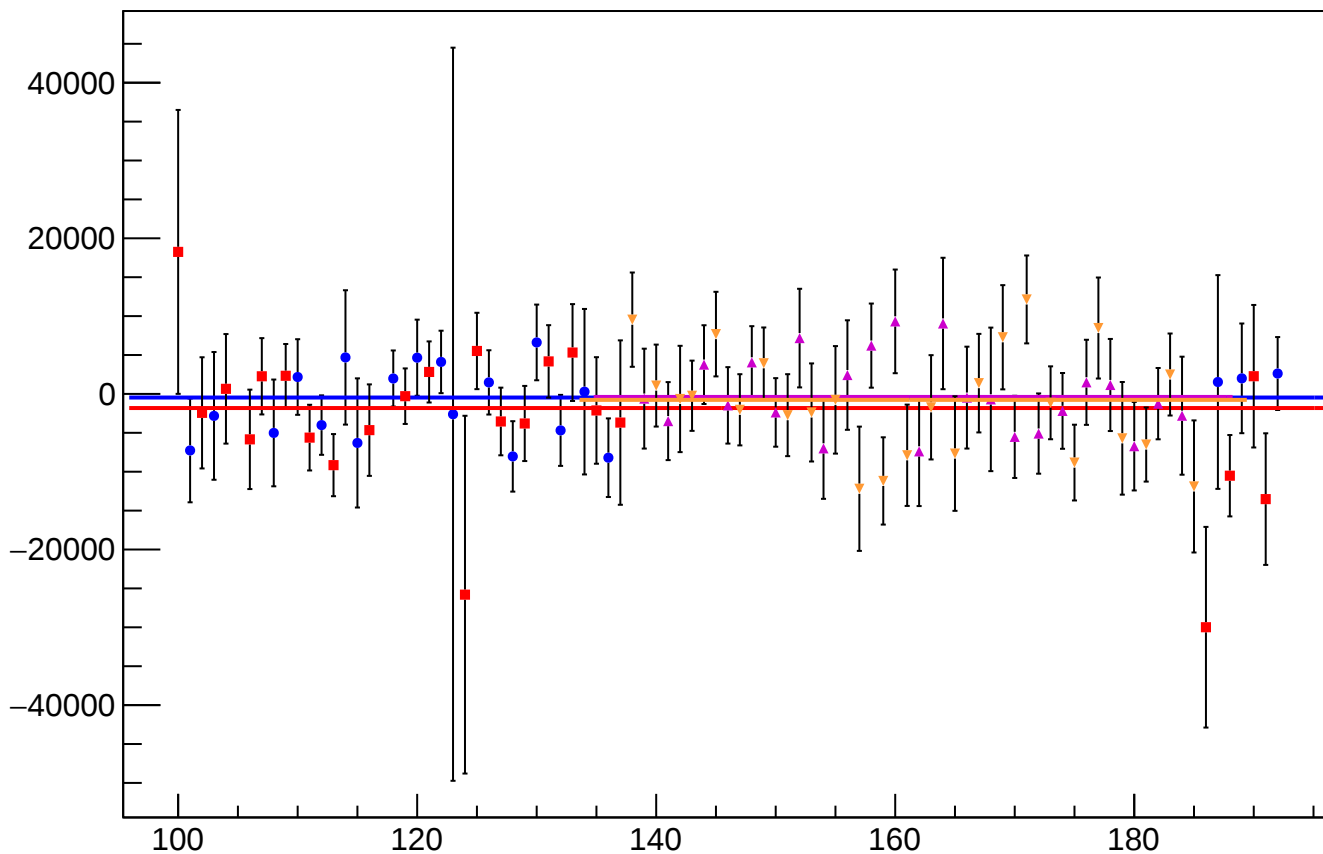
Out: 743.217 $\pm$ 0.196

$\chi^2/NDF$ : 39533989.3/47

All: 1025.626 $\pm$ 0.177

$\chi^2/NDF$ : 71296901.7/95

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



Right In: -465.377+/-1199.241  $\chi^2/\text{NDF}$ : 15.3/19

Left Out: -766.008+/-1147.372  $\chi^2/\text{NDF}$ : 29.9/24

Right Out: -1816.407+/-1139.817  $\chi^2/\text{NDF}$ : 25.8/22

Left In: -388.944+/-1186.300  $\chi^2/\text{NDF}$ : 14.2/22

Left: -583.764+/-824.733  $\chi^2/\text{NDF}$ : 44.2/47

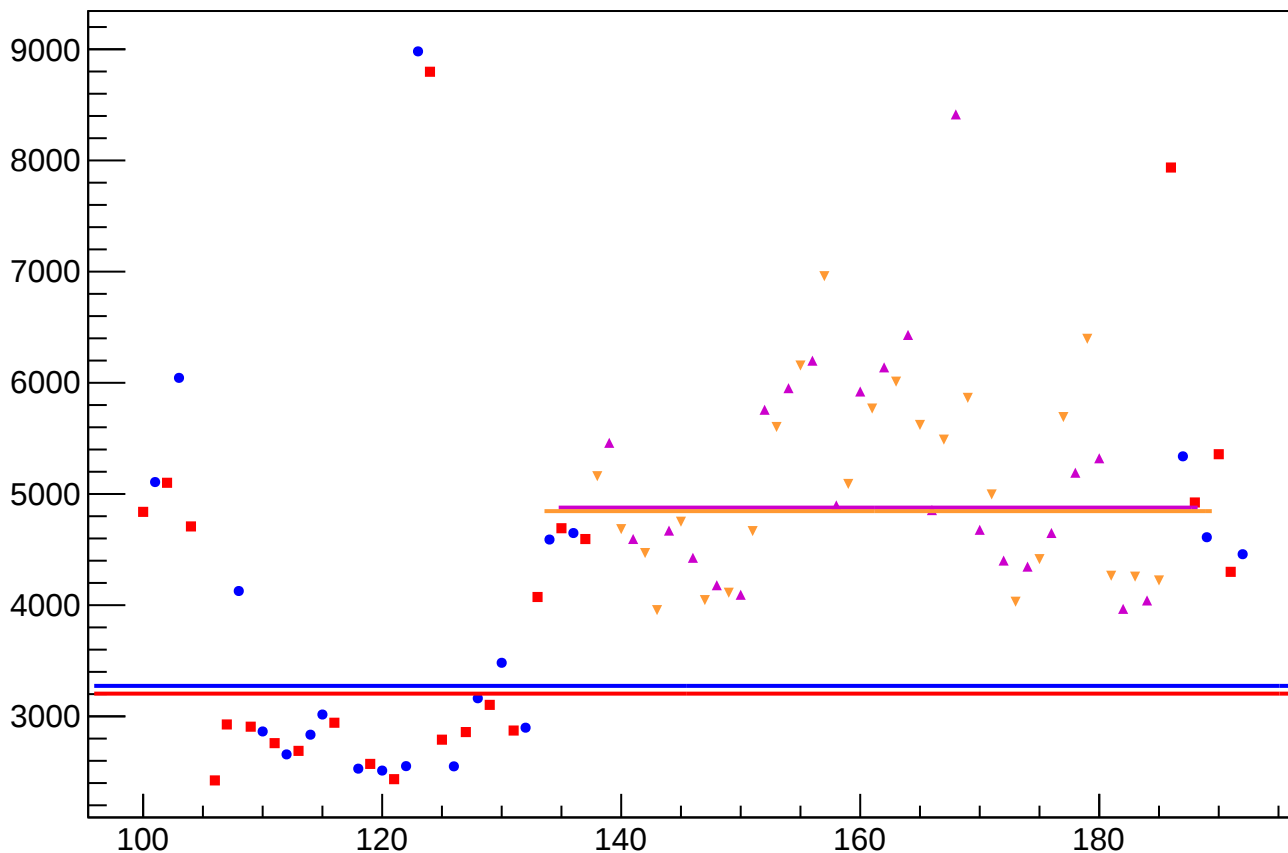
Right: -1175.193+/-826.182  $\chi^2/\text{NDF}$ : 41.8/42

In: -426.746+/-843.379  $\chi^2/\text{NDF}$ : 29.5/42

Out: -1294.677+/-808.630  $\chi^2/\text{NDF}$ : 56.1/47

All: -878.959+/-583.686  $\chi^2/\text{NDF}$ : 86.2/90

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



Right In: 3274.054+/-0.848  $\chi^2/\text{NDF}$ : 1214556.6/19

Left Out: 4845.779+/-0.811  $\chi^2/\text{NDF}$ : 909173.9/24

Right Out: 3204.342+/-0.797  $\chi^2/\text{NDF}$ : 1469716.6/22

Left In: 4877.456+/-0.839  $\chi^2/\text{NDF}$ : 958623.2/22

Left: 4861.089+/-0.583  $\chi^2/\text{NDF}$ : 1868533.9/47

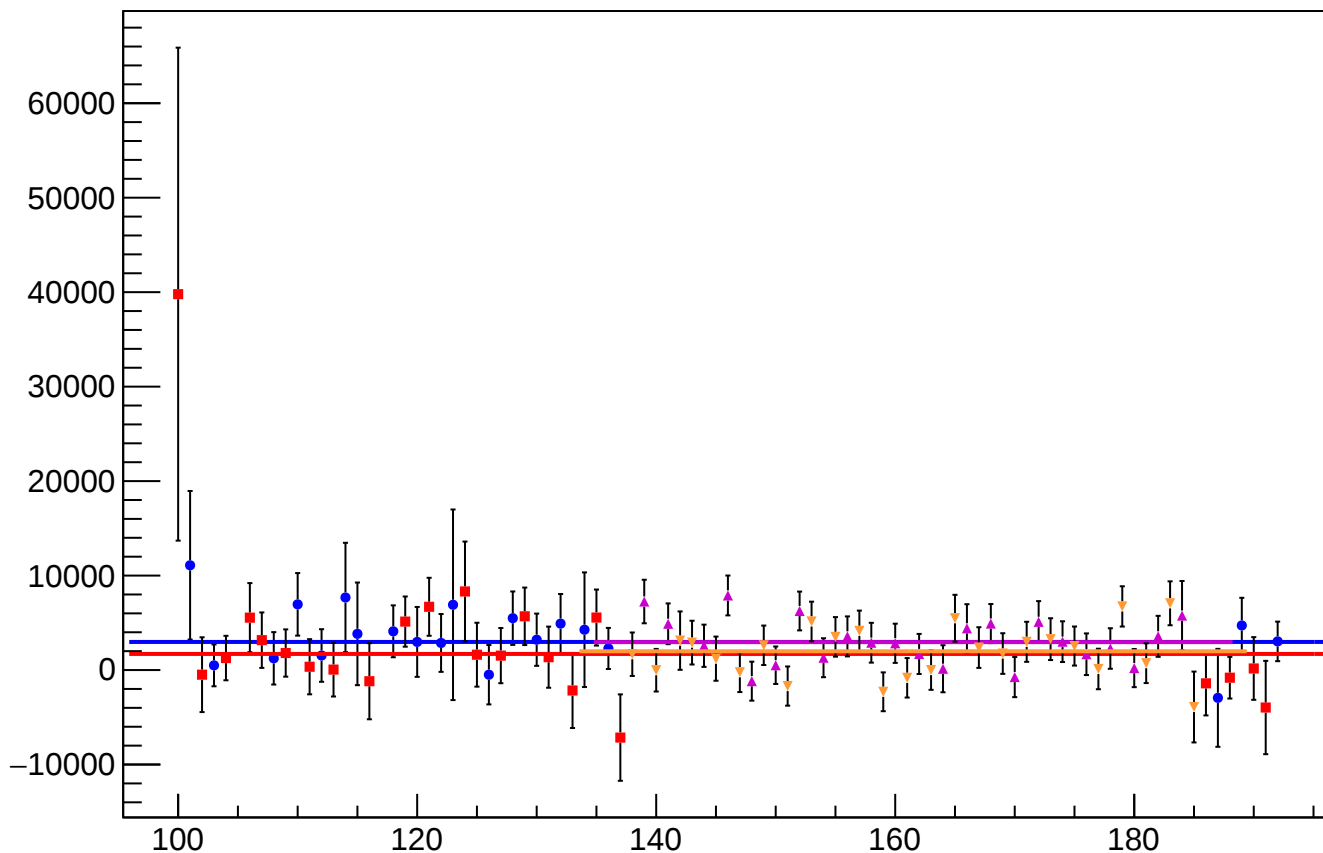
Right: 3237.029+/-0.581  $\chi^2/\text{NDF}$ : 2687862.7/42

In: 4084.449+/-0.596  $\chi^2/\text{NDF}$ : 3980187.1/42

Out: 4010.212+/-0.568  $\chi^2/\text{NDF}$ : 4462552.1/47

All: 4045.555+/-0.411  $\chi^2/\text{NDF}$ : 8450858.2/90

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



Right In: 2976.416+/-700.783  $\chi^2/\text{NDF}$ : 9.6/19

Left Out: 1985.469+/-443.190  $\chi^2/\text{NDF}$ :32.4/24

Right Out: 1706.147+/-668.233  $\chi^2/\text{NDF}$ : 22.6/22

Left In: 2955.900+/-454.551  $\chi^2/\text{NDF}$ :28.4/22

Left: 2458.406+/-317.323  $\chi^2/\text{NDF}$ : 63.2/47

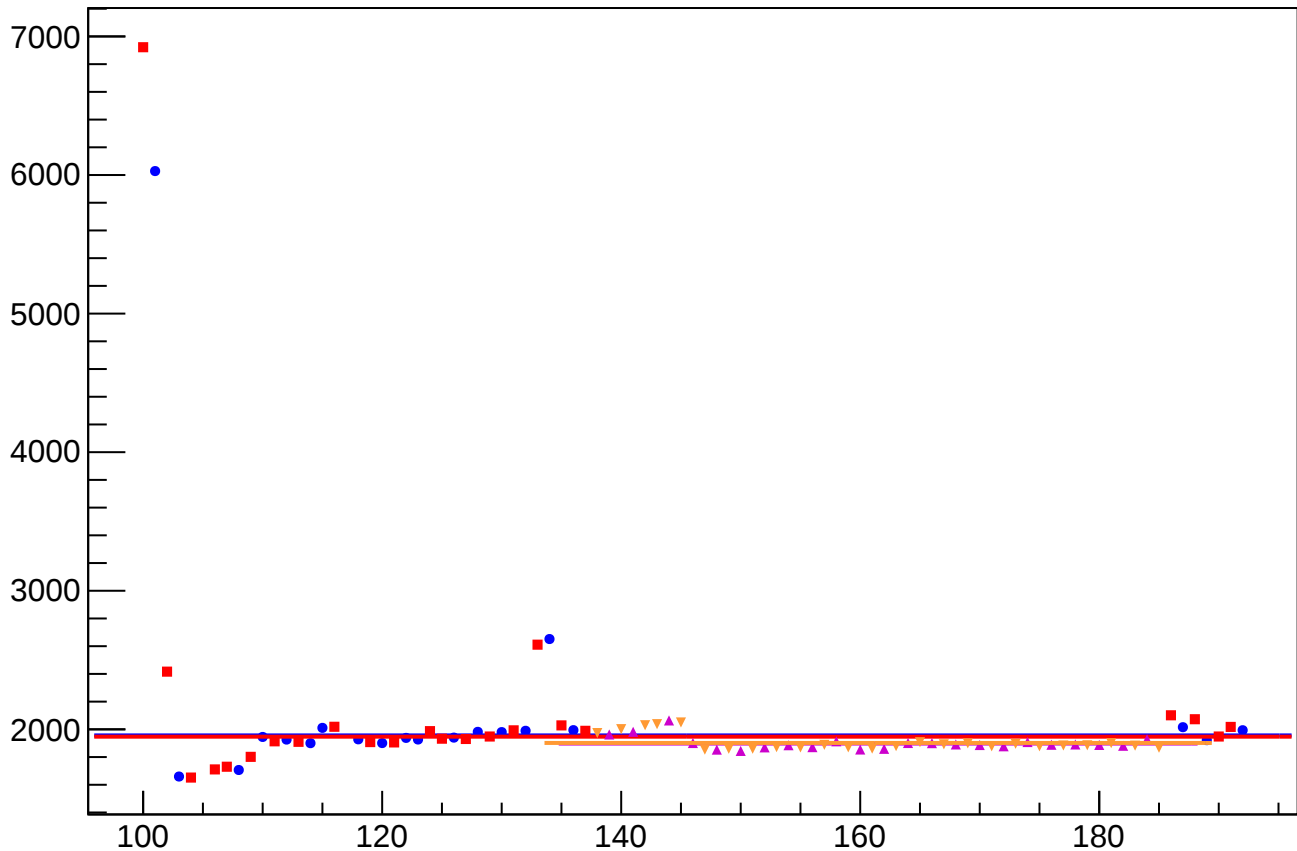
Right: 2311.096+/-483.610  $\chi^2/\text{NDF}$ : 33.9/42

In: 2961.976+/-381.353  $\chi^2/\text{NDF}$ :38.1/42

Out: 1900.138+/-369.341  $\chi^2/\text{NDF}$ :55.1/47

All: 2414.071+/-265.309  $\chi^2/\text{NDF}$ : 97.2/90

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



Right In: 1956.188+/-0.496  $\chi^2/\text{NDF}$ : 618621.5/19

Left Out: 1901.884+/-0.313  $\chi^2/\text{NDF}$ : 30446.9/24

Right Out: 1947.153+/-0.472  $\chi^2/\text{NDF}$ : 230489.3/22

Left In: 1897.456+/-0.321  $\chi^2/\text{NDF}$ : 21180.1/22

Left: 1899.726+/-0.224  $\chi^2/\text{NDF}$ : 51724.3/47

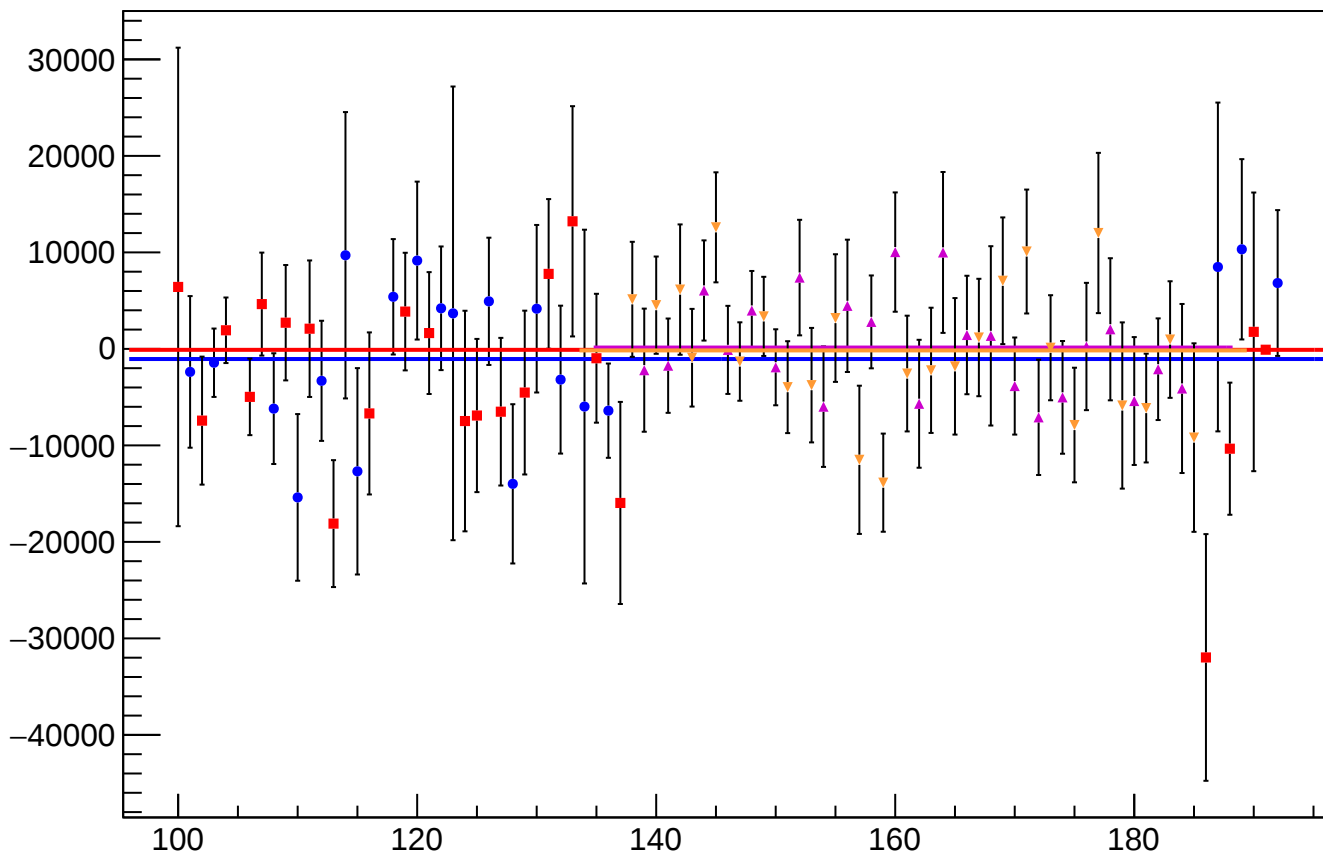
Right: 1951.447+/-0.342  $\chi^2/\text{NDF}$ : 849285.2/42

In: 1914.848+/-0.270  $\chi^2/\text{NDF}$ : 649689.4/42

Out: 1915.750+/-0.261  $\chi^2/\text{NDF}$ : 267327.8/47

All: 1915.314+/-0.188  $\chi^2/\text{NDF}$ : 917023.0/90

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



Right In: -1050.617 $\pm$ 1594.875  $\chi^2$ /NDF: 16.7/19

Left Out: -157.539 $\pm$ 1165.844  $\chi^2$ /NDF:29.5/24

Right Out: -98.022 $\pm$ 109.625  $\chi^2$ /NDF: 28.1/22

Left In: 139.000 $\pm$ 1190.889  $\chi^2$ /NDF:14.7/22

Left: -12.420 $\pm$ 833.090  $\chi^2$ /NDF: 44.2/47

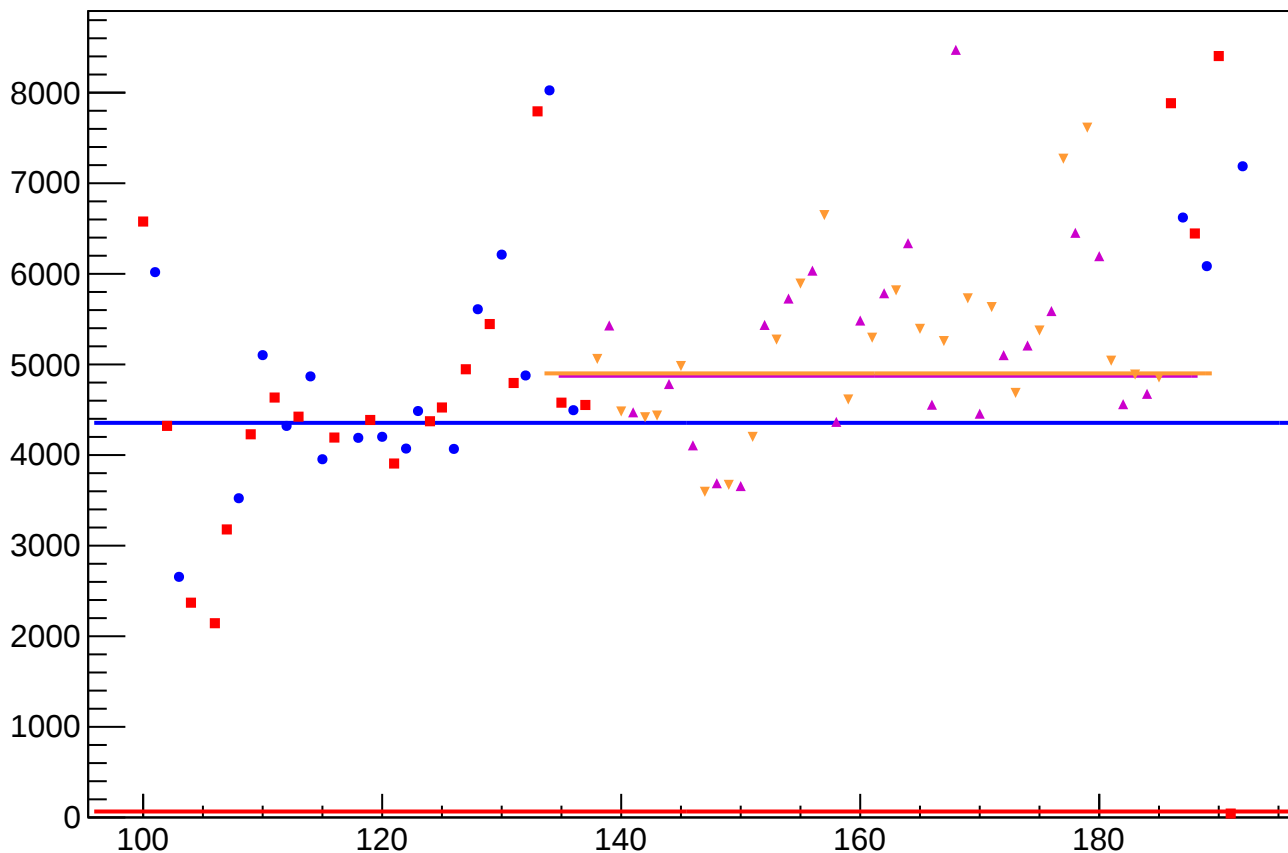
Right: -102.501 $\pm$ 109.367  $\chi^2$ /NDF: 45.2/42

In: -286.846 $\pm$ 954.222  $\chi^2$ /NDF:31.8/42

Out: -98.543 $\pm$ 109.143  $\chi^2$ /NDF:57.6/47

All: -100.975 $\pm$ 108.436  $\chi^2$ /NDF: 89.4/90

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



Right In: 4355.405 $\pm$ 1.128  $\chi^2/\text{NDF}$ : 1236211.1/19

Left Out: 4901.357 $\pm$ 0.824  $\chi^2/\text{NDF}$ : 1136916.0/24

Right Out: 65.703 $\pm$ 0.078  $\chi^2/\text{NDF}$ : 16660609.7/22

Left In: 4875.112 $\pm$ 0.842  $\chi^2/\text{NDF}$ : 1229198.0/22

Left: 4888.513 $\pm$ 0.589  $\chi^2/\text{NDF}$ : 2366610.1/47

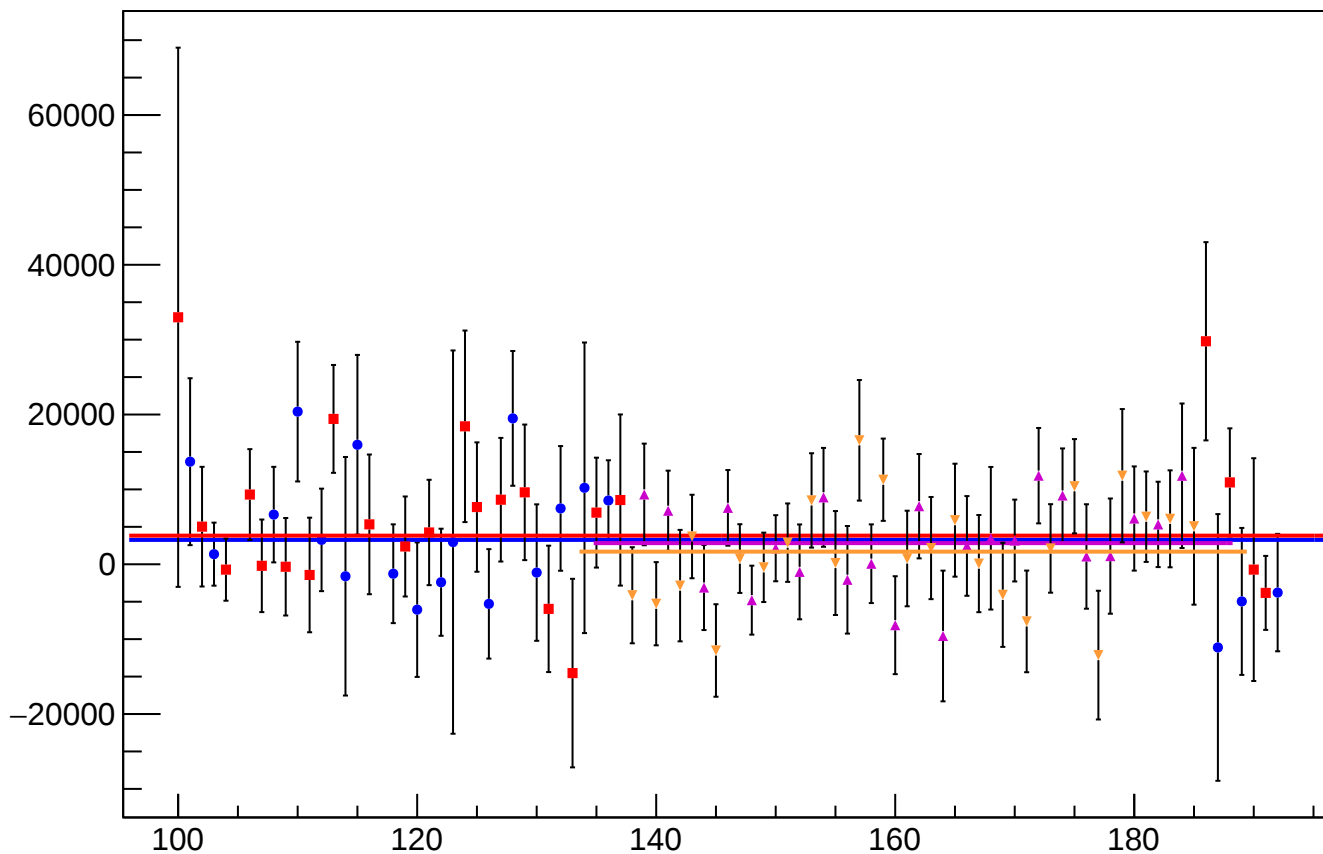
Right: 85.875 $\pm$ 0.077  $\chi^2/\text{NDF}$ : 32297541.2/42

In: 4689.073 $\pm$ 0.675  $\chi^2/\text{NDF}$ : 2601757.4/42

Out: 108.084 $\pm$ 0.077  $\chi^2/\text{NDF}$ : 51903946.8/47

All: 167.241 $\pm$ 0.077  $\chi^2/\text{NDF}$ : 100005030.9/95

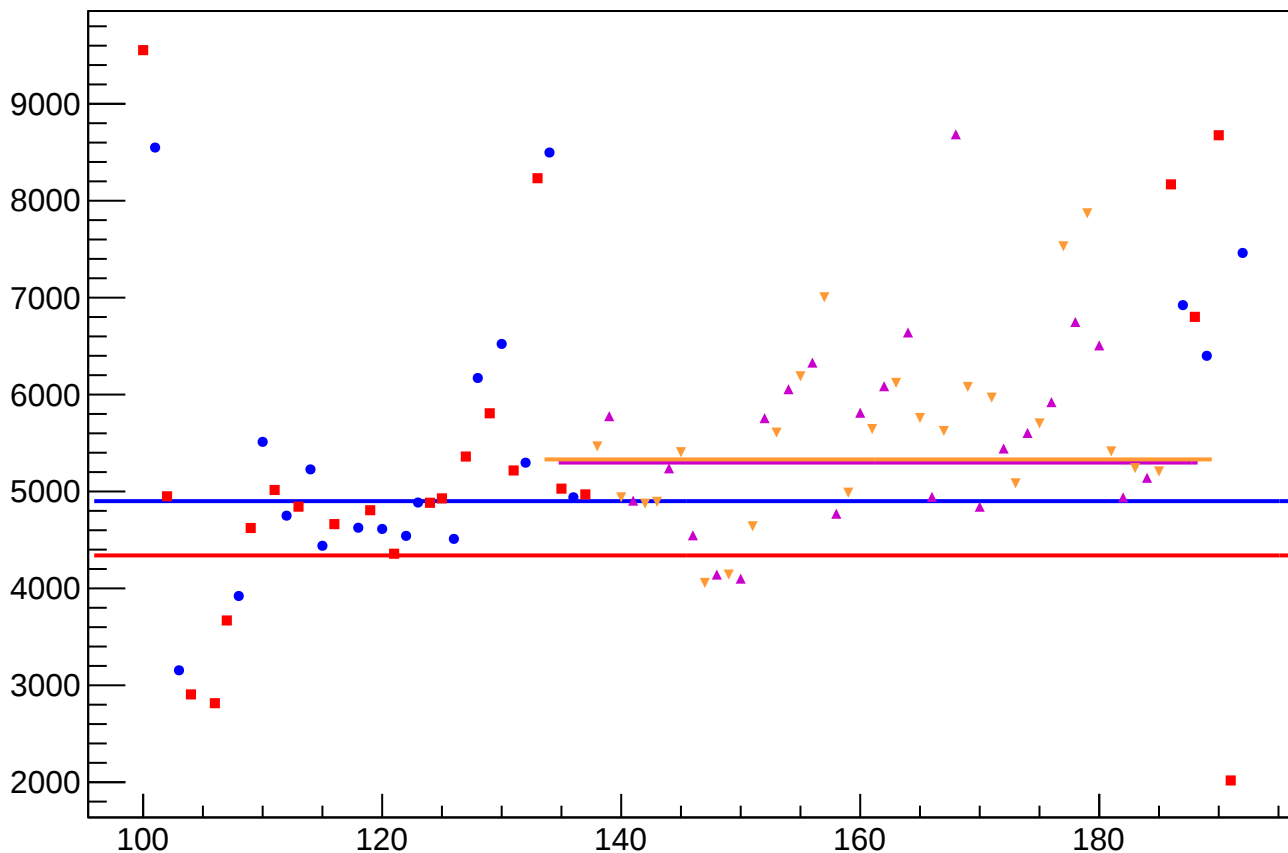
# asym\_atr\_avg\_mean vs Slug, Sign Corrected



Right In: 3254.139+/-1784.966  $\chi^2/\text{NDF}$ : 16.5/19  
 Left Out: 1686.531+/-1261.650  $\chi^2/\text{NDF}$ : 25.4/24  
 Right Out: 3824.085+/-1571.136  $\chi^2/\text{NDF}$ : 22.1/22  
 Left In: 2824.078+/-1288.414  $\chi^2/\text{NDF}$ : 18.0/22

Left: 2243.367+/-901.435  $\chi^2/\text{NDF}$ : 43.8/47  
 Right: 3575.278+/-1179.353  $\chi^2/\text{NDF}$ : 38.6/42  
 In: 2971.393+/-1044.693  $\chi^2/\text{NDF}$ : 34.5/42  
 Out: 2524.532+/-983.733  $\chi^2/\text{NDF}$ : 48.6/47  
 All: 2734.546+/-716.186  $\chi^2/\text{NDF}$ : 83.3/90

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



Right In: 4900.275 $\pm$ 1.262  $\chi^2/\text{NDF}$ : 1097338.5/19

Left Out: 5330.725 $\pm$ 0.892  $\chi^2/\text{NDF}$ : 868061.7/24

Right Out: 4340.020 $\pm$ 1.106  $\chi^2/\text{NDF}$ : 1845093.6/22

Left In: 5298.329 $\pm$ 0.911  $\chi^2/\text{NDF}$ : 956021.6/22

Left: 5314.867 $\pm$ 0.637  $\chi^2/\text{NDF}$ : 1824728.8/47

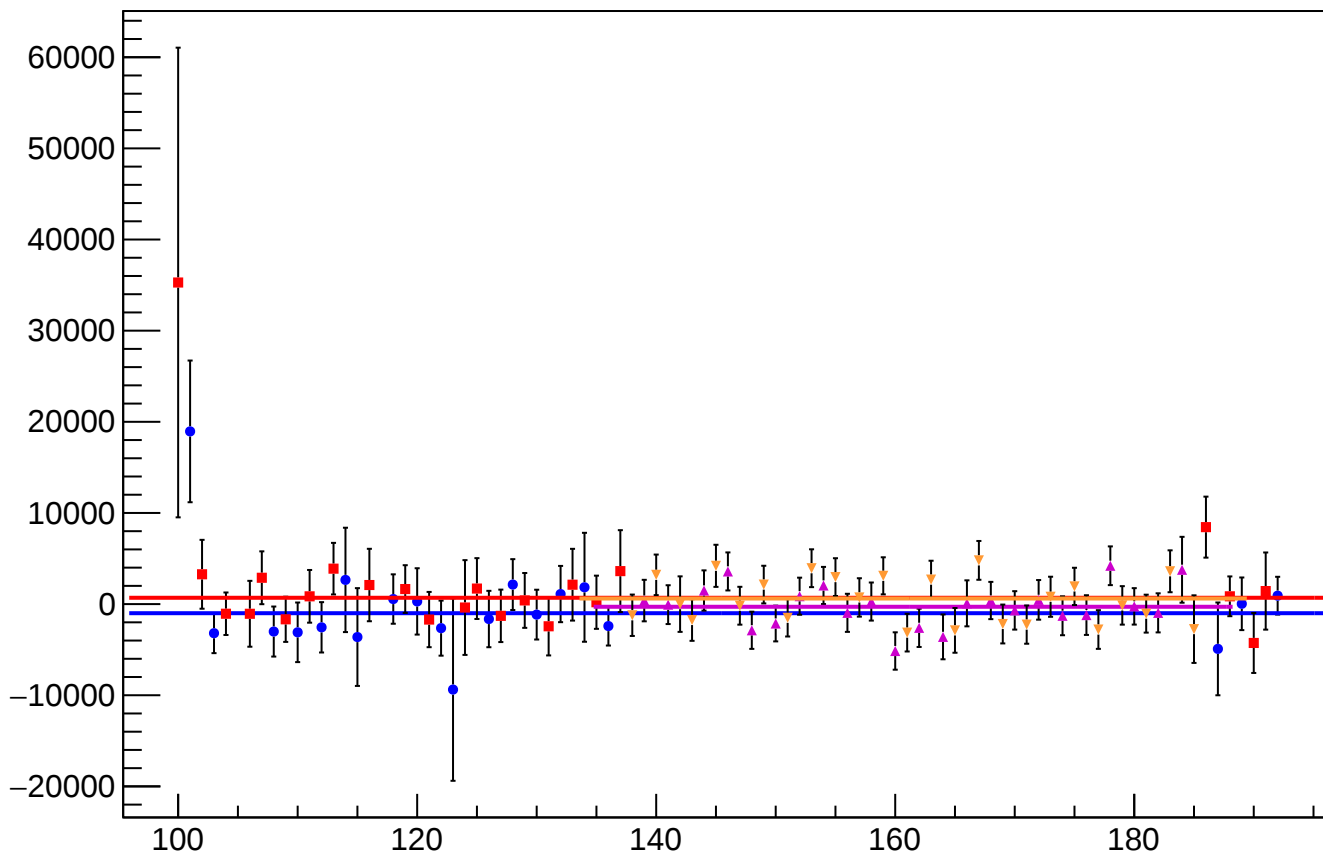
Right: 4583.271 $\pm$ 0.832  $\chi^2/\text{NDF}$ : 3053917.9/42

In: 5161.978 $\pm$ 0.739  $\chi^2/\text{NDF}$ : 2118751.7/42

Out: 4940.058 $\pm$ 0.694  $\chi^2/\text{NDF}$ : 3199453.2/47

All: 5044.146 $\pm$ 0.506  $\chi^2/\text{NDF}$ : 5366124.3/90

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



Right In: -998.340+/-691.844  $\chi^2/\text{NDF}$ : 15.0/19

Left Out: 612.314+/-438.264  $\chi^2/\text{NDF}$ : 32.7/24

Right Out: 694.545+/-657.728  $\chi^2/\text{NDF}$ : 16.5/22

Left In: -293.009+/-449.575  $\chi^2/\text{NDF}$ : 23.6/22

Left: 171.185+/-313.822  $\chi^2/\text{NDF}$ : 58.4/47

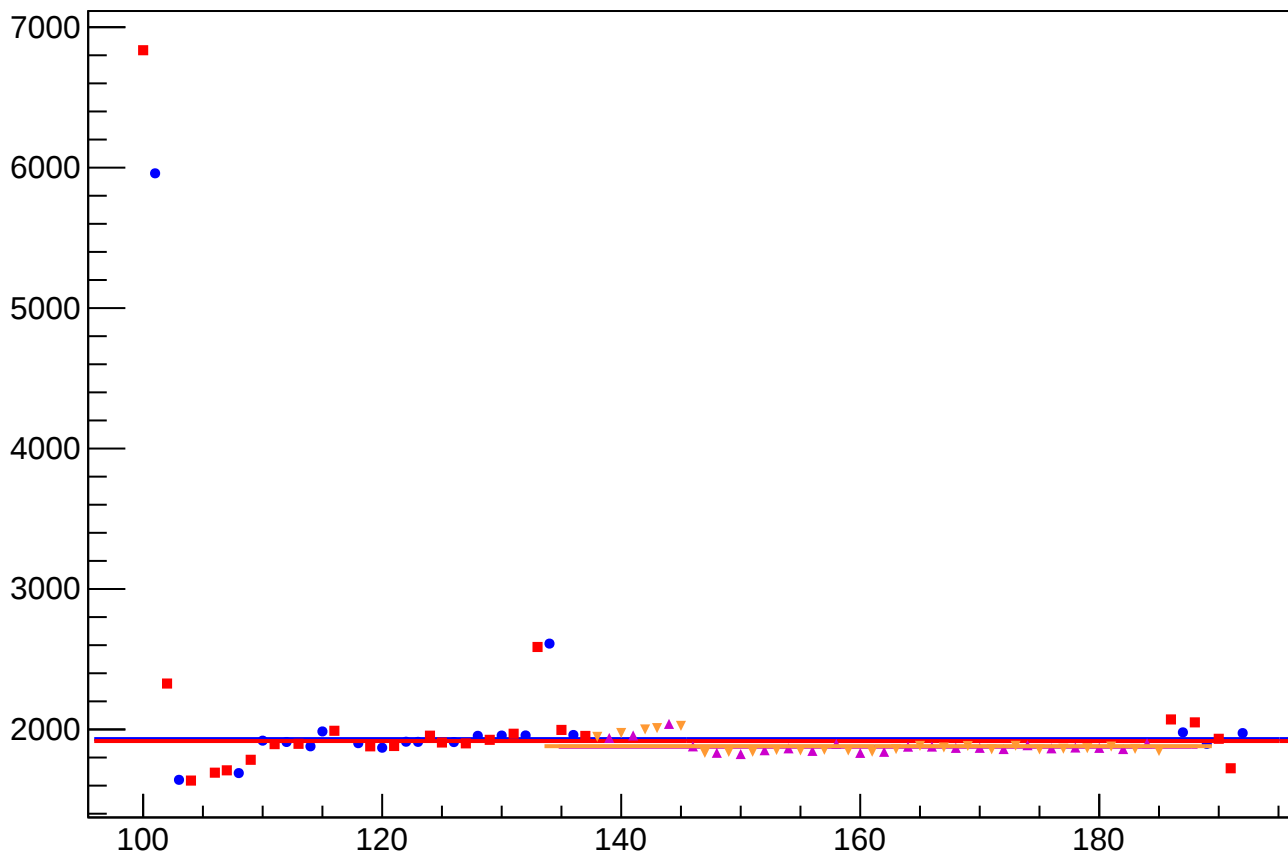
Right: -109.131+/-476.688  $\chi^2/\text{NDF}$ : 34.6/42

In: -502.420+/-376.974  $\chi^2/\text{NDF}$ : 39.3/42

Out: 637.598+/-364.714  $\chi^2/\text{NDF}$ : 49.2/47

All: 86.428+/-262.119  $\chi^2/\text{NDF}$ : 93.3/90

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



Right In: 1931.251 $\pm$ 0.489  $\chi^2$ /NDF: 617282.7/19

Left Out: 1880.808 $\pm$ 0.310  $\chi^2$ /NDF: 28655.5/24

Right Out: 1917.405 $\pm$ 0.464  $\chi^2$ /NDF: 227992.5/22

Left In: 1876.685 $\pm$ 0.318  $\chi^2$ /NDF: 20499.7/22

Left: 1878.799 $\pm$ 0.222  $\chi^2$ /NDF: 49241.5/47

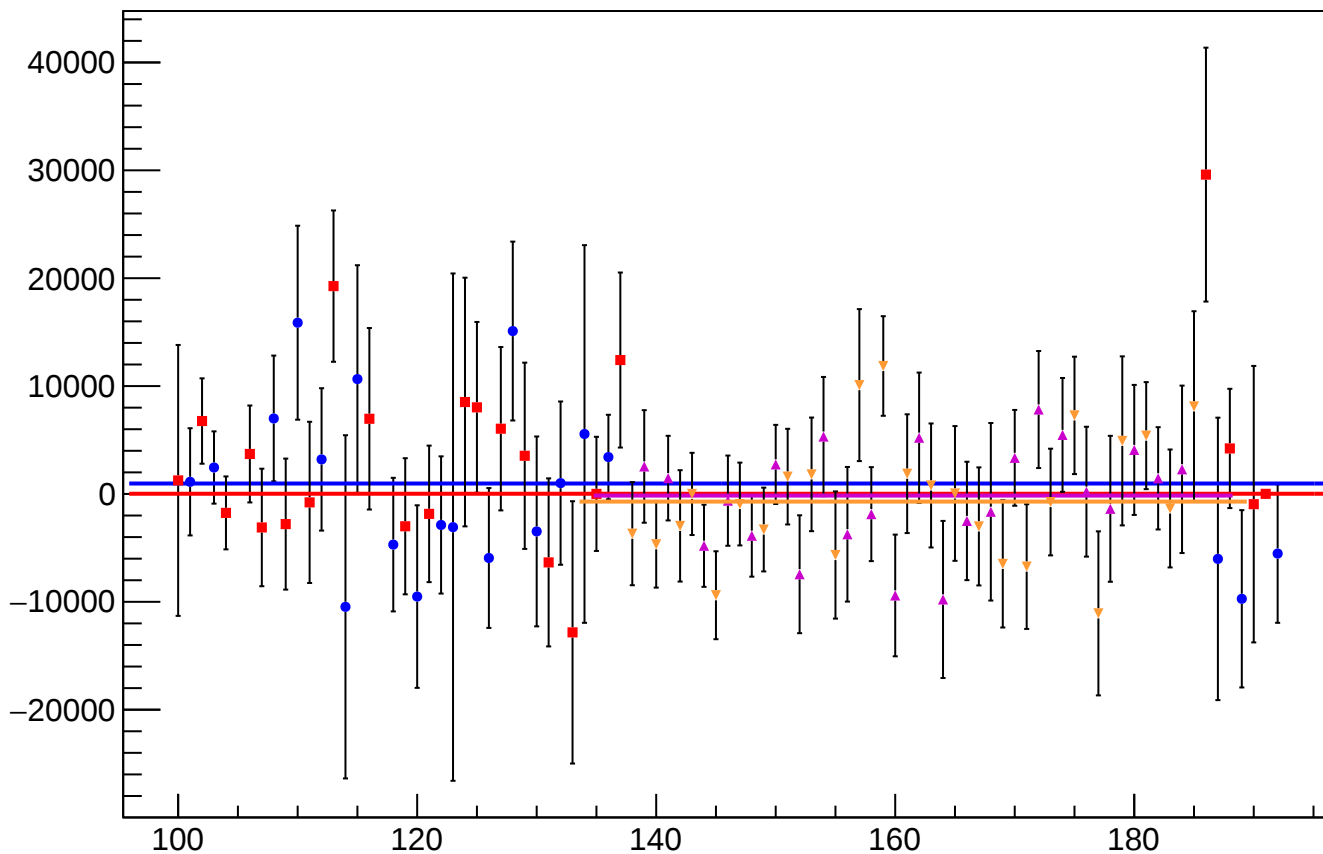
Right: 1923.966 $\pm$ 0.337  $\chi^2$ /NDF: 845696.7/42

In: 1892.886 $\pm$ 0.267  $\chi^2$ /NDF: 646529.9/42

Out: 1892.090 $\pm$ 0.258  $\chi^2$ /NDF: 260947.0/47

All: 1892.474 $\pm$ 0.185  $\chi^2$ /NDF: 907481.6/90

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



Right In: 967.077 $\pm$ 1481.143  $\chi^2$ /NDF: 16.0/19

Left Out: -707.785 $\pm$ 1017.719  $\chi^2$ /NDF:27.1/24

Right Out: 18.877 $\pm$ 85.841  $\chi^2$ /NDF: 26.3/22

Left In: -150.495 $\pm$ 1053.655  $\chi^2$ /NDF:16.9/22

Left: -438.806 $\pm$ 732.011  $\chi^2$ /NDF: 44.2/47

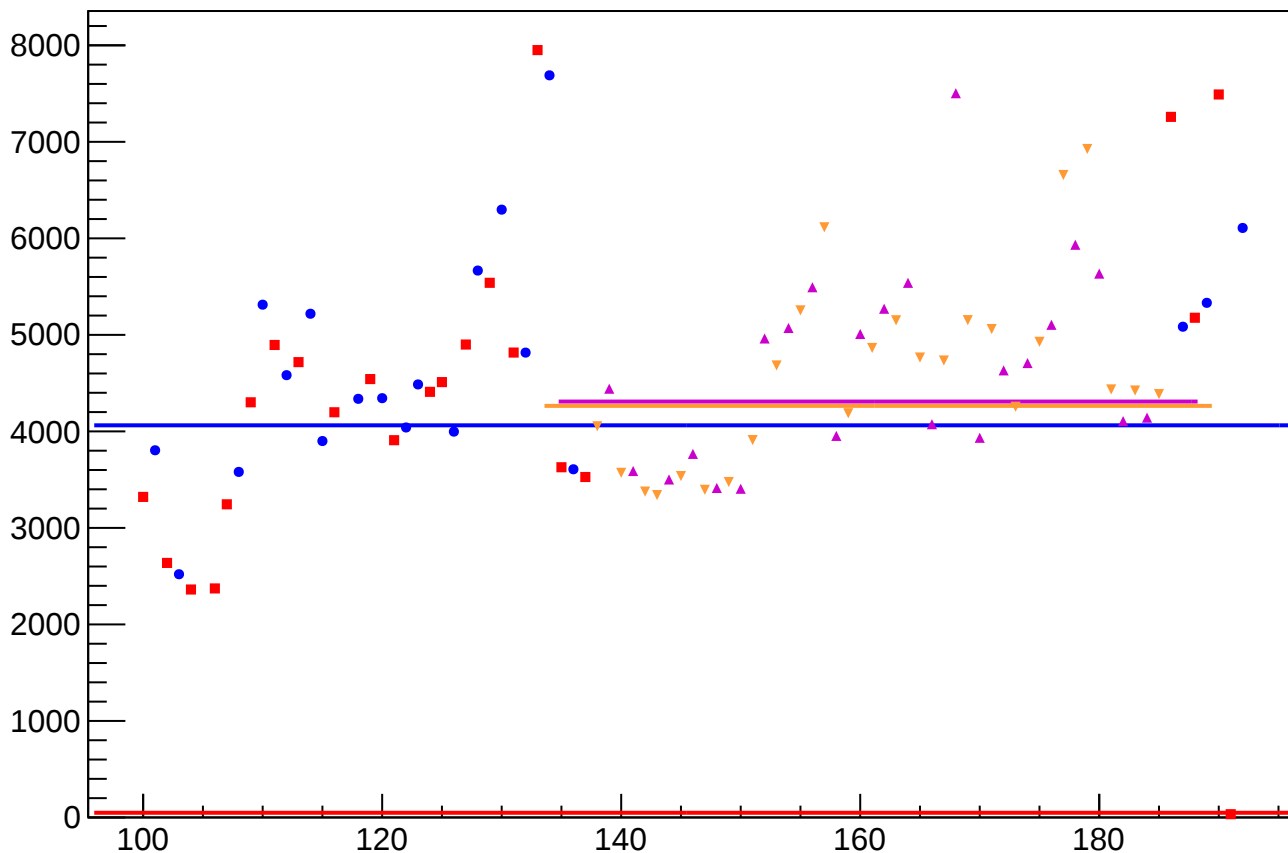
Right: 22.051 $\pm$ 85.697  $\chi^2$ /NDF: 42.8/42

In: 225.027 $\pm$ 858.573  $\chi^2$ /NDF:33.3/42

Out: 13.743 $\pm$ 85.537  $\chi^2$ /NDF:54.0/47

All: 15.820 $\pm$ 85.116  $\chi^2$ /NDF: 87.3/90

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



Right In: 4062.879+/-1.047  $\chi^2/\text{NDF}$ : 1111685.7/19

Left Out: 4264.433+/-0.720  $\chi^2/\text{NDF}$ : 1354900.8/24

Right Out: 48.639+/-0.061  $\chi^2/\text{NDF}$ : 16741999.6/22

Left In: 4309.034+/-0.745  $\chi^2/\text{NDF}$ : 1305133.3/22

Left: 4285.960+/-0.518  $\chi^2/\text{NDF}$ : 2661888.1/47

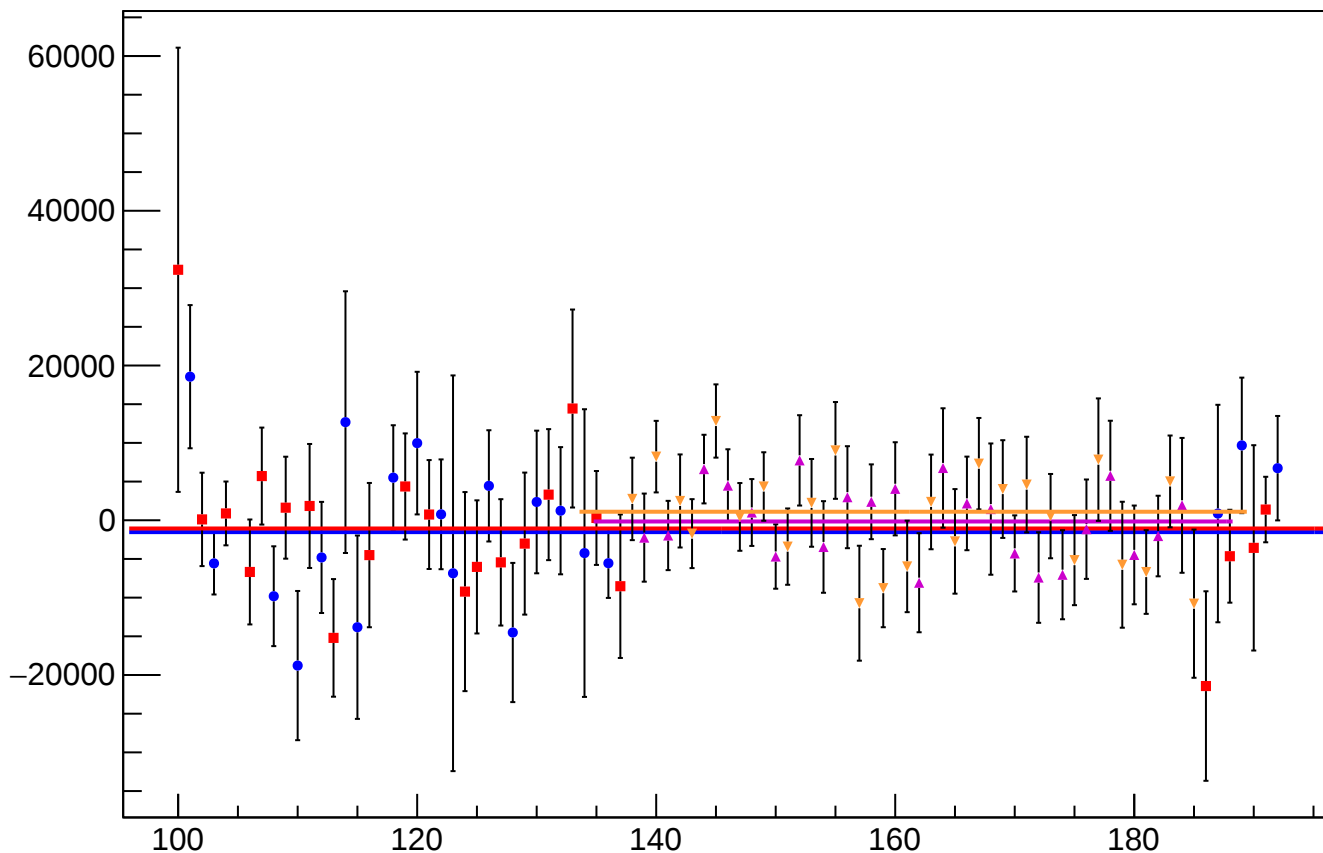
Right: 62.078+/-0.061  $\chi^2/\text{NDF}$ : 32495211.4/42

In: 4226.322+/-0.607  $\chi^2/\text{NDF}$ : 2453497.5/42

Out: 78.420+/-0.060  $\chi^2/\text{NDF}$ : 52173342.0/47

All: 119.186+/-0.060  $\chi^2/\text{NDF}$ : 100848246.5/95

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



Right In: -1533.719 $\pm$ 1704.608  $\chi^2$ /NDF: 22.4/19

Left Out: 1102.204 $\pm$ 1126.663  $\chi^2$ /NDF: 28.6/24

Right Out: -1063.058 $\pm$ 1499.596  $\chi^2$ /NDF: 15.1/22

Left In: -158.683 $\pm$ 1161.507  $\chi^2$ /NDF: 15.5/22

Left: 490.957 $\pm$ 808.709  $\chi^2$ /NDF: 44.7/47

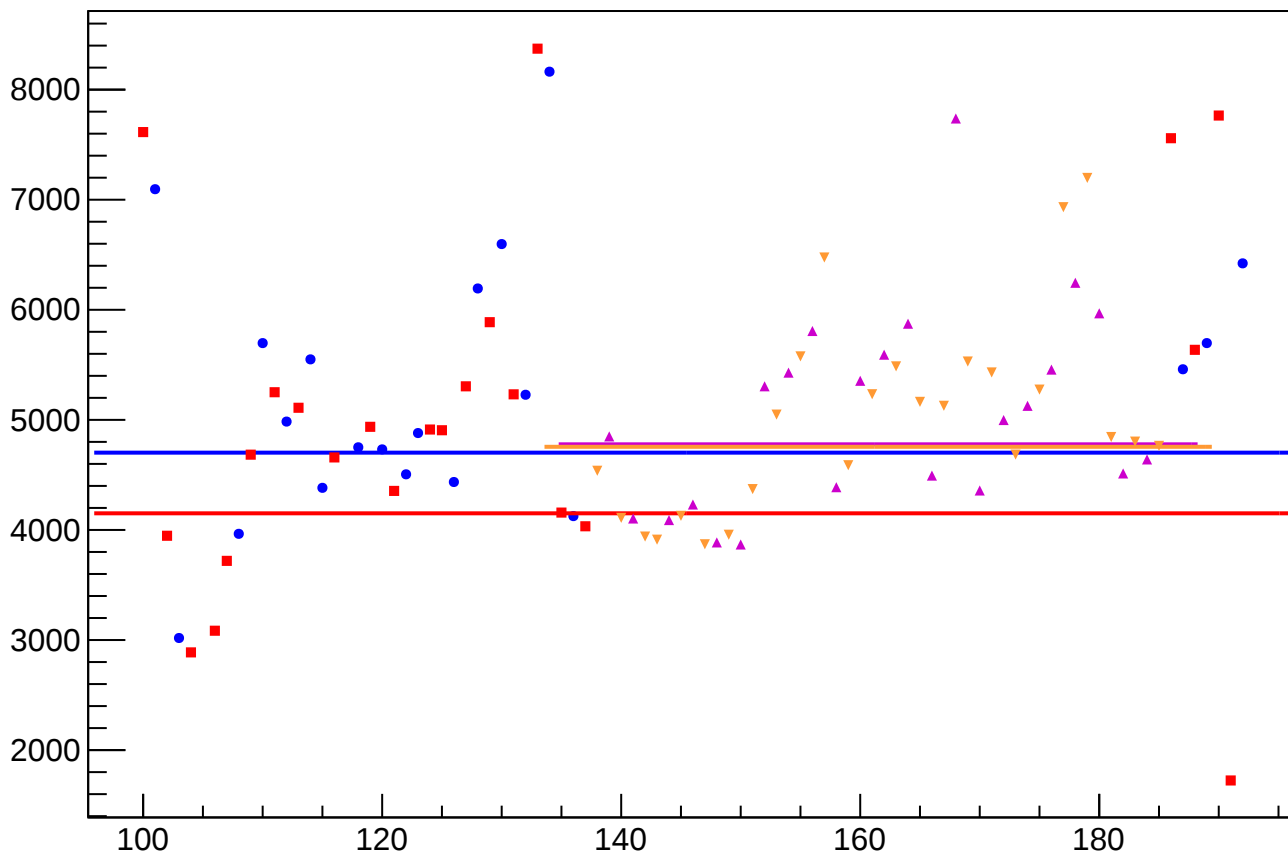
Right: -1268.397 $\pm$ 1125.917  $\chi^2$ /NDF: 37.5/42

In: -594.676 $\pm$ 959.859  $\chi^2$ /NDF: 38.4/42

Out: 320.966 $\pm$ 900.763  $\chi^2$ /NDF: 44.9/47

All: -107.802 $\pm$ 656.835  $\chi^2$ /NDF: 83.8/90

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



Right In: 4702.207+/-1.205  $\chi^2/\text{NDF}$ : 957696.6/19

Left Out: 4755.383+/-0.797  $\chi^2/\text{NDF}$ : 953328.0/24

Right Out: 4151.109+/-1.056  $\chi^2/\text{NDF}$ : 1870801.5/22

Left In: 4777.831+/-0.821  $\chi^2/\text{NDF}$ : 950291.2/22

Left: 4766.265+/-0.572  $\chi^2/\text{NDF}$ : 1904004.1/47

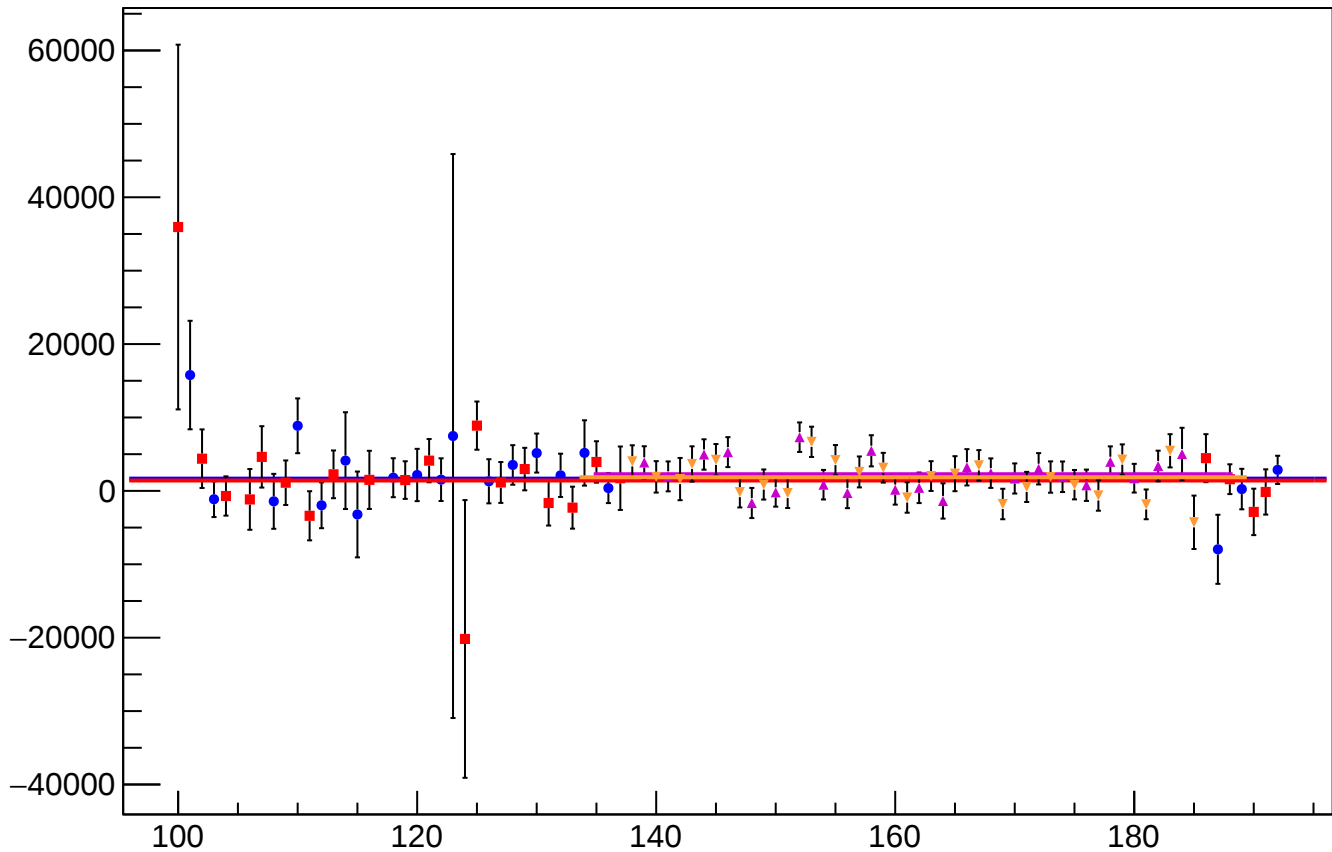
Right: 4390.354+/-0.794  $\chi^2/\text{NDF}$ : 2946791.2/42

In: 4753.852+/-0.679  $\chi^2/\text{NDF}$ : 1910676.1/42

Out: 4536.135+/-0.636  $\chi^2/\text{NDF}$ : 3032872.8/47

All: 4637.913+/-0.464  $\chi^2/\text{NDF}$ : 4998343.2/90

# reg\_asym\_at1\_avg\_mean vs Slug, Sign Corrected



Right In: 1667.126+/-695.591  $\chi^2/\text{NDF}$ : 19.7/19

Left Out: 1856.570+/-430.977  $\chi^2/\text{NDF}$ : 30.0/24

Right Out: 1415.245+/-668.664  $\chi^2/\text{NDF}$ : 20.3/22

Left In: 2268.464+/-441.710  $\chi^2/\text{NDF}$ : 26.9/22

Left: 2057.452+/-308.471  $\chi^2/\text{NDF}$ : 57.3/47

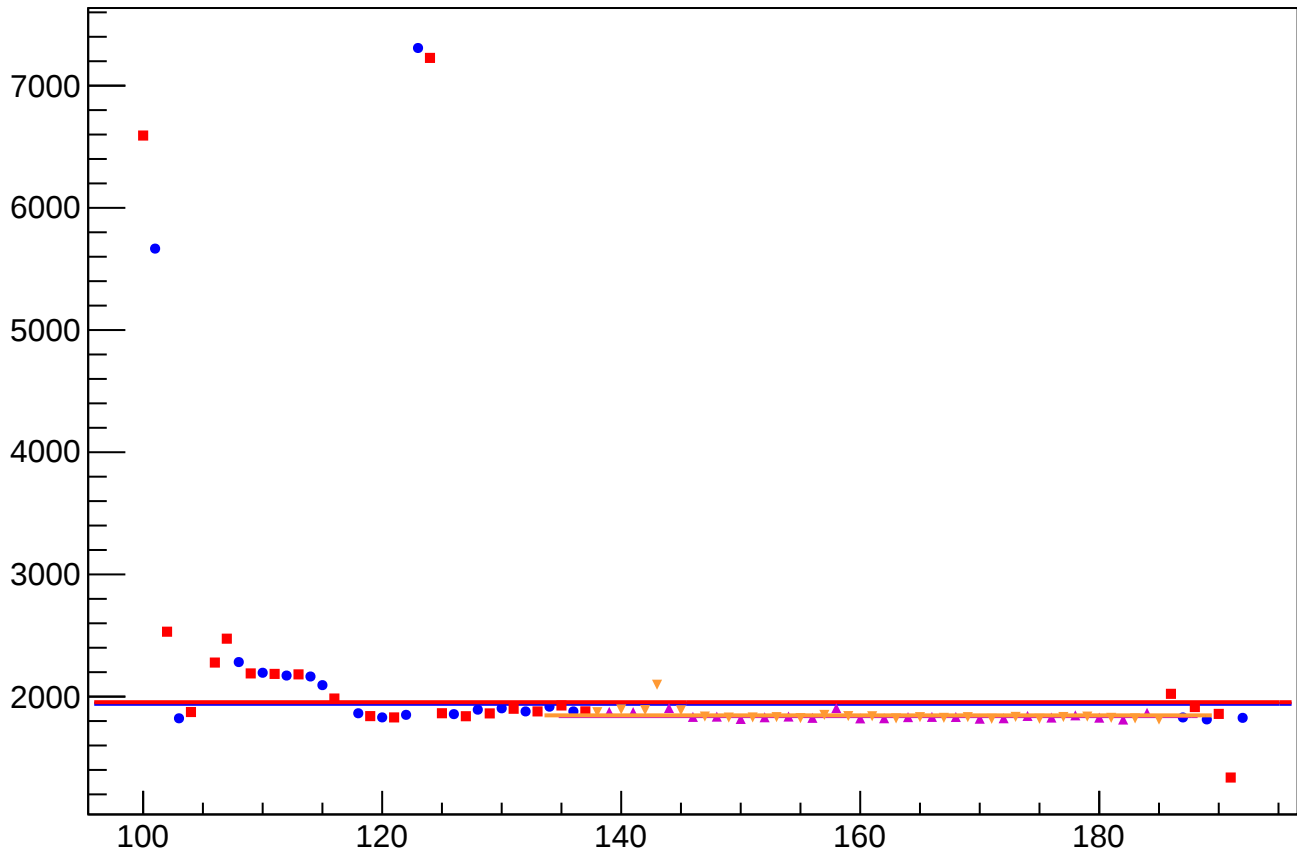
Right: 1536.216+/-482.055  $\chi^2/\text{NDF}$ : 40.1/42

In: 2095.661+/-372.882  $\chi^2/\text{NDF}$ : 47.1/42

Out: 1727.042+/-362.252  $\chi^2/\text{NDF}$ : 50.6/47

All: 1906.022+/-259.827  $\chi^2/\text{NDF}$ : 98.2/90

# reg\_asym\_at1\_avg\_rms vs Slug, Sign Corrected



Right In: 1941.124+/-0.492  $\chi^2/\text{NDF}$ : 615899.7/19

Left Out: 1846.602+/-0.305  $\chi^2/\text{NDF}$ : 27302.8/24

Right Out: 1954.273+/-0.473  $\chi^2/\text{NDF}$ : 444158.1/22

Left In: 1840.541+/-0.312  $\chi^2/\text{NDF}$ : 6740.2/22

Left: 1843.646+/-0.218  $\chi^2/\text{NDF}$ : 34235.8/47

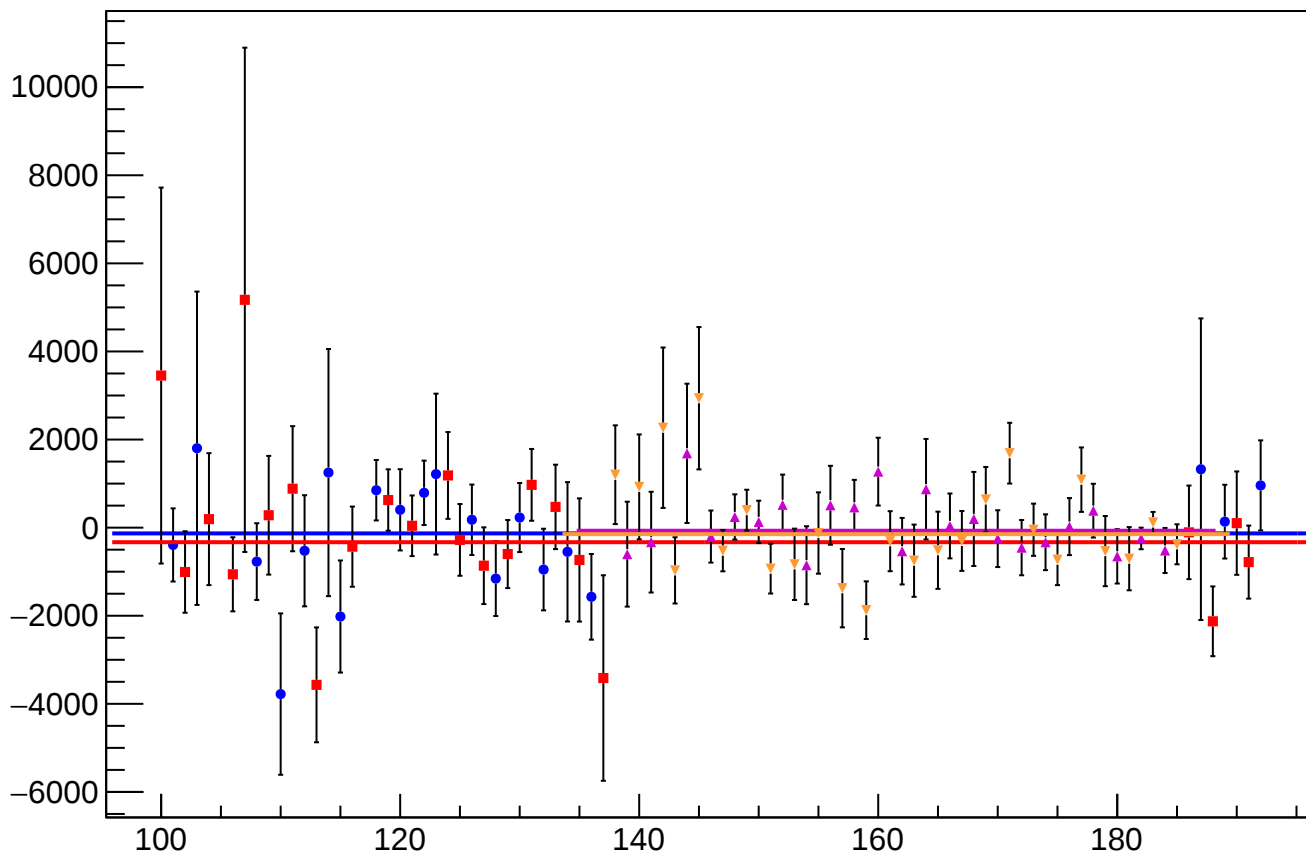
Right: 1947.958+/-0.341  $\chi^2/\text{NDF}$ : 1060429.2/42

In: 1869.445+/-0.264  $\chi^2/\text{NDF}$ : 652440.9/42

Out: 1878.203+/-0.256  $\chi^2/\text{NDF}$ : 508098.3/47

All: 1873.951+/-0.184  $\chi^2/\text{NDF}$ : 1161106.8/90

asym\_at1\_avg\_correction\_mean vs Slug, Sign Corrected



Right In:  $-130.842 \pm 225.561$   $\chi^2/\text{NDF}$ : 18.2/19

Left Out:  $-146.999 \pm 121.984$   $\chi^2/\text{NDF}$ : 37.7/24

Right Out:  $-330.420 \pm 205.829$   $\chi^2/\text{NDF}$ : 26.0/22

Left In:  $-70.340 \pm 126.373$   $\chi^2/\text{NDF}$ : 12.3/22

Left:  $-110.024 \pm 87.766$   $\chi^2/\text{NDF}$ : 50.1/47

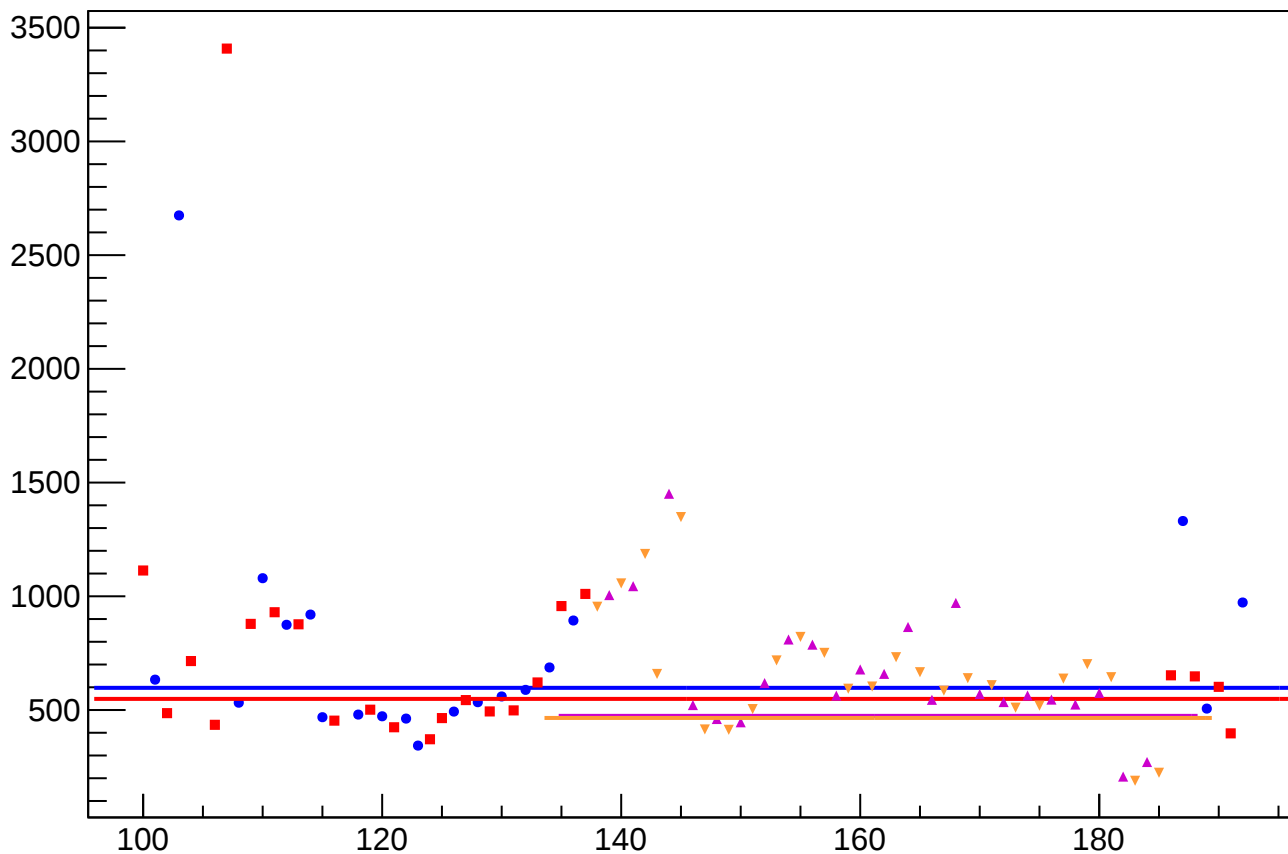
Right:  $-239.740 \pm 152.041$   $\chi^2/\text{NDF}$ : 44.6/42

In:  $-84.794 \pm 110.249$   $\chi^2/\text{NDF}$ : 30.6/42

Out:  $-194.676 \pm 104.939$   $\chi^2/\text{NDF}$ : 64.2/47

All:  $-142.445 \pm 76.011$   $\chi^2/\text{NDF}$ : 95.3/90

asym\_at1\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 597.513 $\pm$ 0.159  $\chi^2$ /NDF: 1808269.8/19

Left Out: 465.080 $\pm$ 0.086  $\chi^2$ /NDF: 7086137.6/24

Right Out: 548.867 $\pm$ 0.146  $\chi^2$ /NDF: 1577255.5/22

Left In: 474.263 $\pm$ 0.089  $\chi^2$ /NDF: 6173100.1/22

Left: 469.509 $\pm$ 0.062  $\chi^2$ /NDF: 13264703.6/47

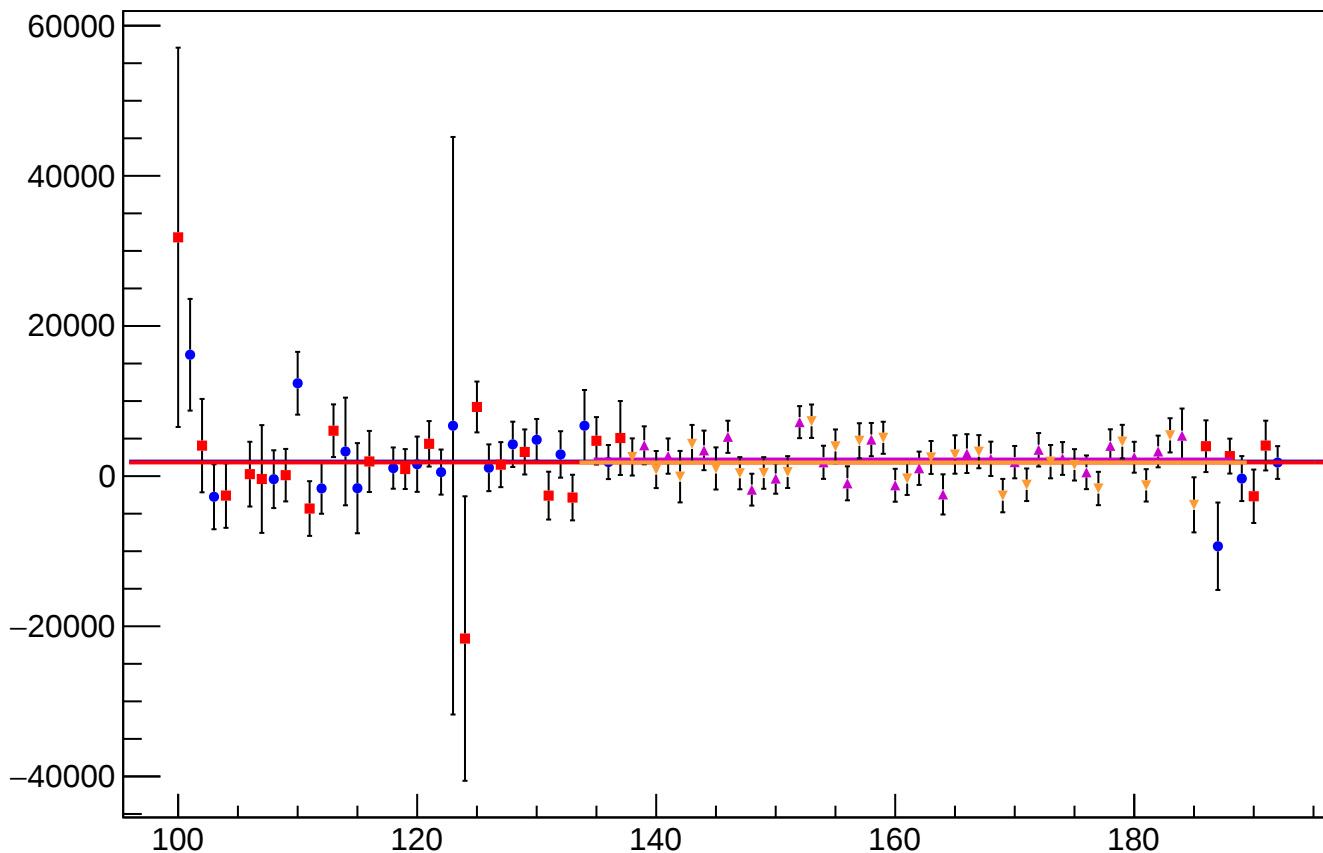
Right: 570.970 $\pm$ 0.108  $\chi^2$ /NDF: 3436282.1/42

In: 503.707 $\pm$ 0.078  $\chi^2$ /NDF: 8435853.3/42

Out: 486.859 $\pm$ 0.074  $\chi^2$ /NDF: 8908660.5/47

All: 494.868 $\pm$ 0.054  $\chi^2$ /NDF: 17369019.0/90

# asym\_at1\_avg\_mean vs Slug, Sign Corrected



Right In: 1936.718+/-770.239  $\chi^2/\text{NDF}$ : 20.4/19

Left Out: 1824.066+/-462.694  $\chi^2/\text{NDF}$ : 32.1/24

Right Out: 1825.598+/-744.560  $\chi^2/\text{NDF}$ : 22.8/22

Left In: 2208.114+/-474.050  $\chi^2/\text{NDF}$ : 25.3/22

Left: 2011.435+/-331.116  $\chi^2/\text{NDF}$ : 57.8/47

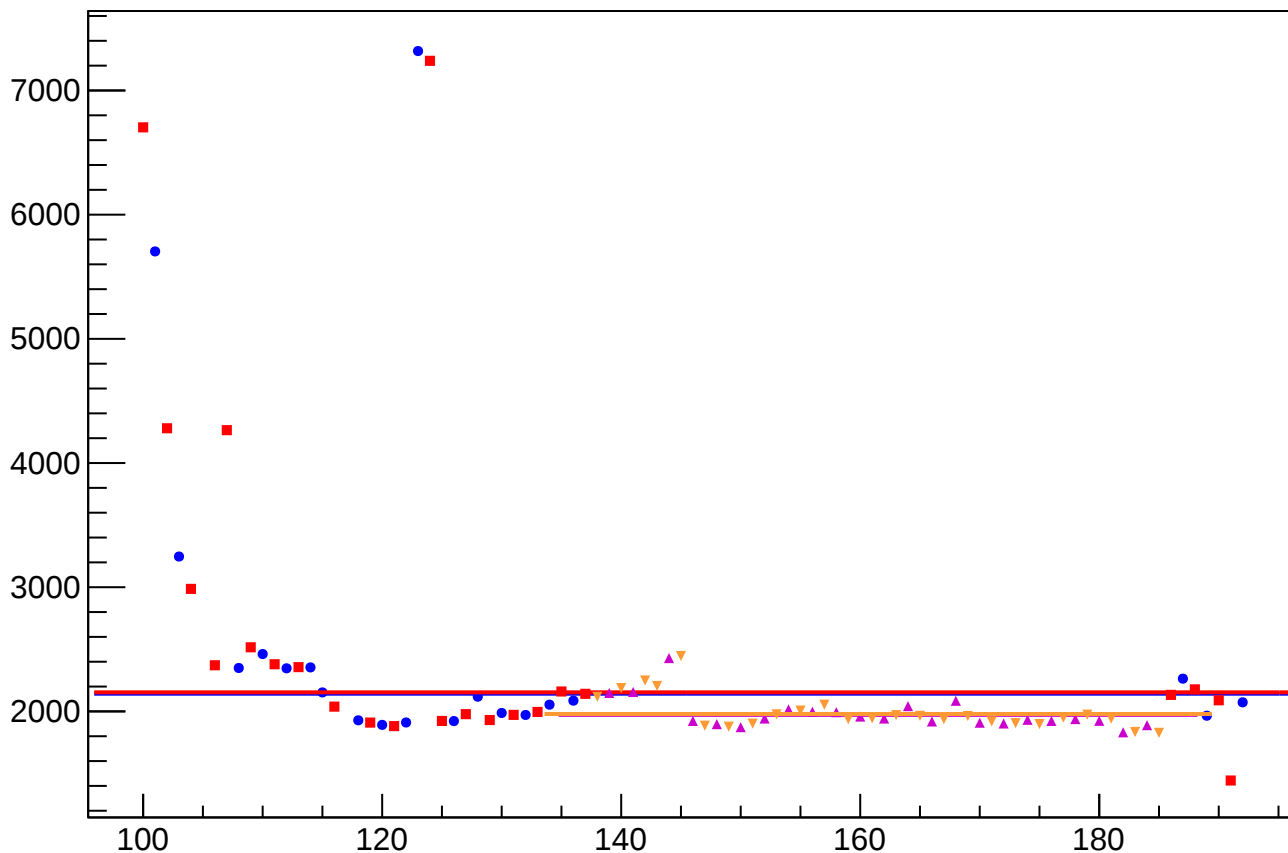
Right: 1879.275+/-535.331  $\chi^2/\text{NDF}$ : 43.3/42

In: 2133.554+/-403.715  $\chi^2/\text{NDF}$ : 45.9/42

Out: 1824.493+/-392.992  $\chi^2/\text{NDF}$ : 54.9/47

All: 1974.864+/-281.602  $\chi^2/\text{NDF}$ : 101.1/90

# asym\_at1\_avg\_rms vs Slug, Sign Corrected



Right In: 2142.498 $\pm$ 0.545  $\chi^2$ /NDF: 719122.4/19

Left Out: 1978.997 $\pm$ 0.327  $\chi^2$ /NDF:139299.8/24

Right Out: 2153.514 $\pm$ 0.526  $\chi^2$ /NDF: 898493.6/22

Left In: 1972.166 $\pm$ 0.335  $\chi^2$ /NDF:116452.5/22

Left: 1975.665 $\pm$ 0.234  $\chi^2$ /NDF: 255965.0/47

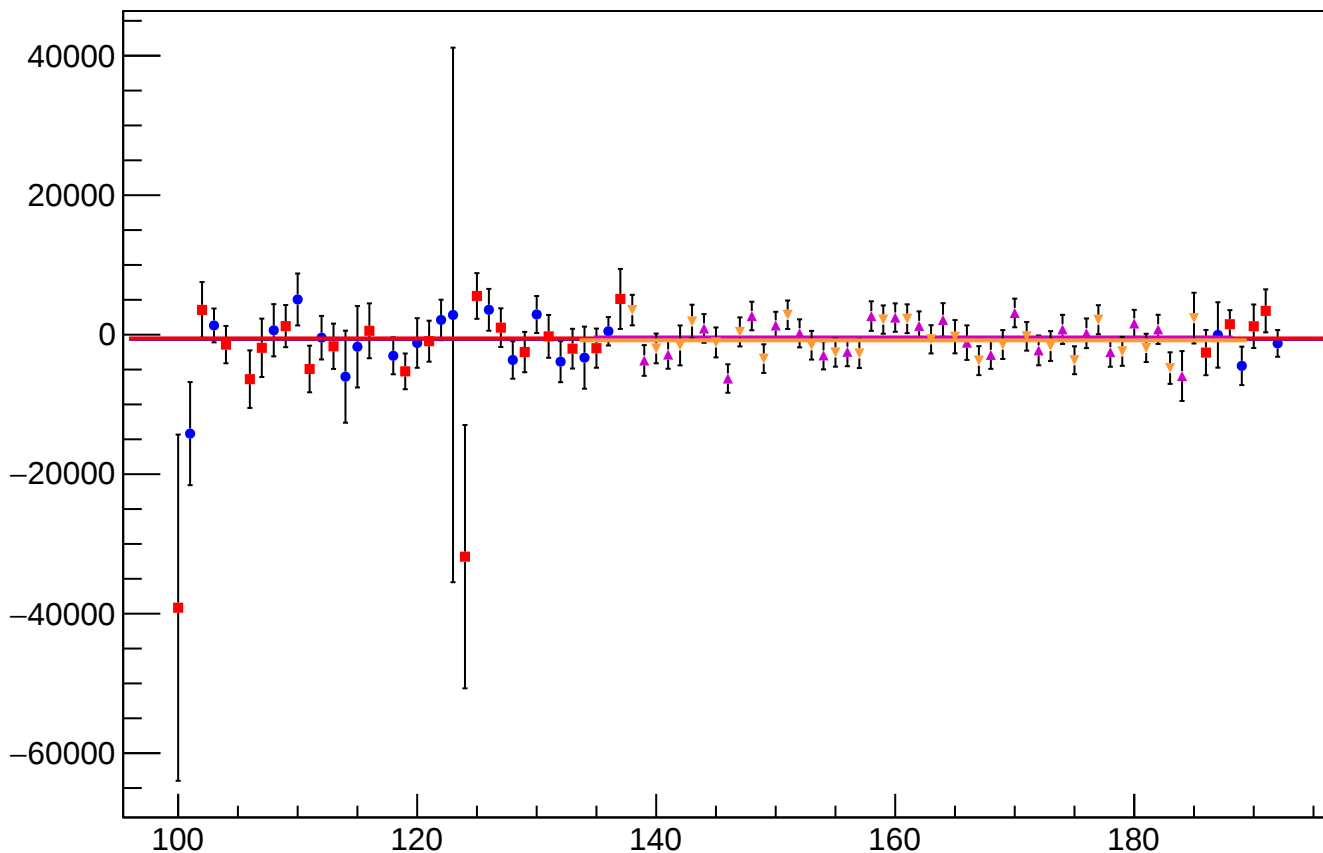
Right: 2148.192 $\pm$ 0.379  $\chi^2$ /NDF: 1617827.6/42

In: 2018.961 $\pm$ 0.285  $\chi^2$ /NDF:906511.5/42

Out: 2027.616 $\pm$ 0.278  $\chi^2$ /NDF:1117059.5/47

All: 2023.405 $\pm$ 0.199  $\chi^2$ /NDF: 2024043.0/90

# reg\_asym\_at1\_dd\_mean vs Slug, Sign Corrected



Right In: -601.705+/-694.081  $\chi^2/\text{NDF}$ : 17.8/19

Left Out: -808.436+/-430.304  $\chi^2/\text{NDF}$ : 27.9/24

Right Out: -547.222+/-666.780  $\chi^2/\text{NDF}$ : 23.9/22

Left In: -398.797+/-441.246  $\chi^2/\text{NDF}$ : 34.4/22

Left: -608.759+/-308.066  $\chi^2/\text{NDF}$ : 62.8/47

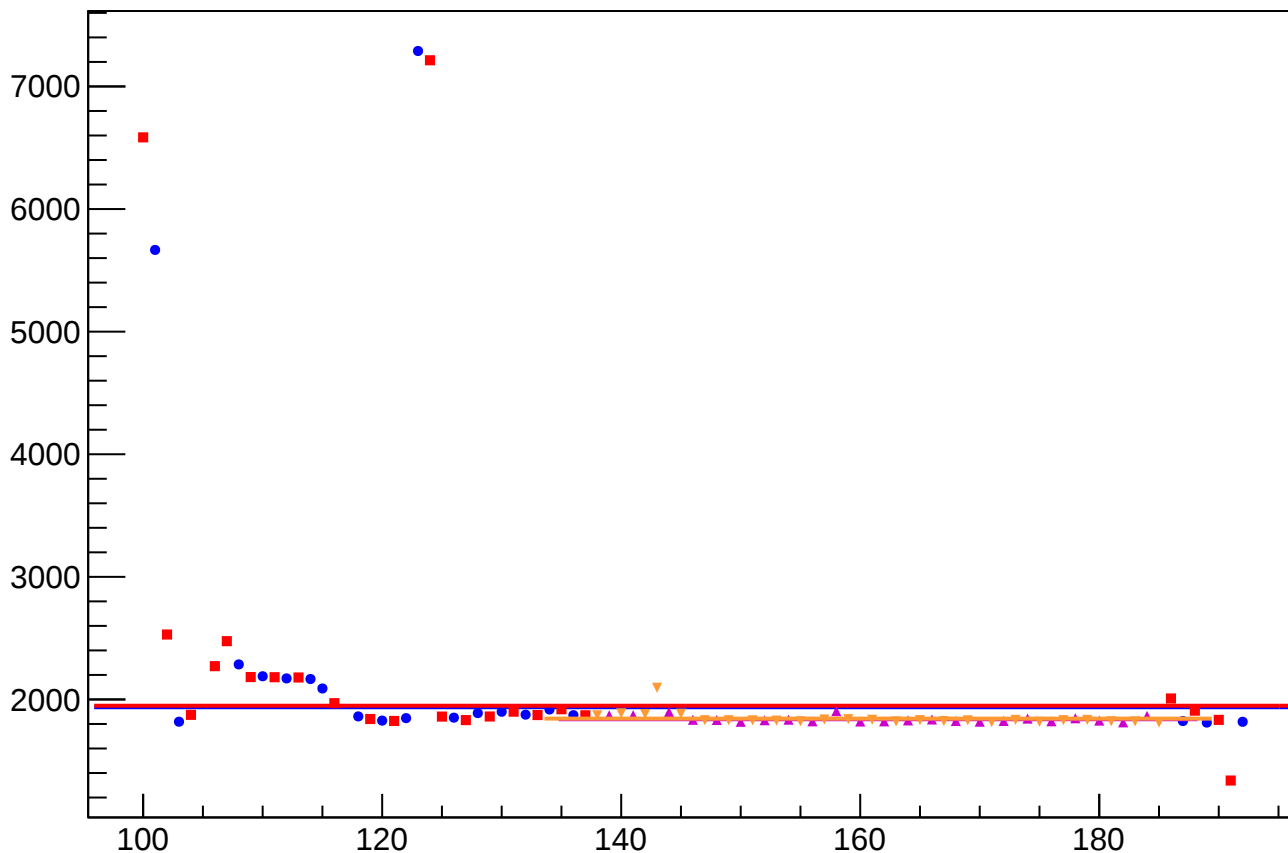
Right: -573.371+/-480.847  $\chi^2/\text{NDF}$ : 41.8/42

In: -457.199+/-372.369  $\chi^2/\text{NDF}$ : 52.3/42

Out: -731.634+/-361.552  $\chi^2/\text{NDF}$ : 52.0/47

All: -598.461+/-259.396  $\chi^2/\text{NDF}$ : 104.5/90

# reg\_asym\_at1\_dd\_rms vs Slug, Sign Corrected



Right In: 1936.694+/-0.491  $\chi^2/\text{NDF}$ : 618587.5/19

Left Out: 1843.747+/-0.304  $\chi^2/\text{NDF}$ : 26867.4/24

Right Out: 1948.722+/-0.471  $\chi^2/\text{NDF}$ : 444224.6/22

Left In: 1838.611+/-0.312  $\chi^2/\text{NDF}$ : 6335.1/22

Left: 1841.243+/-0.218  $\chi^2/\text{NDF}$ : 33341.4/47

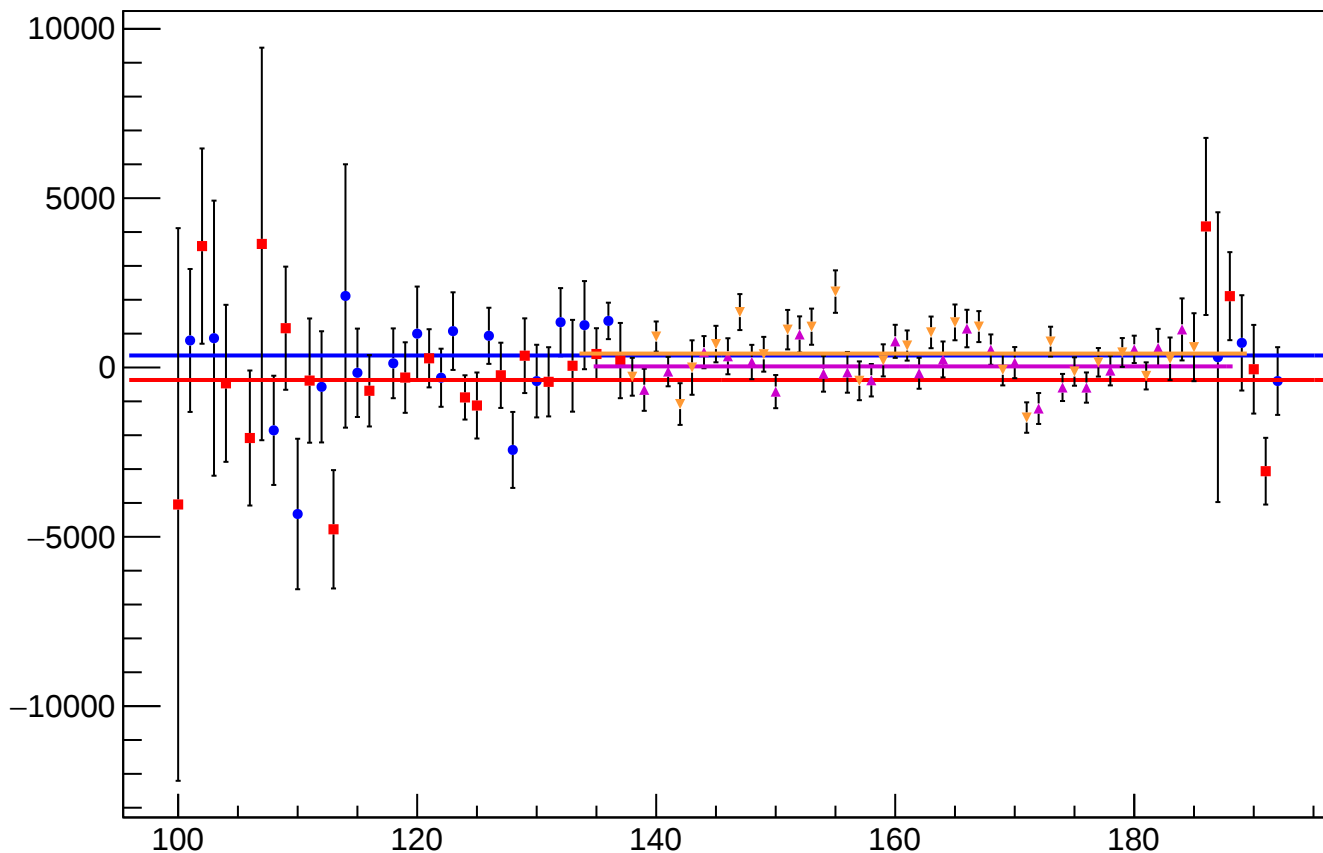
Right: 1942.949+/-0.340  $\chi^2/\text{NDF}$ : 1063124.4/42

In: 1866.842+/-0.263  $\chi^2/\text{NDF}$ : 653366.0/42

Out: 1874.612+/-0.256  $\chi^2/\text{NDF}$ : 506088.7/47

All: 1870.841+/-0.183  $\chi^2/\text{NDF}$ : 1159903.0/90

asym\_at1\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: 354.872 $\pm$ 256.632  $\chi^2/\text{NDF}$ : 21.1/19

Left Out: 411.072 $\pm$ 100.456  $\chi^2/\text{NDF}$ : 61.2/24

Right Out: -368.997 $\pm$ 247.005  $\chi^2/\text{NDF}$ : 28.2/22

Left In: 32.456 $\pm$ 102.403  $\chi^2/\text{NDF}$ : 32.7/22

Left: 225.398 $\pm$ 71.712  $\chi^2/\text{NDF}$ : 100.9/47

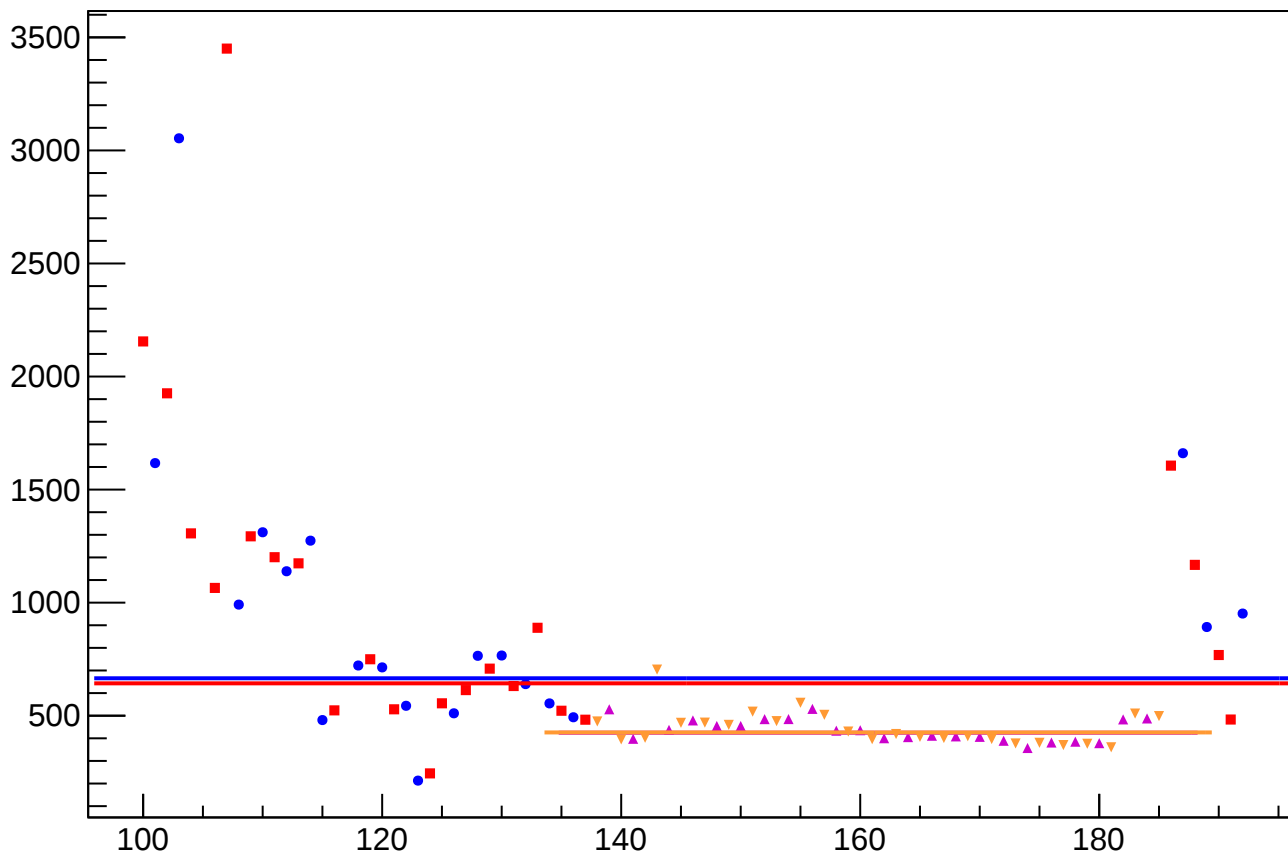
Right: -20.894 $\pm$ 177.965  $\chi^2/\text{NDF}$ : 53.5/42

In: 76.741 $\pm$ 95.111  $\chi^2/\text{NDF}$ : 55.2/42

Out: 300.359 $\pm$ 93.055  $\chi^2/\text{NDF}$ : 98.0/47

All: 190.994 $\pm$ 66.515  $\chi^2/\text{NDF}$ : 156.0/90

asym\_at1\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 665.504 $\pm$ 0.181  $\chi^2$ /NDF: 2612921.0/19

Left Out: 426.027 $\pm$ 0.071  $\chi^2$ /NDF: 733072.9/24

Right Out: 643.117 $\pm$ 0.175  $\chi^2$ /NDF: 3488180.8/22

Left In: 424.639 $\pm$ 0.072  $\chi^2$ /NDF: 391611.2/22

Left: 425.346 $\pm$ 0.051  $\chi^2$ /NDF: 1124871.5/47

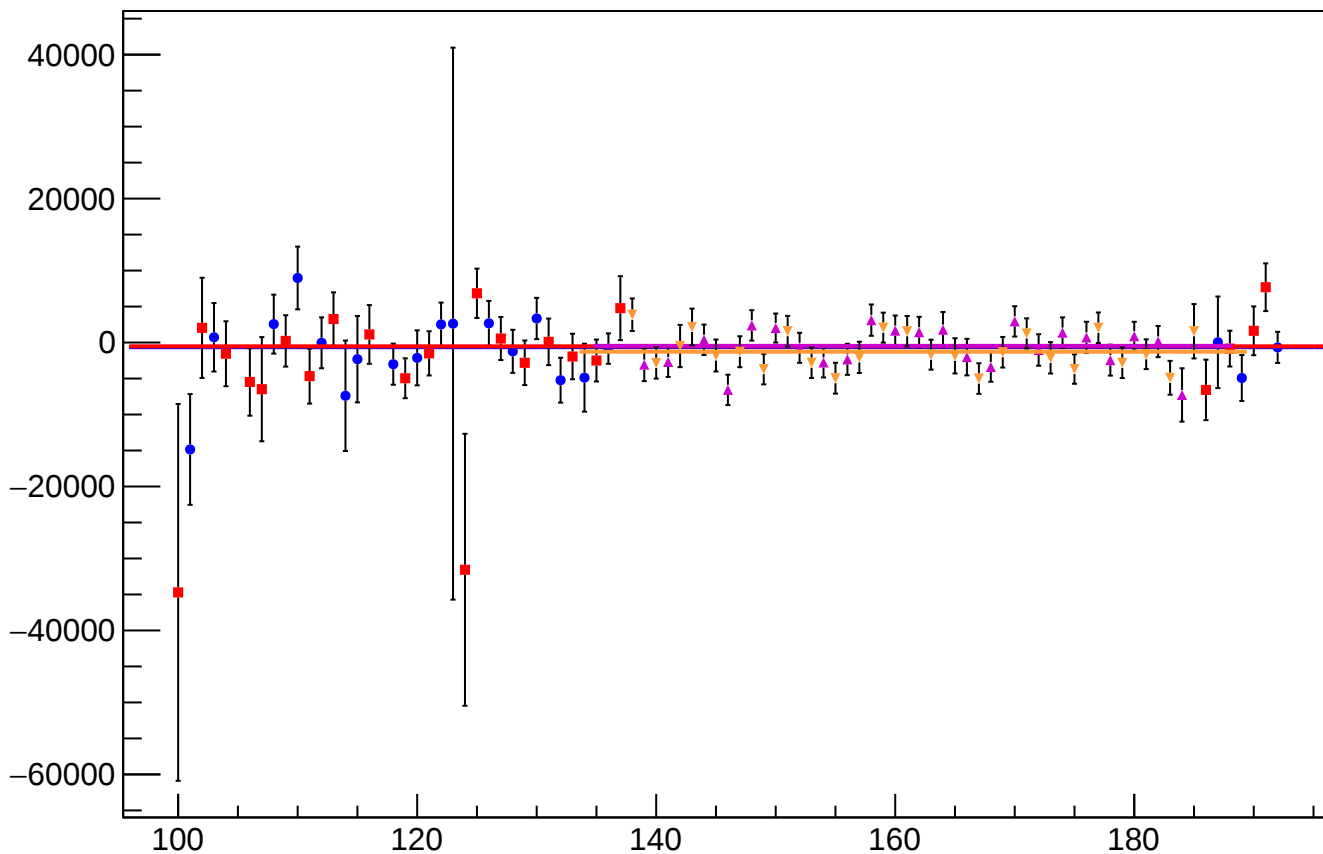
Right: 653.883 $\pm$ 0.126  $\chi^2$ /NDF: 6109002.8/42

In: 457.722 $\pm$ 0.067  $\chi^2$ /NDF: 4524346.6/42

Out: 456.838 $\pm$ 0.066  $\chi^2$ /NDF: 5546873.4/47

All: 457.271 $\pm$ 0.047  $\chi^2$ /NDF: 10071308.2/90

# asym\_at1\_dd\_mean vs Slug, Sign Corrected



Right In: -639.648+/-779.655  $\chi^2/\text{NDF}$ : 19.7/19

Left Out: -1267.885+/-443.219  $\chi^2/\text{NDF}$ : 30.8/24

Right Out: -523.400+/-763.176  $\chi^2/\text{NDF}$ : 27.5/22

Left In: -462.599+/-453.947  $\chi^2/\text{NDF}$ : 32.6/22

Left: -874.870+/-317.128  $\chi^2/\text{NDF}$ : 65.0/47

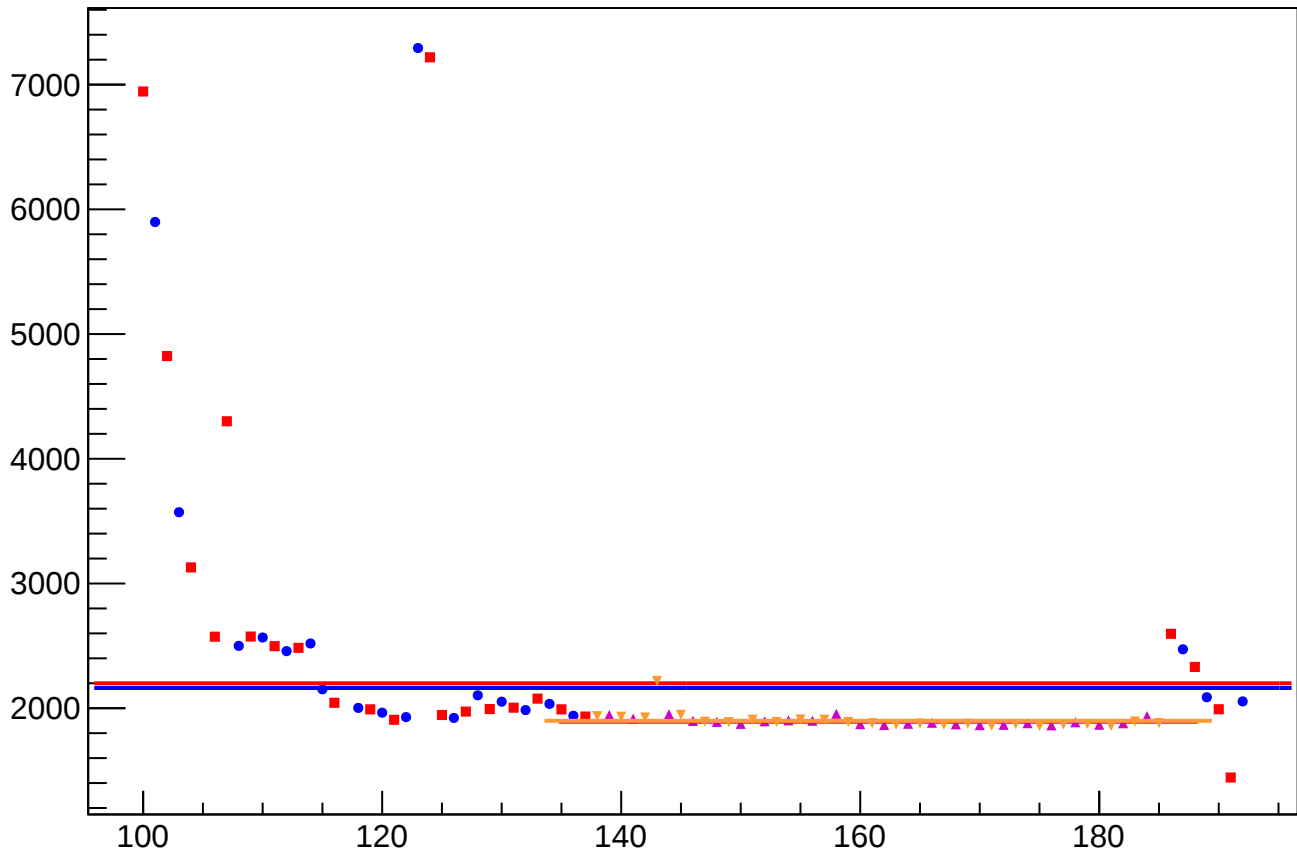
Right: -580.283+/-545.380  $\chi^2/\text{NDF}$ : 47.2/42

In: -507.424+/-392.296  $\chi^2/\text{NDF}$ : 52.3/42

Out: -1080.117+/-383.272  $\chi^2/\text{NDF}$ : 59.0/47

All: -800.433+/-274.149  $\chi^2/\text{NDF}$ : 112.4/90

# asym\_at1\_dd\_rms vs Slug, Sign Corrected



Right In: 2162.199+/-0.551  $\chi^2/\text{NDF}$ : 812410.3/19

Left Out: 1898.962+/-0.313  $\chi^2/\text{NDF}$ : 38680.4/24

Right Out: 2199.886+/-0.540  $\chi^2/\text{NDF}$ : 1029708.8/22

Left In: 1891.693+/-0.321  $\chi^2/\text{NDF}$ : 7420.7/22

Left: 1895.414+/-0.224  $\chi^2/\text{NDF}$ : 46363.6/47

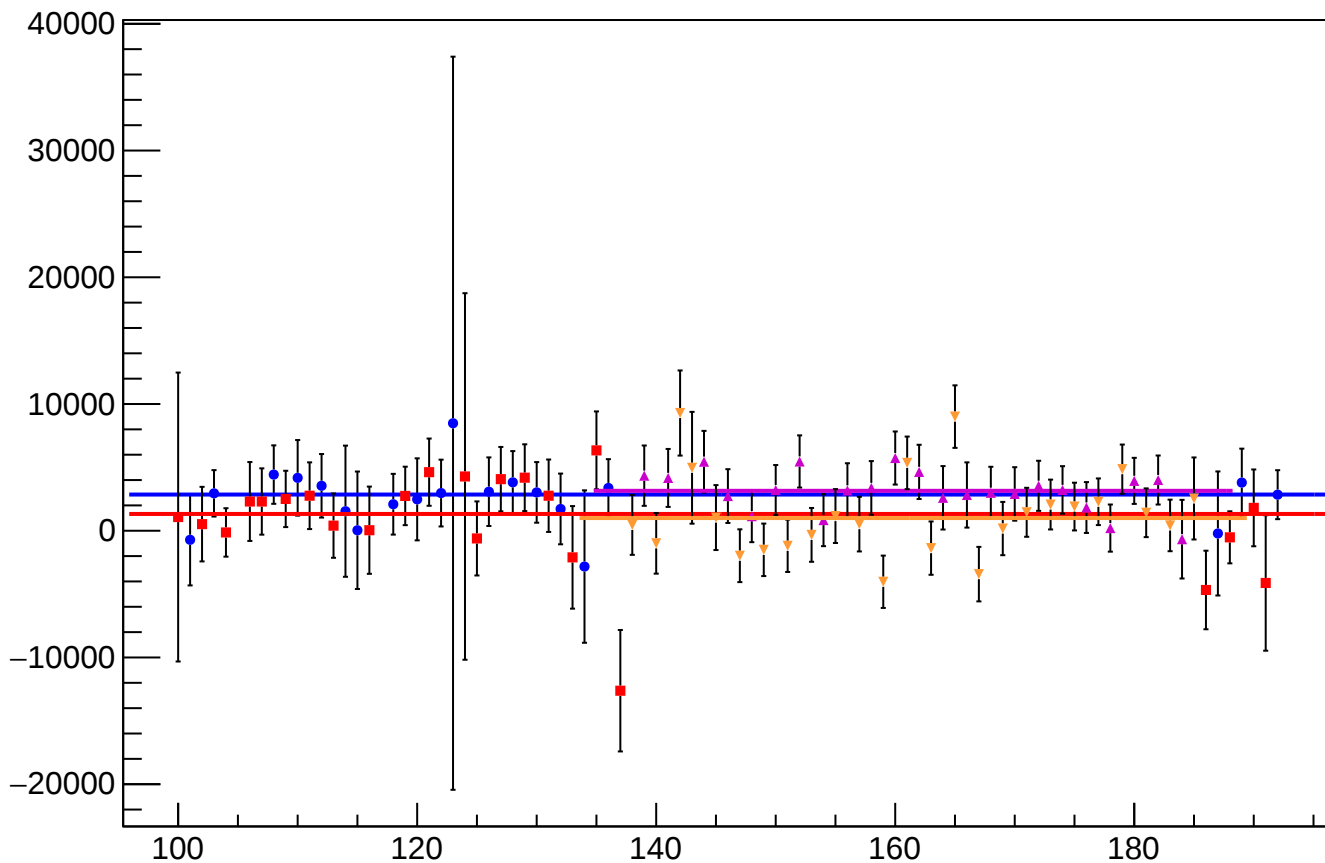
Right: 2181.445+/-0.386  $\chi^2/\text{NDF}$ : 1844505.6/42

In: 1960.179+/-0.277  $\chi^2/\text{NDF}$ : 999634.8/42

Out: 1974.859+/-0.271  $\chi^2/\text{NDF}$ : 1300917.8/47

All: 1967.689+/-0.194  $\chi^2/\text{NDF}$ : 2301985.5/90

# reg\_asym\_at2\_avg\_mean vs Slug, Sign Corrected



Right In: 2855.896 $\pm$ 619.170  $\chi^2$ /NDF: 4.1/19

Left Out: 1001.263 $\pm$ 435.247  $\chi^2$ /NDF:44.6/24

Right Out: 1324.853 $\pm$ 597.407  $\chi^2$ /NDF: 24.2/22

Left In: 3150.437 $\pm$ 441.145  $\chi^2$ /NDF:11.8/22

Left: 2061.387 $\pm$ 309.830  $\chi^2$ /NDF: 68.5/47

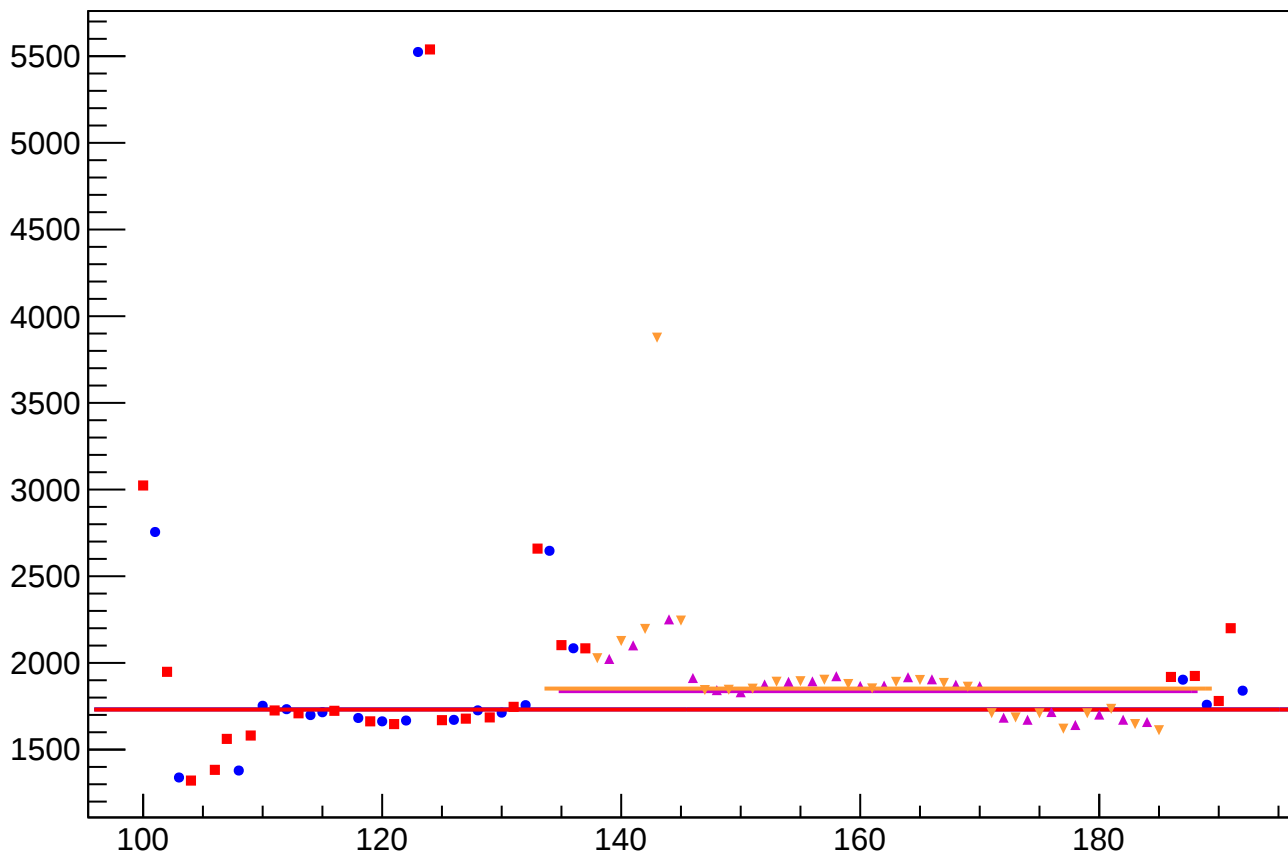
Right: 2062.995 $\pm$ 429.919  $\chi^2$ /NDF: 31.5/42

In: 3051.263 $\pm$ 359.281  $\chi^2$ /NDF:16.1/42

Out: 1113.467 $\pm$ 351.784  $\chi^2$ /NDF:69.0/47

All: 2061.937 $\pm$ 251.358  $\chi^2$ /NDF: 100.0/90

# reg\_asym\_at2\_avg\_rms vs Slug, Sign Corrected



Right In: 1731.971+/-0.438  $\chi^2/\text{NDF}$ : 442650.0/19

Left Out: 1851.959+/-0.308  $\chi^2/\text{NDF}$ : 648954.2/24

Right Out: 1730.819+/-0.422  $\chi^2/\text{NDF}$ : 502421.2/22

Left In: 1837.151+/-0.312  $\chi^2/\text{NDF}$ : 200514.0/22

Left: 1844.654+/-0.219  $\chi^2/\text{NDF}$ : 850610.1/47

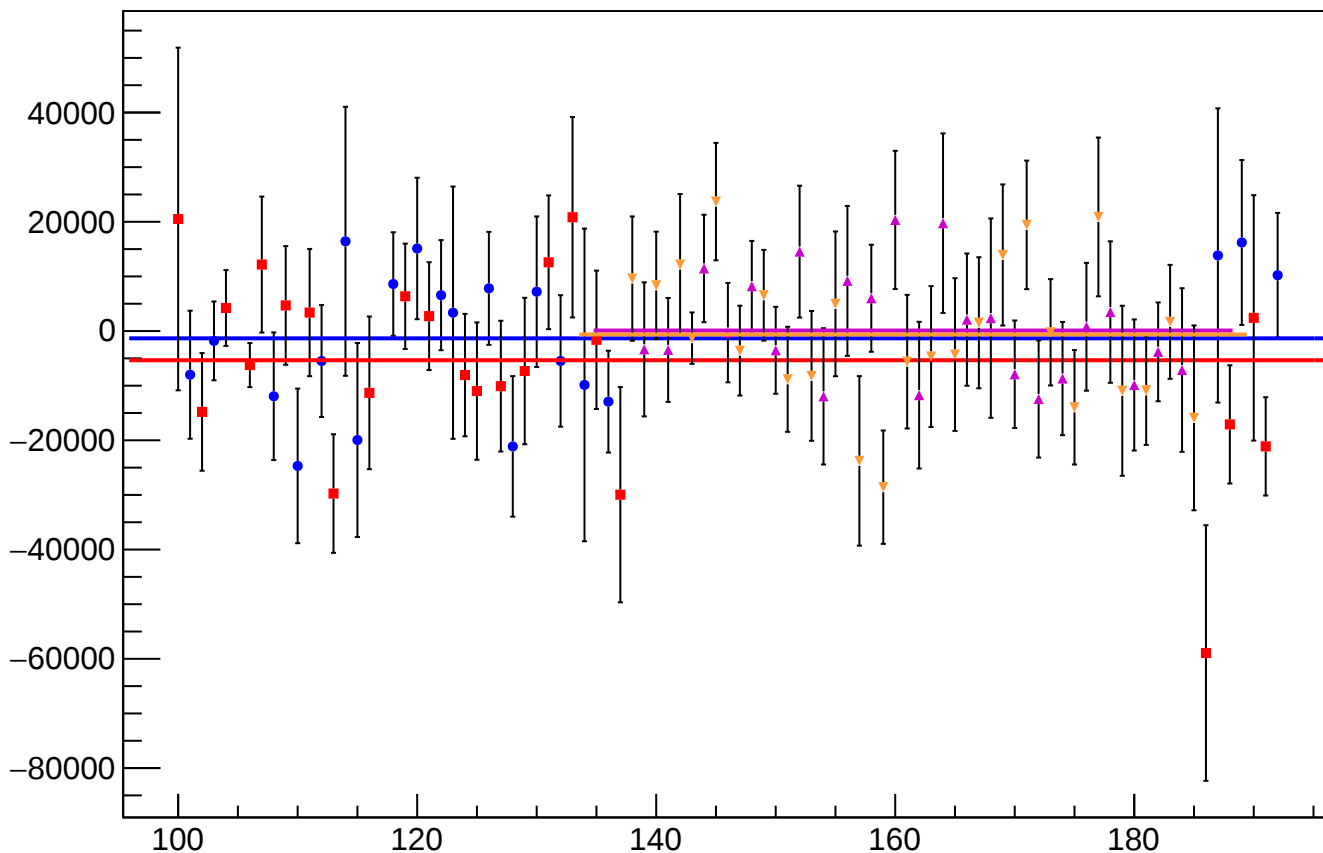
Right: 1731.374+/-0.304  $\chi^2/\text{NDF}$ : 945074.8/42

In: 1801.736+/-0.254  $\chi^2/\text{NDF}$ : 681445.0/42

Out: 1809.954+/-0.249  $\chi^2/\text{NDF}$ : 1205096.6/47

All: 1805.931+/-0.178  $\chi^2/\text{NDF}$ : 1887075.8/90

asym\_at2\_avg\_correction\_mean vs Slug, Sign Corrected



Right In: -1333.646 $\pm$ 2714.379  $\chi^2$ /NDF: 17.0/19

Left Out: -619.372 $\pm$ 2069.686  $\chi^2$ /NDF:30.1/24

Right Out: -5341.096 $\pm$ 2137.793  $\chi^2$ /NDF: 30.1/22

Left In: 93.334 $\pm$ 2293.826  $\chi^2$ /NDF:14.6/22

Left: -299.532 $\pm$ 1536.638  $\chi^2$ /NDF: 44.8/47

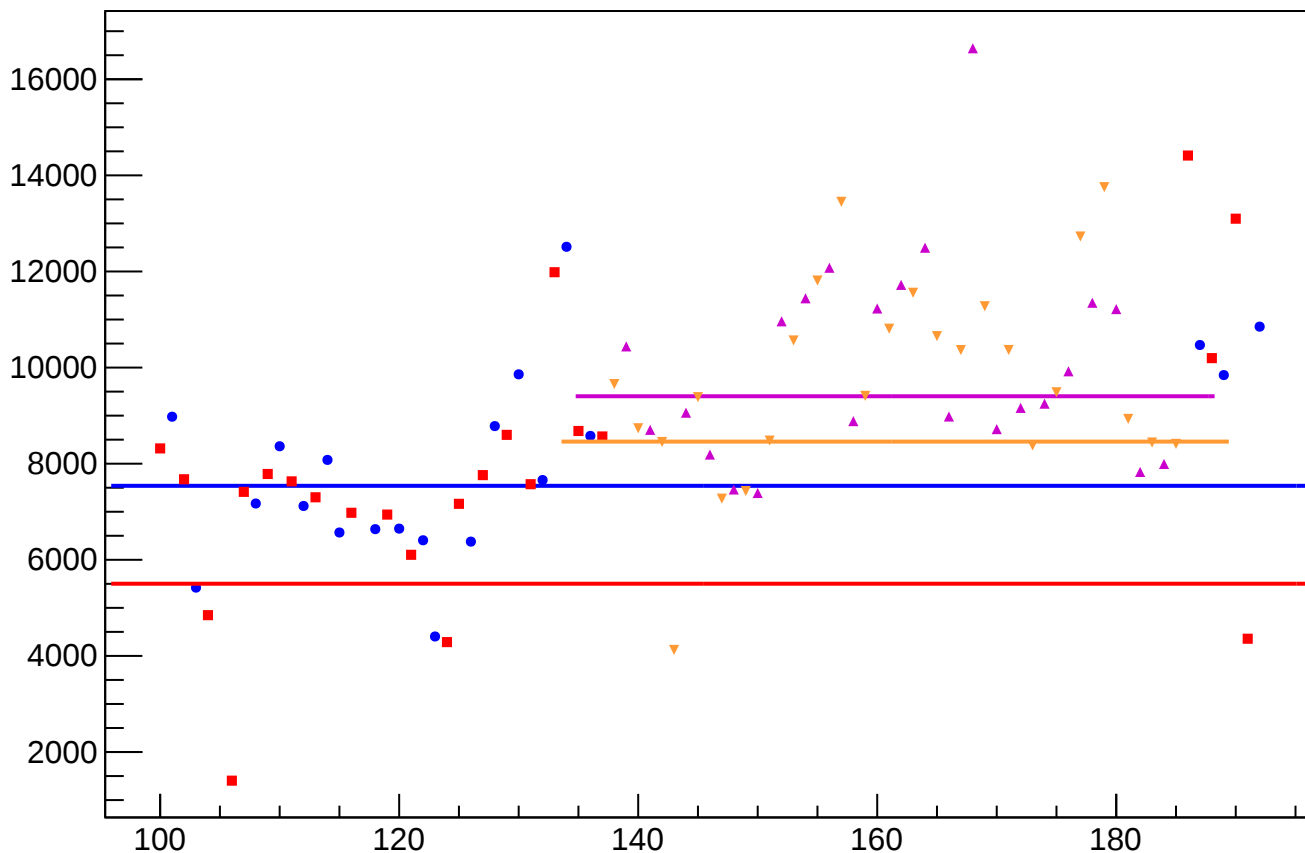
Right: -3806.948 $\pm$ 1679.462  $\chi^2$ /NDF: 48.4/42

In: -501.168 $\pm$ 1752.016  $\chi^2$ /NDF:31.8/42

Out: -2903.823 $\pm$ 1486.984  $\chi^2$ /NDF:62.7/47

All: -1897.785 $\pm$ 1133.703  $\chi^2$ /NDF: 95.6/90

asym\_at2\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 7539.602 $\pm$ 1.919  $\chi^2$ /NDF: 736341.6/19

Left Out: 8459.960 $\pm$ 1.463  $\chi^2$ /NDF:3087200.5/24

Right Out: 5502.261 $\pm$ 1.512  $\chi^2$ /NDF: 4157914.3/22

Left In: 9403.481 $\pm$ 1.622  $\chi^2$ /NDF:1142646.9/22

Left: 8883.382 $\pm$ 1.087  $\chi^2$ /NDF: 4416376.4/47

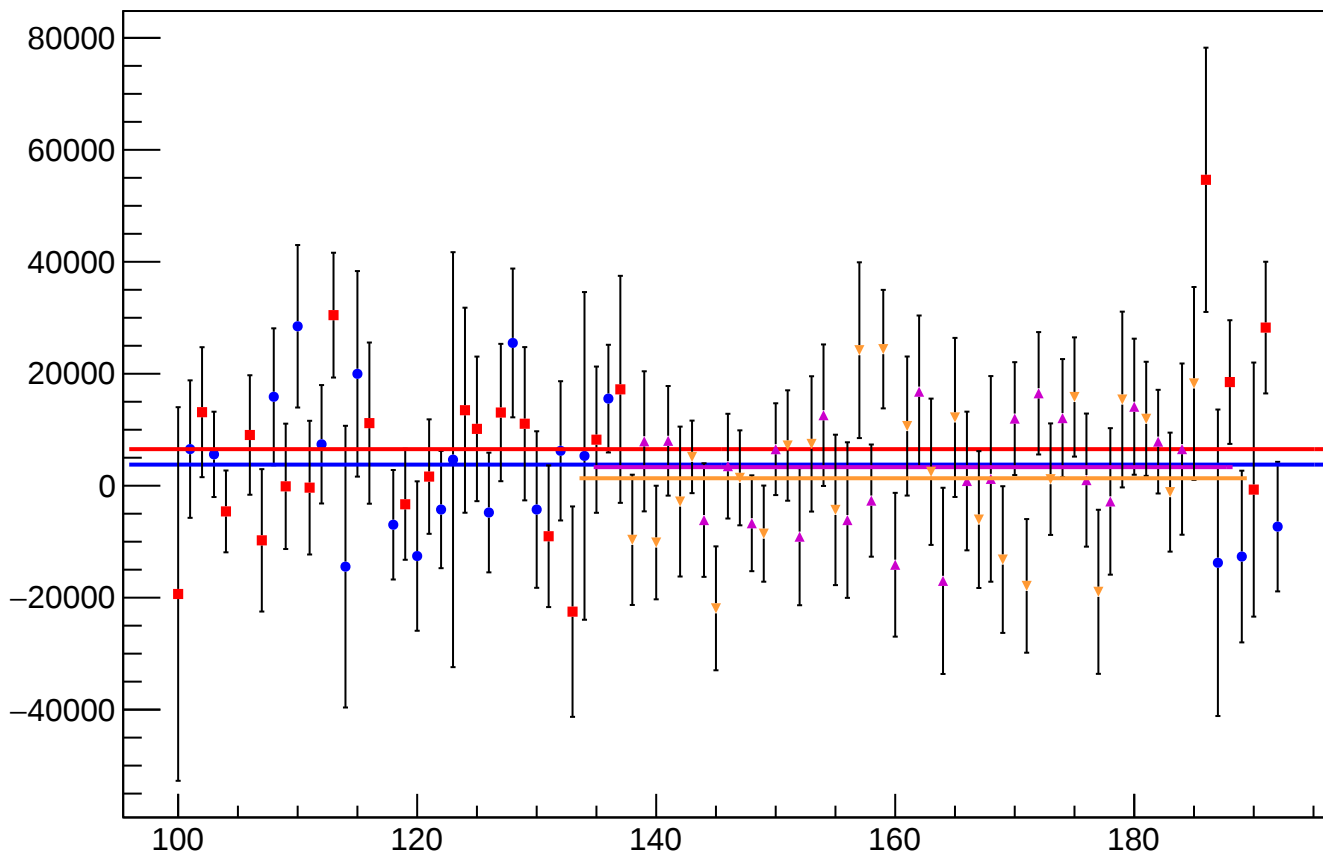
Right: 6282.204 $\pm$ 1.188  $\chi^2$ /NDF: 5589641.5/42

In: 8626.961 $\pm$ 1.239  $\chi^2$ /NDF:2429136.4/42

Out: 7028.975 $\pm$ 1.051  $\chi^2$ /NDF:9221221.3/47

All: 7698.082 $\pm$ 0.802  $\chi^2$ /NDF: 12617491.0/95

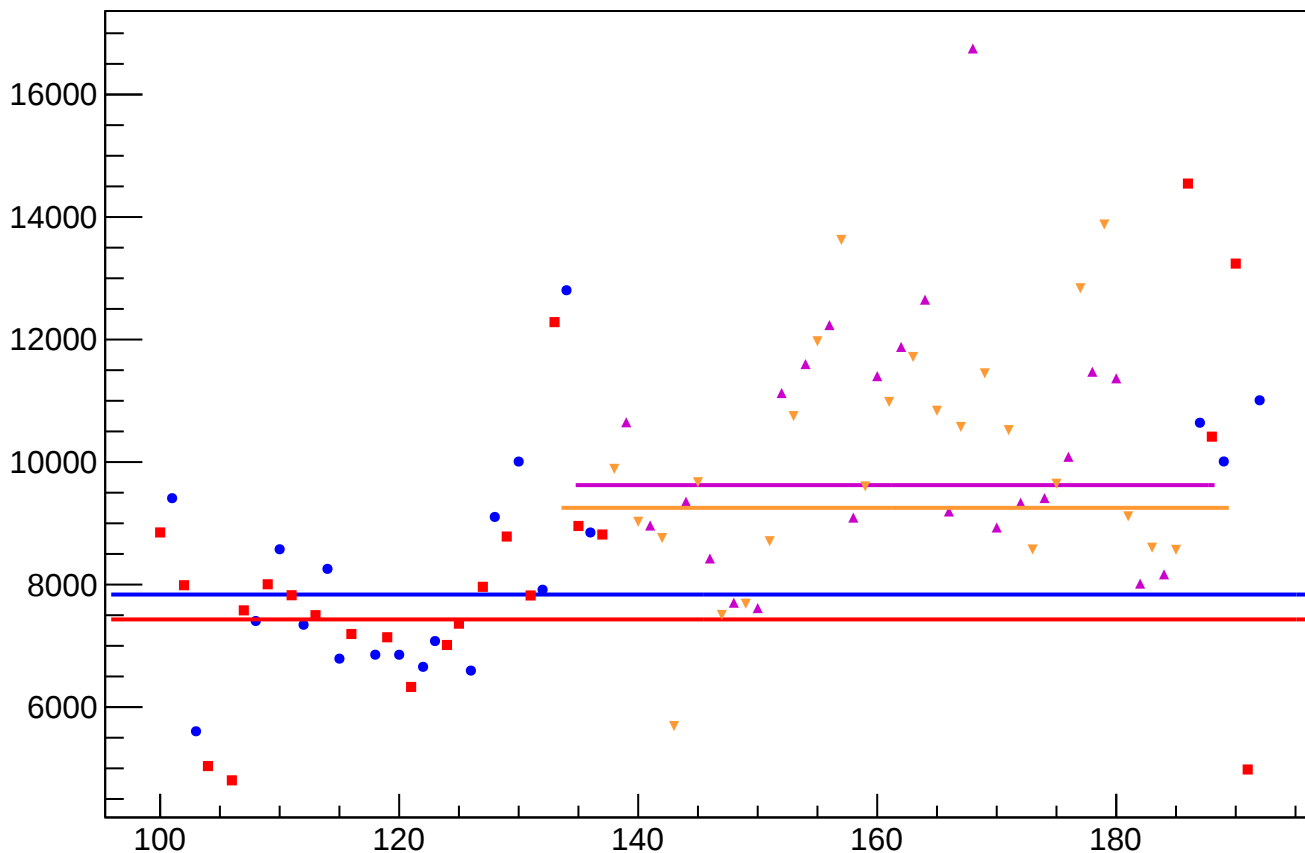
# asym\_at2\_avg\_mean vs Slug, Sign Corrected



Right In: 3767.813 $\pm$ 2820.624  $\chi^2$ /NDF: 16.4/19  
 Left Out: 1332.828 $\pm$ 2213.733  $\chi^2$ /NDF:28.0/24  
 Right Out: 6531.304 $\pm$ 2607.514  $\chi^2$ /NDF: 25.2/22  
 Left In: 3316.909 $\pm$ 2344.543  $\chi^2$ /NDF:13.7/22

Left: 2267.978 $\pm$ 1609.604  $\chi^2$ /NDF: 42.2/47  
 Right: 5257.887 $\pm$ 1914.704  $\chi^2$ /NDF: 42.1/42  
 In: 3501.151 $\pm$ 1803.005  $\chi^2$ /NDF:30.1/42  
 Out: 3510.288 $\pm$ 1687.578  $\chi^2$ /NDF:55.6/47  
 All: 3506.021 $\pm$ 1232.085  $\chi^2$ /NDF: 85.7/90

# asym\_at2\_avg\_rms vs Slug, Sign Corrected



Right In: 7837.433 $\pm$ 1.994  $\chi^2/\text{NDF}$ : 665293.0/19

Left Out: 9252.712 $\pm$ 1.565  $\chi^2/\text{NDF}$ : 1597668.9/24

Right Out: 7431.204 $\pm$ 1.844  $\chi^2/\text{NDF}$ : 1119352.1/22

Left In: 9623.485 $\pm$ 1.658  $\chi^2/\text{NDF}$ : 1069924.0/22

Left: 9427.467 $\pm$ 1.138  $\chi^2/\text{NDF}$ : 2694036.4/47

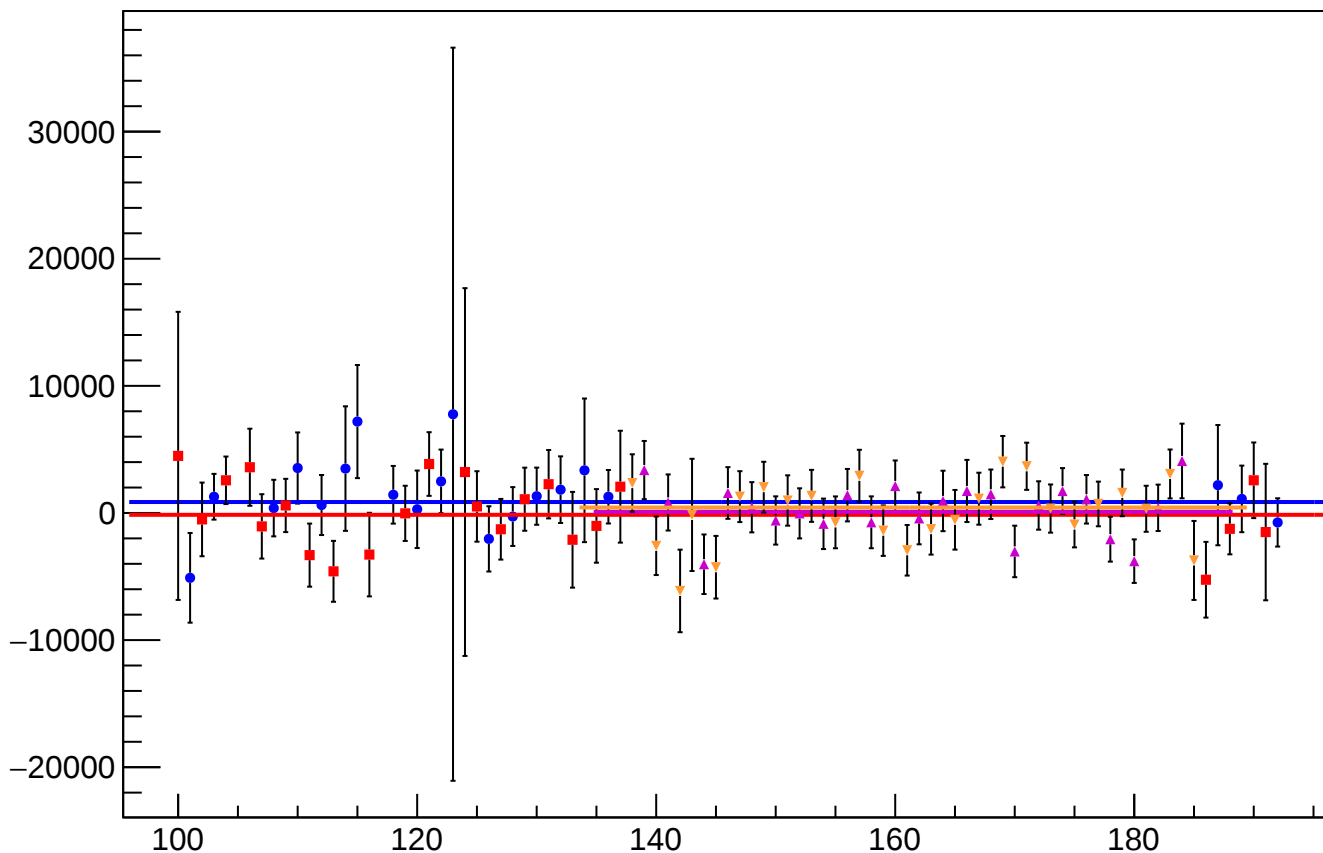
Right: 7618.376 $\pm$ 1.354  $\chi^2/\text{NDF}$ : 1807016.2/42

In: 8893.676 $\pm$ 1.275  $\chi^2/\text{NDF}$ : 2209478.0/42

Out: 8489.645 $\pm$ 1.193  $\chi^2/\text{NDF}$ : 3284269.4/47

All: 8678.307 $\pm$ 0.871  $\chi^2/\text{NDF}$ : 5547282.9/90

# reg\_asym\_at2\_dd\_mean vs Slug, Sign Corrected



Right In:  $861.139 \pm 591.312$   $\chi^2/\text{NDF}: 9.5/19$

Left Out:  $429.447 \pm 416.378$   $\chi^2/\text{NDF}: 28.7/24$

Right Out:  $-144.674 \pm 570.999$   $\chi^2/\text{NDF}: 18.7/22$

Left In:  $88.373 \pm 421.957$   $\chi^2/\text{NDF}: 21.0/22$

Left:  $261.180 \pm 296.376$   $\chi^2/\text{NDF}: 50.0/47$

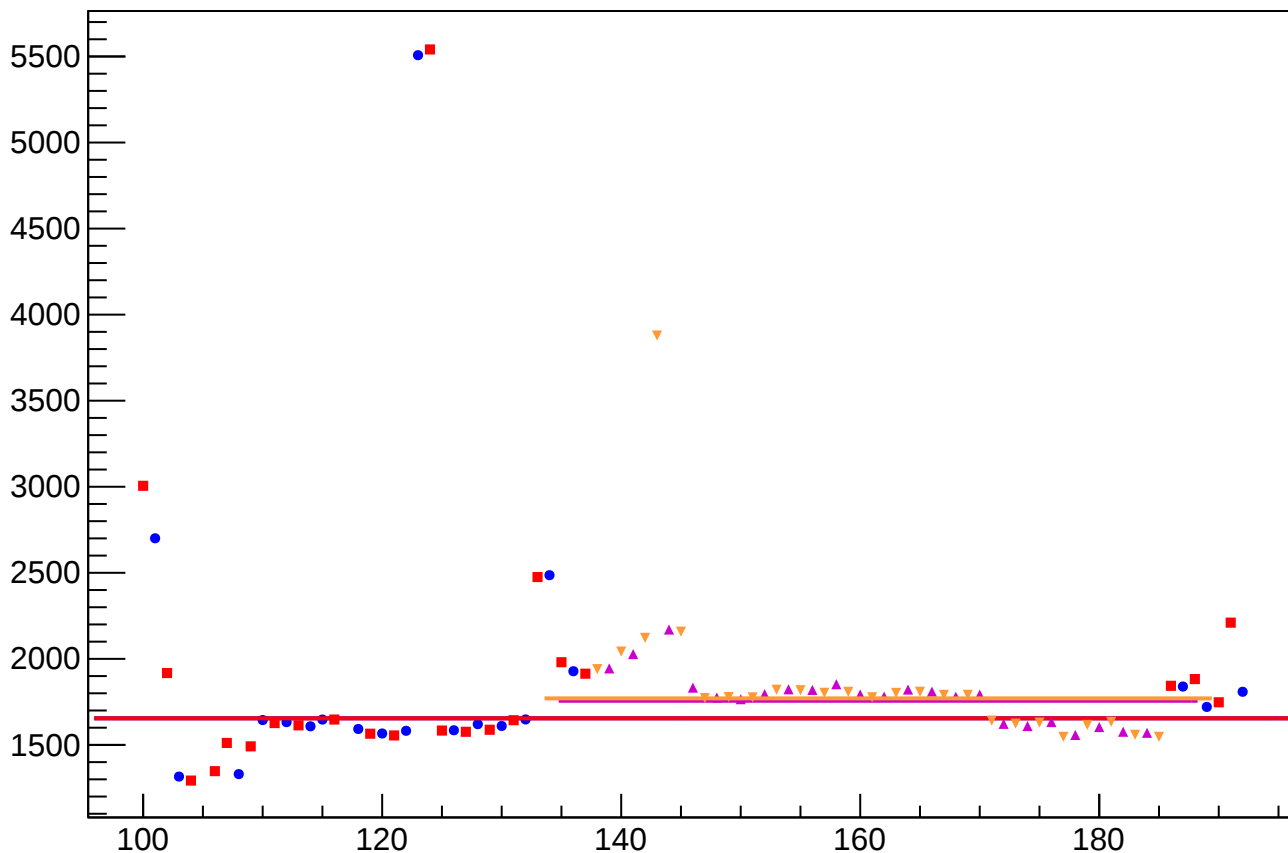
Right:  $340.659 \pm 410.751$   $\chi^2/\text{NDF}: 29.7/42$

In:  $349.108 \pm 343.473$   $\chi^2/\text{NDF}: 31.6/42$

Out:  $230.140 \pm 336.430$   $\chi^2/\text{NDF}: 48.1/47$

All:  $288.392 \pm 240.343$   $\chi^2/\text{NDF}: 79.7/90$

# reg\_asym\_at2\_dd\_rms vs Slug, Sign Corrected



Right In: 1654.562 $\pm$ 0.418  $\chi^2$ /NDF: 427342.7/19

Left Out: 1770.384 $\pm$ 0.294  $\chi^2$ /NDF: 699536.9/24

Right Out: 1654.467 $\pm$ 0.404  $\chi^2$ /NDF: 499905.1/22

Left In: 1756.623 $\pm$ 0.298  $\chi^2$ /NDF: 223077.6/22

Left: 1763.595 $\pm$ 0.210  $\chi^2$ /NDF: 923692.1/47

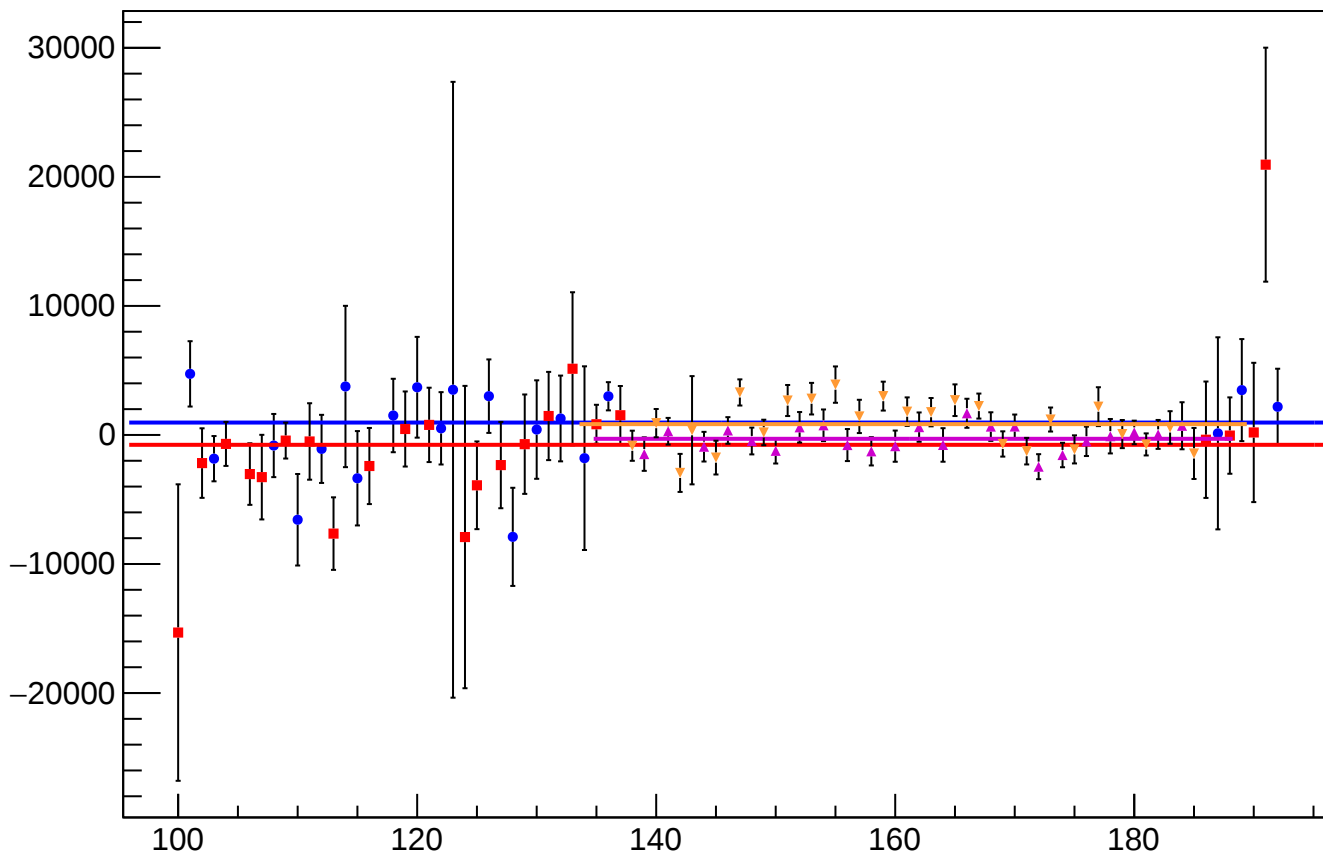
Right: 1654.513 $\pm$ 0.290  $\chi^2$ /NDF: 927247.9/42

In: 1722.187 $\pm$ 0.243  $\chi^2$ /NDF: 689899.0/42

Out: 1730.143 $\pm$ 0.238  $\chi^2$ /NDF: 1253252.7/47

All: 1726.248 $\pm$ 0.170  $\chi^2$ /NDF: 1943699.4/90

asym\_at2\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: 961.059+/-609.211  $\chi^2/\text{NDF}$ : 22.7/19

Left Out: 839.344+/-230.465  $\chi^2/\text{NDF}$ : 54.4/24

Right Out: -764.185+/-569.989  $\chi^2/\text{NDF}$ : 21.0/22

Left In: -298.801+/-231.400  $\chi^2/\text{NDF}$ : 18.3/22

Left: 272.574+/-163.293  $\chi^2/\text{NDF}$ : 84.9/47

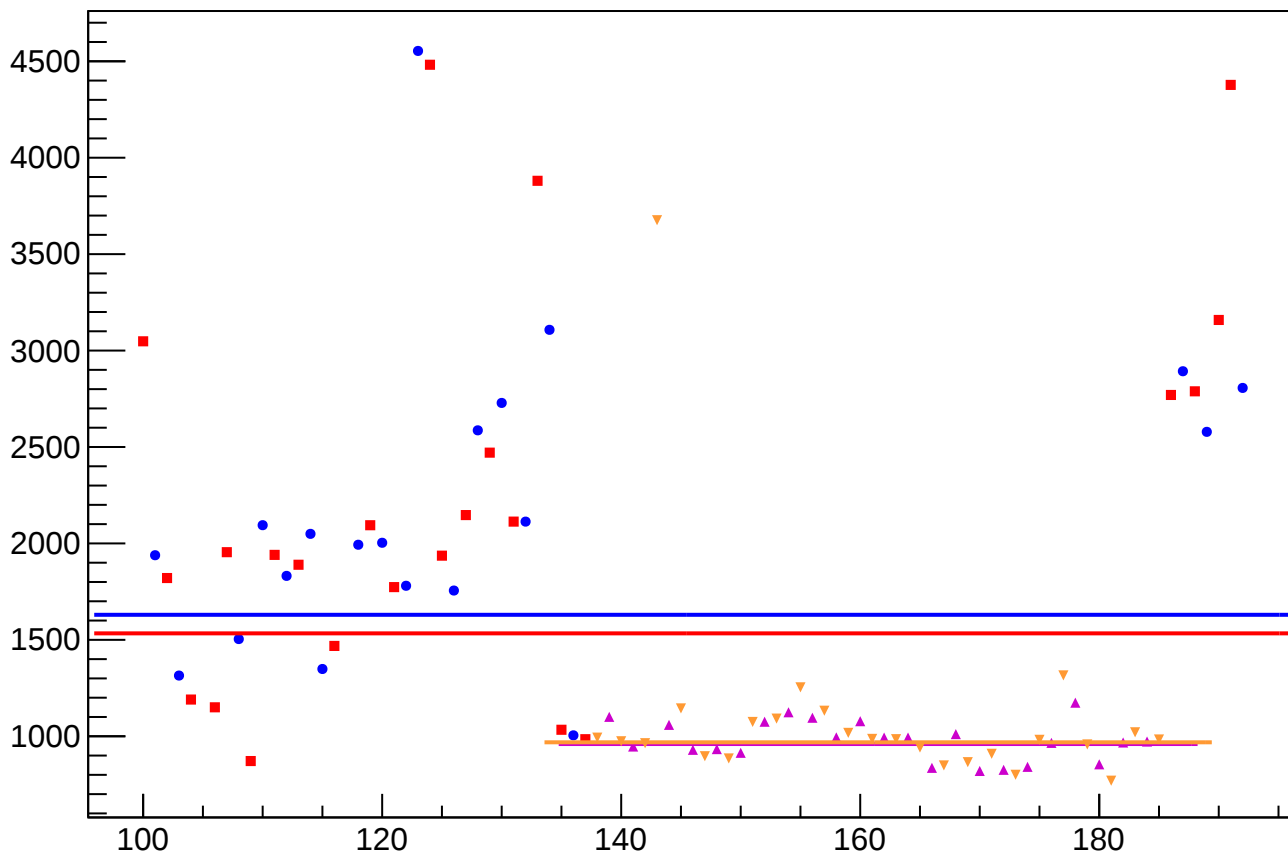
Right: 41.116+/-416.219  $\chi^2/\text{NDF}$ : 48.0/42

In: -139.953+/-216.320  $\chi^2/\text{NDF}$ : 44.8/42

Out: 614.027+/-213.661  $\chi^2/\text{NDF}$ : 82.2/47

All: 241.700+/-152.013  $\chi^2/\text{NDF}$ : 133.2/90

asym\_at2\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 1629.870 $\pm$ 0.431  $\chi^2/\text{NDF}$ : 1822462.7/19

Left Out: 968.712 $\pm$ 0.163  $\chi^2/\text{NDF}$ : 1393696.6/24

Right Out: 1533.641 $\pm$ 0.403  $\chi^2/\text{NDF}$ : 2771610.2/22

Left In: 959.805 $\pm$ 0.164  $\chi^2/\text{NDF}$ : 371210.5/22

Left: 964.276 $\pm$ 0.115  $\chi^2/\text{NDF}$ : 1766394.7/47

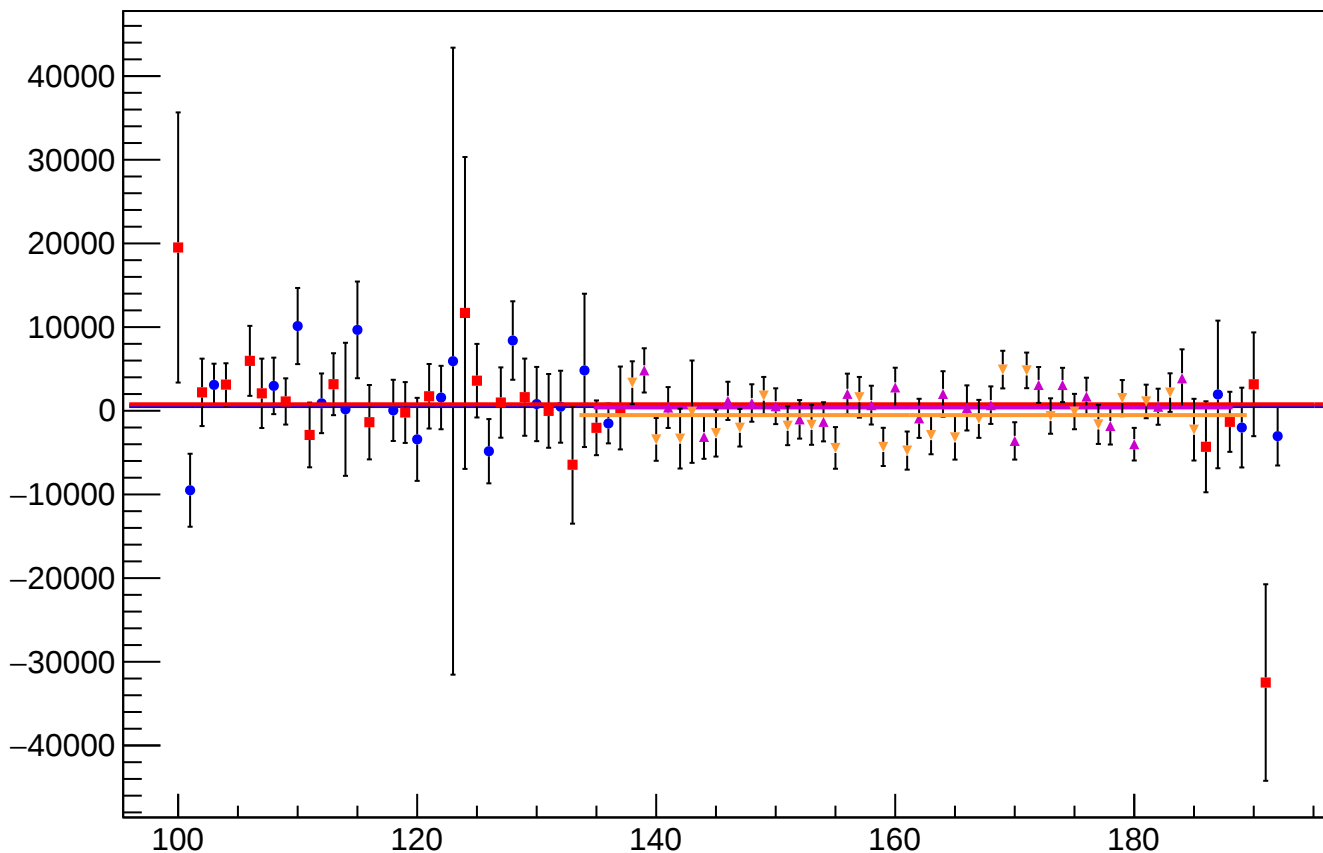
Right: 1578.558 $\pm$ 0.294  $\chi^2/\text{NDF}$ : 4620681.2/42

In: 1044.289 $\pm$ 0.153  $\chi^2/\text{NDF}$ : 4308127.3/42

Out: 1048.092 $\pm$ 0.151  $\chi^2/\text{NDF}$ : 5853895.9/47

All: 1046.214 $\pm$ 0.107  $\chi^2/\text{NDF}$ : 10162336.1/9

# asym\_at2\_dd\_mean vs Slug, Sign Corrected



Right In: 563.951+/-913.030  $\chi^2/\text{NDF}$ : 21.6/19

Left Out: -517.719+/-481.486  $\chi^2/\text{NDF}$ :34.0/24

Right Out: 775.011+/-874.441  $\chi^2/\text{NDF}$ : 17.7/22

Left In: 397.398+/-485.048  $\chi^2/\text{NDF}$ :21.8/22

Left: -63.533+/-341.714  $\chi^2/\text{NDF}$ : 57.7/47

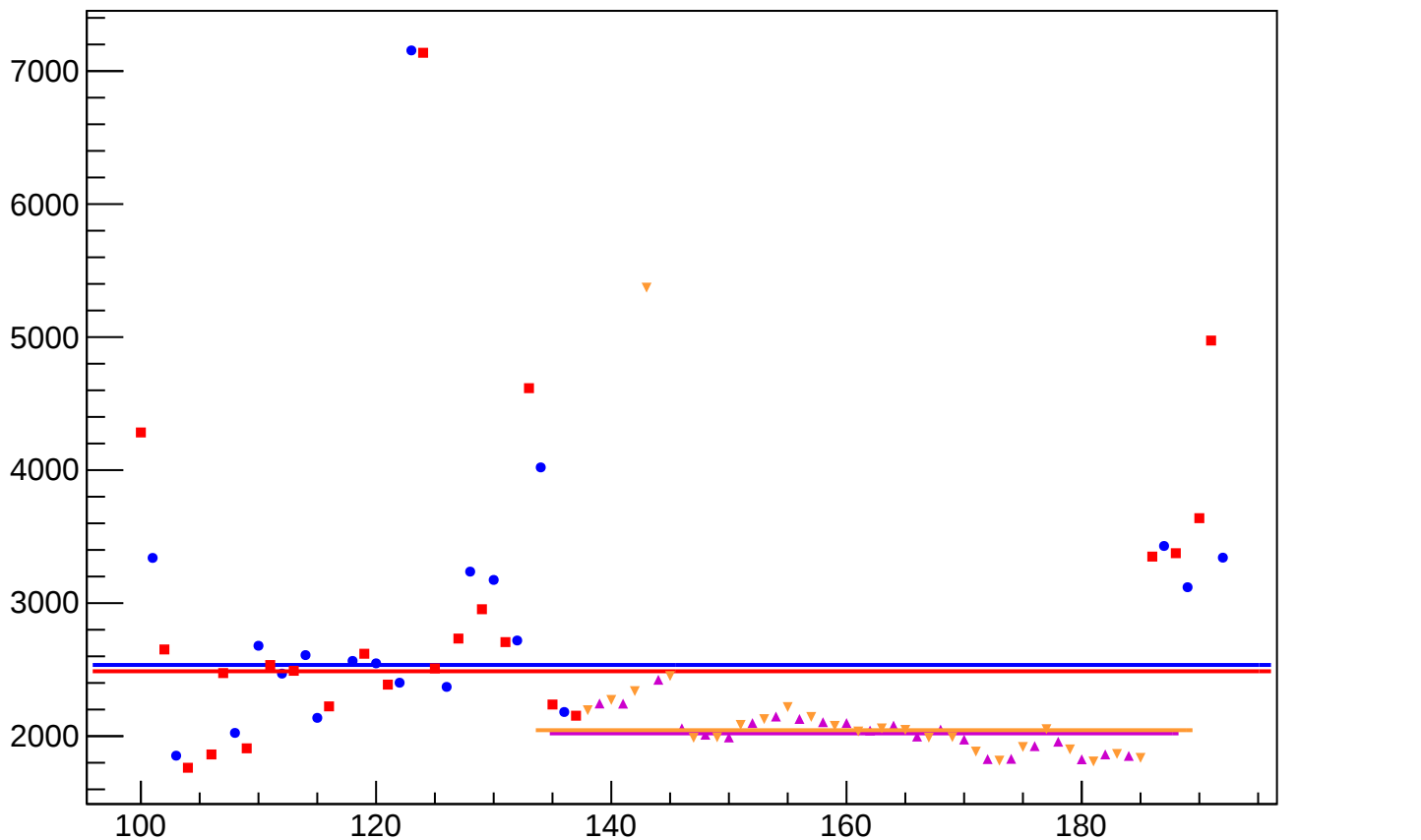
Right: 674.035+/-631.525  $\chi^2/\text{NDF}$ : 39.3/42

In: 434.058+/-428.353  $\chi^2/\text{NDF}$ :43.5/42

Out: -216.967+/-421.775  $\chi^2/\text{NDF}$ :53.4/47

All: 103.508+/-300.539  $\chi^2/\text{NDF}$ : 98.0/90

# asym\_at2\_dd\_rms vs Slug, Sign Corrected



Right In: 2535.188 $\pm$ 0.646  $\chi^2$ /NDF: 651046.7/19

Left Out: 2044.722 $\pm$ 0.340  $\chi^2$ /NDF: 788703.5/24

Right Out: 2487.655 $\pm$ 0.618  $\chi^2$ /NDF: 1025299.7/22

Left In: 2020.802 $\pm$ 0.343  $\chi^2$ /NDF: 173502.0/22

Left: 2032.850 $\pm$ 0.242  $\chi^2$ /NDF: 964655.5/47

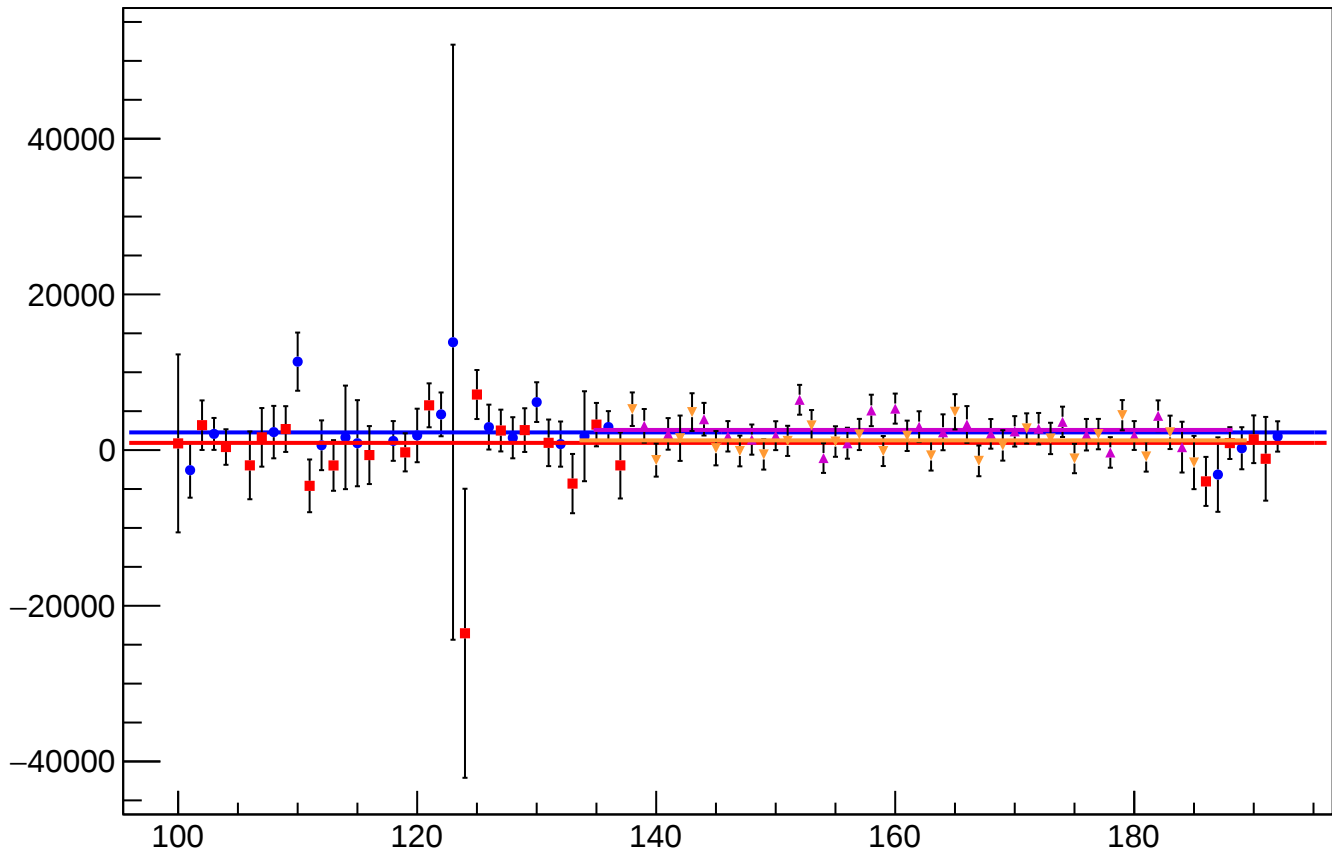
Right: 2510.396 $\pm$ 0.447  $\chi^2$ /NDF: 1679173.8/42

In: 2134.022 $\pm$ 0.303  $\chi^2$ /NDF: 1319629.6/42

Out: 2147.771 $\pm$ 0.298  $\chi^2$ /NDF: 2207771.1/47

All: 2141.003 $\pm$ 0.213  $\chi^2$ /NDF: 3528446.8/90

# reg\_asym\_atl1r2\_avg\_mean vs Slug, Sign Corrected



Right In: 2271.891+/-667.420  $\chi^2/\text{NDF}$ : 13.9/19

Left Out: 1249.917+/-412.486  $\chi^2/\text{NDF}$ : 23.0/24

Right Out: 925.970+/-659.519  $\chi^2/\text{NDF}$ : 20.2/22

Left In: 2586.937+/-421.510  $\chi^2/\text{NDF}$ : 17.5/22

Left: 1903.961+/-294.810  $\chi^2/\text{NDF}$ : 45.6/47

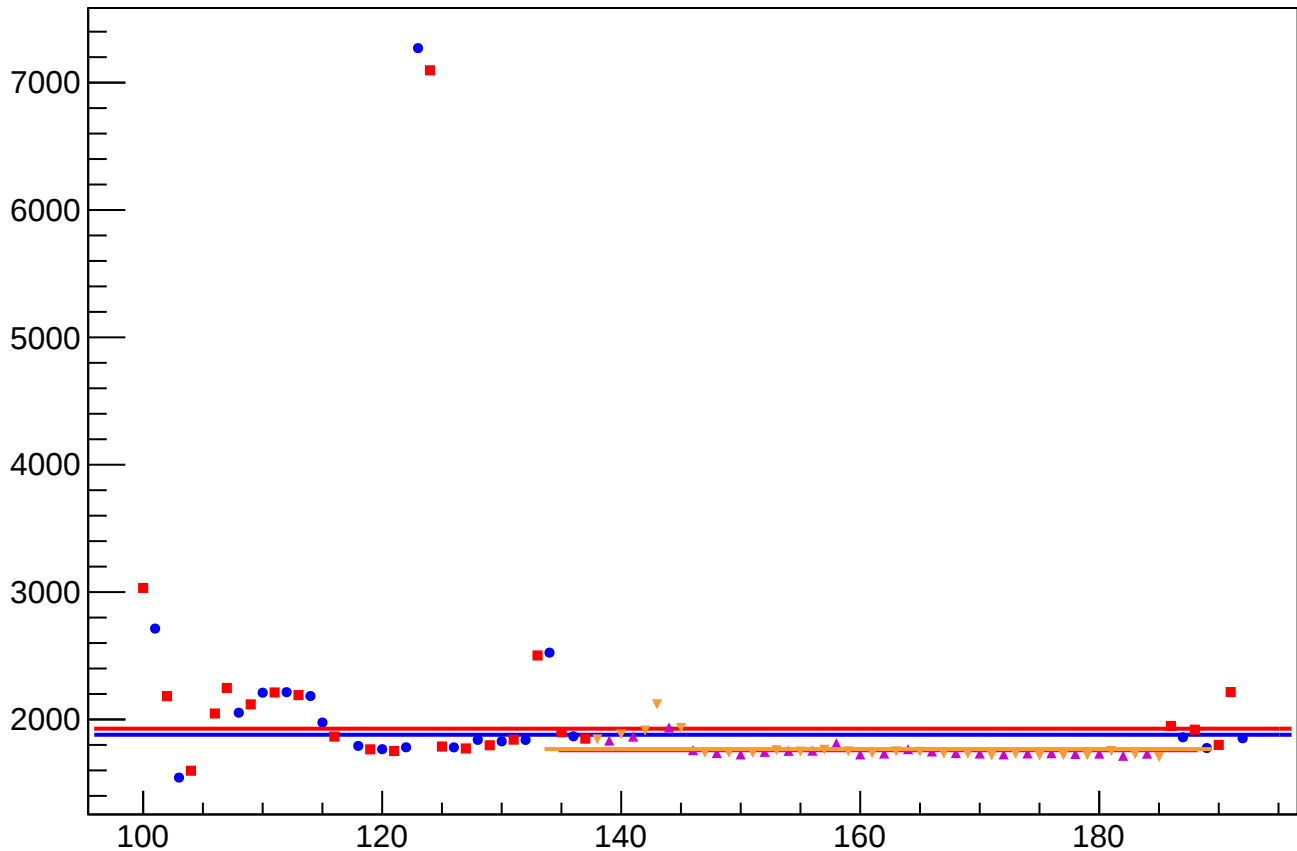
Right: 1590.917+/-469.119  $\chi^2/\text{NDF}$ : 36.1/42

In: 2497.108+/-356.387  $\chi^2/\text{NDF}$ : 31.5/42

Out: 1158.830+/-349.719  $\chi^2/\text{NDF}$ : 43.4/47

All: 1815.333+/-249.613  $\chi^2/\text{NDF}$ : 82.1/90

reg\_asym\_atl1r2\_avg\_rms vs Slug, Sign Corrected



Right In: 1879.905+/-0.472  $\chi^2/\text{NDF}$ : 291695.4/19

Left Out: 1767.517+/-0.292  $\chi^2/\text{NDF}$ : 77674.7/24

Right Out: 1927.443+/-0.466  $\chi^2/\text{NDF}$ : 369586.9/22

Left In: 1758.076+/-0.298  $\chi^2/\text{NDF}$ : 29806.0/22

Left: 1762.899+/-0.208  $\chi^2/\text{NDF}$ : 107993.2/47

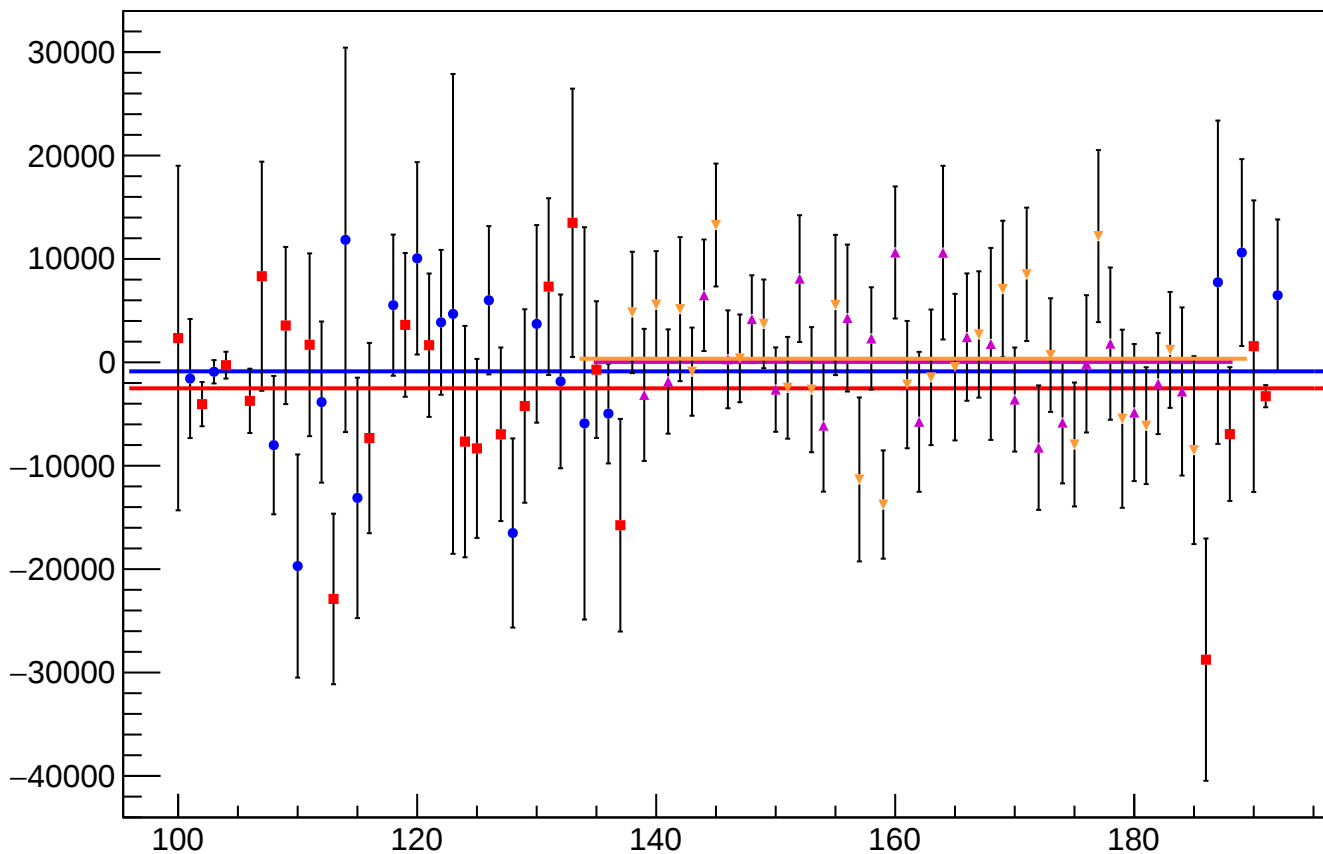
Right: 1903.987+/-0.332  $\chi^2/\text{NDF}$ : 666422.4/42

In: 1792.813+/-0.252  $\chi^2/\text{NDF}$ : 369139.8/42

Out: 1812.566+/-0.247  $\chi^2/\text{NDF}$ : 531948.7/47

All: 1802.879+/-0.176  $\chi^2/\text{NDF}$ : 904219.4/90

asym\_atl1r2\_avg\_correction\_mean vs Slug, Sign Corrected



Right In: -871.574+/-968.959  $\chi^2/\text{NDF}$ : 16.5/19

Left Out: 351.227+/-1170.051  $\chi^2/\text{NDF}$ : 27.8/24

Right Out: -2514.327+/-700.765  $\chi^2/\text{NDF}$ : 24.7/22

Left In: 40.618+/-1207.491  $\chi^2/\text{NDF}$ : 16.0/22

Left: 200.813+/-840.276  $\chi^2/\text{NDF}$ : 43.9/47

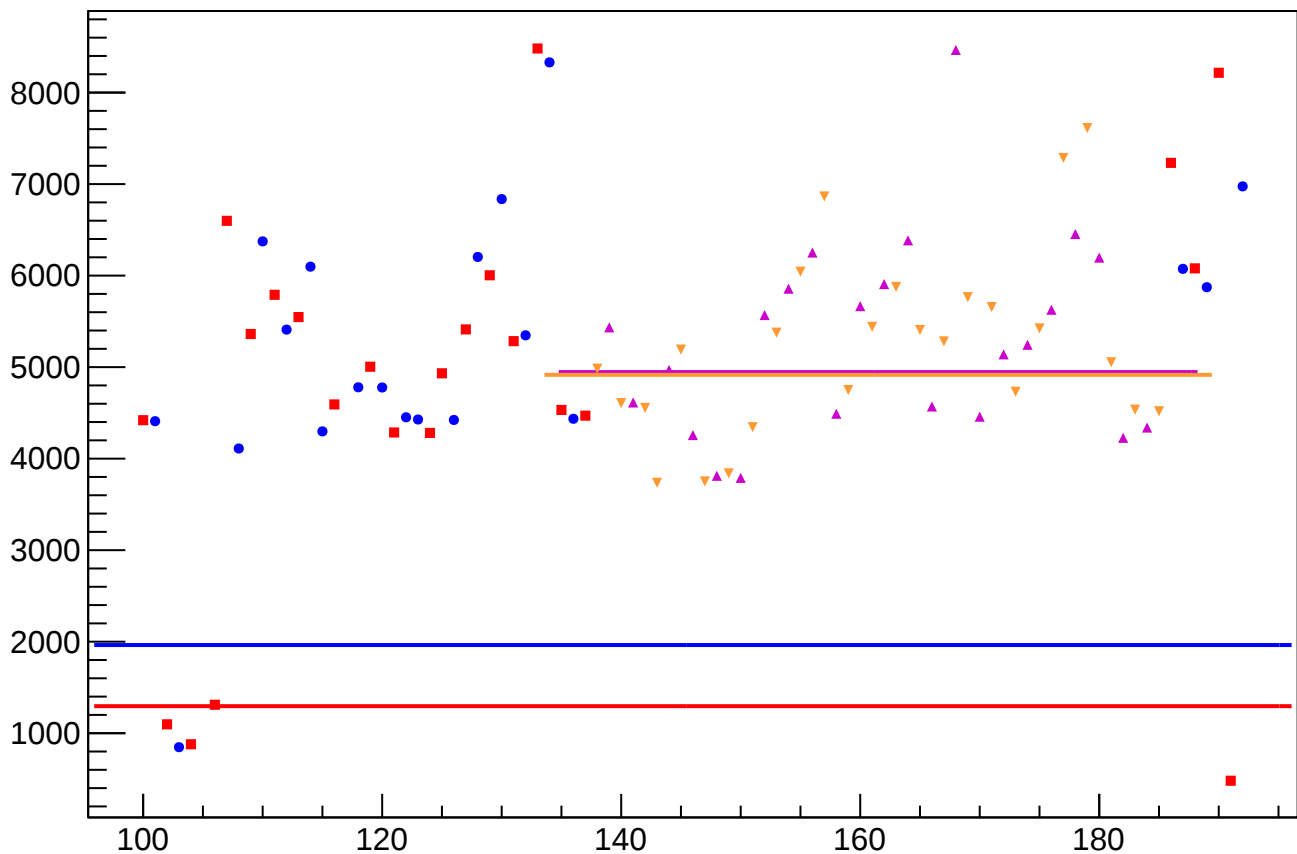
Right: -1950.177+/-567.828  $\chi^2/\text{NDF}$ : 43.1/42

In: -514.265+/-755.724  $\chi^2/\text{NDF}$ : 32.9/42

Out: -1757.810+/-601.188  $\chi^2/\text{NDF}$ : 56.9/47

All: -1275.849+/-470.477  $\chi^2/\text{NDF}$ : 91.5/90

asym\_atl1r2\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 1963.403+/-0.685

$\chi^2/\text{NDF}$ : 7934222.1/19

Left: 4930.370+/-0.594  $\chi^2/\text{NDF}$ : 2375402.9/47

Left Out: 4915.865+/-0.827

$\chi^2/\text{NDF}$ :1186479.7/24

Right: 1524.848+/-0.402  $\chi^2/\text{NDF}$ : 18580044.1/42

Right Out: 1295.468+/-0.496

$\chi^2/\text{NDF}$ : 10021833.9/22

In: 3131.626+/-0.534  $\chi^2/\text{NDF}$ :16544372.6/42

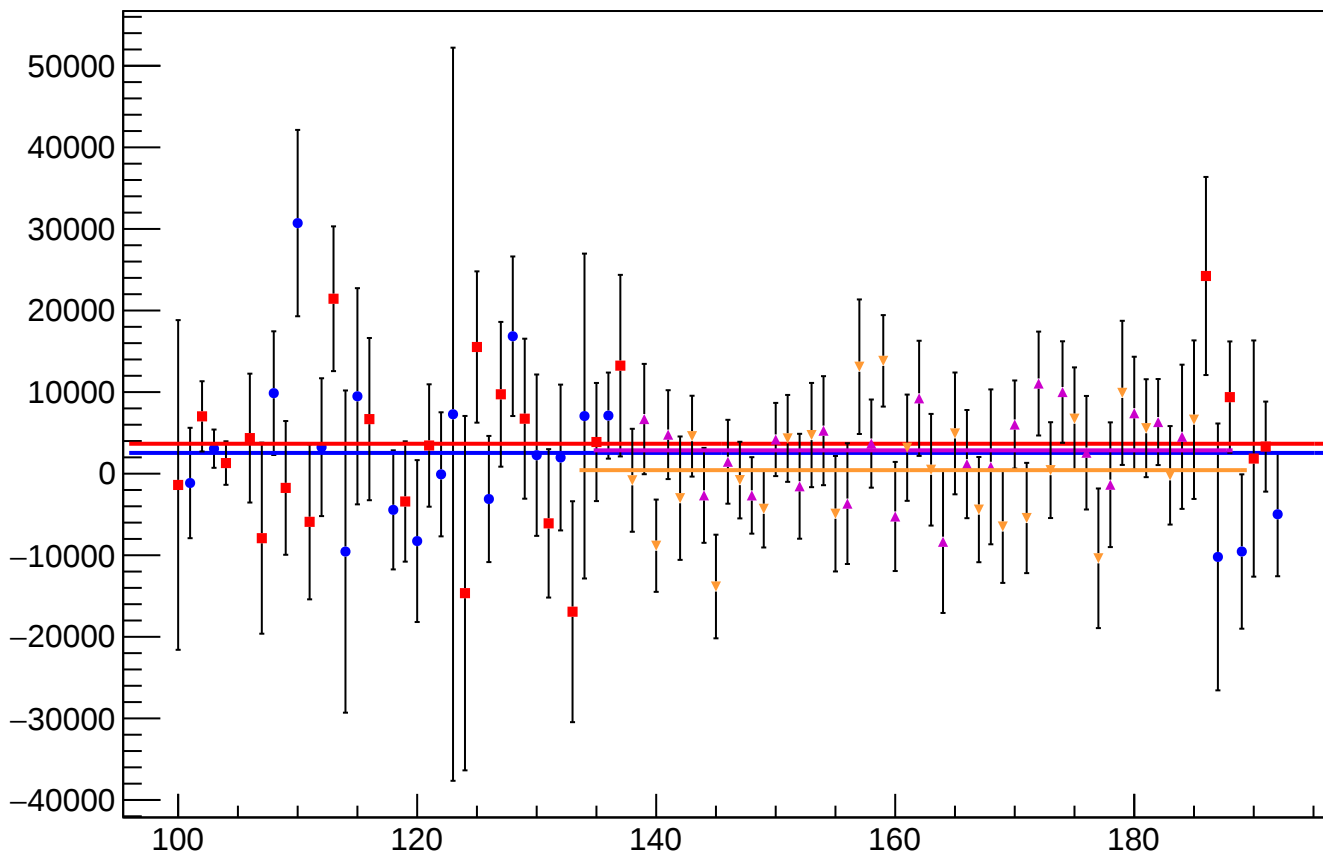
Out: 2251.266+/-0.425  $\chi^2/\text{NDF}$ :25301465.7/47

Left In: 4945.817+/-0.854

$\chi^2/\text{NDF}$ :1188288.6/22

All: 2592.468+/-0.333  $\chi^2/\text{NDF}$ : 43508028.7/9

# asym\_atl1r2\_avg\_mean vs Slug, Sign Corrected



Right In: 2544.117+/-1546.069  $\chi^2/\text{NDF}$ : 17.0/19

Left Out: 430.860+/-1258.273  $\chi^2/\text{NDF}$ : 27.1/24

Right Out: 3667.867+/-1486.487  $\chi^2/\text{NDF}$ : 19.6/22

Left In: 2860.252+/-1292.328  $\chi^2/\text{NDF}$ : 12.9/22

Left: 1613.125+/-901.533  $\chi^2/\text{NDF}$ : 41.8/47

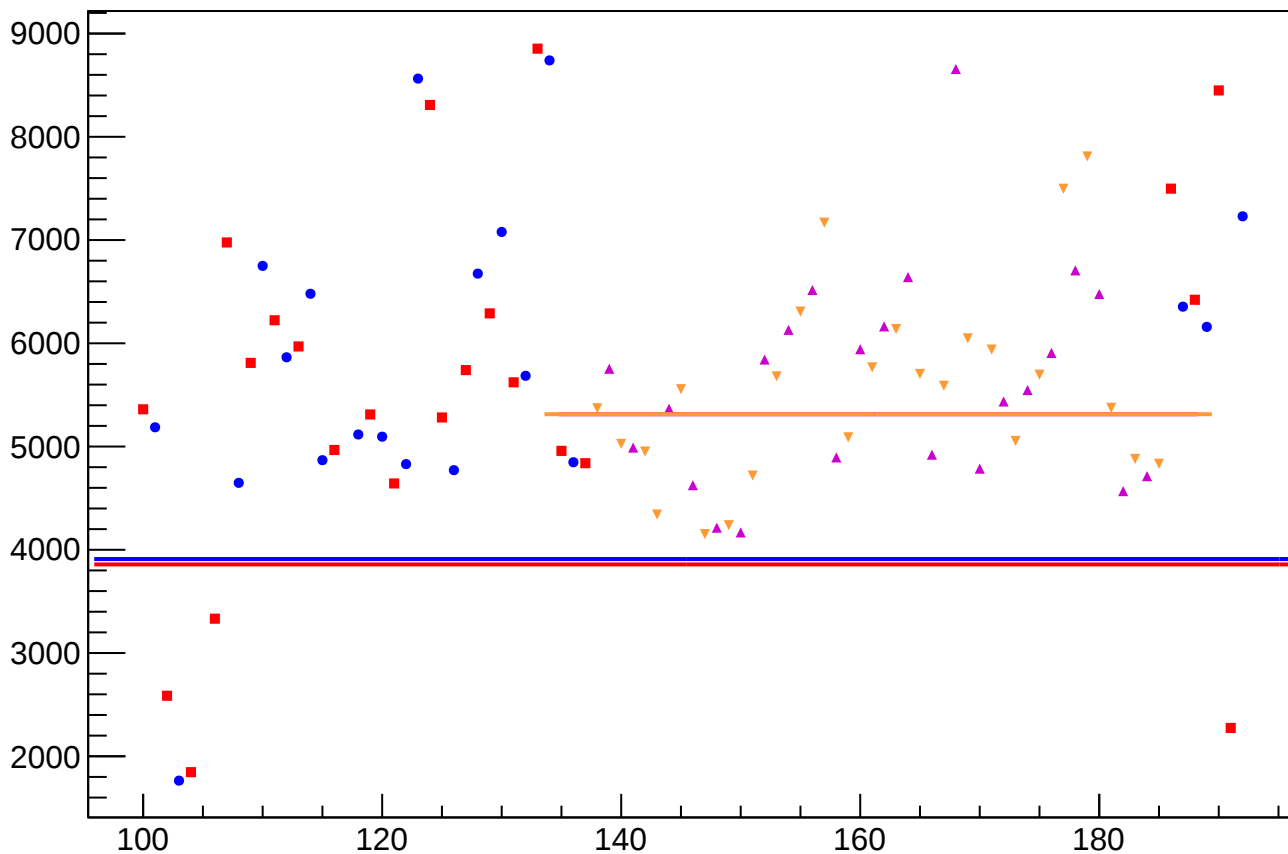
Right: 3128.062+/-1071.550  $\chi^2/\text{NDF}$ : 36.9/42

In: 2730.221+/-991.551  $\chi^2/\text{NDF}$ : 29.8/42

Out: 1782.070+/-960.397  $\chi^2/\text{NDF}$ : 49.5/47

All: 2241.016+/-689.854  $\chi^2/\text{NDF}$ : 79.8/90

# asym\_atl1r2\_avg\_rms vs Slug, Sign Corrected



Right In: 3910.306+/-1.093  $\chi^2/\text{NDF}$ : 3362992.3/19

Left Out: 5313.008+/-0.890  $\chi^2/\text{NDF}$ : 894369.8/24

Right Out: 3858.269+/-1.045  $\chi^2/\text{NDF}$ : 3532516.6/22

Left In: 5312.861+/-0.914  $\chi^2/\text{NDF}$ : 957400.7/22

Left: 5312.937+/-0.637  $\chi^2/\text{NDF}$ : 1851770.5/47

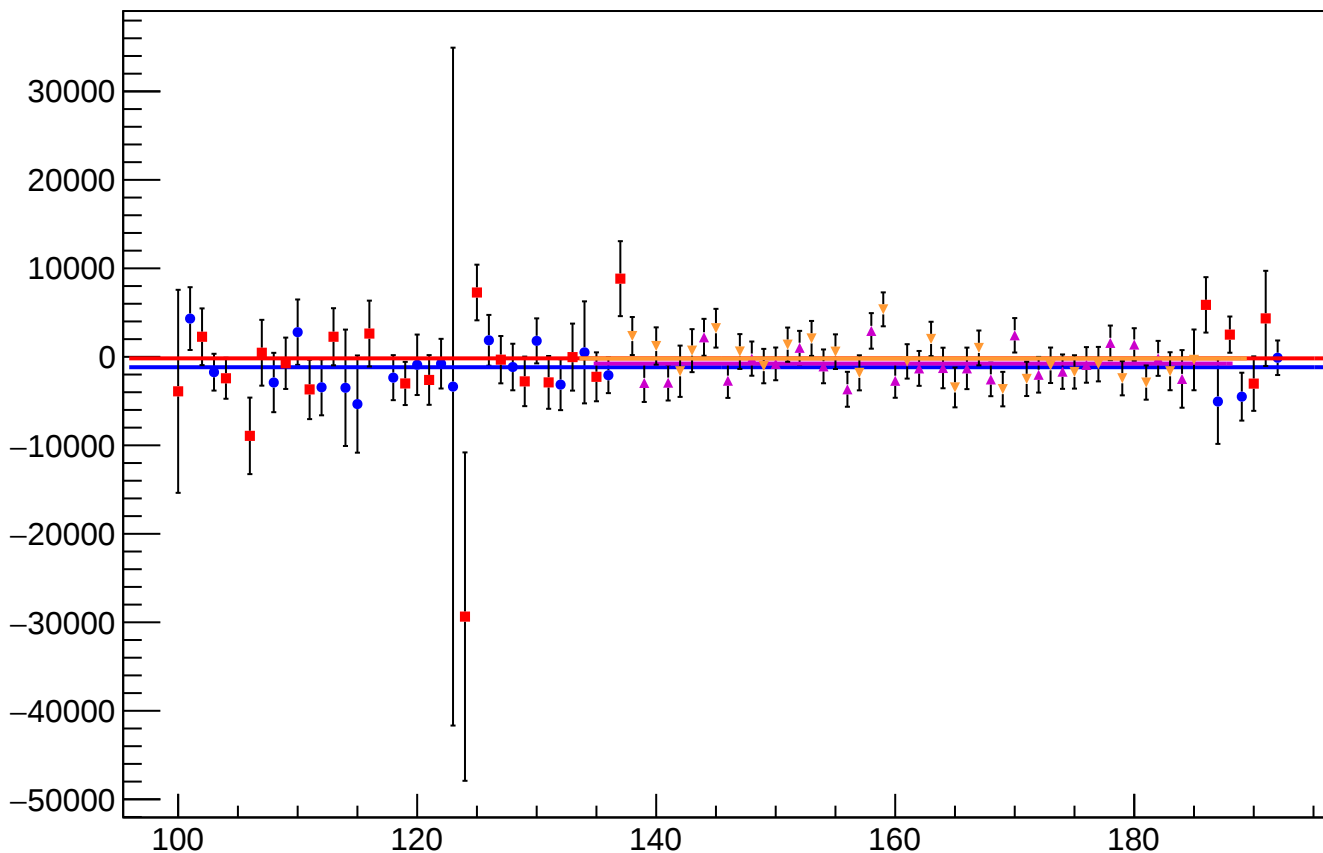
Right: 3883.117+/-0.755  $\chi^2/\text{NDF}$ : 6896692.7/42

In: 4735.972+/-0.701  $\chi^2/\text{NDF}$ : 5289332.0/42

Out: 4701.716+/-0.677  $\chi^2/\text{NDF}$ : 5550234.6/47

All: 4718.256+/-0.487  $\chi^2/\text{NDF}$ : 10840801.2/95

# reg\_asym\_atl1r2\_dd\_mean vs Slug, Sign Corrected



Right In:  $-1173.420 \pm 665.935$   $\chi^2/\text{NDF}: 11.1/19$

Left Out:  $-179.794 \pm 410.976$   $\chi^2/\text{NDF}: 29.3/24$

Right Out:  $-170.647 \pm 658.139$   $\chi^2/\text{NDF}: 32.0/22$

Left In:  $-759.753 \pm 419.905$   $\chi^2/\text{NDF}: 20.3/22$

Left:  $-463.542 \pm 293.710$   $\chi^2/\text{NDF}: 50.5/47$

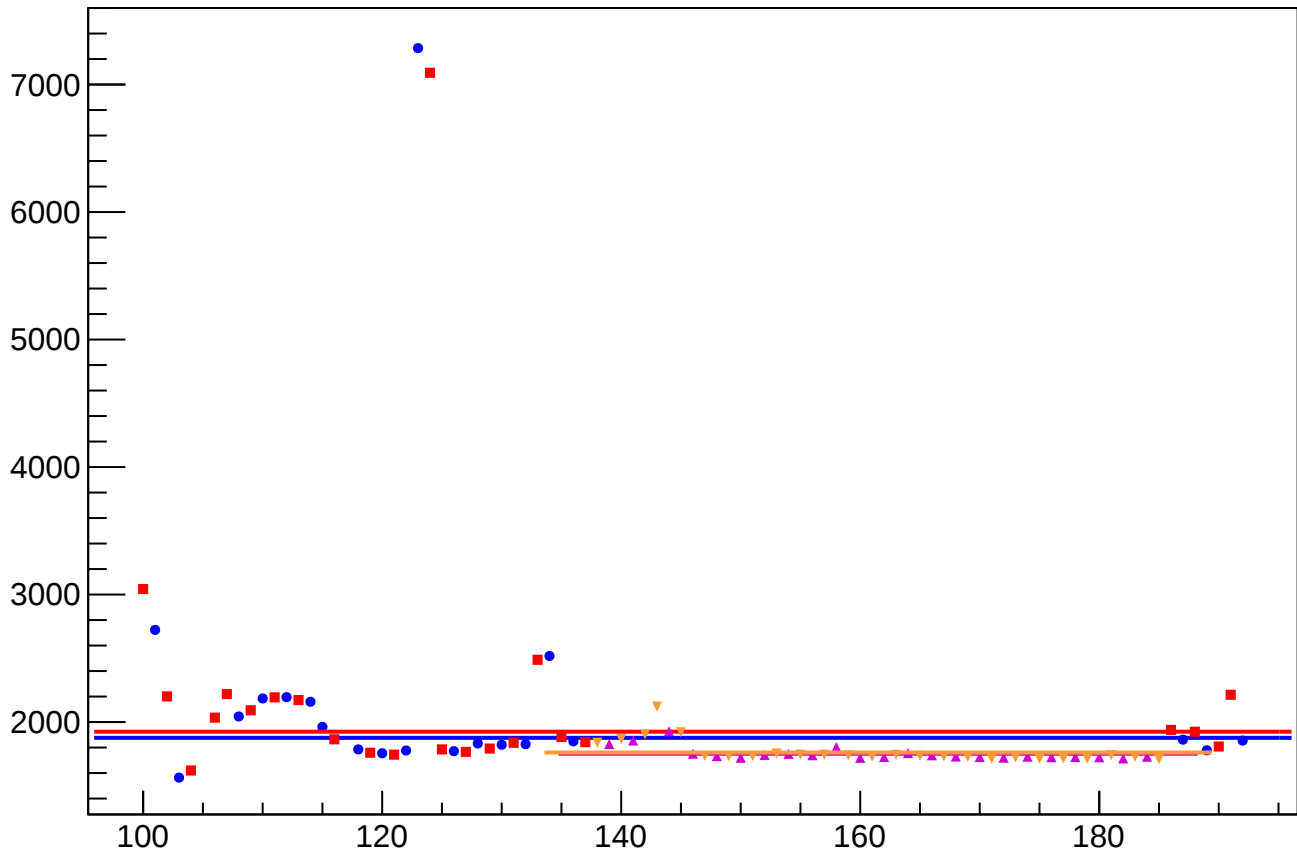
Right:  $-666.130 \pm 468.106$   $\chi^2/\text{NDF}: 44.2/42$

In:  $-877.435 \pm 355.190$   $\chi^2/\text{NDF}: 31.6/42$

Out:  $-177.228 \pm 348.593$   $\chi^2/\text{NDF}: 61.3/47$

All:  $-520.768 \pm 248.792$   $\chi^2/\text{NDF}: 94.8/90$

# reg\_asym\_atl1r2\_dd\_rms vs Slug, Sign Corrected



Right In: 1876.229+/-0.471  $\chi^2/\text{NDF}$ : 282461.0/19

Left Out: 1761.091+/-0.291  $\chi^2/\text{NDF}$ : 77468.5/24

Right Out: 1924.333+/-0.465  $\chi^2/\text{NDF}$ : 358256.6/22

Left In: 1751.418+/-0.297  $\chi^2/\text{NDF}$ : 28578.7/22

Left: 1756.358+/-0.208  $\chi^2/\text{NDF}$ : 106589.3/47

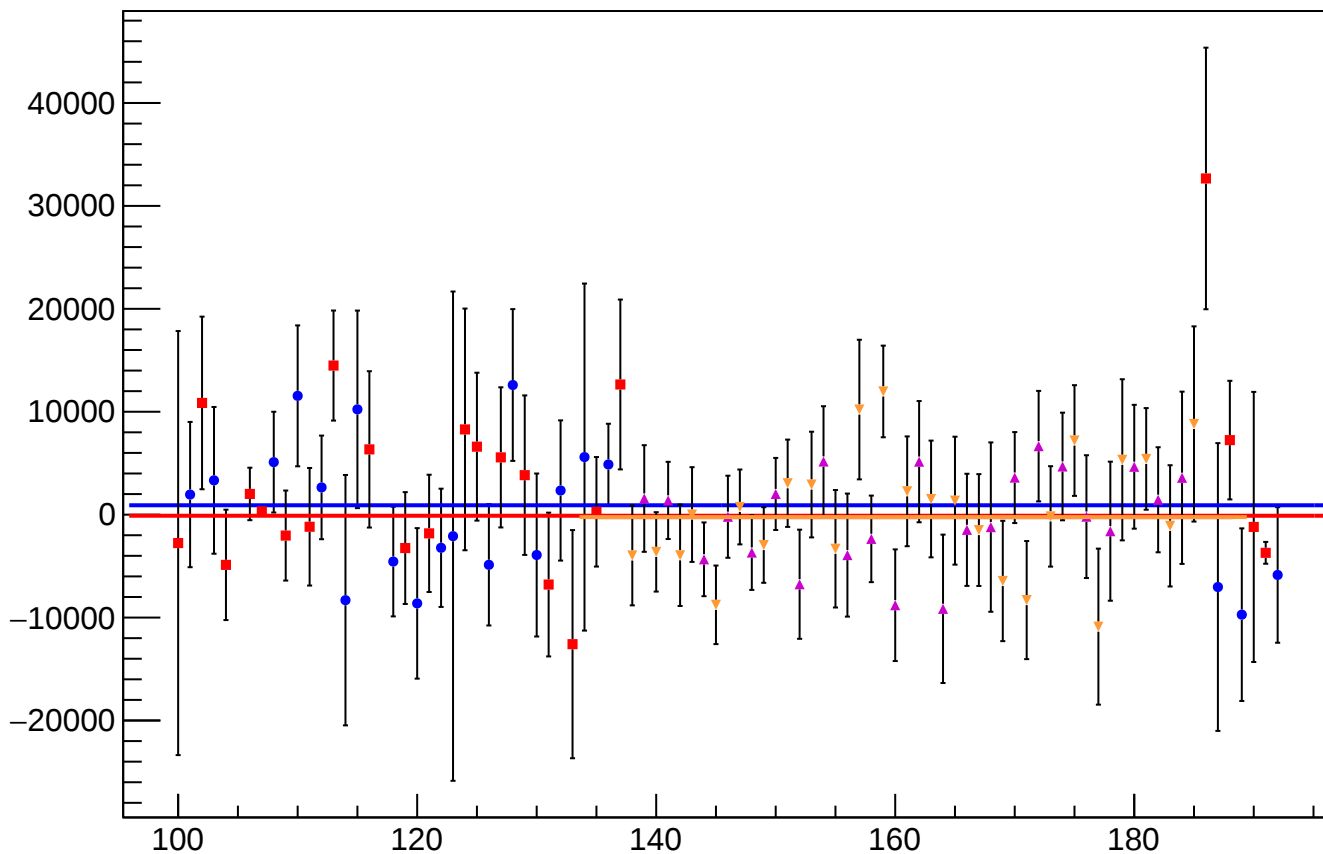
Right: 1900.594+/-0.331  $\chi^2/\text{NDF}$ : 646003.5/42

In: 1786.925+/-0.251  $\chi^2/\text{NDF}$ : 361308.2/42

Out: 1806.970+/-0.246  $\chi^2/\text{NDF}$ : 524408.7/47

All: 1797.139+/-0.176  $\chi^2/\text{NDF}$ : 888962.6/90

asym\_atl1r2\_dd\_correction\_mean vs Slug, Sign Corrected



Right In:  $912.860 \pm 1507.090$   $\chi^2/\text{NDF}: 16.2/19$

Left Out:  $-235.806 \pm 1005.144$   $\chi^2/\text{NDF}: 28.9/24$

Right Out:  $-104.952 \pm 415.615$   $\chi^2/\text{NDF}: 39.5/22$

Left In:  $-239.224 \pm 1028.883$   $\chi^2/\text{NDF}: 15.3/22$

Left:  $-237.475 \pm 718.990$   $\chi^2/\text{NDF}: 44.2/47$

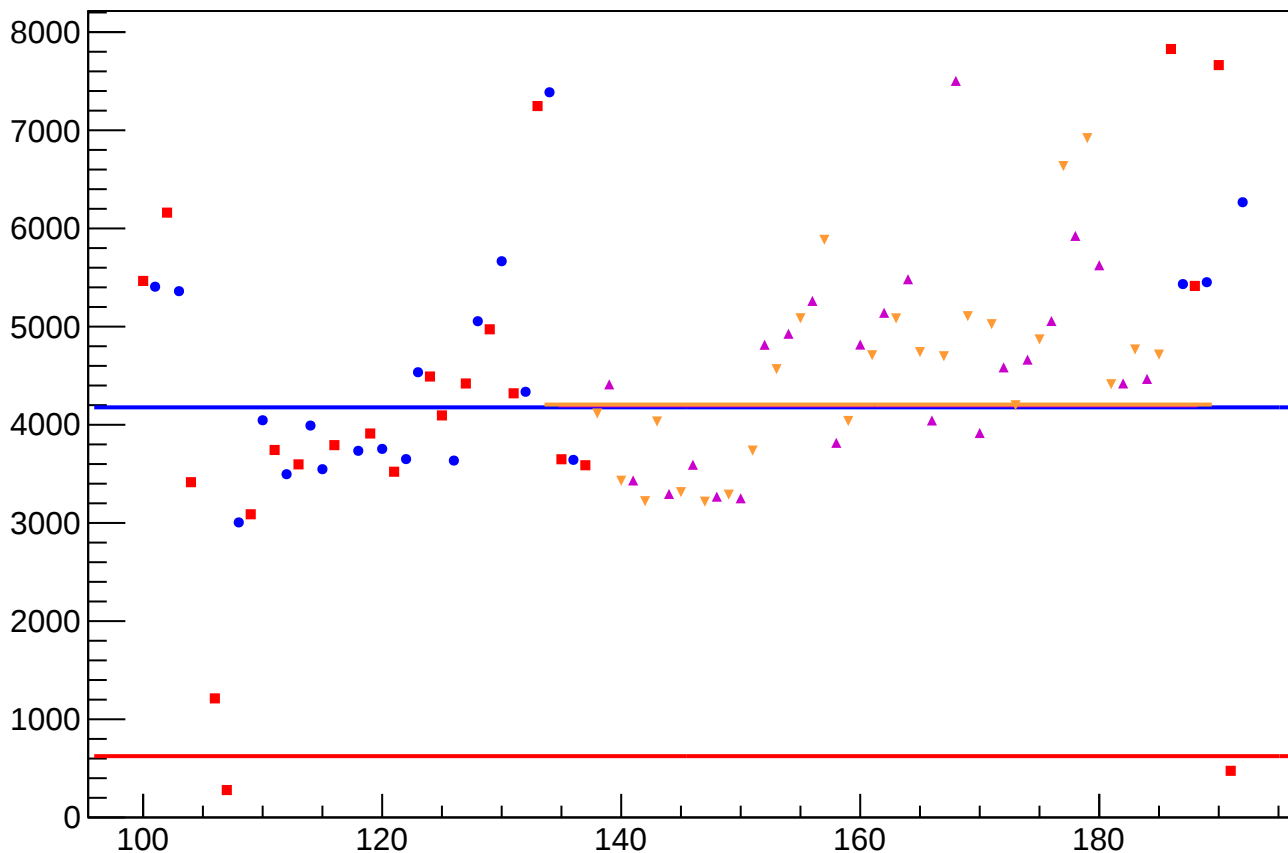
Right:  $-33.017 \pm 400.659$   $\chi^2/\text{NDF}: 56.1/42$

In:  $127.030 \pm 849.744$   $\chi^2/\text{NDF}: 31.9/42$

Out:  $-124.057 \pm 384.077$   $\chi^2/\text{NDF}: 68.4/47$

All:  $-81.463 \pm 349.987$   $\chi^2/\text{NDF}: 100.4/90$

asym\_atl1r2\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 4177.584+/-1.066

$\chi^2/\text{NDF}$ : 804288.8/19

Left: 4201.775+/-0.508

$\chi^2/\text{NDF}$ : 2913357.2/47

Left Out: 4206.076+/-0.711

$\chi^2/\text{NDF}$ : 1442269.3/24

Right: 875.635+/-0.283

$\chi^2/\text{NDF}$ : 23992027.2/42

Right Out: 624.519+/-0.294

$\chi^2/\text{NDF}$ : 12857148.6/22

In: 4191.010+/-0.601

$\chi^2/\text{NDF}$ : 2275534.4/42

Out: 1147.459+/-0.272

$\chi^2/\text{NDF}$ : 35984982.9/47

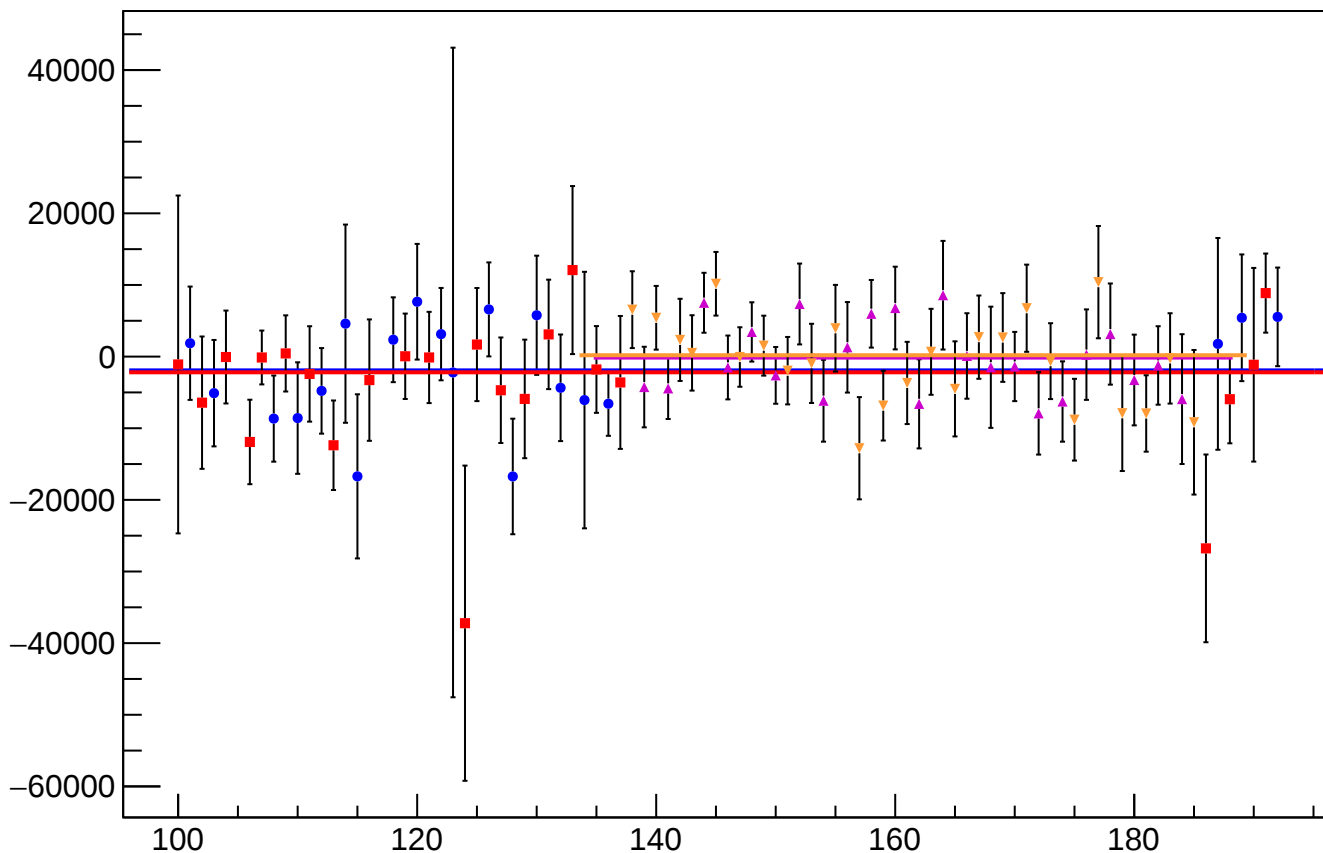
Left In: 4197.267+/-0.728

$\chi^2/\text{NDF}$ : 1471012.9/22

All: 1663.765+/-0.247

$\chi^2/\text{NDF}$ : 59565503.5/9

# asym\_atl1r2\_dd\_mean vs Slug, Sign Corrected



Right In:  $-1924.579 \pm 1690.086$   $\chi^2/\text{NDF}: 16.1/19$

Left Out:  $189.721 \pm 1106.851$   $\chi^2/\text{NDF}: 25.0/24$

Right Out:  $-2191.140 \pm 1455.424$   $\chi^2/\text{NDF}: 19.5/22$

Left In:  $-137.477 \pm 1129.656$   $\chi^2/\text{NDF}: 18.6/22$

Left:  $29.458 \pm 790.601$   $\chi^2/\text{NDF}: 43.6/47$

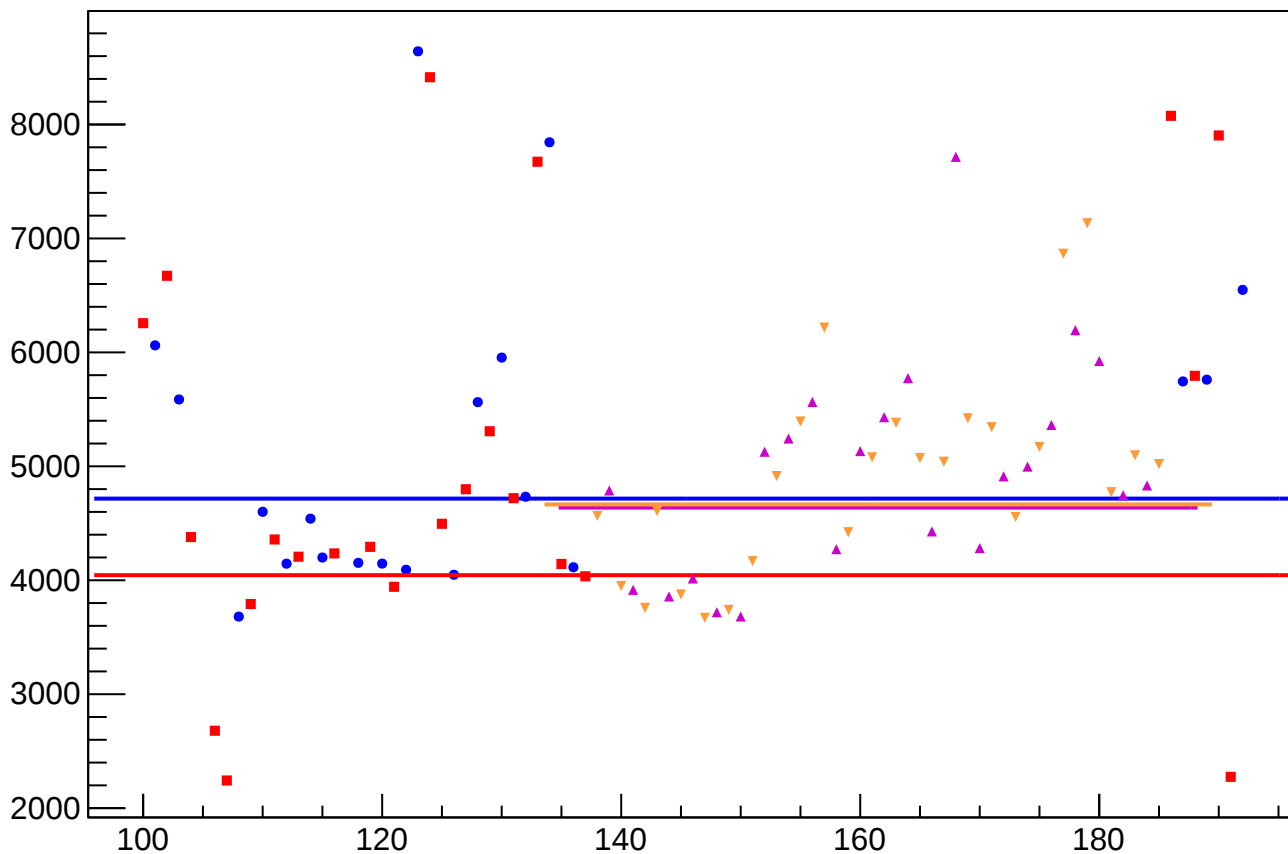
Right:  $-2077.635 \pm 1102.852$   $\chi^2/\text{NDF}: 35.7/42$

In:  $-689.335 \pm 939.178$   $\chi^2/\text{NDF}: 35.5/42$

Out:  $-682.702 \pm 881.020$   $\chi^2/\text{NDF}: 46.2/47$

All:  $-685.807 \pm 642.552$   $\chi^2/\text{NDF}: 81.7/90$

# asym\_atl1r2\_dd\_rms vs Slug, Sign Corrected



Right In: 4716.730+/-1.195  $\chi^2/\text{NDF}$ : 593040.5/19

Left Out: 4665.620+/-0.783  $\chi^2/\text{NDF}$ : 1017235.0/24

Right Out: 4044.563+/-1.024  $\chi^2/\text{NDF}$ : 1866602.7/22

Left In: 4637.777+/-0.799  $\chi^2/\text{NDF}$ : 1065217.2/22

Left: 4651.983+/-0.559  $\chi^2/\text{NDF}$ : 2083072.1/47

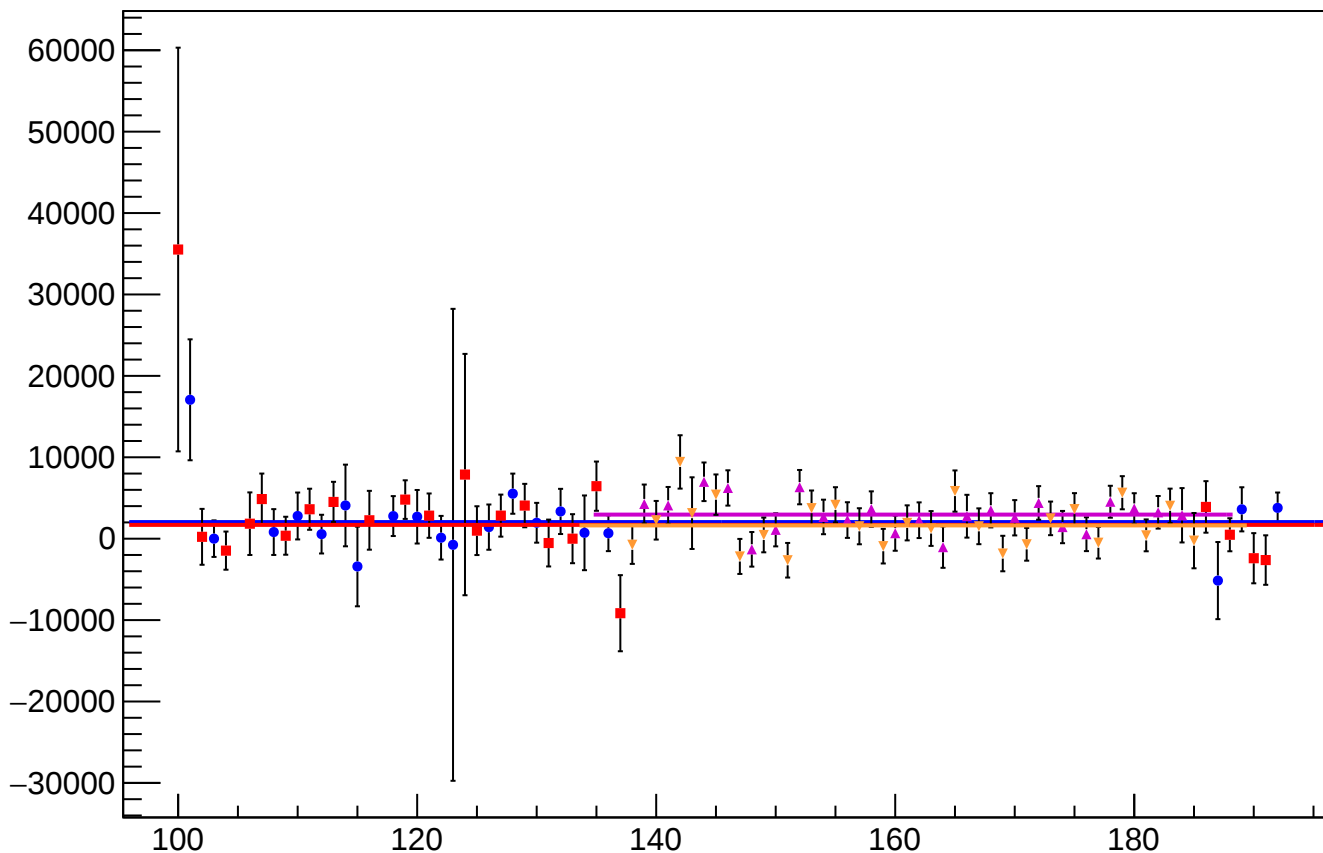
Right: 4328.980+/-0.777  $\chi^2/\text{NDF}$ : 2642134.3/42

In: 4662.158+/-0.664  $\chi^2/\text{NDF}$ : 1661274.5/42

Out: 4436.463+/-0.622  $\chi^2/\text{NDF}$ : 3116173.4/47

All: 4541.880+/-0.454  $\chi^2/\text{NDF}$ : 4839000.0/90

reg\_asym\_atr1l2\_avg\_mean vs Slug, Sign Corrected



Right In: 2038.977 $\pm$ 641.733  $\chi^2$ /NDF: 13.9/19

Left Out: 1630.035 $\pm$ 447.063  $\chi^2$ /NDF:35.4/24

Right Out: 1696.105 $\pm$ 610.723  $\chi^2$ /NDF: 23.6/22

Left In: 2958.620 $\pm$ 453.688  $\chi^2$ /NDF:20.4/22

Left: 2284.557 $\pm$ 318.438  $\chi^2$ /NDF: 60.2/47

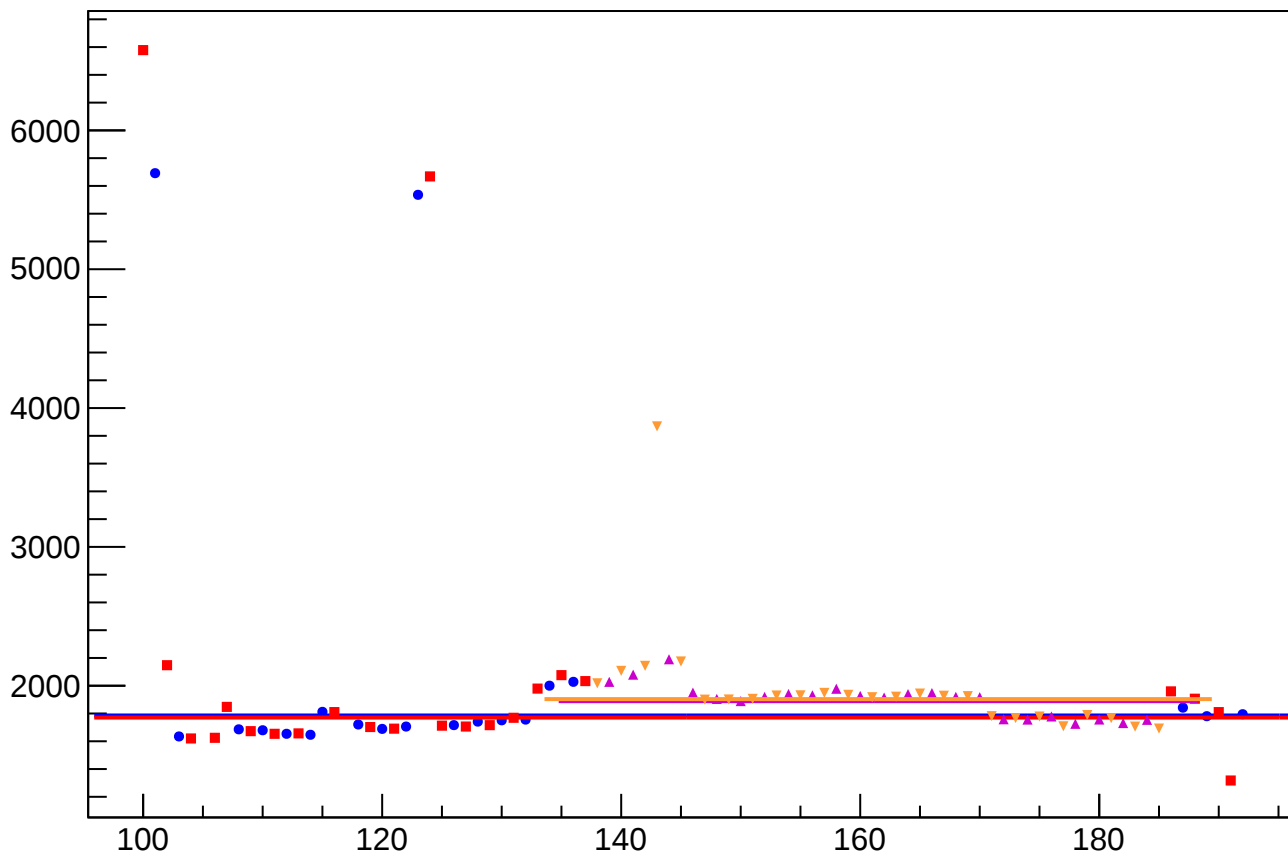
Right: 1859.057 $\pm$ 442.403  $\chi^2$ /NDF: 37.6/42

In: 2652.150 $\pm$ 370.458  $\chi^2$ /NDF:35.6/42

Out: 1653.086 $\pm$ 360.739  $\chi^2$ /NDF:59.1/47

All: 2139.342 $\pm$ 258.449  $\chi^2$ /NDF: 98.4/90

reg\_asym\_atr1l2\_avg\_rms vs Slug, Sign Corrected



Right In: 1785.726+/-0.454  $\chi^2/\text{NDF}$ : 644985.0/19

Left Out: 1903.618+/-0.316  $\chi^2/\text{NDF}$ : 541575.7/24

Right Out: 1770.825+/-0.429  $\chi^2/\text{NDF}$ : 366927.8/22

Left In: 1888.927+/-0.321  $\chi^2/\text{NDF}$ : 126417.2/22

Left: 1896.381+/-0.225  $\chi^2/\text{NDF}$ : 669056.9/47

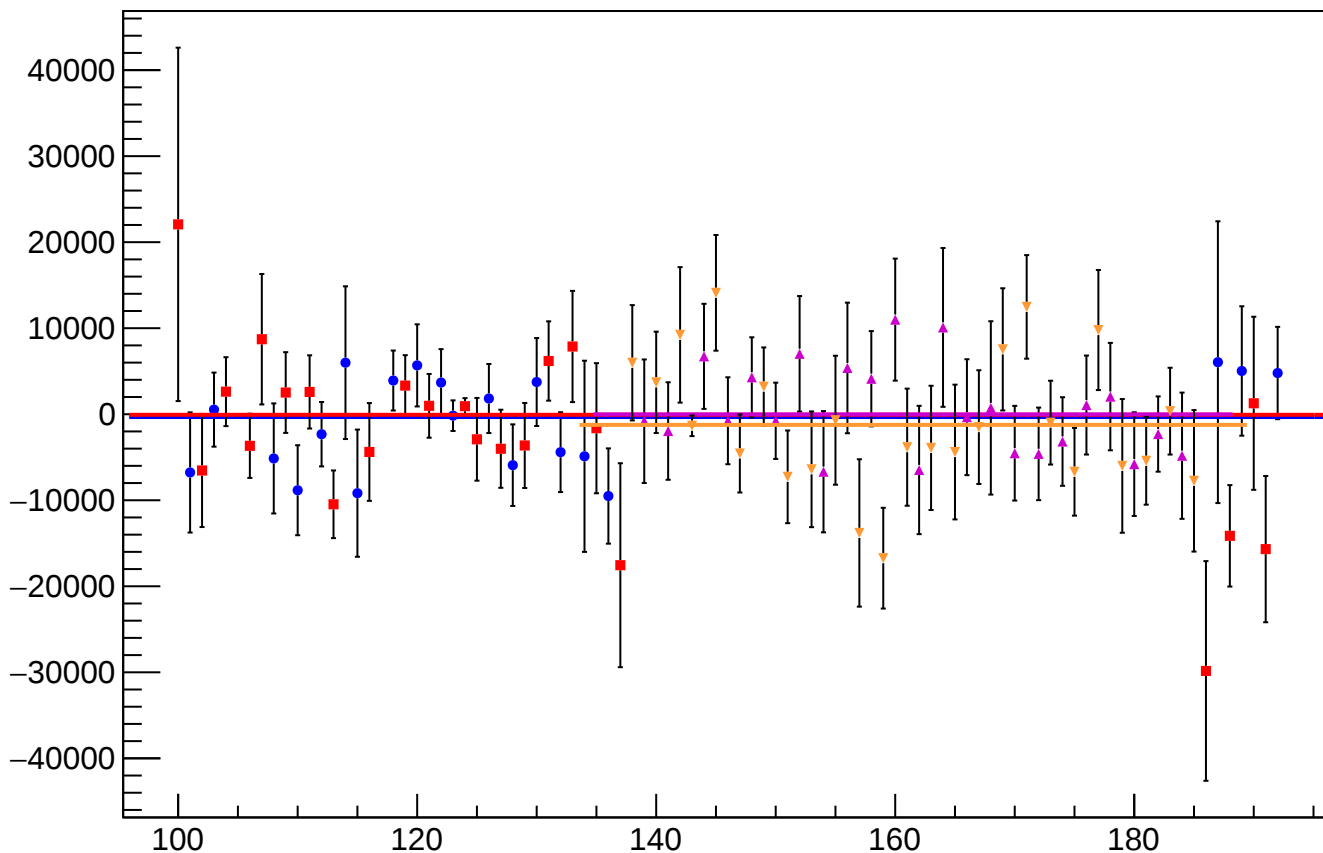
Right: 1777.866+/-0.312  $\chi^2/\text{NDF}$ : 1012481.6/42

In: 1854.535+/-0.262  $\chi^2/\text{NDF}$ : 805889.2/42

Out: 1856.956+/-0.255  $\chi^2/\text{NDF}$ : 970509.6/47

All: 1855.780+/-0.183  $\chi^2/\text{NDF}$ : 1776442.8/90

asym\_atr1l2\_avg\_correction\_mean vs Slug, Sign Corrected



Right In:  $-325.758 \pm 983.182$   $\chi^2/\text{NDF}: 18.0/19$

Left Out:  $-1239.833 \pm 865.201$   $\chi^2/\text{NDF}: 33.9/24$

Right Out:  $-68.535 \pm 714.920$   $\chi^2/\text{NDF}: 37.0/22$

Left In:  $-15.863 \pm 1243.317$   $\chi^2/\text{NDF}: 13.2/22$

Left:  $-840.501 \pm 710.172$   $\chi^2/\text{NDF}: 47.8/47$

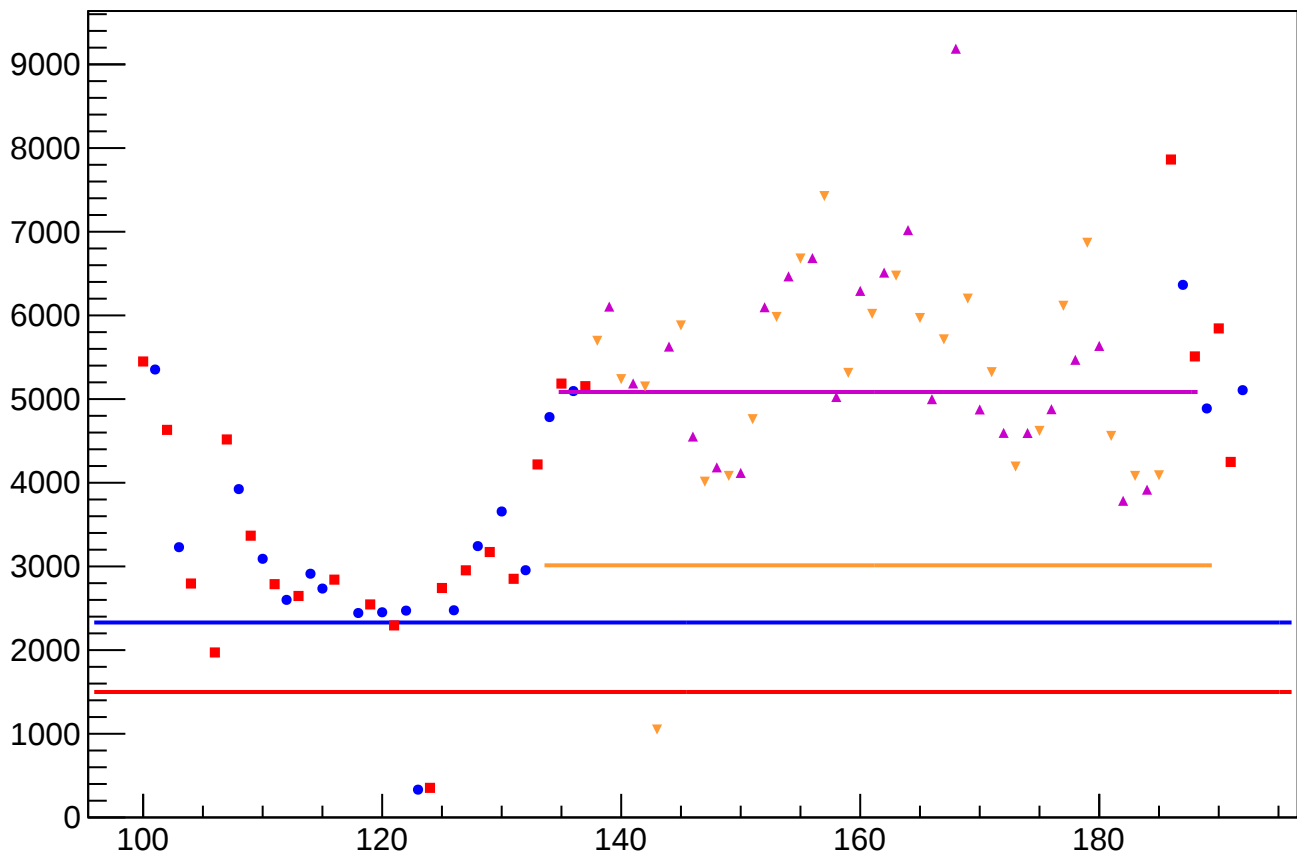
Right:  $-157.500 \pm 578.215$   $\chi^2/\text{NDF}: 55.1/42$

In:  $-206.530 \pm 771.195$   $\chi^2/\text{NDF}: 31.3/42$

Out:  $-543.783 \pm 551.117$   $\chi^2/\text{NDF}: 72.0/47$

All:  $-429.774 \pm 448.390$   $\chi^2/\text{NDF}: 103.4/90$

asym\_atr1l2\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 2330.028 $\pm$ 0.695  $\chi^2$ /NDF: 4916305.2/19

Left Out: 3013.268 $\pm$ 0.612  $\chi^2$ /NDF: 12270753.9/24

Right Out: 1499.392 $\pm$ 0.506  $\chi^2$ /NDF: 8901622.7/22

Left In: 5084.645 $\pm$ 0.879  $\chi^2$ /NDF: 1303587.7/22

Left: 3689.075 $\pm$ 0.502  $\chi^2$ /NDF: 17314385.8/47

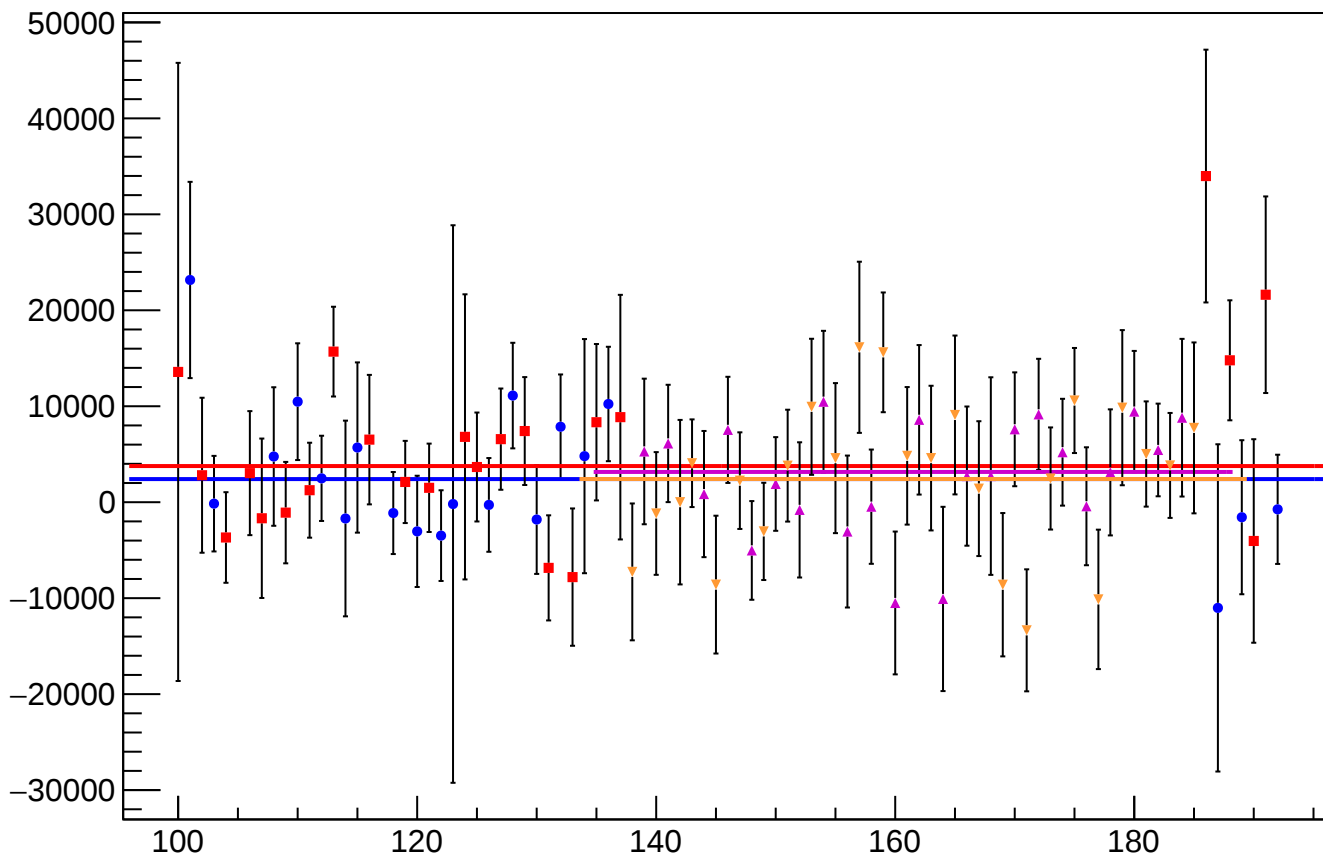
Right: 1786.684 $\pm$ 0.409  $\chi^2$ /NDF: 14751717.2/42

In: 3389.832 $\pm$ 0.545  $\chi^2$ /NDF: 12260060.9/42

Out: 2113.640 $\pm$ 0.390  $\chi^2$ /NDF: 24811101.7/47

All: 2545.059 $\pm$ 0.317  $\chi^2$ /NDF: 40696579.9/95

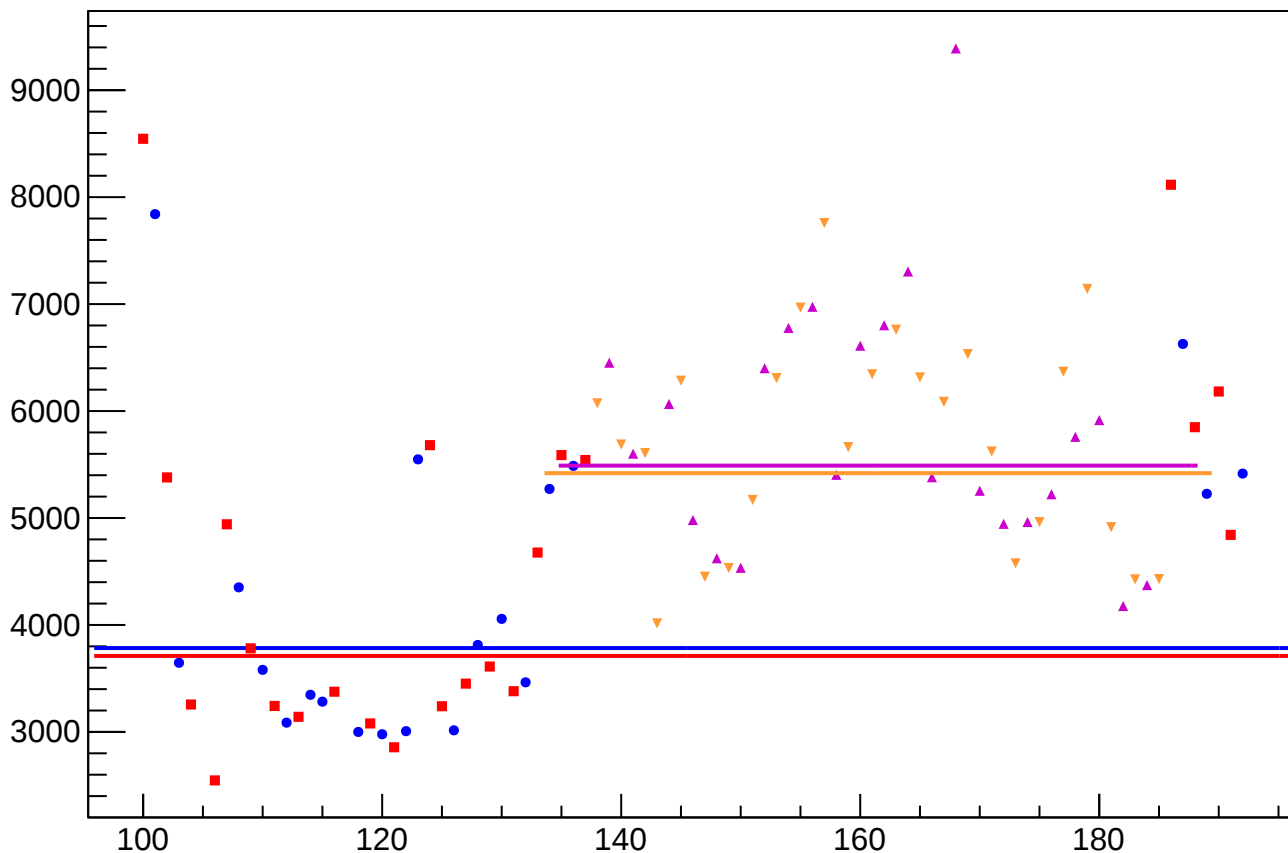
# asym\_atr1l2\_avg\_mean vs Slug, Sign Corrected



Right In: 2409.810+/-1381.386  $\chi^2/\text{NDF}$ : 17.0/19  
 Left Out: 2417.210+/-1286.482  $\chi^2/\text{NDF}$ : 29.9/24  
 Right Out: 3767.430+/-1321.479  $\chi^2/\text{NDF}$ : 30.7/22  
 Left In: 3153.449+/-1337.378  $\chi^2/\text{NDF}$ : 15.5/22

Left: 2771.054+/-927.151  $\chi^2/\text{NDF}$ : 45.5/47  
 Right: 3118.696+/-954.903  $\chi^2/\text{NDF}$ : 48.2/42  
 In: 2793.663+/-960.851  $\chi^2/\text{NDF}$ : 32.6/42  
 Out: 3074.204+/-921.805  $\chi^2/\text{NDF}$ : 61.2/47  
 All: 2939.750+/-665.190  $\chi^2/\text{NDF}$ : 93.8/90

# asym\_atr1l2\_avg\_rms vs Slug, Sign Corrected



Right In: 3784.095 $\pm$ 0.977  $\chi^2$ /NDF: 1096518.5/19

Left Out: 5419.305 $\pm$ 0.910  $\chi^2$ /NDF: 1109972.1/24

Right Out: 3710.569 $\pm$ 0.922  $\chi^2$ /NDF: 1299677.8/22

Left In: 5489.885 $\pm$ 0.946  $\chi^2$ /NDF: 1064353.3/22

Left: 5453.227 $\pm$ 0.656  $\chi^2$ /NDF: 2177218.7/47

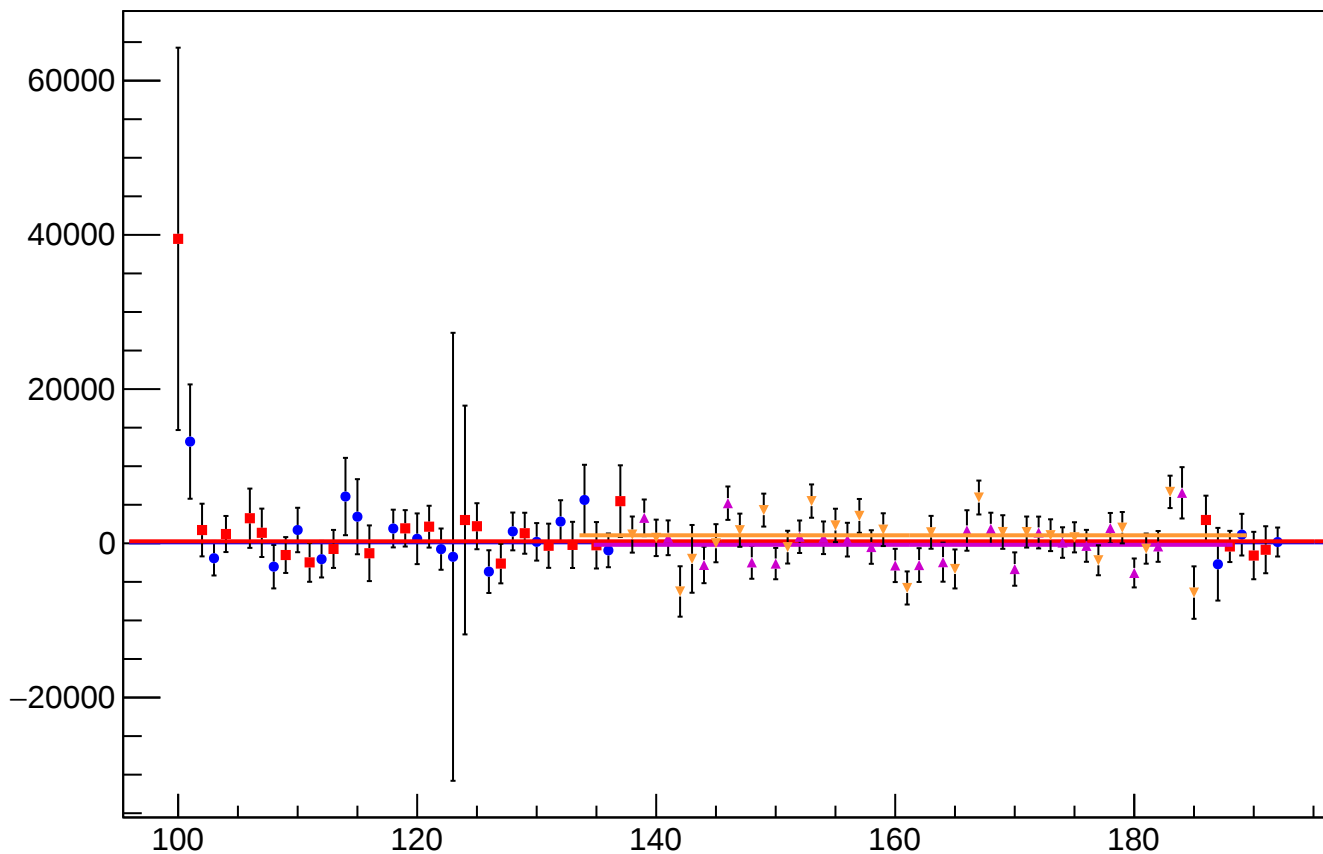
Right: 3745.232 $\pm$ 0.671  $\chi^2$ /NDF: 2399191.2/42

In: 4664.589 $\pm$ 0.679  $\chi^2$ /NDF: 3735061.2/42

Out: 4576.877 $\pm$ 0.648  $\chi^2$ /NDF: 4149173.7/47

All: 4618.639 $\pm$ 0.469  $\chi^2$ /NDF: 7892966.1/90

# reg\_asym\_atr1l2\_dd\_mean vs Slug, Sign Corrected



Right In: 126.336 $\pm$ 639.837  $\chi^2$ /NDF: 14.2/19

Left Out: 1041.262 $\pm$ 446.249  $\chi^2$ /NDF:48.6/24

Right Out: 260.774 $\pm$ 608.819  $\chi^2$ /NDF: 11.3/22

Left In: -191.966 $\pm$ 453.055  $\chi^2$ /NDF:30.0/22

Left: 433.980 $\pm$ 317.925  $\chi^2$ /NDF: 82.3/47

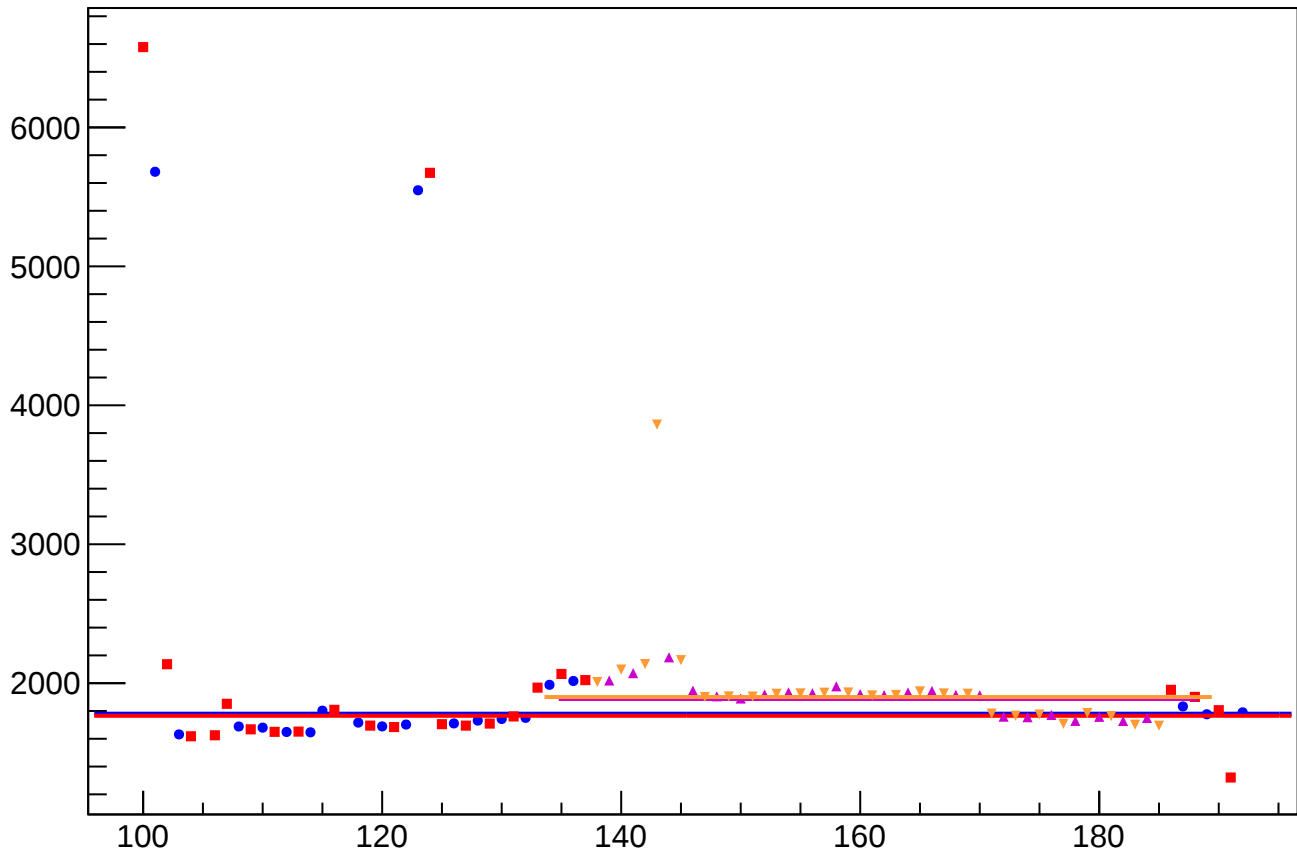
Right: 196.893 $\pm$ 441.058  $\chi^2$ /NDF: 25.5/42

In: -85.671 $\pm$ 369.748  $\chi^2$ /NDF:44.4/42

Out: 768.490 $\pm$ 359.919  $\chi^2$ /NDF:60.9/47

All: 352.914 $\pm$ 257.906  $\chi^2$ /NDF: 108.1/90

# reg\_asym\_atr1l2\_dd\_rms vs Slug, Sign Corrected



Right In: 1780.510+/-0.452  $\chi^2/\text{NDF}$ : 643308.7/19

Left Out: 1900.295+/-0.316  $\chi^2/\text{NDF}$ : 537892.5/24

Right Out: 1765.526+/-0.428  $\chi^2/\text{NDF}$ : 364292.7/22

Left In: 1886.378+/-0.320  $\chi^2/\text{NDF}$ : 123520.6/22

Left: 1893.441+/-0.225  $\chi^2/\text{NDF}$ : 662371.1/47

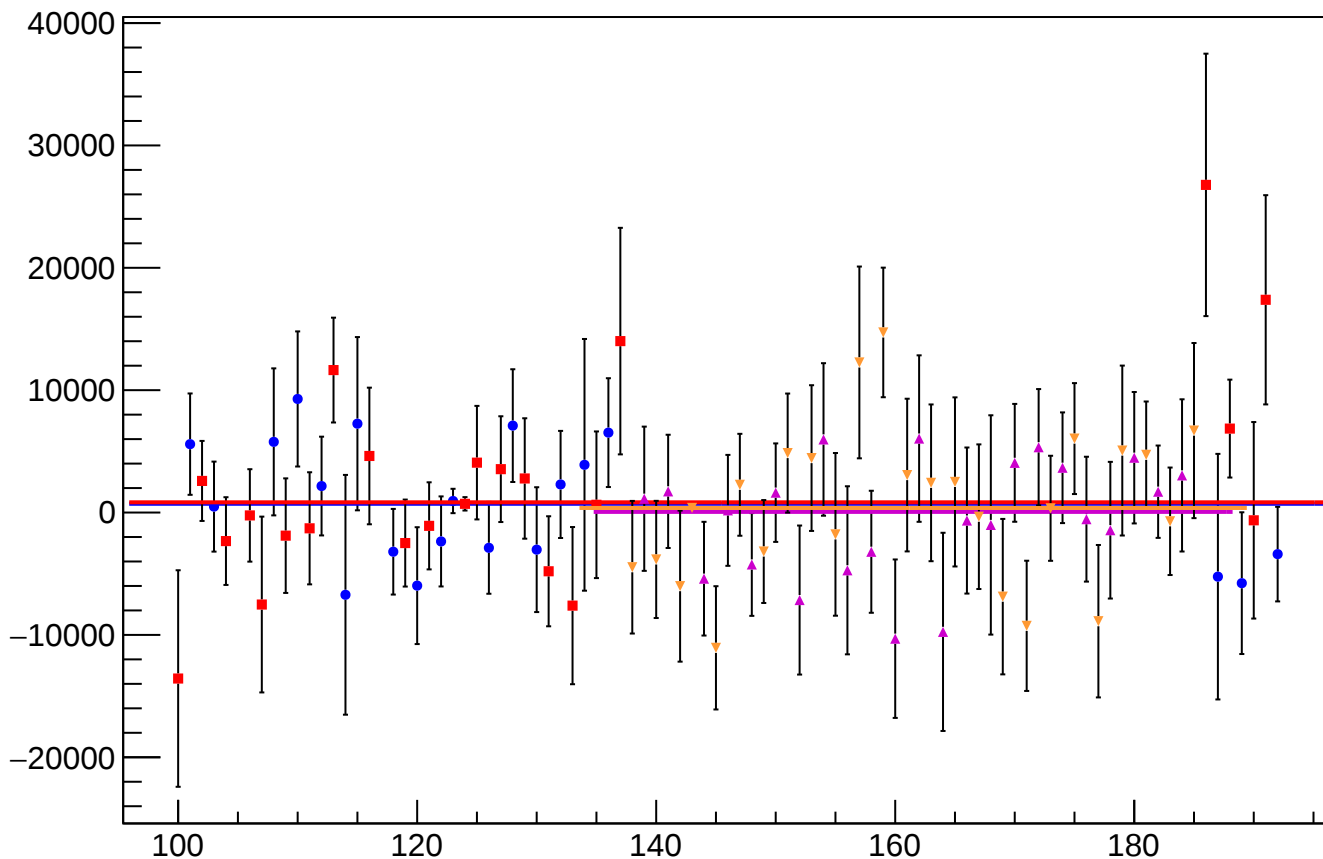
Right: 1772.605+/-0.311  $\chi^2/\text{NDF}$ : 1008180.0/42

In: 1851.024+/-0.261  $\chi^2/\text{NDF}$ : 803298.8/42

Out: 1852.860+/-0.254  $\chi^2/\text{NDF}$ : 966388.9/47

All: 1851.968+/-0.182  $\chi^2/\text{NDF}$ : 1769713.1/90

asym\_atr1l2\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: 716.242 $\pm$ 731.503  $\chi^2$ /NDF: 18.1/19

Left Out: 373.277 $\pm$ 382.071  $\chi^2$ /NDF:30.8/24

Right Out: 835.796 $\pm$ 482.535  $\chi^2$ /NDF: 32.0/22

Left In: 53.099 $\pm$ 1089.888  $\chi^2$ /NDF:14.5/22

Left: 338.236 $\pm$ 360.558  $\chi^2$ /NDF: 45.4/47

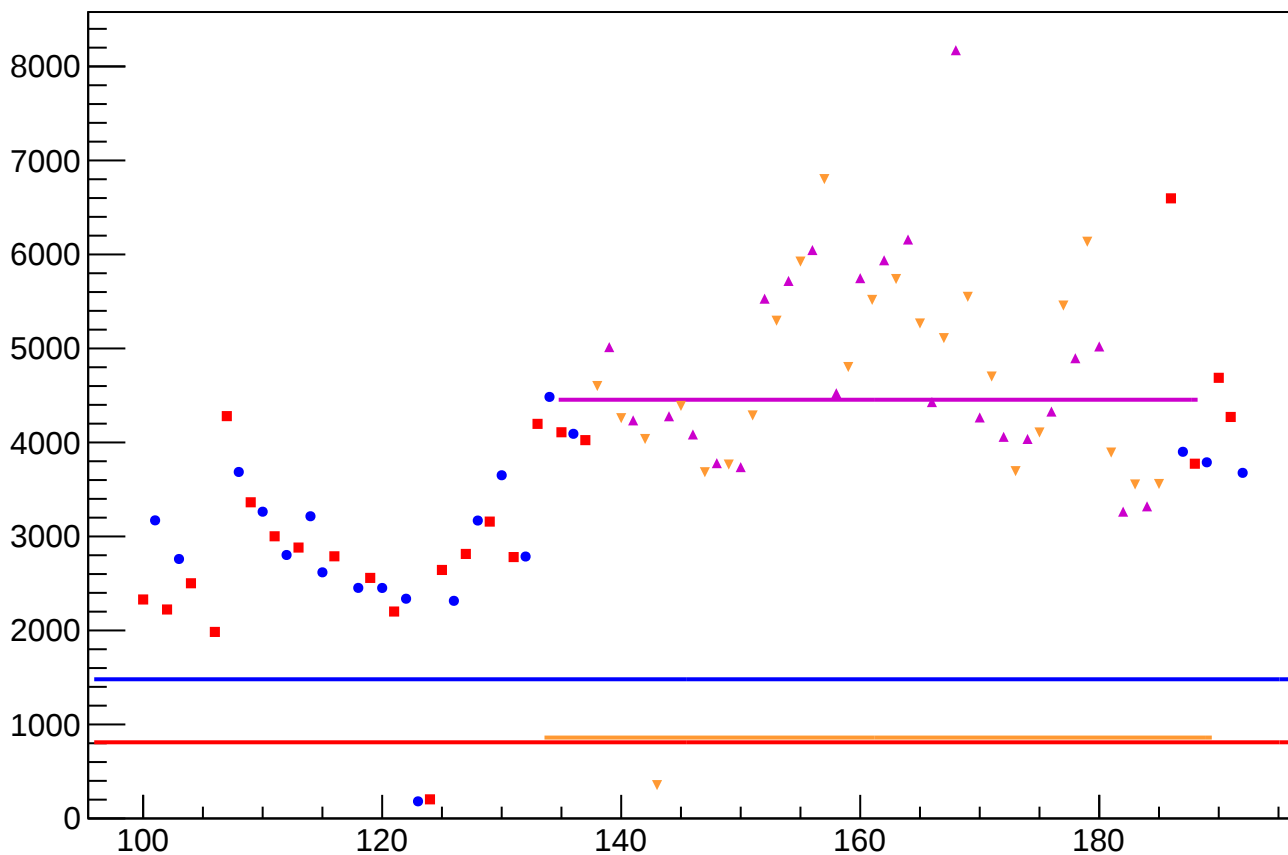
Right: 799.547 $\pm$ 402.793  $\chi^2$ /NDF: 50.1/42

In: 510.290 $\pm$ 607.381  $\chi^2$ /NDF:32.9/42

Out: 551.510 $\pm$ 299.542  $\chi^2$ /NDF:63.4/47

All: 543.446 $\pm$ 268.648  $\chi^2$ /NDF: 96.3/90

asym\_atr1l2\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 1480.599 $\pm$ 0.517  $\chi^2$ /NDF: 7980533.6/19

Left Out: 860.545 $\pm$ 0.270  $\chi^2$ /NDF: 26340106.5/24

Right Out: 810.204 $\pm$ 0.341  $\chi^2$ /NDF: 12010899.8/22

Left In: 4454.402 $\pm$ 0.771  $\chi^2$ /NDF: 1349758.1/22

Left: 1253.867 $\pm$ 0.255  $\chi^2$ /NDF: 47056303.3/47

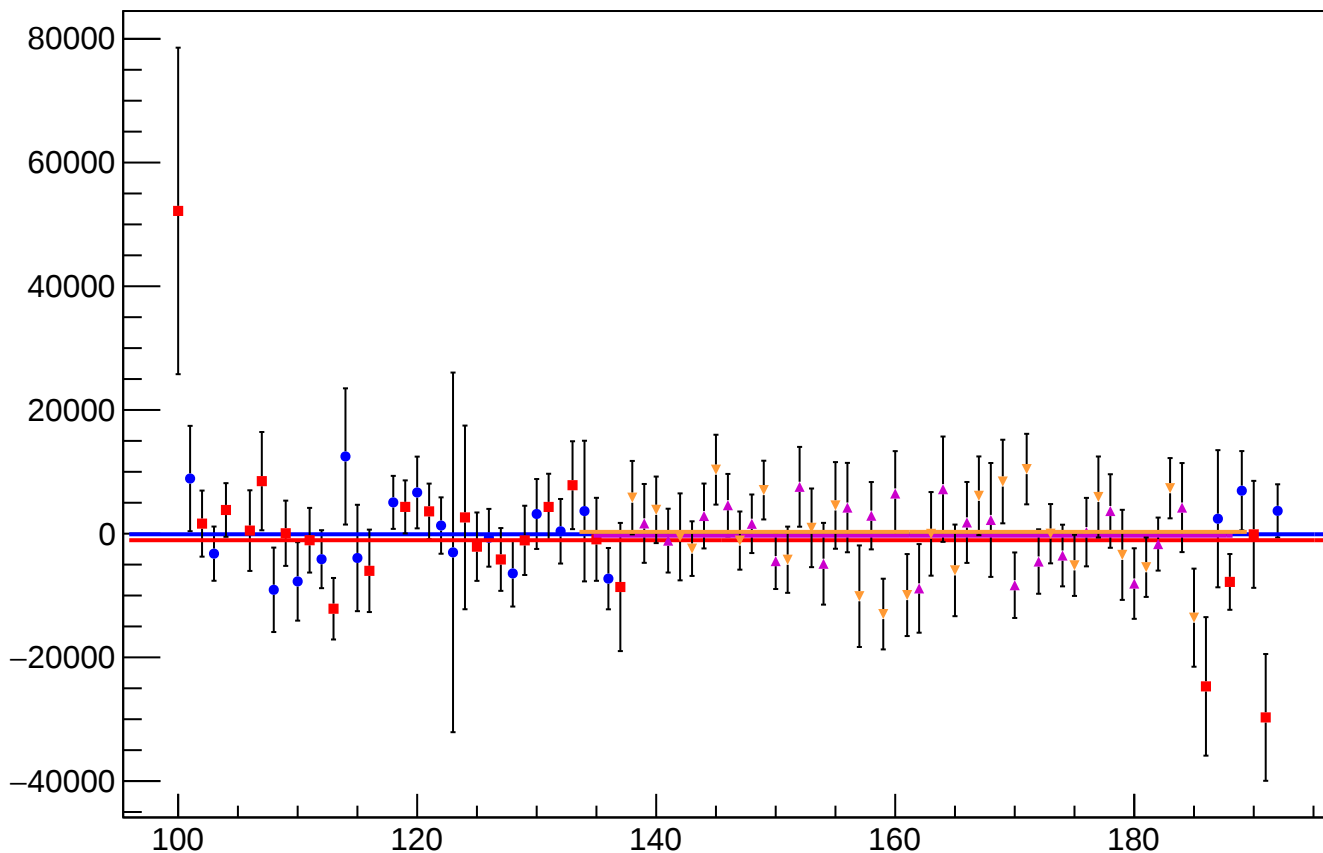
Right: 1013.469 $\pm$ 0.285  $\chi^2$ /NDF: 21161918.1/42

In: 2404.173 $\pm$ 0.429  $\chi^2$ /NDF: 19595814.3/42

Out: 841.146 $\pm$ 0.212  $\chi^2$ /NDF: 38364385.9/47

All: 1146.928 $\pm$ 0.190  $\chi^2$ /NDF: 68613720.5/95

# asym\_atr1l2\_dd\_mean vs Slug, Sign Corrected



Right In:  $-97.331 \pm 1294.596$   $\chi^2/\text{NDF}$ : 16.0/19

Left Out:  $288.508 \pm 1155.419$   $\chi^2/\text{NDF}$ : 32.4/24

Right Out:  $-1058.561 \pm 1247.527$   $\chi^2/\text{NDF}$ : 33.4/22

Left In:  $-332.488 \pm 1196.011$   $\chi^2/\text{NDF}$ : 14.7/22

Left:  $-11.273 \pm 830.984$   $\chi^2/\text{NDF}$ : 47.2/47

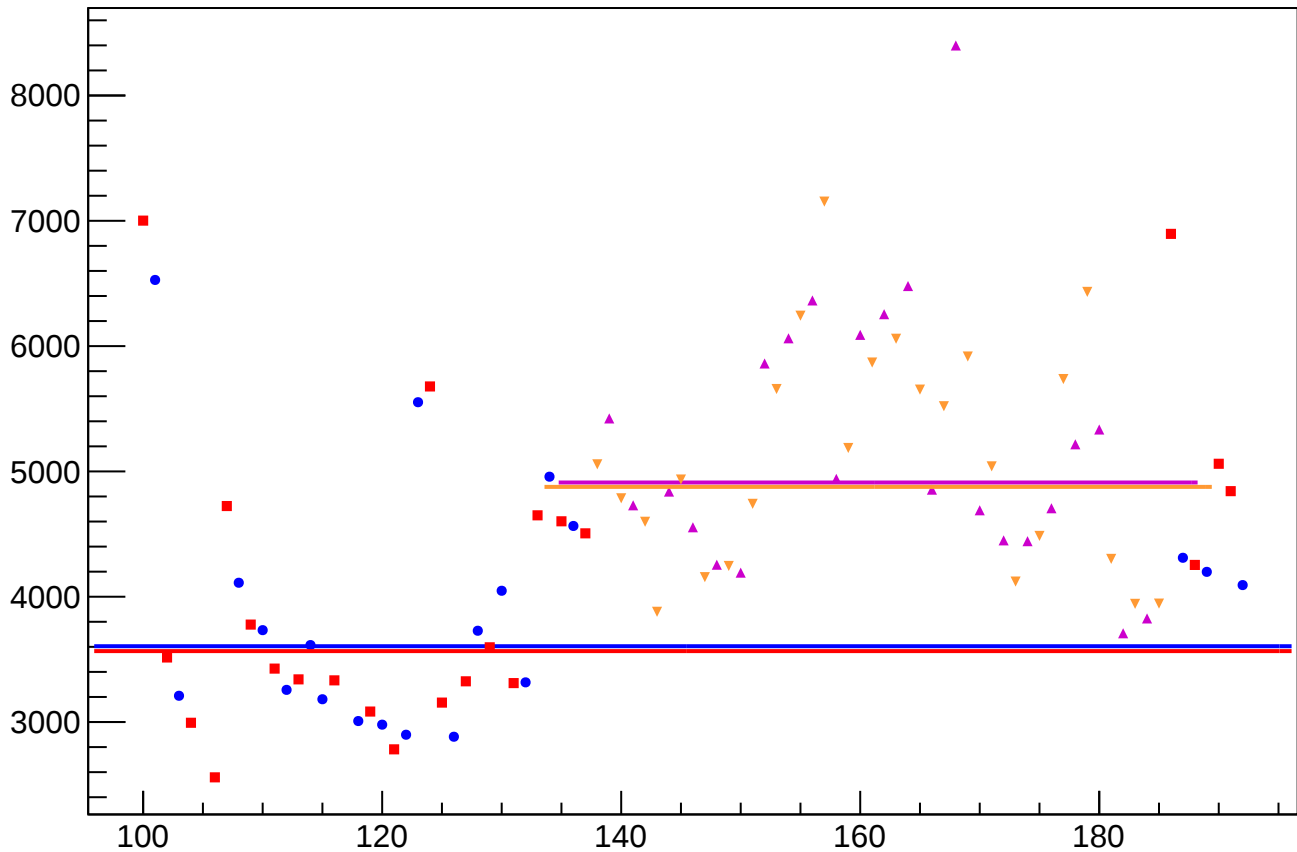
Right:  $-595.737 \pm 898.314$   $\chi^2/\text{NDF}$ : 49.6/42

In:  $-224.203 \pm 878.495$   $\chi^2/\text{NDF}$ : 30.6/42

Out:  $-333.467 \pm 847.699$   $\chi^2/\text{NDF}$ : 66.4/47

All:  $-280.784 \pm 610.010$   $\chi^2/\text{NDF}$ : 97.1/90

# asym\_atr1l2\_dd\_rms vs Slug, Sign Corrected



Right In: 3604.973 $\pm$ 0.915  $\chi^2/\text{NDF}$ : 620276.0/19

Left Out: 4876.564 $\pm$ 0.817  $\chi^2/\text{NDF}$ : 972528.1/24

Right Out: 3566.006 $\pm$ 0.872  $\chi^2/\text{NDF}$ : 772299.8/22

Left In: 4911.546 $\pm$ 0.846  $\chi^2/\text{NDF}$ : 1043164.6/22

Left: 4893.451 $\pm$ 0.588  $\chi^2/\text{NDF}$ : 2016577.8/47

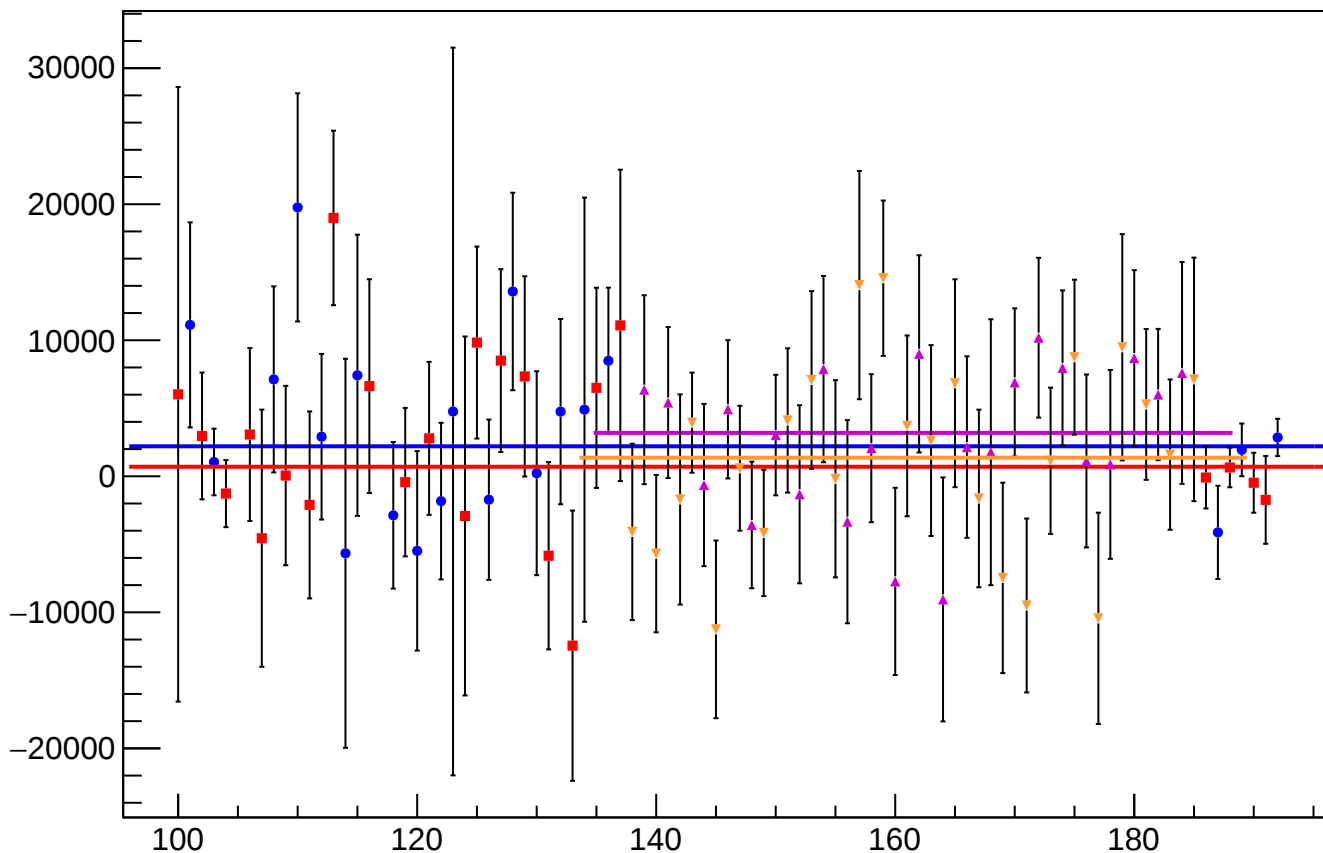
Right: 3584.545 $\pm$ 0.631  $\chi^2/\text{NDF}$ : 1393525.8/42

In: 4309.893 $\pm$ 0.621  $\chi^2/\text{NDF}$ : 2762547.5/42

Out: 4263.959 $\pm$ 0.596  $\chi^2/\text{NDF}$ : 2947611.6/47

All: 4285.984 $\pm$ 0.430  $\chi^2/\text{NDF}$ : 5713005.0/90

reg\_asym\_atl\_avg\_atr\_avg\_avg\_mean vs Slug, Sign Corrected



Right In: 2205.007+/-859.110  $\chi^2/\text{NDF}$ : 17.8/19

Left Out: 1365.082+/-1206.268  $\chi^2/\text{NDF}$ : 28.0/24

Right Out: 703.001+/-819.616  $\chi^2/\text{NDF}$ : 19.4/22

Left In: 3191.160+/-1270.021  $\chi^2/\text{NDF}$ : 14.0/22

Left: 2231.138+/-874.630  $\chi^2/\text{NDF}$ : 43.0/47

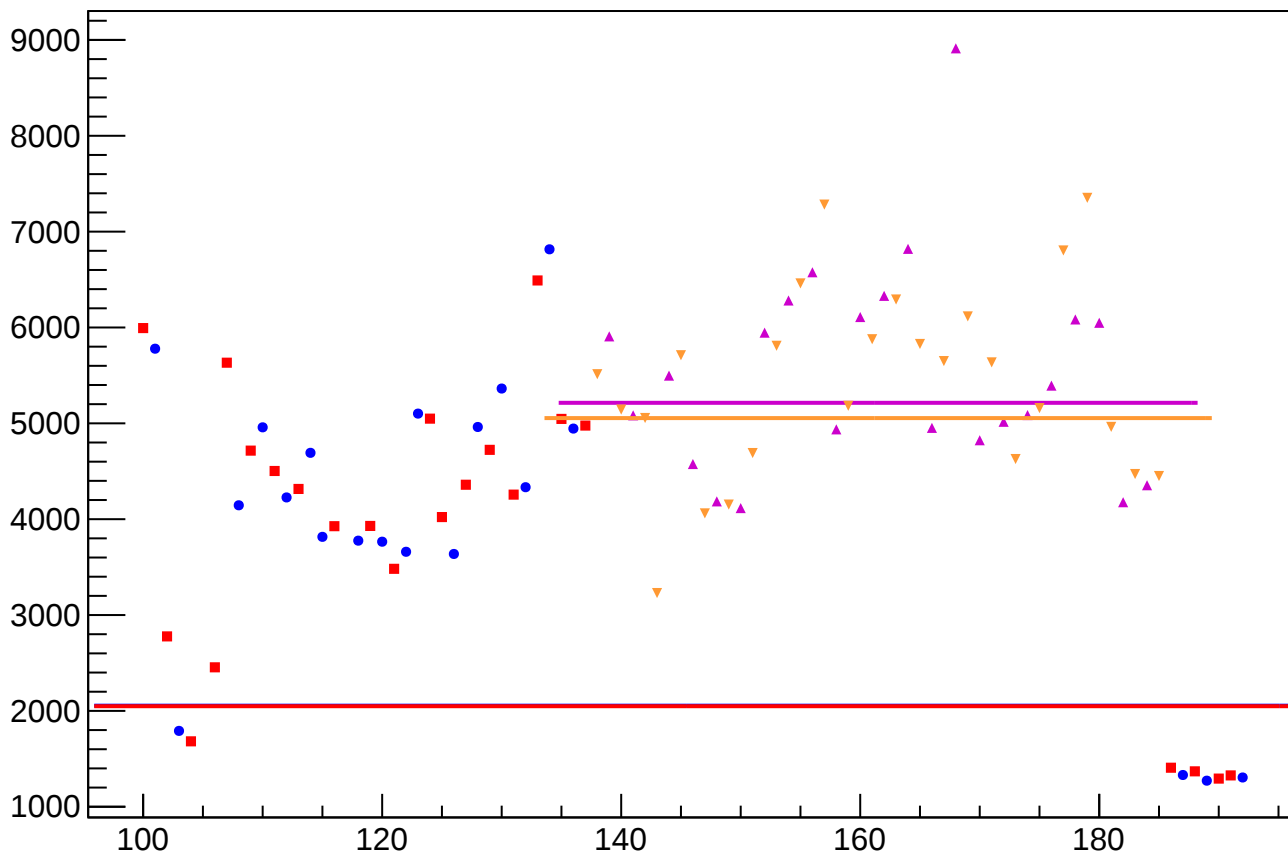
Right: 1418.688+/-593.027  $\chi^2/\text{NDF}$ : 38.8/42

In: 2514.595+/-711.592  $\chi^2/\text{NDF}$ : 32.2/42

Out: 912.120+/-677.931  $\chi^2/\text{NDF}$ : 47.6/47

All: 1674.561+/-490.838  $\chi^2/\text{NDF}$ : 82.4/90

reg\_asym\_atl\_avg\_atr\_avg\_avg\_rms vs Slug, Sign Corrected



Right In: 2054.290+/-0.607  $\chi^2/\text{NDF}$ : 4670423.7/19

Left Out: 5054.711+/-0.853  $\chi^2/\text{NDF}$ : 1437224.7/24

Right Out: 2048.817+/-0.578  $\chi^2/\text{NDF}$ : 4524220.7/22

Left In: 5214.120+/-0.898  $\chi^2/\text{NDF}$ : 1052501.5/22

Left: 5130.314+/-0.618  $\chi^2/\text{NDF}$ : 2506291.2/47

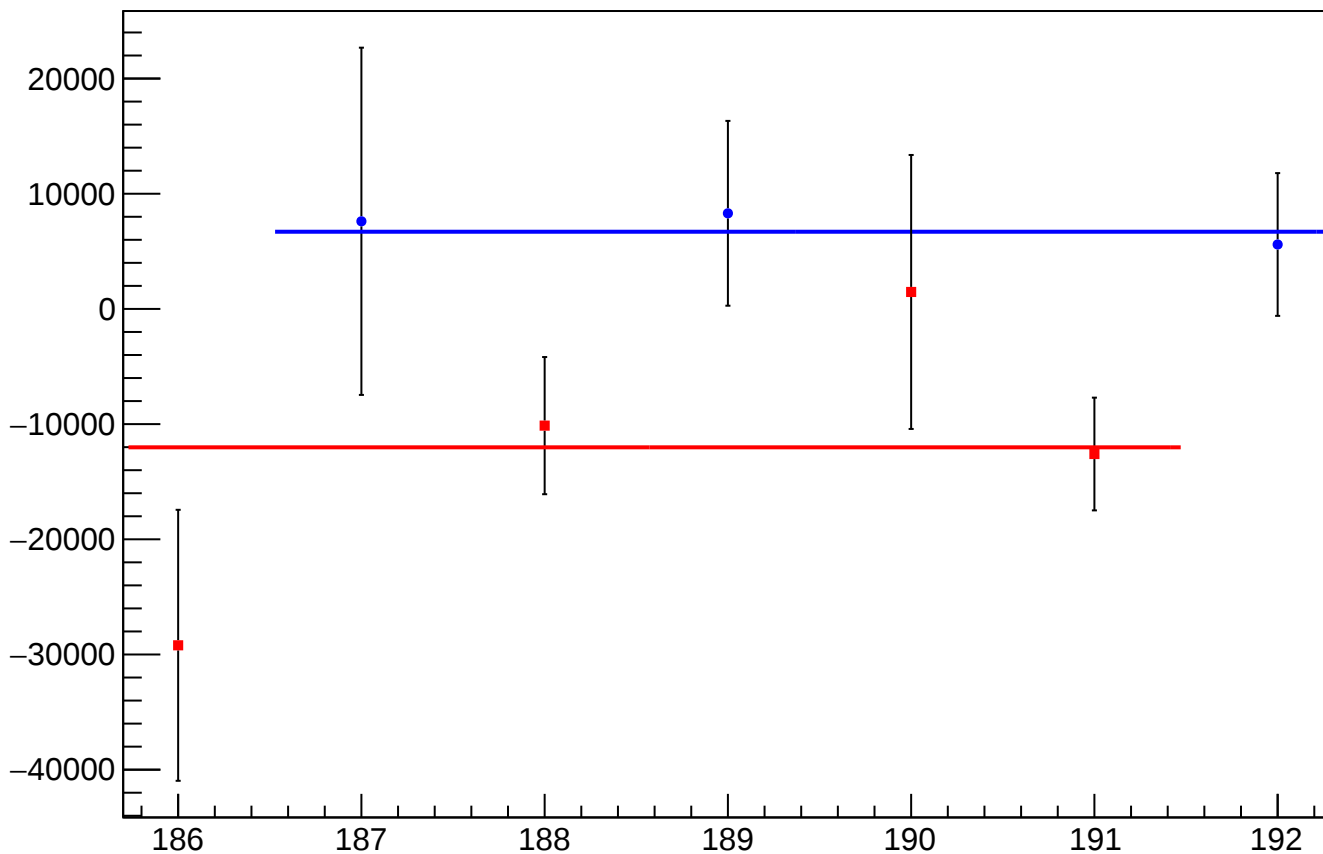
Right: 2051.416+/-0.419  $\chi^2/\text{NDF}$ : 9194687.1/42

In: 3046.261+/-0.503  $\chi^2/\text{NDF}$ : 14216739.2/42

Out: 2994.019+/-0.478  $\chi^2/\text{NDF}$ : 14475362.9/47

All: 3018.817+/-0.347  $\chi^2/\text{NDF}$ : 28697764.9/95

asym\_atl\_avg\_atr\_avg\_avg\_correction\_mean vs Slug, Sign Corrected



Right In: 6701.763+/-4663.654  $\chi^2/\text{NDF}$ : 0.1/2

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Right Out: -12014.862+/-3445.118  $\chi^2/\text{NDF}$ : 3.5/3

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

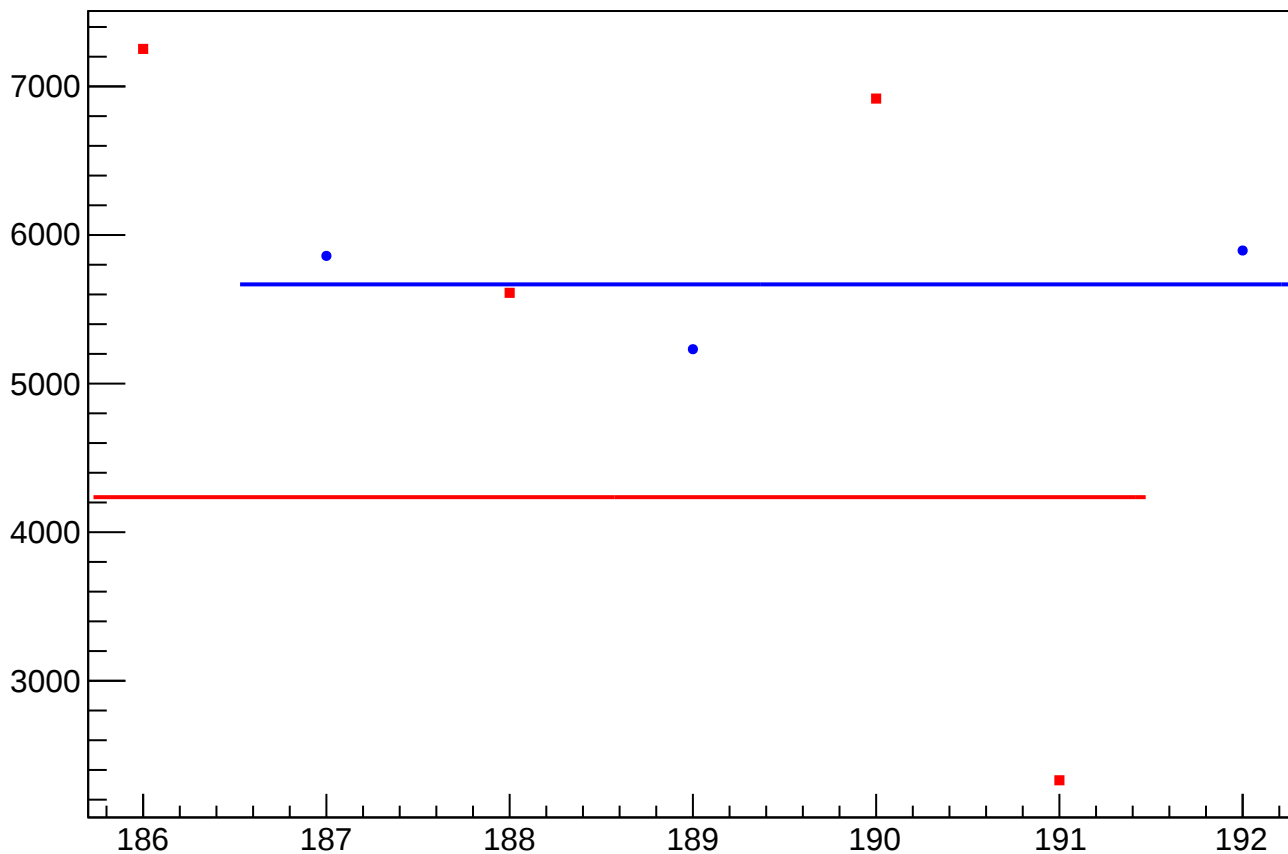
Right: -5407.057+/-2771.030  $\chi^2/\text{NDF}$ : 14.0/6

In: 6701.763+/-4663.654  $\chi^2/\text{NDF}$ : 0.1/2

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

All: -5407.057+/-2771.030  $\chi^2/\text{NDF}$ : 14.0/6

asym\_atl\_avg\_atr\_avg\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 5667.780+/-3.298  $\chi^2/\text{NDF}$ : 8941.3/2

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Right Out: 4235.800+/-2.436  $\chi^2/\text{NDF}$ : 643109.1/3

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

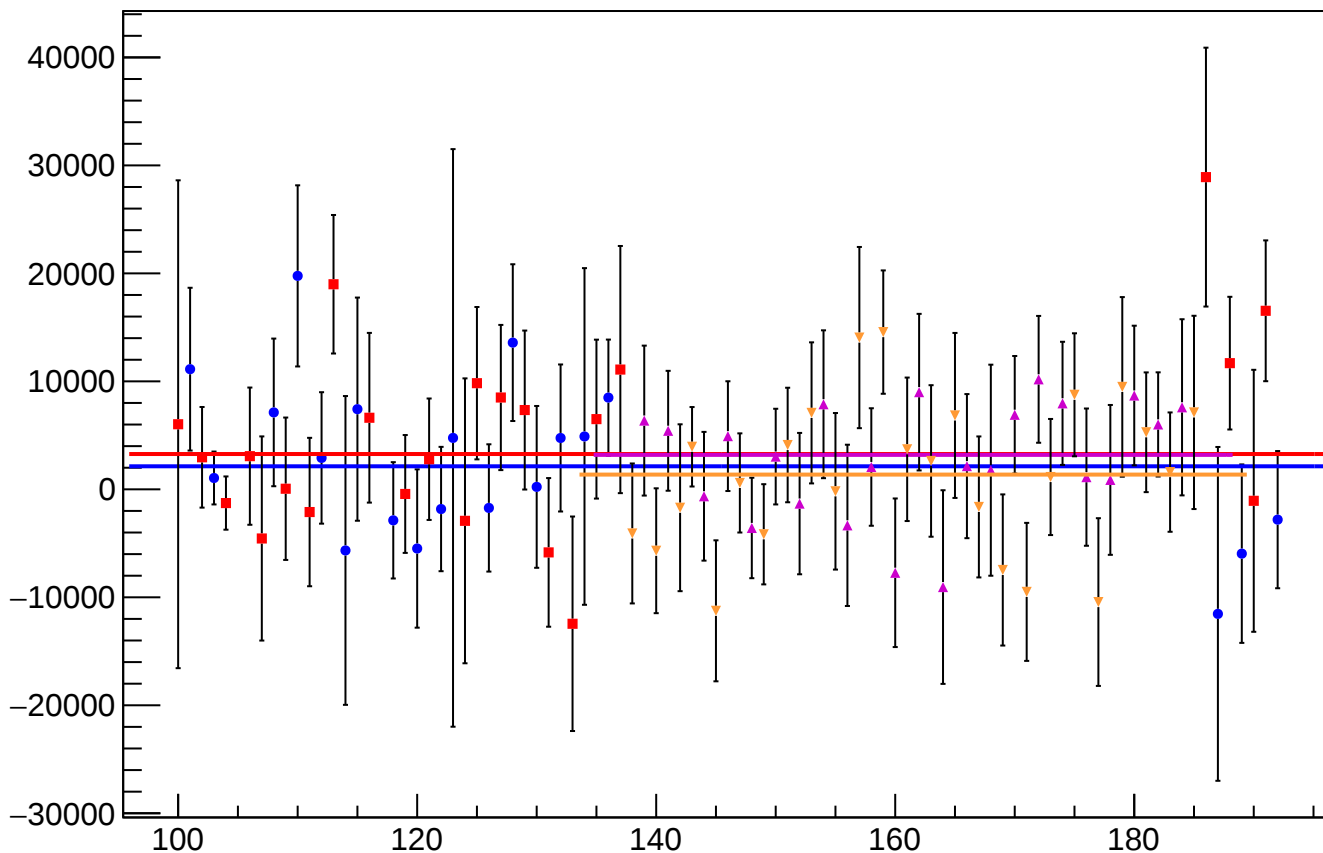
Right: 4741.353+/-1.959  $\chi^2/\text{NDF}$ : 774040.8/6

In: 5667.780+/-3.298  $\chi^2/\text{NDF}$ : 8941.3/2

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

All: 4741.353+/-1.959  $\chi^2/\text{NDF}$ : 774040.8/6

asym\_atl\_avg\_atr\_avg\_avg\_mean vs Slug, Sign Corrected



Right In: 2133.008+/-1392.989  $\chi^2/\text{NDF}$ : 16.5/19

Left Out: 1365.082+/-1206.268  $\chi^2/\text{NDF}$ : 28.0/24

Right Out: 3269.639+/-1306.456  $\chi^2/\text{NDF}$ : 29.2/22

Left In: 3191.160+/-1270.021  $\chi^2/\text{NDF}$ : 14.0/22

Left: 2231.138+/-874.630  $\chi^2/\text{NDF}$ : 43.0/47

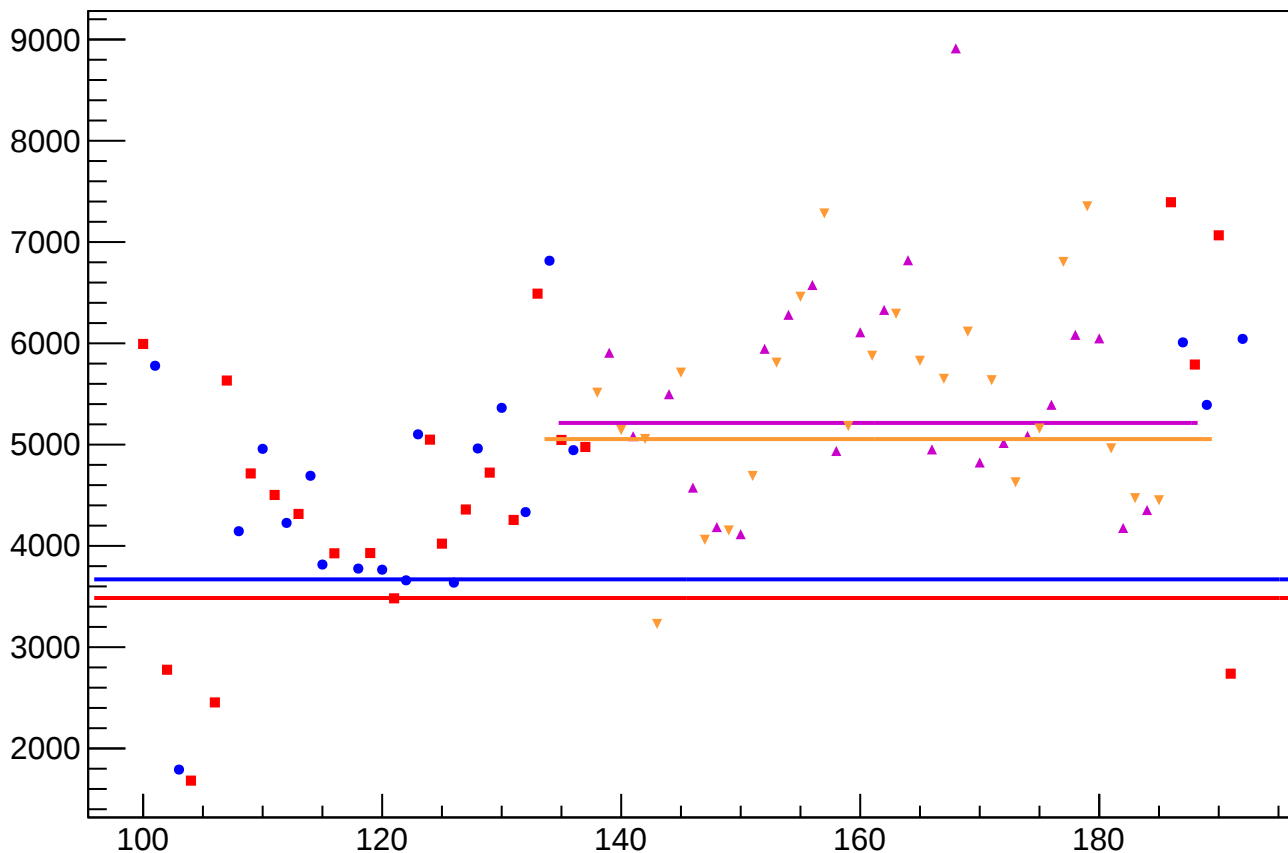
Right: 2737.722+/-952.928  $\chi^2/\text{NDF}$ : 46.1/42

In: 2710.841+/-938.509  $\chi^2/\text{NDF}$ : 30.8/42

Out: 2241.542+/-886.265  $\chi^2/\text{NDF}$ : 58.3/47

All: 2462.766+/-644.362  $\chi^2/\text{NDF}$ : 89.3/90

asym\_atl\_avg\_atr\_avg\_avg\_rms vs Slug, Sign Corrected



Right In: 3669.591 $\pm$ 0.985  $\chi^2$ /NDF: 2215371.1/19

Left Out: 5054.711 $\pm$ 0.853  $\chi^2$ /NDF: 1437224.7/24

Right Out: 3485.474 $\pm$ 0.916  $\chi^2$ /NDF: 2640132.5/22

Left In: 5214.120 $\pm$ 0.898  $\chi^2$ /NDF: 1052501.5/22

Left: 5130.314 $\pm$ 0.618  $\chi^2$ /NDF: 2506291.2/47

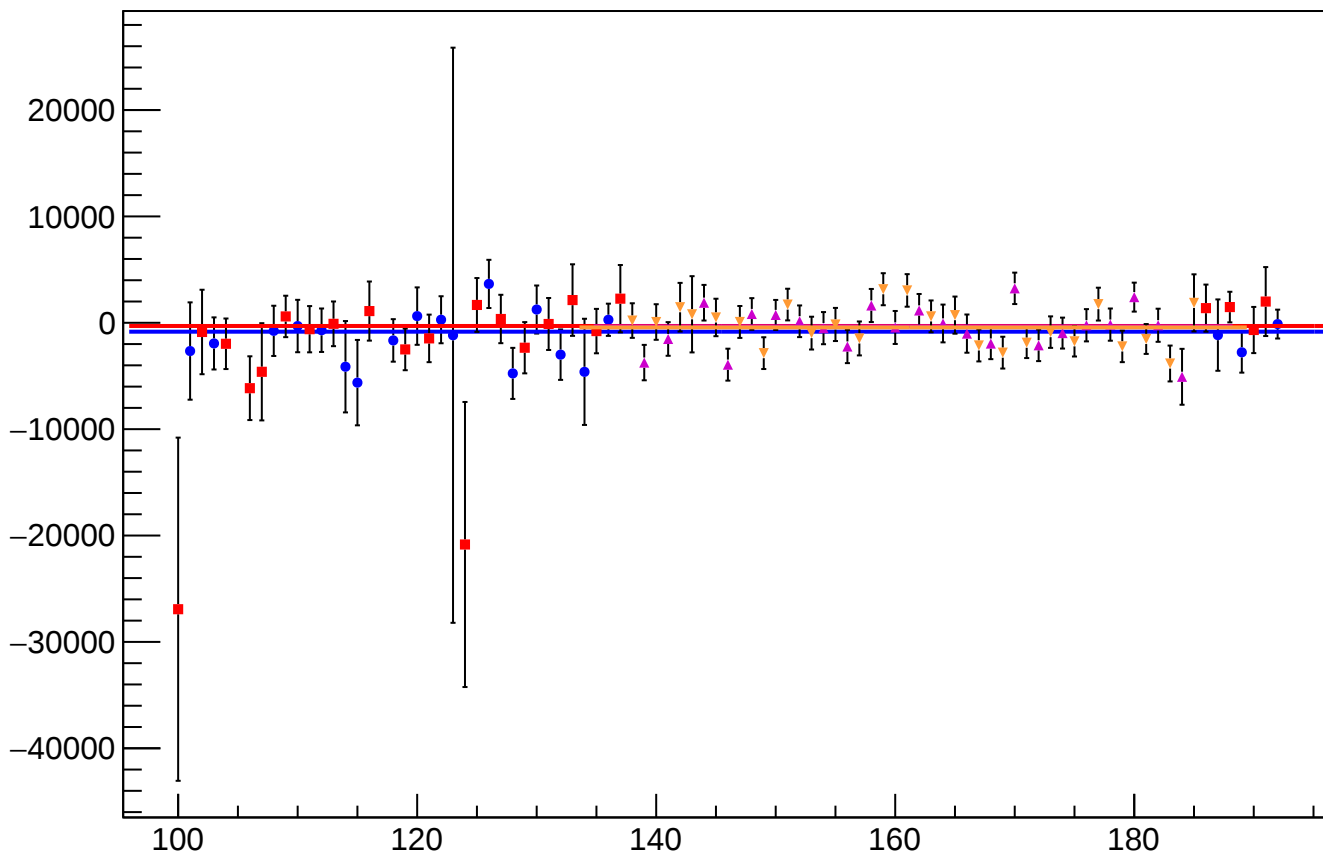
Right: 3570.886 $\pm$ 0.671  $\chi^2$ /NDF: 4874235.8/42

In: 4513.007 $\pm$ 0.664  $\chi^2$ /NDF: 4610613.5/42

Out: 4326.153 $\pm$ 0.624  $\chi^2$ /NDF: 5648789.8/47

All: 4413.882 $\pm$ 0.455  $\chi^2$ /NDF: 10301461.1/95

reg\_asym\_atl\_avg\_atr\_avg\_dd\_mean vs Slug, Sign Corrected



Right In: -836.908 $\pm$ 524.741  $\chi^2$ /NDF: 13.9/19

Left Out: -431.715 $\pm$ 320.540  $\chi^2$ /NDF:33.1/24

Right Out: -299.544 $\pm$ 512.716  $\chi^2$ /NDF: 17.6/22

Left In: -343.737 $\pm$ 324.368  $\chi^2$ /NDF:33.8/22

Left: -388.248 $\pm$ 227.997  $\chi^2$ /NDF: 66.9/47

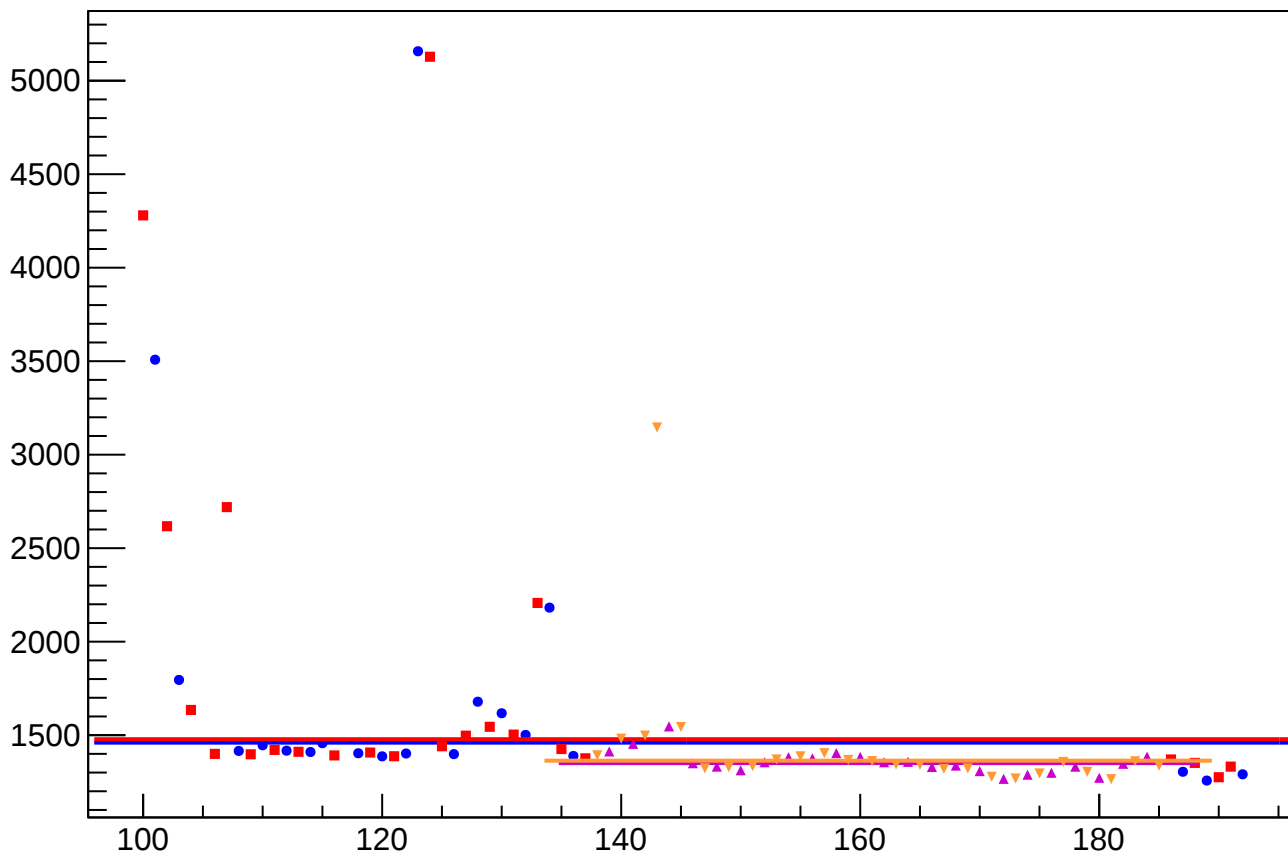
Right: -561.998 $\pm$ 366.722  $\chi^2$ /NDF: 32.0/42

In: -480.083 $\pm$ 275.910  $\chi^2$ /NDF:48.3/42

Out: -394.573 $\pm$ 271.795  $\chi^2$ /NDF:50.7/47

All: -436.685 $\pm$ 193.627  $\chi^2$ /NDF: 99.0/90

reg\_asym\_atl\_avg\_atr\_avg\_dd\_rms vs Slug, Sign Corrected



Right In: 1460.057+/-0.371  $\chi^2$ /NDF: 614658.8/19

Left Out: 1363.561+/-0.227  $\chi^2$ /NDF: 575226.6/24

Right Out: 1478.413+/-0.363  $\chi^2$ /NDF: 687185.4/22

Left In: 1350.909+/-0.229  $\chi^2$ /NDF: 67144.5/22

Left: 1357.310+/-0.161  $\chi^2$ /NDF: 643910.7/47

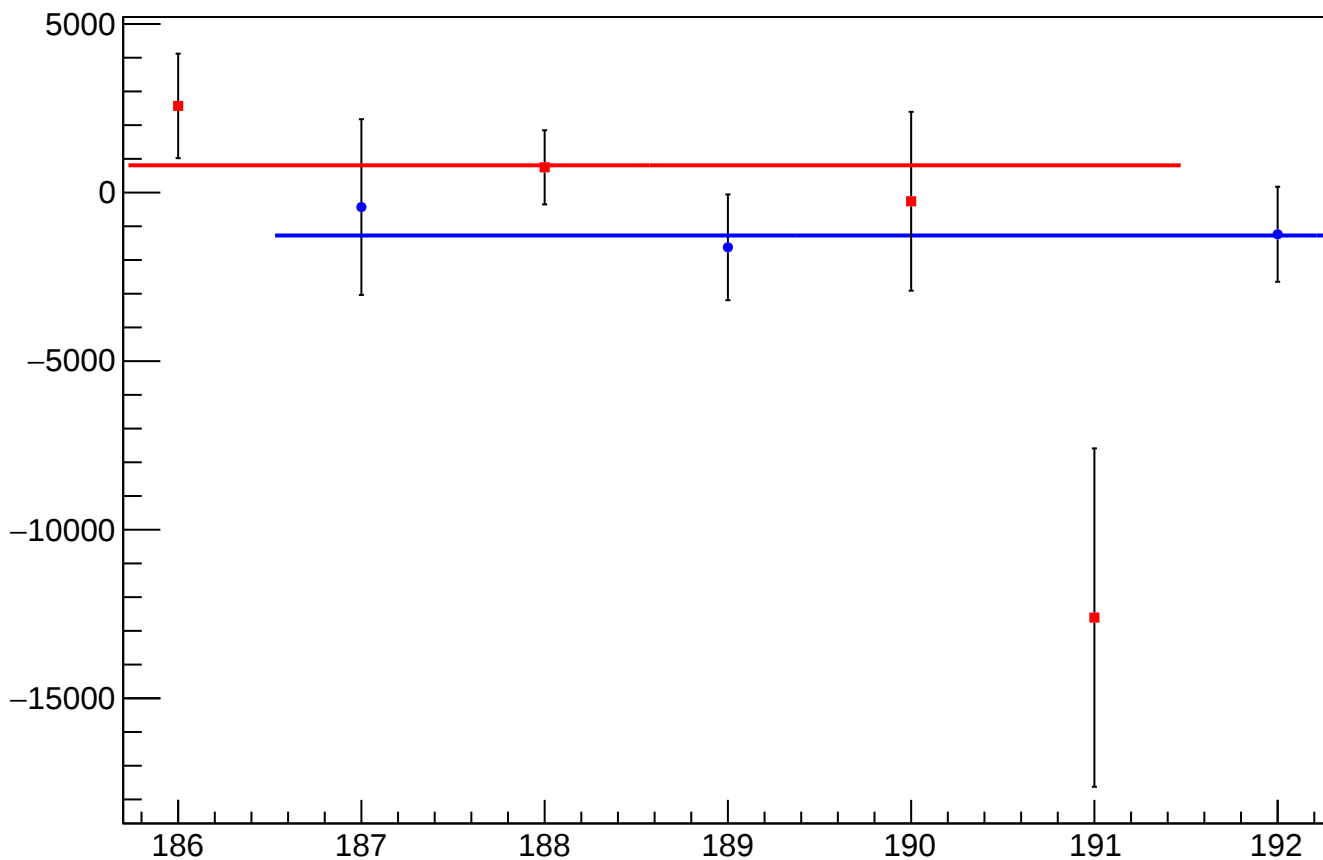
Right: 1469.448+/-0.259  $\chi^2$ /NDF: 1303096.1/42

In: 1381.085+/-0.195  $\chi^2$ /NDF: 744411.7/42

Out: 1395.836+/-0.192  $\chi^2$ /NDF: 1334568.0/47

All: 1388.572+/-0.137  $\chi^2$ /NDF: 2081881.1/90

asym\_atl\_avg\_atr\_avg\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: -1272.879+/-972.777  $\chi^2/\text{NDF}$ : 0.2/2

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Right Out: 808.718+/-837.662  $\chi^2/\text{NDF}$ : 8.6/3

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

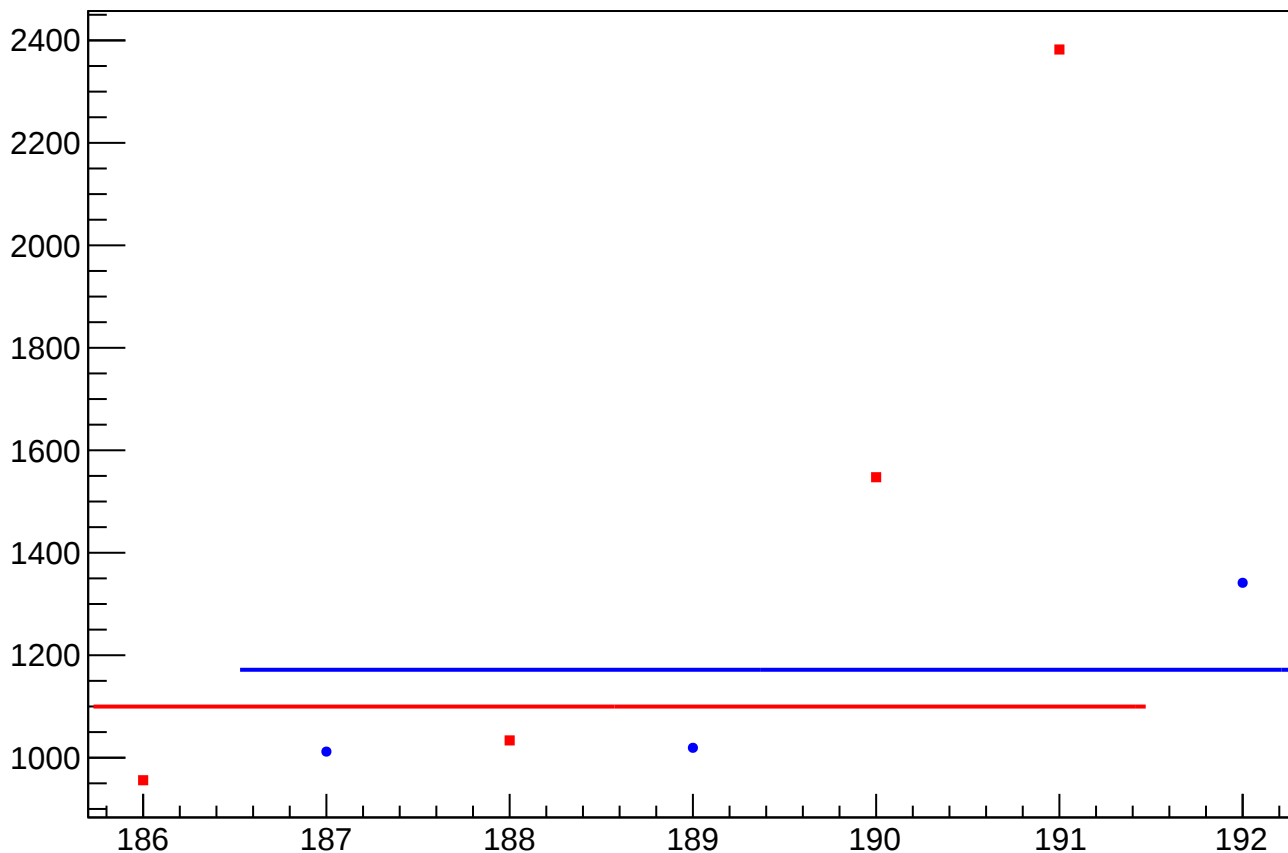
Right: -77.589+/-634.756  $\chi^2/\text{NDF}$ : 11.4/6

In: -1272.879+/-972.777  $\chi^2/\text{NDF}$ : 0.2/2

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

All: -77.589+/-634.756  $\chi^2/\text{NDF}$ : 11.4/6

asym\_atl\_avg\_atr\_avg\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 1171.639+/-0.688  $\chi^2/\text{NDF}$ : 55356.9/2

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Right Out: 1099.852+/-0.592  $\chi^2/\text{NDF}$ : 211957.4/3

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

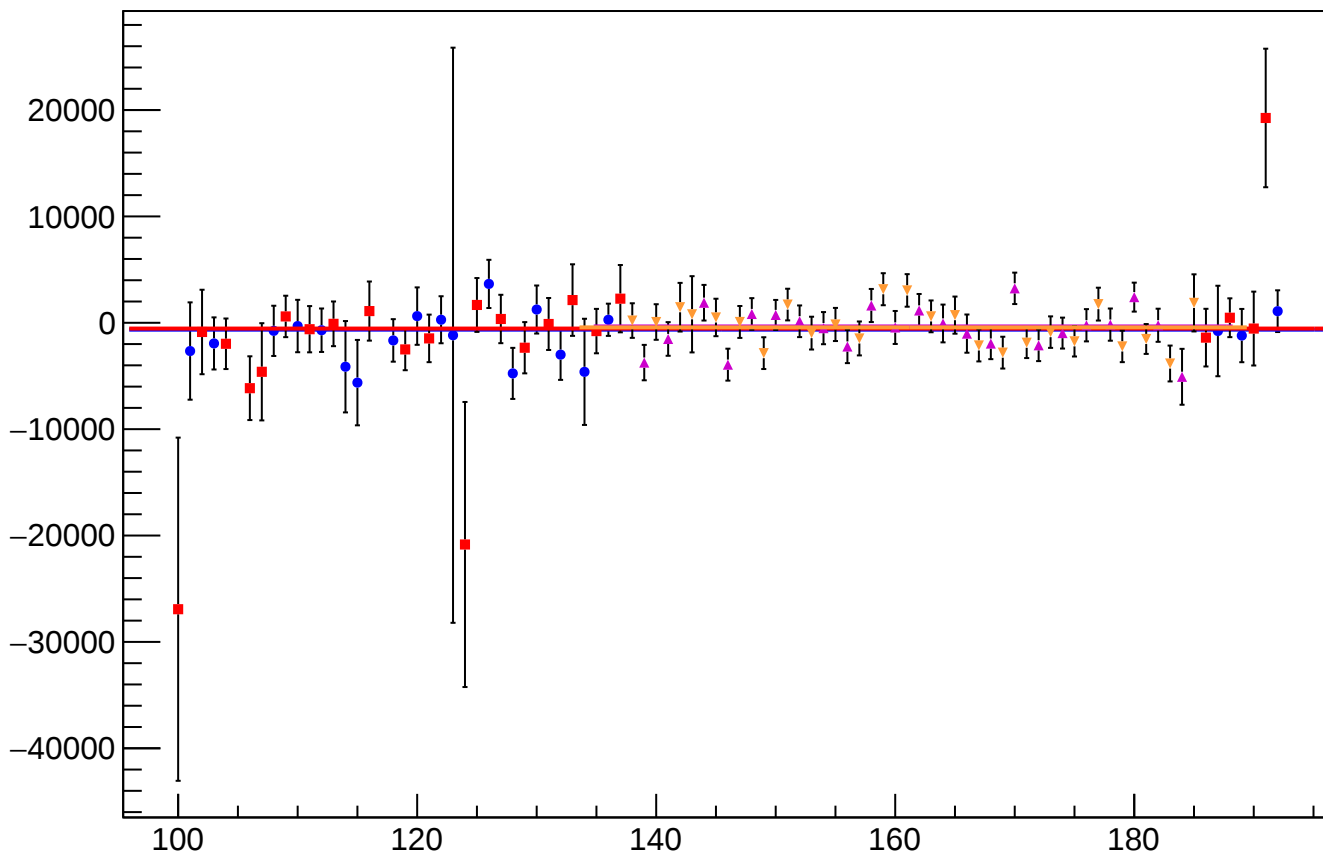
Right: 1130.418+/-0.449  $\chi^2/\text{NDF}$ : 273568.5/6

In: 1171.639+/-0.688  $\chi^2/\text{NDF}$ : 55356.9/2

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

All: 1130.418+/-0.449  $\chi^2/\text{NDF}$ : 273568.5/6

asym\_atl\_avg\_atr\_avg\_dd\_mean vs Slug, Sign Corrected



Right In: -644.335+/-558.904  $\chi^2/\text{NDF}$ : 13.4/19

Left Out: -431.715+/-320.540  $\chi^2/\text{NDF}$ : 33.1/24

Right Out: -542.938+/-546.207  $\chi^2/\text{NDF}$ : 24.1/22

Left In: -343.737+/-324.368  $\chi^2/\text{NDF}$ : 33.8/22

Left: -388.248+/-227.997  $\chi^2/\text{NDF}$ : 66.9/47

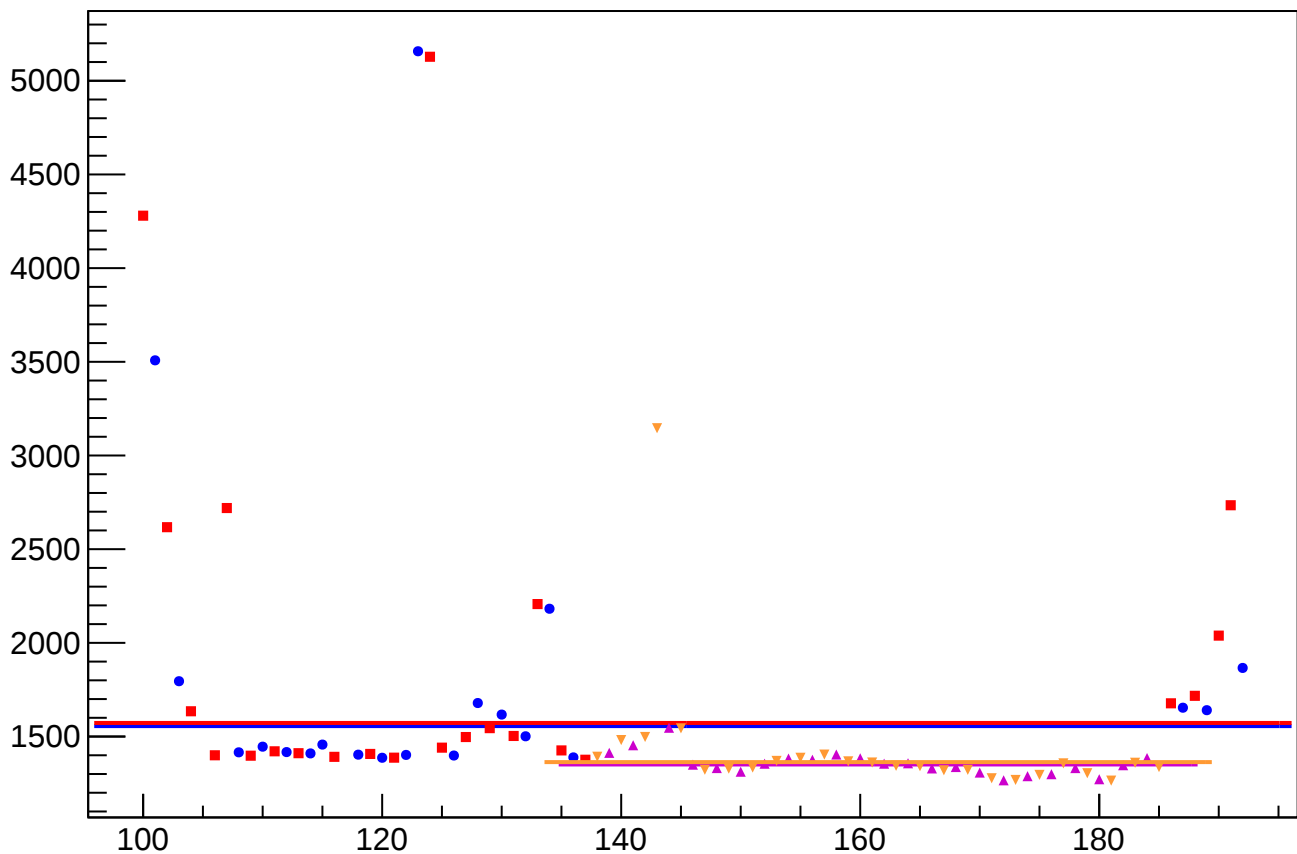
Right: -592.472+/-390.638  $\chi^2/\text{NDF}$ : 37.6/42

In: -419.475+/-280.544  $\chi^2/\text{NDF}$ : 47.4/42

Out: -460.207+/-276.452  $\chi^2/\text{NDF}$ : 57.2/47

All: -440.140+/-196.912  $\chi^2/\text{NDF}$ : 104.7/90

asym\_atl\_avg\_atr\_avg\_dd\_rms vs Slug, Sign Corrected



Right In: 1555.717 $\pm$ 0.395  $\chi^2$ /NDF: 598426.4/19

Left Out: 1363.561 $\pm$ 0.227  $\chi^2$ /NDF: 575226.6/24

Right Out: 1572.520 $\pm$ 0.386  $\chi^2$ /NDF: 757389.9/22

Left In: 1350.909 $\pm$ 0.229  $\chi^2$ /NDF: 67144.5/22

Left: 1357.310 $\pm$ 0.161  $\chi^2$ /NDF: 643910.7/47

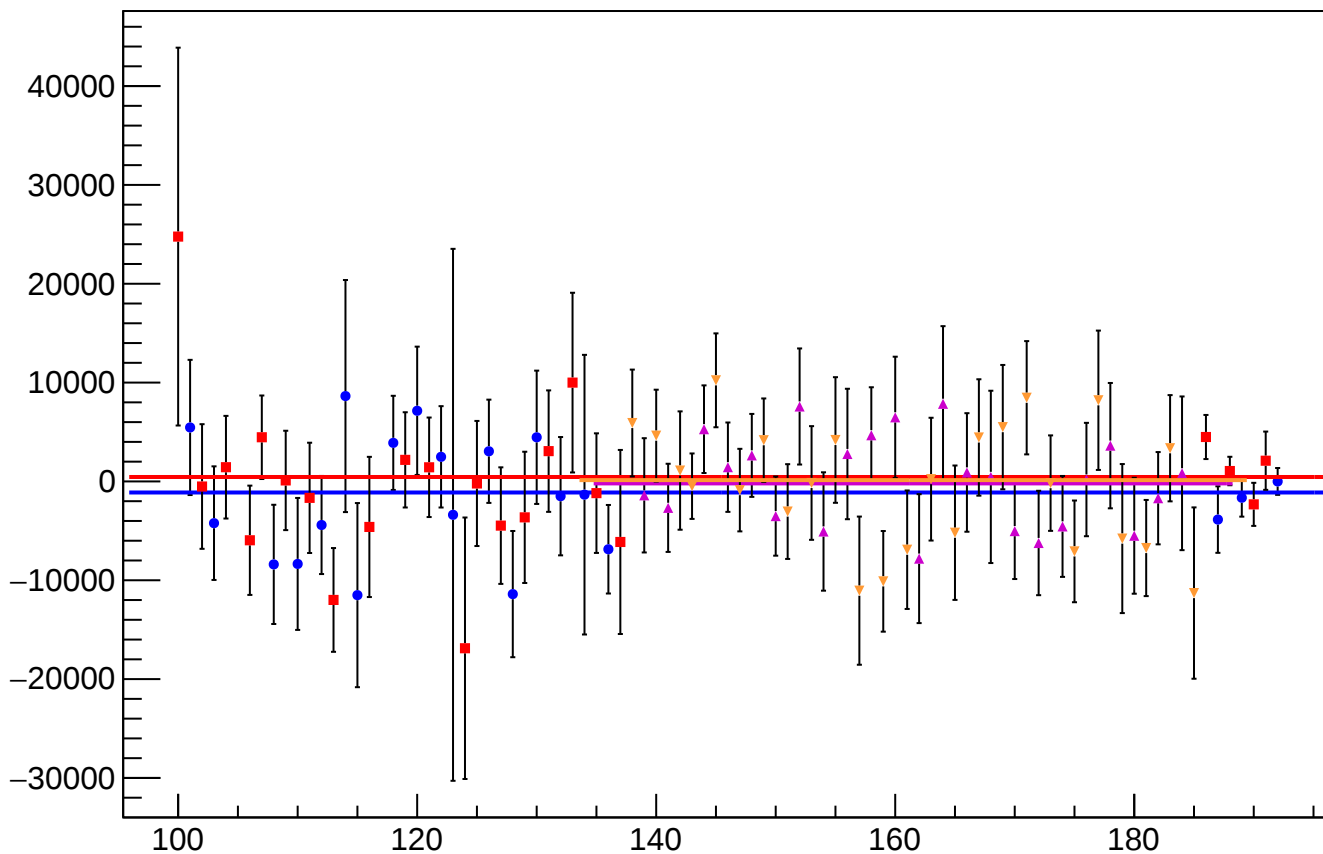
Right: 1564.312 $\pm$ 0.276  $\chi^2$ /NDF: 1356740.8/42

In: 1402.512 $\pm$ 0.198  $\chi^2$ /NDF: 866470.9/42

Out: 1417.090 $\pm$ 0.195  $\chi^2$ /NDF: 1550344.7/47

All: 1409.908 $\pm$ 0.139  $\chi^2$ /NDF: 2419555.5/90

reg\_asym\_atl\_dd\_atr\_dd\_avg\_mean vs Slug, Sign Corrected



Right In: -1119.794 $\pm$ 864.210  $\chi^2$ /NDF: 16.4/19

Left Out: 132.142 $\pm$ 1065.543  $\chi^2$ /NDF: 28.1/24

Right Out: 448.722 $\pm$ 807.767  $\chi^2$ /NDF: 20.4/22

Left In: -200.182 $\pm$ 1123.499  $\chi^2$ /NDF: 14.7/22

Left: -25.227 $\pm$ 773.130  $\chi^2$ /NDF: 42.9/47

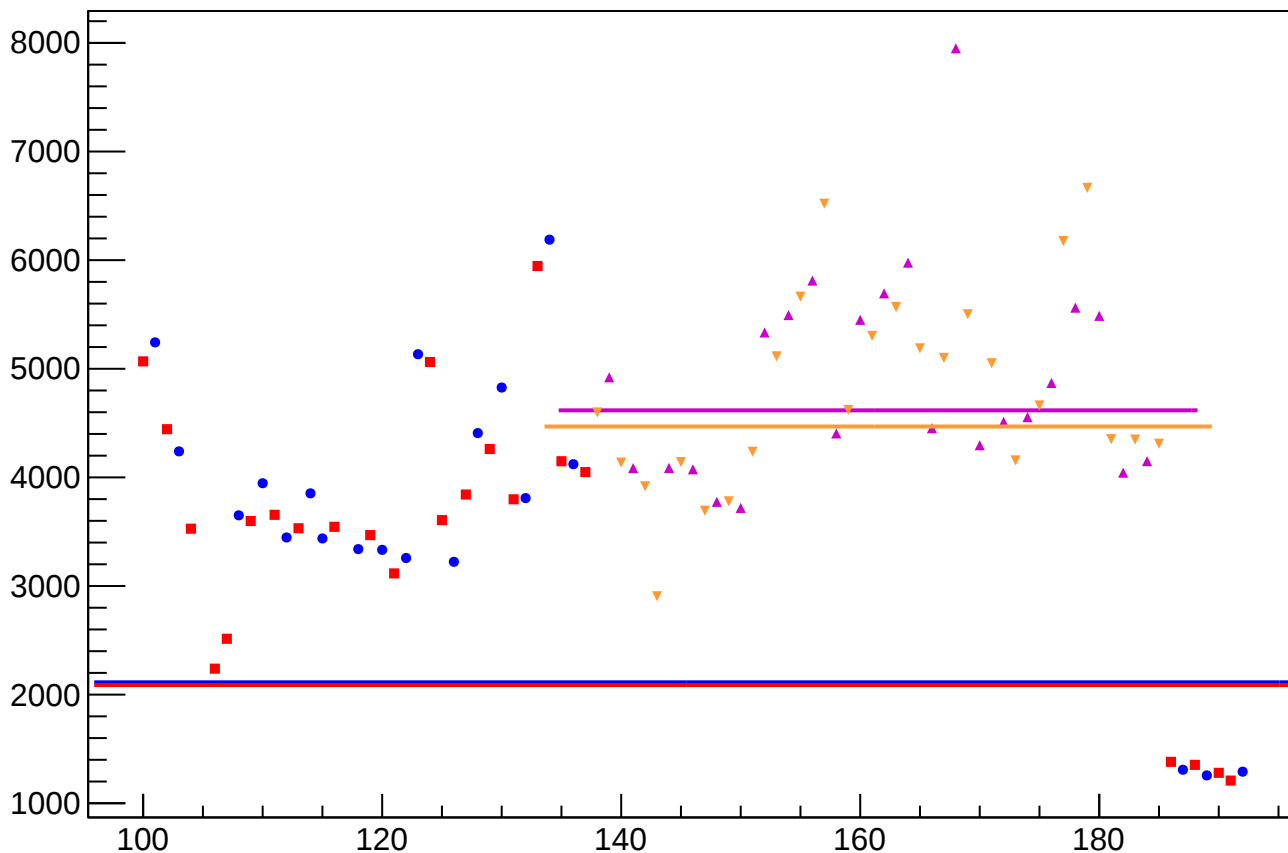
Right: -282.646 $\pm$ 590.123  $\chi^2$ /NDF: 38.6/42

In: -777.941 $\pm$ 684.999  $\chi^2$ /NDF: 31.6/42

Out: 333.185 $\pm$ 643.708  $\chi^2$ /NDF: 48.6/47

All: -187.881 $\pm$ 469.089  $\chi^2$ /NDF: 81.6/90

reg\_asym\_atl\_dd\_atr\_dd\_avg\_rms vs Slug, Sign Corrected



Right In: 2113.190+/-0.611  $\chi^2/\text{NDF}$ : 4182374.4/19

Left Out: 4468.520+/-0.753  $\chi^2/\text{NDF}$ : 1380601.0/24

Right Out: 2088.345+/-0.569  $\chi^2/\text{NDF}$ : 3943297.7/22

Left In: 4617.293+/-0.794  $\chi^2/\text{NDF}$ : 999599.8/22

Left: 4538.970+/-0.547  $\chi^2/\text{NDF}$ : 2398663.8/47

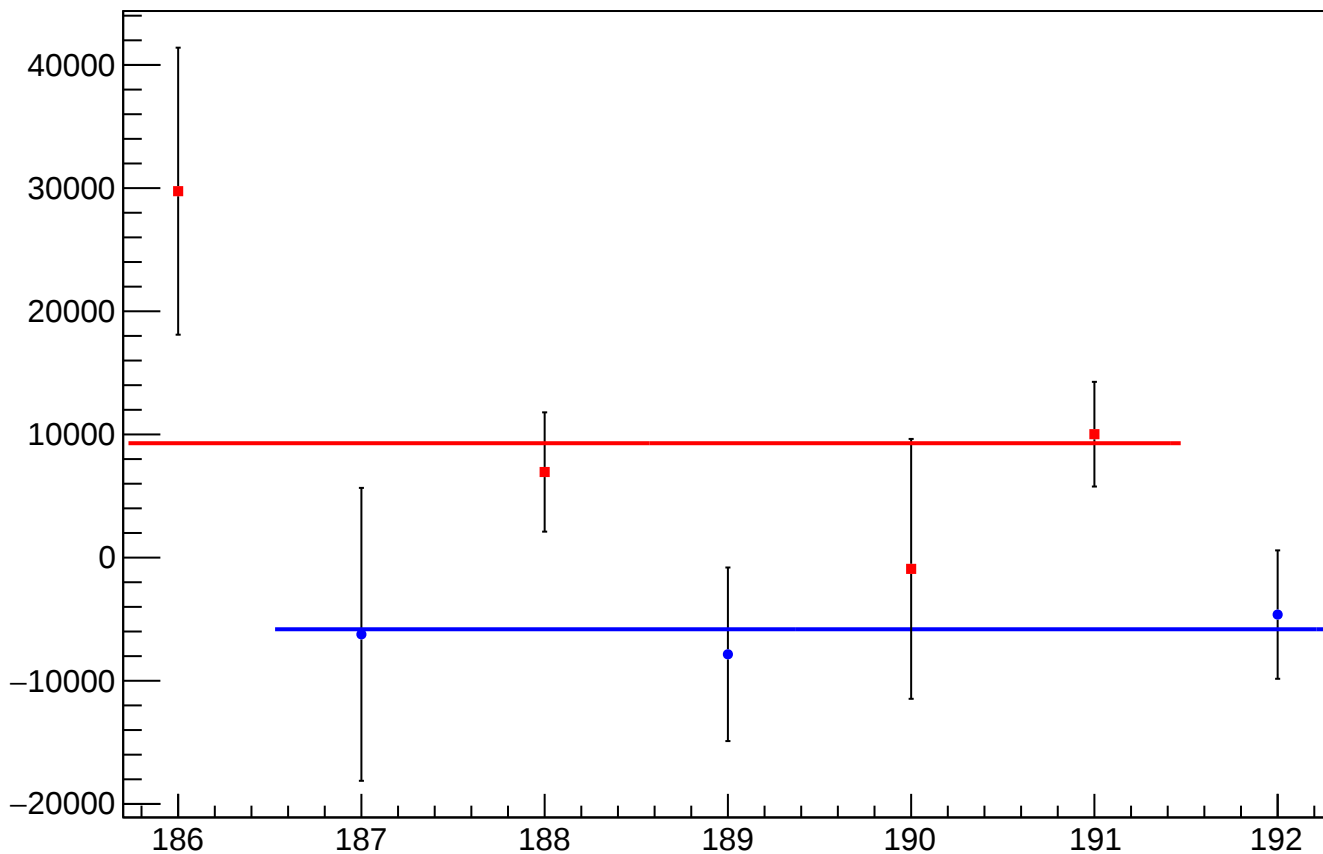
Right: 2099.891+/-0.417  $\chi^2/\text{NDF}$ : 8126556.9/42

In: 3044.045+/-0.484  $\chi^2/\text{NDF}$ : 11424117.1/42

Out: 2953.521+/-0.454  $\chi^2/\text{NDF}$ : 11675879.6/47

All: 2995.883+/-0.331  $\chi^2/\text{NDF}$ : 23118580.2/9

asym\_atl\_dd\_atr\_dd\_avg\_correction\_mean vs Slug, Sign Corrected



Right In: -5817.301+/-3952.577  $\chi^2/\text{NDF}$ : 0.1/2

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Right Out: 9287.920+/-2957.146  $\chi^2/\text{NDF}$ : 4.3/3

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

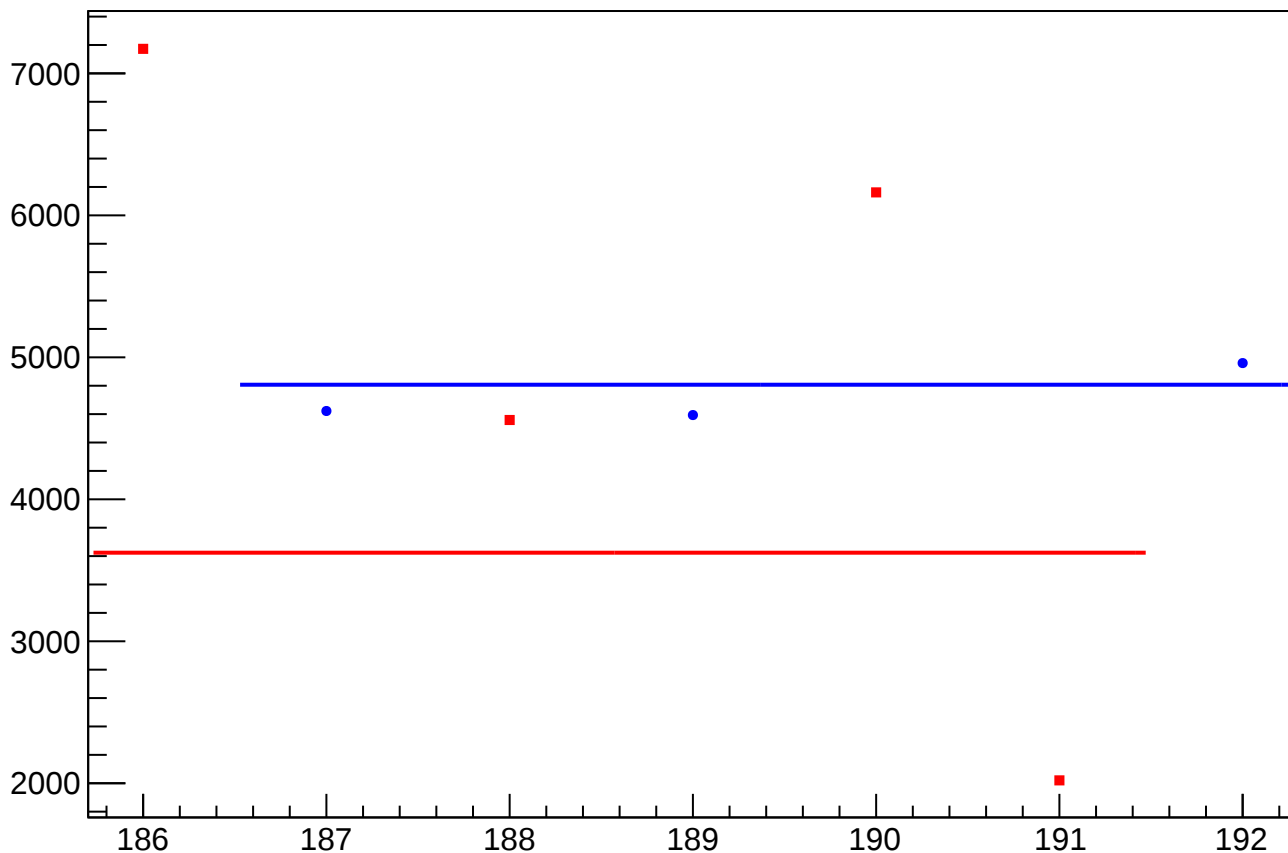
Right: 3867.158+/-2367.810  $\chi^2/\text{NDF}$ : 13.8/6

In: -5817.301+/-3952.577  $\chi^2/\text{NDF}$ : 0.1/2

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

All: 3867.158+/-2367.810  $\chi^2/\text{NDF}$ : 13.8/6

asym\_atl\_dd\_atr\_dd\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 4807.062 $\pm$ 2.795  $\chi^2$ /NDF: 4033.6/2

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:0.0/0

Right Out: 3623.991 $\pm$ 2.091  $\chi^2$ /NDF: 660542.8/3

Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:0.0/0

Left: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

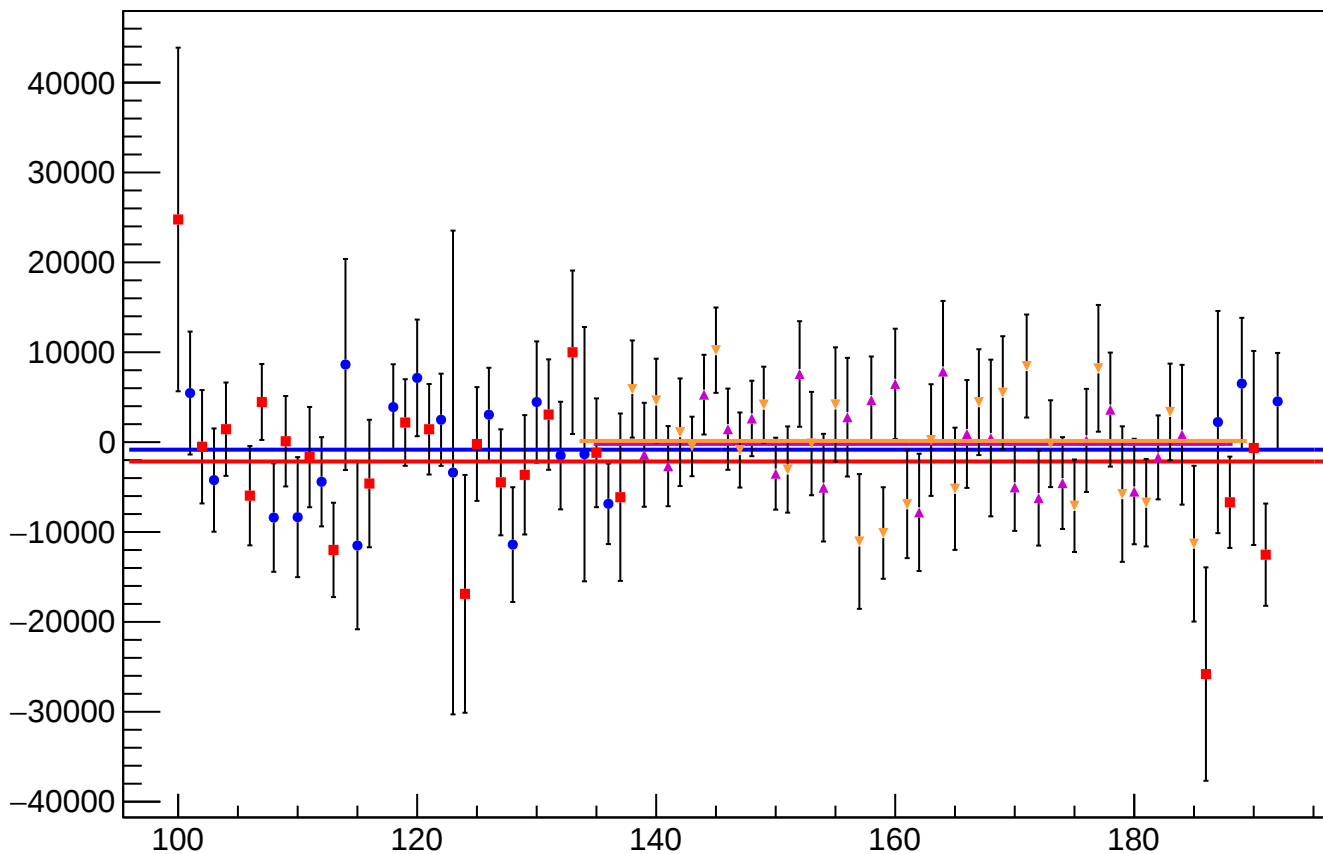
Right: 4048.556 $\pm$ 1.674  $\chi^2$ /NDF: 779455.1/6

In: 4807.062 $\pm$ 2.795  $\chi^2$ /NDF:4033.6/2

Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:0.0/0

All: 4048.556 $\pm$ 1.674  $\chi^2$ /NDF: 779455.1/6

asym\_atl\_dd\_atr\_dd\_avg\_mean vs Slug, Sign Corrected



Right In:  $-839.032 \pm 1423.114$   $\chi^2/\text{NDF}: 17.2/19$

Left Out:  $132.142 \pm 1065.543$   $\chi^2/\text{NDF}: 28.1/24$

Right Out:  $-2151.839 \pm 1281.366$   $\chi^2/\text{NDF}: 23.0/22$

Left In:  $-200.182 \pm 1123.499$   $\chi^2/\text{NDF}: 14.7/22$

Left:  $-25.227 \pm 773.130$   $\chi^2/\text{NDF}: 42.9/47$

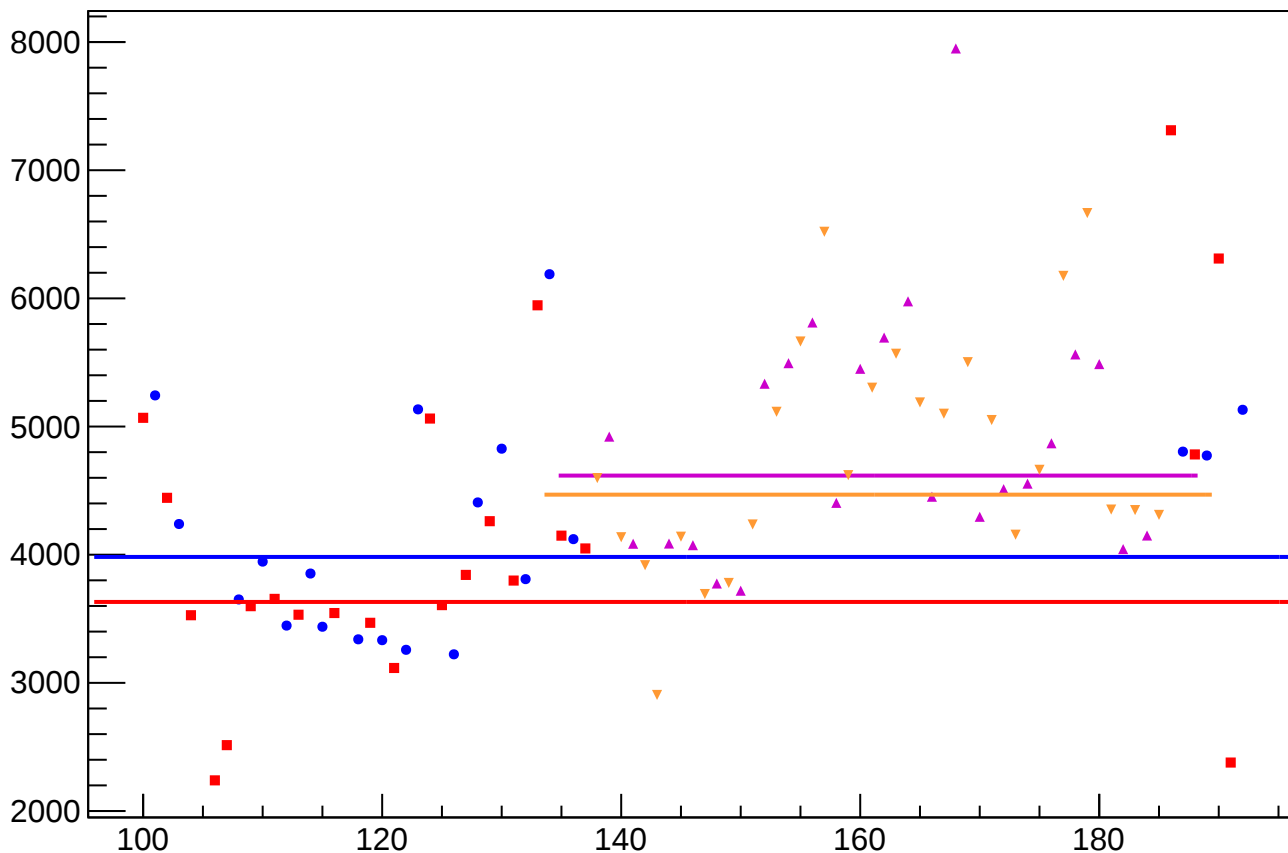
Right:  $-1564.054 \pm 952.245$   $\chi^2/\text{NDF}: 40.7/42$

In:  $-445.471 \pm 881.819$   $\chi^2/\text{NDF}: 32.1/42$

Out:  $-801.573 \pm 819.284$   $\chi^2/\text{NDF}: 53.0/47$

All:  $-636.595 \pm 600.212$   $\chi^2/\text{NDF}: 85.2/90$

asym\_atl\_dd\_atr\_dd\_avg\_rms vs Slug, Sign Corrected



Right In: 3982.560 $\pm$ 1.006  $\chi^2/\text{NDF}$ : 466233.5/19

Left Out: 4468.520 $\pm$ 0.753  $\chi^2/\text{NDF}$ : 1380601.0/24

Right Out: 3631.407 $\pm$ 0.899  $\chi^2/\text{NDF}$ : 1082849.1/22

Left In: 4617.293 $\pm$ 0.794  $\chi^2/\text{NDF}$ : 999599.8/22

Left: 4538.970 $\pm$ 0.547  $\chi^2/\text{NDF}$ : 2398663.8/47

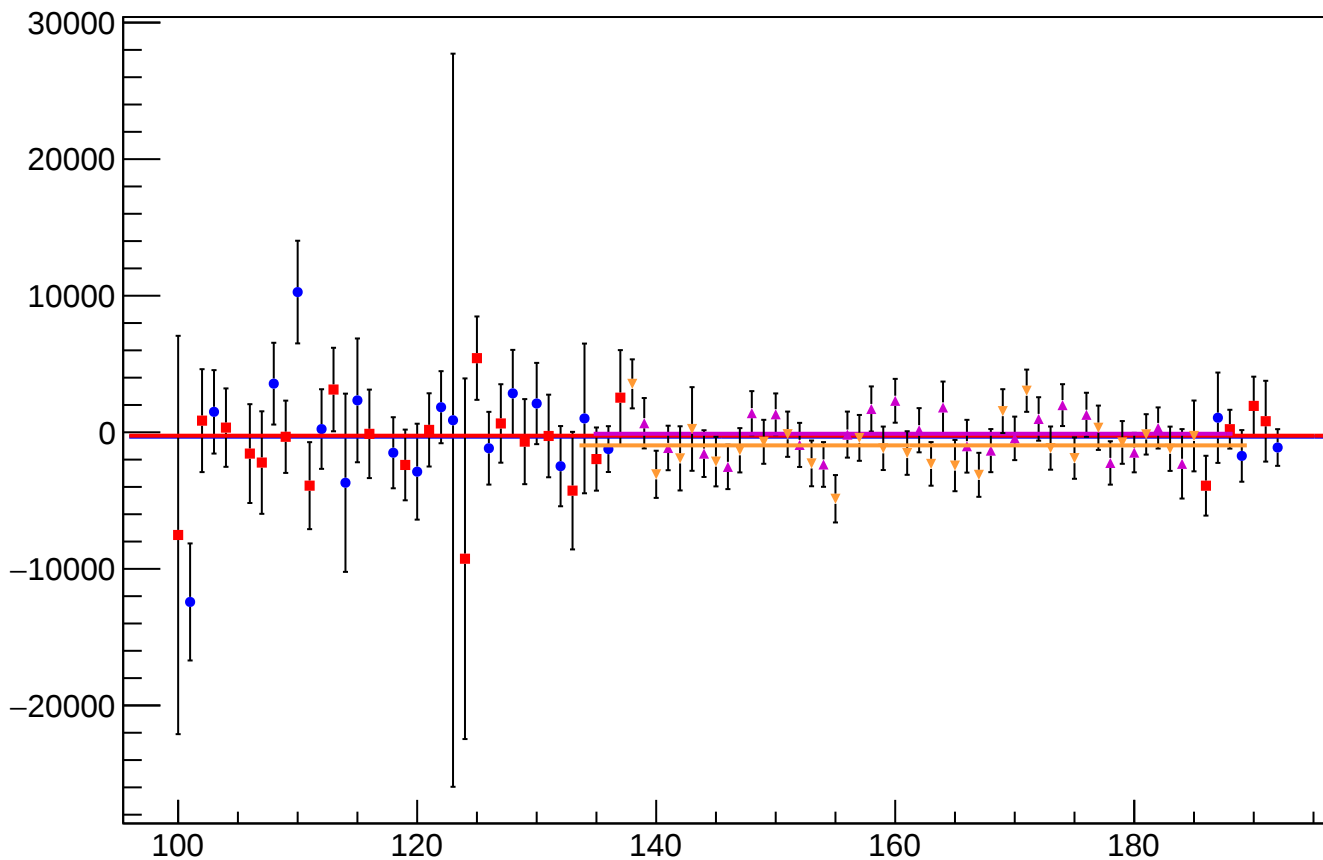
Right: 3787.263 $\pm$ 0.670  $\chi^2/\text{NDF}$ : 1616809.9/42

In: 4373.578 $\pm$ 0.624  $\chi^2/\text{NDF}$ : 1710941.8/42

Out: 4123.100 $\pm$ 0.577  $\chi^2/\text{NDF}$ : 2972803.3/47

All: 4238.741 $\pm$ 0.424  $\chi^2/\text{NDF}$ : 4770612.7/90

reg\_asym\_atl\_dd\_atr\_dd\_dd\_mean vs Slug, Sign Corrected



Right In: -322.000+/-609.730  $\chi^2/\text{NDF}$ : 23.7/19

Left Out: -958.410+/-339.496  $\chi^2/\text{NDF}$ : 28.5/24

Right Out: -249.963+/-589.130  $\chi^2/\text{NDF}$ : 14.2/22

Left In: -107.512+/-343.663  $\chi^2/\text{NDF}$ : 19.5/22

Left: -538.150+/-241.520  $\chi^2/\text{NDF}$ : 51.1/47

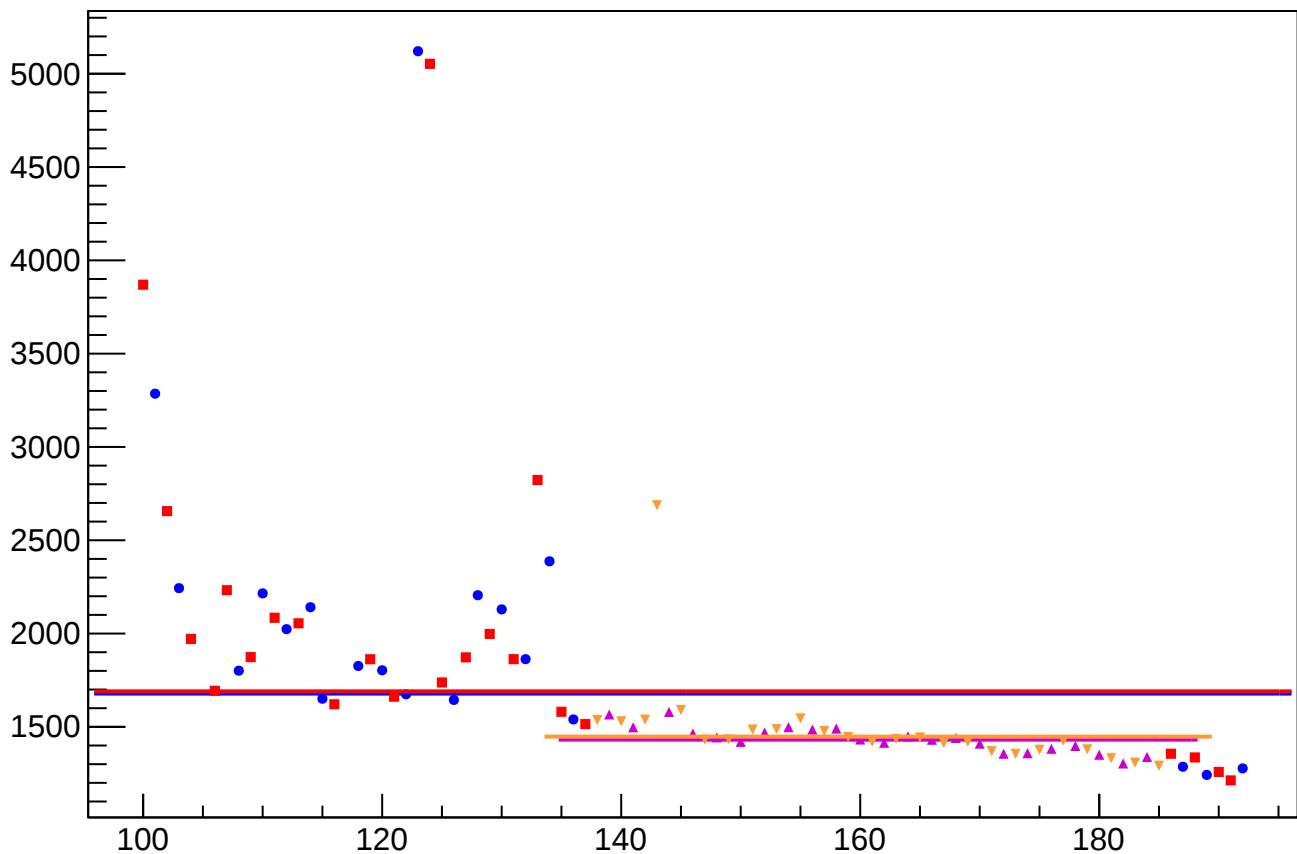
Right: -284.744+/-423.673  $\chi^2/\text{NDF}$ : 38.0/42

In: -159.223+/-299.383  $\chi^2/\text{NDF}$ : 43.3/42

Out: -781.796+/-294.150  $\chi^2/\text{NDF}$ : 43.8/47

All: -475.998+/-209.821  $\chi^2/\text{NDF}$ : 89.3/90

reg\_asym\_atl\_dd\_atr\_dd\_dd\_rms vs Slug, Sign Corrected



Right In: 1678.386 $\pm$ 0.431  $\chi^2$ /NDF: 942880.2/19

Left Out: 1447.554 $\pm$ 0.240  $\chi^2$ /NDF: 419254.7/24

Right Out: 1690.251 $\pm$ 0.417  $\chi^2$ /NDF: 932132.1/22

Left In: 1431.456 $\pm$ 0.243  $\chi^2$ /NDF: 75130.4/22

Left: 1439.603 $\pm$ 0.171  $\chi^2$ /NDF: 496606.4/47

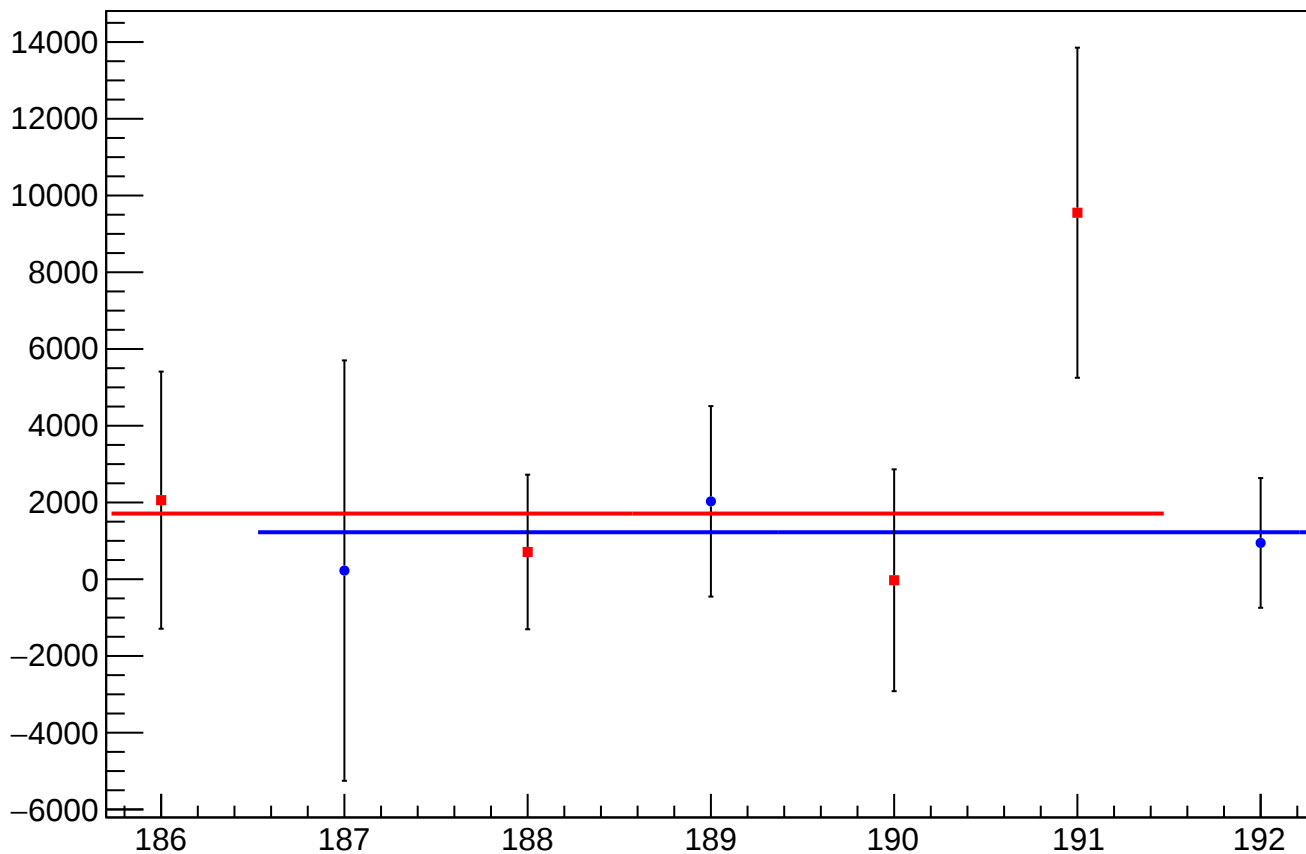
Right: 1684.523 $\pm$ 0.300  $\chi^2$ /NDF: 1875404.0/42

In: 1490.989 $\pm$ 0.212  $\chi^2$ /NDF: 1266952.4/42

Out: 1508.059 $\pm$ 0.208  $\chi^2$ /NDF: 1606193.5/47

All: 1499.674 $\pm$ 0.148  $\chi^2$ /NDF: 2876454.4/90

asym\_atl\_dd\_atr\_dd\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: 1224.191+/-1353.918  $\chi^2/\text{NDF}$ : 0.2/2

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Right Out: 1711.283+/-1401.408  $\chi^2/\text{NDF}$ : 3.9/3

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

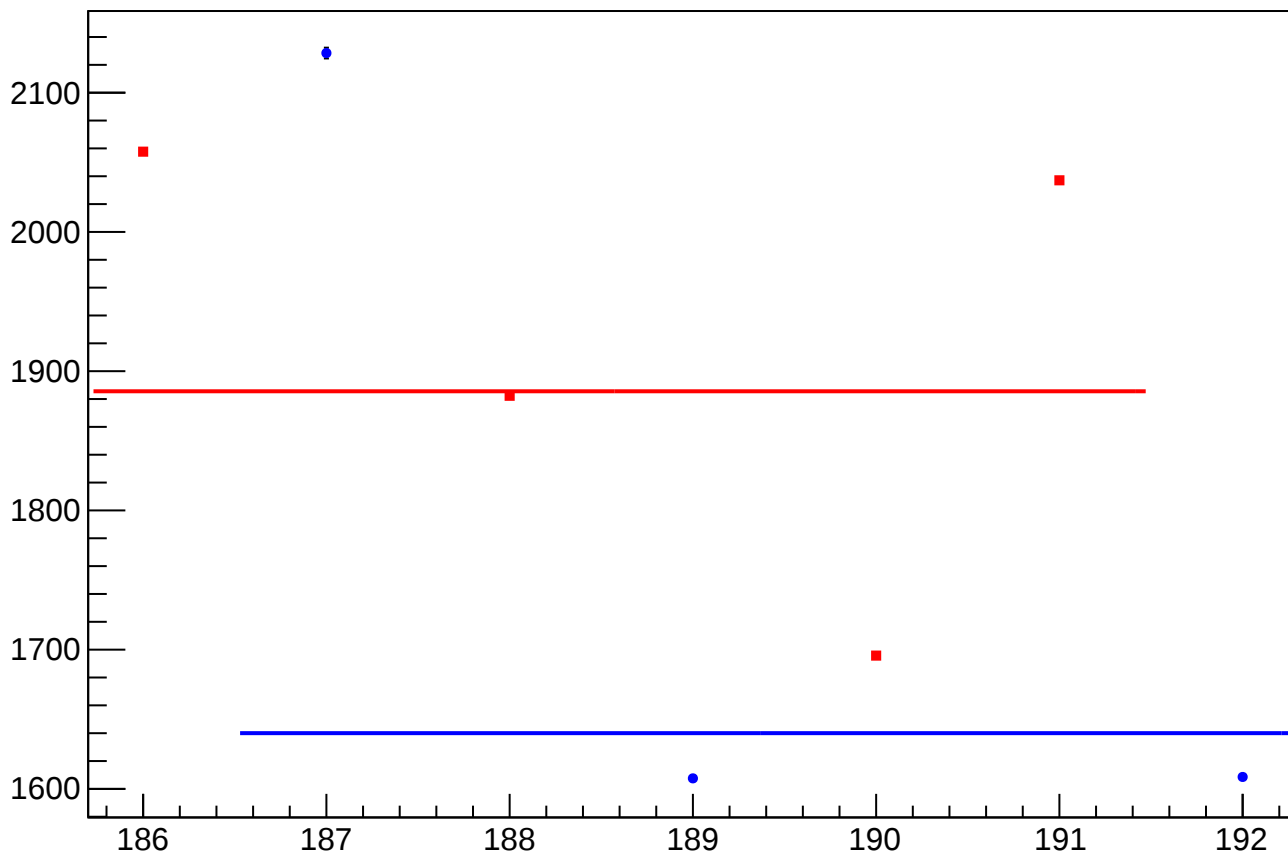
Right: 1459.344+/-973.721  $\chi^2/\text{NDF}$ : 4.2/6

In: 1224.191+/-1353.918  $\chi^2/\text{NDF}$ : 0.2/2

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

All: 1459.344+/-973.721  $\chi^2/\text{NDF}$ : 4.2/6

asym\_atl\_dd\_atr\_dd\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 1640.033+/-0.957  $\chi^2/\text{NDF}$ : 16932.8/2

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Right Out: 1885.563+/-0.991  $\chi^2/\text{NDF}$ : 16386.0/3

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

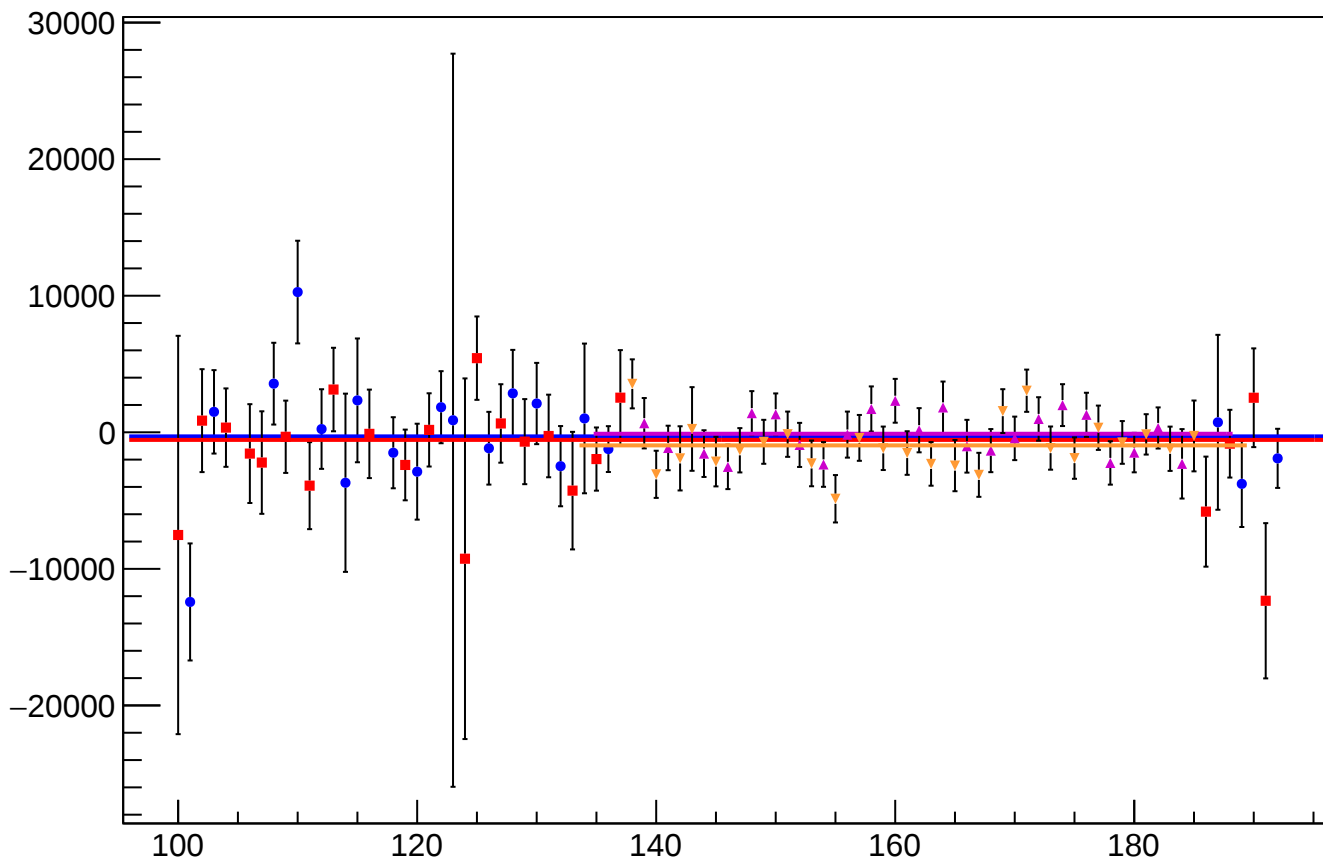
Right: 1758.568+/-0.689  $\chi^2/\text{NDF}$ : 65072.4/6

In: 1640.033+/-0.957  $\chi^2/\text{NDF}$ : 16932.8/2

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

All: 1758.568+/-0.689  $\chi^2/\text{NDF}$ : 65072.4/6

asym\_atl\_dd\_atr\_dd\_dd\_mean vs Slug, Sign Corrected



Right In: -299.705+/-689.666  $\chi^2/\text{NDF}$ : 24.4/19

Left Out: -958.410+/-339.496  $\chi^2/\text{NDF}$ : 28.5/24

Right Out: -557.077+/-677.689  $\chi^2/\text{NDF}$ : 17.0/22

Left In: -107.512+/-343.663  $\chi^2/\text{NDF}$ : 19.5/22

Left: -538.150+/-241.520  $\chi^2/\text{NDF}$ : 51.1/47

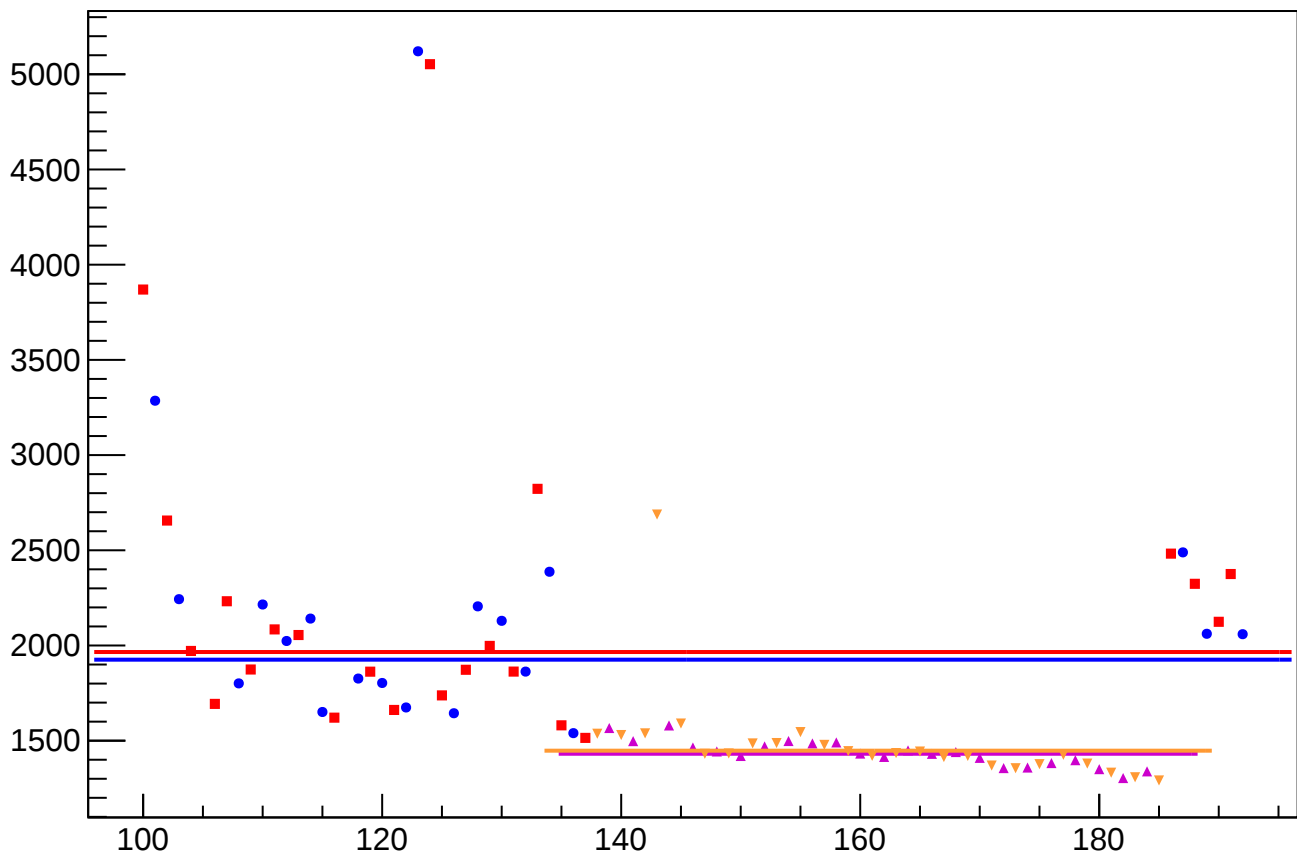
Right: -430.645+/-483.377  $\chi^2/\text{NDF}$ : 41.5/42

In: -145.742+/-307.590  $\chi^2/\text{NDF}$ : 43.9/42

Out: -877.896+/-303.538  $\chi^2/\text{NDF}$ : 45.8/47

All: -516.673+/-216.052  $\chi^2/\text{NDF}$ : 92.6/90

asym\_atl\_dd\_atr\_dd\_dd\_rms vs Slug, Sign Corrected



Right In: 1925.508 $\pm$ 0.488  $\chi^2$ /NDF: 496844.7/19

Left Out: 1447.554 $\pm$ 0.240  $\chi^2$ /NDF: 419254.7/24

Right Out: 1965.720 $\pm$ 0.479  $\chi^2$ /NDF: 563394.6/22

Left In: 1431.456 $\pm$ 0.243  $\chi^2$ /NDF: 75130.4/22

Left: 1439.603 $\pm$ 0.171  $\chi^2$ /NDF: 496606.4/47

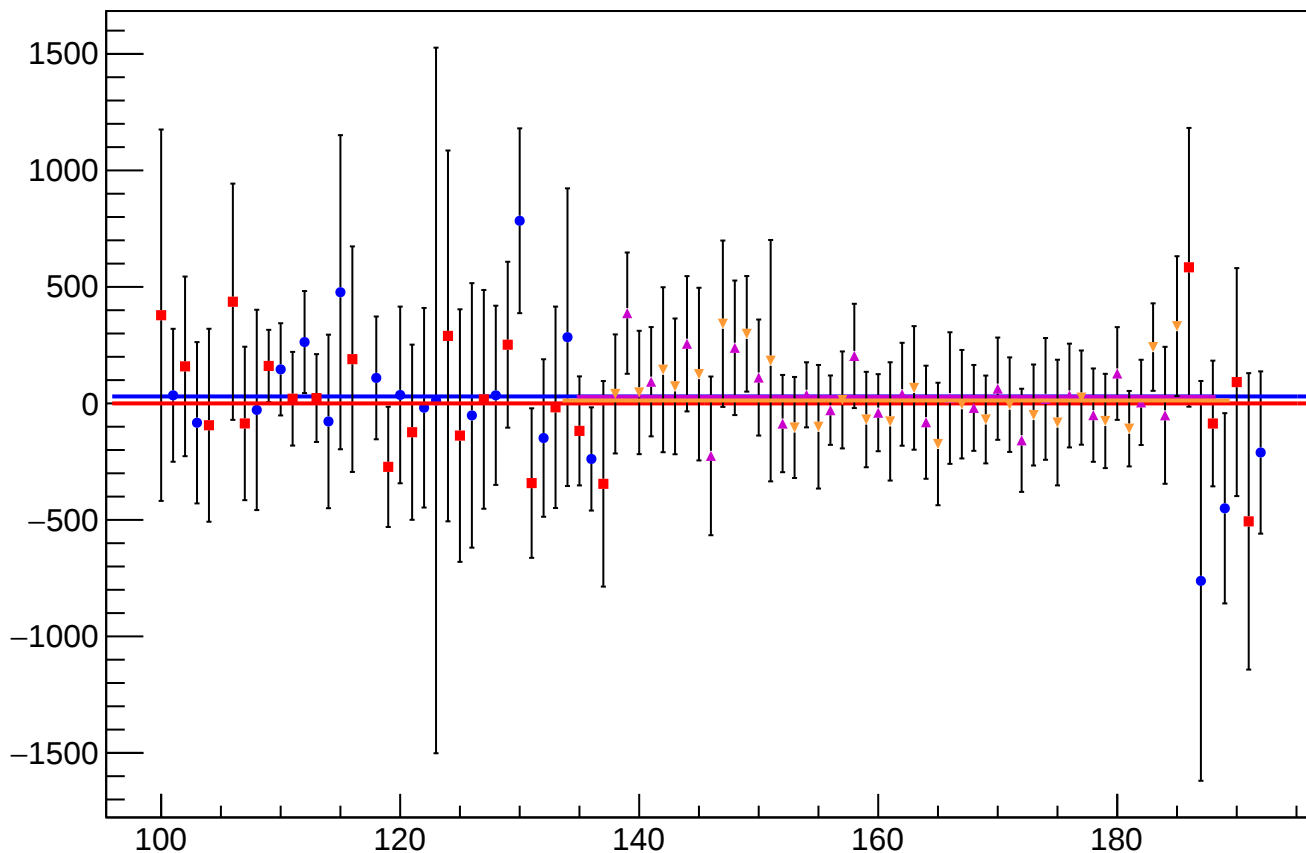
Right: 1945.966 $\pm$ 0.342  $\chi^2$ /NDF: 1063698.6/42

In: 1529.731 $\pm$ 0.217  $\chi^2$ /NDF: 1394182.5/42

Out: 1551.509 $\pm$ 0.215  $\chi^2$ /NDF: 1917346.0/47

All: 1540.764 $\pm$ 0.153  $\chi^2$ /NDF: 3316608.0/90

asym\_bcm\_an\_us\_bcm\_an\_ds\_agg\_avg\_mean vs Slug, Sign Corrected



Right In: 29.887 $\pm$ 76.141  $\chi^2$ /NDF: 10.5/19

Left Out: 12.618 $\pm$ 47.486  $\chi^2$ /NDF: 7.7/24

Right Out: -0.006 $\pm$ 66.350  $\chi^2$ /NDF: 8.2/22

Left In: 27.921 $\pm$ 44.523  $\chi^2$ /NDF: 6.5/22

Left: 20.762 $\pm$ 32.480  $\chi^2$ /NDF: 14.3/47

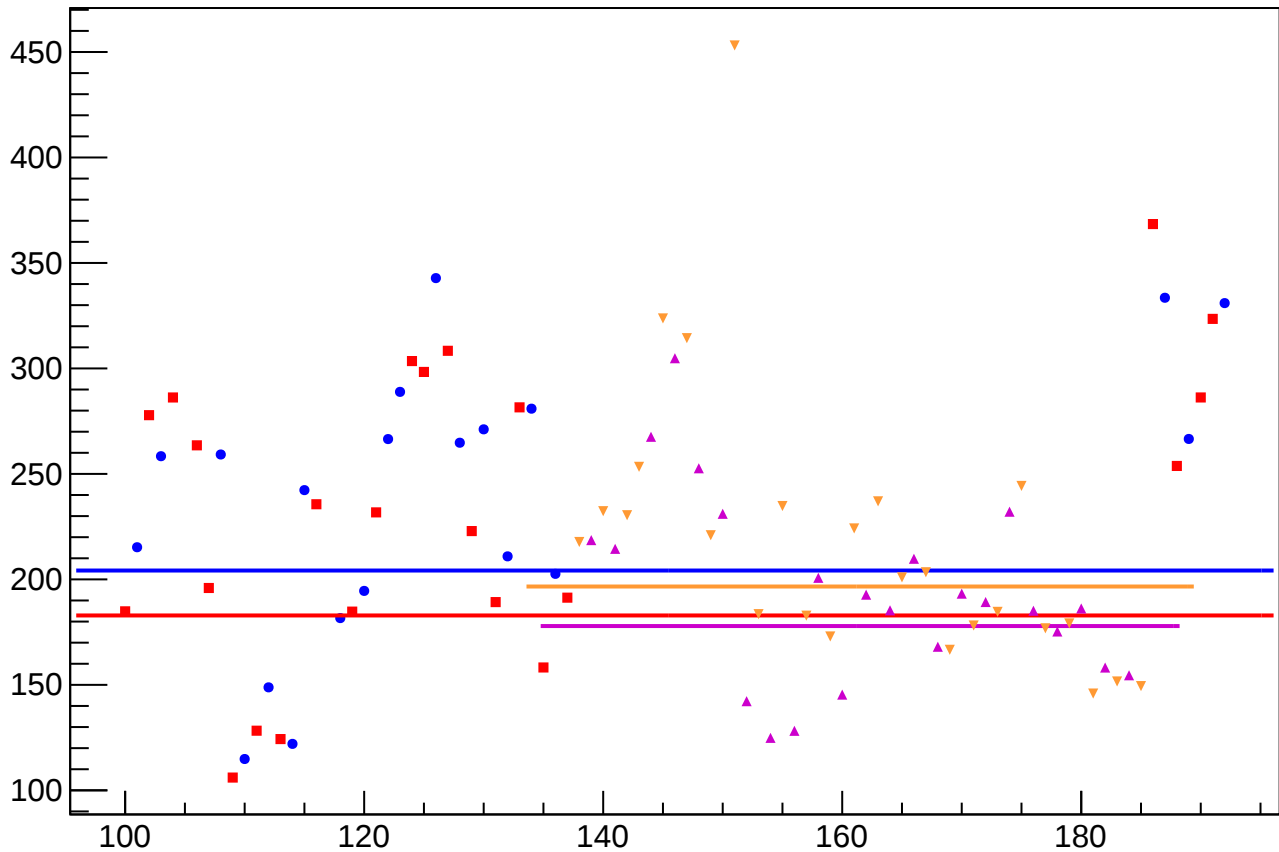
Right: 12.896 $\pm$ 50.022  $\chi^2$ /NDF: 18.7/42

In: 28.422 $\pm$ 38.435  $\chi^2$ /NDF: 17.0/42

Out: 8.342 $\pm$ 38.615  $\chi^2$ /NDF: 15.9/47

All: 18.429 $\pm$ 27.241  $\chi^2$ /NDF: 33.0/90

asym\_bcm\_an\_us\_bcm\_an\_ds\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 204.199 $\pm$ 0.054  $\chi^2$ /NDF: 1401474.3/19

Left Out: 196.620 $\pm$ 0.034  $\chi^2$ /NDF:1793507.9/24

Right Out: 182.899 $\pm$ 0.047  $\chi^2$ /NDF: 2139647.2/22

Left In: 177.878 $\pm$ 0.031  $\chi^2$ /NDF:1644086.7/22

Left: 186.646 $\pm$ 0.023  $\chi^2$ /NDF: 3603390.3/47

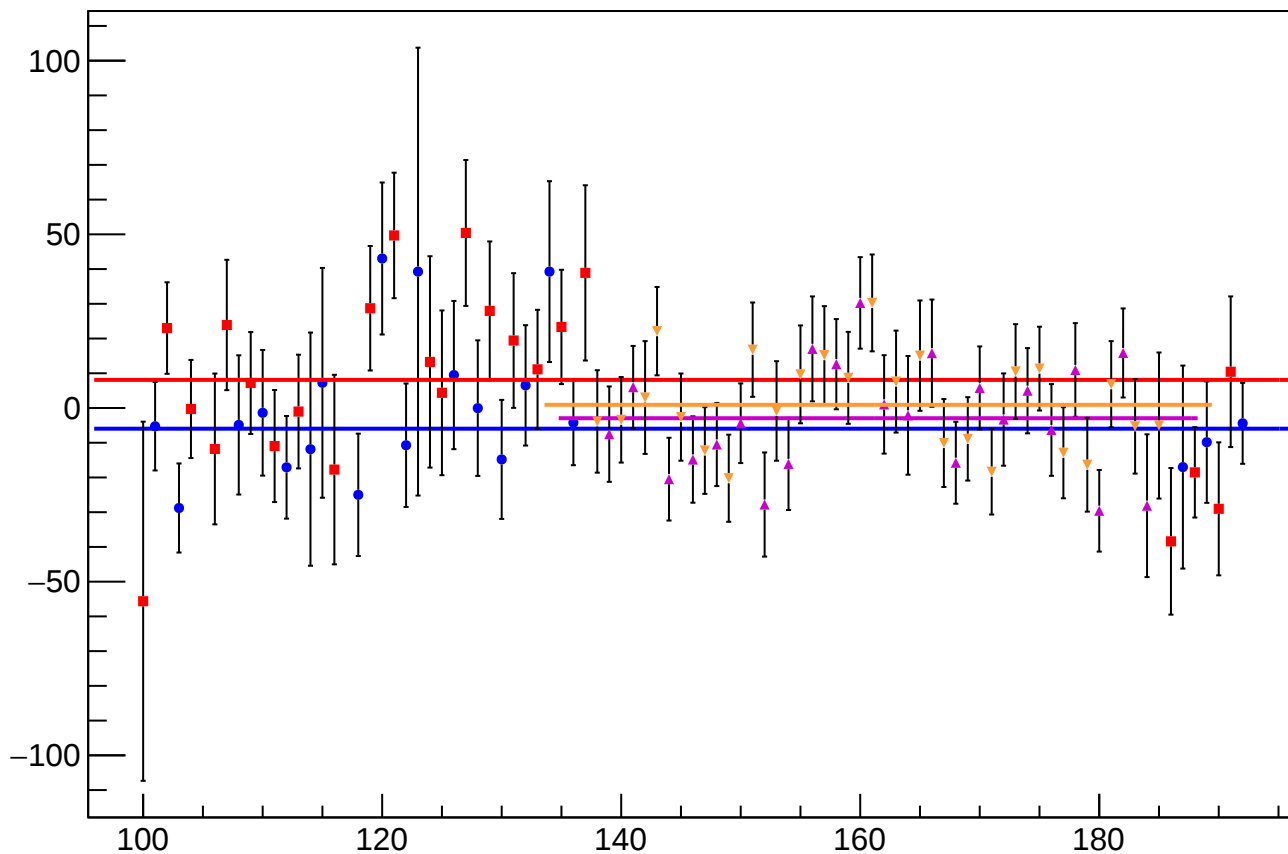
Right: 192.092 $\pm$ 0.035  $\chi^2$ /NDF: 3630081.8/42

In: 184.585 $\pm$ 0.027  $\chi^2$ /NDF:3223666.6/42

Out: 191.972 $\pm$ 0.027  $\chi^2$ /NDF:3989711.0/47

All: 188.261 $\pm$ 0.019  $\chi^2$ /NDF: 7250150.7/90

asym\_bcm\_an\_us\_bcm\_an\_ds\_agg\_dd\_mean vs Slug, Sign Corrected



Right In:  $-5.958 \pm 3.941$   $\chi^2/\text{NDF}$ : 15.4/19

Left Out:  $0.920 \pm 2.696$   $\chi^2/\text{NDF}$ : 24.0/24

Right Out:  $8.096 \pm 3.840$   $\chi^2/\text{NDF}$ : 34.6/22

Left In:  $-2.941 \pm 2.745$   $\chi^2/\text{NDF}$ : 31.0/22

Left:  $-0.976 \pm 1.923$   $\chi^2/\text{NDF}$ : 56.0/47

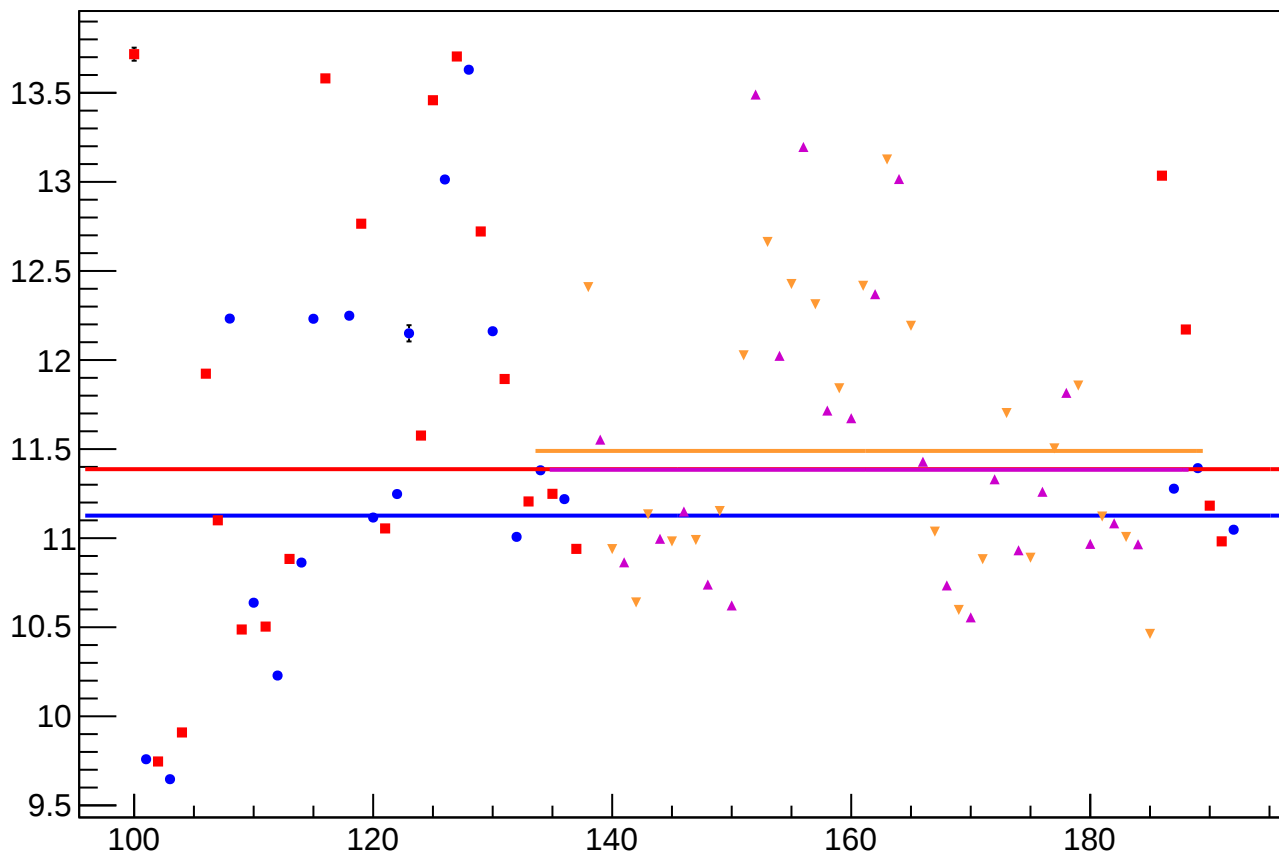
Right:  $1.252 \pm 2.750$   $\chi^2/\text{NDF}$ : 56.5/42

In:  $-3.927 \pm 2.252$   $\chi^2/\text{NDF}$ : 46.8/42

Out:  $3.289 \pm 2.206$   $\chi^2/\text{NDF}$ : 60.9/47

All:  $-0.244 \pm 1.576$   $\chi^2/\text{NDF}$ : 113.0/90

asym\_bcm\_an\_us\_bcm\_an\_ds\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 11.127+/-0.003  $\chi^2/\text{NDF}$ : 132570.2/19

Left Out: 11.490+/-0.002  $\chi^2/\text{NDF}$ :132399.1/24

Right Out: 11.387+/-0.003  $\chi^2/\text{NDF}$ : 170828.8/22

Left In: 11.384+/-0.002  $\chi^2/\text{NDF}$ :149799.6/22

Left: 11.438+/-0.001  $\chi^2/\text{NDF}$ : 283707.5/47

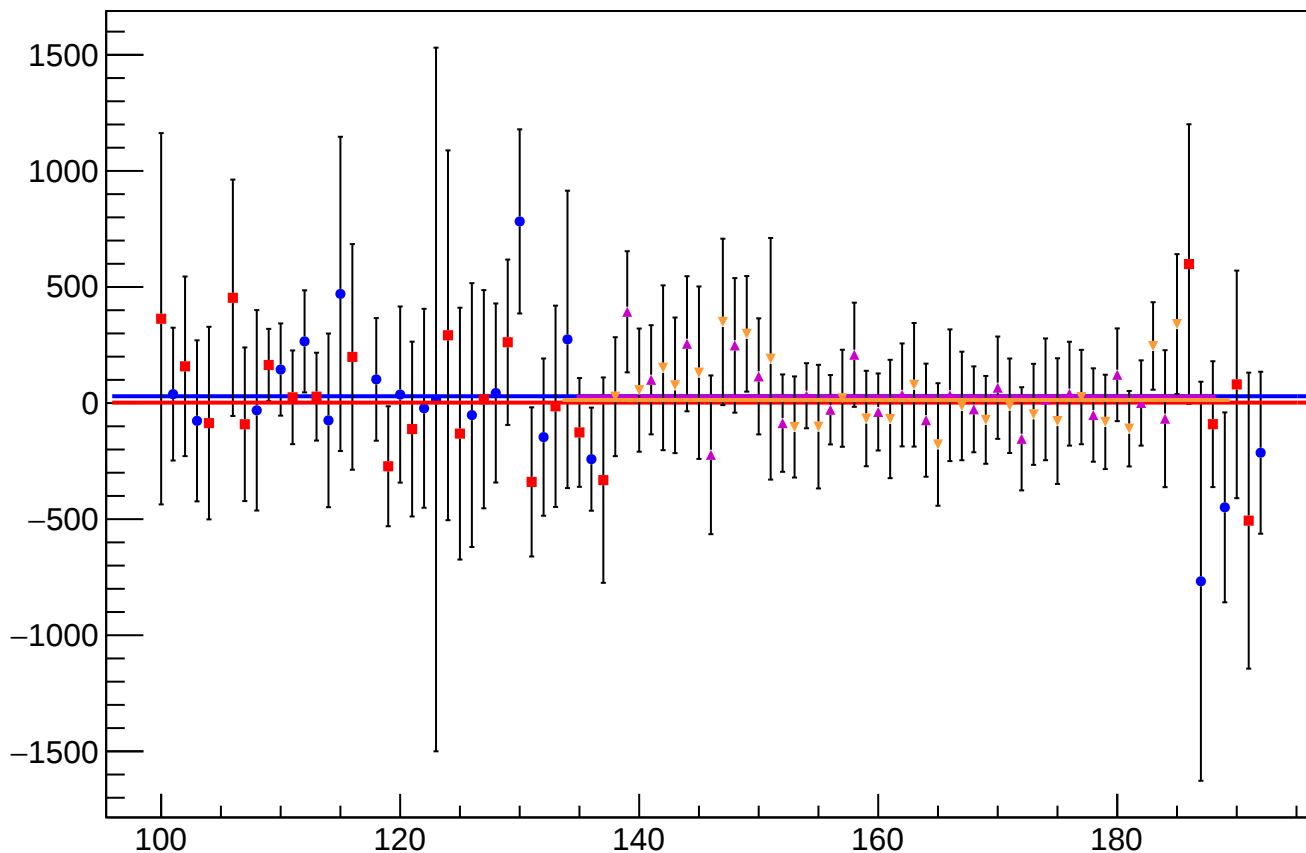
Right: 11.260+/-0.002  $\chi^2/\text{NDF}$ : 307888.3/42

In: 11.300+/-0.002  $\chi^2/\text{NDF}$ :288117.3/42

Out: 11.456+/-0.002  $\chi^2/\text{NDF}$ :304181.5/47

All: 11.380+/-0.001  $\chi^2/\text{NDF}$ : 597190.7/90

asym\_bcm\_an\_us\_bcm\_an\_ds3\_agg\_avg\_mean vs Slug, Sign Corrected



Right In: 29.425+/-76.337  $\chi^2/\text{NDF}$ : 10.4/19

Left Out: 13.323+/-47.662  $\chi^2/\text{NDF}$ : 7.9/24

Right Out: 2.040+/-66.553  $\chi^2/\text{NDF}$ : 8.3/22

Left In: 28.050+/-44.681  $\chi^2/\text{NDF}$ : 6.6/22

Left: 21.161+/-32.597  $\chi^2/\text{NDF}$ : 14.6/47

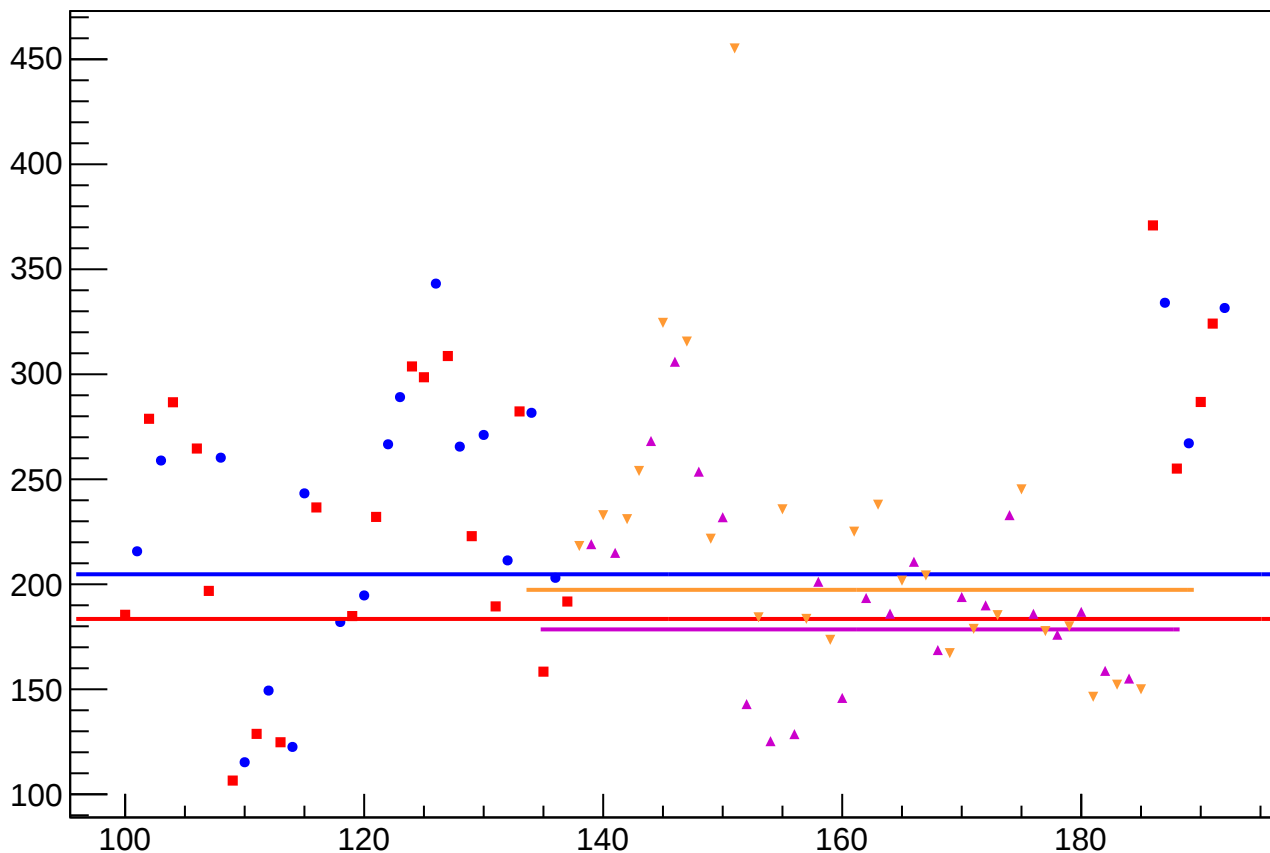
Right: 13.866+/-50.165  $\chi^2/\text{NDF}$ : 18.8/42

In: 28.401+/-38.561  $\chi^2/\text{NDF}$ : 17.1/42

Out: 9.498+/-38.750  $\chi^2/\text{NDF}$ : 16.2/47

All: 18.995+/-27.333  $\chi^2/\text{NDF}$ : 33.4/90

asym\_bcm\_an\_us\_bcm\_an\_ds3\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 204.766 $\pm$ 0.054  $\chi^2/\text{NDF}$ : 1395281.0/19

Left Out: 197.355 $\pm$ 0.034  $\chi^2/\text{NDF}$ :1790824.5/24

Right Out: 183.494 $\pm$ 0.047  $\chi^2/\text{NDF}$ : 2134462.8/22

Left In: 178.512 $\pm$ 0.032  $\chi^2/\text{NDF}$ :1642304.1/22

Left: 187.326 $\pm$ 0.023  $\chi^2/\text{NDF}$ : 3599509.2/47

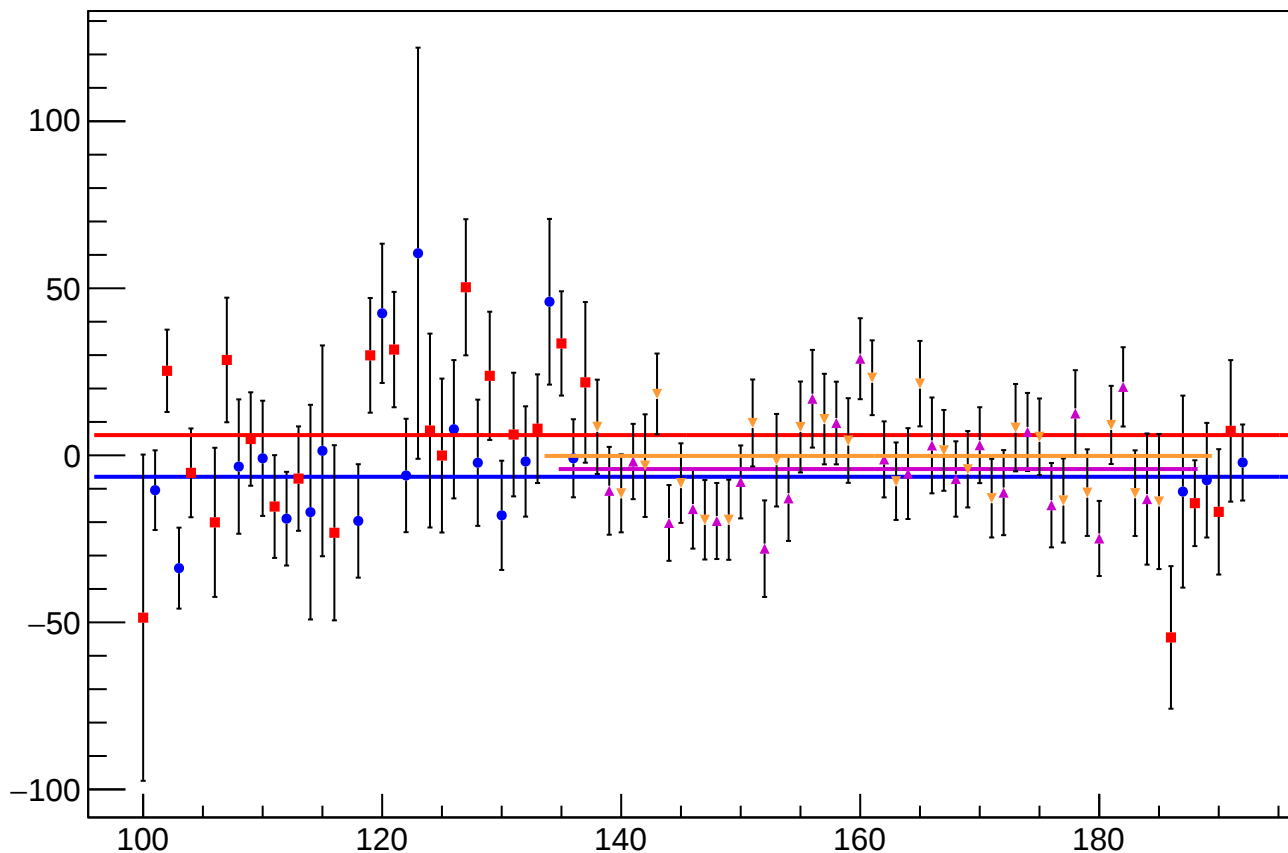
Right: 192.680 $\pm$ 0.035  $\chi^2/\text{NDF}$ : 3617985.0/42

In: 185.212 $\pm$ 0.027  $\chi^2/\text{NDF}$ :3213789.3/42

Out: 192.656 $\pm$ 0.027  $\chi^2/\text{NDF}$ :3982635.1/47

All: 188.916 $\pm$ 0.019  $\chi^2/\text{NDF}$ : 7233513.4/90

asym\_bcm\_an\_us\_bcm\_an\_ds3\_agg\_dd\_mean vs Slug, Sign Corrected



Right In:  $-6.422 \pm 3.778$   $\chi^2/\text{NDF}: 19.6/19$

Left Out:  $-0.170 \pm 2.520$   $\chi^2/\text{NDF}: 24.4/24$

Right Out:  $6.059 \pm 3.695$   $\chi^2/\text{NDF}: 36.5/22$

Left In:  $-4.107 \pm 2.577$   $\chi^2/\text{NDF}: 31.5/22$

Left:  $-2.095 \pm 1.802$   $\chi^2/\text{NDF}: 57.1/47$

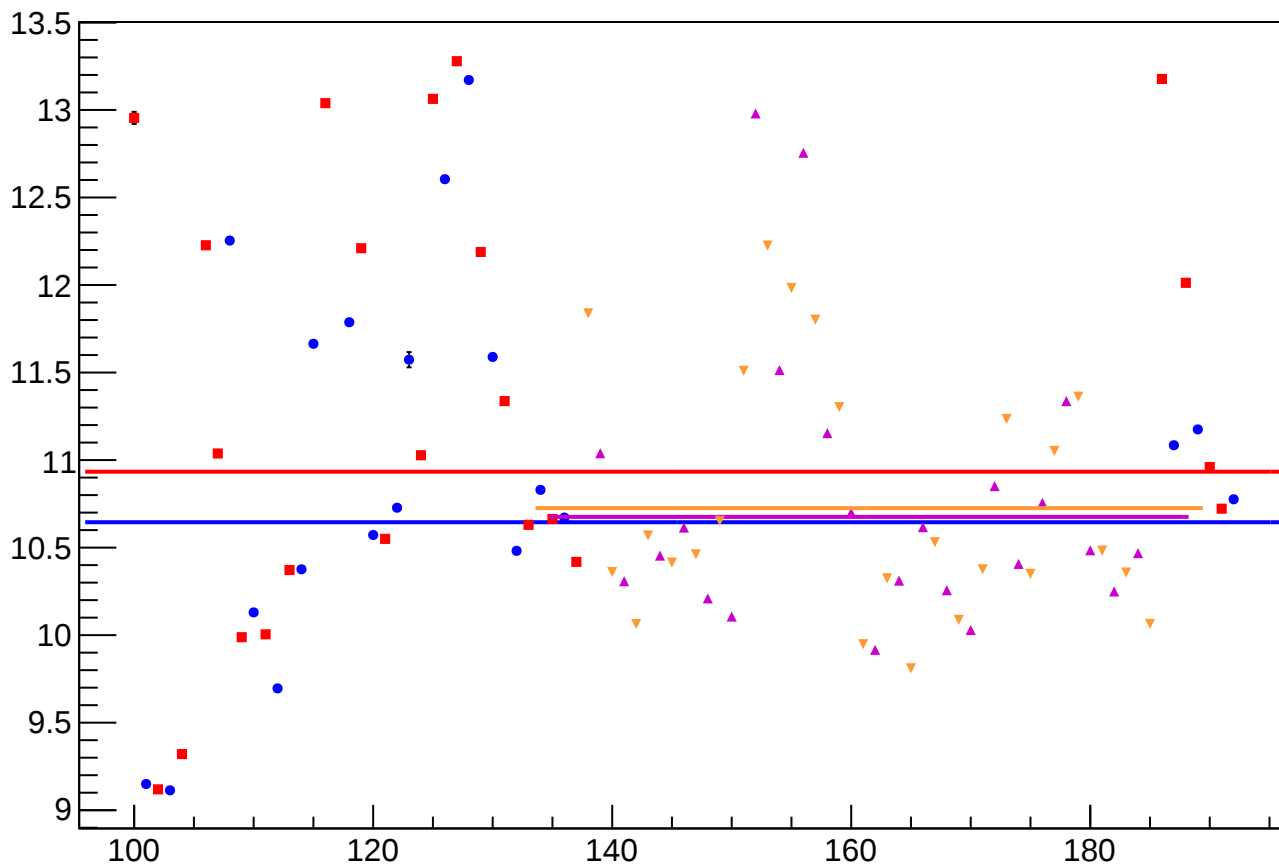
Right:  $-0.044 \pm 2.642$   $\chi^2/\text{NDF}: 61.6/42$

In:  $-4.842 \pm 2.129$   $\chi^2/\text{NDF}: 51.4/42$

Out:  $1.807 \pm 2.082$   $\chi^2/\text{NDF}: 62.8/47$

All:  $-1.443 \pm 1.489$   $\chi^2/\text{NDF}: 119.1/90$

asym\_bcm\_an\_us\_bcm\_an\_ds3\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 10.645 $\pm$ 0.003  $\chi^2$ /NDF: 162255.1/19

Left Out: 10.725 $\pm$ 0.002  $\chi^2$ /NDF:132170.8/24

Right Out: 10.934 $\pm$ 0.003  $\chi^2$ /NDF: 218686.8/22

Left In: 10.675 $\pm$ 0.002  $\chi^2$ /NDF:145938.2/22

Left: 10.701 $\pm$ 0.001  $\chi^2$ /NDF: 278494.3/47

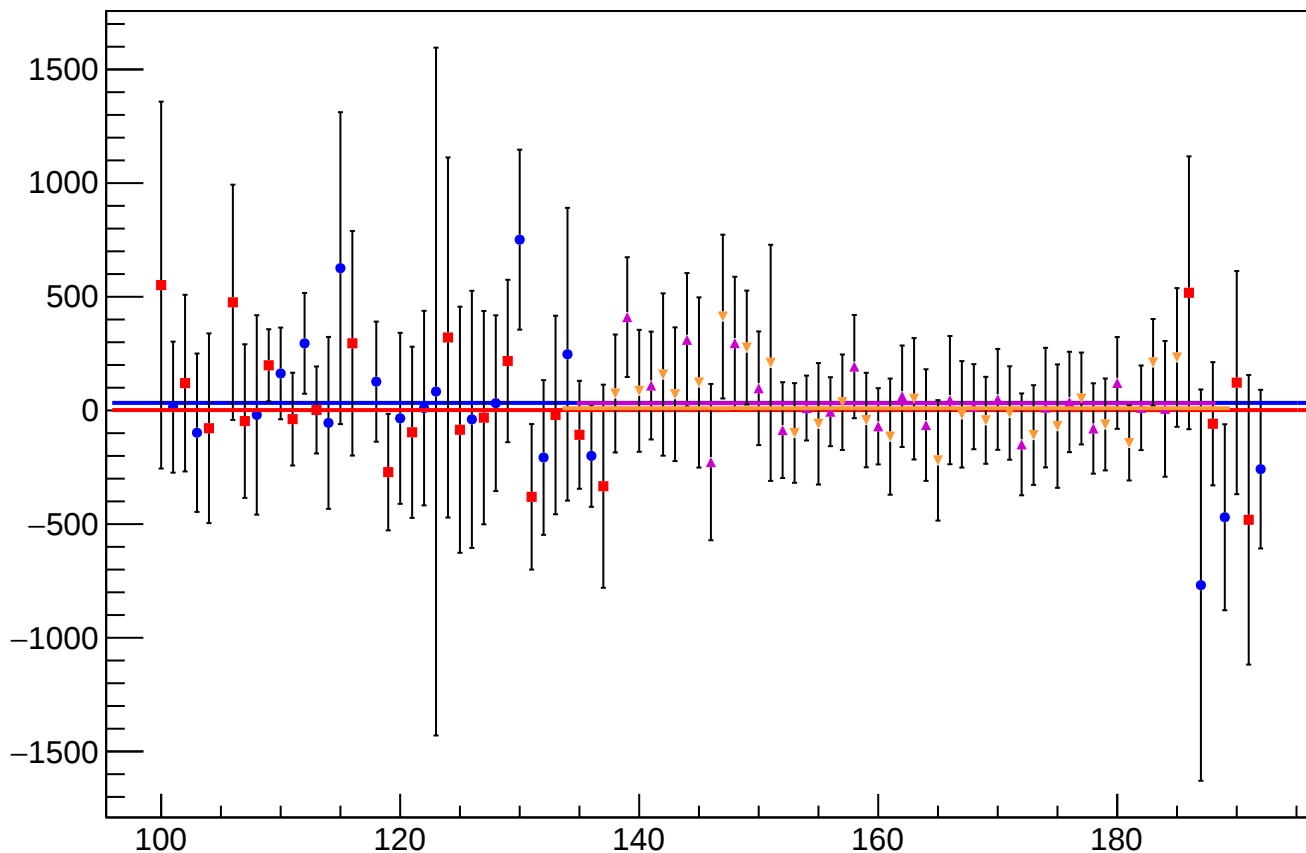
Right: 10.792 $\pm$ 0.002  $\chi^2$ /NDF: 386905.8/42

In: 10.666 $\pm$ 0.002  $\chi^2$ /NDF:308281.8/42

Out: 10.792 $\pm$ 0.001  $\chi^2$ /NDF:355187.3/47

All: 10.730 $\pm$ 0.001  $\chi^2$ /NDF: 667036.7/90

asym\_bcm\_dg\_us\_bcm\_an\_ds\_agg\_avg\_mean vs Slug, Sign Corrected



Right In: 33.267 $\pm$ 76.800  $\chi^2$ /NDF: 11.0/19

Left Out: 9.801 $\pm$ 47.979  $\chi^2$ /NDF: 7.5/24

Right Out: 1.666 $\pm$ 67.120  $\chi^2$ /NDF: 8.8/22

Left In: 31.989 $\pm$ 45.038  $\chi^2$ /NDF: 7.2/22

Left: 21.596 $\pm$ 32.837  $\chi^2$ /NDF: 14.8/47

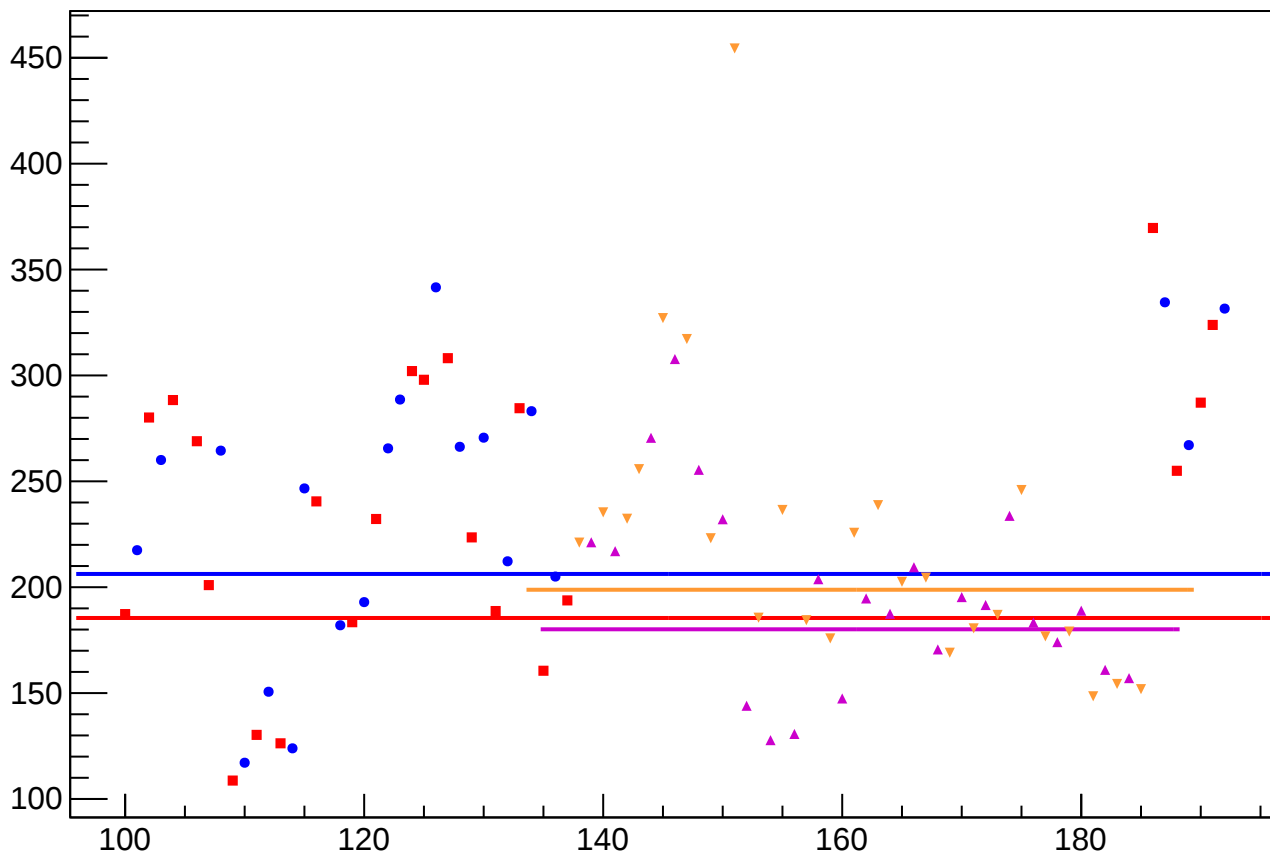
Right: 15.350 $\pm$ 50.539  $\chi^2$ /NDF: 19.9/42

In: 32.316 $\pm$ 38.851  $\chi^2$ /NDF: 18.2/42

Out: 7.050 $\pm$ 39.032  $\chi^2$ /NDF: 16.3/47

All: 19.742 $\pm$ 27.535  $\chi^2$ /NDF: 34.7/90

asym\_bcm\_dg\_us\_bcm\_an\_ds\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 206.257 $\pm$ 0.054  $\chi^2$ /NDF: 1359679.7/19

Left Out: 198.800 $\pm$ 0.034  $\chi^2$ /NDF:1763119.1/24

Right Out: 185.467 $\pm$ 0.047  $\chi^2$ /NDF: 2073712.0/22

Left In: 180.123 $\pm$ 0.032  $\chi^2$ /NDF:1593842.6/22

Left: 188.872 $\pm$ 0.023  $\chi^2$ /NDF: 3518071.9/47

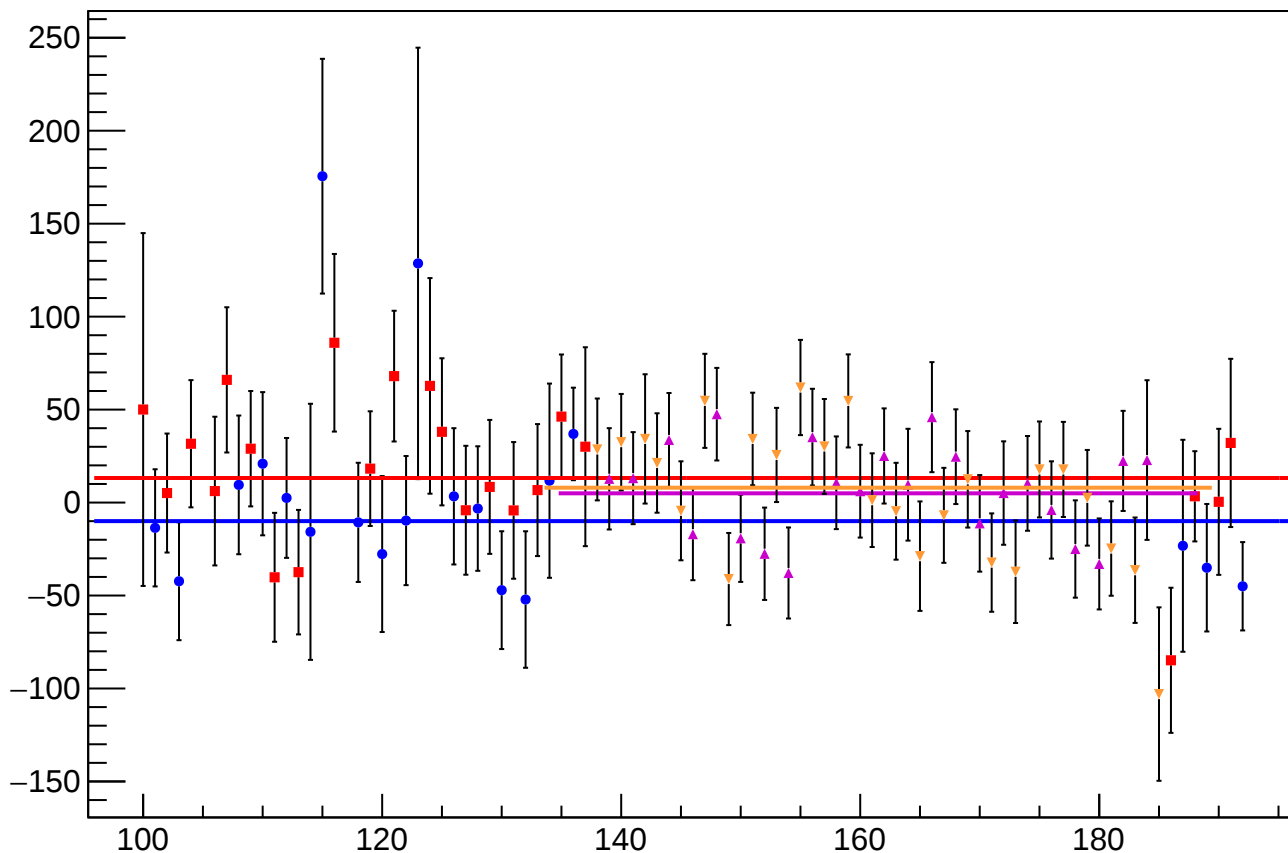
Right: 194.470 $\pm$ 0.036  $\chi^2$ /NDF: 3516485.1/42

In: 186.811 $\pm$ 0.027  $\chi^2$ /NDF:3125841.7/42

Out: 194.291 $\pm$ 0.028  $\chi^2$ /NDF:3889066.7/47

All: 190.533 $\pm$ 0.019  $\chi^2$ /NDF: 7051809.5/90

asym\_bcm\_dg\_us\_bcm\_an\_ds\_agg\_dd\_mean vs Slug, Sign Corrected



Right In:  $-9.977 \pm 8.019$   $\chi^2/\text{NDF}: 21.7/19$

Left Out:  $7.990 \pm 5.327$   $\chi^2/\text{NDF}: 37.4/24$

Right Out:  $13.216 \pm 7.648$   $\chi^2/\text{NDF}: 21.5/22$

Left In:  $4.973 \pm 5.444$   $\chi^2/\text{NDF}: 20.5/22$

Left:  $6.514 \pm 3.808$   $\chi^2/\text{NDF}: 58.0/47$

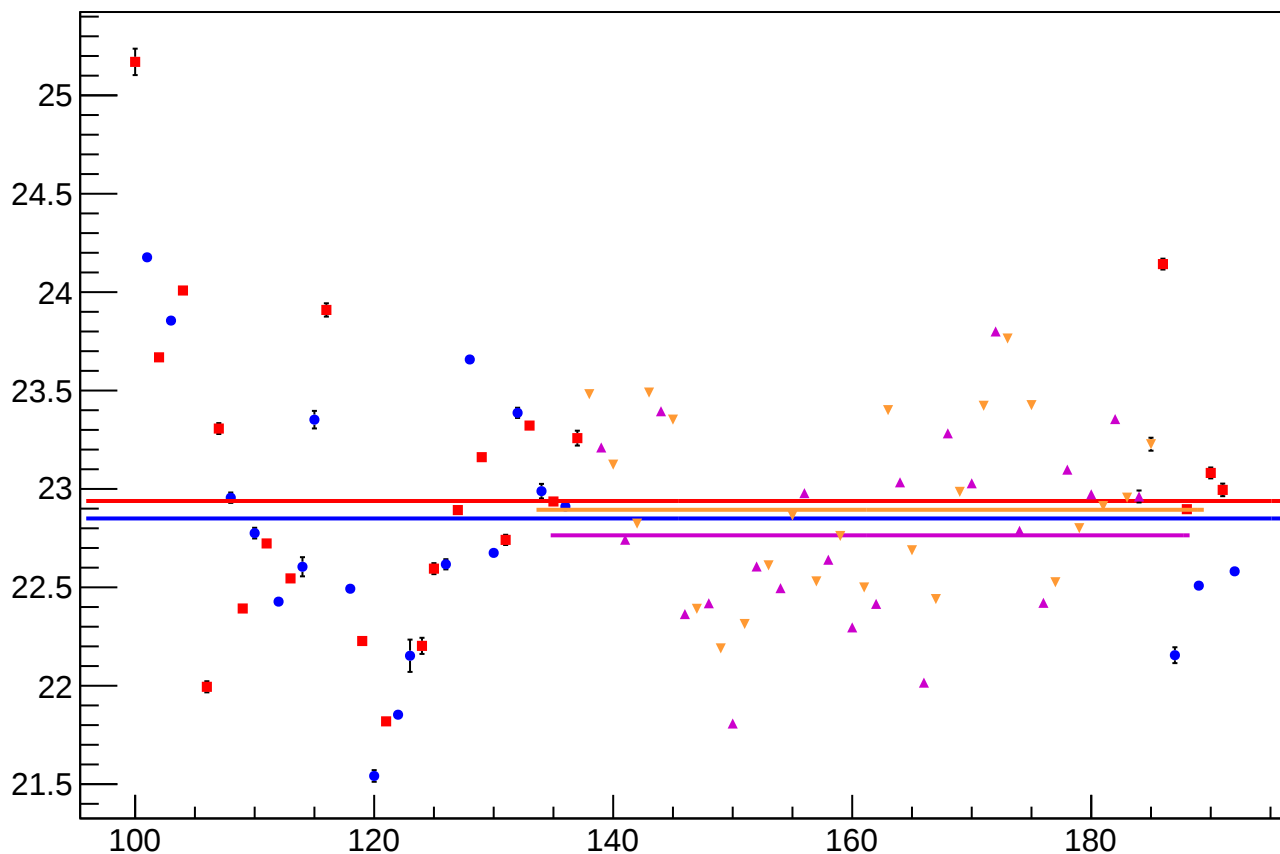
Right:  $2.167 \pm 5.534$   $\chi^2/\text{NDF}: 47.6/42$

In:  $0.256 \pm 4.504$   $\chi^2/\text{NDF}: 44.6/42$

Out:  $9.697 \pm 4.371$   $\chi^2/\text{NDF}: 59.3/47$

All:  $5.118 \pm 3.137$   $\chi^2/\text{NDF}: 106.1/90$

asym\_bcm\_dg\_us\_bcm\_an\_ds\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 22.850+/-0.006  $\chi^2/\text{NDF}$ : 12504.2/19

Left Out: 22.894+/-0.004  $\chi^2/\text{NDF}$ : 13070.5/24

Right Out: 22.939+/-0.005  $\chi^2/\text{NDF}$ : 13140.5/22

Left In: 22.764+/-0.004  $\chi^2/\text{NDF}$ : 14665.7/22

Left: 22.831+/-0.003  $\chi^2/\text{NDF}$ : 28317.3/47

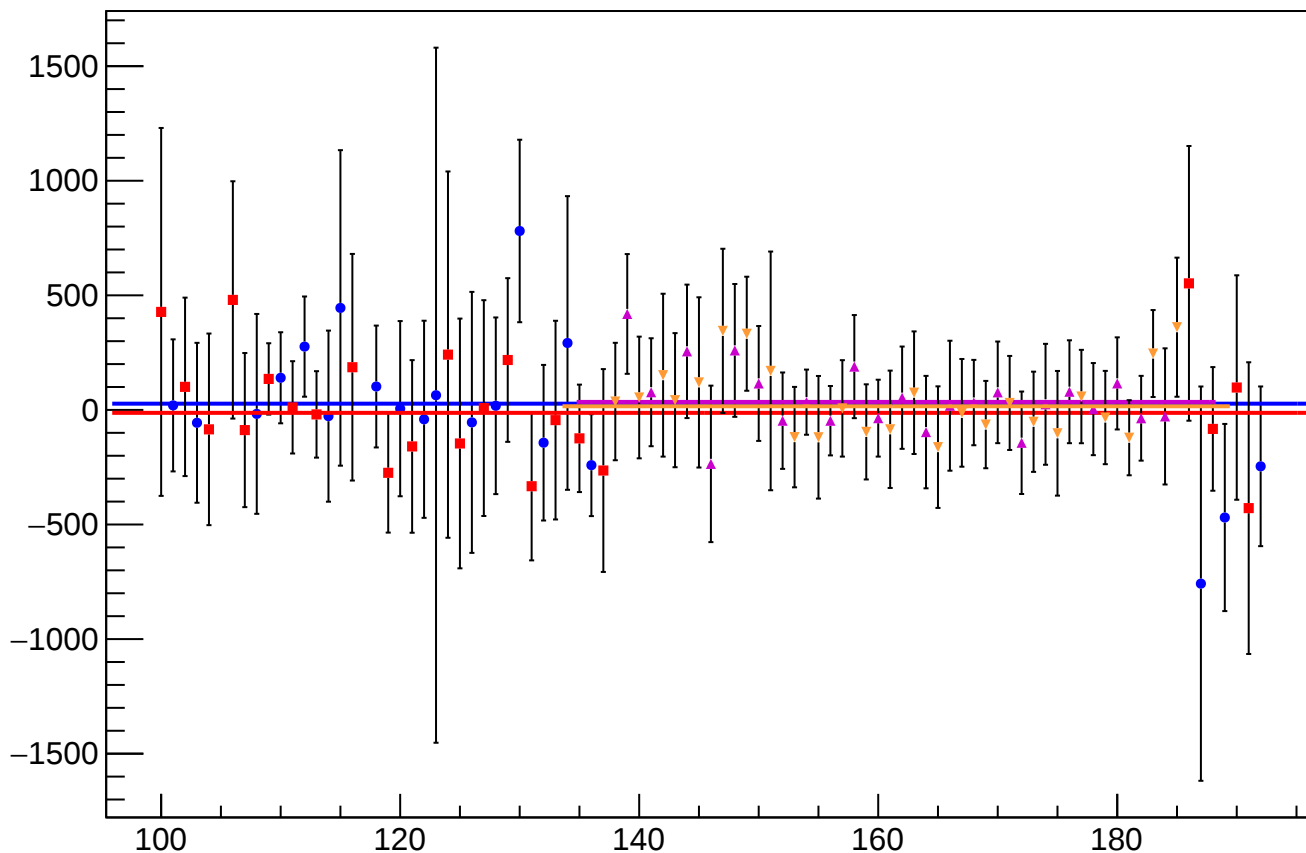
Right: 22.896+/-0.004  $\chi^2/\text{NDF}$ : 25773.1/42

In: 22.791+/-0.003  $\chi^2/\text{NDF}$ : 27326.3/42

Out: 22.909+/-0.003  $\chi^2/\text{NDF}$ : 26256.9/47

All: 22.852+/-0.002  $\chi^2/\text{NDF}$ : 54282.7/90

asym\_bcm\_dg\_ds\_bcm\_an\_ds\_agg\_avg\_mean vs Slug, Sign Corrected



Right In: 27.273+/-76.483  $\chi^2/\text{NDF}$ : 10.6/19

Left Out: 15.904+/-47.898  $\chi^2/\text{NDF}$ : 8.4/24

Right Out: -12.788+/-66.675  $\chi^2/\text{NDF}$ : 7.2/22

Left In: 34.919+/-44.971  $\chi^2/\text{NDF}$ : 6.6/22

Left: 26.010+/-32.785  $\chi^2/\text{NDF}$ : 15.1/47

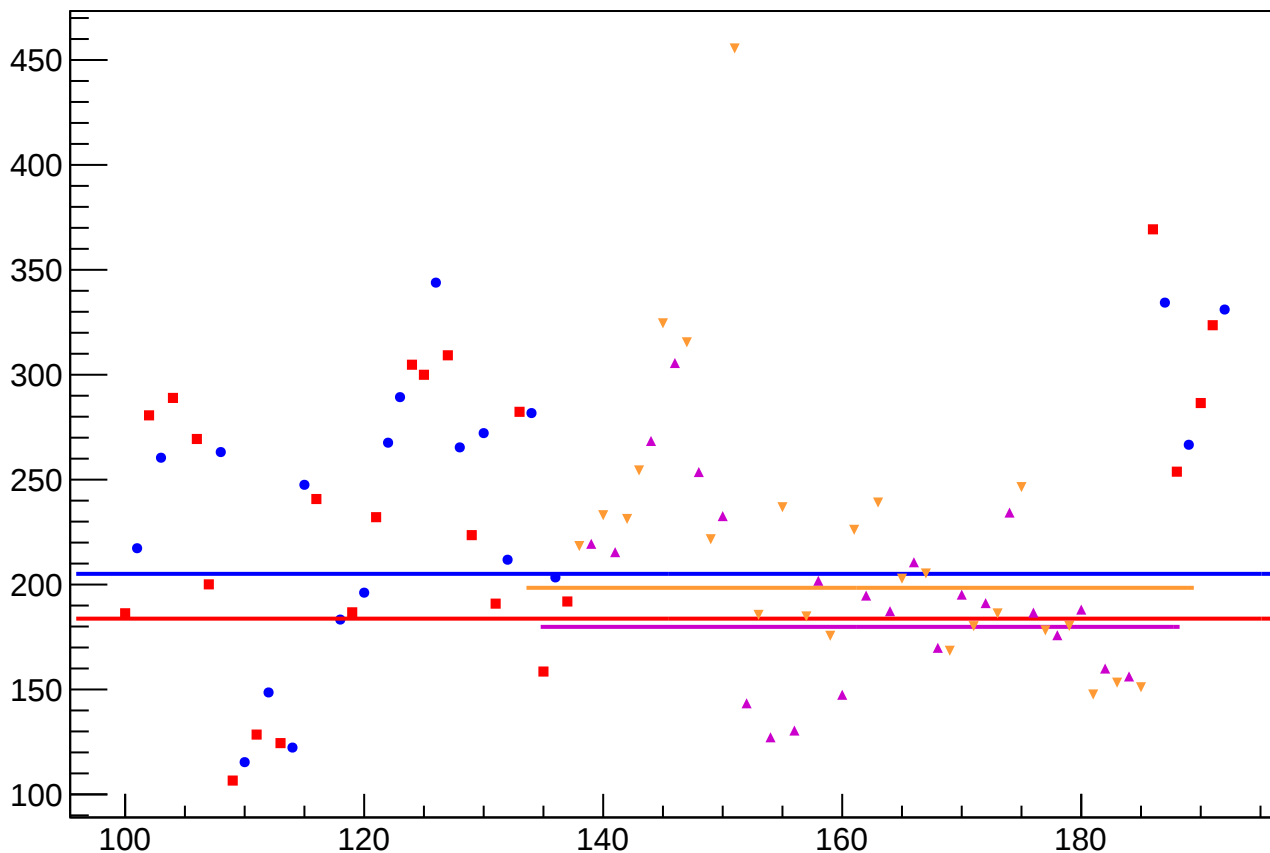
Right: 4.511+/-50.259  $\chi^2/\text{NDF}$ : 17.9/42

In: 32.954+/-38.766  $\chi^2/\text{NDF}$ : 17.2/42

Out: 6.137+/-38.901  $\chi^2/\text{NDF}$ : 15.7/47

All: 19.592+/-27.459  $\chi^2/\text{NDF}$ : 33.1/90

asym\_bcm\_dg\_ds\_bcm\_an\_ds\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 205.107 $\pm$ 0.054  $\chi^2$ /NDF: 1406139.2/19

Left Out: 198.450 $\pm$ 0.034  $\chi^2$ /NDF:1761433.9/24

Right Out: 183.758 $\pm$ 0.047  $\chi^2$ /NDF: 2152849.4/22

Left In: 179.839 $\pm$ 0.032  $\chi^2$ /NDF:1588834.3/22

Left: 188.558 $\pm$ 0.023  $\chi^2$ /NDF: 3510745.5/47

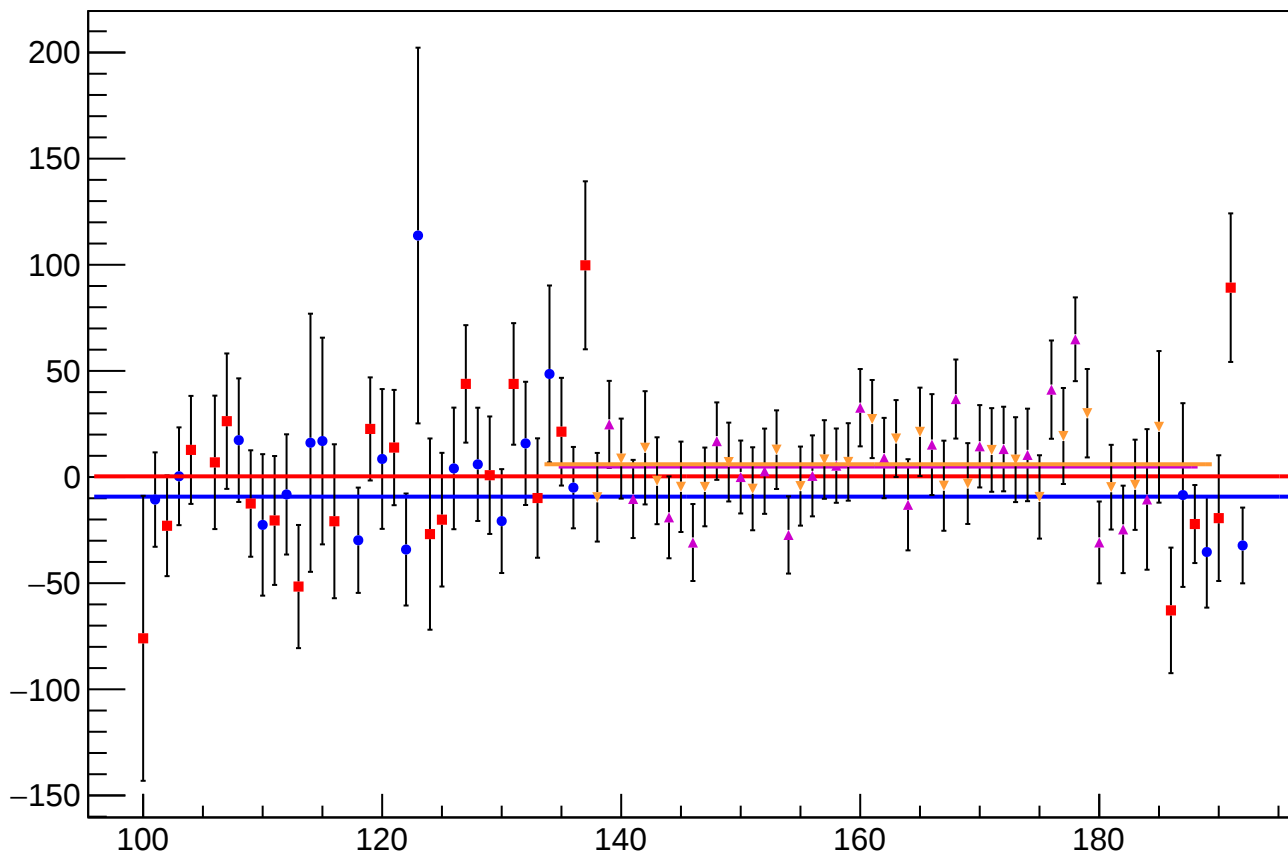
Right: 192.977 $\pm$ 0.036  $\chi^2$ /NDF: 3647524.7/42

In: 186.330 $\pm$ 0.027  $\chi^2$ /NDF:3157180.7/42

Out: 193.449 $\pm$ 0.028  $\chi^2$ /NDF:3978332.3/47

All: 189.877 $\pm$ 0.019  $\chi^2$ /NDF: 7169113.5/90

asym\_bcm\_dg\_ds\_bcm\_an\_ds\_agg\_dd\_mean vs Slug, Sign Corrected



Right In:  $-9.234 \pm 6.208$   $\chi^2/\text{NDF}$ : 11.6/19

Left Out:  $6.020 \pm 4.017$   $\chi^2/\text{NDF}$ : 8.1/24

Right Out:  $0.331 \pm 5.970$   $\chi^2/\text{NDF}$ : 34.2/22

Left In:  $4.943 \pm 4.108$   $\chi^2/\text{NDF}$ : 34.8/22

Left:  $5.494 \pm 2.872$   $\chi^2/\text{NDF}$ : 43.0/47

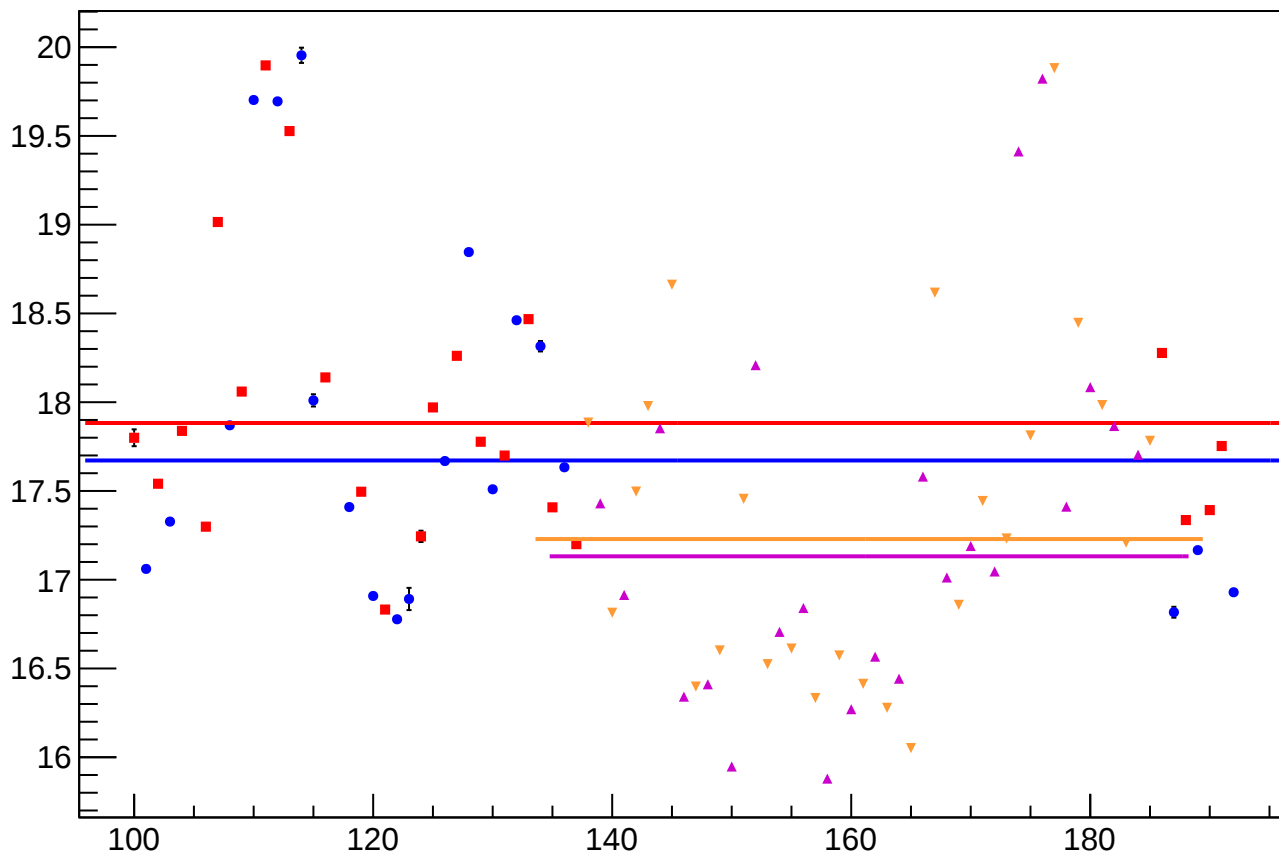
Right:  $-4.264 \pm 4.303$   $\chi^2/\text{NDF}$ : 47.0/42

In:  $0.627 \pm 3.426$   $\chi^2/\text{NDF}$ : 50.0/42

Out:  $4.247 \pm 3.333$   $\chi^2/\text{NDF}$ : 43.0/47

All:  $2.487 \pm 2.389$   $\chi^2/\text{NDF}$ : 93.6/90

asym\_bcm\_dg\_ds\_bcm\_an\_ds\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 17.672 $\pm$ 0.004  $\chi^2$ /NDF: 37254.9/19

Left Out: 17.229 $\pm$ 0.003  $\chi^2$ /NDF:98624.7/24

Right Out: 17.883 $\pm$ 0.004  $\chi^2$ /NDF: 28331.5/22

Left In: 17.132 $\pm$ 0.003  $\chi^2$ /NDF:103997.3/22

Left: 17.182 $\pm$ 0.002  $\chi^2$ /NDF: 203195.4/47

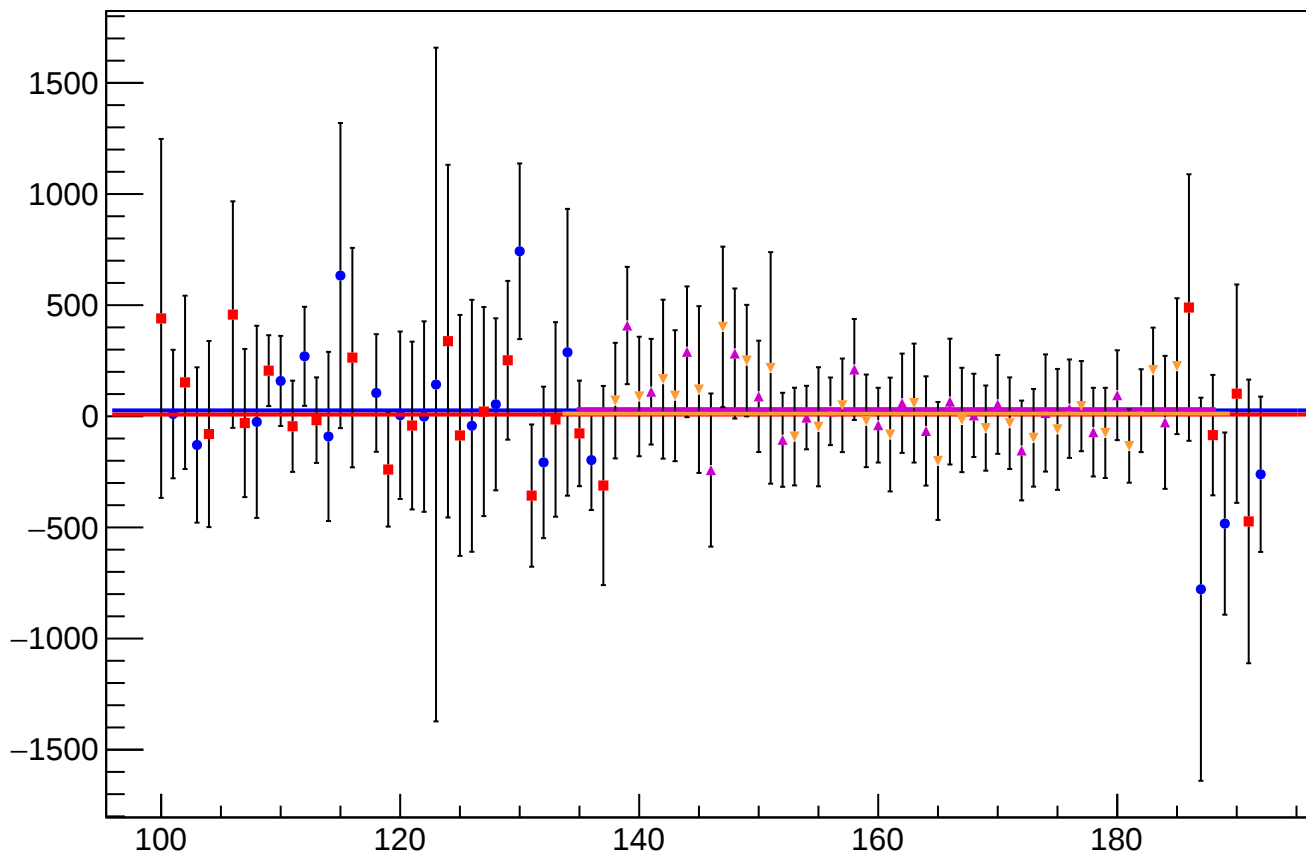
Right: 17.781 $\pm$ 0.003  $\chi^2$ /NDF: 66788.3/42

In: 17.296 $\pm$ 0.002  $\chi^2$ /NDF:151773.3/42

Out: 17.433 $\pm$ 0.002  $\chi^2$ /NDF:143466.5/47

All: 17.366 $\pm$ 0.002  $\chi^2$ /NDF: 296875.3/90

asym\_bcm\_dg\_us\_bcm\_an\_us\_agg\_avg\_mean vs Slug, Sign Corrected



Right In: 26.495+/-76.986  $\chi^2/\text{NDF}$ : 10.8/19

Left Out: 12.474+/-48.086  $\chi^2/\text{NDF}$ : 6.8/24

Right Out: 7.808+/-67.255  $\chi^2/\text{NDF}$ : 8.1/22

Left In: 32.159+/-45.131  $\chi^2/\text{NDF}$ : 6.9/22

Left: 22.940+/-32.908  $\chi^2/\text{NDF}$ : 13.9/47

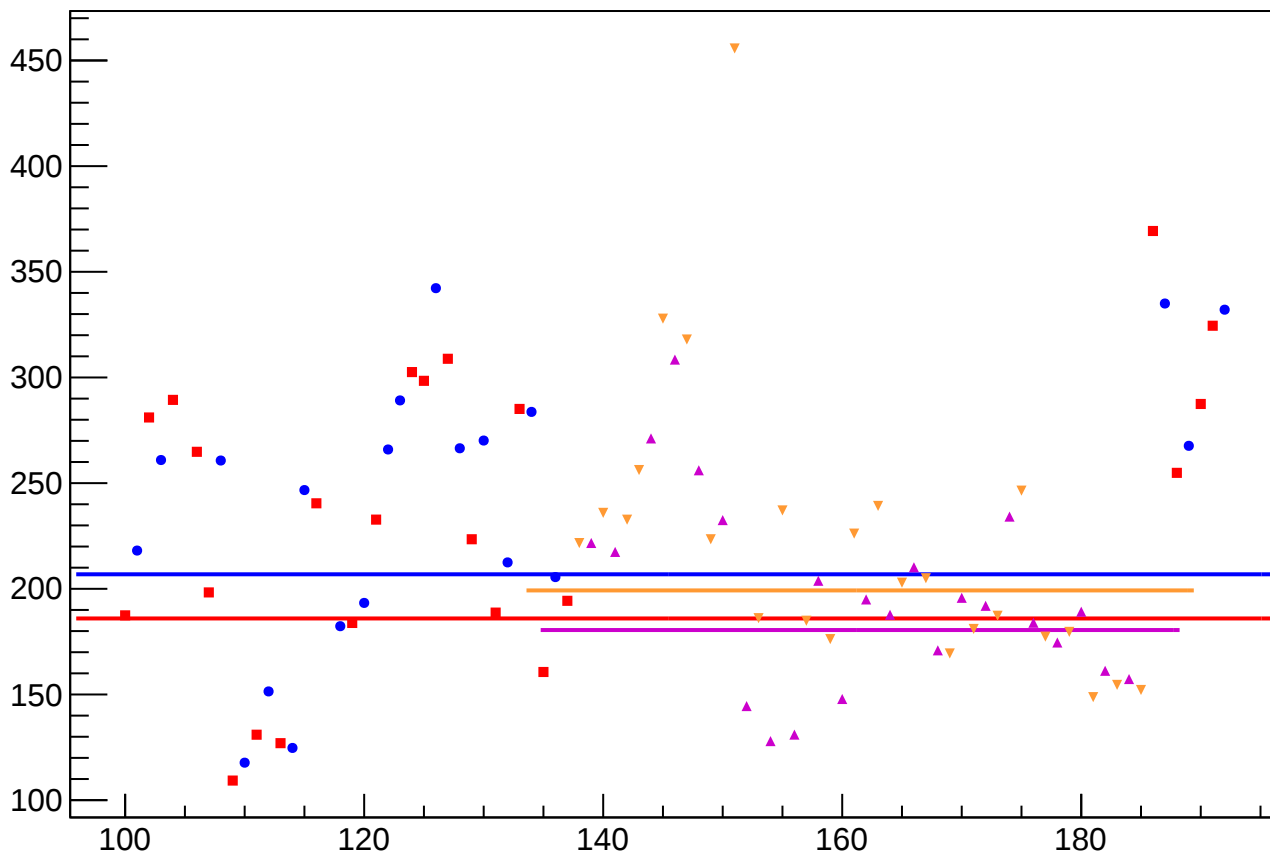
Right: 15.896+/-50.650  $\chi^2/\text{NDF}$ : 18.9/42

In: 30.711+/-38.934  $\chi^2/\text{NDF}$ : 17.8/42

Out: 10.896+/-39.116  $\chi^2/\text{NDF}$ : 14.9/47

All: 20.850+/-27.595  $\chi^2/\text{NDF}$ : 32.8/90

asym\_bcm\_dg\_us\_bcm\_an\_us\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 206.869 $\pm$ 0.054  $\chi^2$ /NDF: 1342898.7/19

Left Out: 199.241 $\pm$ 0.034  $\chi^2$ /NDF:1764097.7/24

Right Out: 185.971 $\pm$ 0.048  $\chi^2$ /NDF: 2051457.5/22

Left In: 180.494 $\pm$ 0.032  $\chi^2$ /NDF:1593784.1/22

Left: 189.274 $\pm$ 0.023  $\chi^2$ /NDF: 3519511.1/47

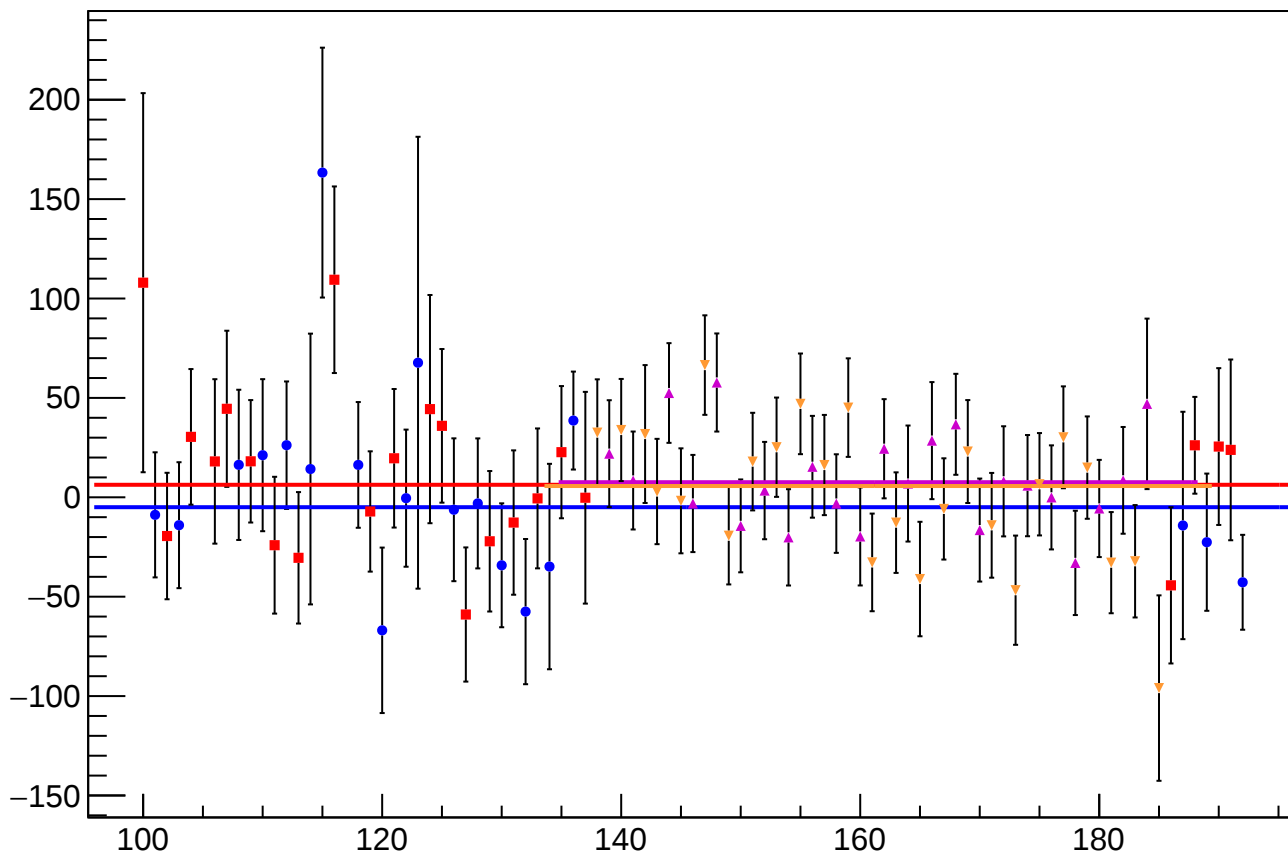
Right: 195.017 $\pm$ 0.036  $\chi^2$ /NDF: 3477941.6/42

In: 187.240 $\pm$ 0.028  $\chi^2$ /NDF:3111398.2/42

Out: 194.752 $\pm$ 0.028  $\chi^2$ /NDF:3867077.9/47

All: 190.978 $\pm$ 0.020  $\chi^2$ /NDF: 7015534.8/90

asym\_bcm\_dg\_us\_bcm\_an\_us\_agg\_dd\_mean vs Slug, Sign Corrected



Right In: -4.979+/-7.971  $\chi^2/\text{NDF}$ : 21.4/19

Left Out: 5.673+/-5.278  $\chi^2/\text{NDF}$ :36.4/24

Right Out: 6.294+/-7.601  $\chi^2/\text{NDF}$ : 19.4/22

Left In: 7.594+/-5.402  $\chi^2/\text{NDF}$ :18.3/22

Left: 6.611+/-3.775  $\chi^2/\text{NDF}$ : 54.8/47

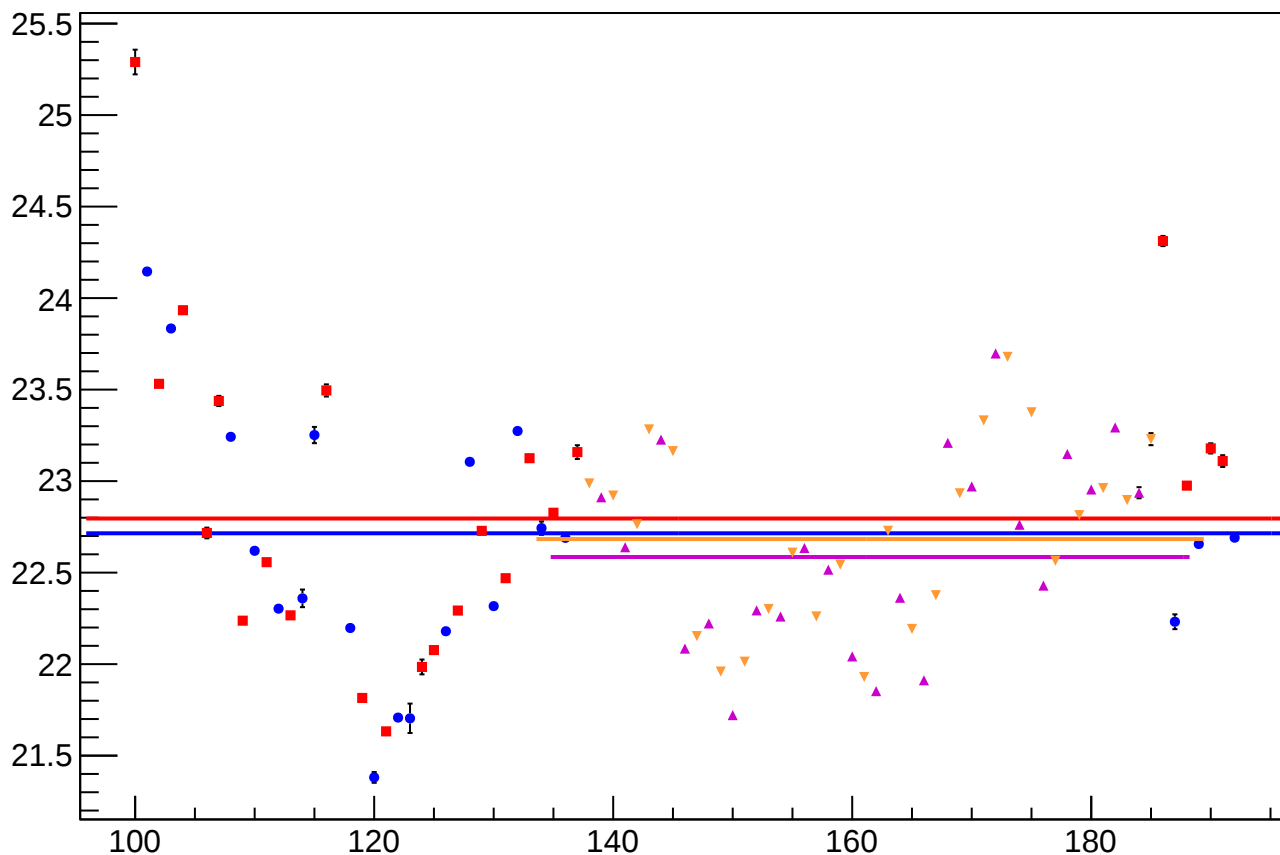
Right: 0.926+/-5.501  $\chi^2/\text{NDF}$ : 41.8/42

In: 3.637+/-4.472  $\chi^2/\text{NDF}$ :41.4/42

Out: 5.875+/-4.335  $\chi^2/\text{NDF}$ :55.8/47

All: 4.791+/-3.113  $\chi^2/\text{NDF}$ : 97.3/90

asym\_bcm\_dg\_us\_bcm\_an\_us\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 22.715+/-0.006  $\chi^2/\text{NDF}$ : 13689.8/19

Left Out: 22.683+/-0.004  $\chi^2/\text{NDF}$ : 16318.1/24

Right Out: 22.796+/-0.005  $\chi^2/\text{NDF}$ : 16587.6/22

Left In: 22.585+/-0.004  $\chi^2/\text{NDF}$ : 18087.5/22

Left: 22.635+/-0.003  $\chi^2/\text{NDF}$ : 34743.7/47

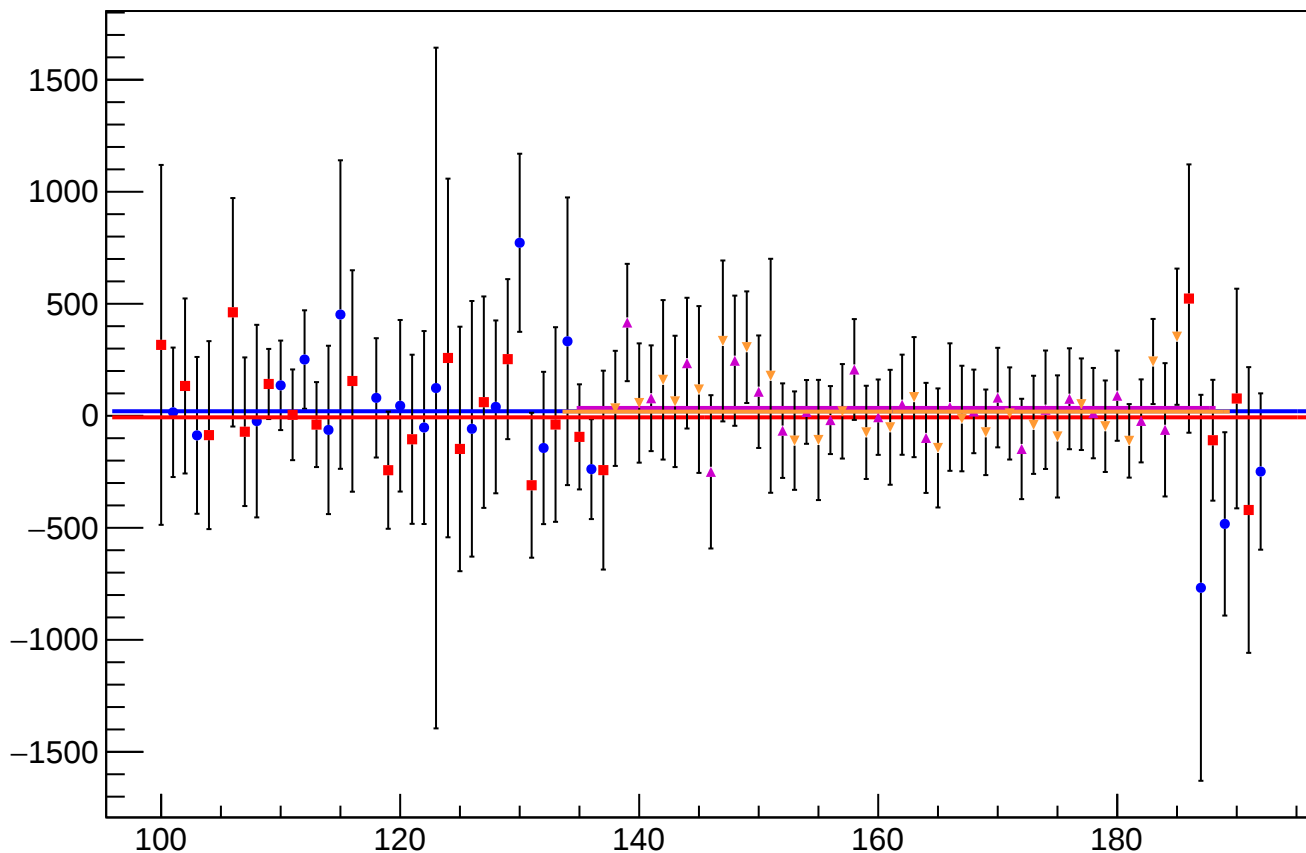
Right: 22.757+/-0.004  $\chi^2/\text{NDF}$ : 30385.0/42

In: 22.626+/-0.003  $\chi^2/\text{NDF}$ : 32140.1/42

Out: 22.720+/-0.003  $\chi^2/\text{NDF}$ : 33200.0/47

All: 22.674+/-0.002  $\chi^2/\text{NDF}$ : 65794.7/90

asym\_bcm\_dg\_ds\_bcm\_an\_us\_agg\_avg\_mean vs Slug, Sign Corrected



Right In: 20.334 $\pm$ 76.671  $\chi^2$ /NDF: 10.4/19

Left Out: 18.633 $\pm$ 48.006  $\chi^2$ /NDF:7.6/24

Right Out: -6.809 $\pm$ 66.814  $\chi^2$ /NDF: 6.5/22

Left In: 35.046 $\pm$ 45.063  $\chi^2$ /NDF:6.3/22

Left: 27.358 $\pm$ 32.855  $\chi^2$ /NDF: 13.9/47

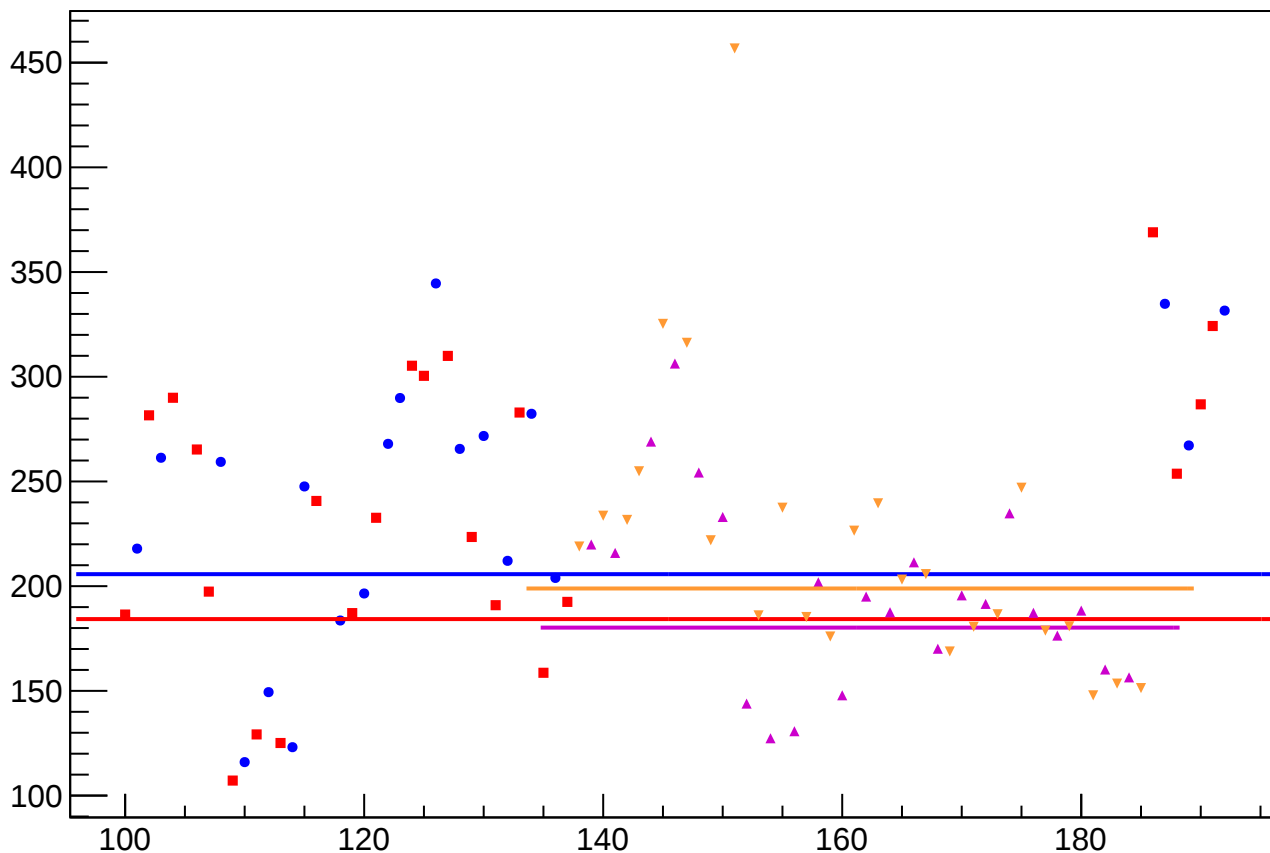
Right: 4.907 $\pm$ 50.372  $\chi^2$ /NDF: 17.0/42

In: 31.269 $\pm$ 38.850  $\chi^2$ /NDF:16.7/42

Out: 9.971 $\pm$ 38.986  $\chi^2$ /NDF:14.2/47

All: 20.657 $\pm$ 27.519  $\chi^2$ /NDF: 31.1/90

asym\_bcm\_dg\_ds\_bcm\_an\_us\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 205.731 $\pm$ 0.054  $\chi^2/\text{NDF}$ : 1388562.1/19

Left Out: 198.891 $\pm$ 0.034  $\chi^2/\text{NDF}$ : 1762454.6/24

Right Out: 184.279 $\pm$ 0.047  $\chi^2/\text{NDF}$ : 2129504.7/22

Left In: 180.207 $\pm$ 0.032  $\chi^2/\text{NDF}$ : 1589005.4/22

Left: 188.959 $\pm$ 0.023  $\chi^2/\text{NDF}$ : 3512499.2/47

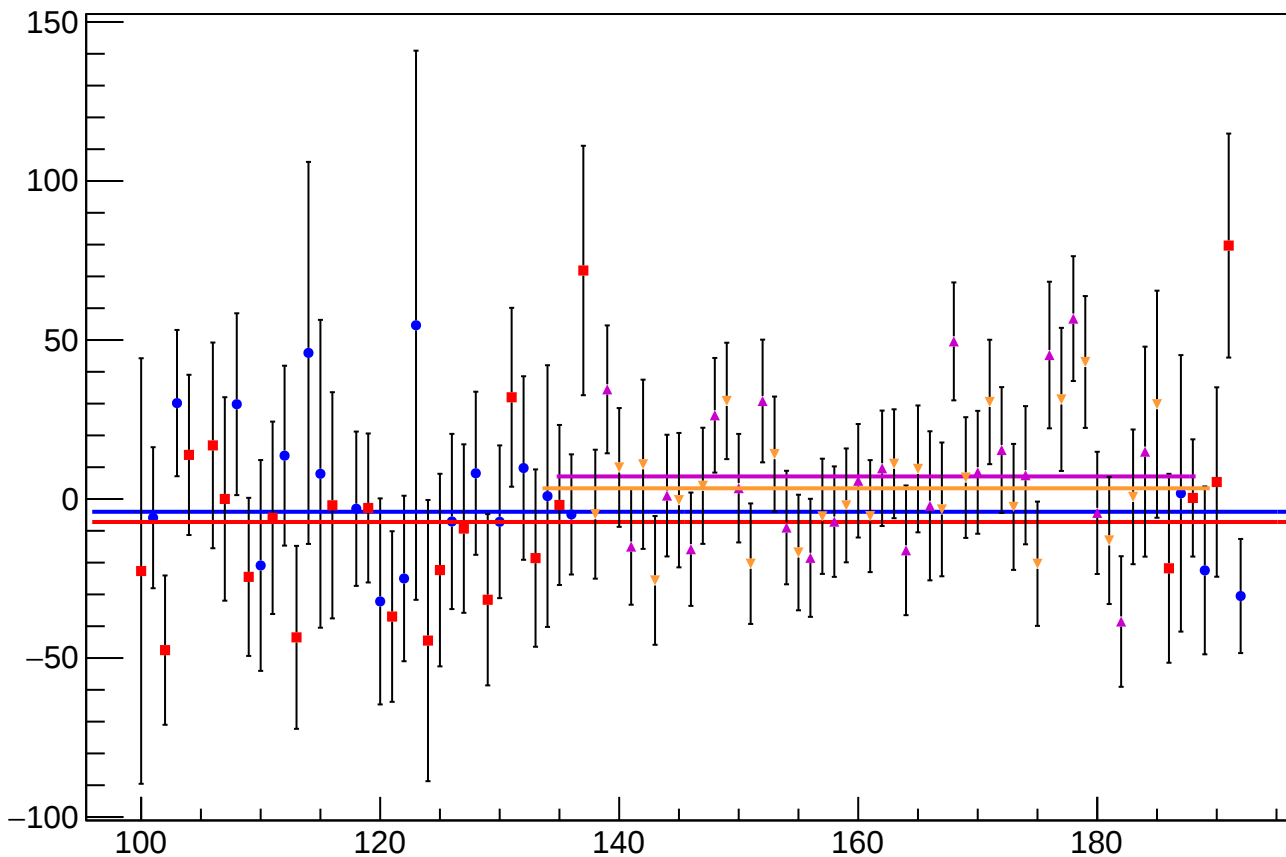
Right: 193.538 $\pm$ 0.036  $\chi^2/\text{NDF}$ : 3607057.3/42

In: 186.760 $\pm$ 0.027  $\chi^2/\text{NDF}$ : 3142308.9/42

Out: 193.916 $\pm$ 0.028  $\chi^2/\text{NDF}$ : 3955042.6/47

All: 190.326 $\pm$ 0.019  $\chi^2/\text{NDF}$ : 7131154.5/90

asym\_bcm\_dg\_ds\_bcm\_an\_us\_agg\_dd\_mean vs Slug, Sign Corrected



Right In:  $-4.015 \pm 6.142$   $\chi^2/\text{NDF}$ : 10.1/19

Left Out:  $3.372 \pm 3.947$   $\chi^2/\text{NDF}$ : 18.8/24

Right Out:  $-7.228 \pm 5.906$   $\chi^2/\text{NDF}$ : 22.4/22

Left In:  $7.099 \pm 4.047$   $\chi^2/\text{NDF}$ : 32.5/22

Left:  $5.189 \pm 2.826$   $\chi^2/\text{NDF}$ : 51.8/47

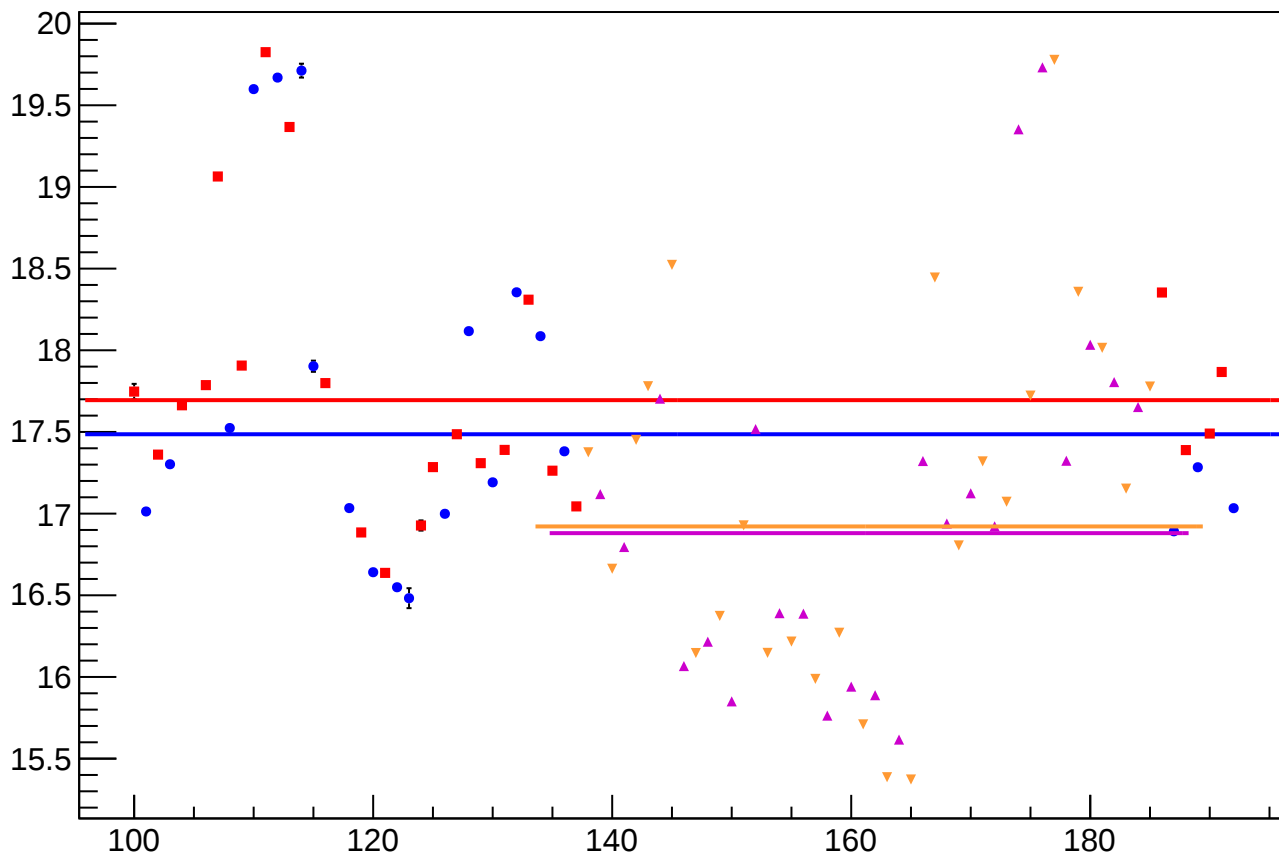
Right:  $-5.684 \pm 4.257$   $\chi^2/\text{NDF}$ : 32.6/42

In:  $3.734 \pm 3.380$   $\chi^2/\text{NDF}$ : 44.9/42

Out:  $0.100 \pm 3.282$   $\chi^2/\text{NDF}$ : 43.4/47

All:  $1.863 \pm 2.354$   $\chi^2/\text{NDF}$ : 88.8/90

asym\_bcm\_dg\_ds\_bcm\_an\_us\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 17.486 $\pm$ 0.004  $\chi^2$ /NDF: 35100.4/19

Left Out: 16.921 $\pm$ 0.003  $\chi^2$ /NDF:138990.4/24

Right Out: 17.695 $\pm$ 0.004  $\chi^2$ /NDF: 31959.1/22

Left In: 16.880 $\pm$ 0.003  $\chi^2$ /NDF:121736.1/22

Left: 16.901 $\pm$ 0.002  $\chi^2$ /NDF: 260831.8/47

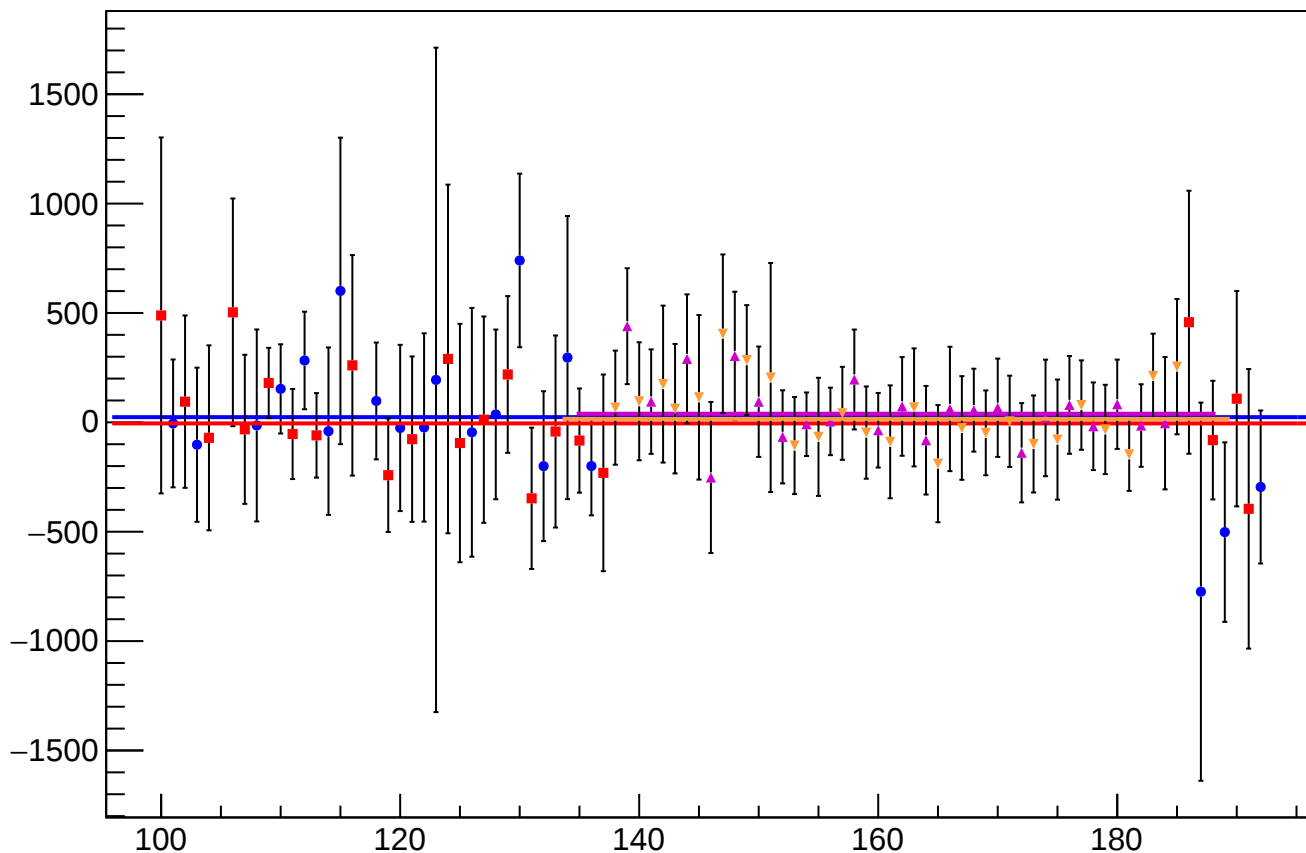
Right: 17.594 $\pm$ 0.003  $\chi^2$ /NDF: 68260.1/42

In: 17.064 $\pm$ 0.002  $\chi^2$ /NDF:170387.5/42

Out: 17.160 $\pm$ 0.002  $\chi^2$ /NDF:194645.5/47

All: 17.113 $\pm$ 0.002  $\chi^2$ /NDF: 365870.5/90

asym\_bcm\_dg\_us\_bcm\_dg\_ds\_agg\_avg\_mean vs Slug, Sign Corrected



Right In: 23.739 $\pm$ 77.404  $\chi^2$ /NDF: 10.9/19

Left Out: 15.970 $\pm$ 48.503  $\chi^2$ /NDF:7.4/24

Right Out: -4.885 $\pm$ 67.687  $\chi^2$ /NDF: 7.2/22

Left In: 39.377 $\pm$ 45.571  $\chi^2$ /NDF:6.9/22

Left: 28.402 $\pm$ 33.212  $\chi^2$ /NDF: 14.4/47

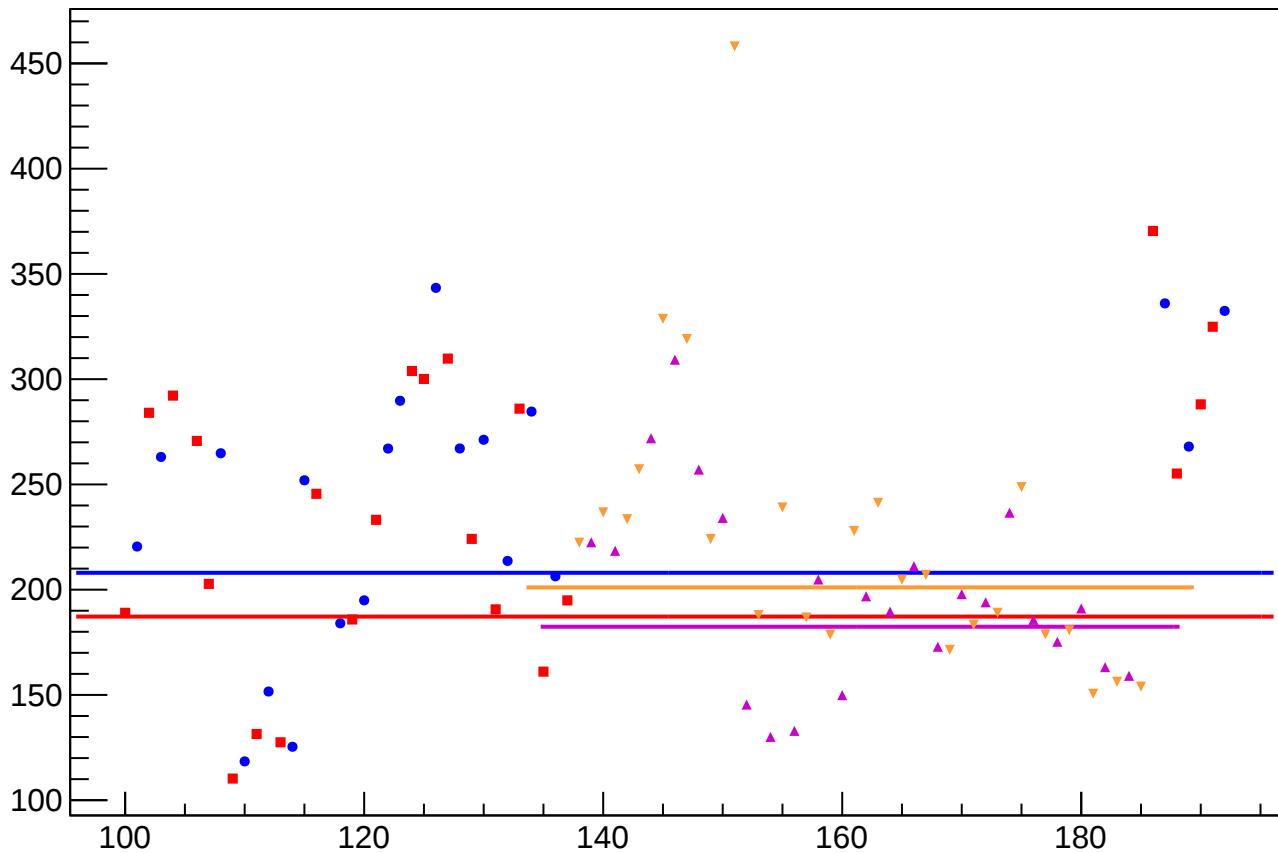
Right: 7.518 $\pm$ 50.953  $\chi^2$ /NDF: 18.1/42

In: 35.352 $\pm$ 39.270  $\chi^2$ /NDF:17.8/42

Out: 8.894 $\pm$ 39.426  $\chi^2$ /NDF:14.6/47

All: 22.175 $\pm$ 27.823  $\chi^2$ /NDF: 32.6/90

asym\_bcm\_dg\_us\_bcm\_dg\_ds\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 208.027+/-0.055  $\chi^2/\text{NDF}$ : 1342090.4/19

Left Out: 201.091+/-0.034  $\chi^2/\text{NDF}$ :1731069.1/24

Right Out: 187.218+/-0.048  $\chi^2/\text{NDF}$ : 2051782.0/22

Left In: 182.396+/-0.032  $\chi^2/\text{NDF}$ :1548907.7/22

Left: 191.161+/-0.023  $\chi^2/\text{NDF}$ : 3437793.2/47

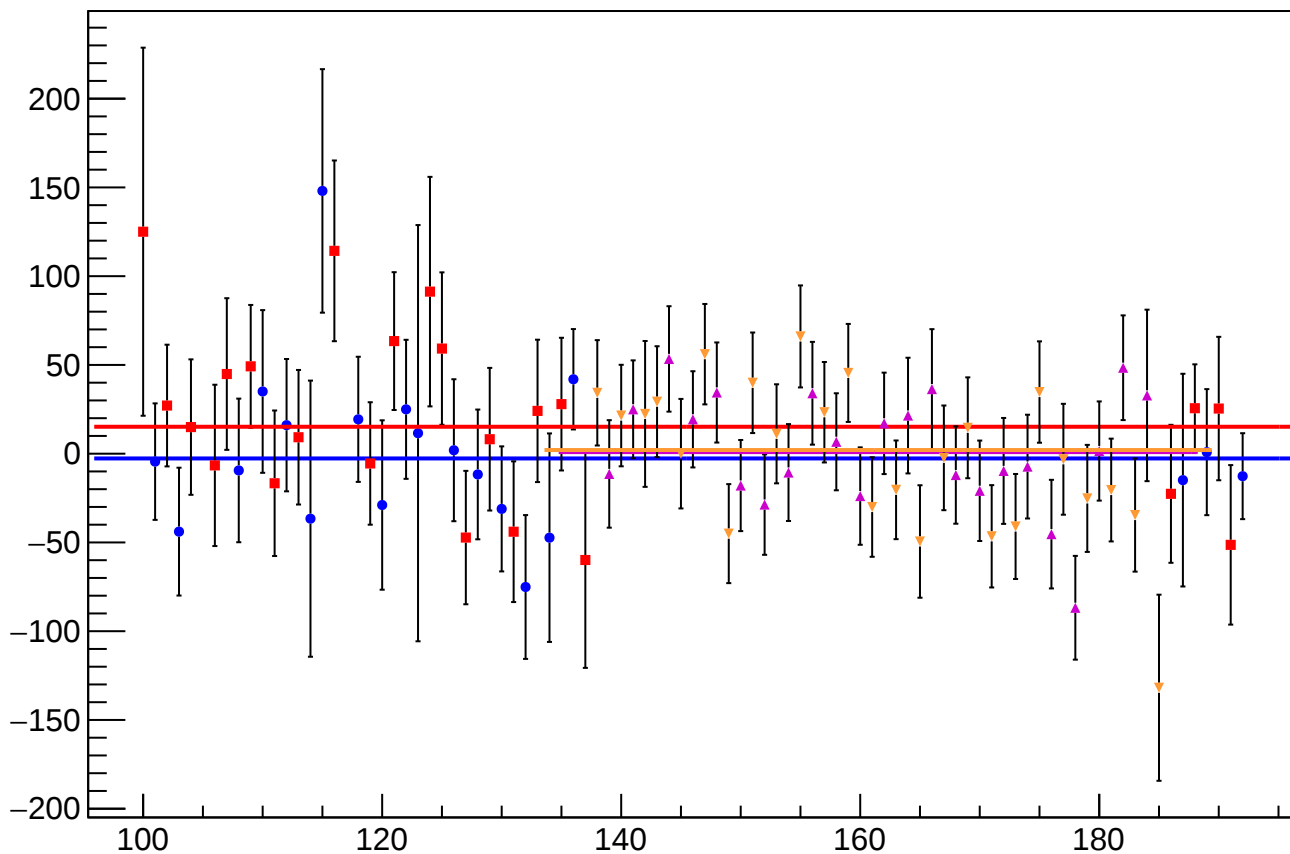
Right: 196.235+/-0.036  $\chi^2/\text{NDF}$ : 3475783.8/42

In: 188.993+/-0.028  $\chi^2/\text{NDF}$ :3053847.4/42

Out: 196.384+/-0.028  $\chi^2/\text{NDF}$ :3838365.6/47

All: 192.674+/-0.020  $\chi^2/\text{NDF}$ : 6927493.7/90

asym\_bcm\_dg\_us\_bcm\_dg\_ds\_agg\_dd\_mean vs Slug, Sign Corrected



Right In:  $-2.684 \pm 8.783$   $\chi^2/\text{NDF}$ : 15.7/19

Left Out:  $2.054 \pm 5.970$   $\chi^2/\text{NDF}$ : 39.4/24

Right Out:  $15.171 \pm 8.321$   $\chi^2/\text{NDF}$ : 21.8/22

Left In:  $0.900 \pm 6.069$   $\chi^2/\text{NDF}$ : 27.1/22

Left:  $1.487 \pm 4.256$   $\chi^2/\text{NDF}$ : 66.5/47

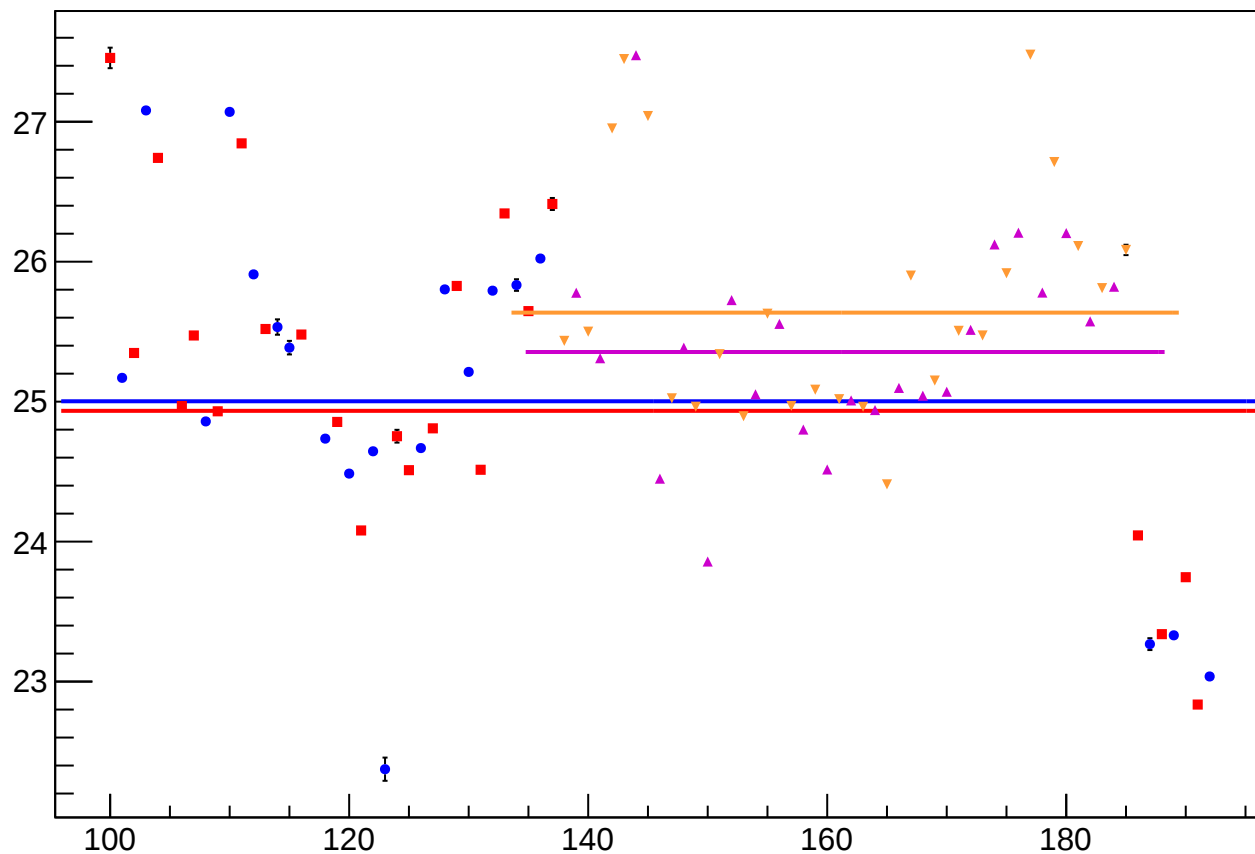
Right:  $6.725 \pm 6.041$   $\chi^2/\text{NDF}$ : 39.7/42

In:  $-0.258 \pm 4.993$   $\chi^2/\text{NDF}$ : 42.9/42

Out:  $6.511 \pm 4.851$   $\chi^2/\text{NDF}$ : 62.9/47

All:  $3.225 \pm 3.479$   $\chi^2/\text{NDF}$ : 106.7/90

asym\_bcm\_dg\_us\_bcm\_dg\_ds\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 25.003 $\pm$ 0.006  $\chi^2$ /NDF: 37913.9/19

Left Out: 25.636 $\pm$ 0.004  $\chi^2$ /NDF: 35130.7/24

Right Out: 24.934 $\pm$ 0.006  $\chi^2$ /NDF: 33617.5/22

Left In: 25.355 $\pm$ 0.004  $\chi^2$ /NDF: 29766.2/22

Left: 25.498 $\pm$ 0.003  $\chi^2$ /NDF: 67081.3/47

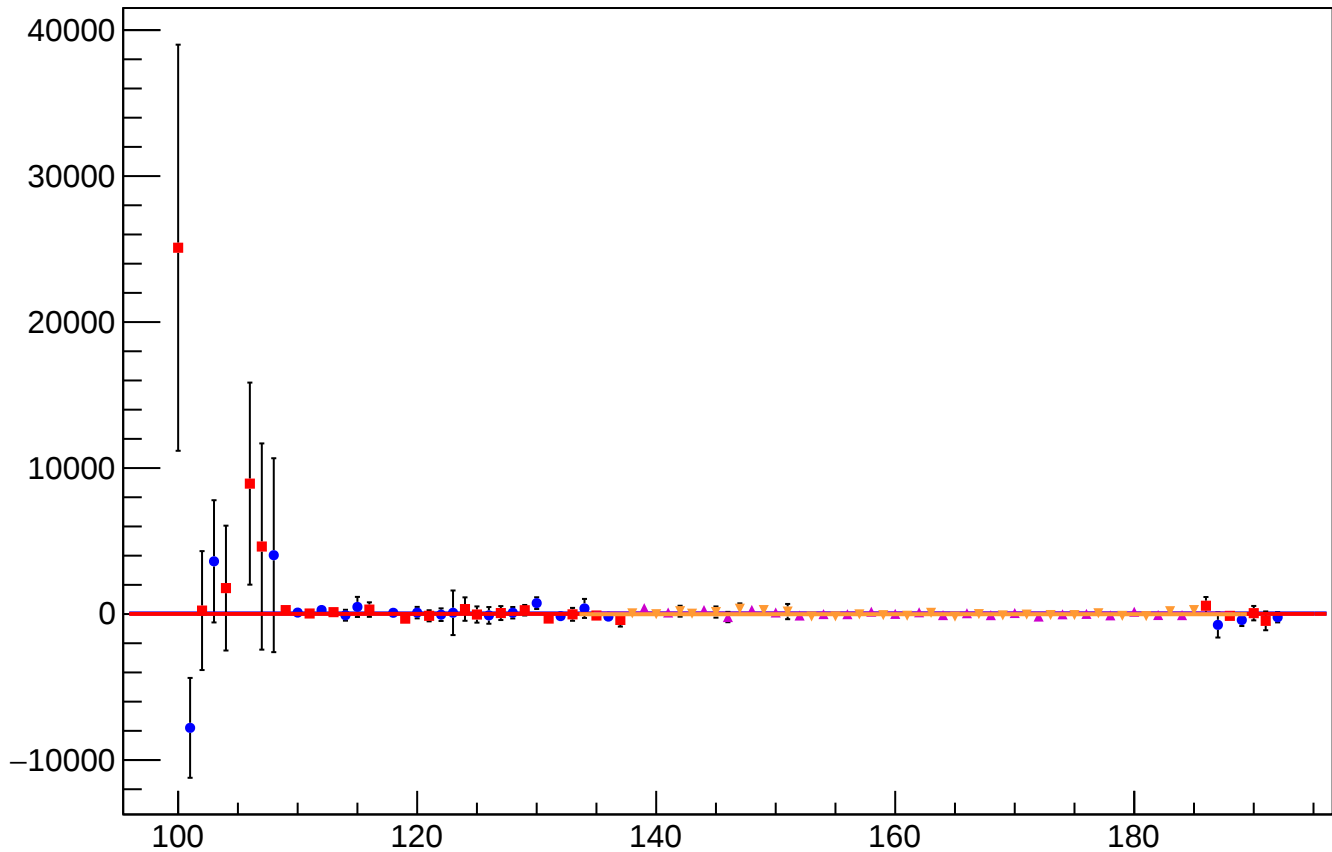
Right: 24.967 $\pm$ 0.004  $\chi^2$ /NDF: 71595.3/42

In: 25.241 $\pm$ 0.004  $\chi^2$ /NDF: 69854.5/42

Out: 25.398 $\pm$ 0.003  $\chi^2$ /NDF: 78138.8/47

All: 25.322 $\pm$ 0.002  $\chi^2$ /NDF: 149006.1/90

asym\_bcm\_cav4cQ\_bcm\_an\_us\_agg\_avg\_mean vs Slug, Sign Corrected



Right In: 42.429+/-83.853  $\chi^2/\text{NDF}$ : 15.4/19

Left Out: -12.820+/-48.216  $\chi^2/\text{NDF}$ : 7.9/24

Right Out: 11.498+/-75.508  $\chi^2/\text{NDF}$ : 13.7/22

Left In: 26.836+/-45.876  $\chi^2/\text{NDF}$ : 7.5/22

Left: 7.994+/-33.236  $\chi^2/\text{NDF}$ : 15.7/47

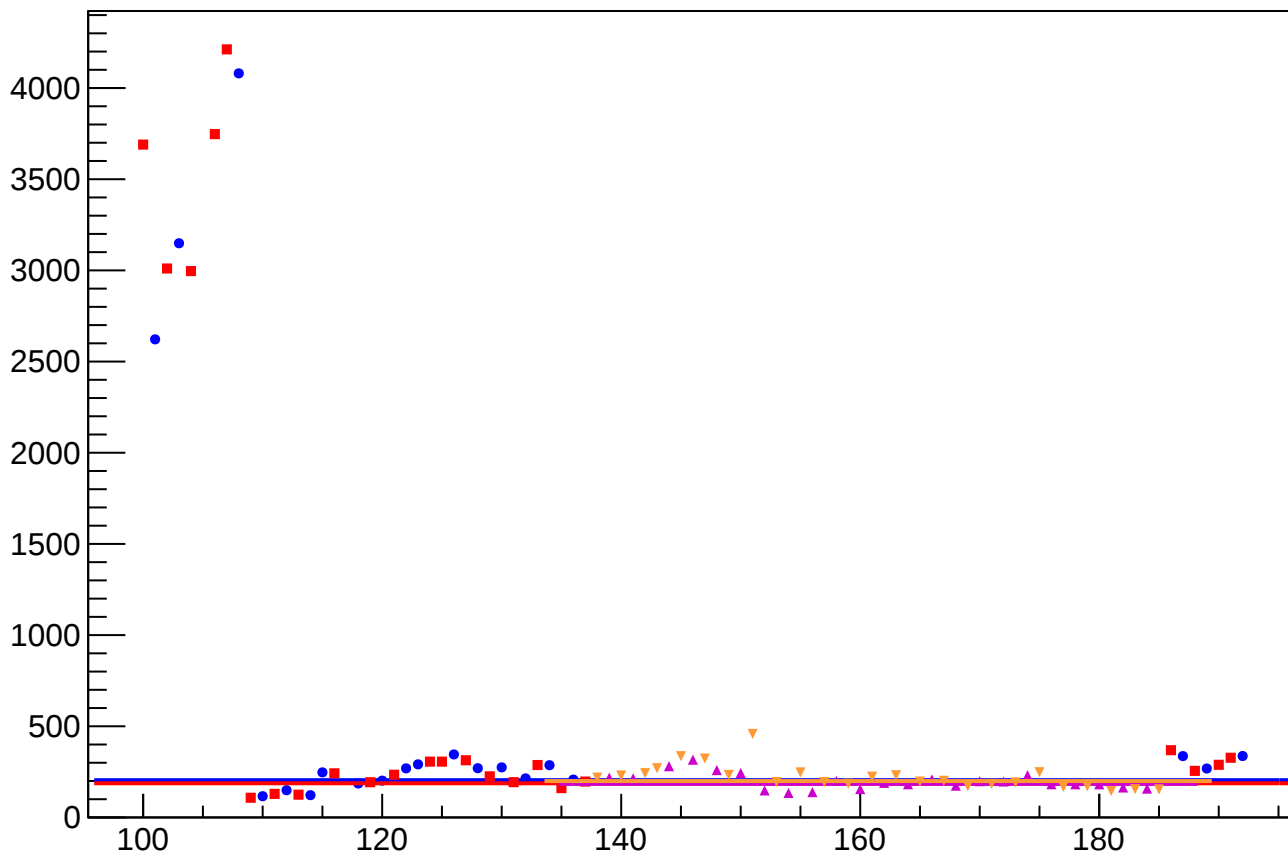
Right: 25.348+/-56.111  $\chi^2/\text{NDF}$ : 29.2/42

In: 30.428+/-40.246  $\chi^2/\text{NDF}$ : 22.9/42

Out: -5.776+/-40.638  $\chi^2/\text{NDF}$ : 21.6/47

All: 12.501+/-28.596  $\chi^2/\text{NDF}$ : 44.9/90

asym\_bcm\_cav4cQ\_bcm\_an\_us\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 204.388 $\pm$ 0.059  $\chi^2$ /NDF: 3991478.9/19

Left Out: 199.536 $\pm$ 0.034  $\chi^2$ /NDF:1880548.8/24

Right Out: 187.408 $\pm$ 0.053  $\chi^2$ /NDF: 4752404.9/22

Left In: 184.031 $\pm$ 0.032  $\chi^2$ /NDF:1423454.3/22

Left: 191.398 $\pm$ 0.024  $\chi^2$ /NDF: 3412539.0/47

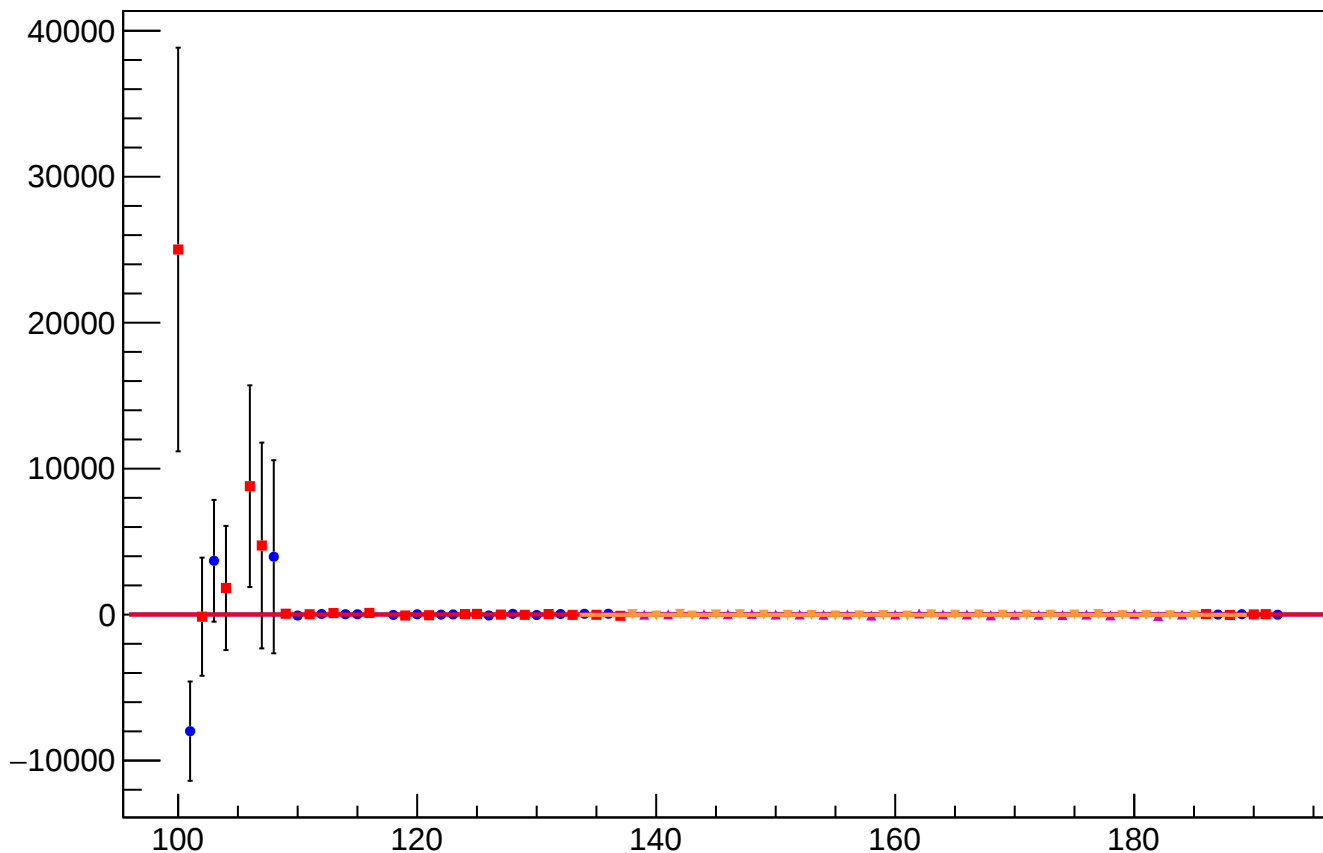
Right: 195.011 $\pm$ 0.040  $\chi^2$ /NDF: 8789171.3/42

In: 188.721 $\pm$ 0.028  $\chi^2$ /NDF:5505649.2/42

Out: 196.023 $\pm$ 0.029  $\chi^2$ /NDF:6669602.2/47

All: 192.337 $\pm$ 0.020  $\chi^2$ /NDF: 12207849.4/90

asym\_bcm\_cav4cQ\_bcm\_an\_us\_agg\_dd\_mean vs Slug, Sign Corrected



Right In: 9.168+/-10.750  $\chi^2/\text{NDF}$ : 19.5/19

Left Out: -17.580+/-6.694  $\chi^2/\text{NDF}$ : 22.3/24

Right Out: 9.040+/-10.558  $\chi^2/\text{NDF}$ : 26.2/22

Left In: 1.038+/-6.880  $\chi^2/\text{NDF}$ : 32.4/22

Left: -8.527+/-4.798  $\chi^2/\text{NDF}$ : 58.5/47

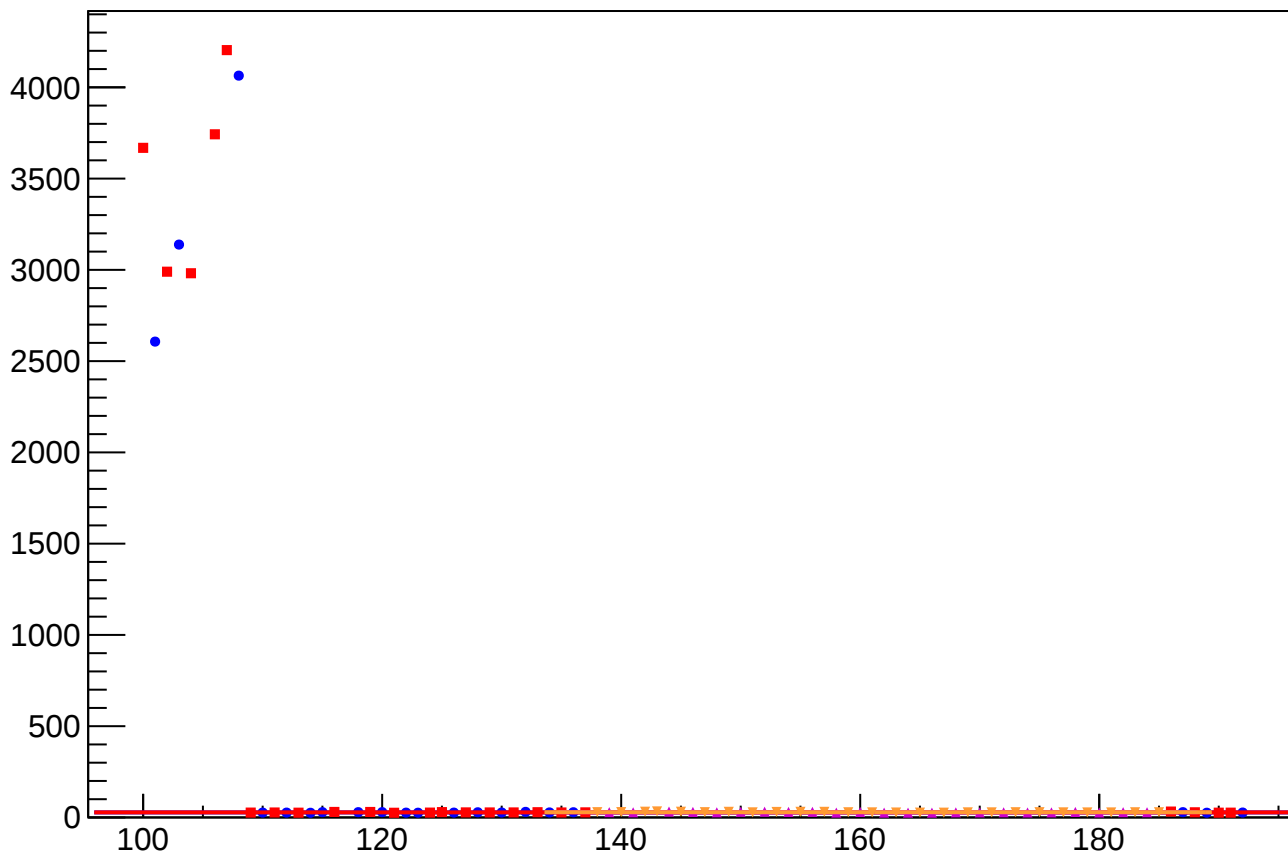
Right: 9.102+/-7.532  $\chi^2/\text{NDF}$ : 45.7/42

In: 3.400+/-5.795  $\chi^2/\text{NDF}$ : 52.4/42

Out: -9.948+/-5.653  $\chi^2/\text{NDF}$ : 53.0/47

All: -3.439+/-4.047  $\chi^2/\text{NDF}$ : 108.1/90

asym\_bcm\_cav4cQ\_bcm\_an\_us\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 27.622 $\pm$ 0.008  $\chi^2$ /NDF: 3034137.4/19

Left Out: 28.691 $\pm$ 0.005  $\chi^2$ /NDF:110483.8/24

Right Out: 27.818 $\pm$ 0.007  $\chi^2$ /NDF: 3496145.7/22

Left In: 28.673 $\pm$ 0.005  $\chi^2$ /NDF:124751.4/22

Left: 28.682 $\pm$ 0.003  $\chi^2$ /NDF: 235242.3/47

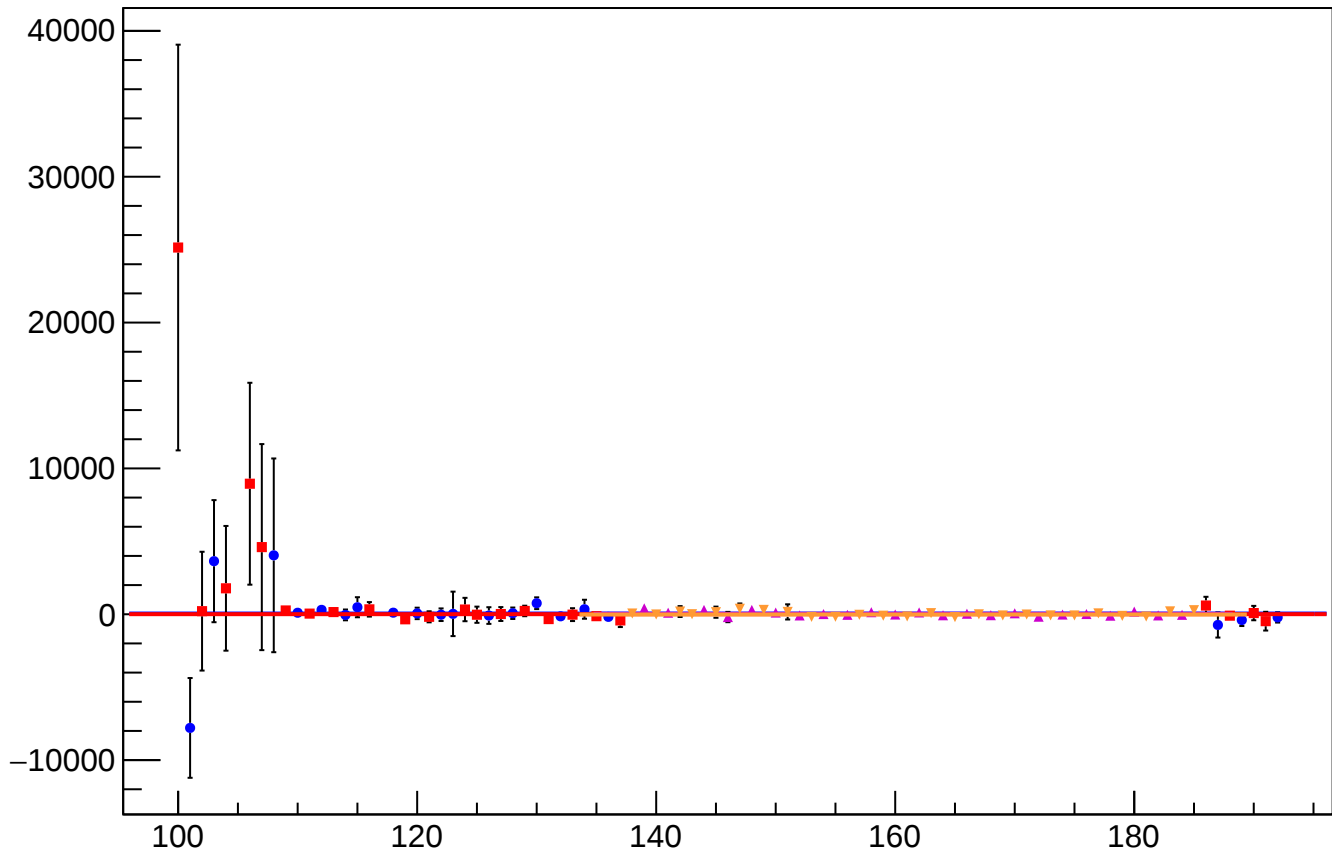
Right: 27.722 $\pm$ 0.005  $\chi^2$ /NDF: 6530621.5/42

In: 28.367 $\pm$ 0.004  $\chi^2$ /NDF:3172444.1/42

Out: 28.441 $\pm$ 0.004  $\chi^2$ /NDF:3616378.1/47

All: 28.405 $\pm$ 0.003  $\chi^2$ /NDF: 6788985.5/90

asym\_bcm\_cav4cQ\_bcm\_an\_ds\_agg\_avg\_mean vs Slug, Sign Corrected



Right In: 48.297+/-83.603  $\chi^2/\text{NDF}$ : 15.6/19

Left Out: -15.483+/-48.109  $\chi^2/\text{NDF}$ : 8.7/24

Right Out: 5.706+/-75.294  $\chi^2/\text{NDF}$ : 14.5/22

Left In: 27.009+/-45.785  $\chi^2/\text{NDF}$ : 7.8/22

Left: 6.815+/-33.166  $\chi^2/\text{NDF}$ : 16.9/47

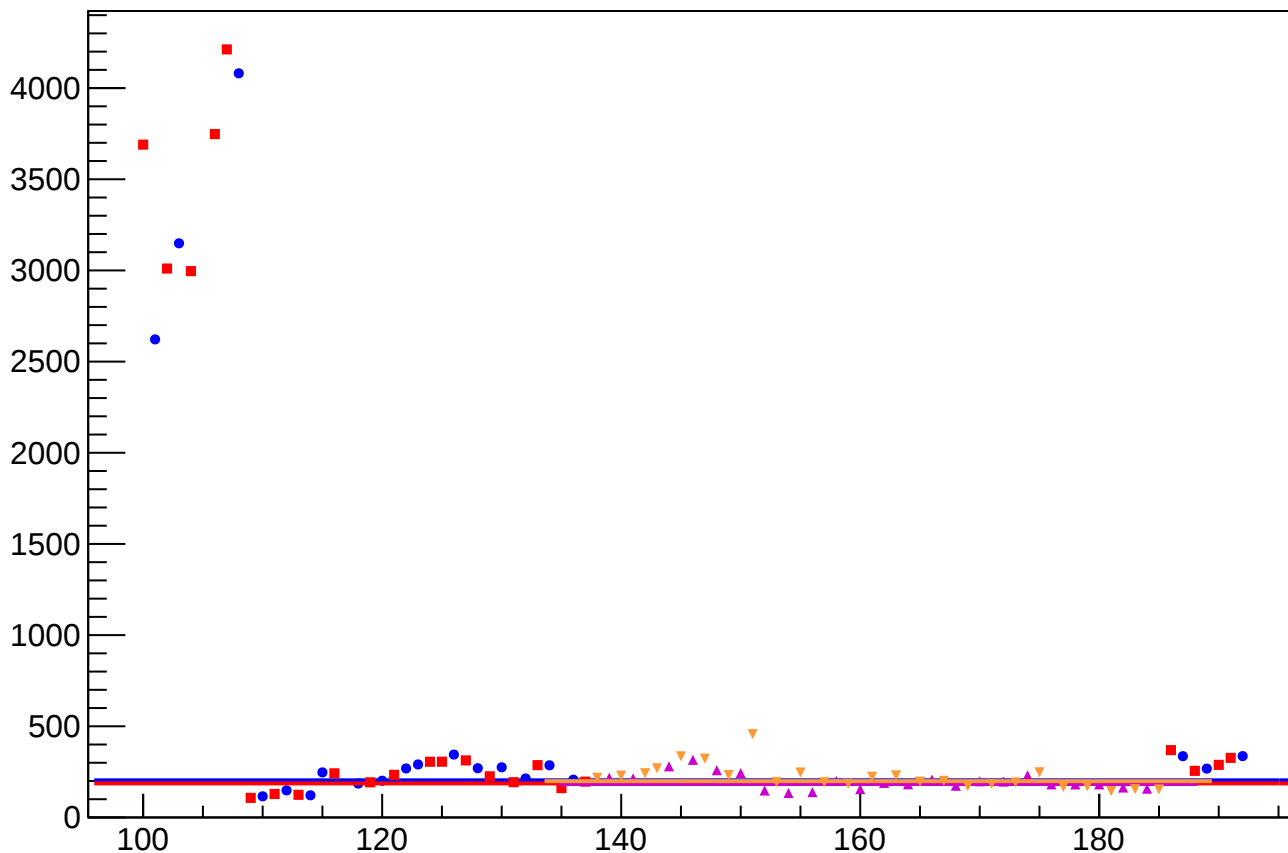
Right: 24.780+/-55.949  $\chi^2/\text{NDF}$ : 30.2/42

In: 31.921+/-40.157  $\chi^2/\text{NDF}$ : 23.4/42

Out: -9.340+/-40.540  $\chi^2/\text{NDF}$ : 23.2/47

All: 11.486+/-28.530  $\chi^2/\text{NDF}$ : 47.2/90

asym\_bcm\_cav4cQ\_bcm\_an\_ds\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 203.660 $\pm$ 0.059  $\chi^2$ /NDF: 4006099.3/19

Left Out: 199.094 $\pm$ 0.034  $\chi^2$ /NDF:1880343.4/24

Right Out: 186.749 $\pm$ 0.053  $\chi^2$ /NDF: 4769726.8/22

Left In: 183.667 $\pm$ 0.032  $\chi^2$ /NDF:1422895.7/22

Left: 190.999 $\pm$ 0.023  $\chi^2$ /NDF: 3411149.8/47

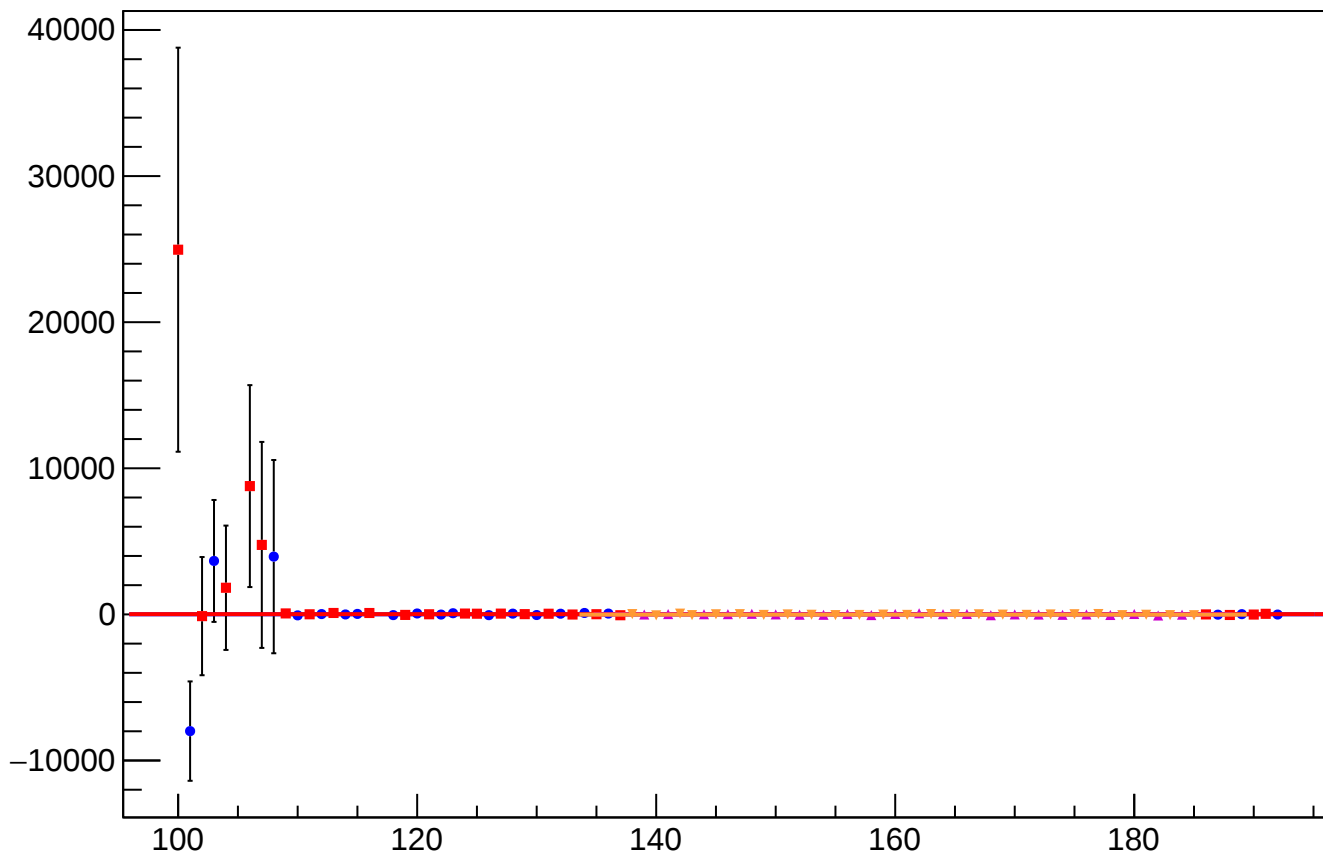
Right: 194.323 $\pm$ 0.040  $\chi^2$ /NDF: 8821009.5/42

In: 188.280 $\pm$ 0.028  $\chi^2$ /NDF:5516984.8/42

Out: 195.515 $\pm$ 0.029  $\chi^2$ /NDF:6688244.5/47

All: 191.863 $\pm$ 0.020  $\chi^2$ /NDF: 12237383.4/90

asym\_bcm\_cav4cQ\_bcm\_an\_ds\_agg\_dd\_mean vs Slug, Sign Corrected



Right In: 5.379+/-10.802  $\chi^2/\text{NDF}$ : 23.4/19

Left Out: -15.006+/-6.723  $\chi^2/\text{NDF}$ : 17.5/24

Right Out: 16.761+/-10.602  $\chi^2/\text{NDF}$ : 21.6/22

Left In: -0.702+/-6.909  $\chi^2/\text{NDF}$ : 26.4/22

Left: -8.049+/-4.819  $\chi^2/\text{NDF}$ : 46.0/47

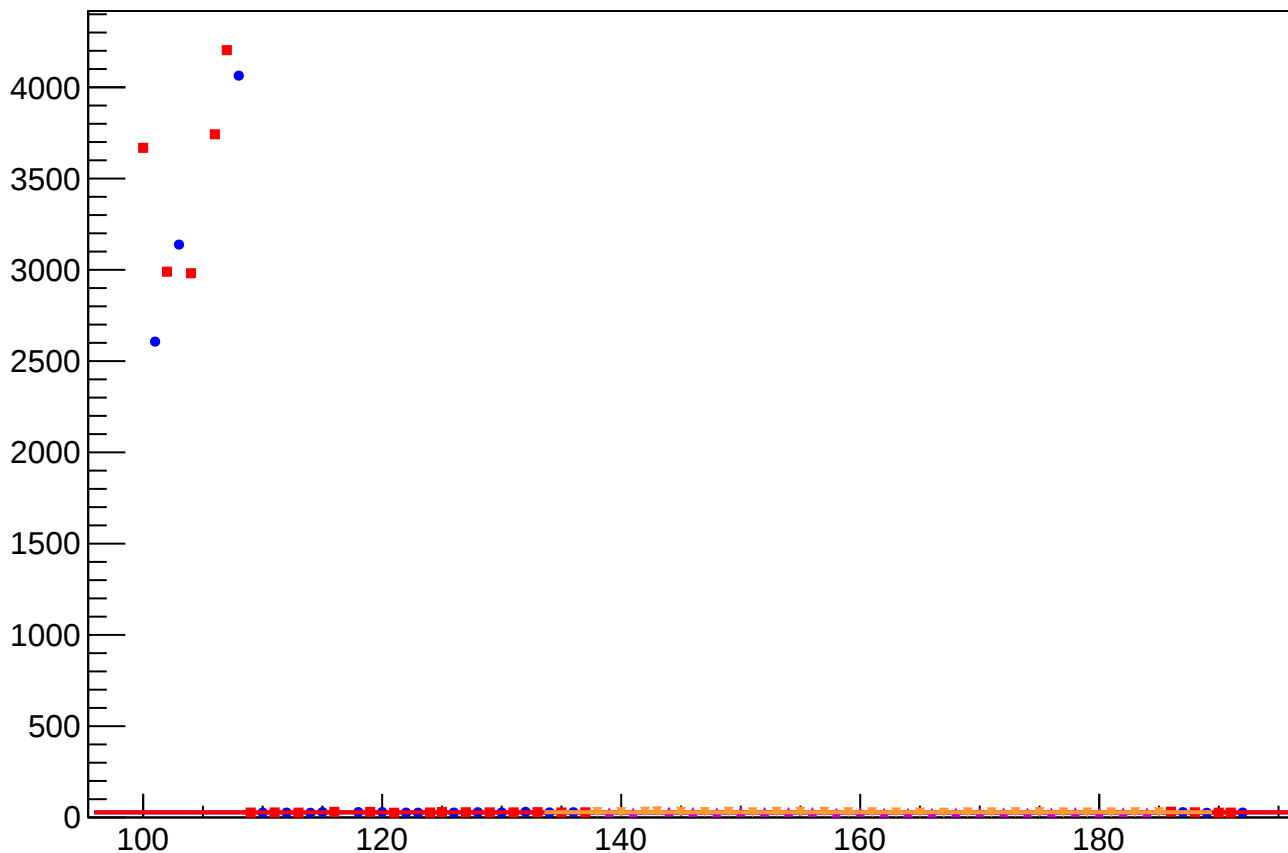
Right: 11.177+/-7.566  $\chi^2/\text{NDF}$ : 45.6/42

In: 1.063+/-5.820  $\chi^2/\text{NDF}$ : 50.0/42

Out: -5.895+/-5.678  $\chi^2/\text{NDF}$ : 45.5/47

All: -2.502+/-4.064  $\chi^2/\text{NDF}$ : 96.2/90

asym\_bcm\_cav4cQ\_bcm\_an\_ds\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 27.750+/-0.008  $\chi^2/\text{NDF}$ : 3036416.2/19

Left Out: 28.813+/-0.005  $\chi^2/\text{NDF}$ : 121973.8/24

Right Out: 27.935+/-0.007  $\chi^2/\text{NDF}$ : 3494027.6/22

Left In: 28.792+/-0.005  $\chi^2/\text{NDF}$ : 129393.1/22

Left: 28.803+/-0.003  $\chi^2/\text{NDF}$ : 251375.8/47

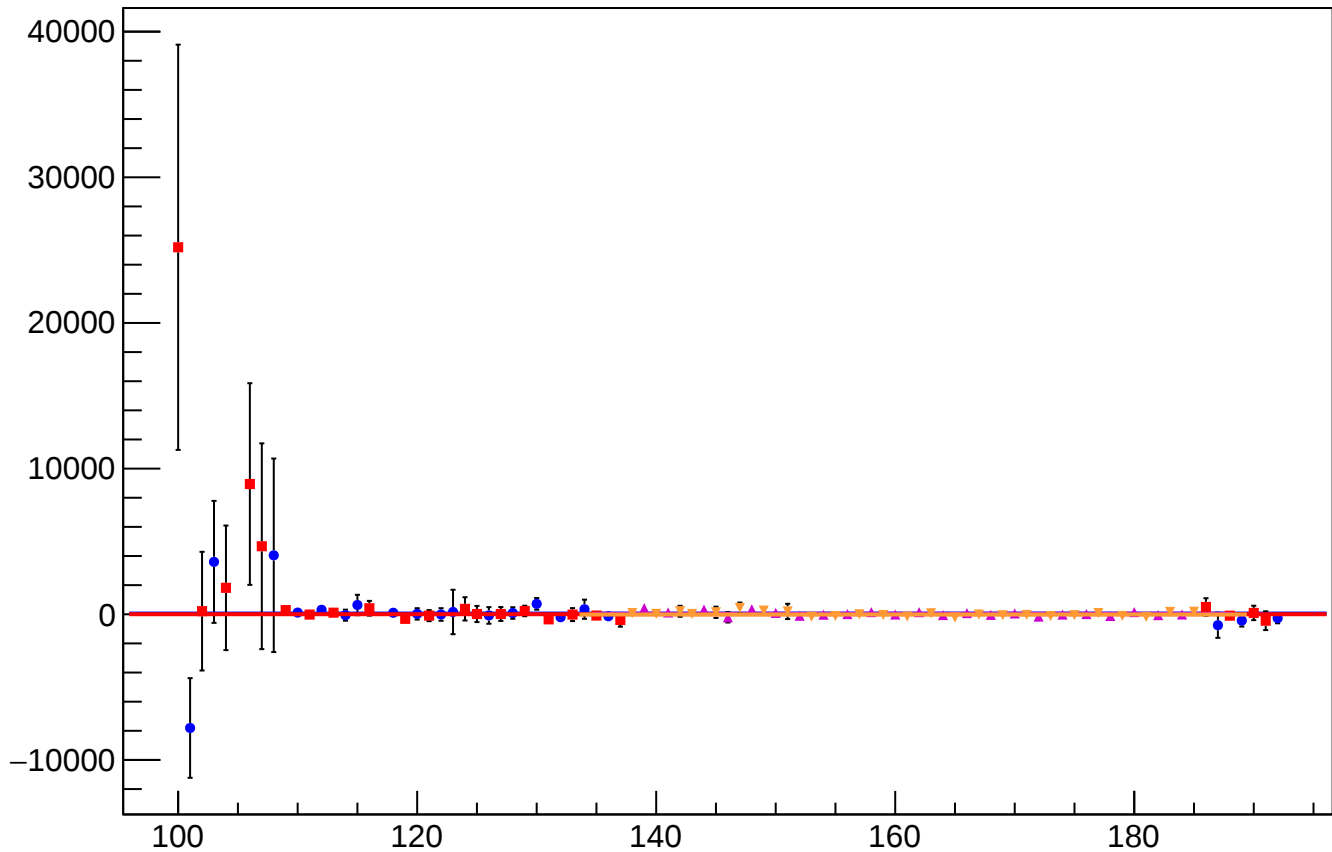
Right: 27.844+/-0.005  $\chi^2/\text{NDF}$ : 6530741.8/42

In: 28.490+/-0.004  $\chi^2/\text{NDF}$ : 3179021.8/42

Out: 28.561+/-0.004  $\chi^2/\text{NDF}$ : 3625776.7/47

All: 28.526+/-0.003  $\chi^2/\text{NDF}$ : 6804951.4/90

asym\_bcm\_cav4cQ\_bcm\_dg\_us\_agg\_avg\_mean vs Slug, Sign Corrected



Right In: 48.720+/-84.529  $\chi^2/\text{NDF}$ : 15.9/19

Left Out: -15.548+/-48.688  $\chi^2/\text{NDF}$ : 8.0/24

Right Out: 3.937+/-76.215  $\chi^2/\text{NDF}$ : 13.6/22

Left In: 31.170+/-46.359  $\chi^2/\text{NDF}$ : 8.2/22

Left: 8.955+/-33.574  $\chi^2/\text{NDF}$ : 16.6/47

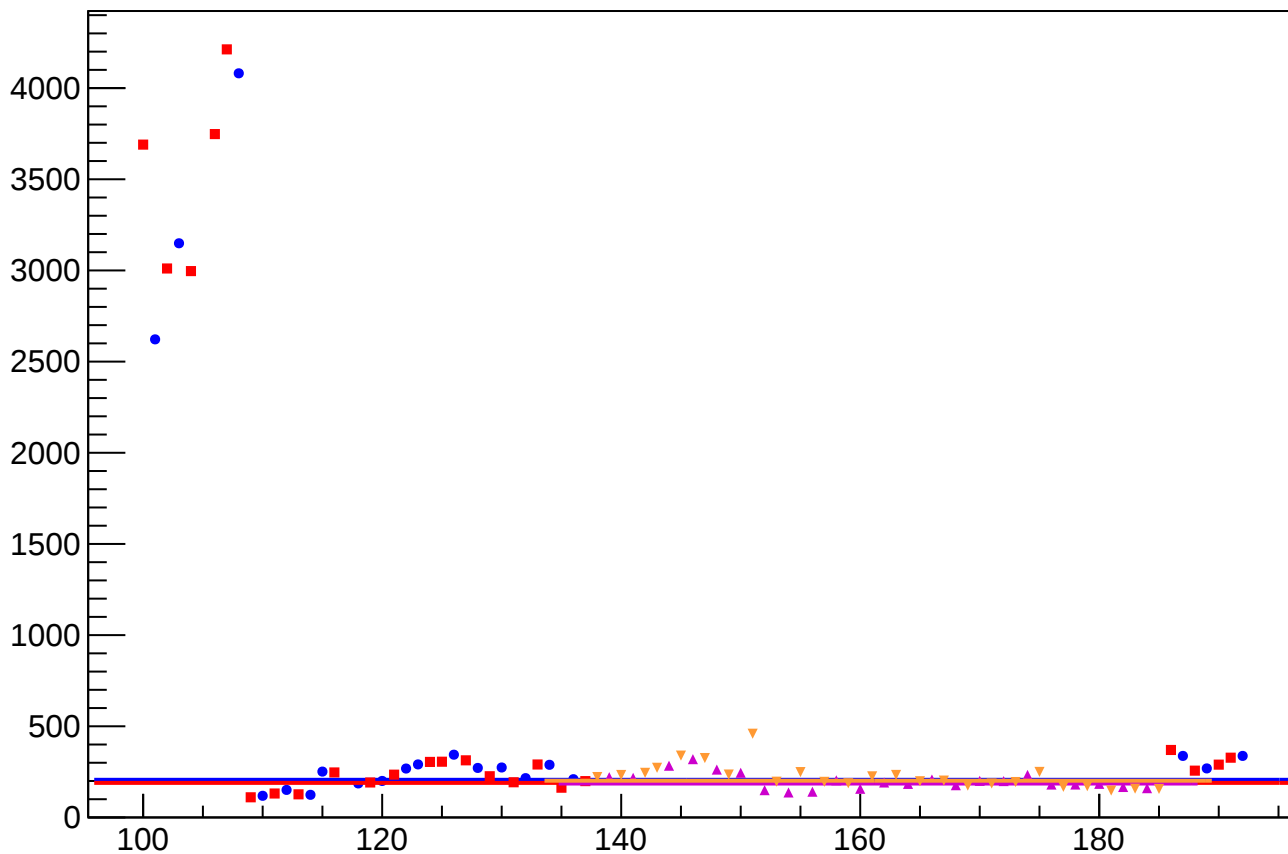
Right: 24.019+/-56.604  $\chi^2/\text{NDF}$ : 29.7/42

In: 35.228+/-40.647  $\chi^2/\text{NDF}$ : 24.1/42

Out: -9.901+/-41.030  $\chi^2/\text{NDF}$ : 21.7/47

All: 12.875+/-28.876  $\chi^2/\text{NDF}$ : 46.4/90

asym\_bcm\_cav4cQ\_bcm\_dg\_us\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 206.426+/-0.060  $\chi^2/\text{NDF}$ : 3944478.6/19

Left Out: 201.600+/-0.034  $\chi^2/\text{NDF}$ : 1857453.2/24

Right Out: 189.633+/-0.054  $\chi^2/\text{NDF}$ : 4696577.5/22

Left In: 186.107+/-0.033  $\chi^2/\text{NDF}$ : 1391327.2/22

Left: 193.474+/-0.024  $\chi^2/\text{NDF}$ : 3354998.7/47

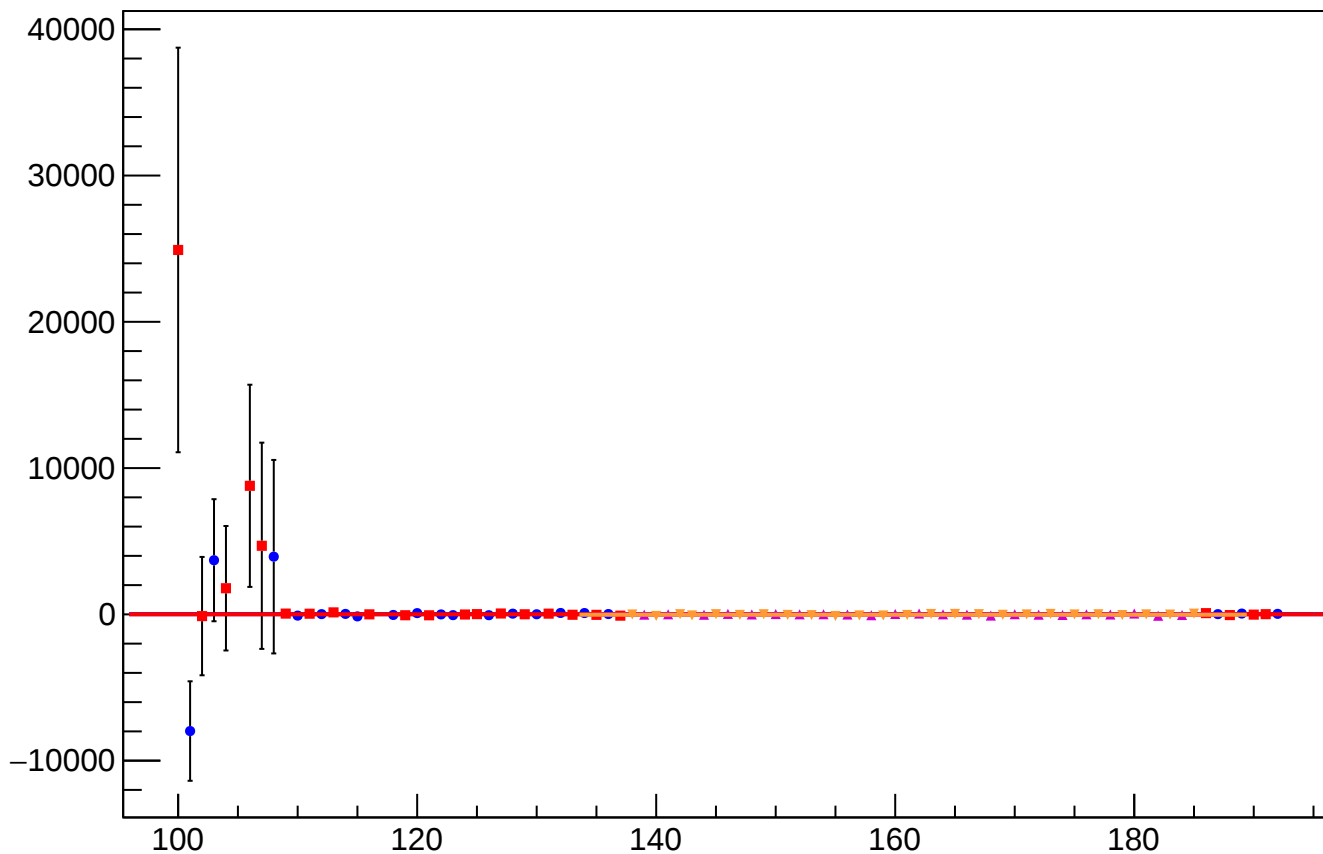
Right: 197.164+/-0.040  $\chi^2/\text{NDF}$ : 8684595.0/42

In: 190.805+/-0.029  $\chi^2/\text{NDF}$ : 5424650.1/42

Out: 198.132+/-0.029  $\chi^2/\text{NDF}$ : 6589046.3/47

All: 194.434+/-0.020  $\chi^2/\text{NDF}$ : 12045879.3/90

asym\_bcm\_cav4cQ\_bcm\_dg\_us\_agg\_dd\_mean vs Slug, Sign Corrected



Right In: 14.831+/-13.191  $\chi^2/\text{NDF}$ : 21.5/19

Left Out: -23.360+/-8.064  $\chi^2/\text{NDF}$ : 25.8/24

Right Out: 5.851+/-12.889  $\chi^2/\text{NDF}$ : 25.7/22

Left In: -6.001+/-8.309  $\chi^2/\text{NDF}$ : 21.1/22

Left: -14.939+/-5.787  $\chi^2/\text{NDF}$ : 49.2/47

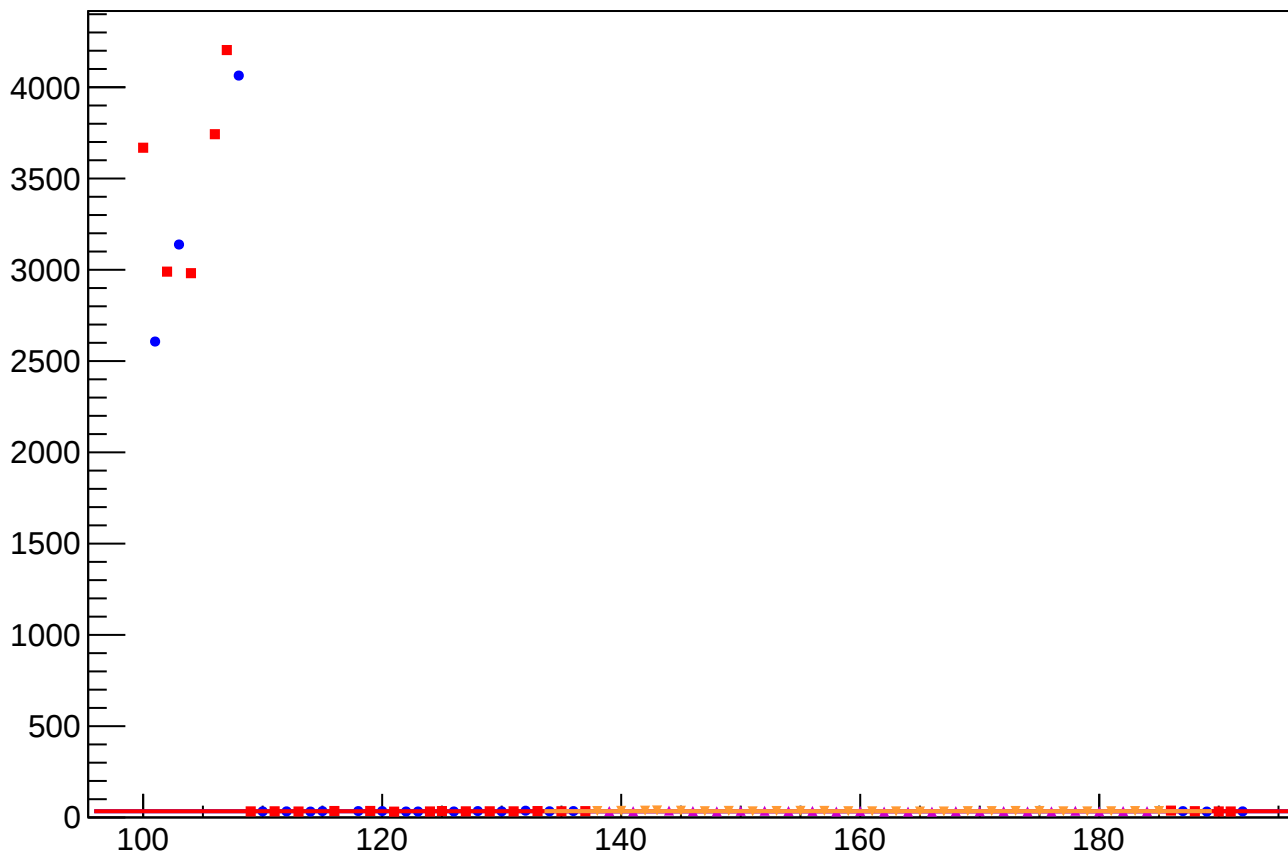
Right: 10.237+/-9.219  $\chi^2/\text{NDF}$ : 47.5/42

In: -0.084+/-7.030  $\chi^2/\text{NDF}$ : 44.5/42

Out: -15.142+/-6.836  $\chi^2/\text{NDF}$ : 55.2/47

All: -7.823+/-4.901  $\chi^2/\text{NDF}$ : 102.0/90

asym\_bcm\_cav4cQ\_bcm\_dg\_us\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 33.927 $\pm$ 0.009  $\chi^2$ /NDF: 3010247.9/19

Left Out: 34.614 $\pm$ 0.006  $\chi^2$ /NDF: 57946.1/24

Right Out: 34.042 $\pm$ 0.009  $\chi^2$ /NDF: 3459832.3/22

Left In: 34.685 $\pm$ 0.006  $\chi^2$ /NDF: 60315.2/22

Left: 34.649 $\pm$ 0.004  $\chi^2$ /NDF: 118335.7/47

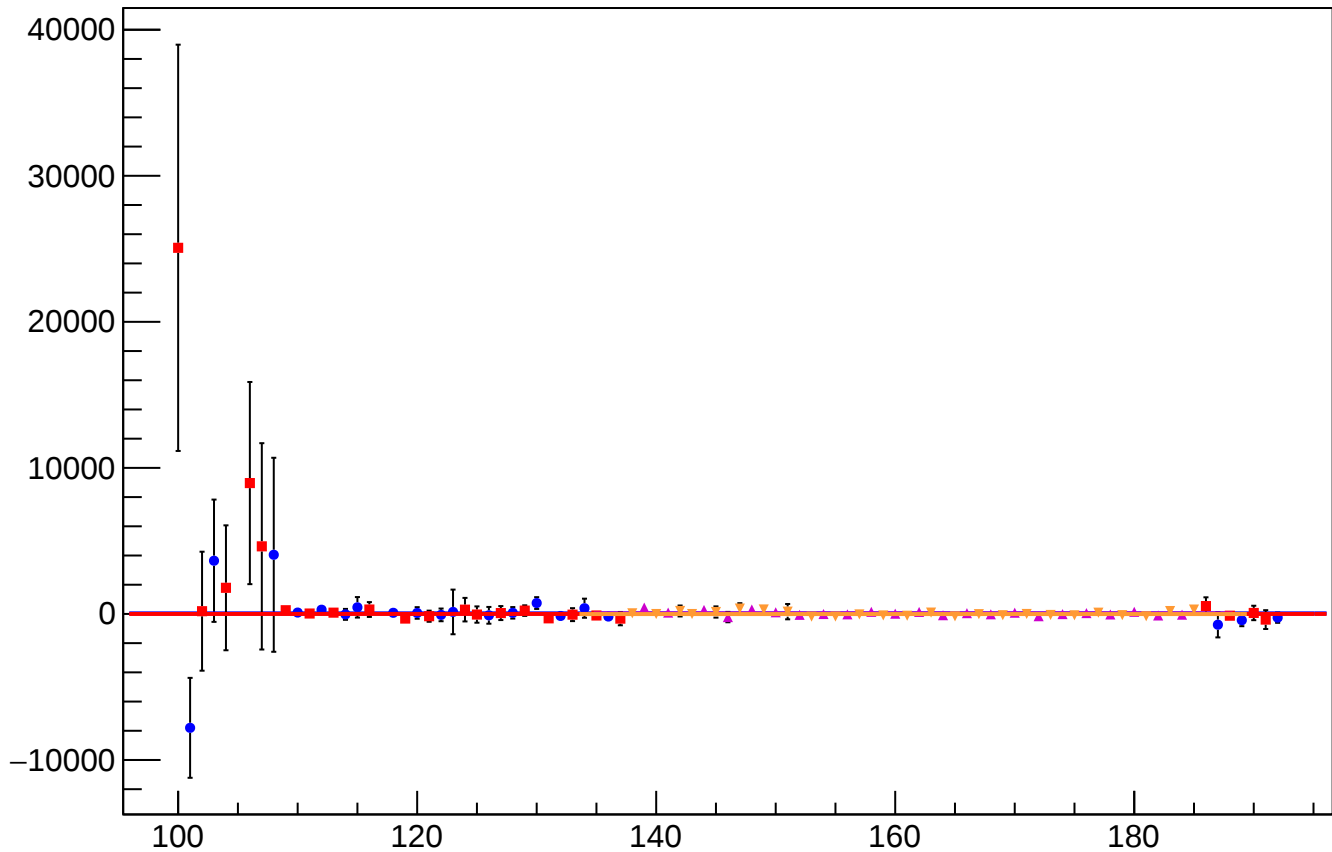
Right: 33.986 $\pm$ 0.007  $\chi^2$ /NDF: 6470158.6/42

In: 34.470 $\pm$ 0.005  $\chi^2$ /NDF: 3075294.1/42

Out: 34.453 $\pm$ 0.005  $\chi^2$ /NDF: 3520610.1/47

All: 34.461 $\pm$ 0.003  $\chi^2$ /NDF: 6595909.7/90

asym\_bcm\_cav4cQ\_bcm\_dg\_ds\_agg\_avg\_mean vs Slug, Sign Corrected



Right In: 38.540 $\pm$ 84.133  $\chi^2$ /NDF: 15.6/19

Left Out: -8.916 $\pm$ 48.615  $\chi^2$ /NDF:8.6/24

Right Out: -0.209 $\pm$ 75.764  $\chi^2$ /NDF: 12.5/22

Left In: 34.127 $\pm$ 46.296  $\chi^2$ /NDF:7.4/22

Left: 13.656 $\pm$ 33.526  $\chi^2$ /NDF: 16.5/47

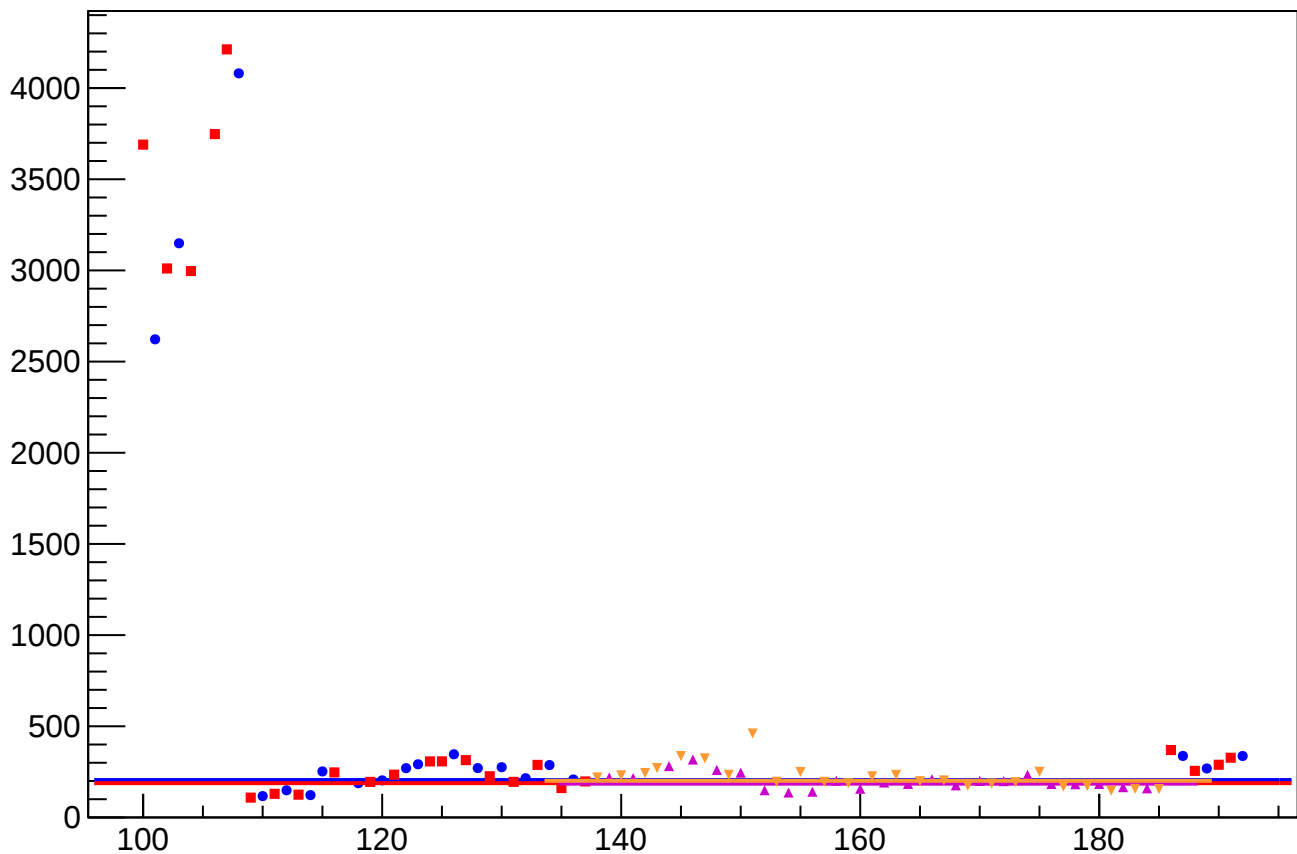
Right: 17.143 $\pm$ 56.300  $\chi^2$ /NDF: 28.2/42

In: 35.153 $\pm$ 40.561  $\chi^2$ /NDF:23.0/42

Out: -6.377 $\pm$ 40.916  $\chi^2$ /NDF:21.1/47

All: 14.569 $\pm$ 28.806  $\chi^2$ /NDF: 44.7/90

asym\_bcm\_cav4cQ\_bcm\_dg\_ds\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 205.105 $\pm$ 0.059  $\chi^2$ /NDF: 3989373.5/19

Left Out: 201.296 $\pm$ 0.034  $\chi^2$ /NDF:1851134.1/24

Right Out: 188.086 $\pm$ 0.054  $\chi^2$ /NDF: 4751770.6/22

Left In: 185.854 $\pm$ 0.033  $\chi^2$ /NDF:1381771.9/22

Left: 193.198 $\pm$ 0.024  $\chi^2$ /NDF: 3338733.9/47

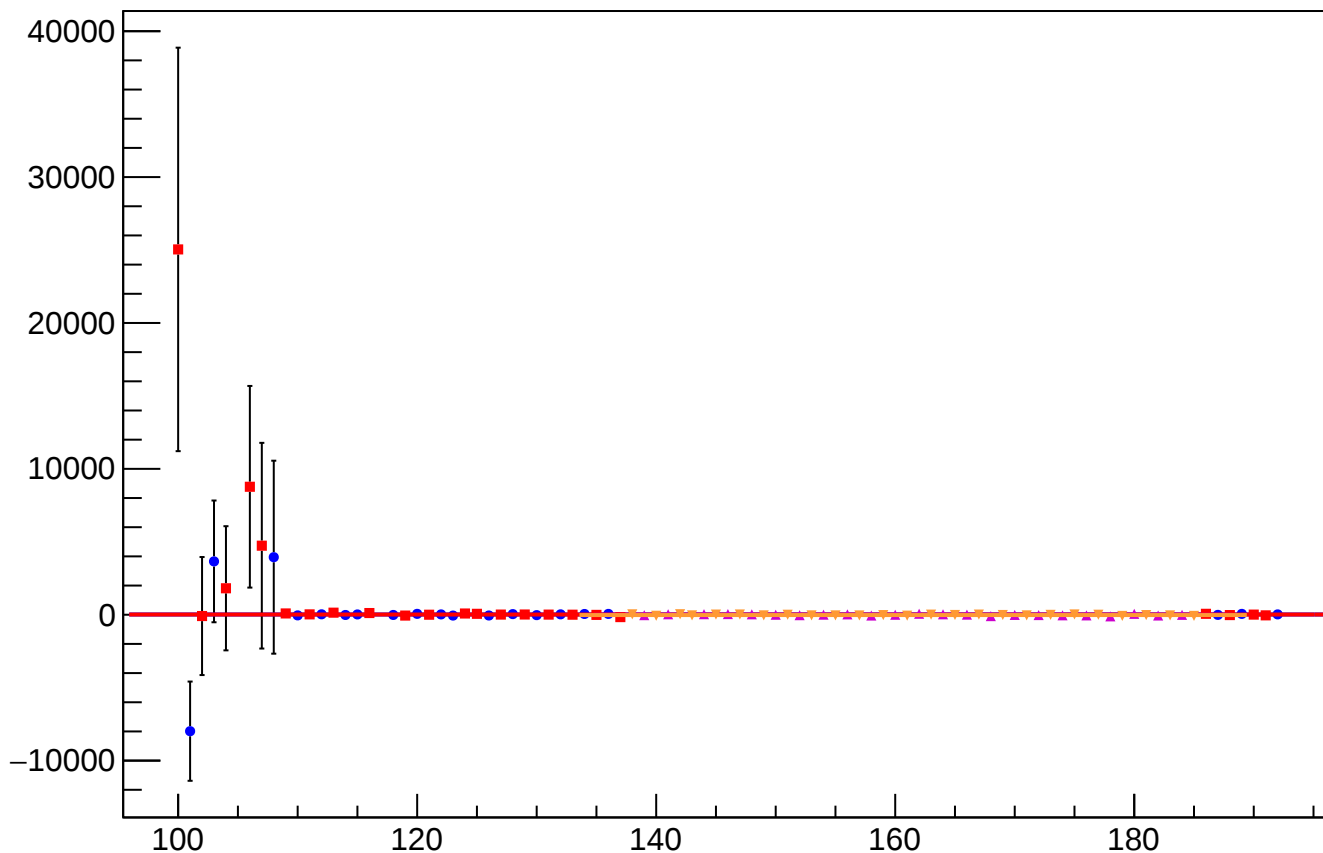
Right: 195.707 $\pm$ 0.040  $\chi^2$ /NDF: 8786339.6/42

In: 190.328 $\pm$ 0.029  $\chi^2$ /NDF:5451525.3/42

Out: 197.443 $\pm$ 0.029  $\chi^2$ /NDF:6645977.3/47

All: 193.855 $\pm$ 0.020  $\chi^2$ /NDF: 12128005.9/90

asym\_bcm\_cav4cQ\_bcm\_dg\_ds\_agg\_dd\_mean vs Slug, Sign Corrected



Right In: 16.844+/-11.969  $\chi^2/\text{NDF}$ : 15.7/19

Left Out: -22.879+/-7.340  $\chi^2/\text{NDF}$ : 18.8/24

Right Out: 14.692+/-11.728  $\chi^2/\text{NDF}$ : 31.3/22

Left In: -5.943+/-7.550  $\chi^2/\text{NDF}$ : 38.3/22

Left: -14.649+/-5.263  $\chi^2/\text{NDF}$ : 59.7/47

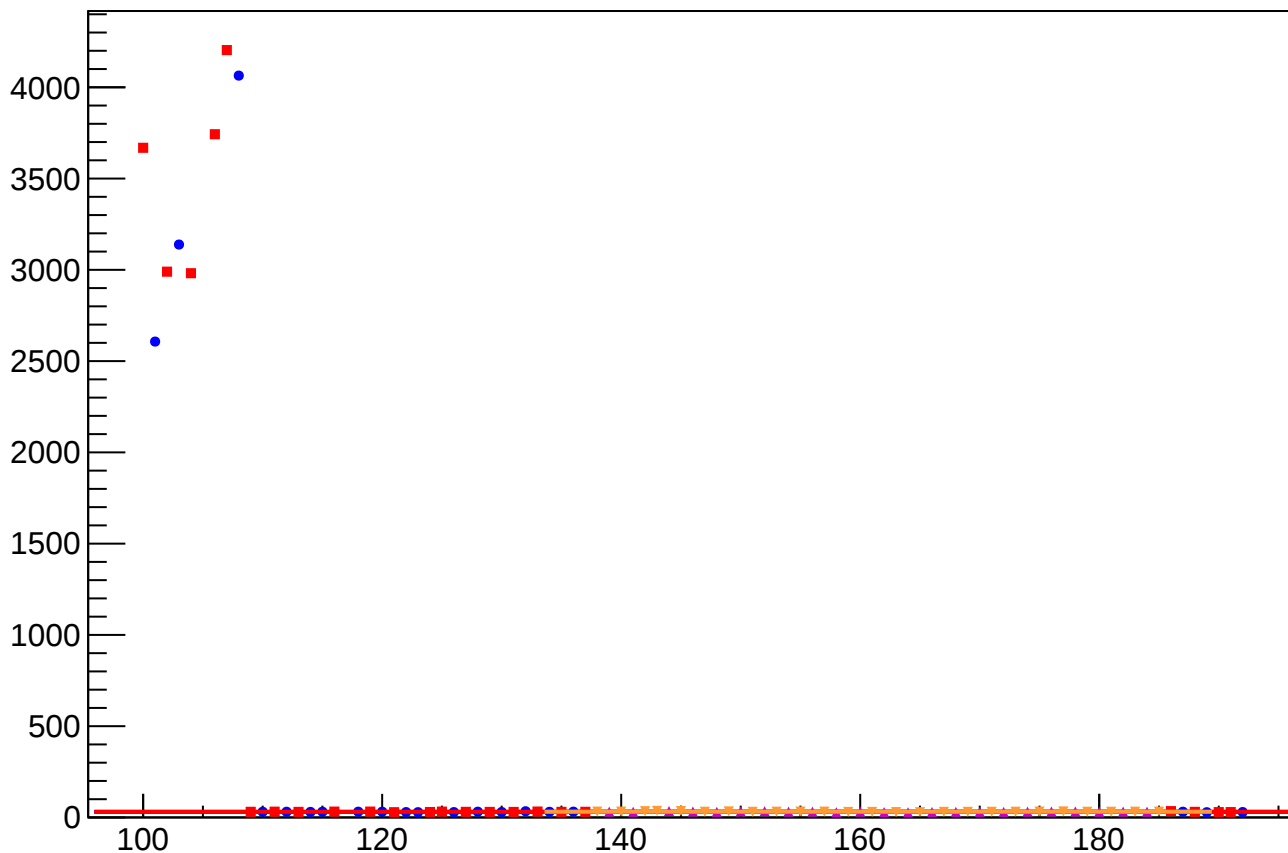
Right: 15.746+/-8.377  $\chi^2/\text{NDF}$ : 47.0/42

In: 0.543+/-6.385  $\chi^2/\text{NDF}$ : 56.6/42

Out: -12.304+/-6.222  $\chi^2/\text{NDF}$ : 57.4/47

All: -6.047+/-4.456  $\chi^2/\text{NDF}$ : 116.1/90

asym\_bcm\_cav4cQ\_bcm\_dg\_ds\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 30.774 $\pm$ 0.008  $\chi^2$ /NDF: 3023256.9/19

Left Out: 31.482 $\pm$ 0.005  $\chi^2$ /NDF: 82437.2/24

Right Out: 30.940 $\pm$ 0.008  $\chi^2$ /NDF: 3471133.5/22

Left In: 31.484 $\pm$ 0.005  $\chi^2$ /NDF: 87981.1/22

Left: 31.483 $\pm$ 0.004  $\chi^2$ /NDF: 170418.5/47

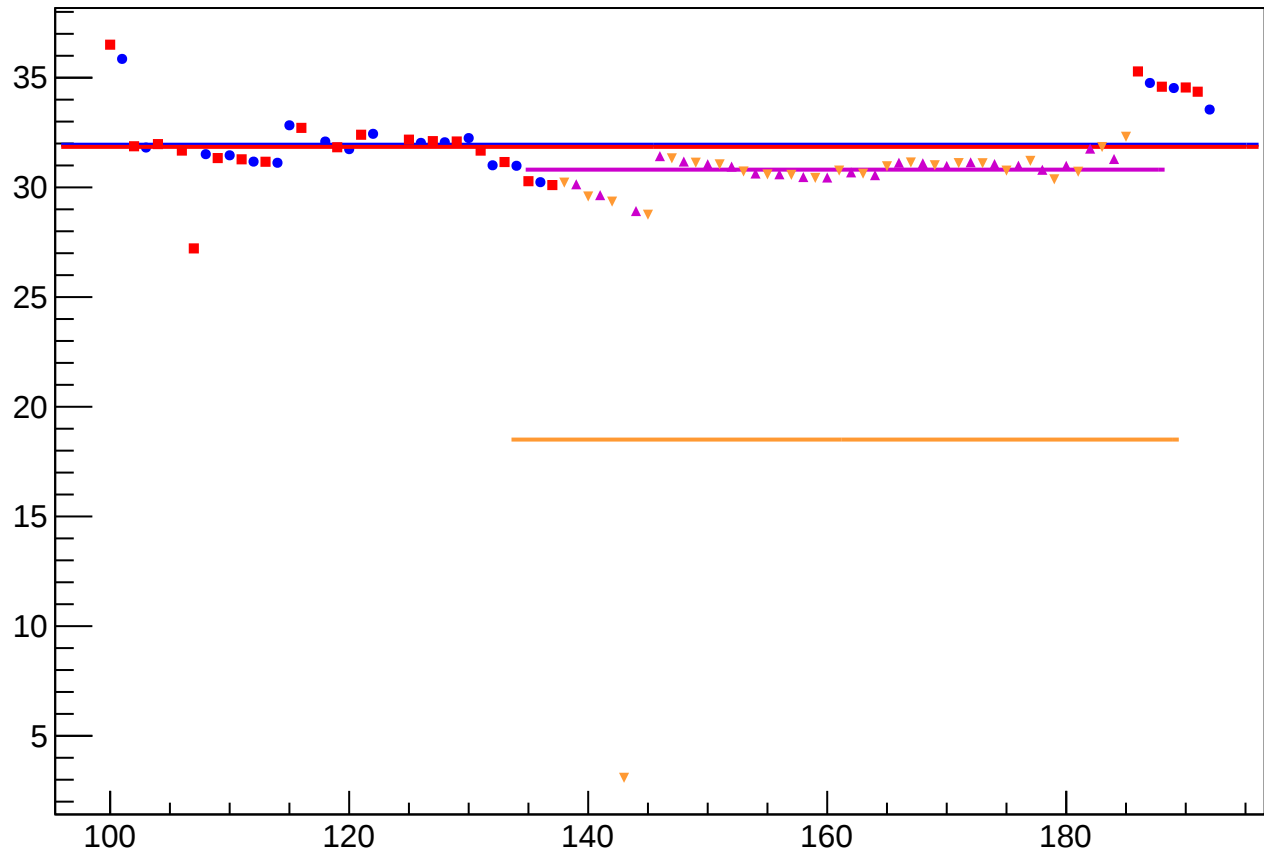
Right: 30.859 $\pm$ 0.006  $\chi^2$ /NDF: 6494587.3/42

In: 31.282 $\pm$ 0.005  $\chi^2$ /NDF: 3116282.3/42

Out: 31.329 $\pm$ 0.004  $\chi^2$ /NDF: 3556636.5/47

All: 31.306 $\pm$ 0.003  $\chi^2$ /NDF: 6672974.6/90

# yield\_usl\_mean vs Slug, Sign Corrected



Right In: 31.946 $\pm$ 0.000  $\chi^2$ /NDF: 1885984903.7/18

Left Out: 18.505 $\pm$ 0.000  $\chi^2$ /NDF: 940607632746.3/24

Right Out: 31.848 $\pm$ 0.000  $\chi^2$ /NDF: 1638312983.6/21

Left In: 30.809 $\pm$ 0.000  $\chi^2$ /NDF: 821961762.3/22

Left: 22.806 $\pm$ 0.000  $\chi^2$ /NDF: 1203928236724.3/41

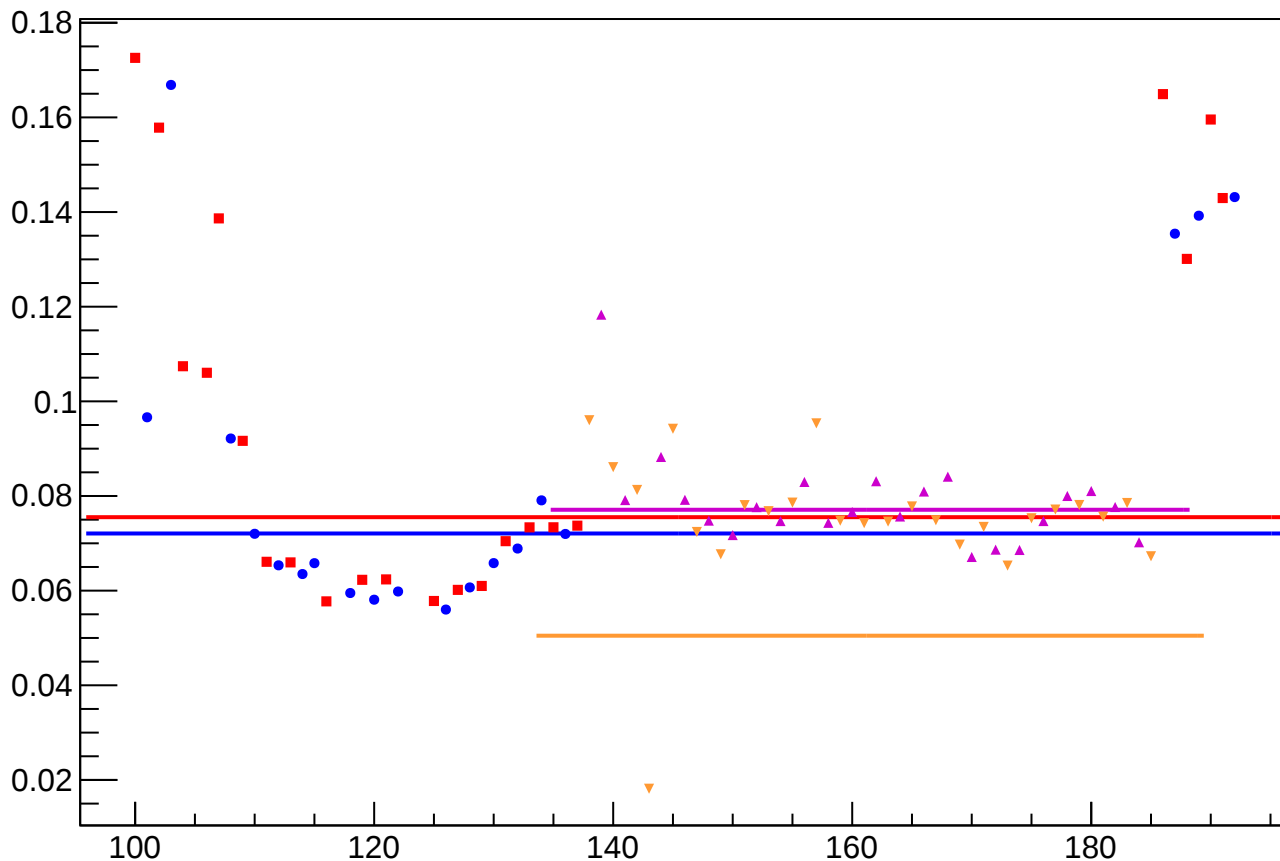
Right: 31.898 $\pm$ 0.000  $\chi^2$ /NDF: 3530563204.1/40

In: 31.185 $\pm$ 0.000  $\chi^2$ /NDF: 3846734094.2/41

Out: 21.236 $\pm$ 0.000  $\chi^2$ /NDF: 1122978137948.1/46

All: 25.113 $\pm$ 0.000  $\chi^2$ /NDF: 1367387662701.1/100

# yield\_usl\_rms vs Slug, Sign Corrected



Right In: 0.072 $\pm$ 0.000  $\chi^2$ /NDF: 1369908.1/18

Left Out: 0.050 $\pm$ 0.000  $\chi^2$ /NDF:8543648.6/24

Right Out: 0.076 $\pm$ 0.000  $\chi^2$ /NDF: 1720664.4/21

Left In: 0.077 $\pm$ 0.000  $\chi^2$ /NDF:325844.3/22

Left: 0.060 $\pm$ 0.000  $\chi^2$ /NDF: 11325451.9/47

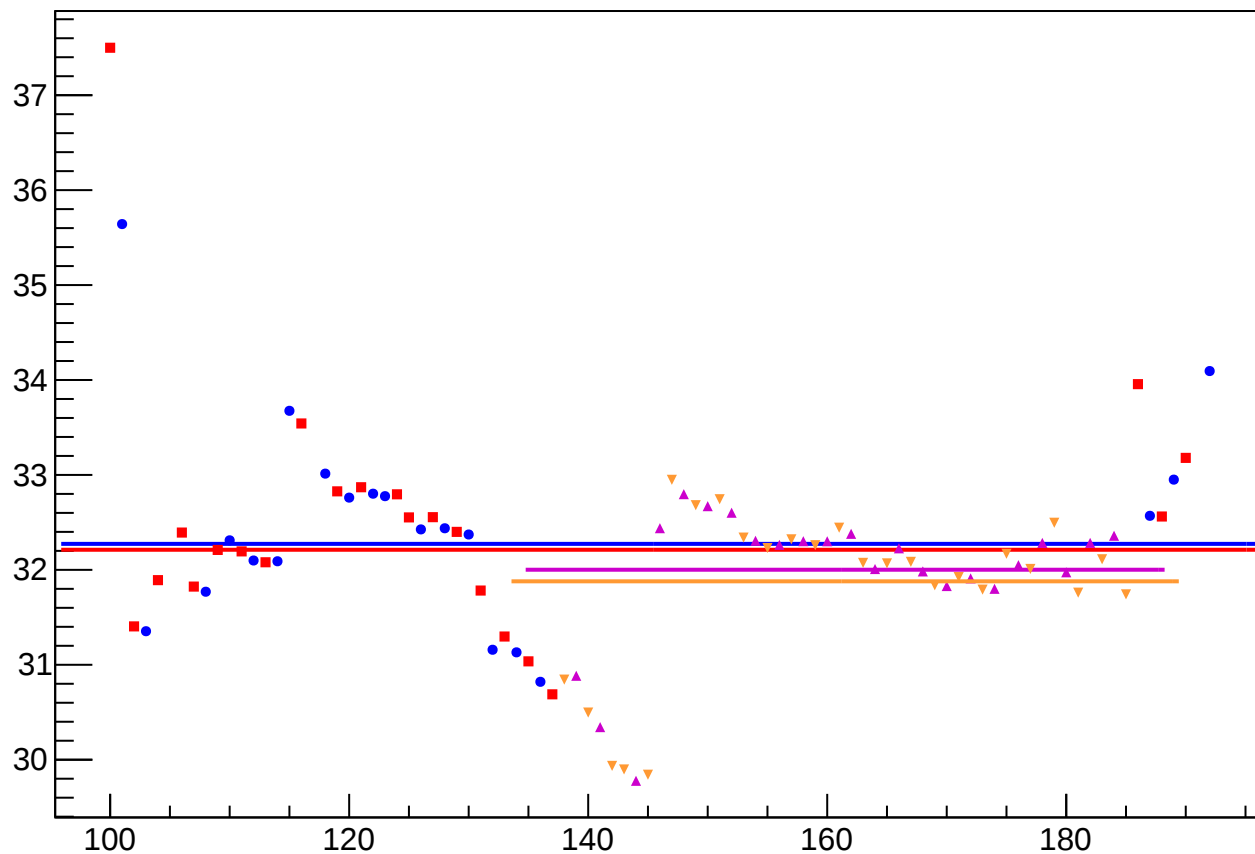
Right: 0.074 $\pm$ 0.000  $\chi^2$ /NDF: 3105956.0/40

In: 0.075 $\pm$ 0.000  $\chi^2$ /NDF:1740042.2/41

Out: 0.056 $\pm$ 0.000  $\chi^2$ /NDF:11537872.1/46

All: 0.063 $\pm$ 0.000  $\chi^2$ /NDF: 15189107.6/88

# yield\_usr\_mean vs Slug, Sign Corrected



Right In: 32.274+/-0.000  $\chi^2/\text{NDF}$ : 1103202748.0/19

Left Out: 31.879+/-0.000  $\chi^2/\text{NDF}$ : 1976281391.1/24

Right Out: 32.212+/-0.000  $\chi^2/\text{NDF}$ : 497629794.2/21

Left In: 32.001+/-0.000  $\chi^2/\text{NDF}$ : 1411110671.9/22

Left: 31.939+/-0.000  $\chi^2/\text{NDF}$ : 3408370857.8/47

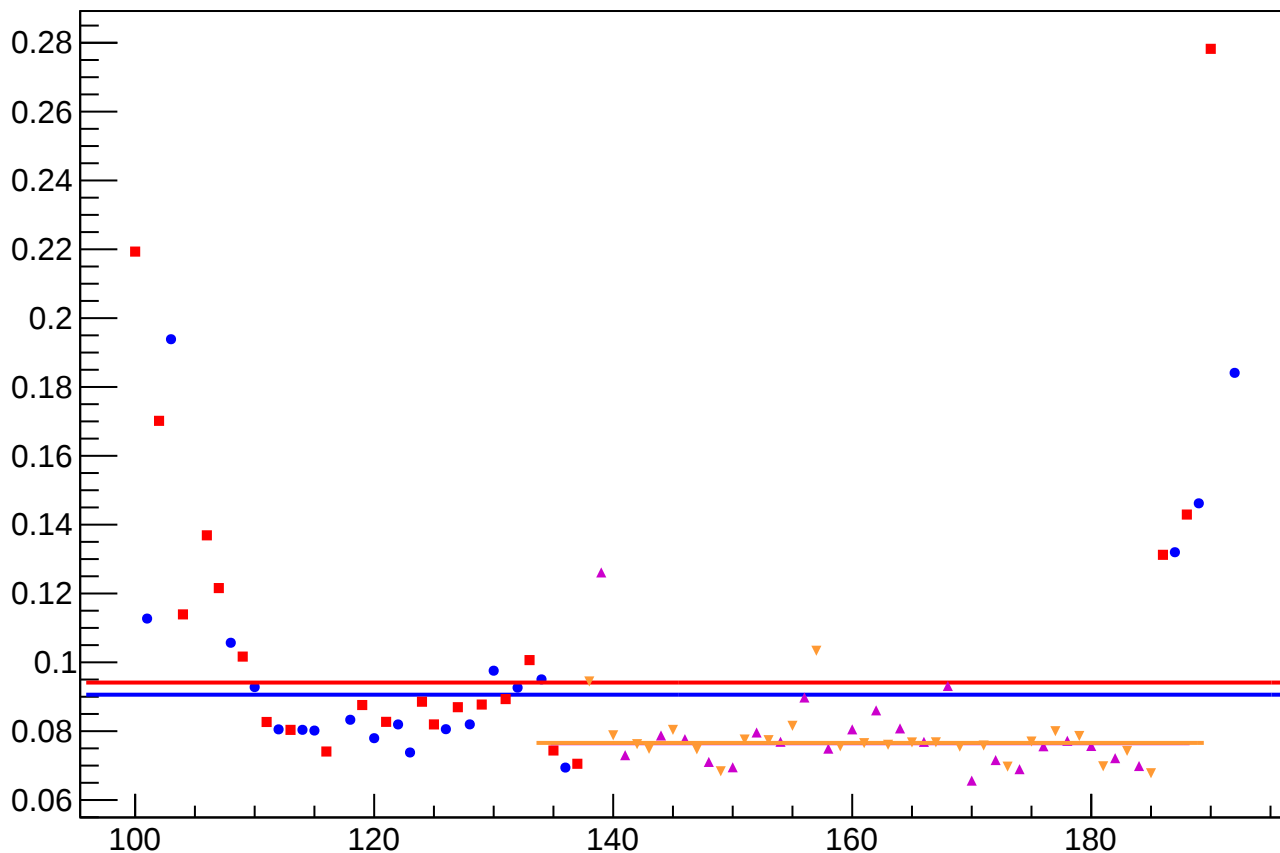
Right: 32.243+/-0.000  $\chi^2/\text{NDF}$ : 1602435856.0/41

In: 32.065+/-0.000  $\chi^2/\text{NDF}$ : 2561890306.5/42

Out: 31.954+/-0.000  $\chi^2/\text{NDF}$ : 2545085244.6/46

All: 32.008+/-0.000  $\chi^2/\text{NDF}$ : 5129564019.3/8

# yield\_usr\_rms vs Slug, Sign Corrected



Right In: 0.091+/-0.000  $\chi^2/\text{NDF}$ : 1186540.1/19

Left Out: 0.077+/-0.000  $\chi^2/\text{NDF}$ : 209648.5/24

Right Out: 0.094+/-0.000  $\chi^2/\text{NDF}$ : 1112841.7/21

Left In: 0.076+/-0.000  $\chi^2/\text{NDF}$ : 432563.3/22

Left: 0.077+/-0.000  $\chi^2/\text{NDF}$ : 642235.6/47

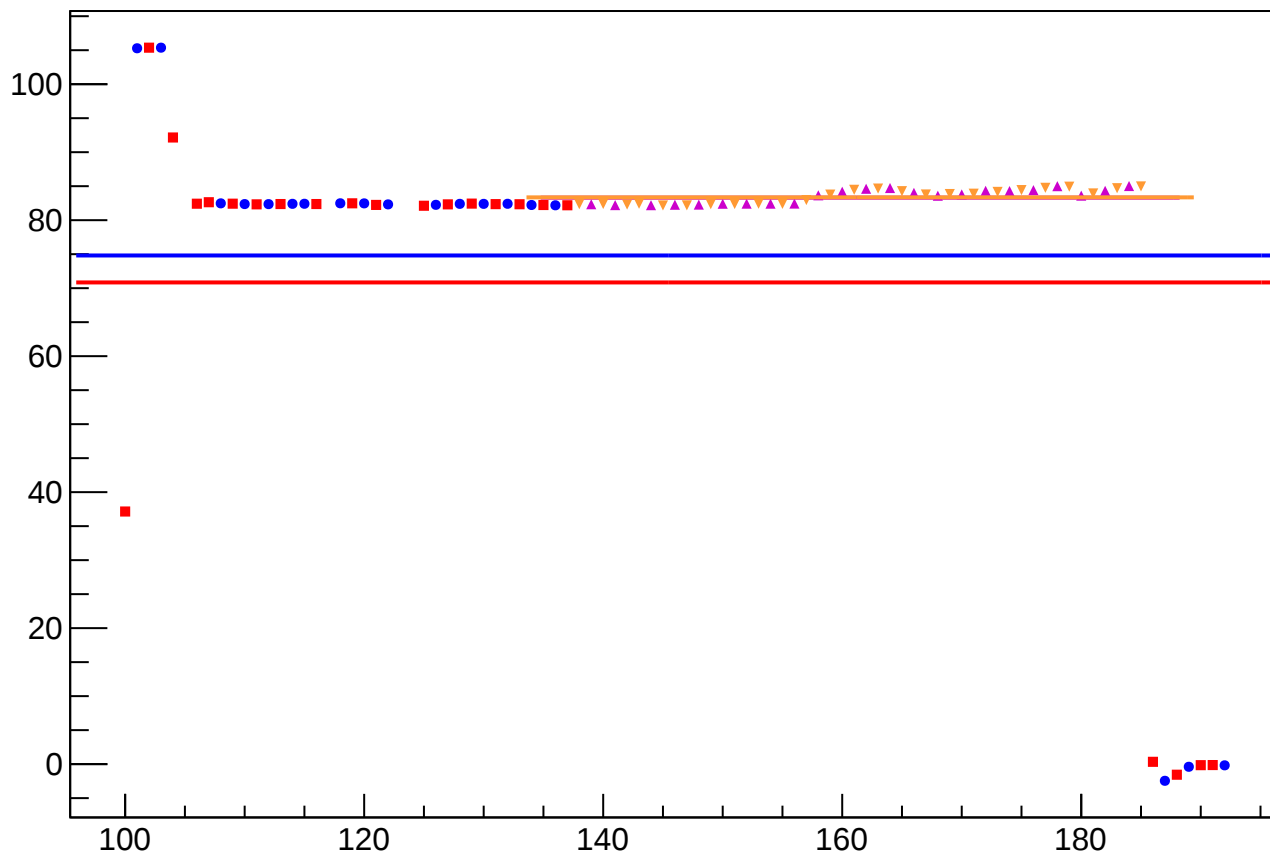
Right: 0.092+/-0.000  $\chi^2/\text{NDF}$ : 2309744.7/41

In: 0.080+/-0.000  $\chi^2/\text{NDF}$ : 1873946.8/42

Out: 0.081+/-0.000  $\chi^2/\text{NDF}$ : 1718292.6/46

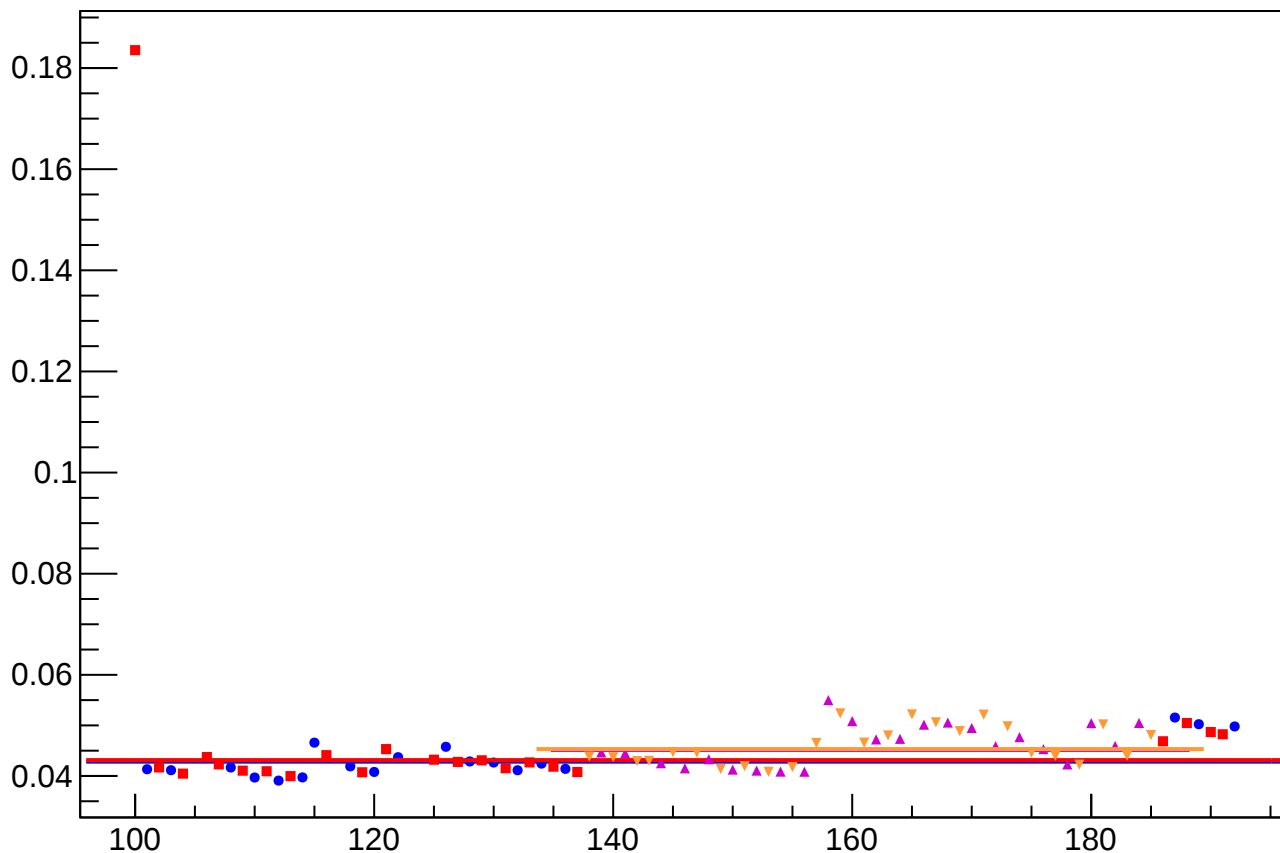
All: 0.080+/-0.000  $\chi^2/\text{NDF}$ : 3594155.0/89

# yield\_dsl\_mean vs Slug, Sign Corrected



|                           |                                          |                       |                                           |
|---------------------------|------------------------------------------|-----------------------|-------------------------------------------|
| Right In: 74.809+/-0.000  | $\chi^2/\text{NDF}$ : 4100685596044.2/18 | Left: 83.332+/-0.000  | $\chi^2/\text{NDF}$ : 17572666767.1/47    |
| Left Out: 83.355+/-0.000  | $\chi^2/\text{NDF}$ : 9142393022.8/24    | Right: 72.756+/-0.000 | $\chi^2/\text{NDF}$ : 9000940724884.0/4   |
| Right Out: 70.844+/-0.000 | $\chi^2/\text{NDF}$ : 4864918096642.5/21 | In: 80.394+/-0.000    | $\chi^2/\text{NDF}$ : 4315174257974.6/41  |
| Left In: 83.309+/-0.000   | $\chi^2/\text{NDF}$ : 8421247810.9/22    | Out: 78.992+/-0.000   | $\chi^2/\text{NDF}$ : 5348990678971.6/46  |
|                           |                                          | All: 79.674+/-0.000   | $\chi^2/\text{NDF}$ : 9676946295468.0/100 |

# yield\_dsl\_rms vs Slug, Sign Corrected



Right In: 0.043 $\pm$ 0.000  $\chi^2$ /NDF: 90540.5/18

Left Out: 0.045 $\pm$ 0.000  $\chi^2$ /NDF: 211358.2/24

Right Out: 0.043 $\pm$ 0.000  $\chi^2$ /NDF: 163417.7/21

Left In: 0.045 $\pm$ 0.000  $\chi^2$ /NDF: 242885.4/22

Left: 0.045 $\pm$ 0.000  $\chi^2$ /NDF: 454494.8/47

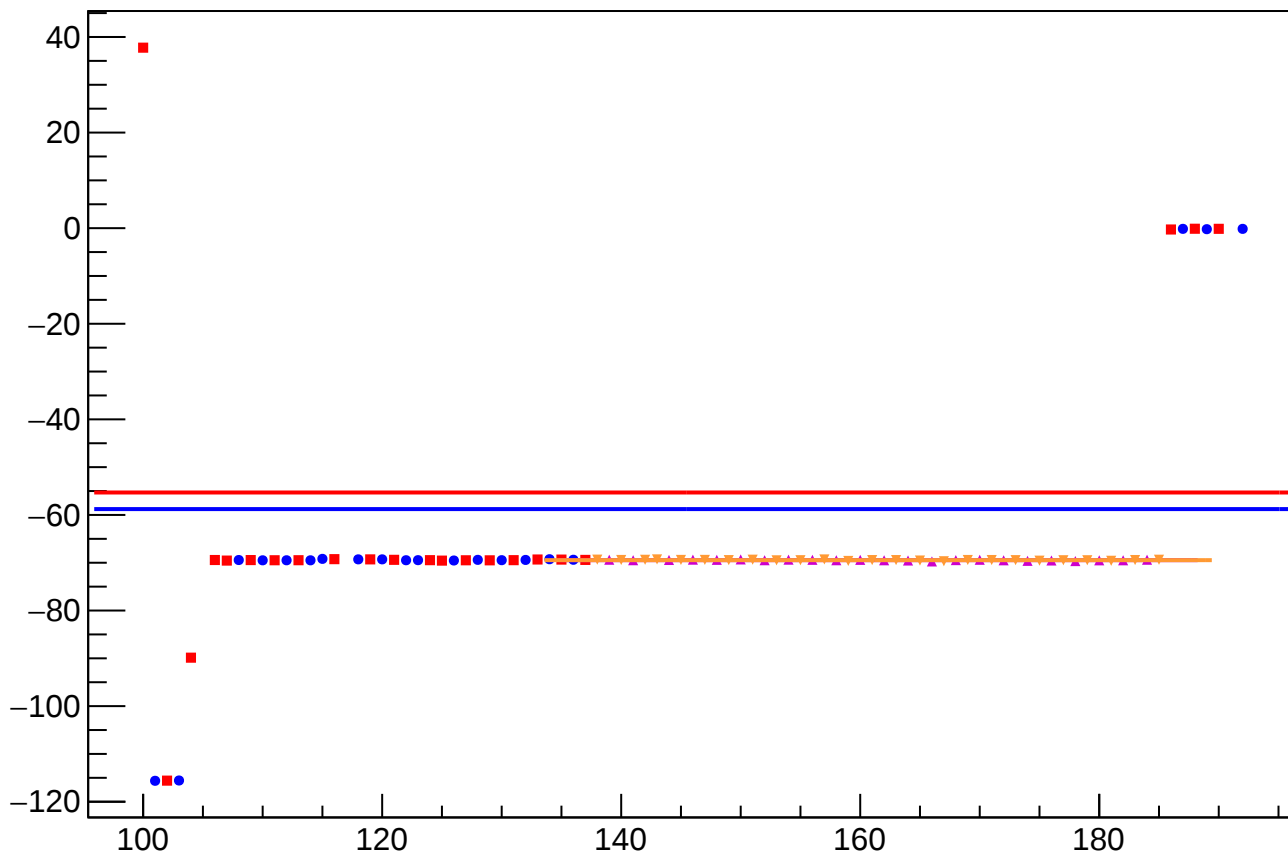
Right: 0.043 $\pm$ 0.000  $\chi^2$ /NDF: 254381.8/40

In: 0.044 $\pm$ 0.000  $\chi^2$ /NDF: 363869.4/41

Out: 0.045 $\pm$ 0.000  $\chi^2$ /NDF: 403479.6/46

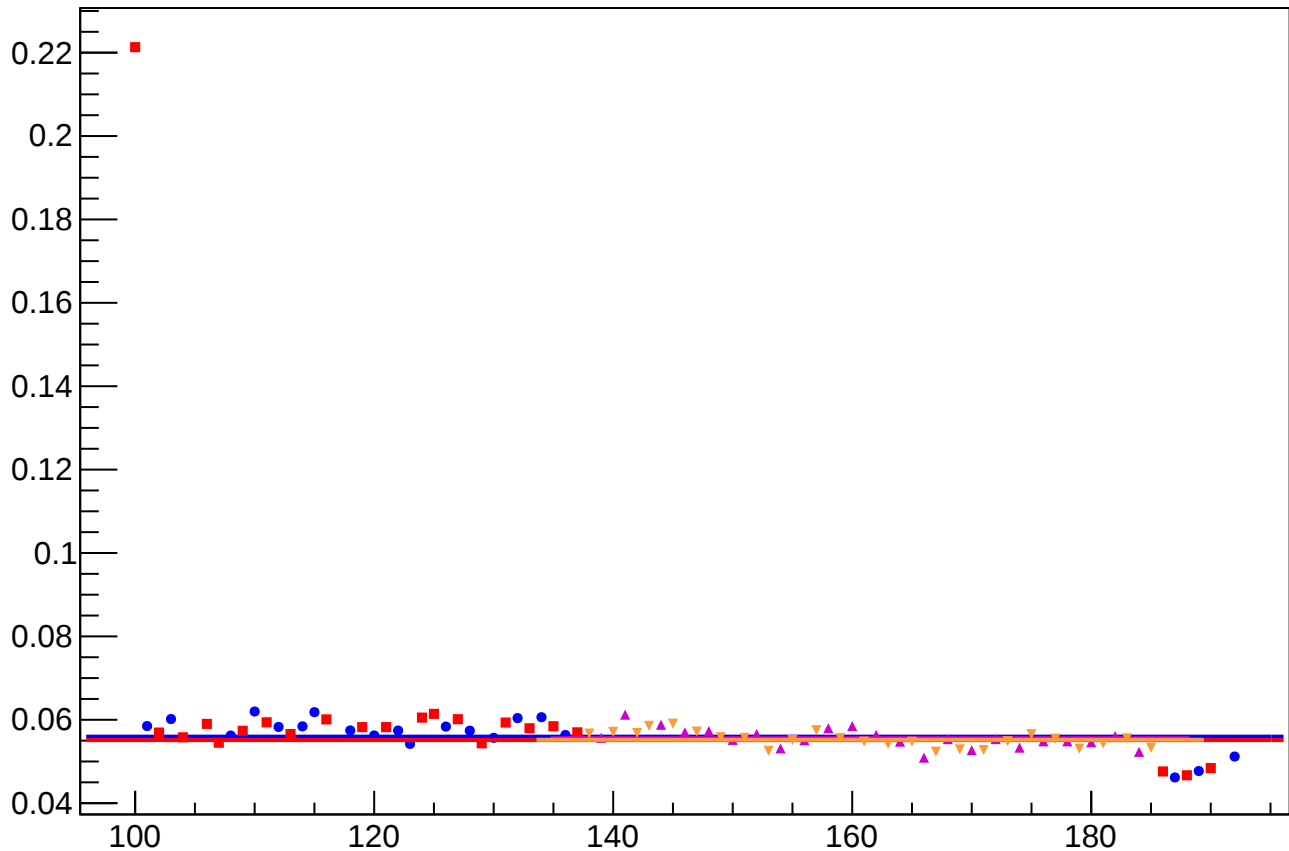
All: 0.044 $\pm$ 0.000  $\chi^2$ /NDF: 767898.3/88

# yield\_dsr\_mean vs Slug, Sign Corrected



|                            |                                          |                        |                                          |
|----------------------------|------------------------------------------|------------------------|------------------------------------------|
| Right In: -58.775+/-0.000  | $\chi^2/\text{NDF}$ : 3255599874224.8/19 | Left: -69.460+/-0.000  | $\chi^2/\text{NDF}$ : 102399164.0/47     |
| Left Out: -69.461+/-0.000  | $\chi^2/\text{NDF}$ : 49572401.9/24      | Right: -56.958+/-0.000 | $\chi^2/\text{NDF}$ : 6564879969690.1/47 |
| Right Out: -55.303+/-0.000 | $\chi^2/\text{NDF}$ : 3293468697742.5/21 | In: -66.094+/-0.000    | $\chi^2/\text{NDF}$ : 3451508628956.6/42 |
| Left In: -69.458+/-0.000   | $\chi^2/\text{NDF}$ : 52798704.3/22      | Out: -64.921+/-0.000   | $\chi^2/\text{NDF}$ : 3668316001005.5/4  |
|                            |                                          | All: -65.485+/-0.000   | $\chi^2/\text{NDF}$ : 712550814091.0/100 |

# yield\_dsr\_rms vs Slug, Sign Corrected



Right In: 0.056+/-0.000  $\chi^2/\text{NDF}$ : 82095.4/19

Left Out: 0.055+/-0.000  $\chi^2/\text{NDF}$ : 38761.8/24

Right Out: 0.055+/-0.000  $\chi^2/\text{NDF}$ : 207474.9/21

Left In: 0.056+/-0.000  $\chi^2/\text{NDF}$ : 52190.5/22

Left: 0.055+/-0.000  $\chi^2/\text{NDF}$ : 91784.6/47

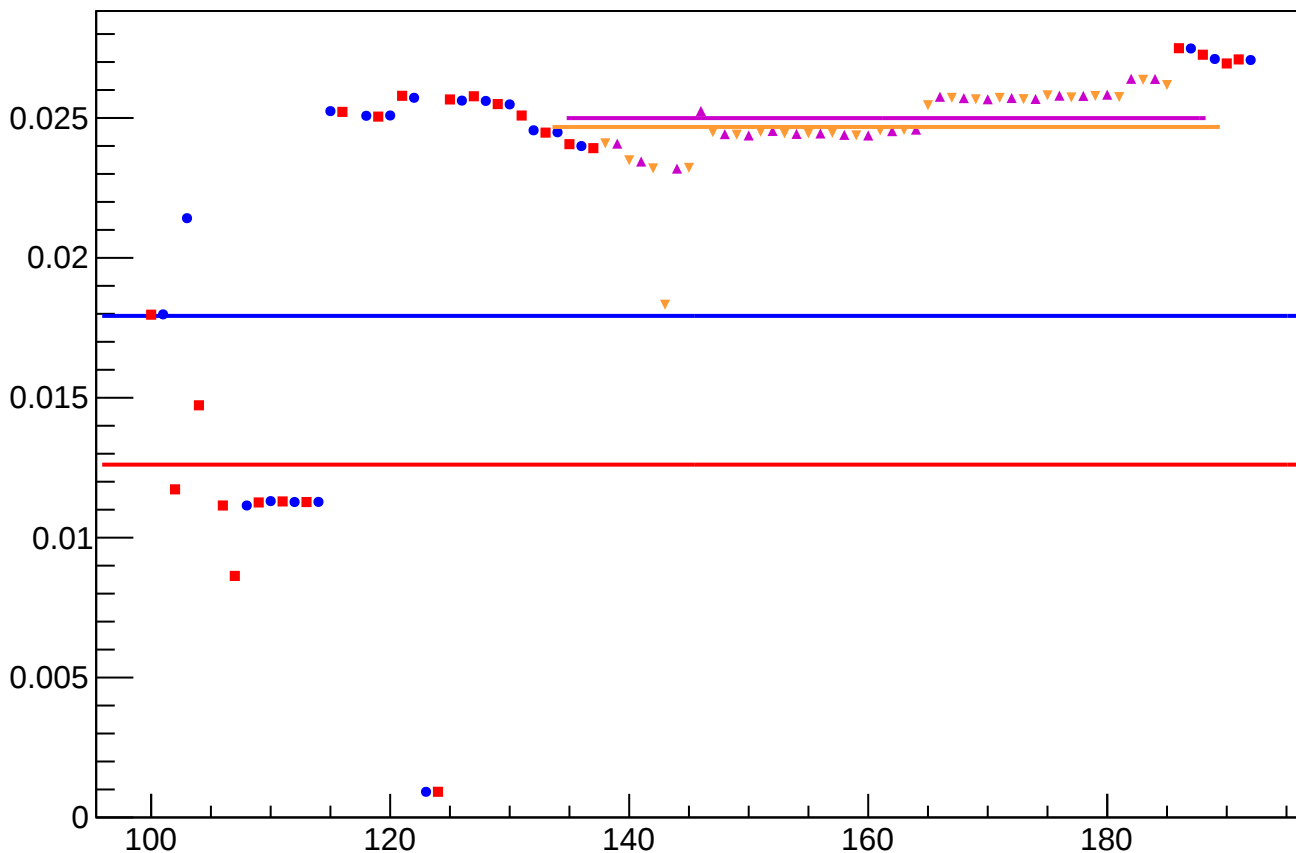
Right: 0.056+/-0.000  $\chi^2/\text{NDF}$ : 291381.8/41

In: 0.056+/-0.000  $\chi^2/\text{NDF}$ : 134742.5/42

Out: 0.055+/-0.000  $\chi^2/\text{NDF}$ : 246261.9/46

All: 0.055+/-0.000  $\chi^2/\text{NDF}$ : 383284.4/89

# yield\_atl1\_mean vs Slug, Sign Corrected



Right In: 0.018+/-0.000

$\chi^2/\text{NDF}$ : 143512170729.8/19

Left: 0.025+/-0.000

$\chi^2/\text{NDF}$ : 12284812437.7/47

Right: 0.015+/-0.000

$\chi^2/\text{NDF}$ : 457670876611.1/42

Left Out: 0.025+/-0.000

$\chi^2/\text{NDF}$ : 9641065555.8/24

In: 0.023+/-0.000

$\chi^2/\text{NDF}$ : 206836451164.9/42

Right Out: 0.013+/-0.000

$\chi^2/\text{NDF}$ : 283449881465.8/22

Out: 0.020+/-0.000

$\chi^2/\text{NDF}$ : 516371889516.3/47

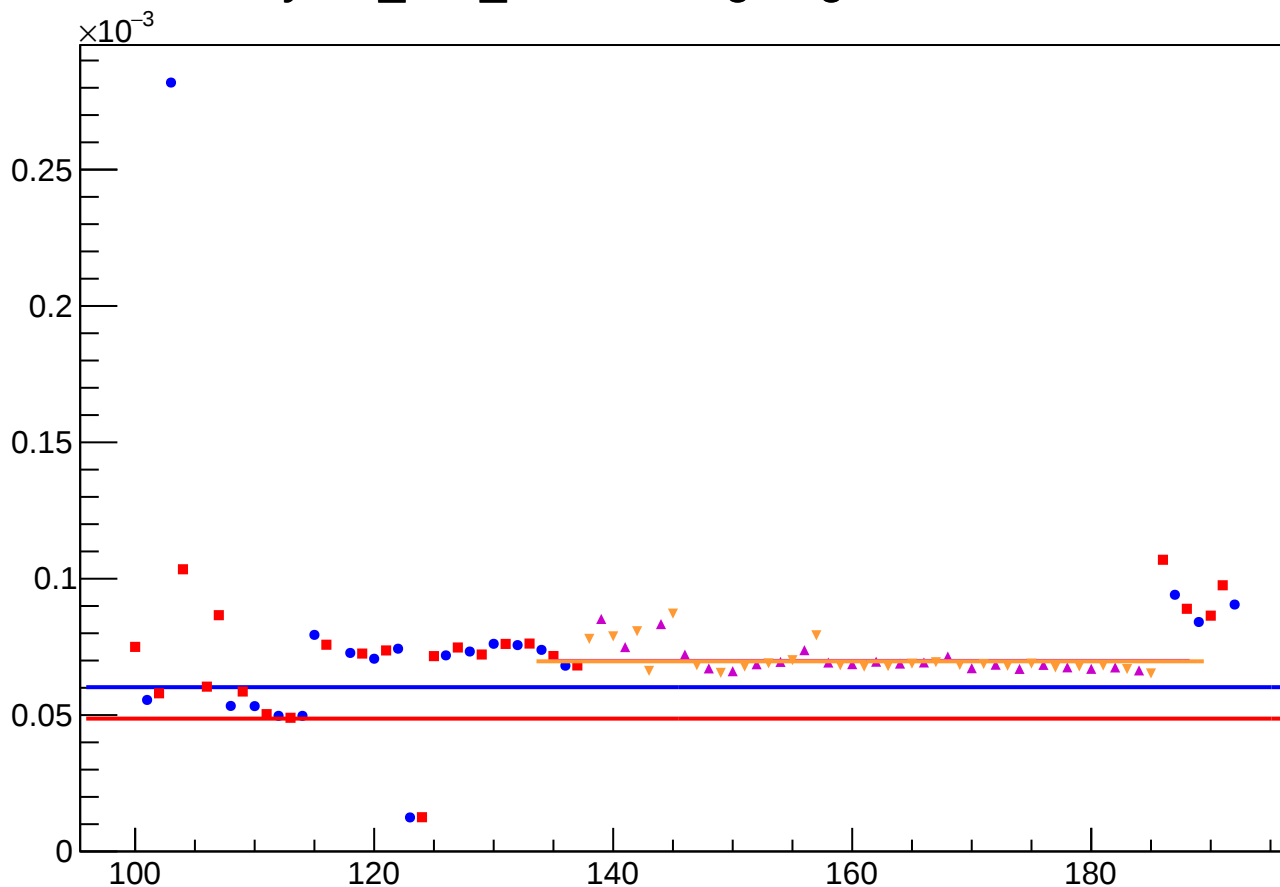
Left In: 0.025+/-0.000

$\chi^2/\text{NDF}$ : 2462473687.7/22

All: 0.021+/-0.000

$\chi^2/\text{NDF}$ : 746770205659.7

# yield\_atl1\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2339953.9/19

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :158125.0/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4498630.0/22

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :129289.8/22

Left: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 287487.6/47

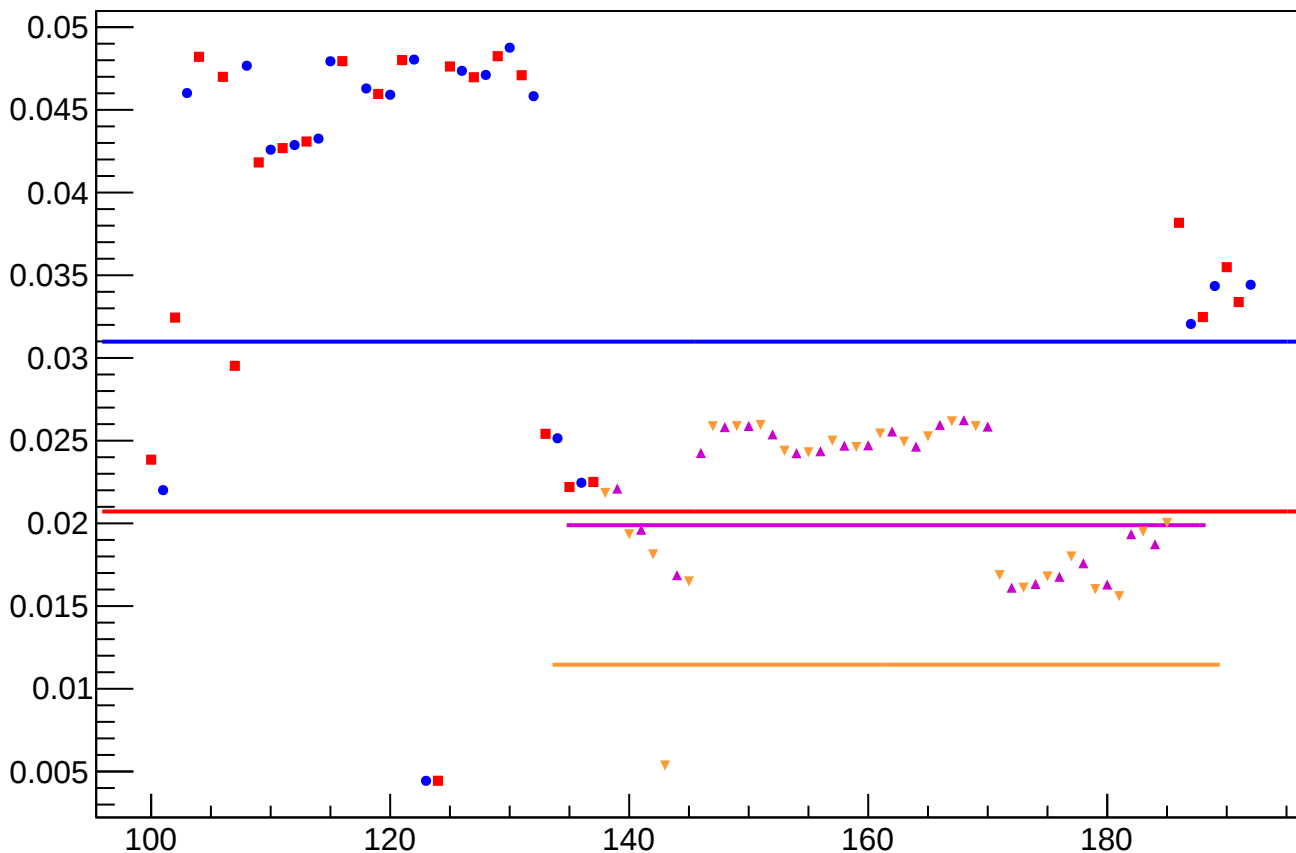
Right: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7127241.5/42

In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :2694894.0/42

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :6009898.9/47

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8879003.6/90

# yield\_atl2\_mean vs Slug, Sign Corrected



Right In: 0.031+/-0.000

$\chi^2/\text{NDF}$ : 21151719955.5/19

Left: 0.014+/-0.000

$\chi^2/\text{NDF}$ : 59527747529.2/47

Left Out: 0.011+/-0.000

$\chi^2/\text{NDF}$ : 40294472965.0/24

Right: 0.025+/-0.000

$\chi^2/\text{NDF}$ : 67150130449.6/42

Right Out: 0.021+/-0.000

$\chi^2/\text{NDF}$ : 40990328610.5/22

In: 0.022+/-0.000

$\chi^2/\text{NDF}$ : 33108768658.0/42

Out: 0.013+/-0.000

$\chi^2/\text{NDF}$ : 90366419381.3/47

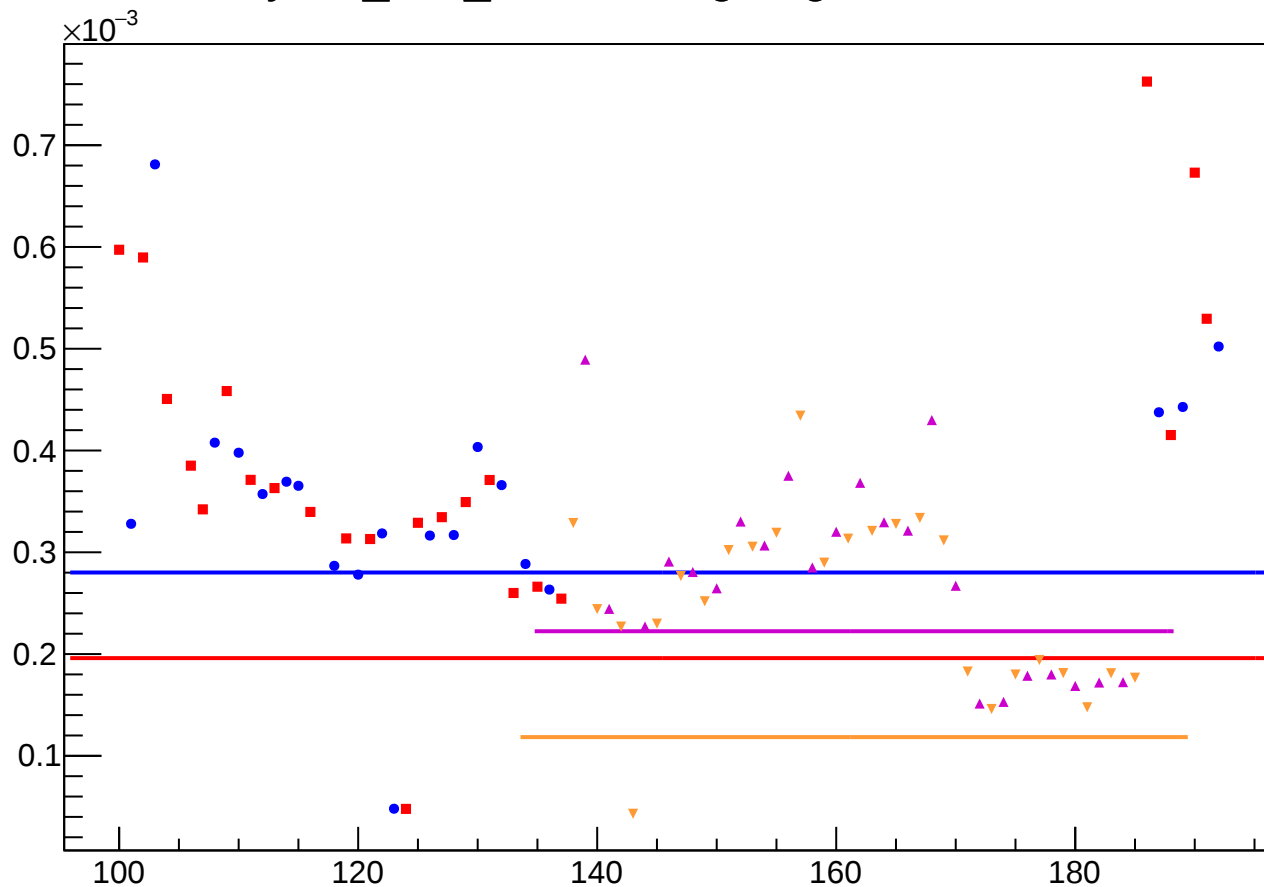
Left In: 0.020+/-0.000

$\chi^2/\text{NDF}$ : 4458790813.3/22

All: 0.016+/-0.000

$\chi^2/\text{NDF}$ : 146038015088.4

# yield\_atl2\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2924030.4/19

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :13563132.9/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6804224.4/22

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :3281119.0/22

Left: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 21336583.8/47

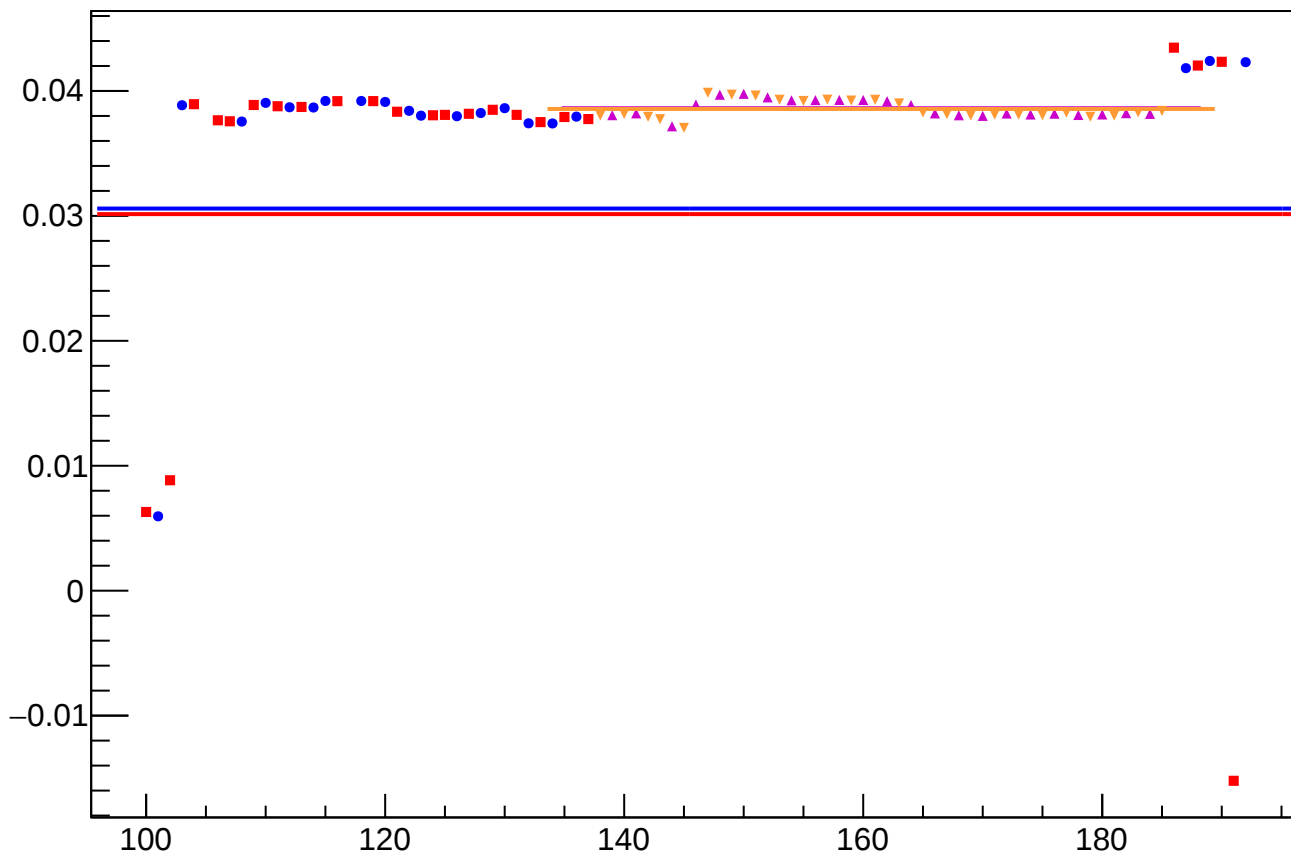
Right: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10400459.0/42

In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :6610748.2/42

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :21642033.3/47

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 33862967.0/90

# yield\_atr1\_mean vs Slug, Sign Corrected



Right In: 0.031+/-0.000

$\chi^2/\text{NDF}$ : 101682898541.8/19

Left Out: 0.039+/-0.000

$\chi^2/\text{NDF}$ : 539468437.3/24

Right Out: 0.030+/-0.000

$\chi^2/\text{NDF}$ : 165945129773.8/22

Left In: 0.039+/-0.000

$\chi^2/\text{NDF}$ : 465745982.6/22

Left: 0.039+/-0.000

$\chi^2/\text{NDF}$ : 1007039623.8/47

Right: 0.030+/-0.000

$\chi^2/\text{NDF}$ : 267679075225.7/42

In: 0.036+/-0.000

$\chi^2/\text{NDF}$ : 123886350915.4/42

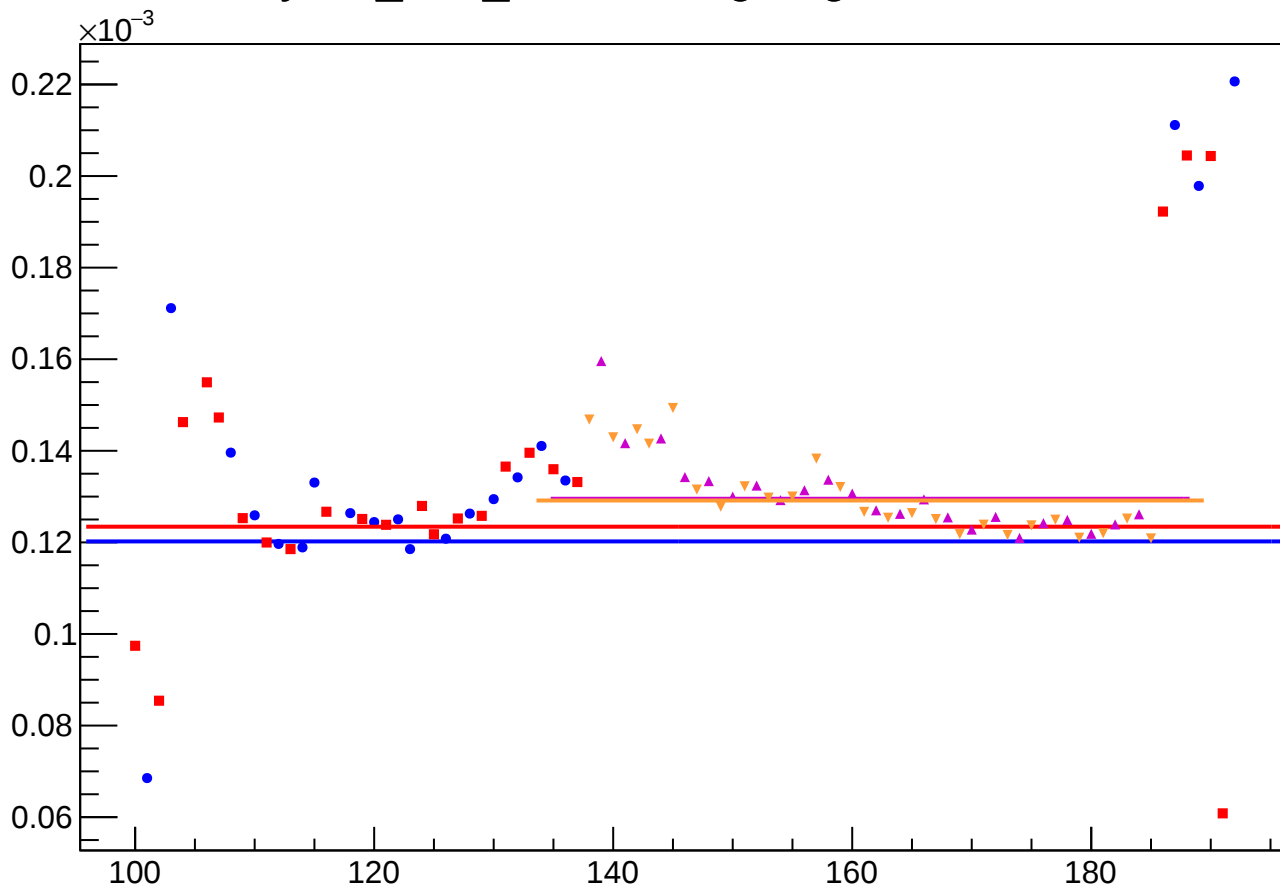
Out: 0.036+/-0.000

$\chi^2/\text{NDF}$ : 191450977270.2/47

All: 0.036+/-0.000

$\chi^2/\text{NDF}$ : 315353855812.8

# yield\_atr1\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1386172.1/19

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :130321.6/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1133134.7/22

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :114763.2/22

Left: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 245235.2/47

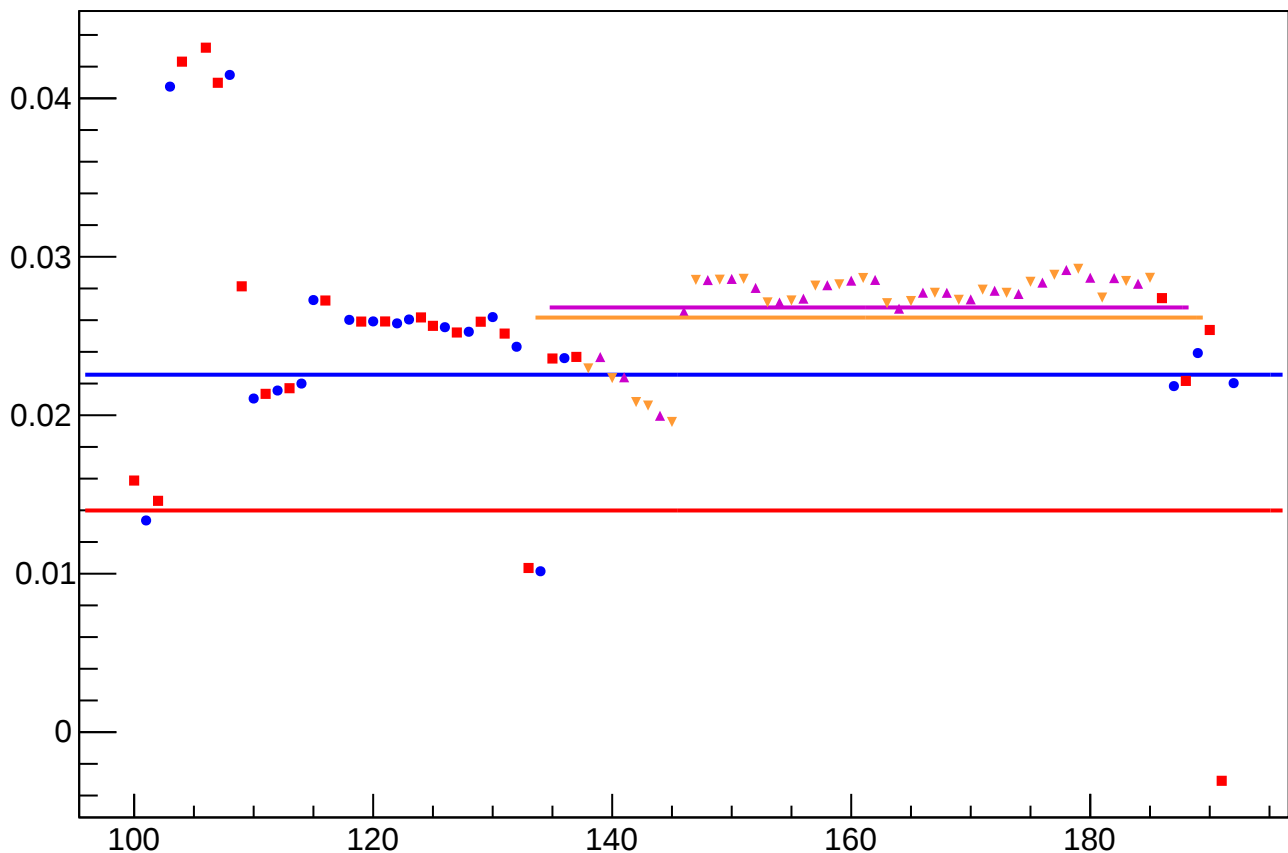
Right: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2524618.1/42

In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :1559441.1/42

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :1286516.1/47

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2847059.6/90

# yield\_atr2\_mean vs Slug, Sign Corrected



Right In: 0.023+/-0.000  $\chi^2/\text{NDF}$ : 4243800014.7/19

Left Out: 0.026+/-0.000  $\chi^2/\text{NDF}$ : 2056710635.1/24

Right Out: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 30102740684.4/22

Left In: 0.027+/-0.000  $\chi^2/\text{NDF}$ : 1332033607.7/22

Left: 0.026+/-0.000  $\chi^2/\text{NDF}$ : 3427924441.4/47

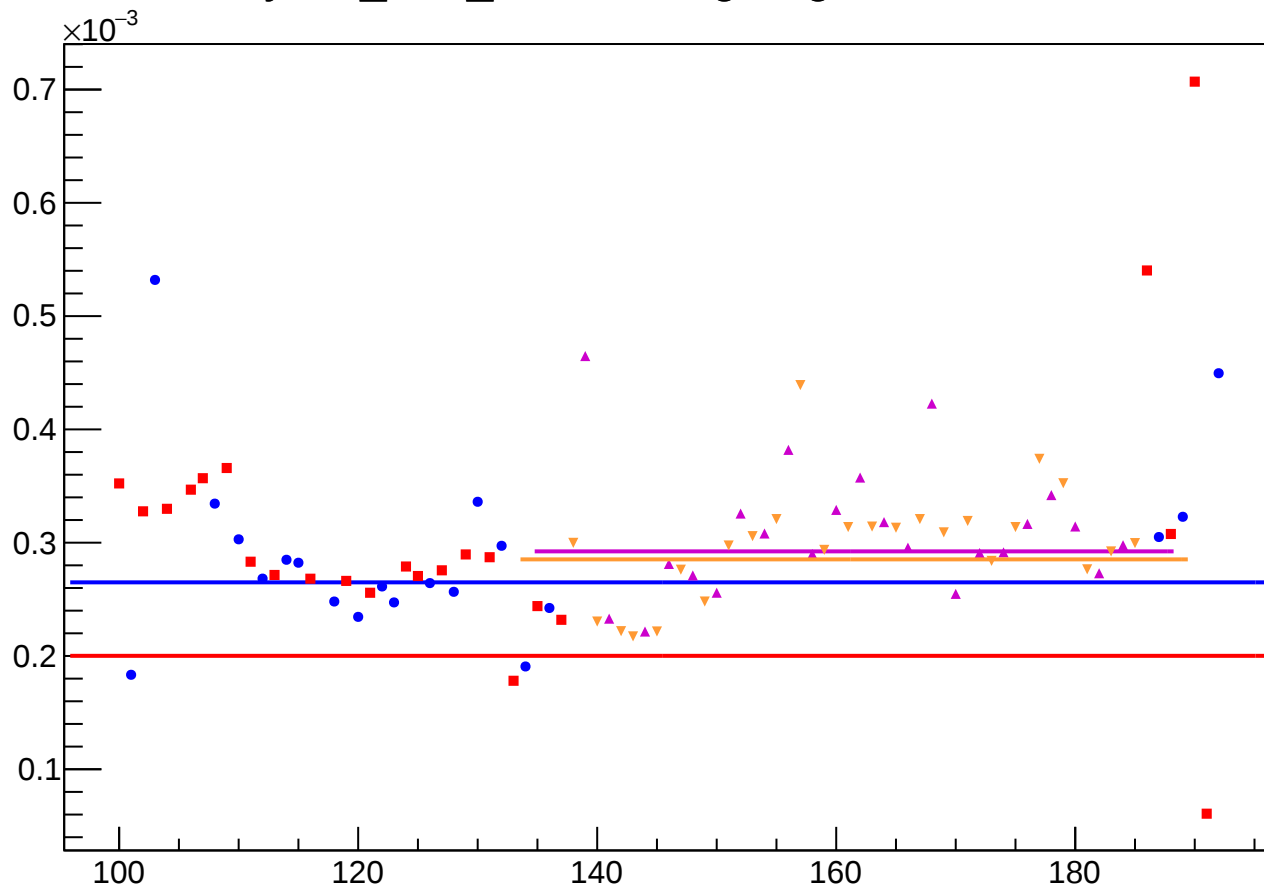
Right: 0.017+/-0.000  $\chi^2/\text{NDF}$ : 38713247879.1/42

In: 0.025+/-0.000  $\chi^2/\text{NDF}$ : 6737139918.6/42

Out: 0.021+/-0.000  $\chi^2/\text{NDF}$ : 44844298291.6/47

All: 0.023+/-0.000  $\chi^2/\text{NDF}$ : 54519769425.0/9

# yield\_atr2\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 979397.4/19

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 813464.1/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4138288.4/22

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 898772.9/22

Left: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1721873.2/47

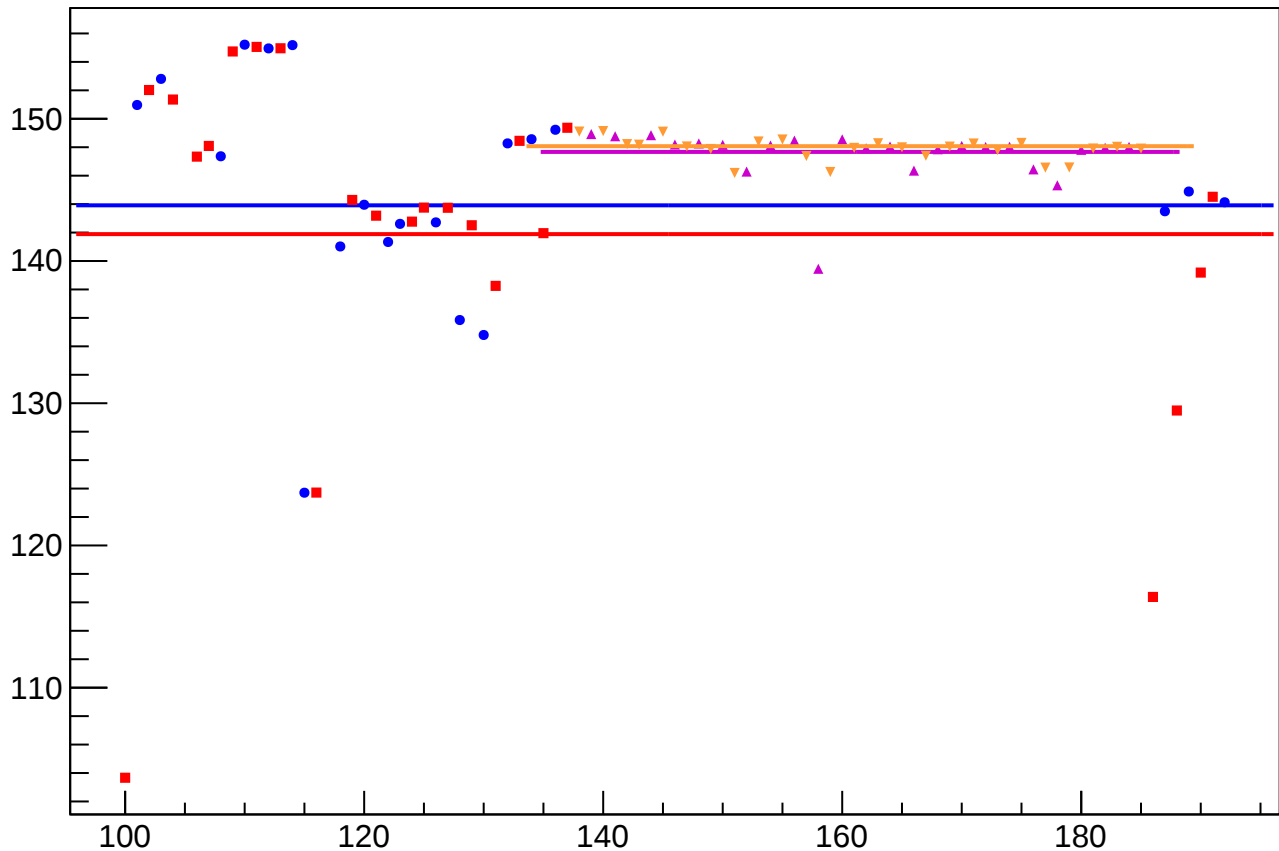
Right: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5618079.3/42

In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1974662.4/42

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6192497.8/47

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8523236.1/90

# yield\_bcm\_an\_ds\_mean vs Slug, Sign Corrected



Right In: 143.915 $\pm$ 0.000  $\chi^2$ /NDF: 3454025314.8/19

Left Out: 148.073 $\pm$ 0.000  $\chi^2$ /NDF: 65614067.4/24

Right Out: 141.890 $\pm$ 0.000  $\chi^2$ /NDF: 7223609825.6/22

Left In: 147.670 $\pm$ 0.000  $\chi^2$ /NDF: 345222604.4/22

Left: 147.879 $\pm$ 0.000  $\chi^2$ /NDF: 418091602.5/47

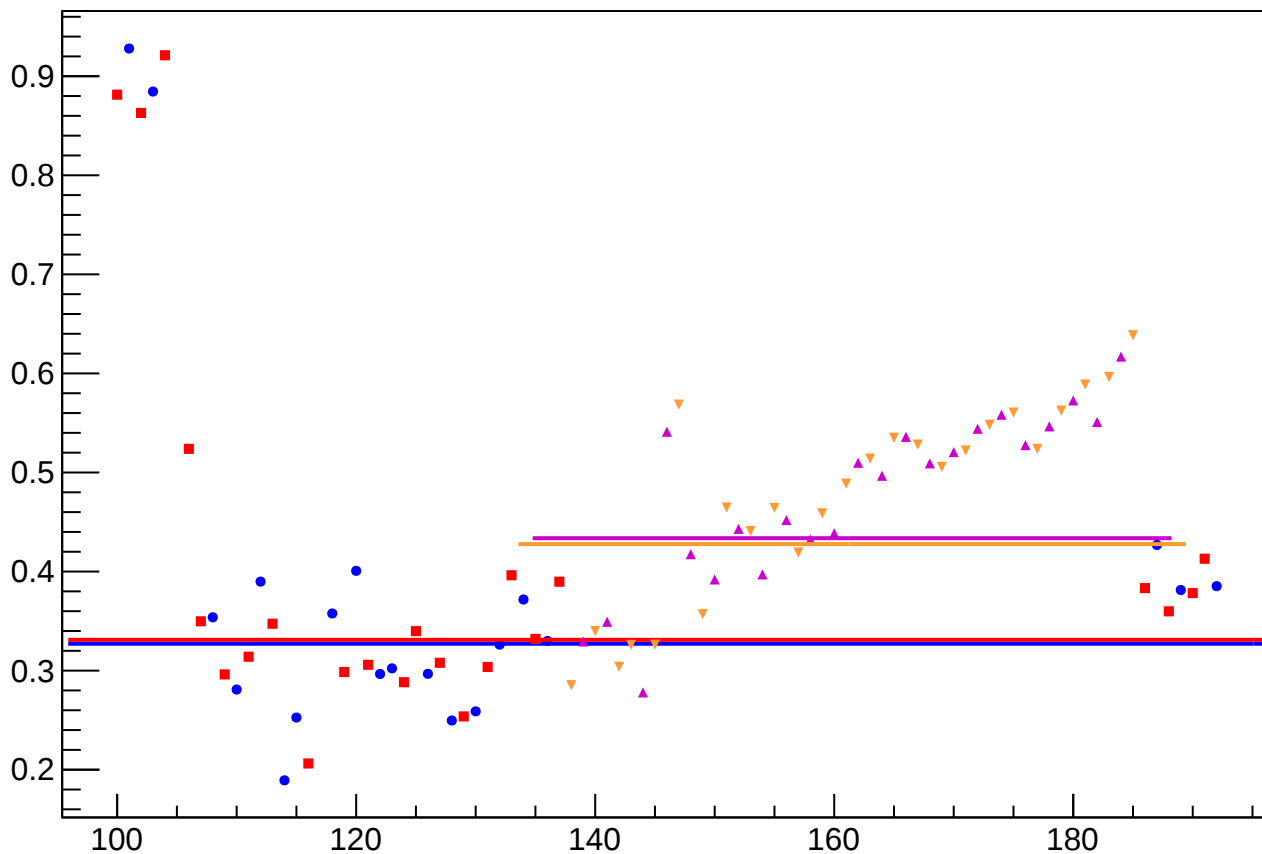
Right: 142.867 $\pm$ 0.000  $\chi^2$ /NDF: 10814686814.8/42

In: 146.064 $\pm$ 0.000  $\chi^2$ /NDF: 4320986418.4/42

Out: 145.429 $\pm$ 0.000  $\chi^2$ /NDF: 8805802643.1/47

All: 145.735 $\pm$ 0.000  $\chi^2$ /NDF: 13158252272.0

# yield\_bcm\_an\_ds\_rms vs Slug, Sign Corrected



Right In: 0.327+/-0.000  $\chi^2/\text{NDF}$ : 1343959.2/19

Left Out: 0.428+/-0.000  $\chi^2/\text{NDF}$ :1896808.7/24

Right Out: 0.331+/-0.000  $\chi^2/\text{NDF}$ : 1281262.9/22

Left In: 0.434+/-0.000  $\chi^2/\text{NDF}$ :1496343.5/22

Left: 0.431+/-0.000  $\chi^2/\text{NDF}$ : 3396308.8/47

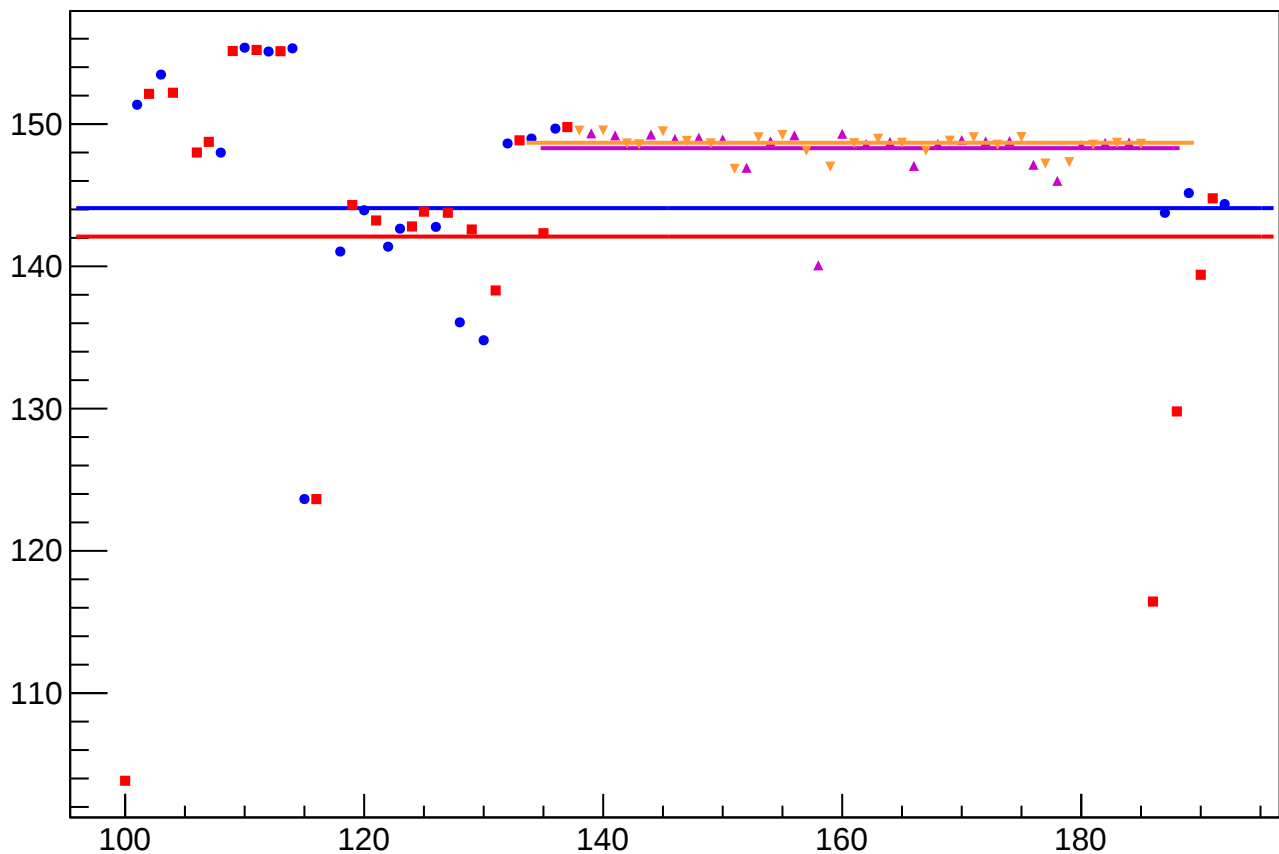
Right: 0.329+/-0.000  $\chi^2/\text{NDF}$ : 2626277.1/42

In: 0.388+/-0.000  $\chi^2/\text{NDF}$ :3679929.0/42

Out: 0.386+/-0.000  $\chi^2/\text{NDF}$ :3918955.2/47

All: 0.387+/-0.000  $\chi^2/\text{NDF}$ : 7599325.1/90

yield\_bcm\_an\_ds3\_mean vs Slug, Sign Corrected



Right In: 144.091 $\pm$ 0.000  $\chi^2$ /NDF: 3499221141.9/19

Left Out: 148.686 $\pm$ 0.000  $\chi^2$ /NDF: 52218185.1/24

Right Out: 142.092 $\pm$ 0.000  $\chi^2$ /NDF: 7166800193.0/22

Left In: 148.307 $\pm$ 0.000  $\chi^2$ /NDF: 333585558.2/22

Left: 148.504 $\pm$ 0.000  $\chi^2$ /NDF: 392094013.2/47

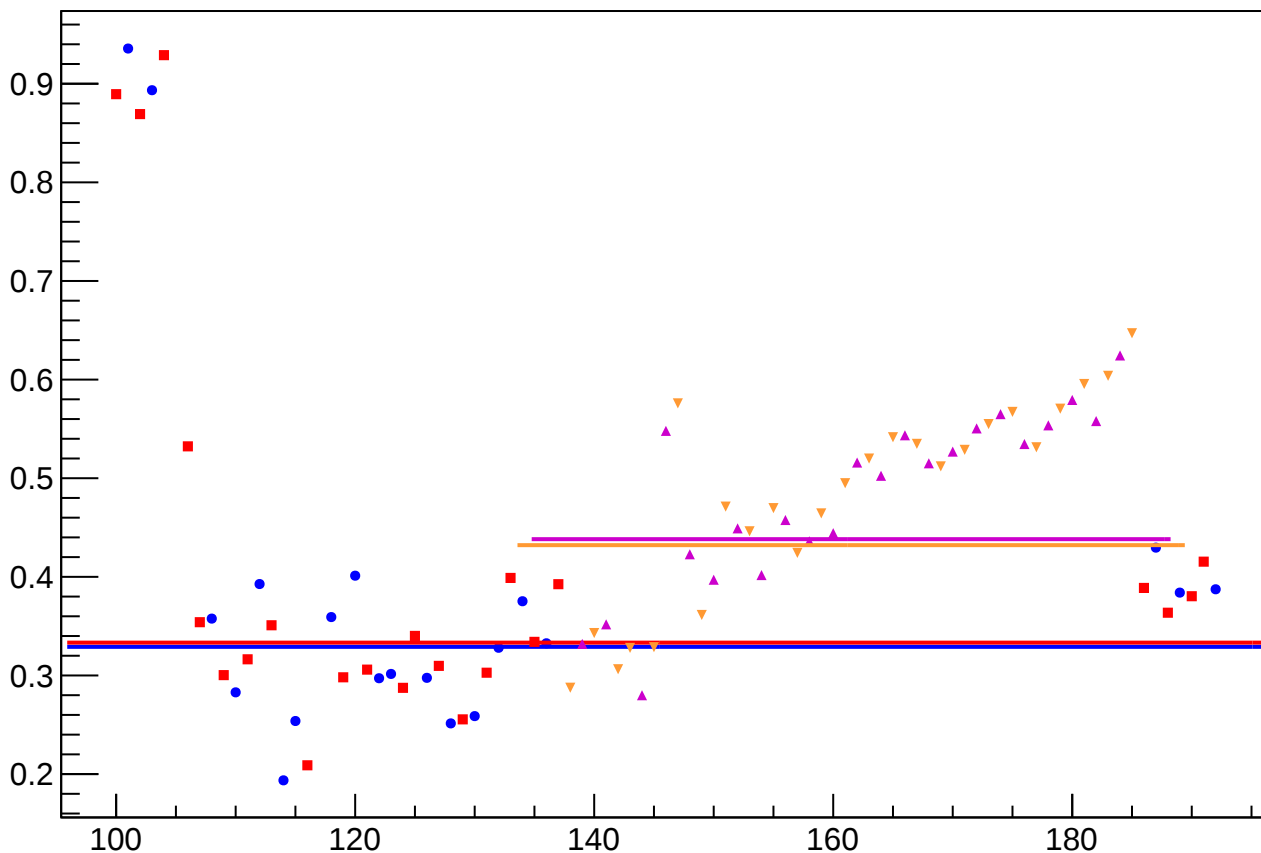
Right: 143.058 $\pm$ 0.000  $\chi^2$ /NDF: 10798036145.3/42

In: 146.493 $\pm$ 0.000  $\chi^2$ /NDF: 4479868826.5/42

Out: 145.854 $\pm$ 0.000  $\chi^2$ /NDF: 8915283100.2/47

All: 146.163 $\pm$ 0.000  $\chi^2$ /NDF: 13426564497.0

# yield\_bcm\_an\_ds3\_rms vs Slug, Sign Corrected



Right In: 0.329 $\pm$ 0.000  $\chi^2$ /NDF: 1345892.9/19

Left Out: 0.432 $\pm$ 0.000  $\chi^2$ /NDF:1929031.5/24

Right Out: 0.333 $\pm$ 0.000  $\chi^2$ /NDF: 1286098.3/22

Left In: 0.438 $\pm$ 0.000  $\chi^2$ /NDF:1521893.6/22

Left: 0.435 $\pm$ 0.000  $\chi^2$ /NDF: 3454164.8/47

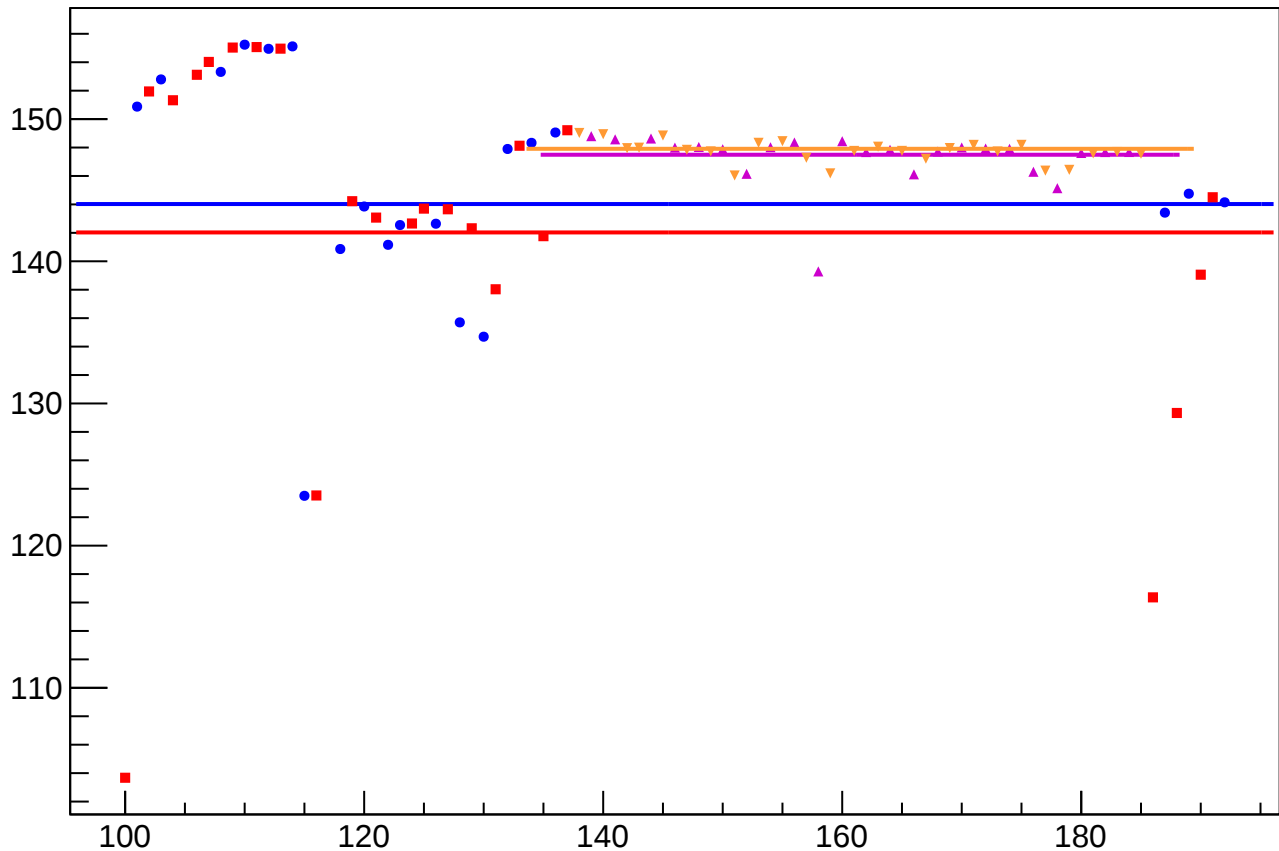
Right: 0.331 $\pm$ 0.000  $\chi^2$ /NDF: 2633197.4/42

In: 0.391 $\pm$ 0.000  $\chi^2$ /NDF:3735759.9/42

Out: 0.390 $\pm$ 0.000  $\chi^2$ /NDF:3977207.4/47

All: 0.390 $\pm$ 0.000  $\chi^2$ /NDF: 7713338.3/90

# yield\_bcm\_an\_us\_mean vs Slug, Sign Corrected



Right In:  $144.026 \pm 0.000$   $\chi^2/\text{NDF}: 3666358406.9/19$

Left Out:  $147.911 \pm 0.000$   $\chi^2/\text{NDF}: 64412407.9/24$

Right Out:  $142.029 \pm 0.000$   $\chi^2/\text{NDF}: 7619657229.2/22$

Left In:  $147.493 \pm 0.000$   $\chi^2/\text{NDF}: 343978473.2/22$

Left:  $147.709 \pm 0.000$   $\chi^2/\text{NDF}: 416149781.4/47$

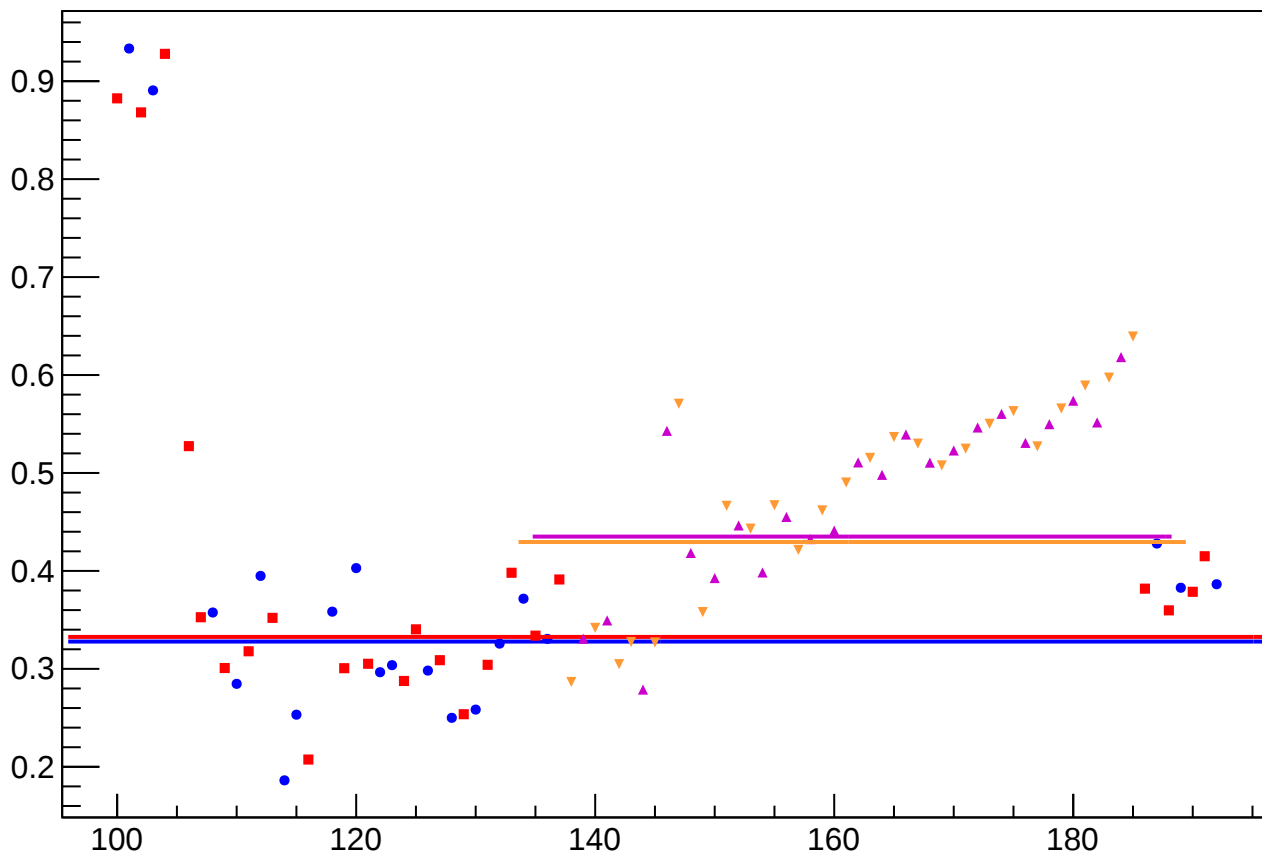
Right:  $142.994 \pm 0.000$   $\chi^2/\text{NDF}: 11418463186.4/42$

In:  $146.010 \pm 0.000$   $\chi^2/\text{NDF}: 4452212883.8/42$

Out:  $145.397 \pm 0.000$   $\chi^2/\text{NDF}: 9045097691.2/47$

All:  $145.693 \pm 0.000$   $\chi^2/\text{NDF}: 13526471542.0/100$

# yield\_bcm\_an\_us\_rms vs Slug, Sign Corrected



Right In: 0.328 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1359271.8/19

Left Out: 0.430 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1895701.4/24

Right Out: 0.333 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1282304.6/22

Left In: 0.435 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1502712.5/22

Left: 0.432 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 3401133.5/47

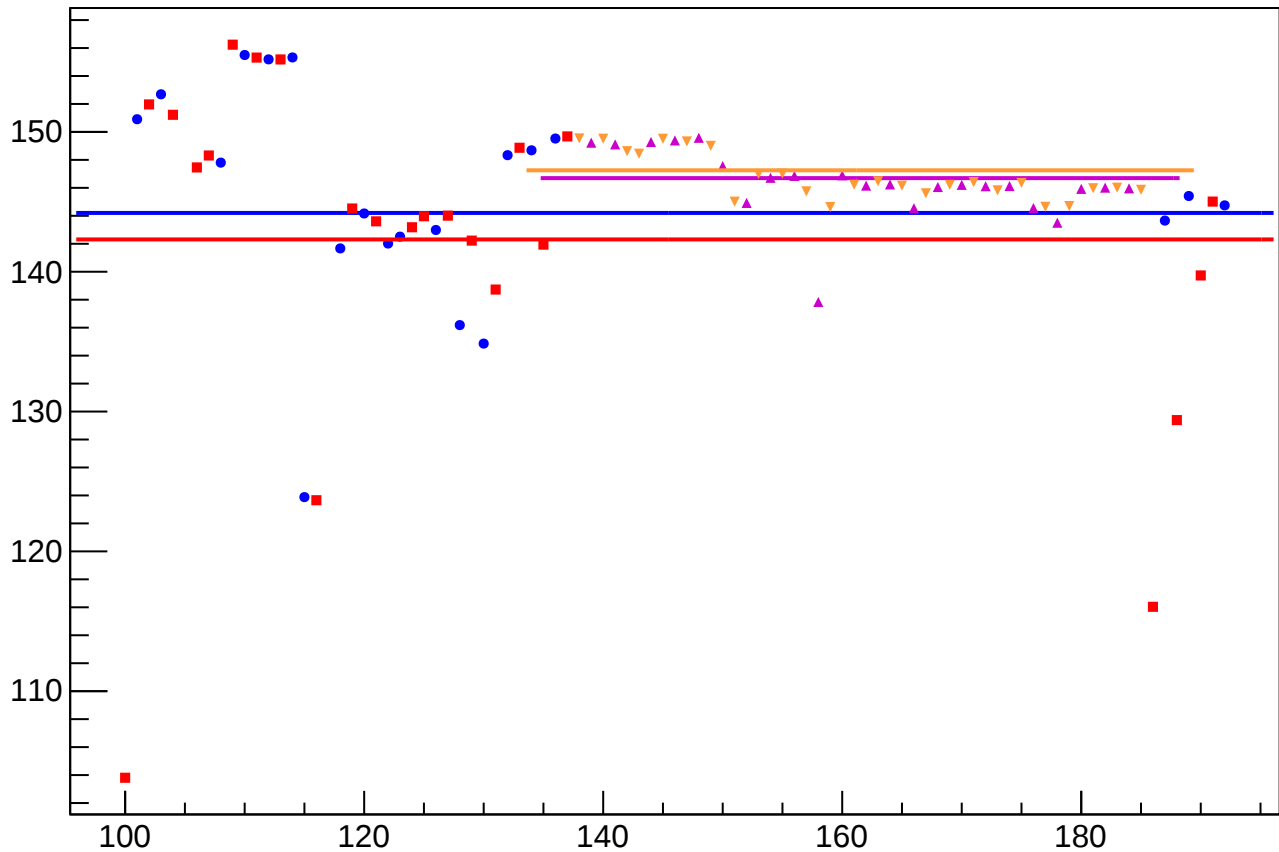
Right: 0.330 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2643061.8/42

In: 0.389 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 3706265.9/42

Out: 0.388 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 3916692.7/47

All: 0.389 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7623145.5/90

# yield\_bcm\_dg\_us\_mean vs Slug, Sign Corrected



Right In: 144.206 $\pm$ 0.000  $\chi^2$ /NDF: 3169087797.8/19

Left Out: 147.255 $\pm$ 0.000  $\chi^2$ /NDF: 262138049.8/24

Right Out: 142.311 $\pm$ 0.000  $\chi^2$ /NDF: 6921983133.6/22

Left In: 146.695 $\pm$ 0.000  $\chi^2$ /NDF: 557896803.1/22

Left: 146.984 $\pm$ 0.000  $\chi^2$ /NDF: 833217060.4/47

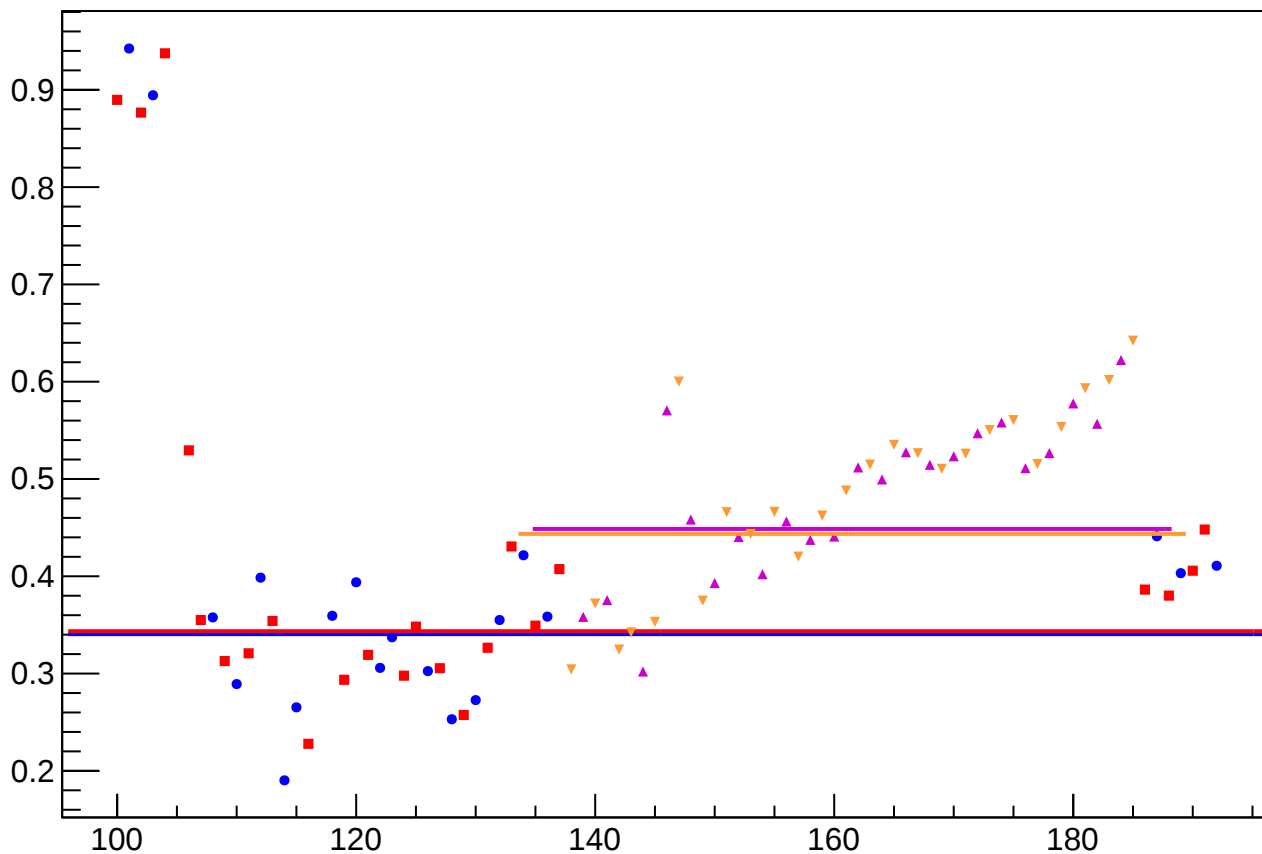
Right: 143.221 $\pm$ 0.000  $\chi^2$ /NDF: 10201832000.6/42

In: 145.648 $\pm$ 0.000  $\chi^2$ /NDF: 3939733702.1/42

Out: 145.157 $\pm$ 0.000  $\chi^2$ /NDF: 8087265278.9/47

All: 145.394 $\pm$ 0.000  $\chi^2$ /NDF: 12044551962.0/83

# yield\_bcm\_dg\_us\_rms vs Slug, Sign Corrected



Right In: 0.341 $\pm$ 0.000  $\chi^2$ /NDF: 1358087.7/19

Left Out: 0.444 $\pm$ 0.000  $\chi^2$ /NDF:1483434.7/24

Right Out: 0.344 $\pm$ 0.000  $\chi^2$ /NDF: 1260688.4/22

Left In: 0.449 $\pm$ 0.000  $\chi^2$ /NDF:1132620.8/22

Left: 0.446 $\pm$ 0.000  $\chi^2$ /NDF: 2618207.6/47

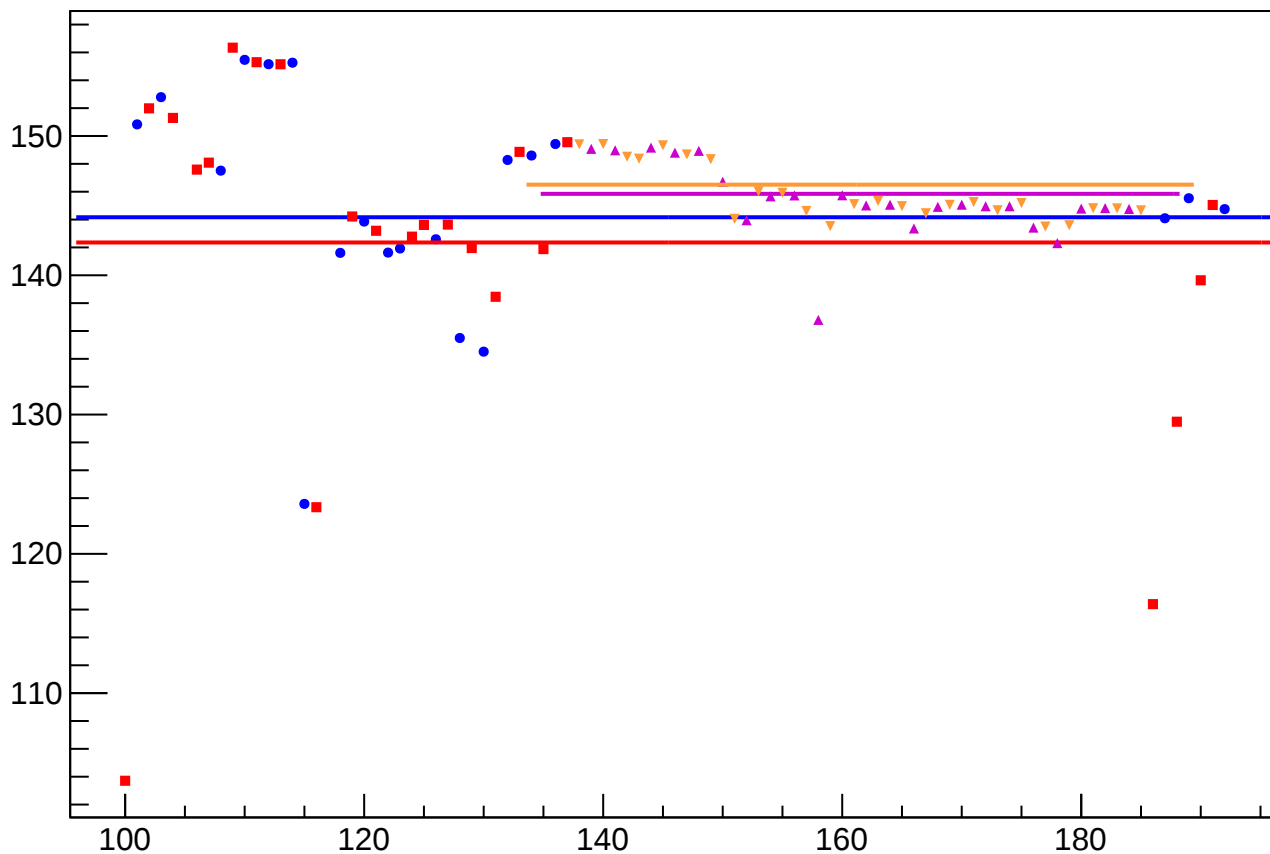
Right: 0.342 $\pm$ 0.000  $\chi^2$ /NDF: 2619338.2/42

In: 0.403 $\pm$ 0.000  $\chi^2$ /NDF:3293408.2/42

Out: 0.401 $\pm$ 0.000  $\chi^2$ /NDF:3483525.1/47

All: 0.402 $\pm$ 0.000  $\chi^2$ /NDF: 6777513.1/90

# yield\_bcm\_dg\_ds\_mean vs Slug, Sign Corrected



Right In: 144.166 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 3289613775.9/19

Left Out: 146.505 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 401688176.3/24

Right Out: 142.355 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 6904108598.4/22

Left In: 145.847 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 694764545.6/22

Left: 146.187 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1114638549.0/47

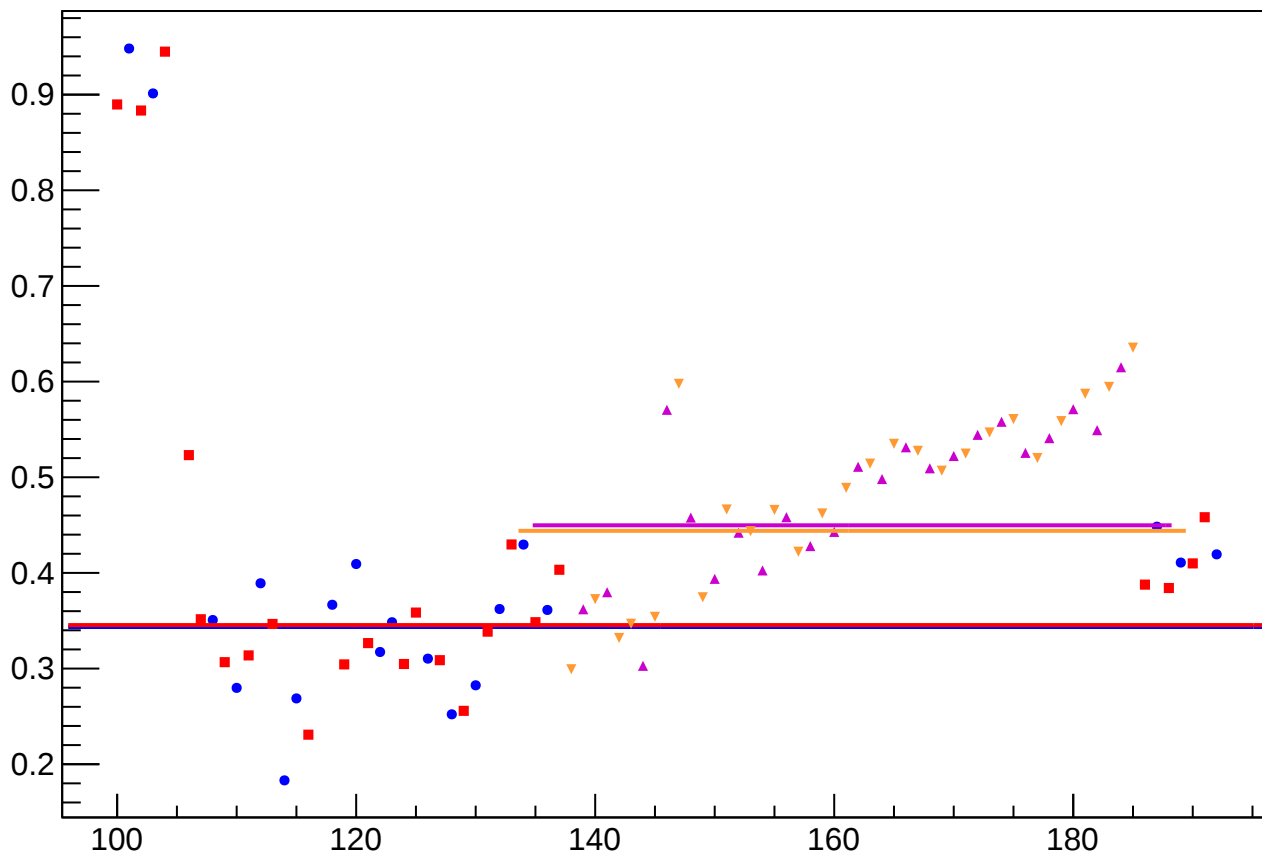
Right: 143.221 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 10292985141.5/42

In: 145.146 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 4079934650.9/42

Out: 144.756 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7936490638.4/47

All: 144.944 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 12027432754.0/47

# yield\_bcm\_dg\_ds\_rms vs Slug, Sign Corrected



Right In: 0.343+/-0.000  $\chi^2/\text{NDF}$ : 1383815.7/19

Left Out: 0.444+/-0.000  $\chi^2/\text{NDF}$ :1463293.5/24

Right Out: 0.345+/-0.000  $\chi^2/\text{NDF}$ : 1254773.2/22

Left In: 0.450+/-0.000  $\chi^2/\text{NDF}$ :1105405.0/22

Left: 0.447+/-0.000  $\chi^2/\text{NDF}$ : 2571486.5/47

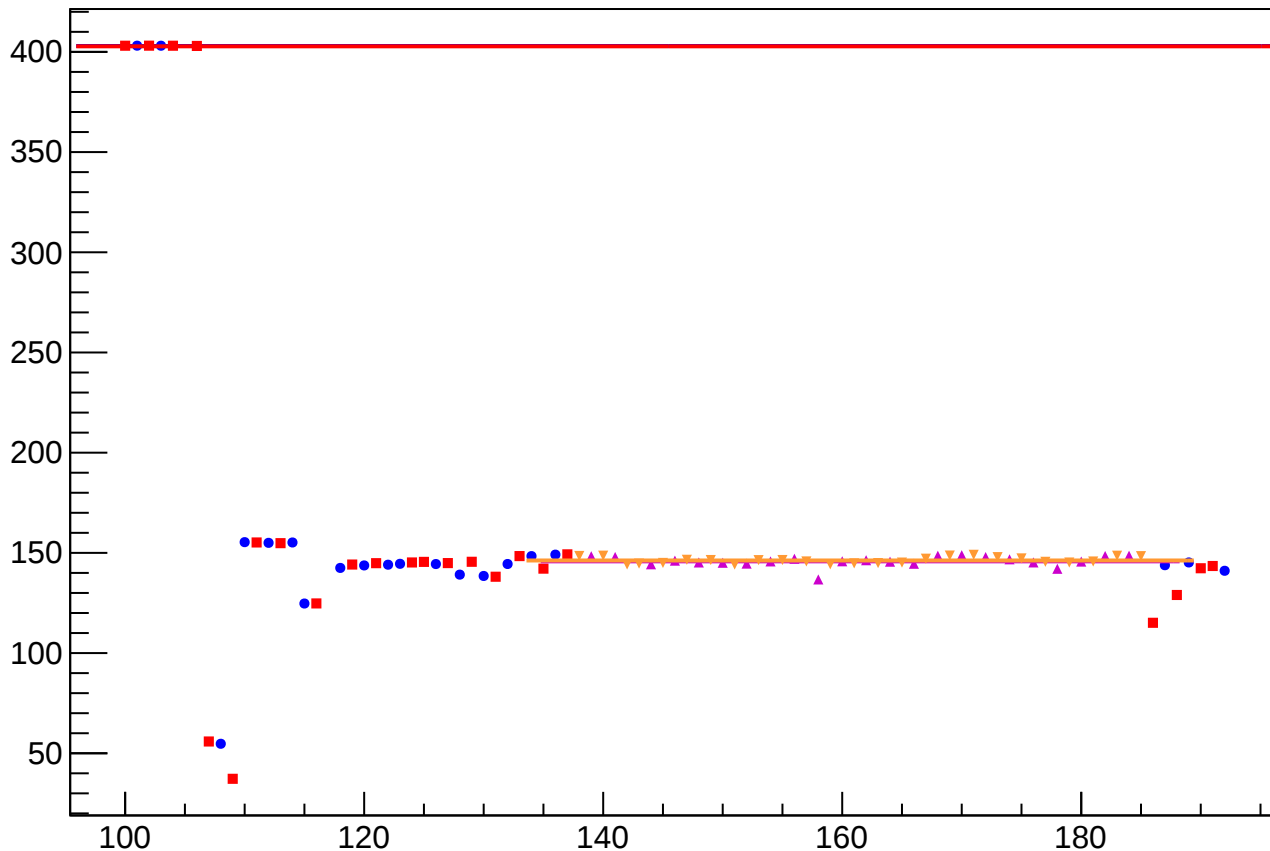
Right: 0.345+/-0.000  $\chi^2/\text{NDF}$ : 2638832.3/42

In: 0.405+/-0.000  $\chi^2/\text{NDF}$ :3254008.5/42

Out: 0.402+/-0.000  $\chi^2/\text{NDF}$ :3429434.5/47

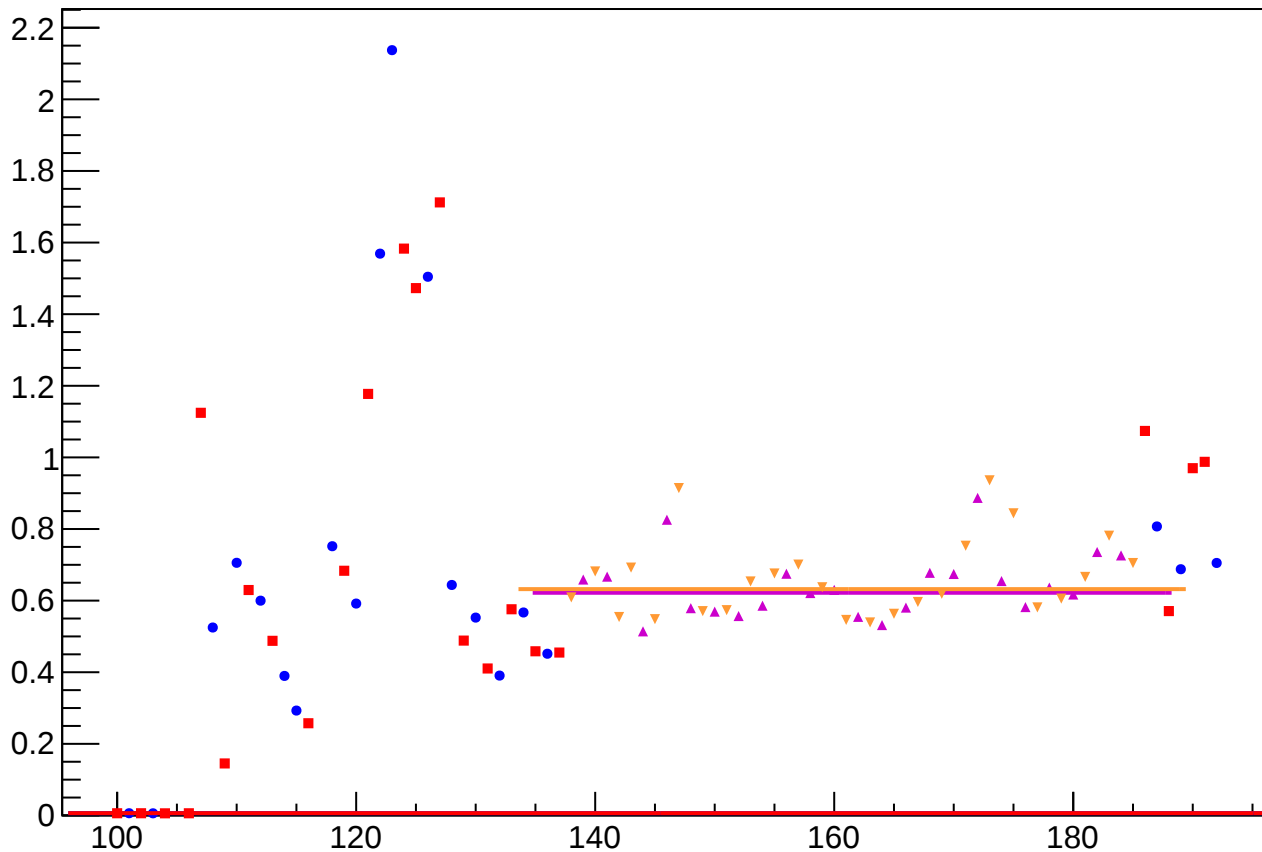
All: 0.404+/-0.000  $\chi^2/\text{NDF}$ : 6684735.0/90

# yield\_cav4bQ\_mean vs Slug, Sign Corrected



|                            |                                          |                        |                                          |
|----------------------------|------------------------------------------|------------------------|------------------------------------------|
| Right In: 402.939+/-0.000  | $\chi^2/\text{NDF}$ : 1245260855105.9/19 | Left: 145.990+/-0.000  | $\chi^2/\text{NDF}$ : 297342055.1/47     |
| Left Out: 146.205+/-0.000  | $\chi^2/\text{NDF}$ : 86658381.3/24      | Right: 402.852+/-0.000 | $\chi^2/\text{NDF}$ : 4575112509402.5    |
| Right Out: 402.775+/-0.000 | $\chi^2/\text{NDF}$ : 3329407915465.6/22 | In: 402.646+/-0.000    | $\chi^2/\text{NDF}$ : 3594953615623.8/42 |
| Left In: 145.773+/-0.000   | $\chi^2/\text{NDF}$ : 207332354.9/22     | Out: 402.513+/-0.000   | $\chi^2/\text{NDF}$ : 5698354030264.1/4  |
|                            |                                          | All: 402.575+/-0.000   | $\chi^2/\text{NDF}$ : 929359762963.1     |

# yield\_cav4bQ\_rms vs Slug, Sign Corrected



Right In: 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 11228574.8/19

Left Out: 0.632 $\pm$ 0.000  $\chi^2$ /NDF: 614155.9/24

Right Out: 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 12105183.1/22

Left In: 0.622 $\pm$ 0.000  $\chi^2$ /NDF: 404479.0/22

Left: 0.627 $\pm$ 0.000  $\chi^2$ /NDF: 1022337.9/47

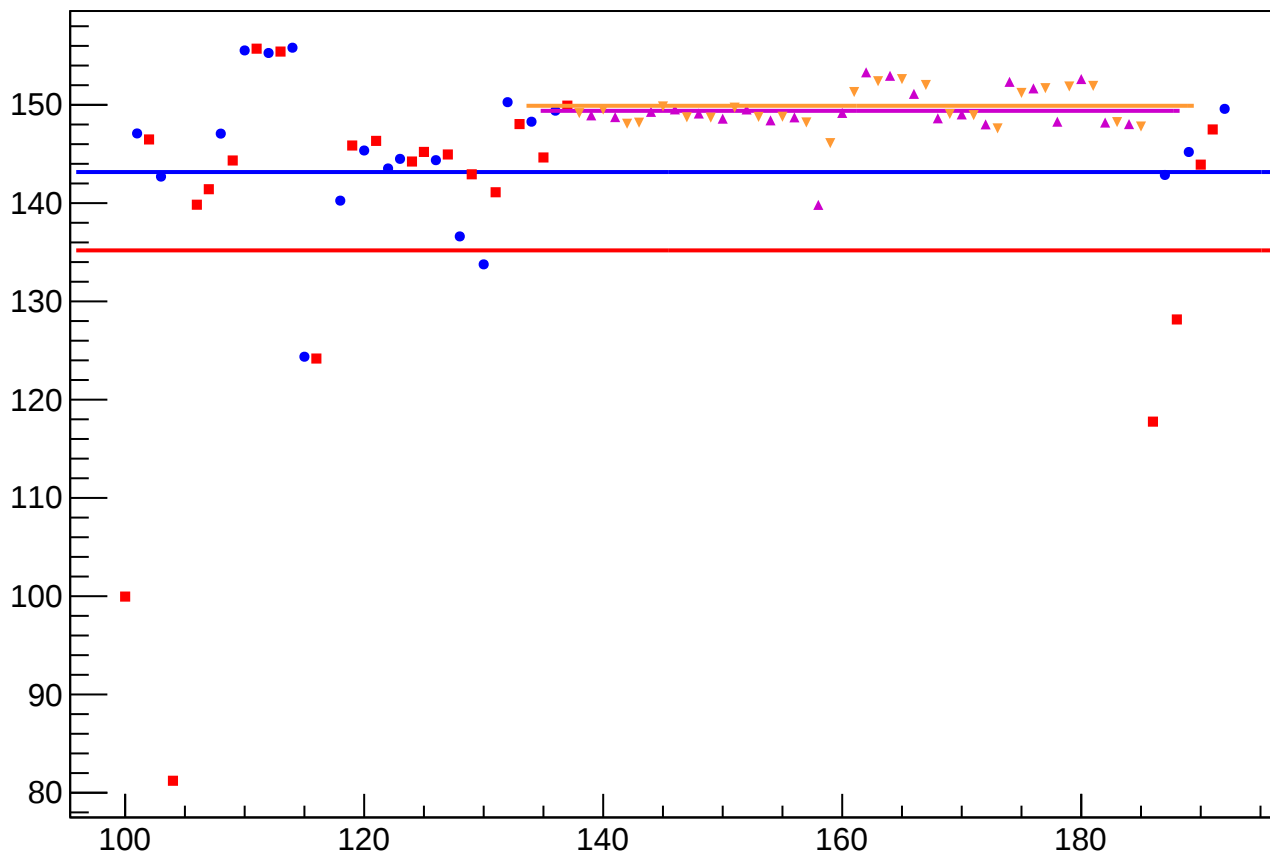
Right: 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 23333758.1/42

In: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 38554869.2/42

Out: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 40898405.9/47

All: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 79453418.6/90

# yield\_cav4cQ\_mean vs Slug, Sign Corrected



Right In: 143.163 $\pm$ 0.000  $\chi^2$ /NDF: 1092424190.7/19

Left Out: 149.906 $\pm$ 0.000  $\chi^2$ /NDF: 163261802.4/24

Right Out: 135.190 $\pm$ 0.000  $\chi^2$ /NDF: 1831322279.0/22

Left In: 149.391 $\pm$ 0.000  $\chi^2$ /NDF: 437129920.4/22

Left: 149.657 $\pm$ 0.000  $\chi^2$ /NDF: 606930259.3/47

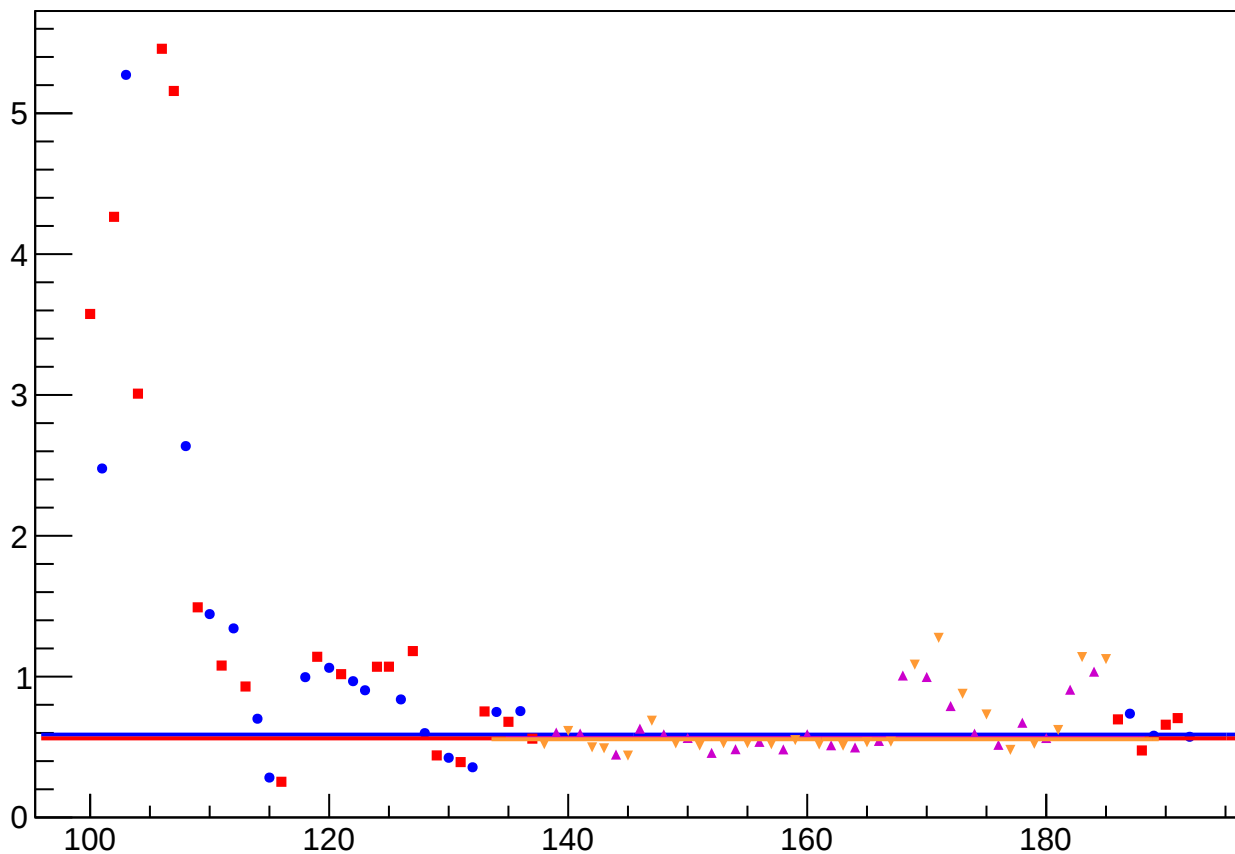
Right: 138.909 $\pm$ 0.000  $\chi^2$ /NDF: 3379305775.1/42

In: 148.020 $\pm$ 0.000  $\chi^2$ /NDF: 1935764161.4/42

Out: 146.495 $\pm$ 0.000  $\chi^2$ /NDF: 4550789317.2/47

All: 147.226 $\pm$ 0.000  $\chi^2$ /NDF: 6560470452.2

# yield\_cav4cQ\_rms vs Slug, Sign Corrected



Right In: 0.588 $\pm$ 0.000  $\chi^2$ /NDF: 3483854.0/19

Left Out: 0.555 $\pm$ 0.000  $\chi^2$ /NDF:1773380.1/24

Right Out: 0.561 $\pm$ 0.000  $\chi^2$ /NDF: 4745533.7/22

Left In: 0.562 $\pm$ 0.000  $\chi^2$ /NDF:1311075.2/22

Left: 0.559 $\pm$ 0.000  $\chi^2$ /NDF: 3086646.6/47

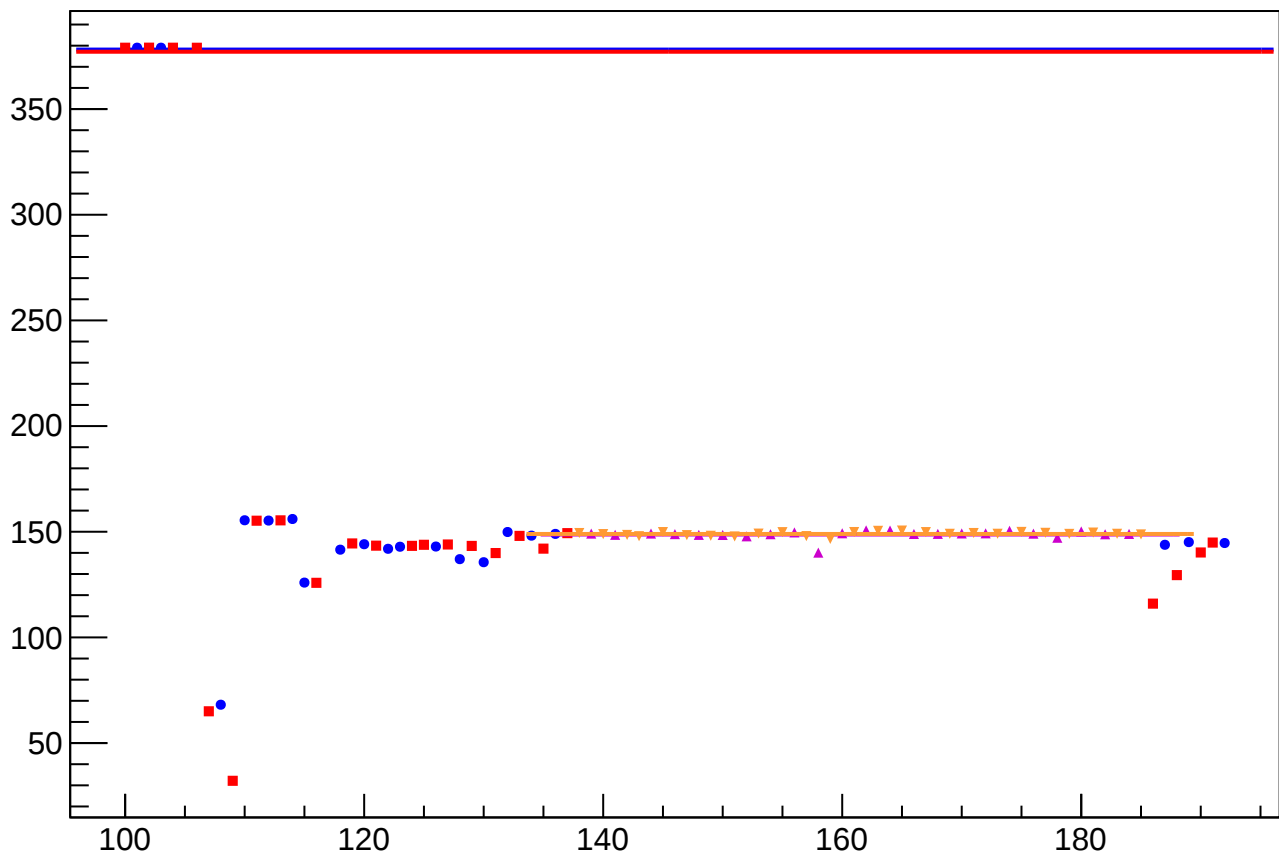
Right: 0.574 $\pm$ 0.000  $\chi^2$ /NDF: 8239660.5/42

In: 0.568 $\pm$ 0.000  $\chi^2$ /NDF:4809196.9/42

Out: 0.557 $\pm$ 0.000  $\chi^2$ /NDF:6519763.2/47

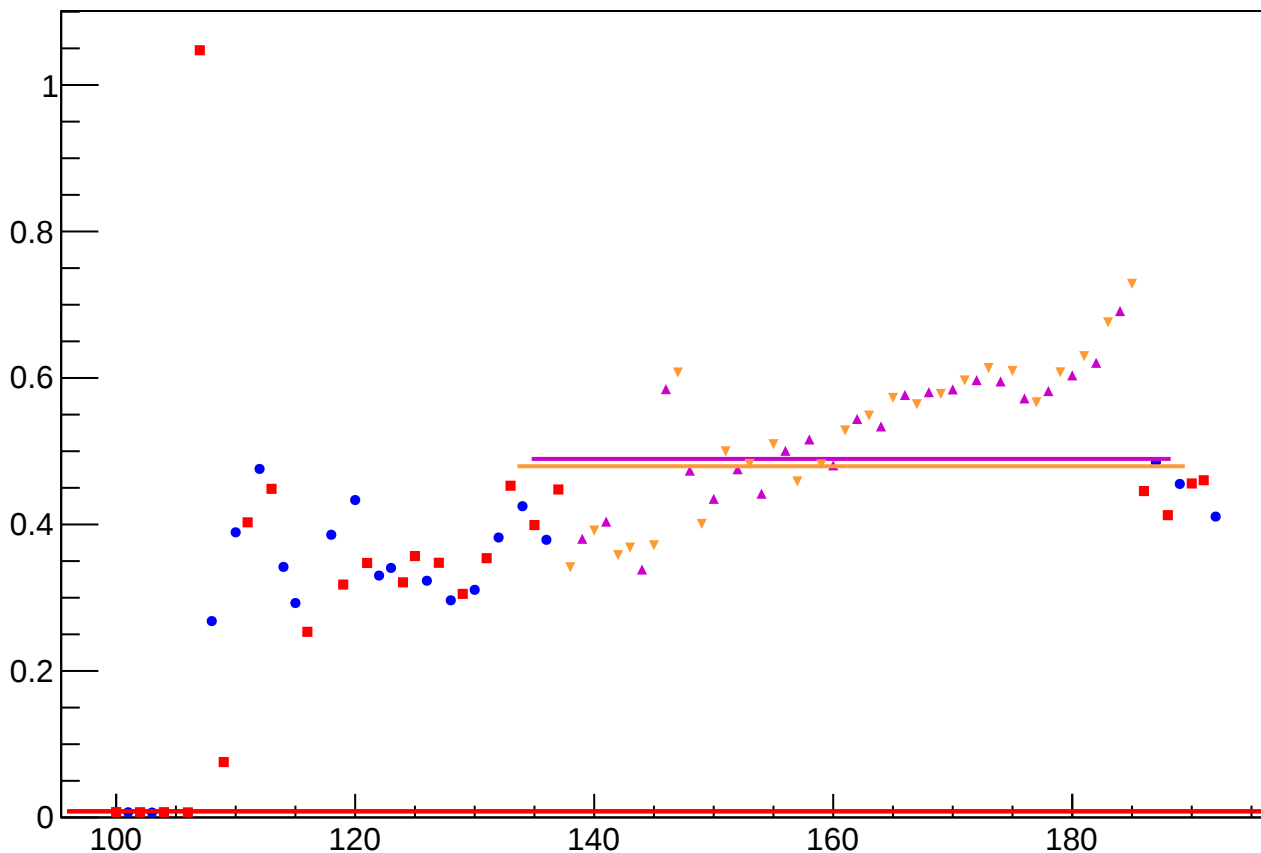
All: 0.562 $\pm$ 0.000  $\chi^2$ /NDF: 11336686.0/90

# yield\_cav4dQ\_mean vs Slug, Sign Corrected



|                            |                                          |                        |                                          |
|----------------------------|------------------------------------------|------------------------|------------------------------------------|
| Right In: 378.154+/-0.000  | $\chi^2/\text{NDF}$ : 2907938884237.8/19 | Left: 148.820+/-0.000  | $\chi^2/\text{NDF}$ : 320306424.2/47     |
| Left Out: 148.946+/-0.000  | $\chi^2/\text{NDF}$ : 63974844.7/24      | Right: 377.610+/-0.000 | $\chi^2/\text{NDF}$ : 11779412670538.1   |
| Right Out: 377.133+/-0.000 | $\chi^2/\text{NDF}$ : 8864079679982.8/22 | In: 376.973+/-0.000    | $\chi^2/\text{NDF}$ : 6518046948513.2/42 |
| Left In: 148.683+/-0.000   | $\chi^2/\text{NDF}$ : 253848207.3/22     | Out: 376.014+/-0.000   | $\chi^2/\text{NDF}$ : 12742942644859.4   |
|                            |                                          | All: 376.462+/-0.000   | $\chi^2/\text{NDF}$ : 192675480130.1     |

# yield\_cav4dQ\_rms vs Slug, Sign Corrected



Right In: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 12494722.3/19

Left Out: 0.479+/-0.000  $\chi^2/\text{NDF}$ :1518765.9/24

Right Out: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 12907077.7/22

Left In: 0.490+/-0.000  $\chi^2/\text{NDF}$ :1090532.3/22

Left: 0.484+/-0.000  $\chi^2/\text{NDF}$ : 2616511.3/47

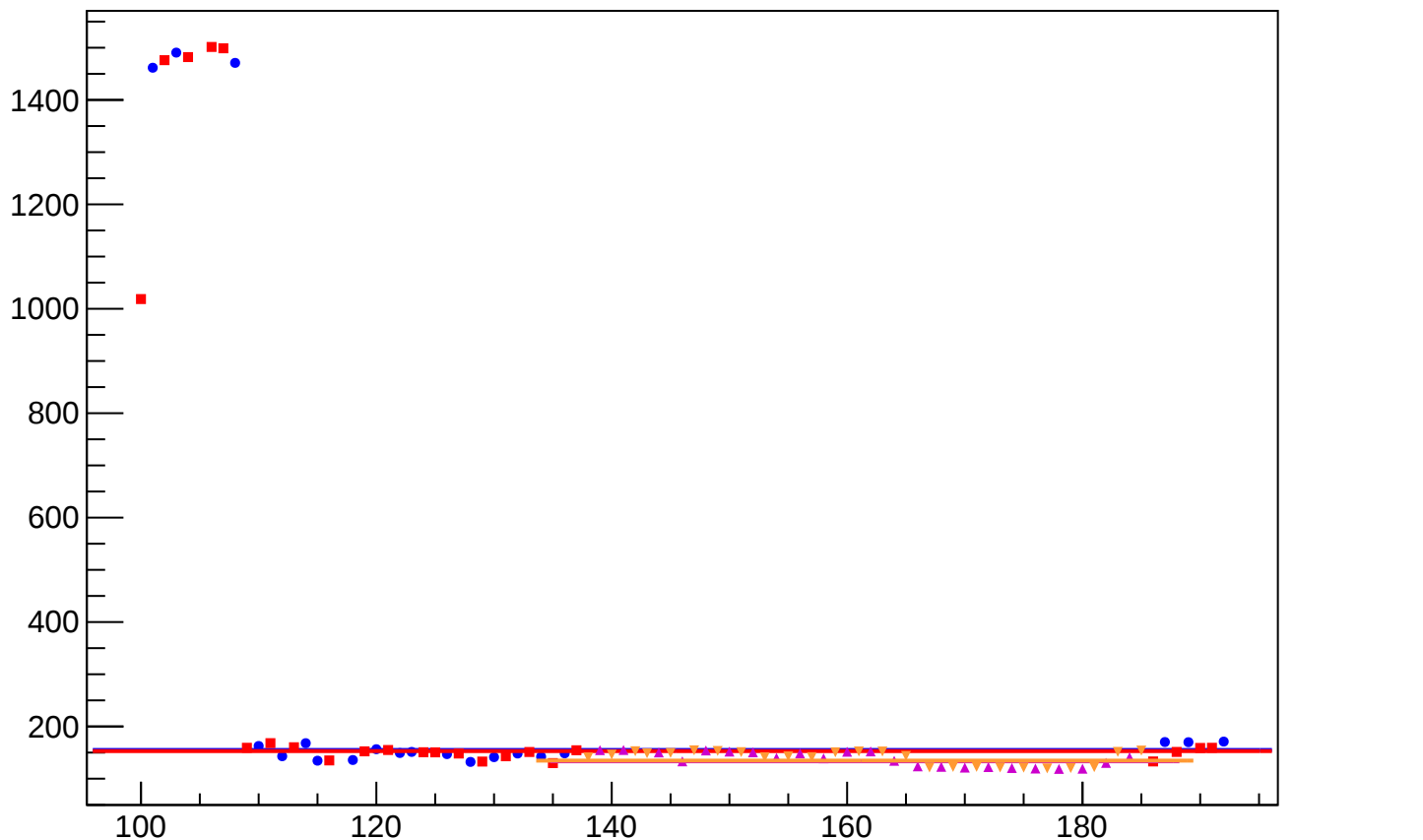
Right: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 25401837.1/42

In: 0.011+/-0.000  $\chi^2/\text{NDF}$ :45327789.5/42

Out: 0.011+/-0.000  $\chi^2/\text{NDF}$ :47488520.2/47

All: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 92816497.4/90

# yield\_bcm0l02\_mean vs Slug, Sign Corrected



Right In: 154.994 $\pm$ 0.000  $\chi^2$ /NDF: 25373877251.8/19

Left Out: 134.585 $\pm$ 0.000  $\chi^2$ /NDF: 4387324151.1/24

Right Out: 152.850 $\pm$ 0.000  $\chi^2$ /NDF: 34016135275.1/22

Left In: 133.309 $\pm$ 0.000  $\chi^2$ /NDF: 4353039408.6/22

Left: 133.958 $\pm$ 0.000  $\chi^2$ /NDF: 8759337937.7/47

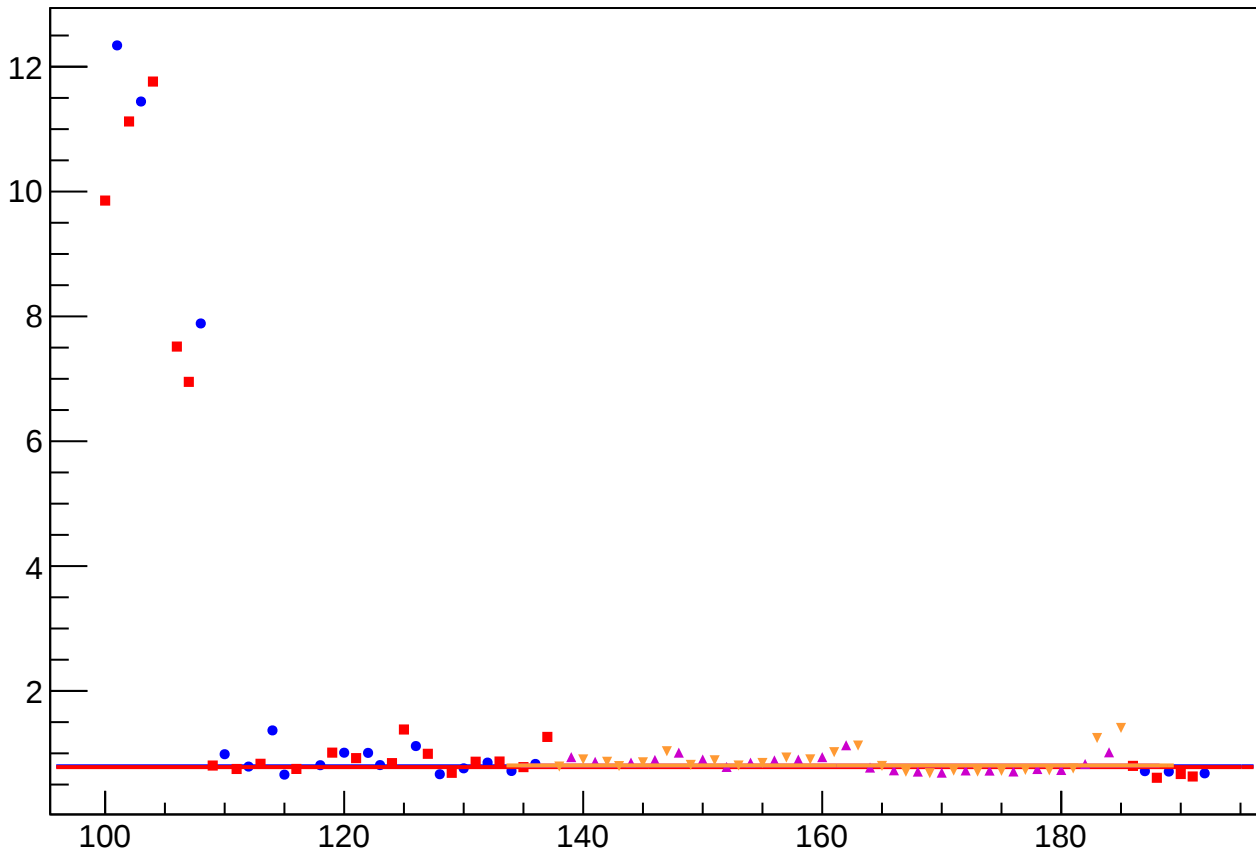
Right: 153.852 $\pm$ 0.000  $\chi^2$ /NDF: 59409573893.1/42

In: 138.908 $\pm$ 0.000  $\chi^2$ /NDF: 32512804971.1/42

Out: 139.648 $\pm$ 0.000  $\chi^2$ /NDF: 40598964254.9/47

All: 139.289 $\pm$ 0.000  $\chi^2$ /NDF: 73120497290.0

# yield\_bcm0l02\_rms vs Slug, Sign Corrected



Right In: 0.793+/-0.000  $\chi^2/\text{NDF}$ : 2756992.1/19

Left Out: 0.807+/-0.000  $\chi^2/\text{NDF}$ : 704181.3/24

Right Out: 0.779+/-0.000  $\chi^2/\text{NDF}$ : 3093503.3/22

Left In: 0.805+/-0.000  $\chi^2/\text{NDF}$ : 479689.4/22

Left: 0.806+/-0.000  $\chi^2/\text{NDF}$ : 1183976.9/47

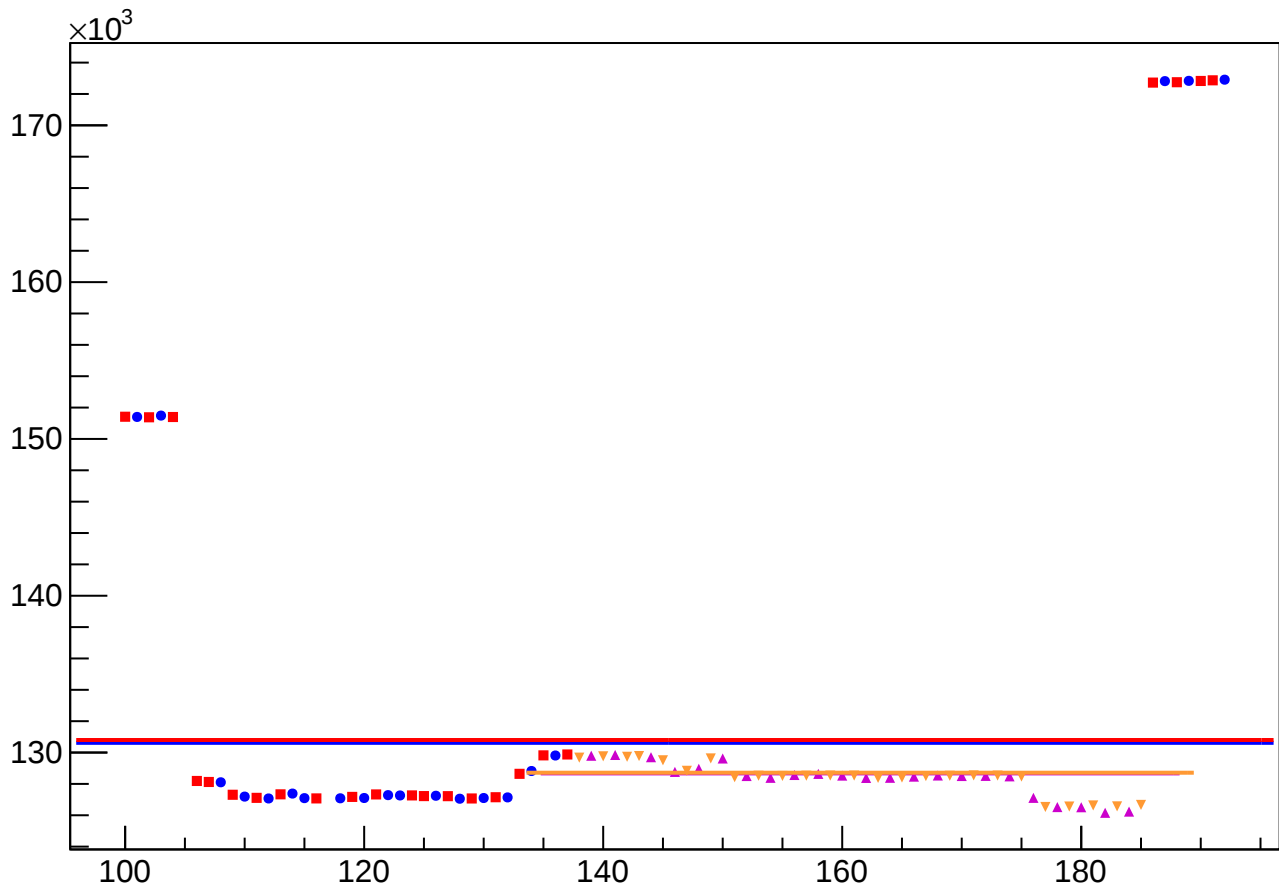
Right: 0.786+/-0.000  $\chi^2/\text{NDF}$ : 5852081.3/42

In: 0.802+/-0.000  $\chi^2/\text{NDF}$ : 3238276.6/42

Out: 0.799+/-0.000  $\chi^2/\text{NDF}$ : 3807557.0/47

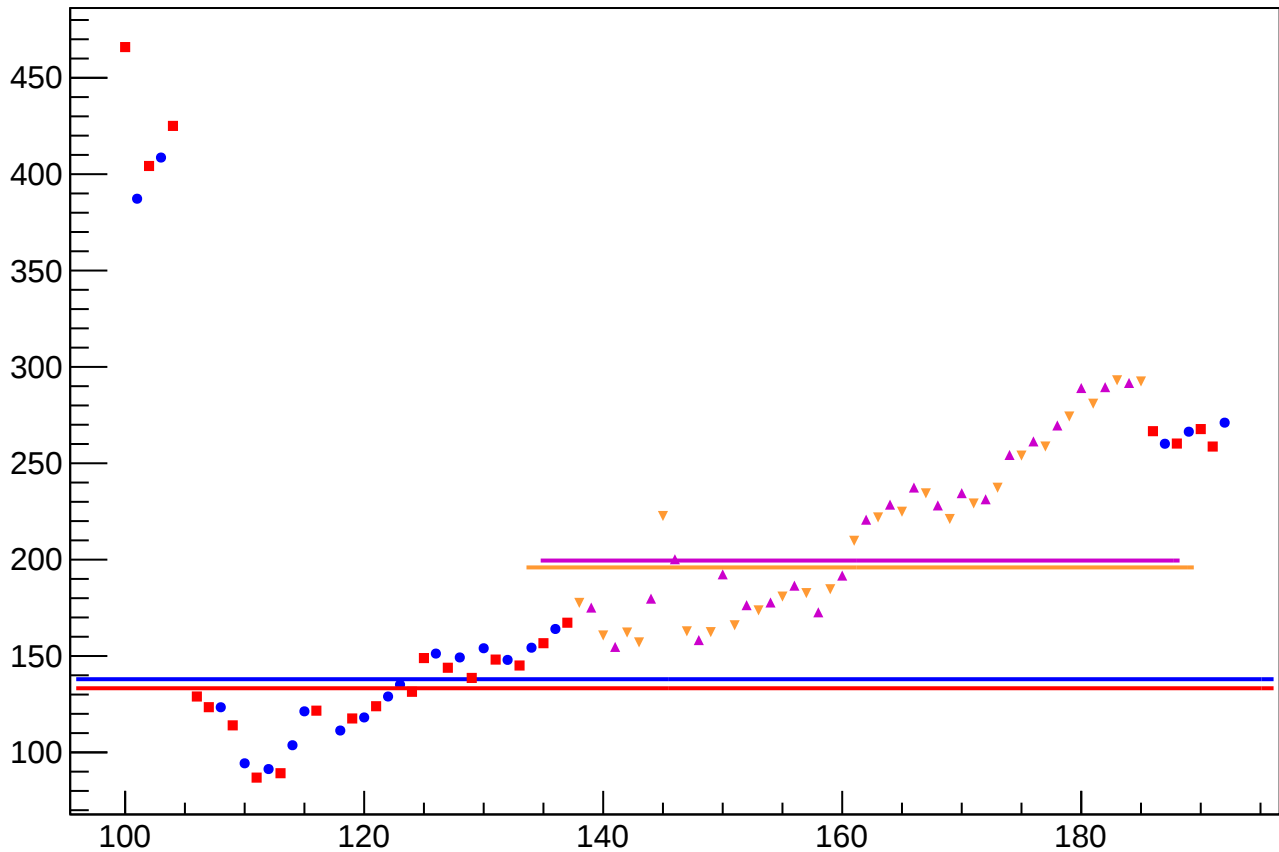
All: 0.800+/-0.000  $\chi^2/\text{NDF}$ : 7046026.9/90

# yield\_bpm2i01WS\_mean vs Slug, Sign Corrected



Right In: 130619.803 $\pm$ 0.053  $\chi^2$ /NDF: 43291999994.8/19  
 Left Out: 128713.791 $\pm$ 0.047  $\chi^2$ /NDF: 348293942.5/24  
 Right Out: 130799.540 $\pm$ 0.049  $\chi^2$ /NDF: 54502396235.0/22  
 Left In: 128670.094 $\pm$ 0.049  $\chi^2$ /NDF: 334875494.0/22  
 Left: 128692.941 $\pm$ 0.034  $\chi^2$ /NDF: 683588051.4/47  
 Right: 130717.227 $\pm$ 0.036  $\chi^2$ /NDF: 97800623108.8/47  
 In: 129564.773 $\pm$ 0.036  $\chi^2$ /NDF: 44358347720.9/47  
 Out: 129710.942 $\pm$ 0.034  $\chi^2$ /NDF: 55806317903.5/47  
 All: 129642.512 $\pm$ 0.025  $\chi^2$ /NDF: 100173473.0/94

# yield\_bpm2i01WS\_rms vs Slug, Sign Corrected



Right In: 137.968 $\pm$ 0.037  $\chi^2$ /NDF: 2228460.7/19

Left Out: 195.964 $\pm$ 0.033  $\chi^2$ /NDF:1316091.7/24

Right Out: 133.269 $\pm$ 0.034  $\chi^2$ /NDF: 2490045.2/22

Left In: 199.531 $\pm$ 0.035  $\chi^2$ /NDF:1175342.5/22

Left: 197.666 $\pm$ 0.024  $\chi^2$ /NDF: 2497014.2/47

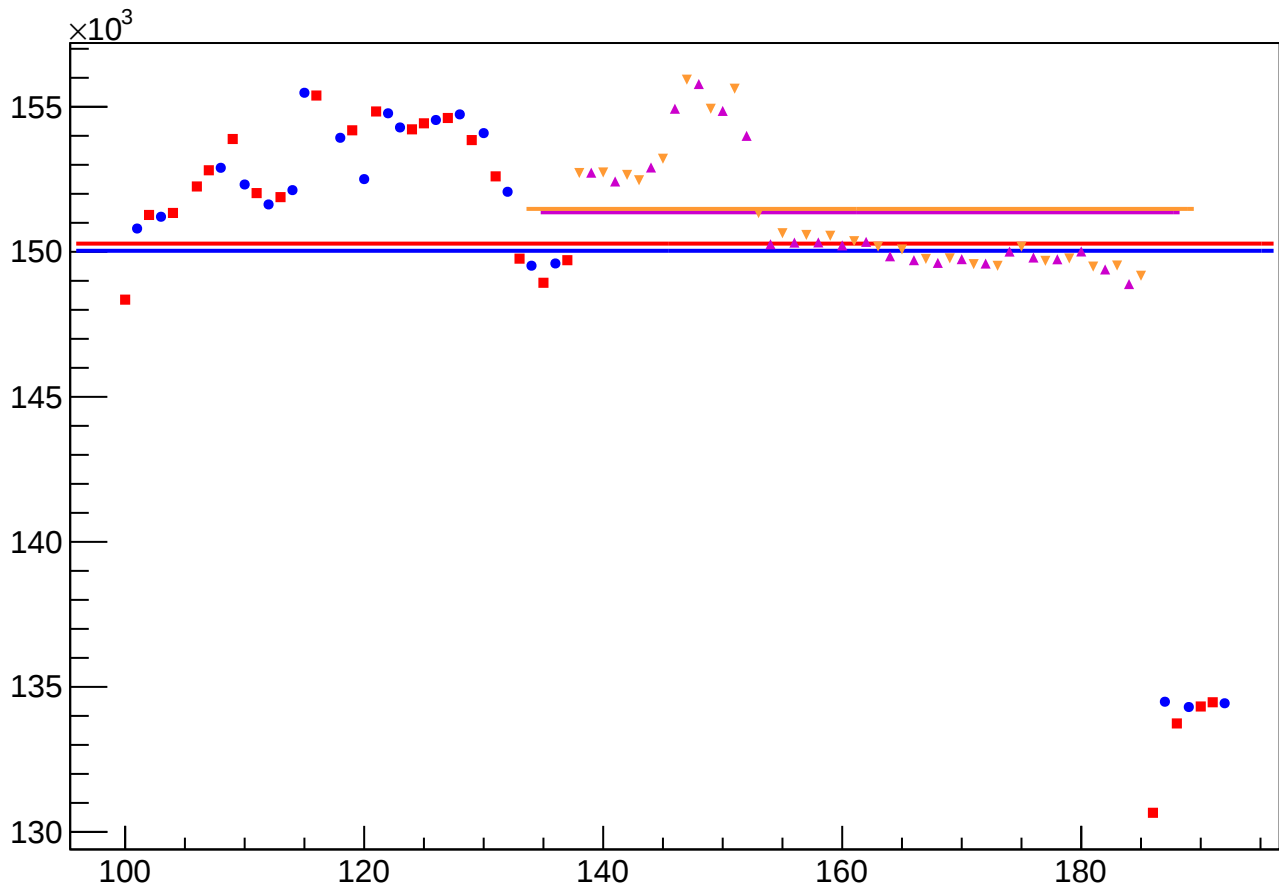
Right: 135.421 $\pm$ 0.025  $\chi^2$ /NDF: 4727018.8/42

In: 171.281 $\pm$ 0.025  $\chi^2$ /NDF:4862378.2/42

Out: 165.991 $\pm$ 0.024  $\chi^2$ /NDF:5533009.8/47

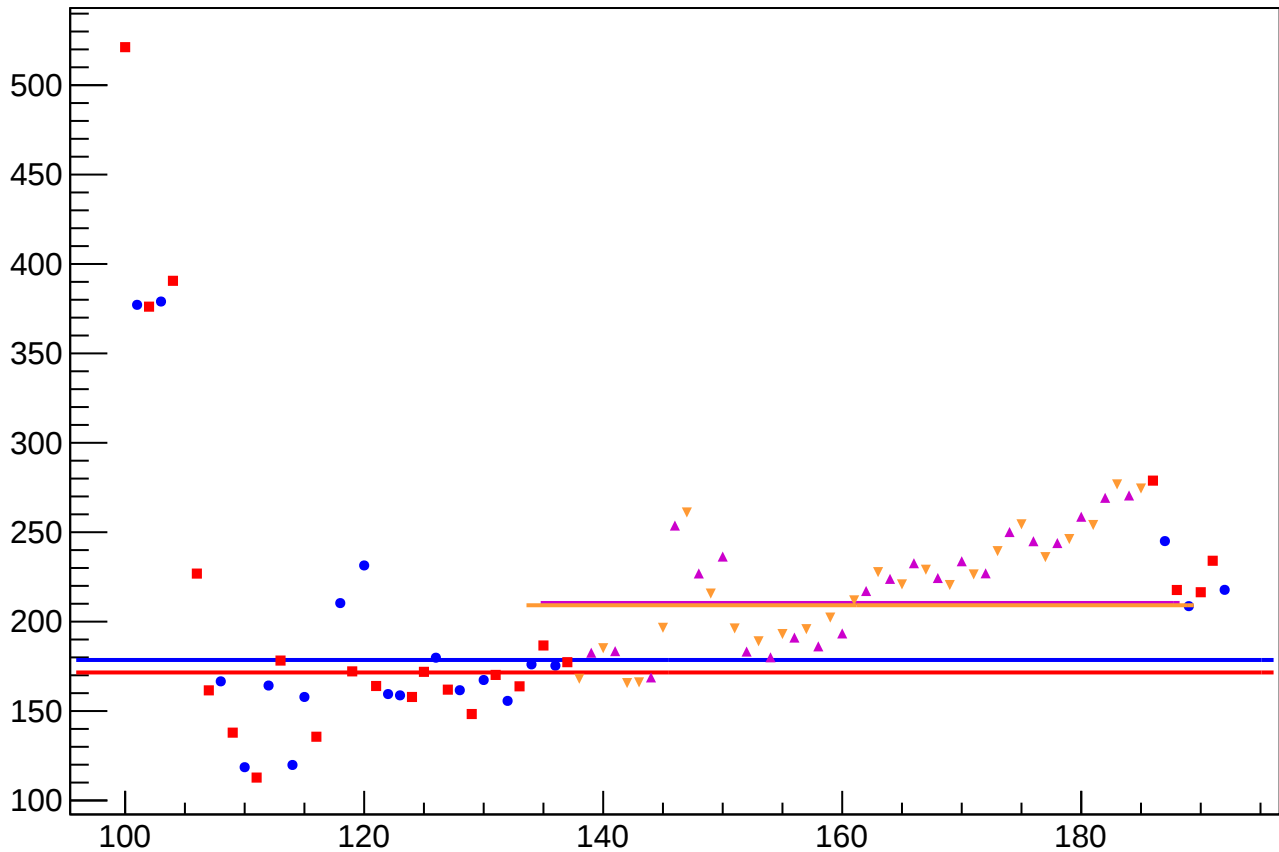
All: 168.468 $\pm$ 0.017  $\chi^2$ /NDF: 10418459.0/90

# yield\_bpm0i07WS\_mean vs Slug, Sign Corrected



|                                   |                                 |                               |                                |
|-----------------------------------|---------------------------------|-------------------------------|--------------------------------|
| Right In: 150035.842 $\pm$ 0.067  | $\chi^2$ /NDF: 9546049292.6/19  | Left: 151423.440 $\pm$ 0.036  | $\chi^2$ /NDF: 2913216467.1/4  |
| Left Out: 151480.339 $\pm$ 0.049  | $\chi^2$ /NDF: 1483692735.3/24  | Right: 150169.906 $\pm$ 0.045 | $\chi^2$ /NDF: 21741059149.5   |
| Right Out: 150283.074 $\pm$ 0.062 | $\chi^2$ /NDF: 12187643356.8/22 | In: 150873.791 $\pm$ 0.041    | $\chi^2$ /NDF: 11219891395.8/4 |
| Left In: 151362.440 $\pm$ 0.051   | $\chi^2$ /NDF: 1426782789.9/22  | Out: 151011.164 $\pm$ 0.039   | $\chi^2$ /NDF: 13900849434.3   |
|                                   |                                 | All: 150946.167 $\pm$ 0.028   | $\chi^2$ /NDF: 251267399       |

# yield\_bpm0i07WS\_rms vs Slug, Sign Corrected



Right In: 178.558+/-0.047  $\chi^2/\text{NDF}$ : 1038624.5/19

Left Out: 209.156+/-0.035  $\chi^2/\text{NDF}$ : 710094.9/24

Right Out: 171.574+/-0.044  $\chi^2/\text{NDF}$ : 1322299.1/22

Left In: 210.431+/-0.036  $\chi^2/\text{NDF}$ : 684015.0/22

Left: 209.771+/-0.025  $\chi^2/\text{NDF}$ : 1394750.9/47

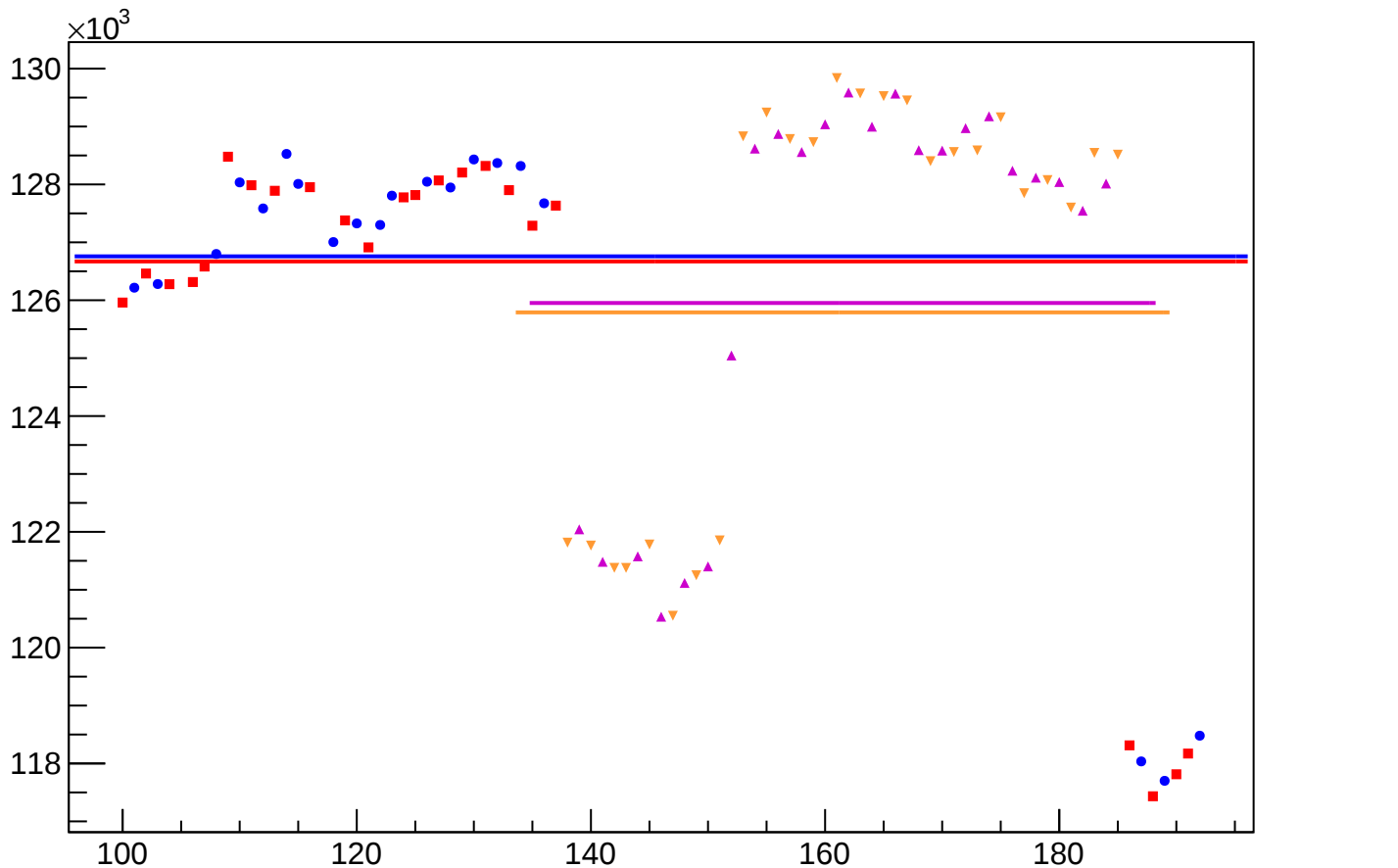
Right: 174.771+/-0.032  $\chi^2/\text{NDF}$ : 2372680.9/42

In: 198.690+/-0.029  $\chi^2/\text{NDF}$ : 2007865.7/42

Out: 194.428+/-0.027  $\chi^2/\text{NDF}$ : 2484679.7/47

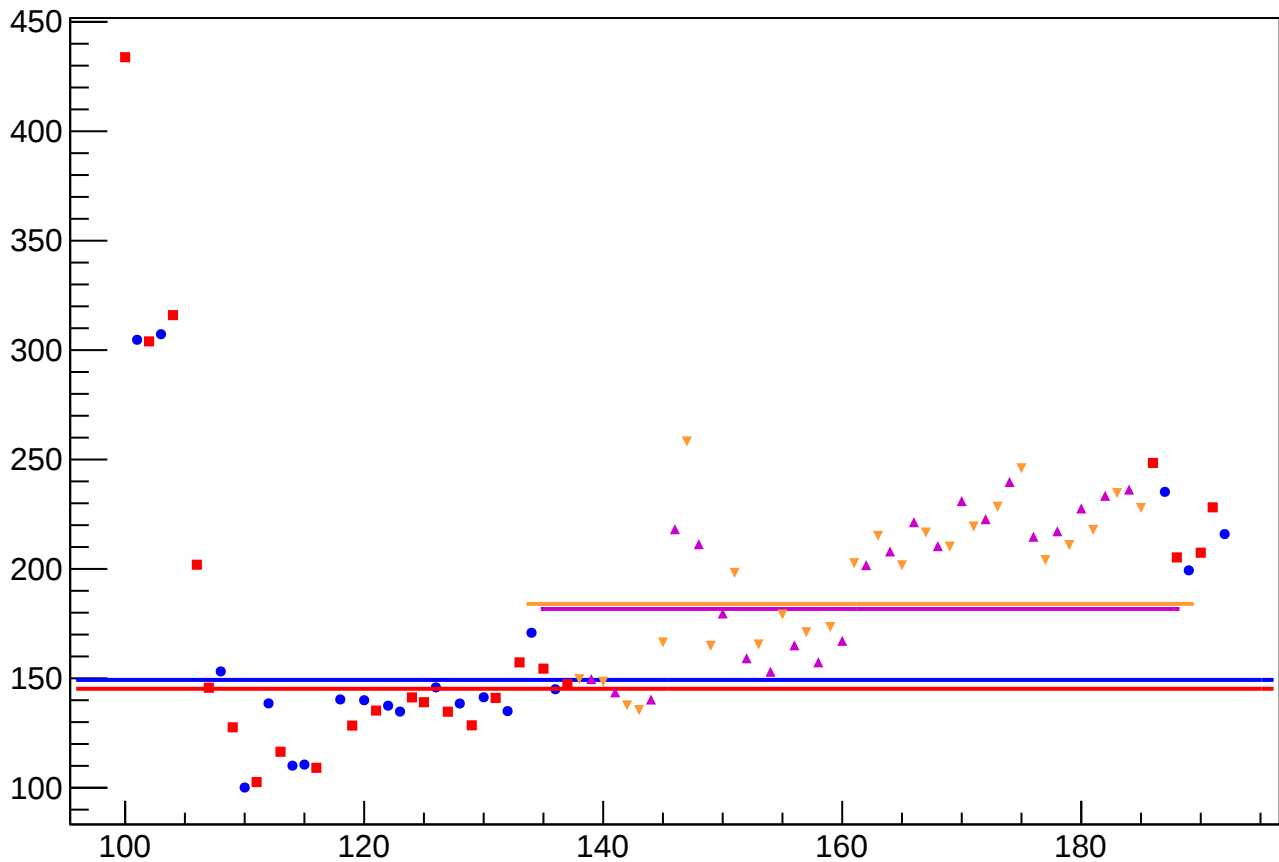
All: 196.445+/-0.020  $\chi^2/\text{NDF}$ : 4504094.4/90

yield\_bpm0l01WS\_mean vs Slug, Sign Corrected



|                                   |                                       |                               |                                        |
|-----------------------------------|---------------------------------------|-------------------------------|----------------------------------------|
| Right In: 126757.877 $\pm$ 0.055  | $\chi^2/\text{NDF}$ : 2775715937.9/19 | Left: 125870.001 $\pm$ 0.031  | $\chi^2/\text{NDF}$ : 12592819321.6/24 |
| Left Out: 125790.126 $\pm$ 0.044  | $\chi^2/\text{NDF}$ : 6744310079.8/24 | Right: 126710.883 $\pm$ 0.038 | $\chi^2/\text{NDF}$ : 6434488838.5/24  |
| Right Out: 126670.130 $\pm$ 0.052 | $\chi^2/\text{NDF}$ : 3657429105.4/22 | In: 126269.752 $\pm$ 0.035    | $\chi^2/\text{NDF}$ : 8745635938.0/42  |
| Left In: 125952.447 $\pm$ 0.045   | $\chi^2/\text{NDF}$ : 5841800367.5/22 | Out: 126160.348 $\pm$ 0.033   | $\chi^2/\text{NDF}$ : 10570320761.1/24 |
|                                   |                                       | All: 126212.951 $\pm$ 0.024   | $\chi^2/\text{NDF}$ : 193210973.0/24   |

# yield\_bpm0l01WS\_rms vs Slug, Sign Corrected



Right In: 149.290+/-0.039  $\chi^2/\text{NDF}$ : 1129642.9/19

Left Out: 184.029+/-0.031  $\chi^2/\text{NDF}$ : 1126592.5/24

Right Out: 145.243+/-0.036  $\chi^2/\text{NDF}$ : 1410901.1/22

Left In: 181.714+/-0.032  $\chi^2/\text{NDF}$ : 1116142.0/22

Left: 182.890+/-0.022  $\chi^2/\text{NDF}$ : 2245464.4/47

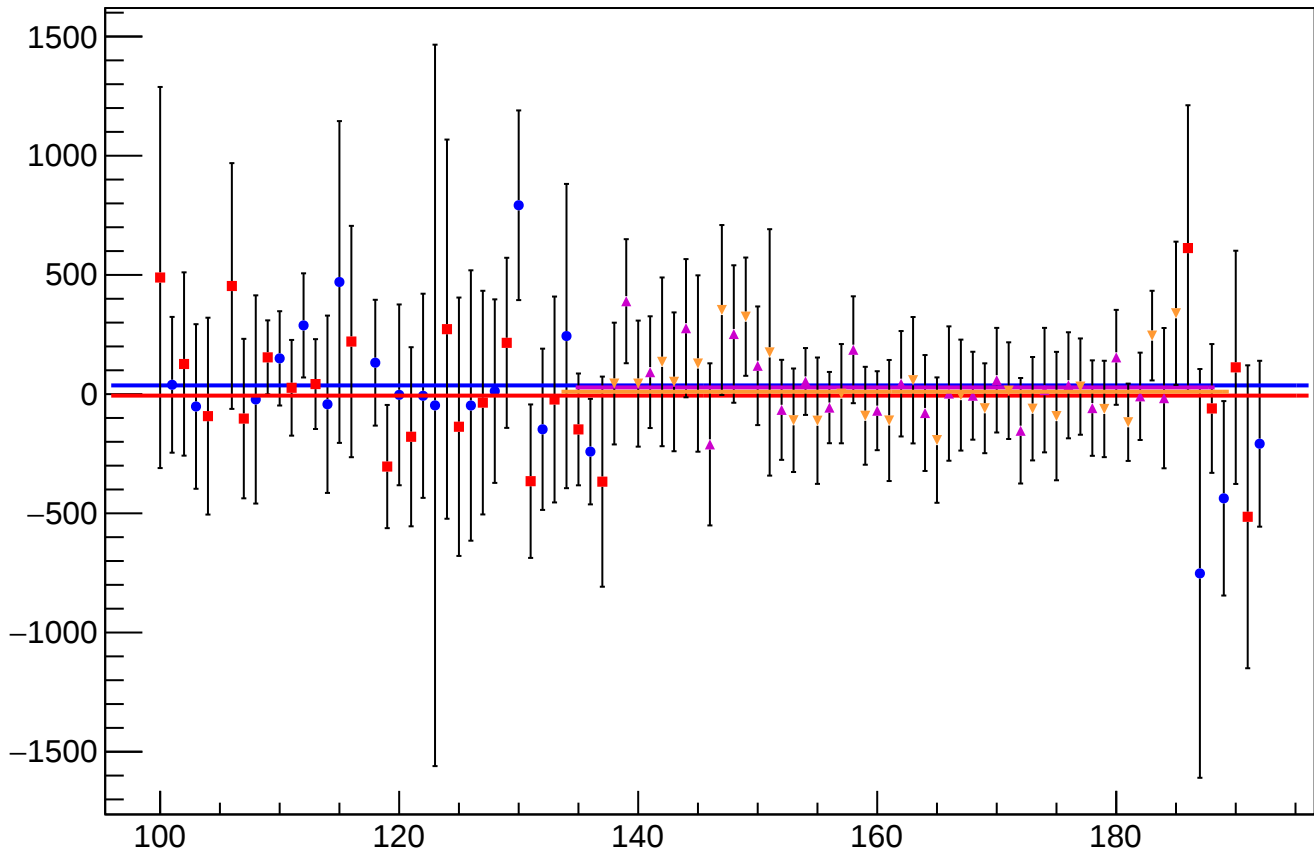
Right: 147.123+/-0.027  $\chi^2/\text{NDF}$ : 2546262.2/42

In: 168.940+/-0.025  $\chi^2/\text{NDF}$ : 2661037.0/42

Out: 167.712+/-0.024  $\chi^2/\text{NDF}$ : 3192474.3/47

All: 168.302+/-0.017  $\chi^2/\text{NDF}$ : 5854808.3/90

# asym\_bcm\_an\_ds\_mean vs Slug, Sign Corrected



Right In: 36.546 $\pm$ 76.128  $\chi^2$ /NDF: 10.7/19

Left Out: 10.078 $\pm$ 47.488  $\chi^2$ /NDF:8.5/24

Right Out: -6.235 $\pm$ 66.432  $\chi^2$ /NDF: 9.0/22

Left In: 28.050 $\pm$ 44.573  $\chi^2$ /NDF:7.0/22

Left: 19.632 $\pm$ 32.499  $\chi^2$ /NDF: 15.5/47

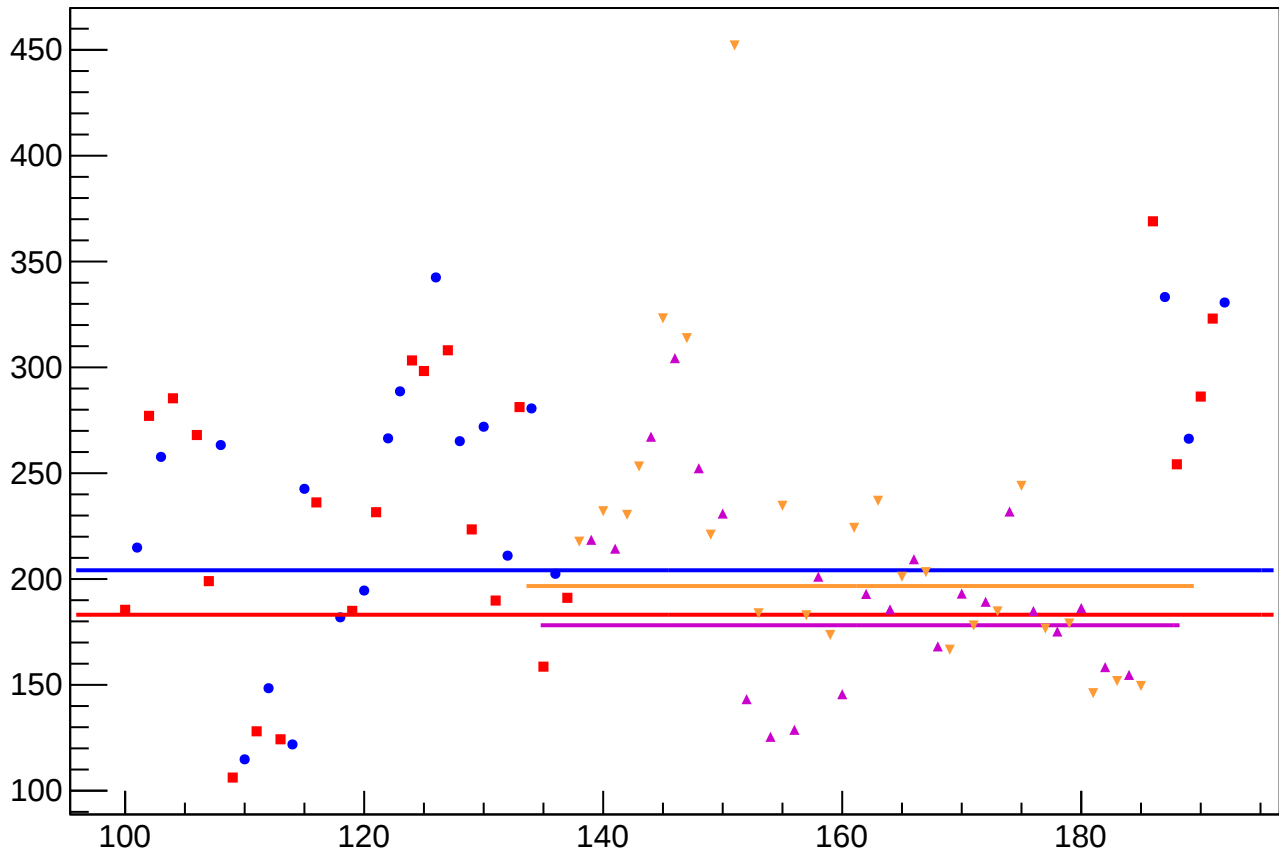
Right: 12.259 $\pm$ 50.054  $\chi^2$ /NDF: 19.8/42

In: 30.219 $\pm$ 38.465  $\chi^2$ /NDF:17.6/42

Out: 4.561 $\pm$ 38.633  $\chi^2$ /NDF:17.5/47

All: 17.446 $\pm$ 27.258  $\chi^2$ /NDF: 35.3/90

# asym\_bcm\_an\_ds\_rms vs Slug, Sign Corrected



Right In:  $204.142 \pm 0.054$   $\chi^2/NDF: 1407458.4/19$

Left Out:  $196.682 \pm 0.034$   $\chi^2/NDF: 1782715.7/24$

Right Out:  $183.137 \pm 0.047$   $\chi^2/NDF: 2141972.4/22$

Left In:  $178.166 \pm 0.032$   $\chi^2/NDF: 1618967.9/22$

Left:  $186.838 \pm 0.023$   $\chi^2/NDF: 3563331.3/47$

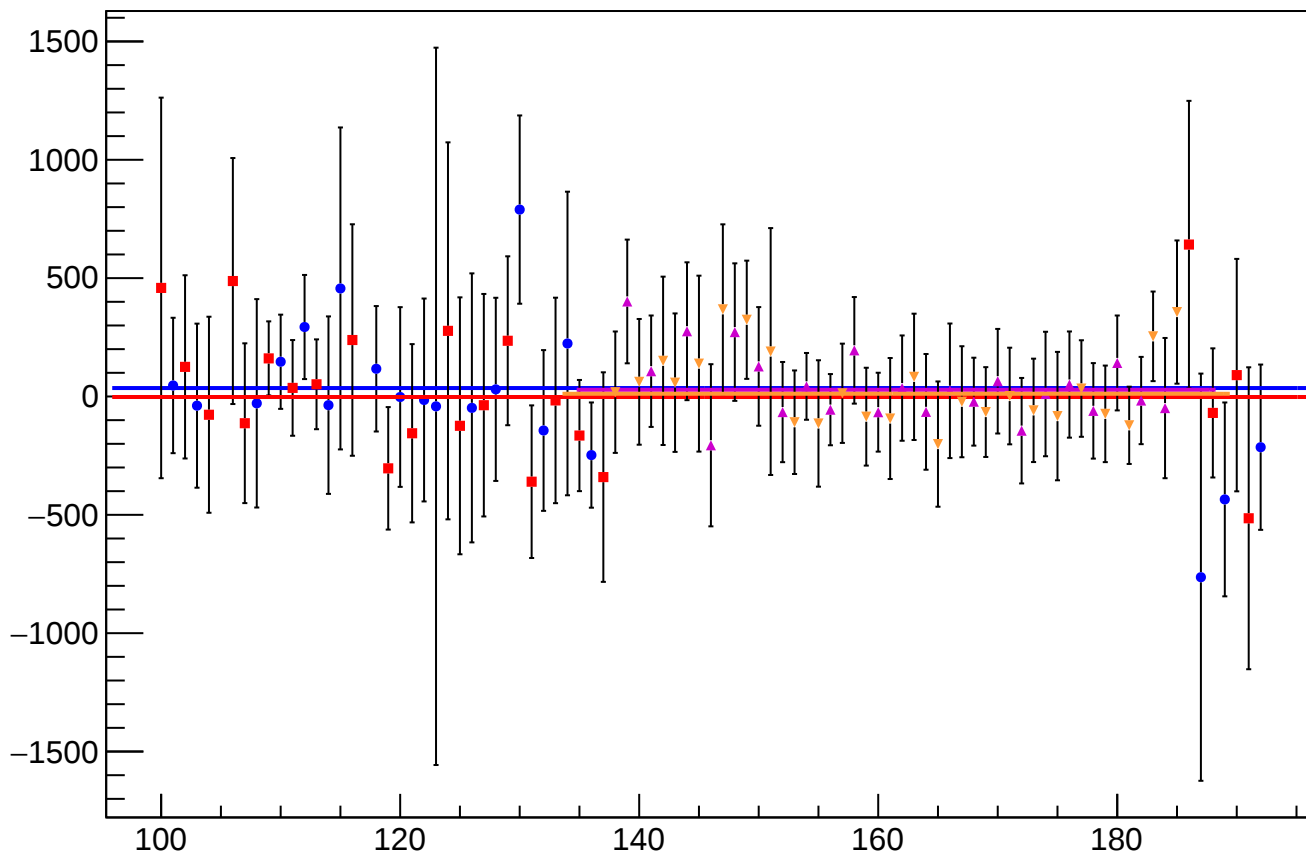
Right:  $192.217 \pm 0.035$   $\chi^2/NDF: 3635869.1/42$

In:  $184.797 \pm 0.027$   $\chi^2/NDF: 3199836.6/42$

Out:  $192.101 \pm 0.027$   $\chi^2/NDF: 3979713.9/47$

All:  $188.433 \pm 0.019$   $\chi^2/NDF: 7215450.1/90$

# asym\_bcm\_an\_ds3\_mean vs Slug, Sign Corrected



Right In: 35.674+/-76.492  $\chi^2/\text{NDF}$ : 10.6/19

Left Out: 11.479+/-47.819  $\chi^2/\text{NDF}$ : 8.8/24

Right Out: -2.195+/-66.805  $\chi^2/\text{NDF}$ : 9.2/22

Left In: 28.280+/-44.863  $\chi^2/\text{NDF}$ : 7.1/22

Left: 20.415+/-32.718  $\chi^2/\text{NDF}$ : 16.0/47

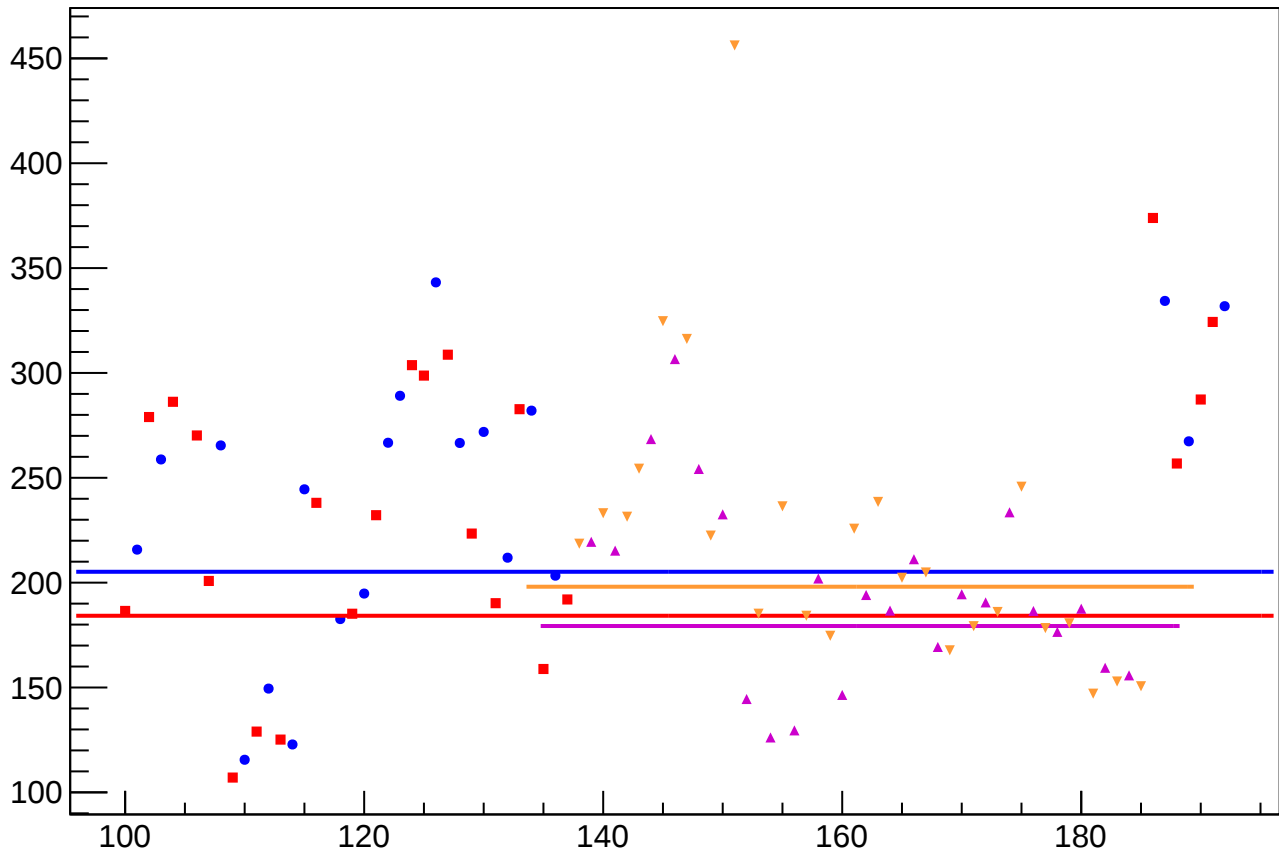
Right: 14.191+/-50.317  $\chi^2/\text{NDF}$ : 20.0/42

In: 30.172+/-38.698  $\chi^2/\text{NDF}$ : 17.7/42

Out: 6.846+/-38.884  $\chi^2/\text{NDF}$ : 18.1/47

All: 18.565+/-27.429  $\chi^2/\text{NDF}$ : 36.0/90

# asym\_bcm\_an\_ds3\_rms vs Slug, Sign Corrected



Right In: 205.187 $\pm$ 0.054  $\chi^2/\text{NDF}$ : 1396988.4/19

Left Out: 198.059 $\pm$ 0.034  $\chi^2/\text{NDF}$ : 1778526.5/24

Right Out: 184.211 $\pm$ 0.047  $\chi^2/\text{NDF}$ : 2134858.4/22

Left In: 179.324 $\pm$ 0.032  $\chi^2/\text{NDF}$ : 1618266.2/22

Left: 188.094 $\pm$ 0.023  $\chi^2/\text{NDF}$ : 3560073.1/47

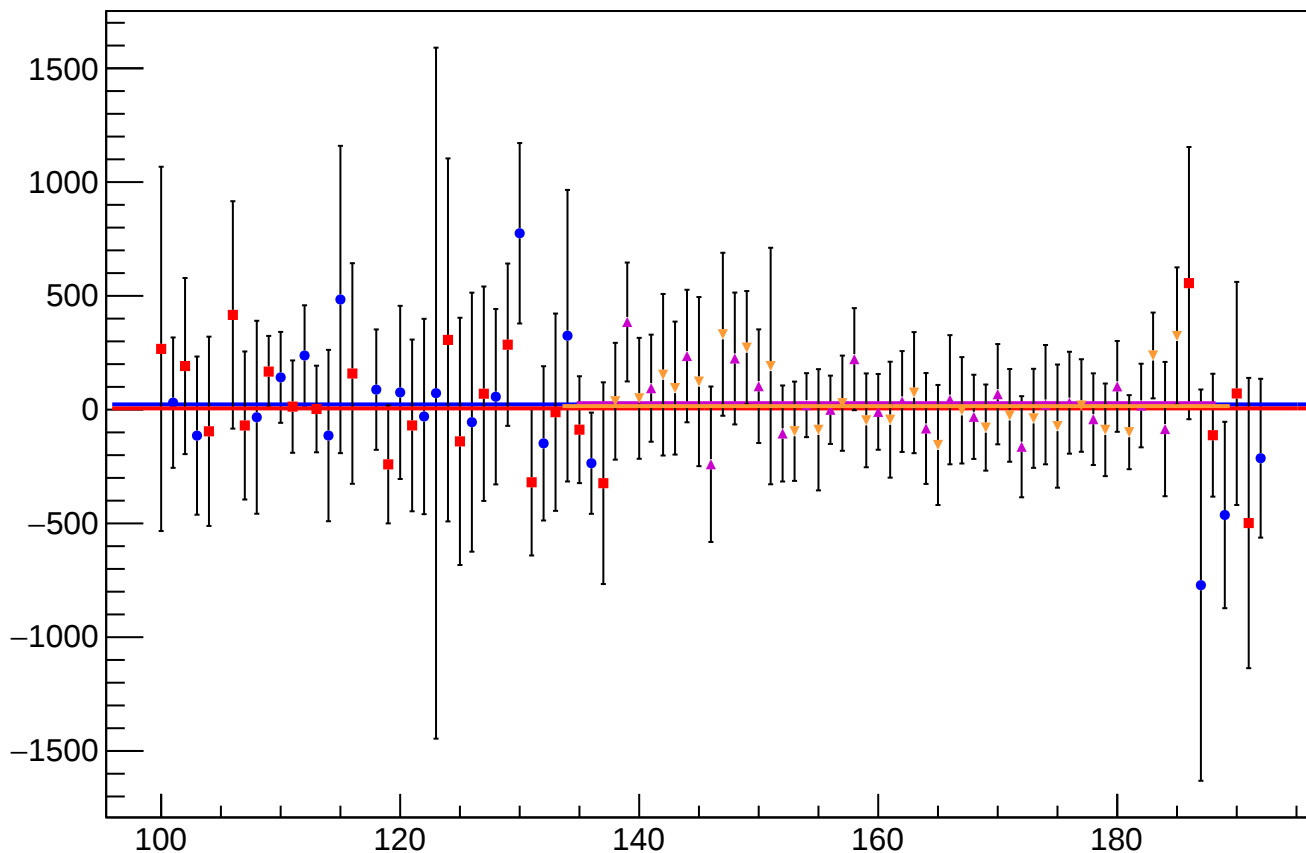
Right: 193.288 $\pm$ 0.036  $\chi^2/\text{NDF}$ : 3617158.8/42

In: 185.943 $\pm$ 0.027  $\chi^2/\text{NDF}$ : 3185371.4/42

Out: 193.368 $\pm$ 0.027  $\chi^2/\text{NDF}$ : 3970203.4/47

All: 189.638 $\pm$ 0.019  $\chi^2/\text{NDF}$ : 7192204.7/90

# asym\_bcm\_an\_us\_mean vs Slug, Sign Corrected



Right In: 22.894+/-76.487  $\chi^2/\text{NDF}$ : 10.3/19

Left Out: 15.437+/-47.695  $\chi^2/\text{NDF}$ : 7.0/24

Right Out: 5.501+/-66.683  $\chi^2/\text{NDF}$ : 7.5/22

Left In: 28.277+/-44.743  $\chi^2/\text{NDF}$ : 6.4/22

Left: 22.267+/-32.632  $\chi^2/\text{NDF}$ : 13.4/47

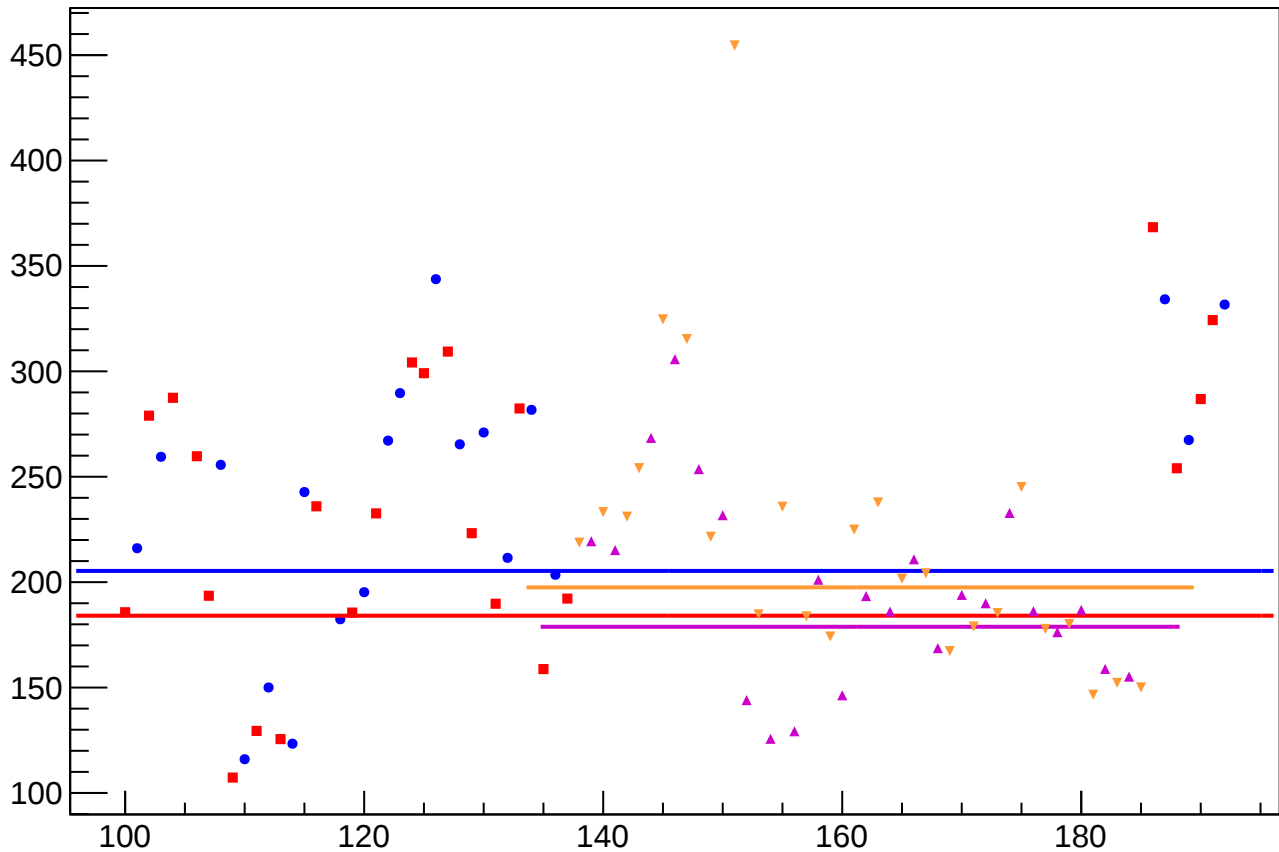
Right: 13.012+/-50.263  $\chi^2/\text{NDF}$ : 17.9/42

In: 26.904+/-38.621  $\chi^2/\text{NDF}$ : 16.7/42

Out: 12.074+/-38.793  $\chi^2/\text{NDF}$ : 14.5/47

All: 19.522+/-27.370  $\chi^2/\text{NDF}$ : 31.3/90

# asym\_bcm\_an\_us\_rms vs Slug, Sign Corrected



Right In:  $205.335 \pm 0.054$   $\chi^2/\text{NDF}: 1373516.5/19$

Left Out:  $197.527 \pm 0.034$   $\chi^2/\text{NDF}: 1784225.5/24$

Right Out:  $184.084 \pm 0.047$   $\chi^2/\text{NDF}: 2098031.2/22$

Left In:  $178.836 \pm 0.032$   $\chi^2/\text{NDF}: 1622266.9/22$

Left:  $187.585 \pm 0.023$   $\chi^2/\text{NDF}: 3569877.1/47$

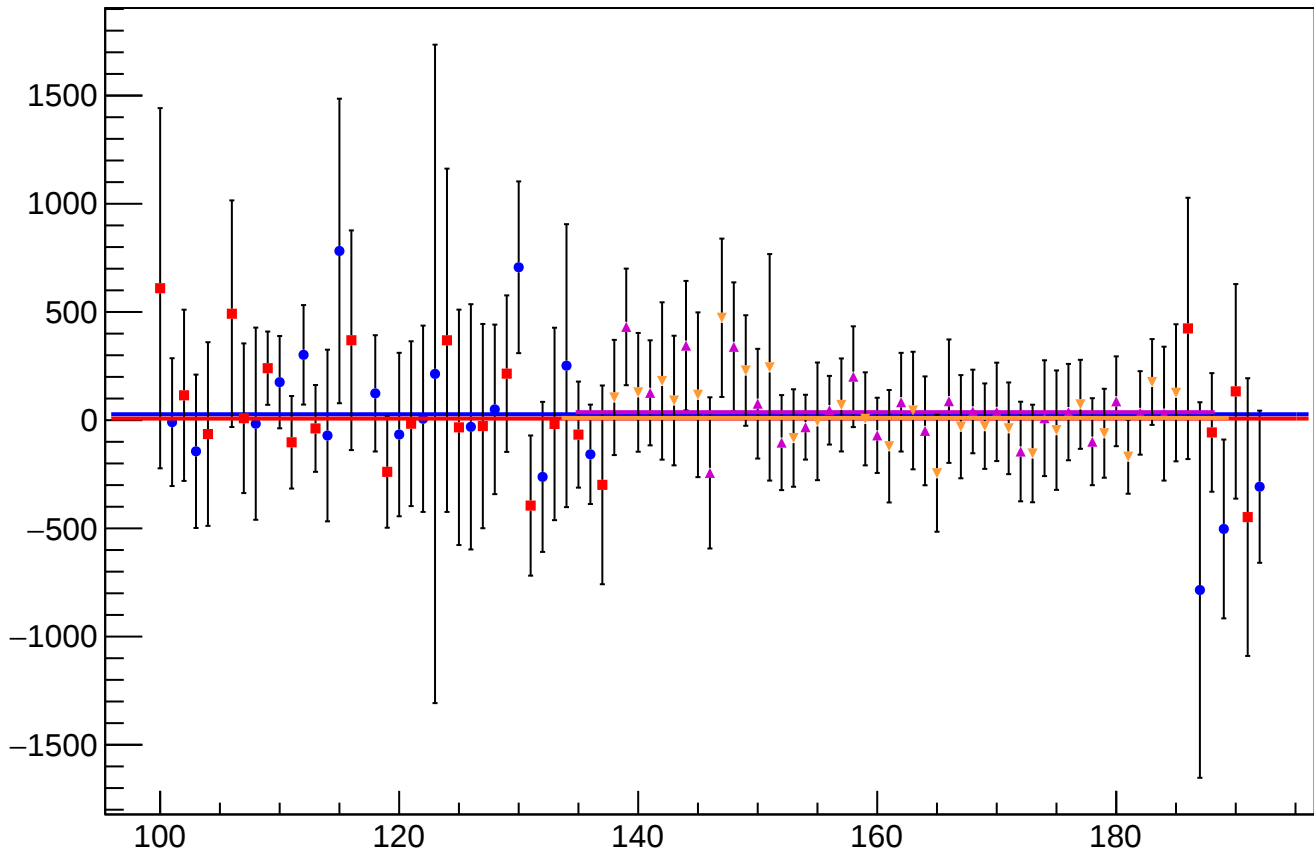
Right:  $193.261 \pm 0.036$   $\chi^2/\text{NDF}: 3559262.0/42$

In:  $185.592 \pm 0.027$   $\chi^2/\text{NDF}: 3174634.5/42$

Out:  $192.978 \pm 0.027$   $\chi^2/\text{NDF}: 3936033.1/47$

All:  $189.268 \pm 0.019$   $\chi^2/\text{NDF}: 7147077.8/90$

# asym\_bcm\_dg\_us\_mean vs Slug, Sign Corrected



Right In: 27.356 $\pm$ 78.727  $\chi^2$ /NDF: 11.4/19

Left Out: 10.534 $\pm$ 49.197  $\chi^2$ /NDF:7.5/24

Right Out: 7.417 $\pm$ 69.271  $\chi^2$ /NDF: 8.8/22

Left In: 37.000 $\pm$ 46.358  $\chi^2$ /NDF:7.9/22

Left: 24.553 $\pm$ 33.739  $\chi^2$ /NDF: 15.5/47

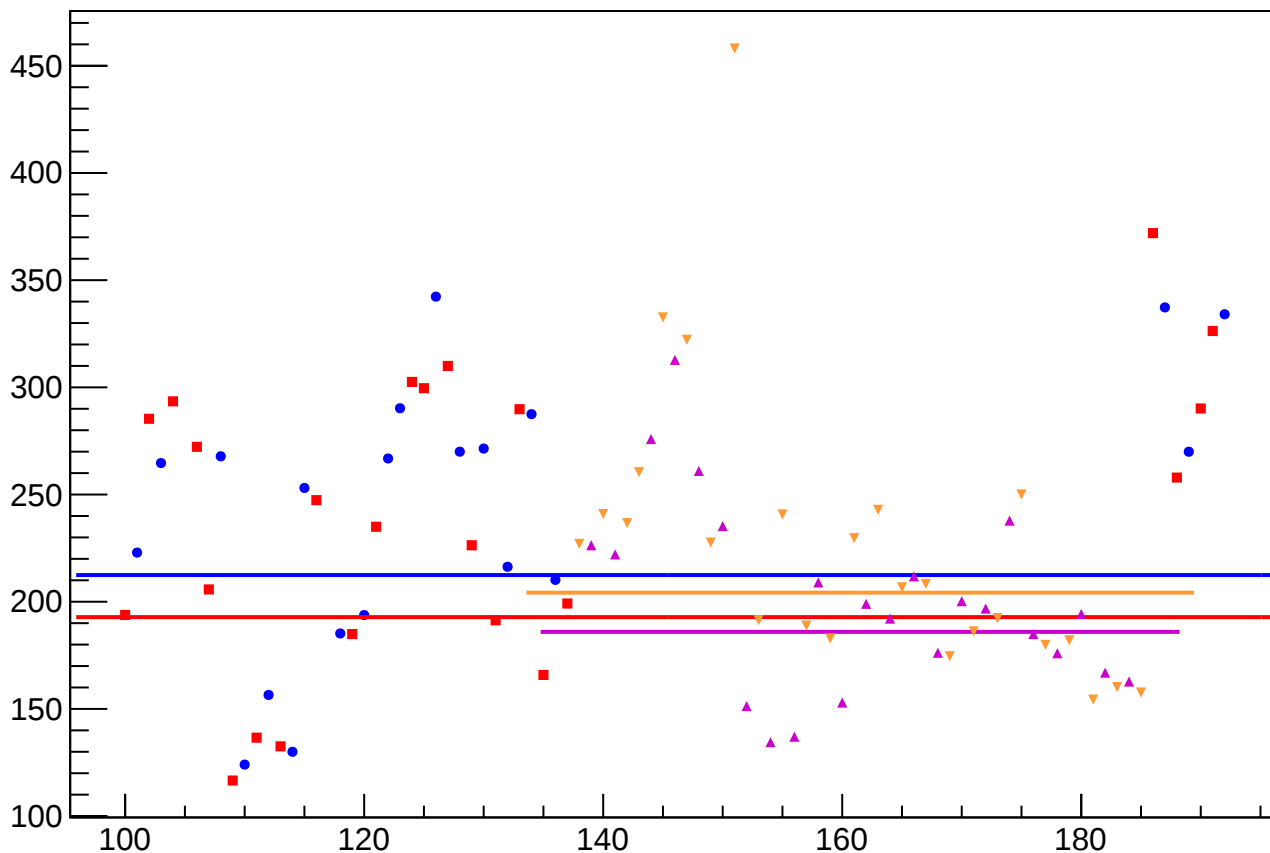
Right: 16.118 $\pm$ 52.005  $\chi^2$ /NDF: 20.3/42

In: 34.517 $\pm$ 39.947  $\chi^2$ /NDF:19.3/42

Out: 9.489 $\pm$ 40.110  $\chi^2$ /NDF:16.3/47

All: 22.054 $\pm$ 28.304  $\chi^2$ /NDF: 35.8/90

# asym\_bcm\_dg\_us\_rms vs Slug, Sign Corrected



Right In:  $212.433 \pm 0.056$   $\chi^2/NDF: 1233743.9/19$

Left Out:  $204.236 \pm 0.035$   $\chi^2/NDF: 1675666.0/24$

Right Out:  $192.821 \pm 0.049$   $\chi^2/NDF: 1872383.5/22$

Left In:  $185.931 \pm 0.033$   $\chi^2/NDF: 1460065.0/22$

Left:  $194.540 \pm 0.024$   $\chi^2/NDF: 3282383.3/47$

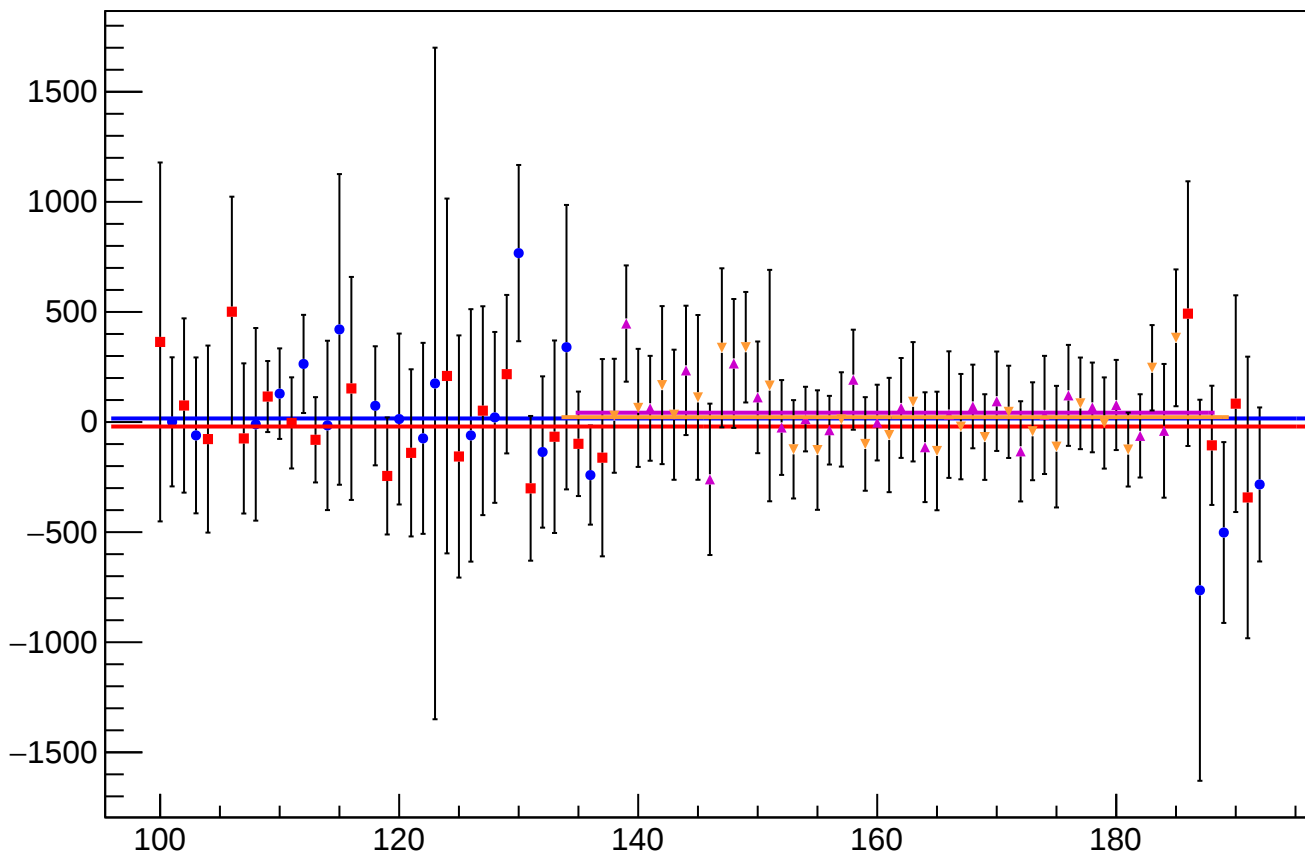
Right:  $201.379 \pm 0.037$   $\chi^2/NDF: 3176082.8/42$

In:  $192.755 \pm 0.028$   $\chi^2/NDF: 2862094.2/42$

Out:  $200.409 \pm 0.028$   $\chi^2/NDF: 3584148.8/47$

All:  $196.566 \pm 0.020$   $\chi^2/NDF: 6482806.9/90$

asym\_bcm\_dg\_ds\_mean vs Slug, Sign Corrected



Right In: 16.345 $\pm$ 77.754  $\chi^2$ /NDF: 10.5/19

Left Out: 22.189 $\pm$ 48.738  $\chi^2$ /NDF:8.4/24

Right Out: -20.298 $\pm$ 67.986  $\chi^2$ /NDF: 5.7/22

Left In: 42.446 $\pm$ 45.861  $\chi^2$ /NDF:6.7/22

Left: 32.933 $\pm$ 33.399  $\chi^2$ /NDF: 15.2/47

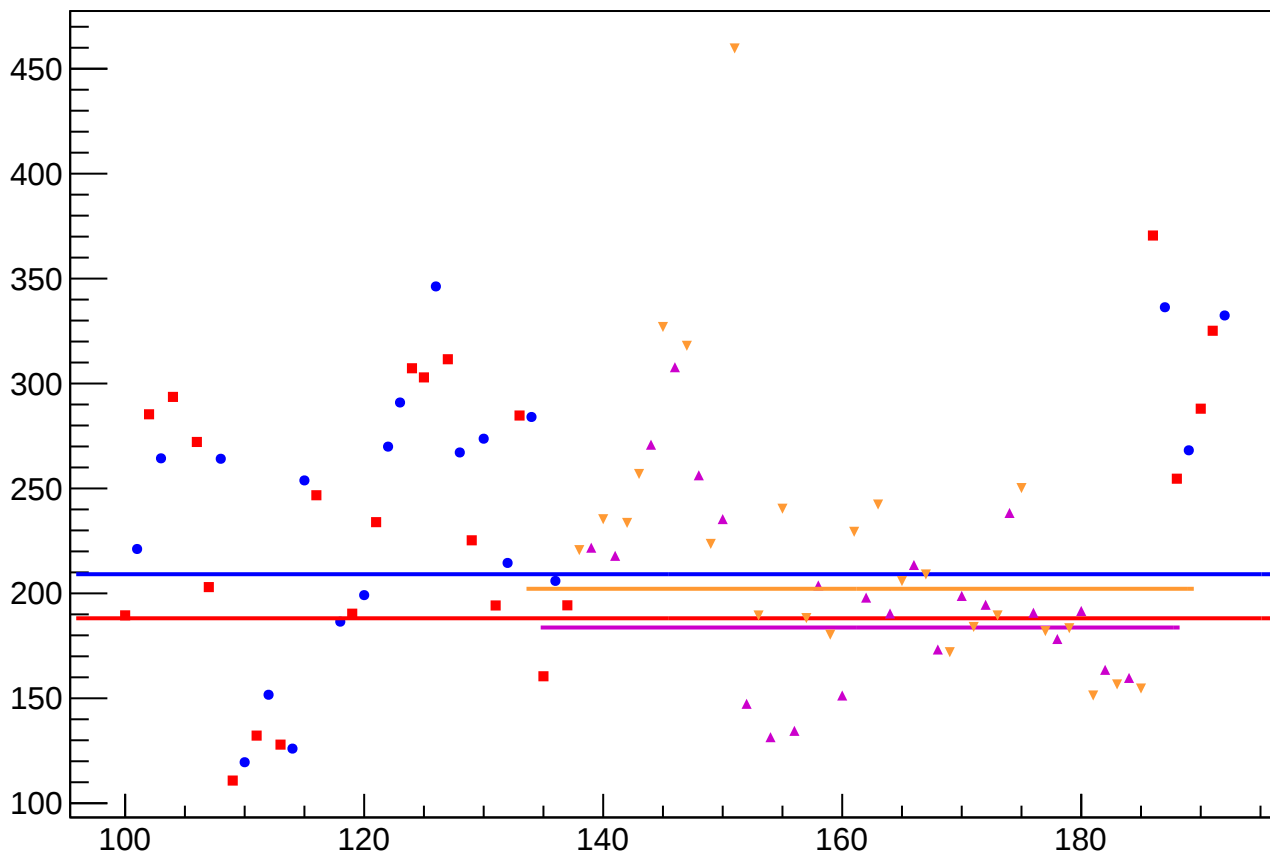
Right: -4.422 $\pm$ 51.181  $\chi^2$ /NDF: 16.3/42

In: 35.710 $\pm$ 39.502  $\chi^2$ /NDF:17.3/42

Out: 7.766 $\pm$ 39.611  $\chi^2$ /NDF:14.4/47

All: 21.776 $\pm$ 27.970  $\chi^2$ /NDF: 31.9/90

# asym\_bcm\_dg\_ds\_rms vs Slug, Sign Corrected



Right In:  $209.130 \pm 0.055$   $\chi^2/\text{NDF}$ : 1329976.1/19

Left Out:  $202.186 \pm 0.034$   $\chi^2/\text{NDF}$ : 1696571.9/24

Right Out:  $188.132 \pm 0.048$   $\chi^2/\text{NDF}$ : 2046867.3/22

Left In:  $183.732 \pm 0.032$   $\chi^2/\text{NDF}$ : 1495930.4/22

Left:  $192.398 \pm 0.024$   $\chi^2/\text{NDF}$ : 3344580.1/47

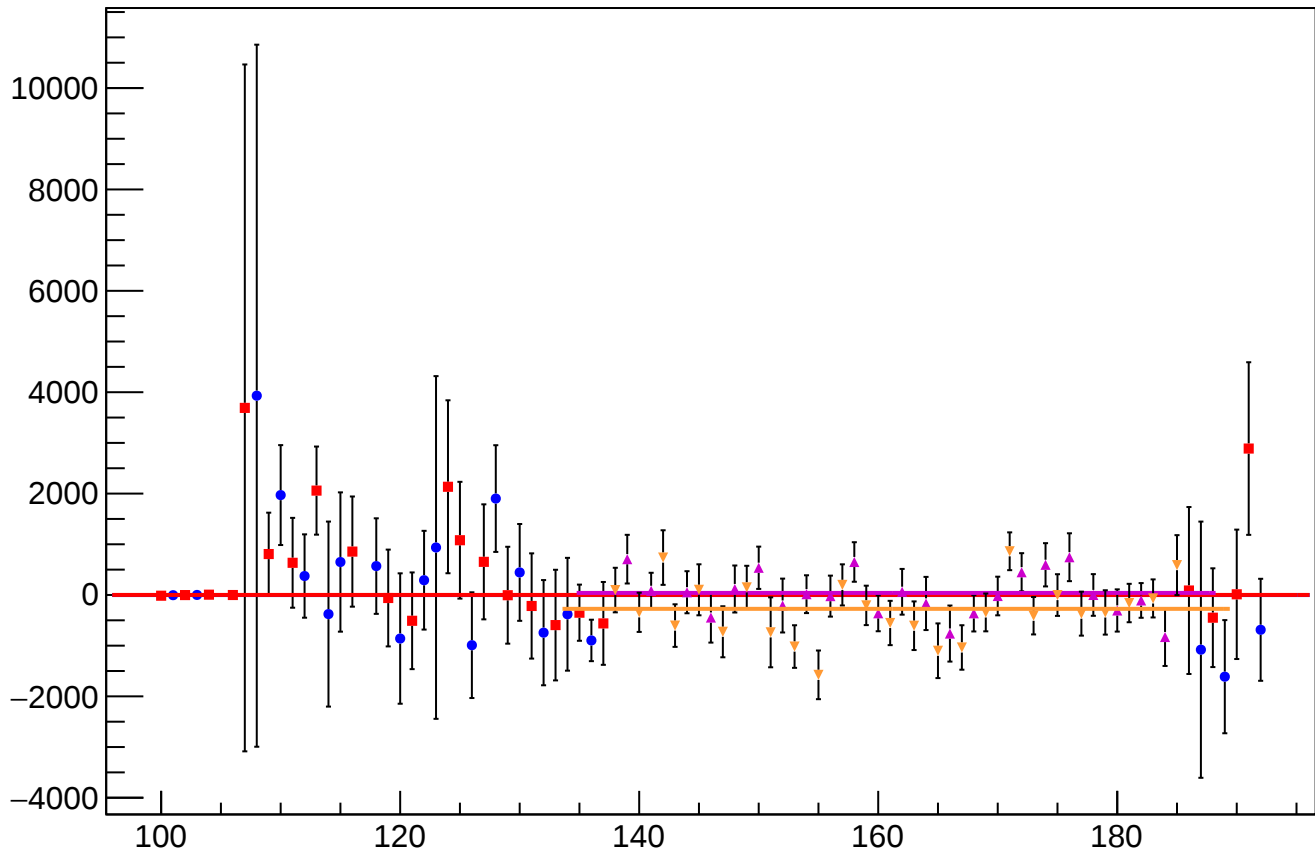
Right:  $197.230 \pm 0.036$   $\chi^2/\text{NDF}$ : 3459508.4/42

In:  $190.287 \pm 0.028$   $\chi^2/\text{NDF}$ : 2984220.6/42

Out:  $197.415 \pm 0.028$   $\chi^2/\text{NDF}$ : 3799896.4/47

All:  $193.841 \pm 0.020$   $\chi^2/\text{NDF}$ : 6816587.6/90

# asym\_cav4bQ\_mean vs Slug, Sign Corrected



Right In:  $-1.539 \pm 2.251$   $\chi^2/\text{NDF}$ : 19.6/19

Left Out:  $-273.664 \pm 86.869$   $\chi^2/\text{NDF}$ : 38.3/24

Right Out:  $0.733 \pm 2.111$   $\chi^2/\text{NDF}$ : 21.3/22

Left In:  $40.480 \pm 87.470$   $\chi^2/\text{NDF}$ : 20.2/22

Left:  $-117.675 \pm 61.637$   $\chi^2/\text{NDF}$ : 65.0/47

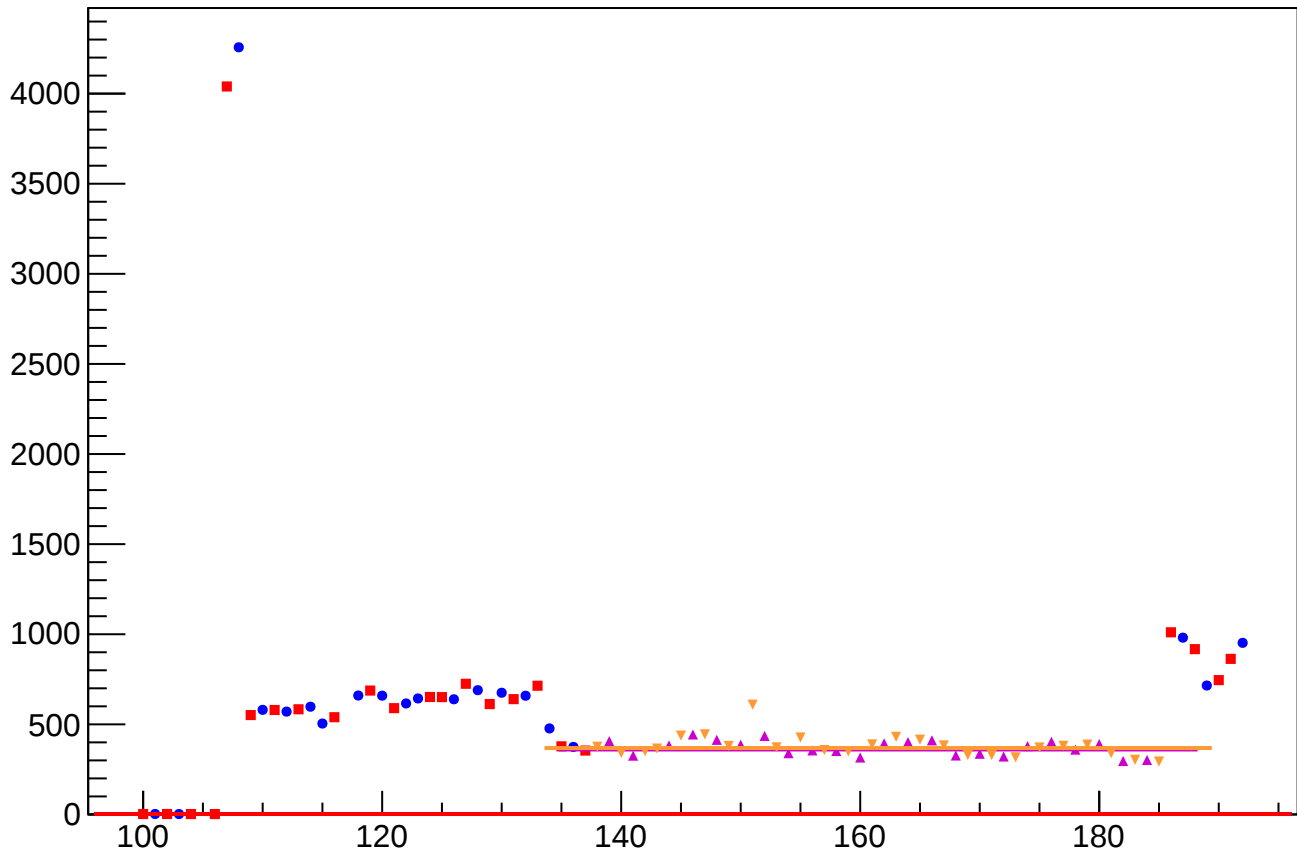
Right:  $-0.330 \pm 1.540$   $\chi^2/\text{NDF}$ : 41.5/42

In:  $-1.512 \pm 2.251$   $\chi^2/\text{NDF}$ : 40.0/42

Out:  $0.571 \pm 2.110$   $\chi^2/\text{NDF}$ : 69.6/47

All:  $-0.403 \pm 1.540$   $\chi^2/\text{NDF}$ : 110.1/90

# asym\_cav4bQ\_rms vs Slug, Sign Corrected



Right In: 2.464+/-0.002  $\chi^2/\text{NDF}$ : 13565549.8/19

Left Out: 368.500+/-0.061  $\chi^2/\text{NDF}$ : 623011.6/24

Right Out: 2.446+/-0.001  $\chi^2/\text{NDF}$ : 14796586.3/22

Left In: 360.571+/-0.062  $\chi^2/\text{NDF}$ : 421995.5/22

Left: 364.563+/-0.044  $\chi^2/\text{NDF}$ : 1053279.8/47

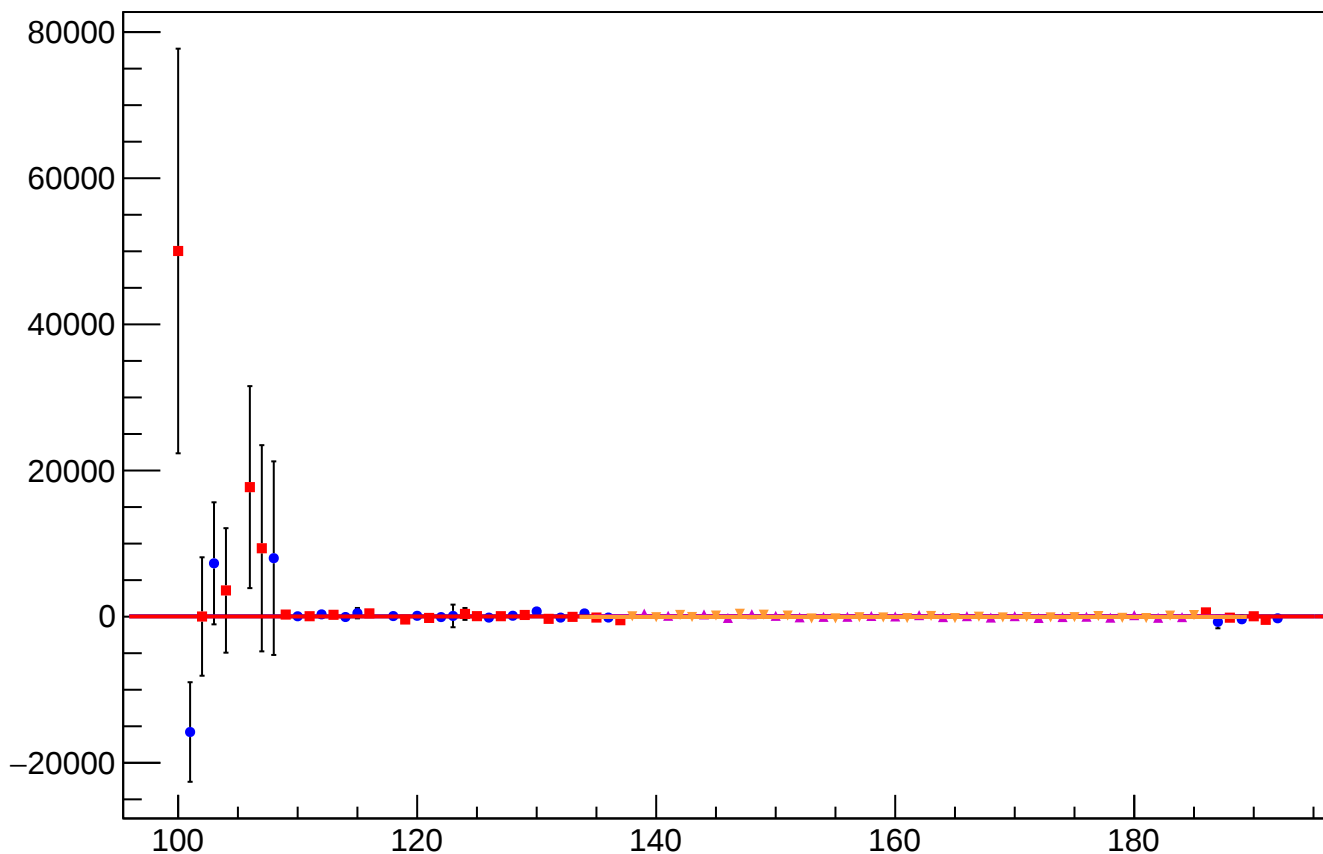
Right: 2.454+/-0.001  $\chi^2/\text{NDF}$ : 28362208.0/42

In: 2.701+/-0.002  $\chi^2/\text{NDF}$ : 47487972.3/42

Out: 2.662+/-0.001  $\chi^2/\text{NDF}$ : 50911720.1/47

All: 2.680+/-0.001  $\chi^2/\text{NDF}$ : 98400020.9/90

# asym\_cav4cQ\_mean vs Slug, Sign Corrected



Right In: 53.141+/-86.788  $\chi^2/\text{NDF}$ : 14.6/19

Left Out: -39.036+/-49.576  $\chi^2/\text{NDF}$ : 9.1/24

Right Out: 26.751+/-78.593  $\chi^2/\text{NDF}$ : 15.8/22

Left In: 28.062+/-48.032  $\chi^2/\text{NDF}$ : 9.6/22

Left: -4.426+/-34.497  $\chi^2/\text{NDF}$ : 19.7/47

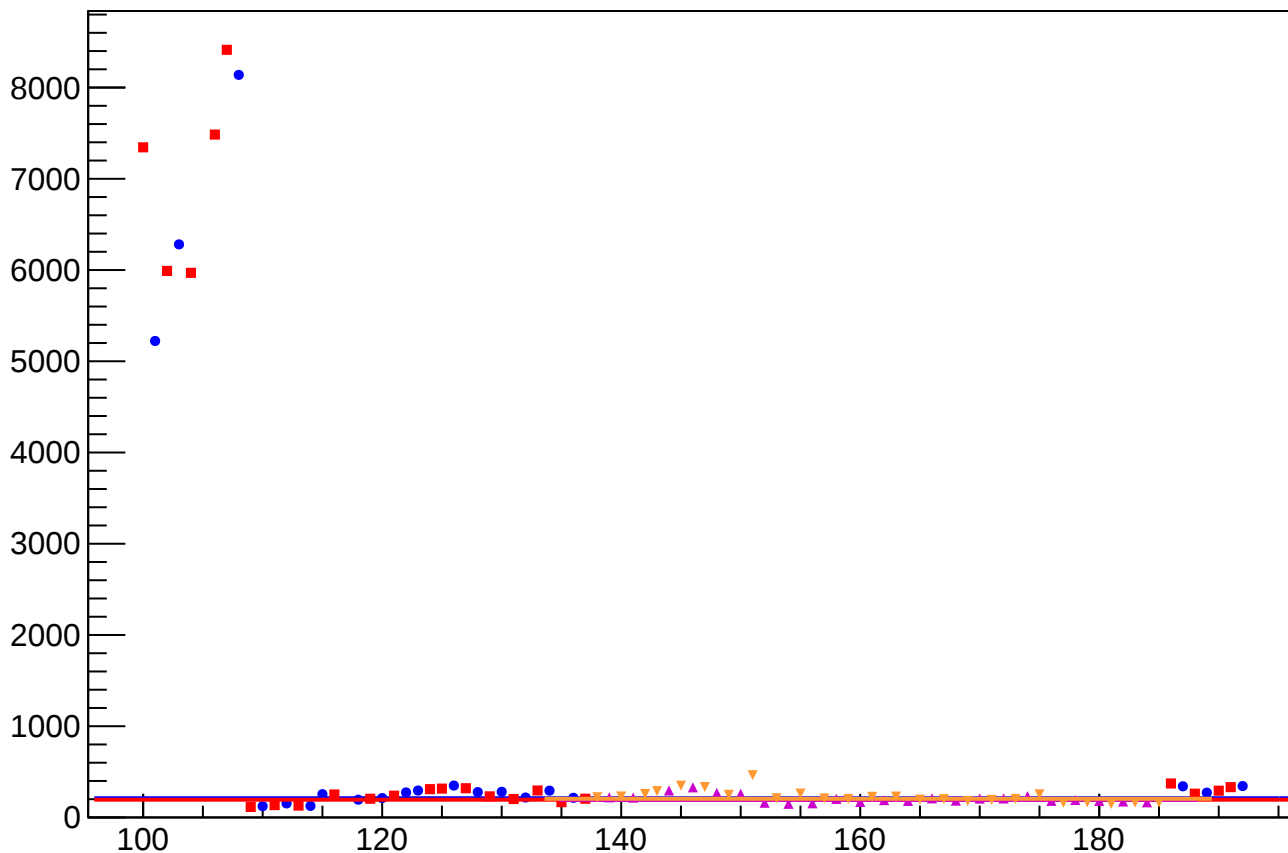
Right: 38.641+/-58.256  $\chi^2/\text{NDF}$ : 30.5/42

In: 33.942+/-42.025  $\chi^2/\text{NDF}$ : 24.2/42

Out: -20.310+/-41.931  $\chi^2/\text{NDF}$ : 25.5/47

All: 6.755+/-29.683  $\chi^2/\text{NDF}$ : 50.6/90

# asym\_cav4cQ\_rms vs Slug, Sign Corrected



Right In: 210.703 $\pm$ 0.061  $\chi^2$ /NDF: 4099506.8/19

Left Out: 205.114 $\pm$ 0.035  $\chi^2$ /NDF:1957484.4/24

Right Out: 194.536 $\pm$ 0.056  $\chi^2$ /NDF: 4829777.9/22

Left In: 193.616 $\pm$ 0.034  $\chi^2$ /NDF:1179471.1/22

Left: 199.183 $\pm$ 0.024  $\chi^2$ /NDF: 3192443.5/47

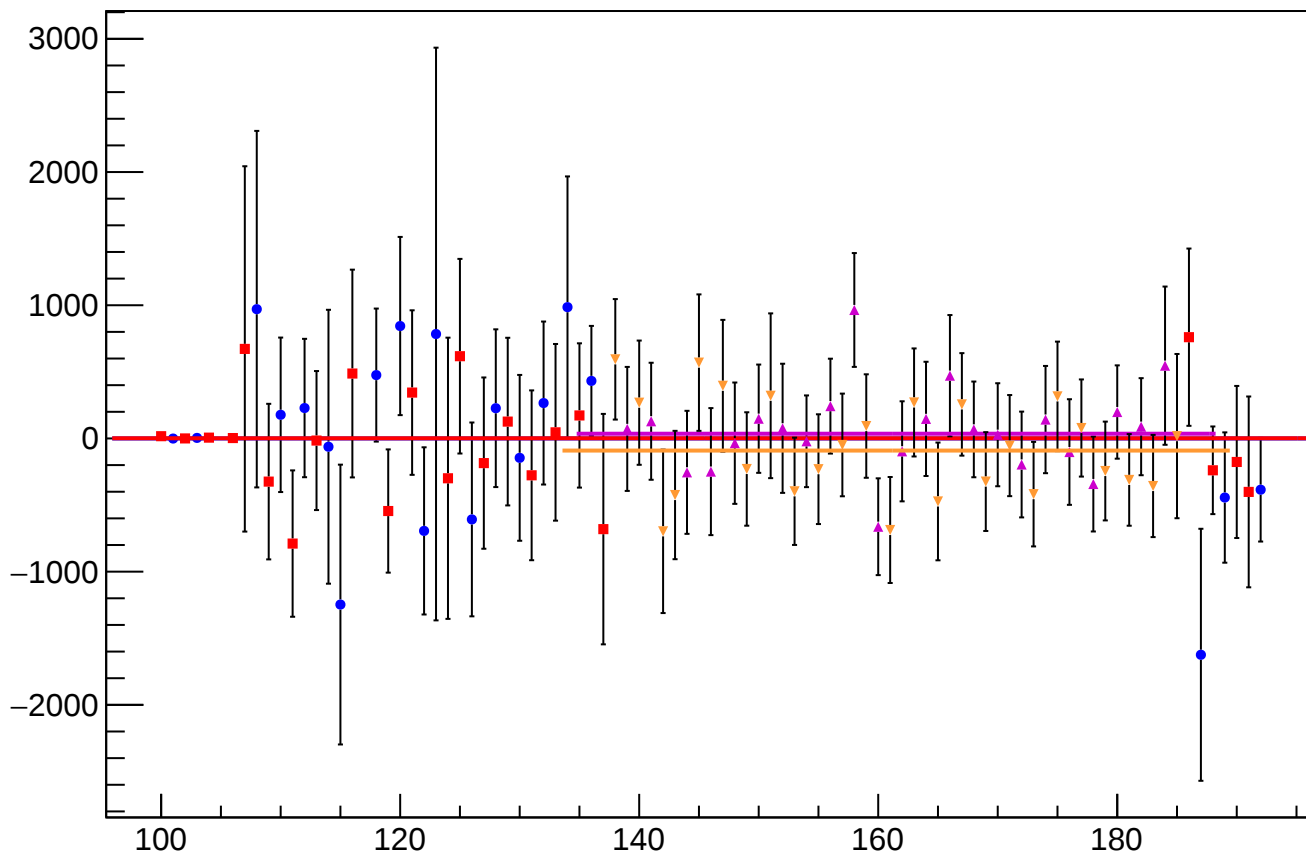
Right: 201.820 $\pm$ 0.041  $\chi^2$ /NDF: 8967414.8/42

In: 197.623 $\pm$ 0.030  $\chi^2$ /NDF:5338324.1/42

Out: 202.103 $\pm$ 0.030  $\chi^2$ /NDF:6813177.5/47

All: 199.868 $\pm$ 0.021  $\chi^2$ /NDF: 12162893.2/90

# asym\_cav4dQ\_mean vs Slug, Sign Corrected



Right In: -0.159 $\pm$ 1.737  $\chi^2/\text{NDF}$ : 14.9/19

Left Out: -90.945 $\pm$ 84.079  $\chi^2/\text{NDF}$ : 16.4/24

Right Out: 1.318 $\pm$ 1.623  $\chi^2/\text{NDF}$ : 11.5/22

Left In: 35.488 $\pm$ 84.382  $\chi^2/\text{NDF}$ : 13.4/22

Left: -27.956 $\pm$ 59.560  $\chi^2/\text{NDF}$ : 31.0/47

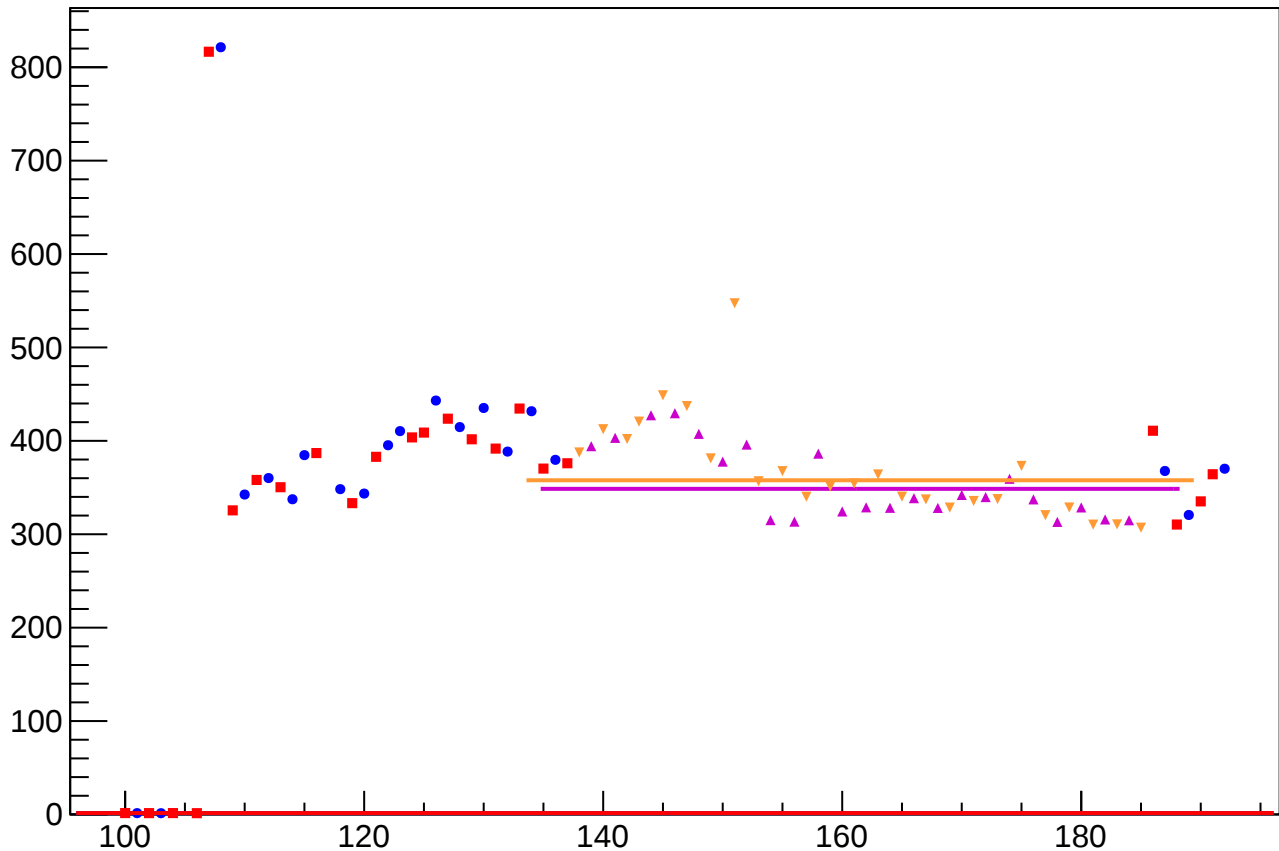
Right: 0.629 $\pm$ 1.186  $\chi^2/\text{NDF}$ : 26.8/42

In: -0.144 $\pm$ 1.736  $\chi^2/\text{NDF}$ : 28.5/42

Out: 1.284 $\pm$ 1.622  $\chi^2/\text{NDF}$ : 29.2/47

All: 0.618 $\pm$ 1.185  $\chi^2/\text{NDF}$ : 58.0/90

# asym\_cav4dQ\_rms vs Slug, Sign Corrected



Right In: 1.465 $\pm$ 0.001  $\chi^2$ /NDF: 13718682.5/19

Left Out: 357.804 $\pm$ 0.059  $\chi^2$ /NDF: 547036.5/24

Right Out: 1.465 $\pm$ 0.001  $\chi^2$ /NDF: 14548777.8/22

Left In: 348.611 $\pm$ 0.060  $\chi^2$ /NDF: 362511.2/22

Left: 353.224 $\pm$ 0.042  $\chi^2$ /NDF: 921460.0/47

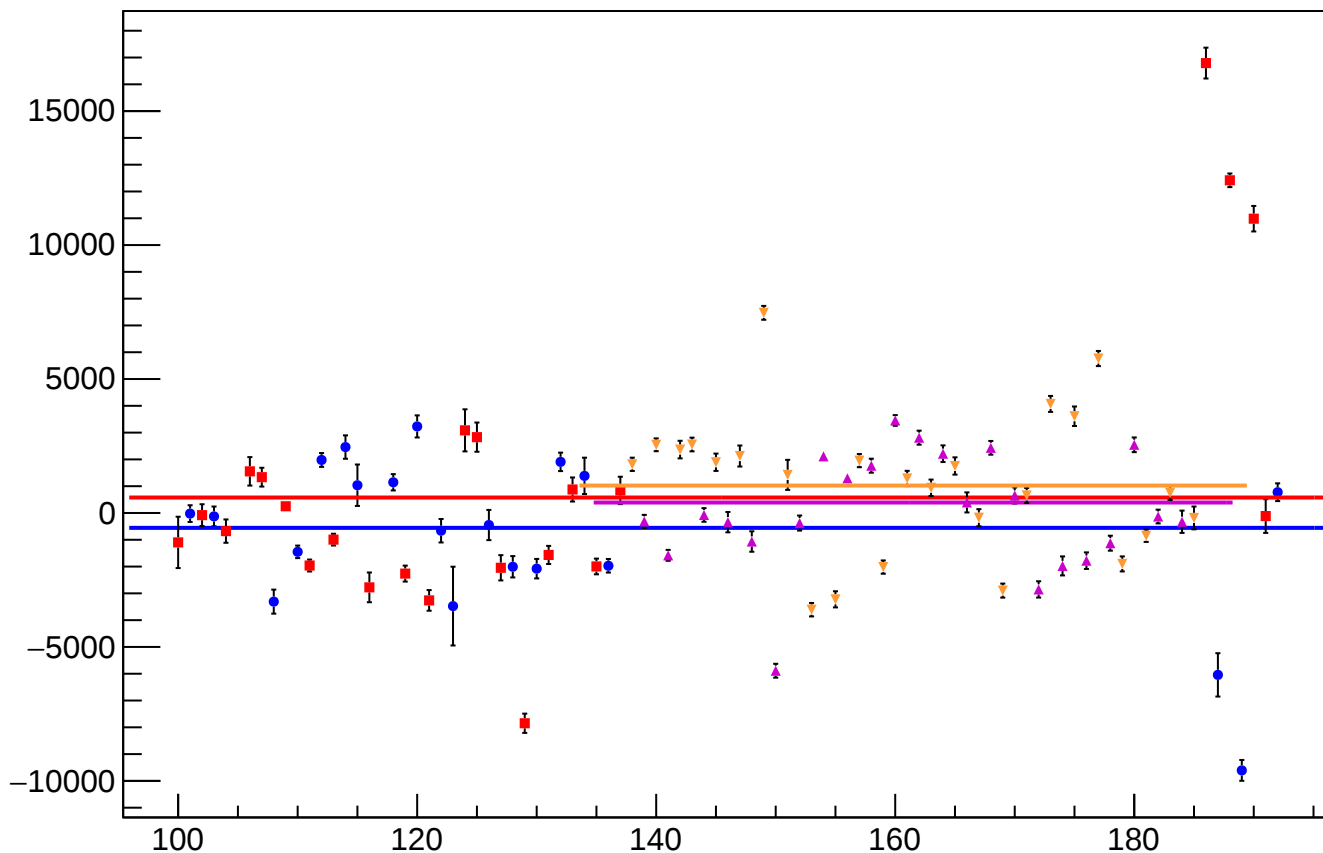
Right: 1.465 $\pm$ 0.001  $\chi^2$ /NDF: 28267460.5/42

In: 1.612 $\pm$ 0.001  $\chi^2$ /NDF: 47916355.5/42

Out: 1.598 $\pm$ 0.001  $\chi^2$ /NDF: 51006514.8/47

All: 1.604 $\pm$ 0.001  $\chi^2$ /NDF: 98922934.8/90

# asym\_bcm0l02\_mean vs Slug, Sign Corrected



Right In: -555.084+/-82.919  $\chi^2/\text{NDF}$ : 1049.5/19

Left Out: 1023.439+/-57.338  $\chi^2/\text{NDF}$ : 2309.4/24

Right Out: 577.167+/-72.953  $\chi^2/\text{NDF}$ : 4605.1/22

Left In: 390.237+/-54.931  $\chi^2/\text{NDF}$ : 1584.9/22

Left: 693.270+/-39.666  $\chi^2/\text{NDF}$ : 3957.9/47

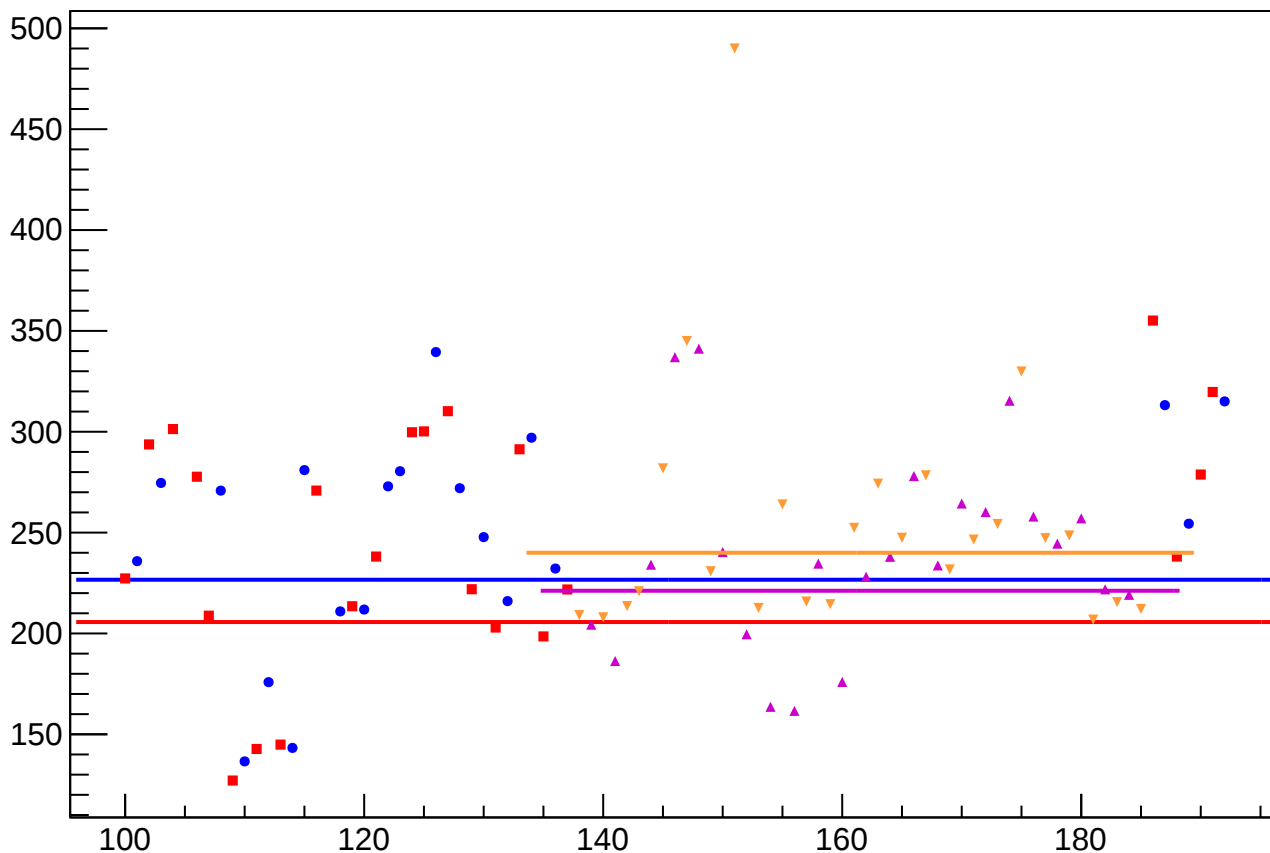
Right: 83.142+/-54.772  $\chi^2/\text{NDF}$ : 5759.7/42

In: 101.908+/-45.794  $\chi^2/\text{NDF}$ : 2724.7/42

Out: 853.030+/-45.081  $\chi^2/\text{NDF}$ : 6937.6/47

All: 483.366+/-32.126  $\chi^2/\text{NDF}$ : 9799.0/90

# asym\_bcm0l02\_rms vs Slug, Sign Corrected



Right In:  $226.634 \pm 0.059$   $\chi^2/NDF: 856874.4/19$

Left Out:  $240.019 \pm 0.041$   $\chi^2/NDF: 1002427.9/24$

Right Out:  $205.660 \pm 0.052$   $\chi^2/NDF: 1500009.5/22$

Left In:  $221.173 \pm 0.039$   $\chi^2/NDF: 1342517.8/22$

Left:  $230.192 \pm 0.028$   $\chi^2/NDF: 2457612.6/47$

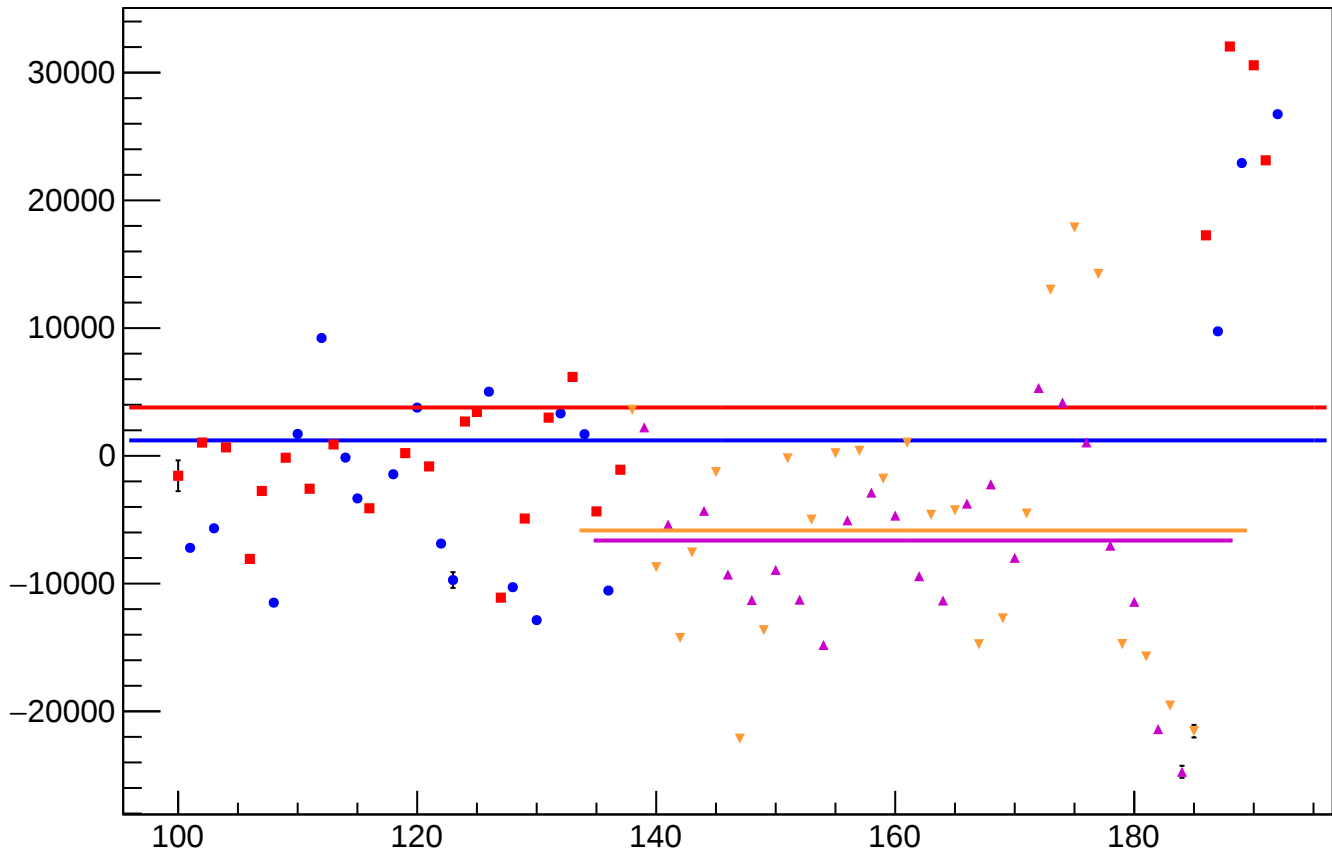
Right:  $214.811 \pm 0.039$   $\chi^2/NDF: 2429013.7/42$

In:  $222.838 \pm 0.032$   $\chi^2/NDF: 2205420.9/42$

Out:  $226.899 \pm 0.032$   $\chi^2/NDF: 2776679.5/47$

All:  $224.900 \pm 0.023$   $\chi^2/NDF: 4990086.2/90$

# asym\_bpm2i01WS\_mean vs Slug, Sign Corrected



Right In: 1209.350+/-44.771  $\chi^2/\text{NDF}$ : 69865.6/19

Left Out: -5841.615+/-35.848  $\chi^2/\text{NDF}$ : 63397.3/24

Right Out: 3785.605+/-41.986  $\chi^2/\text{NDF}$ : 81988.3/22

Left In: -6628.388+/-37.160  $\chi^2/\text{NDF}$ : 21738.0/22

Left: -6220.862+/-25.800  $\chi^2/\text{NDF}$ : 85367.5/47

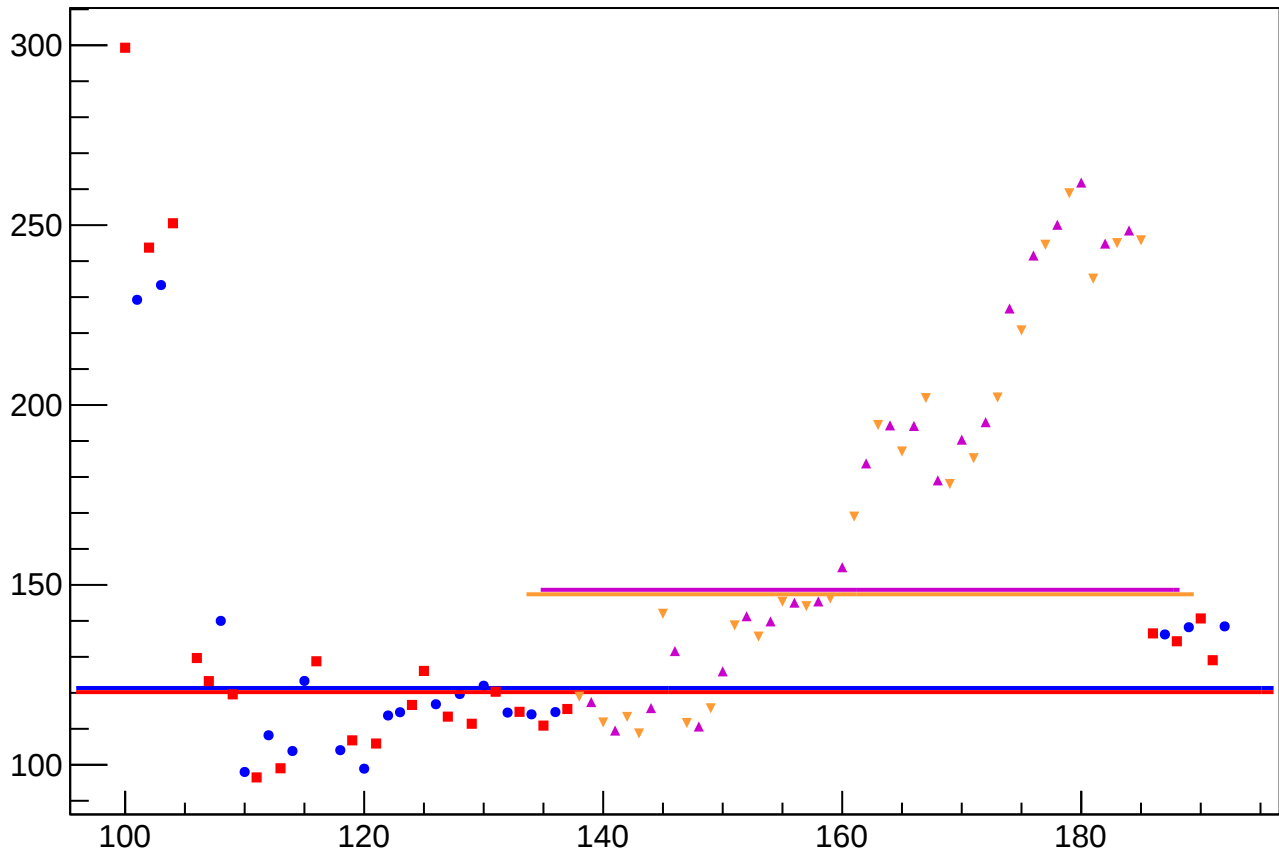
Right: 2580.116+/-30.626  $\chi^2/\text{NDF}$ : 153615.6/42

In: -3431.401+/-28.594  $\chi^2/\text{NDF}$ : 109749.5/42

Out: -1782.523+/-27.262  $\chi^2/\text{NDF}$ : 175795.0/47

All: -2567.675+/-19.731  $\chi^2/\text{NDF}$ : 287286.3/90

# asym\_bpm2i01WS\_rms vs Slug, Sign Corrected



Right In: 121.357 $\pm$ 0.032  $\chi^2/\text{NDF}$ : 688754.9/19

Left Out: 147.396 $\pm$ 0.025  $\chi^2/\text{NDF}$ : 2517097.1/24

Right Out: 120.201 $\pm$ 0.030  $\chi^2/\text{NDF}$ : 747052.6/22

Left In: 148.642 $\pm$ 0.026  $\chi^2/\text{NDF}$ : 2415531.9/22

Left: 147.997 $\pm$ 0.018  $\chi^2/\text{NDF}$ : 4933793.6/47

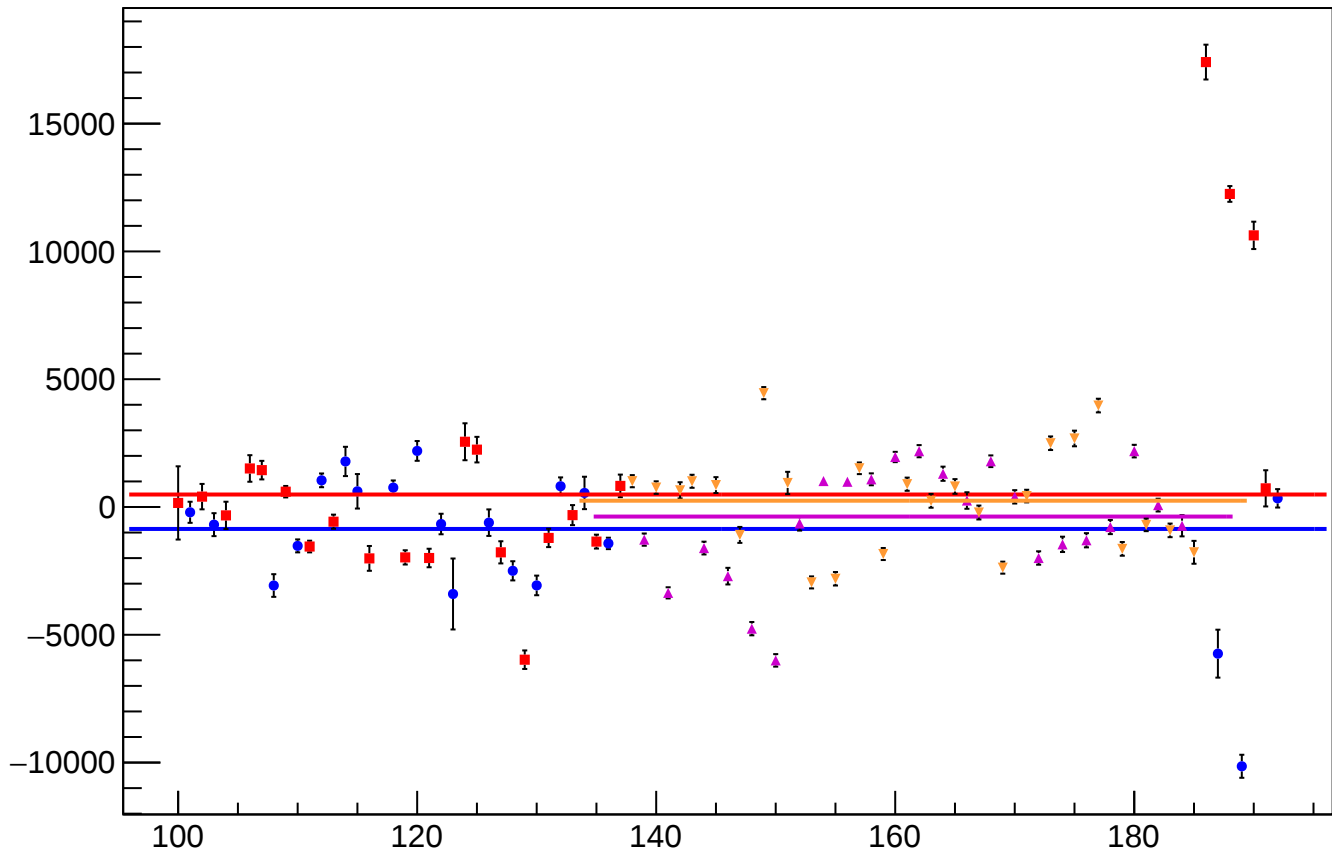
Right: 120.742 $\pm$ 0.022  $\chi^2/\text{NDF}$ : 1436516.2/42

In: 137.512 $\pm$ 0.020  $\chi^2/\text{NDF}$ : 3544125.3/42

Out: 135.930 $\pm$ 0.019  $\chi^2/\text{NDF}$ : 3749458.1/47

All: 136.684 $\pm$ 0.014  $\chi^2/\text{NDF}$ : 7296791.9/90

# asym\_bpm0i07WS\_mean vs Slug, Sign Corrected



Right In:  $-859.126 \pm 84.857$   $\chi^2/\text{NDF}: 759.4/19$

Left Out:  $246.120 \pm 53.492$   $\chi^2/\text{NDF}: 1354.8/24$

Right Out:  $488.292 \pm 77.632$   $\chi^2/\text{NDF}: 3127.7/22$

Left In:  $-374.465 \pm 51.892$   $\chi^2/\text{NDF}: 1798.3/22$

Left:  $-73.589 \pm 37.246$   $\chi^2/\text{NDF}: 3222.4/47$

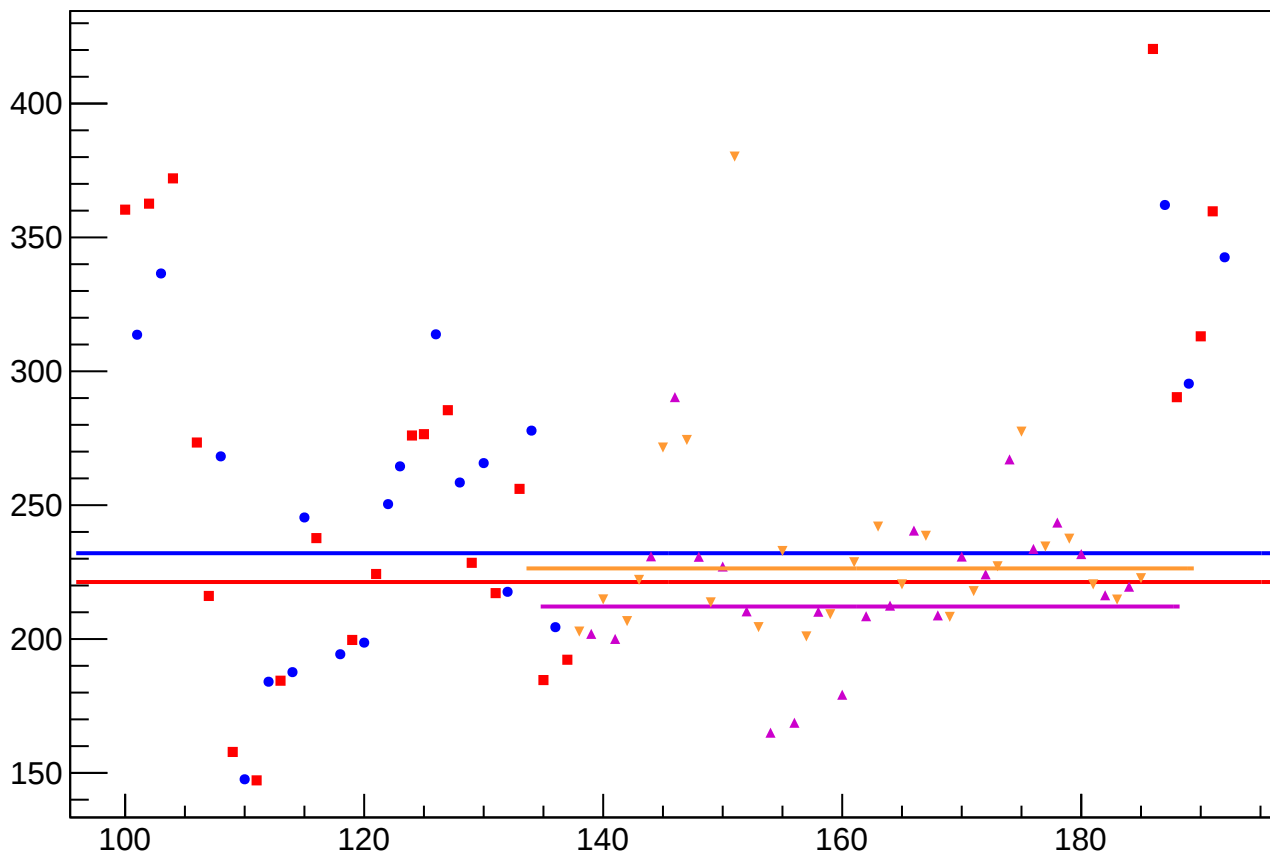
Right:  $-125.623 \pm 57.279$   $\chi^2/\text{NDF}: 4024.3/42$

In:  $-506.379 \pm 44.271$   $\chi^2/\text{NDF}: 2581.4/42$

Out:  $324.082 \pm 44.048$   $\chi^2/\text{NDF}: 4489.1/47$

All:  $-89.052 \pm 31.225$   $\chi^2/\text{NDF}: 7247.3/90$

# asym\_bpm0i07WS\_rms vs Slug, Sign Corrected



Right In: 232.057 $\pm$ 0.060  $\chi^2$ /NDF: 939422.7/19

Left Out: 226.376 $\pm$ 0.038  $\chi^2$ /NDF: 521770.1/24

Right Out: 221.297 $\pm$ 0.055  $\chi^2$ /NDF: 1327001.2/22

Left In: 212.145 $\pm$ 0.037  $\chi^2$ /NDF: 591698.6/22

Left: 219.044 $\pm$ 0.026  $\chi^2$ /NDF: 1186390.8/47

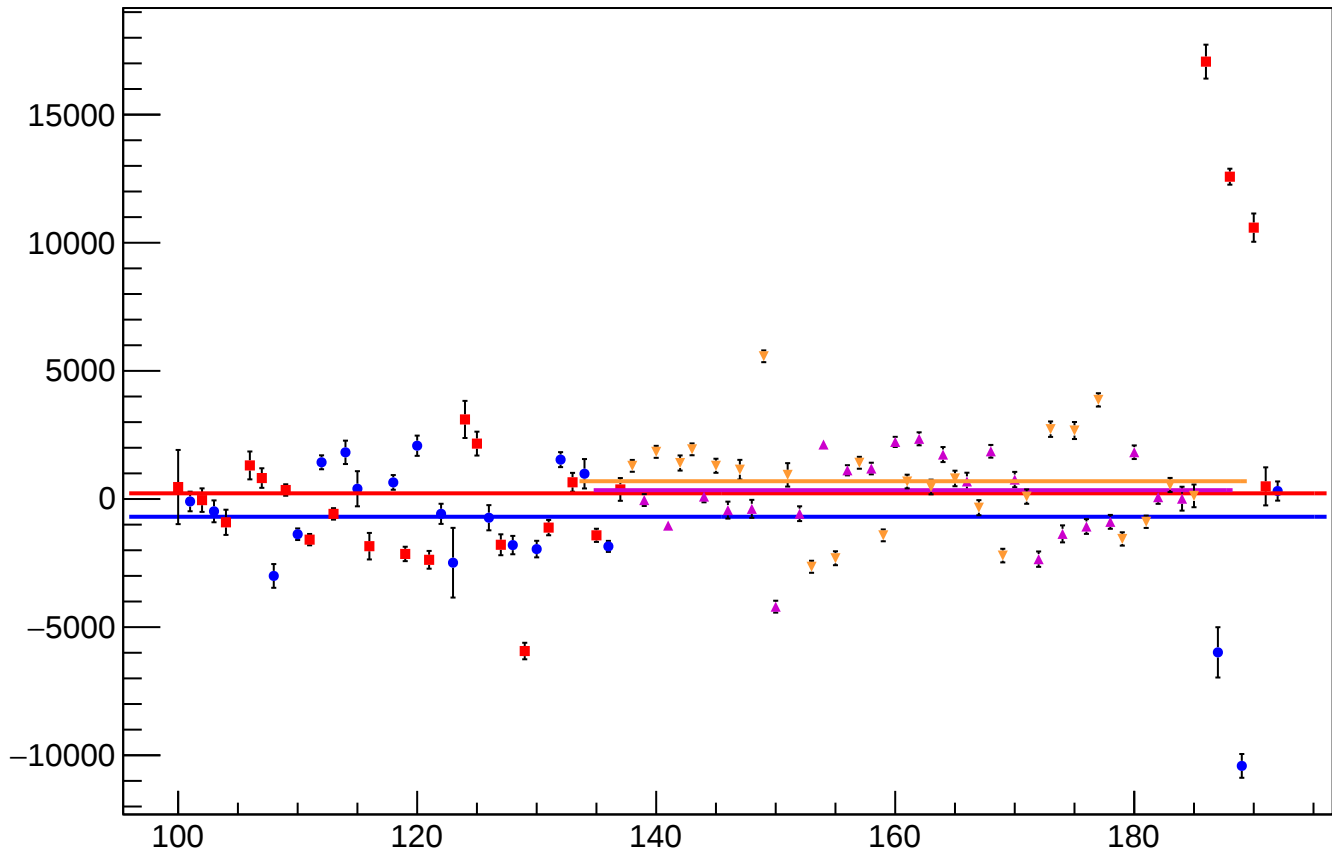
Right: 226.200 $\pm$ 0.041  $\chi^2$ /NDF: 2283931.3/42

In: 217.565 $\pm$ 0.031  $\chi^2$ /NDF: 1611275.7/42

Out: 224.741 $\pm$ 0.031  $\chi^2$ /NDF: 1854575.3/47

All: 221.171 $\pm$ 0.022  $\chi^2$ /NDF: 3492257.4/90

# asym\_bpm0l01WS\_mean vs Slug, Sign Corrected



Right In: -692.570+/-80.855  $\chi^2/\text{NDF}$ : 798.0/19

Left Out: 694.326+/-54.246  $\chi^2/\text{NDF}$ :1422.1/24

Right Out: 221.731+/-73.855  $\chi^2/\text{NDF}$ : 3290.8/22

Left In: 344.578+/-52.954  $\chi^2/\text{NDF}$ :985.0/22

Left: 515.236+/-37.893  $\chi^2/\text{NDF}$ : 2428.4/47

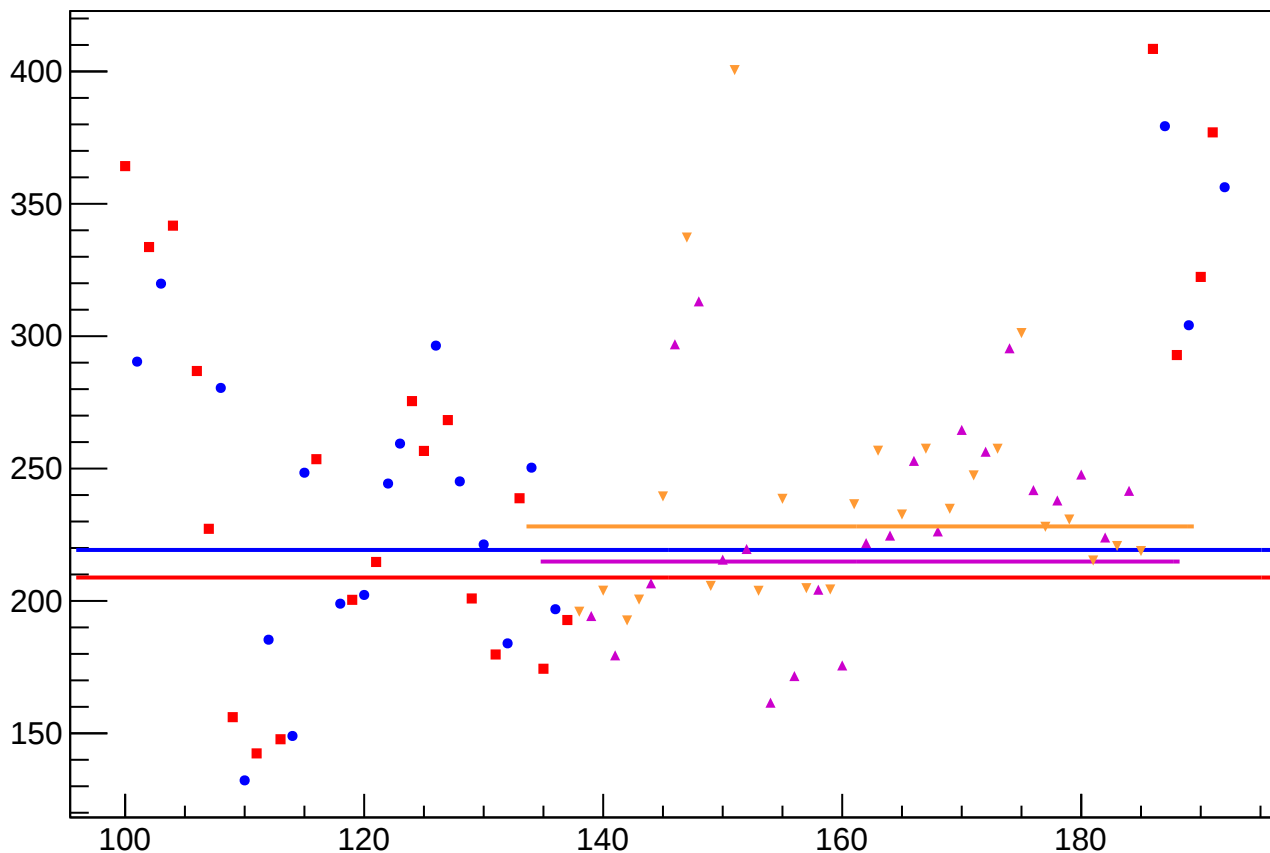
Right: -194.135+/-54.530  $\chi^2/\text{NDF}$ : 4158.6/42

In: 33.251+/-44.299  $\chi^2/\text{NDF}$ :1898.2/42

Out: 528.712+/-43.720  $\chi^2/\text{NDF}$ :4739.5/47

All: 284.239+/-31.117  $\chi^2/\text{NDF}$ : 6701.1/90

# asym\_bpm0l01WS\_rms vs Slug, Sign Corrected



Right In:  $219.259 \pm 0.057$   $\chi^2/\text{NDF}: 1119809.7/19$

Left Out:  $228.144 \pm 0.038$   $\chi^2/\text{NDF}: 828399.3/24$

Right Out:  $208.845 \pm 0.052$   $\chi^2/\text{NDF}: 1487935.4/22$

Left In:  $214.878 \pm 0.037$   $\chi^2/\text{NDF}: 1037509.6/22$

Left:  $221.351 \pm 0.027$   $\chi^2/\text{NDF}: 1927151.4/47$

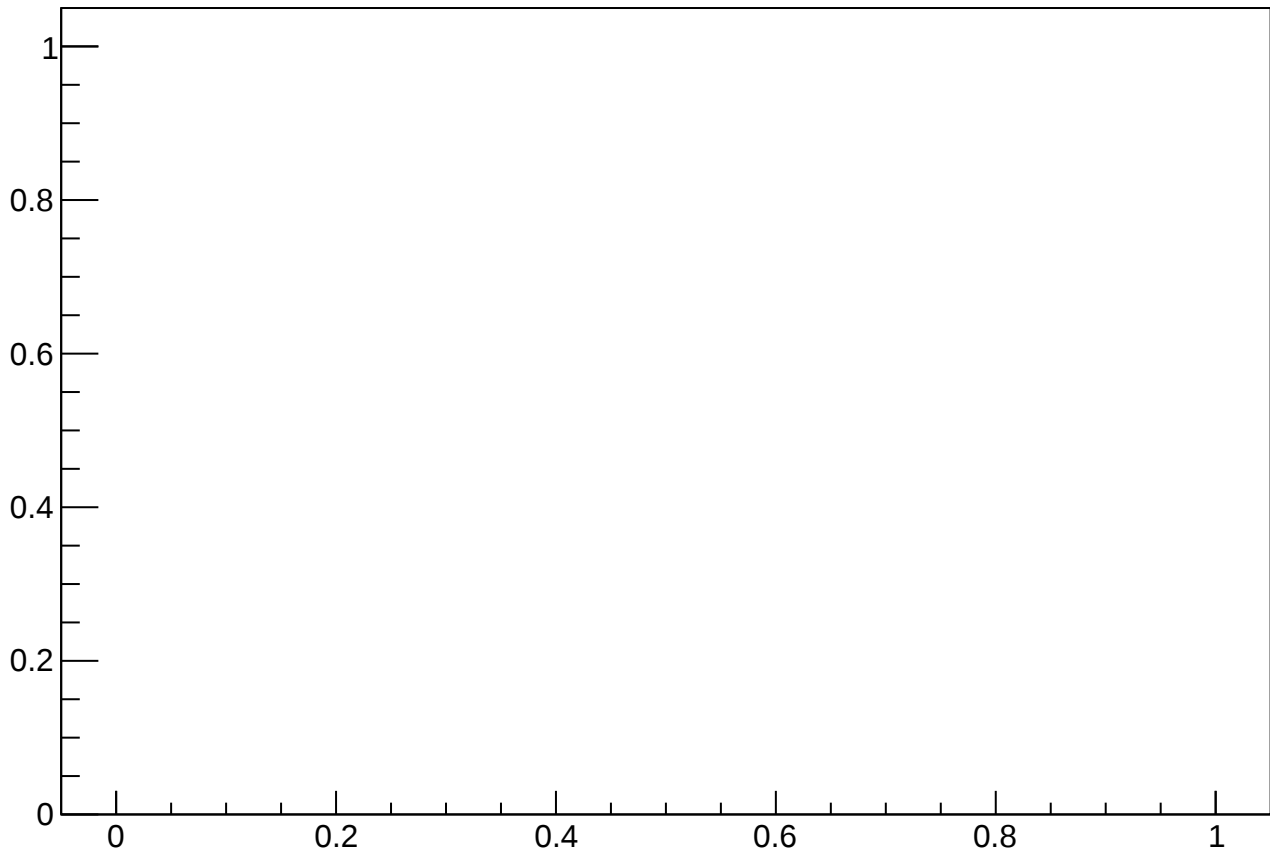
Right:  $213.582 \pm 0.039$   $\chi^2/\text{NDF}: 2625832.0/42$

In:  $216.193 \pm 0.031$   $\chi^2/\text{NDF}: 2161428.3/42$

Out:  $221.381 \pm 0.031$   $\chi^2/\text{NDF}: 2405038.8/47$

All:  $218.821 \pm 0.022$   $\chi^2/\text{NDF}: 4580360.9/90$

# bcm\_an\_us\_ds\_dd\_mean vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Right: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

# bcm\_an\_us\_ds\_dd\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Right: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

bcm\_dg\_us\_dg\_ds\_dd\_mean vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

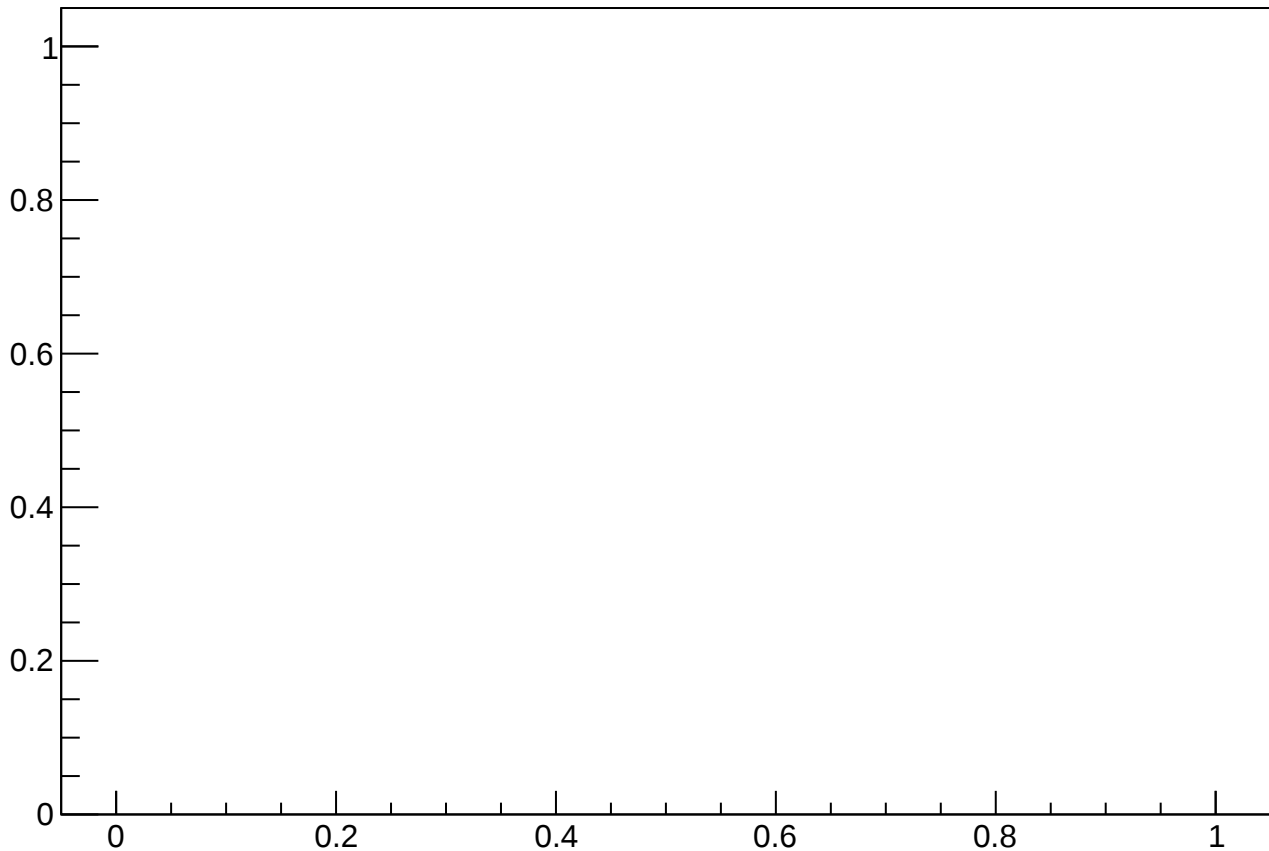
Right: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

bcm\_dg\_us\_dg\_ds\_dd\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

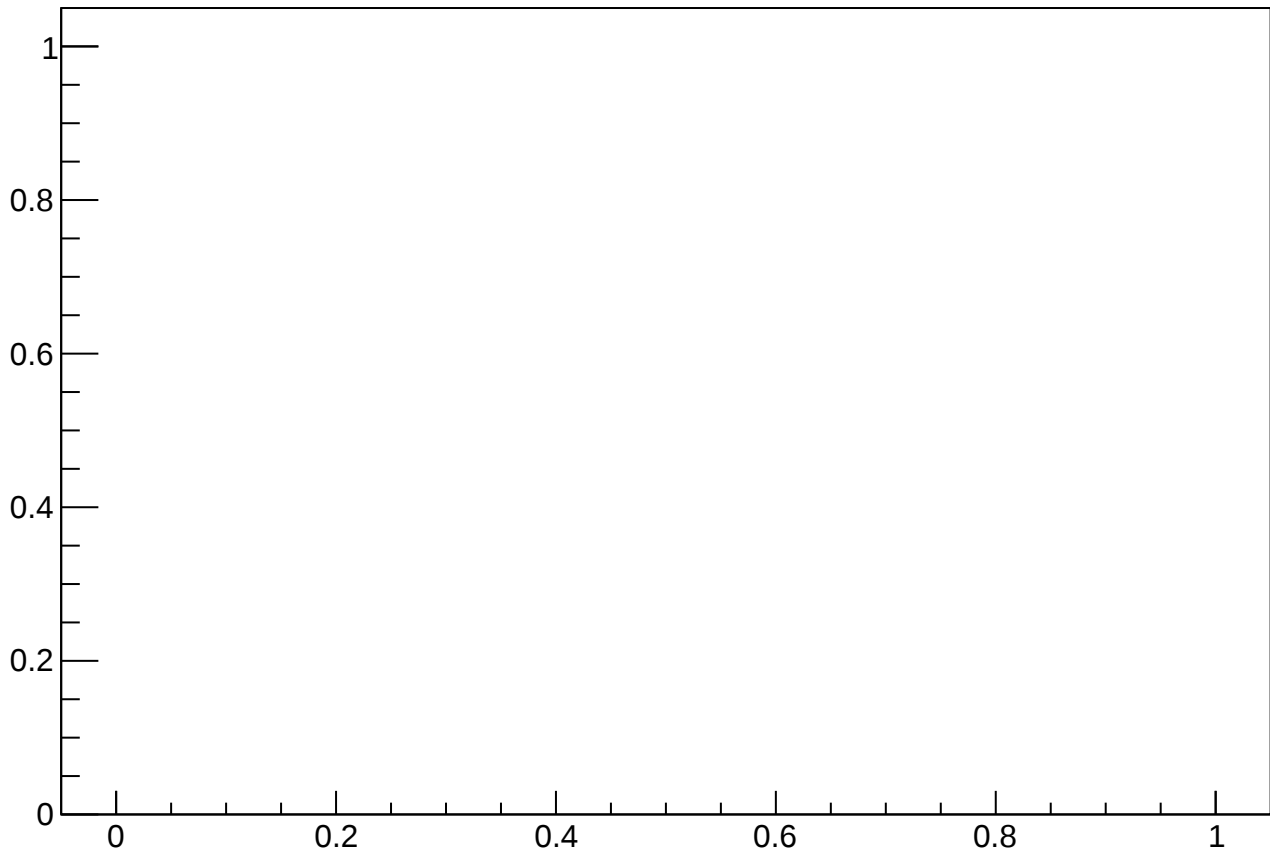
Right: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

# bcm\_dg\_us\_ds\_dd\_mean vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

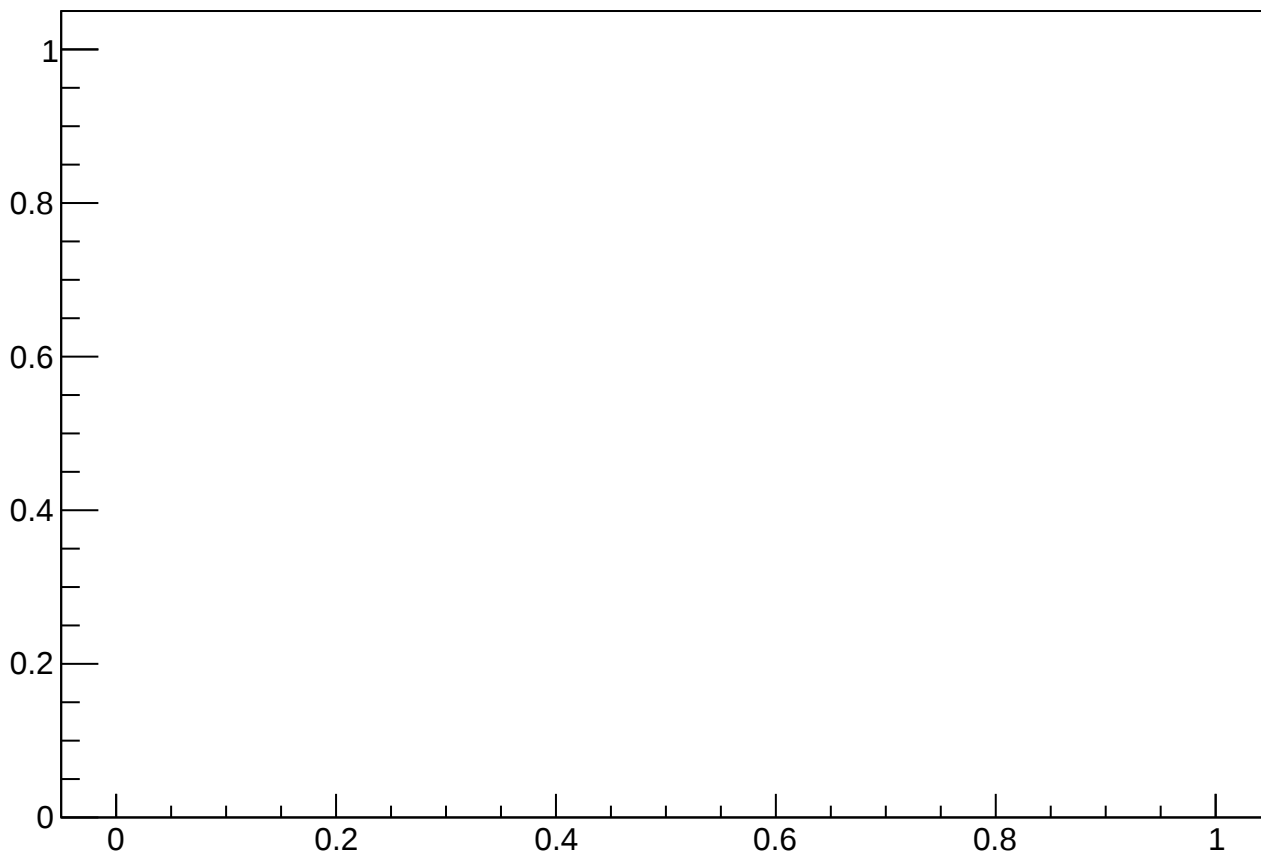
Right: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

# bcm\_dg\_us\_ds\_dd\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Right: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

bcm\_dg\_ds\_ds\_dd\_mean vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

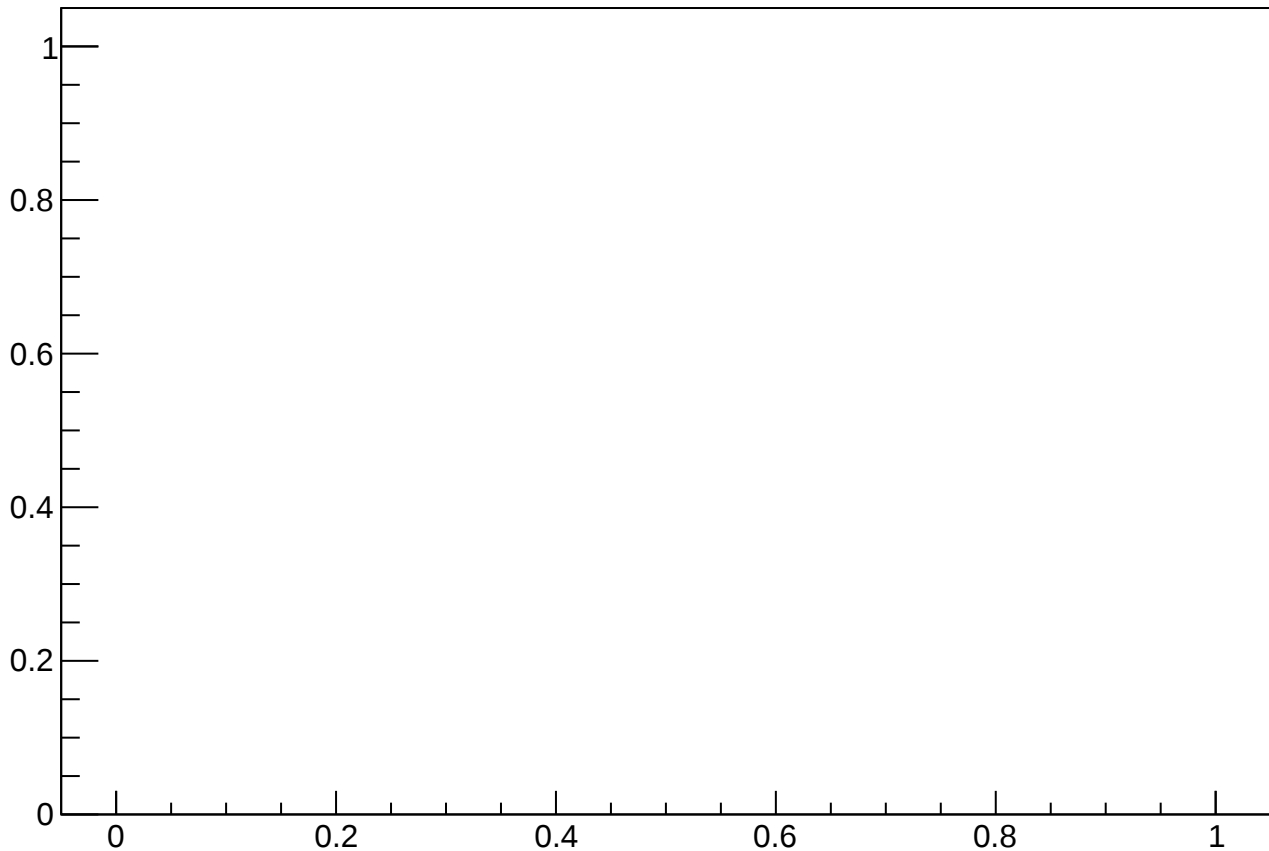
Right: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

# bcm\_dg\_ds\_ds\_dd\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

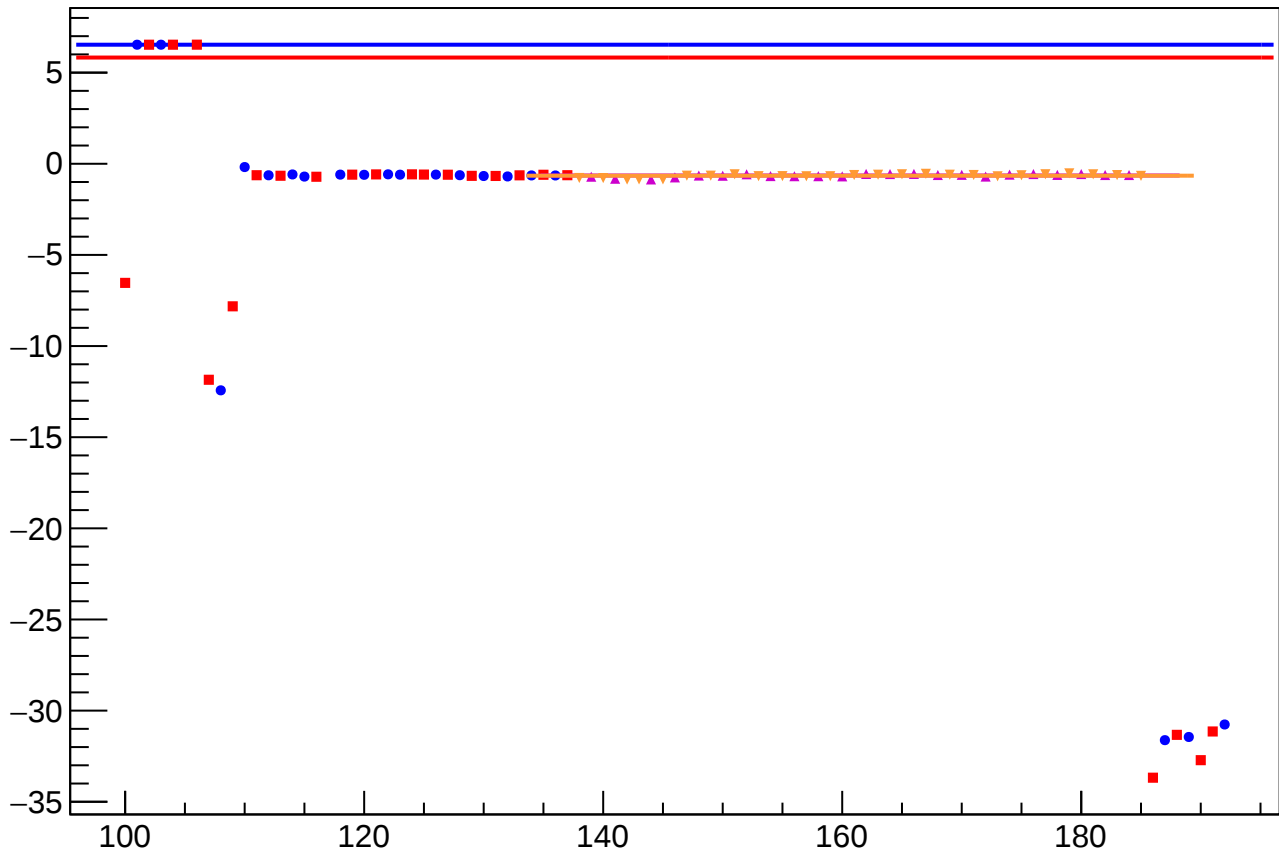
Right: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

# yield\_cav4bX\_mean vs Slug, Sign Corrected



Right In: 6.532+/-0.000  $\chi^2/\text{NDF}$ : 127724619236.2/19

Left Out: -0.654+/-0.000  $\chi^2/\text{NDF}$ : 179069954.8/24

Right Out: 5.827+/-0.000  $\chi^2/\text{NDF}$ : 755962080985175.2/22

Left In: -0.643+/-0.000  $\chi^2/\text{NDF}$ : 123743747.1/22

Left: -0.649+/-0.000  $\chi^2/\text{NDF}$ : 303800919.5/47

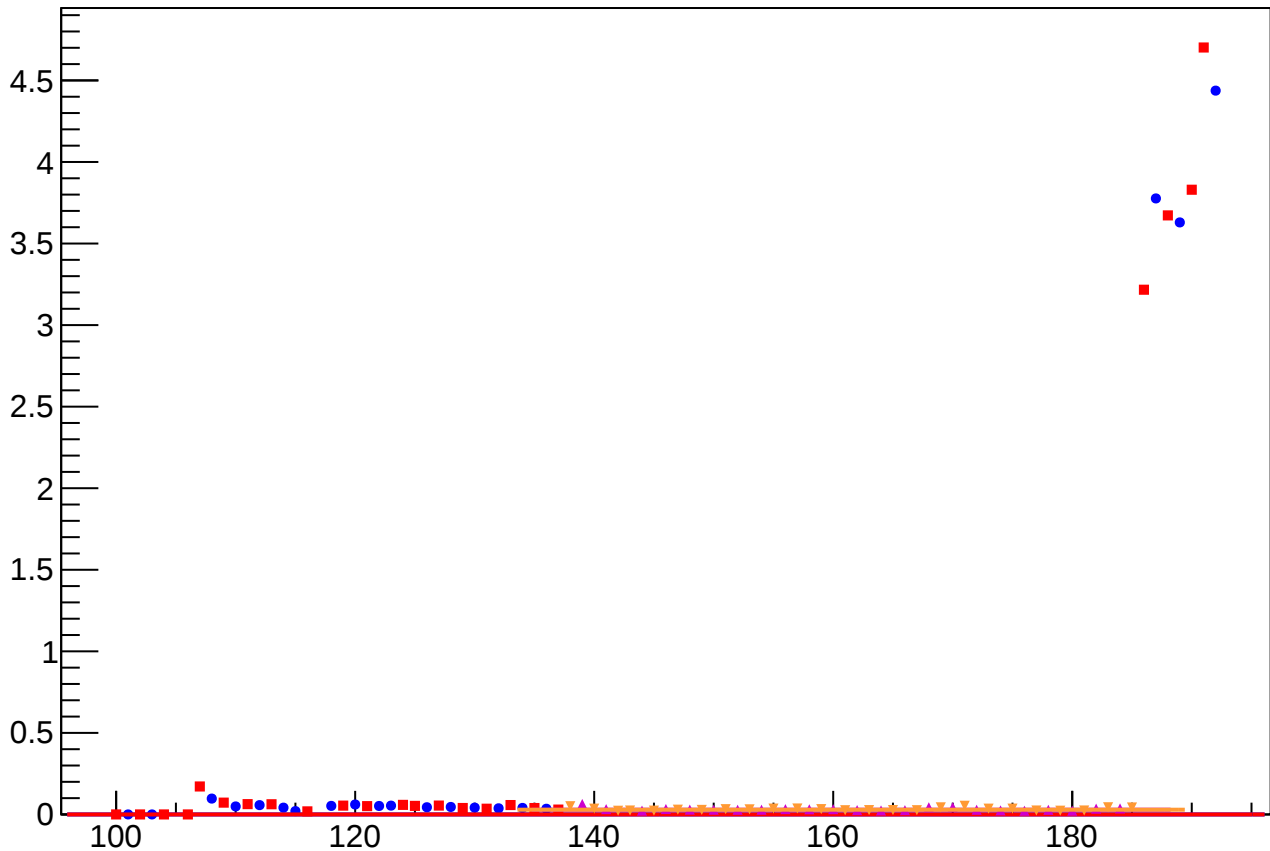
Right: 6.155+/-0.000  $\chi^2/\text{NDF}$ : 776093769260112.1/47

In: 6.530+/-0.000  $\chi^2/\text{NDF}$ : 961843220452.9/42

Out: 5.826+/-0.000  $\chi^2/\text{NDF}$ : 756673097890863.5/42

All: 6.153+/-0.000  $\chi^2/\text{NDF}$ : 77762720117099.5/91

# yield\_cav4bX\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11750854.3/19

Left Out: 0.029+/-0.000  $\chi^2/\text{NDF}$ :1484308.2/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12912719.2/22

Left In: 0.029+/-0.000  $\chi^2/\text{NDF}$ :1206492.9/22

Left: 0.029+/-0.000  $\chi^2/\text{NDF}$ : 2691219.2/47

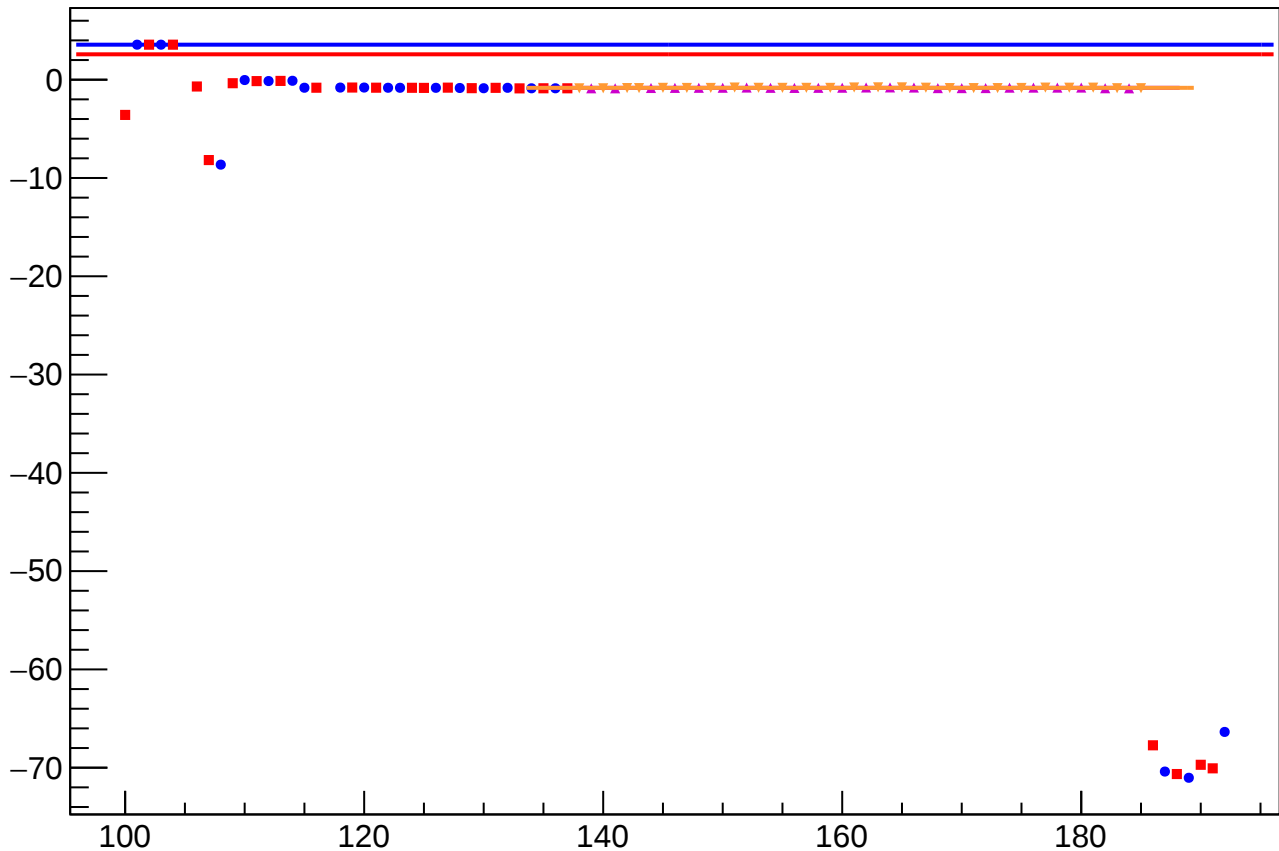
Right: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 24663821.4/42

In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :39928671.0/42

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :42880773.8/47

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 82809871.0/90

# yield\_cav4bY\_mean vs Slug, Sign Corrected



Right In: 3.563+/-0.000  $\chi^2/\text{NDF}$ : 485202119004.1/19

Left Out: -0.827+/-0.000  $\chi^2/\text{NDF}$ : 170052639.9/24

Right Out: 2.583+/-0.000  $\chi^2/\text{NDF}$ : 1253504136354377.5/22

Left In: -0.827+/-0.000  $\chi^2/\text{NDF}$ : 174130375.4/22

Left: -0.827+/-0.000  $\chi^2/\text{NDF}$ : 344237775.5/47

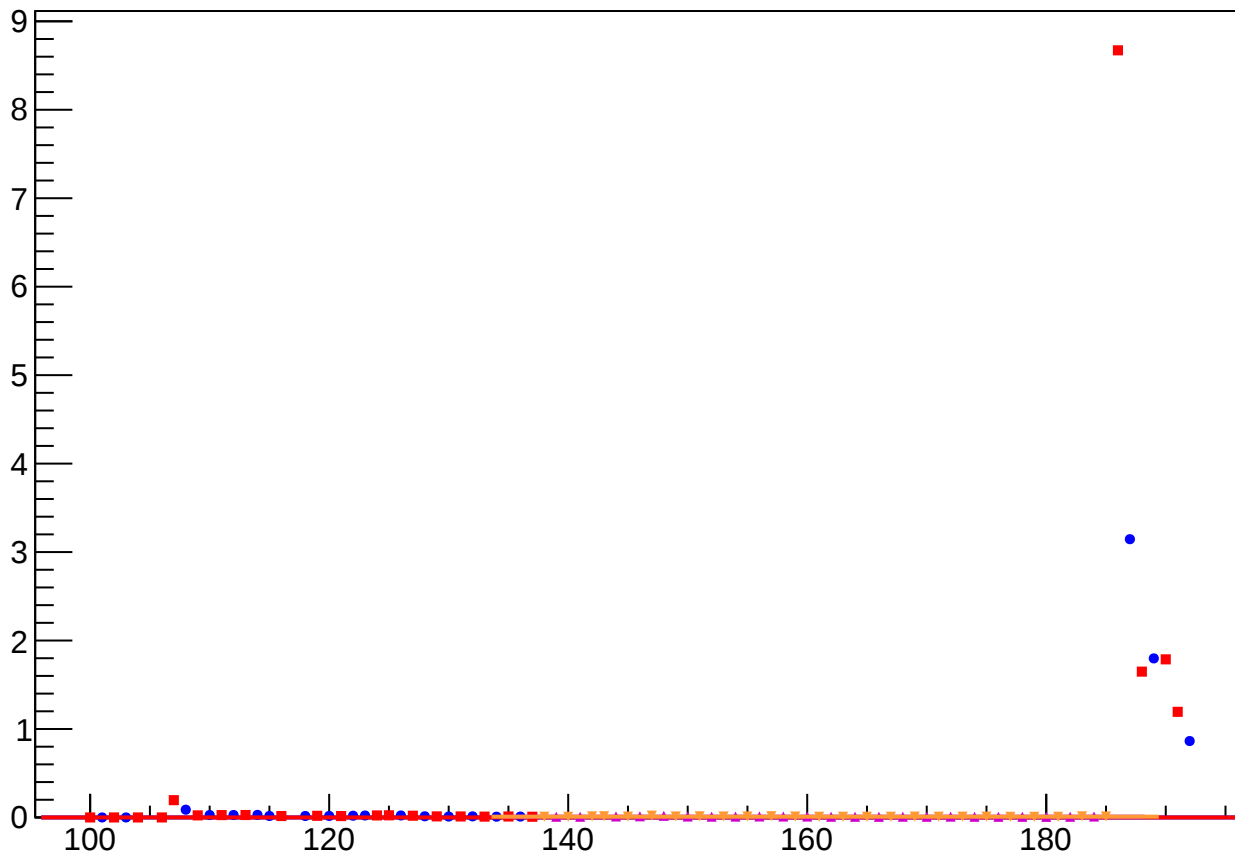
Right: 3.040+/-0.000  $\chi^2/\text{NDF}$ : 1382260401666620.0

In: 3.560+/-0.000  $\chi^2/\text{NDF}$ : 4165763972445.6/42

Out: 2.581+/-0.000  $\chi^2/\text{NDF}$ : 1255735038388588.5

All: 3.038+/-0.000  $\chi^2/\text{NDF}$ : 13879849648320.0

# yield\_cav4bY\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12065401.9/19

Left Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 1455379.3/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13096126.3/22

Left In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 1042123.1/22

Left: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 2503441.1/47

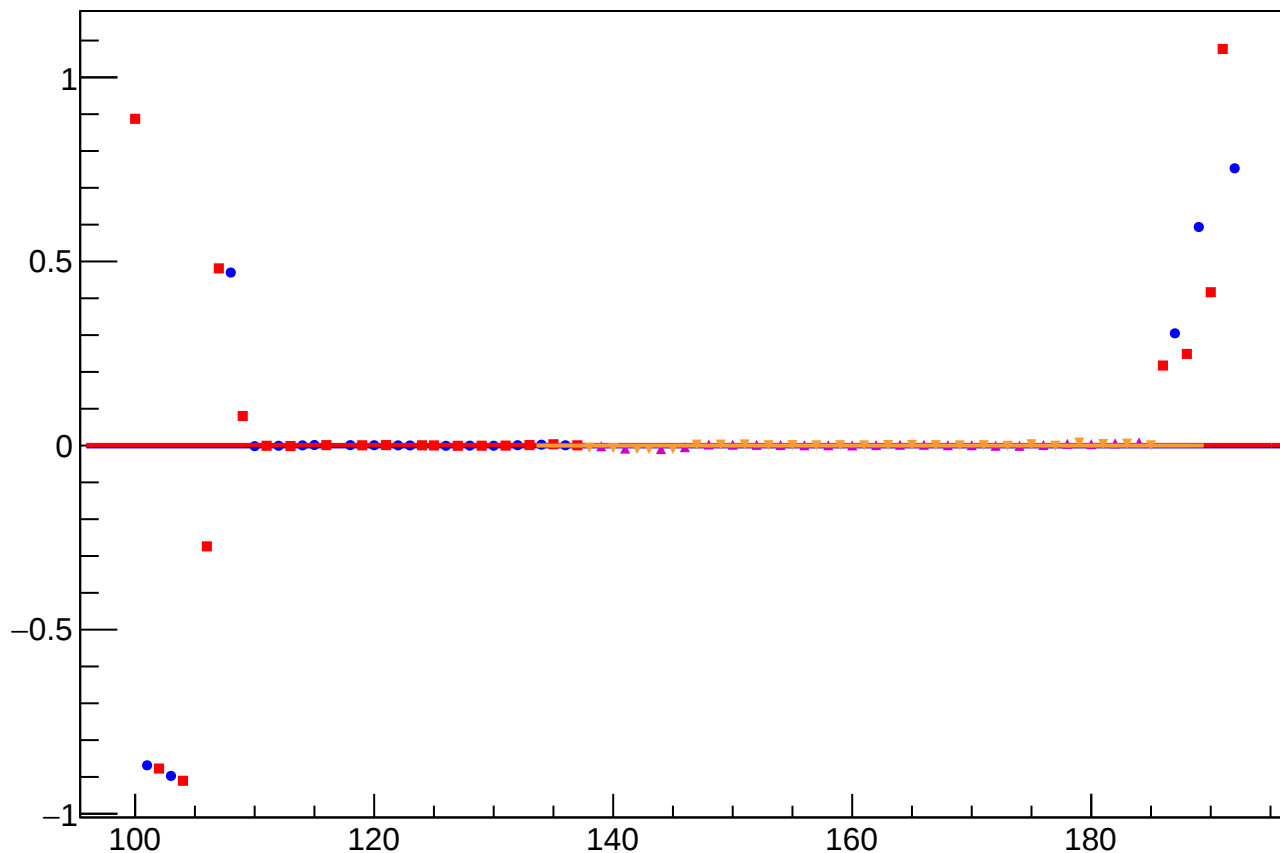
Right: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 25161803.1/42

In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 41862616.4/42

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 44614349.6/47

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 86477746.1/90

# yield\_cav4cX\_mean vs Slug, Sign Corrected



Right In: -0.002+/-0.000

$\chi^2/\text{NDF}$ : 9795164198.2/19

Left: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 254489625.0/47

Right: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 12850793604.7/42

Left Out: -0.000+/-0.000

$\chi^2/\text{NDF}$ : 151559332.0/24

In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 9908078679.7/42

Right Out: 0.002+/-0.000

$\chi^2/\text{NDF}$ : 3041484387.0/22

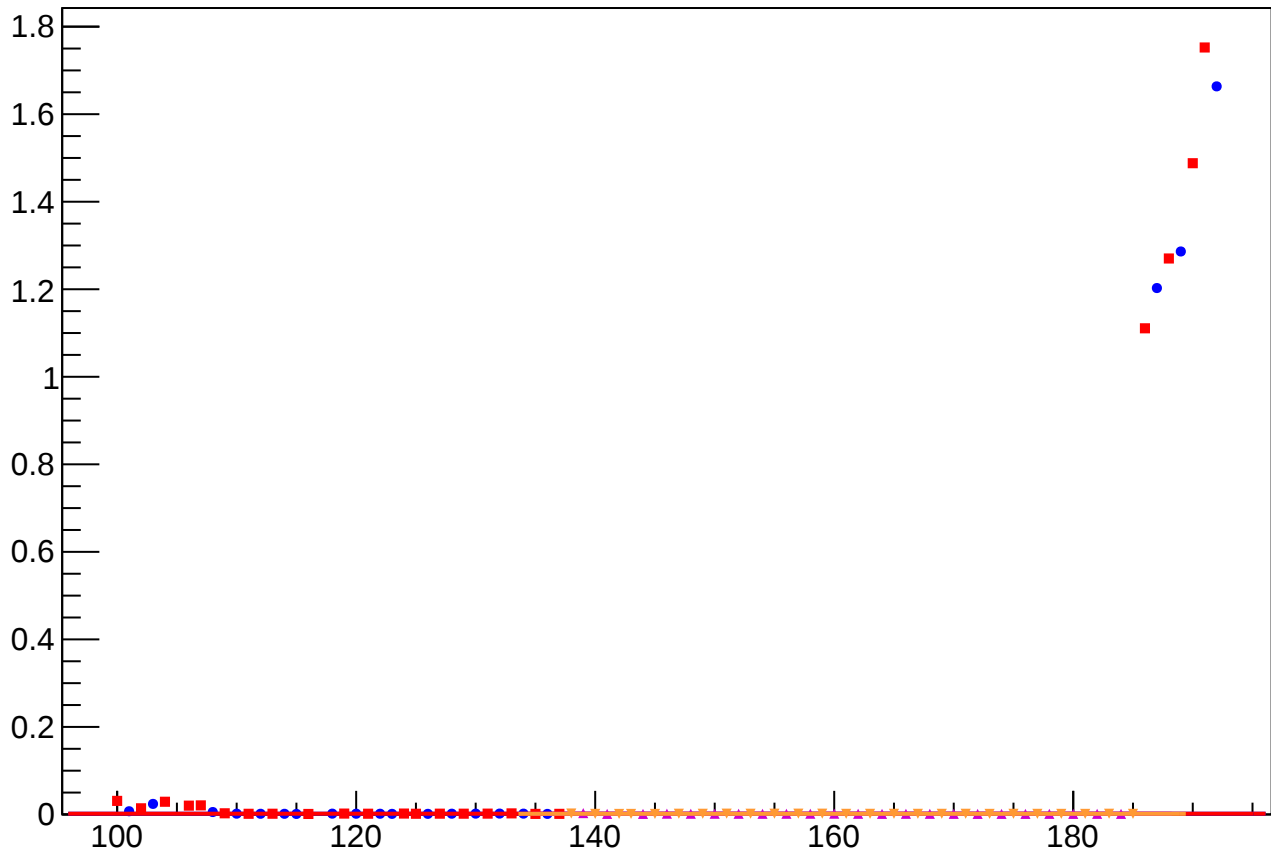
Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3197715796.1/47

Left In: 0.001+/-0.000

$\chi^2/\text{NDF}$ : 101468517.6/22

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13106165868.0/9

# yield\_cav4cX\_rms vs Slug, Sign Corrected



Right In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 4810157.8/19

Left Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 539040.4/24

Right Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 6585006.4/22

Left In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 659543.3/22

Left: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 1201689.9/47

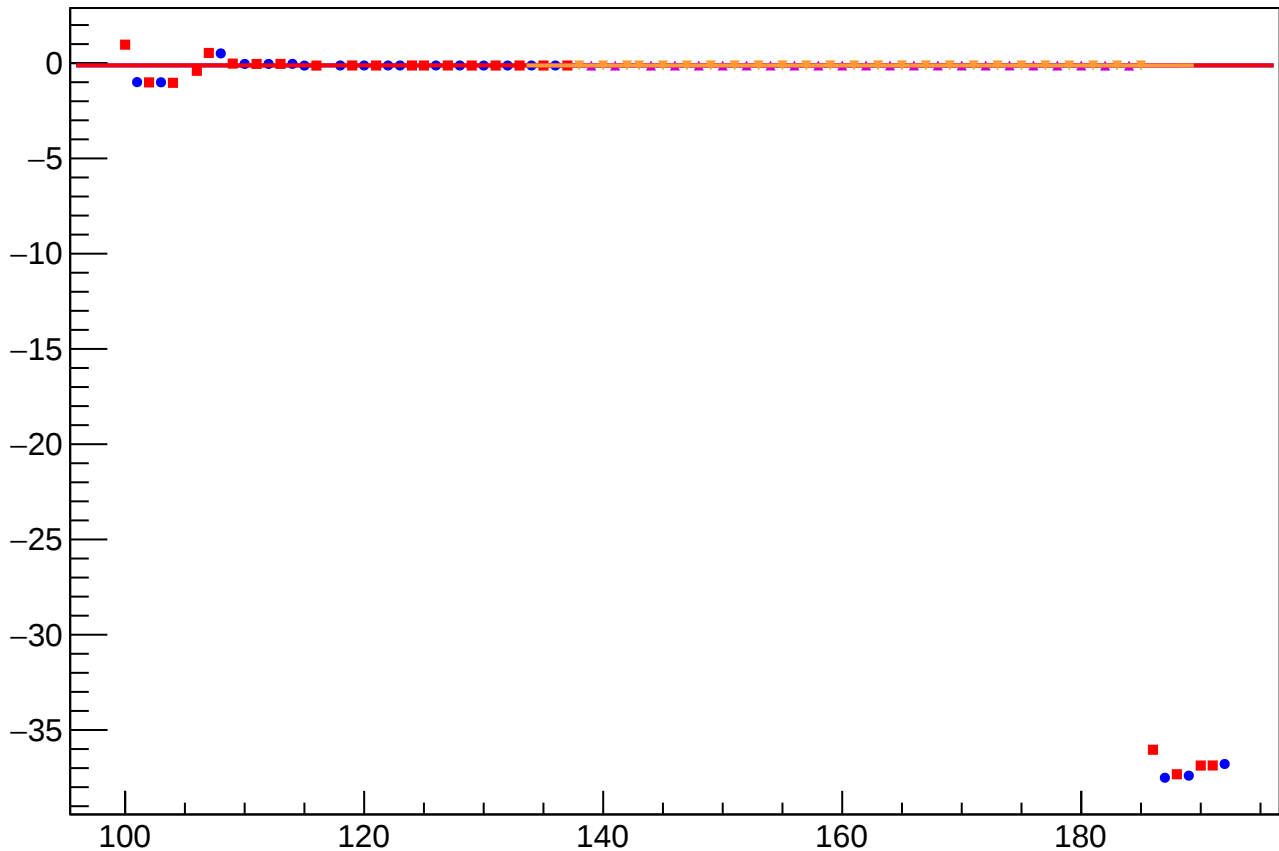
Right: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 11403061.3/42

In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 5521117.7/42

Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 7257988.1/47

All: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 12779737.2/90

# yield\_cav4cY\_mean vs Slug, Sign Corrected



Right In: -0.120+/-0.000  $\chi^2/\text{NDF}$ : 14919151689.0/19

Left Out: -0.121+/-0.000  $\chi^2/\text{NDF}$ : 58329026.8/24

Right Out: -0.116+/-0.000  $\chi^2/\text{NDF}$ : 10500583203.7/22

Left In: -0.121+/-0.000  $\chi^2/\text{NDF}$ : 53134323.3/22

Left: -0.121+/-0.000  $\chi^2/\text{NDF}$ : 111705307.2/47

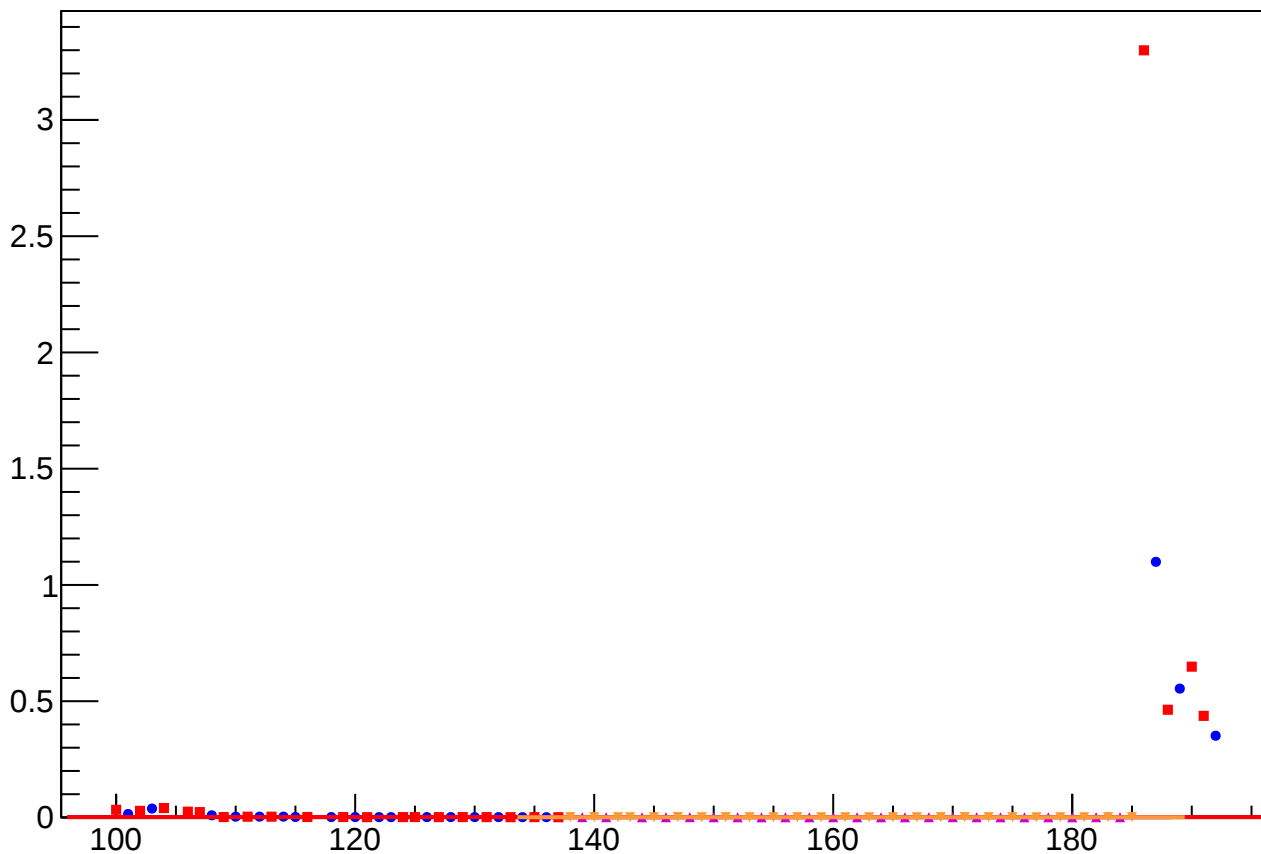
Right: -0.118+/-0.000  $\chi^2/\text{NDF}$ : 25442946260.0/42

In: -0.121+/-0.000  $\chi^2/\text{NDF}$ : 14972618405.5/42

Out: -0.121+/-0.000  $\chi^2/\text{NDF}$ : 10612042193.2/47

All: -0.121+/-0.000  $\chi^2/\text{NDF}$ : 25585646509.1/91

# yield\_cav4cY\_rms vs Slug, Sign Corrected



Right In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 5606773.8/19

Left Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ :1362851.8/24

Right Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 6990006.0/22

Left In: 0.001+/-0.000  $\chi^2/\text{NDF}$ :972588.0/22

Left: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 2336494.2/47

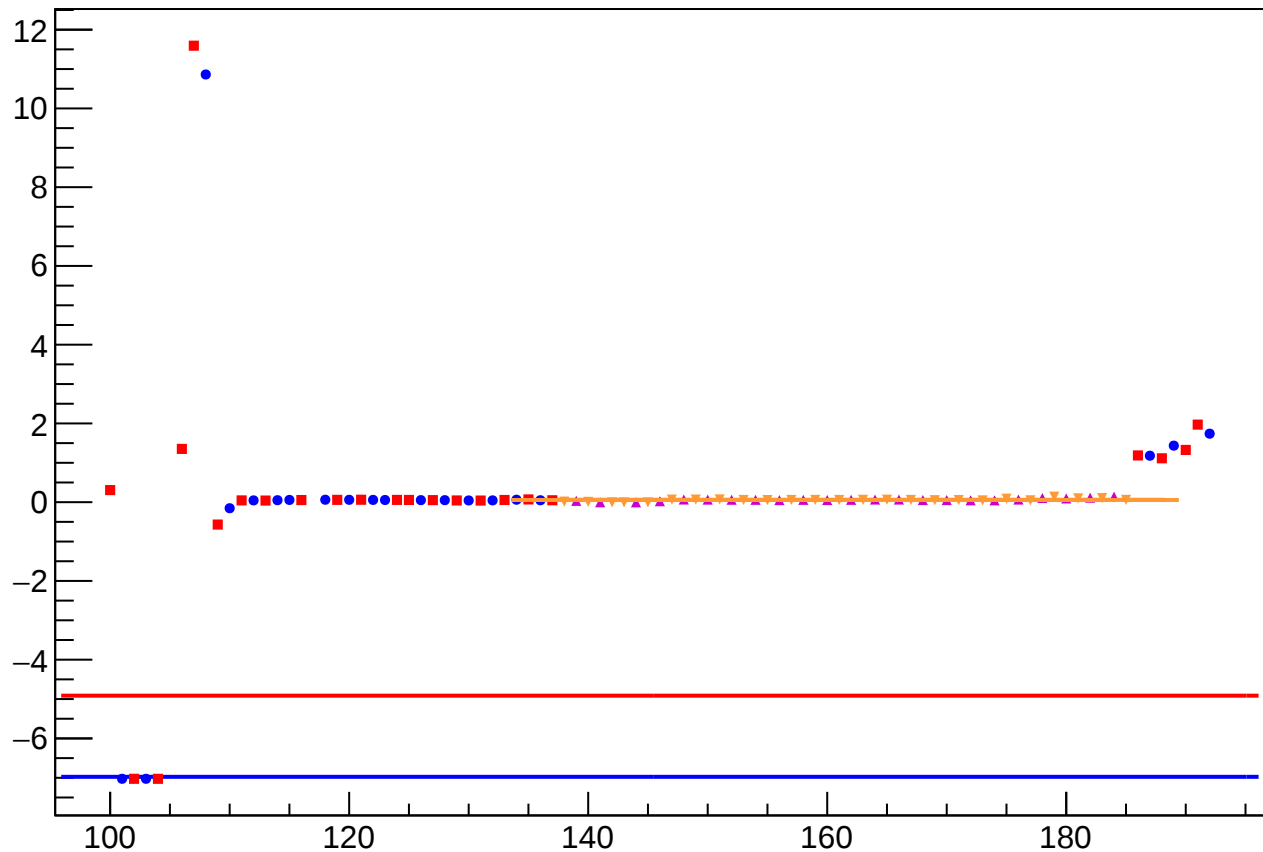
Right: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 12596836.1/42

In: 0.001+/-0.000  $\chi^2/\text{NDF}$ :7703554.7/42

Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ :9500040.3/47

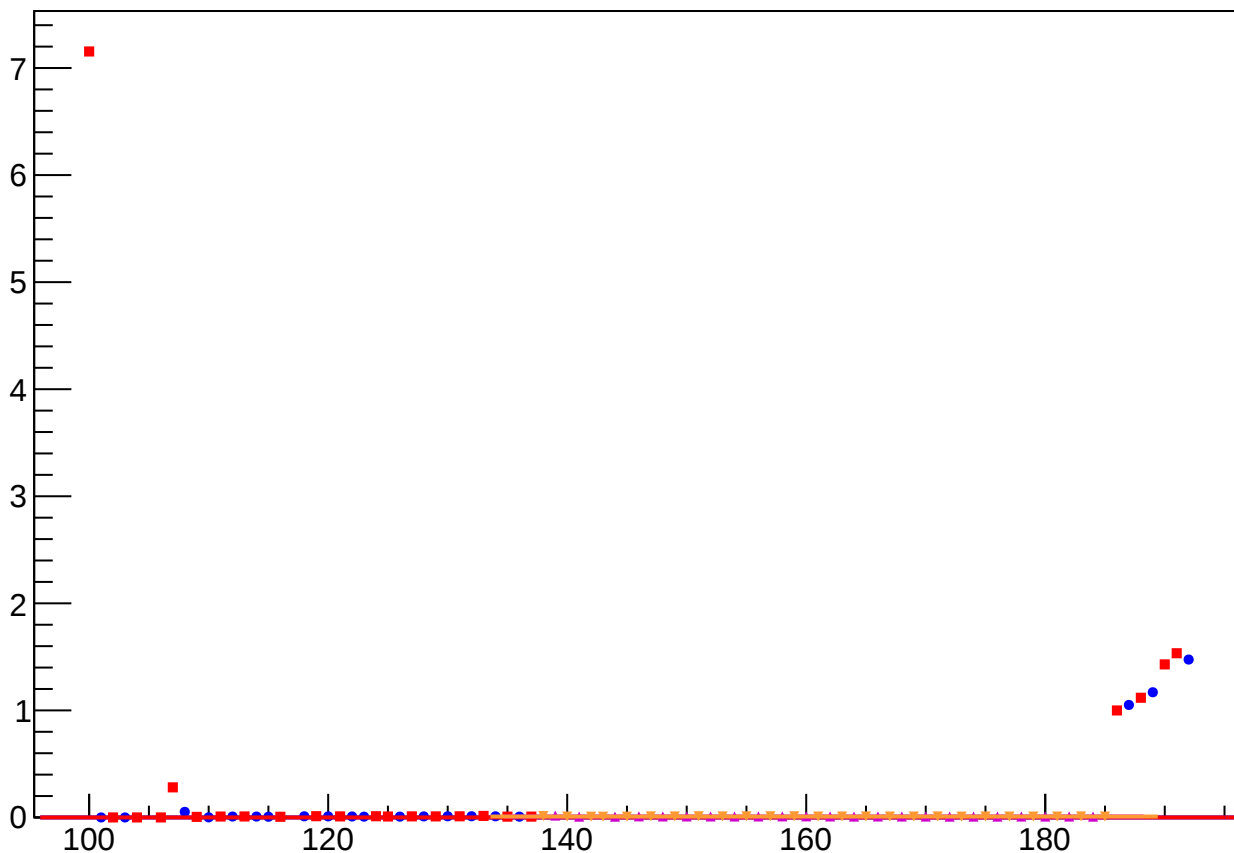
All: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 17205744.5/90

# yield\_cav4dX\_mean vs Slug, Sign Corrected



Right In:  $-6.975 \pm 0.000$   $\chi^2/\text{NDF}: 8762510019374.2/19$  Left:  $0.057 \pm 0.000$   $\chi^2/\text{NDF}: 423872259.5/47$   
 Left Out:  $0.055 \pm 0.000$   $\chi^2/\text{NDF}: 243733184.3/24$  Right:  $-5.900 \pm 0.000$   $\chi^2/\text{NDF}: 430303303627275.1$   
 Right Out:  $-4.914 \pm 0.000$   $\chi^2/\text{NDF}: 365348582984091.8/22$  In:  $-6.925 \pm 0.000$   $\chi^2/\text{NDF}: 17605038243557.2/42$   
 Left In:  $0.059 \pm 0.000$   $\chi^2/\text{NDF}: 178713649.9/22$  Out:  $-4.879 \pm 0.000$   $\chi^2/\text{NDF}: 370175270613378.2/22$   
 All:  $-5.858 \pm 0.000$   $\chi^2/\text{NDF}: 4435812699026$

# yield\_cav4dX\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11122063.5/19

Left Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 513737.0/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12327006.2/22

Left In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 636557.9/22

Left: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 1154784.9/47

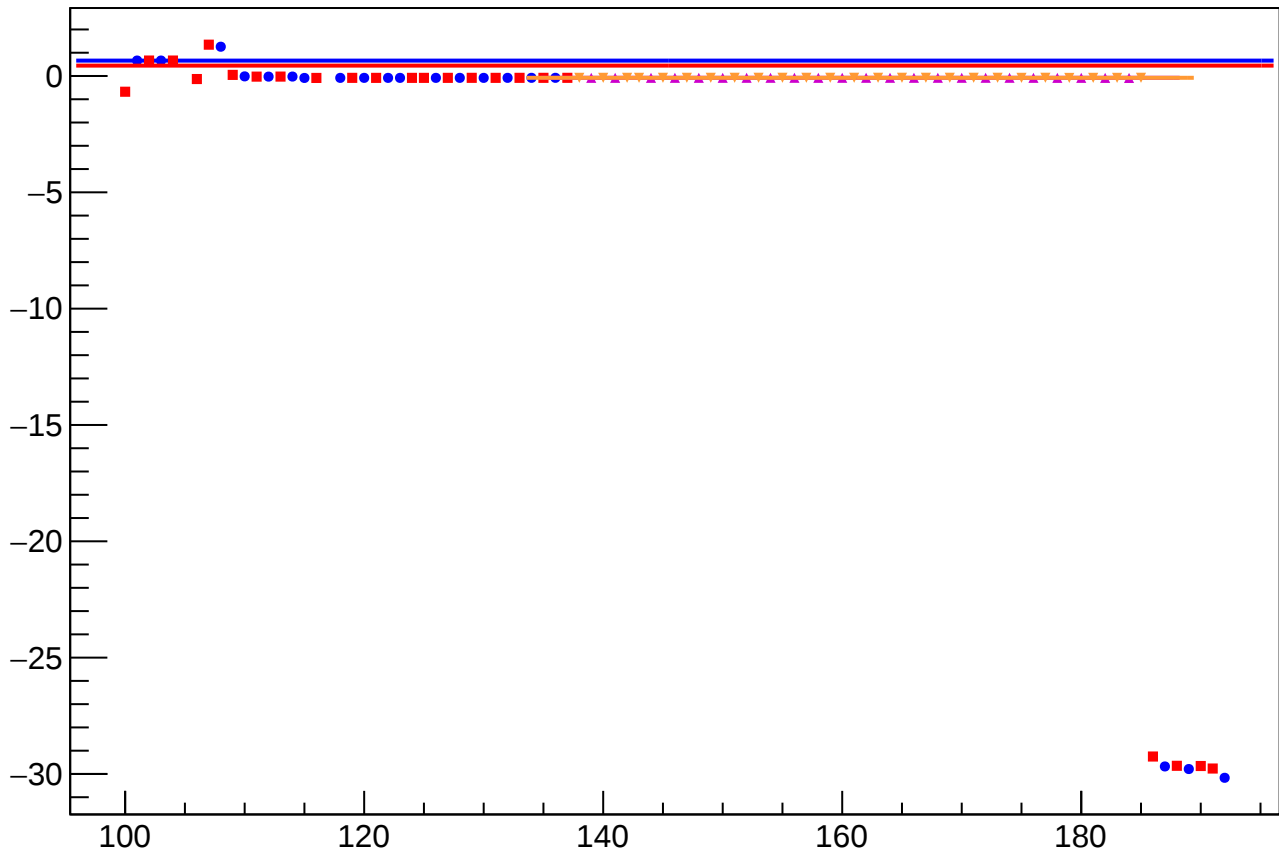
Right: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 23449375.8/42

In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 38759428.5/42

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 41355754.2/47

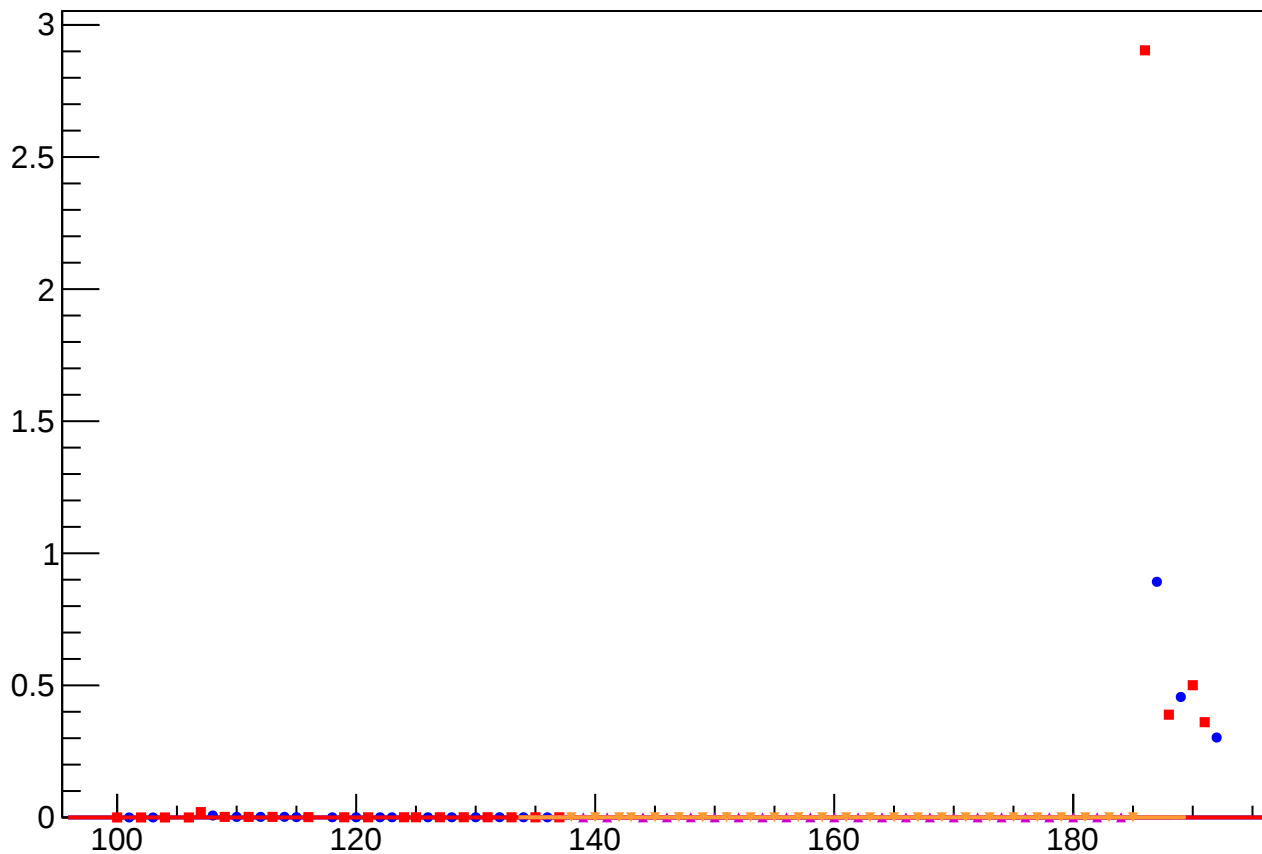
All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 80115672.2/90

# yield\_cav4dY\_mean vs Slug, Sign Corrected



|                          |                                            |                      |                                           |
|--------------------------|--------------------------------------------|----------------------|-------------------------------------------|
| Right In: 0.661+/-0.000  | $\chi^2/\text{NDF}$ : 5596242328987.5/19   | Left: -0.078+/-0.000 | $\chi^2/\text{NDF}$ : 267788024.6/47      |
| Left Out: -0.078+/-0.000 | $\chi^2/\text{NDF}$ : 156525648.0/24       | Right: 0.549+/-0.000 | $\chi^2/\text{NDF}$ : 473950075219014.2   |
| Right Out: 0.446+/-0.000 | $\chi^2/\text{NDF}$ : 405424648288963.5/22 | In: 0.647+/-0.000    | $\chi^2/\text{NDF}$ : 33856223275925.2/42 |
| Left In: -0.077+/-0.000  | $\chi^2/\text{NDF}$ : 111221084.5/22       | Out: 0.436+/-0.000   | $\chi^2/\text{NDF}$ : 420619250045510.9/4 |
|                          |                                            | All: 0.537+/-0.000   | $\chi^2/\text{NDF}$ : 51600011891692      |

# yield\_cav4dY\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12677676.4/19

Left Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 466355.6/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12957986.5/22

Left In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 355587.5/22

Left: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 822908.9/47

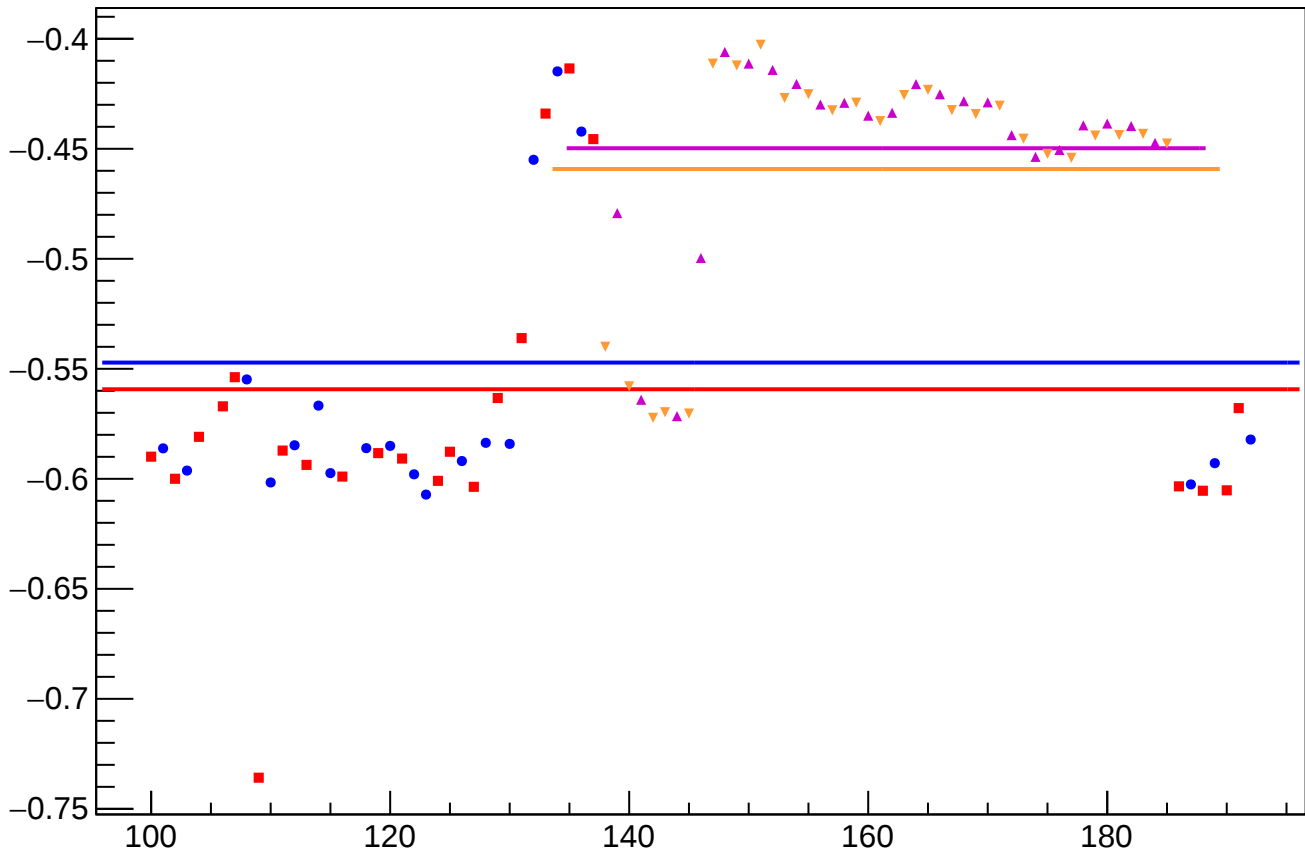
Right: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 25635669.4/42

In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 43656549.8/42

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 45672436.1/47

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 89329385.8/90

# yield\_bpm4aX\_mean vs Slug, Sign Corrected



Right In: -0.547 $\pm$ 0.000  $\chi^2$ /NDF: 47175204.8/19

Left Out: -0.459 $\pm$ 0.000  $\chi^2$ /NDF: 113808762.6/24

Right Out: -0.559 $\pm$ 0.000  $\chi^2$ /NDF: 65161867.0/22

Left In: -0.450 $\pm$ 0.000  $\chi^2$ /NDF: 76151485.7/22

Left: -0.455 $\pm$ 0.000  $\chi^2$ /NDF: 191688333.2/47

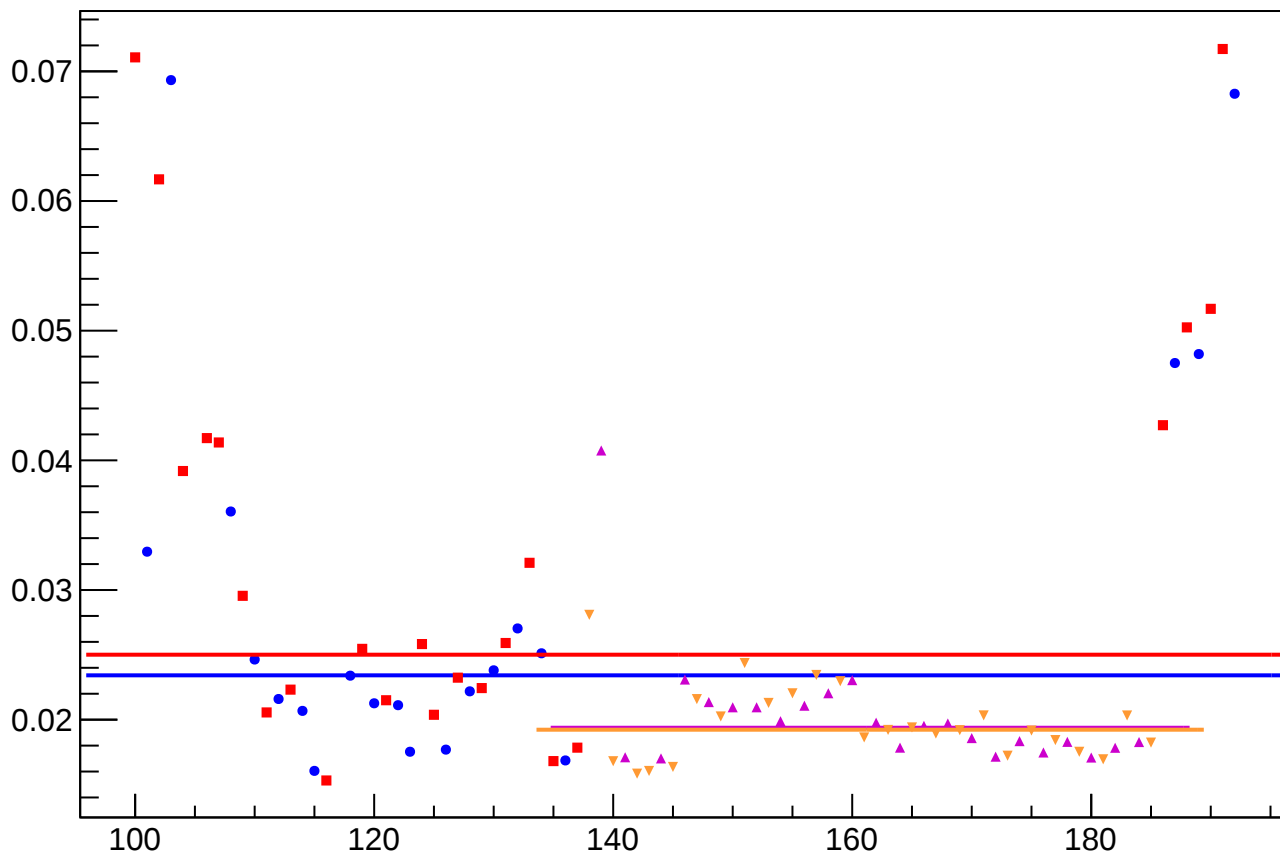
Right: -0.553 $\pm$ 0.000  $\chi^2$ /NDF: 113121778.5/42

In: -0.472 $\pm$ 0.000  $\chi^2$ /NDF: 202910076.1/42

Out: -0.480 $\pm$ 0.000  $\chi^2$ /NDF: 262582845.4/47

All: -0.476 $\pm$ 0.000  $\chi^2$ /NDF: 467219200.6/90

# yield\_bpm4aX\_rms vs Slug, Sign Corrected



Right In: 0.023+/-0.000  $\chi^2/\text{NDF}$ : 2062698.3/19

Left Out: 0.019+/-0.000  $\chi^2/\text{NDF}$ :501253.7/24

Right Out: 0.025+/-0.000  $\chi^2/\text{NDF}$ : 2149377.2/22

Left In: 0.019+/-0.000  $\chi^2/\text{NDF}$ :656155.9/22

Left: 0.019+/-0.000  $\chi^2/\text{NDF}$ : 1158298.6/47

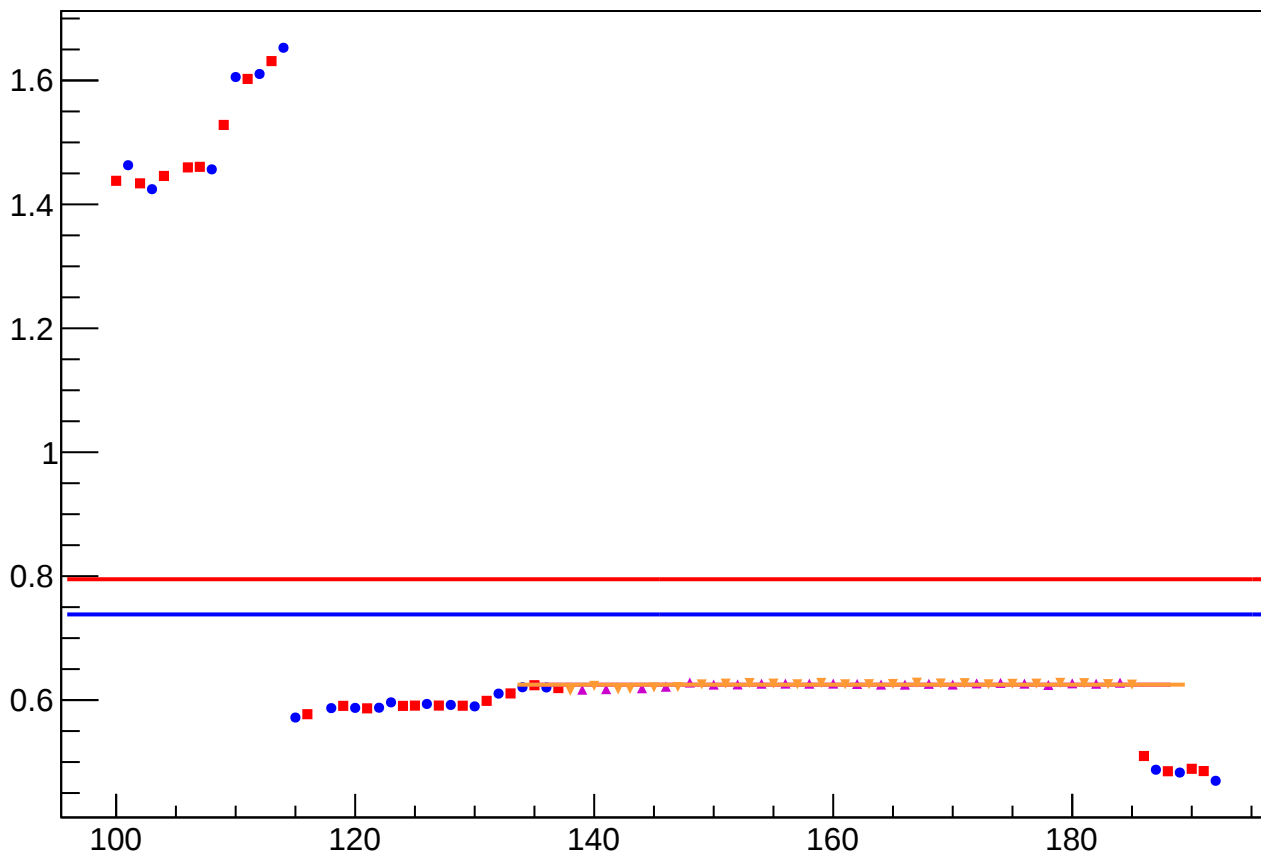
Right: 0.024+/-0.000  $\chi^2/\text{NDF}$ : 4239079.2/42

In: 0.020+/-0.000  $\chi^2/\text{NDF}$ :2992930.1/42

Out: 0.020+/-0.000  $\chi^2/\text{NDF}$ :3209084.5/47

All: 0.020+/-0.000  $\chi^2/\text{NDF}$ : 6203006.5/90

# yield\_bpm4aY\_mean vs Slug, Sign Corrected



Right In: 0.738+/-0.000  $\chi^2/\text{NDF}$ : 4031853885.3/19

Left Out: 0.625+/-0.000  $\chi^2/\text{NDF}$ :1442225.6/24

Right Out: 0.795+/-0.000  $\chi^2/\text{NDF}$ : 4531777728.2/22

Left In: 0.625+/-0.000  $\chi^2/\text{NDF}$ :1135039.4/22

Left: 0.625+/-0.000  $\chi^2/\text{NDF}$ : 2577573.3/47

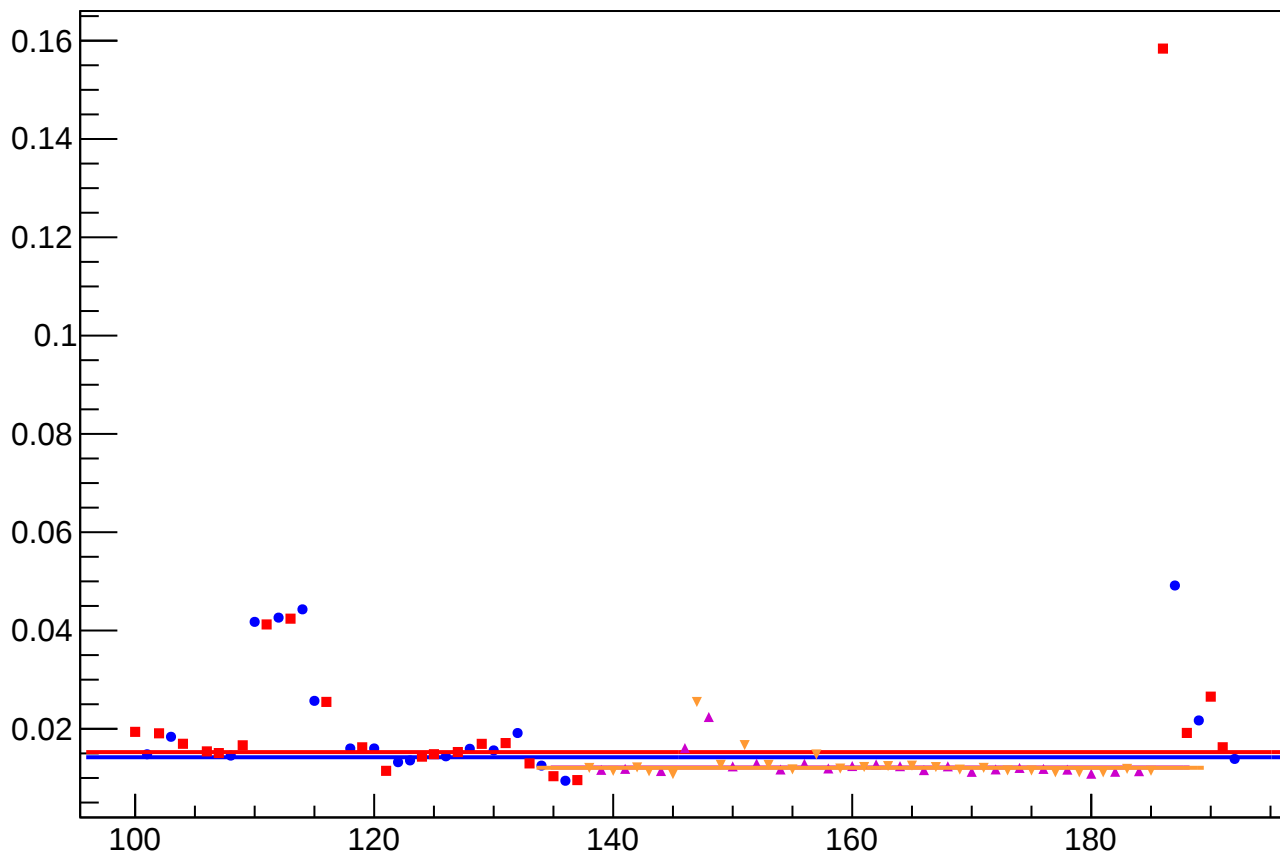
Right: 0.765+/-0.000  $\chi^2/\text{NDF}$ : 8616256296.9/42

In: 0.651+/-0.000  $\chi^2/\text{NDF}$ :4370160291.3/42

Out: 0.660+/-0.000  $\chi^2/\text{NDF}$ :5254628628.1/47

All: 0.655+/-0.000  $\chi^2/\text{NDF}$ : 9630873929.6/90

# yield\_bpm4aY\_rms vs Slug, Sign Corrected



Right In: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 1627381.3/19

Left Out: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 657433.9/24

Right Out: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 2034286.9/22

Left In: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 488249.4/22

Left: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 1146144.5/47

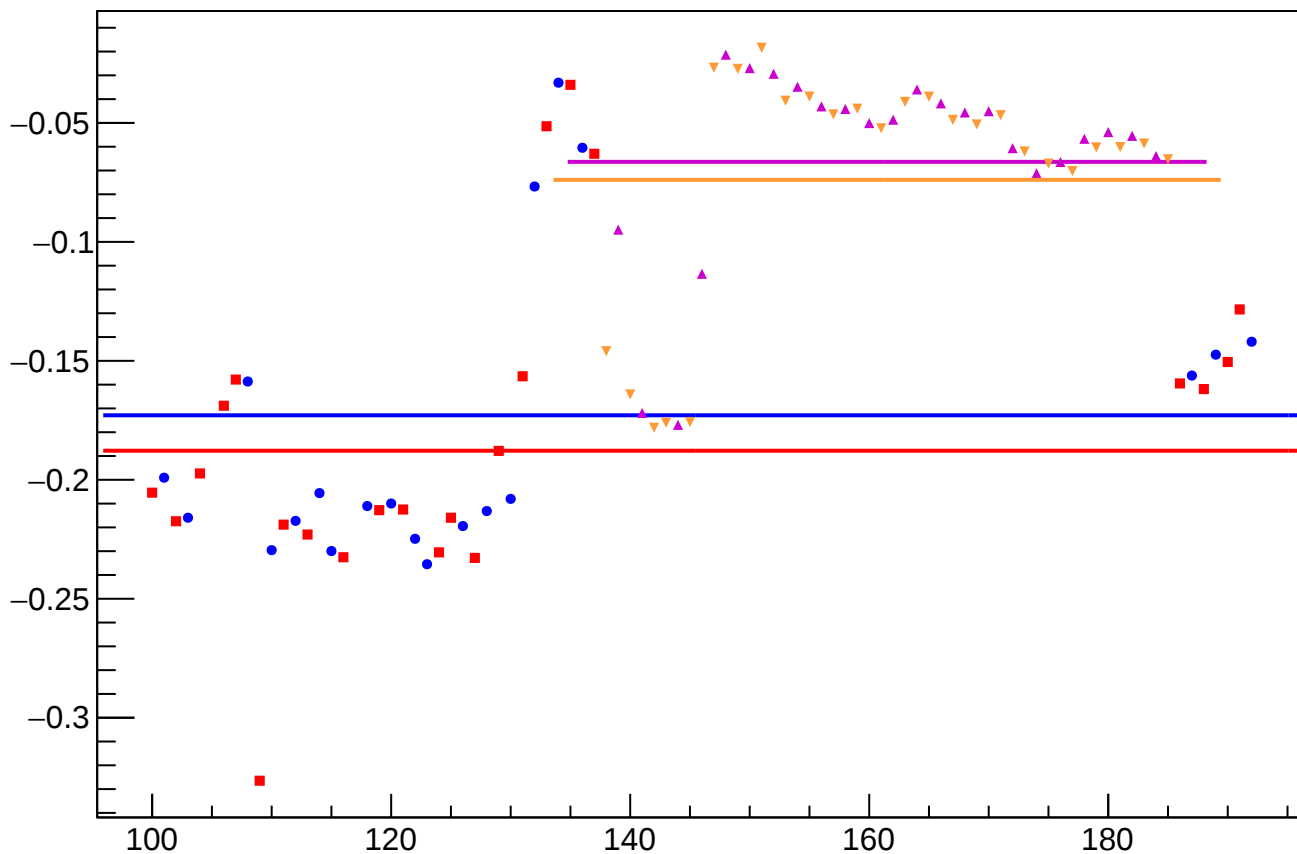
Right: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 3697505.9/42

In: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 2342496.3/42

Out: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 3199213.0/47

All: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 5543714.9/90

# yield\_bpm4eX\_mean vs Slug, Sign Corrected



Right In: -0.173+/-0.000  $\chi^2/NDF$ : 67155655.5/19

Left Out: -0.074+/-0.000  $\chi^2/NDF$ :107858881.3/24

Right Out: -0.188+/-0.000  $\chi^2/NDF$ : 82126012.2/22

Left In: -0.066+/-0.000  $\chi^2/NDF$ :76283954.4/22

Left: -0.070+/-0.000  $\chi^2/NDF$ : 185261776.8/47

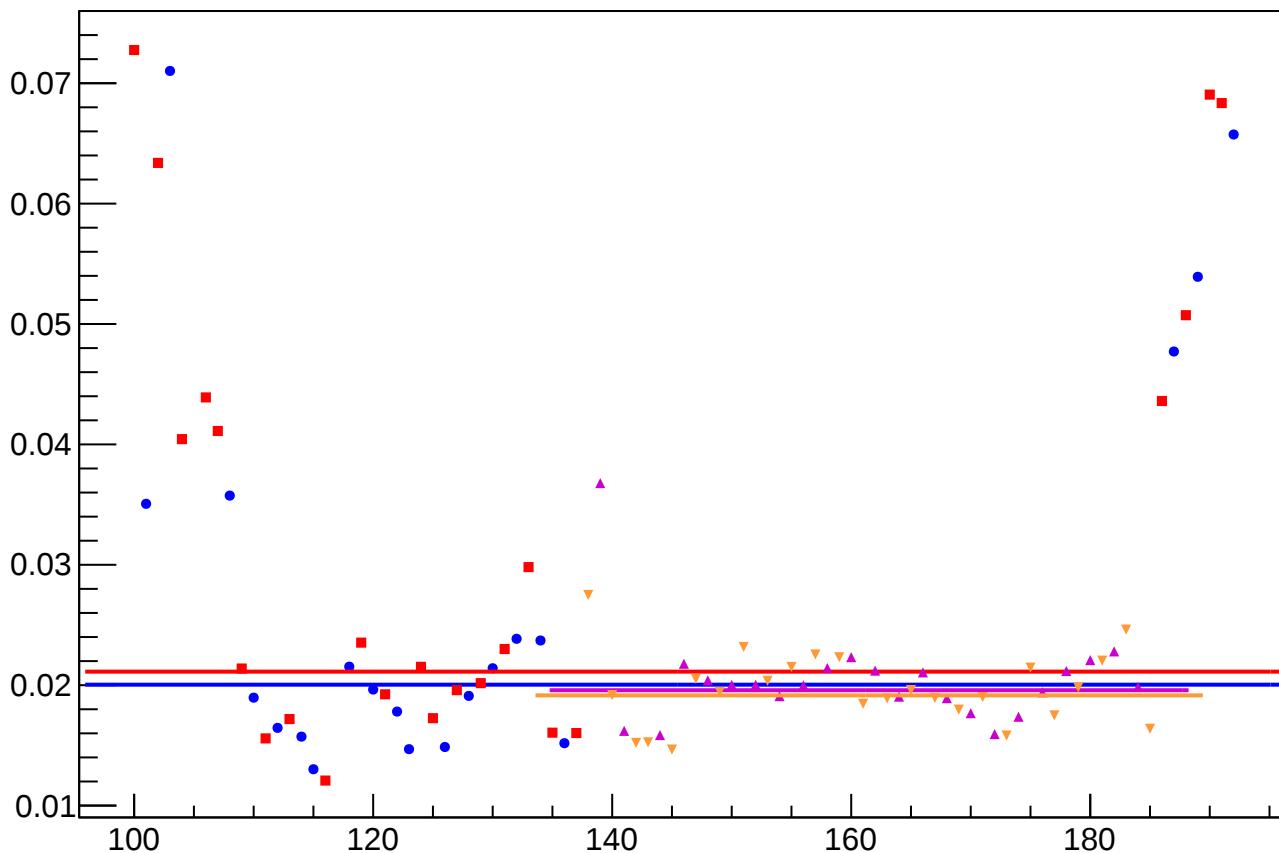
Right: -0.180+/-0.000  $\chi^2/NDF$ : 150849248.1/42

In: -0.096+/-0.000  $\chi^2/NDF$ :260514797.1/42

Out: -0.103+/-0.000  $\chi^2/NDF$ :325722828.6/47

All: -0.099+/-0.000  $\chi^2/NDF$ : 587596580.4/90

# yield\_bpm4eX\_rms vs Slug, Sign Corrected



Right In: 0.020+/-0.000  $\chi^2/\text{NDF}$ : 2533729.0/19

Left Out: 0.019+/-0.000  $\chi^2/\text{NDF}$ : 641027.3/24

Right Out: 0.021+/-0.000  $\chi^2/\text{NDF}$ : 2843893.2/22

Left In: 0.020+/-0.000  $\chi^2/\text{NDF}$ : 651328.7/22

Left: 0.019+/-0.000  $\chi^2/\text{NDF}$ : 1299461.3/47

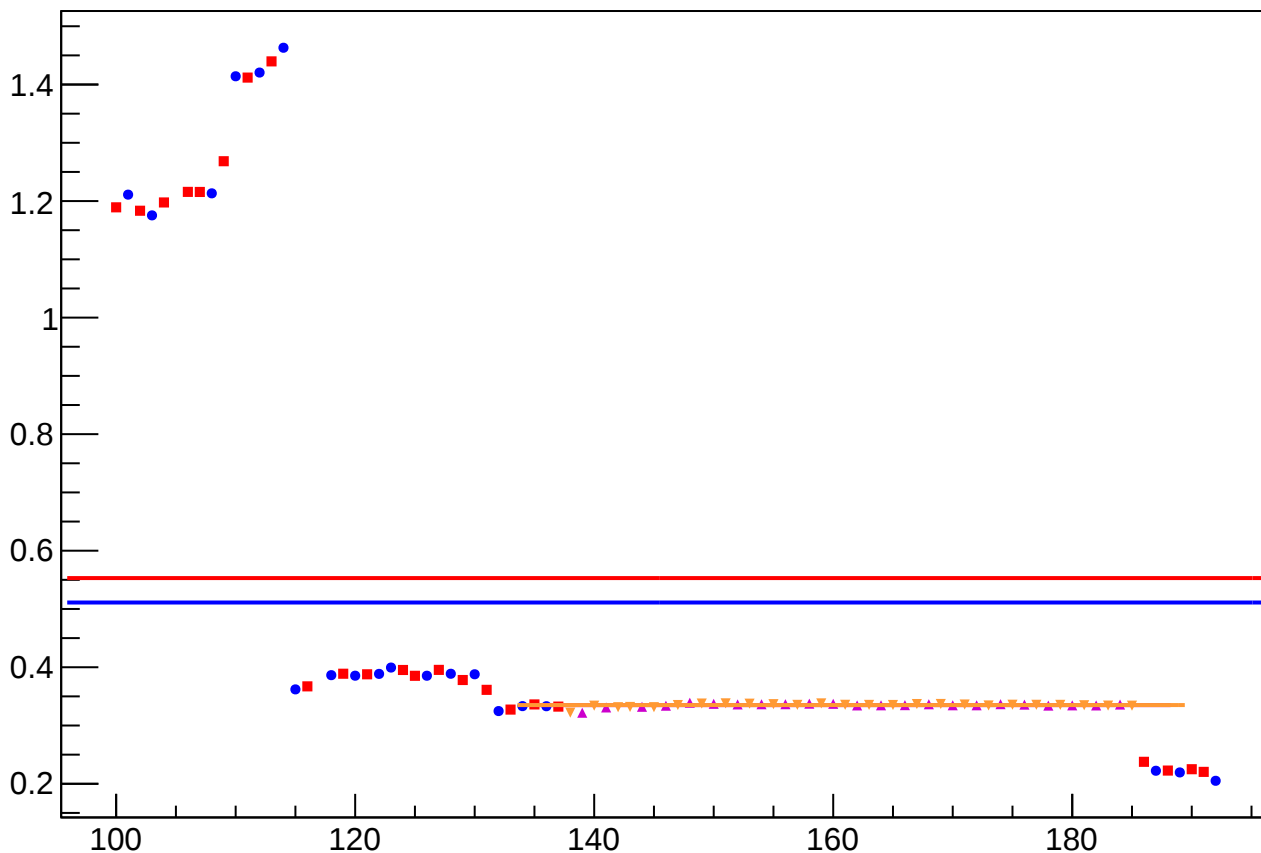
Right: 0.021+/-0.000  $\chi^2/\text{NDF}$ : 5394205.1/42

In: 0.020+/-0.000  $\chi^2/\text{NDF}$ : 3189445.9/42

Out: 0.020+/-0.000  $\chi^2/\text{NDF}$ : 3566159.0/47

All: 0.020+/-0.000  $\chi^2/\text{NDF}$ : 6755750.3/90

# yield\_bpm4eY\_mean vs Slug, Sign Corrected



Right In: 0.511+/-0.000  $\chi^2/\text{NDF}$ : 5776798379.7/19

Left Out: 0.335+/-0.000  $\chi^2/\text{NDF}$ : 1153956.7/24

Right Out: 0.553+/-0.000  $\chi^2/\text{NDF}$ : 6274921556.4/22

Left In: 0.335+/-0.000  $\chi^2/\text{NDF}$ : 1198302.8/22

Left: 0.335+/-0.000  $\chi^2/\text{NDF}$ : 2352818.7/47

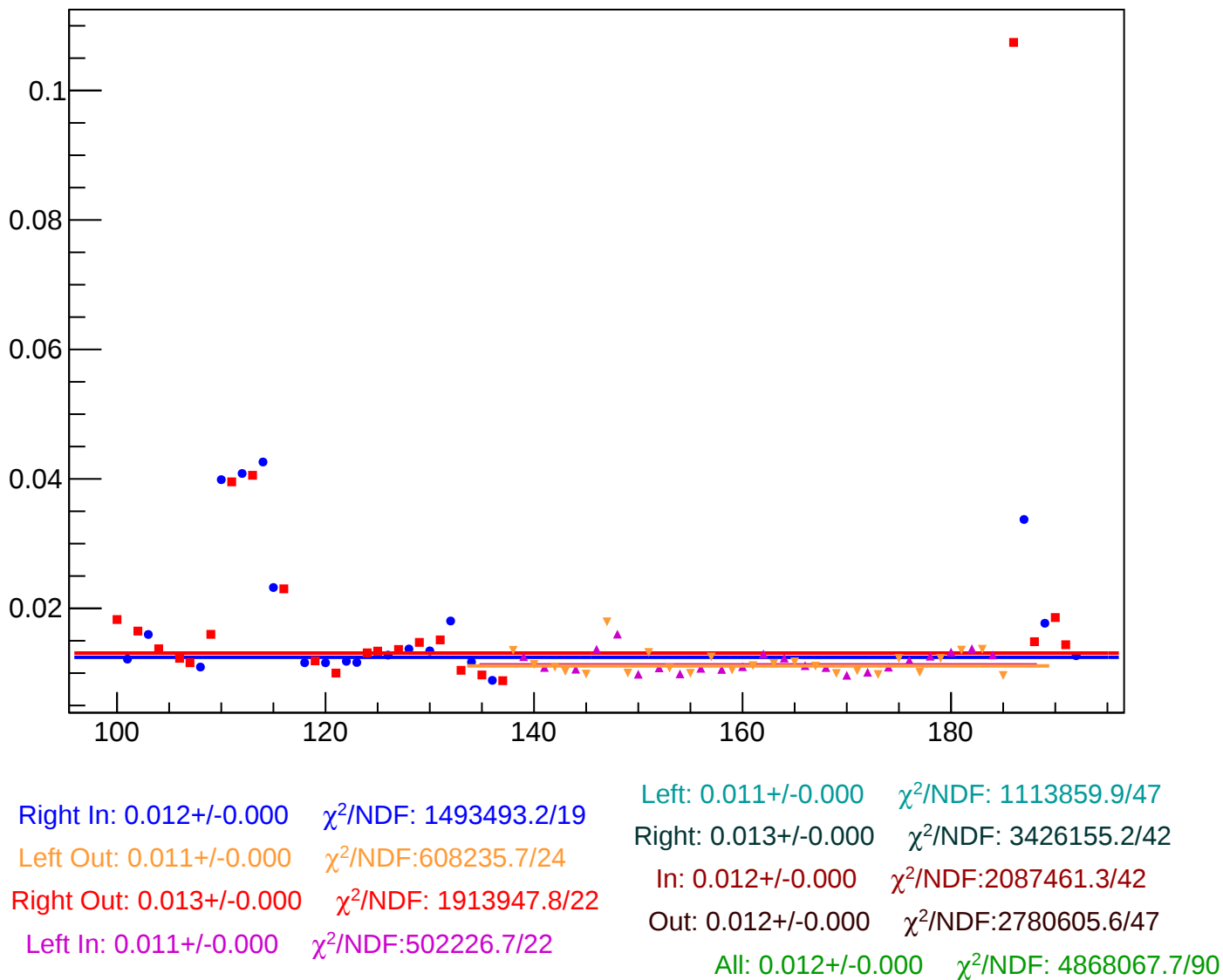
Right: 0.532+/-0.000  $\chi^2/\text{NDF}$ : 12090035140.9/42

In: 0.380+/-0.000  $\chi^2/\text{NDF}$ : 6810339183.1/42

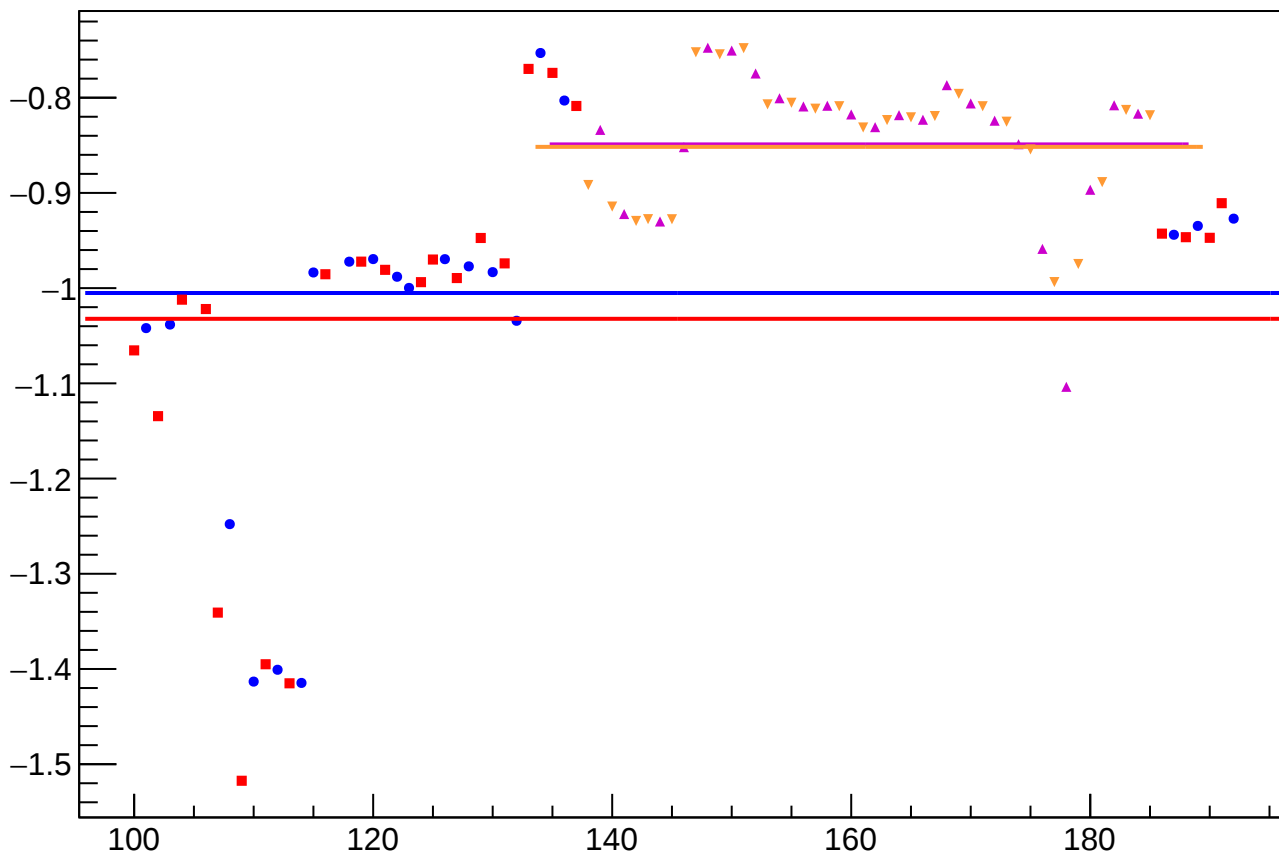
Out: 0.385+/-0.000  $\chi^2/\text{NDF}$ : 7830198816.8/47

All: 0.383+/-0.000  $\chi^2/\text{NDF}$ : 14643349201.6/95

# yield\_bpm4eY\_rms vs Slug, Sign Corrected



# yield\_bpm4acX\_mean vs Slug, Sign Corrected



Right In: -1.005+/-0.000  $\chi^2/\text{NDF}$ : 395592217.4/19

Left Out: -0.852+/-0.000  $\chi^2/\text{NDF}$ :189276591.7/24

Right Out: -1.032+/-0.000  $\chi^2/\text{NDF}$ : 540805933.2/22

Left In: -0.849+/-0.000  $\chi^2/\text{NDF}$ :256438306.8/22

Left: -0.850+/-0.000  $\chi^2/\text{NDF}$ : 445849768.4/47

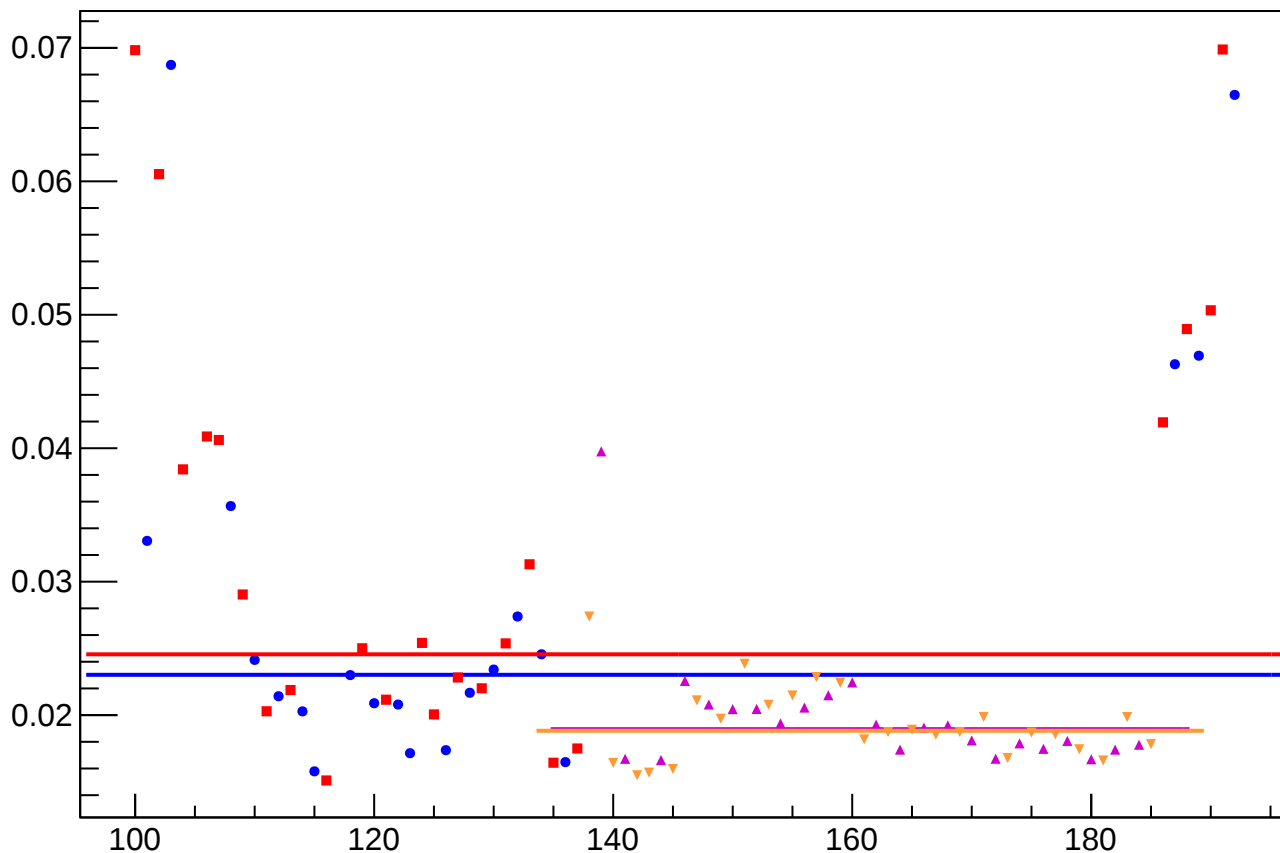
Right: -1.019+/-0.000  $\chi^2/\text{NDF}$ : 940456091.2/42

In: -0.884+/-0.000  $\chi^2/\text{NDF}$ :863802088.2/42

Out: -0.889+/-0.000  $\chi^2/\text{NDF}$ :1012354574.8/47

All: -0.886+/-0.000  $\chi^2/\text{NDF}$ : 1876848951.9/99

# yield\_bpm4acX\_rms vs Slug, Sign Corrected



Right In: 0.023+/-0.000  $\chi^2/\text{NDF}$ : 2075419.3/19

Left Out: 0.019+/-0.000  $\chi^2/\text{NDF}$ :490084.5/24

Right Out: 0.025+/-0.000  $\chi^2/\text{NDF}$ : 2134079.8/22

Left In: 0.019+/-0.000  $\chi^2/\text{NDF}$ :645048.1/22

Left: 0.019+/-0.000  $\chi^2/\text{NDF}$ : 1135735.6/47

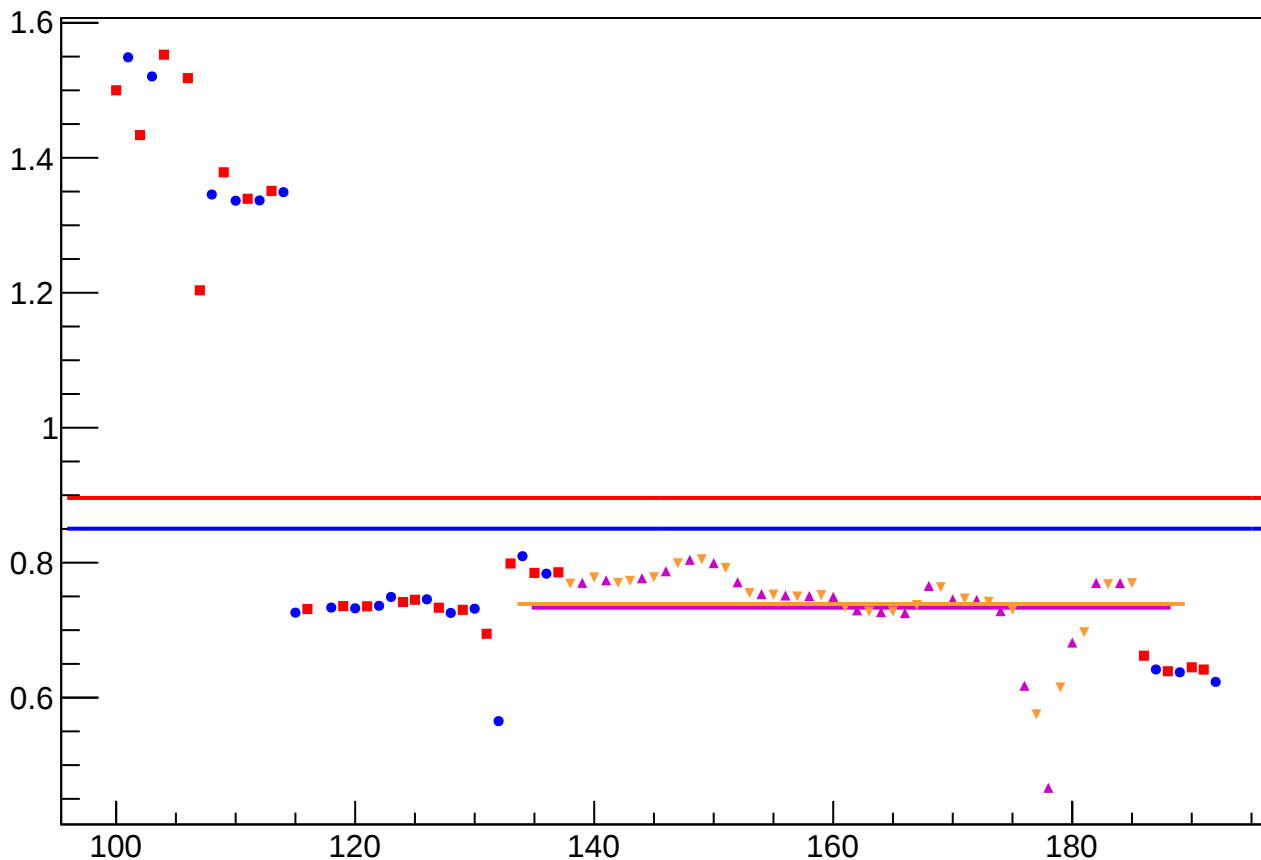
Right: 0.024+/-0.000  $\chi^2/\text{NDF}$ : 4235586.9/42

In: 0.020+/-0.000  $\chi^2/\text{NDF}$ :3008712.5/42

Out: 0.020+/-0.000  $\chi^2/\text{NDF}$ :3192591.0/47

All: 0.020+/-0.000  $\chi^2/\text{NDF}$ : 6202560.9/90

# yield\_bpm4acY\_mean vs Slug, Sign Corrected



Right In: 0.850+/-0.000  $\chi^2/\text{NDF}$ : 2727924894.2/19

Left Out: 0.739+/-0.000  $\chi^2/\text{NDF}$ : 333086309.0/24

Right Out: 0.896+/-0.000  $\chi^2/\text{NDF}$ : 2687689209.0/22

Left In: 0.733+/-0.000  $\chi^2/\text{NDF}$ : 570264411.7/22

Left: 0.736+/-0.000  $\chi^2/\text{NDF}$ : 905100069.4/47

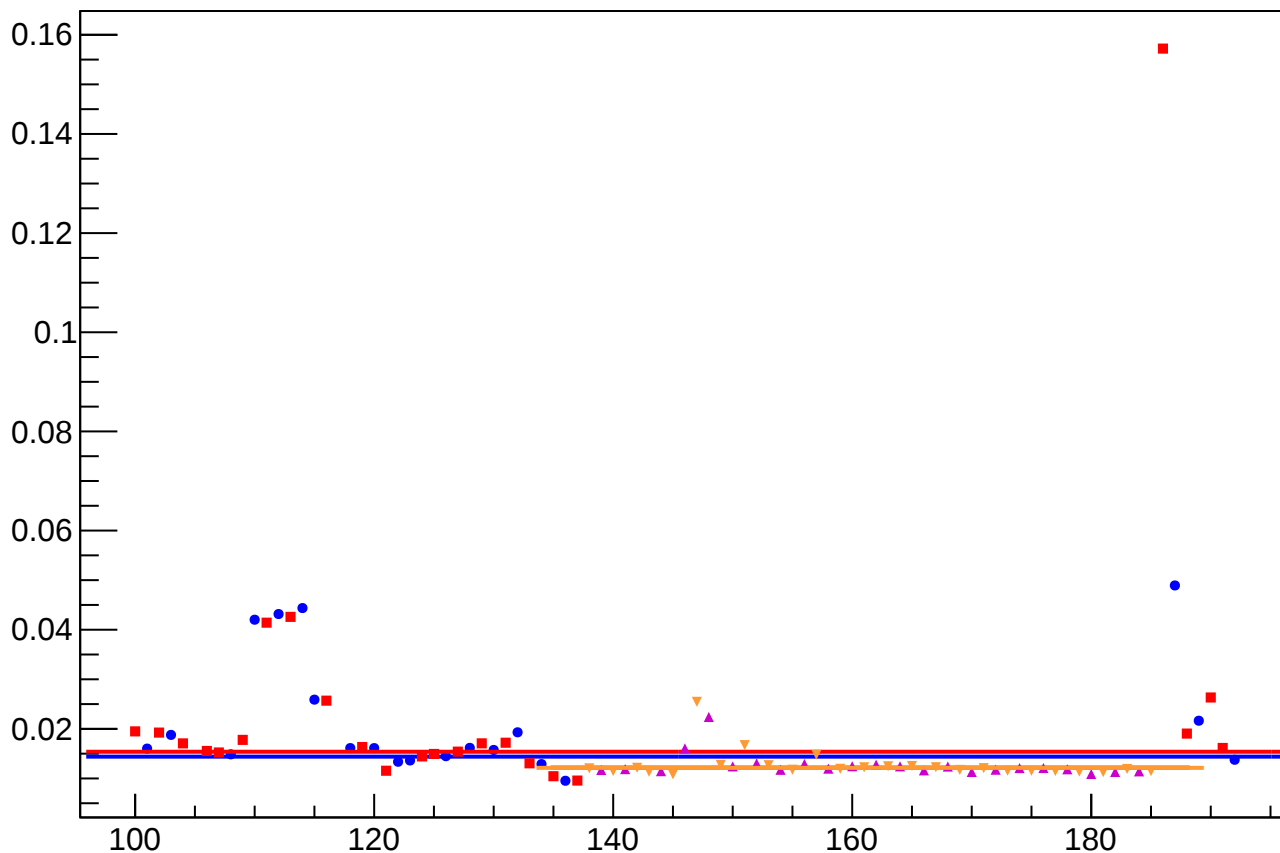
Right: 0.872+/-0.000  $\chi^2/\text{NDF}$ : 5448678598.6/42

In: 0.760+/-0.000  $\chi^2/\text{NDF}$ : 3648320475.8/42

Out: 0.771+/-0.000  $\chi^2/\text{NDF}$ : 3625346355.0/47

All: 0.765+/-0.000  $\chi^2/\text{NDF}$ : 7282937825.7/90

# yield\_bpm4acY\_rms vs Slug, Sign Corrected



Right In: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 1632047.0/19

Left Out: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 638211.9/24

Right Out: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 2028614.8/22

Left In: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 481639.6/22

Left: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 1120132.0/47

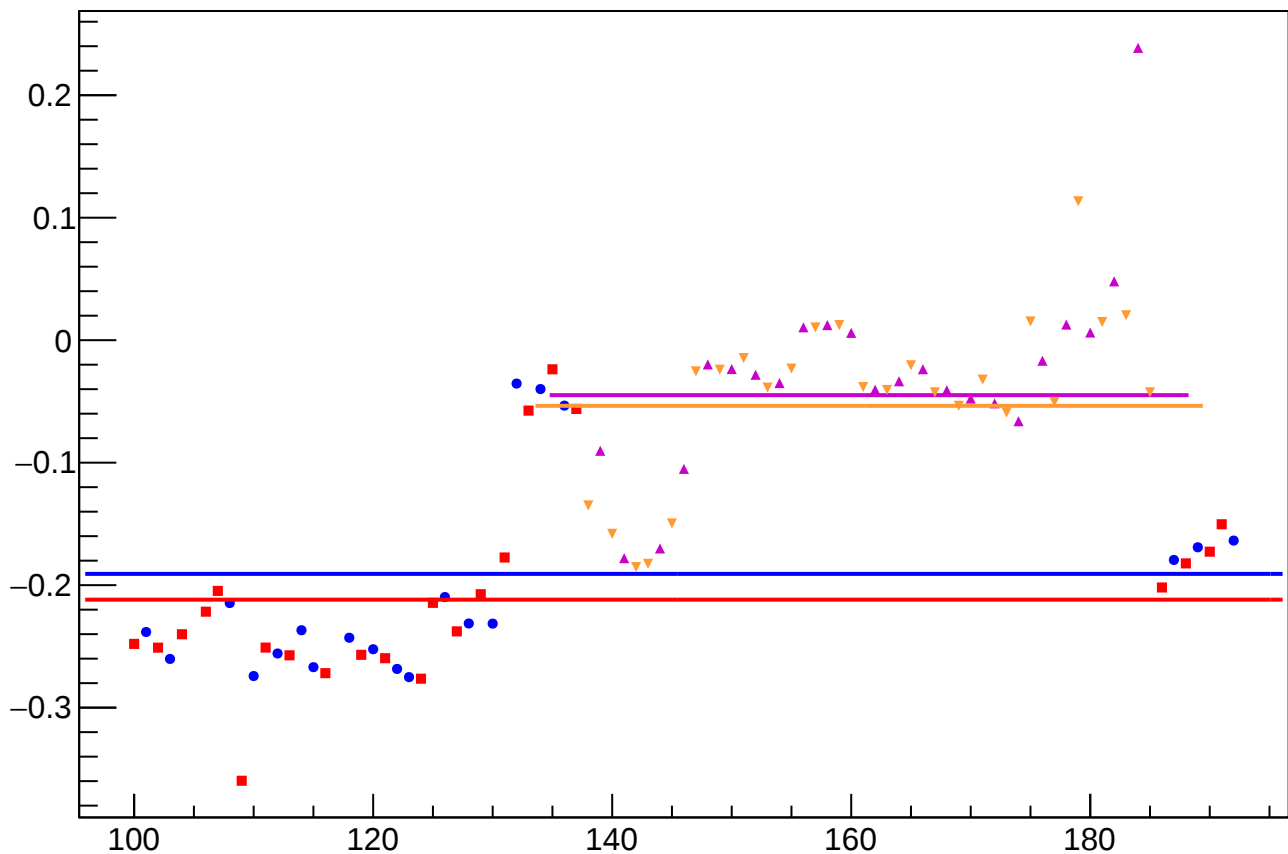
Right: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 3691837.2/42

In: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 2363117.9/42

Out: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 3183322.1/47

All: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 5548439.3/90

# yield\_bpm4ecX\_mean vs Slug, Sign Corrected



Right In: -0.191 $\pm$ 0.000  $\chi^2$ /NDF: 106186093.6/19

Left Out: -0.054 $\pm$ 0.000  $\chi^2$ /NDF:167879648.0/24

Right Out: -0.212 $\pm$ 0.000  $\chi^2$ /NDF: 110234774.1/22

Left In: -0.045 $\pm$ 0.000  $\chi^2$ /NDF:127324000.1/22

Left: -0.049 $\pm$ 0.000  $\chi^2$ /NDF: 296677486.5/47

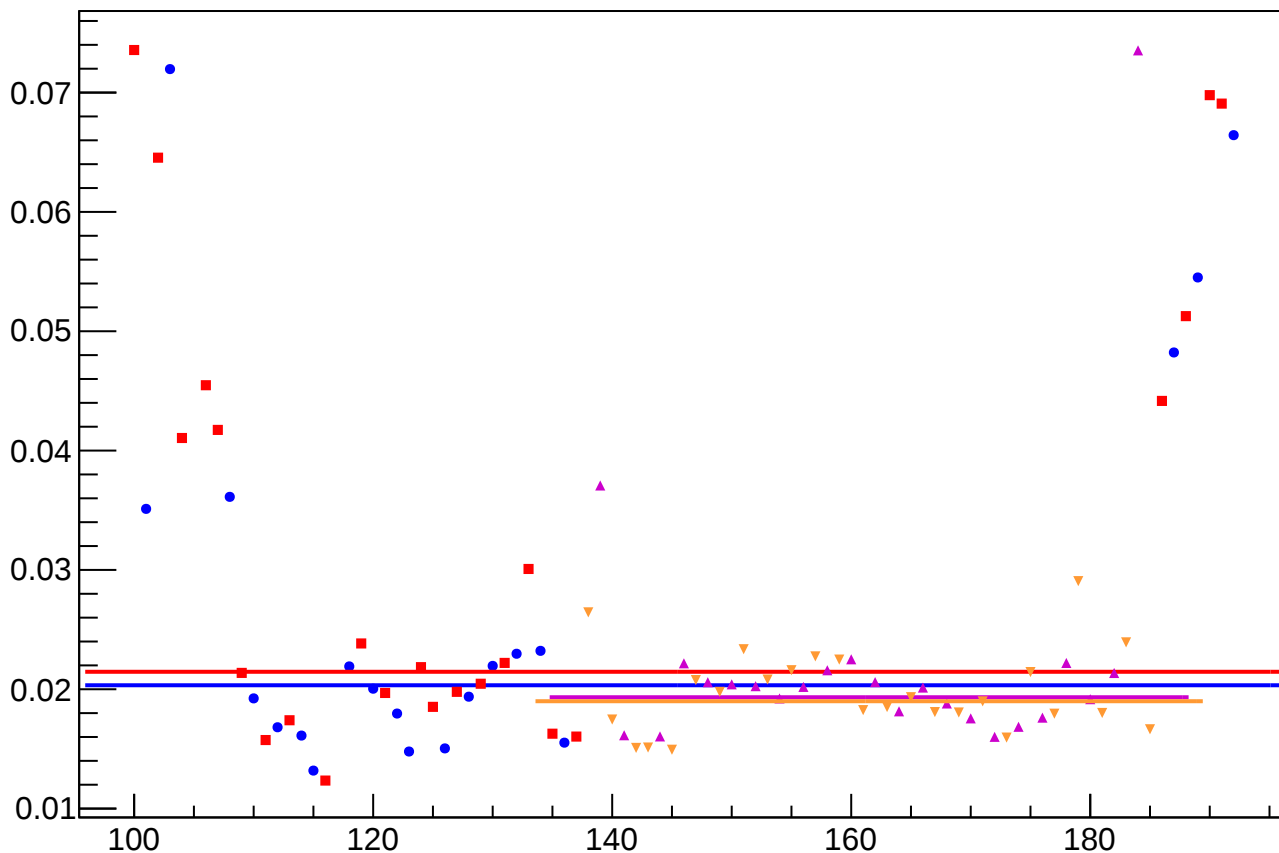
Right: -0.201 $\pm$ 0.000  $\chi^2$ /NDF: 219465343.0/42

In: -0.084 $\pm$ 0.000  $\chi^2$ /NDF:448688520.3/42

Out: -0.093 $\pm$ 0.000  $\chi^2$ /NDF:533114236.1/47

All: -0.089 $\pm$ 0.000  $\chi^2$ /NDF: 983882275.5/90

# yield\_bpm4ecX\_rms vs Slug, Sign Corrected



Right In: 0.020+/-0.000  $\chi^2/\text{NDF}$ : 2499822.5/19

Left Out: 0.019+/-0.000  $\chi^2/\text{NDF}$ : 699267.5/24

Right Out: 0.021+/-0.000  $\chi^2/\text{NDF}$ : 2826630.2/22

Left In: 0.019+/-0.000  $\chi^2/\text{NDF}$ : 892810.7/22

Left: 0.019+/-0.000  $\chi^2/\text{NDF}$ : 1596405.3/47

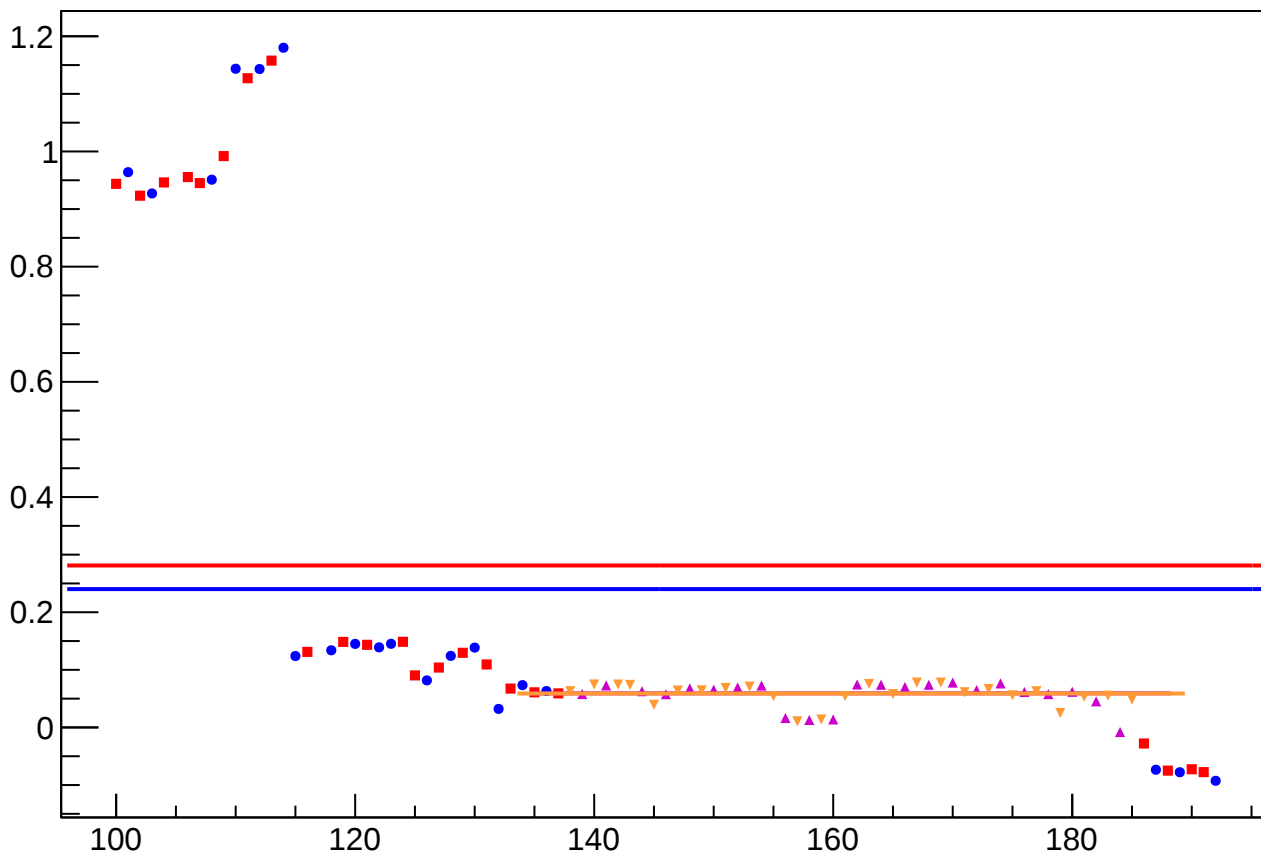
Right: 0.021+/-0.000  $\chi^2/\text{NDF}$ : 5343972.6/42

In: 0.020+/-0.000  $\chi^2/\text{NDF}$ : 3413016.2/42

Out: 0.020+/-0.000  $\chi^2/\text{NDF}$ : 3649875.4/47

All: 0.020+/-0.000  $\chi^2/\text{NDF}$ : 7062901.1/90

# yield\_bpm4ecY\_mean vs Slug, Sign Corrected



Right In: 0.240+/-0.000  $\chi^2/\text{NDF}$ : 6073363266.0/19

Left Out: 0.059+/-0.000  $\chi^2/\text{NDF}$ : 46902918.4/24

Right Out: 0.281+/-0.000  $\chi^2/\text{NDF}$ : 6377747887.9/22

Left In: 0.059+/-0.000  $\chi^2/\text{NDF}$ : 58640898.5/22

Left: 0.059+/-0.000  $\chi^2/\text{NDF}$ : 105549886.8/47

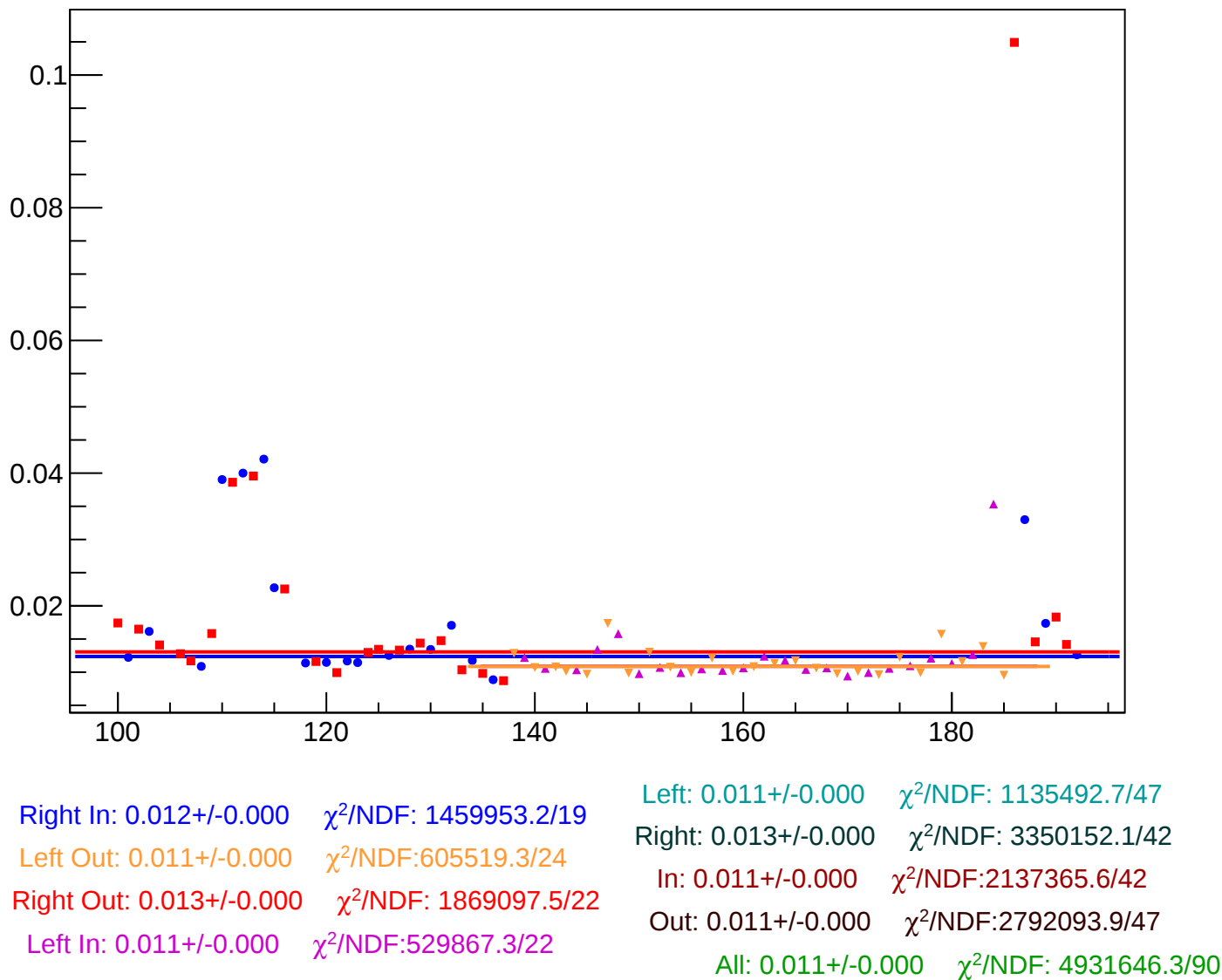
Right: 0.260+/-0.000  $\chi^2/\text{NDF}$ : 12488151410.2/42

In: 0.104+/-0.000  $\chi^2/\text{NDF}$ : 7248044000.9/42

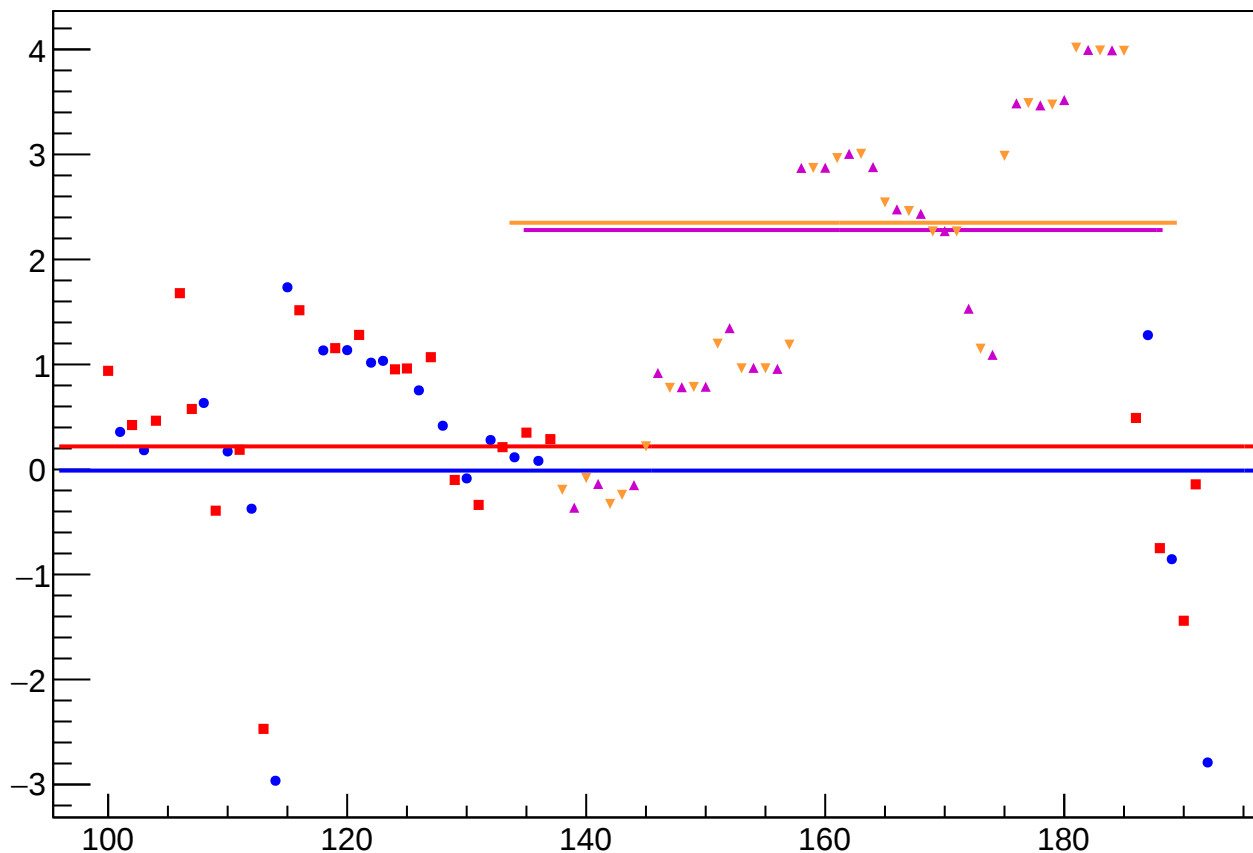
Out: 0.110+/-0.000  $\chi^2/\text{NDF}$ : 8058708257.8/47

All: 0.107+/-0.000  $\chi^2/\text{NDF}$ : 15309702013.9/95

# yield\_bpm4ecY\_rms vs Slug, Sign Corrected



# yield\_bpm1X\_mean vs Slug, Sign Corrected



Right In: -0.011±/0.000

$\chi^2/\text{NDF}$ : 2535341168.7/19

Left: 2.314±/0.000  $\chi^2/\text{NDF}$ : 125168787170.9/47

Right: 0.106±/0.000  $\chi^2/\text{NDF}$ : 4244101463.0/42

Left Out: 2.349±/0.000

$\chi^2/\text{NDF}$ : 63600066268.3/24

In: 2.188±/0.000  $\chi^2/\text{NDF}$ : 75046825006.1/42

Right Out: 0.220±/0.000

$\chi^2/\text{NDF}$ : 1649980212.7/22

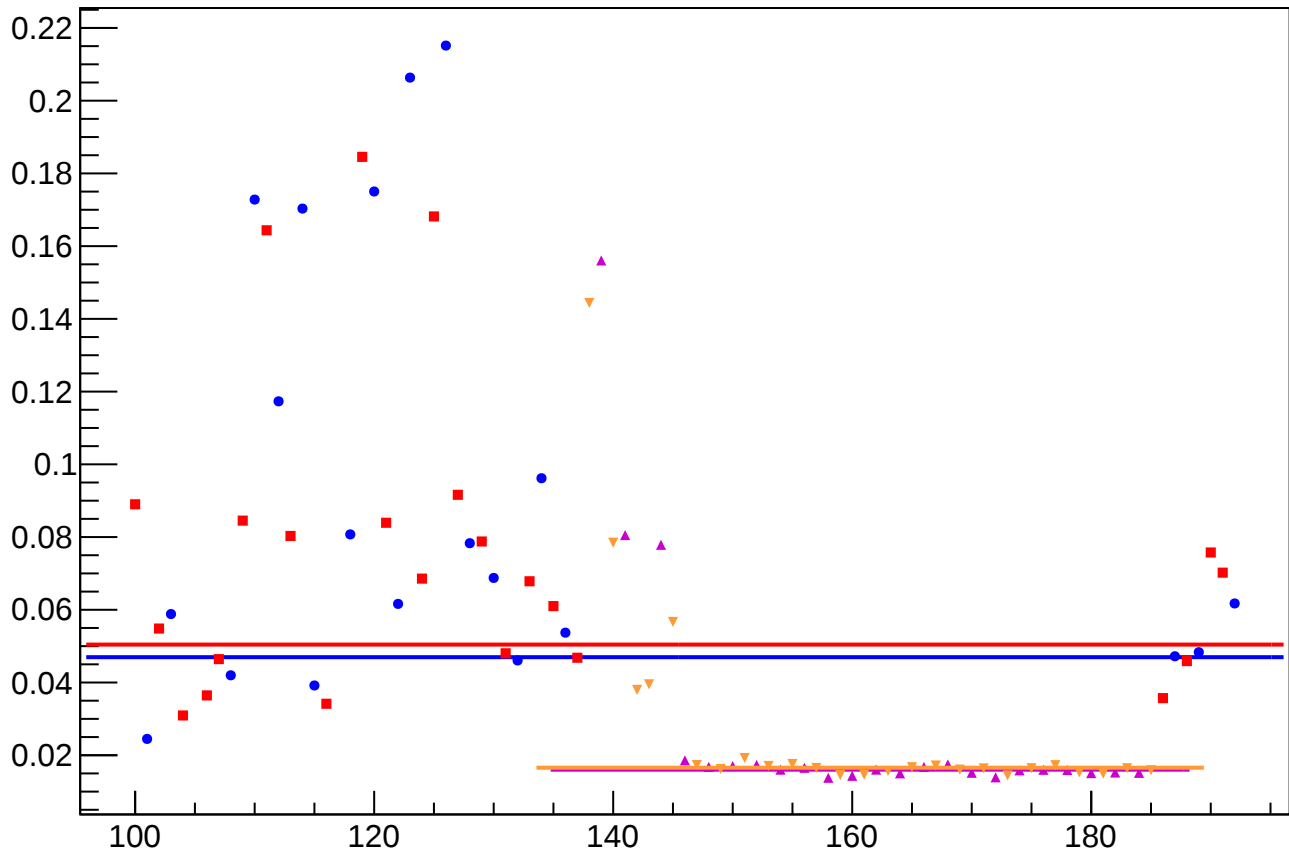
Out: 2.260±/0.000  $\chi^2/\text{NDF}$ : 74975017662.3/47

Left In: 2.280±/0.000

$\chi^2/\text{NDF}$ : 61444254541.3/22

All: 2.223±/0.000  $\chi^2/\text{NDF}$ : 150163917850.8

# yield\_bpm1X\_rms vs Slug, Sign Corrected



Right In: 0.047+/-0.000  $\chi^2/\text{NDF}$ : 2890396.2/19

Left Out: 0.017+/-0.000  $\chi^2/\text{NDF}$ : 2623615.6/24

Right Out: 0.050+/-0.000  $\chi^2/\text{NDF}$ : 2431652.4/22

Left In: 0.016+/-0.000  $\chi^2/\text{NDF}$ : 2463853.3/22

Left: 0.016+/-0.000  $\chi^2/\text{NDF}$ : 5102815.6/47

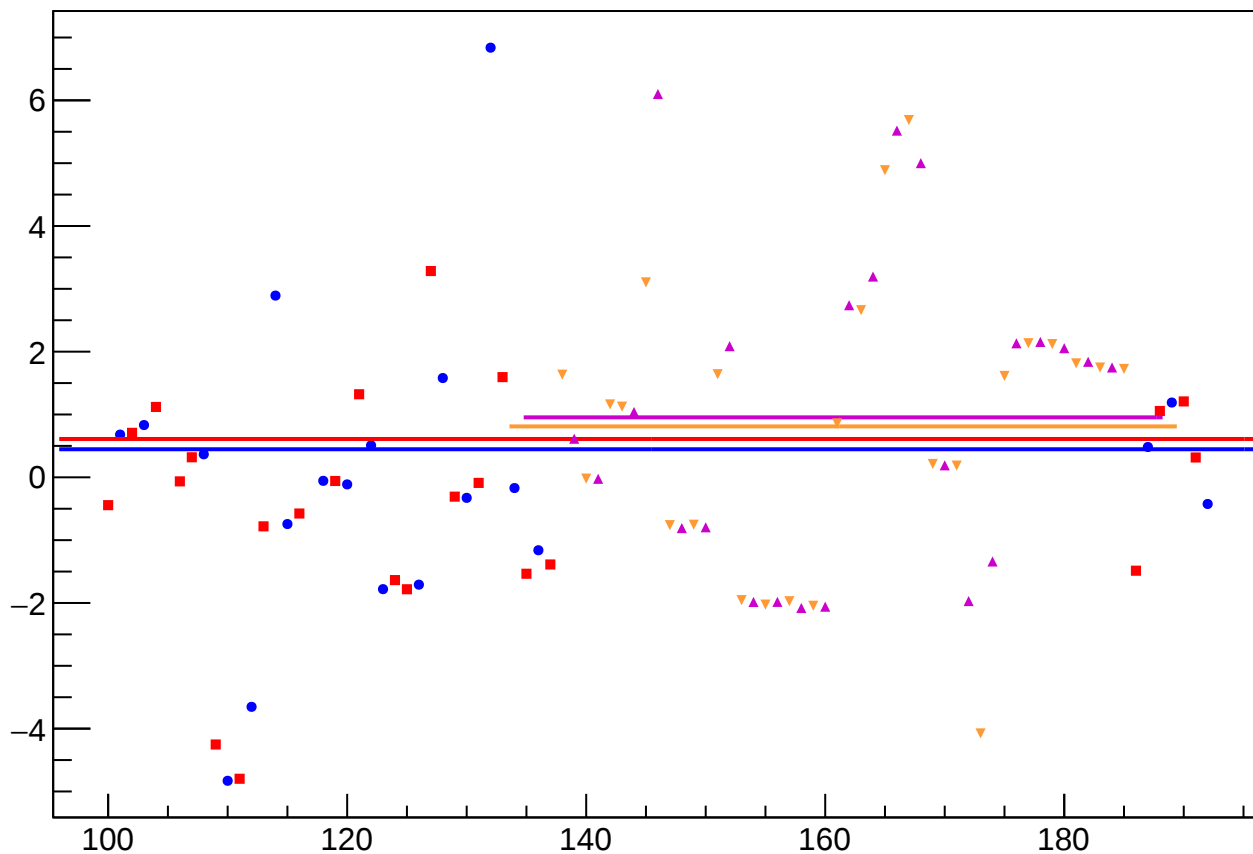
Right: 0.049+/-0.000  $\chi^2/\text{NDF}$ : 5348616.5/42

In: 0.017+/-0.000  $\chi^2/\text{NDF}$ : 9391711.5/42

Out: 0.018+/-0.000  $\chi^2/\text{NDF}$ : 9969235.2/47

All: 0.018+/-0.000  $\chi^2/\text{NDF}$ : 19388501.7/90

# yield\_bpm1Y\_mean vs Slug, Sign Corrected



Right In: 0.447 $\pm$ 0.000  $\chi^2$ /NDF: 13728449066.0/19

Left Out: 0.810 $\pm$ 0.000  $\chi^2$ /NDF: 507583198570.2/24

Right Out: 0.610 $\pm$ 0.000  $\chi^2$ /NDF: 5704492522.4/22

Left In: 0.954 $\pm$ 0.000  $\chi^2$ /NDF: 574792794608.3/22

Left: 0.883 $\pm$ 0.000  $\chi^2$ /NDF: 1083260277372.9/47

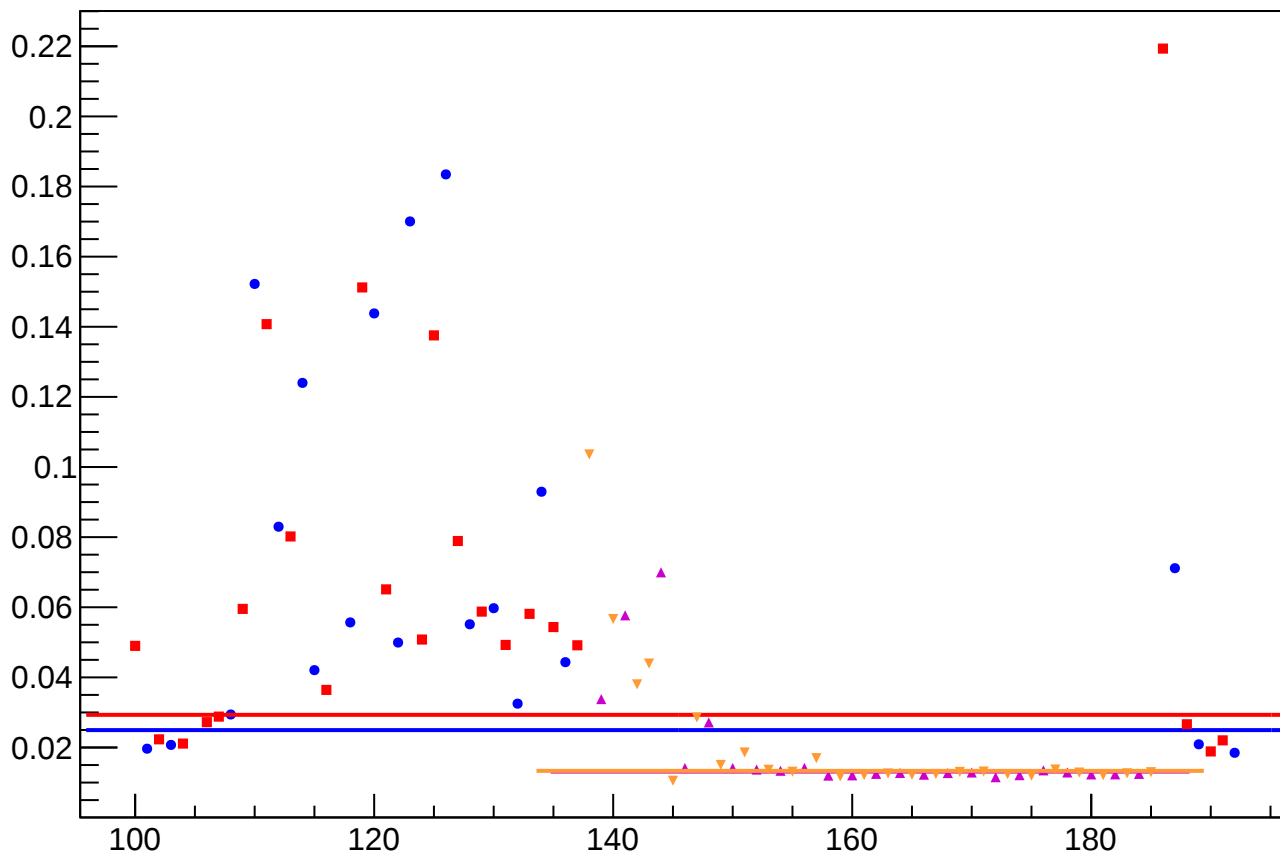
Right: 0.520 $\pm$ 0.000  $\chi^2$ /NDF: 19518217794.7/42

In: 0.915 $\pm$ 0.000  $\chi^2$ /NDF: 590207680276.6/42

Out: 0.798 $\pm$ 0.000  $\chi^2$ /NDF: 513504386362.1/47

All: 0.857 $\pm$ 0.000  $\chi^2$ /NDF: 1104349747324.

# yield\_bpm1Y\_rms vs Slug, Sign Corrected



Right In: 0.025+/-0.000  $\chi^2/\text{NDF}$ : 3457121.6/19

Left Out: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 2829070.5/24

Right Out: 0.029+/-0.000  $\chi^2/\text{NDF}$ : 3950568.9/22

Left In: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 1968206.9/22

Left: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 4800890.3/47

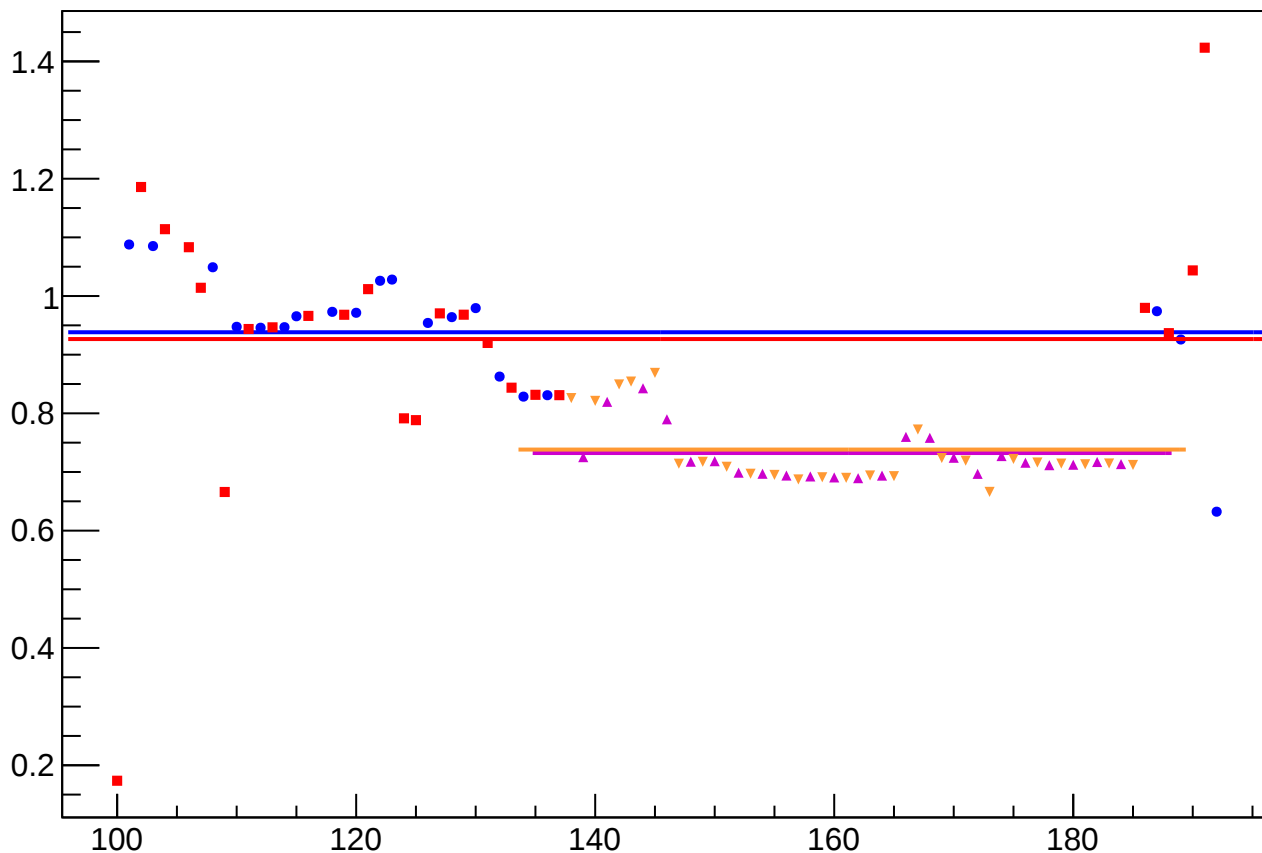
Right: 0.027+/-0.000  $\chi^2/\text{NDF}$ : 7528459.3/42

In: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 7257019.5/42

Out: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 9544542.6/47

All: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 16810868.4/90

# yield\_bpm11X\_mean vs Slug, Sign Corrected



Right In: 0.938+/-0.000  $\chi^2/\text{NDF}$ : 298477349.9/19

Left Out: 0.738+/-0.000  $\chi^2/\text{NDF}$ :310610047.7/24

Right Out: 0.927+/-0.000  $\chi^2/\text{NDF}$ : 454473573.1/22

Left In: 0.732+/-0.000  $\chi^2/\text{NDF}$ :170806298.1/22

Left: 0.735+/-0.000  $\chi^2/\text{NDF}$ : 482865670.9/47

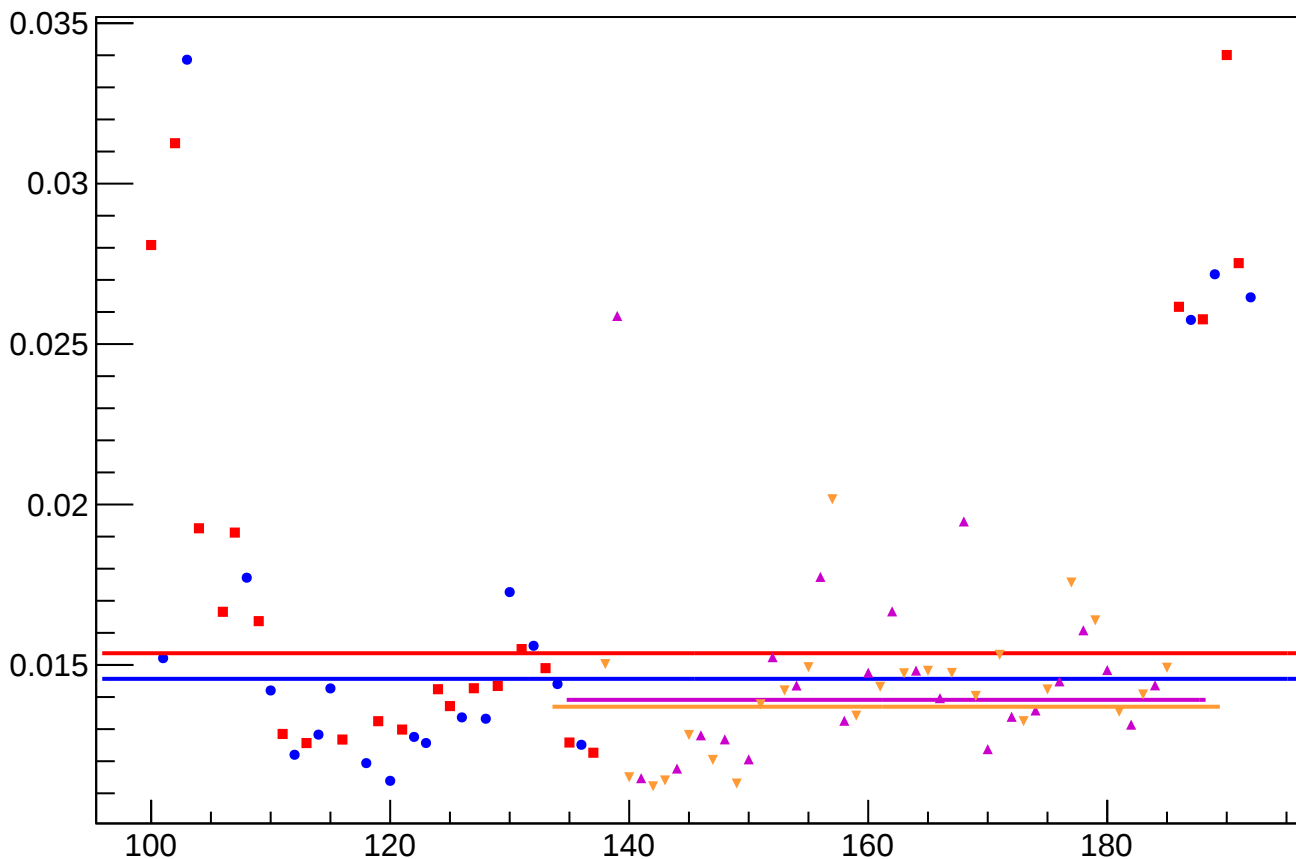
Right: 0.933+/-0.000  $\chi^2/\text{NDF}$ : 755106595.4/42

In: 0.791+/-0.000  $\chi^2/\text{NDF}$ :1446737740.5/42

Out: 0.789+/-0.000  $\chi^2/\text{NDF}$ :1587693743.7/47

All: 0.790+/-0.000  $\chi^2/\text{NDF}$ : 3034841947.7/90

# yield\_bpm11X\_rms vs Slug, Sign Corrected



Right In: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 1164991.0/19

Left Out: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 530851.9/24

Right Out: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 1255934.6/22

Left In: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 794558.0/22

Left: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 1329255.3/47

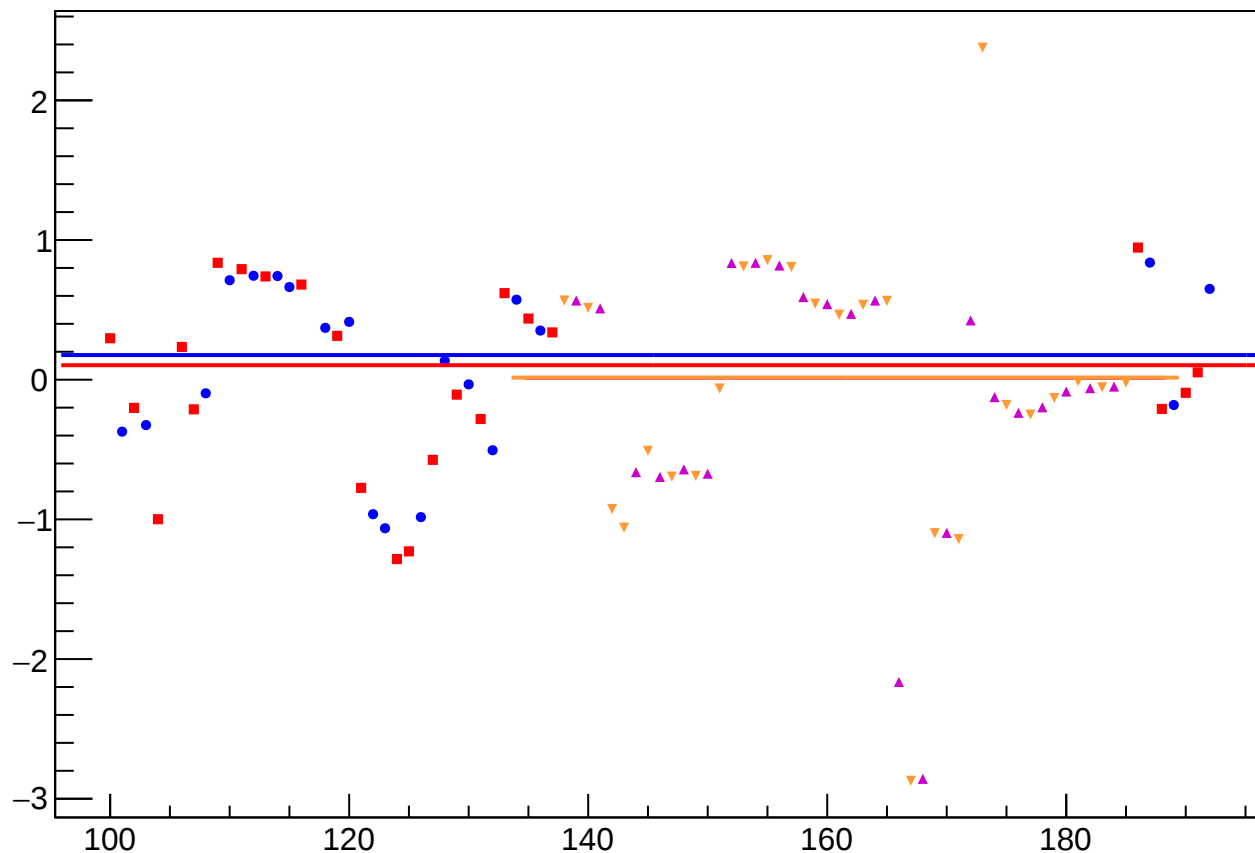
Right: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 2441307.1/42

In: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 1979285.2/42

Out: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 1915636.0/47

All: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 3895147.9/90

# yield\_bpm11Y\_mean vs Slug, Sign Corrected



Right In: 0.176+/-0.000  $\chi^2/\text{NDF}$ : 9162071315.7/19

Left Out: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 96087835995.8/24

Right Out: 0.104+/-0.000  $\chi^2/\text{NDF}$ : 13144296618.3/22

Left In: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 79445696658.6/22

Left: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 175533691121.4/47

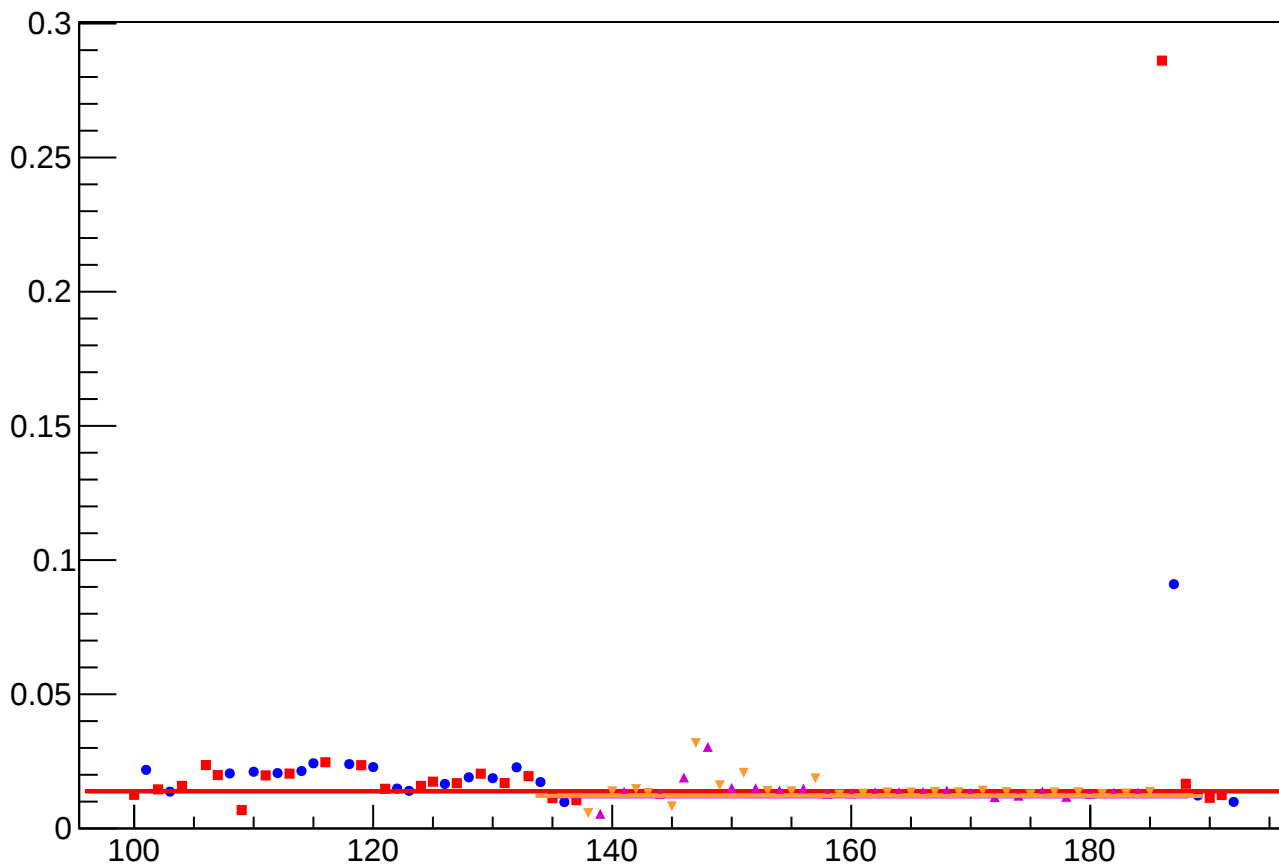
Right: 0.140+/-0.000  $\chi^2/\text{NDF}$ : 22398189549.8/42

In: 0.053+/-0.000  $\chi^2/\text{NDF}$ : 89308642893.8/42

Out: 0.036+/-0.000  $\chi^2/\text{NDF}$ : 109441028531.9/47

All: 0.045+/-0.000  $\chi^2/\text{NDF}$ : 198770622036.4

# yield\_bpm11Y\_rms vs Slug, Sign Corrected



Right In: 0.014 $\pm$ 0.000  $\chi^2$ /NDF: 1748900.9/19

Left Out: 0.012 $\pm$ 0.000  $\chi^2$ /NDF:3107648.9/24

Right Out: 0.014 $\pm$ 0.000  $\chi^2$ /NDF: 2263017.2/22

Left In: 0.012 $\pm$ 0.000  $\chi^2$ /NDF:3105948.8/22

Left: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 6217411.2/47

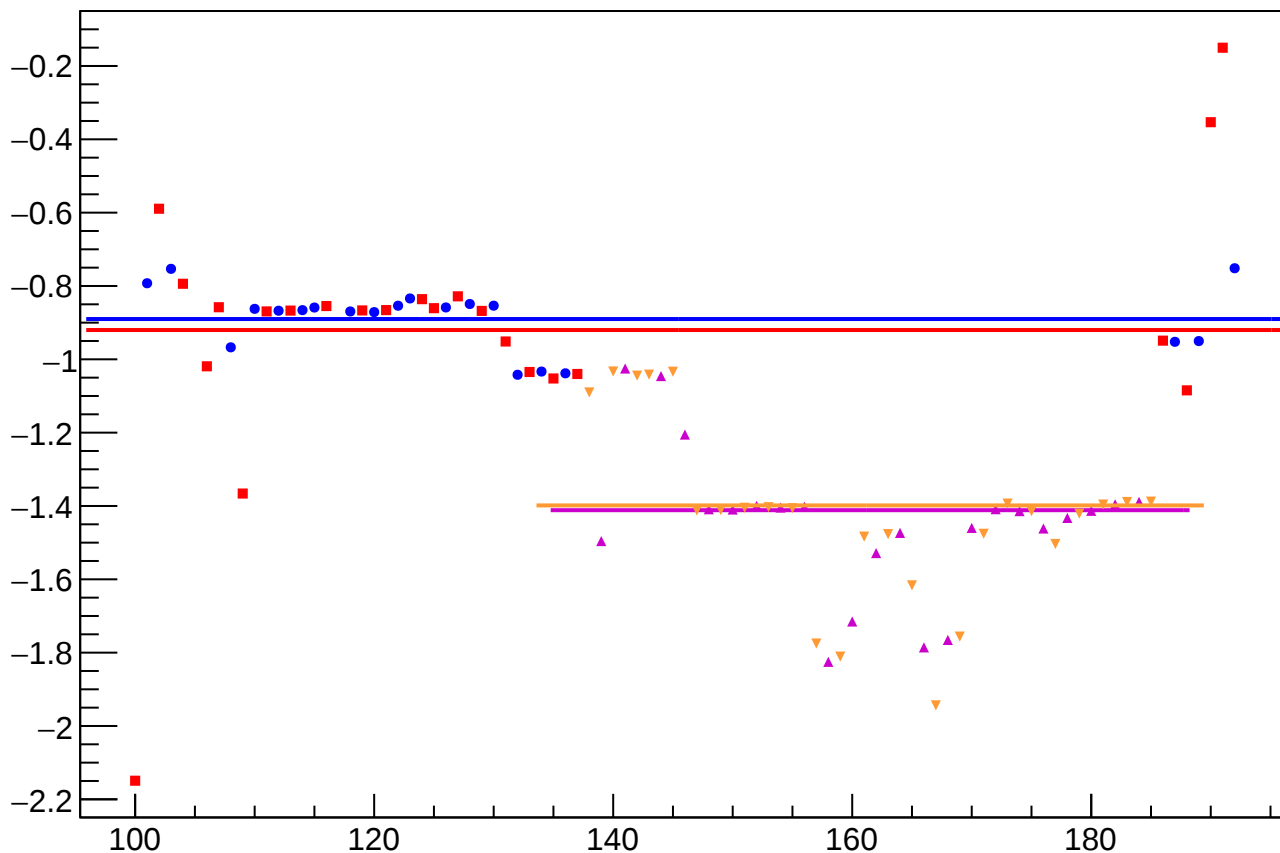
Right: 0.014 $\pm$ 0.000  $\chi^2$ /NDF: 4012386.1/42

In: 0.012 $\pm$ 0.000  $\chi^2$ /NDF:5040426.2/42

Out: 0.013 $\pm$ 0.000  $\chi^2$ /NDF:5543041.3/47

All: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 10587112.5/90

# yield\_bpm12X\_mean vs Slug, Sign Corrected



Right In: -0.890+/-0.000  $\chi^2/\text{NDF}$ : 43809356.8/19

Left Out: -1.398+/-0.000  $\chi^2/\text{NDF}$ : 734579404.3/24

Right Out: -0.920+/-0.000  $\chi^2/\text{NDF}$ : 185159968.4/22

Left In: -1.412+/-0.000  $\chi^2/\text{NDF}$ : 512629872.4/22

Left: -1.405+/-0.000  $\chi^2/\text{NDF}$ : 1248268857.1/47

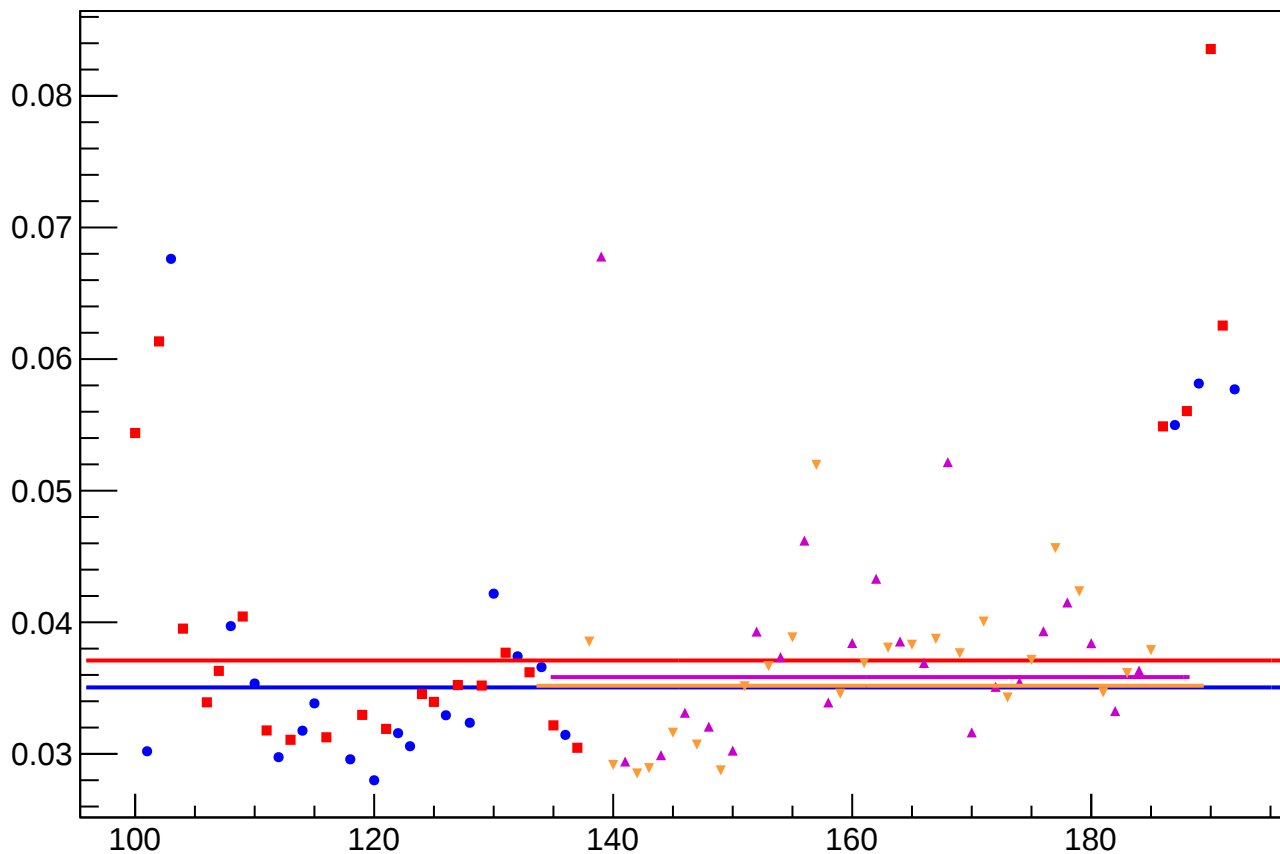
Right: -0.905+/-0.000  $\chi^2/\text{NDF}$ : 231494126.4/42

In: -1.244+/-0.000  $\chi^2/\text{NDF}$ : 1604805582.8/42

Out: -1.256+/-0.000  $\chi^2/\text{NDF}$ : 1807478979.2/47

All: -1.250+/-0.000  $\chi^2/\text{NDF}$ : 3413567824.6/9

# yield\_bpm12X\_rms vs Slug, Sign Corrected



Right In: 0.035+/-0.000  $\chi^2/\text{NDF}$ : 873043.1/19

Left Out: 0.035+/-0.000  $\chi^2/\text{NDF}$ : 597886.0/24

Right Out: 0.037+/-0.000  $\chi^2/\text{NDF}$ : 879774.3/22

Left In: 0.036+/-0.000  $\chi^2/\text{NDF}$ : 890993.5/22

Left: 0.035+/-0.000  $\chi^2/\text{NDF}$ : 1494255.9/47

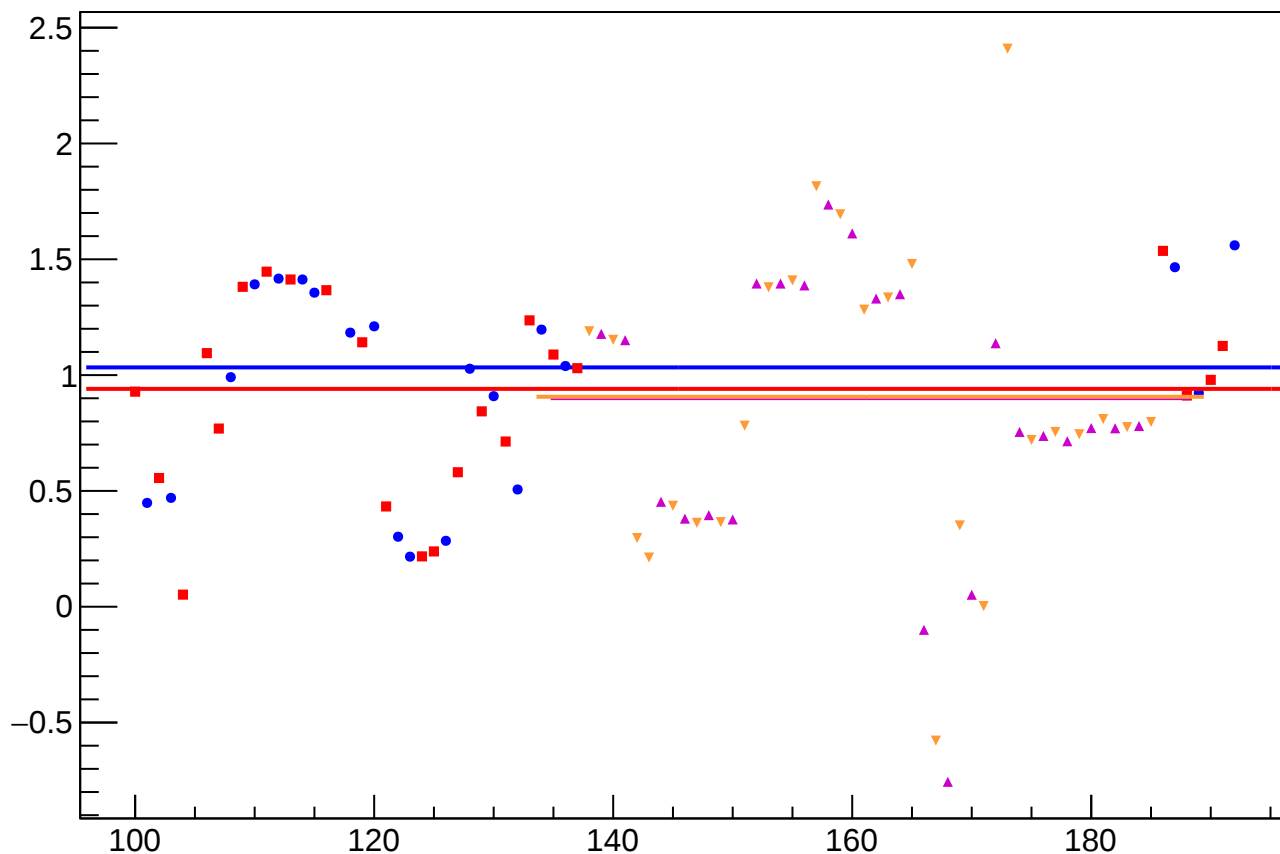
Right: 0.036+/-0.000  $\chi^2/\text{NDF}$ : 1776315.1/42

In: 0.036+/-0.000  $\chi^2/\text{NDF}$ : 1768795.7/42

Out: 0.036+/-0.000  $\chi^2/\text{NDF}$ : 1506207.8/47

All: 0.036+/-0.000  $\chi^2/\text{NDF}$ : 3275520.5/90

# yield\_bpm12Y\_mean vs Slug, Sign Corrected



Right In: 1.033+/-0.000

$\chi^2/\text{NDF}$ : 12391586471.6/19

Left: 0.904+/-0.000  $\chi^2/\text{NDF}$ : 151044220035.9/47

Right: 0.988+/-0.000  $\chi^2/\text{NDF}$ : 22763134157.6/42

Left Out: 0.906+/-0.000

$\chi^2/\text{NDF}$ : 84108410196.2/24

In: 0.935+/-0.000  $\chi^2/\text{NDF}$ : 80274882137.0/42

Right Out: 0.941+/-0.000

$\chi^2/\text{NDF}$ : 10068324039.8/22

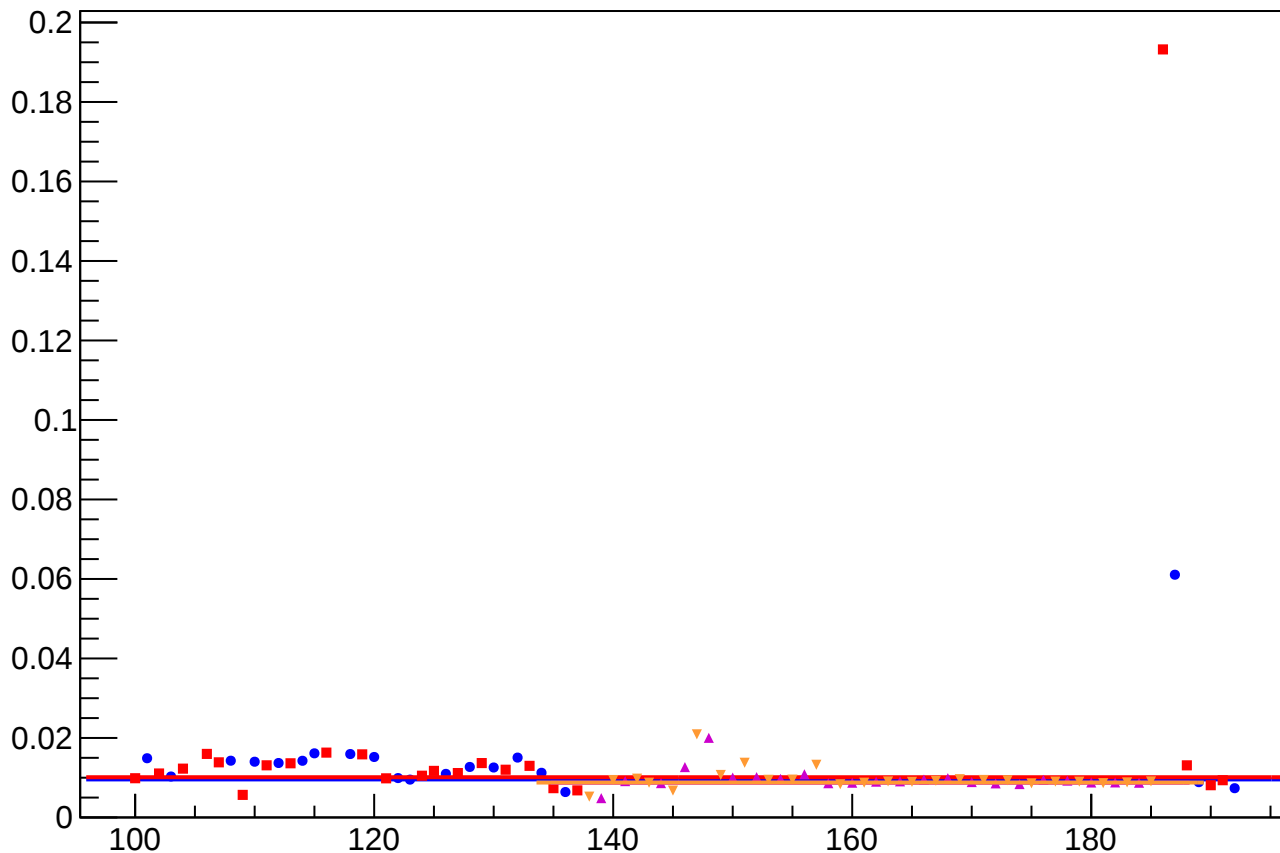
Out: 0.915+/-0.000  $\chi^2/\text{NDF}$ : 94237556725.6/47

Left In: 0.901+/-0.000

$\chi^2/\text{NDF}$ : 66932223067.8/22

All: 0.925+/-0.000  $\chi^2/\text{NDF}$ : 174572480854.0

# yield\_bpm12Y\_rms vs Slug, Sign Corrected



Right In: 0.010+/-0.000  $\chi^2/\text{NDF}$ : 1623370.1/19

Left Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 1698526.2/24

Right Out: 0.010+/-0.000  $\chi^2/\text{NDF}$ : 1913404.9/22

Left In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 1669983.7/22

Left: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 3369008.8/47

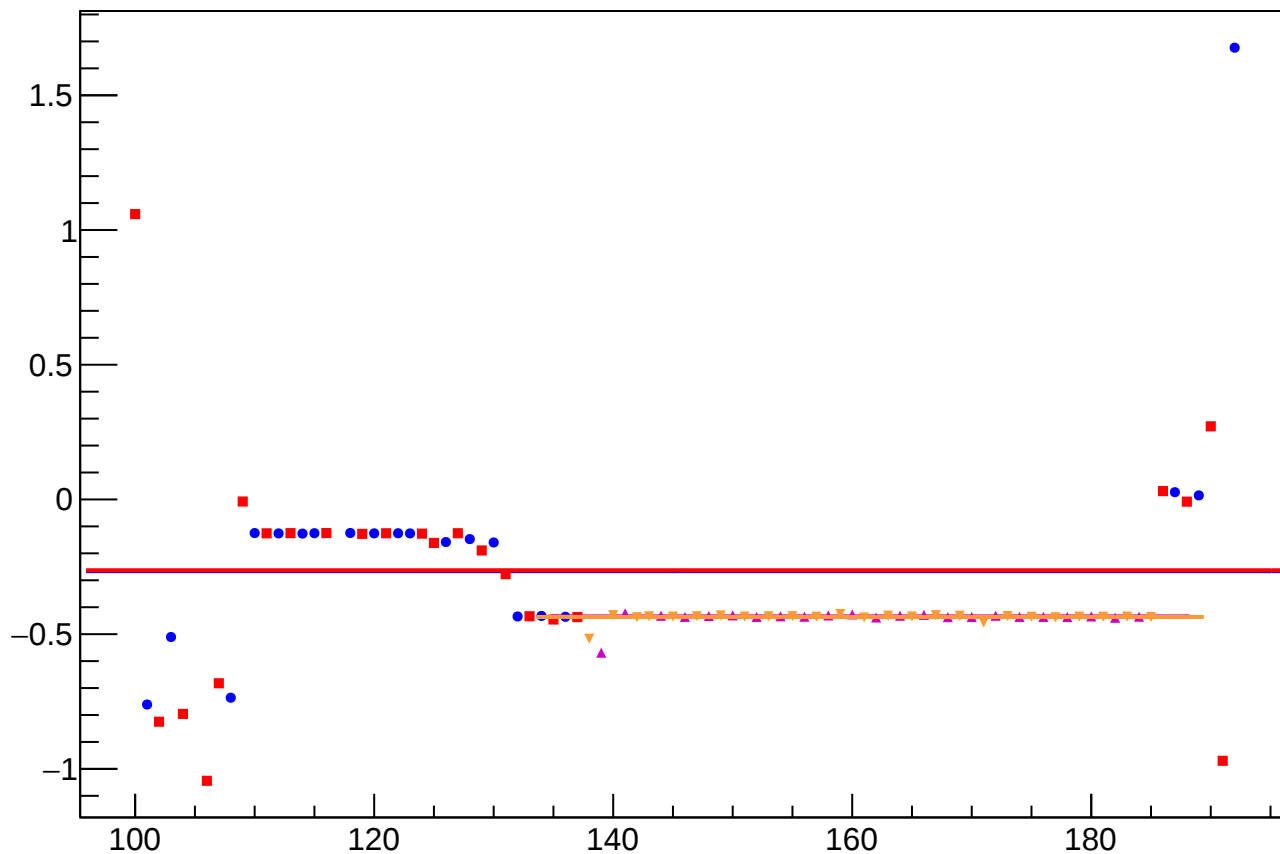
Right: 0.010+/-0.000  $\chi^2/\text{NDF}$ : 3557976.0/42

In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 3368443.5/42

Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 3797045.1/47

All: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 7171768.0/90

# yield\_bpm16X\_mean vs Slug, Sign Corrected



Right In:  $-0.266 \pm 0.000$   $\chi^2/\text{NDF}$ : 1851391905.2/19

Left Out:  $-0.436 \pm 0.000$   $\chi^2/\text{NDF}$ : 28776503.9/24

Right Out:  $-0.263 \pm 0.000$   $\chi^2/\text{NDF}$ : 1055495647.7/22

Left In:  $-0.434 \pm 0.000$   $\chi^2/\text{NDF}$ : 20164730.3/22

Left:  $-0.435 \pm 0.000$   $\chi^2/\text{NDF}$ : 49321098.5/47

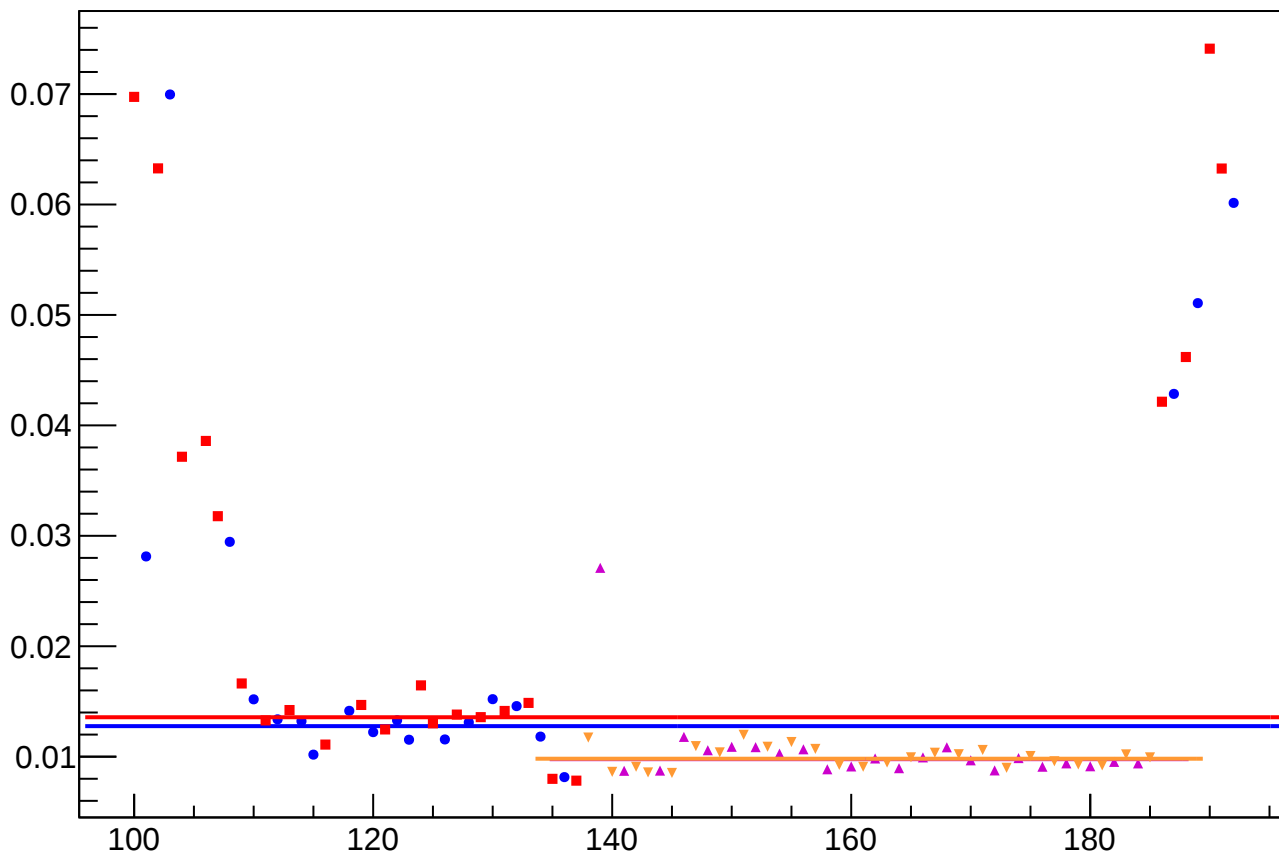
Right:  $-0.265 \pm 0.000$   $\chi^2/\text{NDF}$ : 2907078735.5/42

In:  $-0.405 \pm 0.000$   $\chi^2/\text{NDF}$ : 2616433046.7/42

Out:  $-0.409 \pm 0.000$   $\chi^2/\text{NDF}$ : 1856277931.7/47

All:  $-0.407 \pm 0.000$   $\chi^2/\text{NDF}$ : 4474057710.4/9

# yield\_bpm16X\_rms vs Slug, Sign Corrected



Right In: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 3426613.7/19

Left Out: 0.010+/-0.000  $\chi^2/\text{NDF}$ : 271172.3/24

Right Out: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 3910403.3/22

Left In: 0.010+/-0.000  $\chi^2/\text{NDF}$ : 786577.8/22

Left: 0.010+/-0.000  $\chi^2/\text{NDF}$ : 1058038.1/47

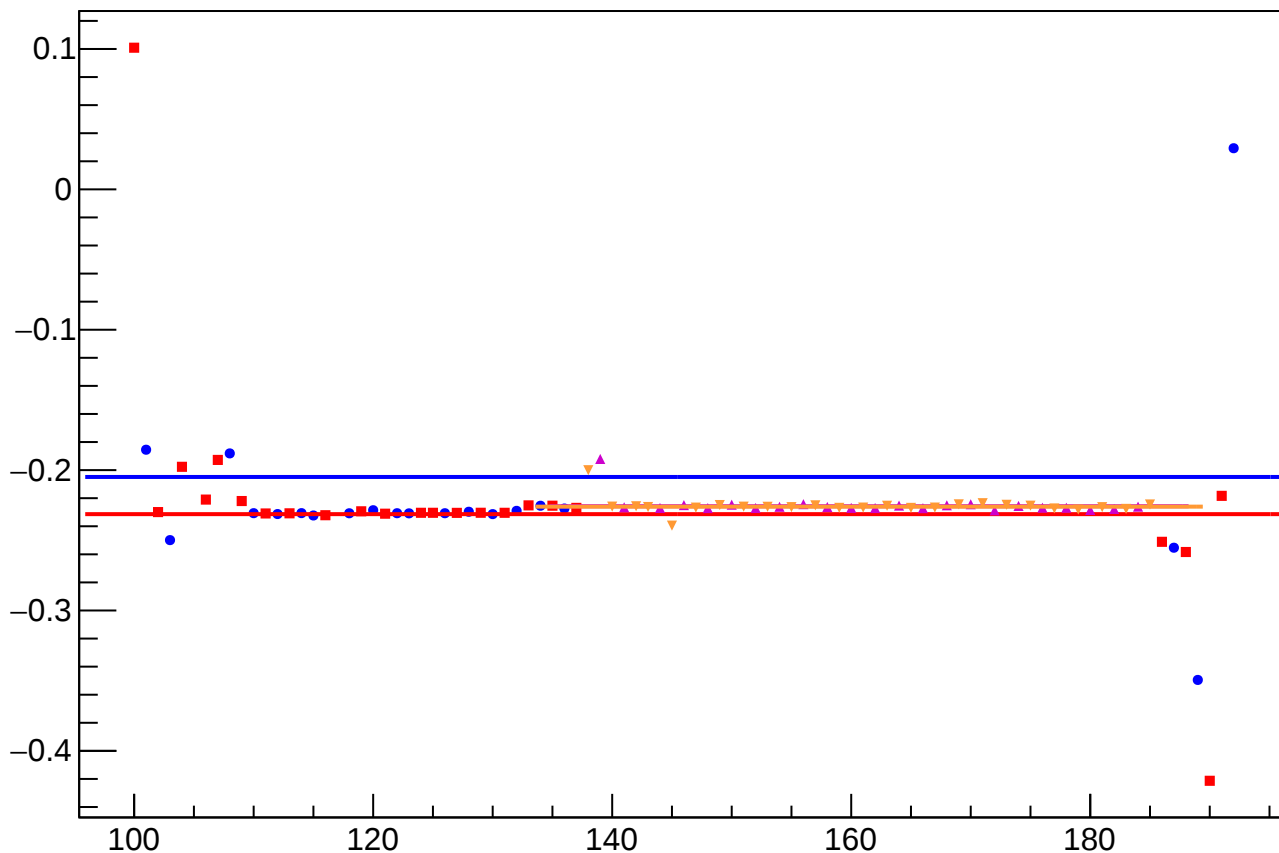
Right: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 7357234.1/42

In: 0.010+/-0.000  $\chi^2/\text{NDF}$ : 4687374.4/42

Out: 0.010+/-0.000  $\chi^2/\text{NDF}$ : 4905207.6/47

All: 0.010+/-0.000  $\chi^2/\text{NDF}$ : 9595250.9/90

# yield\_bpm16Y\_mean vs Slug, Sign Corrected



Right In:  $-0.205 \pm 0.000$   $\chi^2/\text{NDF}: 1873642421.4/19$

Left Out:  $-0.226 \pm 0.000$   $\chi^2/\text{NDF}: 21207366.3/24$

Right Out:  $-0.231 \pm 0.000$   $\chi^2/\text{NDF}: 533496058.6/22$

Left In:  $-0.226 \pm 0.000$   $\chi^2/\text{NDF}: 13717302.5/22$

Left:  $-0.226 \pm 0.000$   $\chi^2/\text{NDF}: 34951372.2/47$

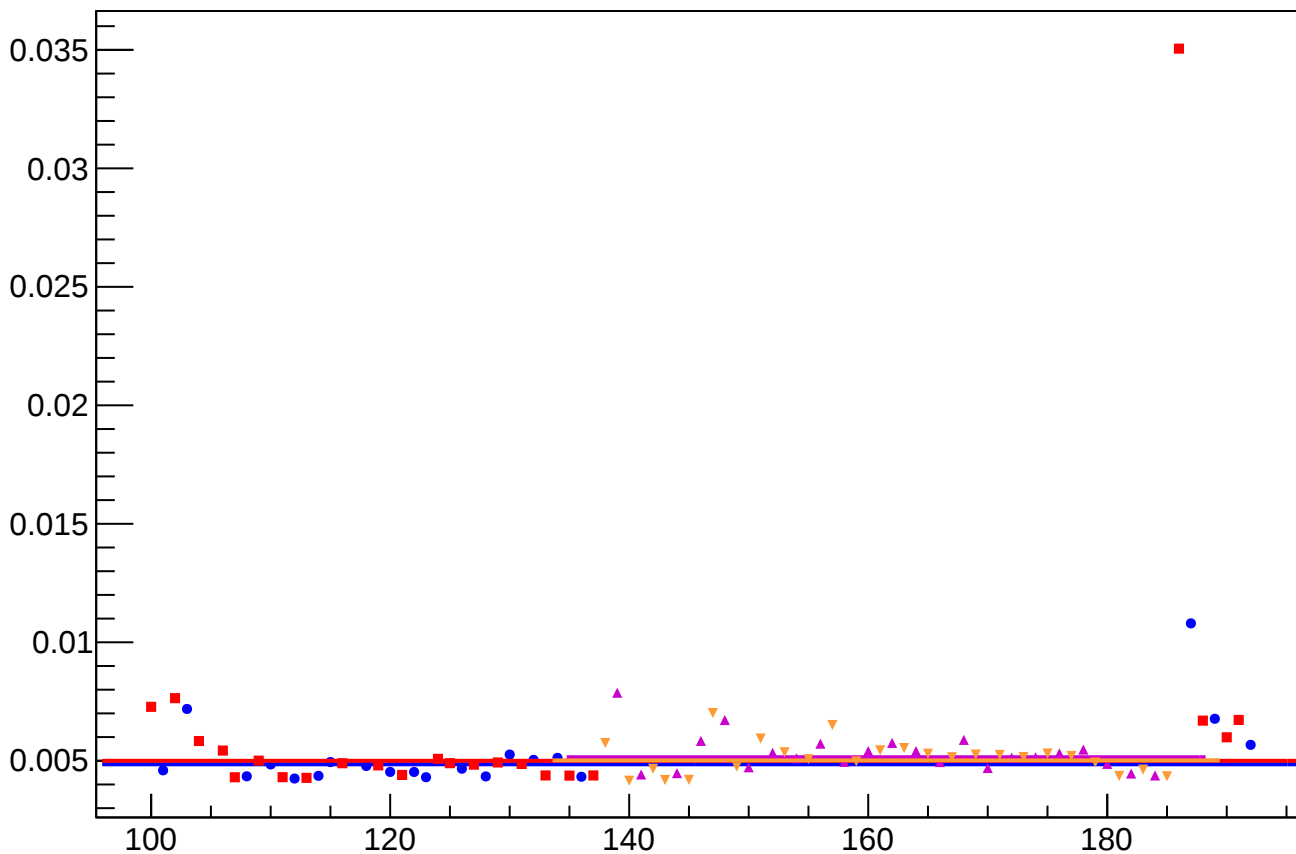
Right:  $-0.218 \pm 0.000$   $\chi^2/\text{NDF}: 2516052384.2/42$

In:  $-0.219 \pm 0.000$   $\chi^2/\text{NDF}: 1977122626.1/42$

Out:  $-0.228 \pm 0.000$   $\chi^2/\text{NDF}: 560821972.4/47$

All:  $-0.223 \pm 0.000$   $\chi^2/\text{NDF}: 2576163268.4/9$

# yield\_bpm16Y\_rms vs Slug, Sign Corrected



Right In: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 382547.5/19

Left Out: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 532623.0/24

Right Out: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 952607.6/22

Left In: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 504040.6/22

Left: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 1048260.0/47

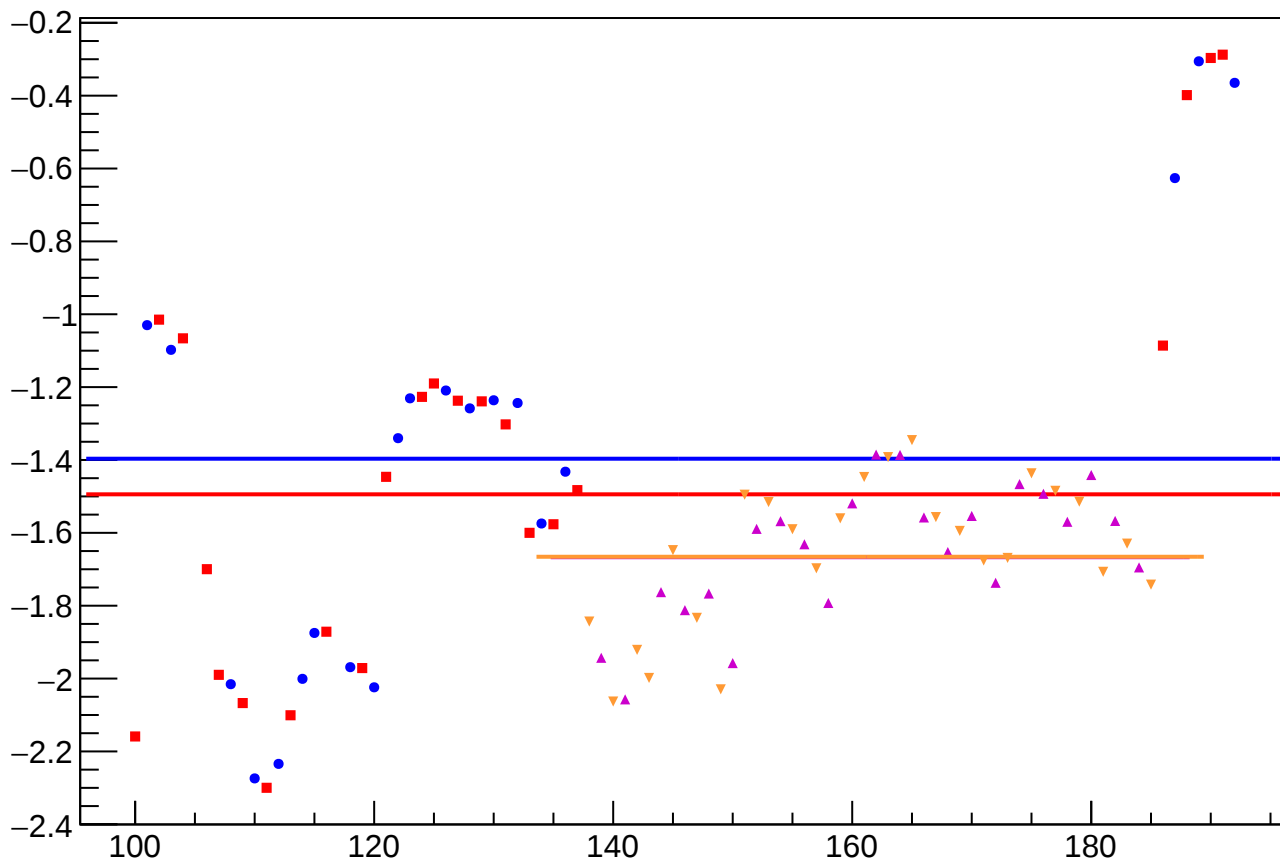
Right: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 1341856.2/42

In: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 923239.1/42

Out: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 1485361.9/47

All: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 2410103.4/90

# yield\_bpm0l01X\_mean vs Slug, Sign Corrected



Right In:  $-1.397 \pm 0.000$   $\chi^2/\text{NDF}: 38021508096.0/19$

Left Out:  $-1.666 \pm 0.000$   $\chi^2/\text{NDF}: 18368038680.8/24$

Right Out:  $-1.494 \pm 0.000$   $\chi^2/\text{NDF}: 50315788943.4/22$

Left In:  $-1.667 \pm 0.000$   $\chi^2/\text{NDF}: 14615453869.3/22$

Left:  $-1.666 \pm 0.000$   $\chi^2/\text{NDF}: 32983827631.4/47$

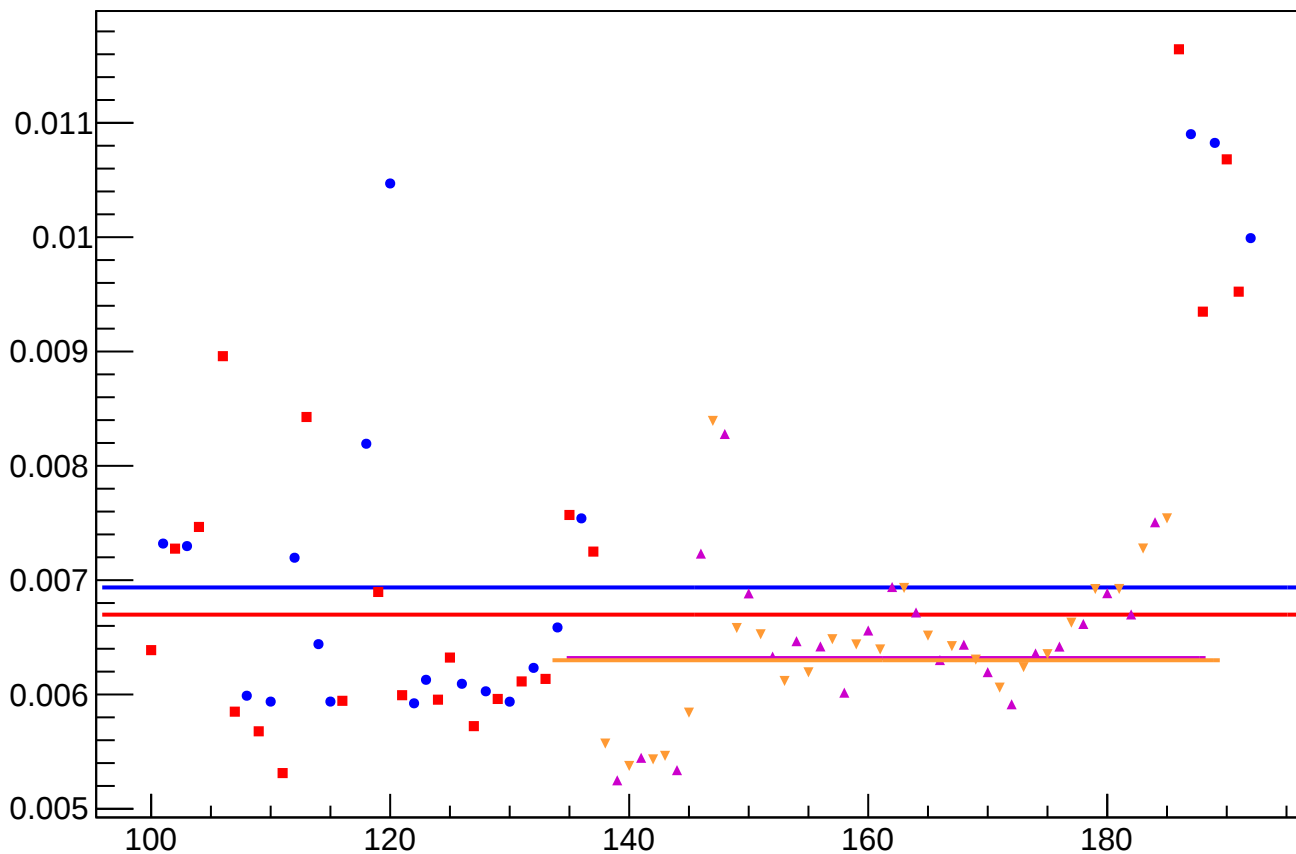
Right:  $-1.450 \pm 0.000$   $\chi^2/\text{NDF}: 89125792693.5/42$

In:  $-1.594 \pm 0.000$   $\chi^2/\text{NDF}: 60746208483.9/42$

Out:  $-1.616 \pm 0.000$   $\chi^2/\text{NDF}: 72457620333.0/47$

All:  $-1.606 \pm 0.000$   $\chi^2/\text{NDF}: 133339393742.6$

# yield\_bpm0l01X\_rms vs Slug, Sign Corrected



Right In: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 533528.1/19

Left Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 312811.2/24

Right Out: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 665561.4/22

Left In: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 334332.4/22

Left: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 647302.7/47

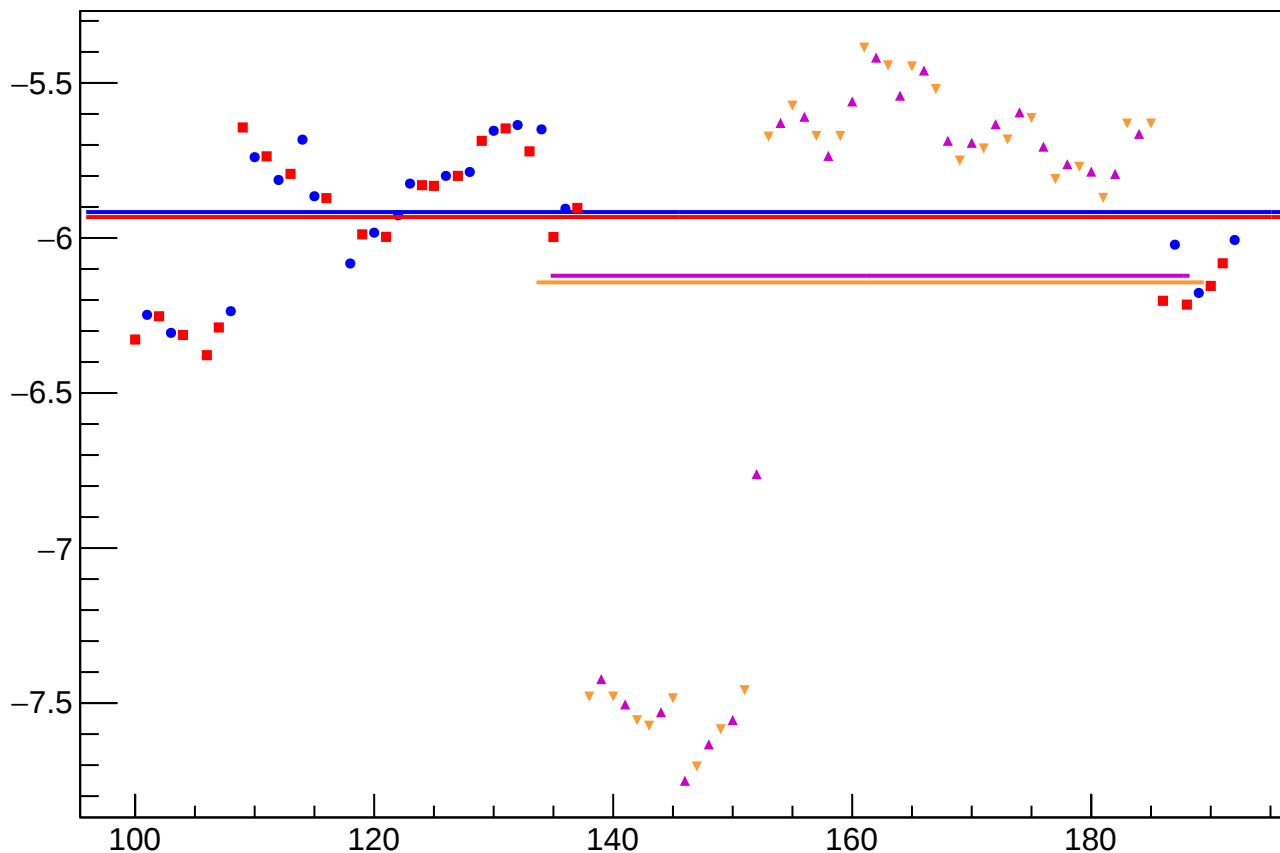
Right: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 1208431.8/42

In: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 952468.8/42

Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 1019271.9/47

All: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 1974548.4/90

# yield\_bpm0l01Y\_mean vs Slug, Sign Corrected



Right In: -5.916+/-0.000  $\chi^2/\text{NDF}$ : 11351079809.8/19

Left Out: -6.143+/-0.000  $\chi^2/\text{NDF}$ : 185721259239.3/24

Right Out: -5.933+/-0.000  $\chi^2/\text{NDF}$ : 13605569712.0/22

Left In: -6.122+/-0.000  $\chi^2/\text{NDF}$ : 159909473006.6/22

Left: -6.133+/-0.000  $\chi^2/\text{NDF}$ : 345689393988.1/47

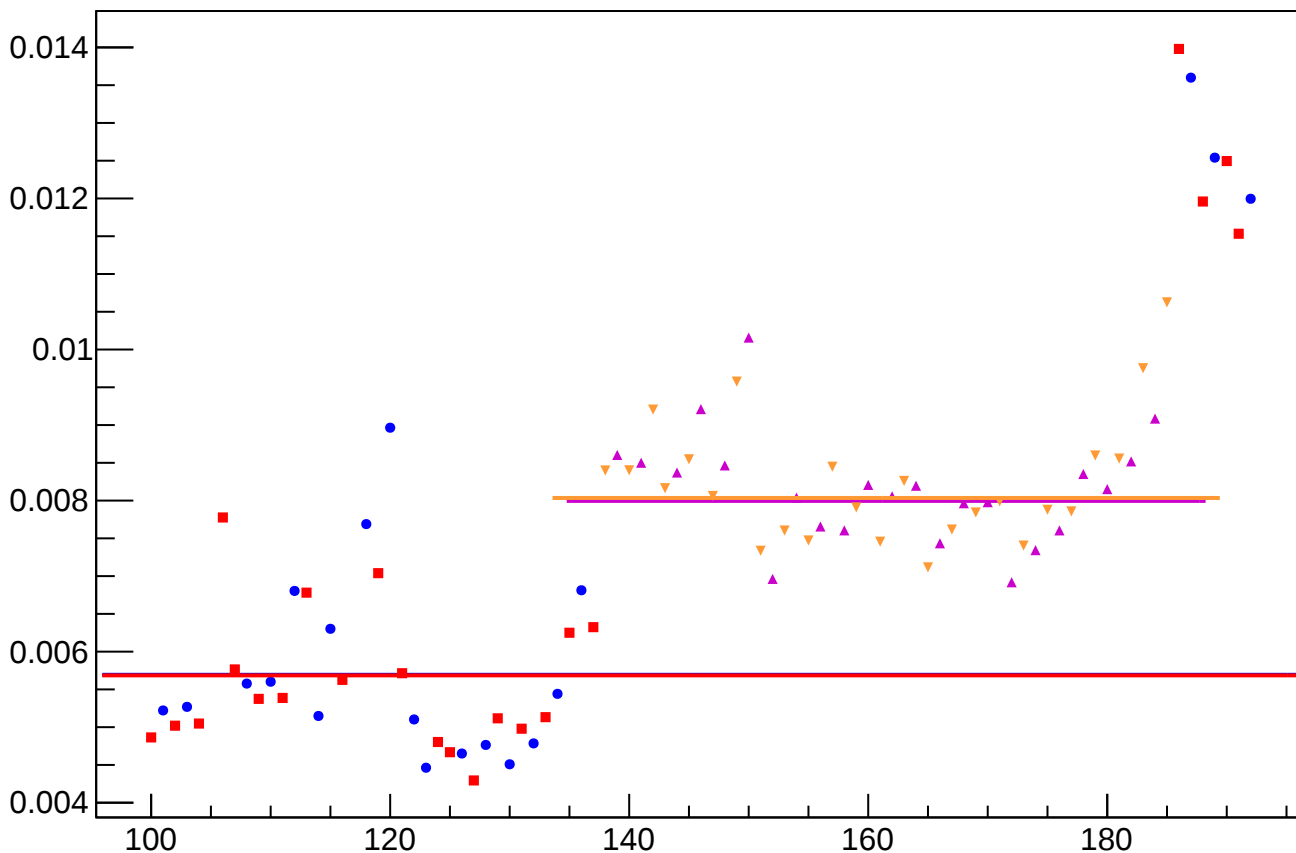
Right: -5.925+/-0.000  $\chi^2/\text{NDF}$ : 24985569546.3/42

In: -6.028+/-0.000  $\chi^2/\text{NDF}$ : 176071653782.8/42

Out: -6.043+/-0.000  $\chi^2/\text{NDF}$ : 204780503000.9/47

All: -6.035+/-0.000  $\chi^2/\text{NDF}$ : 380907105879.2

# yield\_bpm0l01Y\_rms vs Slug, Sign Corrected



Right In: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 1200645.2/19

Left Out: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 205976.0/24

Right Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 1340983.4/22

Left In: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 220203.0/22

Left: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 426558.9/47

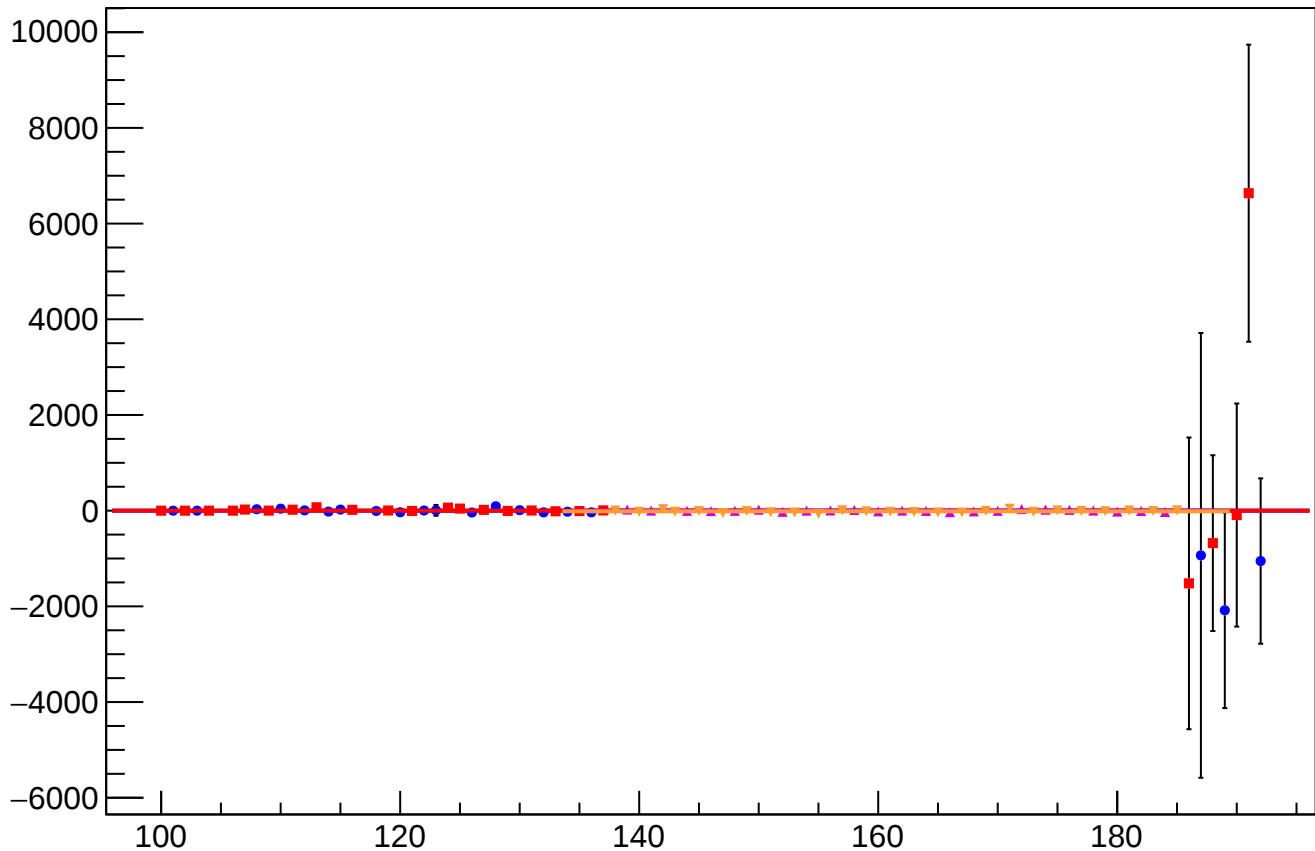
Right: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 2541640.4/42

In: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 2631050.6/42

Out: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 2902139.6/47

All: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 5533494.5/90

# diff\_cav4bX\_mean vs Slug, Sign Corrected



Right In: 0.013 $\pm$ 0.017  $\chi^2$ /NDF: 17.7/19

Left Out: -13.472 $\pm$ 2.796  $\chi^2$ /NDF: 58.5/24

Right Out: -0.003 $\pm$ 0.016  $\chi^2$ /NDF: 19.9/22

Left In: 0.489 $\pm$ 2.905  $\chi^2$ /NDF: 28.7/22

Left: -6.758 $\pm$ 2.015  $\chi^2$ /NDF: 99.2/47

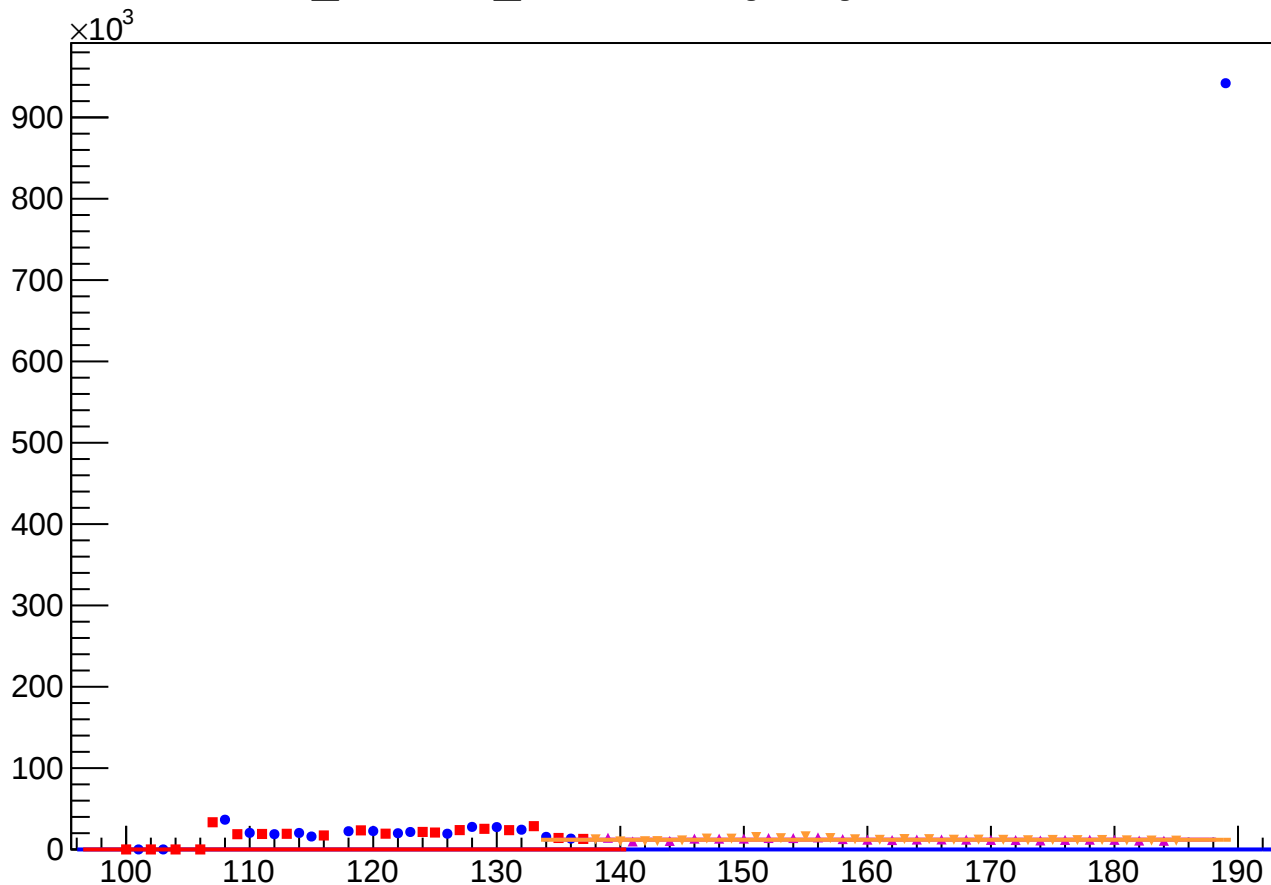
Right: 0.004 $\pm$ 0.012  $\chi^2$ /NDF: 38.1/42

In: 0.013 $\pm$ 0.017  $\chi^2$ /NDF: 46.4/42

Out: -0.004 $\pm$ 0.016  $\chi^2$ /NDF: 101.6/47

All: 0.004 $\pm$ 0.012  $\chi^2$ /NDF: 148.5/90

# diff\_cav4bX\_rms vs Slug, Sign Corrected



Right In: 18.640 $\pm$ 0.012  $\chi^2$ /NDF: 10982766.4/17

Left Out: 11909.835 $\pm$ 1.977  $\chi^2$ /NDF: 475310.2/24

Right Out: 18.311 $\pm$ 0.011  $\chi^2$ /NDF: 11056055.0/18

Left In: 12064.321 $\pm$ 2.054  $\chi^2$ /NDF: 372586.0/22

Left: 11984.125 $\pm$ 1.425  $\chi^2$ /NDF: 850831.6/47

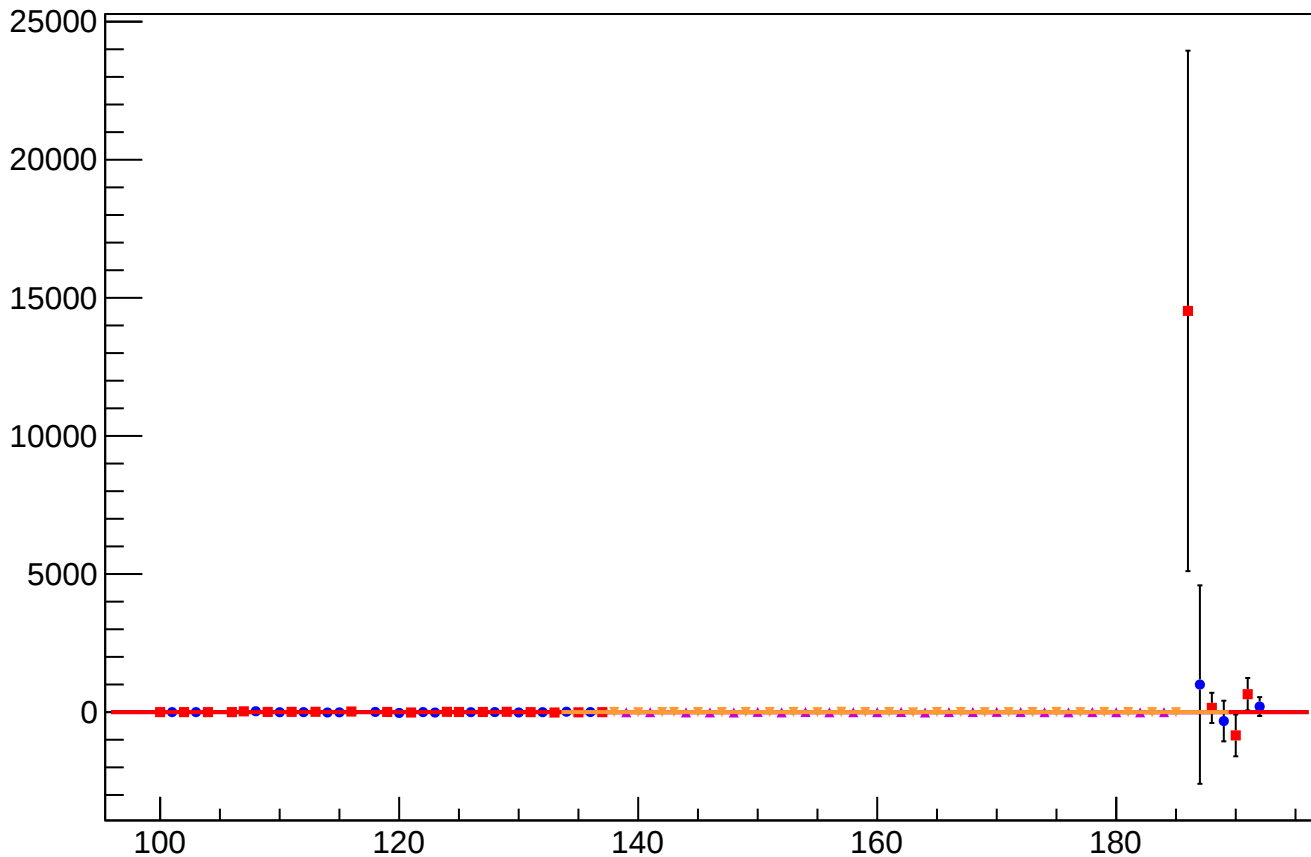
Right: 18.463 $\pm$ 0.008  $\chi^2$ /NDF: 22039209.8/36

In: 19.069 $\pm$ 0.012  $\chi^2$ /NDF: 45733258.4/40

Out: 18.704 $\pm$ 0.011  $\chi^2$ /NDF: 47698495.9/43

All: 18.873 $\pm$ 0.008  $\chi^2$ /NDF: 93432232.0/84

# diff\_cav4bY\_mean vs Slug, Sign Corrected



Right In: 0.001 $\pm$ 0.009  $\chi^2/\text{NDF}$ : 15.3/19

Left Out: 1.675 $\pm$ 1.021  $\chi^2/\text{NDF}$ : 17.9/24

Right Out: -0.014 $\pm$ 0.009  $\chi^2/\text{NDF}$ : 23.5/22

Left In: -0.843 $\pm$ 1.043  $\chi^2/\text{NDF}$ : 35.7/22

Left: 0.443 $\pm$ 0.730  $\chi^2/\text{NDF}$ : 56.5/47

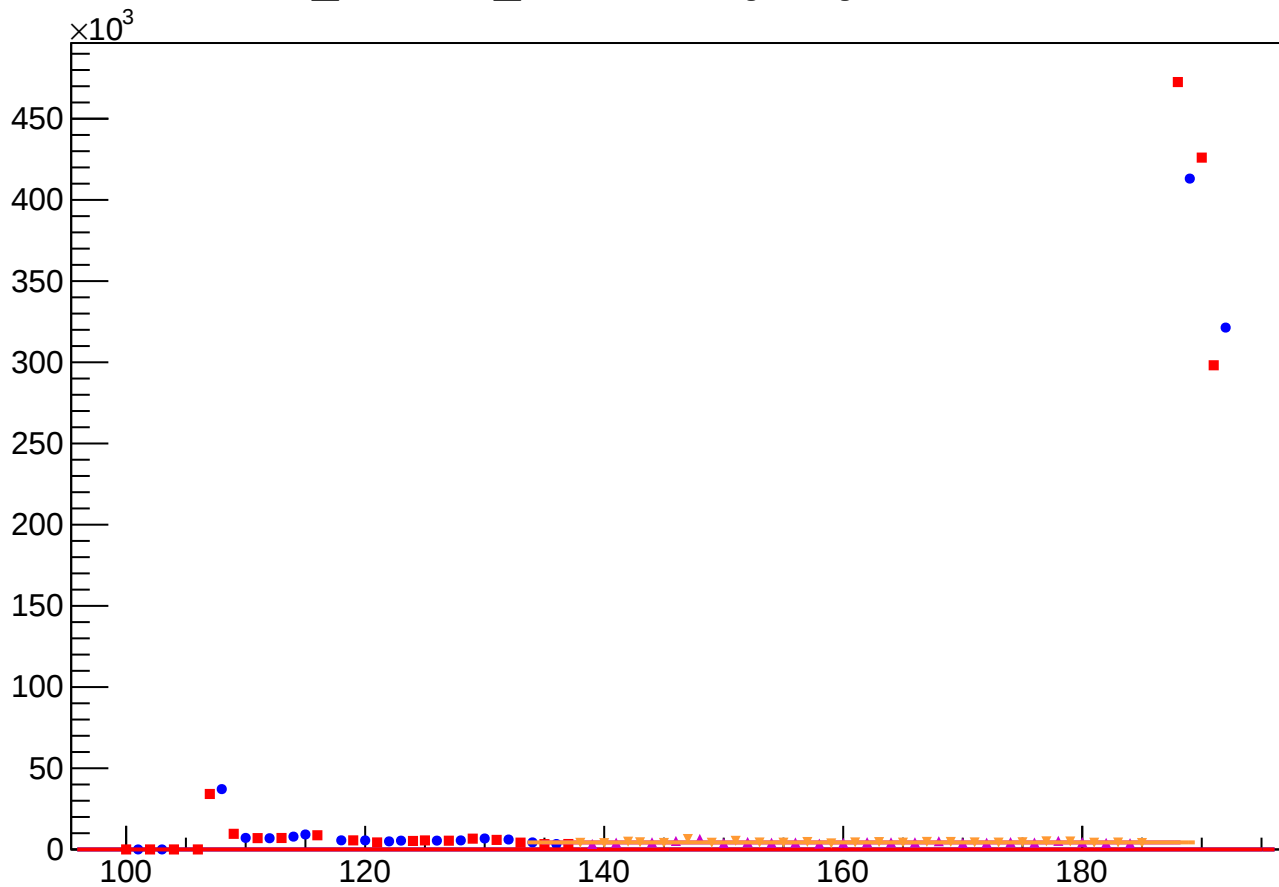
Right: -0.007 $\pm$ 0.006  $\chi^2/\text{NDF}$ : 40.2/42

In: 0.001 $\pm$ 0.009  $\chi^2/\text{NDF}$ : 51.6/42

Out: -0.014 $\pm$ 0.009  $\chi^2/\text{NDF}$ : 44.2/47

All: -0.007 $\pm$ 0.006  $\chi^2/\text{NDF}$ : 97.1/90

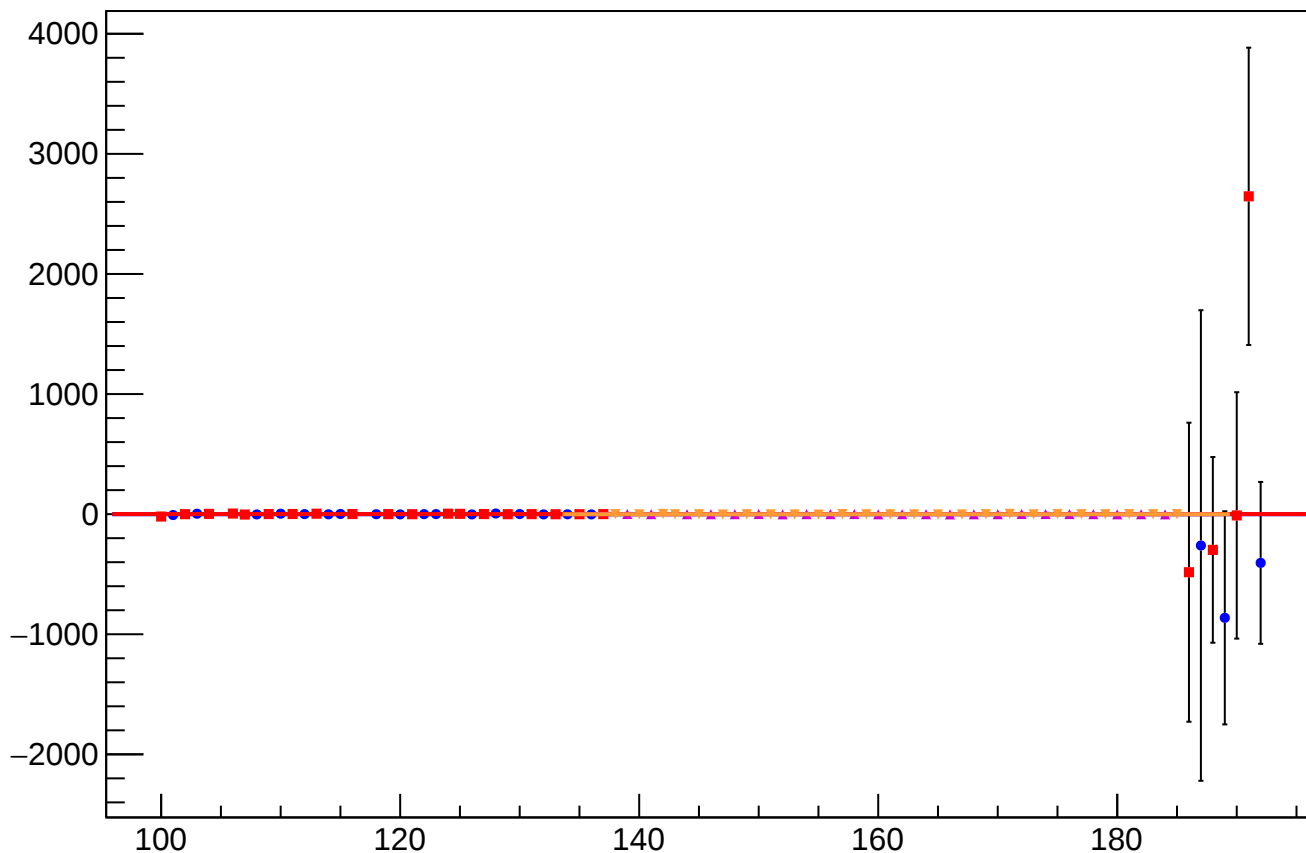
# diff\_cav4bY\_rms vs Slug, Sign Corrected



Right In:  $9.938 \pm 0.007$   $\chi^2/\text{NDF}$ : 13310903.3/18  
 Left Out:  $4350.545 \pm 0.722$   $\chi^2/\text{NDF}$ : 384749.0/24  
 Right Out:  $9.854 \pm 0.006$   $\chi^2/\text{NDF}$ : 13725737.6/21  
 Left In:  $4314.568 \pm 0.738$   $\chi^2/\text{NDF}$ : 534594.3/22

Left:  $4332.940 \pm 0.516$   $\chi^2/\text{NDF}$ : 920558.3/47  
 Right:  $9.893 \pm 0.004$   $\chi^2/\text{NDF}$ : 27036729.0/40  
 In:  $10.273 \pm 0.007$   $\chi^2/\text{NDF}$ : 47906931.2/41  
 Out:  $10.166 \pm 0.006$   $\chi^2/\text{NDF}$ : 50255466.7/46  
 All:  $10.216 \pm 0.004$   $\chi^2/\text{NDF}$ : 98162542.1/88

# diff\_cav4cX\_mean vs Slug, Sign Corrected



Right In: -0.702 $\pm$ 0.485  $\chi^2/\text{NDF}$ : 23.8/19

Left Out: -0.774 $\pm$ 0.164  $\chi^2/\text{NDF}$ : 58.4/24

Right Out: 0.761 $\pm$ 0.502  $\chi^2/\text{NDF}$ : 16.6/22

Left In: 0.020 $\pm$ 0.170  $\chi^2/\text{NDF}$ : 29.2/22

Left: -0.391 $\pm$ 0.118  $\chi^2/\text{NDF}$ : 98.9/47

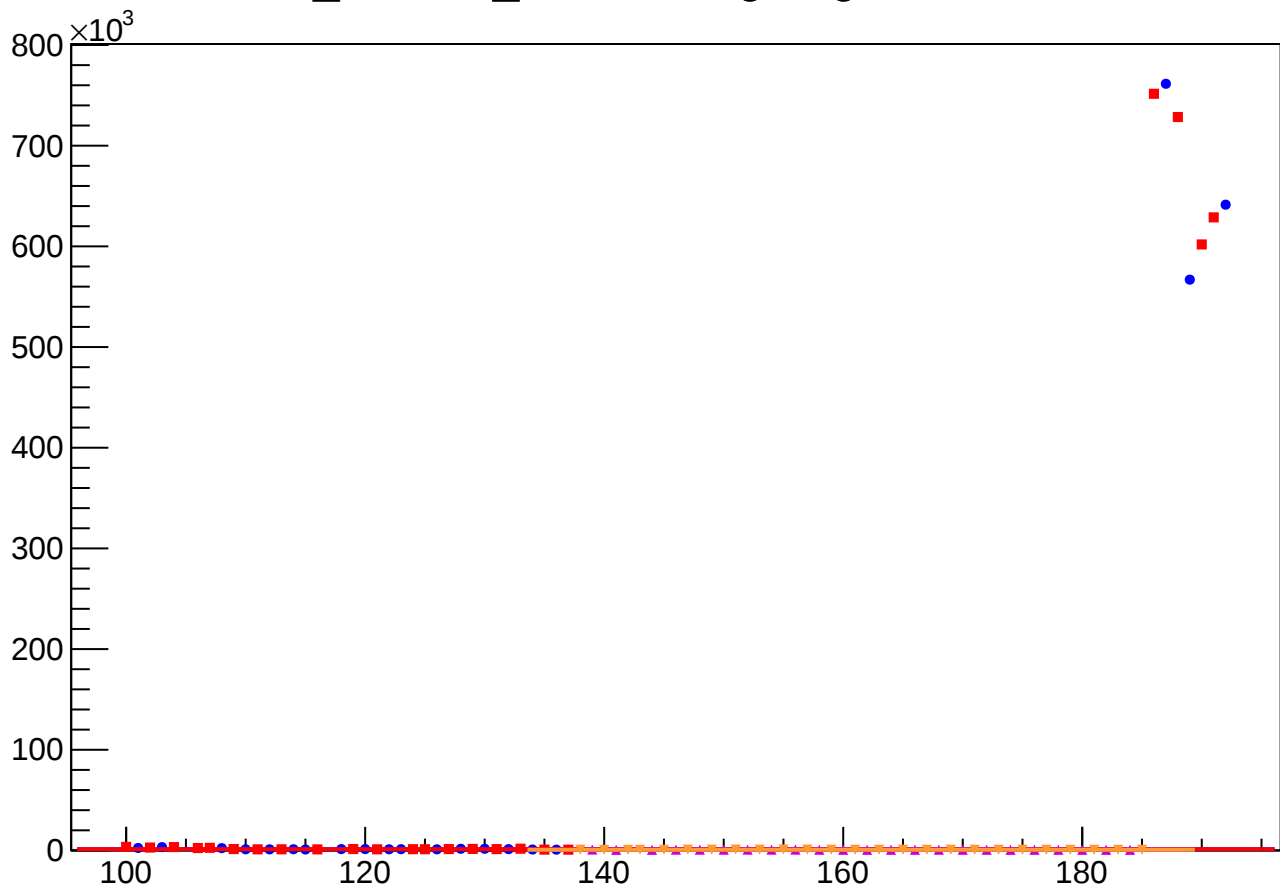
Right: 0.004 $\pm$ 0.349  $\chi^2/\text{NDF}$ : 44.8/42

In: -0.059 $\pm$ 0.161  $\chi^2/\text{NDF}$ : 55.0/42

Out: -0.626 $\pm$ 0.156  $\chi^2/\text{NDF}$ : 83.4/47

All: -0.350 $\pm$ 0.112  $\chi^2/\text{NDF}$ : 144.9/90

# diff\_cav4cX\_rms vs Slug, Sign Corrected



Right In: 1164.759 $\pm$ 0.343  $\chi^2/\text{NDF}$ : 4504656.7/19

Left Out: 700.797 $\pm$ 0.116  $\chi^2/\text{NDF}$ : 392521.4/24

Right Out: 1249.943 $\pm$ 0.355  $\chi^2/\text{NDF}$ : 5312150.9/22

Left In: 706.950 $\pm$ 0.120  $\chi^2/\text{NDF}$ : 338177.1/22

Left: 703.766 $\pm$ 0.084  $\chi^2/\text{NDF}$ : 732052.1/47

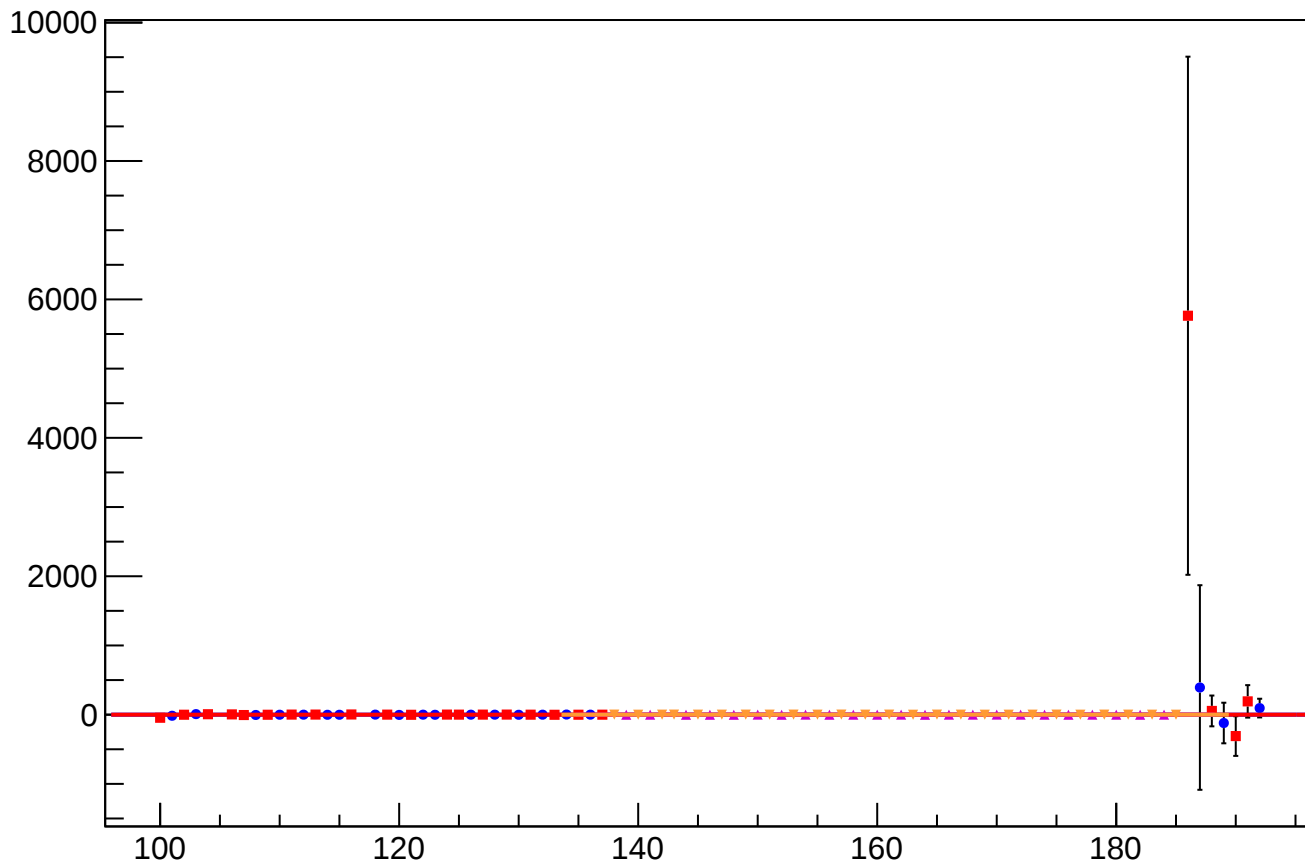
Right: 1205.877 $\pm$ 0.247  $\chi^2/\text{NDF}$ : 9846587.6/42

In: 757.104 $\pm$ 0.114  $\chi^2/\text{NDF}$ : 6429549.0/42

Out: 753.912 $\pm$ 0.110  $\chi^2/\text{NDF}$ : 7865683.9/47

All: 755.464 $\pm$ 0.079  $\chi^2/\text{NDF}$ : 14295639.0/90

# diff\_cav4cY\_mean vs Slug, Sign Corrected



Right In:  $-0.059 \pm 0.271$   $\chi^2/\text{NDF}$ : 21.7/19

Left Out:  $0.236 \pm 0.122$   $\chi^2/\text{NDF}$ : 17.6/24

Right Out:  $-0.244 \pm 0.265$   $\chi^2/\text{NDF}$ : 25.0/22

Left In:  $-0.115 \pm 0.125$   $\chi^2/\text{NDF}$ : 35.0/22

Left:  $0.065 \pm 0.088$   $\chi^2/\text{NDF}$ : 56.6/47

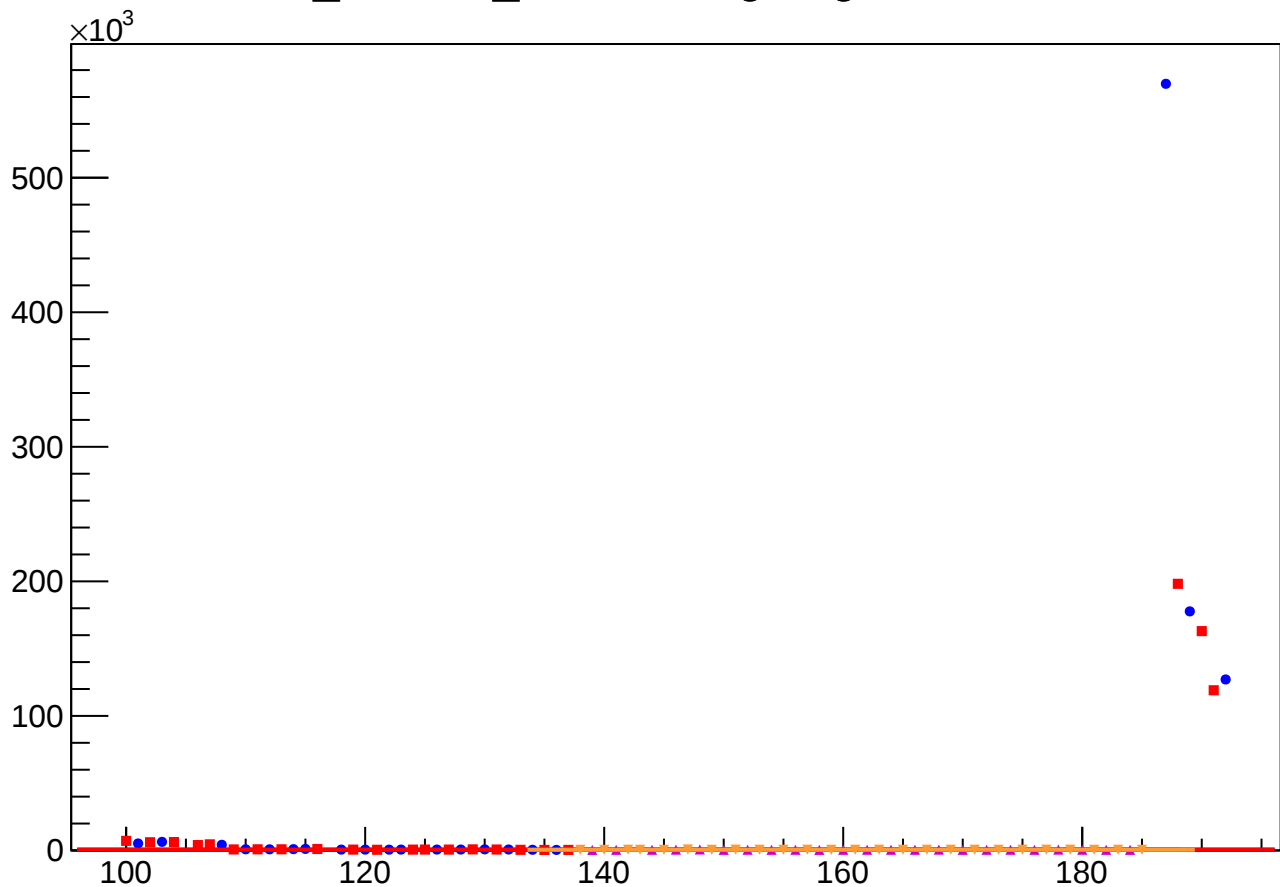
Right:  $-0.154 \pm 0.189$   $\chi^2/\text{NDF}$ : 46.9/42

In:  $-0.105 \pm 0.114$   $\chi^2/\text{NDF}$ : 56.7/42

Out:  $0.152 \pm 0.111$   $\chi^2/\text{NDF}$ : 45.3/47

All:  $0.026 \pm 0.080$   $\chi^2/\text{NDF}$ : 104.5/90

# diff\_cav4cY\_rms vs Slug, Sign Corrected



Right In: 609.267+/-0.191  $\chi^2/\text{NDF}$ : 5918230.2/19

Left Out: 522.416+/-0.087  $\chi^2/\text{NDF}$ : 331573.1/24

Right Out: 600.286+/-0.187  $\chi^2/\text{NDF}$ : 6279236.6/21

Left In: 519.909+/-0.089  $\chi^2/\text{NDF}$ : 444746.3/22

Left: 521.193+/-0.062  $\chi^2/\text{NDF}$ : 776728.3/47

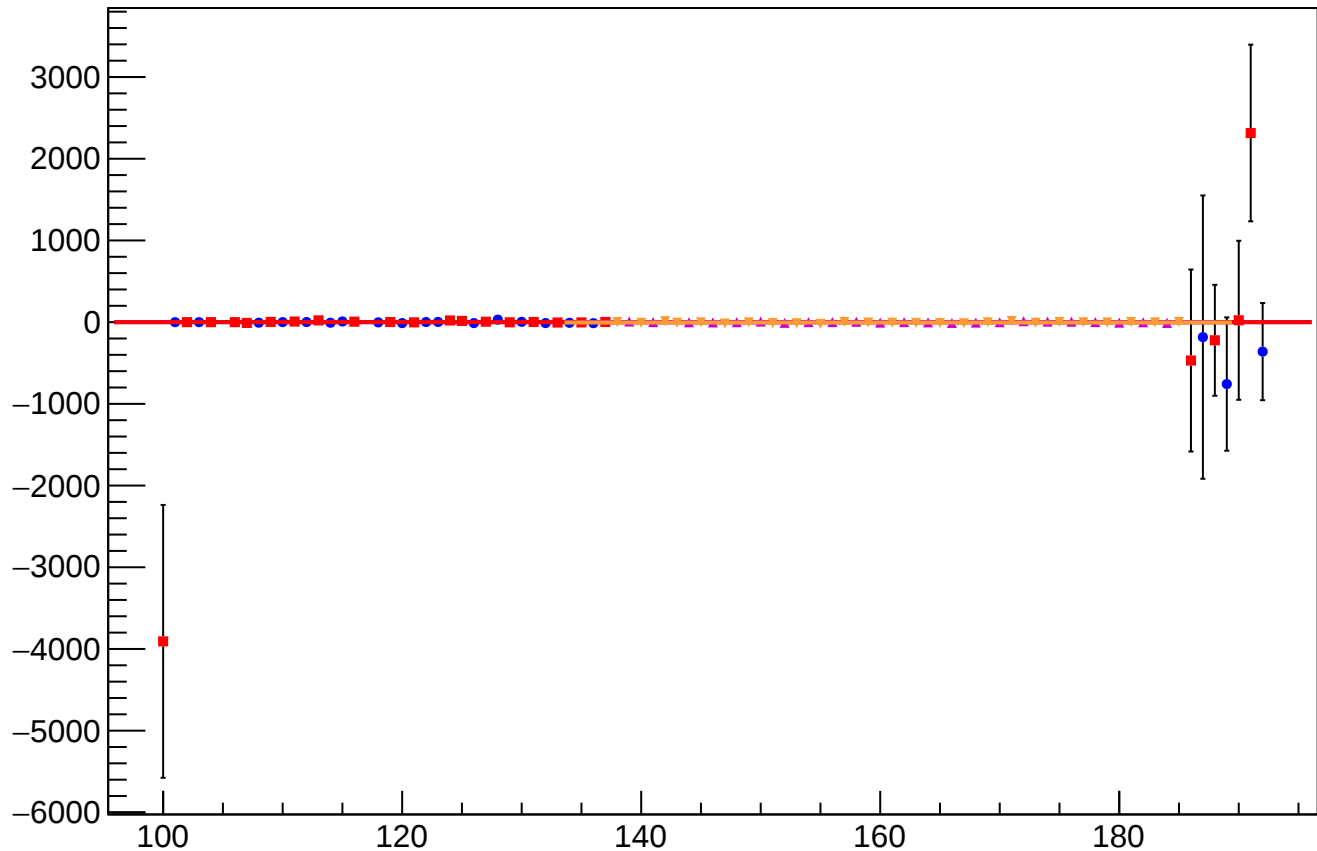
Right: 604.680+/-0.134  $\chi^2/\text{NDF}$ : 12198592.2/41

In: 535.729+/-0.081  $\chi^2/\text{NDF}$ : 6542503.6/42

Out: 536.136+/-0.079  $\chi^2/\text{NDF}$ : 6753238.2/46

All: 535.938+/-0.056  $\chi^2/\text{NDF}$ : 13295754.9/89

# diff\_cav4dX\_mean vs Slug, Sign Corrected



Right In:  $-0.022 \pm 0.021$   $\chi^2/\text{NDF}$ : 16.9/19

Left Out:  $-4.474 \pm 0.956$   $\chi^2/\text{NDF}$ : 58.2/24

Right Out:  $0.027 \pm 0.020$   $\chi^2/\text{NDF}$ : 21.7/22

Left In:  $0.193 \pm 0.990$   $\chi^2/\text{NDF}$ : 29.2/22

Left:  $-2.224 \pm 0.688$   $\chi^2/\text{NDF}$ : 99.0/47

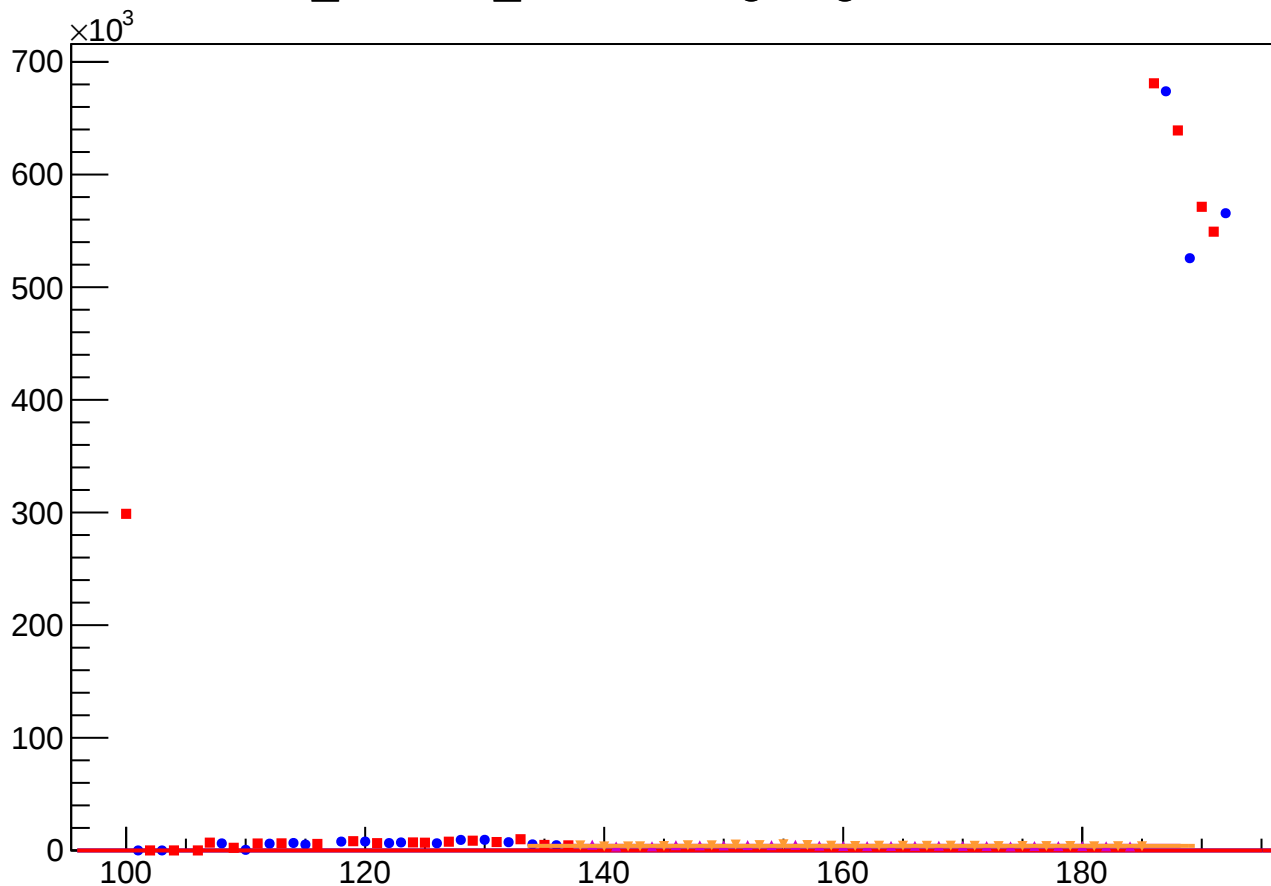
Right:  $0.004 \pm 0.014$   $\chi^2/\text{NDF}$ : 41.4/42

In:  $-0.022 \pm 0.021$   $\chi^2/\text{NDF}$ : 46.2/42

Out:  $0.025 \pm 0.020$   $\chi^2/\text{NDF}$ : 102.1/47

All:  $0.003 \pm 0.014$   $\chi^2/\text{NDF}$ : 150.8/90

# diff\_cav4dX\_rms vs Slug, Sign Corrected



Right In: 17.336+/-0.015     $\chi^2$ /NDF: 13258603.7/19

Left Out: 4074.257+/-0.676     $\chi^2$ /NDF: 416916.0/24

Right Out: 17.268+/-0.014     $\chi^2$ /NDF: 14484166.1/22

Left In: 4113.744+/-0.700     $\chi^2$ /NDF: 354965.8/22

Left: 4093.298+/-0.486     $\chi^2$ /NDF: 773528.6/47

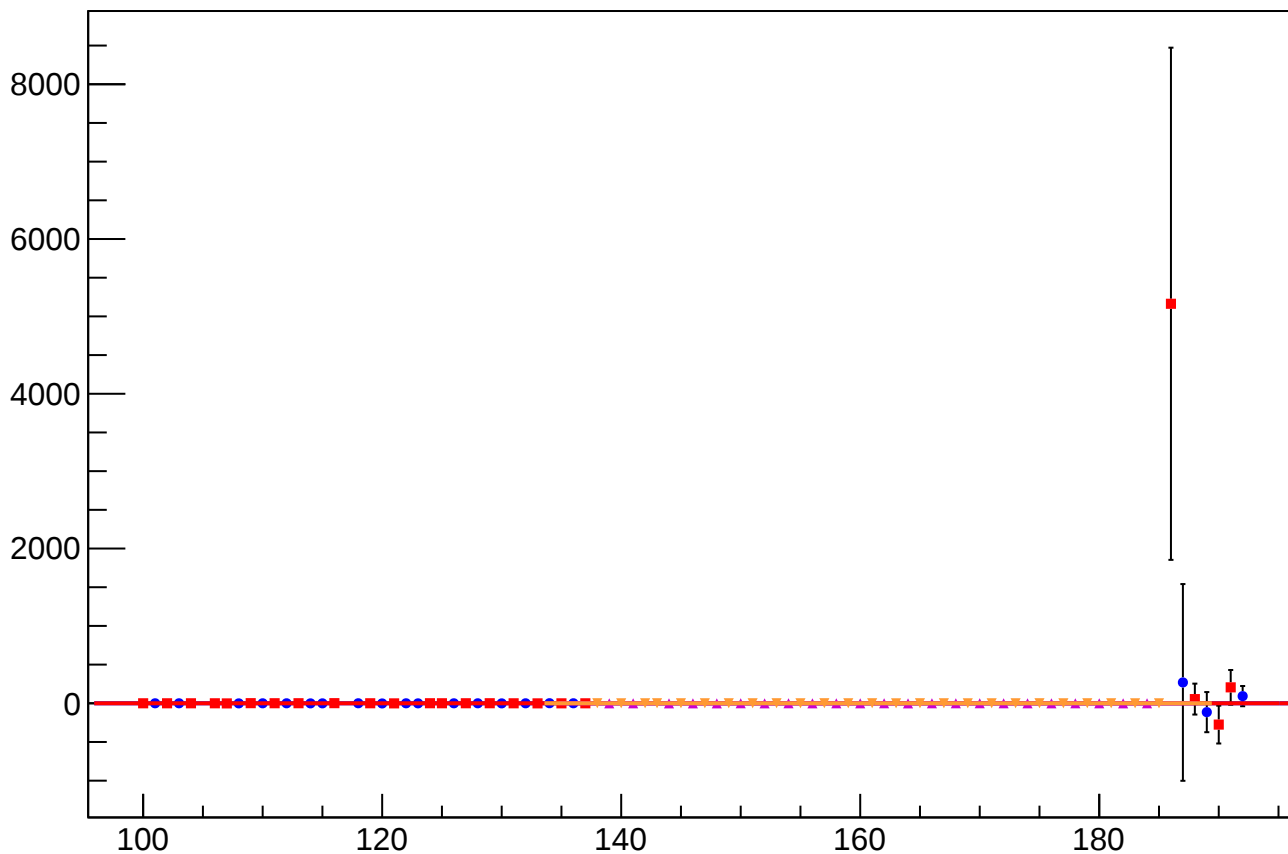
Right: 17.301+/-0.010     $\chi^2$ /NDF: 27742781.1/42

In: 19.142+/-0.015     $\chi^2$ /NDF: 47827833.2/42

Out: 19.005+/-0.014     $\chi^2$ /NDF: 50937140.7/47

All: 19.070+/-0.010     $\chi^2$ /NDF: 98765019.6/90

# diff\_cav4dY\_mean vs Slug, Sign Corrected



Right In:  $0.000 \pm 0.002$   $\chi^2/\text{NDF}: 16.1/19$

Left Out:  $0.151 \pm 0.076$   $\chi^2/\text{NDF}: 16.8/24$

Right Out:  $-0.001 \pm 0.002$   $\chi^2/\text{NDF}: 22.7/22$

Left In:  $-0.075 \pm 0.078$   $\chi^2/\text{NDF}: 34.8/22$

Left:  $0.041 \pm 0.055$   $\chi^2/\text{NDF}: 55.8/47$

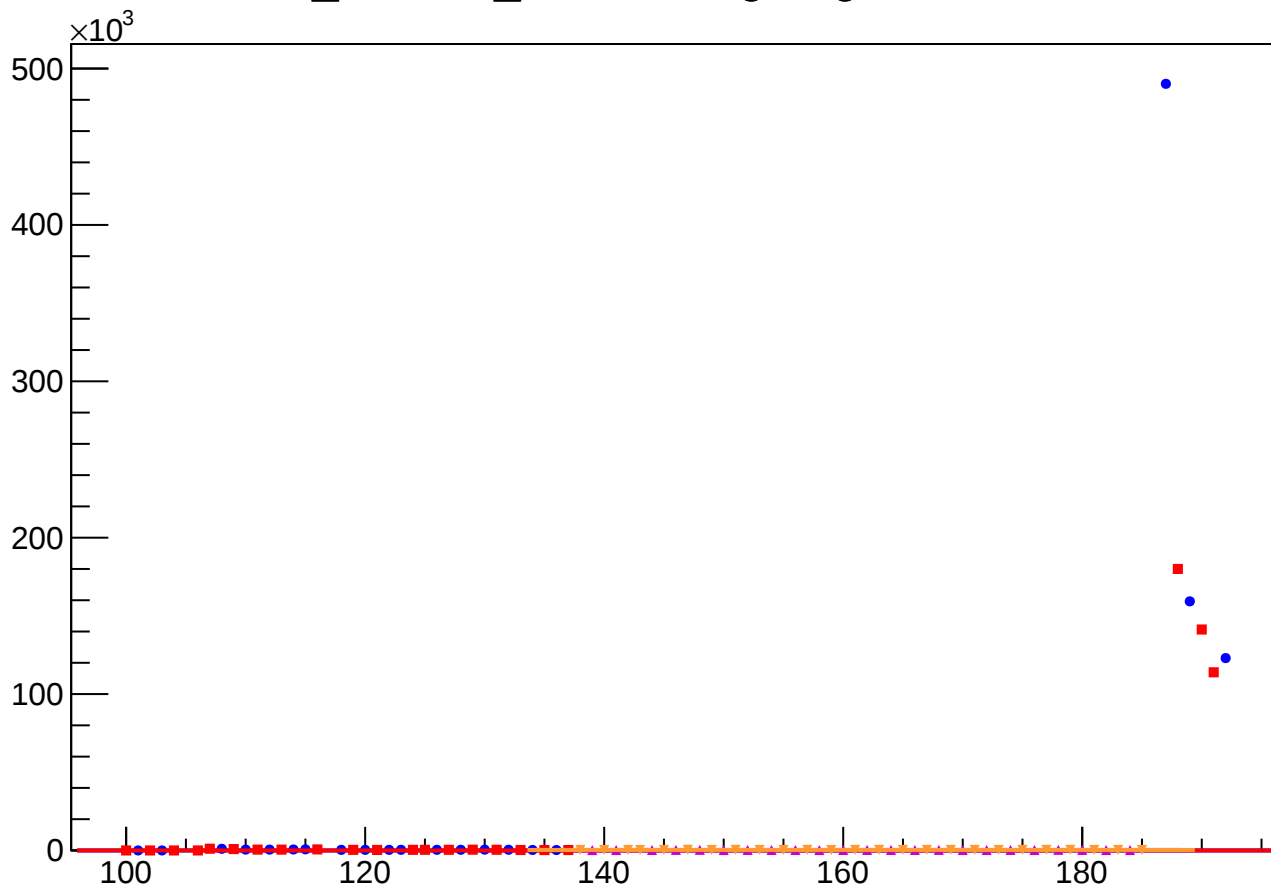
Right:  $-0.000 \pm 0.001$   $\chi^2/\text{NDF}: 38.9/42$

In:  $0.000 \pm 0.002$   $\chi^2/\text{NDF}: 51.8/42$

Out:  $-0.001 \pm 0.002$   $\chi^2/\text{NDF}: 43.4/47$

All:  $-0.000 \pm 0.001$   $\chi^2/\text{NDF}: 95.3/90$

# diff\_cav4dY\_rms vs Slug, Sign Corrected



Right In: 1.698 $\pm$ 0.001  $\chi^2$ /NDF: 13691048.1/19

Left Out: 325.469 $\pm$ 0.054  $\chi^2$ /NDF: 350046.8/24

Right Out: 1.728 $\pm$ 0.001  $\chi^2$ /NDF: 13498796.6/21

Left In: 325.201 $\pm$ 0.055  $\chi^2$ /NDF: 428069.7/22

Left: 325.339 $\pm$ 0.039  $\chi^2$ /NDF: 778128.6/47

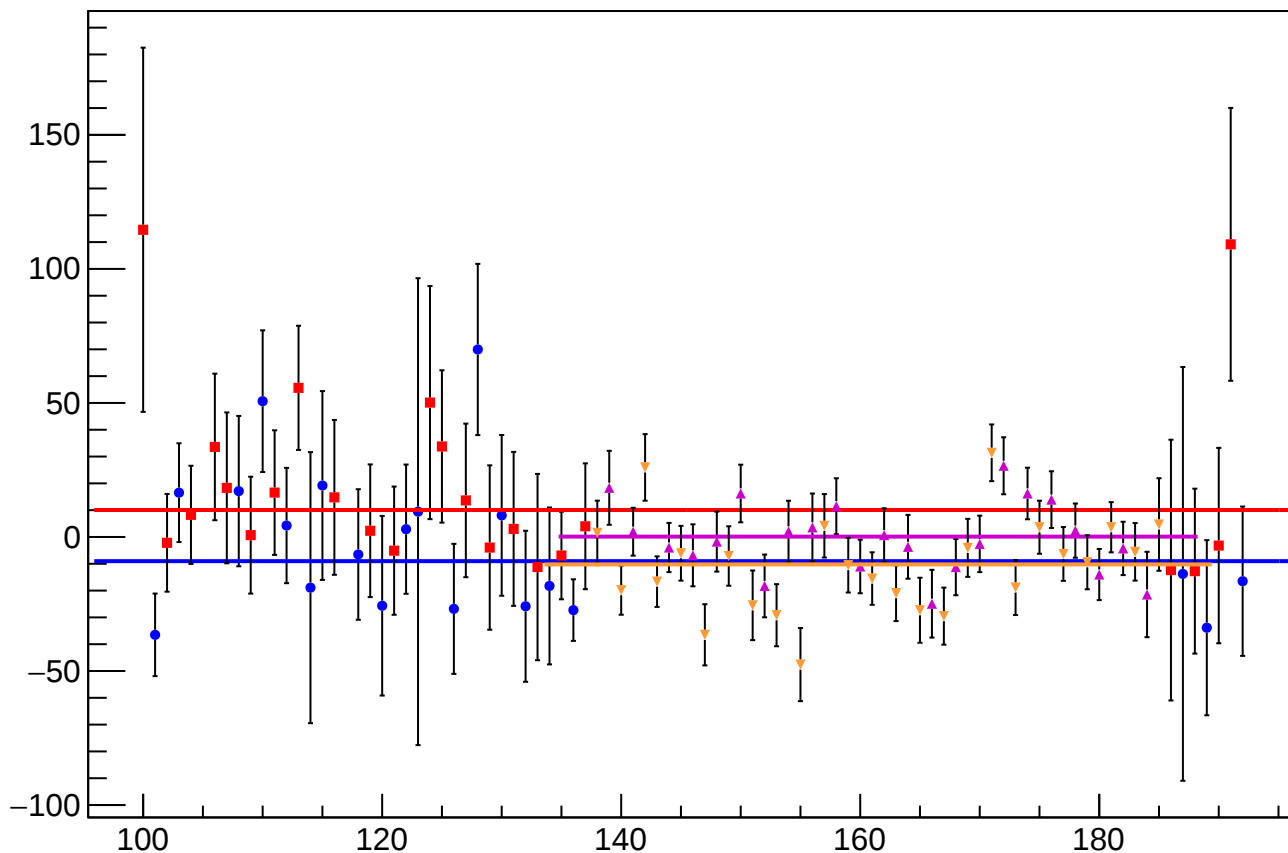
Right: 1.714 $\pm$ 0.001  $\chi^2$ /NDF: 27190071.5/41

In: 1.914 $\pm$ 0.001  $\chi^2$ /NDF: 48094505.5/42

Out: 1.937 $\pm$ 0.001  $\chi^2$ /NDF: 49806642.7/46

All: 1.926 $\pm$ 0.001  $\chi^2$ /NDF: 97901286.0/89

# diff\_bpm4aX\_mean vs Slug, Sign Corrected



Right In:  $-9.024 \pm 5.436$   $\chi^2/\text{NDF}$ : 23.3/19

Left Out:  $-10.235 \pm 2.167$   $\chi^2/\text{NDF}$ : 58.0/24

Right Out:  $10.061 \pm 5.465$   $\chi^2/\text{NDF}$ : 16.4/22

Left In:  $0.130 \pm 2.242$   $\chi^2/\text{NDF}$ : 29.8/22

Left:  $-5.230 \pm 1.558$   $\chi^2/\text{NDF}$ : 98.9/47

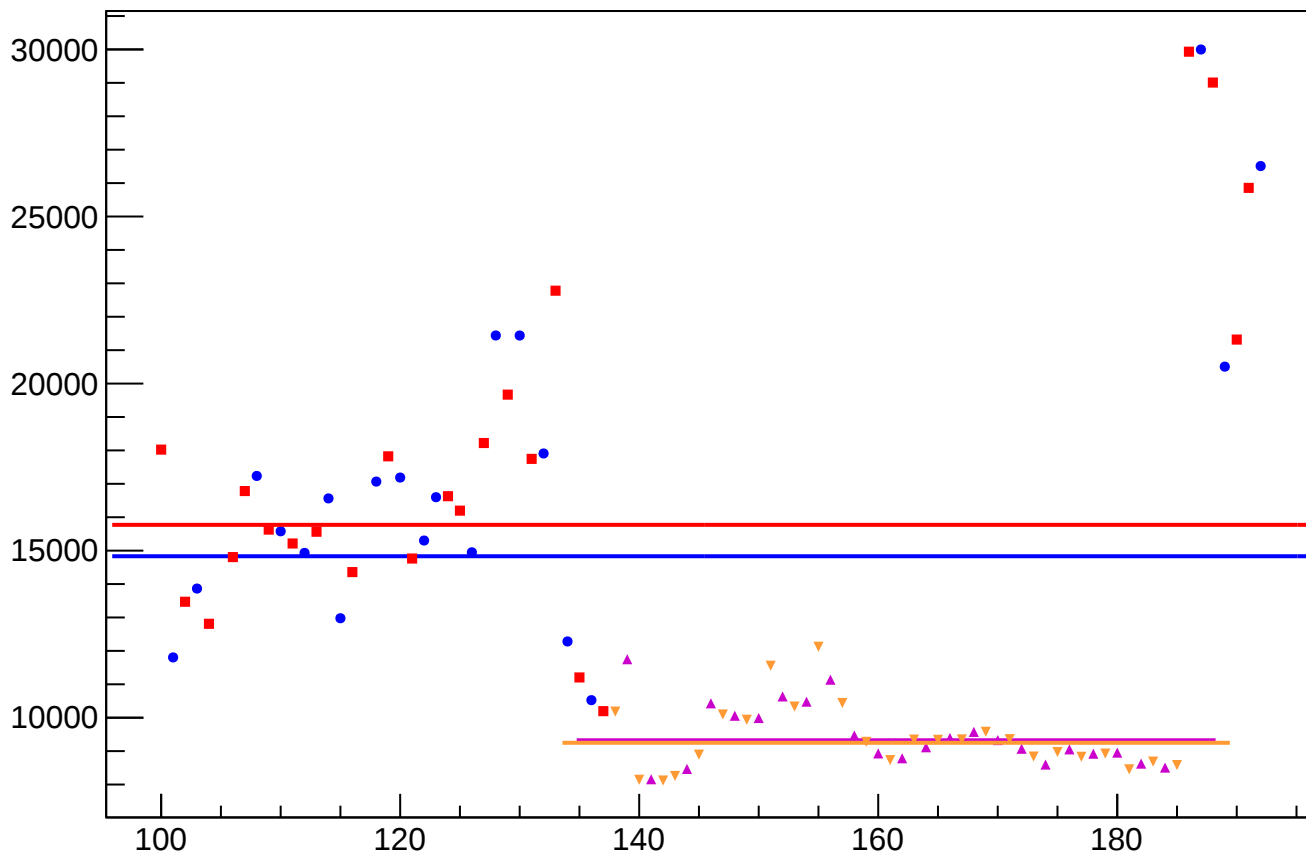
Right:  $0.467 \pm 3.854$   $\chi^2/\text{NDF}$ : 45.8/42

In:  $-1.201 \pm 2.073$   $\chi^2/\text{NDF}$ : 55.5/42

Out:  $-7.478 \pm 2.014$   $\chi^2/\text{NDF}$ : 86.3/47

All:  $-4.430 \pm 1.445$   $\chi^2/\text{NDF}$ : 146.5/90

# diff\_bpm4aX\_rms vs Slug, Sign Corrected



Right In: 14832.499+/-3.844  $\chi^2/\text{NDF}$ : 1127190.3/19

Left Out: 9249.358+/-1.532  $\chi^2/\text{NDF}$ : 332003.4/24

Right Out: 15772.131+/-3.865  $\chi^2/\text{NDF}$ : 1187708.0/22

Left In: 9325.112+/-1.585  $\chi^2/\text{NDF}$ : 280927.7/22

Left: 9285.937+/-1.102  $\chi^2/\text{NDF}$ : 614111.7/47

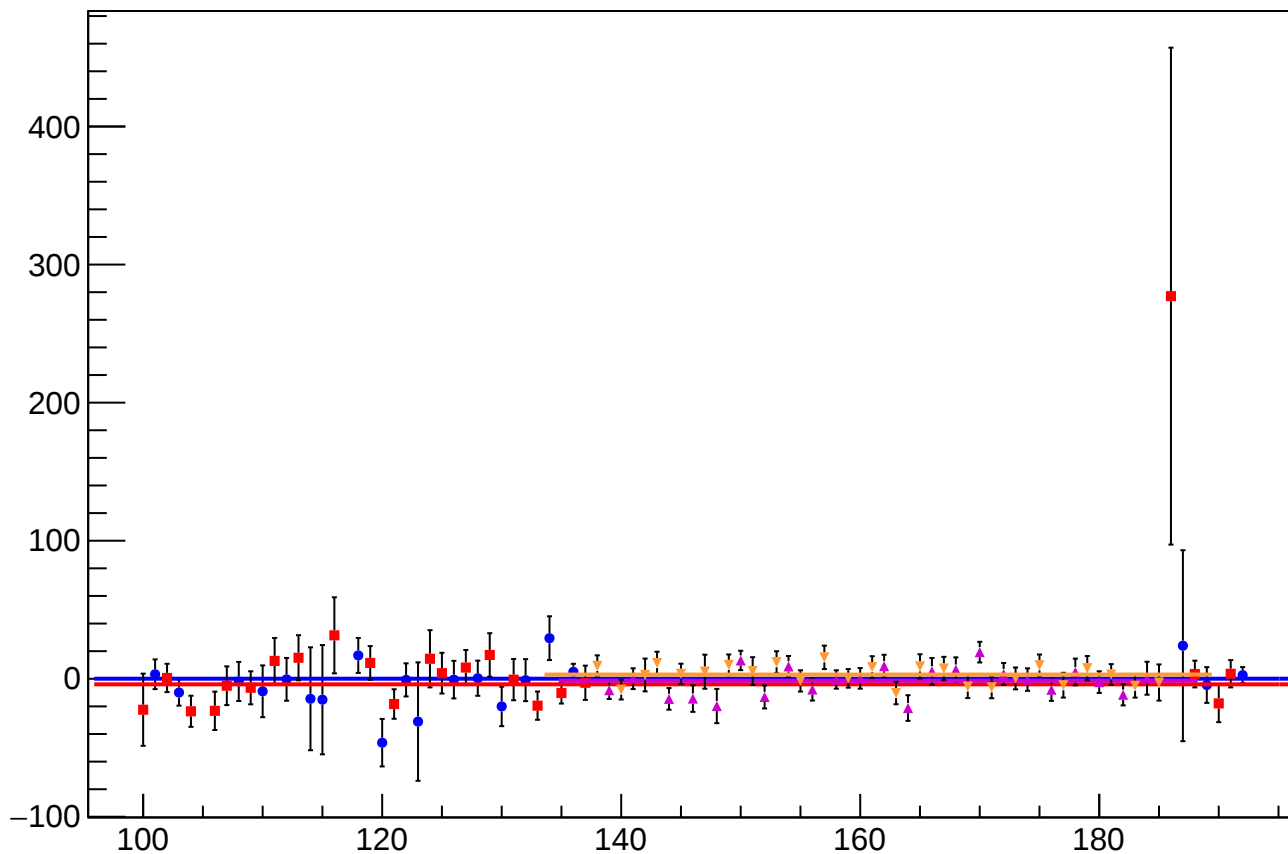
Right: 15299.765+/-2.725  $\chi^2/\text{NDF}$ : 2344618.1/42

In: 10125.956+/-1.466  $\chi^2/\text{NDF}$ : 3162693.1/42

Out: 10135.273+/-1.424  $\chi^2/\text{NDF}$ : 3981662.0/47

All: 10130.748+/-1.021  $\chi^2/\text{NDF}$ : 7144375.9/99

# diff\_bpm4aY\_mean vs Slug, Sign Corrected



Right In:  $0.059 \pm 2.668$   $\chi^2/\text{NDF}: 17.9/19$

Left Out:  $3.062 \pm 1.659$   $\chi^2/\text{NDF}: 18.3/24$

Right Out:  $-4.019 \pm 2.658$   $\chi^2/\text{NDF}: 24.7/22$

Left In:  $-1.394 \pm 1.693$   $\chi^2/\text{NDF}: 35.4/22$

Left:  $0.879 \pm 1.185$   $\chi^2/\text{NDF}: 57.2/47$

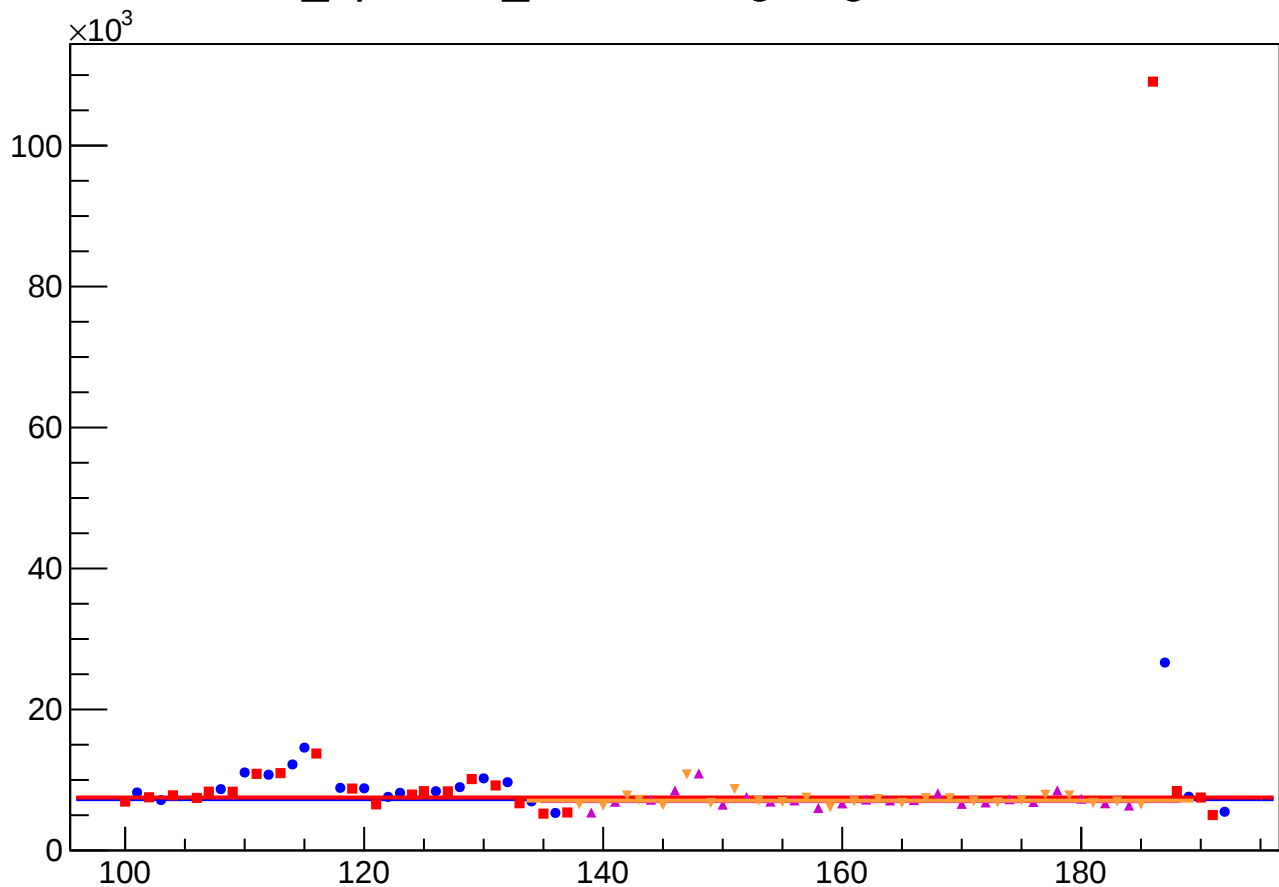
Right:  $-1.988 \pm 1.883$   $\chi^2/\text{NDF}: 43.8/42$

In:  $-0.977 \pm 1.430$   $\chi^2/\text{NDF}: 53.5/42$

Out:  $1.077 \pm 1.407$   $\chi^2/\text{NDF}: 48.1/47$

All:  $0.066 \pm 1.003$   $\chi^2/\text{NDF}: 102.6/90$

# diff\_bpm4aY\_rms vs Slug, Sign Corrected



Right In: 7280.530 $\pm$ 1.887  $\chi^2/\text{NDF}$ : 1131690.4/19

Left Out: 7066.826 $\pm$ 1.173  $\chi^2/\text{NDF}$ : 387449.8/24

Right Out: 7511.429 $\pm$ 1.879  $\chi^2/\text{NDF}$ : 1463426.9/22

Left In: 7000.532 $\pm$ 1.197  $\chi^2/\text{NDF}$ : 550029.3/22

Left: 7034.358 $\pm$ 0.838  $\chi^2/\text{NDF}$ : 939043.5/47

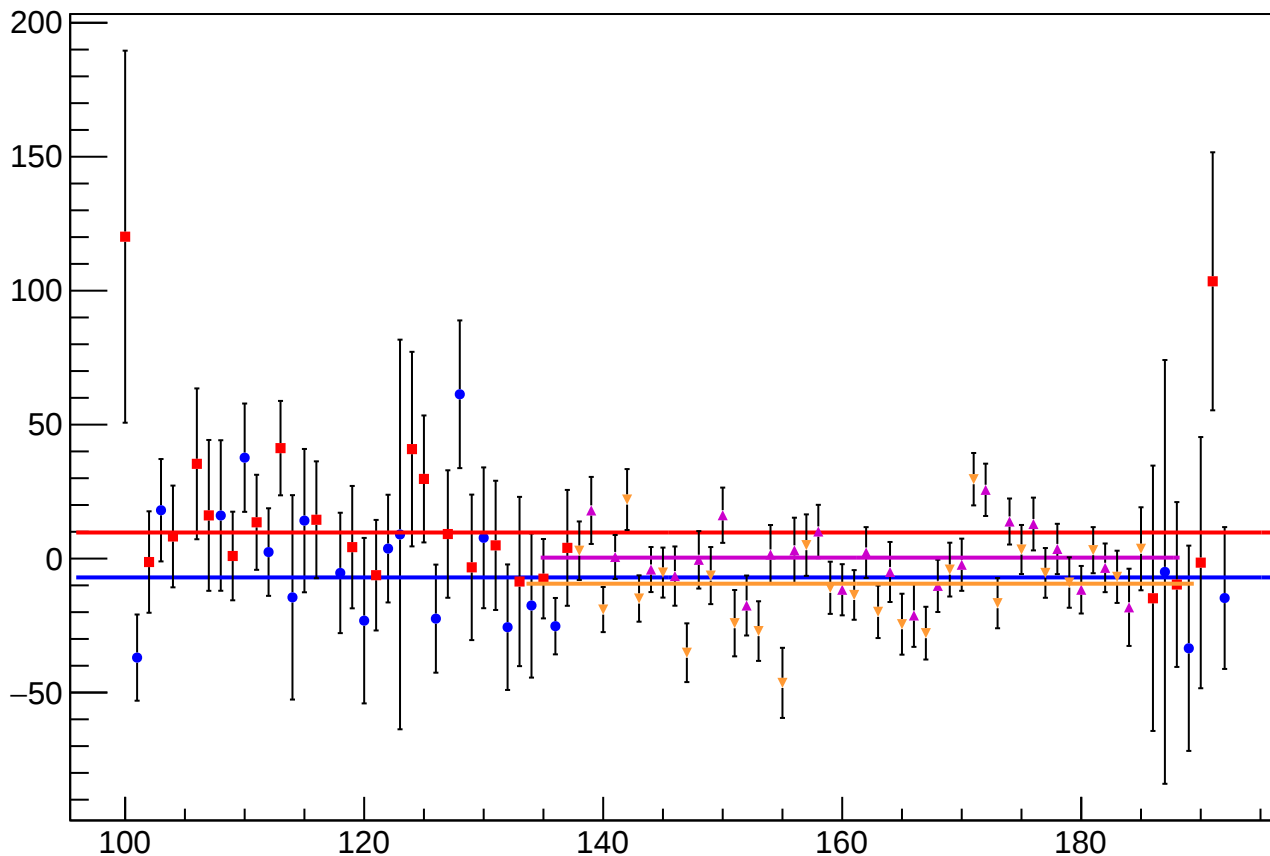
Right: 7396.438 $\pm$ 1.331  $\chi^2/\text{NDF}$ : 2602635.4/42

In: 7080.913 $\pm$ 1.011  $\chi^2/\text{NDF}$ : 1697420.8/42

Out: 7191.474 $\pm$ 0.995  $\chi^2/\text{NDF}$ : 1891156.1/47

All: 7137.067 $\pm$ 0.709  $\chi^2/\text{NDF}$ : 3594652.2/90

# diff\_bpm4eX\_mean vs Slug, Sign Corrected



Right In:  $-7.032 \pm 4.906$   $\chi^2/\text{NDF}: 23.7/19$

Left Out:  $-9.376 \pm 2.018$   $\chi^2/\text{NDF}: 58.4/24$

Right Out:  $9.735 \pm 4.871$   $\chi^2/\text{NDF}: 15.9/22$

Left In:  $0.353 \pm 2.092$   $\chi^2/\text{NDF}: 29.6/22$

Left:  $-4.688 \pm 1.452$   $\chi^2/\text{NDF}: 99.3/47$

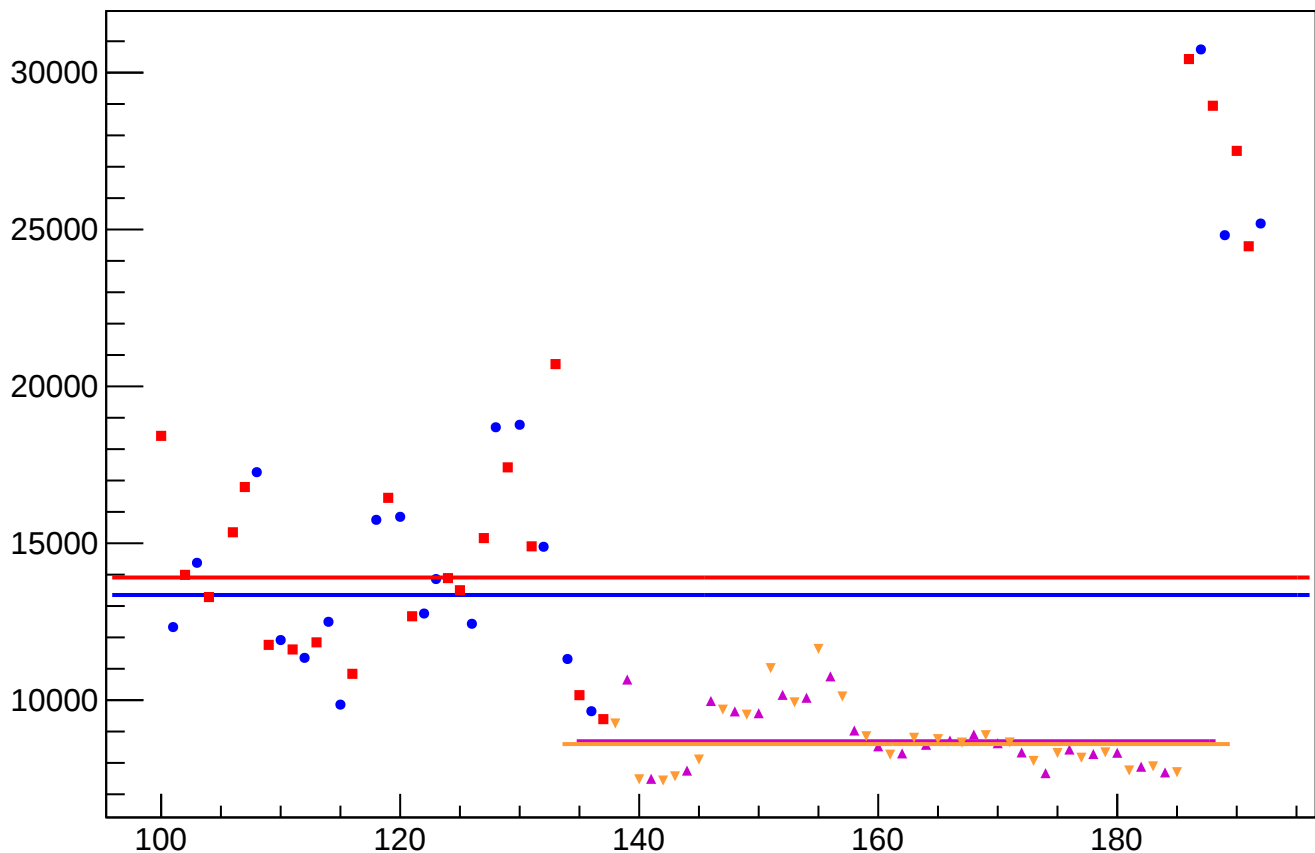
Right:  $1.410 \pm 3.457$   $\chi^2/\text{NDF}: 45.6/42$

In:  $-0.783 \pm 1.924$   $\chi^2/\text{NDF}: 55.3/42$

Out:  $-6.577 \pm 1.864$   $\chi^2/\text{NDF}: 87.5/47$

All:  $-3.773 \pm 1.339$   $\chi^2/\text{NDF}: 147.5/90$

# diff\_bpm4eX\_rms vs Slug, Sign Corrected



Right In: 13351.715 $\pm$ 3.469  $\chi^2$ /NDF: 1273649.3/19

Left Out: 8600.457 $\pm$ 1.427  $\chi^2$ /NDF: 438229.4/24

Right Out: 13909.066 $\pm$ 3.444  $\chi^2$ /NDF: 1518555.5/22

Left In: 8690.209 $\pm$ 1.479  $\chi^2$ /NDF: 370834.1/22

Left: 8643.707 $\pm$ 1.027  $\chi^2$ /NDF: 810970.4/47

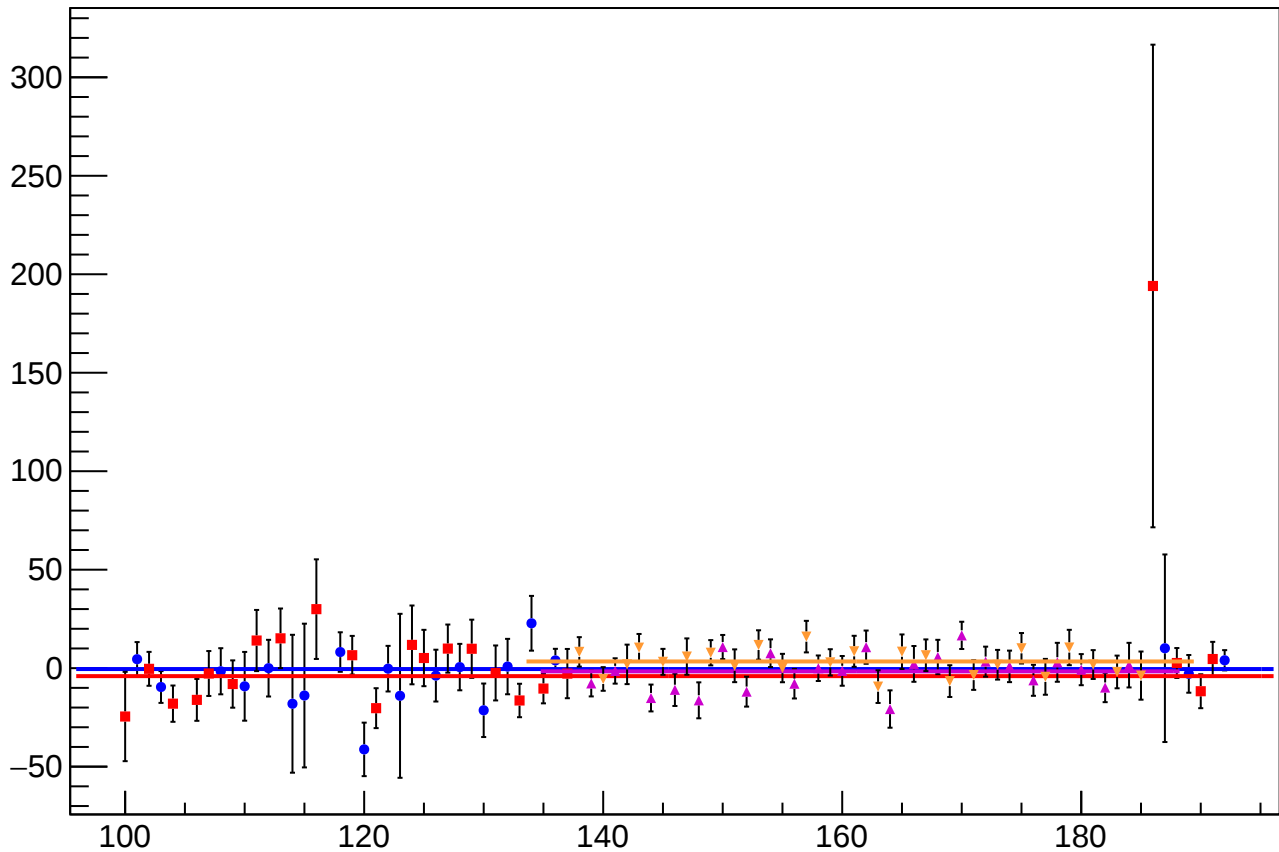
Right: 13632.350 $\pm$ 2.444  $\chi^2$ /NDF: 2805204.1/42

In: 9407.640 $\pm$ 1.361  $\chi^2$ /NDF: 3172479.2/42

Out: 9377.908 $\pm$ 1.318  $\chi^2$ /NDF: 3984226.3/47

All: 9392.301 $\pm$ 0.947  $\chi^2$ /NDF: 7156951.7/90

# diff\_bpm4eY\_mean vs Slug, Sign Corrected



Right In:  $-0.446 \pm 2.385$   $\chi^2/\text{NDF}$ : 18.8/19

Left Out:  $3.406 \pm 1.550$   $\chi^2/\text{NDF}$ : 16.8/24

Right Out:  $-4.043 \pm 2.314$   $\chi^2/\text{NDF}$ : 24.5/22

Left In:  $-1.627 \pm 1.599$   $\chi^2/\text{NDF}$ : 33.5/22

Left:  $0.967 \pm 1.113$   $\chi^2/\text{NDF}$ : 55.4/47

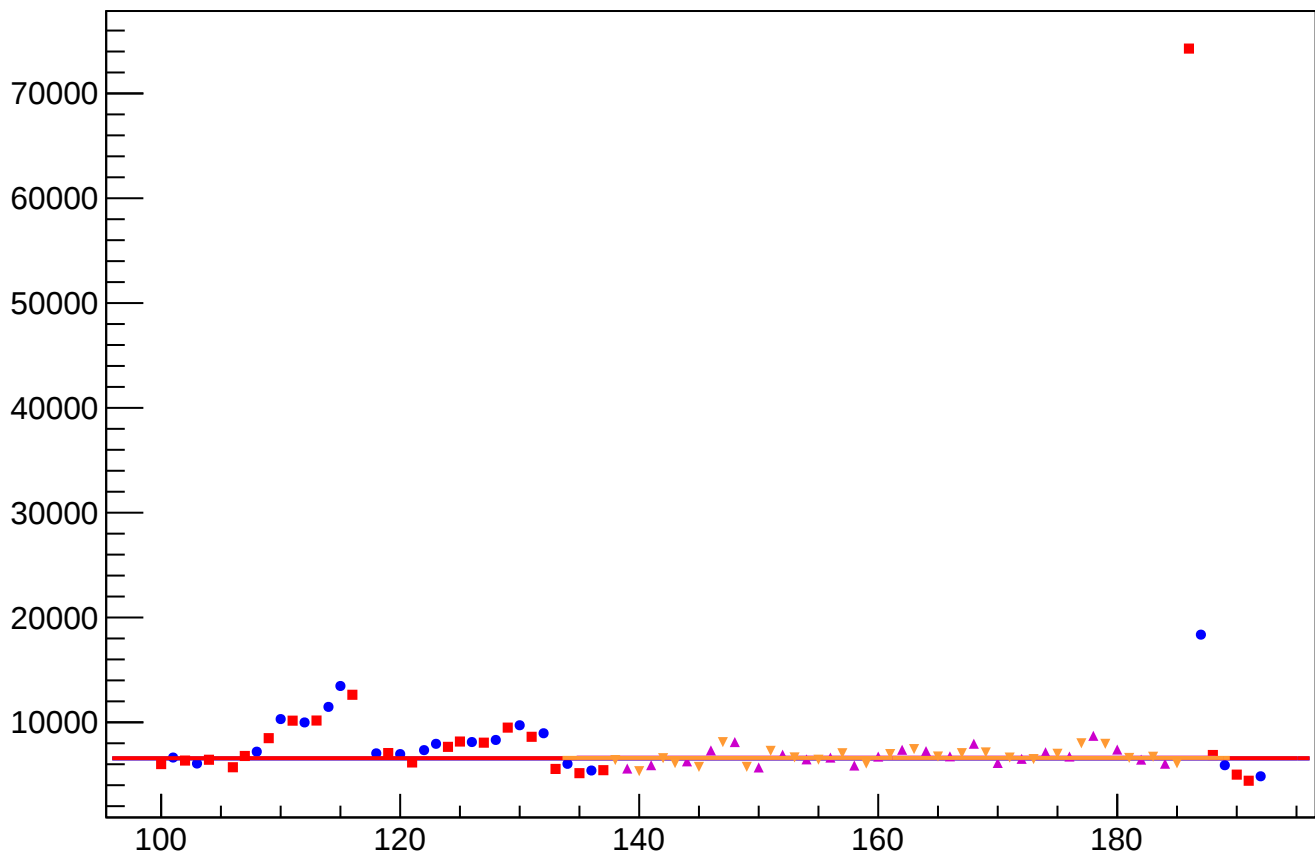
Right:  $-2.299 \pm 1.661$   $\chi^2/\text{NDF}$ : 44.5/42

In:  $-1.261 \pm 1.328$   $\chi^2/\text{NDF}$ : 52.4/42

Out:  $1.098 \pm 1.288$   $\chi^2/\text{NDF}$ : 48.5/47

All:  $-0.045 \pm 0.925$   $\chi^2/\text{NDF}$ : 102.6/90

# diff\_bpm4eY\_rms vs Slug, Sign Corrected



Right In: 6548.207+/-1.687  $\chi^2/\text{NDF}$ : 1020697.7/19

Left Out: 6607.100+/-1.096  $\chi^2/\text{NDF}$ : 398416.1/24

Right Out: 6577.755+/-1.636  $\chi^2/\text{NDF}$ : 1510768.9/22

Left In: 6628.653+/-1.131  $\chi^2/\text{NDF}$ : 430282.2/22

Left: 6617.543+/-0.787  $\chi^2/\text{NDF}$ : 828885.6/47

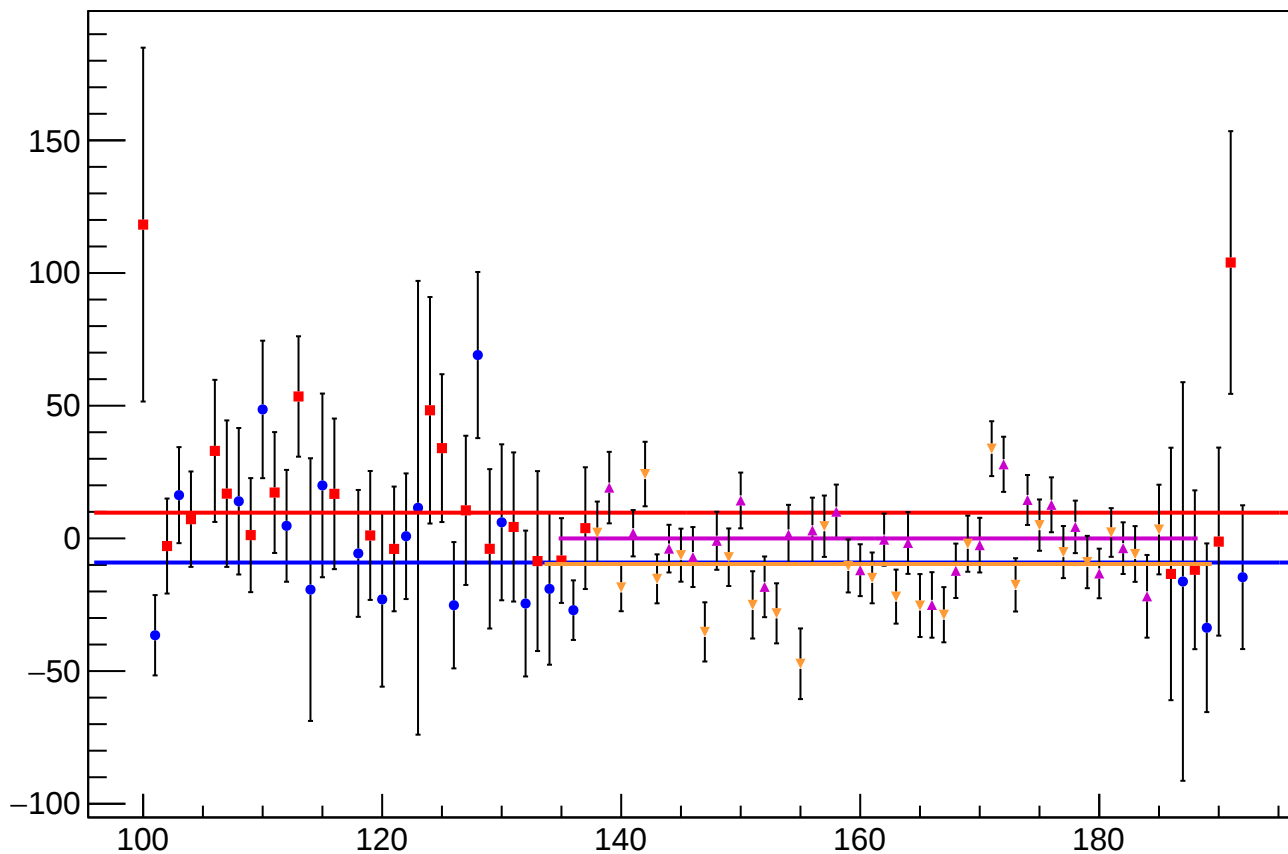
Right: 6563.431+/-1.174  $\chi^2/\text{NDF}$ : 2531624.7/42

In: 6603.709+/-0.939  $\chi^2/\text{NDF}$ : 1452549.2/42

Out: 6598.006+/-0.911  $\chi^2/\text{NDF}$ : 1909407.0/47

All: 6600.770+/-0.654  $\chi^2/\text{NDF}$ : 3361975.3/90

# diff\_bpm4acX\_mean vs Slug, Sign Corrected



Right In:  $-9.096 \pm 5.325$   $\chi^2/\text{NDF}: 23.1/19$

Left Out:  $-9.649 \pm 2.118$   $\chi^2/\text{NDF}: 59.8/24$

Right Out:  $9.690 \pm 5.355$   $\chi^2/\text{NDF}: 16.4/22$

Left In:  $-0.019 \pm 2.192$   $\chi^2/\text{NDF}: 30.6/22$

Left:  $-4.999 \pm 1.523$   $\chi^2/\text{NDF}: 100.4/47$

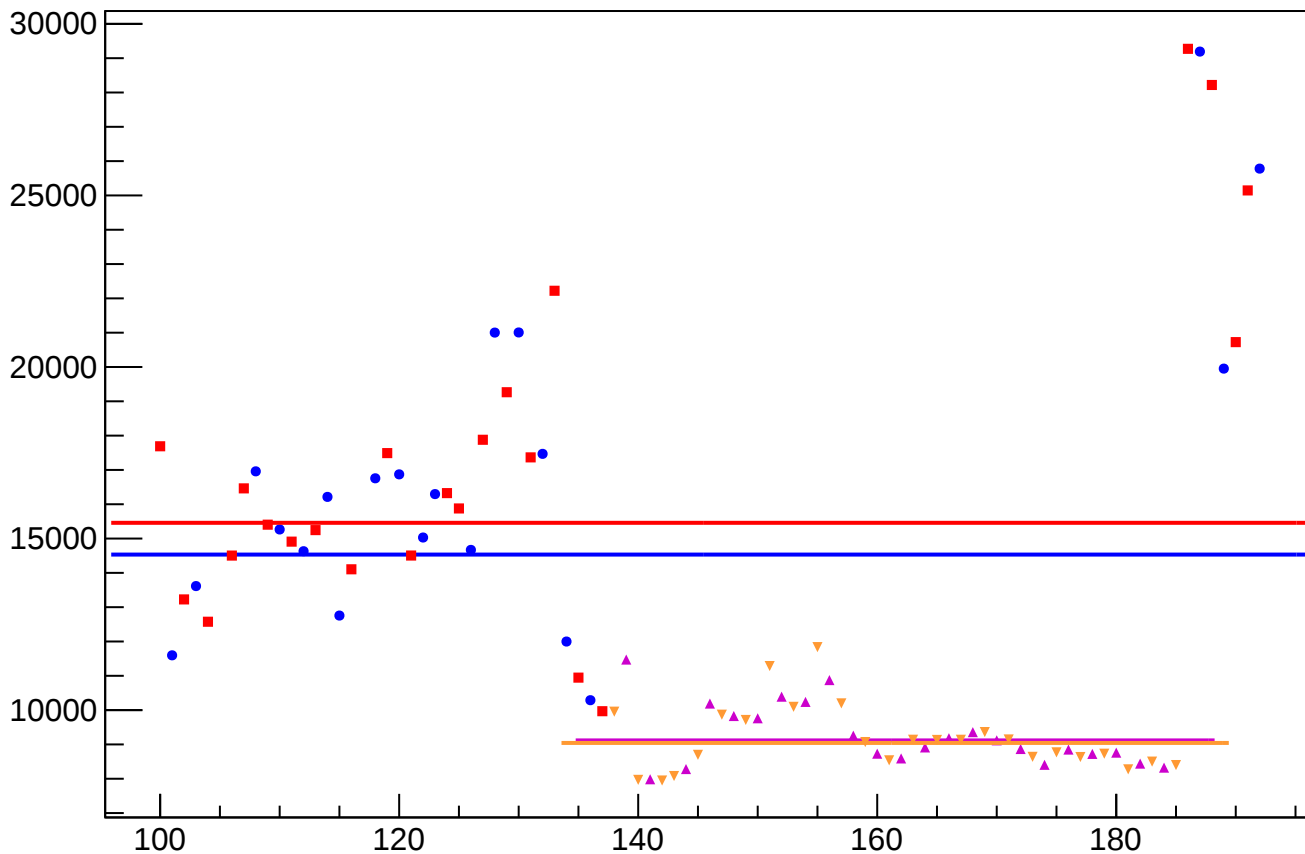
Right:  $0.244 \pm 3.776$   $\chi^2/\text{NDF}: 45.7/42$

In:  $-1.335 \pm 2.027$   $\chi^2/\text{NDF}: 56.2/42$

Out:  $-7.032 \pm 1.970$   $\chi^2/\text{NDF}: 87.5/47$

All:  $-4.265 \pm 1.413$   $\chi^2/\text{NDF}: 147.8/90$

# diff\_bpm4acX\_rms vs Slug, Sign Corrected



Right In:  $14533.130 \pm 3.765$   $\chi^2/\text{NDF}: 1120192.5/19$

Left Out:  $9043.485 \pm 1.498$   $\chi^2/\text{NDF}: 328192.2/24$

Right Out:  $15458.867 \pm 3.787$   $\chi^2/\text{NDF}: 1177639.6/22$

Left In:  $9116.921 \pm 1.550$   $\chi^2/\text{NDF}: 277594.8/22$

Left:  $9078.947 \pm 1.077$   $\chi^2/\text{NDF}: 606947.8/47$

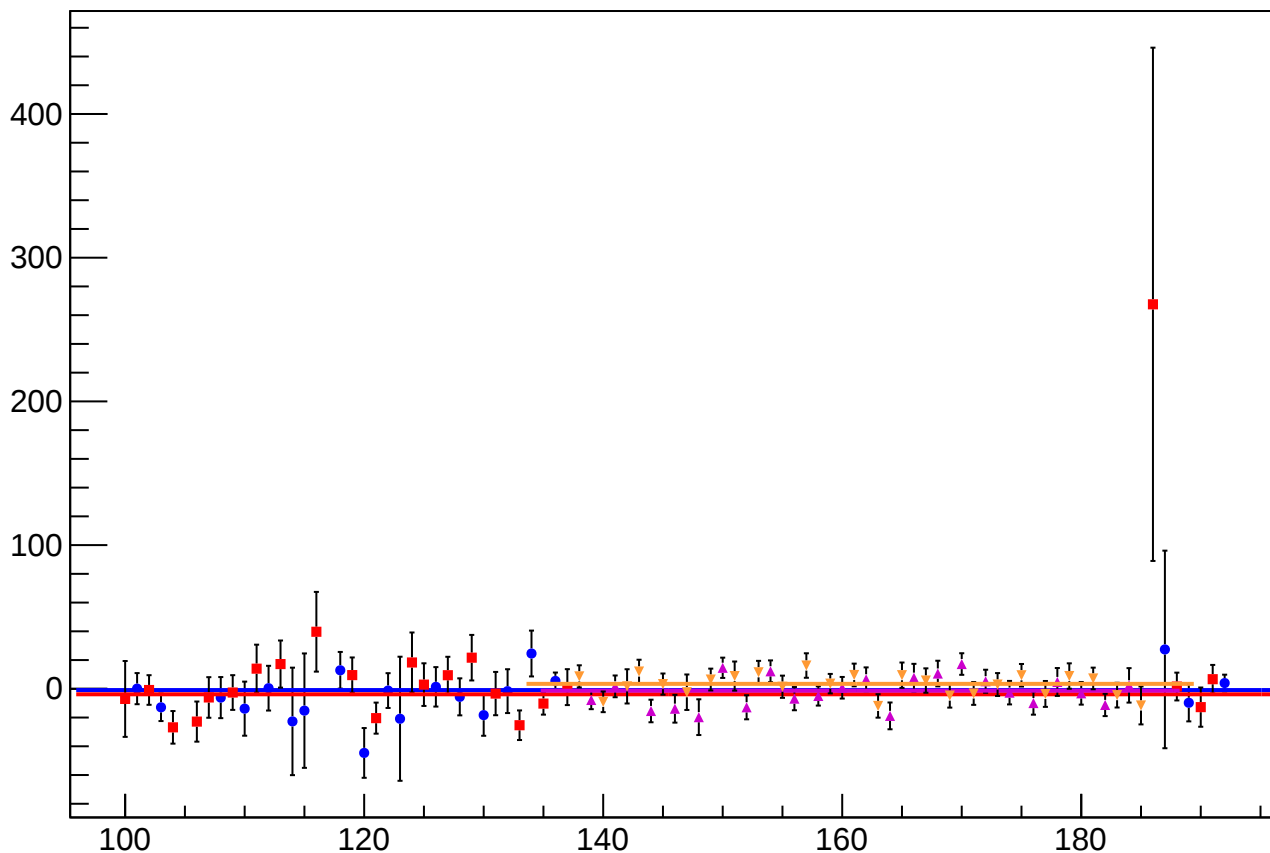
Right:  $14993.367 \pm 2.670$   $\chi^2/\text{NDF}: 2327886.5/42$

In:  $9901.785 \pm 1.433$   $\chi^2/\text{NDF}: 3167246.5/42$

Out:  $9911.457 \pm 1.393$   $\chi^2/\text{NDF}: 3987891.5/47$

All:  $9906.759 \pm 0.999$   $\chi^2/\text{NDF}: 7155161.5/90$

# diff\_bpm4acY\_mean vs Slug, Sign Corrected



Right In:  $-0.872 \pm 2.684$   $\chi^2/\text{NDF}$ : 17.1/19

Left Out:  $3.439 \pm 1.666$   $\chi^2/\text{NDF}$ : 18.9/24

Right Out:  $-3.820 \pm 2.675$   $\chi^2/\text{NDF}$ : 29.3/22

Left In:  $-1.291 \pm 1.701$   $\chi^2/\text{NDF}$ : 36.5/22

Left:  $1.123 \pm 1.190$   $\chi^2/\text{NDF}$ : 59.4/47

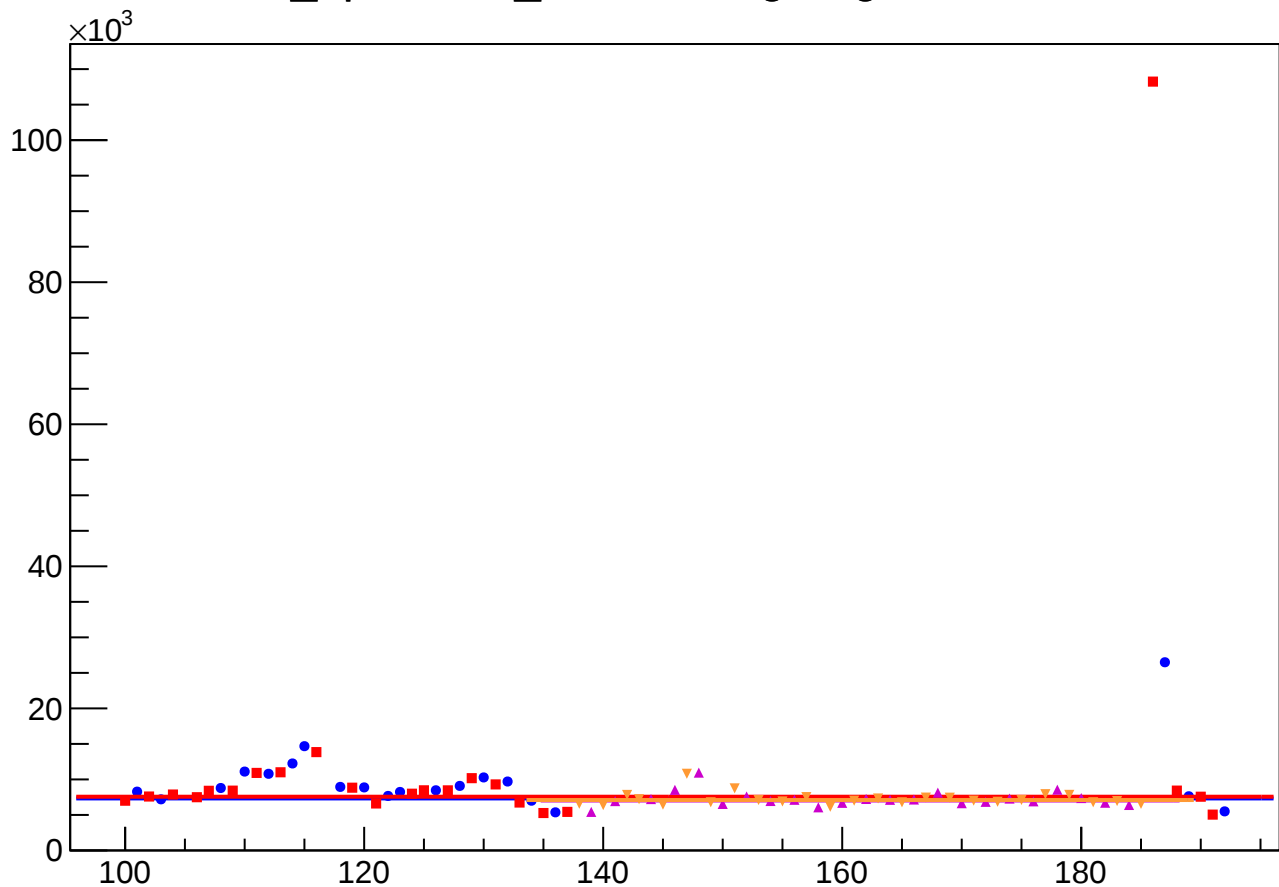
Right:  $-2.351 \pm 1.895$   $\chi^2/\text{NDF}$ : 47.0/42

In:  $-1.171 \pm 1.437$   $\chi^2/\text{NDF}$ : 53.7/42

Out:  $1.411 \pm 1.414$   $\chi^2/\text{NDF}$ : 53.5/47

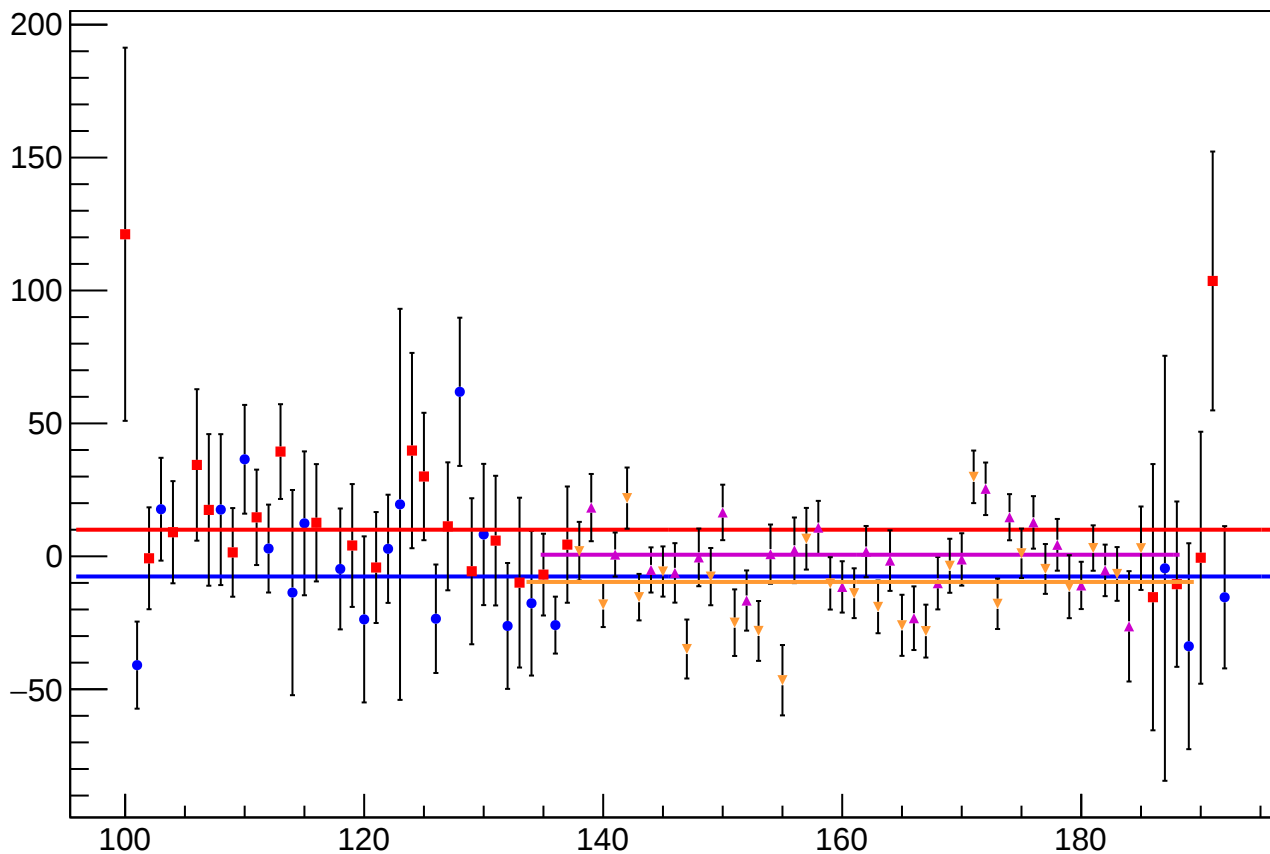
All:  $0.140 \pm 1.008$   $\chi^2/\text{NDF}$ : 108.8/90

# diff\_bpm4acY\_rms vs Slug, Sign Corrected



|                                 |                                    |                             |                                    |
|---------------------------------|------------------------------------|-----------------------------|------------------------------------|
| Right In: 7323.802 $\pm$ 1.898  | $\chi^2/\text{NDF}$ : 1133824.7/19 | Left: 7066.886 $\pm$ 0.842  | $\chi^2/\text{NDF}$ : 925077.6/47  |
| Left Out: 7098.726 $\pm$ 1.178  | $\chi^2/\text{NDF}$ : 382550.4/24  | Right: 7444.727 $\pm$ 1.340 | $\chi^2/\text{NDF}$ : 2597996.1/42 |
| Right Out: 7564.873 $\pm$ 1.892 | $\chi^2/\text{NDF}$ : 1456078.0/22 | In: 7116.824 $\pm$ 1.016    | $\chi^2/\text{NDF}$ : 1691530.6/42 |
| Left In: 7033.702 $\pm$ 1.203   | $\chi^2/\text{NDF}$ : 541035.5/22  | Out: 7228.993 $\pm$ 1.000   | $\chi^2/\text{NDF}$ : 1882379.4/47 |
|                                 |                                    | All: 7173.791 $\pm$ 0.713   | $\chi^2/\text{NDF}$ : 3580101.6/90 |

# diff\_bpm4ecX\_mean vs Slug, Sign Corrected



Right In:  $-7.585 \pm 4.971$   $\chi^2/\text{NDF}$ : 24.3/19

Left Out:  $-9.640 \pm 2.057$   $\chi^2/\text{NDF}$ : 57.6/24

Right Out:  $10.012 \pm 4.940$   $\chi^2/\text{NDF}$ : 15.0/22

Left In:  $0.599 \pm 2.135$   $\chi^2/\text{NDF}$ : 29.7/22

Left:  $-4.710 \pm 1.481$   $\chi^2/\text{NDF}$ : 99.2/47

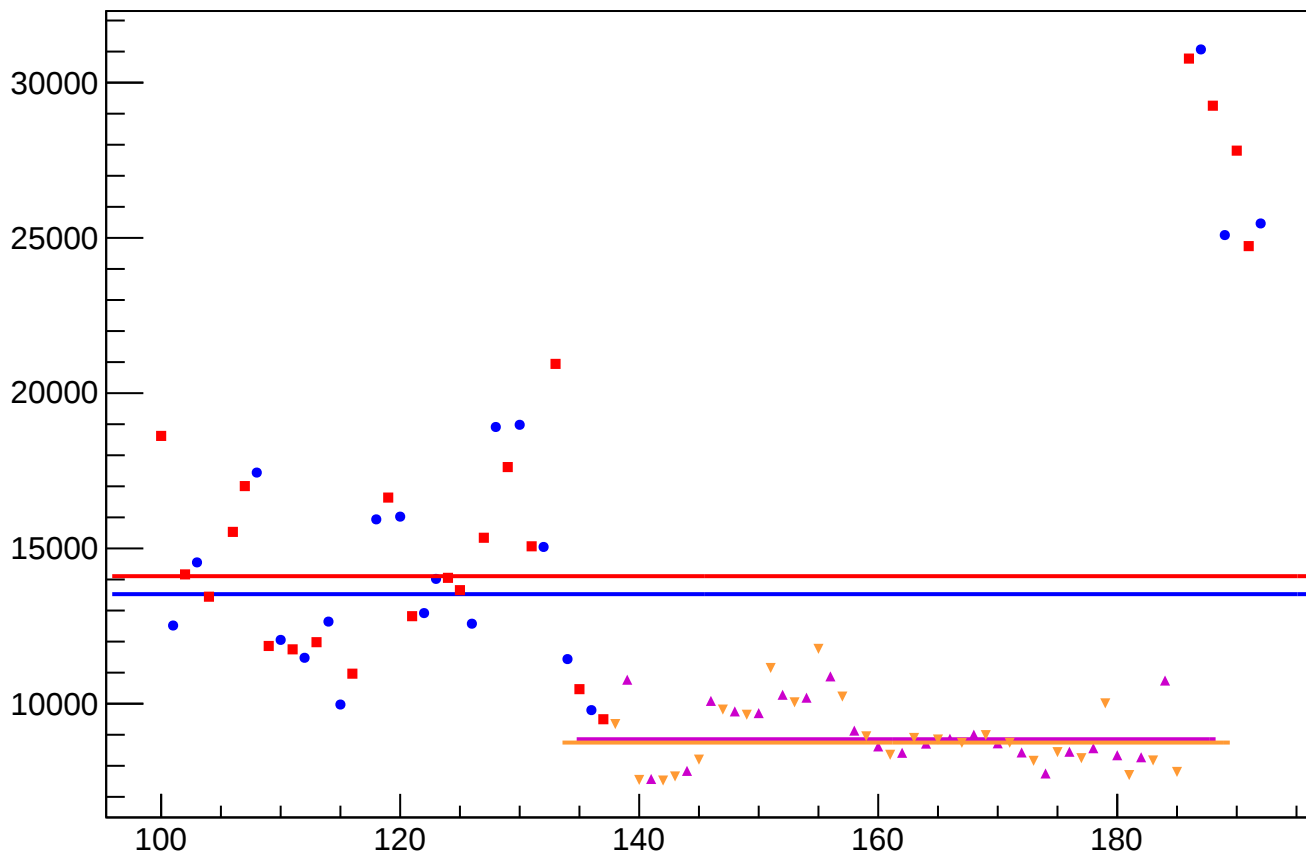
Right:  $1.269 \pm 3.504$   $\chi^2/\text{NDF}$ : 45.7/42

In:  $-0.675 \pm 1.962$   $\chi^2/\text{NDF}$ : 56.3/42

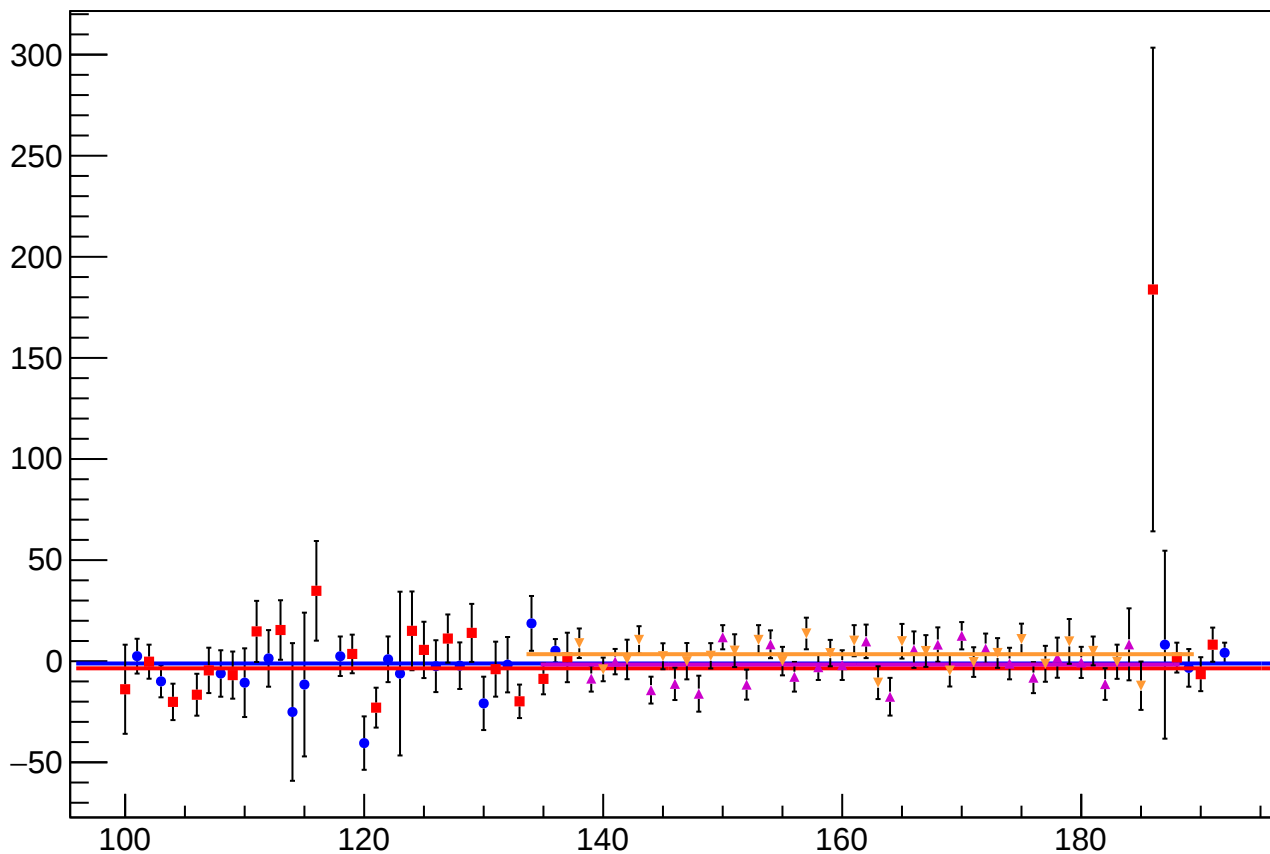
Out:  $-6.735 \pm 1.899$   $\chi^2/\text{NDF}$ : 86.2/47

All:  $-3.804 \pm 1.364$   $\chi^2/\text{NDF}$ : 147.4/90

# diff\_bpm4ecX\_rms vs Slug, Sign Corrected



# diff\_bpm4ecY\_mean vs Slug, Sign Corrected



Right In:  $-1.122 \pm 2.331$   $\chi^2/\text{NDF}$ : 18.4/19

Left Out:  $3.473 \pm 1.524$   $\chi^2/\text{NDF}$ : 15.8/24

Right Out:  $-3.526 \pm 2.264$   $\chi^2/\text{NDF}$ : 29.3/22

Left In:  $-1.638 \pm 1.578$   $\chi^2/\text{NDF}$ : 33.7/22

Left:  $1.006 \pm 1.096$   $\chi^2/\text{NDF}$ : 54.9/47

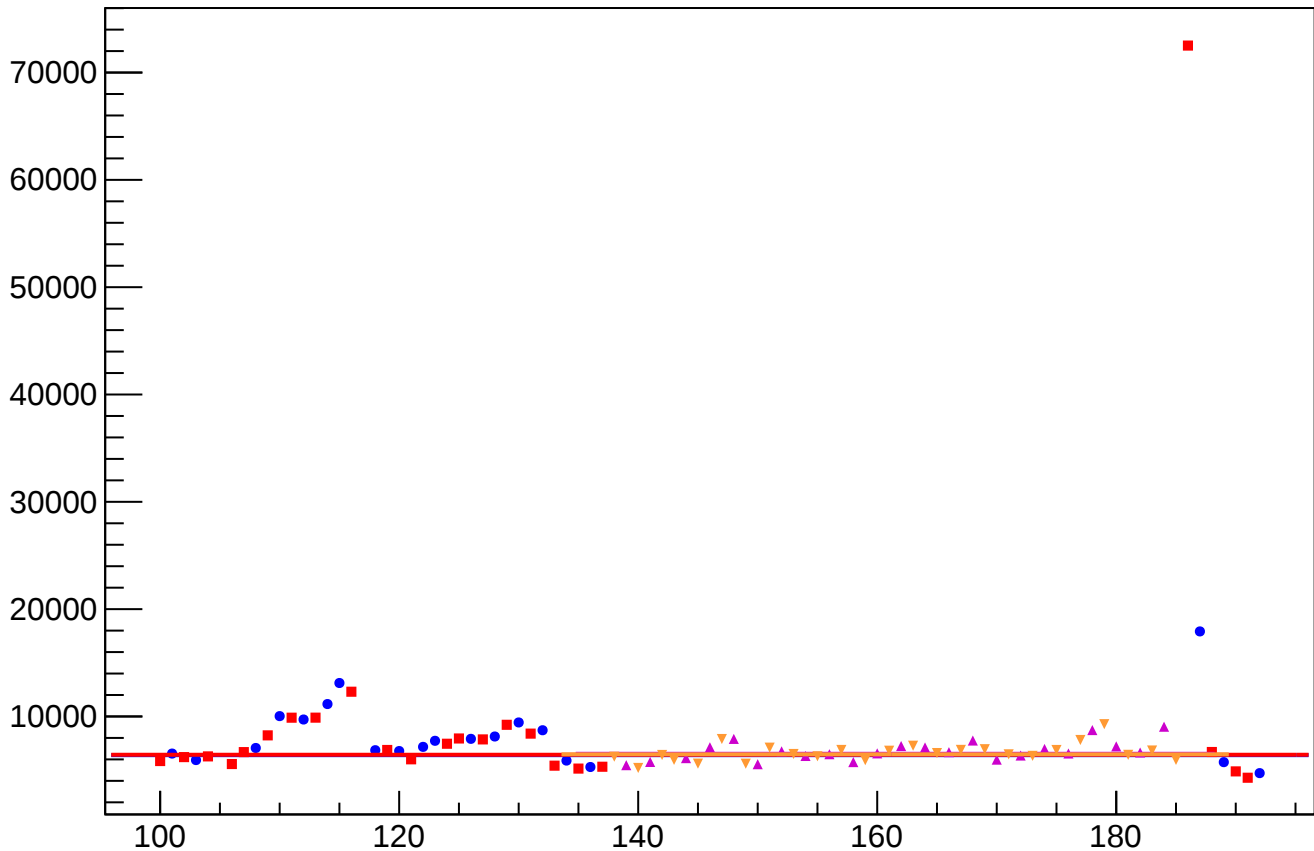
Right:  $-2.360 \pm 1.624$   $\chi^2/\text{NDF}$ : 48.3/42

In:  $-1.476 \pm 1.307$   $\chi^2/\text{NDF}$ : 52.2/42

Out:  $1.290 \pm 1.264$   $\chi^2/\text{NDF}$ : 51.7/47

All:  $-0.048 \pm 0.909$   $\chi^2/\text{NDF}$ : 106.2/90

# diff\_bpm4ecY\_rms vs Slug, Sign Corrected



Right In: 6394.664 $\pm$ 1.648  $\chi^2$ /NDF: 1016961.2/19

Left Out: 6471.976 $\pm$ 1.078  $\chi^2$ /NDF: 490282.9/24

Right Out: 6432.072 $\pm$ 1.601  $\chi^2$ /NDF: 1492011.0/22

Left In: 6521.975 $\pm$ 1.116  $\chi^2$ /NDF: 480034.7/22

Left: 6496.112 $\pm$ 0.775  $\chi^2$ /NDF: 971356.4/47

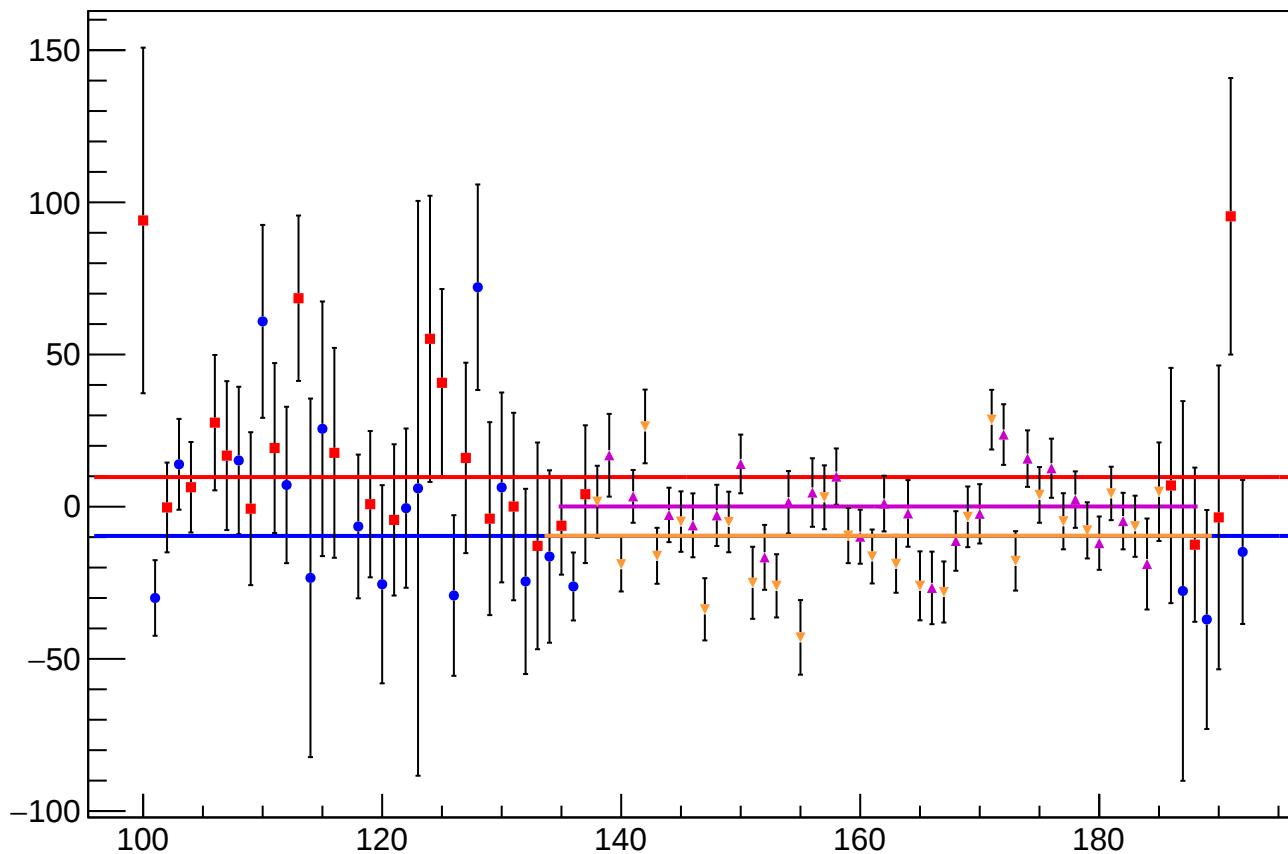
Right: 6413.917 $\pm$ 1.148  $\chi^2$ /NDF: 2509237.3/42

In: 6481.976 $\pm$ 0.924  $\chi^2$ /NDF: 1501086.7/42

Out: 6459.527 $\pm$ 0.894  $\chi^2$ /NDF: 1982721.5/47

All: 6470.382 $\pm$ 0.643  $\chi^2$ /NDF: 3484113.0/90

# diff\_bpm1X\_mean vs Slug, Sign Corrected



Right In:  $-9.606 \pm 5.208$   $\chi^2/\text{NDF}$ : 22.7/19

Left Out:  $-9.554 \pm 2.012$   $\chi^2/\text{NDF}$ : 59.5/24

Right Out:  $9.734 \pm 5.276$   $\chi^2/\text{NDF}$ : 17.1/22

Left In:  $0.072 \pm 2.073$   $\chi^2/\text{NDF}$ : 29.8/22

Left:  $-4.885 \pm 1.444$   $\chi^2/\text{NDF}$ : 100.5/47

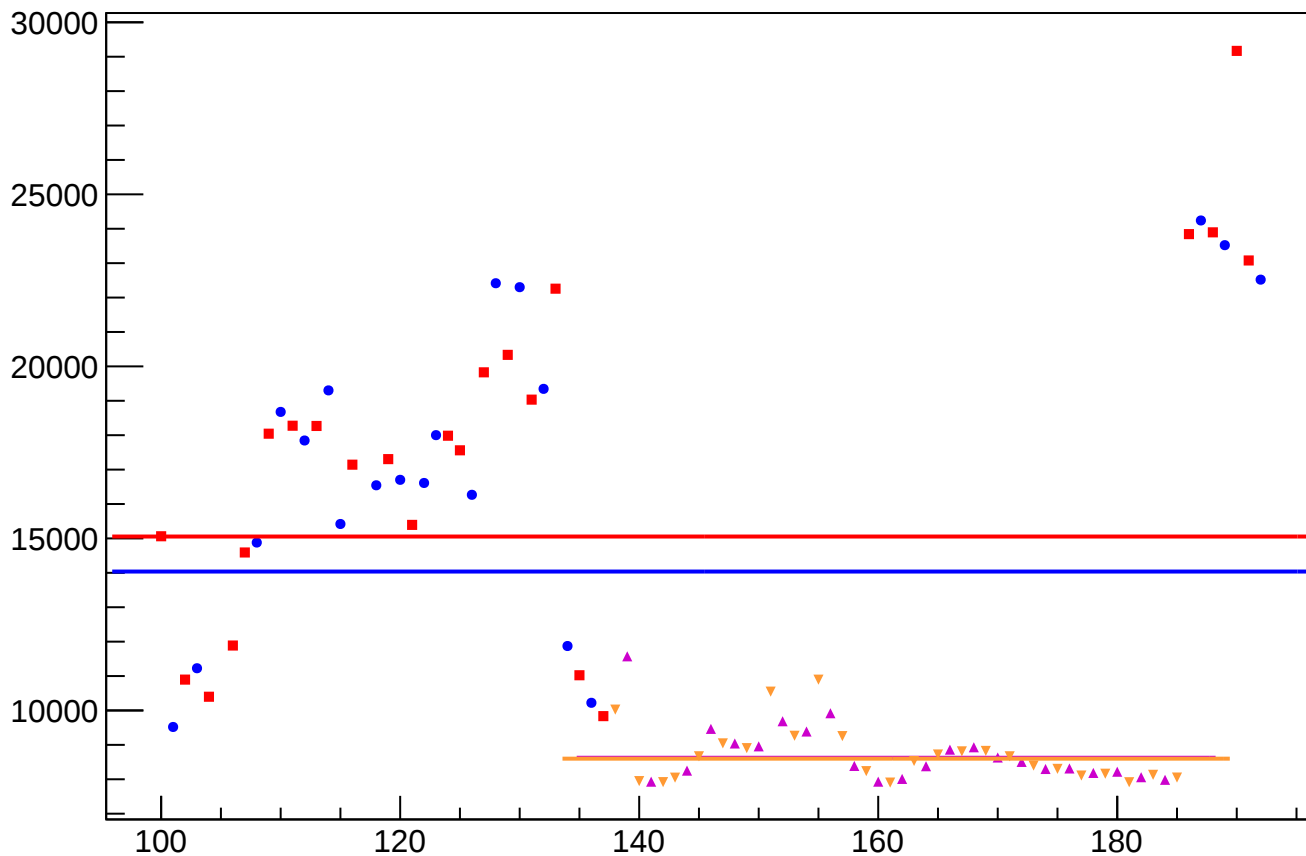
Right:  $-0.063 \pm 3.706$   $\chi^2/\text{NDF}$ : 46.6/42

In:  $-1.252 \pm 1.926$   $\chi^2/\text{NDF}$ : 55.5/42

Out:  $-7.106 \pm 1.880$   $\chi^2/\text{NDF}$ : 88.3/47

All:  $-4.250 \pm 1.345$   $\chi^2/\text{NDF}$ : 148.5/90

# diff\_bpm1X\_rms vs Slug, Sign Corrected



Right In: 14037.299 $\pm$ 3.682  $\chi^2$ /NDF: 1535387.0/19

Left Out: 8598.983 $\pm$ 1.423  $\chi^2$ /NDF:249070.5/24

Right Out: 15055.012 $\pm$ 3.731  $\chi^2$ /NDF: 1552410.9/22

Left In: 8625.233 $\pm$ 1.466  $\chi^2$ /NDF:237310.9/22

Left: 8611.717 $\pm$ 1.021  $\chi^2$ /NDF: 486546.6/47

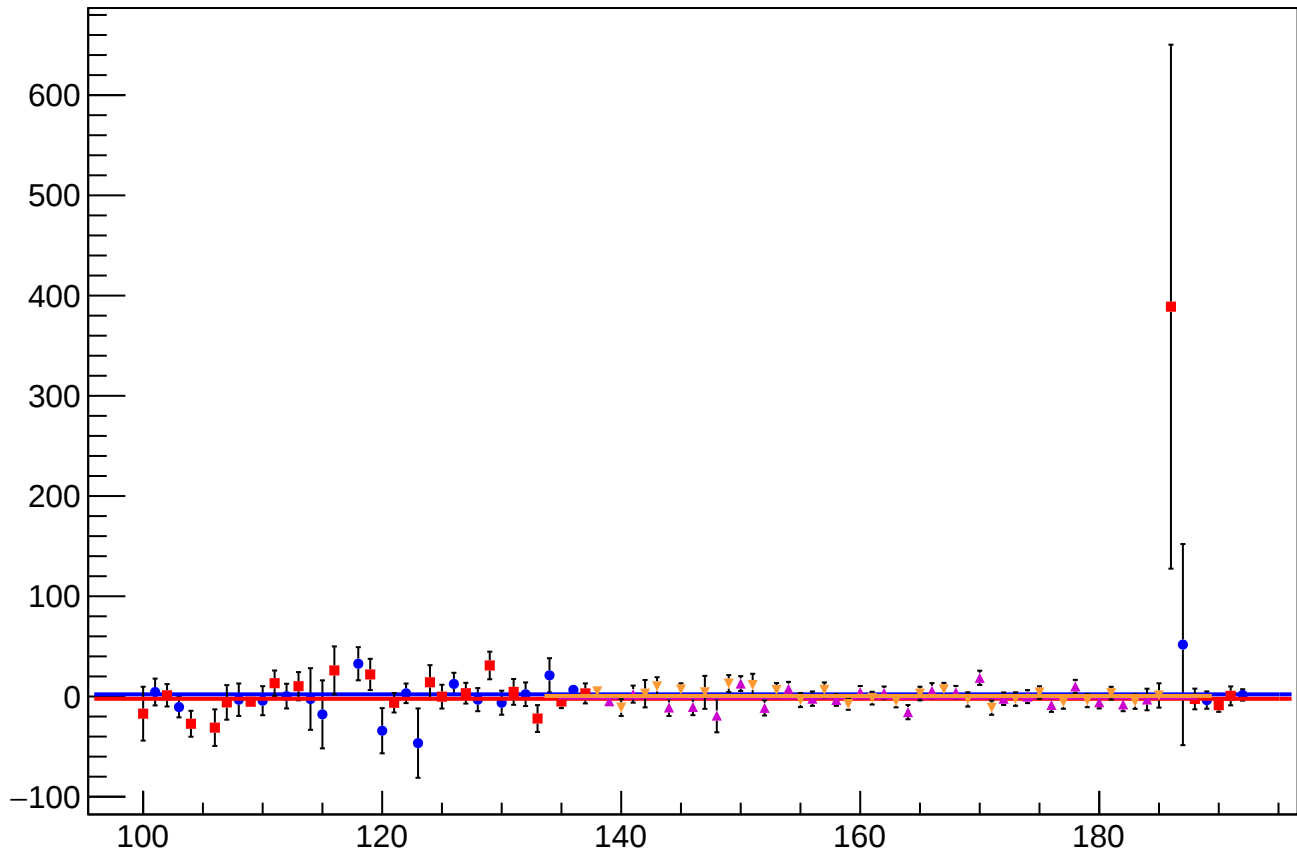
Right: 14539.500 $\pm$ 2.621  $\chi^2$ /NDF: 3125488.5/42

In: 9365.326 $\pm$ 1.362  $\chi^2$ /NDF:3637329.4/42

Out: 9418.408 $\pm$ 1.329  $\chi^2$ /NDF:4415760.7/47

All: 9392.509 $\pm$ 0.951  $\chi^2$ /NDF: 8053868.2/90

# diff\_bpm1Y\_mean vs Slug, Sign Corrected



Right In: 2.129 $\pm$ 2.388  $\chi^2/\text{NDF}$ : 14.7/19

Left Out: 0.528 $\pm$ 1.418  $\chi^2/\text{NDF}$ : 19.5/24

Right Out: -2.301 $\pm$ 2.180  $\chi^2/\text{NDF}$ : 26.6/22

Left In: -1.050 $\pm$ 1.396  $\chi^2/\text{NDF}$ : 32.5/22

Left: -0.273 $\pm$ 0.995  $\chi^2/\text{NDF}$ : 52.6/47

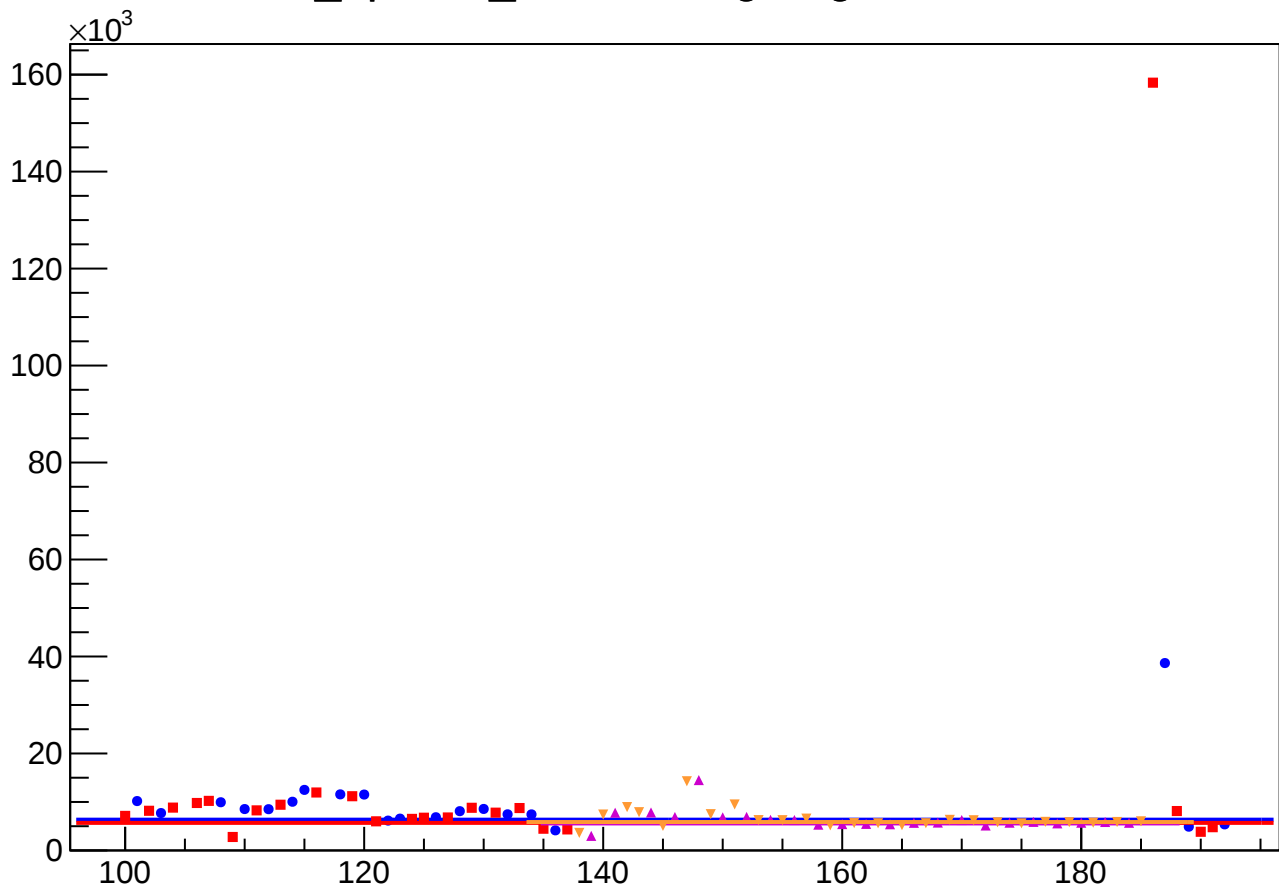
Right: -0.287 $\pm$ 1.610  $\chi^2/\text{NDF}$ : 43.2/42

In: -0.240 $\pm$ 1.205  $\chi^2/\text{NDF}$ : 48.6/42

Out: -0.313 $\pm$ 1.188  $\chi^2/\text{NDF}$ : 47.3/47

All: -0.277 $\pm$ 0.846  $\chi^2/\text{NDF}$ : 95.8/90

# diff\_bpm1Y\_rms vs Slug, Sign Corrected



Right In:  $6350.735 \pm 1.688$   $\chi^2/\text{NDF}: 1743475.3/19$

Left Out:  $5860.605 \pm 1.002$   $\chi^2/\text{NDF}: 1690049.2/24$

Right Out:  $5687.797 \pm 1.541$   $\chi^2/\text{NDF}: 3256596.4/22$

Left In:  $5571.330 \pm 0.987$   $\chi^2/\text{NDF}: 2162788.3/22$

Left:  $5713.698 \pm 0.703$   $\chi^2/\text{NDF}: 3895130.2/47$

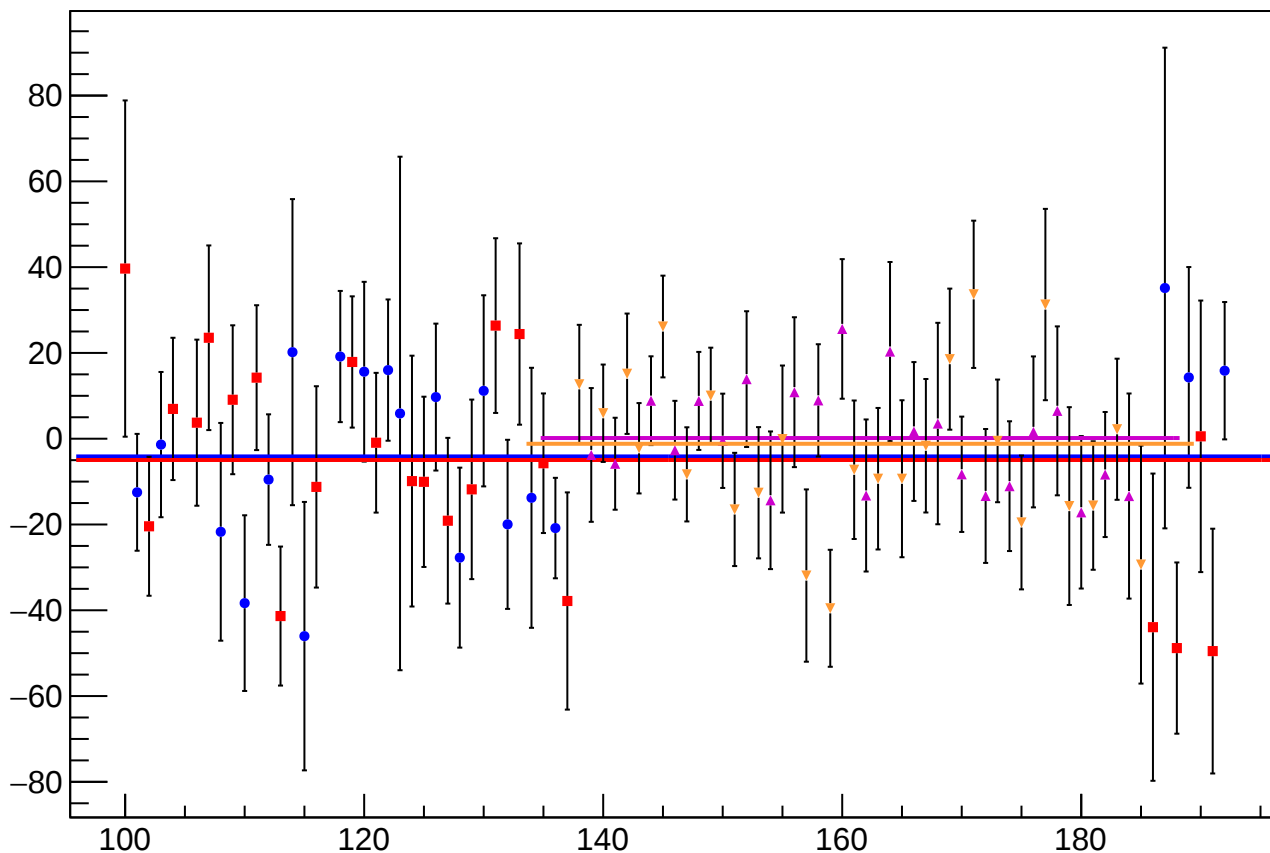
Right:  $5989.134 \pm 1.138$   $\chi^2/\text{NDF}: 5084160.9/42$

In:  $5769.776 \pm 0.852$   $\chi^2/\text{NDF}: 4065099.0/42$

Out:  $5809.239 \pm 0.840$   $\chi^2/\text{NDF}: 4955479.4/47$

All:  $5789.779 \pm 0.598$   $\chi^2/\text{NDF}: 9021665.9/90$

# diff\_bpm11X\_mean vs Slug, Sign Corrected



Right In:  $-4.133 \pm 4.310$   $\chi^2/\text{NDF}: 18.5/19$

Left Out:  $-1.182 \pm 2.939$   $\chi^2/\text{NDF}: 33.7/24$

Right Out:  $-4.962 \pm 4.167$   $\chi^2/\text{NDF}: 29.2/22$

Left In:  $0.157 \pm 3.058$   $\chi^2/\text{NDF}: 11.5/22$

Left:  $-0.539 \pm 2.119$   $\chi^2/\text{NDF}: 45.3/47$

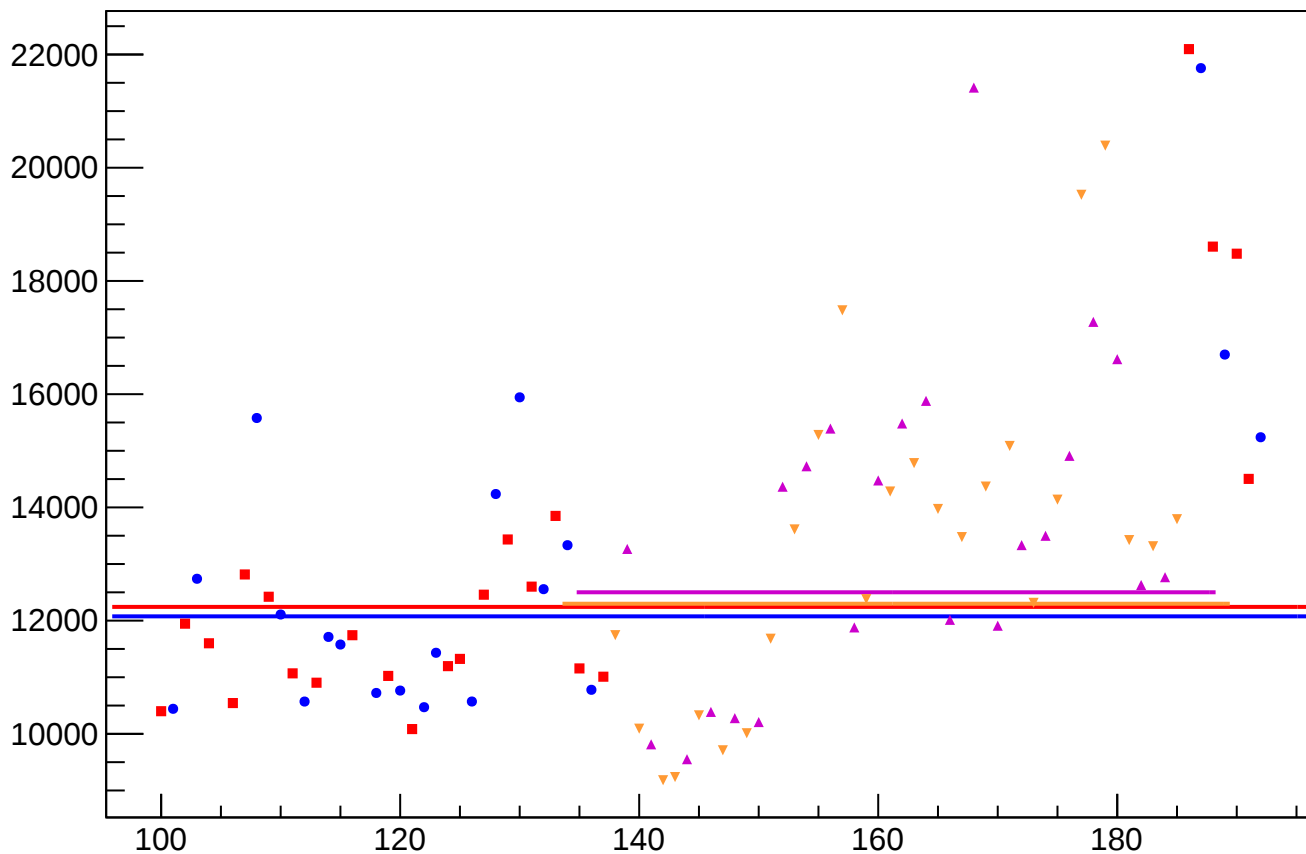
Right:  $-4.561 \pm 2.996$   $\chi^2/\text{NDF}: 47.8/42$

In:  $-1.280 \pm 2.494$   $\chi^2/\text{NDF}: 30.7/42$

Out:  $-2.438 \pm 2.402$   $\chi^2/\text{NDF}: 63.5/47$

All:  $-1.880 \pm 1.730$   $\chi^2/\text{NDF}: 94.3/90$

# diff\_bpm11X\_rms vs Slug, Sign Corrected



Right In: 12075.648+/-3.048

$\chi^2/\text{NDF}$ : 461409.4/19

Left Out: 12298.676+/-2.078

$\chi^2/\text{NDF}$ :1506026.8/24

Right Out: 12242.721+/-2.947

$\chi^2/\text{NDF}$ : 581431.1/22

Left In: 12500.795+/-2.162

$\chi^2/\text{NDF}$ :1357889.1/22

Left: 12395.720+/-1.498

$\chi^2/\text{NDF}$ : 2868458.0/47

Right: 12161.995+/-2.118

$\chi^2/\text{NDF}$ : 1044393.7/42

In: 12358.430+/-1.764

$\chi^2/\text{NDF}$ :1832243.1/42

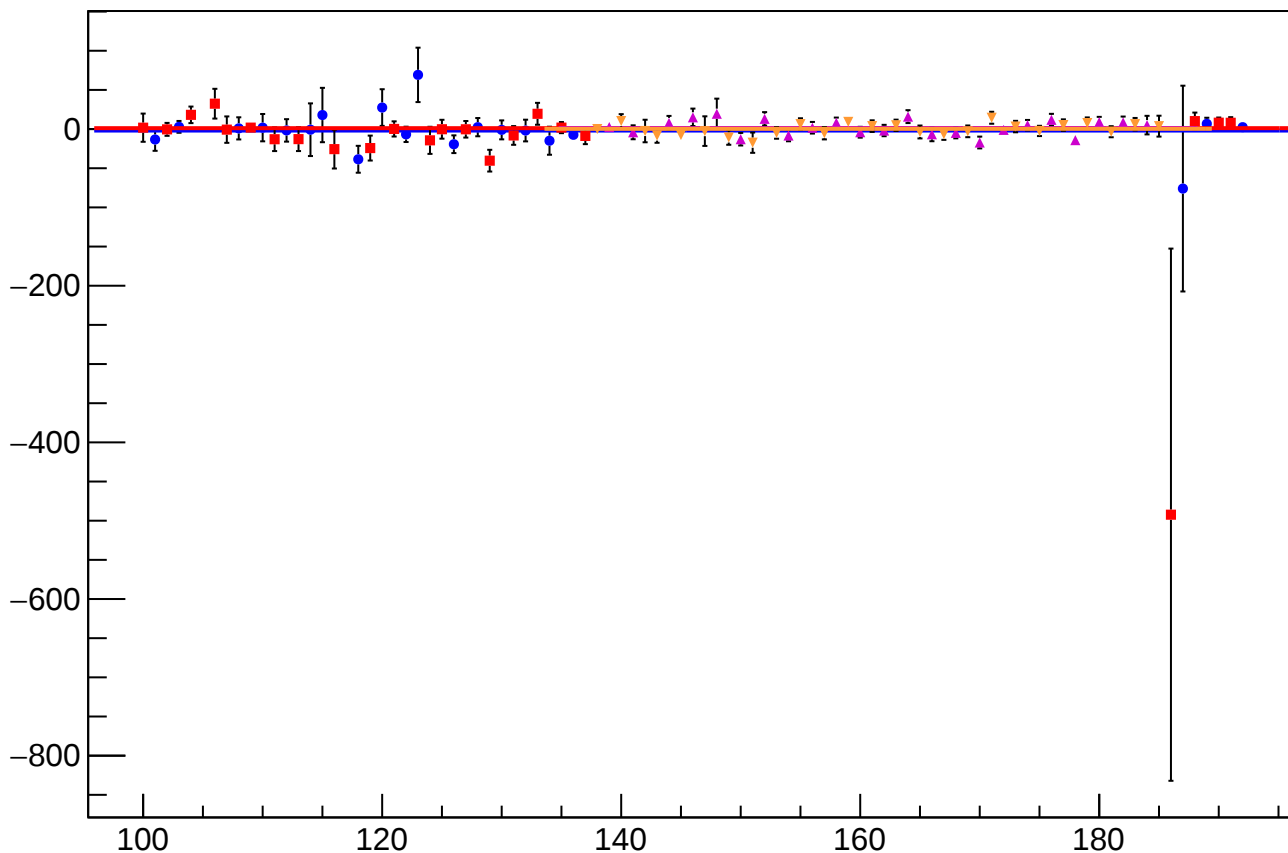
Out: 12280.091+/-1.698

$\chi^2/\text{NDF}$ :2087698.7/47

All: 12317.784+/-1.223

$\chi^2/\text{NDF}$ : 3920965.6/95

# diff\_bpm11Y\_mean vs Slug, Sign Corrected



Right In:  $-1.871 \pm 2.236$   $\chi^2/\text{NDF}$ : 18.9/19

Left Out:  $0.353 \pm 1.433$   $\chi^2/\text{NDF}$ : 19.1/24

Right Out:  $1.152 \pm 2.132$   $\chi^2/\text{NDF}$ : 28.7/22

Left In:  $1.165 \pm 1.371$   $\chi^2/\text{NDF}$ : 33.6/22

Left:  $0.777 \pm 0.991$   $\chi^2/\text{NDF}$ : 52.9/47

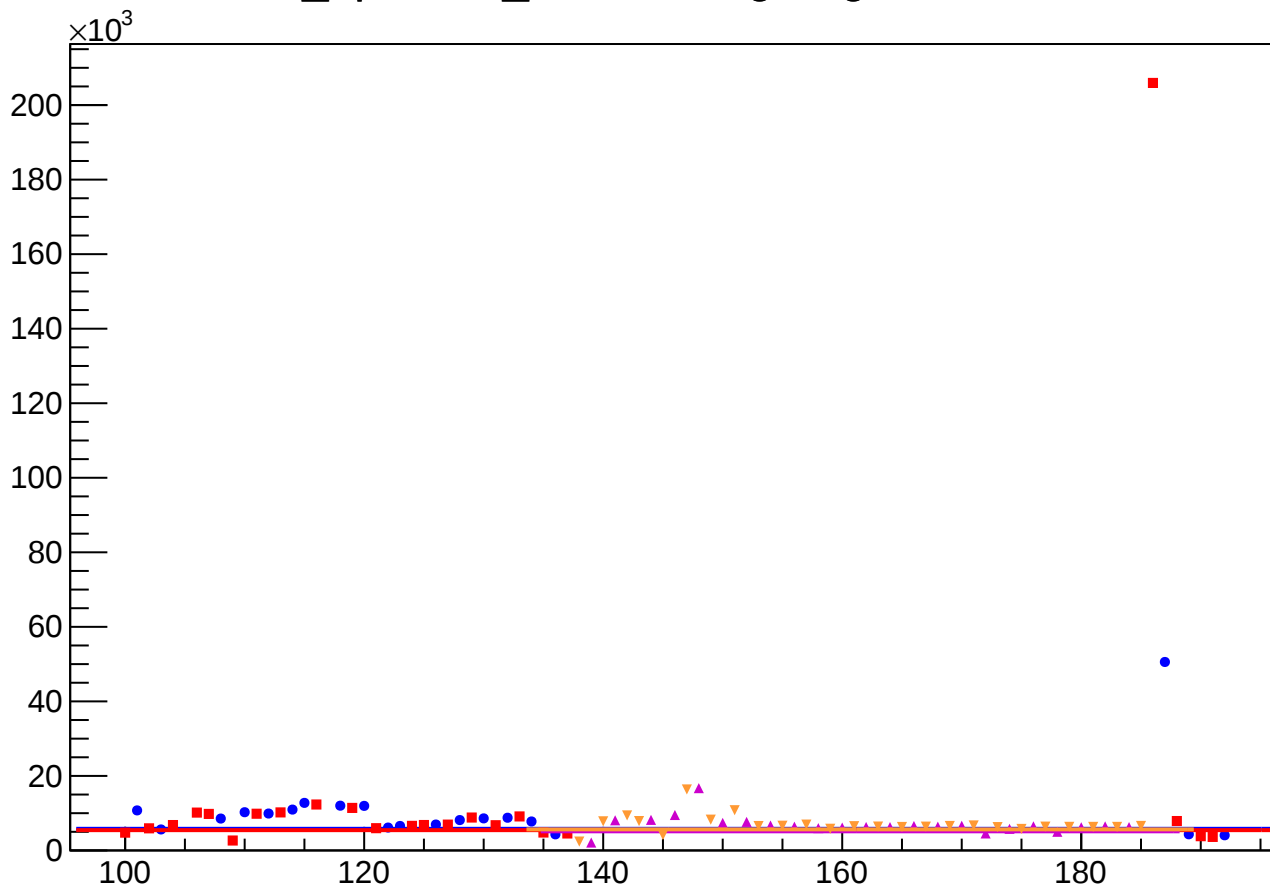
Right:  $-0.287 \pm 1.543$   $\chi^2/\text{NDF}$ : 48.6/42

In:  $0.335 \pm 1.169$   $\chi^2/\text{NDF}$ : 53.9/42

Out:  $0.602 \pm 1.190$   $\chi^2/\text{NDF}$ : 47.9/47

All:  $0.466 \pm 0.834$   $\chi^2/\text{NDF}$ : 101.8/90

# diff\_bpm11Y\_rms vs Slug, Sign Corrected



Right In: 5806.225+/-1.581  $\chi^2/\text{NDF}$ : 2290025.6/19

Left Out: 5659.441+/-1.014  $\chi^2/\text{NDF}$ : 4128583.6/24

Right Out: 5449.494+/-1.508  $\chi^2/\text{NDF}$ : 3245698.3/22

Left In: 5137.772+/-0.970  $\chi^2/\text{NDF}$ : 5495609.7/22

Left: 5387.078+/-0.701  $\chi^2/\text{NDF}$ : 9762498.7/47

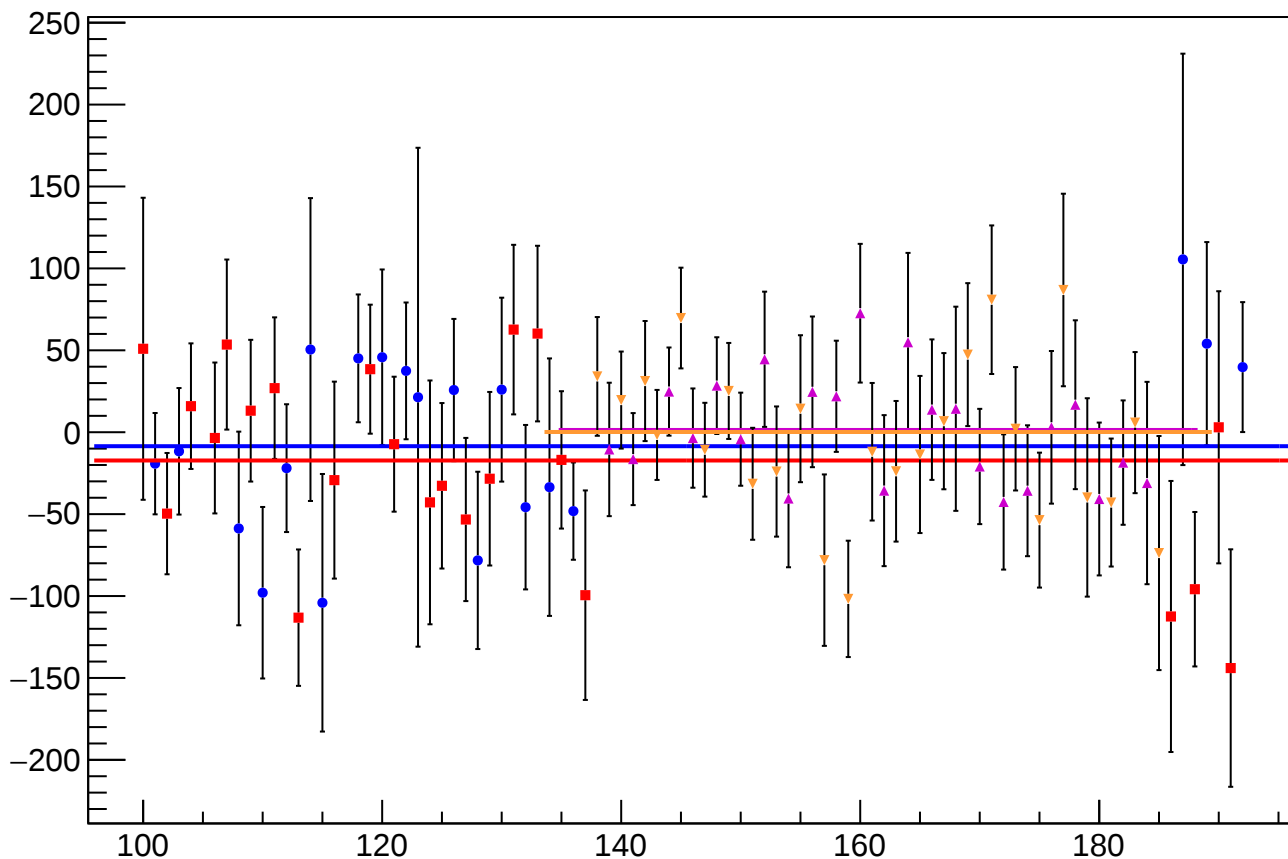
Right: 5619.373+/-1.091  $\chi^2/\text{NDF}$ : 5562389.7/42

In: 5320.497+/-0.827  $\chi^2/\text{NDF}$ : 7915526.4/42

Out: 5594.081+/-0.841  $\chi^2/\text{NDF}$ : 7387639.1/47

All: 5454.909+/-0.590  $\chi^2/\text{NDF}$ : 15356982.6/95

# diff\_bpm12X\_mean vs Slug, Sign Corrected



Right In:  $-8.534 \pm 10.680$   $\chi^2/\text{NDF}$ : 18.4/19

Left Out:  $0.143 \pm 7.683$   $\chi^2/\text{NDF}$ : 31.3/24

Right Out:  $-17.256 \pm 10.355$   $\chi^2/\text{NDF}$ : 27.1/22

Left In:  $1.374 \pm 7.990$   $\chi^2/\text{NDF}$ : 13.3/22

Left:  $0.734 \pm 5.538$   $\chi^2/\text{NDF}$ : 44.6/47

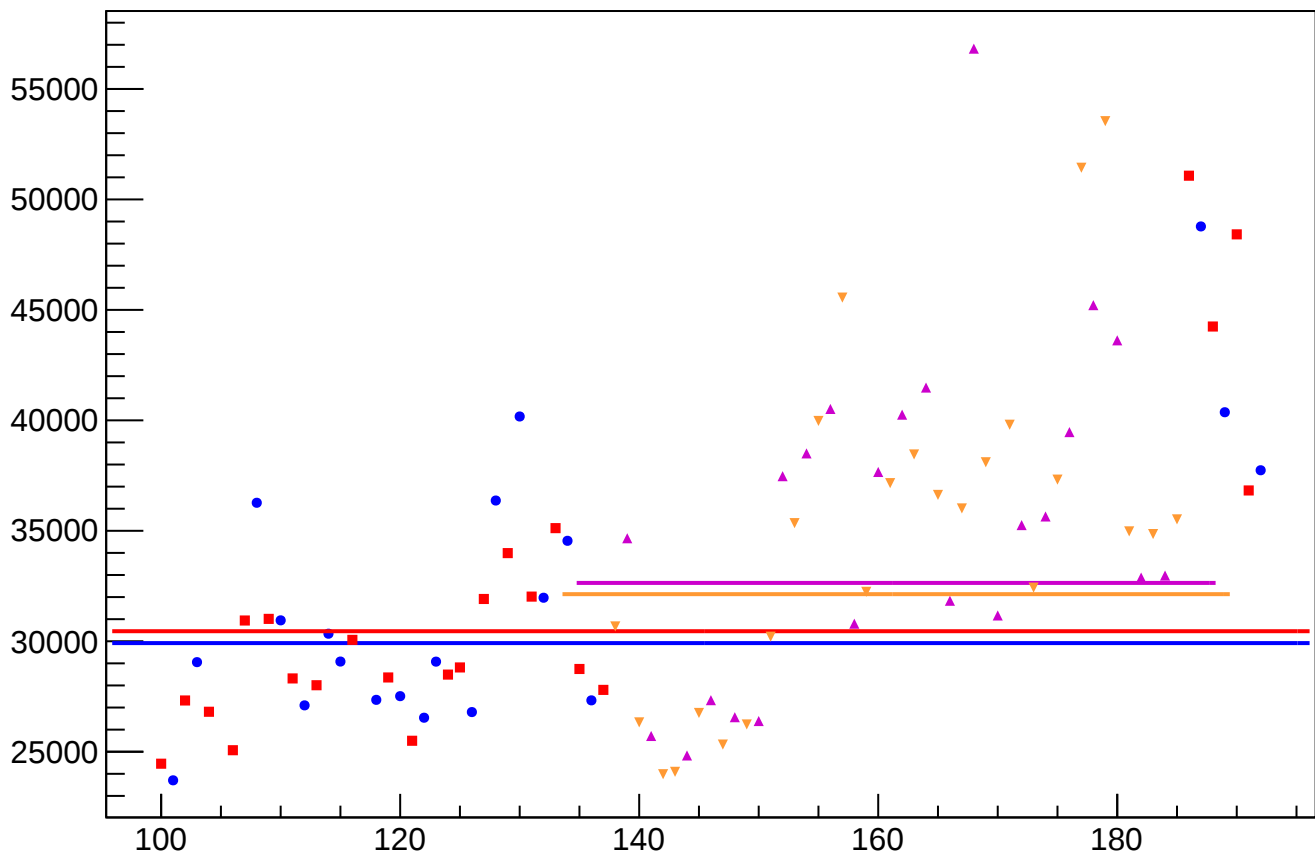
Right:  $-13.030 \pm 7.434$   $\chi^2/\text{NDF}$ : 45.8/42

In:  $-2.181 \pm 6.398$   $\chi^2/\text{NDF}$ : 32.2/42

Out:  $-6.035 \pm 6.170$   $\chi^2/\text{NDF}$ : 60.2/47

All:  $-4.178 \pm 4.441$   $\chi^2/\text{NDF}$ : 92.6/90

# diff\_bpm12X\_rms vs Slug, Sign Corrected



Right In: 29917.220+/-7.552

$\chi^2/\text{NDF}$ : 452883.4/19

Left Out: 32132.314+/-5.433

$\chi^2/\text{NDF}$ : 1540079.4/24

Right Out: 30454.983+/-7.322

$\chi^2/\text{NDF}$ : 557589.1/22

Left In: 32641.162+/-5.650

$\chi^2/\text{NDF}$ : 1402162.4/22

Left: 32376.774+/-3.916

$\chi^2/\text{NDF}$ : 2946456.2/47

Right: 30194.428+/-5.257

$\chi^2/\text{NDF}$ : 1013086.2/42

In: 31663.680+/-4.524

$\chi^2/\text{NDF}$ : 1938454.7/42

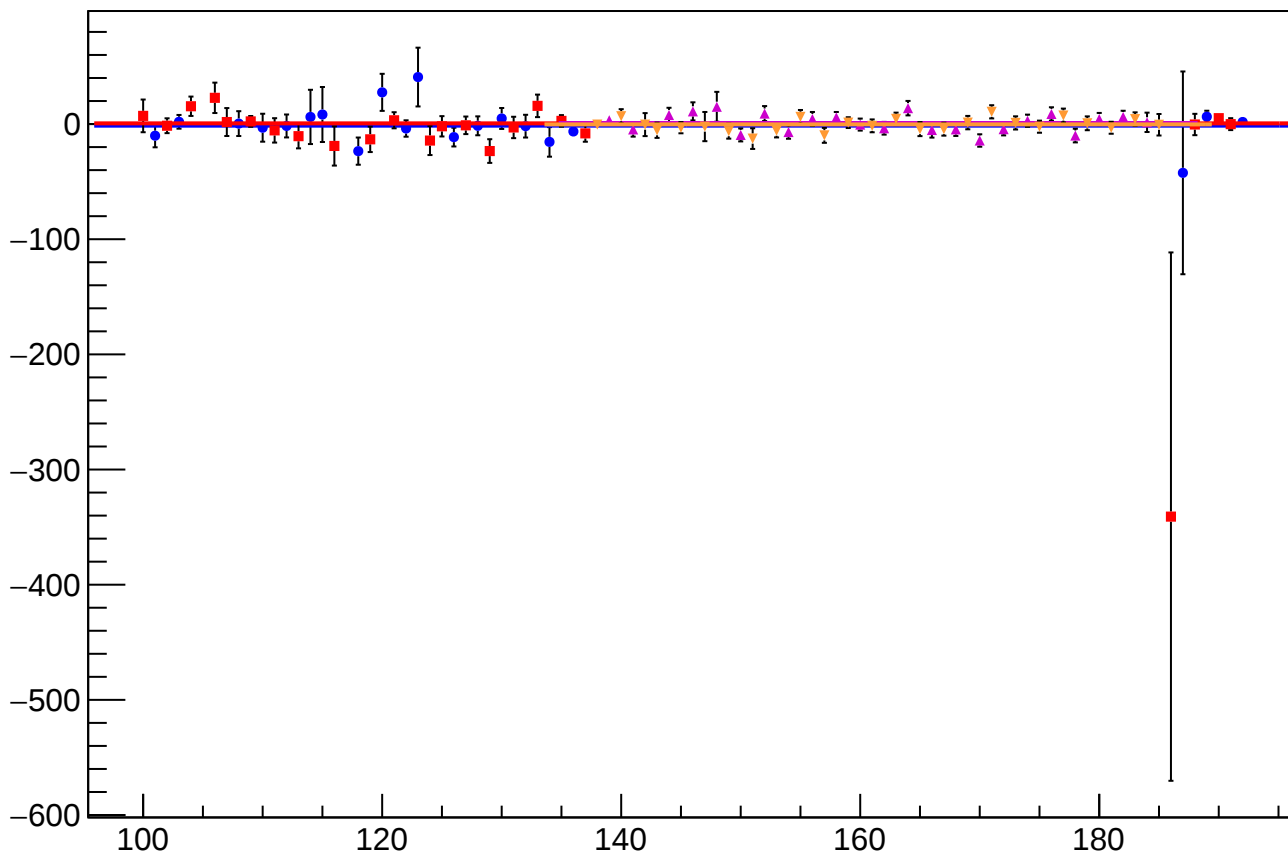
Out: 31536.723+/-4.363

$\chi^2/\text{NDF}$ : 2131514.3/47

All: 31597.901+/-3.140

$\chi^2/\text{NDF}$ : 4070377.1/9

# diff\_bpm12Y\_mean vs Slug, Sign Corrected



Right In:  $-1.387 \pm 1.609$   $\chi^2/\text{NDF}: 19.9/19$

Left Out:  $-0.312 \pm 1.172$   $\chi^2/\text{NDF}: 17.6/24$

Right Out:  $0.606 \pm 1.611$   $\chi^2/\text{NDF}: 25.5/22$

Left In:  $0.908 \pm 1.142$   $\chi^2/\text{NDF}: 36.2/22$

Left:  $0.313 \pm 0.818$   $\chi^2/\text{NDF}: 54.4/47$

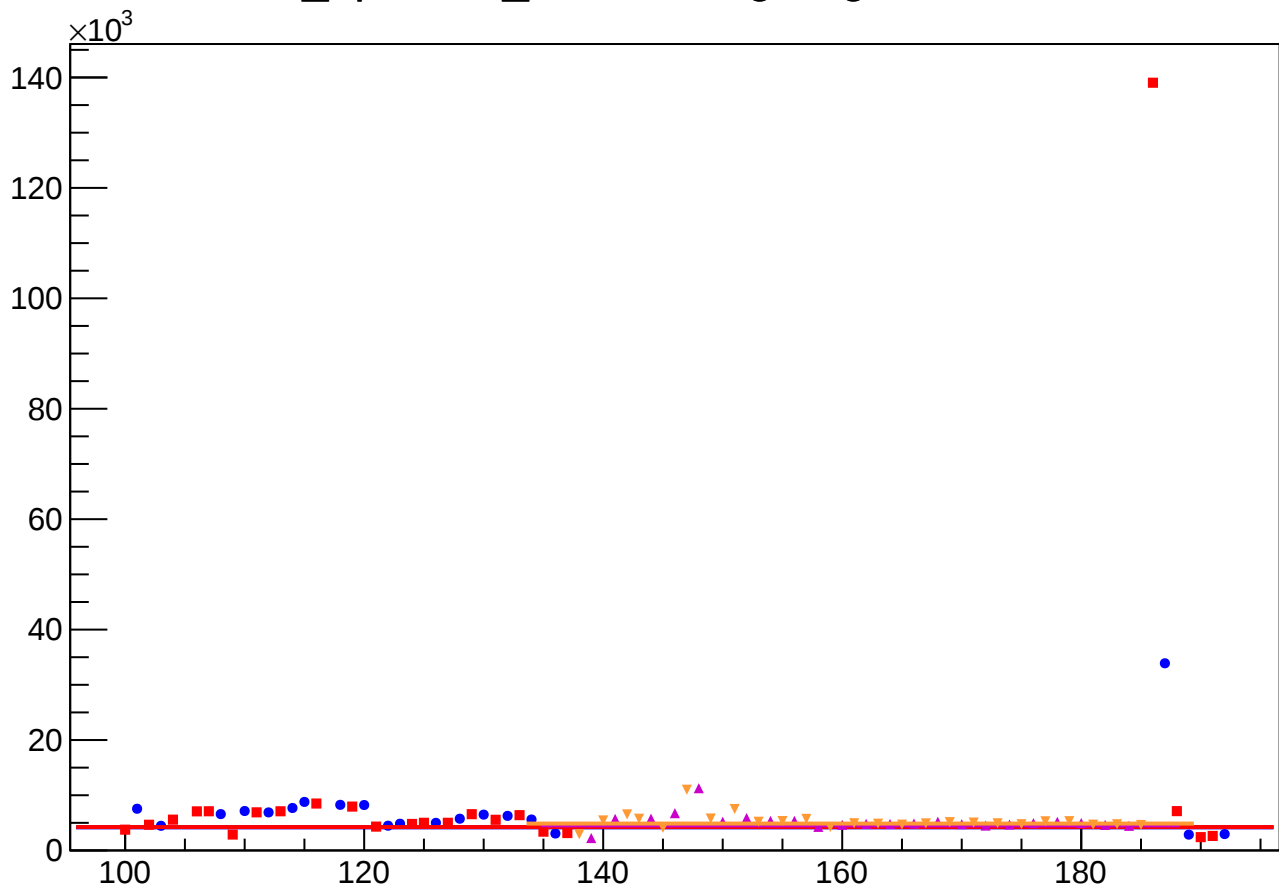
Right:  $-0.391 \pm 1.139$   $\chi^2/\text{NDF}: 46.2/42$

In:  $0.139 \pm 0.931$   $\chi^2/\text{NDF}: 57.5/42$

Out:  $0.005 \pm 0.948$   $\chi^2/\text{NDF}: 43.4/47$

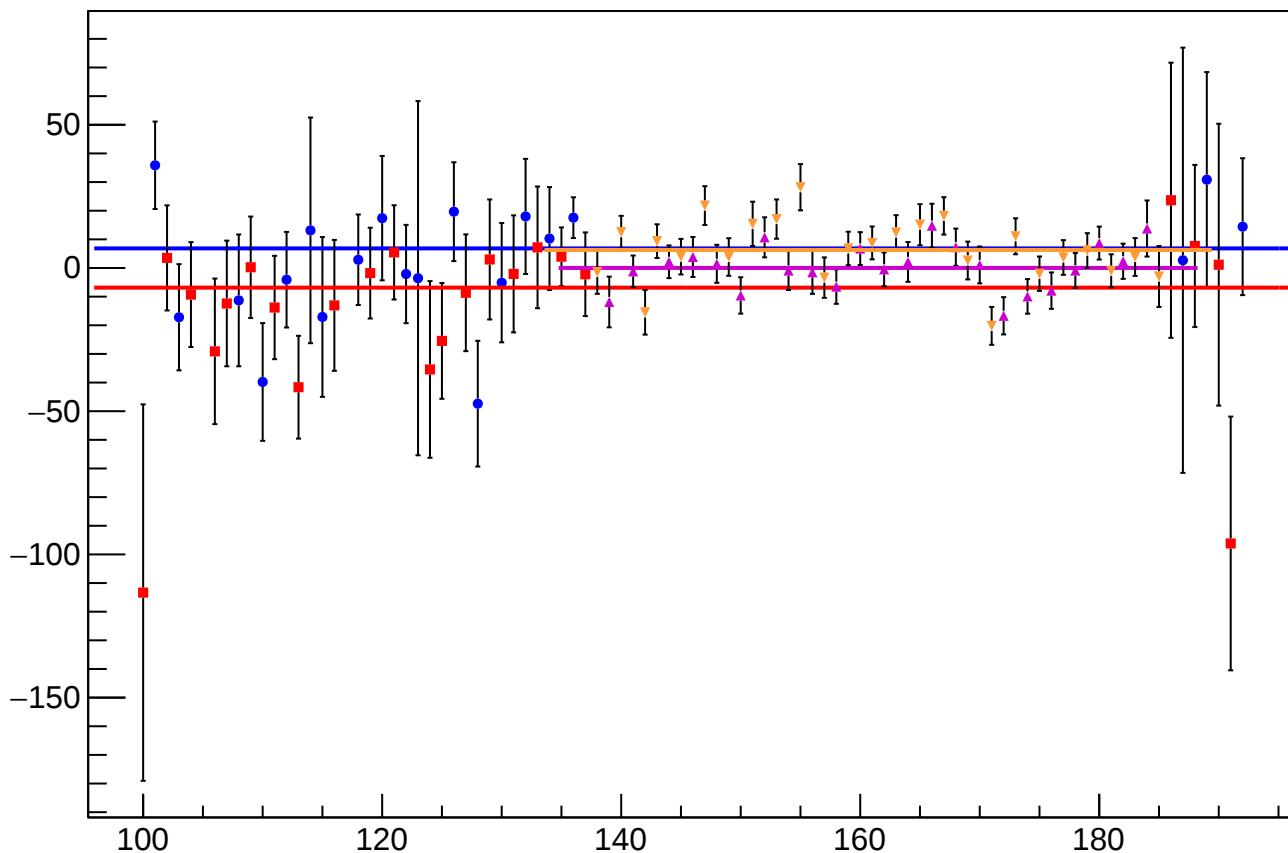
All:  $0.073 \pm 0.664$   $\chi^2/\text{NDF}: 100.8/90$

# diff\_bpm12Y\_rms vs Slug, Sign Corrected



|                                 |                                    |                             |                                    |
|---------------------------------|------------------------------------|-----------------------------|------------------------------------|
| Right In: 4184.292 $\pm$ 1.138  | $\chi^2/\text{NDF}$ : 2298173.7/19 | Left: 4702.320 $\pm$ 0.578  | $\chi^2/\text{NDF}$ : 4223993.0/47 |
| Left Out: 4868.567 $\pm$ 0.829  | $\chi^2/\text{NDF}$ : 1511151.0/24 | Right: 4209.633 $\pm$ 0.805 | $\chi^2/\text{NDF}$ : 5202796.3/42 |
| Right Out: 4235.022 $\pm$ 1.139 | $\chi^2/\text{NDF}$ : 2903629.8/22 | In: 4423.726 $\pm$ 0.659    | $\chi^2/\text{NDF}$ : 4999061.0/42 |
| Left In: 4544.337 $\pm$ 0.808   | $\chi^2/\text{NDF}$ : 2634314.4/22 | Out: 4649.361 $\pm$ 0.670   | $\chi^2/\text{NDF}$ : 4617102.9/47 |
|                                 |                                    | All: 4534.609 $\pm$ 0.470   | $\chi^2/\text{NDF}$ : 9673840.3/90 |

# diff\_bpm16X\_mean vs Slug, Sign Corrected



Right In:  $6.842 \pm 4.001$   $\chi^2/\text{NDF}: 23.0/19$

Left Out:  $6.296 \pm 1.310$   $\chi^2/\text{NDF}: 56.5/24$

Right Out:  $-6.862 \pm 4.137$   $\chi^2/\text{NDF}: 17.0/22$

Left In:  $0.020 \pm 1.353$   $\chi^2/\text{NDF}: 29.9/22$

Left:  $3.259 \pm 0.941$   $\chi^2/\text{NDF}: 97.5/47$

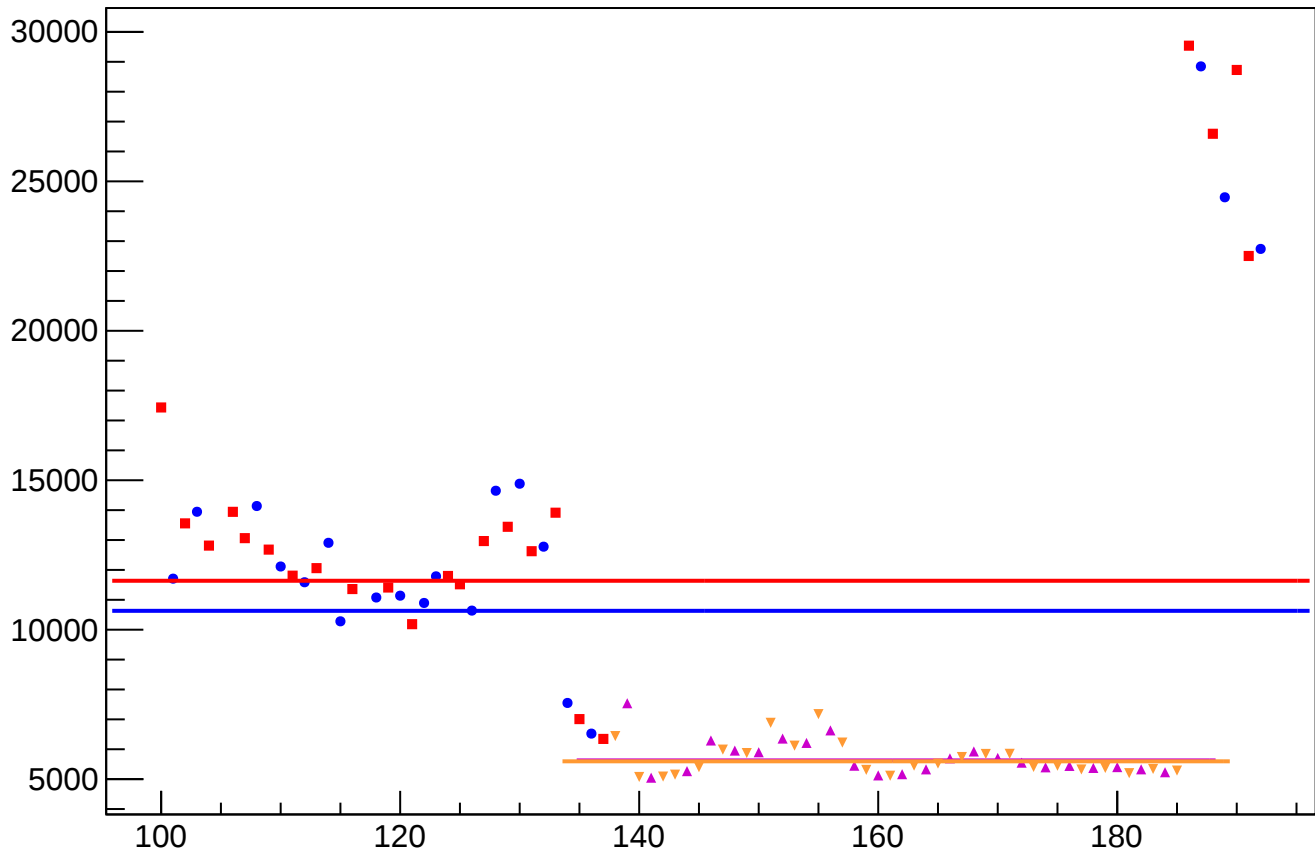
Right:  $0.218 \pm 2.876$   $\chi^2/\text{NDF}: 45.6/42$

In:  $0.720 \pm 1.282$   $\chi^2/\text{NDF}: 55.5/42$

Out:  $5.096 \pm 1.249$   $\chi^2/\text{NDF}: 82.7/47$

All:  $2.965 \pm 0.895$   $\chi^2/\text{NDF}: 144.2/90$

# diff\_bpm16X\_rms vs Slug, Sign Corrected



Right In: 10631.170 $\pm$ 2.829  $\chi^2$ /NDF: 1951994.1/19

Left Out: 5596.370 $\pm$ 0.926  $\chi^2$ /NDF: 283998.1/24

Right Out: 11637.006 $\pm$ 2.925  $\chi^2$ /NDF: 2016438.0/22

Left In: 5627.283 $\pm$ 0.957  $\chi^2$ /NDF: 279318.7/22

Left: 5611.329 $\pm$ 0.666  $\chi^2$ /NDF: 563855.6/47

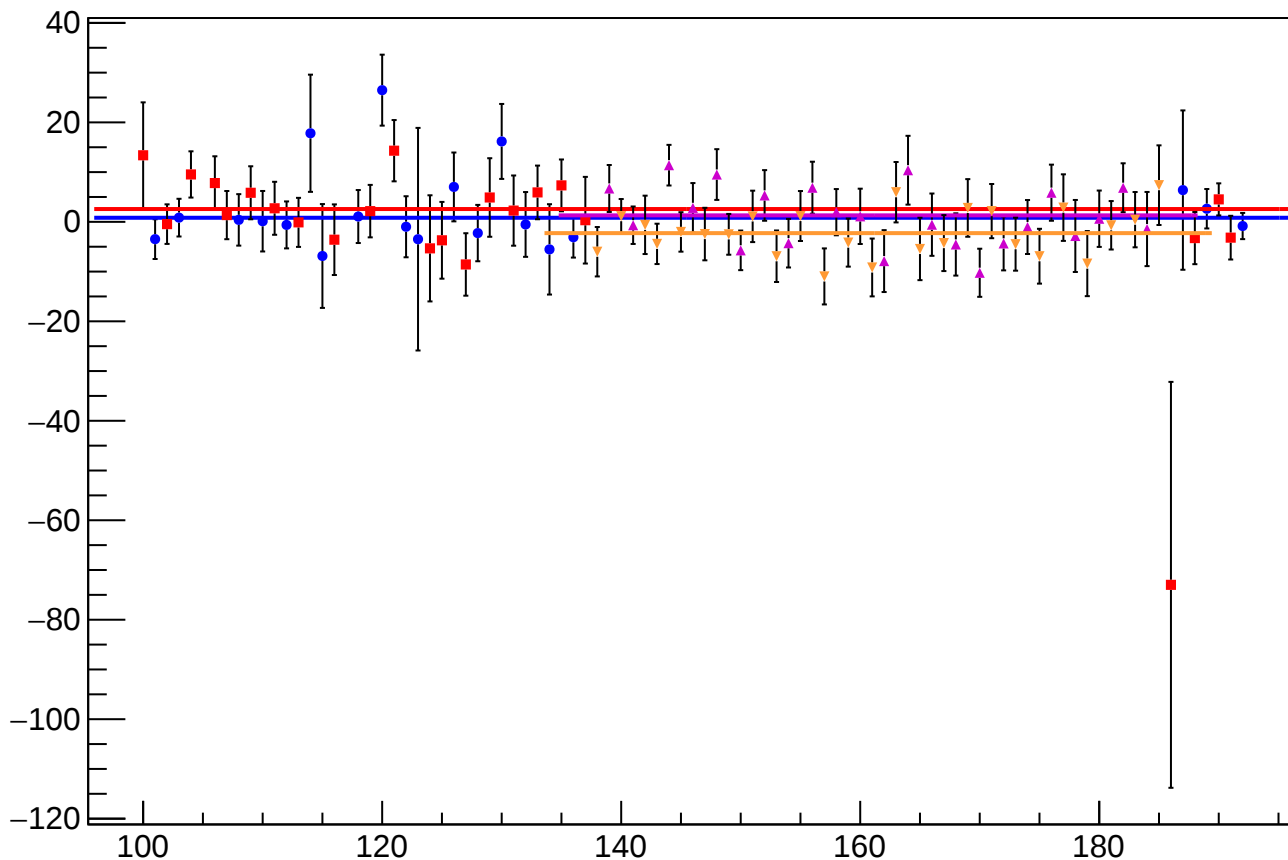
Right: 11117.311 $\pm$ 2.034  $\chi^2$ /NDF: 4029519.7/42

In: 6140.809 $\pm$ 0.906  $\chi^2$ /NDF: 5038372.2/42

Out: 6147.028 $\pm$ 0.883  $\chi^2$ /NDF: 6175959.9/47

All: 6143.999 $\pm$ 0.633  $\chi^2$ /NDF: 11214356.2/95

# diff\_bpm16Y\_mean vs Slug, Sign Corrected



Right In: 0.822 $\pm$ 1.180  $\chi^2/\text{NDF}$ : 24.4/19

Left Out: -2.268 $\pm$ 1.029  $\chi^2/\text{NDF}$ : 15.4/24

Right Out: 2.577 $\pm$ 1.158  $\chi^2/\text{NDF}$ : 22.4/22

Left In: 1.305 $\pm$ 1.077  $\chi^2/\text{NDF}$ : 30.8/22

Left: -0.562 $\pm$ 0.744  $\chi^2/\text{NDF}$ : 51.9/47

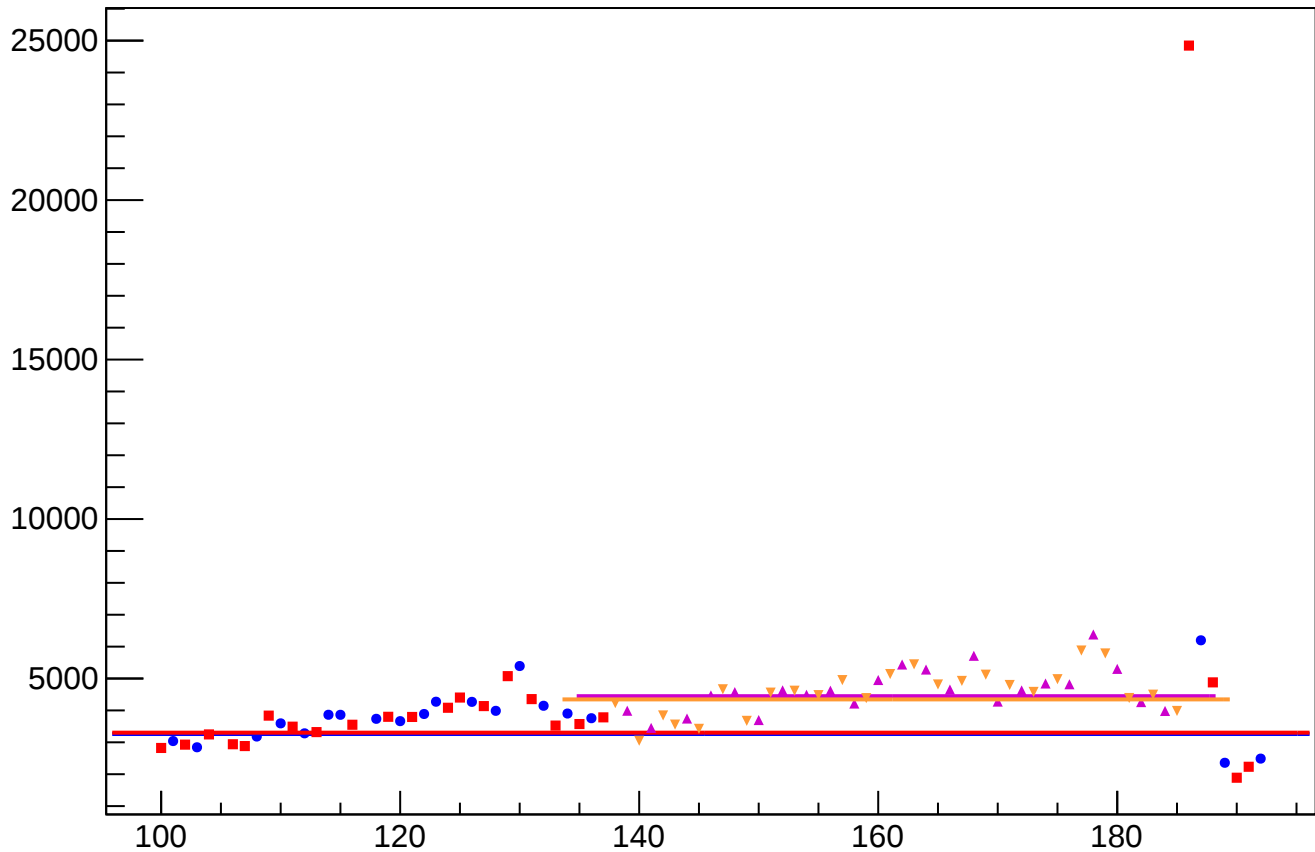
Right: 1.716 $\pm$ 0.827  $\chi^2/\text{NDF}$ : 47.9/42

In: 1.086 $\pm$ 0.796  $\chi^2/\text{NDF}$ : 55.3/42

Out: -0.130 $\pm$ 0.769  $\chi^2/\text{NDF}$ : 47.5/47

All: 0.458 $\pm$ 0.553  $\chi^2/\text{NDF}$ : 104.0/90

# diff\_bpm16Y\_rms vs Slug, Sign Corrected



Right In: 3260.231 $\pm$ 0.835  $\chi^2/\text{NDF}$ : 749656.2/19

Left Out: 4345.381 $\pm$ 0.728  $\chi^2/\text{NDF}$ : 1000636.1/24

Right Out: 3302.425 $\pm$ 0.819  $\chi^2/\text{NDF}$ : 1588713.2/22

Left In: 4446.181 $\pm$ 0.762  $\chi^2/\text{NDF}$ : 702797.6/22

Left: 4393.504 $\pm$ 0.526  $\chi^2/\text{NDF}$ : 1712588.4/47

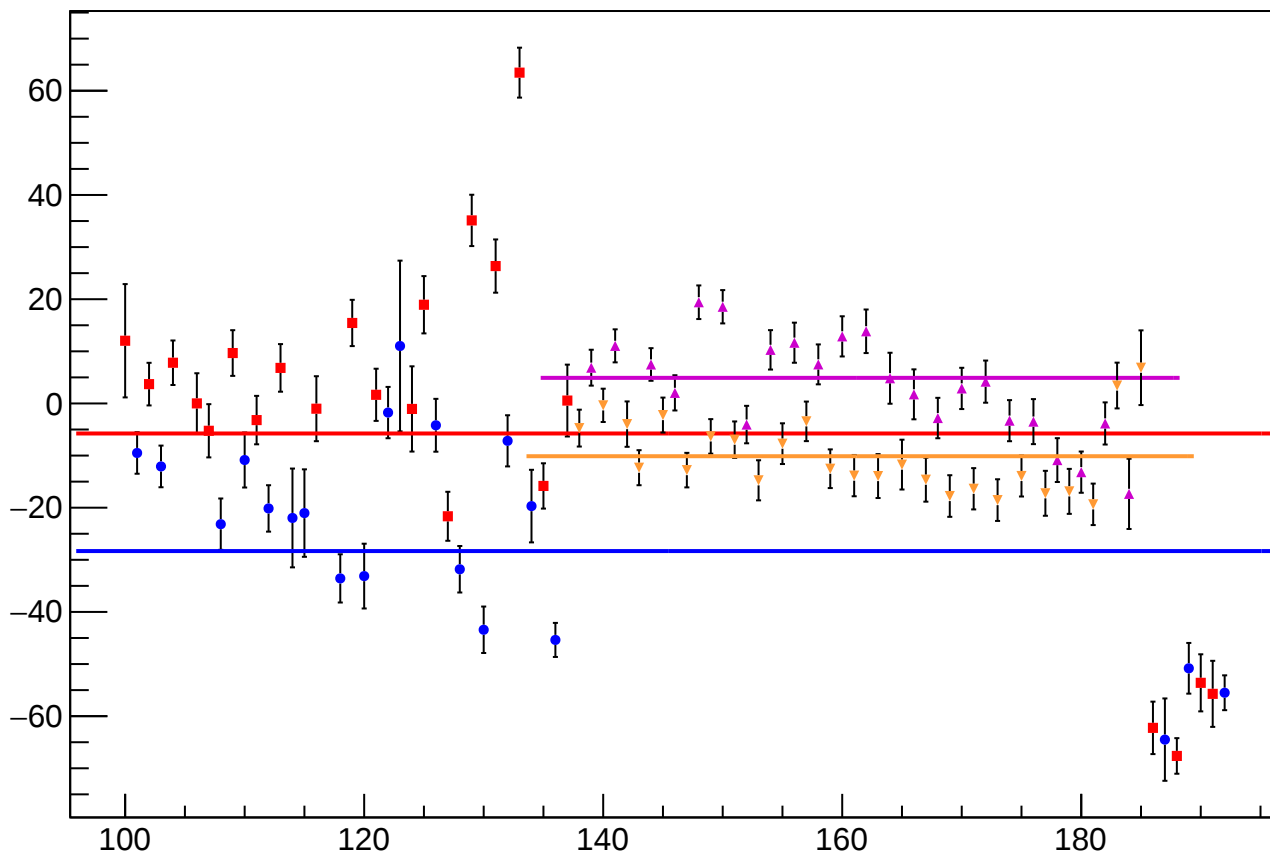
Right: 3281.725 $\pm$ 0.585  $\chi^2/\text{NDF}$ : 2339671.5/42

In: 3907.335 $\pm$ 0.563  $\chi^2/\text{NDF}$ : 2554213.3/42

Out: 3885.125 $\pm$ 0.544  $\chi^2/\text{NDF}$ : 3495281.7/47

All: 3895.859 $\pm$ 0.391  $\chi^2/\text{NDF}$ : 6050300.3/90

# diff\_bpm0l01X\_mean vs Slug, Sign Corrected



Right In: -28.322±/-1.092  $\chi^2/\text{NDF}$ : 282.9/19

Left Out: -10.125±/-0.775  $\chi^2/\text{NDF}$ : 67.9/24

Right Out: -5.762±/-1.038  $\chi^2/\text{NDF}$ : 1013.5/22

Left In: 4.911±/-0.797  $\chi^2/\text{NDF}$ : 127.9/22

Left: -2.814±/-0.556  $\chi^2/\text{NDF}$ : 378.7/47

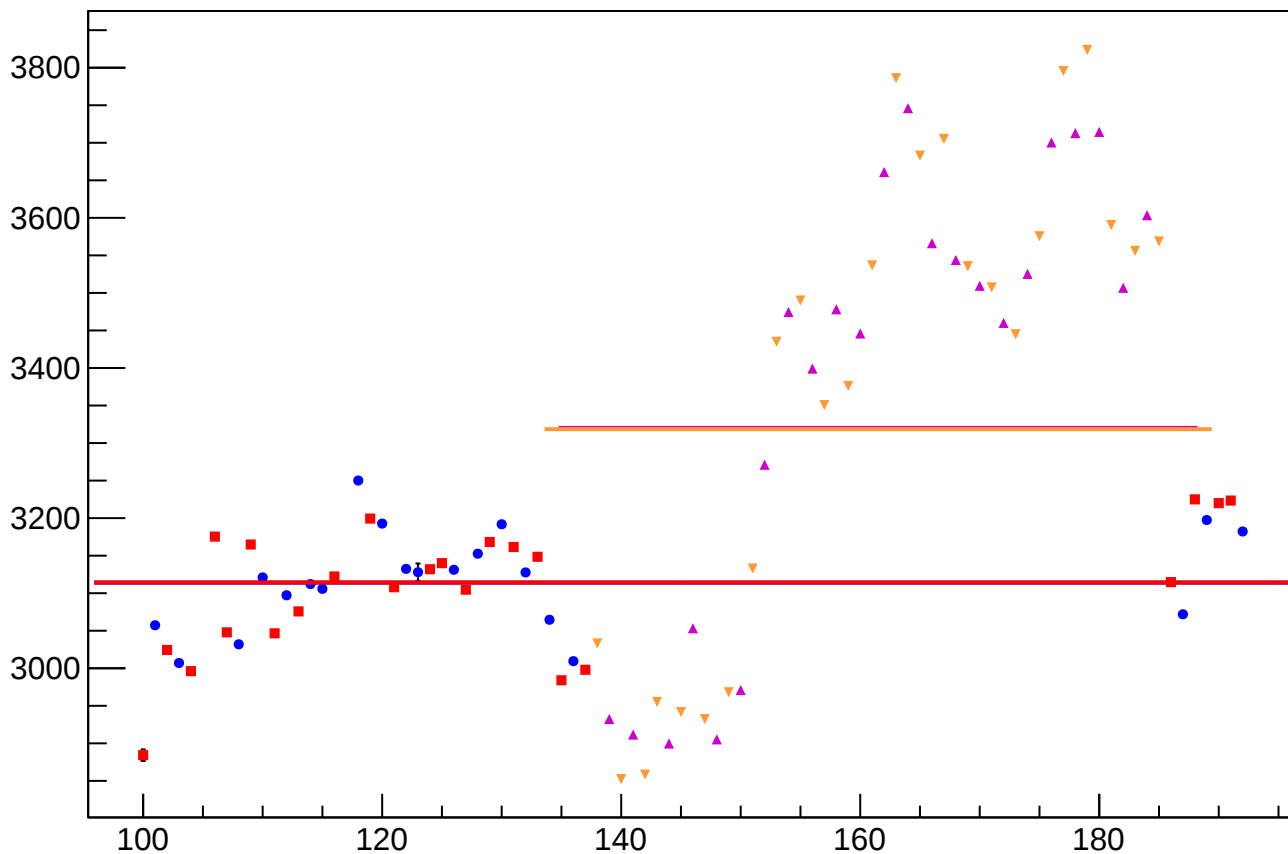
Right: -16.475±/-0.752  $\chi^2/\text{NDF}$ : 1520.7/42

In: -6.648±/-0.644  $\chi^2/\text{NDF}$ : 1015.4/42

Out: -8.562±/-0.621  $\chi^2/\text{NDF}$ : 1092.7/47

All: -7.639±/-0.447  $\chi^2/\text{NDF}$ : 2112.7/90

# diff\_bpm0l01X\_rms vs Slug, Sign Corrected



Right In: 3114.103 $\pm$ 0.772  $\chi^2$ /NDF: 8934.4/19

Left Out: 3318.506 $\pm$ 0.548  $\chi^2$ /NDF: 337694.2/24

Right Out: 3114.315 $\pm$ 0.734  $\chi^2$ /NDF: 11912.2/22

Left In: 3320.170 $\pm$ 0.564  $\chi^2$ /NDF: 287634.9/22

Left: 3319.315 $\pm$ 0.393  $\chi^2$ /NDF: 625333.6/47

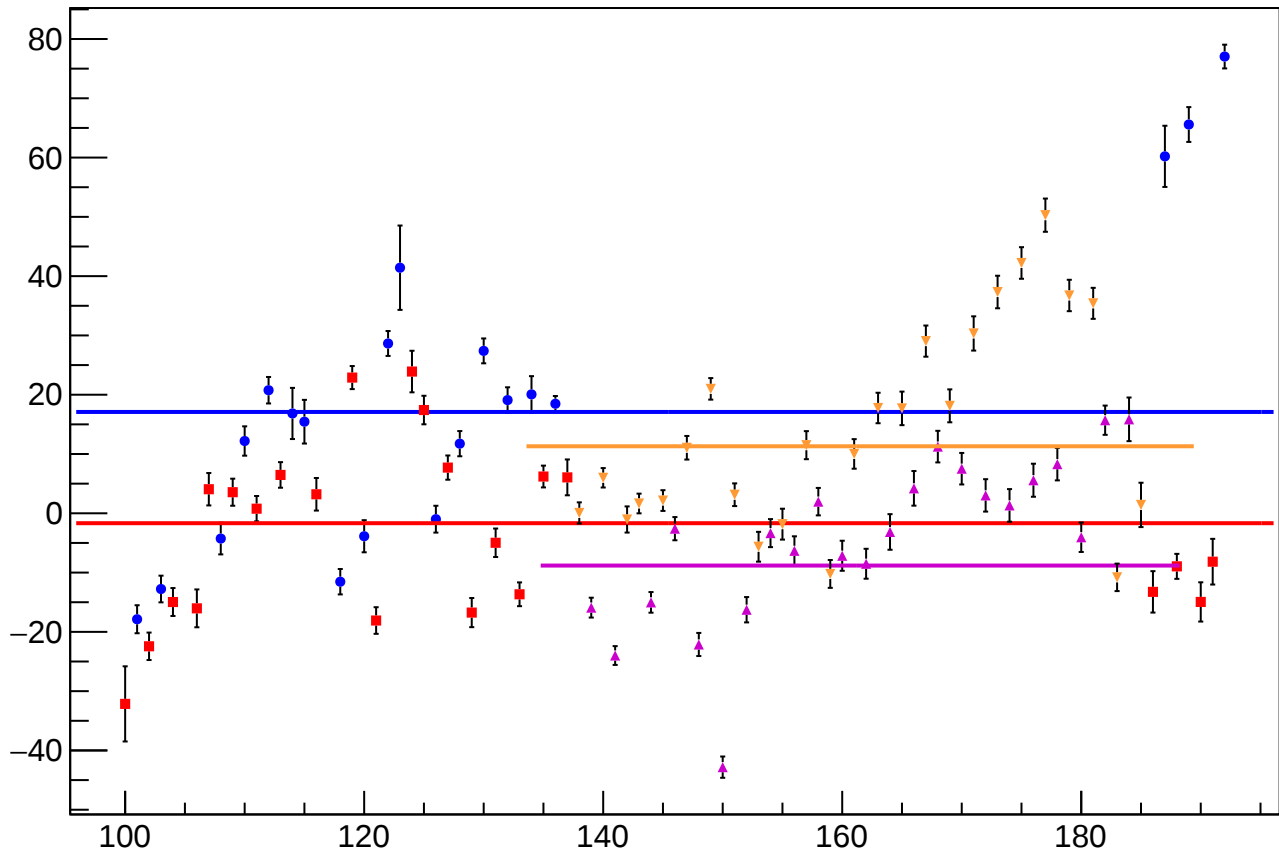
Right: 3114.214 $\pm$ 0.532  $\chi^2$ /NDF: 20846.6/42

In: 3248.498 $\pm$ 0.455  $\chi^2$ /NDF: 343056.4/42

Out: 3245.363 $\pm$ 0.439  $\chi^2$ /NDF: 399279.5/47

All: 3246.875 $\pm$ 0.316  $\chi^2$ /NDF: 742360.5/90

# diff\_bpm0l01Y\_mean vs Slug, Sign Corrected



Right In:  $17.093 \pm 0.530$   $\chi^2/\text{NDF}$ : 2081.9/19

Left Out:  $11.305 \pm 0.454$   $\chi^2/\text{NDF}$ : 1144.3/24

Right Out:  $-1.669 \pm 0.513$   $\chi^2/\text{NDF}$ : 676.3/22

Left In:  $-8.815 \pm 0.475$   $\chi^2/\text{NDF}$ : 942.2/22

Left:  $1.711 \pm 0.328$   $\chi^2/\text{NDF}$ : 3023.6/47

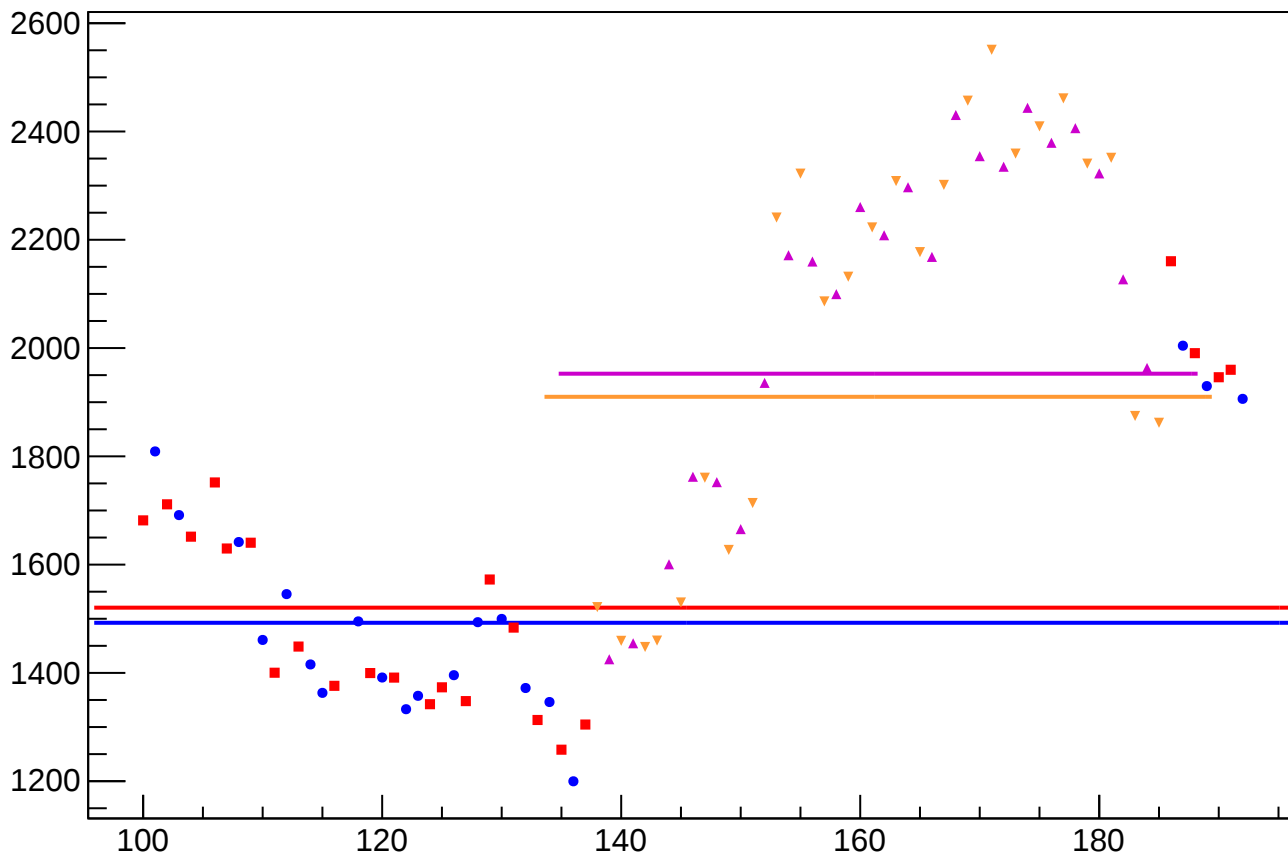
Right:  $7.412 \pm 0.369$   $\chi^2/\text{NDF}$ : 3405.0/42

In:  $2.738 \pm 0.354$   $\chi^2/\text{NDF}$ : 4348.6/42

Out:  $5.611 \pm 0.340$   $\chi^2/\text{NDF}$ : 2179.2/47

All:  $4.232 \pm 0.245$   $\chi^2/\text{NDF}$ : 6562.0/90

# diff\_bpm0l01Y\_rms vs Slug, Sign Corrected



Right In: 1492.568 $\pm$ 0.375  $\chi^2$ /NDF: 341412.2/19

Left Out: 1909.963 $\pm$ 0.321  $\chi^2$ /NDF:1399467.7/24

Right Out: 1520.505 $\pm$ 0.363  $\chi^2$ /NDF: 394942.6/22

Left In: 1952.637 $\pm$ 0.336  $\chi^2$ /NDF:1065333.8/22

Left: 1930.313 $\pm$ 0.232  $\chi^2$ /NDF: 2473233.3/47

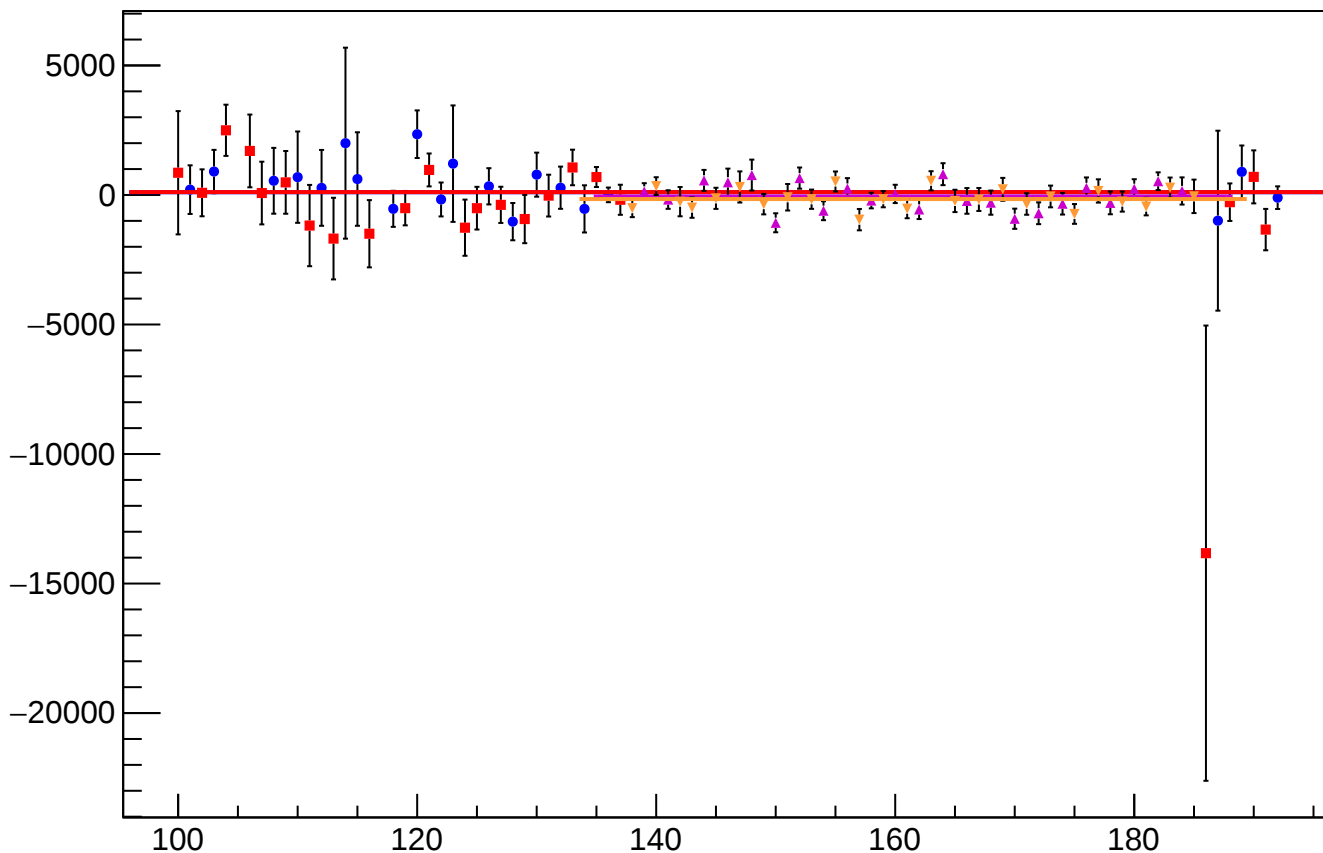
Right: 1506.982 $\pm$ 0.261  $\chi^2$ /NDF: 739223.1/42

In: 1747.485 $\pm$ 0.250  $\chi^2$ /NDF:2242096.9/42

Out: 1739.062 $\pm$ 0.240  $\chi^2$ /NDF:2440677.6/47

All: 1743.105 $\pm$ 0.173  $\chi^2$ /NDF: 4683363.9/90

# asym\_sam1\_mean vs Slug, Sign Corrected



Right In: 105.464+/-164.531  $\chi^2/\text{NDF}$ : 13.6/19

Left Out: -157.242+/-80.796  $\chi^2/\text{NDF}$ : 22.0/24

Right Out: 110.845+/-172.191  $\chi^2/\text{NDF}$ : 28.3/22

Left In: -58.934+/-82.584  $\chi^2/\text{NDF}$ : 38.5/22

Left: -109.164+/-57.753  $\chi^2/\text{NDF}$ : 61.3/47

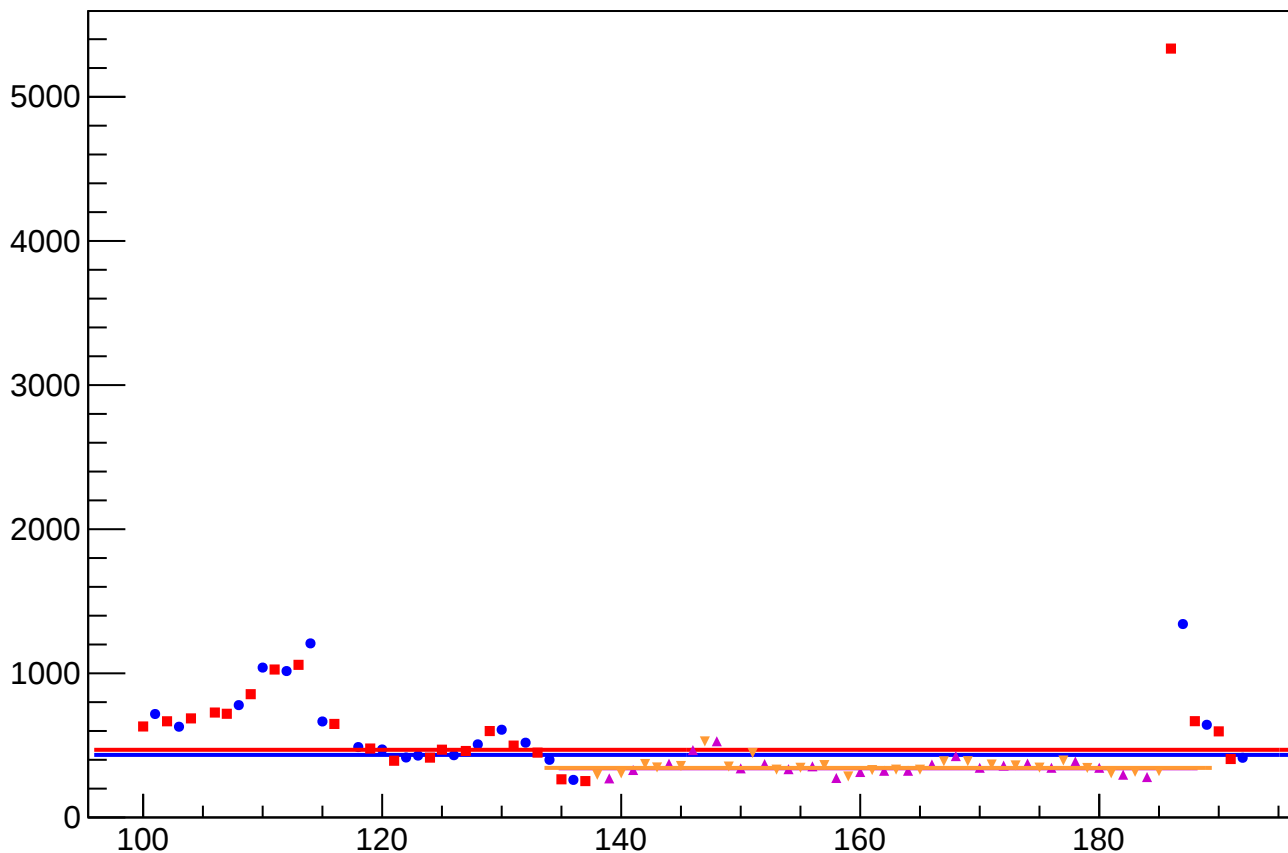
Right: 108.032+/-118.957  $\chi^2/\text{NDF}$ : 41.9/42

In: -25.850+/-73.808  $\chi^2/\text{NDF}$ : 52.9/42

Out: -108.868+/-73.144  $\chi^2/\text{NDF}$ : 52.3/47

All: -67.734+/-51.954  $\chi^2/\text{NDF}$ : 105.9/90

# asym\_sam1\_rms vs Slug, Sign Corrected



Right In: 434.055+/-0.116  $\chi^2/\text{NDF}$ : 2234223.9/19

Left Out: 343.807+/-0.057  $\chi^2/\text{NDF}$ : 539431.0/24

Right Out: 469.411+/-0.122  $\chi^2/\text{NDF}$ : 2854626.6/22

Left In: 340.876+/-0.058  $\chi^2/\text{NDF}$ : 724672.0/22

Left: 342.374+/-0.041  $\chi^2/\text{NDF}$ : 1265389.7/47

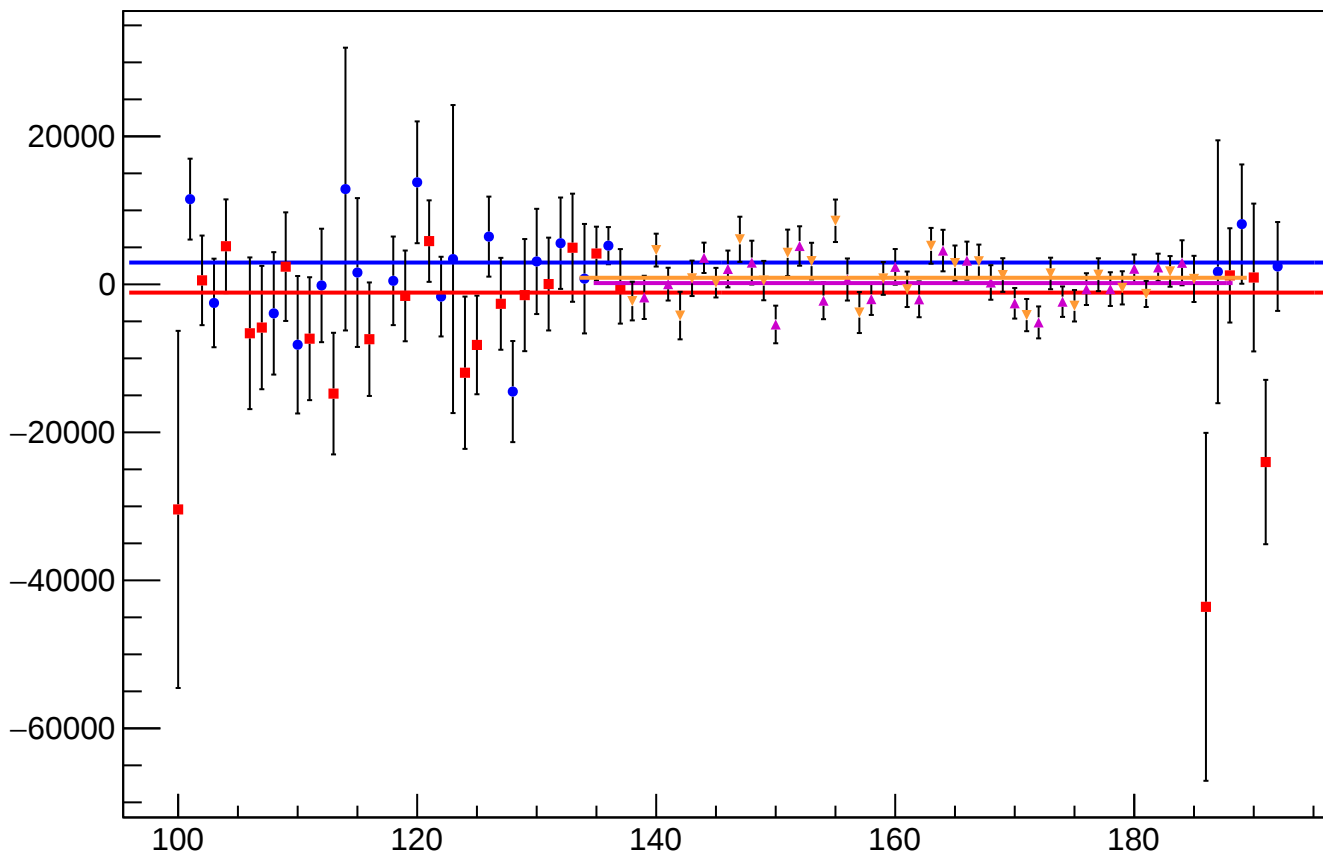
Right: 450.929+/-0.084  $\chi^2/\text{NDF}$ : 5132927.2/42

In: 359.628+/-0.052  $\chi^2/\text{NDF}$ : 3471270.3/42

Out: 366.471+/-0.052  $\chi^2/\text{NDF}$ : 4266223.5/47

All: 363.080+/-0.037  $\chi^2/\text{NDF}$ : 7746168.1/90

# asym\_sam2\_mean vs Slug, Sign Corrected



Right In: 2948.689+/-1384.894  $\chi^2/\text{NDF}$ : 17.0/19

Left Out: 890.395+/-473.262  $\chi^2/\text{NDF}$ : 38.0/24

Right Out: -1114.493+/-1440.918  $\chi^2/\text{NDF}$ : 21.8/22

Left In: 172.391+/-488.067  $\chi^2/\text{NDF}$ : 33.2/22

Left: 542.448+/-339.760  $\chi^2/\text{NDF}$ : 72.3/47

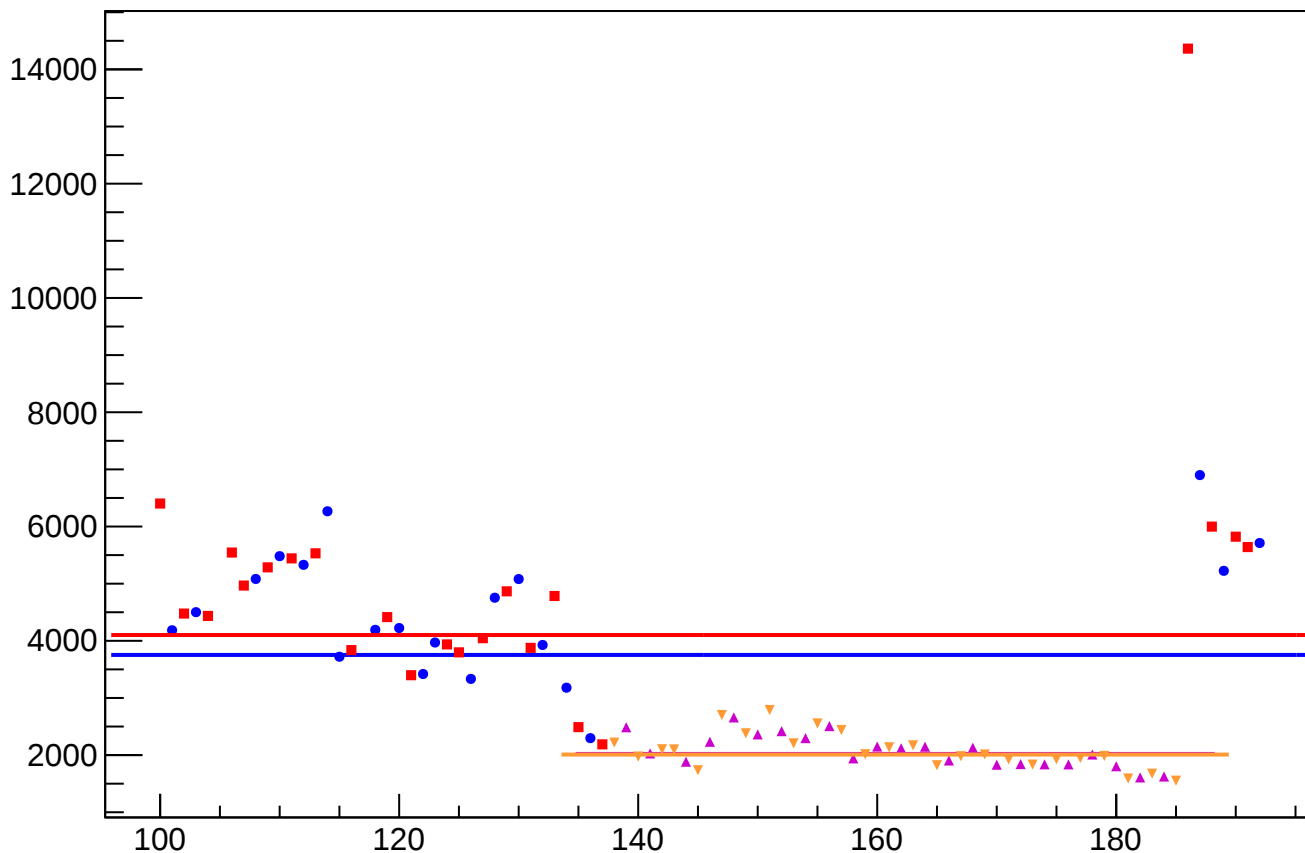
Right: 997.623+/-998.486  $\chi^2/\text{NDF}$ : 42.9/42

In: 479.116+/-460.318  $\chi^2/\text{NDF}$ : 53.7/42

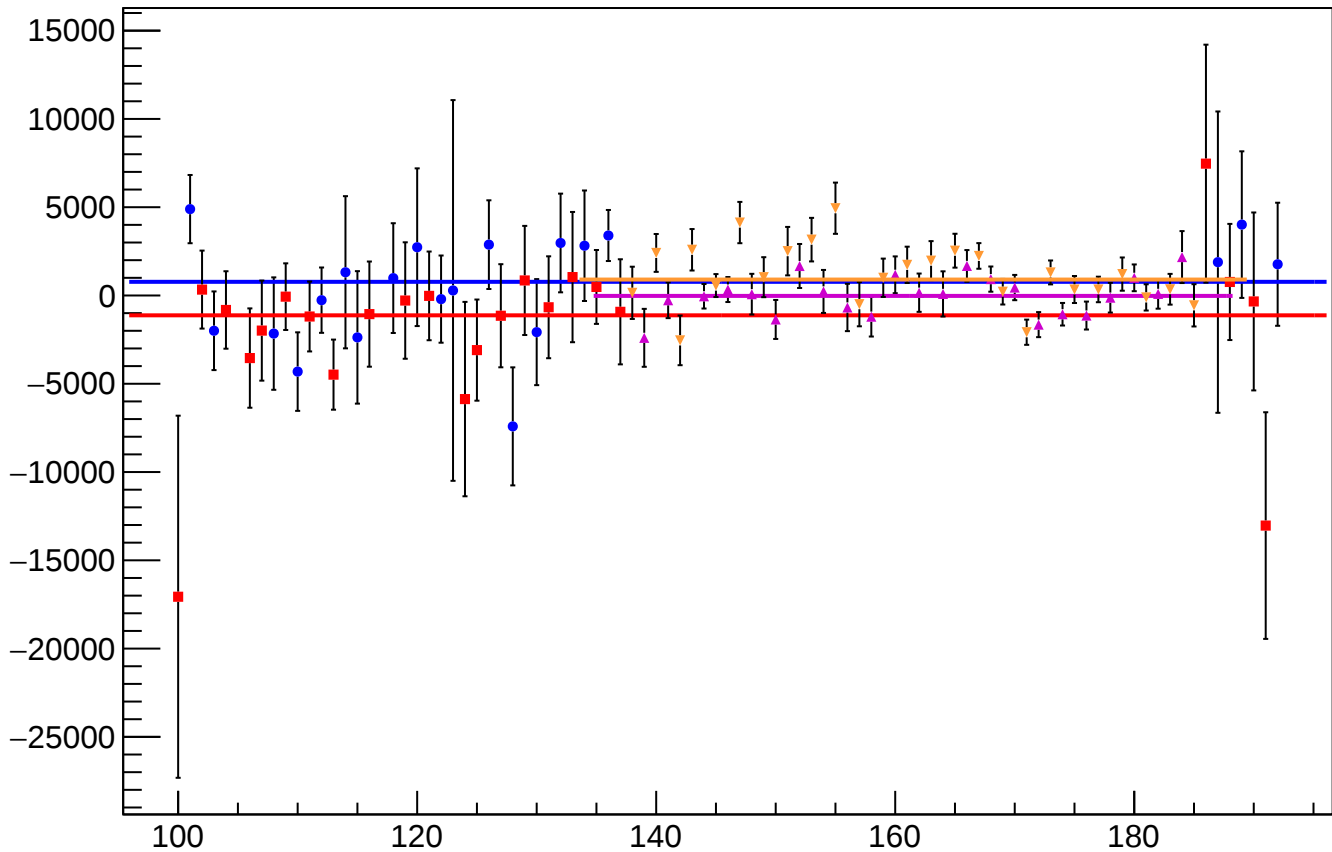
Out: 695.175+/-449.631  $\chi^2/\text{NDF}$ : 61.5/47

All: 589.683+/-321.649  $\chi^2/\text{NDF}$ : 115.4/90

# asym\_sam2\_rms vs Slug, Sign Corrected



# asym\_sam3\_mean vs Slug, Sign Corrected



Right In:  $773.939 \pm 604.720$   $\chi^2/\text{NDF}$ : 26.2/19

Left Out:  $902.091 \pm 185.850$   $\chi^2/\text{NDF}$ : 63.5/24

Right Out:  $-1123.733 \pm 585.604$   $\chi^2/\text{NDF}$ : 15.2/22

Left In:  $-23.529 \pm 188.137$   $\chi^2/\text{NDF}$ : 28.2/22

Left:  $444.940 \pm 132.217$   $\chi^2/\text{NDF}$ : 104.0/47

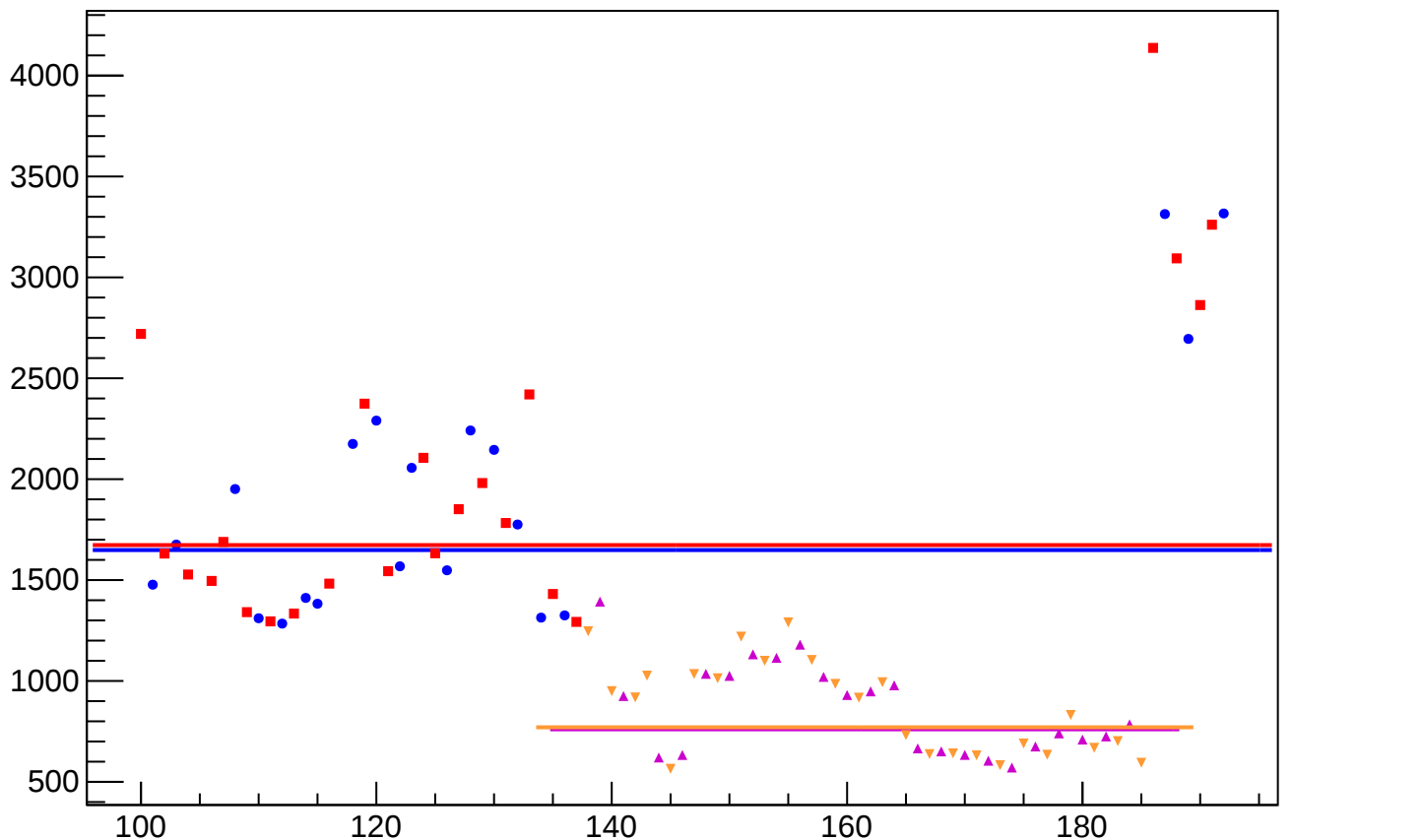
Right:  $-205.365 \pm 420.680$   $\chi^2/\text{NDF}$ : 46.4/42

In:  $46.847 \pm 179.643$   $\chi^2/\text{NDF}$ : 56.0/42

Out:  $716.720 \pm 177.143$   $\chi^2/\text{NDF}$ : 89.6/47

All:  $386.478 \pm 126.134$   $\chi^2/\text{NDF}$ : 152.6/90

# asym\_sam3\_rms vs Slug, Sign Corrected



Right In: 1648.699 $\pm$ 0.428  $\chi^2$ /NDF: 1186745.7/19

Left Out: 770.320 $\pm$ 0.131  $\chi^2$ /NDF: 2287655.1/24

Right Out: 1673.331 $\pm$ 0.414  $\chi^2$ /NDF: 1394482.1/22

Left In: 760.352 $\pm$ 0.133  $\chi^2$ /NDF: 1986749.8/22

Left: 765.397 $\pm$ 0.093  $\chi^2$ /NDF: 4277246.5/47

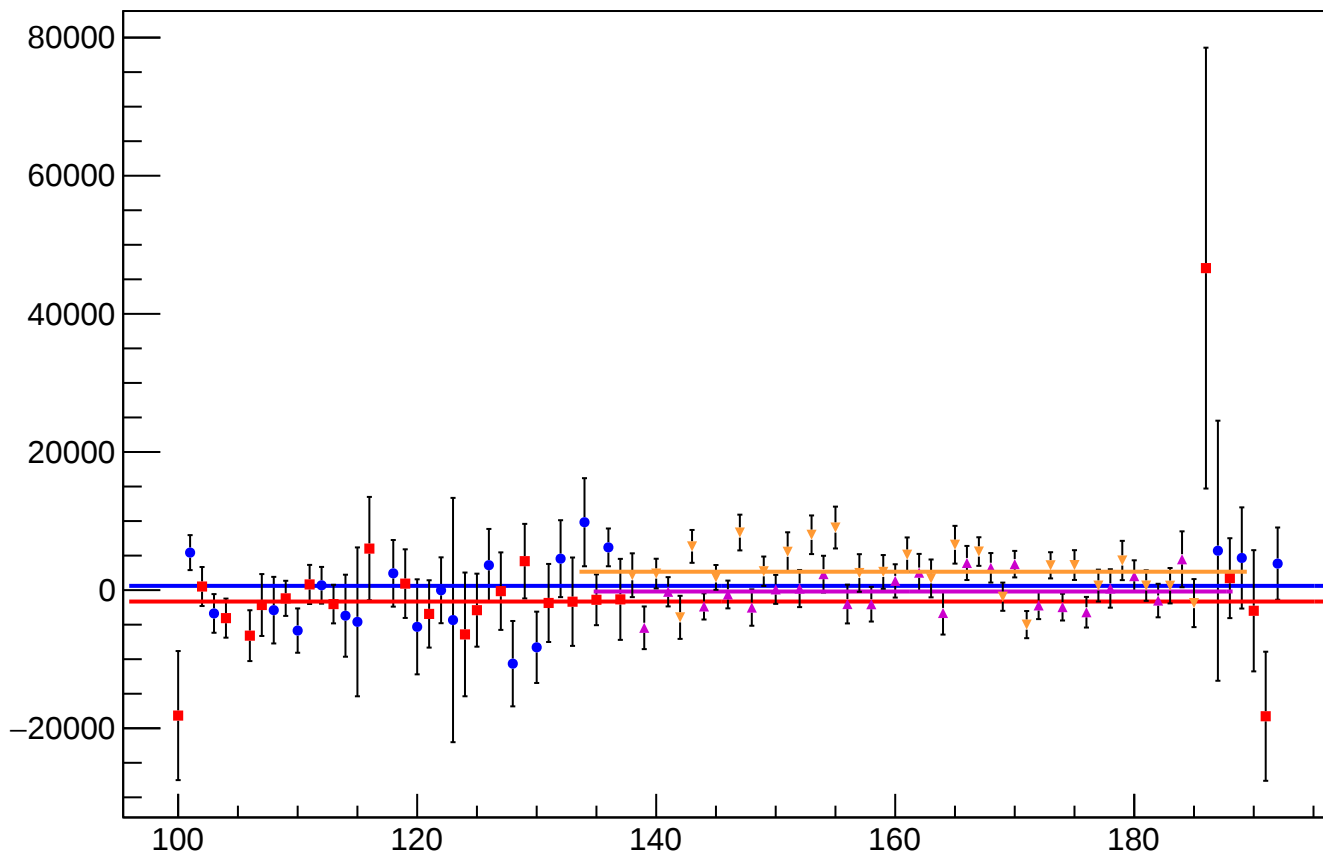
Right: 1661.410 $\pm$ 0.297  $\chi^2$ /NDF: 2582940.3/42

In: 838.748 $\pm$ 0.127  $\chi^2$ /NDF: 7108661.9/42

Out: 852.949 $\pm$ 0.125  $\chi^2$ /NDF: 8002612.2/47

All: 845.948 $\pm$ 0.089  $\chi^2$ /NDF: 15117610.6/90

# asym\_sam4\_mean vs Slug, Sign Corrected



Right In: 617.743+/-970.399  $\chi^2/\text{NDF}$ : 26.1/19

Left Out: 2665.587+/-479.773  $\chi^2/\text{NDF}$ :49.2/24

Right Out: -1651.643+/-904.585  $\chi^2/\text{NDF}$ : 15.9/22

Left In: -199.371+/-492.082  $\chi^2/\text{NDF}$ :25.8/22

Left: 1269.388+/-343.520  $\chi^2/\text{NDF}$ : 92.4/47

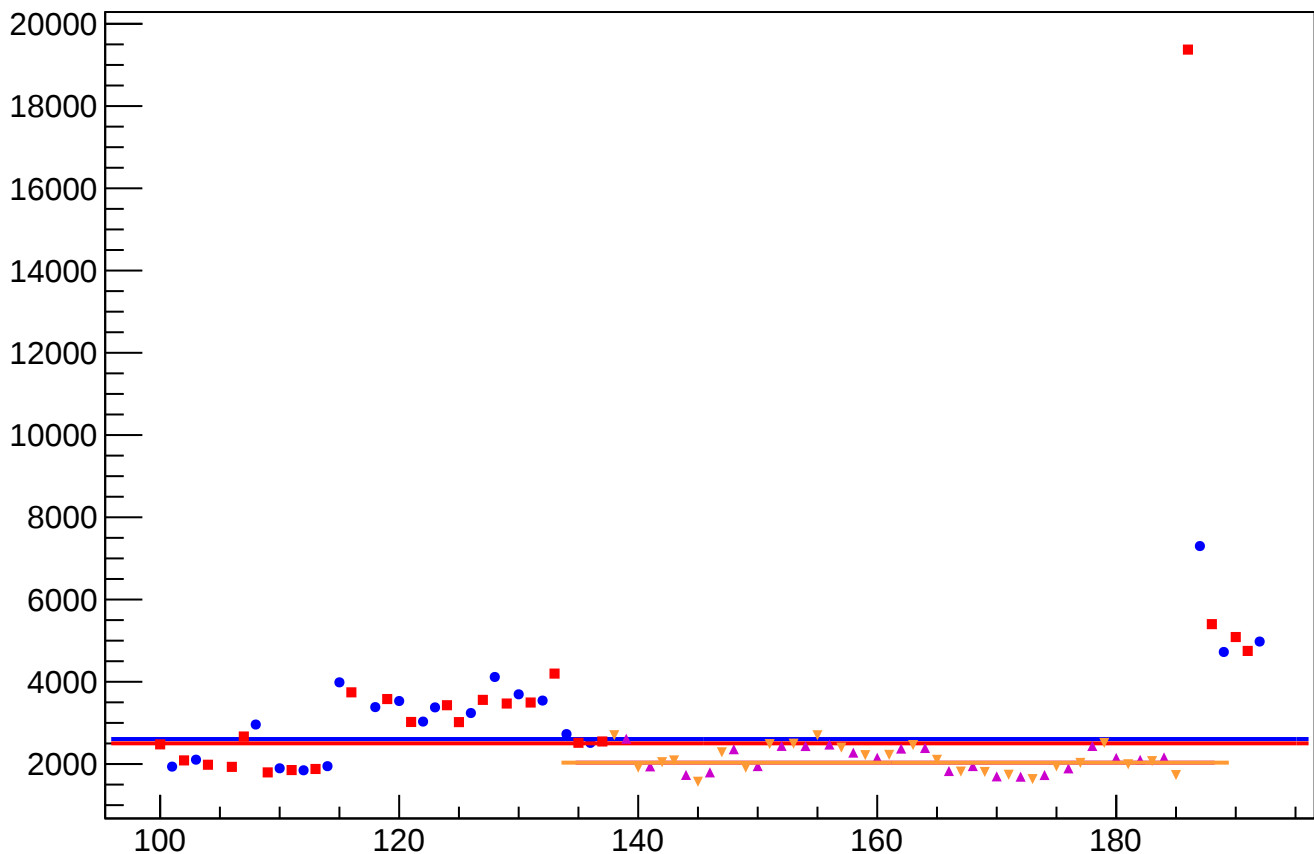
Right: -596.510+/-661.683  $\chi^2/\text{NDF}$ : 45.0/42

In: -32.234+/-438.879  $\chi^2/\text{NDF}$ :52.5/42

Out: 1717.765+/-423.848  $\chi^2/\text{NDF}$ :82.9/47

All: 873.247+/-304.881  $\chi^2/\text{NDF}$ : 143.6/90

# asym\_sam4\_rms vs Slug, Sign Corrected



Right In: 2608.053+/-0.686  $\chi^2/\text{NDF}$ : 1641024.8/19

Left Out: 2033.337+/-0.339  $\chi^2/\text{NDF}$ : 824062.2/24

Right Out: 2503.126+/-0.640  $\chi^2/\text{NDF}$ : 2421818.7/22

Left In: 2032.655+/-0.348  $\chi^2/\text{NDF}$ : 652763.7/22

Left: 2033.004+/-0.243  $\chi^2/\text{NDF}$ : 1476827.9/47

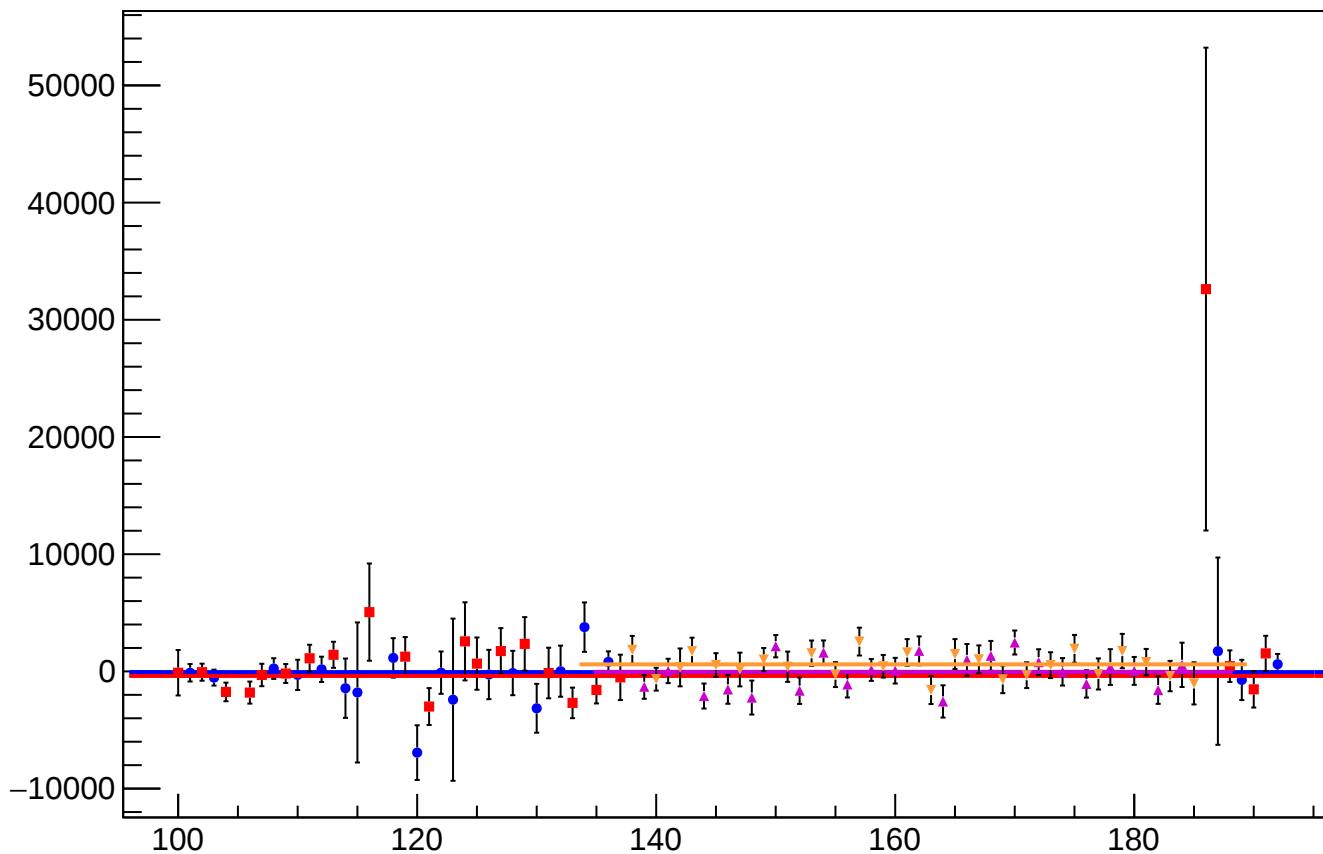
Right: 2551.911+/-0.468  $\chi^2/\text{NDF}$ : 4075355.0/42

In: 2150.350+/-0.310  $\chi^2/\text{NDF}$ : 2853137.4/42

Out: 2136.476+/-0.300  $\chi^2/\text{NDF}$ : 3666883.7/47

All: 2143.171+/-0.216  $\chi^2/\text{NDF}$ : 6521055.2/90

# asym\_sam5\_mean vs Slug, Sign Corrected



Right In:  $-57.823 \pm 290.918$   $\chi^2/\text{NDF}$ : 17.6/19

Left Out:  $600.005 \pm 234.968$   $\chi^2/\text{NDF}$ : 18.5/24

Right Out:  $-387.676 \pm 268.341$   $\chi^2/\text{NDF}$ : 28.3/22

Left In:  $-41.559 \pm 240.807$   $\chi^2/\text{NDF}$ : 36.4/22

Left:  $287.096 \pm 168.174$   $\chi^2/\text{NDF}$ : 58.5/47

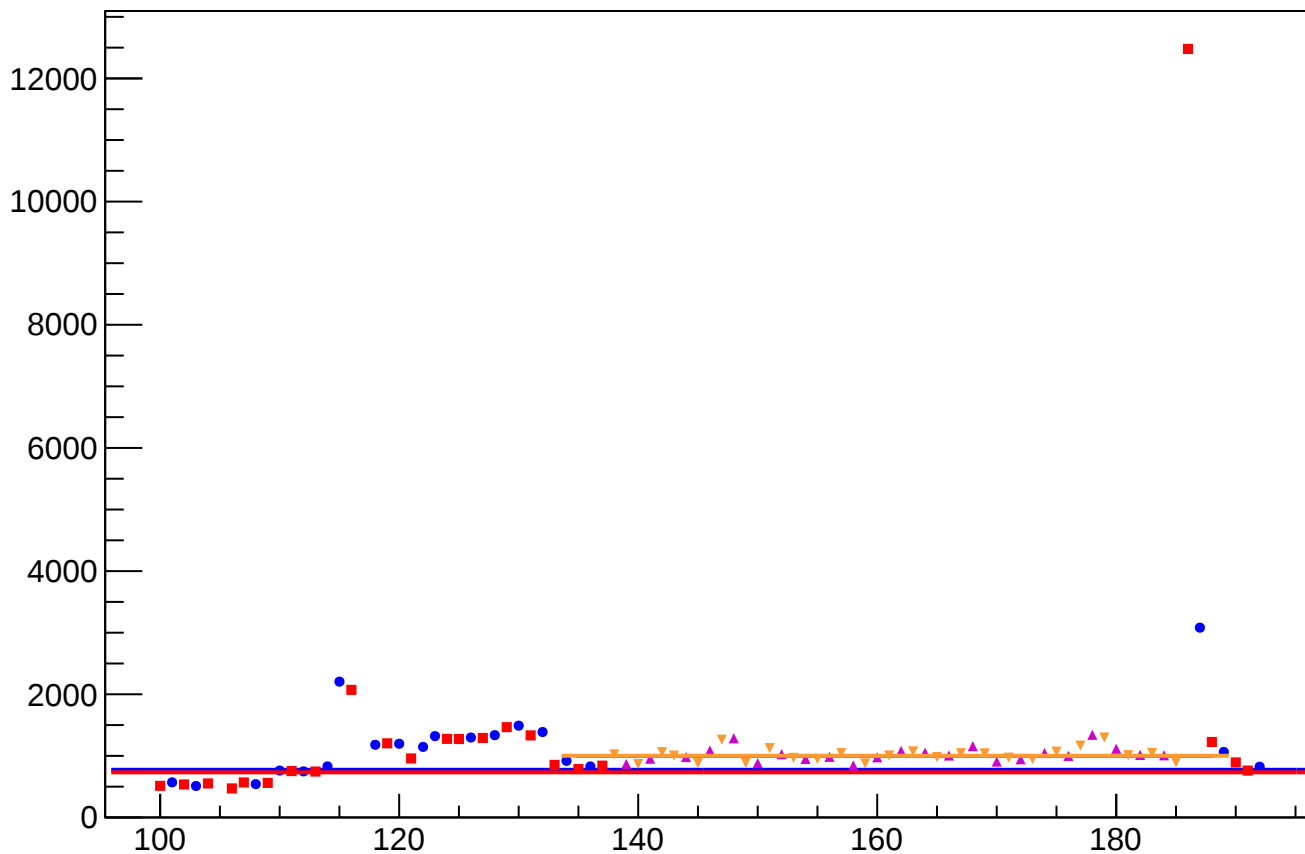
Right:  $-236.044 \pm 197.245$   $\chi^2/\text{NDF}$ : 46.6/42

In:  $-48.172 \pm 185.502$   $\chi^2/\text{NDF}$ : 54.0/42

Out:  $171.368 \pm 176.776$   $\chi^2/\text{NDF}$ : 54.5/47

All:  $66.883 \pm 127.973$   $\chi^2/\text{NDF}$ : 109.2/90

# asym\_sam5\_rms vs Slug, Sign Corrected



Right In: 773.888 $\pm$ 0.206  $\chi^2$ /NDF: 1927384.1/19

Left Out: 1001.472 $\pm$ 0.166  $\chi^2$ /NDF: 370299.3/24

Right Out: 732.463 $\pm$ 0.190  $\chi^2$ /NDF: 2652800.7/22

Left In: 998.050 $\pm$ 0.170  $\chi^2$ /NDF: 404656.2/22

Left: 999.803 $\pm$ 0.119  $\chi^2$ /NDF: 775162.3/47

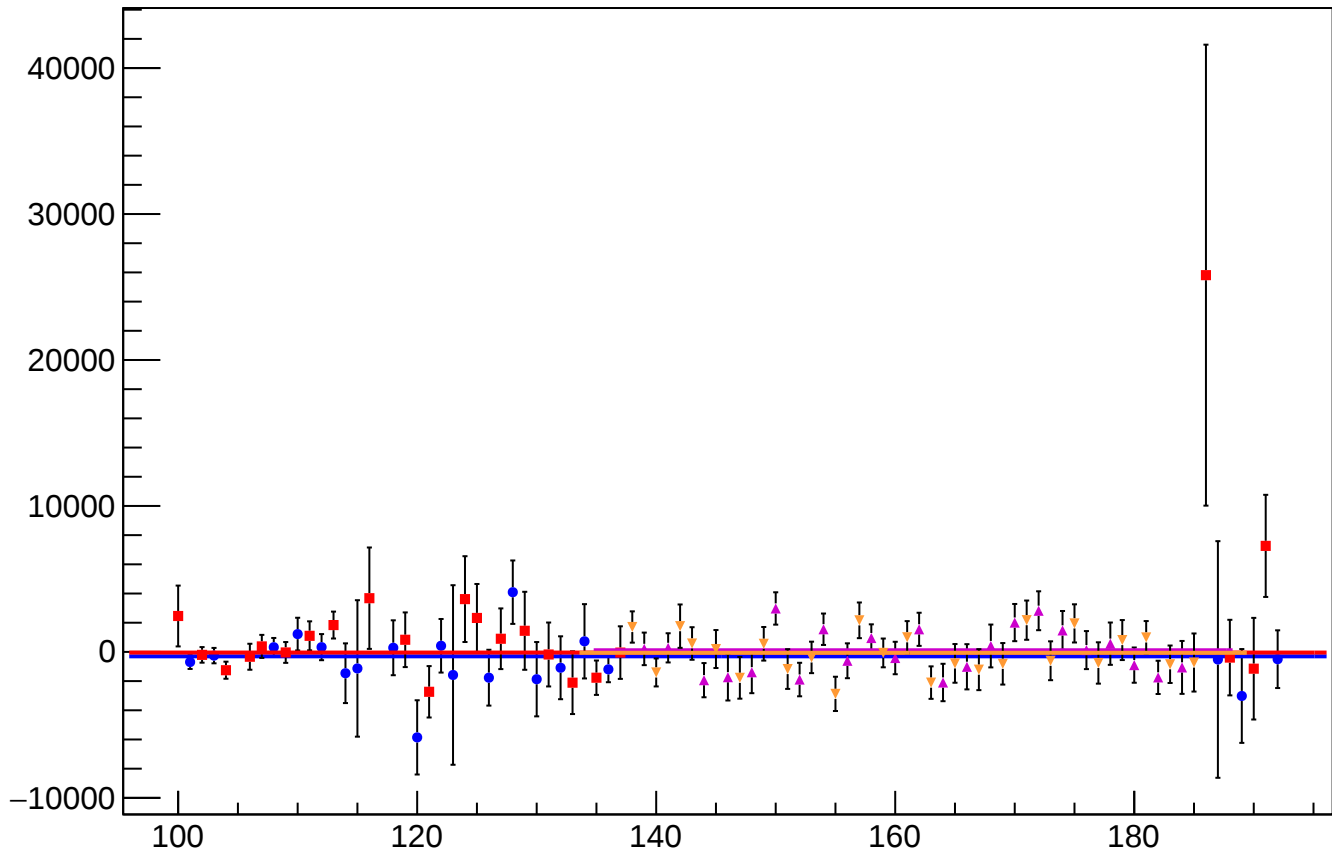
Right: 751.506 $\pm$ 0.139  $\chi^2$ /NDF: 4602095.6/42

In: 906.909 $\pm$ 0.131  $\chi^2$ /NDF: 3036680.9/42

Out: 884.726 $\pm$ 0.125  $\chi^2$ /NDF: 4160773.7/47

All: 895.284 $\pm$ 0.090  $\chi^2$ /NDF: 7212442.2/90

# asym\_sam6\_mean vs Slug, Sign Corrected



Right In: -303.038+/-247.835  $\chi^2/\text{NDF}$ : 16.5/19

Left Out: -59.827+/-246.503  $\chi^2/\text{NDF}$ : 31.0/24

Right Out: -43.773+/-243.876  $\chi^2/\text{NDF}$ : 28.8/22

Left In: 112.398+/-255.409  $\chi^2/\text{NDF}$ : 34.9/22

Left: 23.230+/-177.369  $\chi^2/\text{NDF}$ : 66.1/47

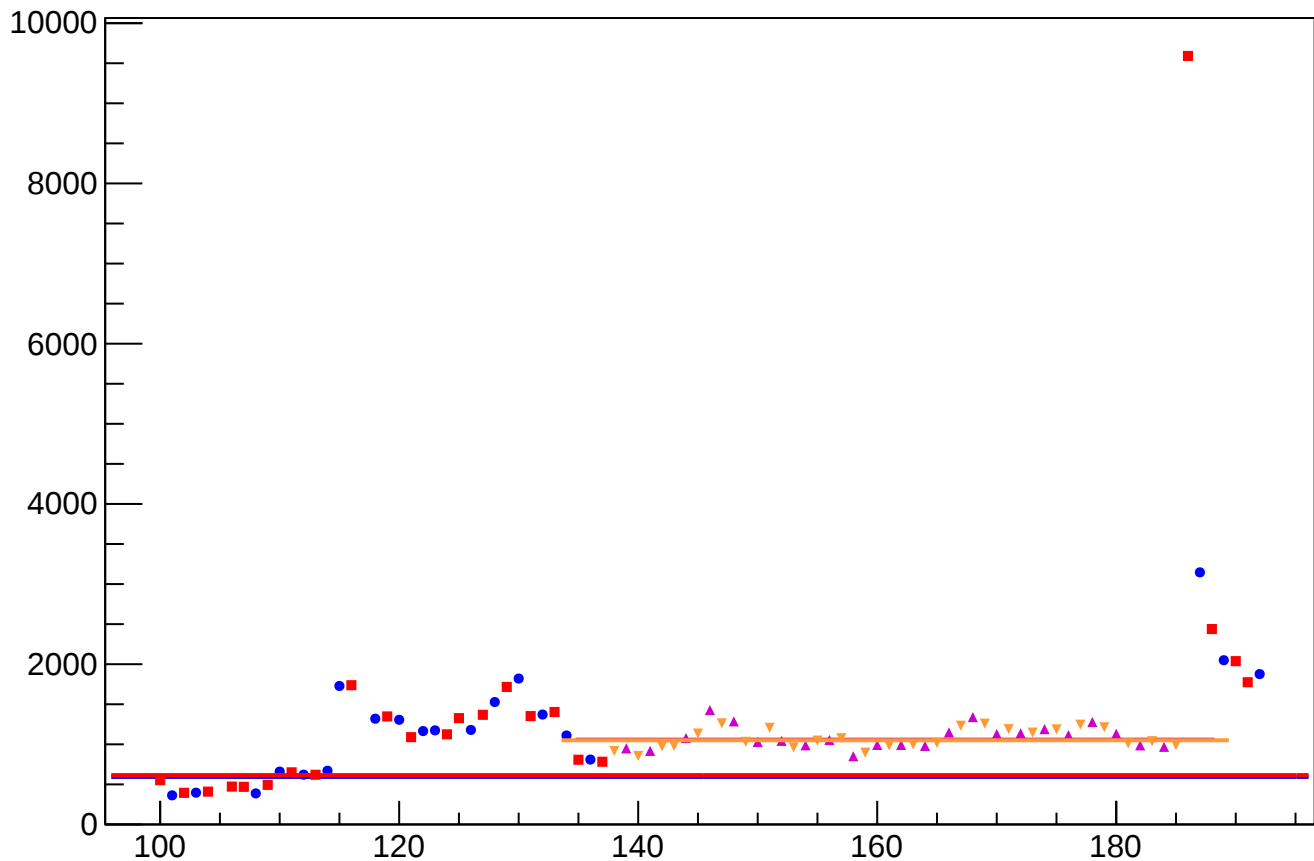
Right: -171.318+/-173.829  $\chi^2/\text{NDF}$ : 45.8/42

In: -101.572+/-177.863  $\chi^2/\text{NDF}$ : 52.7/42

Out: -51.714+/-173.368  $\chi^2/\text{NDF}$ : 59.7/47

All: -76.005+/-124.148  $\chi^2/\text{NDF}$ : 112.5/90

# asym\_sam6\_rms vs Slug, Sign Corrected



Right In: 593.253+/-0.175  $\chi^2/\text{NDF}$ : 4695648.3/19

Left Out: 1050.649+/-0.174  $\chi^2/\text{NDF}$ : 483144.2/24

Right Out: 615.866+/-0.172  $\chi^2/\text{NDF}$ : 5037135.3/22

Left In: 1058.097+/-0.181  $\chi^2/\text{NDF}$ : 528574.7/22

Left: 1054.241+/-0.125  $\chi^2/\text{NDF}$ : 1012599.4/47

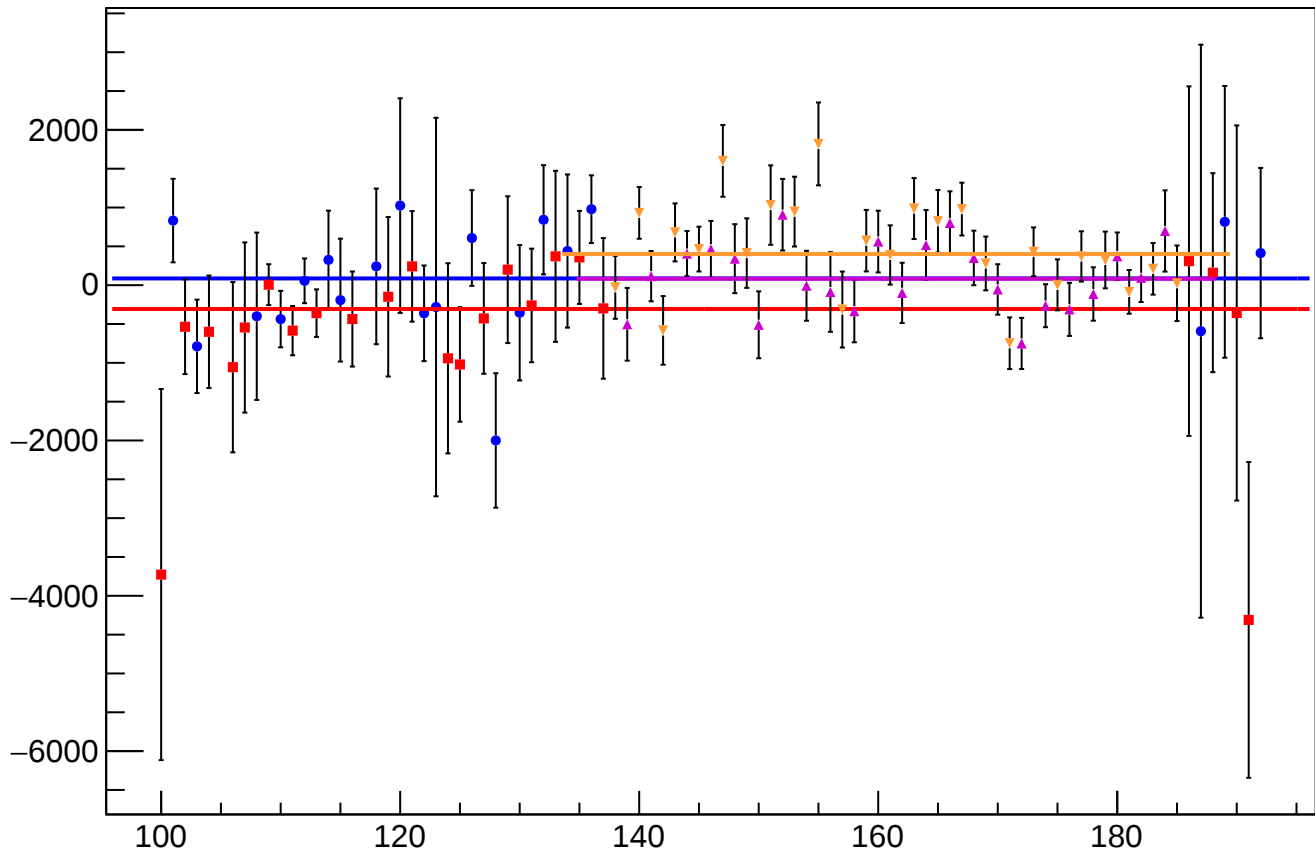
Right: 604.741+/-0.123  $\chi^2/\text{NDF}$ : 9741243.1/42

In: 818.680+/-0.126  $\chi^2/\text{NDF}$ : 8636303.2/42

Out: 830.928+/-0.123  $\chi^2/\text{NDF}$ : 8664623.5/47

All: 824.961+/-0.088  $\chi^2/\text{NDF}$ : 17305789.9/90

# asym\_sam7\_mean vs Slug, Sign Corrected



Right In: 86.851 $\pm$ 141.493  $\chi^2$ /NDF: 20.2/19

Left Out: 400.988 $\pm$ 74.546  $\chi^2$ /NDF:52.1/24

Right Out: -306.826 $\pm$ 128.500  $\chi^2$ /NDF: 13.0/22

Left In: 82.890 $\pm$ 76.904  $\chi^2$ /NDF:29.0/22

Left: 246.889 $\pm$ 53.526  $\chi^2$ /NDF: 89.9/47

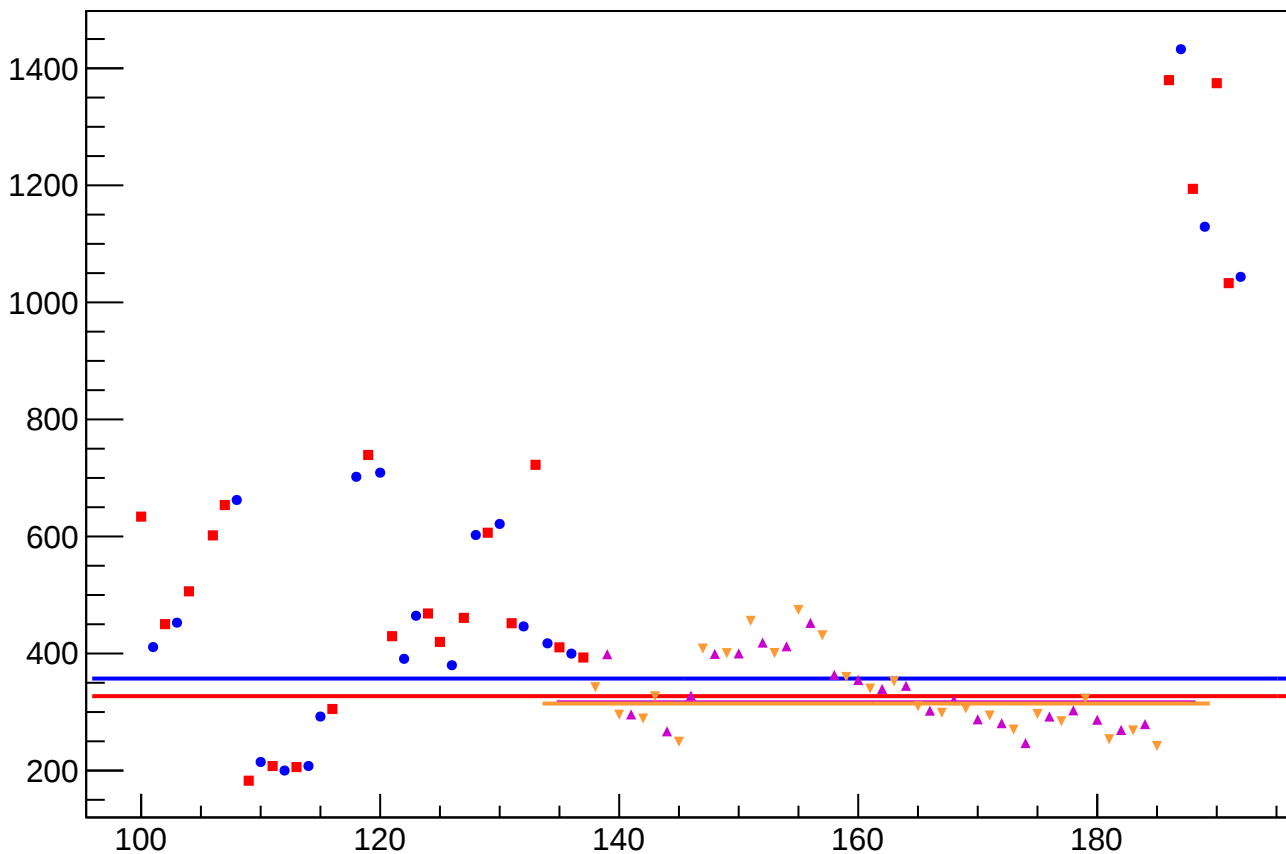
Right: -128.889 $\pm$ 95.126  $\chi^2$ /NDF: 37.4/42

In: 83.793 $\pm$ 67.569  $\chi^2$ /NDF:49.2/42

Out: 222.757 $\pm$ 64.481  $\chi^2$ /NDF:87.7/47

All: 156.522 $\pm$ 46.648  $\chi^2$ /NDF: 139.1/90

# asym\_sam7\_rms vs Slug, Sign Corrected



Right In:  $357.217 \pm 0.100$   $\chi^2/\text{NDF}: 3383674.0/19$

Left Out:  $314.538 \pm 0.053$   $\chi^2/\text{NDF}: 1112445.6/24$

Right Out:  $327.135 \pm 0.091$   $\chi^2/\text{NDF}: 4742359.0/22$

Left In:  $316.647 \pm 0.054$   $\chi^2/\text{NDF}: 920874.0/22$

Left:  $315.560 \pm 0.038$   $\chi^2/\text{NDF}: 2034094.8/47$

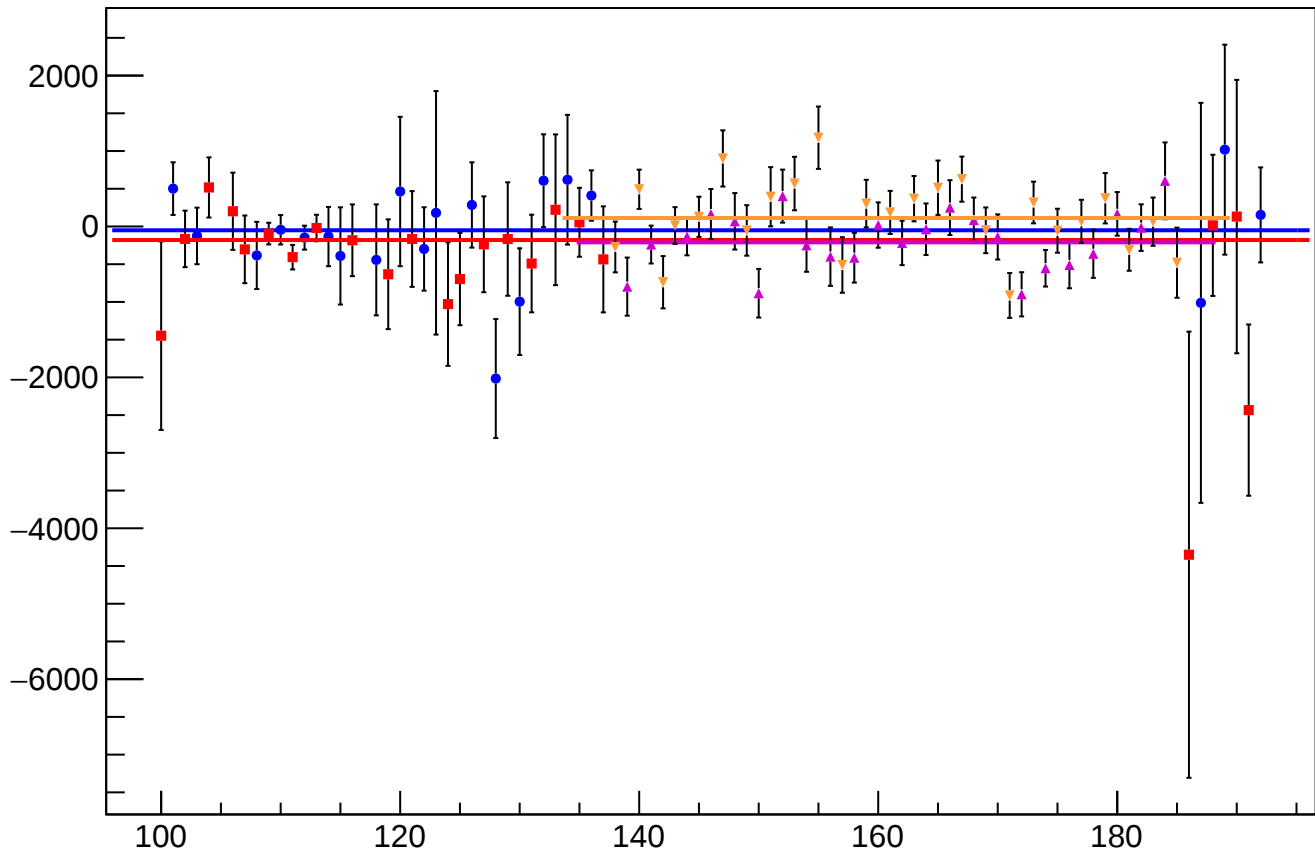
Right:  $340.732 \pm 0.067$   $\chi^2/\text{NDF}: 8175574.1/42$

In:  $325.899 \pm 0.048$   $\chi^2/\text{NDF}: 4431478.6/42$

Out:  $317.710 \pm 0.046$   $\chi^2/\text{NDF}: 5869184.3/47$

All:  $321.613 \pm 0.033$   $\chi^2/\text{NDF}: 10316035.8/90$

# asym\_sam8\_mean vs Slug, Sign Corrected



Right In:  $-50.220 \pm 89.531$   $\chi^2/\text{NDF}$ : 17.4/19

Left Out:  $112.242 \pm 62.643$   $\chi^2/\text{NDF}$ : 49.1/24

Right Out:  $-179.635 \pm 76.440$   $\chi^2/\text{NDF}$ : 16.8/22

Left In:  $-210.453 \pm 65.510$   $\chi^2/\text{NDF}$ : 29.2/22

Left:  $-41.890 \pm 45.275$   $\chi^2/\text{NDF}$ : 91.0/47

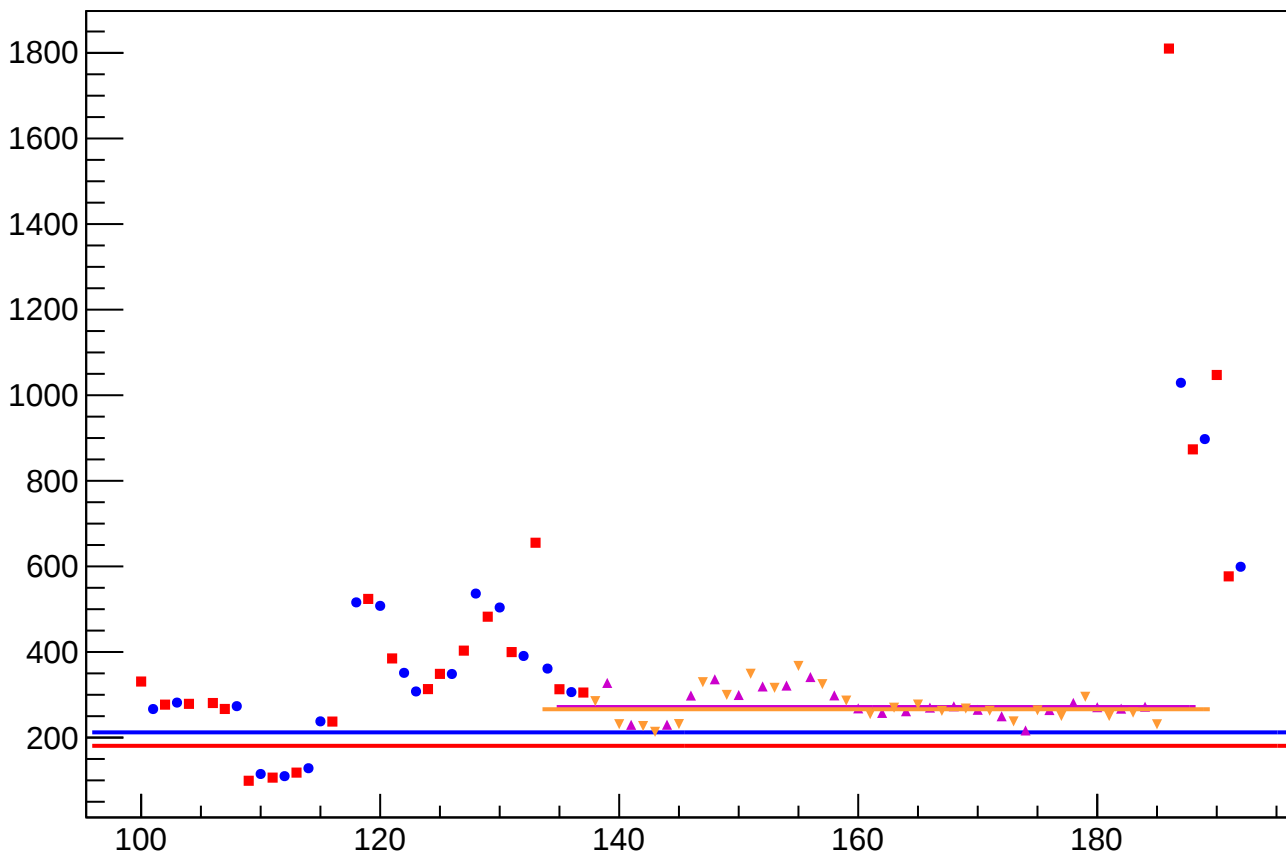
Right:  $-125.072 \pm 58.134$   $\chi^2/\text{NDF}$ : 35.5/42

In:  $-154.580 \pm 52.869$   $\chi^2/\text{NDF}$ : 48.7/42

Out:  $-5.025 \pm 48.452$   $\chi^2/\text{NDF}$ : 74.7/47

All:  $-73.294 \pm 35.720$   $\chi^2/\text{NDF}$ : 127.7/90

# asym\_sam8\_rms vs Slug, Sign Corrected



Right In: 212.178 $\pm$ 0.063  $\chi^2$ /NDF: 4846654.5/19

Left Out: 266.207 $\pm$ 0.044  $\chi^2$ /NDF: 649629.9/24

Right Out: 180.725 $\pm$ 0.054  $\chi^2$ /NDF: 6516916.2/22

Left In: 271.415 $\pm$ 0.046  $\chi^2$ /NDF: 521877.7/22

Left: 268.695 $\pm$ 0.032  $\chi^2$ /NDF: 1178109.8/47

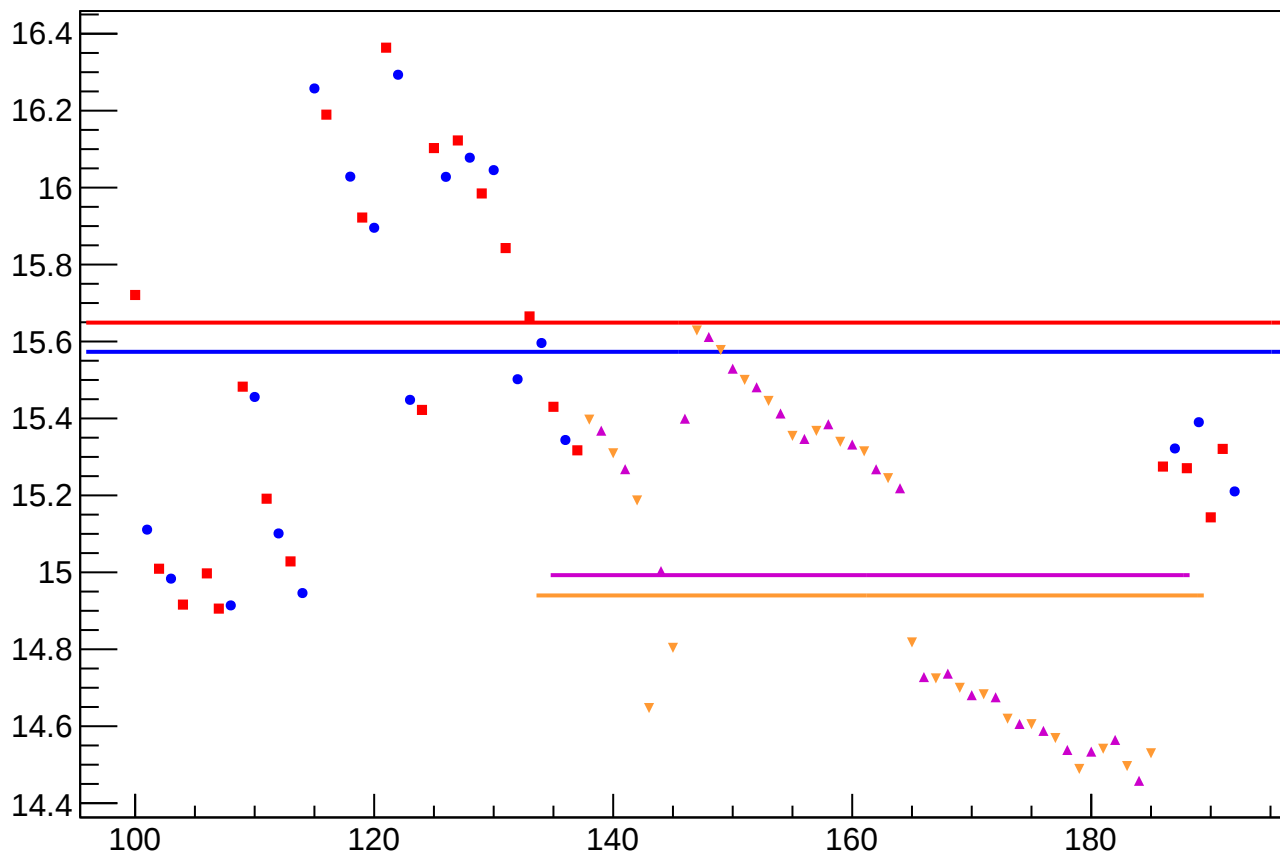
Right: 193.986 $\pm$ 0.041  $\chi^2$ /NDF: 11506334.8/42

In: 250.759 $\pm$ 0.037  $\chi^2$ /NDF: 5938757.8/42

Out: 231.863 $\pm$ 0.034  $\chi^2$ /NDF: 8662793.9/47

All: 240.489 $\pm$ 0.025  $\chi^2$ /NDF: 14740406.1/90

# yield\_sam1\_mean vs Slug, Sign Corrected



Right In: 15.573+/-0.000  $\chi^2/\text{NDF}$ : 6500462990.6/19

Left Out: 14.940+/-0.000  $\chi^2/\text{NDF}$ : 24199653913.9/24

Right Out: 15.649+/-0.000  $\chi^2/\text{NDF}$ : 5806534520.0/22

Left In: 14.993+/-0.000  $\chi^2/\text{NDF}$ : 22023159634.7/22

Left: 14.965+/-0.000  $\chi^2/\text{NDF}$ : 46444749587.5/47

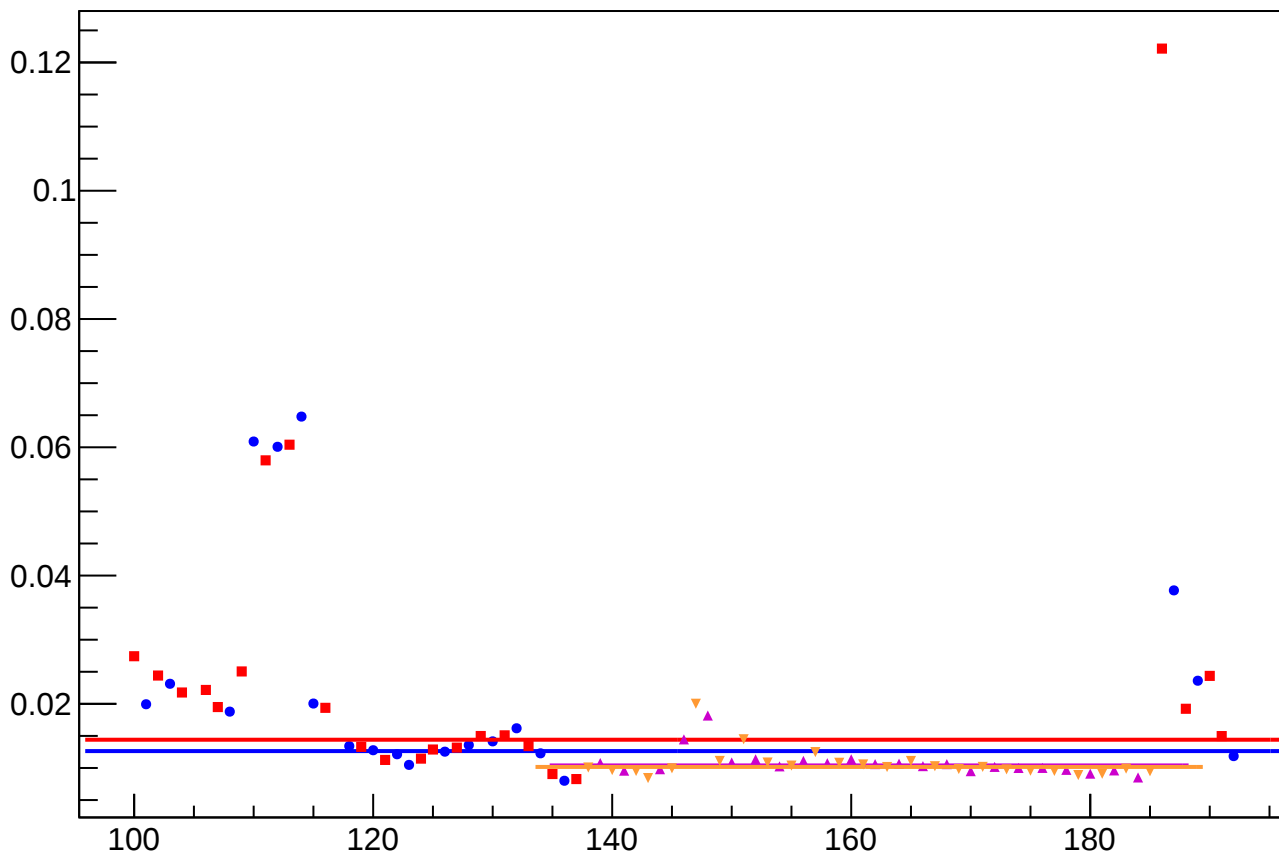
Right: 15.607+/-0.000  $\chi^2/\text{NDF}$ : 12411213532.5/42

In: 15.114+/-0.000  $\chi^2/\text{NDF}$ : 39259085234.2/42

Out: 15.056+/-0.000  $\chi^2/\text{NDF}$ : 43800720240.7/47

All: 15.085+/-0.000  $\chi^2/\text{NDF}$ : 83390213311.6

# yield\_sam1\_rms vs Slug, Sign Corrected



Right In: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 2456197.5/19

Left Out: 0.010+/-0.000  $\chi^2/\text{NDF}$ : 717351.4/24

Right Out: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 2882084.5/22

Left In: 0.010+/-0.000  $\chi^2/\text{NDF}$ : 544268.8/22

Left: 0.010+/-0.000  $\chi^2/\text{NDF}$ : 1270343.0/47

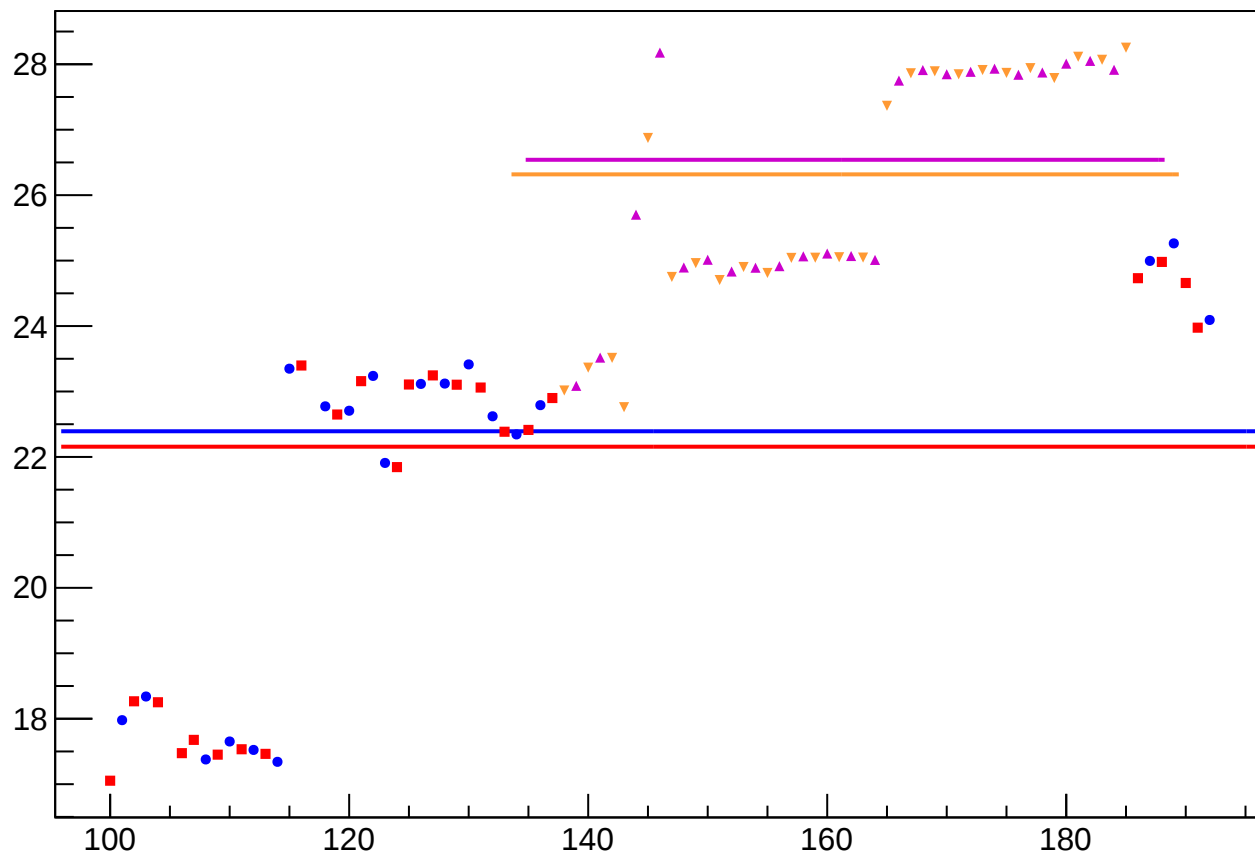
Right: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 5451919.8/42

In: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 3319012.3/42

Out: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 4586759.1/47

All: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 7905779.7/90

# yield\_sam2\_mean vs Slug, Sign Corrected



Right In: 22.392+/-0.000  $\chi^2/\text{NDF}$ : 1011621798.9/19

Left Out: 26.318+/-0.000  $\chi^2/\text{NDF}$ : 4715403741.0/24

Right Out: 22.157+/-0.000  $\chi^2/\text{NDF}$ : 1193827455.0/22

Left In: 26.540+/-0.000  $\chi^2/\text{NDF}$ : 3309392772.6/22

Left: 26.424+/-0.000  $\chi^2/\text{NDF}$ : 8058273722.3/47

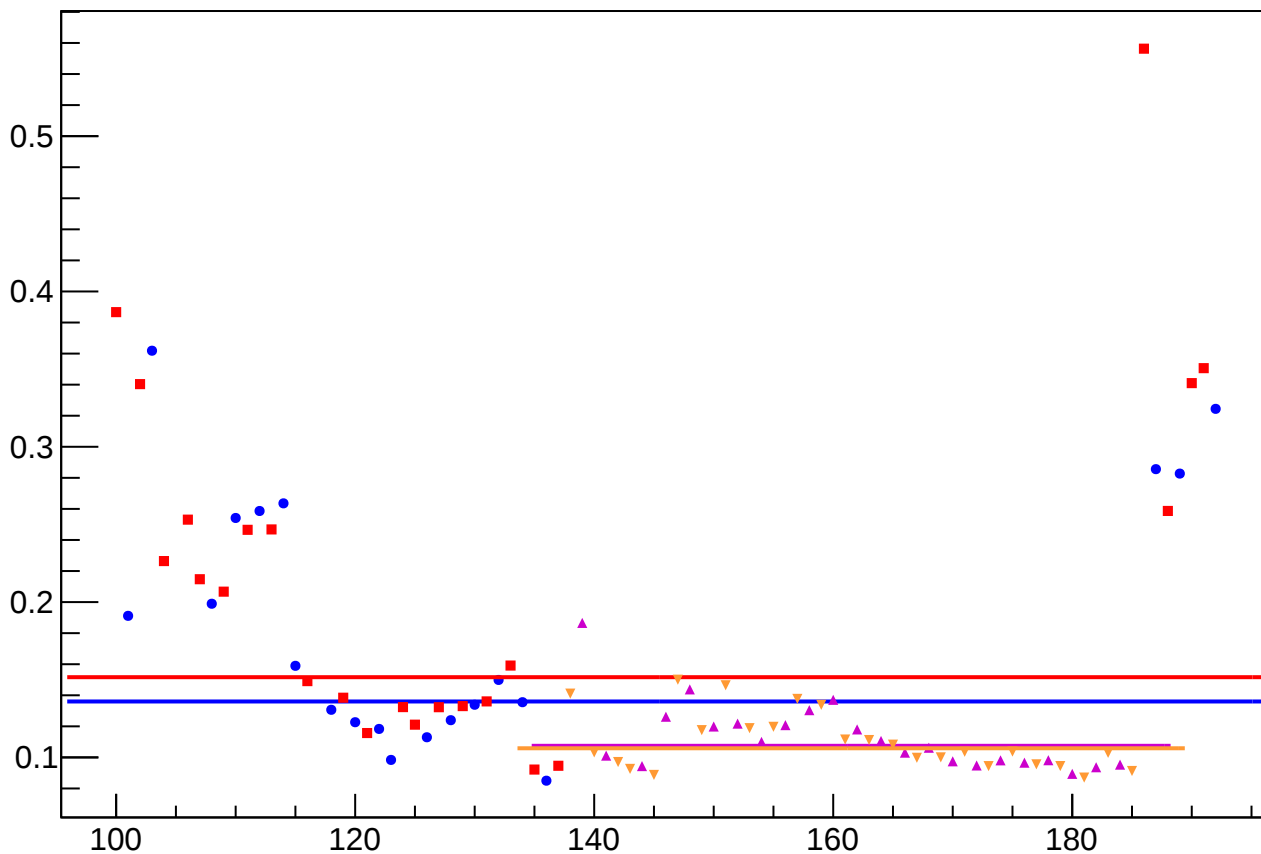
Right: 22.281+/-0.000  $\chi^2/\text{NDF}$ : 2214033697.9/42

In: 25.707+/-0.000  $\chi^2/\text{NDF}$ : 8800713073.6/42

Out: 25.601+/-0.000  $\chi^2/\text{NDF}$ : 10115533185.4/47

All: 25.652+/-0.000  $\chi^2/\text{NDF}$ : 18925536965.1

# yield\_sam2\_rms vs Slug, Sign Corrected



Right In: 0.136 $\pm$ 0.000  $\chi^2$ /NDF: 2443113.6/19

Left Out: 0.106 $\pm$ 0.000  $\chi^2$ /NDF:732883.8/24

Right Out: 0.152 $\pm$ 0.000  $\chi^2$ /NDF: 2560475.3/22

Left In: 0.107 $\pm$ 0.000  $\chi^2$ /NDF:771132.0/22

Left: 0.107 $\pm$ 0.000  $\chi^2$ /NDF: 1507414.2/47

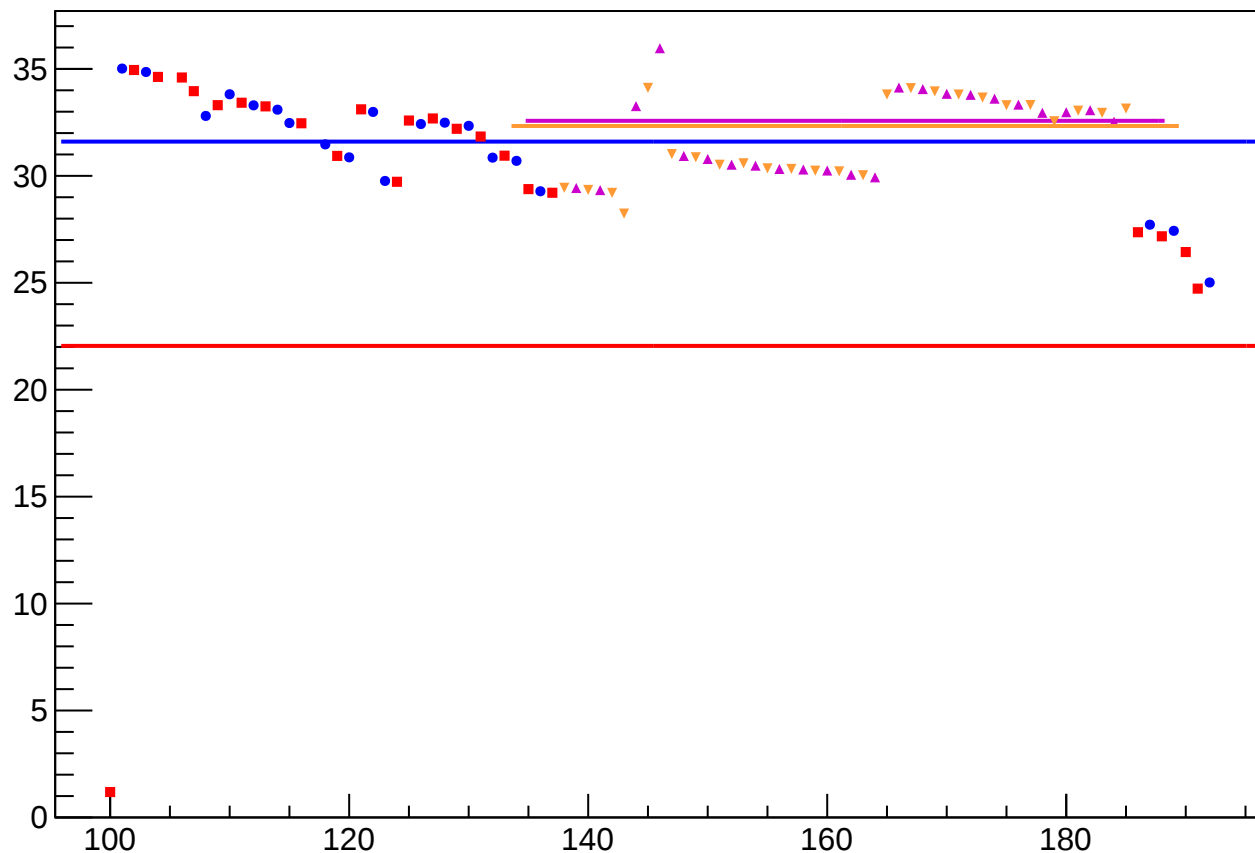
Right: 0.143 $\pm$ 0.000  $\chi^2$ /NDF: 5079121.2/42

In: 0.113 $\pm$ 0.000  $\chi^2$ /NDF:3638514.2/42

Out: 0.114 $\pm$ 0.000  $\chi^2$ /NDF:4311176.2/47

All: 0.113 $\pm$ 0.000  $\chi^2$ /NDF: 7950212.8/90

# yield\_sam3\_mean vs Slug, Sign Corrected



Right In: 31.602 $\pm$ 0.000

$\chi^2$ /NDF: 2980232474.0/19

Left: 32.450 $\pm$ 0.000

$\chi^2$ /NDF: 24766521375.8/47

Left Out: 32.331 $\pm$ 0.000

$\chi^2$ /NDF: 12850475096.2/24

Right: 25.903 $\pm$ 0.000

$\chi^2$ /NDF: 274366765680.4/42

Right Out: 22.049 $\pm$ 0.000

$\chi^2$ /NDF: 230343744855.7/22

In: 32.417 $\pm$ 0.000

$\chi^2$ /NDF: 15375788112.4/42

Out: 30.131 $\pm$ 0.000

$\chi^2$ /NDF: 335840538130.8/47

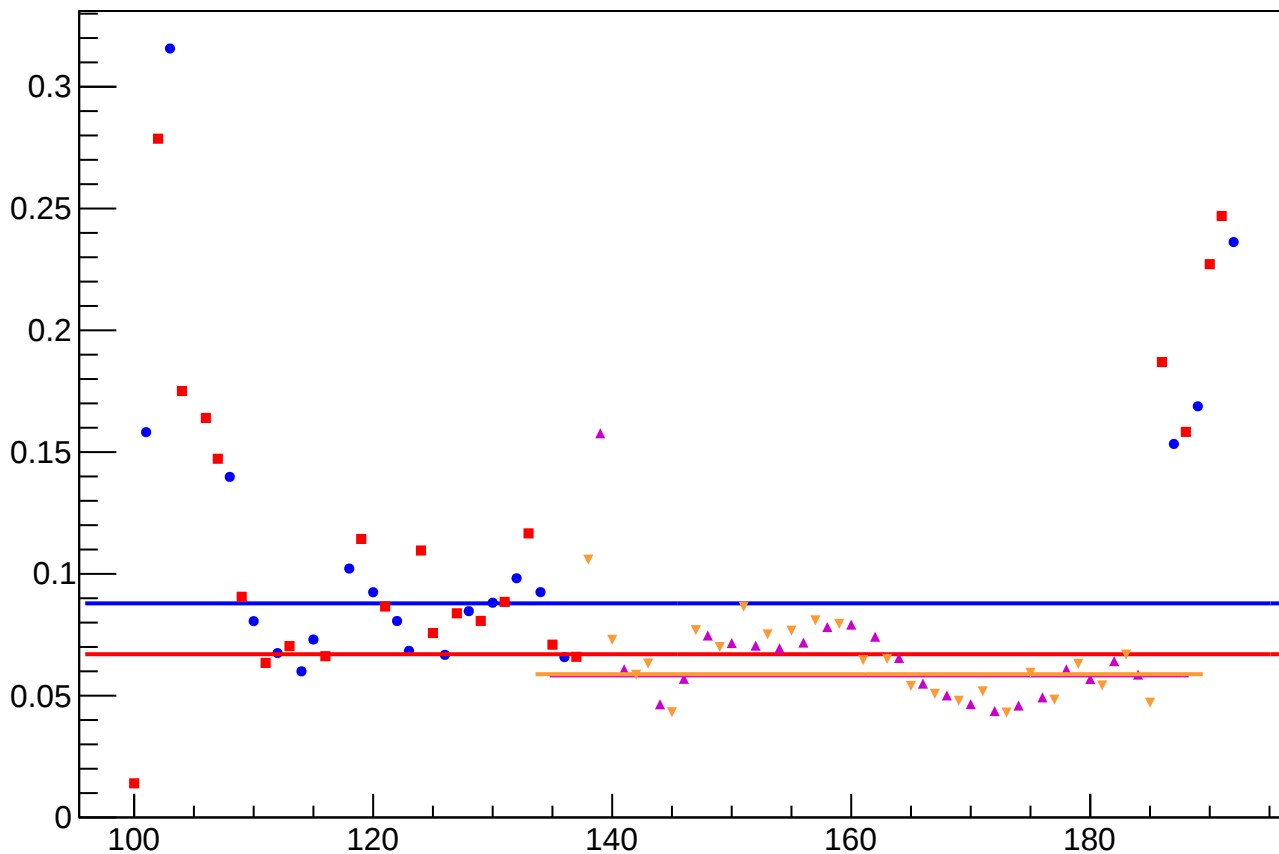
Left In: 32.574 $\pm$ 0.000

$\chi^2$ /NDF: 11797772603.7/22

All: 31.212 $\pm$ 0.000

$\chi^2$ /NDF: 364090796860.0

# yield\_sam3\_rms vs Slug, Sign Corrected



Right In: 0.088 $\pm$ 0.000  $\chi^2$ /NDF: 2166059.5/19

Left Out: 0.059 $\pm$ 0.000  $\chi^2$ /NDF:1402605.2/24

Right Out: 0.067 $\pm$ 0.000  $\chi^2$ /NDF: 5131762.6/22

Left In: 0.058 $\pm$ 0.000  $\chi^2$ /NDF:1525476.4/22

Left: 0.059 $\pm$ 0.000  $\chi^2$ /NDF: 2929140.7/47

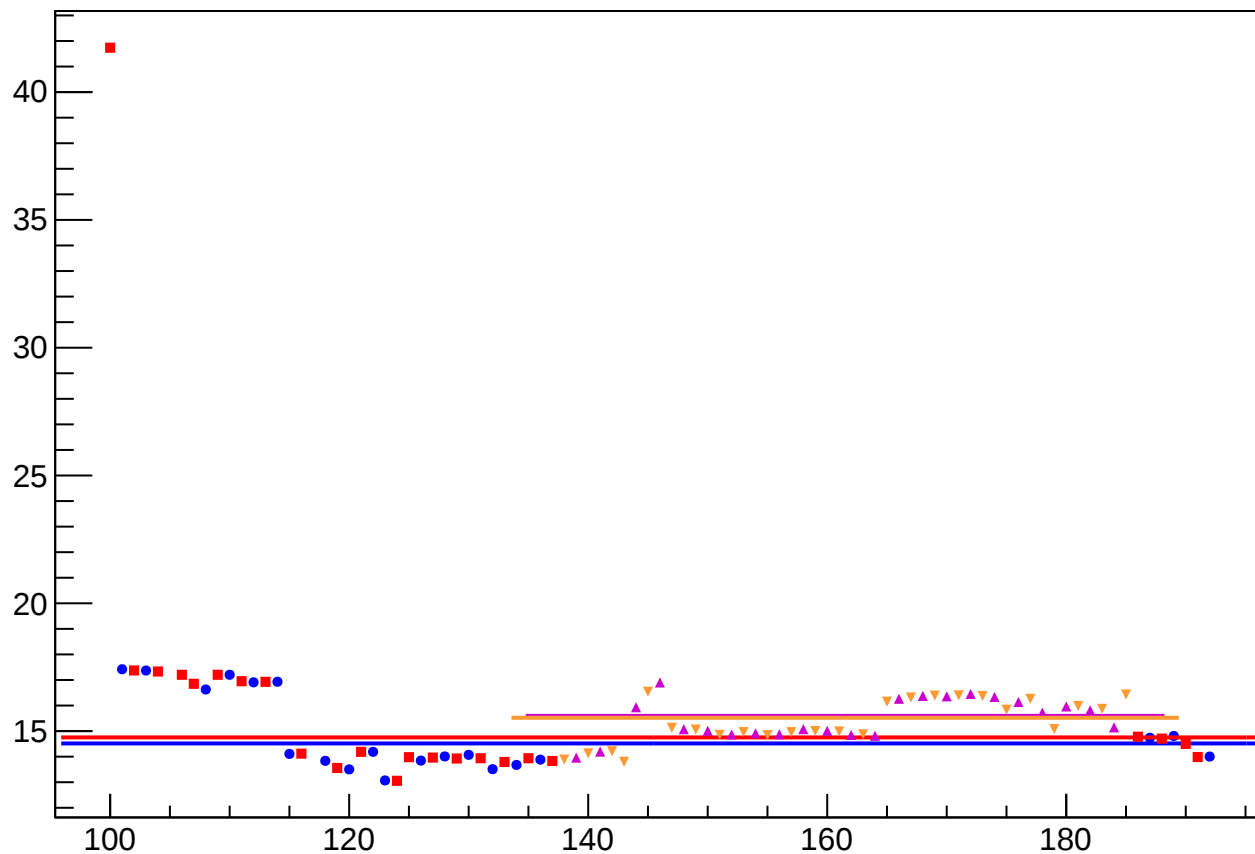
Right: 0.075 $\pm$ 0.000  $\chi^2$ /NDF: 7690064.3/42

In: 0.063 $\pm$ 0.000  $\chi^2$ /NDF:4798215.7/42

Out: 0.061 $\pm$ 0.000  $\chi^2$ /NDF:6651831.5/47

All: 0.062 $\pm$ 0.000  $\chi^2$ /NDF: 11481007.8/90

# yield\_sam4\_mean vs Slug, Sign Corrected



Right In: 14.517 $\pm$ 0.000  $\chi^2$ /NDF: 1492323924.2/19

Left Out: 15.521 $\pm$ 0.000  $\chi^2$ /NDF: 2591377740.5/24

Right Out: 14.752 $\pm$ 0.000  $\chi^2$ /NDF: 1906940957.1/22

Left In: 15.595 $\pm$ 0.000  $\chi^2$ /NDF: 1908733580.5/22

Left: 15.557 $\pm$ 0.000  $\chi^2$ /NDF: 4510008259.4/47

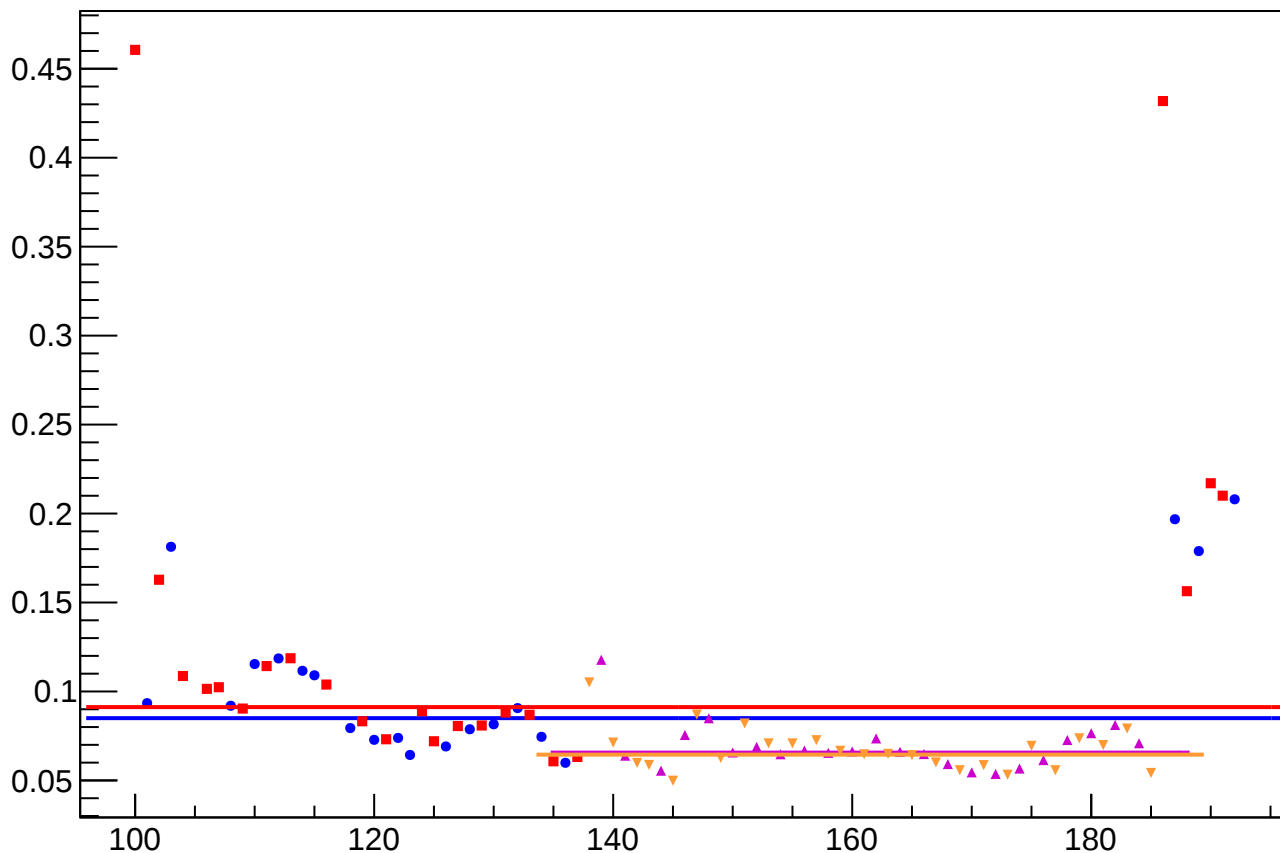
Right: 14.632 $\pm$ 0.000  $\chi^2$ /NDF: 3423345647.6/42

In: 15.372 $\pm$ 0.000  $\chi^2$ /NDF: 4227042086.1/42

Out: 15.379 $\pm$ 0.000  $\chi^2$ /NDF: 4907991213.8/47

All: 15.376 $\pm$ 0.000  $\chi^2$ /NDF: 9135126955.5/91

# yield\_sam4\_rms vs Slug, Sign Corrected



Right In: 0.085 $\pm$ 0.000  $\chi^2$ /NDF: 1769714.2/19

Left Out: 0.064 $\pm$ 0.000  $\chi^2$ /NDF:761552.3/24

Right Out: 0.091 $\pm$ 0.000  $\chi^2$ /NDF: 1925821.6/22

Left In: 0.066 $\pm$ 0.000  $\chi^2$ /NDF:714703.1/22

Left: 0.065 $\pm$ 0.000  $\chi^2$ /NDF: 1481007.6/47

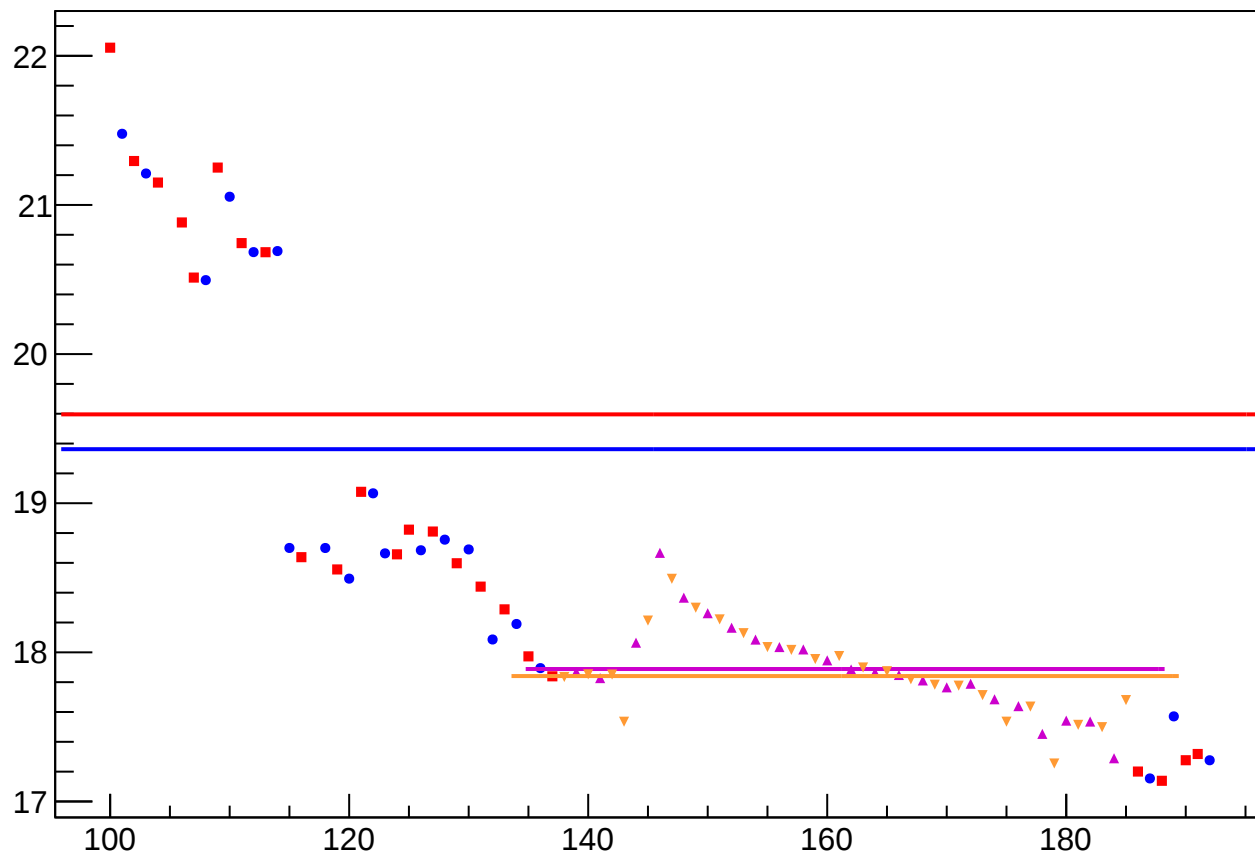
Right: 0.088 $\pm$ 0.000  $\chi^2$ /NDF: 3729073.6/42

In: 0.070 $\pm$ 0.000  $\chi^2$ /NDF:3017140.2/42

Out: 0.069 $\pm$ 0.000  $\chi^2$ /NDF:3676320.5/47

All: 0.070 $\pm$ 0.000  $\chi^2$ /NDF: 6693670.0/90

# yield\_sam5\_mean vs Slug, Sign Corrected



Right In: 19.362 $\pm$ 0.000  $\chi^2$ /NDF: 16873843999.9/19

Left Out: 17.841 $\pm$ 0.000  $\chi^2$ /NDF: 1283287989.7/24

Right Out: 19.596 $\pm$ 0.000  $\chi^2$ /NDF: 15943504224.3/22

Left In: 17.888 $\pm$ 0.000  $\chi^2$ /NDF: 1203002311.3/22

Left: 17.864 $\pm$ 0.000  $\chi^2$ /NDF: 2506375288.6/47

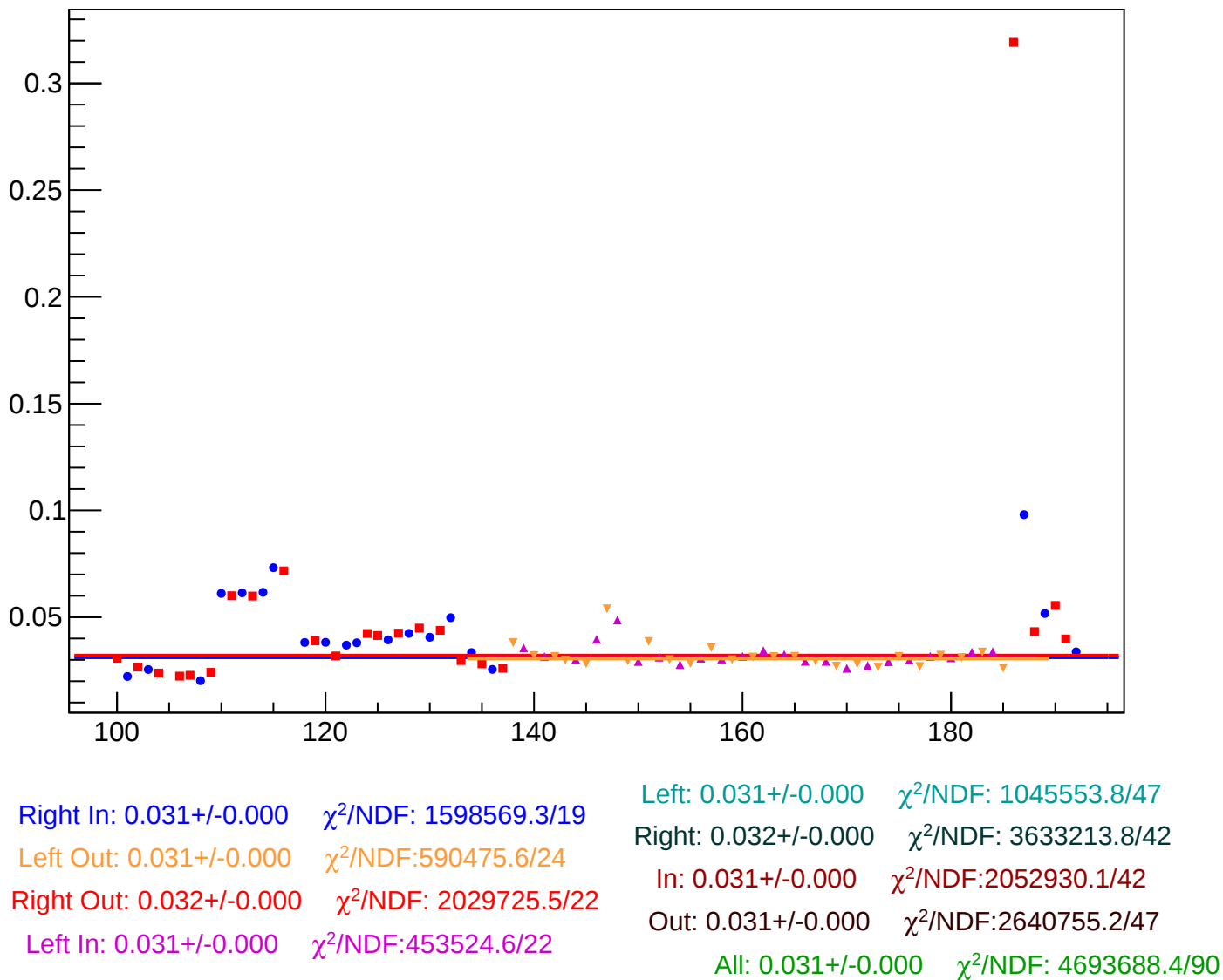
Right: 19.479 $\pm$ 0.000  $\chi^2$ /NDF: 33009079015.0/42

In: 18.314 $\pm$ 0.000  $\chi^2$ /NDF: 28963153229.1/42

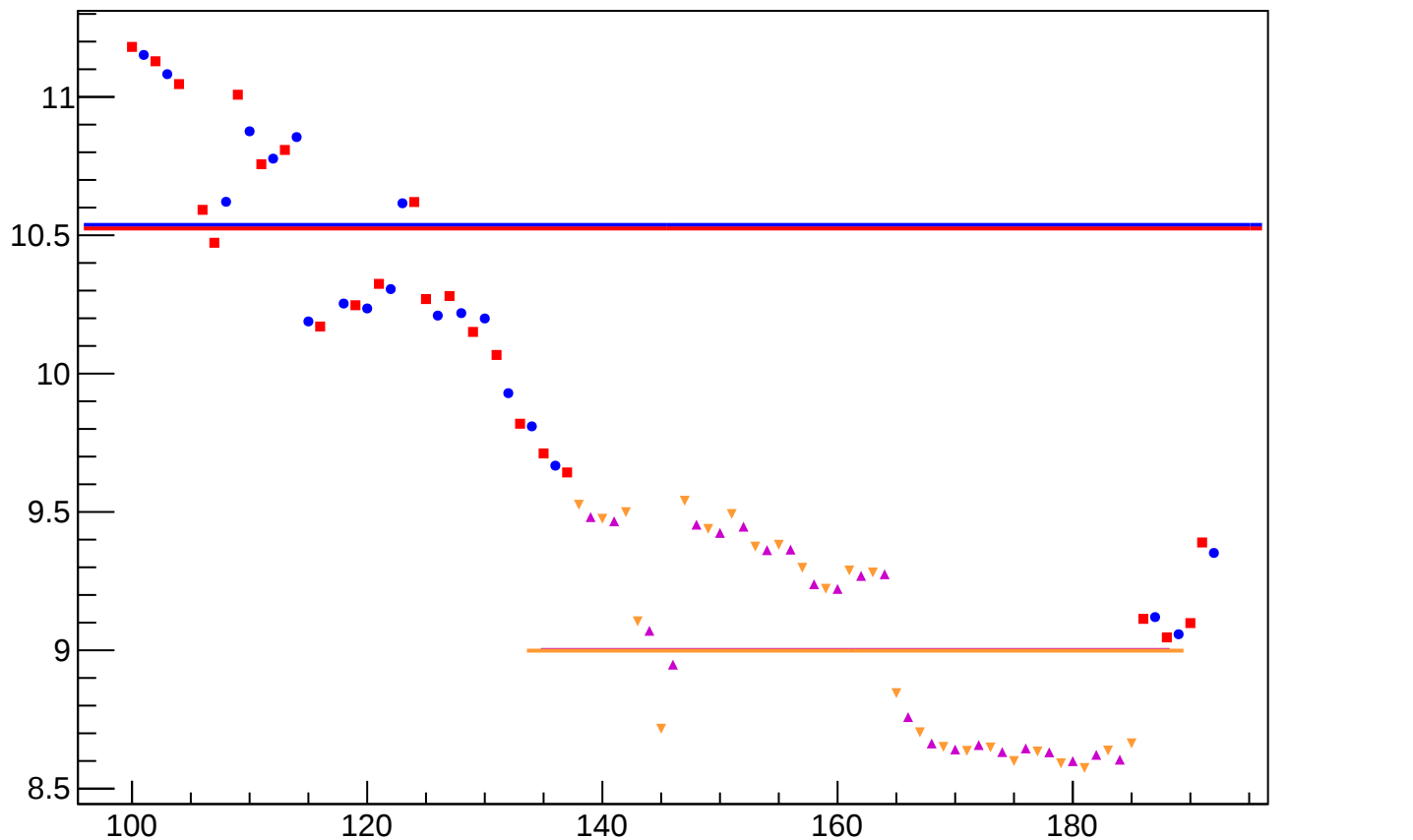
Out: 18.322 $\pm$ 0.000  $\chi^2$ /NDF: 32942729057.9/47

All: 18.318 $\pm$ 0.000  $\chi^2$ /NDF: 61906668388.8

# yield\_sam5\_rms vs Slug, Sign Corrected



# yield\_sam6\_mean vs Slug, Sign Corrected



Right In: 10.537+/-0.000  $\chi^2/\text{NDF}$ : 9039199546.5/19

Left Out: 8.999+/-0.000  $\chi^2/\text{NDF}$ : 6392583736.5/24

Right Out: 10.524+/-0.000  $\chi^2/\text{NDF}$ : 7770300775.4/22

Left In: 9.001+/-0.000  $\chi^2/\text{NDF}$ : 5314536205.4/22

Left: 9.000+/-0.000  $\chi^2/\text{NDF}$ : 11707260677.5/47

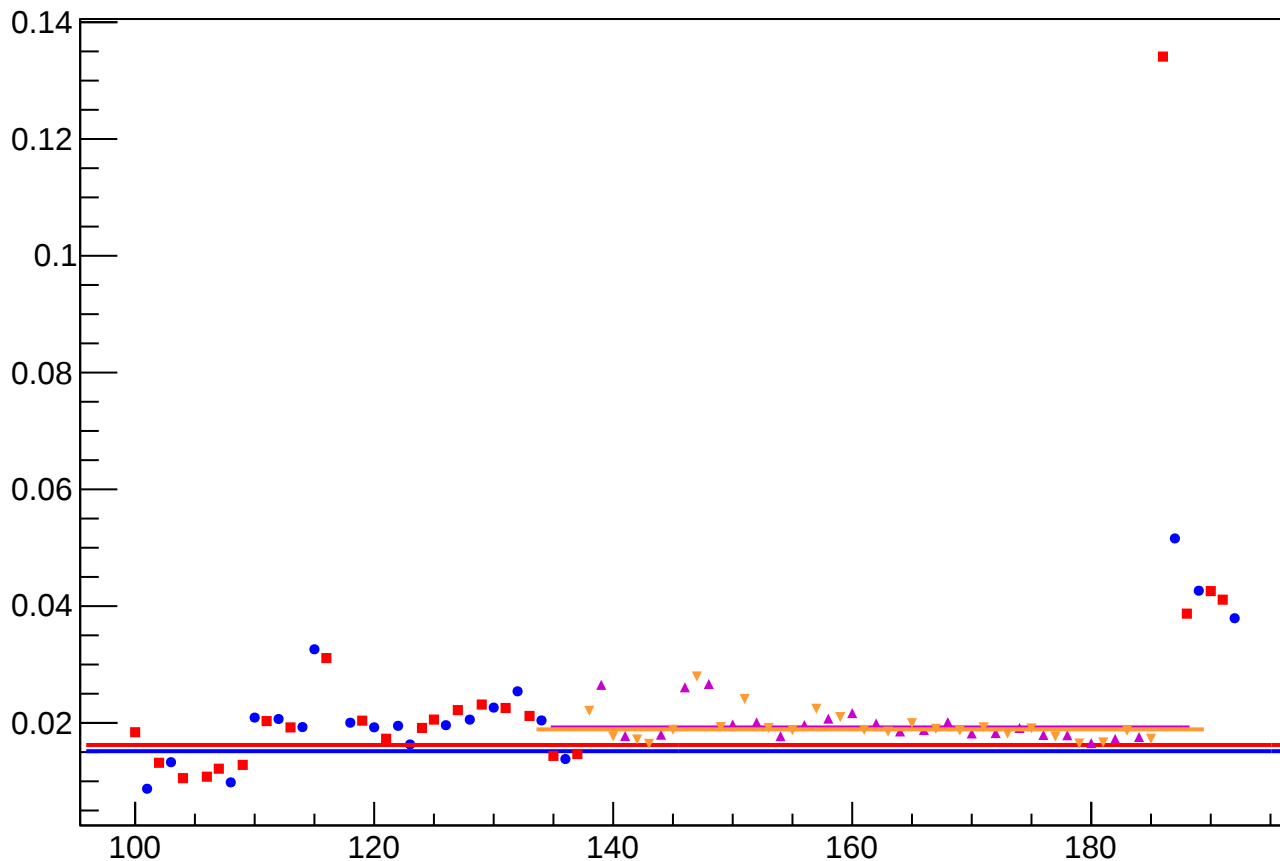
Right: 10.531+/-0.000  $\chi^2/\text{NDF}$ : 16811718967.9/42

In: 9.595+/-0.000  $\chi^2/\text{NDF}$ : 53371472222.8/42

Out: 9.545+/-0.000  $\chi^2/\text{NDF}$ : 53286067833.7/47

All: 9.569+/-0.000  $\chi^2/\text{NDF}$ : 106746960371.1

# yield\_sam6\_rms vs Slug, Sign Corrected



Right In: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 2581017.1/19

Left Out: 0.019+/-0.000  $\chi^2/\text{NDF}$ : 428169.5/24

Right Out: 0.016+/-0.000  $\chi^2/\text{NDF}$ : 2615671.6/22

Left In: 0.019+/-0.000  $\chi^2/\text{NDF}$ : 481824.0/22

Left: 0.019+/-0.000  $\chi^2/\text{NDF}$ : 914799.6/47

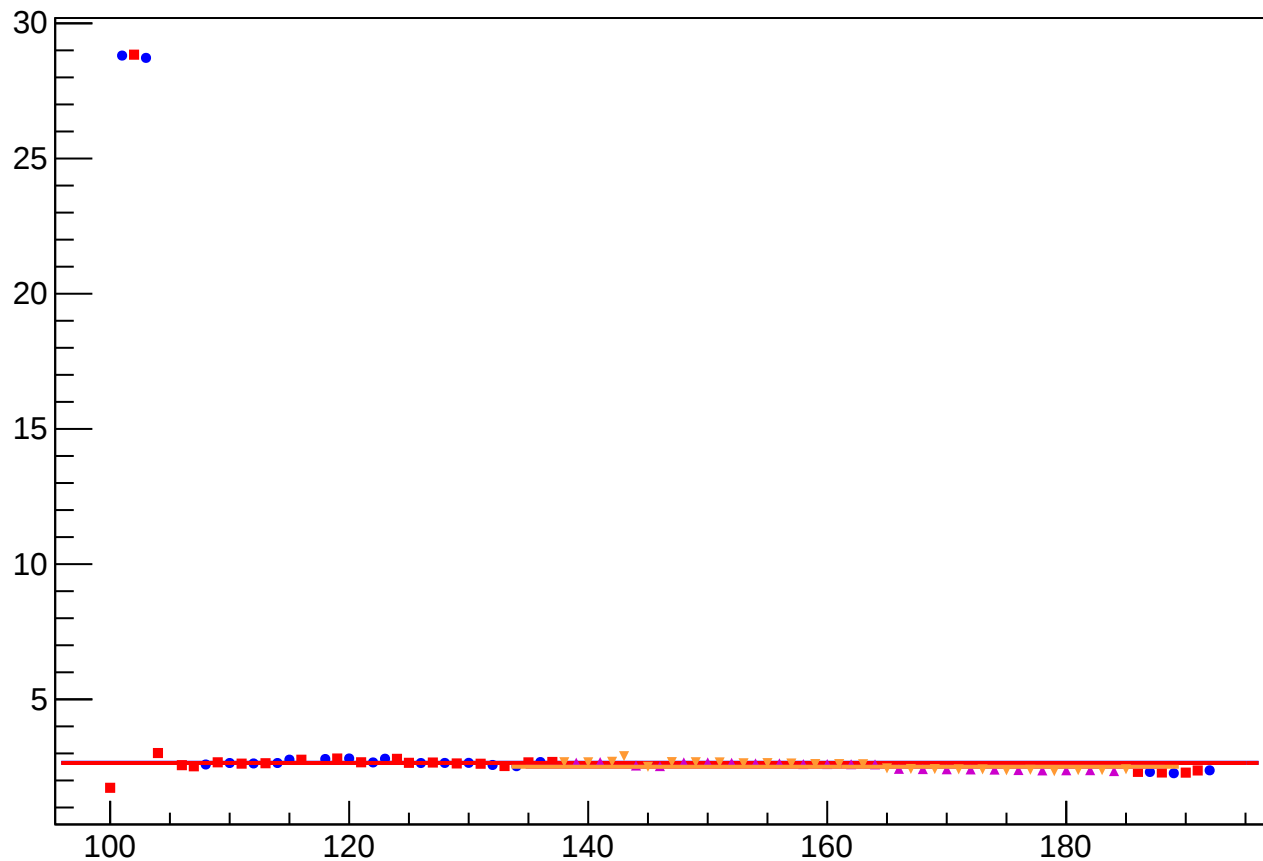
Right: 0.016+/-0.000  $\chi^2/\text{NDF}$ : 5226942.6/42

In: 0.018+/-0.000  $\chi^2/\text{NDF}$ : 3610572.7/42

Out: 0.018+/-0.000  $\chi^2/\text{NDF}$ : 3284314.6/47

All: 0.018+/-0.000  $\chi^2/\text{NDF}$ : 6900792.2/90

# yield\_sam7\_mean vs Slug, Sign Corrected



Right In: 2.655+/-0.000  $\chi^2/\text{NDF}$ : 167499020864.0/19

Left Out: 2.507+/-0.000  $\chi^2/\text{NDF}$ : 64277969186.7/24

Right Out: 2.647+/-0.000  $\chi^2/\text{NDF}$ : 77607792829.7/22

Left In: 2.505+/-0.000  $\chi^2/\text{NDF}$ : 42893630742.5/22

Left: 2.506+/-0.000  $\chi^2/\text{NDF}$ : 107174595641.7/47

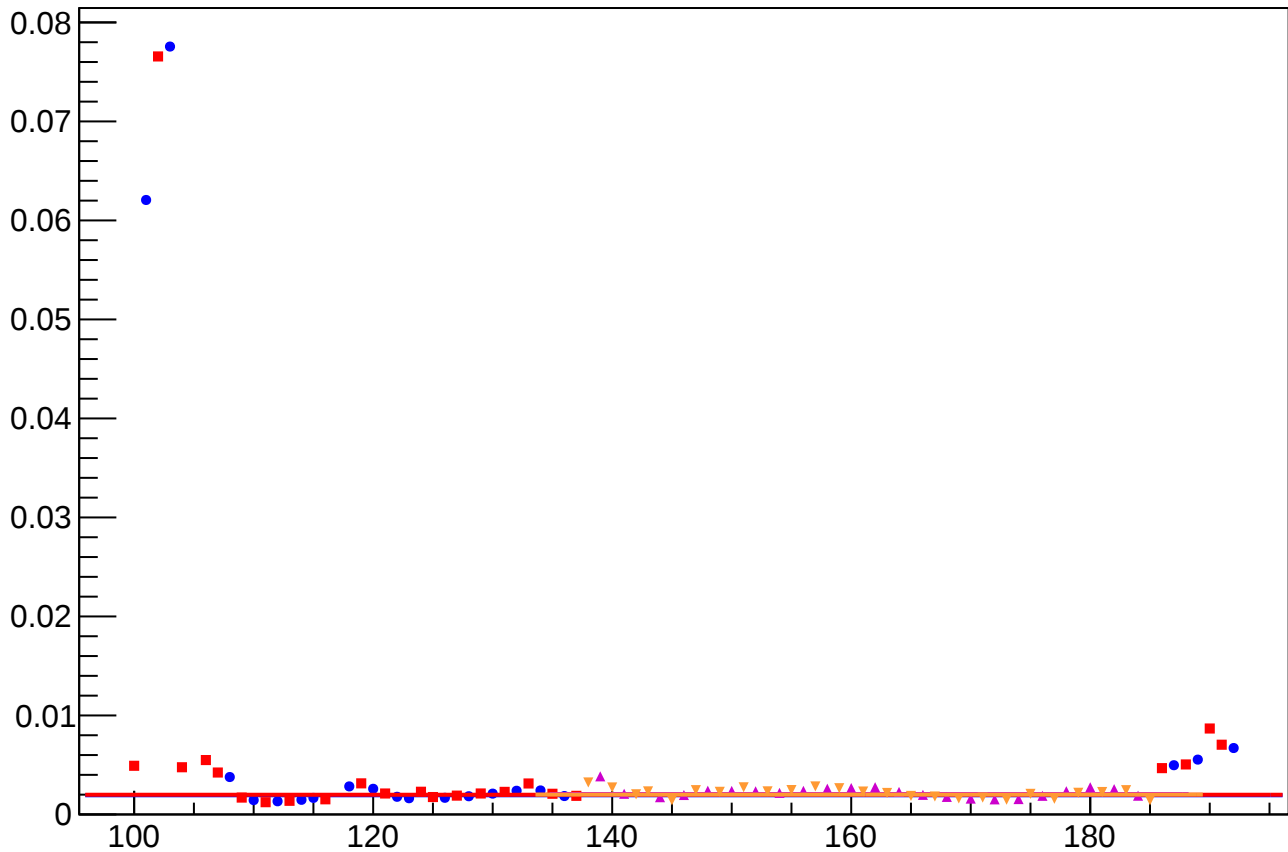
Right: 2.650+/-0.000  $\chi^2/\text{NDF}$ : 245150999846.5/42

In: 2.549+/-0.000  $\chi^2/\text{NDF}$ : 232092899996.7/42

Out: 2.547+/-0.000  $\chi^2/\text{NDF}$ : 162398935703.4/47

All: 2.548+/-0.000  $\chi^2/\text{NDF}$ : 394508695880.1

# yield\_sam7\_rms vs Slug, Sign Corrected



Right In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 4048100.7/19

Left Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ :1469103.5/24

Right Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 3898597.5/22

Left In: 0.002+/-0.000  $\chi^2/\text{NDF}$ :1303230.9/22

Left: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 2781893.0/47

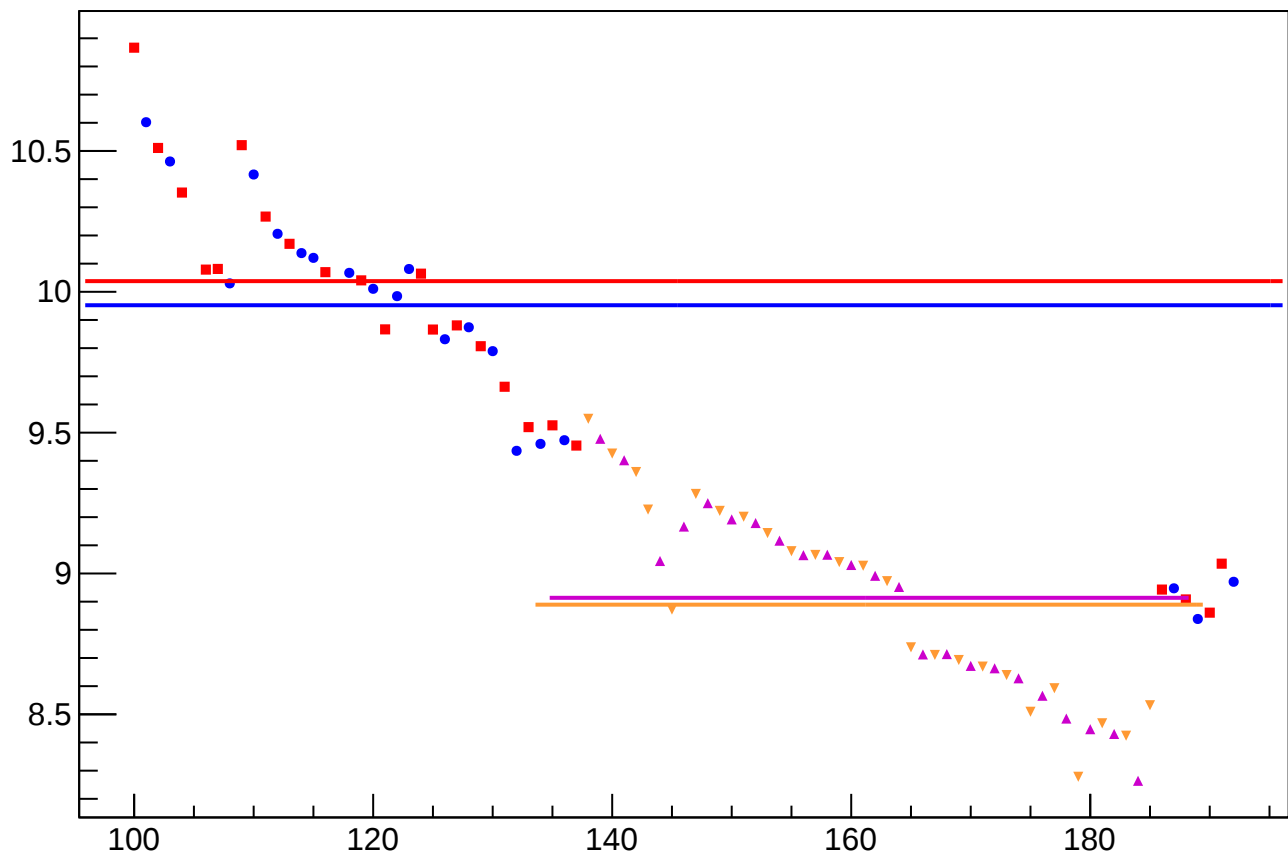
Right: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 7950940.0/42

In: 0.002+/-0.000  $\chi^2/\text{NDF}$ :5381025.8/42

Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ :5368261.2/47

All: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 10751396.9/90

# yield\_sam8\_mean vs Slug, Sign Corrected



Right In: 9.952 $\pm$ 0.000  $\chi^2$ /NDF: 25921209396.9/19

Left Out: 8.889 $\pm$ 0.000  $\chi^2$ /NDF: 34704694045.9/24

Right Out: 10.038 $\pm$ 0.000  $\chi^2$ /NDF: 24329621145.9/22

Left In: 8.914 $\pm$ 0.000  $\chi^2$ /NDF: 28497227562.7/22

Left: 8.901 $\pm$ 0.000  $\chi^2$ /NDF: 63312247922.6/47

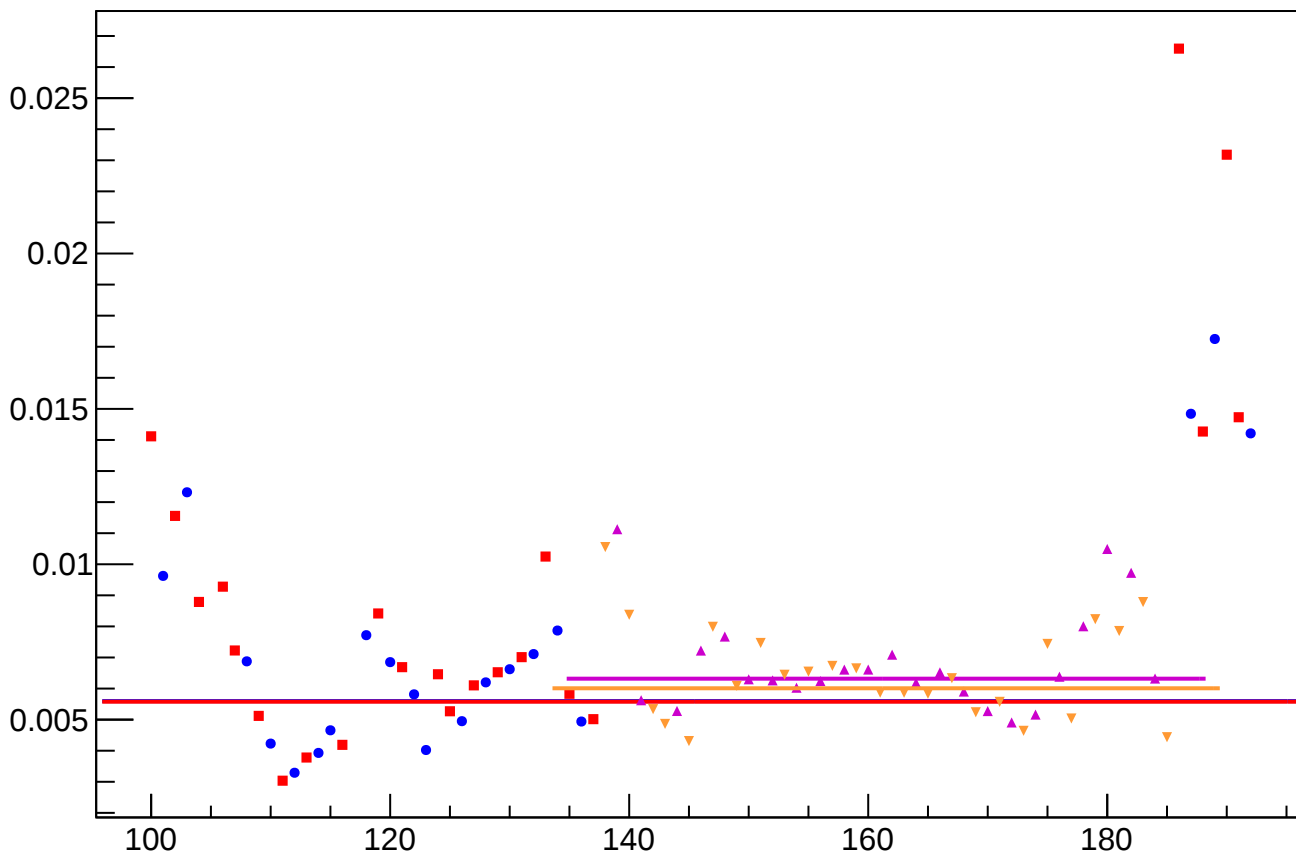
Right: 9.996 $\pm$ 0.000  $\chi^2$ /NDF: 50956422078.5/42

In: 9.277 $\pm$ 0.000  $\chi^2$ /NDF: 185948462888.3/42

Out: 9.268 $\pm$ 0.000  $\chi^2$ /NDF: 234228267053.2/47

All: 9.273 $\pm$ 0.000  $\chi^2$ /NDF: 420200563741.0

# yield\_sam8\_rms vs Slug, Sign Corrected



Right In: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 2429067.0/19

Left Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ :1312525.9/24

Right Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 3395772.2/22

Left In: 0.006+/-0.000  $\chi^2/\text{NDF}$ :1087051.3/22

Left: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 2435218.5/47

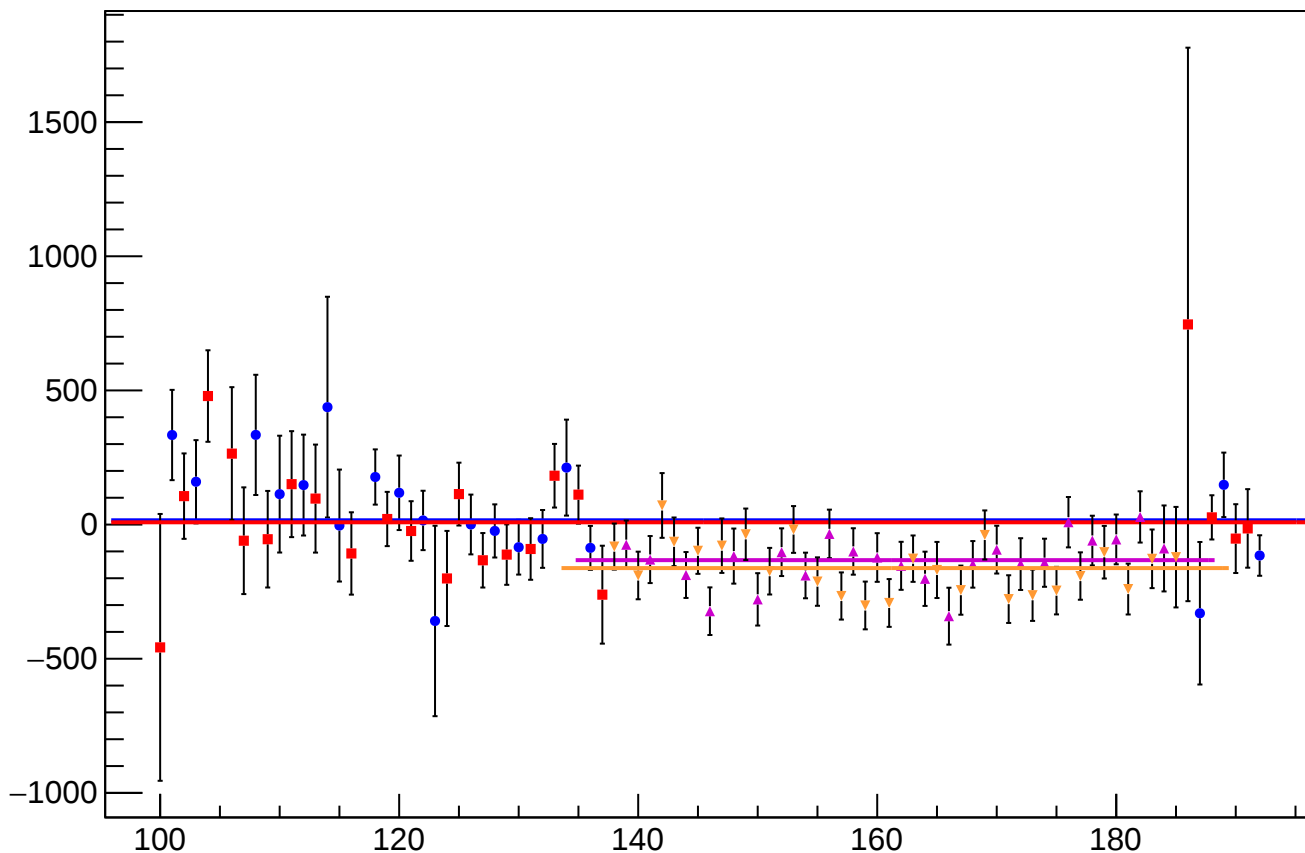
Right: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 5824902.6/42

In: 0.006+/-0.000  $\chi^2/\text{NDF}$ :3643308.8/42

Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ :4757736.9/47

All: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 8423328.9/90

# reg\_asym\_sam1\_mean vs Slug, Sign Corrected

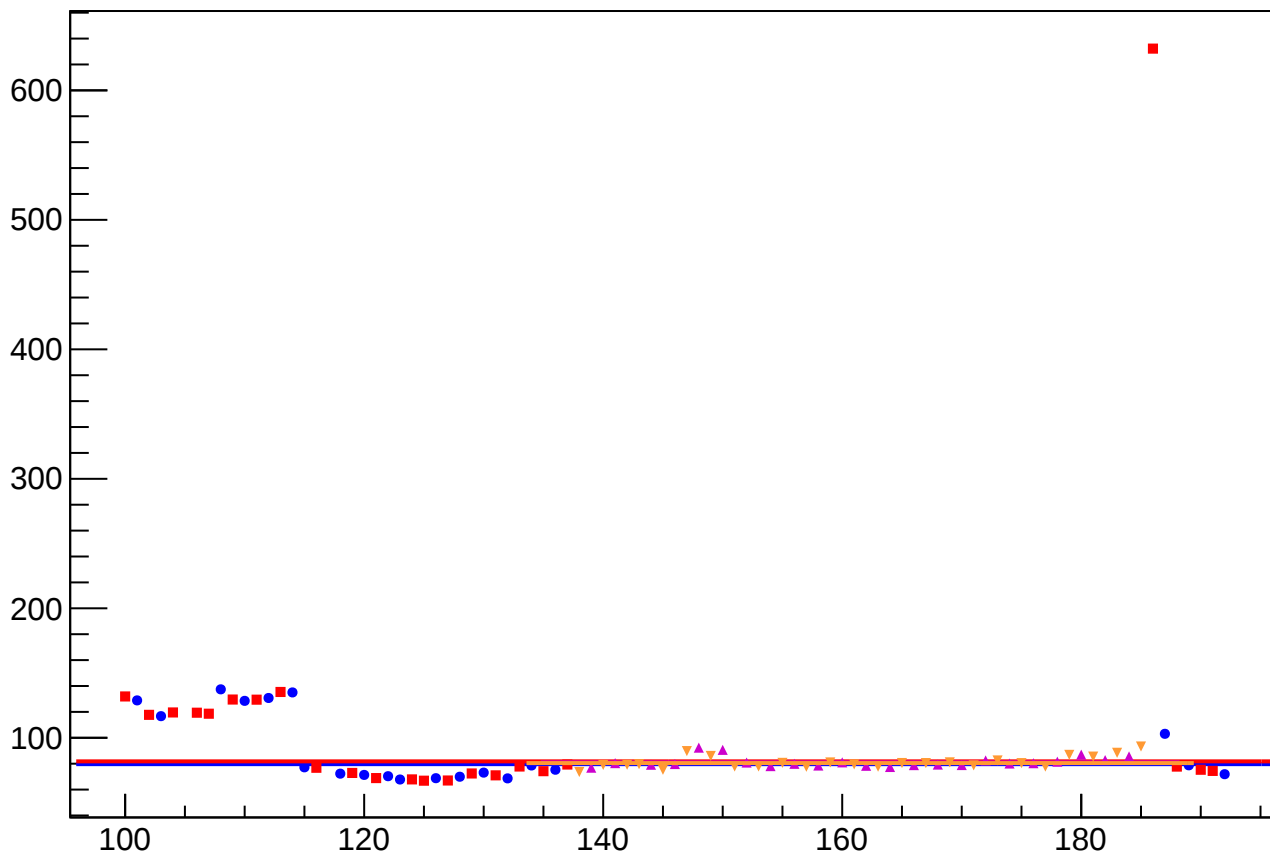


Right In: 15.953 $\pm$ 28.690  $\chi^2/\text{NDF}$ : 22.6/19  
Left Out: -162.161 $\pm$ 18.745  $\chi^2/\text{NDF}$ :25.7/24  
Right Out: 8.508 $\pm$ 28.618  $\chi^2/\text{NDF}$ : 23.6/22  
Left In: -132.557 $\pm$ 19.403  $\chi^2/\text{NDF}$ :20.7/22

Left: -147.870 $\pm$ 13.481  $\chi^2/\text{NDF}$ : 47.6/47  
Right: 12.221 $\pm$ 20.262  $\chi^2/\text{NDF}$ : 46.3/42  
In: -85.949 $\pm$ 16.073  $\chi^2/\text{NDF}$ :61.7/42  
Out: -110.924 $\pm$ 15.681  $\chi^2/\text{NDF}$ :74.2/47

All: -98.744 $\pm$ 11.224  $\chi^2/\text{NDF}$ : 137.2/90

# reg\_asym\_sam1\_rms vs Slug, Sign Corrected



Right In: 79.641 $\pm$ 0.020  $\chi^2$ /NDF: 847027.8/19

Left Out: 80.459 $\pm$ 0.013  $\chi^2$ /NDF: 89942.2/24

Right Out: 81.800 $\pm$ 0.020  $\chi^2$ /NDF: 1494352.2/22

Left In: 81.014 $\pm$ 0.014  $\chi^2$ /NDF: 72250.2/22

Left: 80.727 $\pm$ 0.010  $\chi^2$ /NDF: 163039.2/47

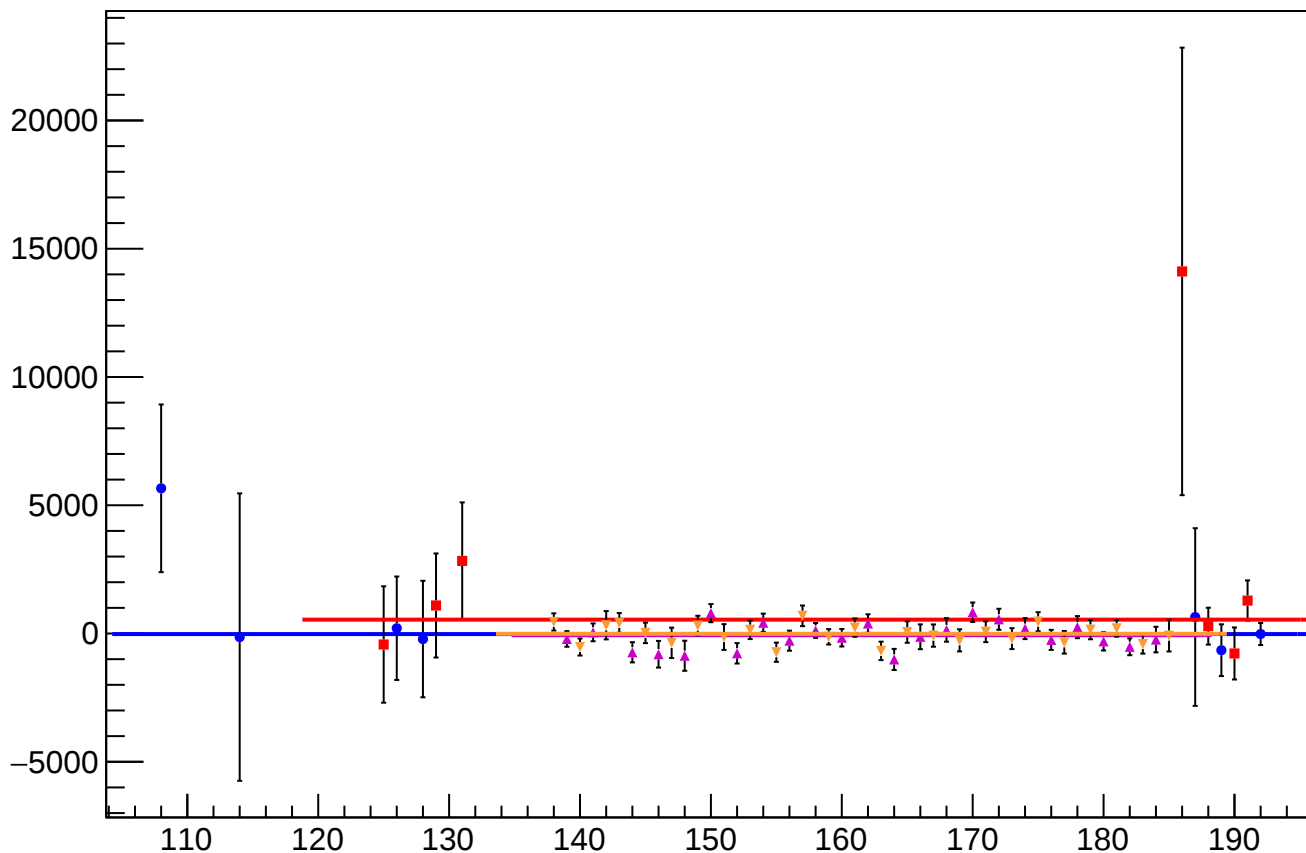
Right: 80.723 $\pm$ 0.014  $\chi^2$ /NDF: 2347053.7/42

In: 80.583 $\pm$ 0.011  $\chi^2$ /NDF: 922418.8/42

Out: 80.861 $\pm$ 0.011  $\chi^2$ /NDF: 1587367.1/47

All: 80.726 $\pm$ 0.008  $\chi^2$ /NDF: 2510092.9/90

# asym\_sam1\_correction\_mean vs Slug, Sign Corrected



Right In:  $-21.859 \pm 377.076$   $\chi^2/\text{NDF}$ : 3.5/6

Left Out:  $-10.486 \pm 78.391$   $\chi^2/\text{NDF}$ : 22.5/24

Right Out:  $540.752 \pm 439.711$   $\chi^2/\text{NDF}$ : 6.4/6

Left In:  $-64.591 \pm 80.047$   $\chi^2/\text{NDF}$ : 37.4/22

Left:  $-36.973 \pm 56.007$   $\chi^2/\text{NDF}$ : 60.2/47

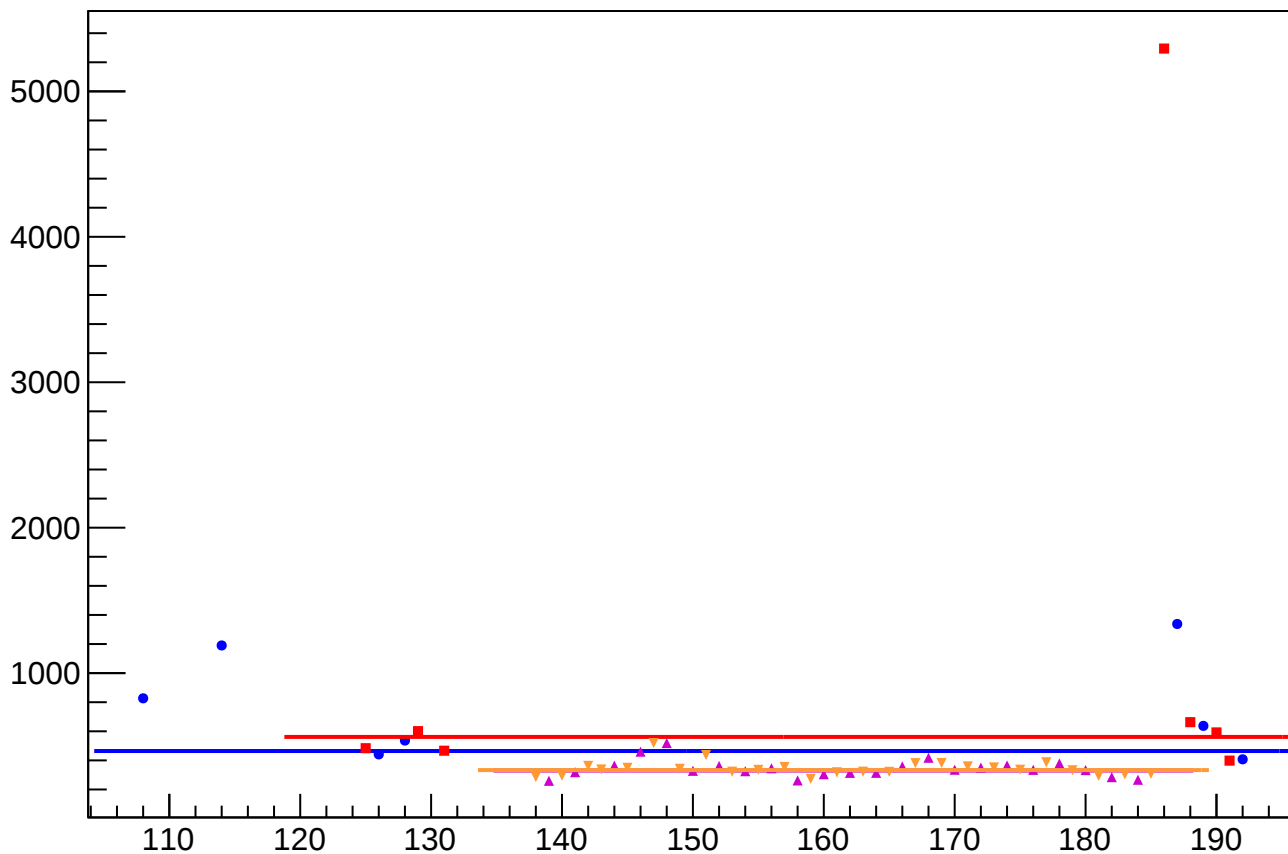
Right:  $216.555 \pm 286.239$   $\chi^2/\text{NDF}$ : 10.8/13

In:  $-62.749 \pm 78.302$   $\chi^2/\text{NDF}$ : 40.9/29

Out:  $6.494 \pm 77.174$   $\chi^2/\text{NDF}$ : 30.5/31

All:  $-27.625 \pm 54.965$   $\chi^2/\text{NDF}$ : 71.7/61

# asym\_sam1\_correction\_rms vs Slug, Sign Corrected



Right In: 464.413+/-0.267  $\chi^2/\text{NDF}$ : 281610.1/6

Left Out: 333.233+/-0.055  $\chi^2/\text{NDF}$ : 592122.2/24

Right Out: 561.413+/-0.311  $\chi^2/\text{NDF}$ : 723161.3/6

Left In: 329.985+/-0.057  $\chi^2/\text{NDF}$ : 795969.0/22

Left: 331.643+/-0.040  $\chi^2/\text{NDF}$ : 1389771.8/47

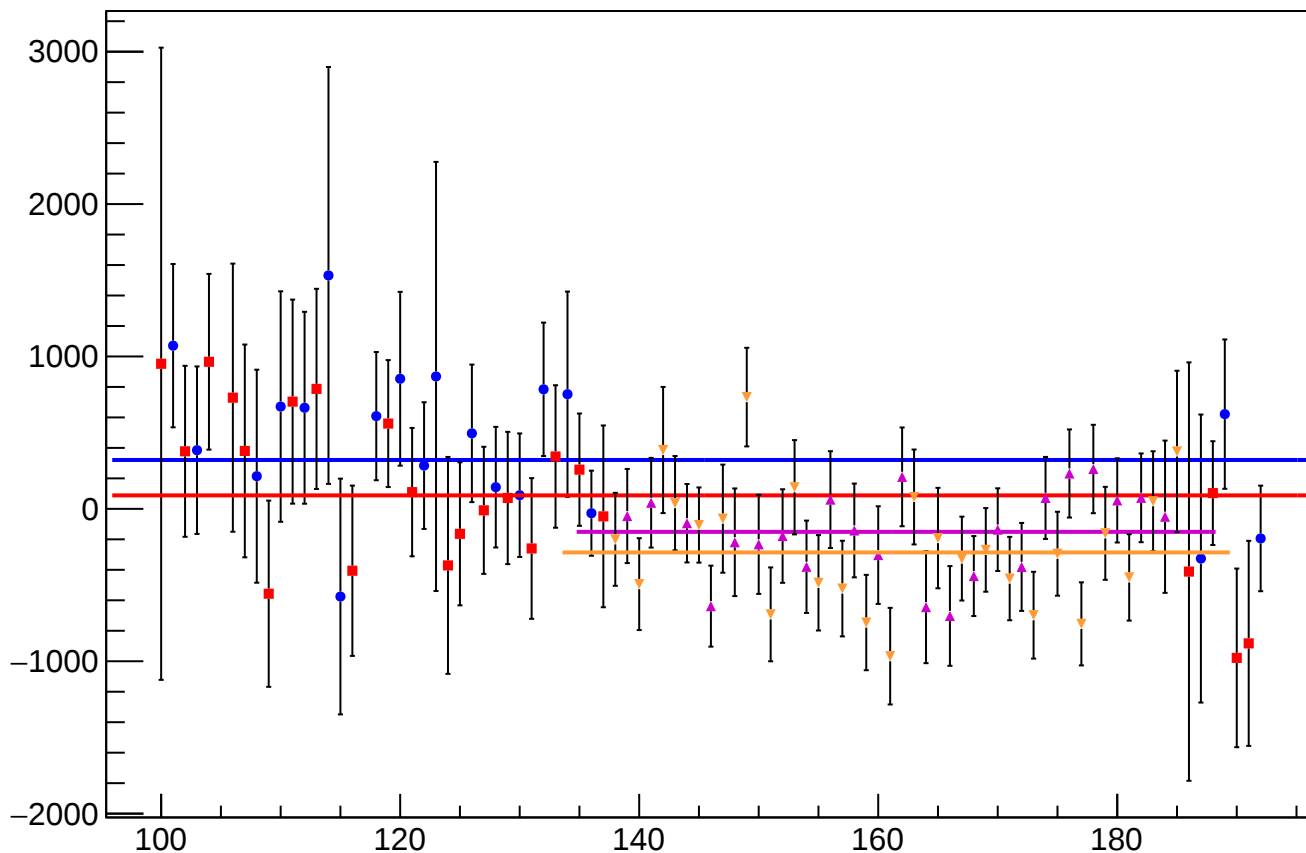
Right: 505.518+/-0.202  $\chi^2/\text{NDF}$ : 1060854.9/13

In: 335.782+/-0.055  $\chi^2/\text{NDF}$ : 1320803.3/29

Out: 340.262+/-0.055  $\chi^2/\text{NDF}$ : 1837270.7/31

All: 338.054+/-0.039  $\chi^2/\text{NDF}$ : 3161394.9/61

# reg\_asym\_sam2\_mean vs Slug, Sign Corrected



Right In: 320.767 $\pm$ 110.709  $\chi^2$ /NDF: 13.0/19

Left Out: -286.030 $\pm$ 61.095  $\chi^2$ /NDF:36.6/24

Right Out: 88.391 $\pm$ 109.840  $\chi^2$ /NDF: 16.0/22

Left In: -150.920 $\pm$ 62.818  $\chi^2$ /NDF:18.7/22

Left: -220.353 $\pm$ 43.797  $\chi^2$ /NDF: 57.6/47

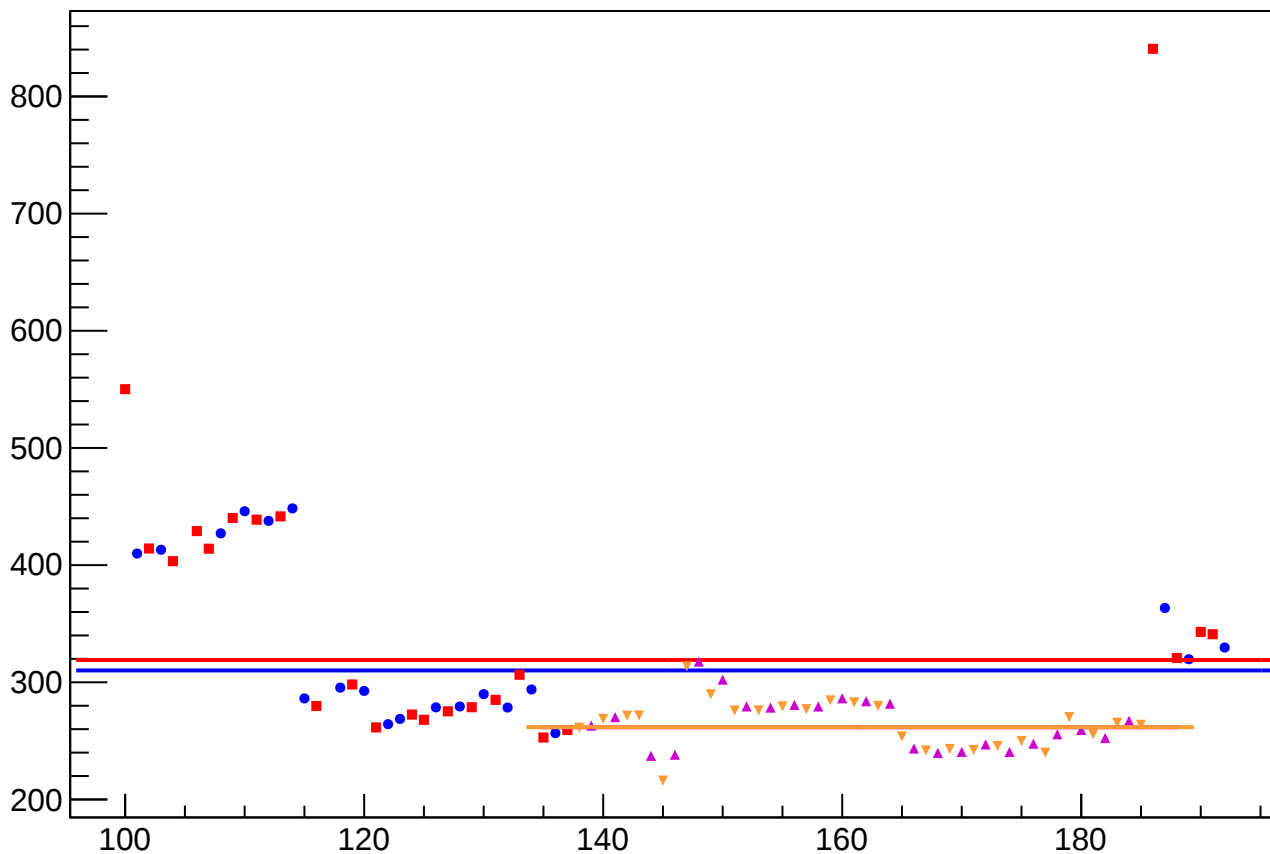
Right: 203.664 $\pm$ 77.974  $\chi^2$ /NDF: 31.2/42

In: -36.042 $\pm$ 54.635  $\chi^2$ /NDF:45.4/42

Out: -197.563 $\pm$ 53.391  $\chi^2$ /NDF:61.5/47

All: -118.662 $\pm$ 38.186  $\chi^2$ /NDF: 111.3/90

# reg\_asym\_sam2\_rms vs Slug, Sign Corrected



Right In: 310.105+/-0.078  $\chi^2/\text{NDF}$ : 520637.3/19

Left Out: 261.722+/-0.043  $\chi^2/\text{NDF}$ : 233222.6/24

Right Out: 319.040+/-0.078  $\chi^2/\text{NDF}$ : 920706.9/22

Left In: 261.637+/-0.044  $\chi^2/\text{NDF}$ : 228241.3/22

Left: 261.680+/-0.031  $\chi^2/\text{NDF}$ : 461465.7/47

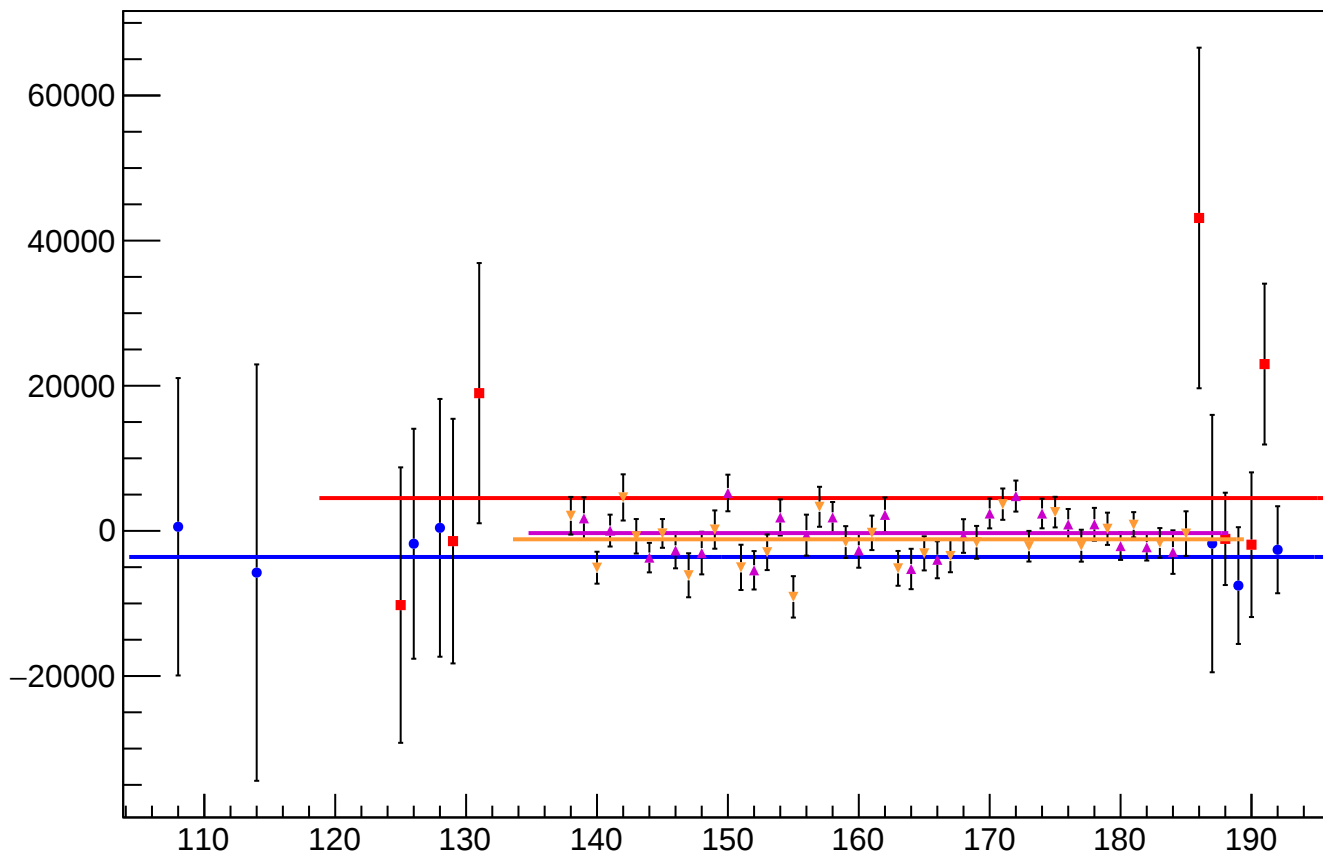
Right: 314.608+/-0.055  $\chi^2/\text{NDF}$ : 1447908.0/42

In: 273.441+/-0.039  $\chi^2/\text{NDF}$ : 1038861.3/42

Out: 275.264+/-0.038  $\chi^2/\text{NDF}$ : 1569866.2/47

All: 274.374+/-0.027  $\chi^2/\text{NDF}$ : 2609867.3/90

asym\_sam2\_correction\_mean vs Slug, Sign Corrected



Right In: -3595.789+/-4181.133  $\chi^2/\text{NDF}$ : 0.4/6

Left Out: -1161.443+/-469.036  $\chi^2/\text{NDF}$ : 38.8/24

Right Out: 4521.448+/-4298.026  $\chi^2/\text{NDF}$ : 8.1/6

Left In: -304.366+/-483.778  $\chi^2/\text{NDF}$ : 35.4/22

Left: -746.162+/-336.750  $\chi^2/\text{NDF}$ : 75.7/47

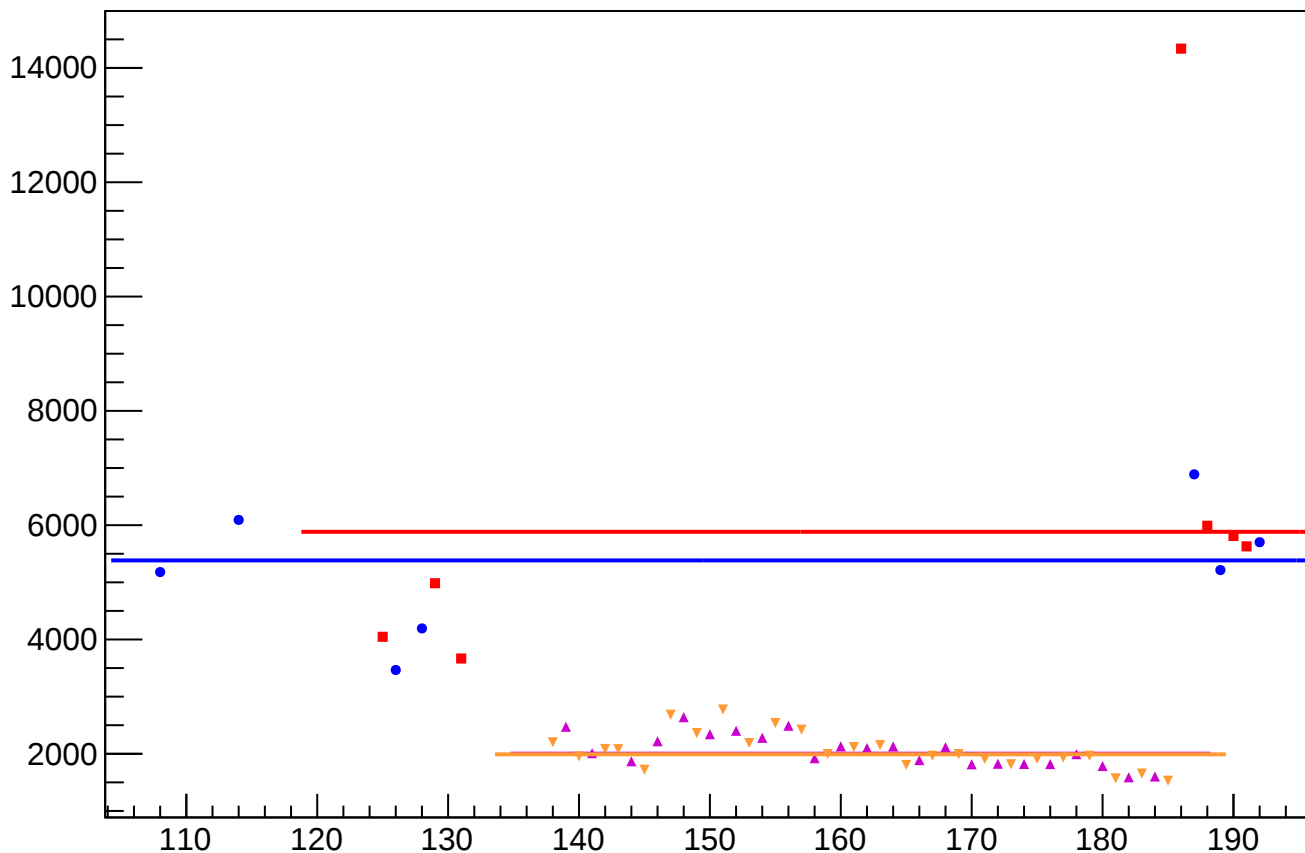
Right: 350.947+/-2996.981  $\chi^2/\text{NDF}$ : 10.3/13

In: -347.848+/-480.572  $\chi^2/\text{NDF}$ : 36.4/29

Out: -1094.562+/-466.268  $\chi^2/\text{NDF}$ : 48.5/31

All: -732.483+/-334.644  $\chi^2/\text{NDF}$ : 86.1/61

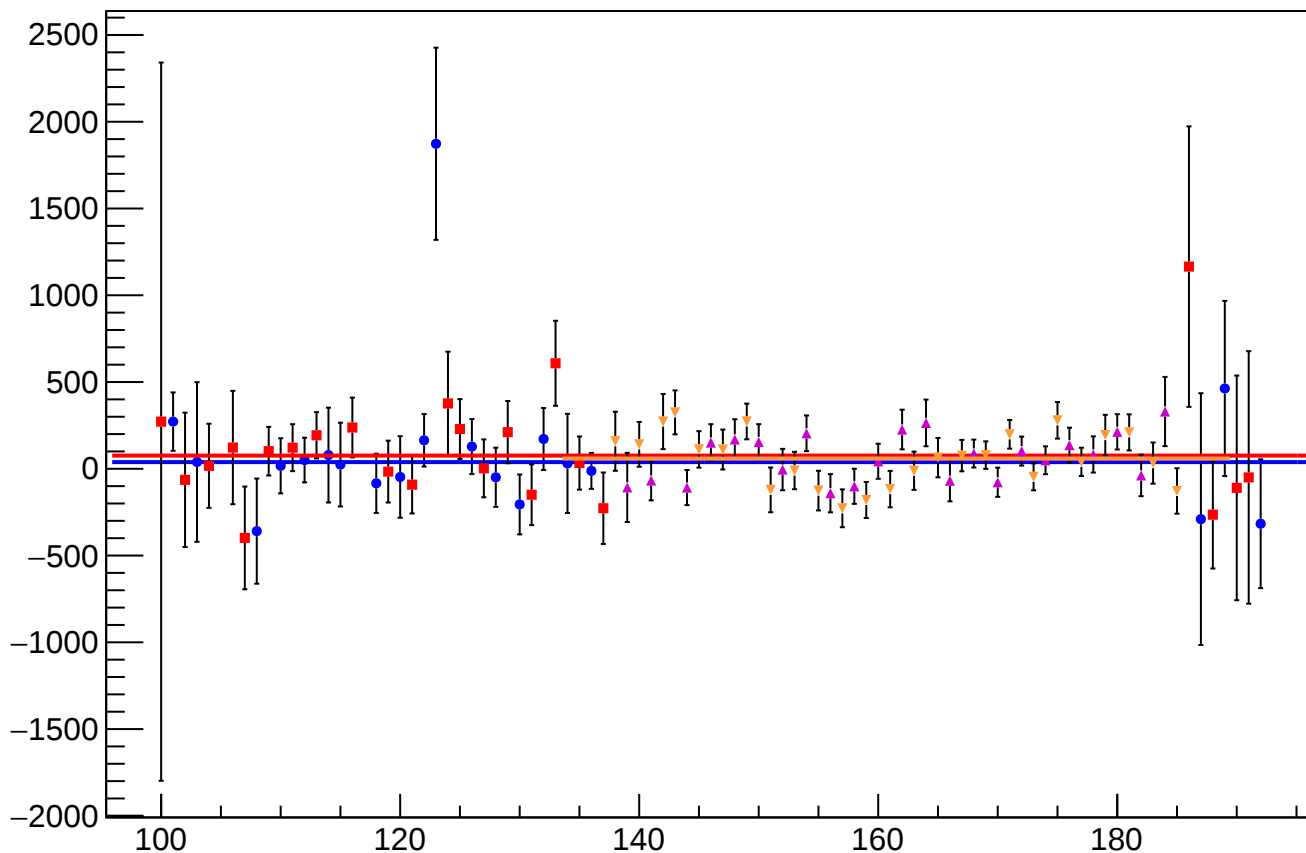
# asym\_sam2\_correction\_rms vs Slug, Sign Corrected



Right In: 5383.586 $\pm$ 2.957  $\chi^2$ /NDF: 60621.7/6  
 Left Out: 1991.105 $\pm$ 0.332  $\chi^2$ /NDF: 726310.6/24  
 Right Out: 5884.067 $\pm$ 3.039  $\chi^2$ /NDF: 316257.6/6  
 Left In: 2002.154 $\pm$ 0.342  $\chi^2$ /NDF: 585947.4/22

Left: 1996.458 $\pm$ 0.238  $\chi^2$ /NDF: 1312795.7/47  
 Right: 5626.928 $\pm$ 2.119  $\chi^2$ /NDF: 390812.4/13  
 In: 2046.825 $\pm$ 0.340  $\chi^2$ /NDF: 1937395.0/29  
 Out: 2036.920 $\pm$ 0.330  $\chi^2$ /NDF: 2664045.4/31  
 All: 2041.723 $\pm$ 0.237  $\chi^2$ /NDF: 4601878.0/63

# reg\_asym\_sam3\_mean vs Slug, Sign Corrected



Right In: 38.514 $\pm$ 43.099  $\chi^2$ /NDF: 21.2/19

Left Out: 58.983 $\pm$ 21.137  $\chi^2$ /NDF:46.9/24

Right Out: 76.049 $\pm$ 42.574  $\chi^2$ /NDF: 20.2/22

Left In: 59.235 $\pm$ 21.921  $\chi^2$ /NDF:29.4/22

Left: 59.104 $\pm$ 15.216  $\chi^2$ /NDF: 76.3/47

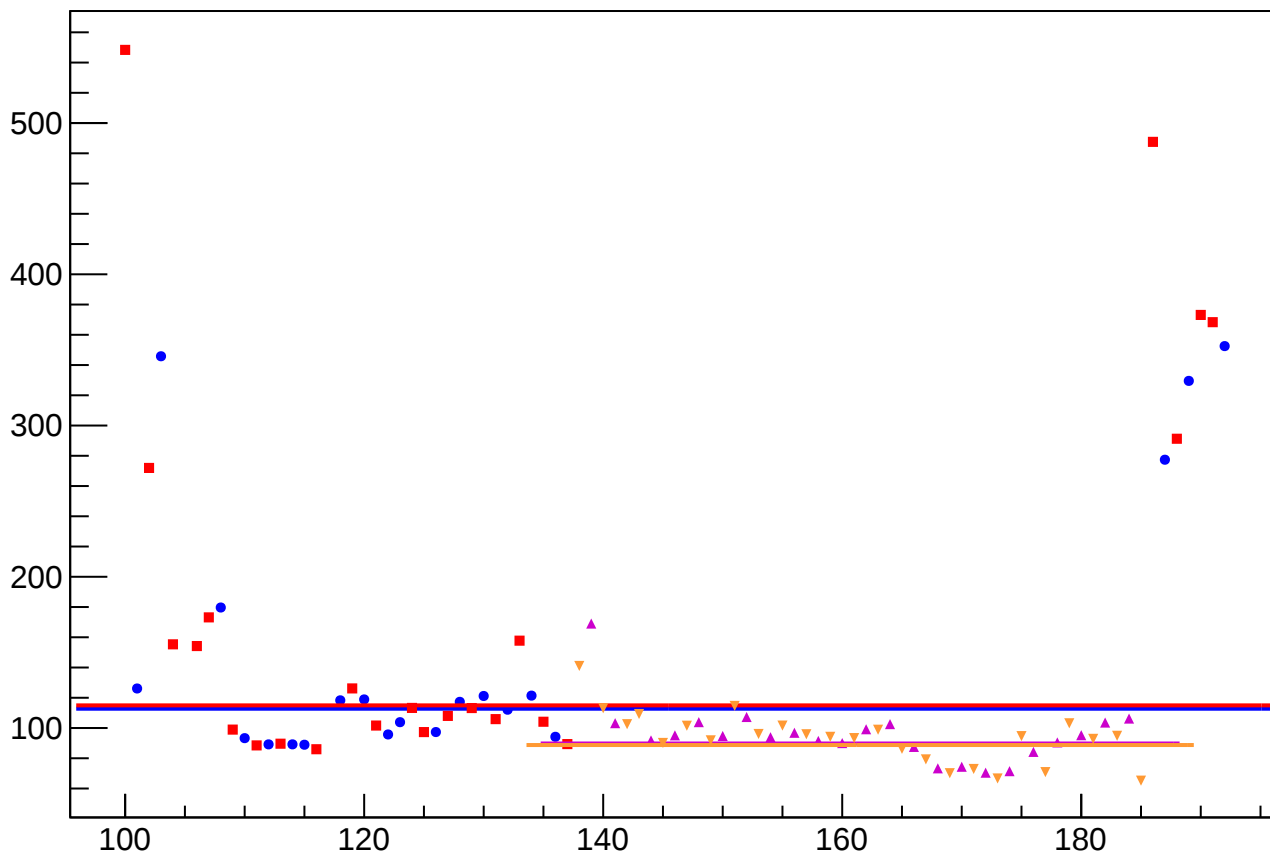
Right: 57.511 $\pm$ 30.288  $\chi^2$ /NDF: 41.8/42

In: 54.976 $\pm$ 19.539  $\chi^2$ /NDF:50.8/42

Out: 62.357 $\pm$ 18.932  $\chi^2$ /NDF:67.3/47

All: 58.783 $\pm$ 13.597  $\chi^2$ /NDF: 118.1/90

# reg\_asym\_sam3\_rms vs Slug, Sign Corrected



Right In: 112.762 $\pm$ 0.030  $\chi^2$ /NDF: 2182605.0/19

Left Out: 88.748 $\pm$ 0.015  $\chi^2$ /NDF:1079338.8/24

Right Out: 114.972 $\pm$ 0.030  $\chi^2$ /NDF: 2593780.6/22

Left In: 89.766 $\pm$ 0.016  $\chi^2$ /NDF:885818.0/22

Left: 89.238 $\pm$ 0.011  $\chi^2$ /NDF: 1967390.0/47

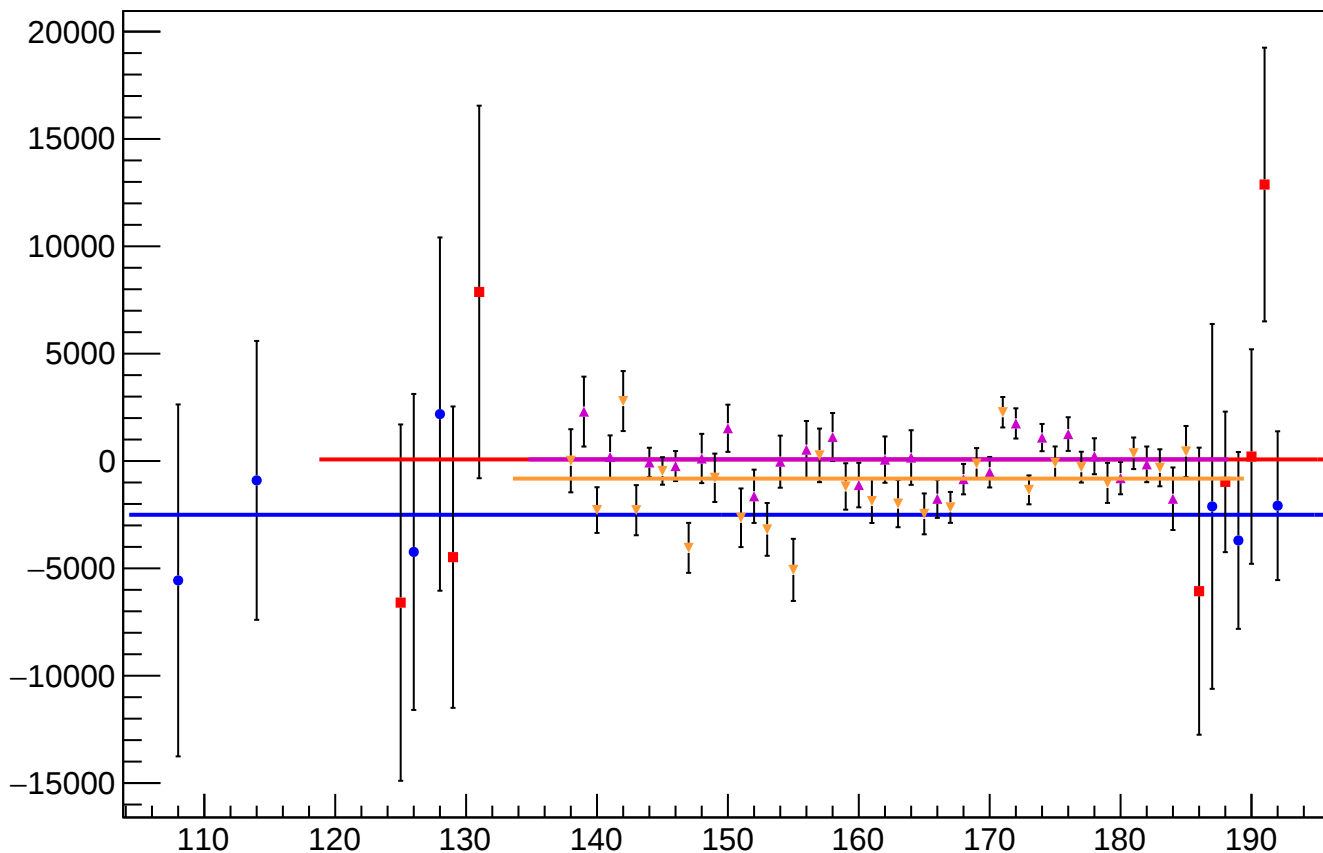
Right: 113.881 $\pm$ 0.021  $\chi^2$ /NDF: 4779047.3/42

In: 94.492 $\pm$ 0.014  $\chi^2$ /NDF:3520794.1/42

Out: 93.934 $\pm$ 0.013  $\chi^2$ /NDF:4281886.1/47

All: 94.204 $\pm$ 0.010  $\chi^2$ /NDF: 7803521.7/90

asym\_sam3\_correction\_mean vs Slug, Sign Corrected



Right In:  $-2504.361 \pm 2094.608$   $\chi^2/\text{NDF}: 0.7/6$

Left Out:  $-818.877 \pm 184.464$   $\chi^2/\text{NDF}: 68.2/24$

Right Out:  $73.715 \pm 2091.943$   $\chi^2/\text{NDF}: 6.9/6$

Left In:  $76.204 \pm 186.651$   $\chi^2/\text{NDF}: 28.3/22$

Left:  $-376.610 \pm 131.202$   $\chi^2/\text{NDF}: 108.1/47$

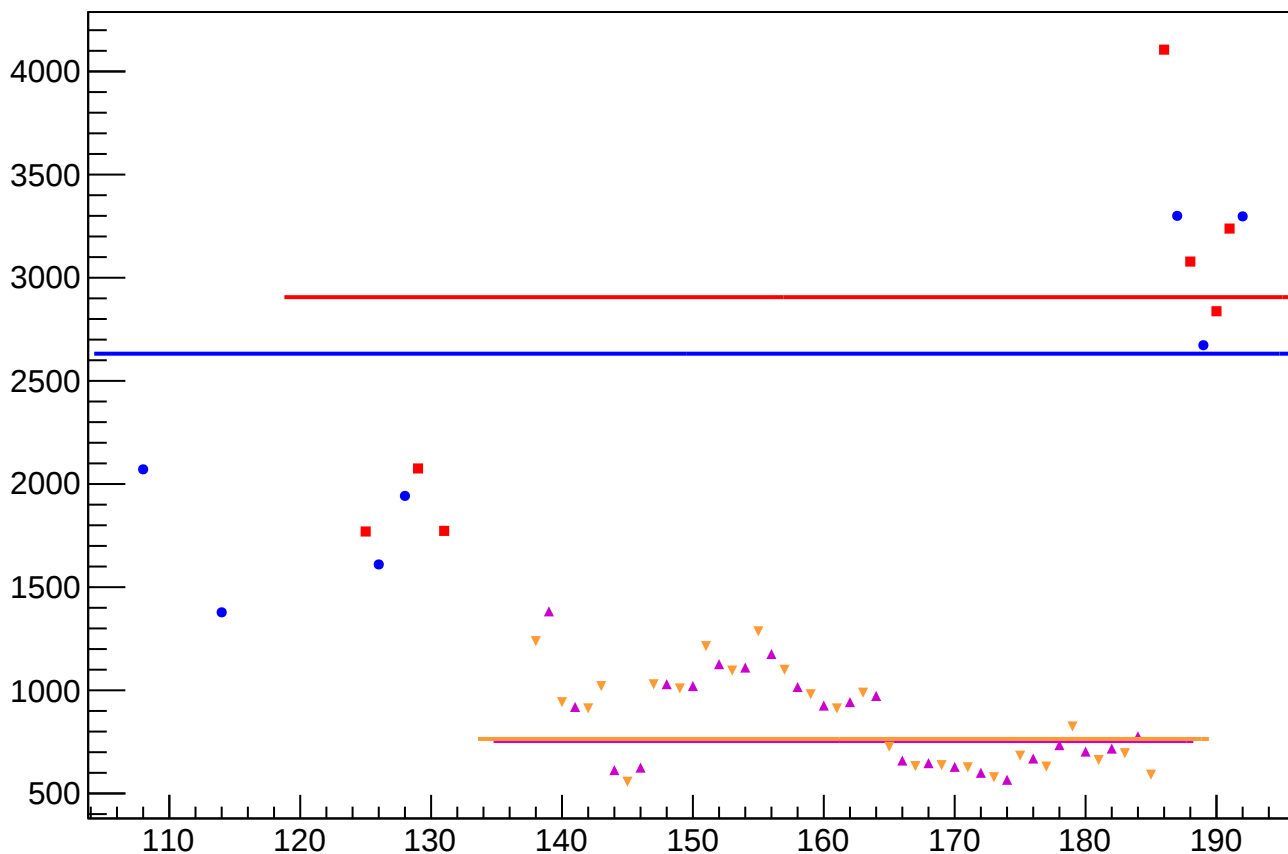
Right:  $-1213.682 \pm 1480.168$   $\chi^2/\text{NDF}: 8.3/13$

In:  $55.874 \pm 185.914$   $\chi^2/\text{NDF}: 30.5/29$

Out:  $-811.990 \pm 183.751$   $\chi^2/\text{NDF}: 75.3/31$

All:  $-383.136 \pm 130.690$   $\chi^2/\text{NDF}: 116.7/61$

# asym\_sam3\_correction\_rms vs Slug, Sign Corrected



Right In: 2631.849+/-1.481  $\chi^2$ /NDF: 222849.2/6

Left Out: 764.280+/-0.130  $\chi^2$ /NDF: 2315985.8/24

Right Out: 2905.848+/-1.479  $\chi^2$ /NDF: 175367.6/6

Left In: 754.027+/-0.132  $\chi^2$ /NDF: 2013386.7/22

Left: 759.214+/-0.093  $\chi^2$ /NDF: 4332425.4/47

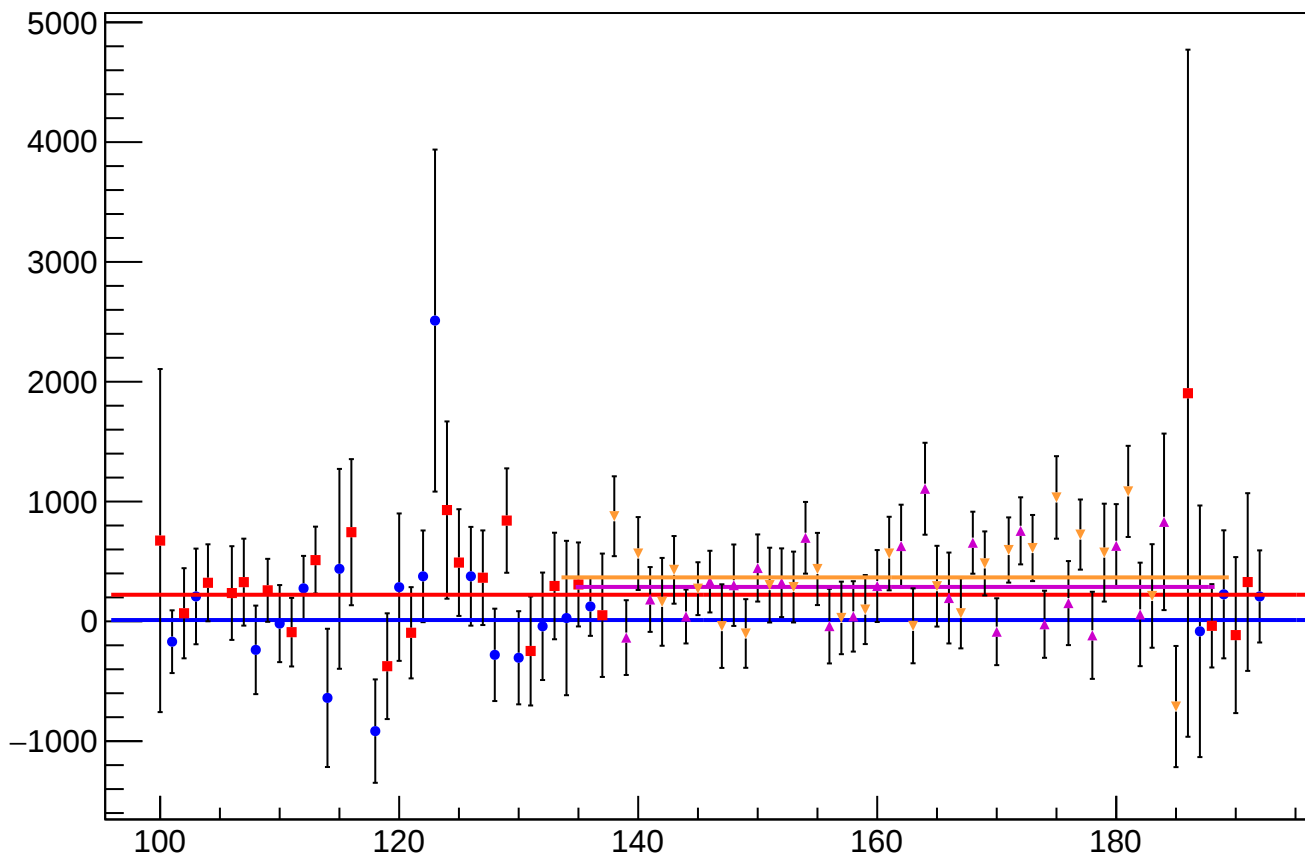
Right: 2769.023+/-1.047  $\chi^2$ /NDF: 415350.1/13

In: 768.820+/-0.131  $\chi^2$ /NDF: 3831008.2/29

Out: 780.803+/-0.130  $\chi^2$ /NDF: 4571195.4/31

All: 774.882+/-0.092  $\chi^2$ /NDF: 8406406.2/61

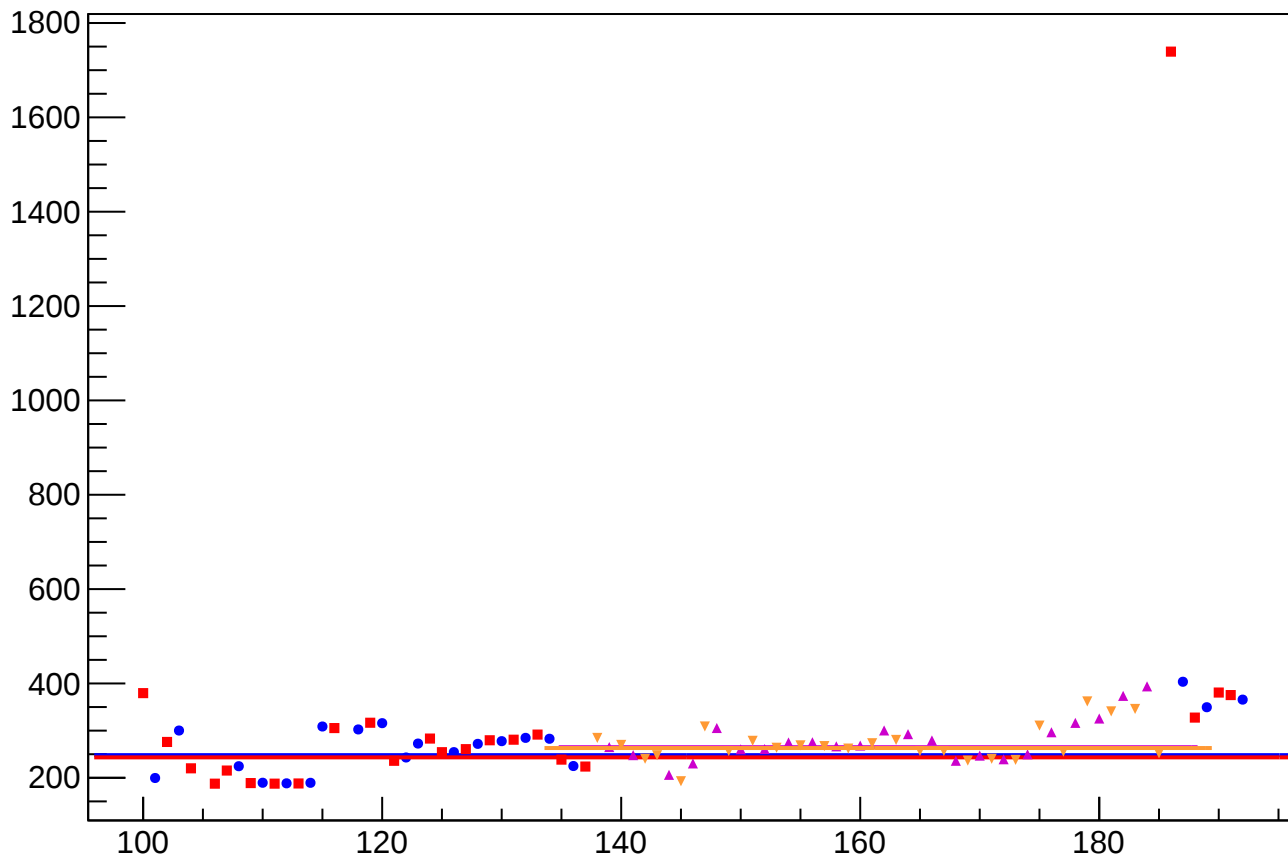
# reg\_asym\_sam4\_mean vs Slug, Sign Corrected



Right In: 10.968+/-89.209  $\chi^2/\text{NDF}$ : 15.1/19  
 Left Out: 367.028+/-61.943  $\chi^2/\text{NDF}$ :28.2/24  
 Right Out: 222.072+/-84.970  $\chi^2/\text{NDF}$ : 11.9/22  
 Left In: 287.246+/-64.141  $\chi^2/\text{NDF}$ :23.9/22

Left: 328.527+/-44.557  $\chi^2/\text{NDF}$ : 52.9/47  
 Right: 121.654+/-61.527  $\chi^2/\text{NDF}$ : 29.9/42  
 In: 193.095+/-52.077  $\chi^2/\text{NDF}$ :45.3/42  
 Out: 316.725+/-50.055  $\chi^2/\text{NDF}$ :42.0/47  
 All: 257.357+/-36.088  $\chi^2/\text{NDF}$ : 90.3/90

# reg\_asym\_sam4\_rms vs Slug, Sign Corrected



Right In: 248.046 $\pm$ 0.063  $\chi^2$ /NDF: 722860.4/19

Left Out: 263.103 $\pm$ 0.044  $\chi^2$ /NDF: 642226.0/24

Right Out: 243.313 $\pm$ 0.060  $\chi^2$ /NDF: 1292617.9/22

Left In: 264.923 $\pm$ 0.045  $\chi^2$ /NDF: 609024.7/22

Left: 263.981 $\pm$ 0.032  $\chi^2$ /NDF: 1252084.1/47

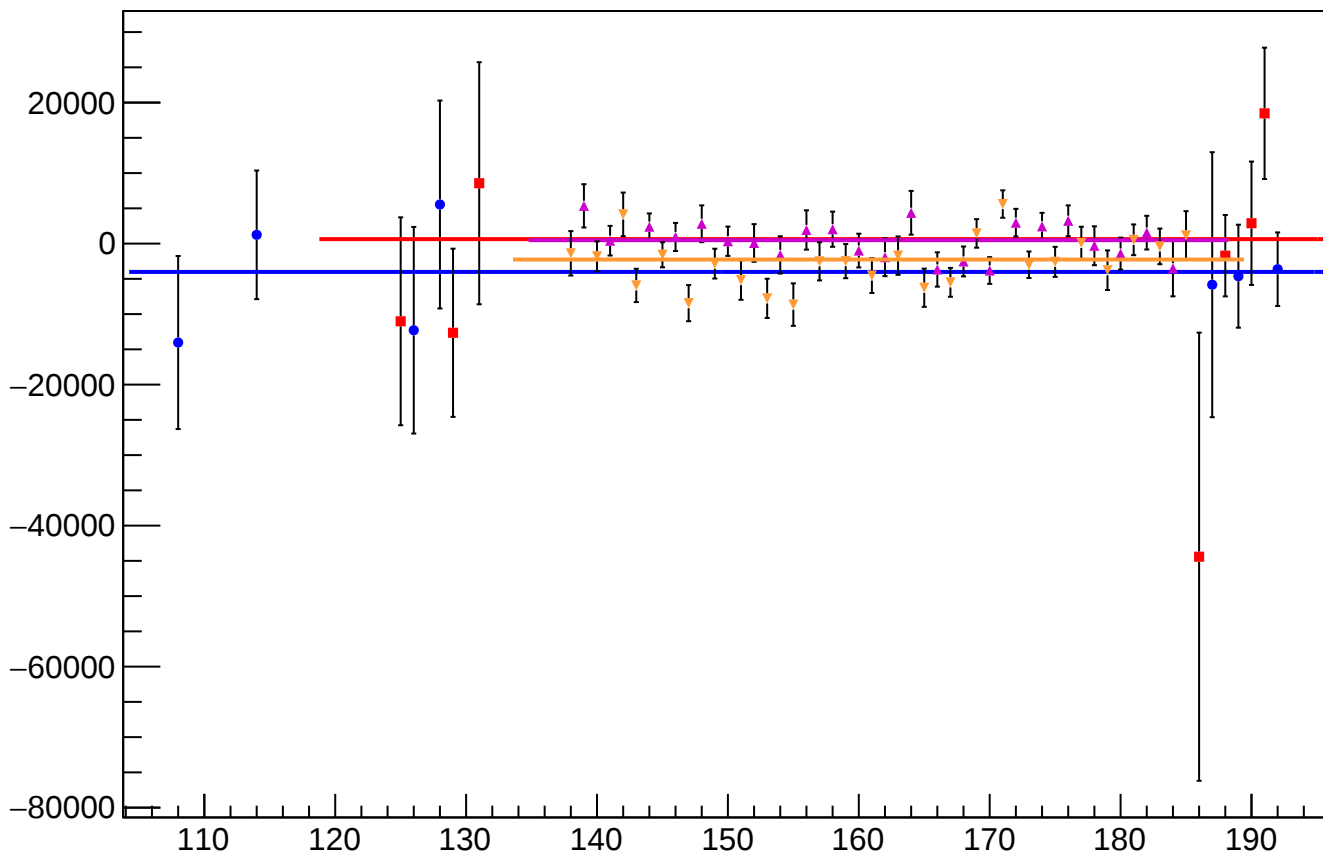
Right: 245.564 $\pm$ 0.044  $\chi^2$ /NDF: 2018430.0/42

In: 259.172 $\pm$ 0.037  $\chi^2$ /NDF: 1379074.3/42

Out: 256.235 $\pm$ 0.035  $\chi^2$ /NDF: 2005684.7/47

All: 257.645 $\pm$ 0.026  $\chi^2$ /NDF: 3388063.7/90

asym\_sam4\_correction\_mean vs Slug, Sign Corrected



Right In:  $-4017.947 \pm 3404.787$   $\chi^2/\text{NDF}: 1.8/6$

Left Out:  $-2260.196 \pm 475.336$   $\chi^2/\text{NDF}: 52.3/24$

Right Out:  $634.807 \pm 3763.167$   $\chi^2/\text{NDF}: 8.0/6$

Left In:  $485.590 \pm 487.465$   $\chi^2/\text{NDF}: 24.8/22$

Left:  $-921.890 \pm 340.321$   $\chi^2/\text{NDF}: 93.4/47$

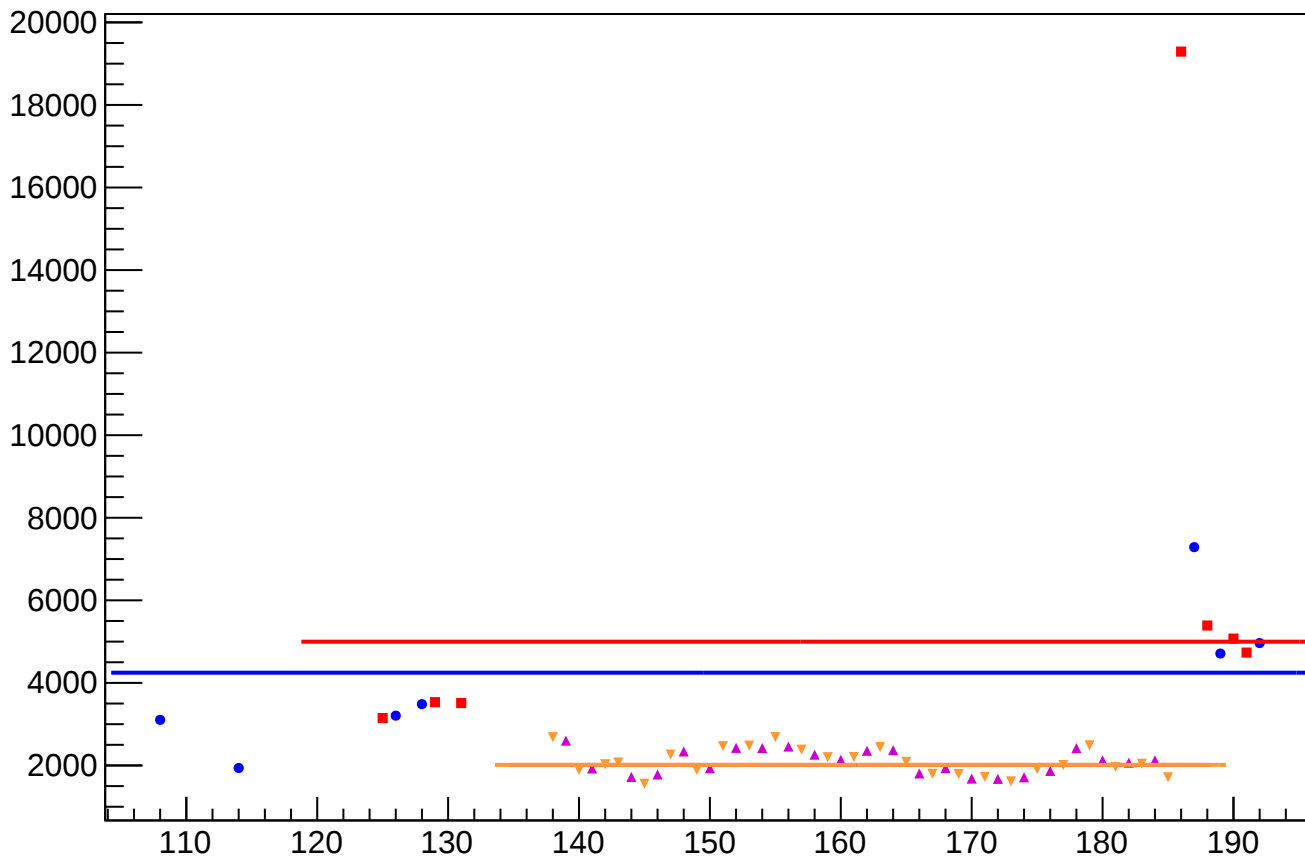
Right:  $-1923.616 \pm 2524.766$   $\chi^2/\text{NDF}: 10.6/13$

In:  $395.131 \pm 482.545$   $\chi^2/\text{NDF}: 28.2/29$

Out:  $-2214.732 \pm 471.588$   $\chi^2/\text{NDF}: 60.9/31$

All:  $-939.766 \pm 337.270$   $\chi^2/\text{NDF}: 104.1/61$

# asym\_sam4\_correction\_rms vs Slug, Sign Corrected



Right In: 4247.012+/-2.408  $\chi^2/\text{NDF}$ : 259241.8/6

Left Out: 2014.106+/-0.336  $\chi^2/\text{NDF}$ : 835656.9/24

Right Out: 4998.286+/-2.661  $\chi^2/\text{NDF}$ : 492167.4/6

Left In: 2013.245+/-0.345  $\chi^2/\text{NDF}$ : 662077.8/22

Left: 2013.686+/-0.241  $\chi^2/\text{NDF}$ : 1497737.9/47

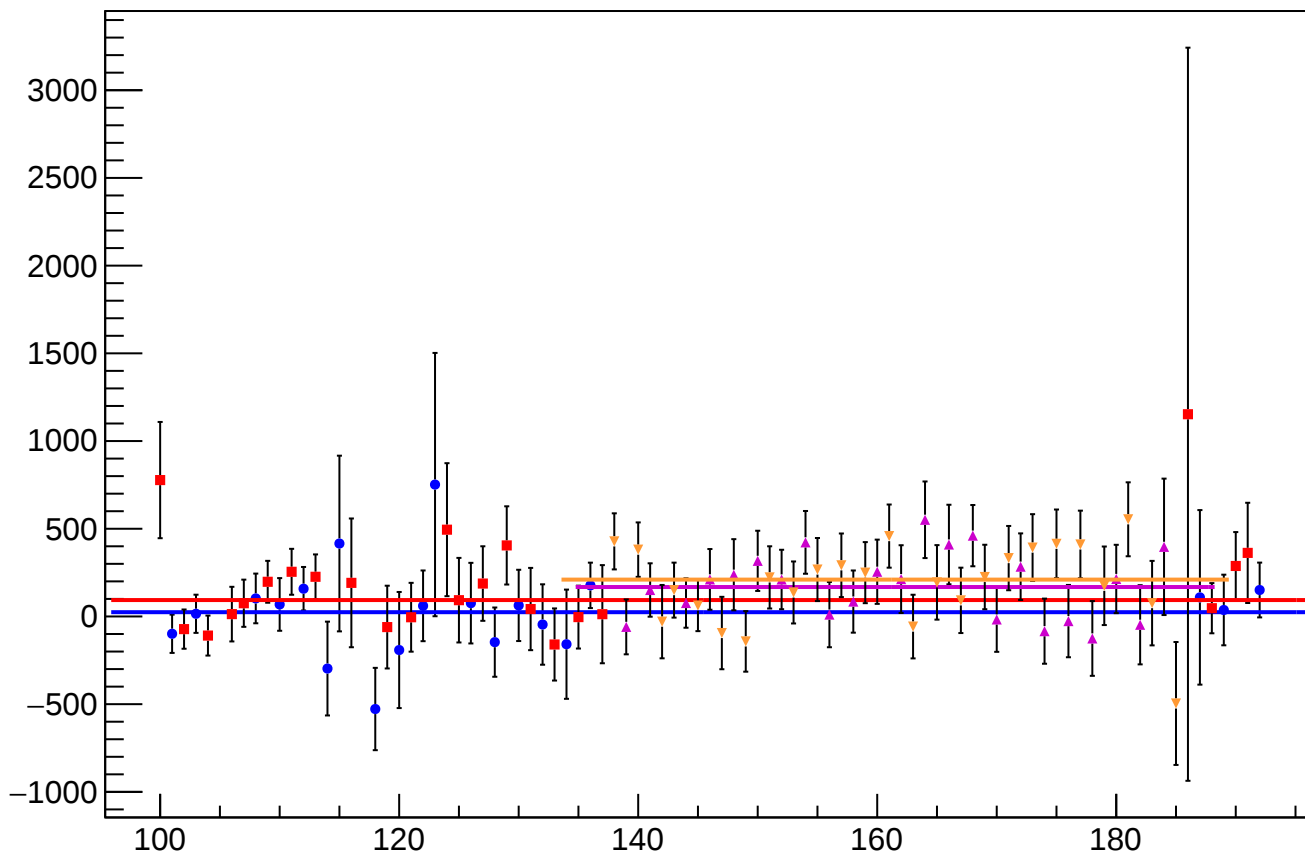
Right: 4585.181+/-1.785  $\chi^2/\text{NDF}$ : 795240.2/13

In: 2058.113+/-0.341  $\chi^2/\text{NDF}$ : 1764875.2/29

Out: 2060.970+/-0.333  $\chi^2/\text{NDF}$ : 2565761.9/31

All: 2059.574+/-0.238  $\chi^2/\text{NDF}$ : 4330673.0/63

# reg\_asym\_sam5\_mean vs Slug, Sign Corrected



Right In: 24.329 $\pm$ 39.939  $\chi^2/\text{NDF}$ : 15.2/19

Left Out: 210.086 $\pm$ 37.093  $\chi^2/\text{NDF}$ : 27.5/24

Right Out: 93.504 $\pm$ 36.653  $\chi^2/\text{NDF}$ : 21.5/22

Left In: 167.822 $\pm$ 38.718  $\chi^2/\text{NDF}$ : 21.1/22

Left: 189.859 $\pm$ 26.785  $\chi^2/\text{NDF}$ : 49.3/47

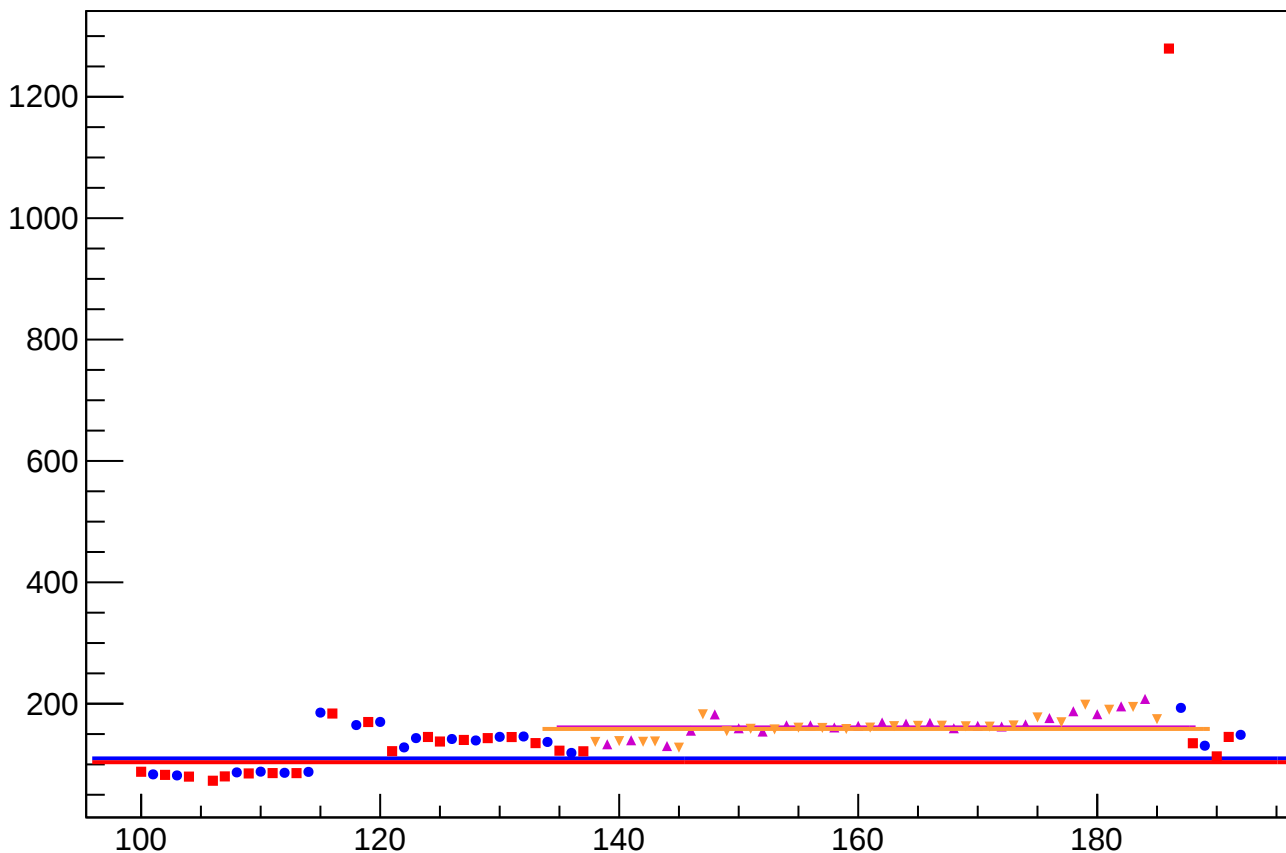
Right: 61.879 $\pm$ 27.005  $\chi^2/\text{NDF}$ : 38.3/42

In: 98.303 $\pm$ 27.799  $\chi^2/\text{NDF}$ : 43.0/42

Out: 151.098 $\pm$ 26.072  $\chi^2/\text{NDF}$ : 54.0/47

All: 126.392 $\pm$ 19.017  $\chi^2/\text{NDF}$ : 98.9/90

# reg\_asym\_sam5\_rms vs Slug, Sign Corrected



Right In: 109.862 $\pm$ 0.028  $\chi^2$ /NDF: 1093386.3/19

Left Out: 158.440 $\pm$ 0.026  $\chi^2$ /NDF: 434300.9/24

Right Out: 103.606 $\pm$ 0.026  $\chi^2$ /NDF: 1797137.7/22

Left In: 160.947 $\pm$ 0.027  $\chi^2$ /NDF: 379713.4/22

Left: 159.640 $\pm$ 0.019  $\chi^2$ /NDF: 818385.9/47

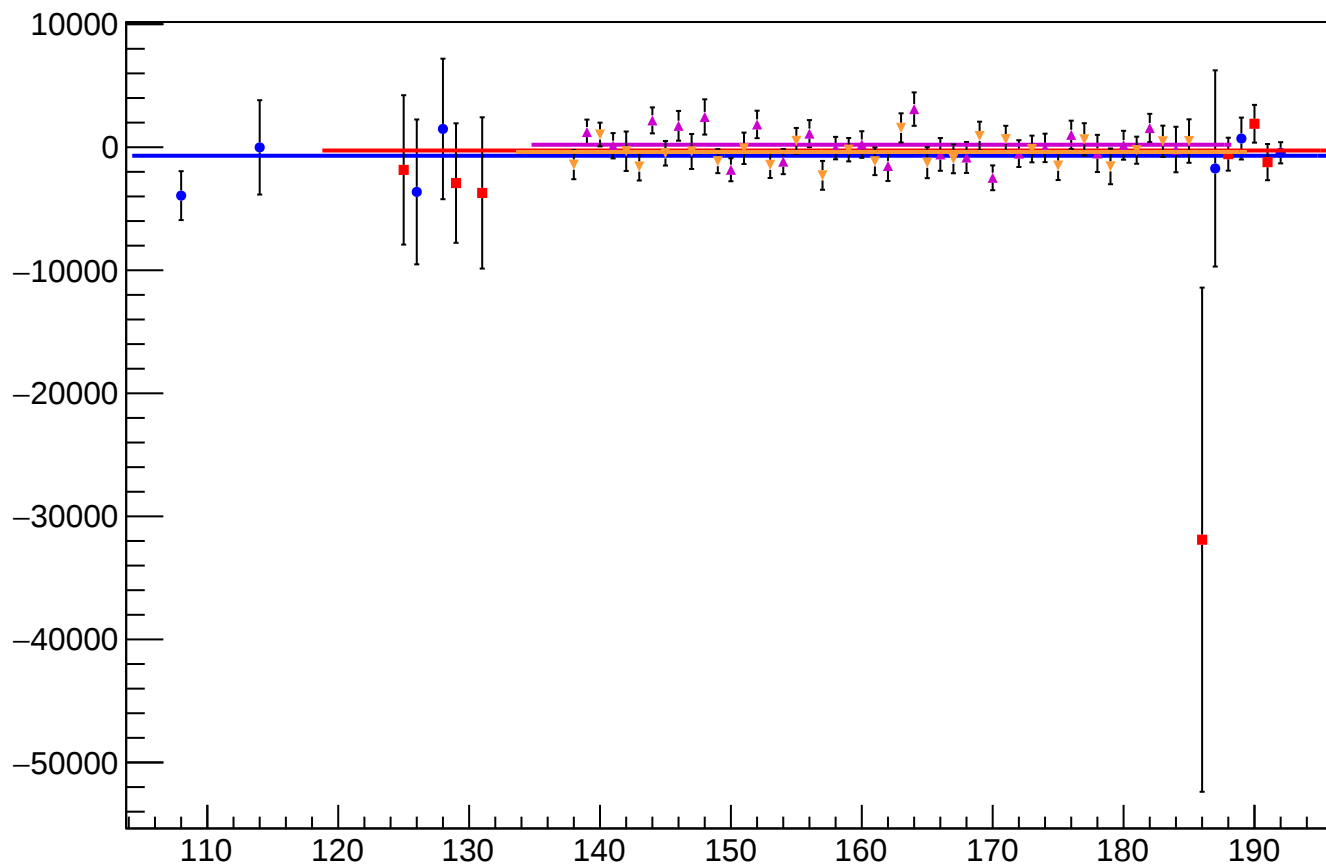
Right: 106.466 $\pm$ 0.019  $\chi^2$ /NDF: 2917166.5/42

In: 136.198 $\pm$ 0.020  $\chi^2$ /NDF: 3159922.2/42

Out: 130.695 $\pm$ 0.018  $\chi^2$ /NDF: 4442892.0/47

All: 133.270 $\pm$ 0.013  $\chi^2$ /NDF: 7644503.4/90

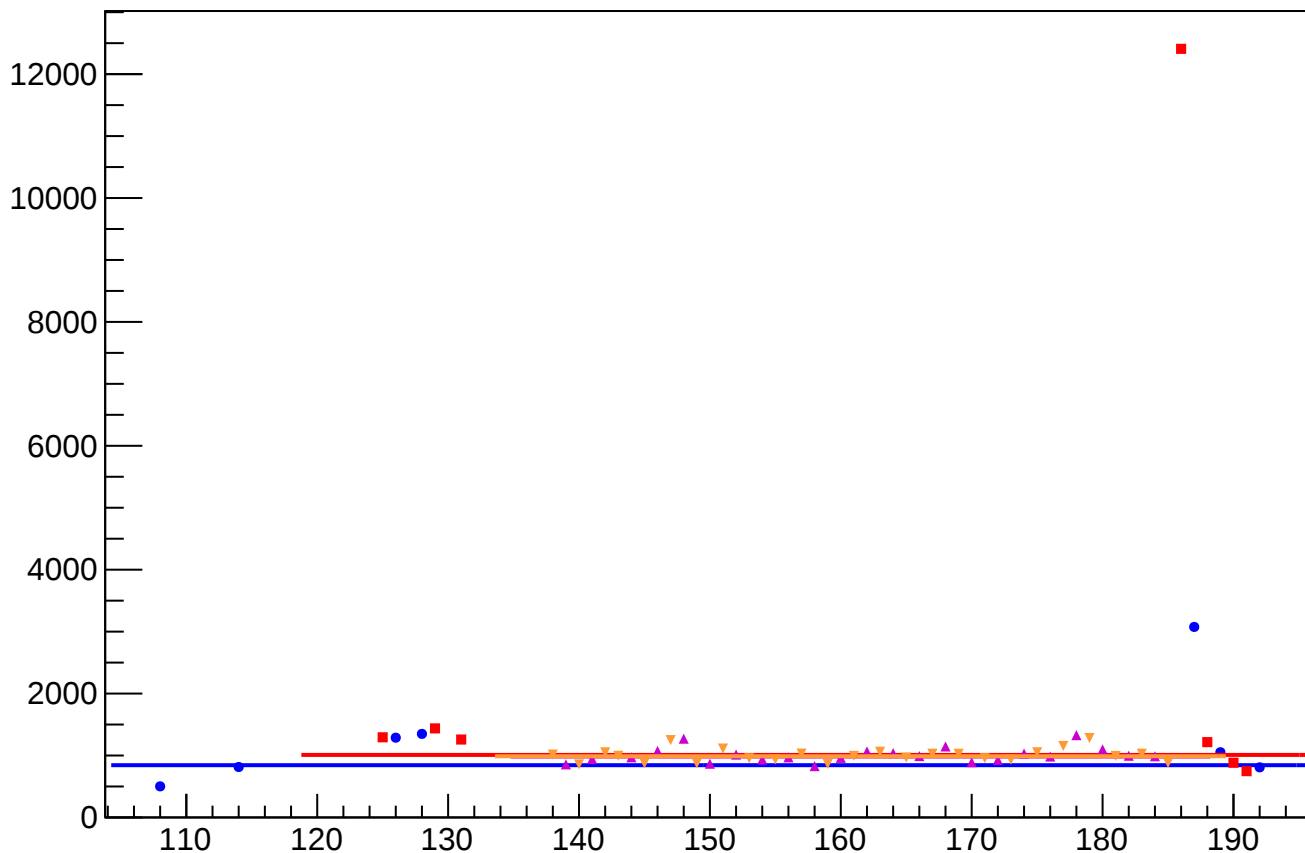
asym\_sam5\_correction\_mean vs Slug, Sign Corrected



Right In:  $-692.630 \pm 691.607$   $\chi^2/\text{NDF}$ : 3.9/6  
 Left Out:  $-385.018 \pm 231.833$   $\chi^2/\text{NDF}$ : 18.1/24  
 Right Out:  $-266.820 \pm 804.969$   $\chi^2/\text{NDF}$ : 5.5/6  
 Left In:  $202.234 \pm 237.460$   $\chi^2/\text{NDF}$ : 35.5/22

Left:  $-98.432 \pm 165.884$   $\chi^2/\text{NDF}$ : 56.7/47  
 Right:  $-511.795 \pm 524.581$   $\chi^2/\text{NDF}$ : 9.6/13  
 In:  $107.867 \pm 224.590$   $\chi^2/\text{NDF}$ : 40.8/29  
 Out:  $-375.965 \pm 222.778$   $\chi^2/\text{NDF}$ : 23.6/31  
 All:  $-136.009 \pm 158.165$   $\chi^2/\text{NDF}$ : 66.8/61

# asym\_sam5\_correction\_rms vs Slug, Sign Corrected



Right In: 843.821+/-0.489  $\chi^2/\text{NDF}$ : 276509.4/6

Left Out: 987.869+/-0.164  $\chi^2/\text{NDF}$ : 376958.5/24

Right Out: 1009.637+/-0.569  $\chi^2/\text{NDF}$ : 767226.6/6

Left In: 983.893+/-0.168  $\chi^2/\text{NDF}$ : 416265.7/22

Left: 985.929+/-0.117  $\chi^2/\text{NDF}$ : 793511.2/47

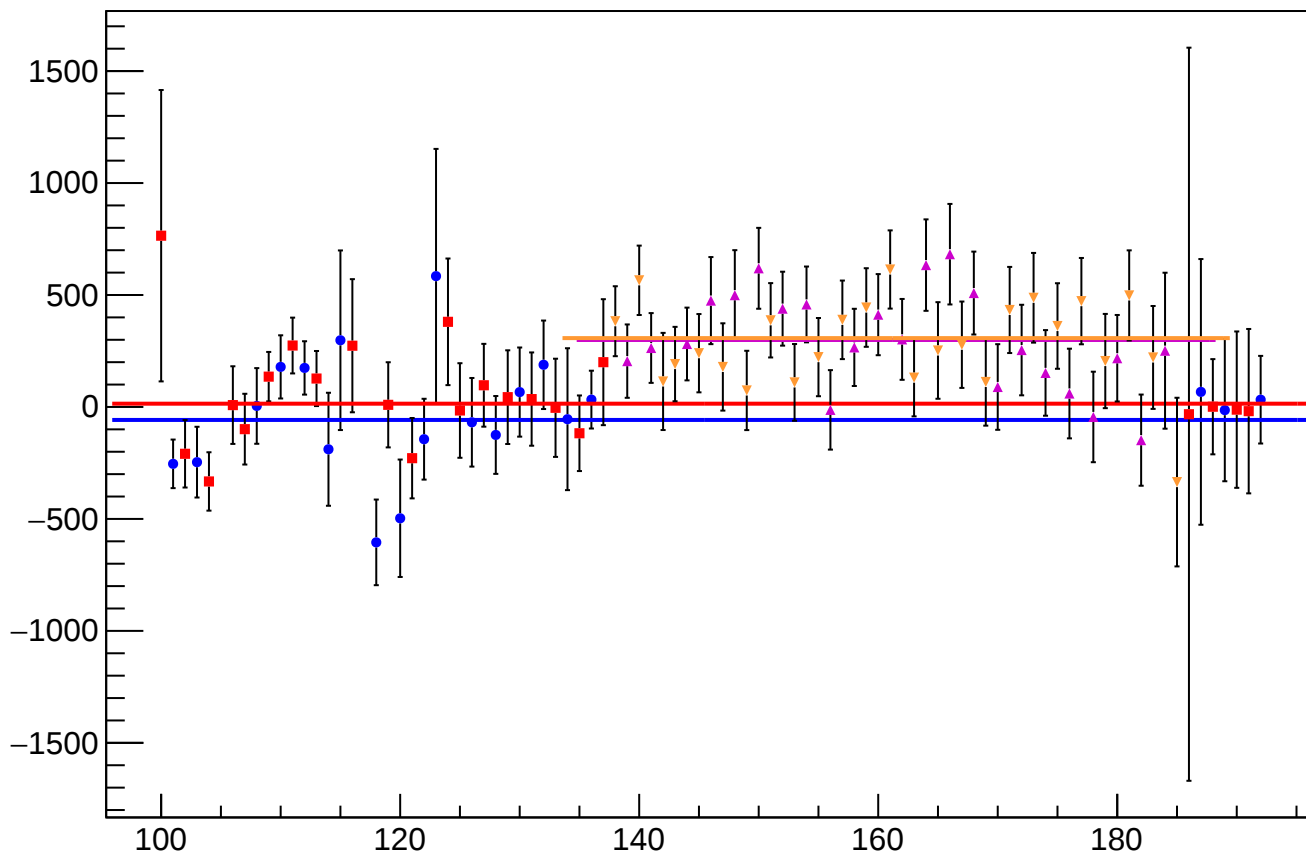
Right: 914.240+/-0.371  $\chi^2/\text{NDF}$ : 1092559.6/13

In: 969.122+/-0.159  $\chi^2/\text{NDF}$ : 766161.9/29

Out: 989.536+/-0.158  $\chi^2/\text{NDF}$ : 1145535.6/31

All: 979.412+/-0.112  $\chi^2/\text{NDF}$ : 1920026.4/61

# reg\_asym\_sam6\_mean vs Slug, Sign Corrected



Right In:  $-57.976 \pm 40.934$   $\chi^2/\text{NDF}: 27.9/19$

Left Out:  $307.487 \pm 37.278$   $\chi^2/\text{NDF}: 20.7/24$

Right Out:  $14.633 \pm 38.405$   $\chi^2/\text{NDF}: 23.1/22$

Left In:  $299.192 \pm 39.009$   $\chi^2/\text{NDF}: 28.5/22$

Left:  $303.528 \pm 26.951$   $\chi^2/\text{NDF}: 49.3/47$

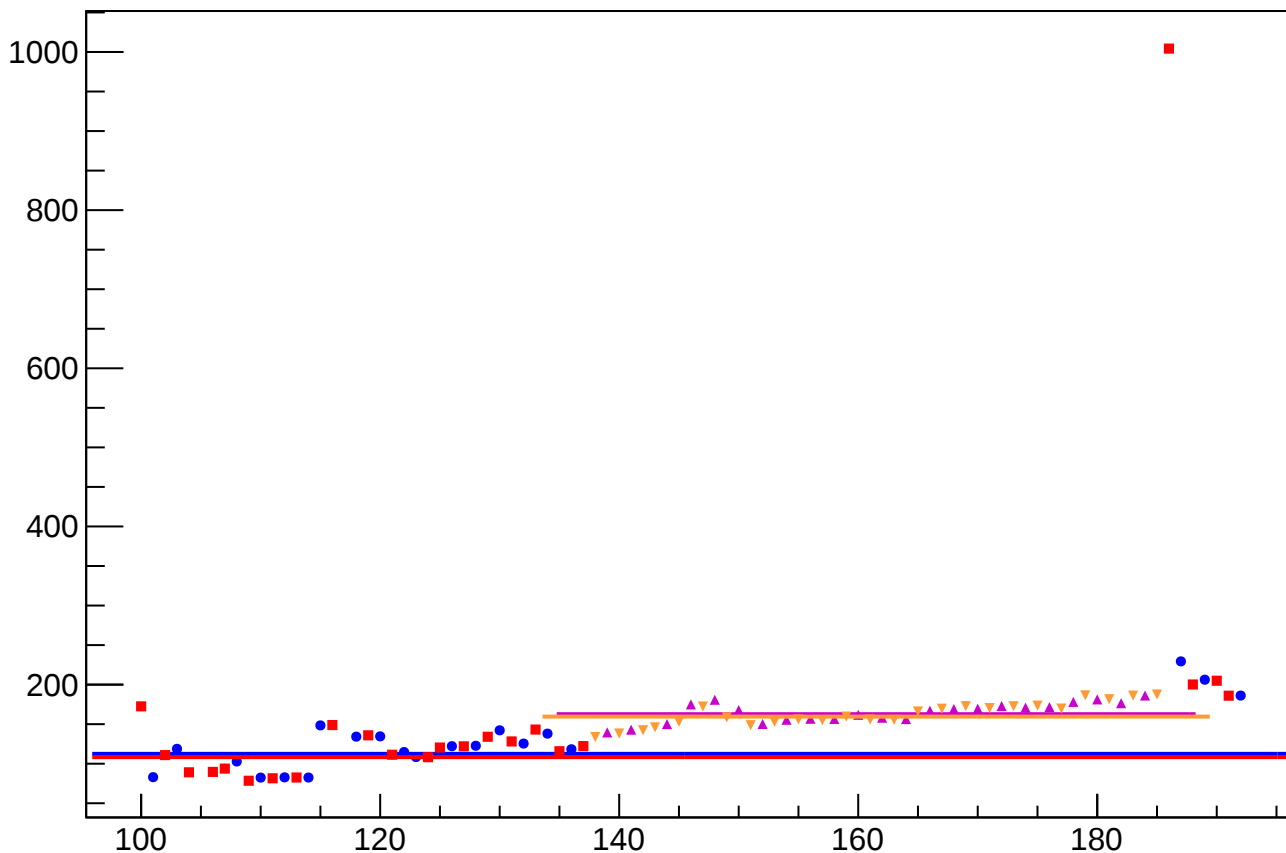
Right:  $-19.359 \pm 28.008$   $\chi^2/\text{NDF}: 52.7/42$

In:  $129.205 \pm 28.240$   $\chi^2/\text{NDF}: 96.3/42$

Out:  $165.420 \pm 26.749$   $\chi^2/\text{NDF}: 73.8/47$

All:  $148.293 \pm 19.420$   $\chi^2/\text{NDF}: 170.9/90$

# reg\_asym\_sam6\_rms vs Slug, Sign Corrected



Right In: 112.445 $\pm$ 0.029  $\chi^2$ /NDF: 1075365.0/19

Left Out: 159.568 $\pm$ 0.026  $\chi^2$ /NDF:287744.2/24

Right Out: 108.290 $\pm$ 0.027  $\chi^2$ /NDF: 1850020.9/22

Left In: 162.606 $\pm$ 0.028  $\chi^2$ /NDF:199542.3/22

Left: 161.019 $\pm$ 0.019  $\chi^2$ /NDF: 493626.9/47

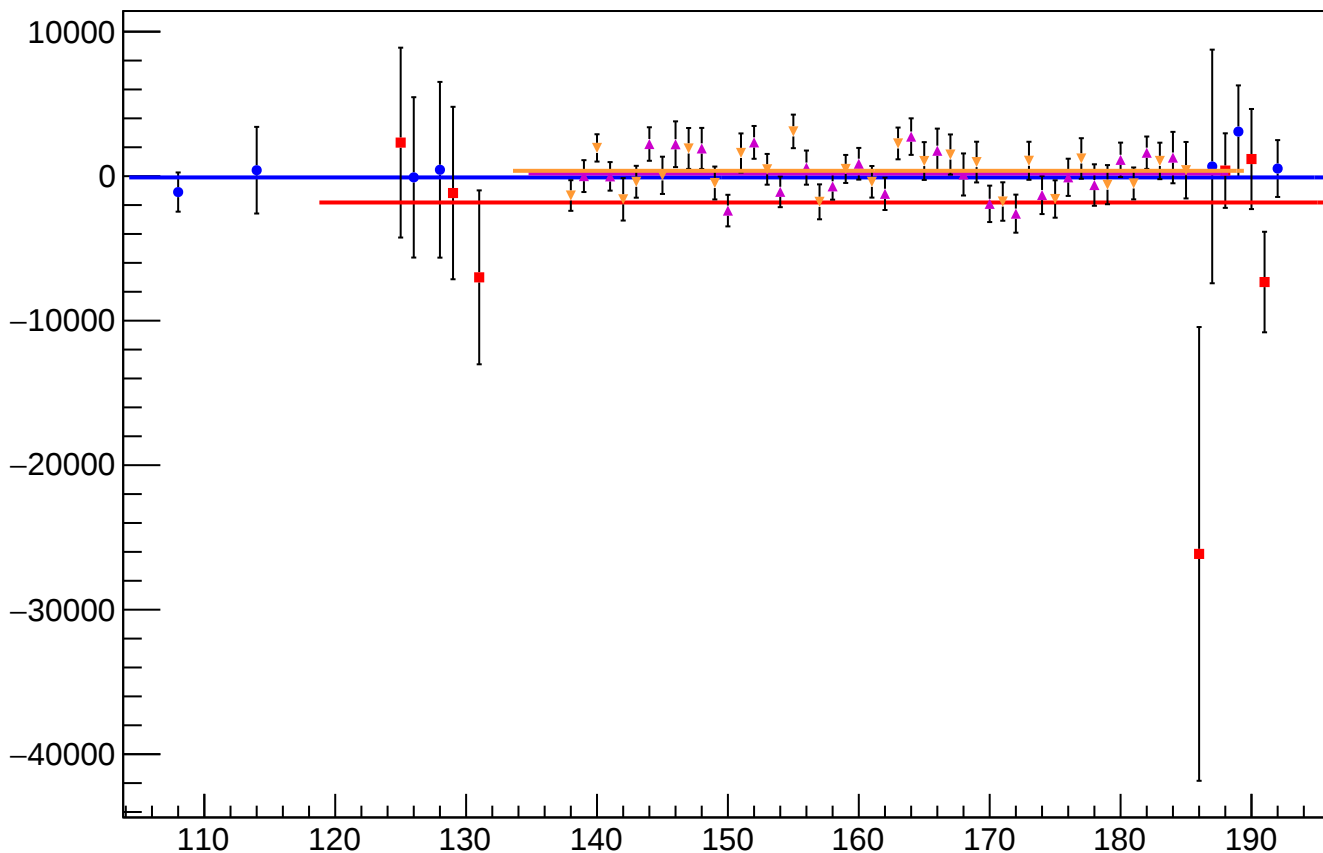
Right: 110.235 $\pm$ 0.020  $\chi^2$ /NDF: 2936346.3/42

In: 138.733 $\pm$ 0.020  $\chi^2$ /NDF:2848829.7/42

Out: 134.693 $\pm$ 0.019  $\chi^2$ /NDF:3973659.6/47

All: 136.603 $\pm$ 0.014  $\chi^2$ /NDF: 6844070.3/90

asym\_sam6\_correction\_mean vs Slug, Sign Corrected



Right In: -86.985 $\pm$ 959.754  $\chi^2$ /NDF: 1.7/6

Left Out: 370.001 $\pm$ 243.521  $\chi^2$ /NDF:30.5/24

Right Out: -1821.598 $\pm$ 1582.753  $\chi^2$ /NDF: 7.5/6

Left In: 183.107 $\pm$ 252.258  $\chi^2$ /NDF:36.5/22

Left: 279.847 $\pm$ 175.203  $\chi^2$ /NDF: 67.2/47

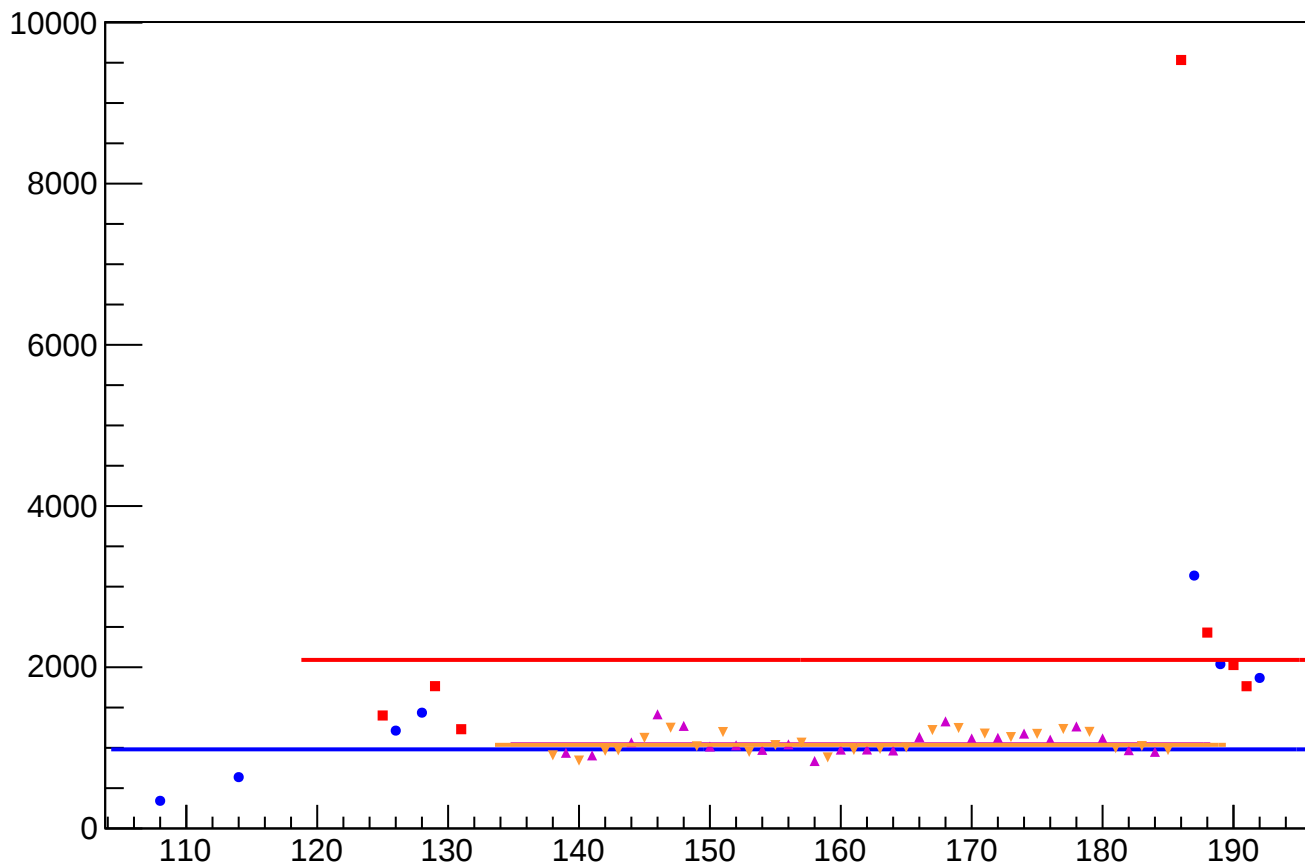
Right: -553.328 $\pm$ 820.662  $\chi^2$ /NDF: 10.1/13

In: 165.654 $\pm$ 243.972  $\chi^2$ /NDF:38.2/29

Out: 319.320 $\pm$ 240.688  $\chi^2$ /NDF:39.9/31

All: 243.528 $\pm$ 171.341  $\chi^2$ /NDF: 78.3/61

# asym\_sam6\_correction\_rms vs Slug, Sign Corrected



Right In: 981.333+/-0.679  $\chi^2/\text{NDF}$ : 1250521.5/6

Left Out: 1037.689+/-0.172  $\chi^2/\text{NDF}$ :494981.4/24

Right Out: 2091.010+/-1.119  $\chi^2/\text{NDF}$ : 571078.9/6

Left In: 1044.746+/-0.178  $\chi^2/\text{NDF}$ :543315.5/22

Left: 1041.093+/-0.124  $\chi^2/\text{NDF}$ : 1039107.0/47

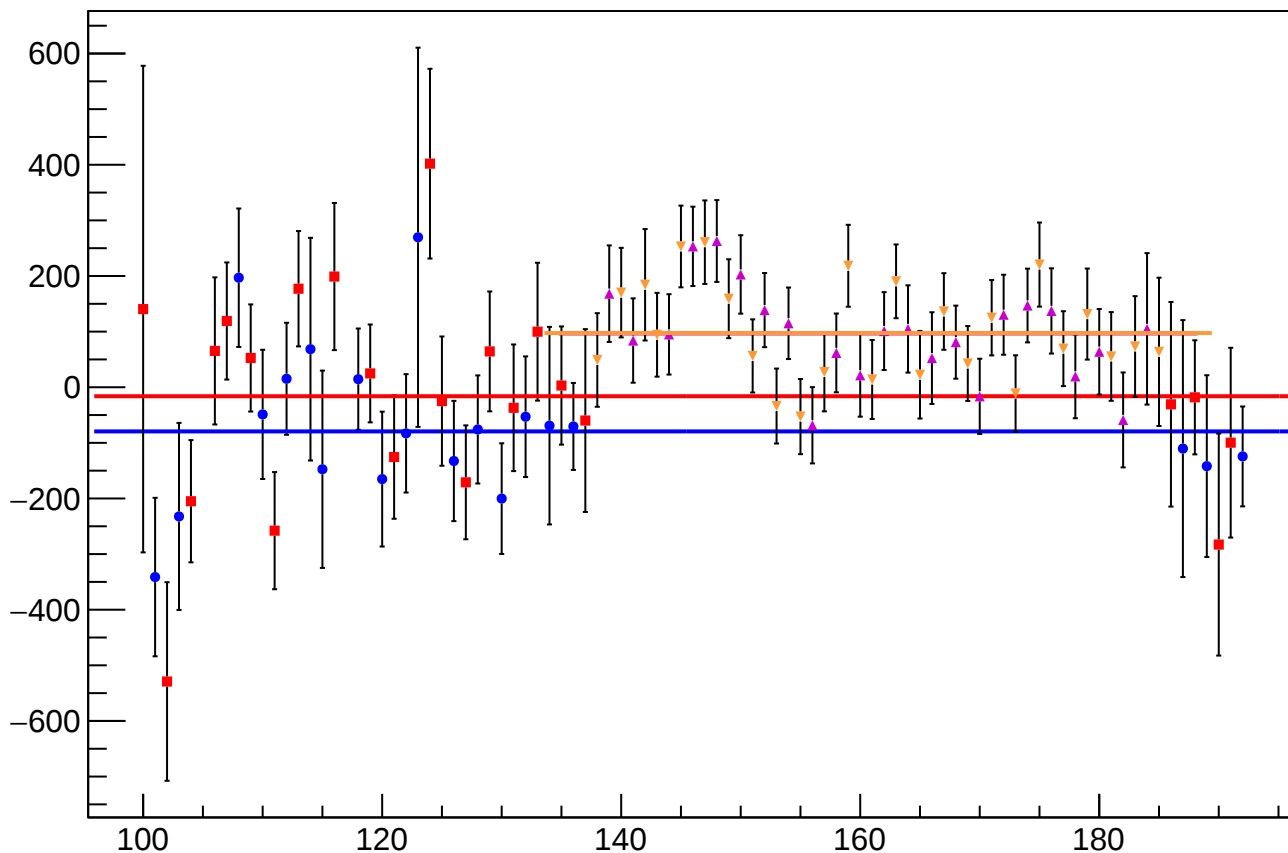
Right: 1279.665+/-0.580  $\chi^2/\text{NDF}$ : 2540397.3/13

In: 1040.648+/-0.173  $\chi^2/\text{NDF}$ :1802003.8/29

Out: 1062.047+/-0.170  $\chi^2/\text{NDF}$ :1931355.0/31

All: 1051.493+/-0.121  $\chi^2/\text{NDF}$ : 3741156.5/61

# reg\_asym\_sam7\_mean vs Slug, Sign Corrected



Right In: -79.417 $\pm$ 26.565  $\chi^2/\text{NDF}$ : 15.6/19

Left Out: 97.445 $\pm$ 14.880  $\chi^2/\text{NDF}$ :36.0/24

Right Out: -16.153 $\pm$ 25.261  $\chi^2/\text{NDF}$ : 38.4/22

Left In: 96.704 $\pm$ 15.369  $\chi^2/\text{NDF}$ :29.2/22

Left: 97.087 $\pm$ 10.690  $\chi^2/\text{NDF}$ : 65.2/47

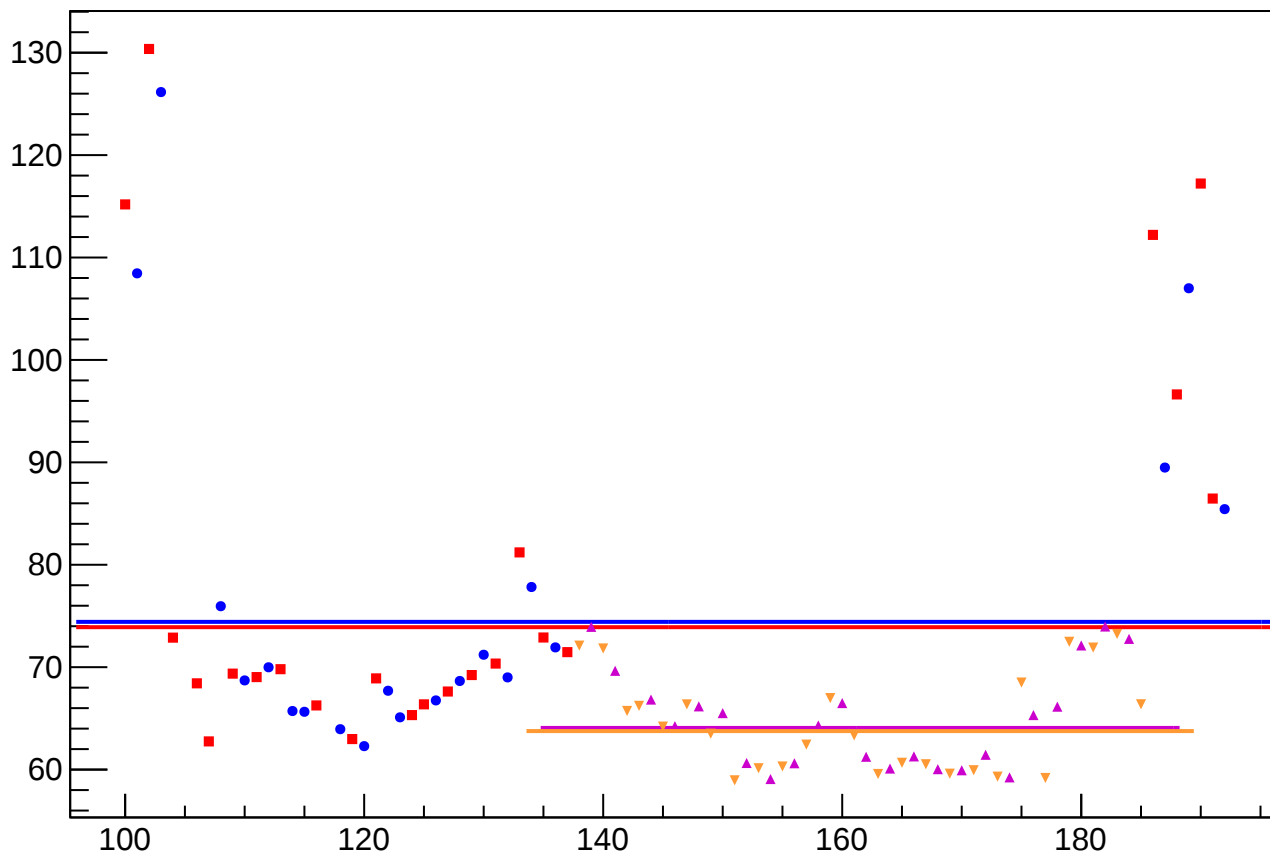
Right: -46.194 $\pm$ 18.306  $\chi^2/\text{NDF}$ : 56.9/42

In: 52.535 $\pm$ 13.303  $\chi^2/\text{NDF}$ :77.7/42

Out: 68.183 $\pm$ 12.821  $\chi^2/\text{NDF}$ :89.4/47

All: 60.648 $\pm$ 9.232  $\chi^2/\text{NDF}$ : 167.8/90

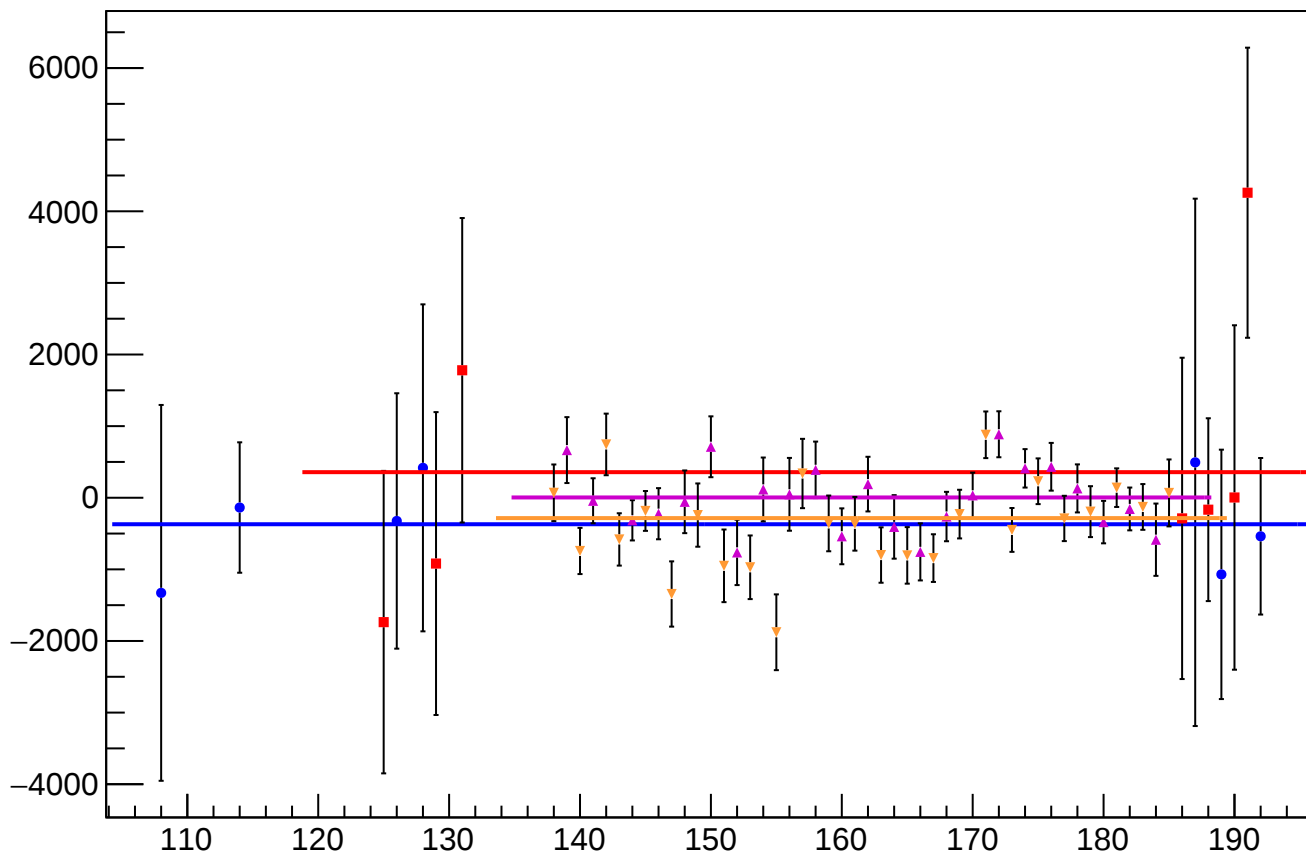
# reg\_asym\_sam7\_rms vs Slug, Sign Corrected



Right In:  $74.425 \pm 0.019$   $\chi^2/\text{NDF}: 522111.6/19$   
 Left Out:  $63.761 \pm 0.011$   $\chi^2/\text{NDF}: 192803.8/24$   
 Right Out:  $73.904 \pm 0.018$   $\chi^2/\text{NDF}: 621559.1/22$   
 Left In:  $64.069 \pm 0.011$   $\chi^2/\text{NDF}: 164660.4/22$

Left:  $63.910 \pm 0.008$   $\chi^2/\text{NDF}: 357877.2/47$   
 Right:  $74.151 \pm 0.013$   $\chi^2/\text{NDF}: 1144074.2/42$   
 In:  $66.666 \pm 0.009$   $\chi^2/\text{NDF}: 914498.3/42$   
 Out:  $66.374 \pm 0.009$   $\chi^2/\text{NDF}: 1053745.0/47$   
 All:  $66.514 \pm 0.007$   $\chi^2/\text{NDF}: 1968742.3/90$

asym\_sam7\_correction\_mean vs Slug, Sign Corrected



Right In:  $-369.942 \pm 568.106$   $\chi^2/\text{NDF}: 0.6/6$

Left Out:  $-284.304 \pm 72.732$   $\chi^2/\text{NDF}: 55.1/24$

Right Out:  $357.319 \pm 725.808$   $\chi^2/\text{NDF}: 5.8/6$

Left In:  $4.037 \pm 75.084$   $\chi^2/\text{NDF}: 32.4/22$

Left:  $-144.720 \pm 52.241$   $\chi^2/\text{NDF}: 95.0/47$

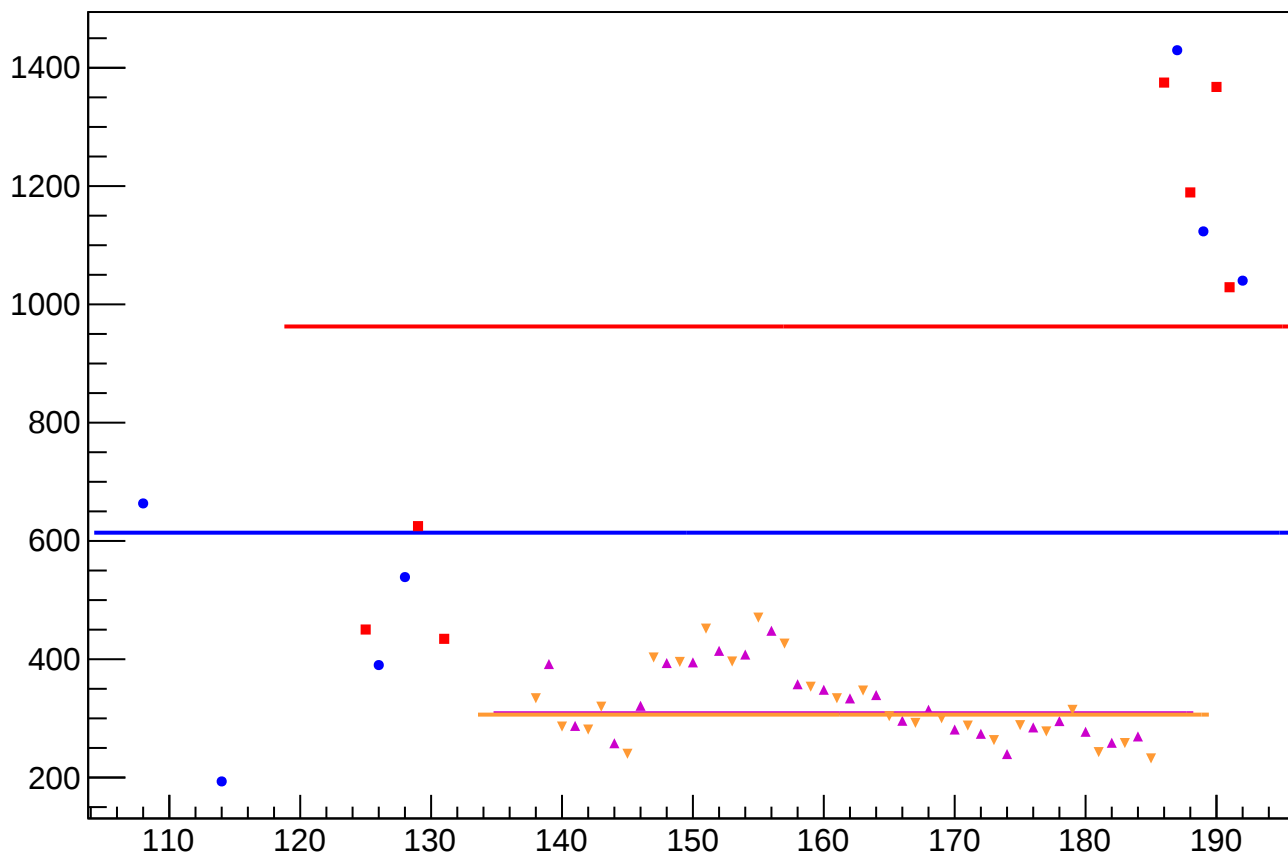
Right:  $-93.653 \pm 447.362$   $\chi^2/\text{NDF}: 7.0/13$

In:  $-2.384 \pm 74.437$   $\chi^2/\text{NDF}: 33.3/29$

Out:  $-277.925 \pm 72.370$   $\chi^2/\text{NDF}: 61.6/31$

All:  $-144.033 \pm 51.889$   $\chi^2/\text{NDF}: 102.0/61$

asym\_sam7\_correction\_rms vs Slug, Sign Corrected



Right In: 613.972+/-0.402  $\chi^2/\text{NDF}$ : 1034442.9/6

Left Out: 306.363+/-0.051  $\chi^2/\text{NDF}$ : 1215669.9/24

Right Out: 962.626+/-0.513  $\chi^2/\text{NDF}$ : 481673.8/6

Left In: 308.727+/-0.053  $\chi^2/\text{NDF}$ : 1002947.4/22

Left: 307.507+/-0.037  $\chi^2/\text{NDF}$ : 2219640.0/47

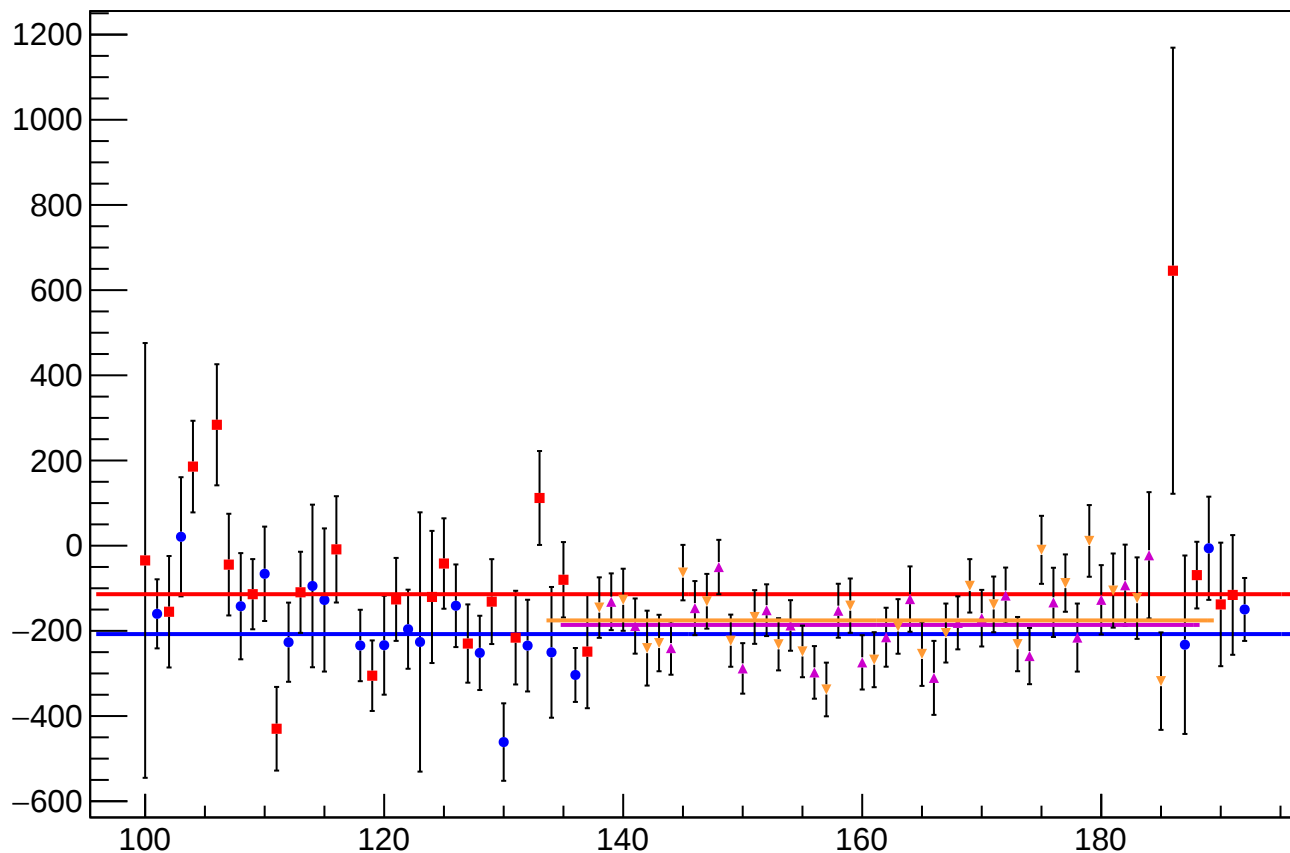
Right: 746.427+/-0.316  $\chi^2/\text{NDF}$ : 1802294.7/13

In: 313.967+/-0.053  $\chi^2/\text{NDF}$ : 2604868.3/29

Out: 312.887+/-0.051  $\chi^2/\text{NDF}$ : 3316183.9/31

All: 313.412+/-0.037  $\chi^2/\text{NDF}$ : 5921268.5/61

# reg\_asym\_sam8\_mean vs Slug, Sign Corrected



Right In:  $-207.572 \pm 23.053$   $\chi^2/\text{NDF}: 20.0/19$

Left Out:  $-175.471 \pm 13.846$   $\chi^2/\text{NDF}: 34.6/24$

Right Out:  $-113.925 \pm 22.889$   $\chi^2/\text{NDF}: 43.2/22$

Left In:  $-186.047 \pm 14.315$   $\chi^2/\text{NDF}: 23.6/22$

Left:  $-180.583 \pm 9.952$   $\chi^2/\text{NDF}: 58.5/47$

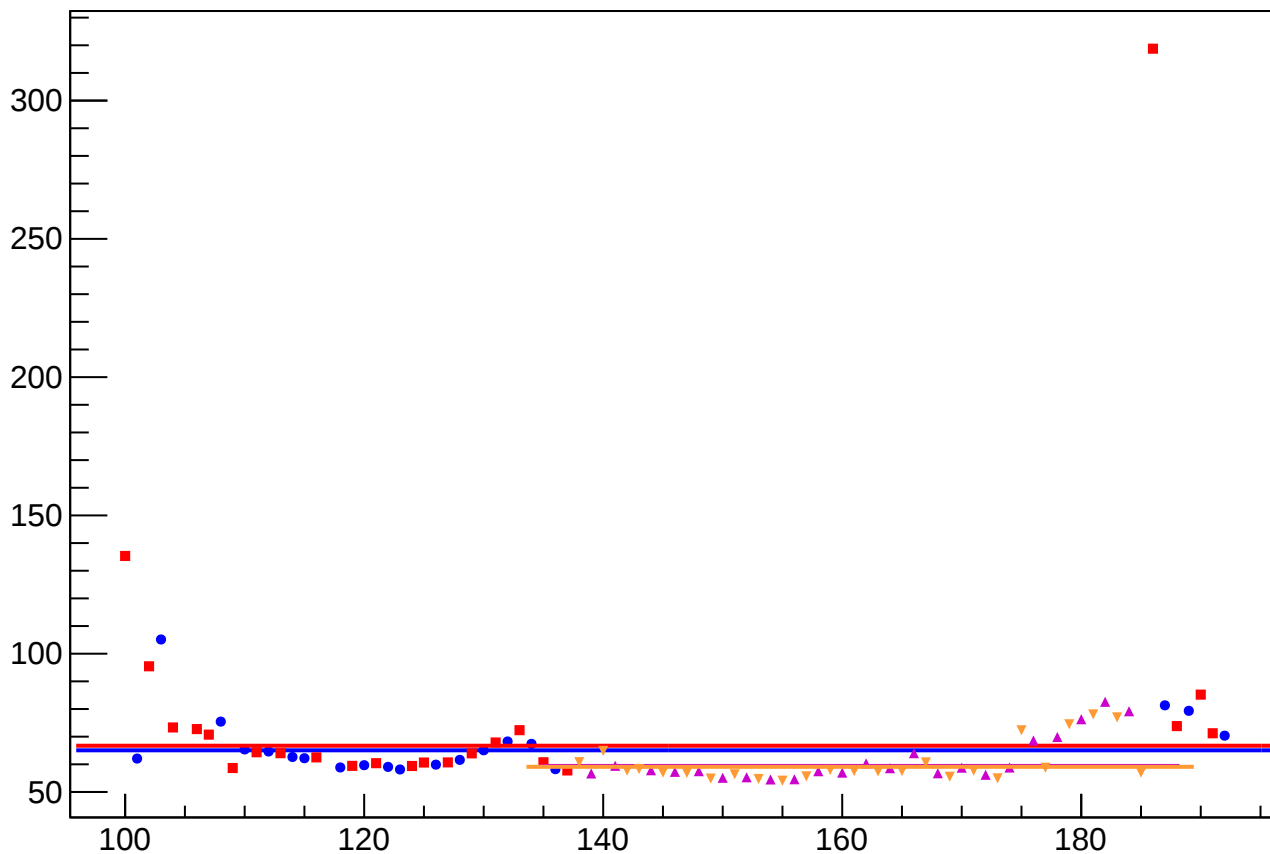
Right:  $-160.414 \pm 16.243$   $\chi^2/\text{NDF}: 71.6/42$

In:  $-192.038 \pm 12.161$   $\chi^2/\text{NDF}: 44.2/42$

Out:  $-158.983 \pm 11.847$   $\chi^2/\text{NDF}: 83.2/47$

All:  $-175.078 \pm 8.486$   $\chi^2/\text{NDF}: 131.2/90$

# reg\_asym\_sam8\_rms vs Slug, Sign Corrected



Right In: 65.068 $\pm$ 0.016  $\chi^2$ /NDF: 290688.3/19

Left Out: 59.099 $\pm$ 0.010  $\chi^2$ /NDF: 369788.6/24

Right Out: 66.725 $\pm$ 0.016  $\chi^2$ /NDF: 752896.3/22

Left In: 59.410 $\pm$ 0.010  $\chi^2$ /NDF: 373052.7/22

Left: 59.250 $\pm$ 0.007  $\chi^2$ /NDF: 743329.1/47

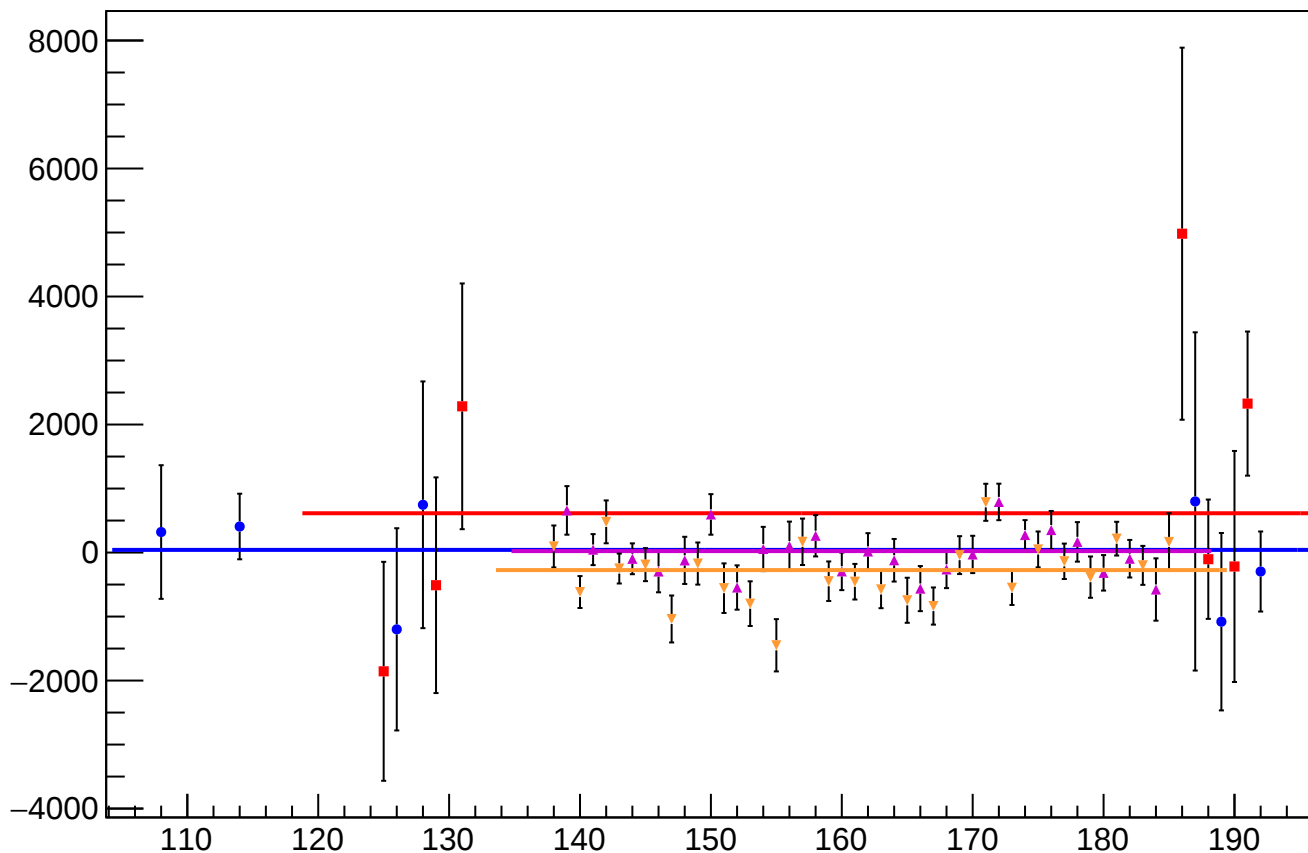
Right: 65.902 $\pm$ 0.011  $\chi^2$ /NDF: 1048785.3/42

In: 60.985 $\pm$ 0.009  $\chi^2$ /NDF: 750681.1/42

Out: 61.142 $\pm$ 0.008  $\chi^2$ /NDF: 1285194.2/47

All: 61.066 $\pm$ 0.006  $\chi^2$ /NDF: 2036046.8/90

asym\_sam8\_correction\_mean vs Slug, Sign Corrected



Right In:  $41.581 \pm 340.629$   $\chi^2/\text{NDF}$ : 2.4/6

Left Out:  $-274.091 \pm 60.799$   $\chi^2/\text{NDF}$ : 53.9/24

Right Out:  $613.994 \pm 547.914$   $\chi^2/\text{NDF}$ : 8.7/6

Left In:  $22.631 \pm 63.643$   $\chi^2/\text{NDF}$ : 28.9/22

Left:  $-132.507 \pm 43.963$   $\chi^2/\text{NDF}$ : 94.2/47

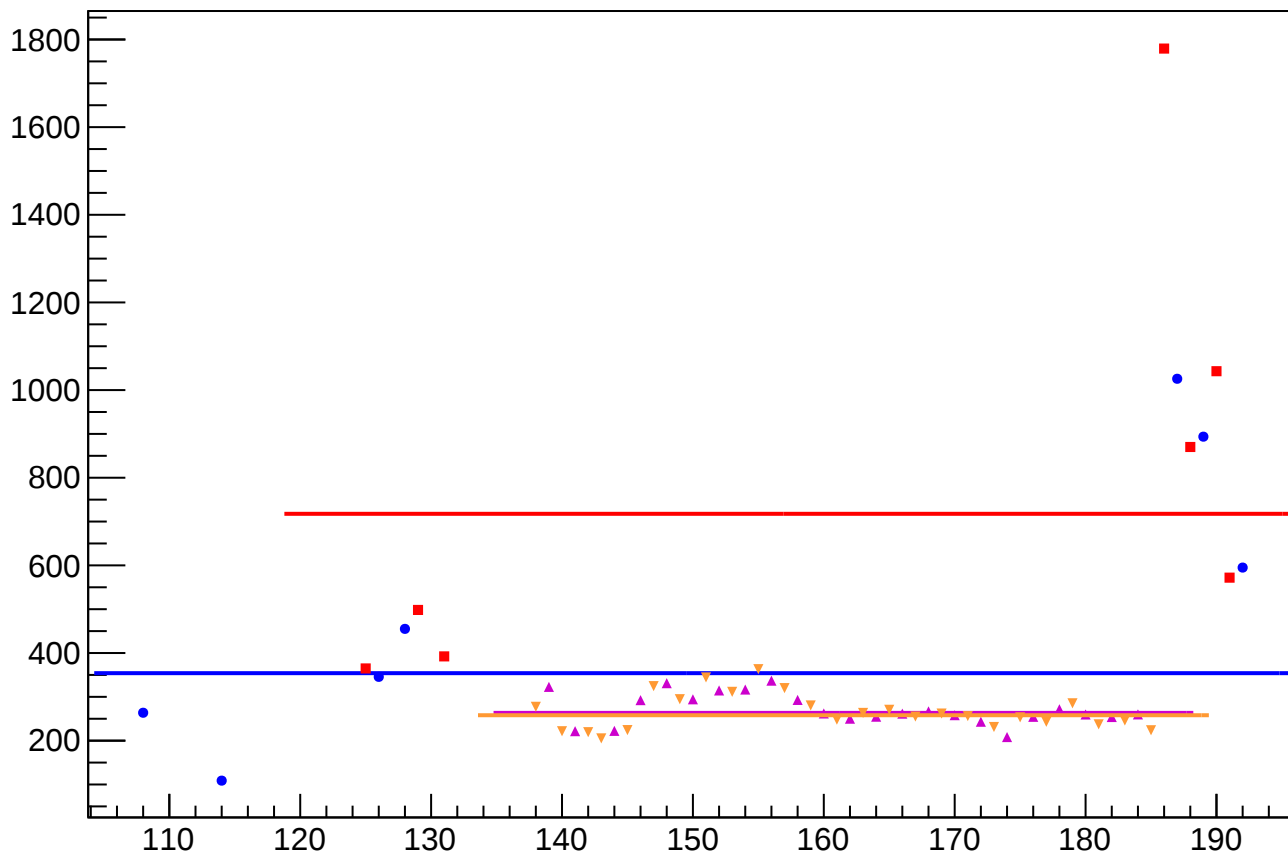
Right:  $201.143 \pm 289.283$   $\chi^2/\text{NDF}$ : 11.8/13

In:  $23.270 \pm 62.560$   $\chi^2/\text{NDF}$ : 31.3/29

Out:  $-263.289 \pm 60.428$   $\chi^2/\text{NDF}$ : 65.2/31

All:  $-124.976 \pm 43.464$   $\chi^2/\text{NDF}$ : 107.3/61

# asym\_sam8\_correction\_rms vs Slug, Sign Corrected



Right In: 354.026+/-0.241  $\chi^2/\text{NDF}$ : 1208291.4/6

Left Out: 258.040+/-0.043  $\chi^2/\text{NDF}$ : 724823.3/24

Right Out: 717.657+/-0.387  $\chi^2/\text{NDF}$ : 595332.8/6

Left In: 263.397+/-0.045  $\chi^2/\text{NDF}$ : 585600.2/22

Left: 260.596+/-0.031  $\chi^2/\text{NDF}$ : 1317830.8/47

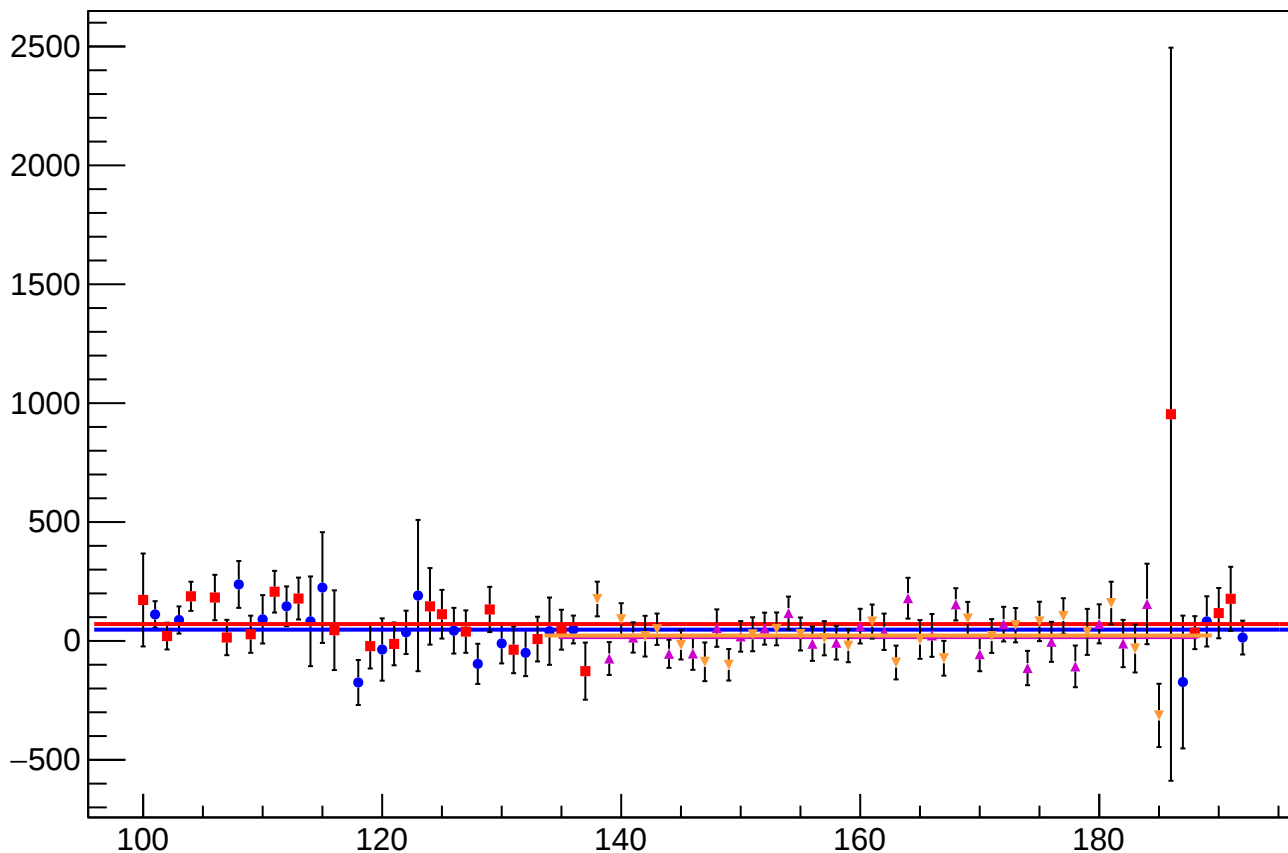
Right: 455.390+/-0.205  $\chi^2/\text{NDF}$ : 2438967.6/13

In: 266.454+/-0.044  $\chi^2/\text{NDF}$ : 1930697.8/29

Out: 263.631+/-0.043  $\chi^2/\text{NDF}$ : 2710368.1/31

All: 264.993+/-0.031  $\chi^2/\text{NDF}$ : 4643172.9/61

# reg\_asym\_sam\_15\_avg\_mean vs Slug, Sign Corrected



Right In: 47.547 $\pm$ 20.189  $\chi^2$ /NDF: 19.2/19

Left Out: 22.871 $\pm$ 14.968  $\chi^2$ /NDF:29.0/24

Right Out: 70.942 $\pm$ 19.087  $\chi^2$ /NDF: 19.5/22

Left In: 16.198 $\pm$ 15.531  $\chi^2$ /NDF:23.3/22

Left: 19.658 $\pm$ 10.777  $\chi^2$ /NDF: 52.4/47

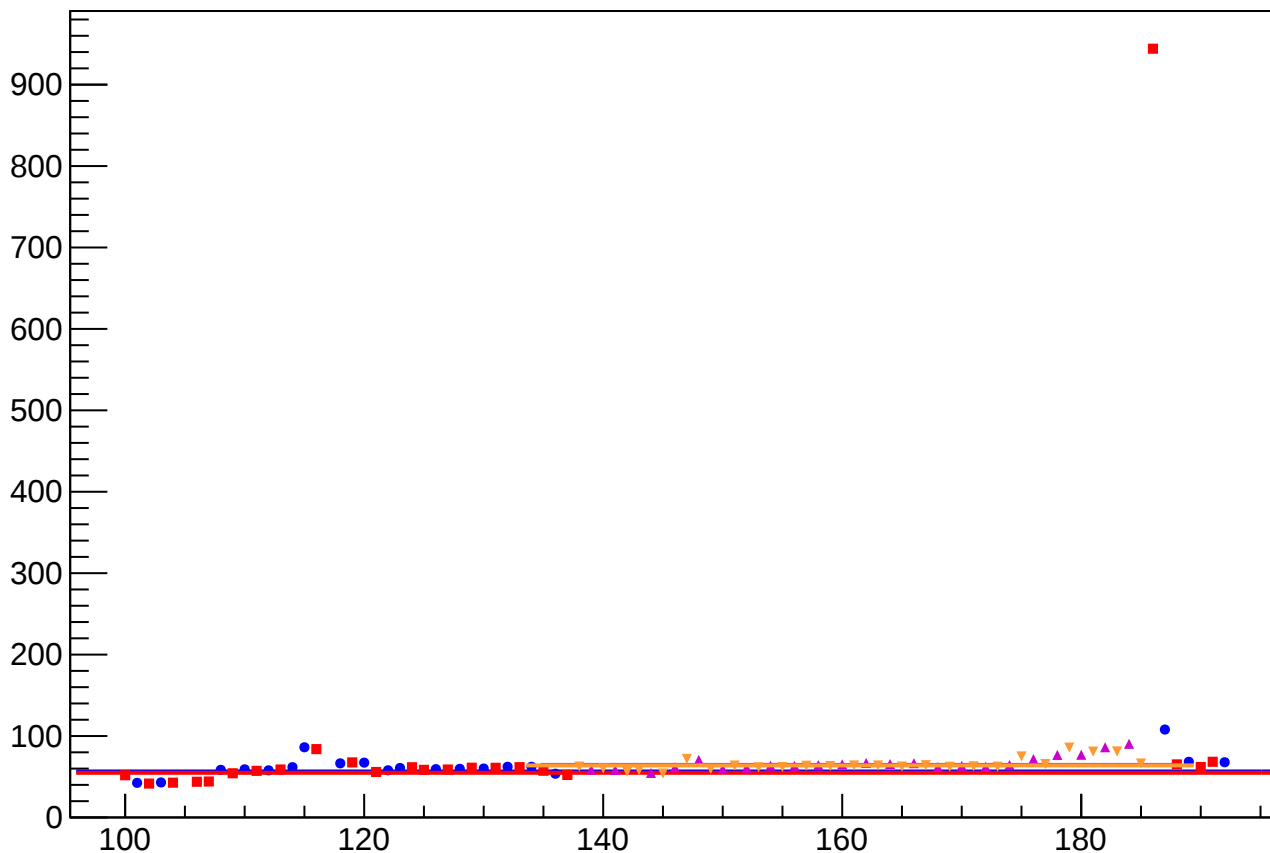
Right: 59.900 $\pm$ 13.870  $\chi^2$ /NDF: 39.4/42

In: 27.853 $\pm$ 12.310  $\chi^2$ /NDF:44.0/42

Out: 41.175 $\pm$ 11.778  $\chi^2$ /NDF:52.4/47

All: 34.808 $\pm$ 8.510  $\chi^2$ /NDF: 97.0/90

# reg\_asym\_sam\_15\_avg\_rms vs Slug, Sign Corrected



Right In: 56.478+/-0.014     $\chi^2/\text{NDF}$ : 477466.3/19

Left Out: 63.920+/-0.011     $\chi^2/\text{NDF}$ : 395410.4/24

Right Out: 54.852+/-0.013     $\chi^2/\text{NDF}$ : 1139910.6/22

Left In: 64.511+/-0.011     $\chi^2/\text{NDF}$ : 370515.2/22

Left: 64.204+/-0.008     $\chi^2/\text{NDF}$ : 767426.6/47

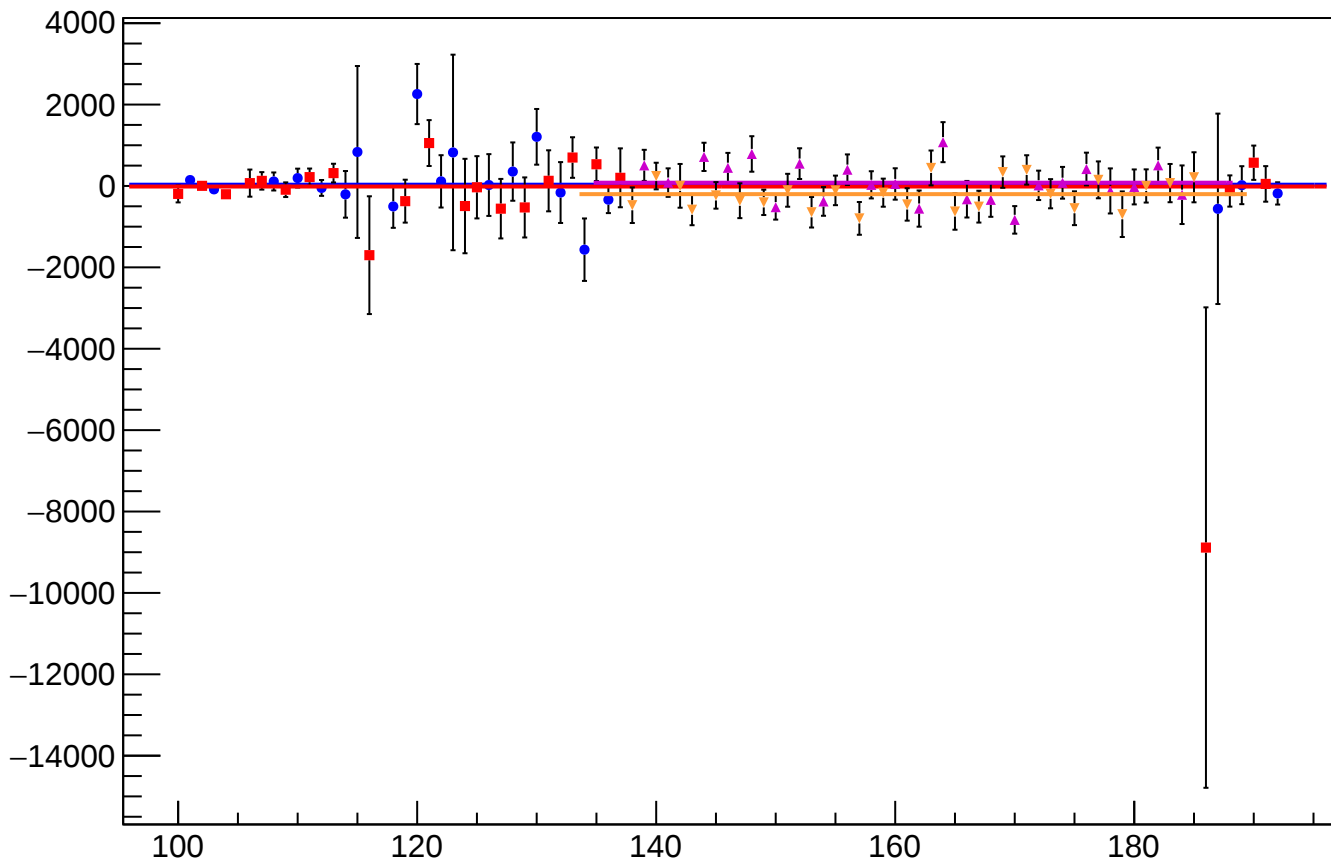
Right: 55.619+/-0.010     $\chi^2/\text{NDF}$ : 1624225.3/42

In: 61.524+/-0.009     $\chi^2/\text{NDF}$ : 1046894.1/42

Out: 60.467+/-0.008     $\chi^2/\text{NDF}$ : 1814826.5/47

All: 60.972+/-0.006     $\chi^2/\text{NDF}$ : 2869424.4/90

asym\_sam\_15\_avg\_correction\_mean vs Slug, Sign Corrected



Right In:  $30.963 \pm 50.361$   $\chi^2/\text{NDF}$ : 24.5/19

Left Out:  $-201.082 \pm 79.549$   $\chi^2/\text{NDF}$ : 19.7/24

Right Out:  $-13.946 \pm 51.998$   $\chi^2/\text{NDF}$ : 23.1/22

Left In:  $79.985 \pm 81.781$   $\chi^2/\text{NDF}$ : 33.4/22

Left:  $-64.438 \pm 57.022$   $\chi^2/\text{NDF}$ : 59.1/47

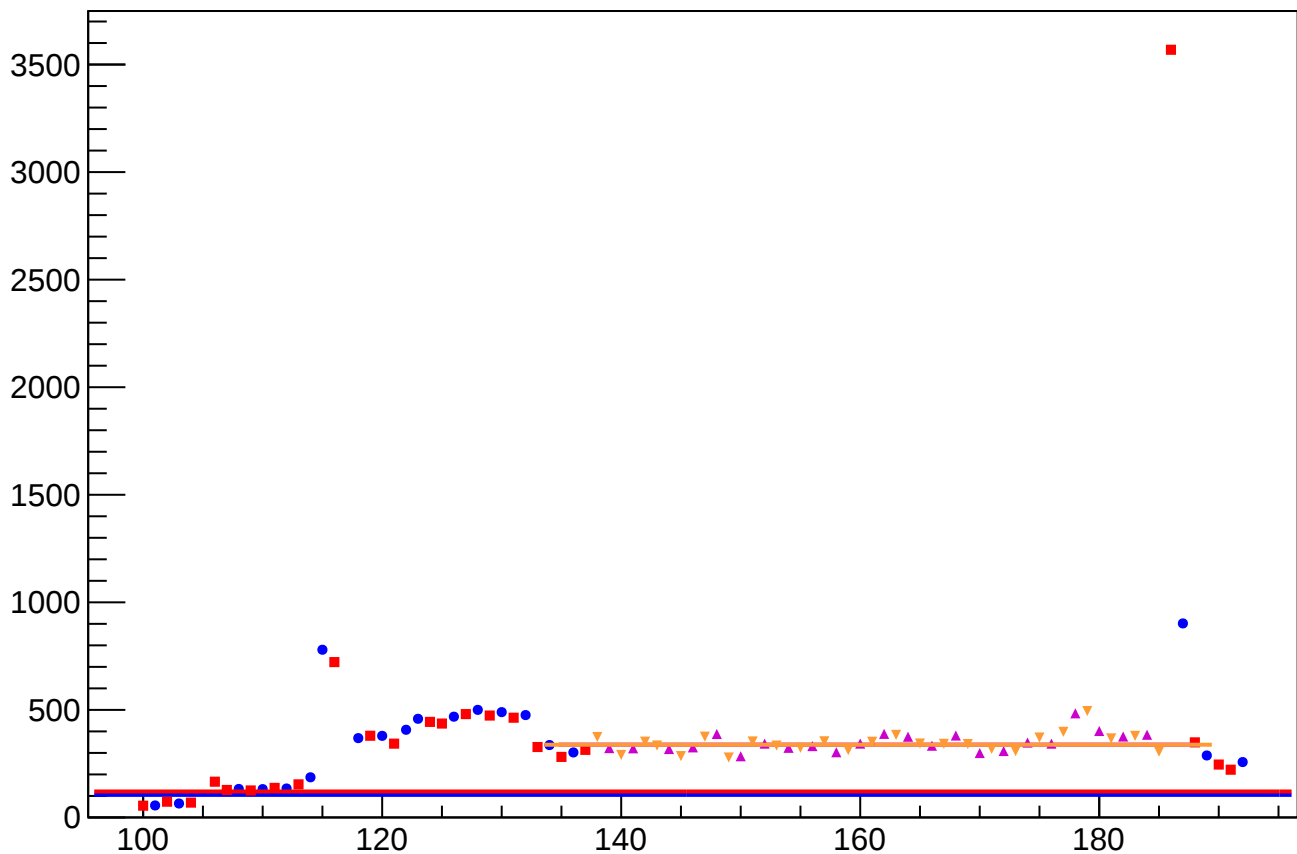
Right:  $9.227 \pm 36.176$   $\chi^2/\text{NDF}$ : 48.0/42

In:  $44.441 \pm 42.882$   $\chi^2/\text{NDF}$ : 58.2/42

Out:  $-69.968 \pm 43.525$   $\chi^2/\text{NDF}$ : 46.7/47

All:  $-11.913 \pm 30.547$   $\chi^2/\text{NDF}$ : 108.3/90

asym\_sam\_15\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 104.947 $\pm$ 0.036  $\chi^2$ /NDF: 7012108.5/19

Left Out: 338.130 $\pm$ 0.056  $\chi^2$ /NDF: 498601.7/24

Right Out: 120.711 $\pm$ 0.037  $\chi^2$ /NDF: 6737370.8/22

Left In: 338.564 $\pm$ 0.058  $\chi^2$ /NDF: 437243.0/22

Left: 338.341 $\pm$ 0.040  $\chi^2$ /NDF: 935873.7/47

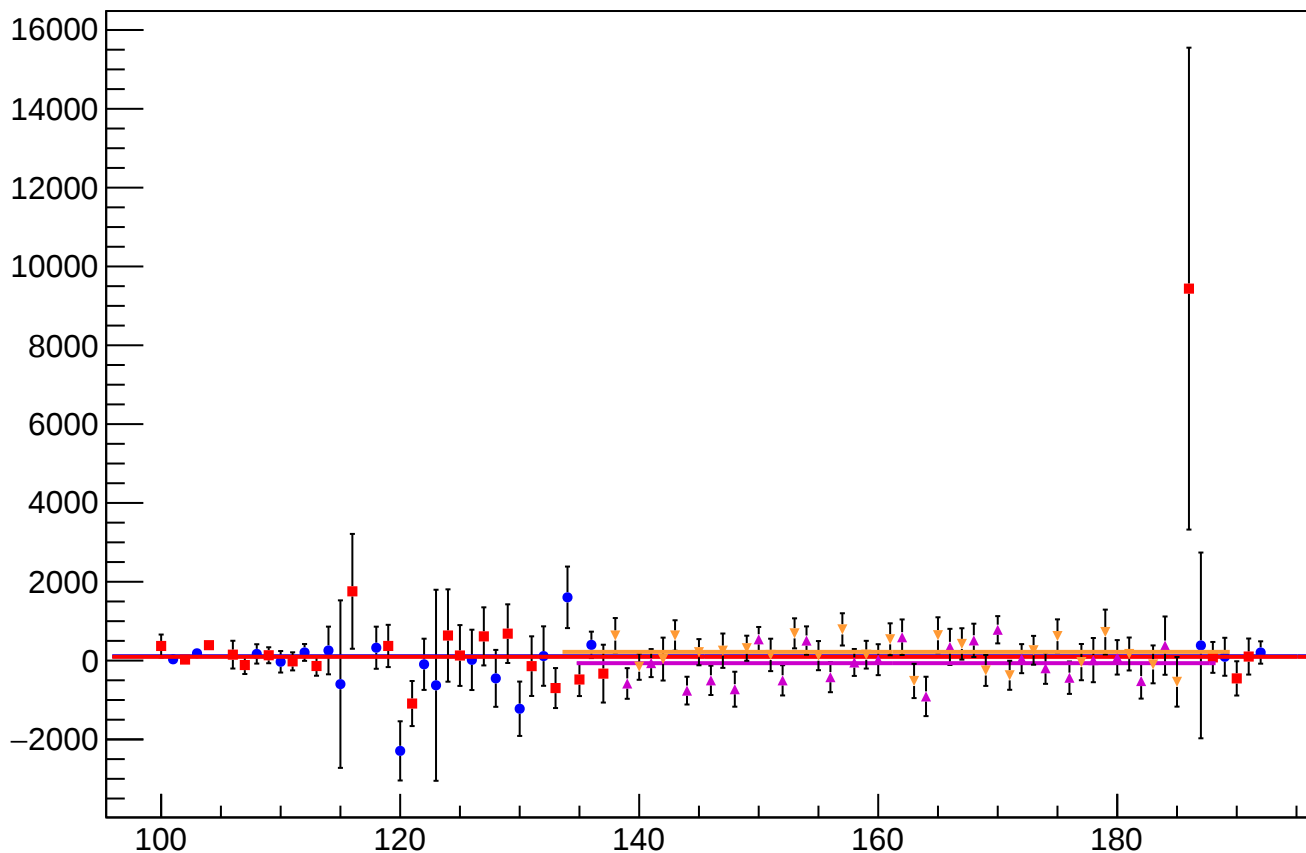
Right: 112.577 $\pm$ 0.026  $\chi^2$ /NDF: 13844330.6/42

In: 169.179 $\pm$ 0.030  $\chi^2$ /NDF: 19282552.9/42

Out: 185.799 $\pm$ 0.031  $\chi^2$ /NDF: 17703580.8/47

All: 177.366 $\pm$ 0.022  $\chi^2$ /NDF: 37134109.6/90

asym\_sam\_15\_avg\_mean vs Slug, Sign Corrected



Right In: 110.350 $\pm$ 61.154  $\chi^2$ /NDF: 21.1/19

Left Out: 221.083 $\pm$ 81.018  $\chi^2$ /NDF:19.7/24

Right Out: 95.694 $\pm$ 59.085  $\chi^2$ /NDF: 25.2/22

Left In: -65.510 $\pm$ 83.319  $\chi^2$ /NDF:34.0/22

Left: 81.798 $\pm$ 58.085  $\chi^2$ /NDF: 59.7/47

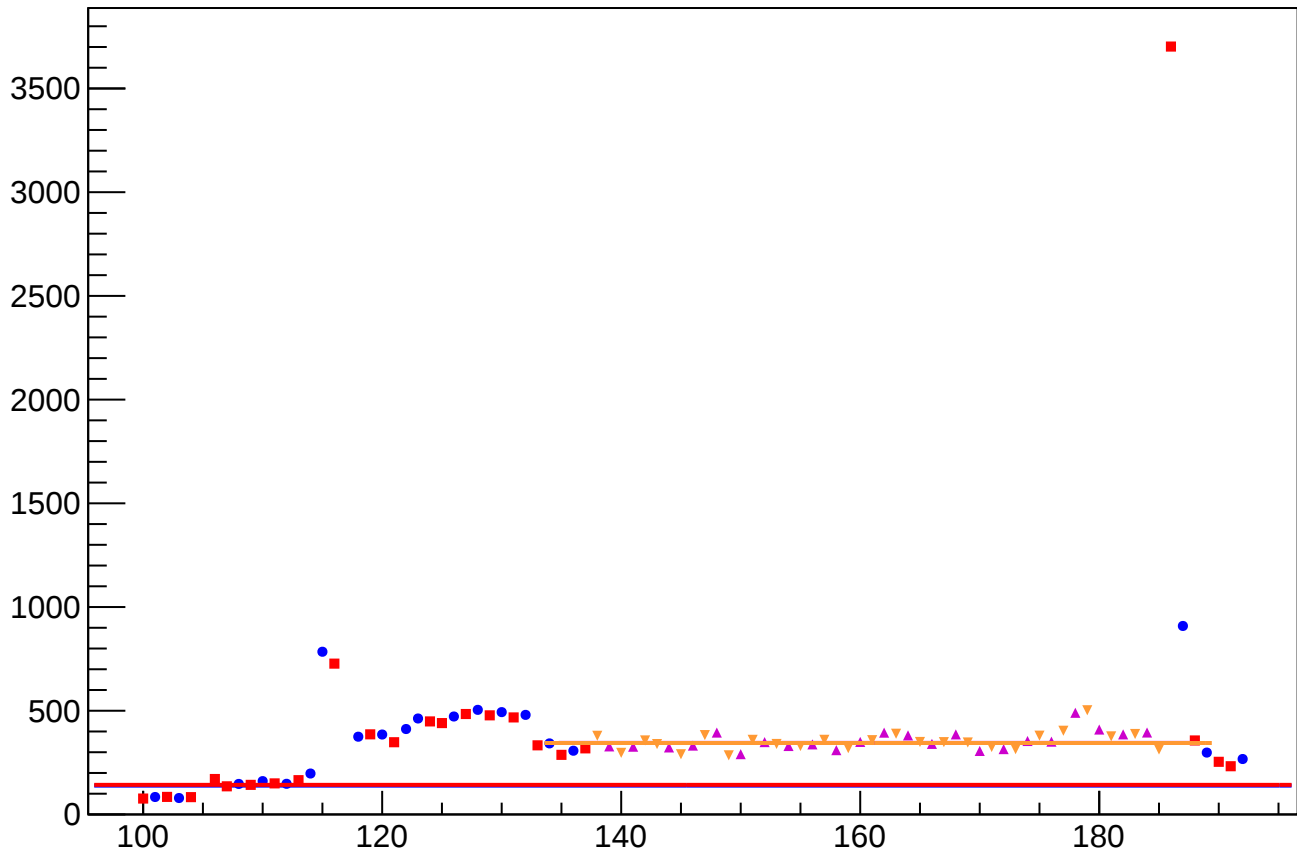
Right: 102.770 $\pm$ 42.492  $\chi^2$ /NDF: 46.4/42

In: 48.780 $\pm$ 49.300  $\chi^2$ /NDF:58.0/42

Out: 139.229 $\pm$ 47.739  $\chi^2$ /NDF:46.4/47

All: 95.459 $\pm$ 34.295  $\chi^2$ /NDF: 106.2/90

# asym\_sam\_15\_avg\_rms vs Slug, Sign Corrected



Right In: 139.041 $\pm$ 0.043  $\chi^2$ /NDF: 5646662.8/19

Left Out: 344.506 $\pm$ 0.057  $\chi^2$ /NDF: 488323.4/24

Right Out: 142.728 $\pm$ 0.042  $\chi^2$ /NDF: 5879166.9/22

Left In: 345.039 $\pm$ 0.059  $\chi^2$ /NDF: 427381.3/22

Left: 344.765 $\pm$ 0.041  $\chi^2$ /NDF: 915746.8/47

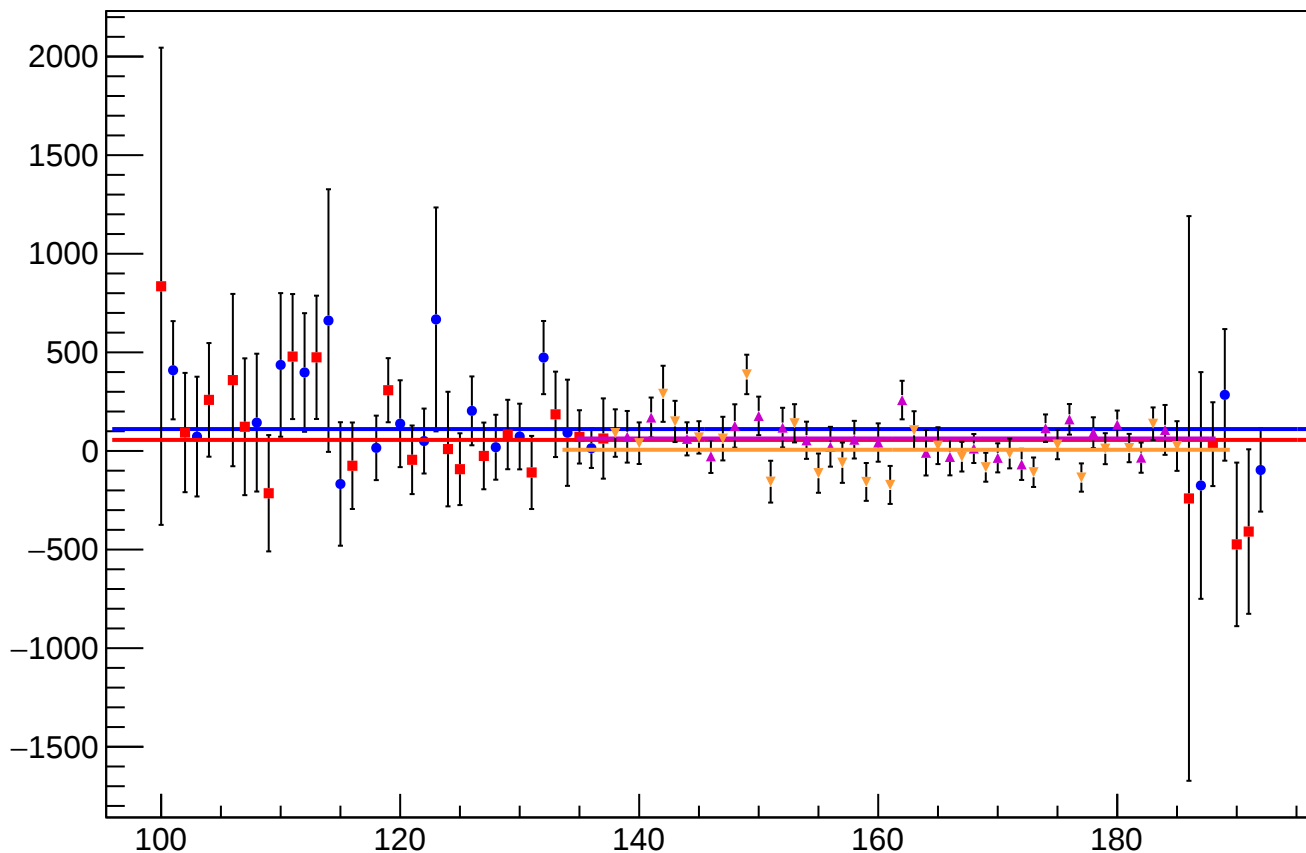
Right: 140.948 $\pm$ 0.030  $\chi^2$ /NDF: 11529590.6/42

In: 211.162 $\pm$ 0.035  $\chi^2$ /NDF: 14019366.4/42

Out: 212.785 $\pm$ 0.034  $\chi^2$ /NDF: 14465716.6/47

All: 212.000 $\pm$ 0.024  $\chi^2$ /NDF: 28486200.6/90

reg\_asym\_sam\_26\_avg\_mean vs Slug, Sign Corrected



Right In: 110.998 $\pm$ 47.269  $\chi^2$ /NDF: 13.0/19

Left Out: 6.020 $\pm$ 17.910  $\chi^2$ /NDF:46.0/24

Right Out: 56.056 $\pm$ 48.037  $\chi^2$ /NDF: 14.0/22

Left In: 63.279 $\pm$ 18.447  $\chi^2$ /NDF:19.8/22

Left: 33.804 $\pm$ 12.850  $\chi^2$ /NDF: 70.8/47

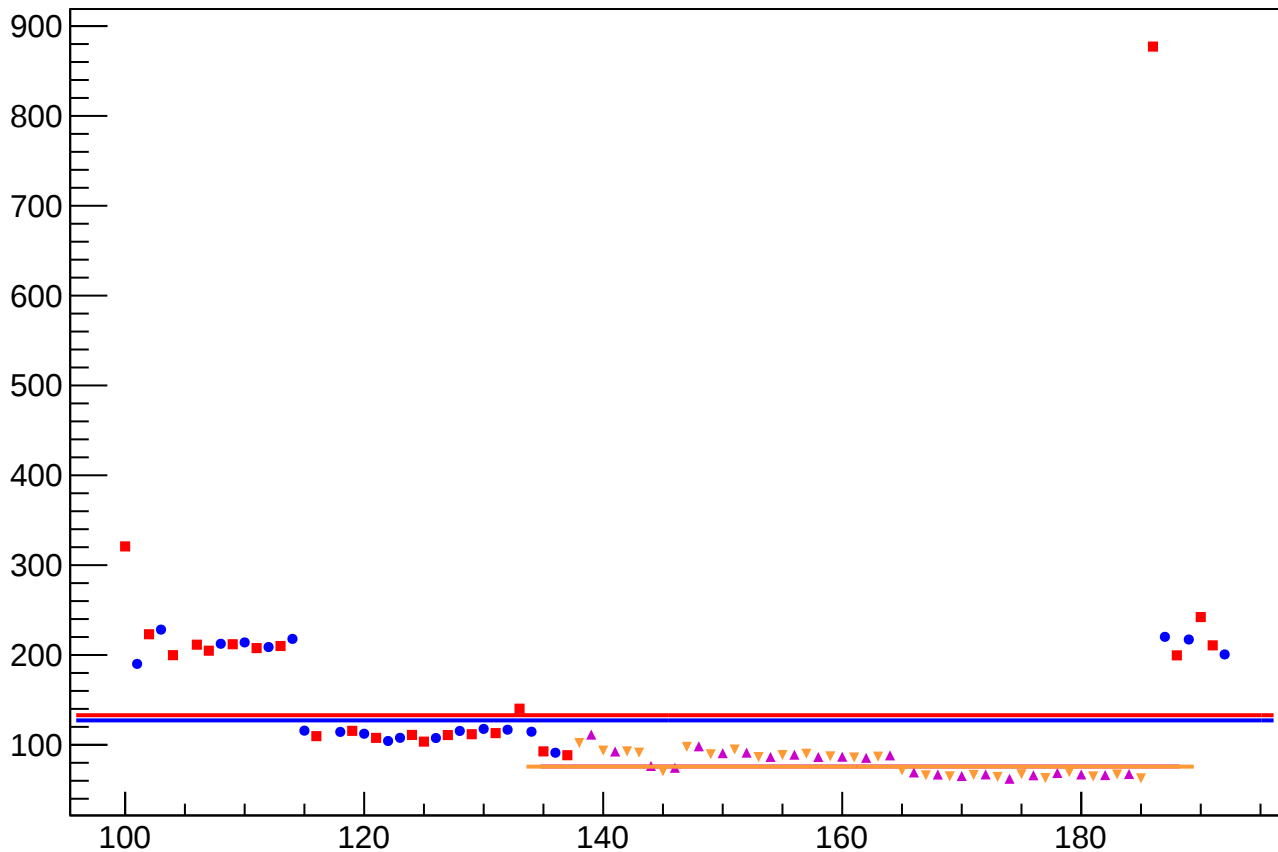
Right: 83.970 $\pm$ 33.692  $\chi^2$ /NDF: 27.6/42

In: 69.586 $\pm$ 17.184  $\chi^2$ /NDF:33.7/42

Out: 12.126 $\pm$ 16.781  $\chi^2$ /NDF:61.0/47

All: 40.175 $\pm$ 12.006  $\chi^2$ /NDF: 100.4/90

reg\_asym\_sam\_26\_avg\_rms vs Slug, Sign Corrected



Right In: 127.203 $\pm$ 0.033  $\chi^2$ /NDF: 1583525.3/19

Left Out: 75.743 $\pm$ 0.013  $\chi^2$ /NDF: 937821.8/24

Right Out: 132.979 $\pm$ 0.034  $\chi^2$ /NDF: 2317375.3/22

Left In: 75.909 $\pm$ 0.013  $\chi^2$ /NDF: 831366.4/22

Left: 75.824 $\pm$ 0.009  $\chi^2$ /NDF: 1769272.3/47

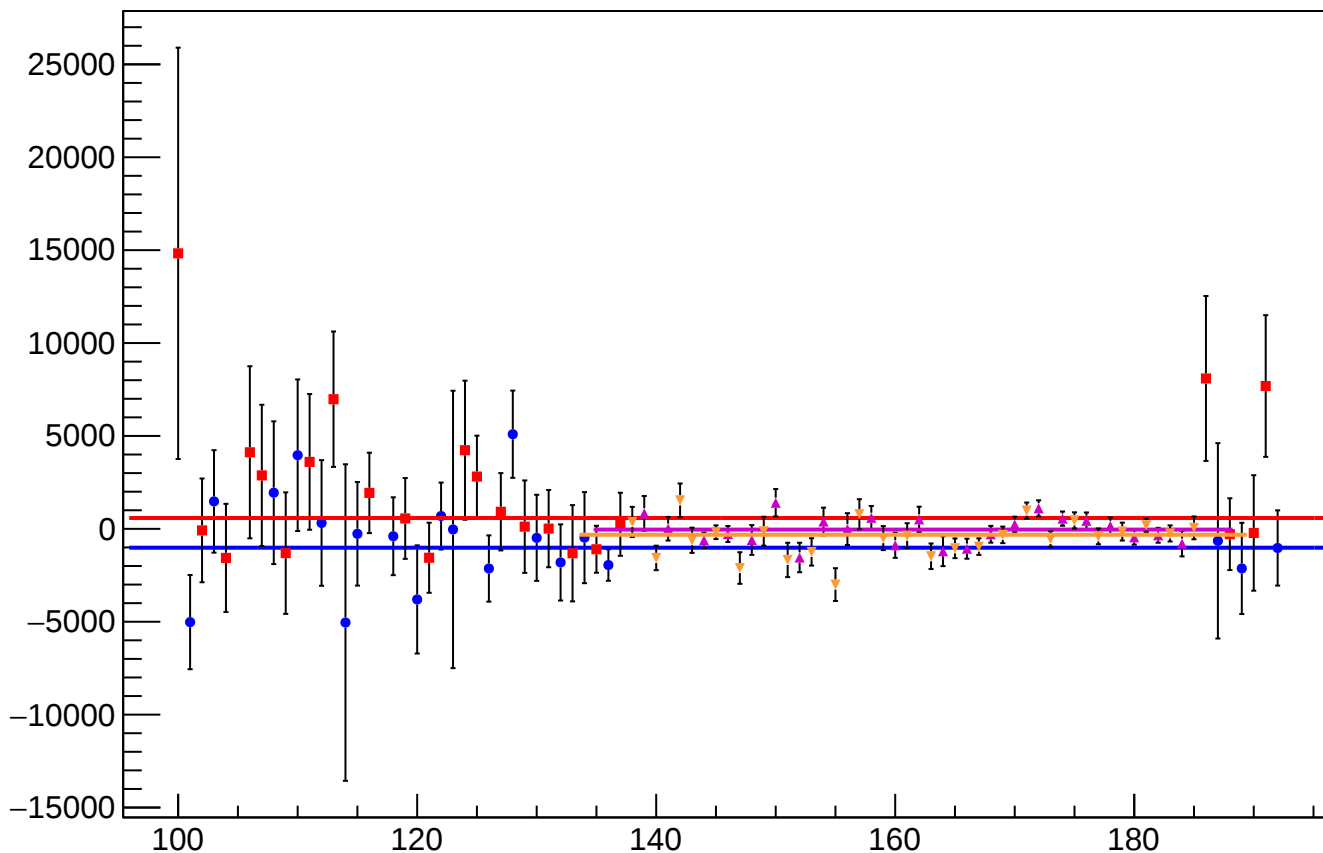
Right: 130.045 $\pm$ 0.024  $\chi^2$ /NDF: 3915590.5/42

In: 82.689 $\pm$ 0.012  $\chi^2$ /NDF: 4458724.7/42

Out: 82.728 $\pm$ 0.012  $\chi^2$ /NDF: 5748093.1/47

All: 82.709 $\pm$ 0.008  $\chi^2$ /NDF: 10206823.2/90

asym\_sam\_26\_avg\_correction\_mean vs Slug, Sign Corrected



Right In: -1014.870 $\pm$ 485.654  $\chi^2$ /NDF: 16.6/19

Left Out: -318.064 $\pm$ 108.014  $\chi^2$ /NDF:50.0/24

Right Out: 584.423 $\pm$ 510.605  $\chi^2$ /NDF: 20.0/22

Left In: -40.473 $\pm$ 110.252  $\chi^2$ /NDF:34.7/22

Left: -182.115 $\pm$ 77.156  $\chi^2$ /NDF: 88.0/47

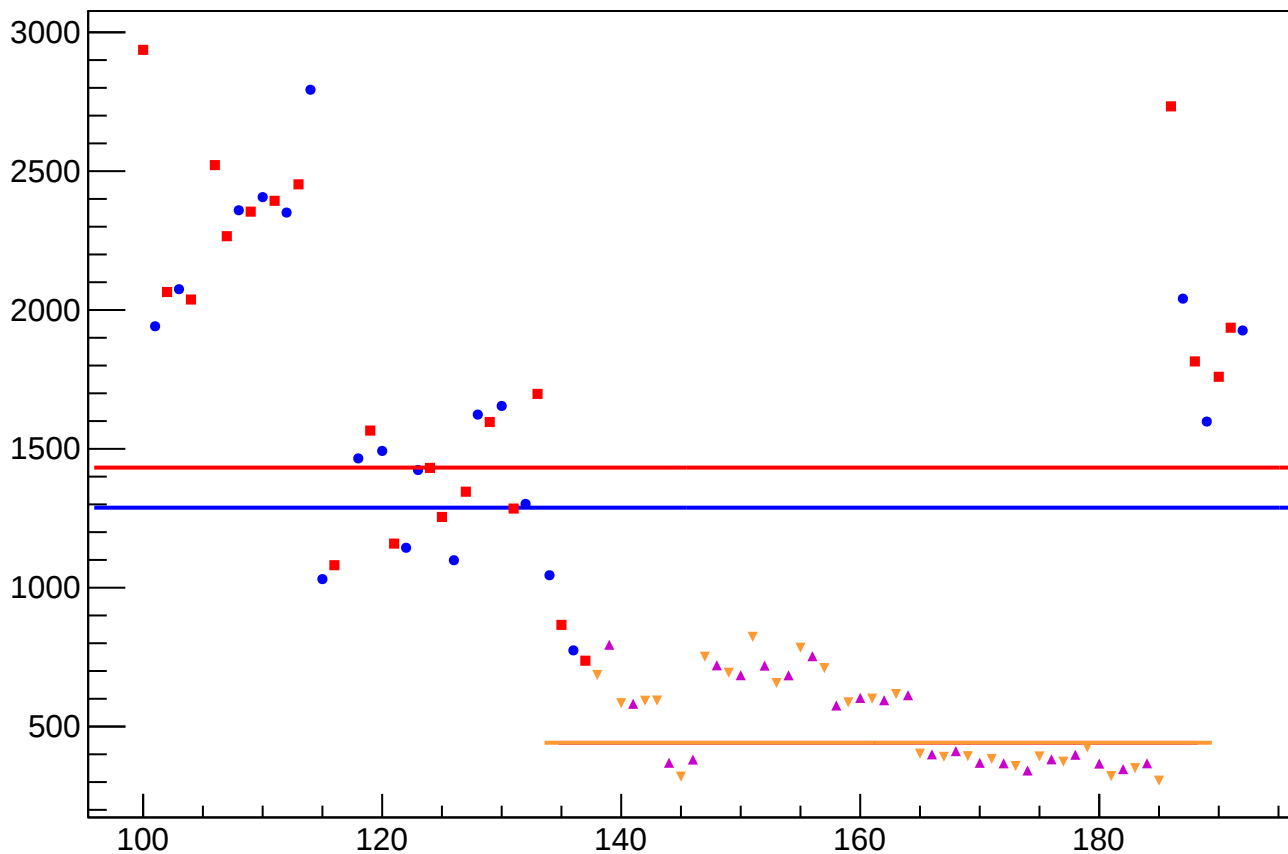
Right: -255.251 $\pm$ 351.899  $\chi^2$ /NDF: 41.8/42

In: -88.229 $\pm$ 107.517  $\chi^2$ /NDF:55.2/42

Out: -279.408 $\pm$ 105.675  $\chi^2$ /NDF:73.1/47

All: -185.470 $\pm$ 75.366  $\chi^2$ /NDF: 129.8/90

asym\_sam\_26\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 1288.177 $\pm$ 0.343  $\chi^2/\text{NDF}$ : 2054855.3/19

Left Out: 441.685 $\pm$ 0.076  $\chi^2/\text{NDF}$ : 3169140.9/24

Right Out: 1432.524 $\pm$ 0.361  $\chi^2/\text{NDF}$ : 2090236.2/22

Left In: 441.009 $\pm$ 0.078  $\chi^2/\text{NDF}$ : 2597018.1/22

Left: 441.354 $\pm$ 0.055  $\chi^2/\text{NDF}$ : 5766197.3/47

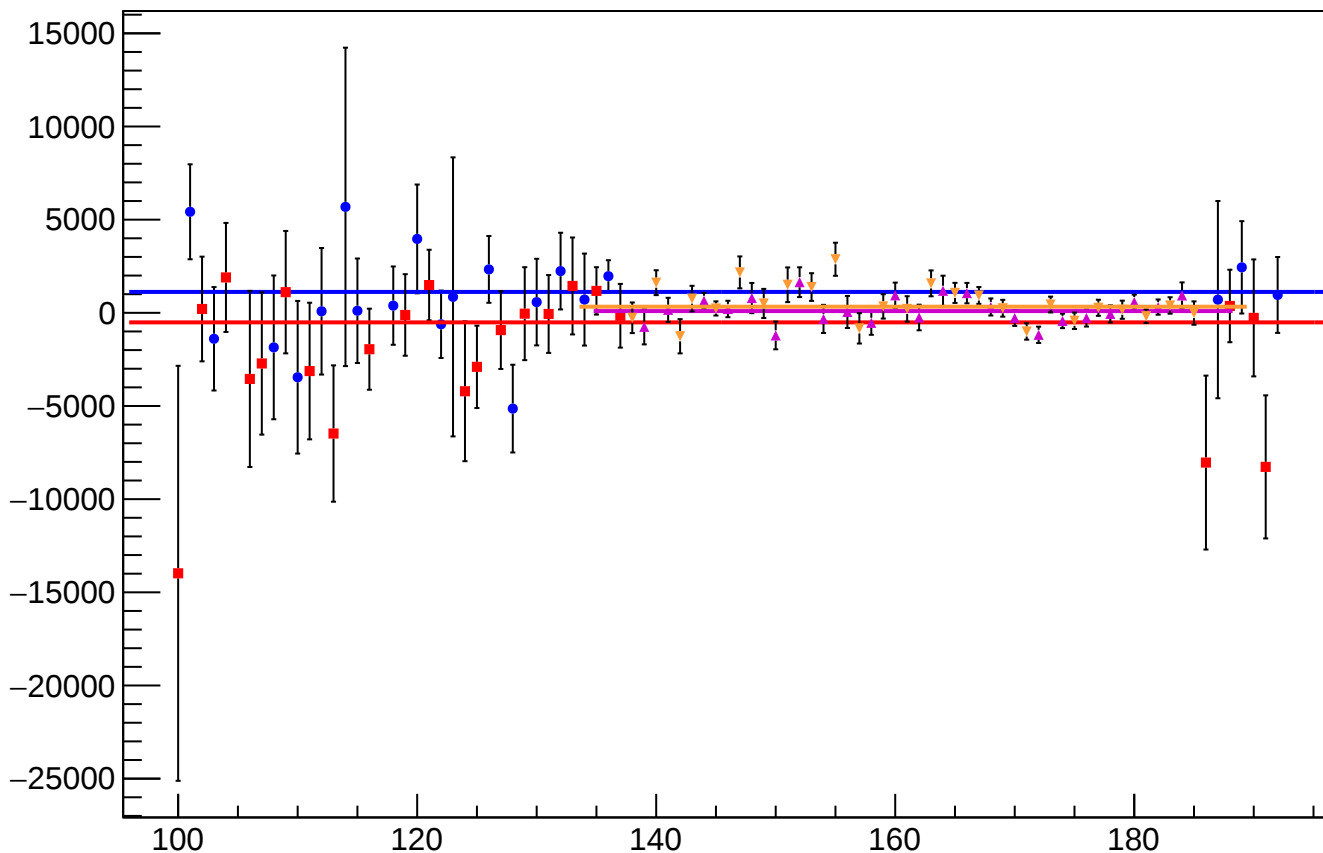
Right: 1356.738 $\pm$ 0.249  $\chi^2/\text{NDF}$ : 4229010.4/42

In: 482.530 $\pm$ 0.076  $\chi^2/\text{NDF}$ : 10439364.8/42

Out: 484.125 $\pm$ 0.075  $\chi^2/\text{NDF}$ : 12468045.9/47

All: 483.341 $\pm$ 0.053  $\chi^2/\text{NDF}$ : 22907634.7/90

# asym\_sam\_26\_avg\_mean vs Slug, Sign Corrected



Right In: 1121.757+/-488.500  $\chi^2/\text{NDF}$ : 17.2/19

Left Out: 328.599+/-109.668  $\chi^2/\text{NDF}$ : 47.7/24

Right Out: -512.627+/-513.683  $\chi^2/\text{NDF}$ : 19.5/22

Left In: 93.310+/-111.960  $\chi^2/\text{NDF}$ : 33.3/22

Left: 213.387+/-78.345  $\chi^2/\text{NDF}$ : 83.3/47

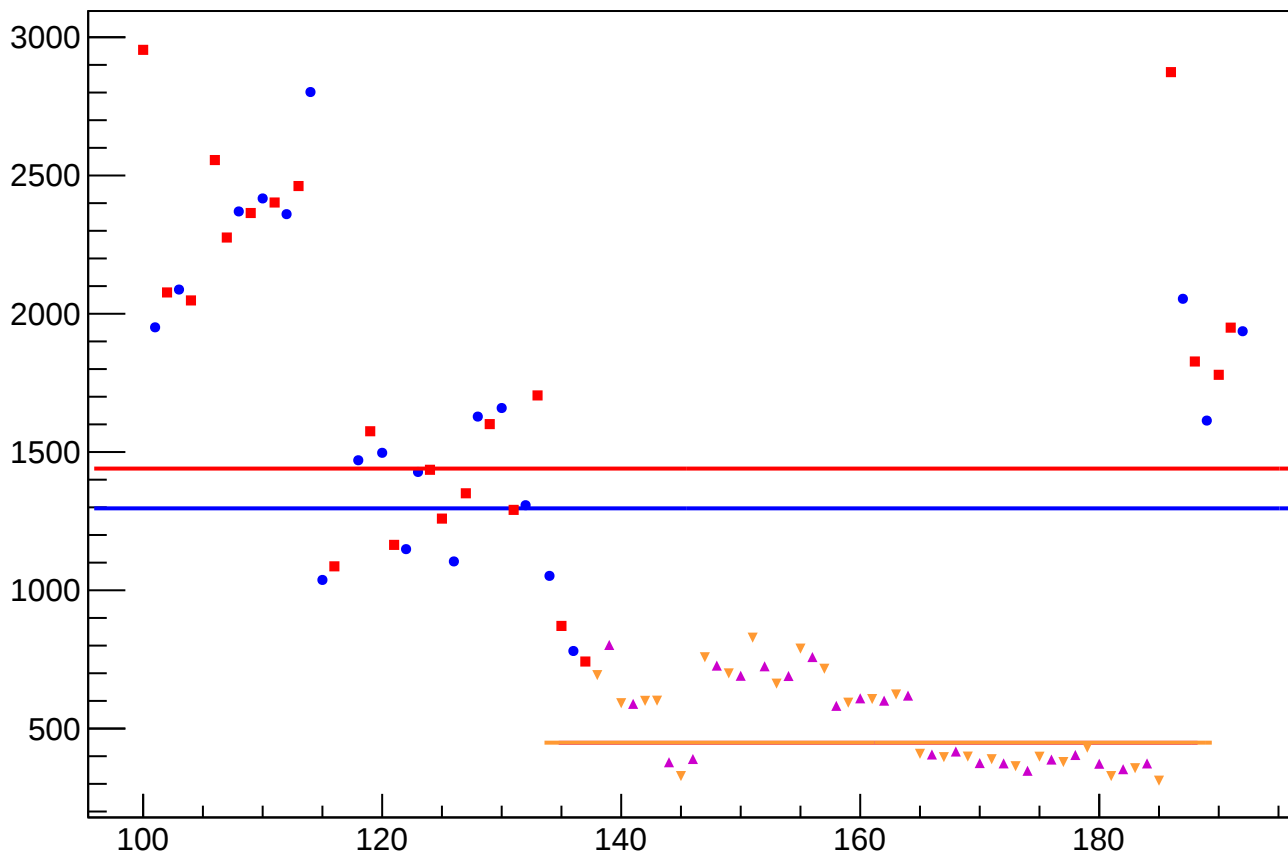
Right: 345.608+/-353.990  $\chi^2/\text{NDF}$ : 42.0/42

In: 144.637+/-109.130  $\chi^2/\text{NDF}$ : 54.8/42

Out: 291.927+/-107.251  $\chi^2/\text{NDF}$ : 69.8/47

All: 219.561+/-76.494  $\chi^2/\text{NDF}$ : 125.4/90

# asym\_sam\_26\_avg\_rms vs Slug, Sign Corrected



Right In: 1296.326 $\pm$ 0.345  $\chi^2/\text{NDF}$ : 2042750.7/19

Left Out: 449.016 $\pm$ 0.078  $\chi^2/\text{NDF}$ : 3090476.2/24

Right Out: 1440.169 $\pm$ 0.363  $\chi^2/\text{NDF}$ : 2105481.2/22

Left In: 448.307 $\pm$ 0.079  $\chi^2/\text{NDF}$ : 2537376.0/22

Left: 448.669 $\pm$ 0.055  $\chi^2/\text{NDF}$ : 5627893.2/47

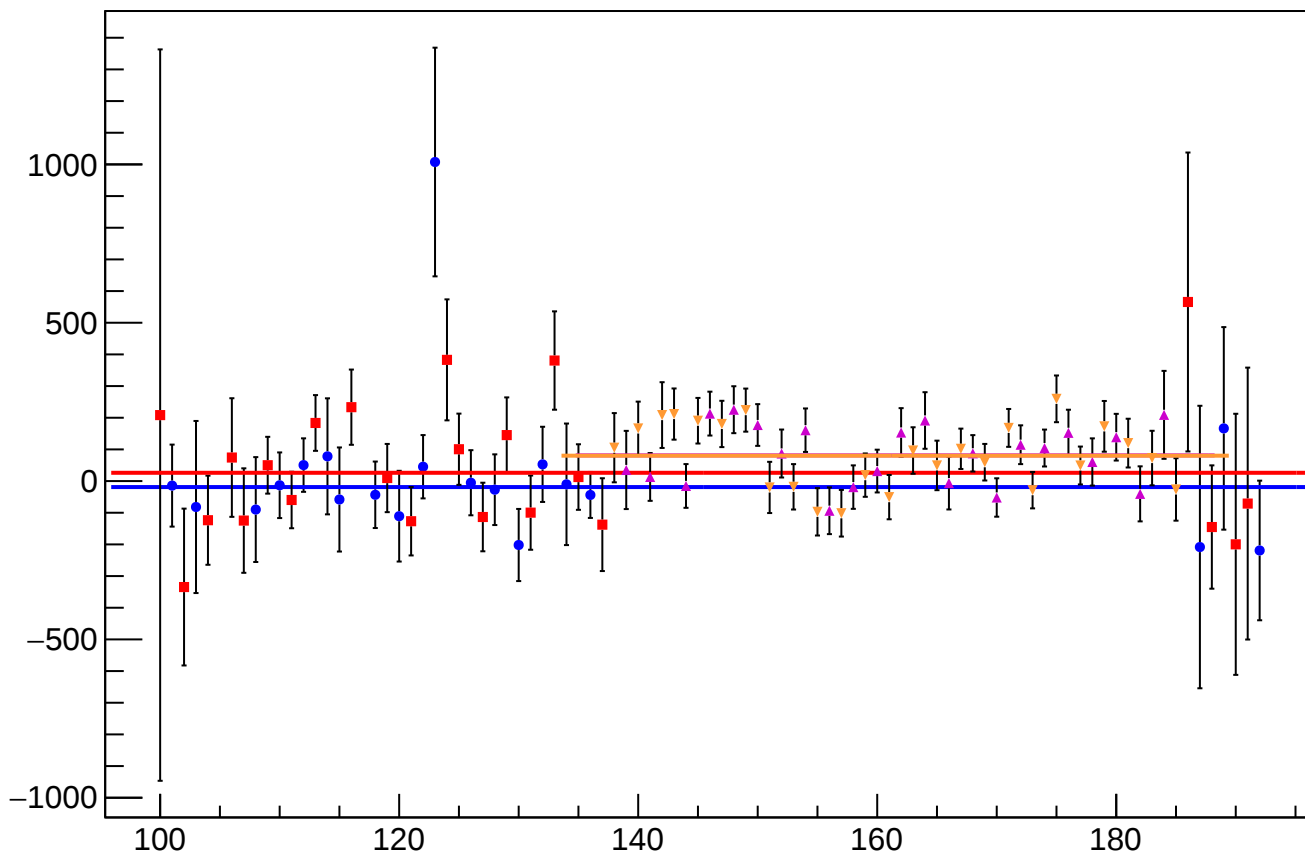
Right: 1364.635 $\pm$ 0.250  $\chi^2/\text{NDF}$ : 4230582.6/42

In: 490.629 $\pm$ 0.077  $\chi^2/\text{NDF}$ : 10306473.8/42

Out: 492.223 $\pm$ 0.076  $\chi^2/\text{NDF}$ : 12317315.8/47

All: 491.440 $\pm$ 0.054  $\chi^2/\text{NDF}$ : 22624006.8/90

reg\_asym\_sam\_37\_avg\_mean vs Slug, Sign Corrected



Right In:  $-18.927 \pm 28.488$   $\chi^2/\text{NDF}$ : 14.6/19

Left Out:  $80.171 \pm 14.592$   $\chi^2/\text{NDF}$ : 48.6/24

Right Out:  $26.169 \pm 27.596$   $\chi^2/\text{NDF}$ : 30.1/22

Left In:  $81.156 \pm 15.105$   $\chi^2/\text{NDF}$ : 35.3/22

Left:  $80.646 \pm 10.495$   $\chi^2/\text{NDF}$ : 83.8/47

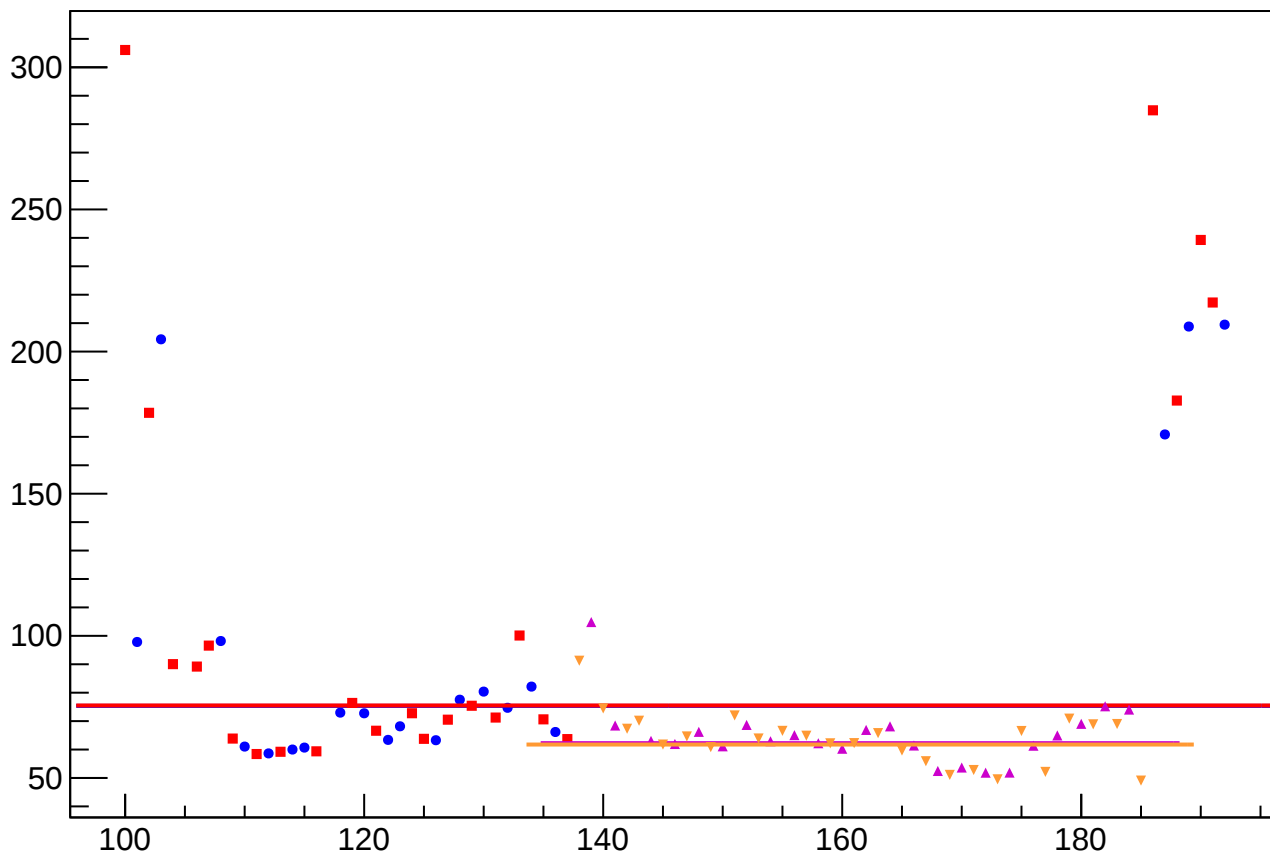
Right:  $4.338 \pm 19.821$   $\chi^2/\text{NDF}$ : 46.0/42

In:  $59.193 \pm 13.345$   $\chi^2/\text{NDF}$ : 59.6/42

Out:  $68.370 \pm 12.900$   $\chi^2/\text{NDF}$ : 81.6/47

All:  $63.938 \pm 9.275$   $\chi^2/\text{NDF}$ : 141.5/90

reg\_asym\_sam\_37\_avg\_rms vs Slug, Sign Corrected



Right In: 75.364 $\pm$ 0.020  $\chi^2$ /NDF: 1973163.8/19

Left Out: 61.761 $\pm$ 0.010  $\chi^2$ /NDF: 645535.0/24

Right Out: 75.501 $\pm$ 0.020  $\chi^2$ /NDF: 2346929.2/22

Left In: 62.250 $\pm$ 0.011  $\chi^2$ /NDF: 591085.1/22

Left: 61.997 $\pm$ 0.007  $\chi^2$ /NDF: 1237703.8/47

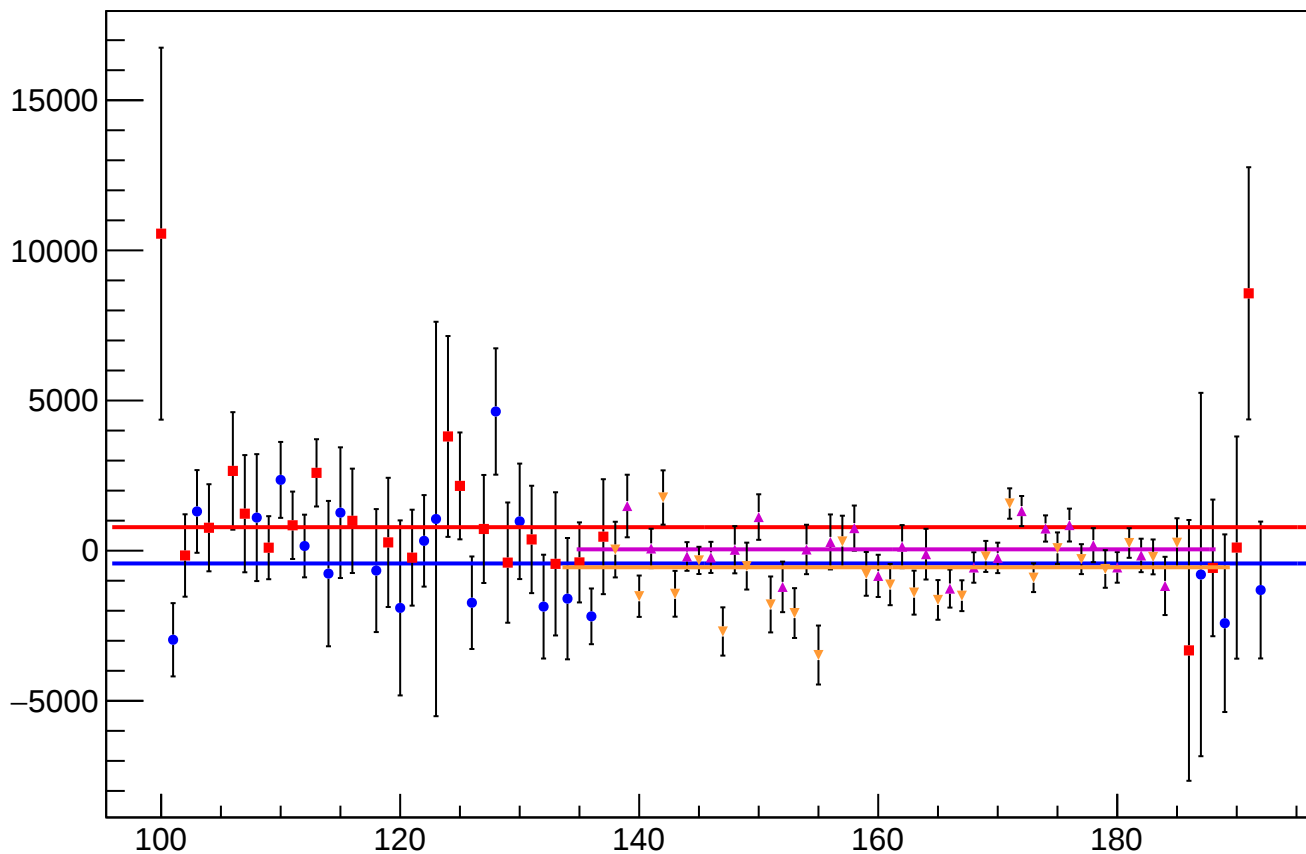
Right: 75.435 $\pm$ 0.014  $\chi^2$ /NDF: 4320117.1/42

In: 65.128 $\pm$ 0.009  $\chi^2$ /NDF: 2895032.6/42

Out: 64.764 $\pm$ 0.009  $\chi^2$ /NDF: 3379956.9/47

All: 64.939 $\pm$ 0.007  $\chi^2$ /NDF: 6275759.7/90

asym\_sam\_37\_avg\_correction\_mean vs Slug, Sign Corrected



Right In:  $-425.550 \pm 373.922$   $\chi^2/\text{NDF}: 25.1/19$

Left Out:  $-552.511 \pm 126.981$   $\chi^2/\text{NDF}: 65.3/24$

Right Out:  $782.707 \pm 361.338$   $\chi^2/\text{NDF}: 15.0/22$

Left In:  $44.578 \pm 129.095$   $\chi^2/\text{NDF}: 29.6/22$

Left:  $-258.894 \pm 90.527$   $\chi^2/\text{NDF}: 105.7/47$

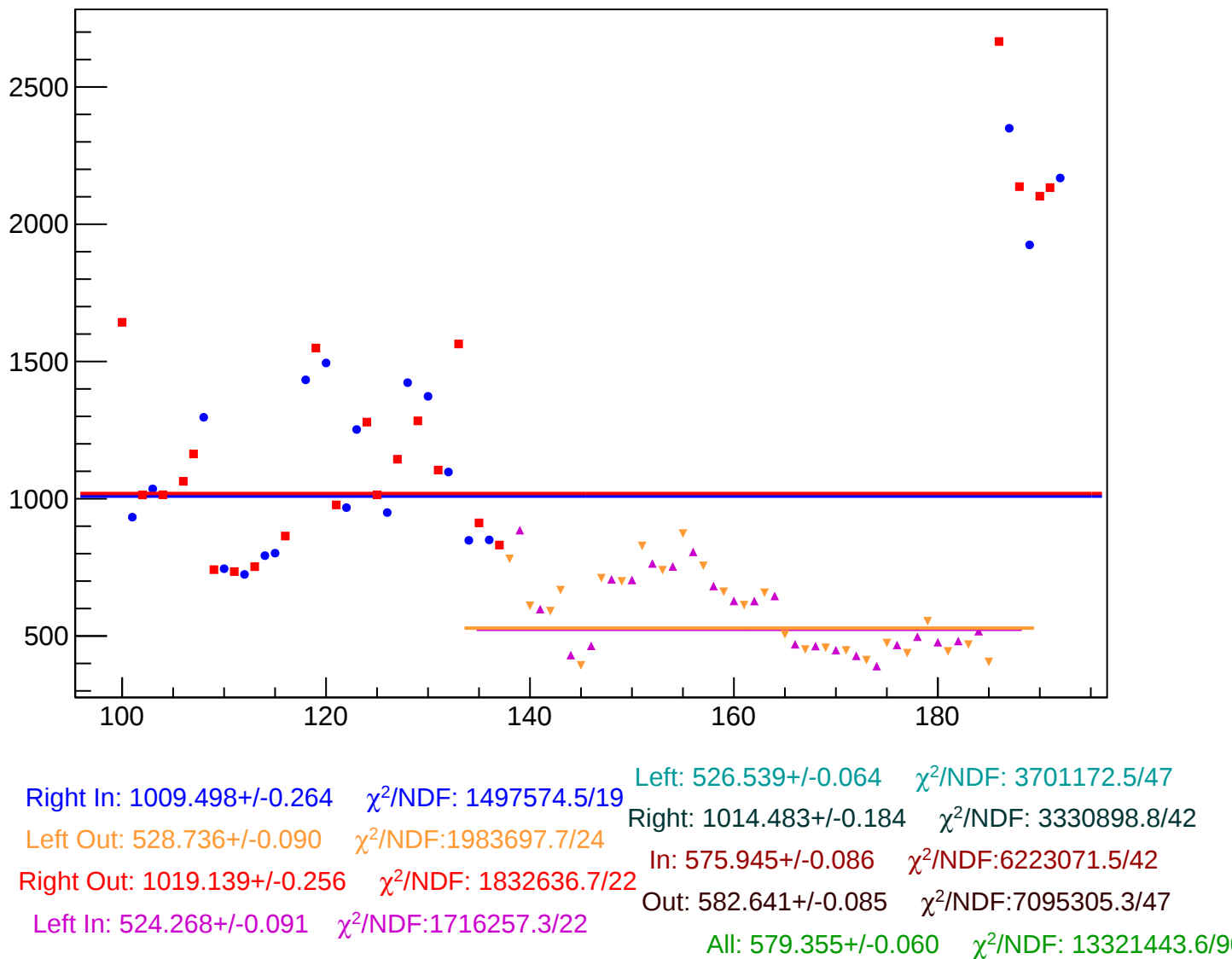
Right:  $199.252 \pm 259.840$   $\chi^2/\text{NDF}: 45.5/42$

In:  $-5.490 \pm 122.027$   $\chi^2/\text{NDF}: 56.0/42$

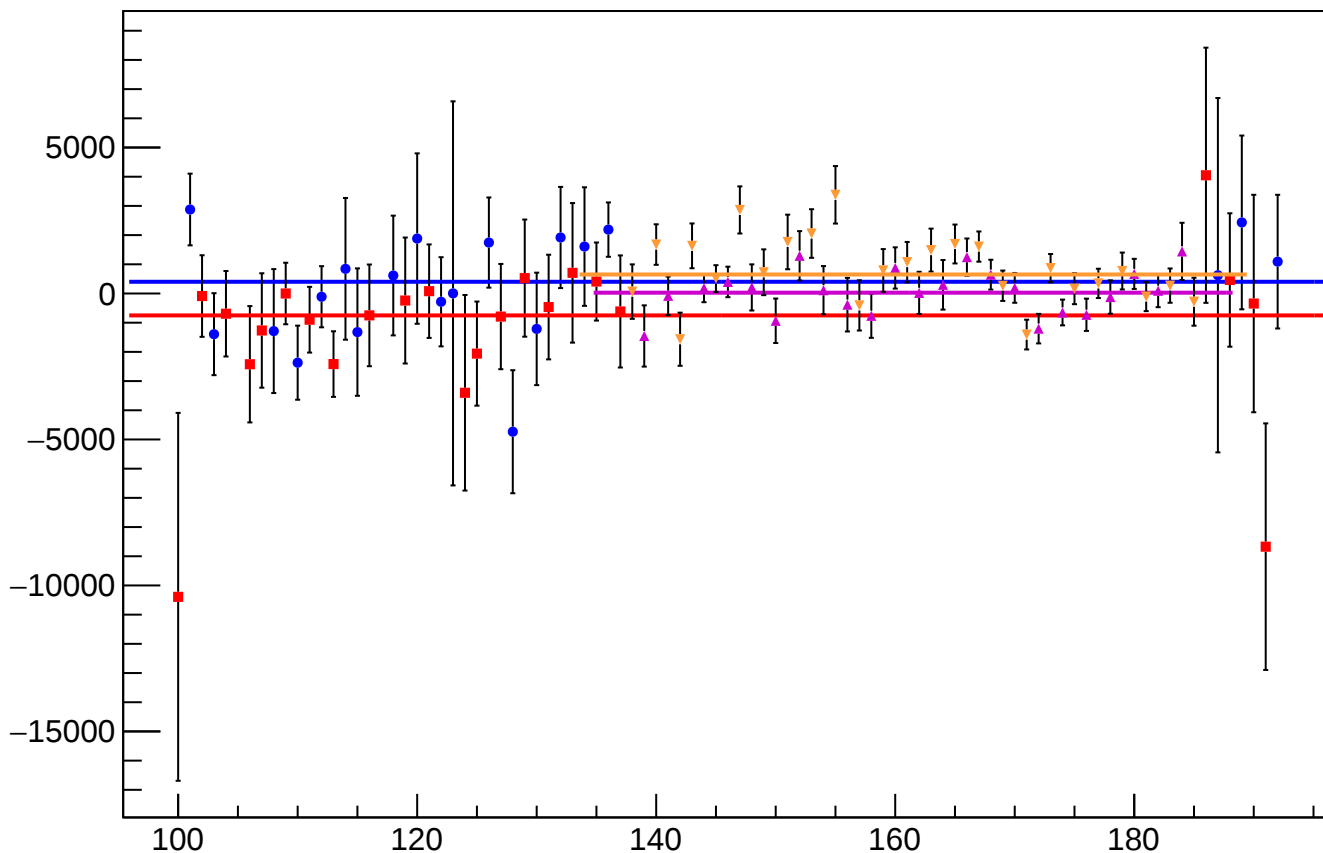
Out:  $-405.743 \pm 119.799$   $\chi^2/\text{NDF}: 92.5/47$

All:  $-209.304 \pm 85.487$   $\chi^2/\text{NDF}: 154.0/90$

asym\_sam\_37\_avg\_correction\_rms vs Slug, Sign Corrected



asym\_sam\_37\_avg\_mean vs Slug, Sign Corrected



Right In: 401.497+/-375.630  $\chi^2/\text{NDF}$ : 25.2/19

Left Out: 651.560+/-127.961  $\chi^2/\text{NDF}$ : 61.1/24

Right Out: -750.858+/-363.167  $\chi^2/\text{NDF}$ : 14.1/22

Left In: 27.483+/-130.127  $\chi^2/\text{NDF}$ : 28.5/22

Left: 344.758+/-91.238  $\chi^2/\text{NDF}$ : 101.2/47

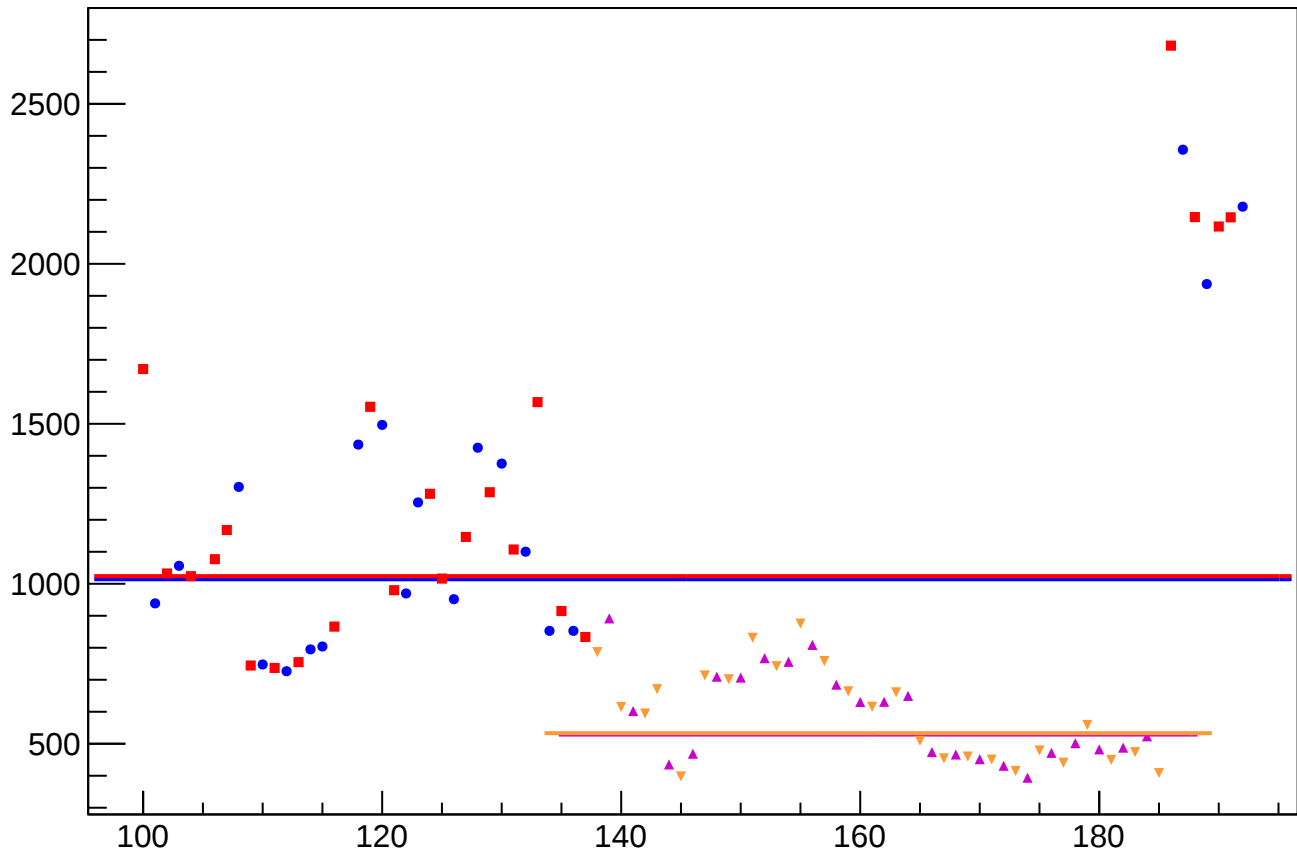
Right: -194.115+/-261.093  $\chi^2/\text{NDF}$ : 44.2/42

In: 67.559+/-122.958  $\chi^2/\text{NDF}$ : 54.6/42

Out: 496.679+/-120.689  $\chi^2/\text{NDF}$ : 88.5/47

All: 286.115+/-86.131  $\chi^2/\text{NDF}$ : 149.3/90

# asym\_sam\_37\_avg\_rms vs Slug, Sign Corrected



Right In: 1014.098+/-0.266  $\chi^2/\text{NDF}$ : 1498355.3/19

Left Out: 533.060+/-0.090  $\chi^2/\text{NDF}$ : 1951536.4/24

Right Out: 1023.949+/-0.257  $\chi^2/\text{NDF}$ : 1836581.6/22

Left In: 528.694+/-0.092  $\chi^2/\text{NDF}$ : 1688511.2/22

Left: 530.914+/-0.065  $\chi^2/\text{NDF}$ : 3641192.3/47

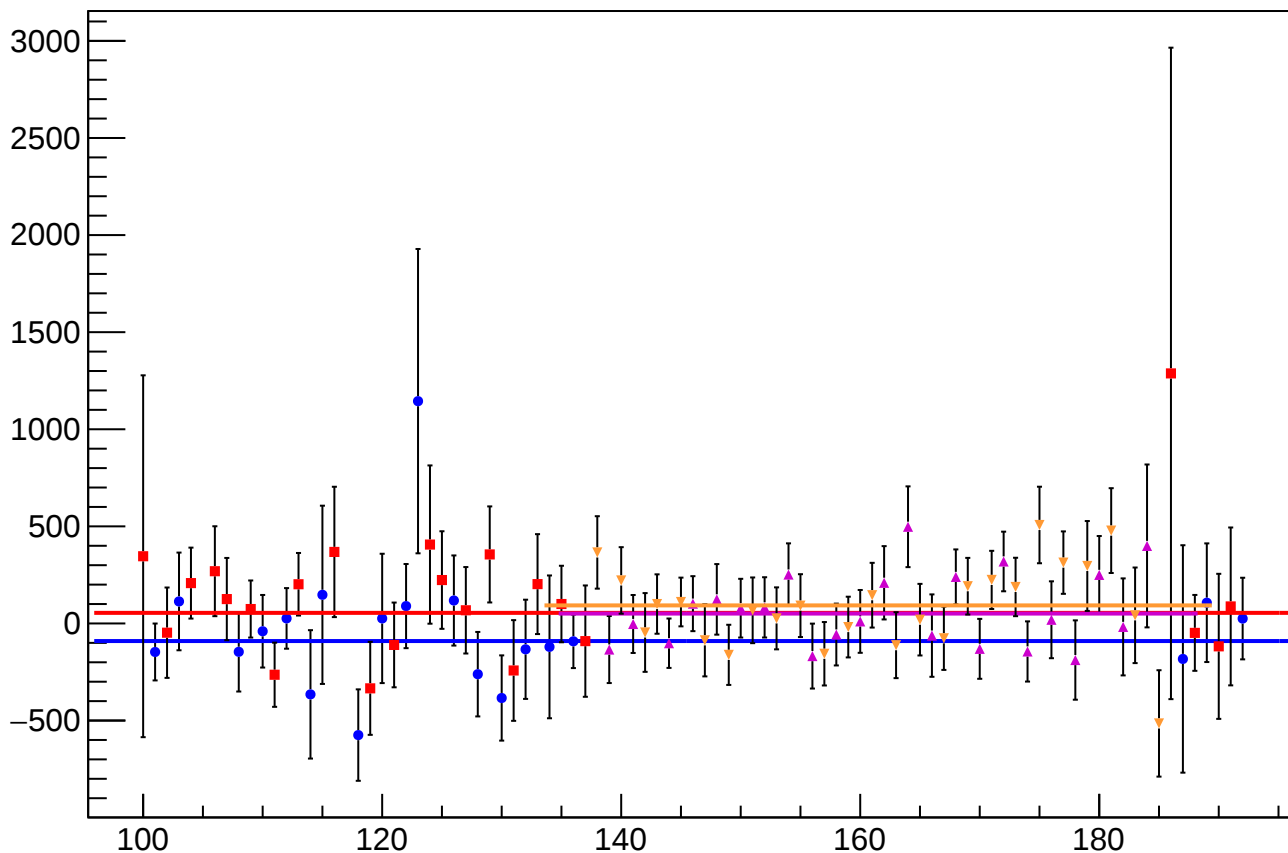
Right: 1019.190+/-0.185  $\chi^2/\text{NDF}$ : 3335647.9/42

In: 580.705+/-0.087  $\chi^2/\text{NDF}$ : 6168780.4/42

Out: 587.273+/-0.085  $\chi^2/\text{NDF}$ : 7038697.0/47

All: 584.050+/-0.061  $\chi^2/\text{NDF}$ : 13210384.1/90

reg\_asym\_sam\_48\_avg\_mean vs Slug, Sign Corrected



Right In:  $-90.621 \pm 50.510$   $\chi^2/\text{NDF}$ : 14.0/19

Left Out:  $92.994 \pm 34.054$   $\chi^2/\text{NDF}$ : 29.4/24

Right Out:  $54.533 \pm 48.484$   $\chi^2/\text{NDF}$ : 16.3/22

Left In:  $50.896 \pm 35.280$   $\chi^2/\text{NDF}$ : 23.5/22

Left:  $72.689 \pm 24.502$   $\chi^2/\text{NDF}$ : 53.6/47

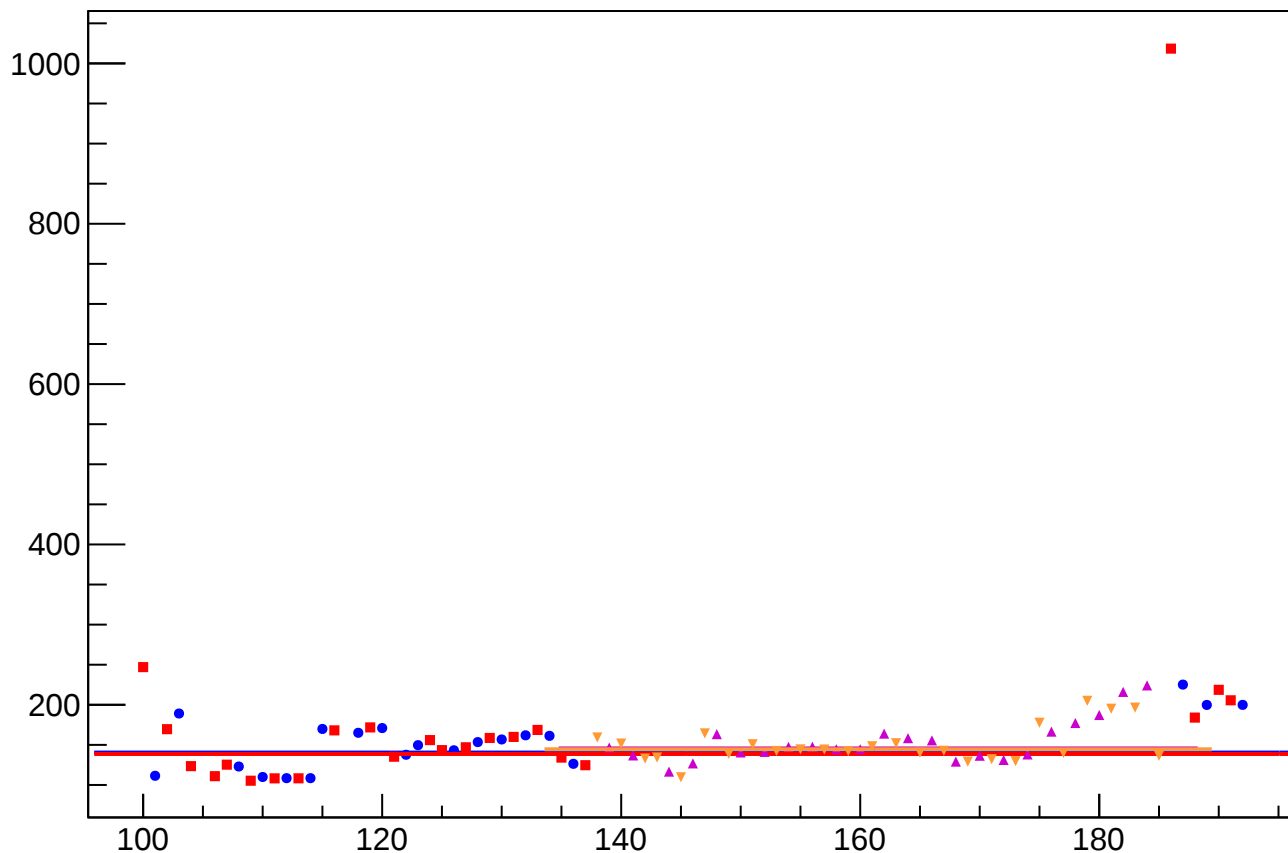
Right:  $-15.075 \pm 34.977$   $\chi^2/\text{NDF}$ : 34.6/42

In:  $4.493 \pm 28.923$   $\chi^2/\text{NDF}$ : 42.7/42

Out:  $80.288 \pm 27.867$   $\chi^2/\text{NDF}$ : 46.1/47

All:  $43.800 \pm 20.068$   $\chi^2/\text{NDF}$ : 92.4/90

reg\_asym\_sam\_48\_avg\_rms vs Slug, Sign Corrected



Right In: 140.396+/-0.036  $\chi^2/\text{NDF}$ : 708515.2/19

Left Out: 144.475+/-0.024  $\chi^2/\text{NDF}$ : 670488.7/24

Right Out: 138.668+/-0.034  $\chi^2/\text{NDF}$ : 1279384.9/22

Left In: 145.535+/-0.025  $\chi^2/\text{NDF}$ : 643529.3/22

Left: 144.986+/-0.017  $\chi^2/\text{NDF}$ : 1314951.6/47

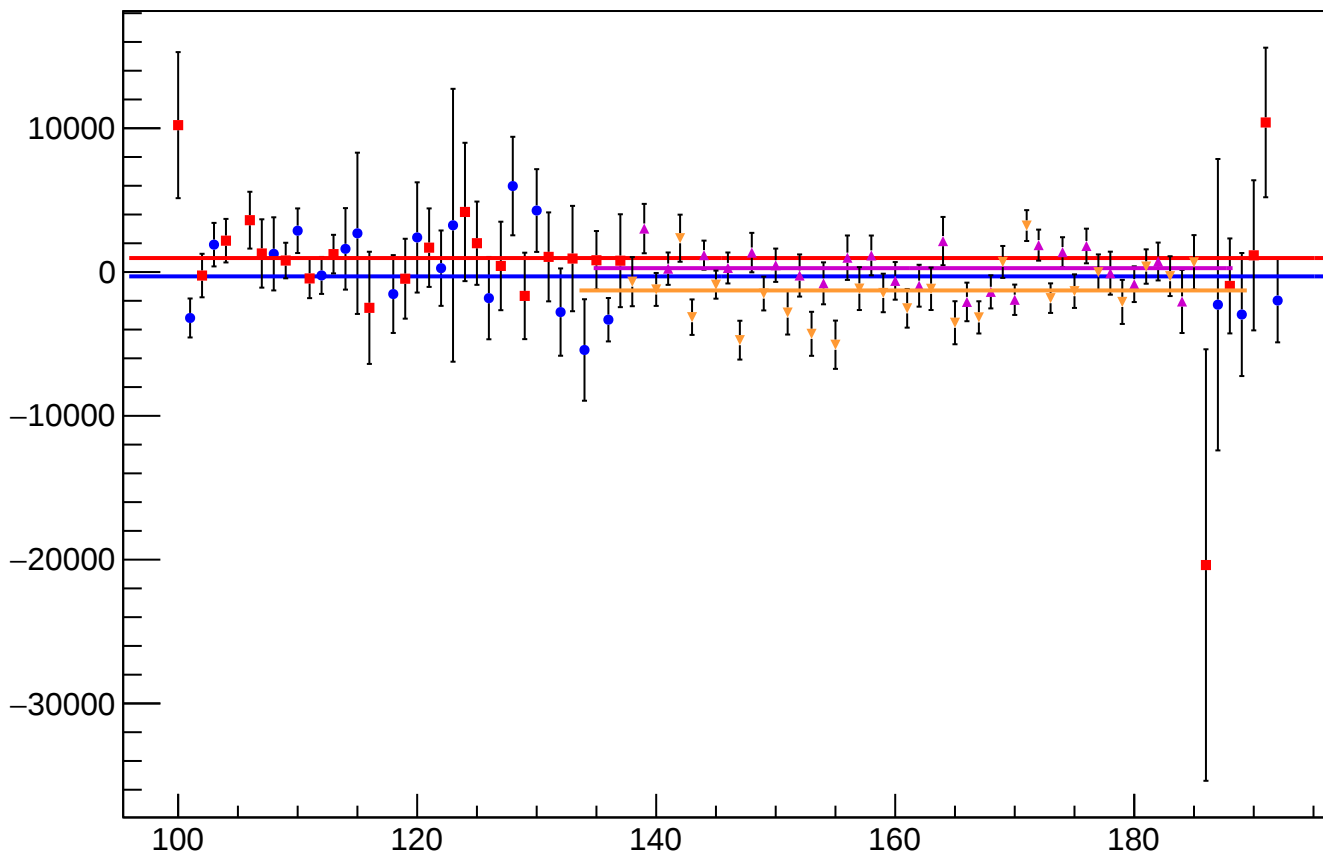
Right: 139.497+/-0.025  $\chi^2/\text{NDF}$ : 1989118.3/42

In: 143.850+/-0.020  $\chi^2/\text{NDF}$ : 1365957.3/42

Out: 142.557+/-0.020  $\chi^2/\text{NDF}$ : 1969087.1/47

All: 143.179+/-0.014  $\chi^2/\text{NDF}$ : 3337117.0/90

asym\_sam\_48\_avg\_correction\_mean vs Slug, Sign Corrected



Right In: -301.650+/-512.164  $\chi^2/\text{NDF}$ : 26.6/19

Left Out: -1279.328+/-259.299  $\chi^2/\text{NDF}$ :55.9/24

Right Out: 973.034+/-472.364  $\chi^2/\text{NDF}$ : 15.7/22

Left In: 269.952+/-266.245  $\chi^2/\text{NDF}$ :24.3/22

Left: -525.161+/-185.759  $\chi^2/\text{NDF}$ : 97.6/47

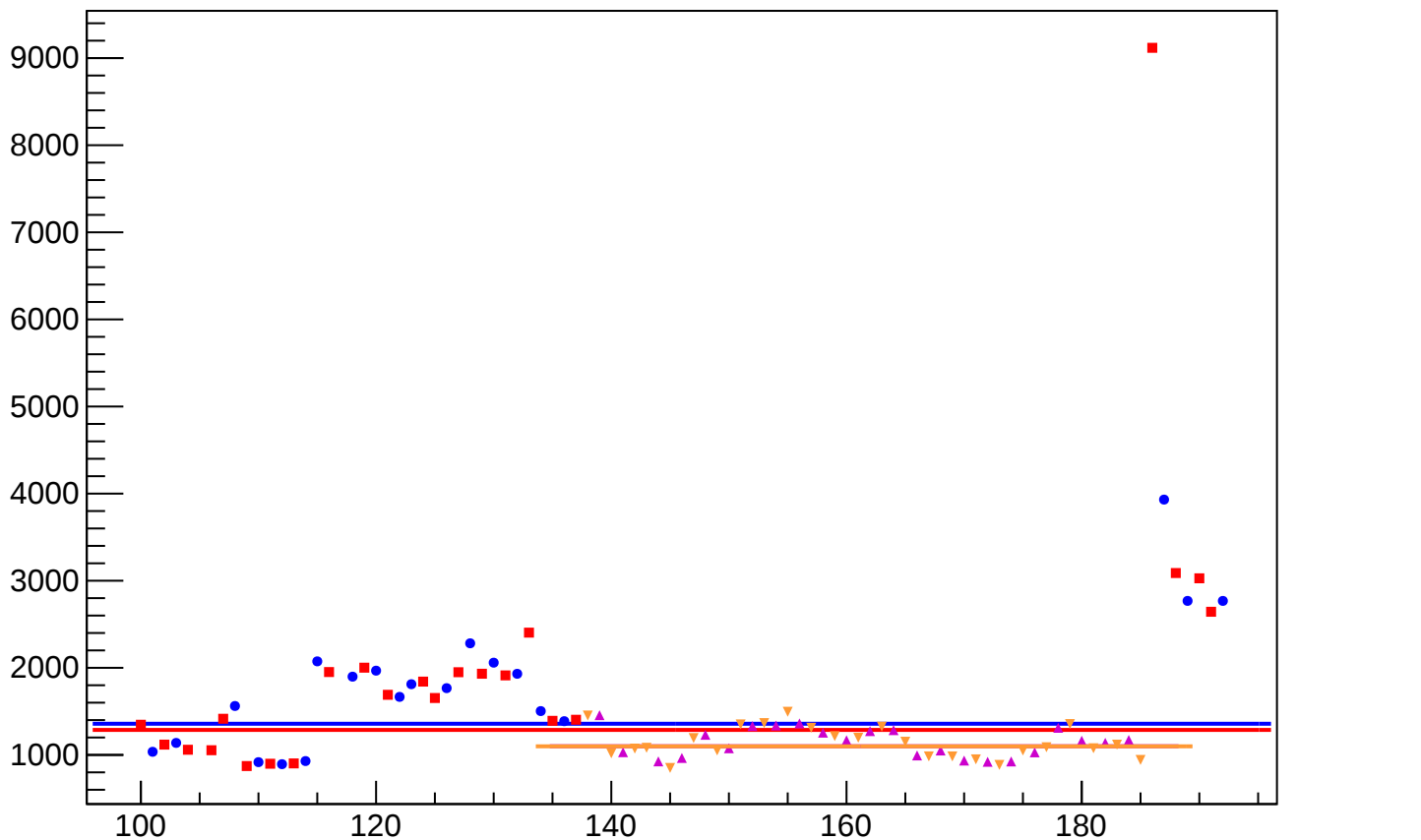
Right: 387.137+/-347.231  $\chi^2/\text{NDF}$ : 45.6/42

In: 148.346+/-236.232  $\chi^2/\text{NDF}$ :51.8/42

Out: -757.776+/-227.304  $\chi^2/\text{NDF}$ :89.1/47

All: -322.162+/-163.794  $\chi^2/\text{NDF}$ : 148.6/90

asym\_sam\_48\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 1357.957 $\pm$ 0.362  $\chi^2$ /NDF: 2028218.6/19

Left Out: 1098.909 $\pm$ 0.183  $\chi^2$ /NDF: 824328.7/24

Right Out: 1286.986 $\pm$ 0.334  $\chi^2$ /NDF: 2905002.8/22

Left In: 1099.585 $\pm$ 0.188  $\chi^2$ /NDF: 679896.1/22

Left: 1099.238 $\pm$ 0.131  $\chi^2$ /NDF: 1504231.4/47

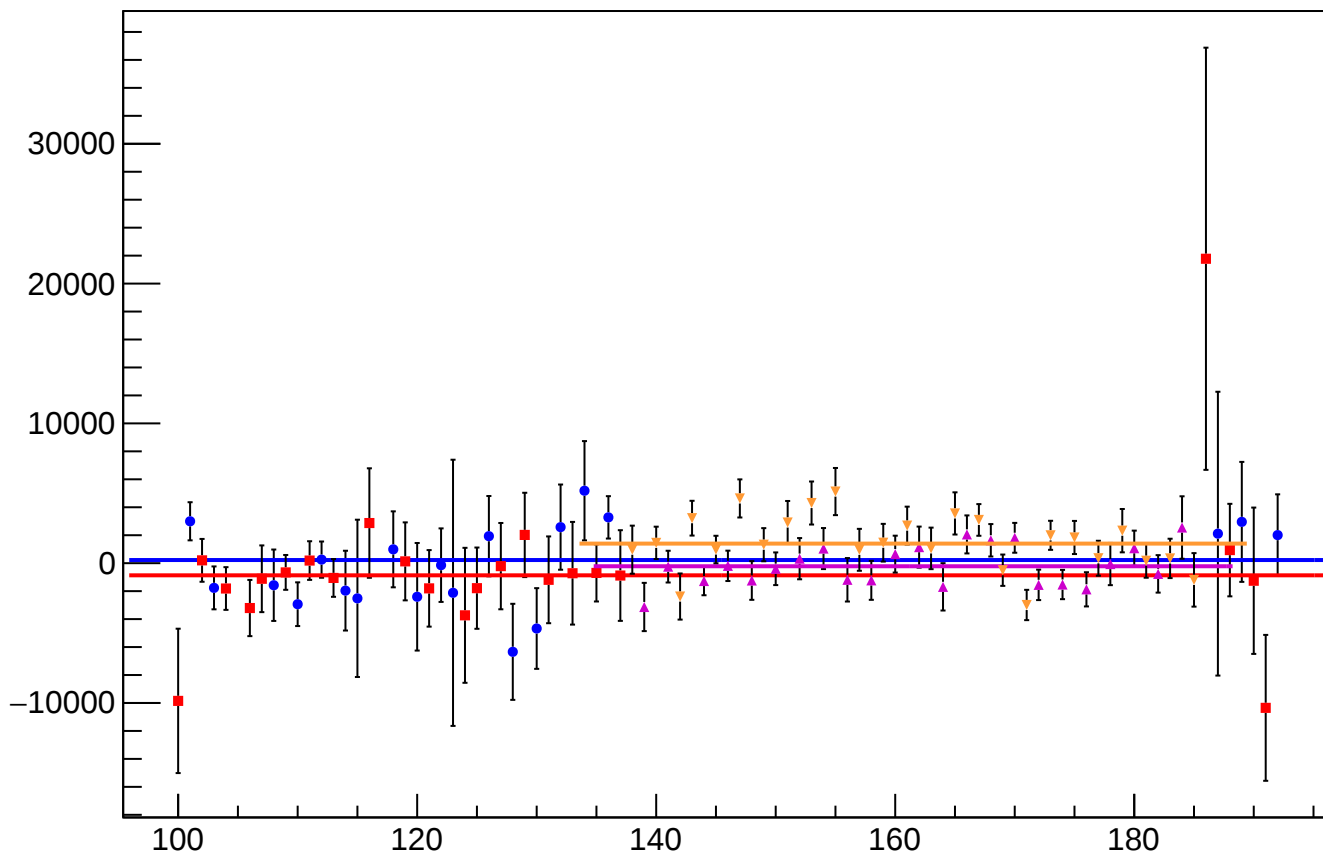
Right: 1319.607 $\pm$ 0.246  $\chi^2$ /NDF: 4953973.2/42

In: 1154.553 $\pm$ 0.167  $\chi^2$ /NDF: 3108813.6/42

Out: 1142.460 $\pm$ 0.161  $\chi^2$ /NDF: 3972977.1/47

All: 1148.273 $\pm$ 0.116  $\chi^2$ /NDF: 7084512.2/90

asym\_sam\_48\_avg\_mean vs Slug, Sign Corrected



Right In: 225.272 $\pm$ 515.401  $\chi^2$ /NDF: 26.2/19

Left Out: 1400.458 $\pm$ 261.804  $\chi^2$ /NDF: 52.2/24

Right Out: -868.149 $\pm$ 475.889  $\chi^2$ /NDF: 14.3/22

Left In: -219.393 $\pm$ 268.852  $\chi^2$ /NDF: 25.0/22

Left: 612.044 $\pm$ 187.566  $\chi^2$ /NDF: 95.9/47

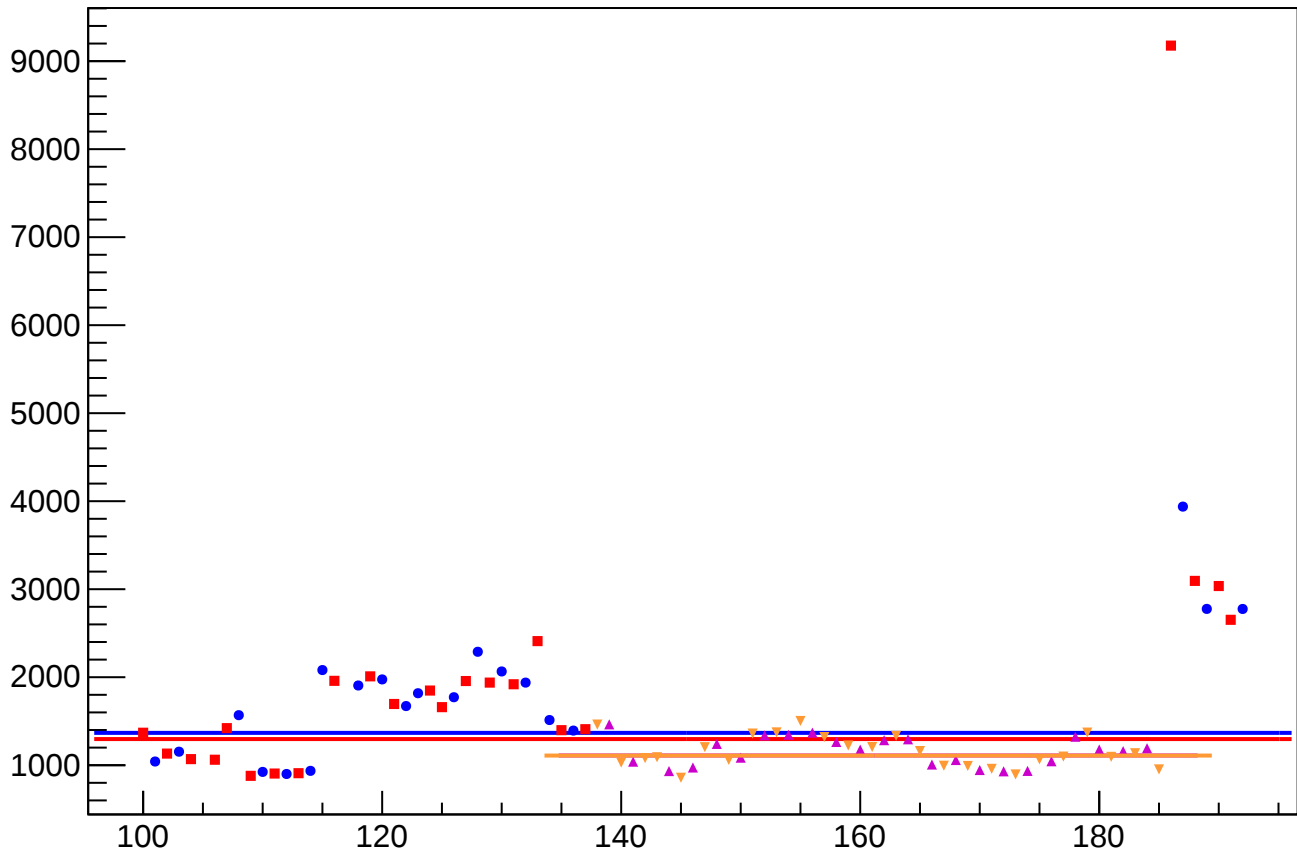
Right: -364.953 $\pm$ 349.639  $\chi^2$ /NDF: 42.9/42

In: -124.279 $\pm$ 238.370  $\chi^2$ /NDF: 51.7/42

Out: 873.382 $\pm$ 229.383  $\chi^2$ /NDF: 84.0/47

All: 393.712 $\pm$ 165.284  $\chi^2$ /NDF: 144.9/90

# asym\_sam\_48\_avg\_rms vs Slug, Sign Corrected



Right In: 1367.540+/-0.364  $\chi^2/\text{NDF}$ : 2008875.8/19

Left Out: 1109.761+/-0.185  $\chi^2/\text{NDF}$ : 812174.9/24

Right Out: 1297.181+/-0.337  $\chi^2/\text{NDF}$ : 2882063.6/22

Left In: 1110.542+/-0.190  $\chi^2/\text{NDF}$ : 669928.9/22

Left: 1110.141+/-0.133  $\chi^2/\text{NDF}$ : 1482112.5/47

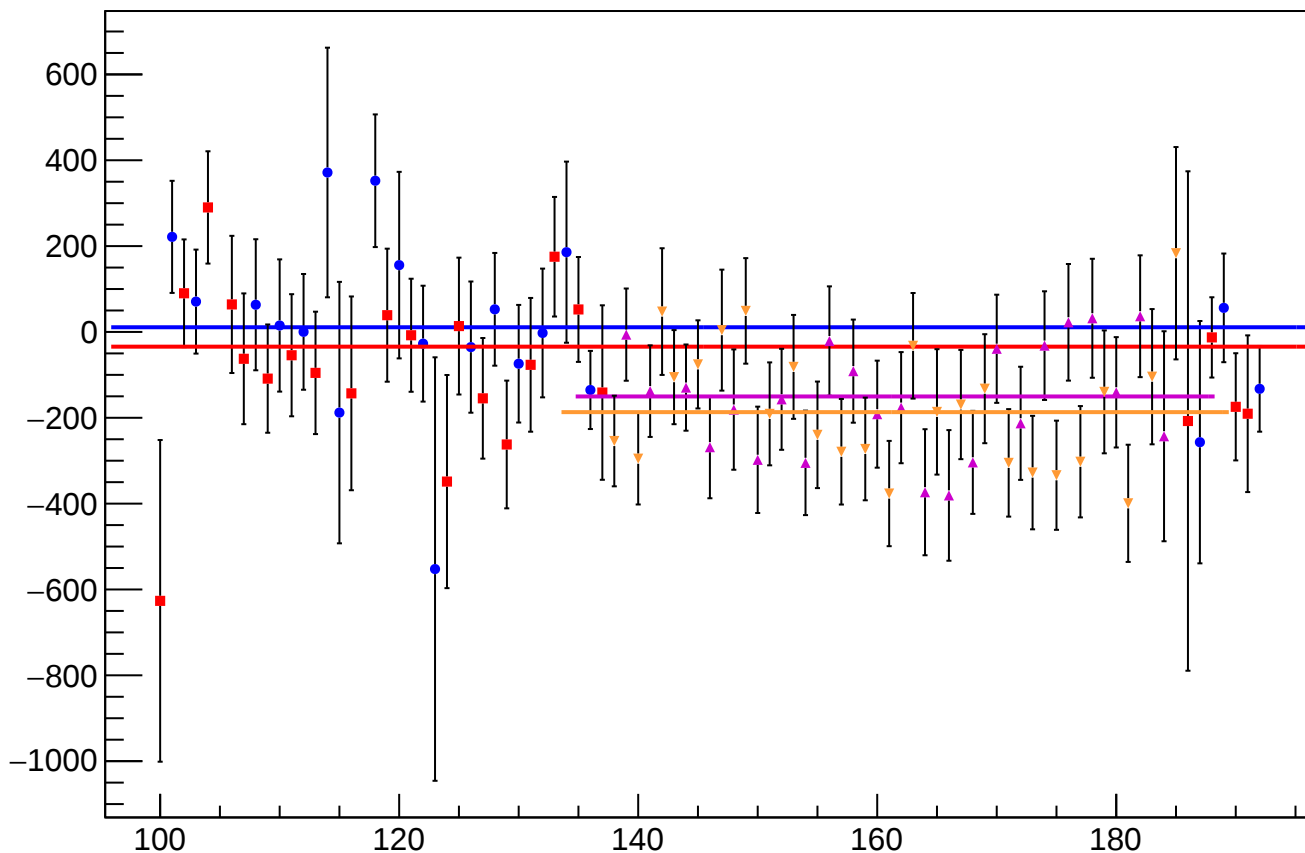
Right: 1329.560+/-0.247  $\chi^2/\text{NDF}$ : 4911058.3/42

In: 1165.514+/-0.169  $\chi^2/\text{NDF}$ : 3069713.5/42

Out: 1153.305+/-0.162  $\chi^2/\text{NDF}$ : 3932372.9/47

All: 1159.175+/-0.117  $\chi^2/\text{NDF}$ : 7004810.2/90

reg\_asym\_sam\_15\_dd\_mean vs Slug, Sign Corrected

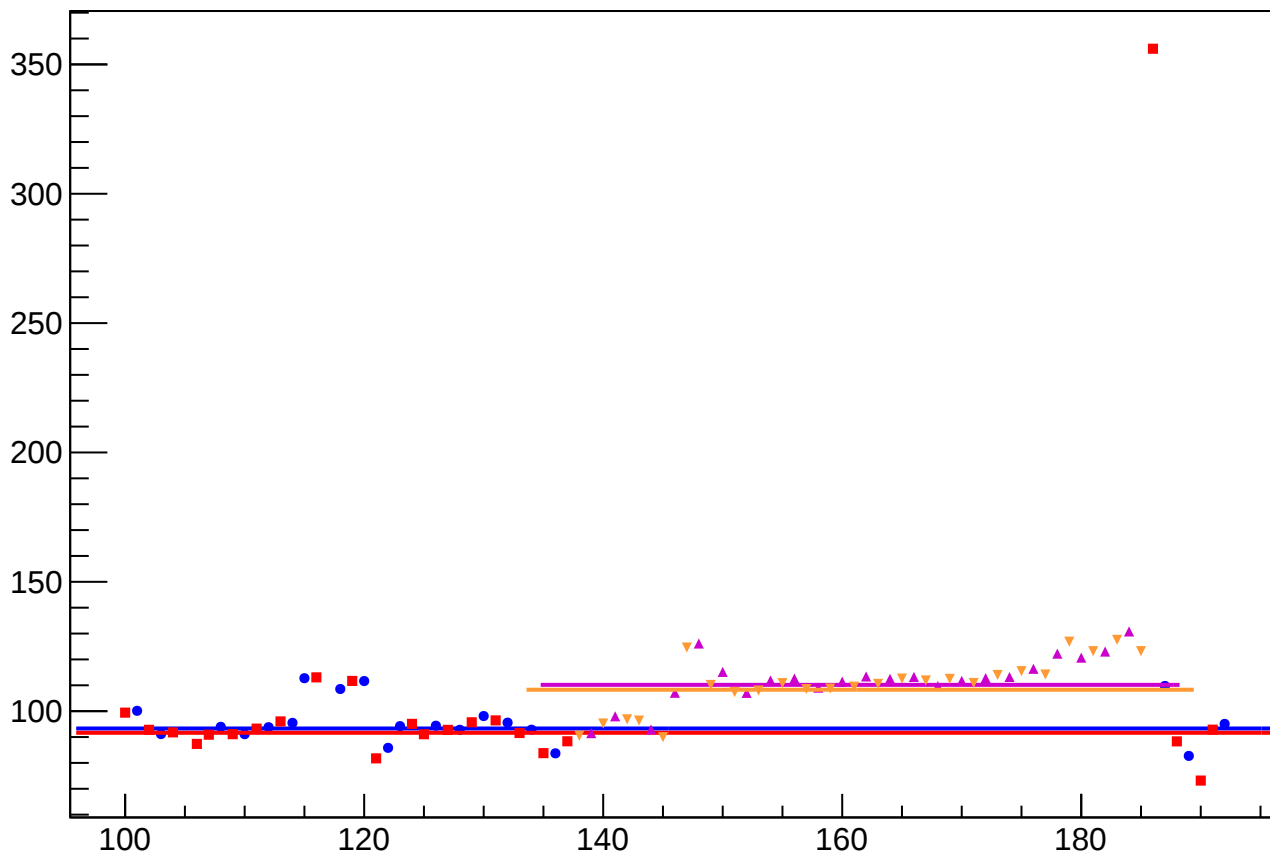


Right In:  $10.917 \pm 32.818$   $\chi^2/\text{NDF}: 18.6/19$   
 Left Out:  $-186.838 \pm 25.308$   $\chi^2/\text{NDF}: 26.6/24$   
 Right Out:  $-34.291 \pm 31.033$   $\chi^2/\text{NDF}: 21.1/22$   
 Left In:  $-150.315 \pm 26.445$   $\chi^2/\text{NDF}: 20.7/22$

Left:  $-169.379 \pm 18.284$   $\chi^2/\text{NDF}: 48.3/47$   
 Right:  $-12.950 \pm 22.548$   $\chi^2/\text{NDF}: 40.7/42$   
 In:  $-86.839 \pm 20.592$   $\chi^2/\text{NDF}: 53.9/42$   
 Out:  $-125.905 \pm 19.613$   $\chi^2/\text{NDF}: 62.2/47$

All:  $-107.323 \pm 14.202$   $\chi^2/\text{NDF}: 118.0/90$

# reg\_asym\_sam\_15\_dd\_rms vs Slug, Sign Corrected



Right In: 93.303+/-0.023  $\chi^2/\text{NDF}$ : 101501.7/19

Left Out: 108.287+/-0.018  $\chi^2/\text{NDF}$ : 330693.5/24

Right Out: 91.642+/-0.022  $\chi^2/\text{NDF}$ : 539701.7/22

Left In: 110.173+/-0.019  $\chi^2/\text{NDF}$ : 246967.7/22

Left: 109.189+/-0.013  $\chi^2/\text{NDF}$ : 582969.0/47

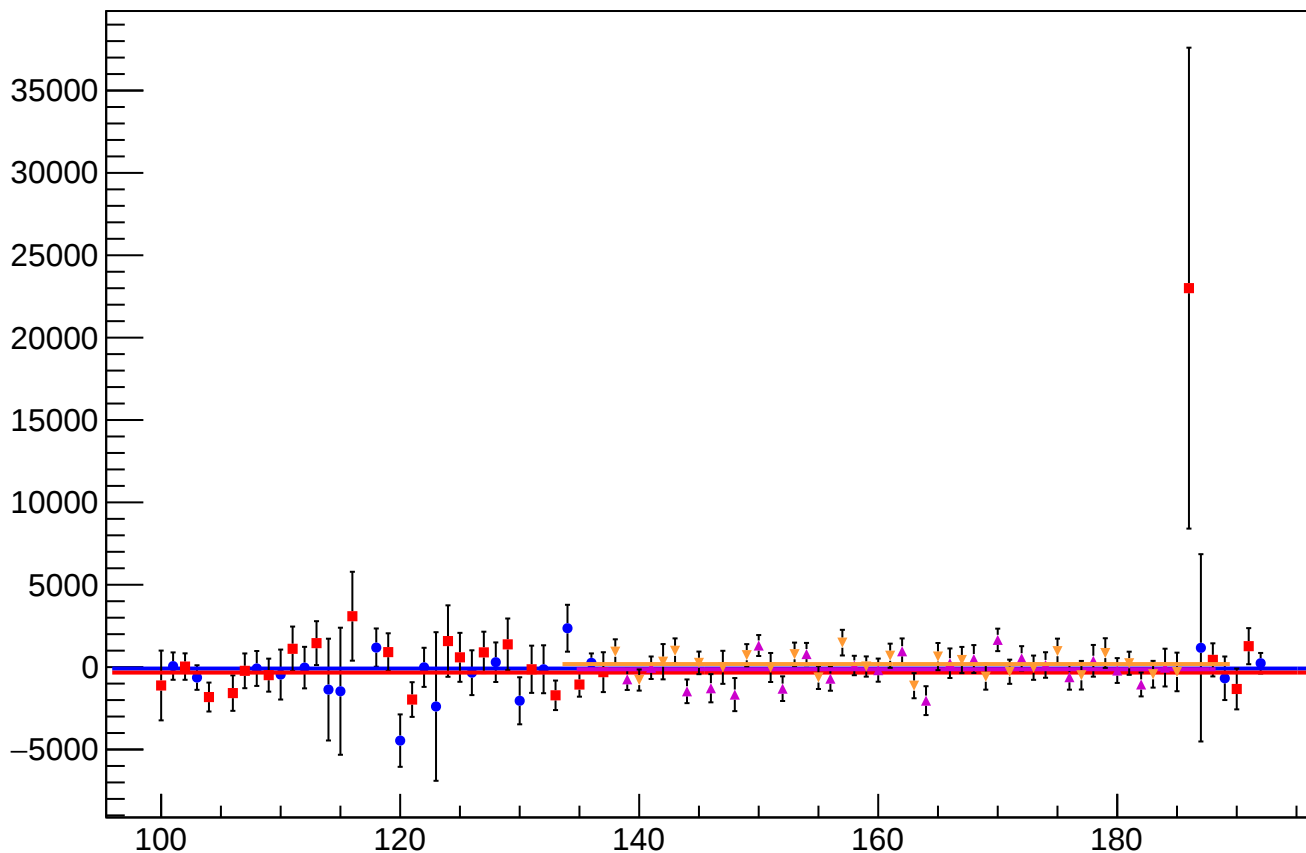
Right: 92.426+/-0.016  $\chi^2/\text{NDF}$ : 643910.2/42

In: 103.532+/-0.015  $\chi^2/\text{NDF}$ : 668891.4/42

Out: 101.639+/-0.014  $\chi^2/\text{NDF}$ : 1215985.5/47

All: 102.539+/-0.010  $\chi^2/\text{NDF}$ : 1893739.9/90

asym\_sam\_15\_dd\_correction\_mean vs Slug, Sign Corrected



Right In:  $-87.254 \pm 248.470$   $\chi^2/\text{NDF}$ : 15.8/19

Left Out:  $185.392 \pm 153.683$   $\chi^2/\text{NDF}$ : 18.4/24

Right Out:  $-332.053 \pm 241.156$   $\chi^2/\text{NDF}$ : 25.3/22

Left In:  $-128.782 \pm 157.155$   $\chi^2/\text{NDF}$ : 36.2/22

Left:  $31.814 \pm 109.877$   $\chi^2/\text{NDF}$ : 56.6/47

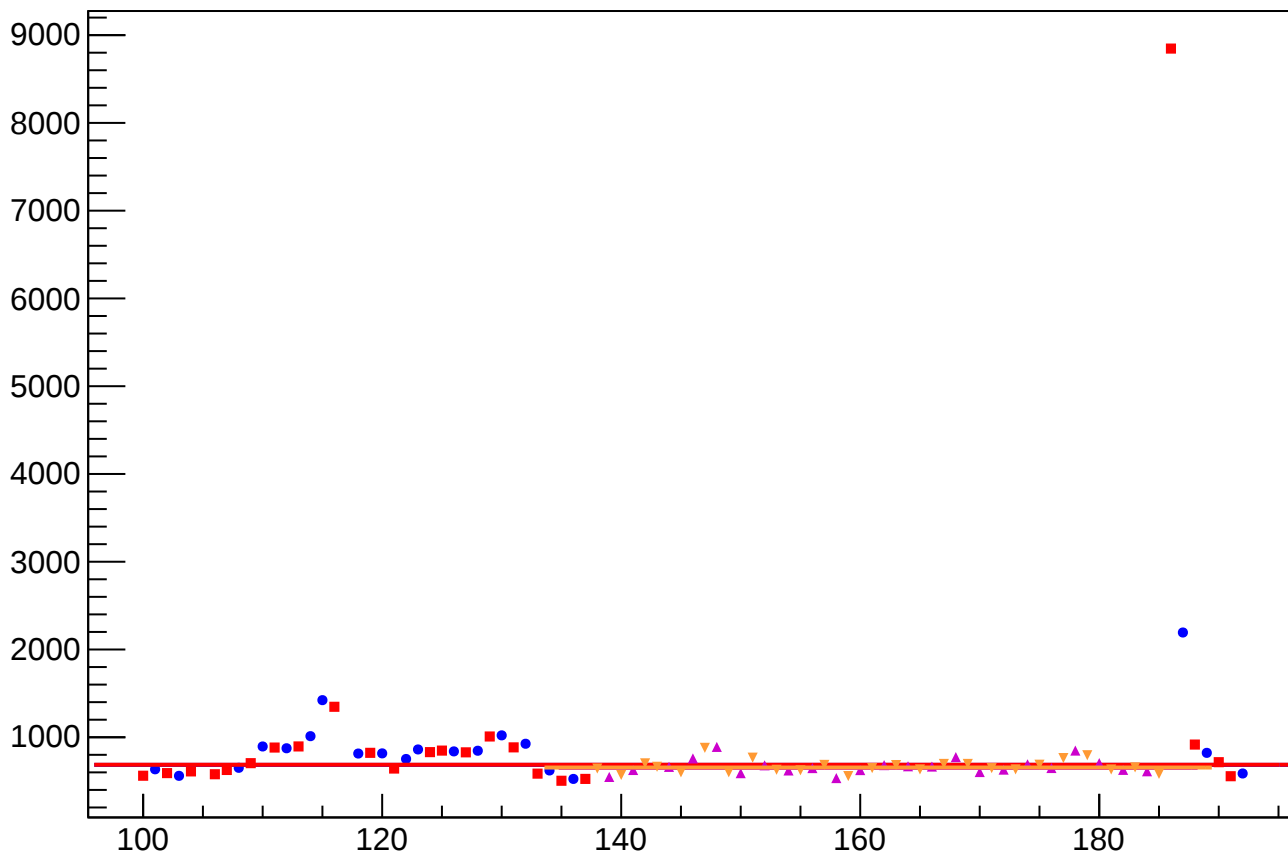
Right:  $-213.310 \pm 173.051$   $\chi^2/\text{NDF}$ : 41.6/42

In:  $-116.916 \pm 132.818$   $\chi^2/\text{NDF}$ : 52.0/42

Out:  $35.942 \pm 129.603$   $\chi^2/\text{NDF}$ : 47.0/47

All:  $-38.614 \pm 92.759$   $\chi^2/\text{NDF}$ : 99.7/90

asym\_sam\_15\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 685.134+/-0.176  $\chi^2/\text{NDF}$ : 891848.7/19

Left Out: 655.155+/-0.109  $\chi^2/\text{NDF}$ : 367349.8/24

Right Out: 686.933+/-0.171  $\chi^2/\text{NDF}$ : 1443142.6/22

Left In: 650.883+/-0.111  $\chi^2/\text{NDF}$ : 466116.8/22

Left: 653.067+/-0.078  $\chi^2/\text{NDF}$ : 834222.1/47

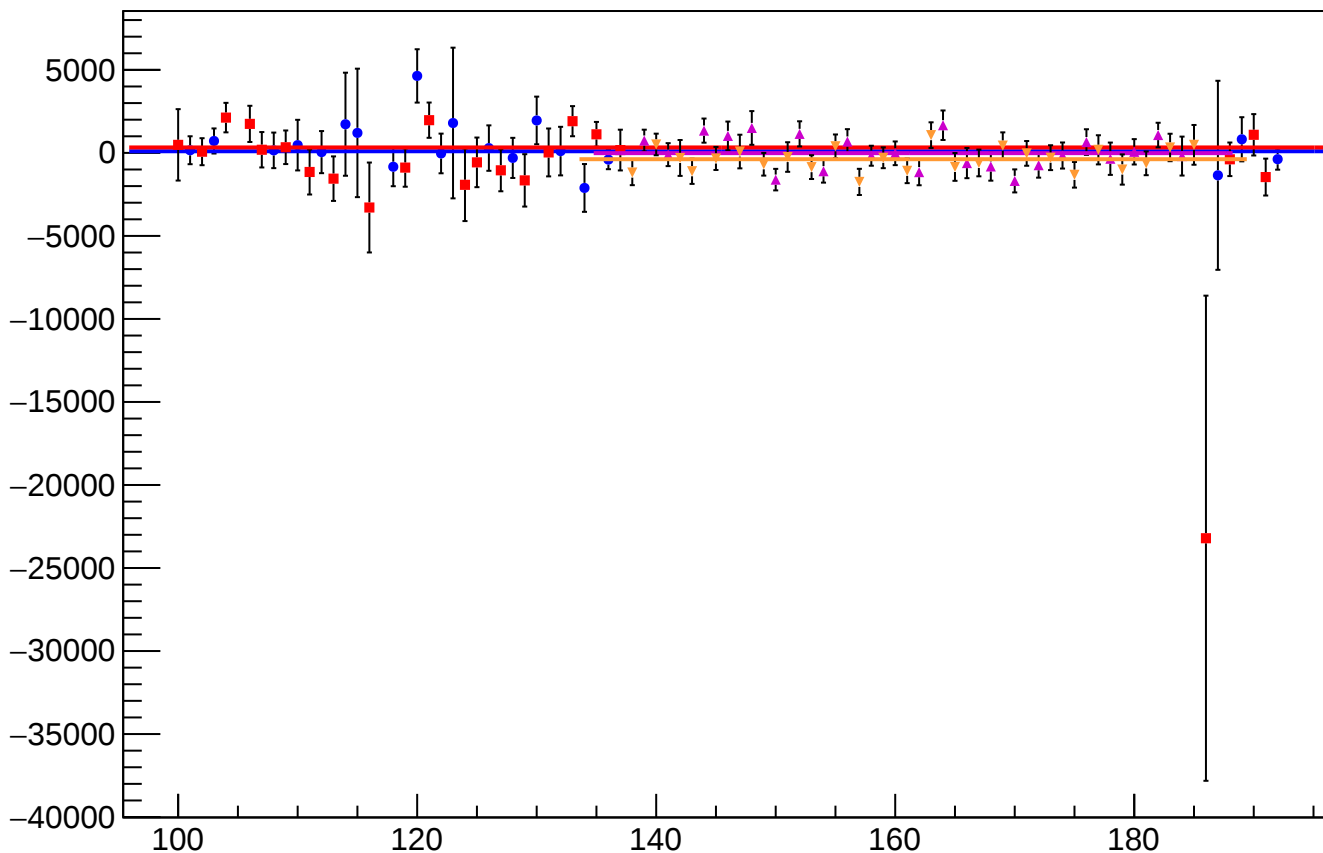
Right: 686.060+/-0.122  $\chi^2/\text{NDF}$ : 2335045.2/42

In: 660.670+/-0.094  $\chi^2/\text{NDF}$ : 1385109.6/42

Out: 664.333+/-0.092  $\chi^2/\text{NDF}$ : 1835189.8/47

All: 662.546+/-0.066  $\chi^2/\text{NDF}$ : 3221079.0/90

# asym\_sam\_15\_dd\_mean vs Slug, Sign Corrected



Right In:  $98.673 \pm 251.066$   $\chi^2/\text{NDF}: 15.7/19$

Left Out:  $-379.470 \pm 155.892$   $\chi^2/\text{NDF}: 18.8/24$

Right Out:  $328.416 \pm 243.585$   $\chi^2/\text{NDF}: 28.8/22$

Left In:  $-14.768 \pm 159.513$   $\chi^2/\text{NDF}: 37.2/22$

Left:  $-201.306 \pm 111.491$   $\chi^2/\text{NDF}: 58.7/47$

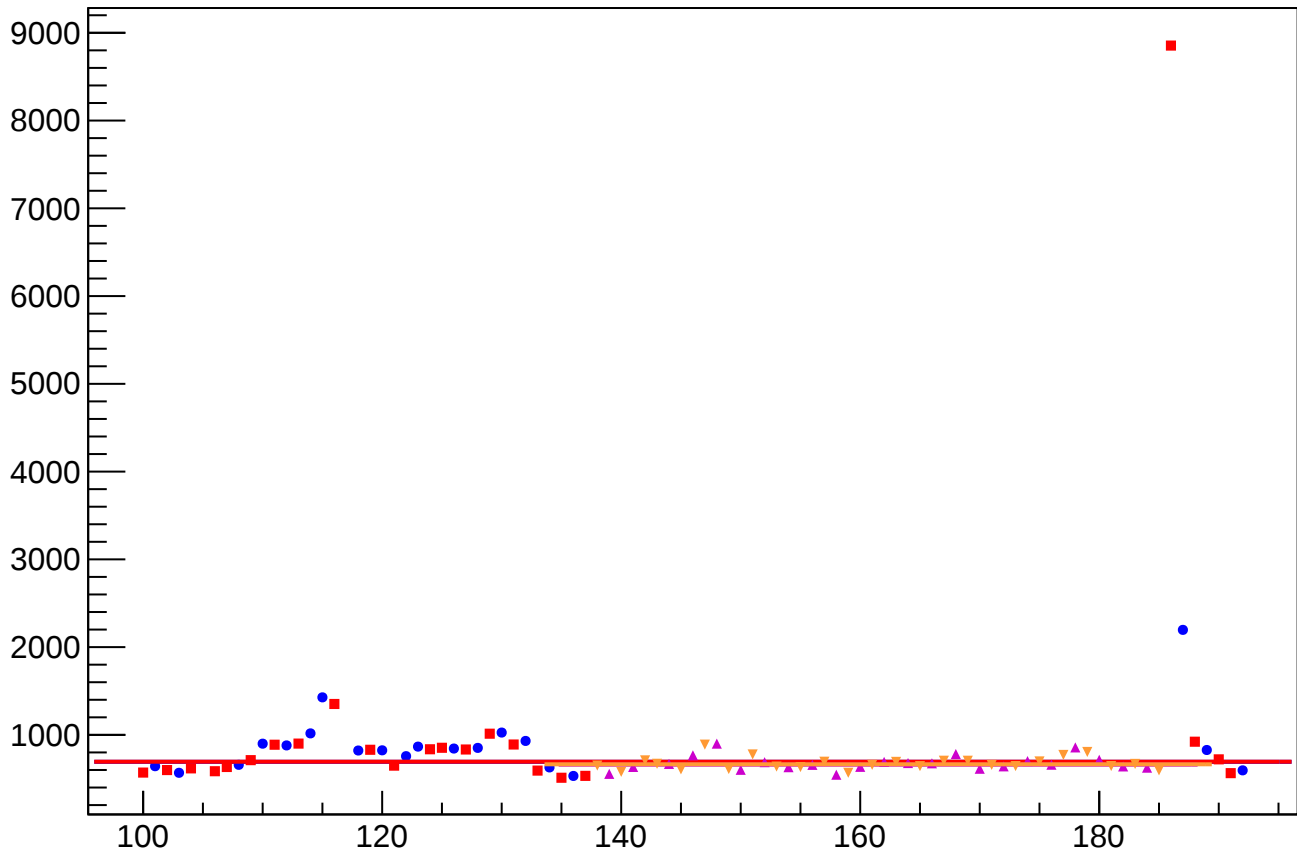
Right:  $217.018 \pm 174.826$   $\chi^2/\text{NDF}: 44.9/42$

In:  $17.855 \pm 134.637$   $\chi^2/\text{NDF}: 53.0/42$

Out:  $-173.777 \pm 131.304$   $\chi^2/\text{NDF}: 53.6/47$

All:  $-80.363 \pm 94.002$   $\chi^2/\text{NDF}: 107.7/90$

# asym\_sam\_15\_dd\_rms vs Slug, Sign Corrected



Right In: 692.885+/-0.178  $\chi^2/\text{NDF}$ : 870190.7/19

Left Out: 664.773+/-0.110  $\chi^2/\text{NDF}$ : 357053.8/24

Right Out: 694.481+/-0.172  $\chi^2/\text{NDF}$ : 1421060.0/22

Left In: 660.890+/-0.113  $\chi^2/\text{NDF}$ : 449180.0/22

Left: 662.876+/-0.079  $\chi^2/\text{NDF}$ : 806839.8/47

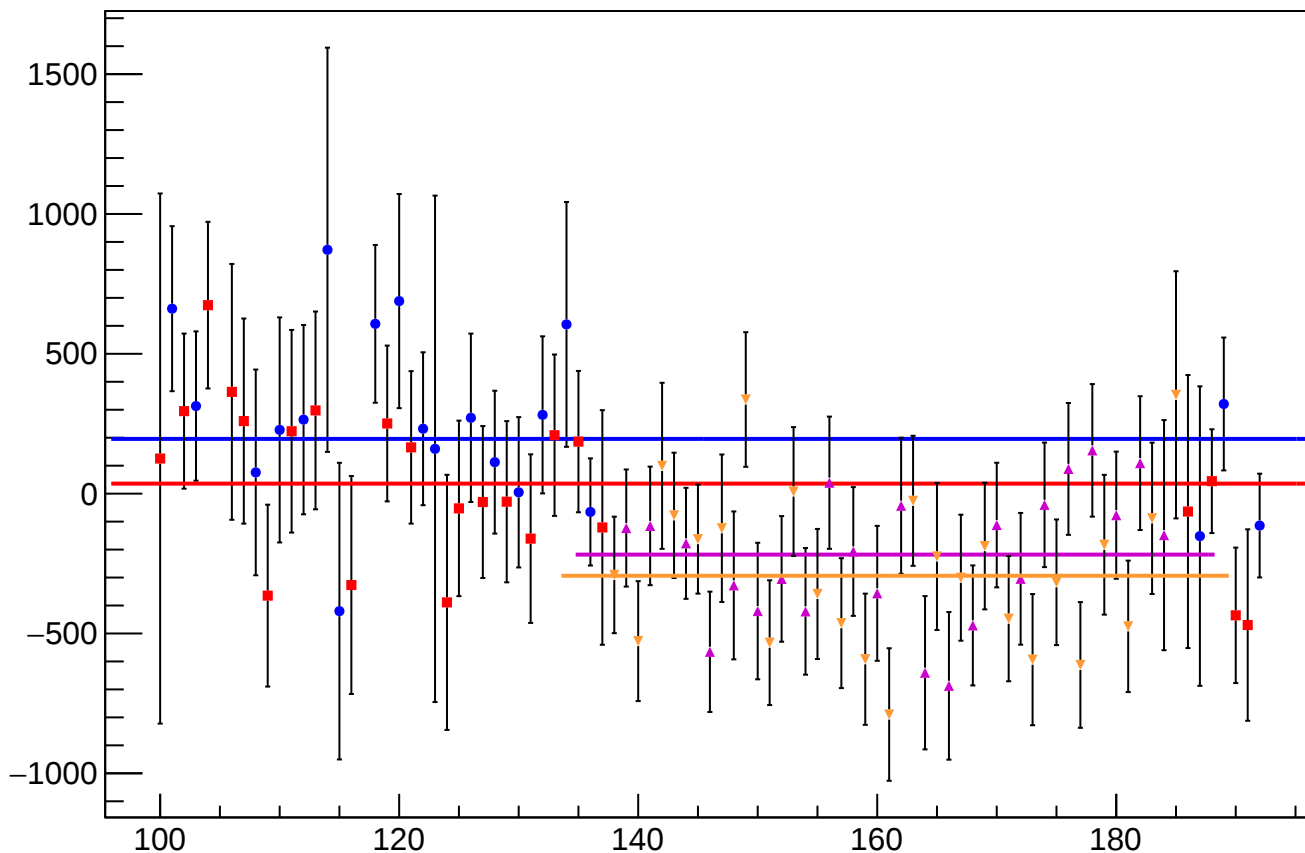
Right: 693.707+/-0.124  $\chi^2/\text{NDF}$ : 2291292.4/42

In: 670.091+/-0.095  $\chi^2/\text{NDF}$ : 1342509.8/42

Out: 673.405+/-0.093  $\chi^2/\text{NDF}$ : 1799220.1/47

All: 671.790+/-0.066  $\chi^2/\text{NDF}$ : 3142350.9/90

reg\_asym\_sam\_26\_dd\_mean vs Slug, Sign Corrected



Right In: 195.754 $\pm$ 66.976  $\chi^2$ /NDF: 15.9/19

Left Out: -293.590 $\pm$ 47.203  $\chi^2$ /NDF:30.3/24

Right Out: 35.878 $\pm$ 64.637  $\chi^2$ /NDF: 18.7/22

Left In: -217.964 $\pm$ 48.819  $\chi^2$ /NDF:21.3/22

Left: -257.050 $\pm$ 33.934  $\chi^2$ /NDF: 52.9/47

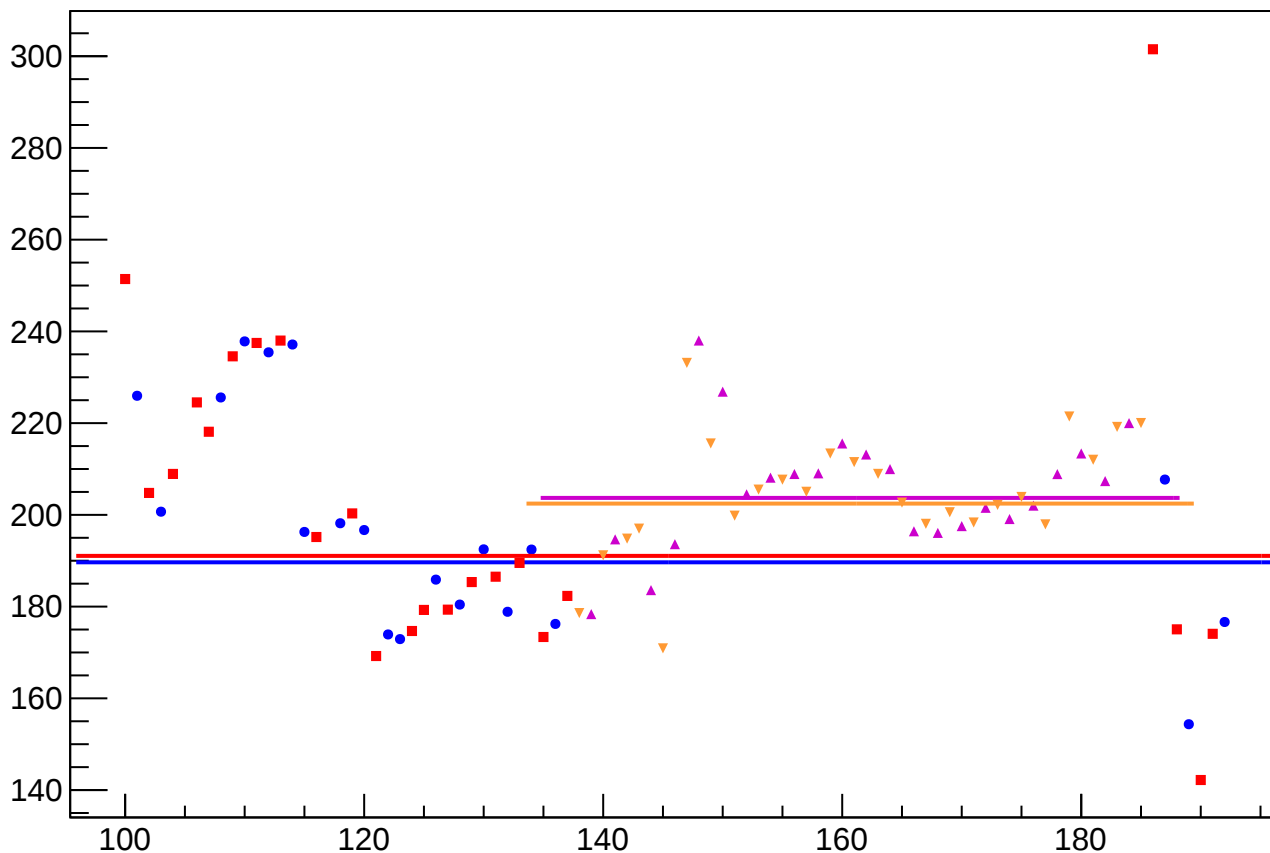
Right: 112.975 $\pm$ 46.510  $\chi^2$ /NDF: 37.5/42

In: -74.422 $\pm$ 39.451  $\chi^2$ /NDF:62.1/42

Out: -178.997 $\pm$ 38.120  $\chi^2$ /NDF:66.0/47

All: -128.504 $\pm$ 27.413  $\chi^2$ /NDF: 131.7/90

reg\_asym\_sam\_26\_dd\_rms vs Slug, Sign Corrected



Right In: 189.655 $\pm$ 0.047  $\chi^2$ /NDF: 209065.0/19

Left Out: 202.459 $\pm$ 0.033  $\chi^2$ /NDF:158582.3/24

Right Out: 191.059 $\pm$ 0.046  $\chi^2$ /NDF: 385648.3/22

Left In: 203.699 $\pm$ 0.035  $\chi^2$ /NDF:136193.4/22

Left: 203.058 $\pm$ 0.024  $\chi^2$ /NDF: 295442.7/47

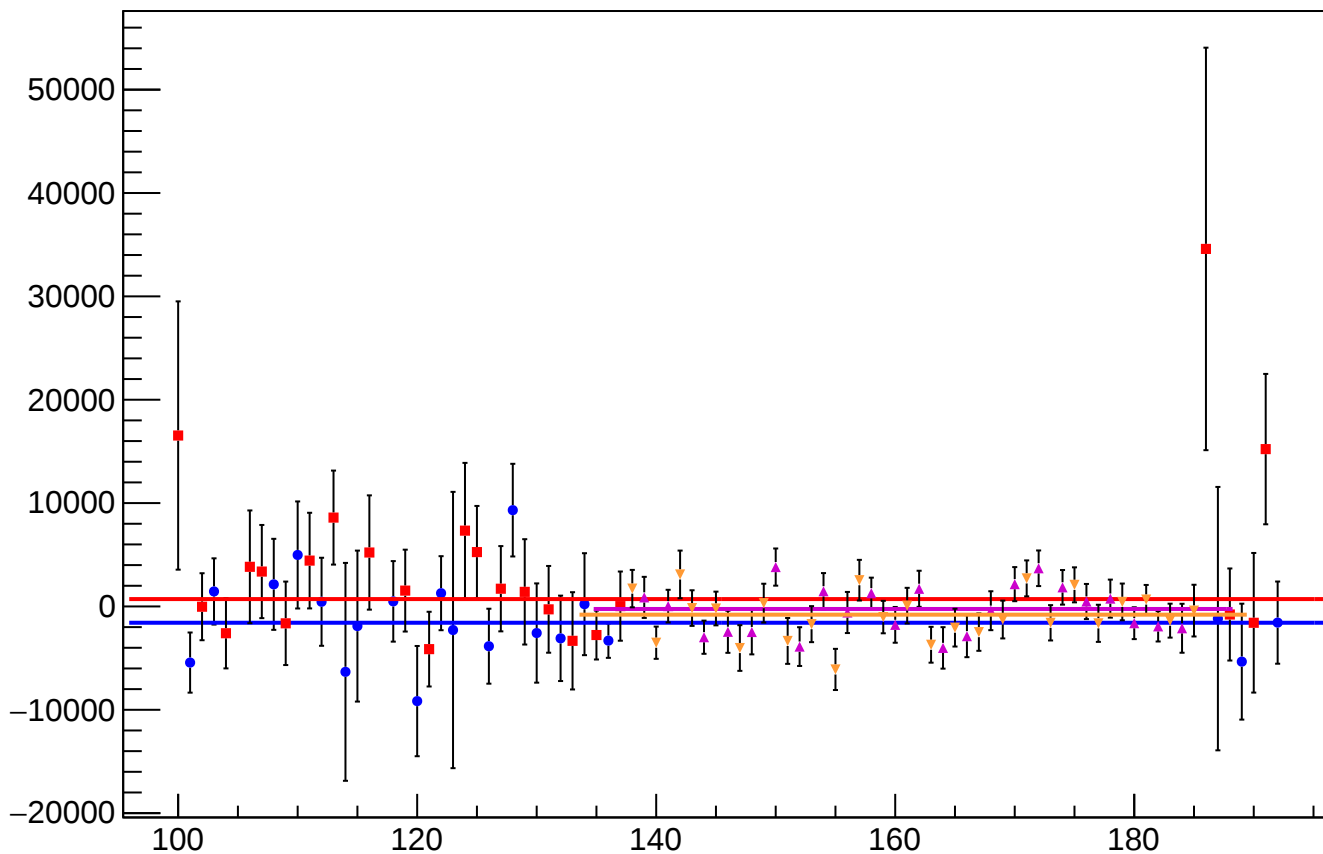
Right: 190.382 $\pm$ 0.033  $\chi^2$ /NDF: 595167.9/42

In: 198.826 $\pm$ 0.028  $\chi^2$ /NDF:402679.8/42

Out: 198.493 $\pm$ 0.027  $\chi^2$ /NDF:584805.1/47

All: 198.654 $\pm$ 0.019  $\chi^2$ /NDF: 987558.6/90

asym\_sam\_26\_dd\_correction\_mean vs Slug, Sign Corrected



Right In:  $-1577.744 \pm 876.371$   $\chi^2/\text{NDF}: 16.5/19$

Left Out:  $-796.528 \pm 357.851$   $\chi^2/\text{NDF}: 35.7/24$

Right Out:  $712.554 \pm 900.212$   $\chi^2/\text{NDF}: 22.0/22$

Left In:  $-245.102 \pm 369.846$   $\chi^2/\text{NDF}: 35.7/22$

Left:  $-529.902 \pm 257.175$   $\chi^2/\text{NDF}: 72.6/47$

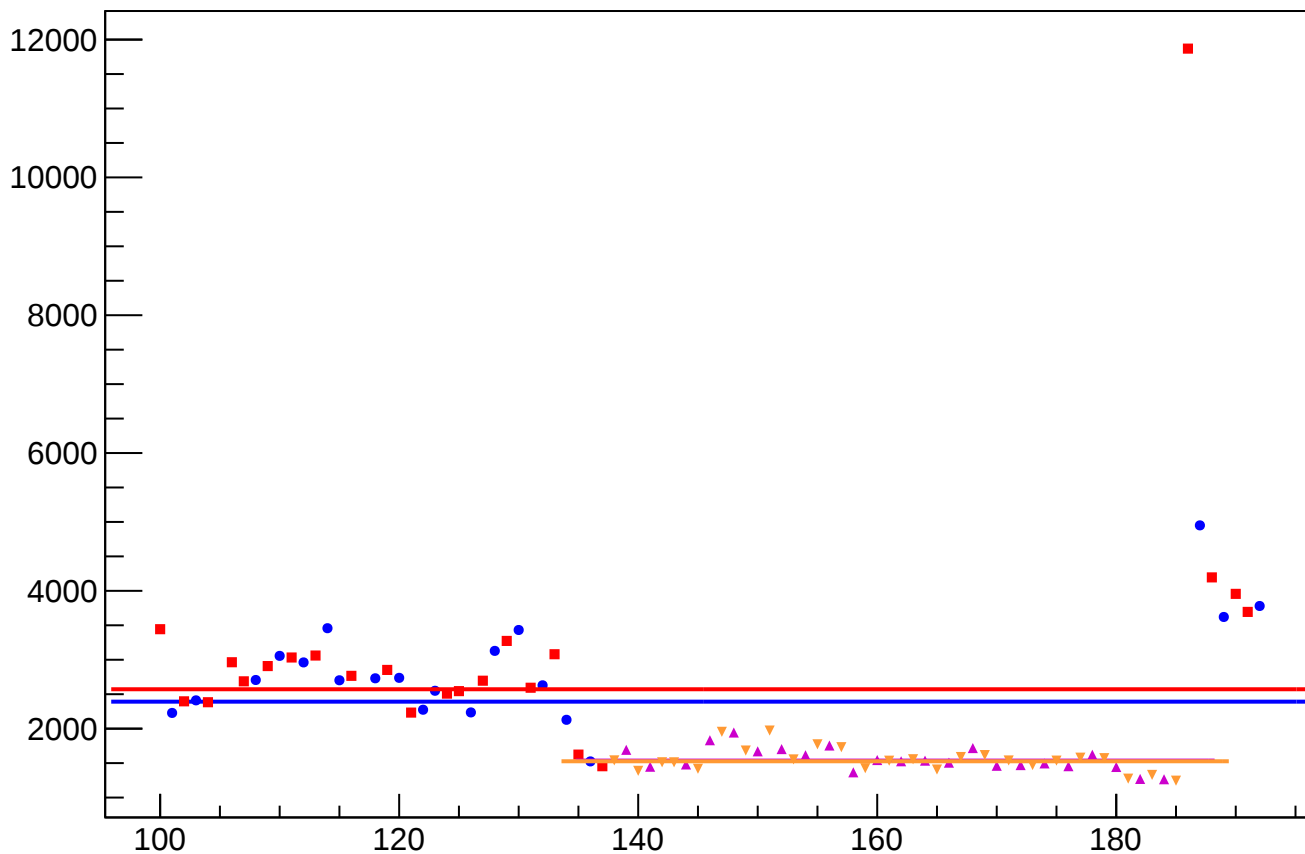
Right:  $-463.325 \pm 627.947$   $\chi^2/\text{NDF}: 41.8/42$

In:  $-446.566 \pm 340.745$   $\chi^2/\text{NDF}: 54.1/42$

Out:  $-590.602 \pm 332.540$   $\chi^2/\text{NDF}: 60.2/47$

All:  $-520.339 \pm 237.989$   $\chi^2/\text{NDF}: 114.4/90$

asym\_sam\_26\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 2391.769+/-0.620  $\chi^2/\text{NDF}$ : 1261435.0/19

Left Out: 1526.712+/-0.253  $\chi^2/\text{NDF}$ : 394892.7/24

Right Out: 2571.784+/-0.637  $\chi^2/\text{NDF}$ : 1579970.3/22

Left In: 1536.538+/-0.262  $\chi^2/\text{NDF}$ : 350373.3/22

Left: 1531.463+/-0.182  $\chi^2/\text{NDF}$ : 745995.2/47

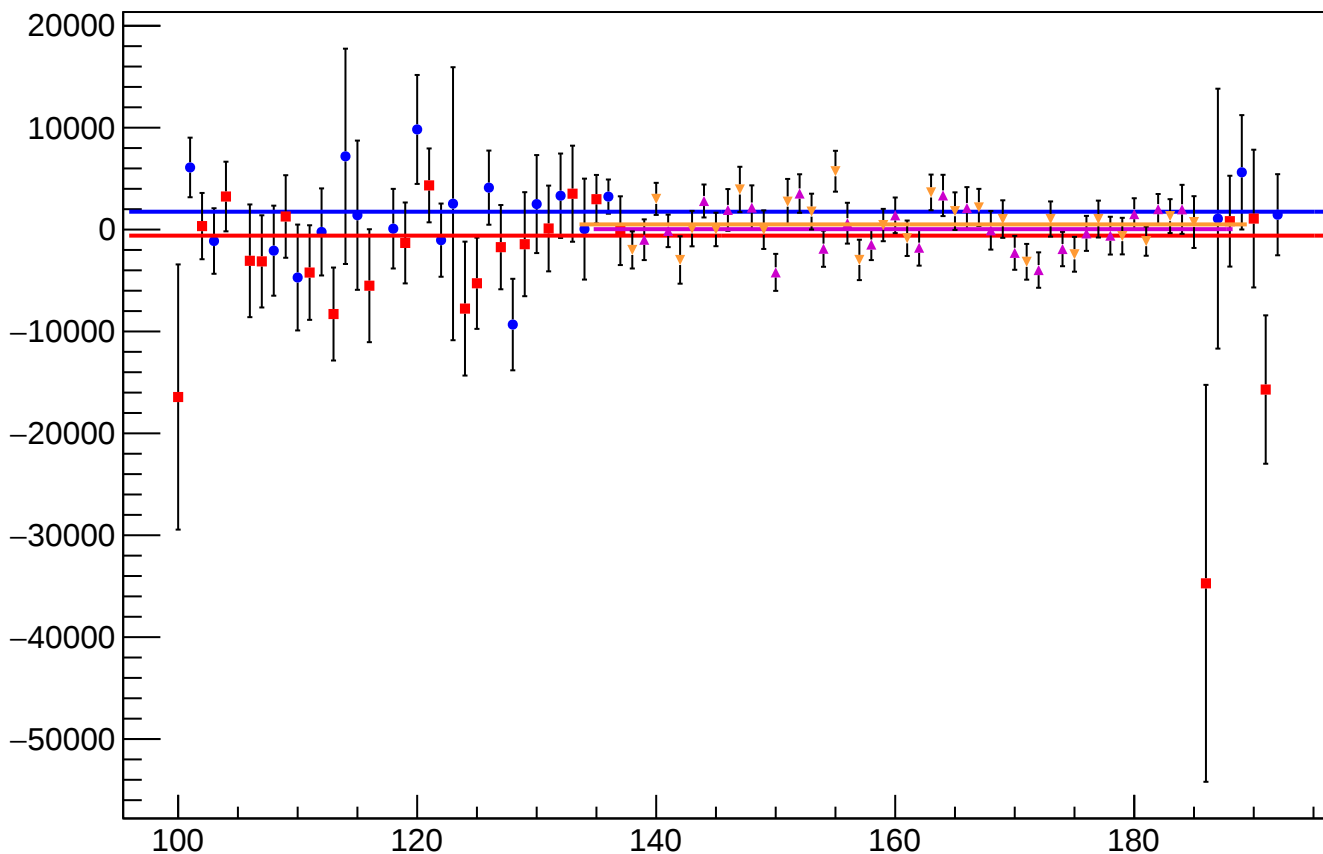
Right: 2479.362+/-0.444  $\chi^2/\text{NDF}$ : 2882466.2/42

In: 1665.829+/-0.241  $\chi^2/\text{NDF}$ : 3228544.0/42

Out: 1669.320+/-0.235  $\chi^2/\text{NDF}$ : 4302508.3/47

All: 1667.617+/-0.168  $\chi^2/\text{NDF}$ : 7531159.8/90

# asym\_sam\_26\_dd\_mean vs Slug, Sign Corrected



Right In: 1752.598 $\pm$ 880.013  $\chi^2$ /NDF: 16.9/19

Left Out: 507.982 $\pm$ 361.172  $\chi^2$ /NDF:35.4/24

Right Out: -594.546 $\pm$ 903.667  $\chi^2$ /NDF: 22.7/22

Left In: 40.080 $\pm$ 373.261  $\chi^2$ /NDF:33.6/22

Left: 281.730 $\pm$ 259.556  $\chi^2$ /NDF: 69.8/47

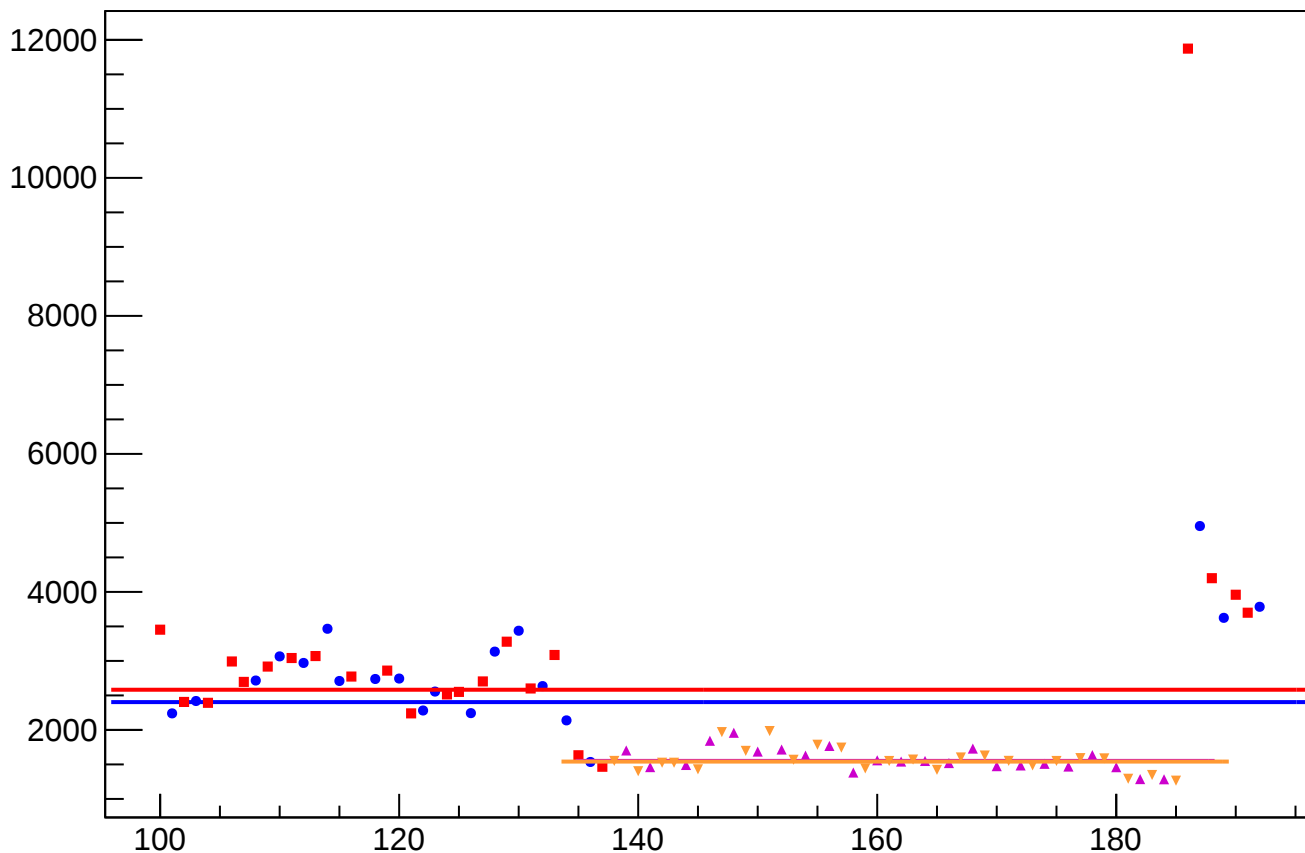
Right: 610.147 $\pm$ 630.460  $\chi^2$ /NDF: 43.0/42

In: 301.196 $\pm$ 343.628  $\chi^2$ /NDF:53.7/42

Out: 356.122 $\pm$ 335.378  $\chi^2$ /NDF:59.3/47

All: 329.327 $\pm$ 240.012  $\chi^2$ /NDF: 113.0/90

# asym\_sam\_26\_dd\_rms vs Slug, Sign Corrected



Right In: 2403.180+/-0.622  $\chi^2/\text{NDF}$ : 1244497.3/19

Left Out: 1541.258+/-0.255  $\chi^2/\text{NDF}$ : 382045.4/24

Right Out: 2582.317+/-0.639  $\chi^2/\text{NDF}$ : 1566615.8/22

Left In: 1551.063+/-0.264  $\chi^2/\text{NDF}$ : 338898.9/22

Left: 1546.000+/-0.184  $\chi^2/\text{NDF}$ : 721657.1/47

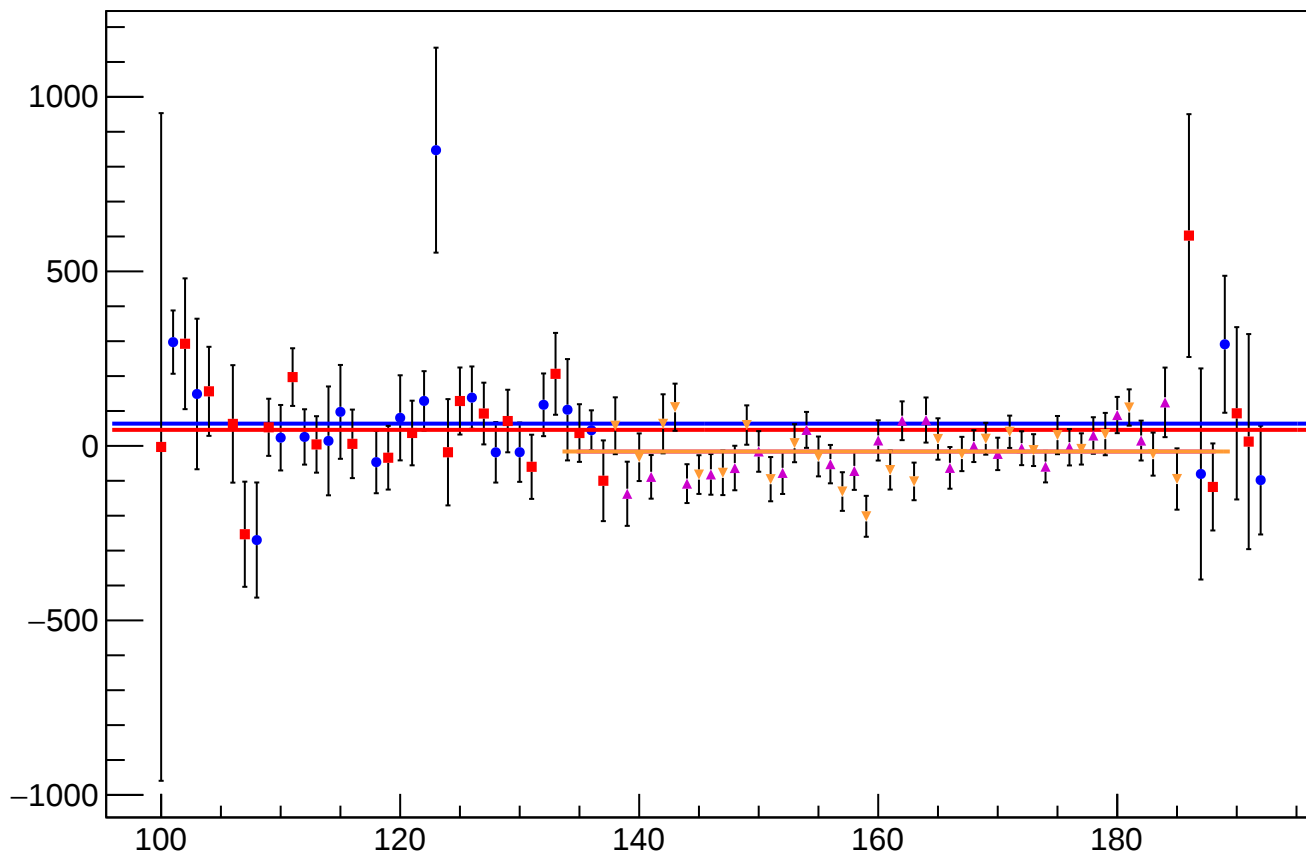
Right: 2490.373+/-0.446  $\chi^2/\text{NDF}$ : 2851451.4/42

In: 1680.990+/-0.243  $\chi^2/\text{NDF}$ : 3172683.7/42

Out: 1684.651+/-0.237  $\chi^2/\text{NDF}$ : 4237434.4/47

All: 1682.865+/-0.170  $\chi^2/\text{NDF}$ : 7410234.4/90

reg\_asym\_sam\_37\_dd\_mean vs Slug, Sign Corrected



Right In: 63.763+/-23.285  $\chi^2/\text{NDF}$ : 26.4/19

Left Out: -16.049+/-11.340  $\chi^2/\text{NDF}$ : 39.7/24

Right Out: 45.931+/-23.093  $\chi^2/\text{NDF}$ : 21.4/22

Left In: -16.162+/-11.649  $\chi^2/\text{NDF}$ : 25.2/22

Left: -16.104+/-8.126  $\chi^2/\text{NDF}$ : 64.9/47

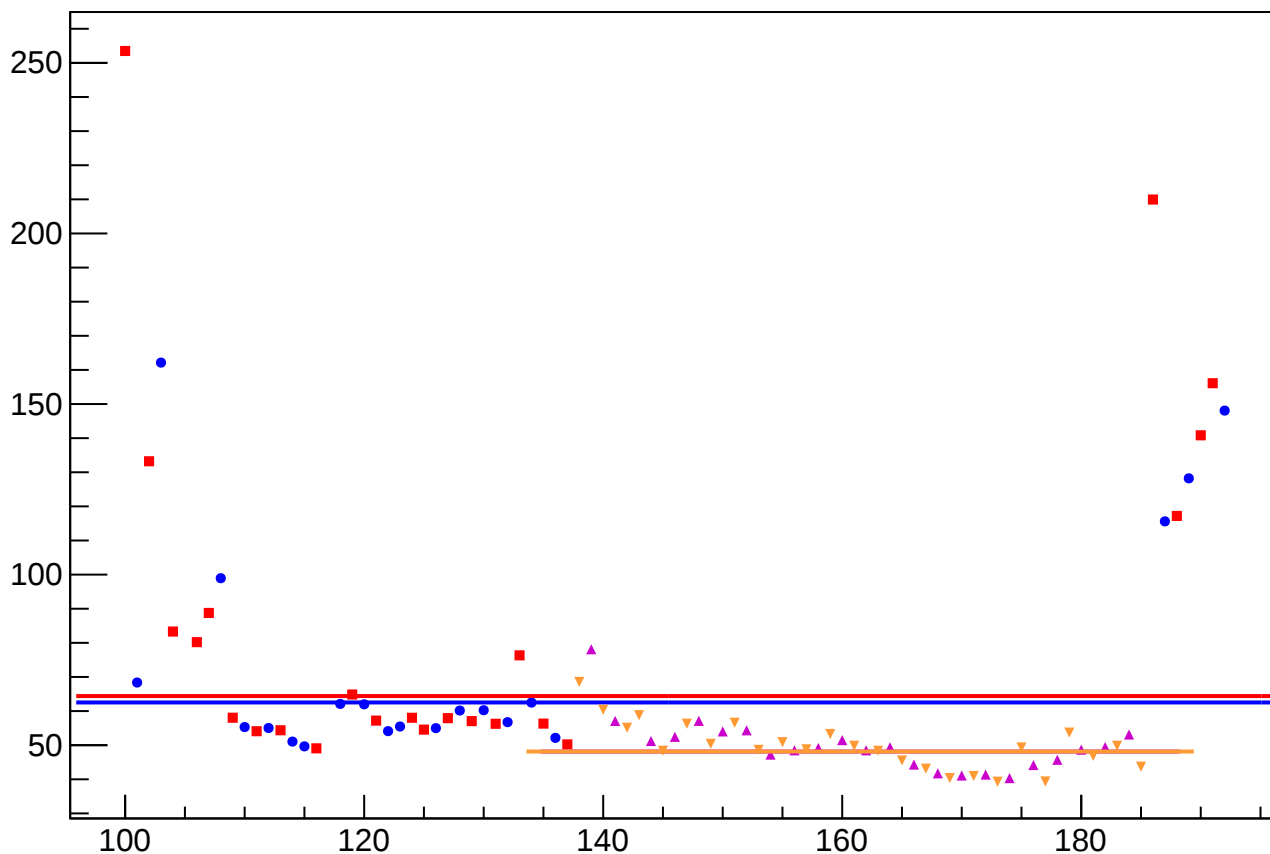
Right: 54.773+/-16.397  $\chi^2/\text{NDF}$ : 48.1/42

In: -0.161+/-10.418  $\chi^2/\text{NDF}$ : 61.1/42

Out: -4.008+/-10.179  $\chi^2/\text{NDF}$ : 66.9/47

All: -2.129+/-7.281  $\chi^2/\text{NDF}$ : 128.0/90

reg\_asym\_sam\_37\_dd\_rms vs Slug, Sign Corrected



Right In: 62.525+/-0.016  $\chi^2/\text{NDF}$ : 1592154.6/19

Left Out: 48.141+/-0.008  $\chi^2/\text{NDF}$ : 655250.3/24

Right Out: 64.398+/-0.016  $\chi^2/\text{NDF}$ : 1808219.0/22

Left In: 48.139+/-0.008  $\chi^2/\text{NDF}$ : 575025.5/22

Left: 48.140+/-0.006  $\chi^2/\text{NDF}$ : 1230275.9/47

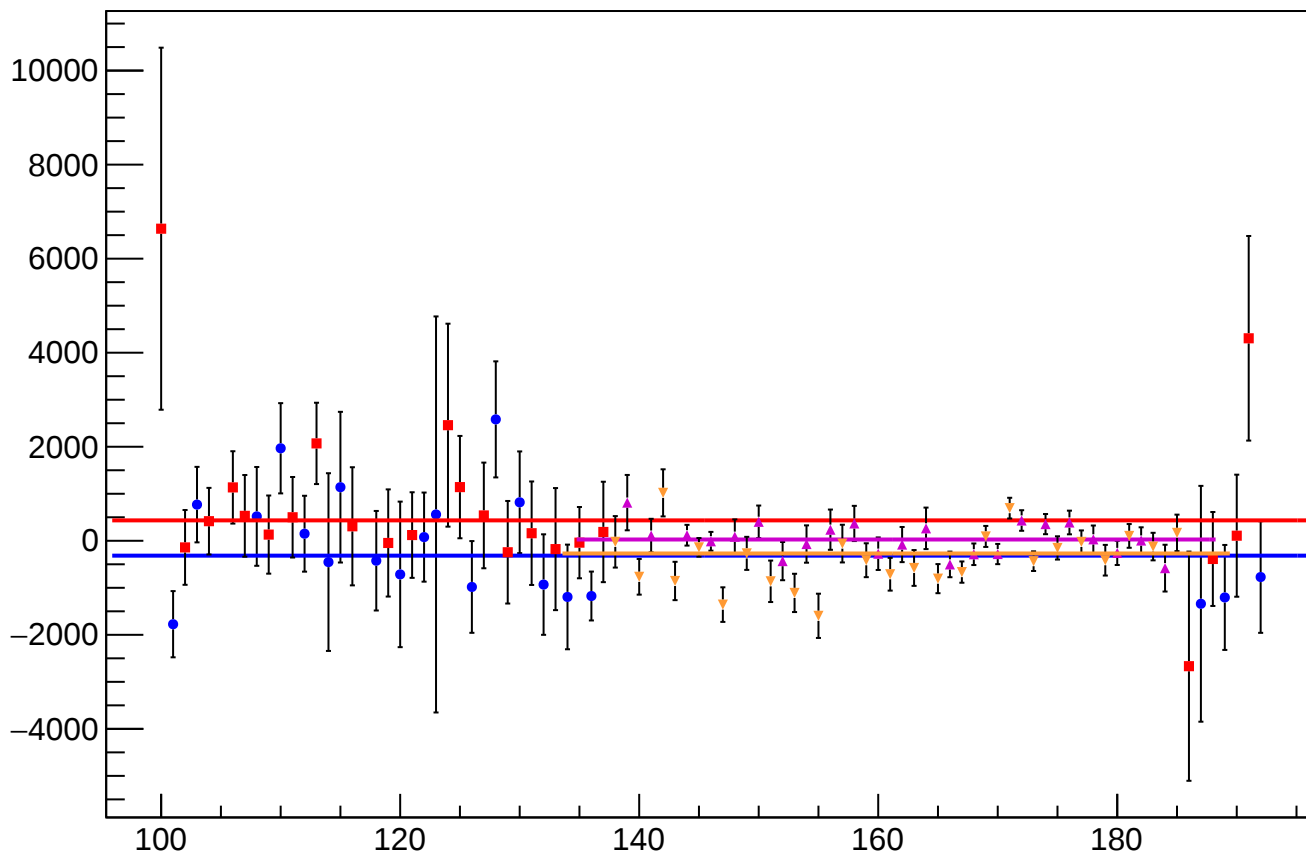
Right: 63.469+/-0.012  $\chi^2/\text{NDF}$ : 3406899.8/42

In: 51.019+/-0.007  $\chi^2/\text{NDF}$ : 2777733.3/42

Out: 51.299+/-0.007  $\chi^2/\text{NDF}$ : 3262101.0/47

All: 51.162+/-0.005  $\chi^2/\text{NDF}$ : 6040574.4/90

asym\_sam\_37\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: -316.195+/-224.382  $\chi^2/\text{NDF}$ : 25.6/19

Left Out: -270.214+/-60.177  $\chi^2/\text{NDF}$ : 70.1/24

Right Out: 433.966+/-212.622  $\chi^2/\text{NDF}$ : 15.9/22

Left In: 27.271+/-60.430  $\chi^2/\text{NDF}$ : 25.1/22

Left: -122.095+/-42.641  $\chi^2/\text{NDF}$ : 107.3/47

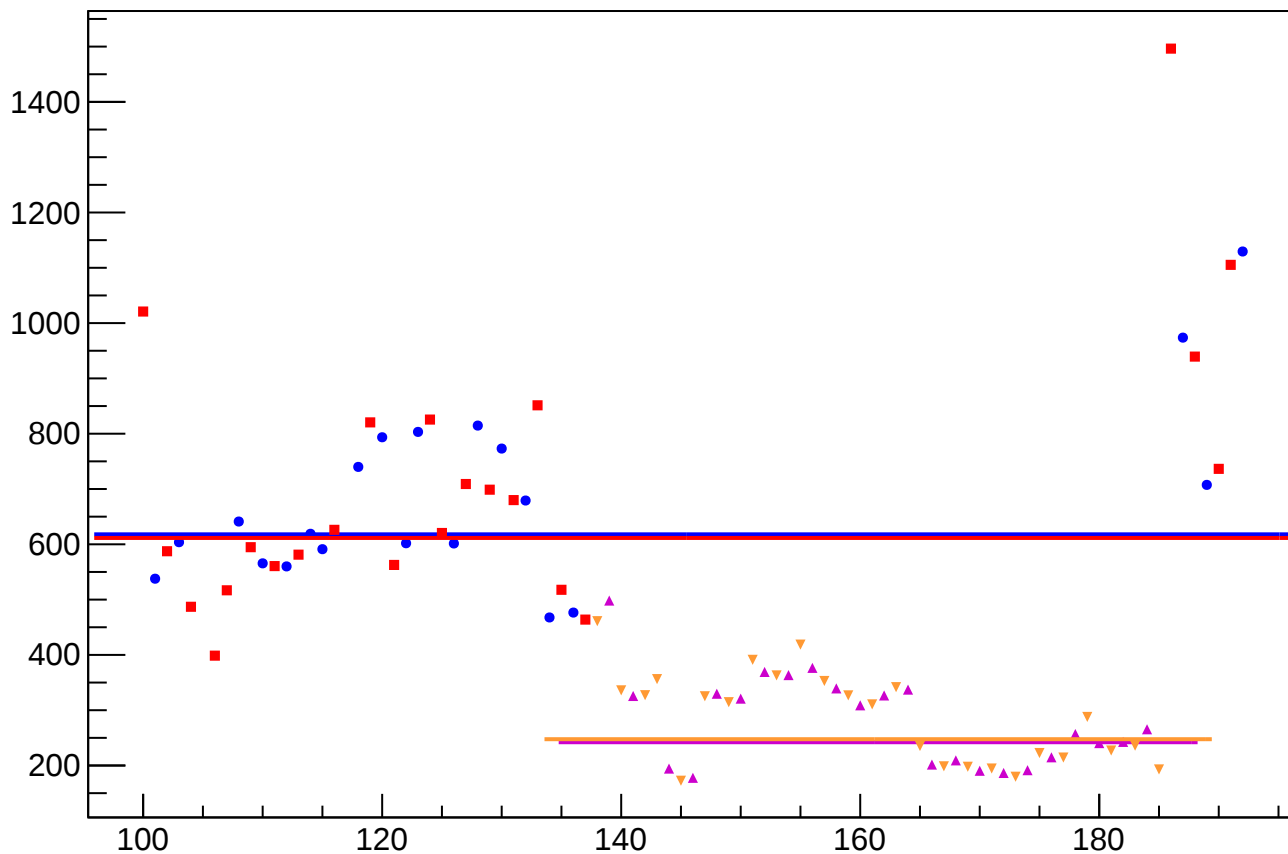
Right: 79.058+/-154.336  $\chi^2/\text{NDF}$ : 47.4/42

In: 4.044+/-58.351  $\chi^2/\text{NDF}$ : 52.8/42

Out: -217.990+/-57.903  $\chi^2/\text{NDF}$ : 96.2/47

All: -107.829+/-41.101  $\chi^2/\text{NDF}$ : 156.3/90

asym\_sam\_37\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 618.015 $\pm$ 0.159  $\chi^2$ /NDF: 809196.6/19

Left Out: 247.570 $\pm$ 0.043  $\chi^2$ /NDF: 2780931.0/24

Right Out: 611.495 $\pm$ 0.150  $\chi^2$ /NDF: 1139676.8/22

Left In: 242.117 $\pm$ 0.043  $\chi^2$ /NDF: 2466108.9/22

Left: 244.855 $\pm$ 0.030  $\chi^2$ /NDF: 5255218.1/47

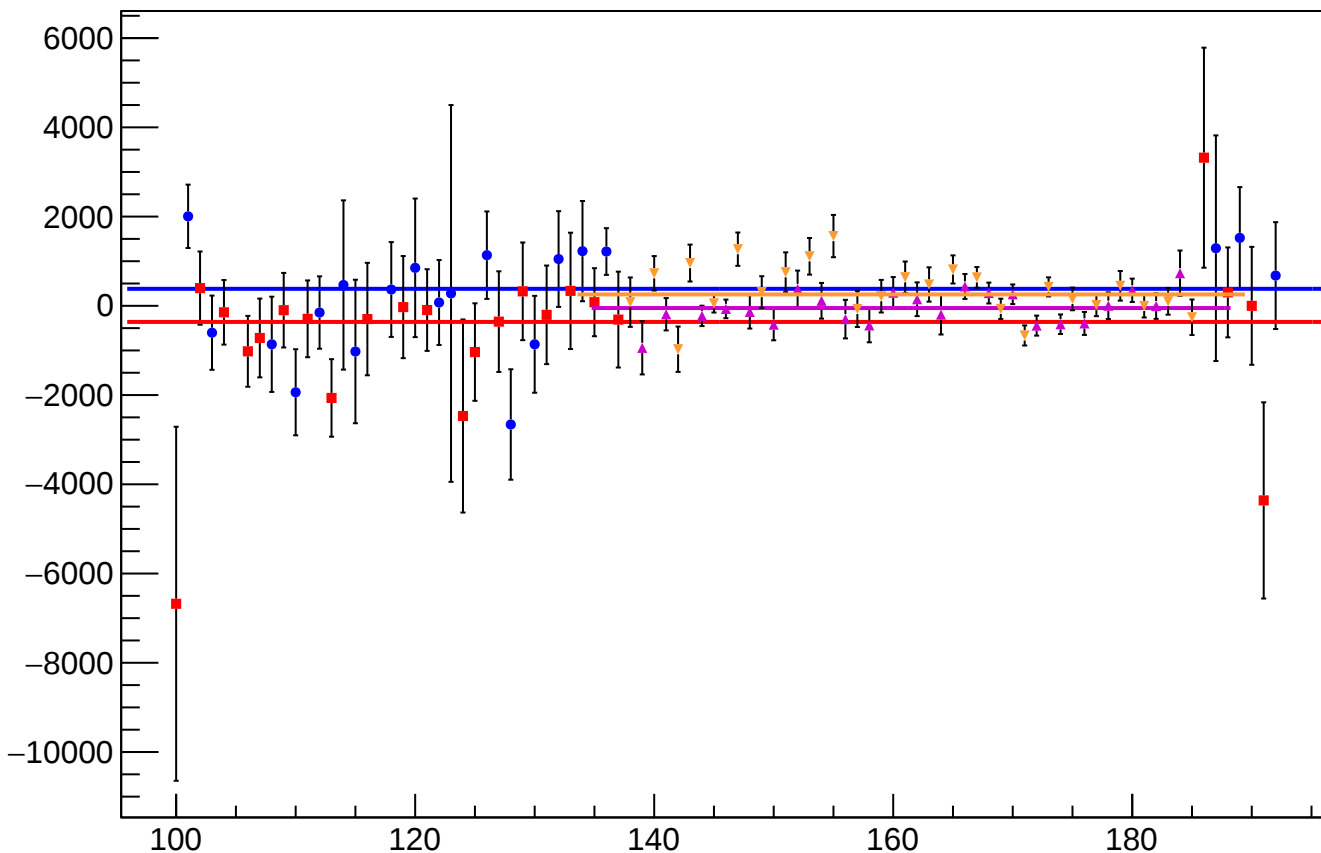
Right: 614.580 $\pm$ 0.109  $\chi^2$ /NDF: 1949763.2/42

In: 267.538 $\pm$ 0.041  $\chi^2$ /NDF: 8508730.9/42

Out: 274.560 $\pm$ 0.041  $\chi^2$ /NDF: 9345269.7/47

All: 271.076 $\pm$ 0.029  $\chi^2$ /NDF: 17868594.8/90

# asym\_sam\_37\_dd\_mean vs Slug, Sign Corrected



Right In: 381.197 $\pm$ 226.380  $\chi^2$ /NDF: 27.8/19

Left Out: 255.995 $\pm$ 61.418  $\chi^2$ /NDF:63.6/24

Right Out: -360.952 $\pm$ 215.067  $\chi^2$ /NDF: 16.9/22

Left In: -49.832 $\pm$ 61.781  $\chi^2$ /NDF:27.5/22

Left: 103.982 $\pm$ 43.557  $\chi^2$ /NDF: 103.4/47

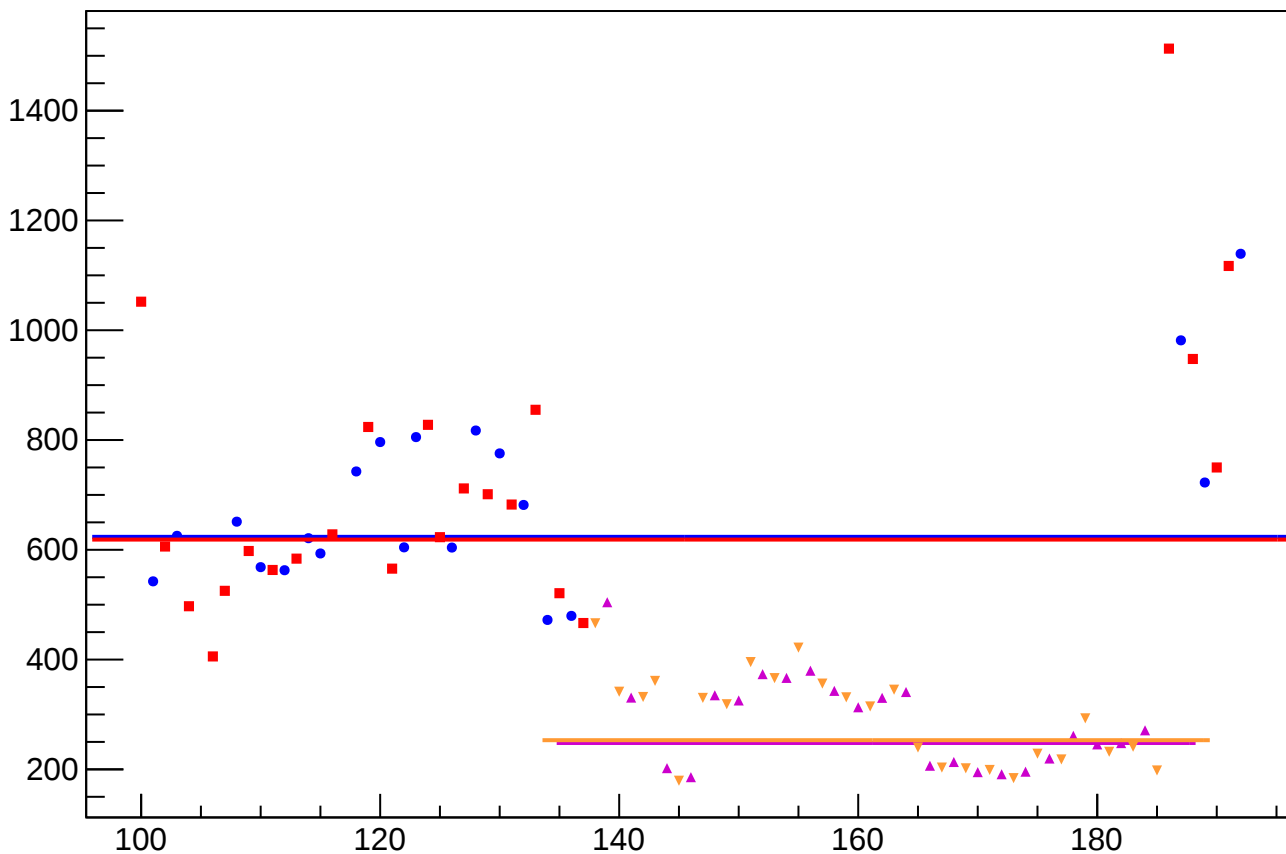
Right: -8.885 $\pm$ 155.921  $\chi^2$ /NDF: 50.3/42

In: -19.954 $\pm$ 59.601  $\chi^2$ /NDF:58.7/42

Out: 209.474 $\pm$ 59.057  $\chi^2$ /NDF:88.1/47

All: 95.812 $\pm$ 41.951  $\chi^2$ /NDF: 154.3/90

# asym\_sam\_37\_dd\_rms vs Slug, Sign Corrected



Right In:  $623.604 \pm 0.160$   $\chi^2/\text{NDF}: 809306.4/19$

Left Out:  $253.137 \pm 0.043$   $\chi^2/\text{NDF}: 2665975.8/24$

Right Out:  $618.613 \pm 0.152$   $\chi^2/\text{NDF}: 1118732.4/22$

Left In:  $248.069 \pm 0.044$   $\chi^2/\text{NDF}: 2343295.0/22$

Left:  $250.618 \pm 0.031$   $\chi^2/\text{NDF}: 5016040.5/47$

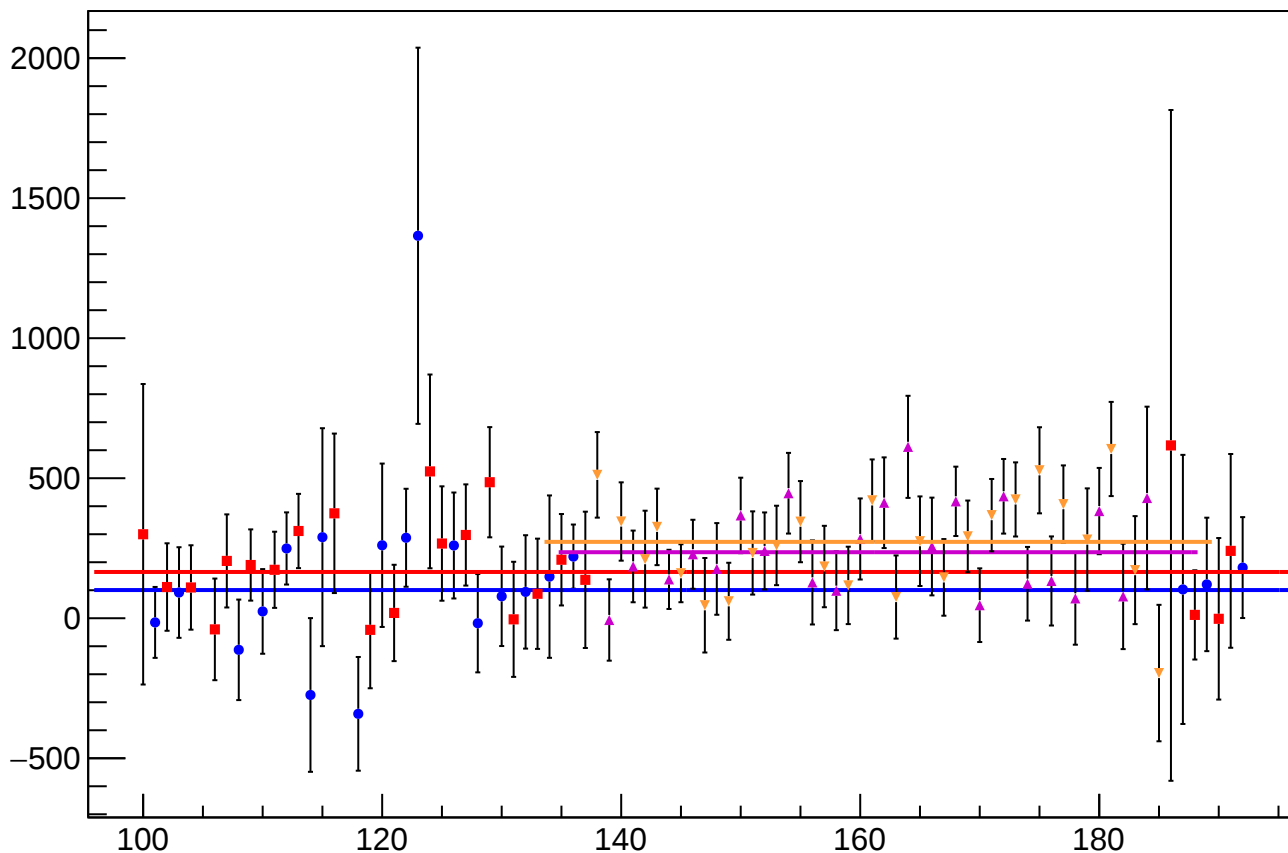
Right:  $620.981 \pm 0.110$   $\chi^2/\text{NDF}: 1928549.7/42$

In:  $274.099 \pm 0.042$   $\chi^2/\text{NDF}: 8274811.2/42$

Out:  $280.696 \pm 0.042$   $\chi^2/\text{NDF}: 9124849.4/47$

All:  $277.428 \pm 0.030$   $\chi^2/\text{NDF}: 17412021.6/90$

reg\_asym\_sam\_48\_dd\_mean vs Slug, Sign Corrected



Right In: 100.655+/-41.390  $\chi^2/\text{NDF}$ : 18.2/19

Left Out: 272.684+/-29.221  $\chi^2/\text{NDF}$ : 27.4/24

Right Out: 165.219+/-39.220  $\chi^2/\text{NDF}$ : 12.0/22

Left In: 235.801+/-30.232  $\chi^2/\text{NDF}$ : 24.6/22

Left: 254.870+/-21.011  $\chi^2/\text{NDF}$ : 52.8/47

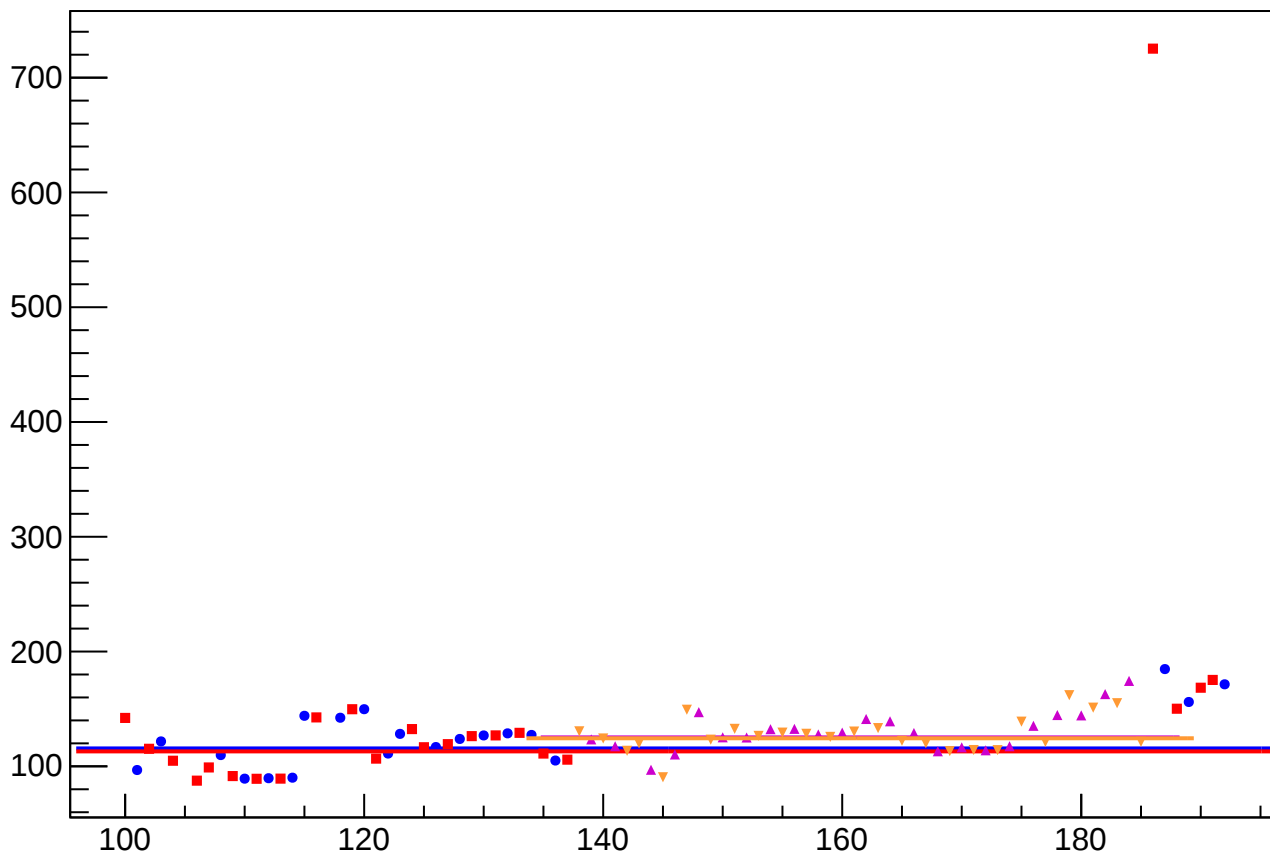
Right: 134.674+/-28.469  $\chi^2/\text{NDF}$ : 31.5/42

In: 188.784+/-24.413  $\chi^2/\text{NDF}$ : 49.7/42

Out: 234.323+/-23.432  $\chi^2/\text{NDF}$ : 44.3/47

All: 212.486+/-16.905  $\chi^2/\text{NDF}$ : 95.8/90

reg\_asym\_sam\_48\_dd\_rms vs Slug, Sign Corrected



Right In: 115.586 $\pm$ 0.029  $\chi^2$ /NDF: 615529.2/19

Left Out: 124.429 $\pm$ 0.021  $\chi^2$ /NDF: 539731.8/24

Right Out: 113.007 $\pm$ 0.028  $\chi^2$ /NDF: 1148625.1/22

Left In: 125.205 $\pm$ 0.021  $\chi^2$ /NDF: 501388.2/22

Left: 124.804 $\pm$ 0.015  $\chi^2$ /NDF: 1041801.9/47

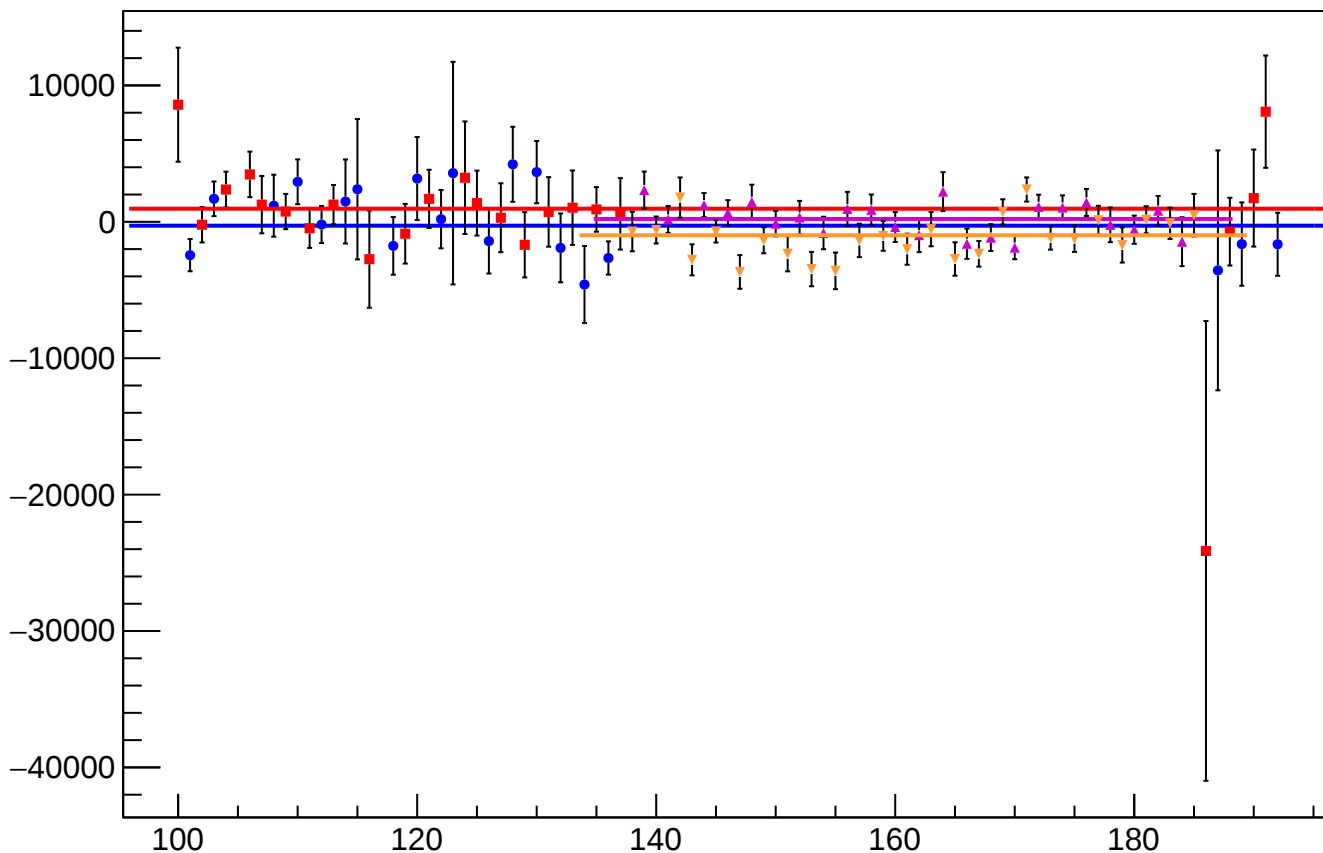
Right: 114.228 $\pm$ 0.020  $\chi^2$ /NDF: 1768245.8/42

In: 121.859 $\pm$ 0.017  $\chi^2$ /NDF: 1187352.7/42

Out: 120.352 $\pm$ 0.017  $\chi^2$ /NDF: 1797422.5/47

All: 121.074 $\pm$ 0.012  $\chi^2$ /NDF: 2988741.9/90

asym\_sam\_48\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: -282.633+/-450.962  $\chi^2/\text{NDF}$ : 25.8/19

Left Out: -982.839+/-218.021  $\chi^2/\text{NDF}$ : 47.2/24

Right Out: 962.581+/-423.763  $\chi^2/\text{NDF}$ : 17.9/22

Left In: 211.420+/-223.296  $\chi^2/\text{NDF}$ : 25.7/22

Left: -399.983+/-155.996  $\chi^2/\text{NDF}$ : 87.5/47

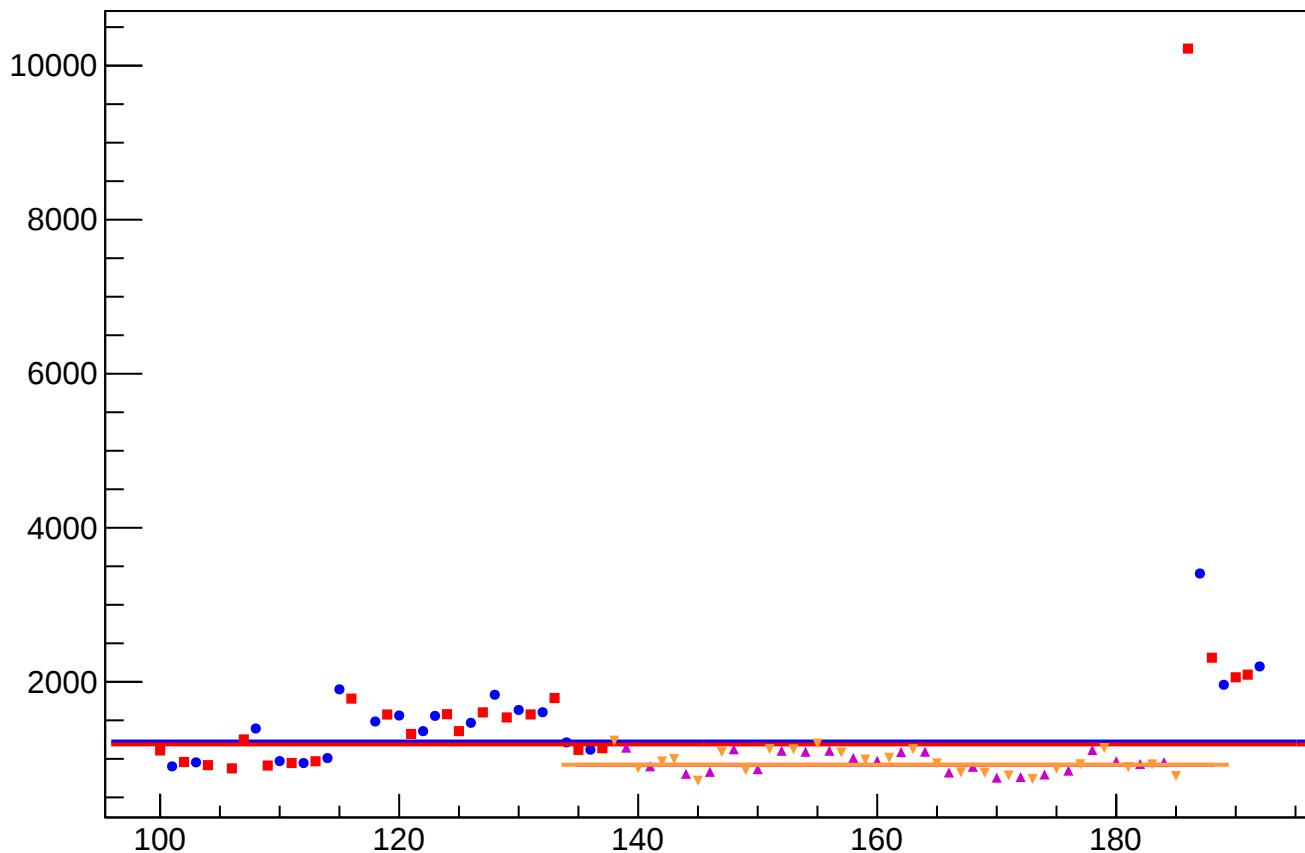
Right: 378.656+/-308.814  $\chi^2/\text{NDF}$ : 47.7/42

In: 114.140+/-200.109  $\chi^2/\text{NDF}$ : 52.4/42

Out: -575.667+/-193.868  $\chi^2/\text{NDF}$ : 81.8/47

All: -241.688+/-139.239  $\chi^2/\text{NDF}$ : 140.3/90

asym\_sam\_48\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 1224.630+/-0.319  $\chi^2/\text{NDF}$ : 1333318.6/19

Left Out: 923.586+/-0.154  $\chi^2/\text{NDF}$ : 842758.6/24

Right Out: 1187.875+/-0.300  $\chi^2/\text{NDF}$ : 2014264.3/22

Left In: 922.245+/-0.158  $\chi^2/\text{NDF}$ : 634712.1/22

Left: 922.932+/-0.110  $\chi^2/\text{NDF}$ : 1477507.6/47

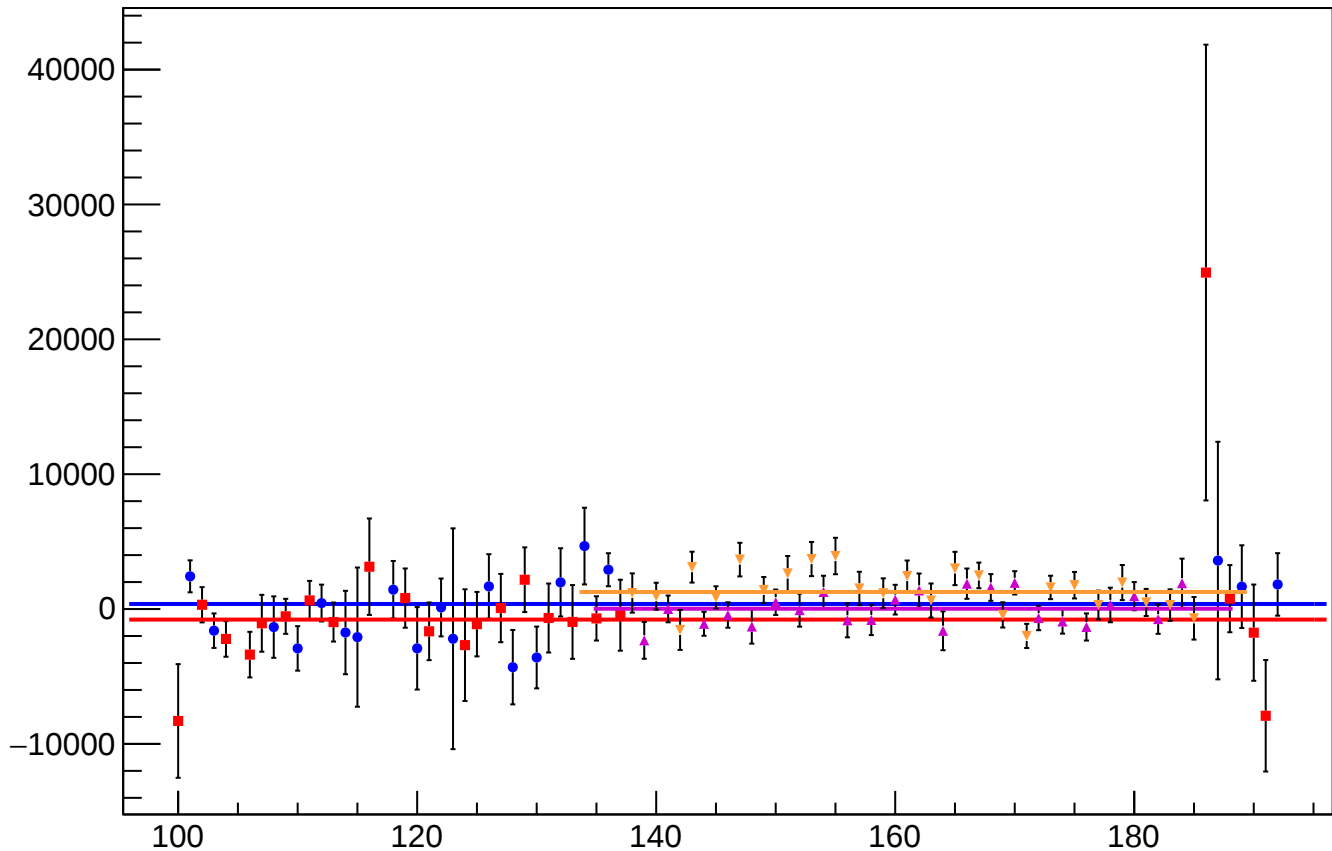
Right: 1205.111+/-0.218  $\chi^2/\text{NDF}$ : 3354638.6/42

In: 981.785+/-0.141  $\chi^2/\text{NDF}$ : 2690199.0/42

Out: 978.901+/-0.137  $\chi^2/\text{NDF}$ : 3472133.6/47

All: 980.298+/-0.098  $\chi^2/\text{NDF}$ : 6162546.9/90

# asym\_sam\_48\_dd\_mean vs Slug, Sign Corrected



Right In: 376.026+/-453.126  $\chi^2/\text{NDF}$ : 26.0/19

Left Out: 1267.344+/-220.133  $\chi^2/\text{NDF}$ :44.9/24

Right Out: -781.953+/-426.019  $\chi^2/\text{NDF}$ : 18.0/22

Left In: 23.478+/-225.490  $\chi^2/\text{NDF}$ :27.2/22

Left: 660.362+/-157.518  $\chi^2/\text{NDF}$ : 87.7/47

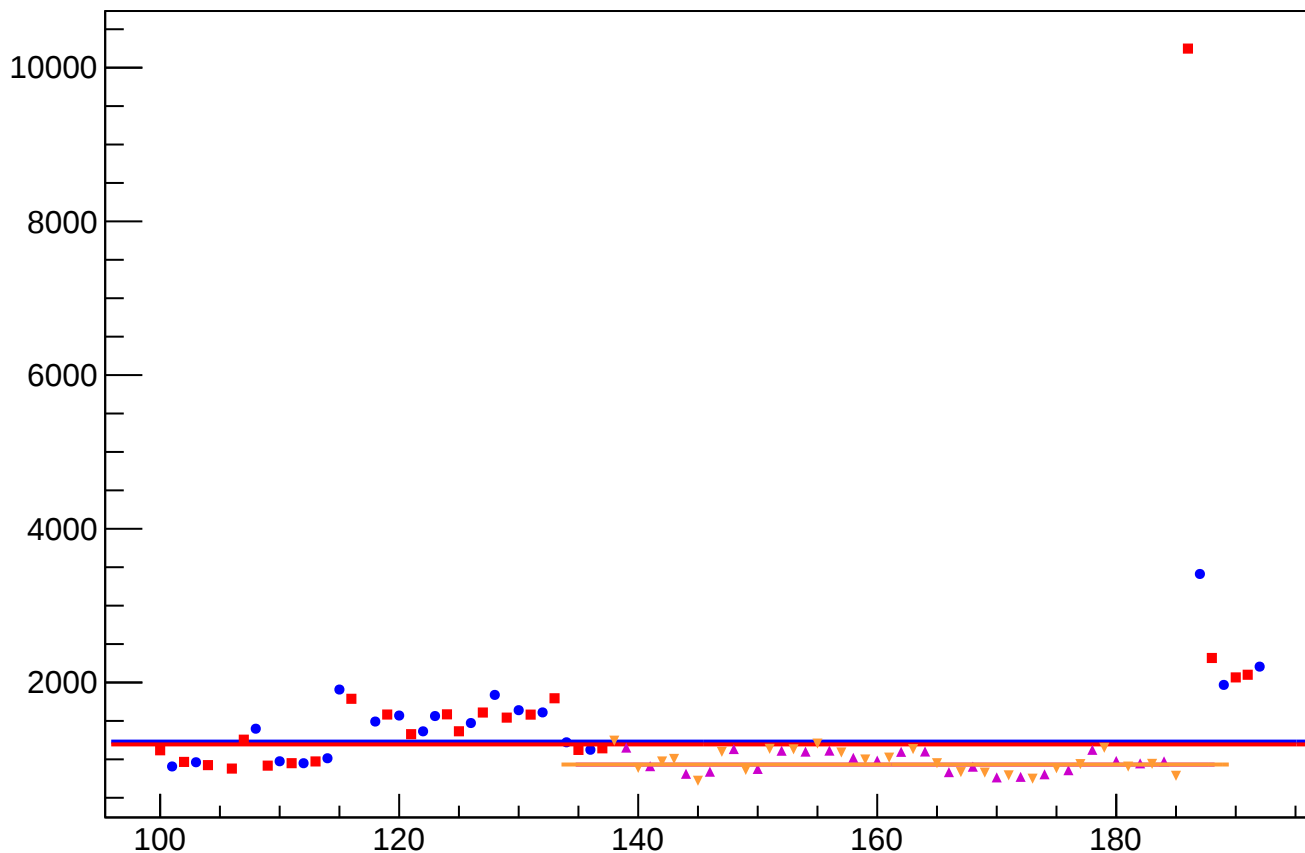
Right: -238.634+/-310.382  $\chi^2/\text{NDF}$ : 47.5/42

In: 93.453+/-201.875  $\chi^2/\text{NDF}$ :53.7/42

Out: 835.486+/-195.568  $\chi^2/\text{NDF}$ :81.2/47

All: 476.244+/-140.464  $\chi^2/\text{NDF}$ : 141.8/90

# asym\_sam\_48\_dd\_rms vs Slug, Sign Corrected



Right In: 1230.912 $\pm$ 0.320  $\chi^2$ /NDF: 1324851.9/19

Left Out: 932.764 $\pm$ 0.156  $\chi^2$ /NDF: 829798.4/24

Right Out: 1194.304 $\pm$ 0.301  $\chi^2$ /NDF: 2004120.4/22

Left In: 931.493 $\pm$ 0.159  $\chi^2$ /NDF: 624436.4/22

Left: 932.144 $\pm$ 0.111  $\chi^2$ /NDF: 1454267.3/47

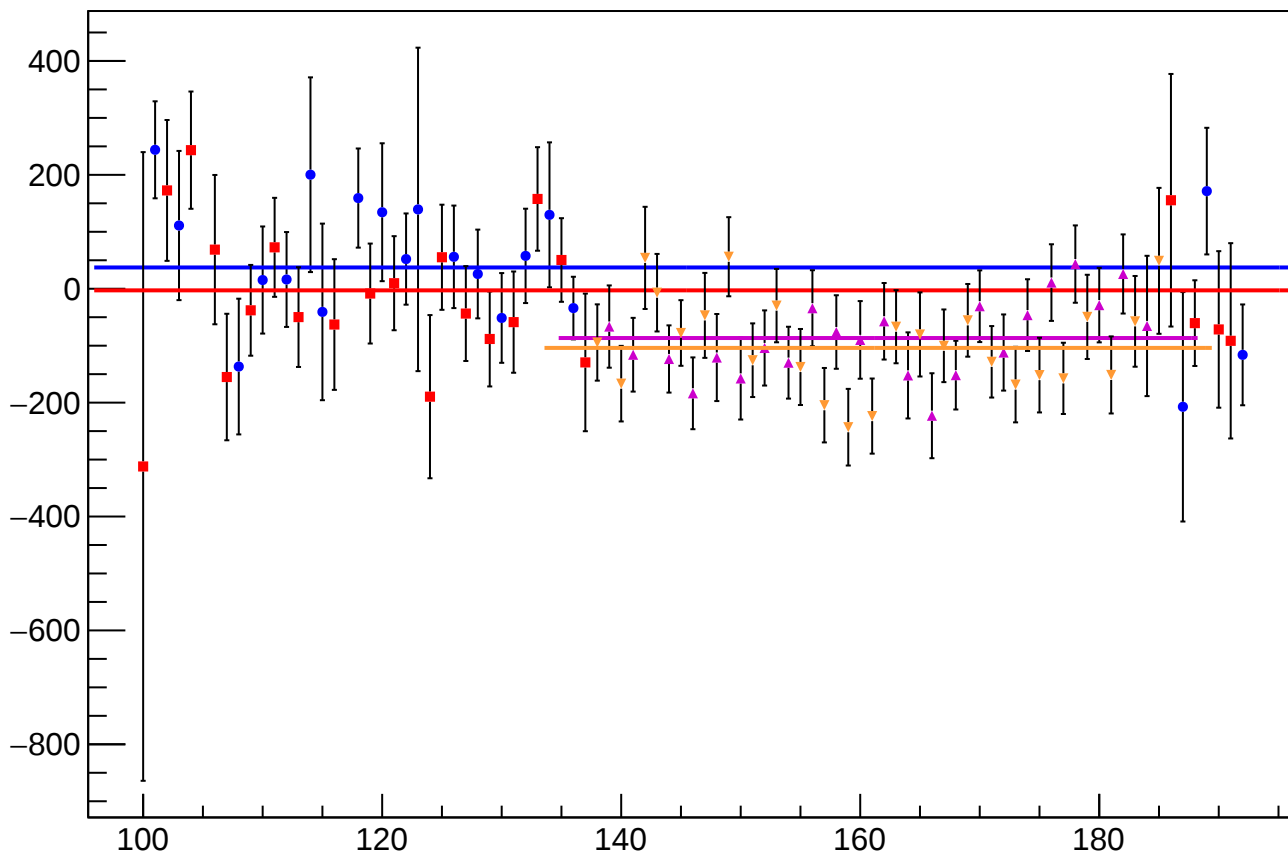
Right: 1211.480 $\pm$ 0.219  $\chi^2$ /NDF: 3335901.6/42

In: 990.923 $\pm$ 0.143  $\chi^2$ /NDF: 2649231.9/42

Out: 987.879 $\pm$ 0.138  $\chi^2$ /NDF: 3428854.1/47

All: 989.353 $\pm$ 0.099  $\chi^2$ /NDF: 6078320.6/90

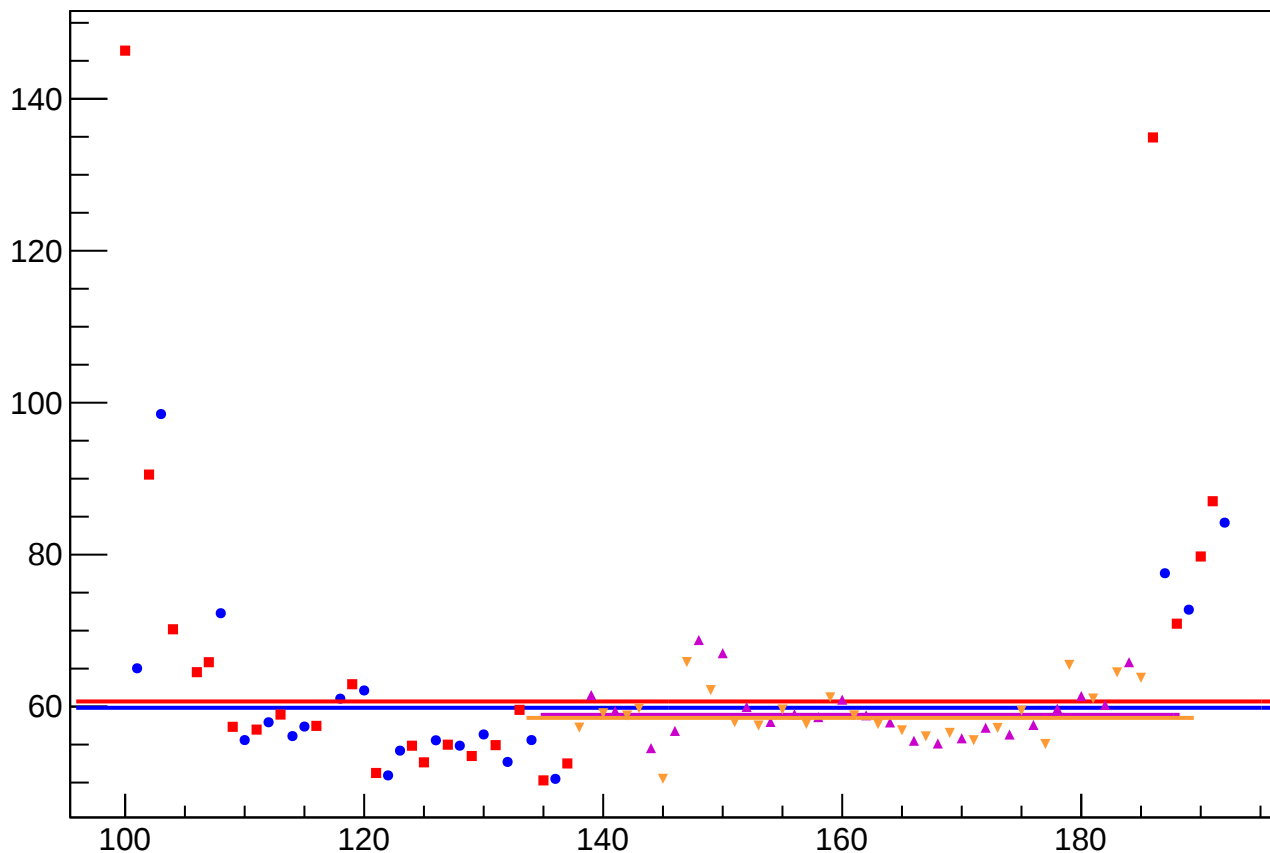
reg\_asym\_sam\_13\_57\_dd\_mean vs Slug, Sign Corrected



Right In:  $37.368 \pm 21.376$   $\chi^2/\text{NDF}: 21.9/19$   
 Left Out:  $-103.899 \pm 13.642$   $\chi^2/\text{NDF}: 30.0/24$   
 Right Out:  $-2.844 \pm 20.787$   $\chi^2/\text{NDF}: 21.9/22$   
 Left In:  $-86.542 \pm 14.120$   $\chi^2/\text{NDF}: 21.4/22$

Left:  $-95.520 \pm 9.811$   $\chi^2/\text{NDF}: 52.1/47$   
 Right:  $16.701 \pm 14.903$   $\chi^2/\text{NDF}: 45.6/42$   
 In:  $-48.901 \pm 11.782$   $\chi^2/\text{NDF}: 66.7/42$   
 Out:  $-73.478 \pm 11.405$   $\chi^2/\text{NDF}: 68.4/47$   
 All:  $-61.588 \pm 8.195$   $\chi^2/\text{NDF}: 137.3/90$

reg\_asym\_sam\_13\_57\_dd\_rms vs Slug, Sign Corrected



Right In: 59.843+/-0.015  $\chi^2/\text{NDF}$ : 522266.3/19

Left Out: 58.513+/-0.010  $\chi^2/\text{NDF}$ : 123221.6/24

Right Out: 60.677+/-0.015  $\chi^2/\text{NDF}$ : 671953.6/22

Left In: 58.913+/-0.010  $\chi^2/\text{NDF}$ : 109968.0/22

Left: 58.706+/-0.007  $\chi^2/\text{NDF}$ : 234021.7/47

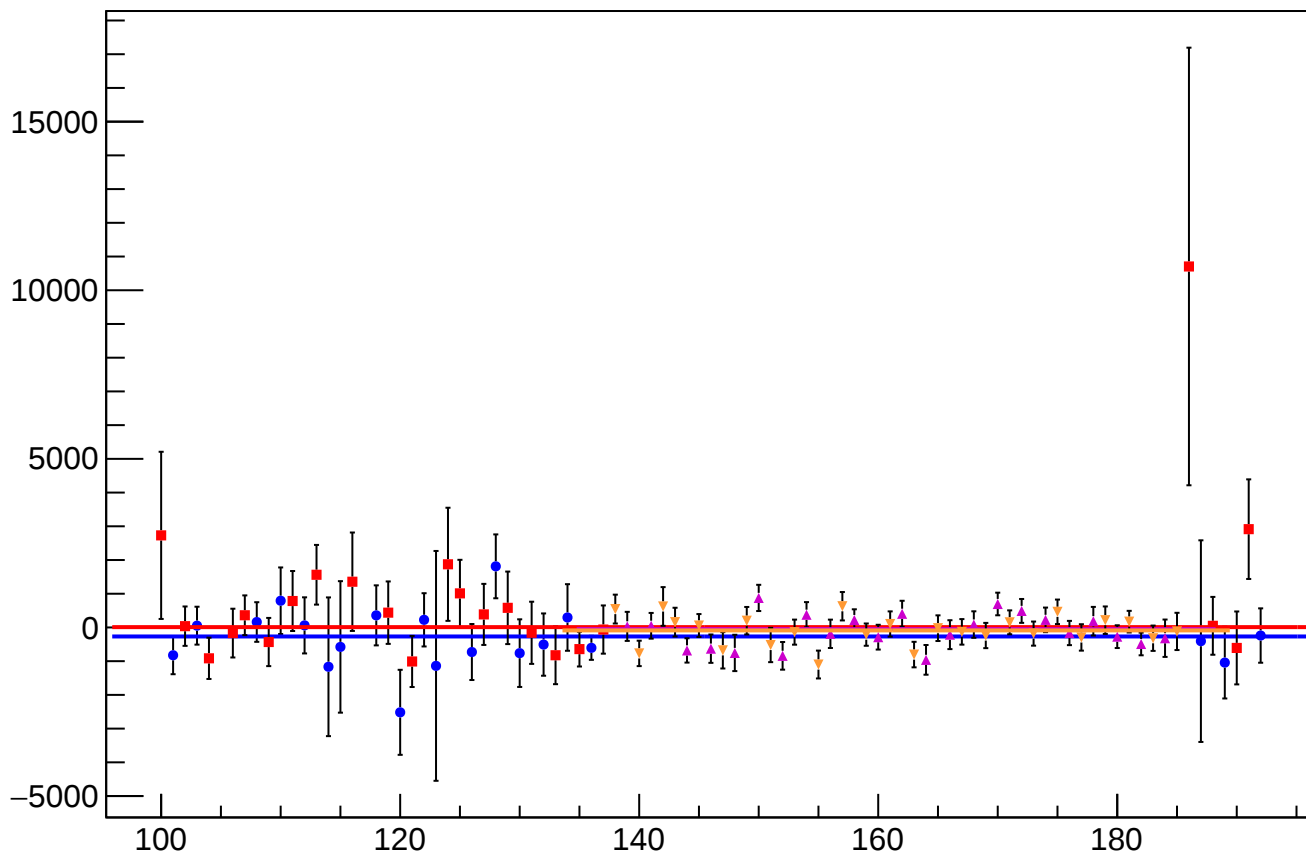
Right: 60.272+/-0.011  $\chi^2/\text{NDF}$ : 1195786.6/42

In: 59.196+/-0.008  $\chi^2/\text{NDF}$ : 634866.6/42

Out: 59.165+/-0.008  $\chi^2/\text{NDF}$ : 810329.9/47

All: 59.180+/-0.006  $\chi^2/\text{NDF}$ : 1445203.7/90

asym\_sam\_13\_57\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: -267.492+/-176.944  $\chi^2/\text{NDF}$ : 14.7/19

Left Out: -87.459+/-78.556  $\chi^2/\text{NDF}$ : 27.7/24

Right Out: 9.705+/-174.509  $\chi^2/\text{NDF}$ : 23.2/22

Left In: -48.742+/-80.548  $\chi^2/\text{NDF}$ : 35.3/22

Left: -68.585+/-56.239  $\chi^2/\text{NDF}$ : 63.2/47

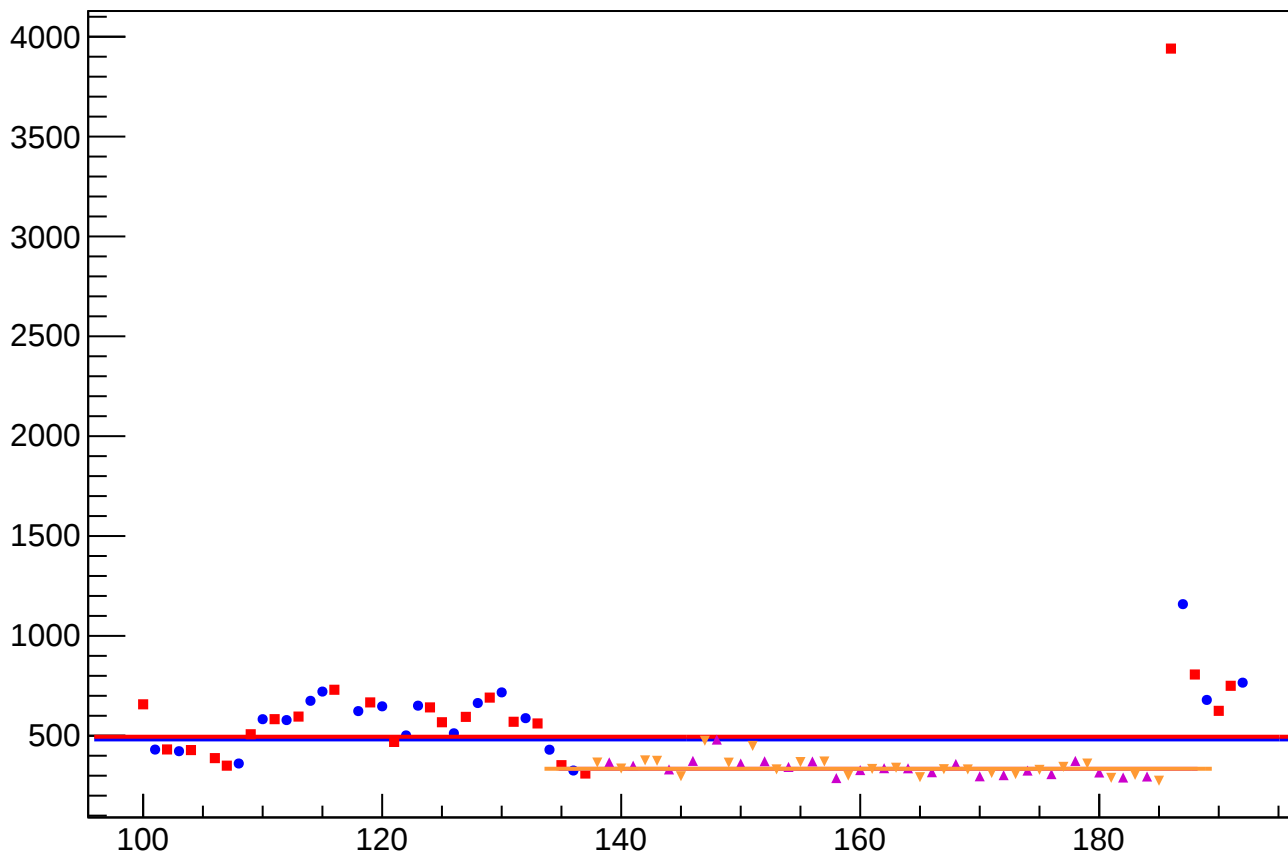
Right: -126.973+/-124.248  $\chi^2/\text{NDF}$ : 39.1/42

In: -86.291+/-73.309  $\chi^2/\text{NDF}$ : 51.3/42

Out: -71.087+/-71.633  $\chi^2/\text{NDF}$ : 51.2/47

All: -78.513+/-51.235  $\chi^2/\text{NDF}$ : 102.5/90

asym\_sam\_13\_57\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 481.619+/-0.125  $\chi^2/\text{NDF}$ : 1331744.0/19

Left Out: 334.749+/-0.056  $\chi^2/\text{NDF}$ : 491370.4/24

Right Out: 495.078+/-0.123  $\chi^2/\text{NDF}$ : 1733899.9/22

Left In: 334.147+/-0.057  $\chi^2/\text{NDF}$ : 397200.6/22

Left: 334.455+/-0.040  $\chi^2/\text{NDF}$ : 888628.3/47

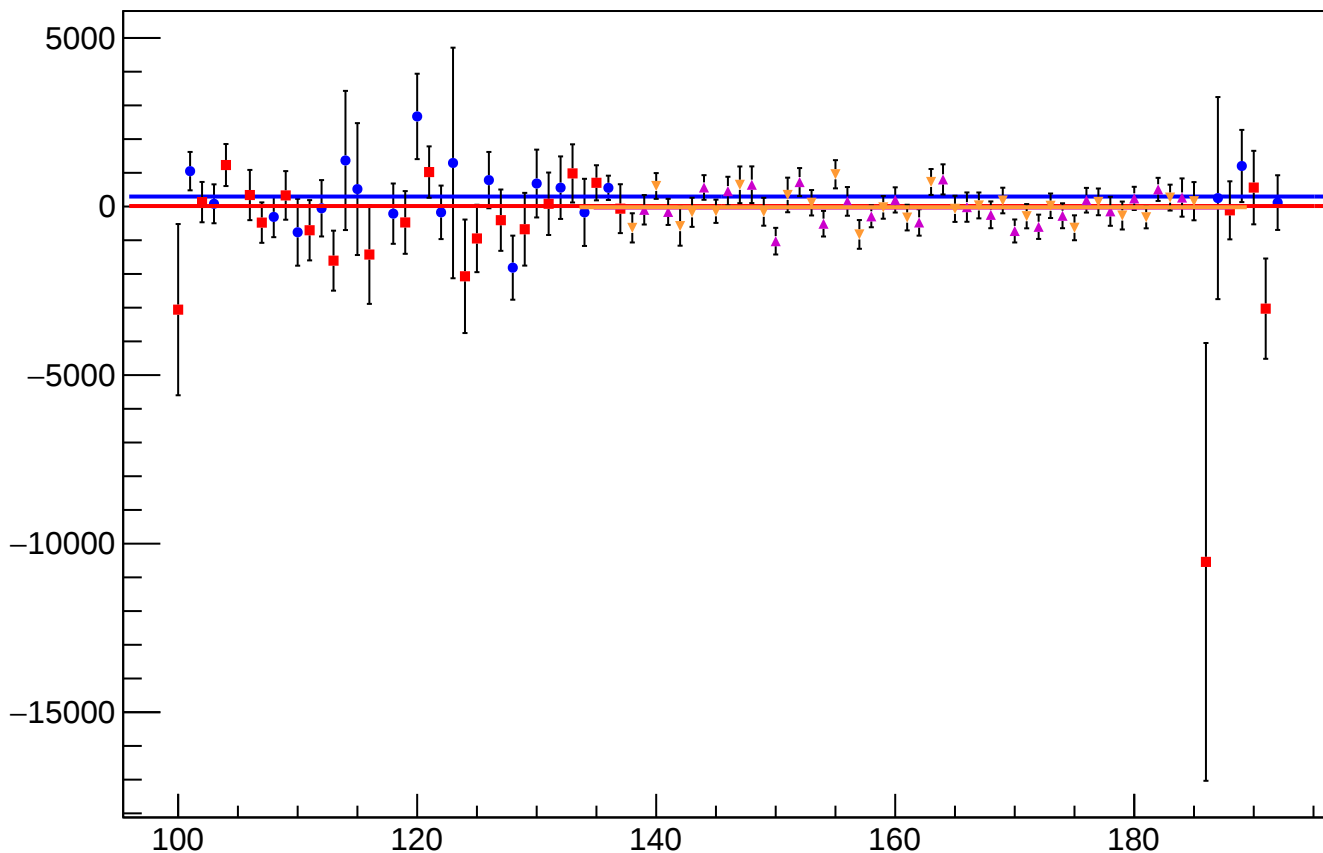
Right: 488.442+/-0.088  $\chi^2/\text{NDF}$ : 3071510.0/42

In: 359.461+/-0.052  $\chi^2/\text{NDF}$ : 2879728.1/42

Out: 361.764+/-0.051  $\chi^2/\text{NDF}$ : 3629010.4/47

All: 360.639+/-0.036  $\chi^2/\text{NDF}$ : 6509748.4/90

# asym\_sam\_13\_57\_dd\_mean vs Slug, Sign Corrected



Right In: 296.388+/-178.952  $\chi^2/\text{NDF}$ : 15.8/19

Left Out: -20.895+/-79.812  $\chi^2/\text{NDF}$ : 27.2/24

Right Out: 14.812+/-176.569  $\chi^2/\text{NDF}$ : 26.5/22

Left In: -31.800+/-81.839  $\chi^2/\text{NDF}$ : 34.0/22

Left: -26.211+/-57.139  $\chi^2/\text{NDF}$ : 61.3/47

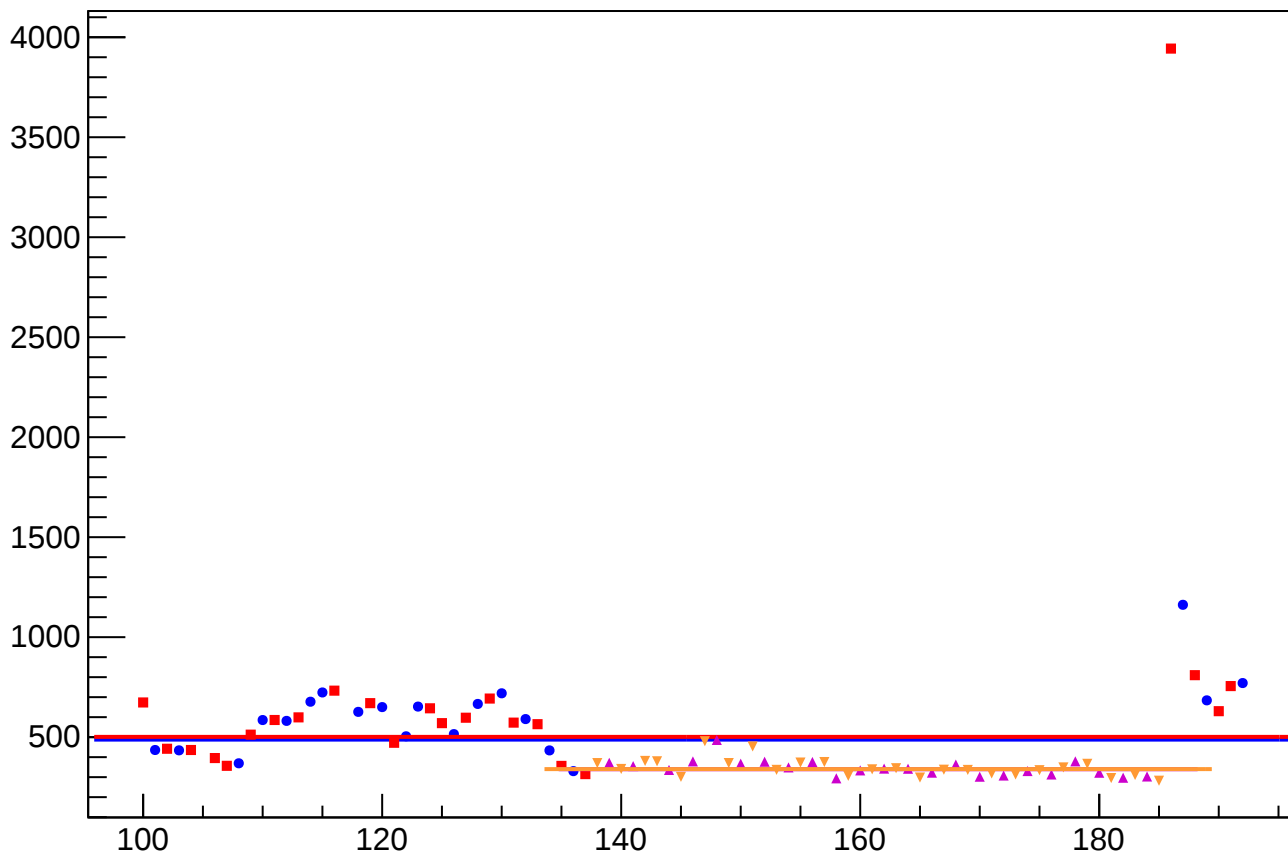
Right: 153.713+/-125.687  $\chi^2/\text{NDF}$ : 43.6/42

In: 24.967+/-74.426  $\chi^2/\text{NDF}$ : 52.6/42

Out: -14.837+/-72.727  $\chi^2/\text{NDF}$ : 53.8/47

All: 4.605+/-52.016  $\chi^2/\text{NDF}$ : 106.5/90

asym\_sam\_13\_57\_dd\_rms vs Slug, Sign Corrected



Right In: 487.790 $\pm$ 0.127  $\chi^2$ /NDF: 1291136.6/19

Left Out: 340.238 $\pm$ 0.056  $\chi^2$ /NDF: 468863.6/24

Right Out: 501.429 $\pm$ 0.125  $\chi^2$ /NDF: 1692821.2/22

Left In: 339.621 $\pm$ 0.058  $\chi^2$ /NDF: 379808.1/22

Left: 339.937 $\pm$ 0.040  $\chi^2$ /NDF: 848729.8/47

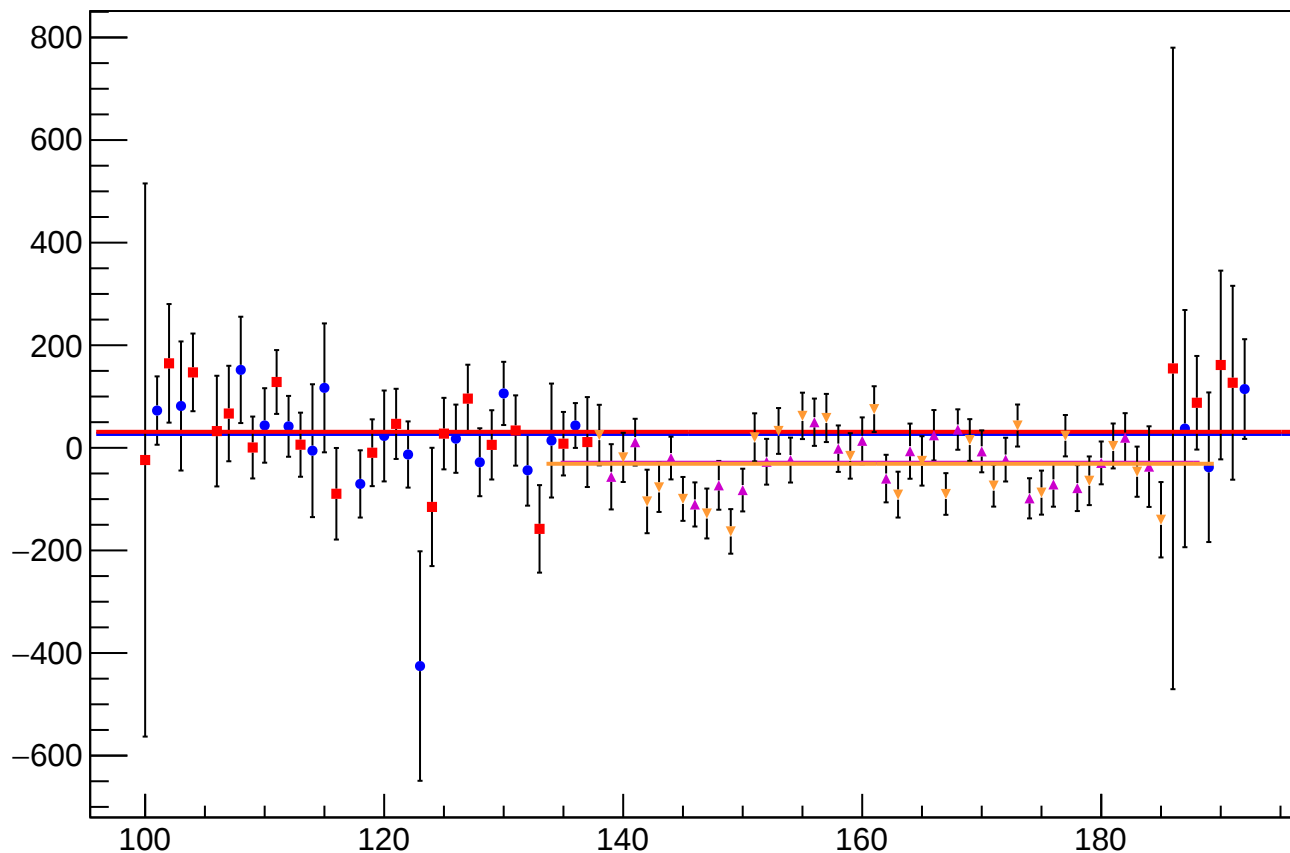
Right: 494.701 $\pm$ 0.089  $\chi^2$ /NDF: 2989844.8/42

In: 365.250 $\pm$ 0.053  $\chi^2$ /NDF: 2804892.6/42

Out: 367.585 $\pm$ 0.051  $\chi^2$ /NDF: 3545720.0/47

All: 366.444 $\pm$ 0.037  $\chi^2$ /NDF: 6351619.2/90

reg\_asym\_sam\_15\_37\_dd\_mean vs Slug, Sign Corrected



Right In: 27.023+/-17.401  $\chi^2/\text{NDF}$ : 14.1/19

Left Out: -31.063+/-9.170  $\chi^2/\text{NDF}$ : 52.6/24

Right Out: 31.243+/-16.977  $\chi^2/\text{NDF}$ : 18.0/22

Left In: -29.055+/-9.449  $\chi^2/\text{NDF}$ : 22.4/22

Left: -30.089+/-6.581  $\chi^2/\text{NDF}$ : 75.1/47

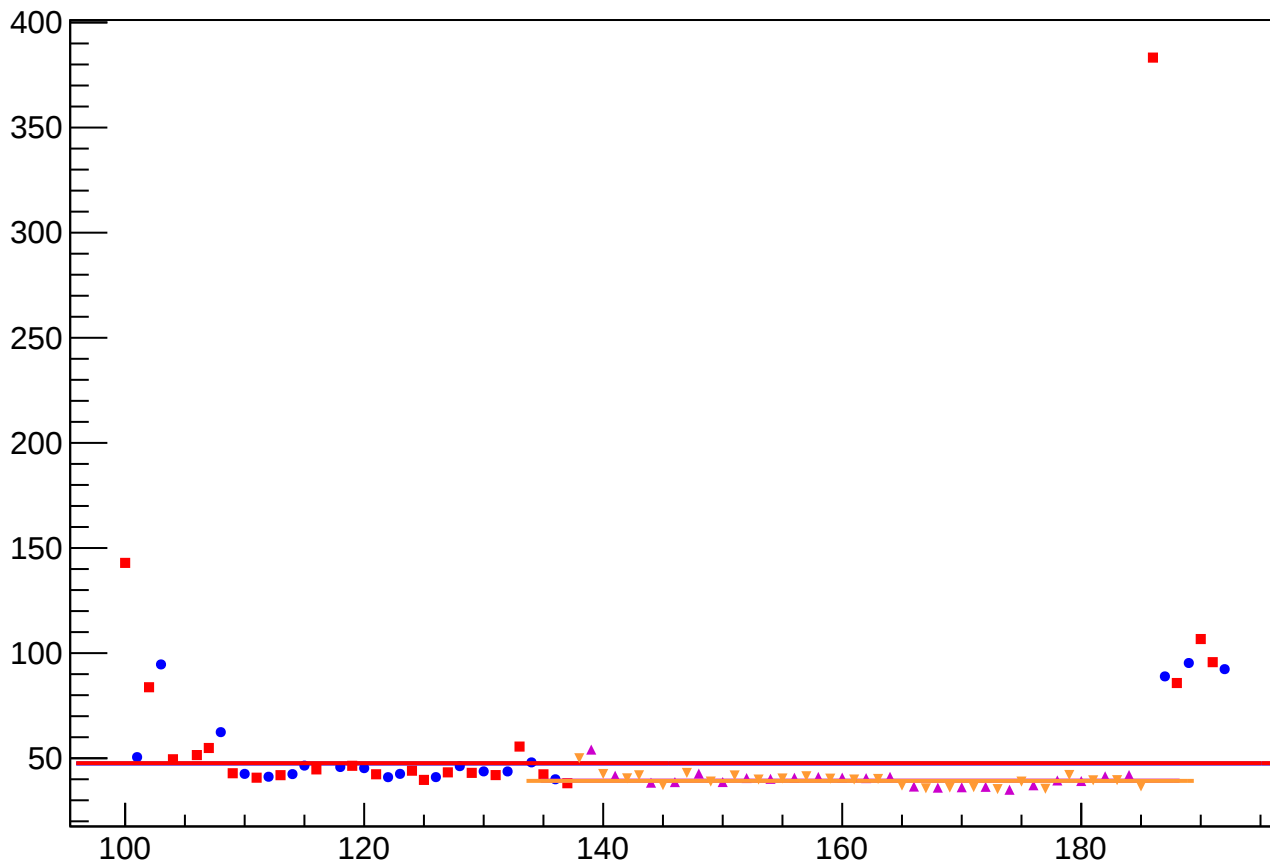
Right: 29.185+/-12.152  $\chi^2/\text{NDF}$ : 32.1/42

In: -16.284+/-8.304  $\chi^2/\text{NDF}$ : 44.5/42

Out: -16.992+/-8.068  $\chi^2/\text{NDF}$ : 81.0/47

All: -16.648+/-5.787  $\chi^2/\text{NDF}$ : 125.5/90

reg\_asym\_sam\_15\_37\_dd\_rms vs Slug, Sign Corrected



Right In: 47.493+/-0.012  $\chi^2/\text{NDF}$ : 1182655.6/19

Left Out: 39.235+/-0.006  $\chi^2/\text{NDF}$ : 201960.7/24

Right Out: 47.662+/-0.012  $\chi^2/\text{NDF}$ : 1718238.2/22

Left In: 39.338+/-0.007  $\chi^2/\text{NDF}$ : 215671.3/22

Left: 39.285+/-0.005  $\chi^2/\text{NDF}$ : 417755.0/47

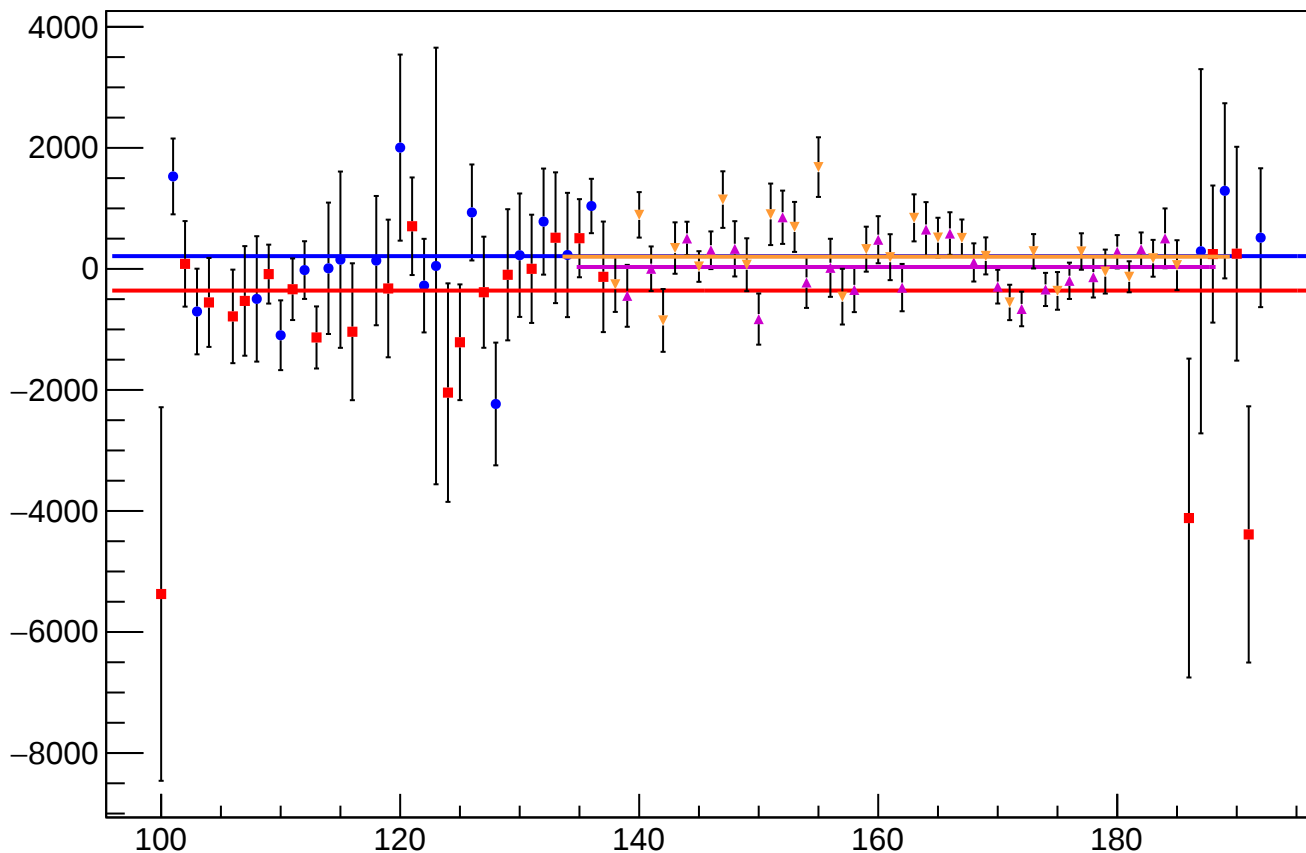
Right: 47.580+/-0.009  $\chi^2/\text{NDF}$ : 2900990.6/42

In: 41.195+/-0.006  $\chi^2/\text{NDF}$ : 1737523.6/42

Out: 41.138+/-0.006  $\chi^2/\text{NDF}$ : 2301674.7/47

All: 41.166+/-0.004  $\chi^2/\text{NDF}$ : 4039247.2/90

asym\_sam\_15\_37\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: 211.091 $\pm$ 184.650  $\chi^2/\text{NDF}$ : 24.8/19

Left Out: 202.369 $\pm$ 70.426  $\chi^2/\text{NDF}$ :44.8/24

Right Out: -358.069 $\pm$ 175.581  $\chi^2/\text{NDF}$ : 18.6/22

Left In: 31.548 $\pm$ 72.100  $\chi^2/\text{NDF}$ :33.4/22

Left: 118.965 $\pm$ 50.380  $\chi^2/\text{NDF}$ : 81.1/47

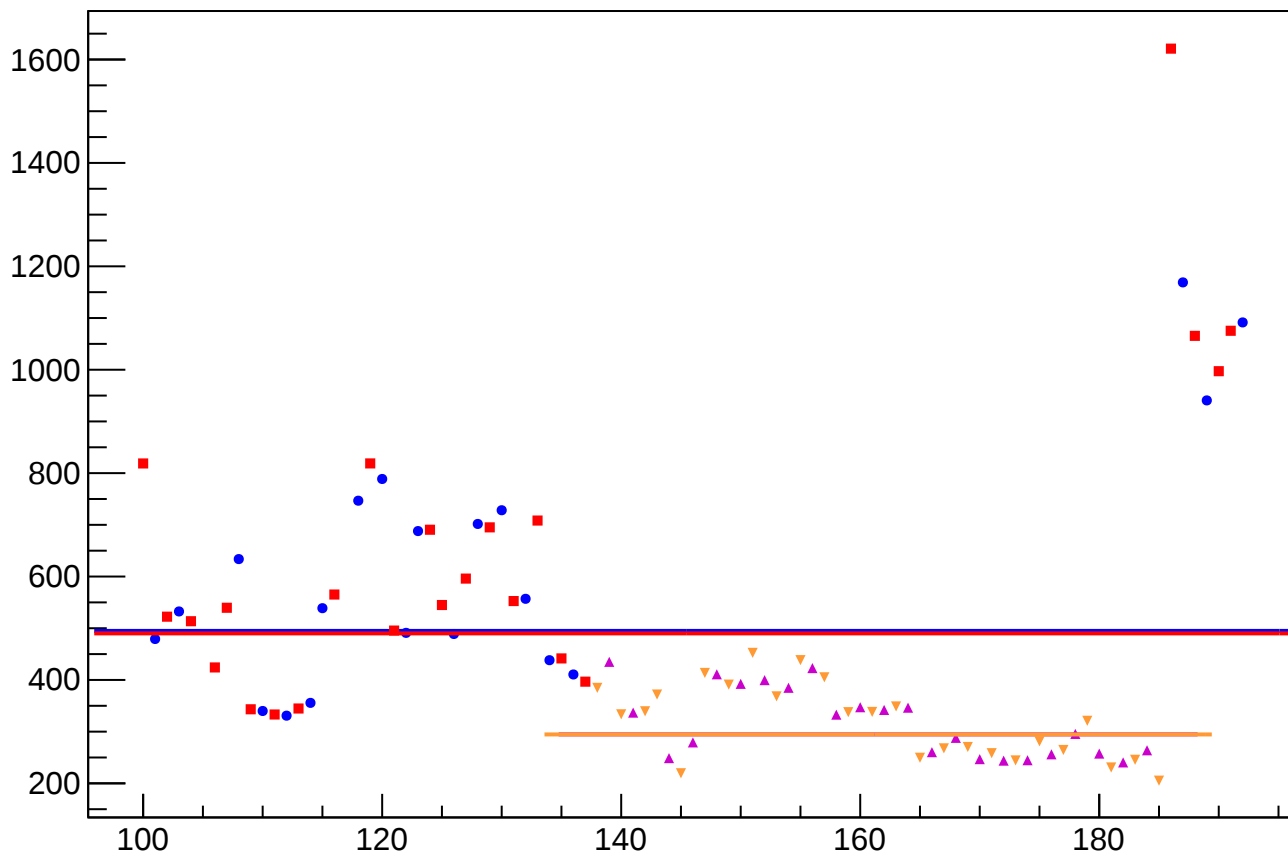
Right: -87.807 $\pm$ 127.240  $\chi^2/\text{NDF}$ : 48.4/42

In: 55.301 $\pm$ 67.162  $\chi^2/\text{NDF}$ :59.0/42

Out: 124.700 $\pm$ 65.364  $\chi^2/\text{NDF}$ :72.2/47

All: 90.942 $\pm$ 46.842  $\chi^2/\text{NDF}$ : 131.7/90

asym\_sam\_15\_37\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 494.835+/-0.131  $\chi^2/\text{NDF}$ : 1753943.6/19

Left Out: 294.591+/-0.050  $\chi^2/\text{NDF}$ : 1680474.5/24

Right Out: 490.055+/-0.124  $\chi^2/\text{NDF}$ : 2213419.0/22

Left In: 294.722+/-0.051  $\chi^2/\text{NDF}$ : 1297310.3/22

Left: 294.655+/-0.036  $\chi^2/\text{NDF}$ : 2977788.1/47

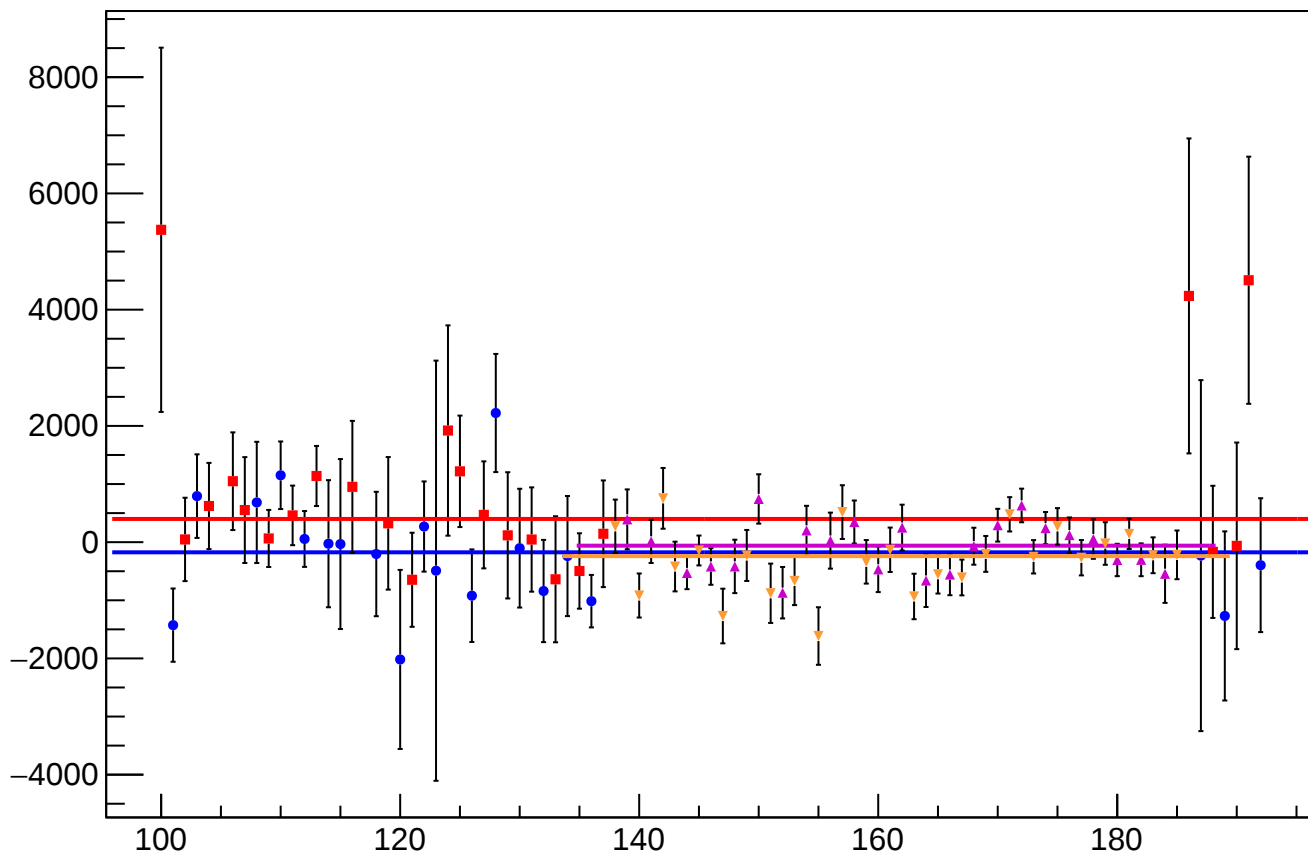
Right: 492.325+/-0.090  $\chi^2/\text{NDF}$ : 3968066.5/42

In: 321.196+/-0.047  $\chi^2/\text{NDF}$ : 5089506.0/42

Out: 321.680+/-0.046  $\chi^2/\text{NDF}$ : 6028987.4/47

All: 321.445+/-0.033  $\chi^2/\text{NDF}$ : 11118546.7/90

asym\_sam\_15\_37\_dd\_mean vs Slug, Sign Corrected



Right In: -174.474+/-185.778  $\chi^2/\text{NDF}$ : 24.7/19

Left Out: -240.357+/-71.100  $\chi^2/\text{NDF}$ : 42.9/24

Right Out: 399.640+/-177.391  $\chi^2/\text{NDF}$ : 18.5/22

Left In: -60.330+/-72.788  $\chi^2/\text{NDF}$ : 30.9/22

Left: -152.455+/-50.862  $\chi^2/\text{NDF}$ : 77.0/47

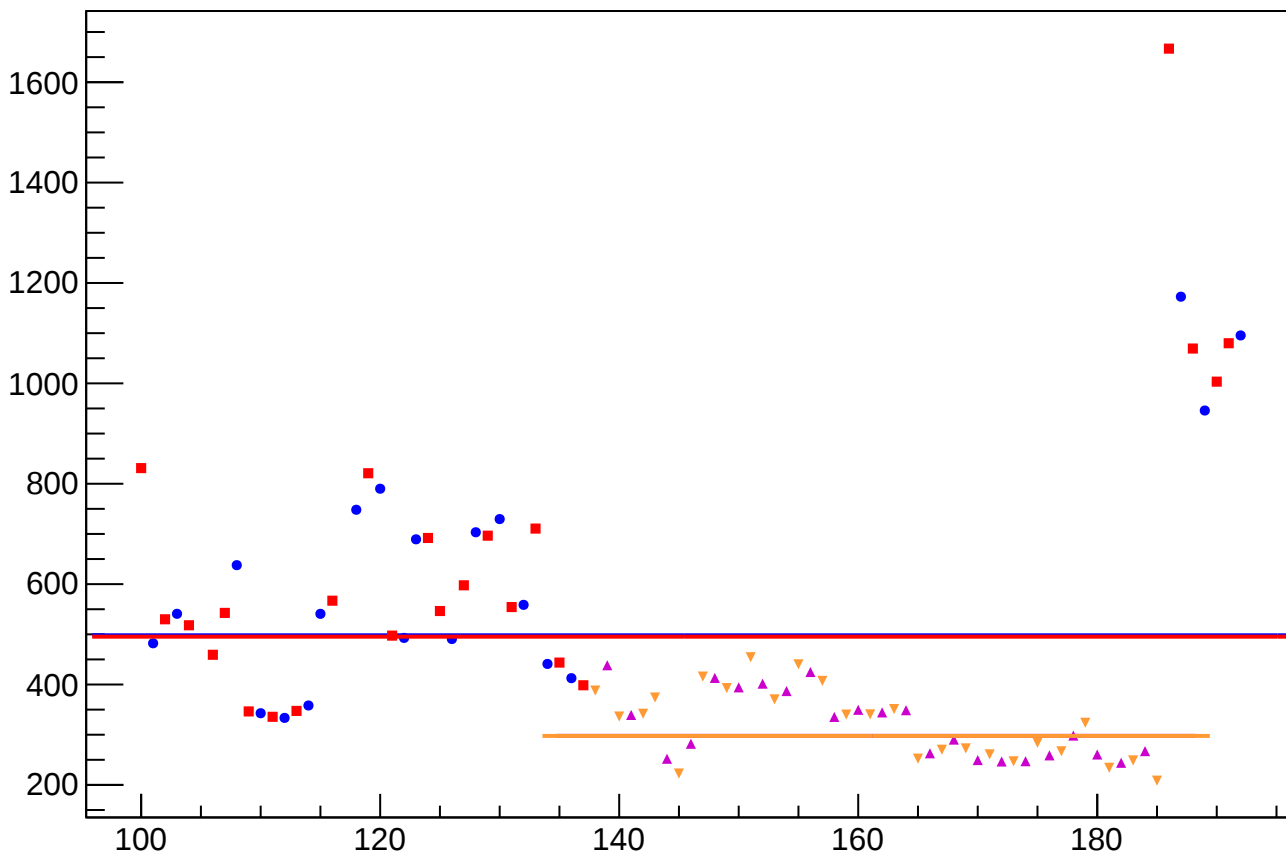
Right: 125.835+/-128.297  $\chi^2/\text{NDF}$ : 48.3/42

In: -75.520+/-67.772  $\chi^2/\text{NDF}$ : 56.0/42

Out: -151.772+/-65.997  $\chi^2/\text{NDF}$ : 72.7/47

All: -114.658+/-47.282  $\chi^2/\text{NDF}$ : 129.3/90

asym\_sam\_15\_37\_dd\_rms vs Slug, Sign Corrected



Right In: 498.084+/-0.131  $\chi^2/\text{NDF}$ : 1741902.9/19

Left Out: 297.613+/-0.050  $\chi^2/\text{NDF}$ : 1637757.8/24

Right Out: 495.335+/-0.125  $\chi^2/\text{NDF}$ : 2195124.6/22

Left In: 297.699+/-0.051  $\chi^2/\text{NDF}$ : 1266306.2/22

Left: 297.655+/-0.036  $\chi^2/\text{NDF}$ : 2904065.4/47

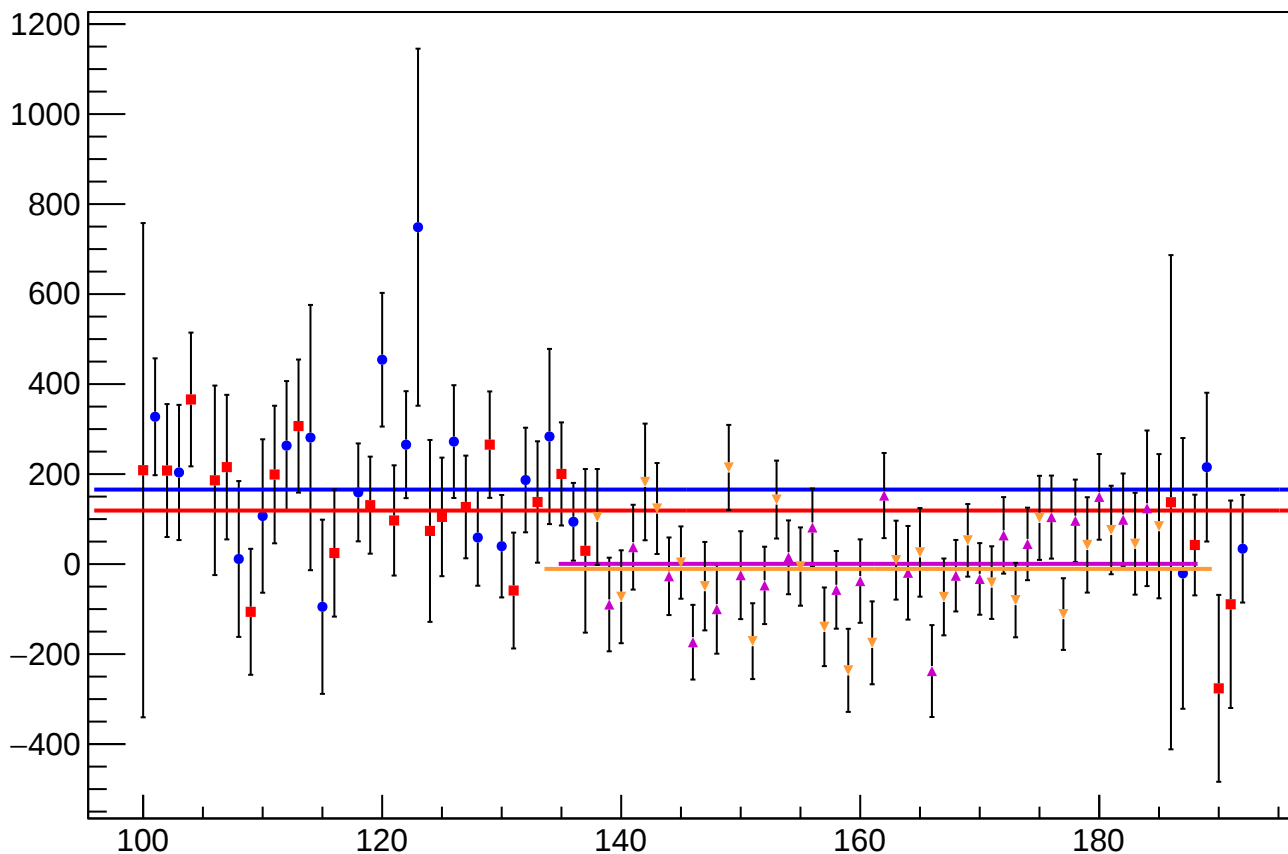
Right: 496.646+/-0.091  $\chi^2/\text{NDF}$ : 3937256.6/42

In: 324.366+/-0.048  $\chi^2/\text{NDF}$ : 5025425.2/42

Out: 324.980+/-0.047  $\chi^2/\text{NDF}$ : 5973683.9/47

All: 324.681+/-0.033  $\chi^2/\text{NDF}$ : 10999193.3/90

reg\_asym\_sam\_24\_68\_dd\_mean vs Slug, Sign Corrected



Right In: 165.622 $\pm$ 30.933  $\chi^2$ /NDF: 17.3/19

Left Out: -10.667 $\pm$ 18.610  $\chi^2$ /NDF:36.3/24

Right Out: 119.002 $\pm$ 30.491  $\chi^2$ /NDF: 17.8/22

Left In: 0.575 $\pm$ 19.091  $\chi^2$ /NDF:23.8/22

Left: -5.190 $\pm$ 13.326  $\chi^2$ /NDF: 60.3/47

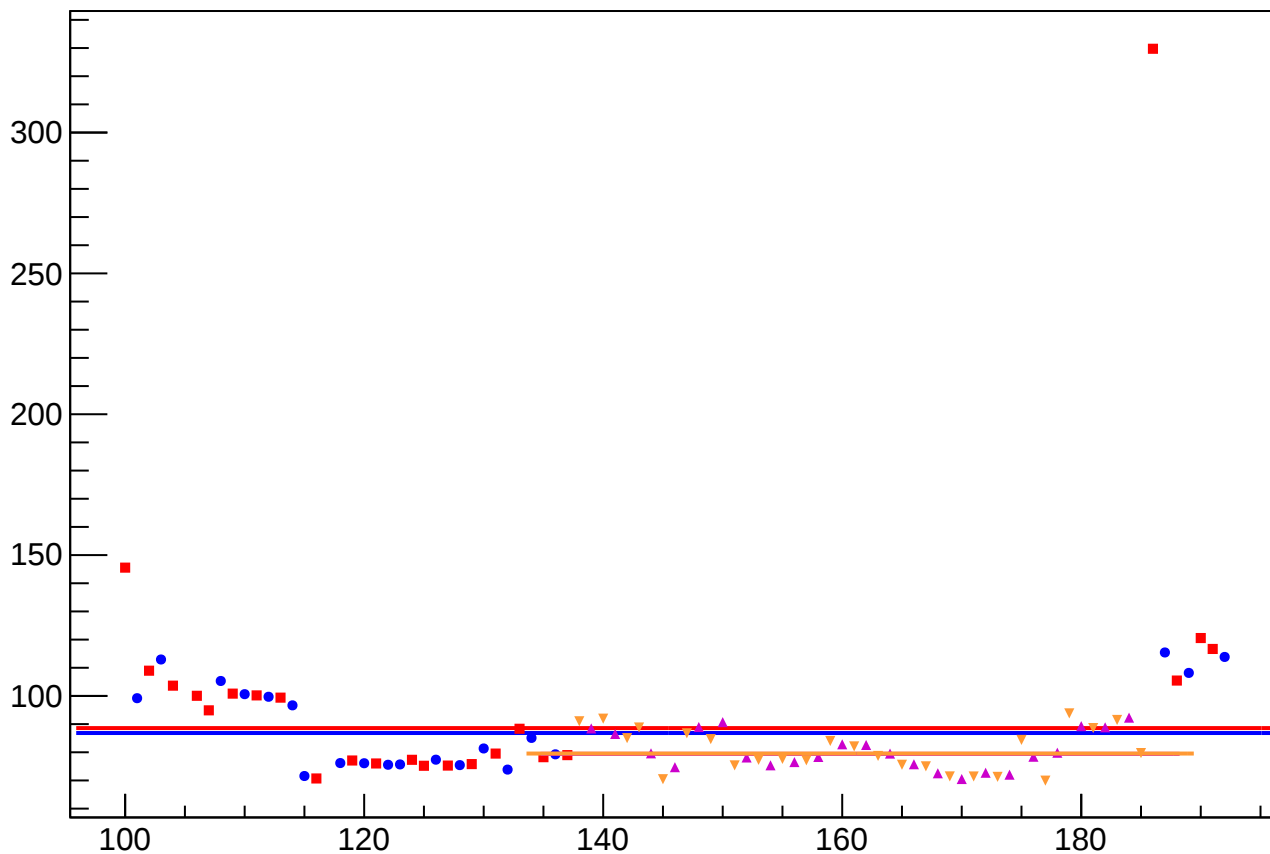
Right: 141.977 $\pm$ 21.715  $\chi^2$ /NDF: 36.2/42

In: 46.103 $\pm$ 16.246  $\chi^2$ /NDF:61.7/42

Out: 24.526 $\pm$ 15.885  $\chi^2$ /NDF:67.3/47

All: 35.072 $\pm$ 11.358  $\chi^2$ /NDF: 129.9/90

reg\_asym\_sam\_24\_68\_dd\_rms vs Slug, Sign Corrected



Right In: 86.837 $\pm$ 0.022  $\chi^2$ /NDF: 426728.7/19

Left Out: 79.551 $\pm$ 0.013  $\chi^2$ /NDF: 309075.2/24

Right Out: 88.586 $\pm$ 0.022  $\chi^2$ /NDF: 819923.0/22

Left In: 79.436 $\pm$ 0.013  $\chi^2$ /NDF: 212440.1/22

Left: 79.495 $\pm$ 0.009  $\chi^2$ /NDF: 521552.2/47

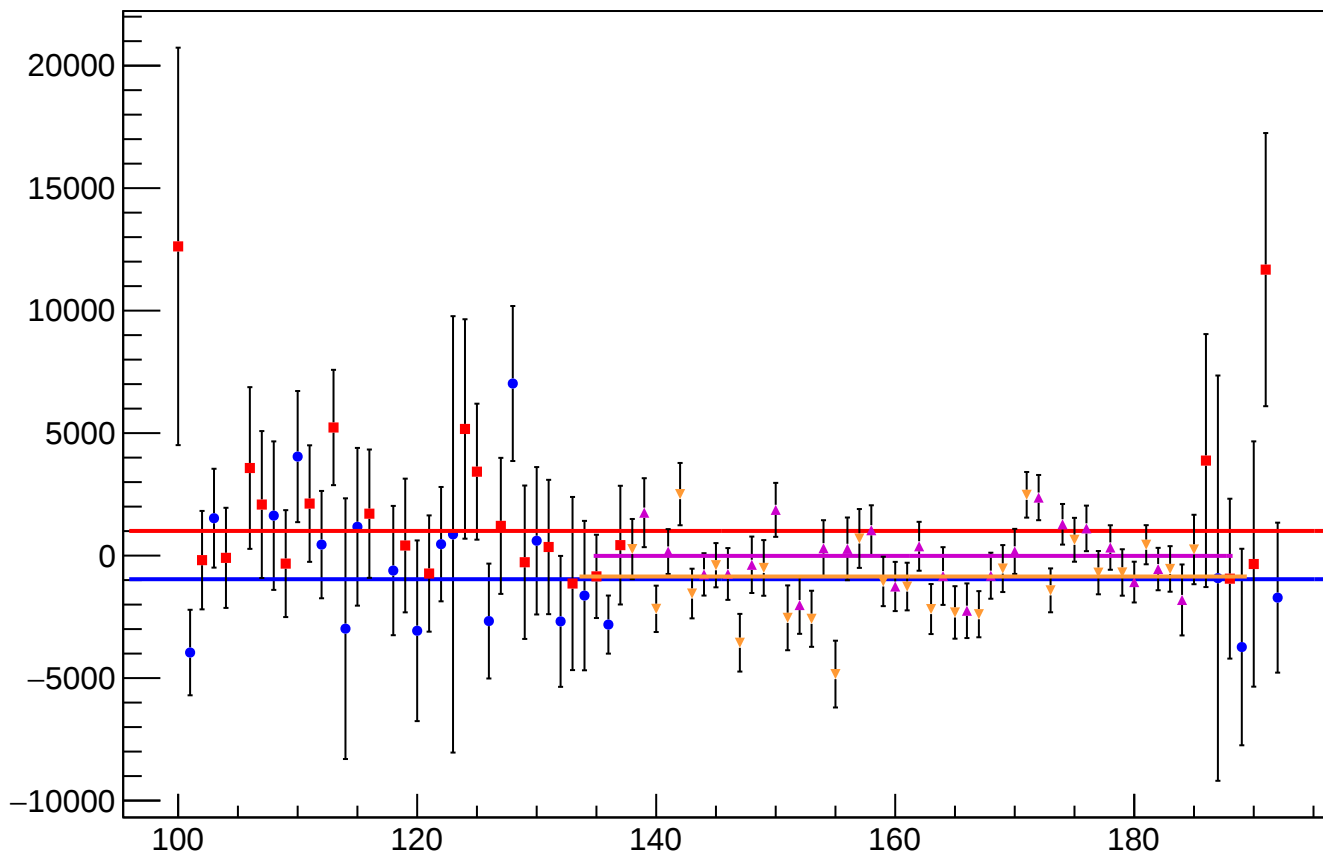
Right: 87.724 $\pm$ 0.015  $\chi^2$ /NDF: 1249892.7/42

In: 81.478 $\pm$ 0.011  $\chi^2$ /NDF: 722079.3/42

Out: 82.003 $\pm$ 0.011  $\chi^2$ /NDF: 1256942.4/47

All: 81.746 $\pm$ 0.008  $\chi^2$ /NDF: 1980090.1/90

asym\_sam\_24\_68\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: -963.760+/-567.001  $\chi^2/\text{NDF}$ : 21.1/19

Left Out: -854.130+/-204.090  $\chi^2/\text{NDF}$ :56.0/24

Right Out: 1006.777+/-570.319  $\chi^2/\text{NDF}$ : 15.8/22

Left In: -11.687+/-210.073  $\chi^2/\text{NDF}$ :31.2/22

Left: -445.076+/-146.383  $\chi^2/\text{NDF}$ : 95.5/47

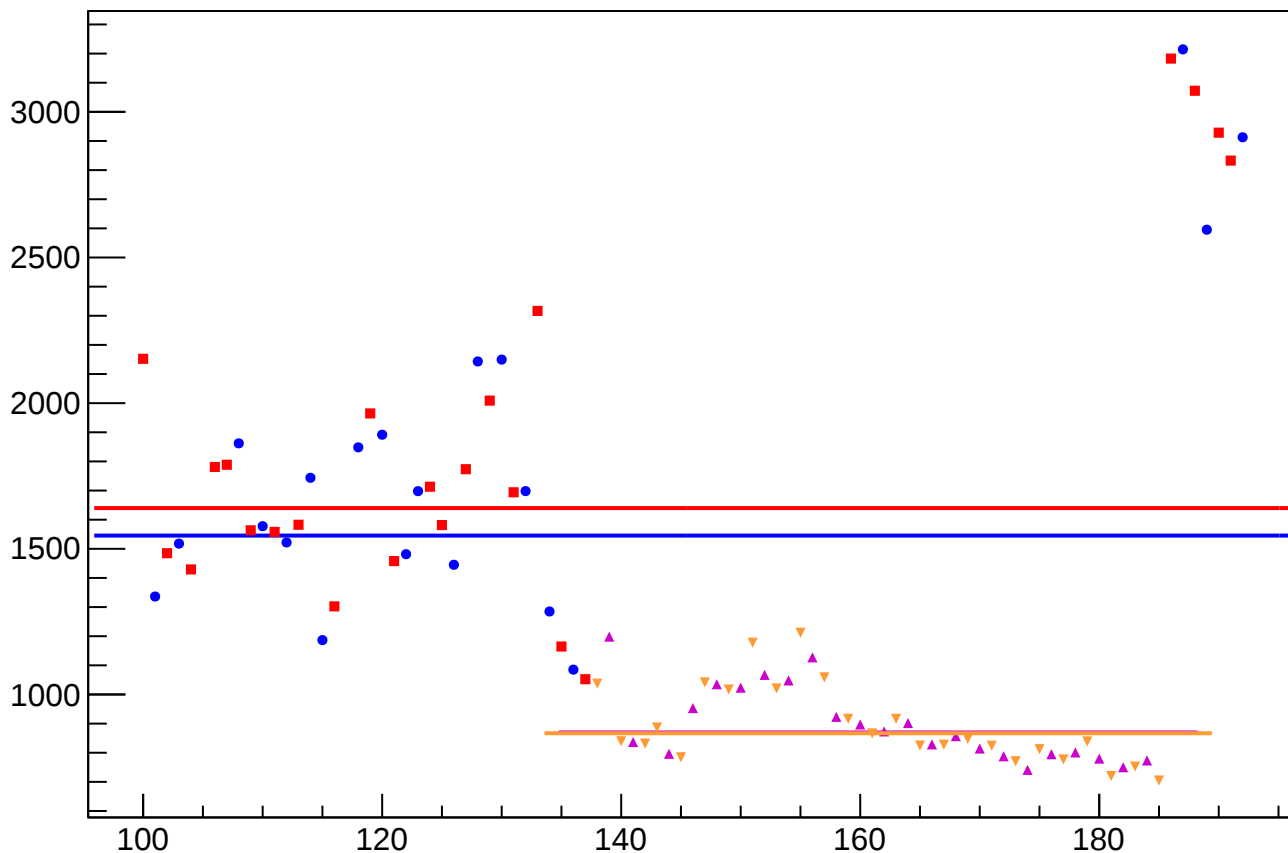
Right: 15.760+/-402.098  $\chi^2/\text{NDF}$ : 42.8/42

In: -126.603+/-196.988  $\chi^2/\text{NDF}$ :54.8/42

Out: -642.877+/-192.157  $\chi^2/\text{NDF}$ :81.2/47

All: -391.148+/-137.552  $\chi^2/\text{NDF}$ : 139.5/90

asym\_sam\_24\_68\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 1545.406 $\pm$ 0.401  $\chi^2$ /NDF: 1220770.5/19

Left Out: 866.893 $\pm$ 0.144  $\chi^2$ /NDF: 661712.5/24

Right Out: 1639.808 $\pm$ 0.403  $\chi^2$ /NDF: 1298822.2/22

Left In: 869.569 $\pm$ 0.149  $\chi^2$ /NDF: 582301.2/22

Left: 868.192 $\pm$ 0.104  $\chi^2$ /NDF: 1244180.7/47

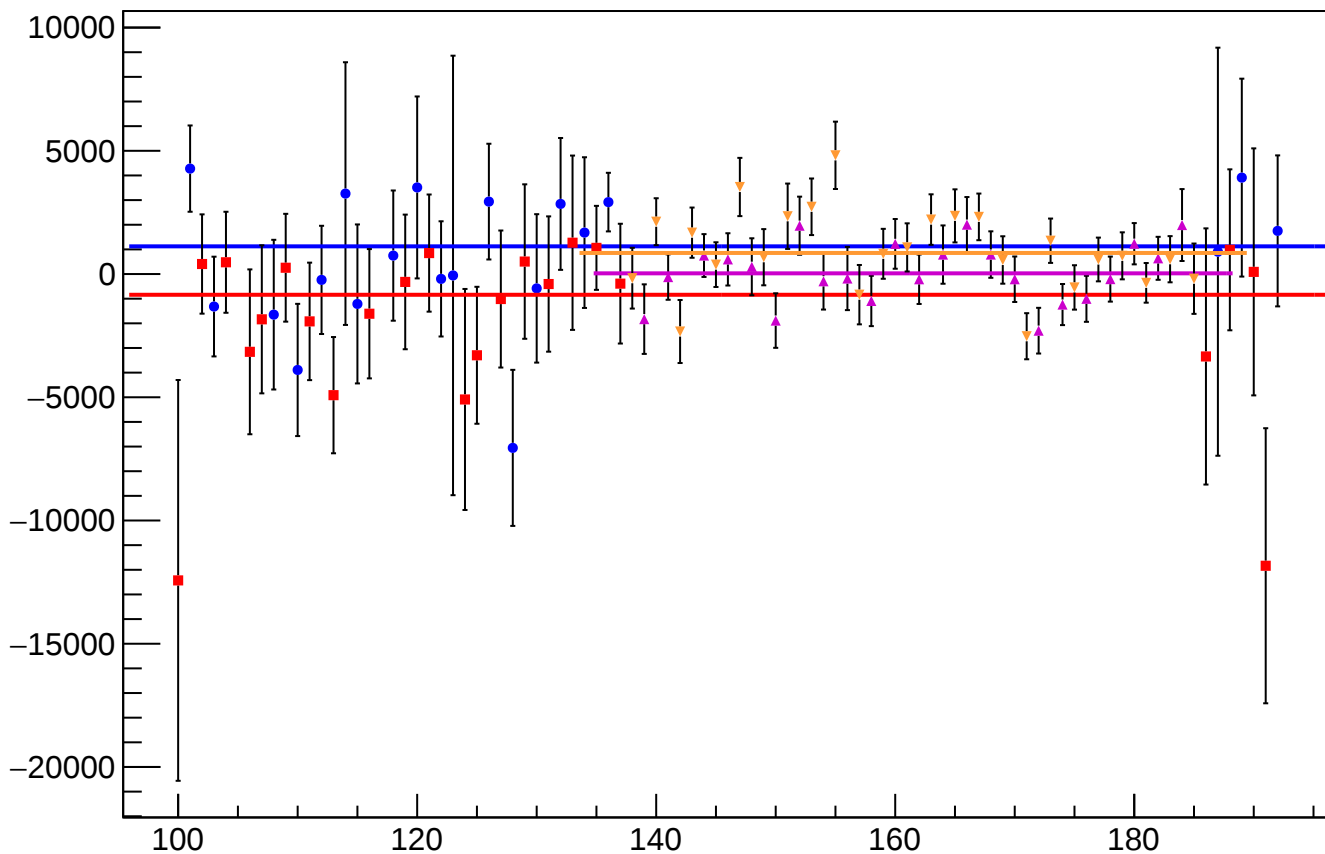
Right: 1592.331 $\pm$ 0.284  $\chi^2$ /NDF: 2547151.2/42

In: 951.143 $\pm$ 0.139  $\chi^2$ /NDF: 4301590.4/42

Out: 954.635 $\pm$ 0.136  $\chi^2$ /NDF: 5216846.0/47

All: 952.932 $\pm$ 0.097  $\chi^2$ /NDF: 9518758.6/90

# asym\_sam\_24\_68\_dd\_mean vs Slug, Sign Corrected



Right In: 1123.665 $\pm$ 568.135  $\chi^2$ /NDF: 21.7/19

Left Out: 855.664 $\pm$ 205.047  $\chi^2$ /NDF:54.1/24

Right Out: -841.222 $\pm$ 571.579  $\chi^2$ /NDF: 15.5/22

Left In: 28.553 $\pm$ 211.034  $\chi^2$ /NDF:29.7/22

Left: 454.007 $\pm$ 147.061  $\chi^2$ /NDF: 91.7/47

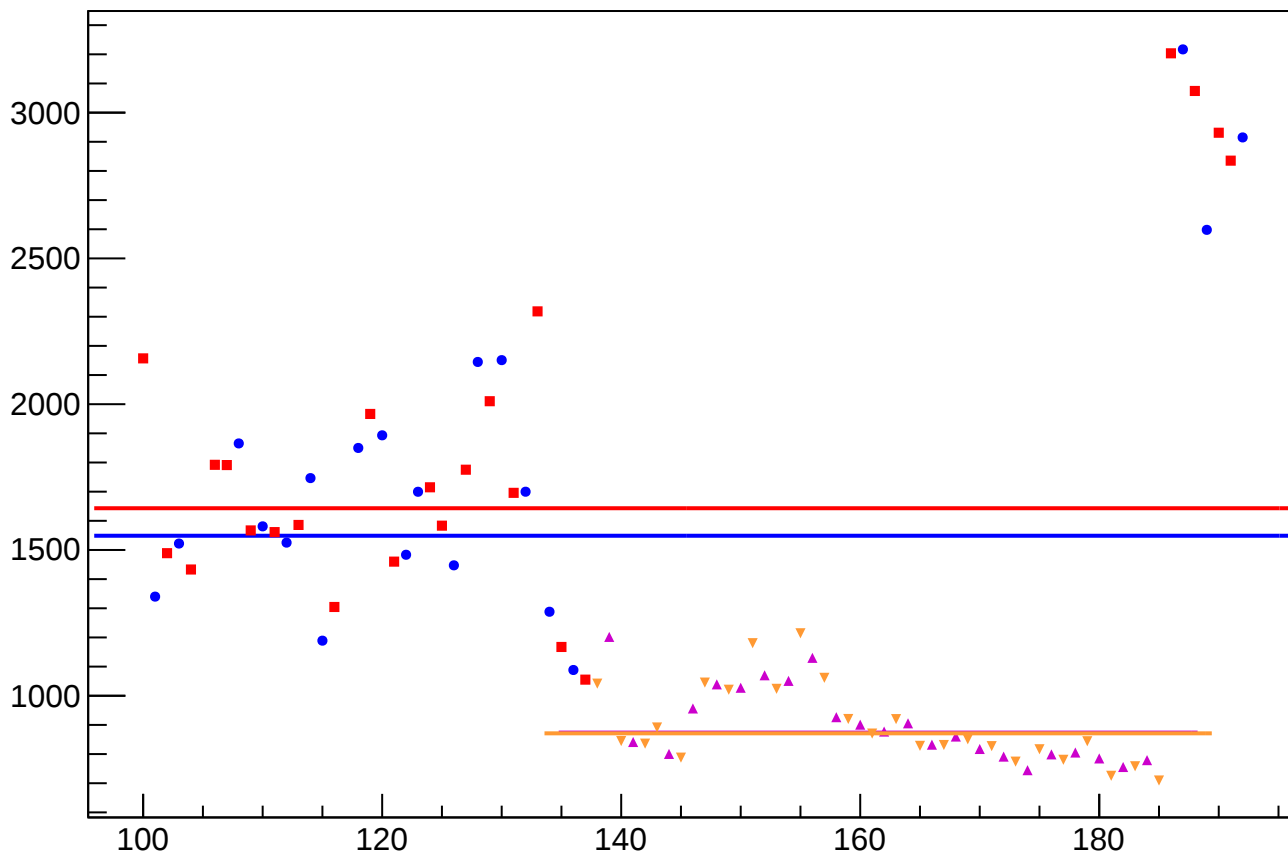
Right: 147.159 $\pm$ 402.945  $\chi^2$ /NDF: 43.1/42

In: 161.331 $\pm$ 197.827  $\chi^2$ /NDF:54.7/42

Out: 662.187 $\pm$ 193.004  $\chi^2$ /NDF:77.3/47

All: 417.939 $\pm$ 138.148  $\chi^2$ /NDF: 135.4/90

asym\_sam\_24\_68\_dd\_rms vs Slug, Sign Corrected



Right In: 1548.815 $\pm$ 0.402  $\chi^2$ /NDF: 1215311.6/19

Left Out: 871.109 $\pm$ 0.145  $\chi^2$ /NDF: 651751.1/24

Right Out: 1643.161 $\pm$ 0.404  $\chi^2$ /NDF: 1296619.1/22

Left In: 873.675 $\pm$ 0.149  $\chi^2$ /NDF: 573822.5/22

Left: 872.355 $\pm$ 0.104  $\chi^2$ /NDF: 1225725.6/47

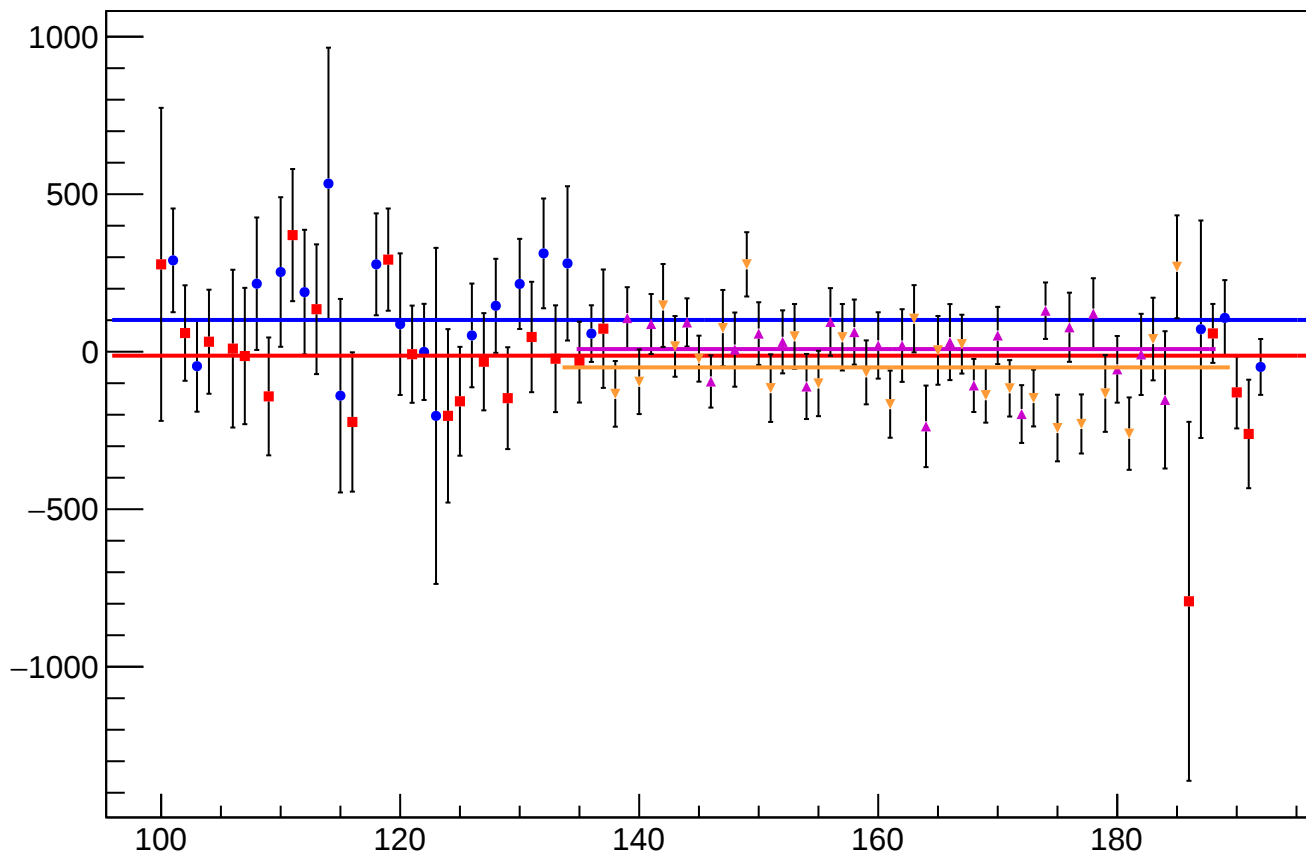
Right: 1595.703 $\pm$ 0.285  $\chi^2$ /NDF: 2539340.8/42

In: 955.533 $\pm$ 0.140  $\chi^2$ /NDF: 4271018.9/42

Out: 959.138 $\pm$ 0.136  $\chi^2$ /NDF: 5181287.8/47

All: 957.380 $\pm$ 0.098  $\chi^2$ /NDF: 9452646.8/90

reg\_asym\_sam\_26\_48\_dd\_mean vs Slug, Sign Corrected



Right In:  $100.817 \pm 35.806$   $\chi^2/\text{NDF}$ : 12.7/19

Left Out:  $-49.717 \pm 20.580$   $\chi^2/\text{NDF}$ : 39.4/24

Right Out:  $-12.551 \pm 35.179$   $\chi^2/\text{NDF}$ : 17.2/22

Left In:  $8.343 \pm 21.271$   $\chi^2/\text{NDF}$ : 22.0/22

Left:  $-21.646 \pm 14.791$   $\chi^2/\text{NDF}$ : 65.3/47

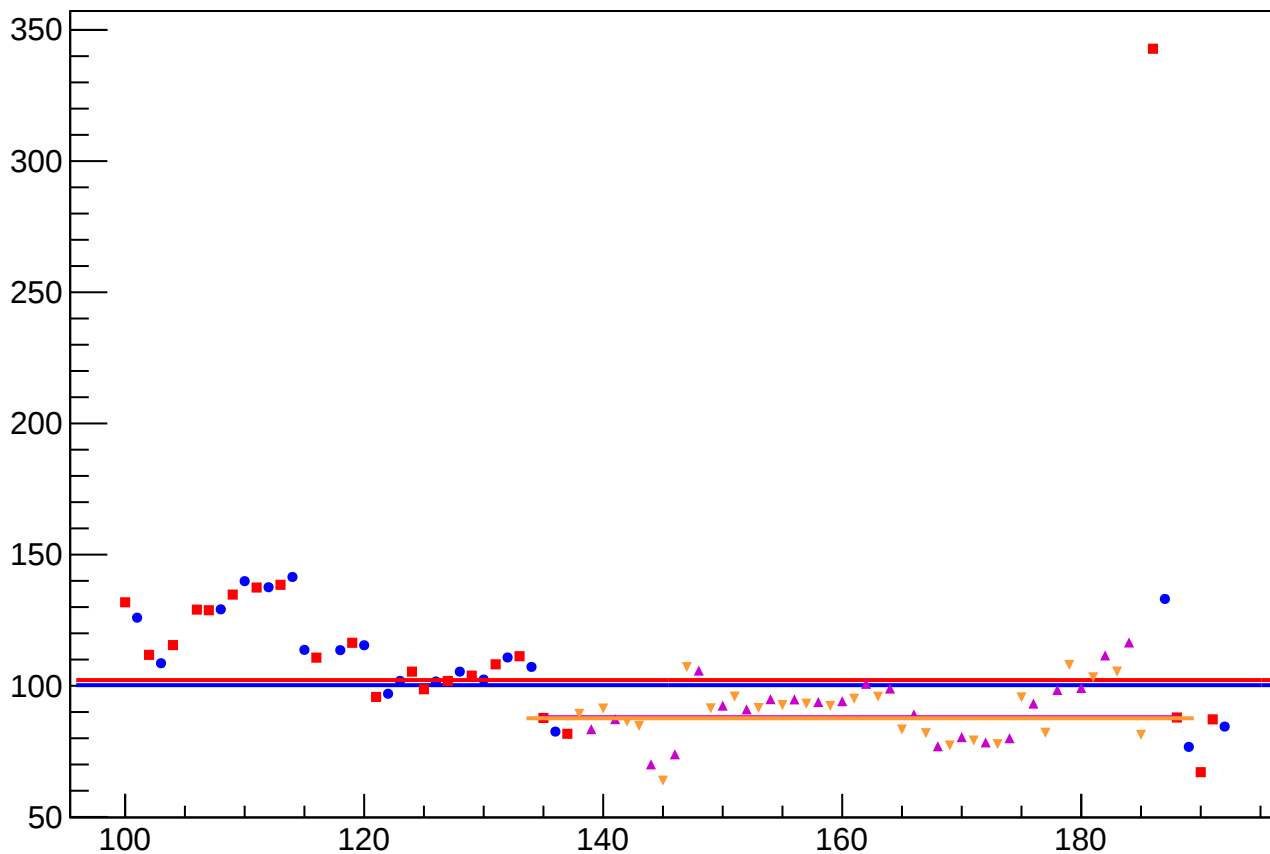
Right:  $43.131 \pm 25.094$   $\chi^2/\text{NDF}$ : 35.1/42

In:  $32.465 \pm 18.288$   $\chi^2/\text{NDF}$ : 39.7/42

Out:  $-40.241 \pm 17.764$   $\chi^2/\text{NDF}$ : 57.5/47

All:  $-4.944 \pm 12.742$   $\chi^2/\text{NDF}$ : 105.3/90

reg\_asym\_sam\_26\_48\_dd\_rms vs Slug, Sign Corrected



Right In: 100.240 $\pm$ 0.025  $\chi^2$ /NDF: 513908.0/19

Left Out: 87.625 $\pm$ 0.015  $\chi^2$ /NDF: 554690.7/24

Right Out: 102.187 $\pm$ 0.025  $\chi^2$ /NDF: 948427.5/22

Left In: 88.032 $\pm$ 0.015  $\chi^2$ /NDF: 523710.9/22

Left: 87.822 $\pm$ 0.010  $\chi^2$ /NDF: 1078779.2/47

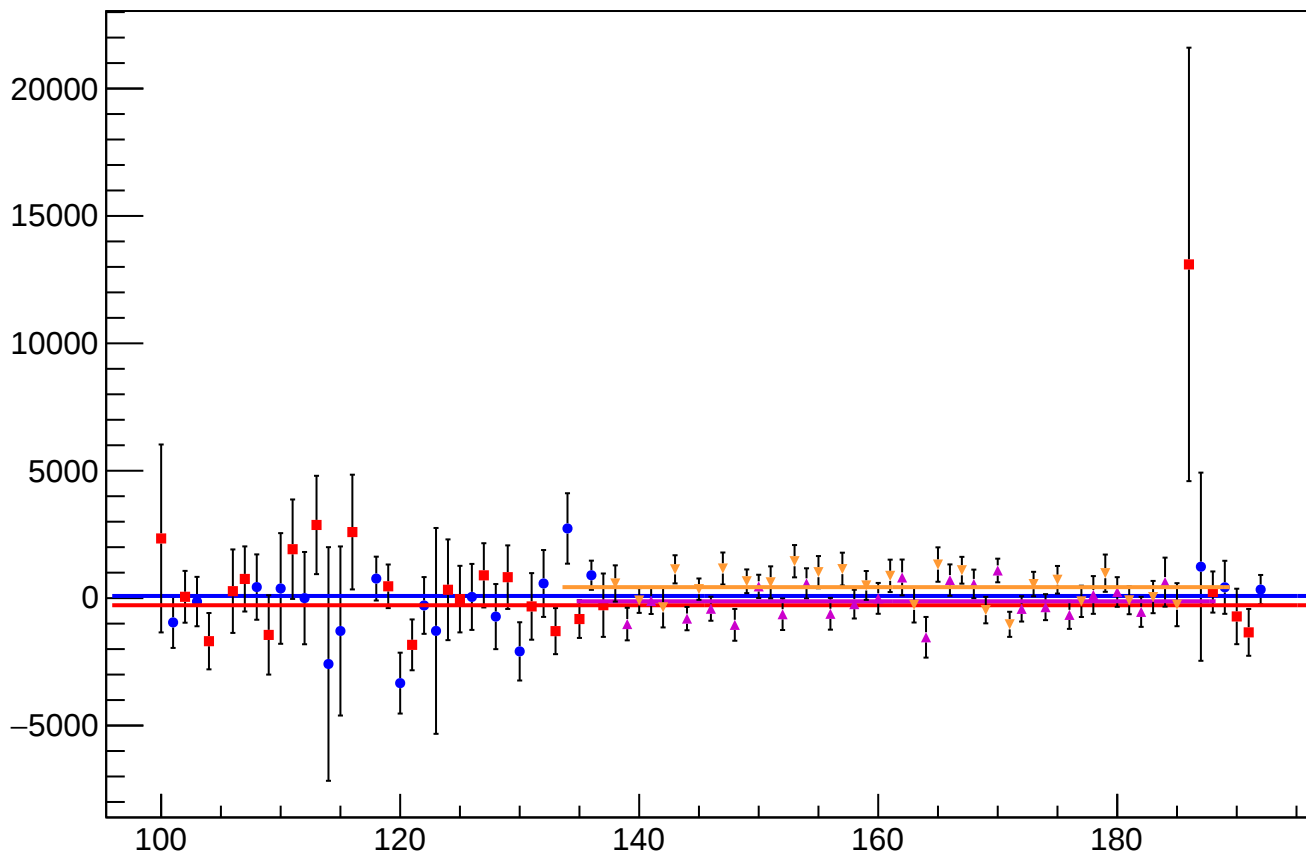
Right: 101.231 $\pm$ 0.018  $\chi^2$ /NDF: 1465345.4/42

In: 91.217 $\pm$ 0.013  $\chi^2$ /NDF: 1209450.3/42

Out: 91.338 $\pm$ 0.013  $\chi^2$ /NDF: 1758420.5/47

All: 91.279 $\pm$ 0.009  $\chi^2$ /NDF: 2967916.4/90

asym\_sam\_26\_48\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: 85.307 $\pm$ 246.854  $\chi^2$ /NDF: 21.0/19

Left Out: 431.658 $\pm$ 115.706  $\chi^2$ /NDF:30.5/24

Right Out: -278.894 $\pm$ 247.553  $\chi^2$ /NDF: 20.3/22

Left In: -123.017 $\pm$ 118.849  $\chi^2$ /NDF:29.3/22

Left: 161.753 $\pm$ 82.905  $\chi^2$ /NDF: 70.9/47

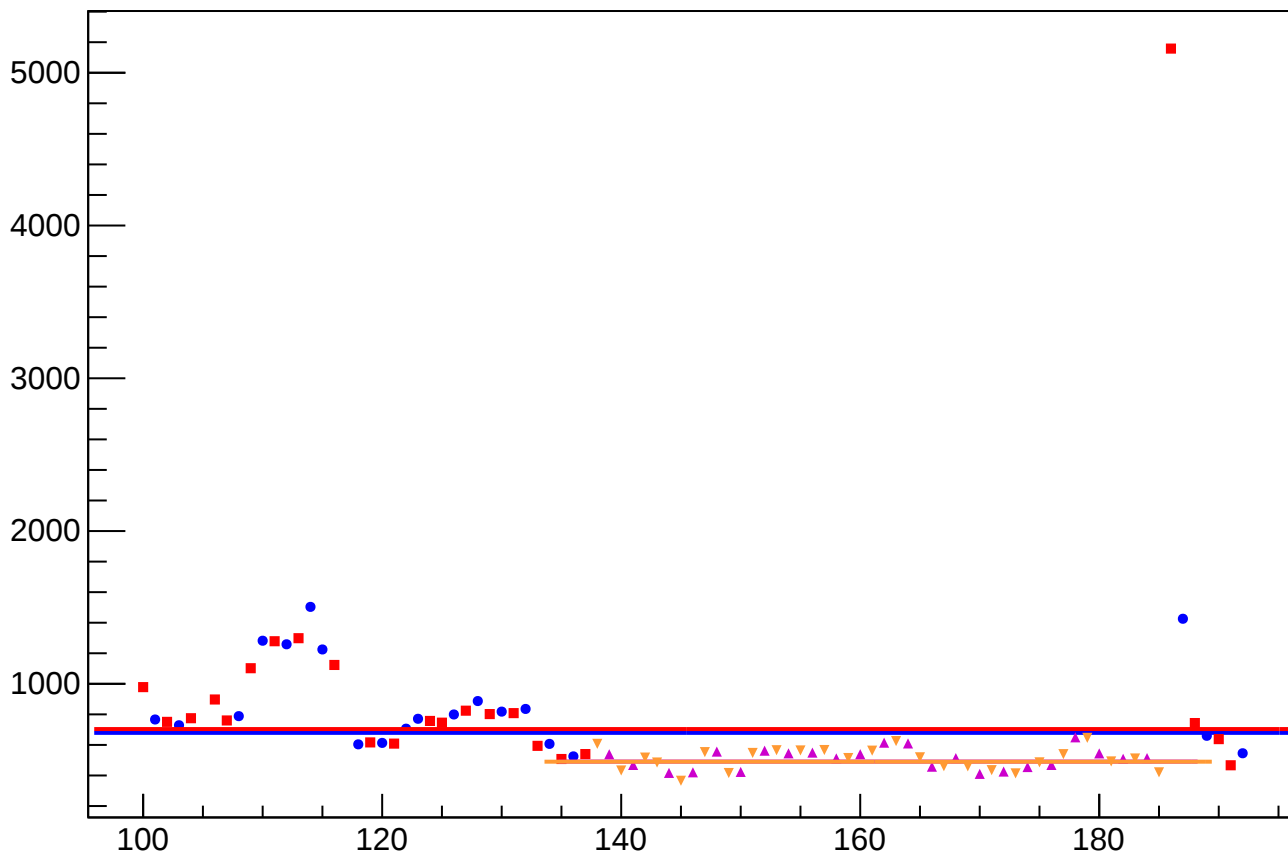
Right: -96.278 $\pm$ 174.799  $\chi^2$ /NDF: 42.4/42

In: -83.814 $\pm$ 107.084  $\chi^2$ /NDF:50.9/42

Out: 304.261 $\pm$ 104.821  $\chi^2$ /NDF:57.5/47

All: 114.368 $\pm$ 74.907  $\chi^2$ /NDF: 115.1/90

asym\_sam\_26\_48\_dd\_correction\_rms vs Slug, Sign Corrected



Right In:  $679.015 \pm 0.175$   $\chi^2/\text{NDF}: 1006393.9/19$

Left Out:  $490.267 \pm 0.082$   $\chi^2/\text{NDF}: 750277.0/24$

Right Out:  $703.861 \pm 0.175$   $\chi^2/\text{NDF}: 1602659.4/22$

Left In:  $490.910 \pm 0.084$   $\chi^2/\text{NDF}: 589235.5/22$

Left:  $490.580 \pm 0.059$   $\chi^2/\text{NDF}: 1339542.5/47$

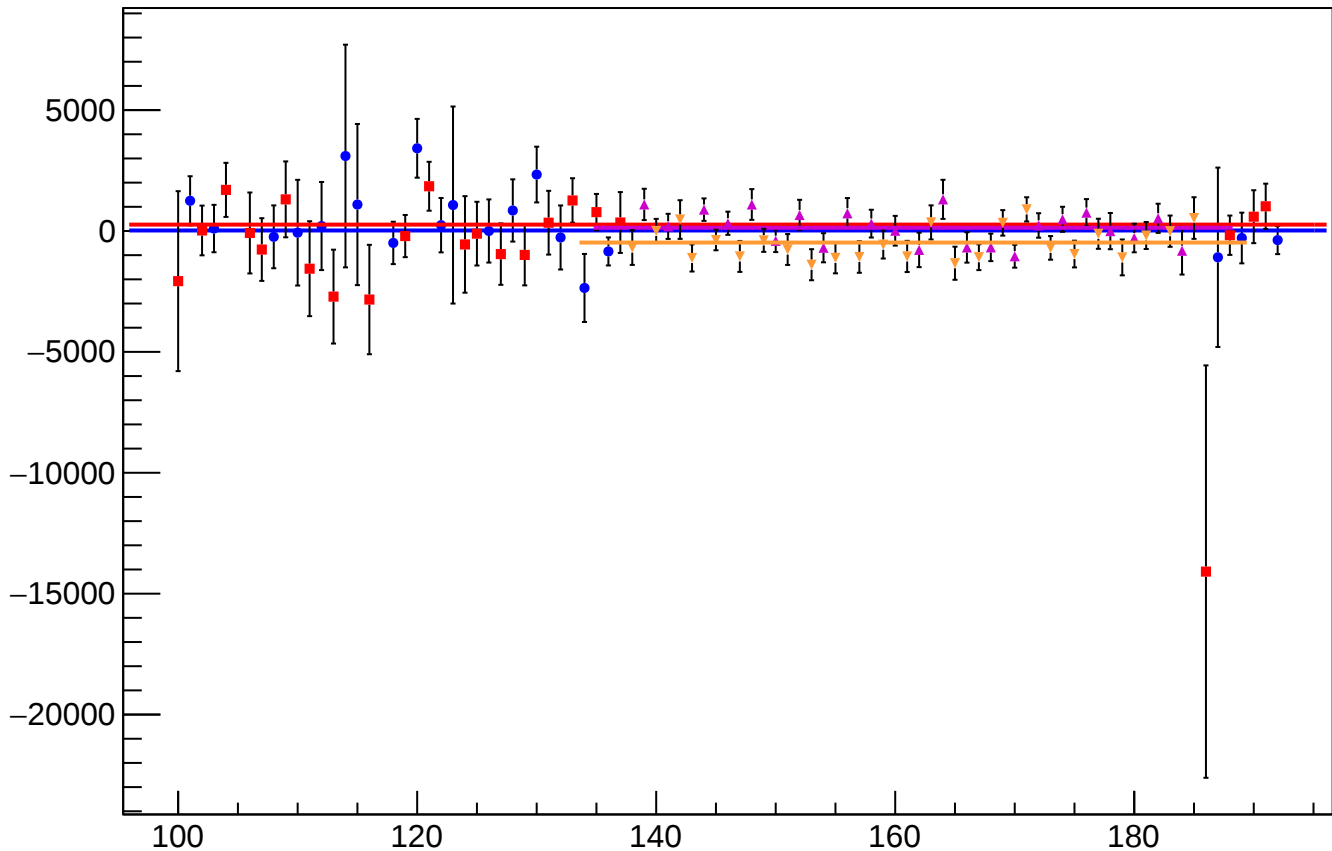
Right:  $691.403 \pm 0.124$   $\chi^2/\text{NDF}: 2619155.1/42$

In:  $526.307 \pm 0.076$   $\chi^2/\text{NDF}: 2538416.8/42$

Out:  $528.563 \pm 0.074$   $\chi^2/\text{NDF}: 3574908.8/47$

All:  $527.459 \pm 0.053$   $\chi^2/\text{NDF}: 6113778.6/90$

asym\_sam\_26\_48\_dd\_mean vs Slug, Sign Corrected



Right In: 21.338 $\pm$ 249.792  $\chi^2$ /NDF: 20.6/19

Left Out: -478.197 $\pm$ 117.659  $\chi^2$ /NDF:27.8/24

Right Out: 263.547 $\pm$ 250.639  $\chi^2$ /NDF: 18.8/22

Left In: 132.543 $\pm$ 120.866  $\chi^2$ /NDF:29.5/22

Left: -181.037 $\pm$ 84.308  $\chi^2$ /NDF: 70.5/47

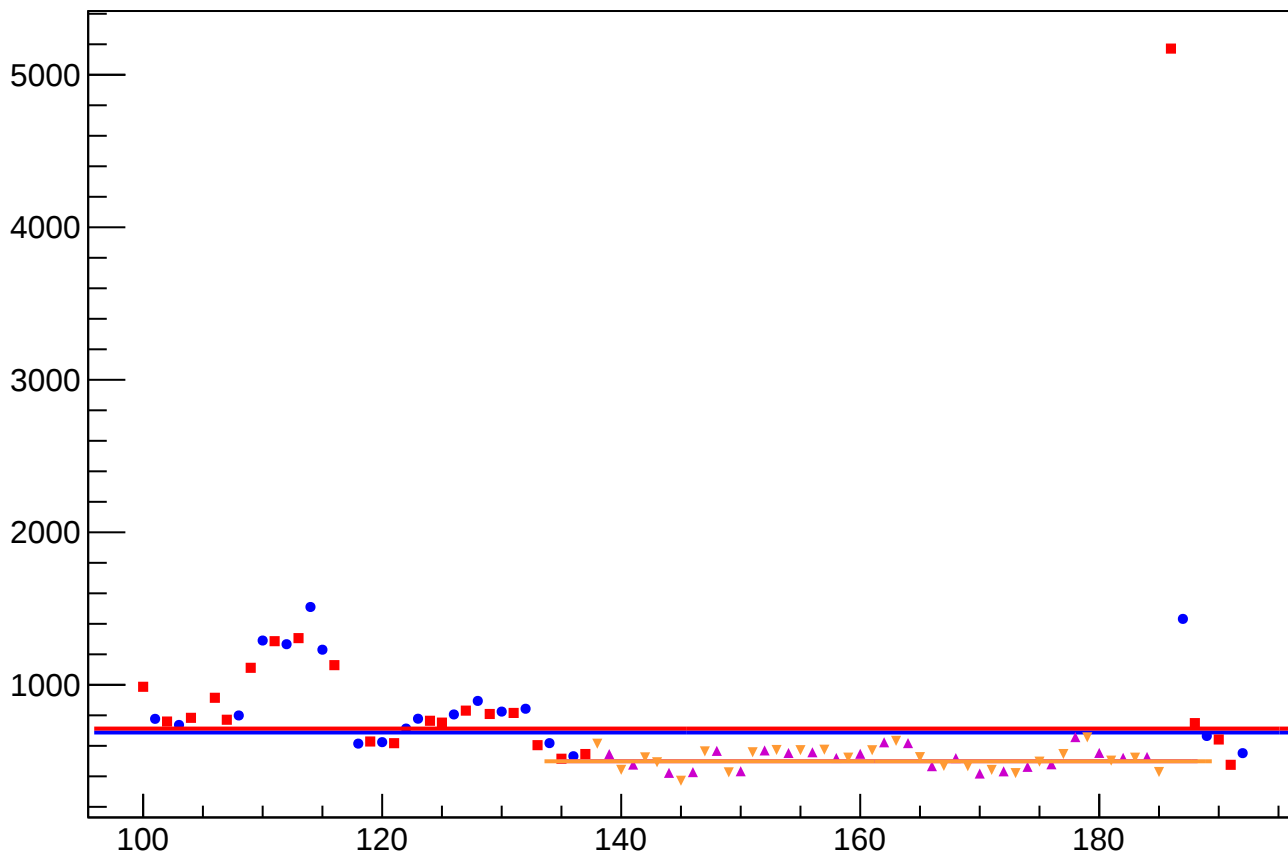
Right: 142.033 $\pm$ 176.928  $\chi^2$ /NDF: 39.8/42

In: 111.446 $\pm$ 108.799  $\chi^2$ /NDF:50.3/42

Out: -344.255 $\pm$ 106.507  $\chi^2$ /NDF:53.7/47

All: -121.254 $\pm$ 76.109  $\chi^2$ /NDF: 113.0/90

asym\_sam\_26\_48\_dd\_rms vs Slug, Sign Corrected



Right In: 687.511+/-0.177  $\chi^2/\text{NDF}$ : 991331.2/19

Left Out: 498.754+/-0.083  $\chi^2/\text{NDF}$ : 734302.8/24

Right Out: 713.200+/-0.177  $\chi^2/\text{NDF}$ : 1578995.0/22

Left In: 499.393+/-0.085  $\chi^2/\text{NDF}$ : 576539.2/22

Left: 499.065+/-0.060  $\chi^2/\text{NDF}$ : 1310870.7/47

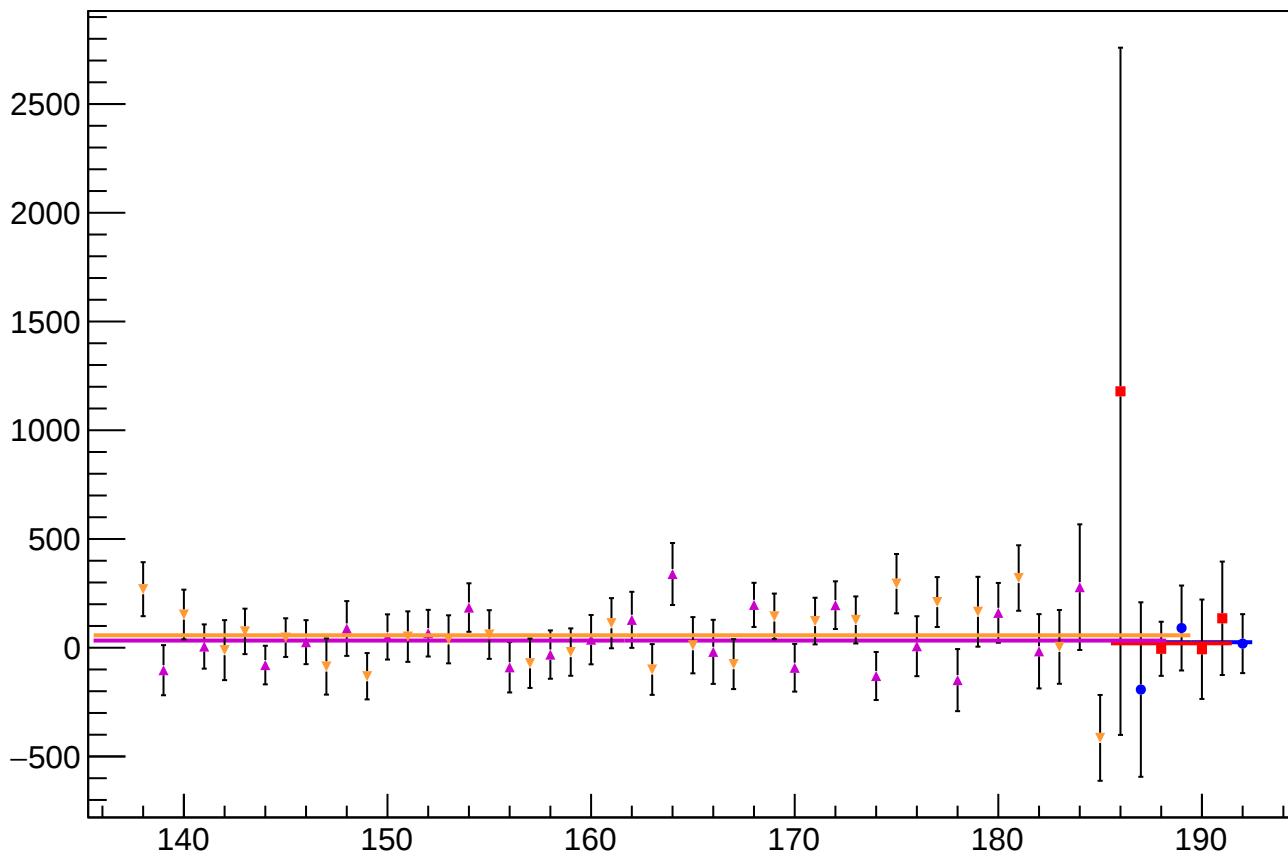
Right: 700.312+/-0.125  $\chi^2/\text{NDF}$ : 2580866.7/42

In: 535.081+/-0.077  $\chi^2/\text{NDF}$ : 2486991.0/42

Out: 537.478+/-0.075  $\chi^2/\text{NDF}$ : 3513002.4/47

All: 536.305+/-0.054  $\chi^2/\text{NDF}$ : 6000489.1/90

reg\_asym\_sam\_1548\_avg\_mean vs Slug, Sign Corrected



Right In: 25.391 $\pm$ 107.308  $\chi^2$ /NDF: 0.4/2

Left Out: 57.211 $\pm$ 23.714  $\chi^2$ /NDF:29.2/24

Right Out: 20.290 $\pm$ 100.588  $\chi^2$ /NDF: 0.8/3

Left In: 32.948 $\pm$ 24.587  $\chi^2$ /NDF:23.6/22

Left: 45.518 $\pm$ 17.069  $\chi^2$ /NDF: 53.3/47

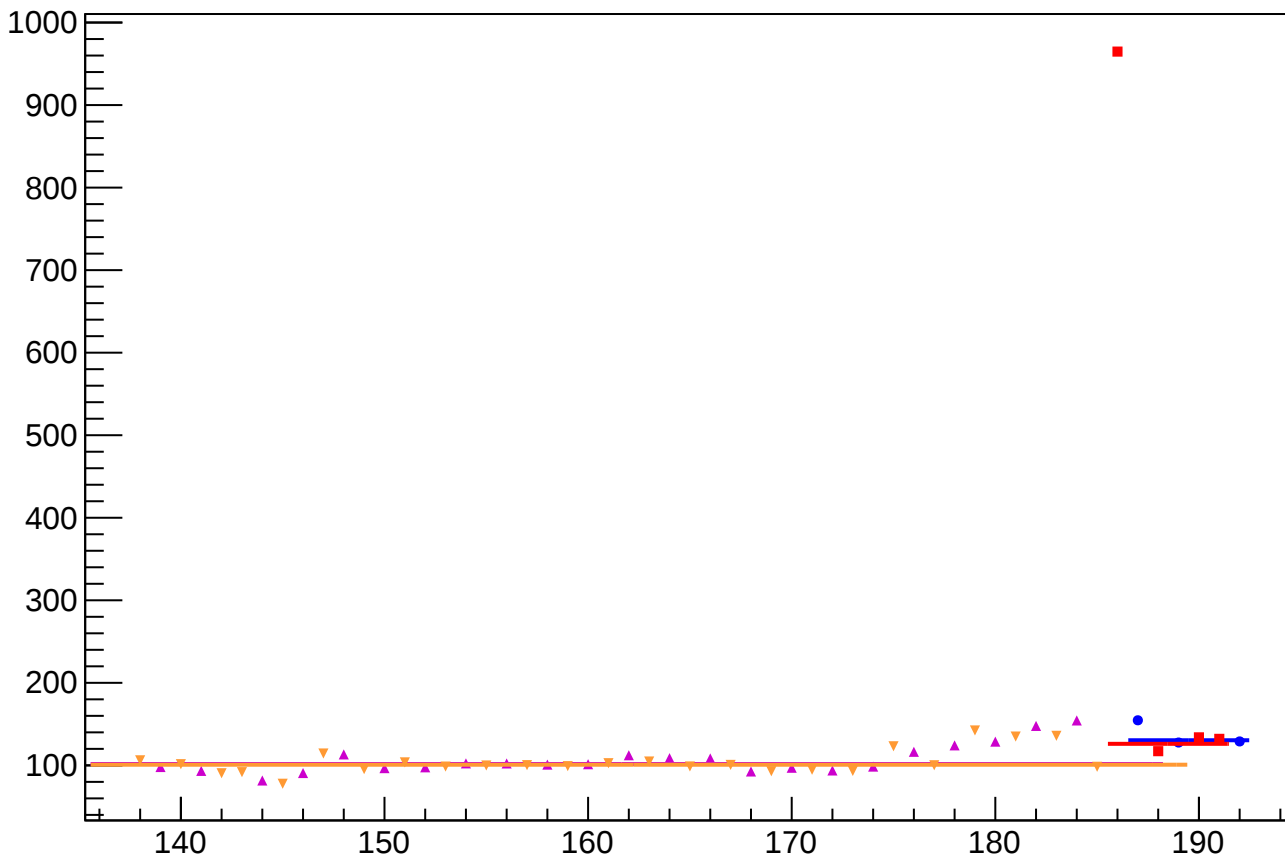
Right: 22.675 $\pm$ 73.387  $\chi^2$ /NDF: 1.2/6

In: 32.571 $\pm$ 23.966  $\chi^2$ /NDF:24.0/25

Out: 55.267 $\pm$ 23.081  $\chi^2$ /NDF:30.1/28

All: 44.346 $\pm$ 16.625  $\chi^2$ /NDF: 54.6/54

reg\_asym\_sam\_1548\_avg\_rms vs Slug, Sign Corrected



Right In: 130.429 $\pm$ 0.076  $\chi^2$ /NDF: 7894.8/2

Left Out: 100.801 $\pm$ 0.017  $\chi^2$ /NDF:600502.4/24

Right Out: 126.098 $\pm$ 0.071  $\chi^2$ /NDF: 577122.0/3

Left In: 101.622 $\pm$ 0.017  $\chi^2$ /NDF:582329.3/22

Left: 101.196 $\pm$ 0.012  $\chi^2$ /NDF: 1183987.6/47

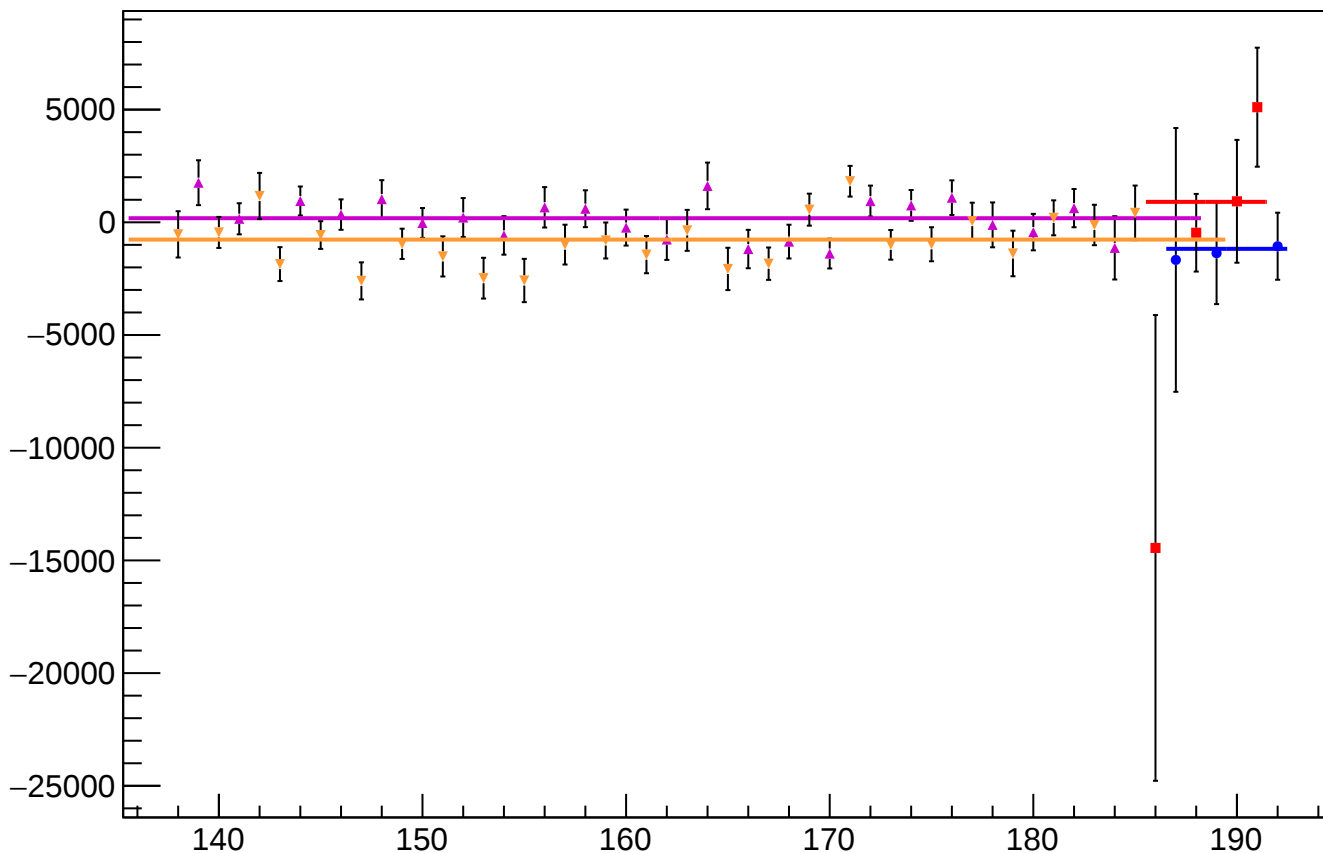
Right: 128.124 $\pm$ 0.052  $\chi^2$ /NDF: 586751.1/6

In: 103.059 $\pm$ 0.017  $\chi^2$ /NDF:727170.2/25

Out: 102.132 $\pm$ 0.016  $\chi^2$ /NDF:1297464.0/28

All: 102.578 $\pm$ 0.012  $\chi^2$ /NDF: 2026183.8/54

asym\_sam\_1548\_avg\_correction\_mean vs Slug, Sign Corrected



Right In: -1176.581+/-1215.260  $\chi^2$ /NDF: 0.0/2

Left Out: -766.358+/-161.066  $\chi^2$ /NDF:46.5/24

Right Out: 907.395+/-1265.393  $\chi^2$ /NDF: 5.4/3

Left In: 181.584+/-165.671  $\chi^2$ /NDF:25.0/22

Left: -305.743+/-115.485  $\chi^2$ /NDF: 88.4/47

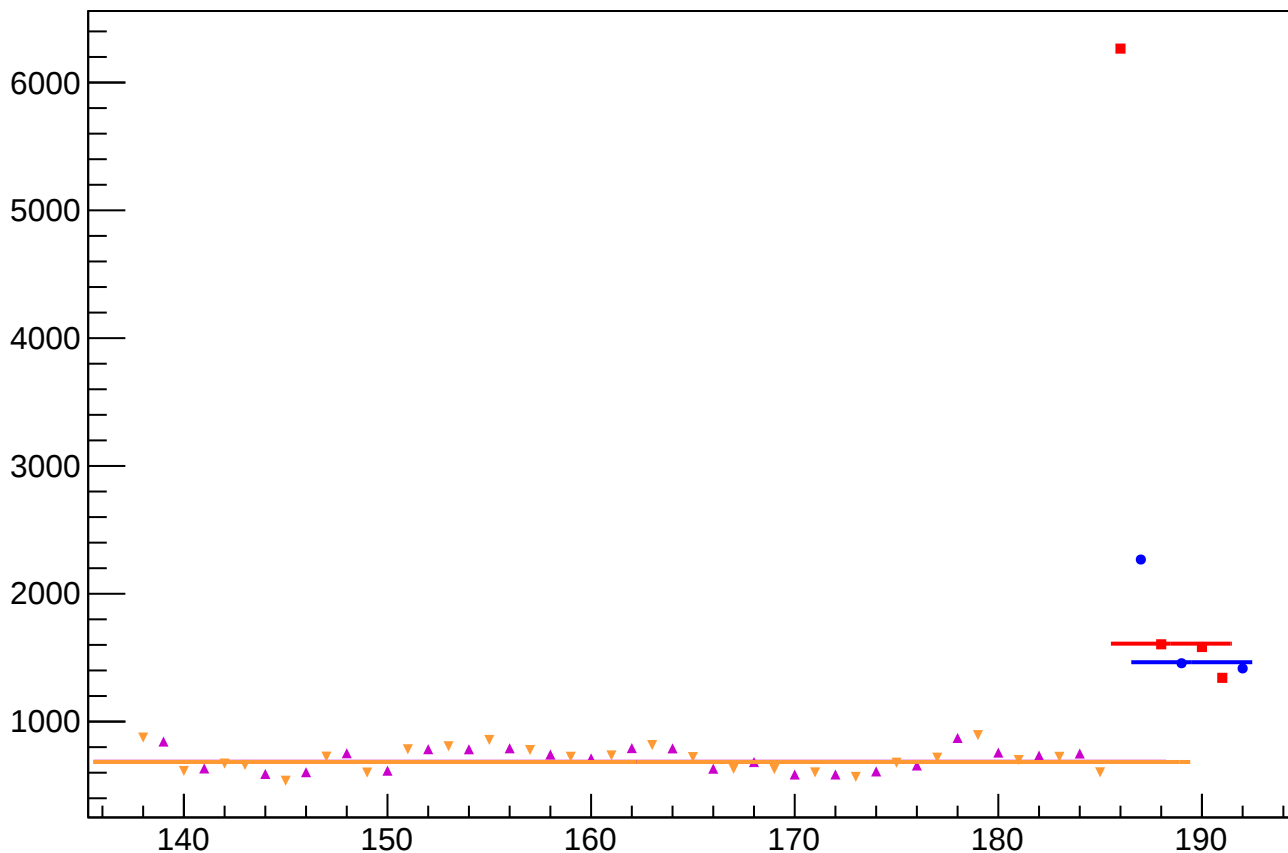
Right: -176.691+/-876.506  $\chi^2$ /NDF: 6.8/6

In: 156.803+/-164.152  $\chi^2$ /NDF:26.2/25

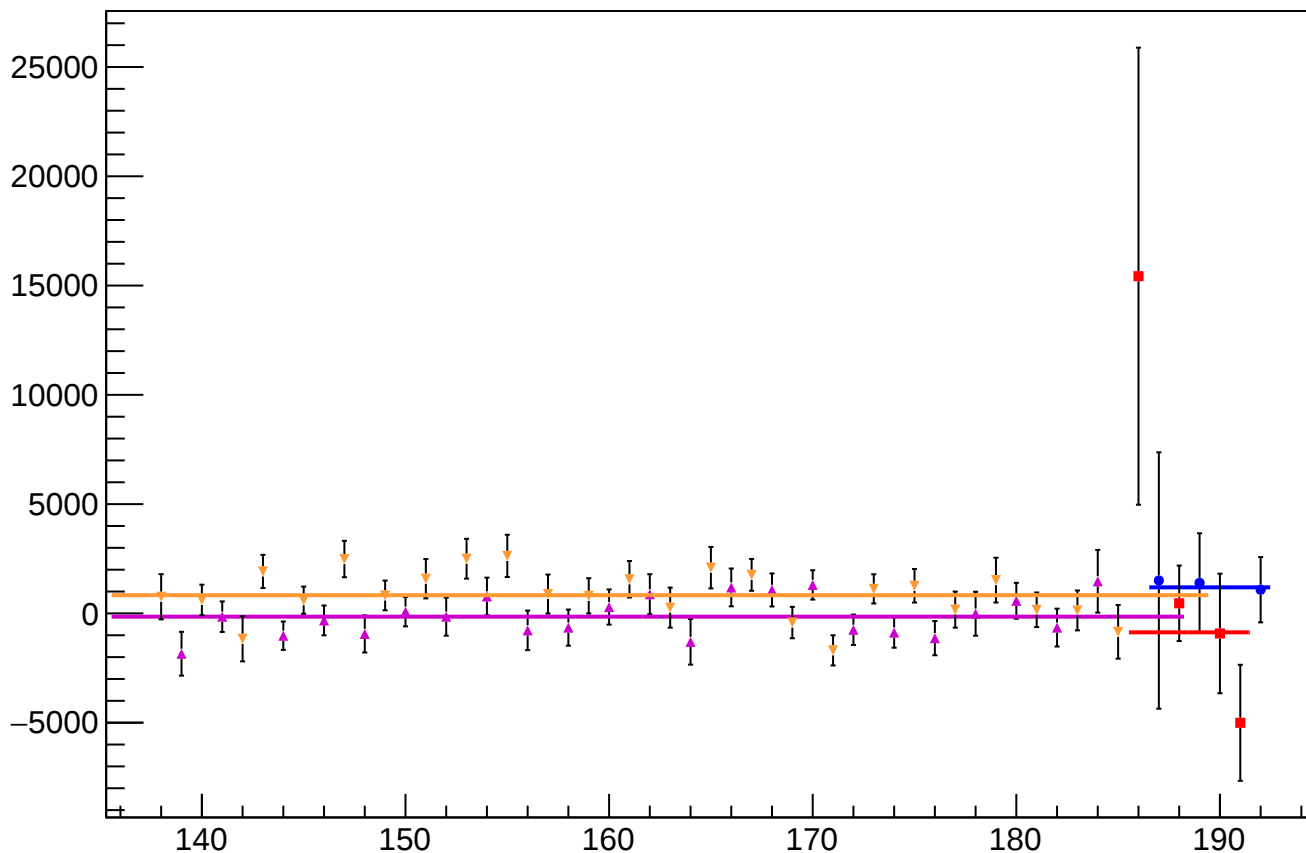
Out: -739.673+/-159.777  $\chi^2$ /NDF:53.6/28

All: -303.541+/-114.495  $\chi^2$ /NDF: 95.2/54

asym\_sam\_1548\_avg\_correction\_rms vs Slug, Sign Corrected



asym\_sam\_1548\_avg\_mean vs Slug, Sign Corrected



Right In: 1192.245 $\pm$ 1220.197  $\chi^2$ /NDF: 0.0/2

Left Out: 833.395 $\pm$ 162.965  $\chi^2$ /NDF:43.2/24

Right Out: -867.007 $\pm$ 1270.130  $\chi^2$ /NDF: 5.5/3

Left In: -148.814 $\pm$ 167.644  $\chi^2$ /NDF:26.0/22

Left: 356.189 $\pm$ 116.853  $\chi^2$ /NDF: 86.9/47

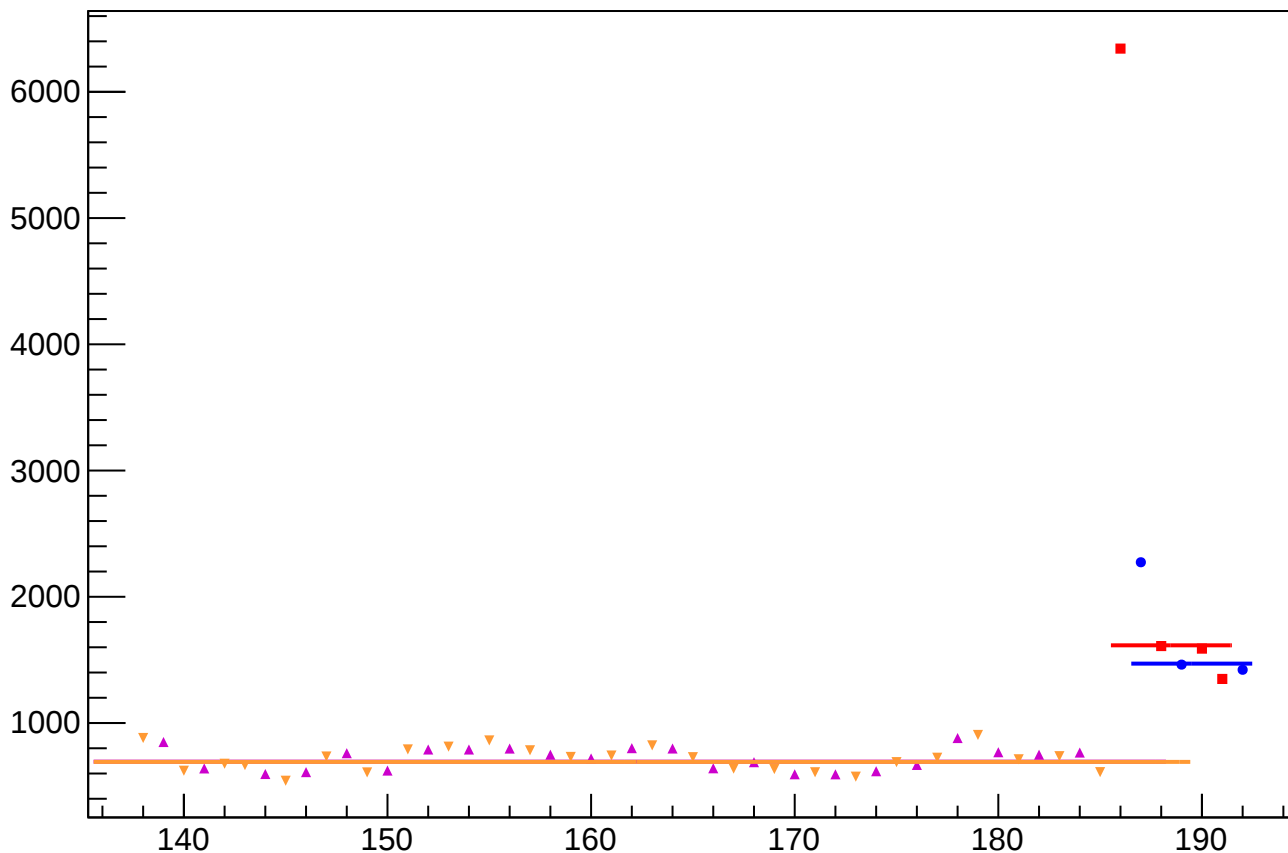
Right: 203.891 $\pm$ 879.933  $\chi^2$ /NDF: 6.8/6

In: -123.969 $\pm$ 166.084  $\chi^2$ /NDF:27.2/25

Out: 805.855 $\pm$ 161.640  $\chi^2$ /NDF:50.4/28

All: 353.549 $\pm$ 115.836  $\chi^2$ /NDF: 93.8/54

asym\_sam\_1548\_avg\_rms vs Slug, Sign Corrected



Right In: 1470.499+/-0.863  $\chi^2/\text{NDF}$ : 39616.9/2

Left Out: 692.097+/-0.115  $\chi^2/\text{NDF}$ : 657259.6/24

Right Out: 1615.482+/-0.898  $\chi^2/\text{NDF}$ : 429128.4/3

Left In: 693.867+/-0.119  $\chi^2/\text{NDF}$ : 522053.5/22

Left: 692.957+/-0.083  $\chi^2/\text{NDF}$ : 1179427.7/47

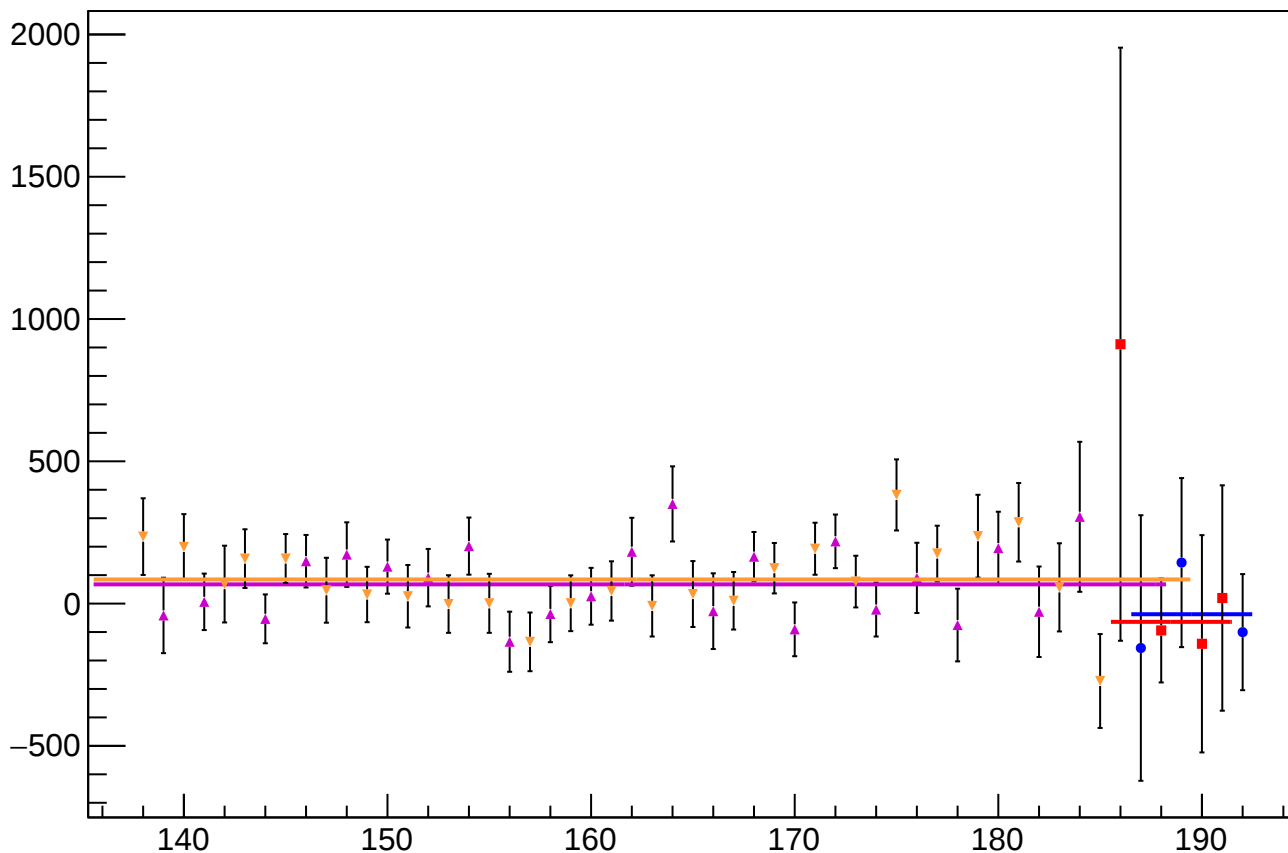
Right: 1540.085+/-0.622  $\chi^2/\text{NDF}$ : 482297.4/6

In: 708.255+/-0.117  $\chi^2/\text{NDF}$ : 1356874.9/25

Out: 707.052+/-0.114  $\chi^2/\text{NDF}$ : 2126328.0/28

All: 707.637+/-0.082  $\chi^2/\text{NDF}$ : 3483256.8/54

reg\_asym\_sam\_3748\_avg\_mean vs Slug, Sign Corrected



Right In:  $-37.442 \pm 158.200$   $\chi^2/\text{NDF}$ : 0.5/2

Left Out:  $84.860 \pm 21.643$   $\chi^2/\text{NDF}$ : 28.5/24

Right Out:  $-64.156 \pm 150.591$   $\chi^2/\text{NDF}$ : 1.0/3

Left In:  $67.552 \pm 22.449$   $\chi^2/\text{NDF}$ : 28.9/22

Left:  $76.522 \pm 15.581$   $\chi^2/\text{NDF}$ : 57.7/47

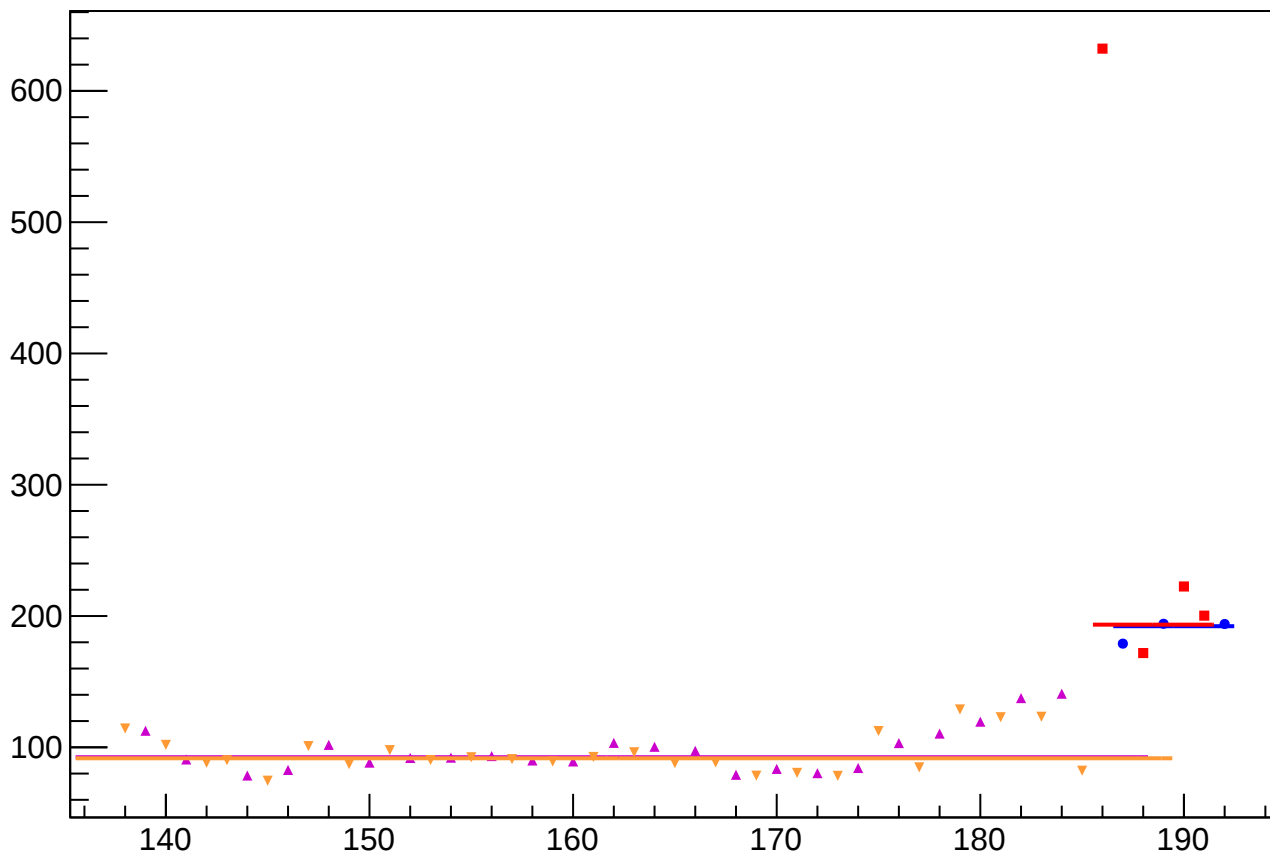
Right:  $-51.457 \pm 109.075$   $\chi^2/\text{NDF}$ : 1.5/6

In:  $65.480 \pm 22.227$   $\chi^2/\text{NDF}$ : 29.8/25

Out:  $81.844 \pm 21.423$   $\chi^2/\text{NDF}$ : 30.4/28

All:  $73.963 \pm 15.425$   $\chi^2/\text{NDF}$ : 60.5/54

reg\_asym\_sam\_3748\_avg\_rms vs Slug, Sign Corrected



Right In: 192.247 $\pm$ 0.112  $\chi^2$ /NDF: 1831.8/2

Left Out: 91.633 $\pm$ 0.015  $\chi^2$ /NDF: 693122.0/24

Right Out: 193.422 $\pm$ 0.106  $\chi^2$ /NDF: 394754.3/3

Left In: 92.466 $\pm$ 0.016  $\chi^2$ /NDF: 655700.4/22

Left: 92.034 $\pm$ 0.011  $\chi^2$ /NDF: 1350250.3/47

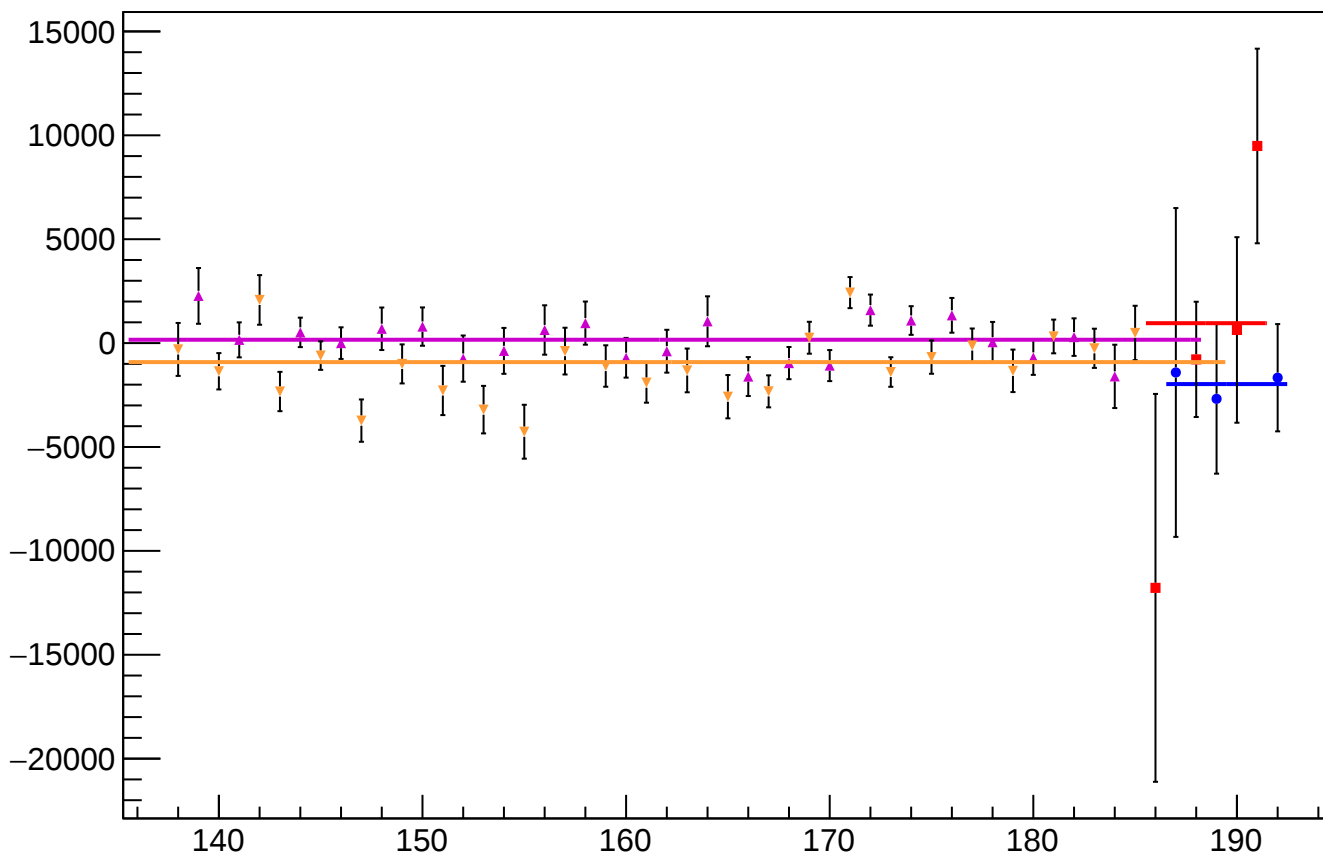
Right: 192.863 $\pm$ 0.077  $\chi^2$ /NDF: 396644.0/6

In: 94.436 $\pm$ 0.016  $\chi^2$ /NDF: 1437460.8/25

Out: 93.693 $\pm$ 0.015  $\chi^2$ /NDF: 1983145.6/28

All: 94.050 $\pm$ 0.011  $\chi^2$ /NDF: 3421764.7/54

asym\_sam\_3748\_avg\_correction\_mean vs Slug, Sign Corrected



Right In: -1972.372 $\pm$ 2027.939  $\chi^2$ /NDF: 0.1/2

Left Out: -914.719 $\pm$ 185.341  $\chi^2$ /NDF:64.2/24

Right Out: 958.141 $\pm$ 2053.394  $\chi^2$ /NDF: 5.6/3

Left In: 161.076 $\pm$ 189.491  $\chi^2$ /NDF:25.1/22

Left: -388.730 $\pm$ 132.499  $\chi^2$ /NDF: 105.7/47

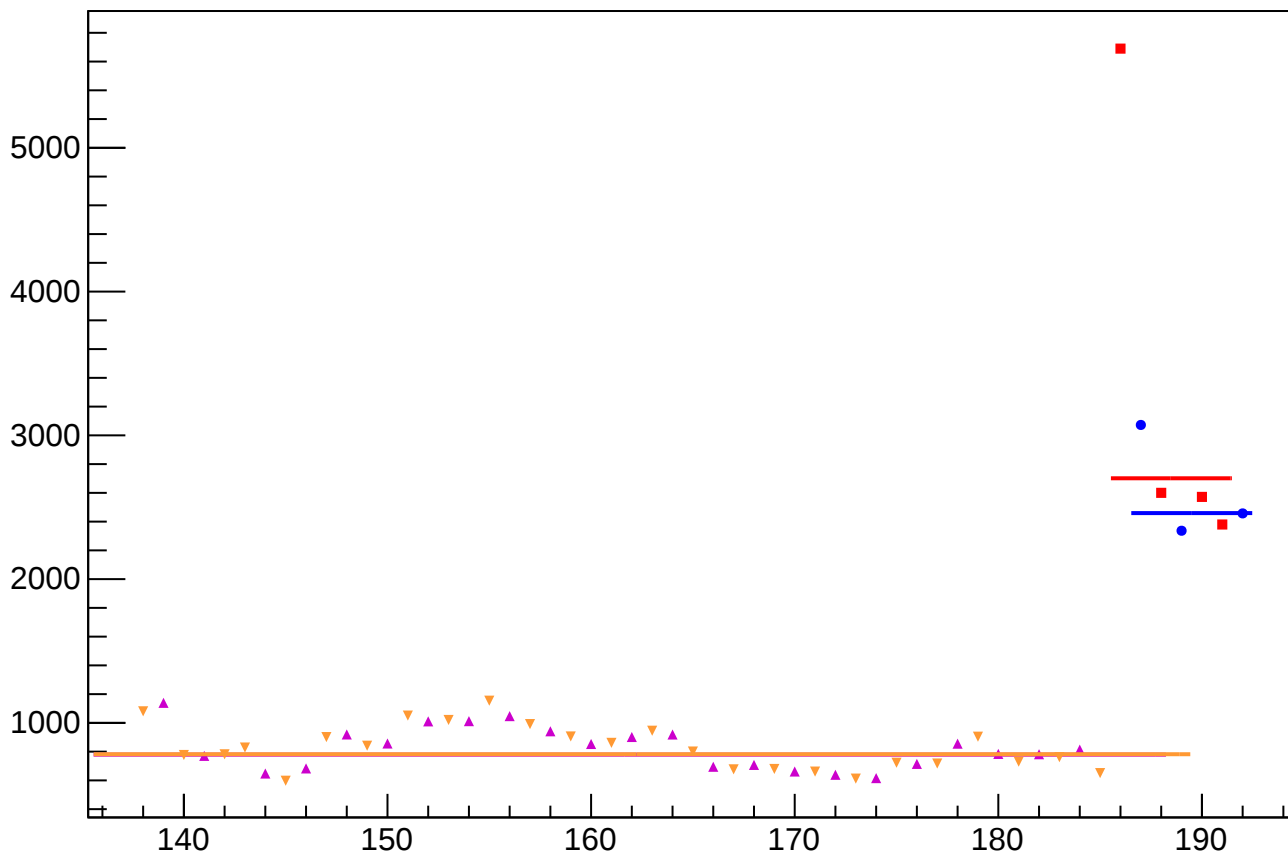
Right: -525.392 $\pm$ 1442.885  $\chi^2$ /NDF: 6.7/6

In: 142.610 $\pm$ 188.669  $\chi^2$ /NDF:26.2/25

Out: -899.584 $\pm$ 184.590  $\chi^2$ /NDF:70.6/28

All: -389.873 $\pm$ 131.943  $\chi^2$ /NDF: 112.4/54

asym\_sam\_3748\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 2459.306+/-1.434  $\chi^2/\text{NDF}$ : 14332.6/2

Left Out: 782.042+/-0.131  $\chi^2/\text{NDF}$ :1130984.3/24

Right Out: 2701.398+/-1.452  $\chi^2/\text{NDF}$ : 218803.7/3

Left In: 778.995+/-0.134  $\chi^2/\text{NDF}$ :980243.4/22

Left: 780.552+/-0.094  $\chi^2/\text{NDF}$ : 2111492.1/47

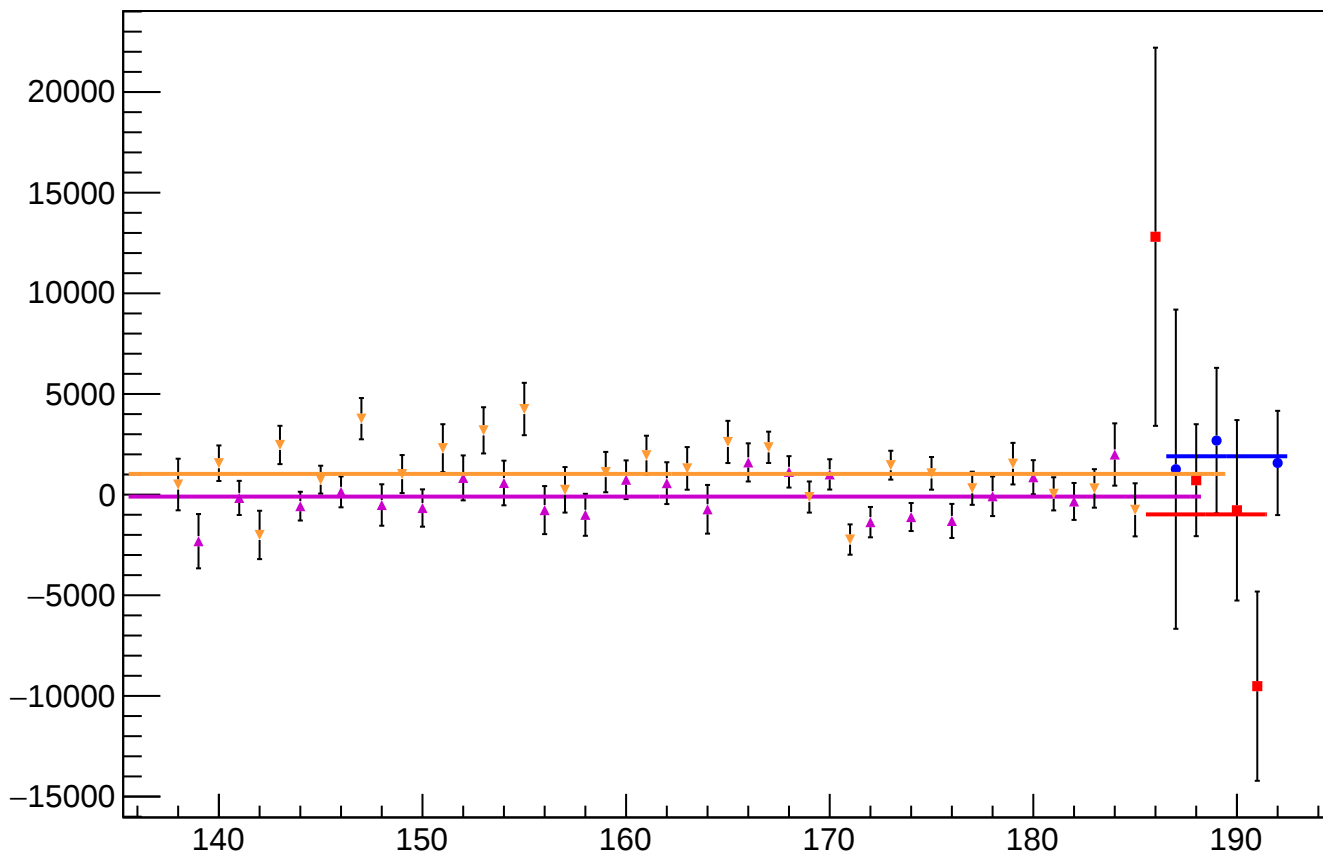
Right: 2578.843+/-1.020  $\chi^2/\text{NDF}$ : 247209.7/6

In: 793.539+/-0.133  $\chi^2/\text{NDF}$ :2355784.8/25

Out: 797.552+/-0.131  $\chi^2/\text{NDF}$ :3083085.0/28

All: 795.589+/-0.093  $\chi^2/\text{NDF}$ : 5439332.3/54

# asym\_sam\_3748\_avg\_mean vs Slug, Sign Corrected



Right In: 1904.959 $\pm$ 2034.518  $\chi^2$ /NDF: 0.1/2

Left Out: 1028.864 $\pm$ 186.810  $\chi^2$ /NDF:60.2/24

Right Out: -982.041 $\pm$ 2059.959  $\chi^2$ /NDF: 5.8/3

Left In: -98.691 $\pm$ 191.027  $\chi^2$ /NDF:25.4/22

Left: 477.669 $\pm$ 133.561  $\chi^2$ /NDF: 103.3/47

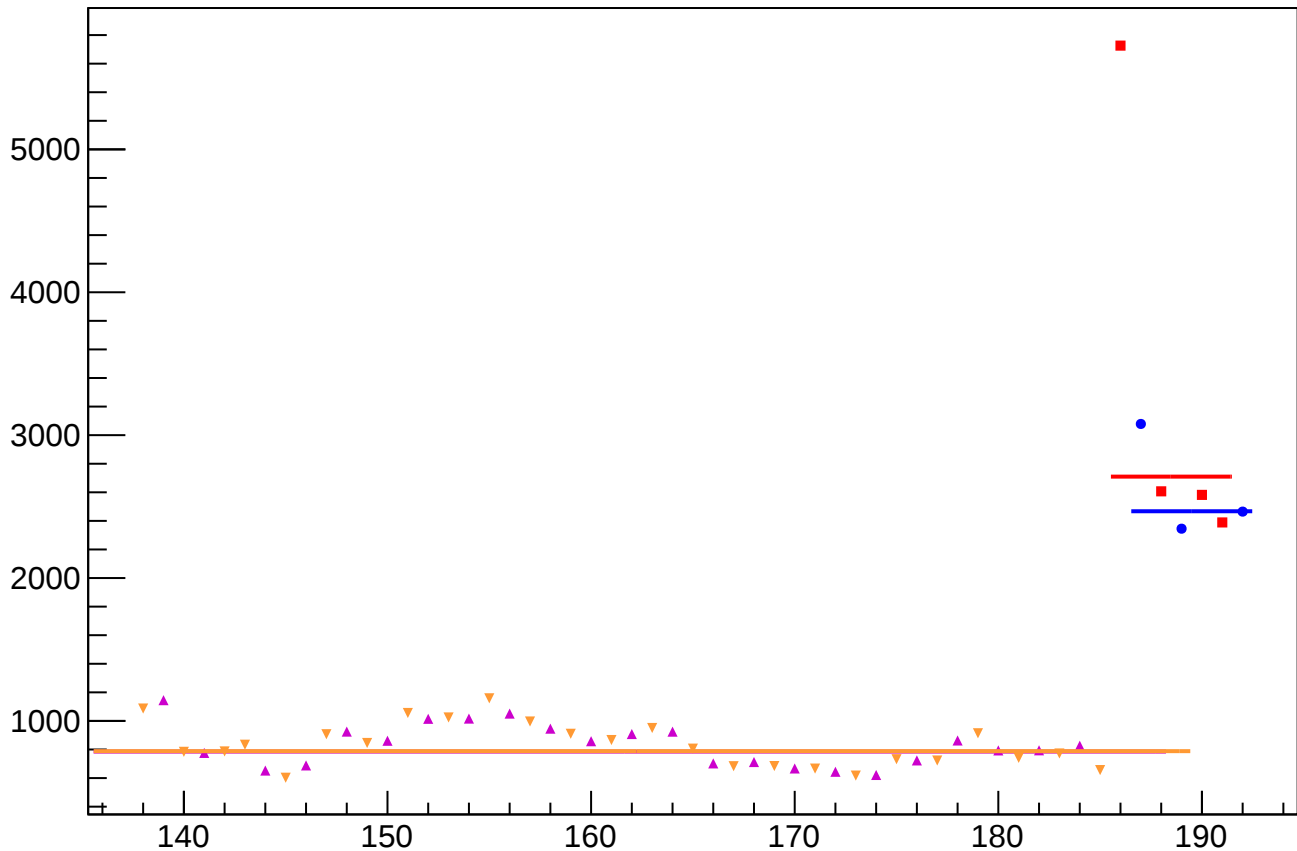
Right: 479.397 $\pm$ 1447.532  $\chi^2$ /NDF: 6.9/6

In: -81.182 $\pm$ 190.190  $\chi^2$ /NDF:26.4/25

Out: 1012.461 $\pm$ 186.047  $\chi^2$ /NDF:66.9/28

All: 477.683 $\pm$ 132.996  $\chi^2$ /NDF: 110.2/54

asym\_sam\_3748\_avg\_rms vs Slug, Sign Corrected



Right In: 2467.416 $\pm$ 1.439  $\chi^2$ /NDF: 14160.4/2

Left Out: 788.442 $\pm$ 0.132  $\chi^2$ /NDF: 1113741.6/24

Right Out: 2709.796 $\pm$ 1.457  $\chi^2$ /NDF: 219895.6/3

Left In: 785.490 $\pm$ 0.135  $\chi^2$ /NDF: 965338.9/22

Left: 786.999 $\pm$ 0.094  $\chi^2$ /NDF: 2079324.6/47

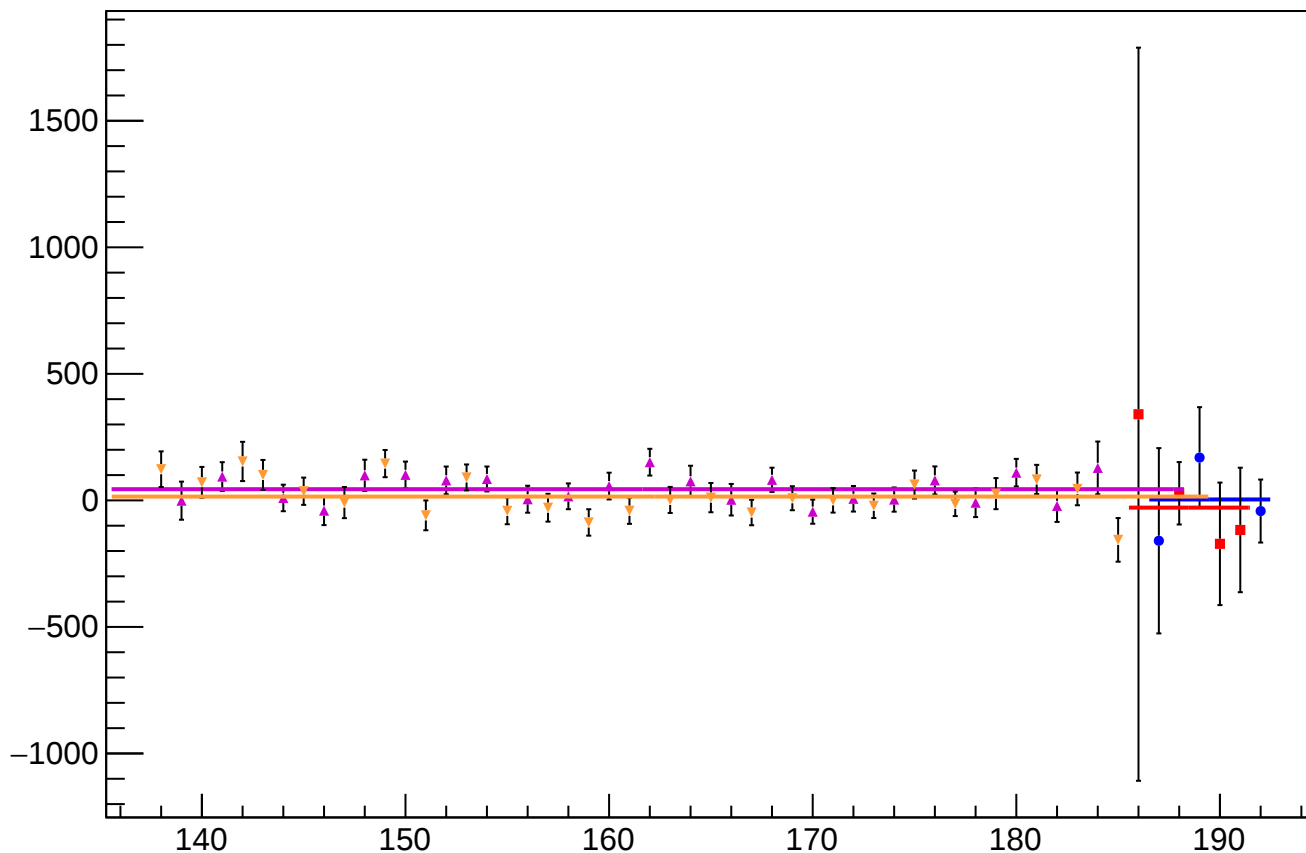
Right: 2587.100 $\pm$ 1.024  $\chi^2$ /NDF: 248072.5/6

In: 800.188 $\pm$ 0.134  $\chi^2$ /NDF: 2334404.3/25

Out: 804.114 $\pm$ 0.132  $\chi^2$ /NDF: 3059357.3/28

All: 802.195 $\pm$ 0.094  $\chi^2$ /NDF: 5394197.1/54

reg\_asym\_sam\_1526\_avg\_mean vs Slug, Sign Corrected



Right In: 3.688 $\pm$ 101.434  $\chi^2$ /NDF: 1.0/2

Left Out: 15.099 $\pm$ 11.154  $\chi^2$ /NDF:34.2/24

Right Out: -28.538 $\pm$ 100.074  $\chi^2$ /NDF: 0.8/3

Left In: 44.297 $\pm$ 11.530  $\chi^2$ /NDF:22.3/22

Left: 29.215 $\pm$ 8.017  $\chi^2$ /NDF: 59.8/47

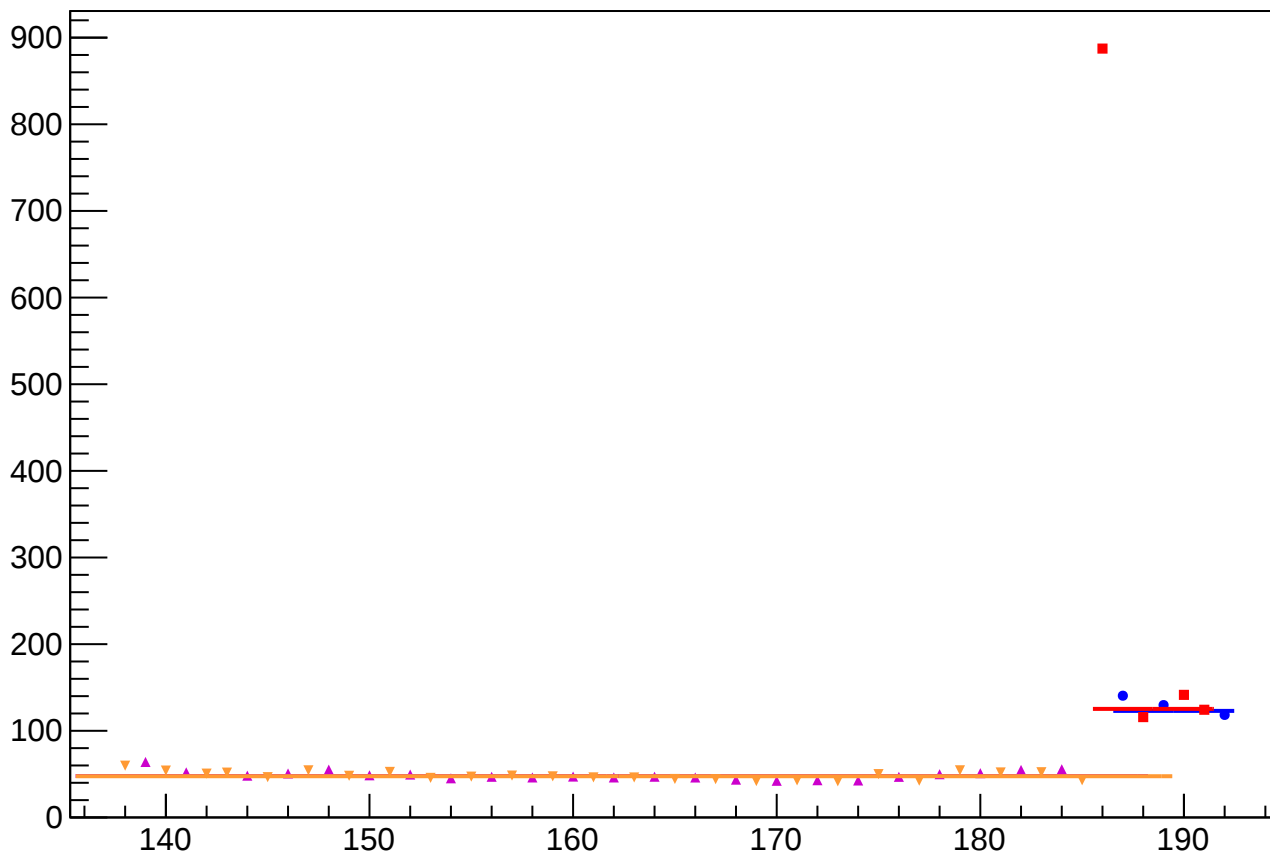
Right: -12.642 $\pm$ 71.239  $\chi^2$ /NDF: 1.8/6

In: 43.779 $\pm$ 11.456  $\chi^2$ /NDF:23.5/25

Out: 14.564 $\pm$ 11.086  $\chi^2$ /NDF:35.1/28

All: 28.692 $\pm$ 7.966  $\chi^2$ /NDF: 62.0/54

reg\_asym\_sam\_1526\_avg\_rms vs Slug, Sign Corrected



Right In: 122.986 $\pm$ 0.072  $\chi^2$ /NDF: 9638.4/2

Left Out: 47.586 $\pm$ 0.008  $\chi^2$ /NDF: 312874.8/24

Right Out: 125.290 $\pm$ 0.071  $\chi^2$ /NDF: 574424.6/3

Left In: 47.846 $\pm$ 0.008  $\chi^2$ /NDF: 281790.1/22

Left: 47.712 $\pm$ 0.006  $\chi^2$ /NDF: 595189.7/47

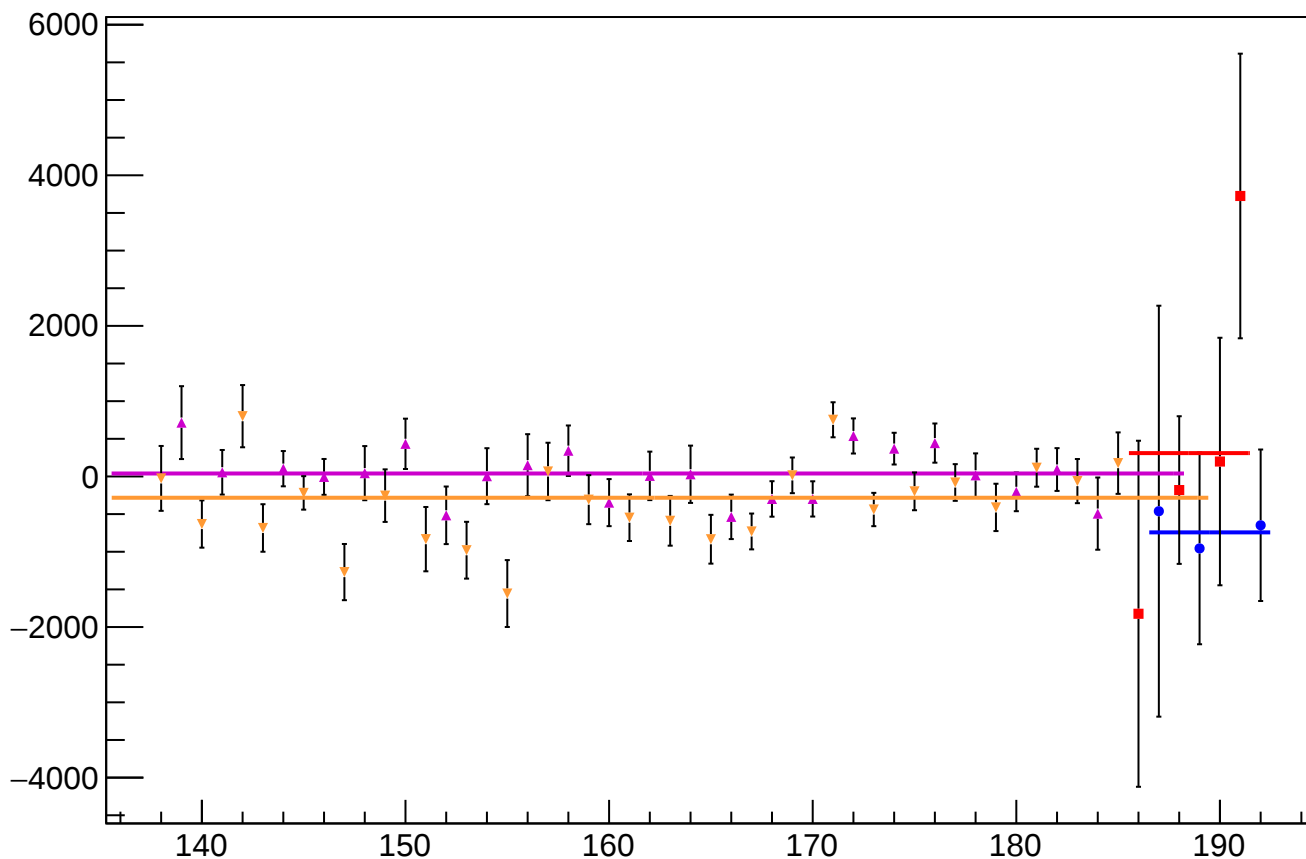
Right: 124.153 $\pm$ 0.050  $\chi^2$ /NDF: 584585.9/6

In: 48.805 $\pm$ 0.008  $\chi^2$ /NDF: 1374941.4/25

Out: 48.540 $\pm$ 0.008  $\chi^2$ /NDF: 2078284.6/28

All: 48.668 $\pm$ 0.006  $\chi^2$ /NDF: 3453777.9/54

asym\_sam\_1526\_avg\_correction\_mean vs Slug, Sign Corrected



Right In: -742.763+/-758.306  $\chi^2/\text{NDF}$ : 0.0/2

Left Out: -282.798+/-59.690  $\chi^2/\text{NDF}$ : 66.5/24

Right Out: 310.157+/-729.433  $\chi^2/\text{NDF}$ : 4.4/3

Left In: 39.432+/-60.759  $\chi^2/\text{NDF}$ : 27.5/22

Left: -124.543+/-42.580  $\chi^2/\text{NDF}$ : 108.4/47

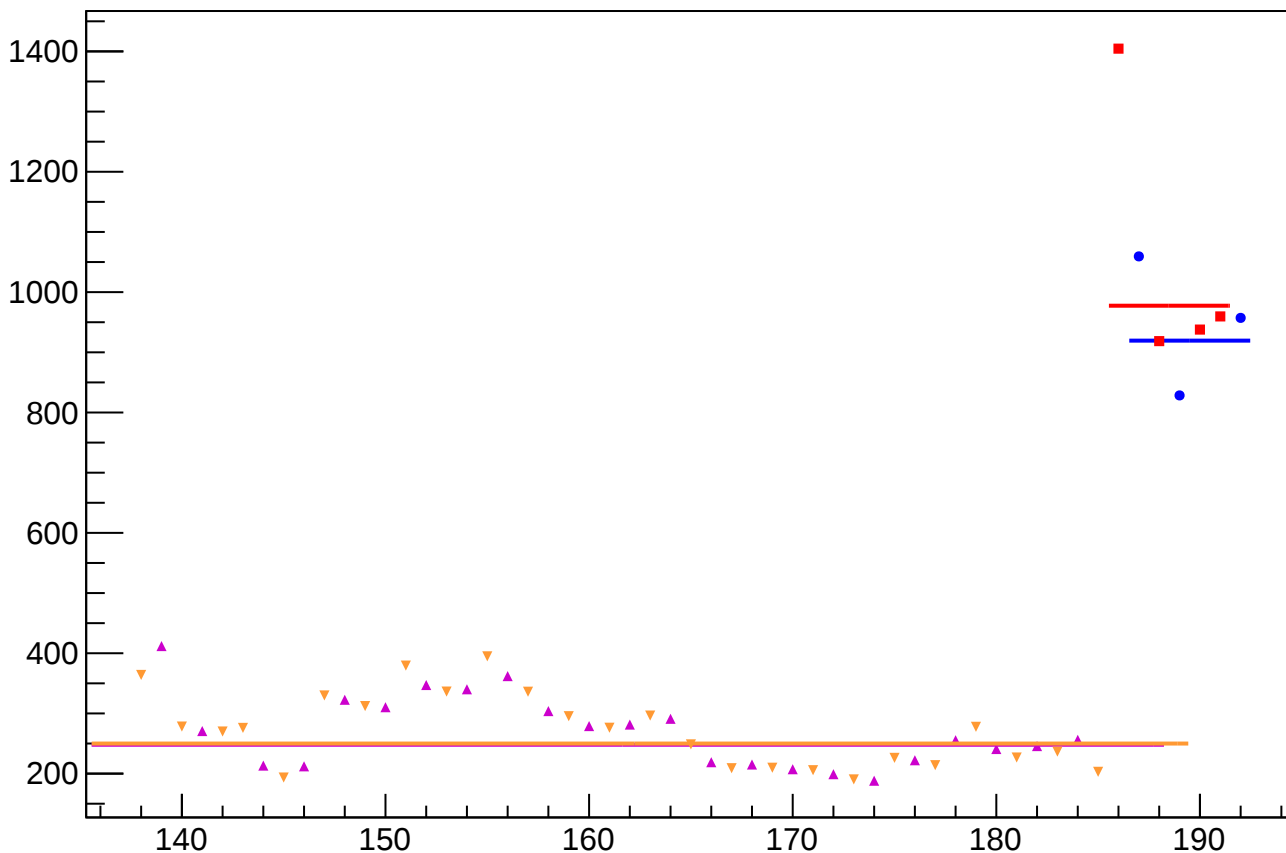
Right: -195.876+/-525.698  $\chi^2/\text{NDF}$ : 5.4/6

In: 34.442+/-60.565  $\chi^2/\text{NDF}$ : 28.7/25

Out: -278.854+/-59.491  $\chi^2/\text{NDF}$ : 71.6/28

All: -125.008+/-42.441  $\chi^2/\text{NDF}$ : 113.8/54

asym\_sam\_1526\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 919.420+/-0.536  $\chi^2/\text{NDF}$ : 18306.2/2

Left Out: 249.956+/-0.042  $\chi^2/\text{NDF}$ :1614205.9/24

Right Out: 977.443+/-0.516  $\chi^2/\text{NDF}$ : 77624.0/3

Left In: 247.917+/-0.043  $\chi^2/\text{NDF}$ :1410847.5/22

Left: 248.955+/-0.030  $\chi^2/\text{NDF}$ : 3026200.1/47

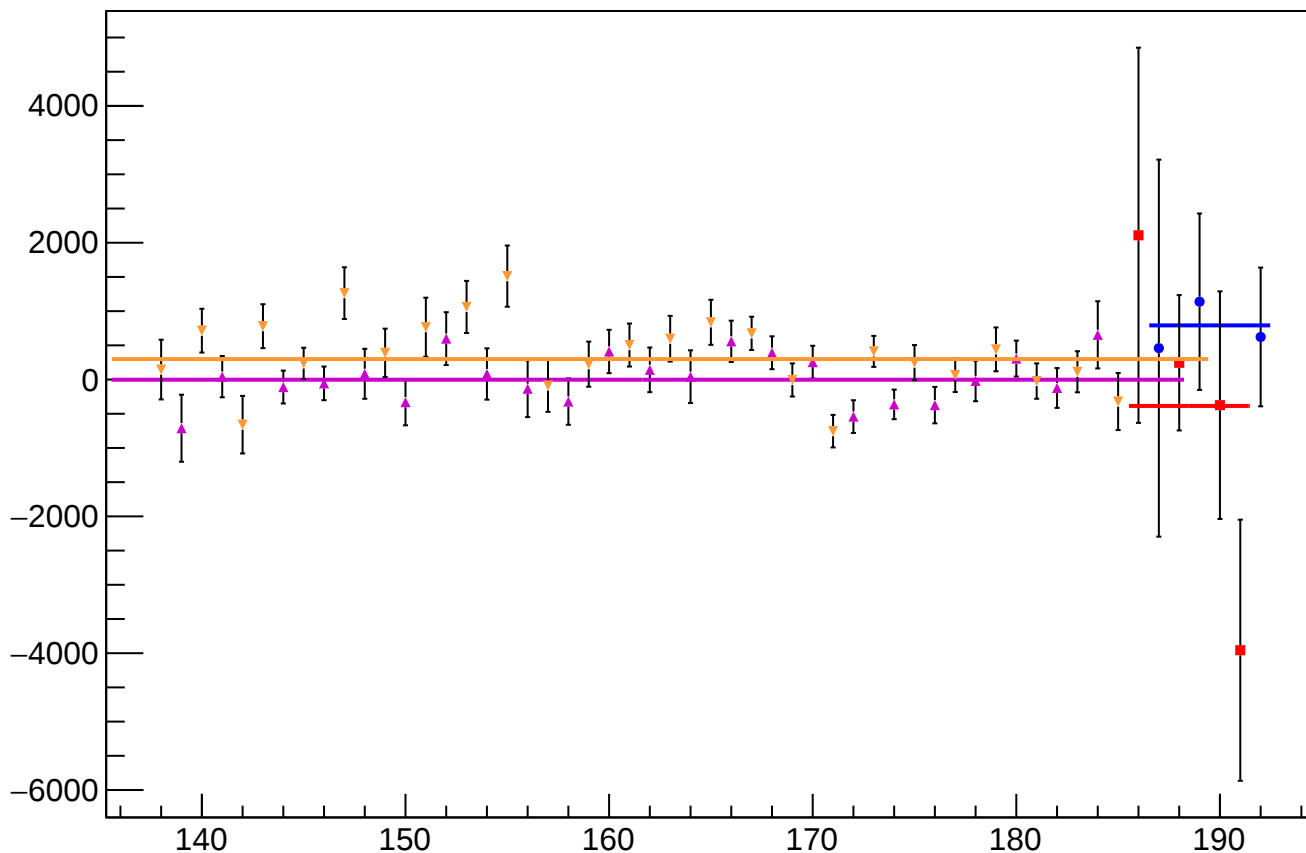
Right: 949.557+/-0.372  $\chi^2/\text{NDF}$ : 102012.2/6

In: 252.200+/-0.043  $\chi^2/\text{NDF}$ :2987477.8/25

Out: 254.795+/-0.042  $\chi^2/\text{NDF}$ :3667936.3/28

All: 253.521+/-0.030  $\chi^2/\text{NDF}$ : 6657282.8/54

asym\_sam\_1526\_avg\_mean vs Slug, Sign Corrected



Right In: 791.670+/-765.639  $\chi^2/\text{NDF}$ : 0.1/2

Left Out: 299.562+/-60.860  $\chi^2/\text{NDF}$ : 62.5/24

Right Out: -385.581+/-747.311  $\chi^2/\text{NDF}$ : 4.7/3

Left In: -2.185+/-62.005  $\chi^2/\text{NDF}$ : 29.2/22

Left: 151.501+/-43.433  $\chi^2/\text{NDF}$ : 103.7/47

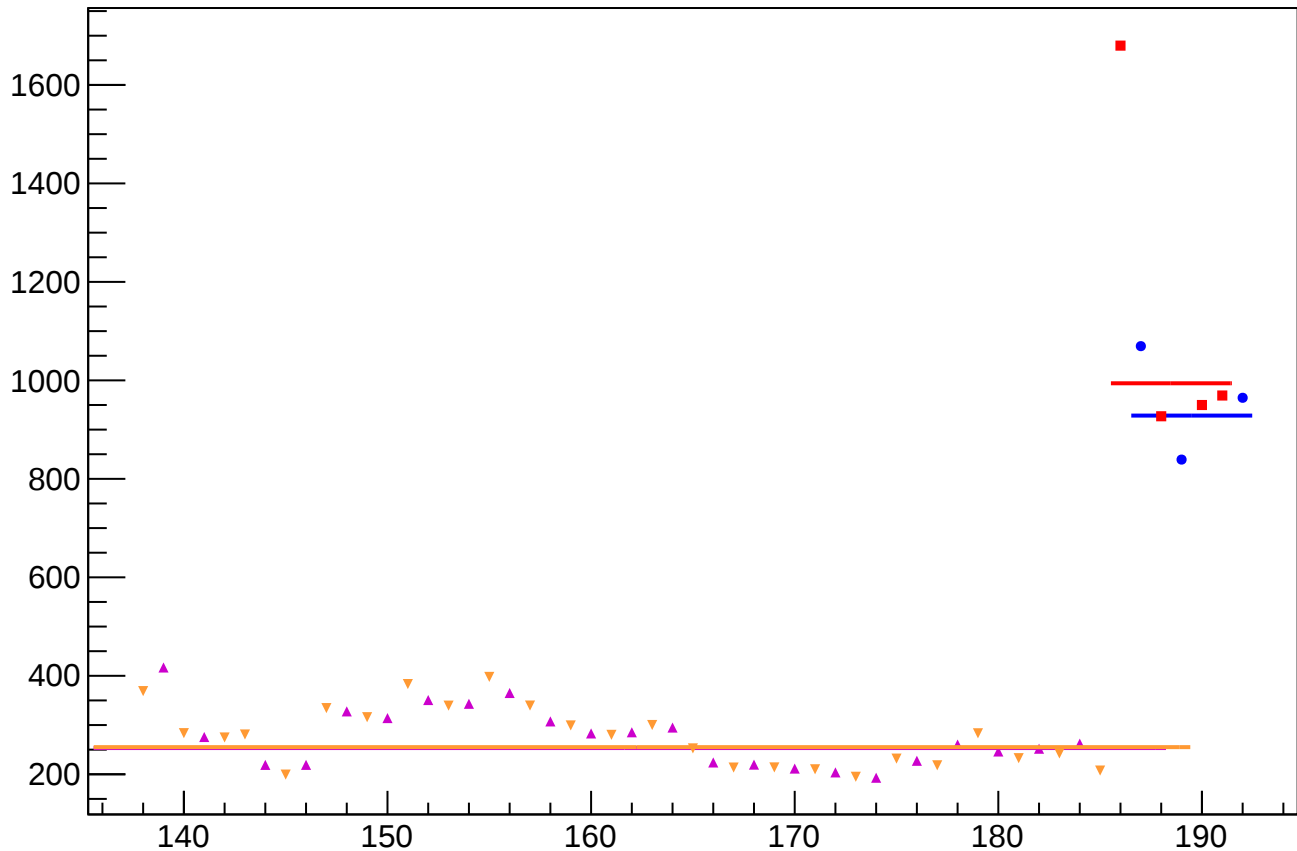
Right: 188.785+/-534.791  $\chi^2/\text{NDF}$ : 6.1/6

In: 2.987+/-61.802  $\chi^2/\text{NDF}$ : 30.4/25

Out: 295.048+/-60.659  $\chi^2/\text{NDF}$ : 68.0/28

All: 151.745+/-43.291  $\chi^2/\text{NDF}$ : 109.8/54

asym\_sam\_1526\_avg\_rms vs Slug, Sign Corrected



Right In: 928.488+/-0.541  $\chi^2/\text{NDF}$ : 17384.1/2

Left Out: 255.135+/-0.043  $\chi^2/\text{NDF}$ :1542039.5/24

Right Out: 994.075+/-0.528  $\chi^2/\text{NDF}$ : 135969.0/3

Left In: 253.287+/-0.044  $\chi^2/\text{NDF}$ :1341662.3/22

Left: 254.229+/-0.031  $\chi^2/\text{NDF}$ : 2884606.5/47

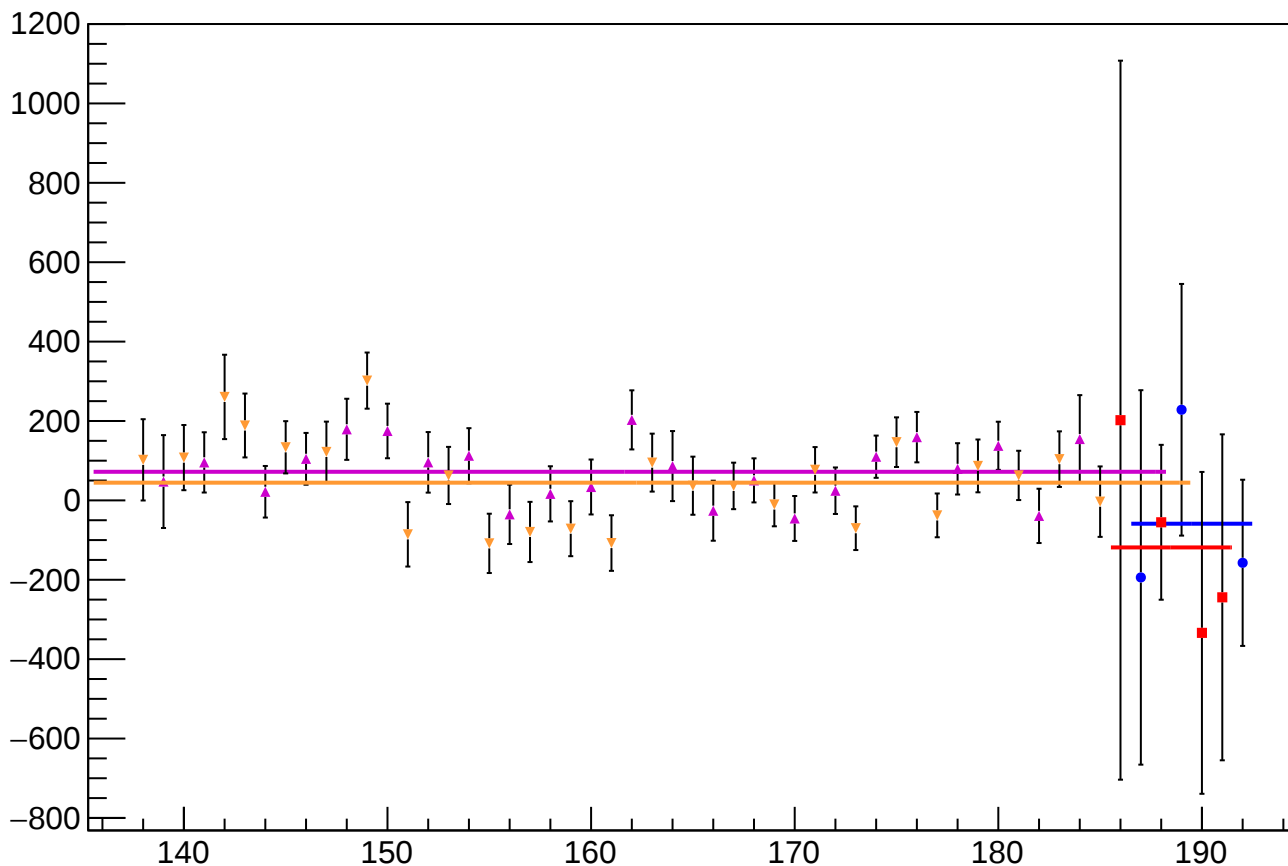
Right: 962.076+/-0.378  $\chi^2/\text{NDF}$ : 160869.0/6

In: 257.687+/-0.044  $\chi^2/\text{NDF}$ :2904332.2/25

Out: 260.004+/-0.043  $\chi^2/\text{NDF}$ :3620567.3/28

All: 258.867+/-0.031  $\chi^2/\text{NDF}$ : 6526331.3/54

reg\_asym\_sam\_3726\_avg\_mean vs Slug, Sign Corrected



Right In: -58.787 $\pm$ 163.804  $\chi^2$ /NDF: 1.1/2

Left Out: 44.602 $\pm$ 13.824  $\chi^2$ /NDF:53.9/24

Right Out: -118.514 $\pm$ 159.095  $\chi^2$ /NDF: 0.6/3

Left In: 72.037 $\pm$ 14.296  $\chi^2$ /NDF:25.3/22

Left: 57.859 $\pm$ 9.938  $\chi^2$ /NDF: 81.1/47

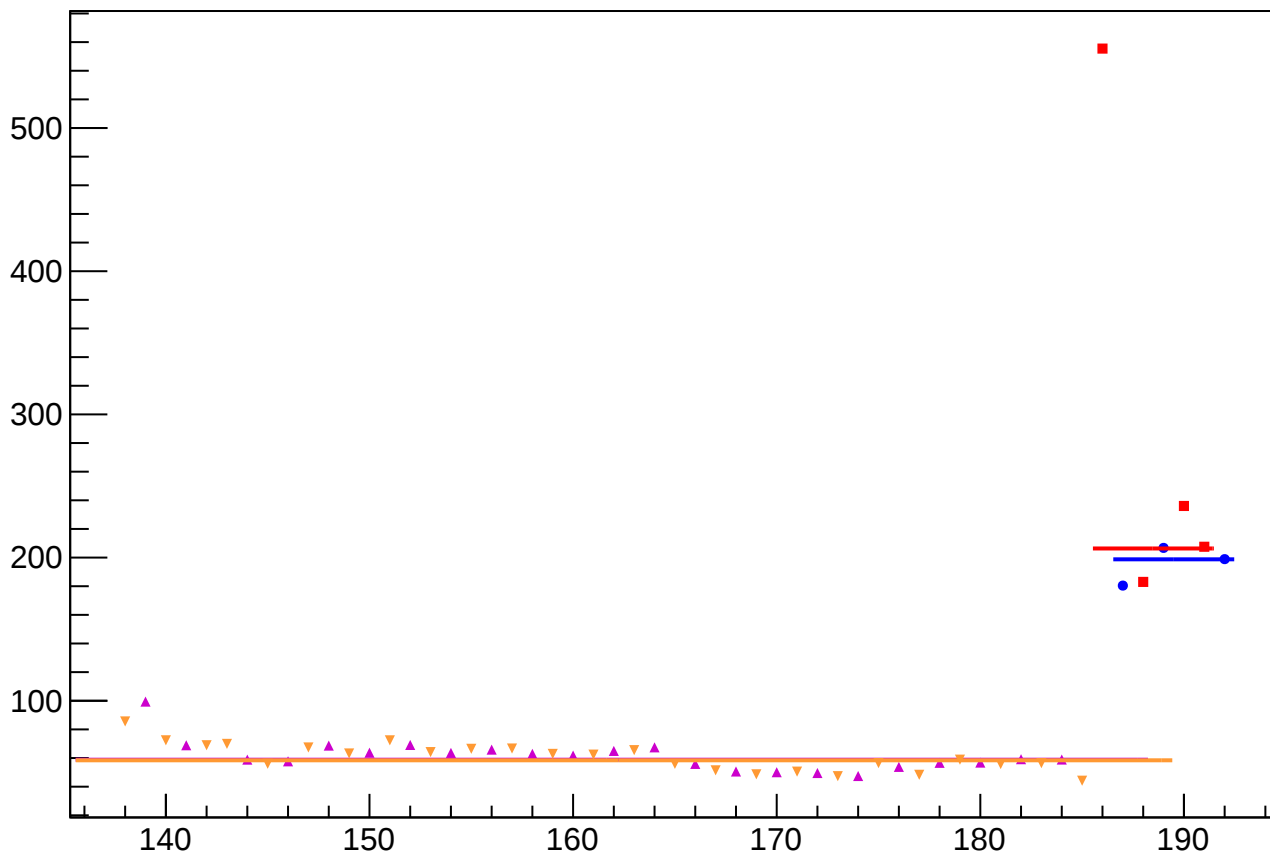
Right: -89.522 $\pm$ 114.126  $\chi^2$ /NDF: 1.8/6

In: 71.048 $\pm$ 14.242  $\chi^2$ /NDF:27.1/25

Out: 43.379 $\pm$ 13.772  $\chi^2$ /NDF:55.6/28

All: 56.750 $\pm$ 9.900  $\chi^2$ /NDF: 84.6/54

reg\_asym\_sam\_3726\_avg\_rms vs Slug, Sign Corrected



Right In: 198.783 $\pm$ 0.116  $\chi^2$ /NDF: 4296.4/2

Left Out: 58.423 $\pm$ 0.010  $\chi^2$ /NDF: 790091.3/24

Right Out: 206.358 $\pm$ 0.112  $\chi^2$ /NDF: 336574.9/3

Left In: 58.840 $\pm$ 0.010  $\chi^2$ /NDF: 679925.7/22

Left: 58.624 $\pm$ 0.007  $\chi^2$ /NDF: 1470896.0/47

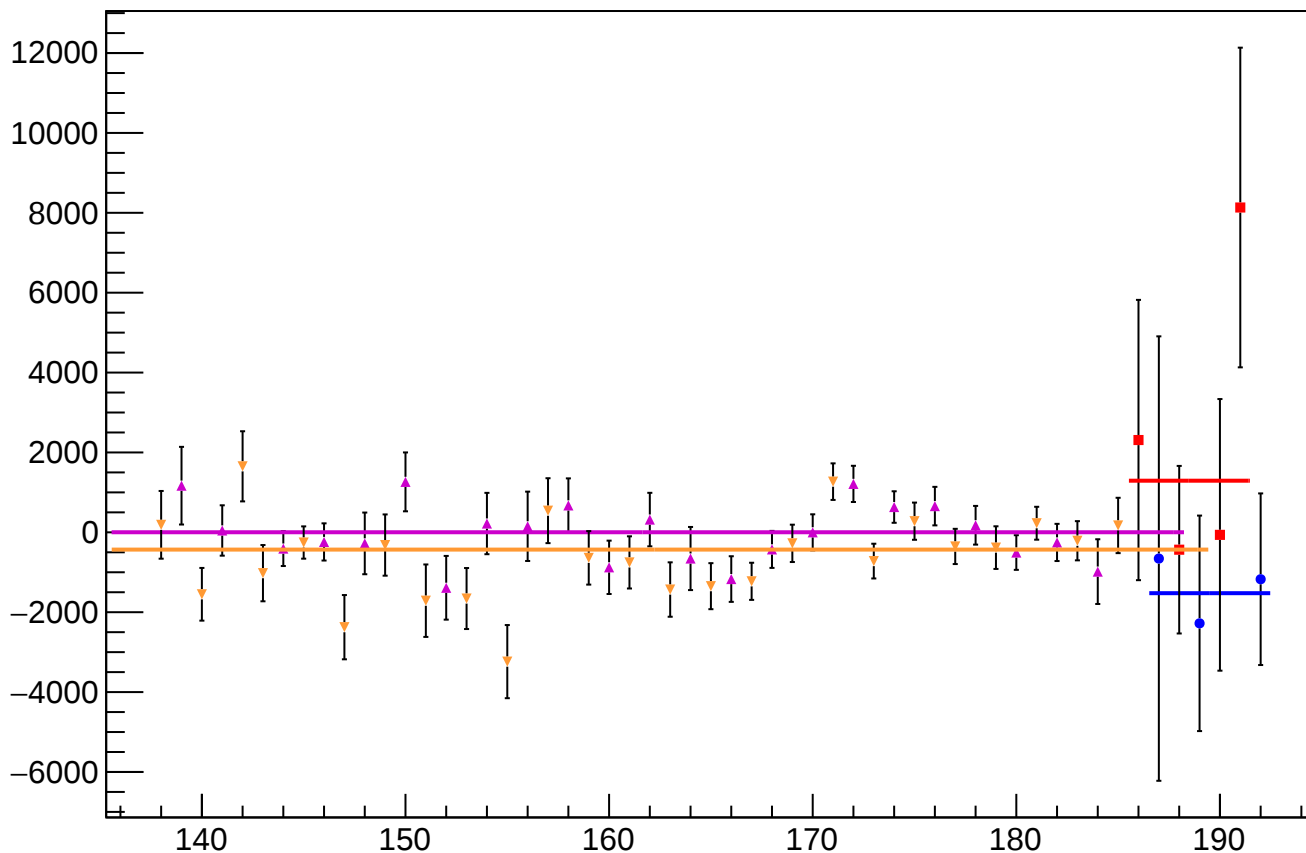
Right: 202.681 $\pm$ 0.081  $\chi^2$ /NDF: 343072.4/6

In: 59.898 $\pm$ 0.010  $\chi^2$ /NDF: 2132949.2/25

Out: 59.531 $\pm$ 0.010  $\chi^2$ /NDF: 2842975.1/28

All: 59.708 $\pm$ 0.007  $\chi^2$ /NDF: 4976607.8/54

asym\_sam\_3726\_avg\_correction\_mean vs Slug, Sign Corrected



Right In: -1523.645 $\pm$ 1608.815  $\chi^2$ /NDF: 0.1/2

Left Out: -432.330 $\pm$ 114.408  $\chi^2$ /NDF:59.4/24

Right Out: 1292.597 $\pm$ 1478.655  $\chi^2$ /NDF: 3.8/3

Left In: 1.825 $\pm$ 116.459  $\chi^2$ /NDF:32.3/22

Left: -219.109 $\pm$ 81.614  $\chi^2$ /NDF: 98.8/47

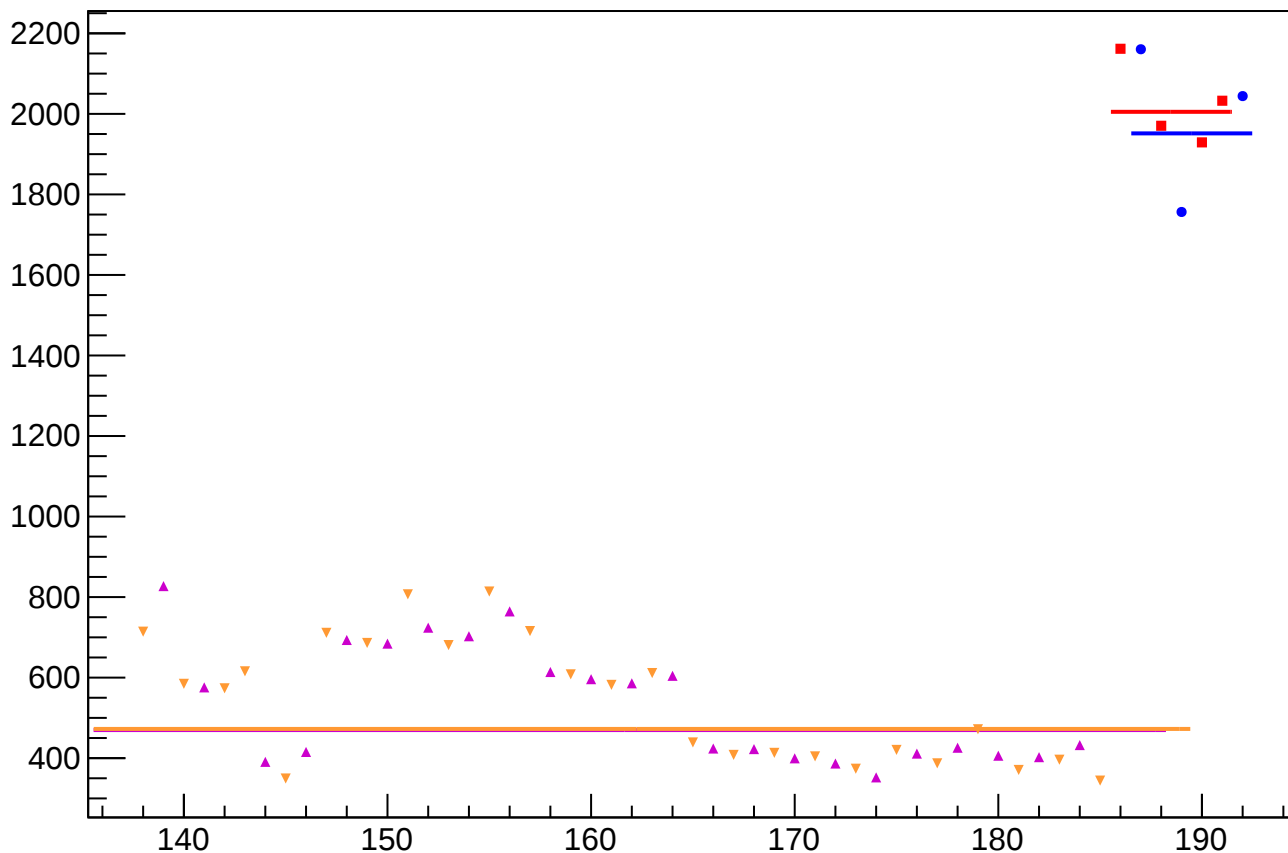
Right: 2.991 $\pm$ 1088.679  $\chi^2$ /NDF: 5.6/6

In: -6.127 $\pm$ 116.155  $\chi^2$ /NDF:33.3/25

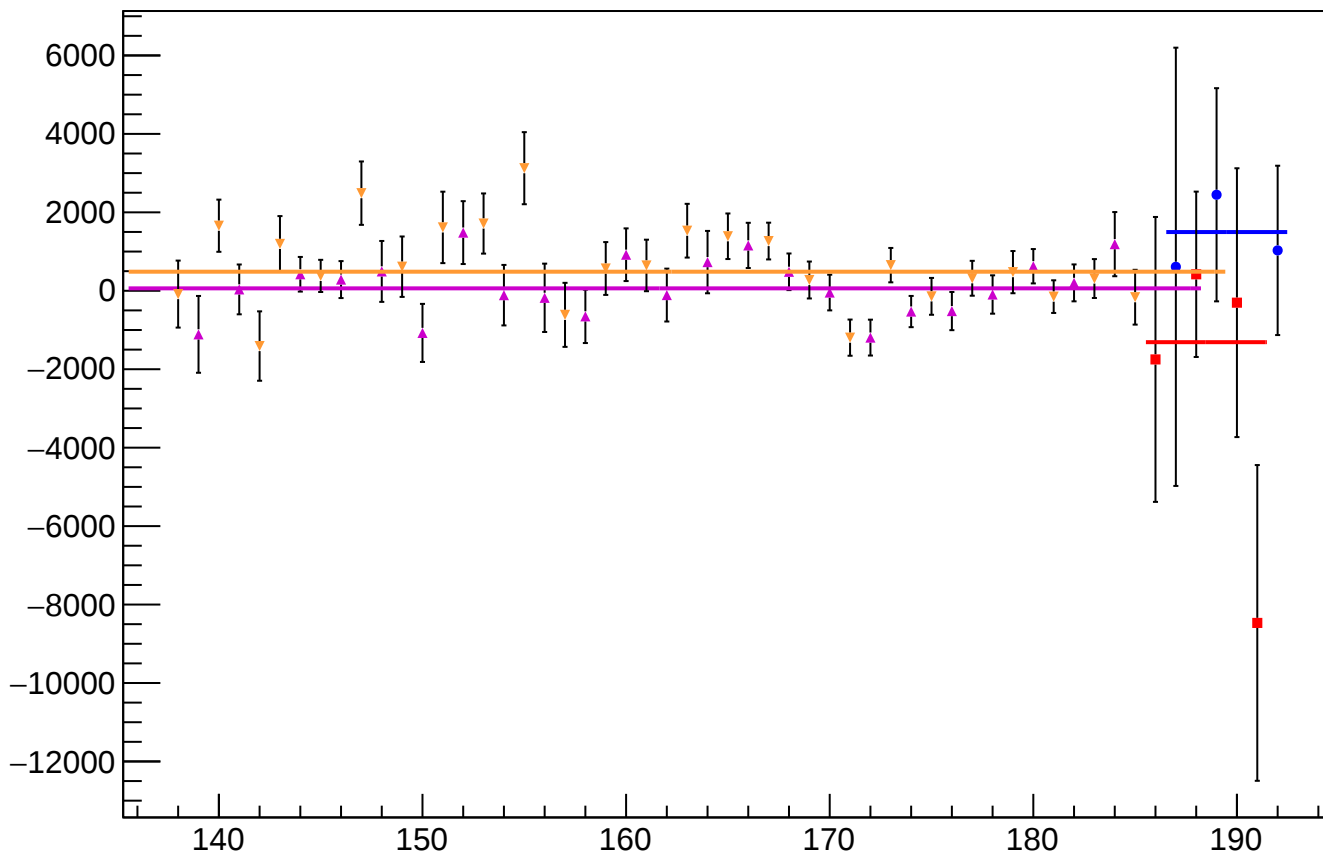
Out: -422.065 $\pm$ 114.067  $\chi^2$ /NDF:64.6/28

All: -217.867 $\pm$ 81.386  $\chi^2$ /NDF: 104.4/54

asym\_sam\_3726\_avg\_correction\_rms vs Slug, Sign Corrected



# asym\_sam\_3726\_avg\_mean vs Slug, Sign Corrected



Right In: 1497.409 $\pm$ 1617.847  $\chi^2$ /NDF: 0.2/2

Left Out: 486.645 $\pm$ 115.346  $\chi^2$ /NDF:56.0/24

Right Out: -1310.230 $\pm$ 1494.526  $\chi^2$ /NDF: 3.9/3

Left In: 61.775 $\pm$ 117.449  $\chi^2$ /NDF:31.2/22

Left: 278.047 $\pm$ 82.295  $\chi^2$ /NDF: 93.8/47

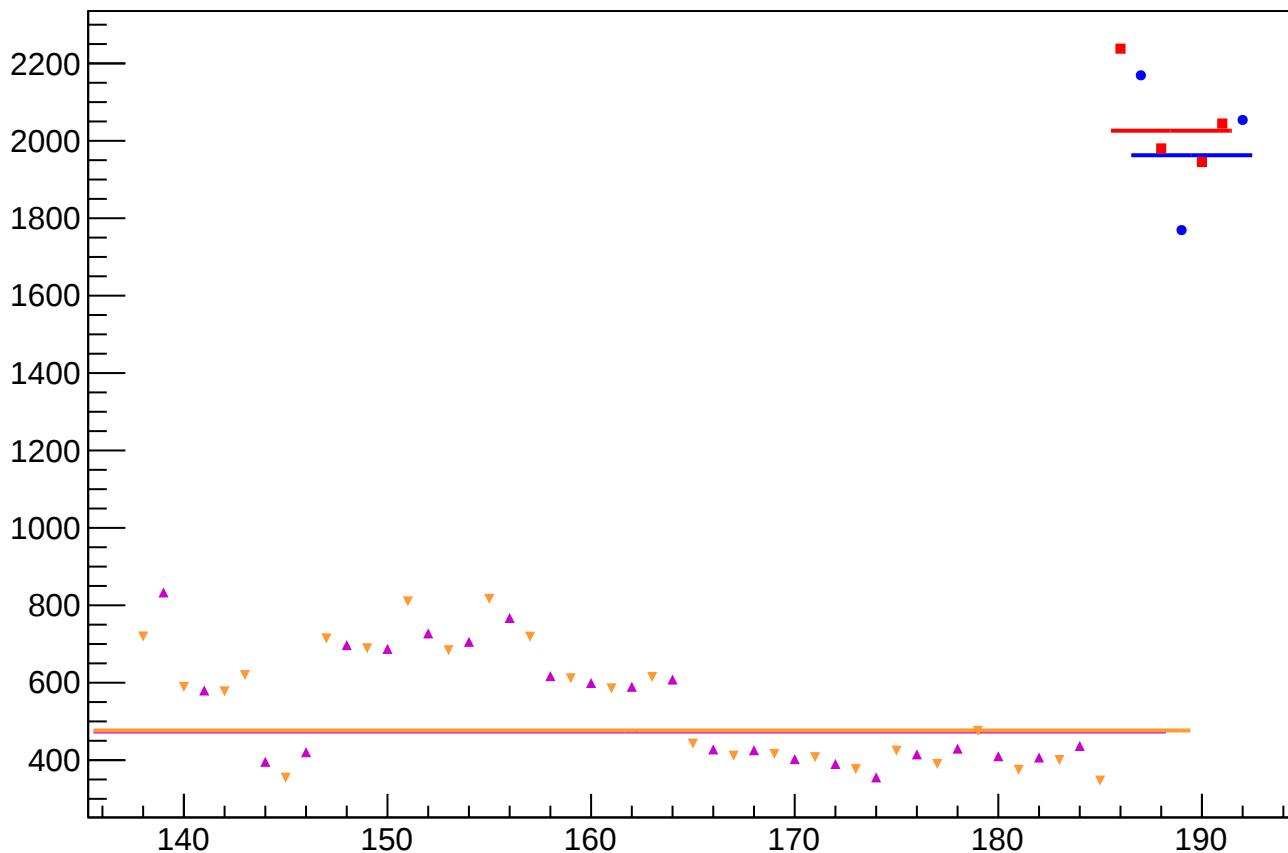
Right: -17.483 $\pm$ 1097.801  $\chi^2$ /NDF: 5.8/6

In: 69.301 $\pm$ 117.141  $\chi^2$ /NDF:32.1/25

Out: 476.006 $\pm$ 115.004  $\chi^2$ /NDF:61.4/28

All: 276.396 $\pm$ 82.065  $\chi^2$ /NDF: 99.7/54

asym\_sam\_3726\_avg\_rms vs Slug, Sign Corrected



Right In: 1962.739 $\pm$ 1.144  $\chi^2$ /NDF: 16434.1/2

Left Out: 476.690 $\pm$ 0.082  $\chi^2$ /NDF: 2472737.6/24

Right Out: 2026.211 $\pm$ 1.057  $\chi^2$ /NDF: 8908.4/3

Left In: 473.983 $\pm$ 0.083  $\chi^2$ /NDF: 2087113.7/22

Left: 475.361 $\pm$ 0.058  $\chi^2$ /NDF: 4560392.0/47

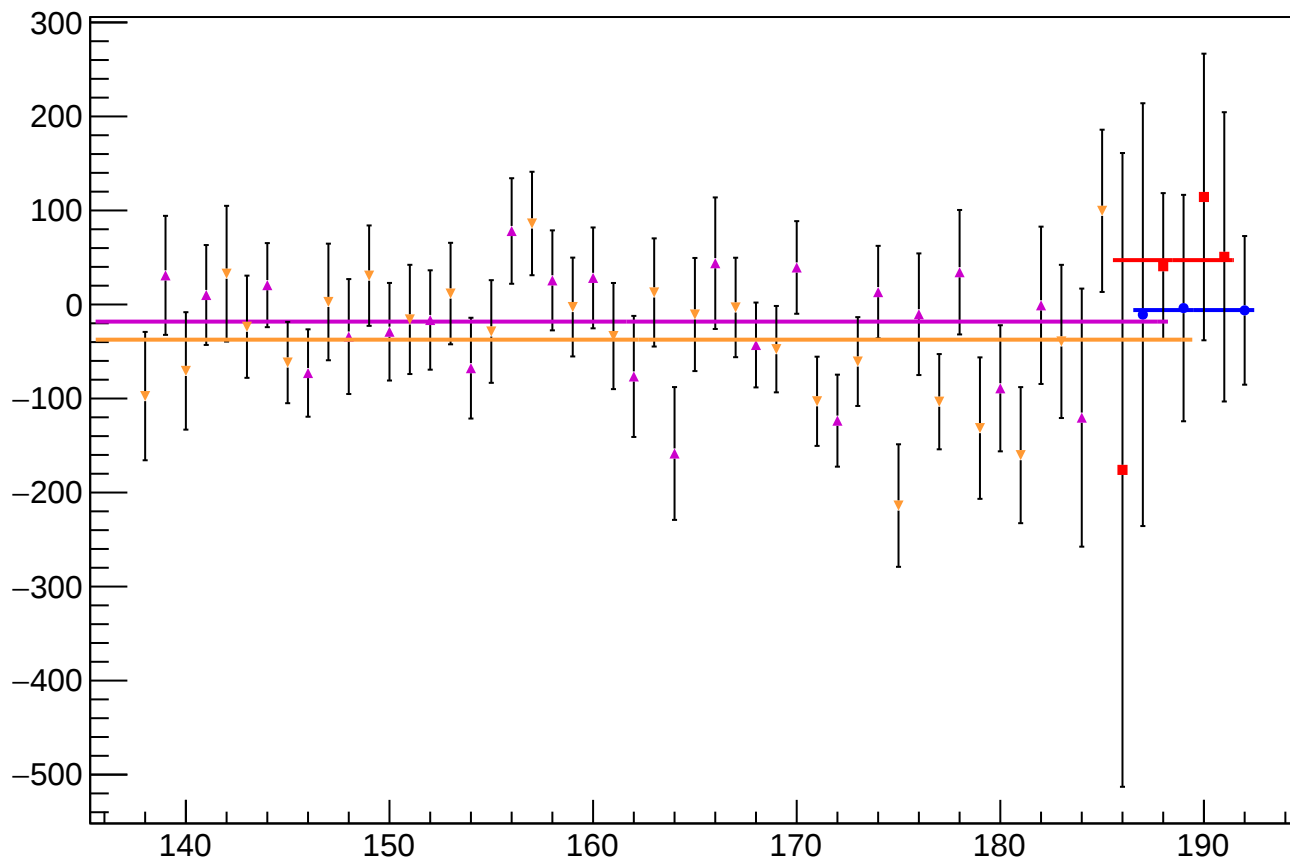
Right: 1996.986 $\pm$ 0.776  $\chi^2$ /NDF: 27003.4/6

In: 481.788 $\pm$ 0.083  $\chi^2$ /NDF: 3788233.5/25

Out: 485.865 $\pm$ 0.081  $\chi^2$ /NDF: 4618813.6/28

All: 483.864 $\pm$ 0.058  $\chi^2$ /NDF: 8408280.8/54

reg\_asym\_sam\_15\_48\_dd\_mean vs Slug, Sign Corrected



Right In:  $-5.934 \pm 63.402$   $\chi^2/\text{NDF}$ : 0.0/2

Left Out:  $-37.413 \pm 11.390$   $\chi^2/\text{NDF}$ : 30.5/24

Right Out:  $47.187 \pm 62.075$   $\chi^2/\text{NDF}$ : 0.6/3

Left In:  $-18.210 \pm 11.788$   $\chi^2/\text{NDF}$ : 23.0/22

Left:  $-28.141 \pm 8.191$   $\chi^2/\text{NDF}$ : 54.8/47

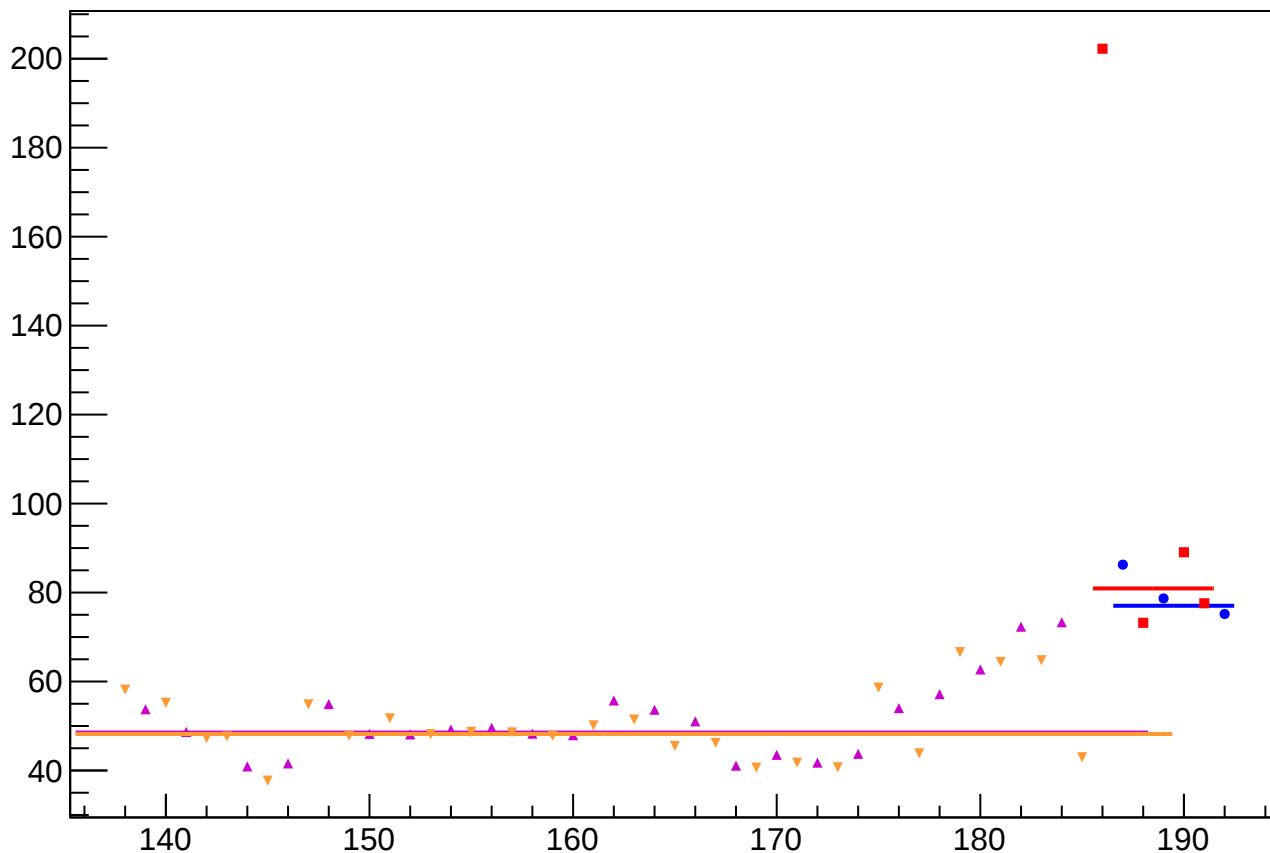
Right:  $21.188 \pm 44.355$   $\chi^2/\text{NDF}$ : 1.0/6

In:  $-17.800 \pm 11.589$   $\chi^2/\text{NDF}$ : 23.0/25

Out:  $-34.657 \pm 11.203$   $\chi^2/\text{NDF}$ : 32.9/28

All:  $-26.514 \pm 8.055$   $\chi^2/\text{NDF}$ : 57.0/54

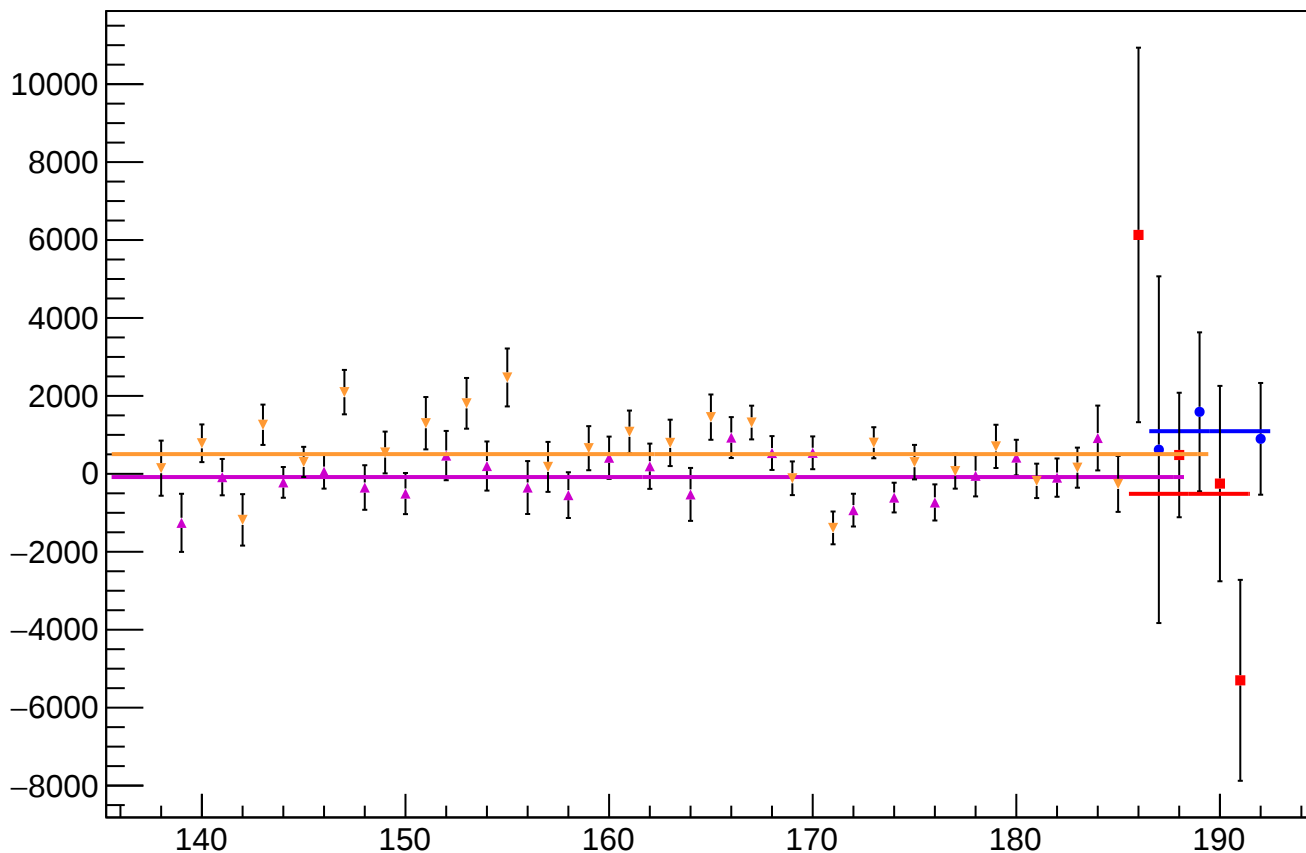
reg\_asym\_sam\_15\_48\_dd\_rms vs Slug, Sign Corrected



Right In: 77.031 $\pm$ 0.045     $\chi^2/\text{NDF}$ : 4850.8/2  
 Left Out: 48.200 $\pm$ 0.008     $\chi^2/\text{NDF}$ : 750196.2/24  
 Right Out: 80.922 $\pm$ 0.044     $\chi^2/\text{NDF}$ : 285529.2/3  
 Left In: 48.527 $\pm$ 0.008     $\chi^2/\text{NDF}$ : 675340.8/22

Left: 48.358 $\pm$ 0.006     $\chi^2/\text{NDF}$ : 1426333.4/47  
 Right: 79.018 $\pm$ 0.031     $\chi^2/\text{NDF}$ : 294226.0/6  
 In: 49.479 $\pm$ 0.008     $\chi^2/\text{NDF}$ : 1070937.8/25  
 Out: 49.265 $\pm$ 0.008     $\chi^2/\text{NDF}$ : 1573386.3/28  
 All: 49.369 $\pm$ 0.006     $\chi^2/\text{NDF}$ : 2644675.8/54

asym\_sam\_15\_48\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: 1094.195 $\pm$ 1134.244  $\chi^2/\text{NDF}$ : 0.1/2

Left Out: 506.205 $\pm$ 103.468  $\chi^2/\text{NDF}$ : 65.7/24

Right Out: -513.017 $\pm$ 1158.706  $\chi^2/\text{NDF}$ : 5.8/3

Left In: -82.421 $\pm$ 105.935  $\chi^2/\text{NDF}$ : 25.3/22

Left: 218.827 $\pm$ 74.020  $\chi^2/\text{NDF}$ : 106.9/47

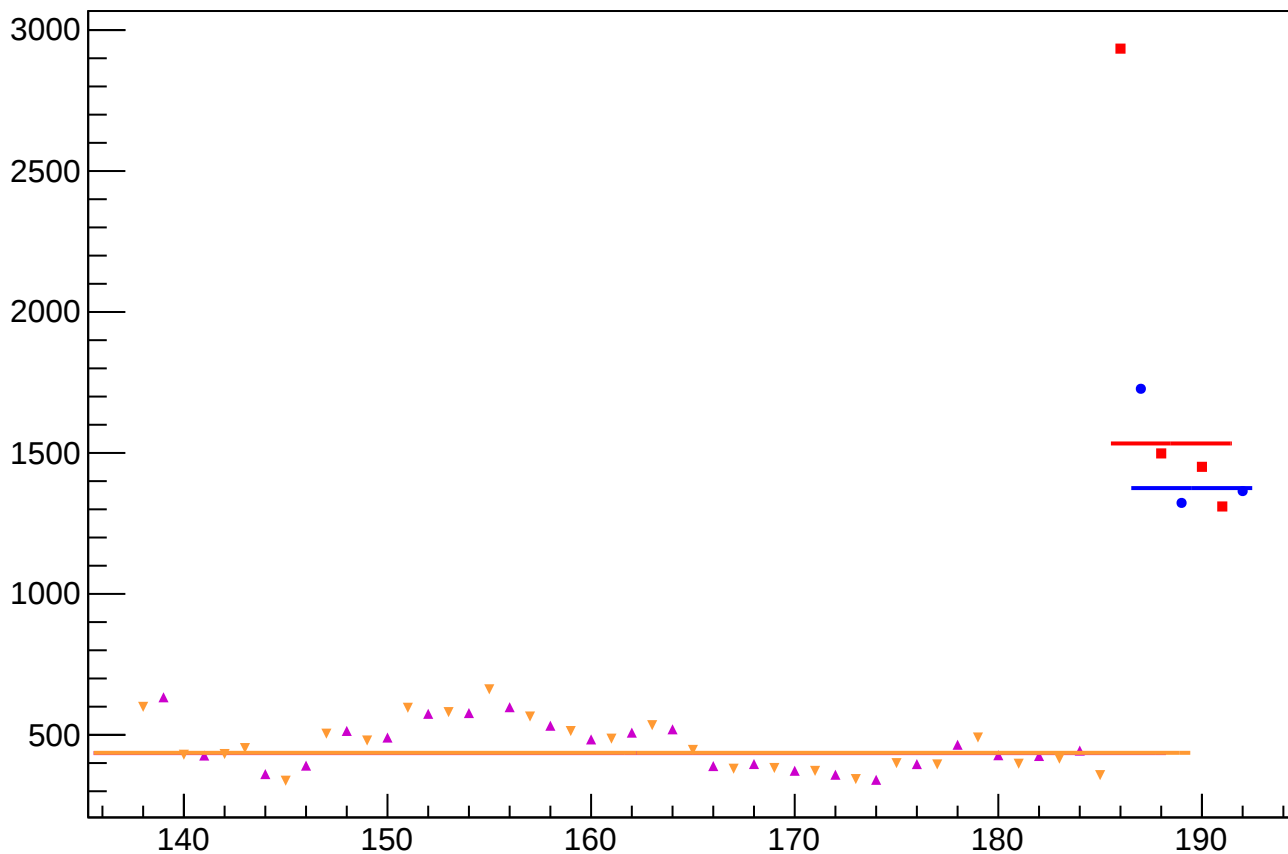
Right: 307.733 $\pm$ 810.542  $\chi^2/\text{NDF}$ : 6.8/6

In: -72.246 $\pm$ 105.476  $\chi^2/\text{NDF}$ : 26.5/25

Out: 498.142 $\pm$ 103.058  $\chi^2/\text{NDF}$ : 72.2/28

All: 219.563 $\pm$ 73.713  $\chi^2/\text{NDF}$ : 113.7/54

asym\_sam\_15\_48\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 1375.353+/-0.802  $\chi^2/\text{NDF}$ : 13979.8/2

Left Out: 436.301+/-0.073  $\chi^2/\text{NDF}$ :1179348.4/24

Right Out: 1533.627+/-0.819  $\chi^2/\text{NDF}$ : 188086.3/3

Left In: 435.275+/-0.075  $\chi^2/\text{NDF}$ :1027713.1/22

Left: 435.800+/-0.052  $\chi^2/\text{NDF}$ : 2207157.7/47

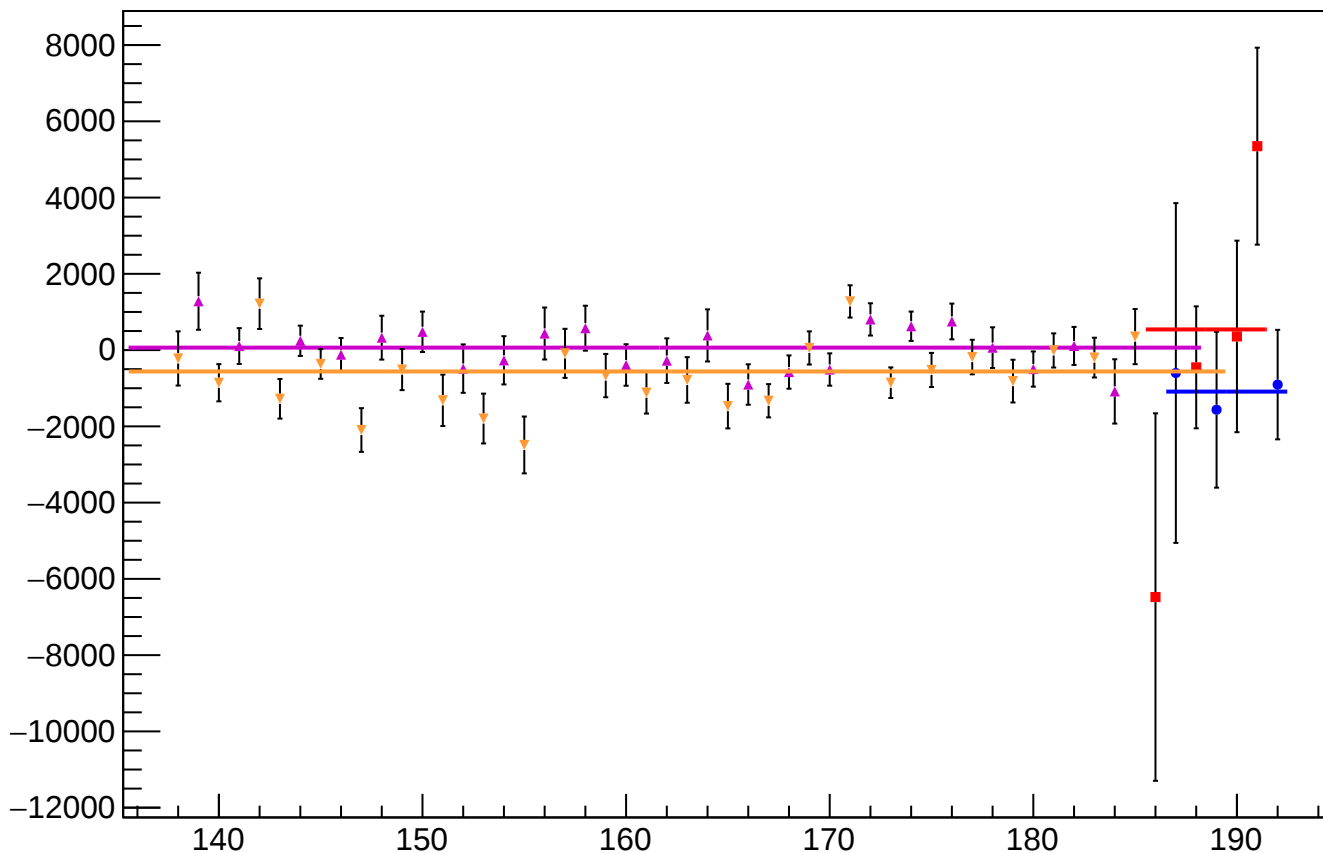
Right: 1452.802+/-0.573  $\chi^2/\text{NDF}$ : 221122.6/6

In: 443.404+/-0.075  $\chi^2/\text{NDF}$ :2403677.4/25

Out: 444.982+/-0.073  $\chi^2/\text{NDF}$ :3146964.5/28

All: 444.212+/-0.052  $\chi^2/\text{NDF}$ : 5550870.8/54

asym\_sam\_15\_48\_dd\_mean vs Slug, Sign Corrected



Right In:  $-1088.638 \pm 1136.094$   $\chi^2/\text{NDF}: 0.1/2$

Left Out:  $-560.684 \pm 104.207$   $\chi^2/\text{NDF}: 61.8/24$

Right Out:  $542.120 \pm 1160.601$   $\chi^2/\text{NDF}: 6.0/3$

Left In:  $64.594 \pm 106.708$   $\chi^2/\text{NDF}: 25.2/22$

Left:  $-255.457 \pm 74.554$   $\chi^2/\text{NDF}: 104.5/47$

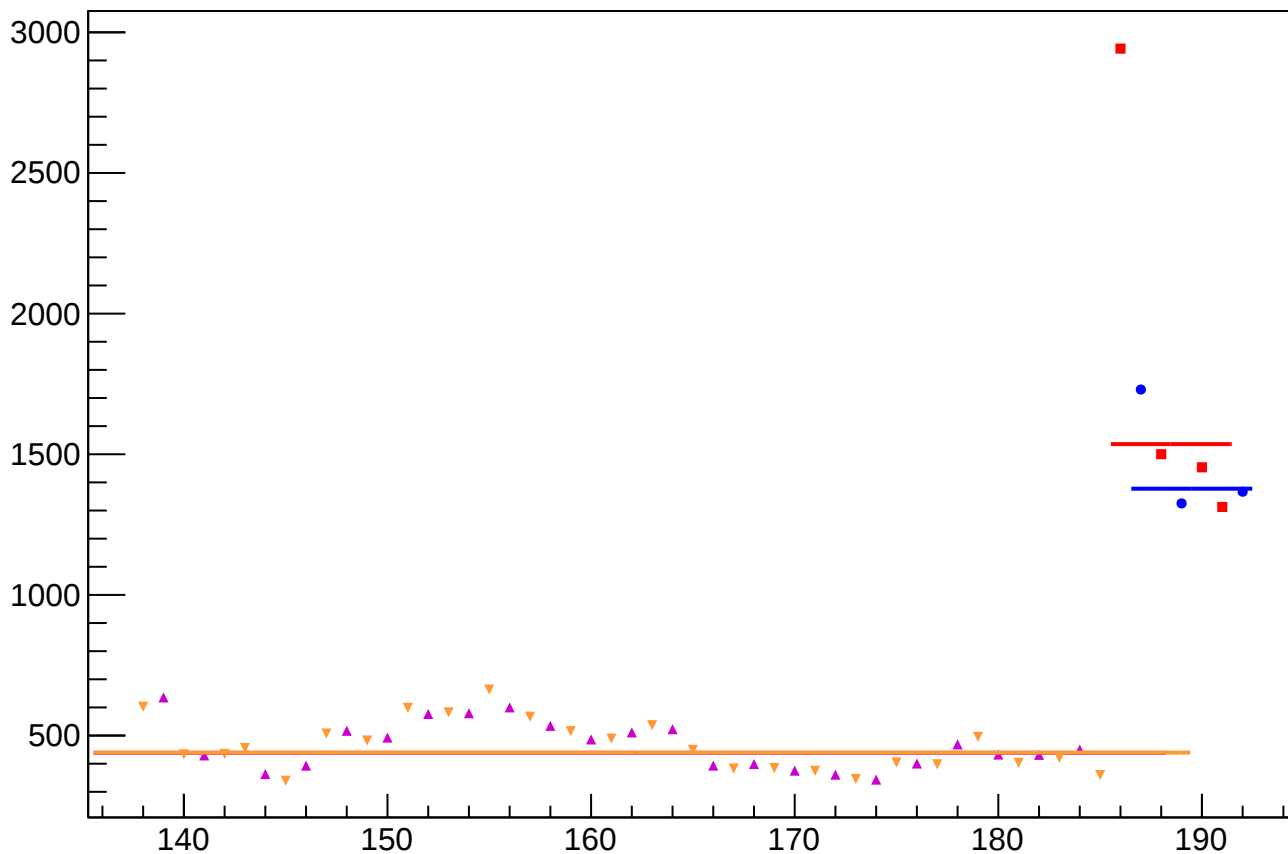
Right:  $-290.658 \pm 811.866$   $\chi^2/\text{NDF}: 7.1/6$

In:  $54.510 \pm 106.240$   $\chi^2/\text{NDF}: 26.3/25$

Out:  $-551.865 \pm 103.790$   $\chi^2/\text{NDF}: 68.6/28$

All:  $-255.751 \pm 74.242$   $\chi^2/\text{NDF}: 111.6/54$

asym\_sam\_15\_48\_dd\_rms vs Slug, Sign Corrected



Right In: 1377.622+/-0.803  $\chi^2/\text{NDF}$ : 13943.5/2

Left Out: 439.527+/-0.074  $\chi^2/\text{NDF}$ :1163352.8/24

Right Out: 1536.094+/-0.821  $\chi^2/\text{NDF}$ : 188373.2/3

Left In: 438.548+/-0.075  $\chi^2/\text{NDF}$ :1013071.4/22

Left: 439.049+/-0.053  $\chi^2/\text{NDF}$ : 2176510.4/47

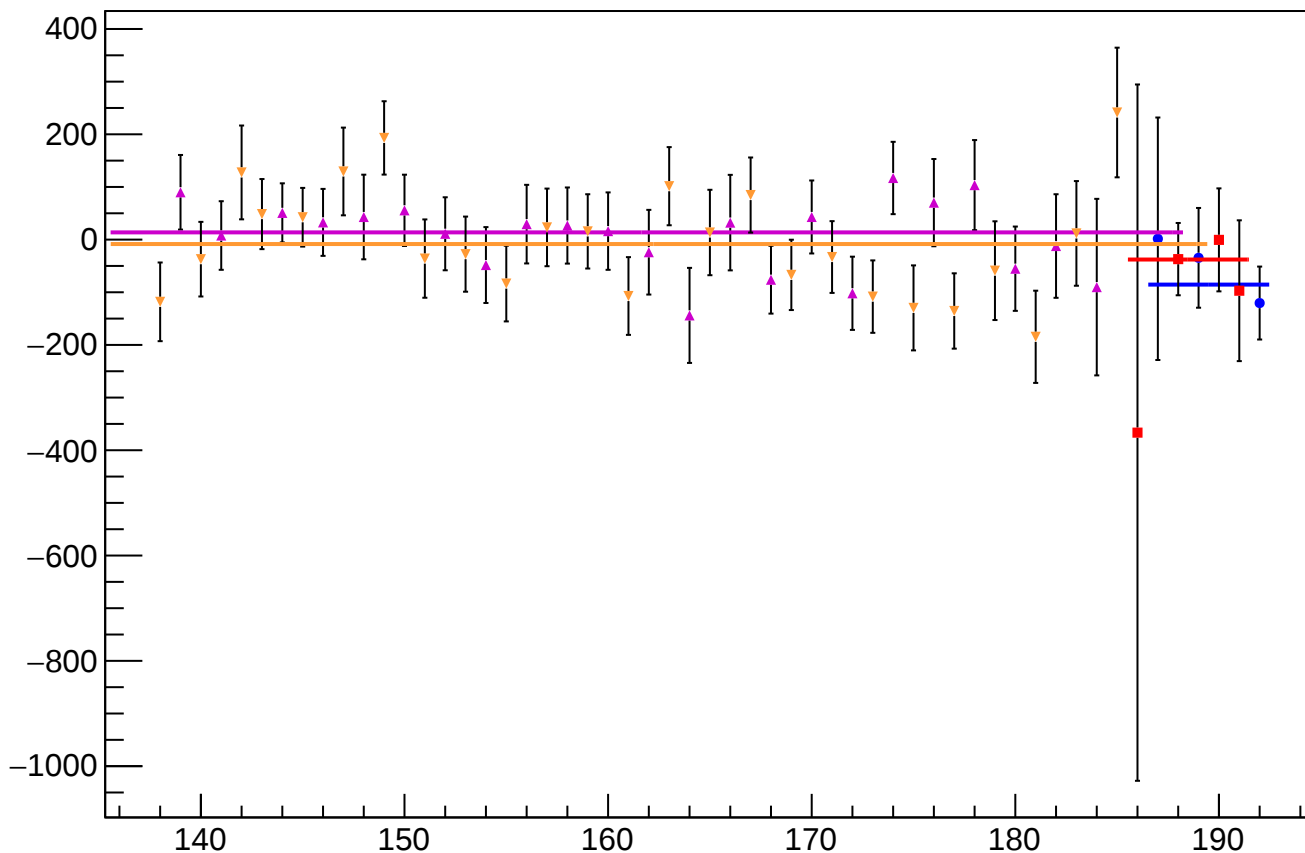
Right: 1455.167+/-0.574  $\chi^2/\text{NDF}$ : 221358.6/6

In: 446.760+/-0.075  $\chi^2/\text{NDF}$ :2381539.3/25

Out: 448.296+/-0.073  $\chi^2/\text{NDF}$ :3122843.9/28

All: 447.546+/-0.052  $\chi^2/\text{NDF}$ : 5504597.3/54

reg\_asym\_sam\_37\_48\_dd\_mean vs Slug, Sign Corrected



Left: 2.258 $\pm$ 10.747  $\chi^2/\text{NDF}$ : 58.9/47

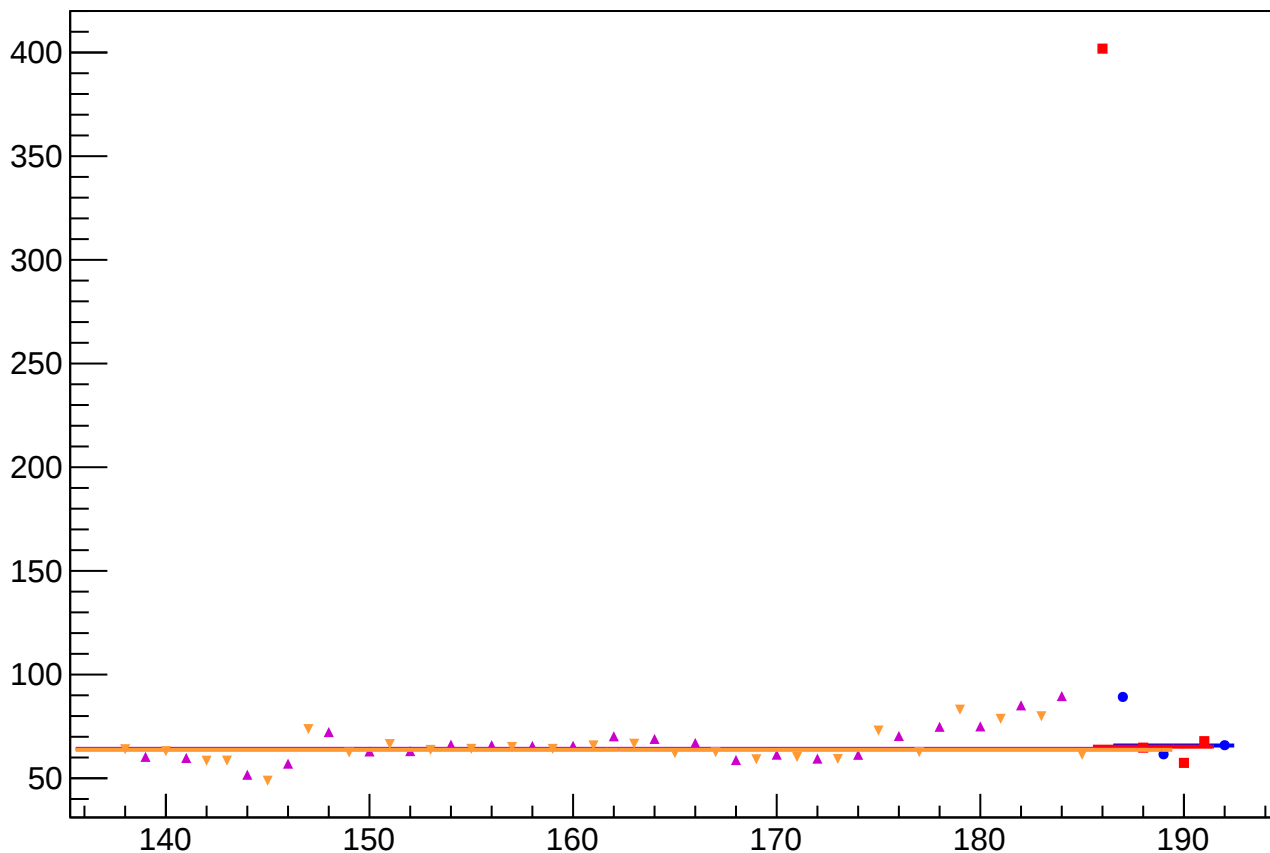
Right: -60.420 $\pm$ 37.431  $\chi^2/\text{NDF}$ : 1.7/6

In: 6.280 $\pm$ 14.886  $\chi^2/\text{NDF}$ : 20.0/25

Out: -10.686 $\pm$ 14.347  $\chi^2/\text{NDF}$ : 42.5/28

All: -2.516 $\pm$ 10.330  $\chi^2/\text{NDF}$ : 63.2/54

reg\_asym\_sam\_37\_48\_dd\_rms vs Slug, Sign Corrected



Right In: 65.789 $\pm$ 0.038  $\chi^2$ /NDF: 24723.9/2

Left Out: 63.696 $\pm$ 0.011  $\chi^2$ /NDF: 448439.3/24

Right Out: 65.229 $\pm$ 0.037  $\chi^2$ /NDF: 532083.0/3

Left In: 64.189 $\pm$ 0.011  $\chi^2$ /NDF: 429670.3/22

Left: 63.934 $\pm$ 0.008  $\chi^2$ /NDF: 879161.0/47

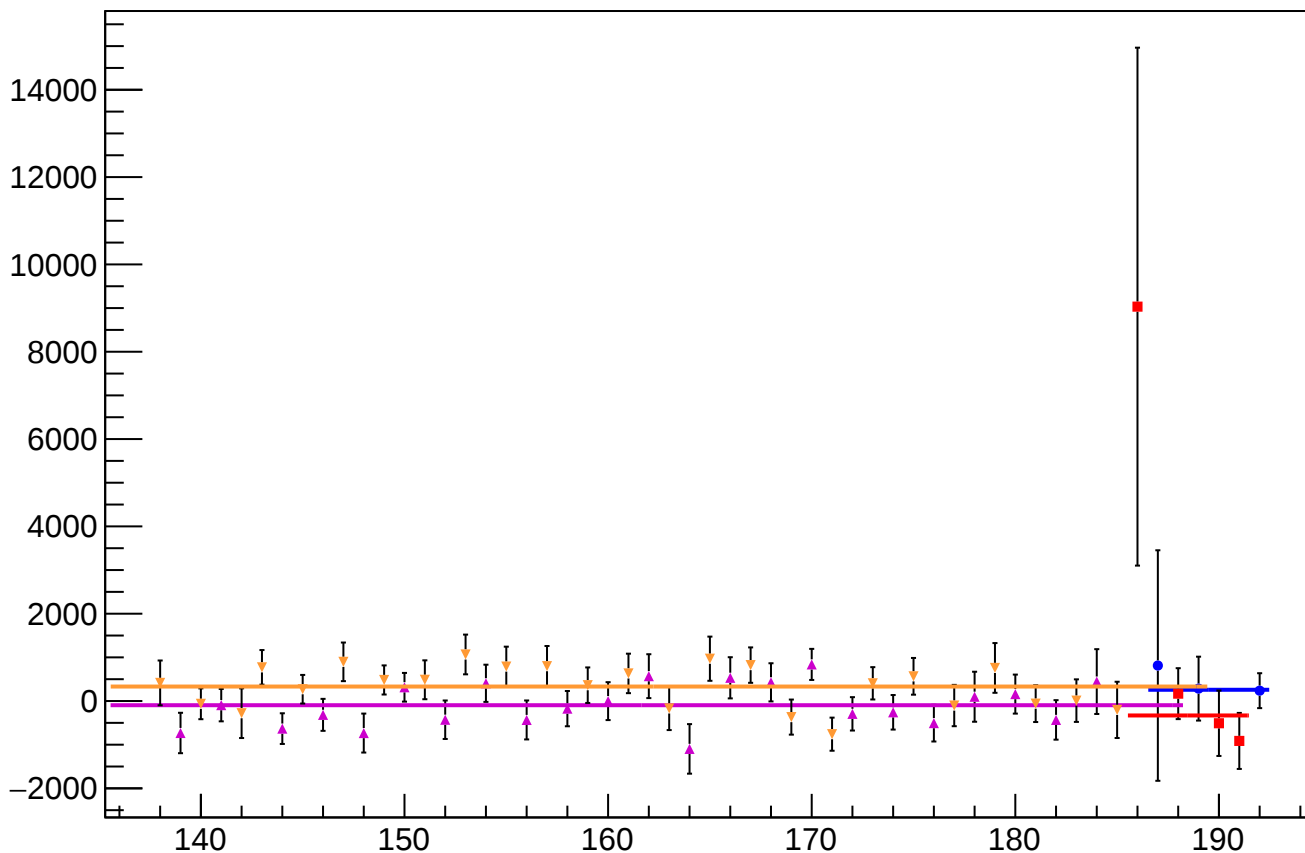
Right: 65.495 $\pm$ 0.026  $\chi^2$ /NDF: 556918.8/6

In: 64.309 $\pm$ 0.011  $\chi^2$ /NDF: 455999.1/25

Out: 63.814 $\pm$ 0.010  $\chi^2$ /NDF: 982148.0/28

All: 64.053 $\pm$ 0.007  $\chi^2$ /NDF: 1439293.5/54

asym\_sam\_37\_48\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: 257.655+/-347.848  $\chi^2/\text{NDF}$ : 0.0/2

Left Out: 331.739+/-86.071  $\chi^2/\text{NDF}$ :29.9/24

Right Out: -330.682+/-373.210  $\chi^2/\text{NDF}$ : 4.1/3

Left In: -95.910+/-88.656  $\chi^2/\text{NDF}$ :28.7/22

Left: 124.240+/-61.755  $\chi^2/\text{NDF}$ : 70.5/47

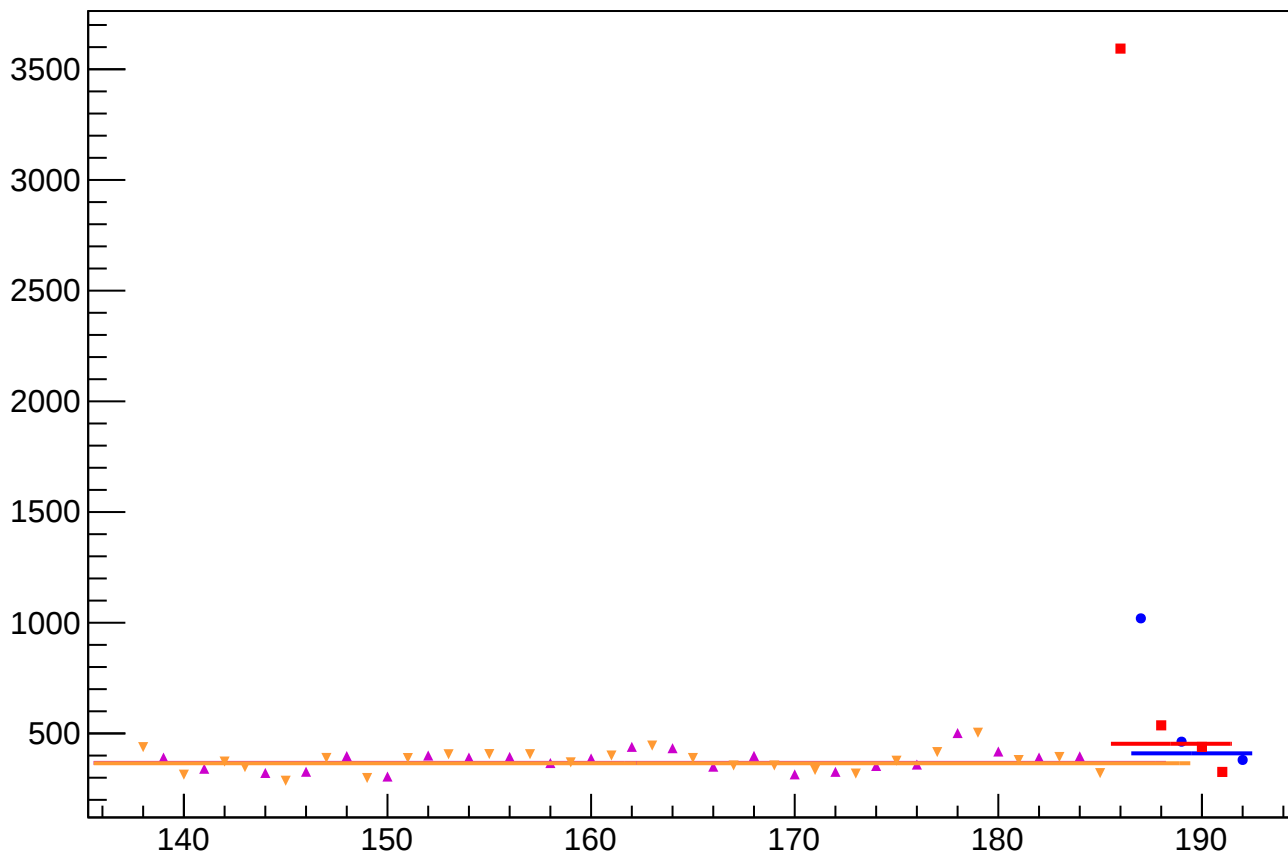
Right: -15.845+/-254.460  $\chi^2/\text{NDF}$ : 5.5/6

In: -74.344+/-85.910  $\chi^2/\text{NDF}$ :29.7/25

Out: 298.286+/-83.869  $\chi^2/\text{NDF}$ :37.0/28

All: 116.448+/-60.013  $\chi^2/\text{NDF}$ : 76.3/54

asym\_sam\_37\_48\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 410.039 $\pm$ 0.246  $\chi^2/\text{NDF}$ : 128149.8/2

Left Out: 365.355 $\pm$ 0.061  $\chi^2/\text{NDF}$ : 618453.7/24

Right Out: 453.282 $\pm$ 0.264  $\chi^2/\text{NDF}$ : 680560.1/3

Left In: 366.925 $\pm$ 0.063  $\chi^2/\text{NDF}$ : 478082.1/22

Left: 366.117 $\pm$ 0.044  $\chi^2/\text{NDF}$ : 1096858.5/47

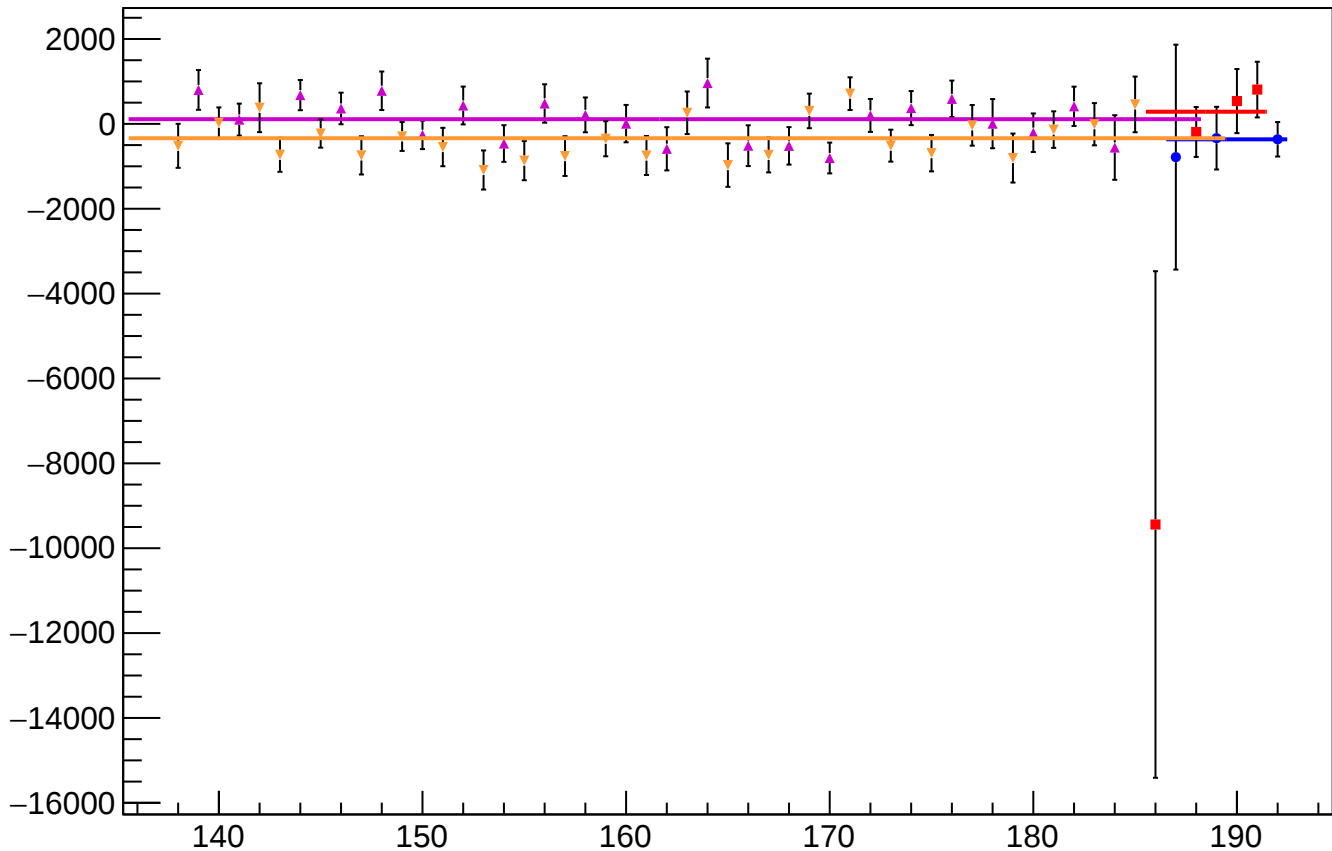
Right: 430.142 $\pm$ 0.180  $\chi^2/\text{NDF}$ : 823078.8/6

In: 369.554 $\pm$ 0.061  $\chi^2/\text{NDF}$ : 635083.0/25

Out: 369.796 $\pm$ 0.059  $\chi^2/\text{NDF}$ : 1404419.8/28

All: 369.678 $\pm$ 0.042  $\chi^2/\text{NDF}$ : 2039510.9/54

# asym\_sam\_37\_48\_dd\_mean vs Slug, Sign Corrected



Right In: -364.576 $\pm$ 352.576  $\chi^2$ /NDF: 0.0/2

Left Out: -338.528 $\pm$ 87.450  $\chi^2$ /NDF:28.2/24

Right Out: 286.275 $\pm$ 377.995  $\chi^2$ /NDF: 4.1/3

Left In: 110.341 $\pm$ 90.084  $\chi^2$ /NDF:29.2/22

Left: -120.751 $\pm$ 62.747  $\chi^2$ /NDF: 70.2/47

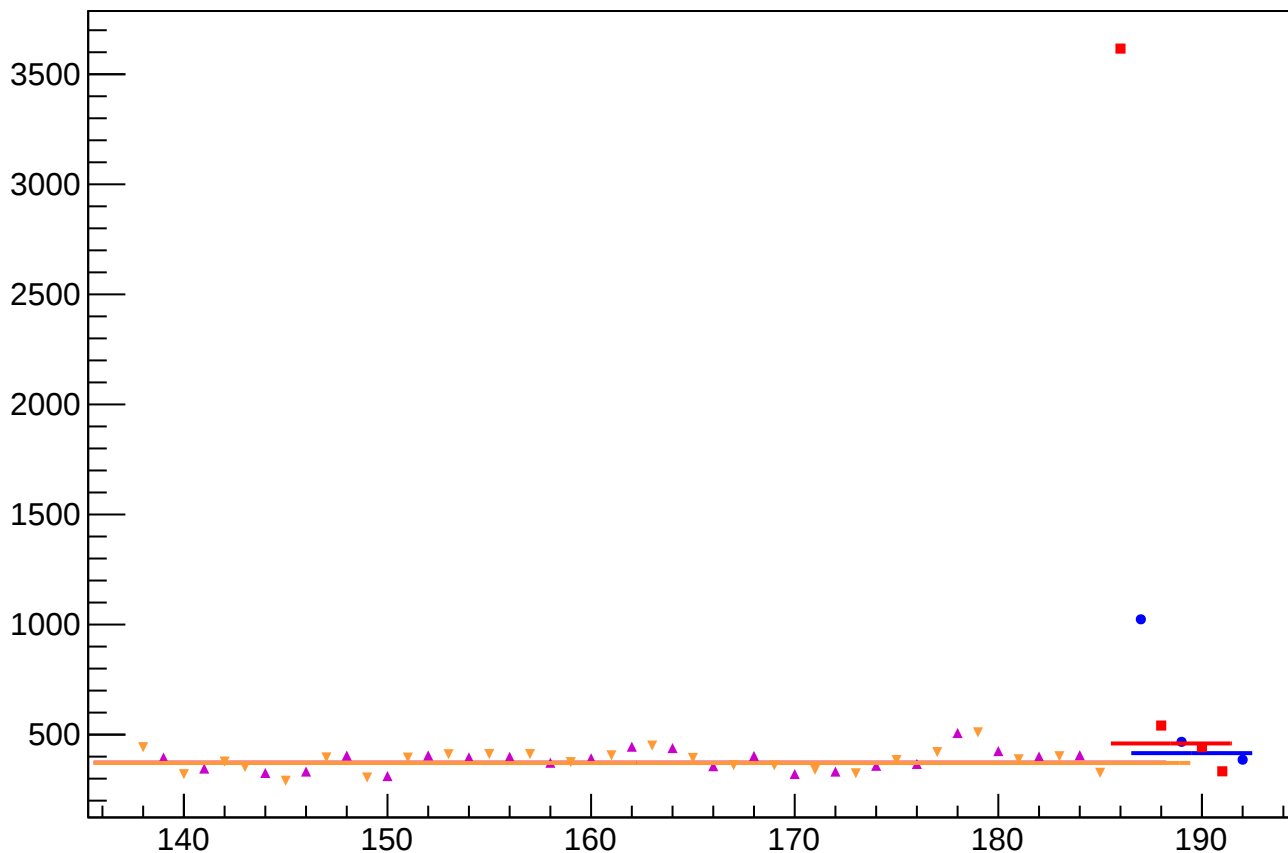
Right: -61.768 $\pm$ 257.827  $\chi^2$ /NDF: 5.7/6

In: 81.237 $\pm$ 87.280  $\chi^2$ /NDF:31.0/25

Out: -306.785 $\pm$ 85.200  $\chi^2$ /NDF:34.9/28

All: -117.453 $\pm$ 60.968  $\chi^2$ /NDF: 75.9/54

asym\_sam\_37\_48\_dd\_rms vs Slug, Sign Corrected



Right In: 415.878+/-0.249  $\chi^2/\text{NDF}$ : 125694.7/2

Left Out: 371.356+/-0.062  $\chi^2/\text{NDF}$ : 604070.6/24

Right Out: 459.860+/-0.267  $\chi^2/\text{NDF}$ : 673099.8/3

Left In: 372.938+/-0.064  $\chi^2/\text{NDF}$ : 467340.9/22

Left: 372.123+/-0.044  $\chi^2/\text{NDF}$ : 1071729.1/47

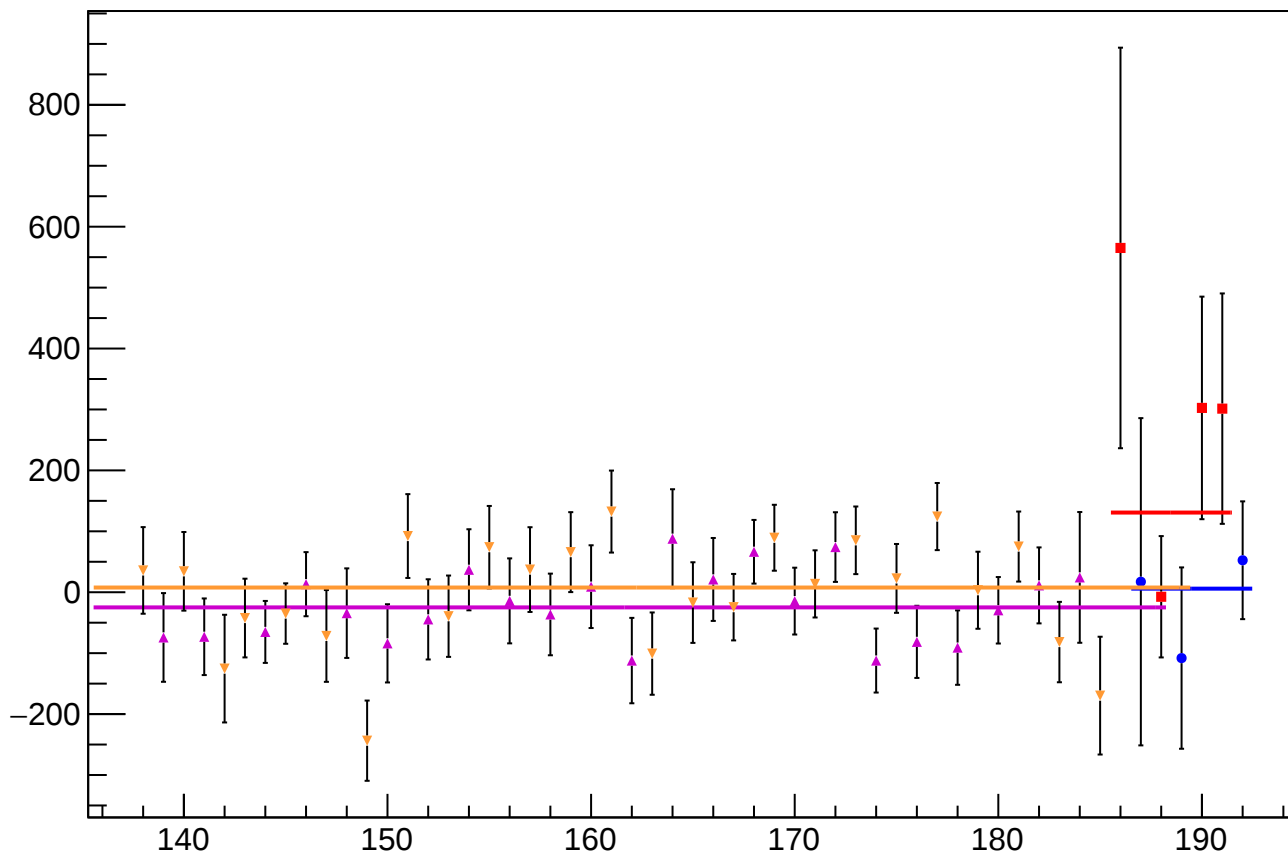
Right: 436.341+/-0.182  $\chi^2/\text{NDF}$ : 813273.7/6

In: 375.569+/-0.062  $\chi^2/\text{NDF}$ : 620883.6/25

Out: 375.852+/-0.060  $\chi^2/\text{NDF}$ : 1381243.0/28

All: 375.714+/-0.043  $\chi^2/\text{NDF}$ : 2002137.4/54

reg\_asym\_sam\_15\_26\_dd\_mean vs Slug, Sign Corrected



Right In:  $5.879 \pm 77.611$   $\chi^2/\text{NDF}: 0.8/2$

Left Out:  $7.723 \pm 12.656$   $\chi^2/\text{NDF}: 45.4/24$

Right Out:  $130.785 \pm 77.145$   $\chi^2/\text{NDF}: 5.4/3$

Left In:  $-24.887 \pm 13.029$   $\chi^2/\text{NDF}: 19.7/22$

Left:  $-8.108 \pm 9.078$   $\chi^2/\text{NDF}: 68.4/47$

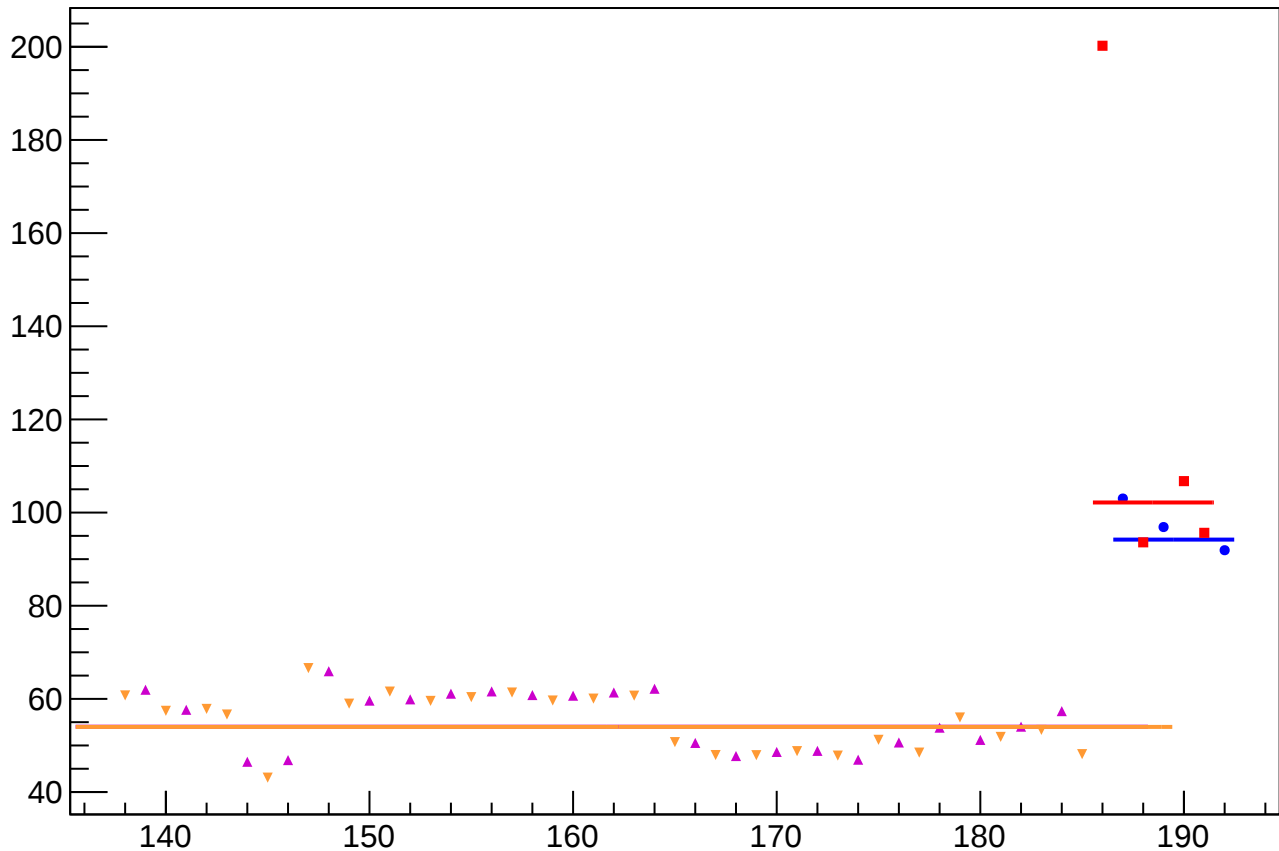
Right:  $68.709 \pm 54.714$   $\chi^2/\text{NDF}: 7.5/6$

In:  $-24.044 \pm 12.849$   $\chi^2/\text{NDF}: 20.7/25$

Out:  $10.949 \pm 12.489$   $\chi^2/\text{NDF}: 53.3/28$

All:  $-6.050 \pm 8.955$   $\chi^2/\text{NDF}: 77.8/54$

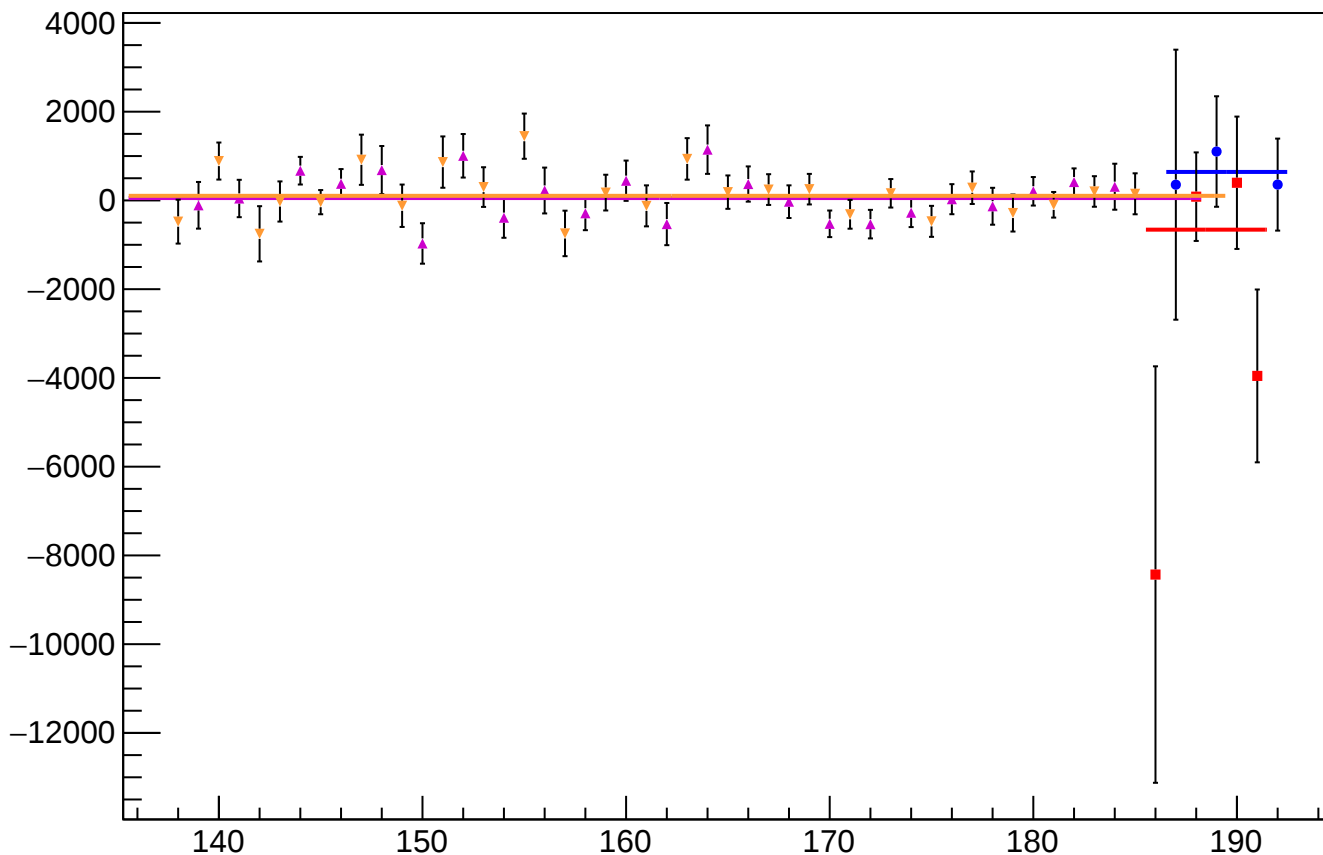
reg\_asym\_sam\_15\_26\_dd\_rms vs Slug, Sign Corrected



Right In: 94.198 $\pm$ 0.055  $\chi^2$ /NDF: 3922.3/2  
 Left Out: 53.984 $\pm$ 0.009  $\chi^2$ /NDF:458972.1/24  
 Right Out: 102.167 $\pm$ 0.055  $\chi^2$ /NDF: 196339.0/3  
 Left In: 54.028 $\pm$ 0.009  $\chi^2$ /NDF:443819.5/22

Left: 54.005 $\pm$ 0.006  $\chi^2$ /NDF: 902803.3/47  
 Right: 98.207 $\pm$ 0.039  $\chi^2$ /NDF: 210868.8/6  
 In: 55.129 $\pm$ 0.009  $\chi^2$ /NDF:968851.8/25  
 Out: 55.246 $\pm$ 0.009  $\chi^2$ /NDF:1415090.4/28  
 All: 55.189 $\pm$ 0.006  $\chi^2$ /NDF: 2384028.6/54

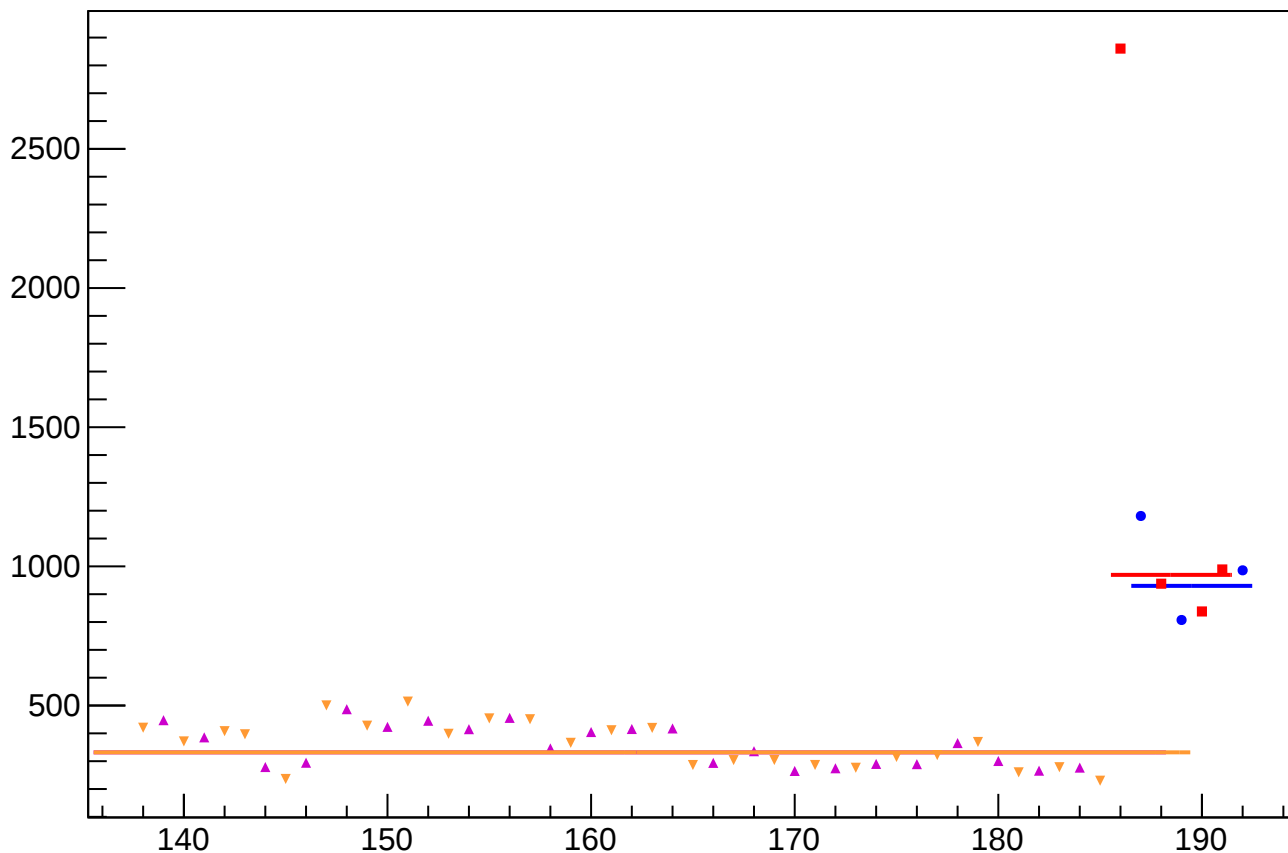
asym\_sam\_15\_26\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: 642.125+/-770.747  $\chi^2/\text{NDF}$ : 0.2/2  
 Left Out: 103.768+/-79.344  $\chi^2/\text{NDF}$ :31.0/24  
 Right Out: -658.616+/-753.060  $\chi^2/\text{NDF}$ : 6.7/3  
 Left In: 53.493+/-81.201  $\chi^2/\text{NDF}$ :34.1/22

Left: 79.212+/-56.750  $\chi^2/\text{NDF}$ : 65.3/47  
 Right: -23.341+/-538.638  $\chi^2/\text{NDF}$ : 8.3/6  
 In: 59.955+/-80.754  $\chi^2/\text{NDF}$ :34.9/25  
 Out: 95.397+/-78.907  $\chi^2/\text{NDF}$ :38.6/28  
 All: 78.086+/-56.438  $\chi^2/\text{NDF}$ : 73.6/54

asym\_sam\_15\_26\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 929.945+/-0.545  $\chi^2/\text{NDF}$ : 38807.3/2

Left Out: 331.770+/-0.056  $\chi^2/\text{NDF}$ :1711721.9/24

Right Out: 969.433+/-0.532  $\chi^2/\text{NDF}$ : 342498.0/3

Left In: 331.666+/-0.057  $\chi^2/\text{NDF}$ :1303192.2/22

Left: 331.719+/-0.040  $\chi^2/\text{NDF}$ : 3014915.7/47

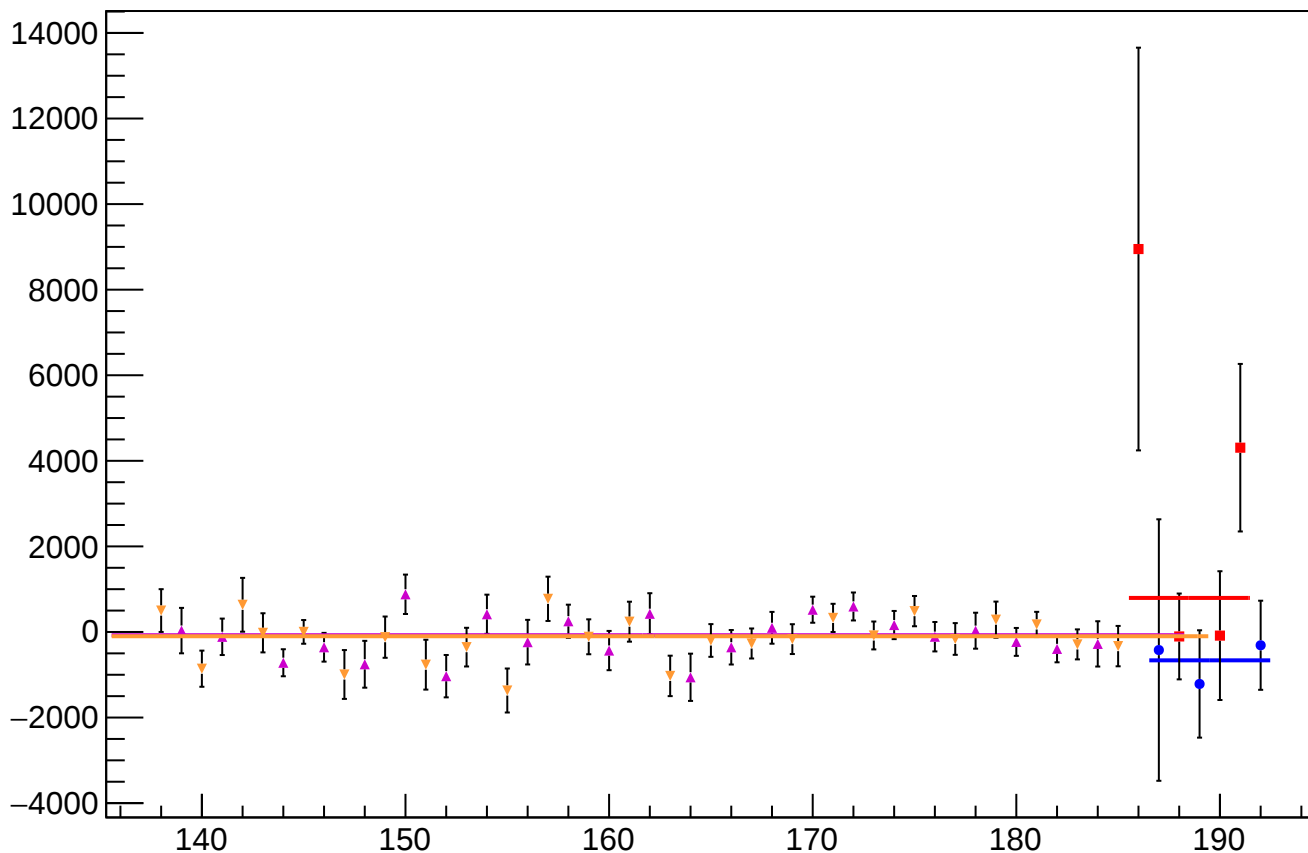
Right: 950.148+/-0.381  $\chi^2/\text{NDF}$ : 383991.1/6

In: 338.233+/-0.057  $\chi^2/\text{NDF}$ :2533848.2/25

Out: 338.772+/-0.056  $\chi^2/\text{NDF}$ :3472490.6/28

All: 338.509+/-0.040  $\chi^2/\text{NDF}$ : 6006384.2/54

asym\_sam\_15\_26\_dd\_mean vs Slug, Sign Corrected



Right In: -662.958+/-775.044  $\chi^2$ /NDF: 0.3/2

Left Out: -99.785+/-80.428  $\chi^2$ /NDF:30.7/24

Right Out: 795.797+/-757.743  $\chi^2$ /NDF: 7.4/3

Left In: -75.579+/-82.319  $\chi^2$ /NDF:32.1/22

Left: -87.963+/-57.528  $\chi^2$ /NDF: 62.8/47

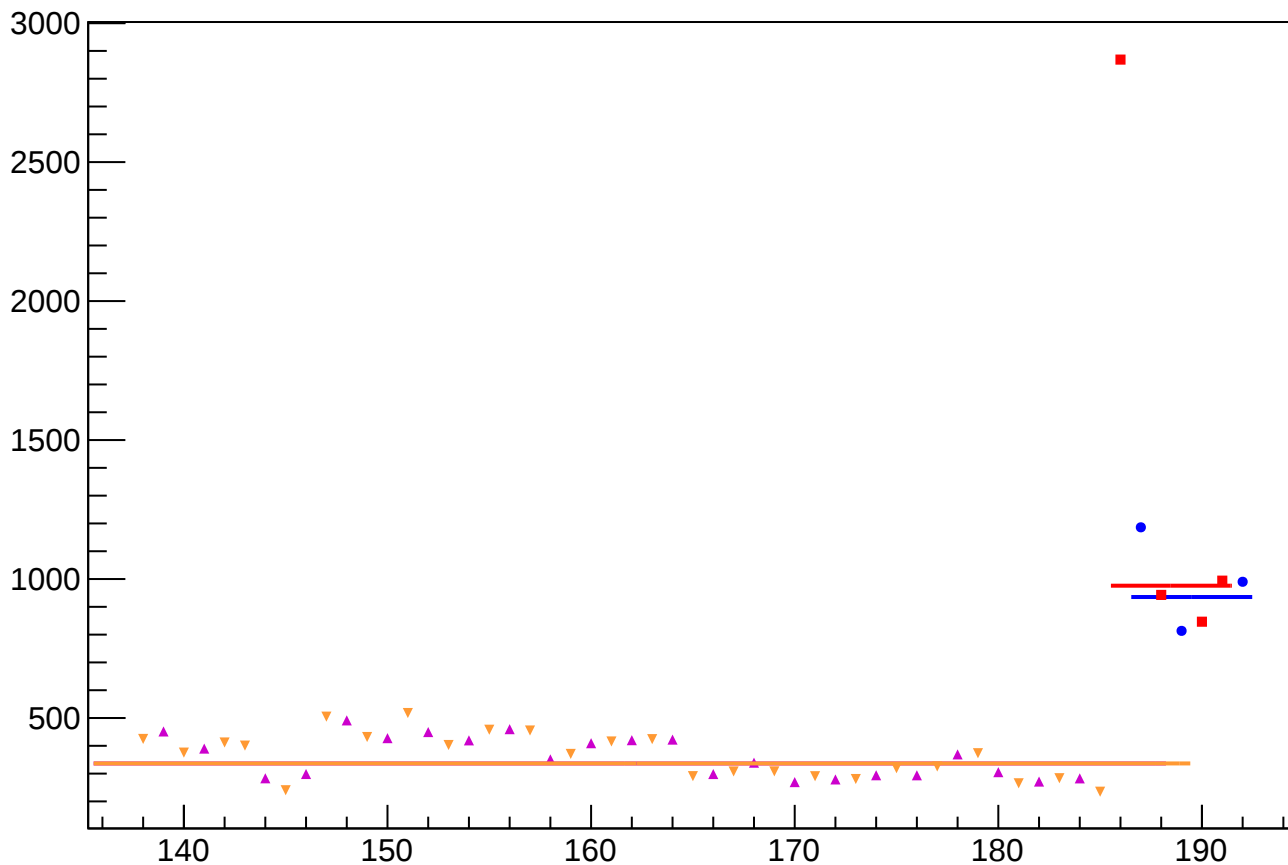
Right: 82.883+/-541.819  $\chi^2$ /NDF: 9.5/6

In: -82.131+/-81.858  $\chi^2$ /NDF:33.0/25

Out: -89.808+/-79.979  $\chi^2$ /NDF:39.4/28

All: -86.059+/-57.206  $\chi^2$ /NDF: 72.4/54

asym\_sam\_15\_26\_dd\_rms vs Slug, Sign Corrected



Right In: 935.316+/-0.548  $\chi^2/\text{NDF}$ : 37851.4/2

Left Out: 336.557+/-0.057  $\chi^2/\text{NDF}$ :1665919.4/24

Right Out: 976.027+/-0.536  $\chi^2/\text{NDF}$ : 340682.7/3

Left In: 336.439+/-0.058  $\chi^2/\text{NDF}$ :1269066.3/22

Left: 336.500+/-0.041  $\chi^2/\text{NDF}$ : 2934987.9/47

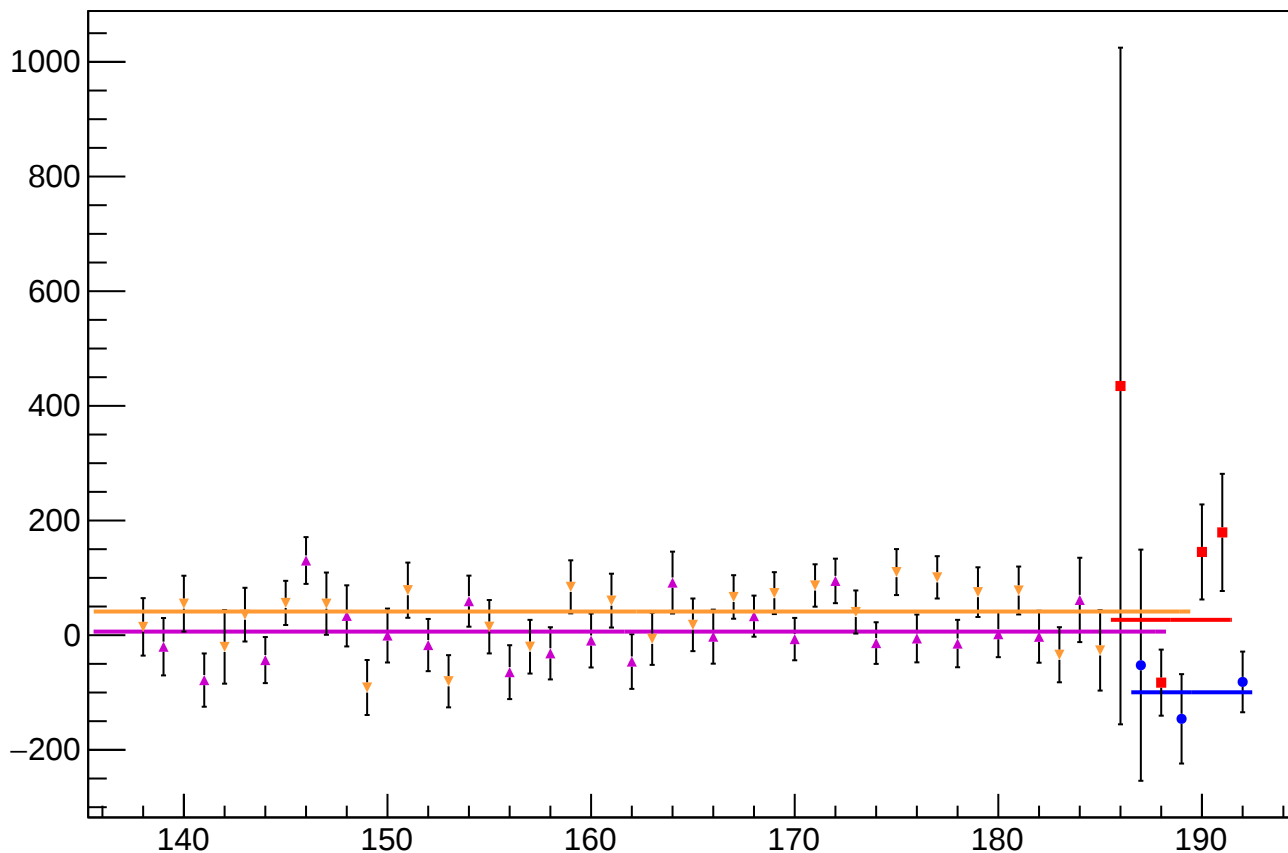
Right: 956.131+/-0.383  $\chi^2/\text{NDF}$ : 381355.6/6

In: 343.120+/-0.058  $\chi^2/\text{NDF}$ :2487725.5/25

Out: 343.681+/-0.057  $\chi^2/\text{NDF}$ :3415114.2/28

All: 343.407+/-0.040  $\chi^2/\text{NDF}$ : 5902887.9/54

reg\_asym\_sam\_37\_26\_dd\_mean vs Slug, Sign Corrected



Right In:  $-99.596 \pm 42.786$   $\chi^2/\text{NDF}$ : 0.5/2

Left Out:  $41.283 \pm 8.889$   $\chi^2/\text{NDF}$ : 34.4/24

Right Out:  $26.782 \pm 42.819$   $\chi^2/\text{NDF}$ : 8.4/3

Left In:  $6.254 \pm 9.175$   $\chi^2/\text{NDF}$ : 30.3/22

Left:  $24.322 \pm 6.384$   $\chi^2/\text{NDF}$ : 72.2/47

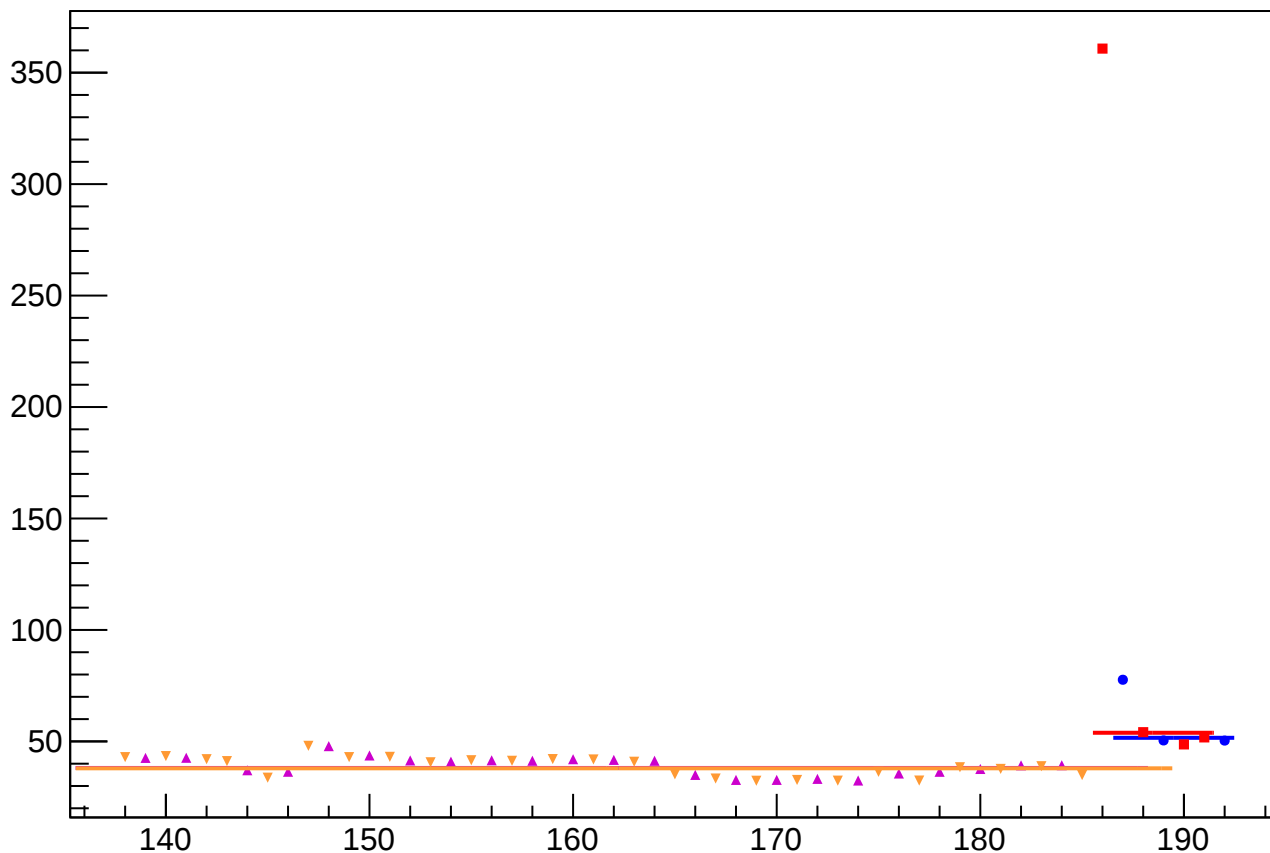
Right:  $-36.456 \pm 30.266$   $\chi^2/\text{NDF}$ : 13.2/6

In:  $1.601 \pm 8.971$   $\chi^2/\text{NDF}$ : 36.7/25

Out:  $40.684 \pm 8.704$   $\chi^2/\text{NDF}$ : 42.8/28

All:  $21.733 \pm 6.247$   $\chi^2/\text{NDF}$ : 89.3/54

reg\_asym\_sam\_37\_26\_dd\_rms vs Slug, Sign Corrected



Right In: 51.615 $\pm$ 0.030  $\chi^2$ /NDF: 34947.7/2

Left Out: 37.925 $\pm$ 0.006  $\chi^2$ /NDF: 487085.3/24

Right Out: 53.875 $\pm$ 0.030  $\chi^2$ /NDF: 549809.4/3

Left In: 38.087 $\pm$ 0.006  $\chi^2$ /NDF: 396334.5/22

Left: 38.004 $\pm$ 0.005  $\chi^2$ /NDF: 883742.3/47

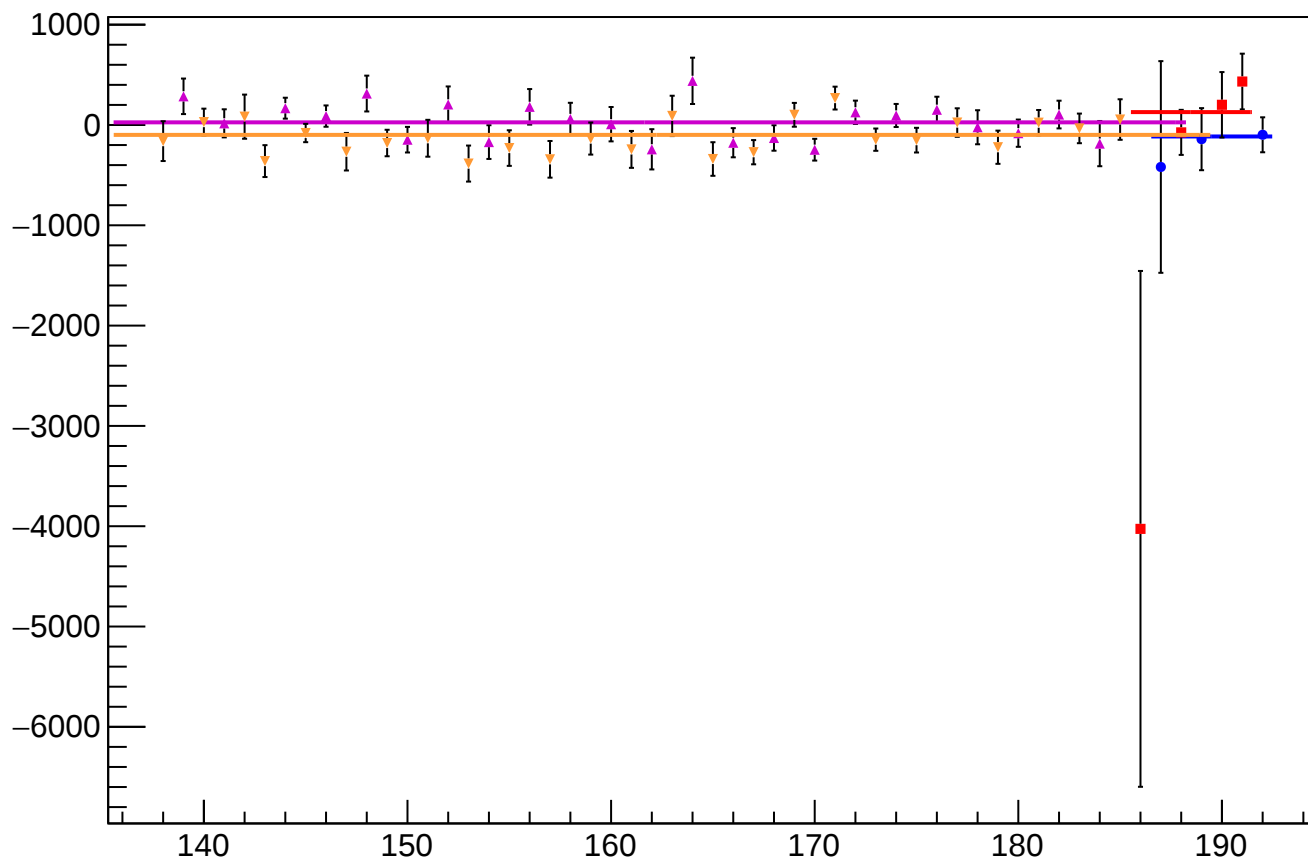
Right: 52.744 $\pm$ 0.021  $\chi^2$ /NDF: 587546.5/6

In: 38.682 $\pm$ 0.006  $\chi^2$ /NDF: 622423.1/25

Out: 38.584 $\pm$ 0.006  $\chi^2$ /NDF: 1302953.8/28

All: 38.632 $\pm$ 0.004  $\chi^2$ /NDF: 1925499.5/54

asym\_sam\_37\_26\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: -114.598+/-150.291  $\chi^2/\text{NDF}$ : 0.1/2

Left Out: -98.741+/-29.095  $\chi^2/\text{NDF}$ : 32.7/24

Right Out: 128.435+/-153.670  $\chi^2/\text{NDF}$ : 4.7/3

Left In: 26.223+/-29.676  $\chi^2/\text{NDF}$ : 30.7/22

Left: -37.493+/-20.776  $\chi^2/\text{NDF}$ : 72.5/47

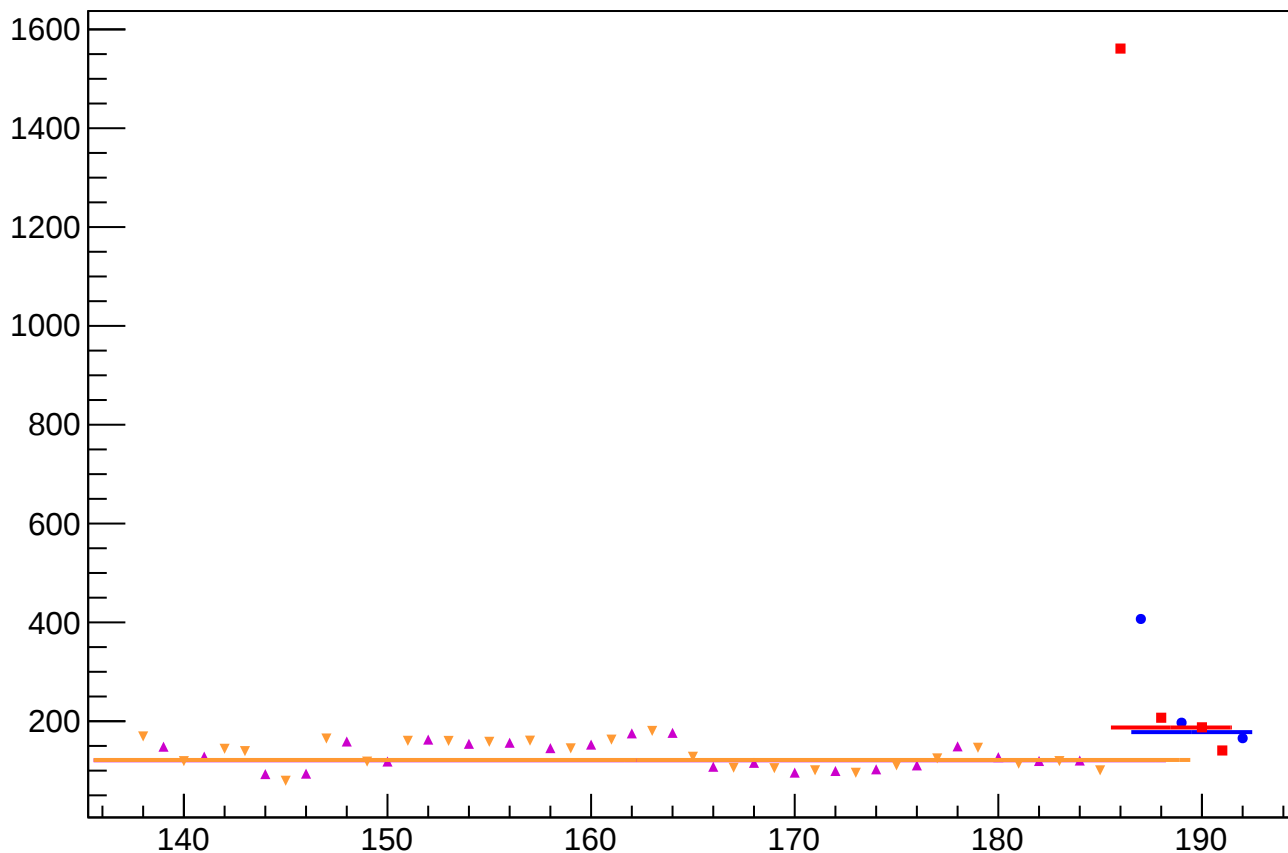
Right: 4.218+/-107.446  $\chi^2/\text{NDF}$ : 6.1/6

In: 20.938+/-29.113  $\chi^2/\text{NDF}$ : 31.6/25

Out: -90.879+/-28.587  $\chi^2/\text{NDF}$ : 39.5/28

All: -35.990+/-20.398  $\chi^2/\text{NDF}$ : 78.7/54

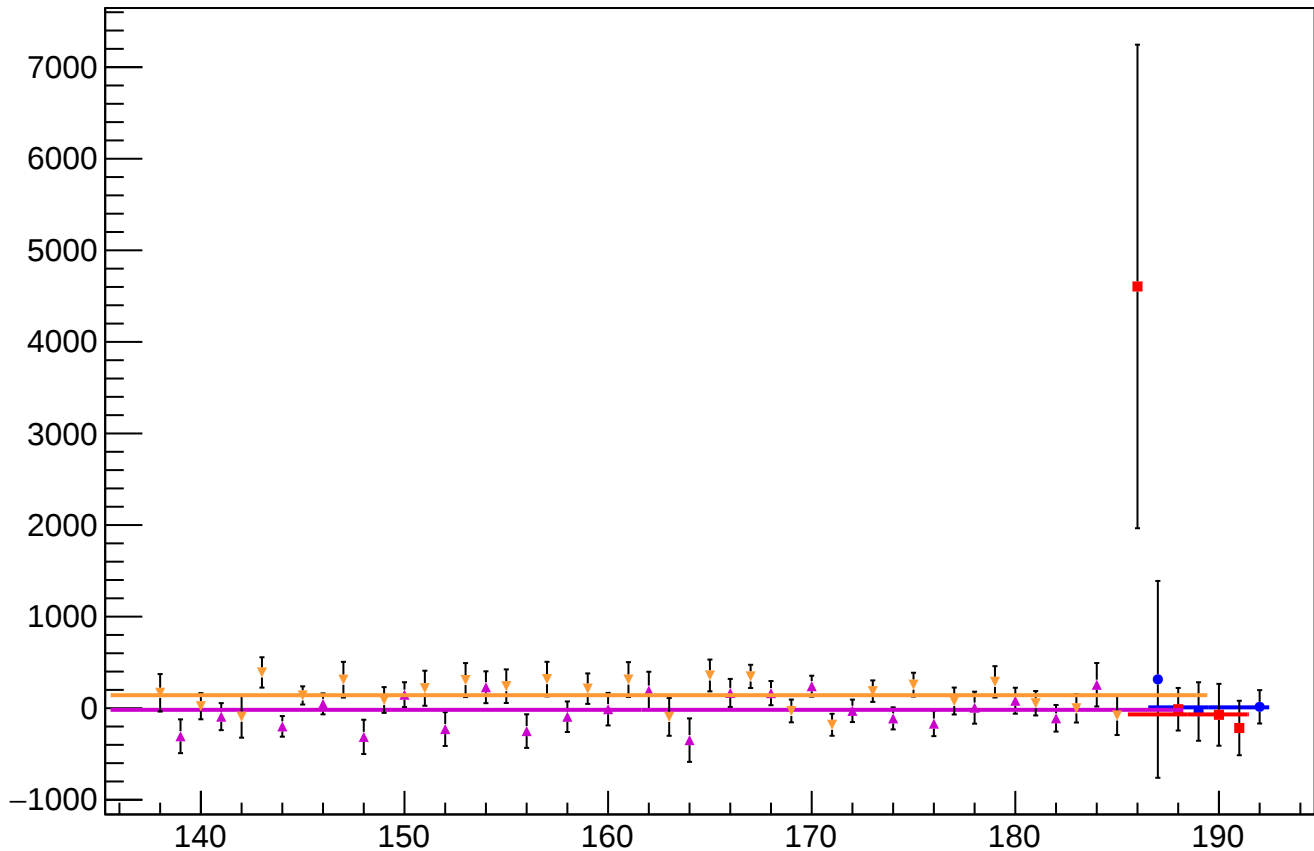
asym\_sam\_37\_26\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 177.930 $\pm$ 0.106  $\chi^2$ /NDF: 111853.1/2  
 Left Out: 121.592 $\pm$ 0.021  $\chi^2$ /NDF:1711423.9/24  
 Right Out: 187.293 $\pm$ 0.109  $\chi^2$ /NDF: 642571.8/3  
 Left In: 120.927 $\pm$ 0.021  $\chi^2$ /NDF:1382861.4/22

Left: 121.266 $\pm$ 0.015  $\chi^2$ /NDF: 3094797.5/47  
 Right: 182.508 $\pm$ 0.076  $\chi^2$ /NDF: 758219.8/6  
 In: 123.066 $\pm$ 0.021  $\chi^2$ /NDF:1771636.9/25  
 Out: 123.866 $\pm$ 0.020  $\chi^2$ /NDF:2706940.3/28  
 All: 123.473 $\pm$ 0.014  $\chi^2$ /NDF: 4479345.7/54

asym\_sam\_37\_26\_dd\_mean vs Slug, Sign Corrected



Right In:  $9.231 \pm 156.643$   $\chi^2/\text{NDF}: 0.1/2$

Left Out:  $142.014 \pm 30.574$   $\chi^2/\text{NDF}: 26.9/24$

Right Out:  $-67.698 \pm 160.693$   $\chi^2/\text{NDF}: 3.4/3$

Left In:  $-17.679 \pm 31.209$   $\chi^2/\text{NDF}: 30.1/22$

Left:  $63.807 \pm 21.840$   $\chi^2/\text{NDF}: 70.4/47$

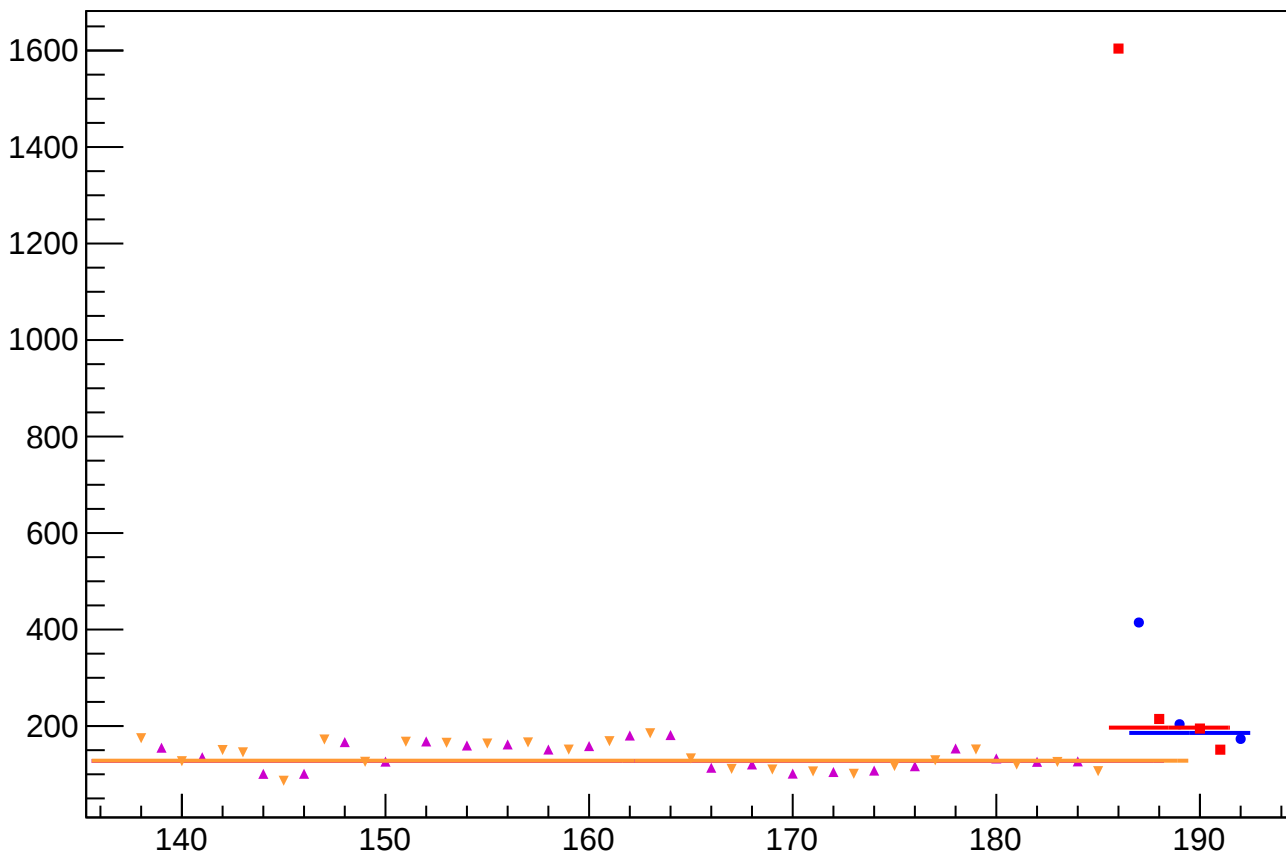
Right:  $-28.252 \pm 112.168$   $\chi^2/\text{NDF}: 3.7/6$

In:  $-16.652 \pm 30.607$   $\chi^2/\text{NDF}: 30.3/25$

Out:  $134.688 \pm 30.035$   $\chi^2/\text{NDF}: 32.0/28$

All:  $60.444 \pm 21.437$   $\chi^2/\text{NDF}: 74.7/54$

asym\_sam\_37\_26\_dd\_rms vs Slug, Sign Corrected



Right In: 185.733 $\pm$ 0.111  $\chi^2$ /NDF: 106352.0/2

Left Out: 128.175 $\pm$ 0.022  $\chi^2$ /NDF: 1532922.0/24

Right Out: 196.731 $\pm$ 0.114  $\chi^2$ /NDF: 627414.2/3

Left In: 127.544 $\pm$ 0.022  $\chi^2$ /NDF: 1235705.3/22

Left: 127.866 $\pm$ 0.015  $\chi^2$ /NDF: 2769045.1/47

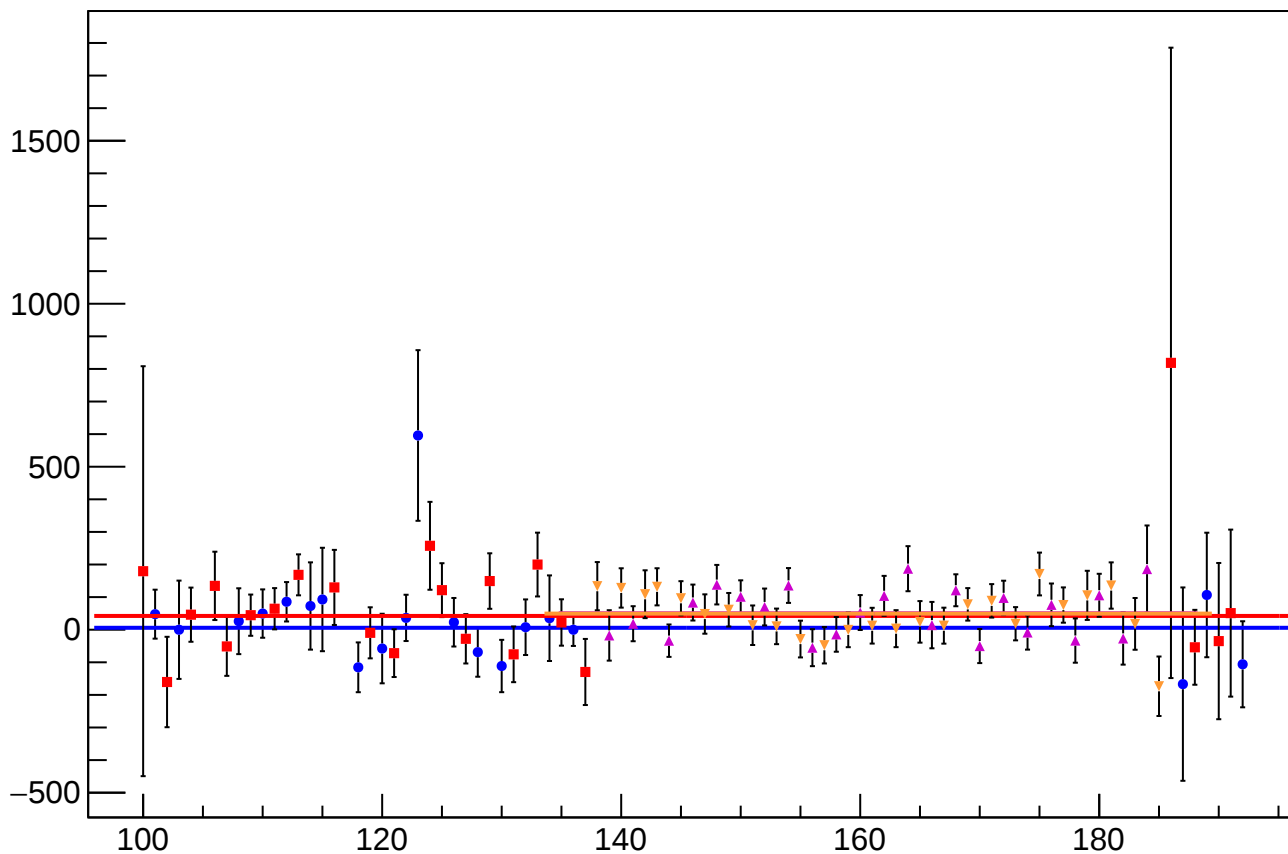
Right: 191.092 $\pm$ 0.079  $\chi^2$ /NDF: 738570.0/6

In: 129.765 $\pm$ 0.022  $\chi^2$ /NDF: 1607514.1/25

Out: 130.570 $\pm$ 0.021  $\chi^2$ /NDF: 2511640.4/28

All: 130.175 $\pm$ 0.015  $\chi^2$ /NDF: 4119859.0/54

reg\_asym\_sam\_1357\_avg\_mean vs Slug, Sign Corrected



Right In:  $5.883 \pm 19.801$   $\chi^2/\text{NDF}: 15.7/19$

Left Out:  $49.402 \pm 11.806$   $\chi^2/\text{NDF}: 28.1/24$

Right Out:  $42.234 \pm 19.068$   $\chi^2/\text{NDF}: 26.4/22$

Left In:  $50.331 \pm 12.253$   $\chi^2/\text{NDF}: 32.2/22$

Left:  $49.849 \pm 8.502$   $\chi^2/\text{NDF}: 60.3/47$

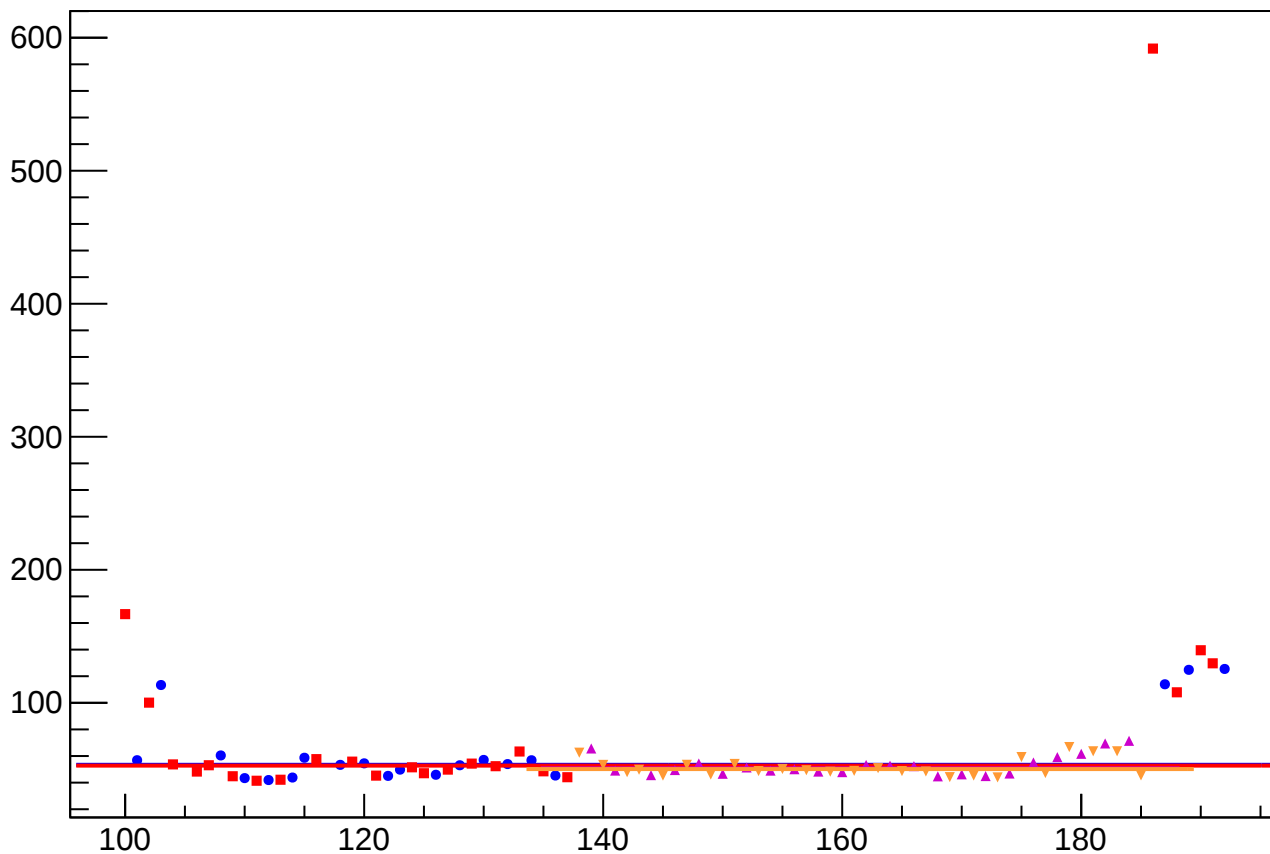
Right:  $24.744 \pm 13.735$   $\chi^2/\text{NDF}: 43.9/42$

In:  $38.023 \pm 10.420$   $\chi^2/\text{NDF}: 51.5/42$

Out:  $47.416 \pm 10.037$   $\chi^2/\text{NDF}: 54.6/47$

All:  $42.895 \pm 7.229$   $\chi^2/\text{NDF}: 106.6/90$

reg\_asym\_sam\_1357\_avg\_rms vs Slug, Sign Corrected



Right In: 53.400 $\pm$ 0.014  $\chi^2$ /NDF: 1516607.5/19

Left Out: 50.189 $\pm$ 0.008  $\chi^2$ /NDF: 467679.2/24

Right Out: 52.793 $\pm$ 0.013  $\chi^2$ /NDF: 2066871.2/22

Left In: 50.683 $\pm$ 0.009  $\chi^2$ /NDF: 469292.3/22

Left: 50.427 $\pm$ 0.006  $\chi^2$ /NDF: 938655.0/47

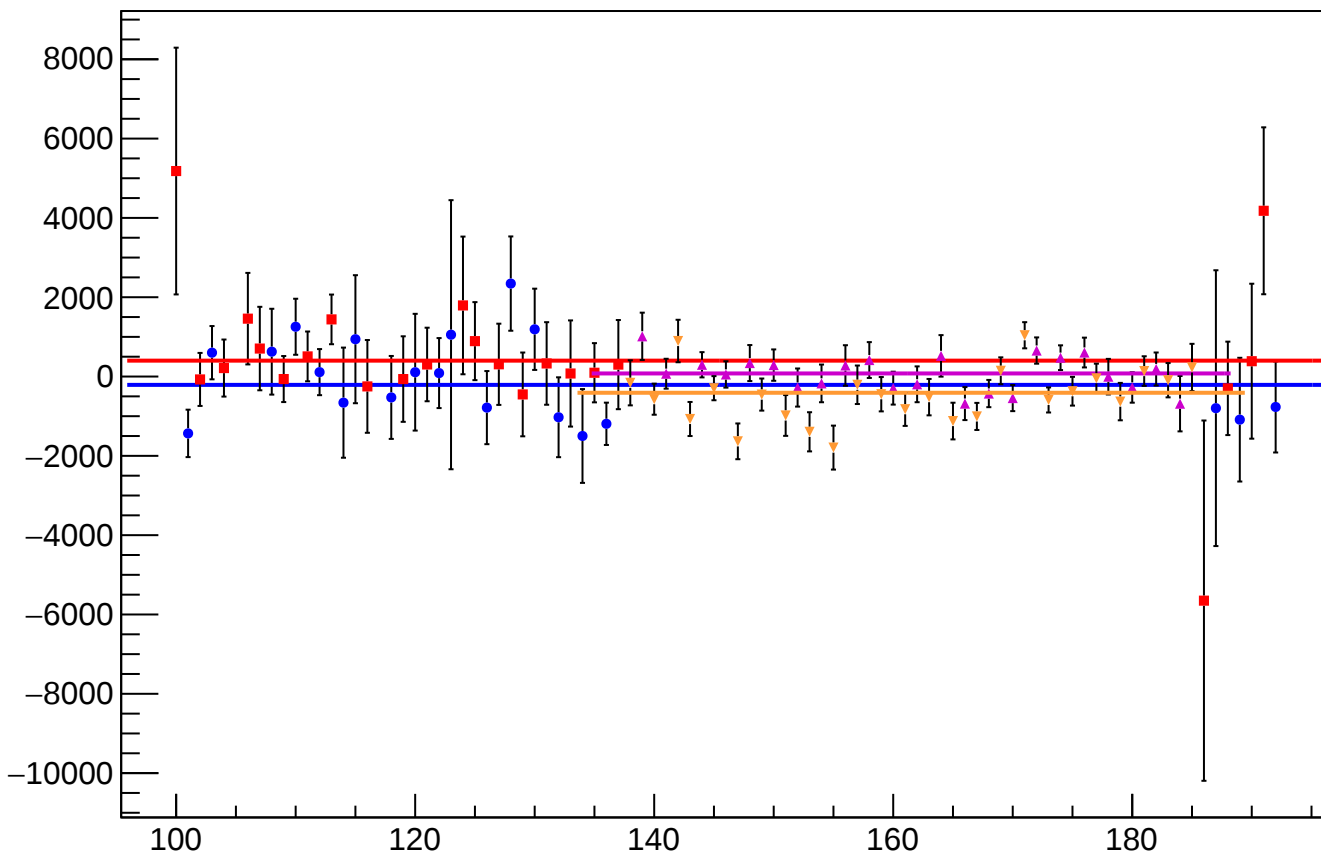
Right: 53.085 $\pm$ 0.010  $\chi^2$ /NDF: 3584455.3/42

In: 51.435 $\pm$ 0.007  $\chi^2$ /NDF: 2013133.6/42

Out: 50.911 $\pm$ 0.007  $\chi^2$ /NDF: 2561504.5/47

All: 51.163 $\pm$ 0.005  $\chi^2$ /NDF: 4577267.8/90

asym\_sam\_1357\_avg\_correction\_mean vs Slug, Sign Corrected



Right In: -210.292+/-205.048  $\chi^2/\text{NDF}$ : 24.5/19

Left Out: -409.164+/-82.348  $\chi^2/\text{NDF}$ : 61.7/24

Right Out: 400.804+/-198.904  $\chi^2/\text{NDF}$ : 14.9/22

Left In: 77.872+/-84.072  $\chi^2/\text{NDF}$ : 24.8/22

Left: -170.691+/-58.829  $\chi^2/\text{NDF}$ : 103.6/47

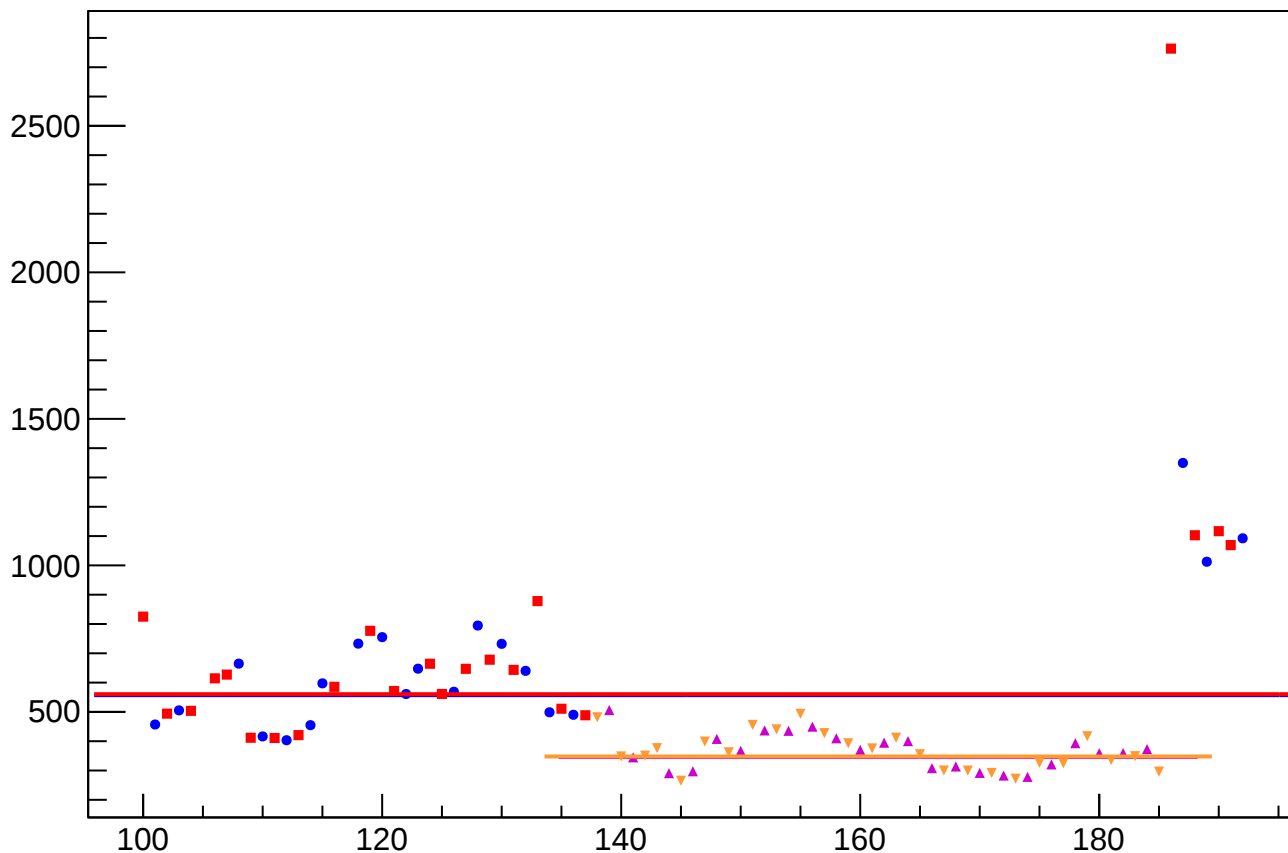
Right: 104.548+/-142.769  $\chi^2/\text{NDF}$ : 44.0/42

In: 36.400+/-77.788  $\chi^2/\text{NDF}$ : 51.1/42

Out: -290.646+/-76.085  $\chi^2/\text{NDF}$ : 90.8/47

All: -130.741+/-54.392  $\chi^2/\text{NDF}$ : 150.9/90

asym\_sam\_1357\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 557.118 $\pm$ 0.145  $\chi^2$ /NDF: 1311279.8/19

Left Out: 347.875 $\pm$ 0.058  $\chi^2$ /NDF: 1044096.7/24

Right Out: 560.455 $\pm$ 0.141  $\chi^2$ /NDF: 1846930.1/22

Left In: 345.954 $\pm$ 0.059  $\chi^2$ /NDF: 900847.0/22

Left: 346.935 $\pm$ 0.042  $\chi^2$ /NDF: 1945476.7/47

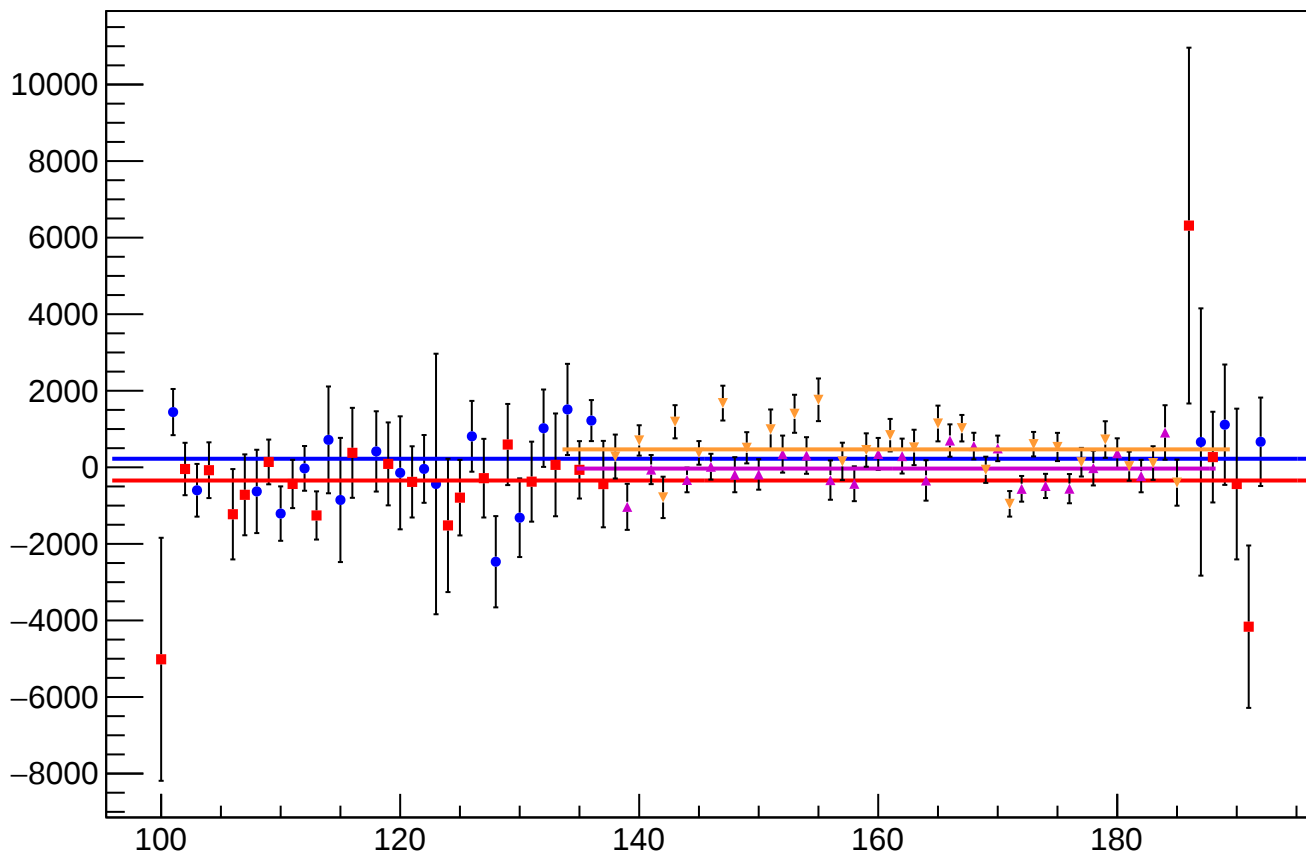
Right: 558.837 $\pm$ 0.101  $\chi^2$ /NDF: 3158482.9/42

In: 376.344 $\pm$ 0.055  $\chi^2$ /NDF: 4027945.9/42

Out: 378.981 $\pm$ 0.054  $\chi^2$ /NDF: 4841224.8/47

All: 377.692 $\pm$ 0.038  $\chi^2$ /NDF: 8870345.0/90

# asym\_sam\_1357\_avg\_mean vs Slug, Sign Corrected



Right In: 223.709 $\pm$ 206.492  $\chi^2$ /NDF: 24.6/19

Left Out: 468.863 $\pm$ 83.295  $\chi^2$ /NDF: 57.5/24

Right Out: -344.516 $\pm$ 200.435  $\chi^2$ /NDF: 13.8/22

Left In: -32.801 $\pm$ 85.064  $\chi^2$ /NDF: 25.7/22

Left: 223.299 $\pm$ 59.514  $\chi^2$ /NDF: 100.9/47

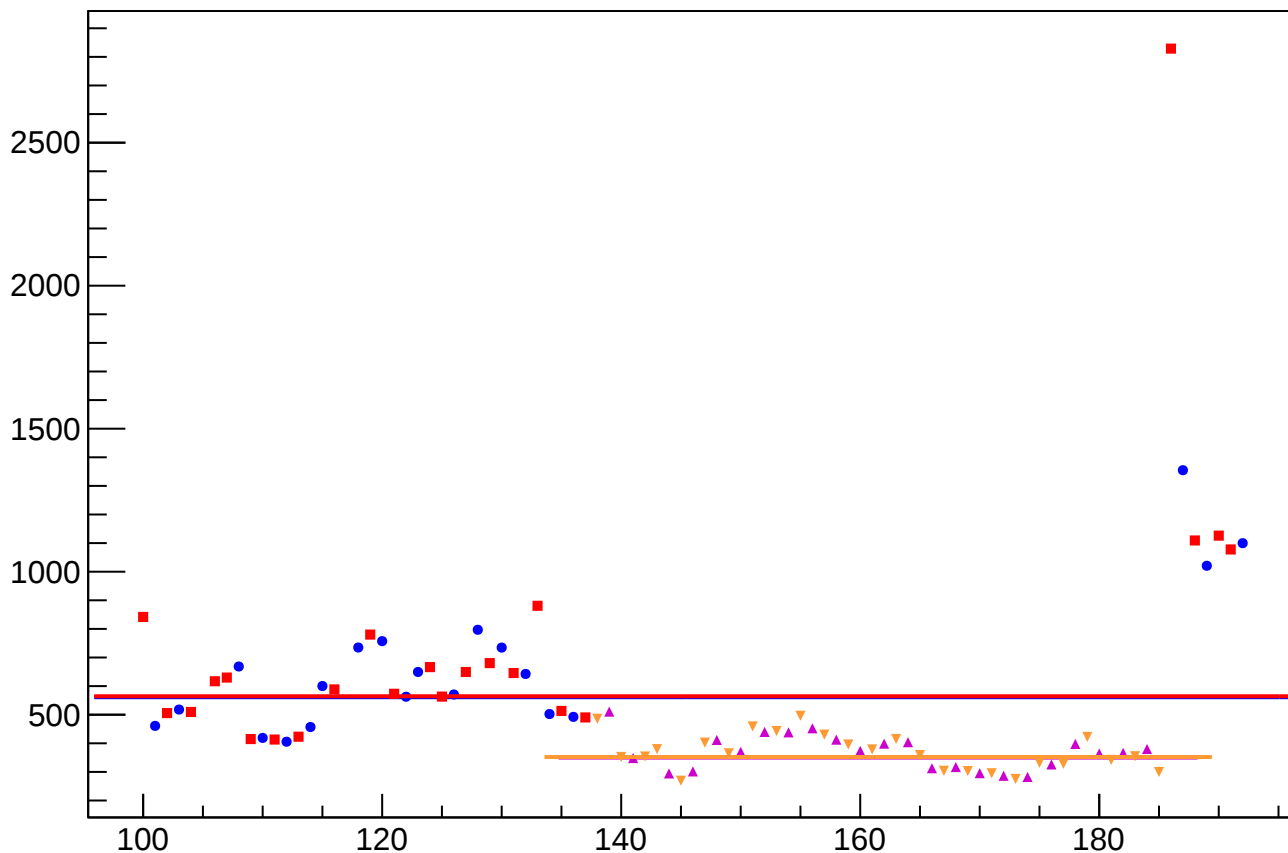
Right: -68.859 $\pm$ 143.823  $\chi^2$ /NDF: 42.3/42

In: 4.413 $\pm$ 78.651  $\chi^2$ /NDF: 51.6/42

Out: 349.079 $\pm$ 76.918  $\chi^2$ /NDF: 85.3/47

All: 180.586 $\pm$ 54.992  $\chi^2$ /NDF: 146.8/90

asym\_sam\_1357\_avg\_rms vs Slug, Sign Corrected



Right In: 561.216 $\pm$ 0.146  $\chi^2$ /NDF: 1303098.6/19

Left Out: 352.015 $\pm$ 0.059  $\chi^2$ /NDF: 1017195.6/24

Right Out: 564.501 $\pm$ 0.142  $\chi^2$ /NDF: 1843253.0/22

Left In: 350.160 $\pm$ 0.060  $\chi^2$ /NDF: 878380.0/22

Left: 351.107 $\pm$ 0.042  $\chi^2$ /NDF: 1896060.8/47

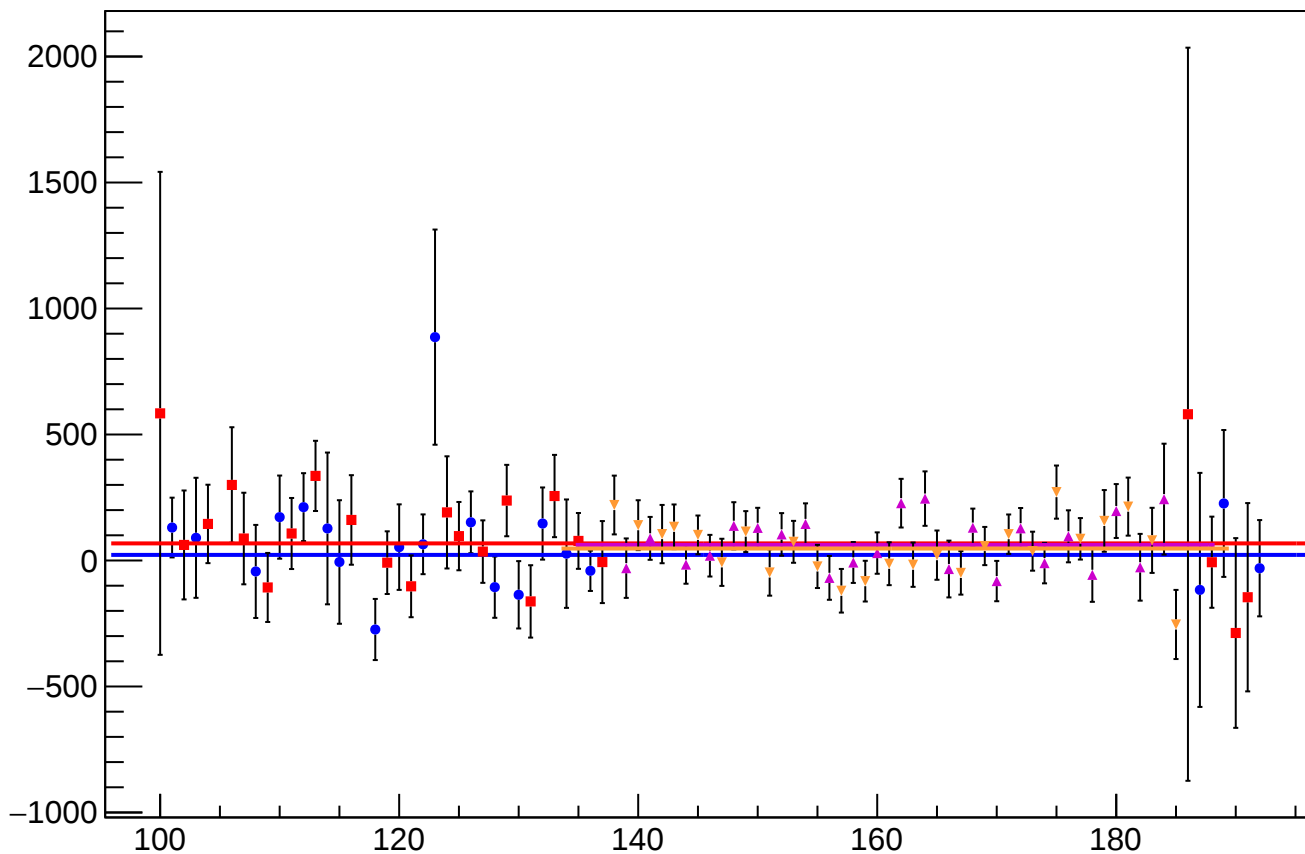
Right: 562.908 $\pm$ 0.102  $\chi^2$ /NDF: 3146612.2/42

In: 380.780 $\pm$ 0.056  $\chi^2$ /NDF: 3967741.2/42

Out: 383.307 $\pm$ 0.054  $\chi^2$ /NDF: 4777168.8/47

All: 382.072 $\pm$ 0.039  $\chi^2$ /NDF: 8745965.1/90

reg\_asym\_sam\_2468\_avg\_mean vs Slug, Sign Corrected



Right In: 22.208+/-33.762  $\chi^2/\text{NDF}$ : 19.9/19

Left Out: 47.426+/-18.253  $\chi^2/\text{NDF}$ : 29.4/24

Right Out: 67.845+/-33.884  $\chi^2/\text{NDF}$ : 17.0/22

Left In: 61.830+/-18.958  $\chi^2/\text{NDF}$ : 24.0/22

Left: 54.355+/-13.149  $\chi^2/\text{NDF}$ : 53.7/47

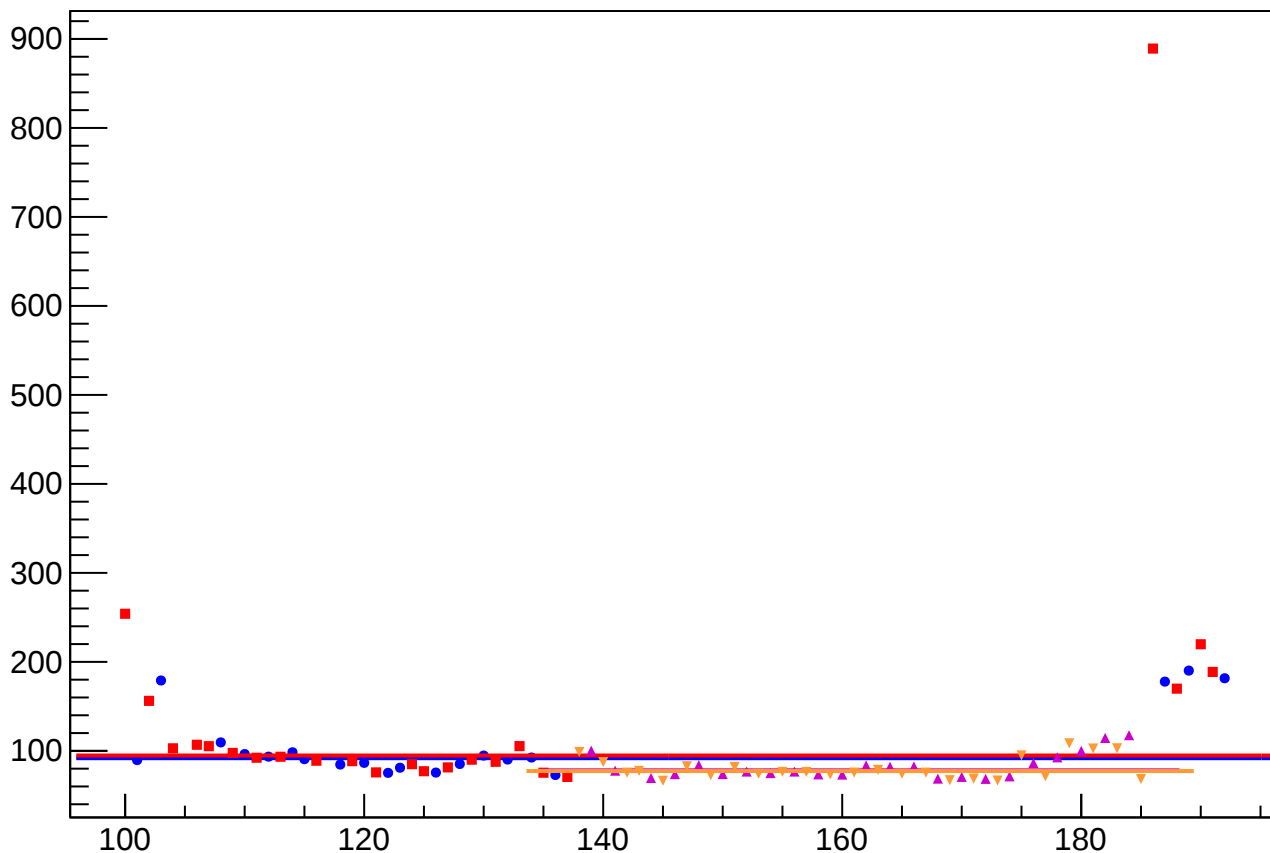
Right: 44.944+/-23.916  $\chi^2/\text{NDF}$ : 37.8/42

In: 52.332+/-16.530  $\chi^2/\text{NDF}$ : 44.9/42

Out: 52.018+/-16.069  $\chi^2/\text{NDF}$ : 46.7/47

All: 52.171+/-11.522  $\chi^2/\text{NDF}$ : 91.6/90

reg\_asym\_sam\_2468\_avg\_rms vs Slug, Sign Corrected



Right In: 91.771 $\pm$ 0.024  $\chi^2$ /NDF: 1231430.7/19

Left Out: 77.316 $\pm$ 0.013  $\chi^2$ /NDF: 635622.3/24

Right Out: 94.793 $\pm$ 0.024  $\chi^2$ /NDF: 1760829.0/22

Left In: 78.139 $\pm$ 0.013  $\chi^2$ /NDF: 582108.1/22

Left: 77.712 $\pm$ 0.009  $\chi^2$ /NDF: 1219684.1/47

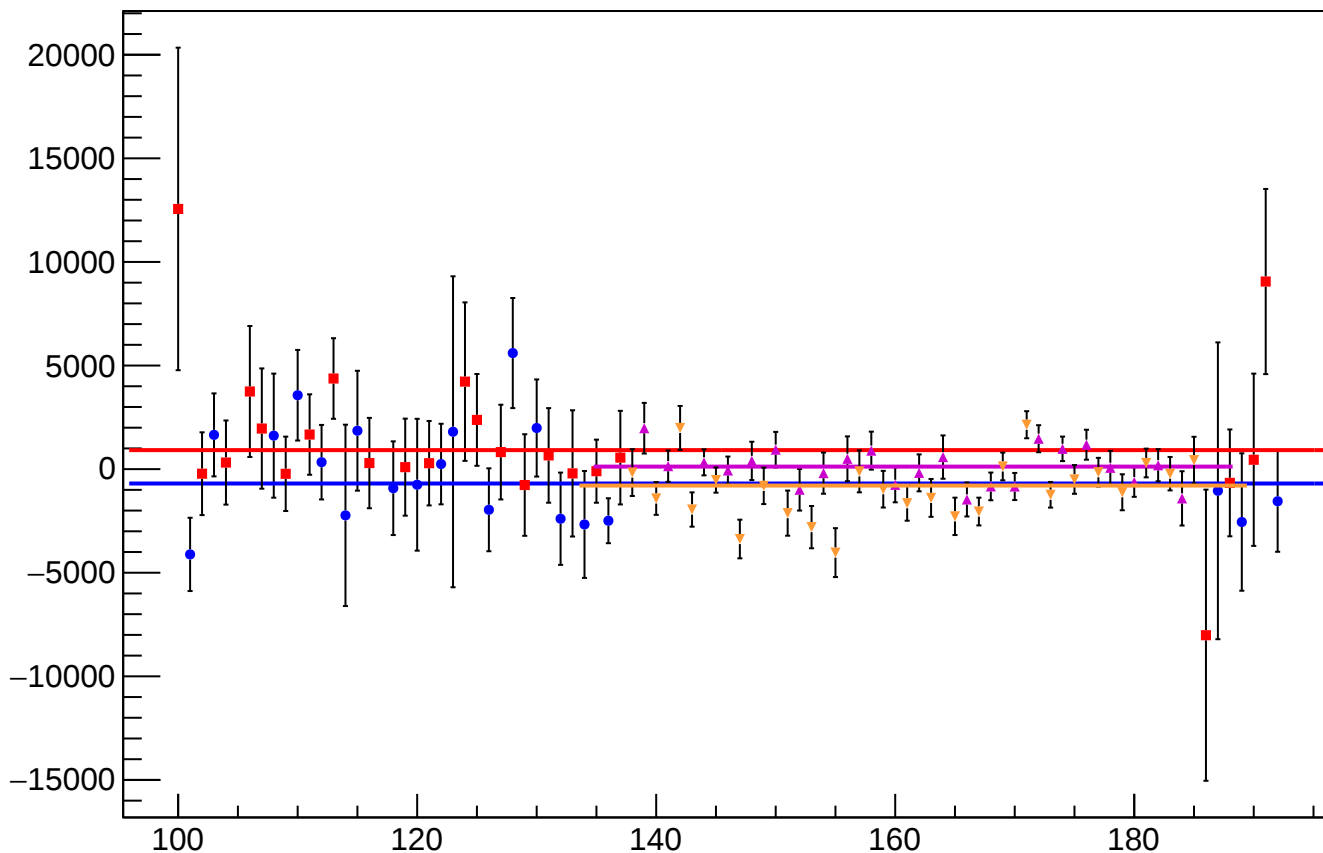
Right: 93.276 $\pm$ 0.017  $\chi^2$ /NDF: 3000240.7/42

In: 81.407 $\pm$ 0.012  $\chi^2$ /NDF: 2061449.7/42

Out: 81.247 $\pm$ 0.011  $\chi^2$ /NDF: 2808830.3/47

All: 81.324 $\pm$ 0.008  $\chi^2$ /NDF: 4870375.9/90

asym\_sam\_2468\_avg\_correction\_mean vs Slug, Sign Corrected



Right In: -693.562+/-499.862  $\chi^2/\text{NDF}$ : 22.8/19

Left Out: -792.776+/-162.659  $\chi^2/\text{NDF}$ : 66.6/24

Right Out: 917.761+/-497.659  $\chi^2/\text{NDF}$ : 15.2/22

Left In: 122.198+/-166.193  $\chi^2/\text{NDF}$ : 25.9/22

Left: -345.122+/-116.247  $\chi^2/\text{NDF}$ : 108.0/47

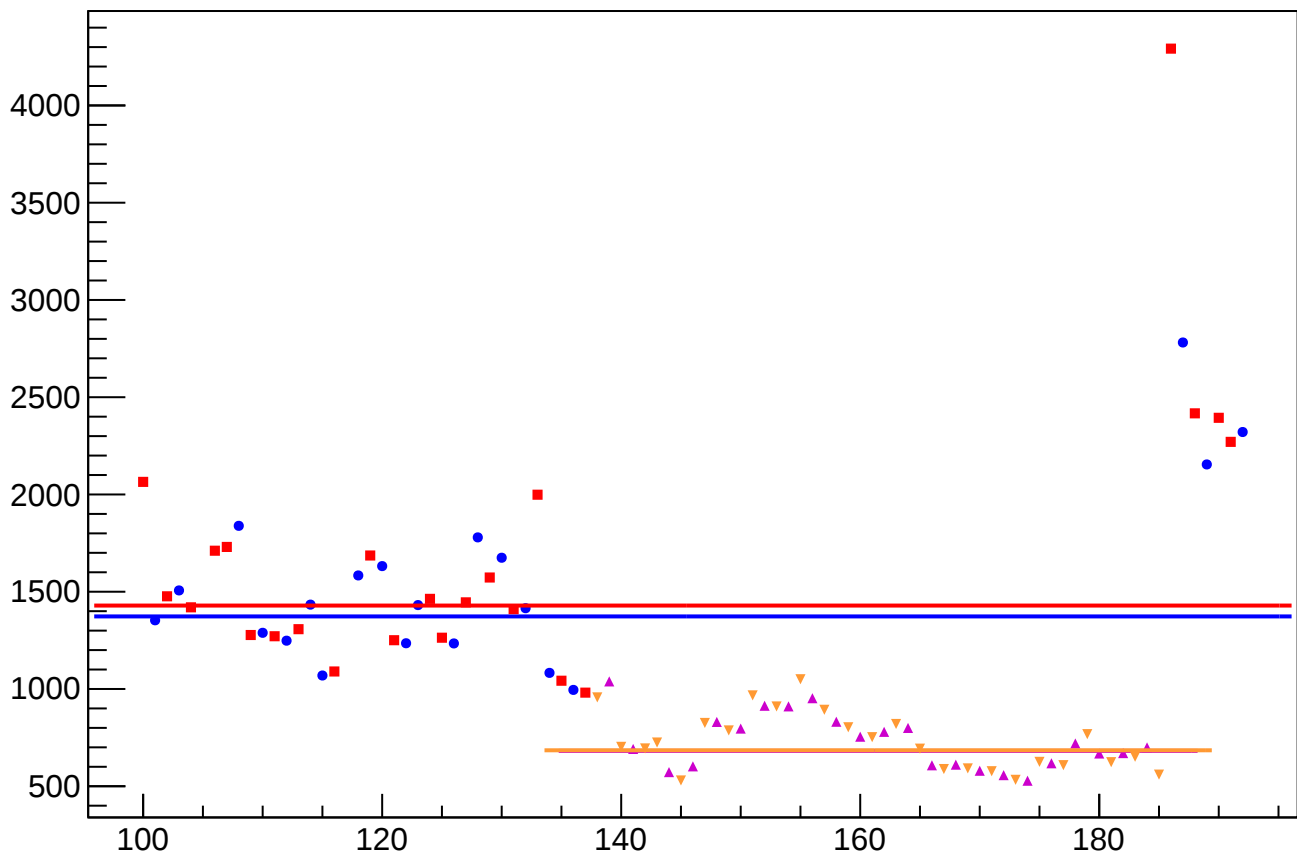
Right: 115.658+/-352.674  $\chi^2/\text{NDF}$ : 43.2/42

In: 40.998+/-157.705  $\chi^2/\text{NDF}$ : 51.1/42

Out: -627.677+/-154.610  $\chi^2/\text{NDF}$ : 92.5/47

All: -299.966+/-110.404  $\chi^2/\text{NDF}$ : 152.7/90

asym\_sam\_2468\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 1373.062 $\pm$ 0.353  $\chi^2$ /NDF: 982271.0/19

Left Out: 684.785 $\pm$ 0.115  $\chi^2$ /NDF:1280146.2/24

Right Out: 1428.888 $\pm$ 0.352  $\chi^2$ /NDF: 1275671.9/22

Left In: 681.712 $\pm$ 0.118  $\chi^2$ /NDF:1119637.0/22

Left: 683.282 $\pm$ 0.082  $\chi^2$ /NDF: 2400132.5/47

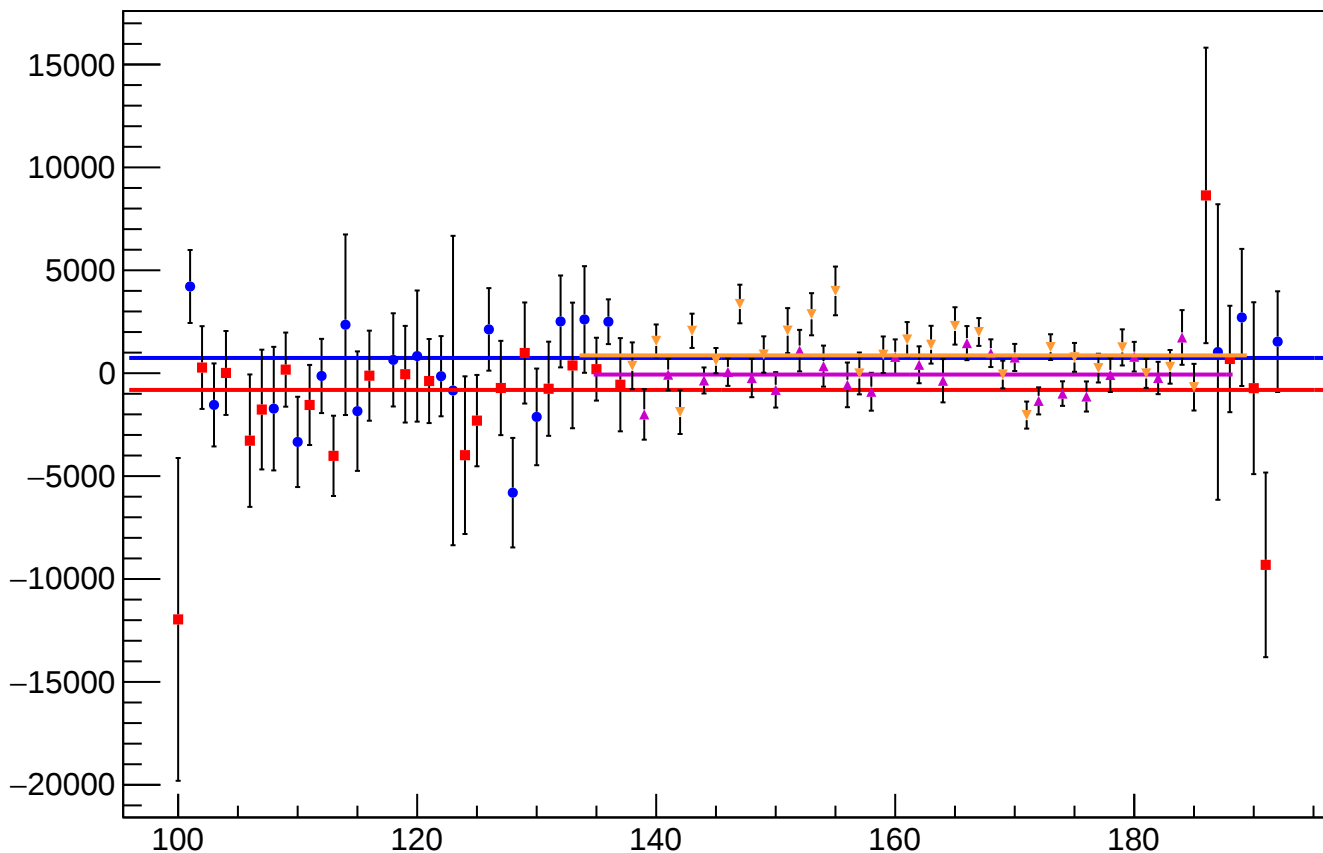
Right: 1401.099 $\pm$ 0.249  $\chi^2$ /NDF: 2270470.9/42

In: 750.528 $\pm$ 0.112  $\chi^2$ /NDF:5546923.3/42

Out: 756.605 $\pm$ 0.109  $\chi^2$ /NDF:6595549.4/47

All: 753.627 $\pm$ 0.078  $\chi^2$ /NDF: 12143986.8/90

asym\_sam\_2468\_avg\_mean vs Slug, Sign Corrected



Right In: 740.976 $\pm$ 501.304  $\chi^2$ /NDF: 22.9/19

Left Out: 865.597 $\pm$ 163.885  $\chi^2$ /NDF:62.8/24

Right Out: -812.770 $\pm$ 499.355  $\chi^2$ /NDF: 14.5/22

Left In: -65.924 $\pm$ 167.485  $\chi^2$ /NDF:26.4/22

Left: 409.953 $\pm$ 117.136  $\chi^2$ /NDF: 105.1/47

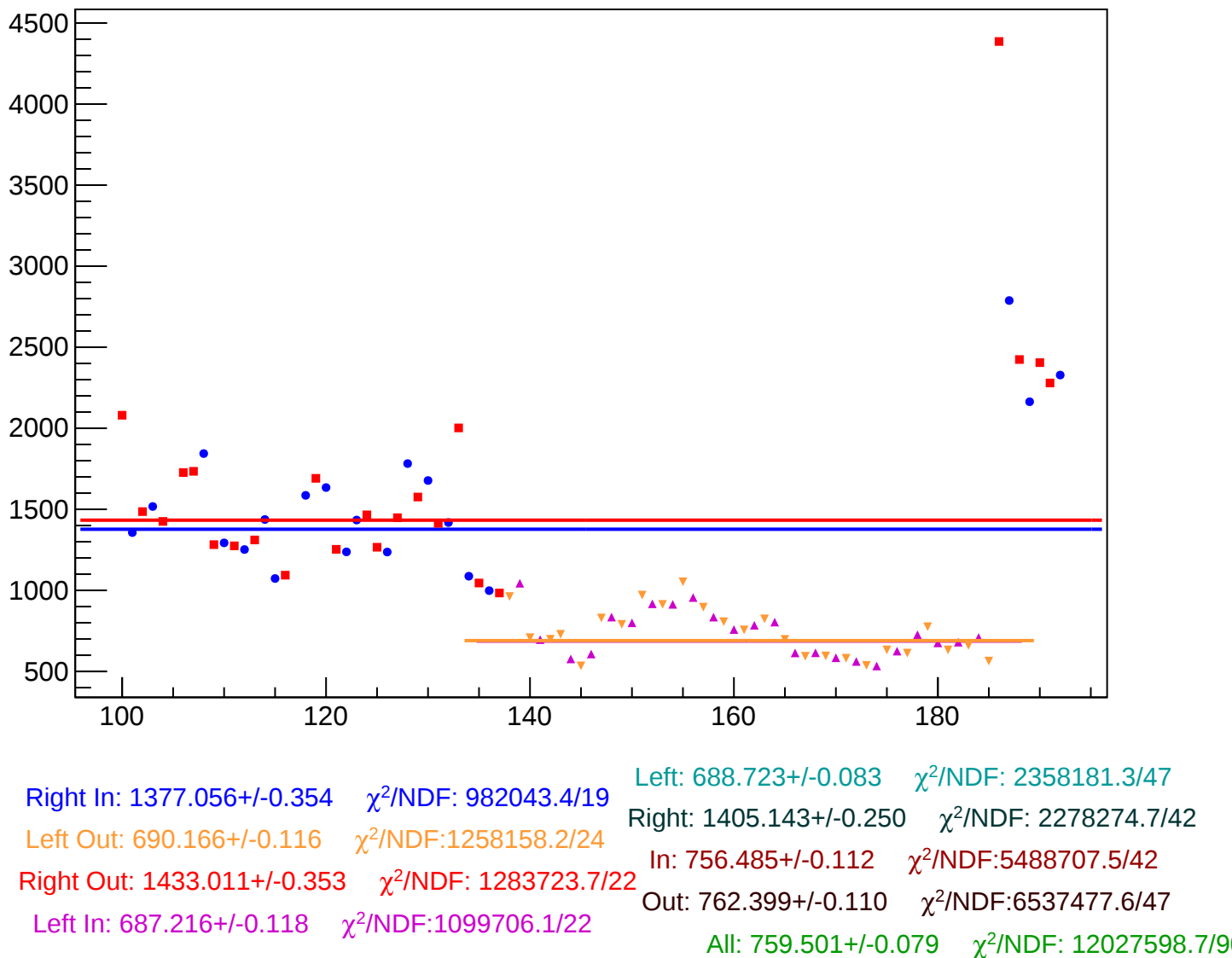
Right: -38.924 $\pm$ 353.784  $\chi^2$ /NDF: 42.2/42

In: 15.099 $\pm$ 158.853  $\chi^2$ /NDF:51.7/42

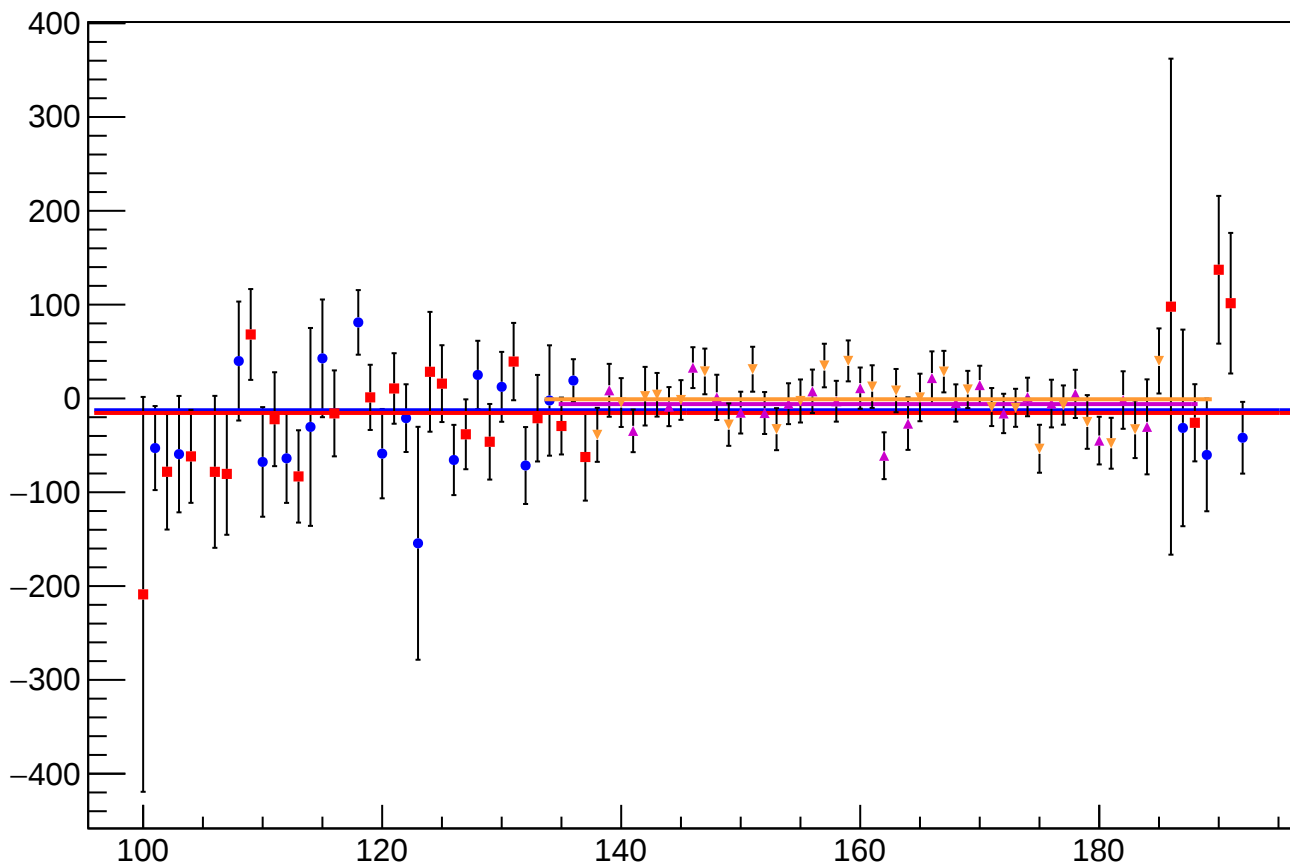
Out: 702.396 $\pm$ 155.714  $\chi^2$ /NDF:87.5/47

All: 365.607 $\pm$ 111.200  $\chi^2$ /NDF: 148.8/90

asym\_sam\_2468\_avg\_rms vs Slug, Sign Corrected



reg\_asym\_sam\_1357\_2468\_dd\_mean vs Slug, Sign Corrected



Right In:  $-12.587 \pm 9.874$   $\chi^2/\text{NDF}$ : 23.4/19

Left Out:  $-0.861 \pm 4.760$   $\chi^2/\text{NDF}$ : 27.9/24

Right Out:  $-15.467 \pm 9.966$   $\chi^2/\text{NDF}$ : 21.4/22

Left In:  $-6.042 \pm 4.925$   $\chi^2/\text{NDF}$ : 16.9/22

Left:  $-3.363 \pm 3.423$   $\chi^2/\text{NDF}$ : 45.4/47

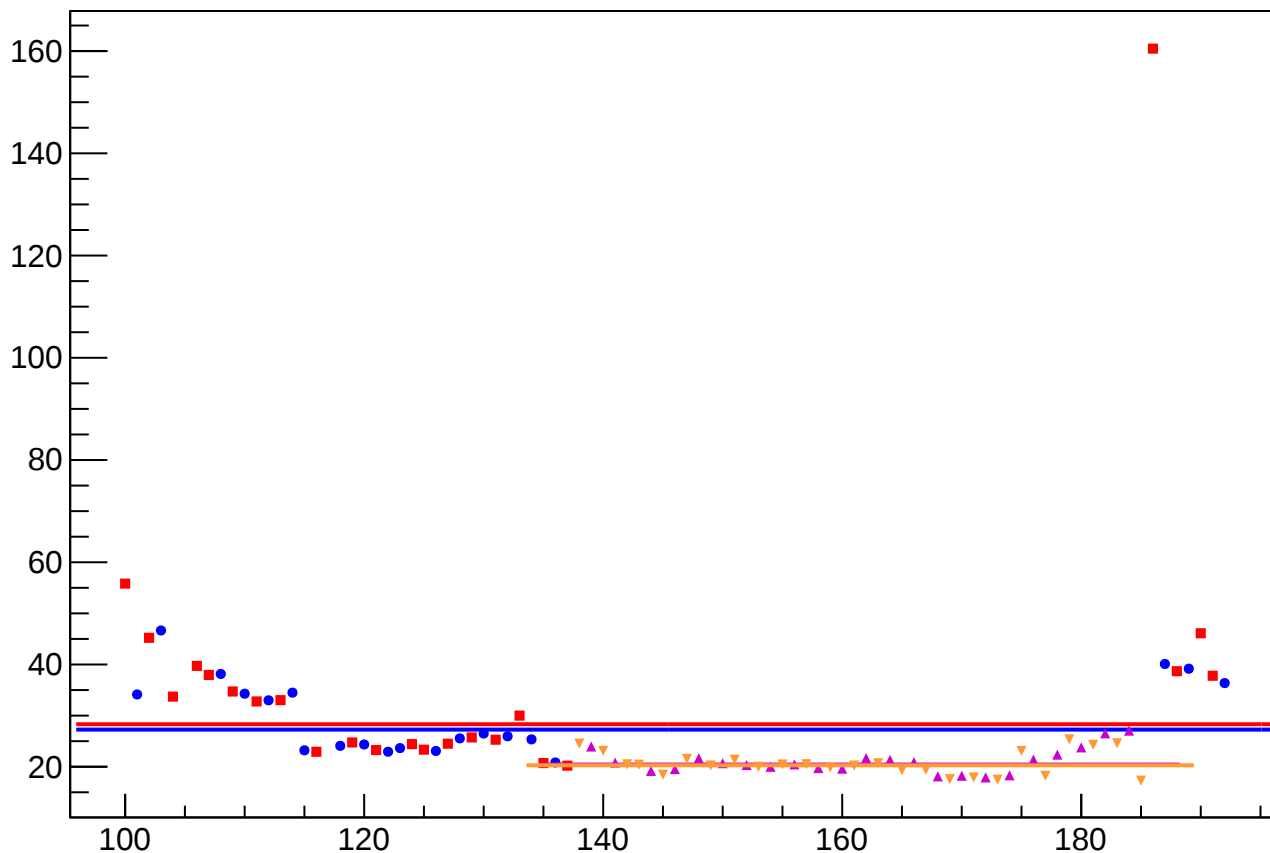
Right:  $-14.014 \pm 7.014$   $\chi^2/\text{NDF}$ : 44.9/42

In:  $-7.346 \pm 4.407$   $\chi^2/\text{NDF}$ : 40.7/42

Out:  $-3.574 \pm 4.295$   $\chi^2/\text{NDF}$ : 51.1/47

All:  $-5.412 \pm 3.076$   $\chi^2/\text{NDF}$ : 92.2/90

reg\_asym\_sam\_1357\_2468\_dd\_rms vs Slug, Sign Corrected



Right In: 27.262 $\pm$ 0.007  $\chi^2$ /NDF: 848455.8/19

Left Out: 20.279 $\pm$ 0.003  $\chi^2$ /NDF: 407056.4/24

Right Out: 28.314 $\pm$ 0.007  $\chi^2$ /NDF: 1474025.8/22

Left In: 20.424 $\pm$ 0.003  $\chi^2$ /NDF: 323427.4/22

Left: 20.349 $\pm$ 0.002  $\chi^2$ /NDF: 731373.7/47

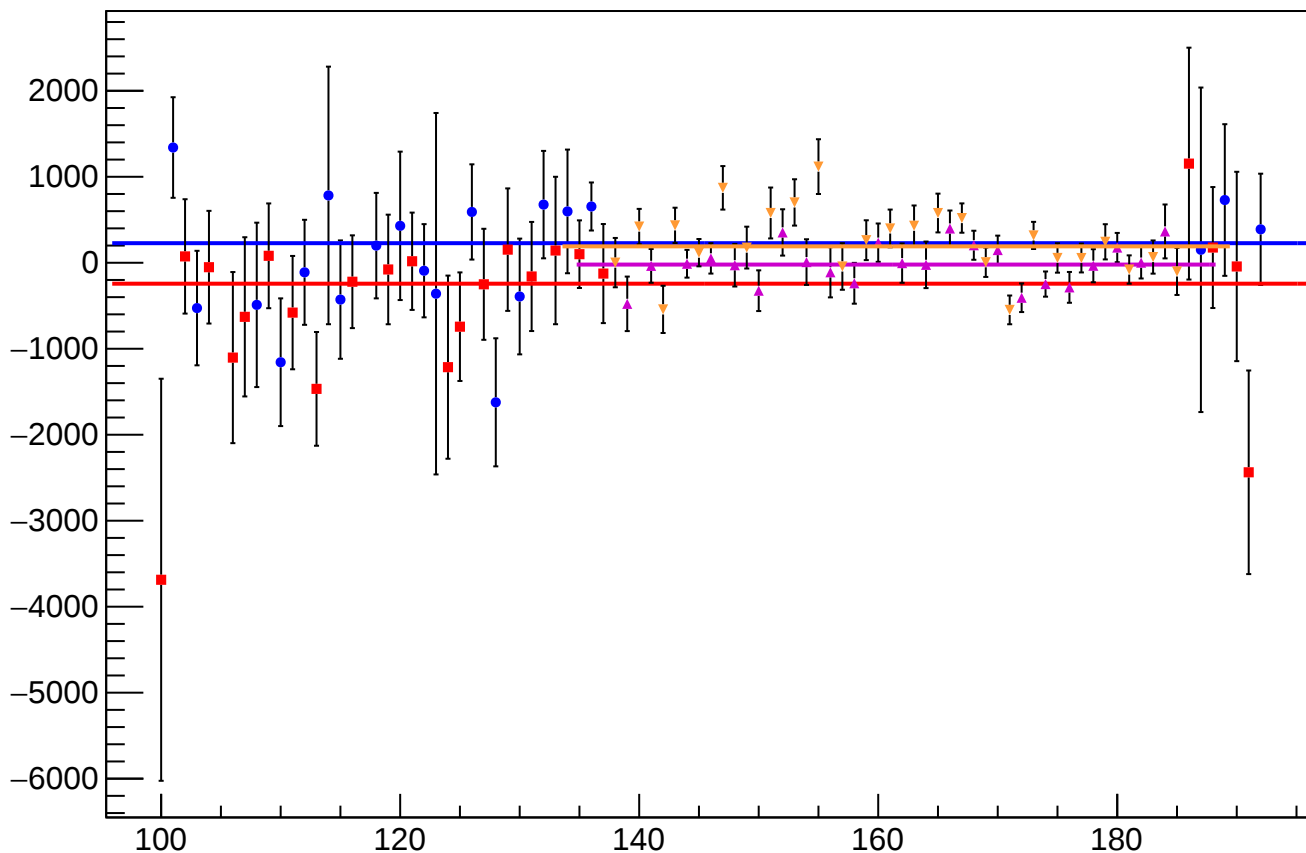
Right: 27.783 $\pm$ 0.005  $\chi^2$ /NDF: 2333728.5/42

In: 21.786 $\pm$ 0.003  $\chi^2$ /NDF: 1940042.4/42

Out: 21.772 $\pm$ 0.003  $\chi^2$ /NDF: 2939462.8/47

All: 21.779 $\pm$ 0.002  $\chi^2$ /NDF: 4879516.4/90

asym\_sam\_1357\_2468\_dd\_correction\_mean vs Slug, Sign Corrected



Right In:  $227.762 \pm 142.150$   $\chi^2/\text{NDF}$ : 21.7/19

Left Out:  $190.867 \pm 41.314$   $\chi^2/\text{NDF}$ : 67.9/24

Right Out:  $-243.410 \pm 143.678$   $\chi^2/\text{NDF}$ : 15.3/22

Left In:  $-20.998 \pm 42.291$   $\chi^2/\text{NDF}$ : 27.7/22

Left:  $87.410 \pm 29.553$   $\chi^2/\text{NDF}$ : 108.4/47

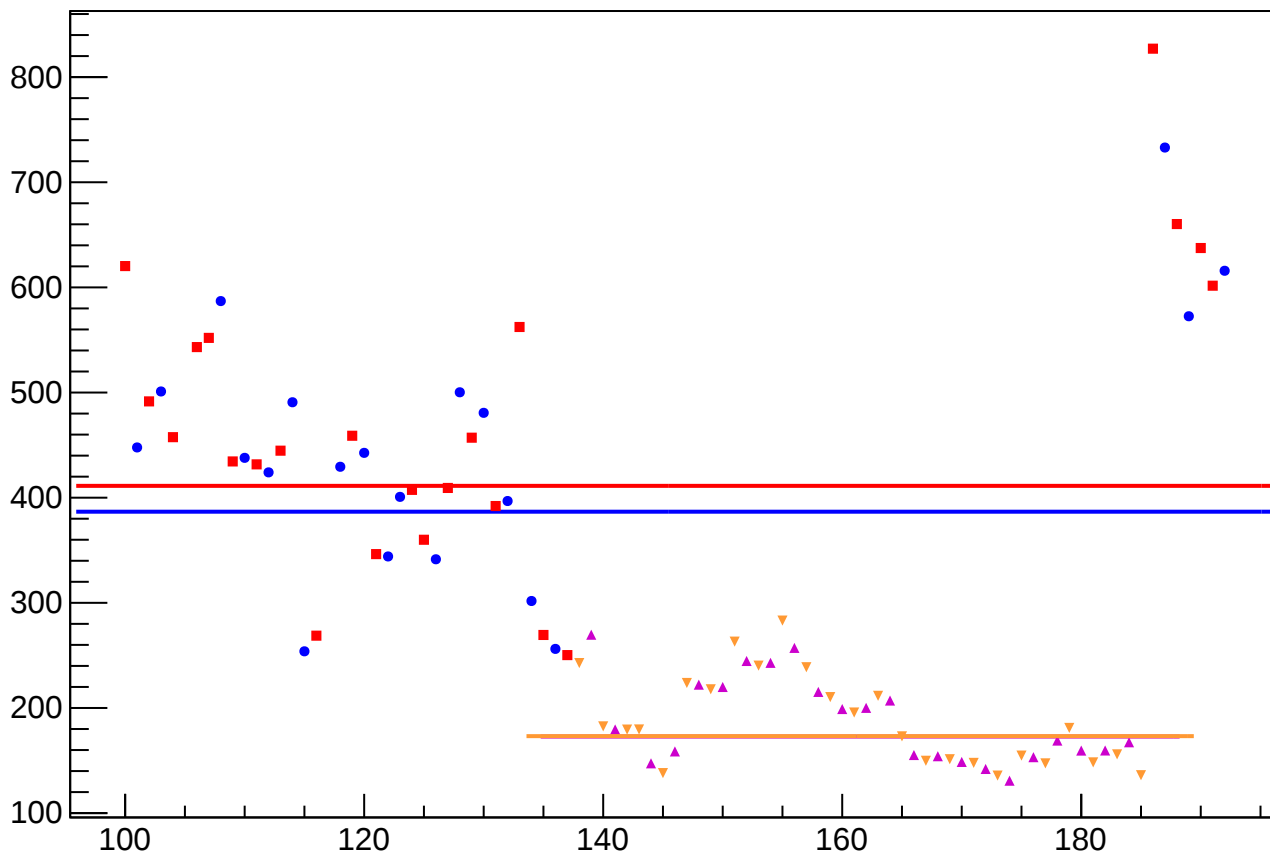
Right:  $-5.305 \pm 101.051$   $\chi^2/\text{NDF}$ : 42.5/42

In:  $-0.771 \pm 40.535$   $\chi^2/\text{NDF}$ : 52.3/42

Out:  $157.703 \pm 39.705$   $\chi^2/\text{NDF}$ : 91.6/47

All:  $80.105 \pm 28.365$   $\chi^2/\text{NDF}$ : 151.7/90

asym\_sam\_1357\_2468\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 386.677 $\pm$ 0.101  $\chi^2$ /NDF: 1270920.1/19

Left Out: 173.210 $\pm$ 0.029  $\chi^2$ /NDF: 1561250.6/24

Right Out: 411.257 $\pm$ 0.102  $\chi^2$ /NDF: 1401850.1/22

Left In: 172.828 $\pm$ 0.030  $\chi^2$ /NDF: 1372131.7/22

Left: 173.023 $\pm$ 0.021  $\chi^2$ /NDF: 2933465.9/47

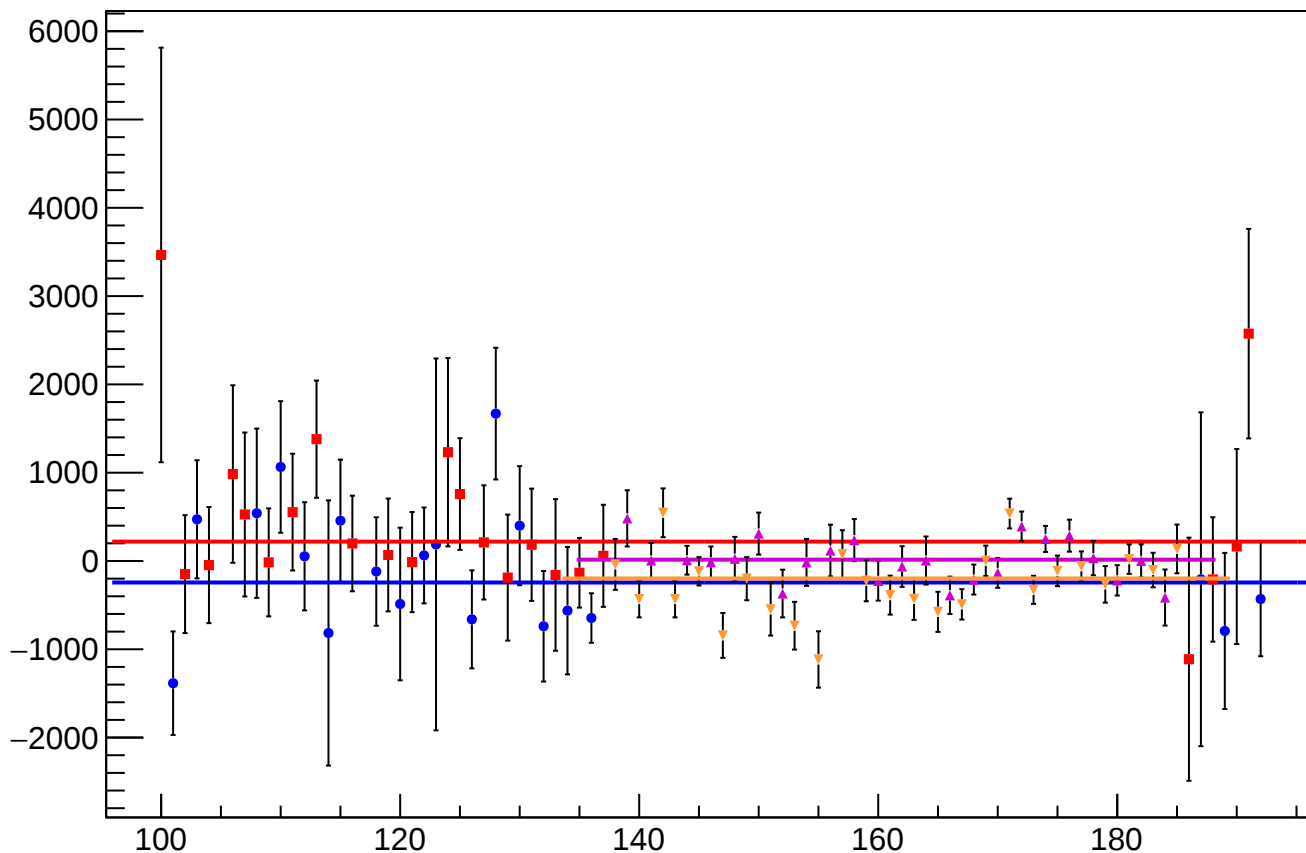
Right: 398.835 $\pm$ 0.071  $\chi^2$ /NDF: 2702349.4/42

In: 190.217 $\pm$ 0.029  $\chi^2$ /NDF: 6801355.7/42

Out: 191.389 $\pm$ 0.028  $\chi^2$ /NDF: 8033824.4/47

All: 190.815 $\pm$ 0.020  $\chi^2$ /NDF: 14836033.9/90

asym\_sam\_1357\_2468\_dd\_mean vs Slug, Sign Corrected



Right In:  $-243.609 \pm 142.555$   $\chi^2/\text{NDF}: 22.0/19$

Left Out:  $-197.918 \pm 41.638$   $\chi^2/\text{NDF}: 64.3/24$

Right Out:  $219.342 \pm 144.130$   $\chi^2/\text{NDF}: 15.0/22$

Left In:  $14.616 \pm 42.629$   $\chi^2/\text{NDF}: 27.7/22$

Left:  $-94.151 \pm 29.787$   $\chi^2/\text{NDF}: 104.7/47$

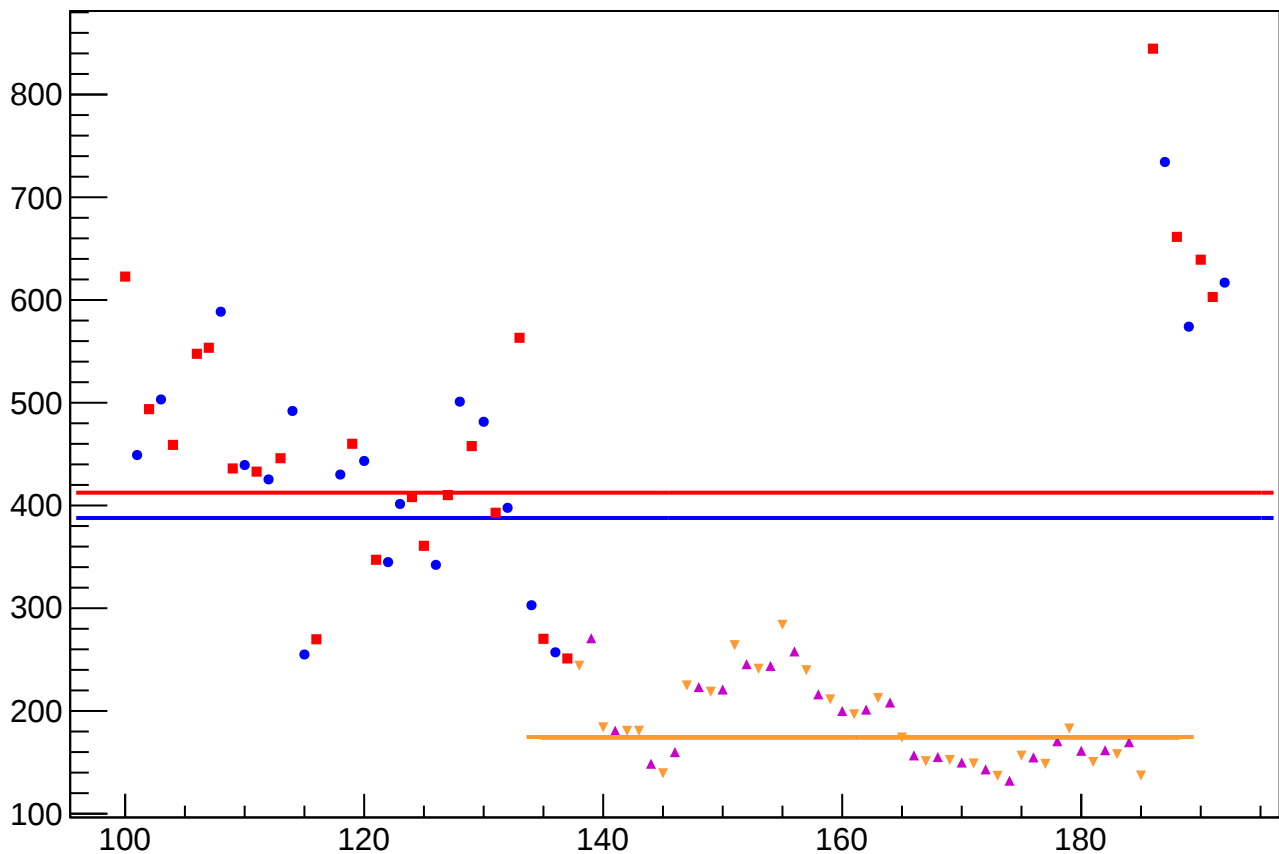
Right:  $-14.676 \pm 101.354$   $\chi^2/\text{NDF}: 42.2/42$

In:  $-6.580 \pm 40.842$   $\chi^2/\text{NDF}: 52.7/42$

Out:  $-165.776 \pm 40.002$   $\chi^2/\text{NDF}: 87.0/47$

All:  $-87.832 \pm 28.578$   $\chi^2/\text{NDF}: 147.5/90$

asym\_sam\_1357\_2468\_dd\_rms vs Slug, Sign Corrected



Right In:  $387.839 \pm 0.101$   $\chi^2/\text{NDF}: 1266874.5/19$

Left Out:  $174.648 \pm 0.029$   $\chi^2/\text{NDF}: 1531999.5/24$

Right Out:  $412.451 \pm 0.102$   $\chi^2/\text{NDF}: 1407806.6/22$

Left In:  $174.288 \pm 0.030$   $\chi^2/\text{NDF}: 1344779.5/22$

Left:  $174.472 \pm 0.021$   $\chi^2/\text{NDF}: 2876851.9/47$

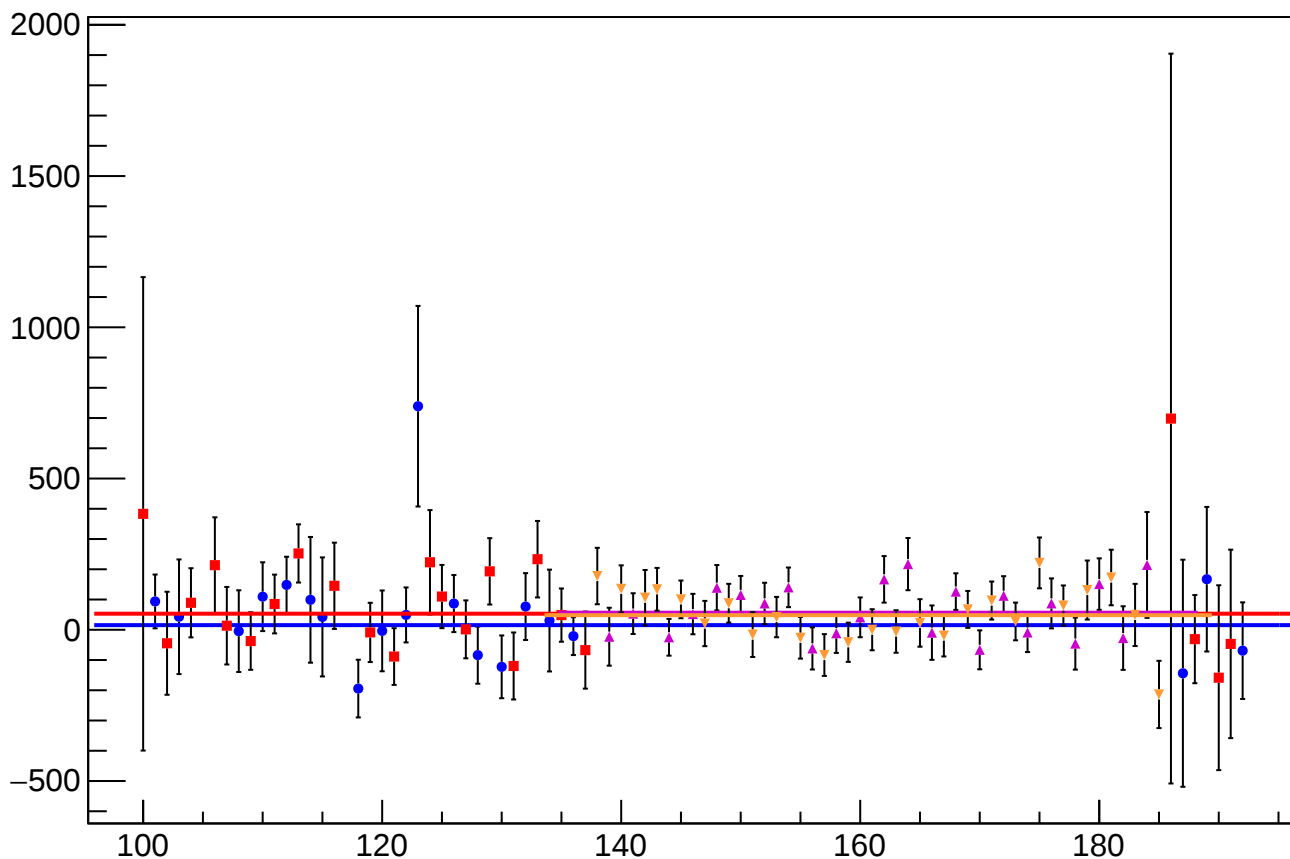
Right:  $400.010 \pm 0.072$   $\chi^2/\text{NDF}: 2704159.4/42$

In:  $191.817 \pm 0.029$   $\chi^2/\text{NDF}: 6731414.0/42$

Out:  $192.966 \pm 0.028$   $\chi^2/\text{NDF}: 7964905.5/47$

All:  $192.404 \pm 0.020$   $\chi^2/\text{NDF}: 14697127.0/90$

reg\_asym\_sam\_12345678\_avg\_mean vs Slug, Sign Corrected



Right In: 15.323+/-25.810  $\chi^2/\text{NDF}$ : 18.4/19

Left Out: 48.233+/-14.616  $\chi^2/\text{NDF}$ : 29.3/24

Right Out: 53.164+/-25.599  $\chi^2/\text{NDF}$ : 19.9/22

Left In: 56.403+/-15.182  $\chi^2/\text{NDF}$ : 27.5/22

Left: 52.163+/-10.529  $\chi^2/\text{NDF}$ : 56.9/47

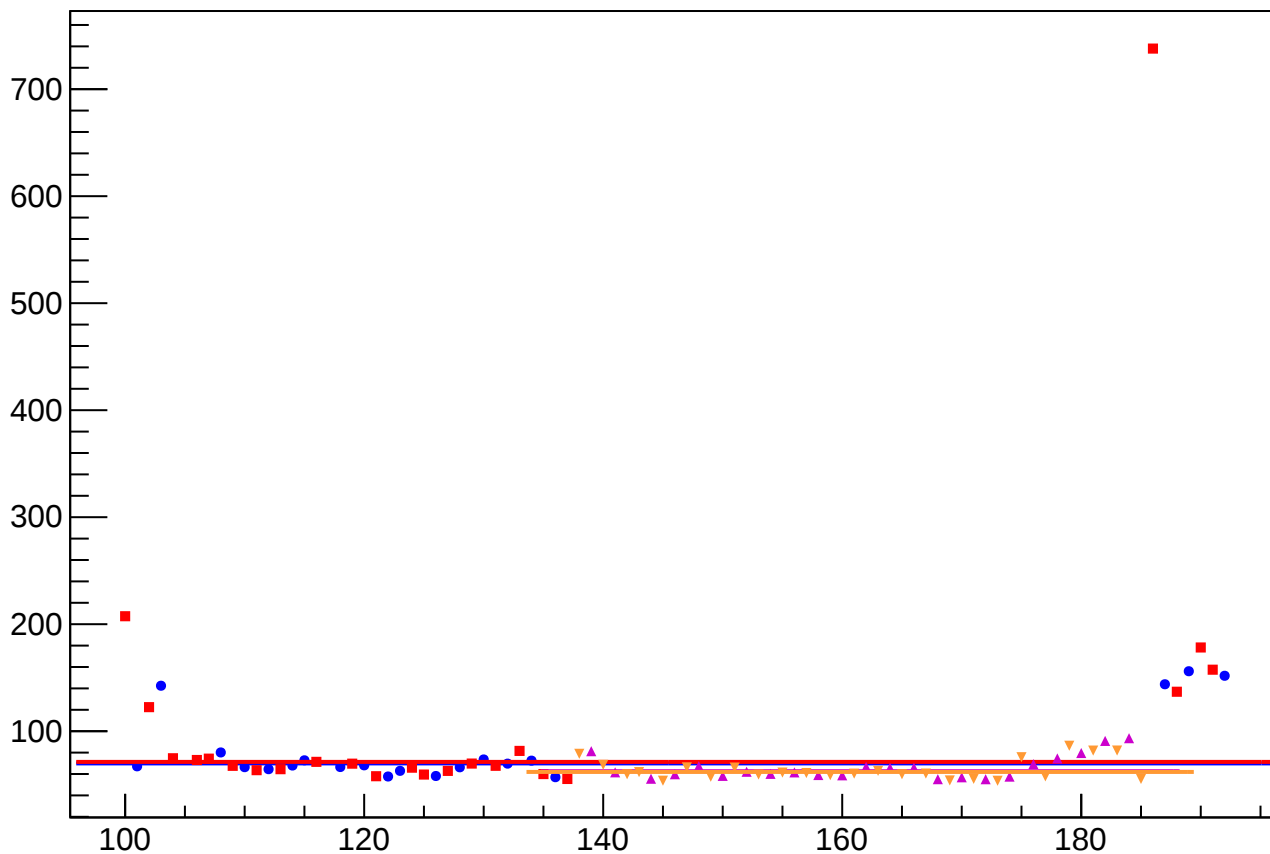
Right: 34.399+/-18.175  $\chi^2/\text{NDF}$ : 39.4/42

In: 45.843+/-13.086  $\chi^2/\text{NDF}$ : 47.8/42

Out: 49.445+/-12.693  $\chi^2/\text{NDF}$ : 49.2/47

All: 47.699+/-9.111  $\chi^2/\text{NDF}$ : 97.0/90

reg\_asym\_sam\_12345678\_avg\_rms vs Slug, Sign Corrected



Right In: 69.901 $\pm$ 0.018  $\chi^2$ /NDF: 1341424.5/19

Left Out: 61.946 $\pm$ 0.010  $\chi^2$ /NDF: 604989.2/24

Right Out: 71.320 $\pm$ 0.018  $\chi^2$ /NDF: 1848219.5/22

Left In: 62.607 $\pm$ 0.011  $\chi^2$ /NDF: 575516.1/22

Left: 62.264 $\pm$ 0.007  $\chi^2$ /NDF: 1182470.7/47

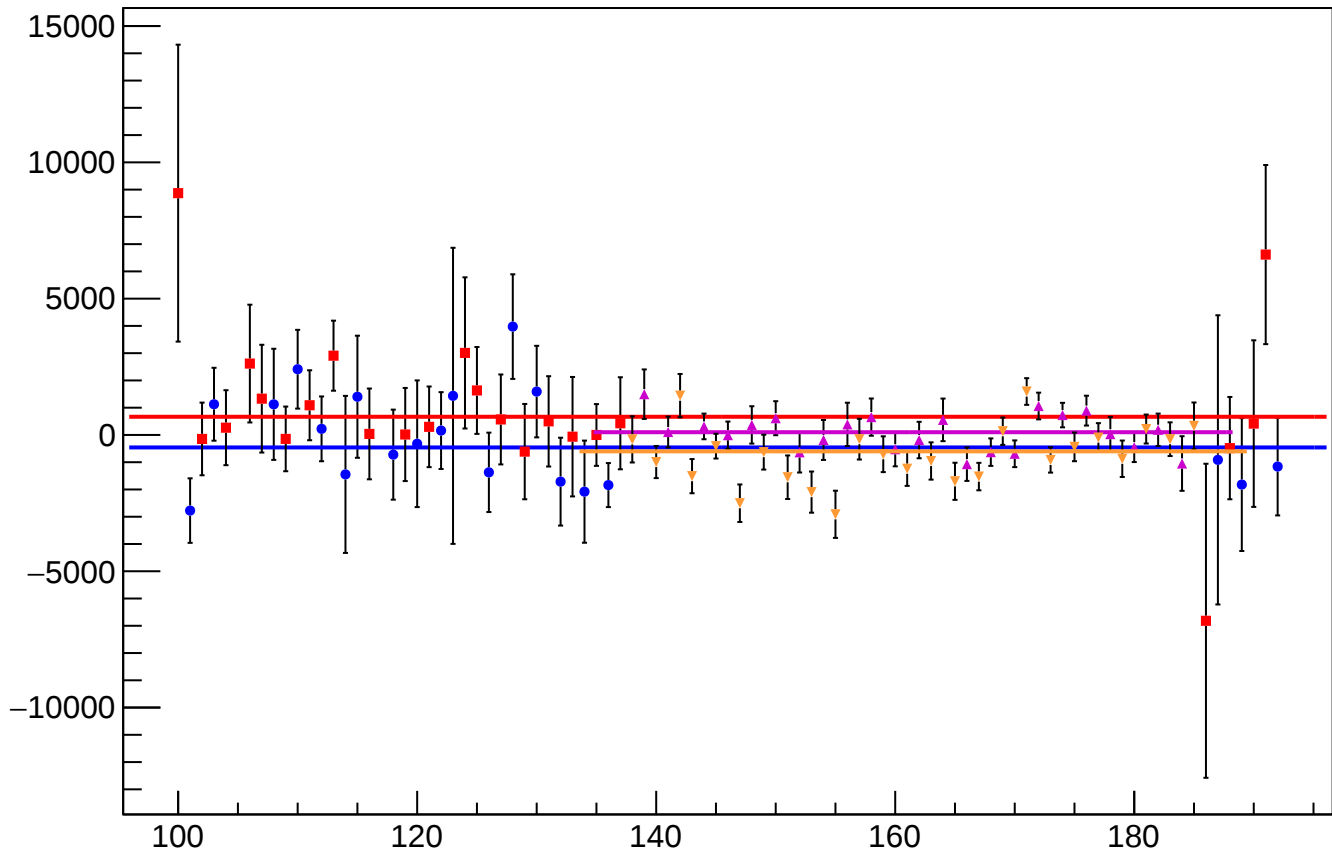
Right: 70.617 $\pm$ 0.013  $\chi^2$ /NDF: 3192693.4/42

In: 64.482 $\pm$ 0.009  $\chi^2$ /NDF: 2035607.6/42

Out: 64.251 $\pm$ 0.009  $\chi^2$ /NDF: 2655465.3/47

All: 64.363 $\pm$ 0.006  $\chi^2$ /NDF: 4691394.3/90

asym\_sam\_12345678\_avg\_correction\_mean vs Slug, Sign Corrected



Right In: -458.245+/-355.164  $\chi^2/\text{NDF}$ : 23.2/19

Left Out: -601.486+/-122.119  $\chi^2/\text{NDF}$ : 65.4/24

Right Out: 666.827+/-351.023  $\chi^2/\text{NDF}$ : 15.1/22

Left In: 100.548+/-124.725  $\chi^2/\text{NDF}$ : 25.5/22

Left: -257.880+/-87.258  $\chi^2/\text{NDF}$ : 107.0/47

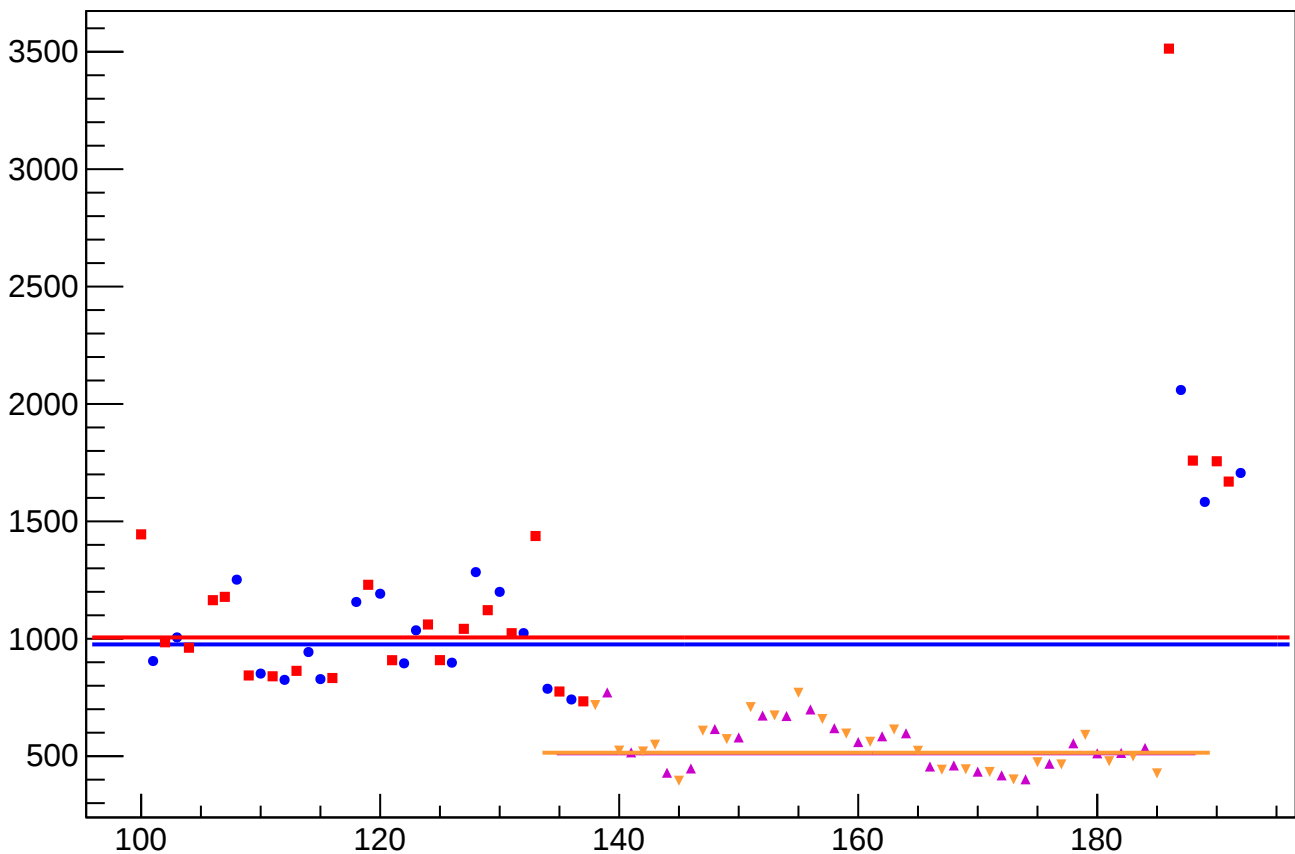
Right: 110.887+/-249.662  $\chi^2/\text{NDF}$ : 43.4/42

In: 39.201+/-117.679  $\chi^2/\text{NDF}$ : 50.9/42

Out: -464.555+/-115.338  $\chi^2/\text{NDF}$ : 92.1/47

All: -217.738+/-82.372  $\chi^2/\text{NDF}$ : 152.4/90

asym\_sam\_12345678\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 975.973+/-0.251  $\chi^2/\text{NDF}$ : 971668.0/19

Left Out: 514.758+/-0.086  $\chi^2/\text{NDF}$ :1194945.9/24

Right Out: 1005.713+/-0.248  $\chi^2/\text{NDF}$ : 1335273.1/22

Left In: 512.199+/-0.088  $\chi^2/\text{NDF}$ :1041302.8/22

Left: 513.505+/-0.062  $\chi^2/\text{NDF}$ : 2236678.4/47

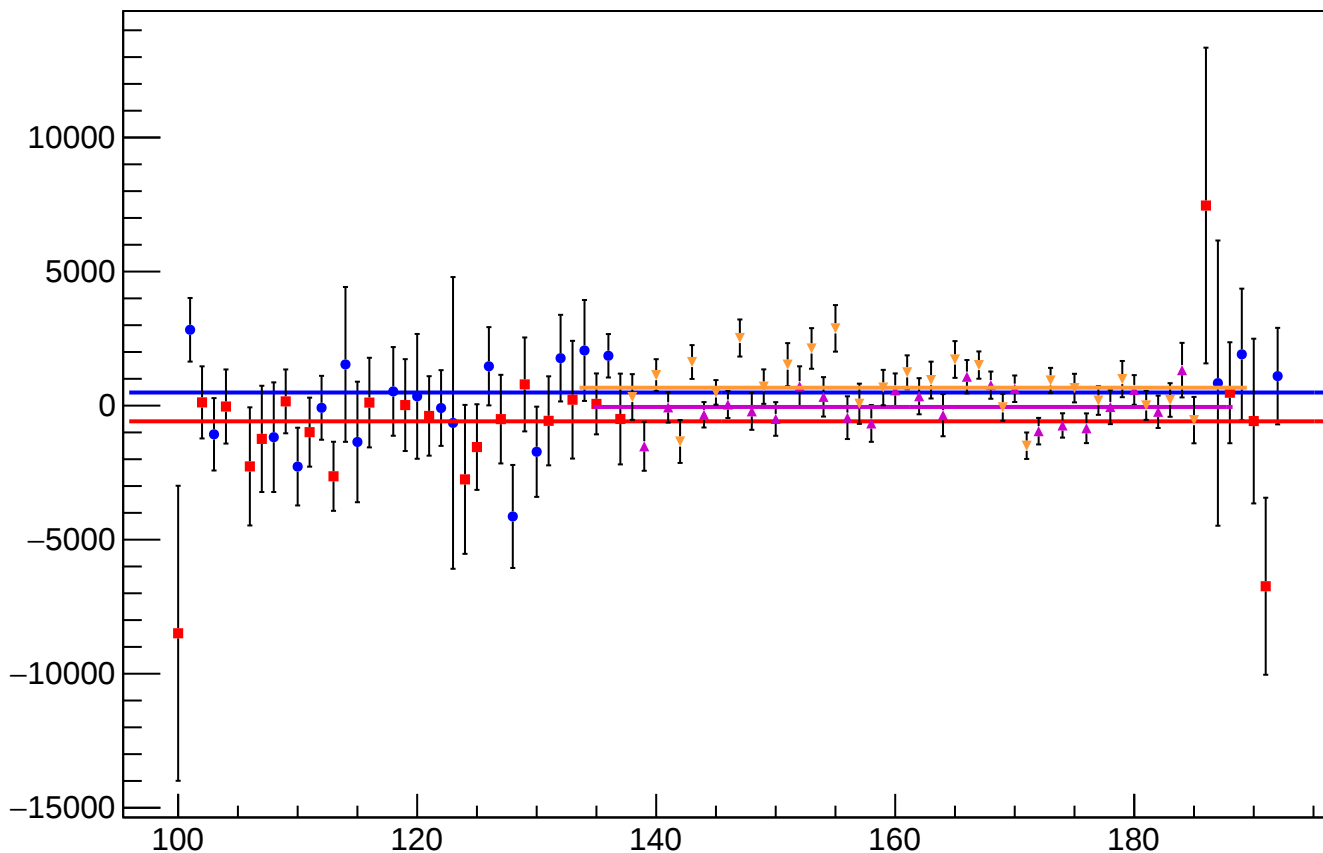
Right: 991.017+/-0.177  $\chi^2/\text{NDF}$ : 2314035.4/42

In: 563.114+/-0.083  $\chi^2/\text{NDF}$ :5048814.0/42

Out: 567.763+/-0.082  $\chi^2/\text{NDF}$ :6020219.0/47

All: 565.485+/-0.058  $\chi^2/\text{NDF}$ : 11070624.5/90

asym\_sam\_12345678\_avg\_mean vs Slug, Sign Corrected



Right In: 488.918+/-356.397  $\chi^2/\text{NDF}$ : 23.4/19

Left Out: 667.625+/-123.146  $\chi^2/\text{NDF}$ : 61.5/24

Right Out: -586.191+/-352.449  $\chi^2/\text{NDF}$ : 14.2/22

Left In: -50.079+/-125.805  $\chi^2/\text{NDF}$ : 26.1/22

Left: 316.439+/-88.002  $\chi^2/\text{NDF}$ : 104.2/47

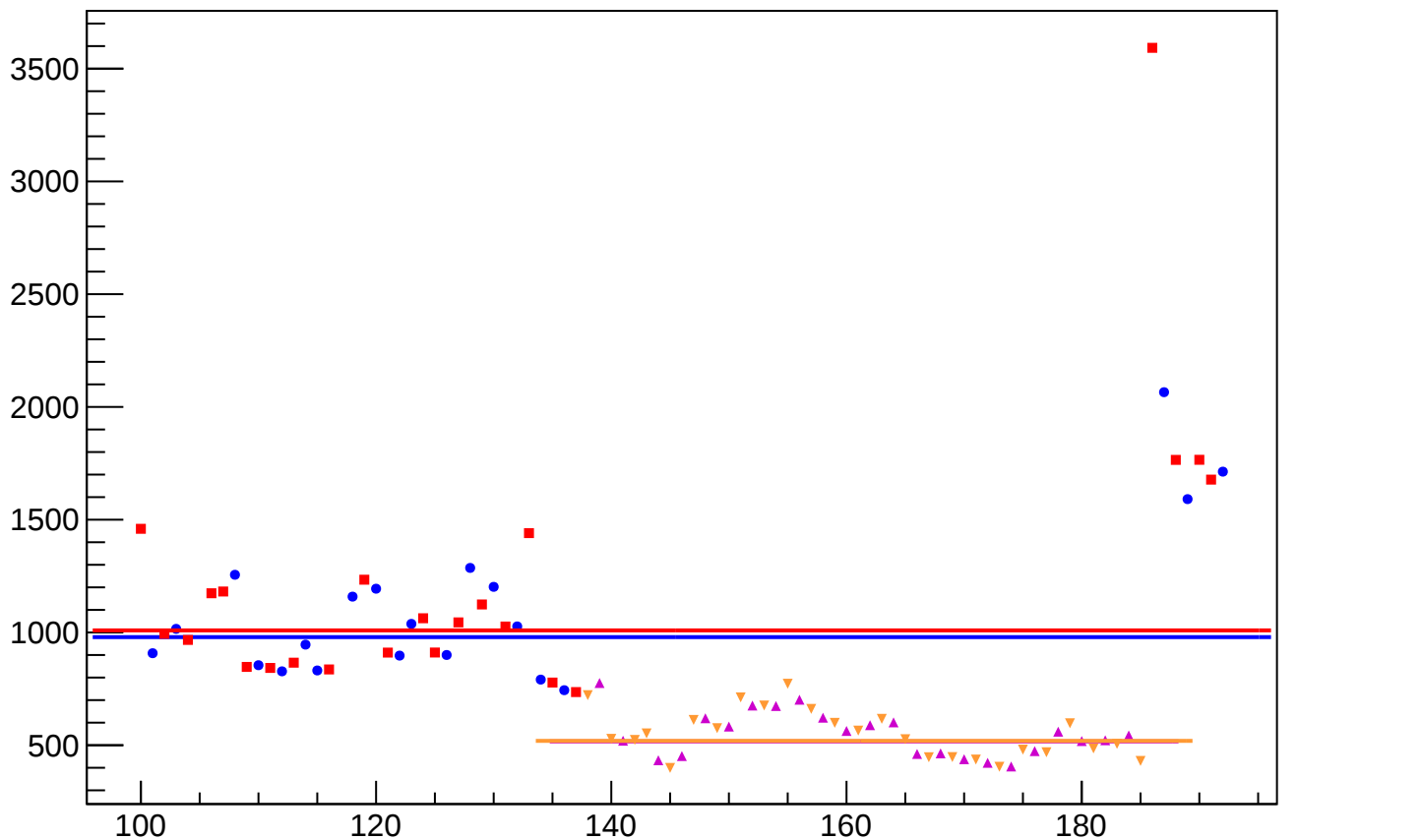
Right: -54.623+/-250.603  $\chi^2/\text{NDF}$ : 42.2/42

In: 9.641+/-118.631  $\chi^2/\text{NDF}$ : 51.5/42

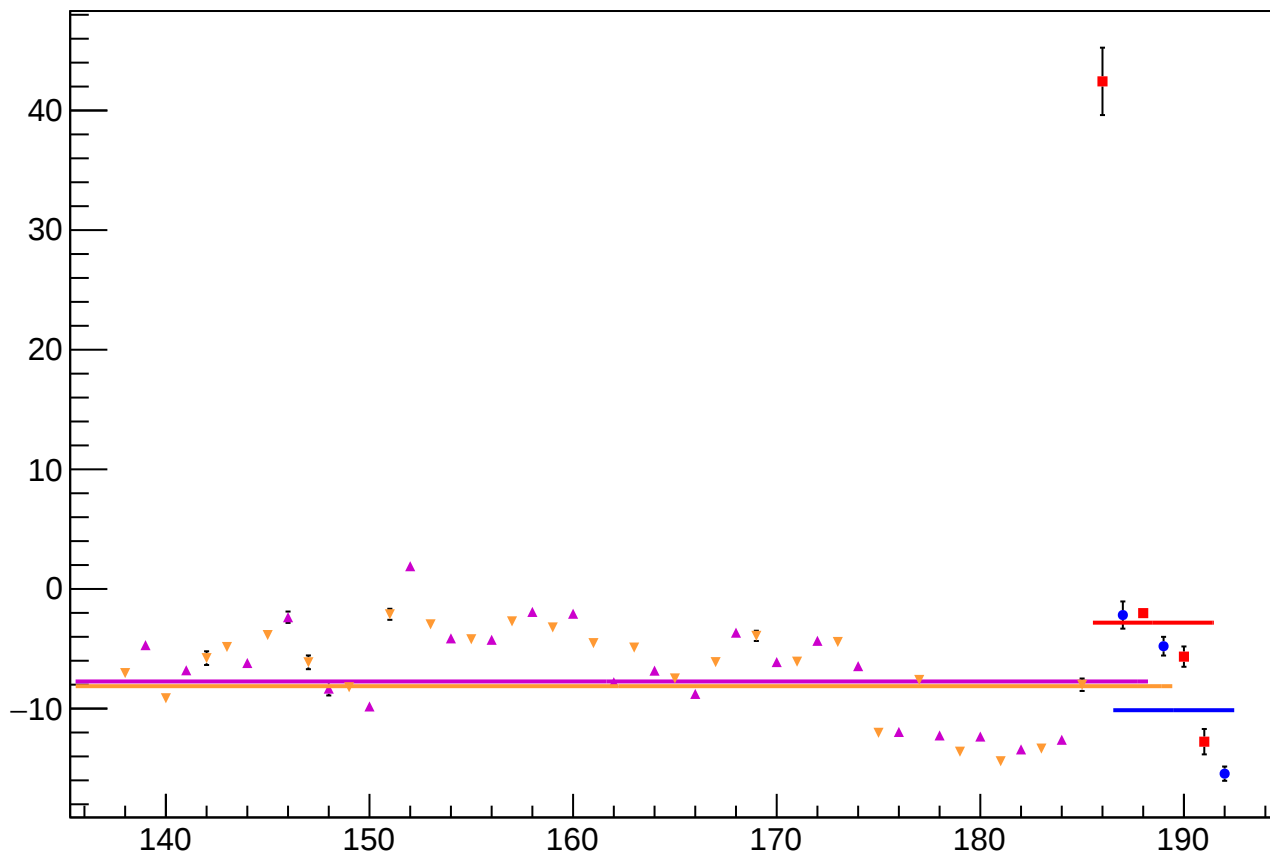
Out: 531.212+/-116.254  $\chi^2/\text{NDF}$ : 87.0/47

All: 275.704+/-83.031  $\chi^2/\text{NDF}$ : 148.4/90

asym\_sam\_12345678\_avg\_rms vs Slug, Sign Corrected



reg\_asym\_sam1\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-10.135 \pm 0.438$   $\chi^2/\text{NDF}: 174.9/2$

Left Out:  $-8.127 \pm 0.067$   $\chi^2/\text{NDF}: 3635.5/24$

Right Out:  $-2.817 \pm 0.298$   $\chi^2/\text{NDF}: 362.6/3$

Left In:  $-7.732 \pm 0.069$   $\chi^2/\text{NDF}: 3719.0/22$

Left:  $-7.934 \pm 0.048$   $\chi^2/\text{NDF}: 7371.4/47$

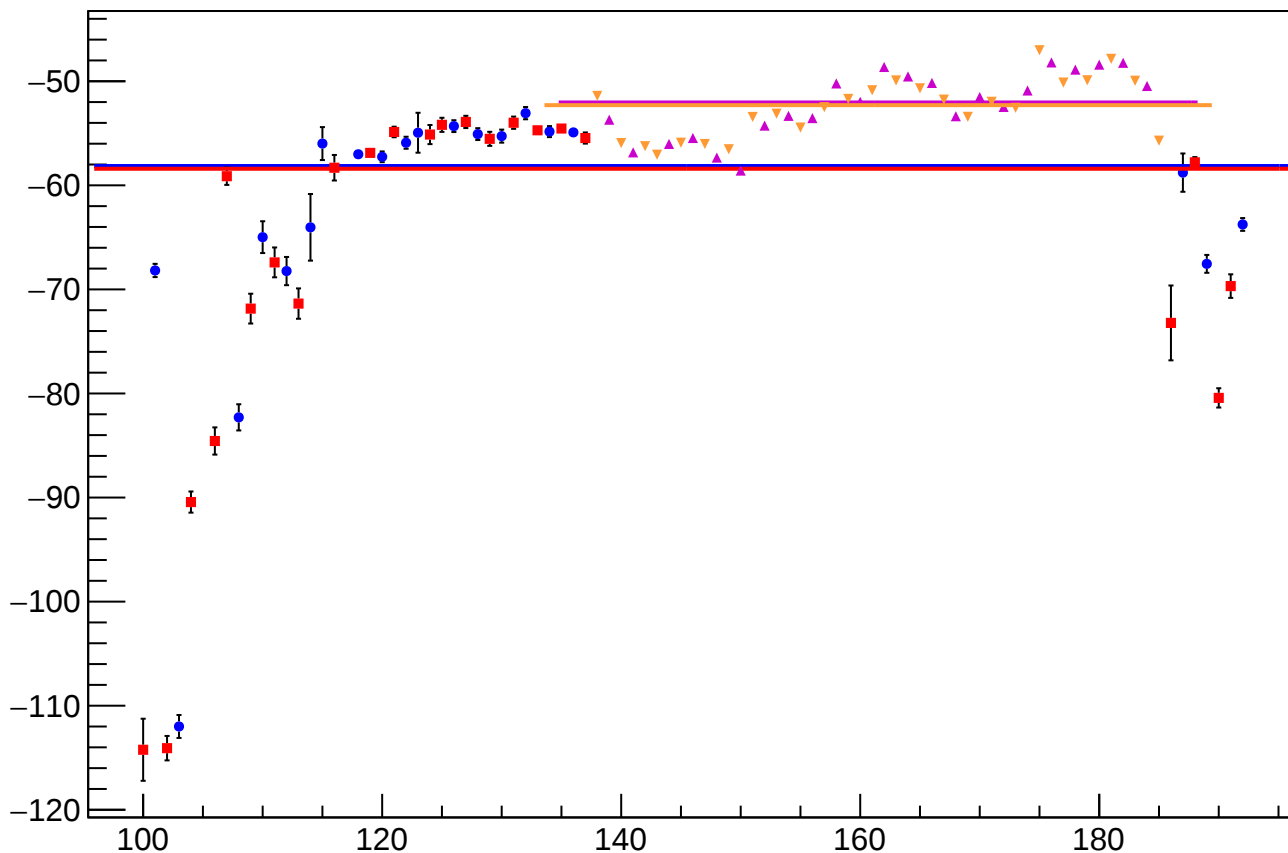
Right:  $-5.136 \pm 0.246$   $\chi^2/\text{NDF}: 728.6/6$

In:  $-7.790 \pm 0.068$   $\chi^2/\text{NDF}: 3923.4/25$

Out:  $-7.869 \pm 0.066$   $\chi^2/\text{NDF}: 4300.0/28$

All:  $-7.831 \pm 0.047$   $\chi^2/\text{NDF}: 8224.1/54$

reg\_asym\_sam1\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: -58.146 $\pm$ 0.137  $\chi^2$ /NDF: 3678.0/19

Left Out: -52.297 $\pm$ 0.055  $\chi^2$ /NDF:2657.5/24

Right Out: -58.408 $\pm$ 0.135  $\chi^2$ /NDF: 5405.5/22

Left In: -52.038 $\pm$ 0.057  $\chi^2$ /NDF:3180.4/22

Left: -52.172 $\pm$ 0.040  $\chi^2$ /NDF: 5848.6/47

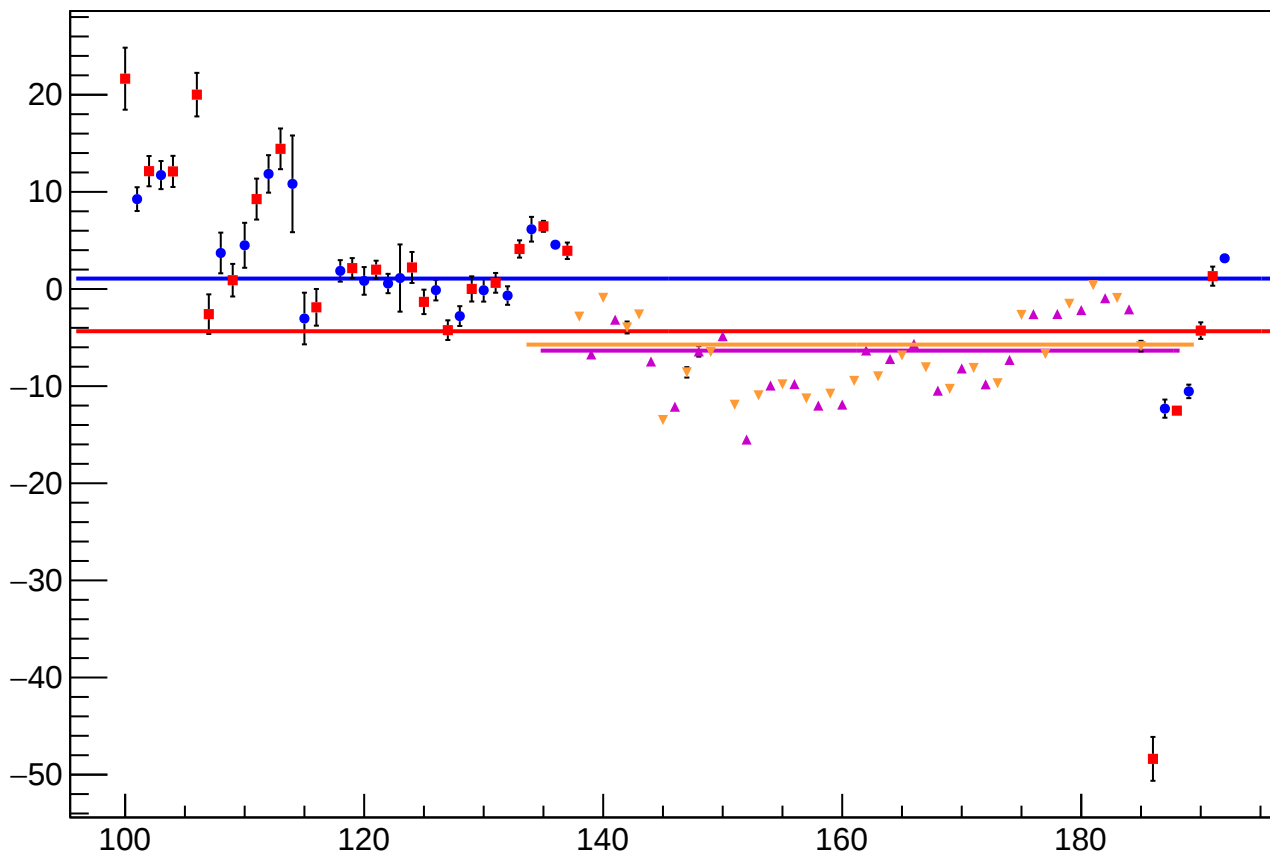
Right: -58.279 $\pm$ 0.096  $\chi^2$ /NDF: 9085.3/42

In: -52.941 $\pm$ 0.053  $\chi^2$ /NDF:8546.0/42

Out: -53.167 $\pm$ 0.051  $\chi^2$ /NDF:9816.4/47

All: -53.058 $\pm$ 0.037  $\chi^2$ /NDF: 18371.9/90

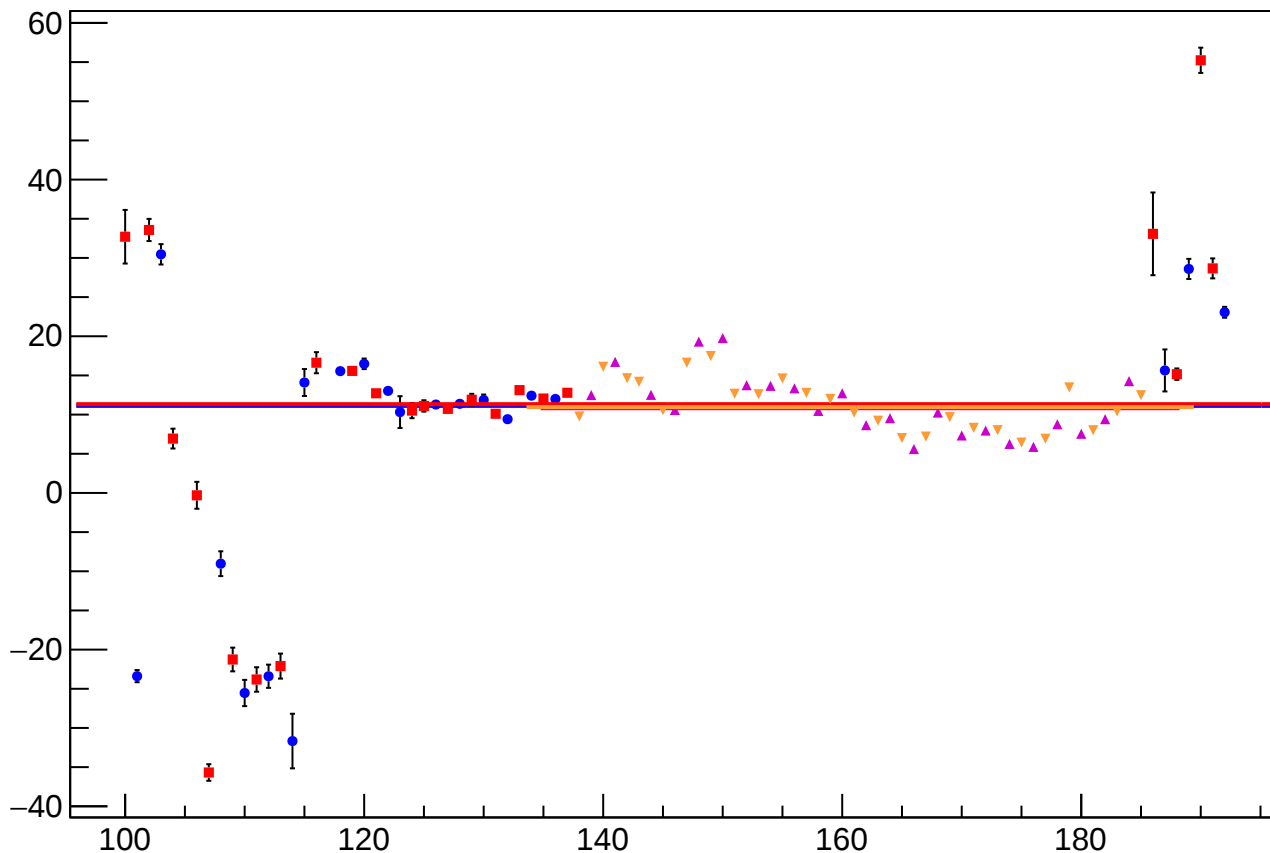
reg\_asym\_sam1\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $1.075 \pm 0.214$   $\chi^2/\text{NDF}: 752.7/19$   
 Left Out:  $-5.722 \pm 0.068$   $\chi^2/\text{NDF}: 3983.0/24$   
 Right Out:  $-4.347 \pm 0.183$   $\chi^2/\text{NDF}: 2549.0/22$   
 Left In:  $-6.344 \pm 0.069$   $\chi^2/\text{NDF}: 3383.7/22$

Left:  $-6.028 \pm 0.048$   $\chi^2/\text{NDF}: 7408.5/47$   
 Right:  $-2.065 \pm 0.139$   $\chi^2/\text{NDF}: 3672.9/42$   
 In:  $-5.653 \pm 0.065$   $\chi^2/\text{NDF}: 5224.8/42$   
 Out:  $-5.556 \pm 0.063$   $\chi^2/\text{NDF}: 6581.9/47$   
 All:  $-5.603 \pm 0.045$   $\chi^2/\text{NDF}: 11807.9/90$

reg\_asym\_sam1\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 11.116 $\pm$ 0.153  $\chi^2$ /NDF: 4197.1/19

Left Out: 10.967 $\pm$ 0.061  $\chi^2$ /NDF: 2637.7/24

Right Out: 11.335 $\pm$ 0.155  $\chi^2$ /NDF: 4830.5/22

Left In: 10.813 $\pm$ 0.063  $\chi^2$ /NDF: 3546.8/22

Left: 10.892 $\pm$ 0.044  $\chi^2$ /NDF: 6187.5/47

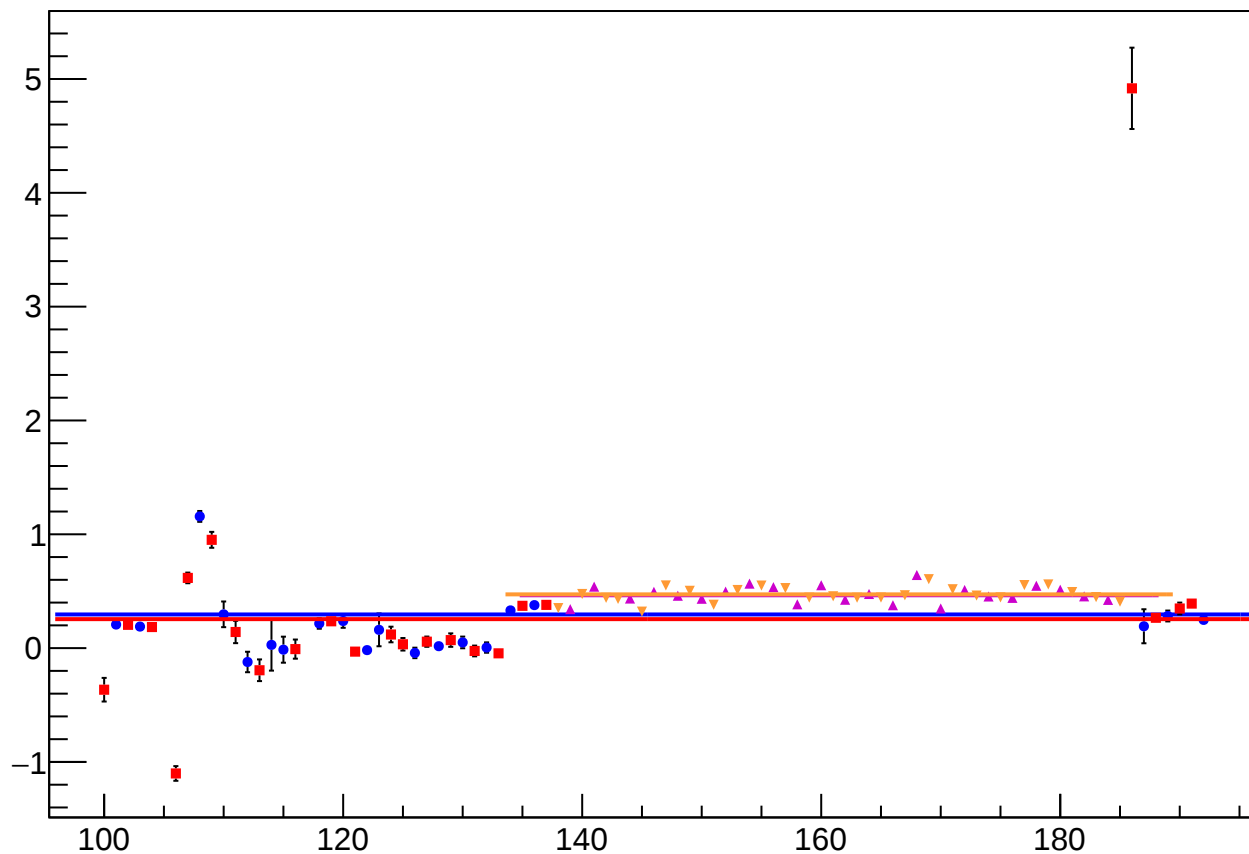
Right: 11.224 $\pm$ 0.109  $\chi^2$ /NDF: 9028.7/42

In: 10.857 $\pm$ 0.058  $\chi^2$ /NDF: 7747.3/42

Out: 11.017 $\pm$ 0.057  $\chi^2$ /NDF: 7473.1/47

All: 10.939 $\pm$ 0.041  $\chi^2$ /NDF: 15224.2/90

reg\_asym\_sam1\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $0.296 \pm 0.008$   $\chi^2/\text{NDF}$ : 653.3/19

Left Out:  $0.472 \pm 0.003$   $\chi^2/\text{NDF}$ : 519.0/24

Right Out:  $0.255 \pm 0.008$   $\chi^2/\text{NDF}$ : 1175.0/22

Left In:  $0.464 \pm 0.003$   $\chi^2/\text{NDF}$ : 733.1/22

Left:  $0.468 \pm 0.002$   $\chi^2/\text{NDF}$ : 1256.2/47

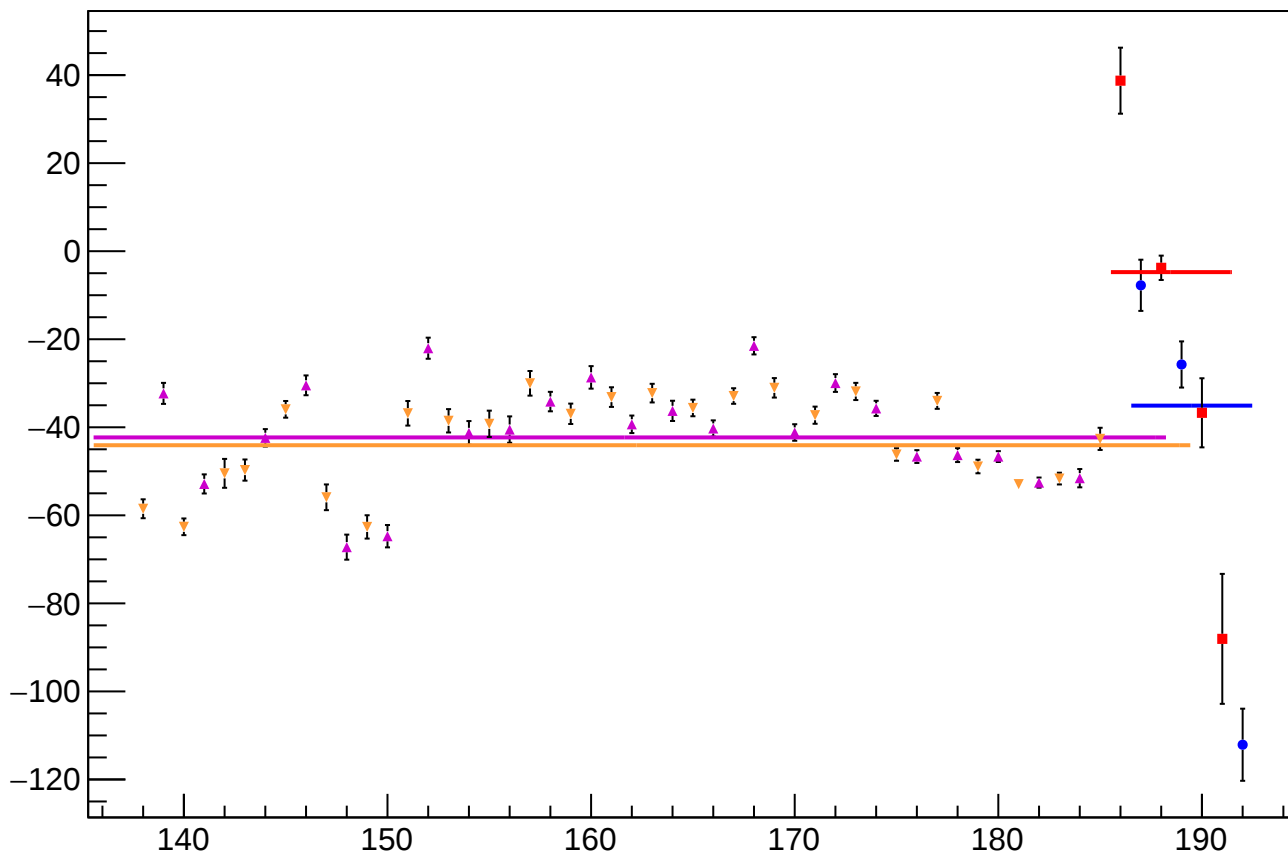
Right:  $0.276 \pm 0.005$   $\chi^2/\text{NDF}$ : 1842.3/42

In:  $0.444 \pm 0.003$   $\chi^2/\text{NDF}$ : 1821.5/42

Out:  $0.449 \pm 0.003$   $\chi^2/\text{NDF}$ : 2364.8/47

All:  $0.447 \pm 0.002$   $\chi^2/\text{NDF}$ : 4187.8/90

reg\_asym\_sam2\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-35.080 \pm 3.517$   $\chi^2/\text{NDF}: 113.7/2$

Left Out:  $-44.077 \pm 0.389$   $\chi^2/\text{NDF}: 632.6/24$

Right Out:  $-4.752 \pm 2.430$   $\chi^2/\text{NDF}: 82.2/3$

Left In:  $-42.304 \pm 0.399$   $\chi^2/\text{NDF}: 640.6/22$

Left:  $-43.214 \pm 0.278$   $\chi^2/\text{NDF}: 1283.3/47$

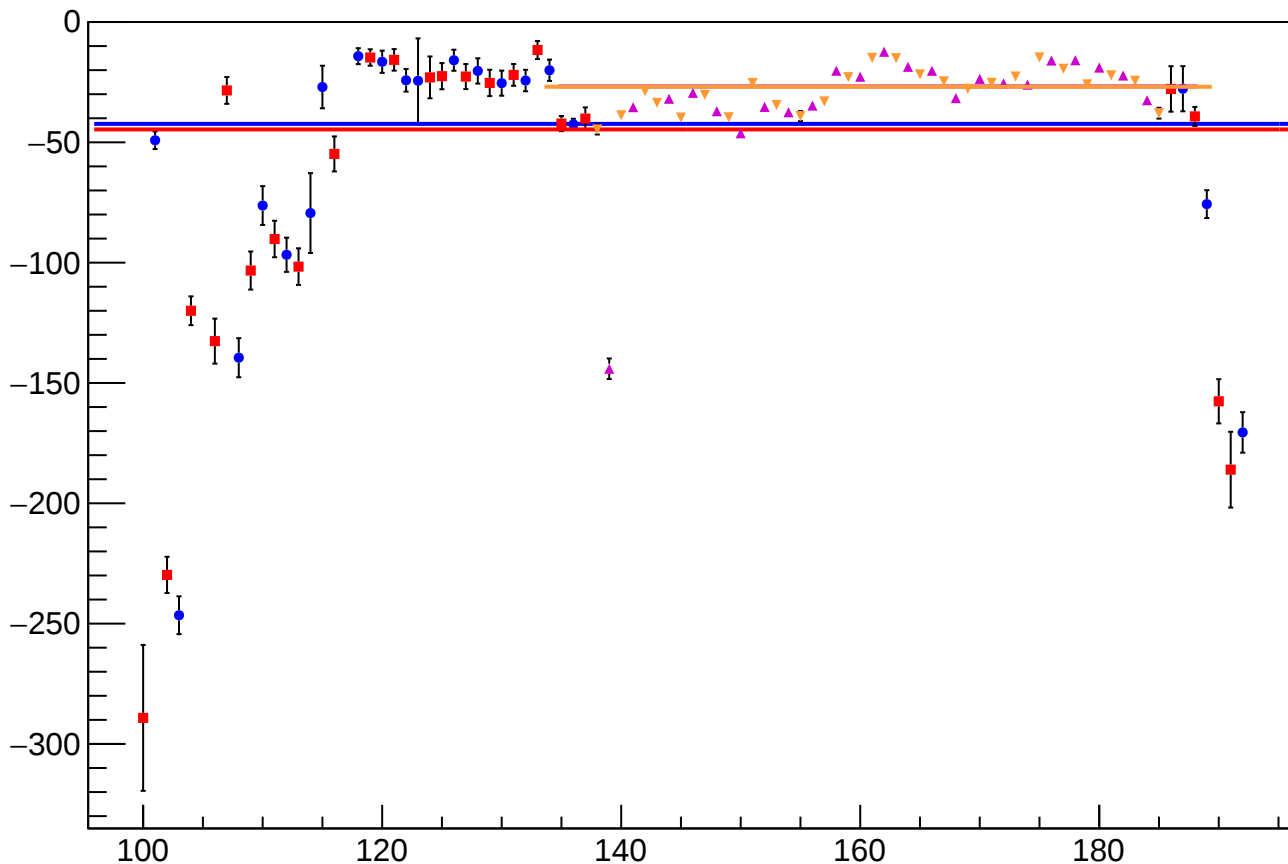
Right:  $-14.551 \pm 1.999$   $\chi^2/\text{NDF}: 246.3/6$

In:  $-42.212 \pm 0.397$   $\chi^2/\text{NDF}: 758.5/25$

Out:  $-43.097 \pm 0.384$   $\chi^2/\text{NDF}: 970.2/28$

All:  $-42.669 \pm 0.276$   $\chi^2/\text{NDF}: 1731.2/54$

reg\_asym\_sam2\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-42.333 \pm 1.110$   $\chi^2/\text{NDF}$ : 1398.2/19

Left Out:  $-26.902 \pm 0.316$   $\chi^2/\text{NDF}$ : 631.0/24

Right Out:  $-44.633 \pm 1.138$   $\chi^2/\text{NDF}$ : 1585.4/22

Left In:  $-26.774 \pm 0.326$   $\chi^2/\text{NDF}$ : 1394.5/22

Left:  $-26.840 \pm 0.227$   $\chi^2/\text{NDF}$ : 2025.6/47

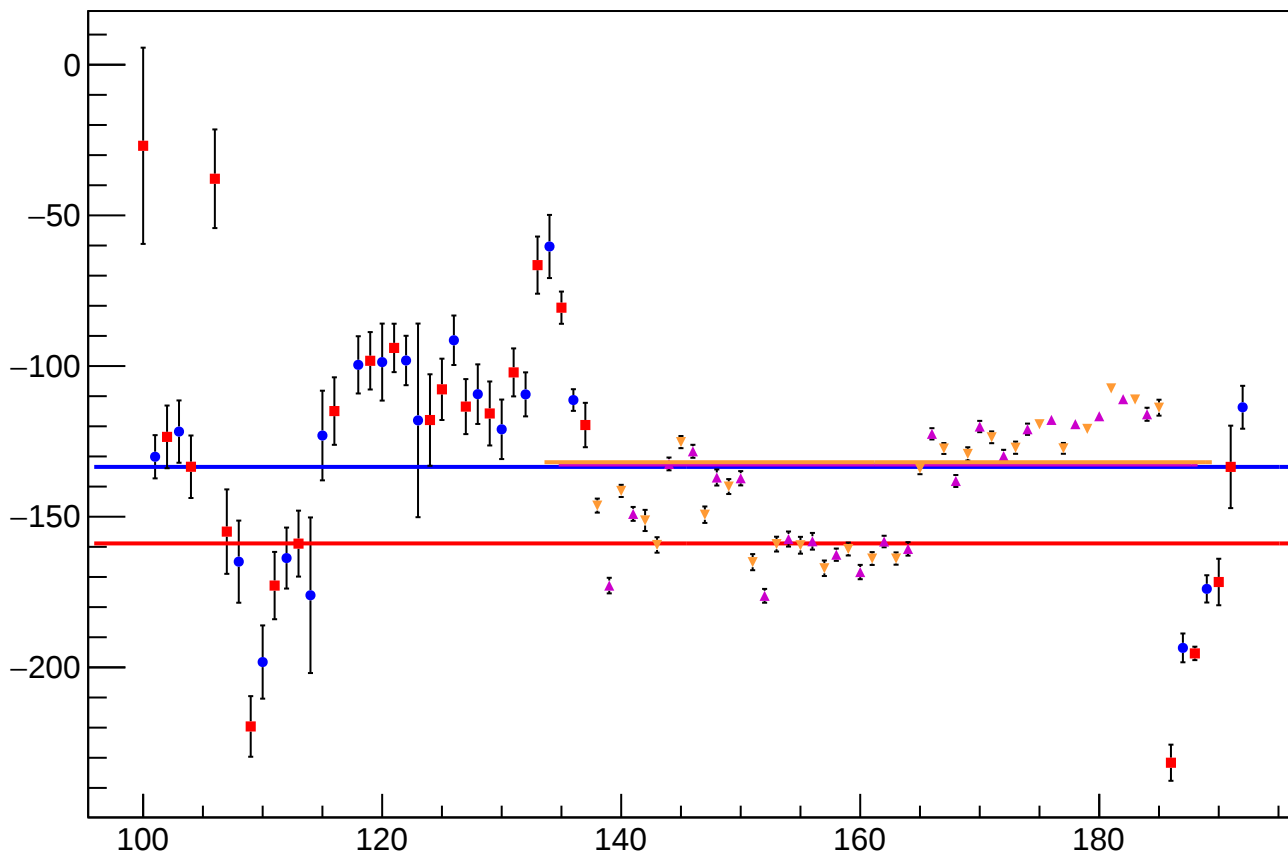
Right:  $-43.454 \pm 0.795$   $\chi^2/\text{NDF}$ : 2985.7/42

In:  $-28.012 \pm 0.313$   $\chi^2/\text{NDF}$ : 2973.7/42

Out:  $-28.174 \pm 0.305$   $\chi^2/\text{NDF}$ : 2441.7/47

All:  $-28.095 \pm 0.218$   $\chi^2/\text{NDF}$ : 5415.6/90

reg\_asym\_sam2\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: -133.471+/-1.708  $\chi^2$ /NDF: 463.4/19

Left Out: -131.912+/-0.391  $\chi^2$ /NDF:2439.3/24

Right Out: -158.864+/-1.482  $\chi^2$ /NDF: 1131.2/22

Left In: -132.690+/-0.399  $\chi^2$ /NDF:2480.2/22

Left: -132.293+/-0.280  $\chi^2$ /NDF: 4921.5/47

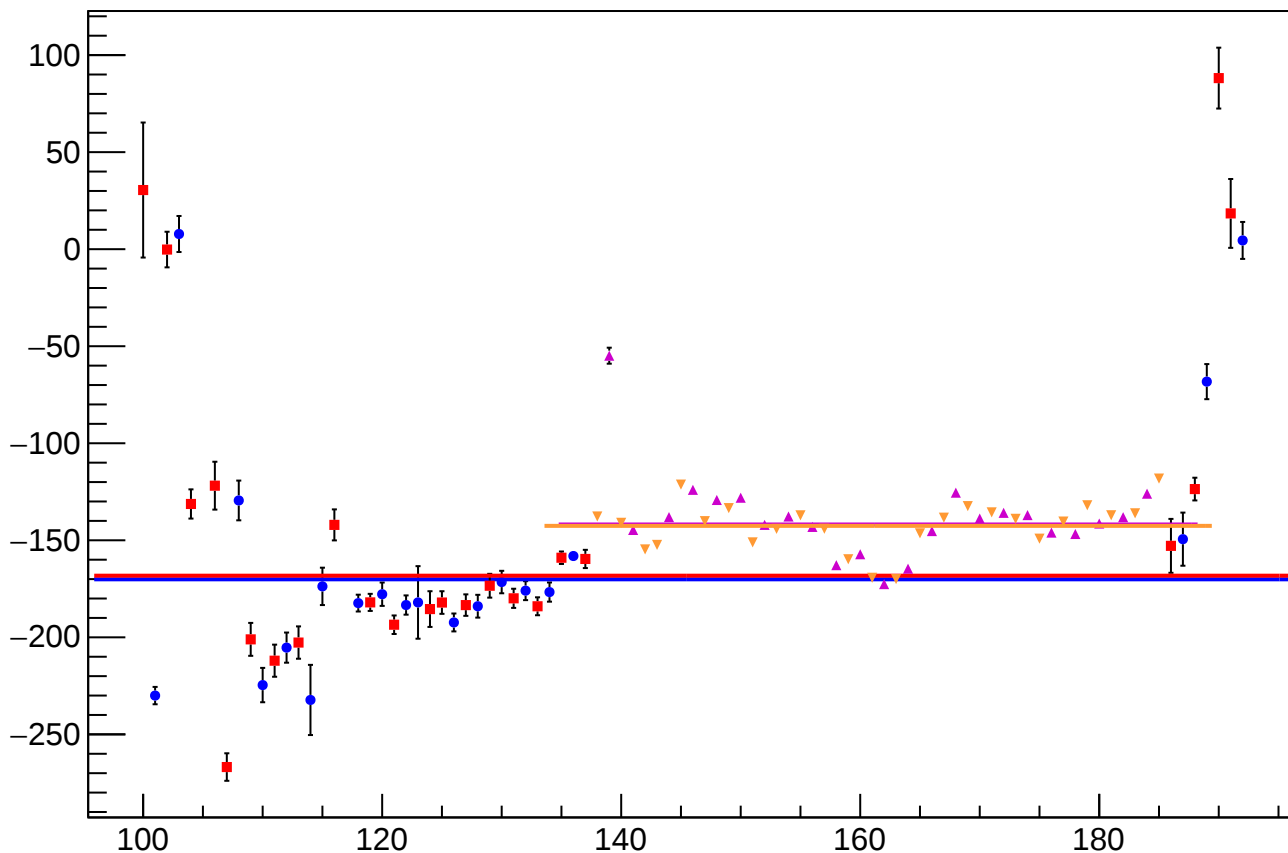
Right: -147.962+/-1.119  $\chi^2$ /NDF: 1720.7/42

In: -132.730+/-0.389  $\chi^2$ /NDF:2943.8/42

Out: -133.670+/-0.378  $\chi^2$ /NDF:3879.8/47

All: -133.213+/-0.271  $\chi^2$ /NDF: 6826.6/90

reg\_asym\_sam2\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-170.110 \pm 1.250$   $\chi^2/\text{NDF}: 1174.1/19$

Left Out:  $-142.564 \pm 0.354$   $\chi^2/\text{NDF}: 1147.7/24$

Right Out:  $-168.236 \pm 1.309$   $\chi^2/\text{NDF}: 1192.2/22$

Left In:  $-141.856 \pm 0.364$   $\chi^2/\text{NDF}: 1544.3/22$

Left:  $-142.220 \pm 0.254$   $\chi^2/\text{NDF}: 2693.9/47$

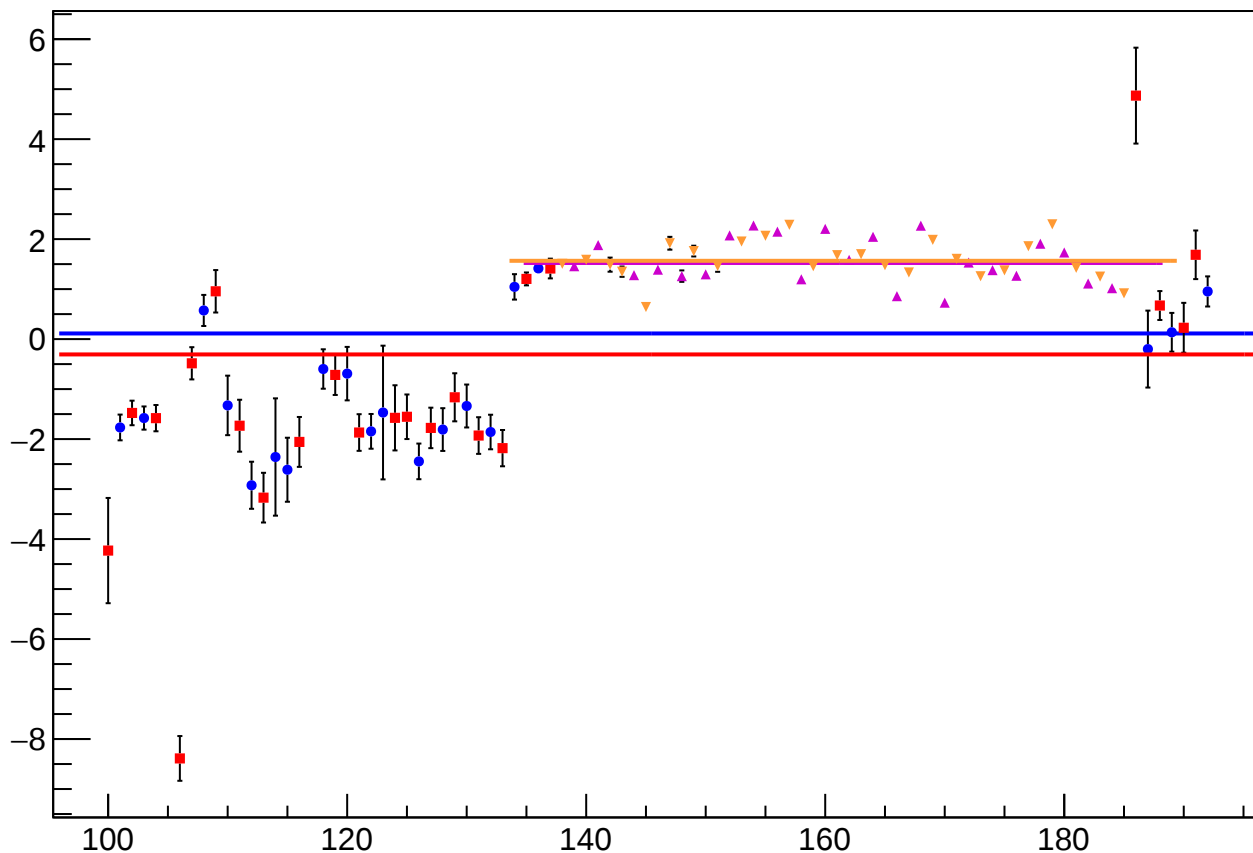
Right:  $-169.216 \pm 0.904$   $\chi^2/\text{NDF}: 2367.4/42$

In:  $-144.063 \pm 0.349$   $\chi^2/\text{NDF}: 3189.5/42$

Out:  $-144.313 \pm 0.342$   $\chi^2/\text{NDF}: 2698.1/47$

All:  $-144.190 \pm 0.244$   $\chi^2/\text{NDF}: 5887.8/90$

reg\_asym\_sam2\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $0.113 \pm 0.064$   $\chi^2/\text{NDF}$ : 533.5/19

Left Out:  $1.566 \pm 0.016$   $\chi^2/\text{NDF}$ : 542.8/24

Right Out:  $-0.307 \pm 0.068$   $\chi^2/\text{NDF}$ : 813.2/22

Left In:  $1.523 \pm 0.017$   $\chi^2/\text{NDF}$ : 738.5/22

Left:  $1.545 \pm 0.012$   $\chi^2/\text{NDF}$ : 1284.8/47

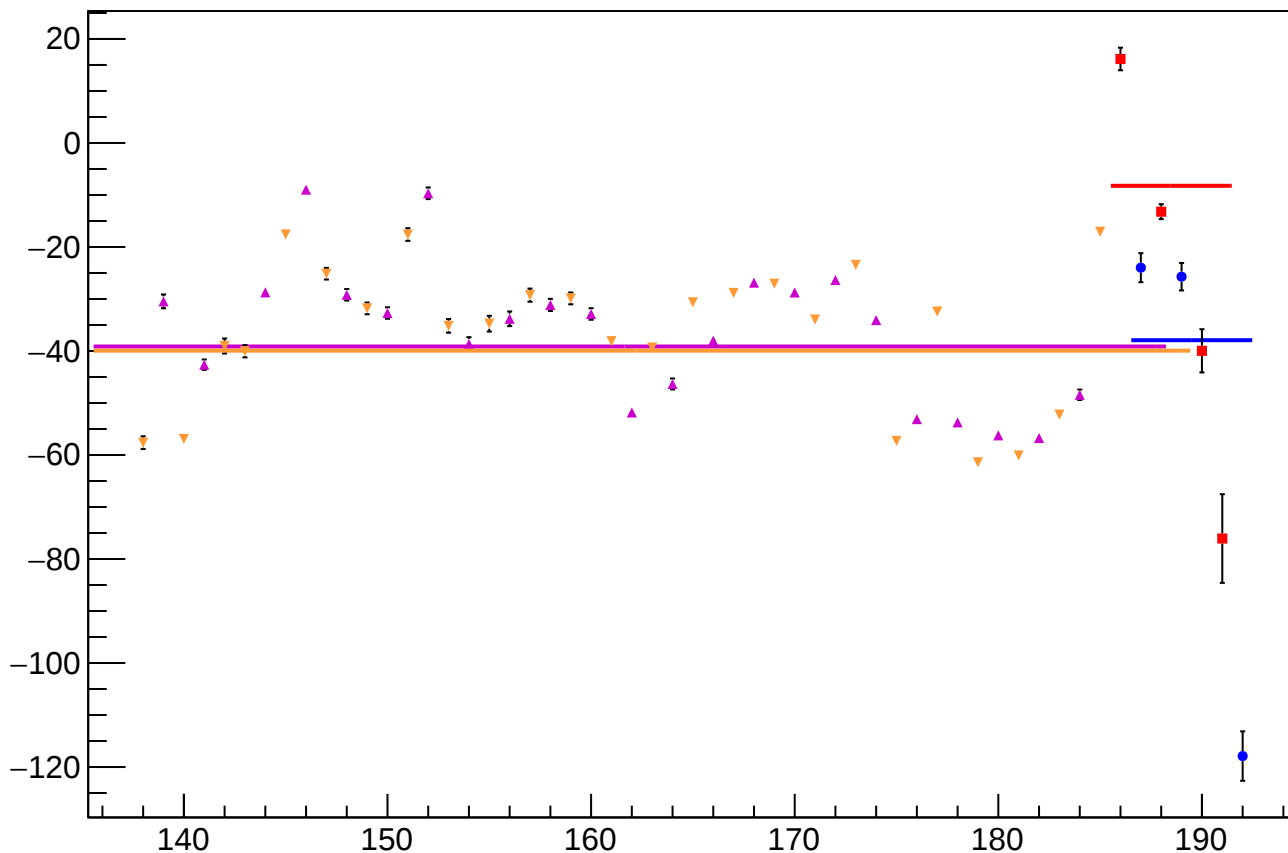
Right:  $-0.086 \pm 0.047$   $\chi^2/\text{NDF}$ : 1366.8/42

In:  $1.436 \pm 0.016$   $\chi^2/\text{NDF}$ : 1721.5/42

Out:  $1.465 \pm 0.016$   $\chi^2/\text{NDF}$ : 2077.6/47

All:  $1.451 \pm 0.011$   $\chi^2/\text{NDF}$ : 3800.8/90

reg\_asym\_sam3\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-37.927 \pm 1.779$   $\chi^2/\text{NDF}: 329.3/2$   
 Left Out:  $-39.935 \pm 0.153$   $\chi^2/\text{NDF}: 9806.5/24$   
 Right Out:  $-8.235 \pm 1.143$   $\chi^2/\text{NDF}: 259.5/3$   
 Left In:  $-39.137 \pm 0.155$   $\chi^2/\text{NDF}: 8534.5/22$

Left:  $-39.540 \pm 0.109$   $\chi^2/\text{NDF}: 18354.5/47$

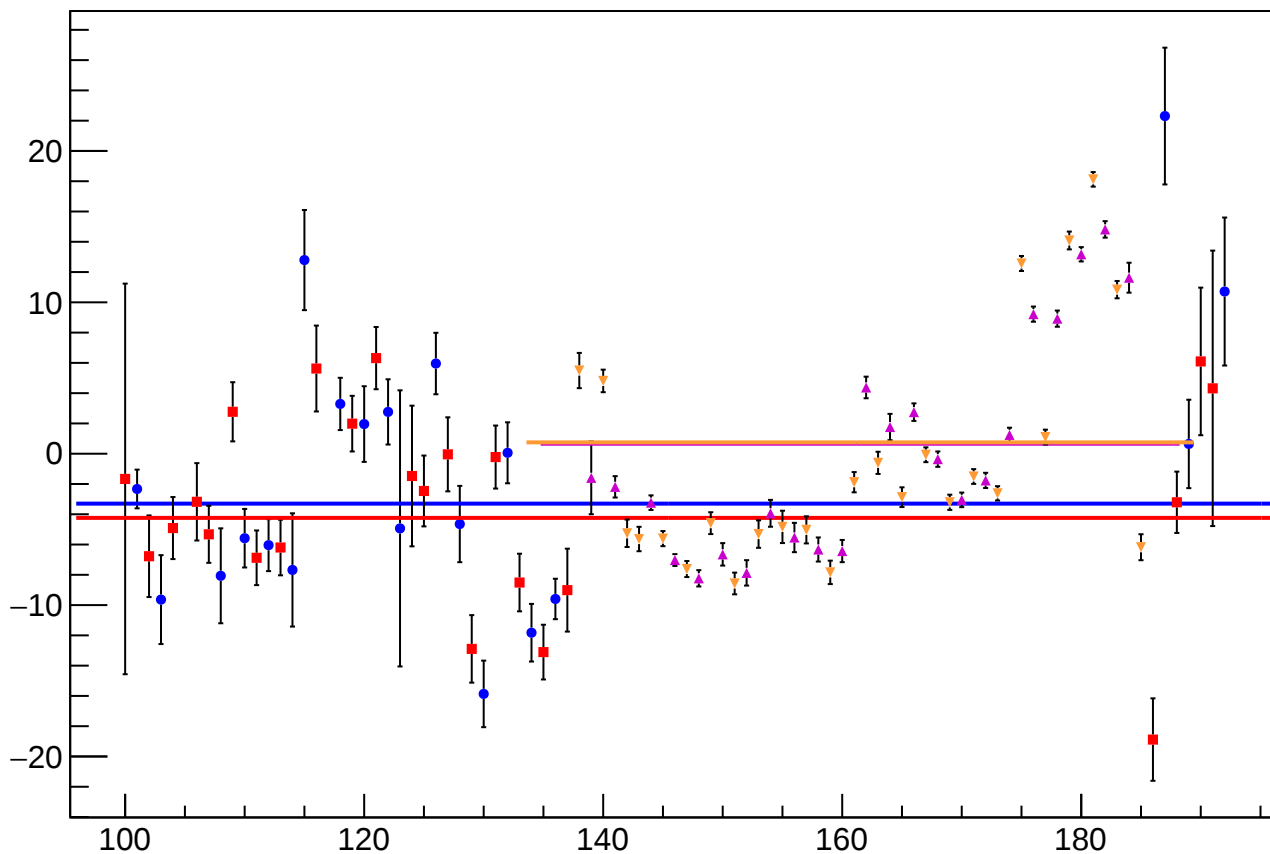
Right:  $-16.903 \pm 0.961$   $\chi^2/\text{NDF}: 786.0/6$

In:  $-39.128 \pm 0.154$   $\chi^2/\text{NDF}: 8864.3/25$

Out:  $-39.375 \pm 0.152$   $\chi^2/\text{NDF}: 10822.2/28$

All:  $-39.253 \pm 0.108$   $\chi^2/\text{NDF}: 19687.7/54$

reg\_asym\_sam3\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-3.297 \pm 0.487$   $\chi^2/\text{NDF}: 204.4/19$

Left Out:  $0.749 \pm 0.124$   $\chi^2/\text{NDF}: 3970.9/24$

Right Out:  $-4.239 \pm 0.481$   $\chi^2/\text{NDF}: 157.0/22$

Left In:  $0.660 \pm 0.124$   $\chi^2/\text{NDF}: 3337.8/22$

Left:  $0.705 \pm 0.088$   $\chi^2/\text{NDF}: 7308.9/47$

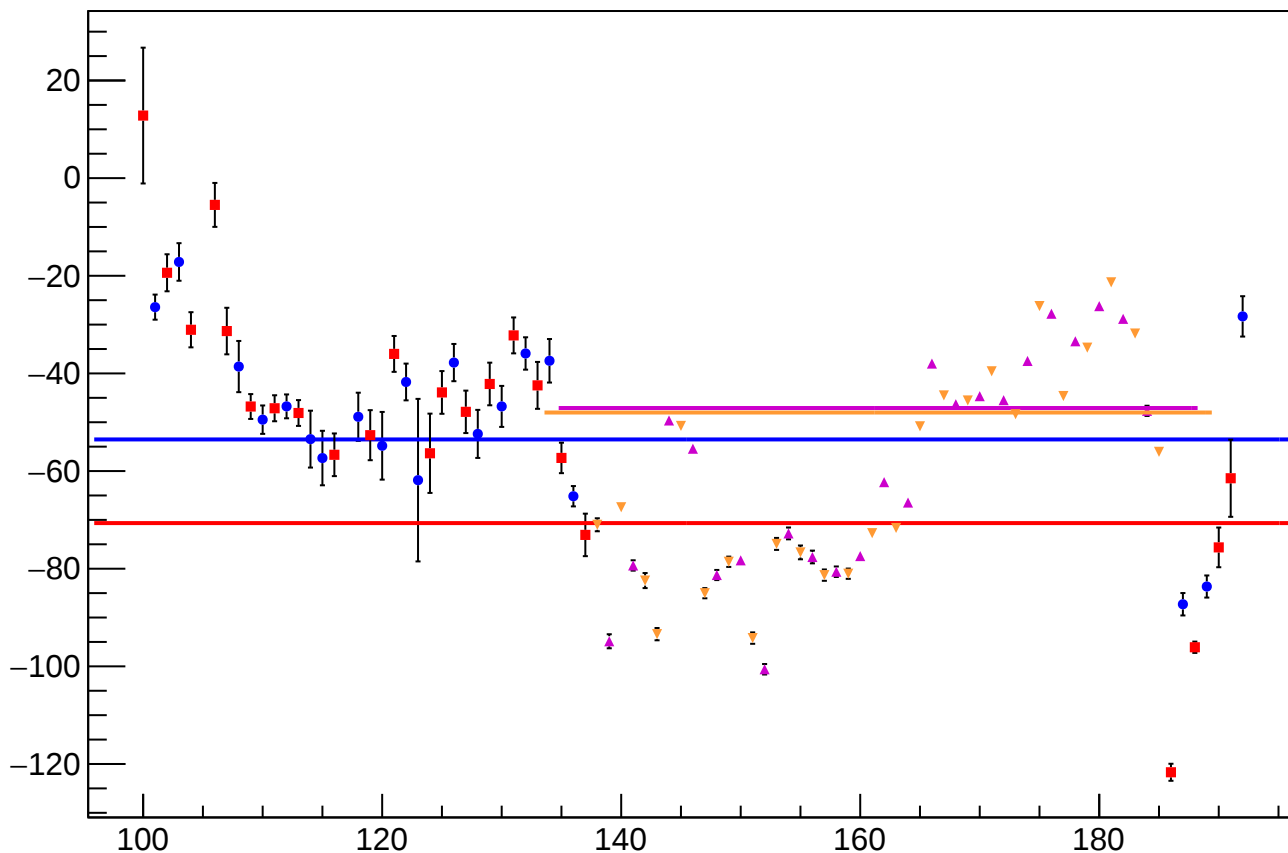
Right:  $-3.773 \pm 0.342$   $\chi^2/\text{NDF}: 363.3/42$

In:  $0.418 \pm 0.120$   $\chi^2/\text{NDF}: 3604.3/42$

Out:  $0.438 \pm 0.120$   $\chi^2/\text{NDF}: 4228.5/47$

All:  $0.428 \pm 0.085$   $\chi^2/\text{NDF}: 7832.8/90$

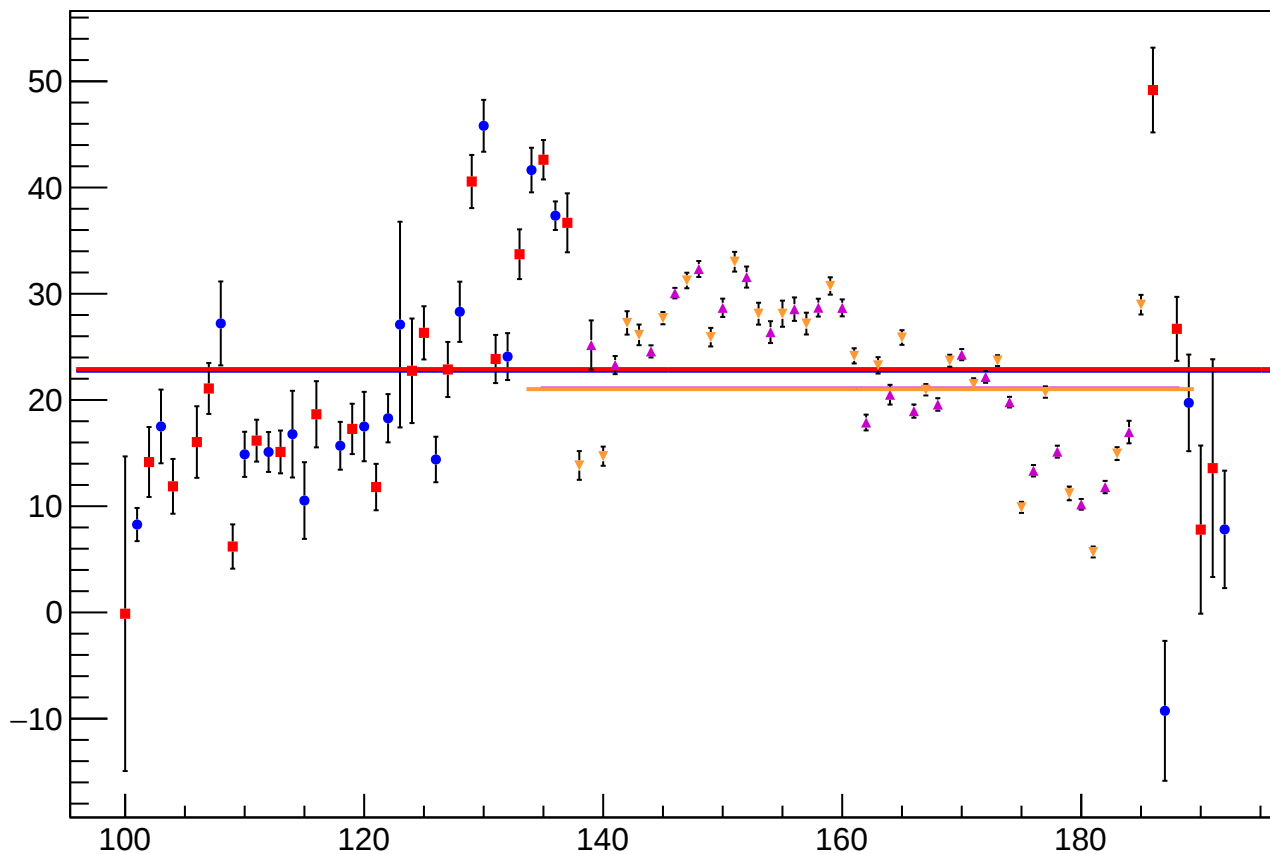
reg\_asym\_sam3\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-53.522 \pm 0.762$   $\chi^2/\text{NDF}$ : 752.0/19  
 Left Out:  $-48.008 \pm 0.155$   $\chi^2/\text{NDF}$ : 16950.0/24  
 Right Out:  $-70.656 \pm 0.640$   $\chi^2/\text{NDF}$ : 2580.3/22  
 Left In:  $-47.085 \pm 0.155$   $\chi^2/\text{NDF}$ : 15515.2/22

Left:  $-47.548 \pm 0.110$   $\chi^2/\text{NDF}$ : 32482.9/47  
 Right:  $-63.575 \pm 0.490$   $\chi^2/\text{NDF}$ : 3628.7/42  
 In:  $-47.341 \pm 0.152$   $\chi^2/\text{NDF}$ : 16335.7/42  
 Out:  $-49.258 \pm 0.150$   $\chi^2/\text{NDF}$ : 20713.9/47  
 All:  $-48.312 \pm 0.107$   $\chi^2/\text{NDF}$ : 37129.8/90

reg\_asym\_sam3\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 22.755 $\pm$ 0.551  $\chi^2$ /NDF: 488.9/19

Left Out: 21.020 $\pm$ 0.139  $\chi^2$ /NDF:2799.3/24

Right Out: 22.909 $\pm$ 0.556  $\chi^2$ /NDF: 416.8/22

Left In: 21.079 $\pm$ 0.140  $\chi^2$ /NDF:2173.2/22

Left: 21.049 $\pm$ 0.098  $\chi^2$ /NDF: 4972.6/47

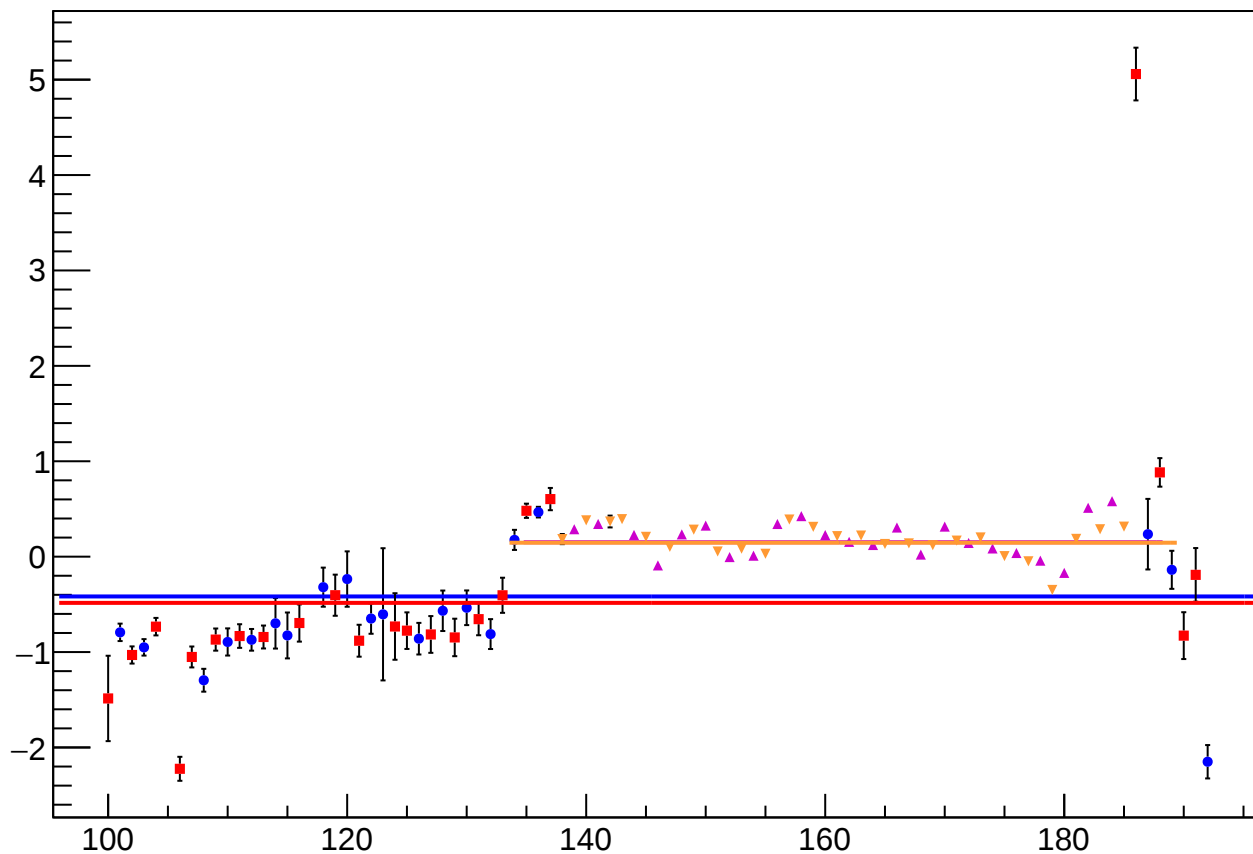
Right: 22.831 $\pm$ 0.391  $\chi^2$ /NDF: 905.7/42

In: 21.180 $\pm$ 0.135  $\chi^2$ /NDF:2670.8/42

Out: 21.131 $\pm$ 0.135  $\chi^2$ /NDF:3226.9/47

All: 21.155 $\pm$ 0.095  $\chi^2$ /NDF: 5897.8/90

reg\_asym\_sam3\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.417 \pm 0.029$   $\chi^2/\text{NDF}$ : 542.7/19

Left Out:  $0.146 \pm 0.006$   $\chi^2/\text{NDF}$ : 610.2/24

Right Out:  $-0.484 \pm 0.029$   $\chi^2/\text{NDF}$ : 1056.0/22

Left In:  $0.151 \pm 0.006$   $\chi^2/\text{NDF}$ : 869.5/22

Left:  $0.149 \pm 0.005$   $\chi^2/\text{NDF}$ : 1480.1/47

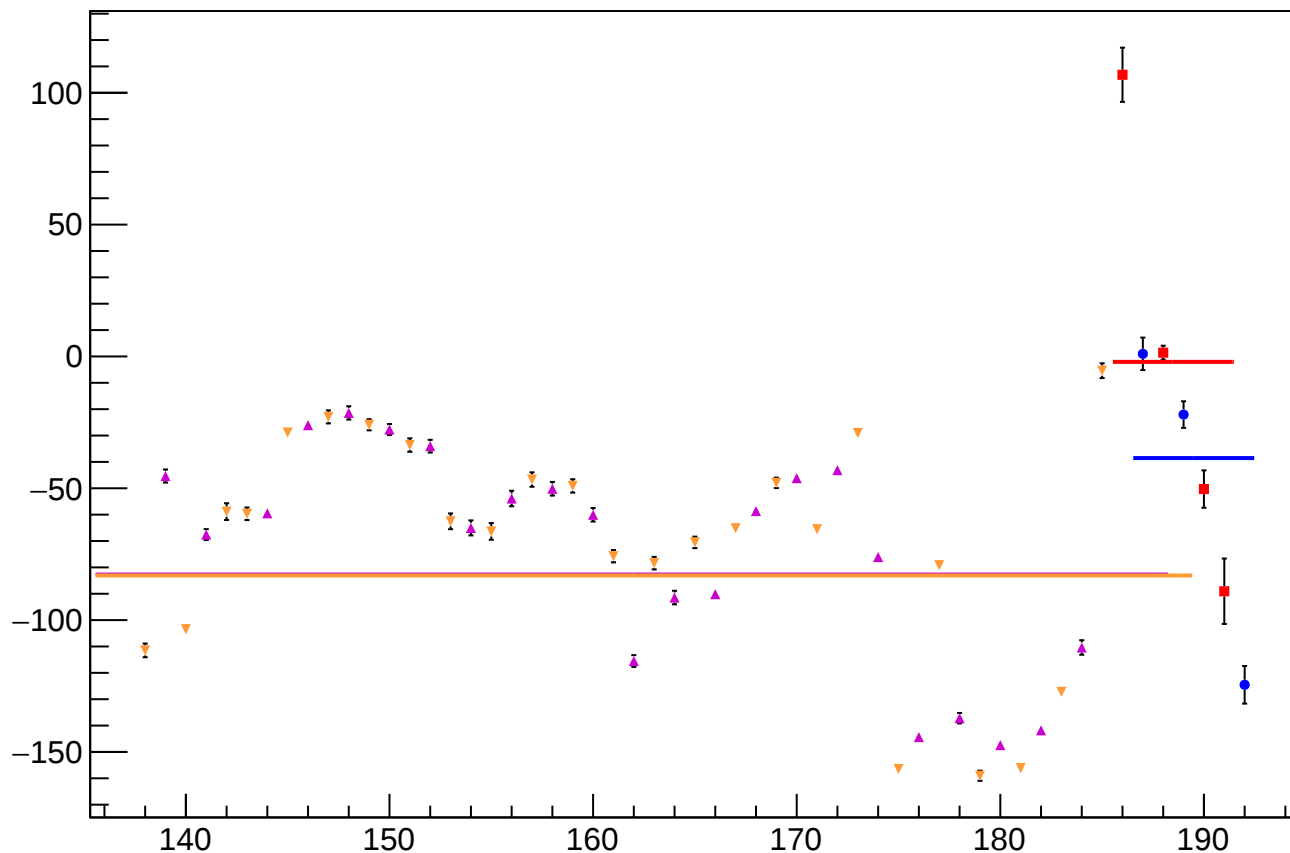
Right:  $-0.451 \pm 0.021$   $\chi^2/\text{NDF}$ : 1601.3/42

In:  $0.125 \pm 0.006$   $\chi^2/\text{NDF}$ : 1771.3/42

Out:  $0.118 \pm 0.006$   $\chi^2/\text{NDF}$ : 2114.1/47

All:  $0.121 \pm 0.004$   $\chi^2/\text{NDF}$ : 3886.1/90

reg\_asym\_sam4\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-38.546 \pm 3.424$   $\chi^2/\text{NDF}: 197.1/2$

Left Out:  $-83.068 \pm 0.406$   $\chi^2/\text{NDF}: 13817.3/24$

Right Out:  $-2.055 \pm 2.371$   $\chi^2/\text{NDF}: 209.3/3$

Left In:  $-82.711 \pm 0.415$   $\chi^2/\text{NDF}: 10841.4/22$

Left:  $-82.893 \pm 0.290$   $\chi^2/\text{NDF}: 24659.1/47$

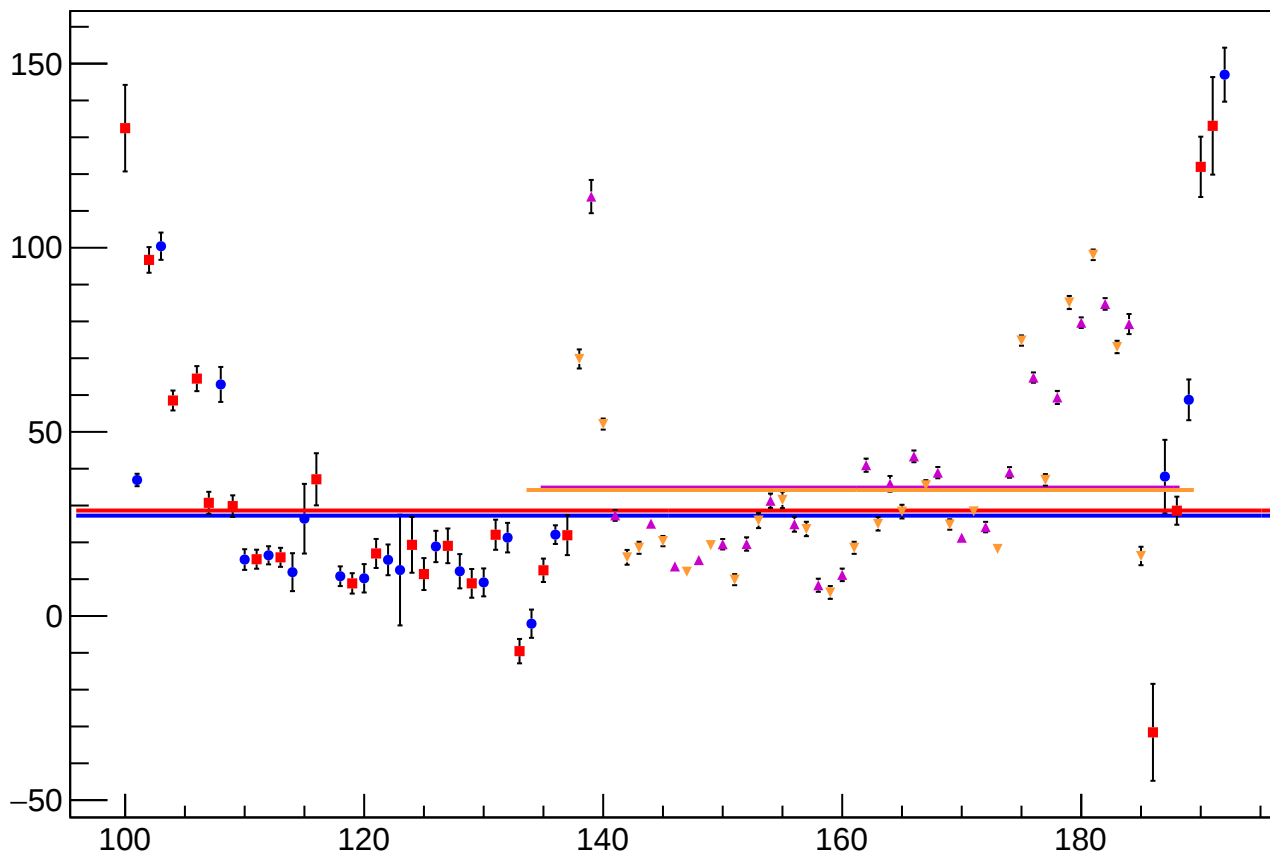
Right:  $-13.878 \pm 1.949$   $\chi^2/\text{NDF}: 483.2/6$

In:  $-82.071 \pm 0.412$   $\chi^2/\text{NDF}: 11202.4/25$

Out:  $-80.756 \pm 0.401$   $\chi^2/\text{NDF}: 15161.1/28$

All:  $-81.395 \pm 0.287$   $\chi^2/\text{NDF}: 26368.8/54$

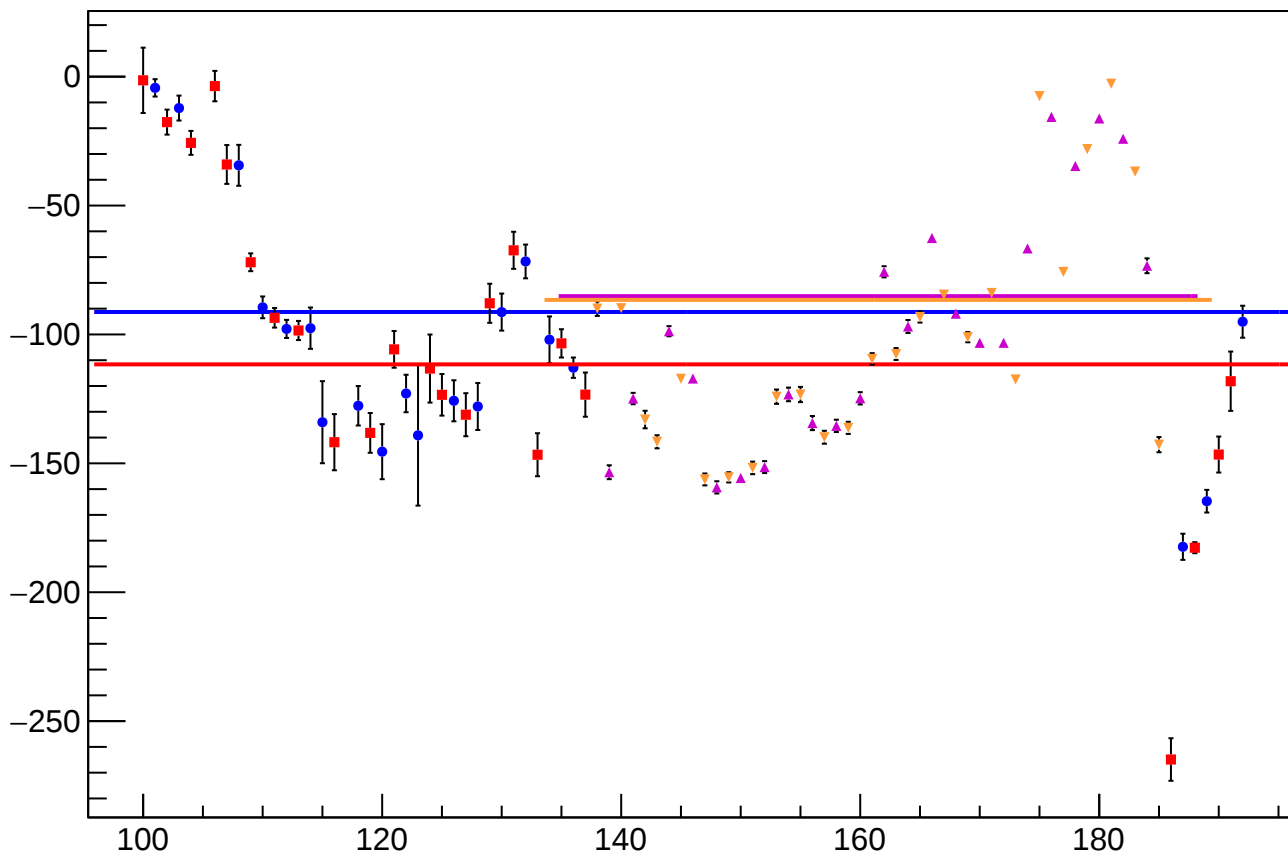
reg\_asym\_sam4\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $27.254 \pm 0.792$   $\chi^2/\text{NDF}: 993.9/19$   
 Left Out:  $34.219 \pm 0.320$   $\chi^2/\text{NDF}: 6192.6/24$   
 Right Out:  $28.643 \pm 0.787$   $\chi^2/\text{NDF}: 1228.3/22$   
 Left In:  $34.870 \pm 0.329$   $\chi^2/\text{NDF}: 4716.1/22$

Left:  $34.535 \pm 0.230$   $\chi^2/\text{NDF}: 10910.7/47$   
 Right:  $27.953 \pm 0.558$   $\chi^2/\text{NDF}: 2223.7/42$   
 In:  $33.747 \pm 0.304$   $\chi^2/\text{NDF}: 5788.9/42$   
 Out:  $33.426 \pm 0.297$   $\chi^2/\text{NDF}: 7464.0/47$   
 All:  $33.583 \pm 0.212$   $\chi^2/\text{NDF}: 13253.4/90$

reg\_asym\_sam4\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-91.285 \pm 1.277$   $\chi^2/\text{NDF}: 1744.5/19$

Left Out:  $-86.595 \pm 0.408$   $\chi^2/\text{NDF}: 14515.7/24$

Right Out:  $-111.609 \pm 1.114$   $\chi^2/\text{NDF}: 2968.9/22$

Left In:  $-85.134 \pm 0.415$   $\chi^2/\text{NDF}: 12841.3/22$

Left:  $-85.876 \pm 0.291$   $\chi^2/\text{NDF}: 27363.3/47$

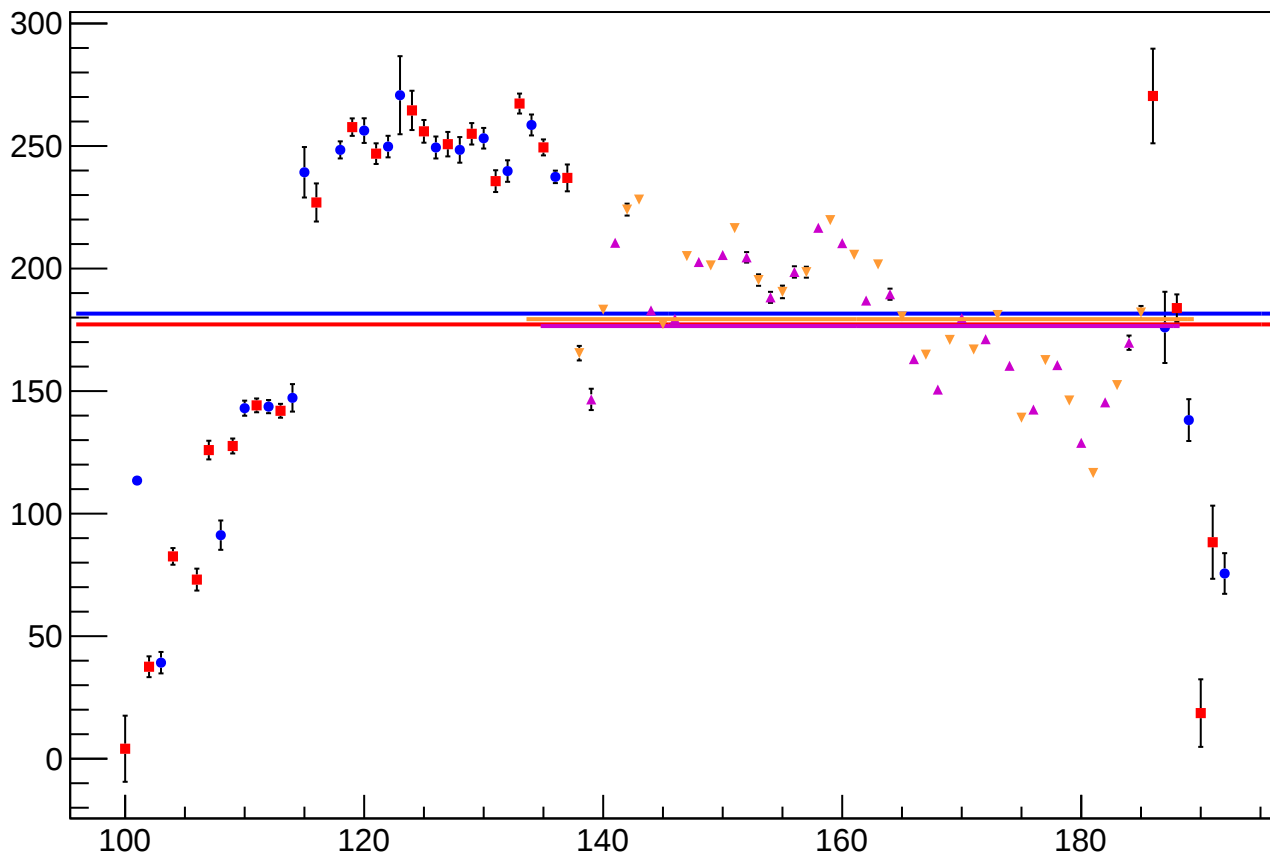
Right:  $-102.823 \pm 0.839$   $\chi^2/\text{NDF}: 4857.2/42$

In:  $-85.722 \pm 0.395$   $\chi^2/\text{NDF}: 14606.7/42$

Out:  $-89.559 \pm 0.383$   $\chi^2/\text{NDF}: 17928.9/47$

All:  $-87.696 \pm 0.275$   $\chi^2/\text{NDF}: 32584.3/90$

reg\_asym\_sam4\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 181.616 $\pm$ 0.908  $\chi^2$ /NDF: 5511.7/19

Left Out: 179.359 $\pm$ 0.362  $\chi^2$ /NDF: 5982.2/24

Right Out: 177.209 $\pm$ 0.908  $\chi^2$ /NDF: 6529.6/22

Left In: 176.531 $\pm$ 0.371  $\chi^2$ /NDF: 4426.0/22

Left: 177.980 $\pm$ 0.259  $\chi^2$ /NDF: 10438.0/47

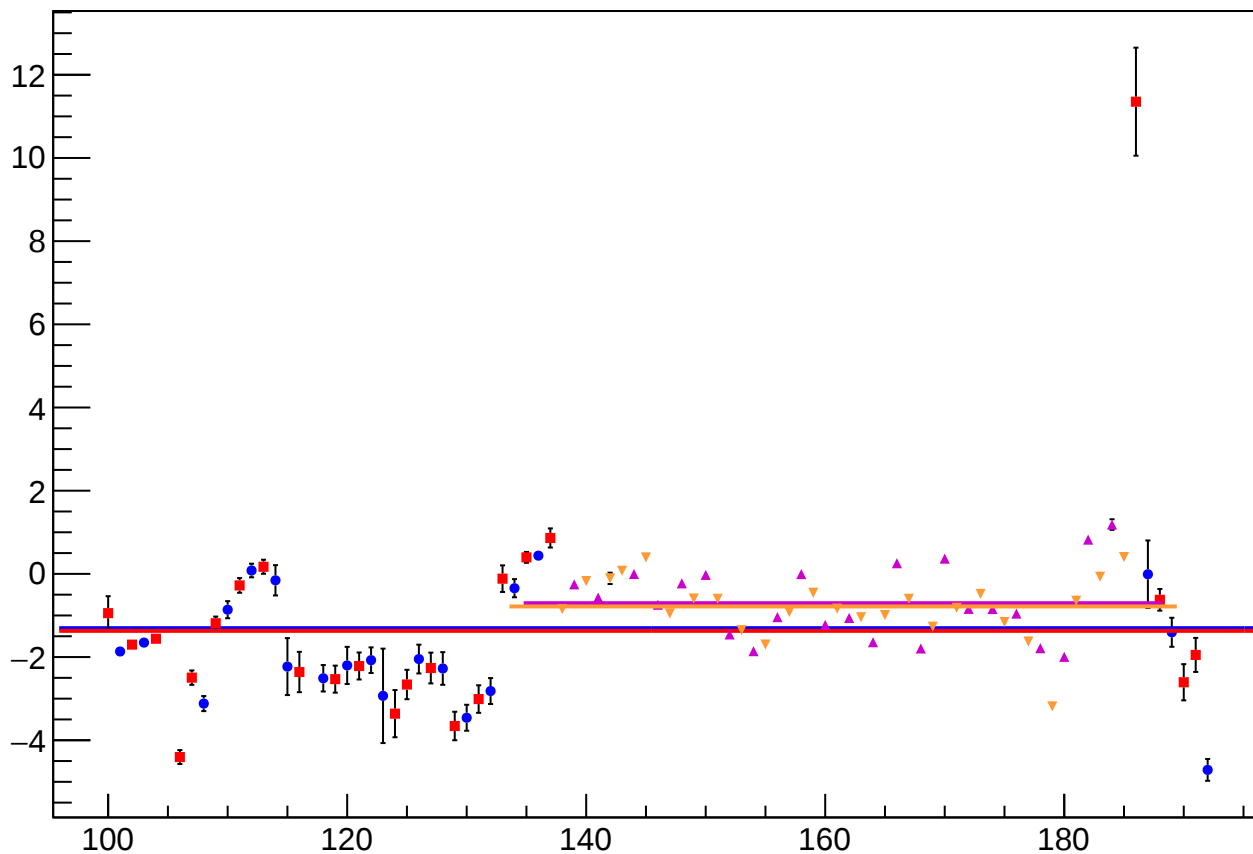
Right: 179.413 $\pm$ 0.642  $\chi^2$ /NDF: 12053.0/42

In: 177.259 $\pm$ 0.343  $\chi^2$ /NDF: 9964.5/42

Out: 179.064 $\pm$ 0.336  $\chi^2$ /NDF: 12516.6/47

All: 178.181 $\pm$ 0.240  $\chi^2$ /NDF: 22495.3/90

reg\_asym\_sam4\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-1.306 \pm 0.047$   $\chi^2/\text{NDF}$ : 797.0/19

Left Out:  $-0.783 \pm 0.017$   $\chi^2/\text{NDF}$ : 1771.6/24

Right Out:  $-1.370 \pm 0.045$   $\chi^2/\text{NDF}$ : 1033.8/22

Left In:  $-0.705 \pm 0.017$   $\chi^2/\text{NDF}$ : 2407.7/22

Left:  $-0.745 \pm 0.012$   $\chi^2/\text{NDF}$ : 4190.3/47

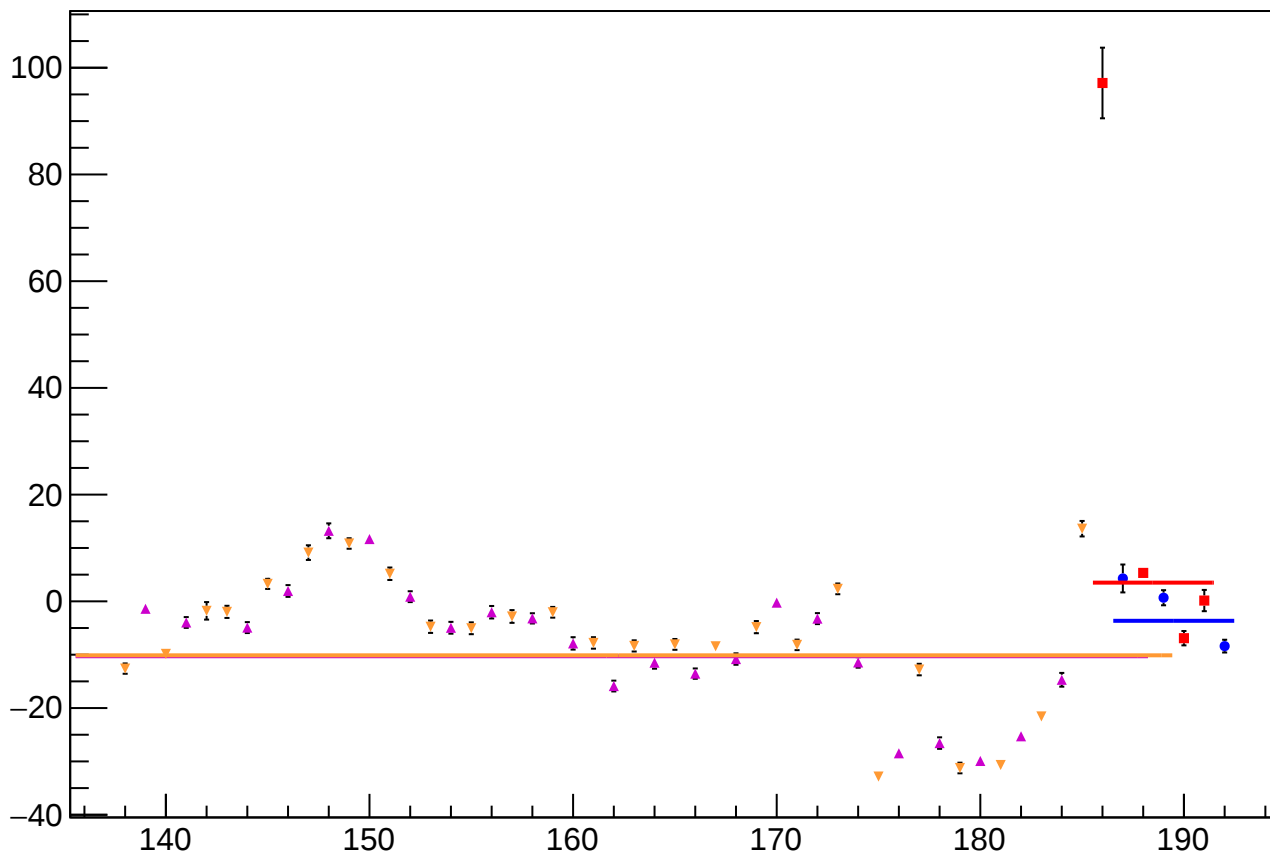
Right:  $-1.339 \pm 0.032$   $\chi^2/\text{NDF}$ : 1831.8/42

In:  $-0.774 \pm 0.016$   $\chi^2/\text{NDF}$ : 3349.9/42

Out:  $-0.855 \pm 0.016$   $\chi^2/\text{NDF}$ : 2957.1/47

All:  $-0.815 \pm 0.011$   $\chi^2/\text{NDF}$ : 6320.2/90

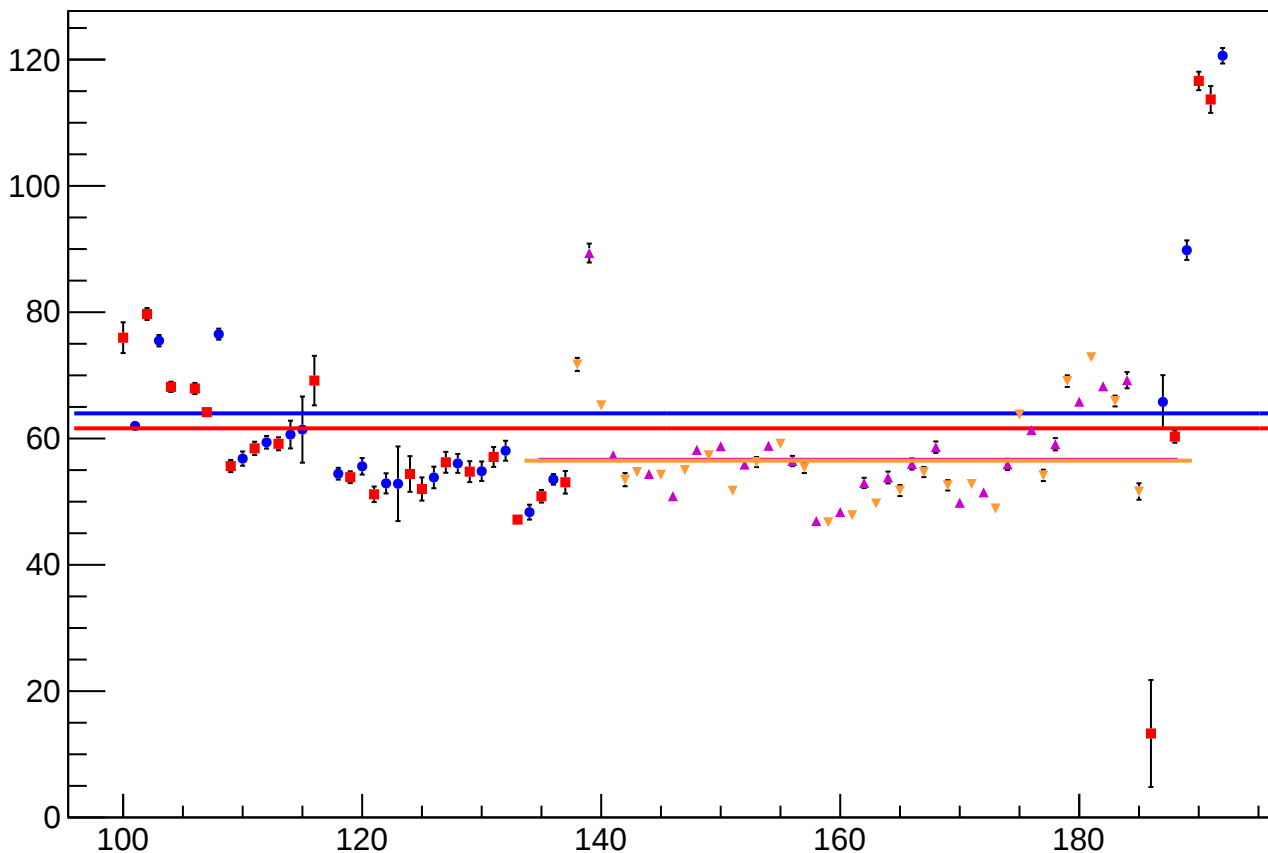
reg\_asym\_sam5\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-3.649 \pm 0.863$   $\chi^2/\text{NDF}: 34.2/2$   
 Left Out:  $-10.117 \pm 0.201$   $\chi^2/\text{NDF}: 4138.1/24$   
 Right Out:  $3.505 \pm 0.553$   $\chi^2/\text{NDF}: 270.9/3$   
 Left In:  $-10.290 \pm 0.205$   $\chi^2/\text{NDF}: 3451.0/22$

Left:  $-10.202 \pm 0.144$   $\chi^2/\text{NDF}: 7589.5/47$   
 Right:  $1.423 \pm 0.466$   $\chi^2/\text{NDF}: 353.8/6$   
 In:  $-9.934 \pm 0.200$   $\chi^2/\text{NDF}: 3541.3/25$   
 Out:  $-8.522 \pm 0.189$   $\chi^2/\text{NDF}: 4944.6/28$   
 All:  $-9.190 \pm 0.137$   $\chi^2/\text{NDF}: 8512.1/54$

reg\_asym\_sam5\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 63.981 $\pm$ 0.254  $\chi^2$ /NDF: 3490.1/19

Left Out: 56.496 $\pm$ 0.159  $\chi^2$ /NDF:1968.0/24

Right Out: 61.609 $\pm$ 0.236  $\chi^2$ /NDF: 3461.9/22

Left In: 56.635 $\pm$ 0.165  $\chi^2$ /NDF:1607.9/22

Left: 56.563 $\pm$ 0.114  $\chi^2$ /NDF: 3576.3/47

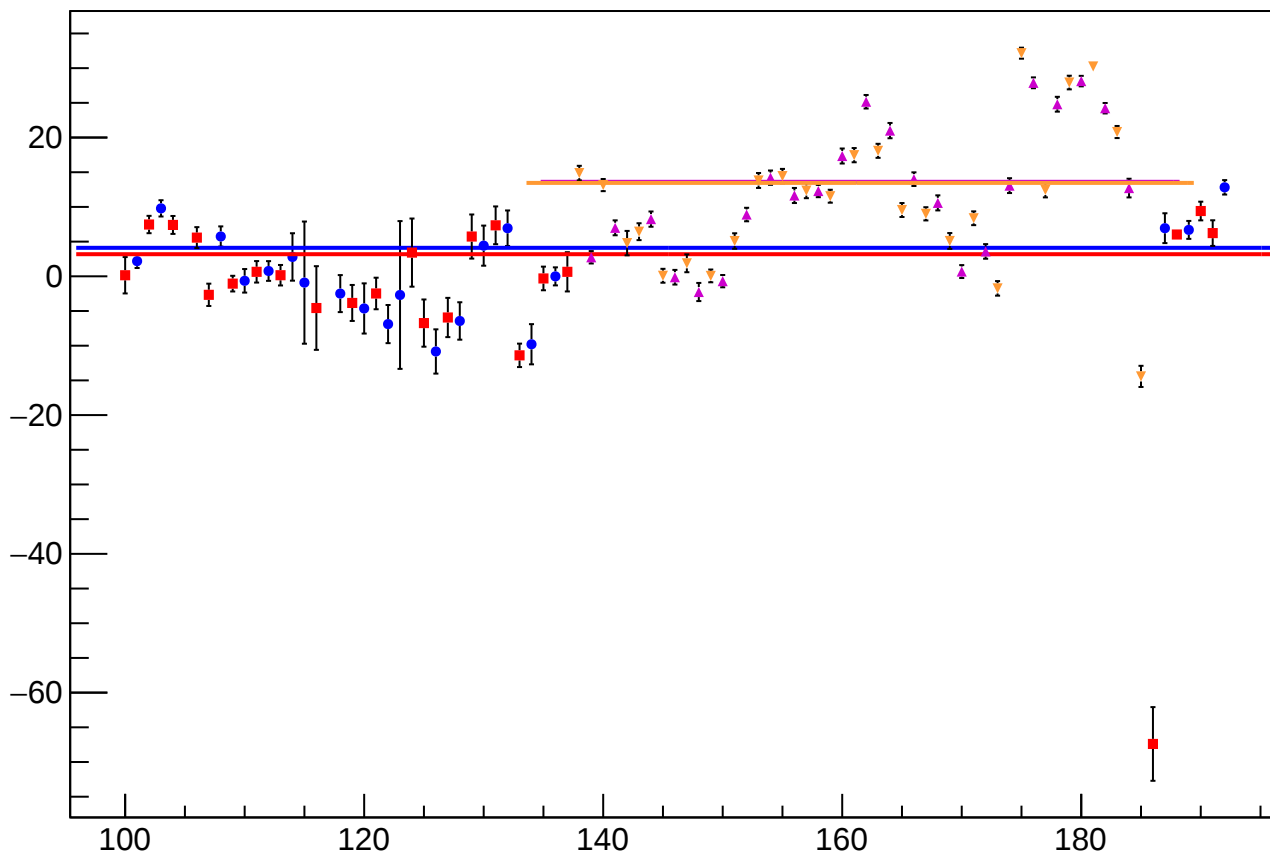
Right: 62.708 $\pm$ 0.173  $\chi^2$ /NDF: 6999.0/42

In: 58.823 $\pm$ 0.138  $\chi^2$ /NDF:5687.5/42

Out: 58.095 $\pm$ 0.132  $\chi^2$ /NDF:5753.7/47

All: 58.441 $\pm$ 0.095  $\chi^2$ /NDF: 11455.7/90

reg\_asym\_sam5\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 4.107 $\pm$ 0.393  $\chi^2$ /NDF: 218.0/19

Left Out: 13.462 $\pm$ 0.202  $\chi^2$ /NDF:2736.3/24

Right Out: 3.186 $\pm$ 0.314  $\chi^2$ /NDF: 407.6/22

Left In: 13.620 $\pm$ 0.204  $\chi^2$ /NDF:2315.4/22

Left: 13.540 $\pm$ 0.144  $\chi^2$ /NDF: 5052.0/47

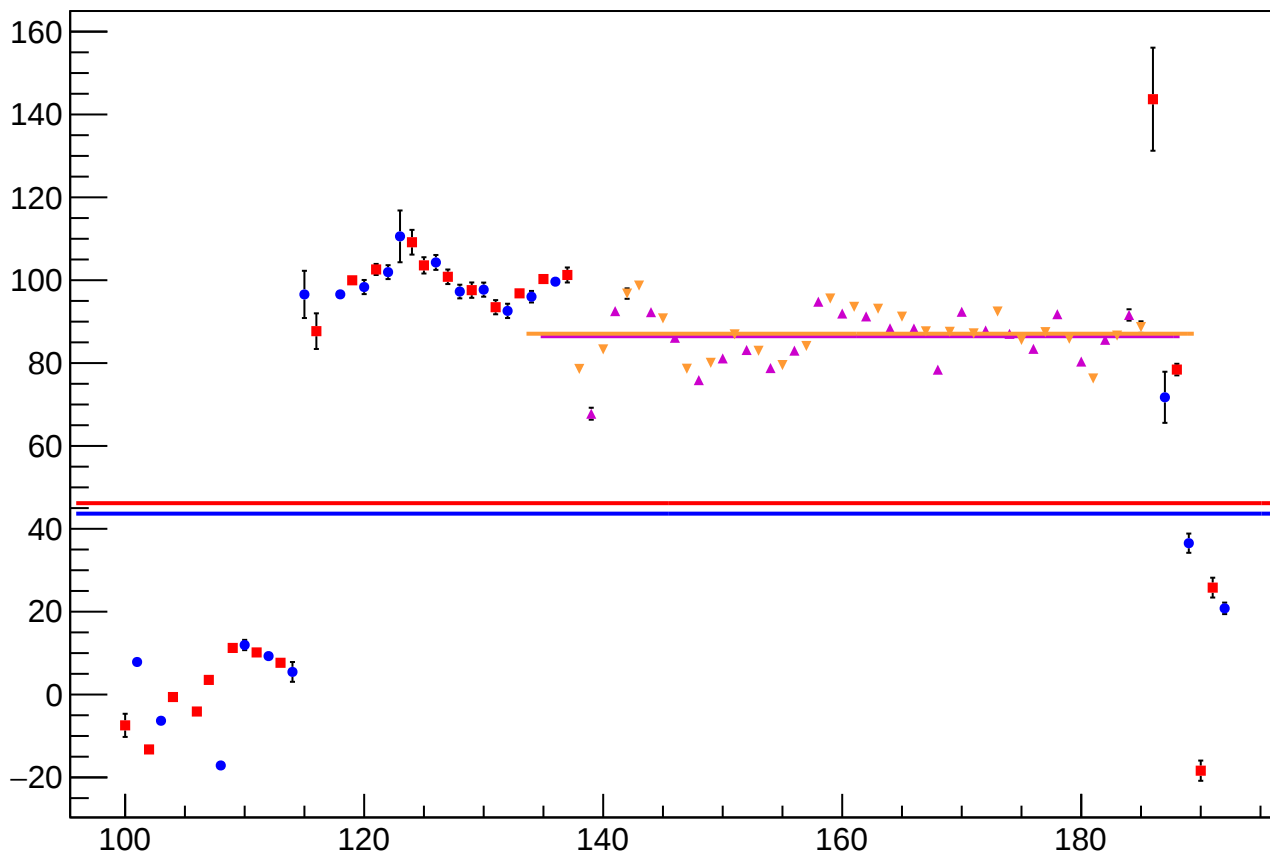
Right: 3.545 $\pm$ 0.245  $\chi^2$ /NDF: 628.9/42

In: 11.593 $\pm$ 0.181  $\chi^2$ /NDF:2994.6/42

Out: 10.468 $\pm$ 0.170  $\chi^2$ /NDF:3901.6/47

All: 10.993 $\pm$ 0.124  $\chi^2$ /NDF: 6916.8/90

reg\_asym\_sam5\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 43.661 $\pm$ 0.295  $\chi^2$ /NDF: 25015.5/19

Left Out: 87.087 $\pm$ 0.179  $\chi^2$ /NDF:1085.8/24

Right Out: 46.187 $\pm$ 0.280  $\chi^2$ /NDF: 29582.2/22

Left In: 86.482 $\pm$ 0.185  $\chi^2$ /NDF:1003.2/22

Left: 86.794 $\pm$ 0.129  $\chi^2$ /NDF: 2094.5/47

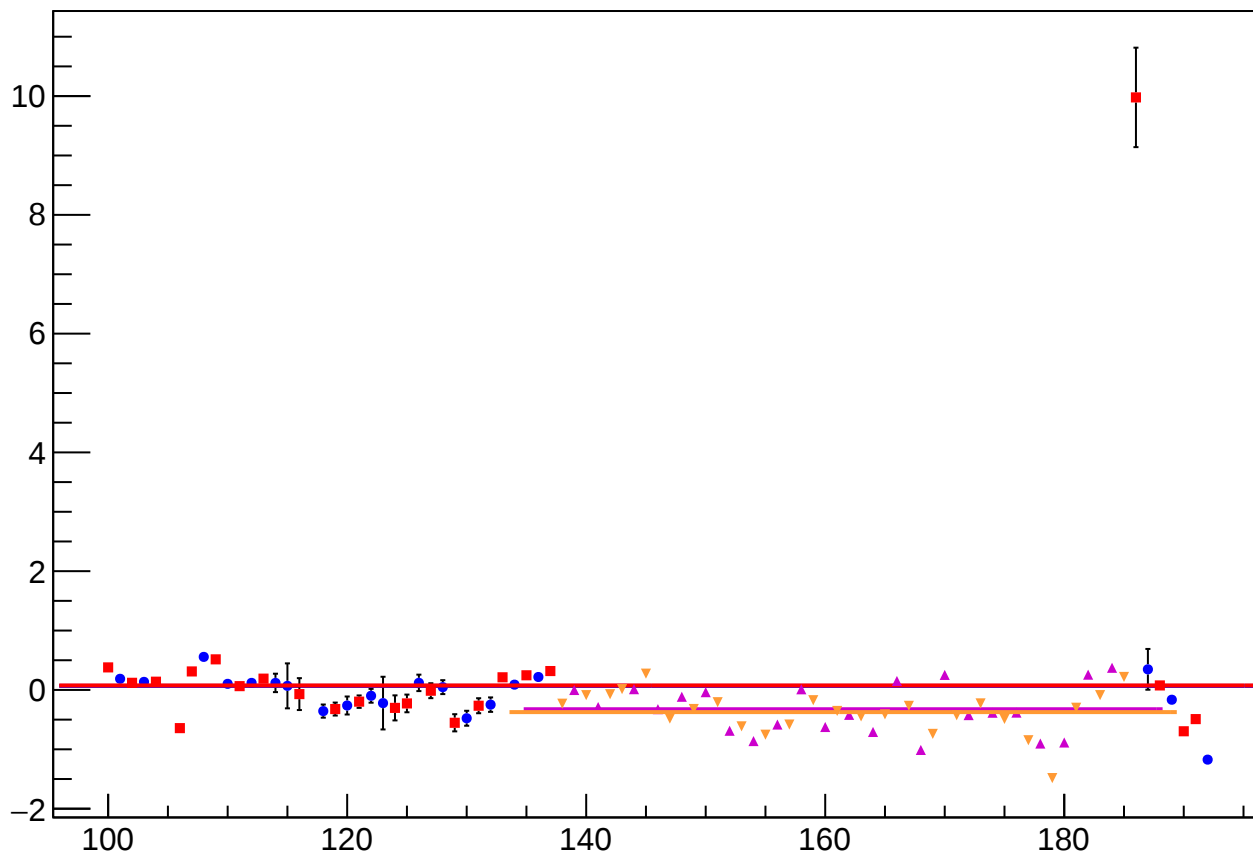
Right: 44.992 $\pm$ 0.203  $\chi^2$ /NDF: 54636.3/42

In: 74.440 $\pm$ 0.157  $\chi^2$ /NDF:41148.4/42

Out: 75.201 $\pm$ 0.151  $\chi^2$ /NDF:45826.6/47

All: 74.835 $\pm$ 0.109  $\chi^2$ /NDF: 86987.3/90

reg\_asym\_sam5\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.068+/-0.013  $\chi^2/\text{NDF}$ : 1117.2/19

Left Out: -0.373+/-0.008  $\chi^2/\text{NDF}$ : 1668.6/24

Right Out: 0.075+/-0.012  $\chi^2/\text{NDF}$ : 823.7/22

Left In: -0.325+/-0.008  $\chi^2/\text{NDF}$ : 2284.1/22

Left: -0.349+/-0.006  $\chi^2/\text{NDF}$ : 3970.2/47

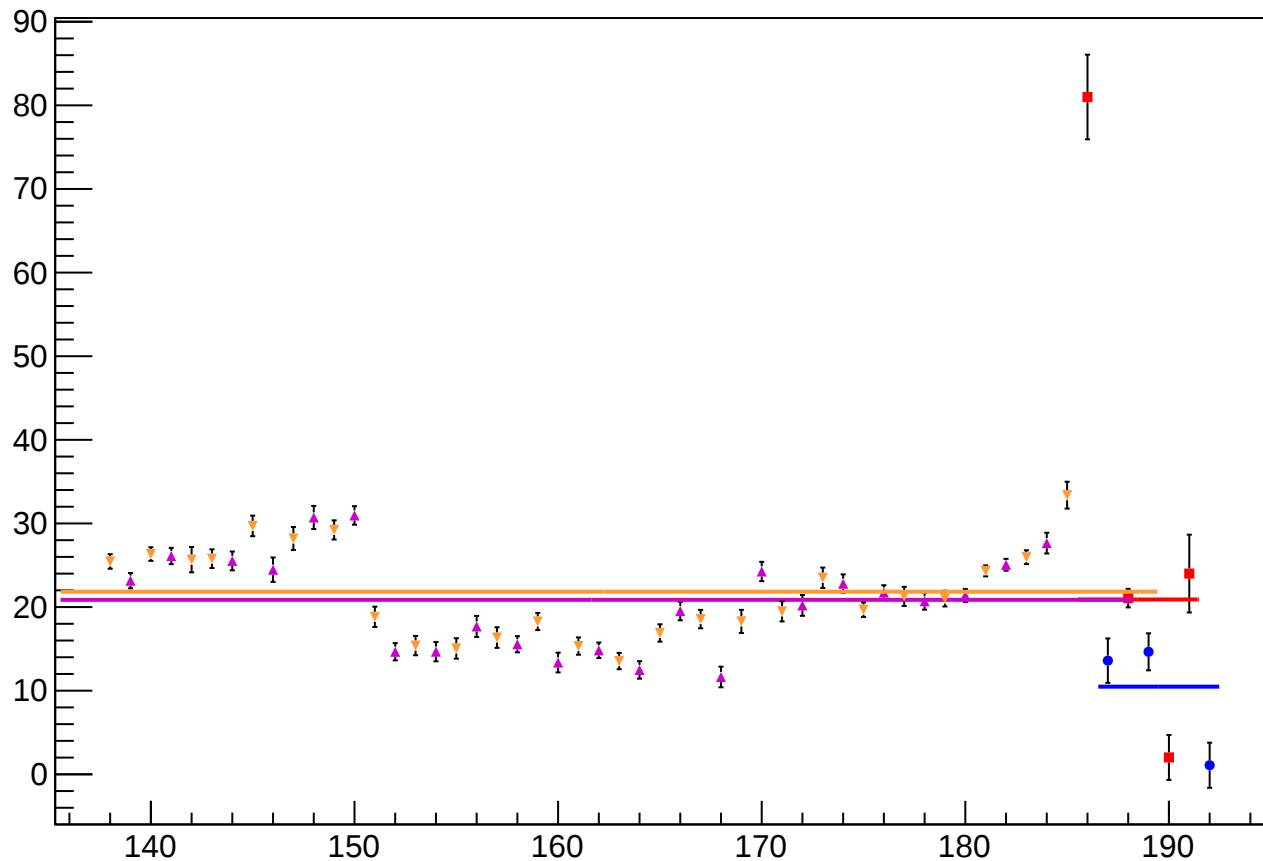
Right: 0.072+/-0.009  $\chi^2/\text{NDF}$ : 1941.1/42

In: -0.215+/-0.007  $\chi^2/\text{NDF}$ : 4041.1/42

Out: -0.238+/-0.007  $\chi^2/\text{NDF}$ : 3414.0/47

All: -0.227+/-0.005  $\chi^2/\text{NDF}$ : 7460.3/90

reg\_asym\_sam6\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $10.483 \pm 1.438$   $\chi^2/\text{NDF}: 17.0/2$

Left Out:  $21.836 \pm 0.210$   $\chi^2/\text{NDF}: 524.3/24$

Right Out:  $20.907 \pm 0.981$   $\chi^2/\text{NDF}: 190.9/3$

Left In:  $20.866 \pm 0.217$   $\chi^2/\text{NDF}: 576.9/22$

Left:  $21.366 \pm 0.151$   $\chi^2/\text{NDF}: 1111.6/47$

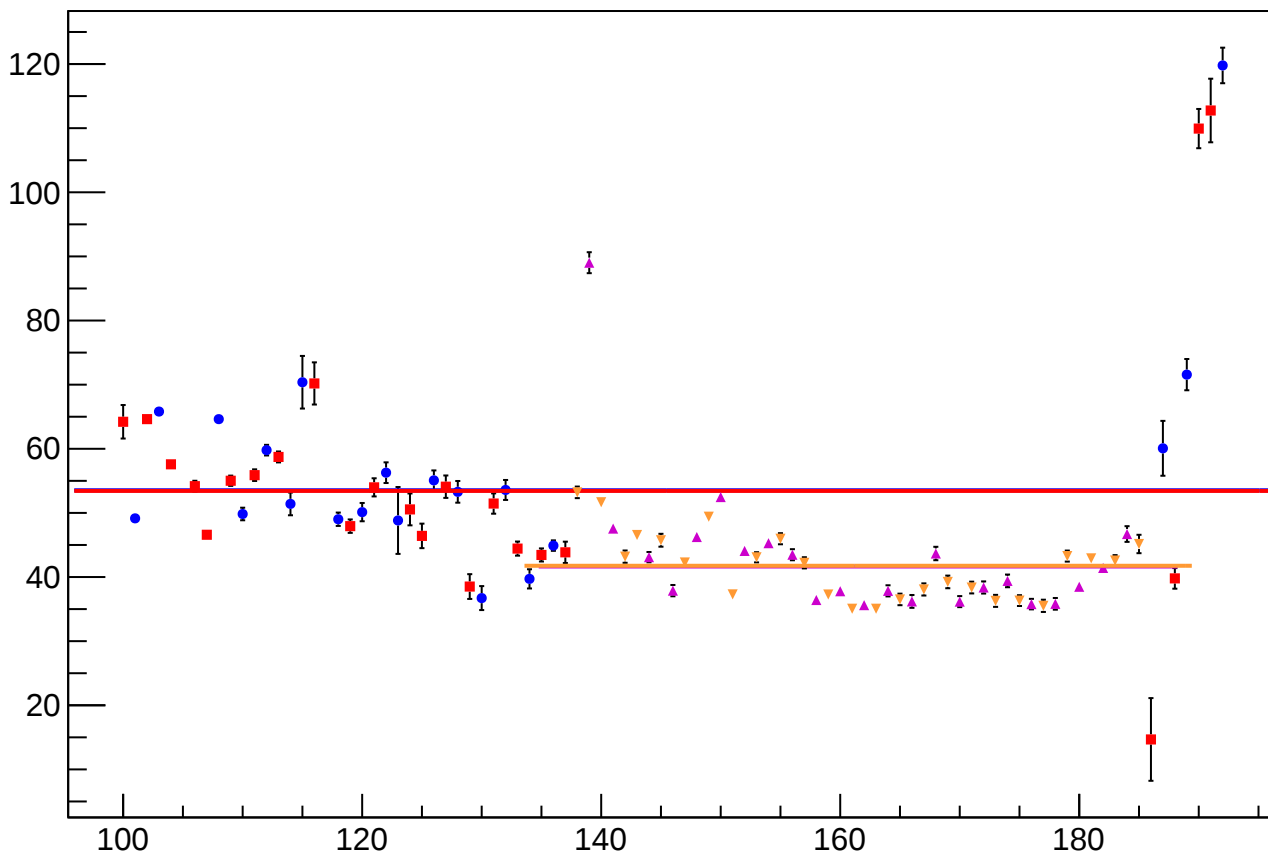
Right:  $17.600 \pm 0.810$   $\chi^2/\text{NDF}: 243.8/6$

In:  $20.635 \pm 0.214$   $\chi^2/\text{NDF}: 644.9/25$

Out:  $21.795 \pm 0.205$   $\chi^2/\text{NDF}: 716.1/28$

All:  $21.240 \pm 0.148$   $\chi^2/\text{NDF}: 1376.3/54$

reg\_asym\_sam6\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 53.529 $\pm$ 0.209  $\chi^2$ /NDF: 1832.5/19

Left Out: 41.757 $\pm$ 0.165  $\chi^2$ /NDF:1015.7/24

Right Out: 53.430 $\pm$ 0.224  $\chi^2$ /NDF: 1468.9/22

Left In: 41.643 $\pm$ 0.174  $\chi^2$ /NDF:1611.0/22

Left: 41.703 $\pm$ 0.120  $\chi^2$ /NDF: 2626.9/47

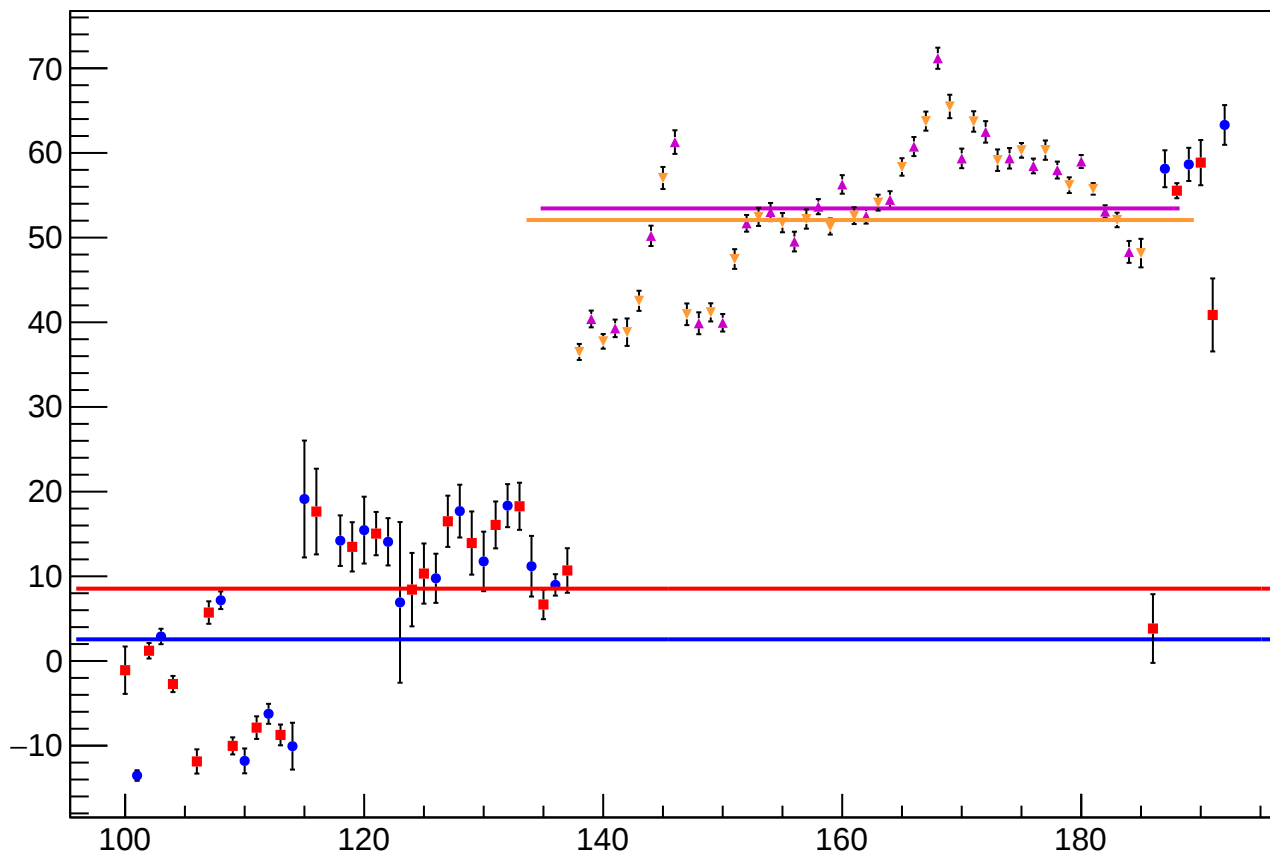
Right: 53.483 $\pm$ 0.153  $\chi^2$ /NDF: 3301.6/42

In: 46.490 $\pm$ 0.134  $\chi^2$ /NDF:5351.5/42

Out: 45.883 $\pm$ 0.133  $\chi^2$ /NDF:4246.2/47

All: 46.185 $\pm$ 0.094  $\chi^2$ /NDF: 9608.0/90

reg\_asym\_sam6\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 2.556 $\pm$ 0.350  $\chi^2$ /NDF: 3155.5/19

Left Out: 52.076 $\pm$ 0.210  $\chi^2$ /NDF:1450.9/24

Right Out: 8.544 $\pm$ 0.342  $\chi^2$ /NDF: 4336.3/22

Left In: 53.447 $\pm$ 0.215  $\chi^2$ /NDF:1169.0/22

Left: 52.744 $\pm$ 0.150  $\chi^2$ /NDF: 2640.6/47

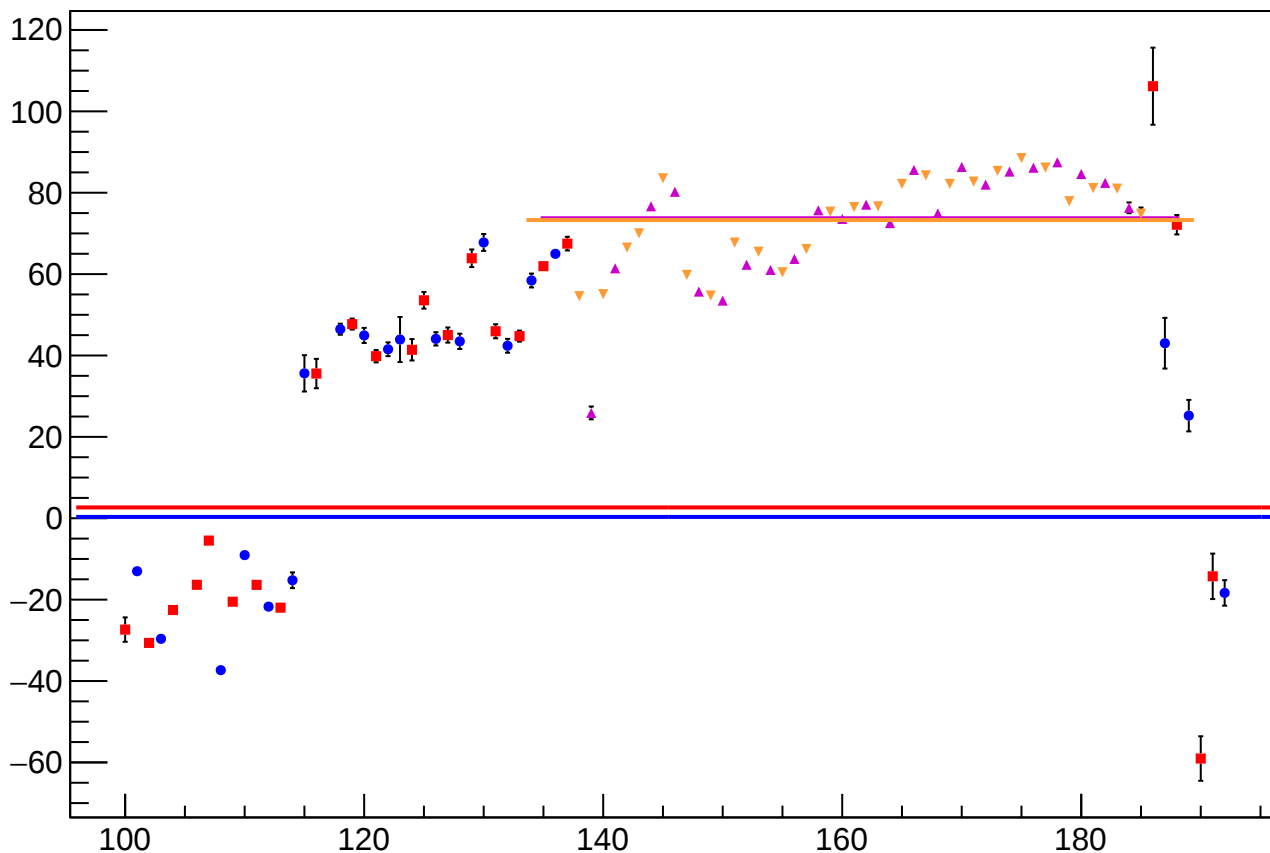
Right: 5.615 $\pm$ 0.245  $\chi^2$ /NDF: 7641.6/42

In: 39.459 $\pm$ 0.183  $\chi^2$ /NDF:19673.9/42

Out: 40.169 $\pm$ 0.179  $\chi^2$ /NDF:17539.9/47

All: 39.823 $\pm$ 0.128  $\chi^2$ /NDF: 37221.5/90

reg\_asym\_sam6\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 0.328+/-0.246  $\chi^2/\text{NDF}$ : 18343.8/19

Left Out: 73.284+/-0.187  $\chi^2/\text{NDF}$ :3144.2/24

Right Out: 2.665+/-0.264  $\chi^2/\text{NDF}$ : 16527.1/22

Left In: 73.730+/-0.194  $\chi^2/\text{NDF}$ :3775.8/22

Left: 73.498+/-0.135  $\chi^2/\text{NDF}$ : 6922.7/47

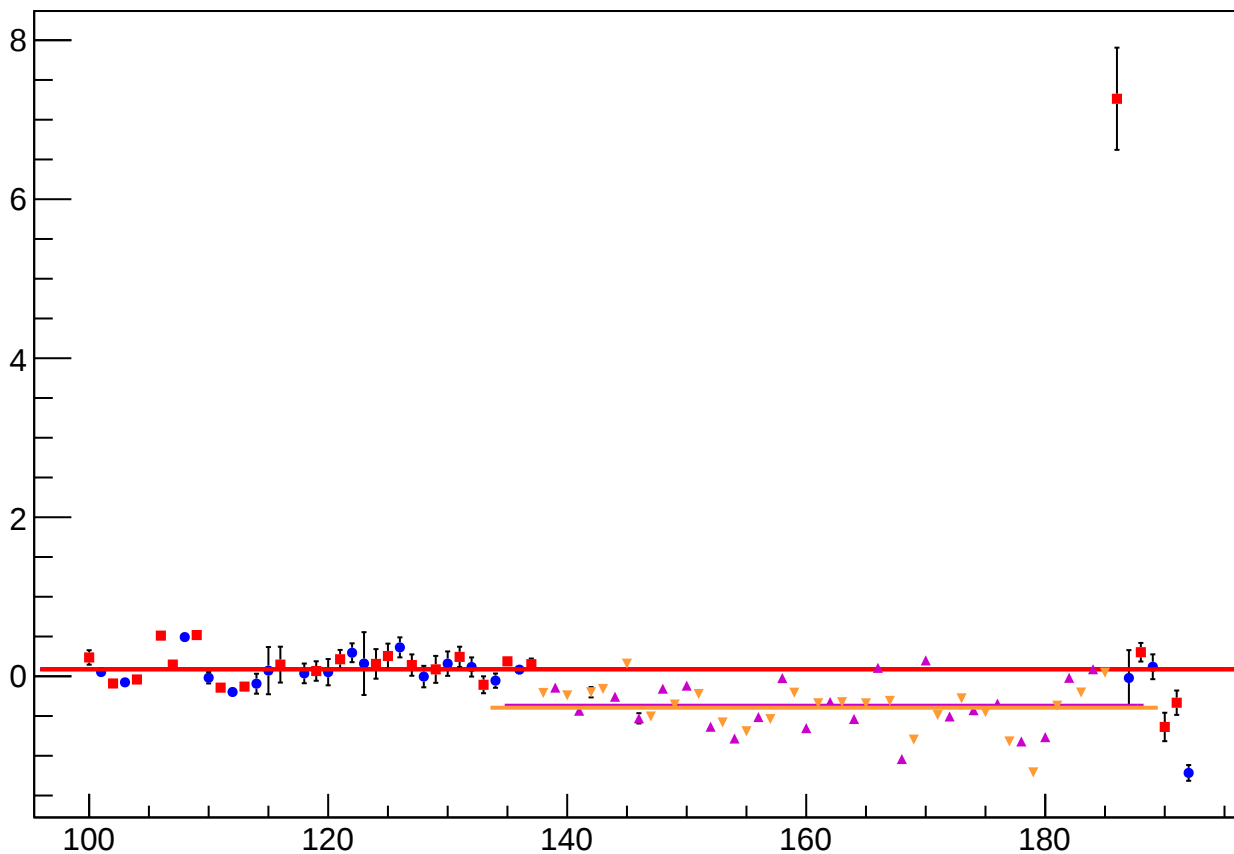
Right: 1.413+/-0.180  $\chi^2/\text{NDF}$ : 34912.7/42

In: 45.550+/-0.153  $\chi^2/\text{NDF}$ :76890.2/42

Out: 49.765+/-0.153  $\chi^2/\text{NDF}$ :67246.1/47

All: 47.657+/-0.108  $\chi^2/\text{NDF}$ : 144517.9/90

reg\_asym\_sam6\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $0.089 \pm 0.011$   $\chi^2/\text{NDF}: 576.2/19$

Left Out:  $-0.396 \pm 0.009$   $\chi^2/\text{NDF}: 950.0/24$

Right Out:  $0.087 \pm 0.011$   $\chi^2/\text{NDF}: 542.8/22$

Left In:  $-0.371 \pm 0.009$   $\chi^2/\text{NDF}: 1313.7/22$

Left:  $-0.383 \pm 0.006$   $\chi^2/\text{NDF}: 2268.0/47$

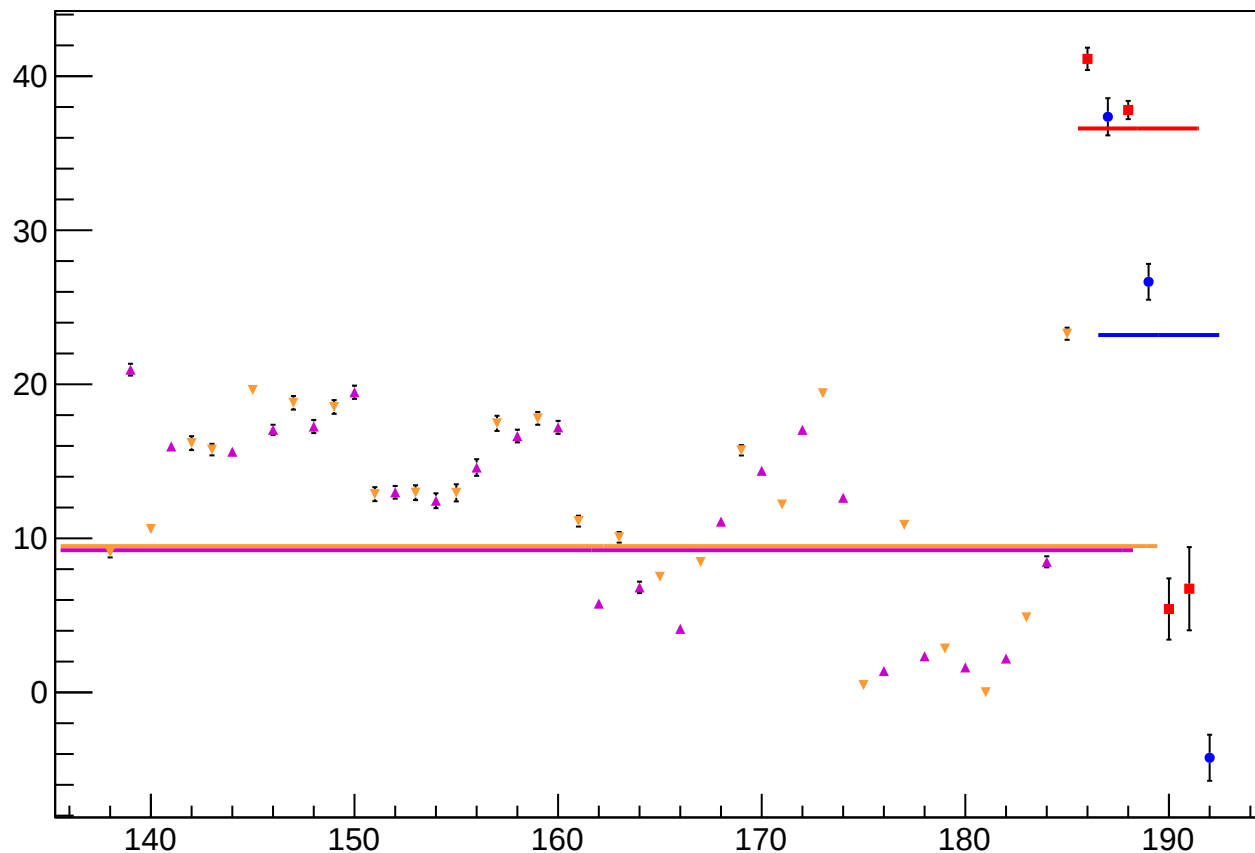
Right:  $0.088 \pm 0.008$   $\chi^2/\text{NDF}: 1119.0/42$

In:  $-0.193 \pm 0.007$   $\chi^2/\text{NDF}: 2968.7/42$

Out:  $-0.212 \pm 0.007$   $\chi^2/\text{NDF}: 2703.6/47$

All:  $-0.203 \pm 0.005$   $\chi^2/\text{NDF}: 5676.5/90$

reg\_asym\_sam7\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 23.197 $\pm$ 0.731  $\chi^2$ /NDF: 482.9/2

Left Out: 9.495 $\pm$ 0.061  $\chi^2$ /NDF:12609.1/24

Right Out: 36.606 $\pm$ 0.441  $\chi^2$ /NDF: 411.6/3

Left In: 9.231 $\pm$ 0.063  $\chi^2$ /NDF:10736.2/22

Left: 9.367 $\pm$ 0.044  $\chi^2$ /NDF: 23354.3/47

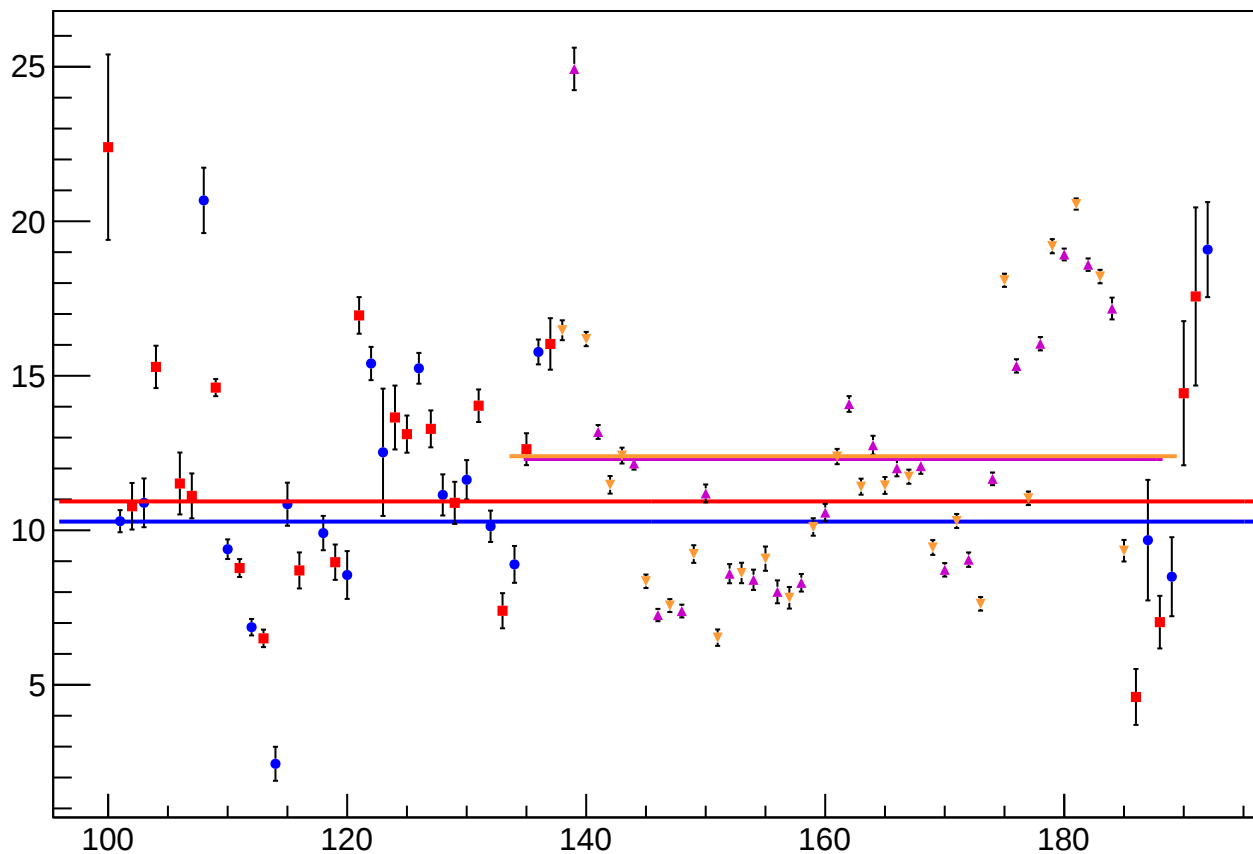
Right: 33.031 $\pm$ 0.377  $\chi^2$ /NDF: 1141.3/6

In: 9.334 $\pm$ 0.063  $\chi^2$ /NDF:11581.3/25

Out: 10.008 $\pm$ 0.061  $\chi^2$ /NDF:16732.4/28

All: 9.683 $\pm$ 0.044  $\chi^2$ /NDF: 28373.3/54

reg\_asym\_sam7\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 10.282 $\pm$ 0.119  $\chi^2$ /NDF: 901.0/19

Left Out: 12.397 $\pm$ 0.050  $\chi^2$ /NDF: 7542.8/24

Right Out: 10.934 $\pm$ 0.114  $\chi^2$ /NDF: 896.0/22

Left In: 12.307 $\pm$ 0.051  $\chi^2$ /NDF: 5601.8/22

Left: 12.353 $\pm$ 0.036  $\chi^2$ /NDF: 13146.3/47

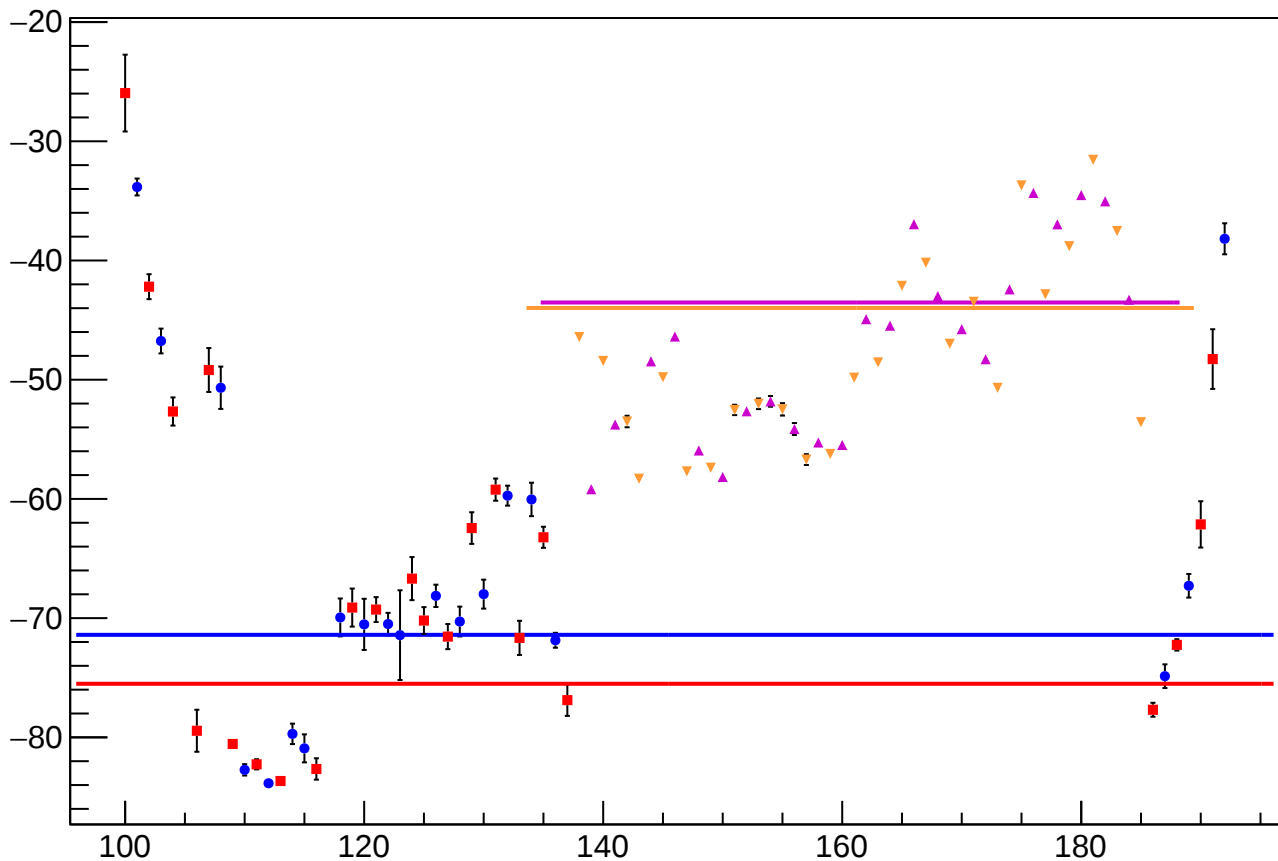
Right: 10.620 $\pm$ 0.082  $\chi^2$ /NDF: 1812.7/42

In: 11.988 $\pm$ 0.047  $\chi^2$ /NDF: 6748.7/42

Out: 12.164 $\pm$ 0.046  $\chi^2$ /NDF: 8576.6/47

All: 12.079 $\pm$ 0.033  $\chi^2$ /NDF: 15332.5/90

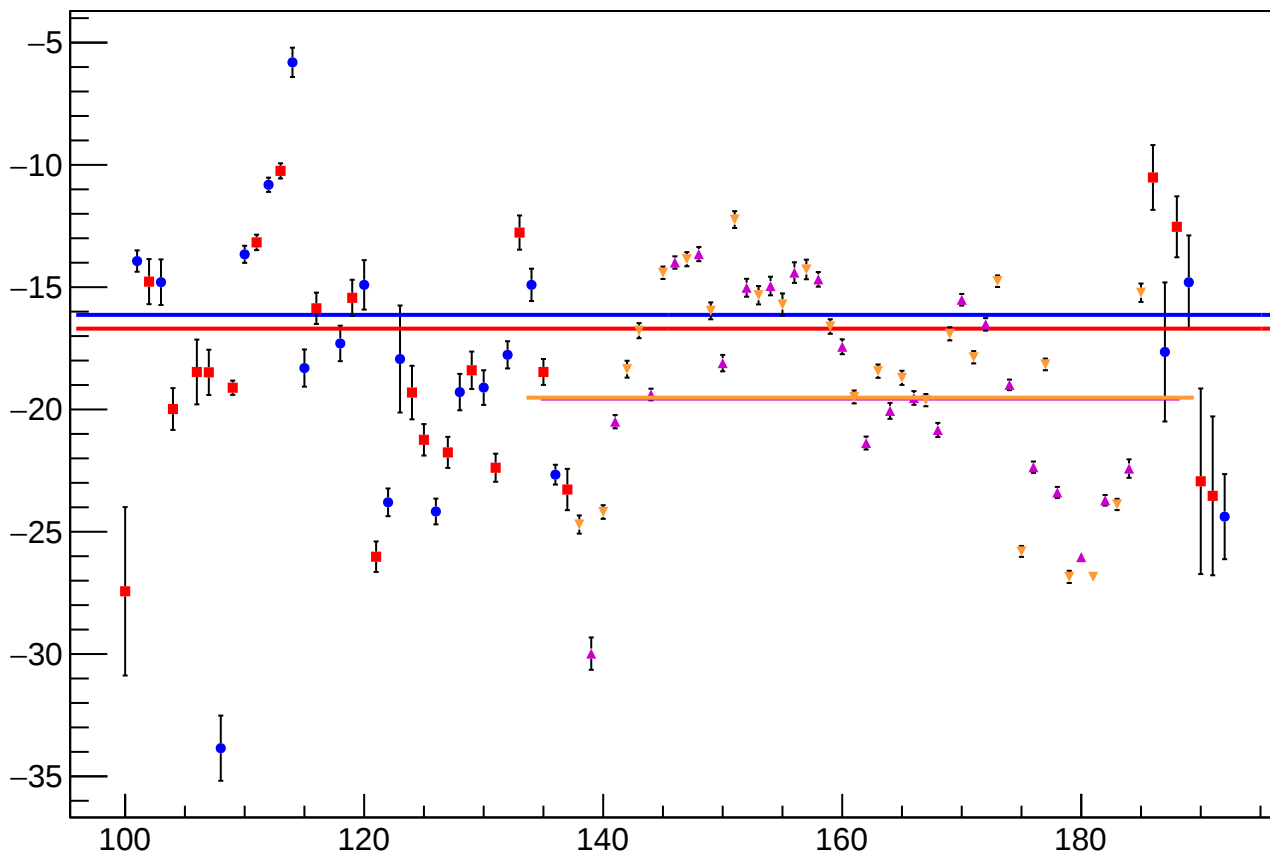
reg\_asym\_sam7\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-71.400 \pm 0.189$   $\chi^2/\text{NDF}: 6261.0/19$   
 Left Out:  $-43.982 \pm 0.062$   $\chi^2/\text{NDF}: 17736.8/24$   
 Right Out:  $-75.506 \pm 0.162$   $\chi^2/\text{NDF}: 3693.8/22$   
 Left In:  $-43.523 \pm 0.063$   $\chi^2/\text{NDF}: 15267.1/22$

Left:  $-43.757 \pm 0.044$   $\chi^2/\text{NDF}: 33030.8/47$   
 Right:  $-73.769 \pm 0.123$   $\chi^2/\text{NDF}: 10227.4/42$   
 In:  $-46.339 \pm 0.060$   $\chi^2/\text{NDF}: 41105.0/42$   
 Out:  $-48.012 \pm 0.058$   $\chi^2/\text{NDF}: 54548.6/47$   
 All:  $-47.206 \pm 0.042$   $\chi^2/\text{NDF}: 96056.2/90$

reg\_asym\_sam7\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



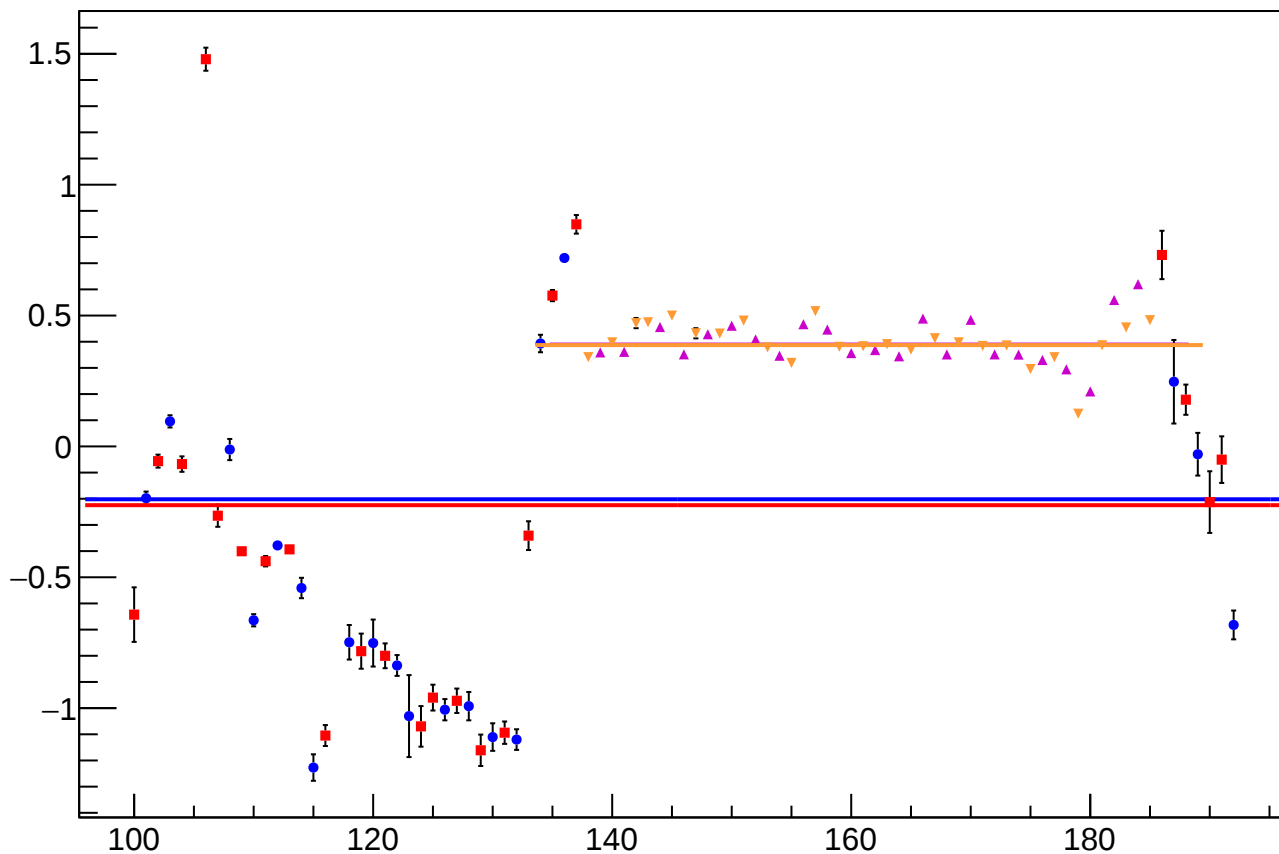
Right In:  $-16.132 \pm 0.132$   $\chi^2/\text{NDF}: 1644.0/19$   
 Left Out:  $-19.517 \pm 0.056$   $\chi^2/\text{NDF}: 6518.3/24$   
 Right Out:  $-16.695 \pm 0.127$   $\chi^2/\text{NDF}: 1251.7/22$   
 Left In:  $-19.555 \pm 0.057$   $\chi^2/\text{NDF}: 4311.2/22$

Left:  $-19.536 \pm 0.040$   $\chi^2/\text{NDF}: 10829.6/47$   
 Right:  $-16.425 \pm 0.091$   $\chi^2/\text{NDF}: 2905.2/42$

In:  $-19.011 \pm 0.053$   $\chi^2/\text{NDF}: 6520.9/42$   
 Out:  $-19.061 \pm 0.051$   $\chi^2/\text{NDF}: 8184.5/47$

All:  $-19.037 \pm 0.037$   $\chi^2/\text{NDF}: 14705.9/90$

reg\_asym\_sam7\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.202 \pm 0.007$   $\chi^2/\text{NDF}$ : 6405.7/19

Left Out:  $0.387 \pm 0.003$   $\chi^2/\text{NDF}$ : 995.0/24

Right Out:  $-0.225 \pm 0.007$   $\chi^2/\text{NDF}$ : 6339.6/22

Left In:  $0.389 \pm 0.003$   $\chi^2/\text{NDF}$ : 1256.9/22

Left:  $0.388 \pm 0.002$   $\chi^2/\text{NDF}$ : 2252.2/47

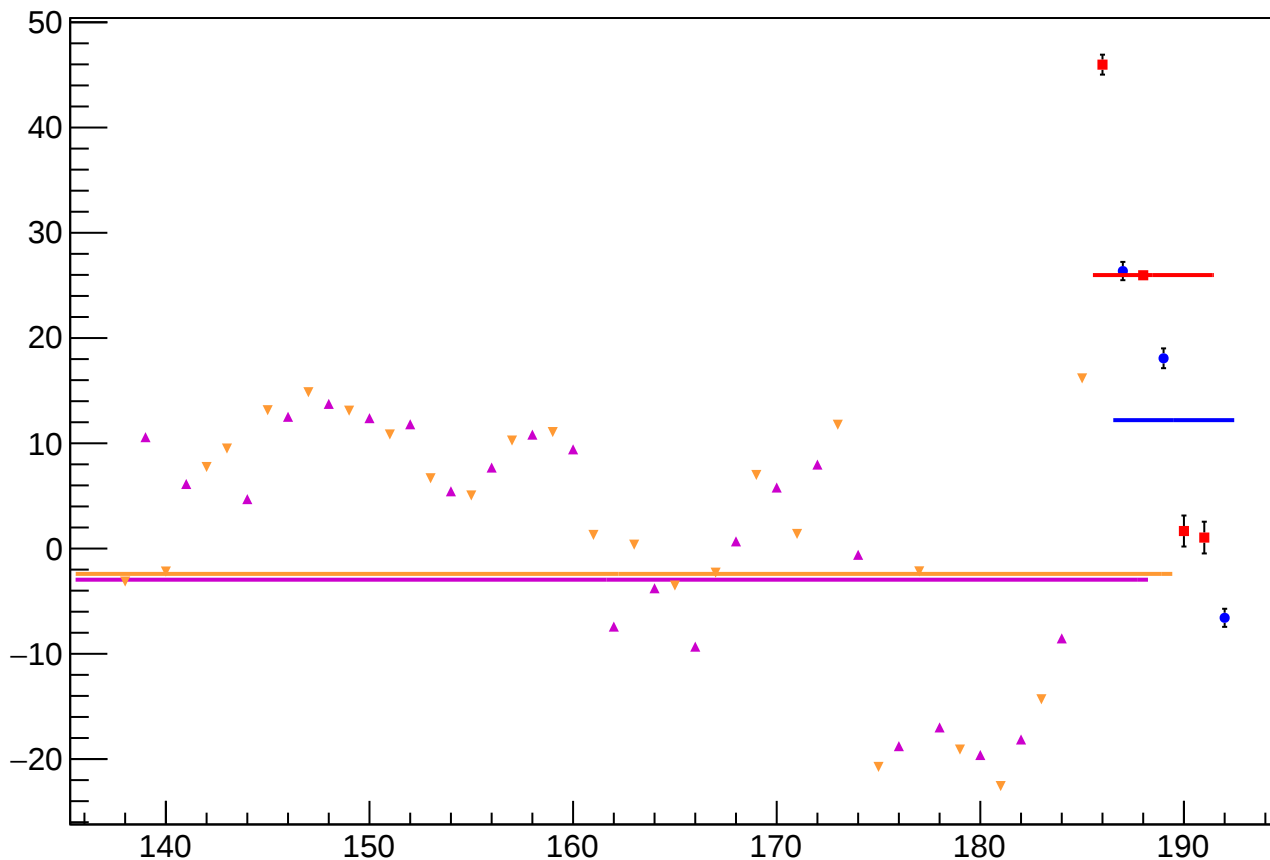
Right:  $-0.214 \pm 0.005$   $\chi^2/\text{NDF}$ : 12750.2/42

In:  $0.324 \pm 0.002$   $\chi^2/\text{NDF}$ : 13269.7/42

Out:  $0.316 \pm 0.002$   $\chi^2/\text{NDF}$ : 13947.4/47

All:  $0.320 \pm 0.002$   $\chi^2/\text{NDF}$ : 27222.1/90

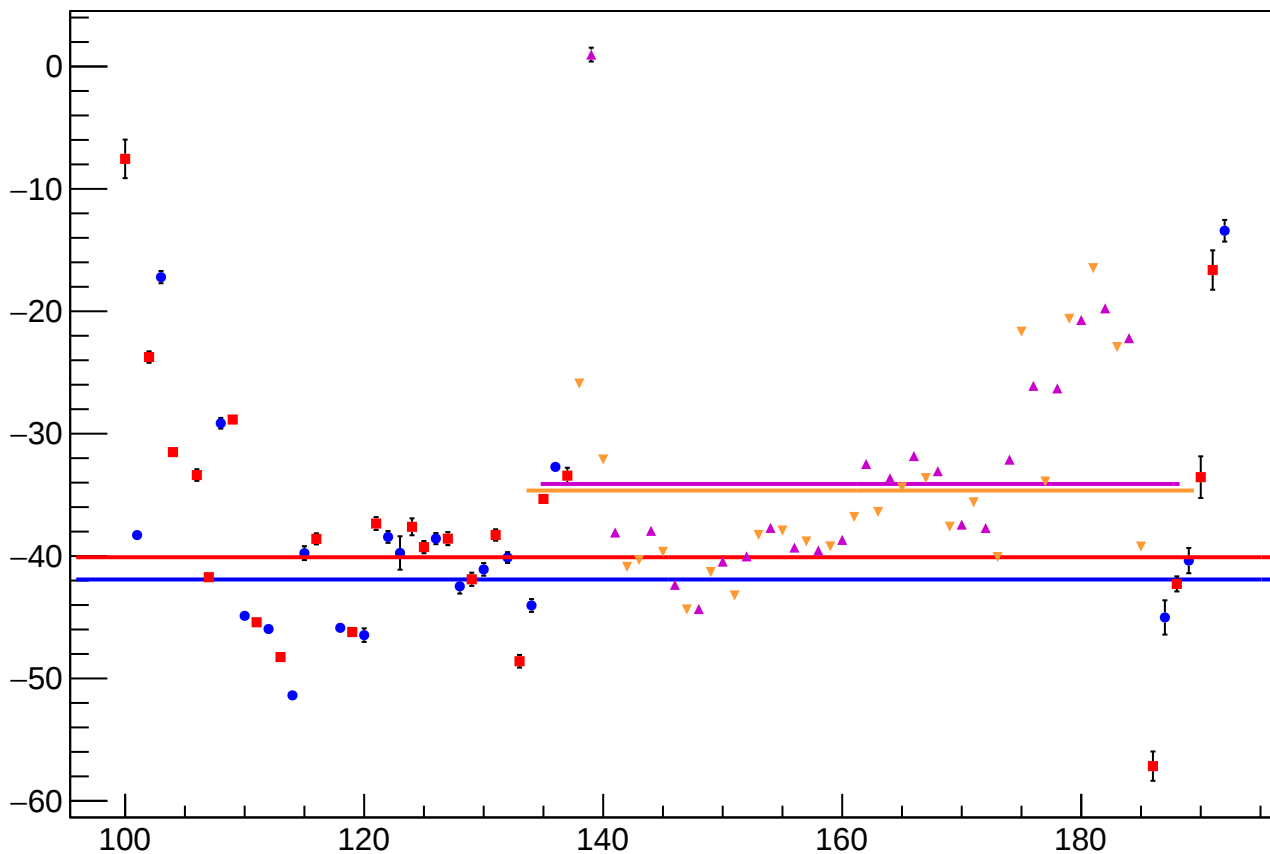
reg\_asym\_sam8\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $12.200 \pm 0.512$   $\chi^2/\text{NDF}$ : 783.5/2  
 Left Out:  $-2.407 \pm 0.053$   $\chi^2/\text{NDF}$ : 56368.5/24  
 Right Out:  $25.983 \pm 0.366$   $\chi^2/\text{NDF}$ : 991.2/3  
 Left In:  $-2.959 \pm 0.055$   $\chi^2/\text{NDF}$ : 45922.6/22

Left:  $-2.672 \pm 0.038$   $\chi^2/\text{NDF}$ : 102343.8/47  
 Right:  $21.329 \pm 0.298$   $\chi^2/\text{NDF}$ : 2254.7/6  
 In:  $-2.787 \pm 0.055$   $\chi^2/\text{NDF}$ : 47572.7/25  
 Out:  $-1.828 \pm 0.052$   $\chi^2/\text{NDF}$ : 63266.2/28  
 All:  $-2.287 \pm 0.038$   $\chi^2/\text{NDF}$ : 111000.5/54

reg\_asym\_sam8\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-41.914 \pm 0.078$   $\chi^2/\text{NDF}$ : 7609.6/19

Left Out:  $-34.646 \pm 0.042$   $\chi^2/\text{NDF}$ : 34674.7/24

Right Out:  $-40.095 \pm 0.072$   $\chi^2/\text{NDF}$ : 11763.8/22

Left In:  $-34.108 \pm 0.044$   $\chi^2/\text{NDF}$ : 29052.8/22

Left:  $-34.390 \pm 0.030$   $\chi^2/\text{NDF}$ : 63806.0/47

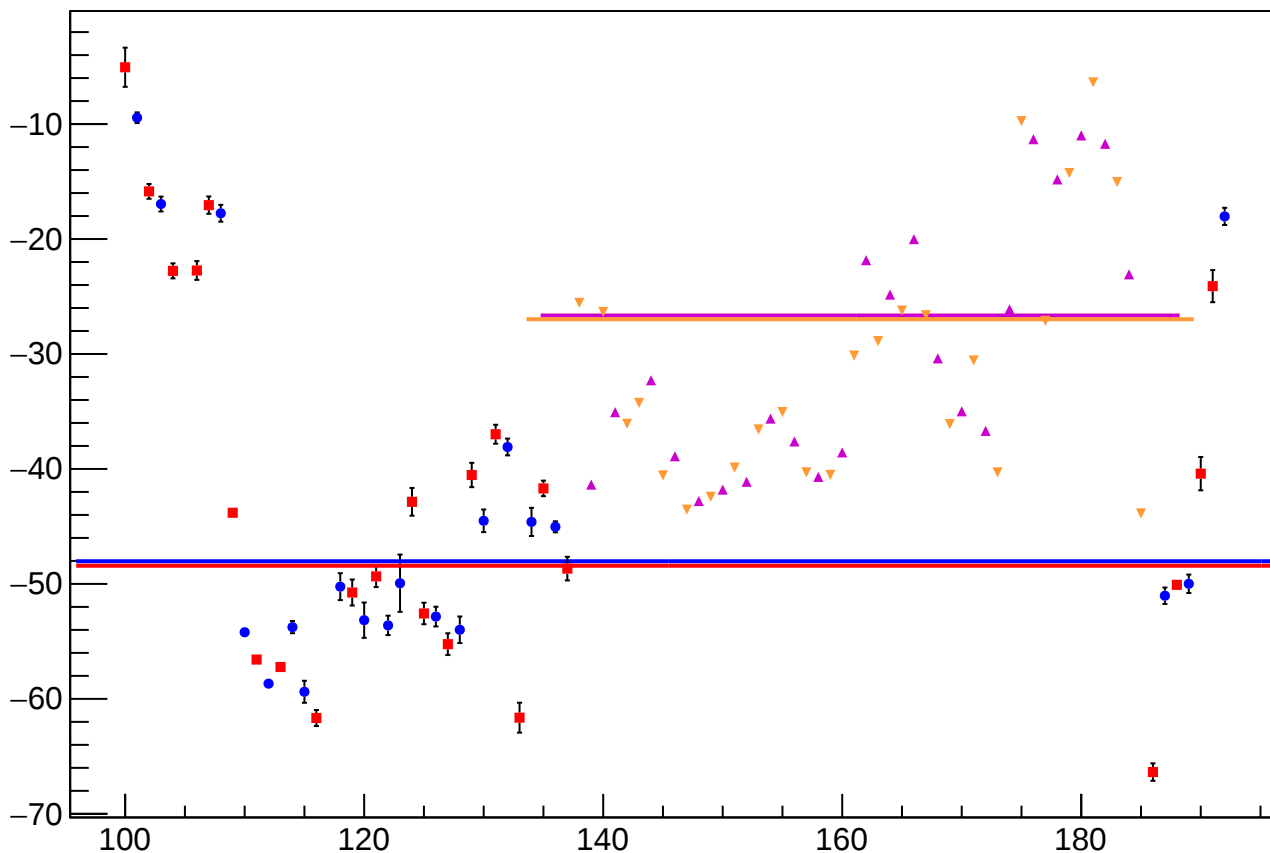
Right:  $-40.938 \pm 0.053$   $\chi^2/\text{NDF}$ : 19668.7/42

In:  $-36.007 \pm 0.038$   $\chi^2/\text{NDF}$ : 44332.7/42

Out:  $-36.017 \pm 0.036$   $\chi^2/\text{NDF}$ : 50720.6/47

All:  $-36.013 \pm 0.026$   $\chi^2/\text{NDF}$ : 95053.3/90

reg\_asym\_sam8\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-48.030 \pm 0.120$   $\chi^2/\text{NDF}: 16327.8/19$

Left Out:  $-26.978 \pm 0.053$   $\chi^2/\text{NDF}: 49361.1/24$

Right Out:  $-48.420 \pm 0.101$   $\chi^2/\text{NDF}: 12657.5/22$

Left In:  $-26.654 \pm 0.055$   $\chi^2/\text{NDF}: 42106.8/22$

Left:  $-26.821 \pm 0.038$   $\chi^2/\text{NDF}: 91485.8/47$

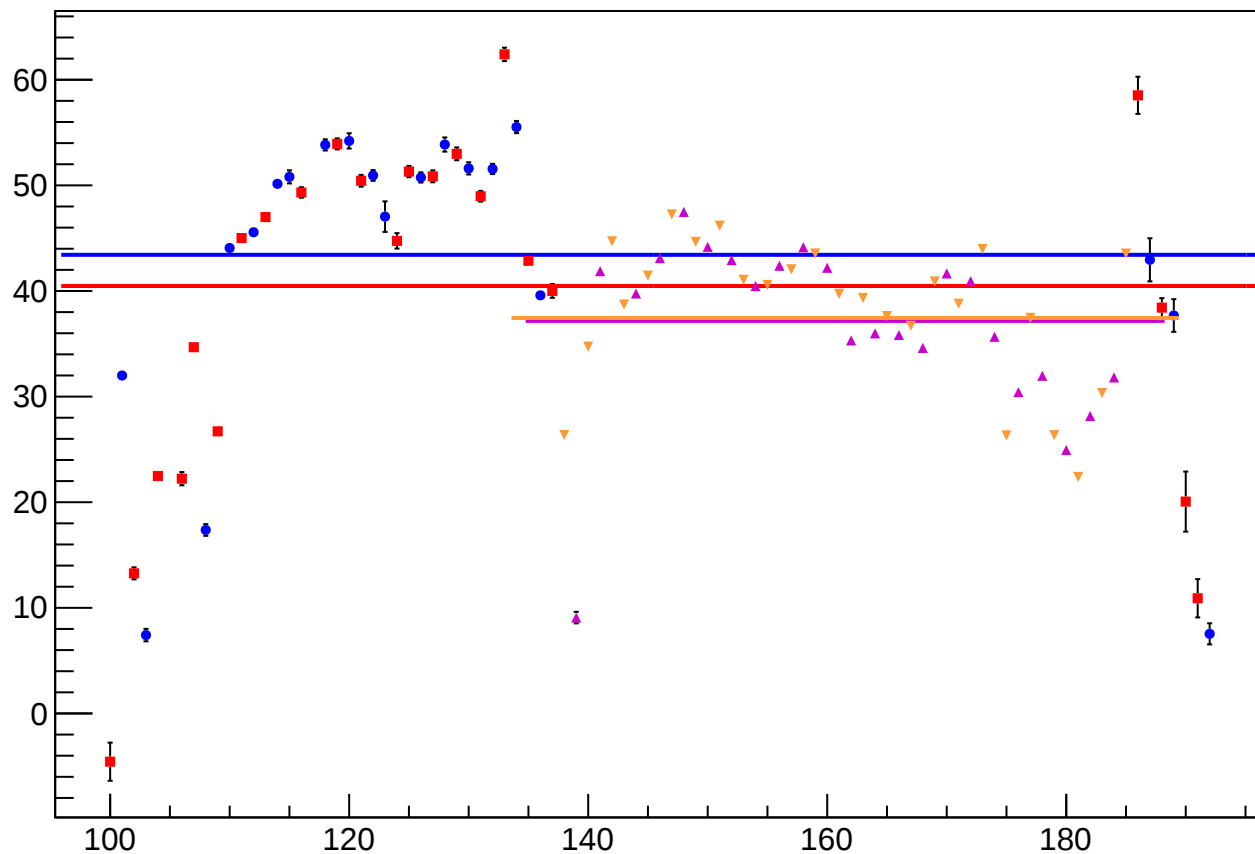
Right:  $-48.258 \pm 0.077$   $\chi^2/\text{NDF}: 28991.5/42$

In:  $-30.359 \pm 0.050$   $\chi^2/\text{NDF}: 84682.7/42$

Out:  $-31.631 \pm 0.047$   $\chi^2/\text{NDF}: 97287.6/47$

All:  $-31.033 \pm 0.034$   $\chi^2/\text{NDF}: 182313.6/90$

reg\_asym\_sam8\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 43.425+/-0.086  $\chi^2/\text{NDF}$ : 11880.3/19

Left Out: 37.447+/-0.047  $\chi^2/\text{NDF}$ : 21570.6/24

Right Out: 40.472+/-0.080  $\chi^2/\text{NDF}$ : 18007.1/22

Left In: 37.169+/-0.049  $\chi^2/\text{NDF}$ : 17236.9/22

Left: 37.314+/-0.034  $\chi^2/\text{NDF}$ : 38824.1/47

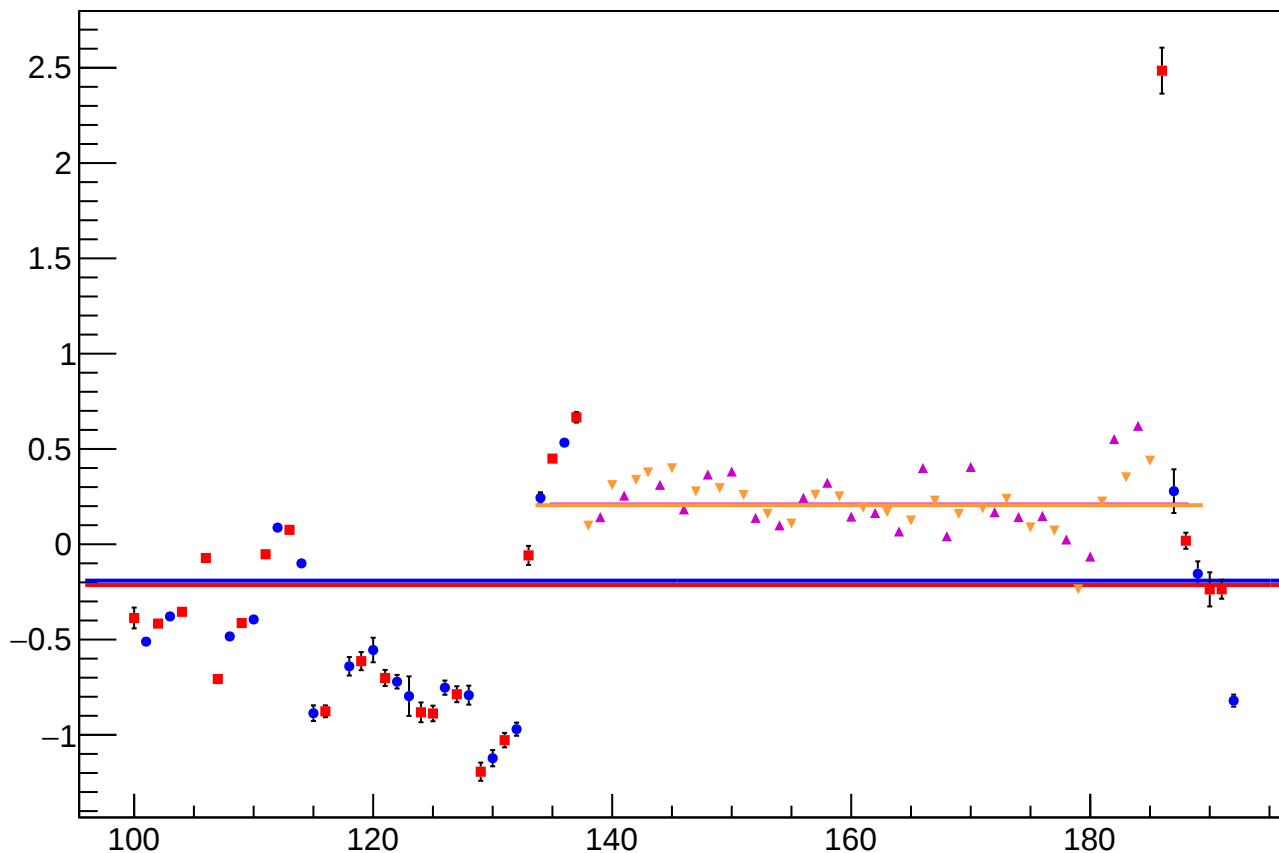
Right: 41.828+/-0.059  $\chi^2/\text{NDF}$ : 30517.4/42

In: 38.702+/-0.043  $\chi^2/\text{NDF}$ : 33066.9/42

Out: 38.231+/-0.041  $\chi^2/\text{NDF}$ : 40644.2/47

All: 38.454+/-0.029  $\chi^2/\text{NDF}$ : 73774.9/90

reg\_asym\_sam8\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.191 \pm 0.005$   $\chi^2/\text{NDF}$ : 7776.0/19

Left Out:  $0.205 \pm 0.002$   $\chi^2/\text{NDF}$ : 3826.2/24

Right Out:  $-0.214 \pm 0.004$   $\chi^2/\text{NDF}$ : 7950.6/22

Left In:  $0.208 \pm 0.002$   $\chi^2/\text{NDF}$ : 5094.6/22

Left:  $0.207 \pm 0.002$   $\chi^2/\text{NDF}$ : 8922.0/47

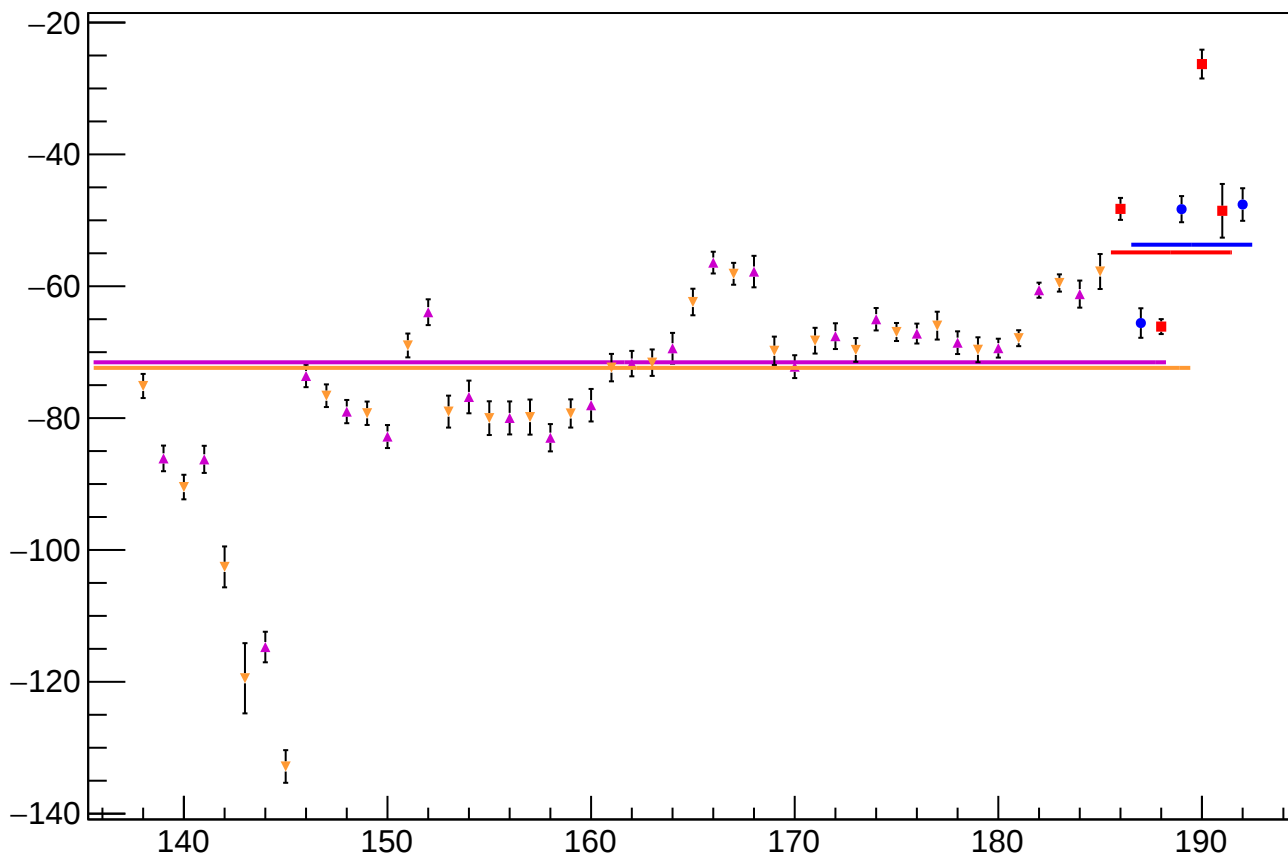
Right:  $-0.204 \pm 0.003$   $\chi^2/\text{NDF}$ : 15739.4/42

In:  $0.136 \pm 0.002$   $\chi^2/\text{NDF}$ : 18599.9/42

Out:  $0.118 \pm 0.002$   $\chi^2/\text{NDF}$ : 19448.1/47

All:  $0.127 \pm 0.001$   $\chi^2/\text{NDF}$ : 38087.5/90

reg\_asym\_usl\_diff\_bpm1X\_slope vs Slug, Sign Corrected

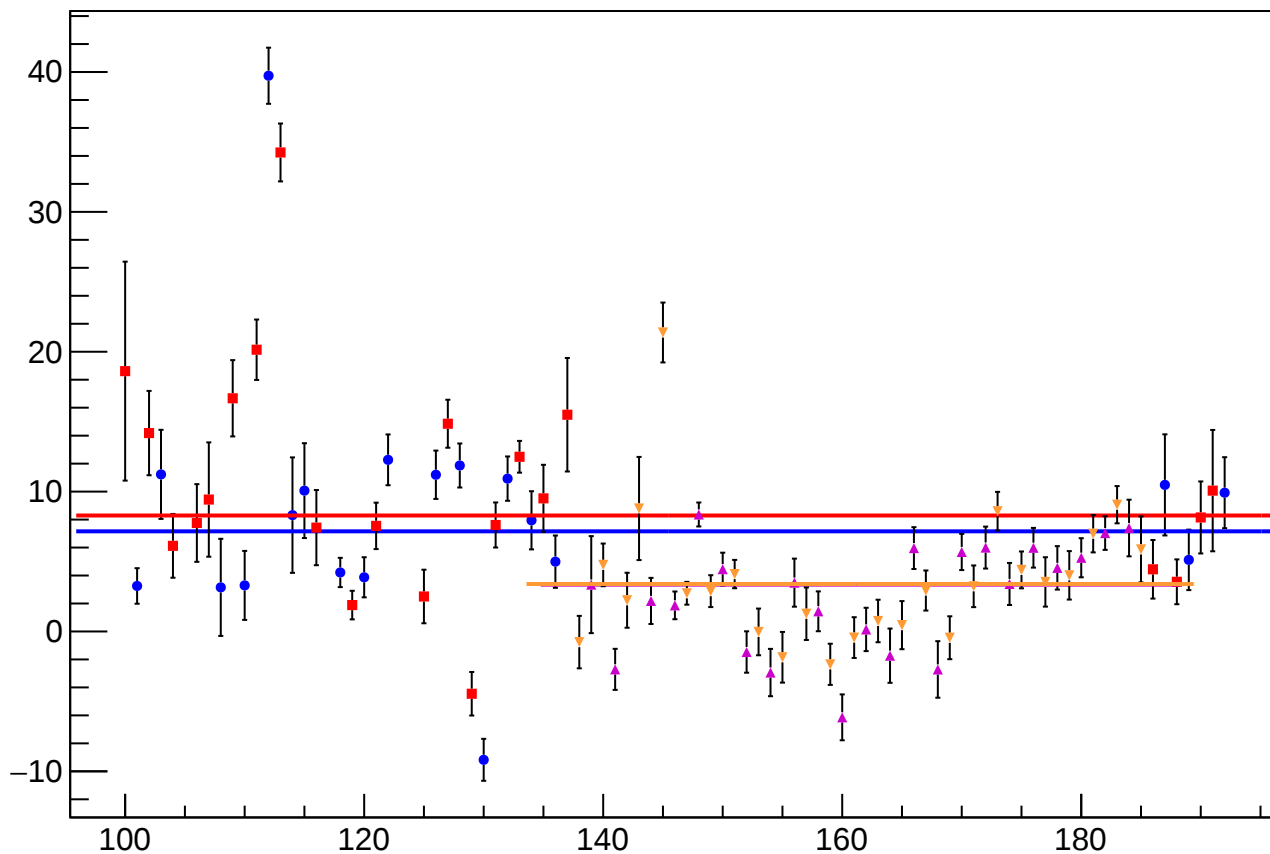


Right In: -53.698 $\pm$ 1.273  $\chi^2$ /NDF: 41.6/2  
 Left Out: -72.381 $\pm$ 0.382  $\chi^2$ /NDF:1199.9/24  
 Right Out: -54.867 $\pm$ 0.843  $\chi^2$ /NDF: 287.2/3  
 Left In: -71.534 $\pm$ 0.382  $\chi^2$ /NDF:851.4/22

Left: -71.957 $\pm$ 0.270  $\chi^2$ /NDF: 2053.7/47  
 Right: -54.510 $\pm$ 0.703  $\chi^2$ /NDF: 329.4/6  
 In: -70.062 $\pm$ 0.366  $\chi^2$ /NDF:1073.3/25  
 Out: -69.401 $\pm$ 0.348  $\chi^2$ /NDF:1845.1/28

All: -69.715 $\pm$ 0.252  $\chi^2$ /NDF: 2920.1/54

reg\_asym\_usl\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $7.159 \pm 0.422$   $\chi^2/\text{NDF}: 443.4/18$

Left Out:  $3.392 \pm 0.294$   $\chi^2/\text{NDF}: 169.9/24$

Right Out:  $8.291 \pm 0.416$   $\chi^2/\text{NDF}: 363.4/21$

Left In:  $3.349 \pm 0.298$   $\chi^2/\text{NDF}: 163.5/22$

Left:  $3.371 \pm 0.209$   $\chi^2/\text{NDF}: 333.4/47$

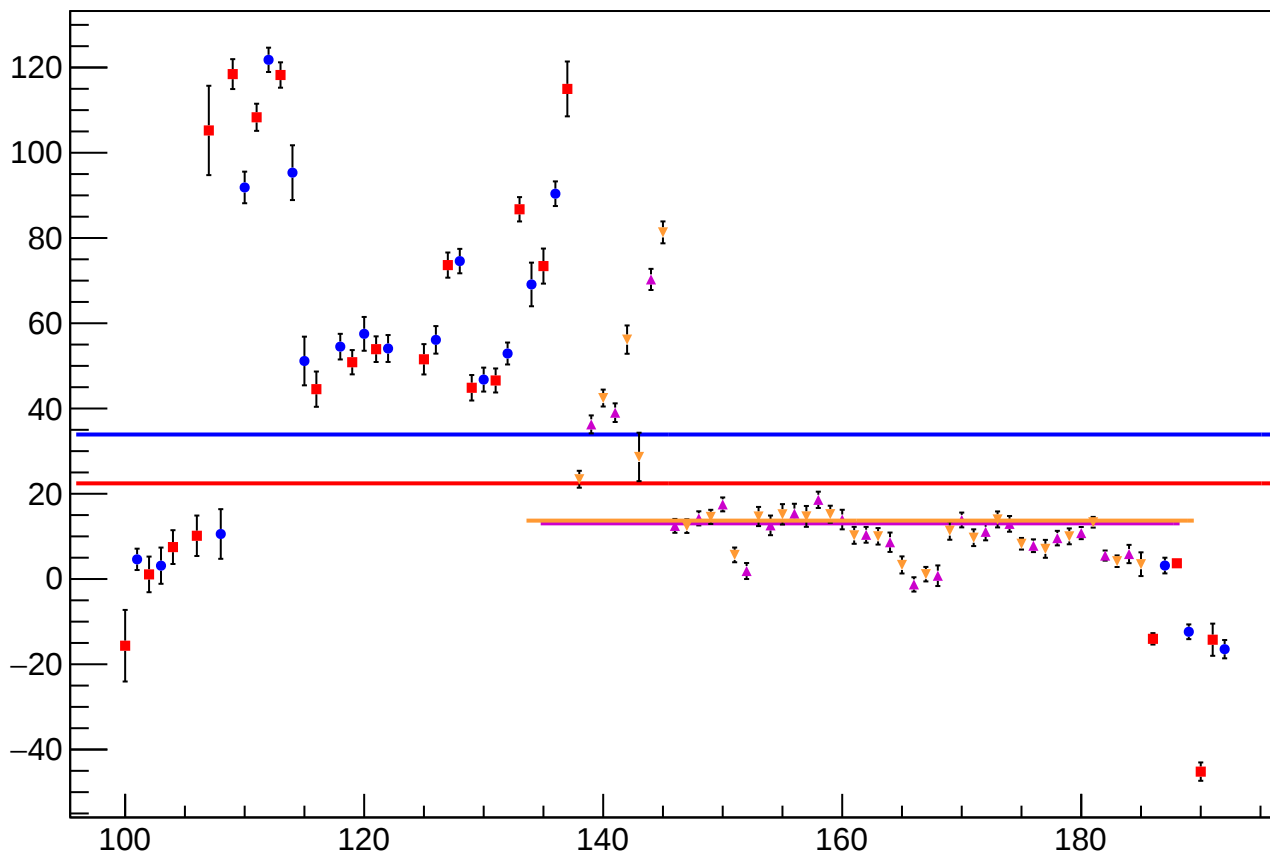
Right:  $7.735 \pm 0.296$   $\chi^2/\text{NDF}: 810.4/40$

In:  $4.617 \pm 0.244$   $\chi^2/\text{NDF}: 661.2/41$

Out:  $5.025 \pm 0.240$   $\chi^2/\text{NDF}: 625.9/46$

All:  $4.824 \pm 0.171$   $\chi^2/\text{NDF}: 1288.5/88$

reg\_asym\_usl\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 33.903+/-0.664  $\chi^2$ /NDF: 3918.6/18

Left Out: 13.700+/-0.381  $\chi^2$ /NDF:1307.0/24

Right Out: 22.440+/-0.539  $\chi^2$ /NDF: 6487.4/21

Left In: 13.058+/-0.380  $\chi^2$ /NDF:1024.7/22

Left: 13.378+/-0.269  $\chi^2$ /NDF: 2333.1/47

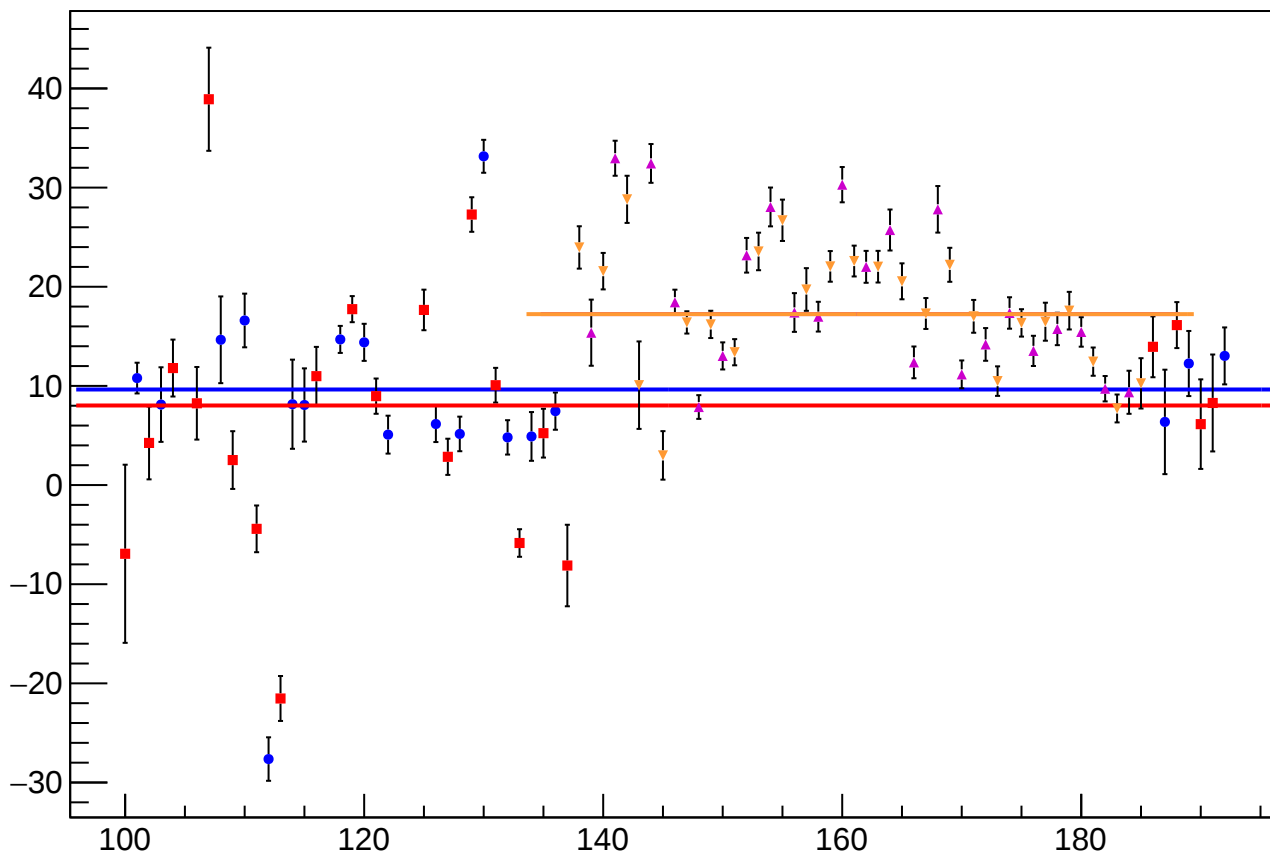
Right: 26.995+/-0.419  $\chi^2$ /NDF: 10585.6/40

In: 18.195+/-0.330  $\chi^2$ /NDF:5685.9/41

Out: 16.609+/-0.311  $\chi^2$ /NDF:7969.6/46

All: 17.356+/-0.226  $\chi^2$ /NDF: 13667.8/88

# reg\_asym\_usl\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $9.638 \pm 0.492$   $\chi^2/\text{NDF}: 549.7/18$

Left Out:  $17.238 \pm 0.336$   $\chi^2/\text{NDF}: 246.5/24$

Right Out:  $8.024 \pm 0.491$   $\chi^2/\text{NDF}: 584.1/21$

Left In:  $17.245 \pm 0.339$   $\chi^2/\text{NDF}: 440.8/22$

Left:  $17.241 \pm 0.239$   $\chi^2/\text{NDF}: 687.3/47$

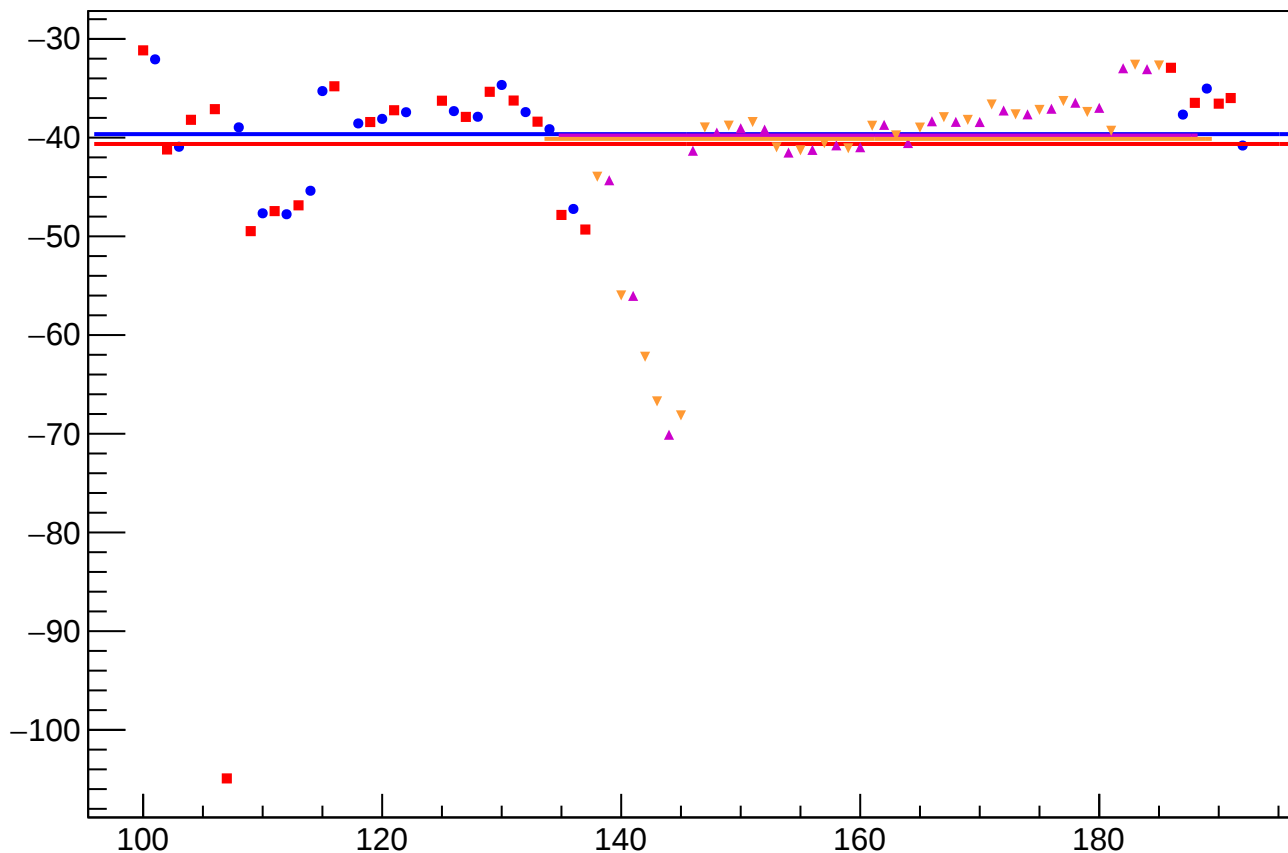
Right:  $8.830 \pm 0.348$   $\chi^2/\text{NDF}: 1139.2/40$

In:  $14.792 \pm 0.279$   $\chi^2/\text{NDF}: 1152.5/41$

Out:  $14.302 \pm 0.277$   $\chi^2/\text{NDF}: 1070.1/46$

All:  $14.545 \pm 0.197$   $\chi^2/\text{NDF}: 2224.1/88$

reg\_asym\_usl\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: -39.645 $\pm$ 0.029  $\chi^2$ /NDF: 27555.0/18

Left Out: -40.126 $\pm$ 0.016  $\chi^2$ /NDF:185897.0/24

Right Out: -40.643 $\pm$ 0.028  $\chi^2$ /NDF: 100401.1/21

Left In: -39.785 $\pm$ 0.016  $\chi^2$ /NDF:144494.5/22

Left: -39.955 $\pm$ 0.011  $\chi^2$ /NDF: 330628.3/47

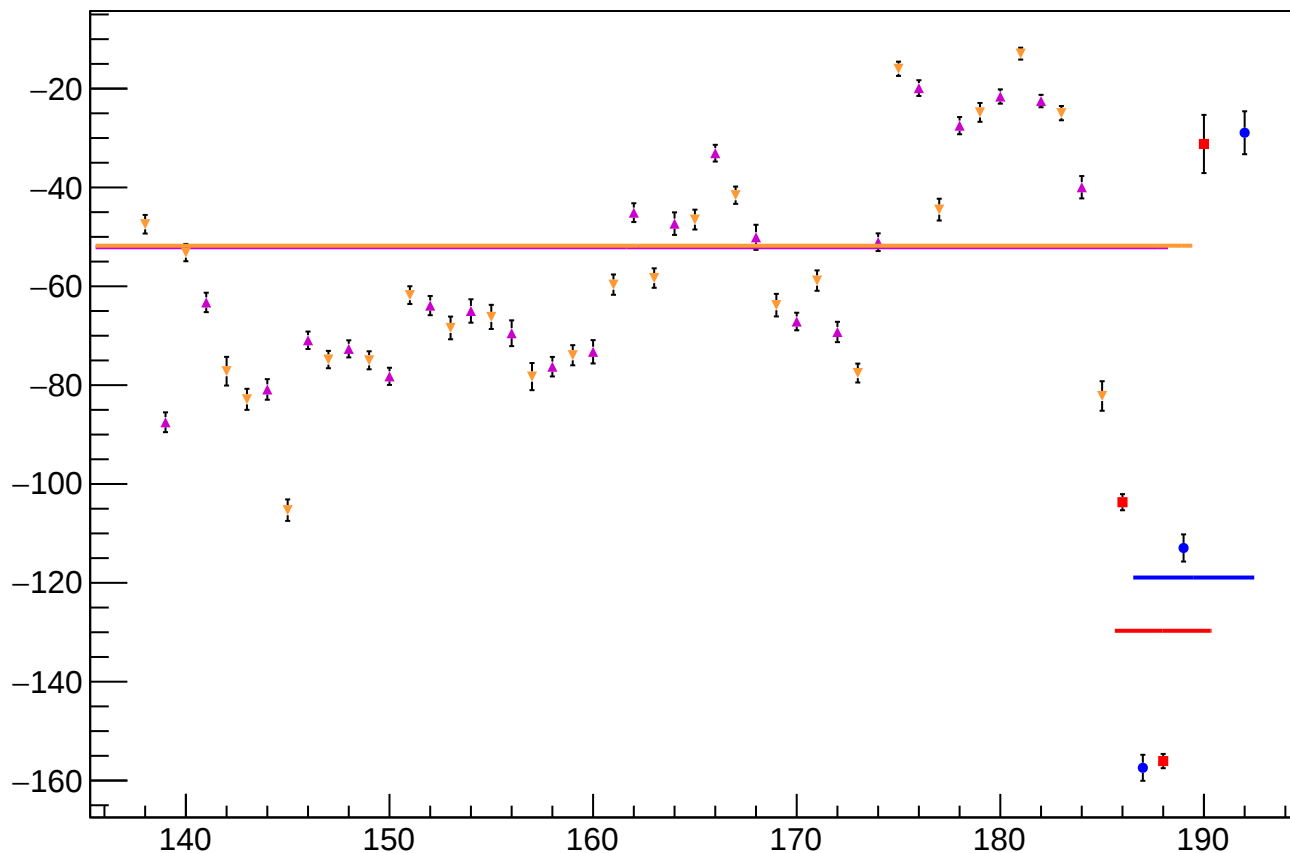
Right: -40.151 $\pm$ 0.020  $\chi^2$ /NDF: 128568.3/40

In: -39.753 $\pm$ 0.014  $\chi^2$ /NDF:172067.7/41

Out: -40.248 $\pm$ 0.014  $\chi^2$ /NDF:286553.1/46

All: -40.000 $\pm$ 0.010  $\chi^2$ /NDF: 459269.3/88

reg\_asym\_usr\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: -118.927+/-1.742  $\chi^2$ /NDF: 647.7/2

Left Out: -51.787+/-0.383  $\chi^2$ /NDF:4164.8/24

Right Out: -129.699+/-1.064  $\chi^2$ /NDF: 866.5/2

Left In: -52.104+/-0.389  $\chi^2$ /NDF:3280.2/22

Left: -51.943+/-0.273  $\chi^2$ /NDF: 7445.3/47

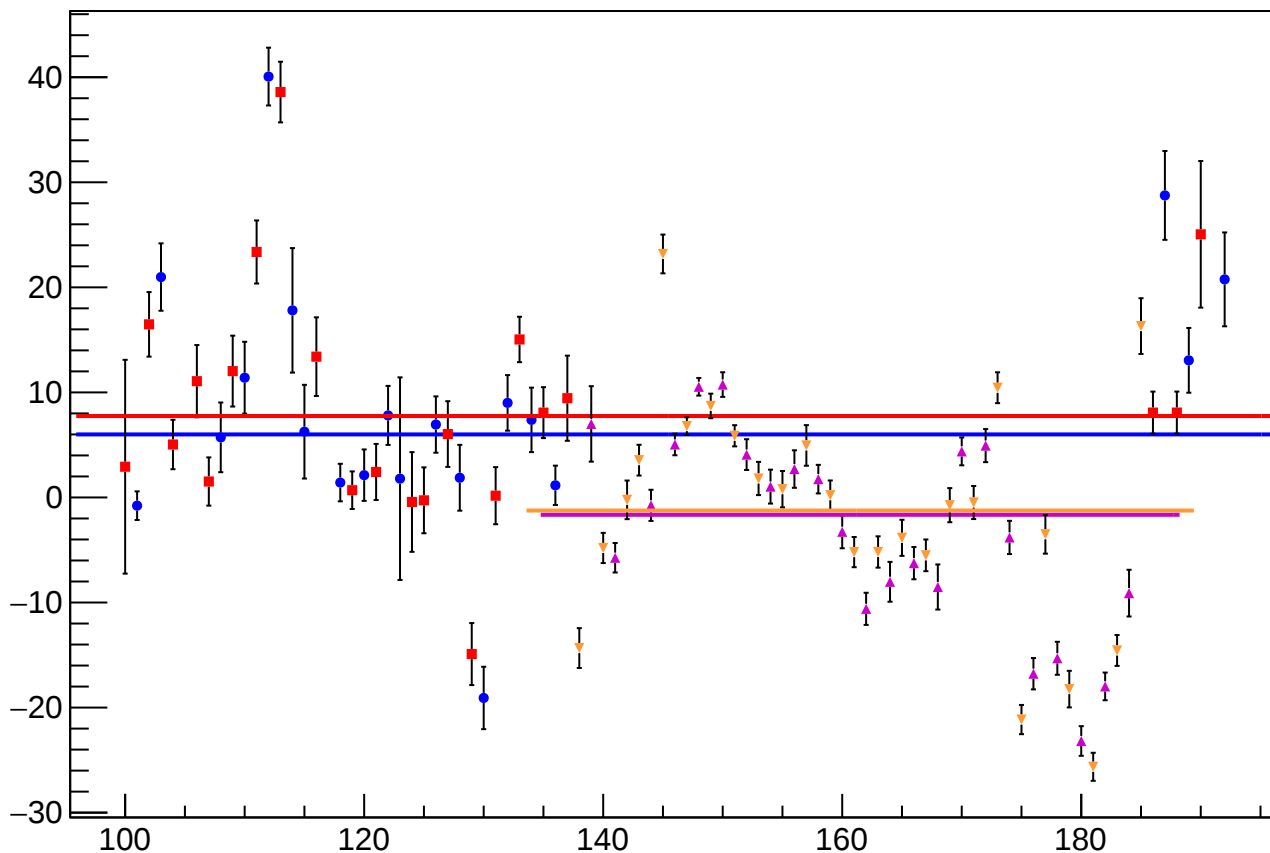
Right: -126.771+/-0.908  $\chi^2$ /NDF: 1542.1/5

In: -55.274+/-0.379  $\chi^2$ /NDF:5330.1/25

Out: -60.706+/-0.360  $\chi^2$ /NDF:9777.7/27

All: -58.131+/-0.261  $\chi^2$ /NDF: 15215.6/53

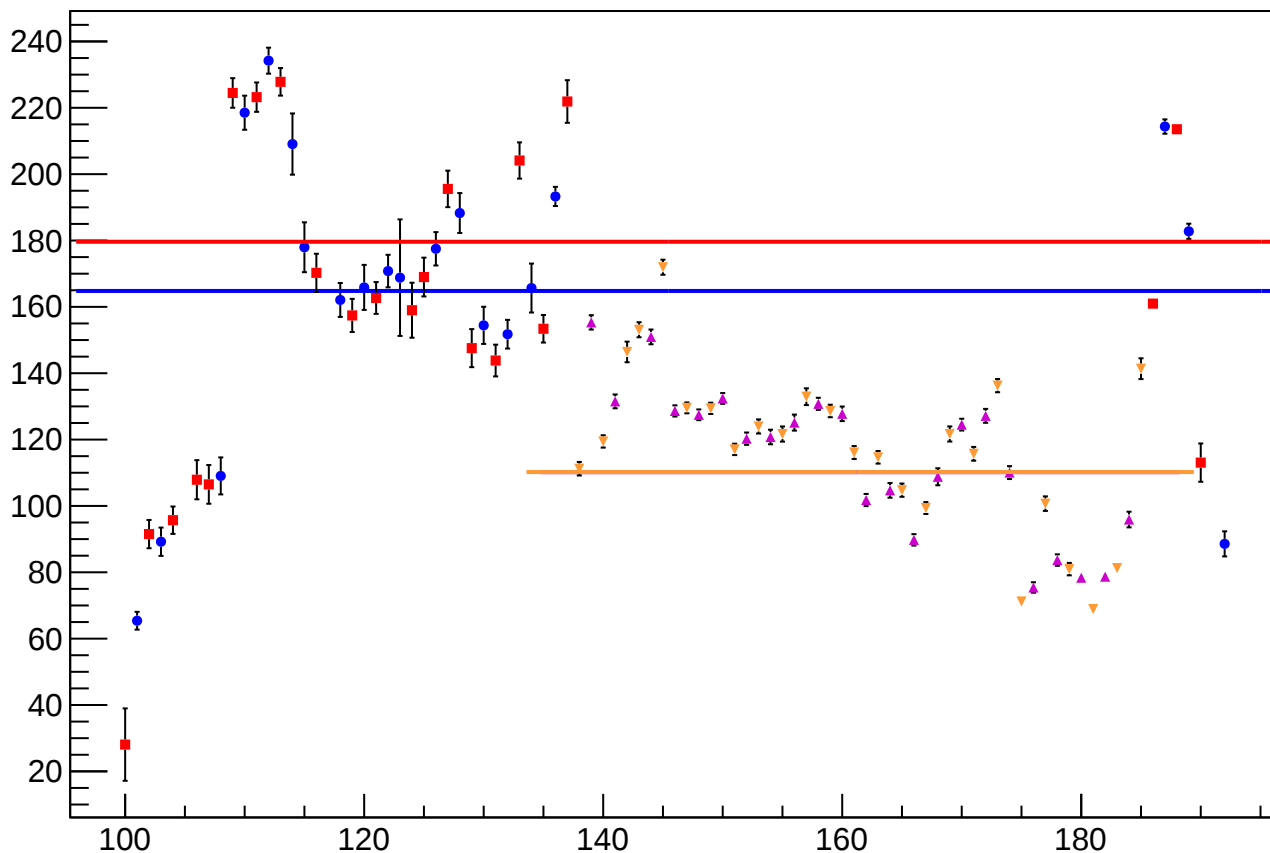
reg\_asym\_usr\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $6.000 \pm 0.604$   $\chi^2/\text{NDF}: 342.4/19$   
 Left Out:  $-1.245 \pm 0.292$   $\chi^2/\text{NDF}: 1322.6/24$   
 Right Out:  $7.752 \pm 0.589$   $\chi^2/\text{NDF}: 276.8/21$   
 Left In:  $-1.650 \pm 0.300$   $\chi^2/\text{NDF}: 1092.2/22$

Left:  $-1.442 \pm 0.209$   $\chi^2/\text{NDF}: 2415.8/47$   
 Right:  $6.898 \pm 0.422$   $\chi^2/\text{NDF}: 623.6/41$   
 In:  $-0.135 \pm 0.269$   $\chi^2/\text{NDF}: 1563.3/42$   
 Out:  $0.525 \pm 0.261$   $\chi^2/\text{NDF}: 1786.7/46$   
 All:  $0.204 \pm 0.187$   $\chi^2/\text{NDF}: 3353.1/89$

reg\_asym\_usr\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $164.797 \pm 0.902$   $\chi^2/\text{NDF}: 3360.7/19$

Left Out:  $110.213 \pm 0.382$   $\chi^2/\text{NDF}: 4593.7/24$

Right Out:  $179.628 \pm 0.693$   $\chi^2/\text{NDF}: 3106.8/21$

Left In:  $110.171 \pm 0.386$   $\chi^2/\text{NDF}: 3702.6/22$

Left:  $110.192 \pm 0.272$   $\chi^2/\text{NDF}: 8296.2/47$

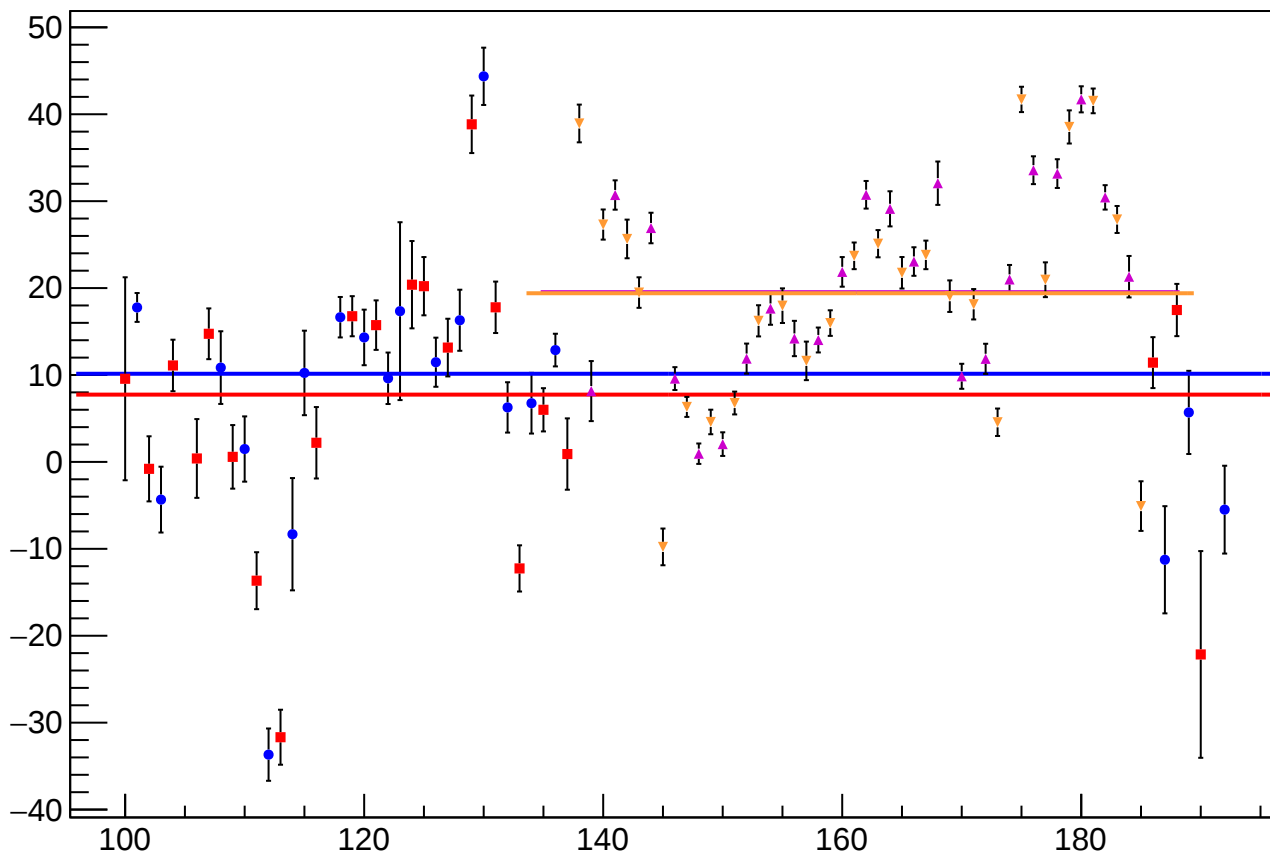
Right:  $174.122 \pm 0.550$   $\chi^2/\text{NDF}: 6637.3/41$

In:  $118.618 \pm 0.355$   $\chi^2/\text{NDF}: 10160.7/42$

Out:  $126.377 \pm 0.335$   $\chi^2/\text{NDF}: 15388.0/46$

All:  $122.726 \pm 0.243$   $\chi^2/\text{NDF}: 25801.7/89$

reg\_asym\_usr\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 10.142 $\pm$ 0.701  $\chi^2$ /NDF: 409.8/19

Left Out: 19.405 $\pm$ 0.335  $\chi^2$ /NDF:1453.4/24

Right Out: 7.742 $\pm$ 0.704  $\chi^2$ /NDF: 442.7/21

Left In: 19.530 $\pm$ 0.342  $\chi^2$ /NDF:1181.3/22

Left: 19.466 $\pm$ 0.239  $\chi^2$ /NDF: 2634.8/47

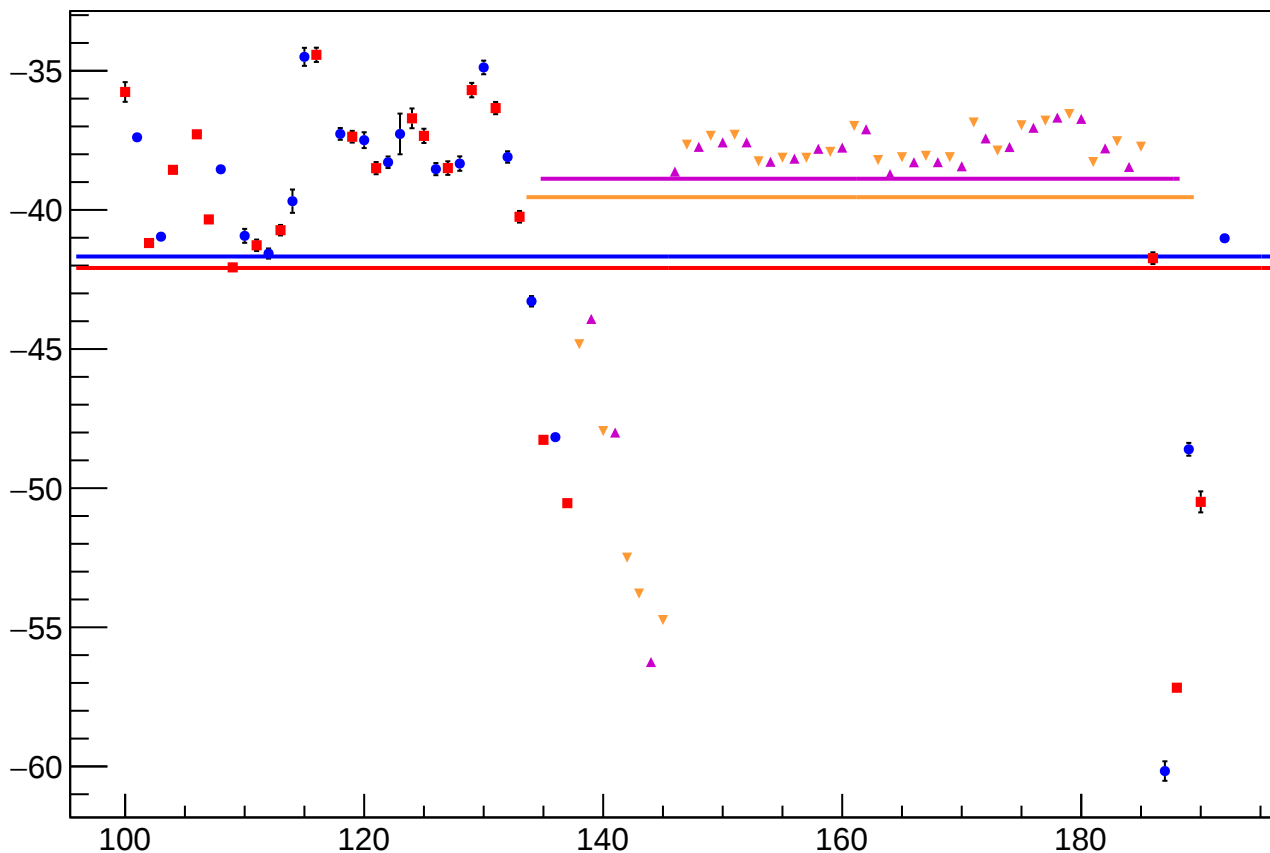
Right: 8.947 $\pm$ 0.497  $\chi^2$ /NDF: 858.3/41

In: 17.721 $\pm$ 0.308  $\chi^2$ /NDF:1735.9/42

Out: 17.255 $\pm$ 0.302  $\chi^2$ /NDF:2120.0/46

All: 17.484 $\pm$ 0.216  $\chi^2$ /NDF: 3857.0/89

reg\_asym\_usr\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-41.674 \pm 0.037$   $\chi^2/\text{NDF}: 16309.5/19$

Left Out:  $-39.542 \pm 0.016$   $\chi^2/\text{NDF}: 92024.1/24$

Right Out:  $-42.086 \pm 0.037$   $\chi^2/\text{NDF}: 22164.9/21$

Left In:  $-38.880 \pm 0.016$   $\chi^2/\text{NDF}: 53409.9/22$

Left:  $-39.214 \pm 0.011$   $\chi^2/\text{NDF}: 146312.0/47$

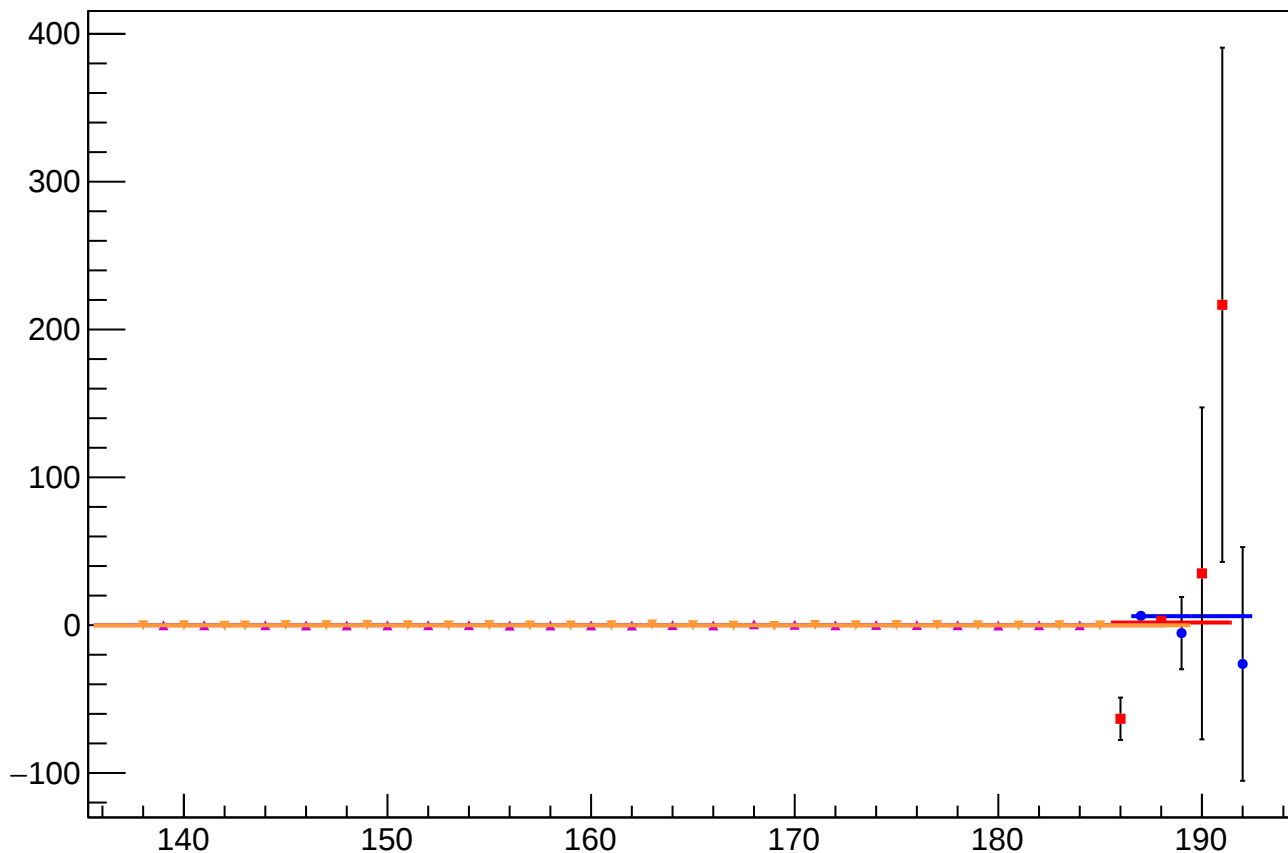
Right:  $-41.880 \pm 0.026$   $\chi^2/\text{NDF}: 38536.9/41$

In:  $-39.316 \pm 0.015$   $\chi^2/\text{NDF}: 74567.5/42$

Out:  $-39.934 \pm 0.014$   $\chi^2/\text{NDF}: 118222.5/46$

All:  $-39.628 \pm 0.010$   $\chi^2/\text{NDF}: 193694.8/89$

reg\_asym\_dsl\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $6.084 \pm 2.982$   $\chi^2/\text{NDF}: 0.4/2$

Left Out:  $-0.095 \pm 0.022$   $\chi^2/\text{NDF}: 41.8/24$

Right Out:  $1.792 \pm 1.944$   $\chi^2/\text{NDF}: 22.6/3$

Left In:  $-0.026 \pm 0.022$   $\chi^2/\text{NDF}: 33.3/22$

Left:  $-0.061 \pm 0.016$   $\chi^2/\text{NDF}: 80.1/47$

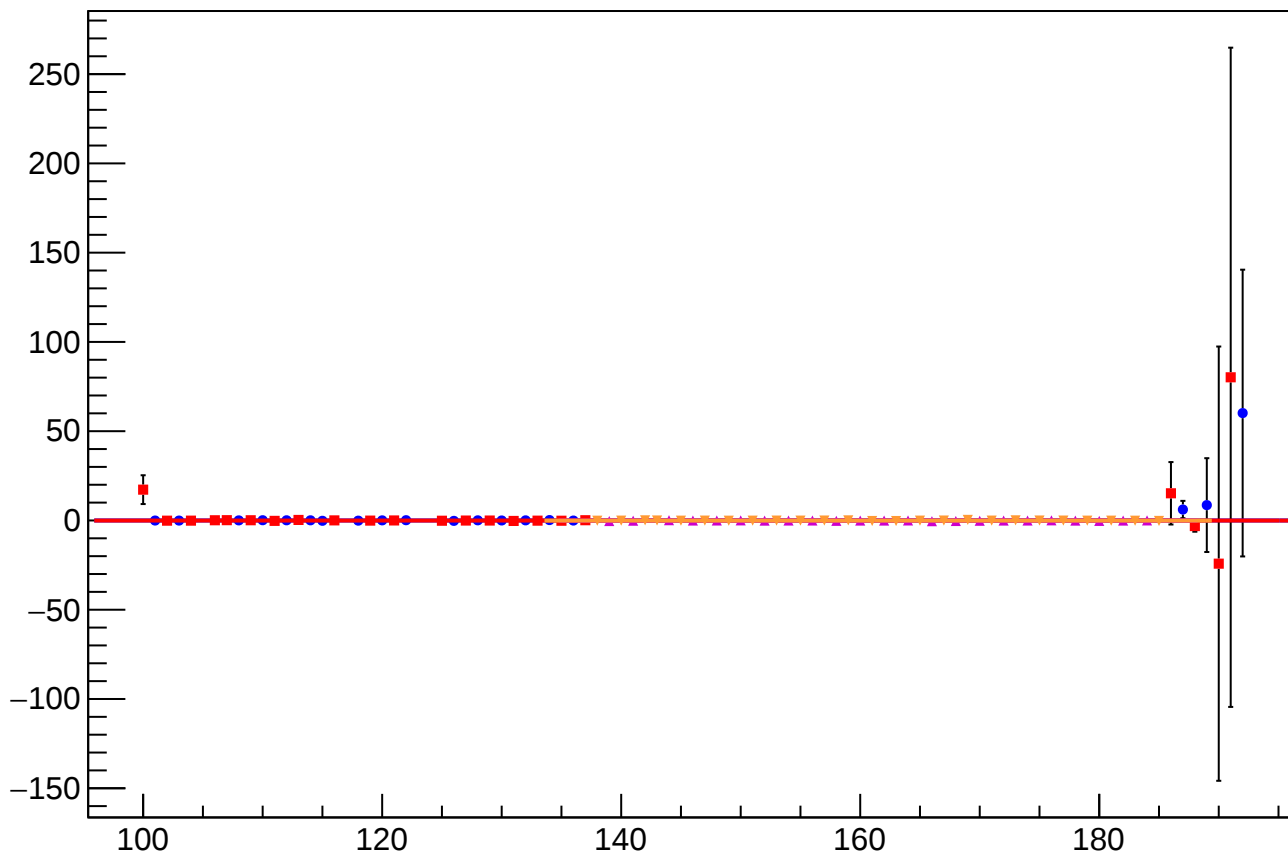
Right:  $3.072 \pm 1.629$   $\chi^2/\text{NDF}: 24.5/6$

In:  $-0.025 \pm 0.022$   $\chi^2/\text{NDF}: 37.9/25$

Out:  $-0.095 \pm 0.022$   $\chi^2/\text{NDF}: 65.4/28$

All:  $-0.061 \pm 0.016$   $\chi^2/\text{NDF}: 108.3/54$

# reg\_asym\_dsl\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-0.002 \pm 0.029$   $\chi^2/\text{NDF}$ : 14.9/18

Left Out:  $-0.078 \pm 0.017$   $\chi^2/\text{NDF}$ : 26.6/24

Right Out:  $-0.050 \pm 0.029$   $\chi^2/\text{NDF}$ : 27.5/21

Left In:  $-0.052 \pm 0.018$   $\chi^2/\text{NDF}$ : 31.7/22

Left:  $-0.065 \pm 0.012$   $\chi^2/\text{NDF}$ : 59.4/47

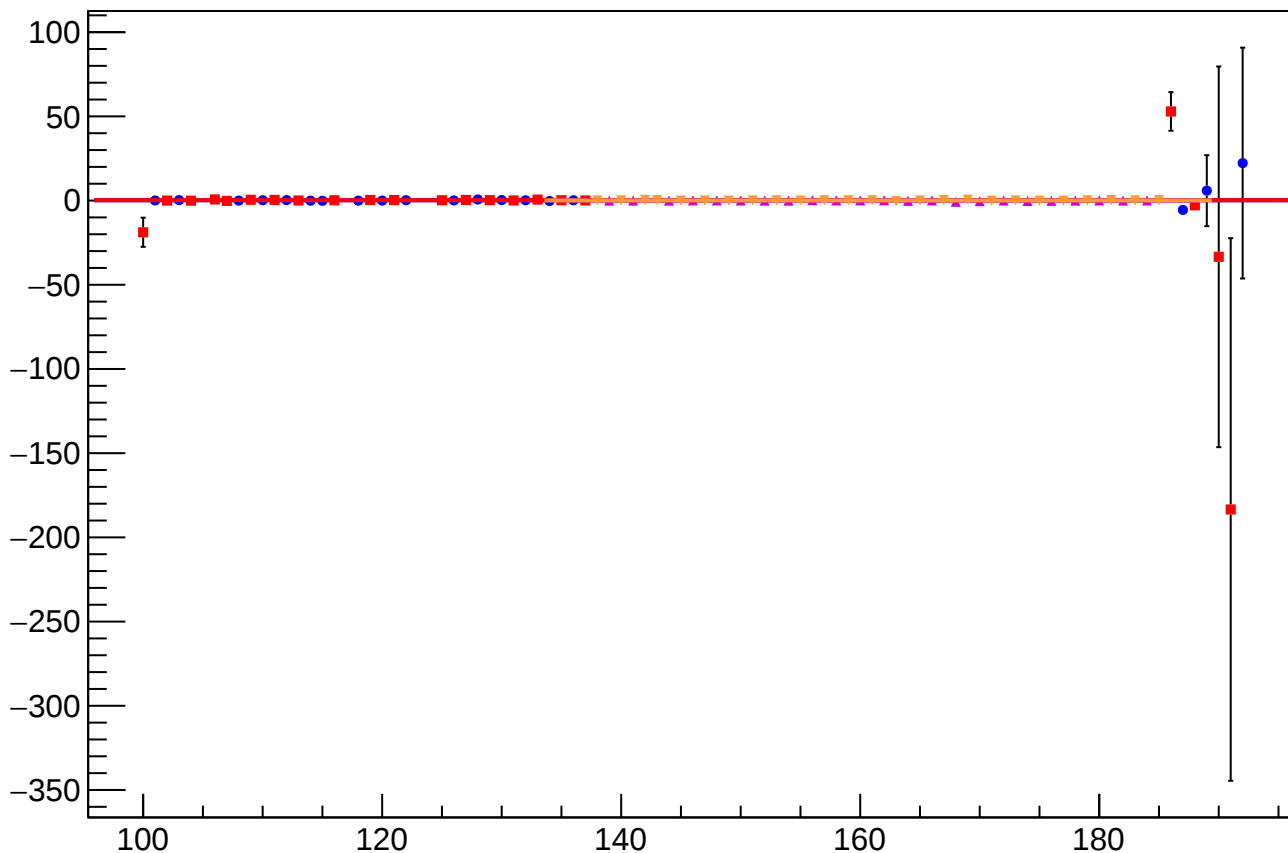
Right:  $-0.025 \pm 0.020$   $\chi^2/\text{NDF}$ : 43.8/40

In:  $-0.038 \pm 0.015$   $\chi^2/\text{NDF}$ : 48.9/41

Out:  $-0.071 \pm 0.015$   $\chi^2/\text{NDF}$ : 54.7/46

All:  $-0.055 \pm 0.010$   $\chi^2/\text{NDF}$ : 106.0/88

reg\_asym\_dsl\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 0.172 $\pm$ 0.053  $\chi^2$ /NDF: 18.0/18

Left Out: 0.088 $\pm$ 0.022  $\chi^2$ /NDF:40.7/24

Right Out: 0.233 $\pm$ 0.054  $\chi^2$ /NDF: 47.7/21

Left In: 0.020 $\pm$ 0.022  $\chi^2$ /NDF:35.6/22

Left: 0.055 $\pm$ 0.015  $\chi^2$ /NDF: 81.0/47

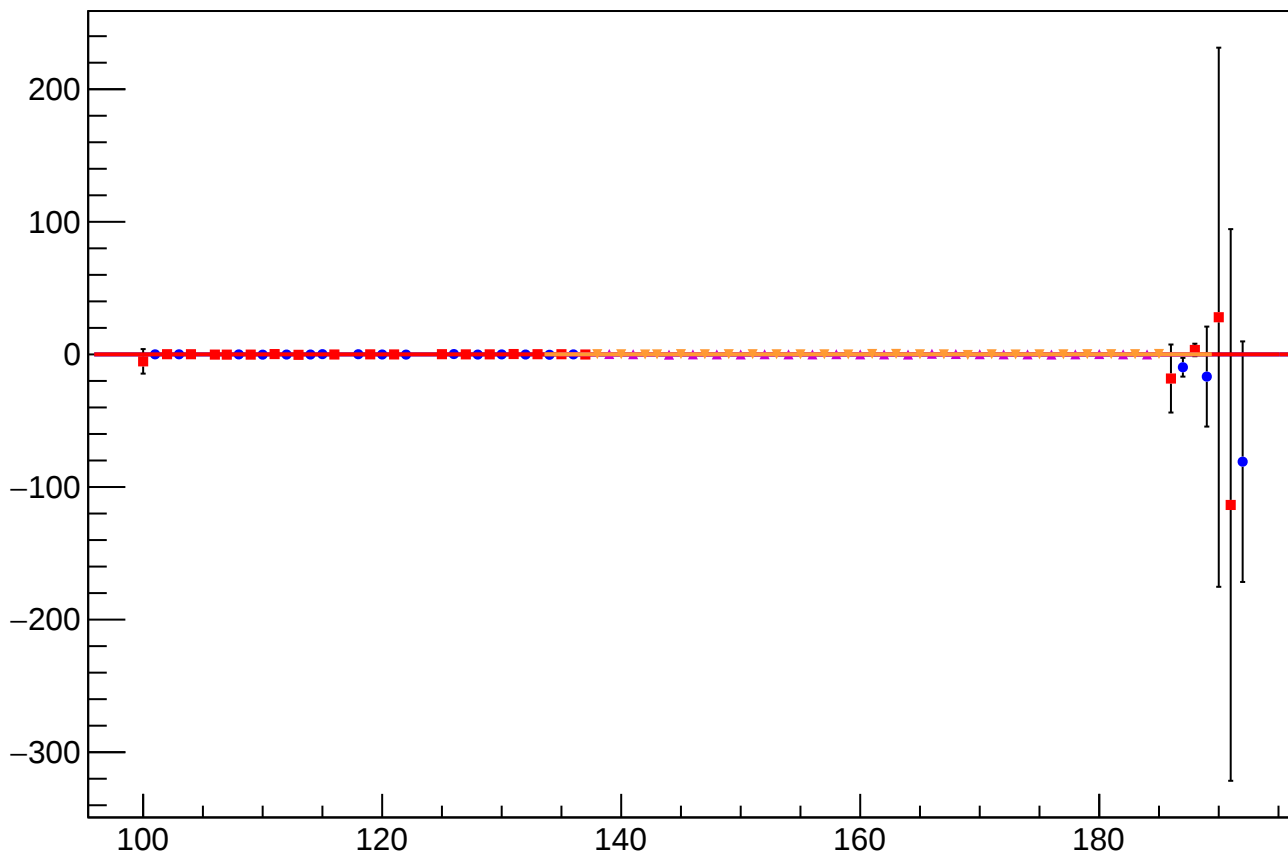
Right: 0.202 $\pm$ 0.038  $\chi^2$ /NDF: 66.4/40

In: 0.043 $\pm$ 0.020  $\chi^2$ /NDF:60.6/41

Out: 0.108 $\pm$ 0.020  $\chi^2$ /NDF:94.8/46

All: 0.076 $\pm$ 0.014  $\chi^2$ /NDF: 160.4/88

reg\_asym\_dsl\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-0.007 \pm 0.033$   $\chi^2/\text{NDF}$ : 16.9/18

Left Out:  $0.102 \pm 0.019$   $\chi^2/\text{NDF}$ : 30.2/24

Right Out:  $0.057 \pm 0.034$   $\chi^2/\text{NDF}$ : 21.6/21

Left In:  $0.069 \pm 0.020$   $\chi^2/\text{NDF}$ : 31.3/22

Left:  $0.086 \pm 0.014$   $\chi^2/\text{NDF}$ : 63.0/47

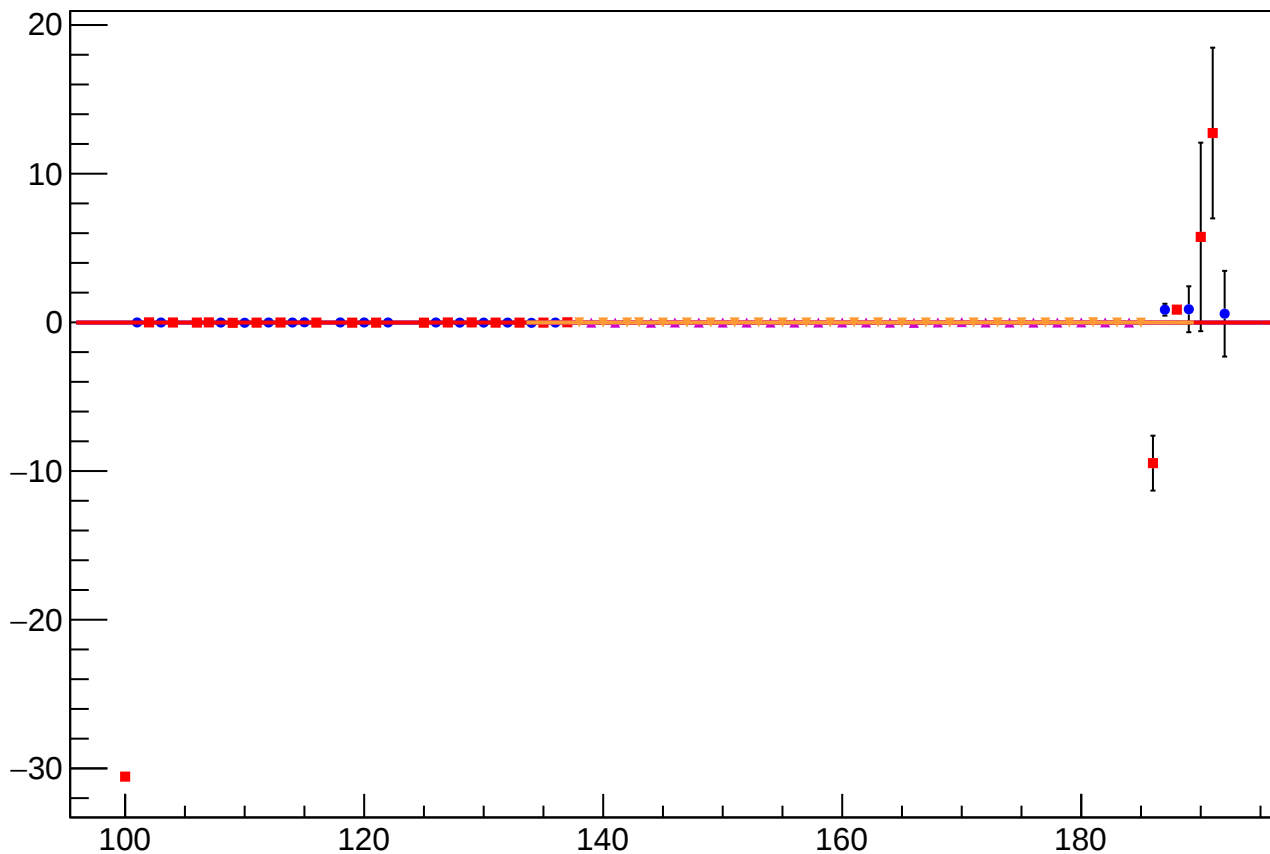
Right:  $0.024 \pm 0.024$   $\chi^2/\text{NDF}$ : 40.4/40

In:  $0.049 \pm 0.017$   $\chi^2/\text{NDF}$ : 52.1/41

Out:  $0.091 \pm 0.017$   $\chi^2/\text{NDF}$ : 53.2/46

All:  $0.070 \pm 0.012$   $\chi^2/\text{NDF}$ : 108.4/88

reg\_asym\_dsl\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.012 \pm 0.002$   $\chi^2/\text{NDF}$ : 17.8/18

Left Out:  $-0.008 \pm 0.001$   $\chi^2/\text{NDF}$ : 34.7/24

Right Out:  $-0.012 \pm 0.002$   $\chi^2/\text{NDF}$ : 11935.6/21

Left In:  $-0.009 \pm 0.001$   $\chi^2/\text{NDF}$ : 40.8/22

Left:  $-0.008 \pm 0.001$   $\chi^2/\text{NDF}$ : 76.4/47

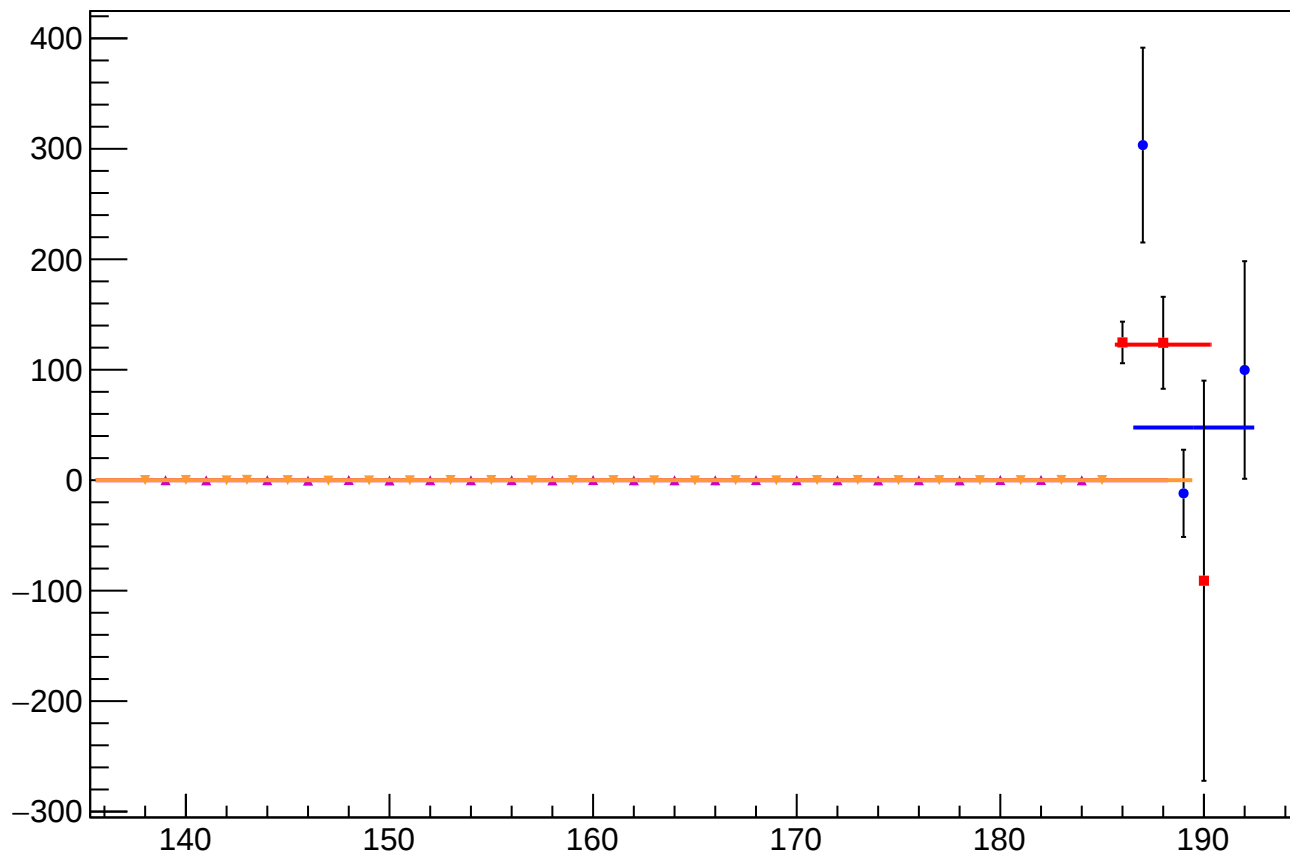
Right:  $-0.012 \pm 0.001$   $\chi^2/\text{NDF}$ : 11953.5/40

In:  $-0.009 \pm 0.001$   $\chi^2/\text{NDF}$ : 61.0/41

Out:  $-0.008 \pm 0.001$   $\chi^2/\text{NDF}$ : 11975.1/46

All:  $-0.009 \pm 0.001$   $\chi^2/\text{NDF}$ : 12036.8/88

reg\_asym\_dsr\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $47.687 \pm 33.835$   $\chi^2/\text{NDF}: 11.0/2$

Left Out:  $0.017 \pm 0.027$   $\chi^2/\text{NDF}: 30.9/24$

Right Out:  $122.737 \pm 17.074$   $\chi^2/\text{NDF}: 1.4/2$

Left In:  $0.002 \pm 0.028$   $\chi^2/\text{NDF}: 29.0/22$

Left:  $0.010 \pm 0.019$   $\chi^2/\text{NDF}: 60.1/47$

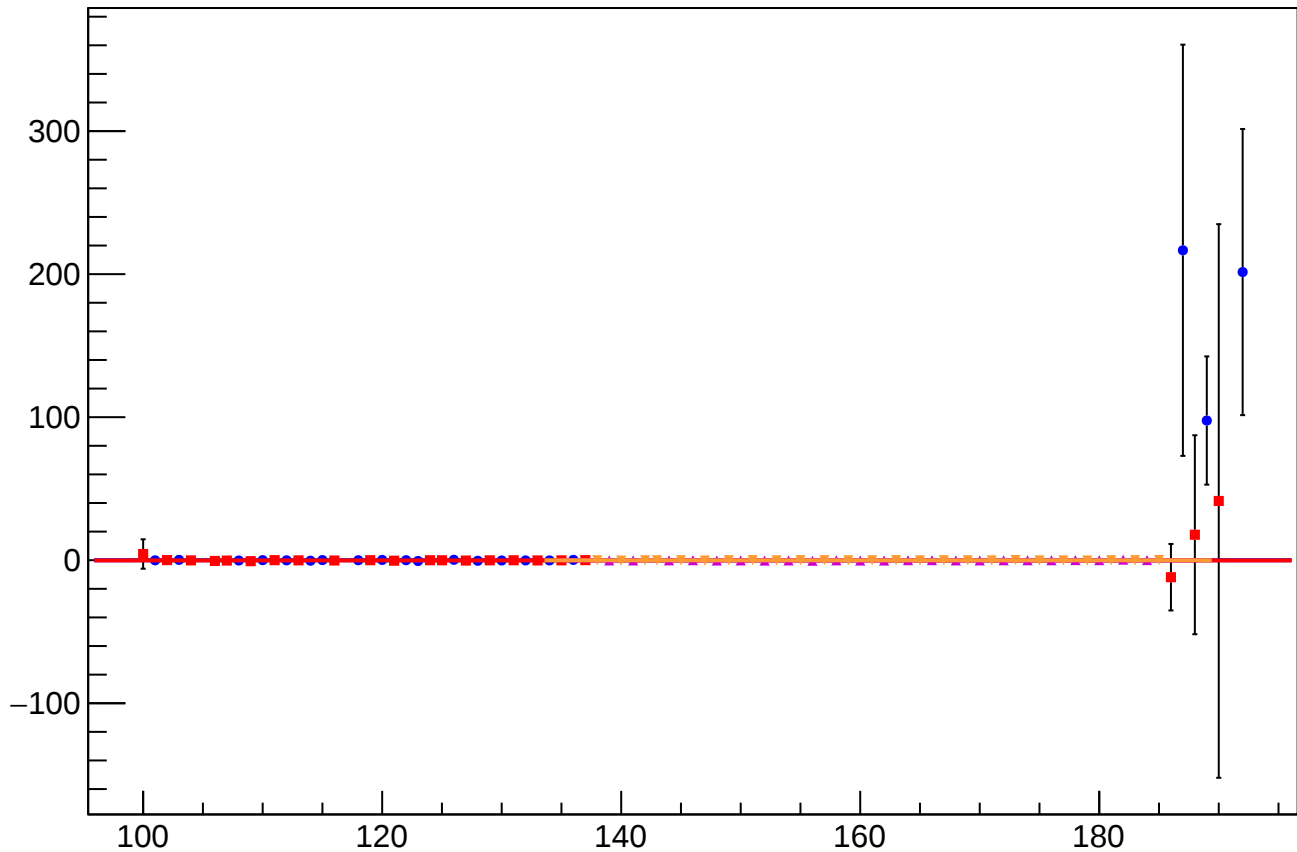
Right:  $107.506 \pm 15.243$   $\chi^2/\text{NDF}: 16.3/5$

In:  $0.002 \pm 0.028$   $\chi^2/\text{NDF}: 42.0/25$

Out:  $0.018 \pm 0.027$   $\chi^2/\text{NDF}: 84.0/27$

All:  $0.010 \pm 0.019$   $\chi^2/\text{NDF}: 126.1/53$

reg\_asym\_dsr\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-0.022 \pm 0.037$   $\chi^2/\text{NDF}$ : 34.0/19

Left Out:  $-0.060 \pm 0.021$   $\chi^2/\text{NDF}$ : 24.6/24

Right Out:  $-0.120 \pm 0.039$   $\chi^2/\text{NDF}$ : 18.8/21

Left In:  $-0.071 \pm 0.022$   $\chi^2/\text{NDF}$ : 49.0/22

Left:  $-0.065 \pm 0.015$   $\chi^2/\text{NDF}$ : 73.7/47

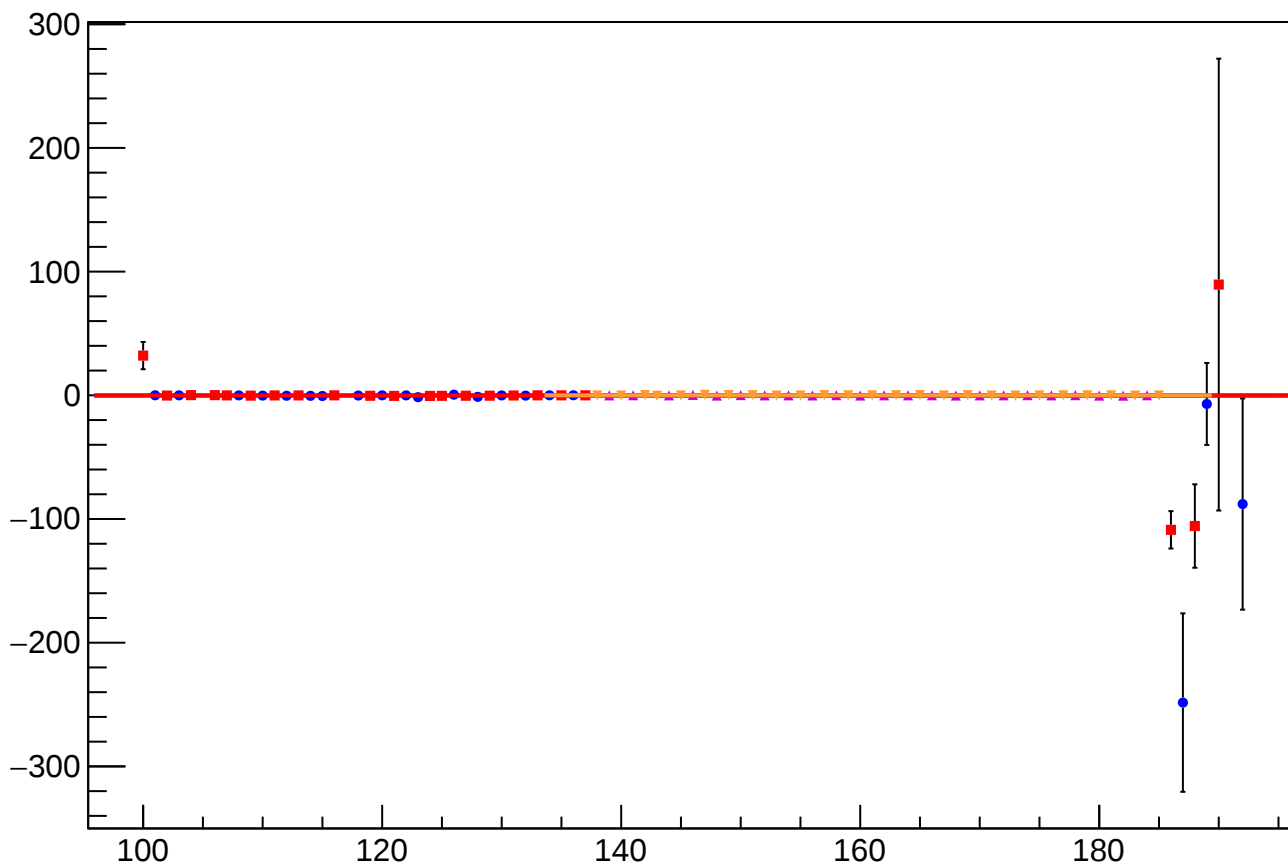
Right:  $-0.068 \pm 0.027$   $\chi^2/\text{NDF}$ : 56.2/41

In:  $-0.058 \pm 0.019$   $\chi^2/\text{NDF}$ : 84.3/42

Out:  $-0.073 \pm 0.019$   $\chi^2/\text{NDF}$ : 45.3/46

All:  $-0.066 \pm 0.013$   $\chi^2/\text{NDF}$ : 129.9/89

reg\_asym\_dsr\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: -0.135+/-0.067  $\chi^2/\text{NDF}$ : 37.7/19

Left Out: -0.018+/-0.027  $\chi^2/\text{NDF}$ : 29.0/24

Right Out: -0.167+/-0.071  $\chi^2/\text{NDF}$ : 76.1/21

Left In: -0.033+/-0.027  $\chi^2/\text{NDF}$ : 28.5/22

Left: -0.025+/-0.019  $\chi^2/\text{NDF}$ : 57.6/47

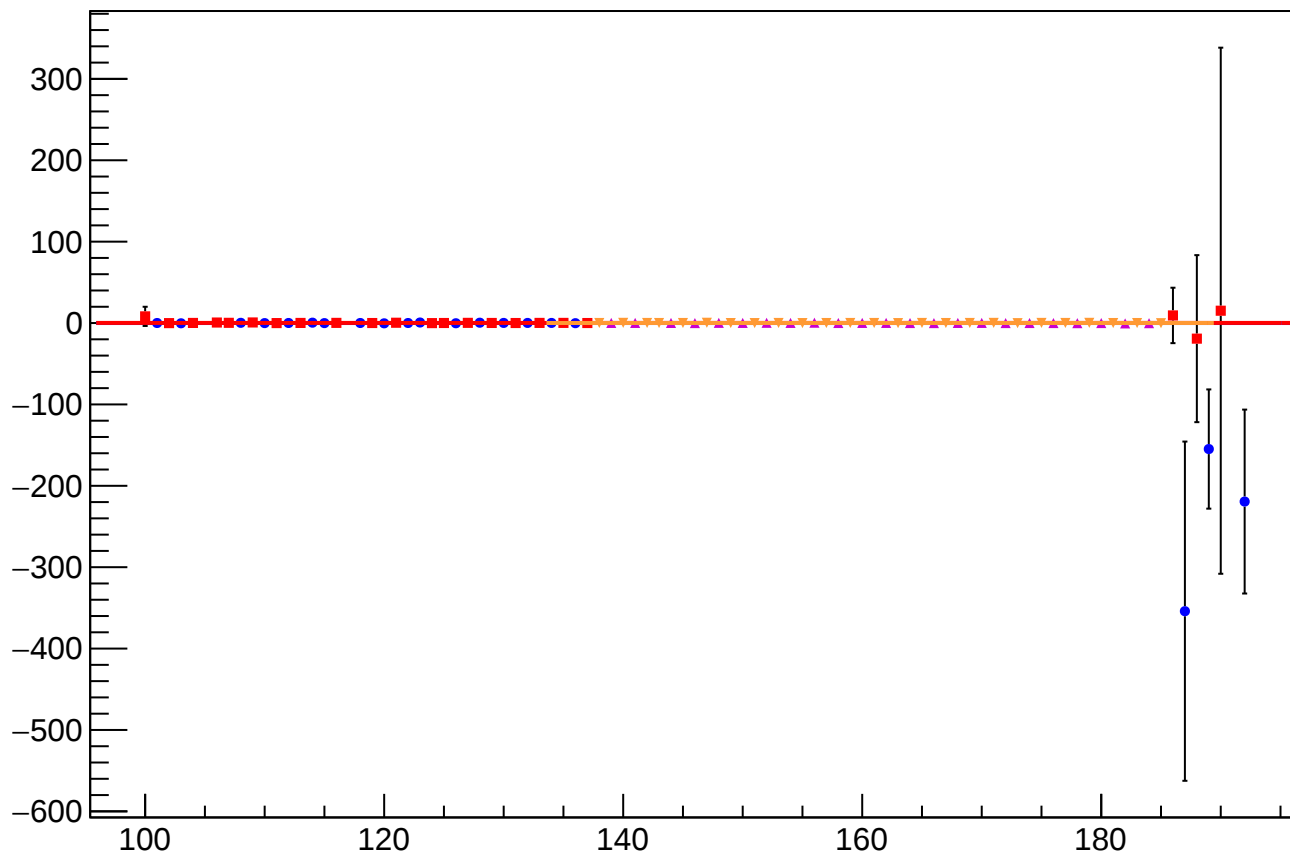
Right: -0.150+/-0.049  $\chi^2/\text{NDF}$ : 113.9/41

In: -0.047+/-0.025  $\chi^2/\text{NDF}$ : 68.1/42

Out: -0.037+/-0.025  $\chi^2/\text{NDF}$ : 109.0/46

All: -0.042+/-0.018  $\chi^2/\text{NDF}$ : 177.2/89

reg\_asym\_dsr\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 0.018 $\pm$ 0.043  $\chi^2$ /NDF: 32.7/19

Left Out: 0.063 $\pm$ 0.024  $\chi^2$ /NDF:24.6/24

Right Out: 0.144 $\pm$ 0.045  $\chi^2$ /NDF: 16.9/21

Left In: 0.069 $\pm$ 0.025  $\chi^2$ /NDF:51.8/22

Left: 0.066 $\pm$ 0.017  $\chi^2$ /NDF: 76.5/47

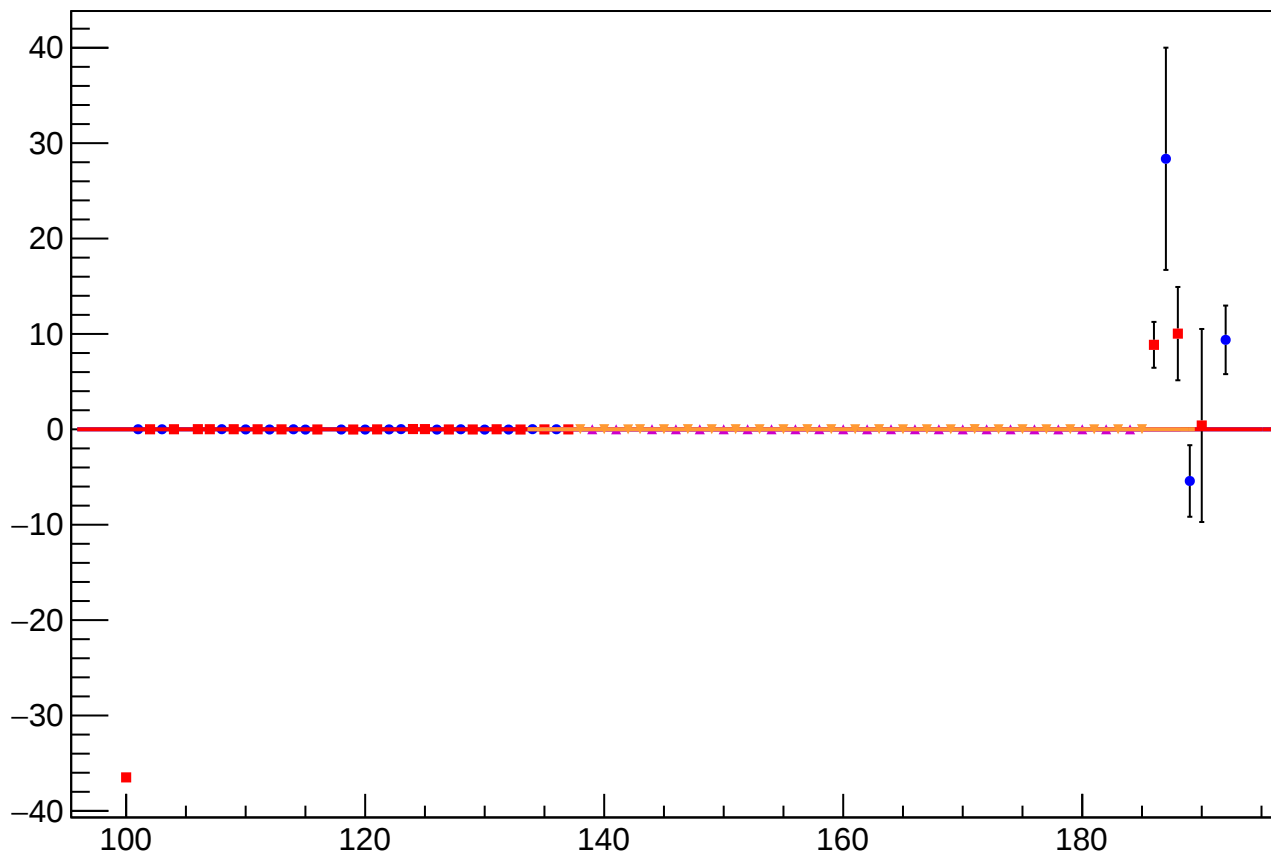
Right: 0.077 $\pm$ 0.031  $\chi^2$ /NDF: 53.7/41

In: 0.056 $\pm$ 0.021  $\chi^2$ /NDF:85.6/42

Out: 0.081 $\pm$ 0.021  $\chi^2$ /NDF:44.0/46

All: 0.069 $\pm$ 0.015  $\chi^2$ /NDF: 130.3/89

reg\_asym\_dsr\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.001 $\pm$ 0.002  $\chi^2/\text{NDF}$ : 45.3/19

Left Out: 0.008 $\pm$ 0.001  $\chi^2/\text{NDF}$ : 26.3/24

Right Out: 0.001 $\pm$ 0.002  $\chi^2/\text{NDF}$ : 10466.9/21

Left In: 0.009 $\pm$ 0.001  $\chi^2/\text{NDF}$ : 15.0/22

Left: 0.009 $\pm$ 0.001  $\chi^2/\text{NDF}$ : 41.4/47

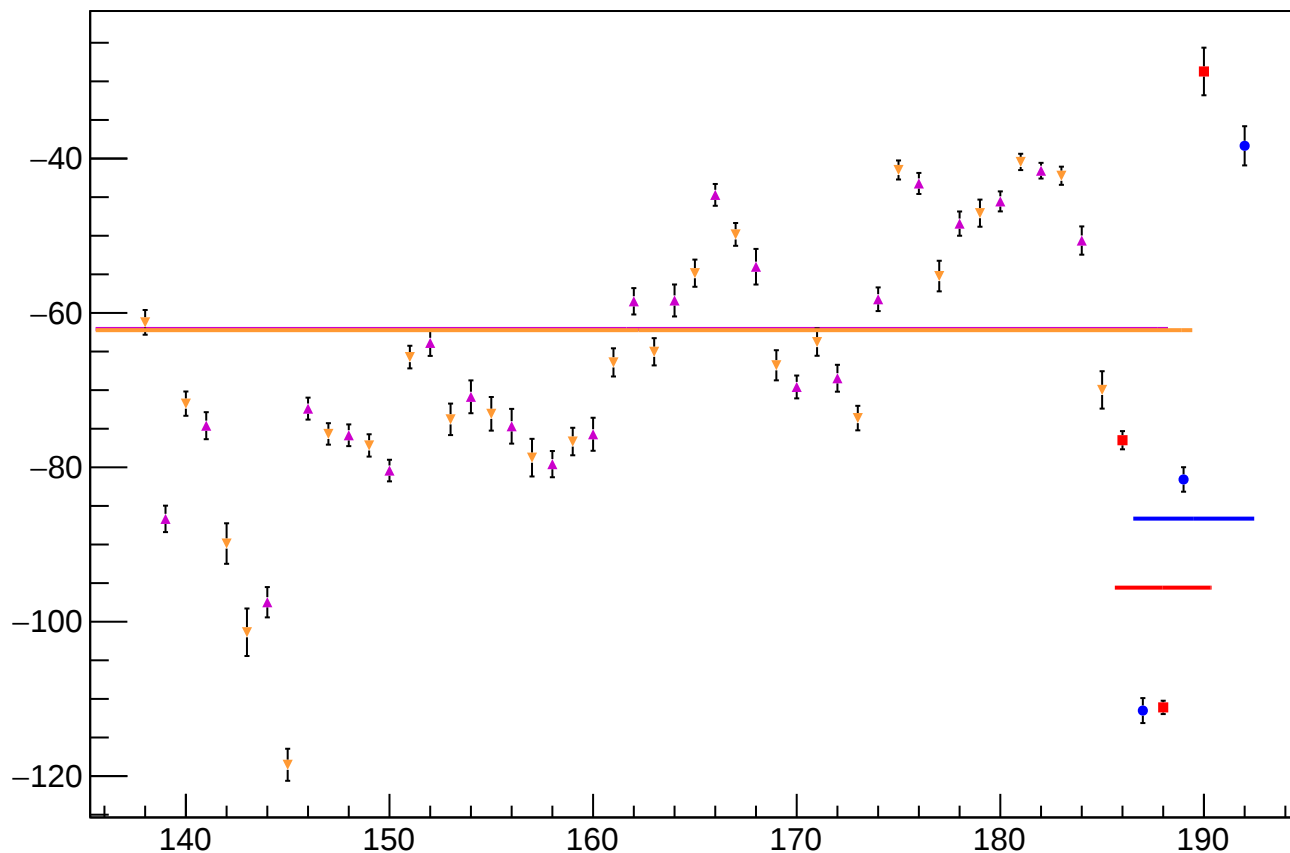
Right: 0.001 $\pm$ 0.002  $\chi^2/\text{NDF}$ : 10512.3/41

In: 0.007 $\pm$ 0.001  $\chi^2/\text{NDF}$ : 69.8/42

Out: 0.007 $\pm$ 0.001  $\chi^2/\text{NDF}$ : 10502.2/46

All: 0.007 $\pm$ 0.001  $\chi^2/\text{NDF}$ : 10572.1/89

reg\_asym\_us\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected

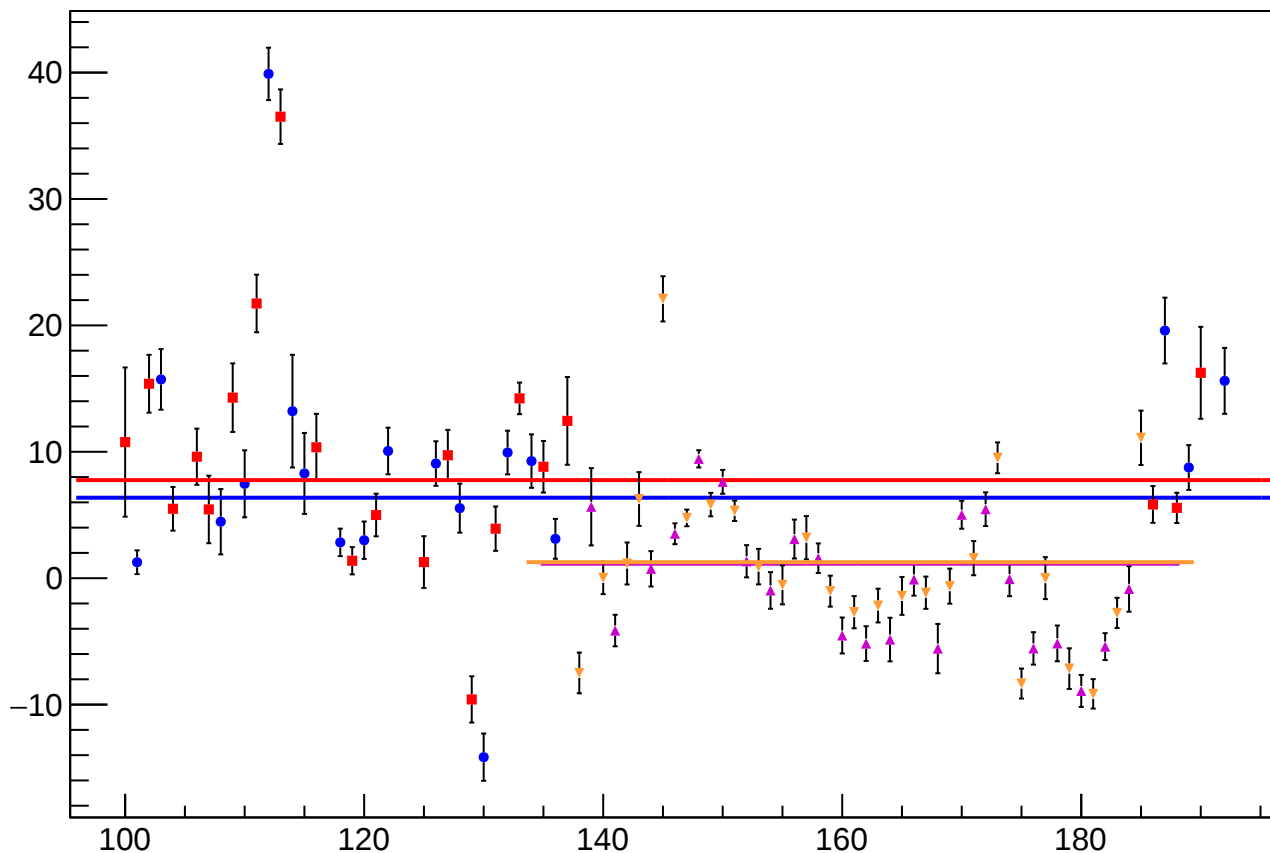


Right In: -86.645 $\pm$ 1.035  $\chi^2$ /NDF: 608.4/2  
 Left Out: -62.232 $\pm$ 0.332  $\chi^2$ /NDF: 2668.5/24  
 Right Out: -95.587 $\pm$ 0.680  $\chi^2$ /NDF: 1055.2/2  
 Left In: -62.073 $\pm$ 0.332  $\chi^2$ /NDF: 2192.0/22

Left: -62.153 $\pm$ 0.235  $\chi^2$ /NDF: 4860.6/47  
 Right: -92.891 $\pm$ 0.568  $\chi^2$ /NDF: 1715.7/5  
 In: -64.371 $\pm$ 0.316  $\chi^2$ /NDF: 3311.6/25  
 Out: -68.655 $\pm$ 0.298  $\chi^2$ /NDF: 5668.3/27

All: -66.640 $\pm$ 0.217  $\chi^2$ /NDF: 9077.0/53

reg\_asym\_us\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $6.367 \pm 0.407$   $\chi^2/\text{NDF}: 503.3/18$

Left Out:  $1.269 \pm 0.251$   $\chi^2/\text{NDF}: 531.9/24$

Right Out:  $7.759 \pm 0.404$   $\chi^2/\text{NDF}: 418.9/20$

Left In:  $1.146 \pm 0.255$   $\chi^2/\text{NDF}: 462.9/22$

Left:  $1.208 \pm 0.179$   $\chi^2/\text{NDF}: 995.0/47$

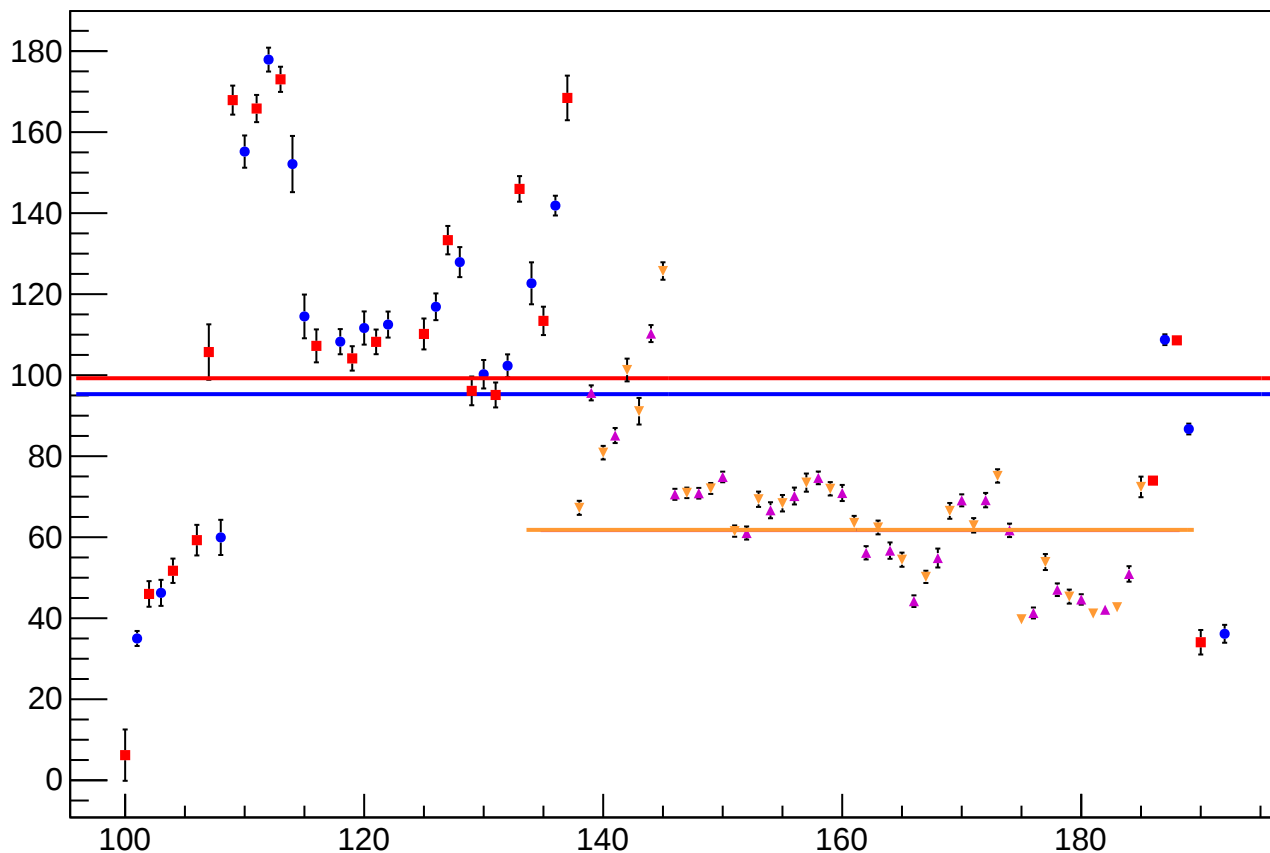
Right:  $7.068 \pm 0.287$   $\chi^2/\text{NDF}: 928.0/39$

In:  $2.619 \pm 0.216$   $\chi^2/\text{NDF}: 1084.1/41$

Out:  $3.072 \pm 0.213$   $\chi^2/\text{NDF}: 1136.9/45$

All:  $2.849 \pm 0.152$   $\chi^2/\text{NDF}: 2223.2/87$

reg\_asym\_us\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 95.317 $\pm$ 0.593  $\chi^2$ /NDF: 3893.1/18

Left Out: 61.812 $\pm$ 0.331  $\chi^2$ /NDF:2686.4/24

Right Out: 99.245 $\pm$ 0.459  $\chi^2$ /NDF: 4066.4/20

Left In: 61.762 $\pm$ 0.330  $\chi^2$ /NDF:2418.2/22

Left: 61.787 $\pm$ 0.234  $\chi^2$ /NDF: 5104.6/47

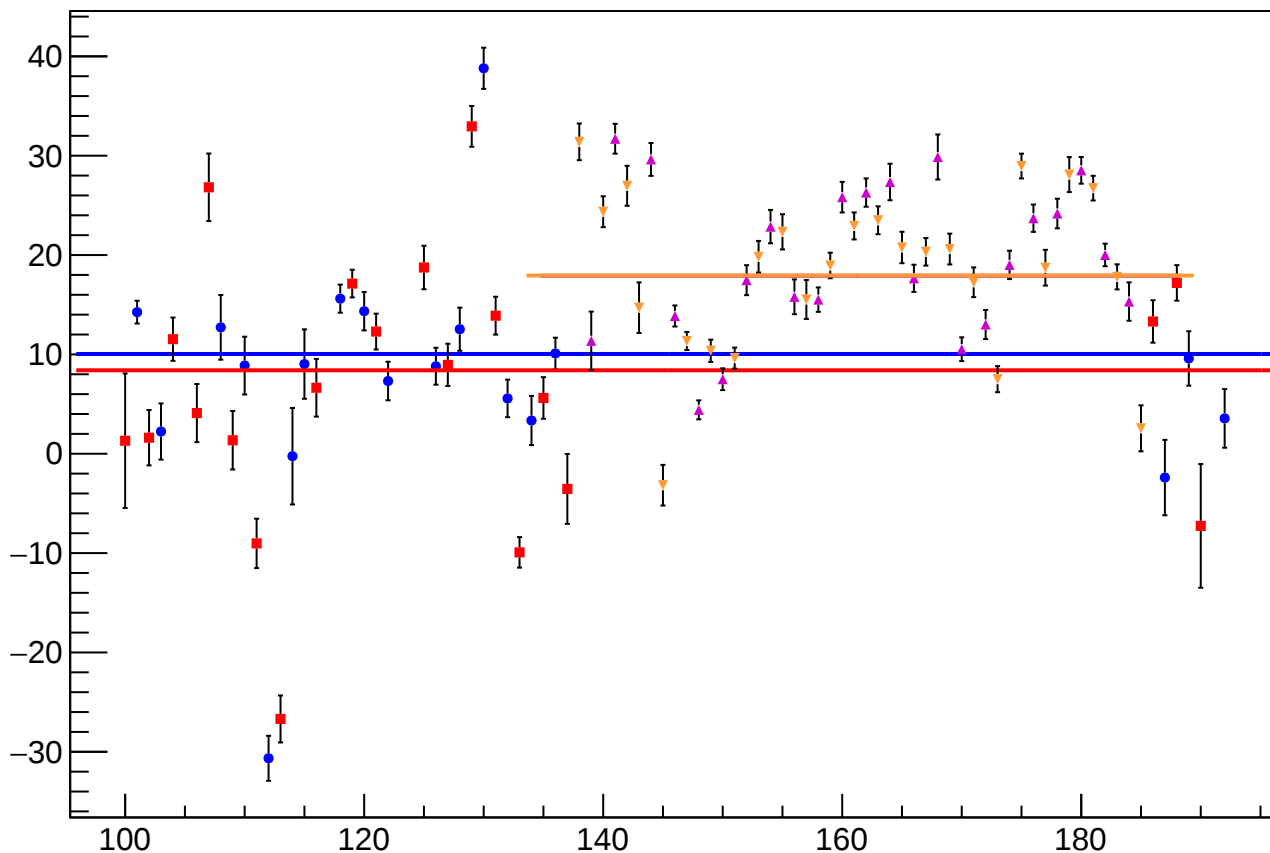
Right: 97.771 $\pm$ 0.363  $\chi^2$ /NDF: 7986.9/39

In: 69.700 $\pm$ 0.288  $\chi^2$ /NDF:8757.6/41

Out: 74.584 $\pm$ 0.268  $\chi^2$ /NDF:11126.1/45

All: 72.317 $\pm$ 0.196  $\chi^2$ /NDF: 20037.4/87

reg\_asym\_us\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $10.041 \pm 0.480$   $\chi^2/\text{NDF}: 594.2/18$

Left Out:  $17.937 \pm 0.289$   $\chi^2/\text{NDF}: 676.0/24$

Right Out:  $8.401 \pm 0.488$   $\chi^2/\text{NDF}: 725.6/20$

Left In:  $17.916 \pm 0.292$   $\chi^2/\text{NDF}: 726.5/22$

Left:  $17.927 \pm 0.206$   $\chi^2/\text{NDF}: 1402.5/47$

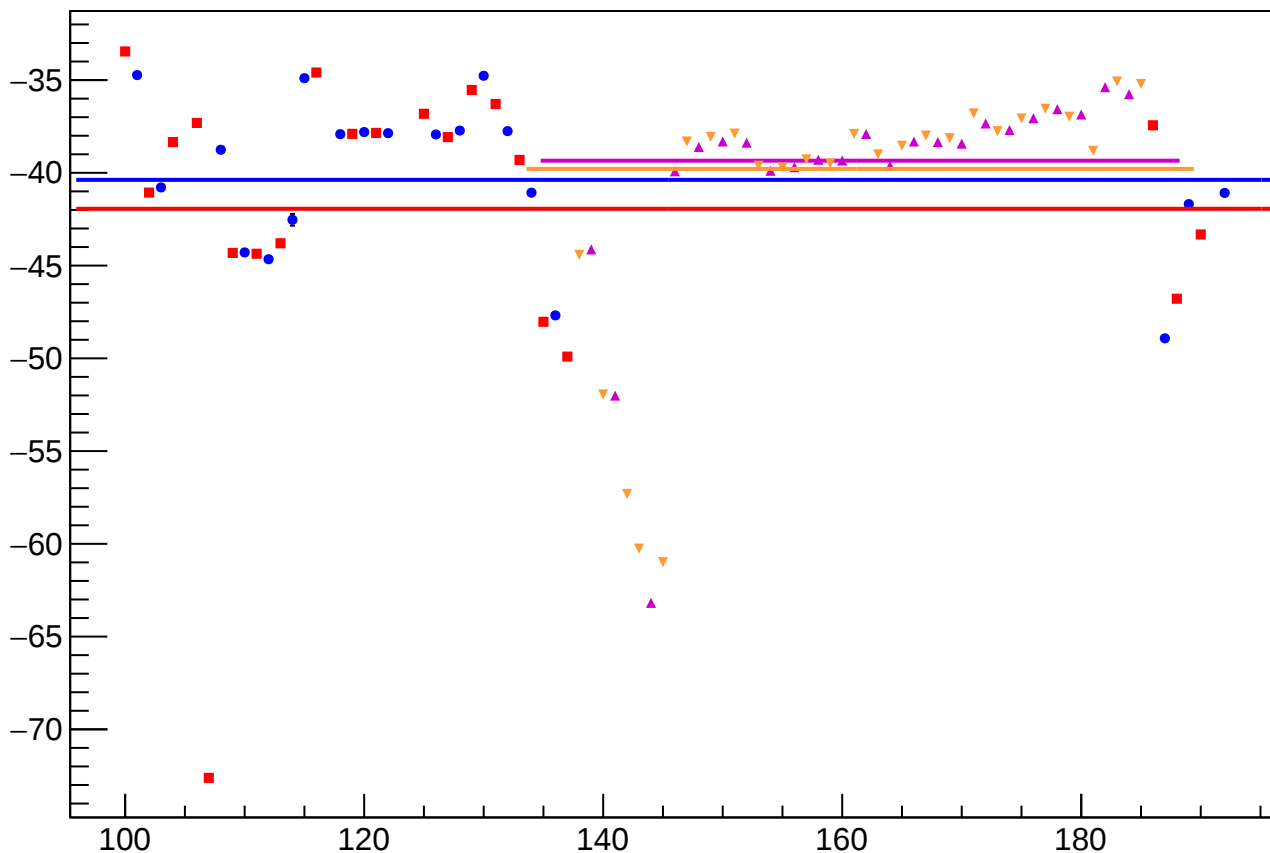
Right:  $9.235 \pm 0.342$   $\chi^2/\text{NDF}: 1325.5/39$

In:  $15.783 \pm 0.250$   $\chi^2/\text{NDF}: 1517.2/41$

Out:  $15.462 \pm 0.249$   $\chi^2/\text{NDF}: 1684.3/45$

All:  $15.622 \pm 0.176$   $\chi^2/\text{NDF}: 3202.3/87$

reg\_asym\_us\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-40.378 \pm 0.026$   $\chi^2/\text{NDF}: 26901.1/18$

Left Out:  $-39.788 \pm 0.014$   $\chi^2/\text{NDF}: 165493.8/24$

Right Out:  $-41.938 \pm 0.027$   $\chi^2/\text{NDF}: 65516.3/20$

Left In:  $-39.344 \pm 0.014$   $\chi^2/\text{NDF}: 116615.7/22$

Left:  $-39.565 \pm 0.010$   $\chi^2/\text{NDF}: 282639.2/47$

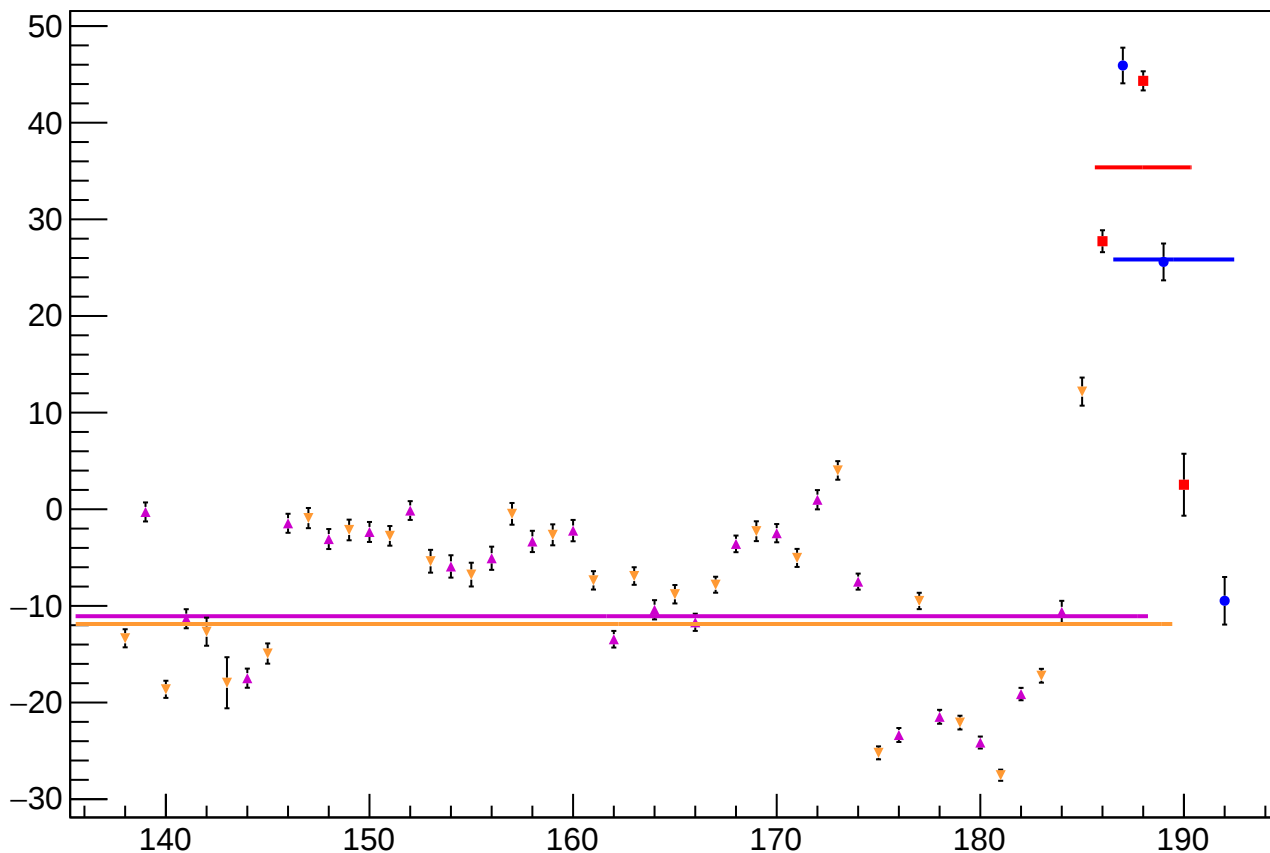
Right:  $-41.148 \pm 0.019$   $\chi^2/\text{NDF}: 94149.9/39$

In:  $-39.562 \pm 0.012$   $\chi^2/\text{NDF}: 144735.0/41$

Out:  $-40.235 \pm 0.012$   $\chi^2/\text{NDF}: 236161.7/45$

All:  $-39.896 \pm 0.009$   $\chi^2/\text{NDF}: 382438.8/87$

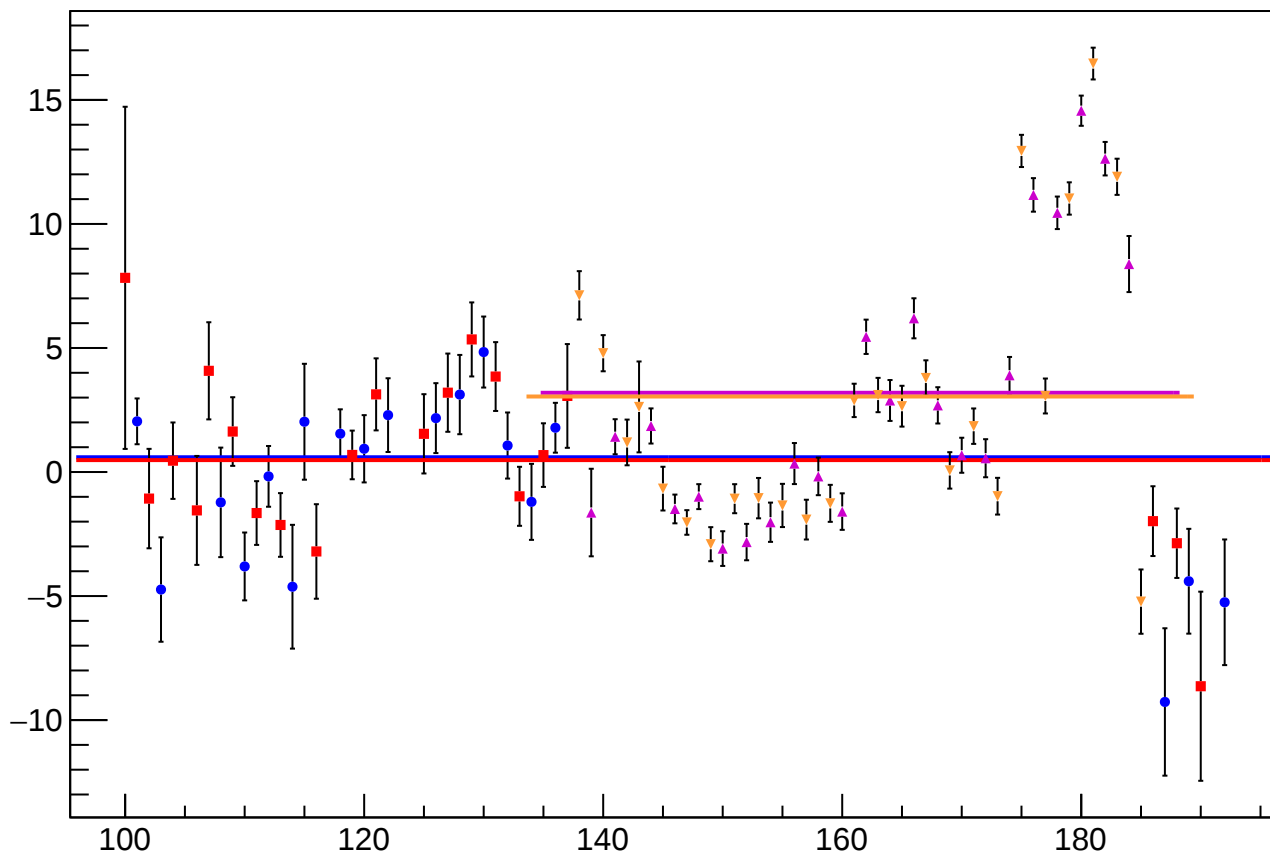
reg\_asym\_us\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 25.847 $\pm$ 1.167  $\chi^2$ /NDF: 324.2/2  
 Left Out: -11.873 $\pm$ 0.186  $\chi^2$ /NDF: 2745.2/24  
 Right Out: 35.378 $\pm$ 0.727  $\chi^2$ /NDF: 232.1/2  
 Left In: -11.067 $\pm$ 0.188  $\chi^2$ /NDF: 2104.8/22

Left: -11.473 $\pm$ 0.132  $\chi^2$ /NDF: 4859.2/47  
 Right: 32.716 $\pm$ 0.617  $\chi^2$ /NDF: 604.4/5  
 In: -10.134 $\pm$ 0.186  $\chi^2$ /NDF: 3404.0/25  
 Out: -8.956 $\pm$ 0.181  $\chi^2$ /NDF: 6945.3/27  
 All: -9.529 $\pm$ 0.129  $\chi^2$ /NDF: 10370.0/53

reg\_asym\_us\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 0.595 $\pm$ 0.333  $\chi^2$ /NDF: 64.7/18

Left Out: 3.044 $\pm$ 0.147  $\chi^2$ /NDF:1457.3/24

Right Out: 0.480 $\pm$ 0.332  $\chi^2$ /NDF: 58.2/20

Left In: 3.194 $\pm$ 0.150  $\chi^2$ /NDF:1295.0/22

Left: 3.118 $\pm$ 0.105  $\chi^2$ /NDF: 2752.7/47

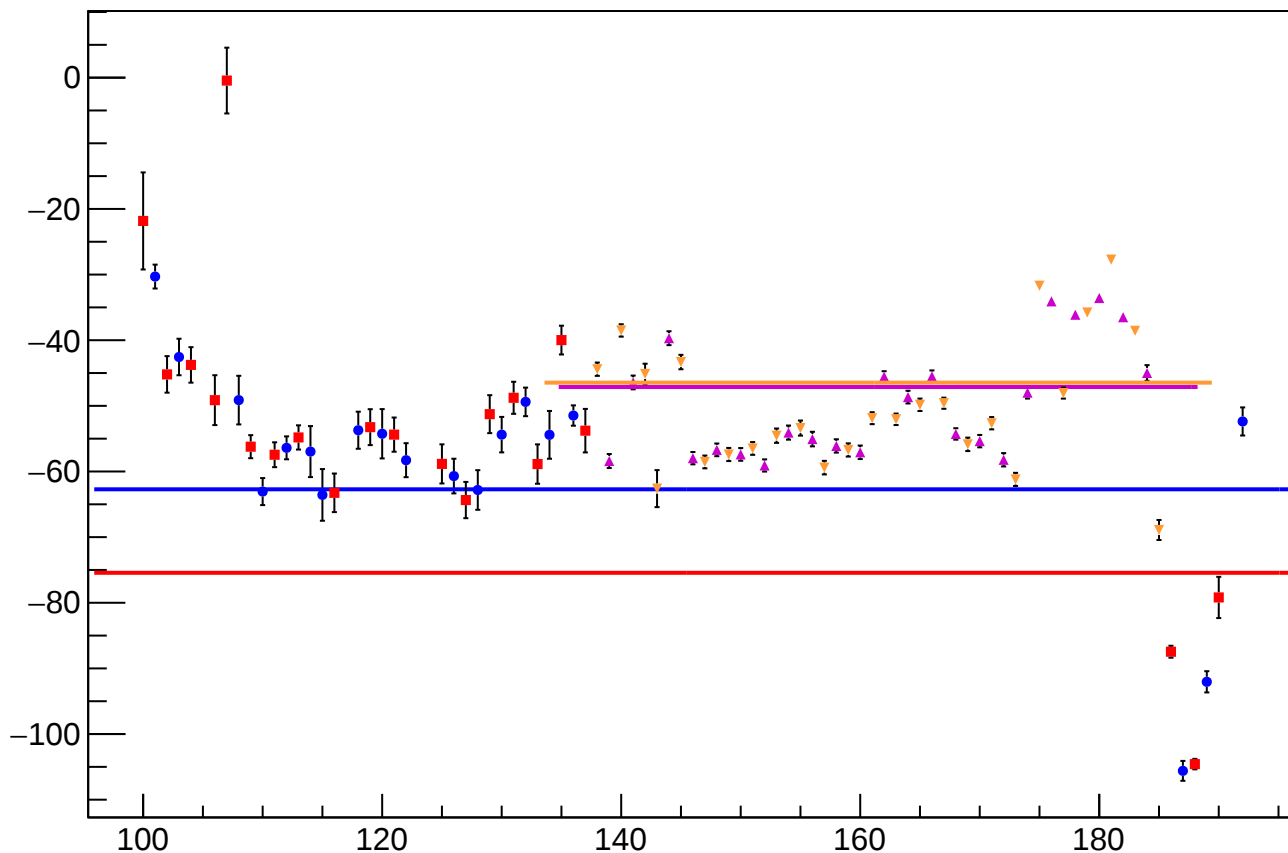
Right: 0.538 $\pm$ 0.235  $\chi^2$ /NDF: 123.0/39

In: 2.755 $\pm$ 0.137  $\chi^2$ /NDF:1410.4/41

Out: 2.622 $\pm$ 0.135  $\chi^2$ /NDF:1565.3/45

All: 2.688 $\pm$ 0.096  $\chi^2$ /NDF: 2976.2/87

reg\_asym\_us\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-62.715 \pm 0.522$   $\chi^2/\text{NDF}$ : 1675.5/18

Left Out:  $-46.463 \pm 0.186$   $\chi^2/\text{NDF}$ : 3319.7/24

Right Out:  $-75.433 \pm 0.426$   $\chi^2/\text{NDF}$ : 3143.7/20

Left In:  $-47.128 \pm 0.187$   $\chi^2/\text{NDF}$ : 2516.0/22

Left:  $-46.793 \pm 0.132$   $\chi^2/\text{NDF}$ : 5842.0/47

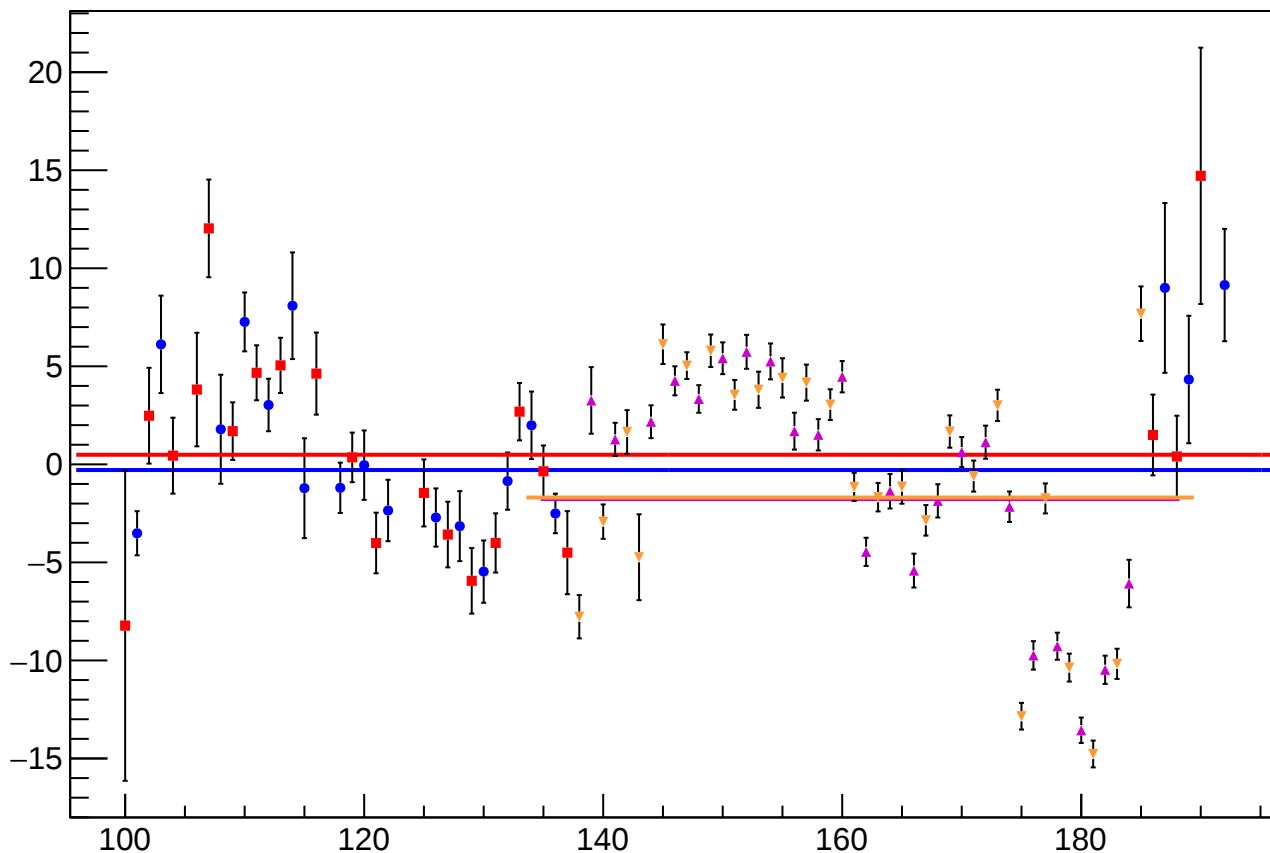
Right:  $-70.342 \pm 0.330$   $\chi^2/\text{NDF}$ : 5175.6/39

In:  $-48.905 \pm 0.176$   $\chi^2/\text{NDF}$ : 4982.3/41

Out:  $-51.104 \pm 0.171$   $\chi^2/\text{NDF}$ : 10343.4/45

All:  $-50.040 \pm 0.123$   $\chi^2/\text{NDF}$ : 15406.1/87

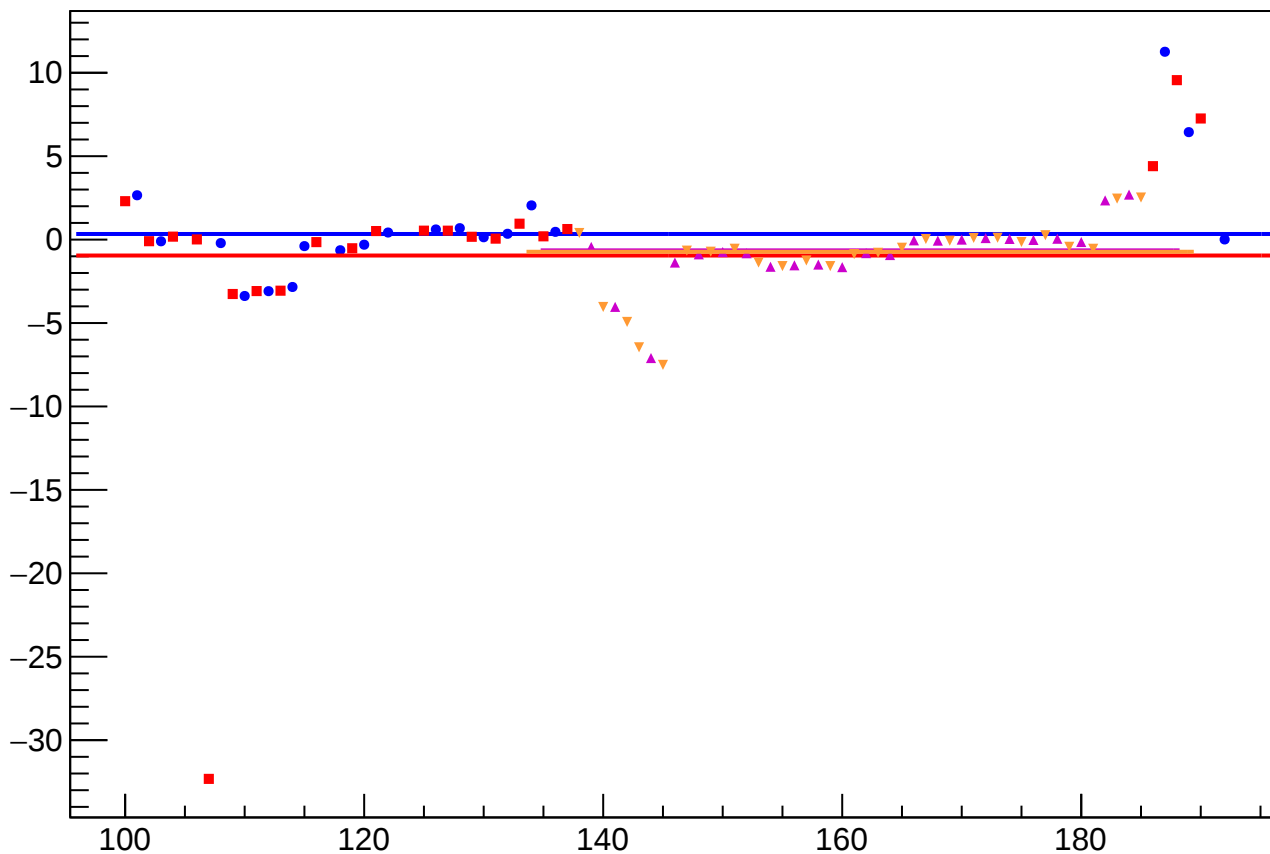
reg\_asym\_us\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-0.290 \pm 0.380$   $\chi^2/\text{NDF}$ : 98.8/18  
 Left Out:  $-1.693 \pm 0.167$   $\chi^2/\text{NDF}$ : 1485.7/24  
 Right Out:  $0.489 \pm 0.385$   $\chi^2/\text{NDF}$ : 101.2/20  
 Left In:  $-1.771 \pm 0.169$   $\chi^2/\text{NDF}$ : 1251.3/22

Left:  $-1.731 \pm 0.119$   $\chi^2/\text{NDF}$ : 2737.1/47  
 Right:  $0.094 \pm 0.271$   $\chi^2/\text{NDF}$ : 202.1/39  
 In:  $-1.527 \pm 0.154$   $\chi^2/\text{NDF}$ : 1362.7/41  
 Out:  $-1.349 \pm 0.153$   $\chi^2/\text{NDF}$ : 1613.9/45  
 All:  $-1.437 \pm 0.109$   $\chi^2/\text{NDF}$ : 2977.3/87

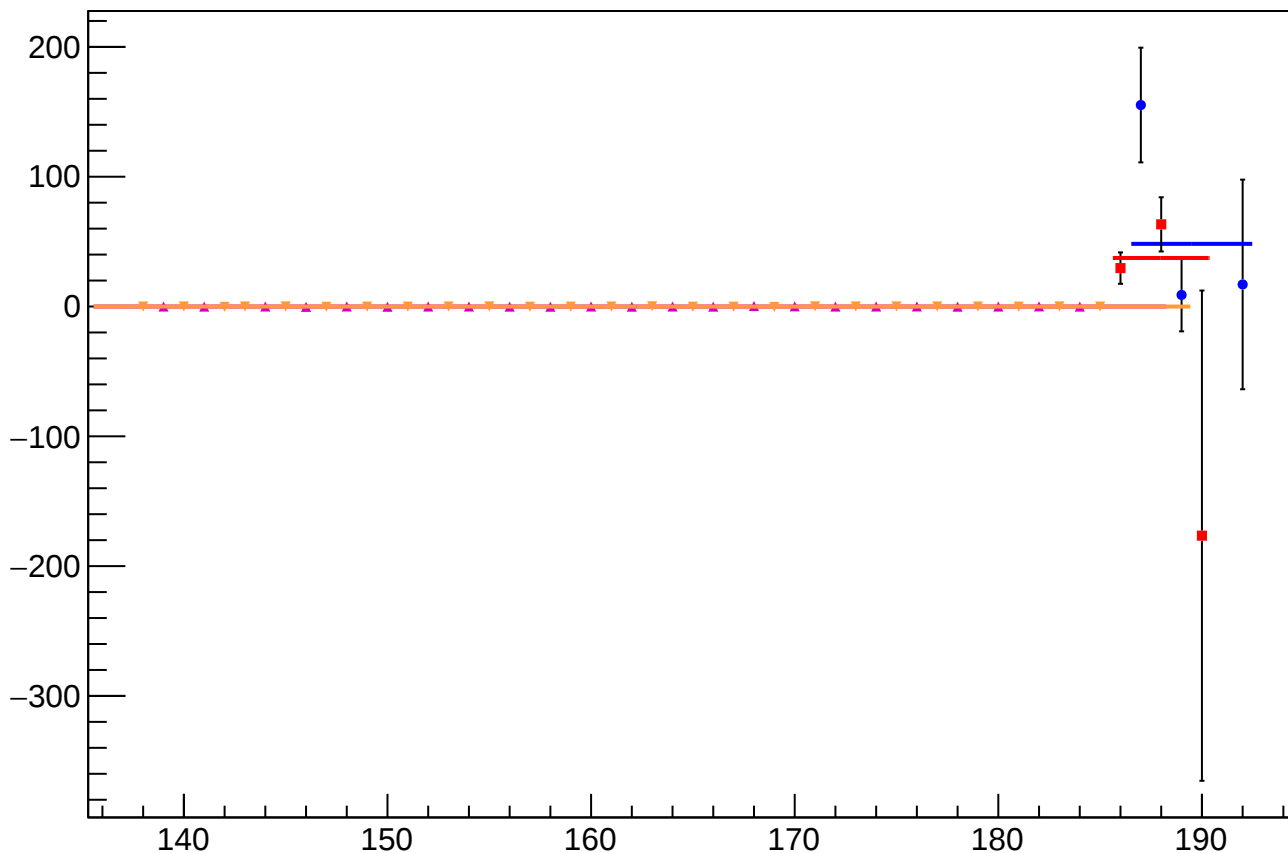
reg\_asym\_us\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $0.337 \pm 0.021$   $\chi^2/\text{NDF}: 9105.1/18$   
 Left Out:  $-0.728 \pm 0.008$   $\chi^2/\text{NDF}: 56403.8/24$   
 Right Out:  $-0.953 \pm 0.021$   $\chi^2/\text{NDF}: 92229.3/20$   
 Left In:  $-0.644 \pm 0.008$   $\chi^2/\text{NDF}: 44169.2/22$

Left:  $-0.686 \pm 0.005$   $\chi^2/\text{NDF}: 100633.3/47$   
 Right:  $-0.298 \pm 0.015$   $\chi^2/\text{NDF}: 103245.4/39$   
 In:  $-0.526 \pm 0.007$   $\chi^2/\text{NDF}: 55248.5/41$   
 Out:  $-0.754 \pm 0.007$   $\chi^2/\text{NDF}: 148734.6/45$   
 All:  $-0.640 \pm 0.005$   $\chi^2/\text{NDF}: 204489.6/87$

reg\_asym\_ds\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 48.273+/-22.731  $\chi^2/\text{NDF}$ : 8.0/2

Left Out: -0.036+/-0.018  $\chi^2/\text{NDF}$ : 35.6/24

Right Out: 37.396+/-10.447  $\chi^2/\text{NDF}$ : 3.2/2

Left In: -0.010+/-0.018  $\chi^2/\text{NDF}$ : 35.1/22

Left: -0.023+/-0.013  $\chi^2/\text{NDF}$ : 71.8/47

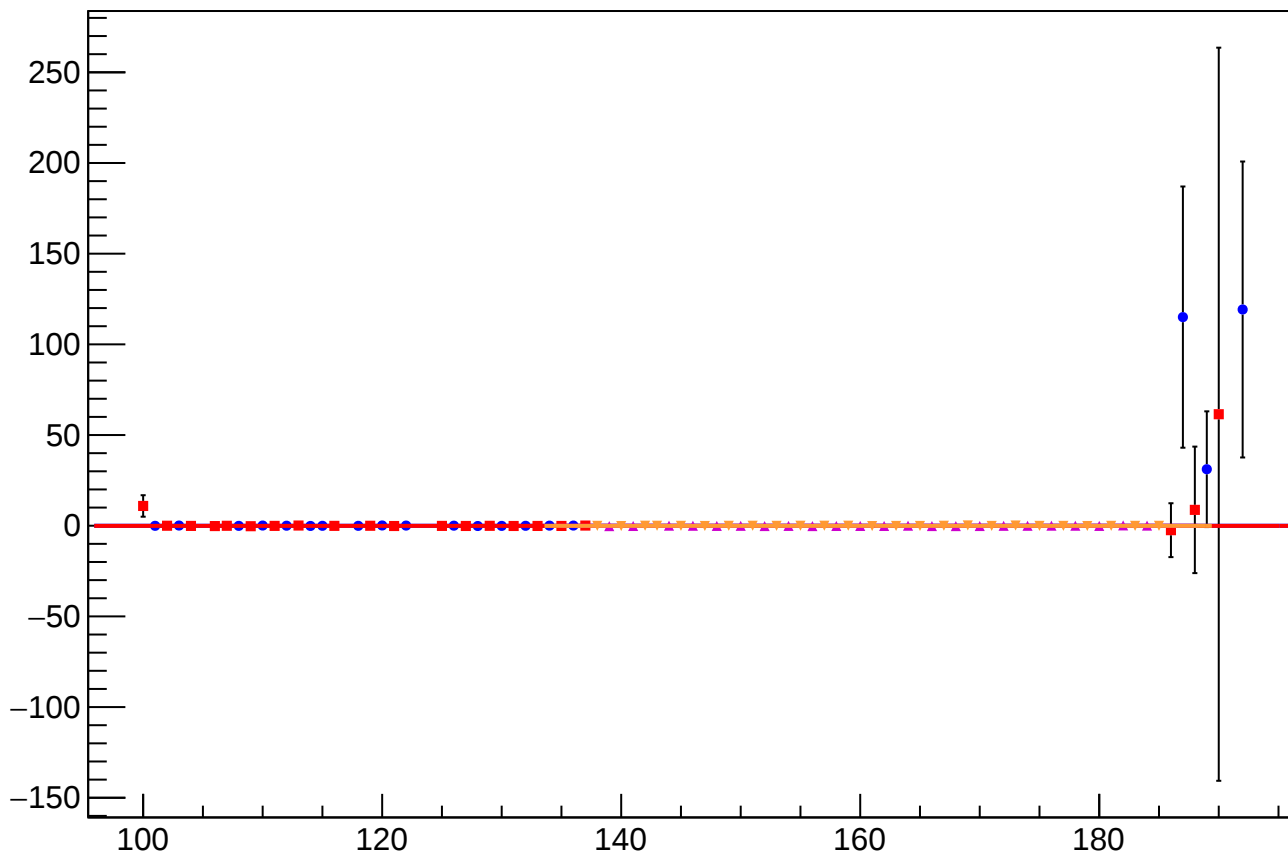
Right: 39.293+/-9.493  $\chi^2/\text{NDF}$ : 11.4/5

In: -0.010+/-0.018  $\chi^2/\text{NDF}$ : 47.6/25

Out: -0.036+/-0.018  $\chi^2/\text{NDF}$ : 51.7/27

All: -0.023+/-0.013  $\chi^2/\text{NDF}$ : 100.3/53

reg\_asym\_ds\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-0.013 \pm 0.023$   $\chi^2/\text{NDF}: 17.7/18$

Left Out:  $-0.071 \pm 0.014$   $\chi^2/\text{NDF}: 28.3/24$

Right Out:  $-0.088 \pm 0.025$   $\chi^2/\text{NDF}: 13.1/20$

Left In:  $-0.064 \pm 0.014$   $\chi^2/\text{NDF}: 41.1/22$

Left:  $-0.067 \pm 0.010$   $\chi^2/\text{NDF}: 69.5/47$

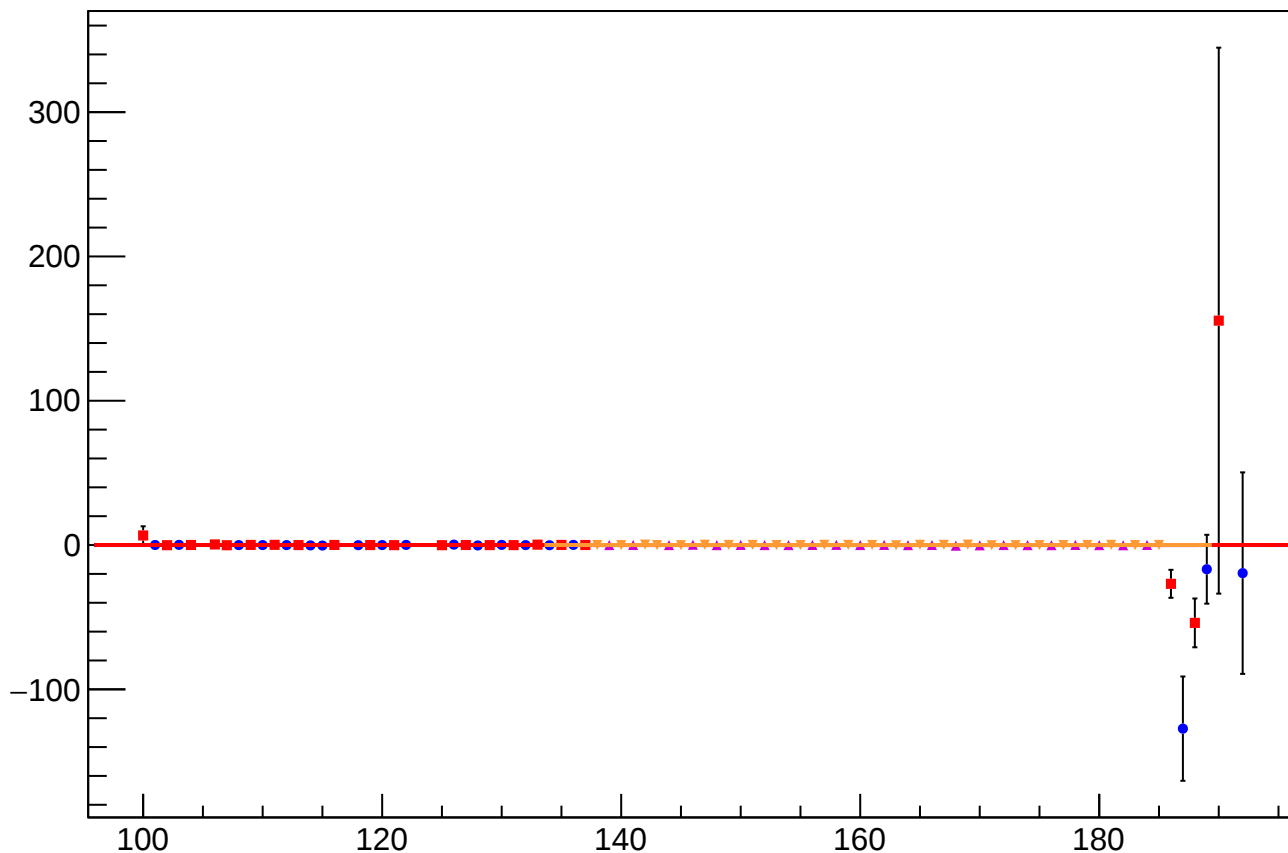
Right:  $-0.049 \pm 0.017$   $\chi^2/\text{NDF}: 35.5/39$

In:  $-0.050 \pm 0.012$   $\chi^2/\text{NDF}: 62.1/41$

Out:  $-0.075 \pm 0.012$   $\chi^2/\text{NDF}: 41.8/45$

All:  $-0.063 \pm 0.009$   $\chi^2/\text{NDF}: 105.9/87$

reg\_asym\_ds\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 0.016 $\pm$ 0.043  $\chi^2$ /NDF: 22.1/18

Left Out: 0.033 $\pm$ 0.018  $\chi^2$ /NDF:32.6/24

Right Out: 0.031 $\pm$ 0.045  $\chi^2$ /NDF: 27.6/20

Left In: -0.009 $\pm$ 0.018  $\chi^2$ /NDF:36.8/22

Left: 0.013 $\pm$ 0.013  $\chi^2$ /NDF: 72.2/47

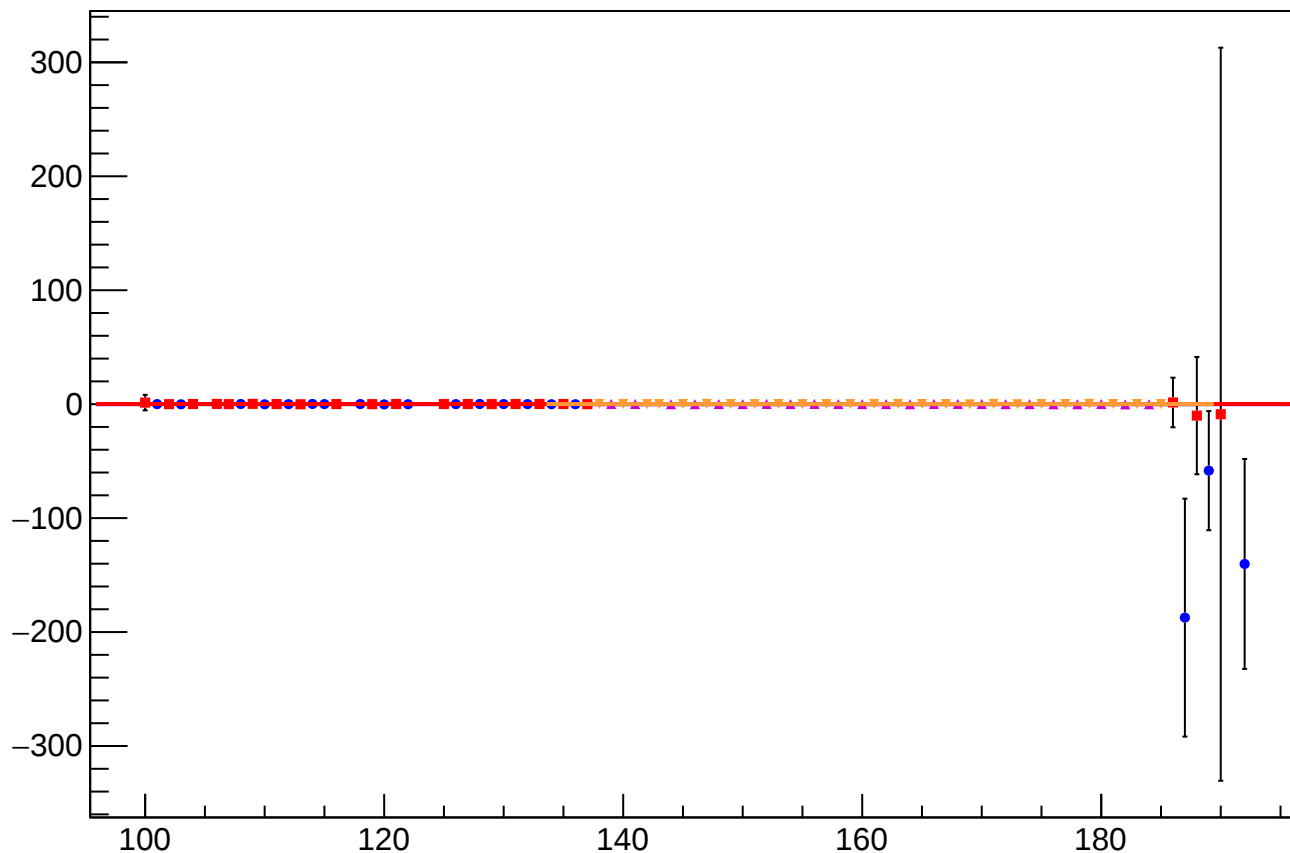
Right: 0.023 $\pm$ 0.031  $\chi^2$ /NDF: 49.8/39

In: -0.005 $\pm$ 0.017  $\chi^2$ /NDF:59.2/41

Out: 0.033 $\pm$ 0.016  $\chi^2$ /NDF:60.2/45

All: 0.014 $\pm$ 0.012  $\chi^2$ /NDF: 122.1/87

reg\_asym\_ds\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 0.008 $\pm$ 0.027  $\chi^2$ /NDF: 18.5/18

Left Out: 0.084 $\pm$ 0.016  $\chi^2$ /NDF:28.1/24

Right Out: 0.105 $\pm$ 0.029  $\chi^2$ /NDF: 8.2/20

Left In: 0.070 $\pm$ 0.016  $\chi^2$ /NDF:44.8/22

Left: 0.077 $\pm$ 0.011  $\chi^2$ /NDF: 73.3/47

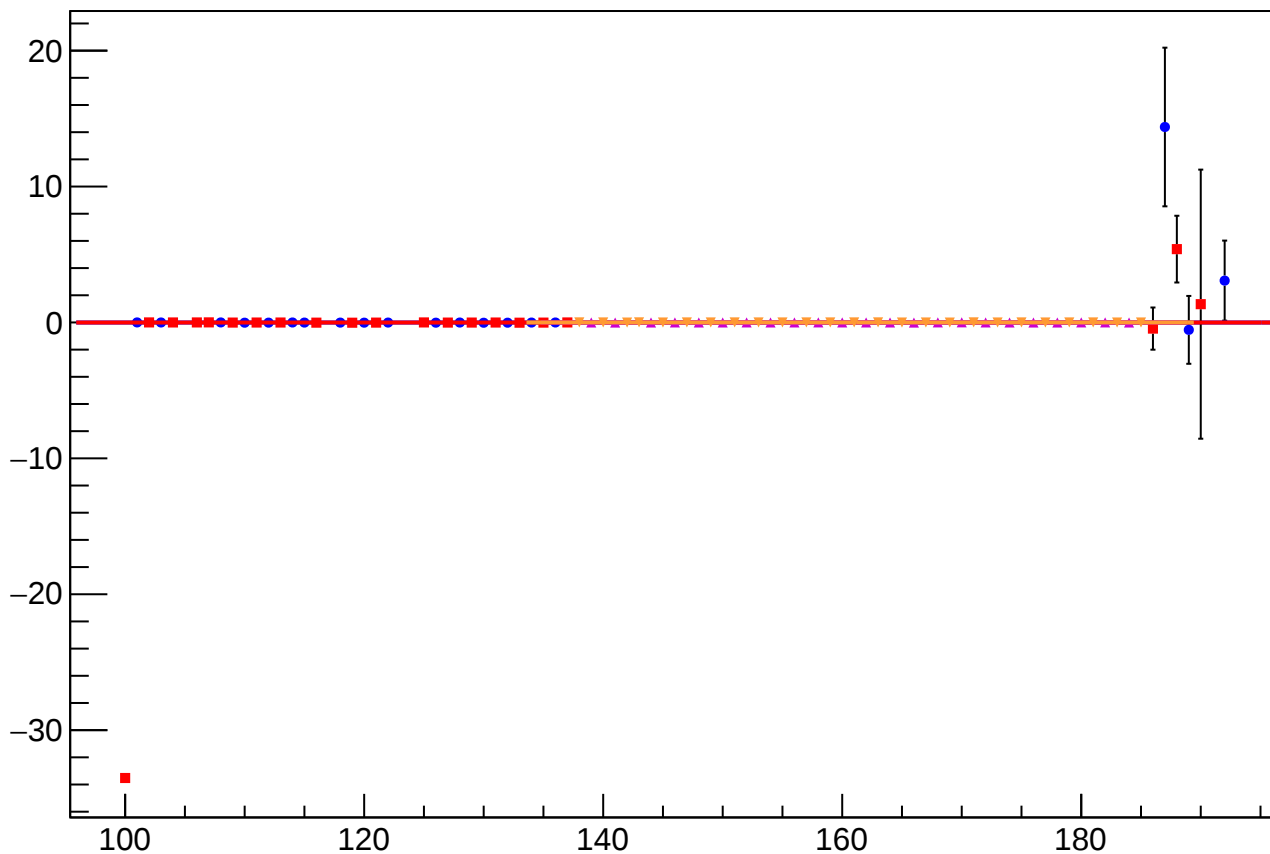
Right: 0.054 $\pm$ 0.020  $\chi^2$ /NDF: 32.7/39

In: 0.053 $\pm$ 0.014  $\chi^2$ /NDF:67.1/41

Out: 0.089 $\pm$ 0.014  $\chi^2$ /NDF:36.7/45

All: 0.071 $\pm$ 0.010  $\chi^2$ /NDF: 107.1/87

reg\_asym\_ds\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.005 \pm 0.001$   $\chi^2/\text{NDF}$ : 28.7/18

Left Out:  $0.001 \pm 0.001$   $\chi^2/\text{NDF}$ : 26.1/24

Right Out:  $-0.006 \pm 0.001$   $\chi^2/\text{NDF}$ : 26513.9/20

Left In:  $0.000 \pm 0.001$   $\chi^2/\text{NDF}$ : 22.3/22

Left:  $0.000 \pm 0.001$   $\chi^2/\text{NDF}$ : 48.6/47

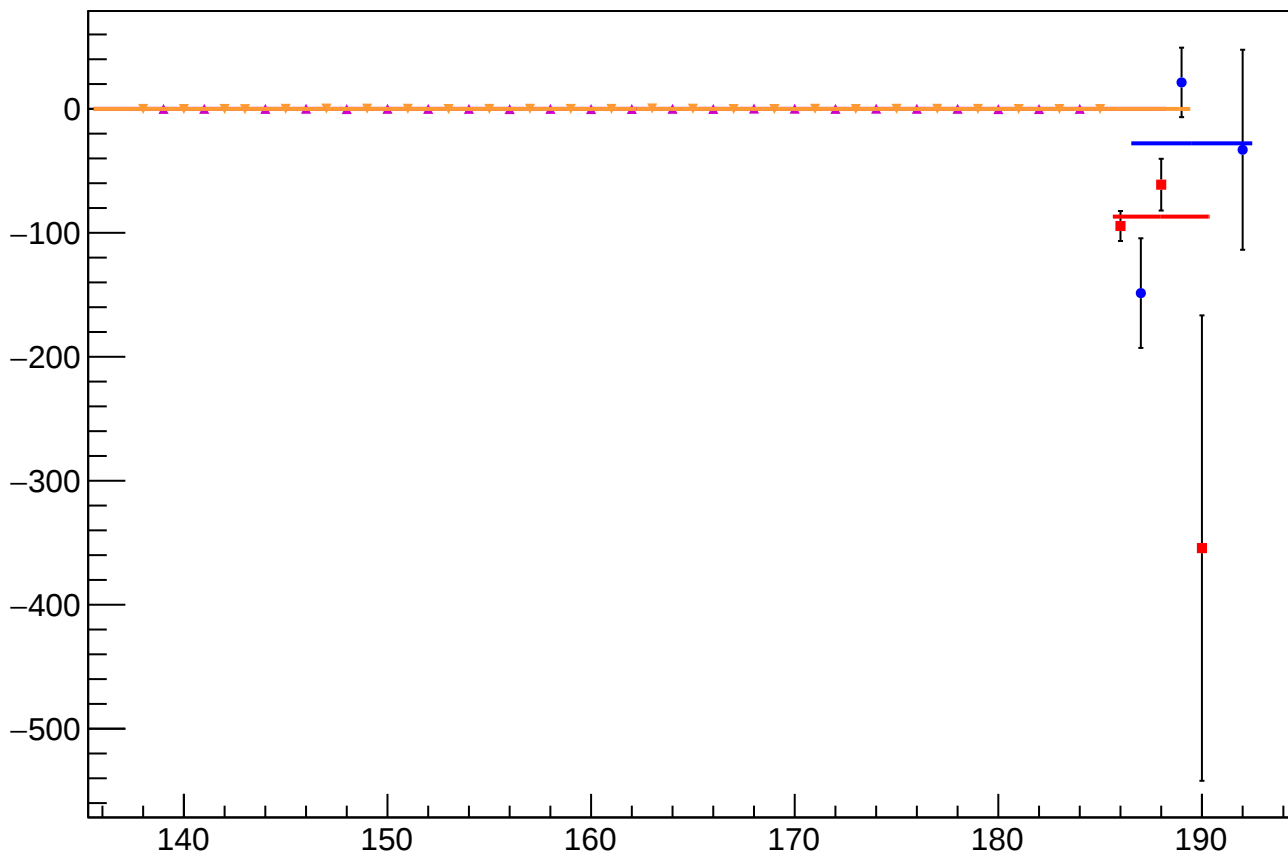
Right:  $-0.006 \pm 0.001$   $\chi^2/\text{NDF}$ : 26542.7/39

In:  $-0.001 \pm 0.001$   $\chi^2/\text{NDF}$ : 62.8/41

Out:  $-0.001 \pm 0.001$   $\chi^2/\text{NDF}$ : 26556.2/45

All:  $-0.001 \pm 0.000$   $\chi^2/\text{NDF}$ : 26619.1/87

reg\_asym\_ds\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-27.825 \pm 22.712$   $\chi^2/\text{NDF}: 10.5/2$

Left Out:  $-0.059 \pm 0.018$   $\chi^2/\text{NDF}: 41.7/24$

Right Out:  $-86.935 \pm 10.450$   $\chi^2/\text{NDF}: 3.9/2$

Left In:  $-0.009 \pm 0.018$   $\chi^2/\text{NDF}: 35.1/22$

Left:  $-0.034 \pm 0.013$   $\chi^2/\text{NDF}: 80.7/47$

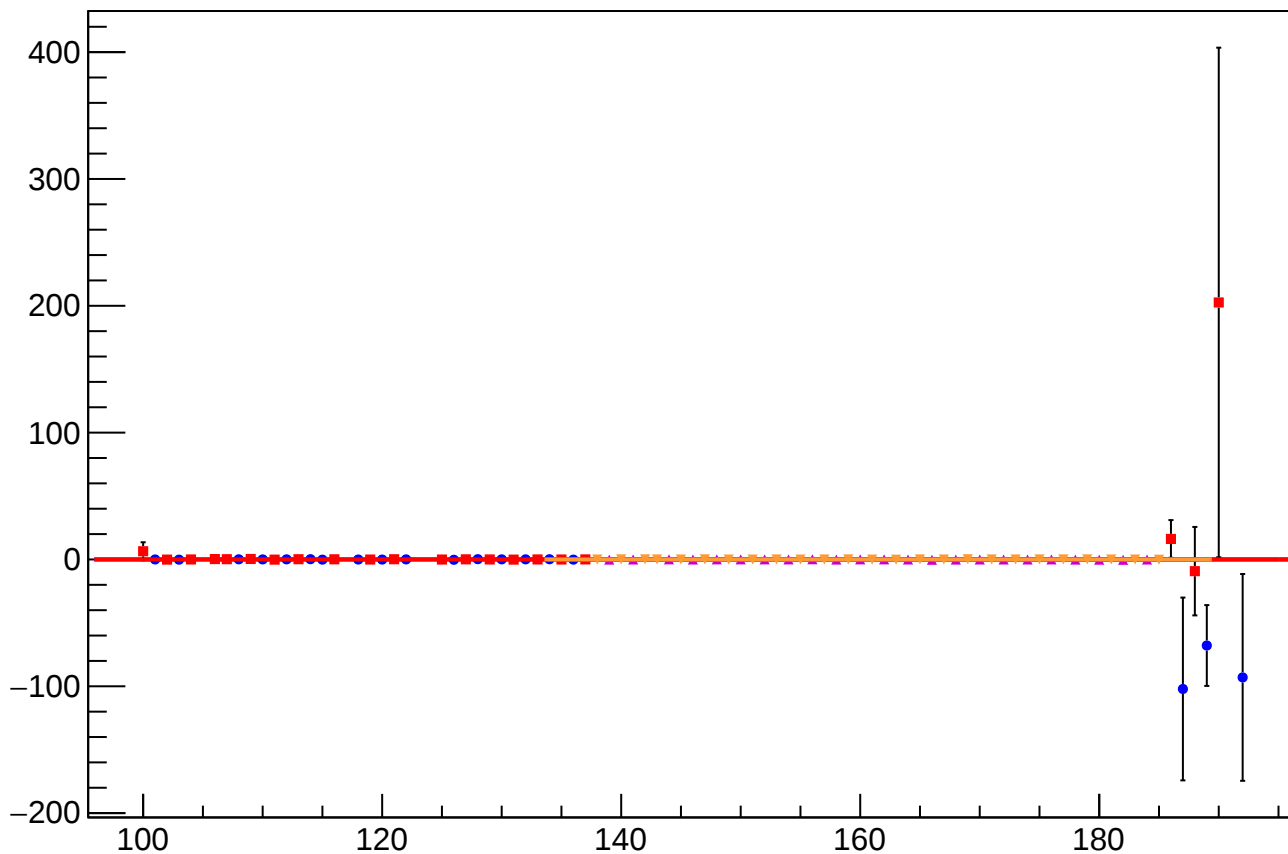
Right:  $-76.607 \pm 9.493$   $\chi^2/\text{NDF}: 20.1/5$

In:  $-0.009 \pm 0.018$   $\chi^2/\text{NDF}: 47.1/25$

Out:  $-0.059 \pm 0.018$   $\chi^2/\text{NDF}: 114.7/27$

All:  $-0.035 \pm 0.013$   $\chi^2/\text{NDF}: 165.8/53$

reg\_asym\_ds\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 0.008 $\pm$ 0.023  $\chi^2$ /NDF: 33.0/18

Left Out: -0.010 $\pm$ 0.014  $\chi^2$ /NDF:29.7/24

Right Out: 0.037 $\pm$ 0.025  $\chi^2$ /NDF: 31.0/20

Left In: 0.005 $\pm$ 0.014  $\chi^2$ /NDF:49.6/22

Left: -0.003 $\pm$ 0.010  $\chi^2$ /NDF: 79.8/47

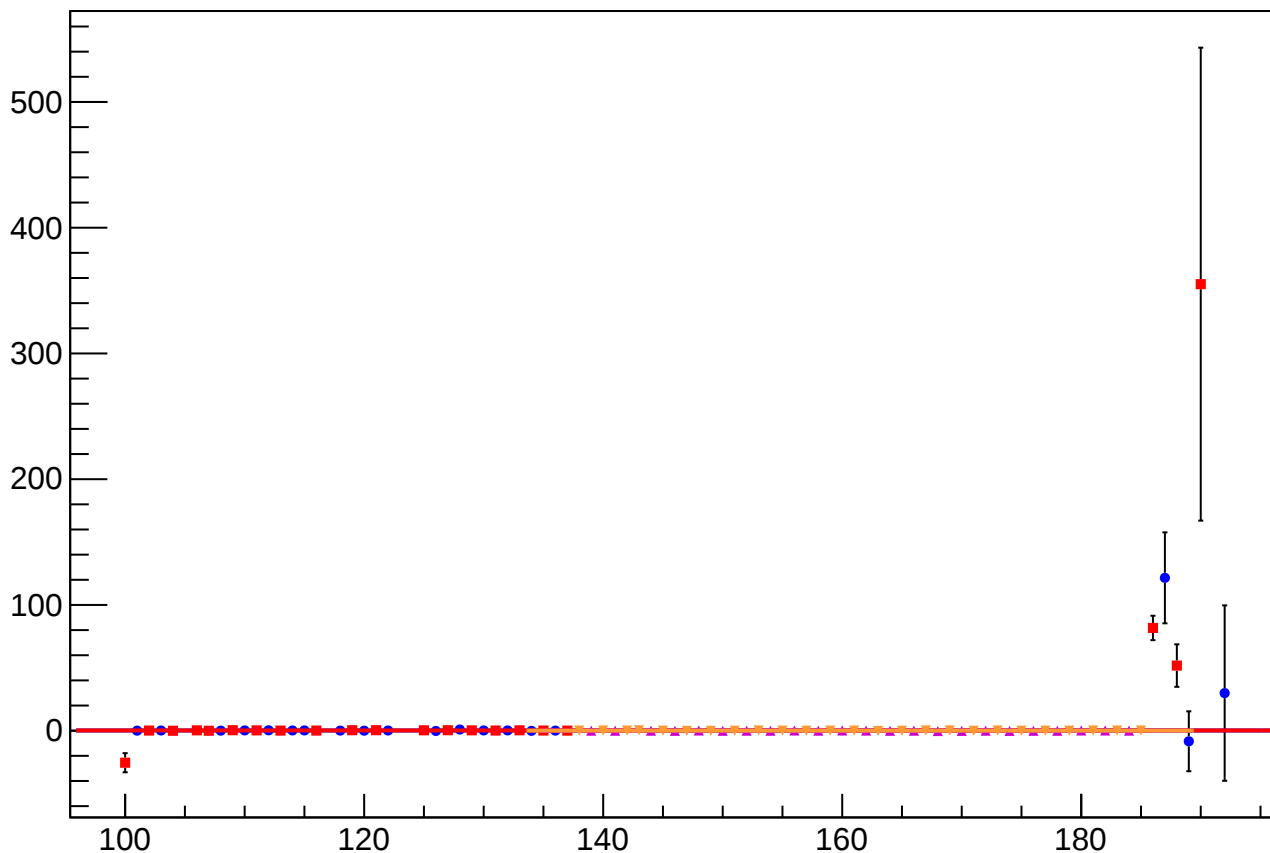
Right: 0.021 $\pm$ 0.017  $\chi^2$ /NDF: 64.7/39

In: 0.006 $\pm$ 0.012  $\chi^2$ /NDF:82.6/41

Out: 0.001 $\pm$ 0.012  $\chi^2$ /NDF:63.3/45

All: 0.003 $\pm$ 0.009  $\chi^2$ /NDF: 145.9/87

reg\_asym\_ds\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 0.157 $\pm$ 0.043  $\chi^2$ /NDF: 41.3/18

Left Out: 0.055 $\pm$ 0.018  $\chi^2$ /NDF:41.0/24

Right Out: 0.197 $\pm$ 0.045  $\chi^2$ /NDF: 105.5/20

Left In: 0.020 $\pm$ 0.018  $\chi^2$ /NDF:35.8/22

Left: 0.038 $\pm$ 0.013  $\chi^2$ /NDF: 78.7/47

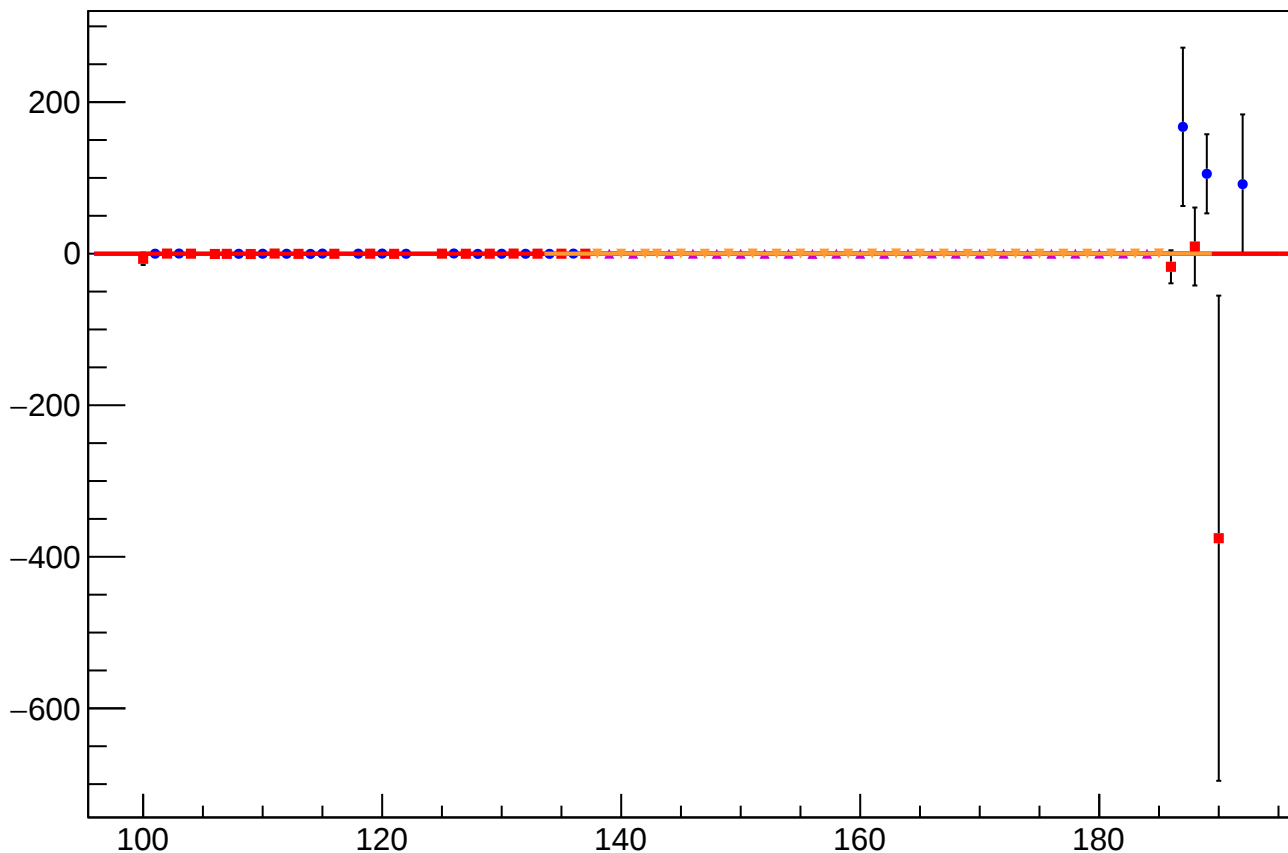
Right: 0.176 $\pm$ 0.031  $\chi^2$ /NDF: 147.2/39

In: 0.040 $\pm$ 0.017  $\chi^2$ /NDF:85.7/41

Out: 0.074 $\pm$ 0.016  $\chi^2$ /NDF:155.1/45

All: 0.057 $\pm$ 0.012  $\chi^2$ /NDF: 242.9/87

reg\_asym\_ds\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-0.010 \pm 0.027$   $\chi^2/\text{NDF}$ : 32.2/18

Left Out:  $0.021 \pm 0.016$   $\chi^2/\text{NDF}$ : 33.4/24

Right Out:  $-0.046 \pm 0.029$   $\chi^2/\text{NDF}$ : 28.3/20

Left In:  $0.006 \pm 0.016$   $\chi^2/\text{NDF}$ : 50.1/22

Left:  $0.014 \pm 0.011$   $\chi^2/\text{NDF}$ : 84.0/47

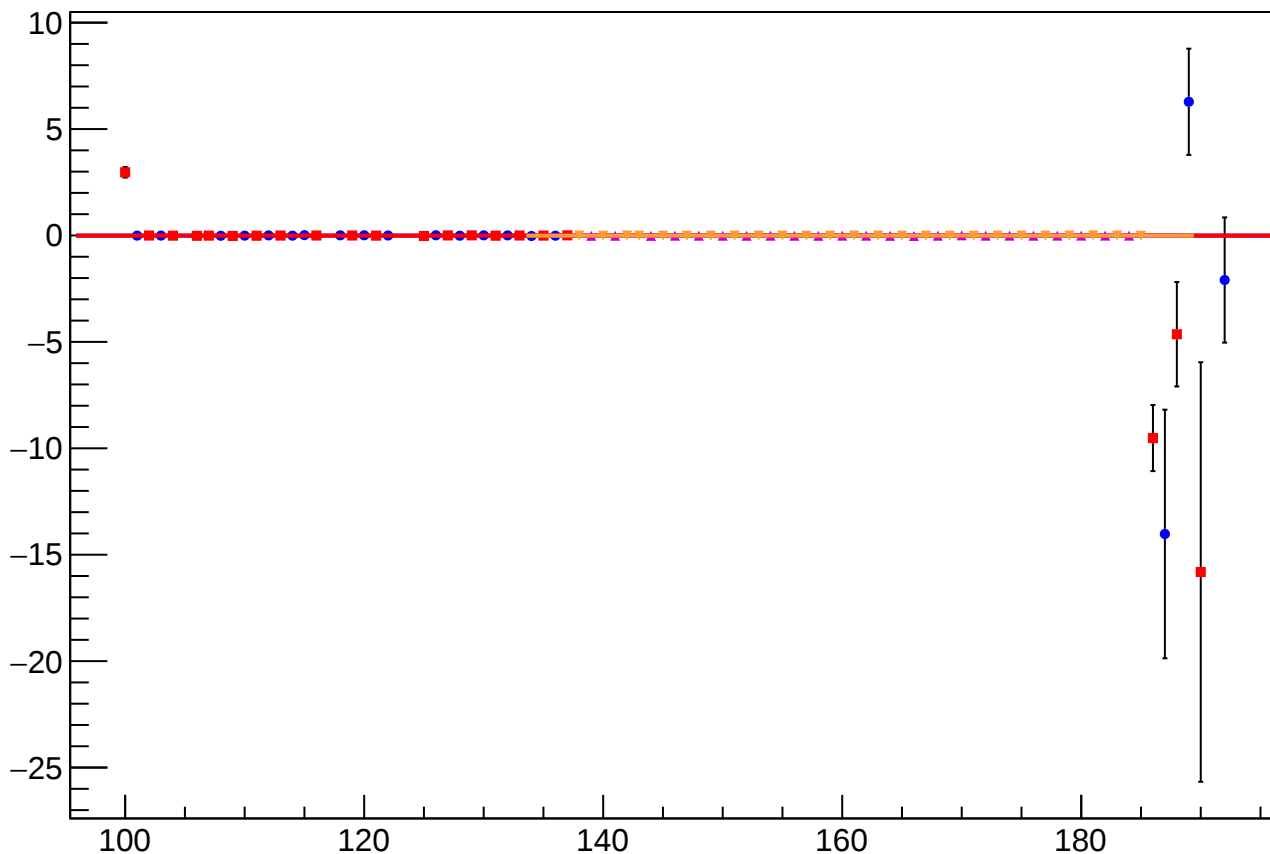
Right:  $-0.027 \pm 0.020$   $\chi^2/\text{NDF}$ : 61.4/39

In:  $0.002 \pm 0.014$   $\chi^2/\text{NDF}$ : 82.6/41

Out:  $0.005 \pm 0.014$   $\chi^2/\text{NDF}$ : 65.9/45

All:  $0.003 \pm 0.010$   $\chi^2/\text{NDF}$ : 148.6/87

reg\_asym\_ds\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: -0.006 $\pm$ 0.001  $\chi^2$ /NDF: 40.1/18

Left Out: -0.008 $\pm$ 0.001  $\chi^2$ /NDF:32.7/24

Right Out: -0.006 $\pm$ 0.001  $\chi^2$ /NDF: 209.0/20

Left In: -0.009 $\pm$ 0.001  $\chi^2$ /NDF:37.2/22

Left: -0.008 $\pm$ 0.001  $\chi^2$ /NDF: 70.3/47

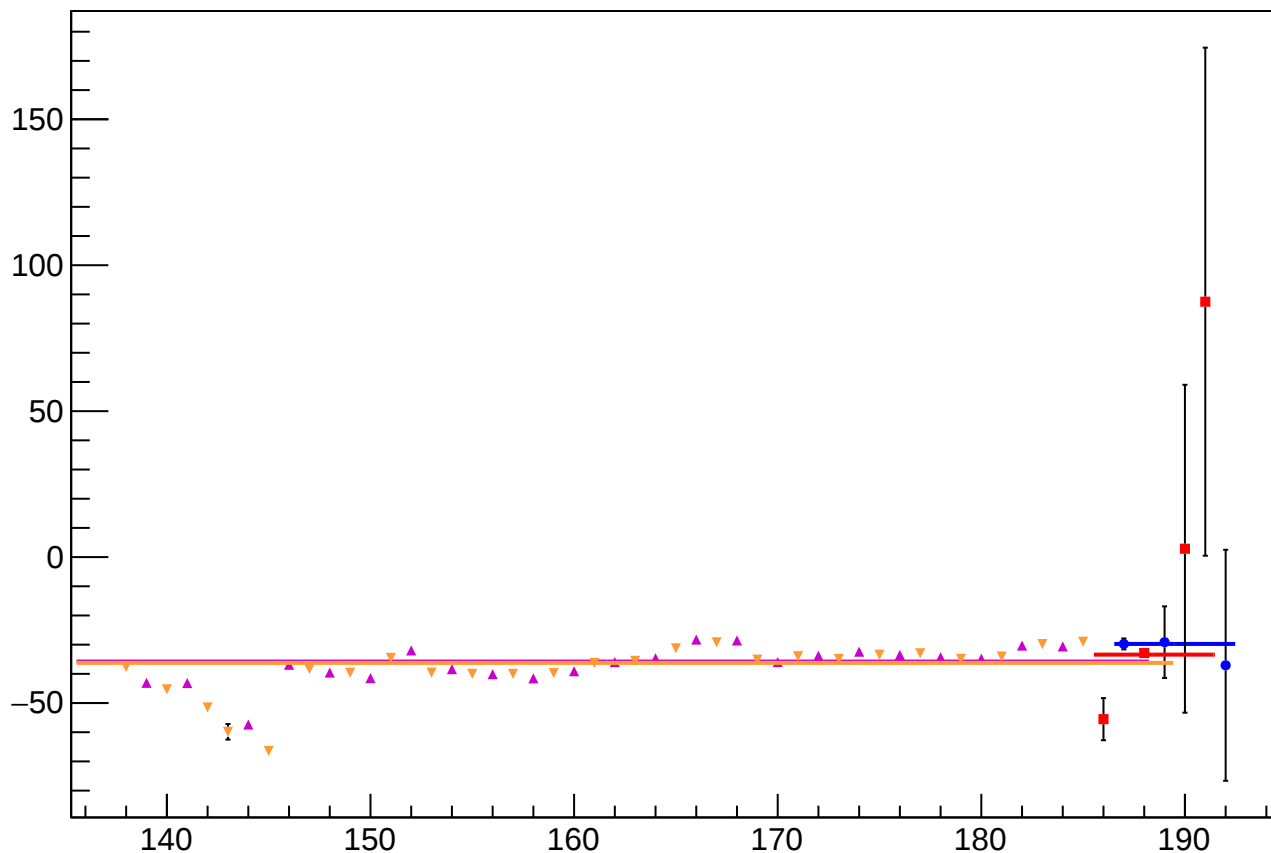
Right: -0.006 $\pm$ 0.001  $\chi^2$ /NDF: 249.1/39

In: -0.008 $\pm$ 0.001  $\chi^2$ /NDF:79.8/41

Out: -0.008 $\pm$ 0.001  $\chi^2$ /NDF:243.6/45

All: -0.008 $\pm$ 0.000  $\chi^2$ /NDF: 323.7/87

reg\_asym\_left\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-29.750 \pm 1.851$   $\chi^2/\text{NDF}: 0.0/2$

Left Out:  $-36.243 \pm 0.191$   $\chi^2/\text{NDF}: 1193.9/24$

Right Out:  $-33.413 \pm 1.164$   $\chi^2/\text{NDF}: 11.9/3$

Left In:  $-35.779 \pm 0.191$   $\chi^2/\text{NDF}: 854.1/22$

Left:  $-36.011 \pm 0.135$   $\chi^2/\text{NDF}: 2050.9/47$

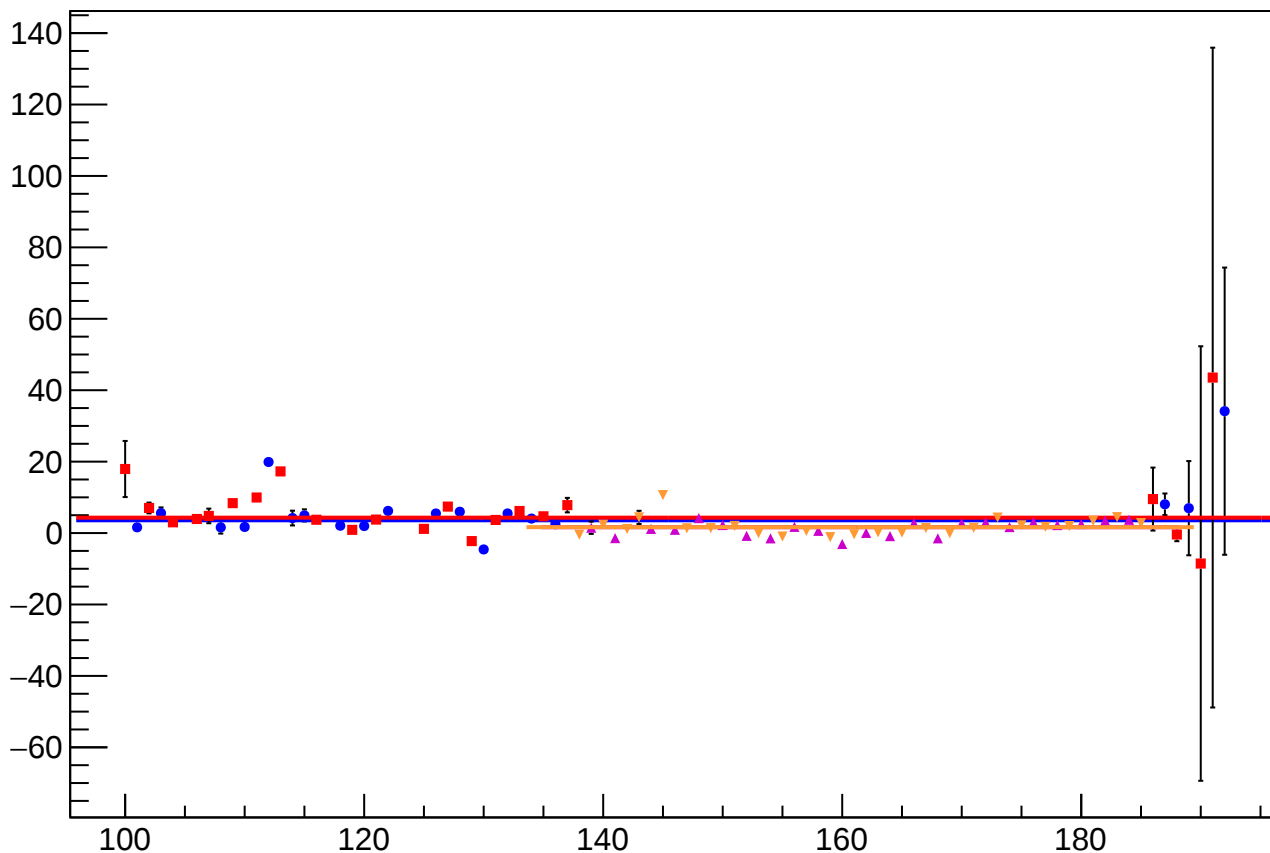
Right:  $-32.376 \pm 0.985$   $\chi^2/\text{NDF}: 14.8/6$

In:  $-35.716 \pm 0.190$   $\chi^2/\text{NDF}: 864.6/25$

Out:  $-36.168 \pm 0.189$   $\chi^2/\text{NDF}: 1211.6/28$

All:  $-35.944 \pm 0.134$   $\chi^2/\text{NDF}: 2079.1/54$

reg\_asym\_left\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 3.578 $\pm$ 0.220  $\chi^2$ /NDF: 442.8/18

Left Out: 1.652 $\pm$ 0.147  $\chi^2$ /NDF:168.8/24

Right Out: 4.310 $\pm$ 0.224  $\chi^2$ /NDF: 360.1/21

Left In: 1.641 $\pm$ 0.150  $\chi^2$ /NDF:163.2/22

Left: 1.647 $\pm$ 0.105  $\chi^2$ /NDF: 332.0/47

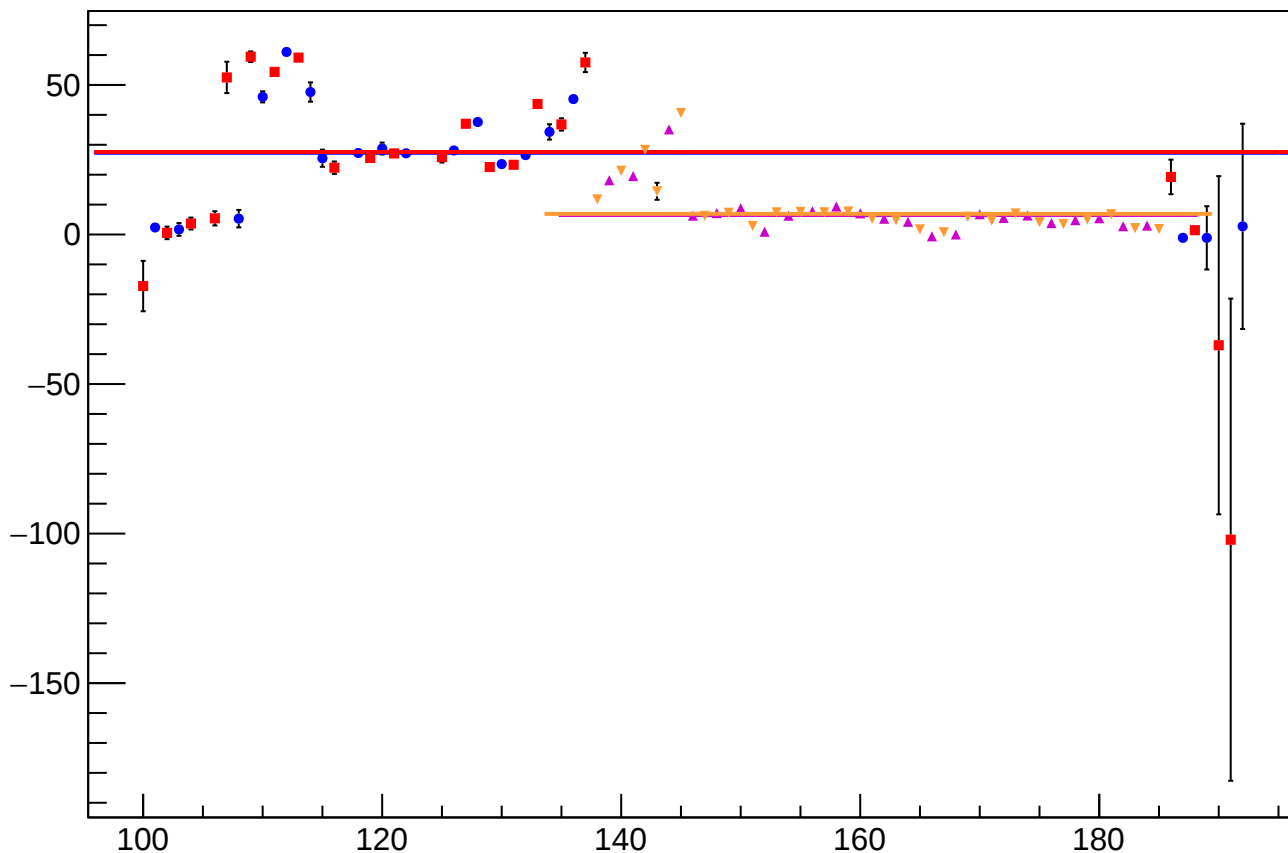
Right: 3.938 $\pm$ 0.157  $\chi^2$ /NDF: 808.3/40

In: 2.253 $\pm$ 0.124  $\chi^2$ /NDF:659.0/41

Out: 2.457 $\pm$ 0.123  $\chi^2$ /NDF:627.5/46

All: 2.355 $\pm$ 0.087  $\chi^2$ /NDF: 1287.8/88

reg\_asym\_left\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $27.328 \pm 0.405$   $\chi^2/\text{NDF}: 1864.6/18$

Left Out:  $6.900 \pm 0.191$   $\chi^2/\text{NDF}: 1302.8/24$

Right Out:  $27.583 \pm 0.386$   $\chi^2/\text{NDF}: 2568.8/21$

Left In:  $6.537 \pm 0.190$   $\chi^2/\text{NDF}: 1025.1/22$

Left:  $6.718 \pm 0.135$   $\chi^2/\text{NDF}: 2329.7/47$

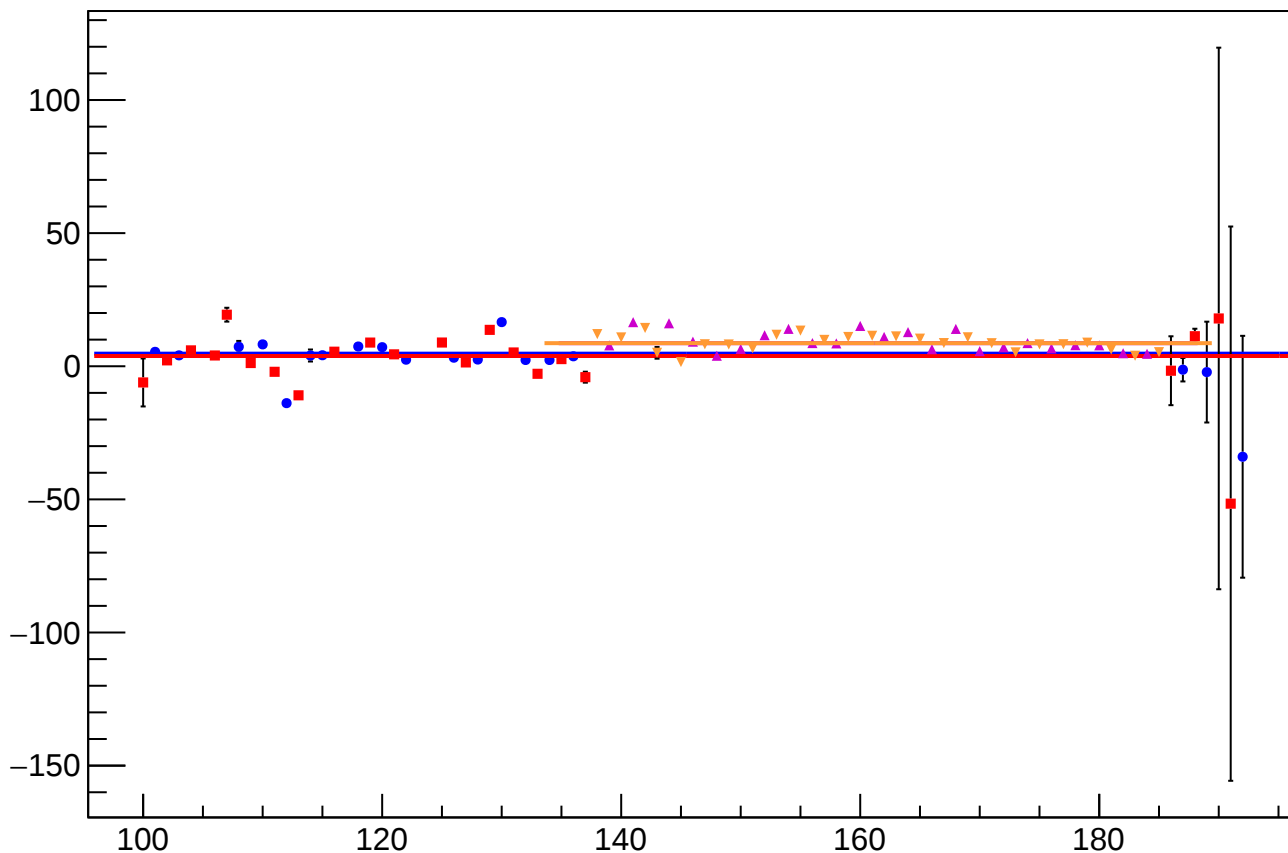
Right:  $27.462 \pm 0.280$   $\chi^2/\text{NDF}: 4433.7/40$

In:  $10.296 \pm 0.172$   $\chi^2/\text{NDF}: 5046.6/41$

Out:  $10.962 \pm 0.171$   $\chi^2/\text{NDF}: 6175.7/46$

All:  $10.632 \pm 0.121$   $\chi^2/\text{NDF}: 11229.8/88$

reg\_asym\_left\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 4.728 $\pm$ 0.254  $\chi^2$ /NDF: 549.3/18

Left Out: 8.674 $\pm$ 0.168  $\chi^2$ /NDF: 243.7/24

Right Out: 3.850 $\pm$ 0.258  $\chi^2$ /NDF: 572.3/21

Left In: 8.668 $\pm$ 0.170  $\chi^2$ /NDF: 436.7/22

Left: 8.671 $\pm$ 0.120  $\chi^2$ /NDF: 680.4/47

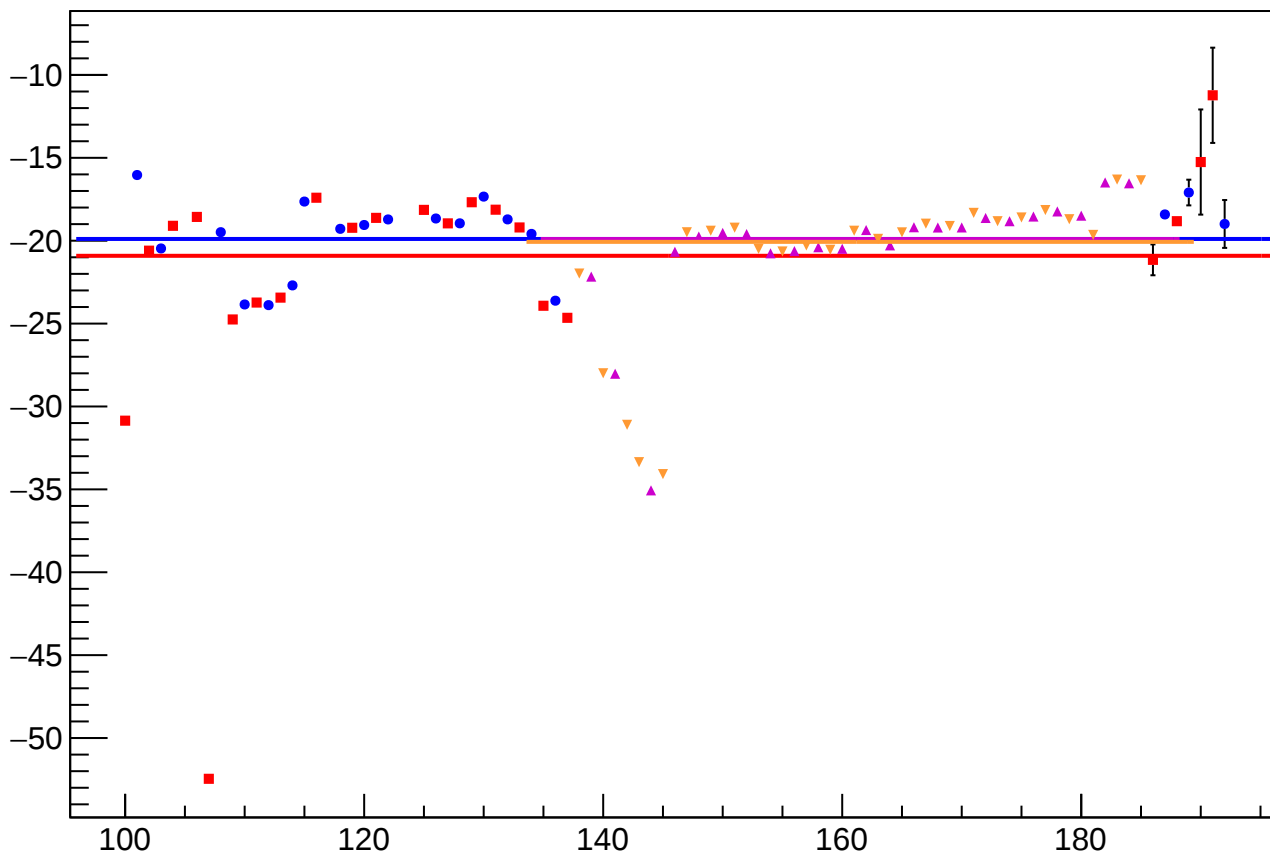
Right: 4.295 $\pm$ 0.181  $\chi^2$ /NDF: 1127.5/40

In: 7.448 $\pm$ 0.141  $\chi^2$ /NDF: 1152.1/41

Out: 7.230 $\pm$ 0.141  $\chi^2$ /NDF: 1061.3/46

All: 7.339 $\pm$ 0.100  $\chi^2$ /NDF: 2214.5/88

reg\_asym\_left\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-19.894 \pm 0.016$   $\chi^2/\text{NDF}$ : 26068.6/18

Left Out:  $-20.069 \pm 0.008$   $\chi^2/\text{NDF}$ : 185373.7/24

Right Out:  $-20.911 \pm 0.016$   $\chi^2/\text{NDF}$ : 94217.2/21

Left In:  $-19.898 \pm 0.008$   $\chi^2/\text{NDF}$ : 144191.9/22

Left:  $-19.983 \pm 0.006$   $\chi^2/\text{NDF}$ : 329802.7/47

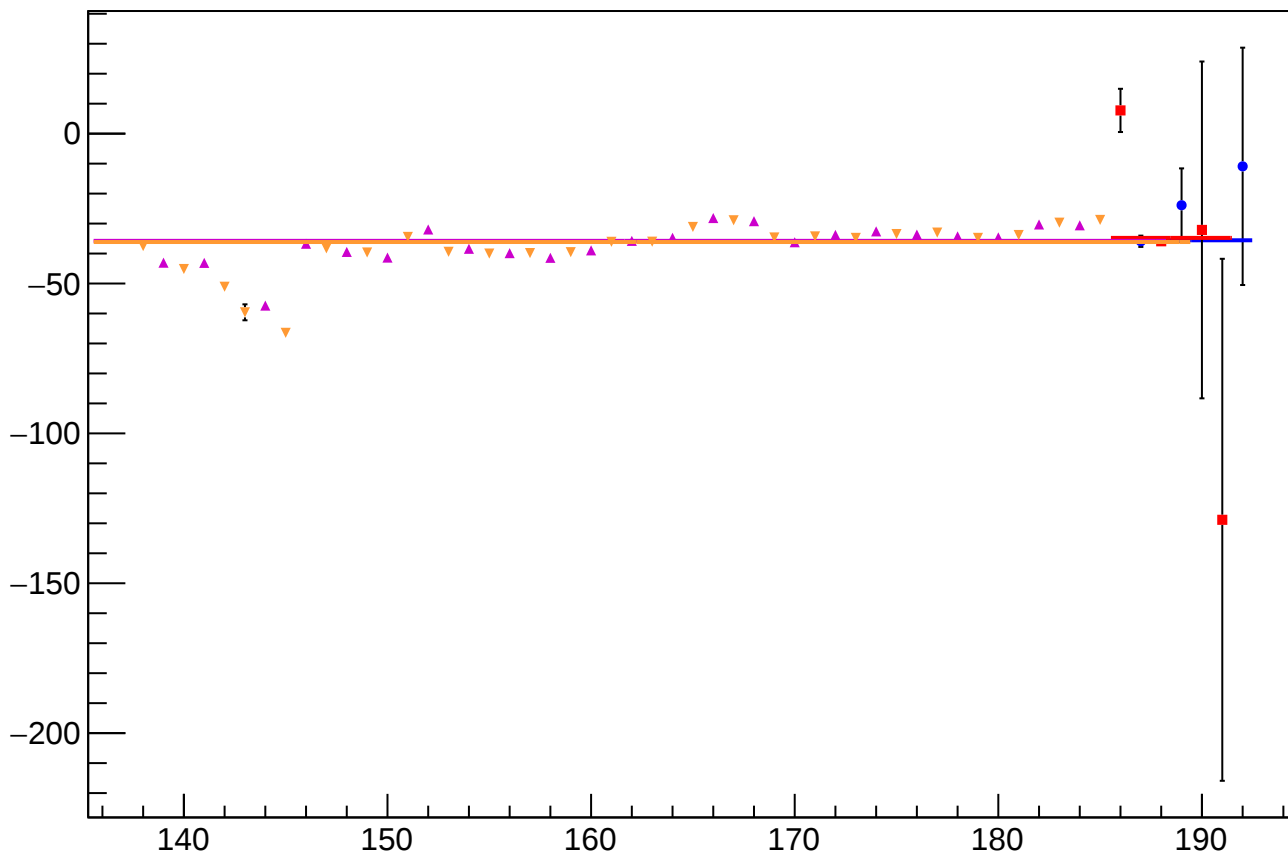
Right:  $-20.402 \pm 0.011$   $\chi^2/\text{NDF}$ : 122396.6/40

In:  $-19.897 \pm 0.007$   $\chi^2/\text{NDF}$ : 170260.6/41

Out:  $-20.239 \pm 0.007$   $\chi^2/\text{NDF}$ : 281898.9/46

All:  $-20.068 \pm 0.005$   $\chi^2/\text{NDF}$ : 453345.0/88

reg\_asym\_left\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: -35.575 $\pm$ 1.858  $\chi^2$ /NDF: 1.3/2

Left Out: -36.152 $\pm$ 0.191  $\chi^2$ /NDF:1199.2/24

Right Out: -34.778 $\pm$ 1.167  $\chi^2$ /NDF: 36.9/3

Left In: -35.766 $\pm$ 0.191  $\chi^2$ /NDF:842.6/22

Left: -35.959 $\pm$ 0.135  $\chi^2$ /NDF: 2043.8/47

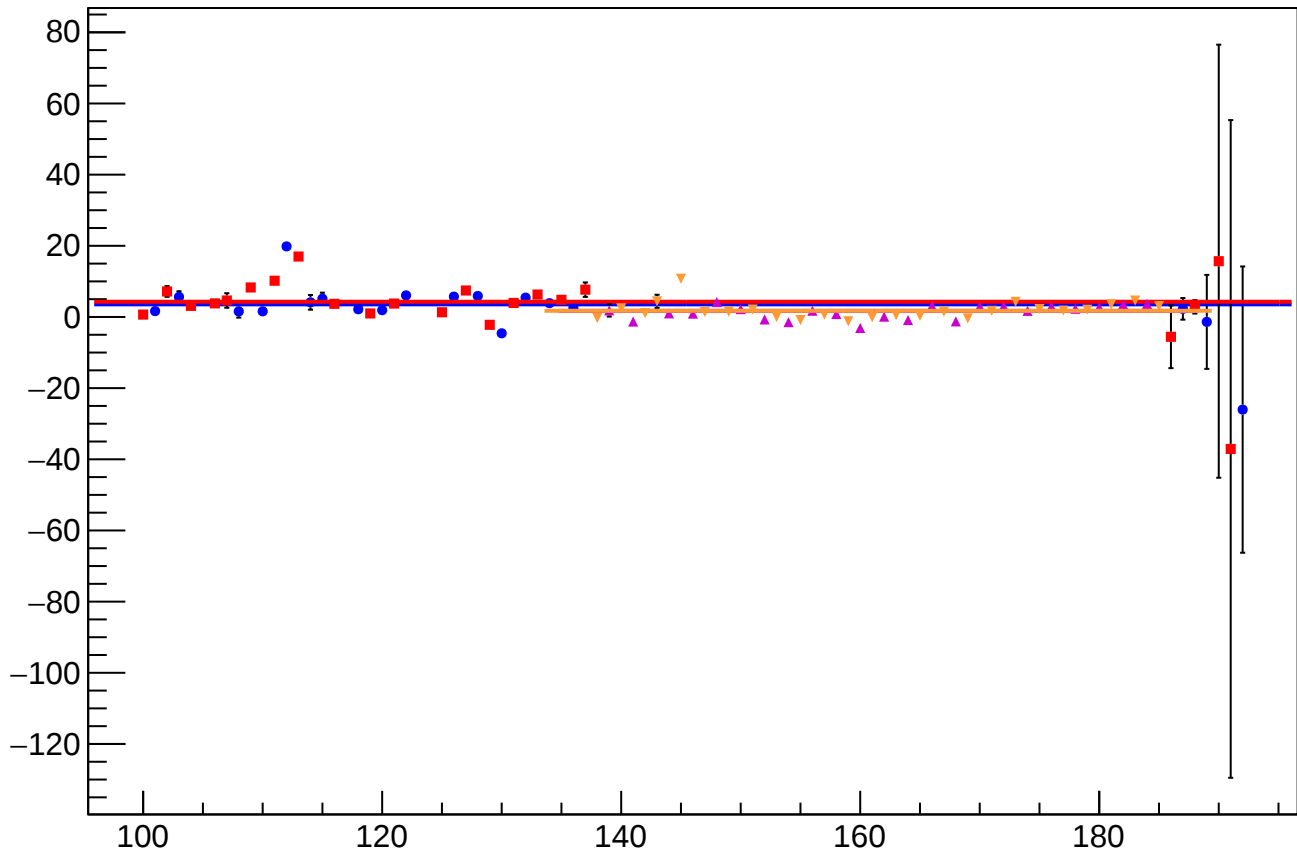
Right: -35.004 $\pm$ 0.988  $\chi^2$ /NDF: 38.3/6

In: -35.764 $\pm$ 0.190  $\chi^2$ /NDF:843.9/25

Out: -36.116 $\pm$ 0.189  $\chi^2$ /NDF:1237.4/28

All: -35.942 $\pm$ 0.134  $\chi^2$ /NDF: 2083.1/54

reg\_asym\_left\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 3.550 $\pm$ 0.220  $\chi^2$ /NDF: 438.0/18

Left Out: 1.741 $\pm$ 0.147  $\chi^2$ /NDF:170.2/24

Right Out: 4.281 $\pm$ 0.220  $\chi^2$ /NDF: 354.2/21

Left In: 1.705 $\pm$ 0.149  $\chi^2$ /NDF:163.0/22

Left: 1.723 $\pm$ 0.105  $\chi^2$ /NDF: 333.2/47

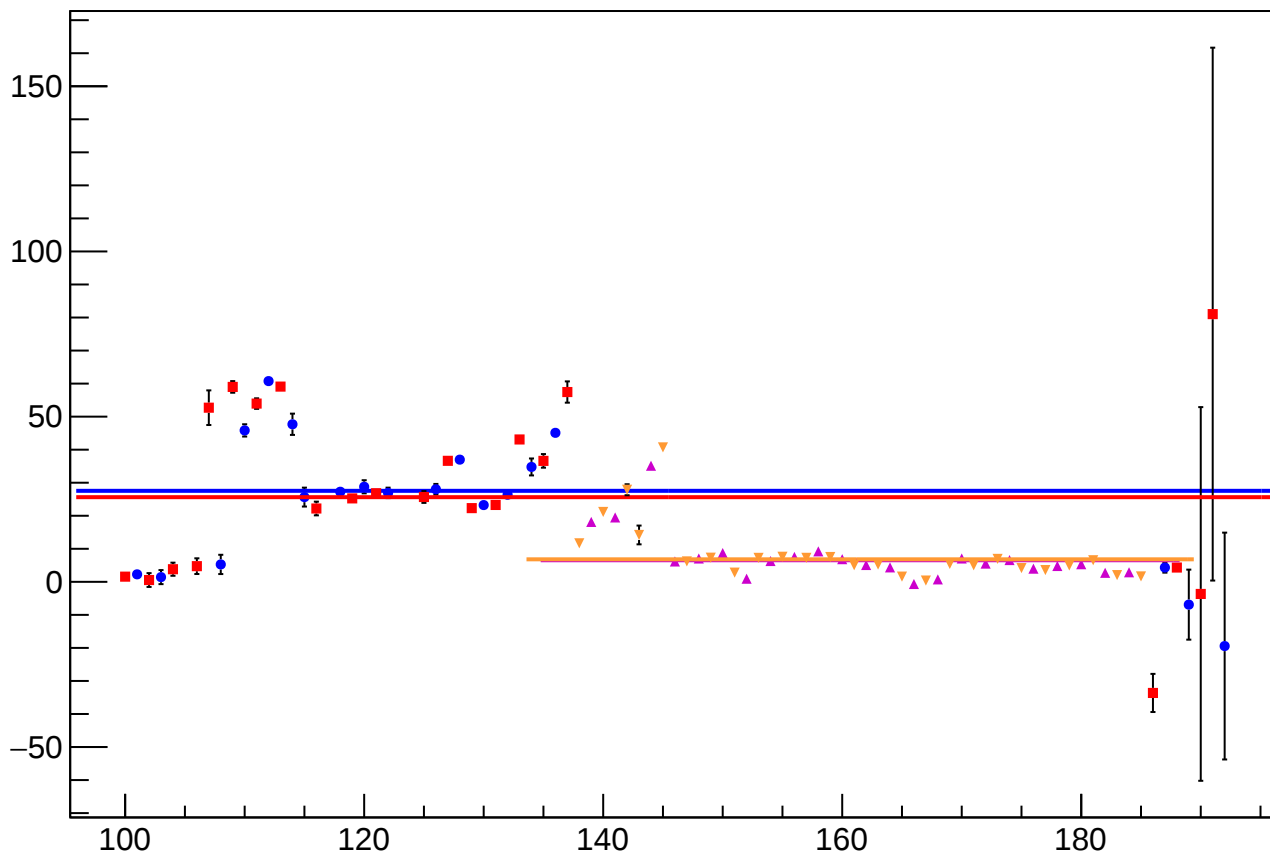
Right: 3.916 $\pm$ 0.155  $\chi^2$ /NDF: 797.7/40

In: 2.288 $\pm$ 0.124  $\chi^2$ /NDF:649.1/41

Out: 2.527 $\pm$ 0.122  $\chi^2$ /NDF:616.7/46

All: 2.409 $\pm$ 0.087  $\chi^2$ /NDF: 1267.7/88

reg\_asym\_left\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $27.546 \pm 0.405$   $\chi^2/\text{NDF}: 1739.1/18$

Left Out:  $6.813 \pm 0.191$   $\chi^2/\text{NDF}: 1304.5/24$

Right Out:  $25.623 \pm 0.371$   $\chi^2/\text{NDF}: 2833.1/21$

Left In:  $6.532 \pm 0.190$   $\chi^2/\text{NDF}: 1018.2/22$

Left:  $6.672 \pm 0.135$   $\chi^2/\text{NDF}: 2323.7/47$

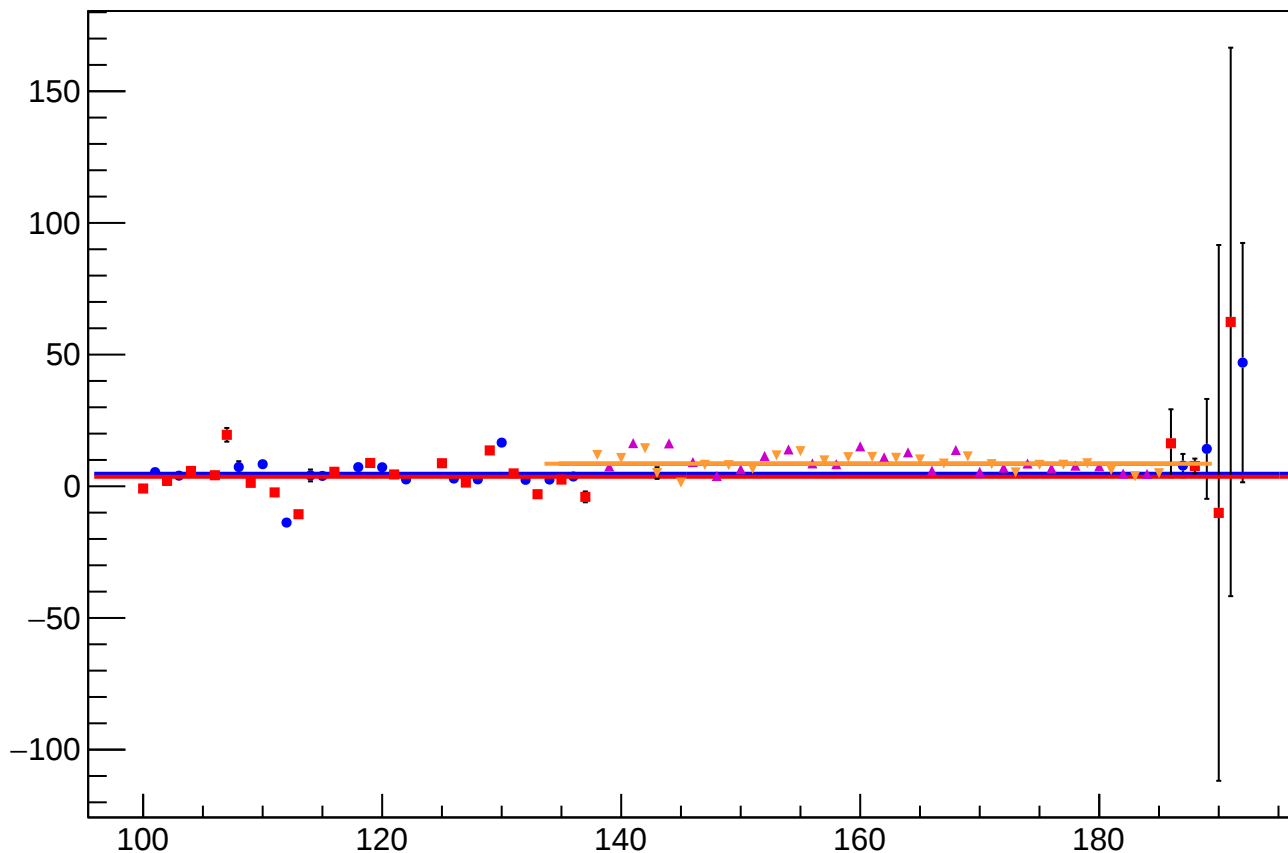
Right:  $26.499 \pm 0.273$   $\chi^2/\text{NDF}: 4584.5/40$

In:  $10.331 \pm 0.172$   $\chi^2/\text{NDF}: 4962.4/41$

Out:  $10.754 \pm 0.170$   $\chi^2/\text{NDF}: 6173.0/46$

All:  $10.546 \pm 0.121$   $\chi^2/\text{NDF}: 11138.4/88$

reg\_asym\_left\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Left:  $8.575 \pm 0.120$   $\chi^2/\text{NDF}: 689.9/47$   
 Right:  $4.186 \pm 0.179$   $\chi^2/\text{NDF}: 1128.8/40$

Right In:  $4.763 \pm 0.254$   $\chi^2/\text{NDF}: 544.7/18$

Left Out:  $8.565 \pm 0.168$   $\chi^2/\text{NDF}: 248.1/24$

Right Out:  $3.612 \pm 0.253$   $\chi^2/\text{NDF}: 573.8/21$

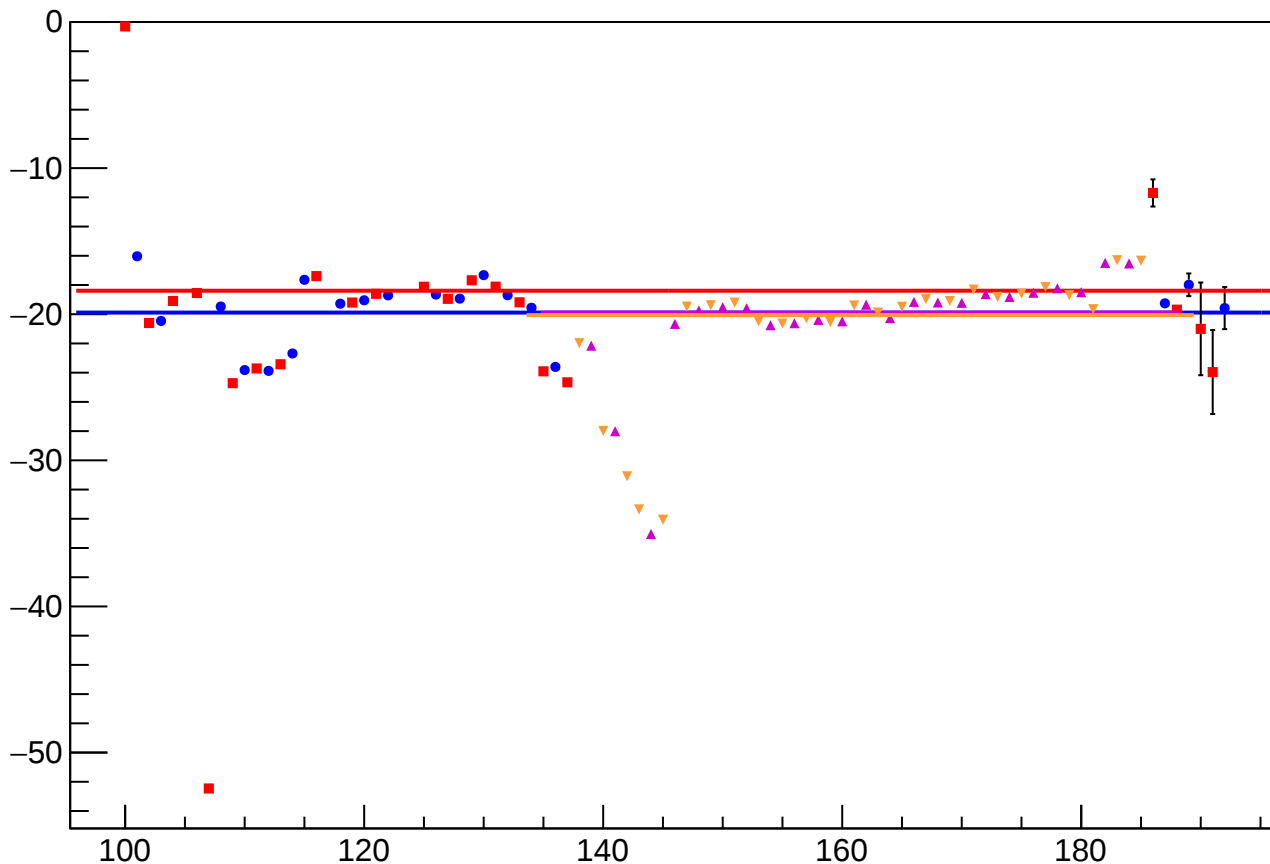
Left In:  $8.585 \pm 0.170$   $\chi^2/\text{NDF}: 441.8/22$

In:  $7.401 \pm 0.141$   $\chi^2/\text{NDF}: 1142.9/41$

Out:  $7.048 \pm 0.140$   $\chi^2/\text{NDF}: 1086.7/46$

All:  $7.223 \pm 0.100$   $\chi^2/\text{NDF}: 2232.8/88$

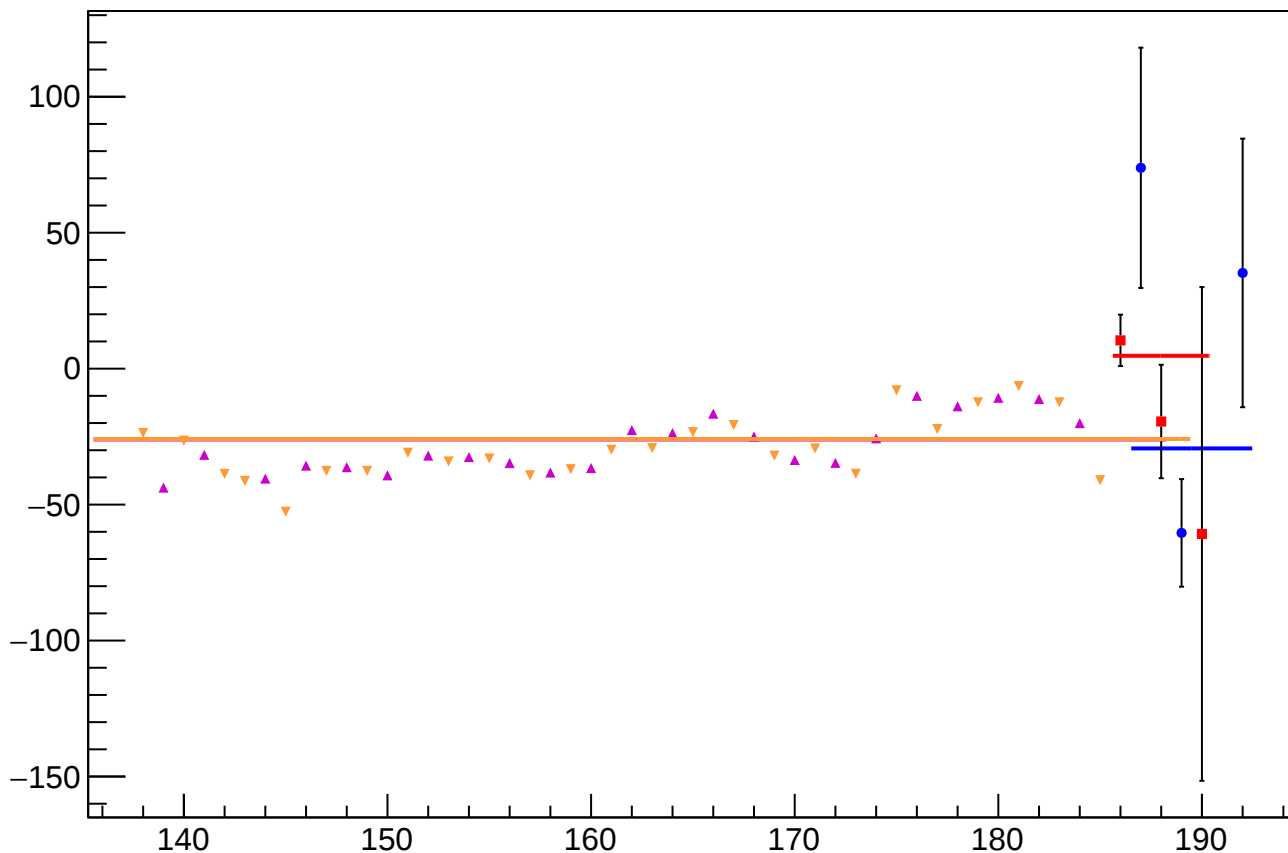
reg\_asym\_left\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-19.886 \pm 0.016$   $\chi^2/\text{NDF}: 26021.5/18$   
 Left Out:  $-20.061 \pm 0.008$   $\chi^2/\text{NDF}: 185580.2/24$   
 Right Out:  $-18.390 \pm 0.015$   $\chi^2/\text{NDF}: 301147.5/21$   
 Left In:  $-19.890 \pm 0.008$   $\chi^2/\text{NDF}: 144055.2/22$

Left:  $-19.976 \pm 0.006$   $\chi^2/\text{NDF}: 329872.6/47$   
 Right:  $-19.092 \pm 0.011$   $\chi^2/\text{NDF}: 332035.6/40$   
 In:  $-19.890 \pm 0.007$   $\chi^2/\text{NDF}: 170076.7/41$   
 Out:  $-19.689 \pm 0.007$   $\chi^2/\text{NDF}: 496784.9/46$   
 All:  $-19.788 \pm 0.005$   $\chi^2/\text{NDF}: 667276.9/88$

reg\_asym\_right\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-29.329 \pm 16.964$   $\chi^2/\text{NDF}$ : 9.6/2

Left Out:  $-25.884 \pm 0.192$   $\chi^2/\text{NDF}$ : 4158.0/24

Right Out:  $4.735 \pm 8.567$   $\chi^2/\text{NDF}$ : 2.2/2

Left In:  $-26.052 \pm 0.195$   $\chi^2/\text{NDF}$ : 3279.5/22

Left:  $-25.967 \pm 0.137$   $\chi^2/\text{NDF}$ : 7437.8/47

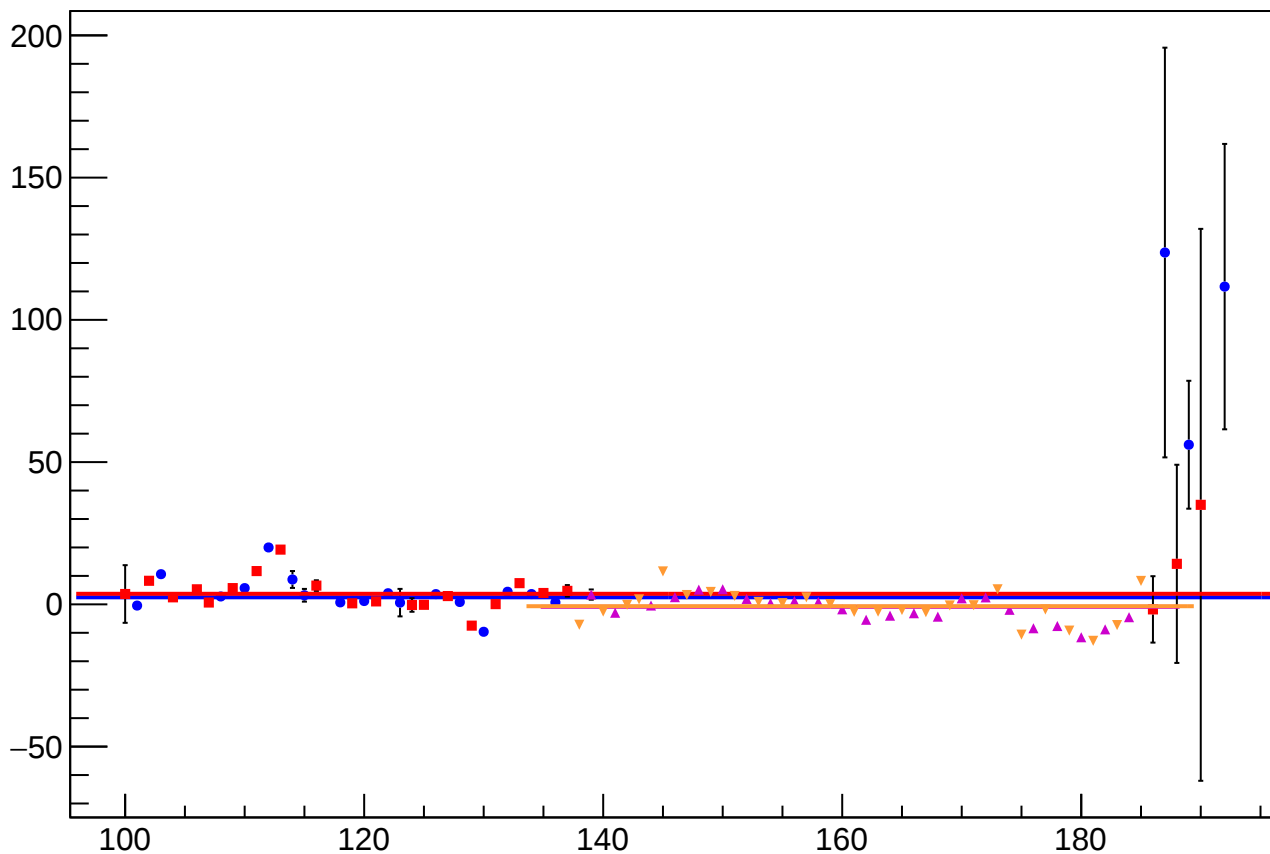
Right:  $-2.187 \pm 7.647$   $\chi^2/\text{NDF}$ : 15.1/5

In:  $-26.053 \pm 0.195$   $\chi^2/\text{NDF}$ : 3289.2/25

Out:  $-25.869 \pm 0.192$   $\chi^2/\text{NDF}$ : 4173.0/27

All:  $-25.959 \pm 0.137$   $\chi^2/\text{NDF}$ : 7462.6/53

reg\_asym\_right\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $2.471 \pm 0.315$   $\chi^2/\text{NDF}$ : 307.6/19

Left Out:  $-0.654 \pm 0.146$   $\chi^2/\text{NDF}$ : 1320.8/24

Right Out:  $3.710 \pm 0.327$   $\chi^2/\text{NDF}$ : 269.5/21

Left In:  $-0.863 \pm 0.150$   $\chi^2/\text{NDF}$ : 1066.5/22

Left:  $-0.756 \pm 0.105$   $\chi^2/\text{NDF}$ : 2388.3/47

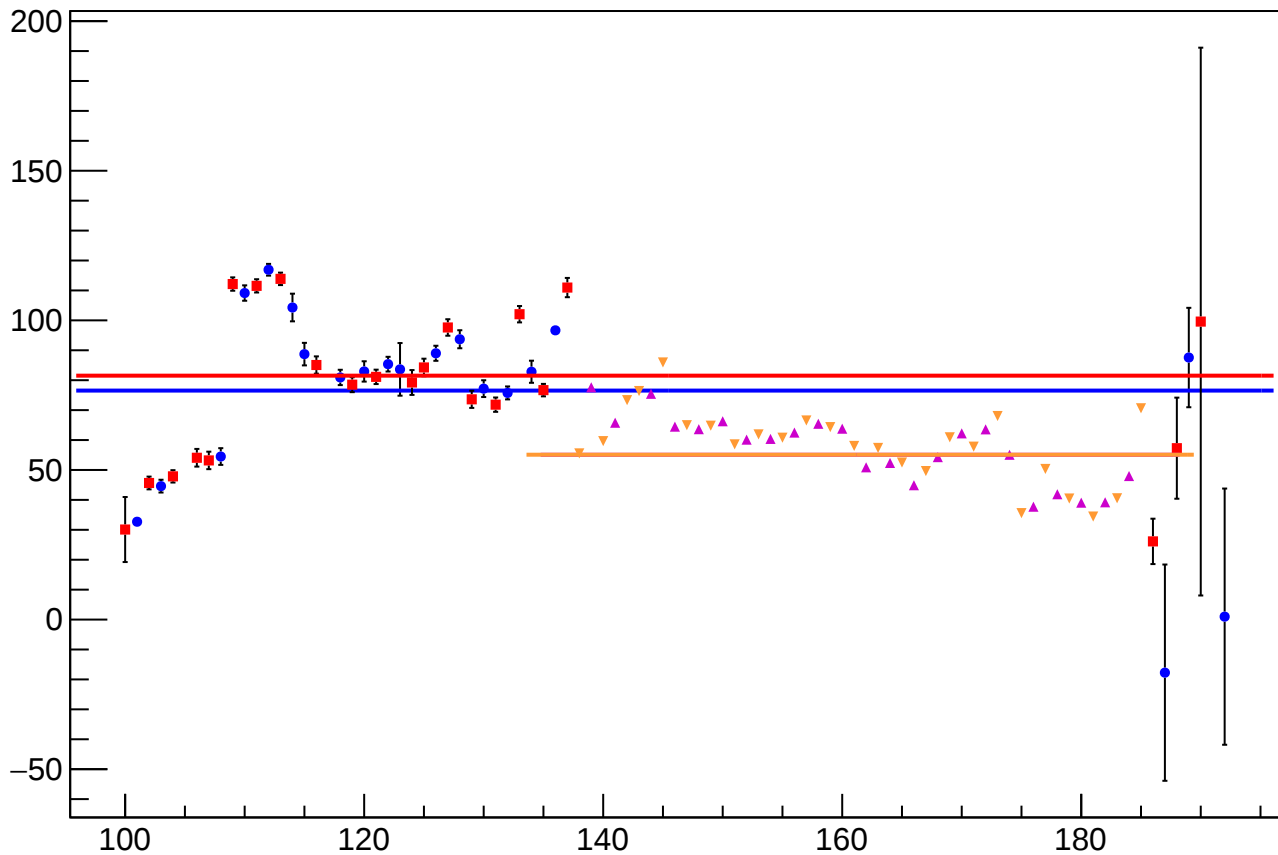
Right:  $3.068 \pm 0.227$   $\chi^2/\text{NDF}$ : 584.5/41

In:  $-0.243 \pm 0.136$   $\chi^2/\text{NDF}$ : 1465.5/42

Out:  $0.074 \pm 0.133$   $\chi^2/\text{NDF}$ : 1739.1/46

All:  $-0.082 \pm 0.095$   $\chi^2/\text{NDF}$ : 3207.4/89

reg\_asym\_right\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 76.530 $\pm$ 0.576  $\chi^2$ /NDF: 2263.1/19

Left Out: 55.098 $\pm$ 0.191  $\chi^2$ /NDF: 4579.3/24

Right Out: 81.518 $\pm$ 0.591  $\chi^2$ /NDF: 1626.6/21

Left In: 55.070 $\pm$ 0.193  $\chi^2$ /NDF: 3702.8/22

Left: 55.084 $\pm$ 0.136  $\chi^2$ /NDF: 8282.1/47

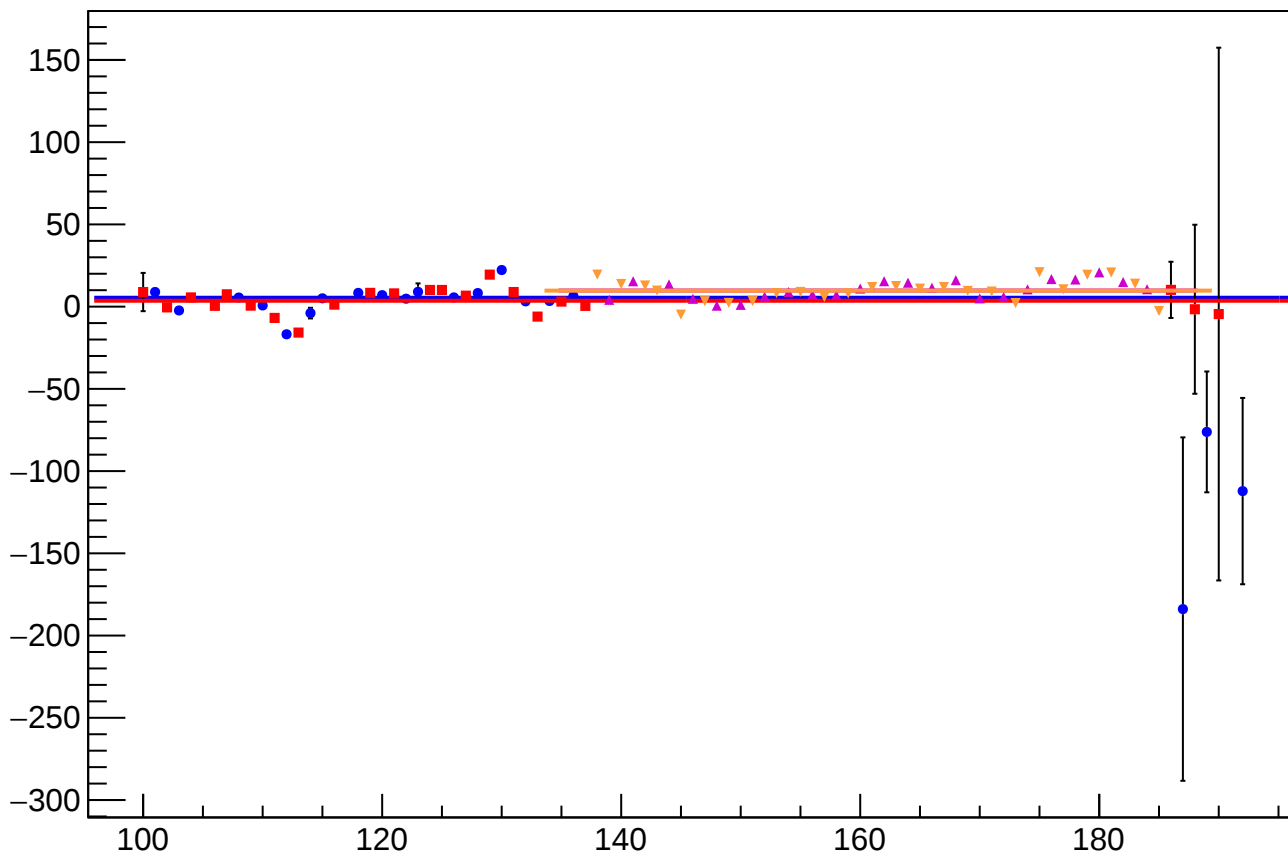
Right: 78.963 $\pm$ 0.413  $\chi^2$ /NDF: 3926.3/41

In: 57.243 $\pm$ 0.183  $\chi^2$ /NDF: 7211.6/42

Out: 57.610 $\pm$ 0.182  $\chi^2$ /NDF: 8016.2/46

All: 57.428 $\pm$ 0.129  $\chi^2$ /NDF: 15229.8/89

reg\_asym\_right\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 5.413 $\pm$ 0.361  $\chi^2$ /NDF: 398.2/19

Left Out: 9.737 $\pm$ 0.168  $\chi^2$ /NDF:1450.2/24

Right Out: 3.585 $\pm$ 0.375  $\chi^2$ /NDF: 421.8/21

Left In: 9.803 $\pm$ 0.172  $\chi^2$ /NDF:1158.7/22

Left: 9.769 $\pm$ 0.120  $\chi^2$ /NDF: 2609.0/47

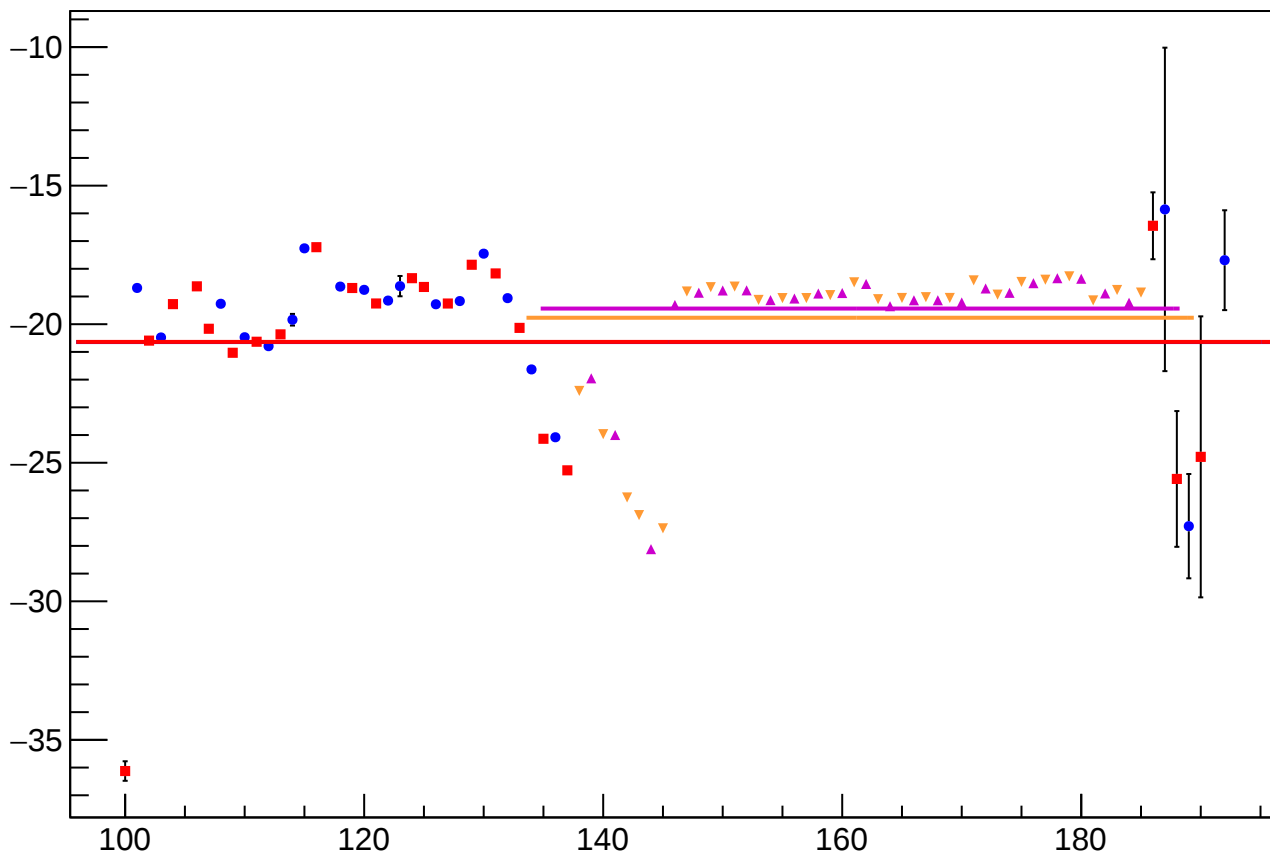
Right: 4.535 $\pm$ 0.260  $\chi^2$ /NDF: 832.3/41

In: 8.993 $\pm$ 0.155  $\chi^2$ /NDF:1677.6/42

Out: 8.713 $\pm$ 0.153  $\chi^2$ /NDF:2095.8/46

All: 8.852 $\pm$ 0.109  $\chi^2$ /NDF: 3775.1/89

reg\_asym\_right\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: -20.644 $\pm$ 0.019  $\chi^2$ /NDF: 12440.0/19

Left Out: -19.767 $\pm$ 0.008  $\chi^2$ /NDF: 91617.3/24

Right Out: -20.639 $\pm$ 0.019  $\chi^2$ /NDF: 13802.7/21

Left In: -19.435 $\pm$ 0.008  $\chi^2$ /NDF: 53170.9/22

Left: -19.603 $\pm$ 0.006  $\chi^2$ /NDF: 145665.0/47

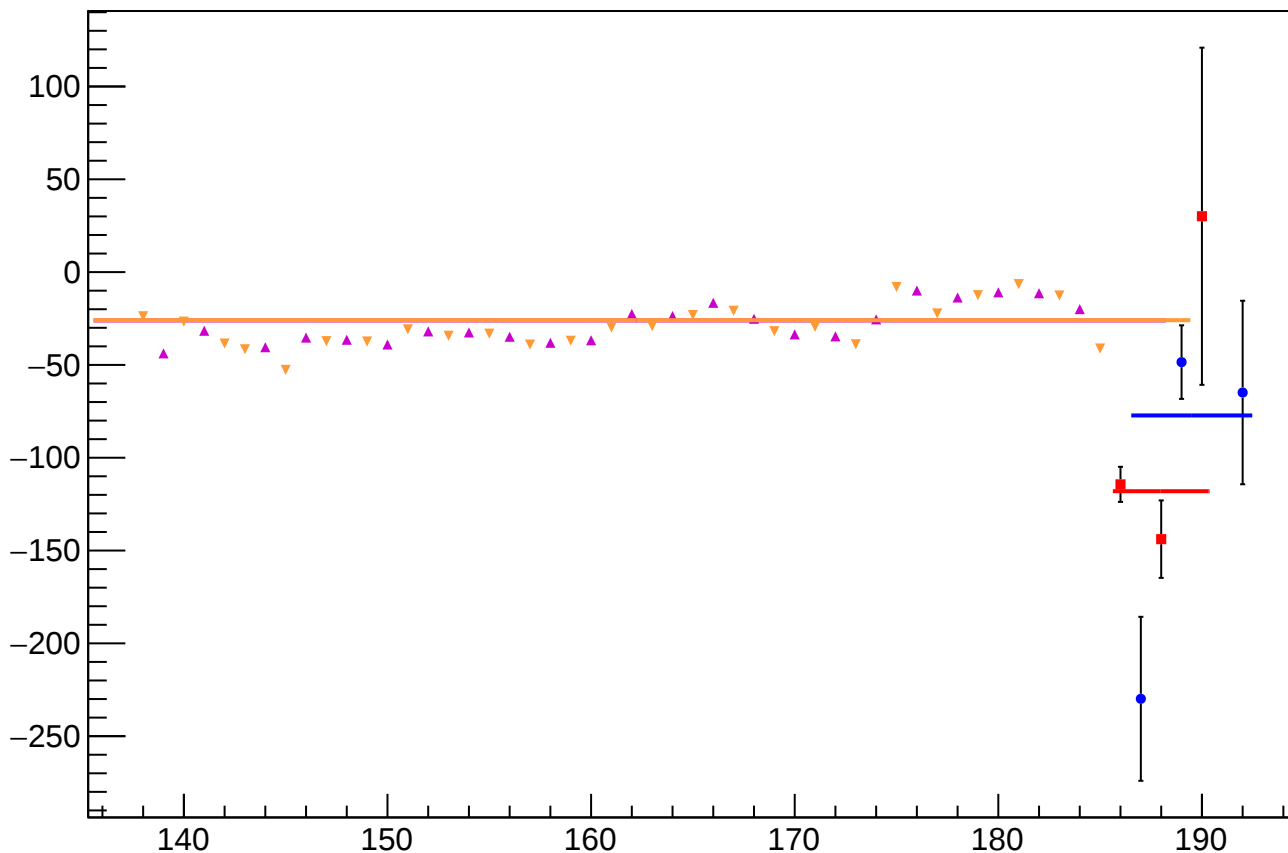
Right: -20.642 $\pm$ 0.014  $\chi^2$ /NDF: 26242.7/41

In: -19.610 $\pm$ 0.007  $\chi^2$ /NDF: 68949.8/42

Out: -19.890 $\pm$ 0.007  $\chi^2$ /NDF: 107144.2/46

All: -19.751 $\pm$ 0.005  $\chi^2$ /NDF: 176822.6/89

reg\_asym\_right\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: -77.223+/-16.979  $\chi^2/\text{NDF}$ : 14.1/2

Left Out: -25.899+/-0.192  $\chi^2/\text{NDF}$ : 4127.5/24

Right Out: -118.038+/-8.573  $\chi^2/\text{NDF}$ : 4.3/2

Left In: -26.046+/-0.195  $\chi^2/\text{NDF}$ : 3246.7/22

Left: -25.971+/-0.137  $\chi^2/\text{NDF}$ : 7374.6/47

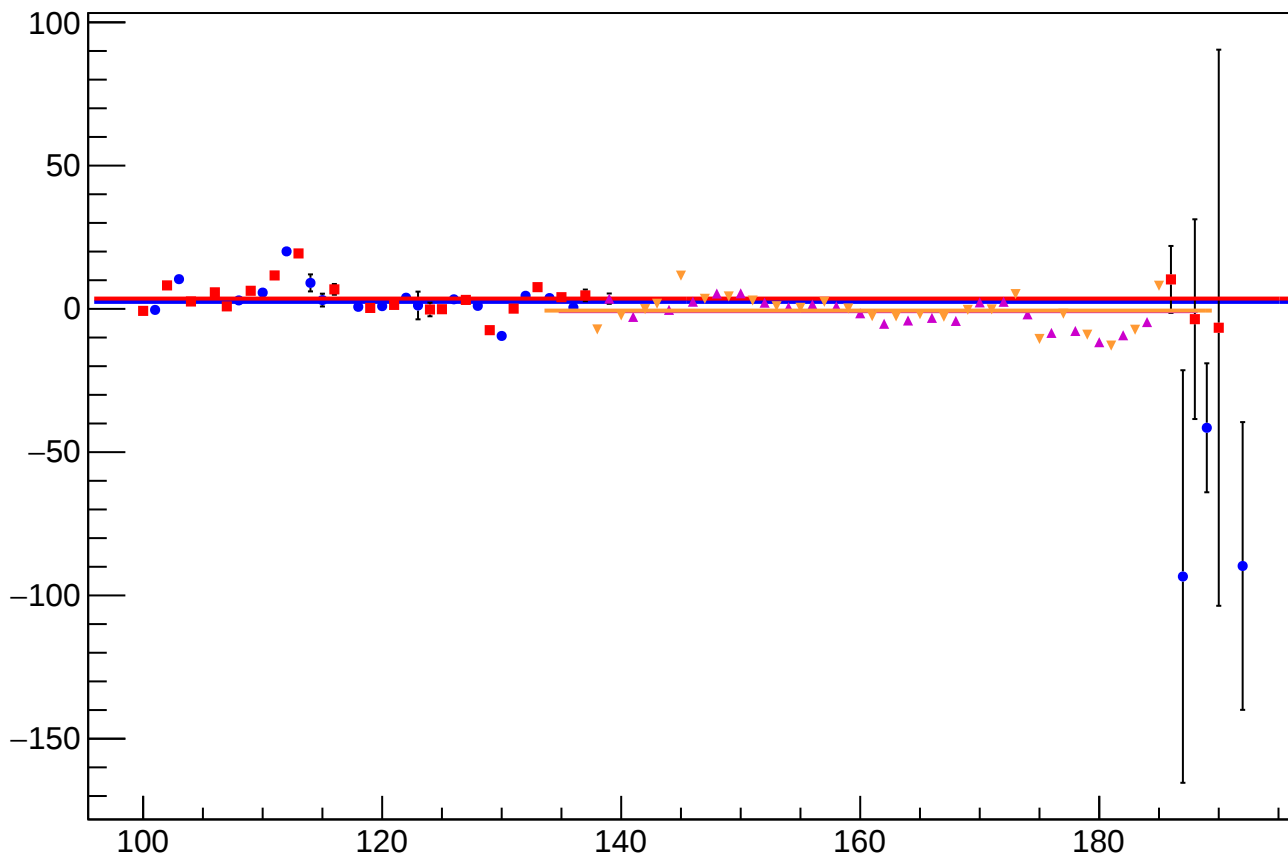
Right: -109.747+/-7.653  $\chi^2/\text{NDF}$ : 23.1/5

In: -26.053+/-0.195  $\chi^2/\text{NDF}$ : 3269.9/25

Out: -25.945+/-0.192  $\chi^2/\text{NDF}$ : 4247.4/27

All: -25.998+/-0.137  $\chi^2/\text{NDF}$ : 7517.4/53

reg\_asym\_right\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 2.441 $\pm$ 0.315  $\chi^2$ /NDF: 301.3/19

Left Out: -0.596 $\pm$ 0.146  $\chi^2$ /NDF:1310.7/24

Right Out: 3.596 $\pm$ 0.318  $\chi^2$ /NDF: 280.4/21

Left In: -0.795 $\pm$ 0.151  $\chi^2$ /NDF:1106.3/22

Left: -0.693 $\pm$ 0.105  $\chi^2$ /NDF: 2417.9/47

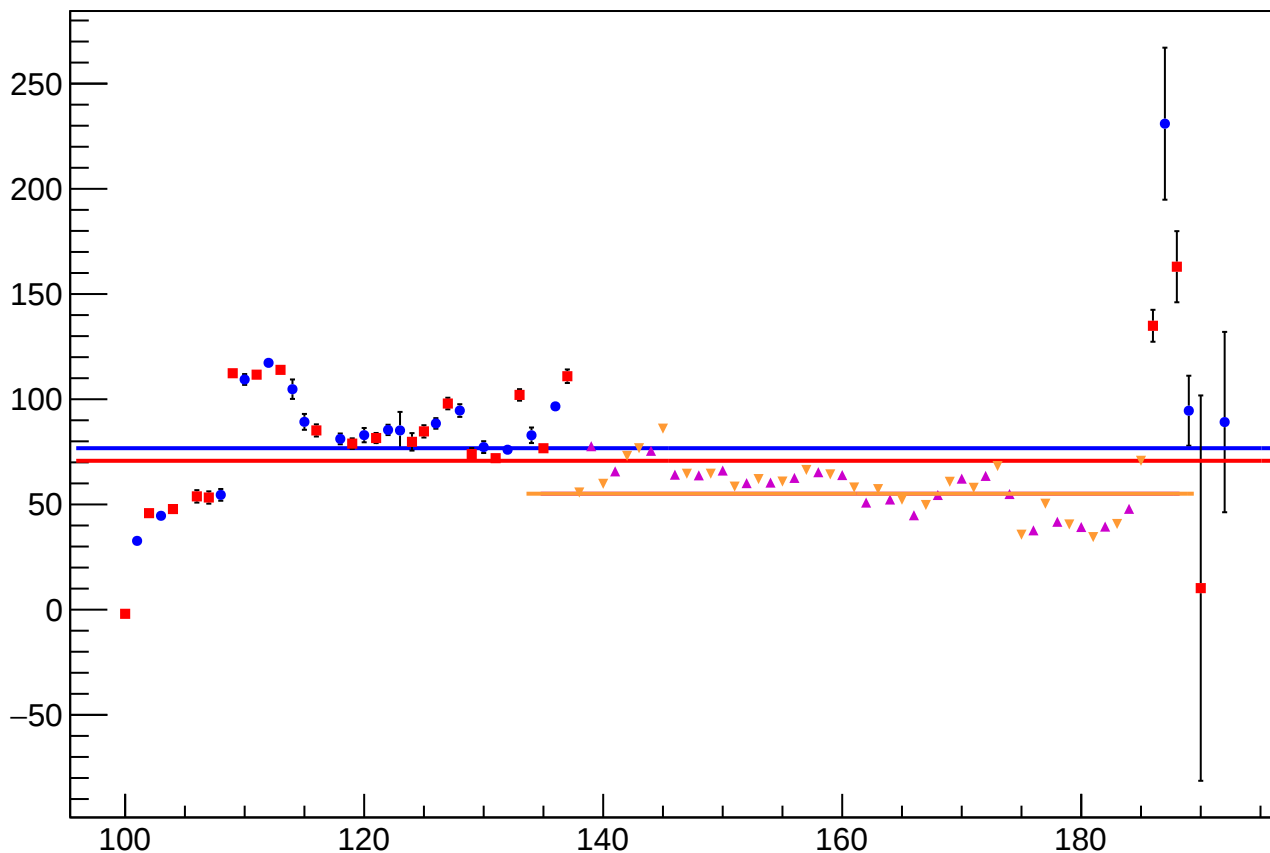
Right: 3.013 $\pm$ 0.224  $\chi^2$ /NDF: 588.4/41

In: -0.193 $\pm$ 0.136  $\chi^2$ /NDF:1493.5/42

Out: 0.136 $\pm$ 0.133  $\chi^2$ /NDF:1734.6/46

All: -0.025 $\pm$ 0.095  $\chi^2$ /NDF: 3231.1/89

reg\_asym\_right\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 76.738 $\pm$ 0.577  $\chi^2$ /NDF: 2284.3/19

Left Out: 55.111 $\pm$ 0.192  $\chi^2$ /NDF: 4560.2/24

Right Out: 70.749 $\pm$ 0.549  $\chi^2$ /NDF: 4489.6/21

Left In: 55.094 $\pm$ 0.194  $\chi^2$ /NDF: 3664.6/22

Left: 55.103 $\pm$ 0.136  $\chi^2$ /NDF: 8224.8/47

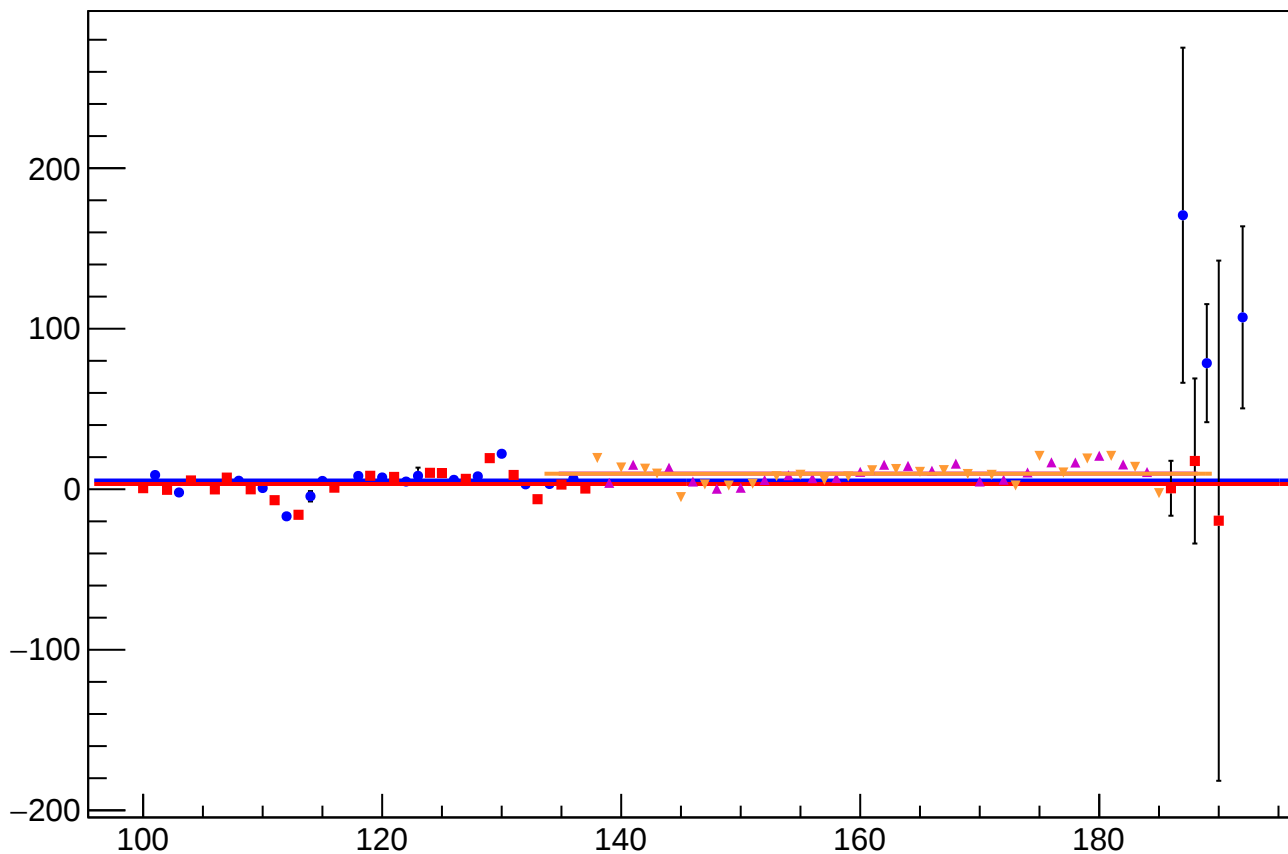
Right: 73.595 $\pm$ 0.398  $\chi^2$ /NDF: 6830.4/41

In: 57.286 $\pm$ 0.184  $\chi^2$ /NDF: 7214.5/42

Out: 56.810 $\pm$ 0.181  $\chi^2$ /NDF: 9773.6/46

All: 57.044 $\pm$ 0.129  $\chi^2$ /NDF: 16991.5/89

reg\_asym\_right\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $5.441 \pm 0.361$   $\chi^2/\text{NDF}: 393.9/19$

Left Out:  $9.675 \pm 0.168$   $\chi^2/\text{NDF}: 1441.3/24$

Right Out:  $3.279 \pm 0.366$   $\chi^2/\text{NDF}: 425.2/21$

Left In:  $9.738 \pm 0.172$   $\chi^2/\text{NDF}: 1191.1/22$

Left:  $9.706 \pm 0.120$   $\chi^2/\text{NDF}: 2632.6/47$

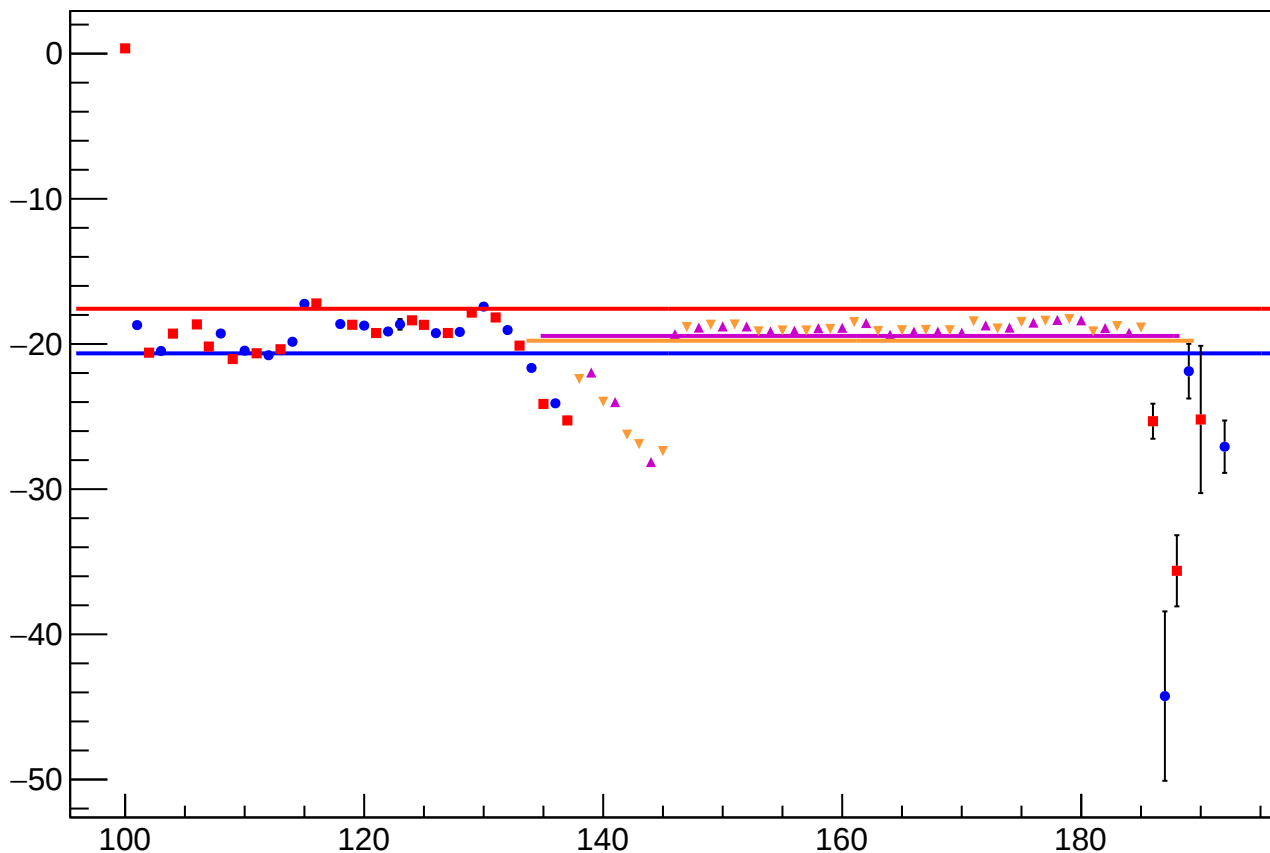
Right:  $4.374 \pm 0.257$   $\chi^2/\text{NDF}: 836.7/41$

In:  $8.945 \pm 0.155$   $\chi^2/\text{NDF}: 1700.5/42$

Out:  $8.562 \pm 0.153$   $\chi^2/\text{NDF}: 2119.4/46$

All:  $8.750 \pm 0.109$   $\chi^2/\text{NDF}: 3823.0/89$

reg\_asym\_right\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: -20.646 $\pm$ 0.019  $\chi^2$ /NDF: 12492.2/19

Left Out: -19.775 $\pm$ 0.008  $\chi^2$ /NDF: 91510.1/24

Right Out: -17.574 $\pm$ 0.018  $\chi^2$ /NDF: 178415.7/21

Left In: -19.445 $\pm$ 0.008  $\chi^2$ /NDF: 53124.1/22

Left: -19.611 $\pm$ 0.006  $\chi^2$ /NDF: 145502.5/47

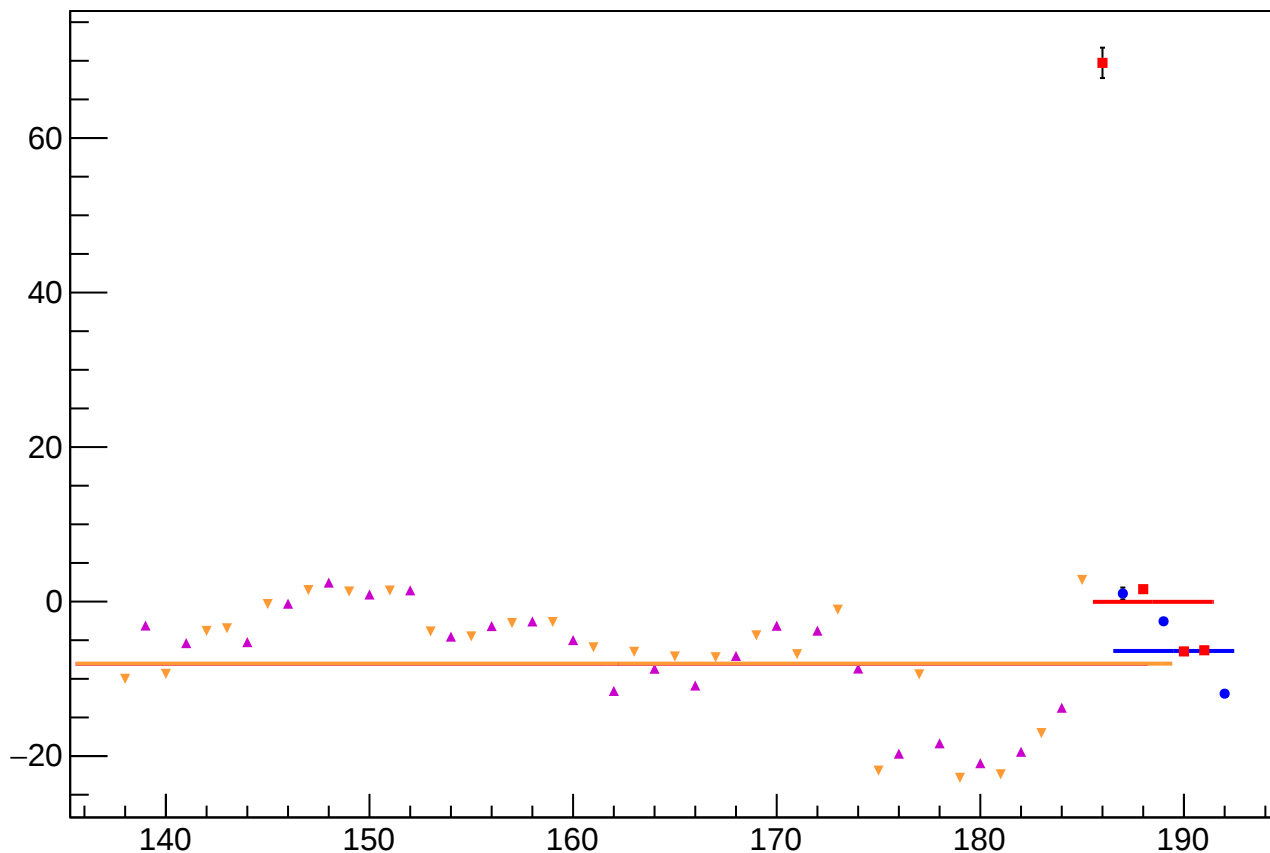
Right: -19.002 $\pm$ 0.013  $\chi^2$ /NDF: 204383.4/41

In: -19.618 $\pm$ 0.007  $\chi^2$ /NDF: 68911.2/42

Out: -19.422 $\pm$ 0.007  $\chi^2$ /NDF: 282415.6/46

All: -19.518 $\pm$ 0.005  $\chi^2$ /NDF: 351690.1/89

reg\_asym\_sam\_15\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected

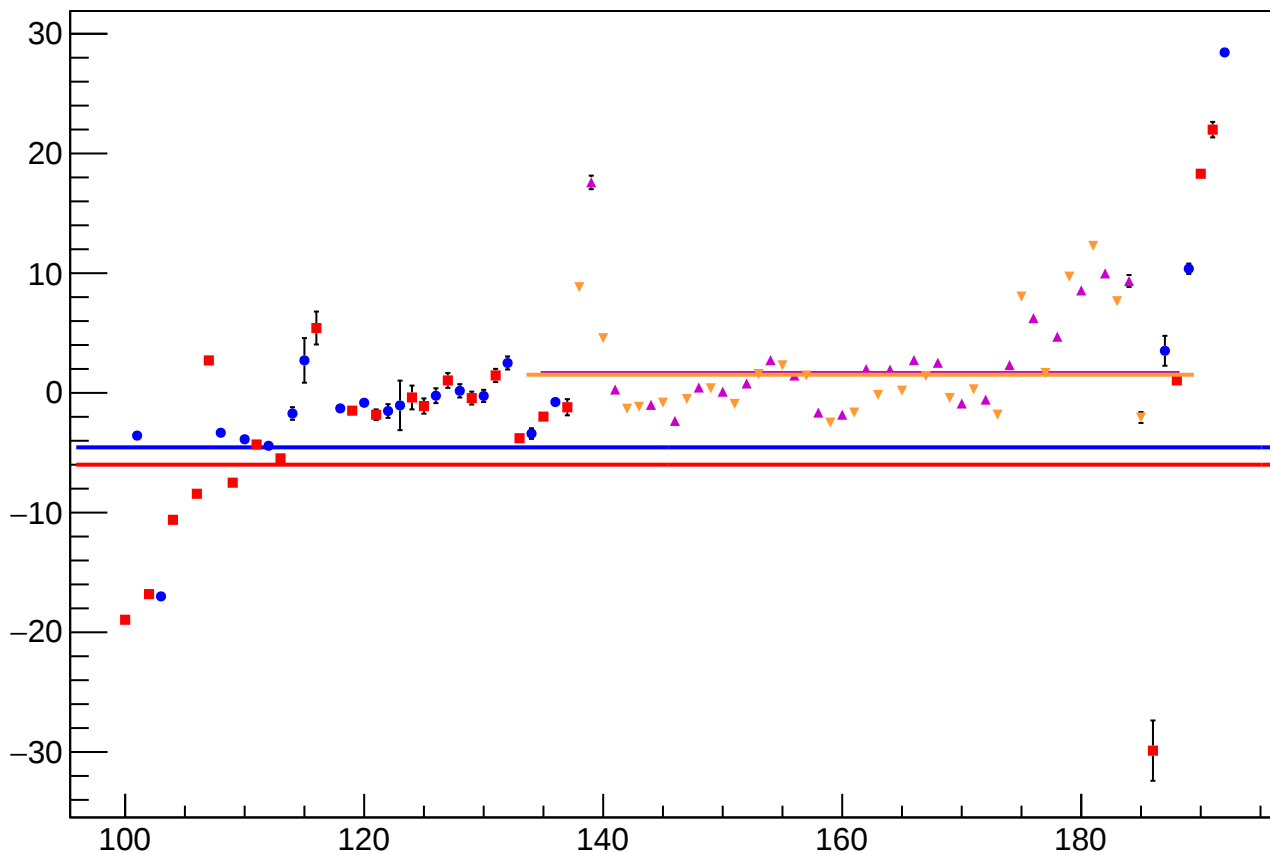


Right In: -6.391+/-0.261  $\chi^2/\text{NDF}$ : 390.5/2  
 Left Out: -8.034+/-0.070  $\chi^2/\text{NDF}$ :12568.0/24  
 Right Out: -0.034+/-0.159  $\chi^2/\text{NDF}$ : 1755.9/3  
 Left In: -8.078+/-0.072  $\chi^2/\text{NDF}$ :10541.6/22

Left: -8.055+/-0.050  $\chi^2/\text{NDF}$ : 23109.8/47  
 Right: -1.754+/-0.136  $\chi^2/\text{NDF}$ : 2580.1/6  
 In: -7.958+/-0.069  $\chi^2/\text{NDF}$ :10971.0/25  
 Out: -6.722+/-0.064  $\chi^2/\text{NDF}$ :16446.6/28

All: -7.294+/-0.047  $\chi^2/\text{NDF}$ : 27588.5/54

reg\_asym\_sam\_15\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-4.549 \pm 0.054$   $\chi^2/\text{NDF}: 17615.9/19$

Left Out:  $1.518 \pm 0.054$   $\chi^2/\text{NDF}: 4847.5/24$

Right Out:  $-5.997 \pm 0.057$   $\chi^2/\text{NDF}: 19006.3/22$

Left In:  $1.662 \pm 0.057$   $\chi^2/\text{NDF}: 4034.2/22$

Left:  $1.587 \pm 0.039$   $\chi^2/\text{NDF}: 8885.0/47$

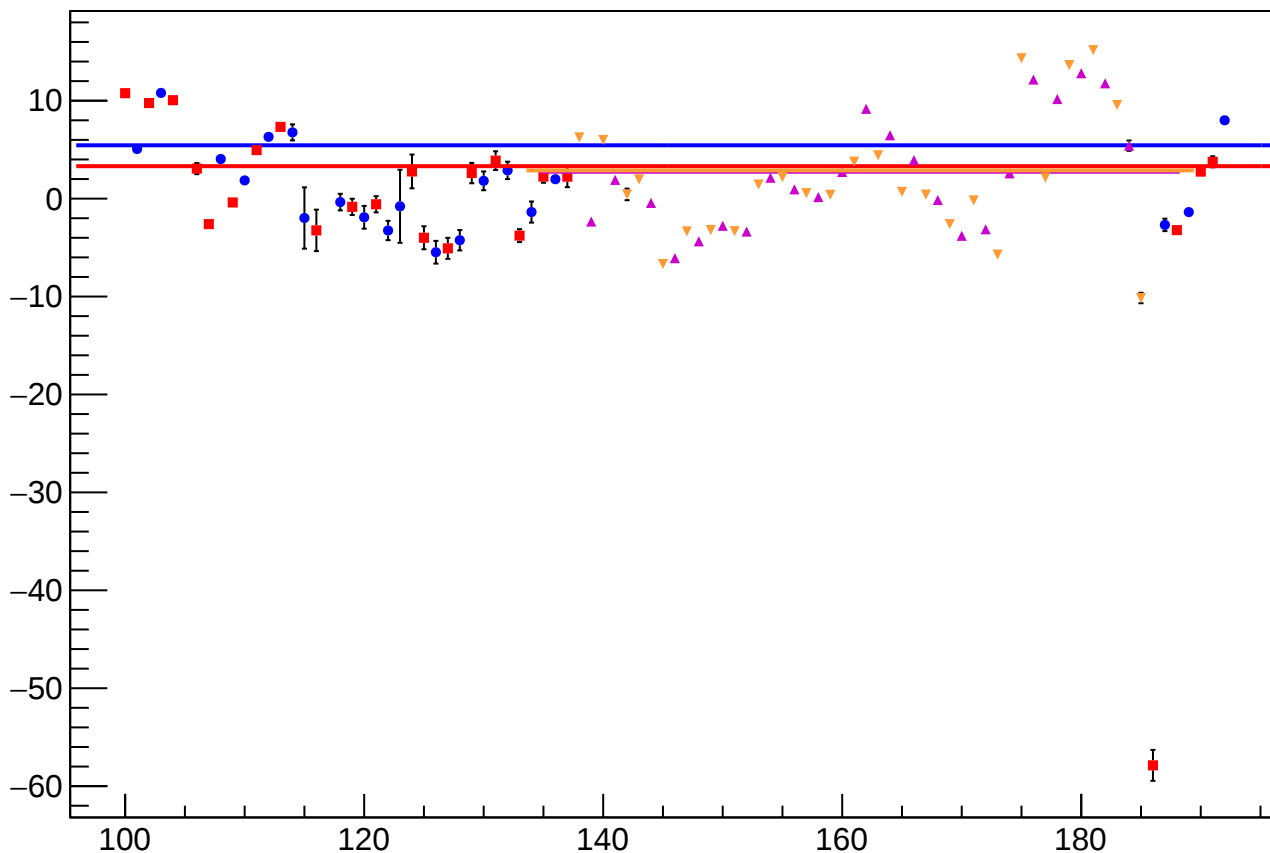
Right:  $-5.234 \pm 0.039$   $\chi^2/\text{NDF}: 36963.5/42$

In:  $-1.594 \pm 0.039$   $\chi^2/\text{NDF}: 27970.0/42$

Out:  $-2.065 \pm 0.039$   $\chi^2/\text{NDF}: 32968.2/47$

All:  $-1.828 \pm 0.028$   $\chi^2/\text{NDF}: 61010.6/90$

reg\_asym\_sam\_15\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $5.447 \pm 0.084$   $\chi^2/\text{NDF}$ : 2028.3/19

Left Out:  $2.884 \pm 0.070$   $\chi^2/\text{NDF}$ : 8893.2/24

Right Out:  $3.315 \pm 0.077$   $\chi^2/\text{NDF}$ : 6916.0/22

Left In:  $2.745 \pm 0.071$   $\chi^2/\text{NDF}$ : 7183.1/22

Left:  $2.816 \pm 0.050$   $\chi^2/\text{NDF}$ : 16078.2/47

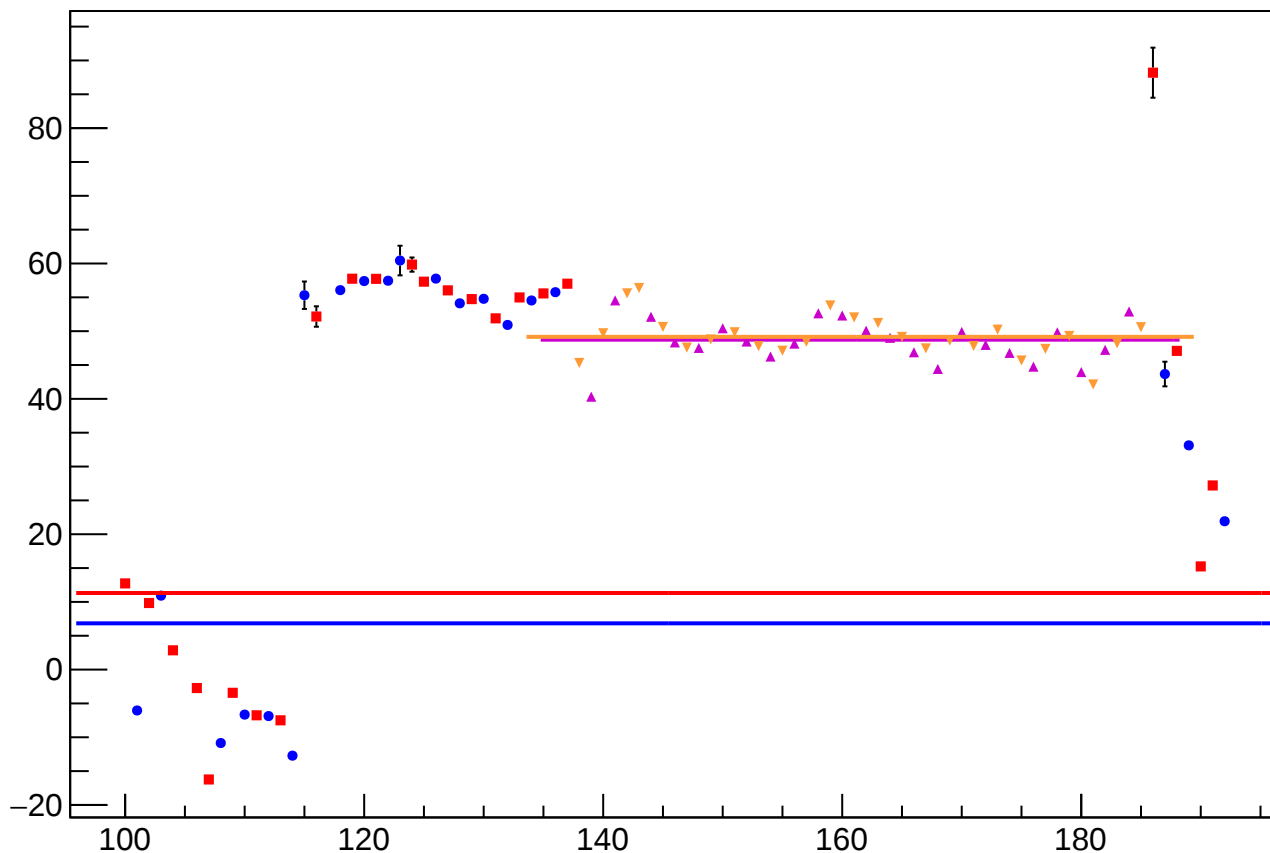
Right:  $4.289 \pm 0.057$   $\chi^2/\text{NDF}$ : 9297.5/42

In:  $3.886 \pm 0.054$   $\chi^2/\text{NDF}$ : 9814.9/42

Out:  $3.081 \pm 0.052$   $\chi^2/\text{NDF}$ : 15826.3/47

All:  $3.464 \pm 0.037$   $\chi^2/\text{NDF}$ : 25756.3/90

reg\_asym\_sam\_15\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 6.834+/-0.064  $\chi^2/\text{NDF}$ : 123829.1/19

Left Out: 49.163+/-0.062  $\chi^2/\text{NDF}$ : 2259.9/24

Right Out: 11.316+/-0.068  $\chi^2/\text{NDF}$ : 130815.0/22

Left In: 48.744+/-0.064  $\chi^2/\text{NDF}$ : 2097.7/22

Left: 48.960+/-0.044  $\chi^2/\text{NDF}$ : 4380.0/47

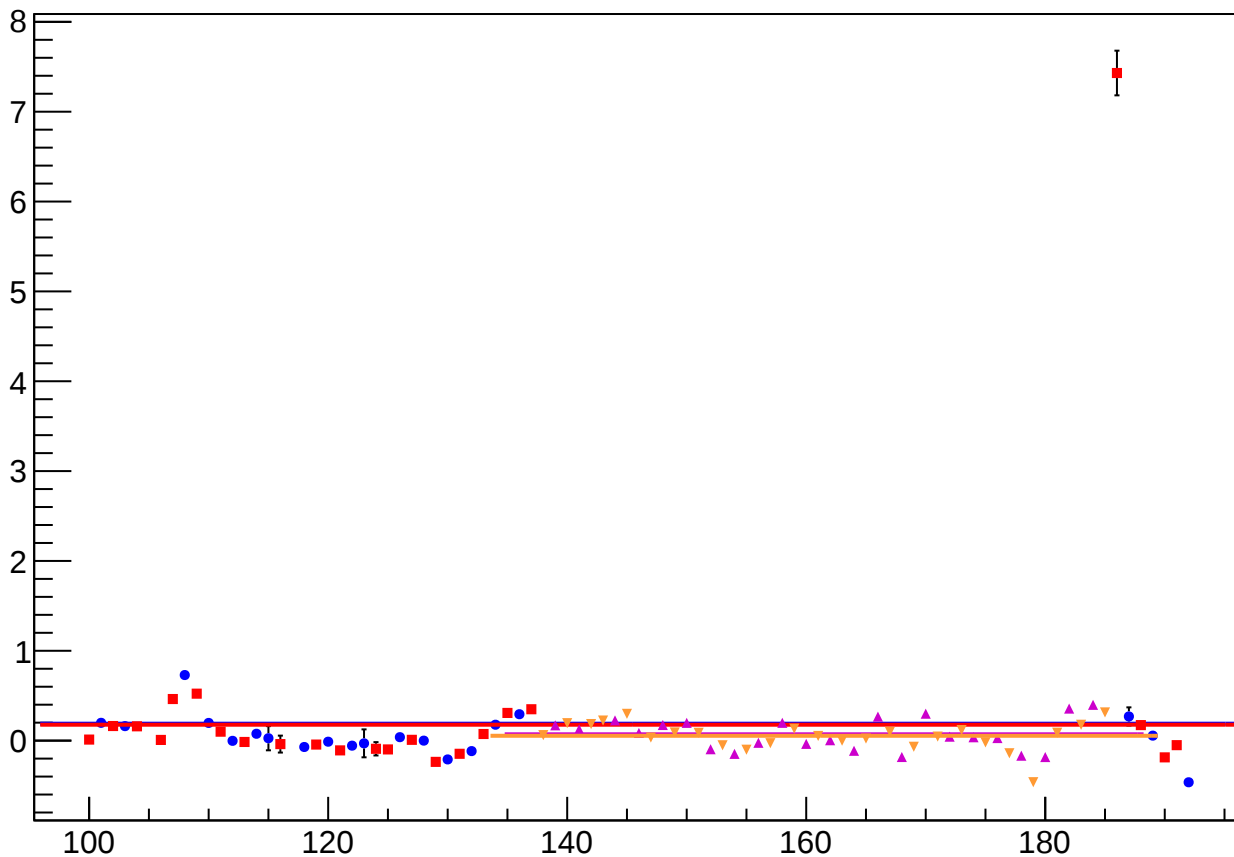
Right: 8.931+/-0.047  $\chi^2/\text{NDF}$ : 256949.1/42

In: 27.817+/-0.045  $\chi^2/\text{NDF}$ : 341620.8/42

Out: 32.088+/-0.046  $\chi^2/\text{NDF}$ : 302608.7/47

All: 29.923+/-0.032  $\chi^2/\text{NDF}$ : 648649.1/90

reg\_asym\_sam\_15\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.188+/-0.003  $\chi^2/\text{NDF}$ : 6164.5/19

Left Out: 0.054+/-0.003  $\chi^2/\text{NDF}$ : 2379.8/24

Right Out: 0.177+/-0.003  $\chi^2/\text{NDF}$ : 3978.4/22

Left In: 0.070+/-0.003  $\chi^2/\text{NDF}$ : 3233.8/22

Left: 0.062+/-0.002  $\chi^2/\text{NDF}$ : 5630.0/47

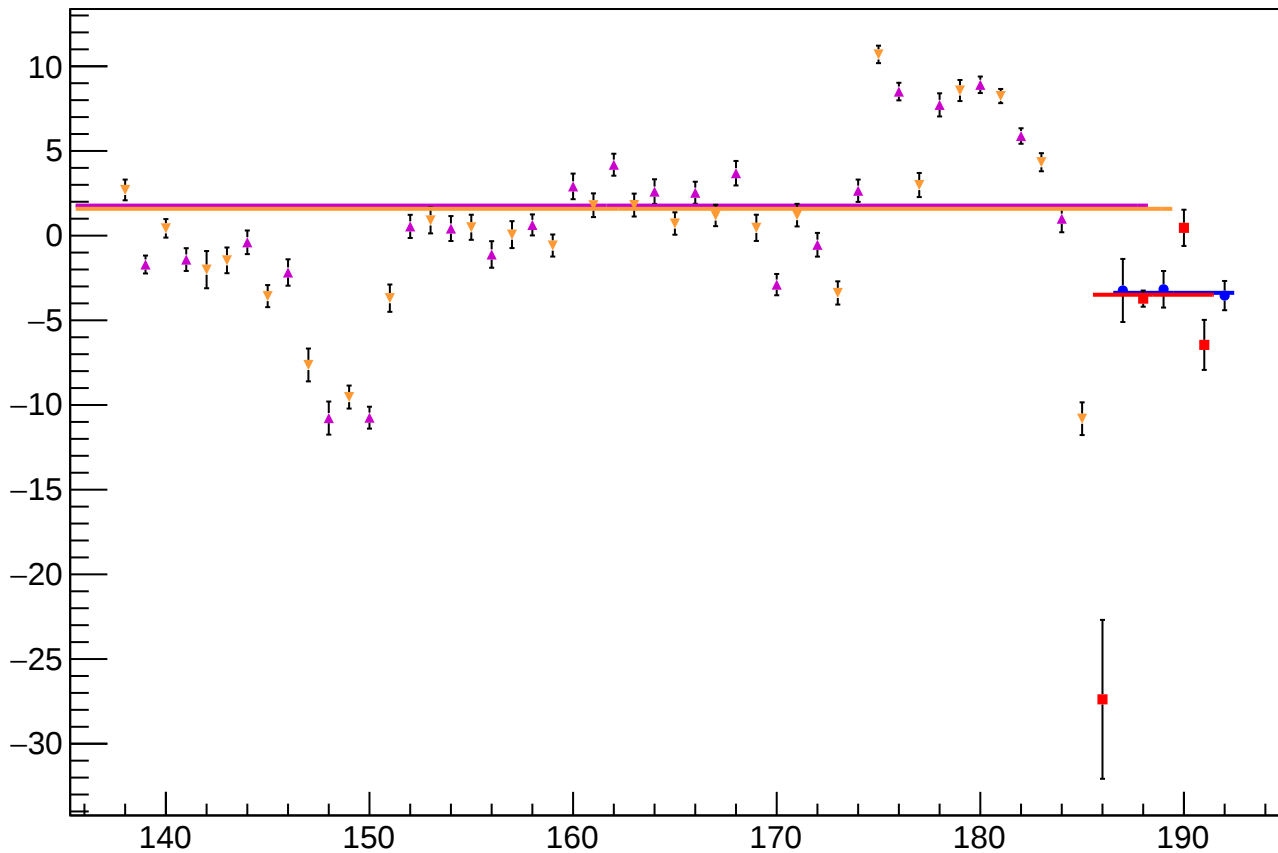
Right: 0.183+/-0.002  $\chi^2/\text{NDF}$ : 10151.9/42

In: 0.133+/-0.002  $\chi^2/\text{NDF}$ : 10299.9/42

Out: 0.120+/-0.002  $\chi^2/\text{NDF}$ : 7382.6/47

All: 0.126+/-0.001  $\chi^2/\text{NDF}$ : 17703.6/90

reg\_asym\_sam\_15\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-3.377 \pm 0.634$   $\chi^2/\text{NDF}$ : 0.1/2

Left Out:  $1.584 \pm 0.133$   $\chi^2/\text{NDF}$ : 1458.8/24

Right Out:  $-3.489 \pm 0.416$   $\chi^2/\text{NDF}$ : 43.8/3

Left In:  $1.774 \pm 0.135$   $\chi^2/\text{NDF}$ : 1297.3/22

Left:  $1.677 \pm 0.095$   $\chi^2/\text{NDF}$ : 2757.2/47

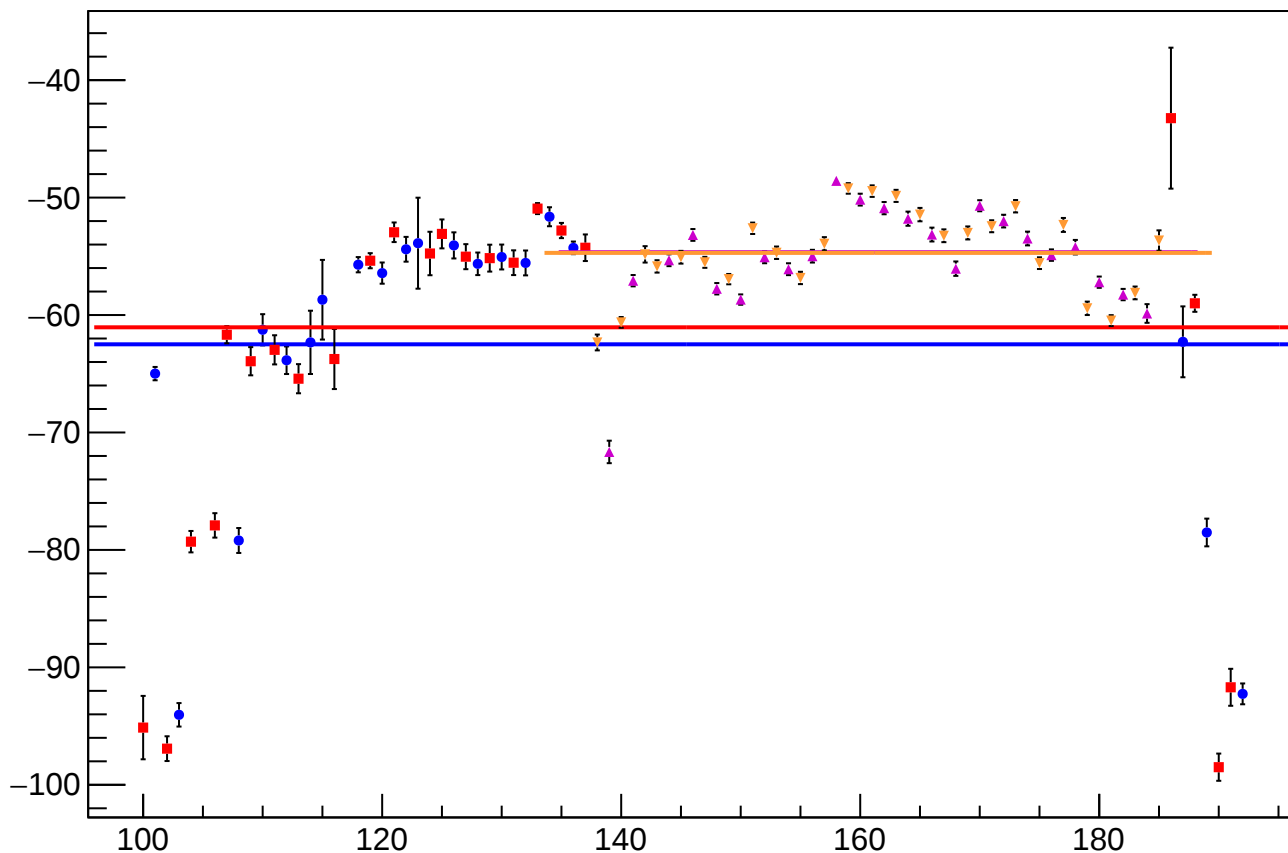
Right:  $-3.456 \pm 0.348$   $\chi^2/\text{NDF}$ : 43.9/6

In:  $1.550 \pm 0.132$   $\chi^2/\text{NDF}$ : 1360.5/25

Out:  $1.116 \pm 0.126$   $\chi^2/\text{NDF}$ : 1637.6/28

All:  $1.323 \pm 0.091$   $\chi^2/\text{NDF}$ : 3003.7/54

reg\_asym\_sam\_15\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-62.493 \pm 0.214$   $\chi^2/\text{NDF}: 3406.9/19$

Left Out:  $-54.707 \pm 0.106$   $\chi^2/\text{NDF}: 1126.0/24$

Right Out:  $-61.045 \pm 0.199$   $\chi^2/\text{NDF}: 4418.3/22$

Left In:  $-54.650 \pm 0.110$   $\chi^2/\text{NDF}: 1077.1/22$

Left:  $-54.680 \pm 0.076$   $\chi^2/\text{NDF}: 2203.2/47$

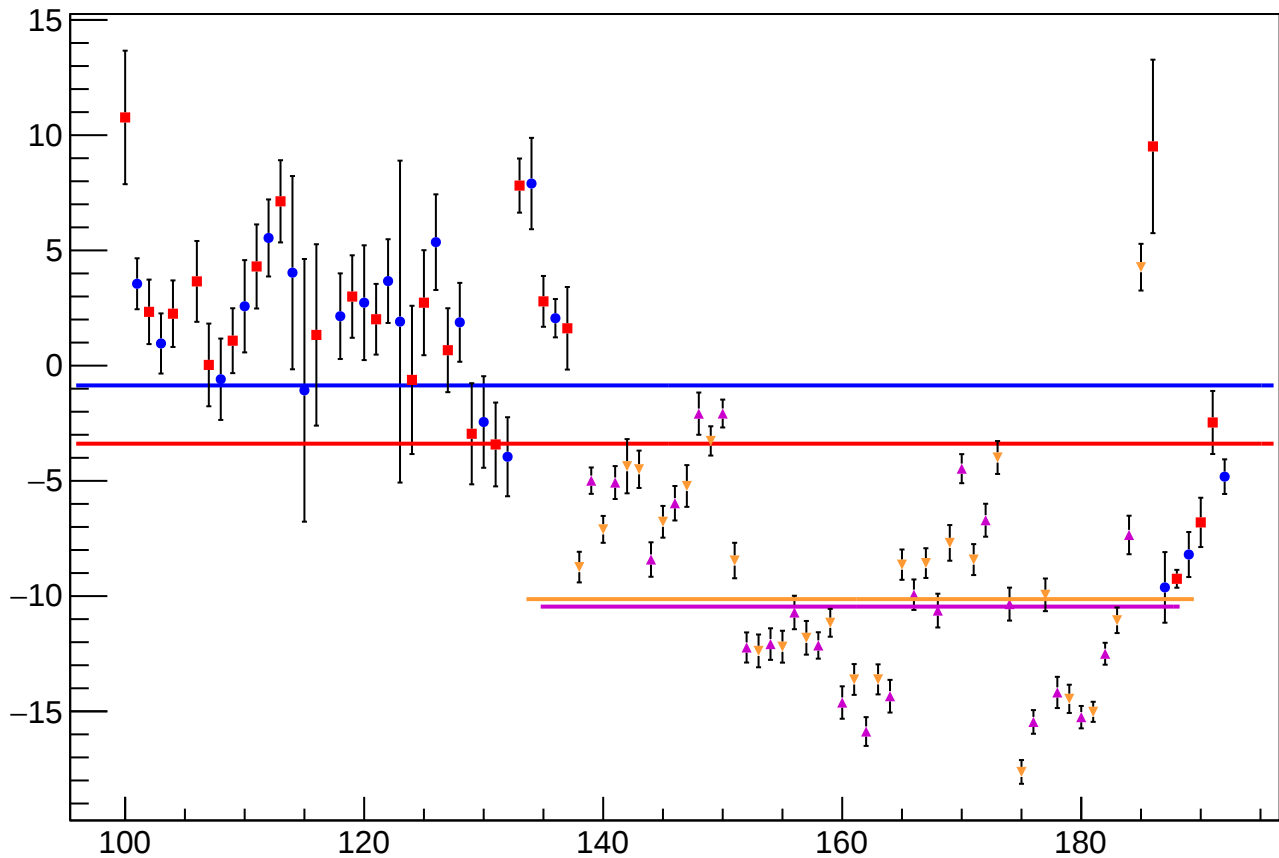
Right:  $-61.716 \pm 0.146$   $\chi^2/\text{NDF}: 7849.7/42$

In:  $-56.283 \pm 0.098$   $\chi^2/\text{NDF}: 5546.7/42$

Out:  $-56.104 \pm 0.093$   $\chi^2/\text{NDF}: 6336.7/47$

All:  $-56.189 \pm 0.067$   $\chi^2/\text{NDF}: 11885.2/90$

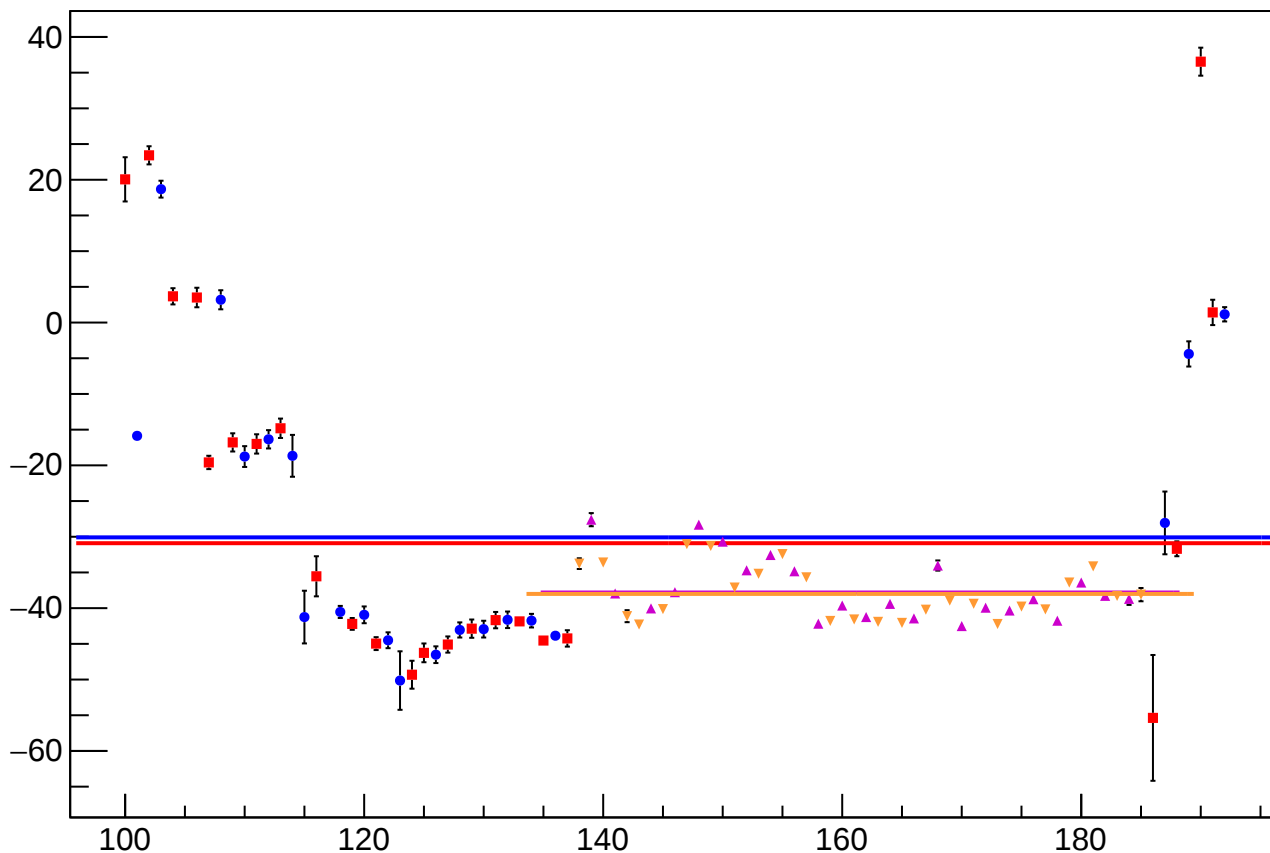
reg\_asym\_sam\_15\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-0.859 \pm 0.328$   $\chi^2/\text{NDF}: 212.1/19$   
 Left Out:  $-10.131 \pm 0.133$   $\chi^2/\text{NDF}: 1055.4/24$   
 Right Out:  $-3.386 \pm 0.260$   $\chi^2/\text{NDF}: 559.2/22$   
 Left In:  $-10.456 \pm 0.135$   $\chi^2/\text{NDF}: 1002.7/22$

Left:  $-10.291 \pm 0.095$   $\chi^2/\text{NDF}: 2061.1/47$   
 Right:  $-2.409 \pm 0.204$   $\chi^2/\text{NDF}: 807.8/42$   
 In:  $-9.070 \pm 0.125$   $\chi^2/\text{NDF}: 1948.4/42$   
 Out:  $-8.737 \pm 0.118$   $\chi^2/\text{NDF}: 2147.7/47$   
 All:  $-8.895 \pm 0.086$   $\chi^2/\text{NDF}: 4099.8/90$

reg\_asym\_sam\_15\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-30.086 \pm 0.245$   $\chi^2/\text{NDF}$ : 5927.1/19

Left Out:  $-38.006 \pm 0.119$   $\chi^2/\text{NDF}$ : 946.0/24

Right Out:  $-30.903 \pm 0.234$   $\chi^2/\text{NDF}$ : 7608.5/22

Left In:  $-37.809 \pm 0.122$   $\chi^2/\text{NDF}$ : 1039.9/22

Left:  $-37.910 \pm 0.085$   $\chi^2/\text{NDF}$ : 1987.2/47

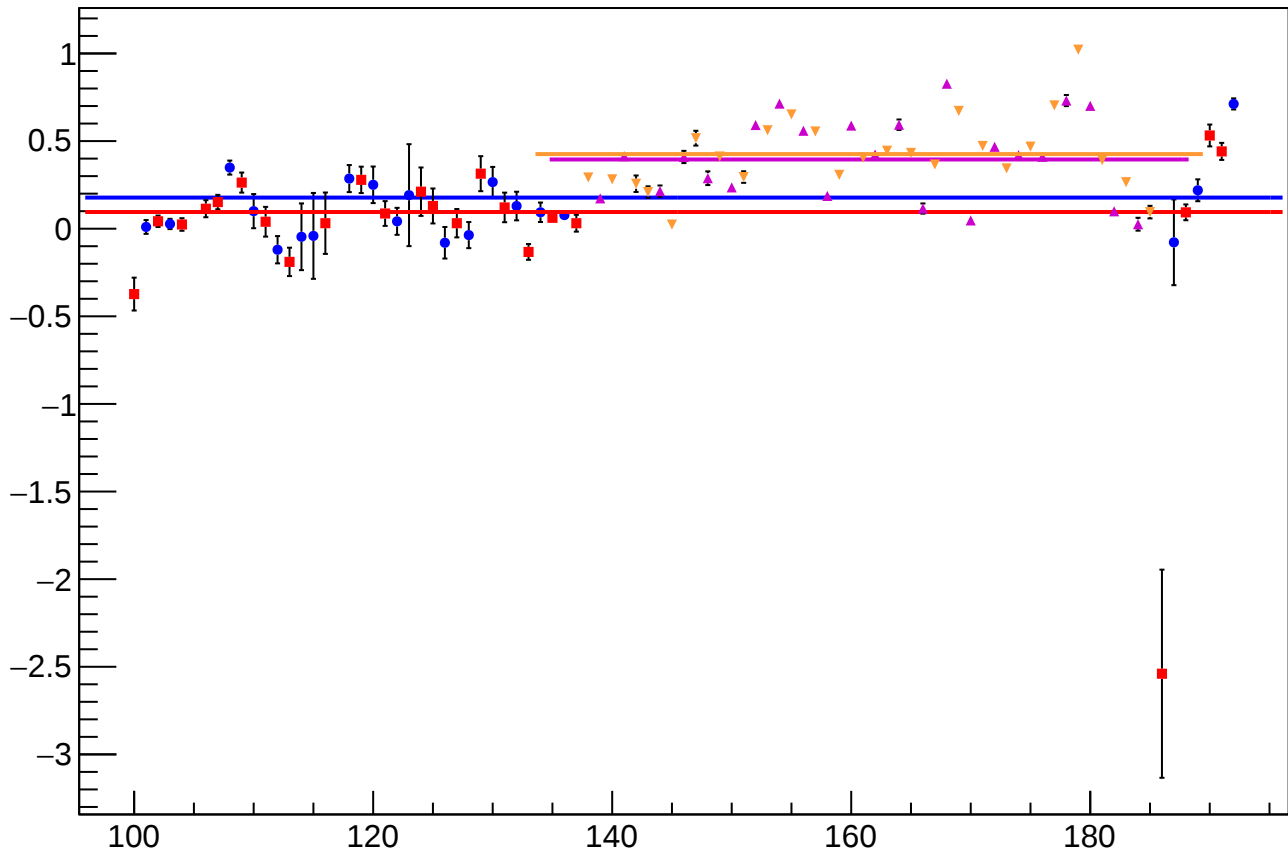
Right:  $-30.514 \pm 0.169$   $\chi^2/\text{NDF}$ : 13541.4/42

In:  $-36.272 \pm 0.109$   $\chi^2/\text{NDF}$ : 7760.7/42

Out:  $-36.551 \pm 0.106$   $\chi^2/\text{NDF}$ : 9287.5/47

All:  $-36.416 \pm 0.076$   $\chi^2/\text{NDF}$ : 17051.6/90

reg\_asym\_sam\_15\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $0.178 \pm 0.012$   $\chi^2/\text{NDF}$ : 412.9/19

Left Out:  $0.426 \pm 0.005$   $\chi^2/\text{NDF}$ : 1303.7/24

Right Out:  $0.095 \pm 0.011$   $\chi^2/\text{NDF}$ : 215.7/22

Left In:  $0.395 \pm 0.005$   $\chi^2/\text{NDF}$ : 1798.2/22

Left:  $0.411 \pm 0.004$   $\chi^2/\text{NDF}$ : 3118.1/47

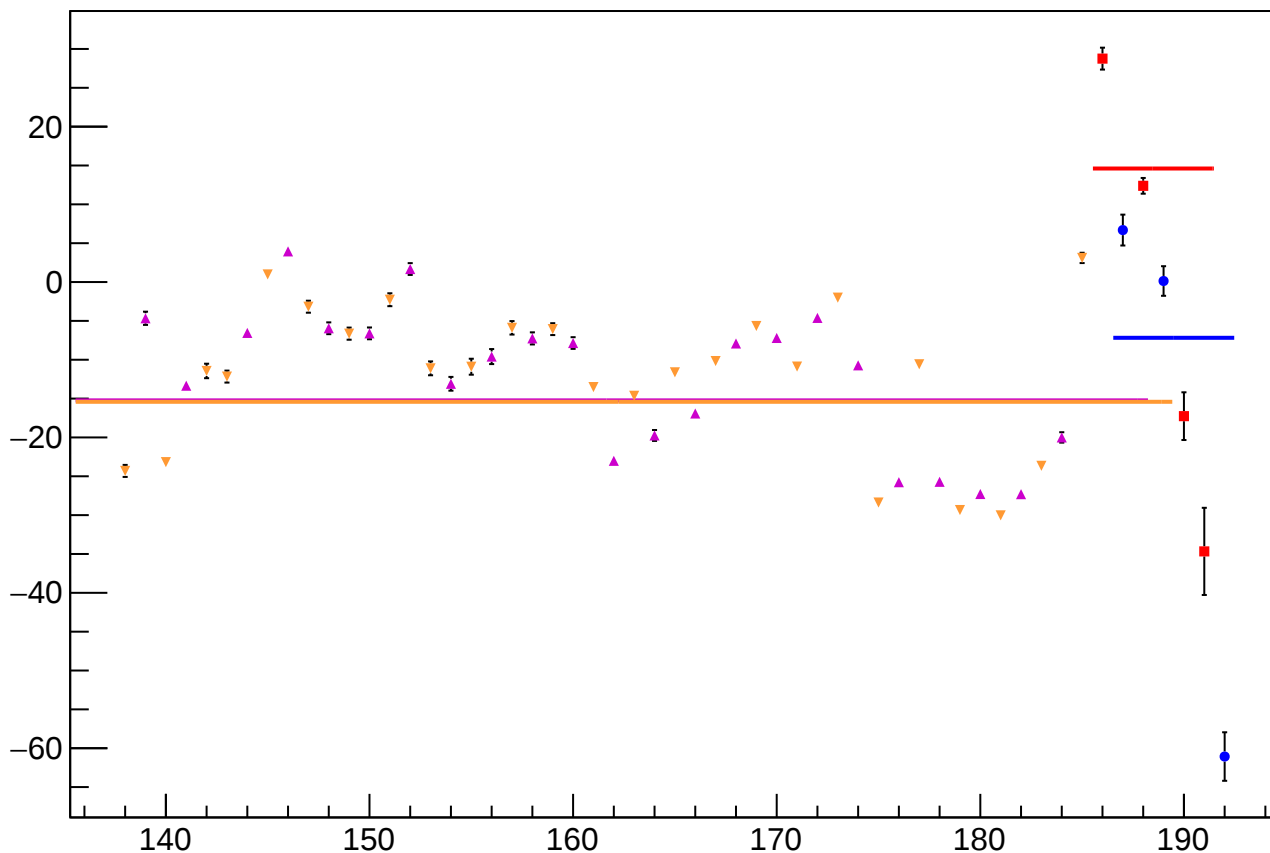
Right:  $0.135 \pm 0.008$   $\chi^2/\text{NDF}$ : 654.6/42

In:  $0.356 \pm 0.005$   $\chi^2/\text{NDF}$ : 2499.3/42

Out:  $0.364 \pm 0.005$   $\chi^2/\text{NDF}$ : 2223.6/47

All:  $0.360 \pm 0.003$   $\chi^2/\text{NDF}$ : 4724.2/90

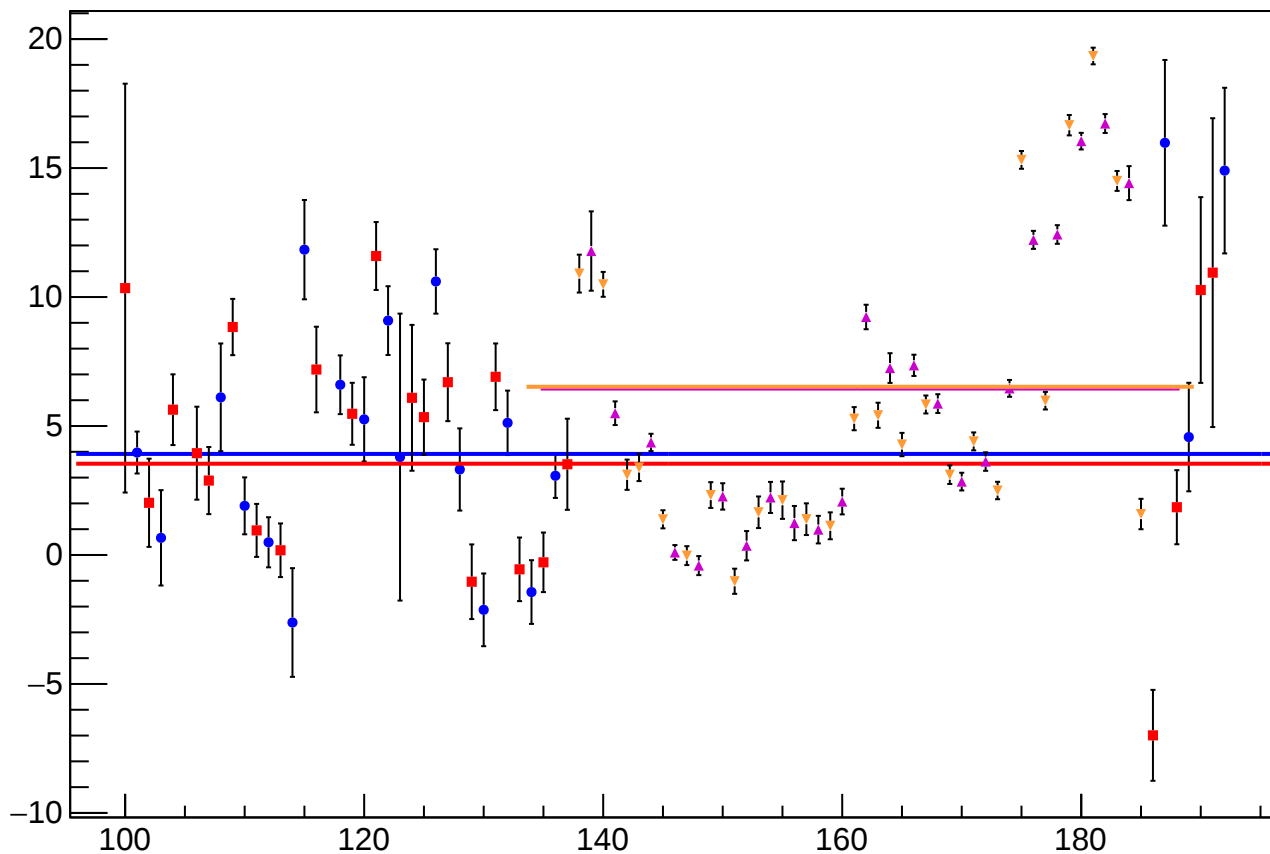
reg\_asym\_sam\_37\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-7.176 \pm 1.258$   $\chi^2/\text{NDF}$ : 361.3/2  
 Left Out:  $-15.413 \pm 0.105$   $\chi^2/\text{NDF}$ : 10509.1/24  
 Right Out:  $14.612 \pm 0.787$   $\chi^2/\text{NDF}$ : 290.5/3  
 Left In:  $-15.229 \pm 0.107$   $\chi^2/\text{NDF}$ : 8657.3/22

Left:  $-15.322 \pm 0.075$   $\chi^2/\text{NDF}$ : 19167.9/47  
 Right:  $8.490 \pm 0.667$   $\chi^2/\text{NDF}$ : 867.4/6  
 In:  $-15.172 \pm 0.106$   $\chi^2/\text{NDF}$ : 9059.3/25  
 Out:  $-14.885 \pm 0.104$   $\chi^2/\text{NDF}$ : 12230.8/28  
 All:  $-15.026 \pm 0.074$   $\chi^2/\text{NDF}$ : 21293.8/54

reg\_asym\_sam\_37\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $3.918 \pm 0.305$   $\chi^2/\text{NDF}$ : 161.6/19

Left Out:  $6.521 \pm 0.085$   $\chi^2/\text{NDF}$ : 4985.2/24

Right Out:  $3.538 \pm 0.303$   $\chi^2/\text{NDF}$ : 177.0/22

Left In:  $6.452 \pm 0.086$   $\chi^2/\text{NDF}$ : 3948.0/22

Left:  $6.487 \pm 0.061$   $\chi^2/\text{NDF}$ : 8933.5/47

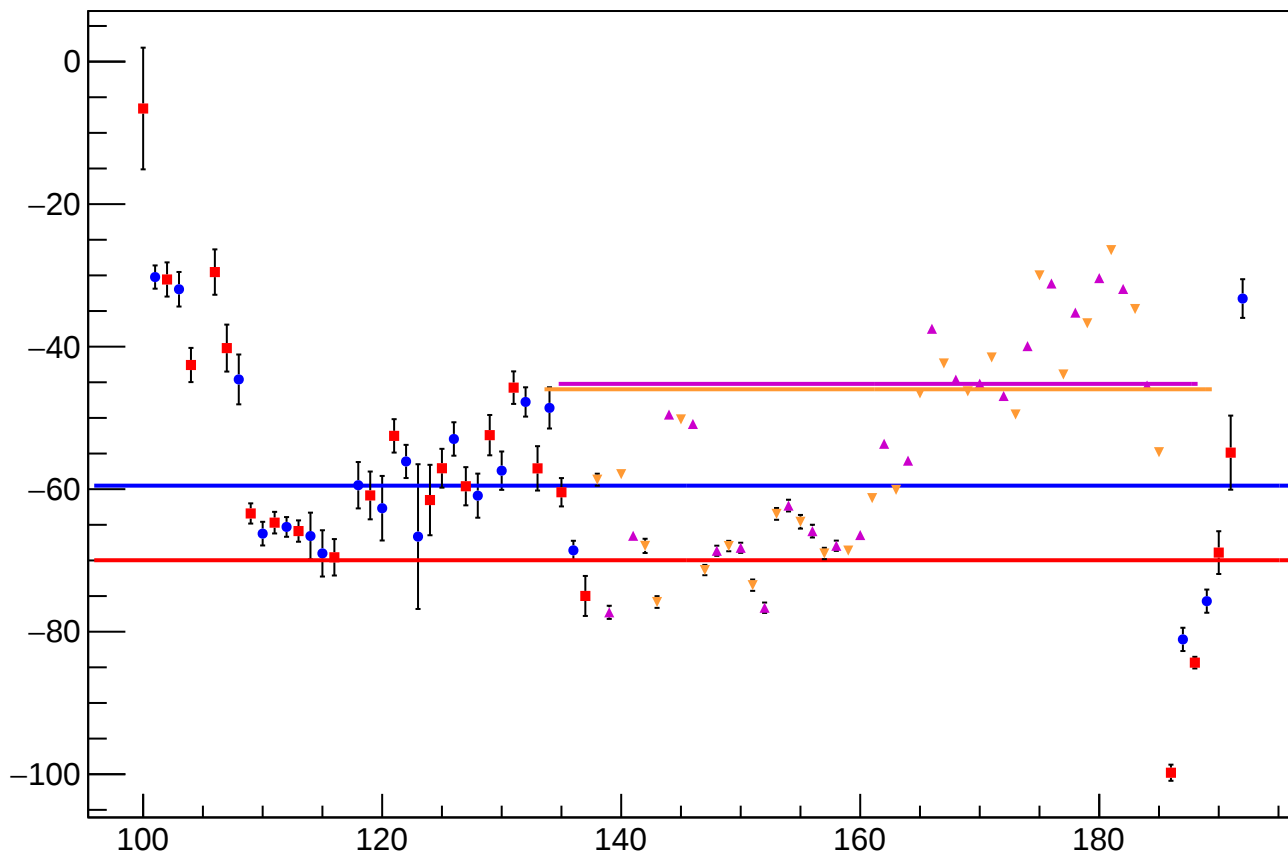
Right:  $3.727 \pm 0.215$   $\chi^2/\text{NDF}$ : 339.4/42

In:  $6.265 \pm 0.083$   $\chi^2/\text{NDF}$ : 4173.6/42

Out:  $6.302 \pm 0.082$   $\chi^2/\text{NDF}$ : 5251.9/47

All:  $6.283 \pm 0.058$   $\chi^2/\text{NDF}$ : 9425.7/90

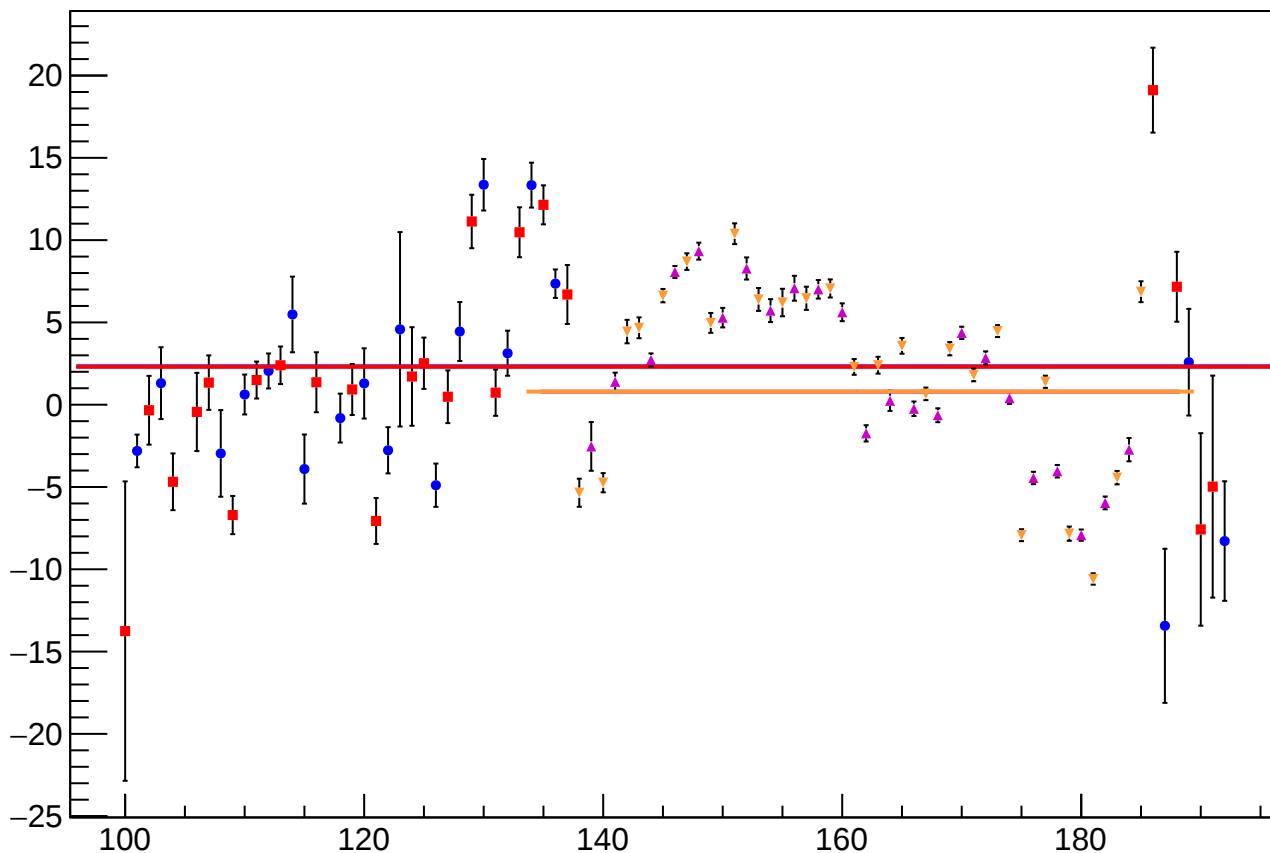
reg\_asym\_sam\_37\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-59.505 \pm 0.484$   $\chi^2/\text{NDF}$ : 988.3/19  
 Left Out:  $-45.982 \pm 0.106$   $\chi^2/\text{NDF}$ : 17360.1/24  
 Right Out:  $-69.972 \pm 0.412$   $\chi^2/\text{NDF}$ : 2048.0/22  
 Left In:  $-45.222 \pm 0.107$   $\chi^2/\text{NDF}$ : 15600.2/22

Left:  $-45.605 \pm 0.075$   $\chi^2/\text{NDF}$ : 32985.7/47  
 Right:  $-65.579 \pm 0.314$   $\chi^2/\text{NDF}$ : 3307.4/42  
 In:  $-45.889 \pm 0.105$   $\chi^2/\text{NDF}$ : 17417.8/42  
 Out:  $-47.479 \pm 0.103$   $\chi^2/\text{NDF}$ : 22589.7/47  
 All:  $-46.698 \pm 0.073$   $\chi^2/\text{NDF}$ : 40124.9/90

reg\_asym\_sam\_37\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 2.328 $\pm$ 0.343  $\chi^2$ /NDF: 262.4/19

Left Out: 0.797 $\pm$ 0.096  $\chi^2$ /NDF: 3760.0/24

Right Out: 2.309 $\pm$ 0.346  $\chi^2$ /NDF: 317.5/22

Left In: 0.792 $\pm$ 0.097  $\chi^2$ /NDF: 2692.5/22

Left: 0.795 $\pm$ 0.068  $\chi^2$ /NDF: 6452.5/47

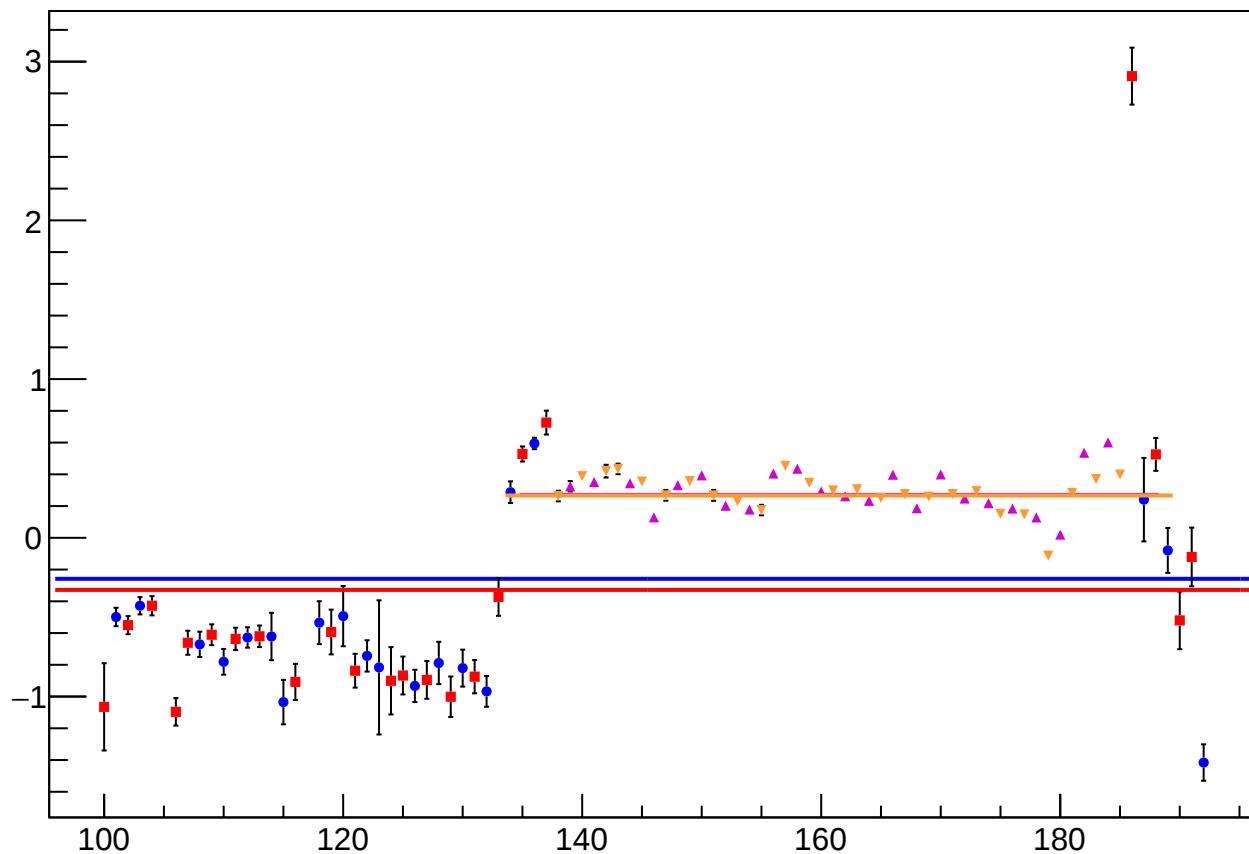
Right: 2.318 $\pm$ 0.244  $\chi^2$ /NDF: 579.9/42

In: 0.905 $\pm$ 0.093  $\chi^2$ /NDF: 2973.4/42

Out: 0.904 $\pm$ 0.092  $\chi^2$ /NDF: 4095.1/47

All: 0.904 $\pm$ 0.065  $\chi^2$ /NDF: 7068.6/90

reg\_asym\_sam\_37\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.258 \pm 0.018$   $\chi^2/\text{NDF}: 1065.6/19$

Left Out:  $0.267 \pm 0.004$   $\chi^2/\text{NDF}: 699.8/24$

Right Out:  $-0.328 \pm 0.018$   $\chi^2/\text{NDF}: 1252.2/22$

Left In:  $0.270 \pm 0.004$   $\chi^2/\text{NDF}: 969.9/22$

Left:  $0.268 \pm 0.003$   $\chi^2/\text{NDF}: 1670.1/47$

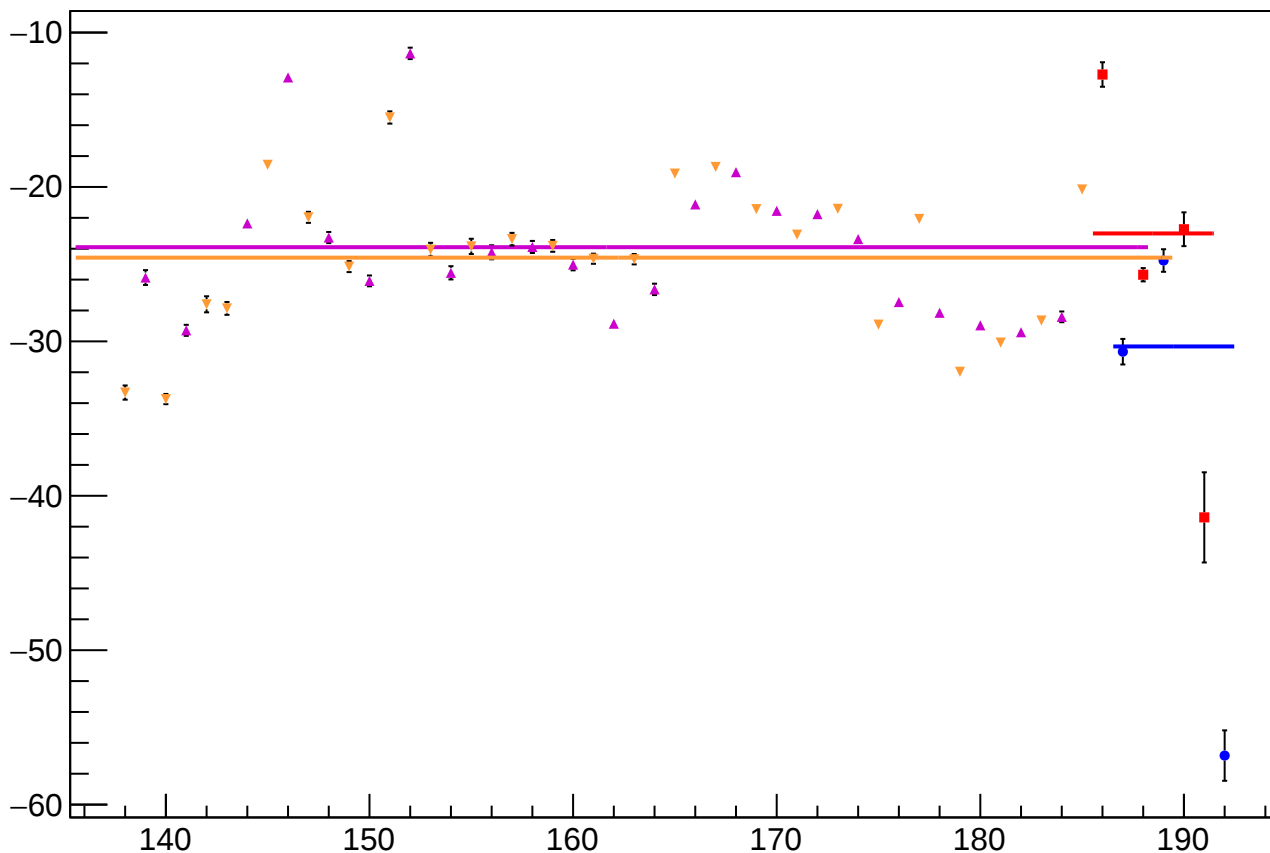
Right:  $-0.293 \pm 0.013$   $\chi^2/\text{NDF}: 2325.0/42$

In:  $0.242 \pm 0.004$   $\chi^2/\text{NDF}: 2810.4/42$

Out:  $0.235 \pm 0.004$   $\chi^2/\text{NDF}: 2940.7/47$

All:  $0.238 \pm 0.003$   $\chi^2/\text{NDF}: 5752.3/90$

reg\_asym\_sam\_37\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-30.329 \pm 0.519$   $\chi^2/\text{NDF}: 321.5/2$

Left Out:  $-24.577 \pm 0.051$   $\chi^2/\text{NDF}: 8590.4/24$

Right Out:  $-23.010 \pm 0.355$   $\chi^2/\text{NDF}: 246.4/3$

Left In:  $-23.901 \pm 0.051$   $\chi^2/\text{NDF}: 9154.9/22$

Left:  $-24.240 \pm 0.036$   $\chi^2/\text{NDF}: 17833.1/47$

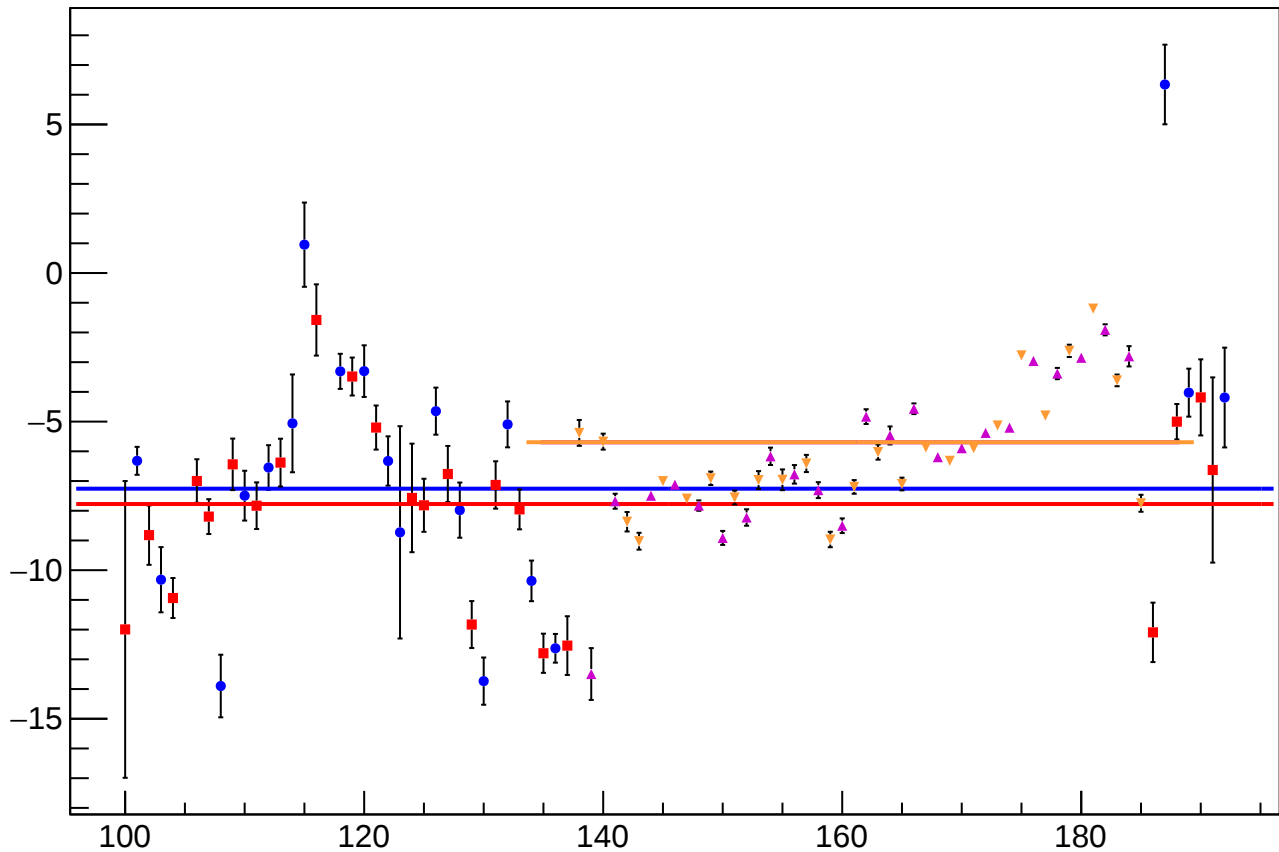
Right:  $-25.343 \pm 0.293$   $\chi^2/\text{NDF}: 703.3/6$

In:  $-23.963 \pm 0.051$   $\chi^2/\text{NDF}: 9628.2/25$

Out:  $-24.546 \pm 0.050$   $\chi^2/\text{NDF}: 8855.9/28$

All:  $-24.256 \pm 0.036$   $\chi^2/\text{NDF}: 18550.4/54$

reg\_asym\_sam\_37\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-7.257 \pm 0.180$   $\chi^2/\text{NDF}$ : 507.0/19

Left Out:  $-5.694 \pm 0.041$   $\chi^2/\text{NDF}$ : 2258.3/24

Right Out:  $-7.774 \pm 0.173$   $\chi^2/\text{NDF}$ : 272.7/22

Left In:  $-5.696 \pm 0.041$   $\chi^2/\text{NDF}$ : 2309.8/22

Left:  $-5.695 \pm 0.029$   $\chi^2/\text{NDF}$ : 4568.1/47

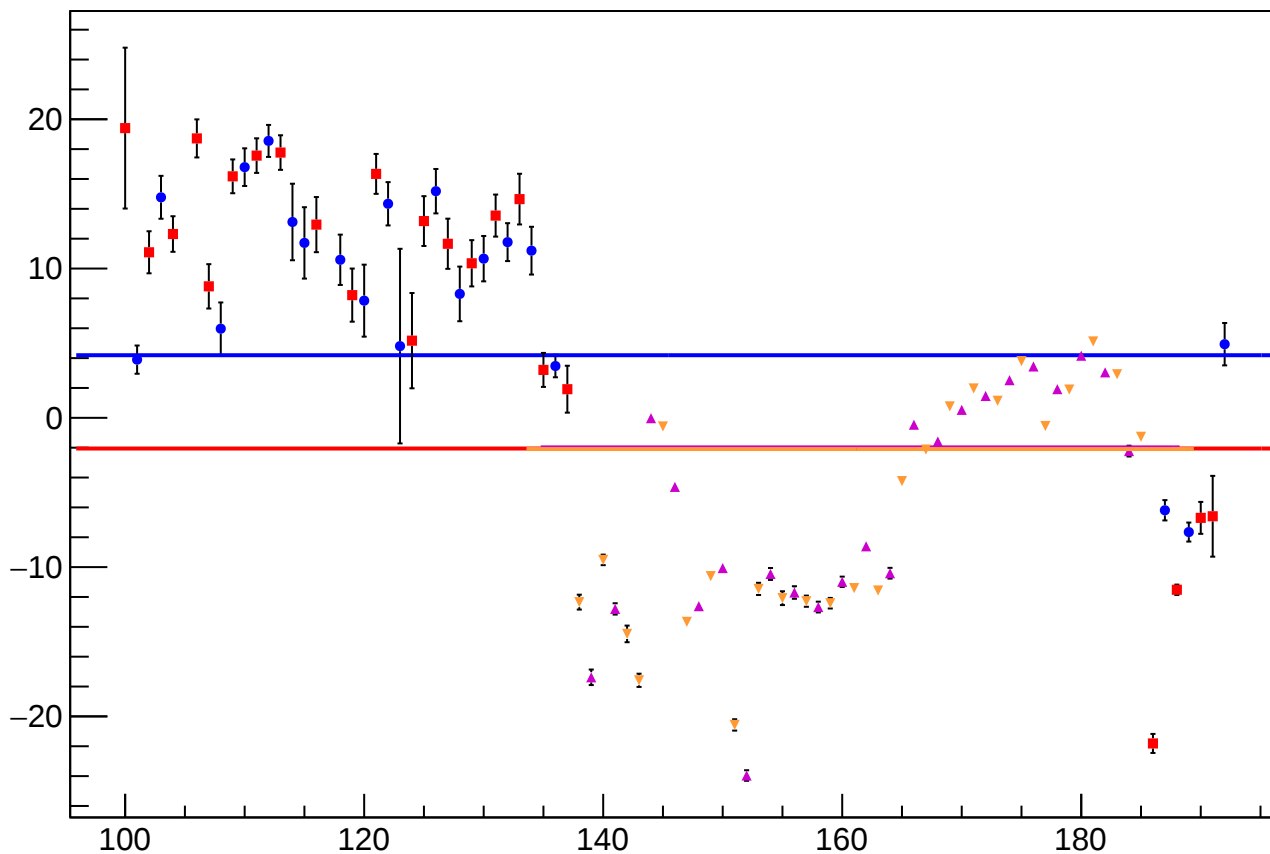
Right:  $-7.526 \pm 0.125$   $\chi^2/\text{NDF}$ : 783.9/42

In:  $-5.773 \pm 0.040$   $\chi^2/\text{NDF}$ : 2888.5/42

Out:  $-5.805 \pm 0.040$   $\chi^2/\text{NDF}$ : 2667.7/47

All:  $-5.789 \pm 0.028$   $\chi^2/\text{NDF}$ : 5556.5/90

reg\_asym\_sam\_37\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected

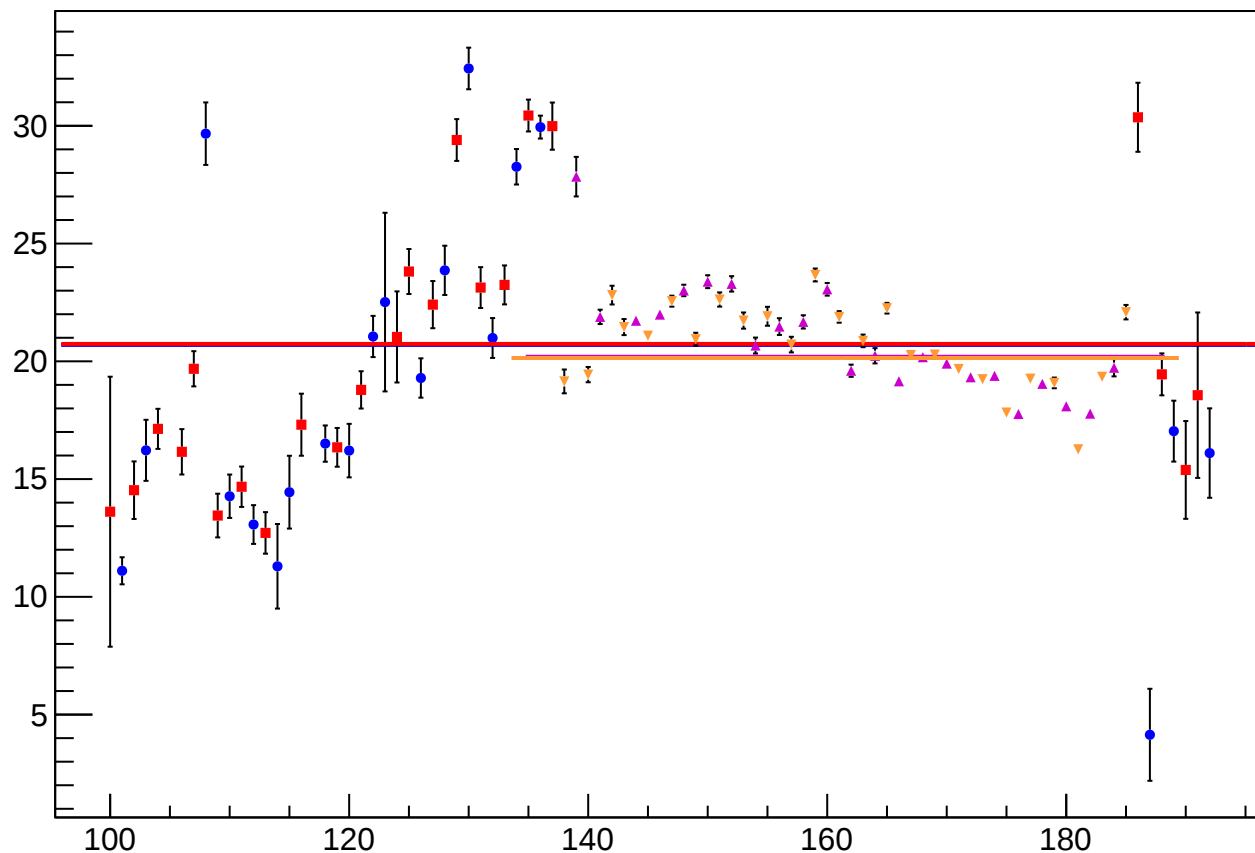


Right In:  $4.194 \pm 0.269$   $\chi^2/\text{NDF}: 1135.6/19$   
 Left Out:  $-2.092 \pm 0.051$   $\chi^2/\text{NDF}: 16305.3/24$   
 Right Out:  $-2.056 \pm 0.219$   $\chi^2/\text{NDF}: 3892.8/22$   
 Left In:  $-1.980 \pm 0.051$   $\chi^2/\text{NDF}: 15382.3/22$

Left:  $-2.036 \pm 0.036$   $\chi^2/\text{NDF}: 31690.0/47$   
 Right:  $0.441 \pm 0.170$   $\chi^2/\text{NDF}: 5353.5/42$   
 In:  $-1.764 \pm 0.050$   $\chi^2/\text{NDF}: 17027.6/42$   
 Out:  $-2.090 \pm 0.050$   $\chi^2/\text{NDF}: 20198.1/47$

All:  $-1.928 \pm 0.035$   $\chi^2/\text{NDF}: 37246.9/90$

reg\_asym\_sam\_37\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 20.697 $\pm$ 0.206  $\chi^2$ /NDF: 1297.8/19

Left Out: 20.141 $\pm$ 0.046  $\chi^2$ /NDF: 1419.1/24

Right Out: 20.739 $\pm$ 0.204  $\chi^2$ /NDF: 774.0/22

Left In: 20.194 $\pm$ 0.046  $\chi^2$ /NDF: 1447.4/22

Left: 20.167 $\pm$ 0.032  $\chi^2$ /NDF: 2867.2/47

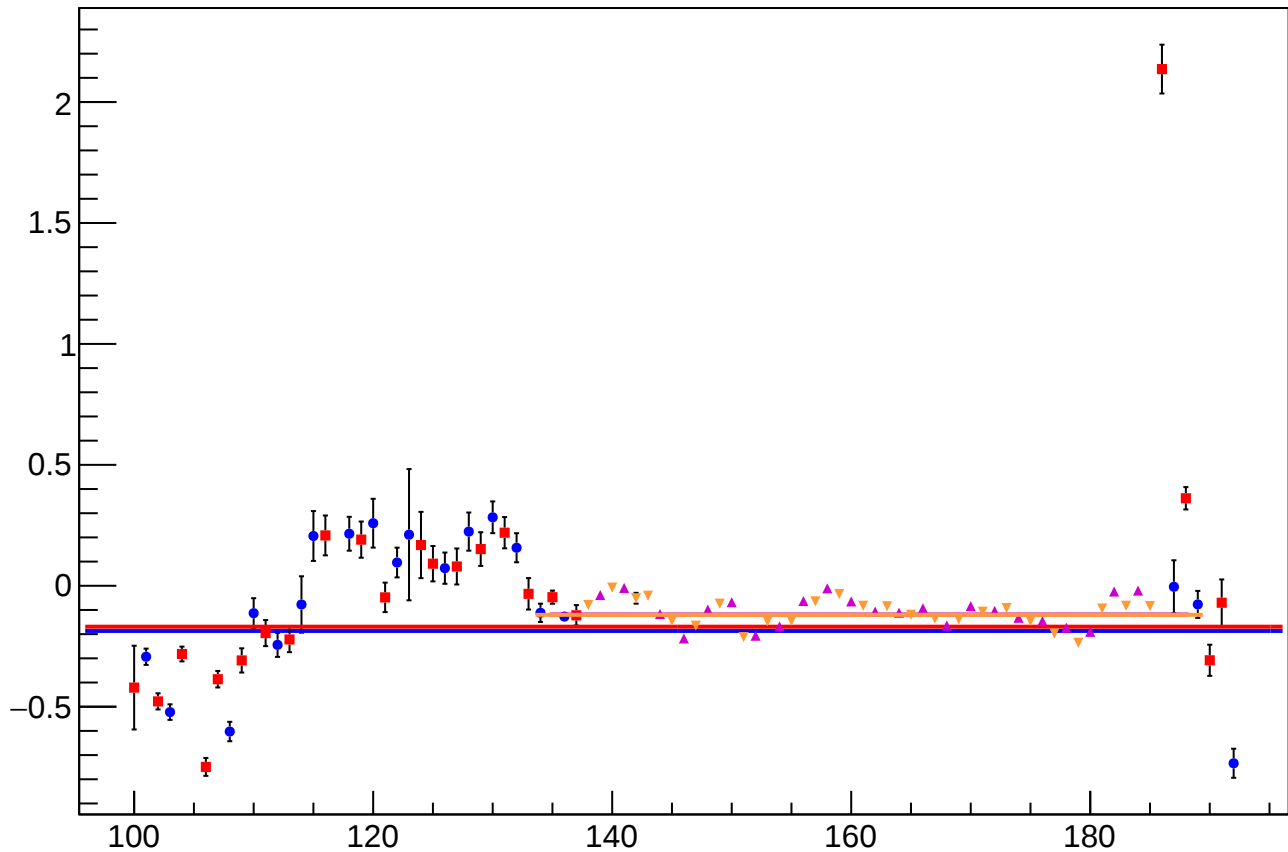
Right: 20.718 $\pm$ 0.145  $\chi^2$ /NDF: 2071.8/42

In: 20.218 $\pm$ 0.045  $\chi^2$ /NDF: 2750.8/42

Out: 20.170 $\pm$ 0.045  $\chi^2$ /NDF: 2201.3/47

All: 20.194 $\pm$ 0.032  $\chi^2$ /NDF: 4952.7/90

reg\_asym\_sam\_37\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.187 \pm 0.011$   $\chi^2/\text{NDF}$ : 549.1/19

Left Out:  $-0.120 \pm 0.002$   $\chi^2/\text{NDF}$ : 530.4/24

Right Out:  $-0.169 \pm 0.010$   $\chi^2/\text{NDF}$ : 1217.2/22

Left In:  $-0.119 \pm 0.002$   $\chi^2/\text{NDF}$ : 721.8/22

Left:  $-0.119 \pm 0.001$   $\chi^2/\text{NDF}$ : 1252.4/47

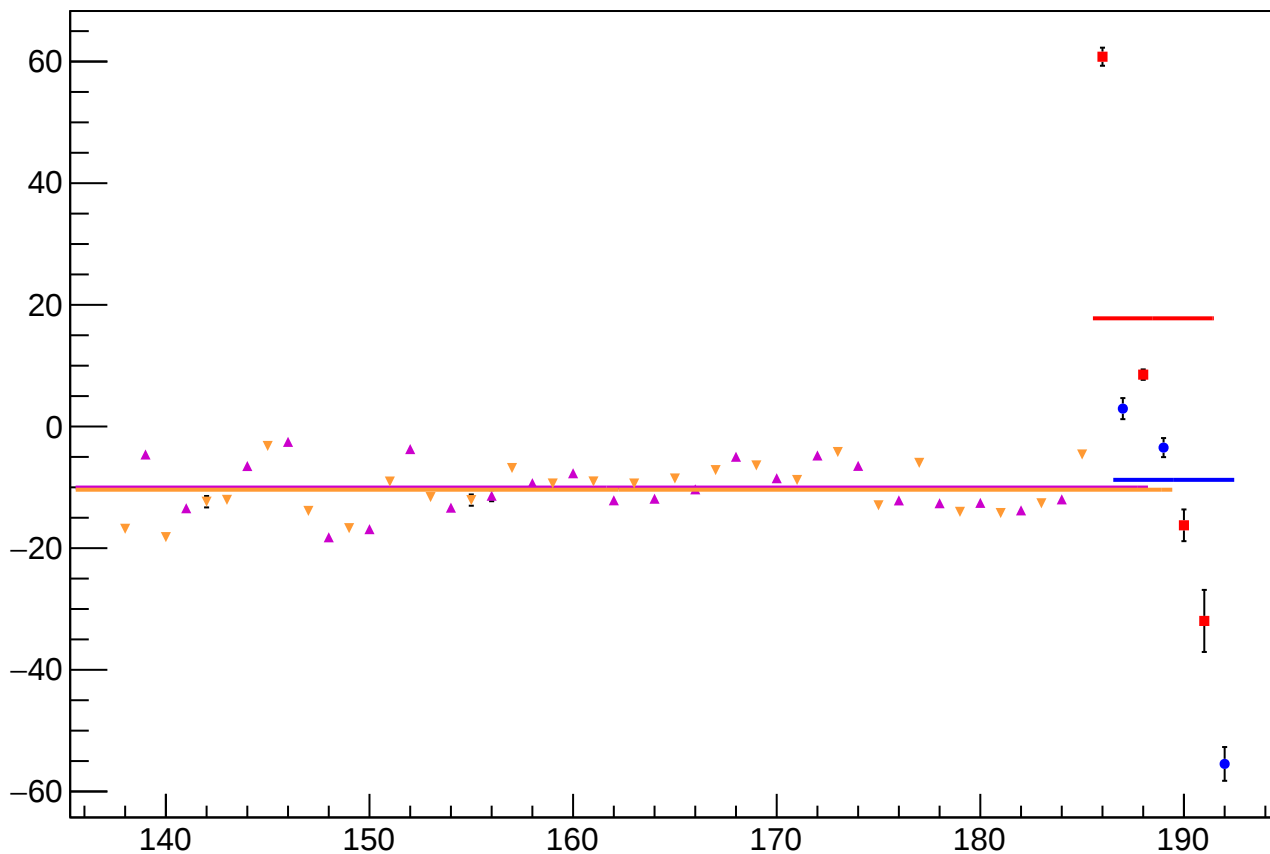
Right:  $-0.178 \pm 0.007$   $\chi^2/\text{NDF}$ : 1767.6/42

In:  $-0.121 \pm 0.002$   $\chi^2/\text{NDF}$ : 1309.2/42

Out:  $-0.122 \pm 0.002$   $\chi^2/\text{NDF}$ : 1768.9/47

All:  $-0.122 \pm 0.001$   $\chi^2/\text{NDF}$ : 3078.2/90

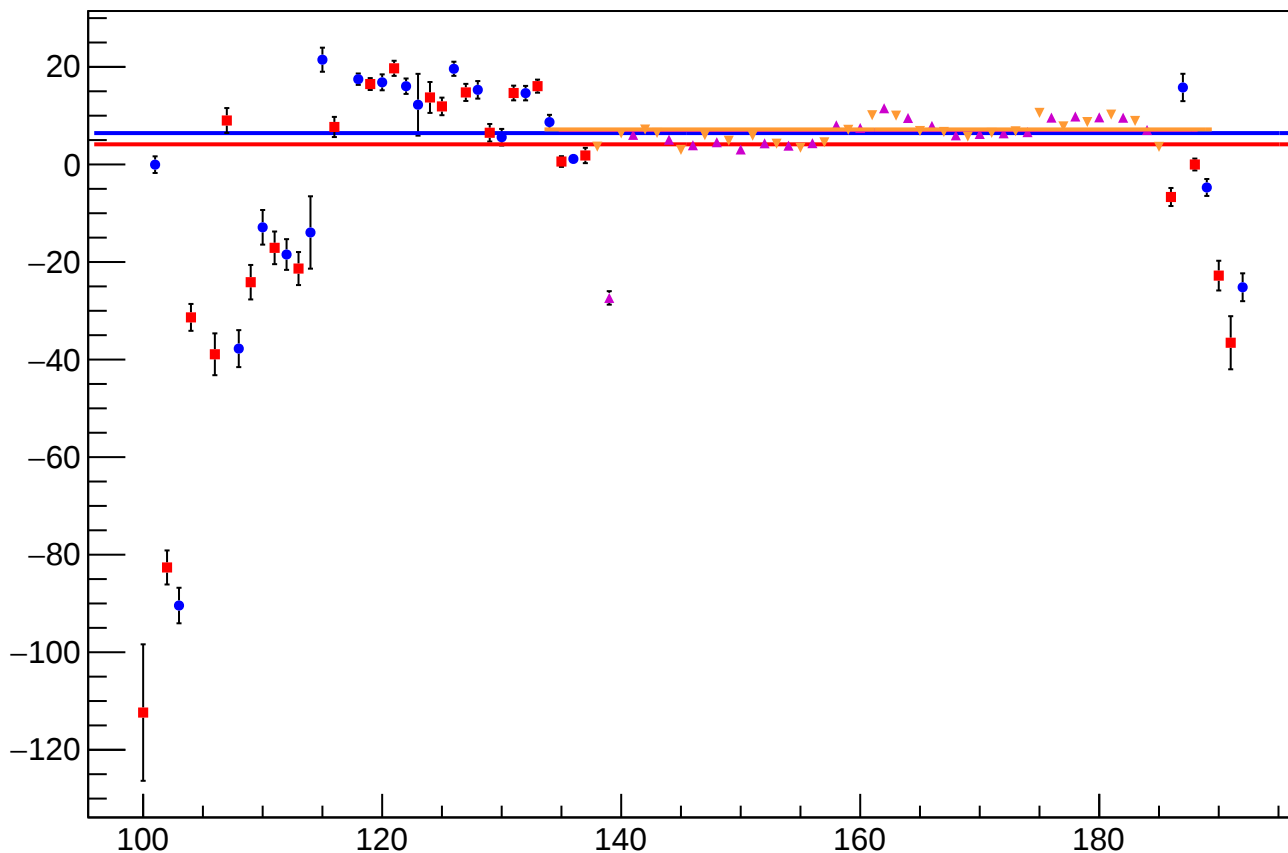
reg\_asym\_sam\_26\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-8.769 \pm 1.072$   $\chi^2/\text{NDF}: 340.1/2$   
 Left Out:  $-10.391 \pm 0.088$   $\chi^2/\text{NDF}: 2111.6/24$   
 Right Out:  $17.784 \pm 0.708$   $\chi^2/\text{NDF}: 1218.6/3$   
 Left In:  $-10.036 \pm 0.090$   $\chi^2/\text{NDF}: 1758.7/22$

Left:  $-10.217 \pm 0.063$   $\chi^2/\text{NDF}: 3878.3/47$   
 Right:  $9.718 \pm 0.591$   $\chi^2/\text{NDF}: 1985.6/6$   
 In:  $-10.027 \pm 0.089$   $\chi^2/\text{NDF}: 2100.1/25$   
 Out:  $-9.964 \pm 0.087$   $\chi^2/\text{NDF}: 4888.5/28$   
 All:  $-9.995 \pm 0.062$   $\chi^2/\text{NDF}: 6988.9/54$

reg\_asym\_sam\_26\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 6.430 $\pm$ 0.389  $\chi^2$ /NDF: 1522.3/19

Left Out: 7.184 $\pm$ 0.073  $\chi^2$ /NDF: 917.3/24

Right Out: 4.127 $\pm$ 0.395  $\chi^2$ /NDF: 1711.2/22

Left In: 7.053 $\pm$ 0.074  $\chi^2$ /NDF: 1535.8/22

Left: 7.119 $\pm$ 0.052  $\chi^2$ /NDF: 2454.8/47

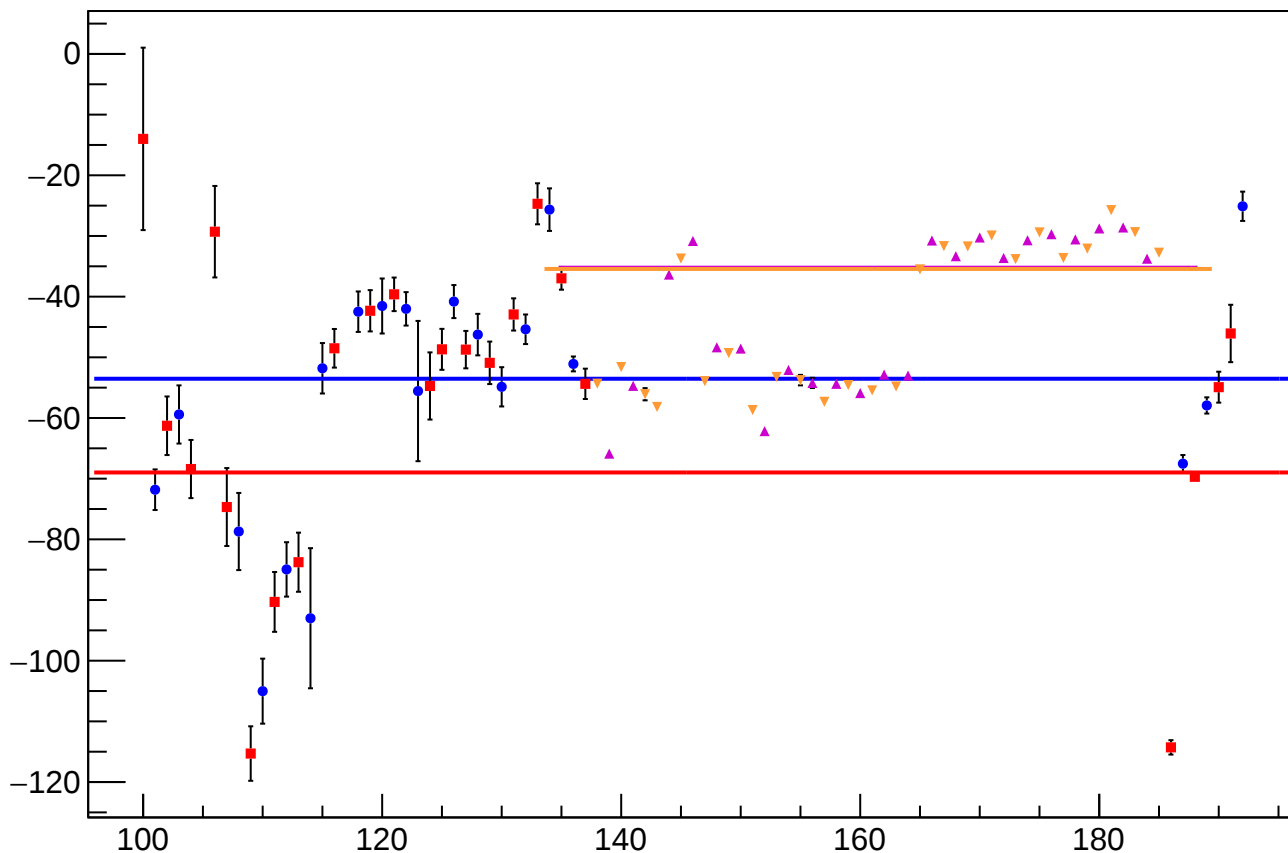
Right: 5.298 $\pm$ 0.277  $\chi^2$ /NDF: 3250.7/42

In: 7.031 $\pm$ 0.073  $\chi^2$ /NDF: 3060.6/42

Out: 7.082 $\pm$ 0.072  $\chi^2$ /NDF: 2686.3/47

All: 7.057 $\pm$ 0.051  $\chi^2$ /NDF: 5747.1/90

reg\_asym\_sam\_26\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-53.530 \pm 0.573$   $\chi^2/\text{NDF}$ : 586.9/19

Left Out:  $-35.434 \pm 0.089$   $\chi^2/\text{NDF}$ : 12782.8/24

Right Out:  $-68.979 \pm 0.469$   $\chi^2/\text{NDF}$ : 2609.4/22

Left In:  $-35.229 \pm 0.090$   $\chi^2/\text{NDF}$ : 11602.9/22

Left:  $-35.333 \pm 0.063$   $\chi^2/\text{NDF}$ : 24388.3/47

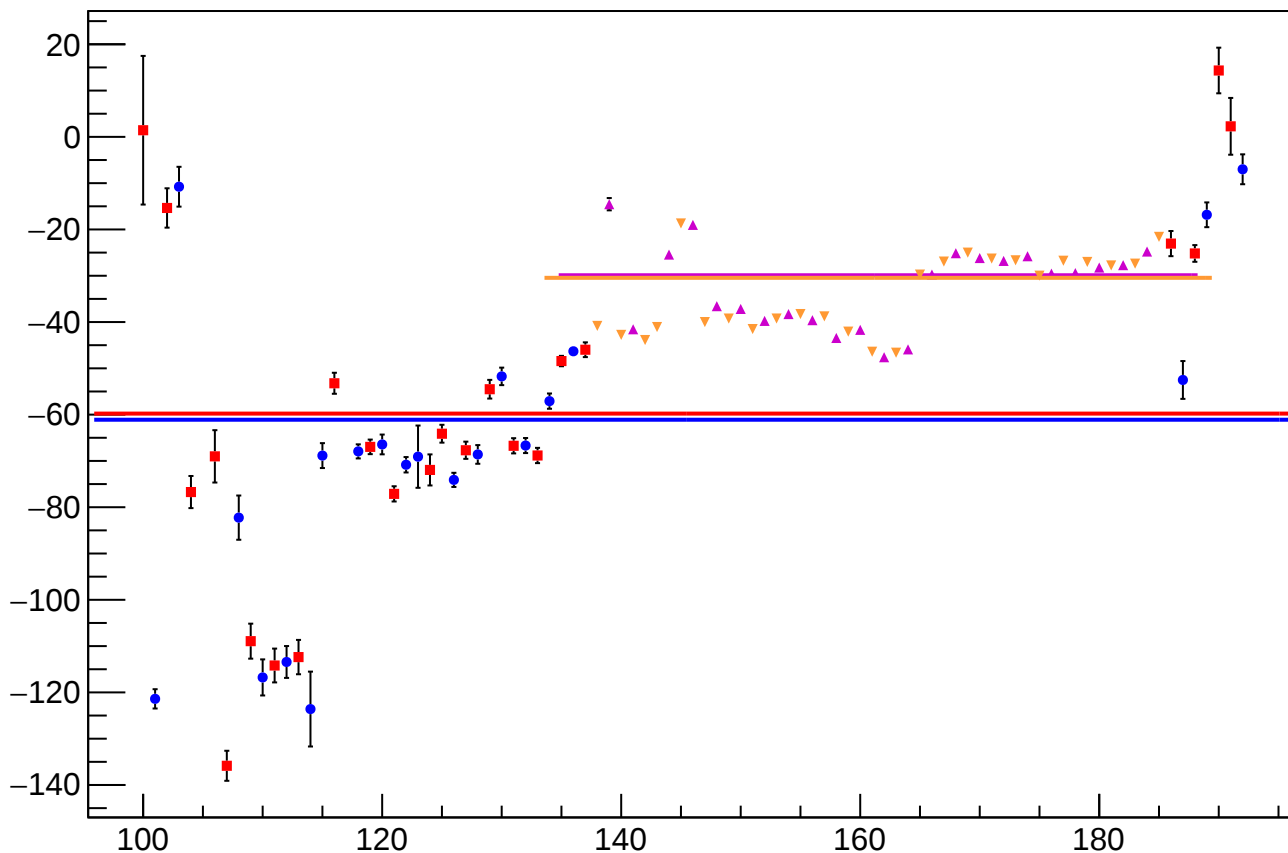
Right:  $-62.793 \pm 0.363$   $\chi^2/\text{NDF}$ : 3631.6/42

In:  $-35.670 \pm 0.089$   $\chi^2/\text{NDF}$ : 13184.2/42

Out:  $-36.603 \pm 0.087$   $\chi^2/\text{NDF}$ : 20339.3/47

All:  $-36.145 \pm 0.062$   $\chi^2/\text{NDF}$ : 33579.4/90

reg\_asym\_sam\_26\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-61.102 \pm 0.436$   $\chi^2/\text{NDF}$ : 2593.8/19

Left Out:  $-30.448 \pm 0.082$   $\chi^2/\text{NDF}$ : 8167.7/24

Right Out:  $-59.775 \pm 0.457$   $\chi^2/\text{NDF}$ : 2580.4/22

Left In:  $-29.892 \pm 0.083$   $\chi^2/\text{NDF}$ : 7115.0/22

Left:  $-30.174 \pm 0.058$   $\chi^2/\text{NDF}$ : 15305.7/47

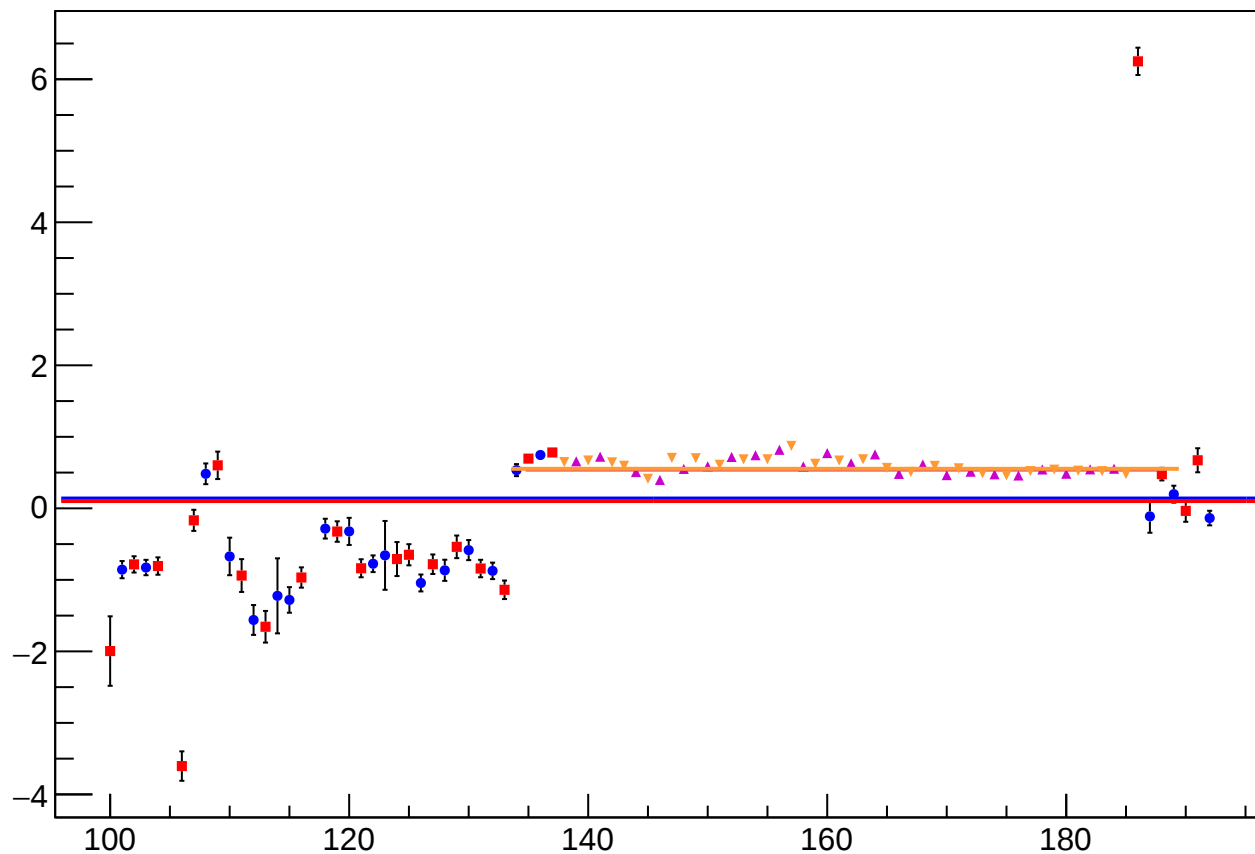
Right:  $-60.470 \pm 0.316$   $\chi^2/\text{NDF}$ : 5178.6/42

In:  $-30.971 \pm 0.081$   $\chi^2/\text{NDF}$ : 14646.6/42

Out:  $-31.351 \pm 0.080$   $\chi^2/\text{NDF}$ : 14735.0/47

All:  $-31.163 \pm 0.057$   $\chi^2/\text{NDF}$ : 29392.8/90

reg\_asym\_sam\_26\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.137 $\pm$ 0.023  $\chi^2$ /NDF: 996.4/19

Left Out: 0.553 $\pm$ 0.004  $\chi^2$ /NDF:542.1/24

Right Out: 0.102 $\pm$ 0.024  $\chi^2$ /NDF: 2262.0/22

Left In: 0.544 $\pm$ 0.004  $\chi^2$ /NDF:655.9/22

Left: 0.548 $\pm$ 0.003  $\chi^2$ /NDF: 1200.9/47

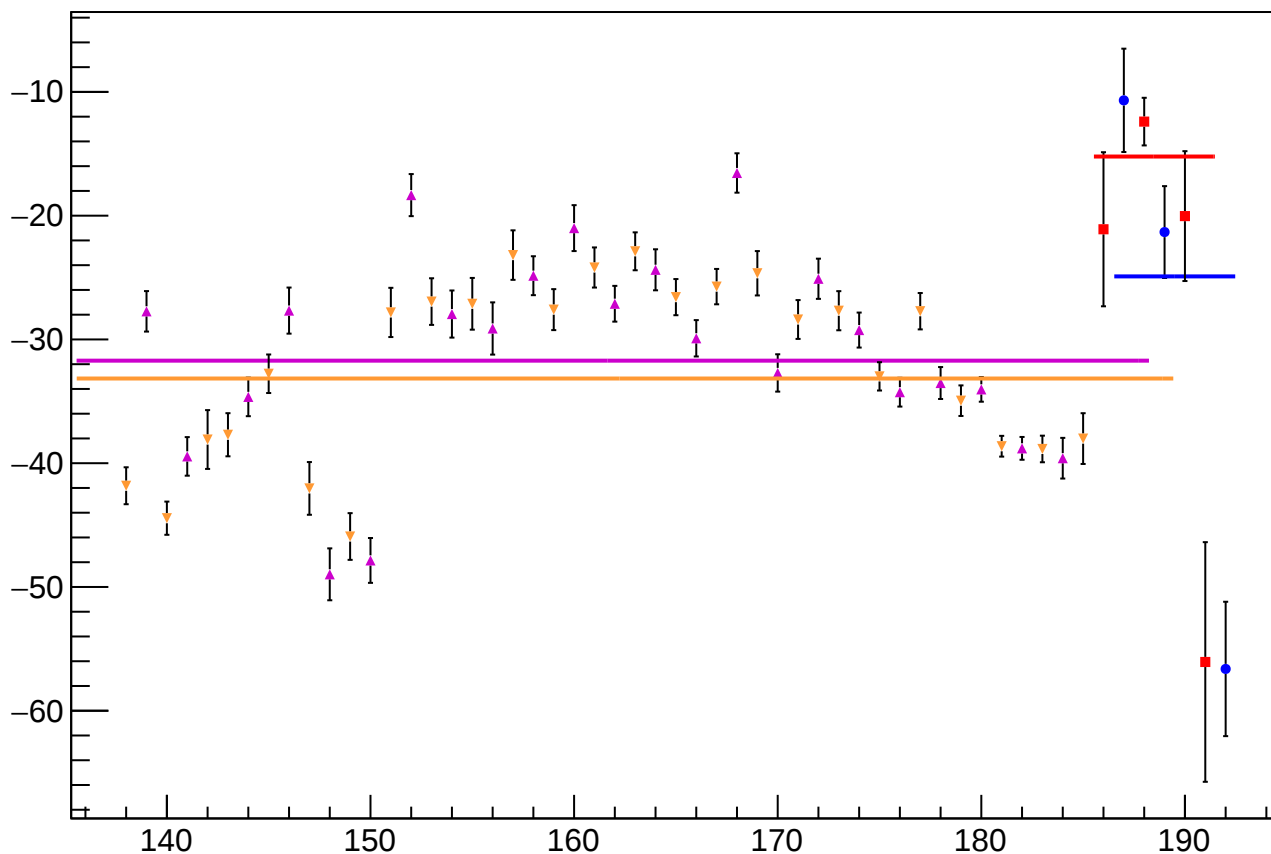
Right: 0.121 $\pm$ 0.017  $\chi^2$ /NDF: 3259.5/42

In: 0.533 $\pm$ 0.004  $\chi^2$ /NDF:1960.6/42

Out: 0.543 $\pm$ 0.004  $\chi^2$ /NDF:3137.2/47

All: 0.538 $\pm$ 0.003  $\chi^2$ /NDF: 5101.2/90

reg\_asym\_sam\_26\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-24.906 \pm 2.470$   $\chi^2/\text{NDF}: 46.7/2$

Left Out:  $-33.157 \pm 0.300$   $\chi^2/\text{NDF}: 500.1/24$

Right Out:  $-15.221 \pm 1.708$   $\chi^2/\text{NDF}: 21.7/3$

Left In:  $-31.714 \pm 0.309$   $\chi^2/\text{NDF}: 542.3/22$

Left:  $-32.456 \pm 0.215$   $\chi^2/\text{NDF}: 1053.6/47$

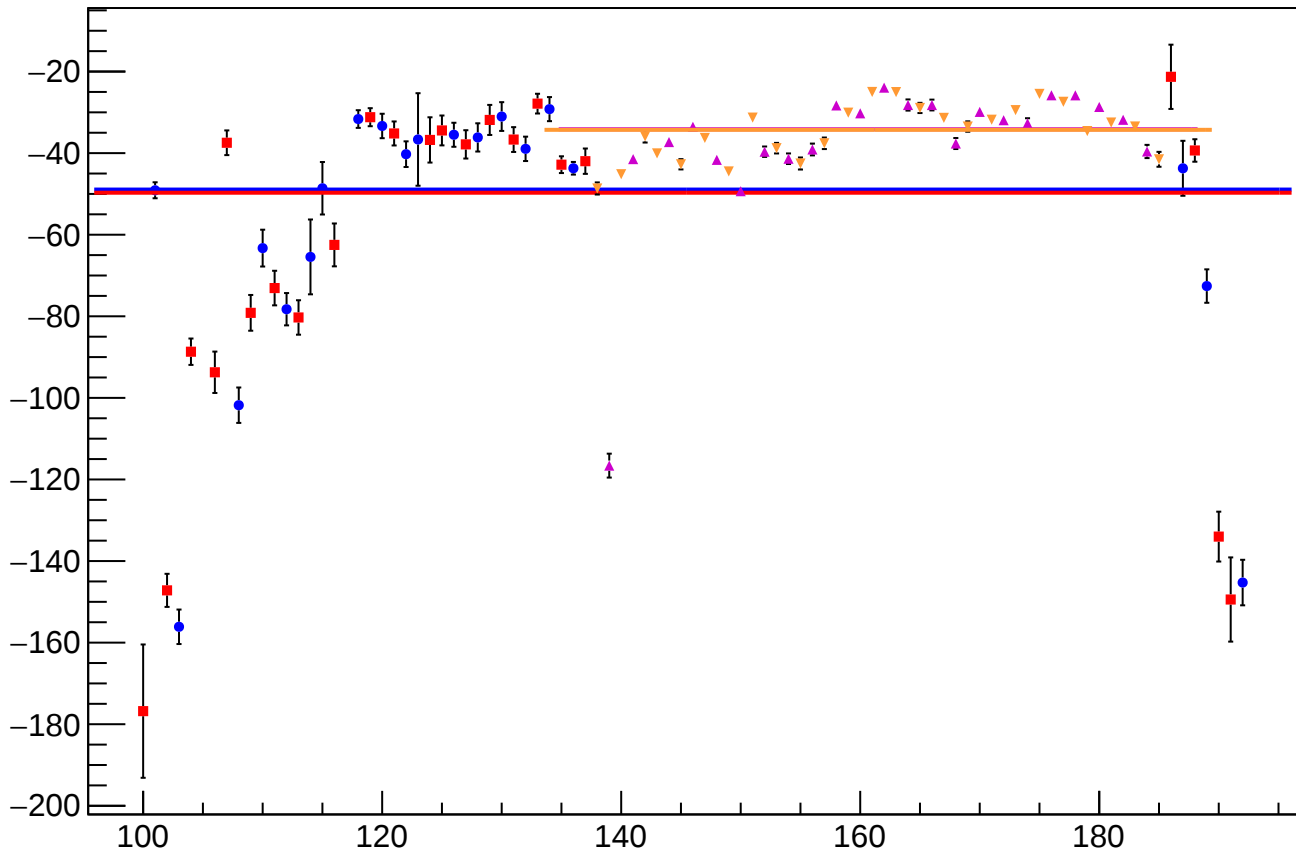
Right:  $-18.353 \pm 1.405$   $\chi^2/\text{NDF}: 78.7/6$

In:  $-31.610 \pm 0.307$   $\chi^2/\text{NDF}: 596.4/25$

Out:  $-32.619 \pm 0.296$   $\chi^2/\text{NDF}: 628.8/28$

All:  $-32.133 \pm 0.213$   $\chi^2/\text{NDF}: 1230.8/54$

reg\_asym\_sam\_26\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-48.928 \pm 0.709$   $\chi^2/\text{NDF}$ : 1418.2/19

Left Out:  $-34.287 \pm 0.241$   $\chi^2/\text{NDF}$ : 695.3/24

Right Out:  $-49.704 \pm 0.726$   $\chi^2/\text{NDF}$ : 1589.4/22

Left In:  $-34.145 \pm 0.251$   $\chi^2/\text{NDF}$ : 1452.6/22

Left:  $-34.219 \pm 0.174$   $\chi^2/\text{NDF}$ : 2148.1/47

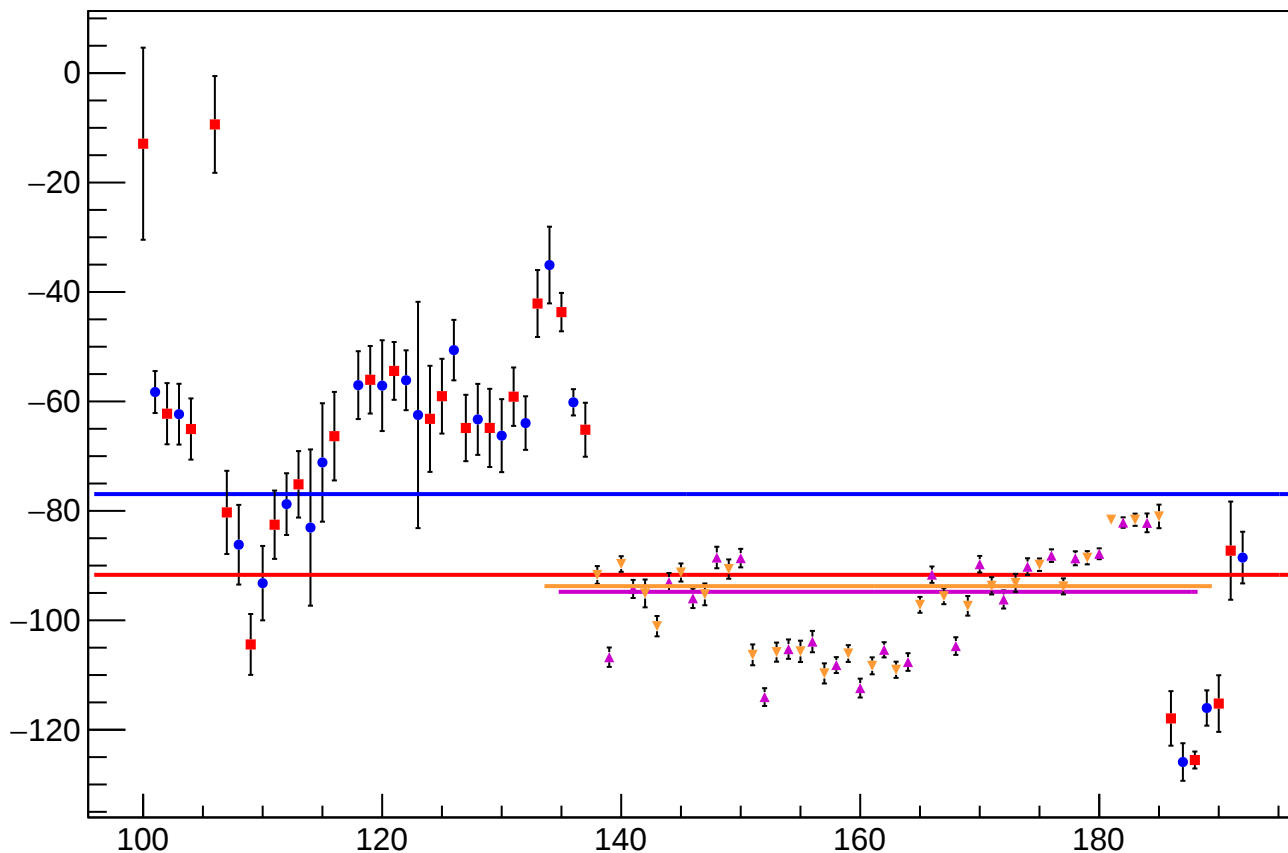
Right:  $-49.307 \pm 0.507$   $\chi^2/\text{NDF}$ : 3008.2/42

In:  $-35.788 \pm 0.236$   $\chi^2/\text{NDF}$ : 3256.9/42

Out:  $-35.821 \pm 0.229$   $\chi^2/\text{NDF}$ : 2690.3/47

All:  $-35.805 \pm 0.165$   $\chi^2/\text{NDF}$ : 5947.3/90

reg\_asym\_sam\_26\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-76.933 \pm 1.116$   $\chi^2/\text{NDF}: 547.2/19$

Left Out:  $-93.754 \pm 0.302$   $\chi^2/\text{NDF}: 883.1/24$

Right Out:  $-91.689 \pm 0.986$   $\chi^2/\text{NDF}: 1176.4/22$

Left In:  $-94.796 \pm 0.308$   $\chi^2/\text{NDF}: 974.7/22$

Left:  $-94.264 \pm 0.216$   $\chi^2/\text{NDF}: 1863.6/47$

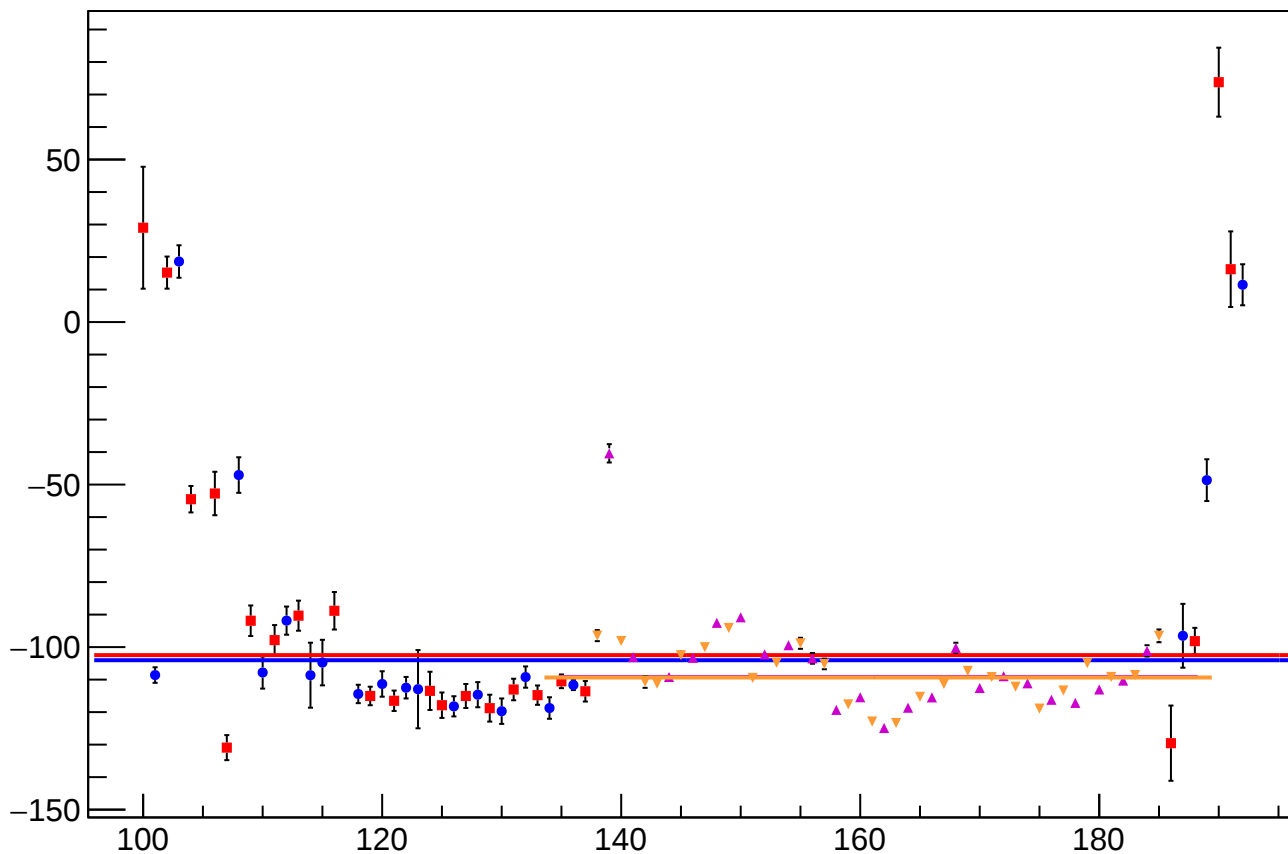
Right:  $-85.223 \pm 0.739$   $\chi^2/\text{NDF}: 1821.7/42$

In:  $-93.529 \pm 0.297$   $\chi^2/\text{NDF}: 1759.7/42$

Out:  $-93.577 \pm 0.289$   $\chi^2/\text{NDF}: 2063.4/47$

All:  $-93.554 \pm 0.207$   $\chi^2/\text{NDF}: 3823.2/90$

reg\_asym\_sam\_26\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-104.035 \pm 0.802$   $\chi^2/\text{NDF}: 1248.9/19$

Left Out:  $-109.351 \pm 0.271$   $\chi^2/\text{NDF}: 826.8/24$

Right Out:  $-102.466 \pm 0.837$   $\chi^2/\text{NDF}: 1411.6/22$

Left In:  $-109.184 \pm 0.280$   $\chi^2/\text{NDF}: 1501.1/22$

Left:  $-109.270 \pm 0.195$   $\chi^2/\text{NDF}: 2328.1/47$

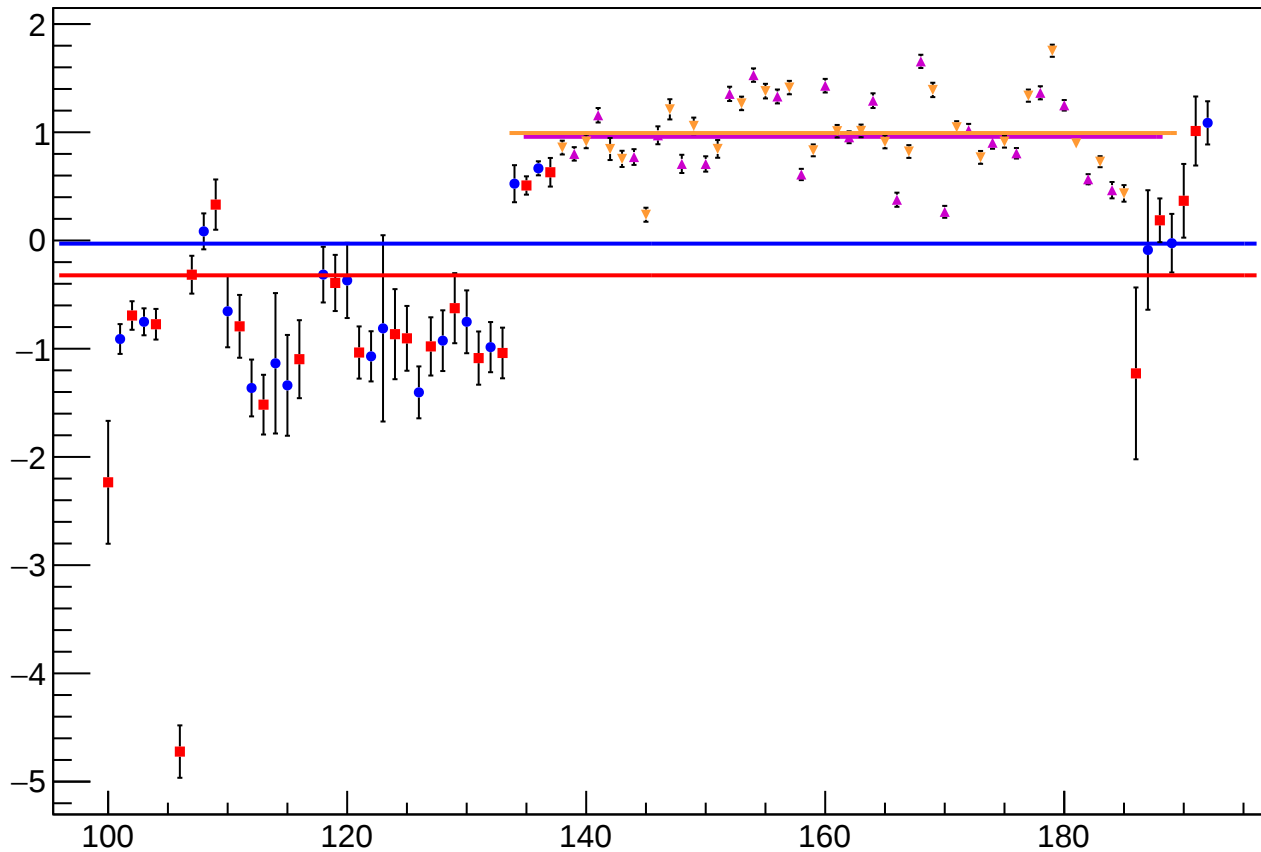
Right:  $-103.284 \pm 0.579$   $\chi^2/\text{NDF}: 2662.4/42$

In:  $-108.625 \pm 0.264$   $\chi^2/\text{NDF}: 2786.8/42$

Out:  $-108.697 \pm 0.258$   $\chi^2/\text{NDF}: 2299.7/47$

All:  $-108.662 \pm 0.185$   $\chi^2/\text{NDF}: 5086.5/90$

reg\_asym\_sam\_26\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.029 \pm 0.041$   $\chi^2/\text{NDF}$ : 361.2/19

Left Out:  $0.993 \pm 0.012$   $\chi^2/\text{NDF}$ : 638.6/24

Right Out:  $-0.322 \pm 0.042$   $\chi^2/\text{NDF}$ : 611.1/22

Left In:  $0.958 \pm 0.013$   $\chi^2/\text{NDF}$ : 894.5/22

Left:  $0.976 \pm 0.009$   $\chi^2/\text{NDF}$ : 1537.0/47

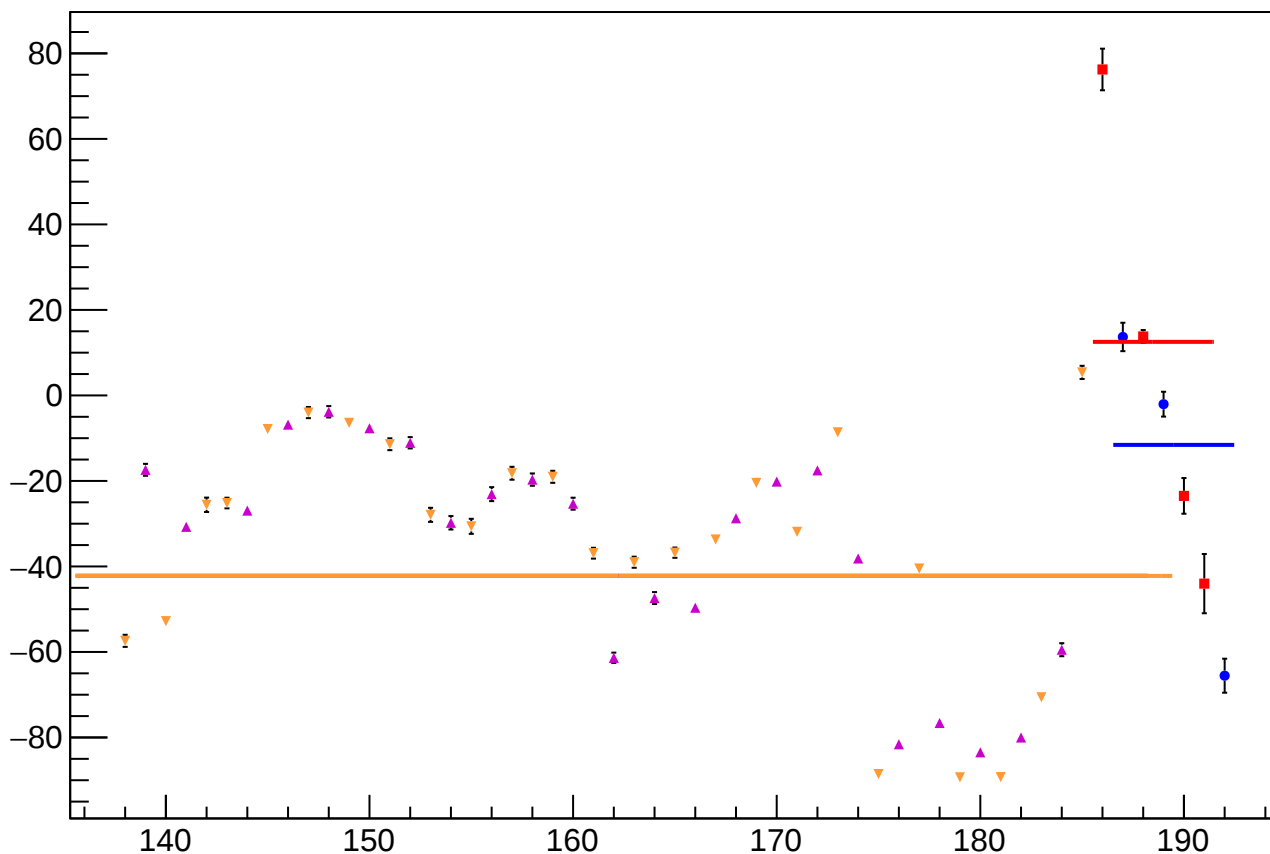
Right:  $-0.170 \pm 0.029$   $\chi^2/\text{NDF}$ : 997.2/42

In:  $0.871 \pm 0.012$   $\chi^2/\text{NDF}$ : 1789.7/42

Out:  $0.889 \pm 0.012$   $\chi^2/\text{NDF}$ : 2141.0/47

All:  $0.880 \pm 0.008$   $\chi^2/\text{NDF}$ : 3931.8/90

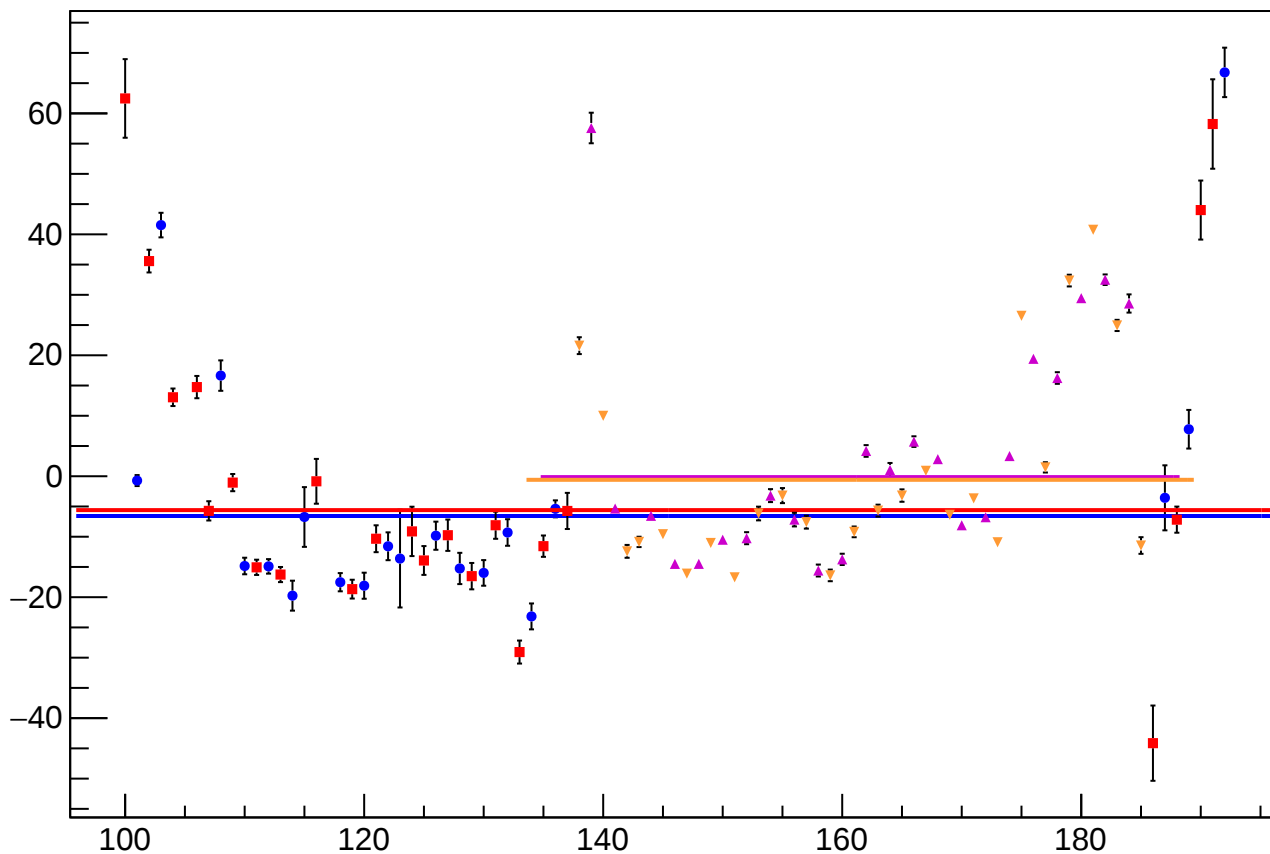
reg\_asym\_sam\_48\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-11.569 \pm 1.917$   $\chi^2/\text{NDF}$ : 252.6/2  
 Left Out:  $-42.213 \pm 0.222$   $\chi^2/\text{NDF}$ : 18309.1/24  
 Right Out:  $12.529 \pm 1.336$   $\chi^2/\text{NDF}$ : 313.1/3  
 Left In:  $-42.176 \pm 0.227$   $\chi^2/\text{NDF}$ : 14575.9/22

Left:  $-42.195 \pm 0.159$   $\chi^2/\text{NDF}$ : 32885.0/47  
 Right:  $4.653 \pm 1.096$   $\chi^2/\text{NDF}$ : 672.1/6  
 In:  $-41.753 \pm 0.225$   $\chi^2/\text{NDF}$ : 15079.9/25  
 Out:  $-40.742 \pm 0.219$   $\chi^2/\text{NDF}$ : 20256.2/28  
 All:  $-41.232 \pm 0.157$   $\chi^2/\text{NDF}$ : 35346.4/54

reg\_asym\_sam\_48\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-6.574 \pm 0.423$   $\chi^2/\text{NDF}: 1324.7/19$

Left Out:  $-0.590 \pm 0.174$   $\chi^2/\text{NDF}: 8750.9/24$

Right Out:  $-5.601 \pm 0.418$   $\chi^2/\text{NDF}: 1515.9/22$

Left In:  $-0.142 \pm 0.179$   $\chi^2/\text{NDF}: 6862.5/22$

Left:  $-0.372 \pm 0.125$   $\chi^2/\text{NDF}: 15616.6/47$

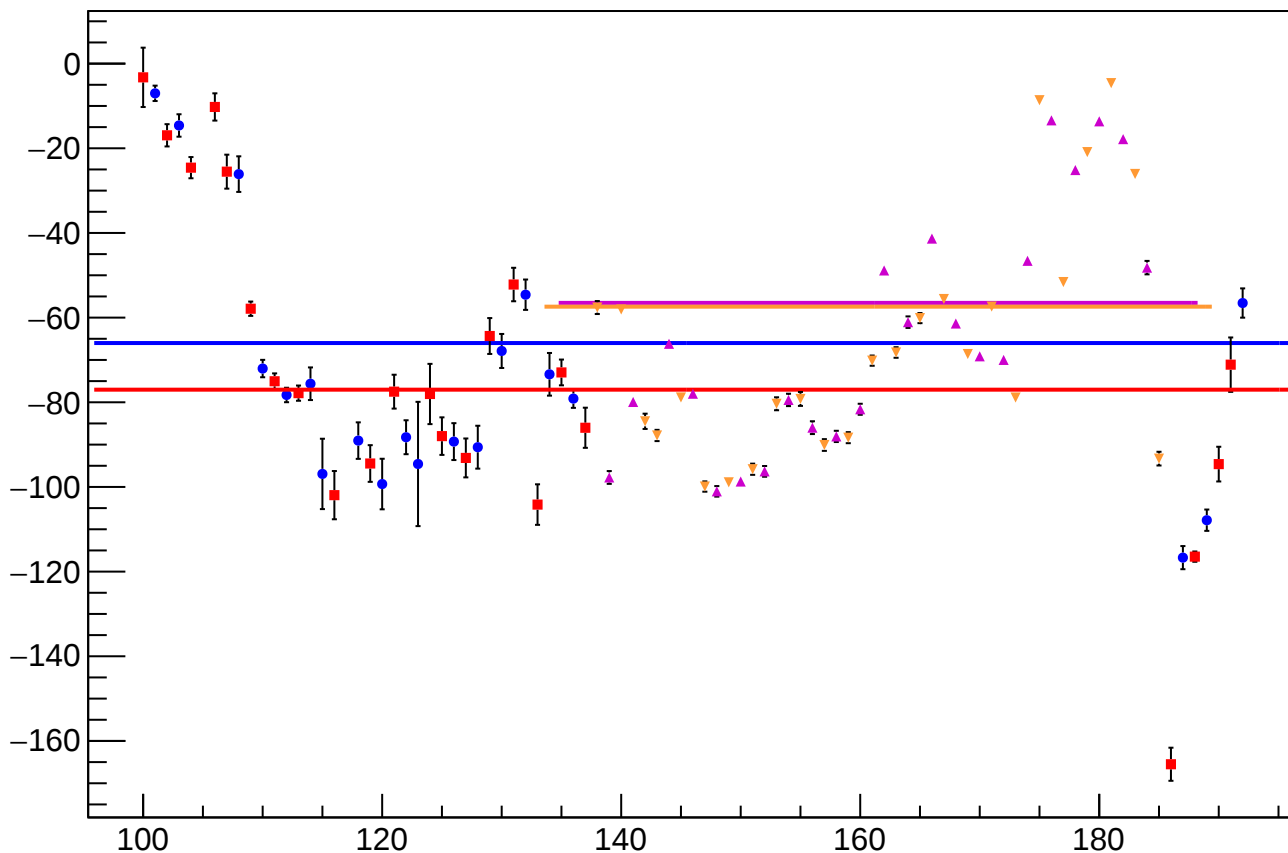
Right:  $-6.081 \pm 0.297$   $\chi^2/\text{NDF}: 2843.3/42$

In:  $-1.119 \pm 0.165$   $\chi^2/\text{NDF}: 8383.0/42$

Out:  $-1.332 \pm 0.161$   $\chi^2/\text{NDF}: 10389.3/47$

All:  $-1.228 \pm 0.115$   $\chi^2/\text{NDF}: 18773.2/90$

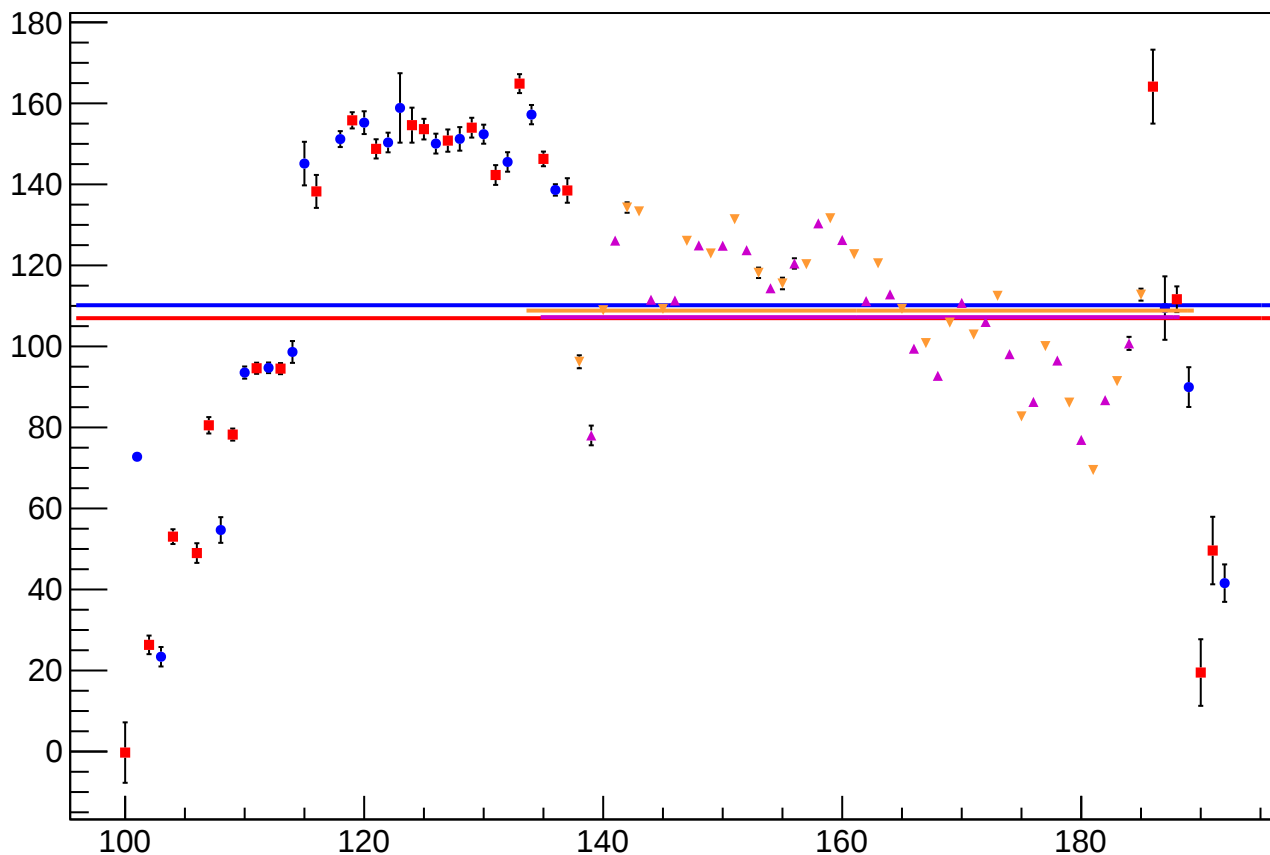
reg\_asym\_sam\_48\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-66.006 \pm 0.679$   $\chi^2/\text{NDF}: 2423.8/19$   
 Left Out:  $-57.413 \pm 0.223$   $\chi^2/\text{NDF}: 18604.1/24$   
 Right Out:  $-77.021 \pm 0.594$   $\chi^2/\text{NDF}: 3514.8/22$   
 Left In:  $-56.519 \pm 0.227$   $\chi^2/\text{NDF}: 16352.6/22$

Left:  $-56.974 \pm 0.159$   $\chi^2/\text{NDF}: 34964.5/47$   
 Right:  $-72.249 \pm 0.447$   $\chi^2/\text{NDF}: 6087.6/42$   
 In:  $-57.472 \pm 0.215$   $\chi^2/\text{NDF}: 18951.8/42$   
 Out:  $-59.840 \pm 0.209$   $\chi^2/\text{NDF}: 23074.0/47$   
 All:  $-58.692 \pm 0.150$   $\chi^2/\text{NDF}: 42088.0/90$

reg\_asym\_sam\_48\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 110.166 $\pm$ 0.484  $\chi^2$ /NDF: 6104.5/19

Left Out: 108.846 $\pm$ 0.197  $\chi^2$ /NDF: 7400.2/24

Right Out: 106.971 $\pm$ 0.480  $\chi^2$ /NDF: 7245.2/22

Left In: 107.225 $\pm$ 0.202  $\chi^2$ /NDF: 5565.3/22

Left: 108.056 $\pm$ 0.141  $\chi^2$ /NDF: 12998.4/47

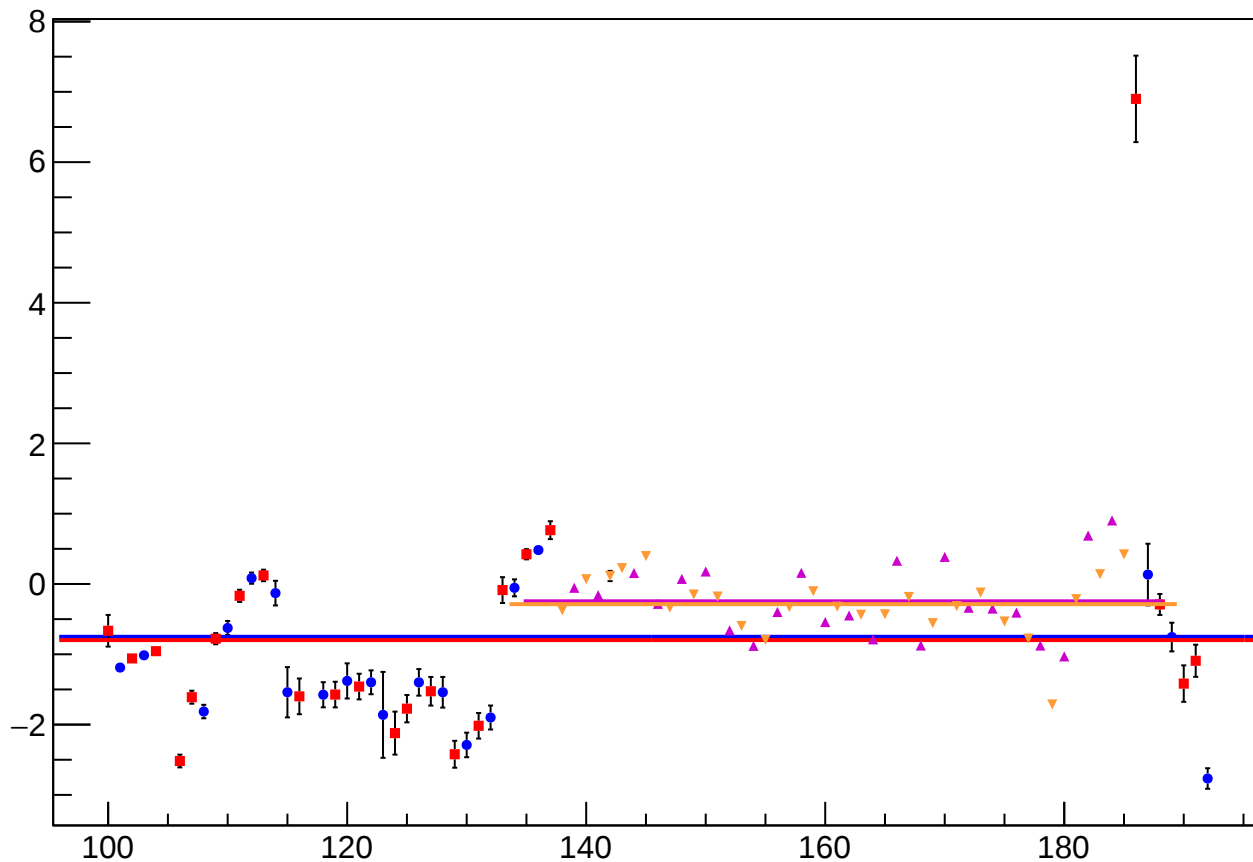
Right: 108.556 $\pm$ 0.341  $\chi^2$ /NDF: 13371.6/42

In: 107.663 $\pm$ 0.187  $\chi^2$ /NDF: 11701.2/42

Out: 108.575 $\pm$ 0.182  $\chi^2$ /NDF: 14658.4/47

All: 108.129 $\pm$ 0.131  $\chi^2$ /NDF: 26371.8/90

reg\_asym\_sam\_48\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.751 \pm 0.025$   $\chi^2/\text{NDF}$ : 1188.1/19

Left Out:  $-0.287 \pm 0.009$   $\chi^2/\text{NDF}$ : 2052.9/24

Right Out:  $-0.798 \pm 0.024$   $\chi^2/\text{NDF}$ : 1478.7/22

Left In:  $-0.247 \pm 0.009$   $\chi^2/\text{NDF}$ : 2792.8/22

Left:  $-0.267 \pm 0.006$   $\chi^2/\text{NDF}$ : 4855.3/47

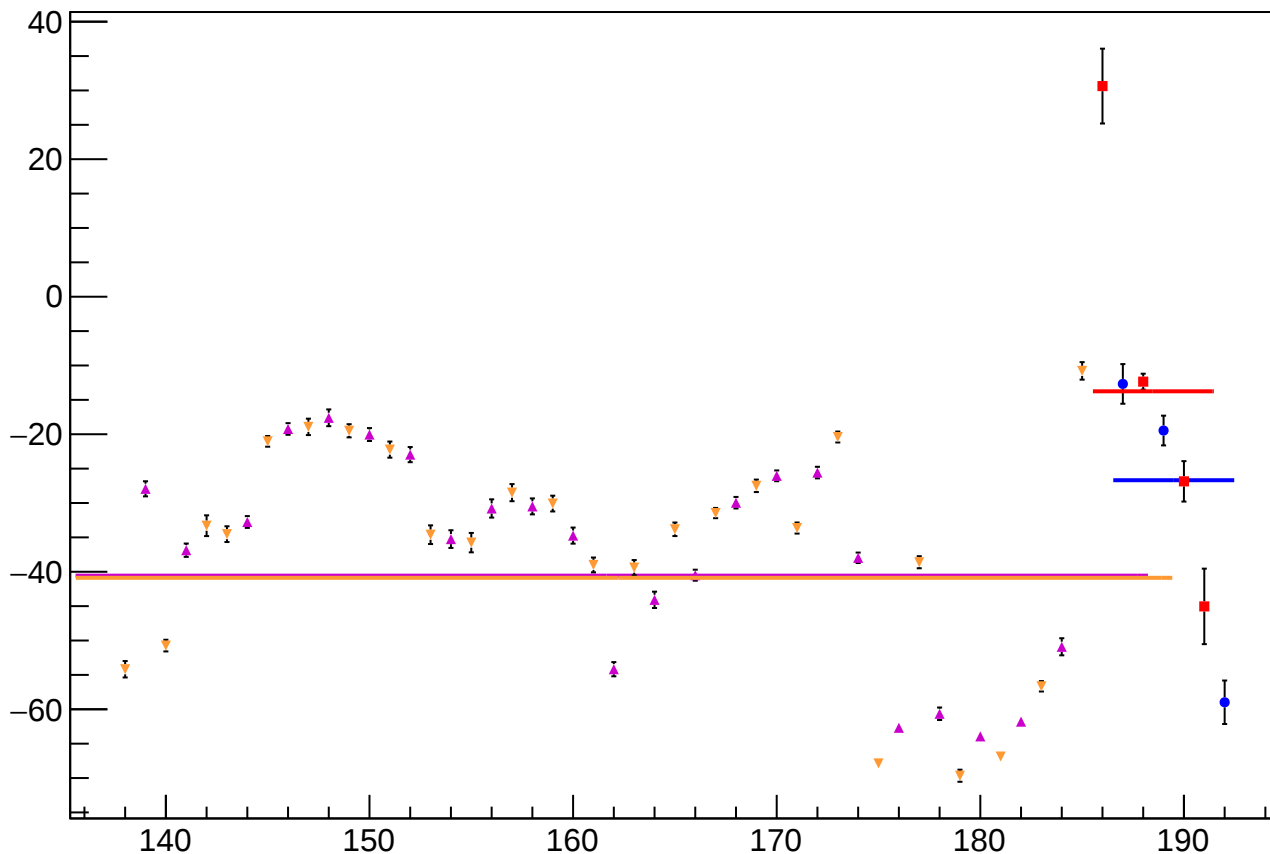
Right:  $-0.776 \pm 0.017$   $\chi^2/\text{NDF}$ : 2668.6/42

In:  $-0.307 \pm 0.009$   $\chi^2/\text{NDF}$ : 4333.9/42

Out:  $-0.352 \pm 0.008$   $\chi^2/\text{NDF}$ : 3934.1/47

All:  $-0.330 \pm 0.006$   $\chi^2/\text{NDF}$ : 8281.8/90

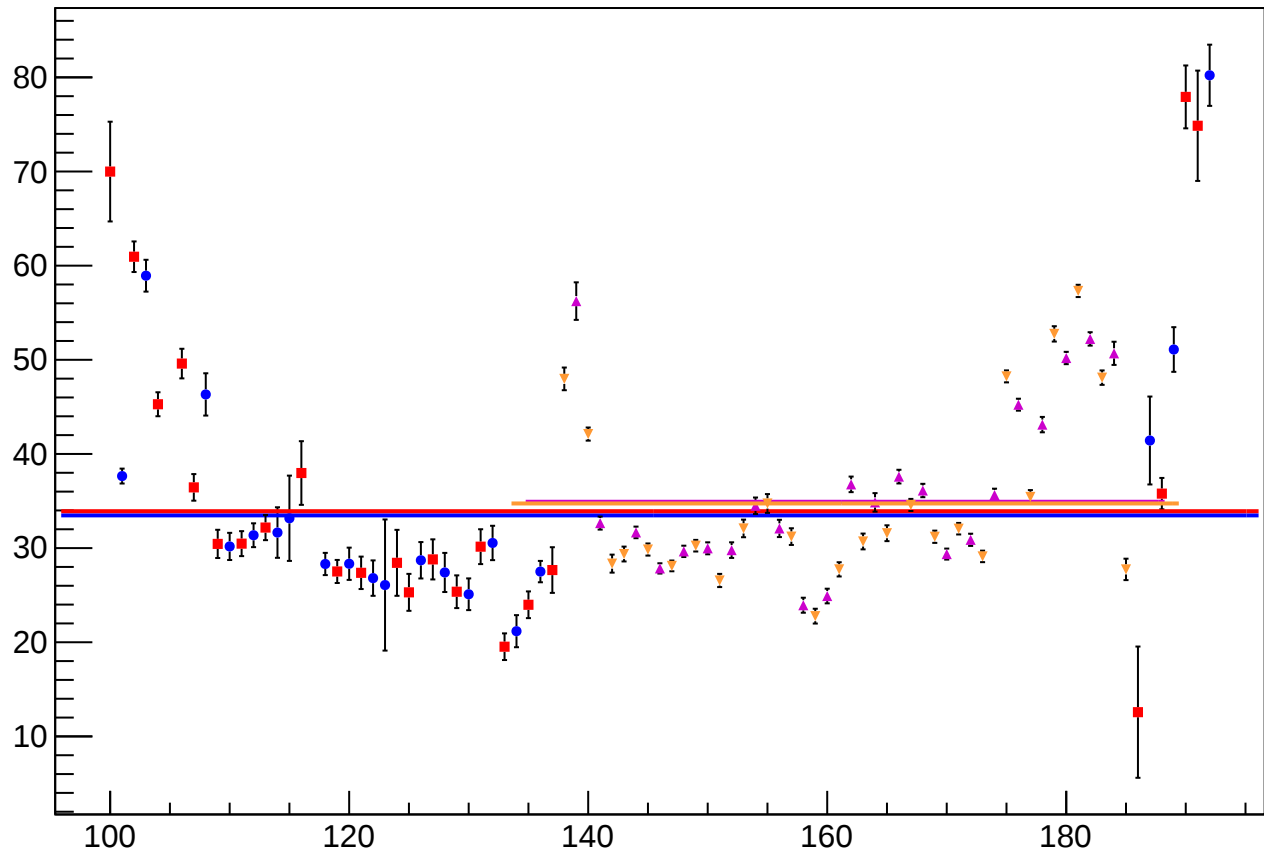
reg\_asym\_sam\_48\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-26.687 \pm 1.518$   $\chi^2/\text{NDF}$ : 139.1/2  
 Left Out:  $-40.880 \pm 0.186$   $\chi^2/\text{NDF}$ : 9123.2/24  
 Right Out:  $-13.757 \pm 1.036$   $\chi^2/\text{NDF}$ : 120.3/3  
 Left In:  $-40.567 \pm 0.190$   $\chi^2/\text{NDF}$ : 6954.7/22

Left:  $-40.726 \pm 0.133$   $\chi^2/\text{NDF}$ : 16079.4/47  
 Right:  $-17.865 \pm 0.855$   $\chi^2/\text{NDF}$ : 308.9/6  
 In:  $-40.353 \pm 0.188$   $\chi^2/\text{NDF}$ : 7176.2/25  
 Out:  $-40.031 \pm 0.183$   $\chi^2/\text{NDF}$ : 9908.0/28  
 All:  $-40.187 \pm 0.131$   $\chi^2/\text{NDF}$ : 17085.6/54

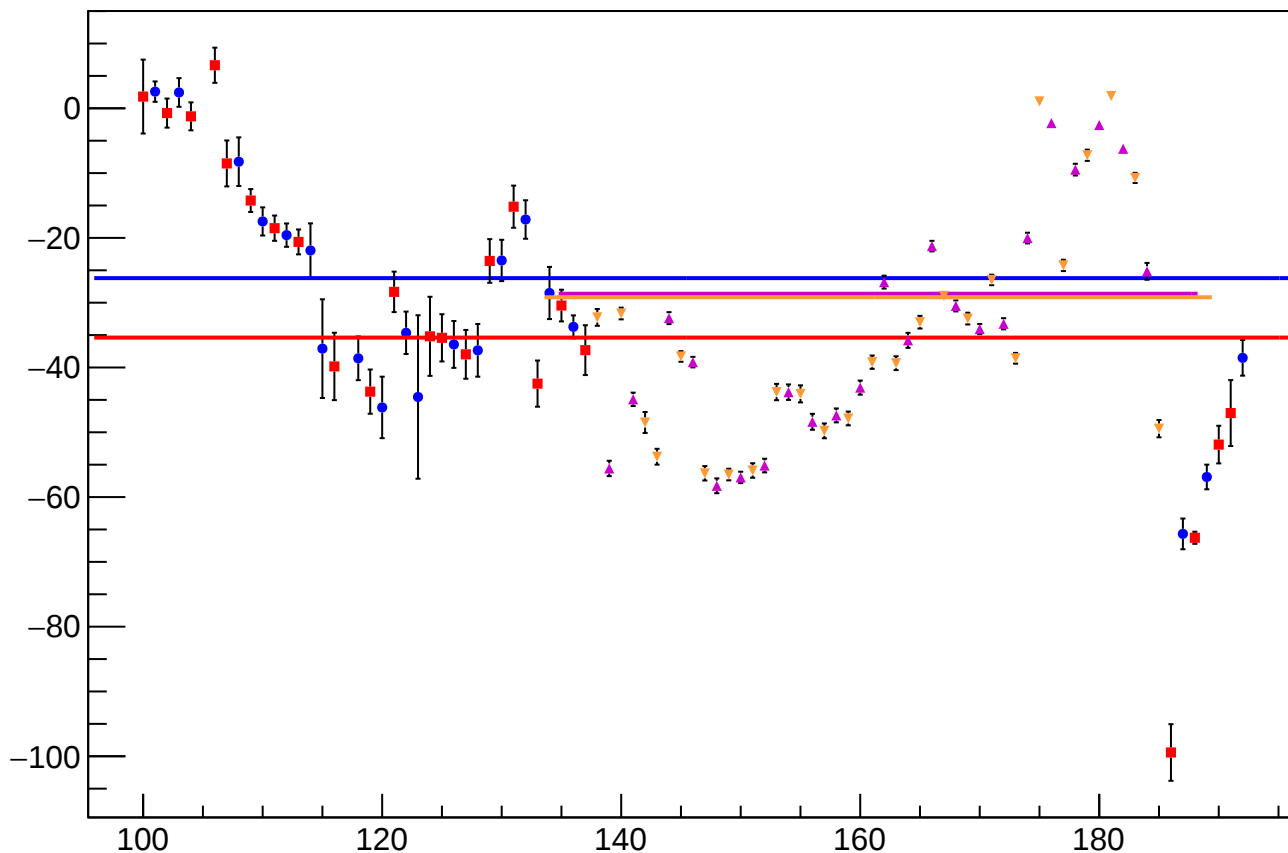
reg\_asym\_sam\_48\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 33.476+/-0.368  $\chi^2$ /NDF: 724.3/19  
 Left Out: 34.741+/-0.147  $\chi^2$ /NDF:3693.2/24  
 Right Out: 33.919+/-0.366  $\chi^2$ /NDF: 1010.5/22  
 Left In: 34.922+/-0.152  $\chi^2$ /NDF:2672.9/22

Left: 34.829+/-0.106  $\chi^2$ /NDF: 6366.8/47  
 Right: 33.699+/-0.260  $\chi^2$ /NDF: 1735.6/42  
 In: 34.712+/-0.140  $\chi^2$ /NDF:3410.4/42  
 Out: 34.626+/-0.137  $\chi^2$ /NDF:4708.0/47  
 All: 34.668+/-0.098  $\chi^2$ /NDF: 8118.6/90

reg\_asym\_sam\_48\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-26.208 \pm 0.595$   $\chi^2/\text{NDF}$ : 1199.9/19

Left Out:  $-29.163 \pm 0.187$   $\chi^2/\text{NDF}$ : 10126.0/24

Right Out:  $-35.386 \pm 0.516$   $\chi^2/\text{NDF}$ : 2523.4/22

Left In:  $-28.616 \pm 0.190$   $\chi^2/\text{NDF}$ : 9040.9/22

Left:  $-28.894 \pm 0.133$   $\chi^2/\text{NDF}$ : 19171.1/47

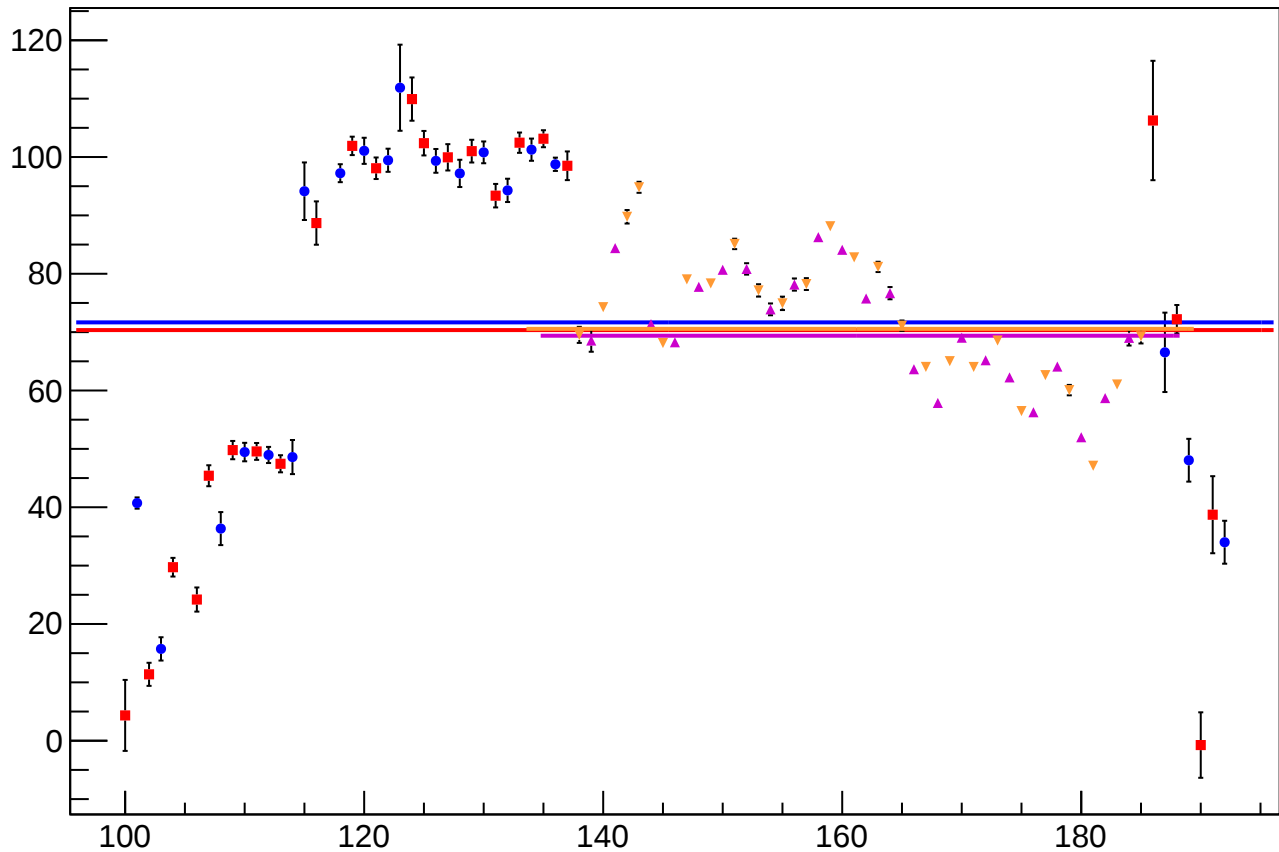
Right:  $-31.451 \pm 0.390$   $\chi^2/\text{NDF}$ : 3859.1/42

In:  $-28.394 \pm 0.181$   $\chi^2/\text{NDF}$ : 10255.6/42

Out:  $-29.887 \pm 0.176$   $\chi^2/\text{NDF}$ : 12778.2/47

All:  $-29.161 \pm 0.126$   $\chi^2/\text{NDF}$ : 23068.8/90

reg\_asym\_sam\_48\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 71.672 $\pm$ 0.422  $\chi^2$ /NDF: 4823.2/19

Left Out: 70.563 $\pm$ 0.166  $\chi^2$ /NDF:4589.1/24

Right Out: 70.352 $\pm$ 0.425  $\chi^2$ /NDF: 5692.1/22

Left In: 69.387 $\pm$ 0.170  $\chi^2$ /NDF:3321.8/22

Left: 69.989 $\pm$ 0.119  $\chi^2$ /NDF: 7935.4/47

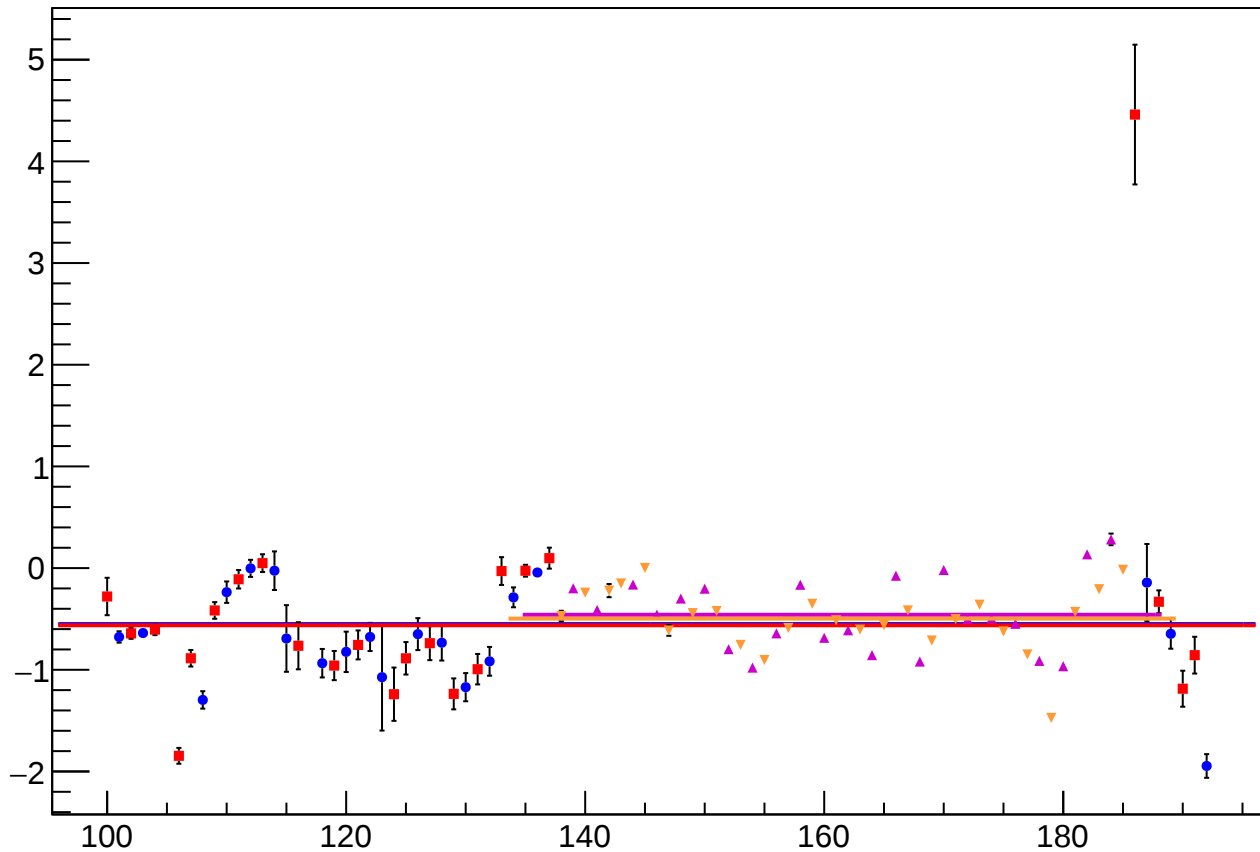
Right: 71.015 $\pm$ 0.299  $\chi^2$ /NDF: 10520.2/42

In: 69.706 $\pm$ 0.158  $\chi^2$ /NDF:8170.2/42

Out: 70.535 $\pm$ 0.155  $\chi^2$ /NDF:10281.5/47

All: 70.129 $\pm$ 0.111  $\chi^2$ /NDF: 18465.7/90

reg\_asym\_sam\_48\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.551 \pm 0.022$   $\chi^2/\text{NDF}$ : 453.1/19

Left Out:  $-0.497 \pm 0.008$   $\chi^2/\text{NDF}$ : 1449.3/24

Right Out:  $-0.562 \pm 0.021$   $\chi^2/\text{NDF}$ : 633.0/22

Left In:  $-0.459 \pm 0.008$   $\chi^2/\text{NDF}$ : 1958.4/22

Left:  $-0.478 \pm 0.005$   $\chi^2/\text{NDF}$ : 3419.9/47

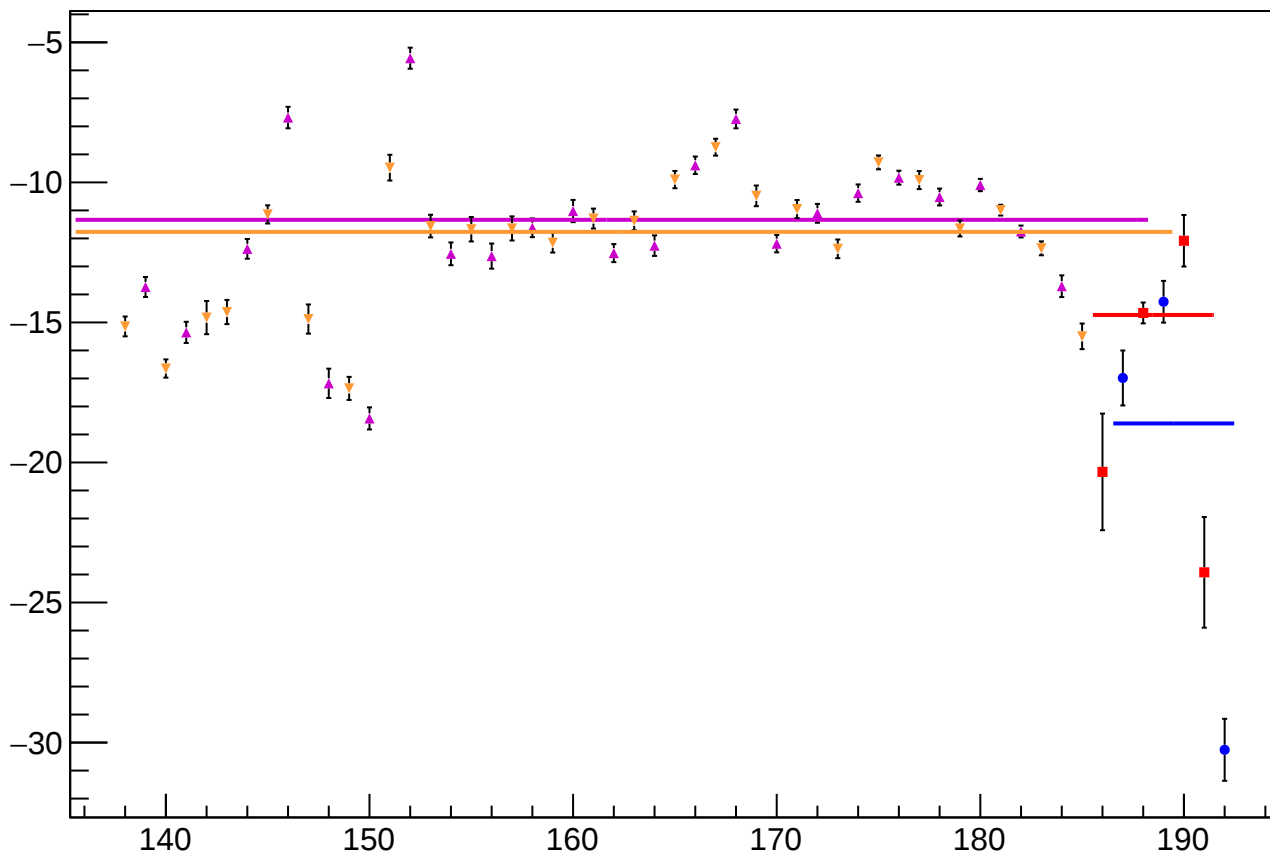
Right:  $-0.557 \pm 0.015$   $\chi^2/\text{NDF}$ : 1086.2/42

In:  $-0.469 \pm 0.007$   $\chi^2/\text{NDF}$ : 2427.5/42

Out:  $-0.504 \pm 0.007$   $\chi^2/\text{NDF}$ : 2091.1/47

All:  $-0.487 \pm 0.005$   $\chi^2/\text{NDF}$ : 4530.5/90

reg\_asym\_sam\_13\_57\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-18.607 \pm 0.523$   $\chi^2/\text{NDF}: 147.6/2$   
 Left Out:  $-11.767 \pm 0.067$   $\chi^2/\text{NDF}: 1020.8/24$   
 Right Out:  $-14.733 \pm 0.335$   $\chi^2/\text{NDF}: 37.2/3$   
 Left In:  $-11.336 \pm 0.068$   $\chi^2/\text{NDF}: 1269.3/22$

Left:  $-11.556 \pm 0.048$   $\chi^2/\text{NDF}: 2310.6/47$

Right:  $-15.862 \pm 0.282$   $\chi^2/\text{NDF}: 223.7/6$

In:  $-11.457 \pm 0.067$   $\chi^2/\text{NDF}: 1607.1/25$

Out:  $-11.880 \pm 0.065$   $\chi^2/\text{NDF}: 1133.2/28$

All:  $-11.675 \pm 0.047$   $\chi^2/\text{NDF}: 2760.6/54$

reg\_asym\_sam\_13\_57\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-34.480 \pm 0.148$   $\chi^2/\text{NDF}$ : 1533.8/19

Left Out:  $-30.212 \pm 0.054$   $\chi^2/\text{NDF}$ : 734.0/24

Right Out:  $-34.397 \pm 0.143$   $\chi^2/\text{NDF}$ : 1730.3/22

Left In:  $-30.124 \pm 0.056$   $\chi^2/\text{NDF}$ : 1226.2/22

Left:  $-30.169 \pm 0.039$   $\chi^2/\text{NDF}$ : 1961.5/47

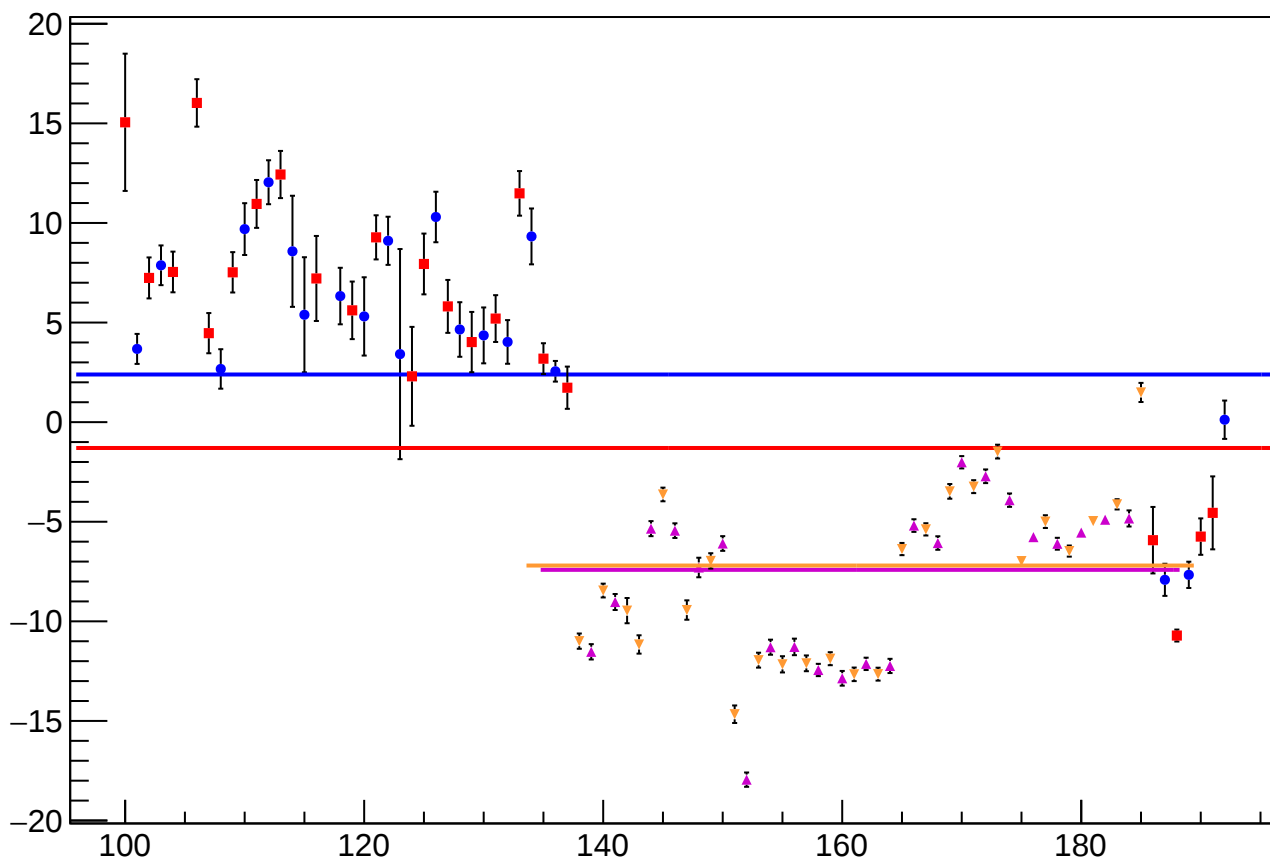
Right:  $-34.437 \pm 0.103$   $\chi^2/\text{NDF}$ : 3264.3/42

In:  $-30.664 \pm 0.052$   $\chi^2/\text{NDF}$ : 3523.9/42

Out:  $-30.729 \pm 0.050$   $\chi^2/\text{NDF}$ : 3210.3/47

All:  $-30.698 \pm 0.036$   $\chi^2/\text{NDF}$ : 6734.9/90

reg\_asym\_sam\_13\_57\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected

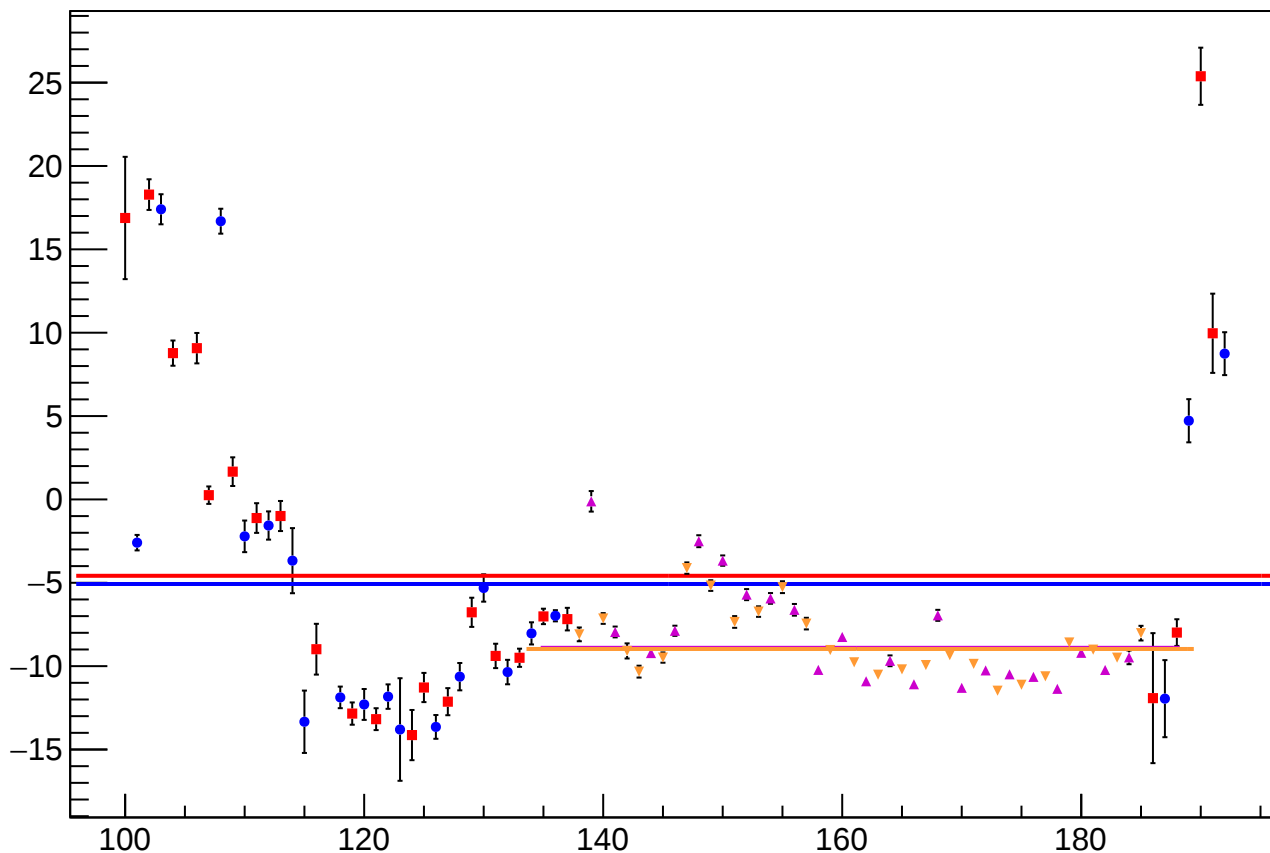


Right In:  $2.392 \pm 0.232$   $\chi^2/\text{NDF}: 659.7/19$   
 Left Out:  $-7.199 \pm 0.067$   $\chi^2/\text{NDF}: 3037.3/24$   
 Right Out:  $-1.297 \pm 0.195$   $\chi^2/\text{NDF}: 2154.4/22$   
 Left In:  $-7.415 \pm 0.068$   $\chi^2/\text{NDF}: 3123.3/22$

Left:  $-7.305 \pm 0.048$   $\chi^2/\text{NDF}: 6165.7/47$   
 Right:  $0.233 \pm 0.149$   $\chi^2/\text{NDF}: 2962.0/42$   
 In:  $-6.643 \pm 0.065$   $\chi^2/\text{NDF}: 5427.6/42$   
 Out:  $-6.580 \pm 0.063$   $\chi^2/\text{NDF}: 6008.1/47$

All:  $-6.611 \pm 0.045$   $\chi^2/\text{NDF}: 11436.2/90$

reg\_asym\_sam\_13\_57\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-5.073 \pm 0.168$   $\chi^2/\text{NDF}$ : 2283.3/19

Left Out:  $-8.970 \pm 0.060$   $\chi^2/\text{NDF}$ : 878.8/24

Right Out:  $-4.580 \pm 0.168$   $\chi^2/\text{NDF}$ : 2413.4/22

Left In:  $-8.900 \pm 0.062$   $\chi^2/\text{NDF}$ : 1533.9/22

Left:  $-8.936 \pm 0.043$   $\chi^2/\text{NDF}$ : 2413.4/47

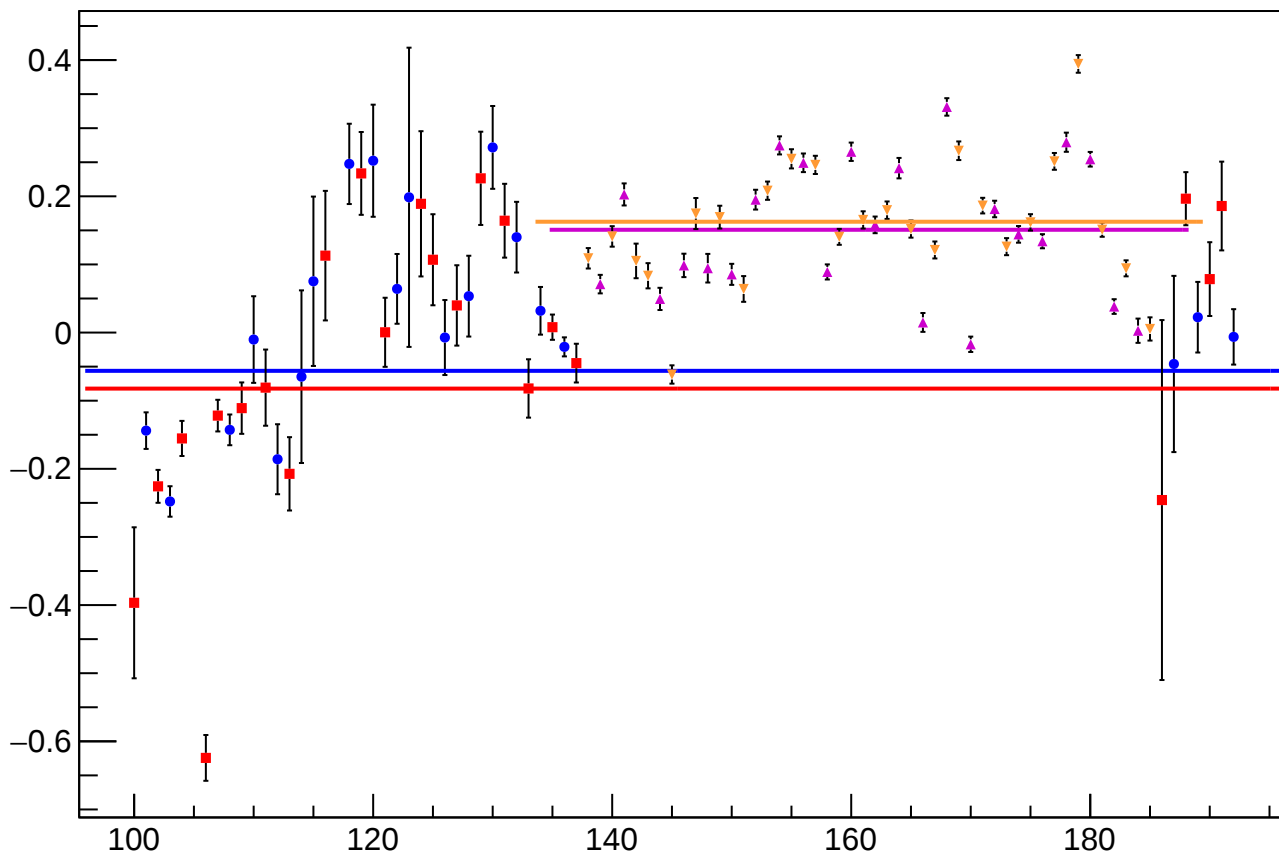
Right:  $-4.827 \pm 0.119$   $\chi^2/\text{NDF}$ : 4701.1/42

In:  $-8.445 \pm 0.058$   $\chi^2/\text{NDF}$ : 4276.2/42

Out:  $-8.470 \pm 0.057$   $\chi^2/\text{NDF}$ : 3898.3/47

All:  $-8.458 \pm 0.040$   $\chi^2/\text{NDF}$ : 8174.6/90

reg\_asym\_sam\_13\_57\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.056 \pm 0.008$   $\chi^2/\text{NDF}$ : 218.6/19

Left Out:  $0.163 \pm 0.003$   $\chi^2/\text{NDF}$ : 1018.1/24

Right Out:  $-0.082 \pm 0.008$   $\chi^2/\text{NDF}$ : 516.7/22

Left In:  $0.151 \pm 0.003$   $\chi^2/\text{NDF}$ : 1286.5/22

Left:  $0.157 \pm 0.002$   $\chi^2/\text{NDF}$ : 2313.9/47

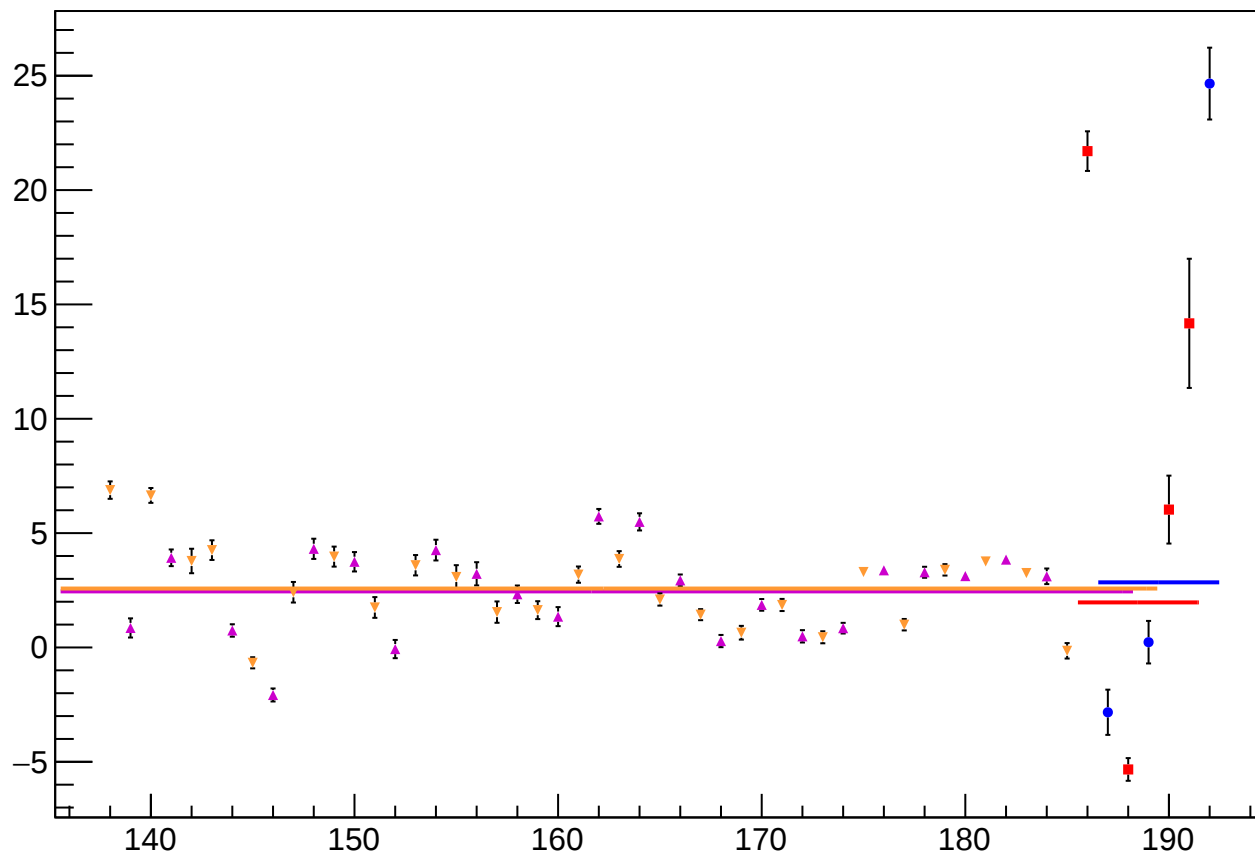
Right:  $-0.069 \pm 0.006$   $\chi^2/\text{NDF}$ : 740.5/42

In:  $0.129 \pm 0.003$   $\chi^2/\text{NDF}$ : 2088.3/42

Out:  $0.138 \pm 0.003$   $\chi^2/\text{NDF}$ : 2357.7/47

All:  $0.134 \pm 0.002$   $\chi^2/\text{NDF}$ : 4451.2/90

reg\_asym\_sam\_15\_37\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 2.848 $\pm$ 0.622  $\chi^2$ /NDF: 233.7/2

Left Out: 2.577 $\pm$ 0.058  $\chi^2$ /NDF:867.5/24

Right Out: 1.970 $\pm$ 0.409  $\chi^2$ /NDF: 761.3/3

Left In: 2.452 $\pm$ 0.059  $\chi^2$ /NDF:871.3/22

Left: 2.516 $\pm$ 0.042  $\chi^2$ /NDF: 1741.0/47

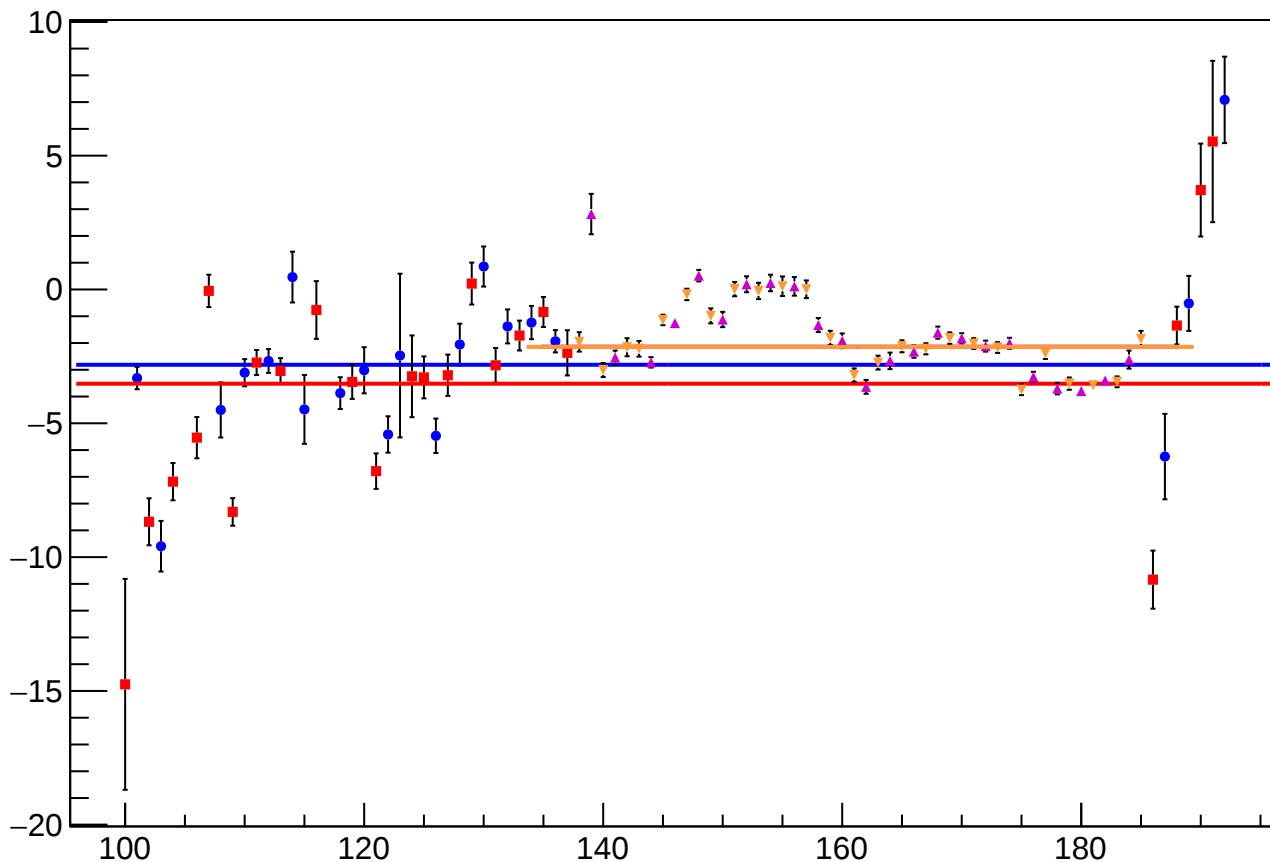
Right: 2.235 $\pm$ 0.342  $\chi^2$ /NDF: 996.4/6

In: 2.456 $\pm$ 0.059  $\chi^2$ /NDF:1105.4/25

Out: 2.565 $\pm$ 0.058  $\chi^2$ /NDF:1630.9/28

All: 2.511 $\pm$ 0.041  $\chi^2$ /NDF: 2738.1/54

reg\_asym\_sam\_15\_37\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-2.813 \pm 0.152$   $\chi^2/\text{NDF}: 192.6/19$

Left Out:  $-2.146 \pm 0.048$   $\chi^2/\text{NDF}: 573.4/24$

Right Out:  $-3.521 \pm 0.149$   $\chi^2/\text{NDF}: 372.4/22$

Left In:  $-2.136 \pm 0.048$   $\chi^2/\text{NDF}: 691.2/22$

Left:  $-2.141 \pm 0.034$   $\chi^2/\text{NDF}: 1264.6/47$

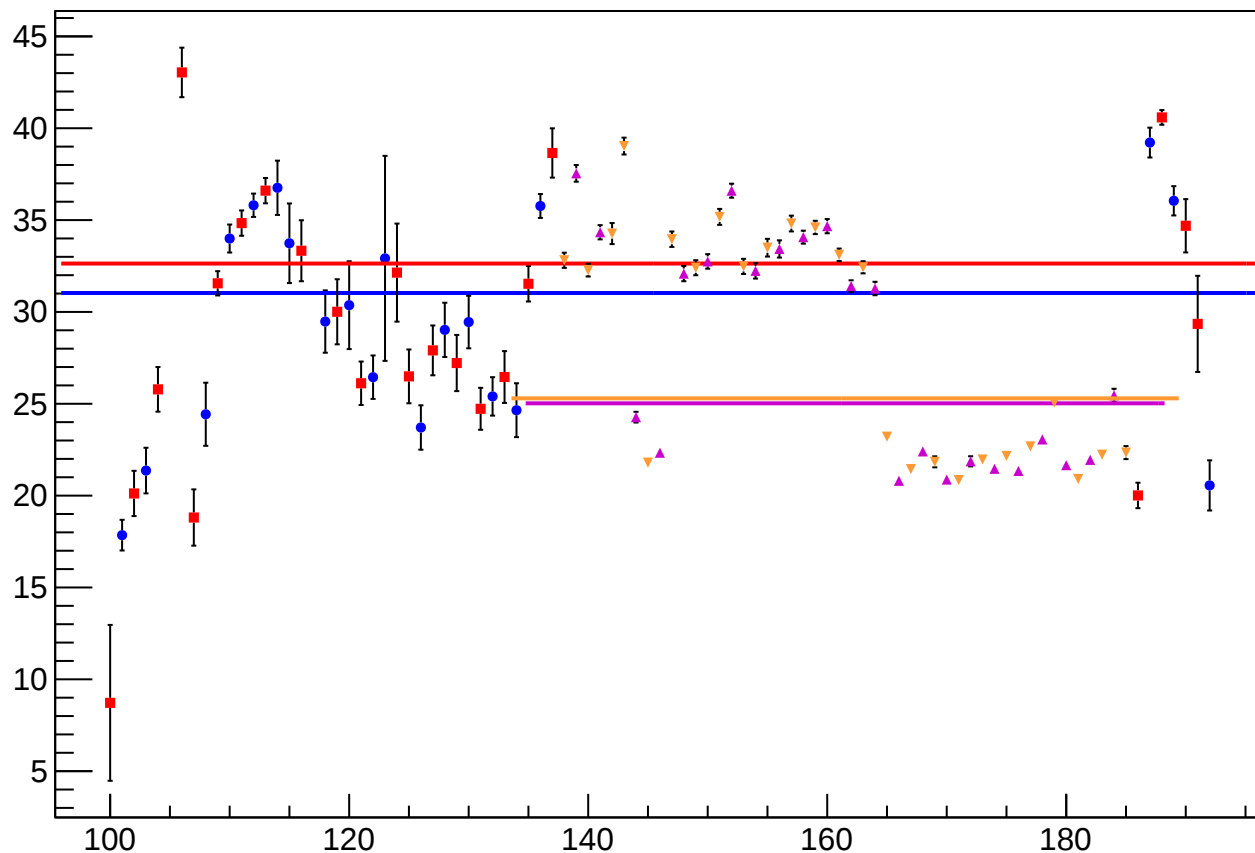
Right:  $-3.174 \pm 0.106$   $\chi^2/\text{NDF}: 576.0/42$

In:  $-2.199 \pm 0.046$   $\chi^2/\text{NDF}: 901.8/42$

Out:  $-2.273 \pm 0.045$   $\chi^2/\text{NDF}: 1023.0/47$

All:  $-2.237 \pm 0.032$   $\chi^2/\text{NDF}: 1926.2/90$

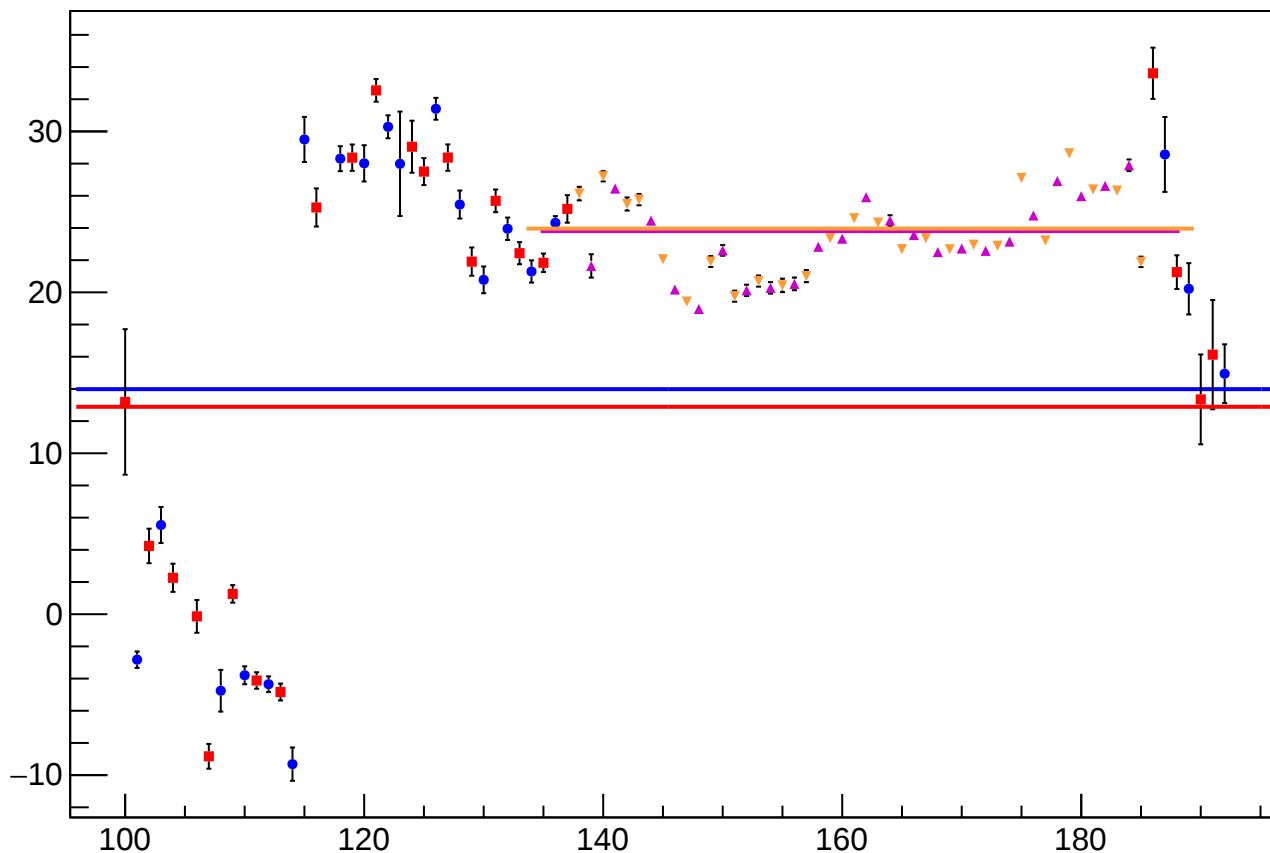
reg\_asym\_sam\_15\_37\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $31.030 \pm 0.239$   $\chi^2/\text{NDF}: 769.7/19$   
 Left Out:  $25.296 \pm 0.059$   $\chi^2/\text{NDF}: 8272.3/24$   
 Right Out:  $32.635 \pm 0.205$   $\chi^2/\text{NDF}: 1248.0/22$   
 Left In:  $25.025 \pm 0.060$   $\chi^2/\text{NDF}: 7610.5/22$

Left:  $25.162 \pm 0.042$   $\chi^2/\text{NDF}: 15893.3/47$   
 Right:  $31.951 \pm 0.156$   $\chi^2/\text{NDF}: 2043.7/42$   
 In:  $25.378 \pm 0.058$   $\chi^2/\text{NDF}: 8976.7/42$   
 Out:  $25.852 \pm 0.057$   $\chi^2/\text{NDF}: 10699.7/47$   
 All:  $25.620 \pm 0.040$   $\chi^2/\text{NDF}: 19710.7/90$

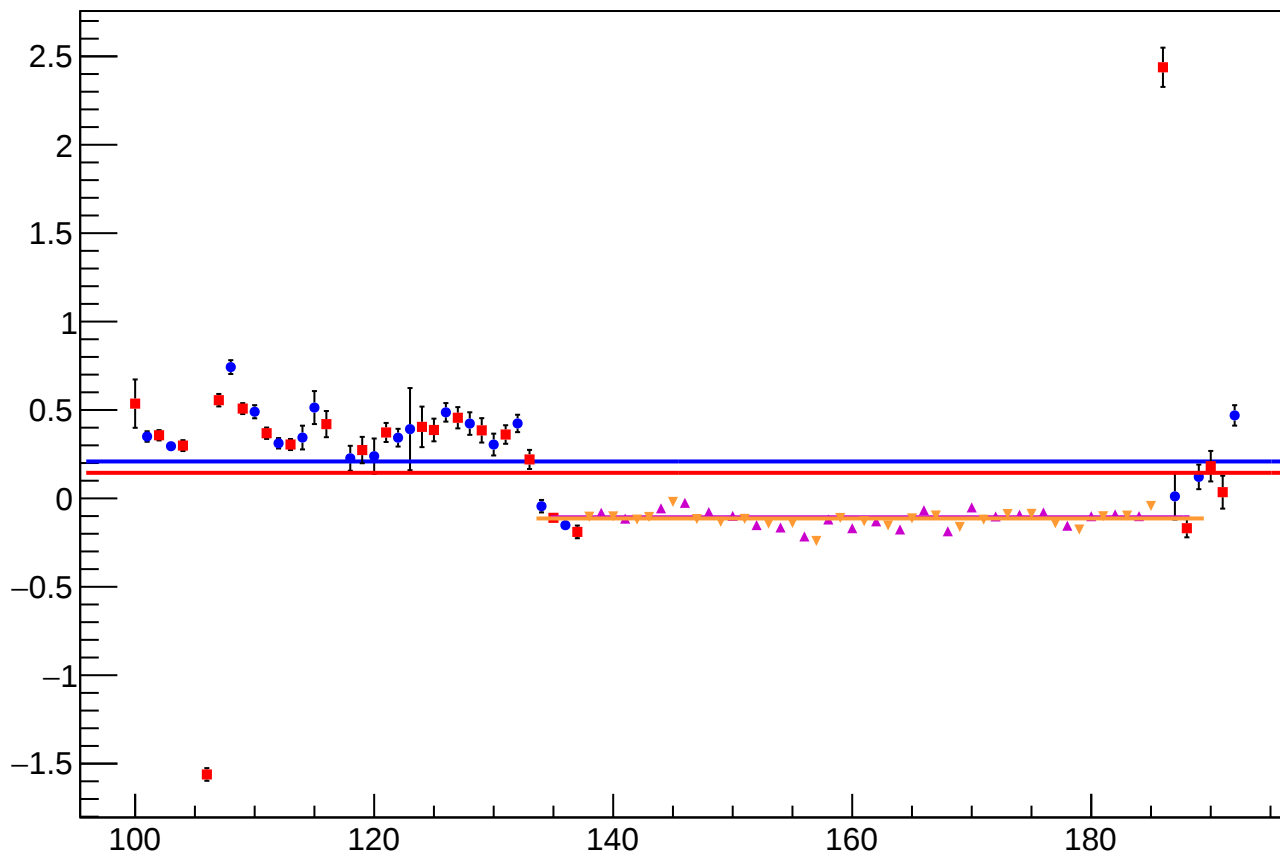
reg\_asym\_sam\_15\_37\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 13.985 $\pm$ 0.171  $\chi^2$ /NDF: 7330.5/19  
 Left Out: 23.962 $\pm$ 0.053  $\chi^2$ /NDF:1922.4/24  
 Right Out: 12.889 $\pm$ 0.170  $\chi^2$ /NDF: 7195.2/22  
 Left In: 23.805 $\pm$ 0.054  $\chi^2$ /NDF:1761.3/22

Left: 23.885 $\pm$ 0.038  $\chi^2$ /NDF: 3688.0/47  
 Right: 13.434 $\pm$ 0.121  $\chi^2$ /NDF: 14546.4/42  
 In: 22.911 $\pm$ 0.052  $\chi^2$ /NDF:12097.4/42  
 Out: 22.977 $\pm$ 0.051  $\chi^2$ /NDF:12977.8/47  
 All: 22.945 $\pm$ 0.036  $\chi^2$ /NDF: 25076.0/90

reg\_asym\_sam\_15\_37\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $0.209 \pm 0.009$   $\chi^2/\text{NDF}: 870.8/19$

Left Out:  $-0.113 \pm 0.002$   $\chi^2/\text{NDF}: 291.0/24$

Right Out:  $0.145 \pm 0.009$   $\chi^2/\text{NDF}: 3479.7/22$

Left In:  $-0.107 \pm 0.002$   $\chi^2/\text{NDF}: 321.8/22$

Left:  $-0.110 \pm 0.002$   $\chi^2/\text{NDF}: 616.6/47$

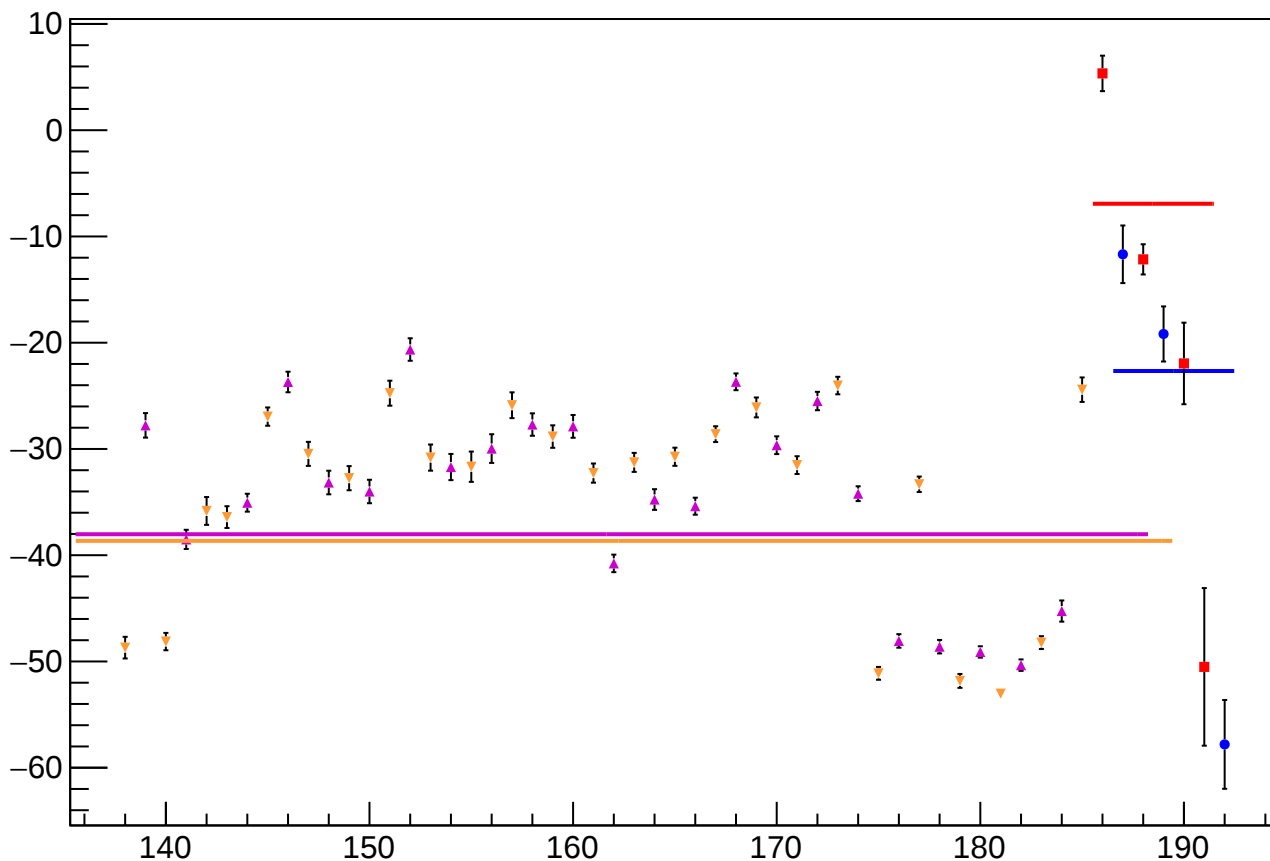
Right:  $0.176 \pm 0.006$   $\chi^2/\text{NDF}: 4375.8/42$

In:  $-0.085 \pm 0.002$   $\chi^2/\text{NDF}: 2299.5/42$

Out:  $-0.096 \pm 0.002$   $\chi^2/\text{NDF}: 4544.8/47$

All:  $-0.091 \pm 0.002$   $\chi^2/\text{NDF}: 6854.2/90$

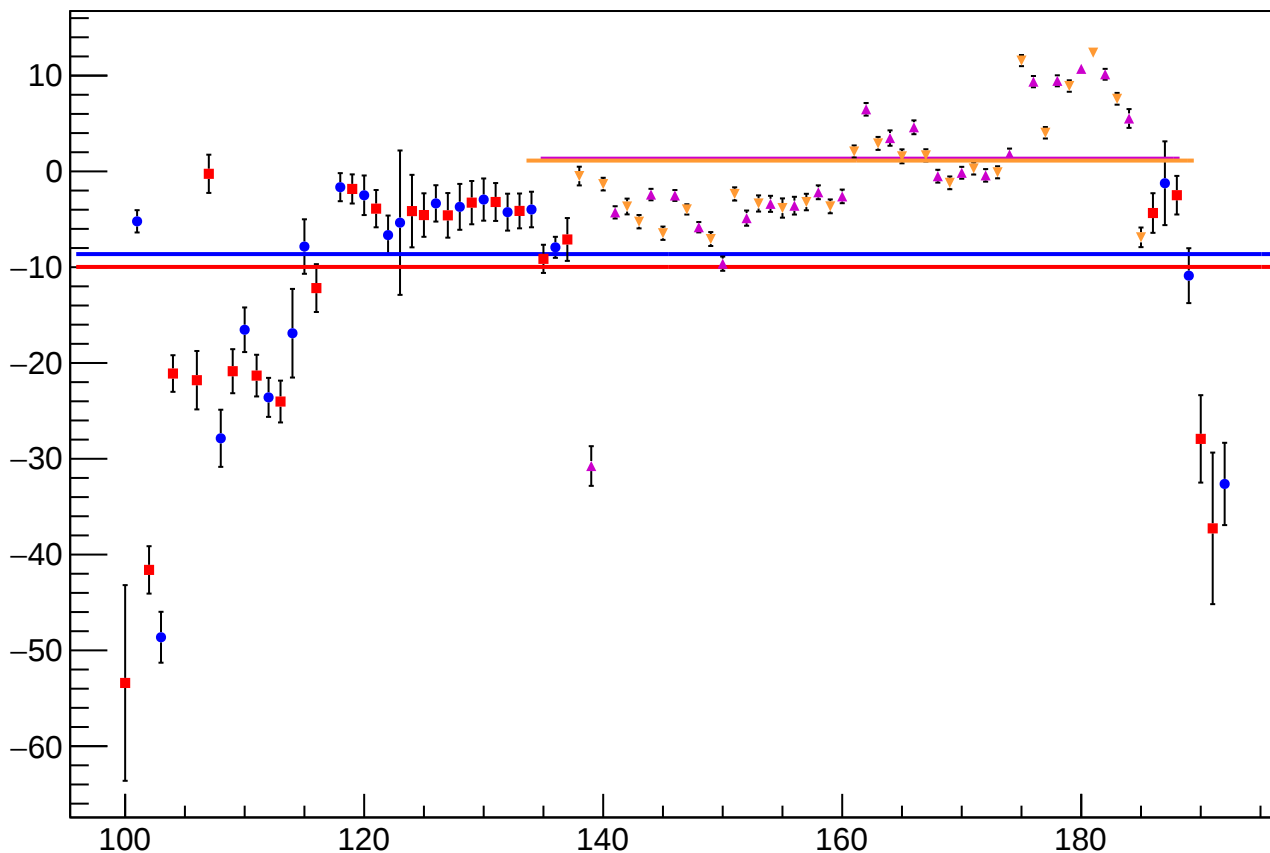
reg\_asym\_sam\_24\_68\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-22.662 \pm 1.710$   $\chi^2/\text{NDF}$ : 89.0/2  
 Left Out:  $-38.650 \pm 0.169$   $\chi^2/\text{NDF}$ : 4077.2/24  
 Right Out:  $-6.922 \pm 1.031$   $\chi^2/\text{NDF}$ : 117.5/3  
 Left In:  $-38.027 \pm 0.173$   $\chi^2/\text{NDF}$ : 3091.9/22

Left:  $-38.346 \pm 0.121$   $\chi^2/\text{NDF}$ : 7175.7/47  
 Right:  $-11.121 \pm 0.883$   $\chi^2/\text{NDF}$ : 268.6/6  
 In:  $-37.871 \pm 0.172$   $\chi^2/\text{NDF}$ : 3260.8/25  
 Out:  $-37.819 \pm 0.167$   $\chi^2/\text{NDF}$ : 5116.3/28  
 All:  $-37.844 \pm 0.120$   $\chi^2/\text{NDF}$ : 8377.1/54

reg\_asym\_sam\_24\_68\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-8.632 \pm 0.455$   $\chi^2/\text{NDF}$ : 443.5/19

Left Out:  $1.130 \pm 0.136$   $\chi^2/\text{NDF}$ : 1799.3/24

Right Out:  $-9.973 \pm 0.462$   $\chi^2/\text{NDF}$ : 479.2/22

Left In:  $1.329 \pm 0.140$   $\chi^2/\text{NDF}$ : 2048.0/22

Left:  $1.227 \pm 0.097$   $\chi^2/\text{NDF}$ : 3848.4/47

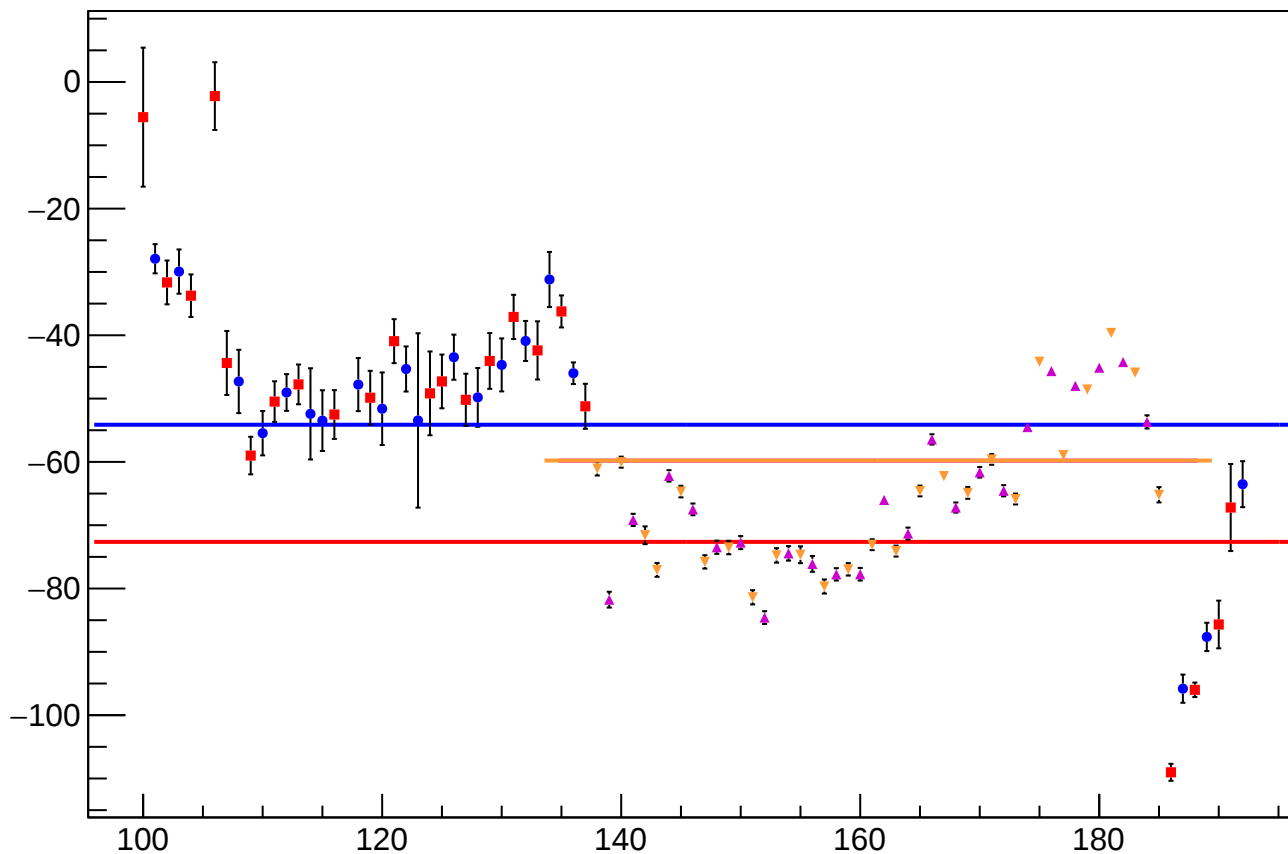
Right:  $-9.292 \pm 0.324$   $\chi^2/\text{NDF}$ : 927.0/42

In:  $0.471 \pm 0.134$   $\chi^2/\text{NDF}$ : 2928.7/42

Out:  $0.245 \pm 0.130$   $\chi^2/\text{NDF}$ : 2809.6/47

All:  $0.355 \pm 0.093$   $\chi^2/\text{NDF}$ : 5739.8/90

reg\_asym\_sam\_24\_68\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-54.131 \pm 0.726$   $\chi^2/\text{NDF}$ : 855.1/19

Left Out:  $-59.789 \pm 0.170$   $\chi^2/\text{NDF}$ : 5837.7/24

Right Out:  $-72.631 \pm 0.604$   $\chi^2/\text{NDF}$ : 2465.3/22

Left In:  $-59.802 \pm 0.173$   $\chi^2/\text{NDF}$ : 5217.5/22

Left:  $-59.795 \pm 0.121$   $\chi^2/\text{NDF}$ : 11055.3/47

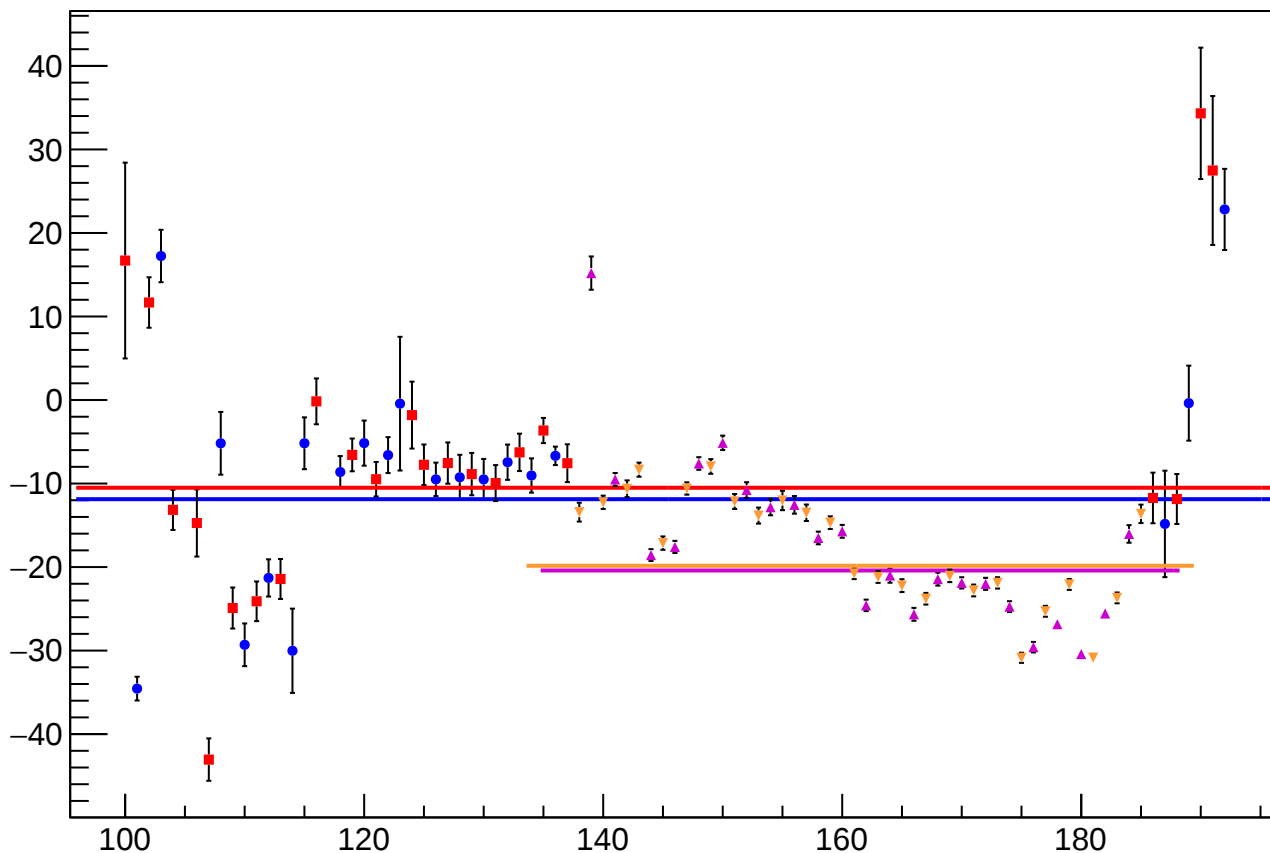
Right:  $-65.054 \pm 0.464$   $\chi^2/\text{NDF}$ : 3704.2/42

In:  $-59.496 \pm 0.169$   $\chi^2/\text{NDF}$ : 6130.4/42

Out:  $-60.732 \pm 0.164$   $\chi^2/\text{NDF}$ : 8721.4/47

All:  $-60.132 \pm 0.117$   $\chi^2/\text{NDF}$ : 14879.5/90

reg\_asym\_sam\_24\_68\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-11.873 \pm 0.516$   $\chi^2/\text{NDF}$ : 532.3/19

Left Out:  $-19.847 \pm 0.153$   $\chi^2/\text{NDF}$ : 1931.3/24

Right Out:  $-10.503 \pm 0.534$   $\chi^2/\text{NDF}$ : 417.2/22

Left In:  $-20.410 \pm 0.157$   $\chi^2/\text{NDF}$ : 2302.0/22

Left:  $-20.122 \pm 0.109$   $\chi^2/\text{NDF}$ : 4239.8/47

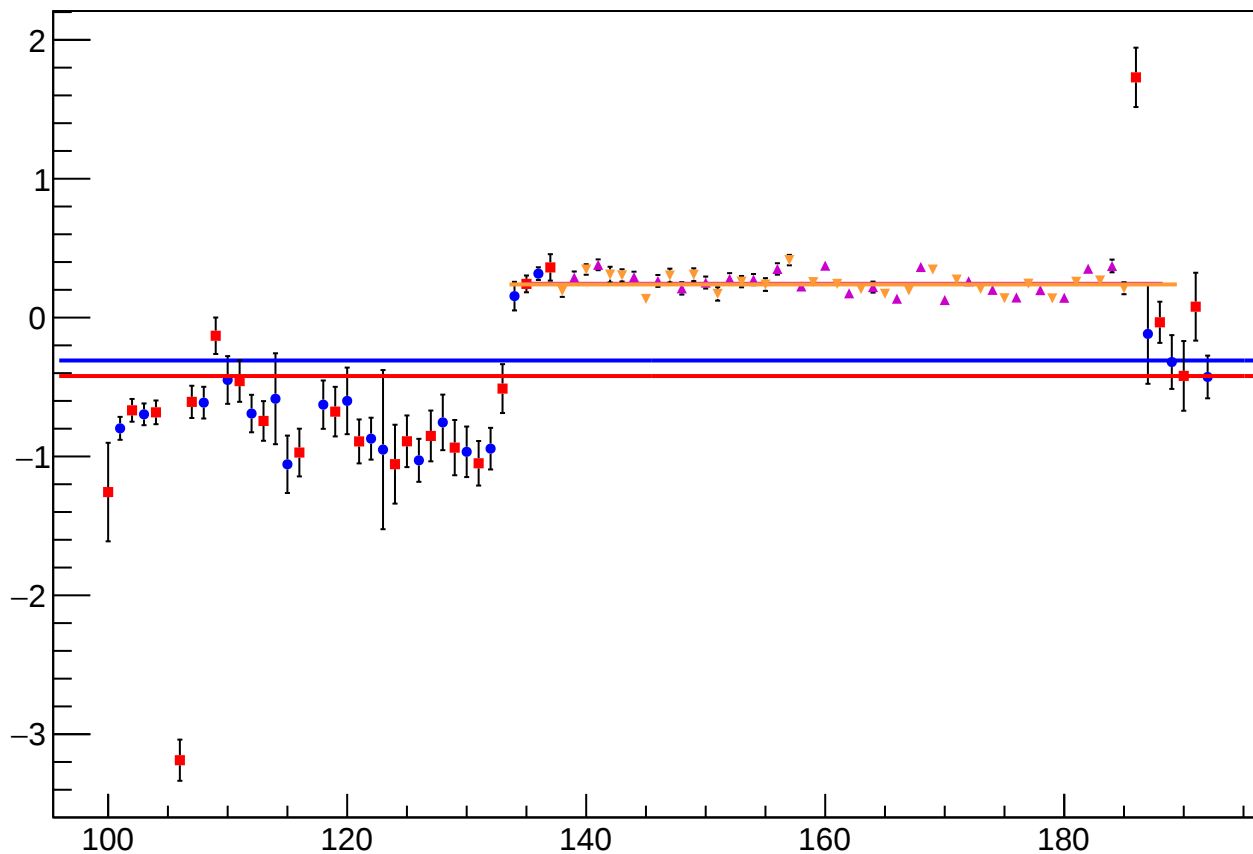
Right:  $-11.212 \pm 0.371$   $\chi^2/\text{NDF}$ : 952.9/42

In:  $-19.689 \pm 0.150$   $\chi^2/\text{NDF}$ : 3085.3/42

Out:  $-19.142 \pm 0.147$   $\chi^2/\text{NDF}$ : 2631.0/47

All:  $-19.410 \pm 0.105$   $\chi^2/\text{NDF}$ : 5723.1/90

reg\_asym\_sam\_24\_68\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.309 \pm 0.027$   $\chi^2/\text{NDF}$ : 372.6/19

Left Out:  $0.239 \pm 0.007$   $\chi^2/\text{NDF}$ : 93.0/24

Right Out:  $-0.421 \pm 0.028$   $\chi^2/\text{NDF}$ : 744.3/22

Left In:  $0.243 \pm 0.007$   $\chi^2/\text{NDF}$ : 138.3/22

Left:  $0.241 \pm 0.005$   $\chi^2/\text{NDF}$ : 231.5/47

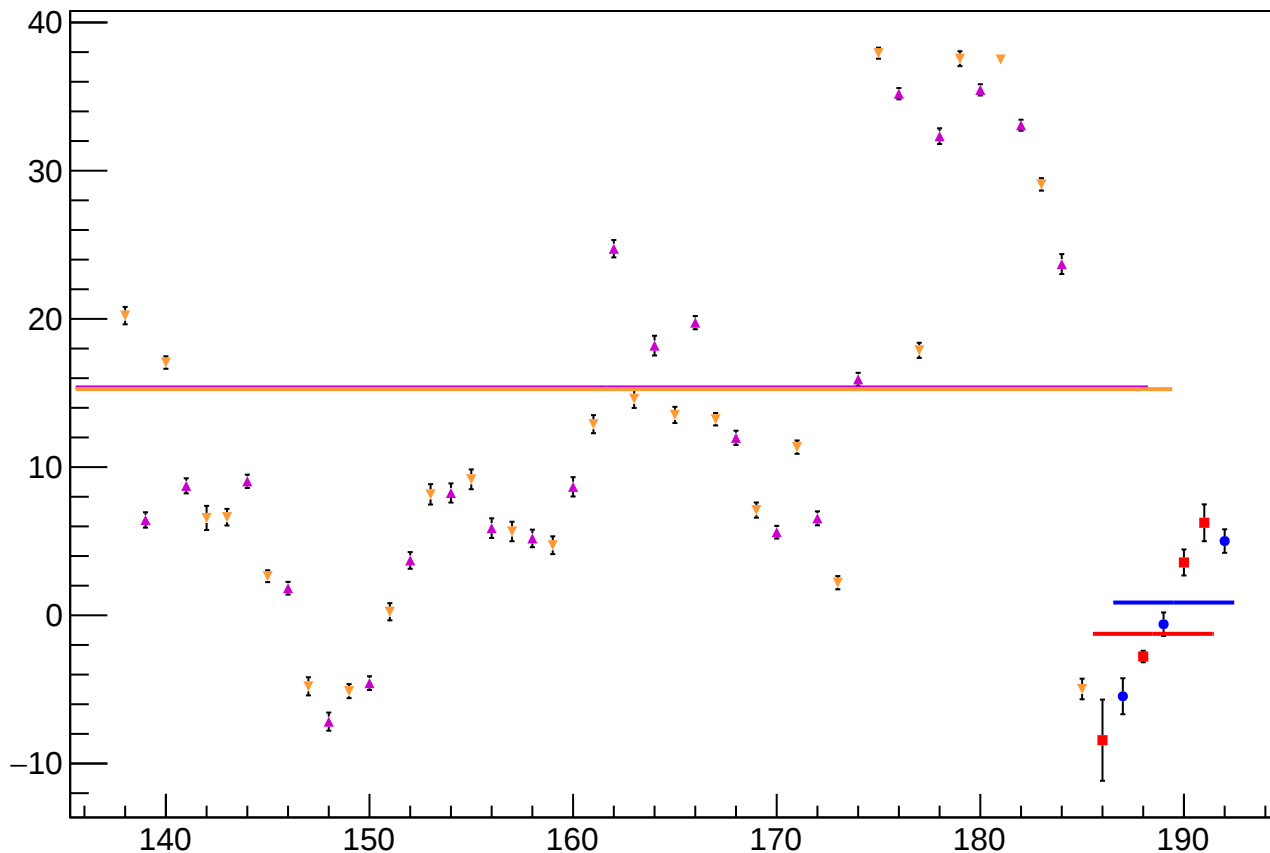
Right:  $-0.363 \pm 0.019$   $\chi^2/\text{NDF}$ : 1125.4/42

In:  $0.206 \pm 0.007$   $\chi^2/\text{NDF}$ : 906.5/42

Out:  $0.198 \pm 0.007$   $\chi^2/\text{NDF}$ : 1376.9/47

All:  $0.202 \pm 0.005$   $\chi^2/\text{NDF}$ : 2284.1/90

reg\_asym\_sam\_26\_48\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $0.862 \pm 0.510$   $\chi^2/\text{NDF}: 57.9/2$

Left Out:  $15.263 \pm 0.100$   $\chi^2/\text{NDF}: 19175.2/24$

Right Out:  $-1.248 \pm 0.339$   $\chi^2/\text{NDF}: 88.7/3$

Left In:  $15.377 \pm 0.103$   $\chi^2/\text{NDF}: 16268.9/22$

Left:  $15.318 \pm 0.072$   $\chi^2/\text{NDF}: 35444.7/47$

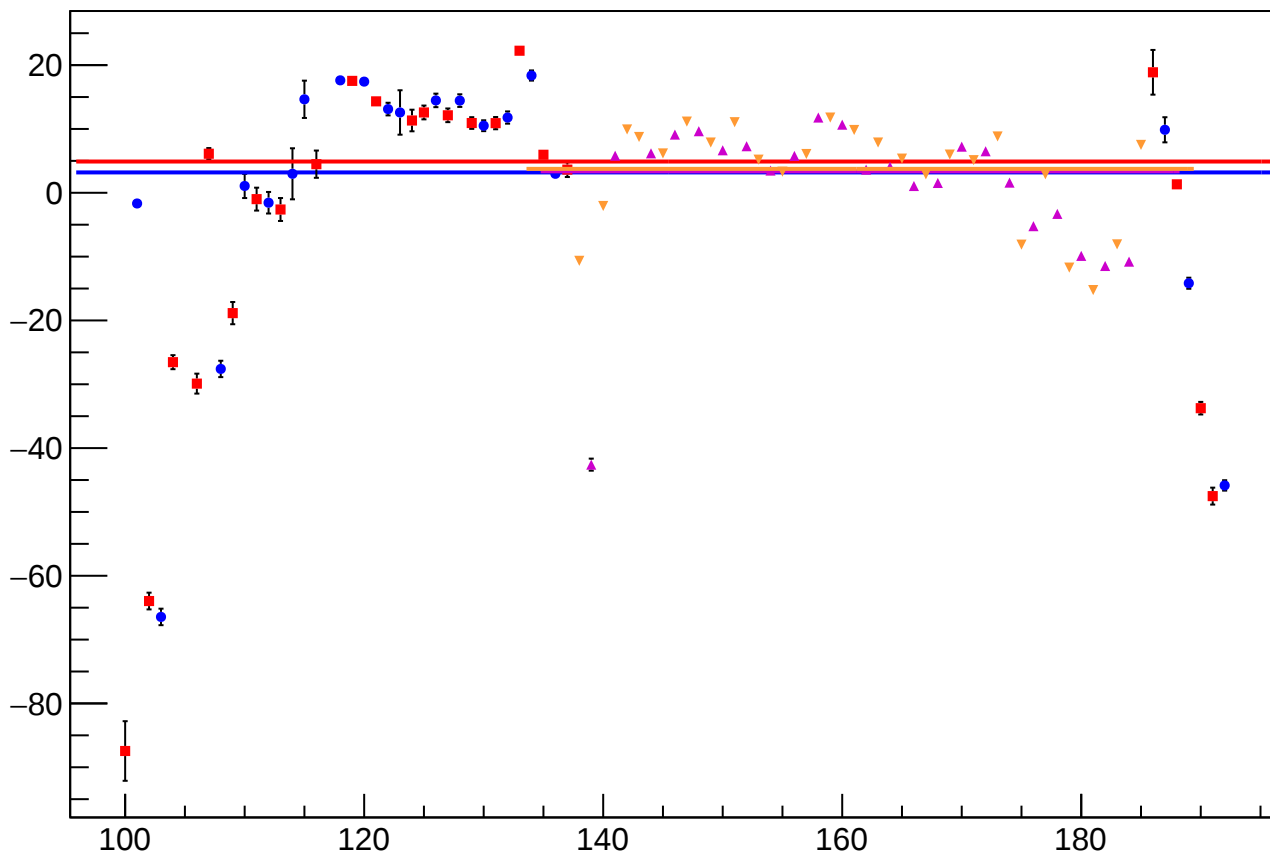
Right:  $-0.600 \pm 0.282$   $\chi^2/\text{NDF}: 158.5/6$

In:  $14.810 \pm 0.101$   $\chi^2/\text{NDF}: 17106.4/25$

Out:  $13.931 \pm 0.096$   $\chi^2/\text{NDF}: 21441.1/28$

All:  $14.351 \pm 0.070$   $\chi^2/\text{NDF}: 38587.2/54$

reg\_asym\_sam\_26\_48\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $3.190 \pm 0.204$   $\chi^2/\text{NDF}: 9777.5/19$

Left Out:  $3.746 \pm 0.079$   $\chi^2/\text{NDF}: 9247.4/24$

Right Out:  $4.898 \pm 0.194$   $\chi^2/\text{NDF}: 10164.0/22$

Left In:  $3.365 \pm 0.081$   $\chi^2/\text{NDF}: 8527.0/22$

Left:  $3.561 \pm 0.057$   $\chi^2/\text{NDF}: 17785.7/47$

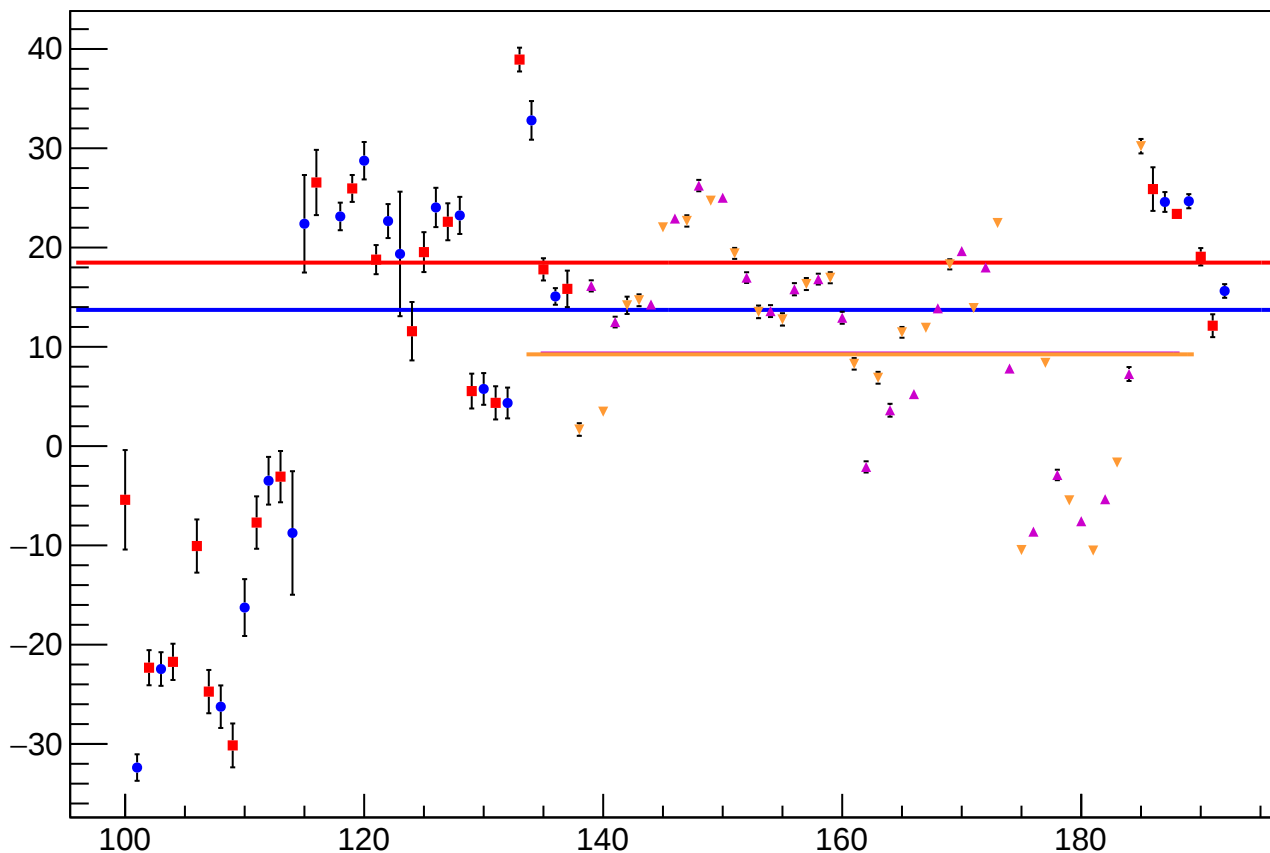
Right:  $4.087 \pm 0.140$   $\chi^2/\text{NDF}: 19978.4/42$

In:  $3.341 \pm 0.075$   $\chi^2/\text{NDF}: 18305.2/42$

Out:  $3.909 \pm 0.073$   $\chi^2/\text{NDF}: 19441.8/47$

All:  $3.635 \pm 0.052$   $\chi^2/\text{NDF}: 37776.3/90$

reg\_asym\_sam\_26\_48\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 13.720 $\pm$ 0.305  $\chi^2$ /NDF: 2886.7/19

Left Out: 9.242 $\pm$ 0.101  $\chi^2$ /NDF:13633.2/24

Right Out: 18.482 $\pm$ 0.235  $\chi^2$ /NDF: 2949.4/22

Left In: 9.328 $\pm$ 0.103  $\chi^2$ /NDF:11968.5/22

Left: 9.284 $\pm$ 0.072  $\chi^2$ /NDF: 25602.0/47

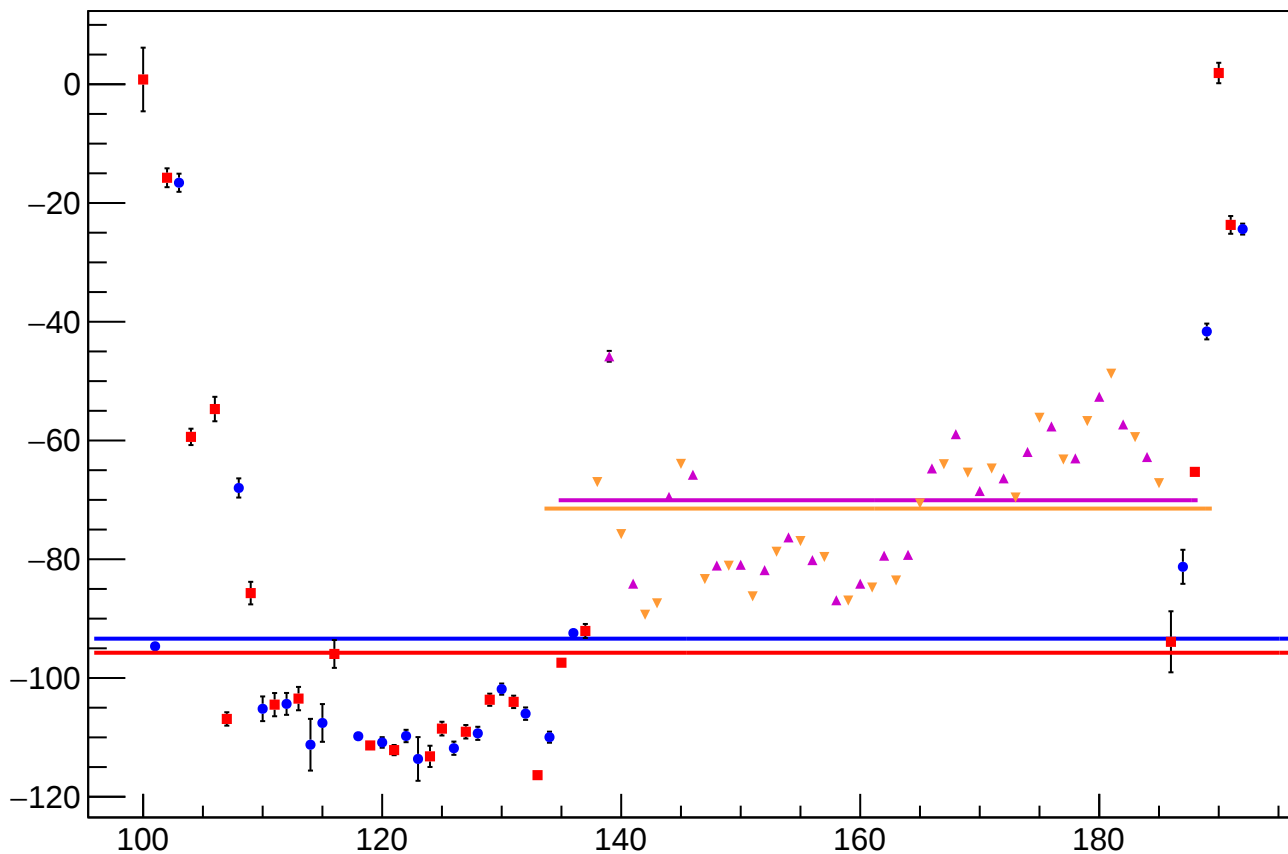
Right: 16.702 $\pm$ 0.186  $\chi^2$ /NDF: 5989.0/42

In: 9.775 $\pm$ 0.097  $\chi^2$ /NDF:15041.7/42

Out: 10.677 $\pm$ 0.093  $\chi^2$ /NDF:17884.3/47

All: 10.247 $\pm$ 0.067  $\chi^2$ /NDF: 32971.0/90

reg\_asym\_sam\_26\_48\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-93.374 \pm 0.237$   $\chi^2/\text{NDF}: 12397.9/19$

Left Out:  $-71.465 \pm 0.089$   $\chi^2/\text{NDF}: 16409.7/24$

Right Out:  $-95.746 \pm 0.231$   $\chi^2/\text{NDF}: 13726.2/22$

Left In:  $-70.061 \pm 0.092$   $\chi^2/\text{NDF}: 13058.5/22$

Left:  $-70.782 \pm 0.064$   $\chi^2/\text{NDF}: 29588.5/47$

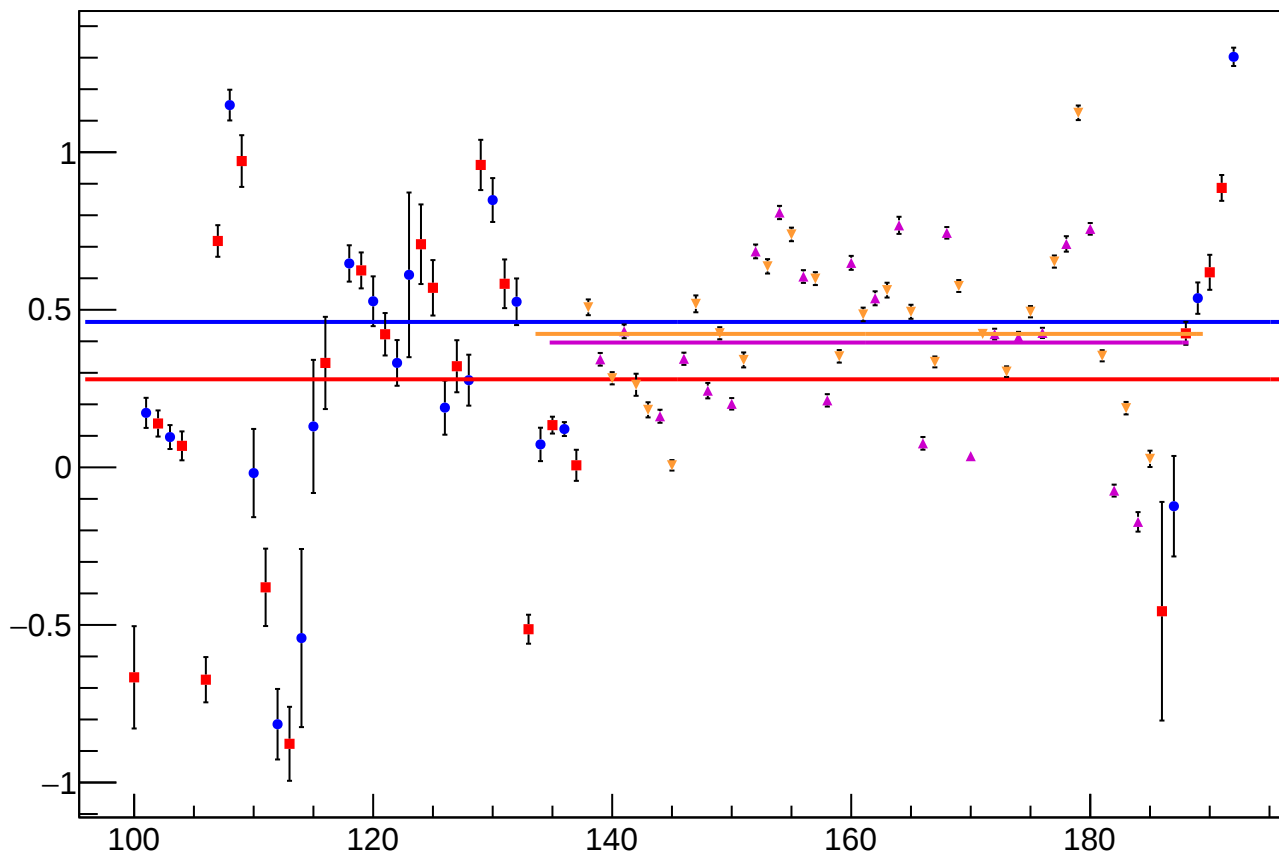
Right:  $-94.592 \pm 0.166$   $\chi^2/\text{NDF}: 26175.3/42$

In:  $-73.088 \pm 0.086$   $\chi^2/\text{NDF}: 33844.0/42$

Out:  $-74.618 \pm 0.083$   $\chi^2/\text{NDF}: 39739.5/47$

All:  $-73.874 \pm 0.060$   $\chi^2/\text{NDF}: 73747.7/90$

reg\_asym\_sam\_26\_48\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $0.461 \pm 0.012$   $\chi^2/\text{NDF}$ : 1688.4/19

Left Out:  $0.424 \pm 0.004$   $\chi^2/\text{NDF}$ : 2885.0/24

Right Out:  $0.279 \pm 0.012$   $\chi^2/\text{NDF}$ : 1303.6/22

Left In:  $0.396 \pm 0.004$   $\chi^2/\text{NDF}$ : 4051.5/22

Left:  $0.410 \pm 0.003$   $\chi^2/\text{NDF}$ : 6958.5/47

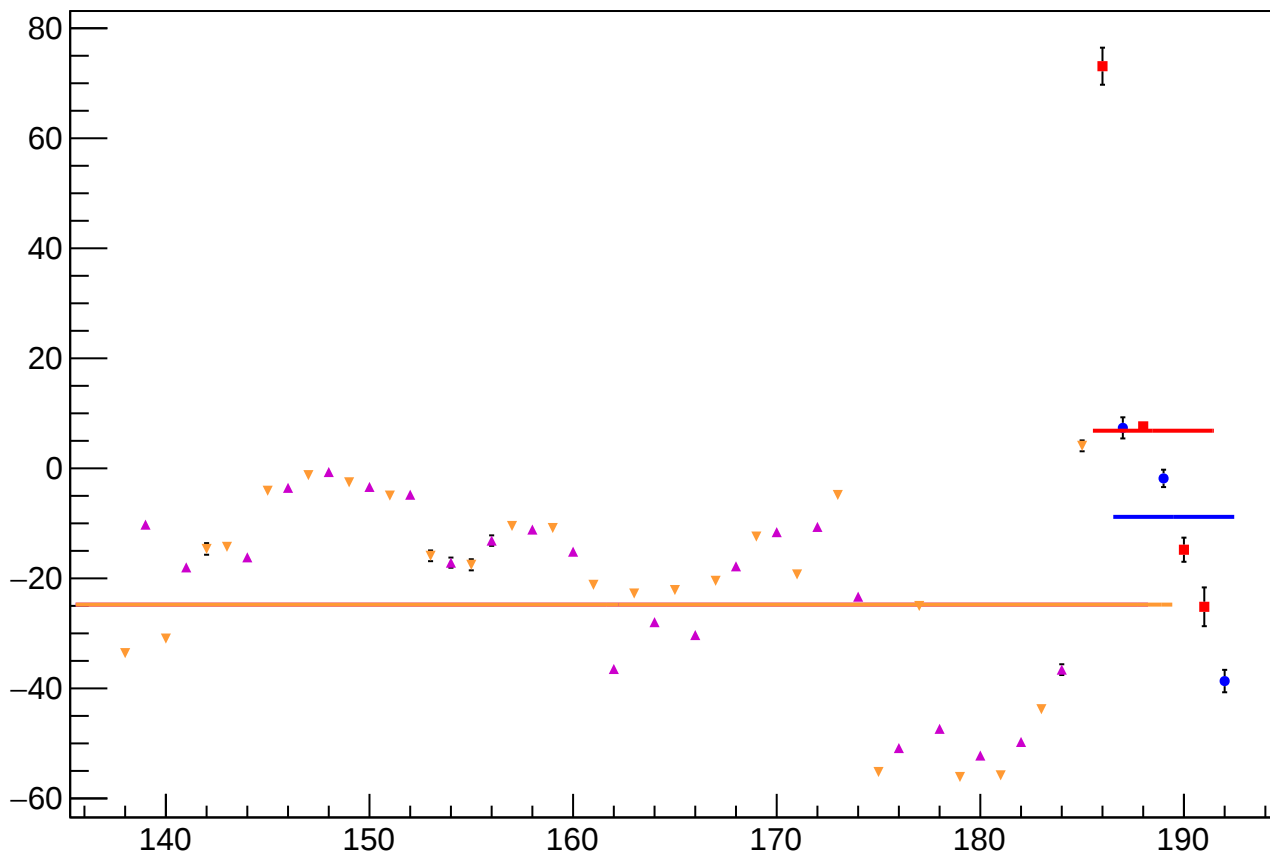
Right:  $0.370 \pm 0.008$   $\chi^2/\text{NDF}$ : 3110.2/42

In:  $0.403 \pm 0.004$   $\chi^2/\text{NDF}$ : 5766.8/42

Out:  $0.408 \pm 0.004$   $\chi^2/\text{NDF}$ : 4321.6/47

All:  $0.406 \pm 0.003$   $\chi^2/\text{NDF}$ : 10089.1/90

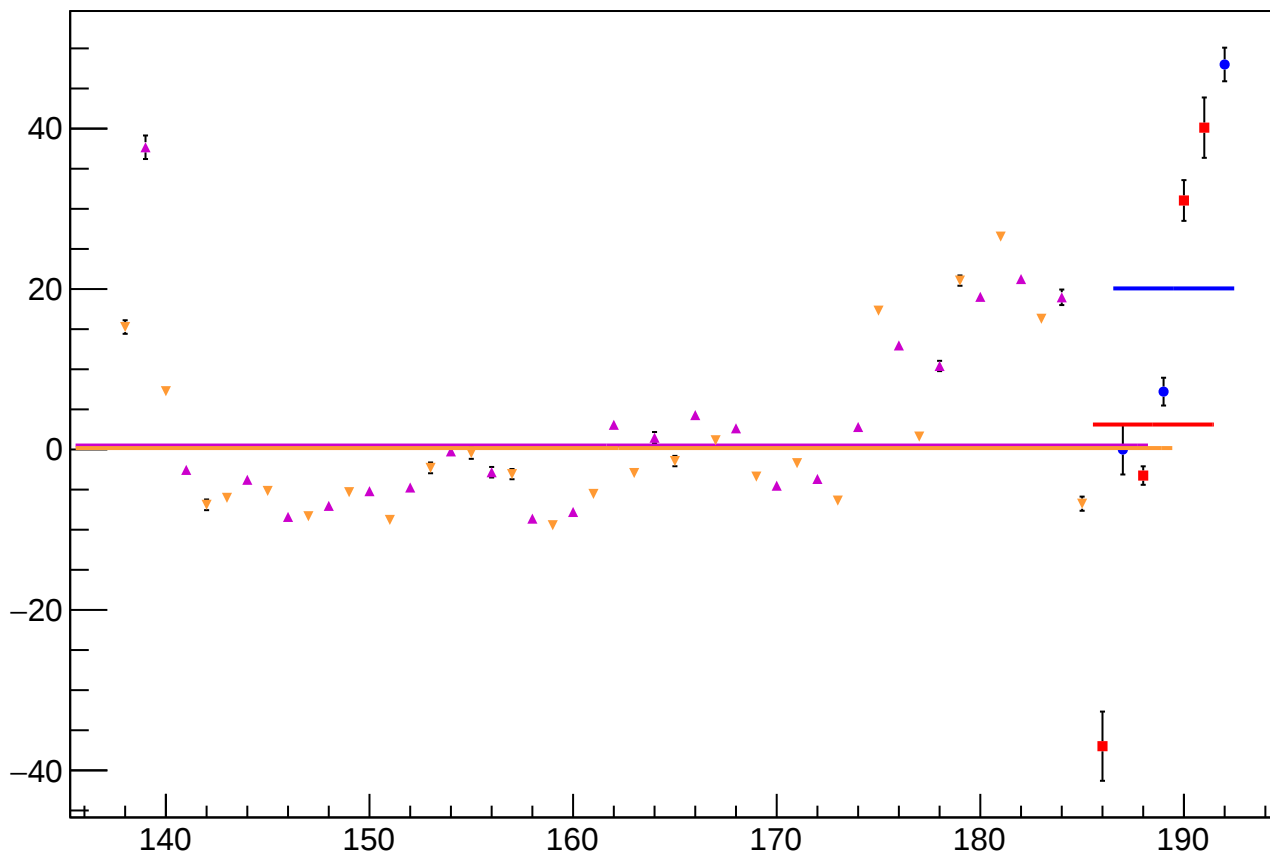
reg\_asym\_sam\_1548\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: -8.818+/-1.047  $\chi^2/\text{NDF}$ : 305.1/2  
 Left Out: -24.769+/-0.139  $\chi^2/\text{NDF}$ :18318.8/24  
 Right Out: 6.841+/-0.719  $\chi^2/\text{NDF}$ : 567.5/3  
 Left In: -24.775+/-0.143  $\chi^2/\text{NDF}$ :14807.4/22

Left: -24.772+/-0.100  $\chi^2/\text{NDF}$ : 33126.2/47  
 Right: 1.824+/-0.592  $\chi^2/\text{NDF}$ : 1024.8/6  
 In: -24.483+/-0.141  $\chi^2/\text{NDF}$ :15340.7/25  
 Out: -23.623+/-0.137  $\chi^2/\text{NDF}$ :20750.9/28  
 All: -24.039+/-0.098  $\chi^2/\text{NDF}$ : 36110.7/54

reg\_asym\_sam\_1548\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 20.078+/-1.227  $\chi^2/\text{NDF}$ : 274.6/2

Left Out: 0.177+/-0.109  $\chi^2/\text{NDF}$ : 8295.6/24

Right Out: 3.112+/-0.984  $\chi^2/\text{NDF}$ : 334.5/3

Left In: 0.493+/-0.112  $\chi^2/\text{NDF}$ : 6555.4/22

Left: 0.330+/-0.078  $\chi^2/\text{NDF}$ : 14855.0/47

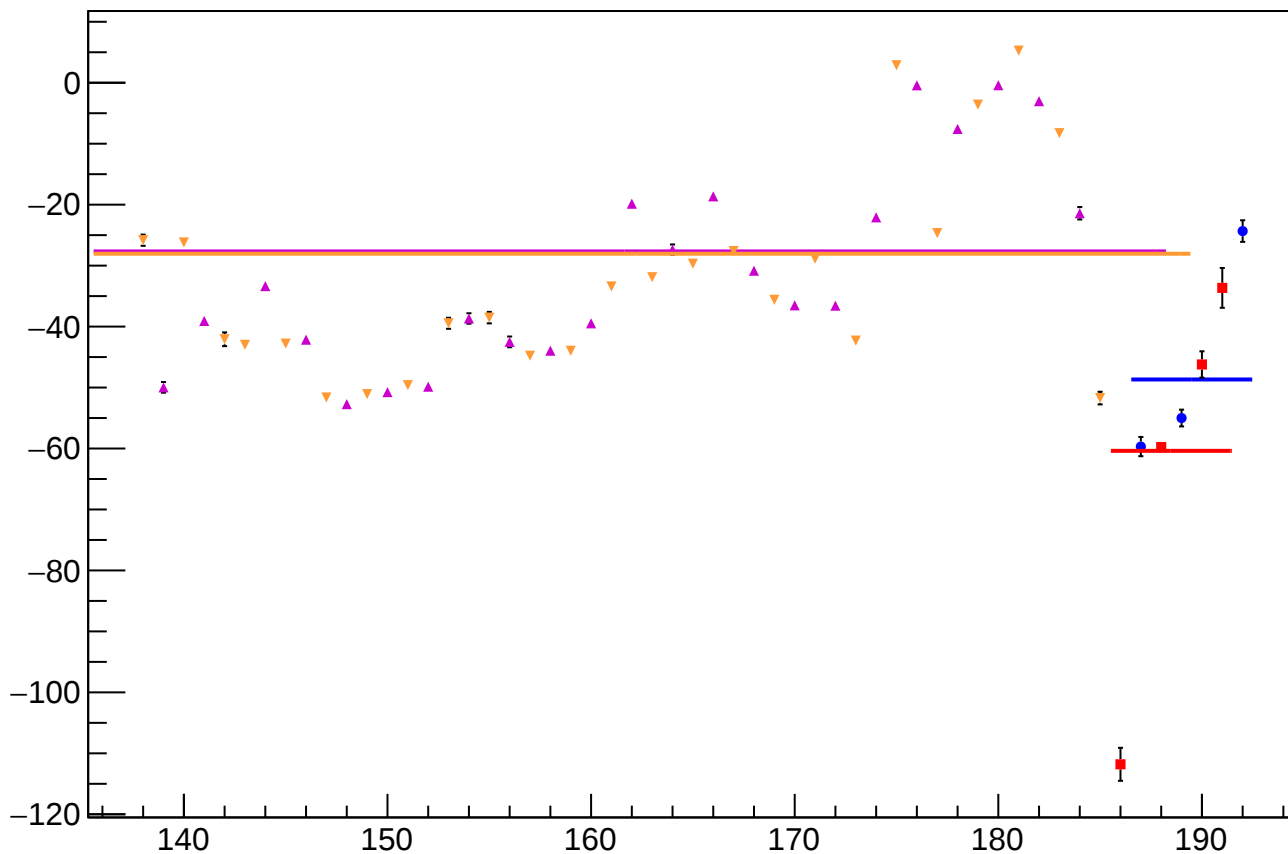
Right: 9.757+/-0.768  $\chi^2/\text{NDF}$ : 725.5/6

In: 0.655+/-0.112  $\chi^2/\text{NDF}$ : 7082.7/25

Out: 0.213+/-0.108  $\chi^2/\text{NDF}$ : 8638.9/28

All: 0.426+/-0.078  $\chi^2/\text{NDF}$ : 15729.7/54

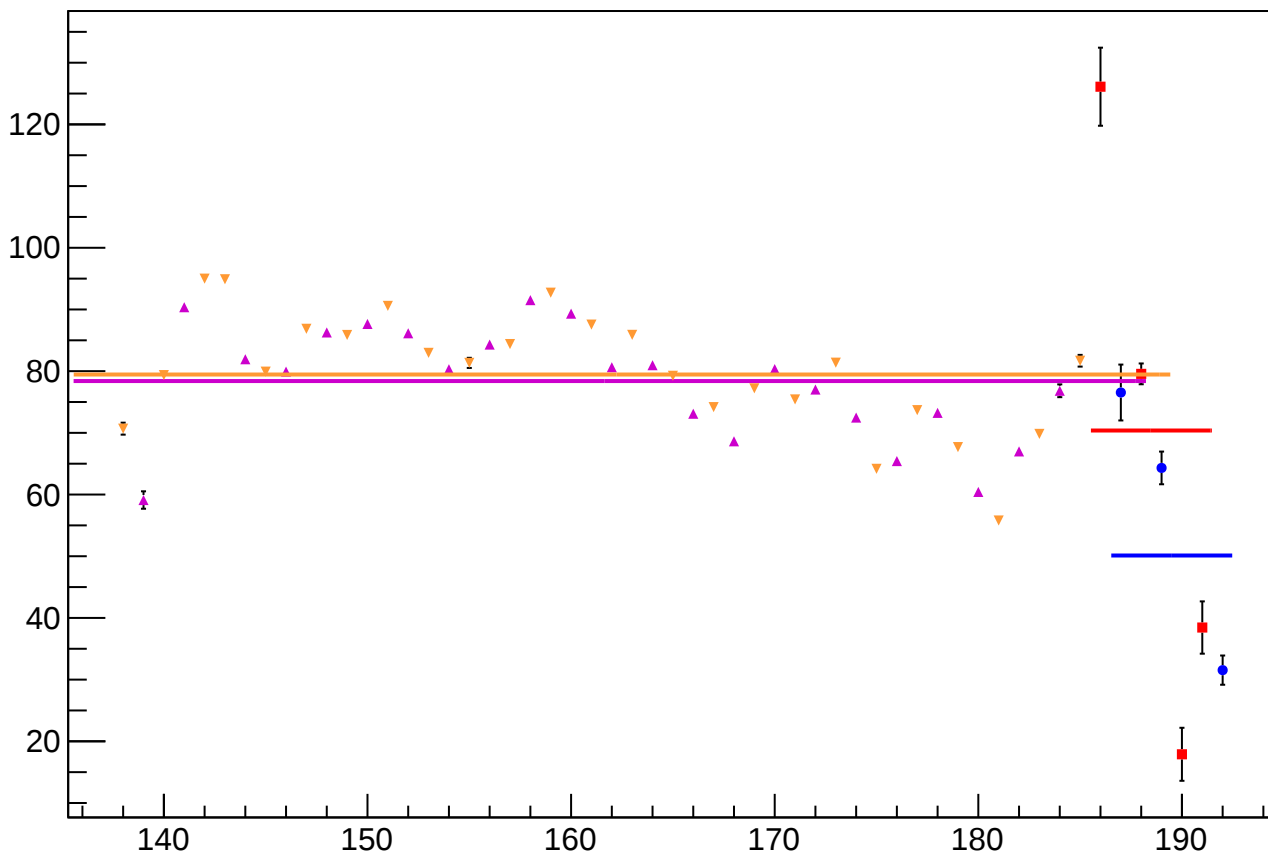
reg\_asym\_sam\_1548\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: -48.676 $\pm$ 0.895  $\chi^2$ /NDF: 258.5/2  
 Left Out: -28.050 $\pm$ 0.140  $\chi^2$ /NDF:17144.5/24  
 Right Out: -60.382 $\pm$ 0.594  $\chi^2$ /NDF: 472.1/3  
 Left In: -27.666 $\pm$ 0.142  $\chi^2$ /NDF:15003.2/22

Left: -27.862 $\pm$ 0.100  $\chi^2$ /NDF: 32151.3/47  
 Right: -56.799 $\pm$ 0.495  $\chi^2$ /NDF: 849.2/6  
 In: -28.185 $\pm$ 0.141  $\chi^2$ /NDF:15799.0/25  
 Out: -29.746 $\pm$ 0.136  $\chi^2$ /NDF:20419.5/28  
 All: -28.991 $\pm$ 0.098  $\chi^2$ /NDF: 36282.0/54

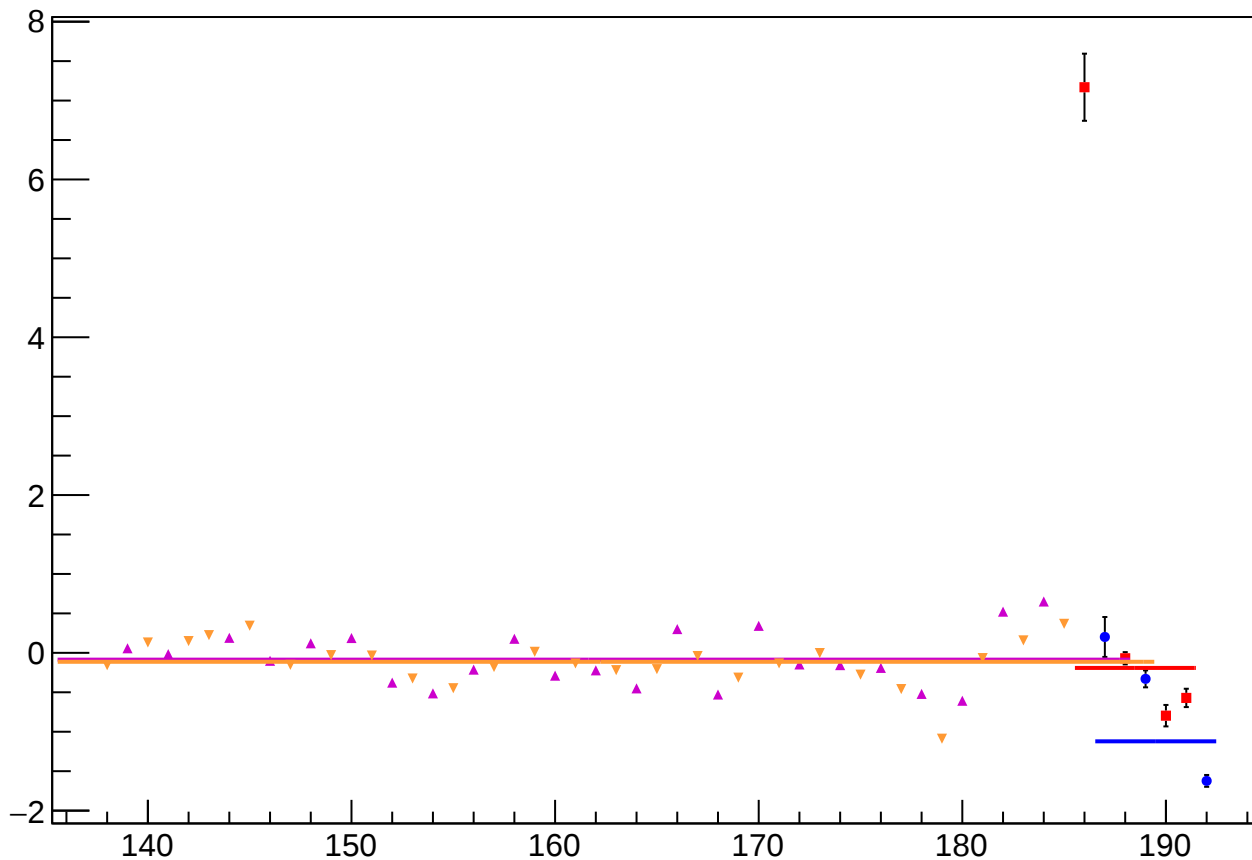
reg\_asym\_sam\_1548\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 50.118 $\pm$ 1.645  $\chi^2$ /NDF: 124.3/2  
 Left Out: 79.456 $\pm$ 0.123  $\chi^2$ /NDF: 6077.1/24  
 Right Out: 70.379 $\pm$ 1.434  $\chi^2$ /NDF: 313.2/3  
 Left In: 78.396 $\pm$ 0.127  $\chi^2$ /NDF: 4707.3/22

Left: 78.941 $\pm$ 0.088  $\chi^2$ /NDF: 10820.4/47  
 Right: 61.635 $\pm$ 1.081  $\chi^2$ /NDF: 523.6/6  
 In: 78.229 $\pm$ 0.126  $\chi^2$ /NDF: 5125.2/25  
 Out: 79.389 $\pm$ 0.123  $\chi^2$ /NDF: 6430.1/28  
 All: 78.826 $\pm$ 0.088  $\chi^2$ /NDF: 11598.6/54

reg\_asym\_sam\_1548\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-1.122 \pm 0.060$   $\chi^2/\text{NDF}$ : 126.4/2

Left Out:  $-0.113 \pm 0.006$   $\chi^2/\text{NDF}$ : 2303.1/24

Right Out:  $-0.191 \pm 0.058$   $\chi^2/\text{NDF}$ : 332.3/3

Left In:  $-0.086 \pm 0.006$   $\chi^2/\text{NDF}$ : 3132.1/22

Left:  $-0.100 \pm 0.004$   $\chi^2/\text{NDF}$ : 5446.4/47

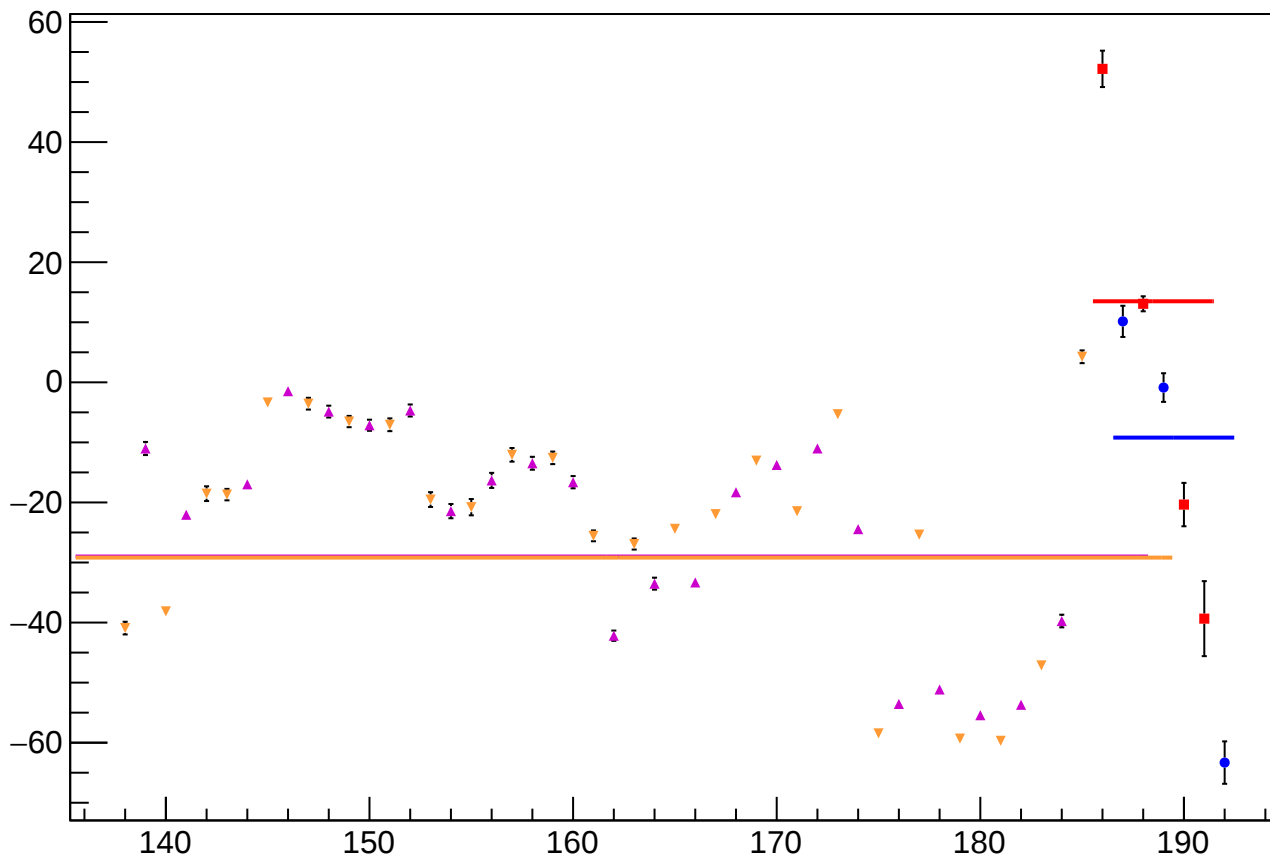
Right:  $-0.642 \pm 0.042$   $\chi^2/\text{NDF}$ : 583.9/6

In:  $-0.096 \pm 0.006$   $\chi^2/\text{NDF}$ : 3556.1/25

Out:  $-0.114 \pm 0.006$   $\chi^2/\text{NDF}$ : 2637.2/28

All:  $-0.105 \pm 0.004$   $\chi^2/\text{NDF}$ : 6198.5/54

reg\_asym\_sam\_3748\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: -9.202±/1.573  $\chi^2/\text{NDF}$ : 302.4/2  
 Left Out: -29.180±/0.157  $\chi^2/\text{NDF}$ :16912.2/24  
 Right Out: 13.495±/1.085  $\chi^2/\text{NDF}$ : 322.6/3  
 Left In: -29.003±/0.160  $\chi^2/\text{NDF}$ :13416.8/22

Left: -29.093±/0.112  $\chi^2/\text{NDF}$ : 30329.6/47

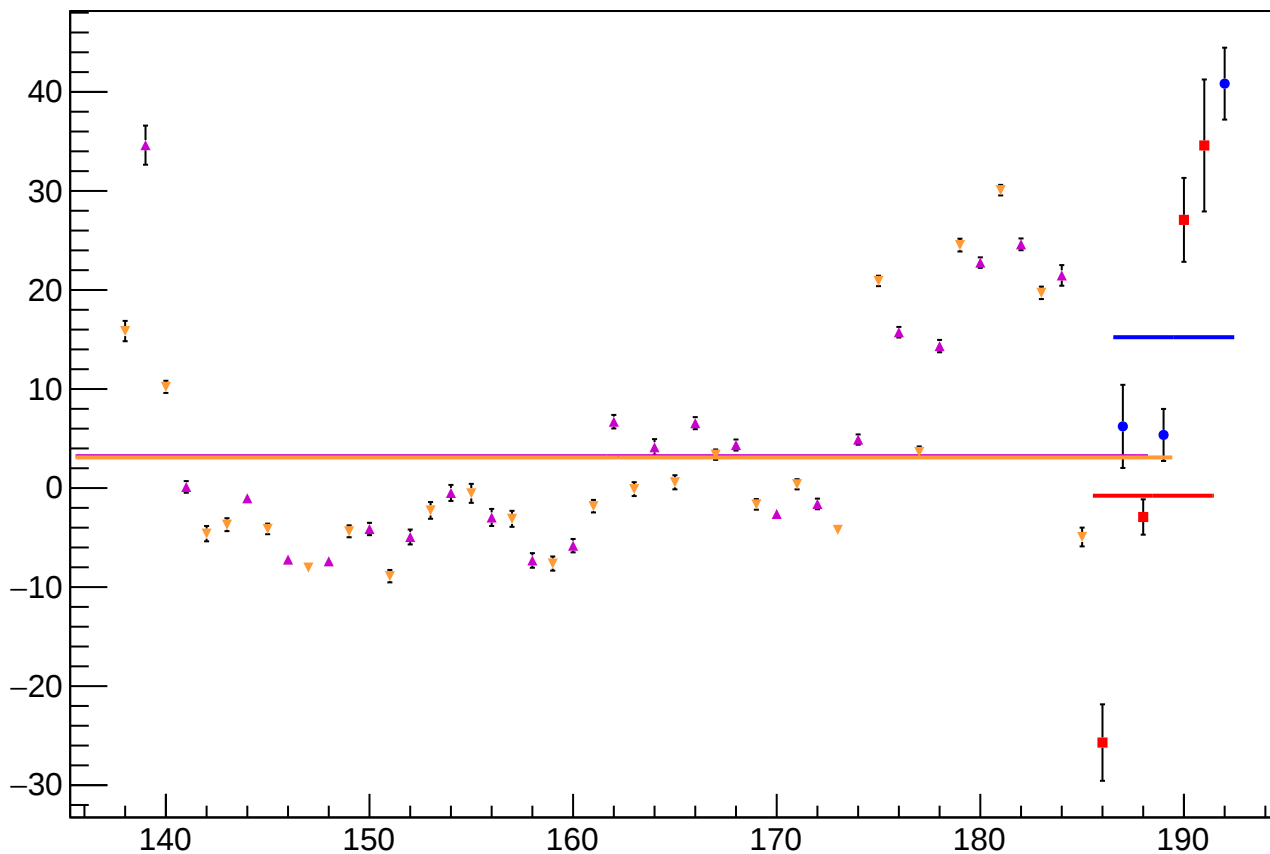
Right: 6.173±/0.893  $\chi^2/\text{NDF}$ : 766.1/6

In: -28.800±/0.159  $\chi^2/\text{NDF}$ :13876.1/25

Out: -28.308±/0.155  $\chi^2/\text{NDF}$ :18749.3/28

All: -28.548±/0.111  $\chi^2/\text{NDF}$ : 32630.3/54

reg\_asym\_sam\_3748\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 15.232 $\pm$ 1.898  $\chi^2$ /NDF: 68.4/2

Left Out: 3.091 $\pm$ 0.124  $\chi^2$ /NDF:8084.1/24

Right Out: -0.772 $\pm$ 1.476  $\chi^2$ /NDF: 114.5/3

Left In: 3.221 $\pm$ 0.127  $\chi^2$ /NDF:6237.6/22

Left: 3.155 $\pm$ 0.089  $\chi^2$ /NDF: 14322.2/47

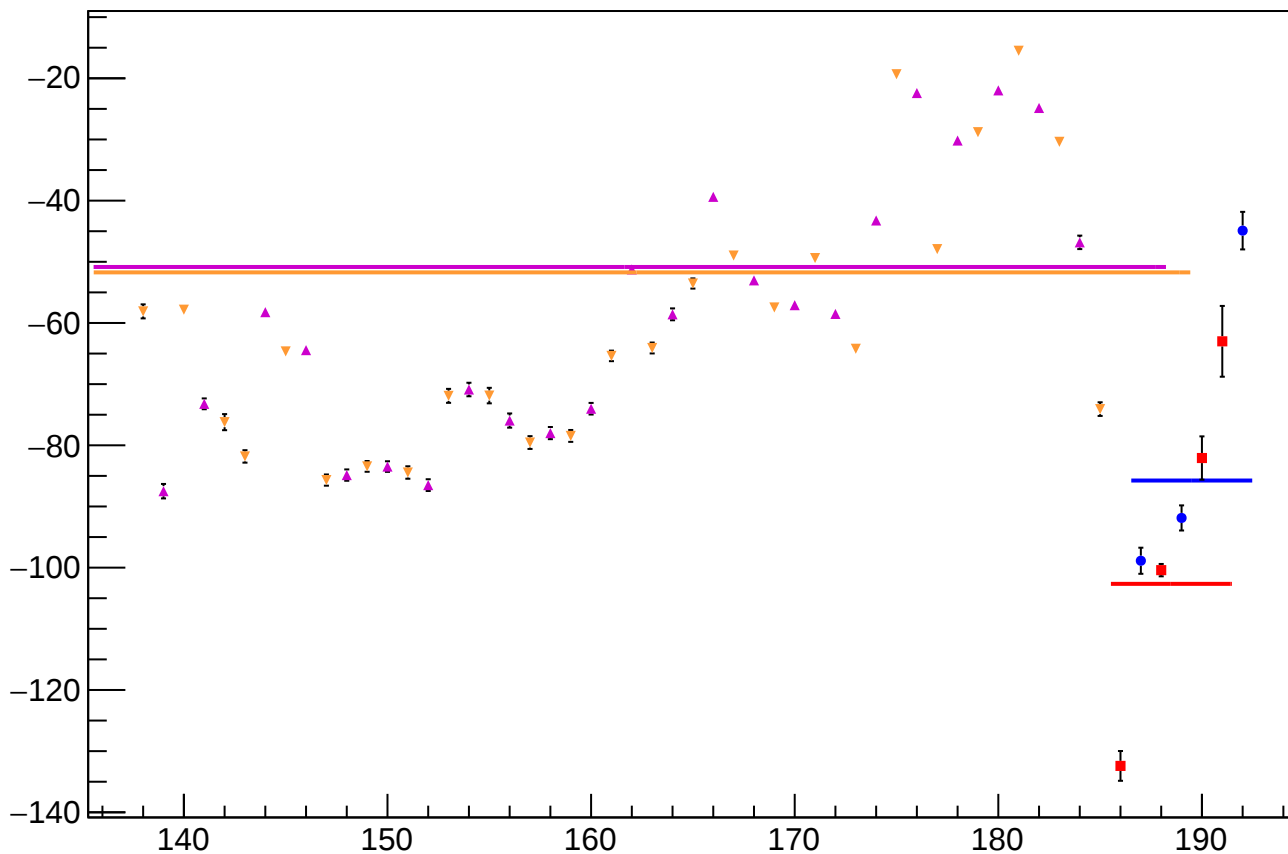
Right: 5.257 $\pm$ 1.165  $\chi^2$ /NDF: 227.2/6

In: 3.275 $\pm$ 0.127  $\chi^2$ /NDF:6345.9/25

Out: 3.063 $\pm$ 0.124  $\chi^2$ /NDF:8205.4/28

All: 3.167 $\pm$ 0.089  $\chi^2$ /NDF: 14552.7/54

reg\_asym\_sam\_3748\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-85.759 \pm 1.333$   $\chi^2/\text{NDF}$ : 223.6/2

Left Out:  $-51.729 \pm 0.158$   $\chi^2/\text{NDF}$ : 19538.0/24

Right Out:  $-102.651 \pm 0.892$   $\chi^2/\text{NDF}$ : 235.0/3

Left In:  $-50.844 \pm 0.160$   $\chi^2/\text{NDF}$ : 17272.0/22

Left:  $-51.293 \pm 0.112$   $\chi^2/\text{NDF}$ : 36825.5/47

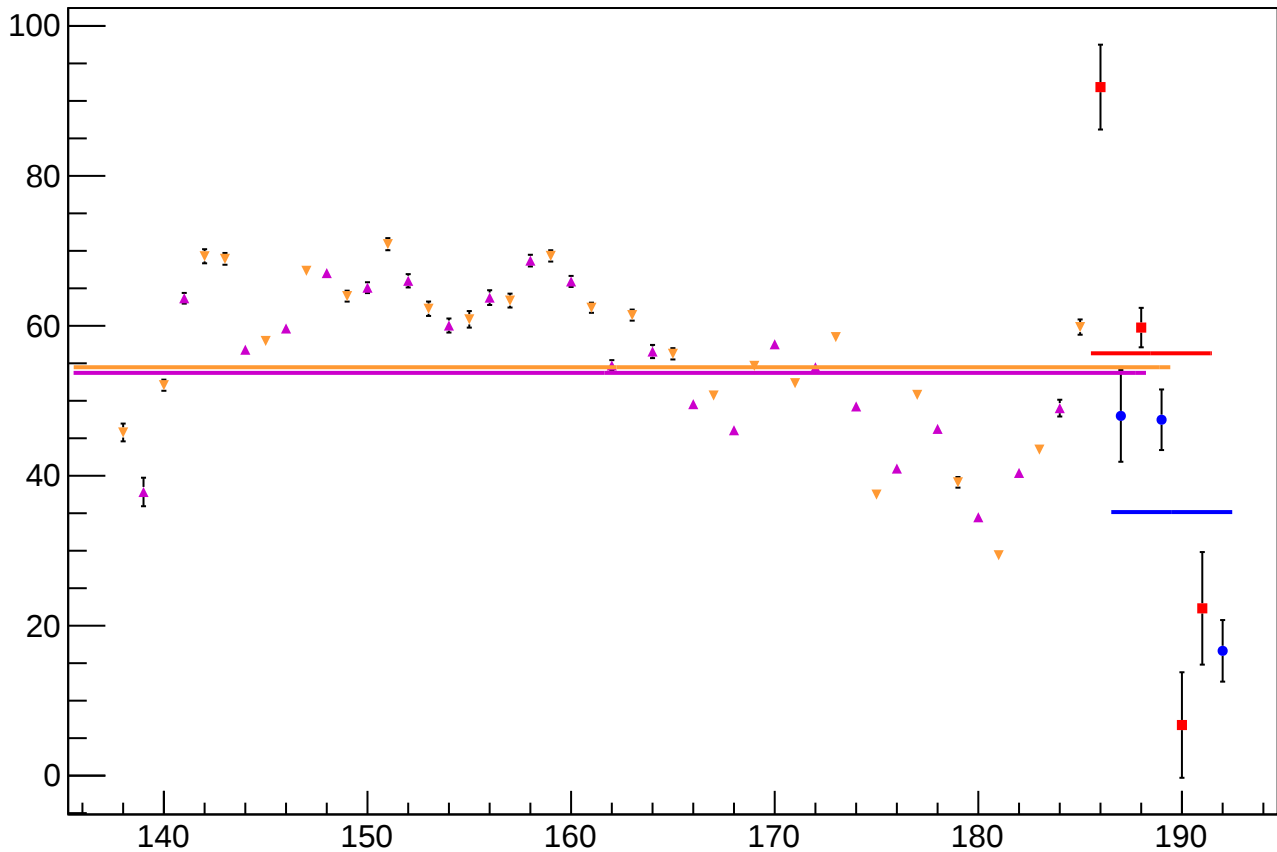
Right:  $-97.427 \pm 0.741$   $\chi^2/\text{NDF}$ : 569.6/6

In:  $-51.341 \pm 0.159$   $\chi^2/\text{NDF}$ : 18172.0/25

Out:  $-53.276 \pm 0.155$   $\chi^2/\text{NDF}$ : 22933.8/28

All:  $-52.330 \pm 0.111$   $\chi^2/\text{NDF}$ : 41181.6/54

reg\_asym\_sam\_3748\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 35.156 $\pm$ 2.606  $\chi^2$ /NDF: 34.0/2

Left Out: 54.476 $\pm$ 0.140  $\chi^2$ /NDF:6266.9/24

Right Out: 56.334 $\pm$ 2.164  $\chi^2$ /NDF: 111.2/3

Left In: 53.724 $\pm$ 0.143  $\chi^2$ /NDF:4585.7/22

Left: 54.107 $\pm$ 0.100  $\chi^2$ /NDF: 10866.7/47

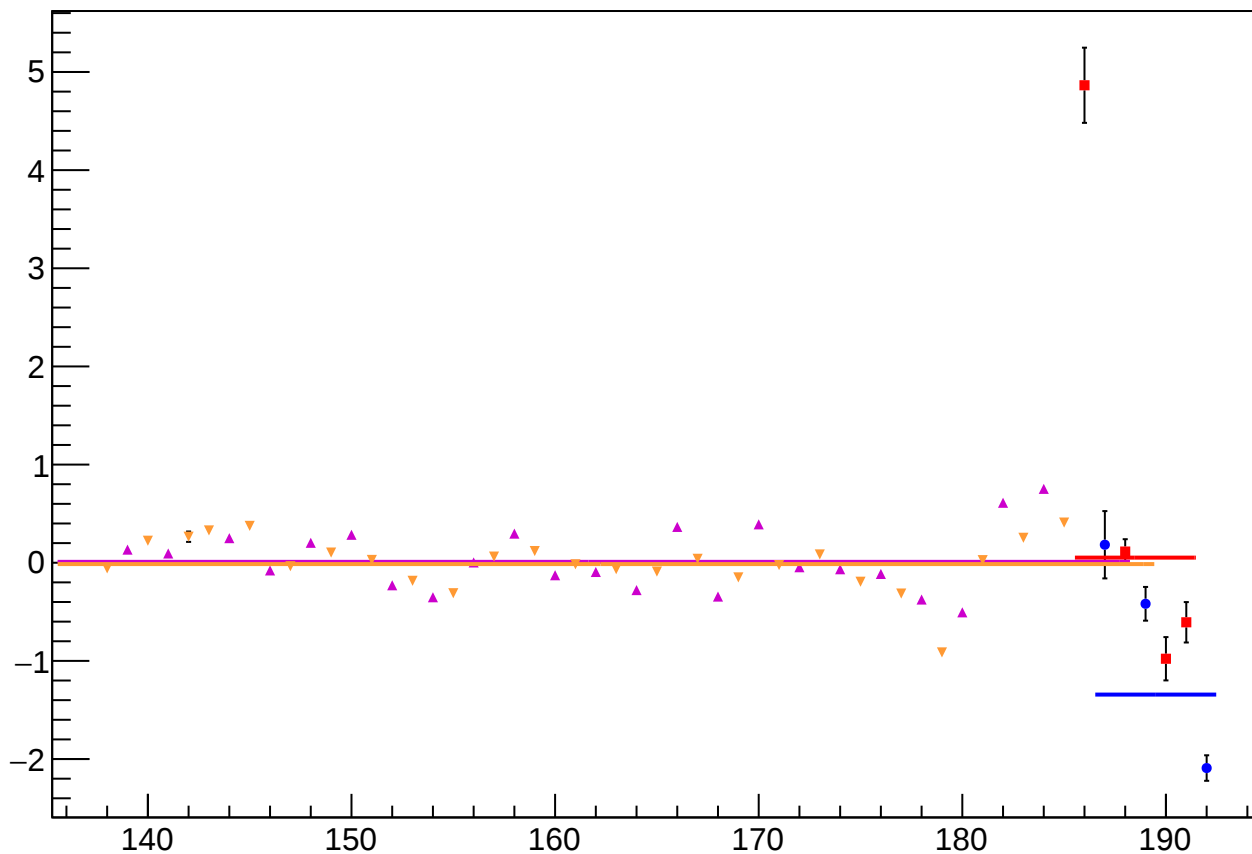
Right: 47.691 $\pm$ 1.665  $\chi^2$ /NDF: 184.3/6

In: 53.668 $\pm$ 0.143  $\chi^2$ /NDF:4670.3/25

Out: 54.484 $\pm$ 0.140  $\chi^2$ /NDF:6378.9/28

All: 54.084 $\pm$ 0.100  $\chi^2$ /NDF: 11065.8/54

reg\_asym\_sam\_3748\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



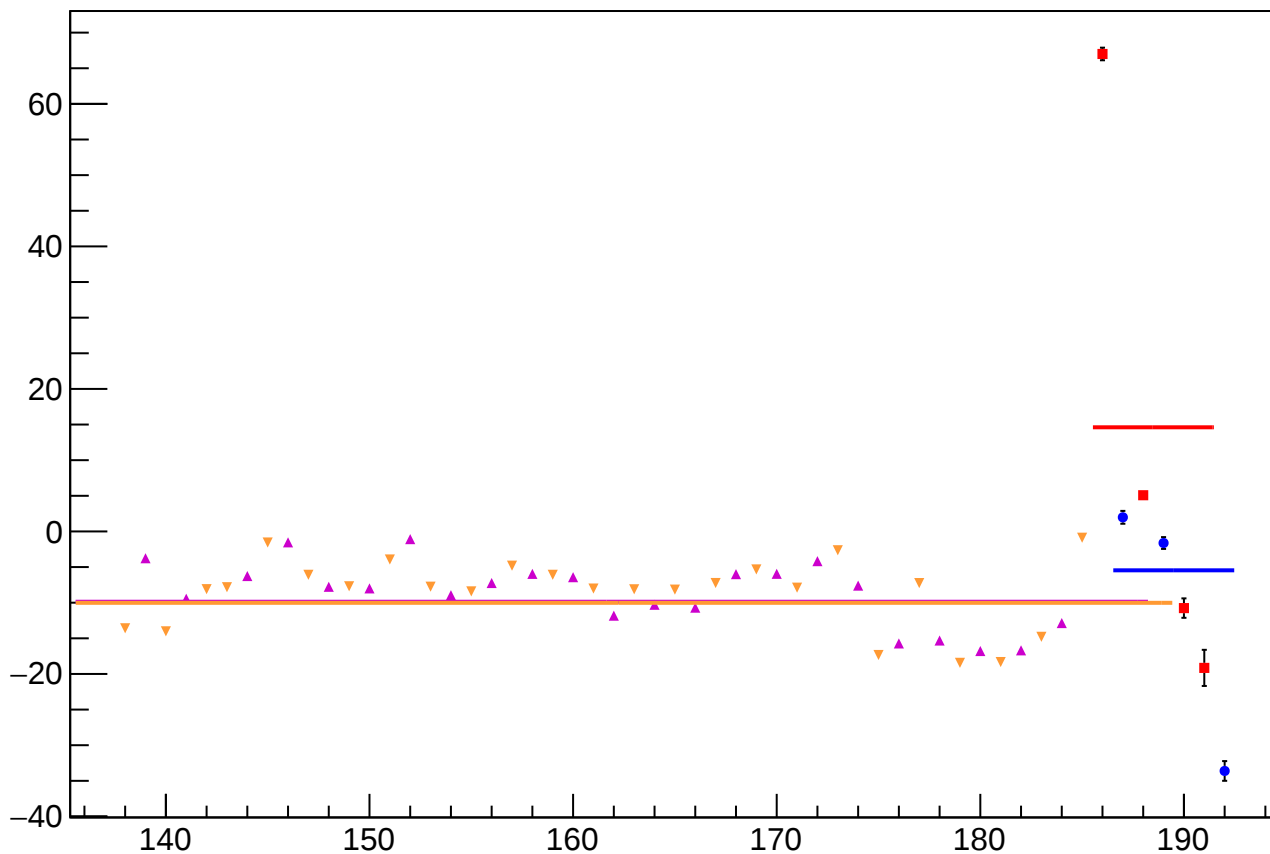
Right In:  $-1.343 \pm 0.099$   $\chi^2/\text{NDF}: 82.0/2$   
 Left Out:  $-0.014 \pm 0.006$   $\chi^2/\text{NDF}: 1654.7/24$   
 Right Out:  $0.052 \pm 0.094$   $\chi^2/\text{NDF}: 190.2/3$   
 Left In:  $0.009 \pm 0.007$   $\chi^2/\text{NDF}: 2220.5/22$

Left:  $-0.003 \pm 0.005$   $\chi^2/\text{NDF}: 3881.4/47$   
 Right:  $-0.605 \pm 0.068$   $\chi^2/\text{NDF}: 376.8/6$

In:  $0.003 \pm 0.007$   $\chi^2/\text{NDF}: 2487.5/25$   
 Out:  $-0.013 \pm 0.006$   $\chi^2/\text{NDF}: 1845.4/28$

All:  $-0.005 \pm 0.005$   $\chi^2/\text{NDF}: 4336.1/54$

reg\_asym\_sam\_1526\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



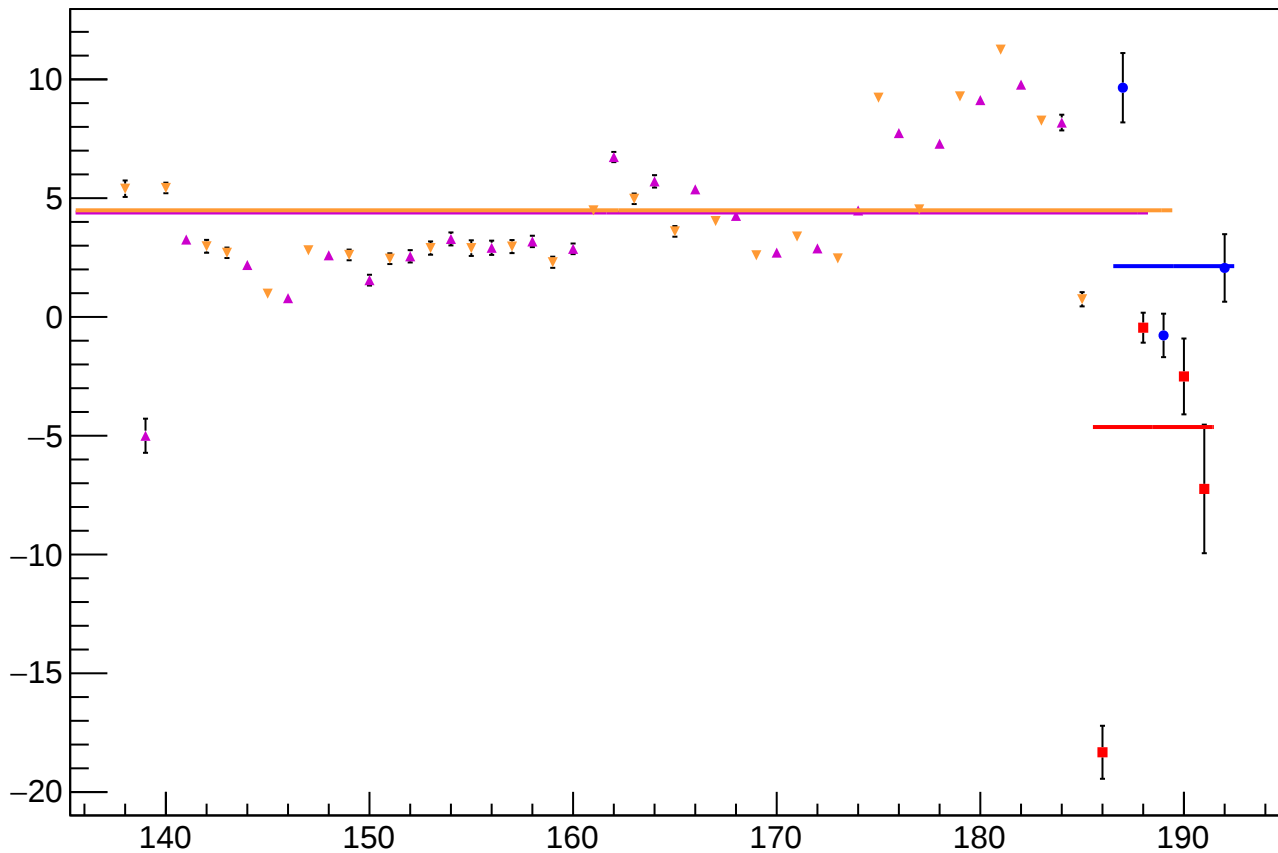
Right In:  $-5.457 \pm 0.558$   $\chi^2/\text{NDF}: 504.1/2$   
 Left Out:  $-10.017 \pm 0.051$   $\chi^2/\text{NDF}: 12552.8/24$   
 Right Out:  $14.613 \pm 0.378$   $\chi^2/\text{NDF}: 4486.9/3$   
 Left In:  $-9.865 \pm 0.051$   $\chi^2/\text{NDF}: 9345.4/22$

Left:  $-9.942 \pm 0.036$   $\chi^2/\text{NDF}: 21902.5/47$   
 Right:  $8.307 \pm 0.313$   $\chi^2/\text{NDF}: 5877.9/6$

In:  $-9.828 \pm 0.051$   $\chi^2/\text{NDF}: 9911.4/25$   
 Out:  $-9.582 \pm 0.050$   $\chi^2/\text{NDF}: 21215.2/28$

All:  $-9.703 \pm 0.036$   $\chi^2/\text{NDF}: 31138.4/54$

reg\_asym\_sam\_1526\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 2.138 +/- 0.681  $\chi^2/\text{NDF}$ : 36.6/2

Left Out: 4.489 +/- 0.041  $\chi^2/\text{NDF}$ : 4832.3/24

Right Out: -4.634 +/- 0.510  $\chi^2/\text{NDF}$ : 197.1/3

Left In: 4.396 +/- 0.041  $\chi^2/\text{NDF}$ : 4230.4/22

Left: 4.443 +/- 0.029  $\chi^2/\text{NDF}$ : 9065.3/47

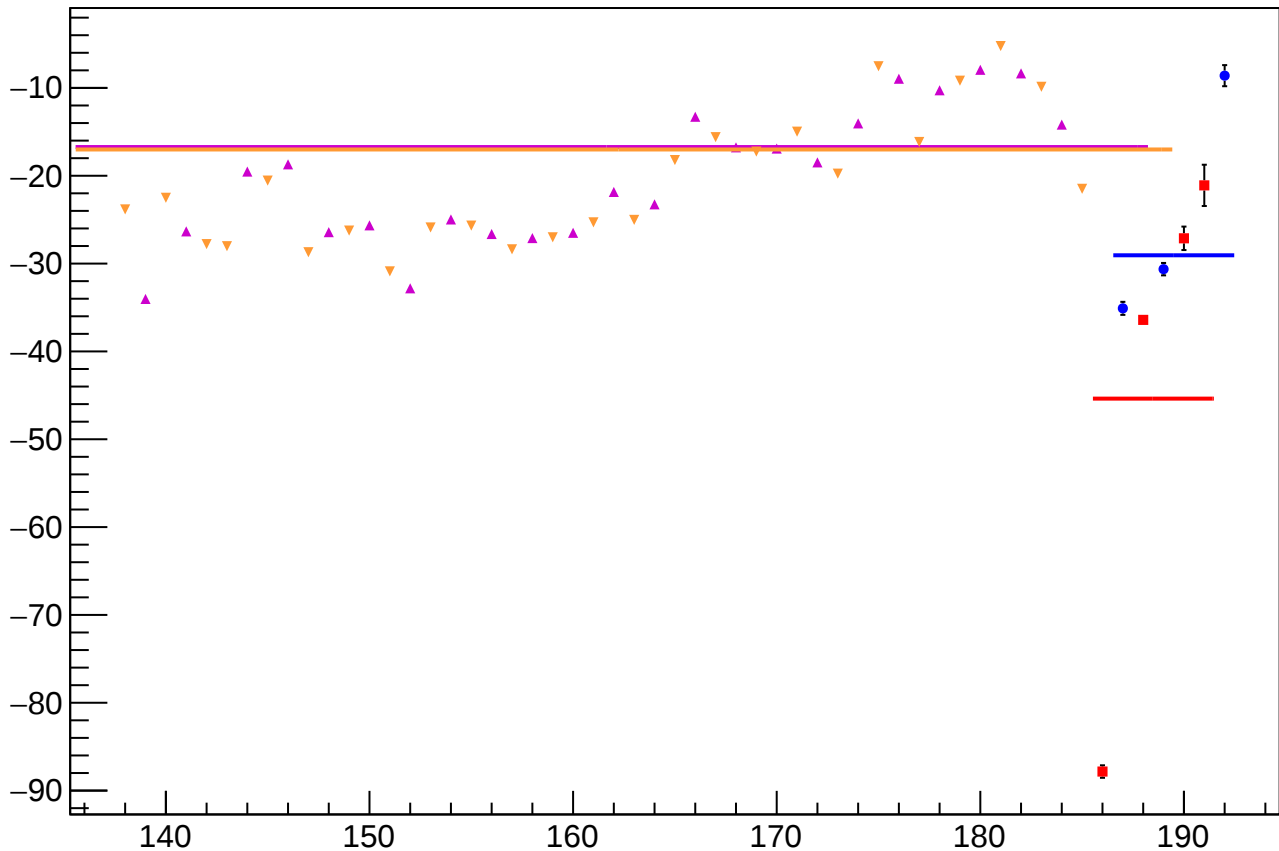
Right: -2.199 +/- 0.408  $\chi^2/\text{NDF}$ : 297.2/6

In: 4.388 +/- 0.041  $\chi^2/\text{NDF}$ : 4278.0/25

Out: 4.431 +/- 0.041  $\chi^2/\text{NDF}$ : 5347.4/28

All: 4.410 +/- 0.029  $\chi^2/\text{NDF}$ : 9626.0/54

reg\_asym\_sam\_1526\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: -29.055 $\pm$ 0.471  $\chi^2$ /NDF: 360.9/2

Left Out: -17.008 $\pm$ 0.051  $\chi^2$ /NDF:22094.7/24

Right Out: -45.374 $\pm$ 0.309  $\chi^2$ /NDF: 4482.6/3

Left In: -16.732 $\pm$ 0.052  $\chi^2$ /NDF:18777.2/22

Left: -16.871 $\pm$ 0.036  $\chi^2$ /NDF: 40886.5/47

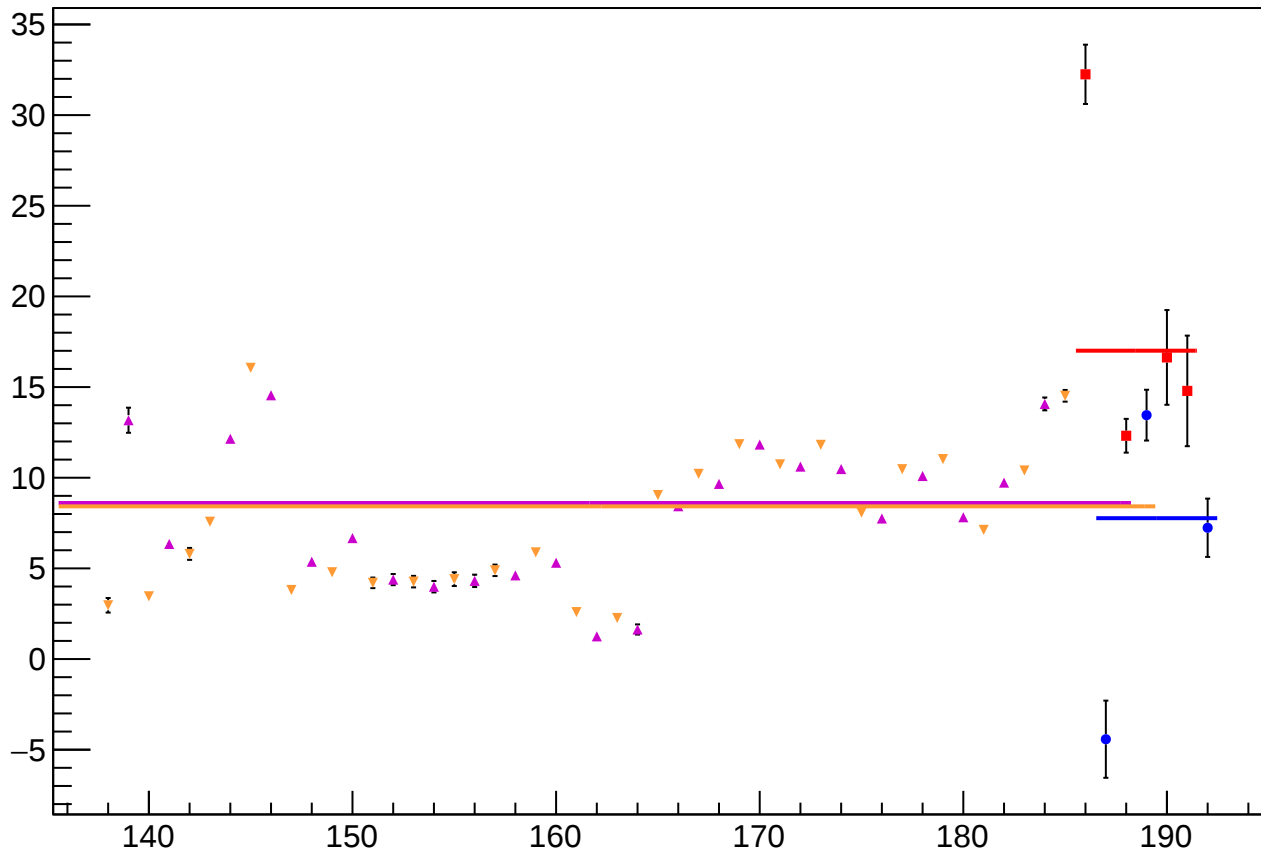
Right: -40.453 $\pm$ 0.258  $\chi^2$ /NDF: 5683.4/6

In: -16.878 $\pm$ 0.051  $\chi^2$ /NDF:19815.7/25

Out: -17.761 $\pm$ 0.050  $\chi^2$ /NDF:34769.1/28

All: -17.327 $\pm$ 0.036  $\chi^2$ /NDF: 54736.2/54

reg\_asym\_sam\_1526\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $7.769 \pm 0.946$   $\chi^2/\text{NDF}: 49.4/2$

Left Out:  $8.422 \pm 0.046$   $\chi^2/\text{NDF}: 6470.1/24$

Right Out:  $17.007 \pm 0.749$   $\chi^2/\text{NDF}: 112.8/3$

Left In:  $8.606 \pm 0.046$   $\chi^2/\text{NDF}: 5504.2/22$

Left:  $8.513 \pm 0.032$   $\chi^2/\text{NDF}: 11982.4/47$

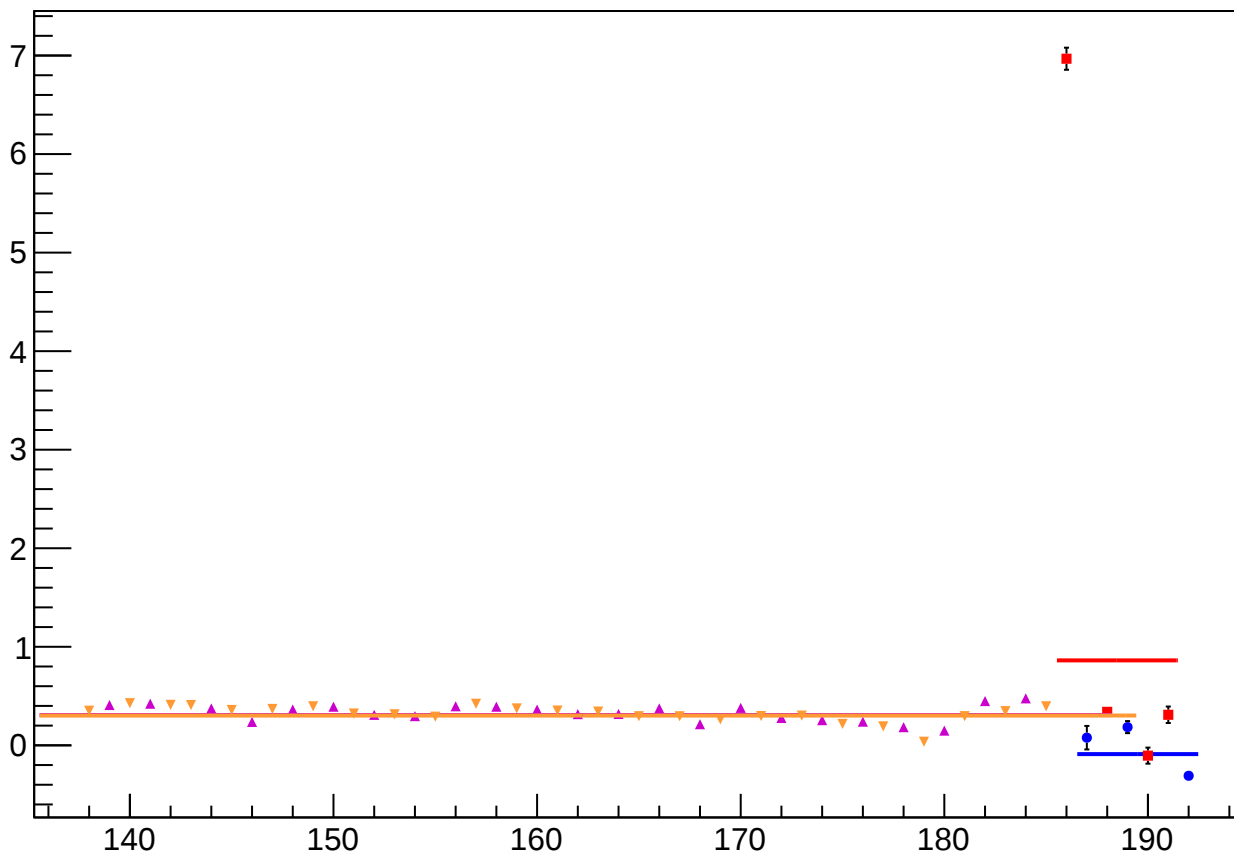
Right:  $13.446 \pm 0.587$   $\chi^2/\text{NDF}: 220.8/6$

In:  $8.604 \pm 0.046$   $\chi^2/\text{NDF}: 5554.4/25$

Out:  $8.454 \pm 0.045$   $\chi^2/\text{NDF}: 6713.7/28$

All:  $8.528 \pm 0.032$   $\chi^2/\text{NDF}: 12273.5/54$

reg\_asym\_sam\_1526\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.089 \pm 0.037$   $\chi^2/\text{NDF}$ : 40.7/2

Left Out:  $0.302 \pm 0.002$   $\chi^2/\text{NDF}$ : 1590.9/24

Right Out:  $0.862 \pm 0.034$   $\chi^2/\text{NDF}$ : 3282.4/3

Left In:  $0.307 \pm 0.002$   $\chi^2/\text{NDF}$ : 1699.5/22

Left:  $0.305 \pm 0.001$   $\chi^2/\text{NDF}$ : 3293.0/47

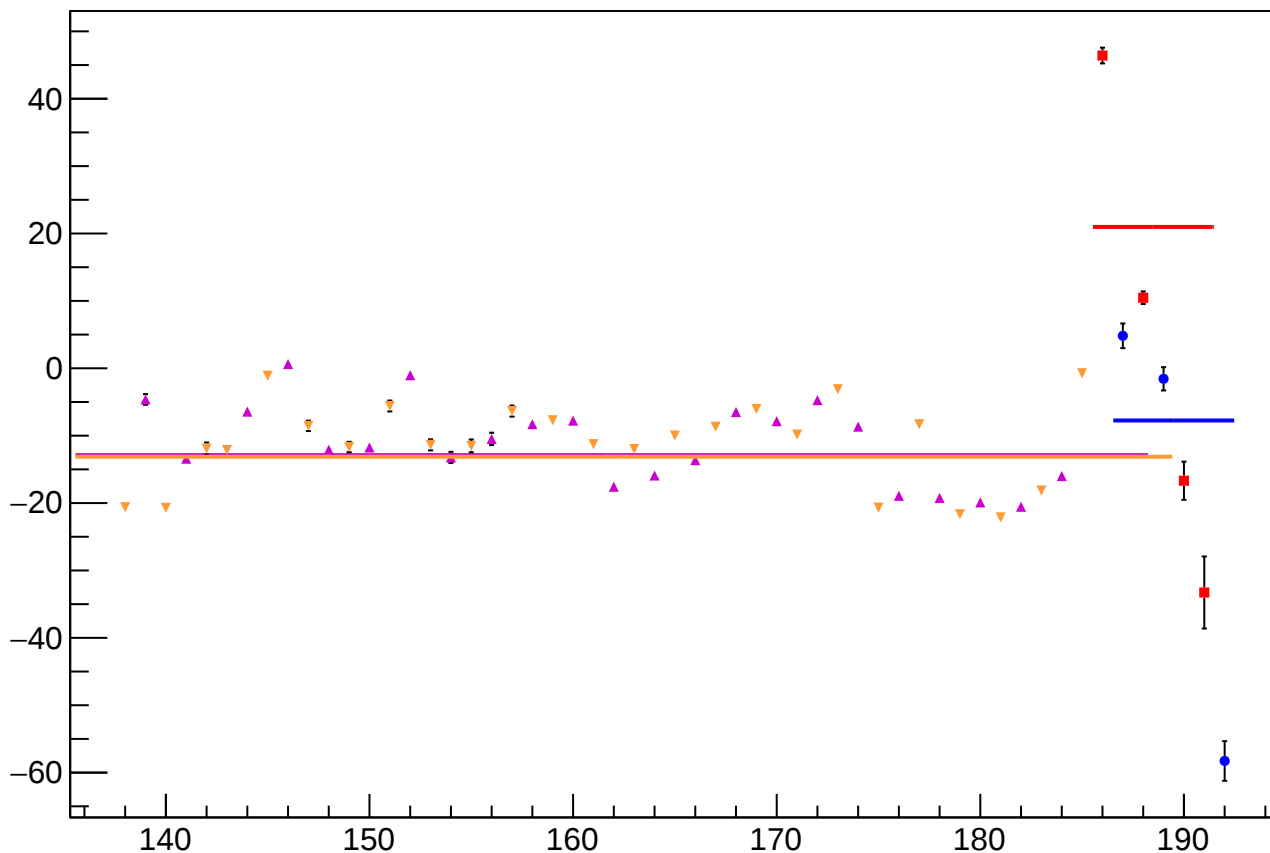
Right:  $0.431 \pm 0.025$   $\chi^2/\text{NDF}$ : 3680.8/6

In:  $0.306 \pm 0.002$   $\chi^2/\text{NDF}$ : 1853.5/25

Out:  $0.305 \pm 0.002$   $\chi^2/\text{NDF}$ : 5145.1/28

All:  $0.305 \pm 0.001$   $\chi^2/\text{NDF}$ : 6998.9/54

reg\_asym\_sam\_3726\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



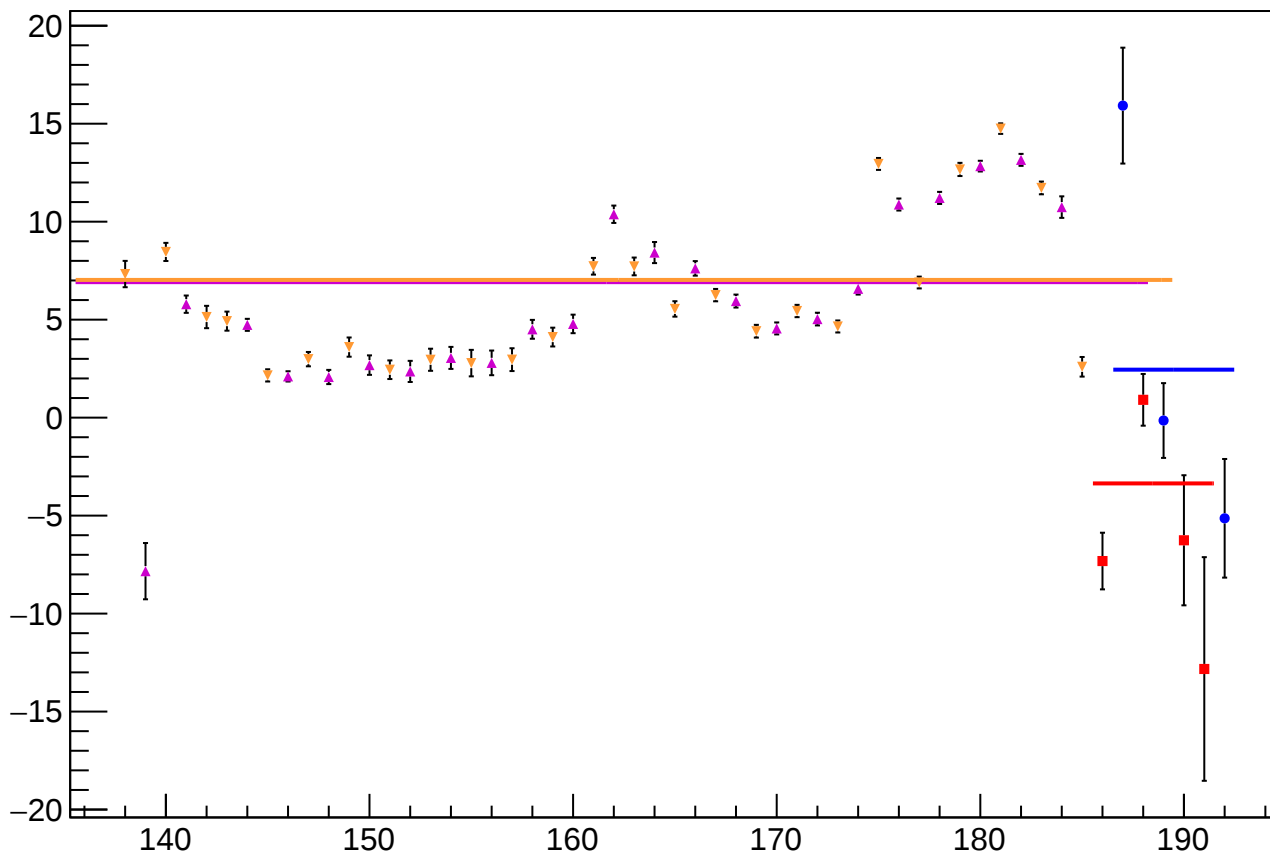
Right In:  $-7.742 \pm 1.155$   $\chi^2/\text{NDF}$ : 354.6/2  
 Left Out:  $-13.125 \pm 0.094$   $\chi^2/\text{NDF}$ : 5977.6/24  
 Right Out:  $20.981 \pm 0.699$   $\chi^2/\text{NDF}$ : 882.2/3  
 Left In:  $-12.885 \pm 0.095$   $\chi^2/\text{NDF}$ : 4776.2/22

Left:  $-13.007 \pm 0.067$   $\chi^2/\text{NDF}$ : 10757.0/47  
 Right:  $13.273 \pm 0.598$   $\chi^2/\text{NDF}$ : 1689.6/6

In:  $-12.851 \pm 0.095$   $\chi^2/\text{NDF}$ : 5150.4/25  
 Out:  $-12.524 \pm 0.093$   $\chi^2/\text{NDF}$ : 9197.1/28

All:  $-12.684 \pm 0.066$   $\chi^2/\text{NDF}$ : 14353.6/54

reg\_asym\_sam\_3726\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 2.448+/-1.417  $\chi^2/\text{NDF}$ : 28.9/2

Left Out: 7.028+/-0.077  $\chi^2/\text{NDF}$ :2665.3/24

Right Out: -3.357+/-0.923  $\chi^2/\text{NDF}$ : 21.5/3

Left In: 6.914+/-0.078  $\chi^2/\text{NDF}$ :2428.2/22

Left: 6.971+/-0.055  $\chi^2/\text{NDF}$ : 5094.6/47

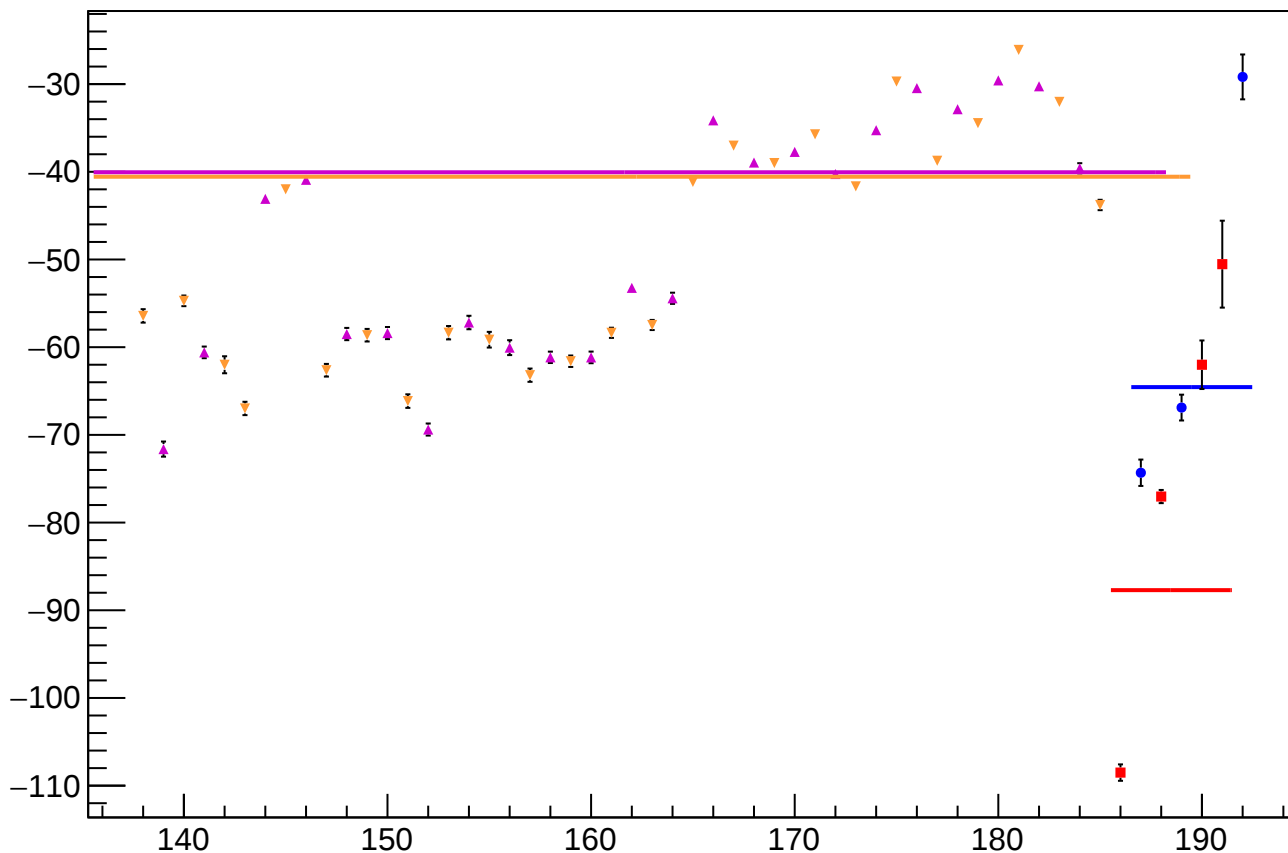
Right: -1.628+/-0.773  $\chi^2/\text{NDF}$ : 62.2/6

In: 6.901+/-0.078  $\chi^2/\text{NDF}$ :2467.0/25

Out: 6.955+/-0.077  $\chi^2/\text{NDF}$ :2812.6/28

All: 6.928+/-0.055  $\chi^2/\text{NDF}$ : 5279.8/54

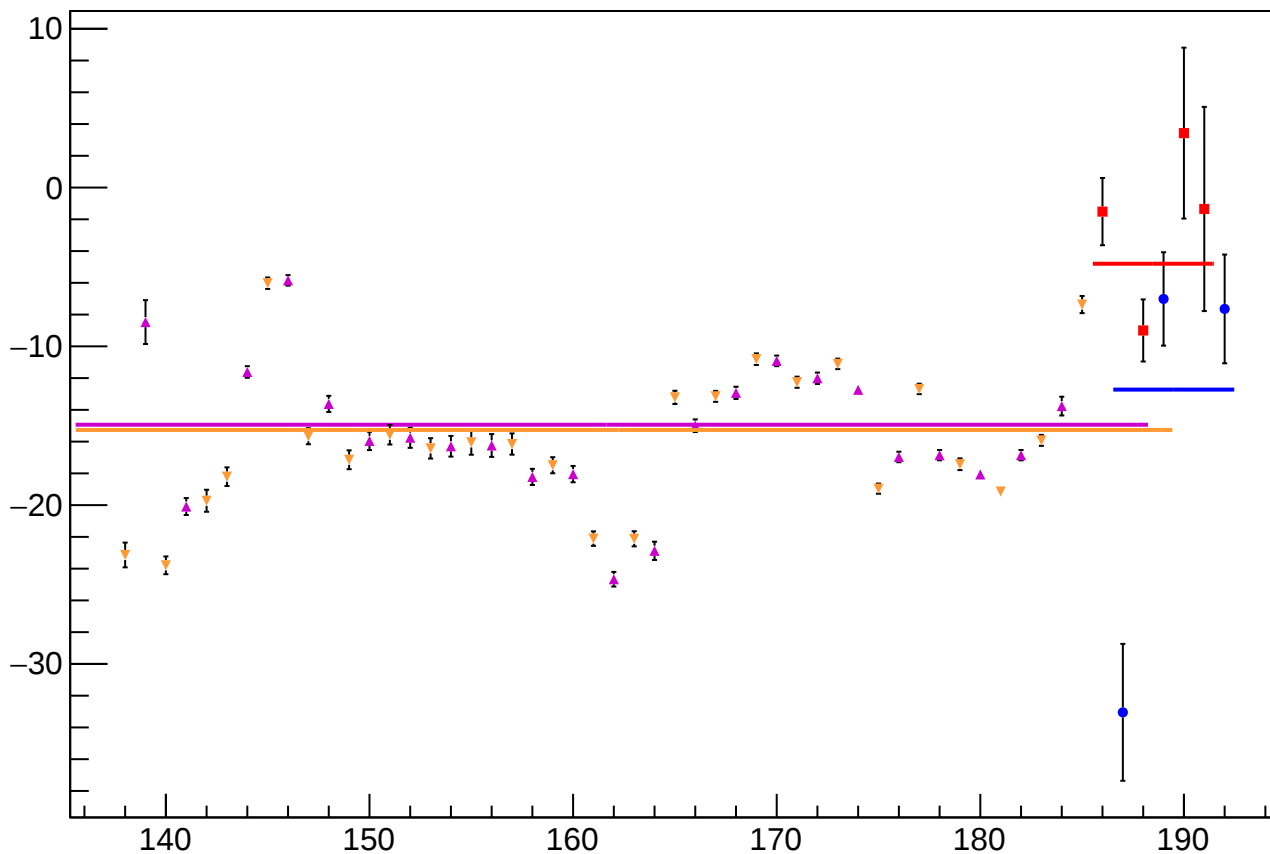
reg\_asym\_sam\_3726\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-64.553 \pm 0.973$   $\chi^2/\text{NDF}$ : 235.7/2  
 Left Out:  $-40.563 \pm 0.095$   $\chi^2/\text{NDF}$ : 15637.6/24  
 Right Out:  $-87.705 \pm 0.569$   $\chi^2/\text{NDF}$ : 838.7/3  
 Left In:  $-40.053 \pm 0.096$   $\chi^2/\text{NDF}$ : 13927.3/22

Left:  $-40.310 \pm 0.067$   $\chi^2/\text{NDF}$ : 29579.2/47  
 Right:  $-81.796 \pm 0.491$   $\chi^2/\text{NDF}$ : 1496.3/6  
 In:  $-40.288 \pm 0.095$   $\chi^2/\text{NDF}$ : 14791.2/25  
 Out:  $-41.832 \pm 0.093$   $\chi^2/\text{NDF}$ : 23145.8/28  
 All:  $-41.074 \pm 0.067$   $\chi^2/\text{NDF}$ : 38071.0/54

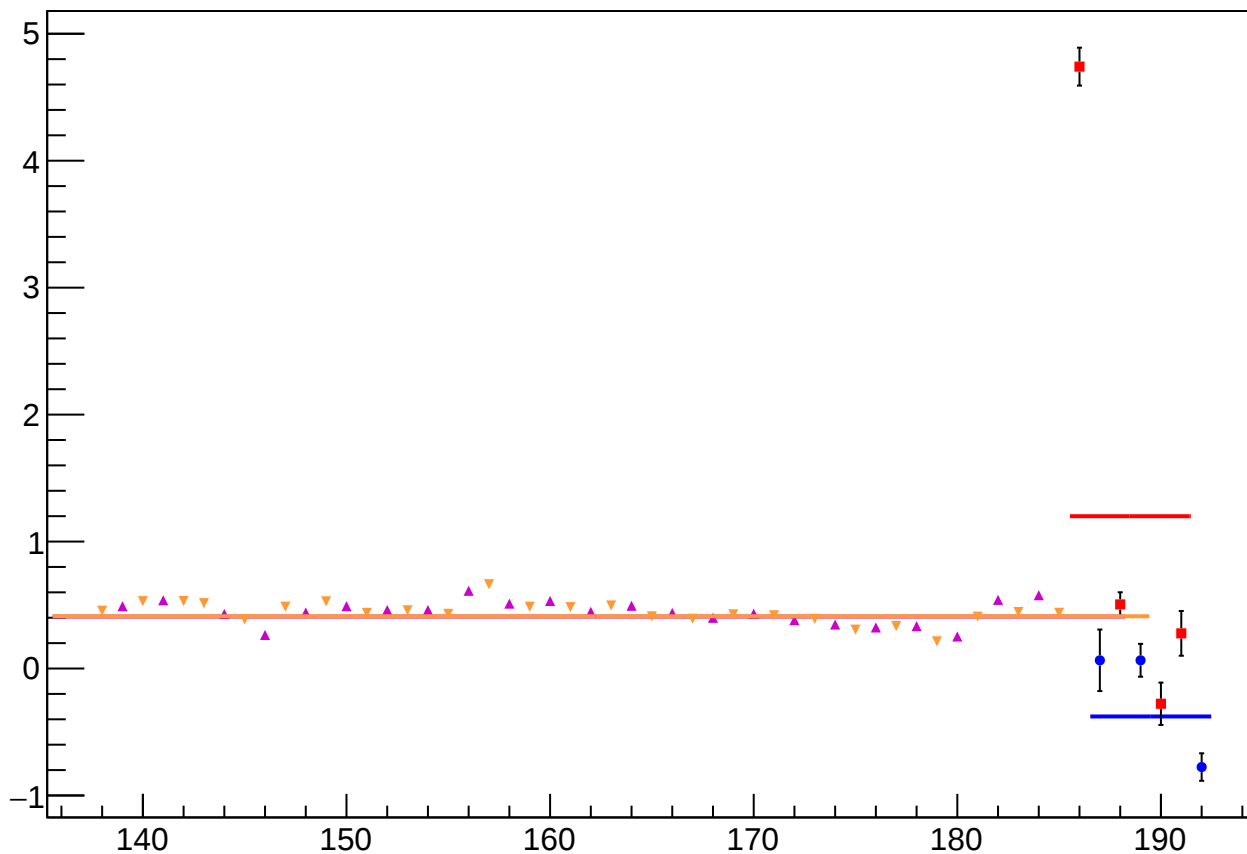
reg\_asym\_sam\_3726\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-12.724 \pm 1.981$   $\chi^2/\text{NDF}: 28.2/2$   
 Left Out:  $-15.266 \pm 0.086$   $\chi^2/\text{NDF}: 2595.5/24$   
 Right Out:  $-4.797 \pm 1.357$   $\chi^2/\text{NDF}: 9.6/3$   
 Left In:  $-14.936 \pm 0.087$   $\chi^2/\text{NDF}: 2199.7/22$

Left:  $-15.103 \pm 0.061$   $\chi^2/\text{NDF}: 4802.4/47$   
 Right:  $-7.327 \pm 1.119$   $\chi^2/\text{NDF}: 48.7/6$   
 In:  $-14.932 \pm 0.087$   $\chi^2/\text{NDF}: 2229.1/25$   
 Out:  $-15.224 \pm 0.086$   $\chi^2/\text{NDF}: 2664.4/28$   
 All:  $-15.080 \pm 0.061$   $\chi^2/\text{NDF}: 4899.3/54$

reg\_asym\_sam\_3726\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: -0.378+/-0.079  $\chi^2/\text{NDF}$ : 28.6/2

Left Out: 0.411+/-0.004  $\chi^2/\text{NDF}$ :428.7/24

Right Out: 1.200+/-0.067  $\chi^2/\text{NDF}$ : 720.7/3

Left In: 0.409+/-0.004  $\chi^2/\text{NDF}$ :557.8/22

Left: 0.410+/-0.003  $\chi^2/\text{NDF}$ : 986.7/47

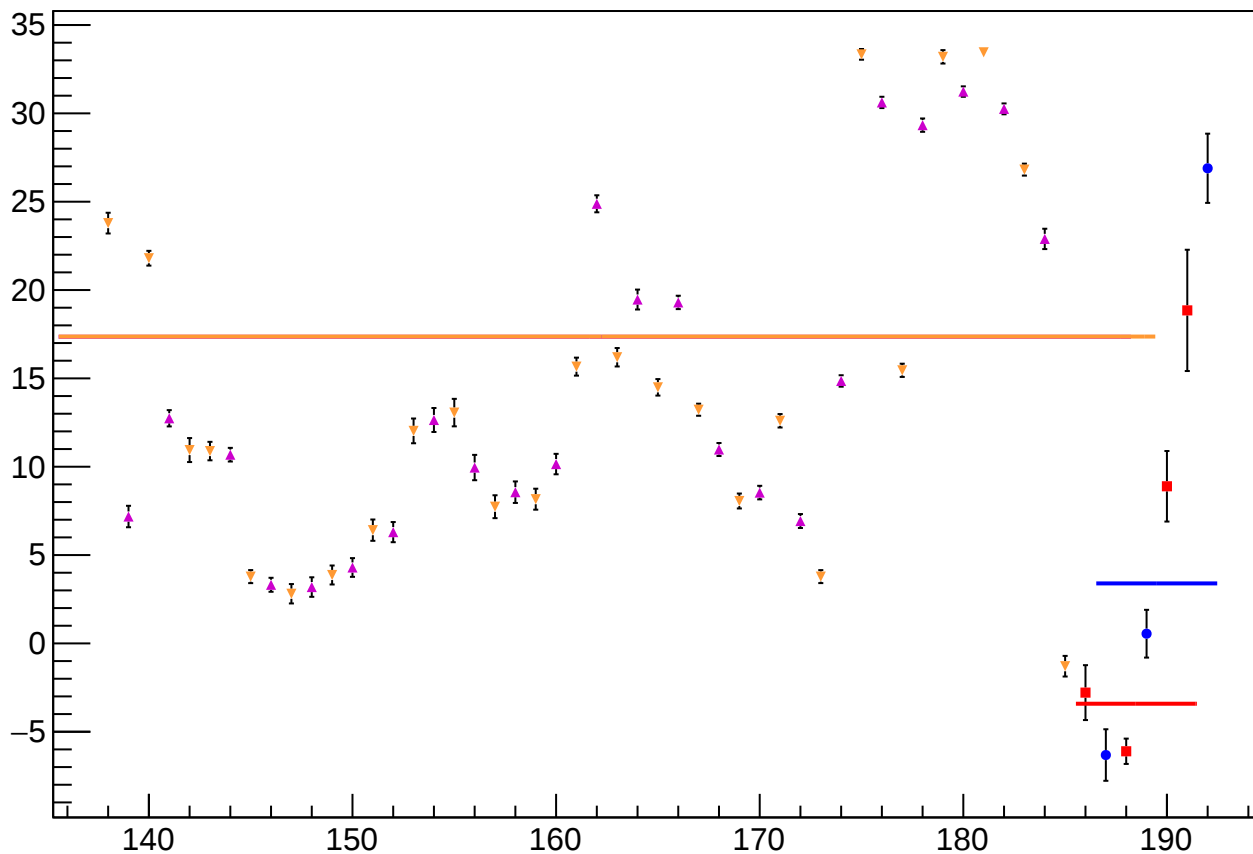
Right: 0.535+/-0.051  $\chi^2/\text{NDF}$ : 982.3/6

In: 0.407+/-0.004  $\chi^2/\text{NDF}$ :686.5/25

Out: 0.414+/-0.004  $\chi^2/\text{NDF}$ :1286.9/28

All: 0.411+/-0.003  $\chi^2/\text{NDF}$ : 1974.8/54

reg\_asym\_sam\_15\_48\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 3.395+/-0.885  $\chi^2/\text{NDF}$ : 192.6/2

Left Out: 17.367+/-0.087  $\chi^2/\text{NDF}$ : 16337.6/24

Right Out: -3.414+/-0.609  $\chi^2/\text{NDF}$ : 94.3/3

Left In: 17.355+/-0.089  $\chi^2/\text{NDF}$ : 12745.1/22

Left: 17.361+/-0.062  $\chi^2/\text{NDF}$ : 29082.8/47

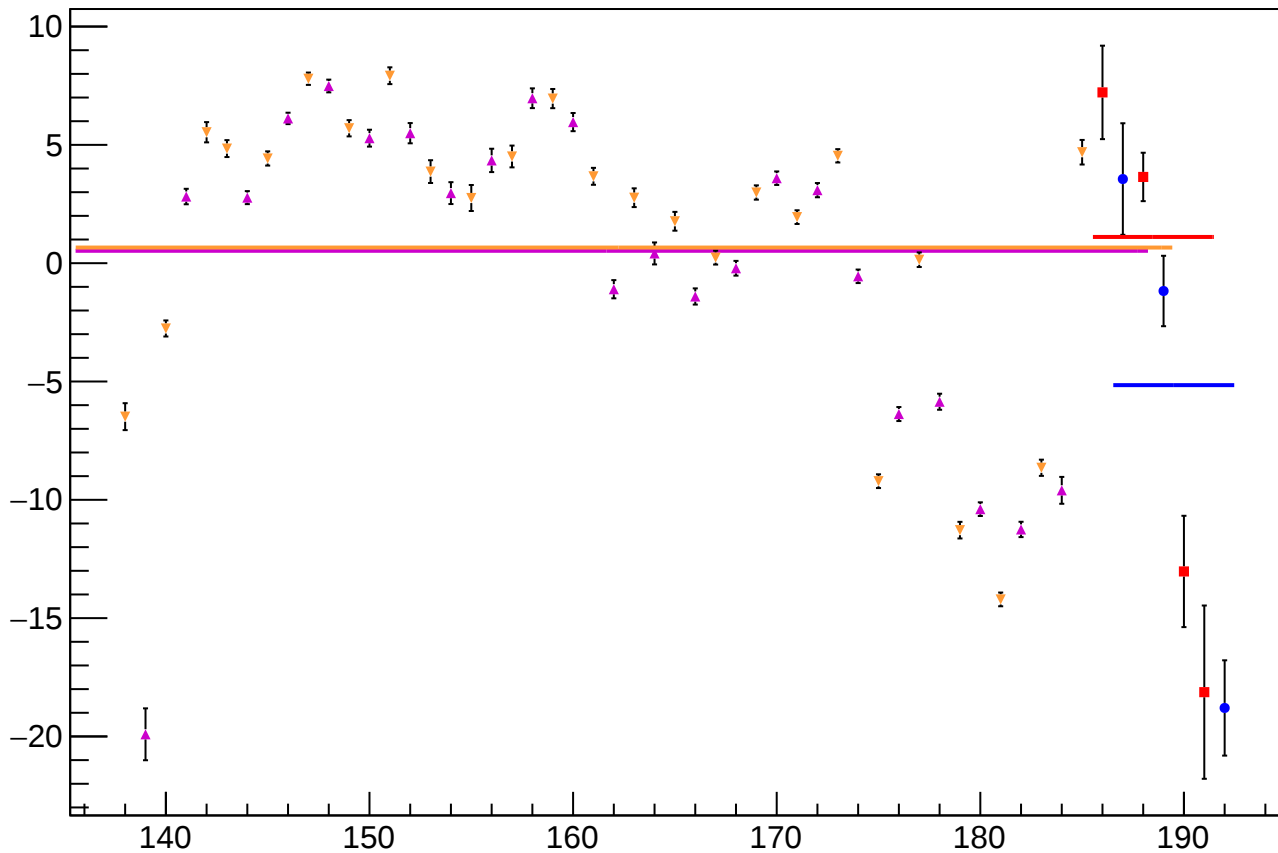
Right: -1.225+/-0.502  $\chi^2/\text{NDF}$ : 327.2/6

In: 17.216+/-0.088  $\chi^2/\text{NDF}$ : 13184.3/25

Out: 16.951+/-0.086  $\chi^2/\text{NDF}$ : 17573.1/28

All: 17.080+/-0.062  $\chi^2/\text{NDF}$ : 30762.0/54

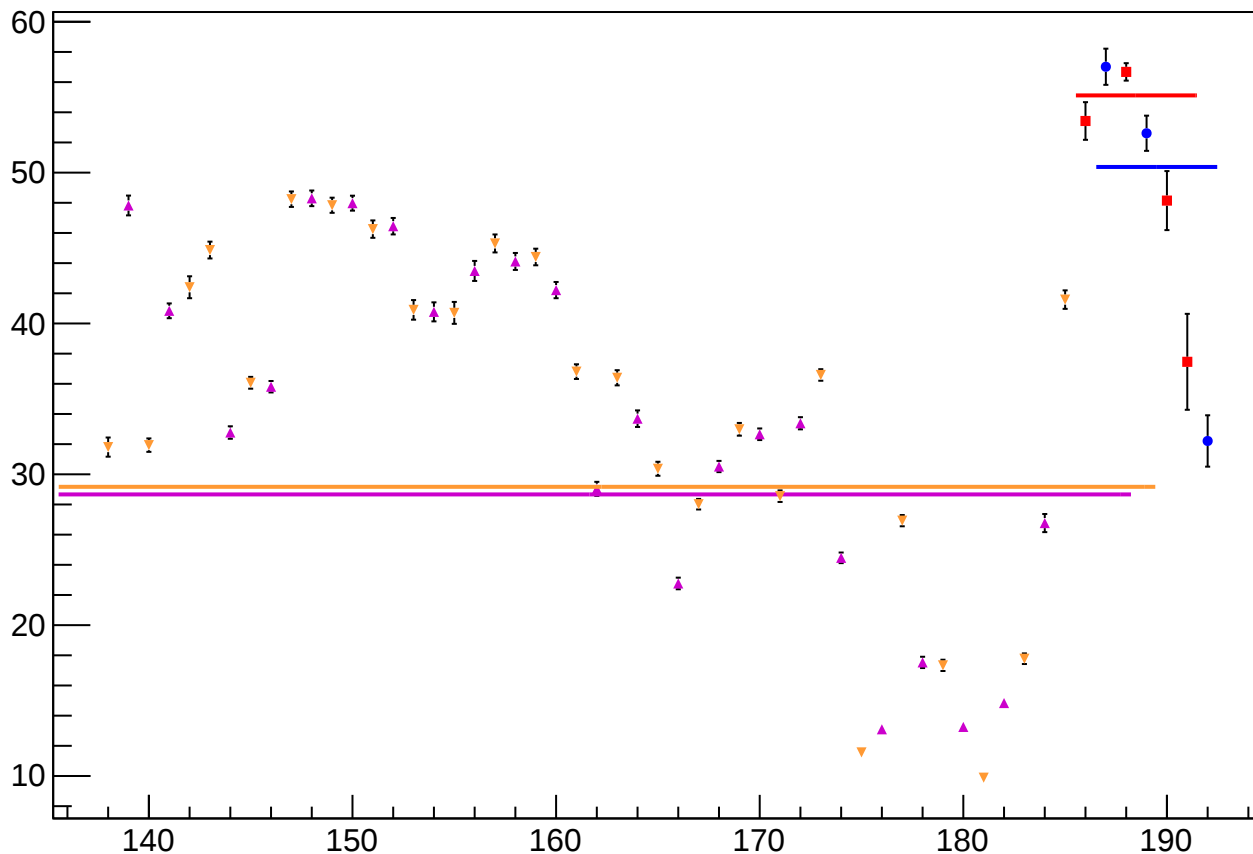
reg\_asym\_sam\_15\_48\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-5.154 \pm 1.067$   $\chi^2/\text{NDF}$ : 66.7/2  
 Left Out:  $0.661 \pm 0.069$   $\chi^2/\text{NDF}$ : 8553.9/24  
 Right Out:  $1.109 \pm 0.826$   $\chi^2/\text{NDF}$ : 79.4/3  
 Left In:  $0.524 \pm 0.071$   $\chi^2/\text{NDF}$ : 6729.7/22

Left:  $0.594 \pm 0.050$   $\chi^2/\text{NDF}$ : 15285.5/47  
 Right:  $-1.236 \pm 0.653$   $\chi^2/\text{NDF}$ : 167.7/6  
 In:  $0.499 \pm 0.071$   $\chi^2/\text{NDF}$ : 6824.6/25  
 Out:  $0.664 \pm 0.069$   $\chi^2/\text{NDF}$ : 8633.6/28  
 All:  $0.583 \pm 0.049$   $\chi^2/\text{NDF}$ : 15460.9/54

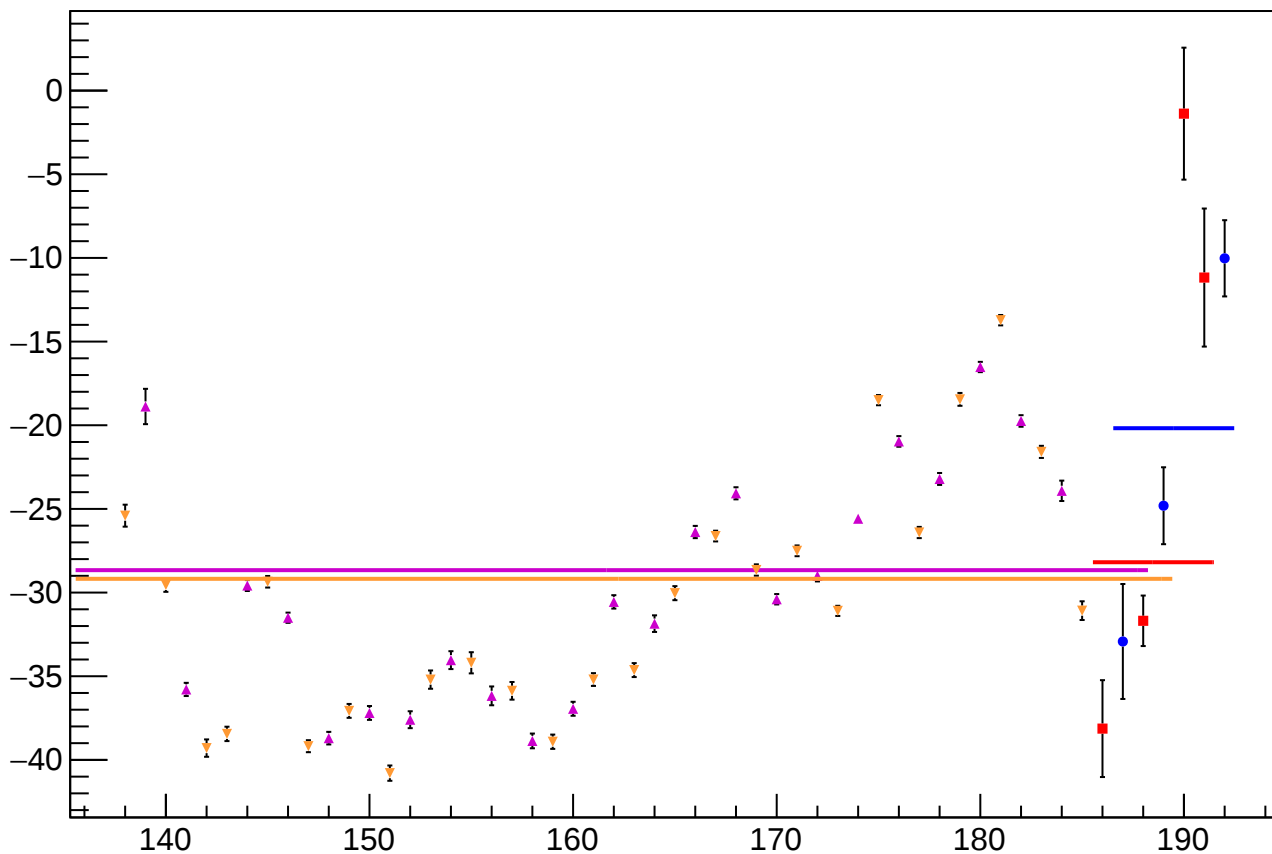
reg\_asym\_sam\_15\_48\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 50.376 $\pm$ 0.751  $\chi^2$ /NDF: 148.1/2  
 Left Out: 29.171 $\pm$ 0.088  $\chi^2$ /NDF:18974.7/24  
 Right Out: 55.119 $\pm$ 0.501  $\chi^2$ /NDF: 52.6/3  
 Left In: 28.667 $\pm$ 0.089  $\chi^2$ /NDF:16847.2/22

Left: 28.923 $\pm$ 0.063  $\chi^2$ /NDF: 35838.1/47  
 Right: 53.659 $\pm$ 0.416  $\chi^2$ /NDF: 228.4/6  
 In: 28.969 $\pm$ 0.089  $\chi^2$ /NDF:17820.3/25  
 Out: 29.945 $\pm$ 0.086  $\chi^2$ /NDF:21633.4/28  
 All: 29.468 $\pm$ 0.062  $\chi^2$ /NDF: 39515.9/54

reg\_asym\_sam\_15\_48\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



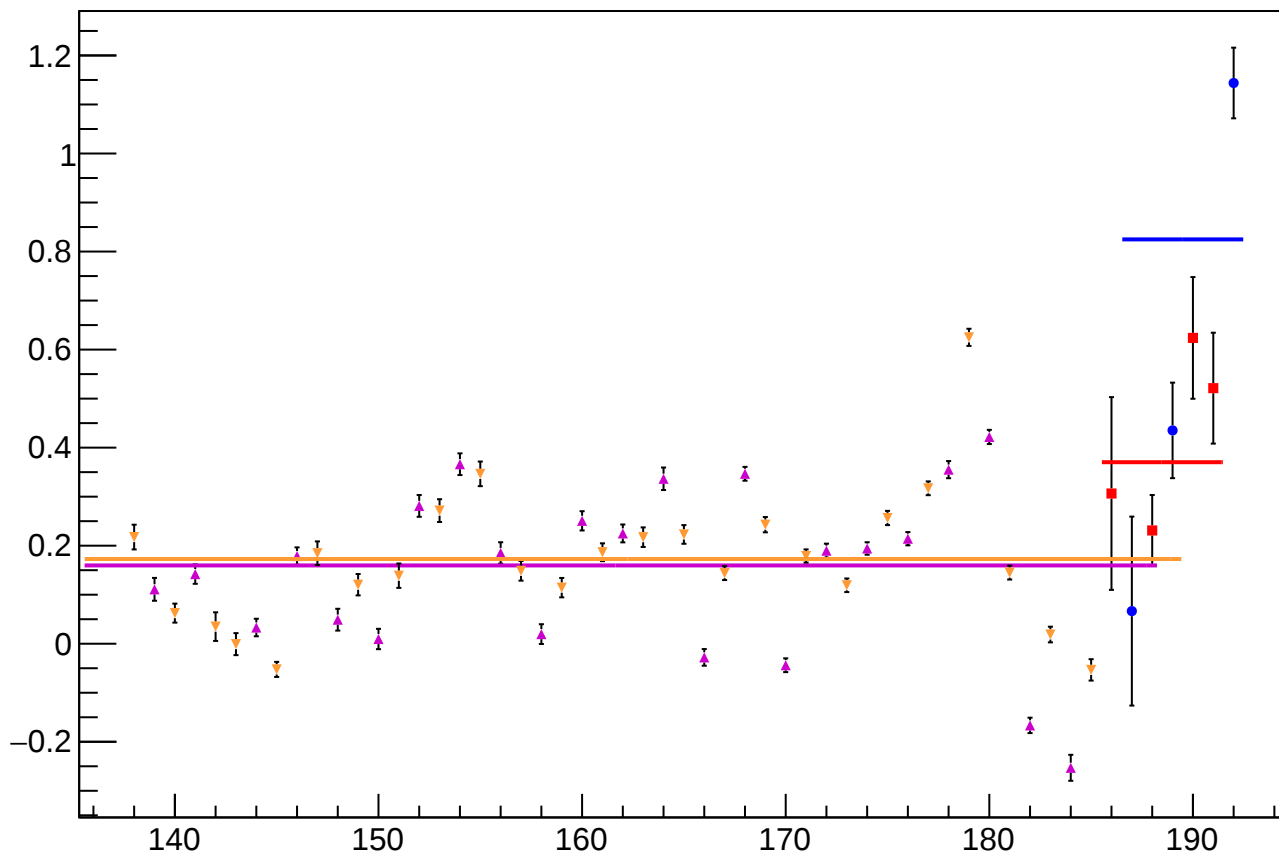
Right In:  $-20.177 \pm 1.464$   $\chi^2/\text{NDF}: 37.7/2$   
 Left Out:  $-29.178 \pm 0.078$   $\chi^2/\text{NDF}: 9081.4/24$   
 Right Out:  $-28.187 \pm 1.211$   $\chi^2/\text{NDF}: 80.4/3$   
 Left In:  $-28.660 \pm 0.080$   $\chi^2/\text{NDF}: 6670.1/22$

Left:  $-28.924 \pm 0.056$   $\chi^2/\text{NDF}: 15773.0/47$   
 Right:  $-24.931 \pm 0.933$   $\chi^2/\text{NDF}: 135.9/6$

In:  $-28.635 \pm 0.080$   $\chi^2/\text{NDF}: 6741.3/25$   
 Out:  $-29.174 \pm 0.078$   $\chi^2/\text{NDF}: 9162.5/28$

All:  $-28.910 \pm 0.056$   $\chi^2/\text{NDF}: 15927.1/54$

reg\_asym\_sam\_15\_48\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $0.825 \pm 0.055$   $\chi^2/\text{NDF}$ : 51.1/2

Left Out:  $0.173 \pm 0.004$   $\chi^2/\text{NDF}$ : 1478.5/24

Right Out:  $0.370 \pm 0.053$   $\chi^2/\text{NDF}$ : 9.8/3

Left In:  $0.160 \pm 0.004$   $\chi^2/\text{NDF}$ : 2057.9/22

Left:  $0.166 \pm 0.003$   $\chi^2/\text{NDF}$ : 3542.9/47

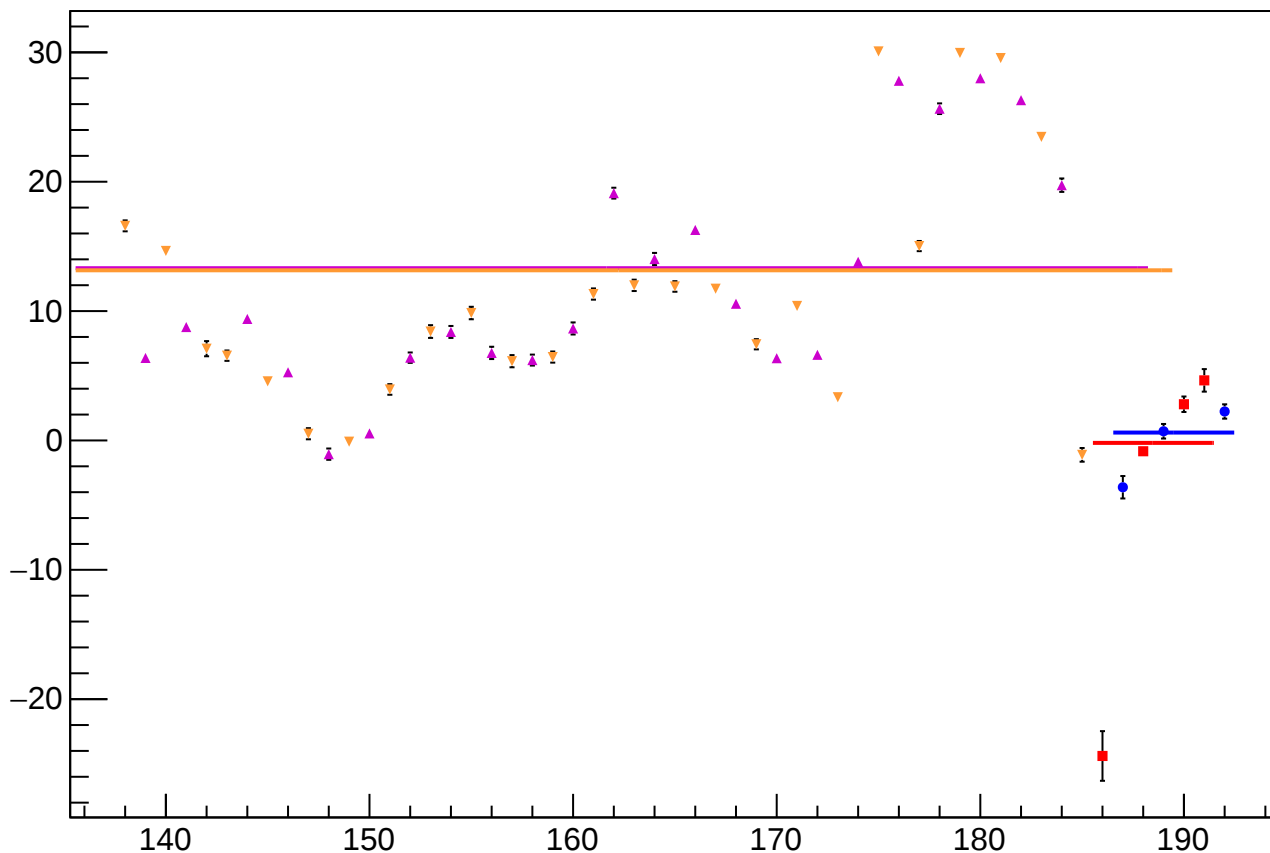
Right:  $0.586 \pm 0.038$   $\chi^2/\text{NDF}$ : 96.1/6

In:  $0.163 \pm 0.004$   $\chi^2/\text{NDF}$ : 2252.1/25

Out:  $0.174 \pm 0.004$   $\chi^2/\text{NDF}$ : 1502.2/28

All:  $0.168 \pm 0.003$   $\chi^2/\text{NDF}$ : 3759.0/54

reg\_asym\_sam\_37\_48\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $0.610 \pm 0.360$   $\chi^2/\text{NDF}: 32.4/2$

Left Out:  $13.153 \pm 0.075$   $\chi^2/\text{NDF}: 17079.7/24$

Right Out:  $-0.189 \pm 0.243$   $\chi^2/\text{NDF}: 220.0/3$

Left In:  $13.315 \pm 0.077$   $\chi^2/\text{NDF}: 13977.7/22$

Left:  $13.232 \pm 0.054$   $\chi^2/\text{NDF}: 31059.6/47$

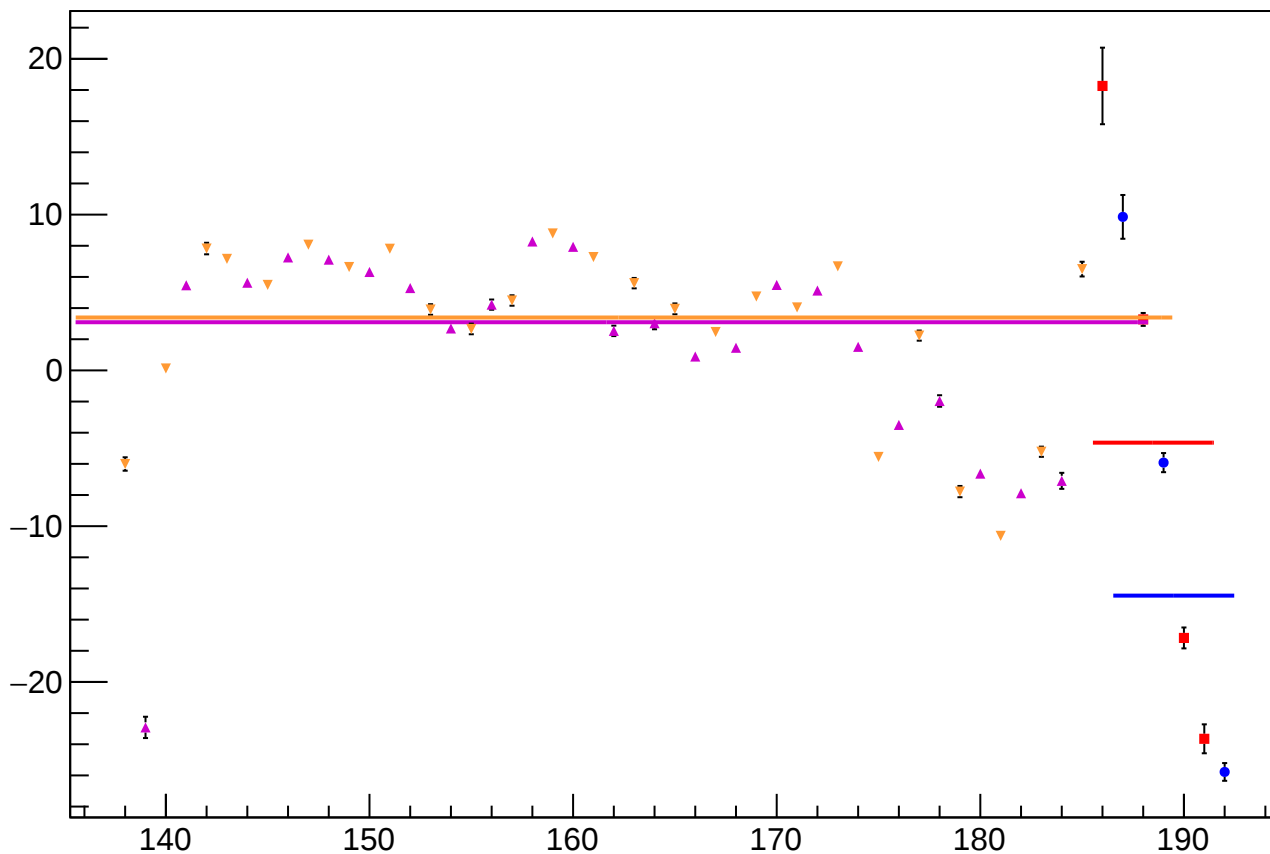
Right:  $0.061 \pm 0.201$   $\chi^2/\text{NDF}: 255.8/6$

In:  $12.757 \pm 0.075$   $\chi^2/\text{NDF}: 15203.6/25$

Out:  $11.985 \pm 0.072$   $\chi^2/\text{NDF}: 20054.6/28$

All:  $12.352 \pm 0.052$   $\chi^2/\text{NDF}: 35313.1/54$

reg\_asym\_sam\_37\_48\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: -14.458 $\pm$ 0.400  $\chi^2$ /NDF: 888.3/2

Left Out: 3.396 $\pm$ 0.058  $\chi^2$ /NDF:8101.5/24

Right Out: -4.639 $\pm$ 0.327  $\chi^2$ /NDF: 1218.8/3

Left In: 3.092 $\pm$ 0.061  $\chi^2$ /NDF:7104.4/22

Left: 3.250 $\pm$ 0.042  $\chi^2$ /NDF: 15218.9/47

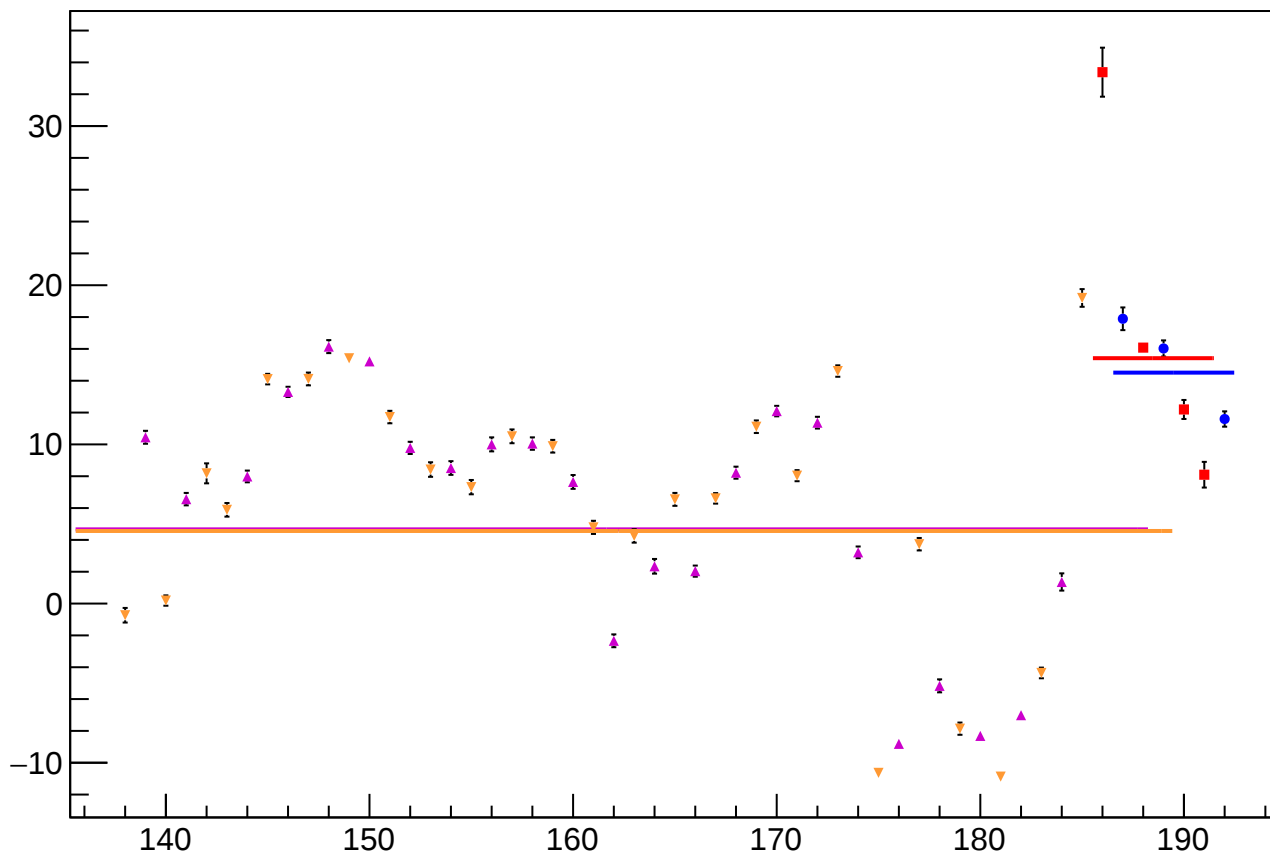
Right: -8.567 $\pm$ 0.253  $\chi^2$ /NDF: 2468.5/6

In: 2.699 $\pm$ 0.060  $\chi^2$ /NDF:9873.8/25

Out: 3.147 $\pm$ 0.057  $\chi^2$ /NDF:9906.3/28

All: 2.932 $\pm$ 0.041  $\chi^2$ /NDF: 19809.3/54

reg\_asym\_sam\_37\_48\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 14.509+/-0.314  $\chi^2/\text{NDF}$ : 68.0/2

Left Out: 4.561+/-0.075  $\chi^2/\text{NDF}$ :13592.1/24

Right Out: 15.417+/-0.205  $\chi^2/\text{NDF}$ : 255.9/3

Left In: 4.662+/-0.077  $\chi^2/\text{NDF}$ :11281.5/22

Left: 4.610+/-0.054  $\chi^2/\text{NDF}$ : 24874.4/47

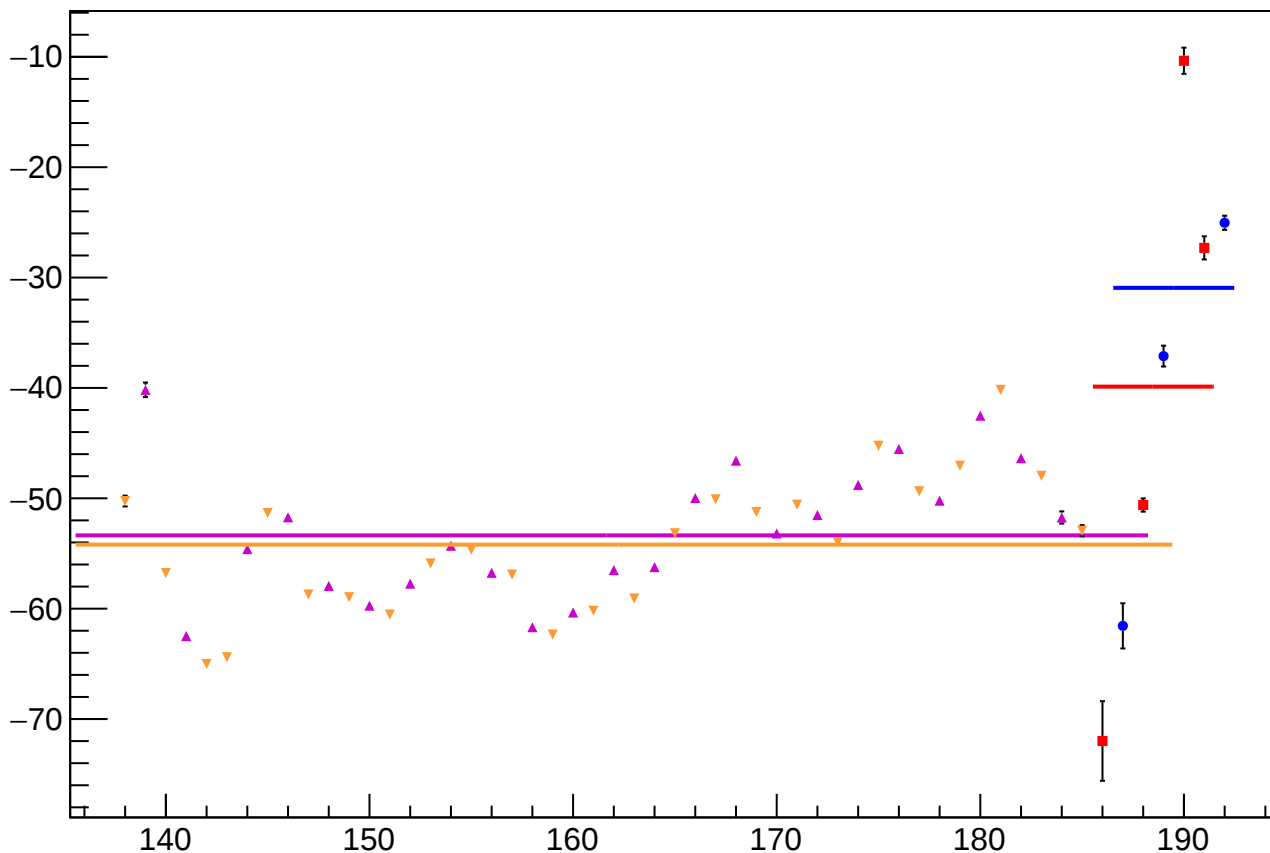
Right: 15.146+/-0.171  $\chi^2/\text{NDF}$ : 329.7/6

In: 5.219+/-0.075  $\chi^2/\text{NDF}$ :12278.5/25

Out: 5.858+/-0.071  $\chi^2/\text{NDF}$ :16326.0/28

All: 5.555+/-0.051  $\chi^2/\text{NDF}$ : 28643.2/54

reg\_asym\_sam\_37\_48\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-30.934 \pm 0.515$   $\chi^2/\text{NDF}: 350.6/2$   
 Left Out:  $-54.199 \pm 0.066$   $\chi^2/\text{NDF}: 8454.7/24$   
 Right Out:  $-39.881 \pm 0.472$   $\chi^2/\text{NDF}: 1161.4/3$   
 Left In:  $-53.359 \pm 0.068$   $\chi^2/\text{NDF}: 6882.0/22$

Left:  $-53.792 \pm 0.048$   $\chi^2/\text{NDF}: 15414.3/47$

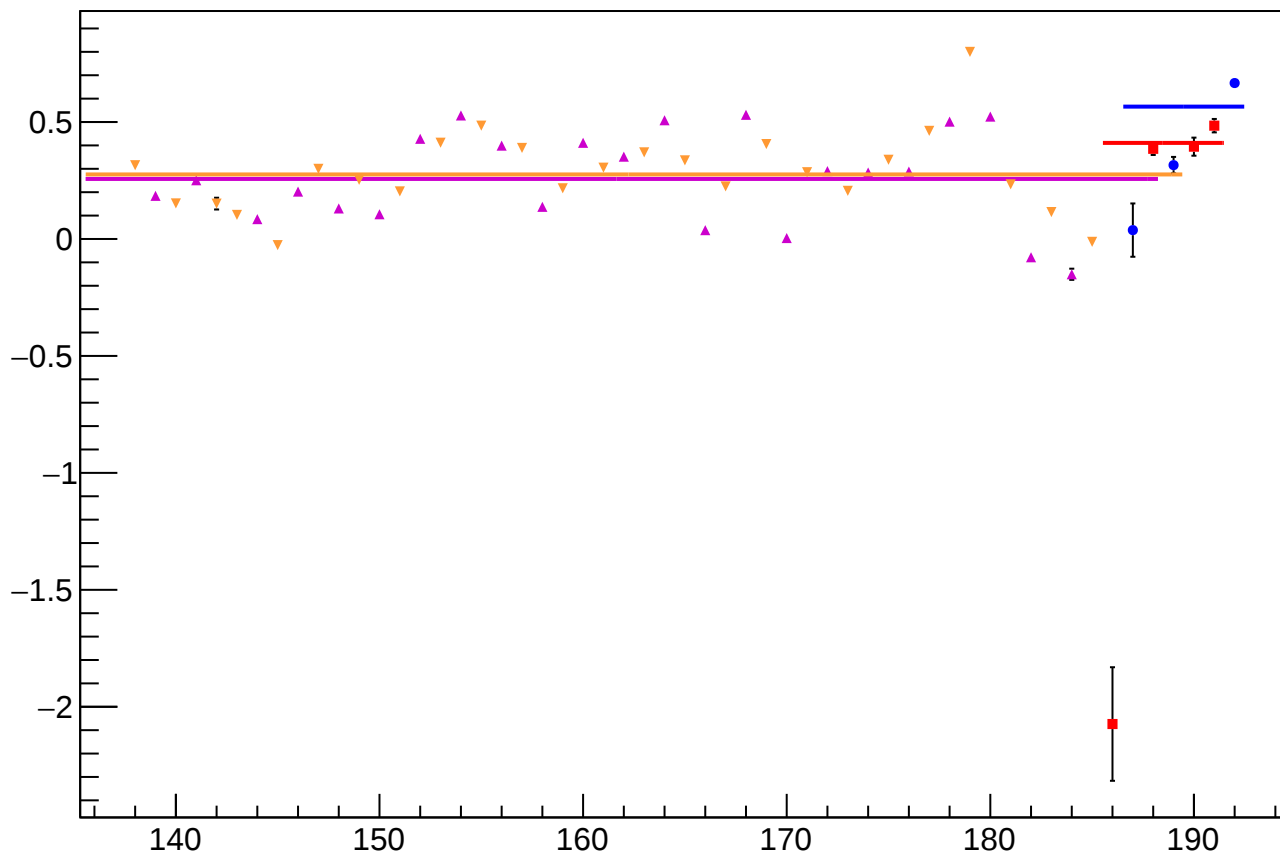
Right:  $-35.793 \pm 0.348$   $\chi^2/\text{NDF}: 1676.1/6$

In:  $-52.969 \pm 0.068$   $\chi^2/\text{NDF}: 9097.2/25$

Out:  $-53.921 \pm 0.066$   $\chi^2/\text{NDF}: 10517.7/28$

All:  $-53.460 \pm 0.047$   $\chi^2/\text{NDF}: 19716.5/54$

reg\_asym\_sam\_37\_48\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.566 $\pm$ 0.017  $\chi^2$ /NDF: 96.7/2

Left Out: 0.276 $\pm$ 0.003  $\chi^2$ /NDF: 2623.6/24

Right Out: 0.411 $\pm$ 0.017  $\chi^2$ /NDF: 112.4/3

Left In: 0.257 $\pm$ 0.003  $\chi^2$ /NDF: 3623.9/22

Left: 0.266 $\pm$ 0.002  $\chi^2$ /NDF: 6267.0/47

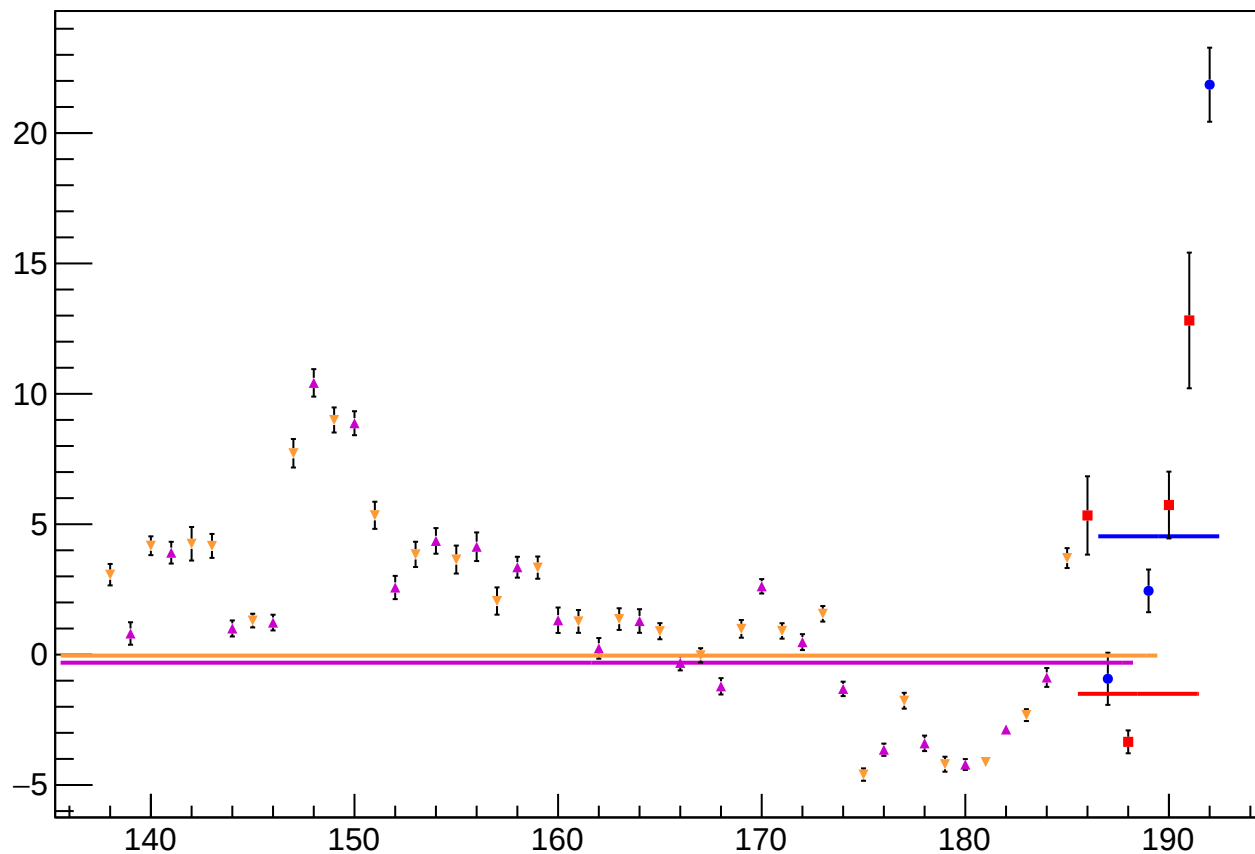
Right: 0.488 $\pm$ 0.012  $\chi^2$ /NDF: 249.1/6

In: 0.266 $\pm$ 0.003  $\chi^2$ /NDF: 4026.7/25

Out: 0.280 $\pm$ 0.003  $\chi^2$ /NDF: 2794.9/28

All: 0.273 $\pm$ 0.002  $\chi^2$ /NDF: 6831.9/54

reg\_asym\_sam\_15\_26\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $4.537 \pm 0.578$   $\chi^2/\text{NDF}: 185.1/2$

Left Out:  $-0.037 \pm 0.066$   $\chi^2/\text{NDF}: 2637.7/24$

Right Out:  $-1.503 \pm 0.396$   $\chi^2/\text{NDF}: 100.6/3$

Left In:  $-0.310 \pm 0.067$   $\chi^2/\text{NDF}: 2250.5/22$

Left:  $-0.171 \pm 0.047$   $\chi^2/\text{NDF}: 4896.5/47$

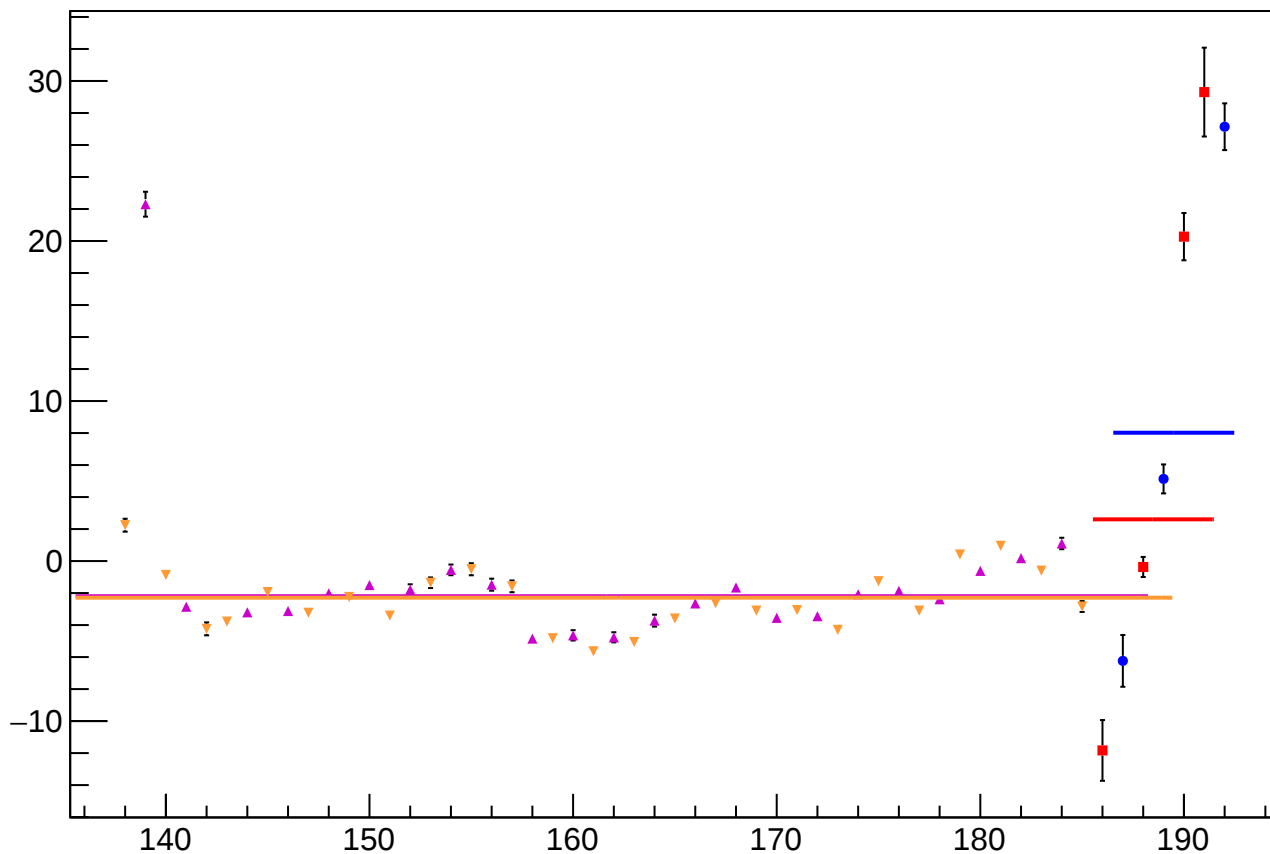
Right:  $0.421 \pm 0.327$   $\chi^2/\text{NDF}: 360.0/6$

In:  $-0.245 \pm 0.067$   $\chi^2/\text{NDF}: 2504.8/25$

Out:  $-0.077 \pm 0.065$   $\chi^2/\text{NDF}: 2751.6/28$

All:  $-0.159 \pm 0.047$   $\chi^2/\text{NDF}: 5259.7/54$

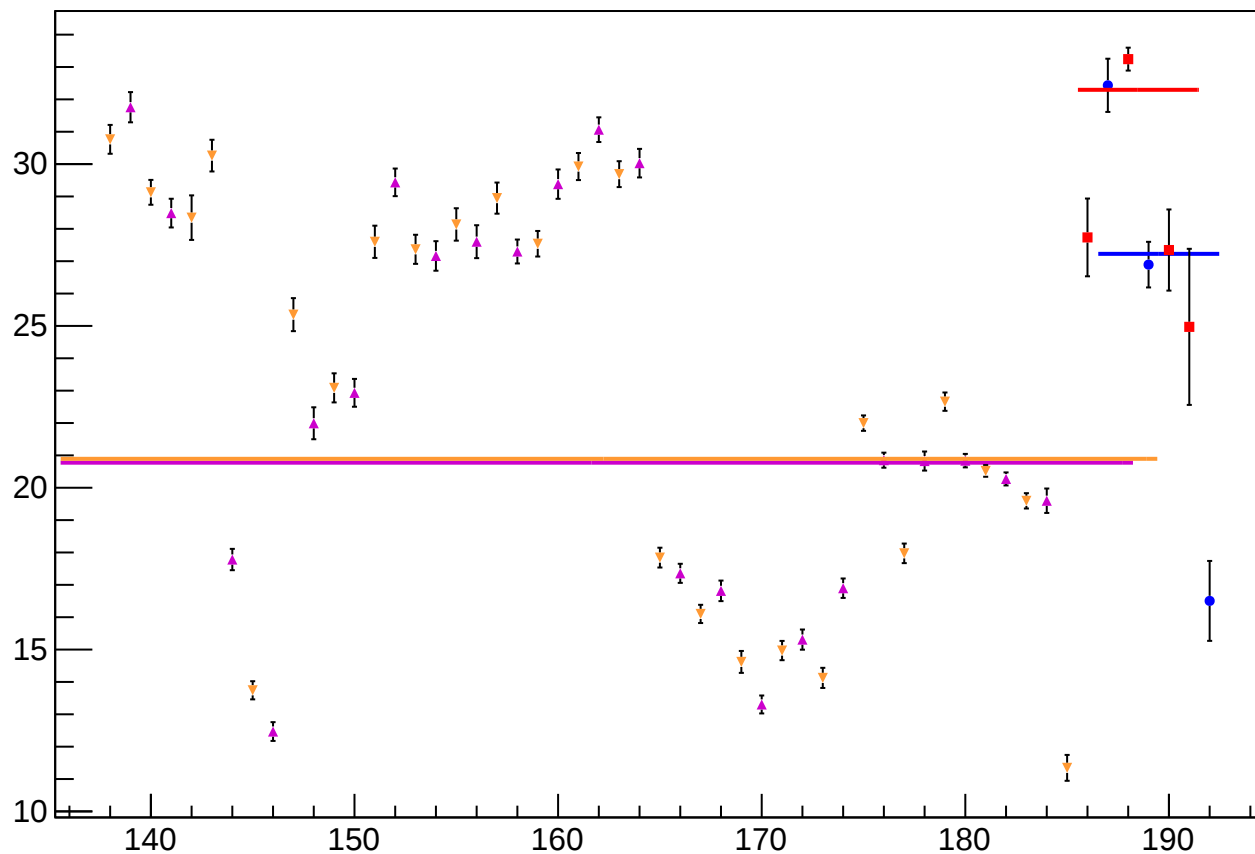
reg\_asym\_sam\_15\_26\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $8.019 \pm 0.695$   $\chi^2/\text{NDF}: 259.3/2$   
 Left Out:  $-2.288 \pm 0.054$   $\chi^2/\text{NDF}: 1137.7/24$   
 Right Out:  $2.607 \pm 0.542$   $\chi^2/\text{NDF}: 315.9/3$   
 Left In:  $-2.198 \pm 0.055$   $\chi^2/\text{NDF}: 1673.9/22$

Left:  $-2.244 \pm 0.039$   $\chi^2/\text{NDF}: 2813.0/47$   
 Right:  $4.655 \pm 0.427$   $\chi^2/\text{NDF}: 613.0/6$   
 In:  $-2.134 \pm 0.055$   $\chi^2/\text{NDF}: 2148.1/25$   
 Out:  $-2.240 \pm 0.054$   $\chi^2/\text{NDF}: 1534.4/28$   
 All:  $-2.188 \pm 0.038$   $\chi^2/\text{NDF}: 3684.3/54$

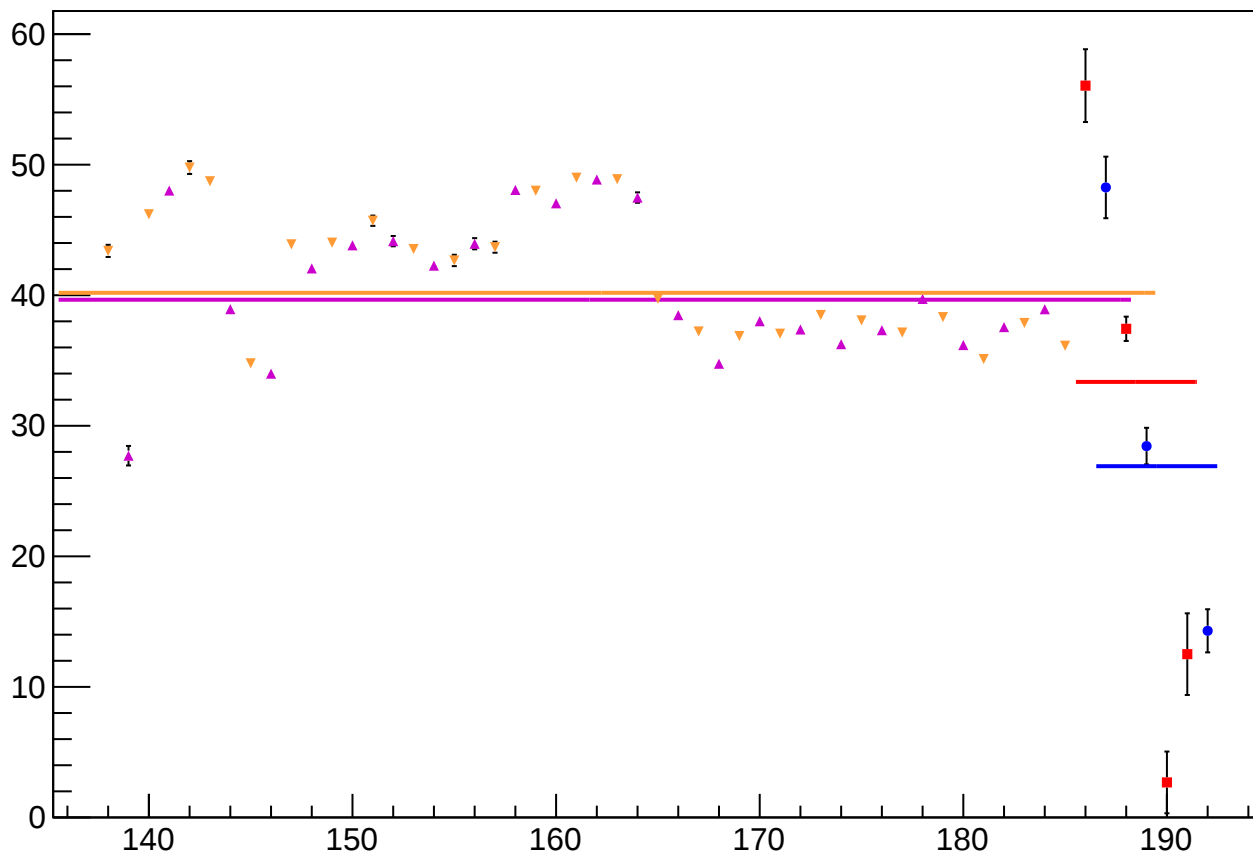
reg\_asym\_sam\_15\_26\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $27.227 \pm 0.491$   $\chi^2/\text{NDF}: 115.8/2$   
 Left Out:  $20.894 \pm 0.067$   $\chi^2/\text{NDF}: 6655.4/24$   
 Right Out:  $32.295 \pm 0.325$   $\chi^2/\text{NDF}: 46.4/3$   
 Left In:  $20.774 \pm 0.068$   $\chi^2/\text{NDF}: 5927.9/22$

Left:  $20.835 \pm 0.047$   $\chi^2/\text{NDF}: 12584.8/47$   
 Right:  $30.753 \pm 0.271$   $\chi^2/\text{NDF}: 236.3/6$   
 In:  $20.894 \pm 0.067$   $\chi^2/\text{NDF}: 6213.2/25$   
 Out:  $21.356 \pm 0.065$   $\chi^2/\text{NDF}: 7884.5/28$   
 All:  $21.130 \pm 0.047$   $\chi^2/\text{NDF}: 14122.0/54$

reg\_asym\_sam\_15\_26\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 26.905 $\pm$ 0.974  $\chi^2$ /NDF: 141.5/2

Left Out: 40.186 $\pm$ 0.060  $\chi^2$ /NDF: 5932.7/24

Right Out: 33.361 $\pm$ 0.799  $\chi^2$ /NDF: 298.2/3

Left In: 39.655 $\pm$ 0.061  $\chi^2$ /NDF: 5298.6/22

Left: 39.925 $\pm$ 0.043  $\chi^2$ /NDF: 11269.2/47

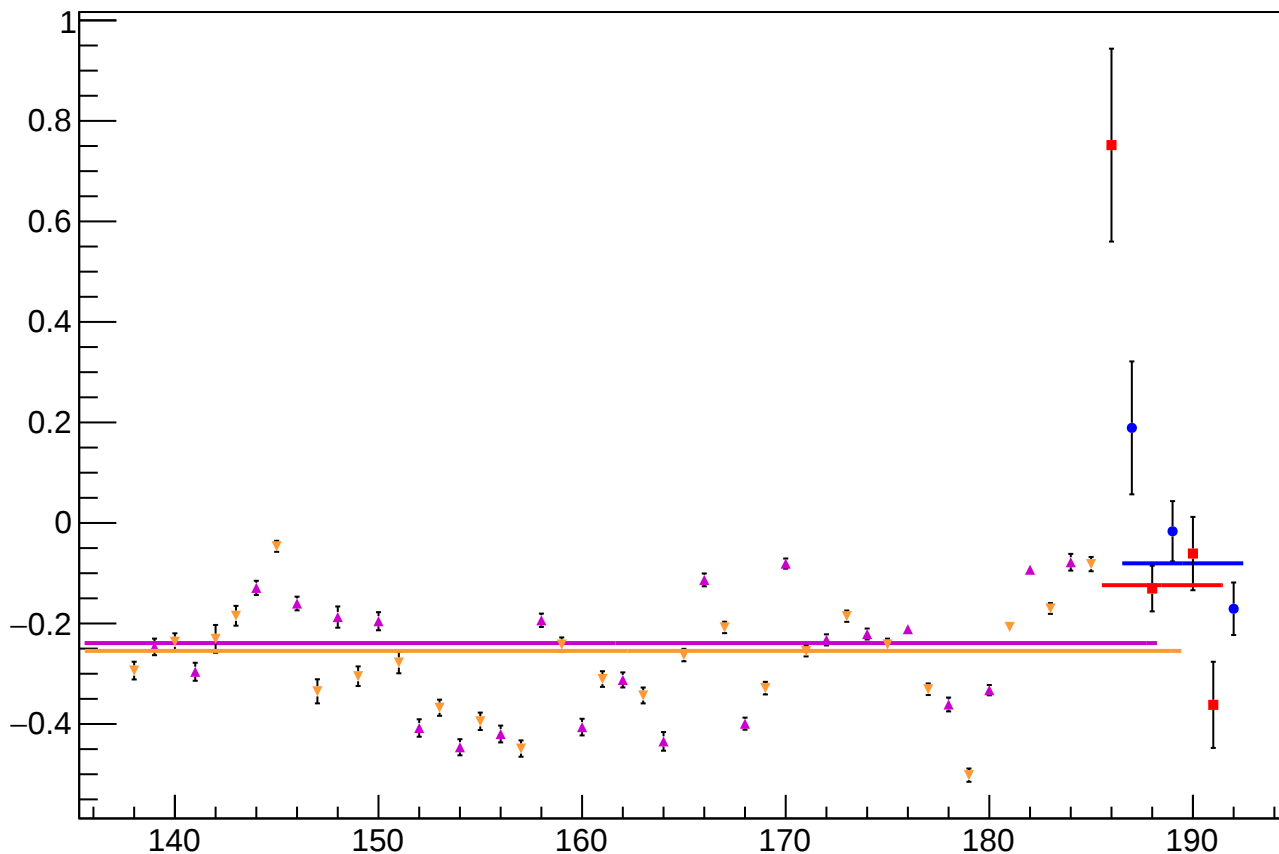
Right: 30.762 $\pm$ 0.618  $\chi^2$ /NDF: 465.9/6

In: 39.605 $\pm$ 0.061  $\chi^2$ /NDF: 5610.8/25

Out: 40.147 $\pm$ 0.060  $\chi^2$ /NDF: 6303.4/28

All: 39.881 $\pm$ 0.043  $\chi^2$ /NDF: 11954.1/54

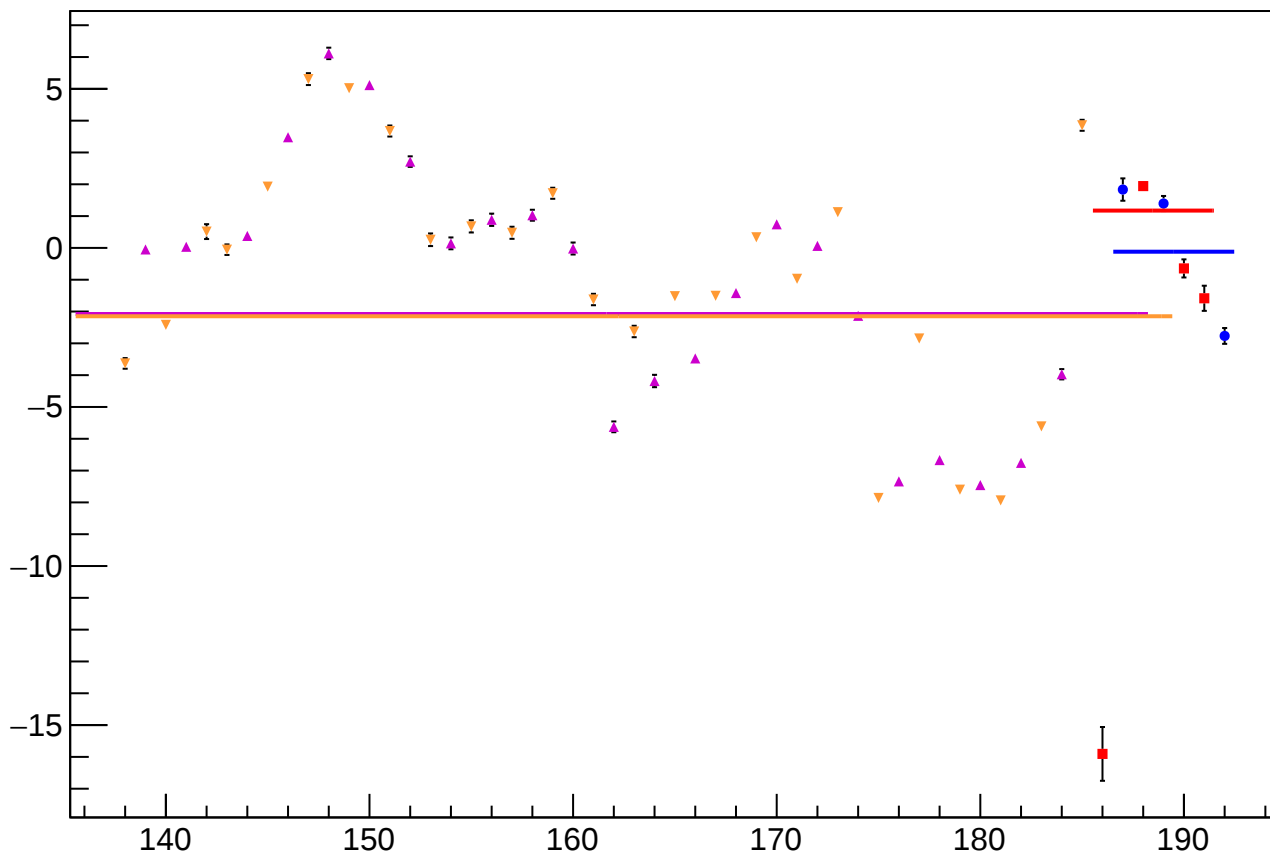
reg\_asym\_sam\_15\_26\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.080 \pm 0.038$   $\chi^2/\text{NDF}$ : 8.3/2  
 Left Out:  $-0.255 \pm 0.003$   $\chi^2/\text{NDF}$ : 1420.4/24  
 Right Out:  $-0.124 \pm 0.035$   $\chi^2/\text{NDF}$ : 29.3/3  
 Left In:  $-0.239 \pm 0.003$   $\chi^2/\text{NDF}$ : 1750.5/22

Left:  $-0.247 \pm 0.002$   $\chi^2/\text{NDF}$ : 3186.7/47  
 Right:  $-0.104 \pm 0.026$   $\chi^2/\text{NDF}$ : 38.3/6  
 In:  $-0.238 \pm 0.003$   $\chi^2/\text{NDF}$ : 1776.3/25  
 Out:  $-0.254 \pm 0.003$   $\chi^2/\text{NDF}$ : 1463.9/28  
 All:  $-0.246 \pm 0.002$   $\chi^2/\text{NDF}$ : 3256.2/54

reg\_asym\_sam\_37\_26\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected

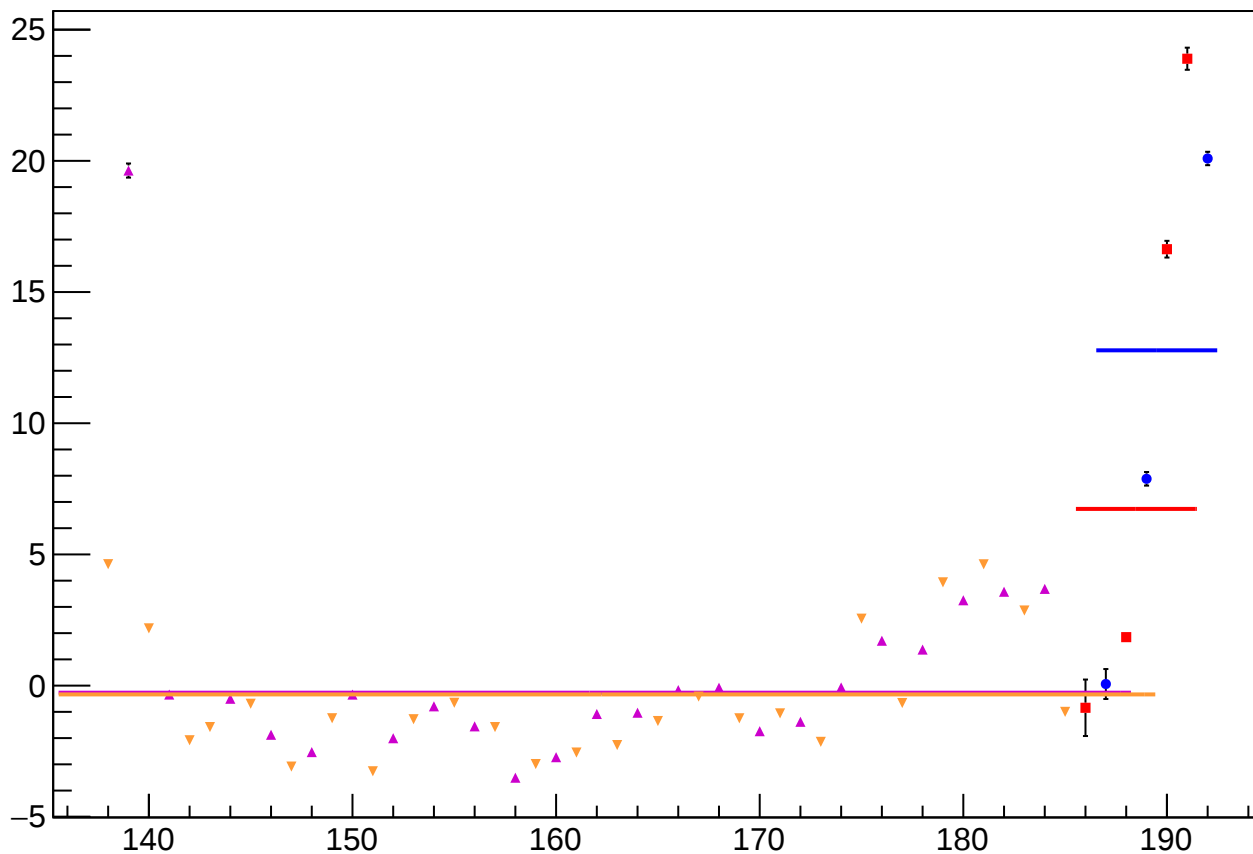


Right In:  $-0.119 \pm 0.154$   $\chi^2/\text{NDF}: 184.9/2$   
 Left Out:  $-2.149 \pm 0.026$   $\chi^2/\text{NDF}: 24536.3/24$   
 Right Out:  $1.173 \pm 0.098$   $\chi^2/\text{NDF}: 546.9/3$   
 Left In:  $-2.078 \pm 0.026$   $\chi^2/\text{NDF}: 23245.8/22$

Left:  $-2.114 \pm 0.018$   $\chi^2/\text{NDF}: 47785.8/47$   
 Right:  $0.800 \pm 0.083$   $\chi^2/\text{NDF}: 781.7/6$   
 In:  $-2.024 \pm 0.026$   $\chi^2/\text{NDF}: 23587.4/25$   
 Out:  $-1.938 \pm 0.025$   $\chi^2/\text{NDF}: 26150.8/28$

All:  $-1.979 \pm 0.018$   $\chi^2/\text{NDF}: 49744.0/54$

reg\_asym\_sam\_37\_26\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



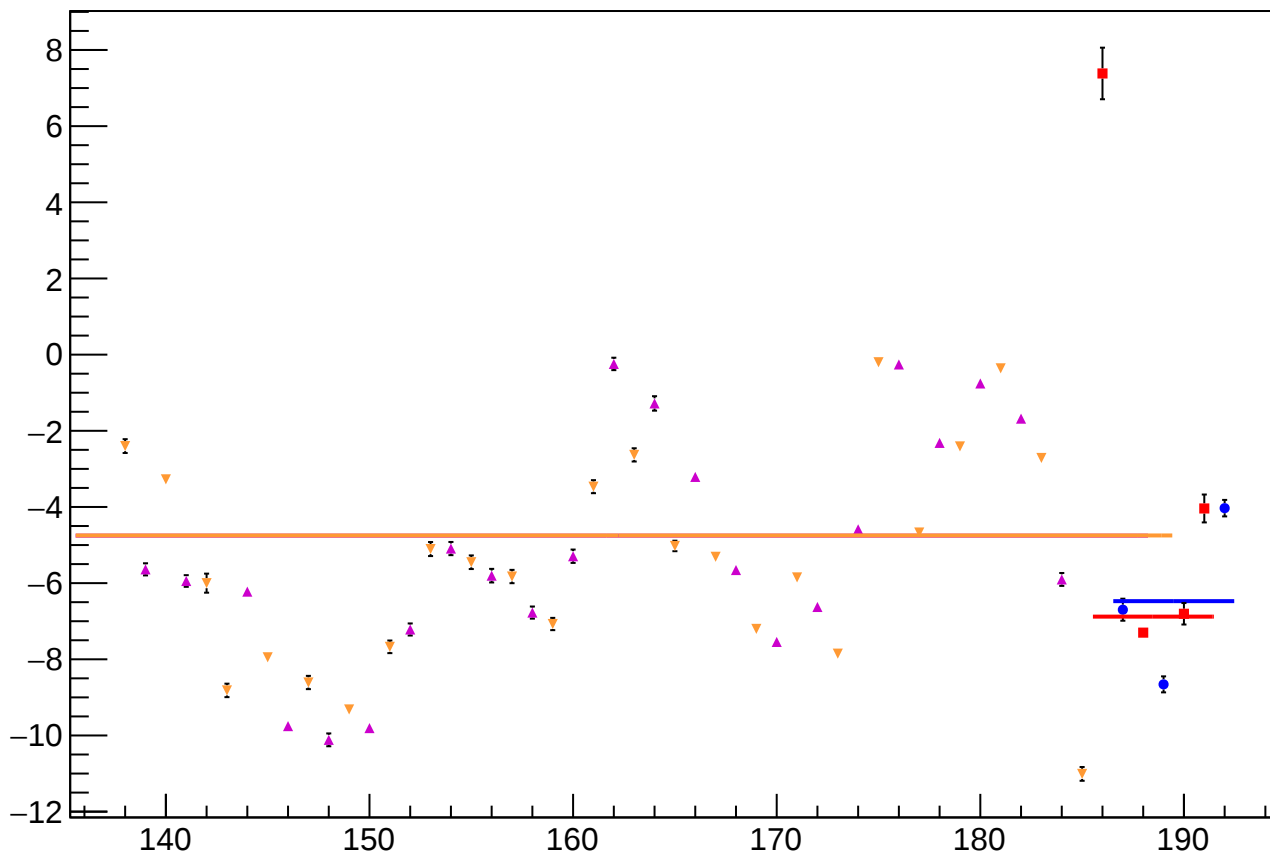
Right In: 12.779+/-0.173  $\chi^2/\text{NDF}$ : 1672.2/2  
 Left Out: -0.335+/-0.021  $\chi^2/\text{NDF}$ : 12596.1/24  
 Right Out: 6.735+/-0.135  $\chi^2/\text{NDF}$ : 3589.1/3  
 Left In: -0.269+/-0.021  $\chi^2/\text{NDF}$ : 13323.1/22

Left: -0.303+/-0.015  $\chi^2/\text{NDF}$ : 25924.2/47  
 Right: 9.020+/-0.107  $\chi^2/\text{NDF}$ : 6017.3/6

In: -0.082+/-0.021  $\chi^2/\text{NDF}$ : 20579.7/25  
 Out: -0.175+/-0.020  $\chi^2/\text{NDF}$ : 18859.3/28

All: -0.129+/-0.015  $\chi^2/\text{NDF}$ : 39449.3/54

reg\_asym\_sam\_37\_26\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



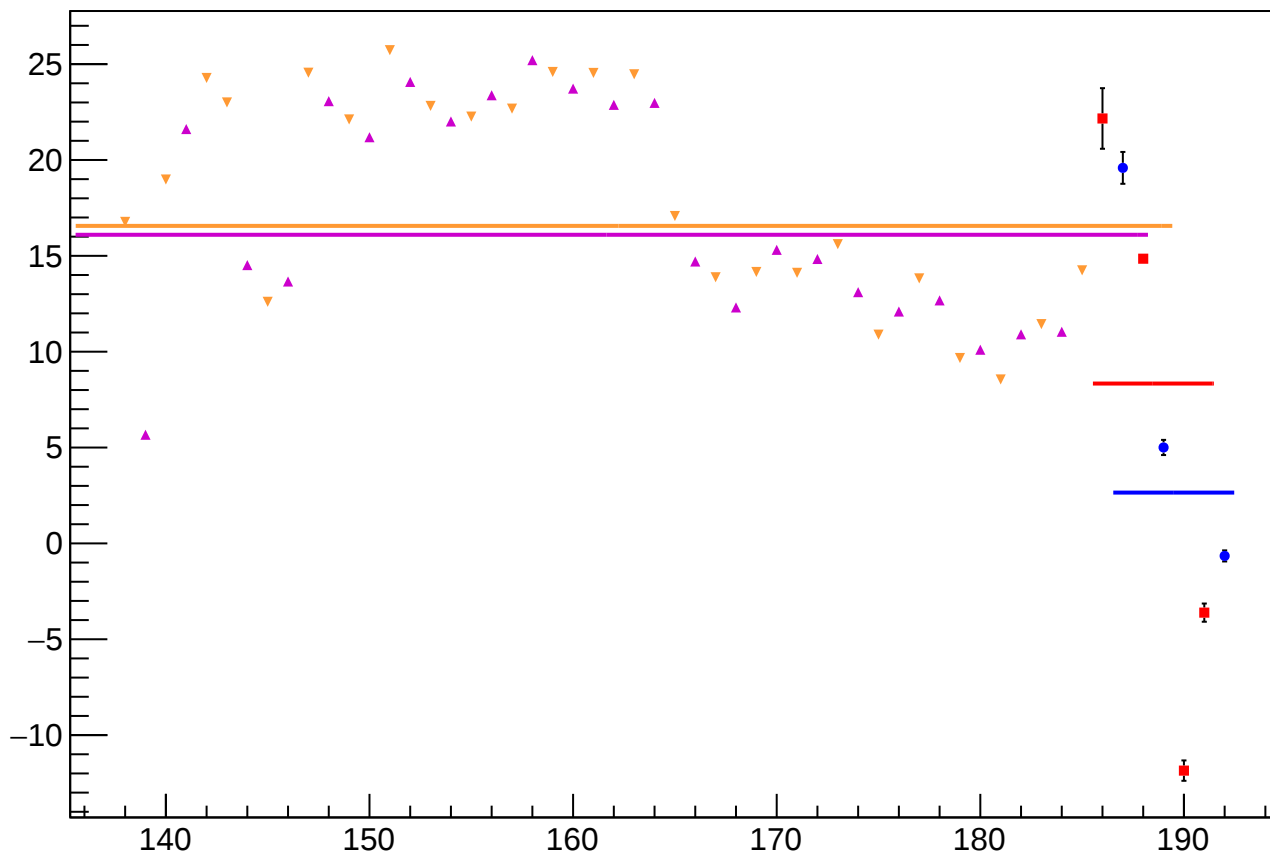
Right In:  $-6.473 \pm 0.134$   $\chi^2/\text{NDF}: 235.9/2$   
 Left Out:  $-4.748 \pm 0.026$   $\chi^2/\text{NDF}: 13289.8/24$   
 Right Out:  $-6.879 \pm 0.082$   $\chi^2/\text{NDF}: 526.1/3$   
 Left In:  $-4.753 \pm 0.026$   $\chi^2/\text{NDF}: 14119.2/22$

Left:  $-4.751 \pm 0.018$   $\chi^2/\text{NDF}: 27409.0/47$   
 Right:  $-6.768 \pm 0.070$   $\chi^2/\text{NDF}: 768.6/6$

In:  $-4.816 \pm 0.026$   $\chi^2/\text{NDF}: 14514.3/25$   
 Out:  $-4.940 \pm 0.025$   $\chi^2/\text{NDF}: 14430.4/28$

All:  $-4.881 \pm 0.018$   $\chi^2/\text{NDF}: 28956.9/54$

reg\_asym\_sam\_37\_26\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Left: 16.335  $\pm$  0.017  $\chi^2/\text{NDF}$ : 96401.9/47

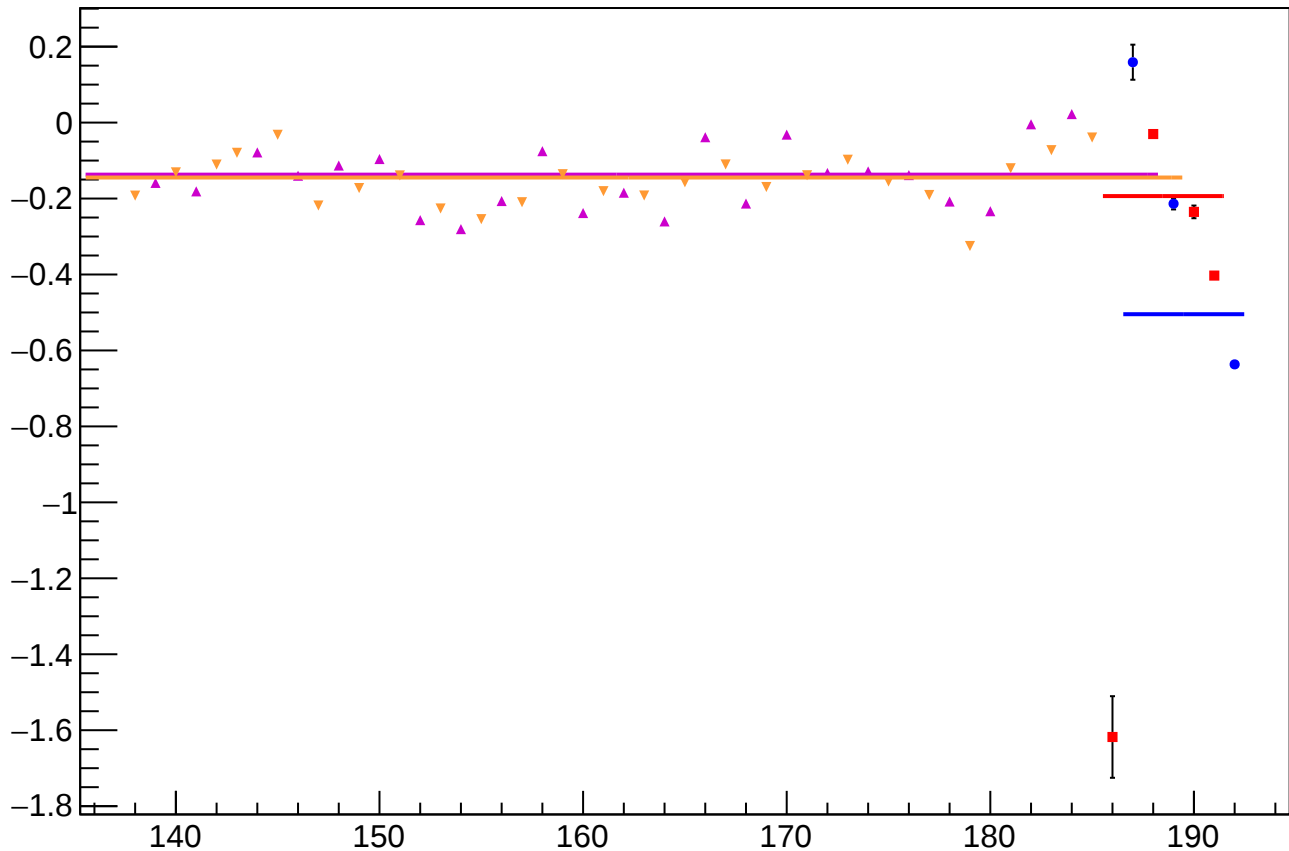
Right: 5.913  $\pm$  0.147  $\chi^2/\text{NDF}$ : 3878.1/6

In: 15.952  $\pm$  0.023  $\chi^2/\text{NDF}$ : 46471.0/25

Out: 16.447  $\pm$  0.023  $\chi^2/\text{NDF}$ : 58564.9/28

All: 16.204  $\pm$  0.016  $\chi^2/\text{NDF}$ : 105263.3/54

reg\_asym\_sam\_37\_26\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.505 \pm 0.008$   $\chi^2/\text{NDF}$ : 785.7/2

Left Out:  $-0.145 \pm 0.001$   $\chi^2/\text{NDF}$ : 3769.7/24

Right Out:  $-0.194 \pm 0.007$   $\chi^2/\text{NDF}$ : 686.0/3

Left In:  $-0.137 \pm 0.001$   $\chi^2/\text{NDF}$ : 5392.6/22

Left:  $-0.141 \pm 0.001$   $\chi^2/\text{NDF}$ : 9187.6/47

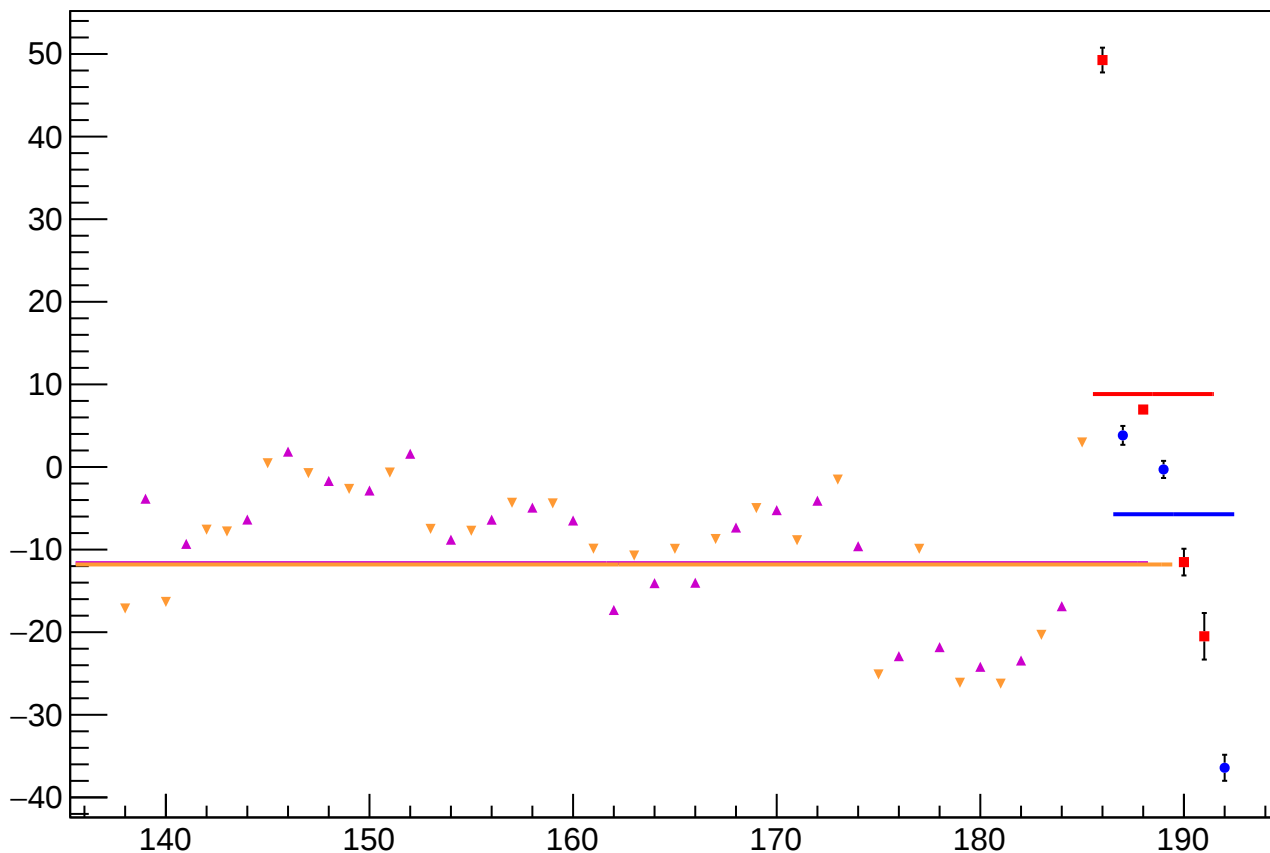
Right:  $-0.341 \pm 0.005$   $\chi^2/\text{NDF}$ : 2330.1/6

In:  $-0.144 \pm 0.001$   $\chi^2/\text{NDF}$ : 8407.1/25

Out:  $-0.146 \pm 0.001$   $\chi^2/\text{NDF}$ : 4499.6/28

All:  $-0.145 \pm 0.001$   $\chi^2/\text{NDF}$ : 12907.9/54

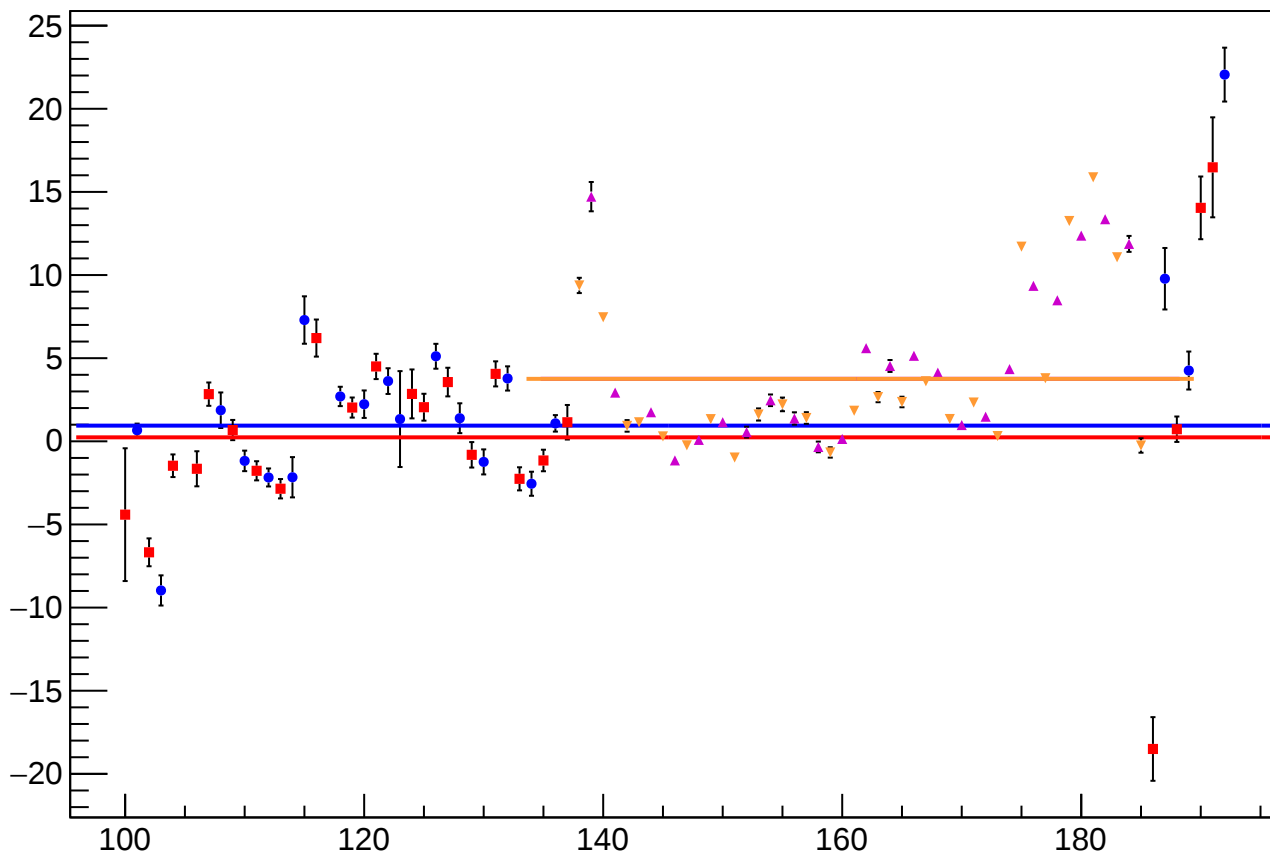
reg\_asym\_sam\_1357\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: -5.720+/-0.690  $\chi^2/\text{NDF}$ : 476.5/2  
 Left Out: -11.801+/-0.070  $\chi^2/\text{NDF}$ :17308.2/24  
 Right Out: 8.831+/-0.476  $\chi^2/\text{NDF}$ : 1005.7/3  
 Left In: -11.642+/-0.072  $\chi^2/\text{NDF}$ :14121.2/22

Left: -11.723+/-0.050  $\chi^2/\text{NDF}$ : 31432.0/47  
 Right: 4.148+/-0.392  $\chi^2/\text{NDF}$ : 1783.6/6  
 In: -11.579+/-0.071  $\chi^2/\text{NDF}$ :14670.6/25  
 Out: -11.360+/-0.070  $\chi^2/\text{NDF}$ :20156.2/28  
 All: -11.467+/-0.050  $\chi^2/\text{NDF}$ : 34831.6/54

reg\_asym\_sam\_1357\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 0.943 $\pm$ 0.167  $\chi^2$ /NDF: 494.7/19

Left Out: 3.757 $\pm$ 0.056  $\chi^2$ /NDF:7450.7/24

Right Out: 0.239 $\pm$ 0.169  $\chi^2$ /NDF: 450.3/22

Left In: 3.757 $\pm$ 0.057  $\chi^2$ /NDF:5629.4/22

Left: 3.757 $\pm$ 0.040  $\chi^2$ /NDF: 13080.0/47

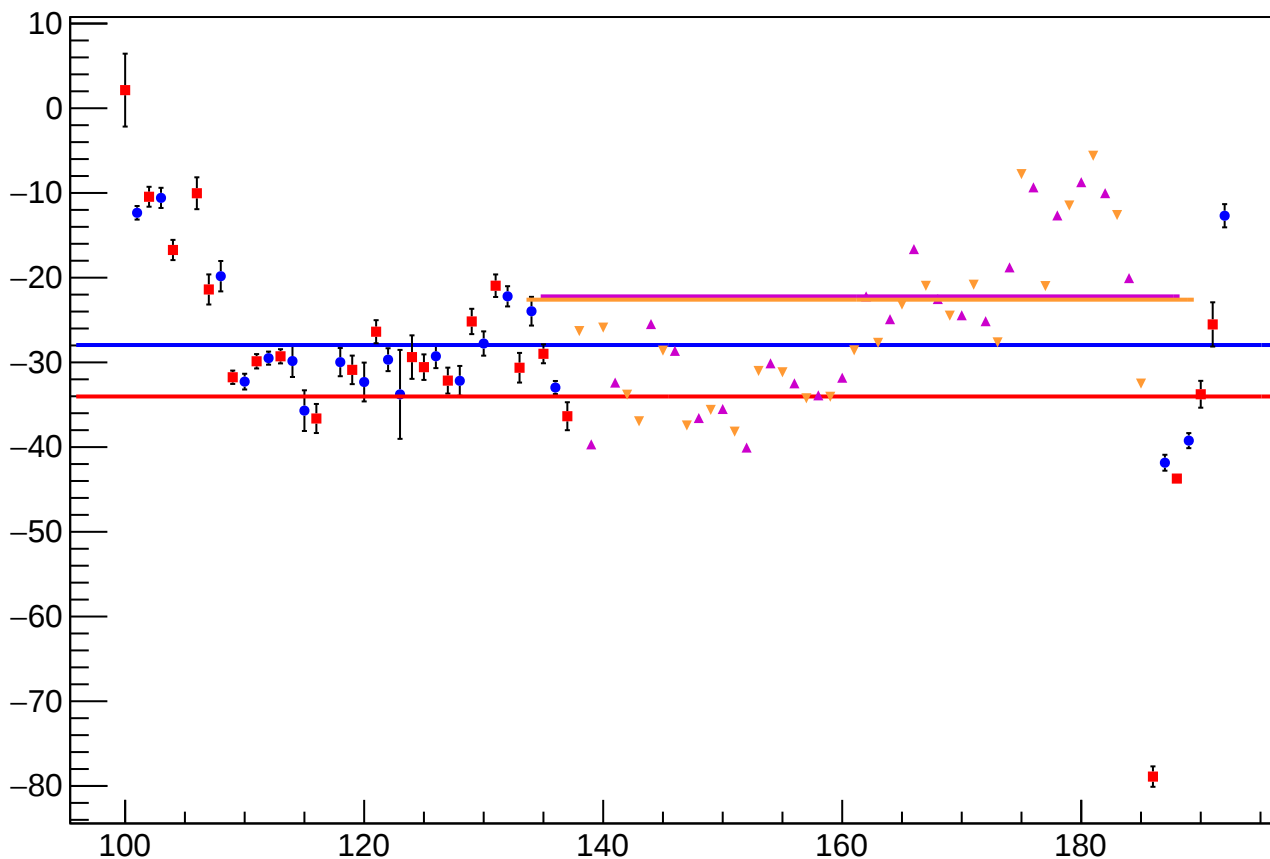
Right: 0.595 $\pm$ 0.119  $\chi^2$ /NDF: 953.7/42

In: 3.467 $\pm$ 0.054  $\chi^2$ /NDF:6378.7/42

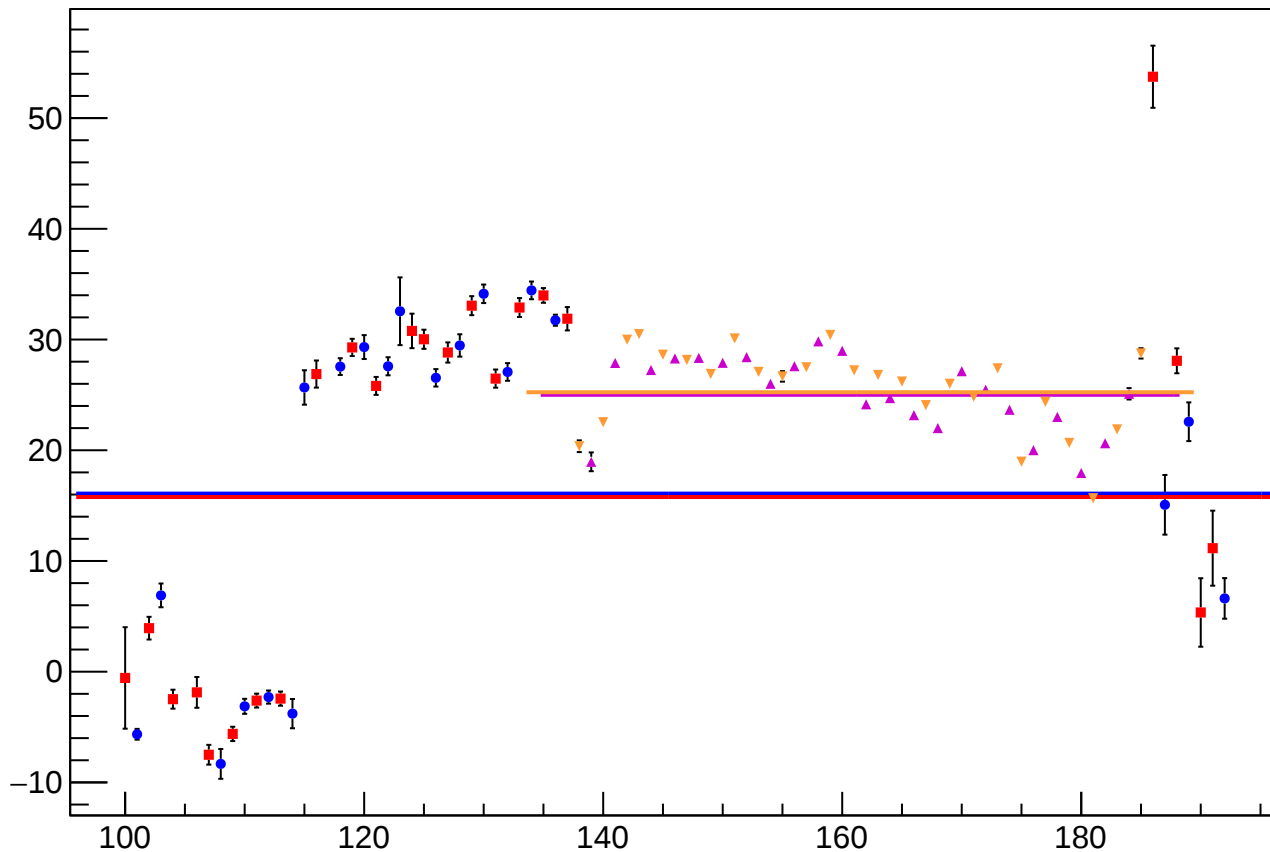
Out: 3.413 $\pm$ 0.053  $\chi^2$ /NDF:8292.7/47

All: 3.440 $\pm$ 0.038  $\chi^2$ /NDF: 14671.9/90

reg\_asym\_sam\_1357\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



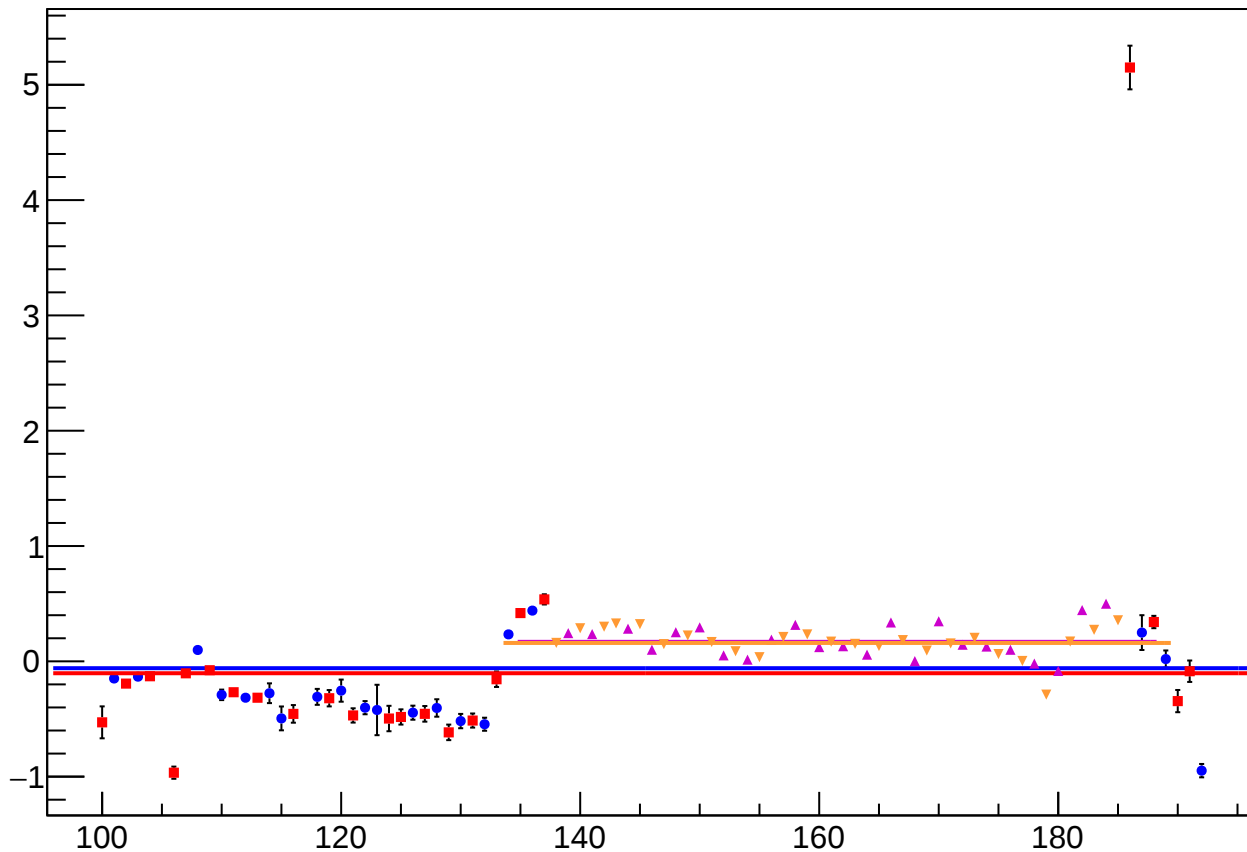
reg\_asym\_sam\_1357\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 16.084 $\pm$ 0.190  $\chi^2$ /NDF: 7582.7/19  
 Left Out: 25.242 $\pm$ 0.063  $\chi^2$ /NDF:3786.5/24  
 Right Out: 15.776 $\pm$ 0.193  $\chi^2$ /NDF: 7583.8/22  
 Left In: 25.009 $\pm$ 0.064  $\chi^2$ /NDF:2722.0/22

Left: 25.128 $\pm$ 0.045  $\chi^2$ /NDF: 6515.2/47  
 Right: 15.933 $\pm$ 0.135  $\chi^2$ /NDF: 15167.8/42  
 In: 24.101 $\pm$ 0.061  $\chi^2$ /NDF:12292.1/42  
 Out: 24.342 $\pm$ 0.060  $\chi^2$ /NDF:13541.7/47  
 All: 24.224 $\pm$ 0.042  $\chi^2$ /NDF: 25841.9/90

reg\_asym\_sam\_1357\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.059 \pm 0.010$   $\chi^2/\text{NDF}$ : 1257.5/19

Left Out:  $0.159 \pm 0.003$   $\chi^2/\text{NDF}$ : 1864.2/24

Right Out:  $-0.103 \pm 0.010$   $\chi^2/\text{NDF}$ : 2013.0/22

Left In:  $0.169 \pm 0.003$   $\chi^2/\text{NDF}$ : 2418.8/22

Left:  $0.164 \pm 0.002$   $\chi^2/\text{NDF}$ : 4288.4/47

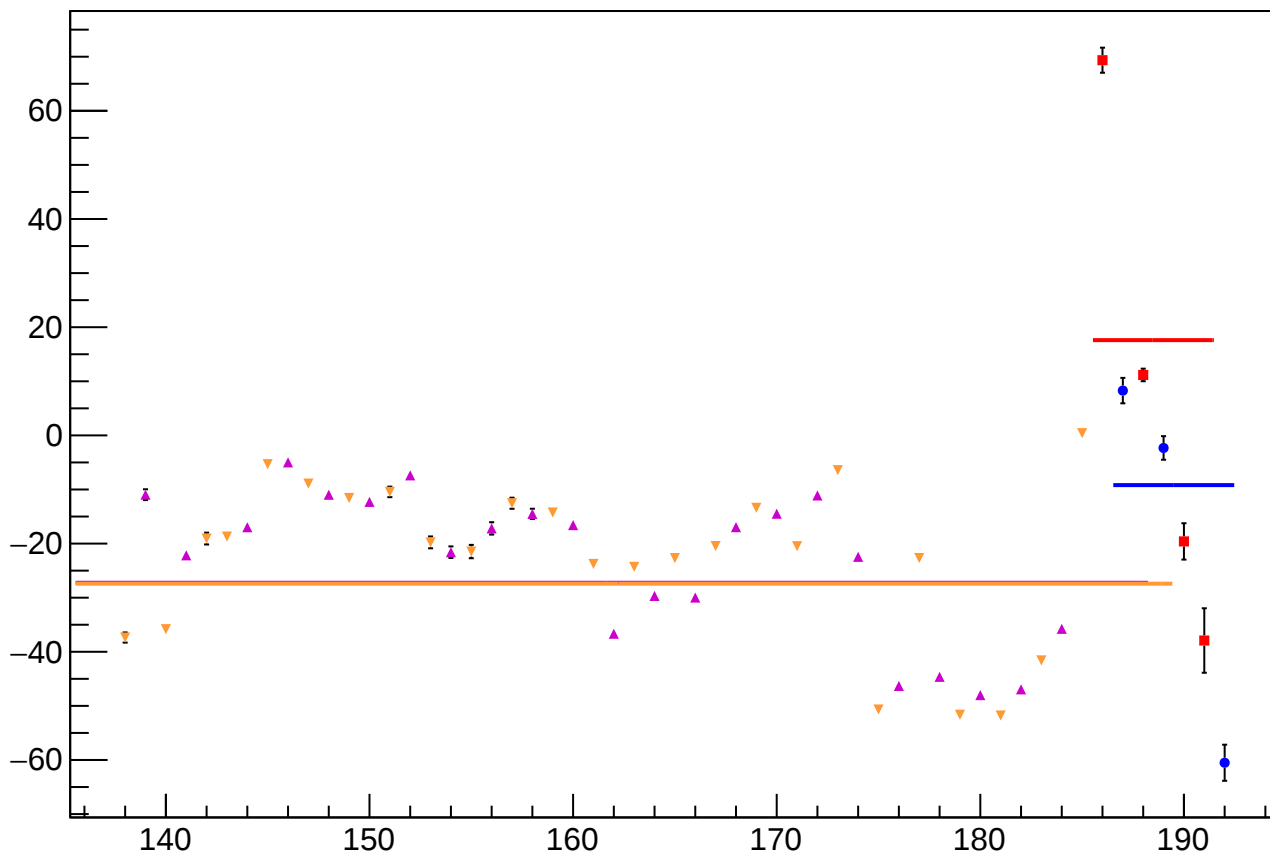
Right:  $-0.081 \pm 0.007$   $\chi^2/\text{NDF}$ : 3279.9/42

In:  $0.151 \pm 0.003$   $\chi^2/\text{NDF}$ : 4151.6/42

Out:  $0.140 \pm 0.003$   $\chi^2/\text{NDF}$ : 4507.0/47

All:  $0.145 \pm 0.002$   $\chi^2/\text{NDF}$ : 8667.2/90

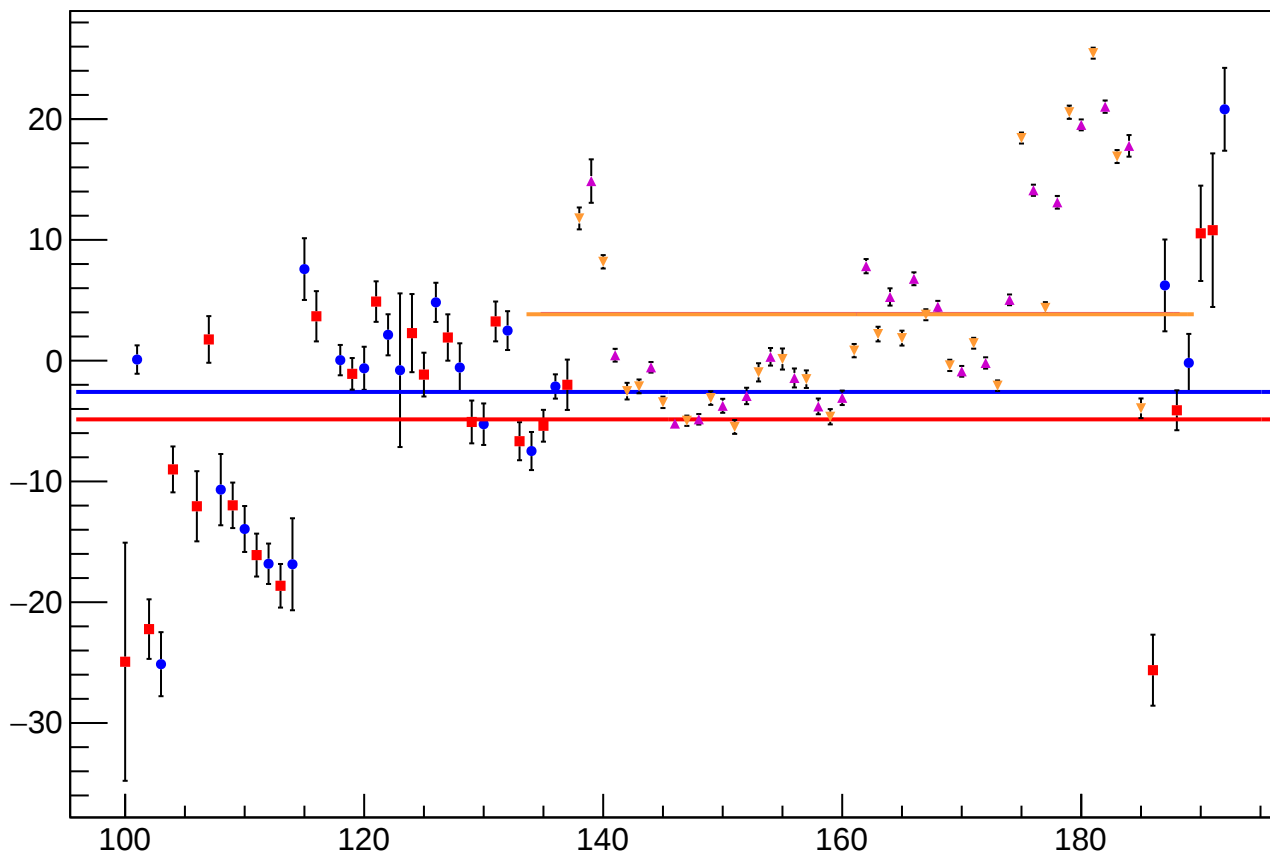
reg\_asym\_sam\_2468\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-9.191 \pm 1.441$   $\chi^2/\text{NDF}: 301.8/2$   
 Left Out:  $-27.408 \pm 0.137$   $\chi^2/\text{NDF}: 14850.5/24$   
 Right Out:  $17.607 \pm 0.978$   $\chi^2/\text{NDF}: 738.8/3$   
 Left In:  $-27.243 \pm 0.139$   $\chi^2/\text{NDF}: 11305.2/22$

Left:  $-27.327 \pm 0.098$   $\chi^2/\text{NDF}: 26156.4/47$   
 Right:  $9.153 \pm 0.809$   $\chi^2/\text{NDF}: 1277.3/6$   
 In:  $-27.076 \pm 0.139$   $\chi^2/\text{NDF}: 11762.4/25$   
 Out:  $-26.544 \pm 0.136$   $\chi^2/\text{NDF}: 17666.0/28$   
 All:  $-26.804 \pm 0.097$   $\chi^2/\text{NDF}: 29436.0/54$

reg\_asym\_sam\_2468\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Left:  $3.853 \pm 0.078$   $\chi^2/\text{NDF}$ : 12363.3/47

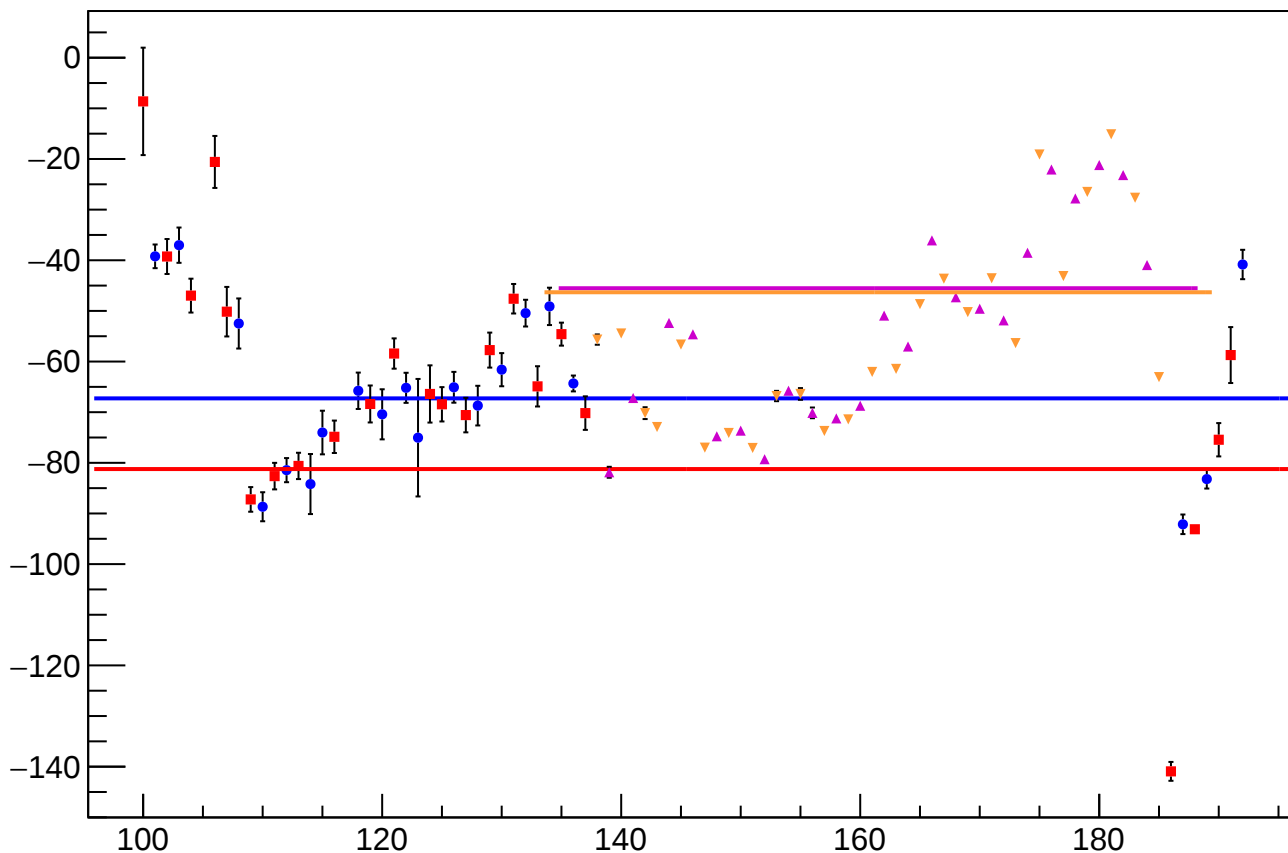
Right:  $-3.710 \pm 0.285$   $\chi^2/\text{NDF}$ : 717.4/42

In:  $3.404 \pm 0.107$   $\chi^2/\text{NDF}$ : 5998.4/42

Out:  $3.255 \pm 0.105$   $\chi^2/\text{NDF}$ : 7735.1/47

All:  $3.328 \pm 0.075$   $\chi^2/\text{NDF}$ : 13734.5/90

reg\_asym\_sam\_2468\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-67.273 \pm 0.634$   $\chi^2/\text{NDF}$ : 724.8/19  
 Left Out:  $-46.318 \pm 0.138$   $\chi^2/\text{NDF}$ : 20134.6/24  
 Right Out:  $-81.230 \pm 0.549$   $\chi^2/\text{NDF}$ : 2144.4/22  
 Left In:  $-45.522 \pm 0.140$   $\chi^2/\text{NDF}$ : 17525.4/22

Left:  $-45.925 \pm 0.098$   $\chi^2/\text{NDF}$ : 37676.5/47

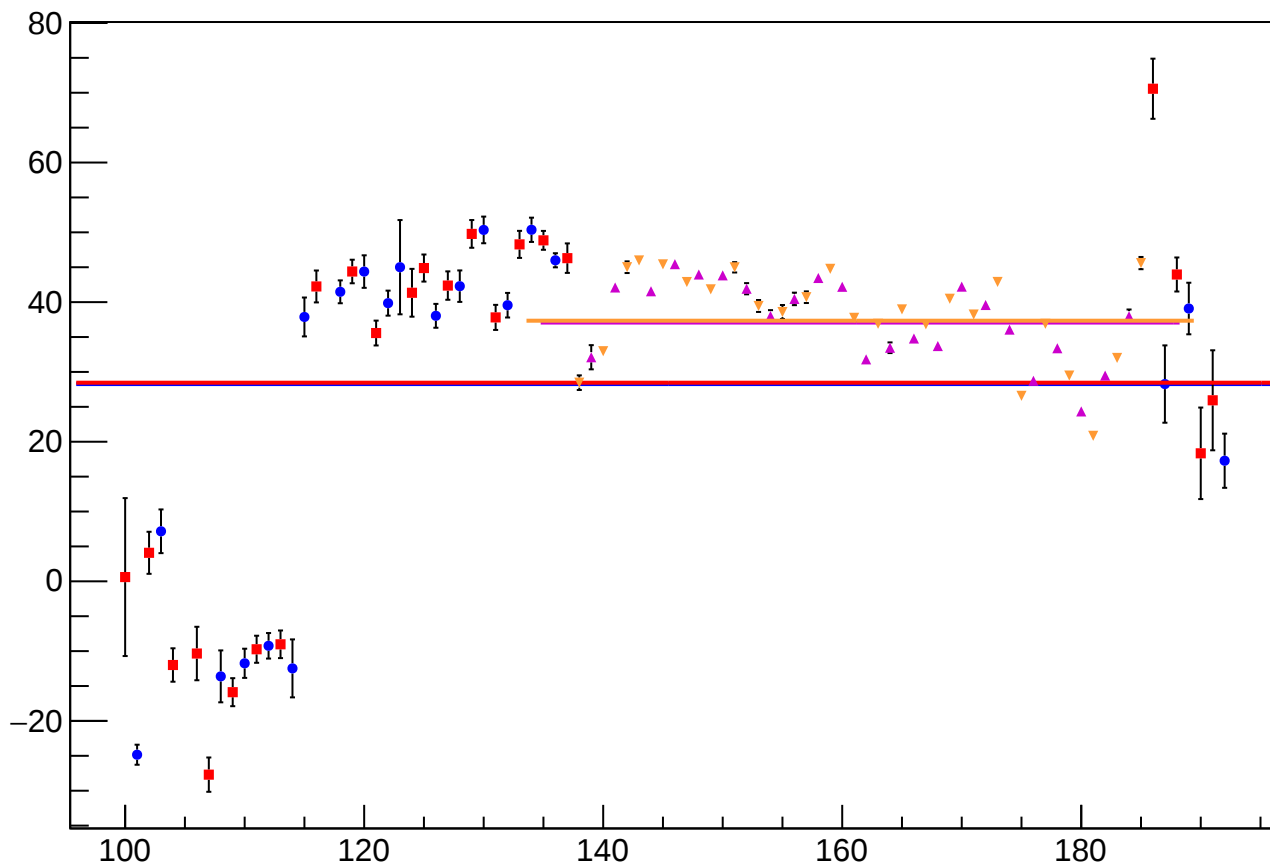
Right:  $-75.245 \pm 0.415$   $\chi^2/\text{NDF}$ : 3146.2/42

In:  $-46.531 \pm 0.136$   $\chi^2/\text{NDF}$ : 19373.5/42

Out:  $-48.390 \pm 0.134$   $\chi^2/\text{NDF}$ : 26081.1/47

All:  $-47.479 \pm 0.096$   $\chi^2/\text{NDF}$ : 45549.3/90

reg\_asym\_sam\_2468\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 28.261 $\pm$ 0.453  $\chi^2$ /NDF: 3327.5/19

Left Out: 37.340 $\pm$ 0.123  $\chi^2$ /NDF:3149.1/24

Right Out: 28.456 $\pm$ 0.466  $\chi^2$ /NDF: 3174.9/22

Left In: 37.074 $\pm$ 0.125  $\chi^2$ /NDF:2397.3/22

Left: 37.209 $\pm$ 0.088  $\chi^2$ /NDF: 5548.7/47

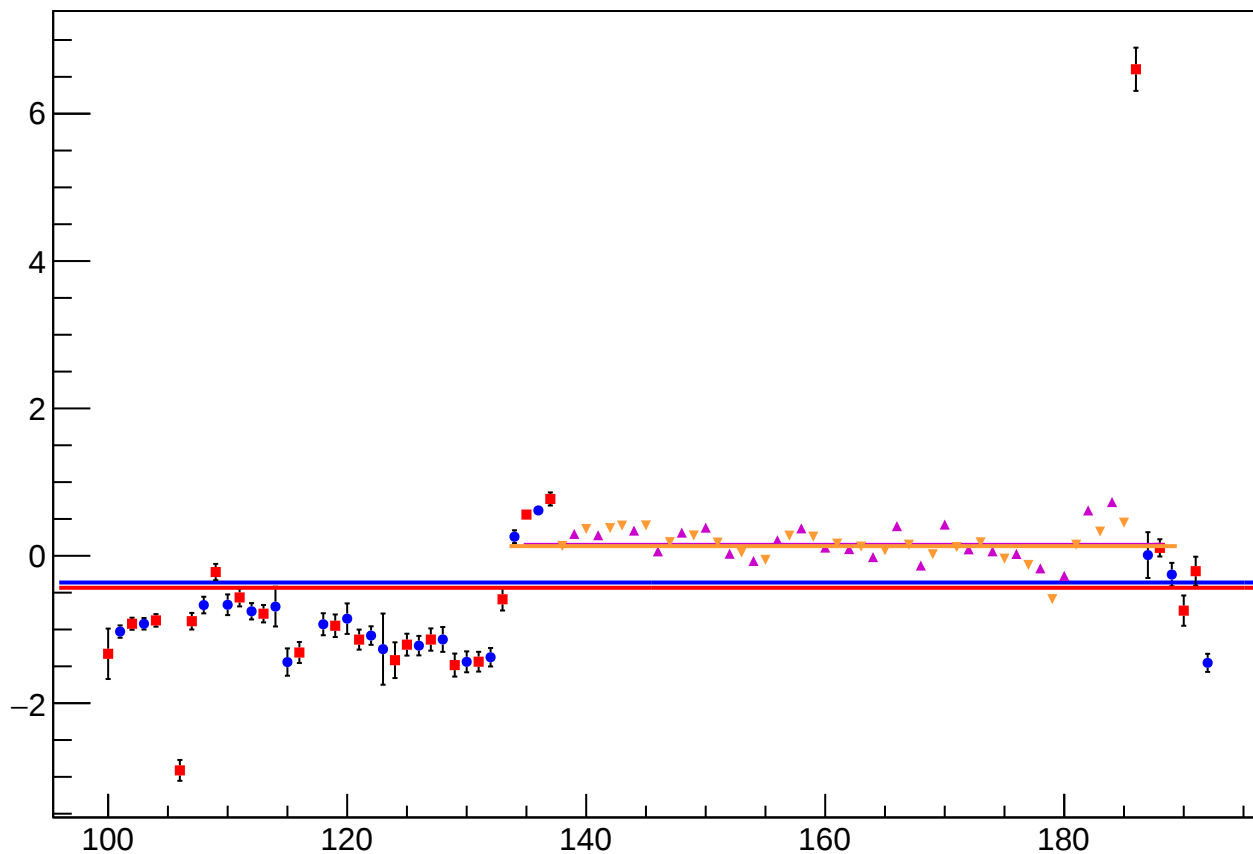
Right: 28.356 $\pm$ 0.325  $\chi^2$ /NDF: 6502.4/42

In: 36.448 $\pm$ 0.121  $\chi^2$ /NDF:6076.9/42

Out: 36.762 $\pm$ 0.119  $\chi^2$ /NDF:6664.3/47

All: 36.607 $\pm$ 0.085  $\chi^2$ /NDF: 12744.6/90

reg\_asym\_sam\_2468\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.362 \pm 0.024$   $\chi^2/\text{NDF}$ : 1093.4/19

Left Out:  $0.131 \pm 0.006$   $\chi^2/\text{NDF}$ : 1426.3/24

Right Out:  $-0.434 \pm 0.025$   $\chi^2/\text{NDF}$ : 1769.7/22

Left In:  $0.149 \pm 0.006$   $\chi^2/\text{NDF}$ : 1803.6/22

Left:  $0.140 \pm 0.004$   $\chi^2/\text{NDF}$ : 3234.6/47

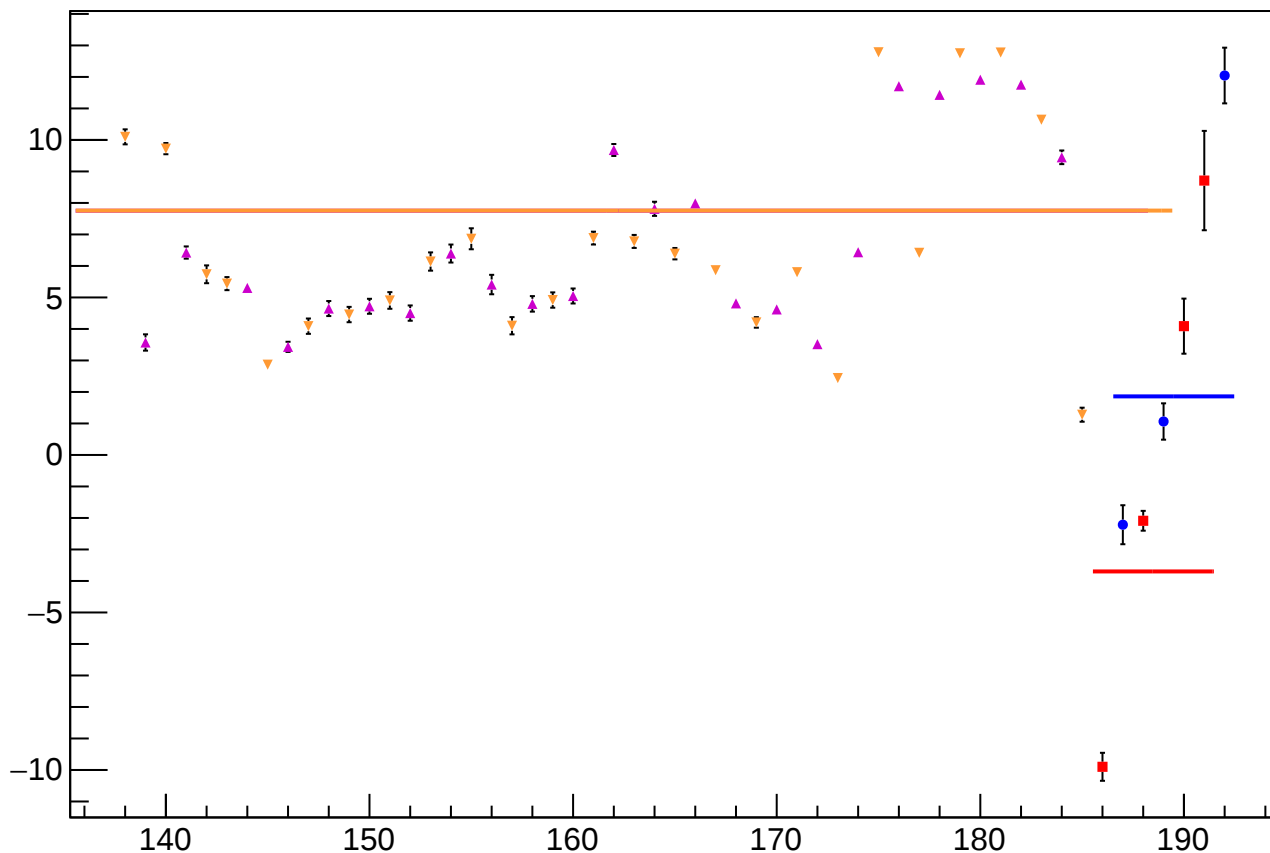
Right:  $-0.397 \pm 0.017$   $\chi^2/\text{NDF}$ : 2867.4/42

In:  $0.121 \pm 0.006$   $\chi^2/\text{NDF}$ : 3322.3/42

Out:  $0.103 \pm 0.005$   $\chi^2/\text{NDF}$ : 3693.6/47

All:  $0.112 \pm 0.004$   $\chi^2/\text{NDF}$ : 7021.1/90

reg\_asym\_sam\_1357\_2468\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $1.859 \pm 0.381$   $\chi^2/\text{NDF}: 177.9/2$

Left Out:  $7.757 \pm 0.034$   $\chi^2/\text{NDF}: 11728.6/24$

Right Out:  $-3.698 \pm 0.243$   $\chi^2/\text{NDF}: 362.2/3$

Left In:  $7.753 \pm 0.035$   $\chi^2/\text{NDF}: 8345.2/22$

Left:  $7.755 \pm 0.025$   $\chi^2/\text{NDF}: 20073.8/47$

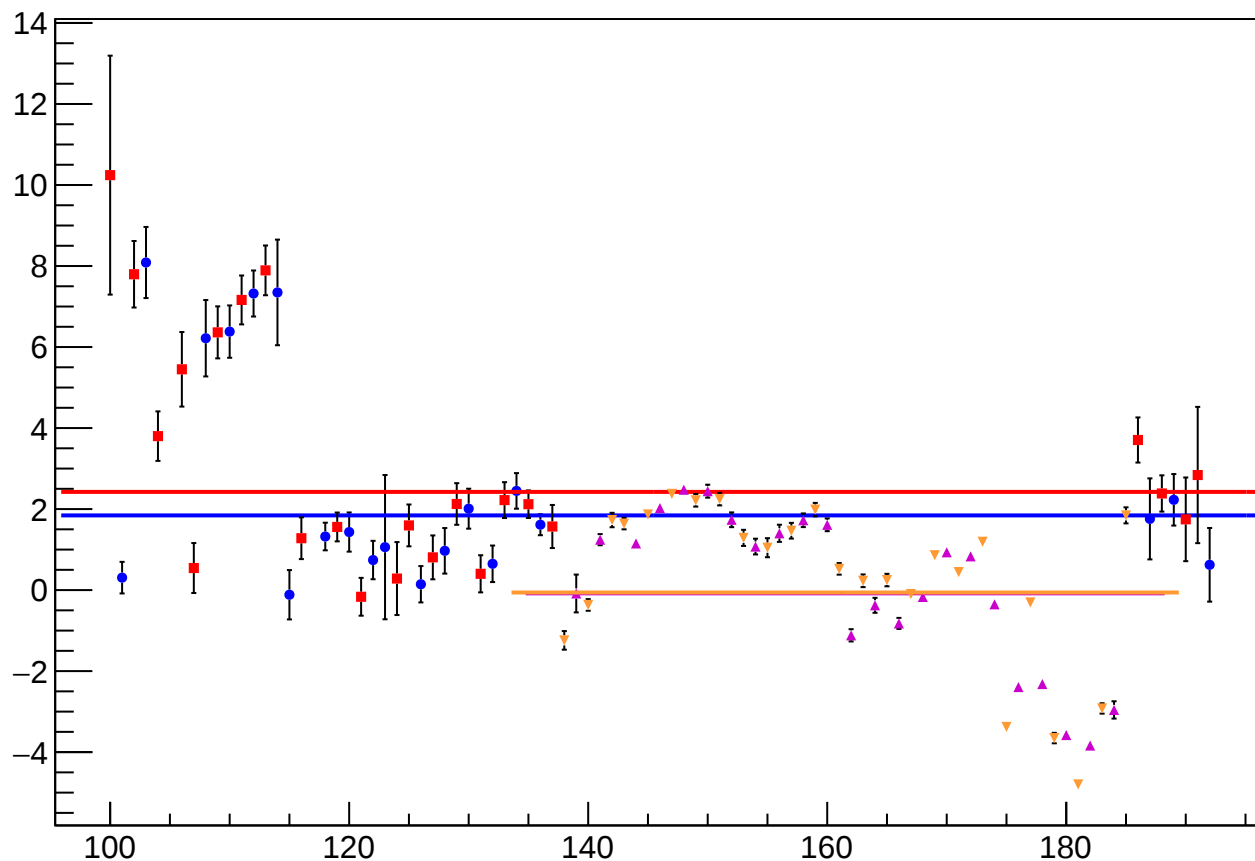
Right:  $-2.086 \pm 0.205$   $\chi^2/\text{NDF}: 691.3/6$

In:  $7.703 \pm 0.035$   $\chi^2/\text{NDF}: 8760.6/25$

Out:  $7.534 \pm 0.034$   $\chi^2/\text{NDF}: 14262.5/28$

All:  $7.616 \pm 0.024$   $\chi^2/\text{NDF}: 23035.2/54$

reg\_asym\_sam\_1357\_2468\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $1.844 \pm 0.114$   $\chi^2/\text{NDF}: 295.4/19$

Left Out:  $-0.059 \pm 0.028$   $\chi^2/\text{NDF}: 6068.8/24$

Right Out:  $2.424 \pm 0.115$   $\chi^2/\text{NDF}: 341.5/22$

Left In:  $-0.080 \pm 0.028$   $\chi^2/\text{NDF}: 4979.5/22$

Left:  $-0.070 \pm 0.020$   $\chi^2/\text{NDF}: 11048.5/47$

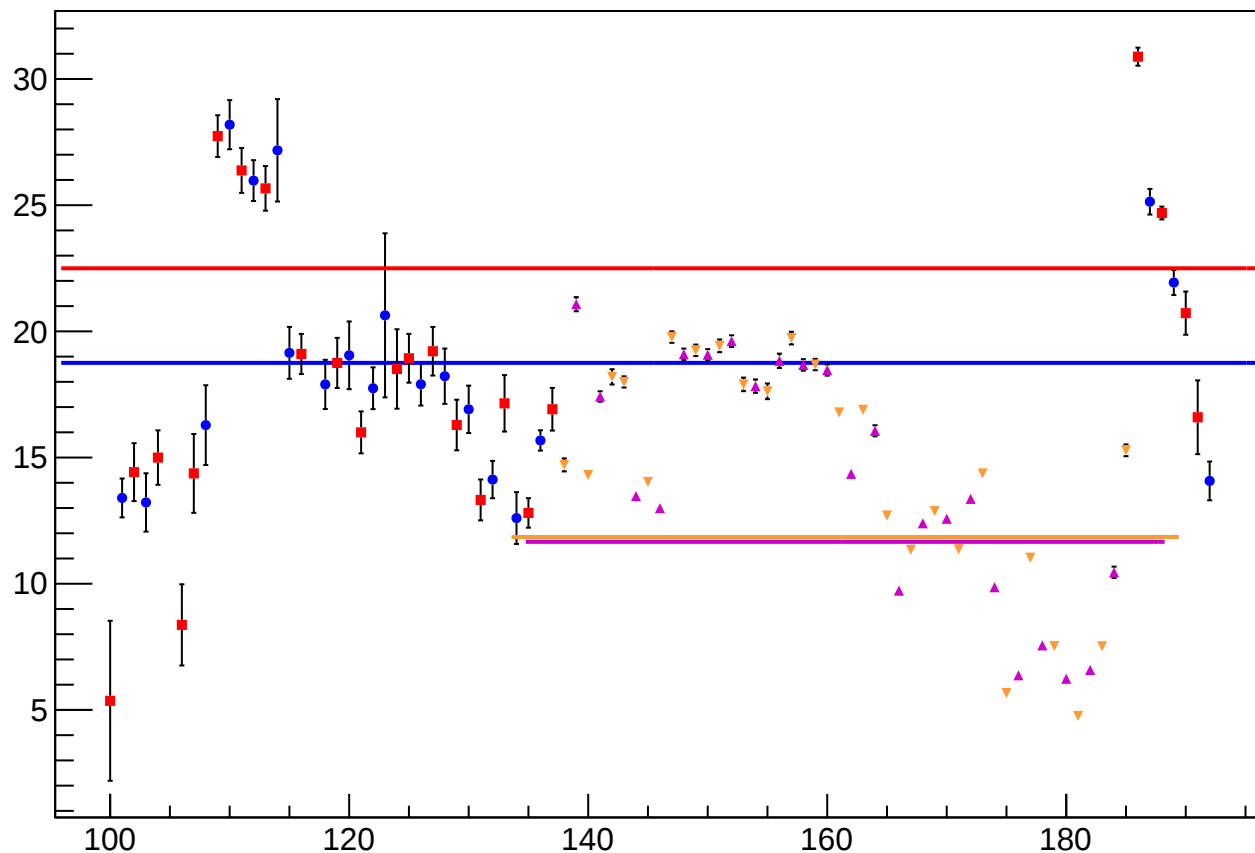
Right:  $2.131 \pm 0.081$   $\chi^2/\text{NDF}: 649.8/42$

In:  $0.032 \pm 0.027$   $\chi^2/\text{NDF}: 5544.6/42$

Out:  $0.078 \pm 0.027$   $\chi^2/\text{NDF}: 6852.5/47$

All:  $0.055 \pm 0.019$   $\chi^2/\text{NDF}: 12398.5/90$

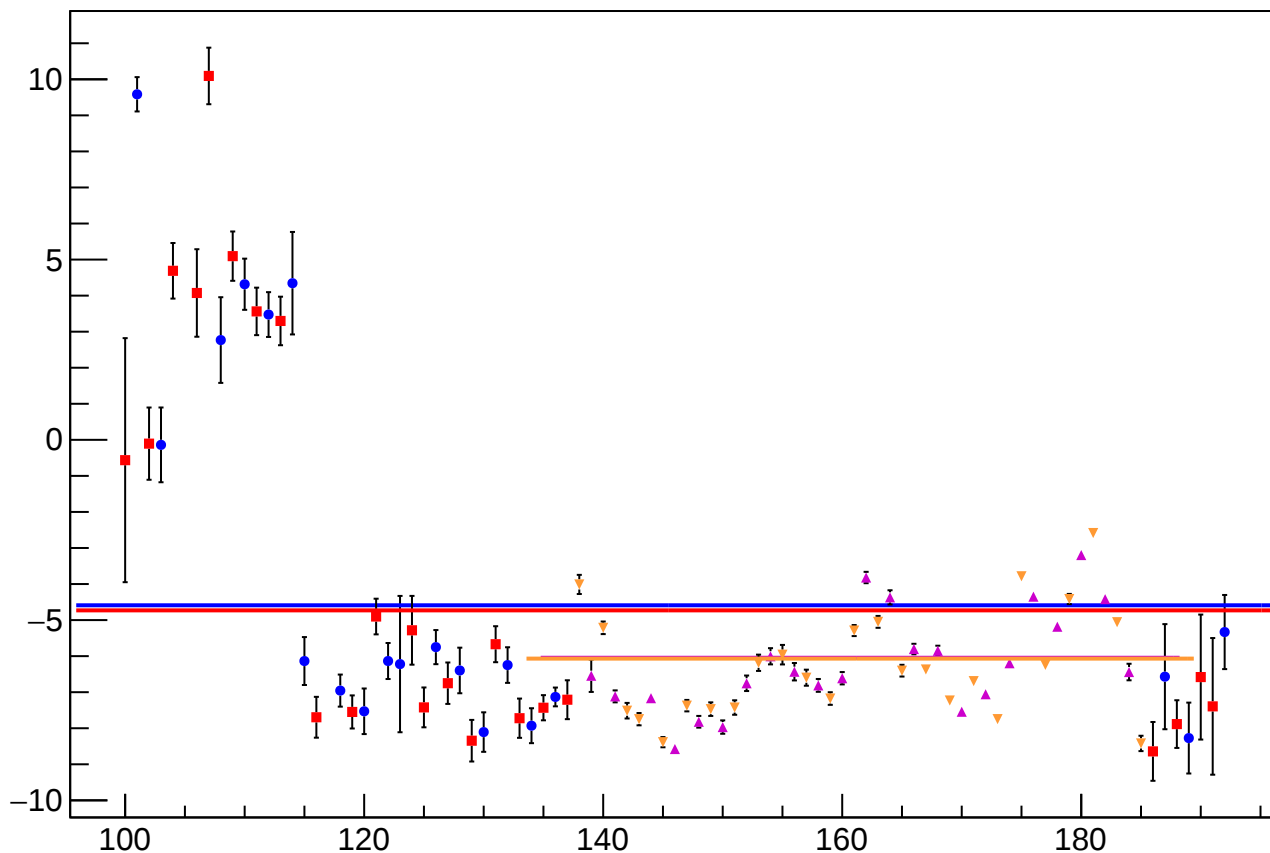
reg\_asym\_sam\_1357\_2468\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 18.752 $\pm$ 0.178  $\chi^2$ /NDF: 640.9/19  
 Left Out: 11.853 $\pm$ 0.035  $\chi^2$ /NDF:19149.4/24  
 Right Out: 22.499 $\pm$ 0.148  $\chi^2$ /NDF: 1583.1/22  
 Left In: 11.660 $\pm$ 0.035  $\chi^2$ /NDF:16710.2/22

Left: 11.758 $\pm$ 0.025  $\chi^2$ /NDF: 35874.9/47  
 Right: 20.970 $\pm$ 0.113  $\chi^2$ /NDF: 2487.4/42  
 In: 11.928 $\pm$ 0.035  $\chi^2$ /NDF:18884.7/42  
 Out: 12.411 $\pm$ 0.034  $\chi^2$ /NDF:25669.4/47  
 All: 12.174 $\pm$ 0.024  $\chi^2$ /NDF: 44654.1/90

reg\_asym\_sam\_1357\_2468\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-4.589 \pm 0.128$   $\chi^2/\text{NDF}: 1599.7/19$

Left Out:  $-6.068 \pm 0.031$   $\chi^2/\text{NDF}: 2671.7/24$

Right Out:  $-4.730 \pm 0.132$   $\chi^2/\text{NDF}: 1393.3/22$

Left In:  $-6.045 \pm 0.032$   $\chi^2/\text{NDF}: 2293.7/22$

Left:  $-6.057 \pm 0.022$   $\chi^2/\text{NDF}: 4965.7/47$

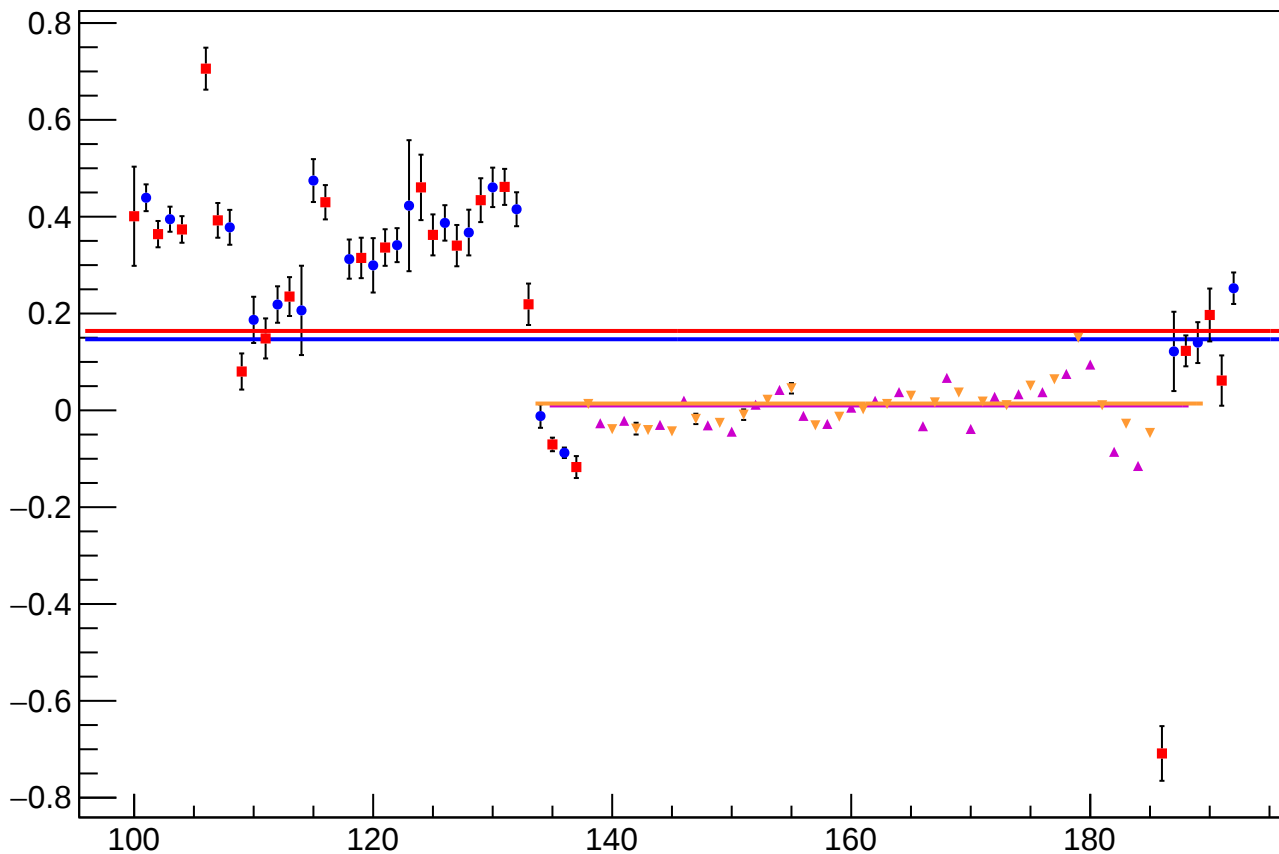
Right:  $-4.658 \pm 0.092$   $\chi^2/\text{NDF}: 2993.6/42$

In:  $-5.961 \pm 0.031$   $\chi^2/\text{NDF}: 4015.4/42$

Out:  $-5.998 \pm 0.030$   $\chi^2/\text{NDF}: 4162.5/47$

All:  $-5.980 \pm 0.022$   $\chi^2/\text{NDF}: 8178.7/90$

reg\_asym\_sam\_1357\_2468\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.147 $\pm$ 0.007  $\chi^2$ /NDF: 1068.8/19

Left Out: 0.014 $\pm$ 0.001  $\chi^2$ /NDF:956.2/24

Right Out: 0.164 $\pm$ 0.007  $\chi^2$ /NDF: 1250.2/22

Left In: 0.010 $\pm$ 0.001  $\chi^2$ /NDF:1216.1/22

Left: 0.012 $\pm$ 0.001  $\chi^2$ /NDF: 2176.2/47

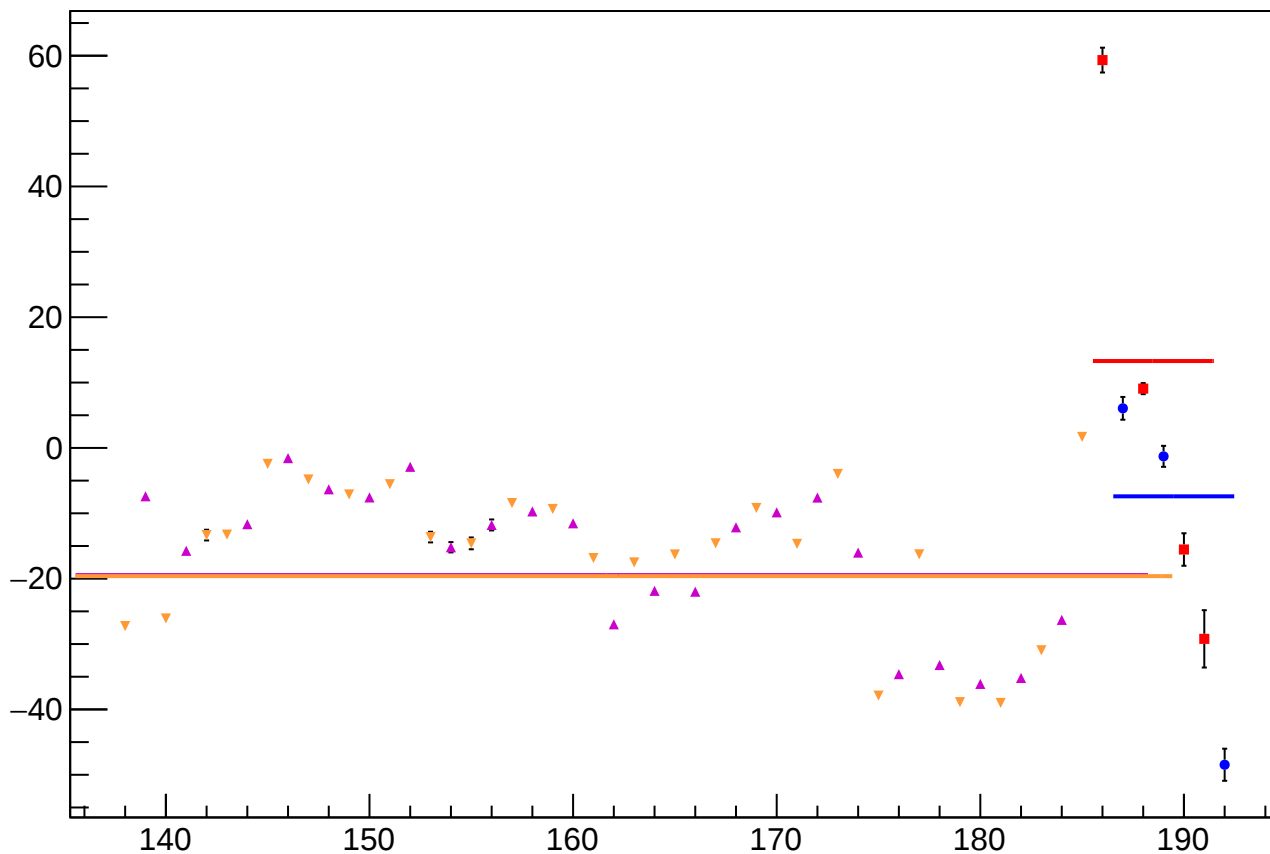
Right: 0.155 $\pm$ 0.005  $\chi^2$ /NDF: 2322.0/42

In: 0.016 $\pm$ 0.001  $\chi^2$ /NDF:2671.8/42

Out: 0.020 $\pm$ 0.001  $\chi^2$ /NDF:2642.4/47

All: 0.018 $\pm$ 0.001  $\chi^2$ /NDF: 5318.0/90

reg\_asym\_sam\_12345678\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-7.403 \pm 1.064$   $\chi^2/\text{NDF}$ : 354.0/2  
 Left Out:  $-19.612 \pm 0.103$   $\chi^2/\text{NDF}$ : 15761.3/24  
 Right Out:  $13.295 \pm 0.729$   $\chi^2/\text{NDF}$ : 839.8/3  
 Left In:  $-19.450 \pm 0.105$   $\chi^2/\text{NDF}$ : 12283.1/22

Left:  $-19.533 \pm 0.074$   $\chi^2/\text{NDF}$ : 28045.6/47

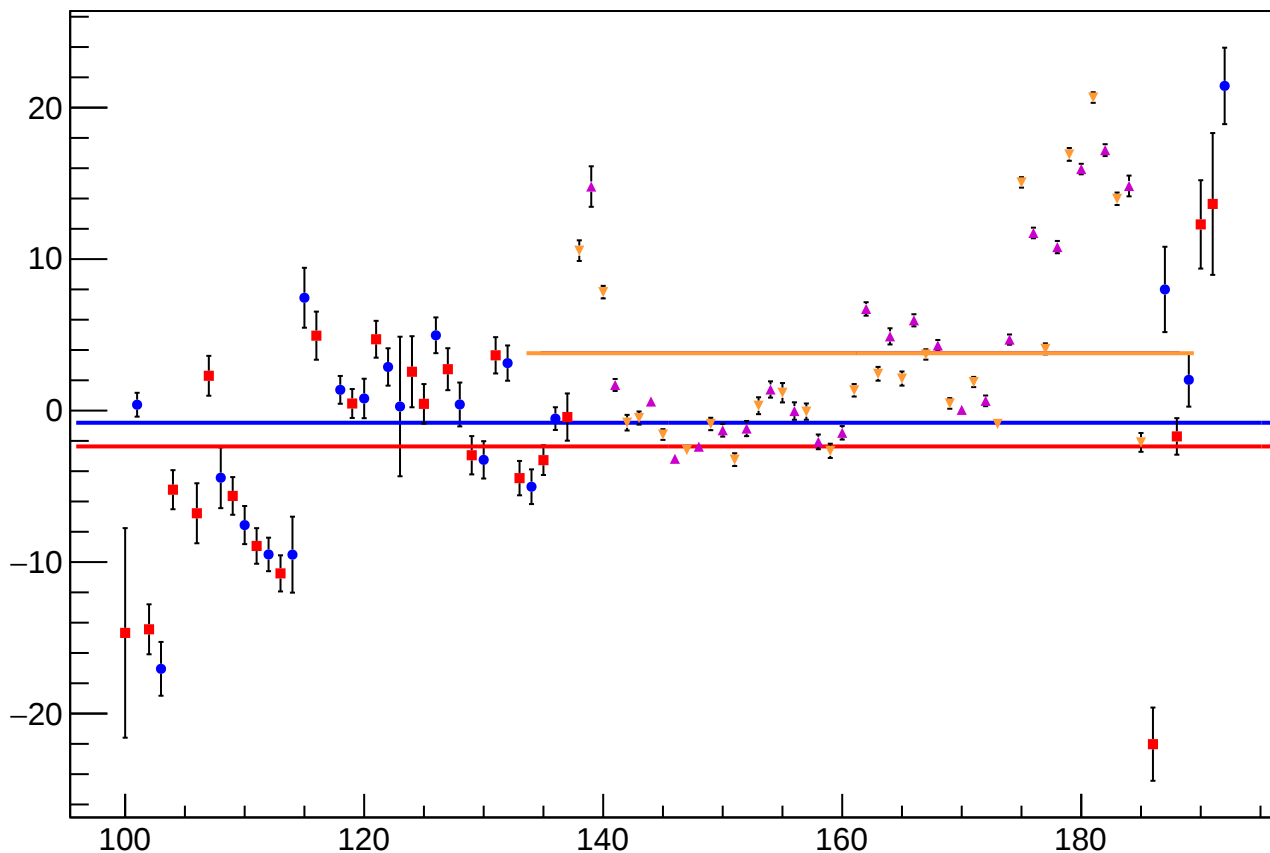
Right:  $6.679 \pm 0.601$   $\chi^2/\text{NDF}$ : 1451.4/6

In:  $-19.334 \pm 0.105$   $\chi^2/\text{NDF}$ : 12764.2/25

Out:  $-18.966 \pm 0.102$   $\chi^2/\text{NDF}$ : 18598.1/28

All:  $-19.146 \pm 0.073$   $\chi^2/\text{NDF}$ : 31368.6/54

reg\_asym\_sam\_12345678\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-0.802 \pm 0.286$   $\chi^2/\text{NDF}$ : 369.1/19

Left Out:  $3.788 \pm 0.082$   $\chi^2/\text{NDF}$ : 7150.5/24

Right Out:  $-2.366 \pm 0.290$   $\chi^2/\text{NDF}$ : 387.8/22

Left In:  $3.799 \pm 0.084$   $\chi^2/\text{NDF}$ : 5517.0/22

Left:  $3.793 \pm 0.059$   $\chi^2/\text{NDF}$ : 12667.5/47

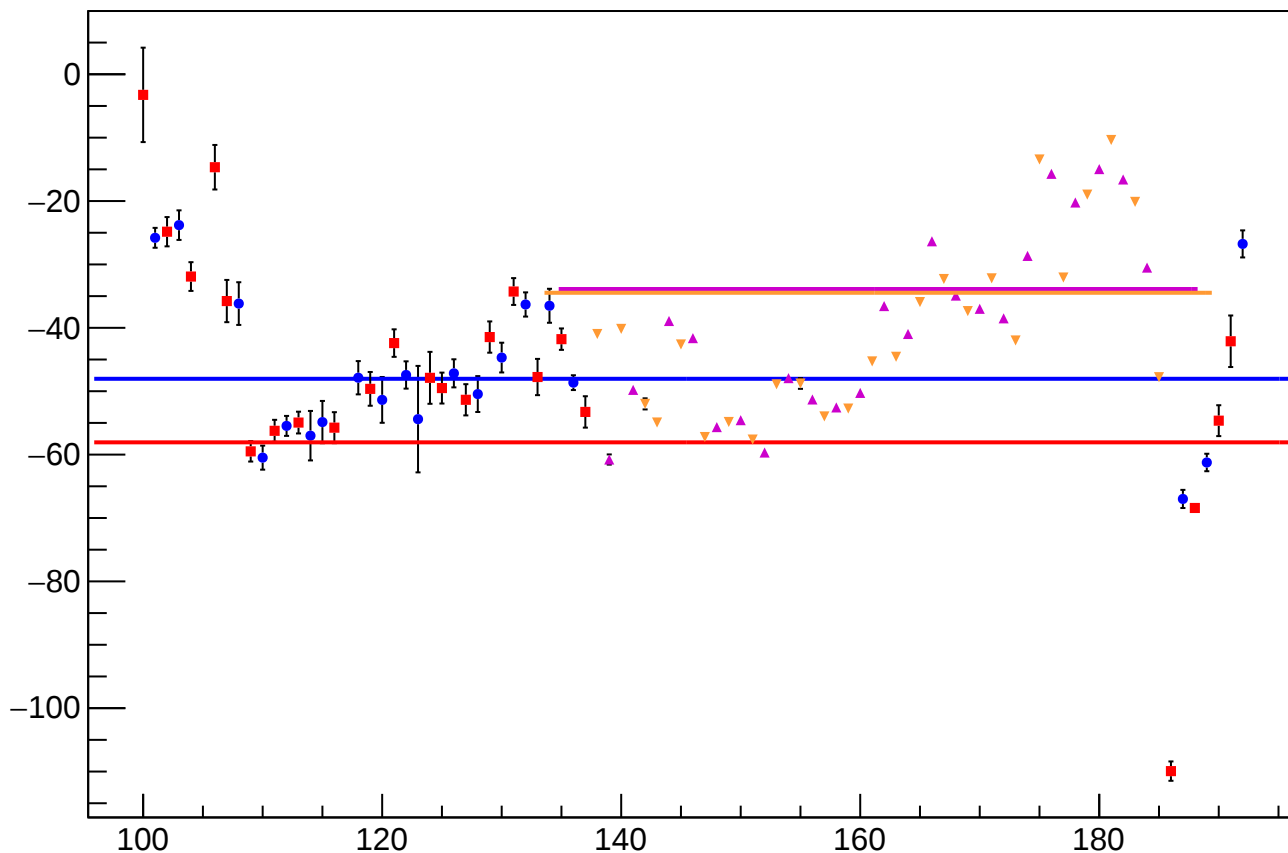
Right:  $-1.574 \pm 0.203$   $\chi^2/\text{NDF}$ : 771.7/42

In:  $3.436 \pm 0.080$   $\chi^2/\text{NDF}$ : 6125.2/42

Out:  $3.330 \pm 0.079$   $\chi^2/\text{NDF}$ : 7956.6/47

All:  $3.382 \pm 0.056$   $\chi^2/\text{NDF}$ : 14082.7/90

reg\_asym\_sam\_12345678\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-48.040 \pm 0.454$   $\chi^2/\text{NDF}$ : 823.4/19

Left Out:  $-34.471 \pm 0.104$   $\chi^2/\text{NDF}$ : 20196.3/24

Right Out:  $-58.066 \pm 0.397$   $\chi^2/\text{NDF}$ : 2366.0/22

Left In:  $-33.875 \pm 0.105$   $\chi^2/\text{NDF}$ : 17638.7/22

Left:  $-34.177 \pm 0.074$   $\chi^2/\text{NDF}$ : 37851.2/47

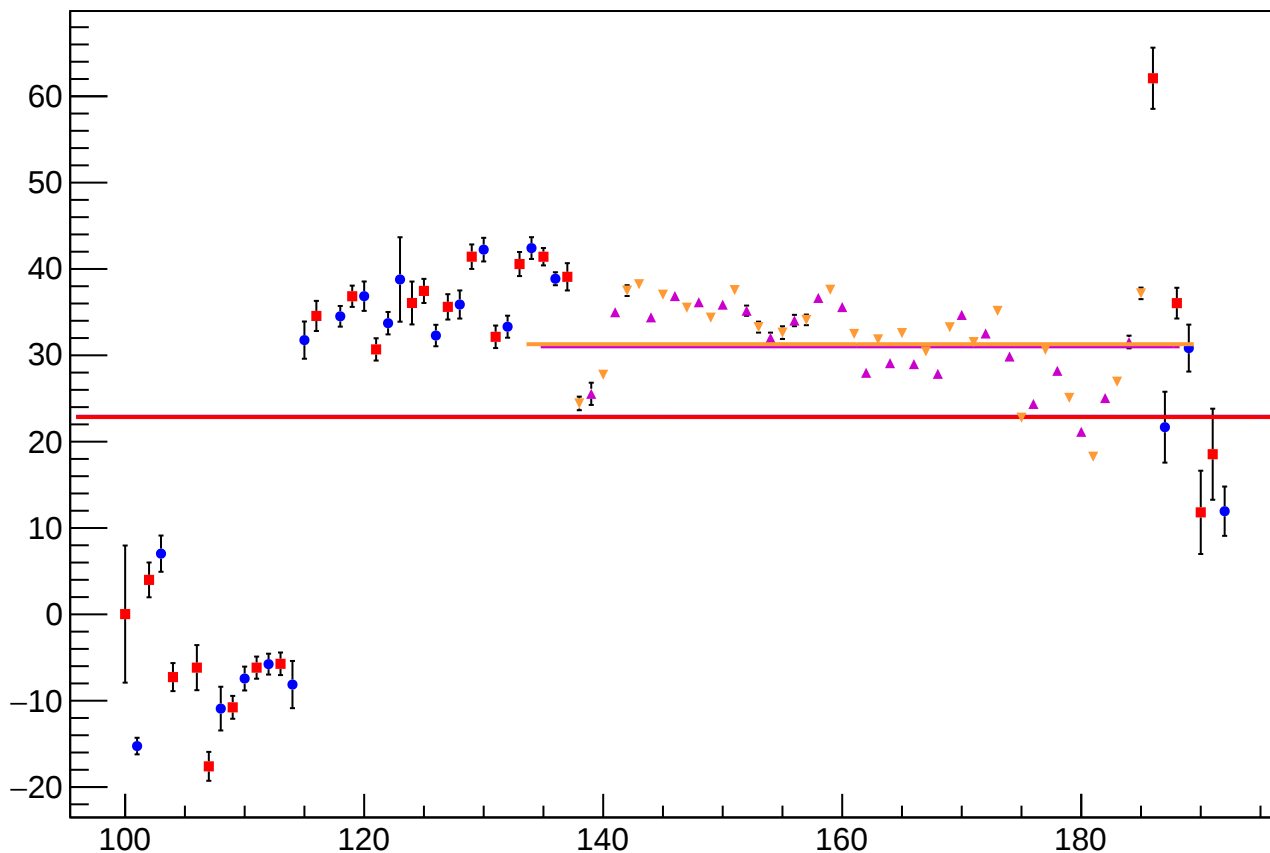
Right:  $-53.723 \pm 0.299$   $\chi^2/\text{NDF}$ : 3466.3/42

In:  $-34.599 \pm 0.103$   $\chi^2/\text{NDF}$ : 19387.4/42

Out:  $-35.988 \pm 0.101$   $\chi^2/\text{NDF}$ : 25875.4/47

All:  $-35.307 \pm 0.072$   $\chi^2/\text{NDF}$ : 45356.4/90

reg\_asym\_sam\_12345678\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 22.881 $\pm$ 0.323  $\chi^2$ /NDF: 4340.5/19

Left Out: 31.286 $\pm$ 0.092  $\chi^2$ /NDF:3345.7/24

Right Out: 22.851 $\pm$ 0.332  $\chi^2$ /NDF: 4218.6/22

Left In: 31.039 $\pm$ 0.094  $\chi^2$ /NDF:2480.0/22

Left: 31.165 $\pm$ 0.066  $\chi^2$ /NDF: 5829.2/47

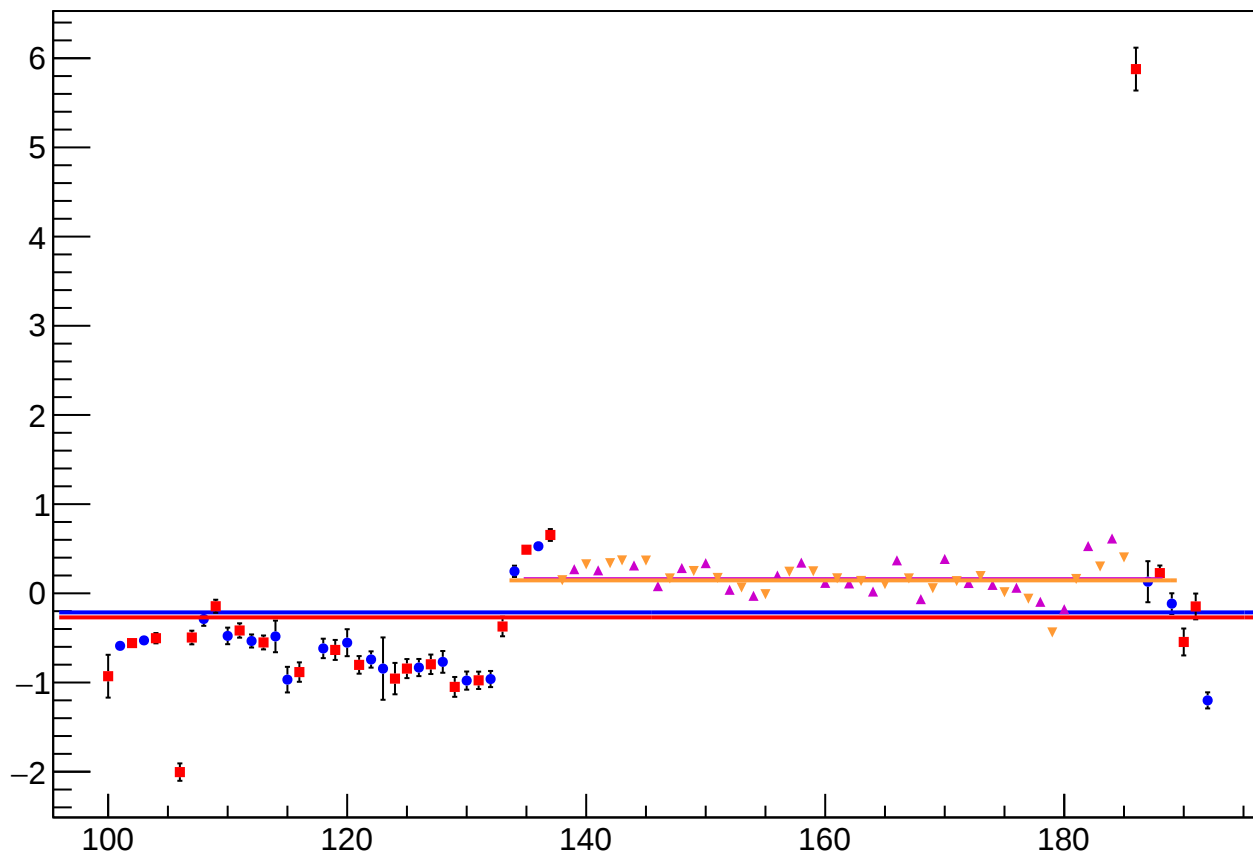
Right: 22.866 $\pm$ 0.231  $\chi^2$ /NDF: 8559.1/42

In: 30.400 $\pm$ 0.090  $\chi^2$ /NDF:7408.0/42

Out: 30.679 $\pm$ 0.089  $\chi^2$ /NDF:8164.9/47

All: 30.542 $\pm$ 0.063  $\chi^2$ /NDF: 15577.7/90

reg\_asym\_sam\_12345678\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.214 \pm 0.017$   $\chi^2/\text{NDF}$ : 1121.1/19

Left Out:  $0.145 \pm 0.004$   $\chi^2/\text{NDF}$ : 1579.6/24

Right Out:  $-0.270 \pm 0.018$   $\chi^2/\text{NDF}$ : 1876.2/22

Left In:  $0.159 \pm 0.004$   $\chi^2/\text{NDF}$ : 2009.8/22

Left:  $0.152 \pm 0.003$   $\chi^2/\text{NDF}$ : 3594.3/47

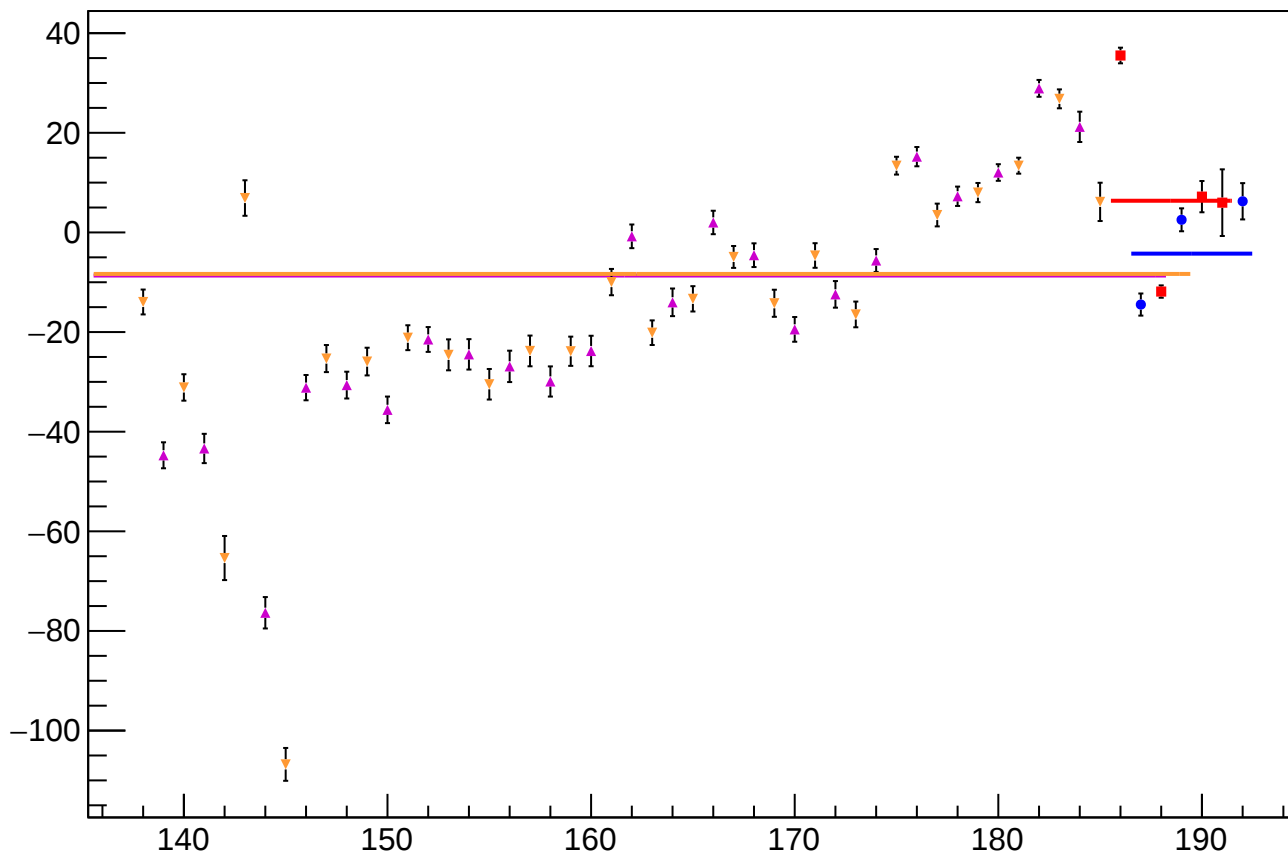
Right:  $-0.241 \pm 0.012$   $\chi^2/\text{NDF}$ : 3002.5/42

In:  $0.137 \pm 0.004$   $\chi^2/\text{NDF}$ : 3572.0/42

Out:  $0.122 \pm 0.004$   $\chi^2/\text{NDF}$ : 3986.9/47

All:  $0.130 \pm 0.003$   $\chi^2/\text{NDF}$ : 7564.9/90

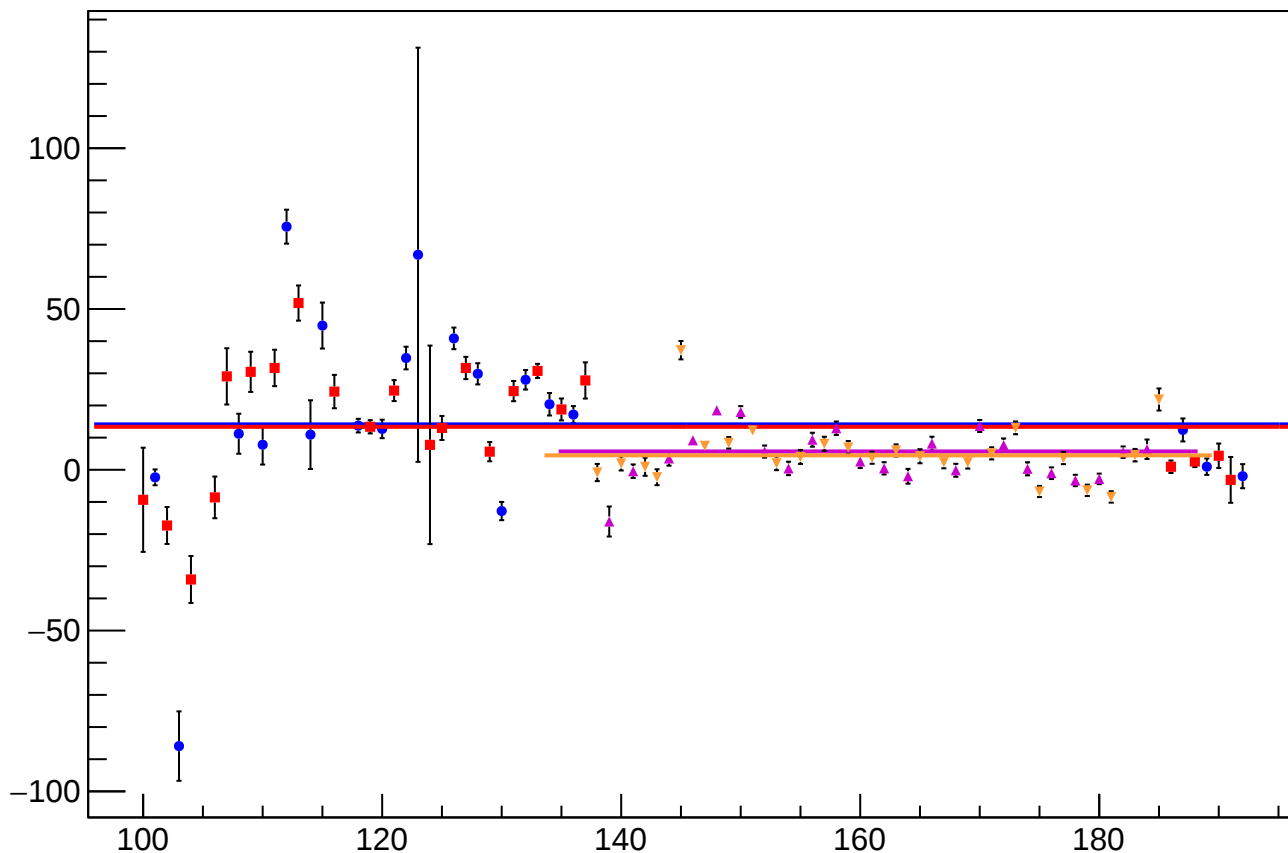
reg\_asym\_atl1\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-4.256 \pm 1.463$   $\chi^2/\text{NDF}: 38.2/2$   
 Left Out:  $-8.332 \pm 0.500$   $\chi^2/\text{NDF}: 2226.2/24$   
 Right Out:  $6.361 \pm 0.920$   $\chi^2/\text{NDF}: 561.0/3$   
 Left In:  $-8.652 \pm 0.507$   $\chi^2/\text{NDF}: 2223.8/22$

Left:  $-8.490 \pm 0.356$   $\chi^2/\text{NDF}: 4450.2/47$   
 Right:  $3.351 \pm 0.779$   $\chi^2/\text{NDF}: 637.0/6$   
 In:  $-8.180 \pm 0.479$   $\chi^2/\text{NDF}: 2270.1/25$   
 Out:  $-4.988 \pm 0.439$   $\chi^2/\text{NDF}: 2984.1/28$   
 All:  $-6.445 \pm 0.324$   $\chi^2/\text{NDF}: 5278.3/54$

reg\_asym\_atl1\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 14.126 $\pm$ 0.777  $\chi^2$ /NDF: 568.1/19

Left Out: 4.484 $\pm$ 0.392  $\chi^2$ /NDF: 371.9/24

Right Out: 13.361 $\pm$ 0.720  $\chi^2$ /NDF: 380.8/22

Left In: 5.705 $\pm$ 0.404  $\chi^2$ /NDF: 324.1/22

Left: 5.076 $\pm$ 0.281  $\chi^2$ /NDF: 700.6/47

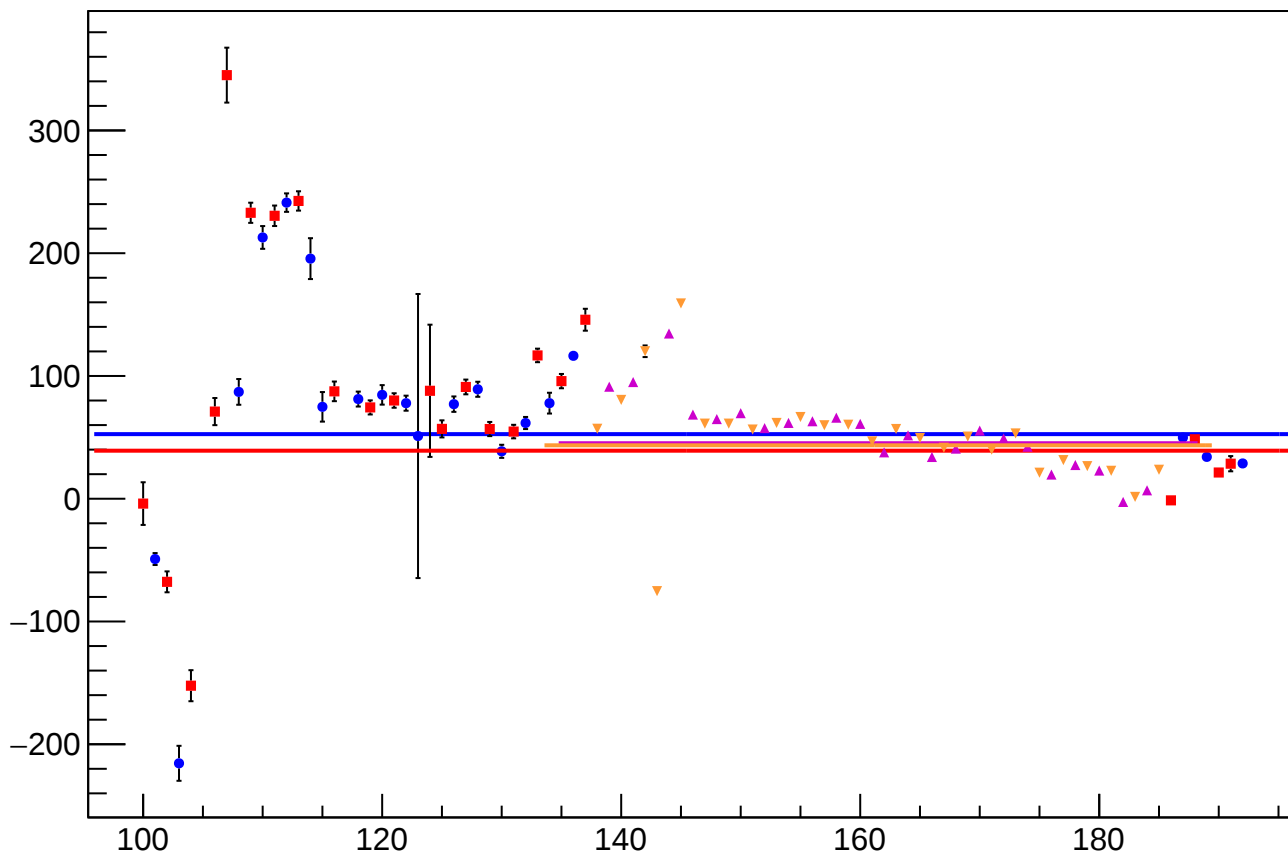
Right: 13.714 $\pm$ 0.528  $\chi^2$ /NDF: 949.4/42

In: 7.497 $\pm$ 0.359  $\chi^2$ /NDF: 984.5/42

Out: 6.514 $\pm$ 0.344  $\chi^2$ /NDF: 869.8/47

All: 6.985 $\pm$ 0.248  $\chi^2$ /NDF: 1858.2/90

reg\_asym\_atl1\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 52.624 $\pm$ 0.983  $\chi^2$ /NDF: 2325.9/19

Left Out: 43.524 $\pm$ 0.498  $\chi^2$ /NDF: 3830.7/24

Right Out: 39.132 $\pm$ 0.688  $\chi^2$ /NDF: 4154.8/22

Left In: 45.211 $\pm$ 0.504  $\chi^2$ /NDF: 3048.5/22

Left: 44.358 $\pm$ 0.354  $\chi^2$ /NDF: 6884.8/47

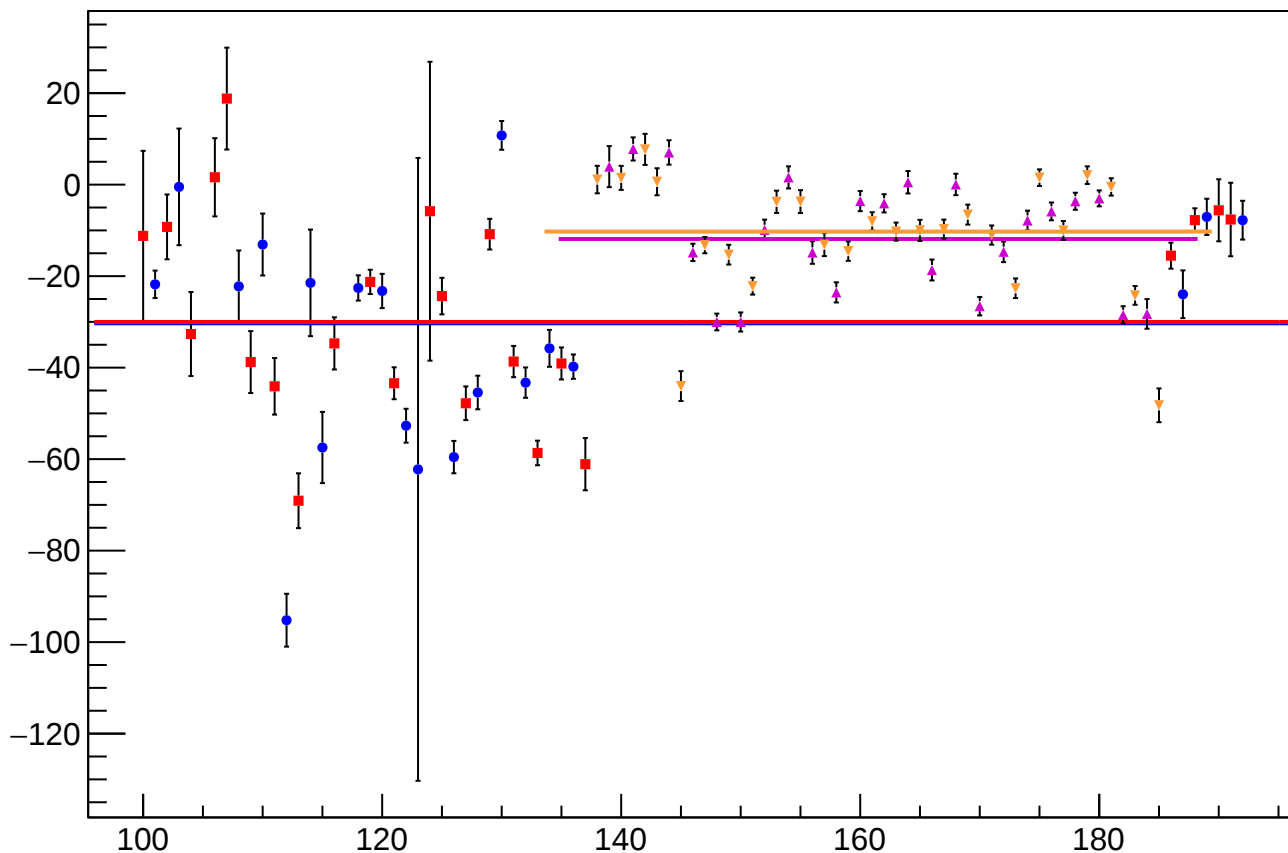
Right: 43.568 $\pm$ 0.564  $\chi^2$ /NDF: 6607.1/42

In: 46.755 $\pm$ 0.449  $\chi^2$ /NDF: 5419.4/42

Out: 42.013 $\pm$ 0.404  $\chi^2$ /NDF: 8012.2/47

All: 44.134 $\pm$ 0.300  $\chi^2$ /NDF: 13493.3/90

reg\_asym\_atl1\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-30.306 \pm 0.917$   $\chi^2/\text{NDF}: 558.3/19$

Left Out:  $-10.257 \pm 0.444$   $\chi^2/\text{NDF}: 552.4/24$

Right Out:  $-30.017 \pm 0.891$   $\chi^2/\text{NDF}: 454.0/22$

Left In:  $-11.877 \pm 0.456$   $\chi^2/\text{NDF}: 666.2/22$

Left:  $-11.046 \pm 0.318$   $\chi^2/\text{NDF}: 1225.1/47$

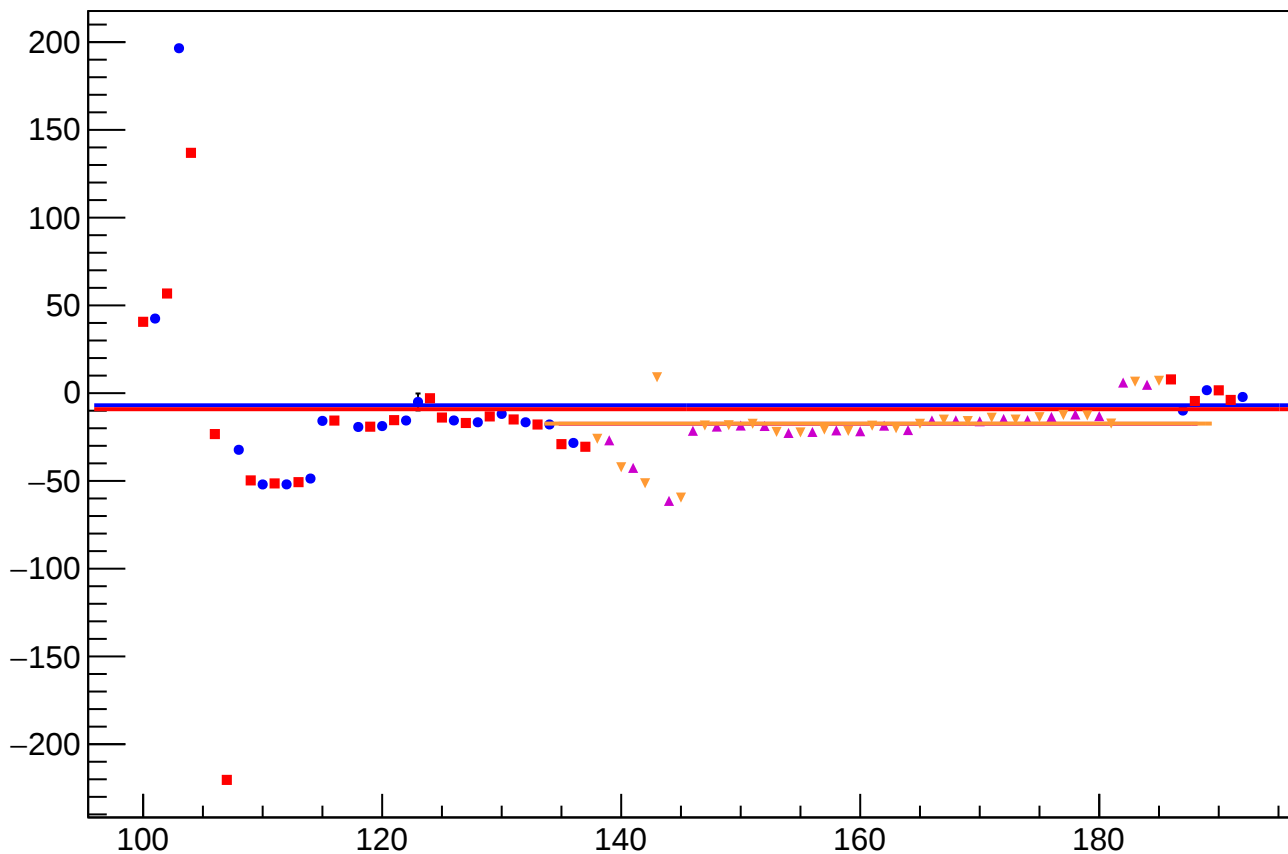
Right:  $-30.157 \pm 0.639$   $\chi^2/\text{NDF}: 1012.3/42$

In:  $-15.533 \pm 0.408$   $\chi^2/\text{NDF}: 1548.4/42$

Out:  $-14.193 \pm 0.398$   $\chi^2/\text{NDF}: 1400.6/47$

All:  $-14.845 \pm 0.285$   $\chi^2/\text{NDF}: 2954.5/90$

reg\_asym\_atl1\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-6.921 \pm 0.051$   $\chi^2/\text{NDF}: 579985.8/19$

Left Out:  $-17.333 \pm 0.020$   $\chi^2/\text{NDF}: 325197.2/24$

Right Out:  $-9.148 \pm 0.051$   $\chi^2/\text{NDF}: 573610.4/22$

Left In:  $-17.491 \pm 0.021$   $\chi^2/\text{NDF}: 259215.8/22$

Left:  $-17.411 \pm 0.015$   $\chi^2/\text{NDF}: 584442.6/47$

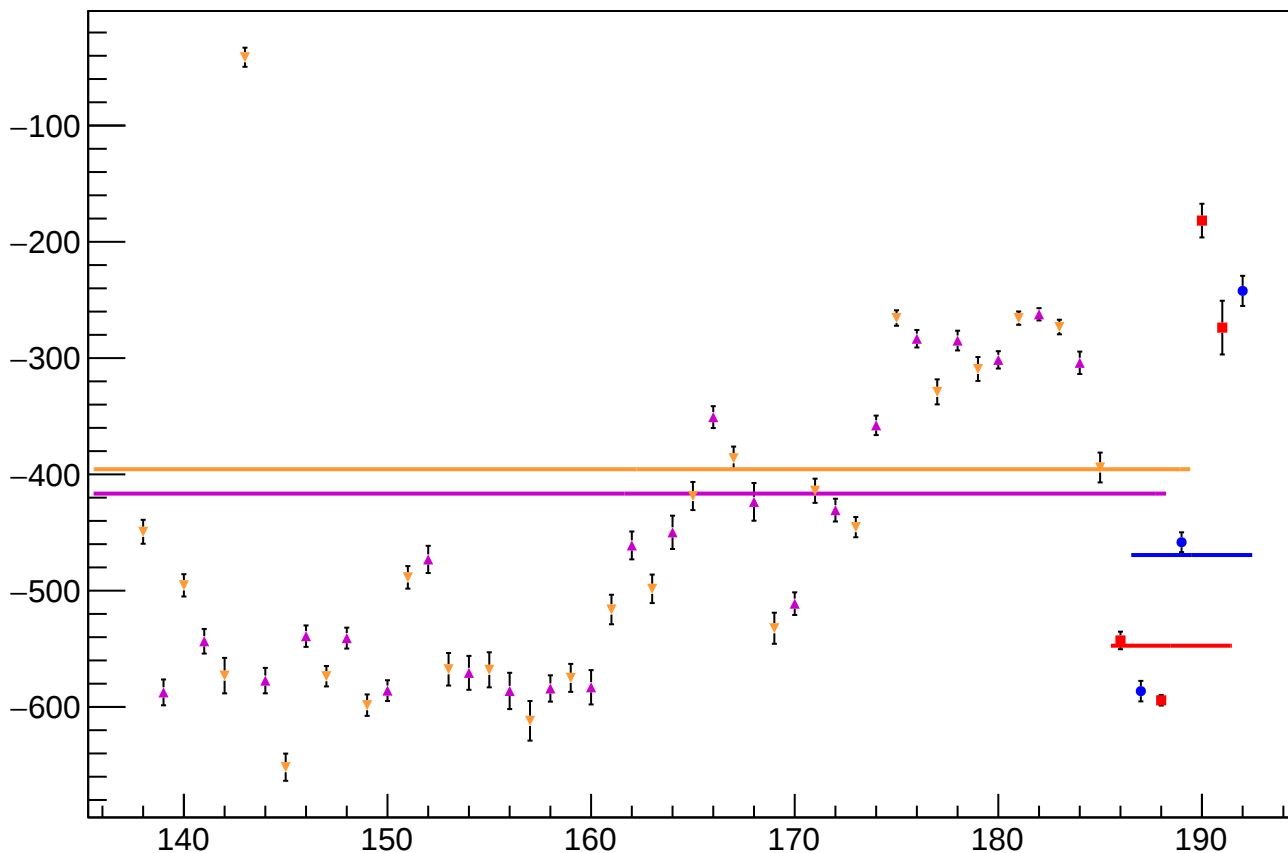
Right:  $-8.038 \pm 0.036$   $\chi^2/\text{NDF}: 1154549.7/42$

In:  $-16.003 \pm 0.019$   $\chi^2/\text{NDF}: 875982.4/42$

Out:  $-16.201 \pm 0.019$   $\chi^2/\text{NDF}: 921058.7/47$

All:  $-16.104 \pm 0.013$   $\chi^2/\text{NDF}: 1797095.1/90$

reg\_asym\_atl2\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-469.349 \pm 5.540$   $\chi^2/\text{NDF}$ : 485.6/2

Left Out:  $-395.547 \pm 1.953$   $\chi^2/\text{NDF}$ : 5946.5/24

Right Out:  $-547.328 \pm 3.679$   $\chi^2/\text{NDF}$ : 888.0/3

Left In:  $-416.521 \pm 2.005$   $\chi^2/\text{NDF}$ : 3917.0/22

Left:  $-405.762 \pm 1.399$   $\chi^2/\text{NDF}$ : 9919.7/47

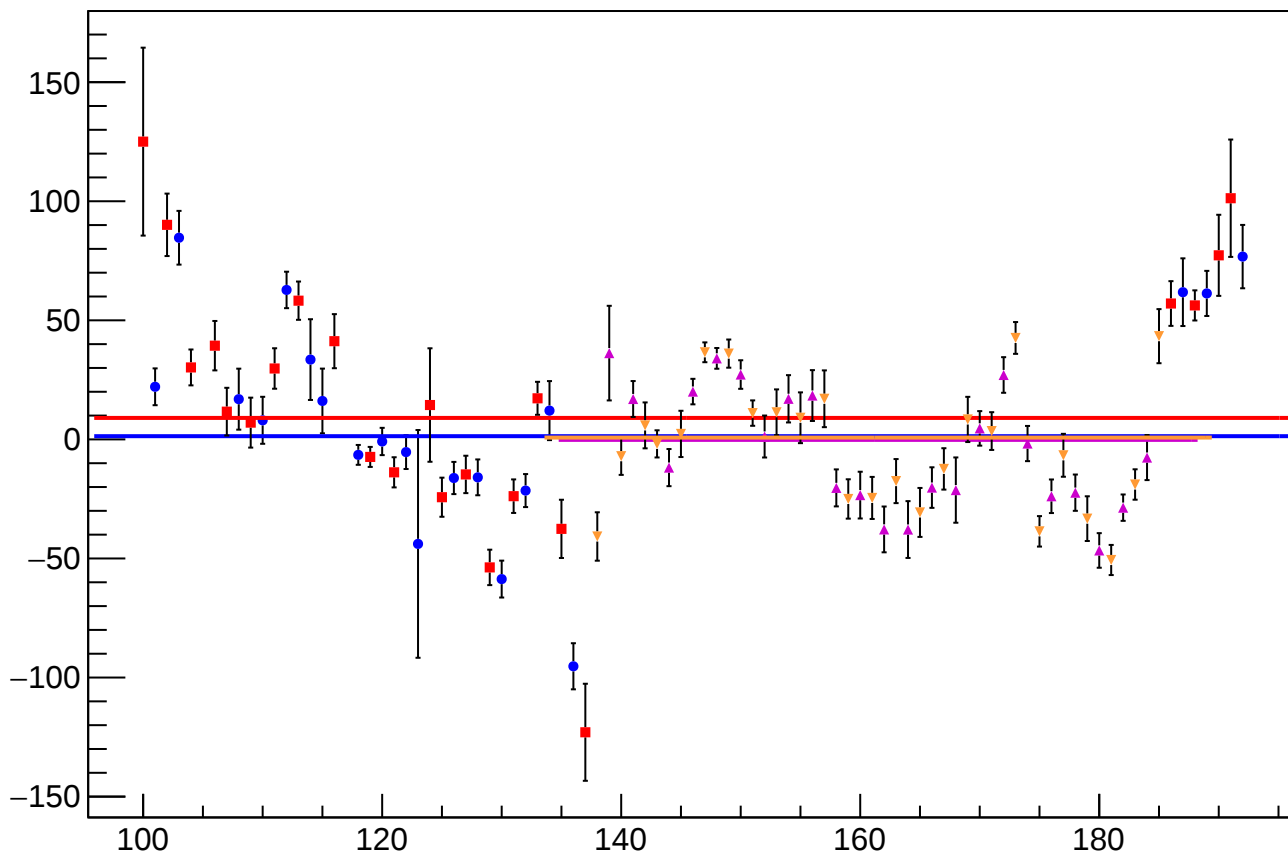
Right:  $-523.462 \pm 3.065$   $\chi^2/\text{NDF}$ : 1511.1/6

In:  $-422.639 \pm 1.885$   $\chi^2/\text{NDF}$ : 4483.0/25

Out:  $-428.930 \pm 1.725$   $\chi^2/\text{NDF}$ : 8162.3/28

All:  $-426.062 \pm 1.273$   $\chi^2/\text{NDF}$ : 12651.3/54

reg\_asym\_atl2\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 1.351 $\pm$ 1.853  $\chi^2$ /NDF: 411.9/19

Left Out: 0.767 $\pm$ 1.503  $\chi^2$ /NDF:350.1/24

Right Out: 9.018 $\pm$ 1.786  $\chi^2$ /NDF: 431.8/22

Left In: -0.202 $\pm$ 1.575  $\chi^2$ /NDF:260.8/22

Left: 0.305 $\pm$ 1.087  $\chi^2$ /NDF: 611.1/47

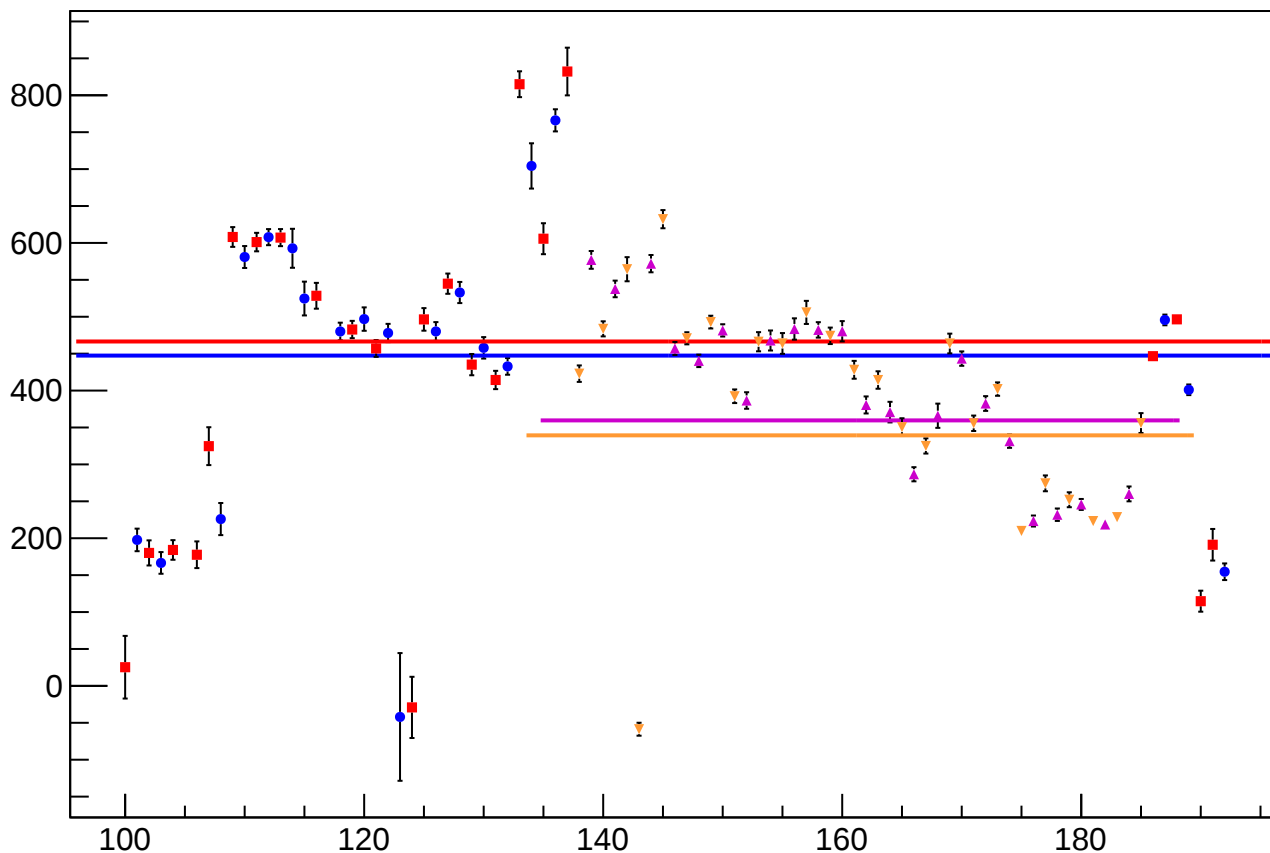
Right: 5.327 $\pm$ 1.286  $\chi^2$ /NDF: 852.5/42

In: 0.449 $\pm$ 1.200  $\chi^2$ /NDF:673.1/42

Out: 4.187 $\pm$ 1.150  $\chi^2$ /NDF:794.3/47

All: 2.399 $\pm$ 0.830  $\chi^2$ /NDF: 1472.5/90

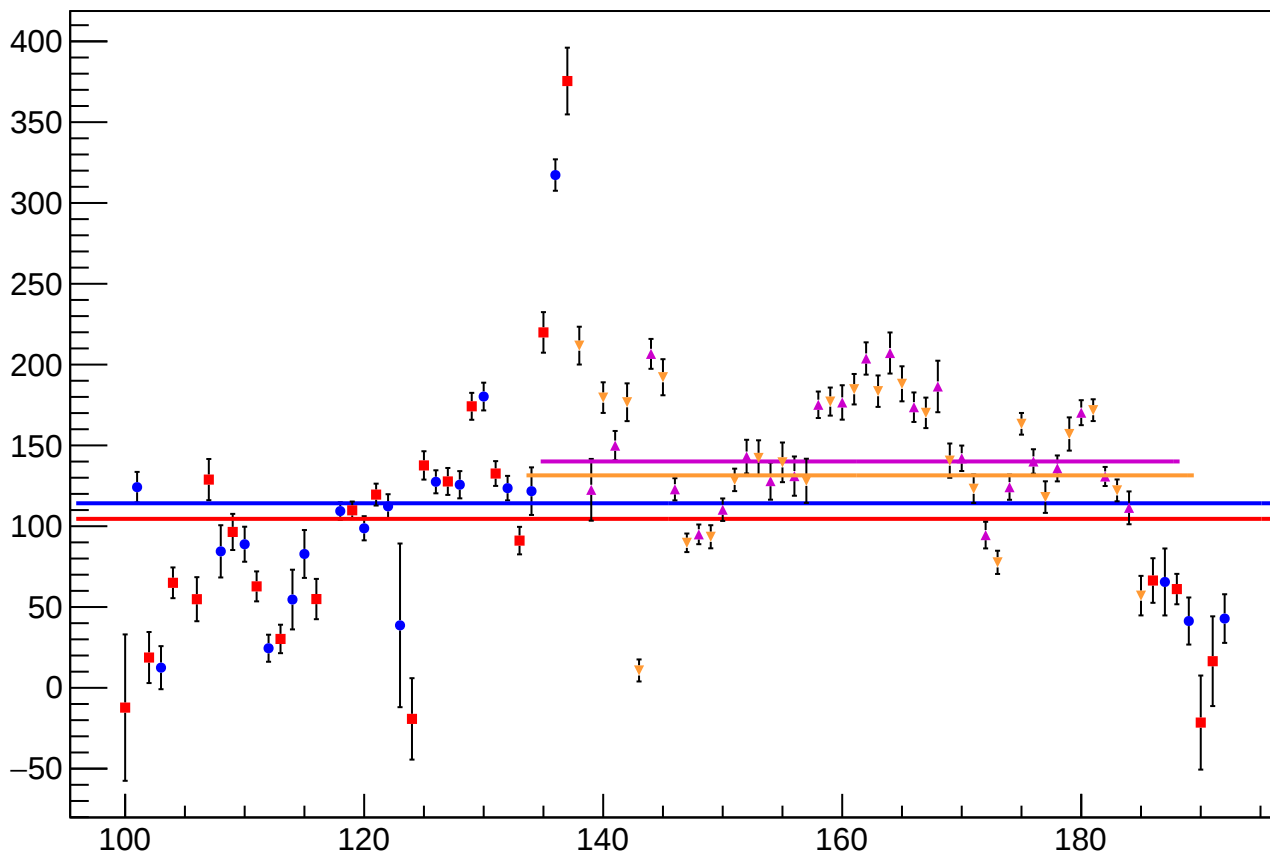
reg\_asym\_atl2\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $447.387 \pm 2.881$   $\chi^2/\text{NDF}: 2459.4/19$   
 Left Out:  $339.355 \pm 1.963$   $\chi^2/\text{NDF}: 5502.5/24$   
 Right Out:  $466.495 \pm 2.288$   $\chi^2/\text{NDF}: 3146.8/22$   
 Left In:  $359.609 \pm 2.003$   $\chi^2/\text{NDF}: 3398.5/22$

Left:  $349.278 \pm 1.402$   $\chi^2/\text{NDF}: 8953.2/47$   
 Right:  $459.108 \pm 1.792$   $\chi^2/\text{NDF}: 5633.2/42$   
 In:  $388.199 \pm 1.644$   $\chi^2/\text{NDF}: 6483.7/42$   
 Out:  $393.261 \pm 1.490$   $\chi^2/\text{NDF}: 10428.6/47$   
 All:  $390.980 \pm 1.104$   $\chi^2/\text{NDF}: 16917.5/90$

reg\_asym\_atl2\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 114.196 $\pm$ 2.170  $\chi^2/\text{NDF}$ : 761.0/19

Left Out: 131.464 $\pm$ 1.728  $\chi^2/\text{NDF}$ :809.3/24

Right Out: 104.548 $\pm$ 2.113  $\chi^2/\text{NDF}$ : 630.4/22

Left In: 140.069 $\pm$ 1.795  $\chi^2/\text{NDF}$ :316.5/22

Left: 135.602 $\pm$ 1.245  $\chi^2/\text{NDF}$ : 1137.8/47

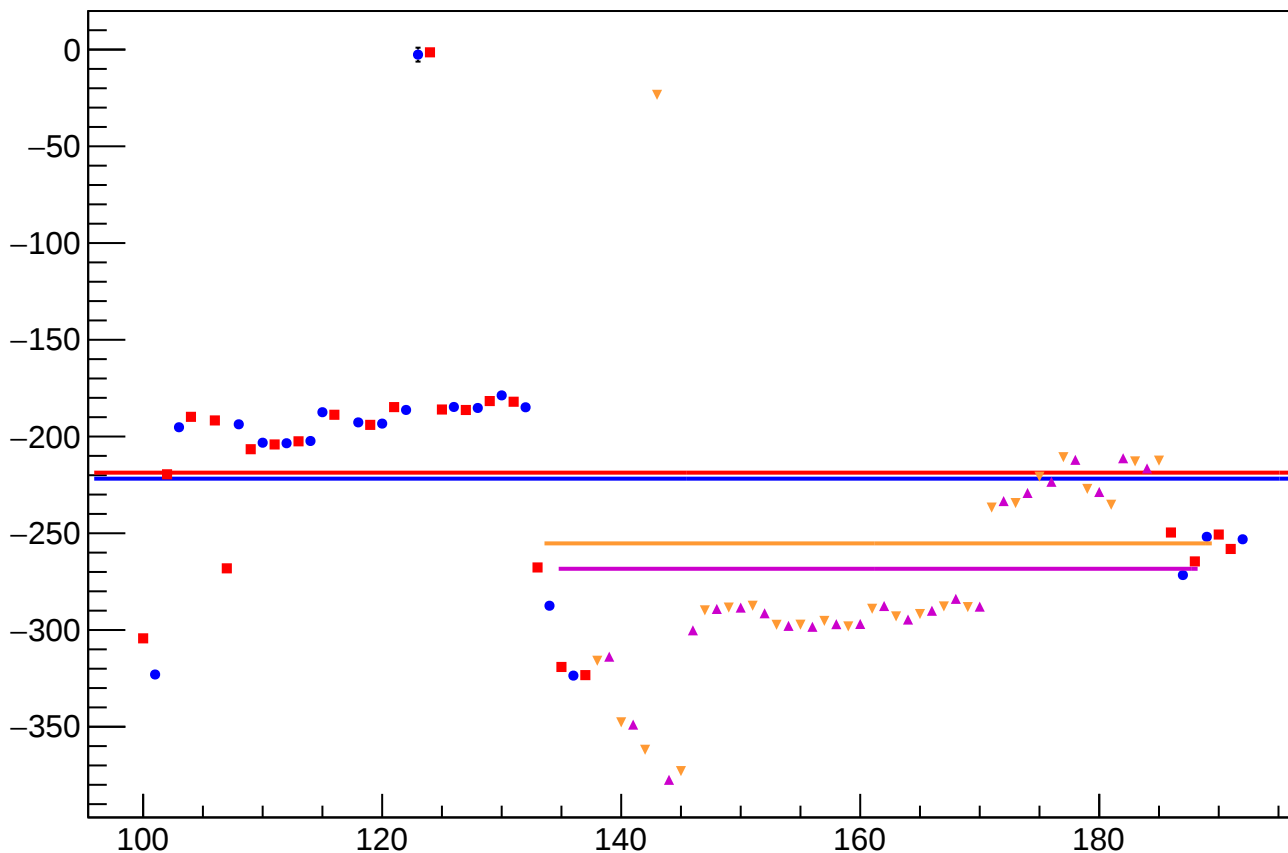
Right: 109.245 $\pm$ 1.514  $\chi^2/\text{NDF}$ : 1401.6/42

In: 129.554 $\pm$ 1.383  $\chi^2/\text{NDF}$ :1162.0/42

Out: 120.681 $\pm$ 1.338  $\chi^2/\text{NDF}$ :1537.0/47

All: 124.969 $\pm$ 0.961  $\chi^2/\text{NDF}$ : 2720.2/90

reg\_asym\_atl2\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: -221.777+/-0.128  $\chi^2$ /NDF: 155816.2/19

Left Out: -255.232+/-0.082  $\chi^2$ /NDF: 728016.7/24

Right Out: -218.669+/-0.122  $\chi^2$ /NDF: 132030.4/22

Left In: -268.353+/-0.084  $\chi^2$ /NDF: 262479.3/22

Left: -261.661+/-0.059  $\chi^2$ /NDF: 1003051.2/47

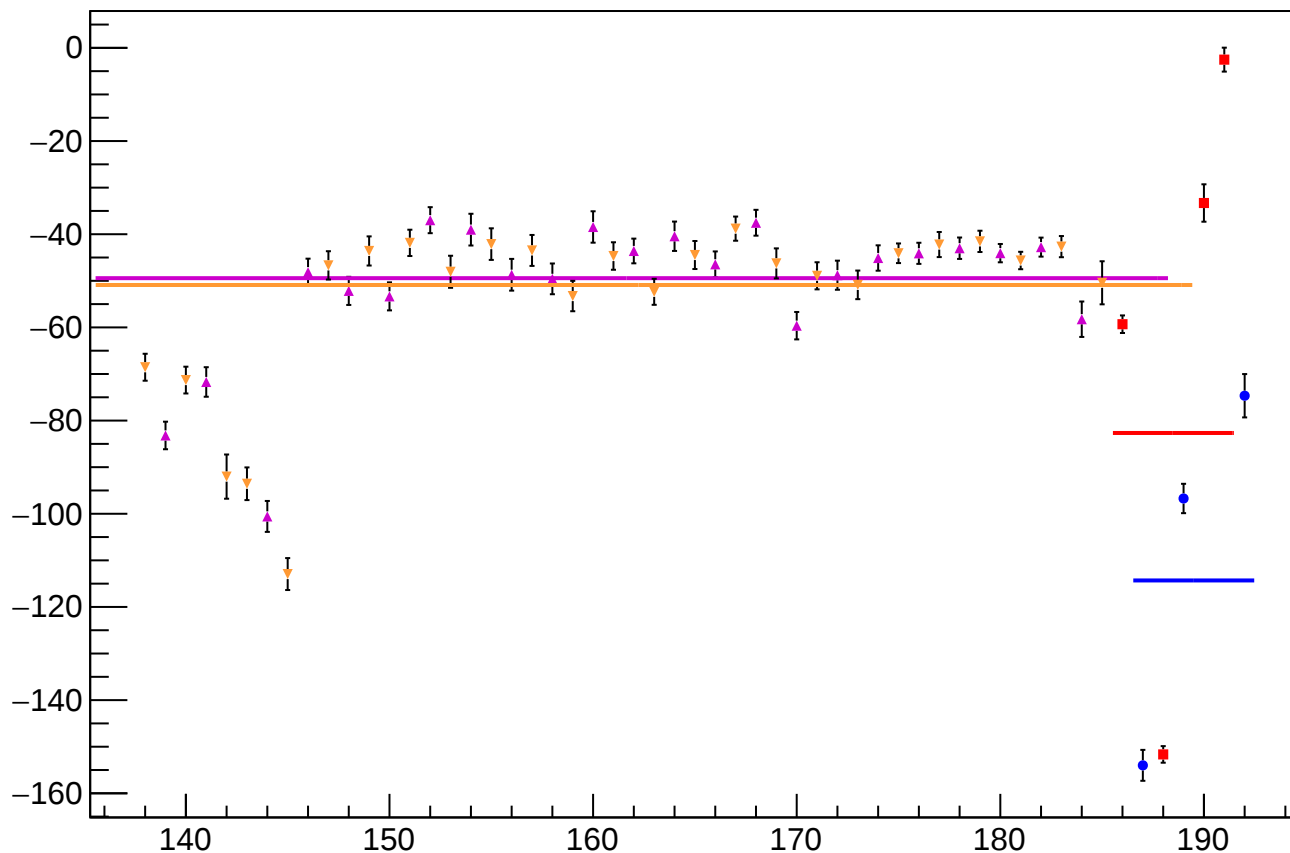
Right: -220.145+/-0.088  $\chi^2$ /NDF: 288155.5/42

In: -254.440+/-0.070  $\chi^2$ /NDF: 510963.4/42

Out: -243.842+/-0.068  $\chi^2$ /NDF: 922042.3/47

All: -248.986+/-0.049  $\chi^2$ /NDF: 1444793.5/90

reg\_asym\_atr1\_diff\_bpm1X\_slope vs Slug, Sign Corrected

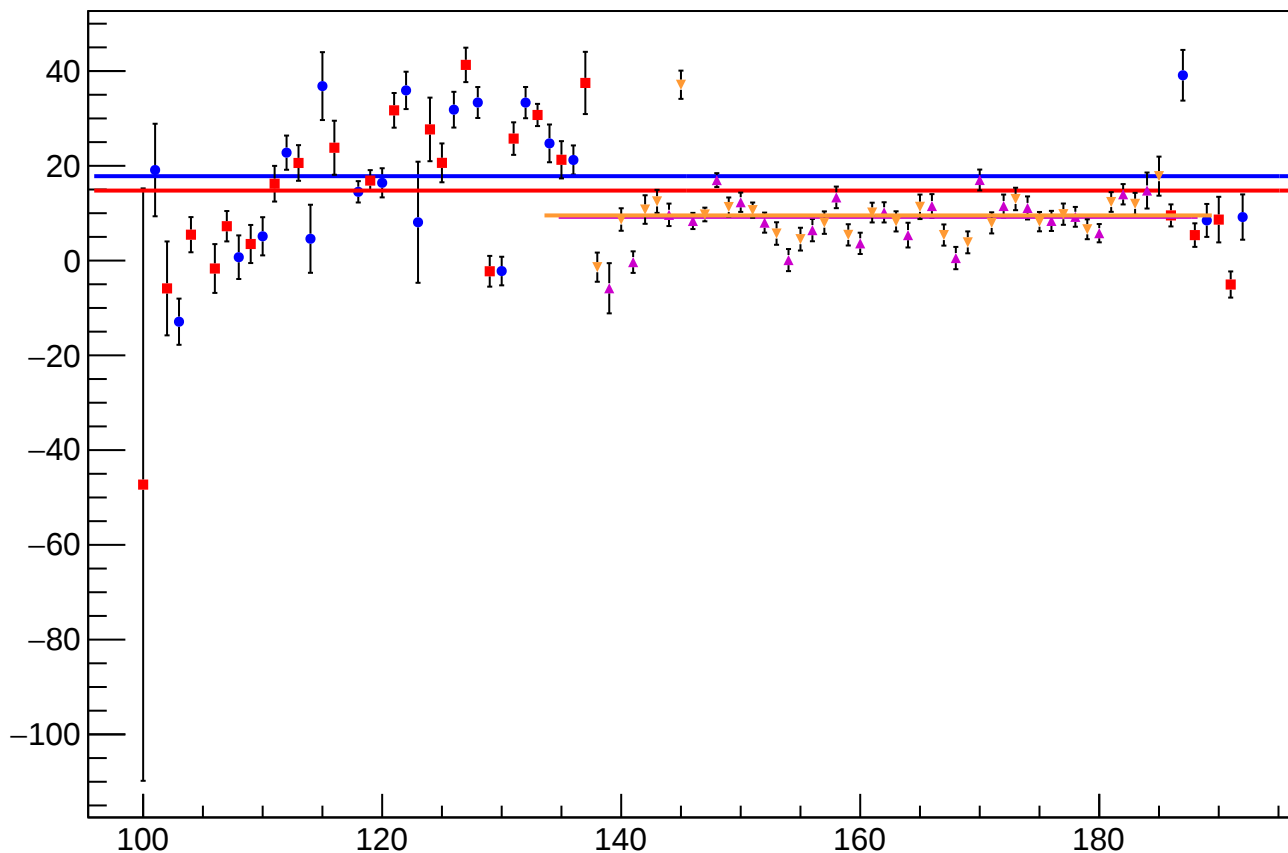


Right In:  $-114.313 \pm 2.051$   $\chi^2/\text{NDF}$ : 246.9/2  
 Left Out:  $-50.897 \pm 0.573$   $\chi^2/\text{NDF}$ : 761.1/24  
 Right Out:  $-82.659 \pm 1.111$   $\chi^2/\text{NDF}$ : 2779.6/3  
 Left In:  $-49.432 \pm 0.584$   $\chi^2/\text{NDF}$ : 543.4/22

Left:  $-50.179 \pm 0.409$   $\chi^2/\text{NDF}$ : 1307.8/47  
 Right:  $-89.841 \pm 0.977$   $\chi^2/\text{NDF}$ : 3210.6/6  
 In:  $-54.298 \pm 0.562$   $\chi^2/\text{NDF}$ : 1716.2/25  
 Out:  $-57.567 \pm 0.509$   $\chi^2/\text{NDF}$ : 4186.5/28

All:  $-56.093 \pm 0.377$   $\chi^2/\text{NDF}$ : 5921.3/54

reg\_asym\_atr1\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 17.814 $\pm$ 0.862  $\chi^2$ /NDF: 233.1/19

Left Out: 9.530 $\pm$ 0.446  $\chi^2$ /NDF:134.4/24

Right Out: 14.776 $\pm$ 0.733  $\chi^2$ /NDF: 292.9/22

Left In: 9.231 $\pm$ 0.462  $\chi^2$ /NDF:124.0/22

Left: 9.386 $\pm$ 0.321  $\chi^2$ /NDF: 258.5/47

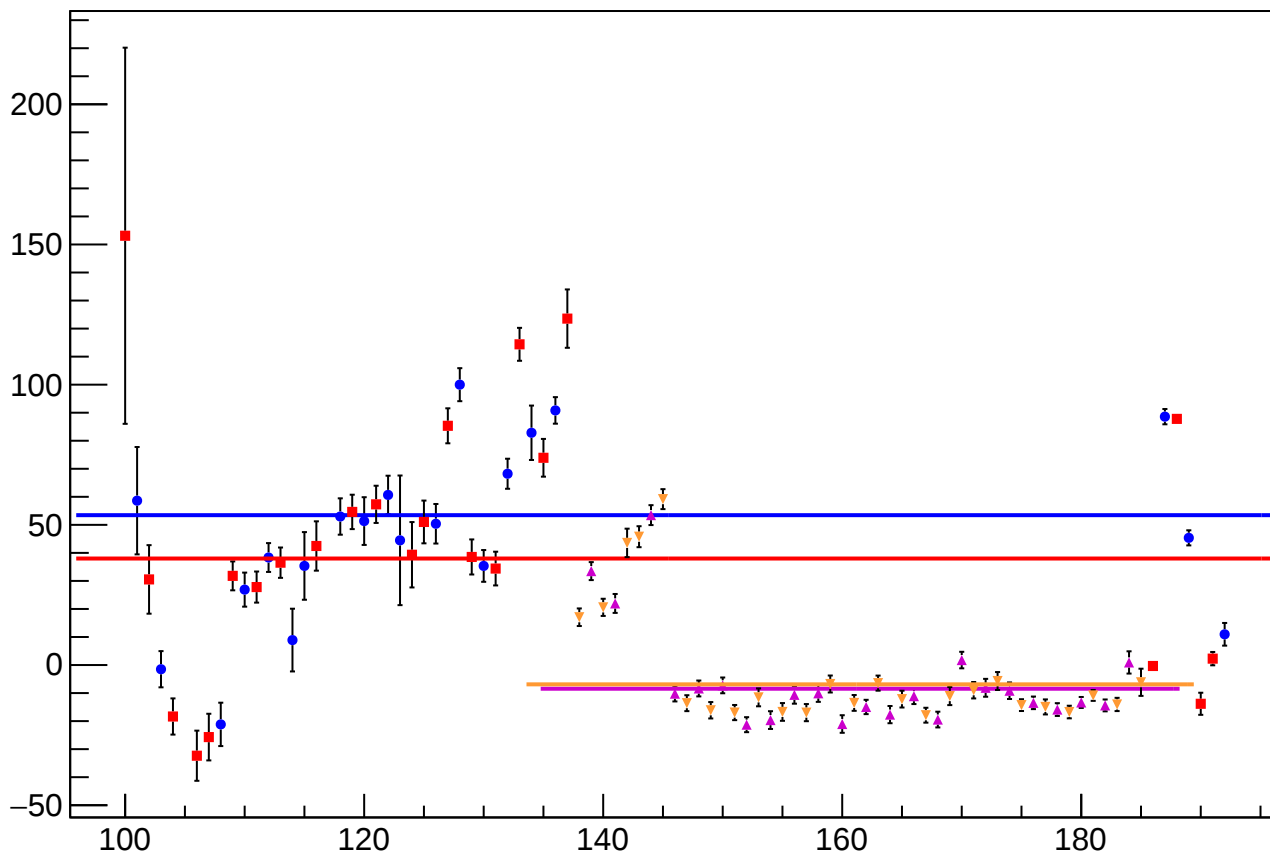
Right: 16.051 $\pm$ 0.558  $\chi^2$ /NDF: 533.2/42

In: 11.145 $\pm$ 0.407  $\chi^2$ /NDF:434.1/42

Out: 10.947 $\pm$ 0.381  $\chi^2$ /NDF:464.7/47

All: 11.039 $\pm$ 0.278  $\chi^2$ /NDF: 898.9/90

reg\_asym\_atr1\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 53.453+/-1.206  $\chi^2/\text{NDF}$ : 650.1/19

Left Out: -6.888+/-0.571  $\chi^2/\text{NDF}$ : 914.2/24

Right Out: 37.990+/-0.803  $\chi^2/\text{NDF}$ : 2792.3/22

Left In: -8.451+/-0.580  $\chi^2/\text{NDF}$ : 688.9/22

Left: -7.658+/-0.407  $\chi^2/\text{NDF}$ : 1606.8/47

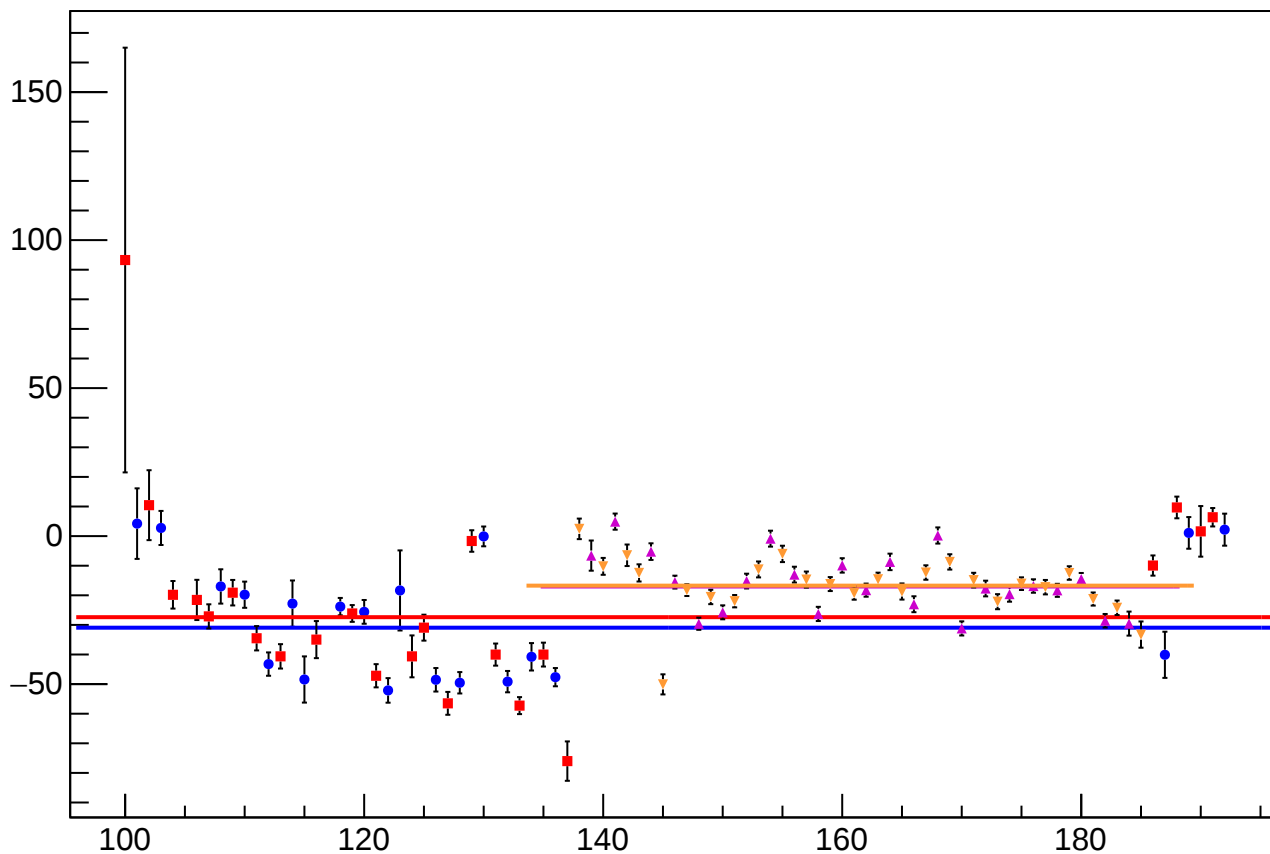
Right: 42.736+/-0.668  $\chi^2/\text{NDF}$ : 3556.3/42

In: 3.172+/-0.523  $\chi^2/\text{NDF}$ : 3479.2/42

Out: 8.194+/-0.465  $\chi^2/\text{NDF}$ : 5782.6/47

All: 5.973+/-0.347  $\chi^2/\text{NDF}$ : 9313.3/90

reg\_asym\_atr1\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-30.941 \pm 1.000$   $\chi^2/\text{NDF}: 370.9/19$

Left Out:  $-16.733 \pm 0.507$   $\chi^2/\text{NDF}: 223.3/24$

Right Out:  $-27.389 \pm 0.880$   $\chi^2/\text{NDF}: 612.5/22$

Left In:  $-17.023 \pm 0.522$   $\chi^2/\text{NDF}: 327.6/22$

Left:  $-16.874 \pm 0.364$   $\chi^2/\text{NDF}: 551.0/47$

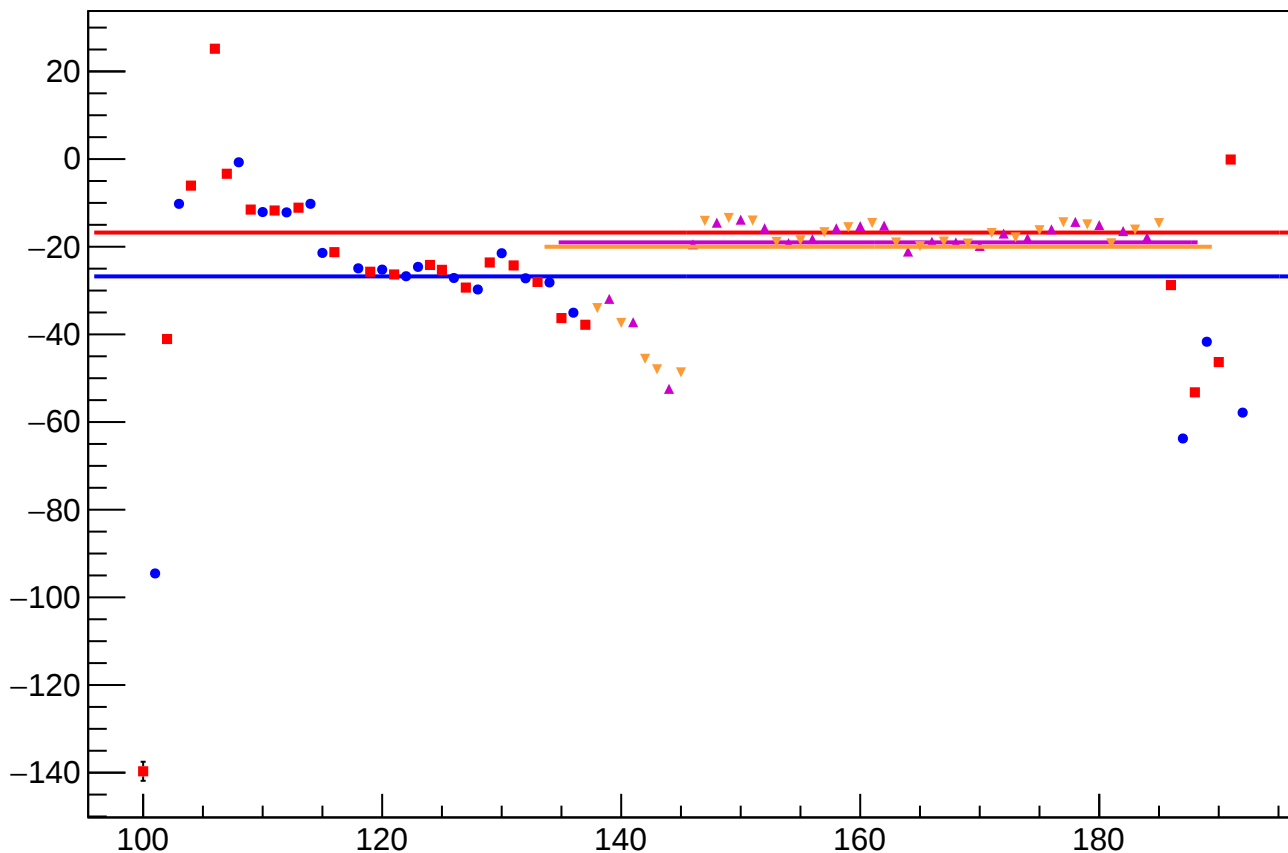
Right:  $-28.940 \pm 0.661$   $\chi^2/\text{NDF}: 990.6/42$

In:  $-20.004 \pm 0.463$   $\chi^2/\text{NDF}: 850.8/42$

Out:  $-19.387 \pm 0.439$   $\chi^2/\text{NDF}: 945.9/47$

All:  $-19.679 \pm 0.318$   $\chi^2/\text{NDF}: 1797.7/90$

reg\_asym\_atr1\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-26.768 \pm 0.054$   $\chi^2/\text{NDF}: 101357.6/19$

Left Out:  $-20.006 \pm 0.023$   $\chi^2/\text{NDF}: 145623.8/24$

Right Out:  $-16.765 \pm 0.045$   $\chi^2/\text{NDF}: 176906.3/22$

Left In:  $-19.007 \pm 0.024$   $\chi^2/\text{NDF}: 90873.3/22$

Left:  $-19.514 \pm 0.017$   $\chi^2/\text{NDF}: 237400.2/47$

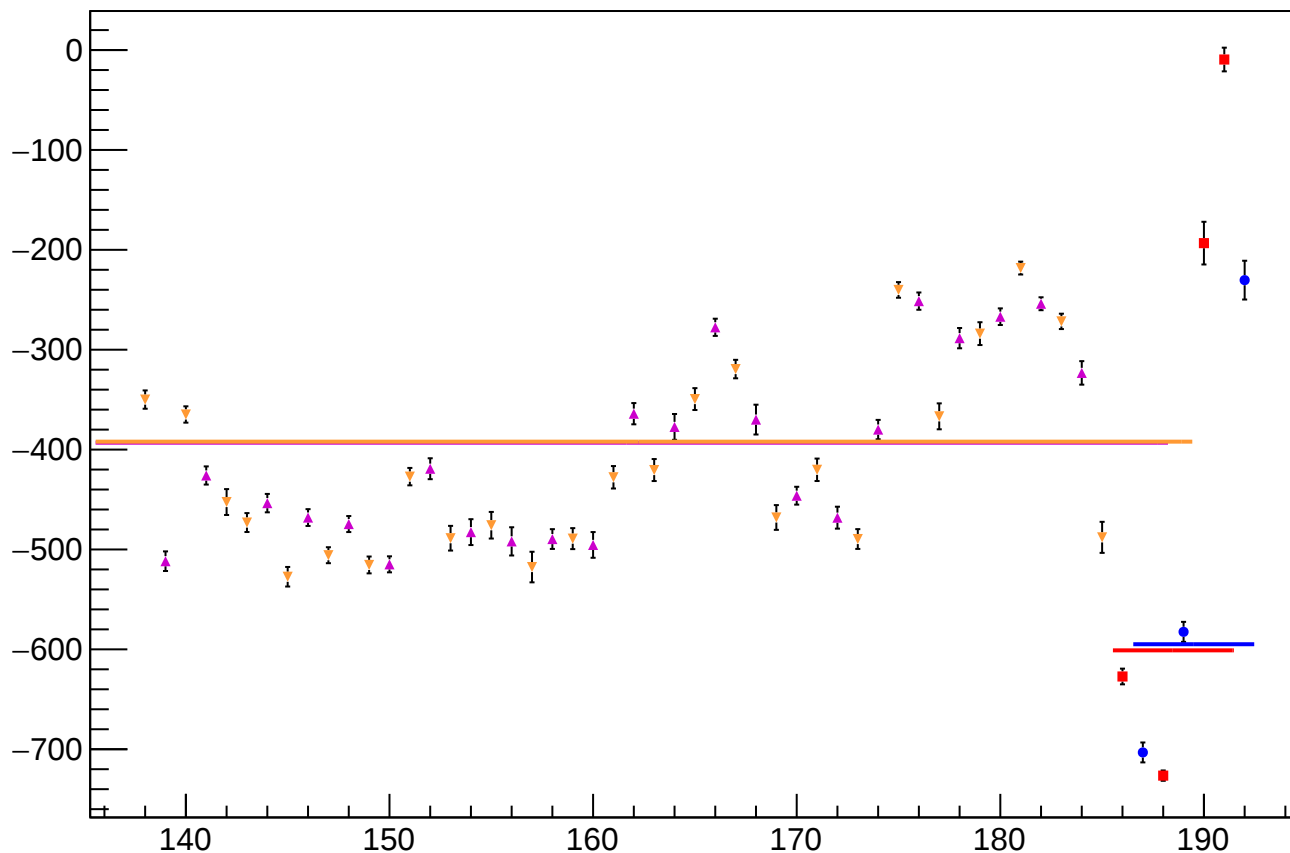
Right:  $-20.837 \pm 0.034$   $\chi^2/\text{NDF}: 298759.0/42$

In:  $-20.266 \pm 0.022$   $\chi^2/\text{NDF}: 209662.0/42$

Out:  $-19.310 \pm 0.021$   $\chi^2/\text{NDF}: 326680.1/47$

All:  $-19.765 \pm 0.015$   $\chi^2/\text{NDF}: 537362.1/90$

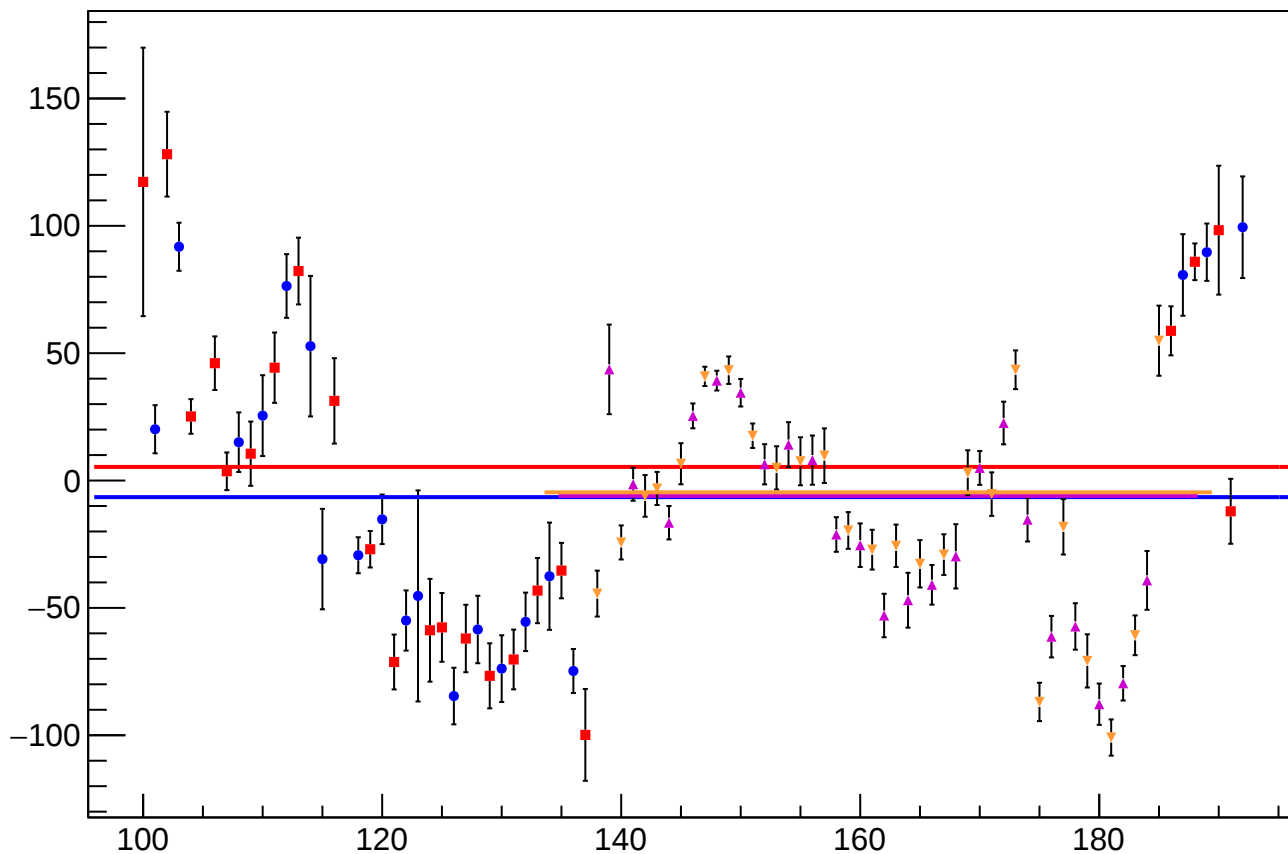
reg\_asym\_atr2\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-594.875 \pm 6.634$   $\chi^2/\text{NDF}: 472.3/2$   
 Left Out:  $-392.054 \pm 1.967$   $\chi^2/\text{NDF}: 2717.2/24$   
 Right Out:  $-601.007 \pm 3.991$   $\chi^2/\text{NDF}: 3450.6/3$   
 Left In:  $-393.113 \pm 2.006$   $\chi^2/\text{NDF}: 2253.3/22$

Left:  $-392.573 \pm 1.404$   $\chi^2/\text{NDF}: 4970.6/47$   
 Right:  $-599.378 \pm 3.420$   $\chi^2/\text{NDF}: 3923.6/6$   
 In:  $-410.007 \pm 1.920$   $\chi^2/\text{NDF}: 3573.0/25$   
 Out:  $-432.872 \pm 1.764$   $\chi^2/\text{NDF}: 8373.2/28$   
 All:  $-422.404 \pm 1.299$   $\chi^2/\text{NDF}: 12023.1/54$

reg\_asym\_atr2\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-6.516 \pm 2.677$   $\chi^2/\text{NDF}: 507.9/19$

Left Out:  $-4.624 \pm 1.462$   $\chi^2/\text{NDF}: 772.9/24$

Right Out:  $5.349 \pm 2.329$   $\chi^2/\text{NDF}: 572.5/22$

Left In:  $-6.019 \pm 1.516$   $\chi^2/\text{NDF}: 654.1/22$

Left:  $-5.296 \pm 1.053$   $\chi^2/\text{NDF}: 1427.4/47$

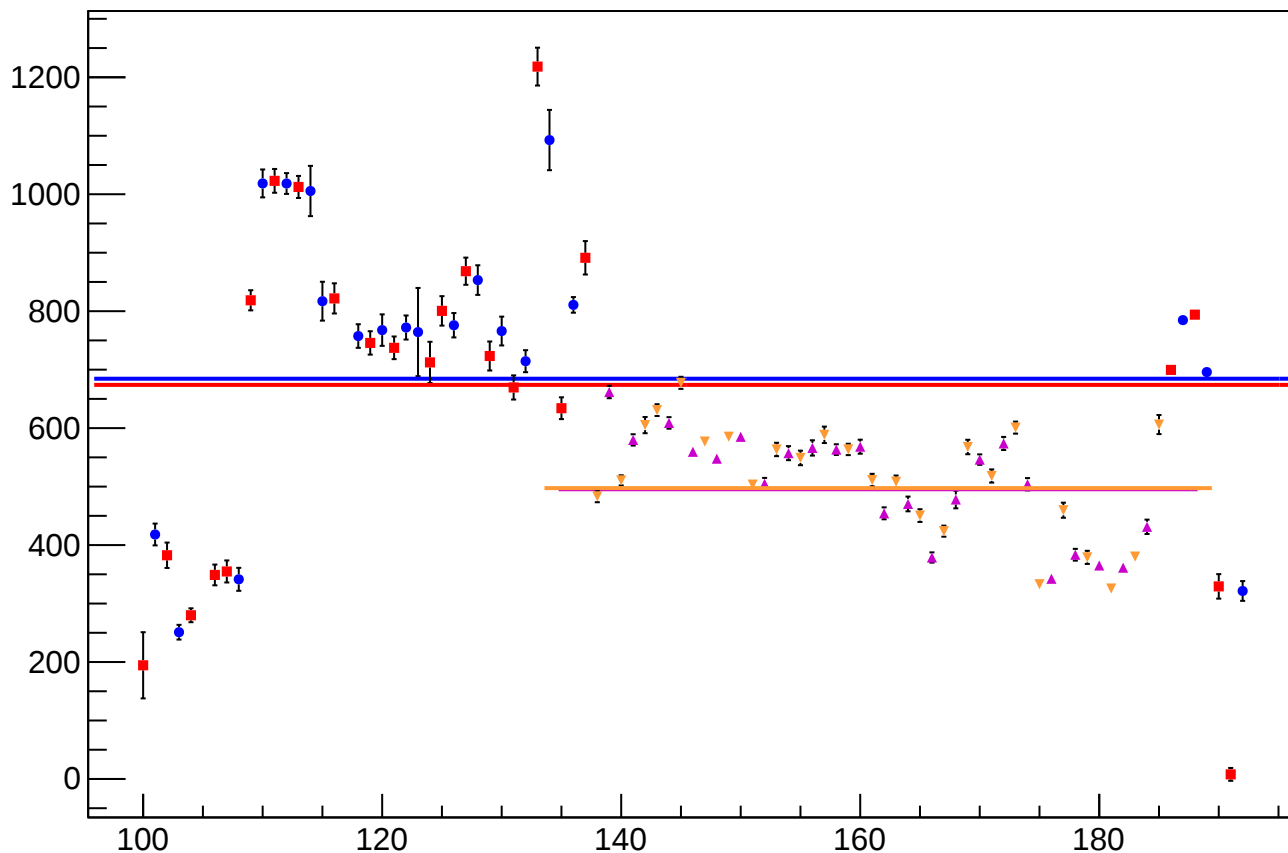
Right:  $0.238 \pm 1.757$   $\chi^2/\text{NDF}: 1091.6/42$

In:  $-6.139 \pm 1.319$   $\chi^2/\text{NDF}: 1162.0/42$

Out:  $-1.804 \pm 1.238$   $\chi^2/\text{NDF}: 1358.6/47$

All:  $-3.834 \pm 0.903$   $\chi^2/\text{NDF}: 2526.3/90$

reg\_asym\_atr2\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $684.498 \pm 3.733$   $\chi^2/\text{NDF}: 3198.8/19$

Left Out:  $497.381 \pm 1.966$   $\chi^2/\text{NDF}: 2614.6/24$

Right Out:  $673.967 \pm 2.693$   $\chi^2/\text{NDF}: 7959.2/22$

Left In:  $495.454 \pm 1.992$   $\chi^2/\text{NDF}: 2253.8/22$

Left:  $496.430 \pm 1.399$   $\chi^2/\text{NDF}: 4868.9/47$

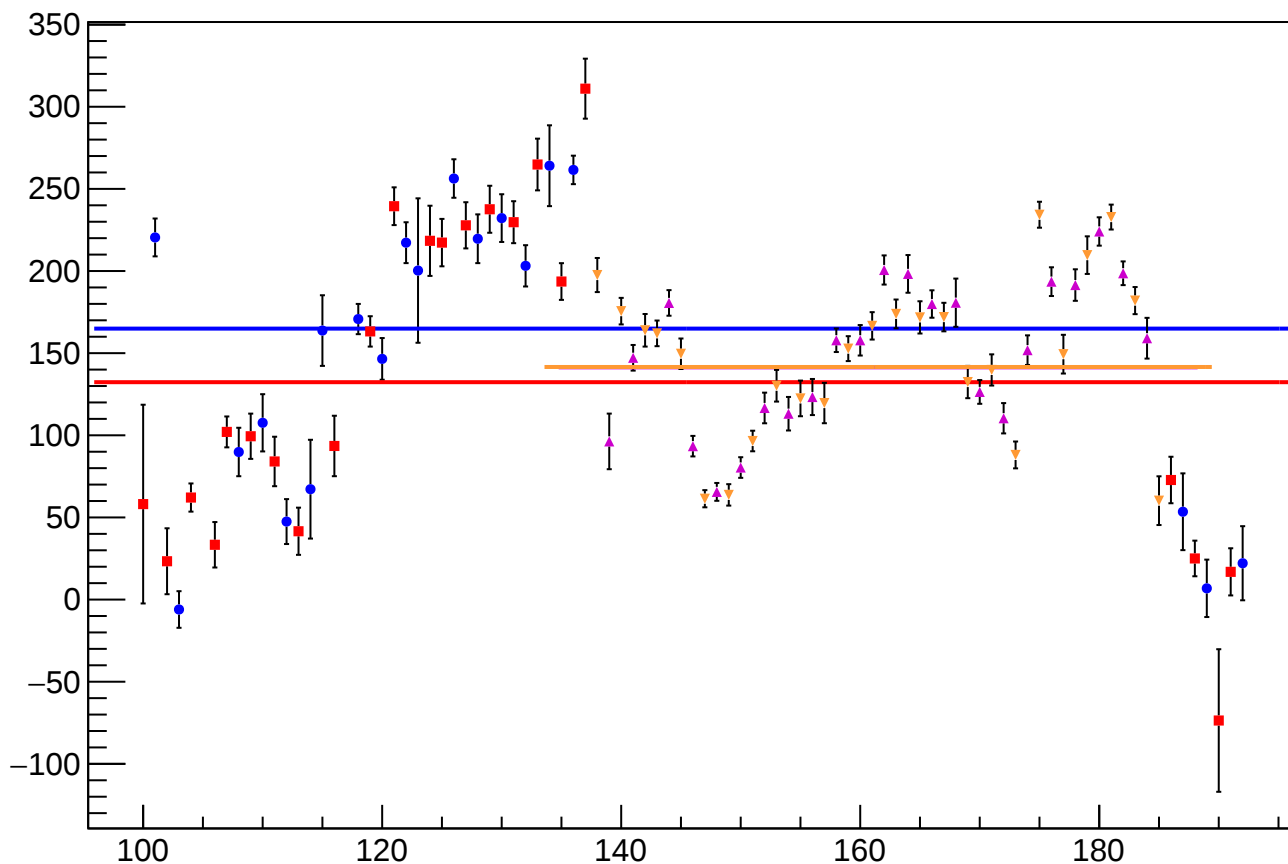
Right:  $677.571 \pm 2.184$   $\chi^2/\text{NDF}: 11163.2/42$

In:  $537.361 \pm 1.758$   $\chi^2/\text{NDF}: 7448.7/42$

Out:  $558.772 \pm 1.588$   $\chi^2/\text{NDF}: 13378.8/47$

All:  $549.150 \pm 1.178$   $\chi^2/\text{NDF}: 20909.2/90$

reg\_asym\_atr2\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $164.947 \pm 3.131$   $\chi^2/\text{NDF}: 790.7/19$

Left Out:  $141.588 \pm 1.698$   $\chi^2/\text{NDF}: 959.6/24$

Right Out:  $132.334 \pm 2.810$   $\chi^2/\text{NDF}: 926.8/22$

Left In:  $141.360 \pm 1.748$   $\chi^2/\text{NDF}: 741.2/22$

Left:  $141.478 \pm 1.218$   $\chi^2/\text{NDF}: 1700.8/47$

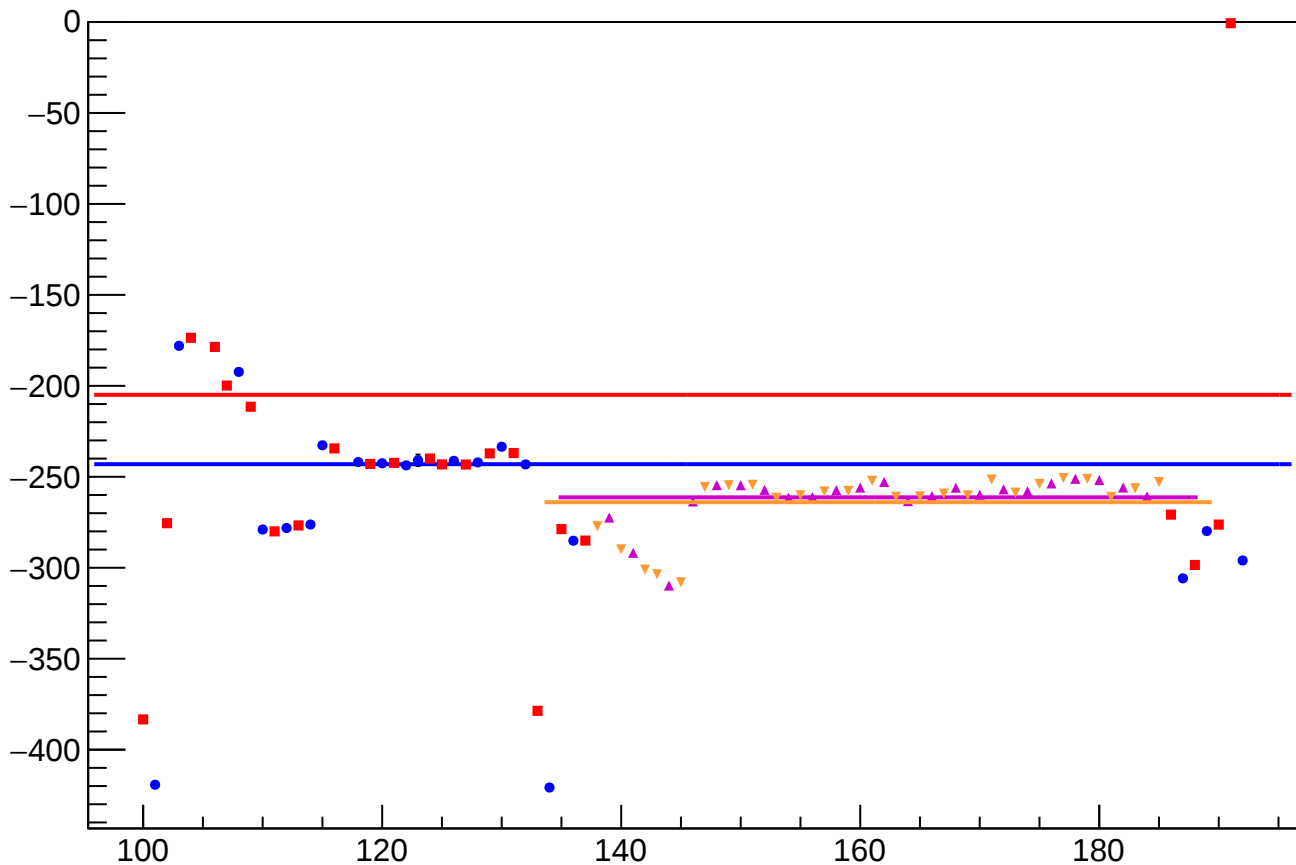
Right:  $146.883 \pm 2.091$   $\chi^2/\text{NDF}: 1777.6/42$

In:  $146.965 \pm 1.526$   $\chi^2/\text{NDF}: 1575.2/42$

Out:  $139.112 \pm 1.454$   $\chi^2/\text{NDF}: 1894.3/47$

All:  $142.847 \pm 1.053$   $\chi^2/\text{NDF}: 3483.4/90$

reg\_asym\_atr2\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: -243.062+/-0.153  $\chi^2/\text{NDF}$ : 177559.7/19

Left Out: -263.943+/-0.081  $\chi^2/\text{NDF}$ : 39085.0/24

Right Out: -204.930+/-0.135  $\chi^2/\text{NDF}$ : 425266.9/22

Left In: -261.286+/-0.082  $\chi^2/\text{NDF}$ : 23348.4/22

Left: -262.627+/-0.058  $\chi^2/\text{NDF}$ : 62963.4/47

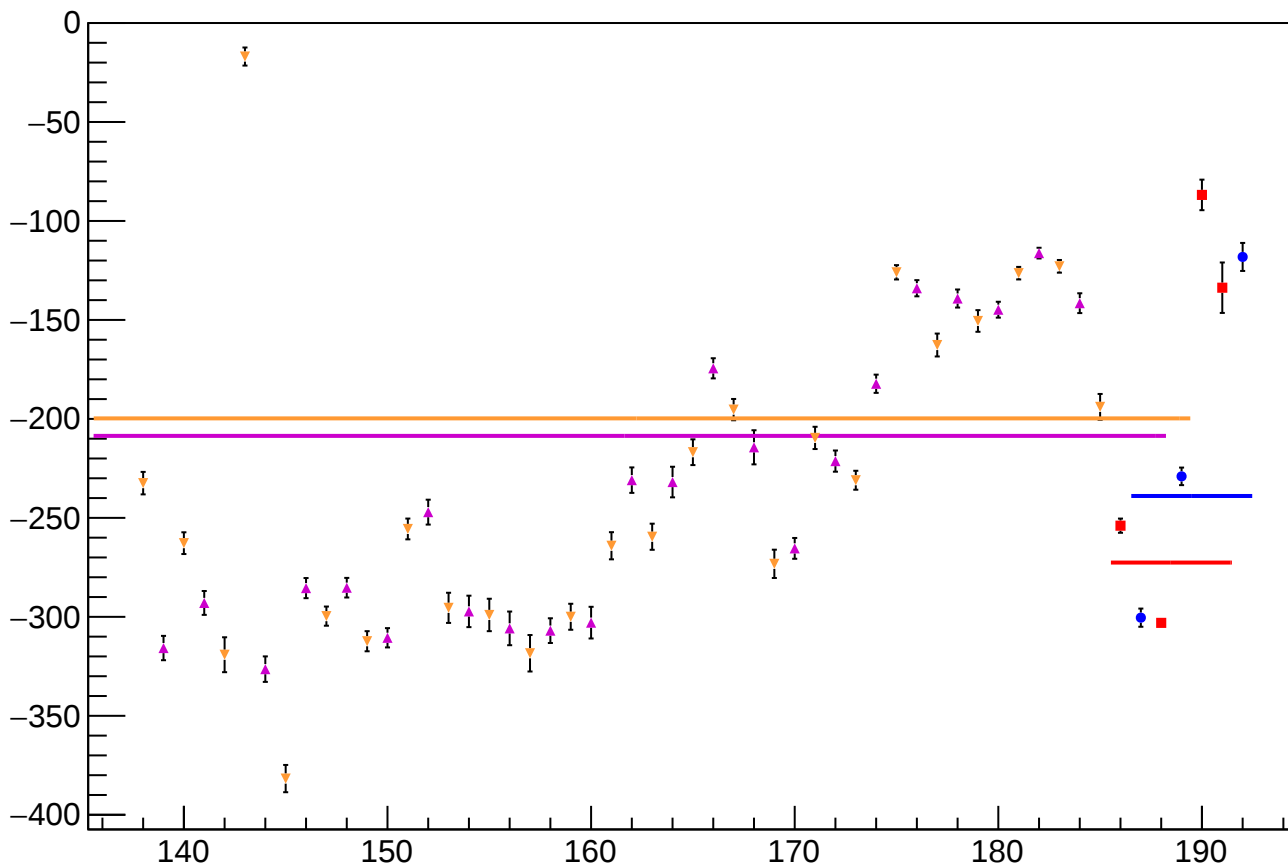
Right: -221.658+/-0.101  $\chi^2/\text{NDF}$ : 637627.1/42

In: -257.228+/-0.072  $\chi^2/\text{NDF}$ : 211916.3/42

Out: -248.318+/-0.070  $\chi^2/\text{NDF}$ : 604041.9/47

All: -252.609+/-0.050  $\chi^2/\text{NDF}$ : 823835.9/90

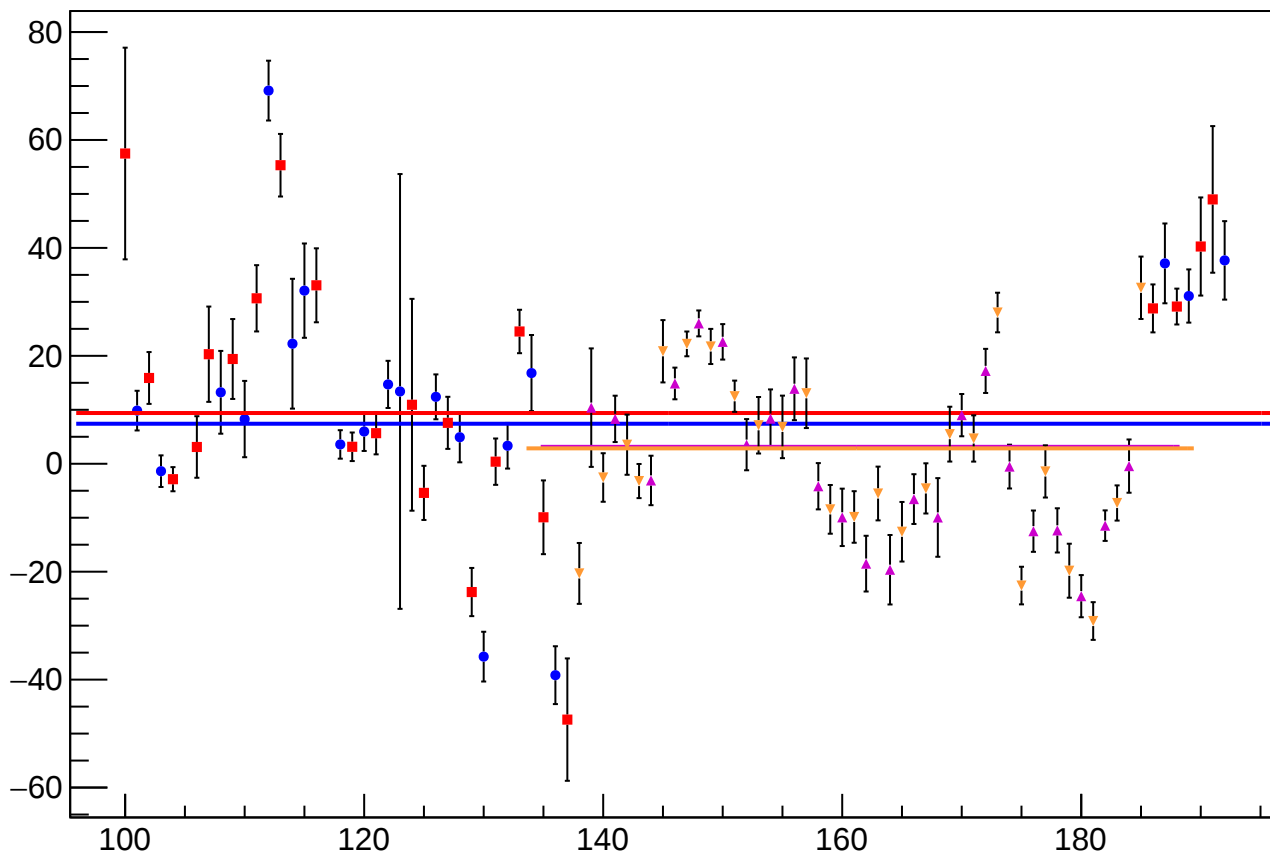
reg\_asym\_atl\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: -238.942 $\pm$ 2.907  $\chi^2$ /NDF: 475.4/2  
 Left Out: -199.741 $\pm$ 1.061  $\chi^2$ /NDF:6361.5/24  
 Right Out: -272.577 $\pm$ 1.895  $\chi^2$ /NDF: 890.5/3  
 Left In: -208.579 $\pm$ 1.082  $\chi^2$ /NDF:4805.1/22

Left: -204.073 $\pm$ 0.758  $\chi^2$ /NDF: 11200.6/47  
 Right: -262.551 $\pm$ 1.587  $\chi^2$ /NDF: 1459.9/6  
 In: -212.275 $\pm$ 1.014  $\chi^2$ /NDF:5376.4/25  
 Out: -217.131 $\pm$ 0.926  $\chi^2$ /NDF:8376.9/28  
 All: -214.924 $\pm$ 0.684  $\chi^2$ /NDF: 13765.8/54

reg\_asym\_atl\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $7.416 \pm 1.058$   $\chi^2/\text{NDF}$ : 372.8/19

Left Out:  $2.853 \pm 0.820$   $\chi^2/\text{NDF}$ : 419.8/24

Right Out:  $9.403 \pm 0.984$   $\chi^2/\text{NDF}$ : 325.5/22

Left In:  $3.136 \pm 0.857$   $\chi^2/\text{NDF}$ : 319.8/22

Left:  $2.988 \pm 0.592$   $\chi^2/\text{NDF}$ : 739.7/47

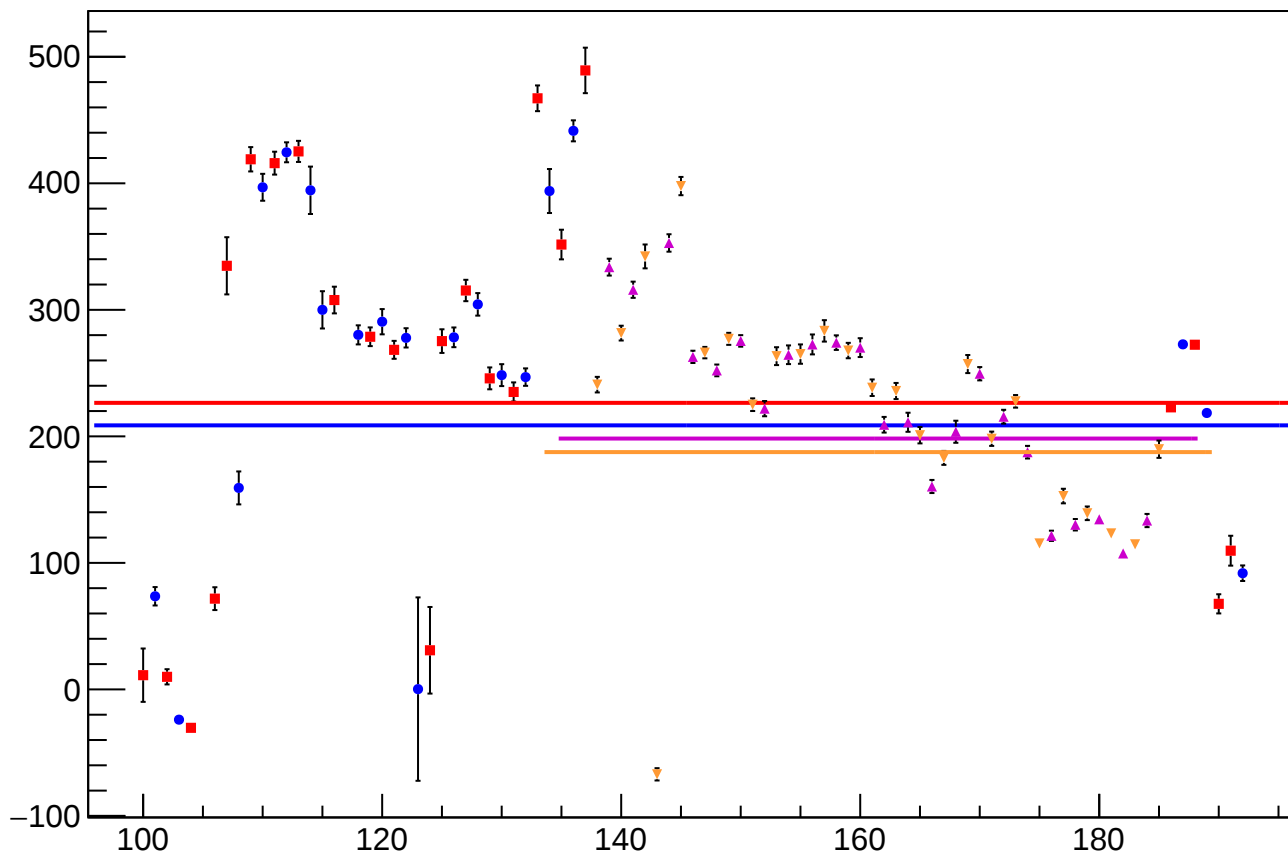
Right:  $8.481 \pm 0.721$   $\chi^2/\text{NDF}$ : 700.2/42

In:  $4.832 \pm 0.666$   $\chi^2/\text{NDF}$ : 702.5/42

Out:  $5.536 \pm 0.630$   $\chi^2/\text{NDF}$ : 771.5/47

All:  $5.203 \pm 0.458$   $\chi^2/\text{NDF}$ : 1474.6/90

reg\_asym\_atl\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 208.691+/-1.540  $\chi^2/\text{NDF}$ : 7390.8/19

Left Out: 187.565+/-1.066  $\chi^2/\text{NDF}$ : 7082.0/24

Right Out: 226.485+/-1.204  $\chi^2/\text{NDF}$ : 9634.5/22

Left In: 198.269+/-1.082  $\chi^2/\text{NDF}$ : 4515.8/22

Left: 192.839+/-0.759  $\chi^2/\text{NDF}$ : 11647.5/47

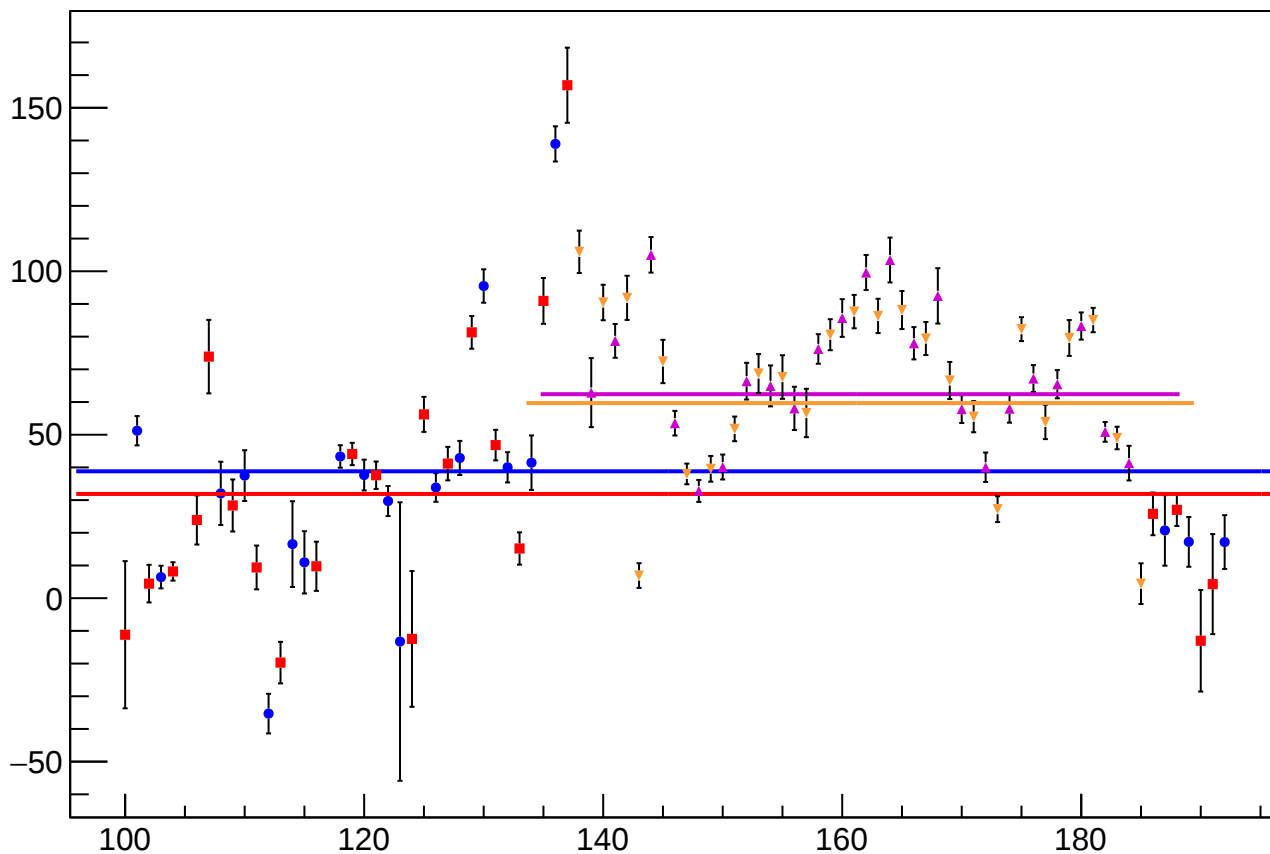
Right: 219.738+/-0.948  $\chi^2/\text{NDF}$ : 17108.2/42

In: 201.711+/-0.885  $\chi^2/\text{NDF}$ : 11937.3/42

Out: 204.671+/-0.798  $\chi^2/\text{NDF}$ : 17302.6/47

All: 203.344+/-0.593  $\chi^2/\text{NDF}$ : 29246.0/90

reg\_asym\_atl\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 38.811 $\pm$ 1.245  $\chi^2$ /NDF: 752.9/19

Left Out: 59.682 $\pm$ 0.941  $\chi^2$ /NDF: 757.6/24

Right Out: 31.885 $\pm$ 1.187  $\chi^2$ /NDF: 563.9/22

Left In: 62.400 $\pm$ 0.974  $\chi^2$ /NDF: 406.3/22

Left: 60.993 $\pm$ 0.677  $\chi^2$ /NDF: 1167.9/47

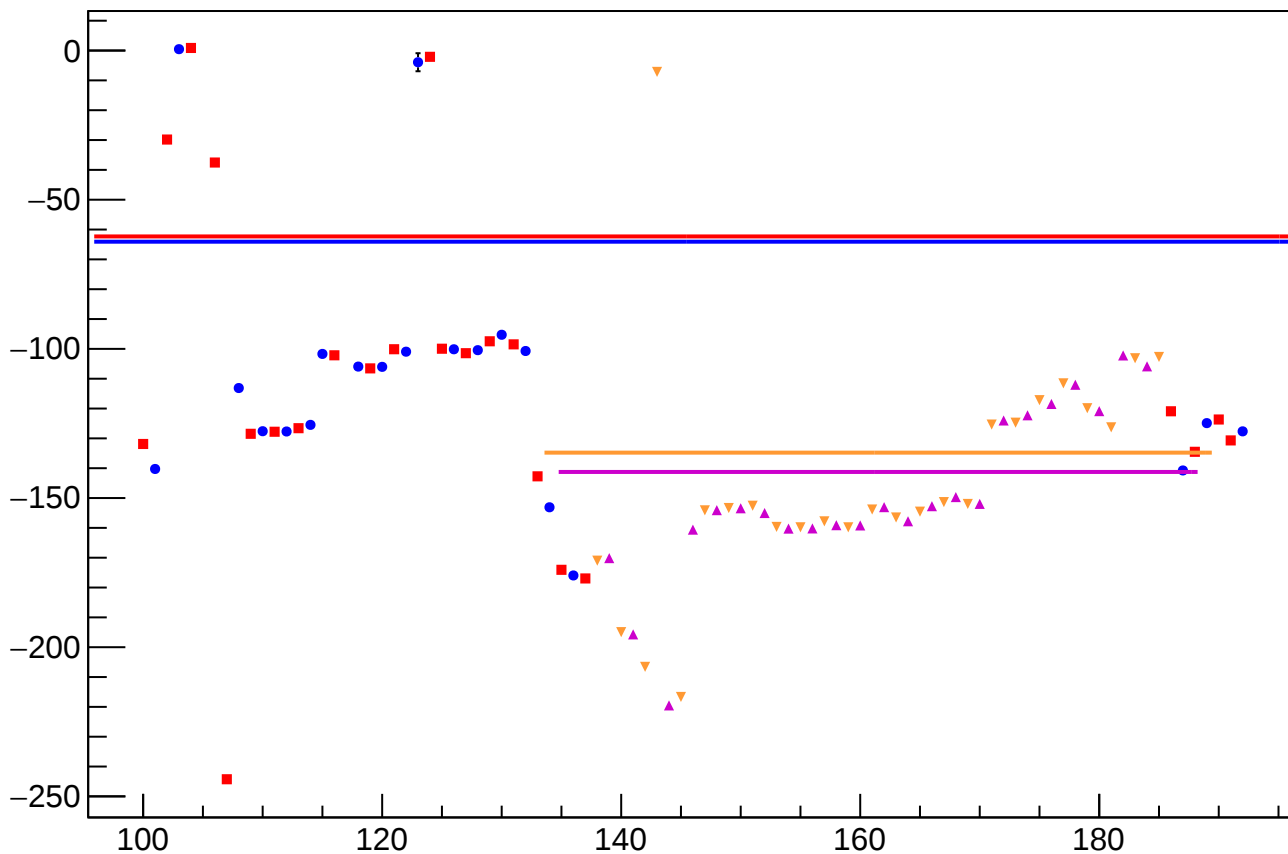
Right: 35.183 $\pm$ 0.859  $\chi^2$ /NDF: 1333.0/42

In: 53.438 $\pm$ 0.767  $\chi^2$ /NDF: 1382.0/42

Out: 48.954 $\pm$ 0.737  $\chi^2$ /NDF: 1658.4/47

All: 51.107 $\pm$ 0.532  $\chi^2$ /NDF: 3058.2/90

reg\_asym\_atl\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: -64.072 $\pm$ 0.059  $\chi^2$ /NDF: 1217269.9/19

Left Out: -134.780 $\pm$ 0.045  $\chi^2$ /NDF: 804747.3/24

Right Out: -62.311 $\pm$ 0.057  $\chi^2$ /NDF: 1157577.5/22

Left In: -141.255 $\pm$ 0.045  $\chi^2$ /NDF: 347229.8/22

Left: -137.961 $\pm$ 0.032  $\chi^2$ /NDF: 1162377.9/47

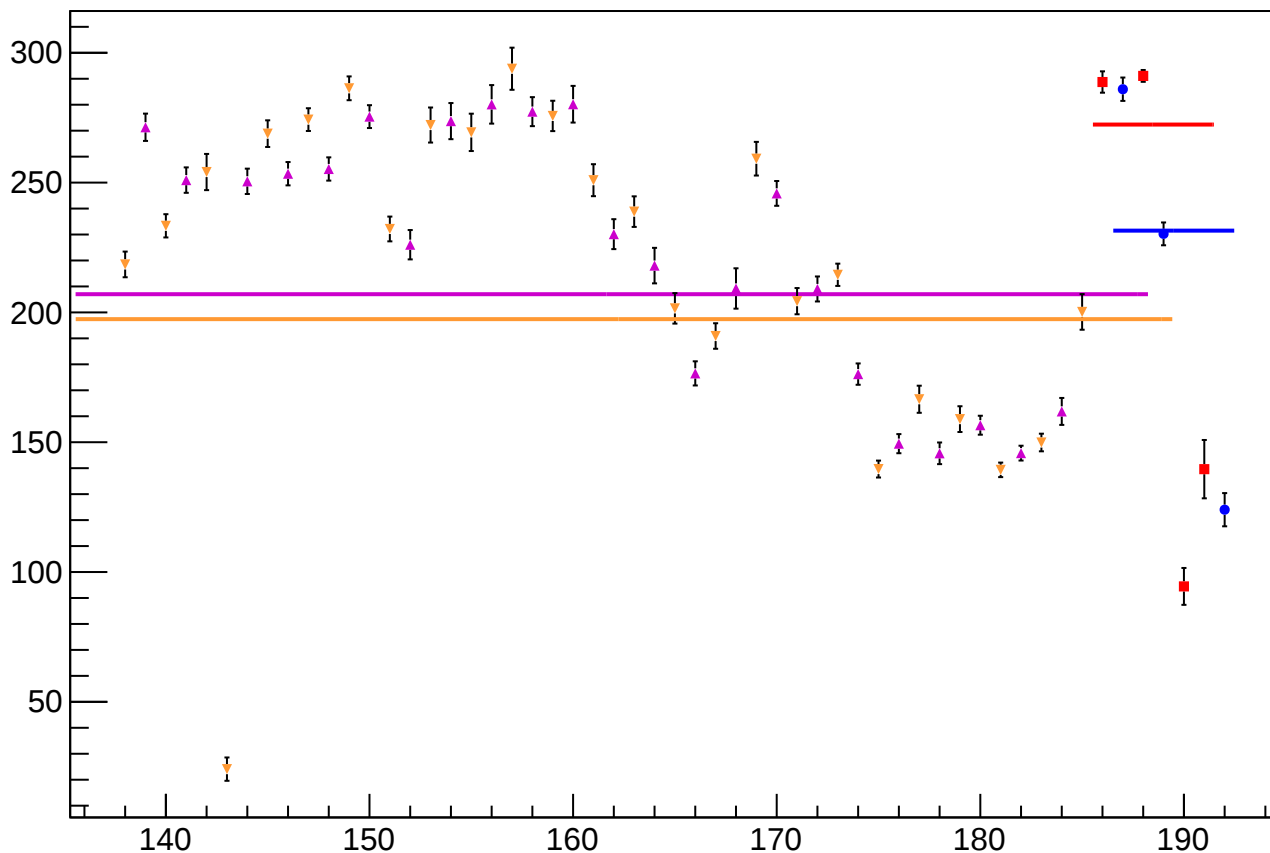
Right: -63.164 $\pm$ 0.041  $\chi^2$ /NDF: 2375307.0/42

In: -112.632 $\pm$ 0.036  $\chi^2$ /NDF: 2641505.0/42

Out: -107.445 $\pm$ 0.035  $\chi^2$ /NDF: 2962560.4/47

All: -109.980 $\pm$ 0.025  $\chi^2$ /NDF: 5614727.4/90

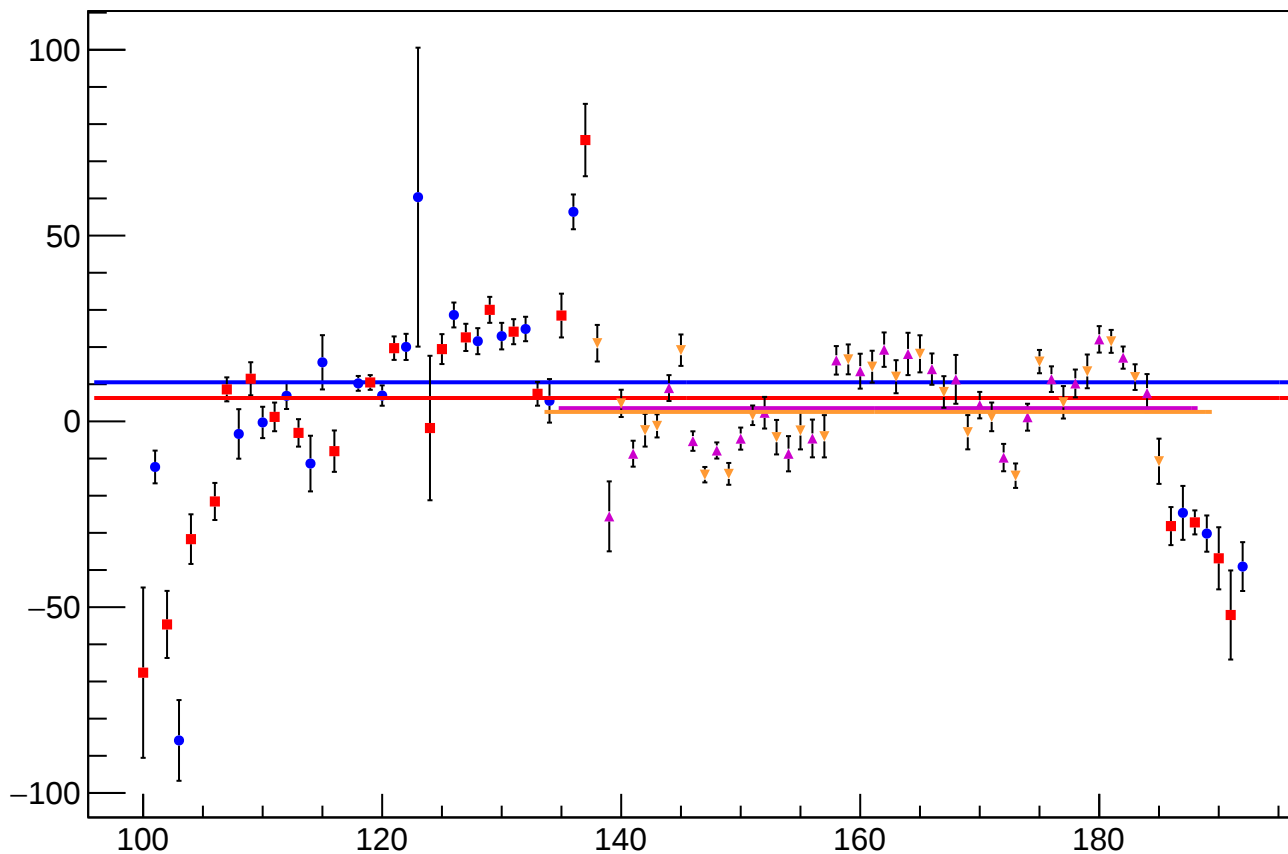
reg\_asym\_atl\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $231.498 \pm 2.821$   $\chi^2/\text{NDF}: 429.1/2$   
 Left Out:  $197.408 \pm 0.963$   $\chi^2/\text{NDF}: 4384.2/24$   
 Right Out:  $272.356 \pm 1.892$   $\chi^2/\text{NDF}: 850.4/3$   
 Left In:  $207.014 \pm 0.990$   $\chi^2/\text{NDF}: 2611.5/22$

Left:  $202.077 \pm 0.690$   $\chi^2/\text{NDF}: 7044.1/47$   
 Right:  $259.685 \pm 1.571$   $\chi^2/\text{NDF}: 1424.2/6$   
 In:  $209.700 \pm 0.934$   $\chi^2/\text{NDF}: 3107.7/25$   
 Out:  $212.830 \pm 0.858$   $\chi^2/\text{NDF}: 6481.2/28$   
 All:  $211.398 \pm 0.632$   $\chi^2/\text{NDF}: 9595.0/54$

reg\_asym\_atl\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $10.522 \pm 0.905$   $\chi^2/\text{NDF}: 454.3/19$

Left Out:  $2.548 \pm 0.741$   $\chi^2/\text{NDF}: 275.4/24$

Right Out:  $6.291 \pm 0.861$   $\chi^2/\text{NDF}: 531.4/22$

Left In:  $3.559 \pm 0.774$   $\chi^2/\text{NDF}: 192.0/22$

Left:  $3.031 \pm 0.535$   $\chi^2/\text{NDF}: 468.3/47$

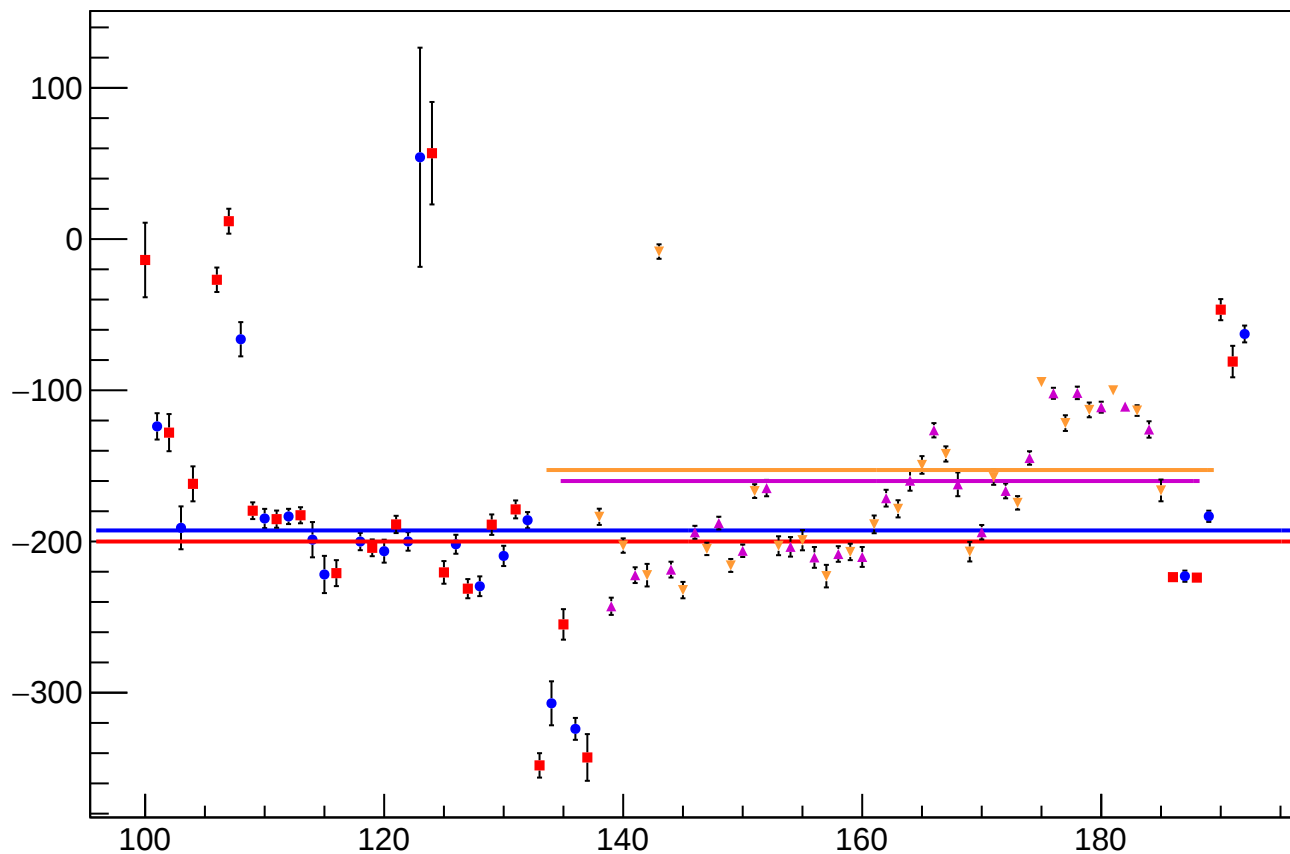
Right:  $8.299 \pm 0.624$   $\chi^2/\text{NDF}: 997.2/42$

In:  $6.500 \pm 0.588$   $\chi^2/\text{NDF}: 680.4/42$

Out:  $4.141 \pm 0.561$   $\chi^2/\text{NDF}: 817.7/47$

All:  $5.266 \pm 0.406$   $\chi^2/\text{NDF}: 1506.6/90$

reg\_asym\_atl\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-192.691 \pm 1.433$   $\chi^2/\text{NDF}: 1267.0/19$

Left Out:  $-152.738 \pm 0.967$   $\chi^2/\text{NDF}: 3077.8/24$

Right Out:  $-200.011 \pm 1.144$   $\chi^2/\text{NDF}: 2651.5/22$

Left In:  $-160.021 \pm 0.989$   $\chi^2/\text{NDF}: 2024.4/22$

Left:  $-156.299 \pm 0.691$   $\chi^2/\text{NDF}: 5129.9/47$

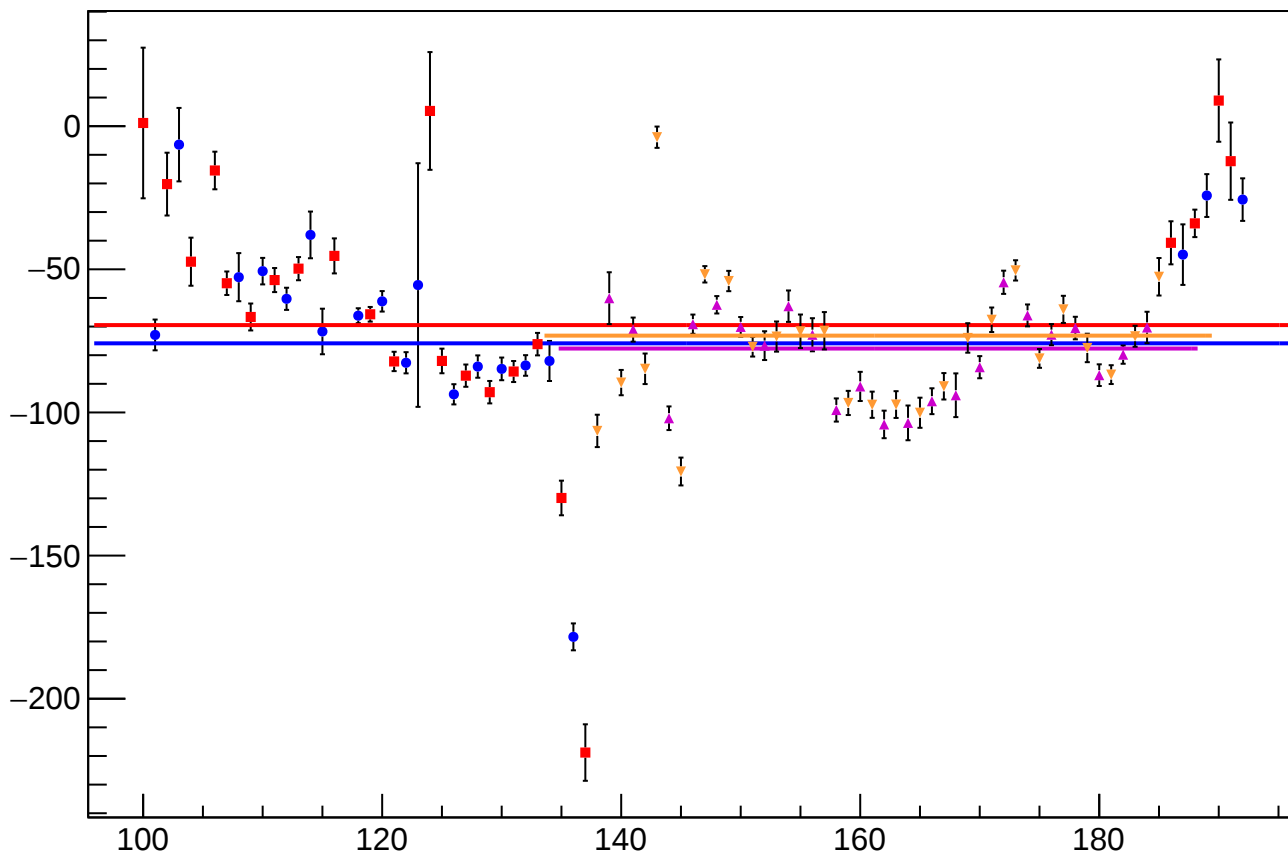
Right:  $-197.162 \pm 0.894$   $\chi^2/\text{NDF}: 3934.4/42$

In:  $-170.553 \pm 0.814$   $\chi^2/\text{NDF}: 3643.4/42$

Out:  $-172.432 \pm 0.739$   $\chi^2/\text{NDF}: 6724.9/47$

All:  $-171.583 \pm 0.547$   $\chi^2/\text{NDF}: 10371.2/90$

reg\_asym\_atl\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-75.857 \pm 1.056$   $\chi^2/\text{NDF}$ : 756.9/19

Left Out:  $-73.165 \pm 0.851$   $\chi^2/\text{NDF}$ : 788.6/24

Right Out:  $-69.484 \pm 1.014$   $\chi^2/\text{NDF}$ : 731.0/22

Left In:  $-77.678 \pm 0.883$   $\chi^2/\text{NDF}$ : 248.3/22

Left:  $-75.339 \pm 0.613$   $\chi^2/\text{NDF}$ : 1050.4/47

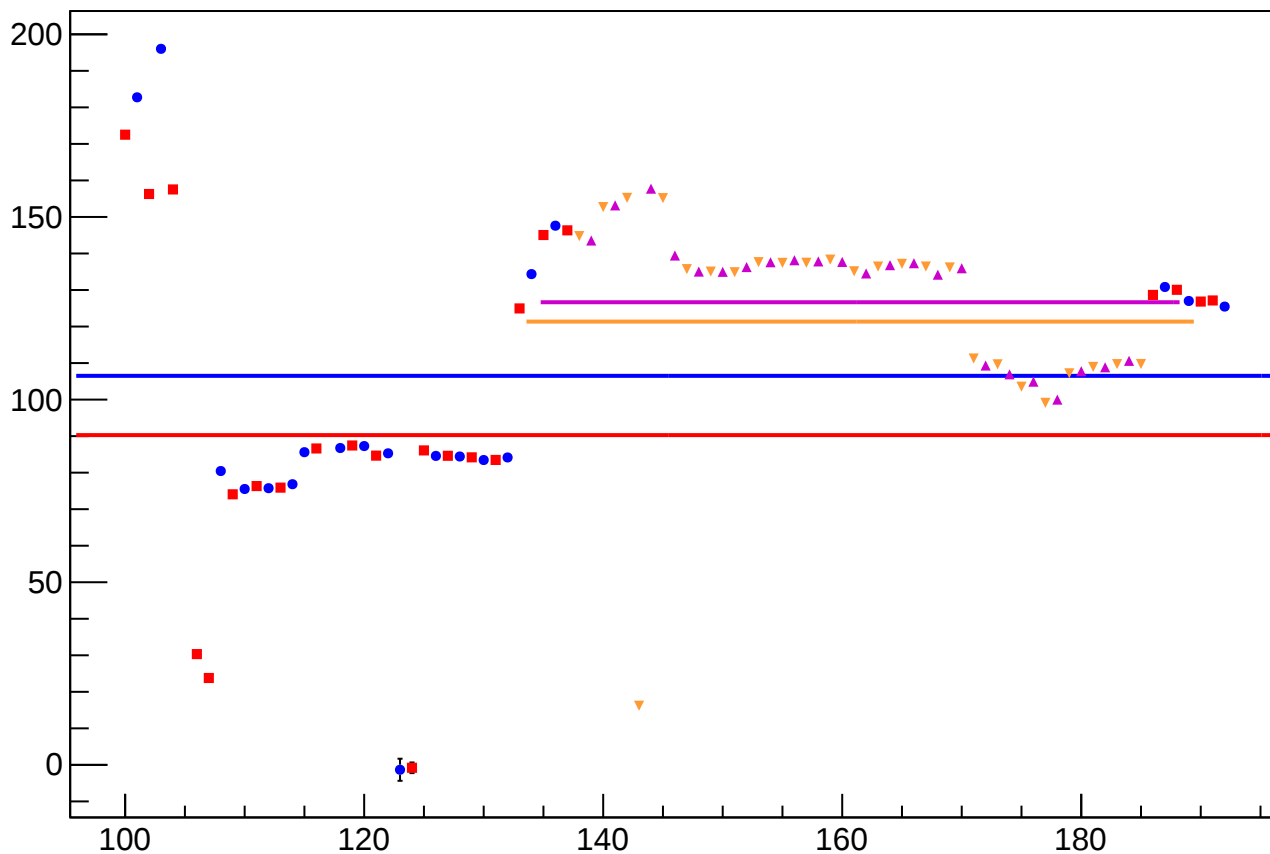
Right:  $-72.541 \pm 0.732$   $\chi^2/\text{NDF}$ : 1506.9/42

In:  $-76.929 \pm 0.677$   $\chi^2/\text{NDF}$ : 1006.9/42

Out:  $-71.644 \pm 0.652$   $\chi^2/\text{NDF}$ : 1527.3/47

All:  $-74.185 \pm 0.470$   $\chi^2/\text{NDF}$ : 2565.9/90

reg\_asym\_atl\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 106.505 $\pm$ 0.066  $\chi^2$ /NDF: 286195.6/19

Left Out: 121.356 $\pm$ 0.040  $\chi^2$ /NDF: 481977.3/24

Right Out: 90.278 $\pm$ 0.060  $\chi^2$ /NDF: 478733.3/22

Left In: 126.653 $\pm$ 0.041  $\chi^2$ /NDF: 163046.1/22

Left: 123.954 $\pm$ 0.029  $\chi^2$ /NDF: 653496.6/47

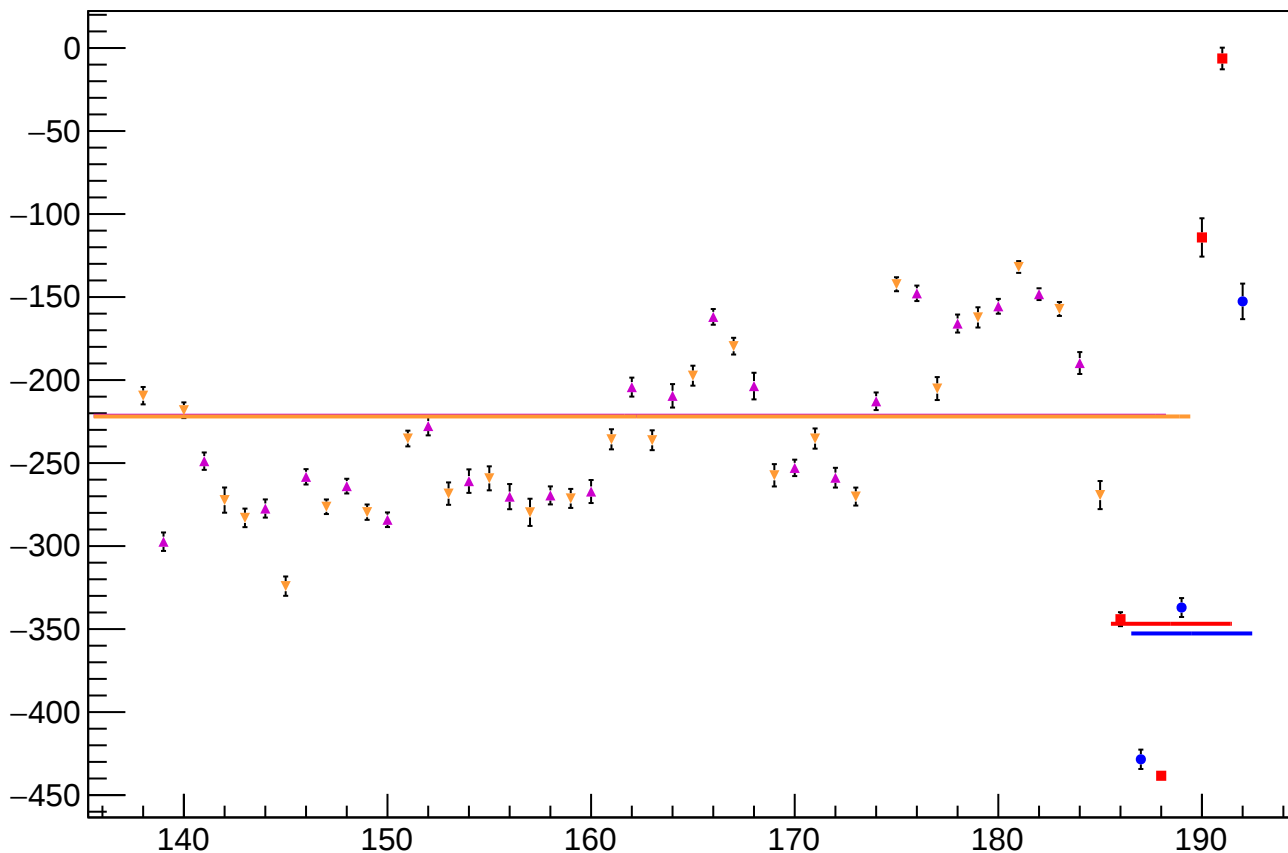
Right: 97.581 $\pm$ 0.044  $\chi^2$ /NDF: 797967.6/42

In: 121.053 $\pm$ 0.035  $\chi^2$ /NDF: 516108.3/42

Out: 111.668 $\pm$ 0.033  $\chi^2$ /NDF: 1146049.0/47

All: 116.159 $\pm$ 0.024  $\chi^2$ /NDF: 1699854.7/90

reg\_asym\_atr\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: -352.635+/-3.807  $\chi^2/\text{NDF}$ : 525.8/2

Left Out: -221.934+/-1.084  $\chi^2/\text{NDF}$ : 2578.4/24

Right Out: -346.805+/-2.259  $\chi^2/\text{NDF}$ : 4045.5/3

Left In: -221.483+/-1.102  $\chi^2/\text{NDF}$ : 2149.8/22

Left: -221.712+/-0.773  $\chi^2/\text{NDF}$ : 4728.2/47

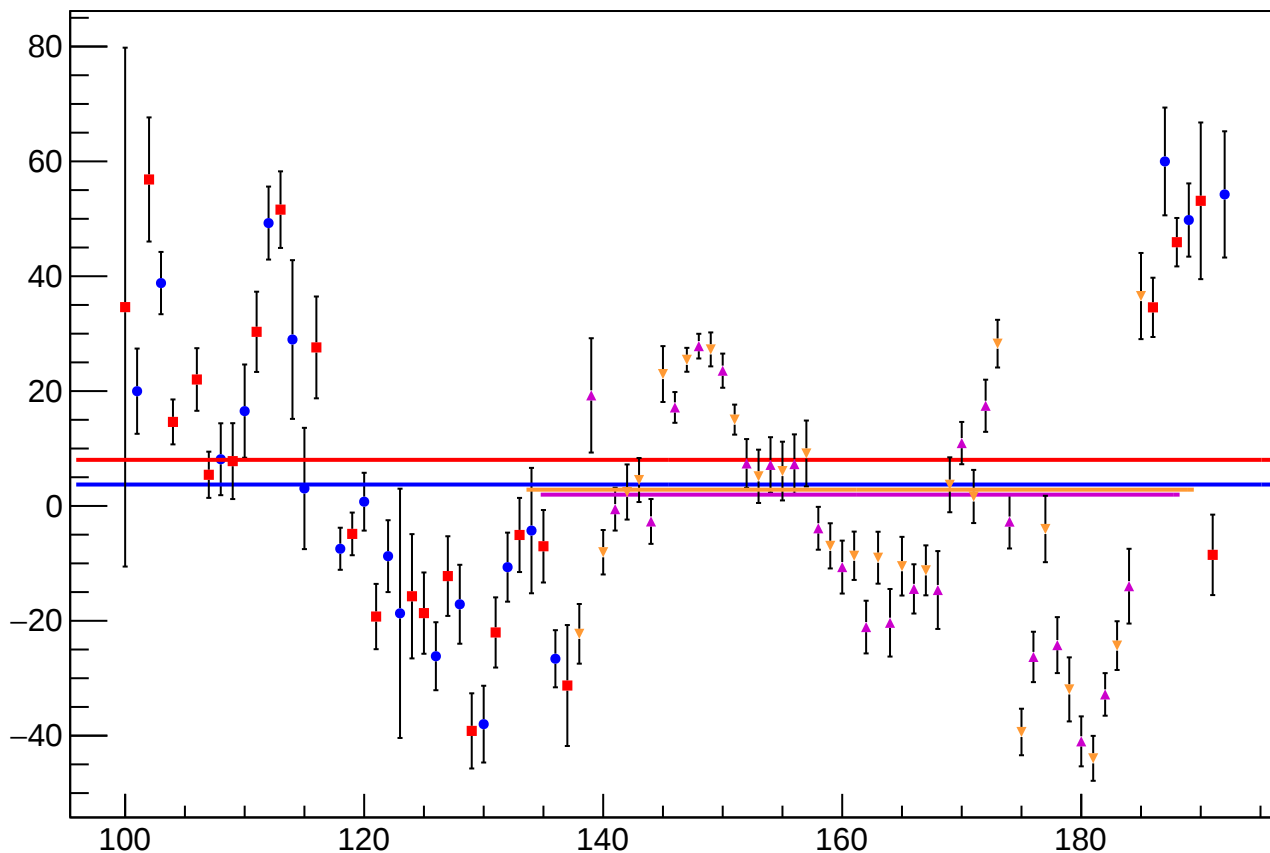
Right: -348.322+/-1.943  $\chi^2/\text{NDF}$ : 4573.1/6

In: -231.624+/-1.059  $\chi^2/\text{NDF}$ : 3770.4/25

Out: -245.328+/-0.978  $\chi^2/\text{NDF}$ : 9107.9/28

All: -239.021+/-0.718  $\chi^2/\text{NDF}$ : 12968.7/54

reg\_asym\_atr\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 3.730+/-1.464  $\chi^2/\text{NDF}$ : 345.4/19

Left Out: 2.832+/-0.807  $\chi^2/\text{NDF}$ : 686.9/24

Right Out: 8.027+/-1.261  $\chi^2/\text{NDF}$ : 374.7/22

Left In: 1.969+/-0.835  $\chi^2/\text{NDF}$ : 589.1/22

Left: 2.415+/-0.580  $\chi^2/\text{NDF}$ : 1276.5/47

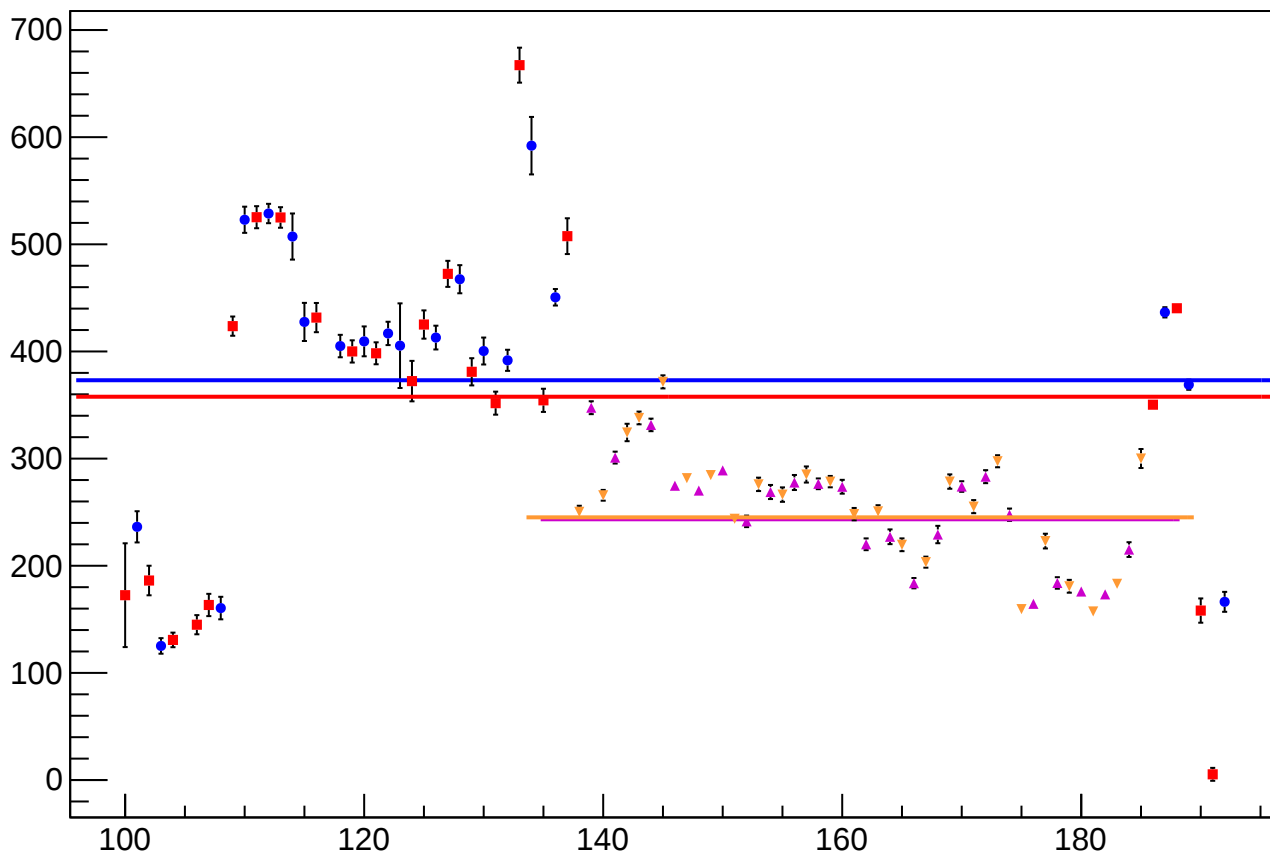
Right: 6.198+/-0.956  $\chi^2/\text{NDF}$ : 725.0/42

In: 2.401+/-0.725  $\chi^2/\text{NDF}$ : 935.5/42

Out: 4.342+/-0.680  $\chi^2/\text{NDF}$ : 1073.6/47

All: 3.434+/-0.496  $\chi^2/\text{NDF}$ : 2013.0/90

reg\_asym\_atr\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 373.134 $\pm$ 2.092  $\chi^2$ /NDF: 3100.2/19

Left Out: 245.179 $\pm$ 1.082  $\chi^2$ /NDF:2597.4/24

Right Out: 357.754 $\pm$ 1.501  $\chi^2$ /NDF: 8309.0/22

Left In: 243.366 $\pm$ 1.094  $\chi^2$ /NDF:2236.7/22

Left: 244.282 $\pm$ 0.769  $\chi^2$ /NDF: 4835.5/47

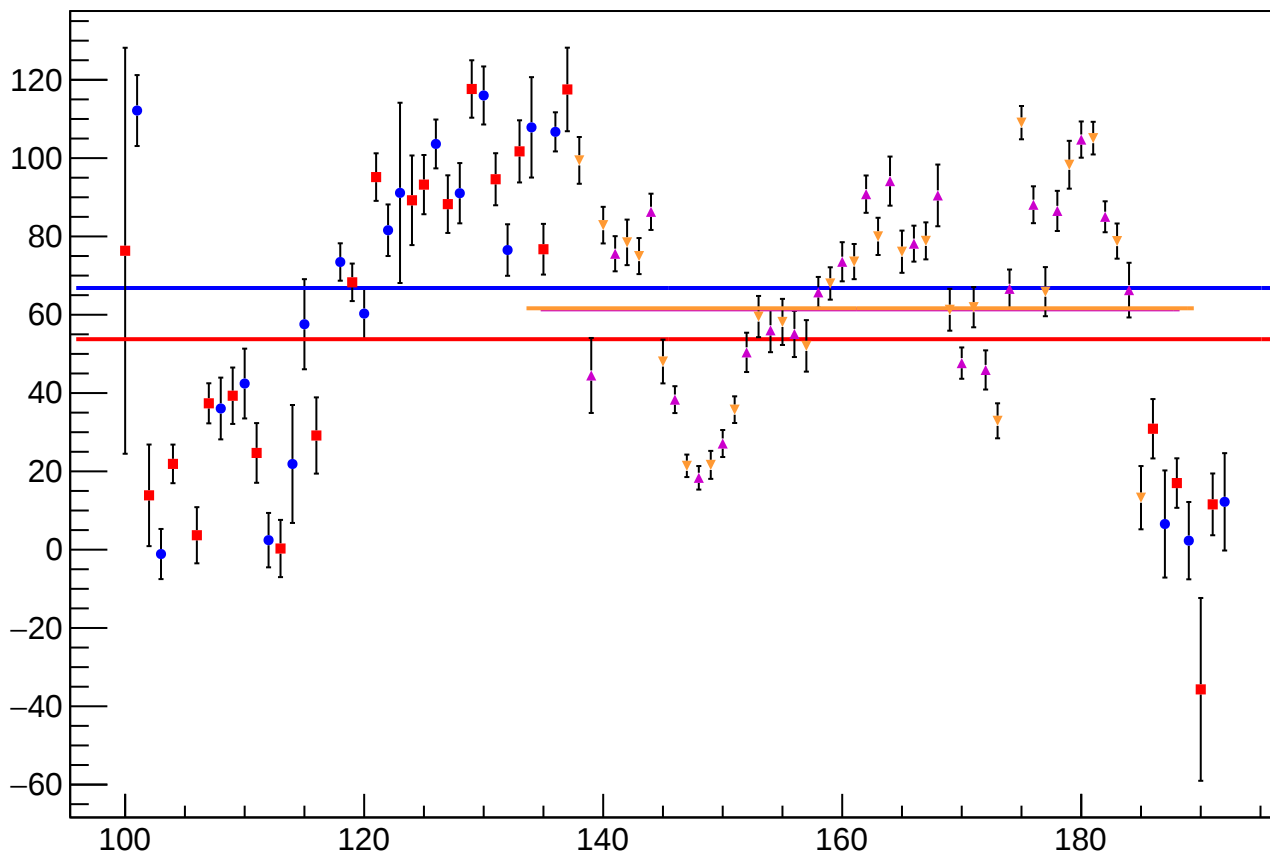
Right: 362.979 $\pm$ 1.219  $\chi^2$ /NDF: 11444.9/42

In: 271.218 $\pm$ 0.969  $\chi^2$ /NDF:8358.9/42

Out: 283.686 $\pm$ 0.878  $\chi^2$ /NDF:14608.9/47

All: 278.069 $\pm$ 0.651  $\chi^2$ /NDF: 23058.7/90

reg\_asym\_atr\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 66.830 $\pm$ 1.710  $\chi^2$ /NDF: 511.1/19

Left Out: 61.647 $\pm$ 0.936  $\chi^2$ /NDF: 871.5/24

Right Out: 53.758 $\pm$ 1.516  $\chi^2$ /NDF: 588.0/22

Left In: 61.375 $\pm$ 0.961  $\chi^2$ /NDF: 699.7/22

Left: 61.515 $\pm$ 0.671  $\chi^2$ /NDF: 1571.3/47

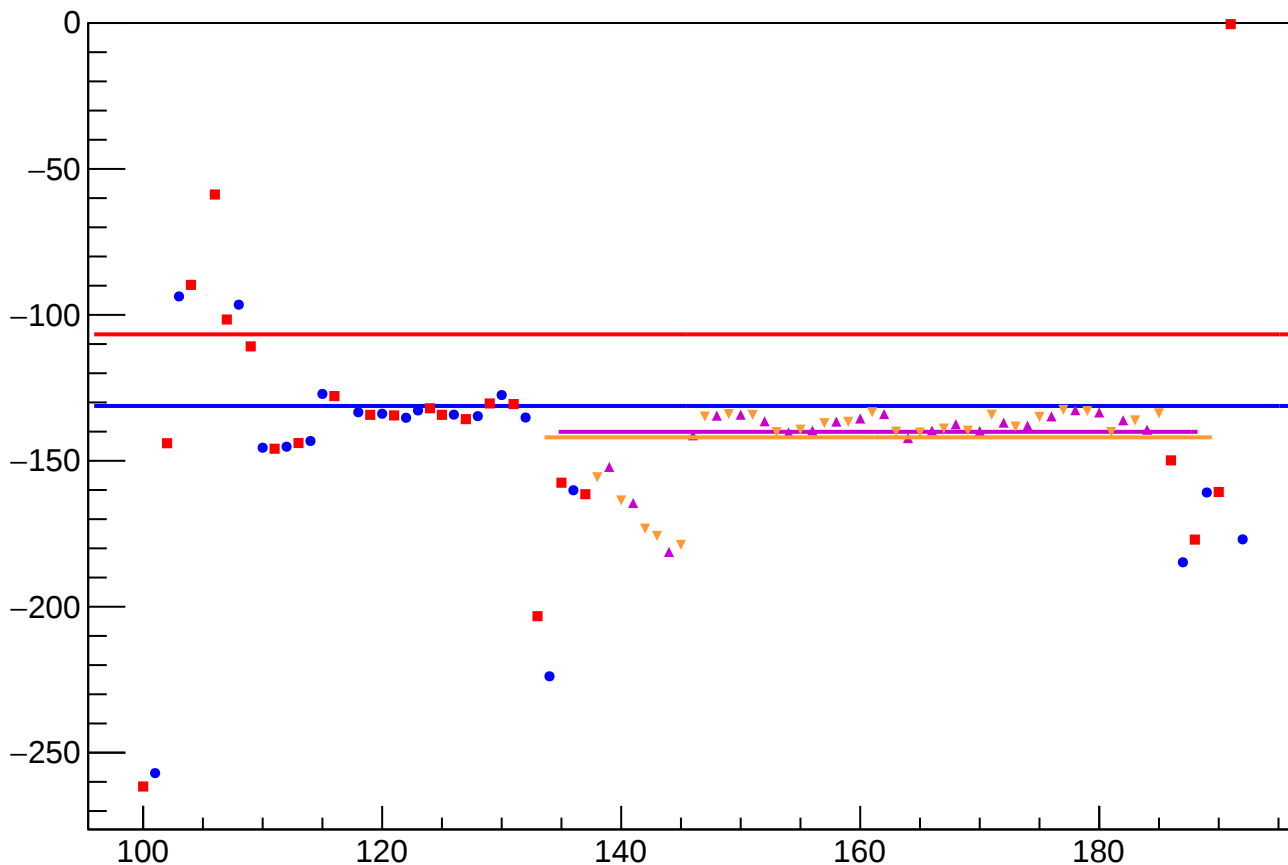
Right: 59.510 $\pm$ 1.134  $\chi^2$ /NDF: 1131.8/42

In: 62.685 $\pm$ 0.838  $\chi^2$ /NDF: 1218.5/42

Out: 59.469 $\pm$ 0.797  $\chi^2$ /NDF: 1479.1/47

All: 60.996 $\pm$ 0.577  $\chi^2$ /NDF: 2705.4/90

reg\_asym\_atr\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-131.207 \pm 0.086$   $\chi^2/\text{NDF}: 191376.4/19$

Left Out:  $-141.969 \pm 0.045$   $\chi^2/\text{NDF}: 80252.6/24$

Right Out:  $-106.675 \pm 0.074$   $\chi^2/\text{NDF}: 478747.3/22$

Left In:  $-140.068 \pm 0.045$   $\chi^2/\text{NDF}: 48030.7/22$

Left:  $-141.025 \pm 0.032$   $\chi^2/\text{NDF}: 129181.1/47$

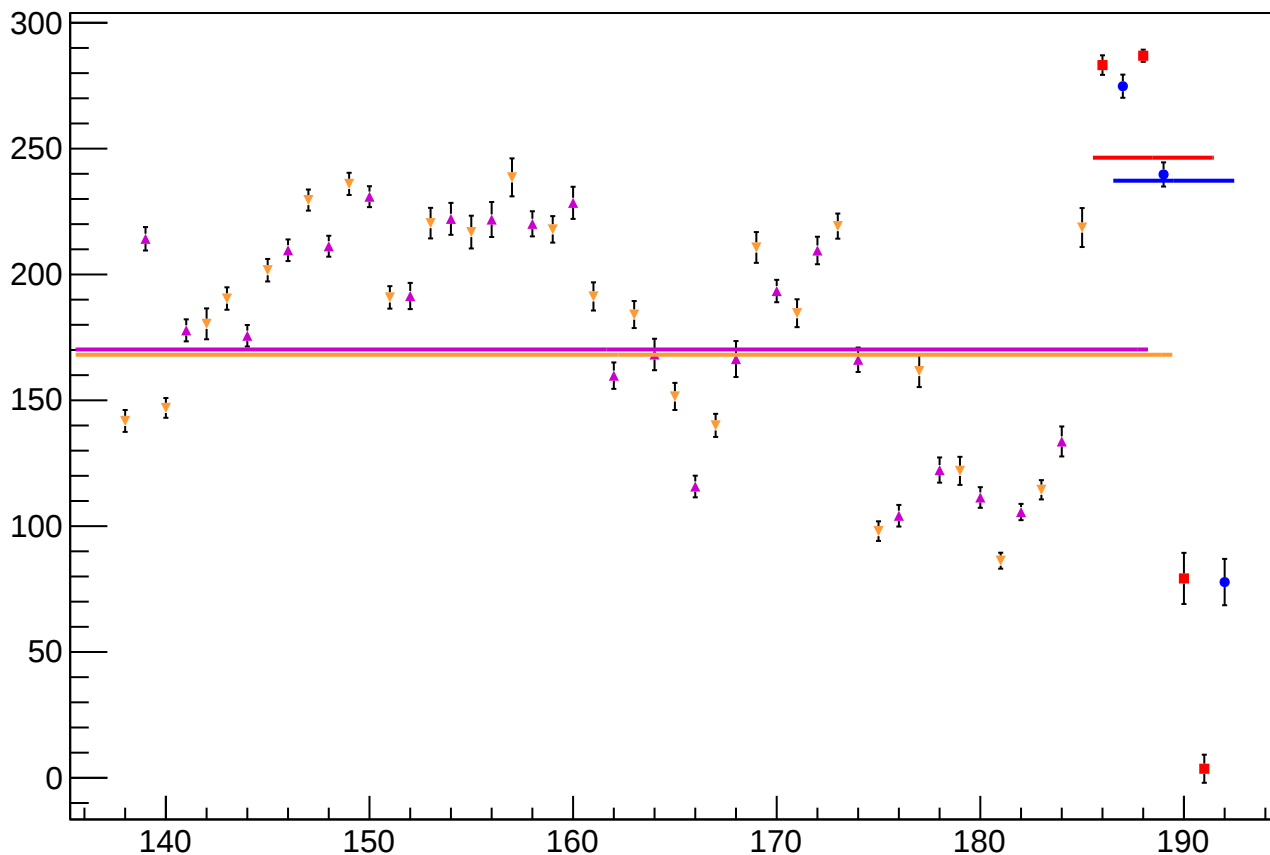
Right:  $-117.229 \pm 0.056$   $\chi^2/\text{NDF}: 716907.1/42$

In:  $-138.150 \pm 0.040$   $\chi^2/\text{NDF}: 247800.1/42$

Out:  $-132.606 \pm 0.038$   $\chi^2/\text{NDF}: 724375.5/47$

All:  $-135.270 \pm 0.028$   $\chi^2/\text{NDF}: 982236.2/90$

reg\_asym\_atr\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $237.260 \pm 3.125$   $\chi^2/\text{NDF}$ : 366.8/2

Left Out:  $168.106 \pm 0.970$   $\chi^2/\text{NDF}$ : 2468.8/24

Right Out:  $246.407 \pm 1.889$   $\chi^2/\text{NDF}$ : 2533.5/3

Left In:  $170.198 \pm 0.995$   $\chi^2/\text{NDF}$ : 2024.5/22

Left:  $169.125 \pm 0.695$   $\chi^2/\text{NDF}$ : 4495.5/47

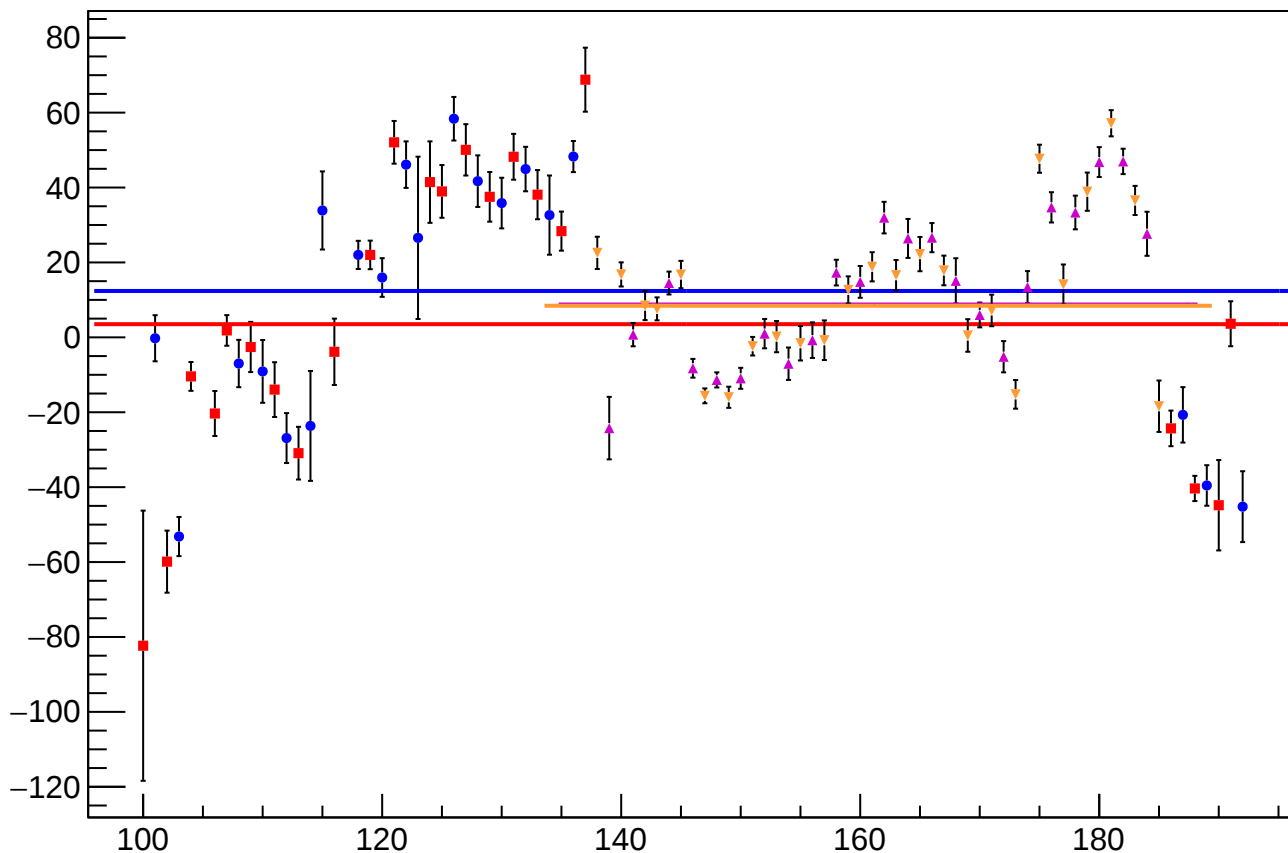
Right:  $243.958 \pm 1.617$   $\chi^2/\text{NDF}$ : 2906.5/6

In:  $176.376 \pm 0.948$   $\chi^2/\text{NDF}$ : 2809.4/25

Out:  $184.444 \pm 0.863$   $\chi^2/\text{NDF}$ : 6361.2/28

All:  $180.789 \pm 0.638$   $\chi^2/\text{NDF}$ : 9210.2/54

reg\_asym\_atr\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 12.384 $\pm$ 1.406  $\chi^2$ /NDF: 609.2/19

Left Out: 8.436 $\pm$ 0.728  $\chi^2$ /NDF: 752.0/24

Right Out: 3.517 $\pm$ 1.210  $\chi^2$ /NDF: 712.0/22

Left In: 8.769 $\pm$ 0.758  $\chi^2$ /NDF: 626.8/22

Left: 8.596 $\pm$ 0.525  $\chi^2$ /NDF: 1379.0/47

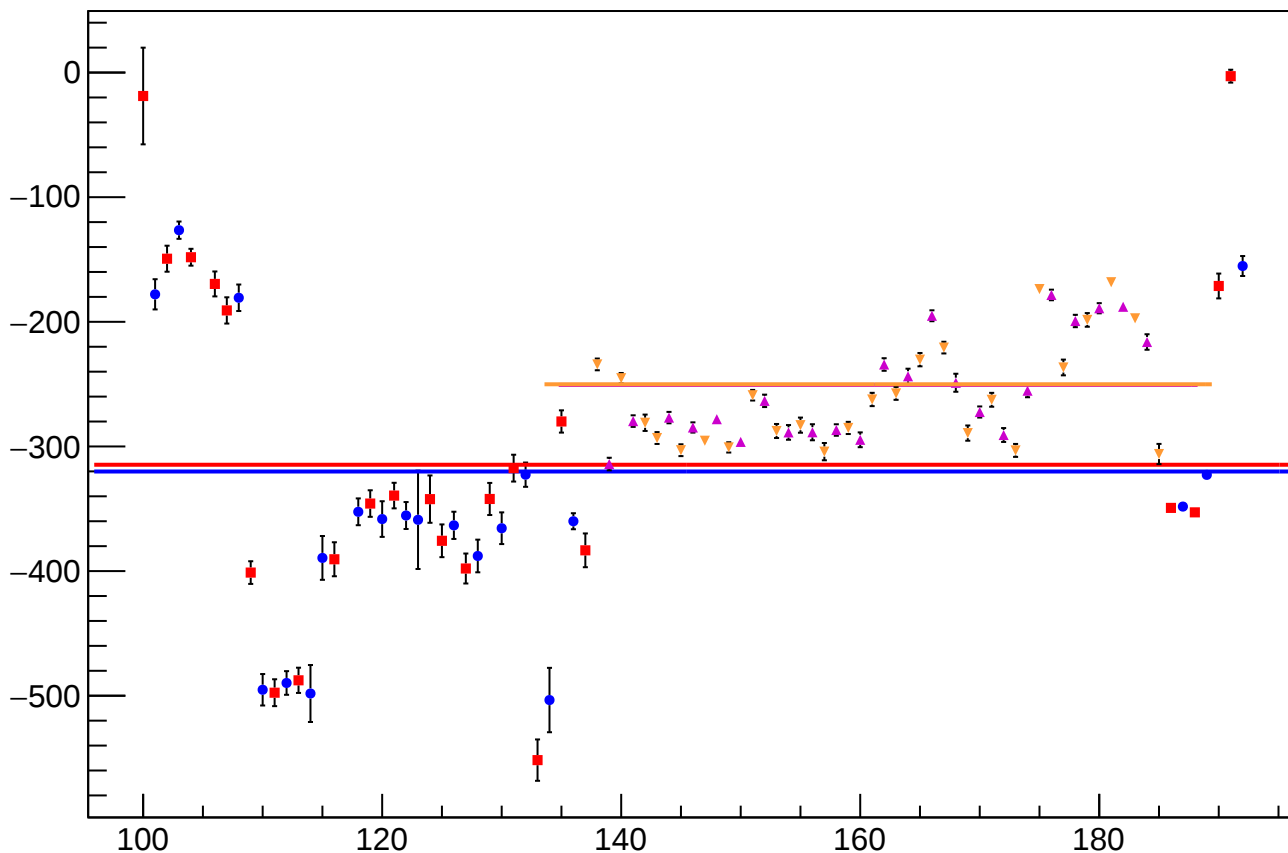
Right: 7.290 $\pm$ 0.917  $\chi^2$ /NDF: 1344.1/42

In: 9.584 $\pm$ 0.667  $\chi^2$ /NDF: 1241.2/42

Out: 7.128 $\pm$ 0.624  $\chi^2$ /NDF: 1476.2/47

All: 8.273 $\pm$ 0.456  $\chi^2$ /NDF: 2724.6/90

reg\_asym\_atr\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-320.095 \pm 1.865$   $\chi^2/\text{NDF}: 2328.0/19$

Left Out:  $-250.119 \pm 0.972$   $\chi^2/\text{NDF}: 2246.9/24$

Right Out:  $-314.676 \pm 1.318$   $\chi^2/\text{NDF}: 6657.7/22$

Left In:  $-250.628 \pm 0.990$   $\chi^2/\text{NDF}: 1937.1/22$

Left:  $-250.369 \pm 0.694$   $\chi^2/\text{NDF}: 4184.2/47$

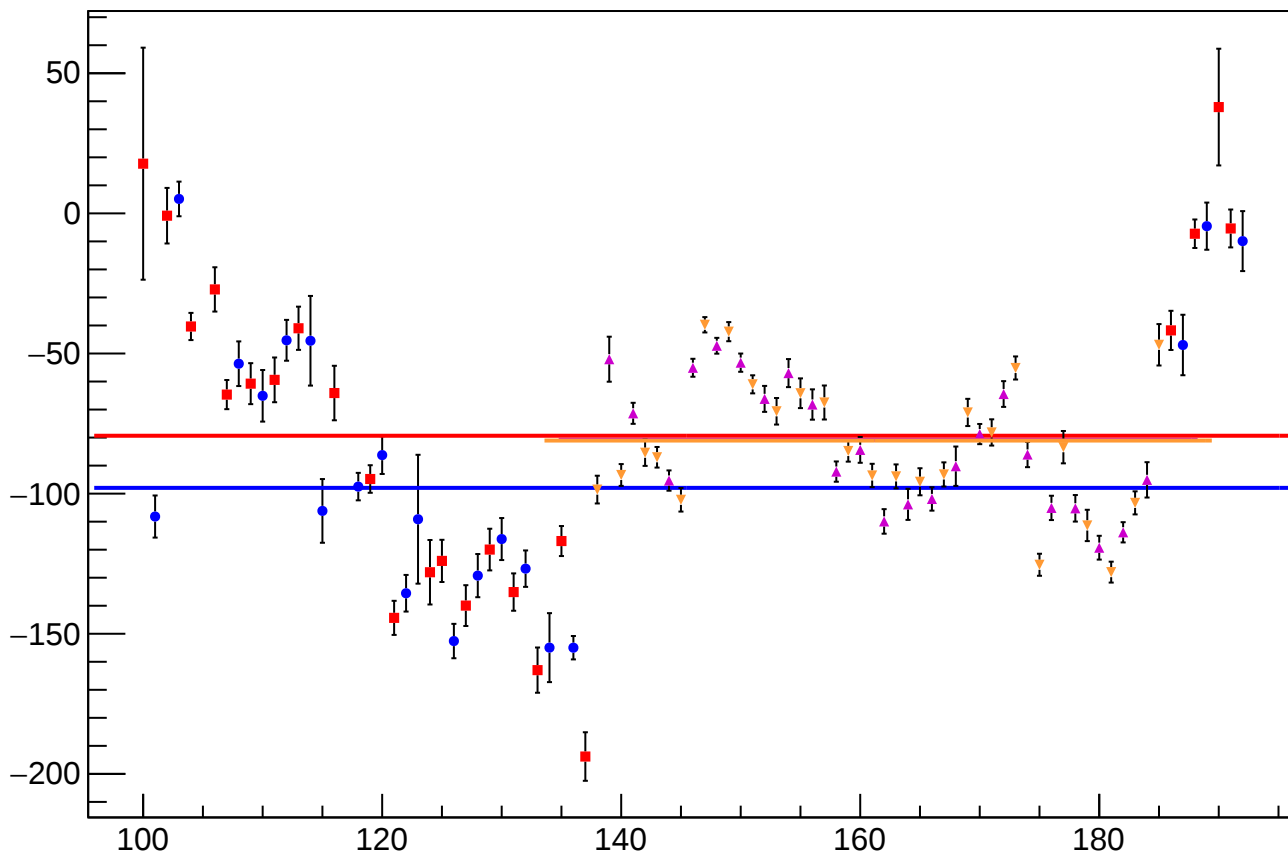
Right:  $-316.481 \pm 1.077$   $\chi^2/\text{NDF}: 8991.4/42$

In:  $-265.903 \pm 0.875$   $\chi^2/\text{NDF}: 5347.0/42$

Out:  $-272.865 \pm 0.782$   $\chi^2/\text{NDF}: 10457.9/47$

All:  $-269.770 \pm 0.583$   $\chi^2/\text{NDF}: 15840.0/90$

reg\_asym\_atr\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-97.943 \pm 1.641$   $\chi^2/\text{NDF}$ : 966.7/19

Left Out:  $-81.057 \pm 0.843$   $\chi^2/\text{NDF}$ : 913.0/24

Right Out:  $-79.343 \pm 1.462$   $\chi^2/\text{NDF}$ : 1283.3/22

Left In:  $-80.834 \pm 0.872$   $\chi^2/\text{NDF}$ : 693.1/22

Left:  $-80.949 \pm 0.606$   $\chi^2/\text{NDF}$ : 1606.2/47

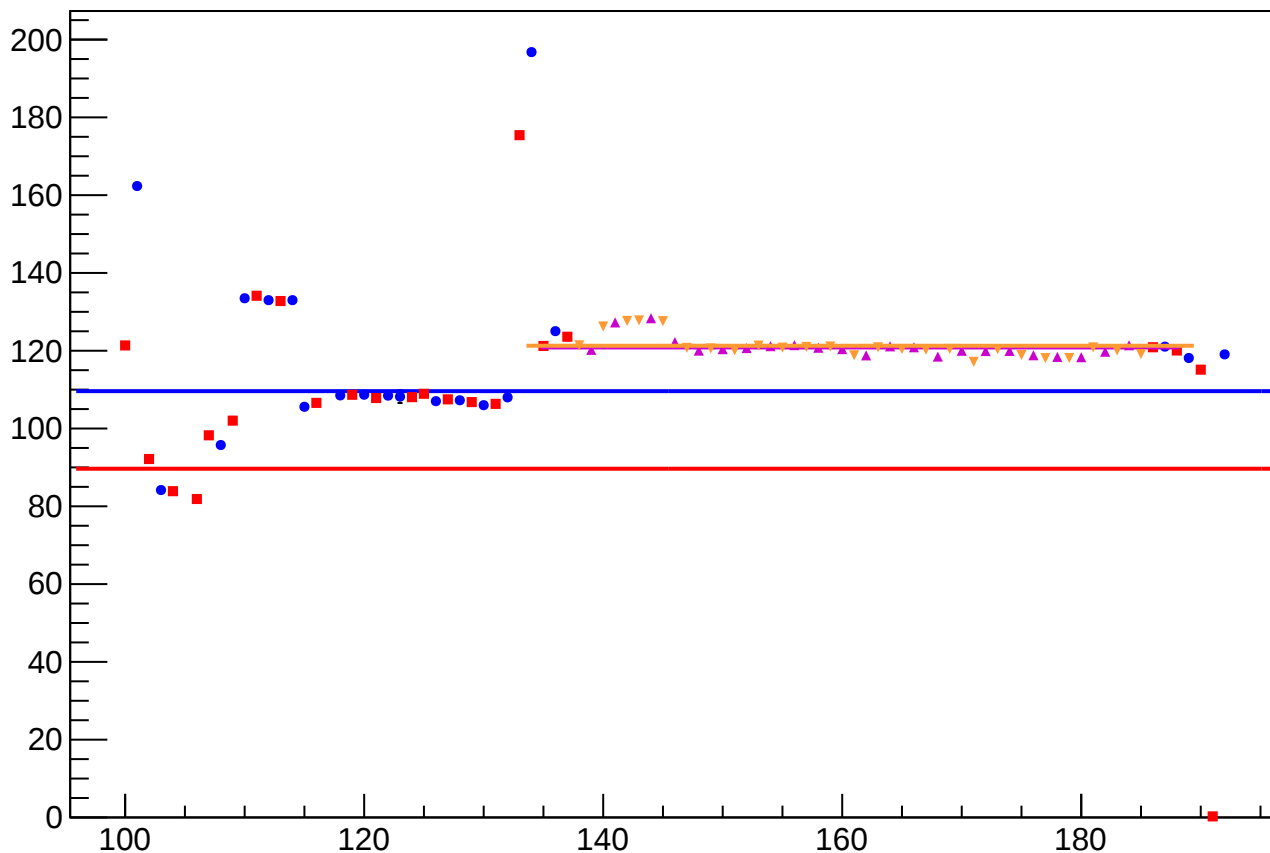
Right:  $-87.571 \pm 1.092$   $\chi^2/\text{NDF}$ : 2321.5/42

In:  $-84.599 \pm 0.770$   $\chi^2/\text{NDF}$ : 1744.5/42

Out:  $-80.629 \pm 0.730$   $\chi^2/\text{NDF}$ : 2197.3/47

All:  $-82.509 \pm 0.530$   $\chi^2/\text{NDF}$ : 3955.9/90

reg\_asym\_atr\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 109.611 $\pm$ 0.080  $\chi^2$ /NDF: 74981.6/19

Left Out: 121.283 $\pm$ 0.040  $\chi^2$ /NDF:4939.3/24

Right Out: 89.662 $\pm$ 0.070  $\chi^2$ /NDF: 329389.4/22

Left In: 120.843 $\pm$ 0.041  $\chi^2$ /NDF:3368.2/22

Left: 121.066 $\pm$ 0.029  $\chi^2$ /NDF: 8366.9/47

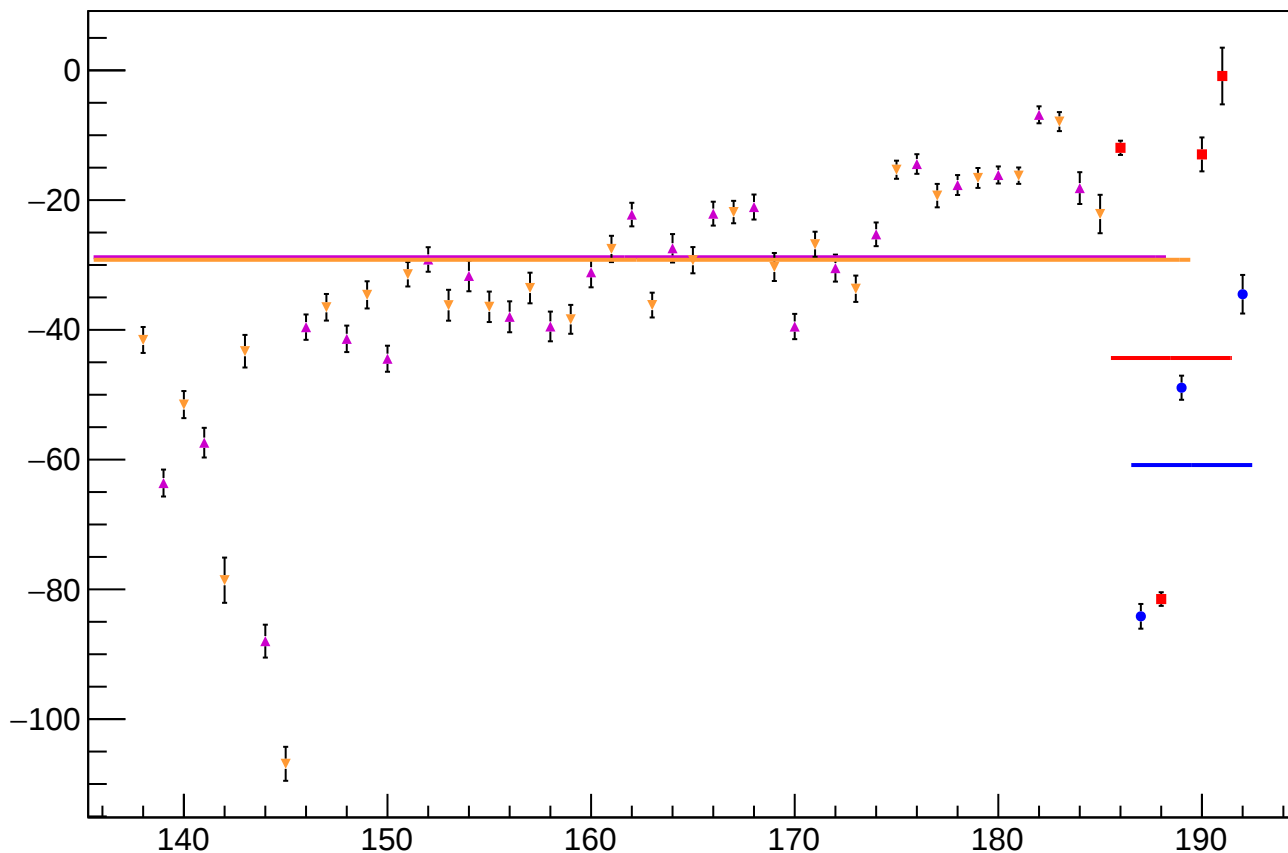
Right: 98.224 $\pm$ 0.053  $\chi^2$ /NDF: 439603.3/42

In: 118.547 $\pm$ 0.036  $\chi^2$ /NDF:93919.4/42

Out: 113.407 $\pm$ 0.035  $\chi^2$ /NDF:489198.5/47

All: 115.865 $\pm$ 0.025  $\chi^2$ /NDF: 593583.8/90

reg\_asym\_at1\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected

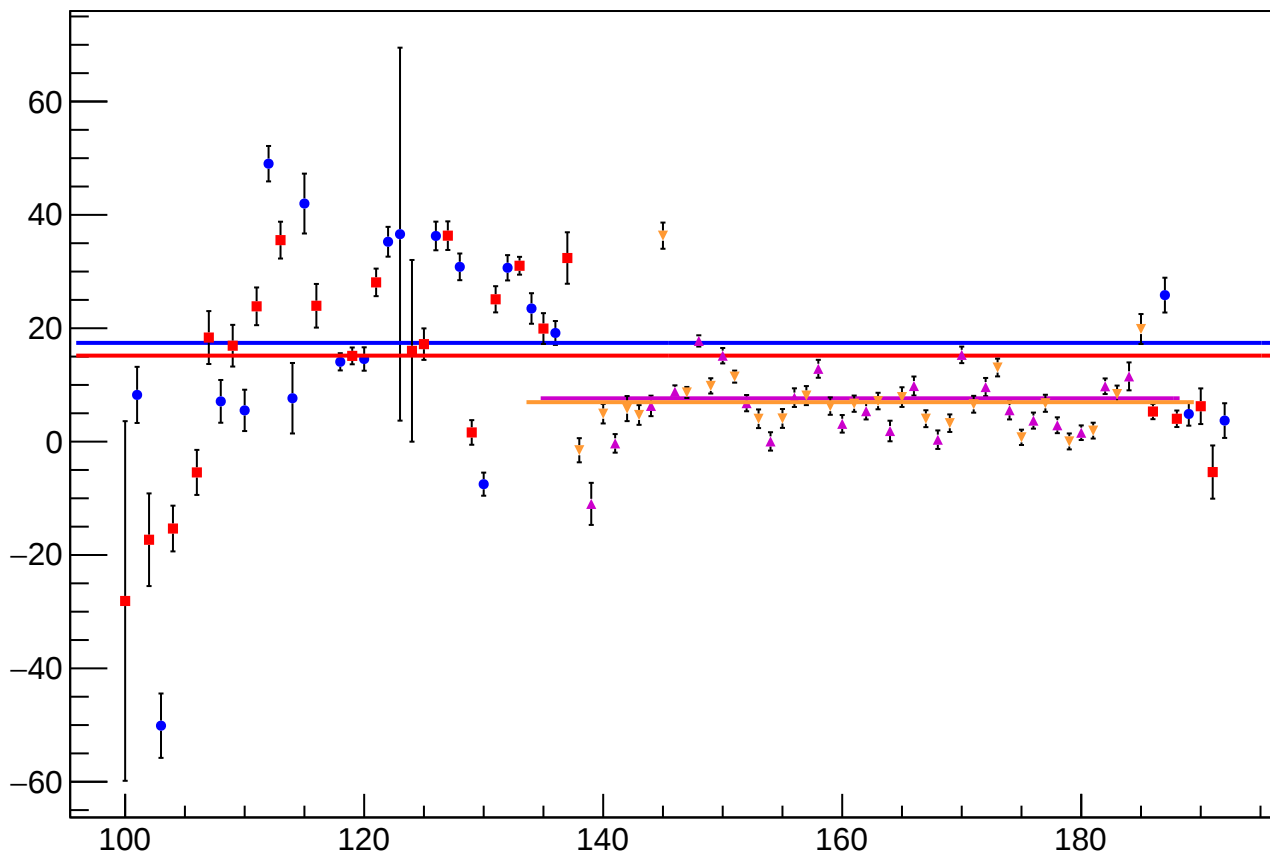


Right In:  $-60.837 \pm 1.215$   $\chi^2/\text{NDF}: 269.1/2$   
 Left Out:  $-29.199 \pm 0.389$   $\chi^2/\text{NDF}: 1881.5/24$   
 Right Out:  $-44.339 \pm 0.719$   $\chi^2/\text{NDF}: 2367.6/3$   
 Left In:  $-28.810 \pm 0.395$   $\chi^2/\text{NDF}: 1763.8/22$

Left:  $-29.008 \pm 0.277$   $\chi^2/\text{NDF}: 3645.8/47$   
 Right:  $-48.615 \pm 0.619$   $\chi^2/\text{NDF}: 2773.3/6$   
 In:  $-31.876 \pm 0.376$   $\chi^2/\text{NDF}: 2661.2/25$   
 Out:  $-32.624 \pm 0.342$   $\chi^2/\text{NDF}: 4592.5/28$

All:  $-32.285 \pm 0.253$   $\chi^2/\text{NDF}: 7255.9/54$

reg\_asym\_at1\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 17.418 $\pm$ 0.599  $\chi^2$ /NDF: 686.1/19

Left Out: 6.960 $\pm$ 0.303  $\chi^2$ /NDF:321.3/24

Right Out: 15.171 $\pm$ 0.528  $\chi^2$ /NDF: 568.9/22

Left In: 7.638 $\pm$ 0.313  $\chi^2$ /NDF:337.7/22

Left: 7.287 $\pm$ 0.218  $\chi^2$ /NDF: 661.5/47

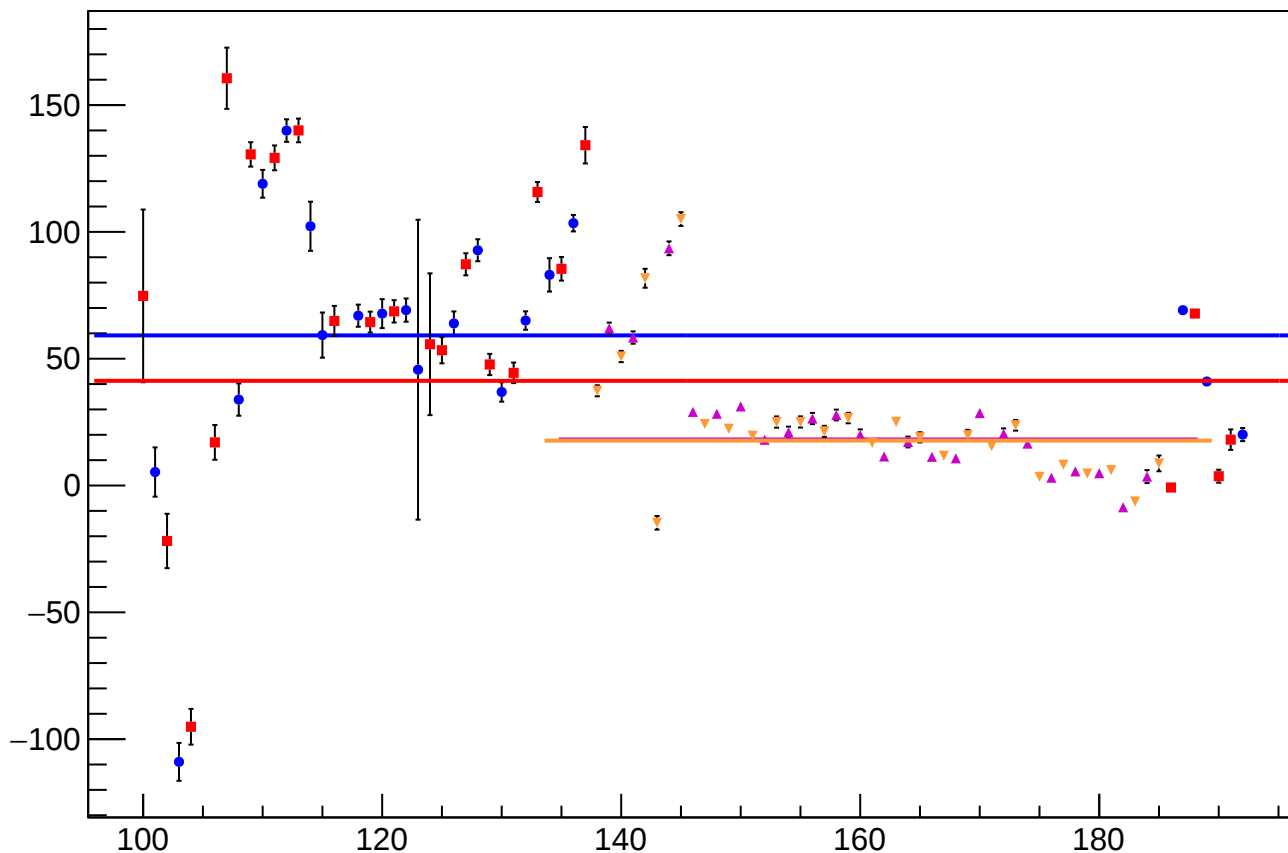
Right: 16.153 $\pm$ 0.396  $\chi^2$ /NDF: 1262.9/42

In: 9.740 $\pm$ 0.278  $\chi^2$ /NDF:1233.0/42

Out: 8.993 $\pm$ 0.263  $\chi^2$ /NDF:1072.1/47

All: 9.346 $\pm$ 0.191  $\chi^2$ /NDF: 2308.9/90

reg\_asym\_at1\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 59.185 $\pm$ 0.787  $\chi^2$ /NDF: 1729.6/19

Left Out: 17.705 $\pm$ 0.387  $\chi^2$ /NDF:2432.2/24

Right Out: 41.276 $\pm$ 0.529  $\chi^2$ /NDF: 5980.5/22

Left In: 18.150 $\pm$ 0.393  $\chi^2$ /NDF:2339.4/22

Left: 17.924 $\pm$ 0.276  $\chi^2$ /NDF: 4772.2/47

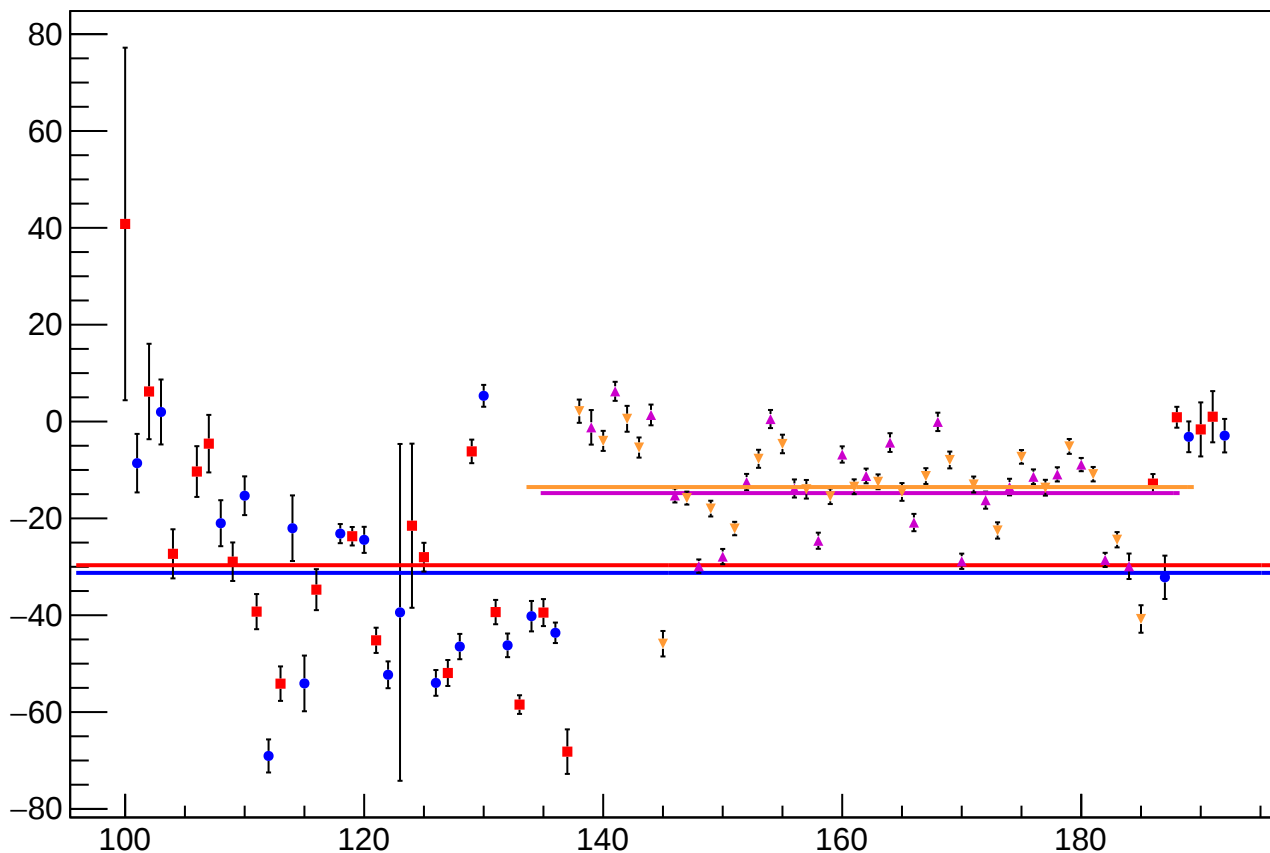
Right: 46.842 $\pm$ 0.439  $\chi^2$ /NDF: 8066.7/42

In: 26.320 $\pm$ 0.351  $\chi^2$ /NDF:6244.4/42

Out: 25.934 $\pm$ 0.312  $\chi^2$ /NDF:9706.2/47

All: 26.104 $\pm$ 0.233  $\chi^2$ /NDF: 15951.2/90

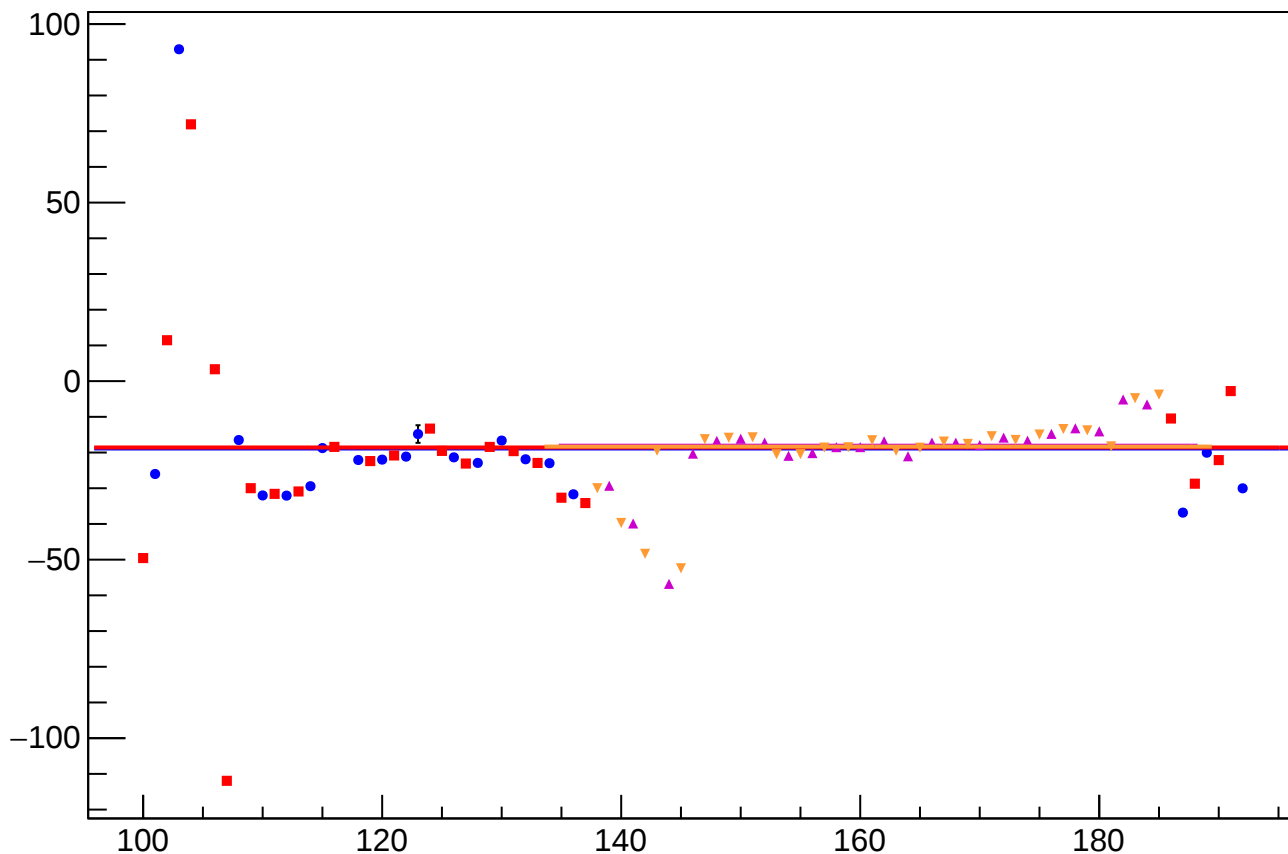
reg\_asym\_at1\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-31.254 \pm 0.702$   $\chi^2/\text{NDF}: 874.7/19$   
 Left Out:  $-13.531 \pm 0.344$   $\chi^2/\text{NDF}: 572.8/24$   
 Right Out:  $-29.671 \pm 0.648$   $\chi^2/\text{NDF}: 965.3/22$   
 Left In:  $-14.778 \pm 0.354$   $\chi^2/\text{NDF}: 838.0/22$

Left:  $-14.136 \pm 0.247$   $\chi^2/\text{NDF}: 1417.2/47$   
 Right:  $-30.400 \pm 0.476$   $\chi^2/\text{NDF}: 1842.7/42$   
 In:  $-18.119 \pm 0.316$   $\chi^2/\text{NDF}: 2151.7/42$   
 Out:  $-17.076 \pm 0.304$   $\chi^2/\text{NDF}: 2021.5/47$   
 All:  $-17.577 \pm 0.219$   $\chi^2/\text{NDF}: 4178.9/90$

reg\_asym\_at1\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: -18.868 $\pm$ 0.039  $\chi^2/\text{NDF}$ : 492849.5/19

Left Out: -18.334 $\pm$ 0.016  $\chi^2/\text{NDF}$ : 284152.1/24

Right Out: -18.583 $\pm$ 0.038  $\chi^2/\text{NDF}$ : 458563.4/22

Left In: -18.083 $\pm$ 0.016  $\chi^2/\text{NDF}$ : 241949.5/22

Left: -18.211 $\pm$ 0.011  $\chi^2/\text{NDF}$ : 526224.9/47

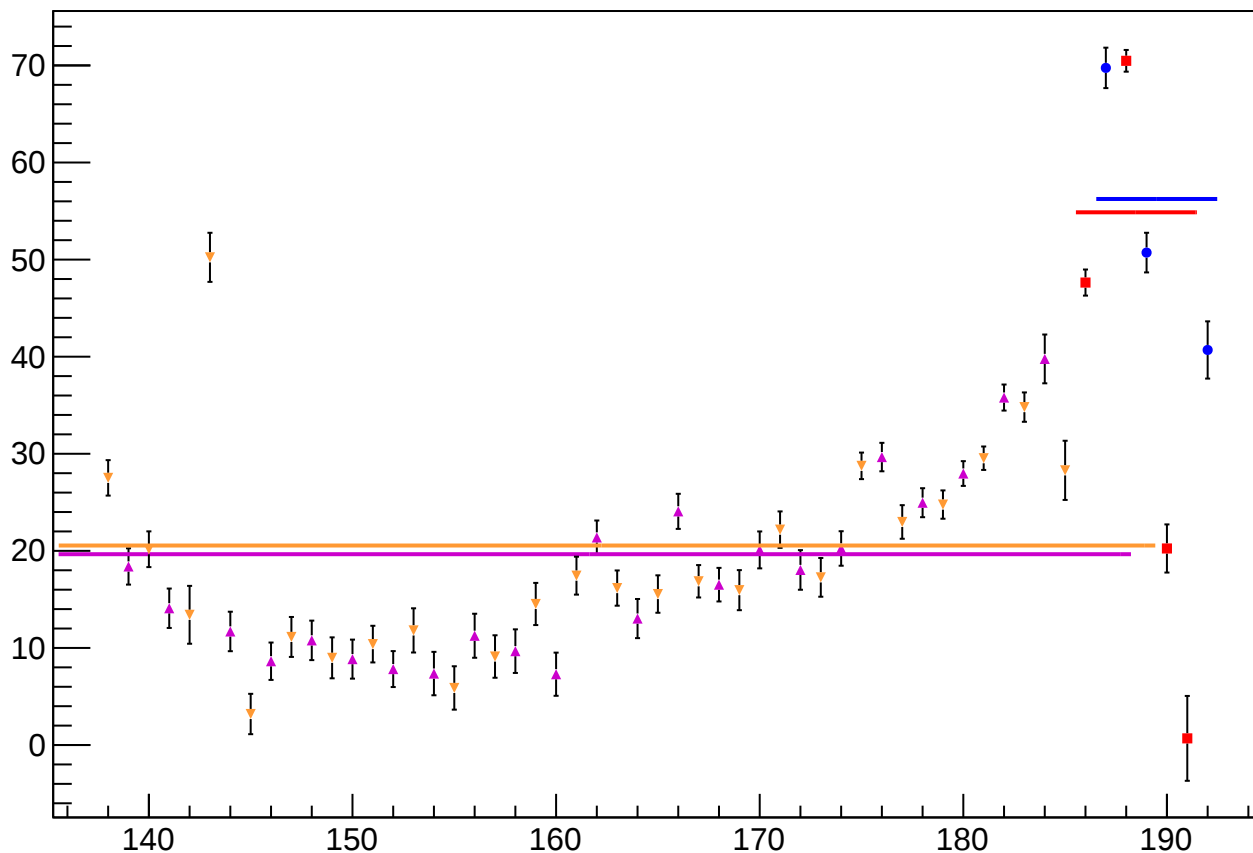
Right: -18.720 $\pm$ 0.027  $\chi^2/\text{NDF}$ : 951440.4/42

In: -18.196 $\pm$ 0.015  $\chi^2/\text{NDF}$ : 735141.4/42

Out: -18.371 $\pm$ 0.015  $\chi^2/\text{NDF}$ : 742752.7/47

All: -18.285 $\pm$ 0.010  $\chi^2/\text{NDF}$ : 1477964.7/90

reg\_asym\_at1\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 56.243 $\pm$ 1.307  $\chi^2$ /NDF: 77.2/2

Left Out: 20.550 $\pm$ 0.373  $\chi^2$ /NDF: 626.4/24

Right Out: 54.871 $\pm$ 0.798  $\chi^2$ /NDF: 572.4/3

Left In: 19.656 $\pm$ 0.380  $\chi^2$ /NDF: 571.8/22

Left: 20.112 $\pm$ 0.266  $\chi^2$ /NDF: 1201.0/47

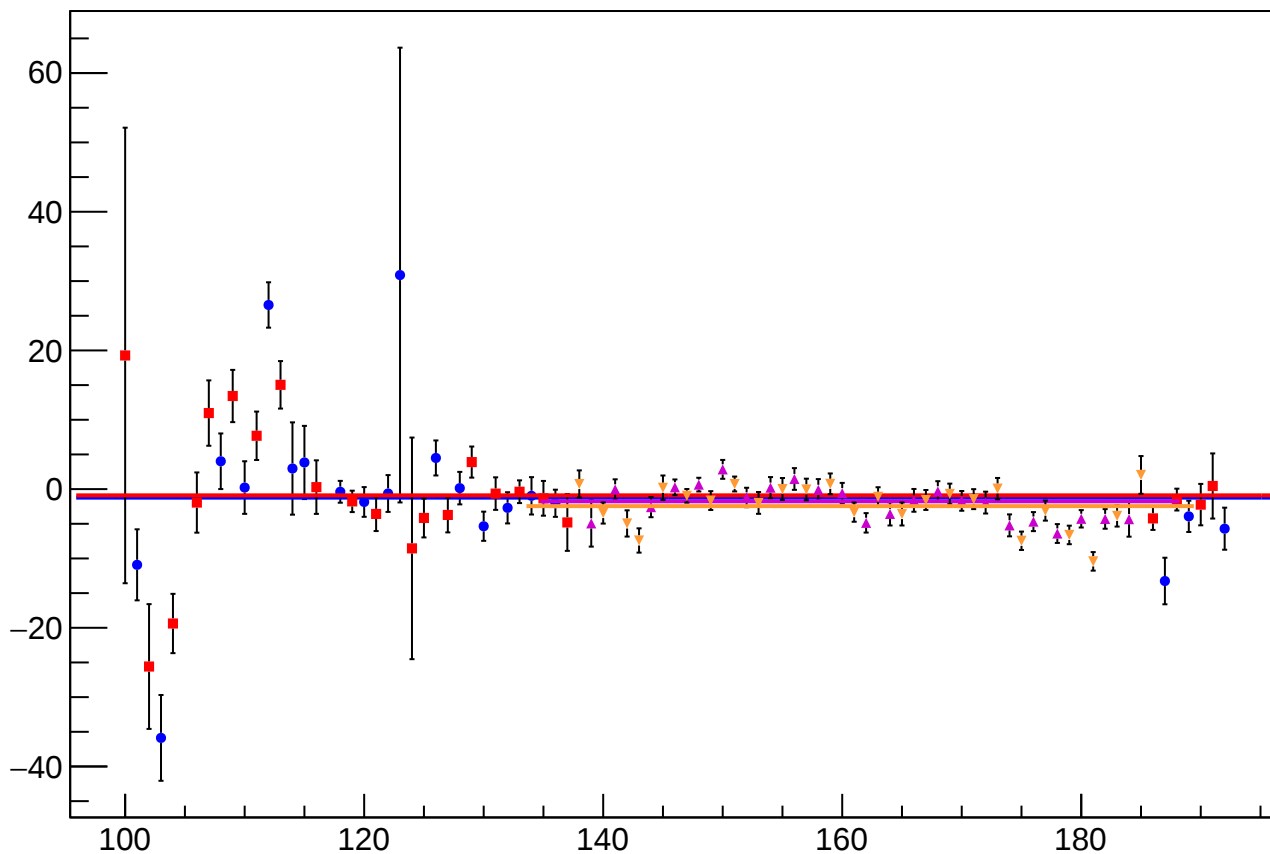
Right: 55.244 $\pm$ 0.681  $\chi^2$ /NDF: 650.4/6

In: 22.514 $\pm$ 0.365  $\chi^2$ /NDF: 1371.6/25

Out: 26.700 $\pm$ 0.338  $\chi^2$ /NDF: 2715.4/28

All: 24.769 $\pm$ 0.248  $\chi^2$ /NDF: 4157.8/54

reg\_asym\_at1\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-1.227 \pm 0.612$   $\chi^2/\text{NDF}$ : 137.9/19

Left Out:  $-2.455 \pm 0.292$   $\chi^2/\text{NDF}$ : 106.0/24

Right Out:  $-0.900 \pm 0.556$   $\chi^2/\text{NDF}$ : 89.6/22

Left In:  $-1.758 \pm 0.302$   $\chi^2/\text{NDF}$ : 67.4/22

Left:  $-2.118 \pm 0.210$   $\chi^2/\text{NDF}$ : 176.1/47

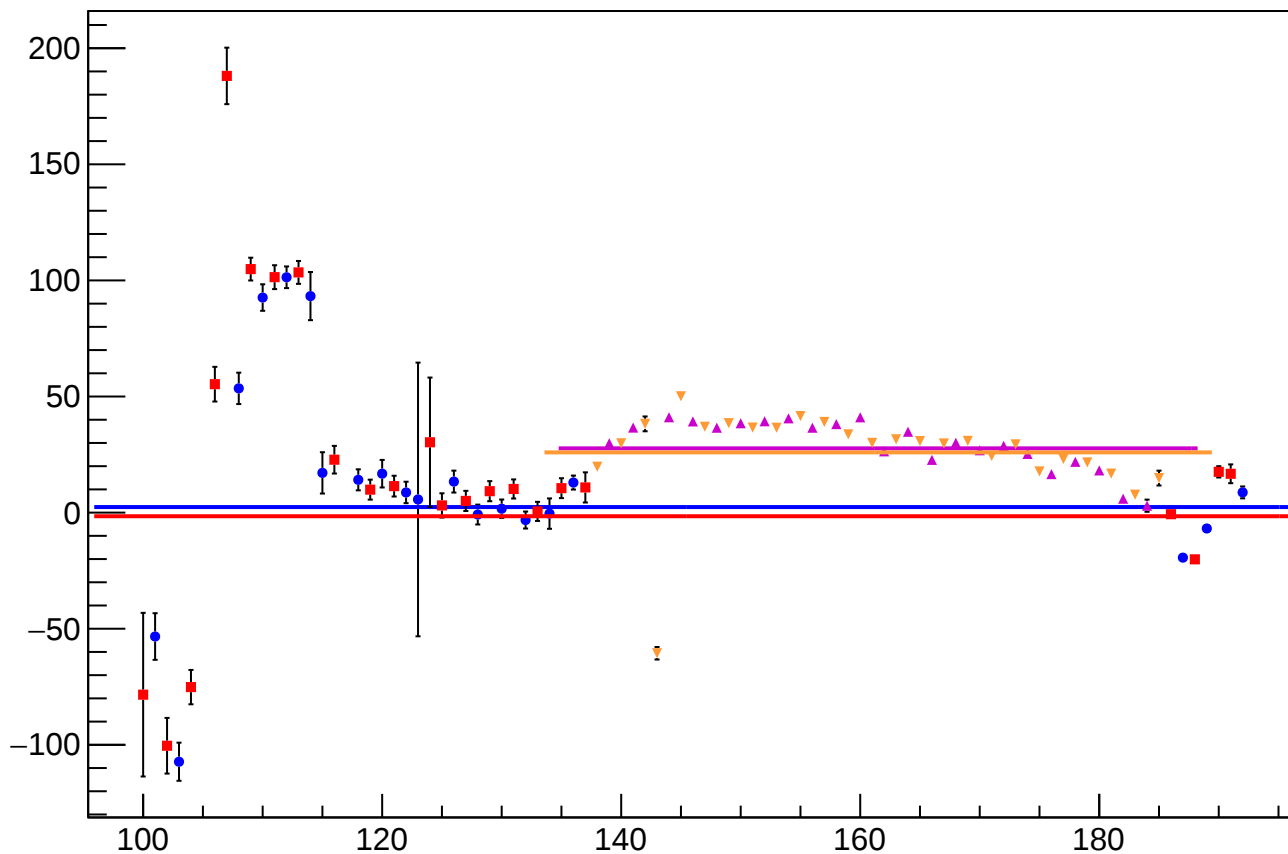
Right:  $-1.048 \pm 0.412$   $\chi^2/\text{NDF}$ : 227.7/42

In:  $-1.654 \pm 0.271$   $\chi^2/\text{NDF}$ : 206.0/42

Out:  $-2.118 \pm 0.259$   $\chi^2/\text{NDF}$ : 201.7/47

All:  $-1.897 \pm 0.187$   $\chi^2/\text{NDF}$ : 409.3/90

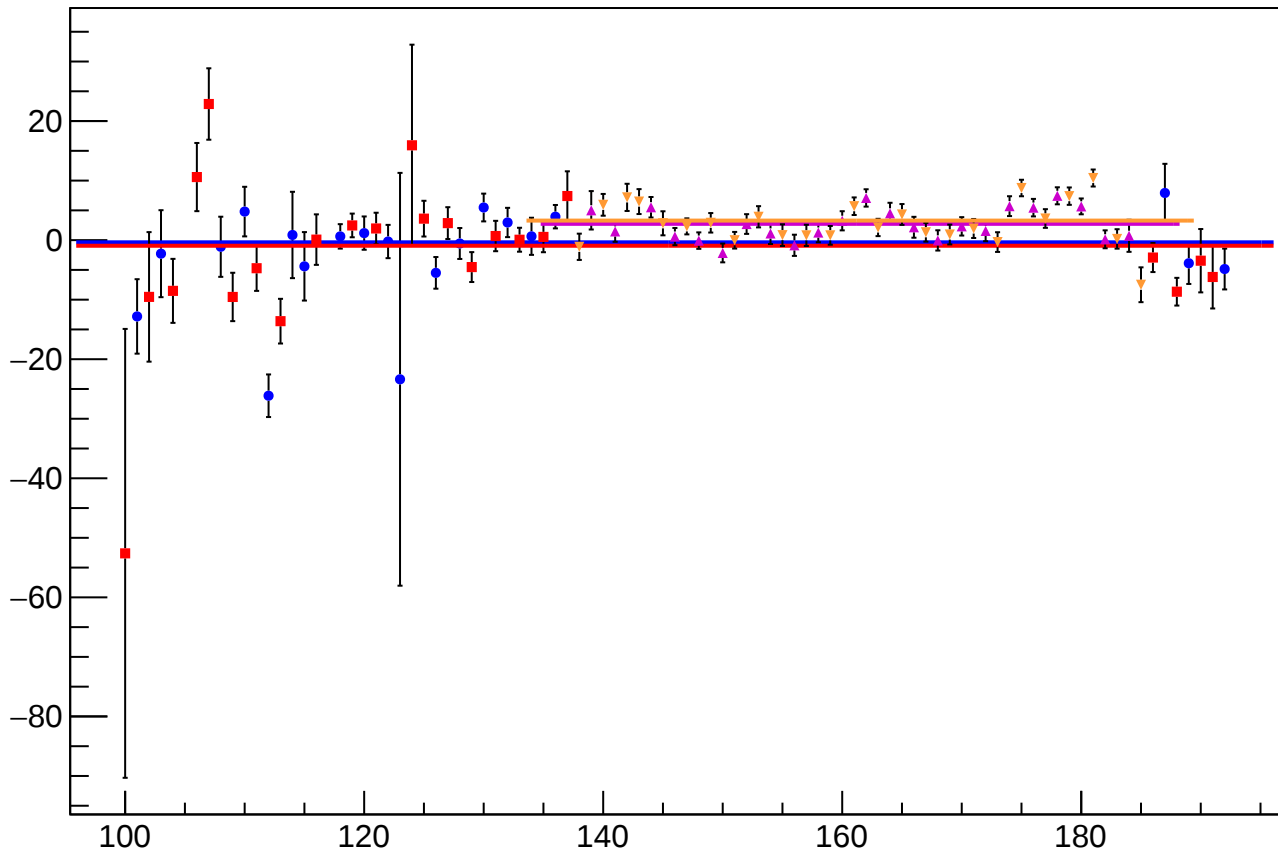
reg\_asym\_at1\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $2.395 \pm 0.827$   $\chi^2/\text{NDF}$ : 1277.7/19  
 Left Out:  $25.938 \pm 0.372$   $\chi^2/\text{NDF}$ : 1711.6/24  
 Right Out:  $-1.558 \pm 0.580$   $\chi^2/\text{NDF}$ : 2368.1/22  
 Left In:  $27.677 \pm 0.378$   $\chi^2/\text{NDF}$ : 803.9/22

Left:  $26.794 \pm 0.265$   $\chi^2/\text{NDF}$ : 2526.2/47  
 Right:  $-0.252 \pm 0.475$   $\chi^2/\text{NDF}$ : 3661.1/42  
 In:  $23.301 \pm 0.344$   $\chi^2/\text{NDF}$ : 2855.0/42  
 Out:  $17.923 \pm 0.313$   $\chi^2/\text{NDF}$ : 5669.5/47  
 All:  $20.362 \pm 0.232$   $\chi^2/\text{NDF}$ : 8658.1/90

reg\_asym\_at1\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-0.367 \pm 0.712$   $\chi^2/\text{NDF}$ : 81.3/19

Left Out:  $3.283 \pm 0.331$   $\chi^2/\text{NDF}$ : 102.3/24

Right Out:  $-0.943 \pm 0.674$   $\chi^2/\text{NDF}$ : 70.6/22

Left In:  $2.738 \pm 0.341$   $\chi^2/\text{NDF}$ : 64.5/22

Left:  $3.018 \pm 0.238$   $\chi^2/\text{NDF}$ : 168.1/47

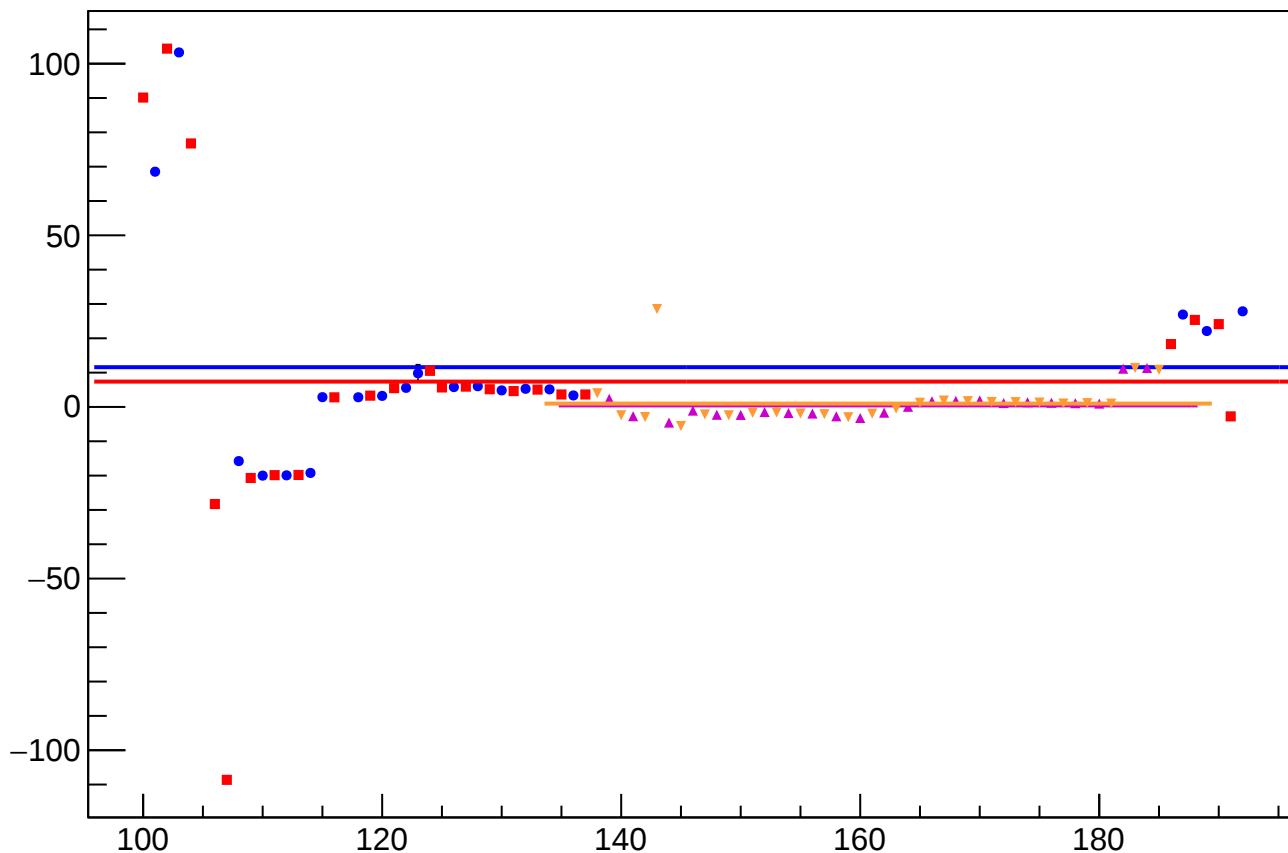
Right:  $-0.671 \pm 0.489$   $\chi^2/\text{NDF}$ : 152.3/42

In:  $2.158 \pm 0.308$   $\chi^2/\text{NDF}$ : 161.3/42

Out:  $2.460 \pm 0.297$   $\chi^2/\text{NDF}$ : 204.6/47

All:  $2.314 \pm 0.214$   $\chi^2/\text{NDF}$ : 366.3/90

reg\_asym\_at1\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 11.582+/-0.039  $\chi^2/\text{NDF}$ : 394555.5/19

Left Out: 0.979+/-0.015  $\chi^2/\text{NDF}$ : 117391.3/24

Right Out: 7.387+/-0.039  $\chi^2/\text{NDF}$ : 561571.5/22

Left In: 0.451+/-0.015  $\chi^2/\text{NDF}$ : 50699.8/22

Left: 0.719+/-0.011  $\chi^2/\text{NDF}$ : 168685.3/47

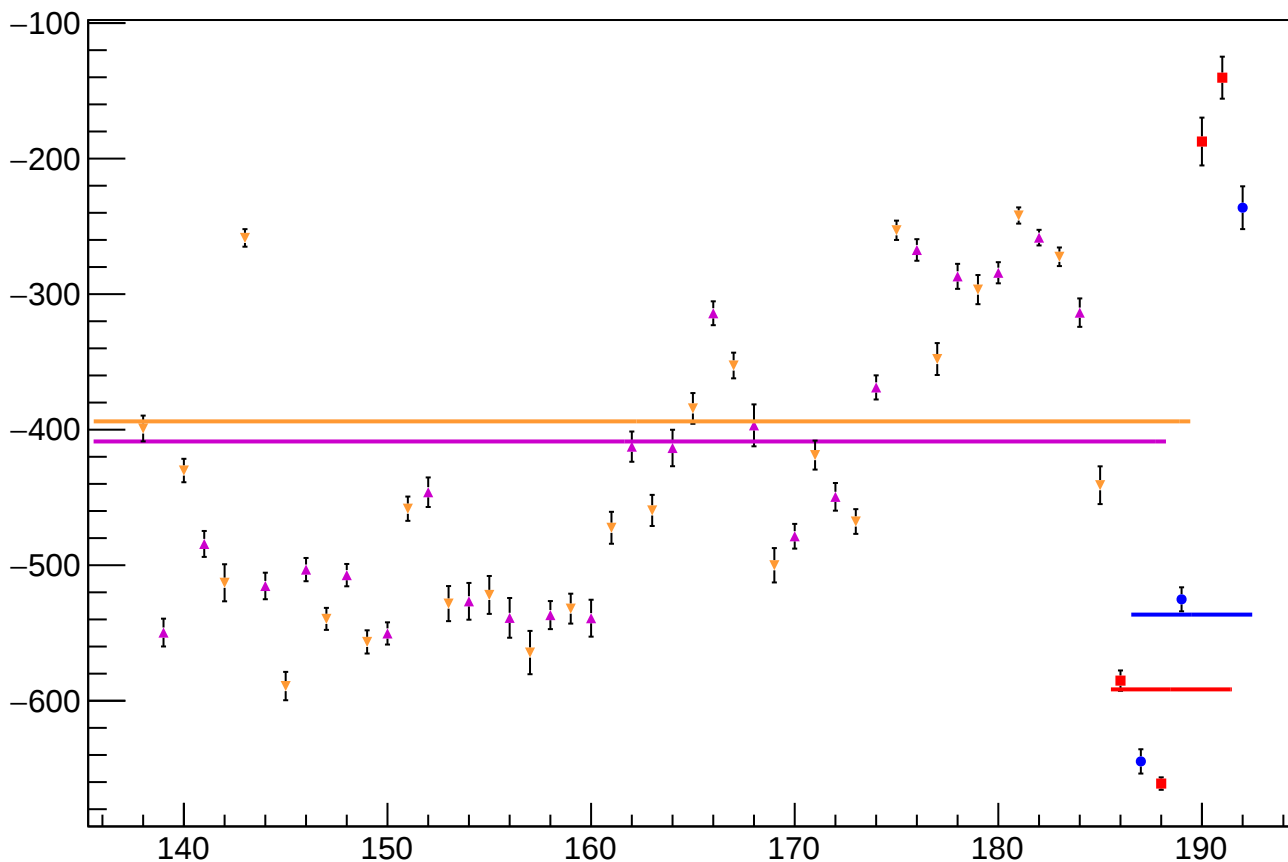
Right: 9.436+/-0.028  $\chi^2/\text{NDF}$ : 961908.9/42

In: 1.928+/-0.014  $\chi^2/\text{NDF}$ : 514270.8/42

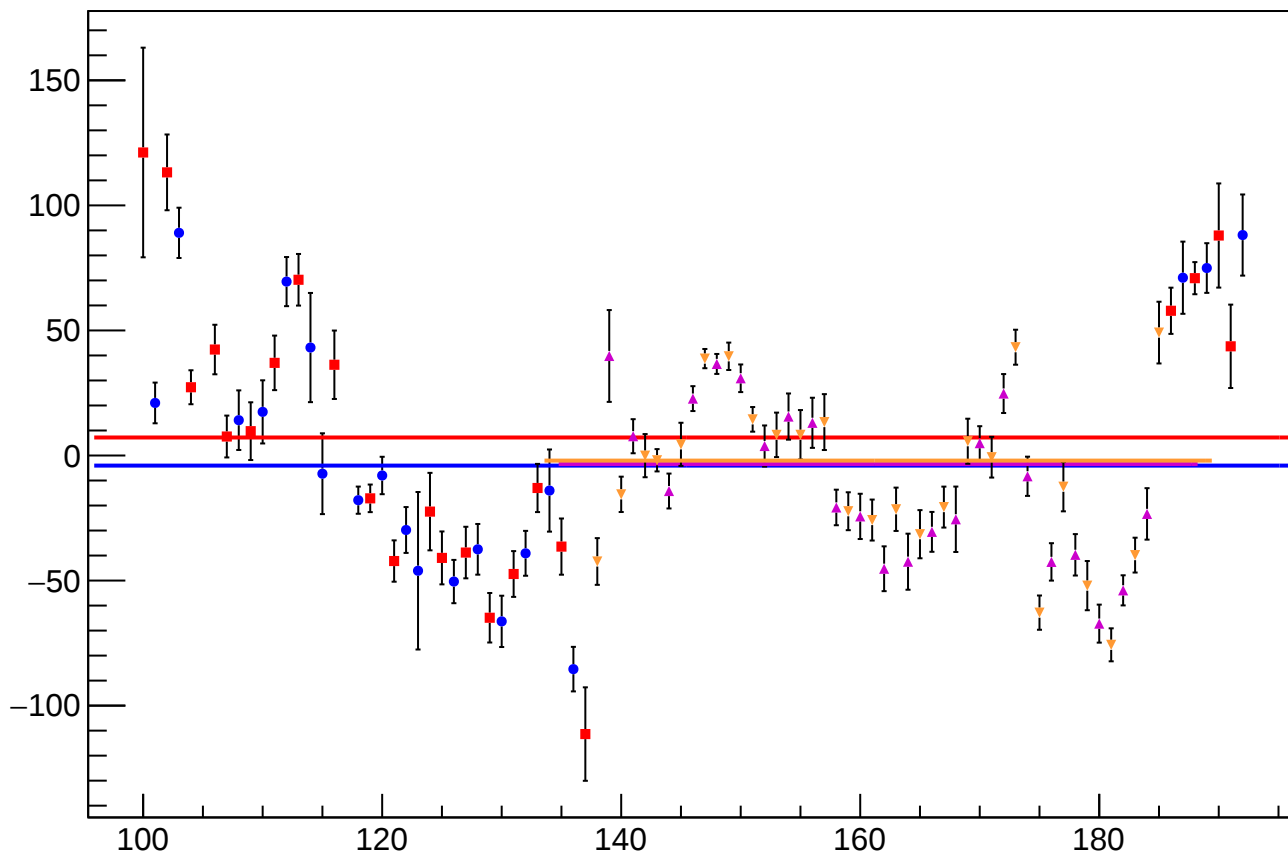
Out: 1.840+/-0.014  $\chi^2/\text{NDF}$ : 702868.8/47

All: 1.883+/-0.010  $\chi^2/\text{NDF}$ : 1217158.6/90

reg\_asym\_at2\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



reg\_asym\_at2\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-4.036 \pm 2.240$   $\chi^2/\text{NDF}: 475.9/19$

Left Out:  $-2.037 \pm 1.424$   $\chi^2/\text{NDF}: 563.8/24$

Right Out:  $7.204 \pm 2.052$   $\chi^2/\text{NDF}: 523.2/22$

Left In:  $-3.420 \pm 1.520$   $\chi^2/\text{NDF}: 451.0/22$

Left:  $-2.683 \pm 1.039$   $\chi^2/\text{NDF}: 1015.2/47$

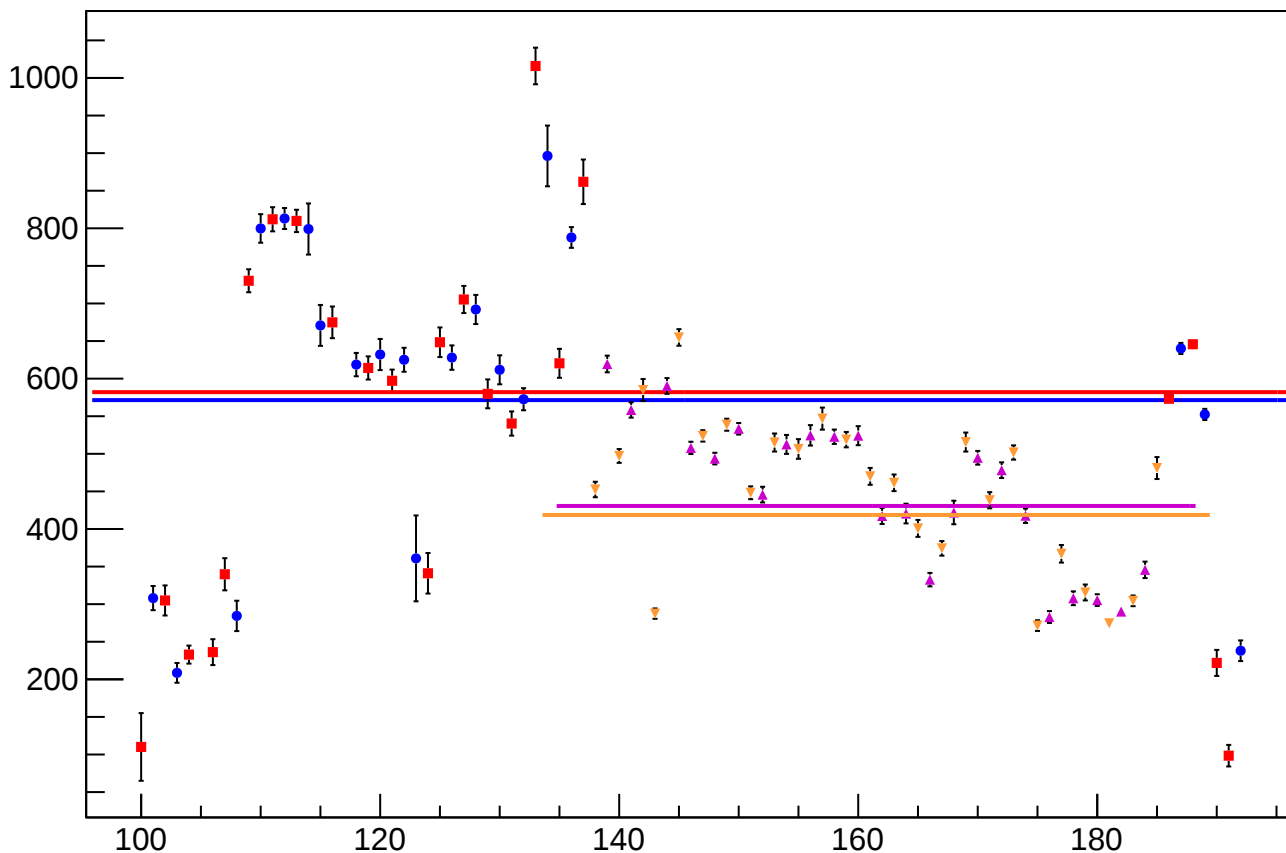
Right:  $2.074 \pm 1.513$   $\chi^2/\text{NDF}: 1012.8/42$

In:  $-3.614 \pm 1.258$   $\chi^2/\text{NDF}: 926.9/42$

Out:  $0.967 \pm 1.170$   $\chi^2/\text{NDF}: 1100.7/47$

All:  $-1.159 \pm 0.857$   $\chi^2/\text{NDF}: 2034.8/90$

reg\_asym\_at2\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 571.447 $\pm$ 3.251  $\chi^2$ /NDF: 2824.3/19

Left Out: 418.680 $\pm$ 1.905  $\chi^2$ /NDF:3296.5/24

Right Out: 582.048 $\pm$ 2.441  $\chi^2$ /NDF: 4664.3/22

Left In: 430.640 $\pm$ 1.971  $\chi^2$ /NDF:2850.6/22

Left: 424.457 $\pm$ 1.370  $\chi^2$ /NDF: 6166.1/47

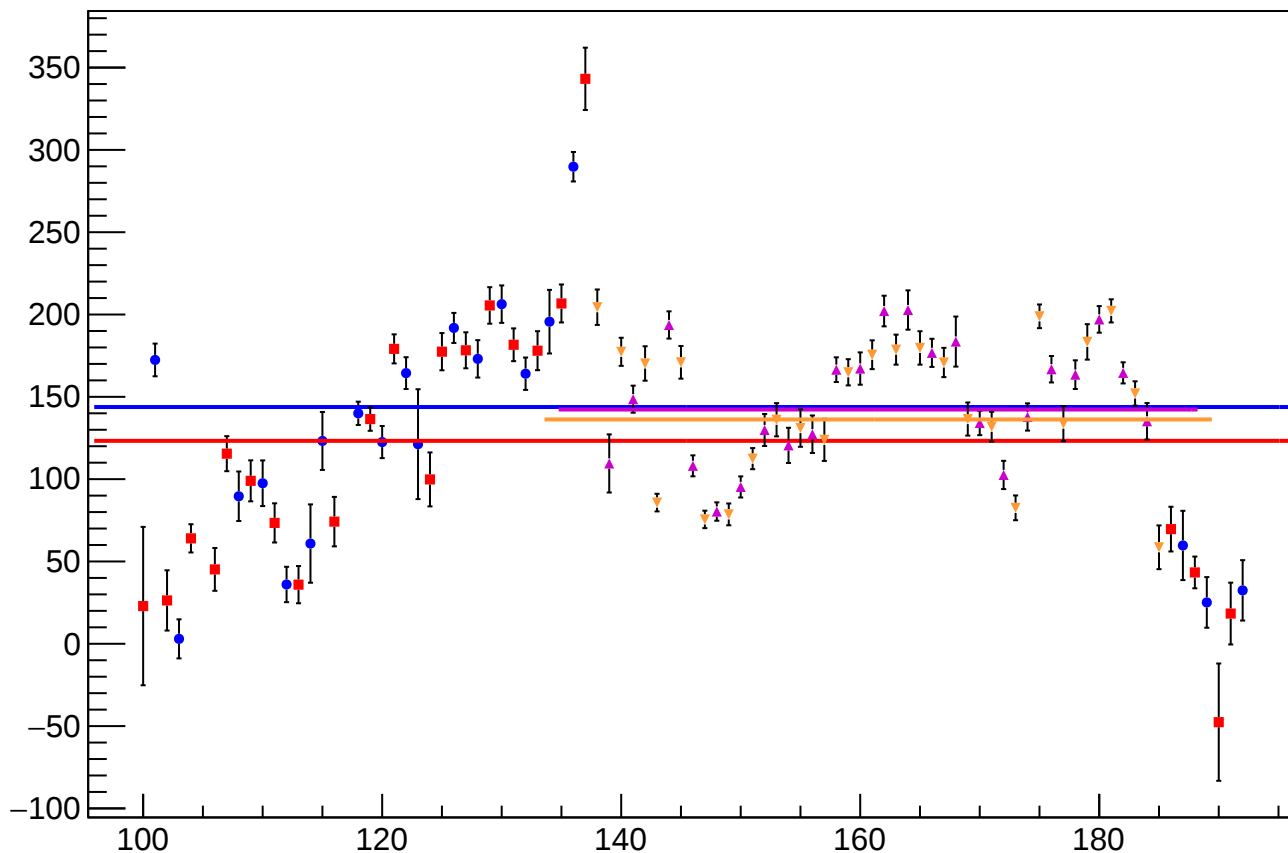
Right: 578.226 $\pm$ 1.952  $\chi^2$ /NDF: 7495.5/42

In: 468.475 $\pm$ 1.685  $\chi^2$ /NDF:7046.6/42

Out: 480.507 $\pm$ 1.502  $\chi^2$ /NDF:10744.5/47

All: 475.182 $\pm$ 1.121  $\chi^2$ /NDF: 17819.5/90

reg\_asym\_at2\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 143.818 $\pm$ 2.625  $\chi^2$ /NDF: 752.3/19

Left Out: 136.258 $\pm$ 1.651  $\chi^2$ /NDF: 758.3/24

Right Out: 123.274 $\pm$ 2.458  $\chi^2$ /NDF: 738.8/22

Left In: 142.296 $\pm$ 1.745  $\chi^2$ /NDF: 459.8/22

Left: 139.111 $\pm$ 1.199  $\chi^2$ /NDF: 1224.4/47

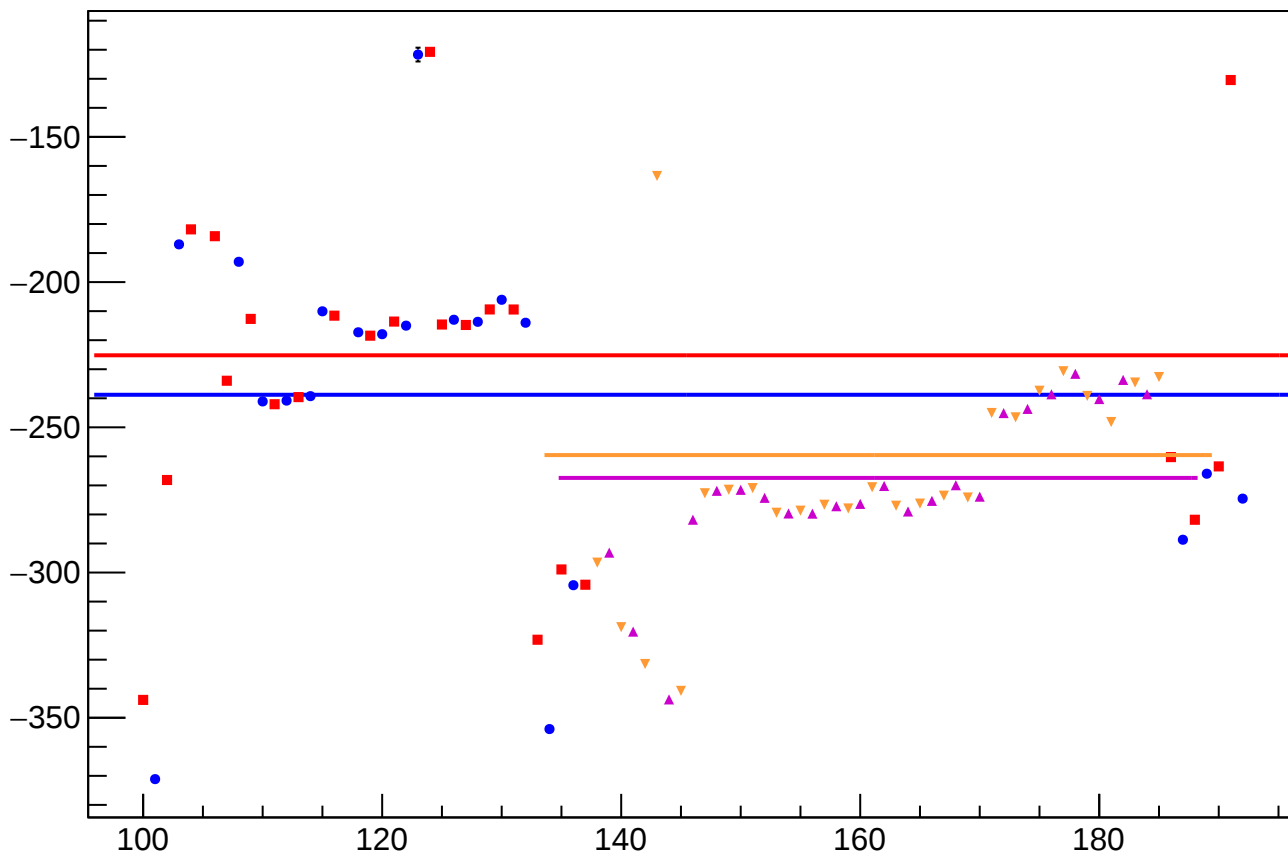
Right: 132.871 $\pm$ 1.794  $\chi^2$ /NDF: 1523.8/42

In: 142.763 $\pm$ 1.453  $\chi^2$ /NDF: 1212.3/42

Out: 132.221 $\pm$ 1.370  $\chi^2$ /NDF: 1516.3/47

All: 137.184 $\pm$ 0.997  $\chi^2$ /NDF: 2756.5/90

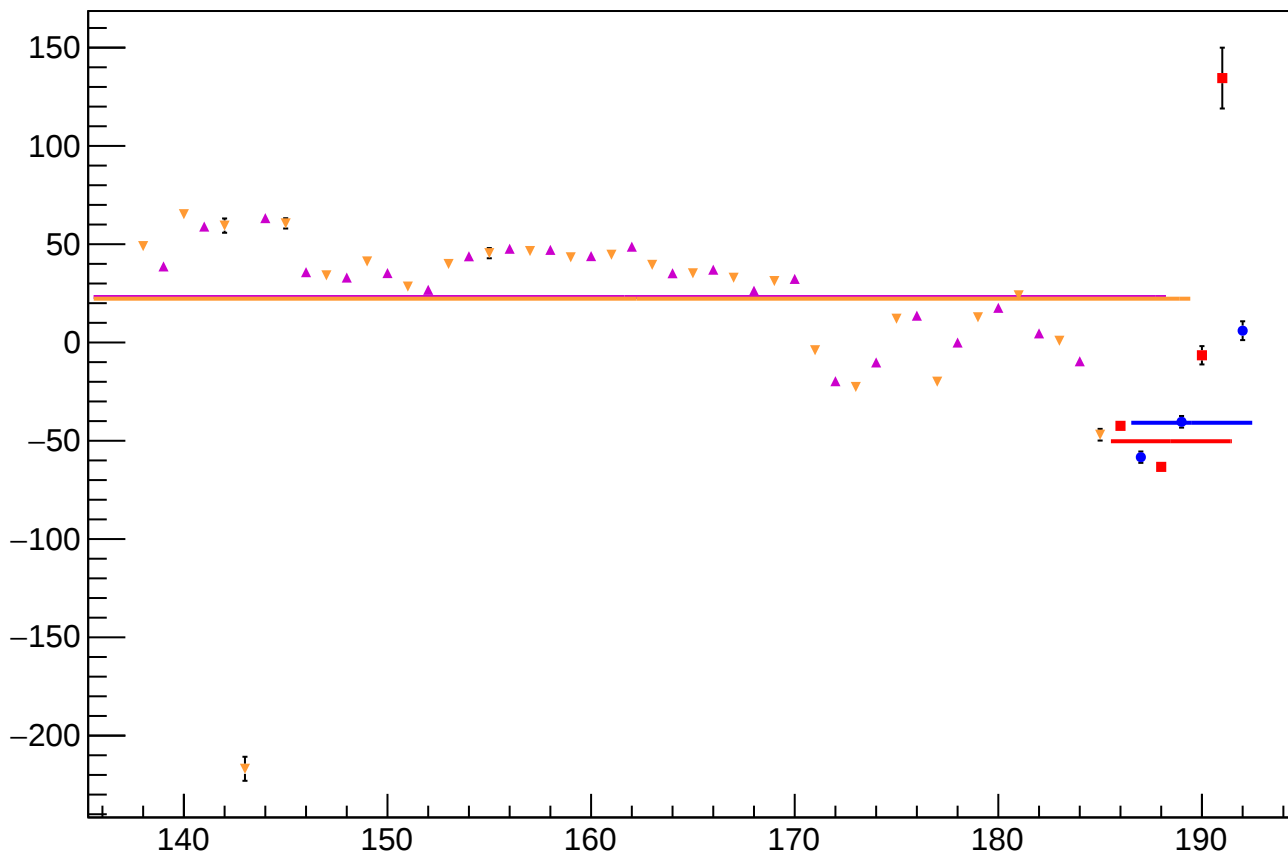
reg\_asym\_at2\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-238.791 \pm 0.141$   $\chi^2/\text{NDF}: 152743.1/19$   
 Left Out:  $-259.557 \pm 0.079$   $\chi^2/\text{NDF}: 238235.2/24$   
 Right Out:  $-225.201 \pm 0.130$   $\chi^2/\text{NDF}: 147905.7/22$   
 Left In:  $-267.417 \pm 0.082$   $\chi^2/\text{NDF}: 98035.5/22$

Left:  $-263.361 \pm 0.057$   $\chi^2/\text{NDF}: 341051.4/47$   
 Right:  $-231.439 \pm 0.095$   $\chi^2/\text{NDF}: 305687.4/42$   
 In:  $-260.212 \pm 0.071$   $\chi^2/\text{NDF}: 281702.1/42$   
 Out:  $-250.246 \pm 0.068$   $\chi^2/\text{NDF}: 437278.5/47$   
 All:  $-255.004 \pm 0.049$   $\chi^2/\text{NDF}: 729377.6/90$

reg\_asym\_at2\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $-40.839 \pm 1.897$   $\chi^2/\text{NDF}: 132.4/2$

Left Out:  $22.279 \pm 0.399$   $\chi^2/\text{NDF}: 5171.0/24$

Right Out:  $-50.244 \pm 1.126$   $\chi^2/\text{NDF}: 320.5/3$

Left In:  $23.136 \pm 0.401$   $\chi^2/\text{NDF}: 2744.7/22$

Left:  $22.705 \pm 0.283$   $\chi^2/\text{NDF}: 7918.0/47$

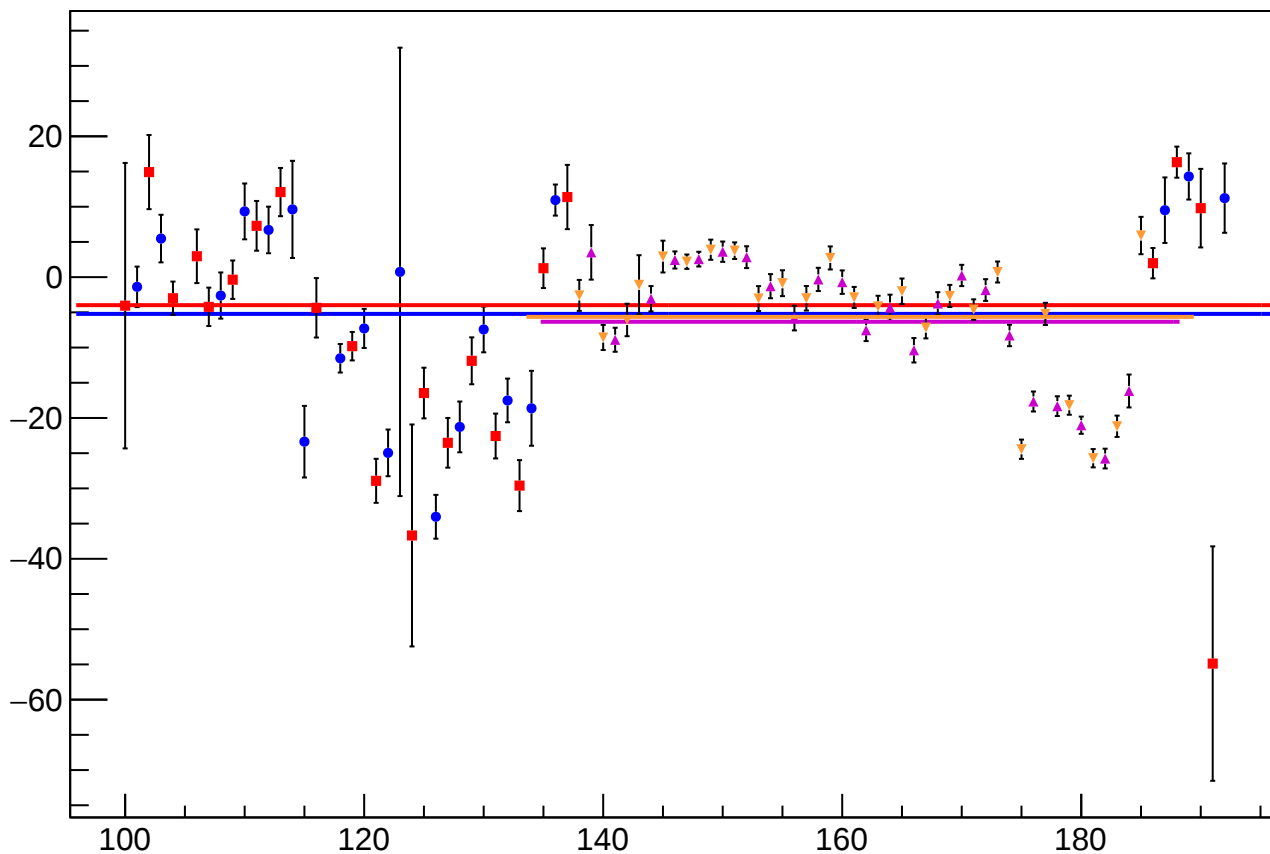
Right:  $-47.794 \pm 0.968$   $\chi^2/\text{NDF}: 471.1/6$

In:  $20.394 \pm 0.393$   $\chi^2/\text{NDF}: 3965.8/25$

Out:  $14.195 \pm 0.376$   $\chi^2/\text{NDF}: 9178.7/28$

All:  $17.158 \pm 0.272$   $\chi^2/\text{NDF}: 13274.5/54$

reg\_asym\_at2\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-5.220 \pm 0.749$   $\chi^2/\text{NDF}$ : 340.3/19

Left Out:  $-5.642 \pm 0.316$   $\chi^2/\text{NDF}$ : 893.7/24

Right Out:  $-3.979 \pm 0.677$   $\chi^2/\text{NDF}$ : 381.5/22

Left In:  $-6.337 \pm 0.321$   $\chi^2/\text{NDF}$ : 783.0/22

Left:  $-5.983 \pm 0.225$   $\chi^2/\text{NDF}$ : 1679.1/47

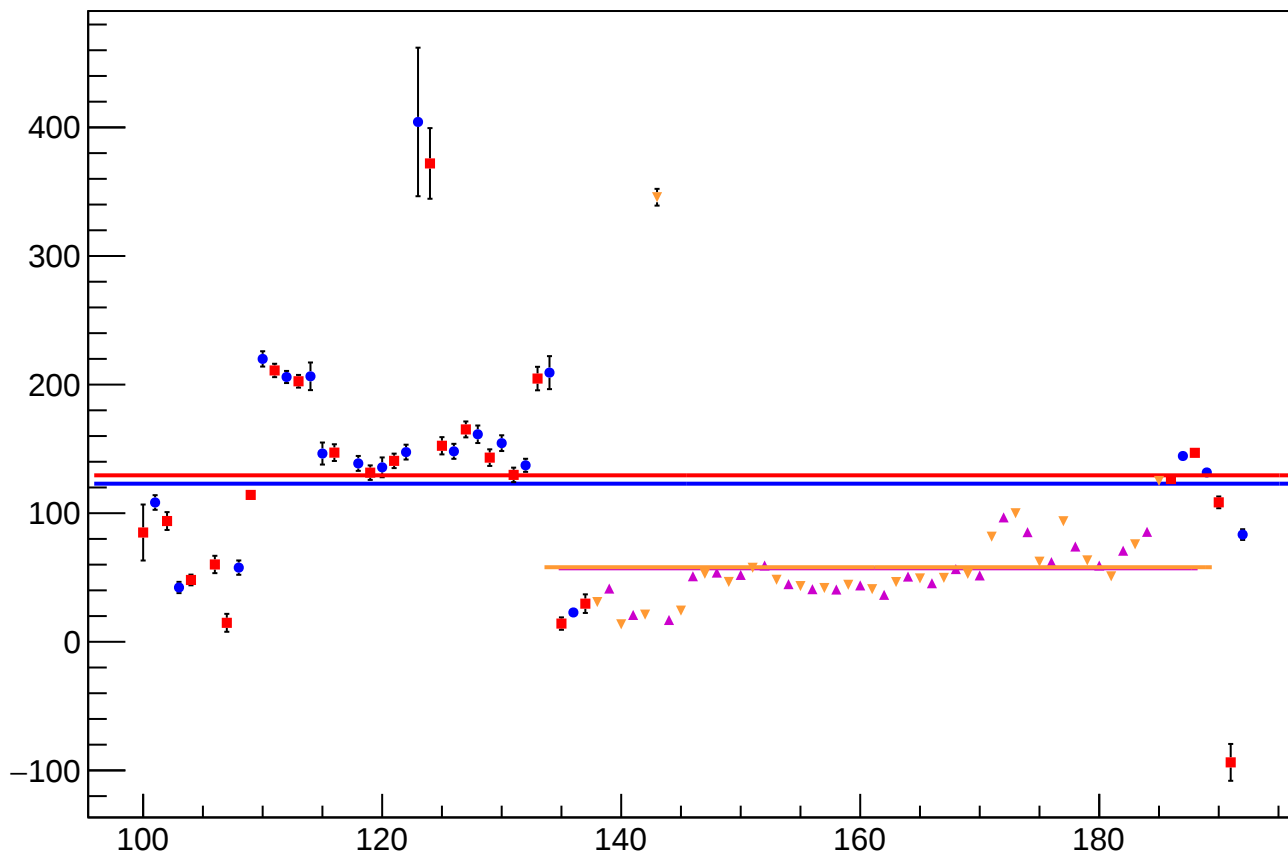
Right:  $-4.537 \pm 0.502$   $\chi^2/\text{NDF}$ : 723.4/42

In:  $-6.164 \pm 0.295$   $\chi^2/\text{NDF}$ : 1125.2/42

Out:  $-5.346 \pm 0.286$   $\chi^2/\text{NDF}$ : 1280.2/47

All:  $-5.742 \pm 0.205$   $\chi^2/\text{NDF}$ : 2409.3/90

reg\_asym\_at2\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 122.950 $\pm$ 1.059  $\chi^2$ /NDF: 2361.1/19

Left Out: 57.990 $\pm$ 0.398  $\chi^2$ /NDF:4635.7/24

Right Out: 129.449 $\pm$ 0.759  $\chi^2$ /NDF: 2701.7/22

Left In: 57.139 $\pm$ 0.400  $\chi^2$ /NDF:1803.4/22

Left: 57.566 $\pm$ 0.282  $\chi^2$ /NDF: 6441.4/47

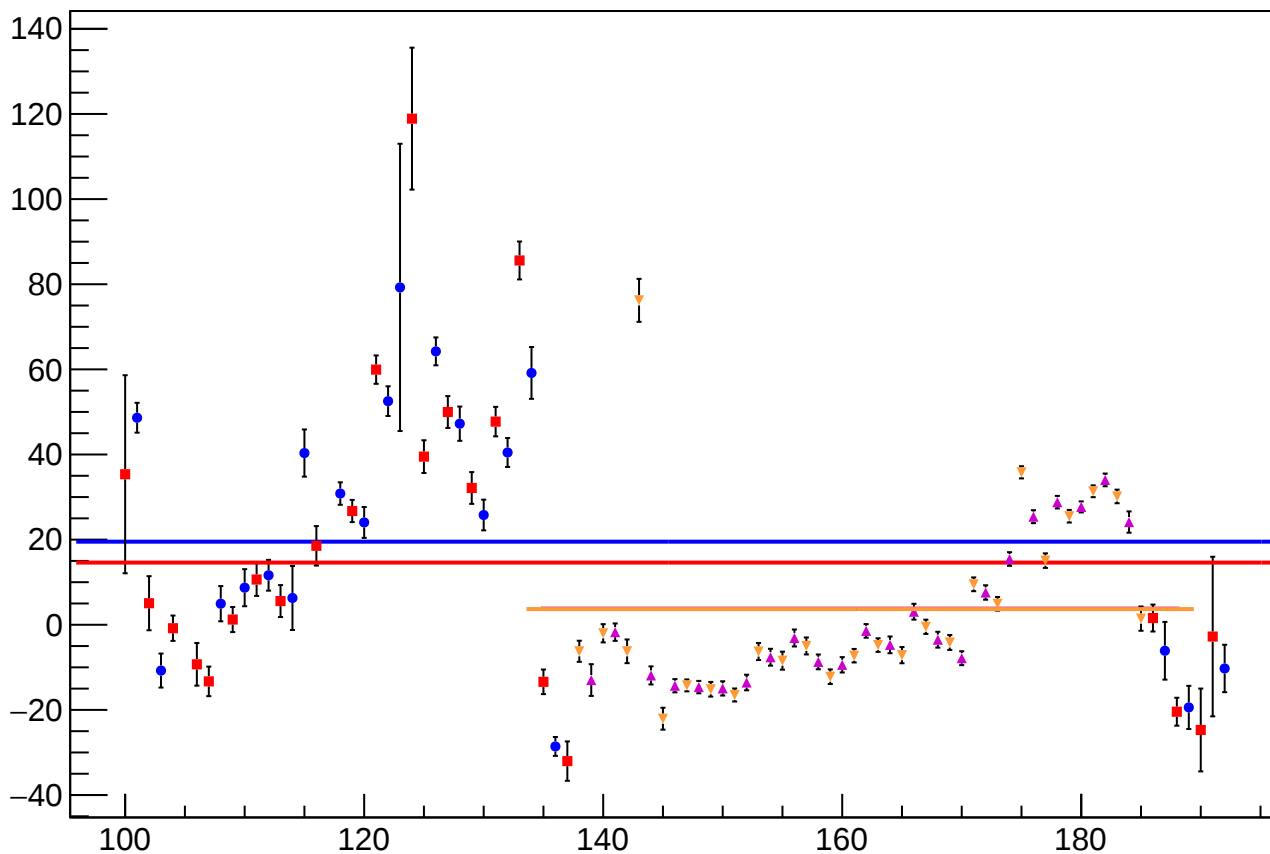
Right: 127.243 $\pm$ 0.617  $\chi^2$ /NDF: 5087.7/42

In: 65.336 $\pm$ 0.374  $\chi^2$ /NDF:7543.5/42

Out: 73.382 $\pm$ 0.352  $\chi^2$ /NDF:14283.1/47

All: 69.595 $\pm$ 0.256  $\chi^2$ /NDF: 22071.9/90

reg\_asym\_at2\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 19.520 $\pm$ 0.868  $\chi^2$ /NDF: 1170.7/19

Left Out: 3.684 $\pm$ 0.357  $\chi^2$ /NDF:2541.7/24

Right Out: 14.608 $\pm$ 0.811  $\chi^2$ /NDF: 1233.4/22

Left In: 3.786 $\pm$ 0.362  $\chi^2$ /NDF:2198.8/22

Left: 3.734 $\pm$ 0.254  $\chi^2$ /NDF: 4740.5/47

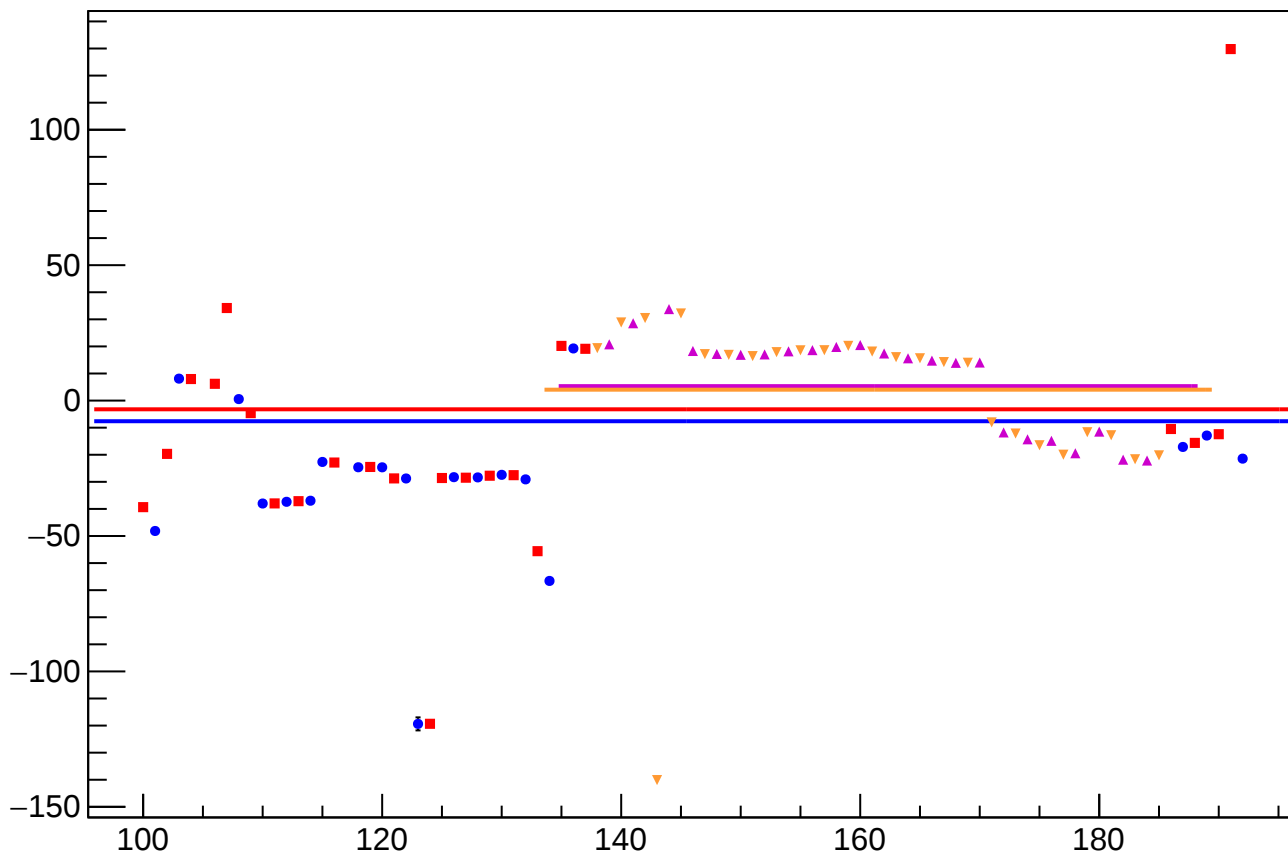
Right: 16.897 $\pm$ 0.593  $\chi^2$ /NDF: 2421.1/42

In: 6.114 $\pm$ 0.334  $\chi^2$ /NDF:3649.4/42

Out: 5.455 $\pm$ 0.327  $\chi^2$ /NDF:3927.0/47

All: 5.777 $\pm$ 0.233  $\chi^2$ /NDF: 7578.4/90

reg\_asym\_at2\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-7.620 \pm 0.044$   $\chi^2/\text{NDF}$ : 272208.9/19

Left Out:  $4.026 \pm 0.016$   $\chi^2/\text{NDF}$ : 1383143.9/24

Right Out:  $-3.219 \pm 0.043$   $\chi^2/\text{NDF}$ : 339736.7/22

Left In:  $5.335 \pm 0.016$   $\chi^2/\text{NDF}$ : 1077818.8/22

Left:  $4.678 \pm 0.012$   $\chi^2/\text{NDF}$ : 2464153.9/47

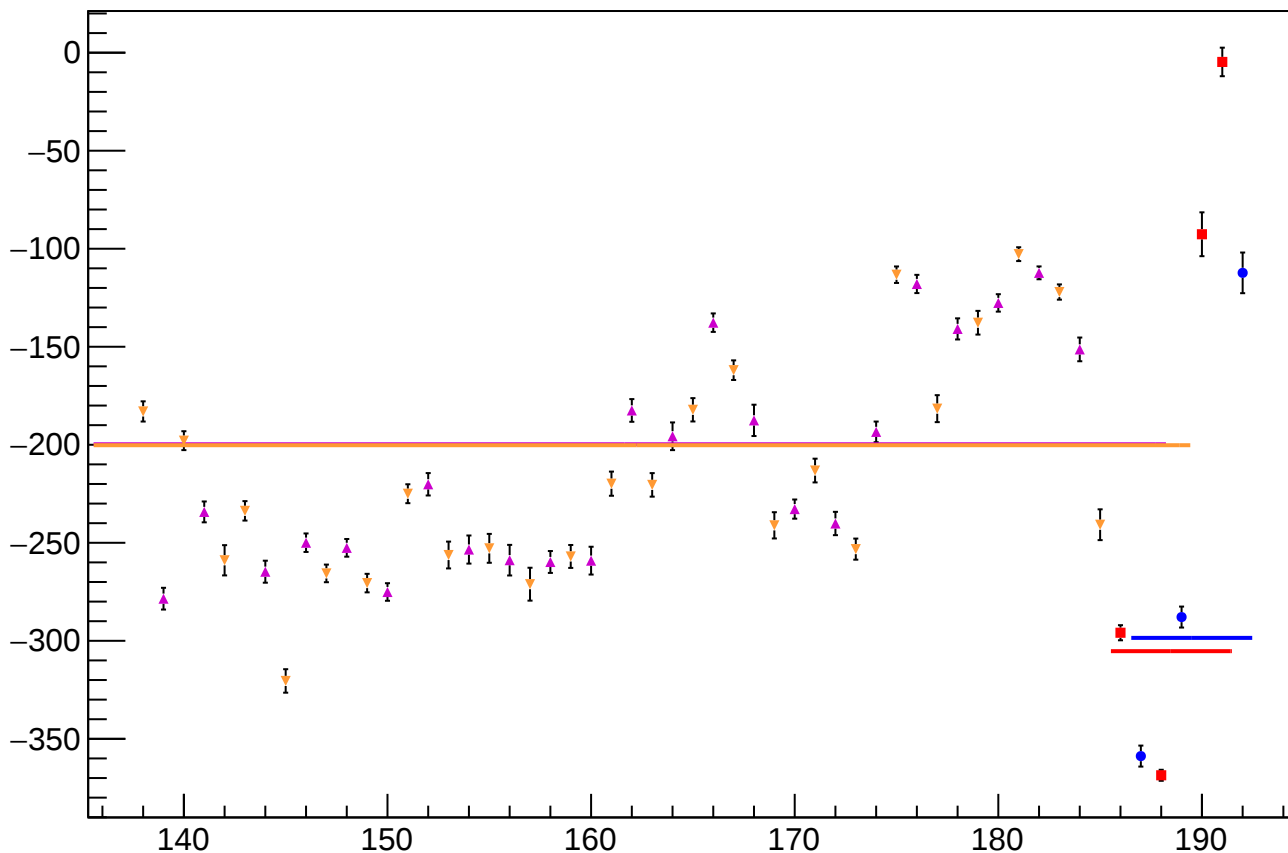
Right:  $-5.368 \pm 0.031$   $\chi^2/\text{NDF}$ : 617136.3/42

In:  $3.732 \pm 0.015$   $\chi^2/\text{NDF}$ : 1427023.5/42

Out:  $3.098 \pm 0.015$   $\chi^2/\text{NDF}$ : 1747984.9/47

All:  $3.413 \pm 0.011$   $\chi^2/\text{NDF}$ : 3175865.2/90

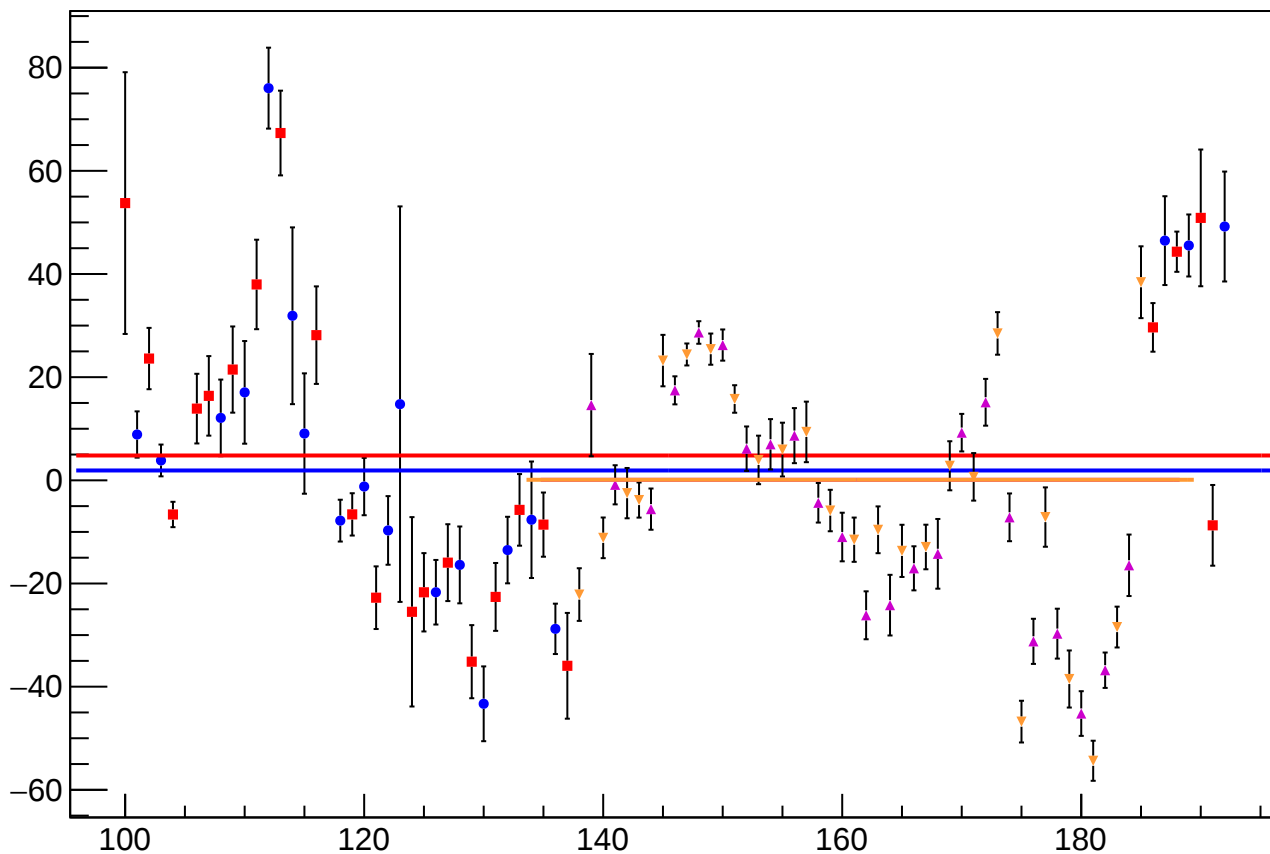
reg\_asym\_atl1r2\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: -298.506 $\pm$ 3.556  $\chi^2$ /NDF: 453.0/2  
 Left Out: -200.228 $\pm$ 1.078  $\chi^2$ /NDF:3225.0/24  
 Right Out: -305.279 $\pm$ 2.129  $\chi^2$ /NDF: 2579.6/3  
 Left In: -199.739 $\pm$ 1.097  $\chi^2$ /NDF:2968.0/22

Left: -199.988 $\pm$ 0.769  $\chi^2$ /NDF: 6193.2/47  
 Right: -303.492 $\pm$ 1.827  $\chi^2$ /NDF: 3035.3/6  
 In: -208.328 $\pm$ 1.049  $\chi^2$ /NDF:4125.4/25  
 Out: -221.658 $\pm$ 0.962  $\chi^2$ /NDF:7742.5/28  
 All: -215.569 $\pm$ 0.709  $\chi^2$ /NDF: 11955.7/54

reg\_asym\_atl1r2\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $1.912 \pm 1.396$   $\chi^2/\text{NDF}$ : 313.3/19

Left Out:  $0.109 \pm 0.807$   $\chi^2/\text{NDF}$ : 831.2/24

Right Out:  $4.816 \pm 1.245$   $\chi^2/\text{NDF}$ : 390.5/22

Left In:  $0.097 \pm 0.838$   $\chi^2/\text{NDF}$ : 715.5/22

Left:  $0.103 \pm 0.581$   $\chi^2/\text{NDF}$ : 1546.7/47

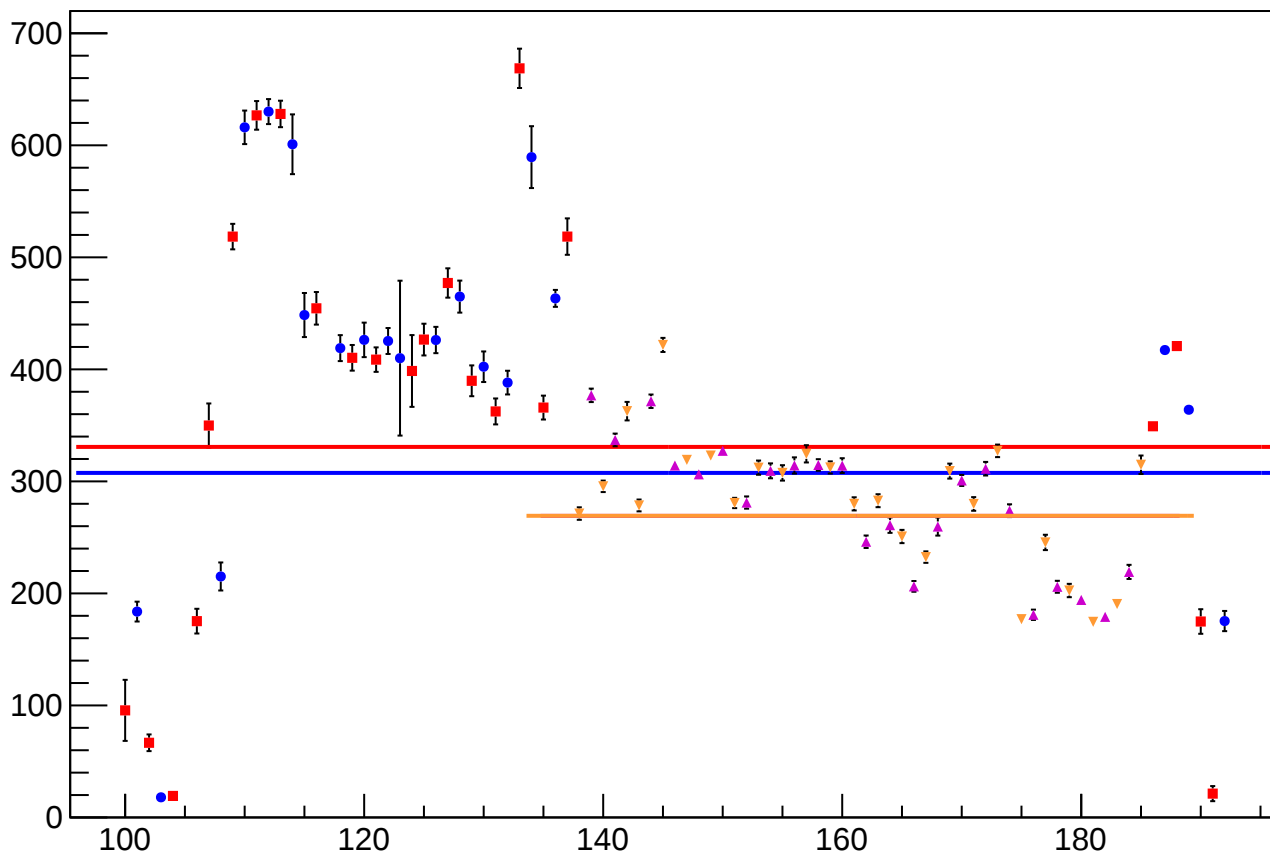
Right:  $3.529 \pm 0.929$   $\chi^2/\text{NDF}$ : 706.2/42

In:  $0.578 \pm 0.718$   $\chi^2/\text{NDF}$ : 1030.0/42

Out:  $1.501 \pm 0.677$   $\chi^2/\text{NDF}$ : 1231.8/47

All:  $1.067 \pm 0.493$   $\chi^2/\text{NDF}$ : 2262.7/90

reg\_asym\_atl1r2\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 307.568 $\pm$ 1.905  $\chi^2$ /NDF: 8904.9/19

Left Out: 269.278 $\pm$ 1.078  $\chi^2$ /NDF:3146.7/24

Right Out: 330.775 $\pm$ 1.418  $\chi^2$ /NDF: 12933.5/22

Left In: 269.191 $\pm$ 1.091  $\chi^2$ /NDF:3170.2/22

Left: 269.235 $\pm$ 0.767  $\chi^2$ /NDF: 6316.9/47

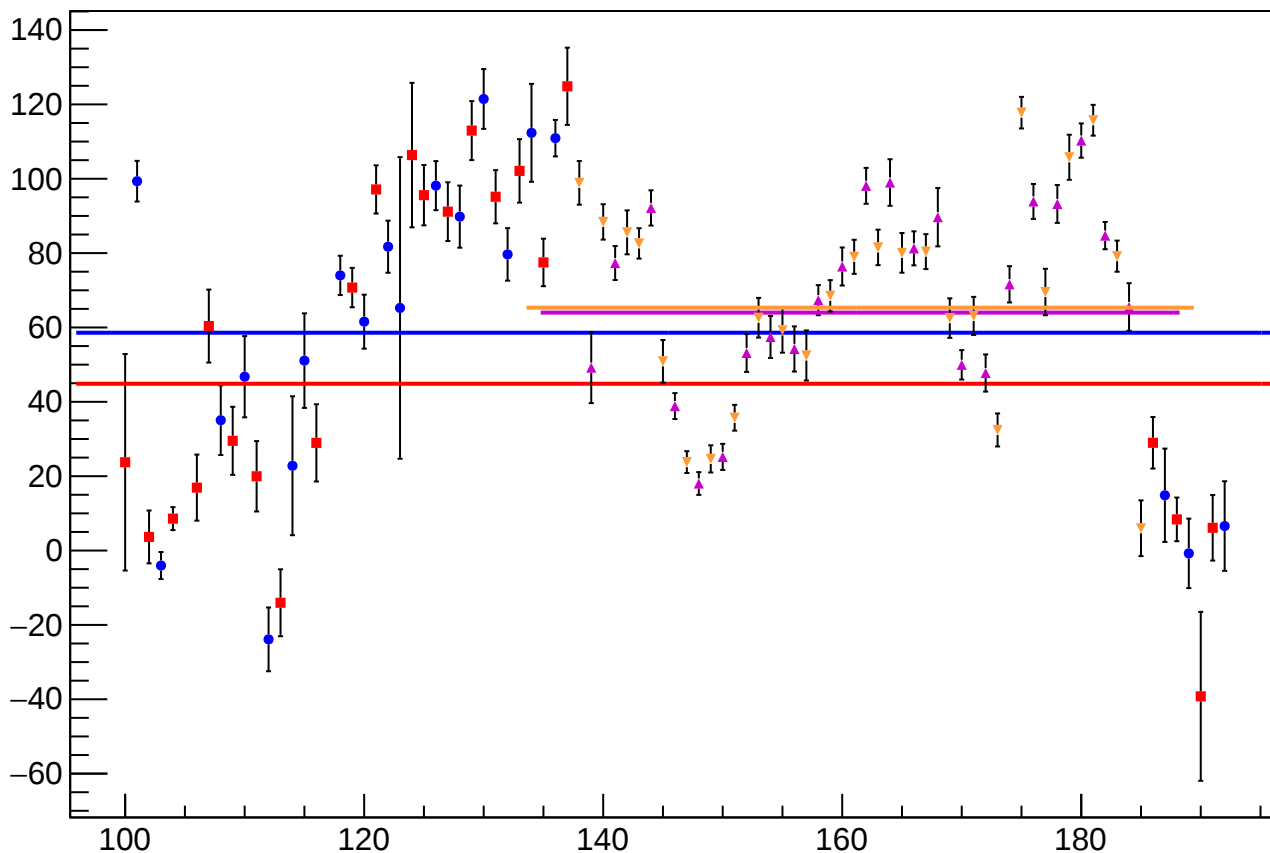
Right: 322.502 $\pm$ 1.137  $\chi^2$ /NDF: 21933.9/42

In: 278.665 $\pm$ 0.946  $\chi^2$ /NDF:12380.8/42

Out: 291.796 $\pm$ 0.858  $\chi^2$ /NDF:17272.8/47

All: 285.873 $\pm$ 0.636  $\chi^2$ /NDF: 29759.2/90

reg\_asym\_atl1r2\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 58.586 $\pm$ 1.639  $\chi^2$ /NDF: 797.0/19

Left Out: 65.323 $\pm$ 0.935  $\chi^2$ /NDF:1007.1/24

Right Out: 44.865 $\pm$ 1.517  $\chi^2$ /NDF: 742.1/22

Left In: 63.999 $\pm$ 0.963  $\chi^2$ /NDF:799.5/22

Left: 64.681 $\pm$ 0.671  $\chi^2$ /NDF: 1807.5/47

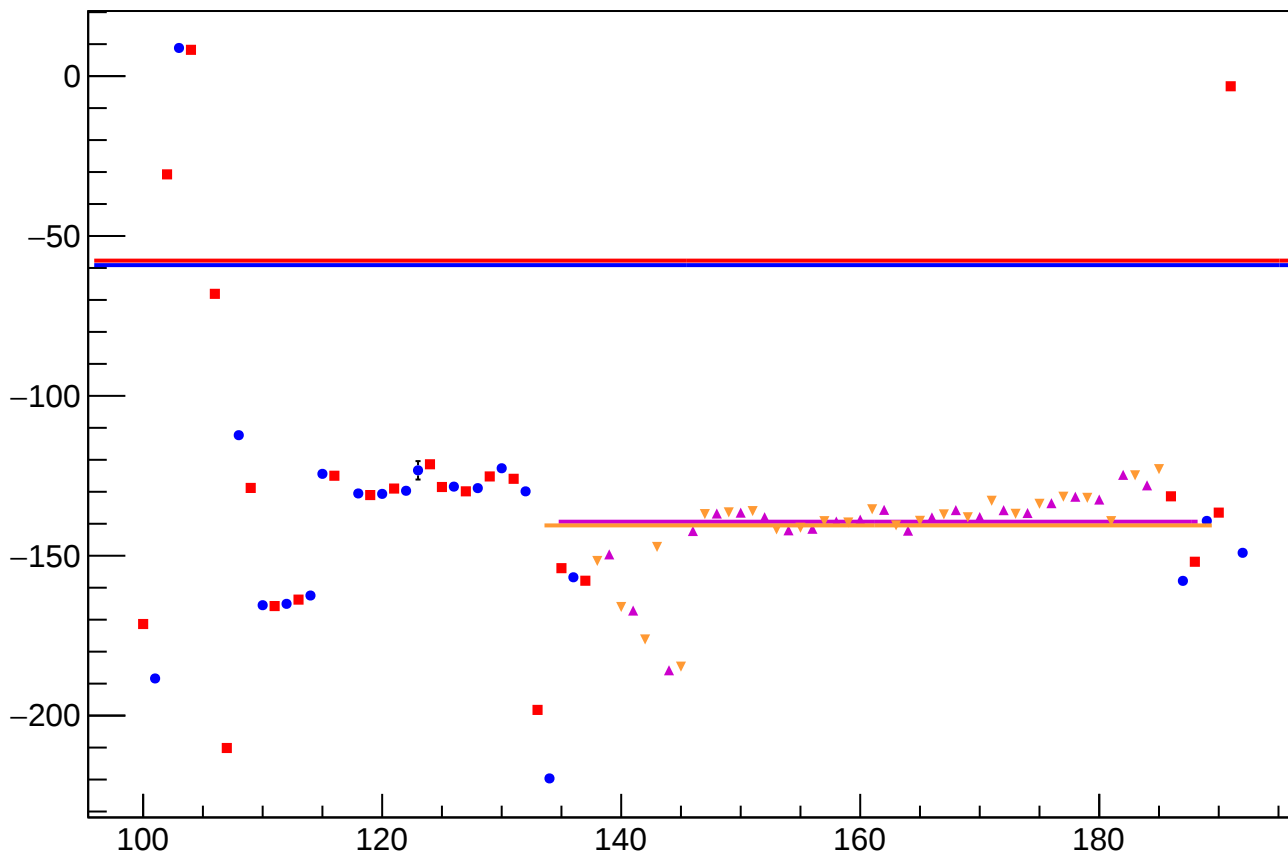
Right: 51.193 $\pm$ 1.113  $\chi^2$ /NDF: 1576.8/42

In: 62.611 $\pm$ 0.830  $\chi^2$ /NDF:1604.5/42

Out: 59.692 $\pm$ 0.796  $\chi^2$ /NDF:1881.1/47

All: 61.090 $\pm$ 0.574  $\chi^2$ /NDF: 3492.1/90

reg\_asym\_atl1r2\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-59.113 \pm 0.068$   $\chi^2/\text{NDF}: 1336604.7/19$

Left Out:  $-140.519 \pm 0.045$   $\chi^2/\text{NDF}: 77489.0/24$

Right Out:  $-57.703 \pm 0.066$   $\chi^2/\text{NDF}: 1141466.3/22$

Left In:  $-139.360 \pm 0.045$   $\chi^2/\text{NDF}: 62449.0/22$

Left:  $-139.945 \pm 0.032$   $\chi^2/\text{NDF}: 140272.6/47$

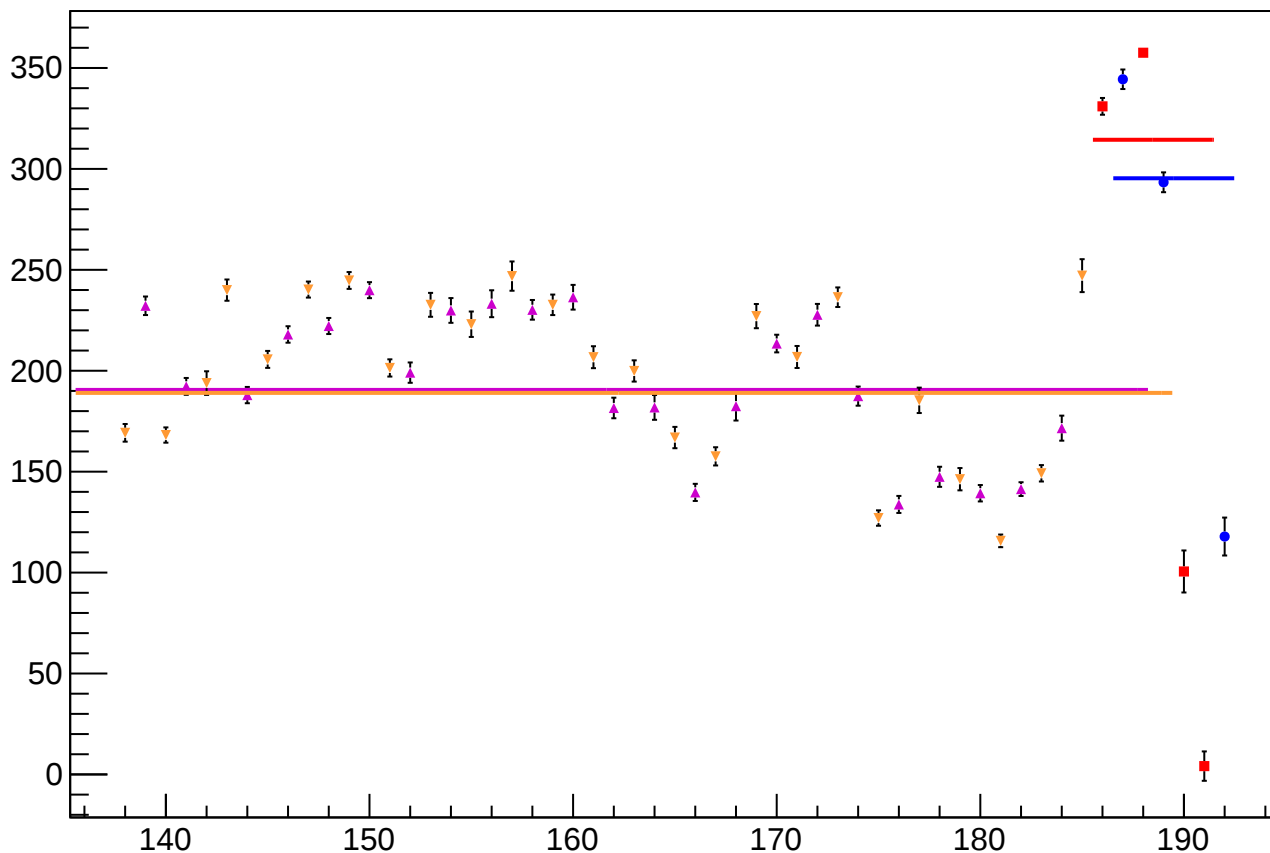
Right:  $-58.391 \pm 0.048$   $\chi^2/\text{NDF}: 2478290.3/42$

In:  $-115.003 \pm 0.038$   $\chi^2/\text{NDF}: 2363873.2/42$

Out:  $-114.859 \pm 0.037$   $\chi^2/\text{NDF}: 2289502.3/47$

All:  $-114.930 \pm 0.026$   $\chi^2/\text{NDF}: 4653382.8/90$

reg\_asym\_atl1r2\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 295.359 $\pm$ 3.237  $\chi^2$ /NDF: 459.9/2

Left Out: 189.030 $\pm$ 0.956  $\chi^2$ /NDF:1980.9/24

Right Out: 314.434 $\pm$ 2.019  $\chi^2$ /NDF: 2551.8/3

Left In: 190.506 $\pm$ 0.975  $\chi^2$ /NDF:1412.7/22

Left: 189.753 $\pm$ 0.683  $\chi^2$ /NDF: 3394.8/47

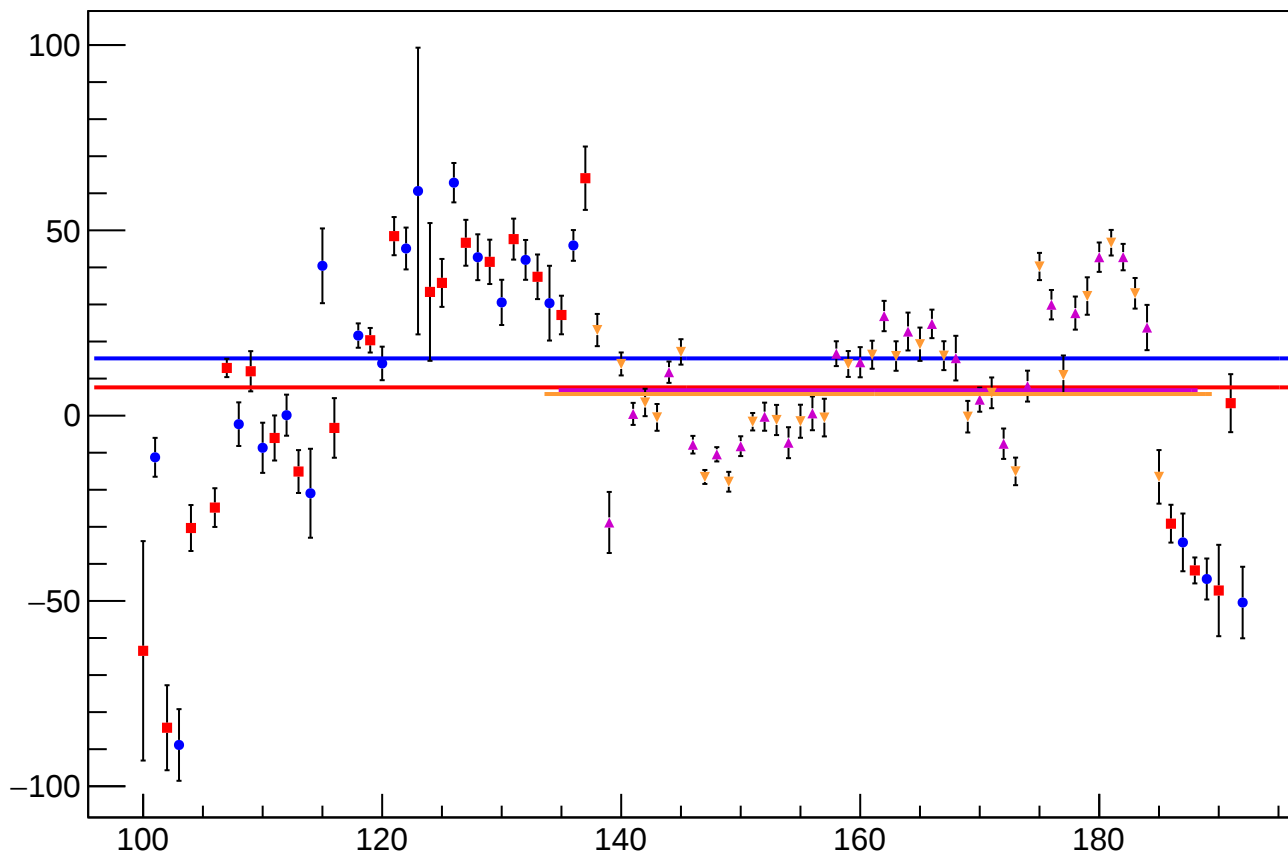
Right: 309.092 $\pm$ 1.713  $\chi^2$ /NDF: 3036.6/6

In: 199.228 $\pm$ 0.934  $\chi^2$ /NDF:2834.5/25

Out: 211.994 $\pm$ 0.864  $\chi^2$ /NDF:7684.5/28

All: 206.105 $\pm$ 0.634  $\chi^2$ /NDF: 10619.7/54

reg\_asym\_atl1r2\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 15.448+/-1.323  $\chi^2/\text{NDF}$ : 608.6/19

Left Out: 5.834+/-0.712  $\chi^2/\text{NDF}$ : 652.2/24

Right Out: 7.627+/-1.114  $\chi^2/\text{NDF}$ : 749.2/22

Left In: 6.862+/-0.736  $\chi^2/\text{NDF}$ : 522.7/22

Left: 6.331+/-0.512  $\chi^2/\text{NDF}$ : 1176.0/47

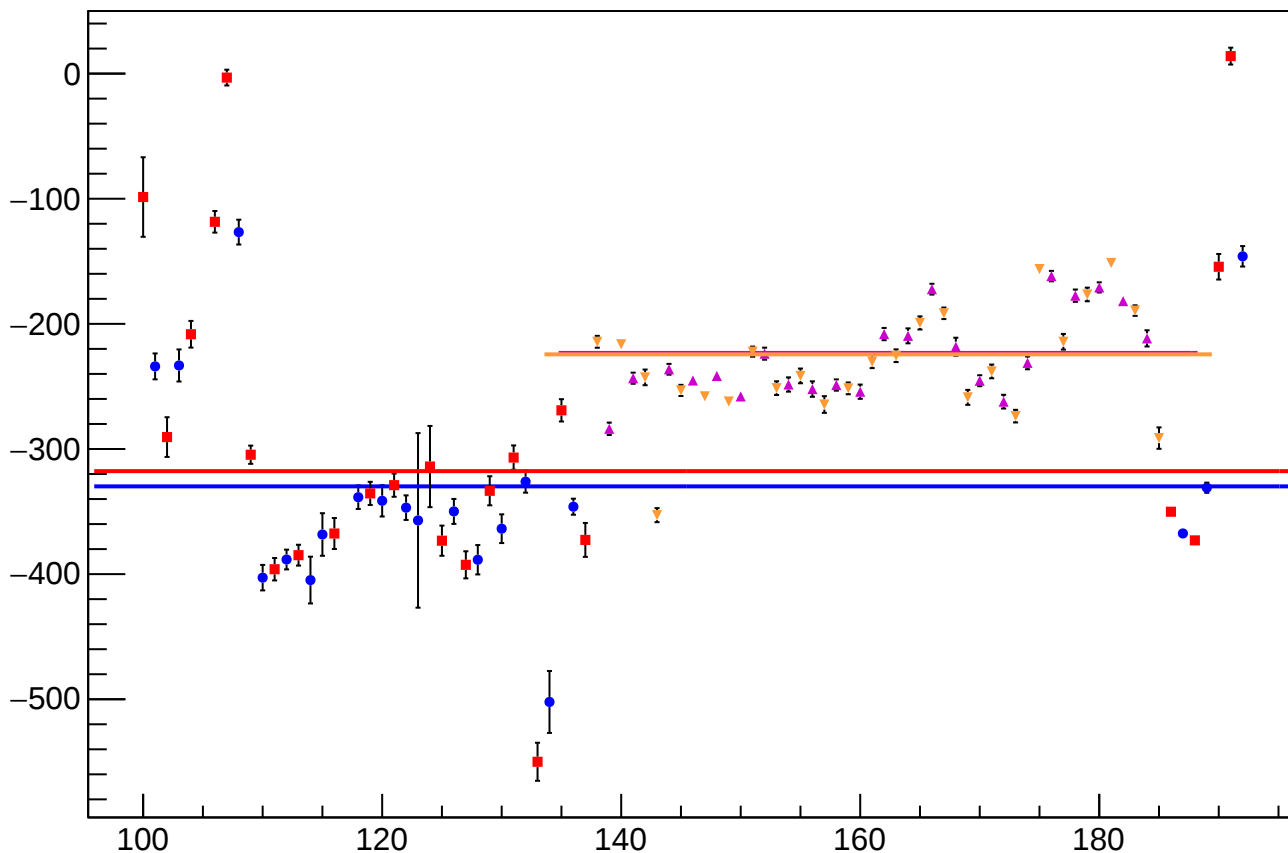
Right: 10.873+/-0.852  $\chi^2/\text{NDF}$ : 1378.2/42

In: 8.893+/-0.643  $\chi^2/\text{NDF}$ : 1163.5/42

Out: 6.354+/-0.600  $\chi^2/\text{NDF}$ : 1403.3/47

All: 7.536+/-0.439  $\chi^2/\text{NDF}$ : 2575.1/90

reg\_asym\_atl1r2\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-329.869 \pm 1.863$   $\chi^2/\text{NDF}$ : 1382.8/19

Left Out:  $-224.364 \pm 0.956$   $\chi^2/\text{NDF}$ : 2103.2/24

Right Out:  $-317.691 \pm 1.343$   $\chi^2/\text{NDF}$ : 7214.5/22

Left In:  $-223.223 \pm 0.969$   $\chi^2/\text{NDF}$ : 1269.3/22

Left:  $-223.801 \pm 0.681$   $\chi^2/\text{NDF}$ : 3373.2/47

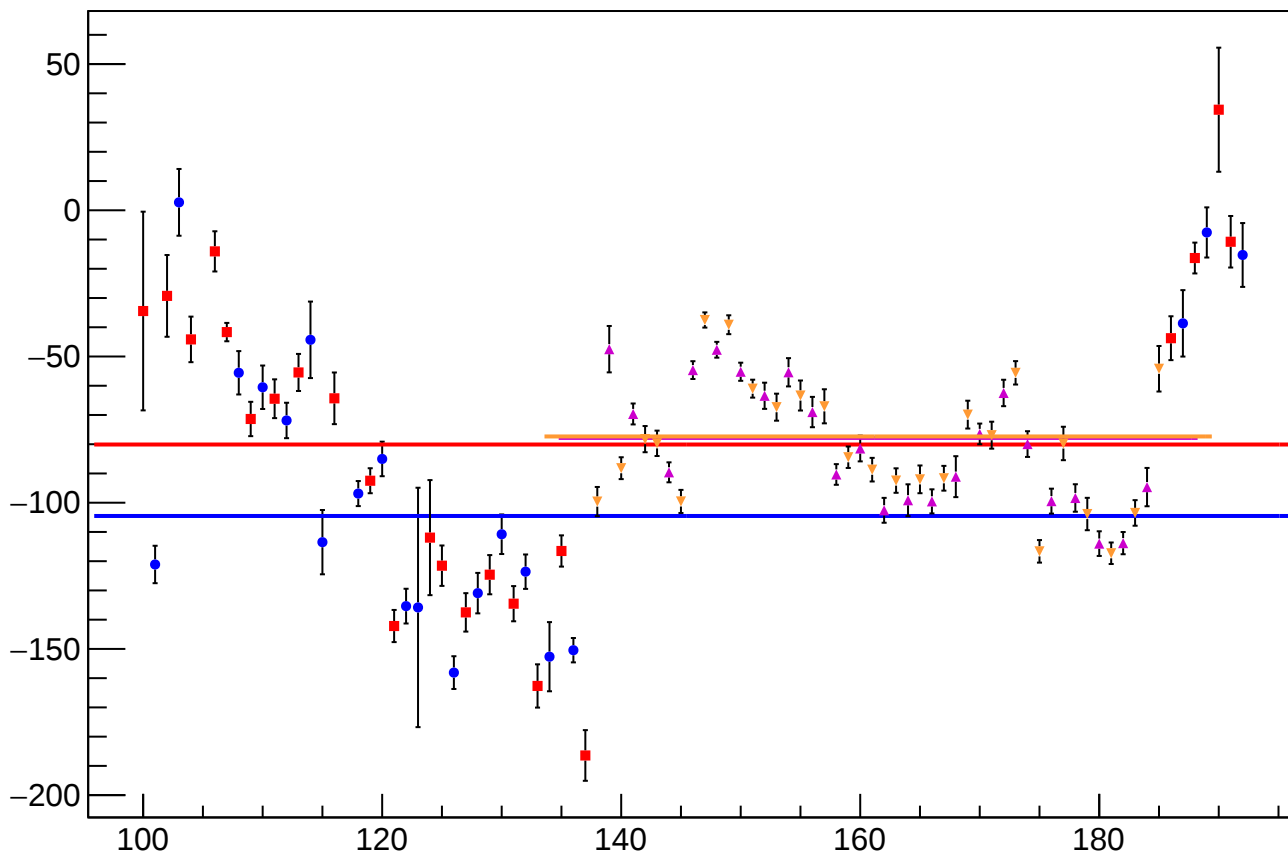
Right:  $-321.856 \pm 1.089$   $\chi^2/\text{NDF}$ : 8625.5/42

In:  $-245.941 \pm 0.860$   $\chi^2/\text{NDF}$ : 5231.4/42

Out:  $-255.749 \pm 0.779$   $\chi^2/\text{NDF}$ : 12522.5/47

All:  $-251.328 \pm 0.577$   $\chi^2/\text{NDF}$ : 17825.4/90

reg\_asym\_atl1r2\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-104.536 \pm 1.543$   $\chi^2/\text{NDF}$ : 750.0/19

Left Out:  $-77.343 \pm 0.827$   $\chi^2/\text{NDF}$ : 846.2/24

Right Out:  $-80.098 \pm 1.343$   $\chi^2/\text{NDF}$ : 1264.0/22

Left In:  $-77.838 \pm 0.849$   $\chi^2/\text{NDF}$ : 622.8/22

Left:  $-77.584 \pm 0.592$   $\chi^2/\text{NDF}$ : 1469.2/47

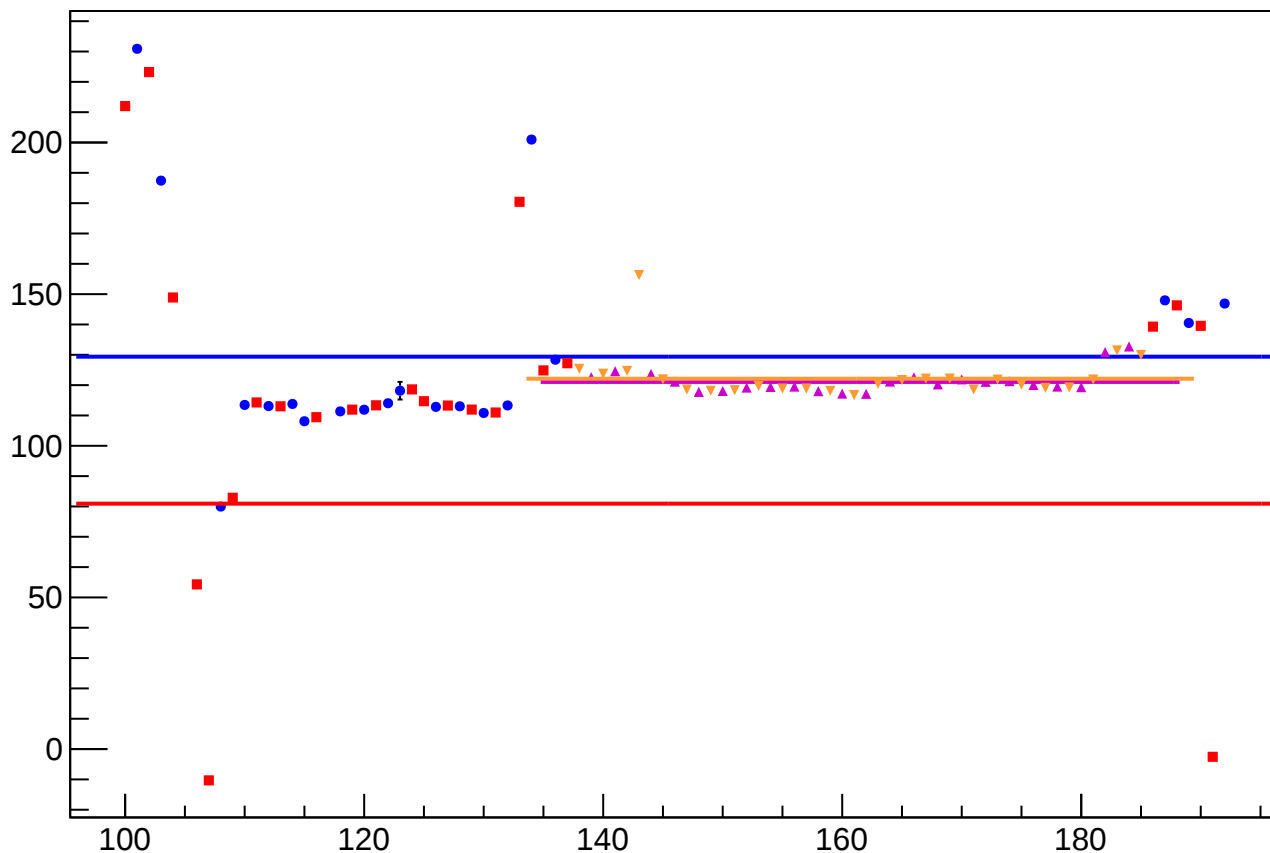
Right:  $-90.630 \pm 1.013$   $\chi^2/\text{NDF}$ : 2156.7/42

In:  $-84.039 \pm 0.744$   $\chi^2/\text{NDF}$ : 1602.6/42

Out:  $-78.100 \pm 0.704$   $\chi^2/\text{NDF}$ : 2113.3/47

All:  $-80.907 \pm 0.511$   $\chi^2/\text{NDF}$ : 3749.5/90

reg\_asym\_atl1r2\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 129.383 $\pm$ 0.084  $\chi^2$ /NDF: 192326.7/19

Left Out: 122.119 $\pm$ 0.039  $\chi^2$ /NDF:30480.7/24

Right Out: 80.919 $\pm$ 0.069  $\chi^2$ /NDF: 957282.7/22

Left In: 121.055 $\pm$ 0.040  $\chi^2$ /NDF:7931.6/22

Left: 121.591 $\pm$ 0.028  $\chi^2$ /NDF: 38773.7/47

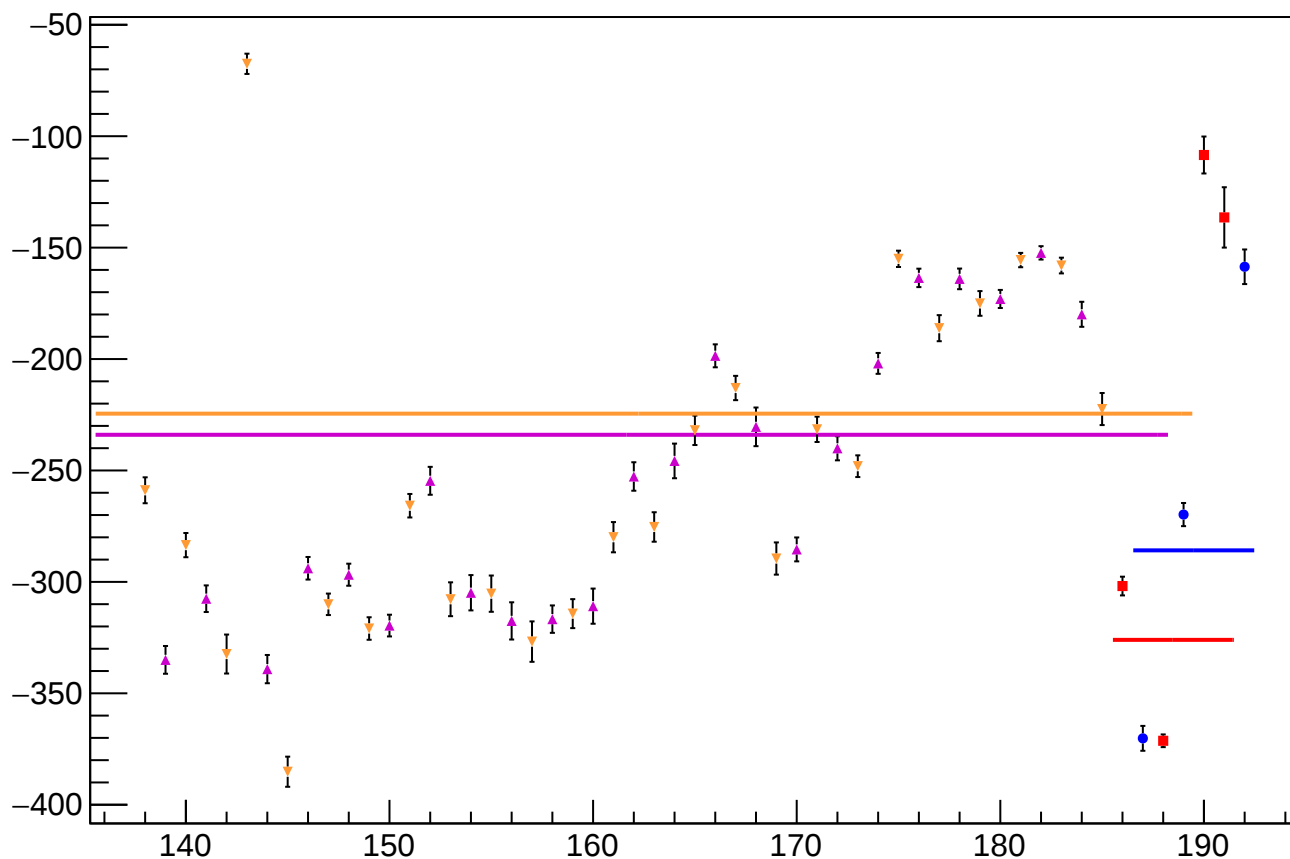
Right: 100.328 $\pm$ 0.053  $\chi^2$ /NDF: 1348096.9/42

In: 122.571 $\pm$ 0.036  $\chi^2$ /NDF:208254.4/42

Out: 111.948 $\pm$ 0.034  $\chi^2$ /NDF:1257524.8/47

All: 116.997 $\pm$ 0.025  $\chi^2$ /NDF: 1511626.1/90

reg\_asym\_atr1l2\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: -285.850+/-3.416  $\chi^2/\text{NDF}$ : 506.4/2

Left Out: -224.501+/-1.079  $\chi^2/\text{NDF}$ : 4870.6/24

Right Out: -326.015+/-2.239  $\chi^2/\text{NDF}$ : 1169.9/3

Left In: -233.988+/-1.109  $\chi^2/\text{NDF}$ : 3538.4/22

Left: -229.116+/-0.773  $\chi^2/\text{NDF}$ : 8446.6/47

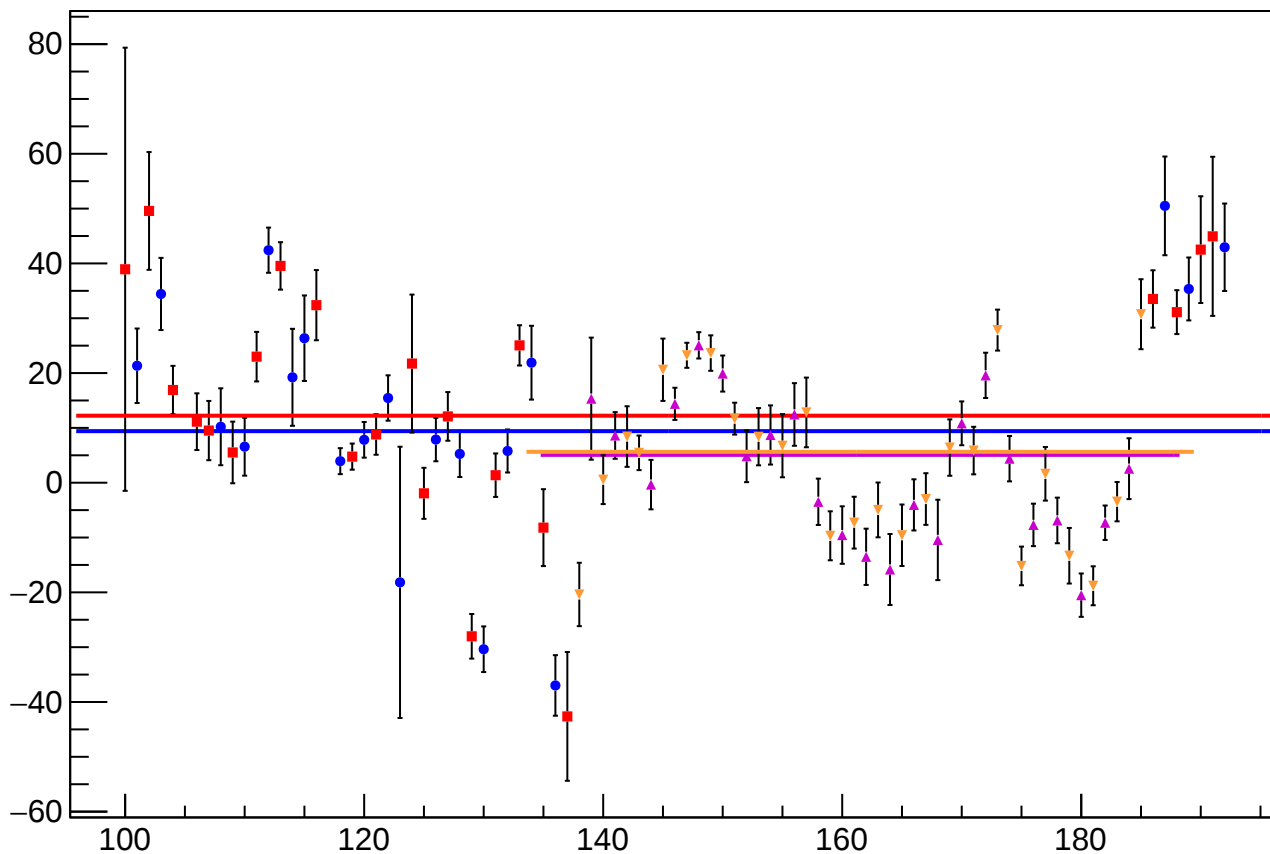
Right: -313.948+/-1.873  $\chi^2/\text{NDF}$ : 1773.0/6

In: -238.928+/-1.054  $\chi^2/\text{NDF}$ : 4253.3/25

Out: -243.637+/-0.972  $\chi^2/\text{NDF}$ : 7708.9/28

All: -241.474+/-0.715  $\chi^2/\text{NDF}$ : 11973.0/54

reg\_asym\_atr1l2\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $9.406 \pm 1.068$   $\chi^2/\text{NDF}$ : 323.1/19

Left Out:  $5.638 \pm 0.828$   $\chi^2/\text{NDF}$ : 313.6/24

Right Out:  $12.225 \pm 1.009$   $\chi^2/\text{NDF}$ : 292.7/22

Left In:  $5.077 \pm 0.869$   $\chi^2/\text{NDF}$ : 239.7/22

Left:  $5.371 \pm 0.599$   $\chi^2/\text{NDF}$ : 553.6/47

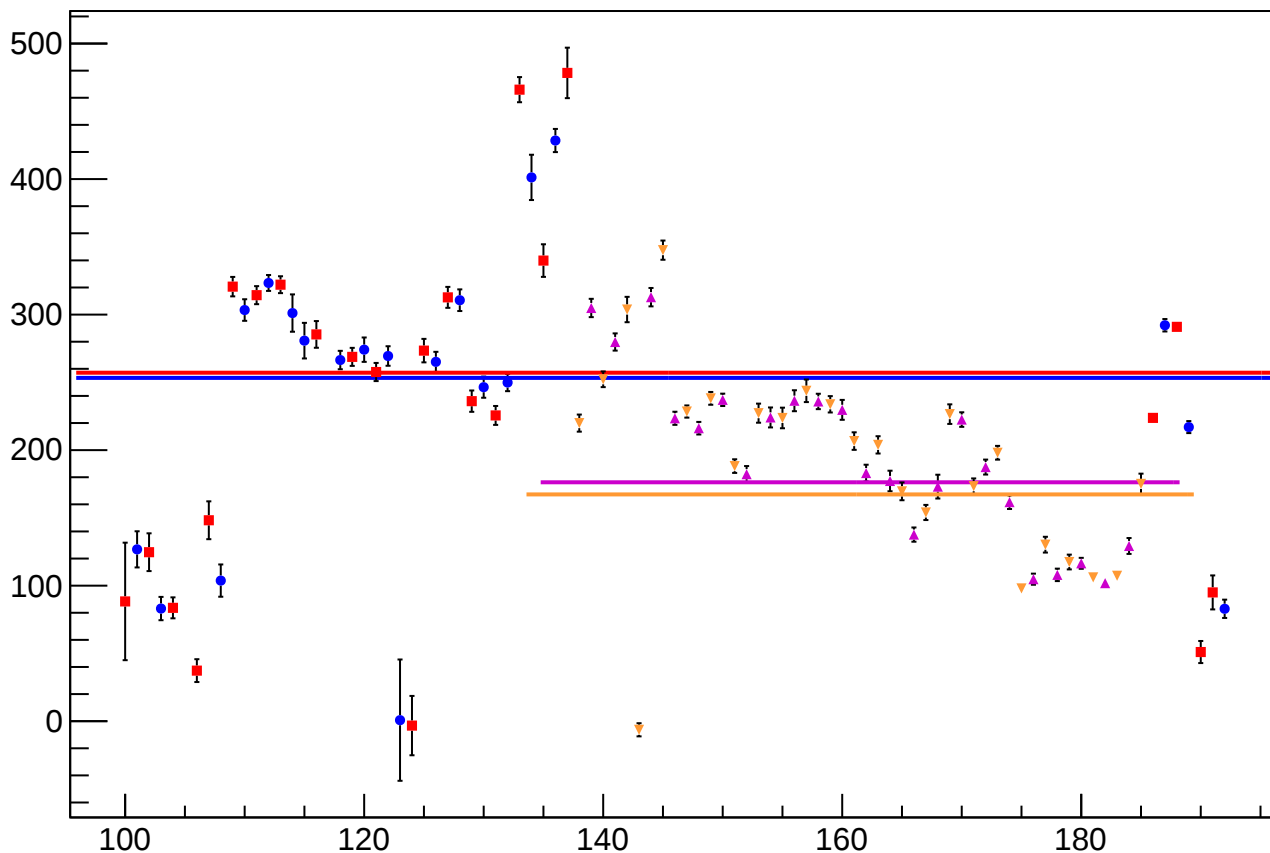
Right:  $10.896 \pm 0.733$   $\chi^2/\text{NDF}$ : 619.4/42

In:  $6.802 \pm 0.674$   $\chi^2/\text{NDF}$ : 572.7/42

Out:  $8.290 \pm 0.640$   $\chi^2/\text{NDF}$ : 631.8/47

All:  $7.584 \pm 0.464$   $\chi^2/\text{NDF}$ : 1207.0/90

reg\_asym\_atr1l2\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 253.307 $\pm$ 1.694  $\chi^2$ /NDF: 2212.9/19

Left Out: 167.327 $\pm$ 1.082  $\chi^2$ /NDF:4454.5/24

Right Out: 257.130 $\pm$ 1.344  $\chi^2$ /NDF: 3664.0/22

Left In: 176.272 $\pm$ 1.106  $\chi^2$ /NDF:3169.5/22

Left: 171.704 $\pm$ 0.774  $\chi^2$ /NDF: 7657.4/47

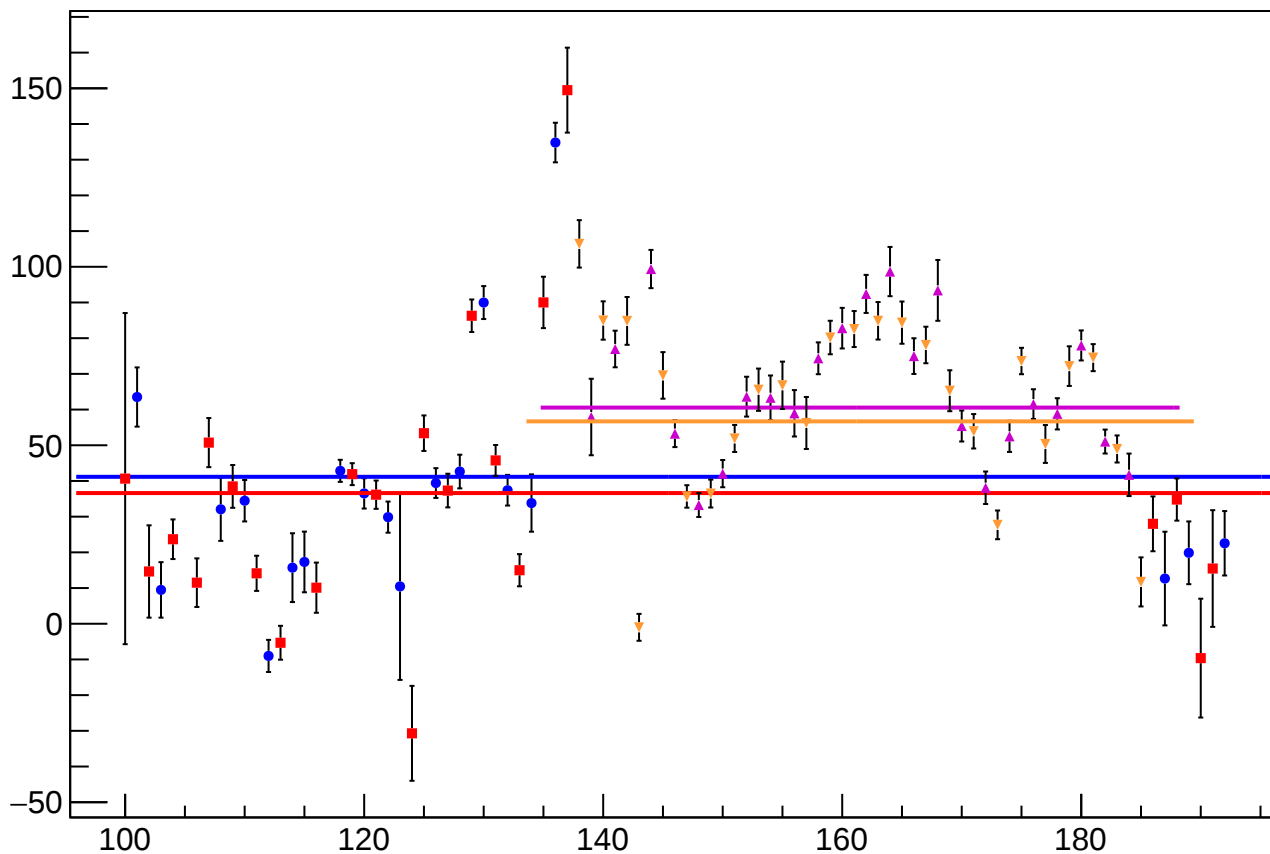
Right: 255.654 $\pm$ 1.053  $\chi^2$ /NDF: 5880.1/42

In: 199.285 $\pm$ 0.926  $\chi^2$ /NDF:6832.5/42

Out: 202.666 $\pm$ 0.843  $\chi^2$ /NDF:10826.8/47

All: 201.134 $\pm$ 0.623  $\chi^2$ /NDF: 17666.6/90

reg\_asym\_atr1l2\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 41.164 $\pm$ 1.245  $\chi^2$ /NDF: 588.7/19

Left Out: 56.695 $\pm$ 0.952  $\chi^2$ /NDF: 690.4/24

Right Out: 36.609 $\pm$ 1.190  $\chi^2$ /NDF: 481.6/22

Left In: 60.555 $\pm$ 0.990  $\chi^2$ /NDF: 335.6/22

Left: 58.548 $\pm$ 0.686  $\chi^2$ /NDF: 1034.0/47

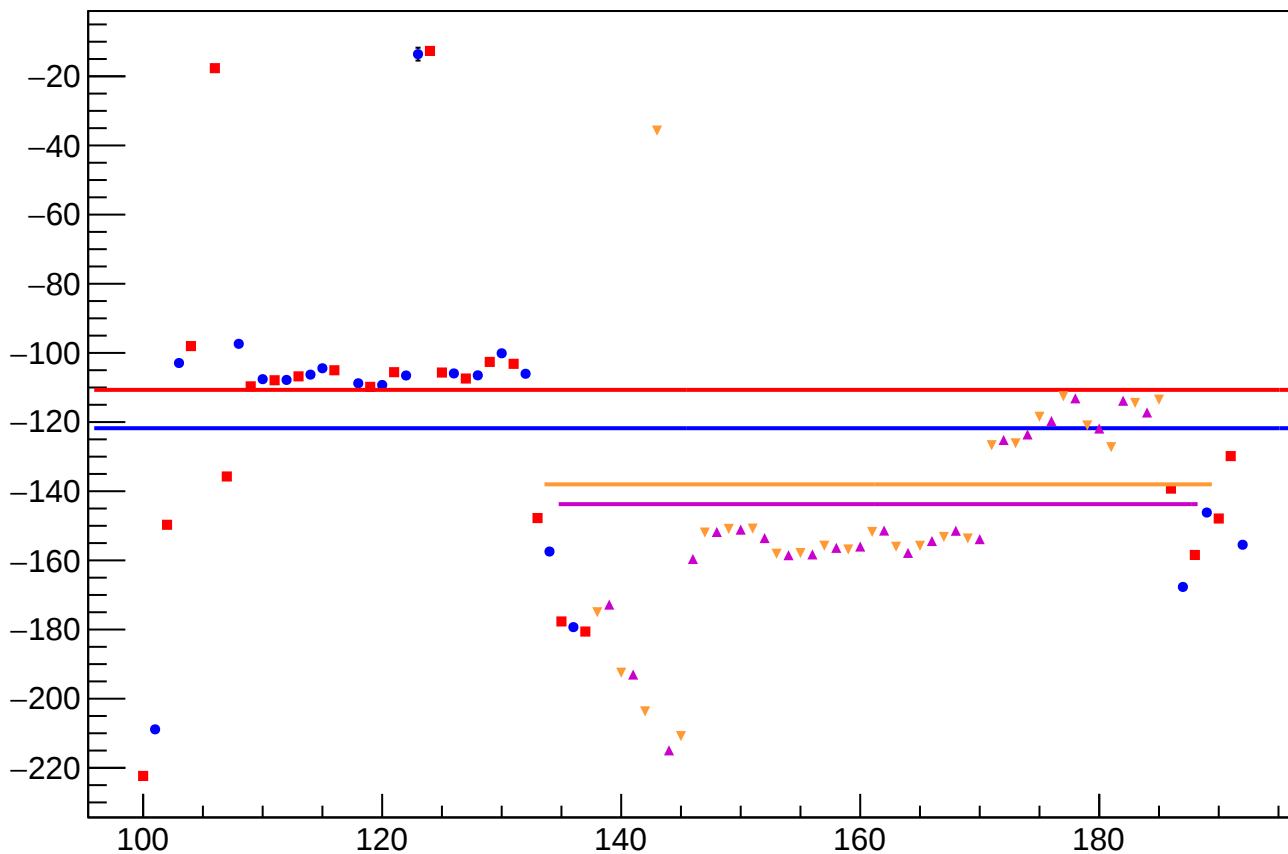
Right: 38.782 $\pm$ 0.860  $\chi^2$ /NDF: 1077.2/42

In: 53.046 $\pm$ 0.775  $\chi^2$ /NDF: 1072.8/42

Out: 48.856 $\pm$ 0.743  $\chi^2$ /NDF: 1345.8/47

All: 50.863 $\pm$ 0.536  $\chi^2$ /NDF: 2433.8/90

reg\_asym\_atr1l2\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: -121.776+/-0.074  $\chi^2/\text{NDF}$ : 166489.1/19

Left Out: -138.008+/-0.045  $\chi^2/\text{NDF}$ : 565767.2/24

Right Out: -110.687+/-0.069  $\chi^2/\text{NDF}$ : 365532.9/22

Left In: -143.735+/-0.046  $\chi^2/\text{NDF}$ : 258408.3/22

Left: -140.811+/-0.032  $\chi^2/\text{NDF}$ : 832055.2/47

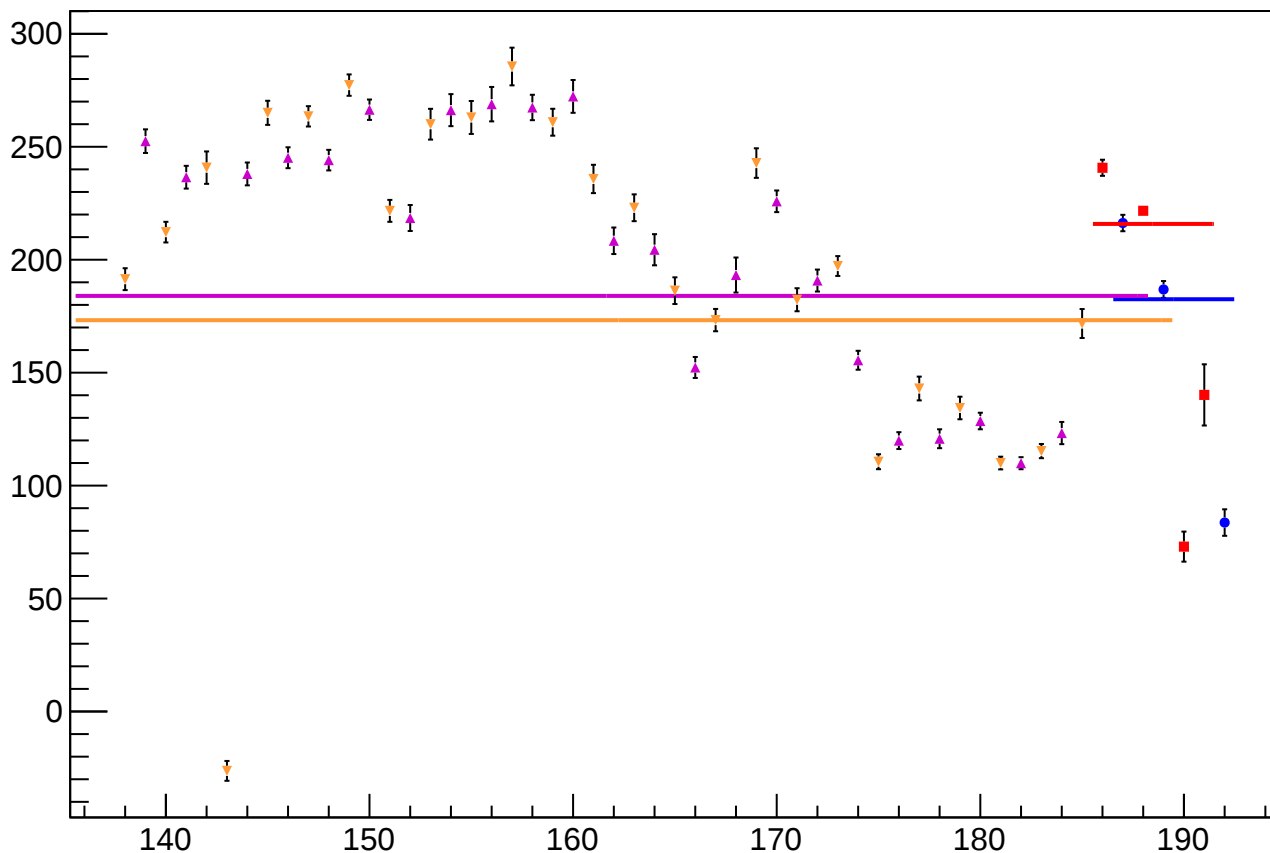
Right: -115.812+/-0.050  $\chi^2/\text{NDF}$ : 544100.8/42

In: -137.595+/-0.039  $\chi^2/\text{NDF}$ : 488341.9/42

Out: -129.755+/-0.038  $\chi^2/\text{NDF}$ : 1042022.6/47

All: -133.530+/-0.027  $\chi^2/\text{NDF}$ : 1551186.5/90

reg\_asym\_atr1l2\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $182.510 \pm 2.376$   $\chi^2/\text{NDF}$ : 371.5/2

Left Out:  $173.229 \pm 0.966$   $\chi^2/\text{NDF}$ : 5846.0/24

Right Out:  $215.845 \pm 1.591$   $\chi^2/\text{NDF}$ : 550.5/3

Left In:  $183.984 \pm 0.991$   $\chi^2/\text{NDF}$ : 3613.7/22

Left:  $178.467 \pm 0.692$   $\chi^2/\text{NDF}$ : 9520.1/47

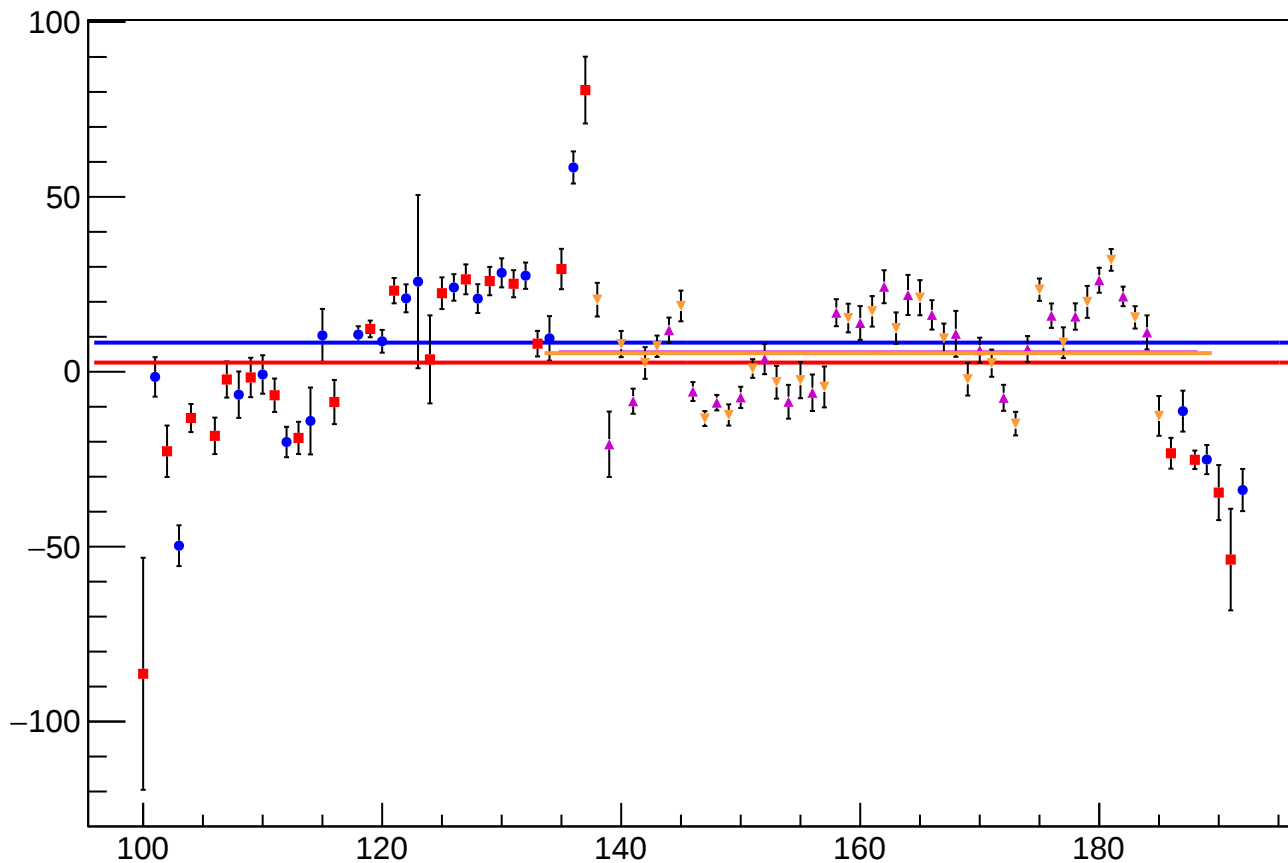
Right:  $205.522 \pm 1.322$   $\chi^2/\text{NDF}$ : 1057.9/6

In:  $183.766 \pm 0.915$   $\chi^2/\text{NDF}$ : 3985.5/25

Out:  $184.697 \pm 0.826$   $\chi^2/\text{NDF}$ : 6920.6/28

All:  $184.279 \pm 0.613$   $\chi^2/\text{NDF}$ : 10906.7/54

reg\_asym\_atr1l2\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $8.335 \pm 1.011$   $\chi^2/\text{NDF}: 488.8/19$

Left Out:  $5.321 \pm 0.747$   $\chi^2/\text{NDF}: 345.5/24$

Right Out:  $2.631 \pm 0.943$   $\chi^2/\text{NDF}: 519.7/22$

Left In:  $5.527 \pm 0.781$   $\chi^2/\text{NDF}: 256.3/22$

Left:  $5.420 \pm 0.540$   $\chi^2/\text{NDF}: 601.9/47$

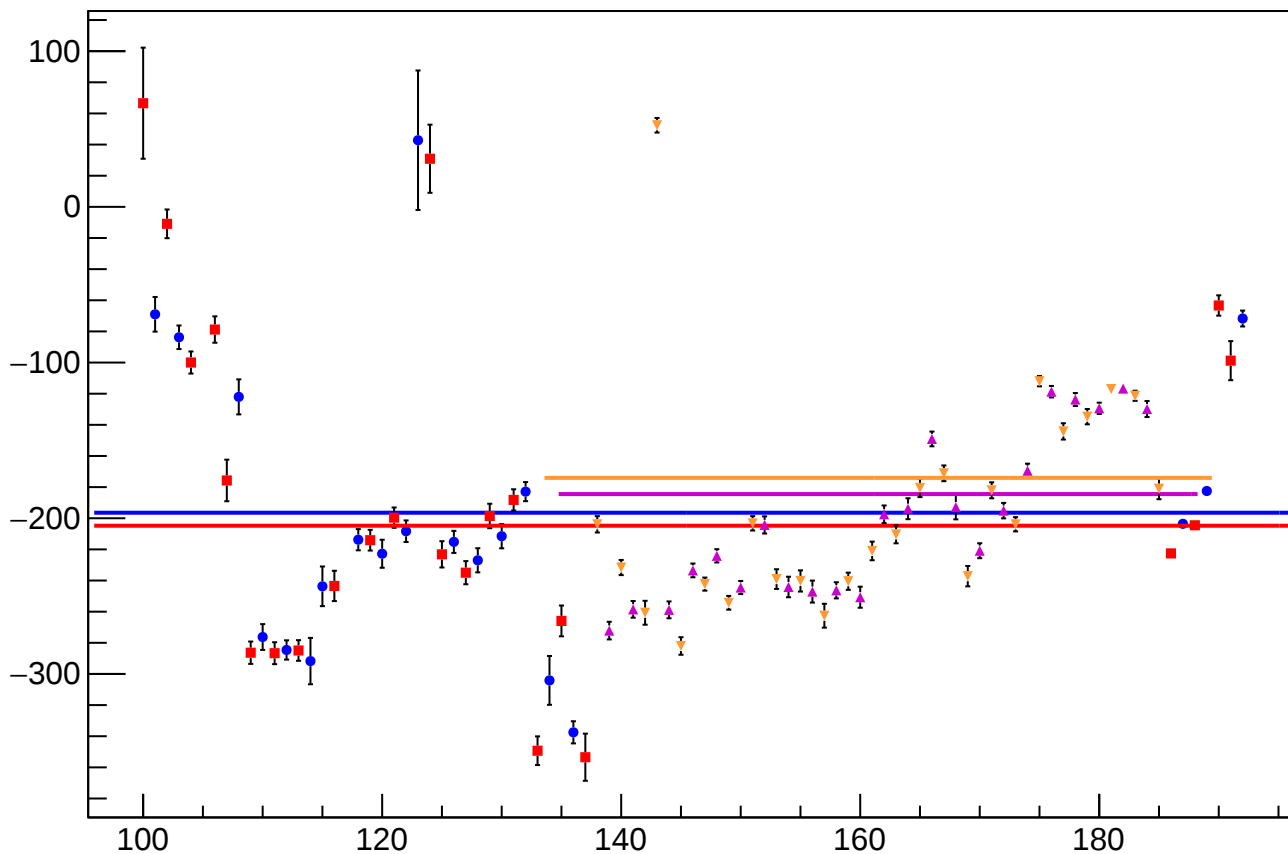
Right:  $5.284 \pm 0.690$   $\chi^2/\text{NDF}: 1025.5/42$

In:  $6.576 \pm 0.618$   $\chi^2/\text{NDF}: 749.9/42$

Out:  $4.284 \pm 0.586$   $\chi^2/\text{NDF}: 870.3/47$

All:  $5.368 \pm 0.425$   $\chi^2/\text{NDF}: 1627.4/90$

reg\_asym\_atr1l2\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-196.444 \pm 1.417$   $\chi^2/\text{NDF}: 1888.8/19$

Left Out:  $-174.061 \pm 0.971$   $\chi^2/\text{NDF}: 5443.3/24$

Right Out:  $-204.785 \pm 1.073$   $\chi^2/\text{NDF}: 2477.2/22$

Left In:  $-184.456 \pm 0.991$   $\chi^2/\text{NDF}: 3051.6/22$

Left:  $-179.154 \pm 0.693$   $\chi^2/\text{NDF}: 8551.0/47$

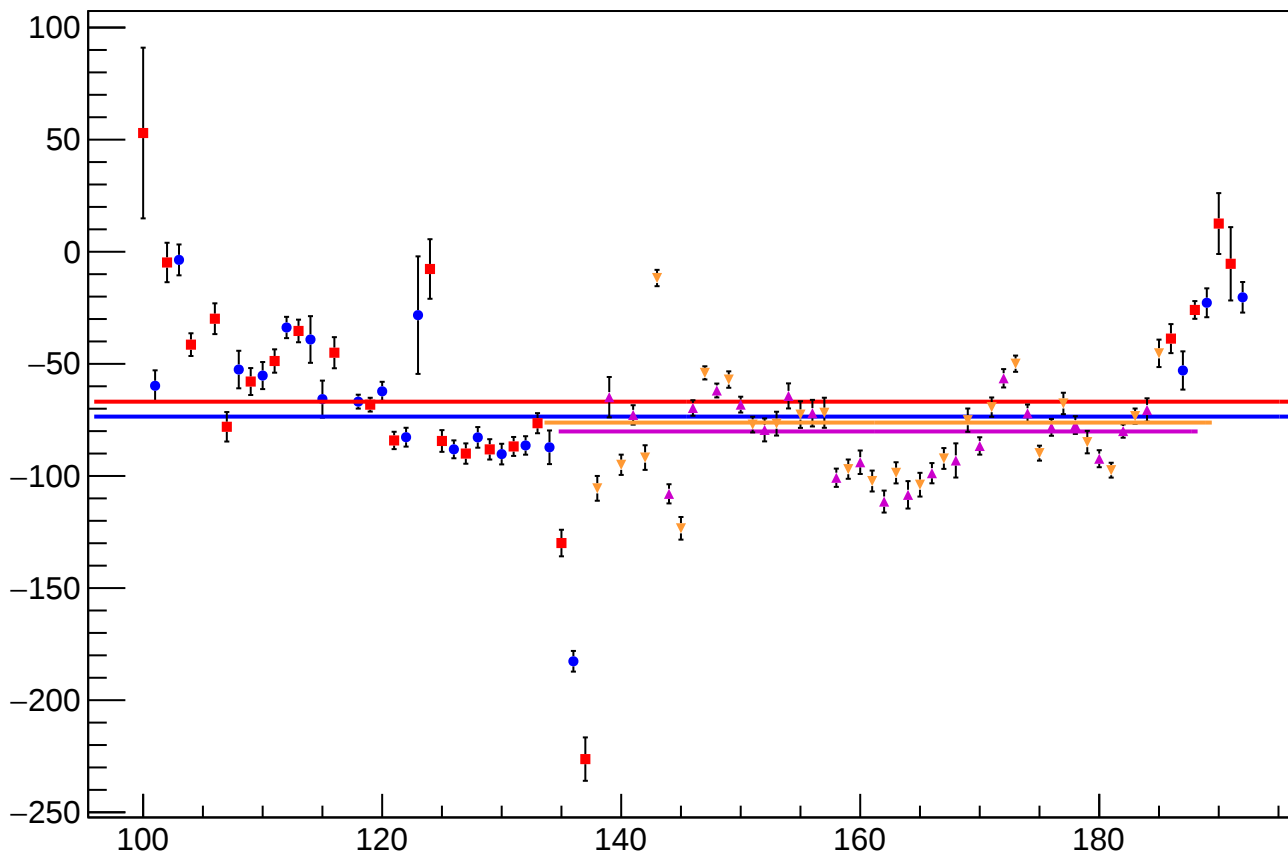
Right:  $-201.744 \pm 0.856$   $\chi^2/\text{NDF}: 4388.0/42$

In:  $-188.390 \pm 0.812$   $\chi^2/\text{NDF}: 4988.5/42$

Out:  $-187.884 \pm 0.720$   $\chi^2/\text{NDF}: 8371.1/47$

All:  $-188.107 \pm 0.539$   $\chi^2/\text{NDF}: 13359.7/90$

reg\_asym\_atr1l2\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-73.521 \pm 1.186$   $\chi^2/\text{NDF}: 956.0/19$

Left Out:  $-76.182 \pm 0.857$   $\chi^2/\text{NDF}: 801.0/24$

Right Out:  $-66.864 \pm 1.131$   $\chi^2/\text{NDF}: 867.2/22$

Left In:  $-80.149 \pm 0.889$   $\chi^2/\text{NDF}: 283.3/22$

Left:  $-78.094 \pm 0.617$   $\chi^2/\text{NDF}: 1094.6/47$

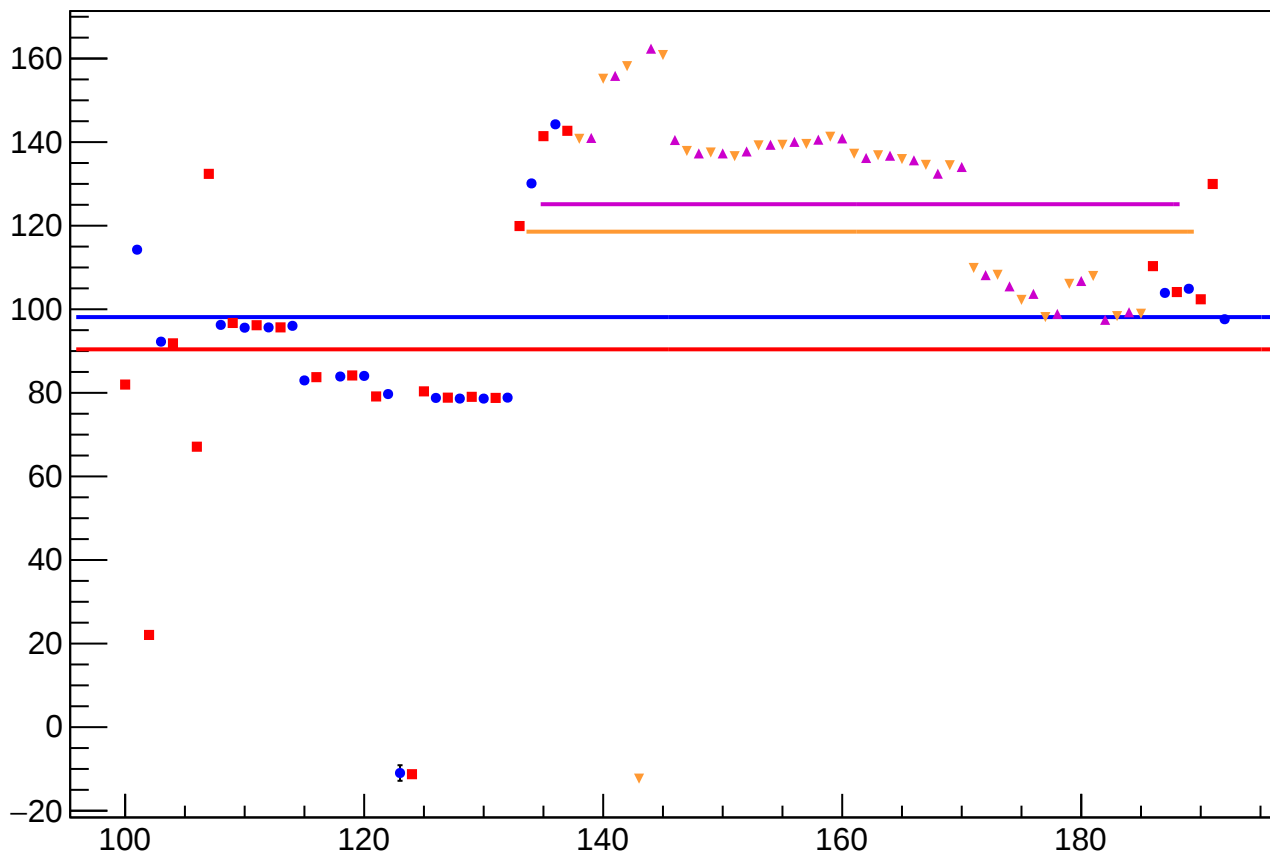
Right:  $-70.034 \pm 0.819$   $\chi^2/\text{NDF}: 1839.7/42$

In:  $-77.765 \pm 0.711$   $\chi^2/\text{NDF}: 1259.3/42$

Out:  $-72.783 \pm 0.683$   $\chi^2/\text{NDF}: 1711.3/47$

All:  $-75.173 \pm 0.493$   $\chi^2/\text{NDF}: 2996.1/90$

reg\_asym\_atr1l2\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 98.126+/-0.067  $\chi^2/\text{NDF}$ : 94589.1/19

Left Out: 118.569+/-0.040  $\chi^2/\text{NDF}$ : 728689.7/24

Right Out: 90.410+/-0.063  $\chi^2/\text{NDF}$ : 237859.7/22

Left In: 125.139+/-0.041  $\chi^2/\text{NDF}$ : 220927.1/22

Left: 121.790+/-0.029  $\chi^2/\text{NDF}$ : 962526.8/47

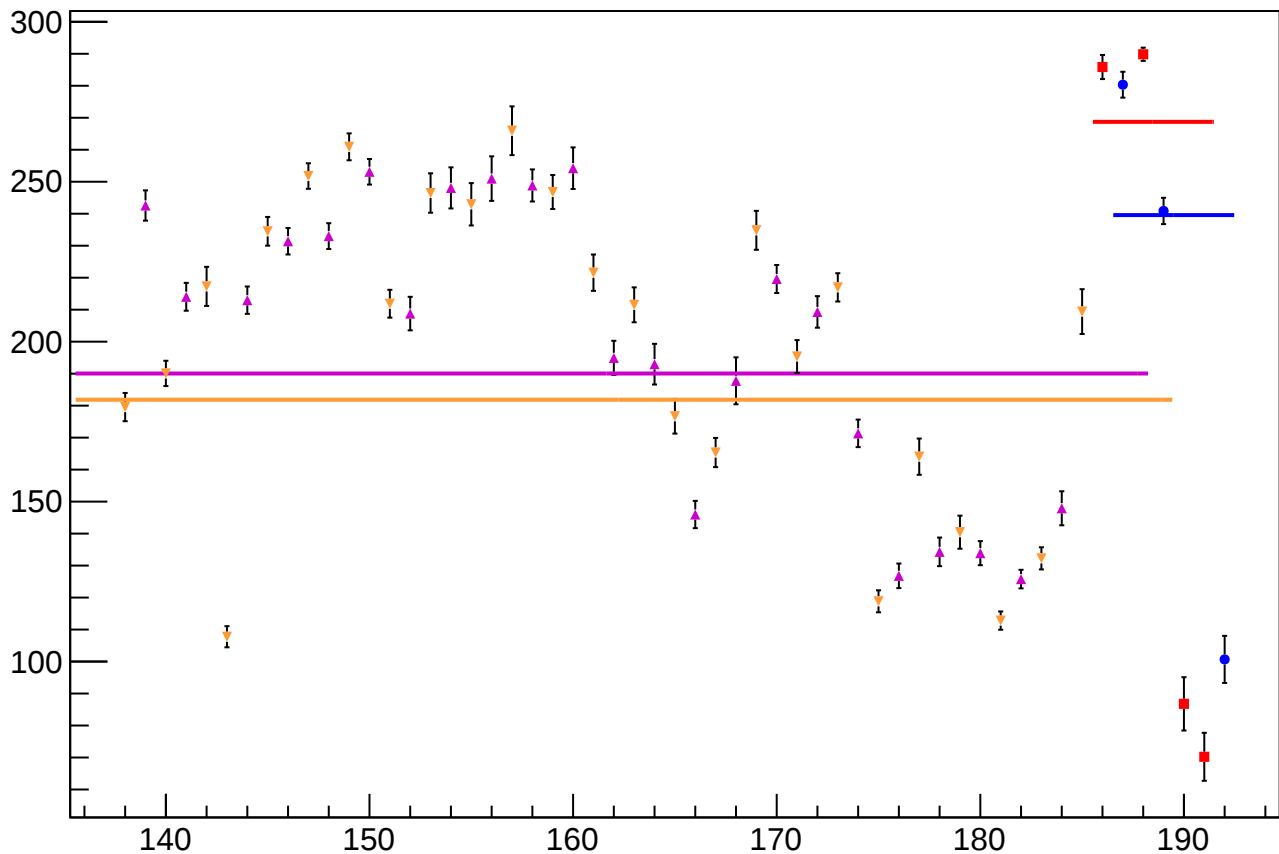
Right: 94.000+/-0.046  $\chi^2/\text{NDF}$ : 339450.5/42

In: 117.775+/-0.035  $\chi^2/\text{NDF}$ : 432232.5/42

Out: 110.319+/-0.034  $\chi^2/\text{NDF}$ : 1108221.2/47

All: 113.922+/-0.024  $\chi^2/\text{NDF}$ : 1563625.2/90

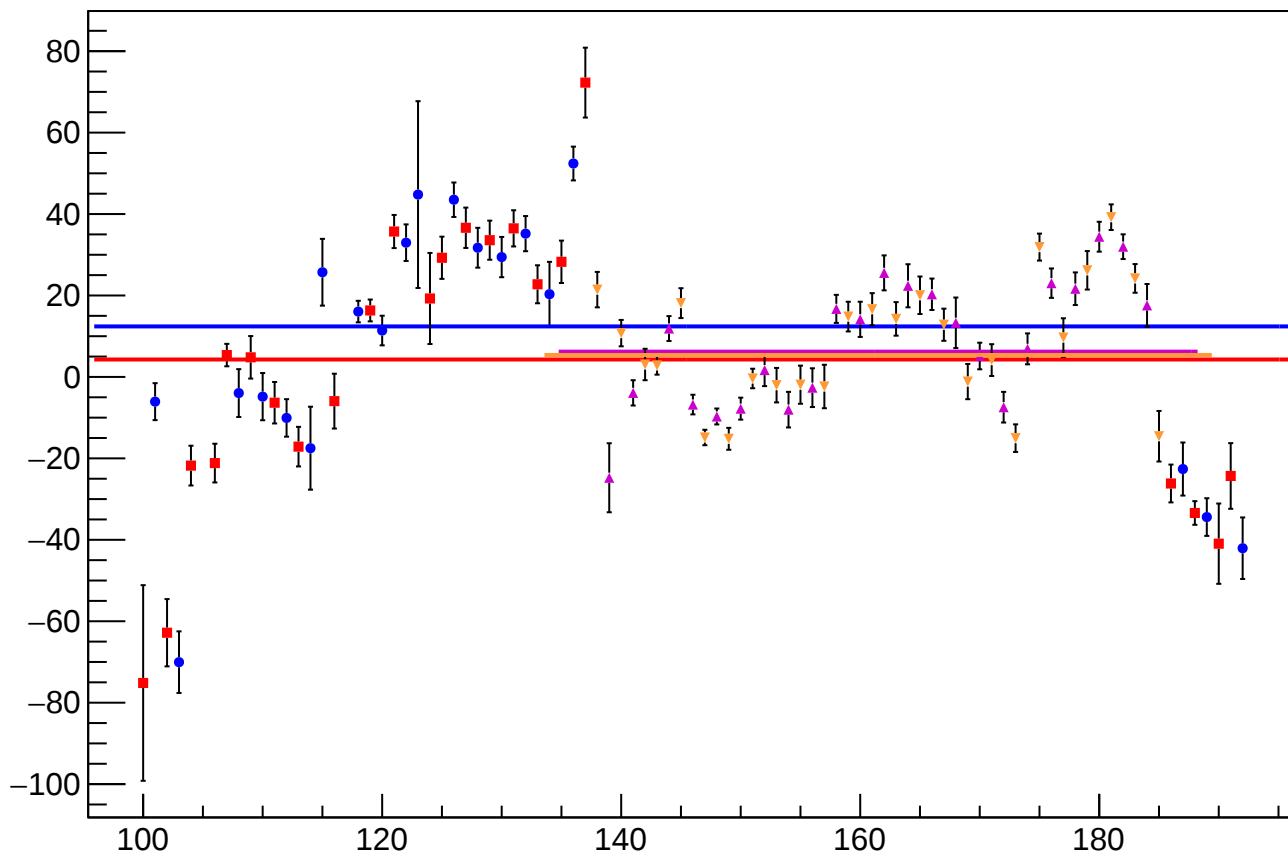
reg\_asym\_atl\_dd\_atr\_dd\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $239.576 \pm 2.686$   $\chi^2/\text{NDF}: 457.8/2$   
 Left Out:  $181.850 \pm 0.913$   $\chi^2/\text{NDF}: 3303.4/24$   
 Right Out:  $268.726 \pm 1.724$   $\chi^2/\text{NDF}: 1301.7/3$   
 Left In:  $190.048 \pm 0.953$   $\chi^2/\text{NDF}: 2438.4/22$

Left:  $185.775 \pm 0.659$   $\chi^2/\text{NDF}: 5780.3/47$   
 Right:  $260.220 \pm 1.451$   $\chi^2/\text{NDF}: 1843.0/6$   
 In:  $195.584 \pm 0.898$   $\chi^2/\text{NDF}: 3198.2/25$   
 Out:  $200.891 \pm 0.807$   $\chi^2/\text{NDF}: 6588.0/28$   
 All:  $198.520 \pm 0.600$   $\chi^2/\text{NDF}: 9805.5/54$

reg\_asym\_atl\_dd\_atr\_dd\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 12.404+/-1.104  $\chi^2/\text{NDF}$ : 598.8/19

Left Out: 5.394+/-0.688  $\chi^2/\text{NDF}$ : 526.5/24

Right Out: 4.282+/-0.980  $\chi^2/\text{NDF}$ : 742.3/22

Left In: 6.206+/-0.732  $\chi^2/\text{NDF}$ : 407.5/22

Left: 5.775+/-0.501  $\chi^2/\text{NDF}$ : 934.7/47

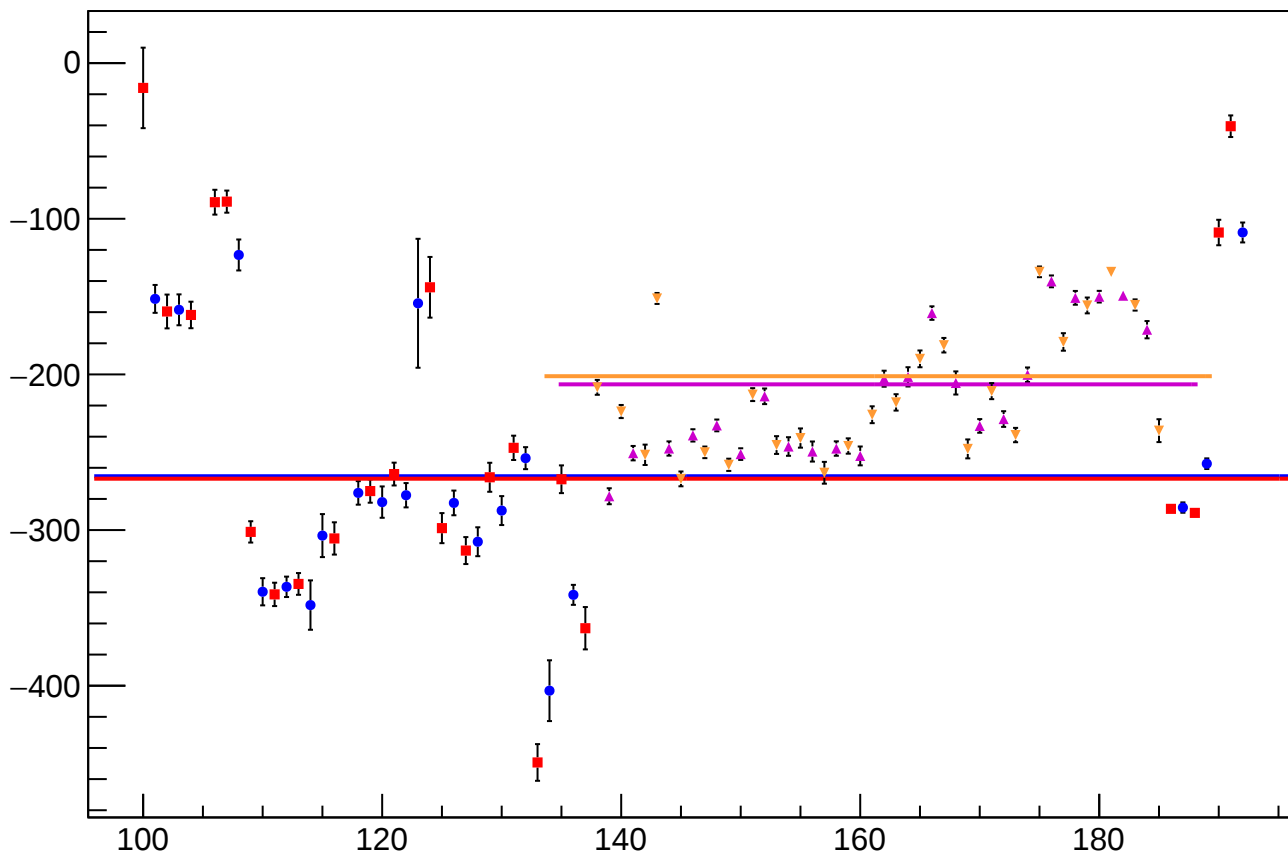
Right: 7.864+/-0.733  $\chi^2/\text{NDF}$ : 1371.4/42

In: 8.098+/-0.610  $\chi^2/\text{NDF}$ : 1028.2/42

Out: 5.027+/-0.563  $\chi^2/\text{NDF}$ : 1269.7/47

All: 6.441+/-0.414  $\chi^2/\text{NDF}$ : 2311.6/90

reg\_asym\_atl\_dd\_atr\_dd\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-265.417 \pm 1.563$   $\chi^2/\text{NDF}$ : 1586.2/19

Left Out:  $-201.144 \pm 0.918$   $\chi^2/\text{NDF}$ : 2488.8/24

Right Out:  $-267.000 \pm 1.152$   $\chi^2/\text{NDF}$ : 3727.7/22

Left In:  $-206.379 \pm 0.950$   $\chi^2/\text{NDF}$ : 2111.6/22

Left:  $-203.672 \pm 0.660$   $\chi^2/\text{NDF}$ : 4616.1/47

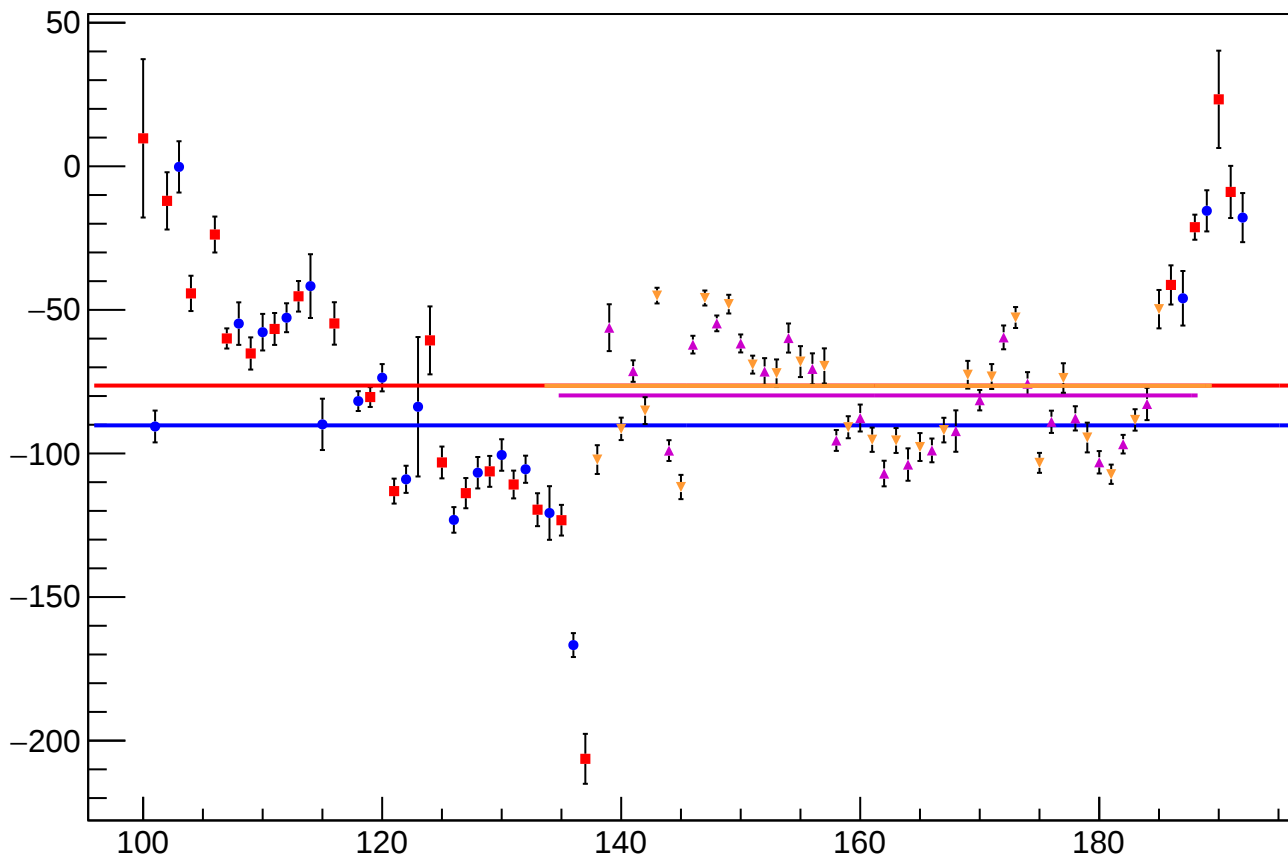
Right:  $-266.442 \pm 0.928$   $\chi^2/\text{NDF}$ : 5314.5/42

In:  $-222.293 \pm 0.812$   $\chi^2/\text{NDF}$ : 4739.7/42

Out:  $-226.707 \pm 0.718$   $\chi^2/\text{NDF}$ : 8214.9/47

All:  $-224.769 \pm 0.538$   $\chi^2/\text{NDF}$ : 12971.2/90

reg\_asym\_atl\_dd\_atr\_dd\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-90.217 \pm 1.293$   $\chi^2/\text{NDF}$ : 886.8/19

Left Out:  $-76.460 \pm 0.797$   $\chi^2/\text{NDF}$ : 781.3/24

Right Out:  $-76.354 \pm 1.178$   $\chi^2/\text{NDF}$ : 1093.6/22

Left In:  $-79.792 \pm 0.840$   $\chi^2/\text{NDF}$ : 412.3/22

Left:  $-78.038 \pm 0.578$   $\chi^2/\text{NDF}$ : 1201.9/47

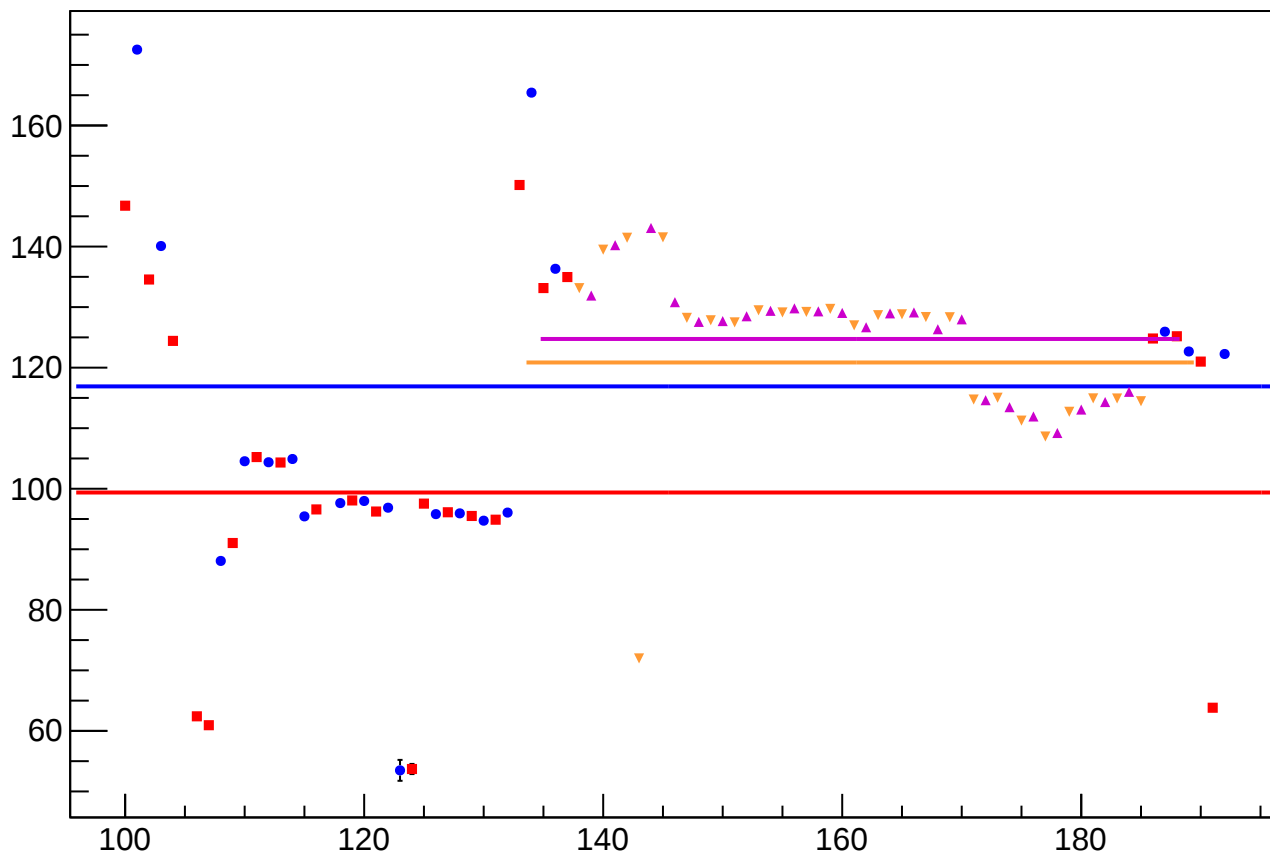
Right:  $-82.642 \pm 0.871$   $\chi^2/\text{NDF}$ : 2043.2/42

In:  $-82.885 \pm 0.704$   $\chi^2/\text{NDF}$ : 1344.8/42

Out:  $-76.426 \pm 0.660$   $\chi^2/\text{NDF}$ : 1874.9/47

All:  $-79.446 \pm 0.482$   $\chi^2/\text{NDF}$ : 3264.5/90

reg\_asym\_atl\_dd\_atr\_dd\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 116.904 $\pm$ 0.073  $\chi^2$ /NDF: 106739.1/19

Left Out: 120.855 $\pm$ 0.038  $\chi^2$ /NDF:182759.1/24

Right Out: 99.377 $\pm$ 0.063  $\chi^2$ /NDF: 209991.6/22

Left In: 124.738 $\pm$ 0.039  $\chi^2$ /NDF:51298.3/22

Left: 122.737 $\pm$ 0.027  $\chi^2$ /NDF: 239101.1/47

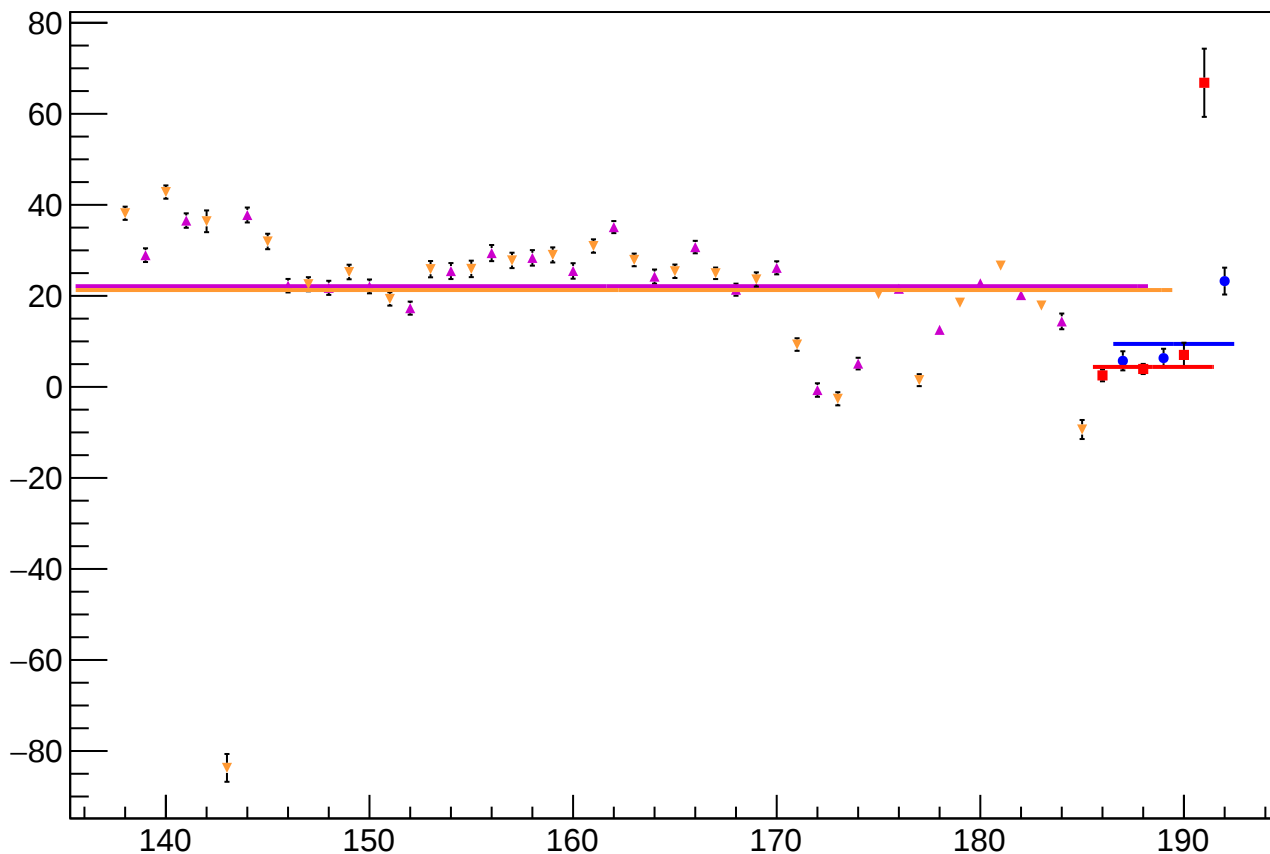
Right: 106.806 $\pm$ 0.048  $\chi^2$ /NDF: 349883.0/42

In: 122.984 $\pm$ 0.035  $\chi^2$ /NDF:166958.0/42

Out: 115.069 $\pm$ 0.033  $\chi^2$ /NDF:478563.2/47

All: 118.785 $\pm$ 0.024  $\chi^2$ /NDF: 673316.4/90

reg\_asym\_atl\_dd\_atr\_dd\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 9.442 $\pm$ 1.314  $\chi^2$ /NDF: 27.3/2

Left Out: 21.282 $\pm$ 0.282  $\chi^2$ /NDF:2600.5/24

Right Out: 4.390 $\pm$ 0.801  $\chi^2$ /NDF: 72.6/3

Left In: 22.127 $\pm$ 0.285  $\chi^2$ /NDF:900.2/22

Left: 21.700 $\pm$ 0.201  $\chi^2$ /NDF: 3505.2/47

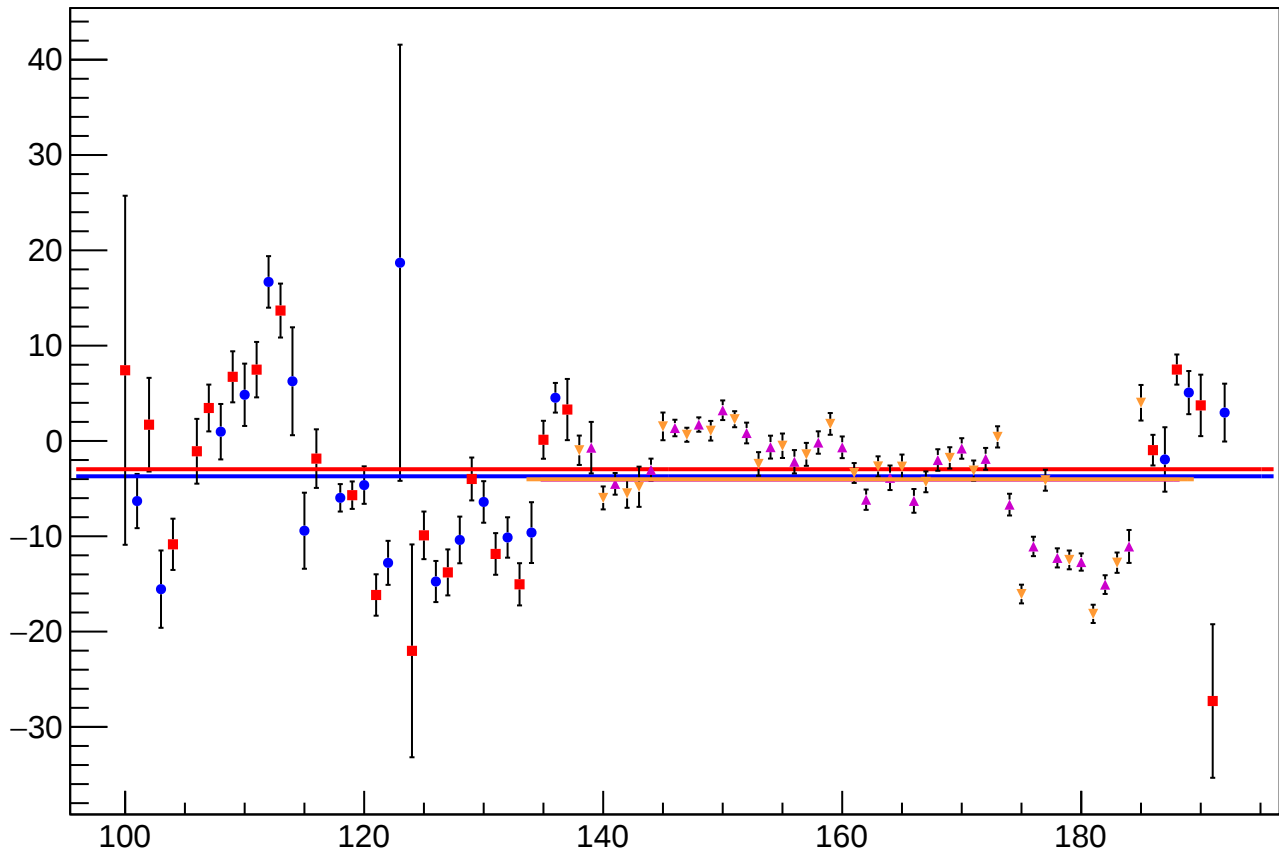
Right: 5.759 $\pm$ 0.684  $\chi^2$ /NDF: 110.7/6

In: 21.554 $\pm$ 0.279  $\chi^2$ /NDF:1016.6/25

Out: 19.413 $\pm$ 0.266  $\chi^2$ /NDF:3068.9/28

All: 20.434 $\pm$ 0.193  $\chi^2$ /NDF: 4116.3/54

reg\_asym\_atl\_dd\_atr\_dd\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-3.707 \pm 0.553$   $\chi^2/\text{NDF}$ : 195.9/19

Left Out:  $-4.022 \pm 0.223$   $\chi^2/\text{NDF}$ : 734.1/24

Right Out:  $-2.965 \pm 0.512$   $\chi^2/\text{NDF}$ : 260.4/22

Left In:  $-4.059 \pm 0.228$   $\chi^2/\text{NDF}$ : 577.2/22

Left:  $-4.040 \pm 0.159$   $\chi^2/\text{NDF}$ : 1311.4/47

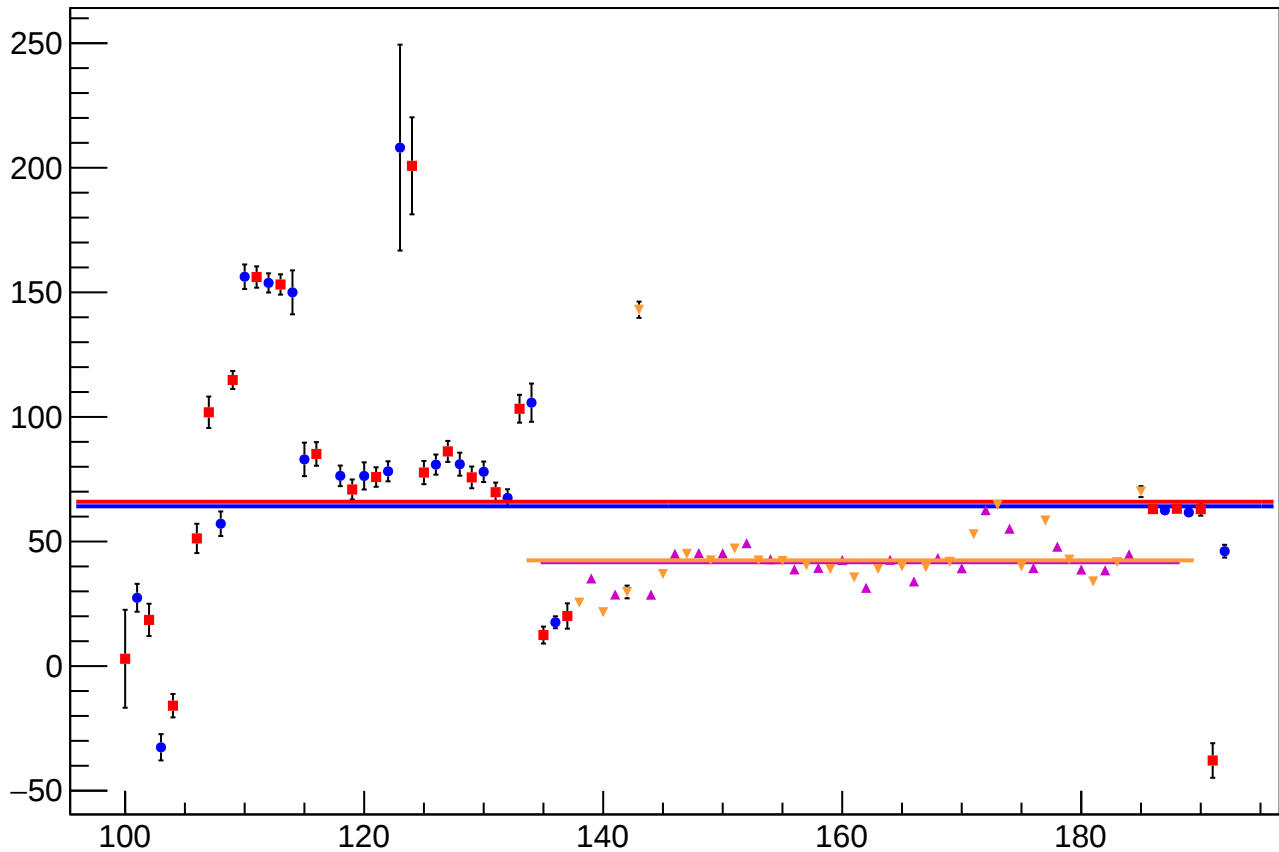
Right:  $-3.308 \pm 0.376$   $\chi^2/\text{NDF}$ : 457.2/42

In:  $-4.007 \pm 0.211$   $\chi^2/\text{NDF}$ : 773.5/42

Out:  $-3.853 \pm 0.205$   $\chi^2/\text{NDF}$ : 998.1/47

All:  $-3.928 \pm 0.147$   $\chi^2/\text{NDF}$ : 1771.8/90

reg\_asym\_atl\_dd\_atr\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $64.128 \pm 0.776$   $\chi^2/\text{NDF}$ : 1915.5/19

Left Out:  $42.452 \pm 0.282$   $\chi^2/\text{NDF}$ : 2016.0/24

Right Out:  $65.963 \pm 0.559$   $\chi^2/\text{NDF}$ : 2214.2/22

Left In:  $41.695 \pm 0.284$   $\chi^2/\text{NDF}$ : 630.2/22

Left:  $42.077 \pm 0.200$   $\chi^2/\text{NDF}$ : 2649.8/47

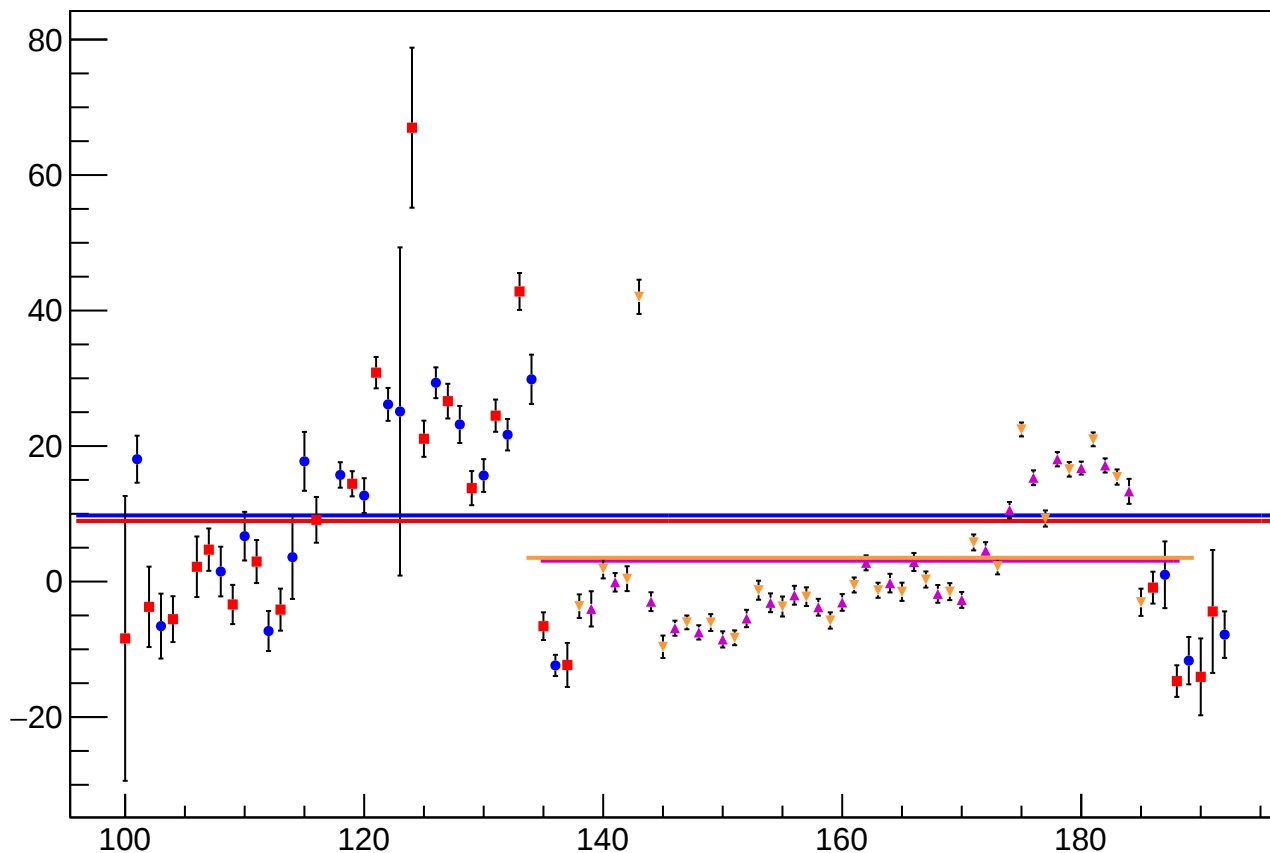
Right:  $65.336 \pm 0.454$   $\chi^2/\text{NDF}$ : 4133.4/42

In:  $44.345 \pm 0.267$   $\chi^2/\text{NDF}$ : 3282.1/42

Out:  $47.220 \pm 0.252$   $\chi^2/\text{NDF}$ : 5640.4/47

All:  $45.866 \pm 0.183$   $\chi^2/\text{NDF}$ : 8983.9/90

reg\_asym\_atl\_dd\_atr\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $9.766 \pm 0.638$   $\chi^2/\text{NDF}$ : 547.1/19

Left Out:  $3.505 \pm 0.252$   $\chi^2/\text{NDF}$ : 1691.3/24

Right Out:  $8.940 \pm 0.612$   $\chi^2/\text{NDF}$ : 697.9/22

Left In:  $3.081 \pm 0.257$   $\chi^2/\text{NDF}$ : 1265.7/22

Left:  $3.297 \pm 0.180$   $\chi^2/\text{NDF}$ : 2958.4/47

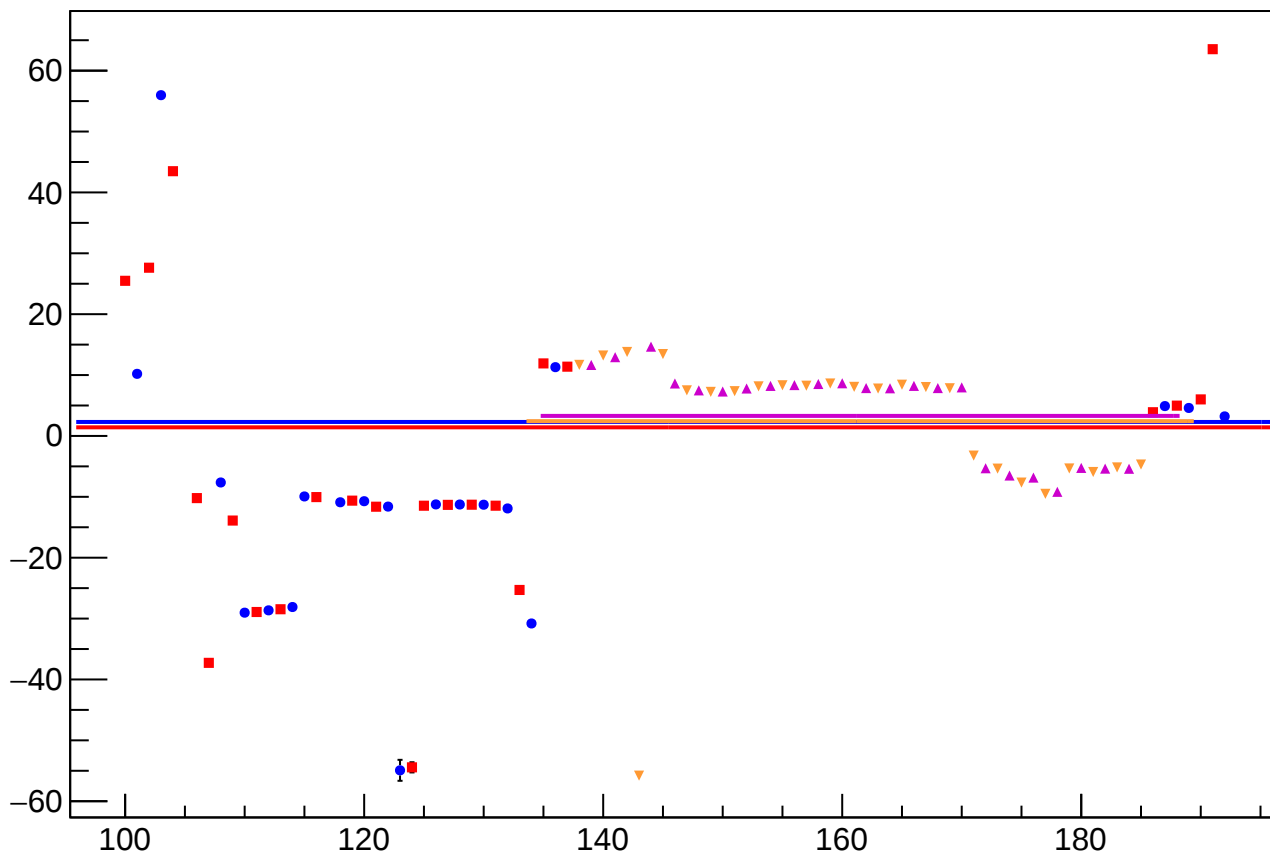
Right:  $9.336 \pm 0.442$   $\chi^2/\text{NDF}$ : 1245.9/42

In:  $4.014 \pm 0.238$   $\chi^2/\text{NDF}$ : 1907.2/42

Out:  $4.294 \pm 0.233$   $\chi^2/\text{NDF}$ : 2456.6/47

All:  $4.157 \pm 0.167$   $\chi^2/\text{NDF}$ : 4364.5/90

reg\_asym\_atl\_dd\_atr\_dd\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 2.296 $\pm$ 0.034  $\chi^2$ /NDF: 358327.1/19

Left Out: 2.425 $\pm$ 0.012  $\chi^2$ /NDF: 616382.5/24

Right Out: 1.413 $\pm$ 0.034  $\chi^2$ /NDF: 428302.8/22

Left In: 3.293 $\pm$ 0.012  $\chi^2$ /NDF: 404323.8/22

Left: 2.855 $\pm$ 0.008  $\chi^2$ /NDF: 1023497.1/47

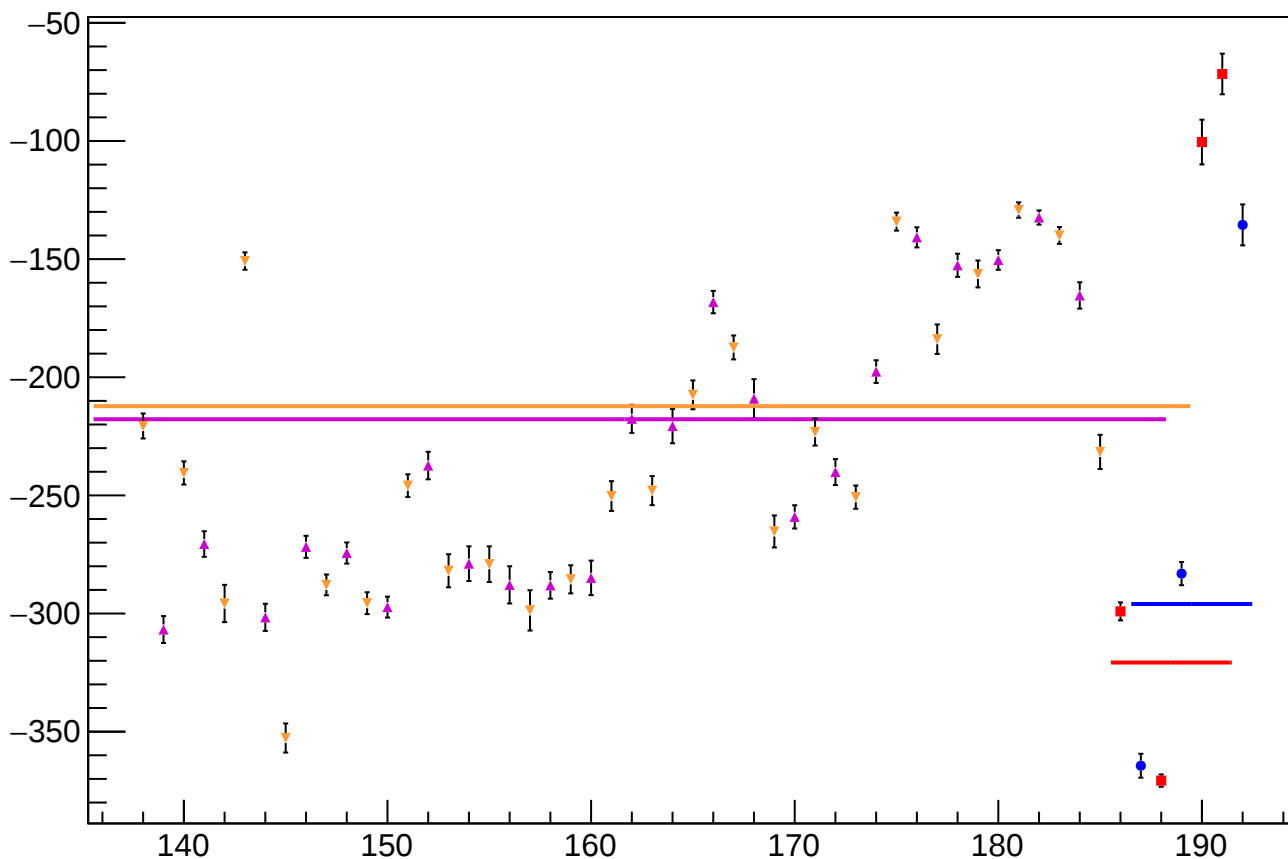
Right: 1.849 $\pm$ 0.024  $\chi^2$ /NDF: 786971.3/42

In: 3.188 $\pm$ 0.011  $\chi^2$ /NDF: 763418.4/42

Out: 2.318 $\pm$ 0.011  $\chi^2$ /NDF: 1045496.7/47

All: 2.749 $\pm$ 0.008  $\chi^2$ /NDF: 1812053.0/90

reg\_asym\_atl\_avg\_atr\_avg\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: -295.976+/-3.262  $\chi^2/\text{NDF}$ : 532.3/2

Left Out: -212.231+/-1.029  $\chi^2/\text{NDF}$ : 3875.4/24

Right Out: -320.737+/-2.041  $\chi^2/\text{NDF}$ : 1780.7/3

Left In: -217.779+/-1.067  $\chi^2/\text{NDF}$ : 3448.9/22

Left: -214.906+/-0.741  $\chi^2/\text{NDF}$ : 7338.3/47

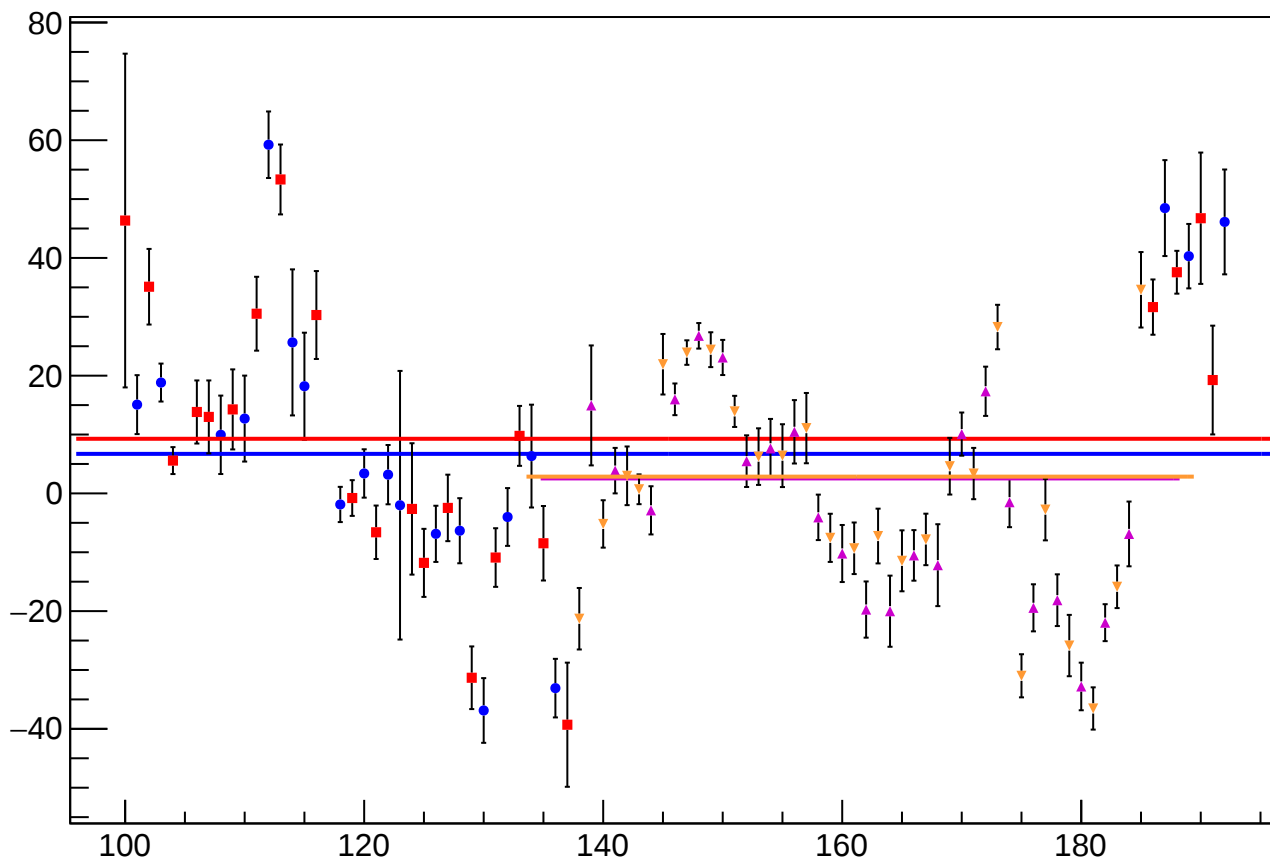
Right: -313.772+/-1.730  $\chi^2/\text{NDF}$ : 2354.5/6

In: -225.335+/-1.014  $\chi^2/\text{NDF}$ : 4500.5/25

Out: -234.242+/-0.919  $\chi^2/\text{NDF}$ : 7909.9/28

All: -230.225+/-0.681  $\chi^2/\text{NDF}$ : 12452.7/54

reg\_asym\_atl\_avg\_atr\_avg\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $6.714 \pm 1.191$   $\chi^2/\text{NDF}$ : 346.4/19

Left Out:  $2.848 \pm 0.775$   $\chi^2/\text{NDF}$ : 582.1/24

Right Out:  $9.278 \pm 1.062$   $\chi^2/\text{NDF}$ : 337.9/22

Left In:  $2.540 \pm 0.822$   $\chi^2/\text{NDF}$ : 473.6/22

Left:  $2.703 \pm 0.564$   $\chi^2/\text{NDF}$ : 1055.8/47

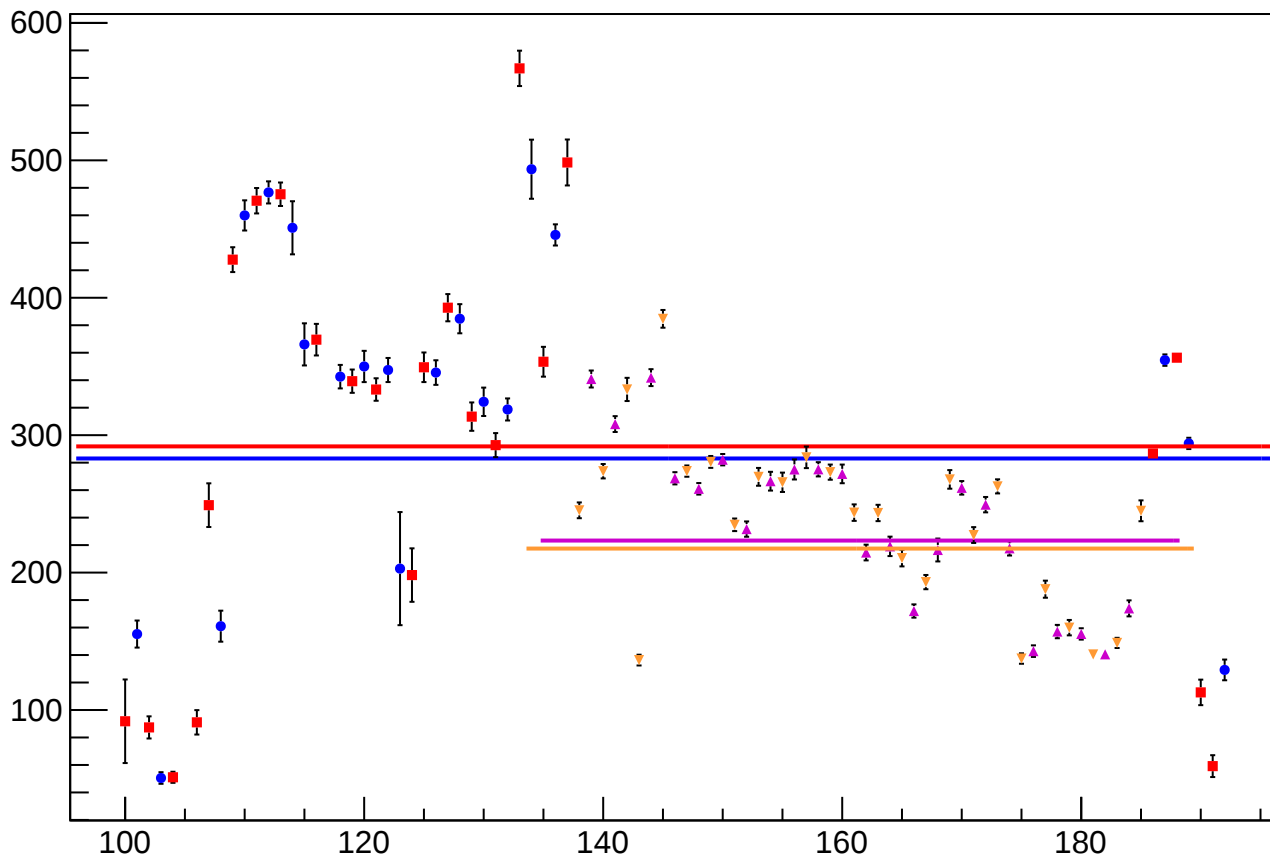
Right:  $8.141 \pm 0.793$   $\chi^2/\text{NDF}$ : 686.9/42

In:  $3.889 \pm 0.677$   $\chi^2/\text{NDF}$ : 828.4/42

Out:  $5.079 \pm 0.626$   $\chi^2/\text{NDF}$ : 943.9/47

All:  $4.530 \pm 0.460$   $\chi^2/\text{NDF}$ : 1774.0/90

reg\_asym\_atl\_avg\_atr\_avg\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 283.036+/-1.716  $\chi^2/\text{NDF}$ : 5832.7/19

Left Out: 217.484+/-1.032  $\chi^2/\text{NDF}$ : 3769.5/24

Right Out: 291.832+/-1.299  $\chi^2/\text{NDF}$ : 8908.5/22

Left In: 223.309+/-1.062  $\chi^2/\text{NDF}$ : 3378.0/22

Left: 220.314+/-0.740  $\chi^2/\text{NDF}$ : 7163.0/47

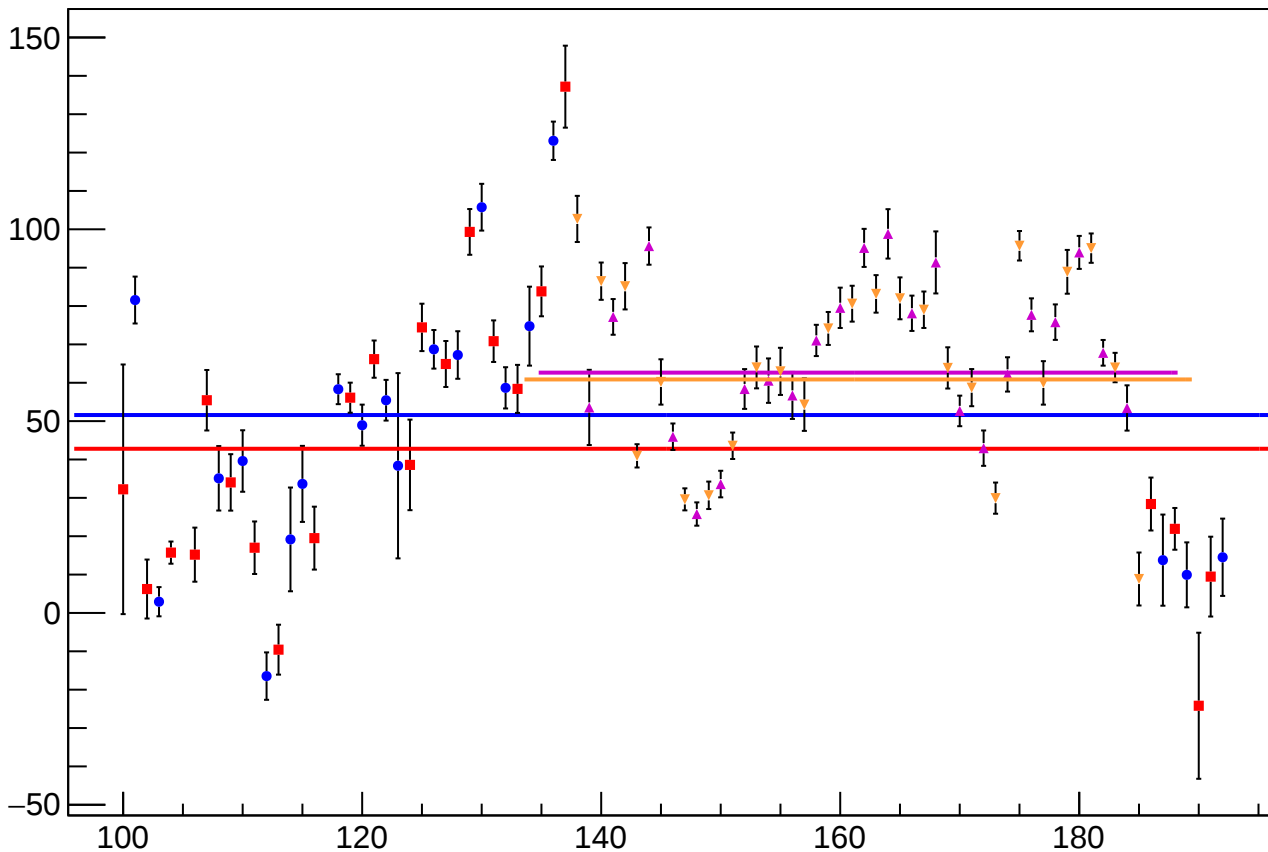
Right: 288.628+/-1.035  $\chi^2/\text{NDF}$ : 14757.9/42

In: 239.853+/-0.903  $\chi^2/\text{NDF}$ : 10087.0/42

Out: 246.272+/-0.808  $\chi^2/\text{NDF}$ : 14686.3/47

All: 243.417+/-0.602  $\chi^2/\text{NDF}$ : 24801.4/90

reg\_asym\_atl\_avg\_atr\_avg\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 51.589 $\pm$ 1.397  $\chi^2/\text{NDF}$ : 684.2/19

Left Out: 60.863 $\pm$ 0.897  $\chi^2/\text{NDF}$ : 731.6/24

Right Out: 42.795 $\pm$ 1.282  $\chi^2/\text{NDF}$ : 574.1/22

Left In: 62.640 $\pm$ 0.943  $\chi^2/\text{NDF}$ : 515.4/22

Left: 61.707 $\pm$ 0.650  $\chi^2/\text{NDF}$ : 1248.9/47

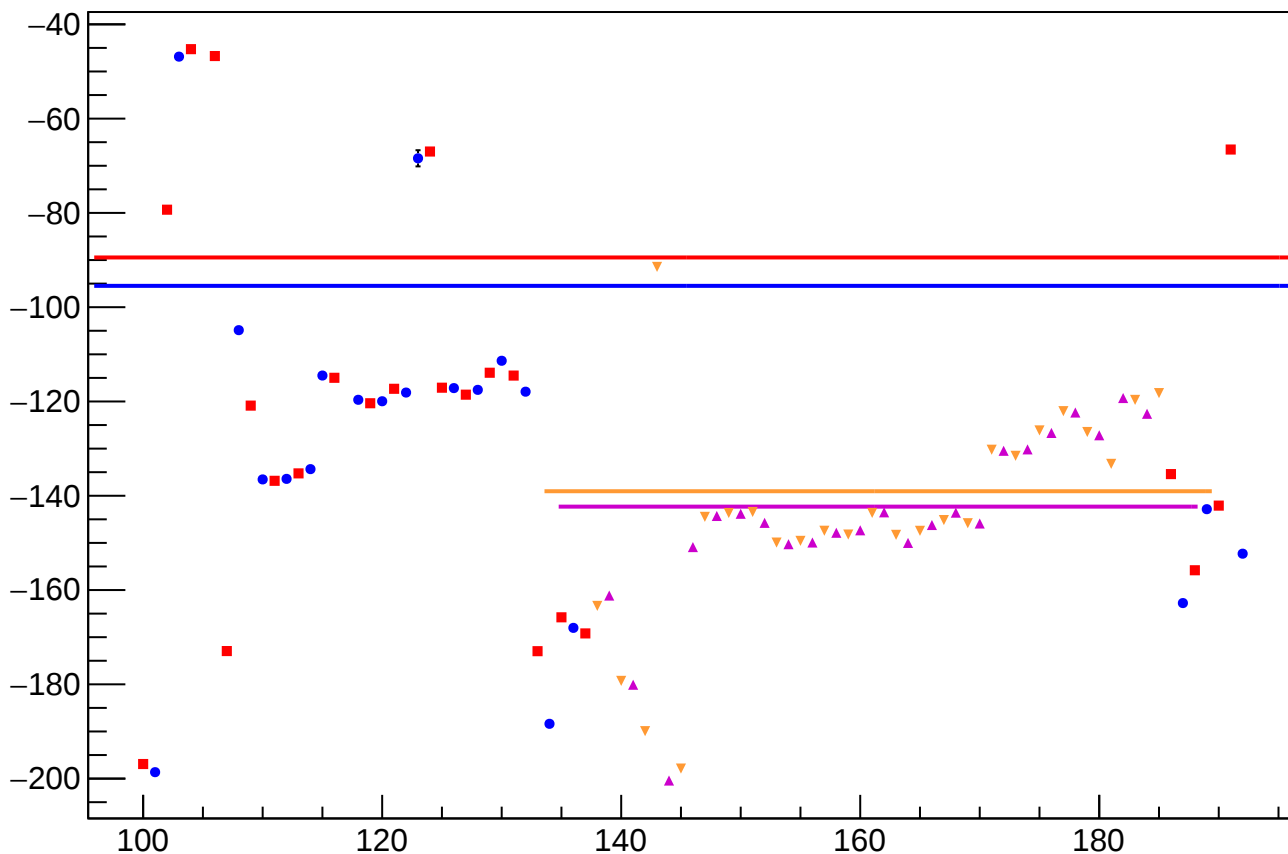
Right: 46.817 $\pm$ 0.945  $\chi^2/\text{NDF}$ : 1279.8/42

In: 59.181 $\pm$ 0.781  $\chi^2/\text{NDF}$ : 1242.6/42

Out: 54.930 $\pm$ 0.735  $\chi^2/\text{NDF}$ : 1439.1/47

All: 56.925 $\pm$ 0.535  $\chi^2/\text{NDF}$ : 2697.4/90

reg\_asym\_atl\_avg\_atr\_avg\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: -95.474+/-0.065  $\chi^2/\text{NDF}$ : 593833.2/19

Left Out: -139.040+/-0.043  $\chi^2/\text{NDF}$ : 258113.4/24

Right Out: -89.452+/-0.061  $\chi^2/\text{NDF}$ : 575531.6/22

Left In: -142.305+/-0.044  $\chi^2/\text{NDF}$ : 143351.8/22

Left: -140.627+/-0.031  $\chi^2/\text{NDF}$ : 404285.9/47

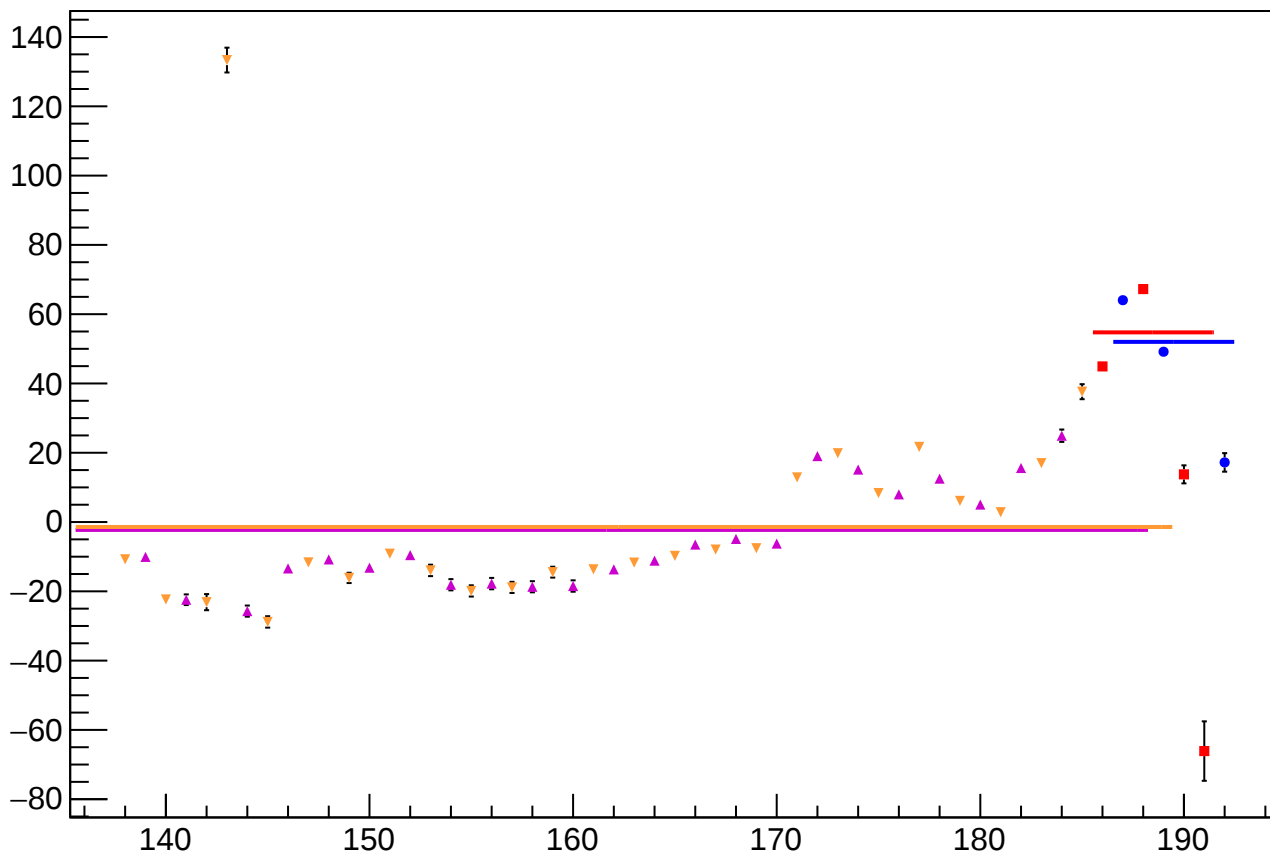
Right: -92.273+/-0.045  $\chi^2/\text{NDF}$ : 1173911.7/42

In: -127.586+/-0.036  $\chi^2/\text{NDF}$ : 1091978.3/42

Out: -122.690+/-0.035  $\chi^2/\text{NDF}$ : 1274811.0/47

All: -125.042+/-0.025  $\chi^2/\text{NDF}$ : 2376138.9/90

reg\_asym\_atl\_avg\_atr\_avg\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 52.009+/-0.942  $\chi^2/\text{NDF}$ : 247.4/2

Left Out: -1.427+/-0.268  $\chi^2/\text{NDF}$ : 4339.0/24

Right Out: 54.748+/-0.562  $\chi^2/\text{NDF}$ : 836.1/3

Left In: -2.270+/-0.271  $\chi^2/\text{NDF}$ : 2521.6/22

Left: -1.844+/-0.190  $\chi^2/\text{NDF}$ : 6865.5/47

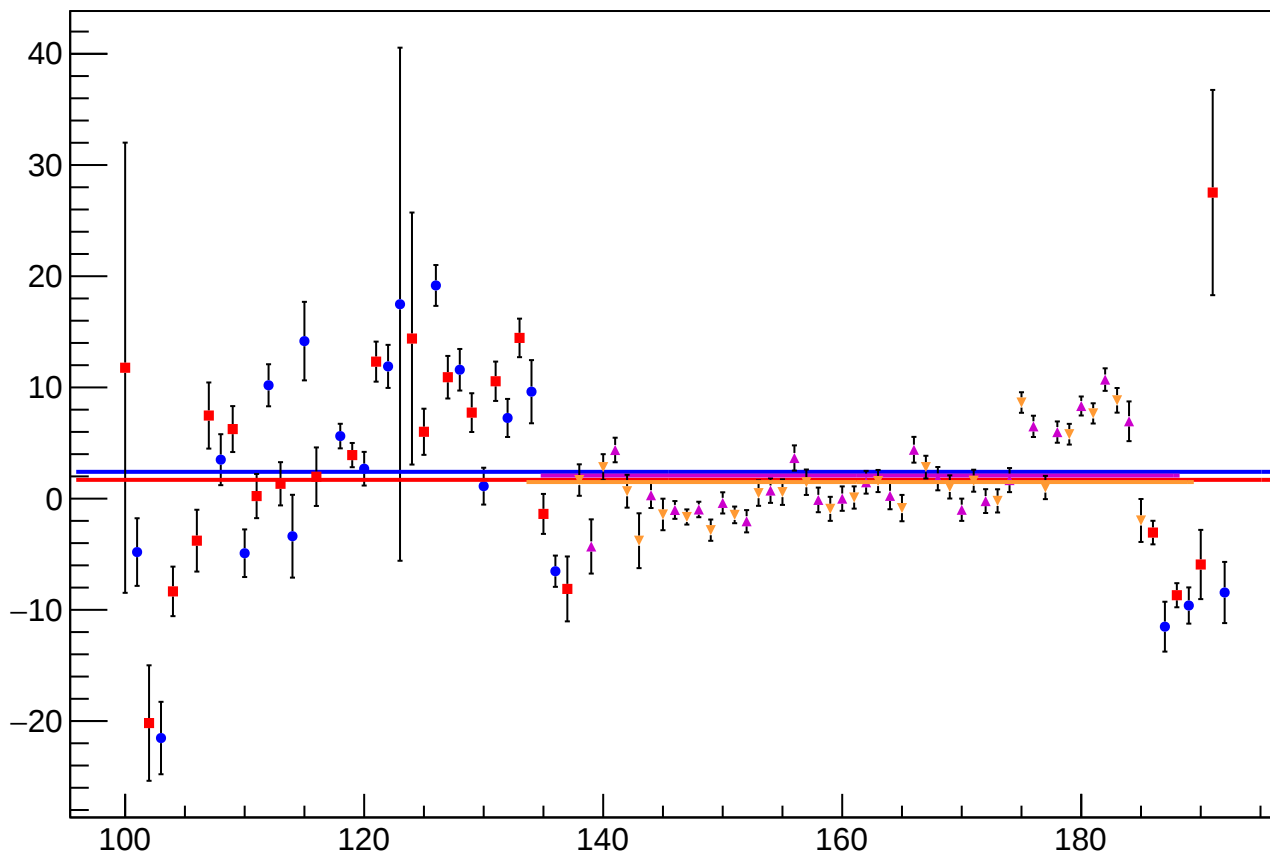
Right: 54.029+/-0.483  $\chi^2/\text{NDF}$ : 1089.8/6

In: 1.871+/-0.260  $\chi^2/\text{NDF}$ : 5835.3/25

Out: 8.957+/-0.242  $\chi^2/\text{NDF}$ : 13318.8/28

All: 5.676+/-0.177  $\chi^2/\text{NDF}$ : 19552.3/54

reg\_asym\_atl\_avg\_atr\_avg\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 2.410 $\pm$ 0.439  $\chi^2$ /NDF: 406.4/19

Left Out: 1.491 $\pm$ 0.210  $\chi^2$ /NDF:259.1/24

Right Out: 1.689 $\pm$ 0.398  $\chi^2$ /NDF: 350.4/22

Left In: 2.075 $\pm$ 0.215  $\chi^2$ /NDF:274.6/22

Left: 1.776 $\pm$ 0.150  $\chi^2$ /NDF: 537.4/47

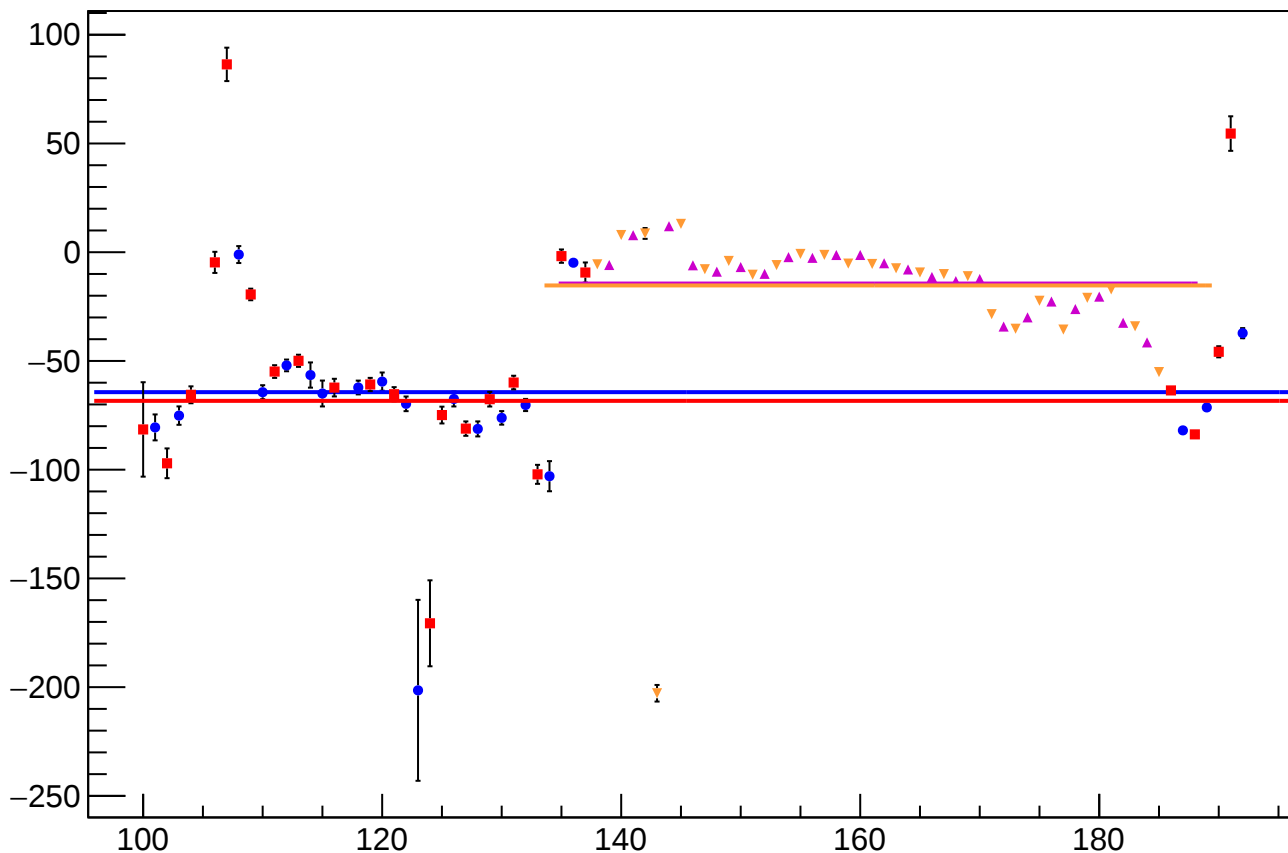
Right: 2.015 $\pm$ 0.295  $\chi^2$ /NDF: 758.3/42

In: 2.140 $\pm$ 0.193  $\chi^2$ /NDF:681.4/42

Out: 1.534 $\pm$ 0.186  $\chi^2$ /NDF:609.7/47

All: 1.825 $\pm$ 0.134  $\chi^2$ /NDF: 1296.2/90

reg\_asym\_atl\_avg\_atr\_avg\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-64.343 \pm 0.583$   $\chi^2/\text{NDF}: 1551.4/19$

Left Out:  $-15.279 \pm 0.267$   $\chi^2/\text{NDF}: 4820.1/24$

Right Out:  $-68.350 \pm 0.402$   $\chi^2/\text{NDF}: 2730.2/22$

Left In:  $-14.406 \pm 0.269$   $\chi^2/\text{NDF}: 2032.4/22$

Left:  $-14.846 \pm 0.189$   $\chi^2/\text{NDF}: 6857.8/47$

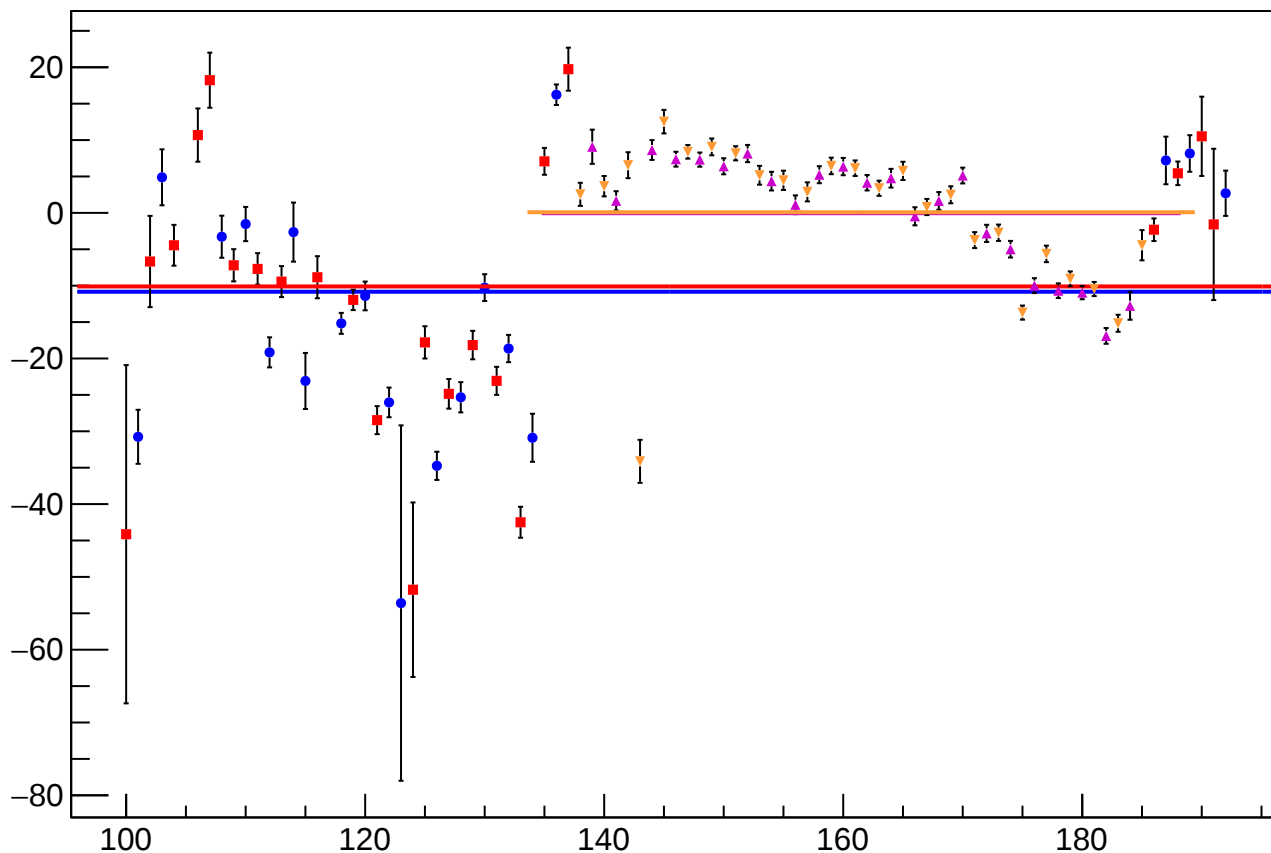
Right:  $-67.058 \pm 0.331$   $\chi^2/\text{NDF}: 4313.6/42$

In:  $-23.187 \pm 0.244$   $\chi^2/\text{NDF}: 9639.2/42$

Out:  $-31.515 \pm 0.222$   $\chi^2/\text{NDF}: 19656.0/47$

All:  $-27.744 \pm 0.164$   $\chi^2/\text{NDF}: 29931.0/90$

reg\_asym\_atl\_avg\_atr\_avg\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-10.832 \pm 0.512$   $\chi^2/\text{NDF}$ : 896.9/19

Left Out:  $0.087 \pm 0.238$   $\chi^2/\text{NDF}$ : 1172.3/24

Right Out:  $-10.105 \pm 0.483$   $\chi^2/\text{NDF}$ : 882.5/22

Left In:  $-0.044 \pm 0.243$   $\chi^2/\text{NDF}$ : 1028.2/22

Left:  $0.023 \pm 0.170$   $\chi^2/\text{NDF}$ : 2200.6/47

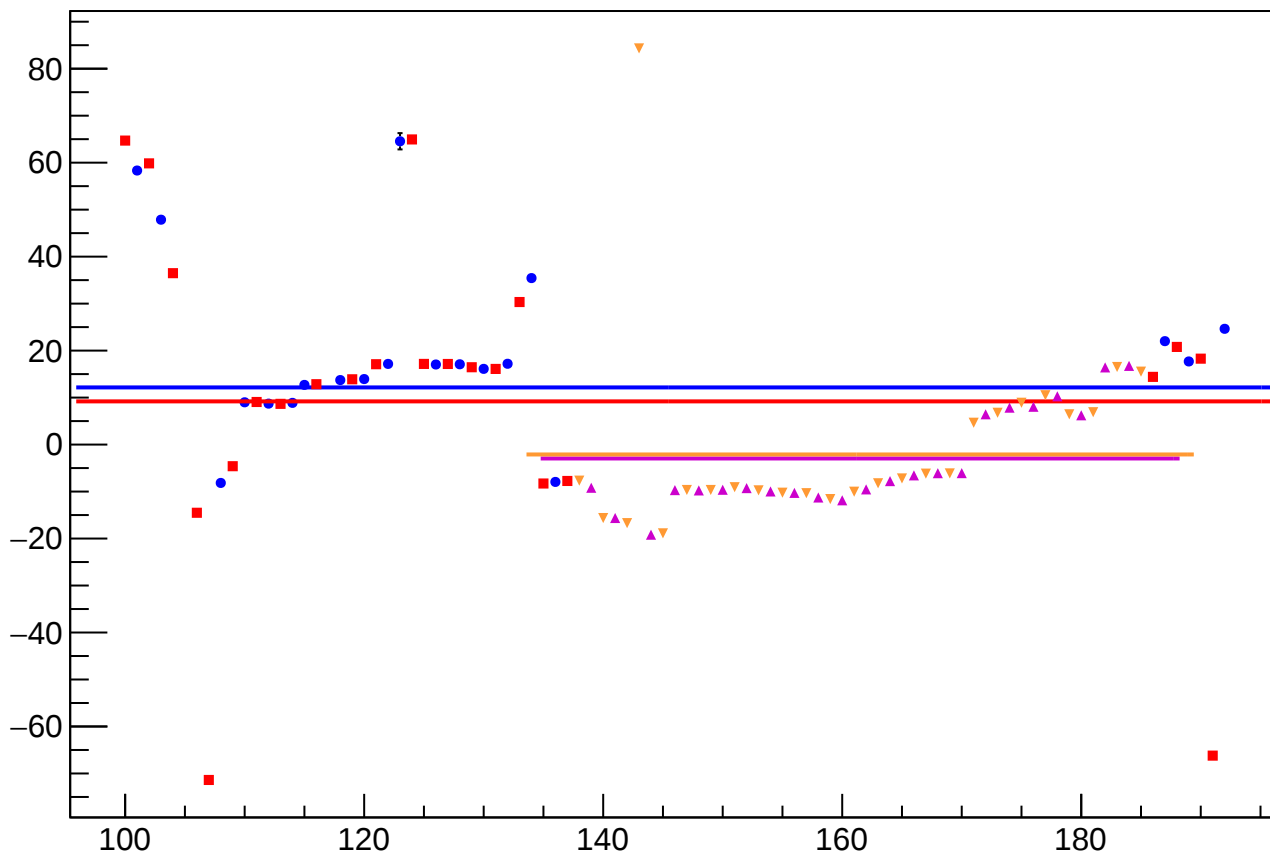
Right:  $-10.447 \pm 0.351$   $\chi^2/\text{NDF}$ : 1780.4/42

In:  $-2.028 \pm 0.220$   $\chi^2/\text{NDF}$ : 2287.4/42

Out:  $-1.907 \pm 0.214$   $\chi^2/\text{NDF}$ : 2412.8/47

All:  $-1.966 \pm 0.153$   $\chi^2/\text{NDF}$ : 4700.4/90

reg\_asym\_atl\_avg\_atr\_avg\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $12.165 \pm 0.028$   $\chi^2/\text{NDF}$ : 405392.5/19

Left Out:  $-2.105 \pm 0.011$   $\chi^2/\text{NDF}$ : 1093120.2/24

Right Out:  $9.193 \pm 0.028$   $\chi^2/\text{NDF}$ : 640148.8/22

Left In:  $-2.959 \pm 0.011$   $\chi^2/\text{NDF}$ : 763000.9/22

Left:  $-2.529 \pm 0.008$   $\chi^2/\text{NDF}$ : 1859155.7/47

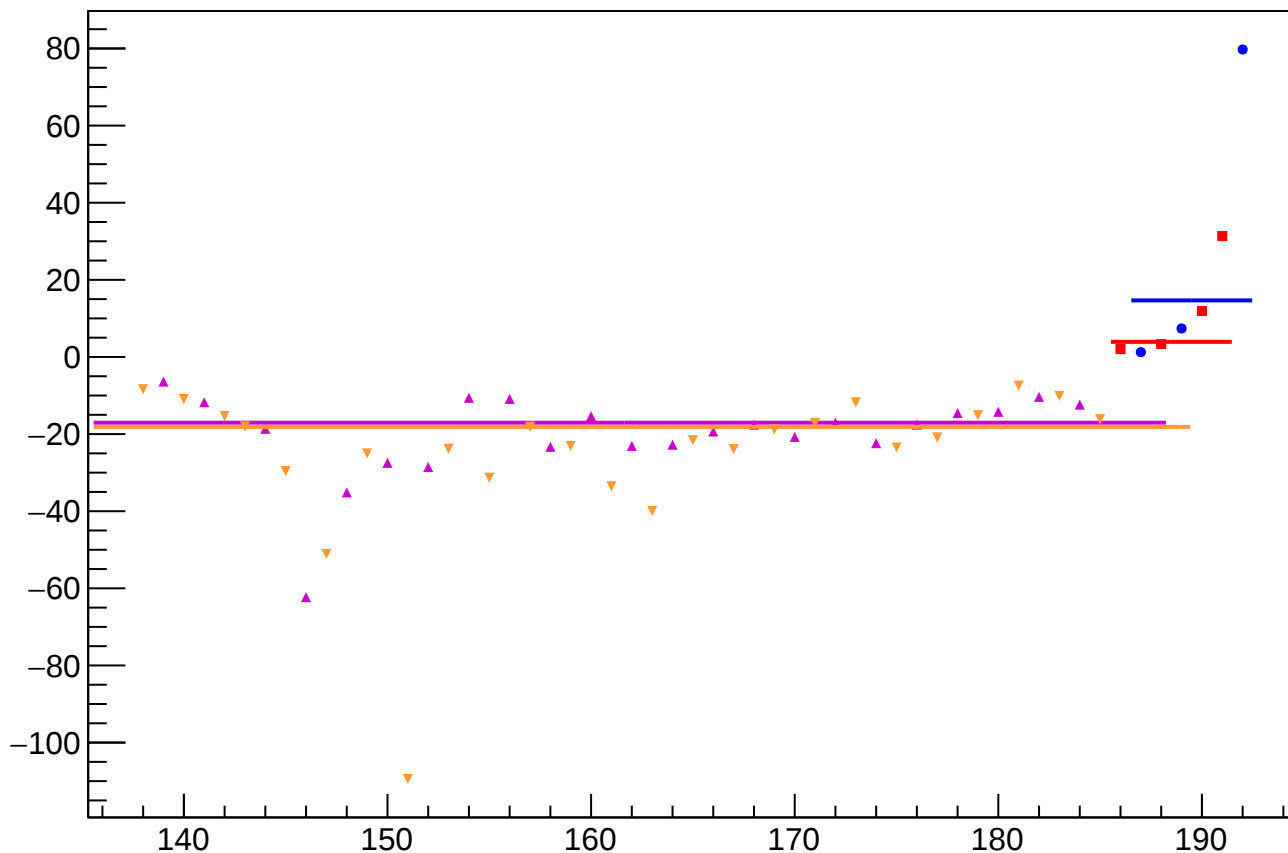
Right:  $10.664 \pm 0.020$   $\chi^2/\text{NDF}$ : 1051166.8/42

In:  $-0.956 \pm 0.010$   $\chi^2/\text{NDF}$ : 1418722.4/42

Out:  $-0.601 \pm 0.010$   $\chi^2/\text{NDF}$ : 1875673.5/47

All:  $-0.777 \pm 0.007$   $\chi^2/\text{NDF}$ : 3294998.1/90

reg\_asym\_bcm\_an\_ds3\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $14.669 \pm 0.174$   $\chi^2/\text{NDF}: 21763.6/2$

Left Out:  $-18.128 \pm 0.039$   $\chi^2/\text{NDF}: 88551.6/24$

Right Out:  $3.921 \pm 0.092$   $\chi^2/\text{NDF}: 1630.5/3$

Left In:  $-17.038 \pm 0.038$   $\chi^2/\text{NDF}: 44141.1/22$

Left:  $-17.572 \pm 0.027$   $\chi^2/\text{NDF}: 133092.4/47$

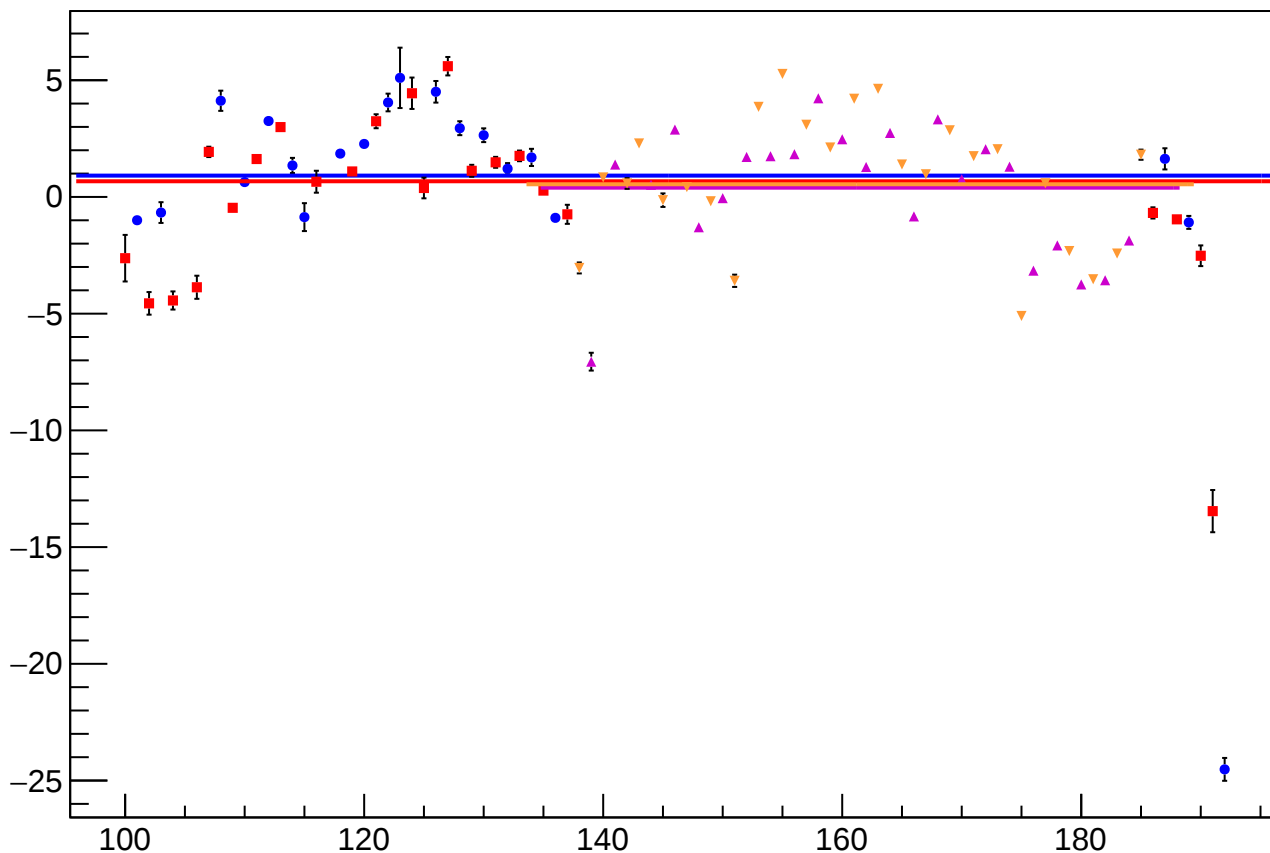
Right:  $6.288 \pm 0.082$   $\chi^2/\text{NDF}: 26376.9/6$

In:  $-15.580 \pm 0.037$   $\chi^2/\text{NDF}: 97667.0/25$

Out:  $-14.803 \pm 0.036$   $\chi^2/\text{NDF}: 138600.7/28$

All:  $-15.176 \pm 0.026$   $\chi^2/\text{NDF}: 236493.7/54$

reg\_asym\_bcm\_an\_ds3\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $0.914 \pm 0.060$   $\chi^2/\text{NDF}: 3451.1/19$

Left Out:  $0.543 \pm 0.032$   $\chi^2/\text{NDF}: 7085.3/24$

Right Out:  $0.671 \pm 0.053$   $\chi^2/\text{NDF}: 1420.5/22$

Left In:  $0.397 \pm 0.031$   $\chi^2/\text{NDF}: 6235.6/22$

Left:  $0.466 \pm 0.022$   $\chi^2/\text{NDF}: 13331.6/47$

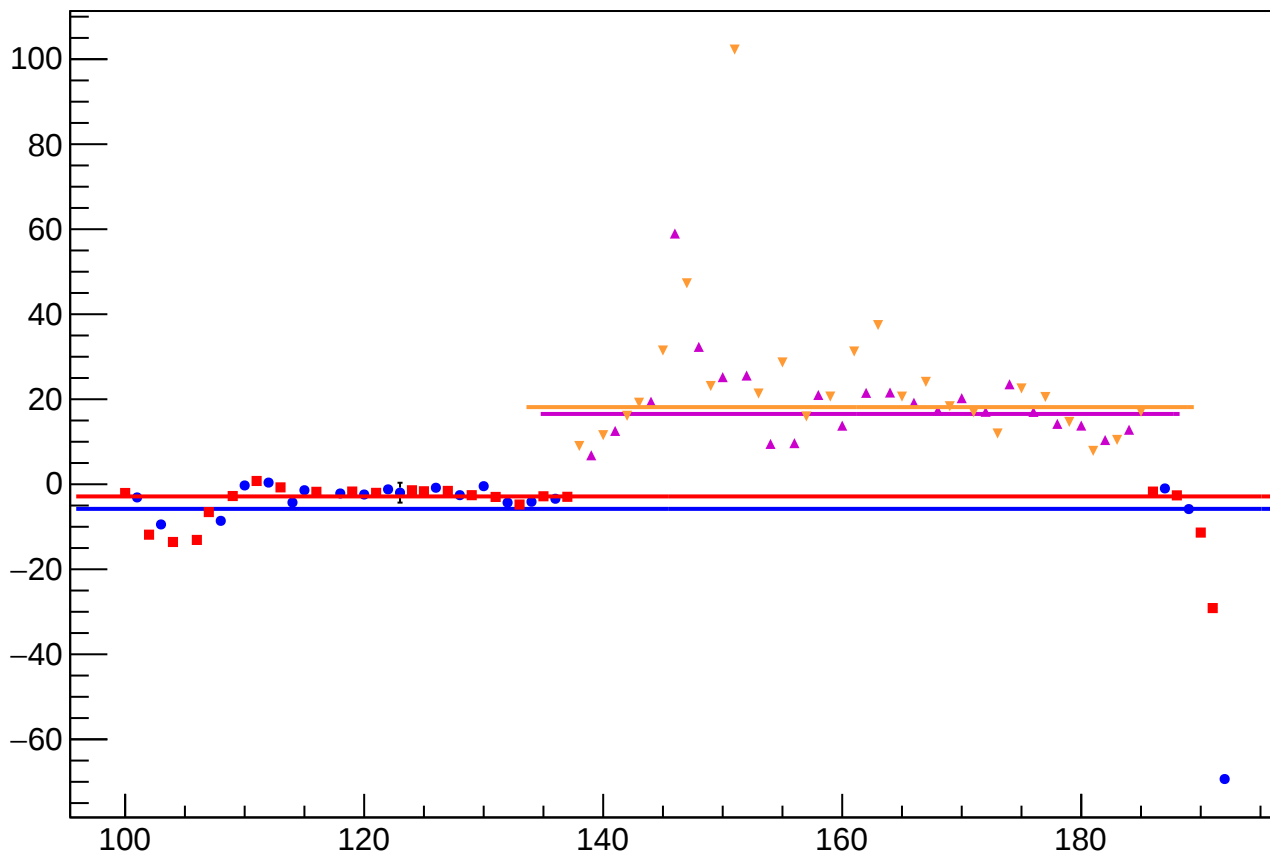
Right:  $0.778 \pm 0.040$   $\chi^2/\text{NDF}: 4880.9/42$

In:  $0.505 \pm 0.027$   $\chi^2/\text{NDF}: 9746.1/42$

Out:  $0.578 \pm 0.028$   $\chi^2/\text{NDF}: 8510.1/47$

All:  $0.541 \pm 0.019$   $\chi^2/\text{NDF}: 18259.7/90$

reg\_asym\_bcm\_an\_ds3\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-5.787 \pm 0.089$   $\chi^2/\text{NDF}: 25375.2/19$

Left Out:  $18.150 \pm 0.039$   $\chi^2/\text{NDF}: 77847.8/24$

Right Out:  $-2.859 \pm 0.060$   $\chi^2/\text{NDF}: 2624.4/22$

Left In:  $16.543 \pm 0.038$   $\chi^2/\text{NDF}: 40855.0/22$

Left:  $17.318 \pm 0.027$   $\chi^2/\text{NDF}: 119577.9/47$

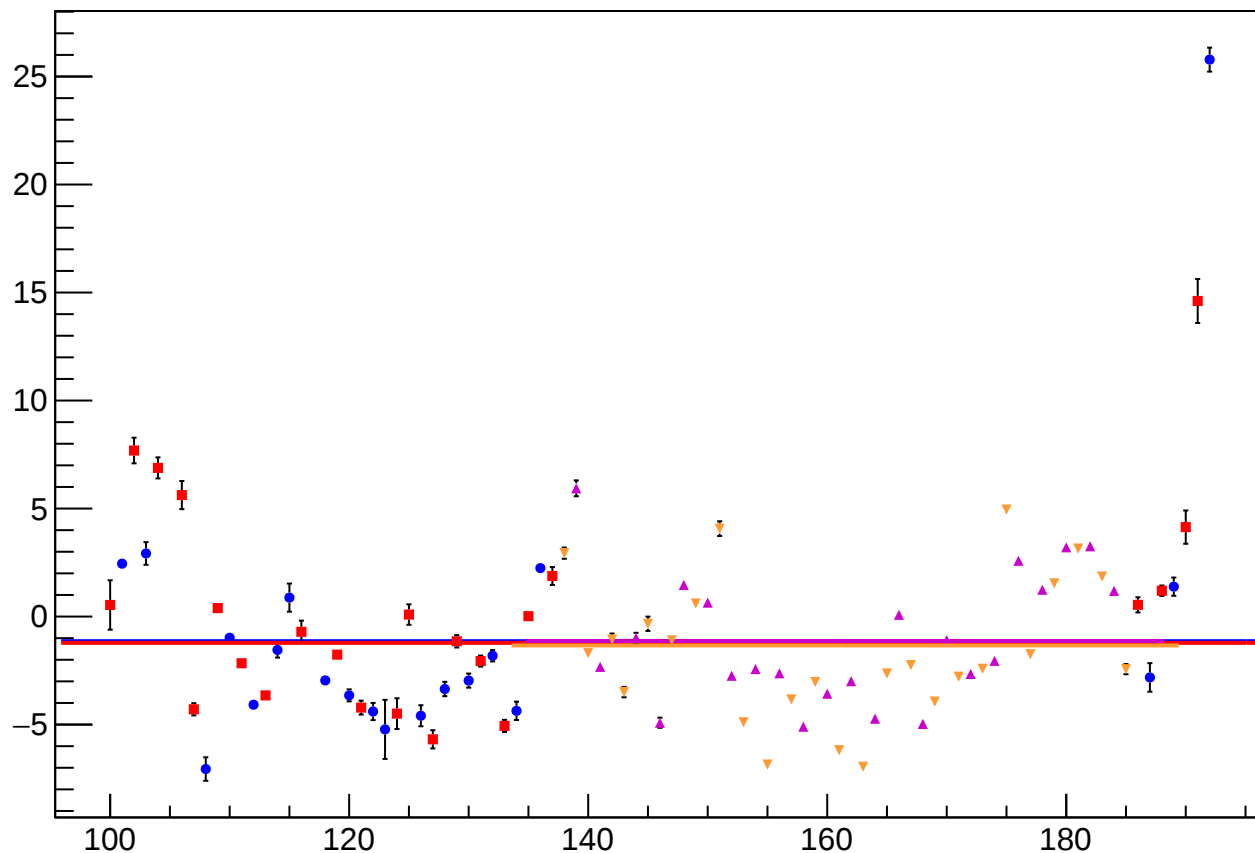
Right:  $-3.778 \pm 0.050$   $\chi^2/\text{NDF}: 28750.6/42$

In:  $13.106 \pm 0.035$   $\chi^2/\text{NDF}: 120063.3/42$

Out:  $11.867 \pm 0.033$   $\chi^2/\text{NDF}: 166842.5/47$

All:  $12.450 \pm 0.024$   $\chi^2/\text{NDF}: 287579.7/90$

reg\_asym\_bcm\_an\_ds3\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



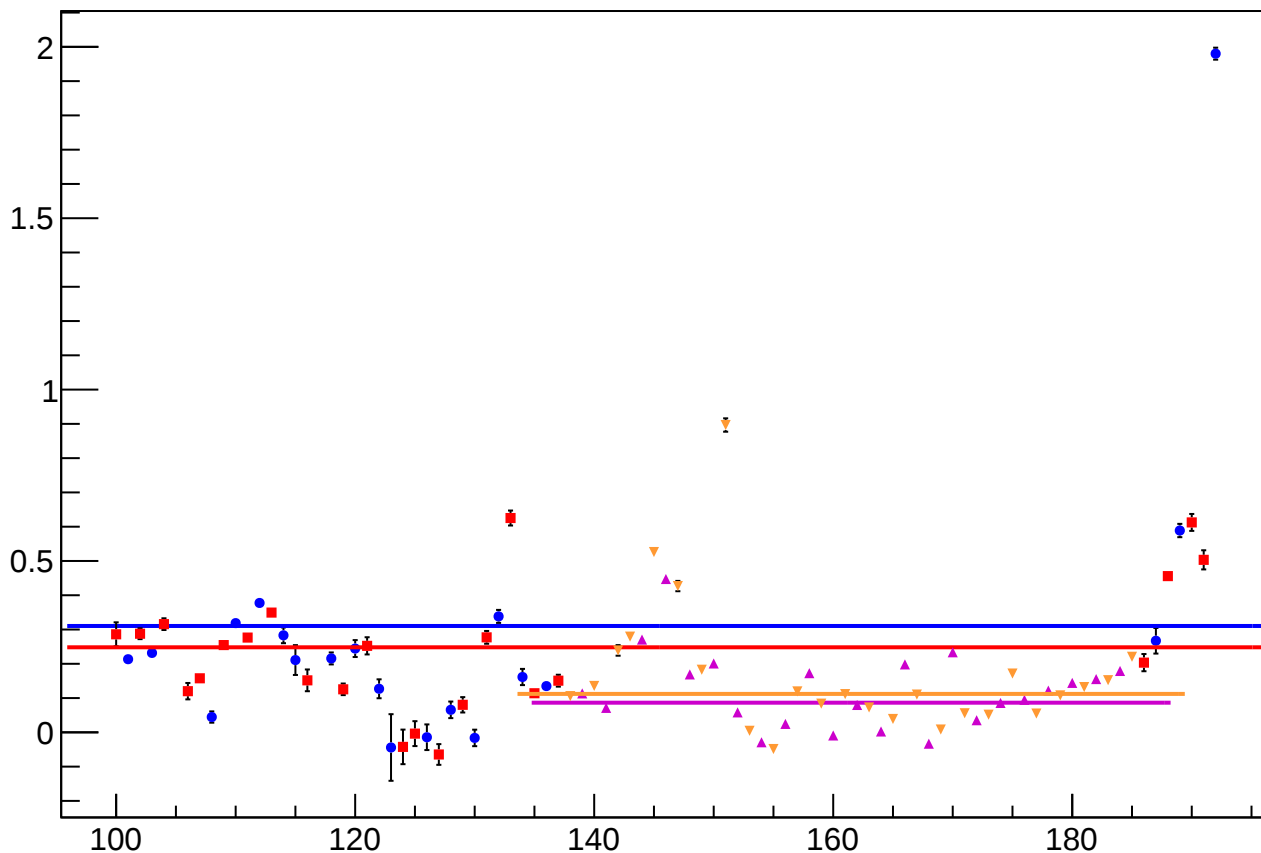
Right In:  $-1.140 \pm 0.069$   $\chi^2/\text{NDF}$ : 3712.9/19  
 Left Out:  $-1.338 \pm 0.036$   $\chi^2/\text{NDF}$ : 7943.1/24  
 Right Out:  $-1.217 \pm 0.062$   $\chi^2/\text{NDF}$ : 1945.9/22  
 Left In:  $-1.129 \pm 0.034$   $\chi^2/\text{NDF}$ : 6740.3/22

Left:  $-1.228 \pm 0.025$   $\chi^2/\text{NDF}$ : 14701.0/47  
 Right:  $-1.183 \pm 0.046$   $\chi^2/\text{NDF}$ : 5659.5/42

In:  $-1.131 \pm 0.031$   $\chi^2/\text{NDF}$ : 10453.1/42  
 Out:  $-1.307 \pm 0.031$   $\chi^2/\text{NDF}$ : 9891.8/47

All:  $-1.218 \pm 0.022$   $\chi^2/\text{NDF}$ : 20361.2/90

reg\_asym\_bcm\_an\_ds3\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.310 $\pm$ 0.004  $\chi^2$ /NDF: 10610.1/19

Left Out: 0.112 $\pm$ 0.002  $\chi^2$ /NDF:4503.9/24

Right Out: 0.248 $\pm$ 0.003  $\chi^2$ /NDF: 1669.7/22

Left In: 0.087 $\pm$ 0.002  $\chi^2$ /NDF:3655.4/22

Left: 0.098 $\pm$ 0.001  $\chi^2$ /NDF: 8295.3/47

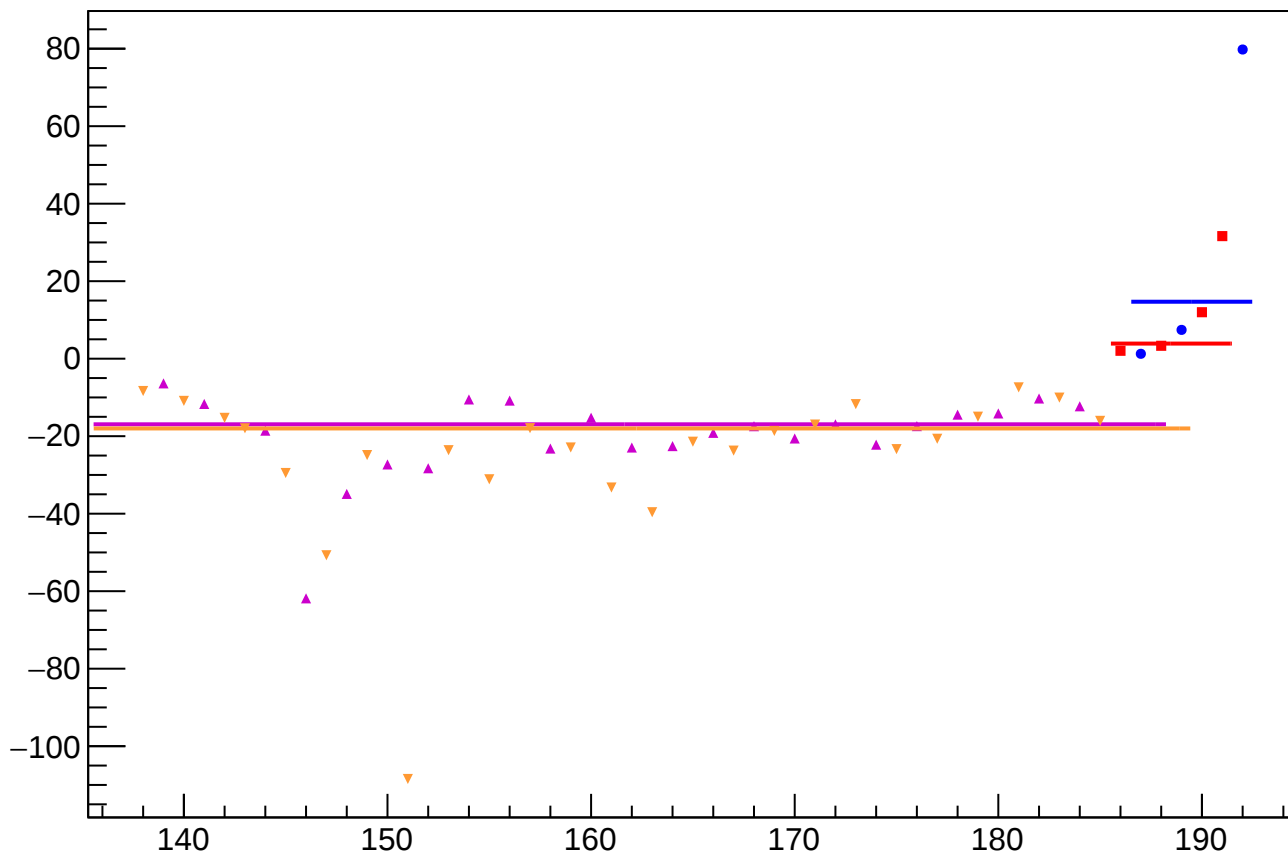
Right: 0.275 $\pm$ 0.003  $\chi^2$ /NDF: 12421.1/42

In: 0.115 $\pm$ 0.001  $\chi^2$ /NDF:17084.4/42

Out: 0.136 $\pm$ 0.001  $\chi^2$ /NDF:7453.6/47

All: 0.125 $\pm$ 0.001  $\chi^2$ /NDF: 24650.3/90

reg\_asym\_bcm\_an\_ds\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 14.699 $\pm$ 0.173  $\chi^2$ /NDF: 21937.8/2

Left Out: -18.005 $\pm$ 0.039  $\chi^2$ /NDF:88391.0/24

Right Out: 3.898 $\pm$ 0.091  $\chi^2$ /NDF: 1678.3/3

Left In: -16.934 $\pm$ 0.038  $\chi^2$ /NDF:44060.6/22

Left: -17.459 $\pm$ 0.027  $\chi^2$ /NDF: 132843.0/47

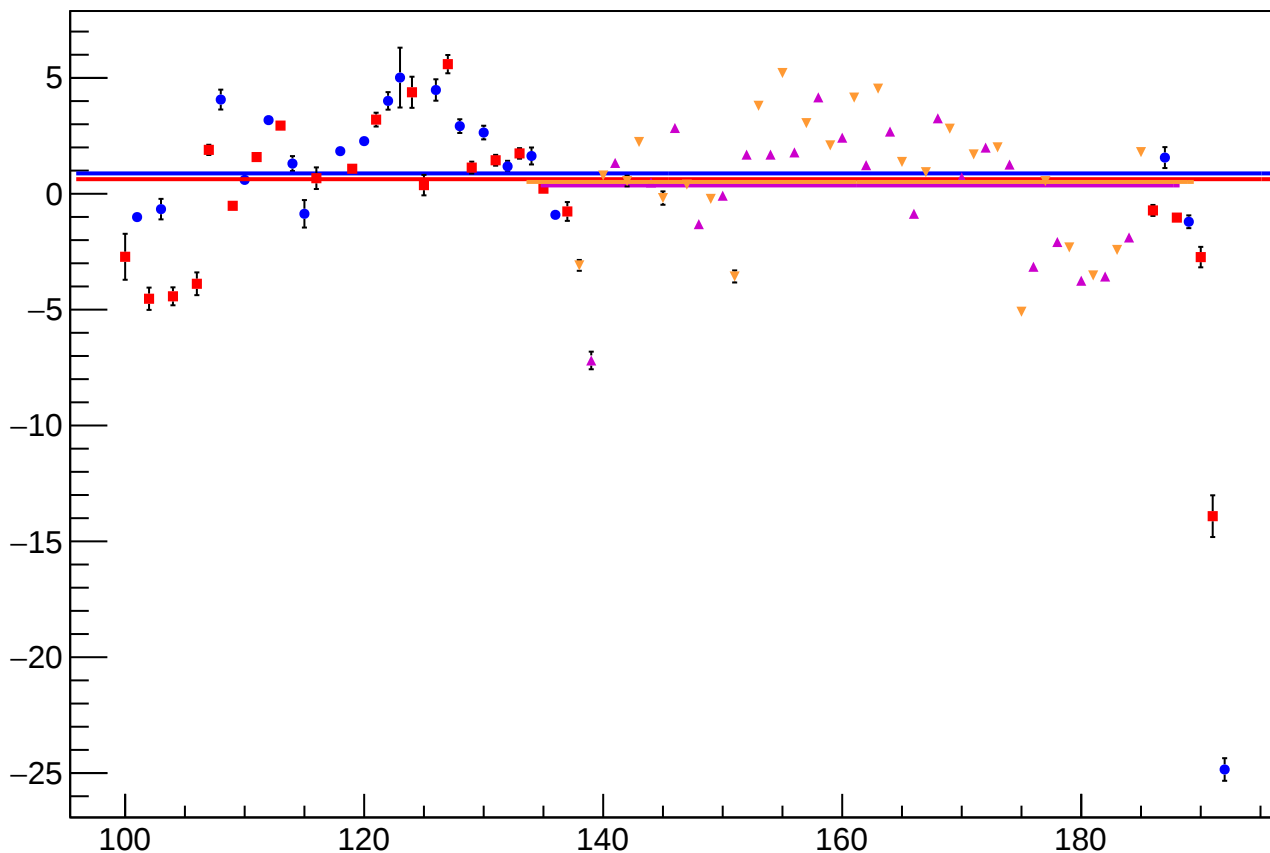
Right: 6.249 $\pm$ 0.081  $\chi^2$ /NDF: 26662.6/6

In: -15.486 $\pm$ 0.037  $\chi^2$ /NDF:97872.3/25

Out: -14.677 $\pm$ 0.036  $\chi^2$ /NDF:138884.5/28

All: -15.066 $\pm$ 0.026  $\chi^2$ /NDF: 237005.2/54

reg\_asym\_bcm\_an\_ds\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $0.879 \pm 0.059$   $\chi^2/\text{NDF}: 3537.9/19$

Left Out:  $0.511 \pm 0.032$   $\chi^2/\text{NDF}: 7070.4/24$

Right Out:  $0.630 \pm 0.053$   $\chi^2/\text{NDF}: 1456.9/22$

Left In:  $0.360 \pm 0.031$   $\chi^2/\text{NDF}: 6221.1/22$

Left:  $0.432 \pm 0.022$   $\chi^2/\text{NDF}: 13303.2/47$

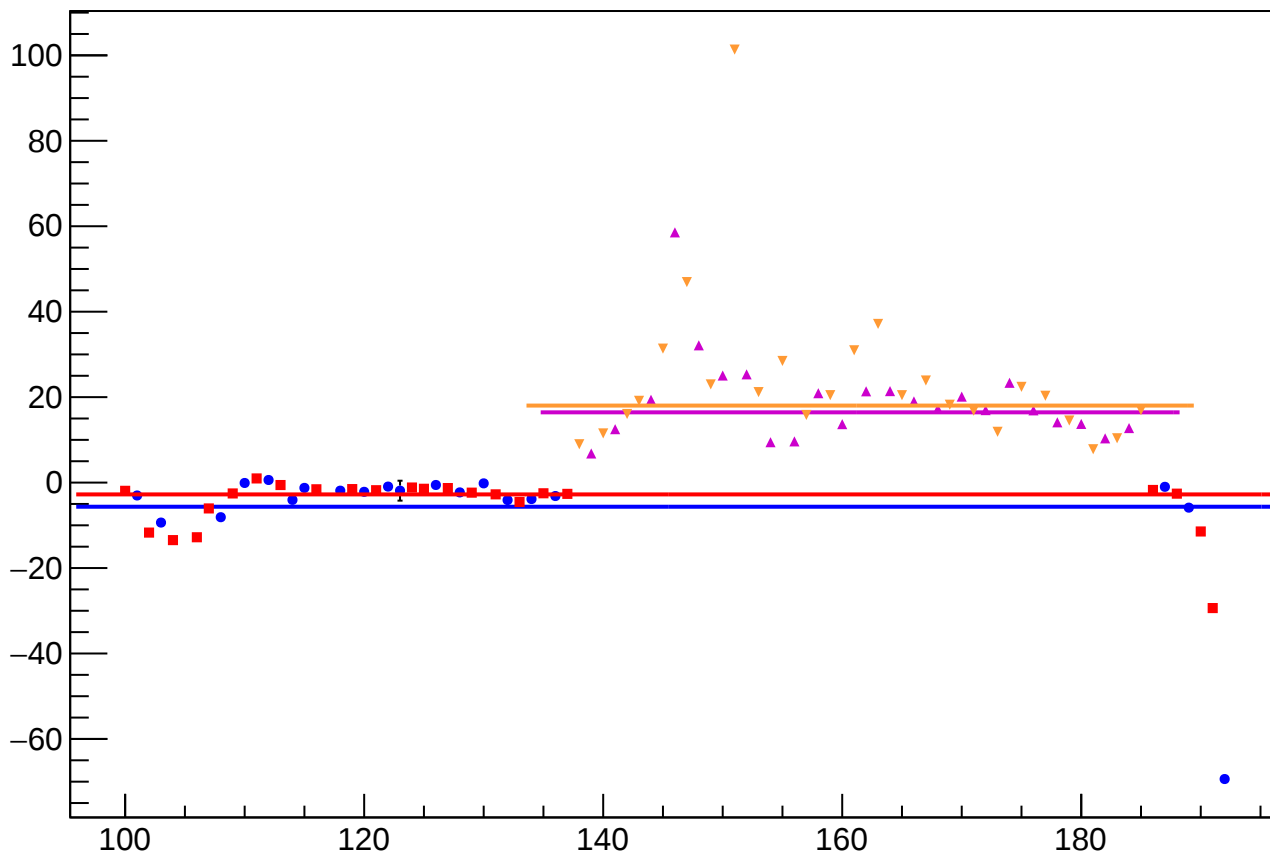
Right:  $0.739 \pm 0.039$   $\chi^2/\text{NDF}: 5004.7/42$

In:  $0.468 \pm 0.027$   $\chi^2/\text{NDF}: 9819.6/42$

Out:  $0.544 \pm 0.027$   $\chi^2/\text{NDF}: 8530.9/47$

All:  $0.506 \pm 0.019$   $\chi^2/\text{NDF}: 18354.4/90$

reg\_asym\_bcm\_an\_ds\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: -5.650+/-0.088  $\chi^2/\text{NDF}$ : 25716.4/19

Left Out: 18.027+/-0.039  $\chi^2/\text{NDF}$ : 77718.1/24

Right Out: -2.765+/-0.059  $\chi^2/\text{NDF}$ : 2690.4/22

Left In: 16.443+/-0.038  $\chi^2/\text{NDF}$ : 40780.6/22

Left: 17.207+/-0.027  $\chi^2/\text{NDF}$ : 119360.0/47

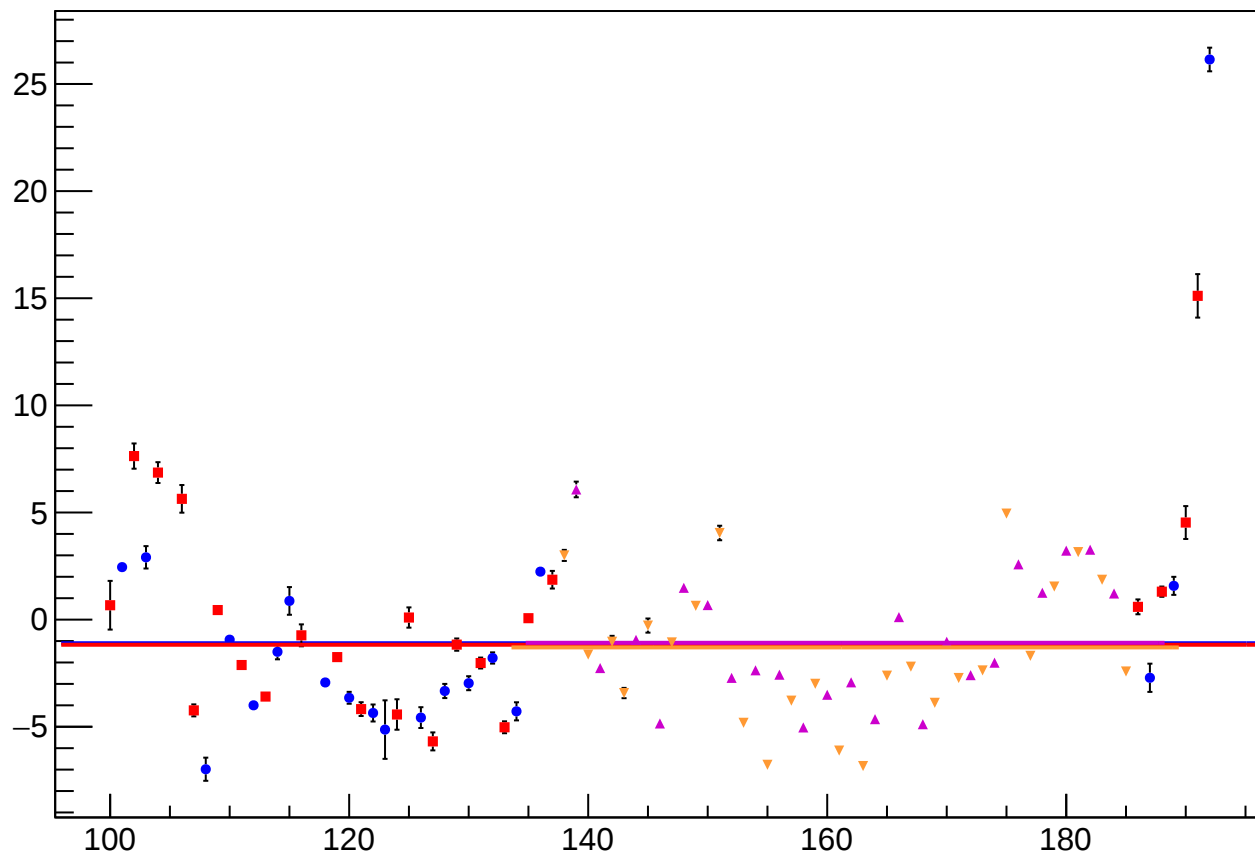
Right: -3.664+/-0.049  $\chi^2/\text{NDF}$ : 29144.2/42

In: 13.054+/-0.035  $\chi^2/\text{NDF}$ : 119711.4/42

Out: 11.789+/-0.032  $\chi^2/\text{NDF}$ : 166472.2/47

All: 12.383+/-0.024  $\chi^2/\text{NDF}$ : 286895.9/90

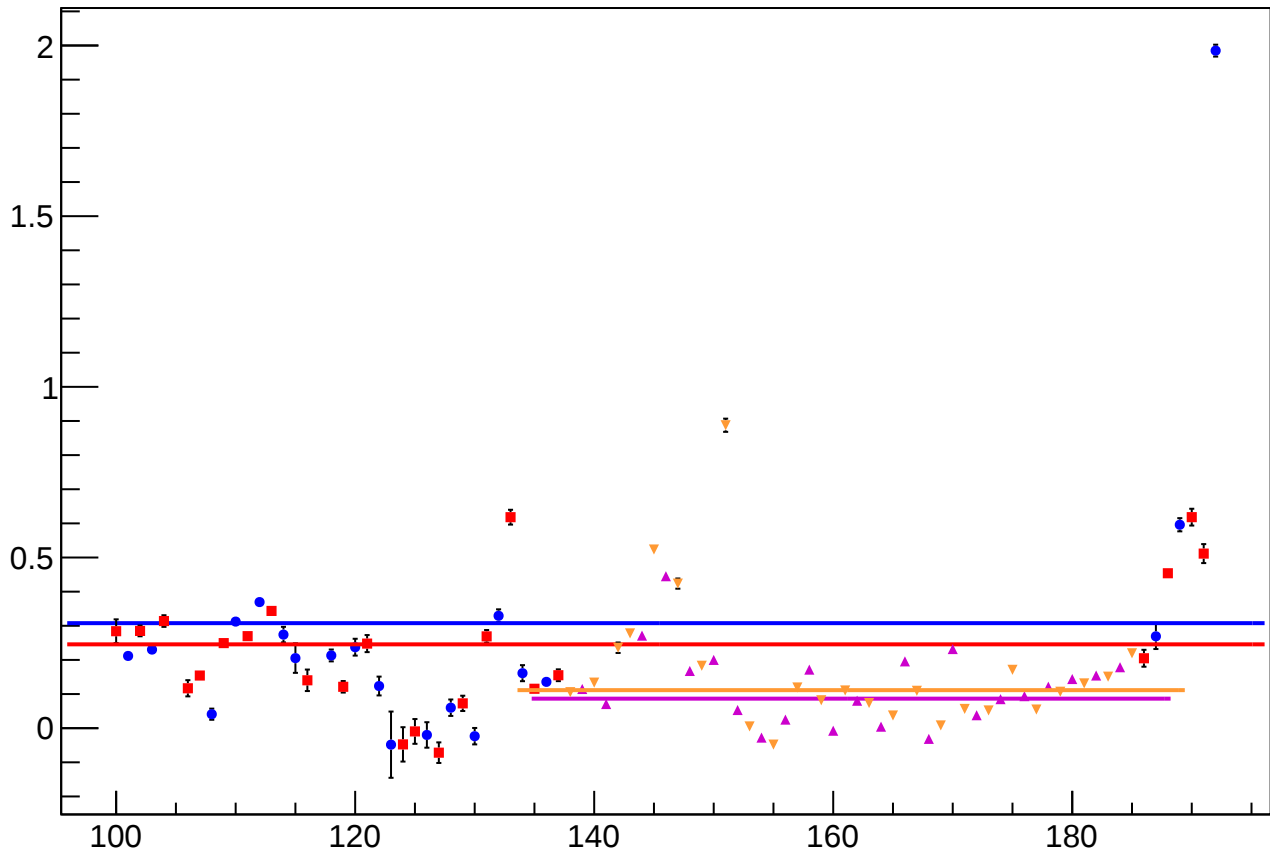
reg\_asym\_bcm\_an\_ds\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-1.102 \pm 0.069$   $\chi^2/\text{NDF}$ : 3789.0/19  
 Left Out:  $-1.297 \pm 0.036$   $\chi^2/\text{NDF}$ : 7925.1/24  
 Right Out:  $-1.172 \pm 0.062$   $\chi^2/\text{NDF}$ : 1983.7/22  
 Left In:  $-1.082 \pm 0.034$   $\chi^2/\text{NDF}$ : 6724.1/22

Left:  $-1.184 \pm 0.025$   $\chi^2/\text{NDF}$ : 14668.4/47  
 Right:  $-1.141 \pm 0.046$   $\chi^2/\text{NDF}$ : 5773.3/42  
 In:  $-1.086 \pm 0.030$   $\chi^2/\text{NDF}$ : 10513.2/42  
 Out:  $-1.266 \pm 0.031$   $\chi^2/\text{NDF}$ : 9911.9/47  
 All:  $-1.175 \pm 0.022$   $\chi^2/\text{NDF}$ : 20442.4/90

reg\_asym\_bcm\_an\_ds\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.308 $\pm$ 0.004  $\chi^2$ /NDF: 10775.0/19

Left Out: 0.111 $\pm$ 0.002  $\chi^2$ /NDF:4496.0/24

Right Out: 0.246 $\pm$ 0.003  $\chi^2$ /NDF: 1682.8/22

Left In: 0.087 $\pm$ 0.001  $\chi^2$ /NDF:3625.5/22

Left: 0.098 $\pm$ 0.001  $\chi^2$ /NDF: 8251.9/47

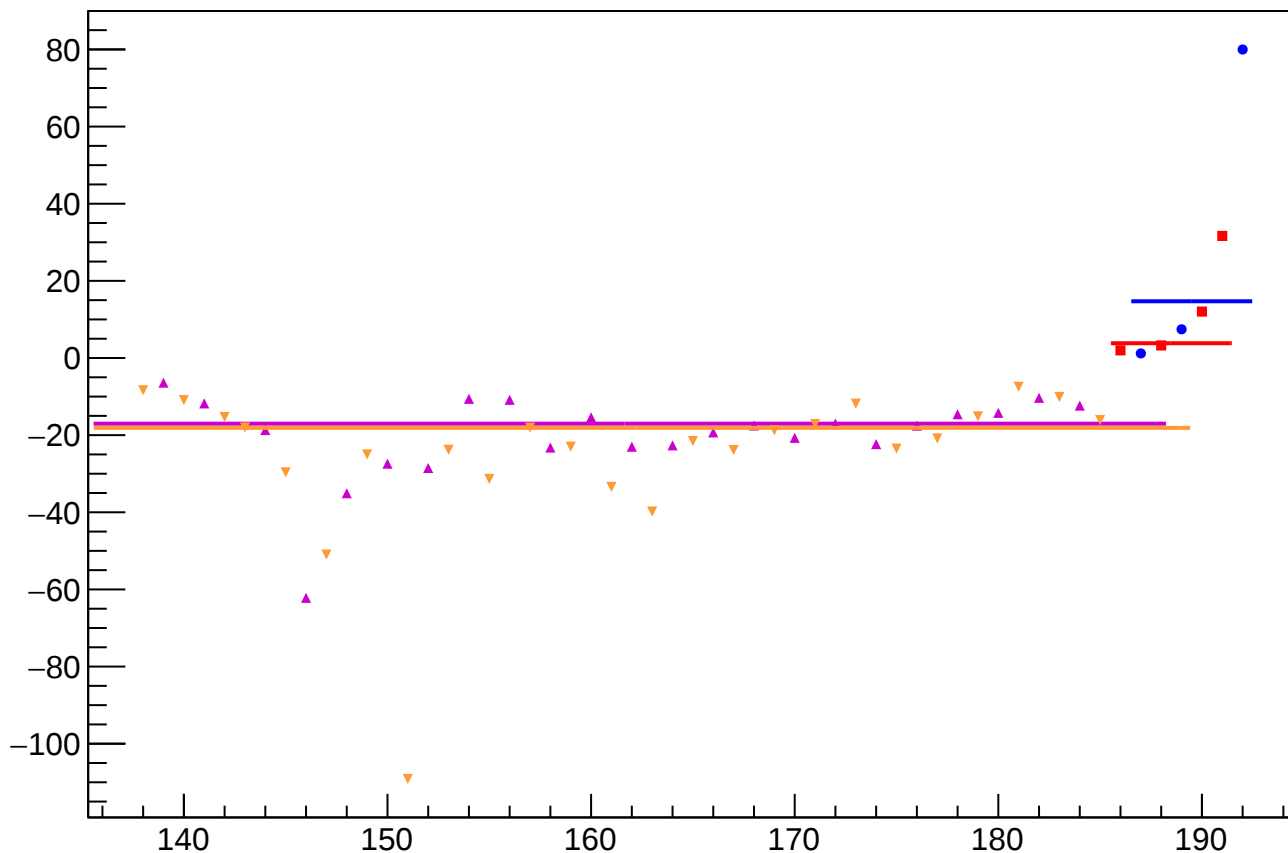
Right: 0.273 $\pm$ 0.003  $\chi^2$ /NDF: 12599.9/42

In: 0.115 $\pm$ 0.001  $\chi^2$ /NDF:17180.3/42

Out: 0.135 $\pm$ 0.001  $\chi^2$ /NDF:7439.4/47

All: 0.125 $\pm$ 0.001  $\chi^2$ /NDF: 24726.5/90

reg\_asym\_bcm\_an\_us\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 14.711 $\pm$ 0.174  $\chi^2$ /NDF: 21935.0/2

Left Out: -18.112 $\pm$ 0.039  $\chi^2$ /NDF:88529.7/24

Right Out: 3.829 $\pm$ 0.091  $\chi^2$ /NDF: 1687.6/3

Left In: -17.024 $\pm$ 0.038  $\chi^2$ /NDF:44141.8/22

Left: -17.557 $\pm$ 0.027  $\chi^2$ /NDF: 133072.9/47

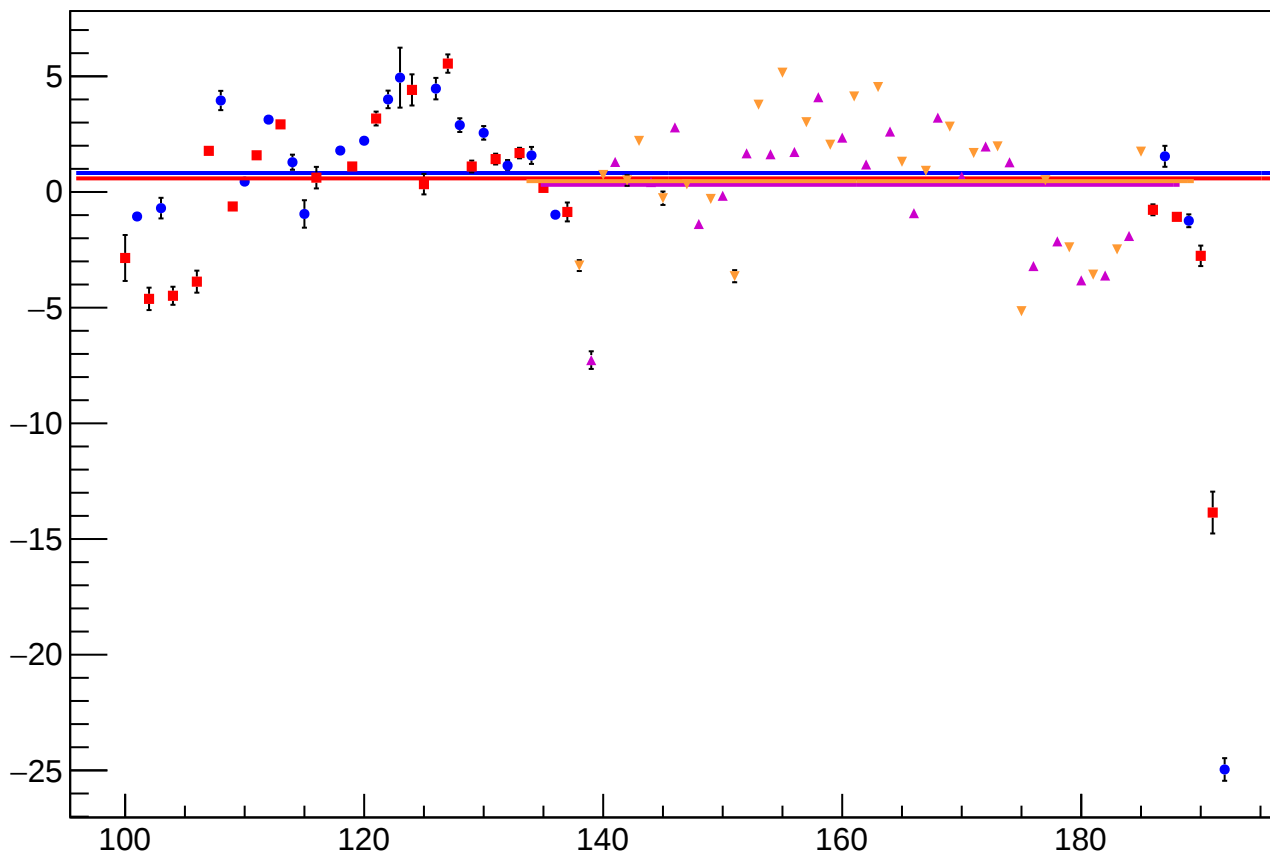
Right: 6.178 $\pm$ 0.081  $\chi^2$ /NDF: 26698.8/6

In: -15.571 $\pm$ 0.037  $\chi^2$ /NDF:97912.2/25

Out: -14.746 $\pm$ 0.036  $\chi^2$ /NDF:139261.4/28

All: -15.142 $\pm$ 0.026  $\chi^2$ /NDF: 237429.8/54

reg\_asym\_bcm\_an\_us\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $0.821 \pm 0.060$   $\chi^2/\text{NDF}: 3535.8/19$

Left Out:  $0.469 \pm 0.032$   $\chi^2/\text{NDF}: 7093.0/24$

Right Out:  $0.588 \pm 0.053$   $\chi^2/\text{NDF}: 1462.8/22$

Left In:  $0.311 \pm 0.031$   $\chi^2/\text{NDF}: 6183.1/22$

Left:  $0.386 \pm 0.022$   $\chi^2/\text{NDF}: 13288.8/47$

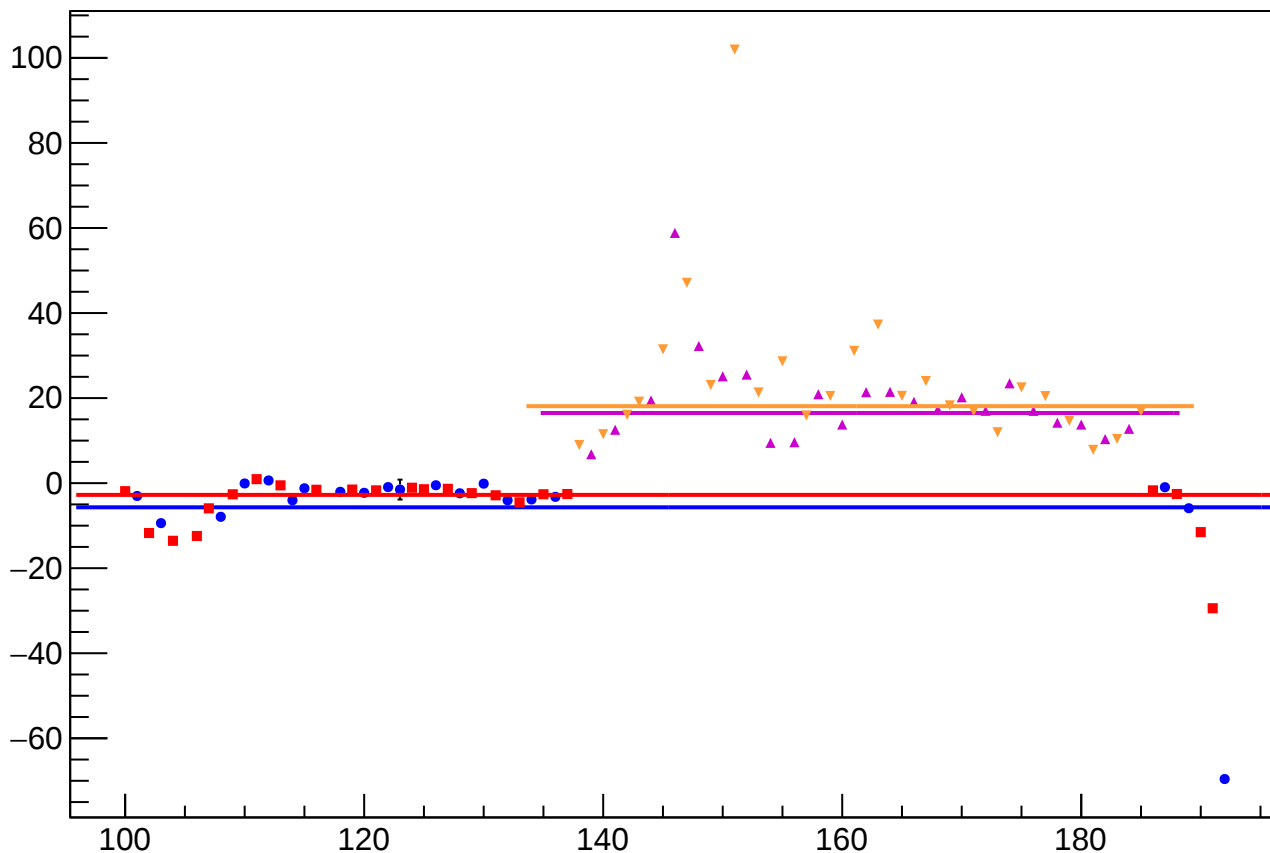
Right:  $0.690 \pm 0.039$   $\chi^2/\text{NDF}: 5007.3/42$

In:  $0.417 \pm 0.027$   $\chi^2/\text{NDF}: 9776.9/42$

Out:  $0.501 \pm 0.028$   $\chi^2/\text{NDF}: 8559.6/47$

All:  $0.459 \pm 0.019$   $\chi^2/\text{NDF}: 18341.2/90$

reg\_asym\_bcm\_an\_us\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-5.684 \pm 0.089$   $\chi^2/\text{NDF}: 25695.9/19$

Left Out:  $18.101 \pm 0.039$   $\chi^2/\text{NDF}: 77839.7/24$

Right Out:  $-2.761 \pm 0.059$   $\chi^2/\text{NDF}: 2687.5/22$

Left In:  $16.496 \pm 0.038$   $\chi^2/\text{NDF}: 40867.3/22$

Left:  $17.270 \pm 0.027$   $\chi^2/\text{NDF}: 119584.1/47$

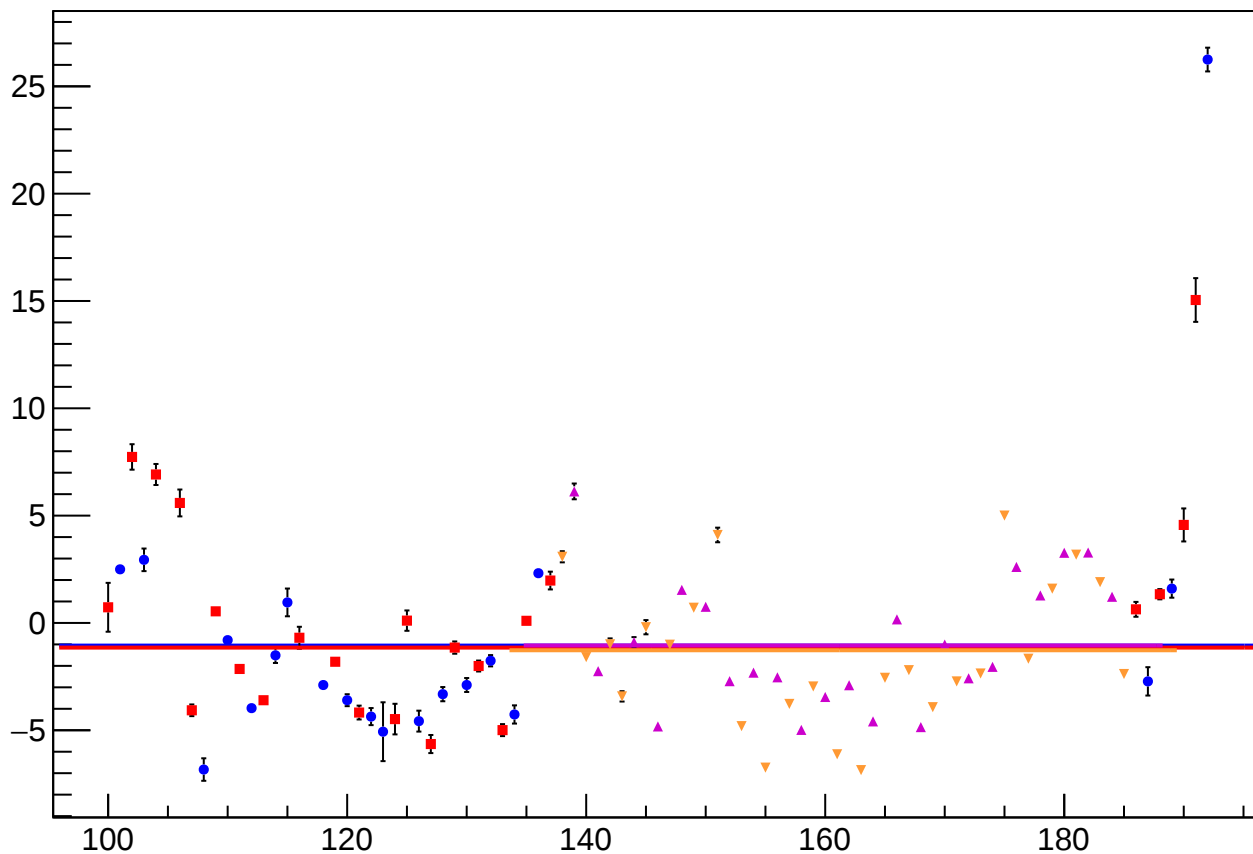
Right:  $-3.667 \pm 0.049$   $\chi^2/\text{NDF}: 29135.5/42$

In:  $13.099 \pm 0.035$   $\chi^2/\text{NDF}: 119704.5/42$

Out:  $11.811 \pm 0.033$   $\chi^2/\text{NDF}: 166849.7/47$

All:  $12.415 \pm 0.024$   $\chi^2/\text{NDF}: 287286.9/90$

reg\_asym\_bcm\_an\_us\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



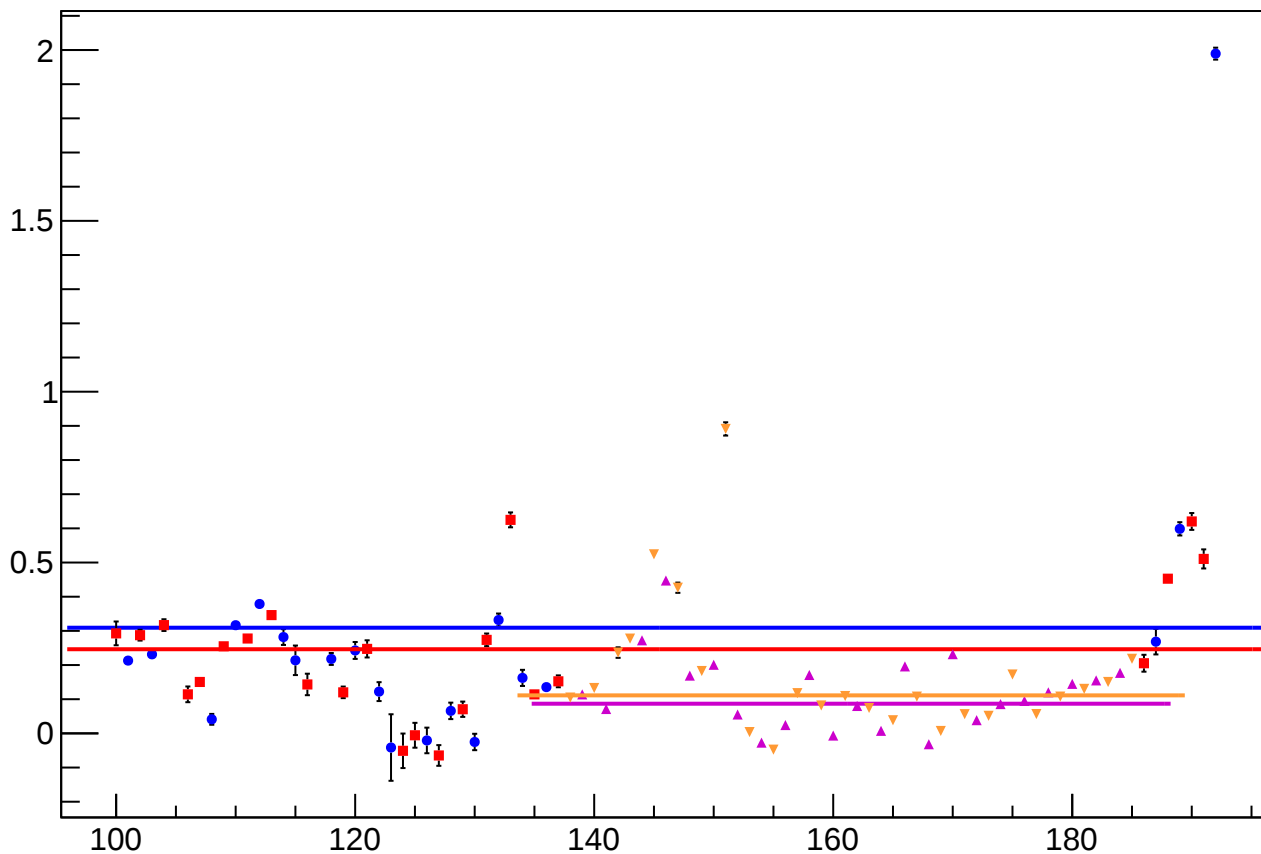
Right In:  $-1.056 \pm 0.069$   $\chi^2/\text{NDF}$ : 3788.2/19  
 Left Out:  $-1.273 \pm 0.036$   $\chi^2/\text{NDF}$ : 7951.6/24  
 Right Out:  $-1.149 \pm 0.062$   $\chi^2/\text{NDF}$ : 1991.6/22  
 Left In:  $-1.050 \pm 0.034$   $\chi^2/\text{NDF}$ : 6673.4/22

Left:  $-1.156 \pm 0.025$   $\chi^2/\text{NDF}$ : 14645.3/47  
 Right:  $-1.108 \pm 0.046$   $\chi^2/\text{NDF}$ : 5780.7/42

In:  $-1.051 \pm 0.031$   $\chi^2/\text{NDF}$ : 10461.6/42  
 Out:  $-1.242 \pm 0.031$   $\chi^2/\text{NDF}$ : 9946.2/47

All:  $-1.145 \pm 0.022$   $\chi^2/\text{NDF}$ : 20426.9/90

reg\_asym\_bcm\_an\_us\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.309+/-0.004  $\chi^2/\text{NDF}$ : 10774.4/19

Left Out: 0.111+/-0.002  $\chi^2/\text{NDF}$ : 4474.5/24

Right Out: 0.246+/-0.003  $\chi^2/\text{NDF}$ : 1708.7/22

Left In: 0.087+/-0.001  $\chi^2/\text{NDF}$ : 3598.5/22

Left: 0.098+/-0.001  $\chi^2/\text{NDF}$ : 8197.1/47

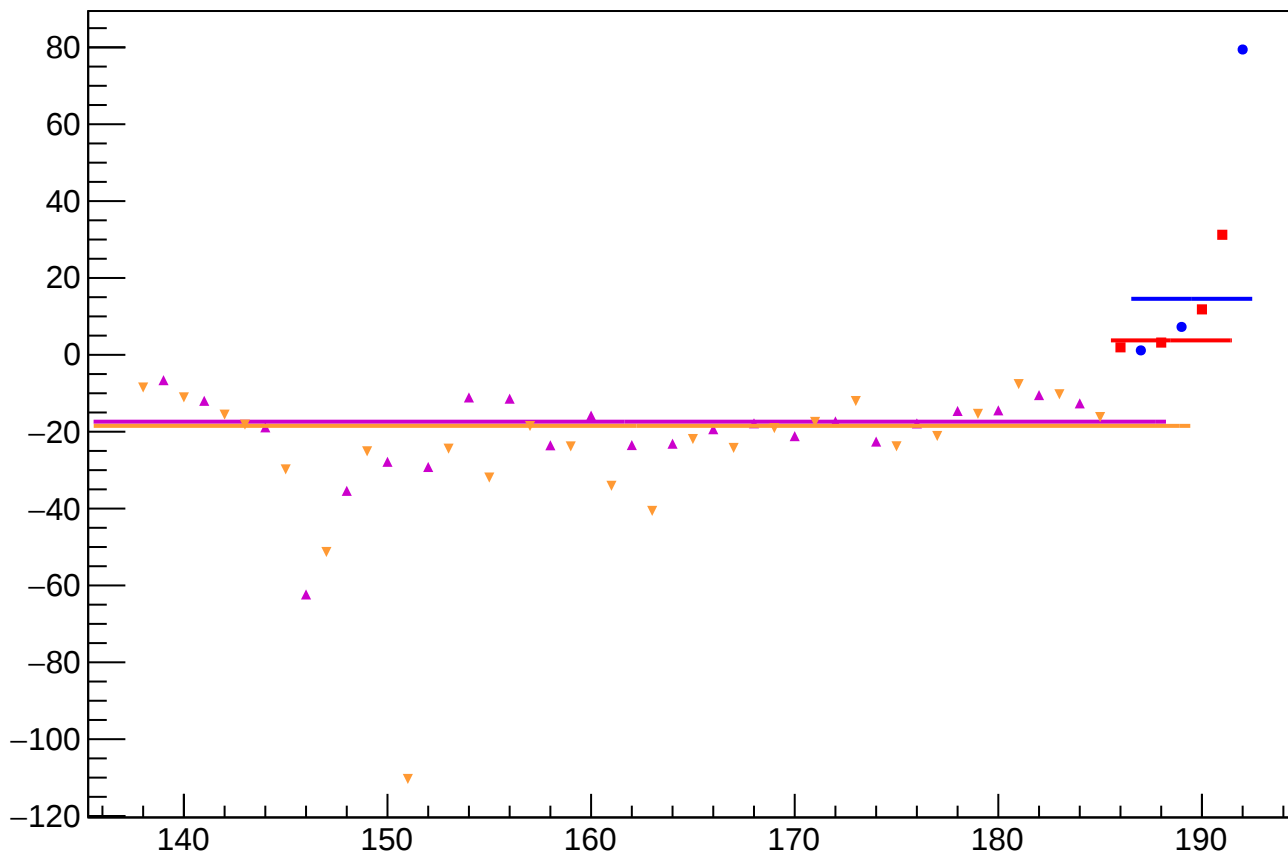
Right: 0.273+/-0.003  $\chi^2/\text{NDF}$ : 12628.5/42

In: 0.115+/-0.001  $\chi^2/\text{NDF}$ : 17163.5/42

Out: 0.135+/-0.001  $\chi^2/\text{NDF}$ : 7454.3/47

All: 0.125+/-0.001  $\chi^2/\text{NDF}$ : 24719.6/90

reg\_asym\_bcm\_dg\_ds\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 14.577+/-0.174  $\chi^2/\text{NDF}$ : 21562.9/2

Left Out: -18.479+/-0.040  $\chi^2/\text{NDF}$ : 87883.4/24

Right Out: 3.760+/-0.091  $\chi^2/\text{NDF}$ : 1630.4/3

Left In: -17.393+/-0.039  $\chi^2/\text{NDF}$ : 43178.9/22

Left: -17.926+/-0.028  $\chi^2/\text{NDF}$ : 131443.9/47

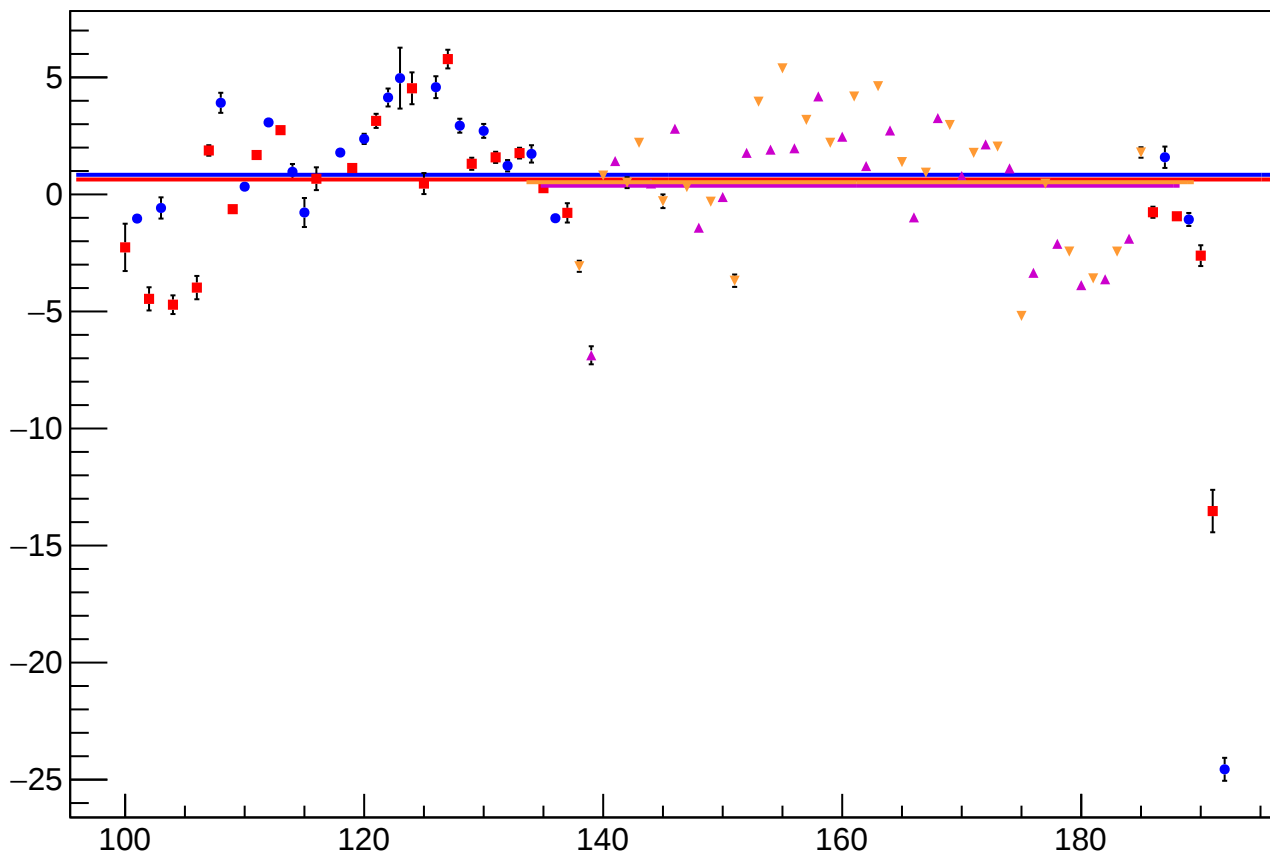
Right: 6.094+/-0.081  $\chi^2/\text{NDF}$ : 26213.2/6

In: -15.872+/-0.038  $\chi^2/\text{NDF}$ : 96776.5/25

Out: -14.952+/-0.036  $\chi^2/\text{NDF}$ : 139284.3/28

All: -15.392+/-0.026  $\chi^2/\text{NDF}$ : 236366.2/54

reg\_asym\_bcm\_dg\_ds\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $0.838 \pm 0.061$   $\chi^2/\text{NDF}: 3430.7/19$

Left Out:  $0.522 \pm 0.033$   $\chi^2/\text{NDF}: 7055.1/24$

Right Out:  $0.638 \pm 0.054$   $\chi^2/\text{NDF}: 1406.2/22$

Left In:  $0.371 \pm 0.031$   $\chi^2/\text{NDF}: 6217.4/22$

Left:  $0.443 \pm 0.023$   $\chi^2/\text{NDF}: 13283.4/47$

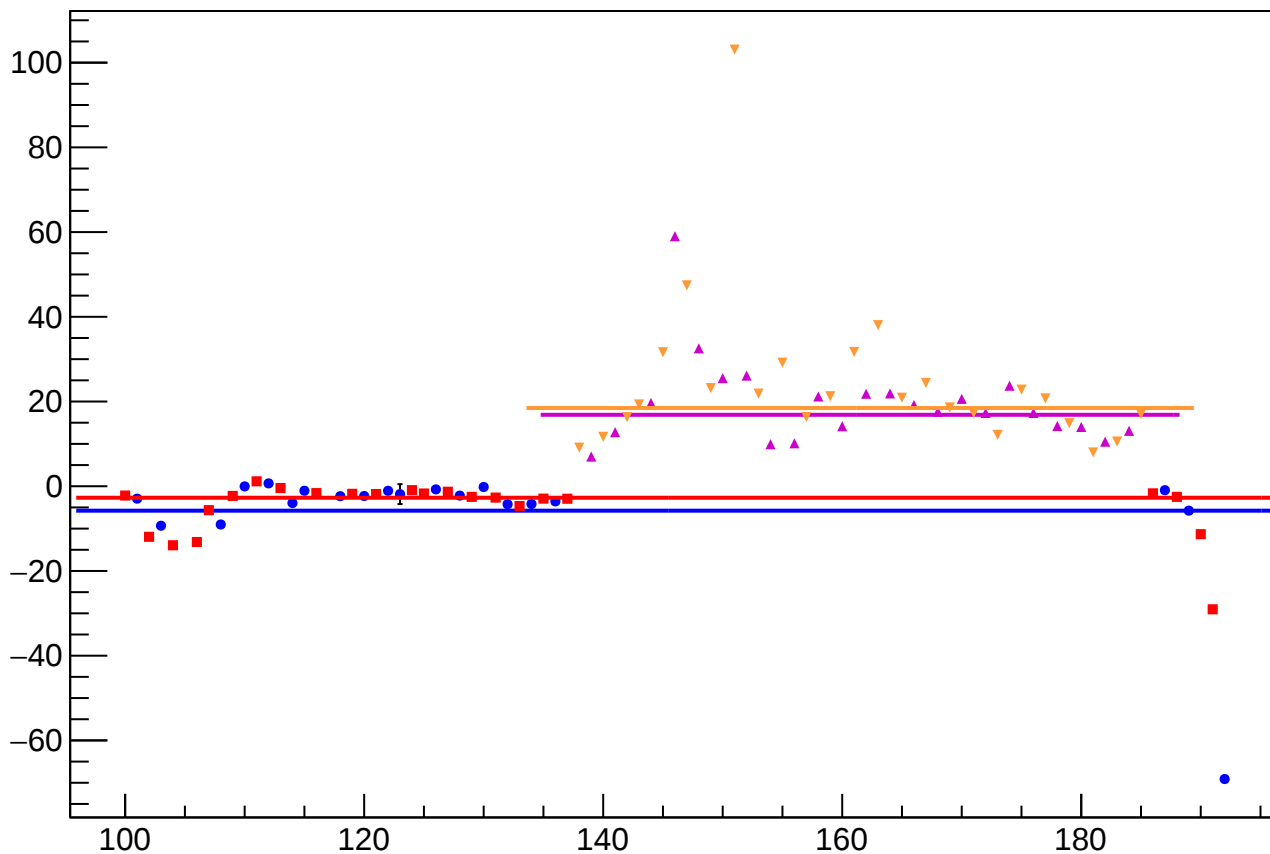
Right:  $0.726 \pm 0.040$   $\chi^2/\text{NDF}: 4843.0/42$

In:  $0.470 \pm 0.028$   $\chi^2/\text{NDF}: 9694.9/42$

Out:  $0.553 \pm 0.028$   $\chi^2/\text{NDF}: 8464.7/47$

All:  $0.511 \pm 0.020$   $\chi^2/\text{NDF}: 18164.0/90$

reg\_asym\_bcm\_dg\_ds\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-5.767 \pm 0.090$   $\chi^2/\text{NDF}: 25180.5/19$

Left Out:  $18.467 \pm 0.040$   $\chi^2/\text{NDF}: 77226.7/24$

Right Out:  $-2.713 \pm 0.060$   $\chi^2/\text{NDF}: 2648.3/22$

Left In:  $16.867 \pm 0.039$   $\chi^2/\text{NDF}: 39779.0/22$

Left:  $17.640 \pm 0.028$   $\chi^2/\text{NDF}: 117837.8/47$

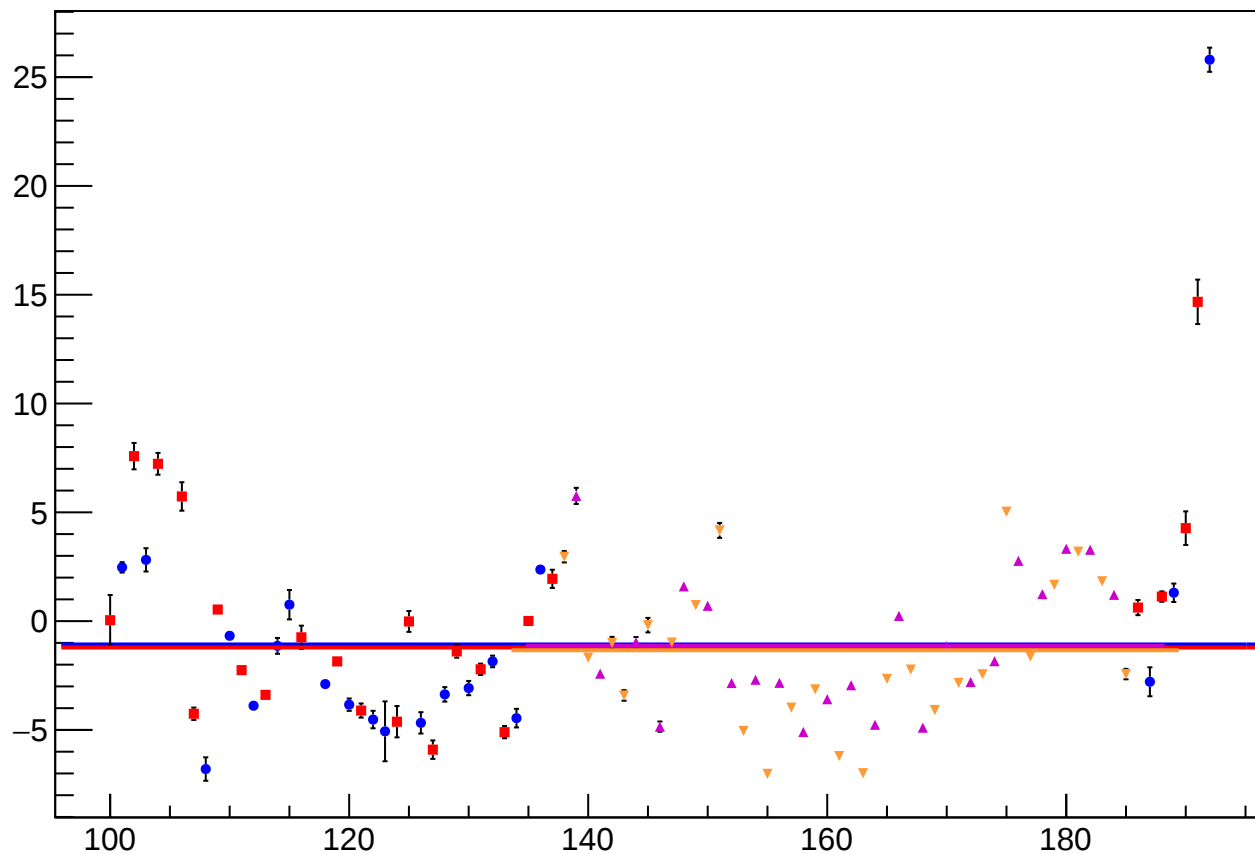
Right:  $-3.656 \pm 0.050$   $\chi^2/\text{NDF}: 28630.9/42$

In:  $13.332 \pm 0.035$   $\chi^2/\text{NDF}: 118750.7/42$

Out:  $11.962 \pm 0.033$   $\chi^2/\text{NDF}: 166481.0/47$

All:  $12.603 \pm 0.024$   $\chi^2/\text{NDF}: 286027.5/90$

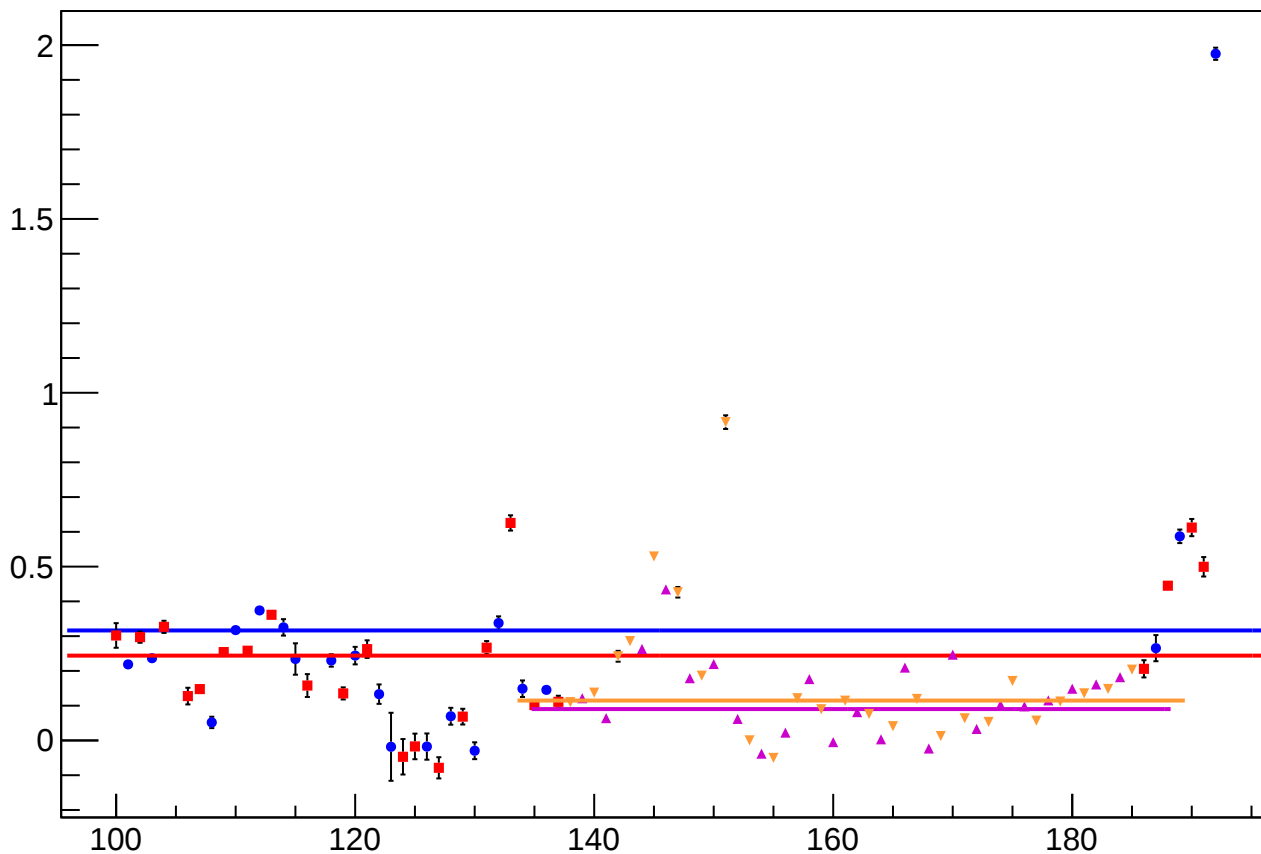
reg\_asym\_bcm\_dg\_ds\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-1.072 \pm 0.071$   $\chi^2/\text{NDF}$ : 3681.2/19  
 Left Out:  $-1.340 \pm 0.037$   $\chi^2/\text{NDF}$ : 7907.4/24  
 Right Out:  $-1.210 \pm 0.063$   $\chi^2/\text{NDF}$ : 1921.8/22  
 Left In:  $-1.132 \pm 0.035$   $\chi^2/\text{NDF}$ : 6708.5/22

Left:  $-1.231 \pm 0.025$   $\chi^2/\text{NDF}$ : 14632.9/47  
 Right:  $-1.149 \pm 0.047$   $\chi^2/\text{NDF}$ : 5605.1/42  
 In:  $-1.120 \pm 0.031$   $\chi^2/\text{NDF}$ : 10390.3/42  
 Out:  $-1.307 \pm 0.032$   $\chi^2/\text{NDF}$ : 9832.3/47  
 All:  $-1.213 \pm 0.022$   $\chi^2/\text{NDF}$ : 20240.3/90

reg\_asym\_bcm\_dg\_ds\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.316 $\pm$ 0.004  $\chi^2$ /NDF: 10428.0/19

Left Out: 0.115 $\pm$ 0.002  $\chi^2$ /NDF:4431.9/24

Right Out: 0.244 $\pm$ 0.003  $\chi^2$ /NDF: 1742.2/22

Left In: 0.090 $\pm$ 0.002  $\chi^2$ /NDF:3676.5/22

Left: 0.102 $\pm$ 0.001  $\chi^2$ /NDF: 8228.2/47

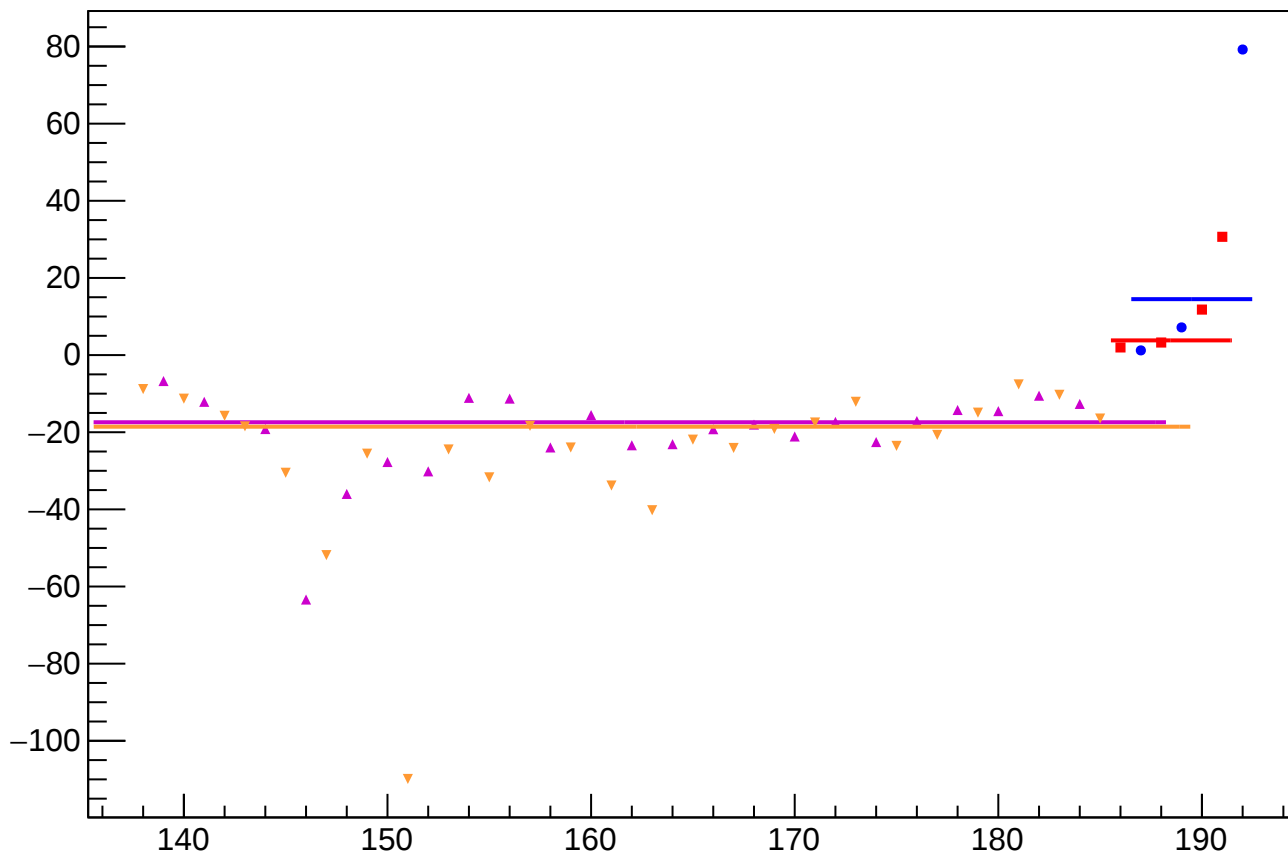
Right: 0.275 $\pm$ 0.003  $\chi^2$ /NDF: 12356.0/42

In: 0.119 $\pm$ 0.001  $\chi^2$ /NDF:16892.4/42

Out: 0.138 $\pm$ 0.001  $\chi^2$ /NDF:7294.4/47

All: 0.128 $\pm$ 0.001  $\chi^2$ /NDF: 24268.8/90

reg\_asym\_bcm\_dg\_us\_diff\_bpm1X\_slope vs Slug, Sign Corrected



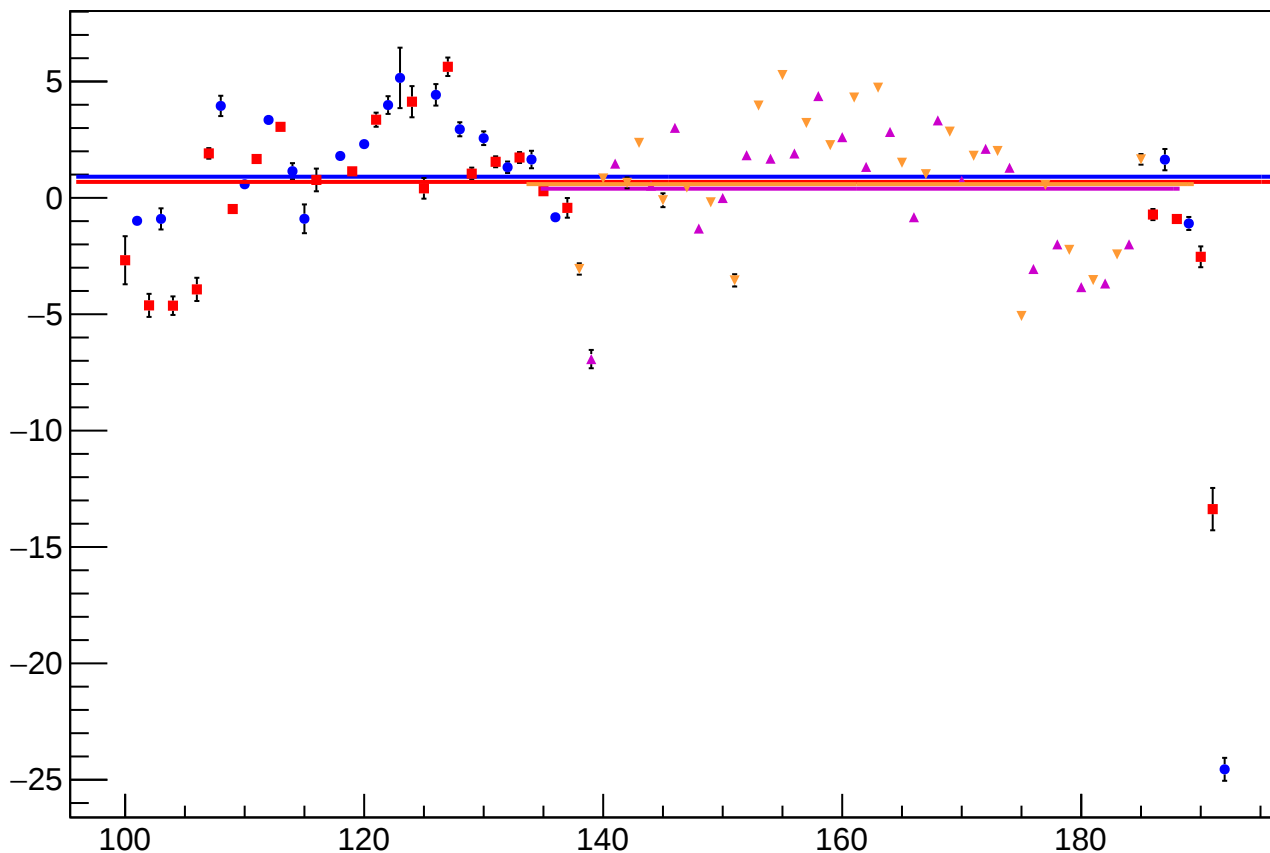
Right In:  $14.501 \pm 0.175$   $\chi^2/\text{NDF}: 21235.1/2$   
 Left Out:  $-18.566 \pm 0.040$   $\chi^2/\text{NDF}: 86389.6/24$   
 Right Out:  $3.809 \pm 0.093$   $\chi^2/\text{NDF}: 1559.6/3$   
 Left In:  $-17.414 \pm 0.039$   $\chi^2/\text{NDF}: 43504.1/22$

Left:  $-17.979 \pm 0.028$   $\chi^2/\text{NDF}: 130314.7/47$   
 Right:  $6.144 \pm 0.082$   $\chi^2/\text{NDF}: 25711.5/6$

In:  $-15.882 \pm 0.038$   $\chi^2/\text{NDF}: 96392.7/25$   
 Out:  $-15.027 \pm 0.037$   $\chi^2/\text{NDF}: 137202.6/28$

All:  $-15.437 \pm 0.027$   $\chi^2/\text{NDF}: 233854.3/54$

reg\_asym\_bcm\_dg\_us\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $0.909 \pm 0.061$   $\chi^2/\text{NDF}: 3387.1/19$

Left Out:  $0.591 \pm 0.033$   $\chi^2/\text{NDF}: 6796.5/24$

Right Out:  $0.686 \pm 0.054$   $\chi^2/\text{NDF}: 1387.1/22$

Left In:  $0.394 \pm 0.032$   $\chi^2/\text{NDF}: 6059.8/22$

Left:  $0.488 \pm 0.023$   $\chi^2/\text{NDF}: 12874.6/47$

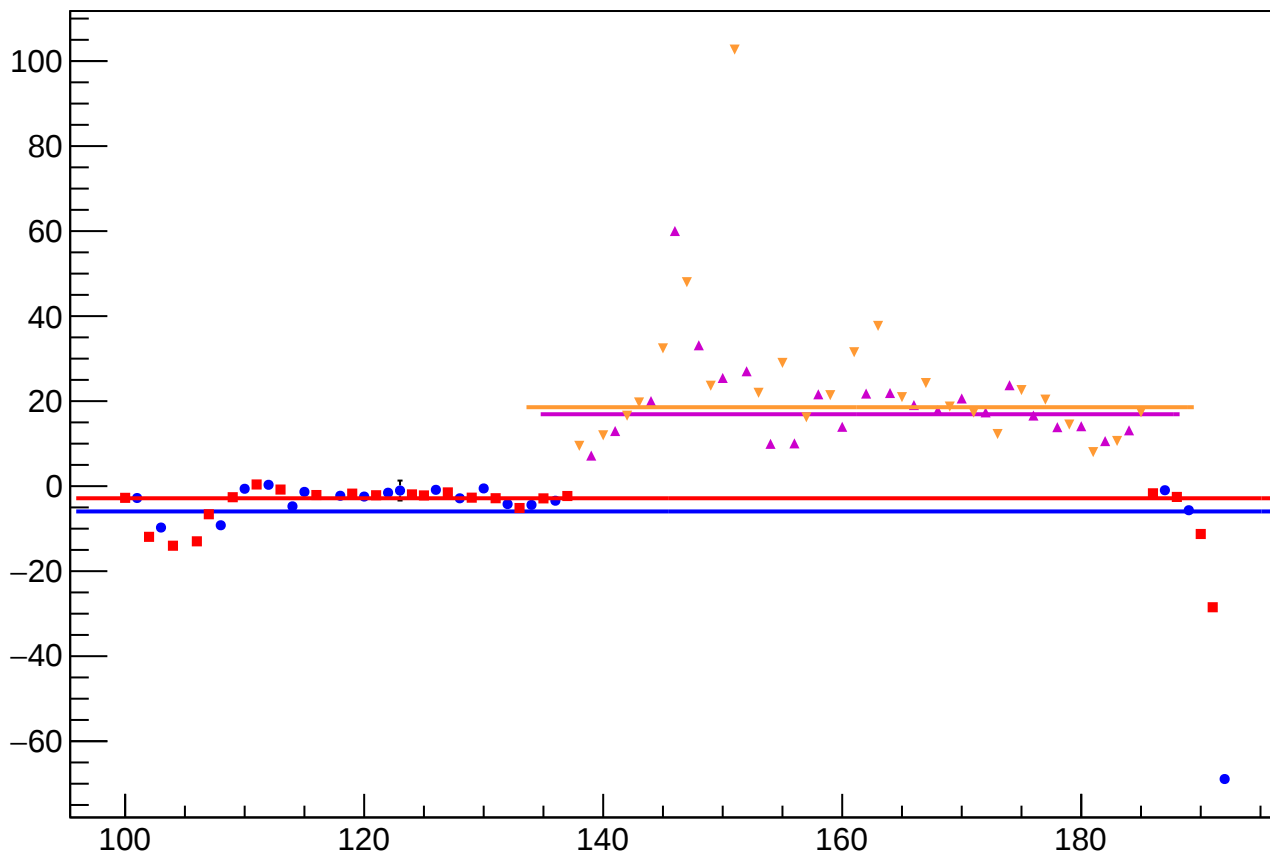
Right:  $0.784 \pm 0.041$   $\chi^2/\text{NDF}: 4781.6/42$

In:  $0.503 \pm 0.028$   $\chi^2/\text{NDF}: 9502.7/42$

Out:  $0.617 \pm 0.028$   $\chi^2/\text{NDF}: 8185.9/47$

All:  $0.559 \pm 0.020$   $\chi^2/\text{NDF}: 17696.7/90$

reg\_asym\_bcm\_dg\_us\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-5.948 \pm 0.091$   $\chi^2/\text{NDF}$ : 24563.1/19

Left Out:  $18.573 \pm 0.040$   $\chi^2/\text{NDF}$ : 76029.9/24

Right Out:  $-2.849 \pm 0.061$   $\chi^2/\text{NDF}$ : 2478.3/22

Left In:  $16.919 \pm 0.039$   $\chi^2/\text{NDF}$ : 40154.5/22

Left:  $17.718 \pm 0.028$   $\chi^2/\text{NDF}$ : 117057.3/47

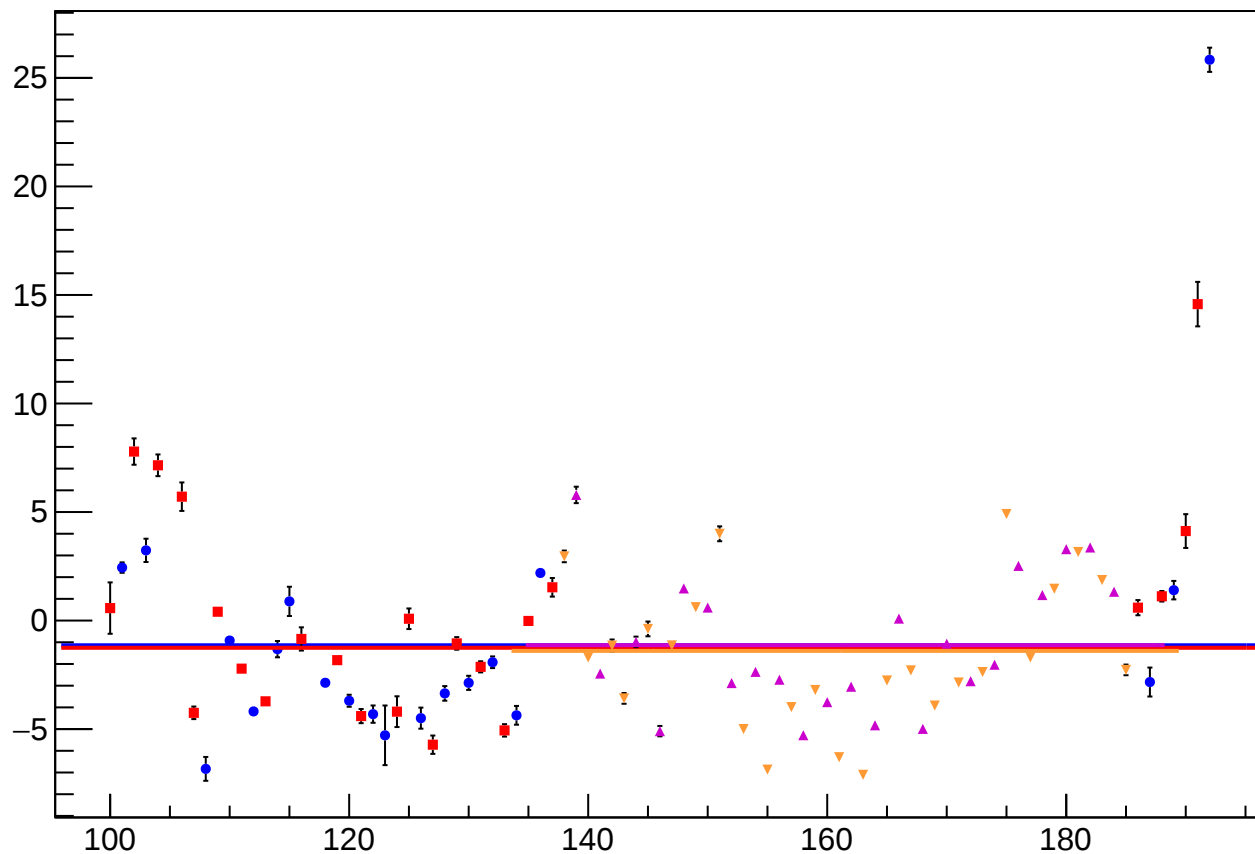
Right:  $-3.812 \pm 0.051$   $\chi^2/\text{NDF}$ : 27848.0/42

In:  $13.359 \pm 0.036$   $\chi^2/\text{NDF}$ : 118487.7/42

Out:  $12.046 \pm 0.034$   $\chi^2/\text{NDF}$ : 164763.2/47

All:  $12.662 \pm 0.024$   $\chi^2/\text{NDF}$ : 283967.5/90

reg\_asym\_bcm\_dg\_us\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-1.138 \pm 0.071$   $\chi^2/\text{NDF}$ : 3624.2/19

Left Out:  $-1.396 \pm 0.037$   $\chi^2/\text{NDF}$ : 7651.5/24

Right Out:  $-1.254 \pm 0.064$   $\chi^2/\text{NDF}$ : 1887.8/22

Left In:  $-1.135 \pm 0.035$   $\chi^2/\text{NDF}$ : 6597.7/22

Left:  $-1.259 \pm 0.025$   $\chi^2/\text{NDF}$ : 14275.6/47

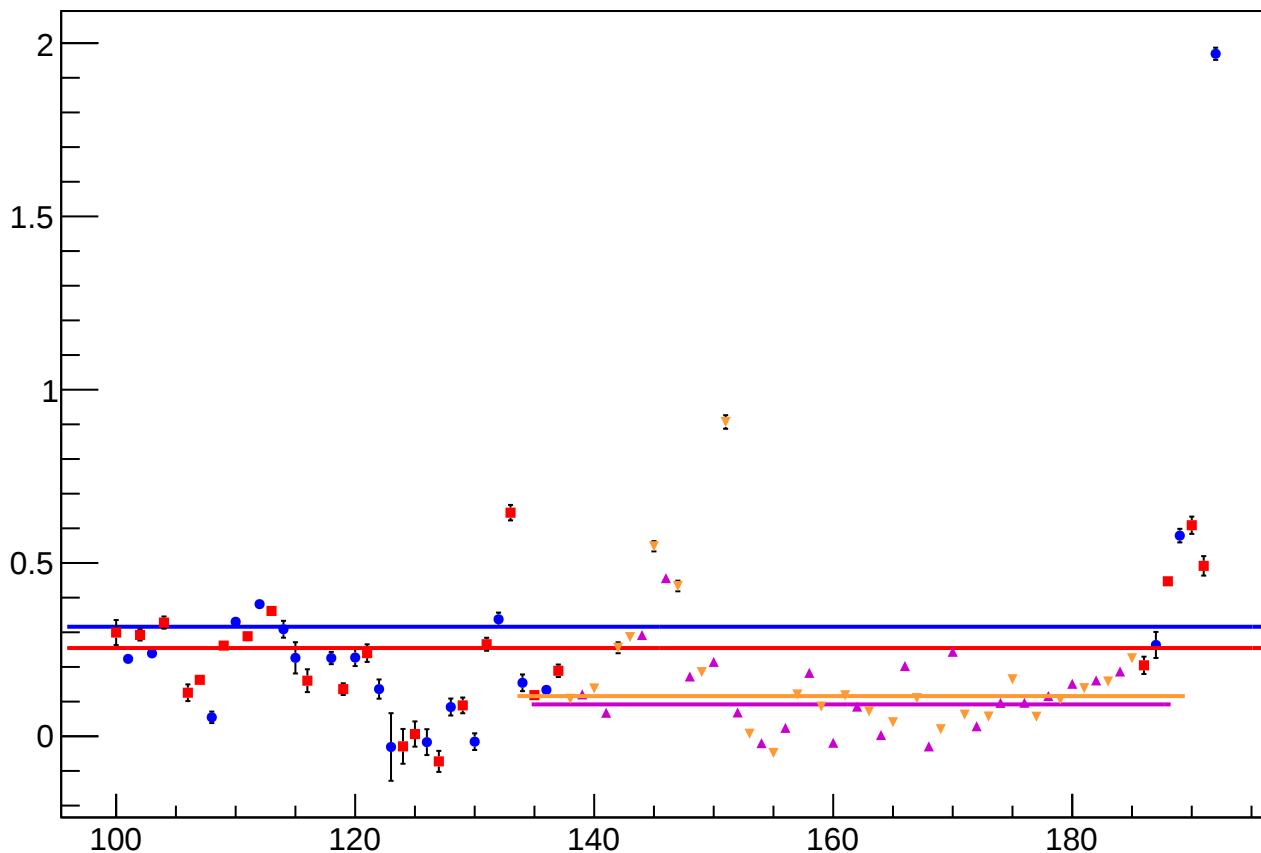
Right:  $-1.203 \pm 0.048$   $\chi^2/\text{NDF}$ : 5513.5/42

In:  $-1.135 \pm 0.032$   $\chi^2/\text{NDF}$ : 10221.9/42

Out:  $-1.361 \pm 0.032$   $\chi^2/\text{NDF}$ : 9543.0/47

All:  $-1.247 \pm 0.022$   $\chi^2/\text{NDF}$ : 19790.1/90

reg\_asym\_bcm\_dg\_us\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.316 $\pm$ 0.004  $\chi^2$ /NDF: 10264.8/19

Left Out: 0.116 $\pm$ 0.002  $\chi^2$ /NDF:4463.0/24

Right Out: 0.255 $\pm$ 0.004  $\chi^2$ /NDF: 1574.2/22

Left In: 0.092 $\pm$ 0.002  $\chi^2$ /NDF:3631.4/22

Left: 0.103 $\pm$ 0.001  $\chi^2$ /NDF: 8207.3/47

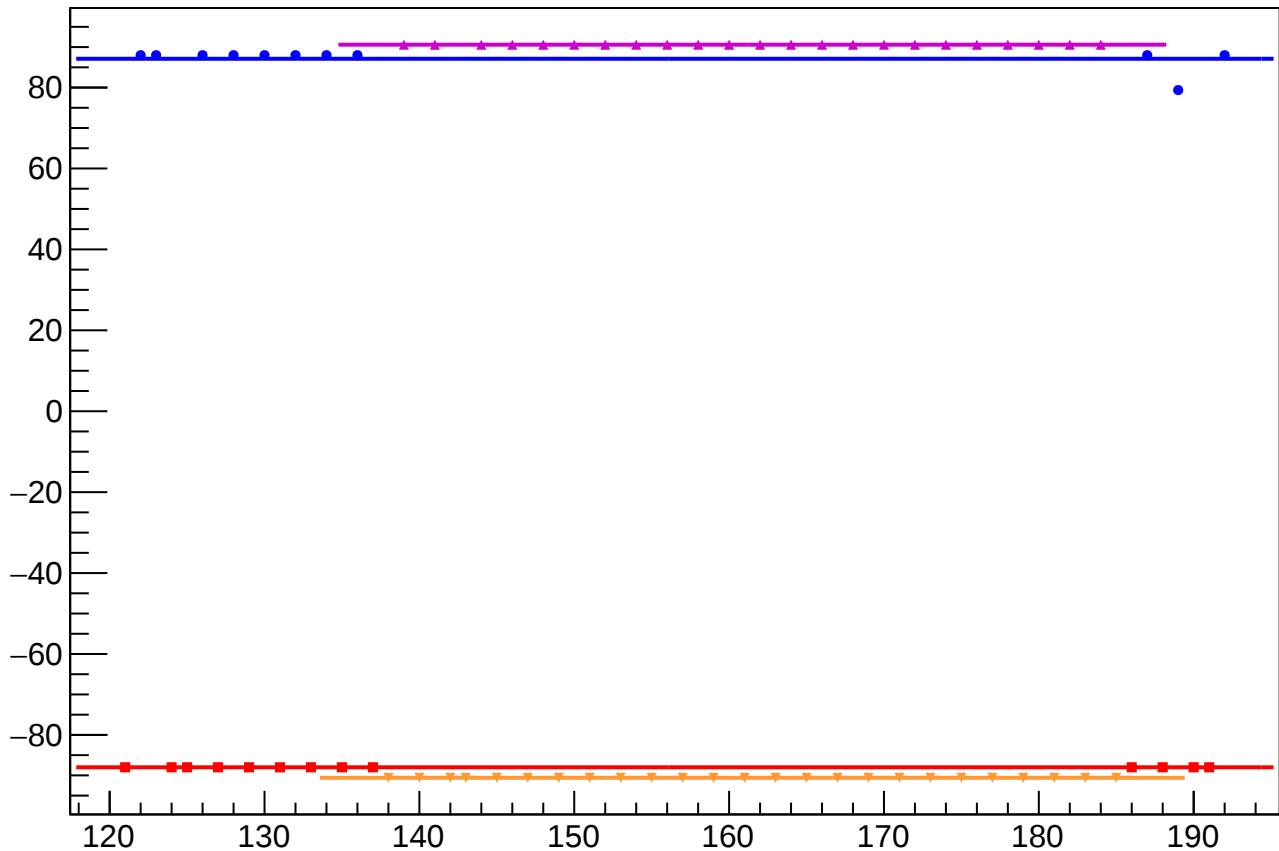
Right: 0.281 $\pm$ 0.003  $\chi^2$ /NDF: 11968.7/42

In: 0.121 $\pm$ 0.001  $\chi^2$ /NDF:16568.5/42

Out: 0.140 $\pm$ 0.001  $\chi^2$ /NDF:7284.1/47

All: 0.130 $\pm$ 0.001  $\chi^2$ /NDF: 23943.6/90

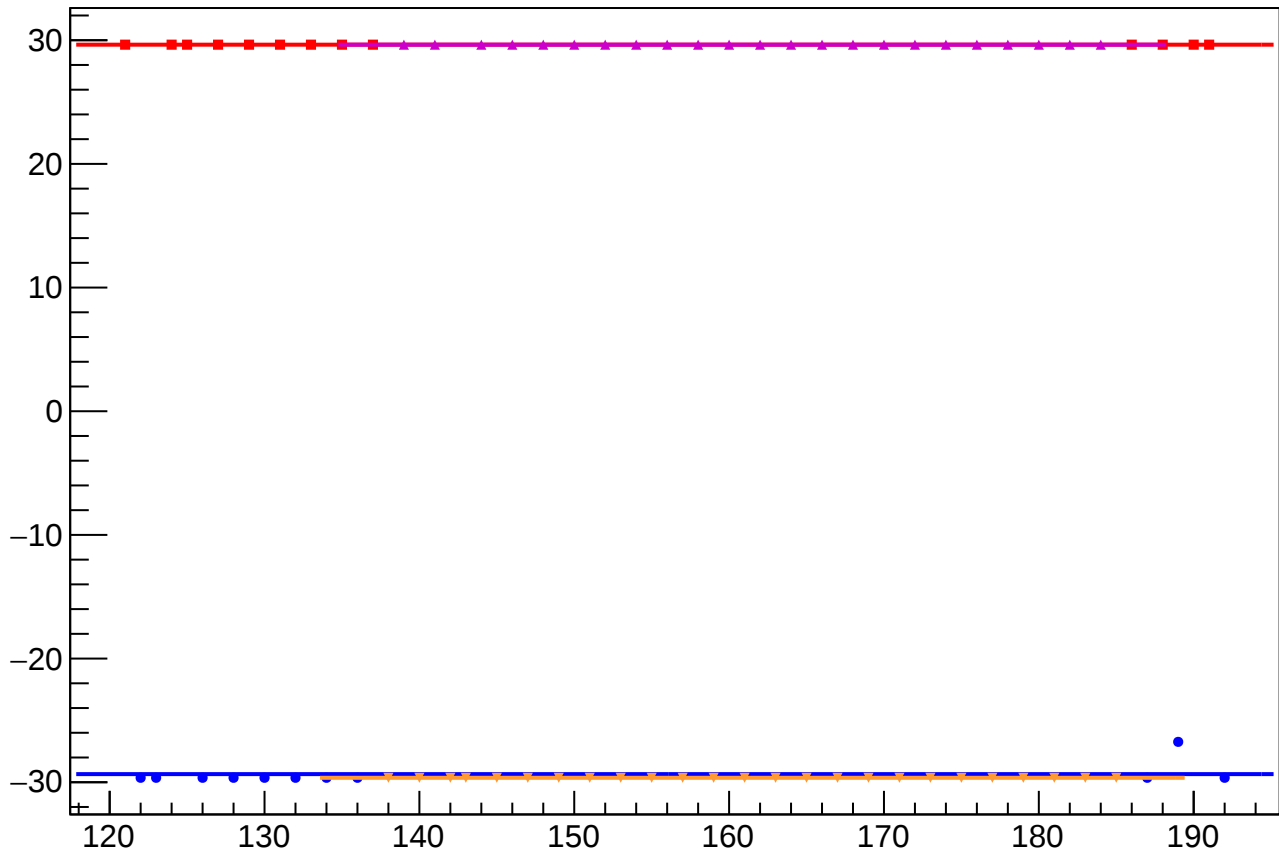
# VWienAngle\_mean vs Slug, Sign Corrected



Right In:  $87.117 \pm 0.000$   $\chi^2/\text{NDF}$ : 3407377860925098239133609625649152.0/10  
 Left Out:  $-90.599 \pm 0.000$   $\chi^2/\text{NDF}$ : 6053403.0/24  
 Right Out:  $-88.001 \pm 0.000$   $\chi^2/\text{NDF}$ : 142575.6/12  
 Left In:  $90.599 \pm 0.000$   $\chi^2/\text{NDF}$ : 5932436.0/22

Left:  $-2.410 \pm 0.000$   $\chi^2/\text{NDF}$ : 30521213250005045  
 Right:  $-1.655 \pm 0.000$   $\chi^2/\text{NDF}$ : 7745151940405664  
 In:  $89.848 \pm 0.000$   $\chi^2/\text{NDF}$ : 814341452161586440  
 Out:  $-90.050 \pm 0.000$   $\chi^2/\text{NDF}$ : 2726502928932265  
 All:  $-2.249 \pm 0.000$   $\chi^2/\text{NDF}$ : 3826681801094

# HWienAngle\_mean vs Slug, Sign Corrected



Right In: -29.343+/-0.000

$\chi^2/\text{NDF}$ : 386567212910206065529992226275328.0/10

Left: -0.789+/-0.000  $\chi^2/\text{NDF}$ : 32668496095314519

Right: 0.558+/-0.000  $\chi^2/\text{NDF}$ : 87868792994853509

Left Out: -29.641+/-0.000

$\chi^2/\text{NDF}$ : 654199.2/24

In: 16.919+/-0.000  $\chi^2/\text{NDF}$ : 135929278810919574

Right Out: 29.641+/-0.000

$\chi^2/\text{NDF}$ : 363393.5/12

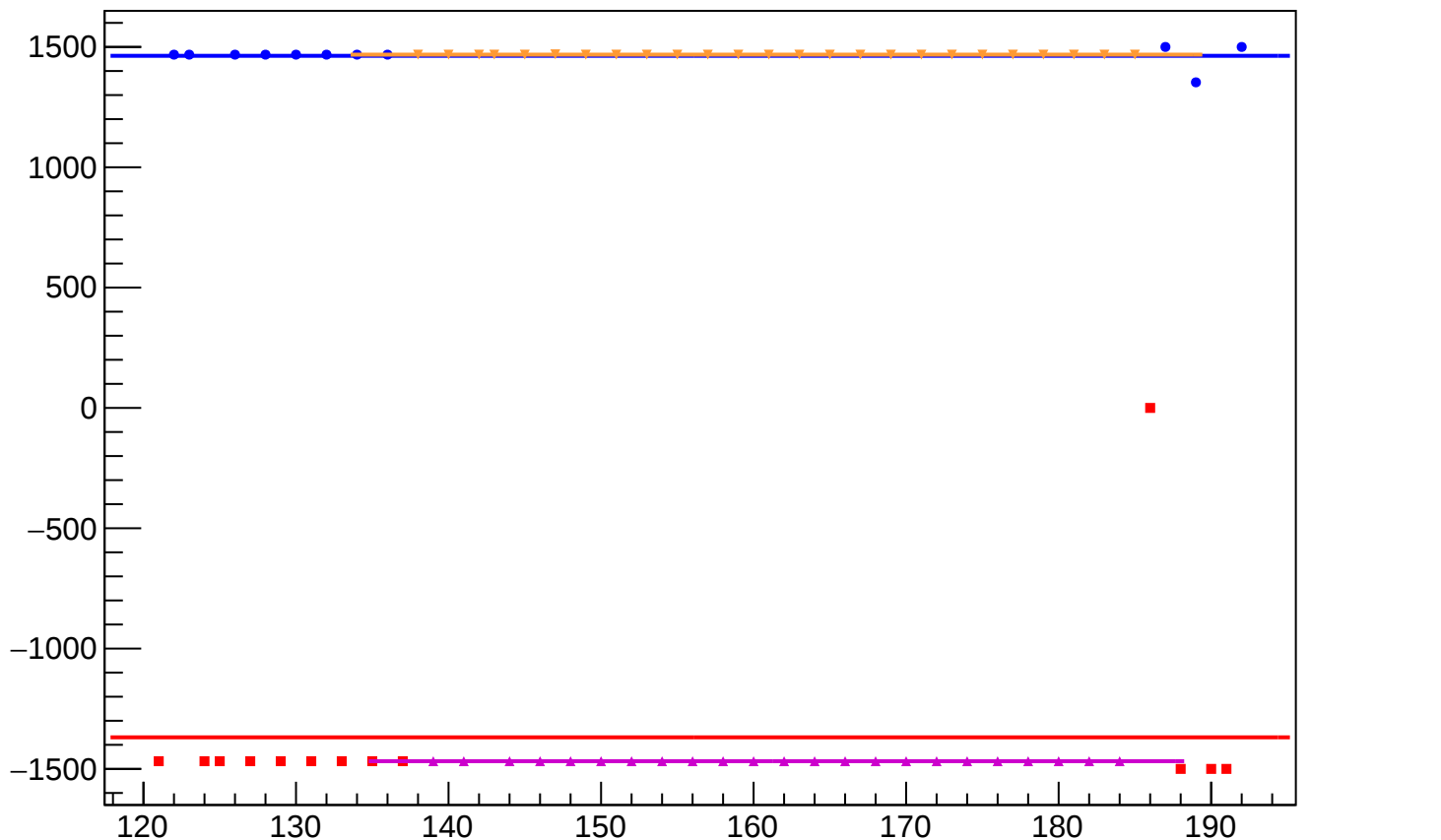
Out: -17.109+/-0.000  $\chi^2/\text{NDF}$ : 1418947031946269

Left In: 29.641+/-0.000

$\chi^2/\text{NDF}$ : 511825.6/22

All: -0.501+/-0.000  $\chi^2/\text{NDF}$ : 4146977180058

# psub\_pl\_pos\_mean vs Slug, Sign Corrected



Right In: 1463.143+/-0.000

$\chi^2/\text{NDF}$ : 774005490050963320366919457896923136.0/10

Left Out: 1468.048+/-0.000

$\chi^2/\text{NDF}$ : 127960980922965975039069502046208.0/24

Right Out: -1368.847+/-0.000

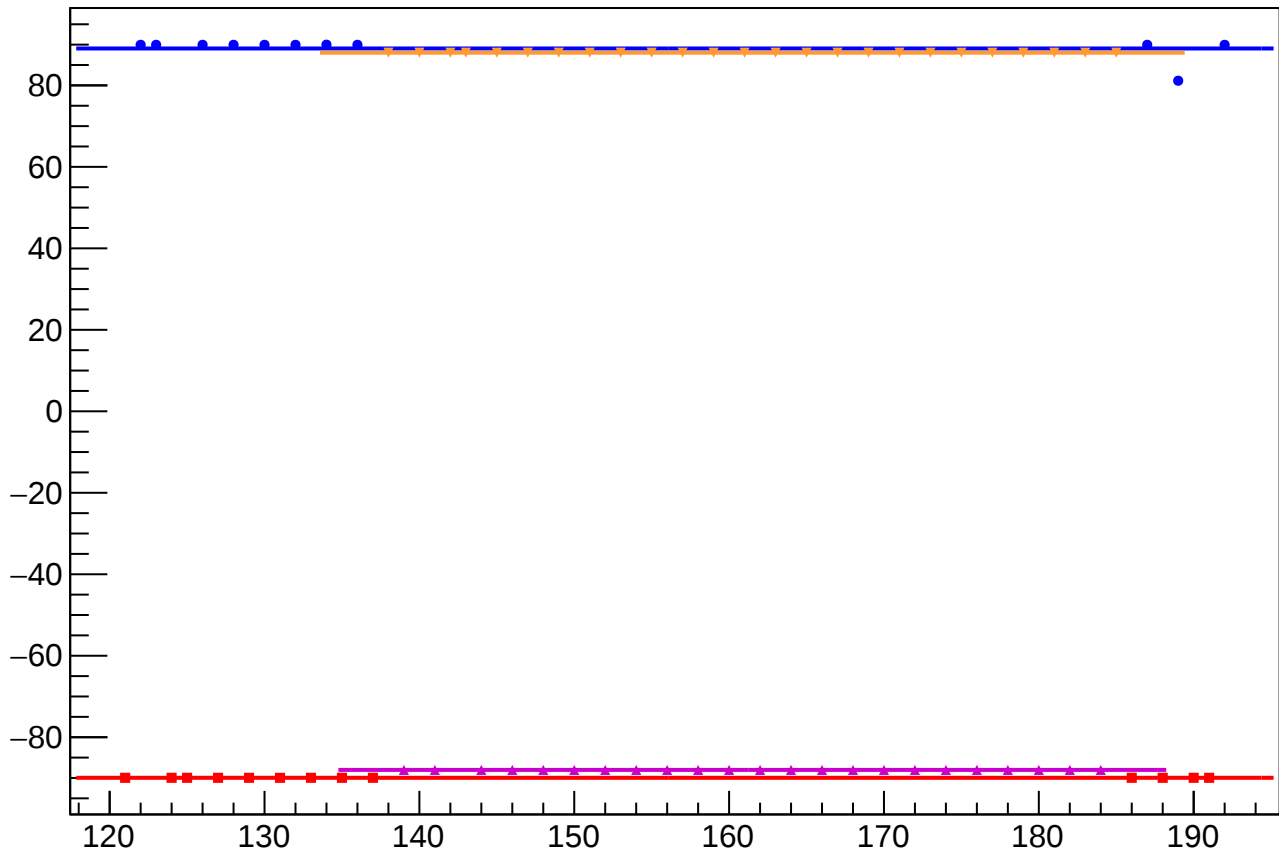
$\chi^2/\text{NDF}$ : 77017054284632969514672769414878724096.0/12

Left In: -1467.994+/-0.000

$\chi^2/\text{NDF}$ : 145848702340275035310993178624.0/22

All: 36.616+/-0.000  $\chi^2/\text{NDF}$ : 1011599538669

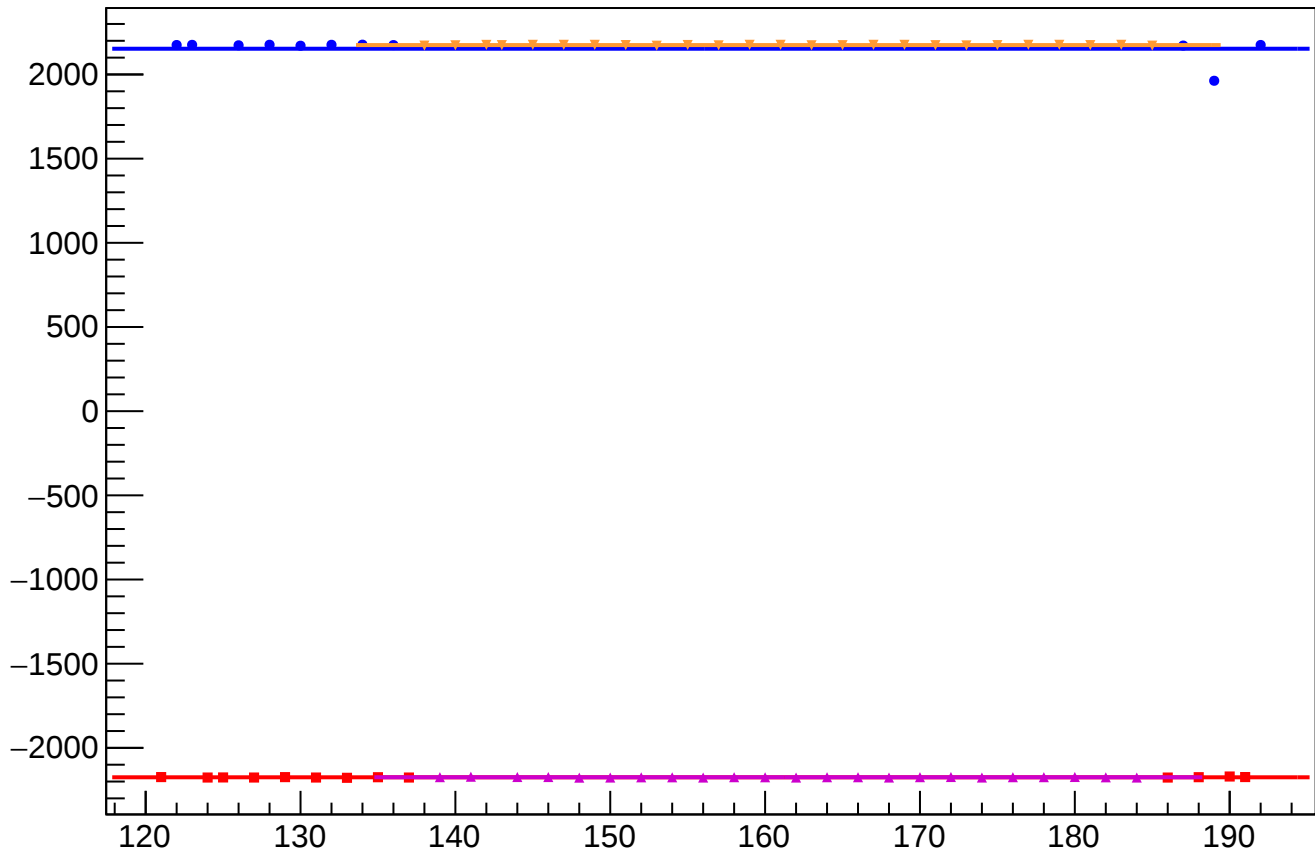
# Phi\_FG\_mean vs Slug, Sign Corrected



Right In: 89.057+/-0.000  $\chi^2/\text{NDF}$ : 3562014479714373488729666216787968.0/10  
 Left Out: 88.021+/-0.000  $\chi^2/\text{NDF}$ : 5326388.8/24  
 Right Out: -89.959+/-0.000  $\chi^2/\text{NDF}$ : 1284997.6/12  
 Left In: -88.021+/-0.000  $\chi^2/\text{NDF}$ : 6084099.2/22

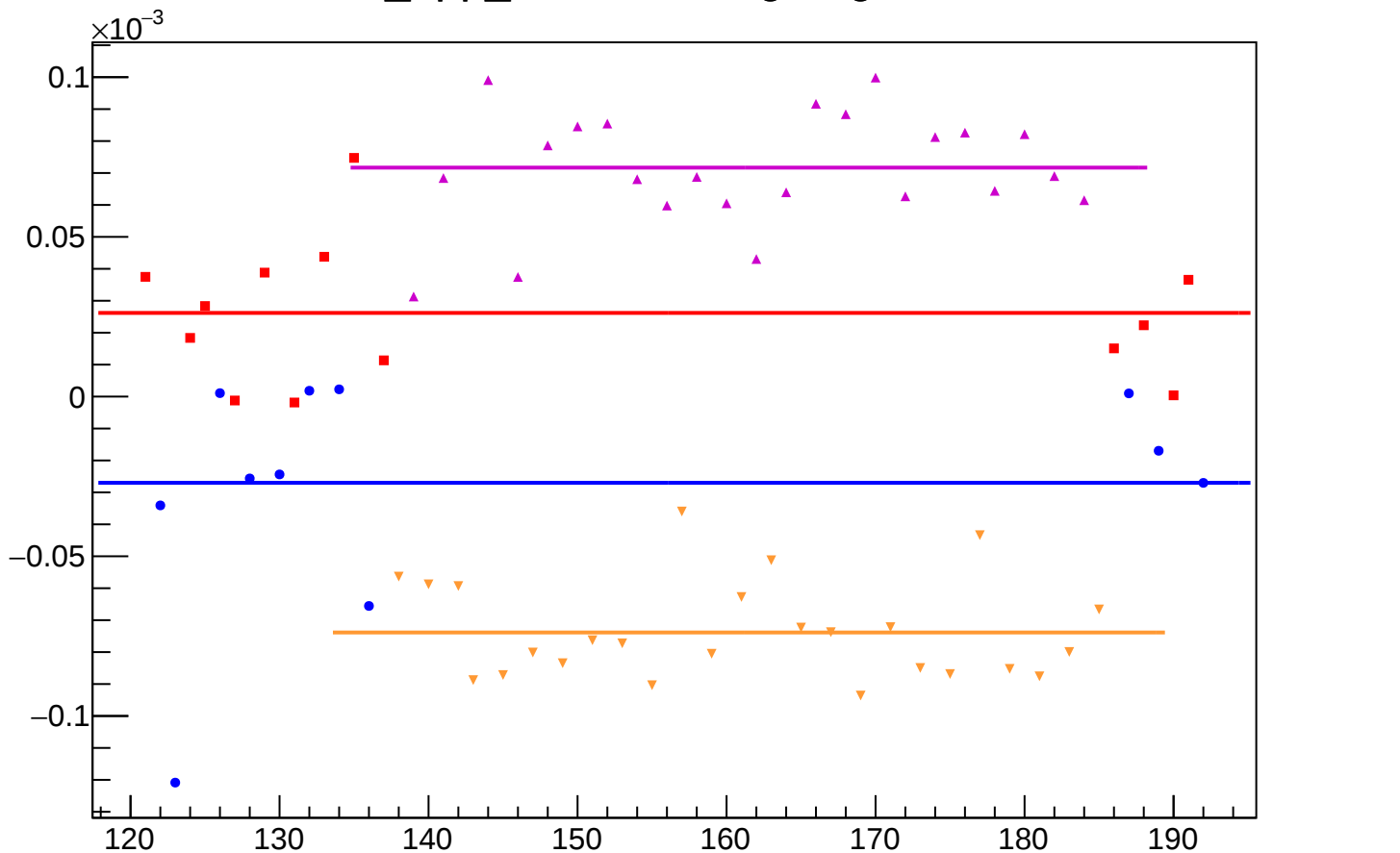
Left: 2.342+/-0.000  $\chi^2/\text{NDF}$ : 288085769312401978  
 Right: -1.692+/-0.000  $\chi^2/\text{NDF}$ : 8093876801886928  
 In: -49.829+/-0.000  $\chi^2/\text{NDF}$ : 12251246727607087  
 Out: 50.397+/-0.000  $\chi^2/\text{NDF}$ : 12790030916914924  
 All: 1.481+/-0.000  $\chi^2/\text{NDF}$ : 36915377421677

# HALLA\_p\_mean vs Slug, Sign Corrected



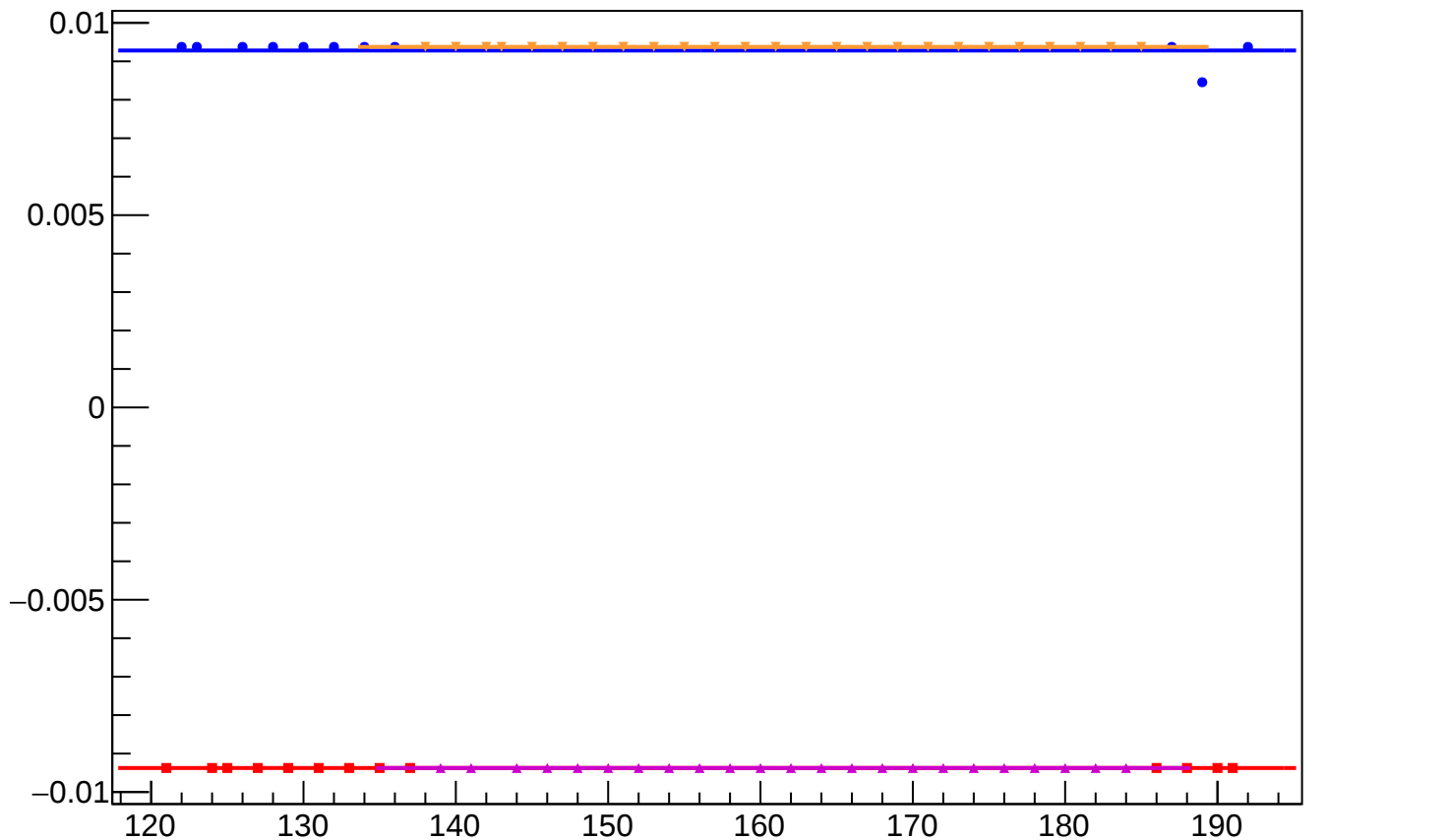
Right In: 2152.846+/-0.000  $\chi^2/\text{NDF}$ : 2057593828519138986623970285734330368.0/10  
 Left Out: 2174.622+/-0.000  $\chi^2/\text{NDF}$ : 5110578135476093110874911595823104.0/24  
 Right Out: -2174.777+/-0.000  $\chi^2/\text{NDF}$ : 1738951520107555077803129316573184.0/12  
 Left In: -2174.539+/-0.000  $\chi^2/\text{NDF}$ : 3400742562425168967494665391570944.0/22  
 All: 36.793+/-0.000  $\chi^2/\text{NDF}$ : 2232123279172

# HALLA\_dpp\_mean vs Slug, Sign Corrected



|                              |                                                     |                           |                                          |
|------------------------------|-----------------------------------------------------|---------------------------|------------------------------------------|
| Right In: $-0.000 \pm 0.000$ | $\chi^2/\text{NDF}$ : 269004355878513398513664.0/10 | Left: $-0.000 \pm 0.000$  | $\chi^2/\text{NDF}$ : 20702696564433151  |
| Left Out: $-0.000 \pm 0.000$ | $\chi^2/\text{NDF}$ : 450400934180541069000704.0/24 | Right: $-0.000 \pm 0.000$ | $\chi^2/\text{NDF}$ : 1219108905208127   |
| Right Out: $0.000 \pm 0.000$ | $\chi^2/\text{NDF}$ : 235841366856814095761408.0/12 | In: $0.000 \pm 0.000$     | $\chi^2/\text{NDF}$ : 463461039925621396 |
| Left In: $0.000 \pm 0.000$   | $\chi^2/\text{NDF}$ : 562166279020739416817664.0/22 | Out: $-0.000 \pm 0.000$   | $\chi^2/\text{NDF}$ : 47279752666890428  |
|                              |                                                     | All: $-0.000 \pm 0.000$   | $\chi^2/\text{NDF}$ : 2192890871144      |

# MQ171LM\_mean vs Slug, Sign Corrected



Right In: 0.009 $\pm$ 0.000

$\chi^2/\text{NDF}$ : 38671459736002300922036224.0/10

Left Out: 0.009 $\pm$ 0.000

$\chi^2/\text{NDF}$ : 0.1/24

Right Out: -0.009 $\pm$ 0.000

$\chi^2/\text{NDF}$ : 0.1/12

Left In: -0.009 $\pm$ 0.000

$\chi^2/\text{NDF}$ : 0.1/22

Left: 0.000 $\pm$ 0.000

$\chi^2/\text{NDF}$ : 326809514411447718

Right: -0.000 $\pm$ 0.000

$\chi^2/\text{NDF}$ : 8790229426779982

In: -0.005 $\pm$ 0.000

$\chi^2/\text{NDF}$ : 135981103852730670

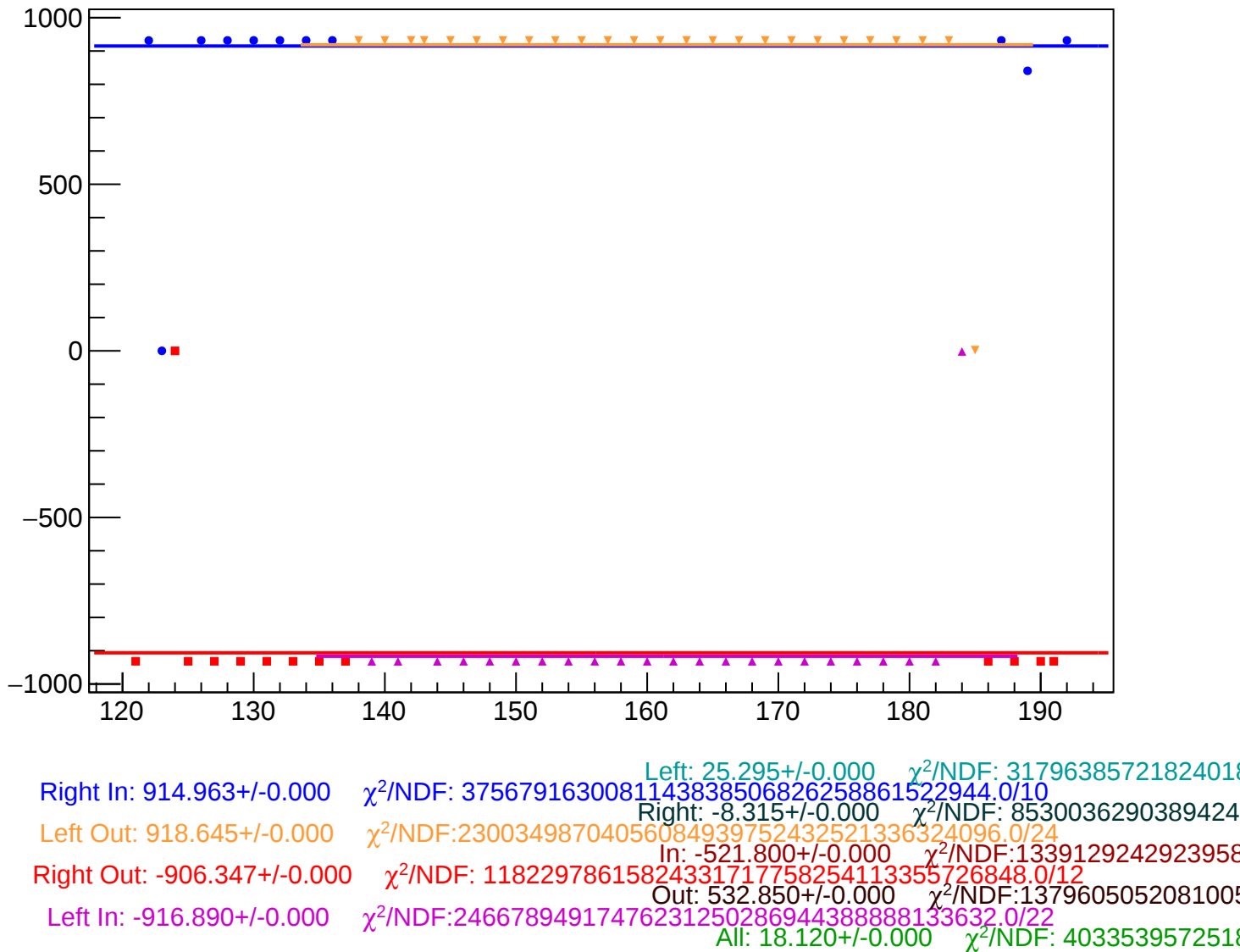
Out: 0.005 $\pm$ 0.000

$\chi^2/\text{NDF}$ : 141948802642443932

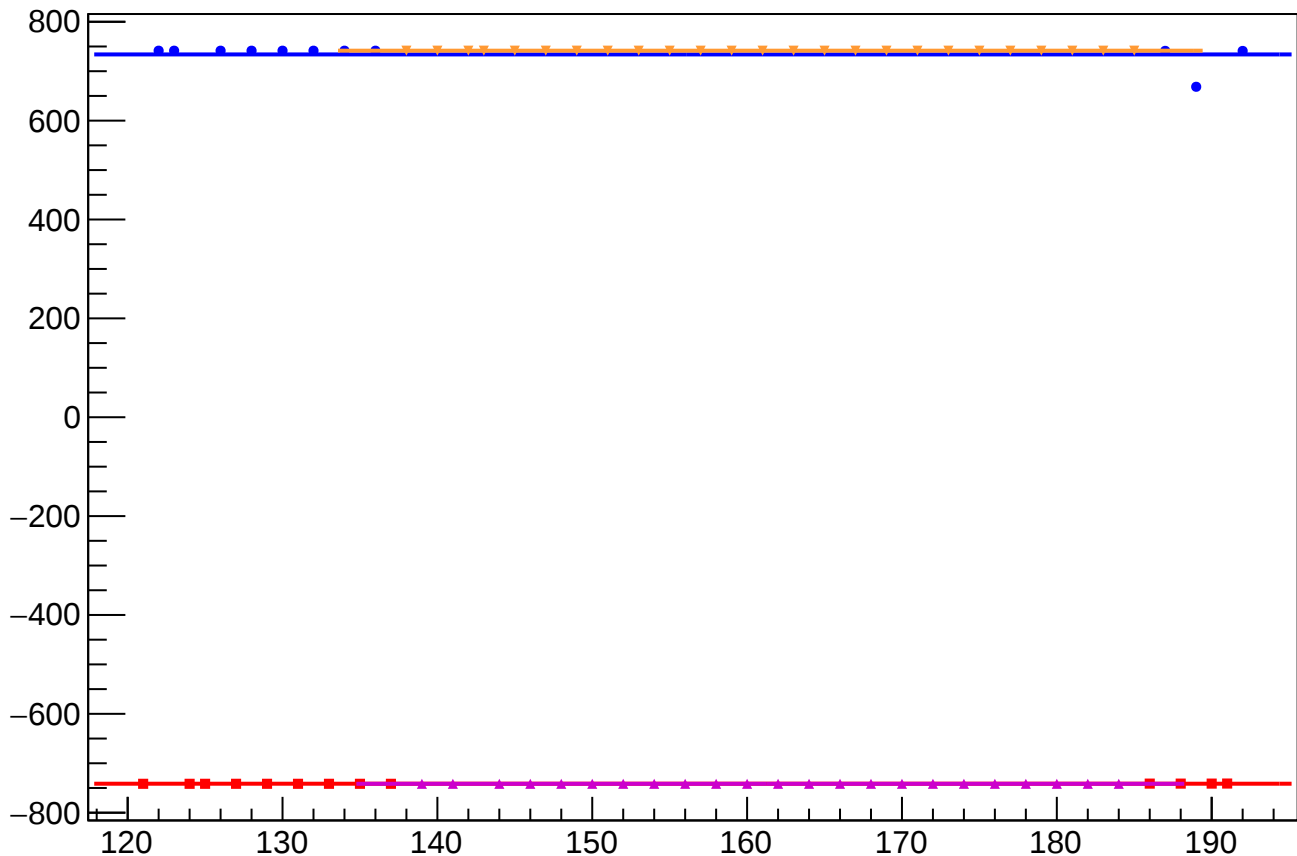
All: 0.000 $\pm$ 0.000

$\chi^2/\text{NDF}$ : 41485582762553

# HacL\_Q2\_HP3458A\_IOUT\_mean vs Slug, Sign Corrected



# HacL\_D1\_HP3458A\_IOUT\_mean vs Slug, Sign Corrected



Right In:  $733.944 \pm 0.000$   $\chi^2/\text{NDF}: 243367117013055334110279787136155648.0/10$

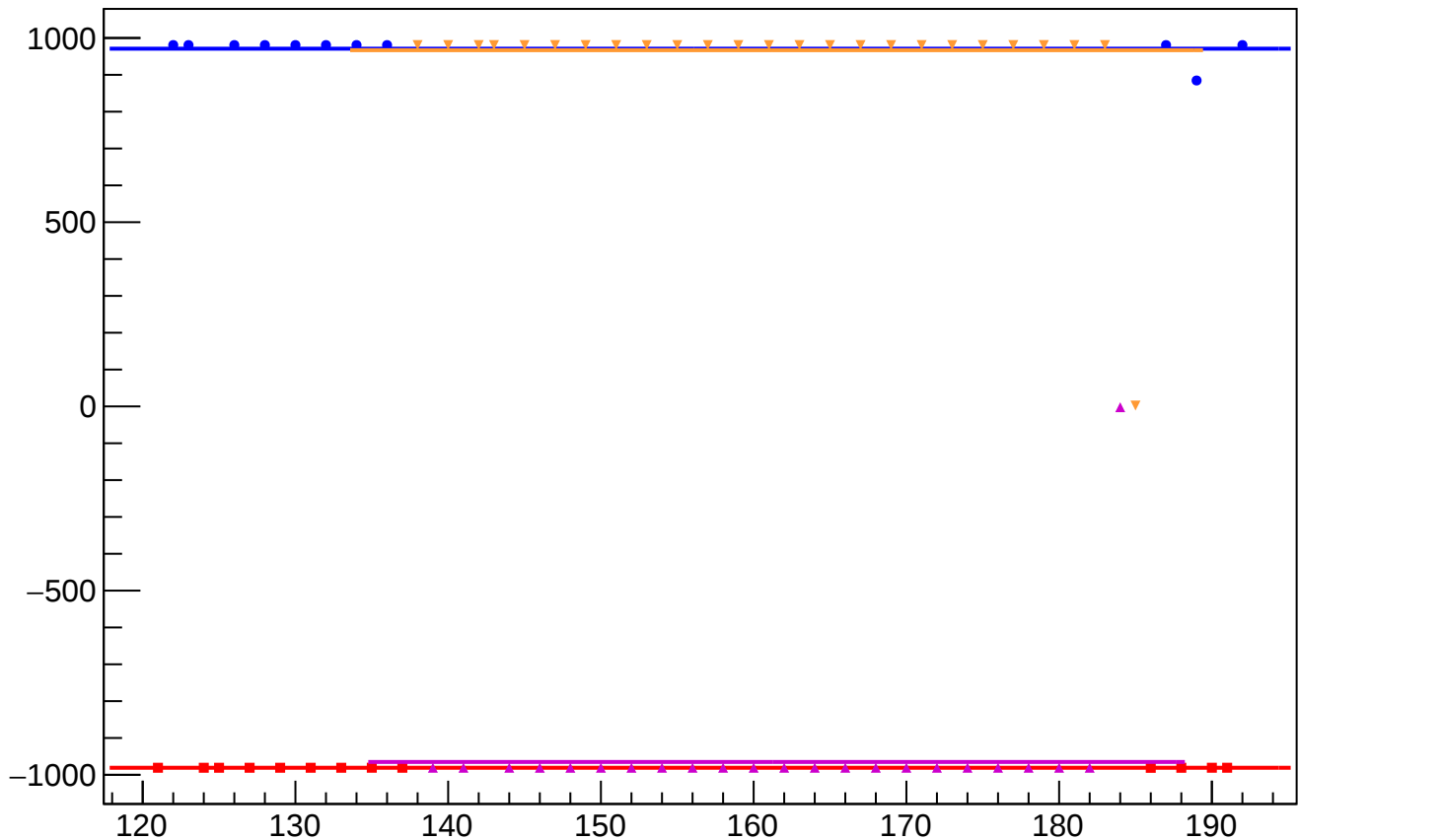
Left Out:  $741.513 \pm 0.000$   $\chi^2/\text{NDF}: 244782737401533731539808944128.0/24$

Right Out:  $-741.381 \pm 0.000$   $\chi^2/\text{NDF}: 18551726047363364827266763718656.0/12$

Left In:  $-741.512 \pm 0.000$   $\chi^2/\text{NDF}: 215375309108434607405602439168.0/22$

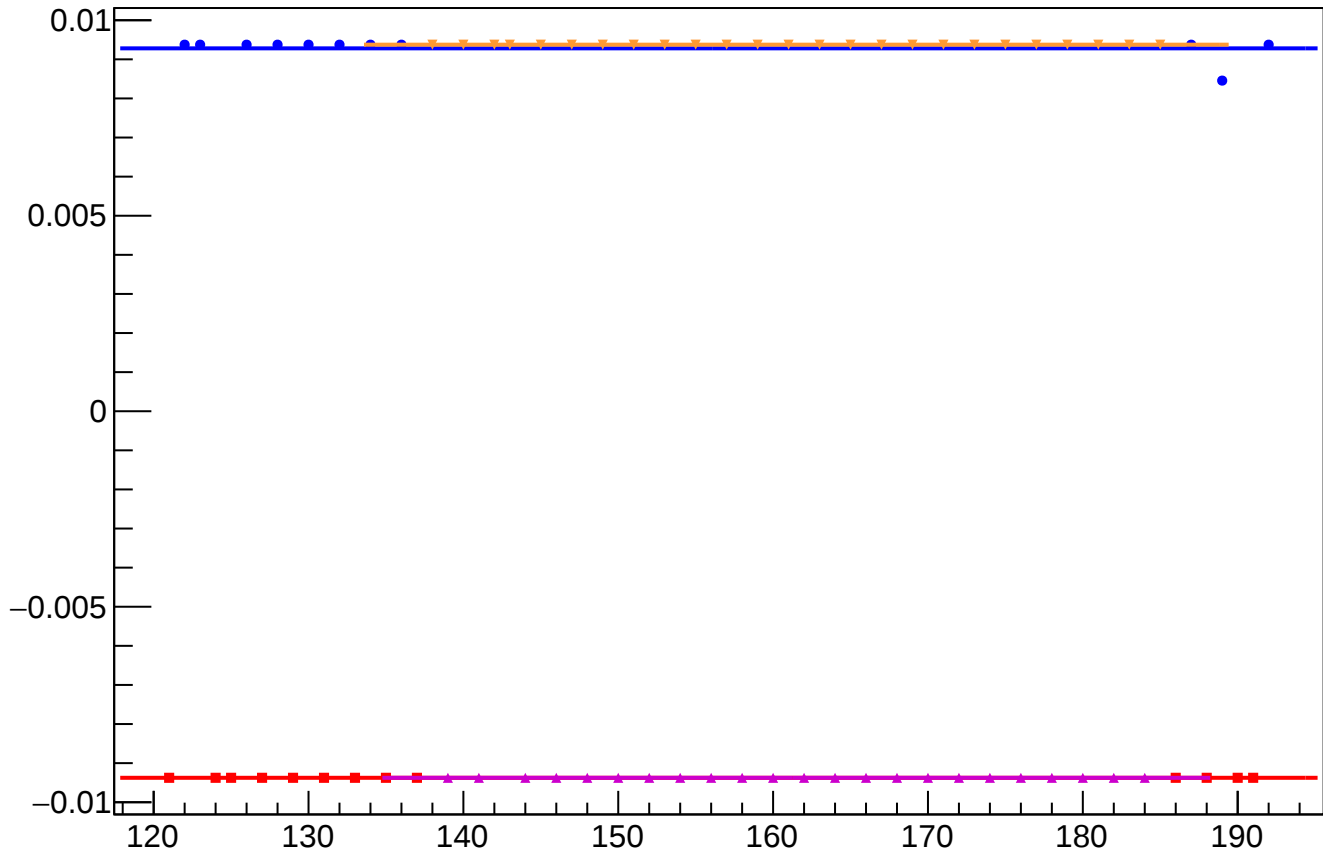
All:  $12.540 \pm 0.000$   $\chi^2/\text{NDF}: 2595136036865$

# HacL\_Q3\_HP3458A\_IOUT\_mean vs Slug, Sign Corrected



|                             |                                                                   |                                     |                                         |
|-----------------------------|-------------------------------------------------------------------|-------------------------------------|-----------------------------------------|
| Right In: 970.968+/-0.000   | $\chi^2/\text{NDF}$ : 423444567912434199331361627679227904.0/10   | Left: 26.619+/-0.000                | $\chi^2/\text{NDF}$ : 35227684296675597 |
| Left Out: 966.936+/-0.000   | $\chi^2/\text{NDF}$ : 25485578616543458629432284645183979520.0/24 | Right: -18.465+/-0.000              | $\chi^2/\text{NDF}$ : 962154797903811   |
| Right Out: -980.844+/-0.000 | $\chi^2/\text{NDF}$ : 1995038460784896062778488389632.0/12        | In: -547.535+/-0.000                | $\chi^2/\text{NDF}$ : 1491838076437168  |
| Left In: -965.102+/-0.000   | $\chi^2/\text{NDF}$ : 27330319430012441419356351914146004992.0/22 | Out: 555.184+/-0.000                | $\chi^2/\text{NDF}$ : 1557309377576771  |
|                             | All: 16.994+/-0.000                                               | $\chi^2/\text{NDF}$ : 4486537838638 |                                         |

# MQ172RM\_mean vs Slug, Sign Corrected



Right In: 0.009 $\pm$ 0.000

$\chi^2/\text{NDF}$ : 38671459736002300922036224.0/10

Left Out: 0.009 $\pm$ 0.000

$\chi^2/\text{NDF}$ : 0.1/24

Right Out: -0.009 $\pm$ 0.000

$\chi^2/\text{NDF}$ : 0.1/12

Left In: -0.009 $\pm$ 0.000

$\chi^2/\text{NDF}$ : 0.1/22

Left: 0.000 $\pm$ 0.000

$\chi^2/\text{NDF}$ : 326809514411447718

Right: -0.000 $\pm$ 0.000

$\chi^2/\text{NDF}$ : 8790229426779982

In: -0.005 $\pm$ 0.000

$\chi^2/\text{NDF}$ : 135981103852730670

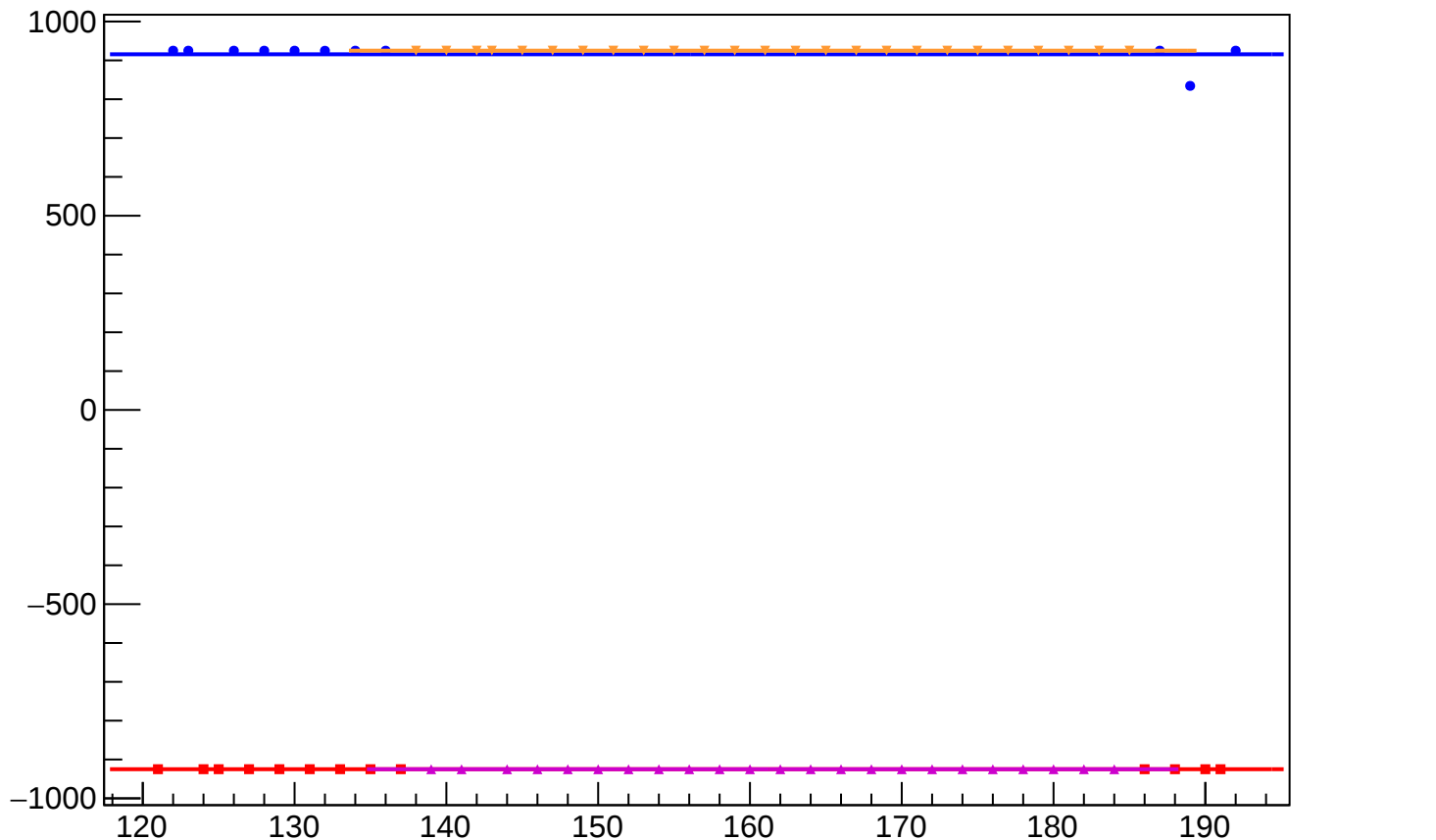
Out: 0.005 $\pm$ 0.000

$\chi^2/\text{NDF}$ : 141948802642443932

All: 0.000 $\pm$ 0.000

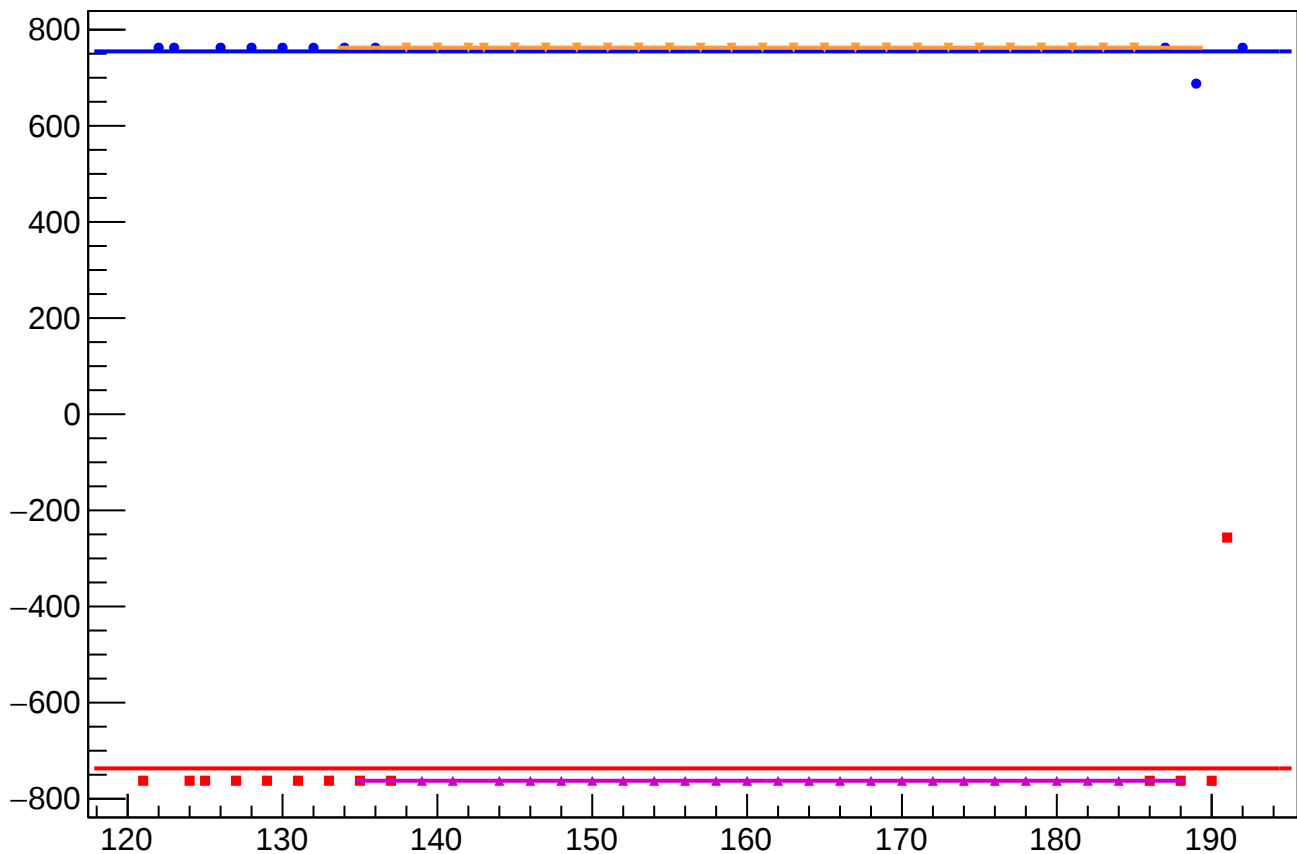
$\chi^2/\text{NDF}$ : 41485582762553

# HacR\_Q2\_HP3458A\_IOUT\_mean vs Slug, Sign Corrected



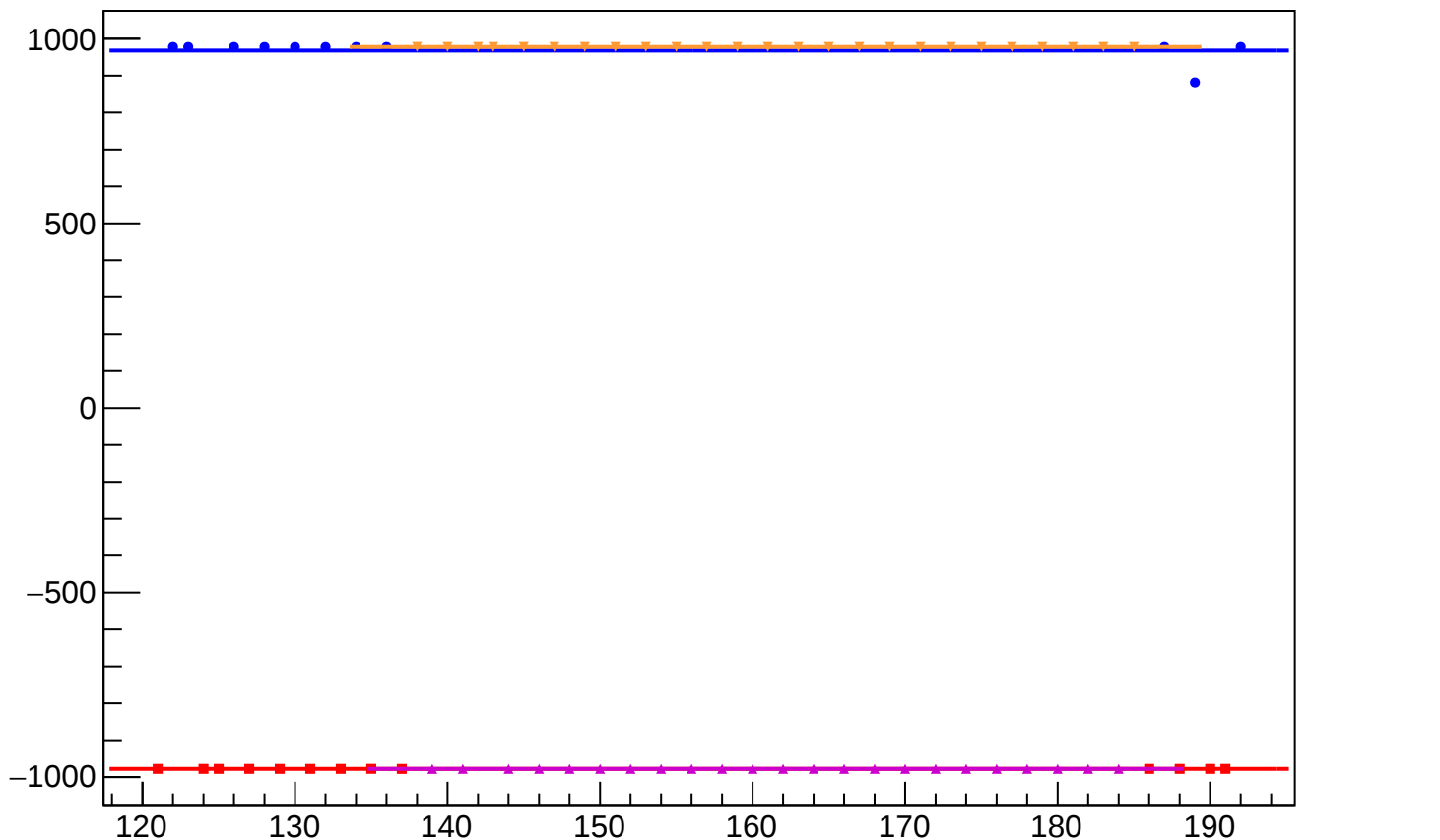
Right In: 915.676+/-0.000  $\chi^2/\text{NDF}$ : 375884890430723301501999086619852800.0/10  
 Left Out: 924.983+/-0.000  $\chi^2/\text{NDF}$ : 1041831865443970524066476982272.0/24  
 Right Out: -924.980+/-0.000  $\chi^2/\text{NDF}$ : 520299909712652106588189884416.0/12  
 Left In: -924.983+/-0.000  $\chi^2/\text{NDF}$ : 888539224321534960792212865024.0/22  
 All: 15.639+/-0.000  $\chi^2/\text{NDF}$ : 4038496451919

# HacR\_D1\_HP3458A\_IOUT\_mean vs Slug, Sign Corrected



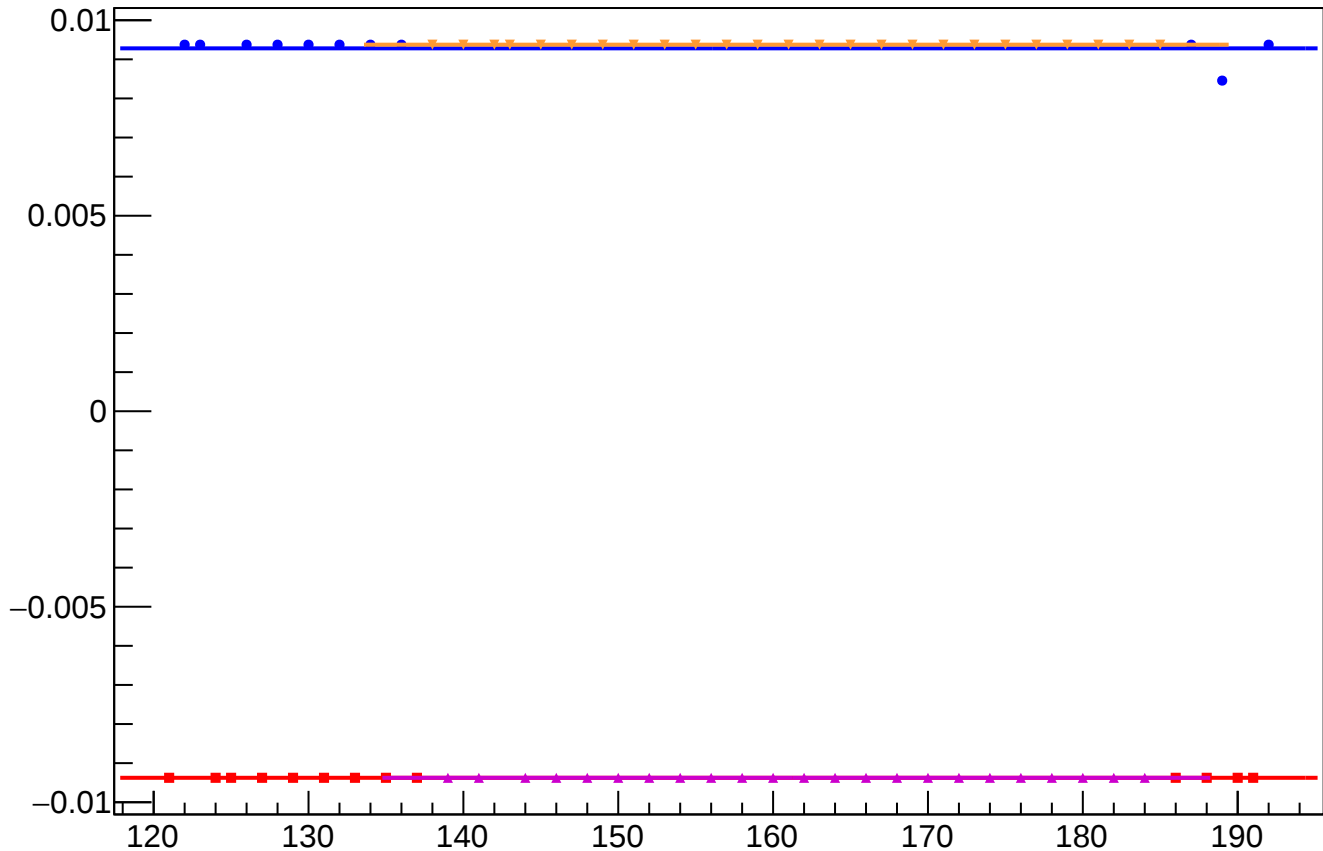
Right In: 754.848+/-0.000  $\chi^2/\text{NDF}$ : 255335025612225496360523797039677440.0/10  
 Left Out: 762.518+/-0.000  $\chi^2/\text{NDF}$ : 731741258759628909874415403008.0/24  
 Right Out: -736.835+/-0.000  $\chi^2/\text{NDF}$ : 6318356853792801414755158542883225600.0/12  
 Left In: -762.519+/-0.000  $\chi^2/\text{NDF}$ : 629058355419214408155297480704.0/22  
 All: 15.672+/-0.000  $\chi^2/\text{NDF}$ : 2730666910741

# HacR\_Q3\_HP3458A\_IOUT\_mean vs Slug, Sign Corrected



Right In: 967.936+/-0.000  $\chi^2/\text{NDF}$ : 420393013582034299669496529428676608.0/10  
 Left Out: 977.738+/-0.000  $\chi^2/\text{NDF}$ : 1154150409979077132991401558016.0/24  
 Right Out: -977.749+/-0.000  $\chi^2/\text{NDF}$ : 994270738783232407048177057792.0/12  
 Left In: -977.735+/-0.000  $\chi^2/\text{NDF}$ : 976503887937607318263199432704.0/22  
 All: 16.535+/-0.000  $\chi^2/\text{NDF}$ : 4512329922387

# hesDipole\_current\_mean vs Slug, Sign Corrected



Right In: 0.009+/-0.000

$\chi^2/\text{NDF}$ : 38671459736002300922036224.0/10

Left Out: 0.009+/-0.000

$\chi^2/\text{NDF}$ : 0.1/24

Right Out: -0.009+/-0.000

$\chi^2/\text{NDF}$ : 0.1/12

Left In: -0.009+/-0.000

$\chi^2/\text{NDF}$ : 0.1/22

Left: 0.000+/-0.000

$\chi^2/\text{NDF}$ : 326809514411447718

Right: -0.000+/-0.000

$\chi^2/\text{NDF}$ : 8790229426779982

In: -0.005+/-0.000

$\chi^2/\text{NDF}$ : 135981103852730670

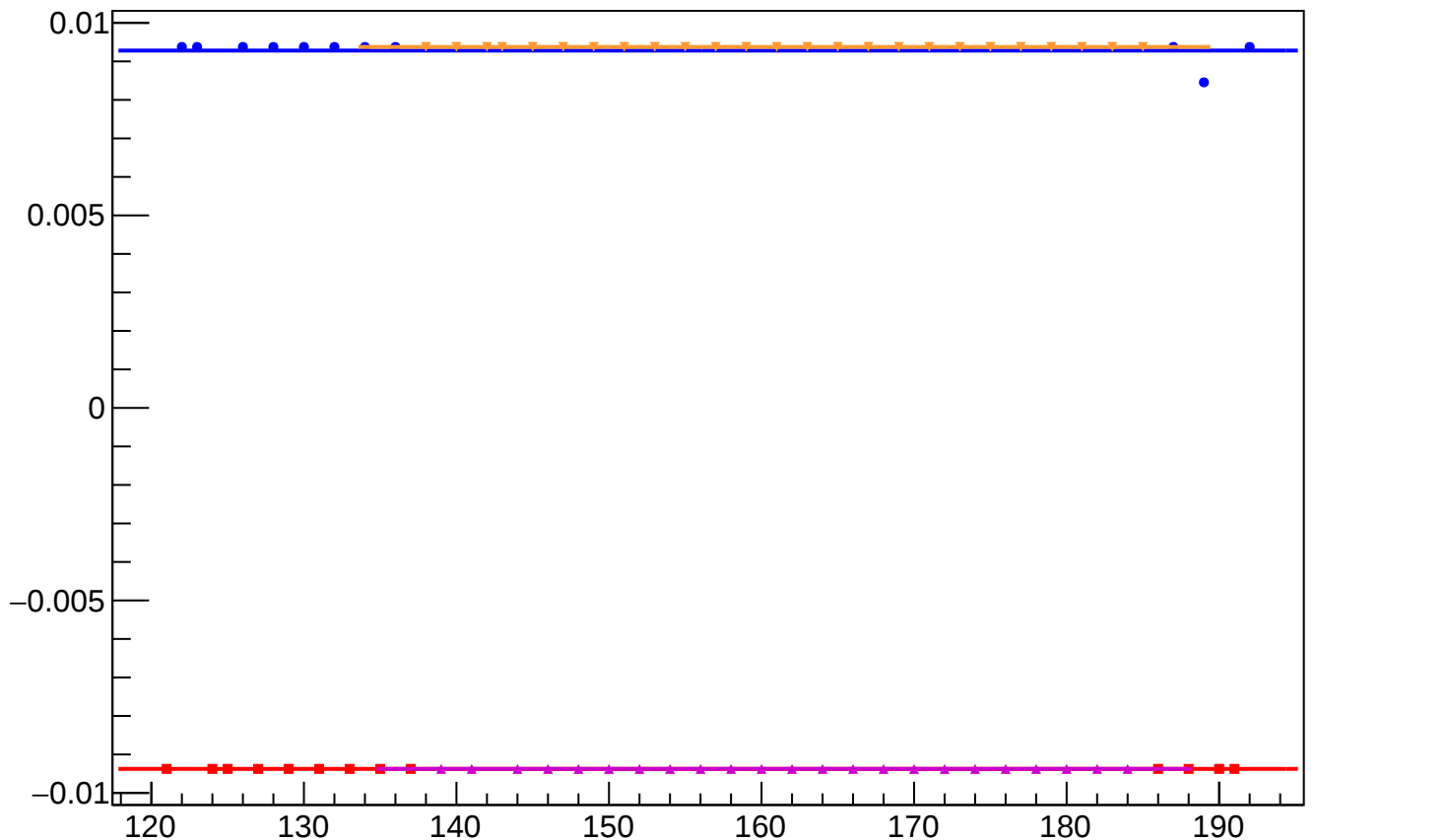
Out: 0.005+/-0.000

$\chi^2/\text{NDF}$ : 141948802642443932

All: 0.000+/-0.000

$\chi^2/\text{NDF}$ : 41485582762553

MSUPERBIGBITereadcalc\_mean vs Slug, Sign Corrected



Right In: 0.009+/-0.000

$\chi^2/\text{NDF}$ : 38671459736002300922036224.0/10

Left Out: 0.009+/-0.000

$\chi^2/\text{NDF}$ : 0.1/24

Right Out: -0.009+/-0.000

$\chi^2/\text{NDF}$ : 0.1/12

Left In: -0.009+/-0.000

$\chi^2/\text{NDF}$ : 0.1/22

Left: 0.000+/-0.000

$\chi^2/\text{NDF}$ : 326809514411447718

Right: -0.000+/-0.000

$\chi^2/\text{NDF}$ : 8790229426779982

In: -0.005+/-0.000

$\chi^2/\text{NDF}$ : 135981103852730670

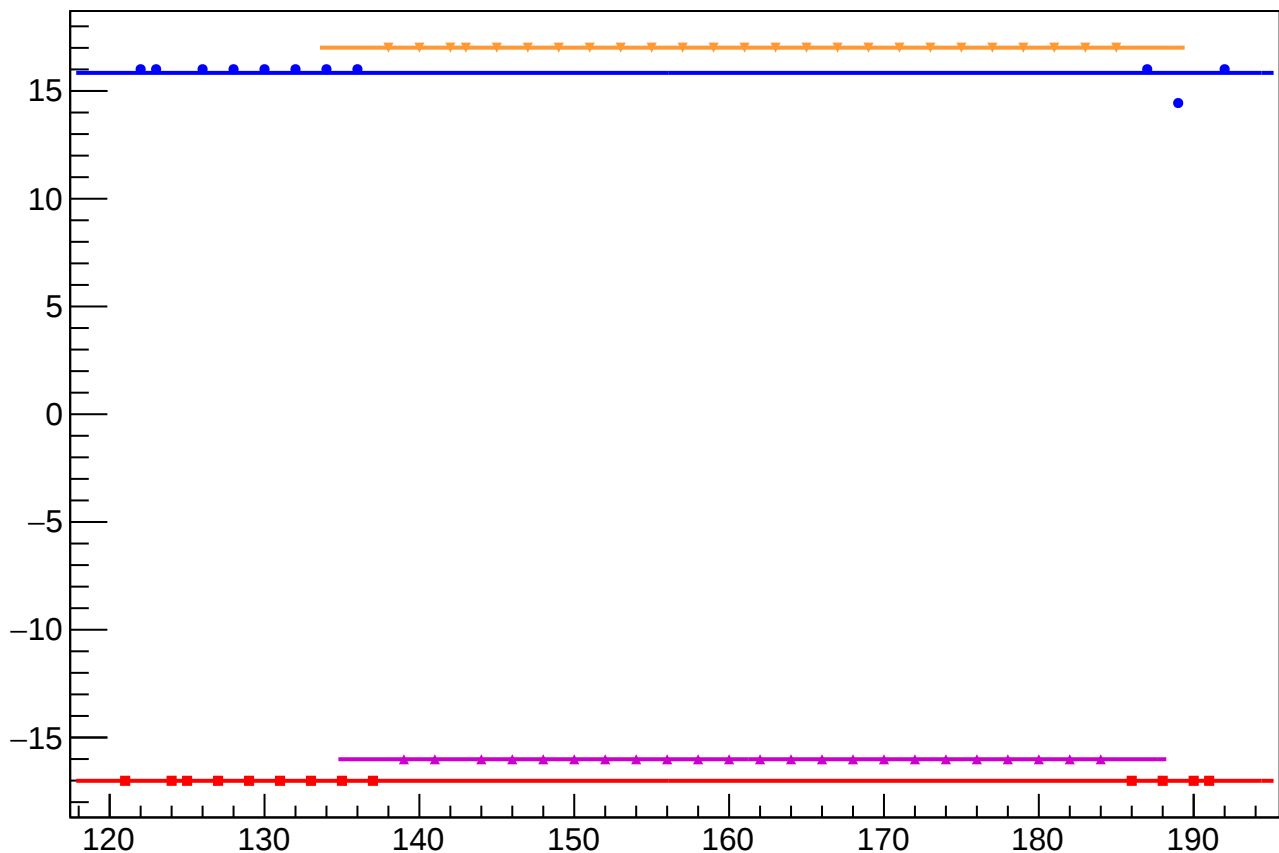
Out: 0.005+/-0.000

$\chi^2/\text{NDF}$ : 141948802642443932

All: 0.000+/-0.000

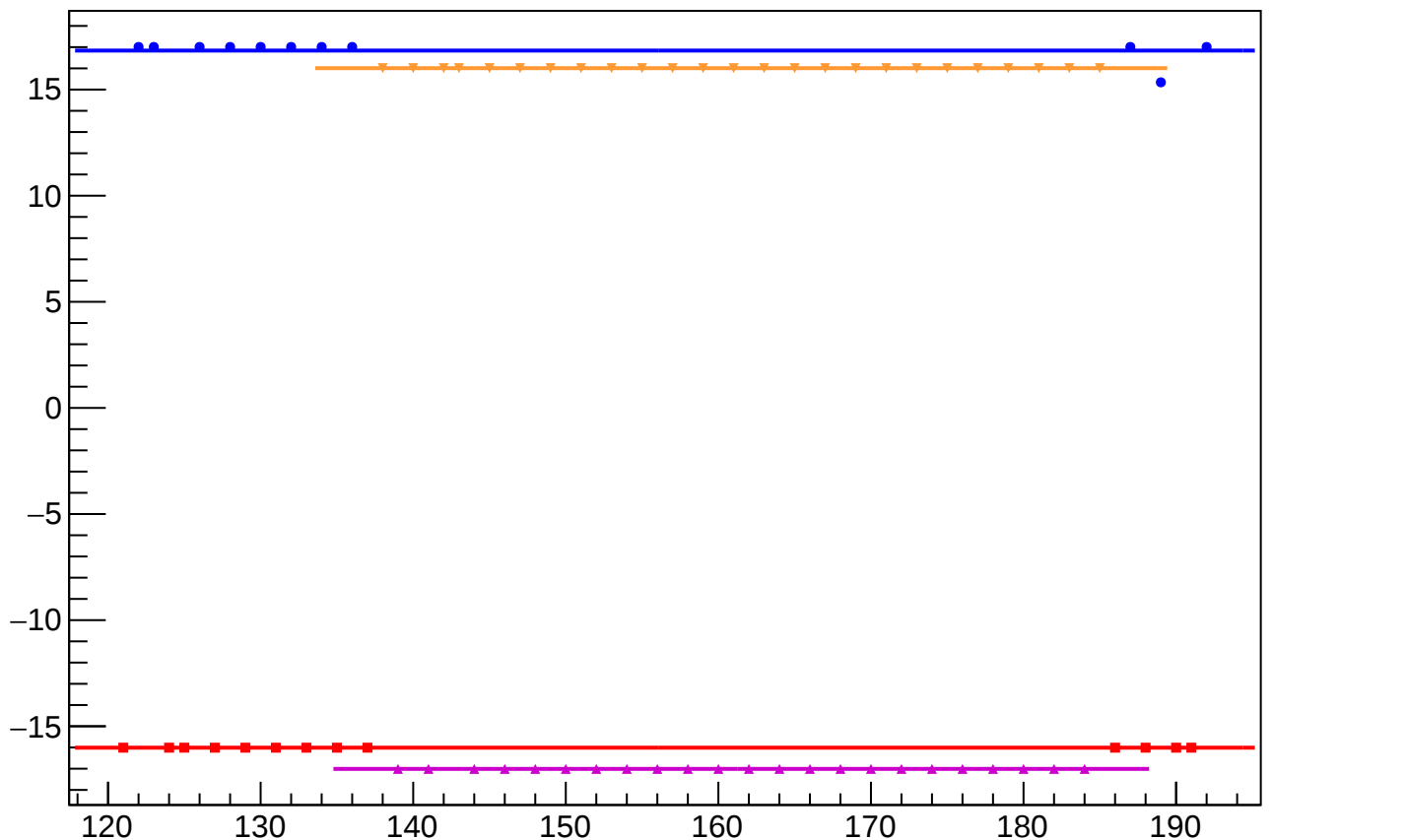
$\chi^2/\text{NDF}$ : 41485582762553

# IGL1I00DI24\_24M\_mean vs Slug, Sign Corrected



Right In: 15.840 $\pm$ 0.000  $\chi^2$ /NDF: 112062081465969324770608831004672.0/10  
 Left Out: 17.009 $\pm$ 0.000  $\chi^2$ /NDF: 26284444608576238643052544.0/24  
 Right Out: -17.009 $\pm$ 0.000  $\chi^2$ /NDF: 11372984013858191609692160.0/12  
 Left In: -16.009 $\pm$ 0.000  $\chi^2$ /NDF: 127973174512756677672960.0/22  
 All: 0.517 $\pm$ 0.000  $\chi^2$ /NDF: 12057415932042

# IGL1I00OD16\_16\_mean vs Slug, Sign Corrected



Left: 0.042 +/- 0.000  $\chi^2/\text{NDF}$ : 994312337700629058

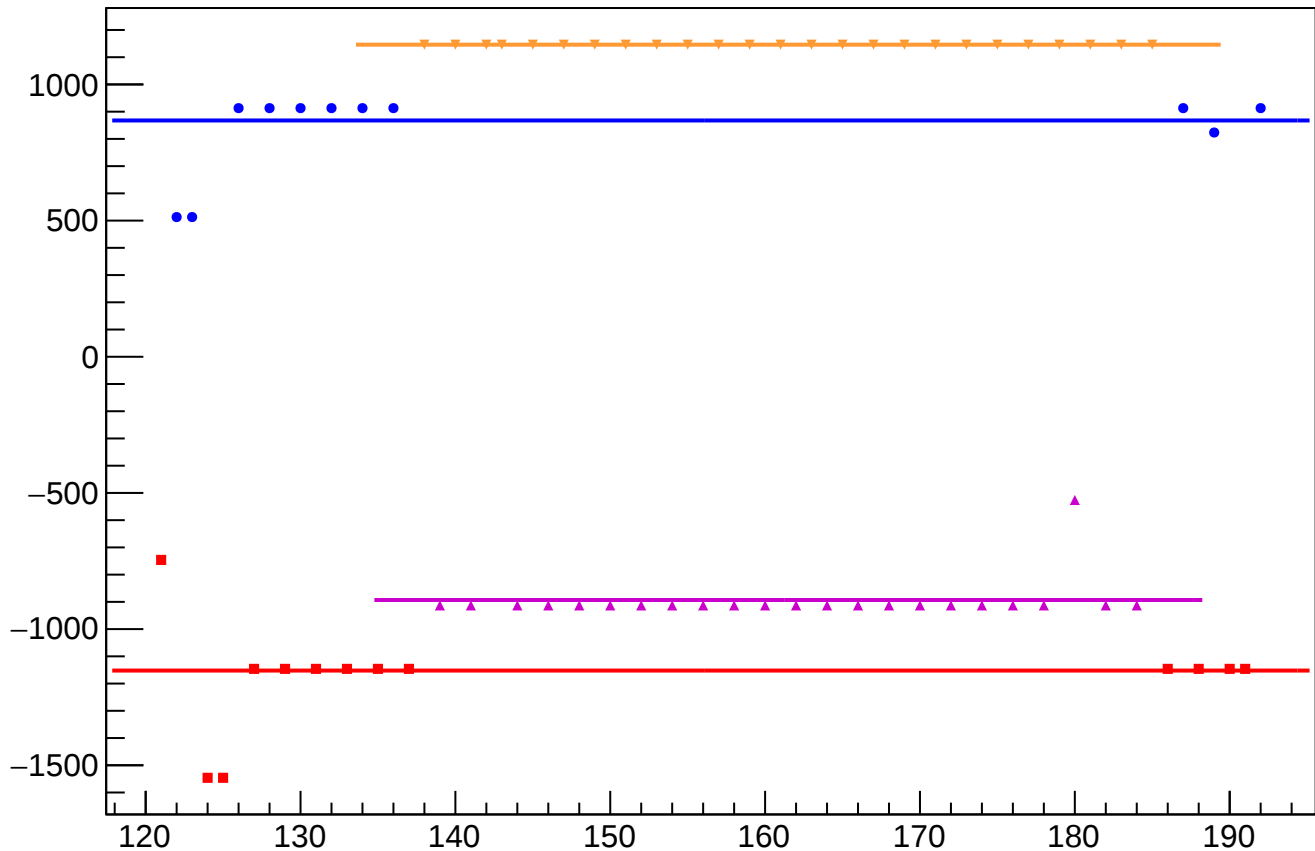
Right: 0.187 +/- 0.000  $\chi^2/\text{NDF}$ : 27251976015683234

In: -9.564 +/- 0.000  $\chi^2/\text{NDF}$ : 445177405650196535

Out: 9.173 +/- 0.000  $\chi^2/\text{NDF}$ : 412829969090909531

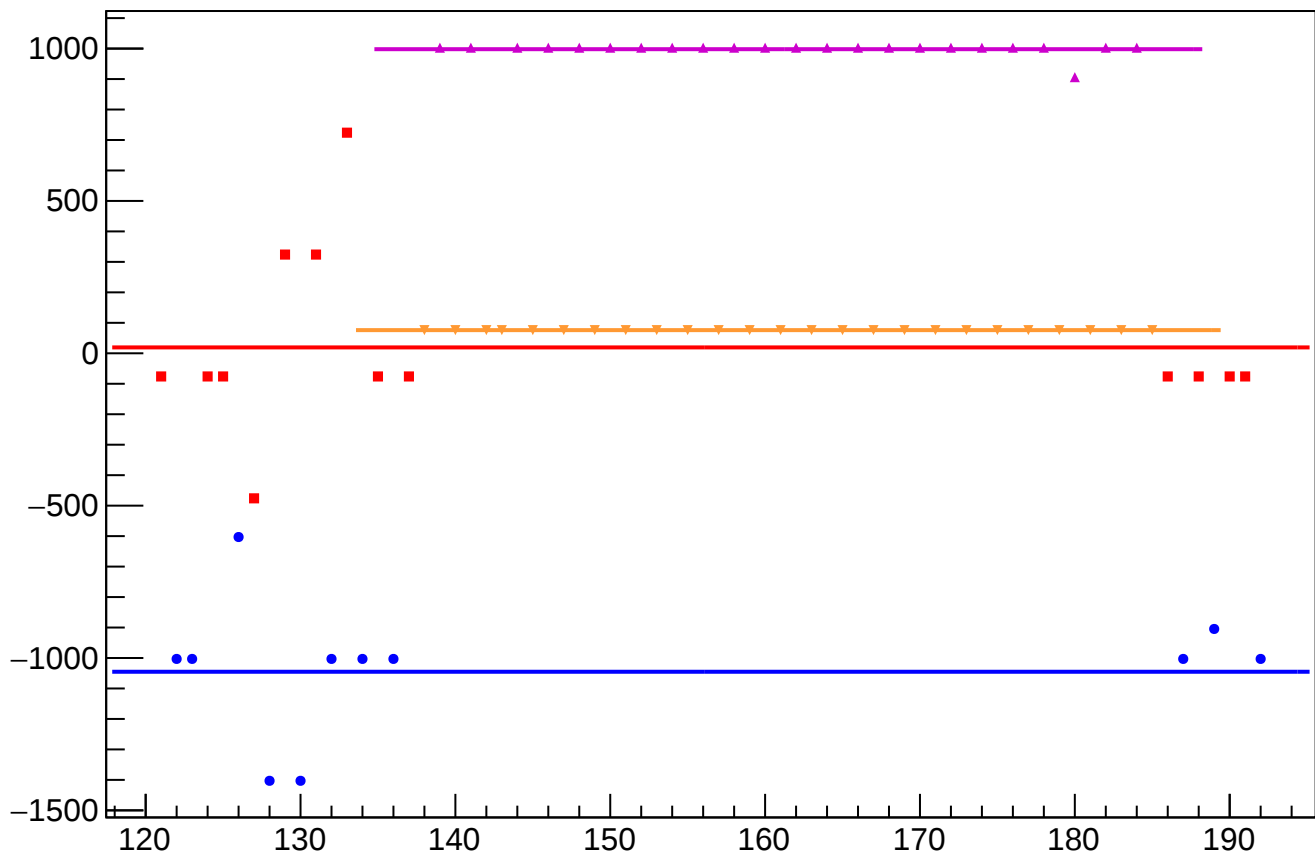
All: 0.074 +/- 0.000  $\chi^2/\text{NDF}$ : 12668486122993

# RTPAPOSUCNT\_mean vs Slug, Sign Corrected



Right In:  $867.682 \pm 0.000$   $\chi^2/\text{NDF}: 6586179989374299032475669534202658816.0/10$   
 Left Out:  $1146.011 \pm 0.000$   $\chi^2/\text{NDF}: 8041760976861450519237885952.0/24$   
 Right Out:  $-1152.260 \pm 0.000$   $\chi^2/\text{NDF}: 13740667527768954173471207694954135552.0/12$   
 Left In:  $-893.116 \pm 0.000$   $\chi^2/\text{NDF}: 13219826761707982974212661987208331264.0/22$   
 All:  $87.423 \pm 0.000$   $\chi^2/\text{NDF}: 5005141350891$

# RTPAPOSVCNT\_mean vs Slug, Sign Corrected



Right In: -1045.128 $\pm$ 0.000

$\chi^2/\text{NDF}$ : 22808502133777497764487577913993986048.0/10

Left Out: 76.011 $\pm$ 0.000

$\chi^2/\text{NDF}$ : 11003263624957134120836661248.0/24

Right Out: 19.302 $\pm$ 0.000

$\chi^2/\text{NDF}$ : 42388458814459467006894755337335734272.0/12

Left In: 998.020 $\pm$ 0.000

$\chi^2/\text{NDF}$ : 826231736084035689068445378231140352.0/22

All: 304.799 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 19855254888.0/48