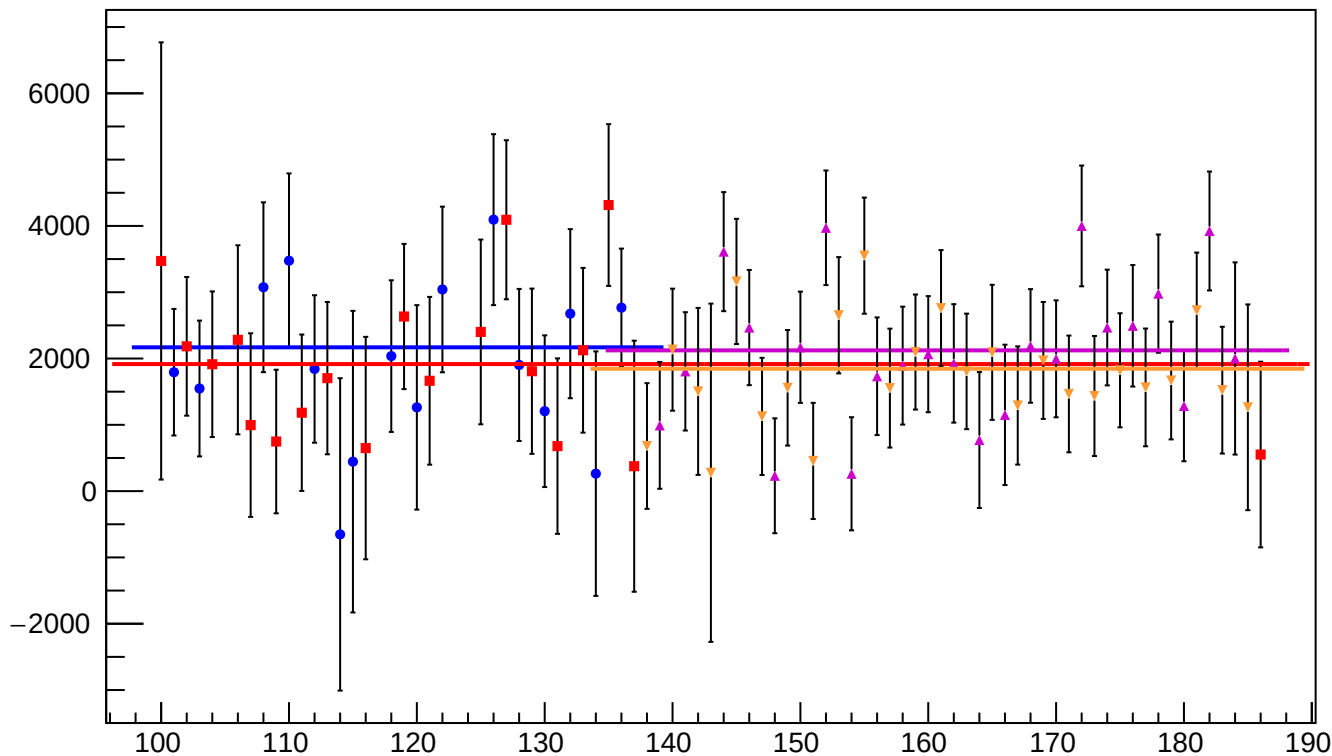


# reg\_asym\_us\_avg\_mean vs Slug, Sign Corrected



Right In: 2168.910+/-308.001

Left Out: 1845.799+/-186.902

Right Out: 1916.193+/-294.567

Left In: 2123.138+/-188.684

$\chi^2/\text{NDF}$ : 9.6/15

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

$\chi^2/\text{NDF}$ : 13.2/18

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

Left: 1983.152+/-132.785

Right: 2036.920+/-212.881

In: 2135.628+/-160.893

Out: 1866.004+/-157.815

All: 1998.212+/-112.665

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

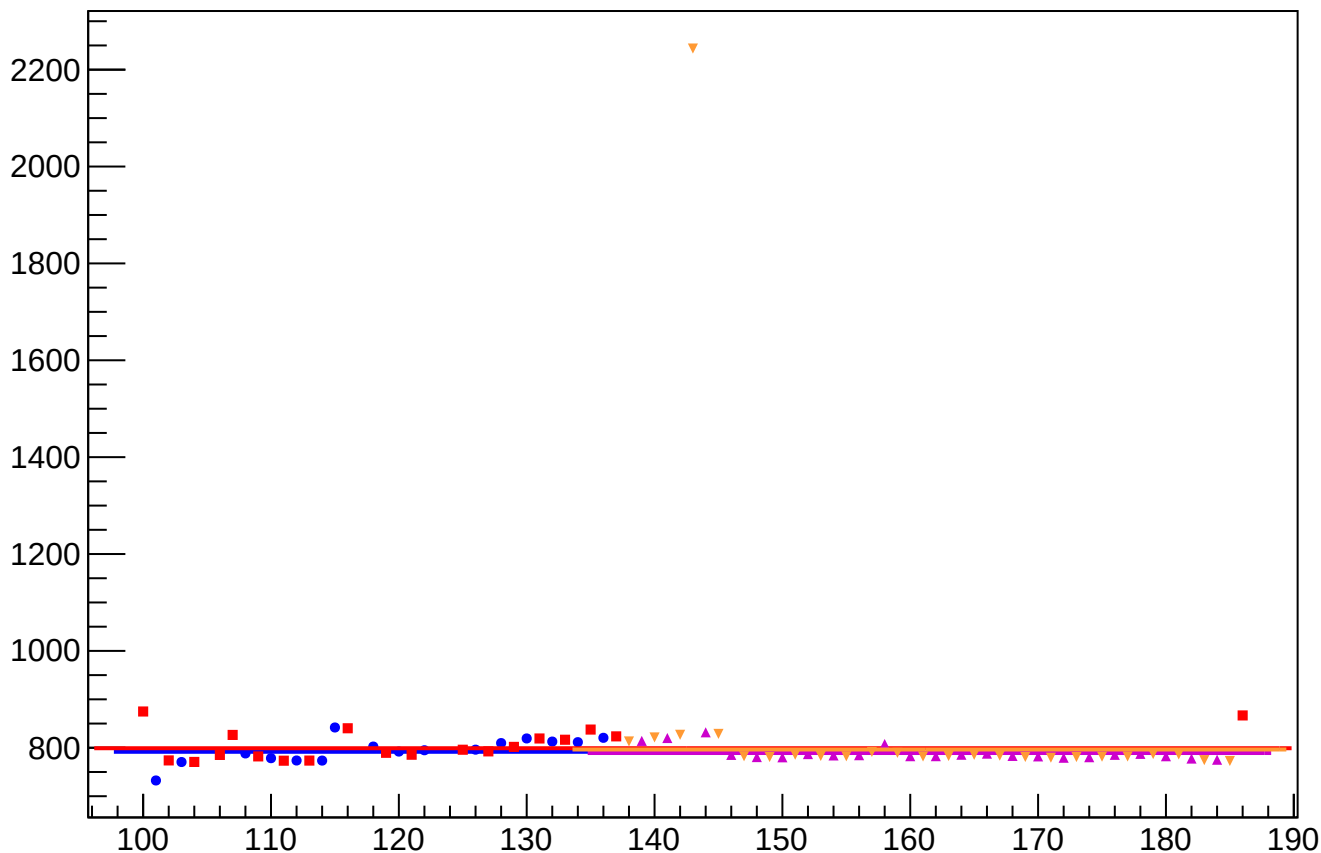
$\chi^2/\text{NDF}$ : 23.2/34

$\chi^2/\text{NDF}$ :41.6/38

$\chi^2/\text{NDF}$ :28.8/43

$\chi^2/\text{NDF}$ : 71.8/82

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



Right In: 791.722 $\pm$ 0.218  $\chi^2$ /NDF: 15122.0/15

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

Right Out: 799.057 $\pm$ 0.208  $\chi^2$ /NDF: 16467.9/18

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

Left: 792.847 $\pm$ 0.094  $\chi^2$ /NDF: 671545.0/47

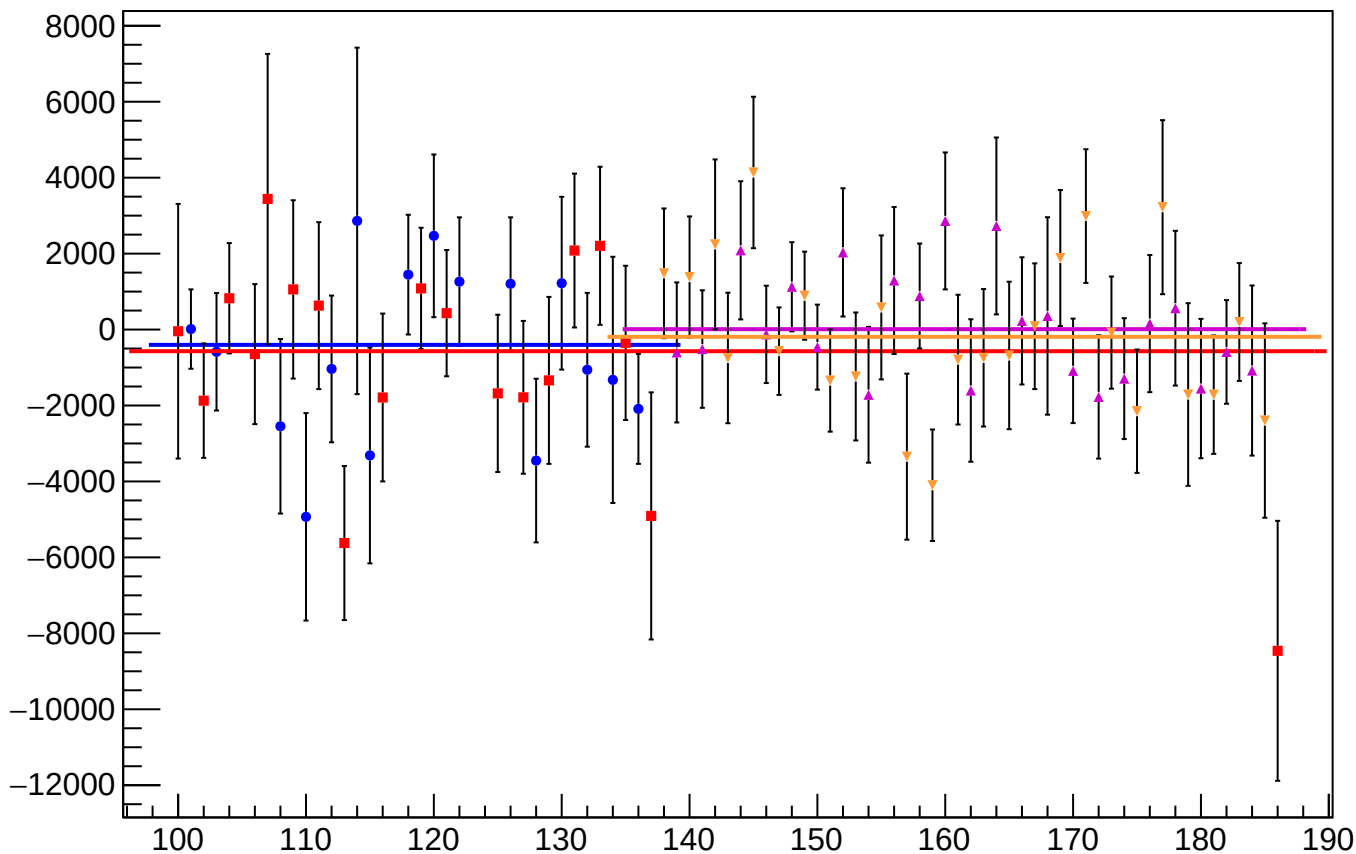
Right: 795.553 $\pm$ 0.151  $\chi^2$ /NDF: 32182.2/34

In: 789.877 $\pm$ 0.114  $\chi^2$ /NDF: 26563.9/38

Out: 797.192 $\pm$ 0.112  $\chi^2$ /NDF: 675289.1/43

All: 793.605 $\pm$ 0.080  $\chi^2$ /NDF: 703959.7/82

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



Right In: -403.277 $\pm$ 465.456  $\chi^2/\text{NDF}$ : 14.5/15

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

Right Out: -569.740 $\pm$ 469.359  $\chi^2/\text{NDF}$ : 22.9/18

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

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

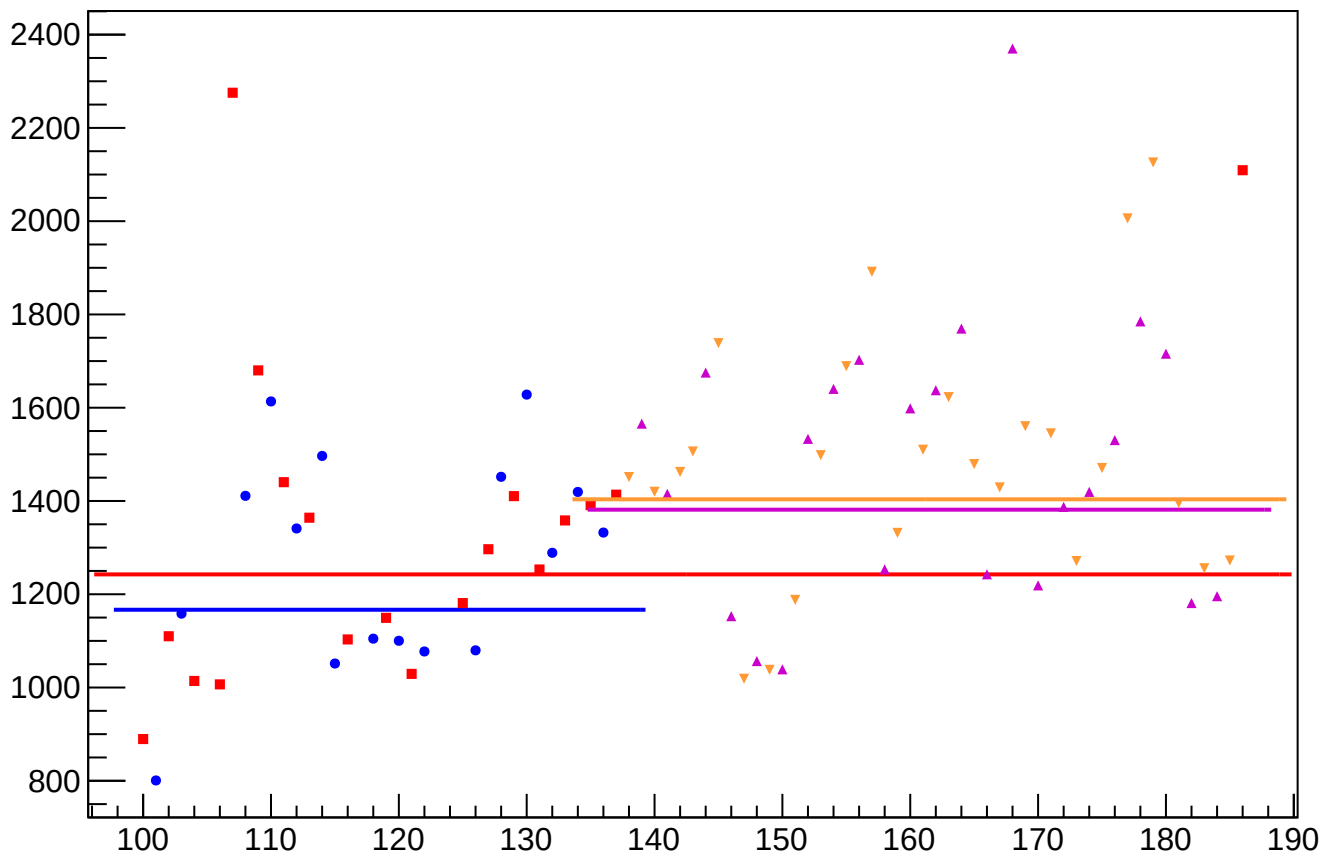
Right: -485.814 $\pm$ 330.498  $\chi^2/\text{NDF}$ : 37.4/34

In: -132.522 $\pm$ 273.395  $\chi^2/\text{NDF}$ : 29.2/38

Out: -318.287 $\pm$ 272.079  $\chi^2/\text{NDF}$ : 53.4/43

All: -225.853 $\pm$ 192.853  $\chi^2/\text{NDF}$ : 82.9/82

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



Right In: 1166.780 $\pm$ 0.329  $\chi^2/\text{NDF}$ : 529794.9/15

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

Right Out: 1242.602 $\pm$ 0.332  $\chi^2/\text{NDF}$ : 572059.5/18

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

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

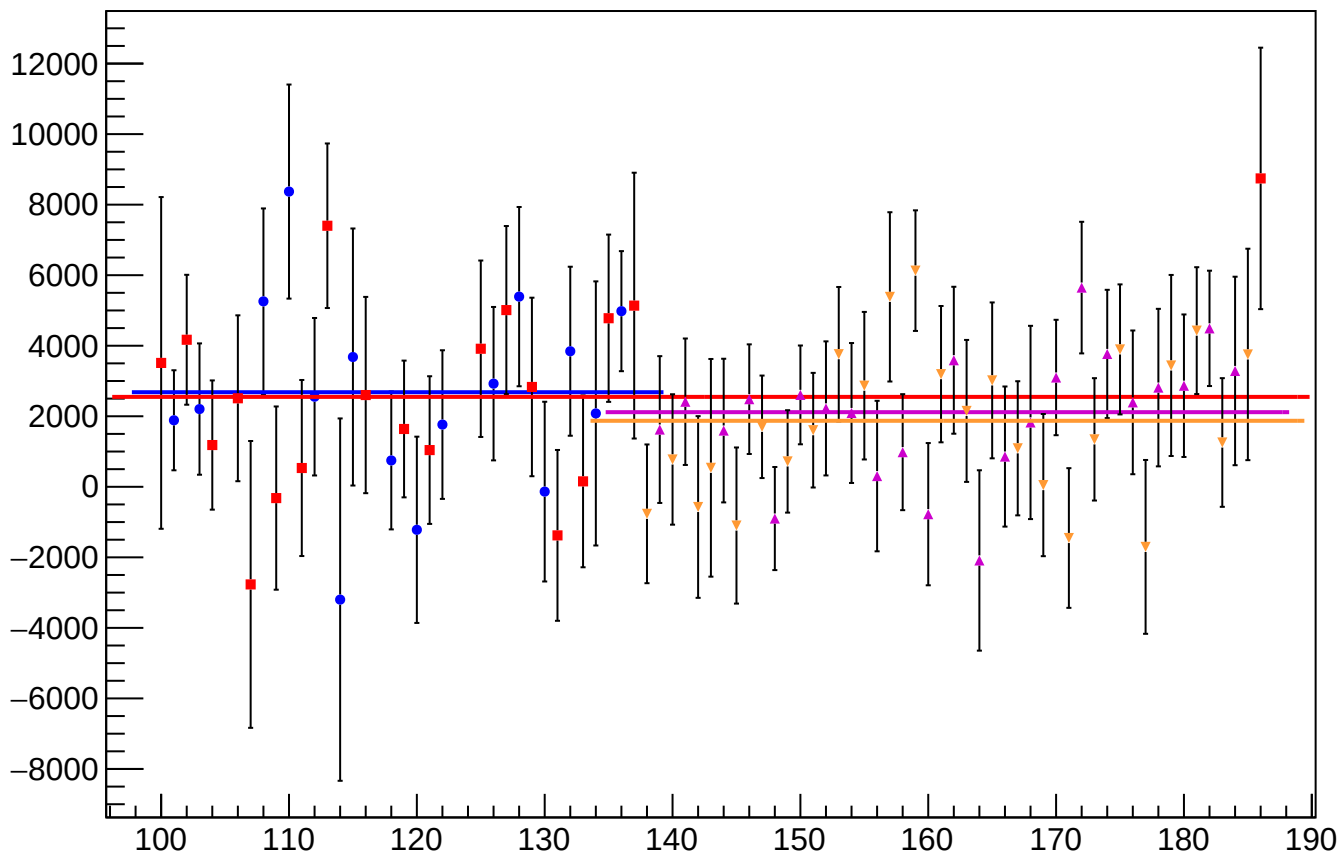
Right: 1204.374 $\pm$ 0.234  $\chi^2/\text{NDF}$ : 1128168.6/34

In: 1307.328 $\pm$ 0.193  $\chi^2/\text{NDF}$ : 2084693.1/38

Out: 1349.506 $\pm$ 0.192  $\chi^2/\text{NDF}$ : 1854849.6/43

All: 1328.519 $\pm$ 0.136  $\chi^2/\text{NDF}$ : 3963458.3/82

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



Right In: 2681.840 $\pm$ 568.598  $\chi^2$ /NDF: 14.0/15

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

Right Out: 2549.567 $\pm$ 563.693  $\chi^2$ /NDF: 19.1/18

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

Left: 1993.467 $\pm$ 277.425  $\chi^2$ /NDF: 45.1/47

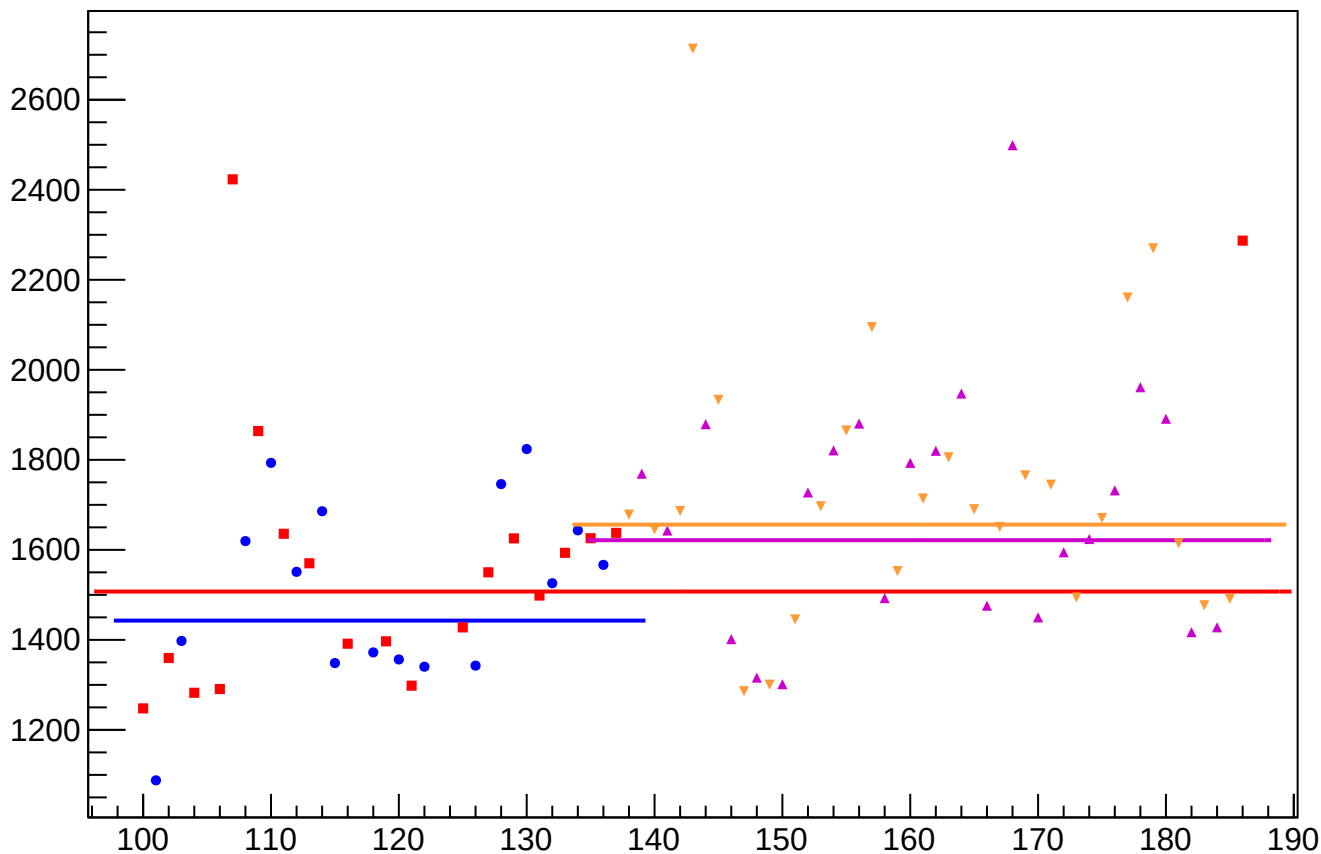
Right: 2615.131 $\pm$ 400.314  $\chi^2$ /NDF: 33.2/34

In: 2299.001 $\pm$ 323.291  $\chi^2$ /NDF:33.5/38

Out: 2092.378 $\pm$ 321.656  $\chi^2$ /NDF:46.2/43

All: 2195.166 $\pm$ 228.021  $\chi^2$ /NDF: 79.9/82

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



Right In: 1442.805 $\pm$ 0.402  $\chi^2/\text{NDF}$ : 278289.5/15

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

Right Out: 1507.369 $\pm$ 0.399  $\chi^2/\text{NDF}$ : 347272.5/18

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

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

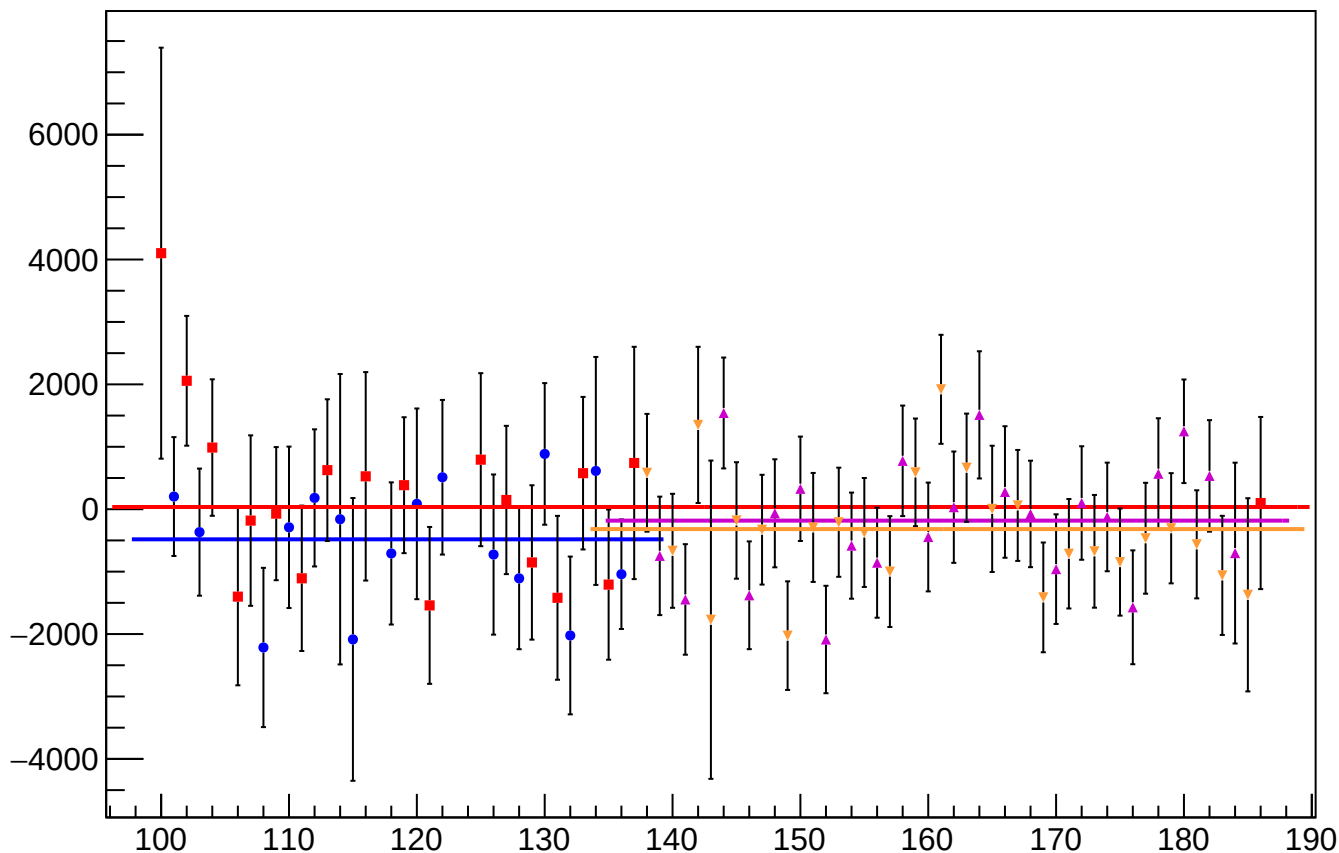
Right: 1475.367 $\pm$ 0.283  $\chi^2/\text{NDF}$ : 638567.2/34

In: 1563.676 $\pm$ 0.229  $\chi^2/\text{NDF}$ : 1187150.9/38

Out: 1607.685 $\pm$ 0.227  $\chi^2/\text{NDF}$ : 1351768.6/43

All: 1585.792 $\pm$ 0.161  $\chi^2/\text{NDF}$ : 2557544.7/82

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



Right In:  $-482.437 \pm 305.341$   $\chi^2/\text{NDF}$ : 8.2/15

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

Right Out:  $35.436 \pm 291.698$   $\chi^2/\text{NDF}$ : 13.6/18

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

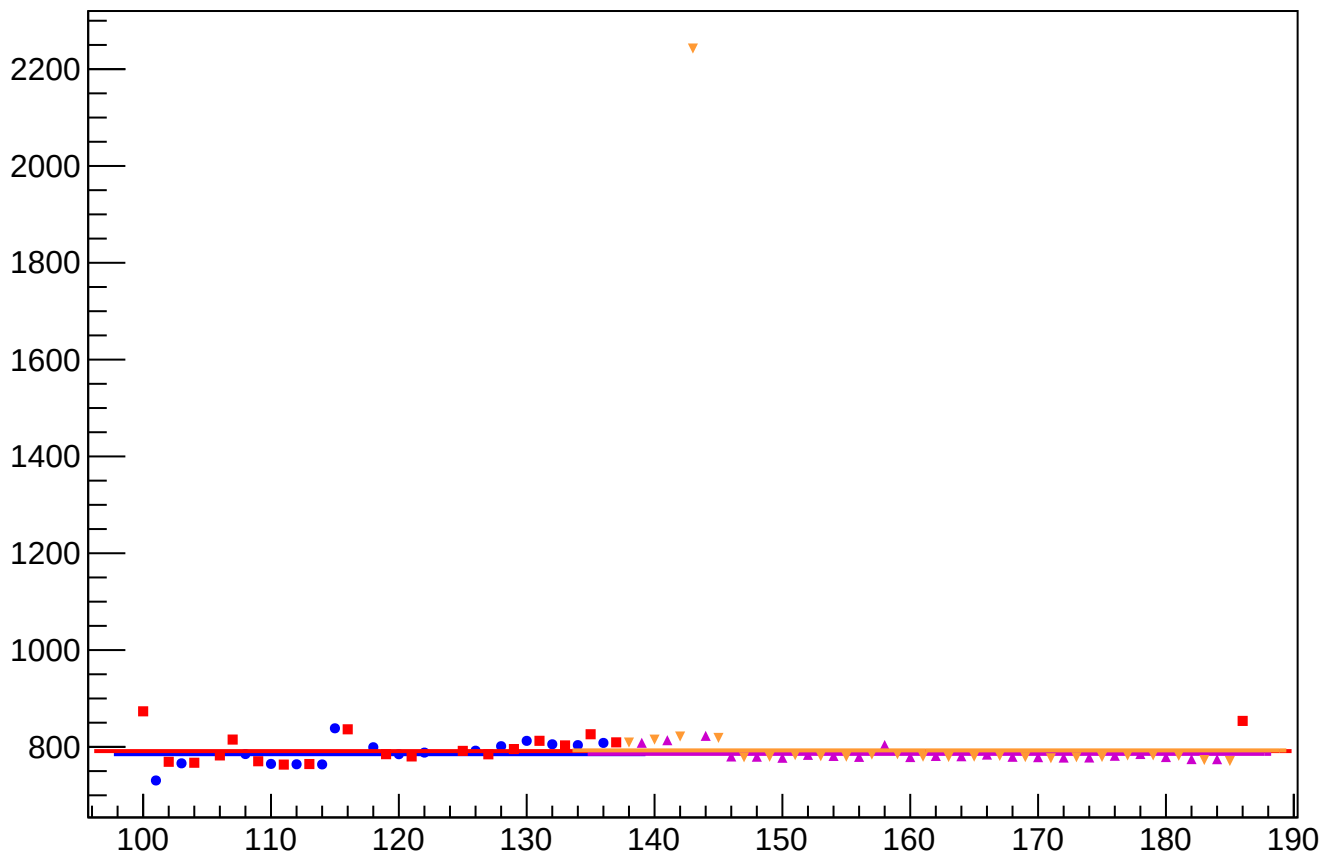
Right:  $-211.673 \pm 210.920$   $\chi^2/\text{NDF}$ : 23.2/34

In:  $-265.119 \pm 159.976$   $\chi^2/\text{NDF}$ : 35.0/38

Out:  $-216.042 \pm 156.854$   $\chi^2/\text{NDF}$ : 35.0/43

All:  $-240.097 \pm 112.000$   $\chi^2/\text{NDF}$ : 70.0/82

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



Right In: 784.921 $\pm$ 0.216  $\chi^2$ /NDF: 13814.6/15

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

Right Out: 791.314 $\pm$ 0.206  $\chi^2$ /NDF: 15248.5/18

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

Left: 789.226 $\pm$ 0.093  $\chi^2$ /NDF: 670367.6/47

Right: 788.264 $\pm$ 0.149  $\chi^2$ /NDF: 29521.5/34

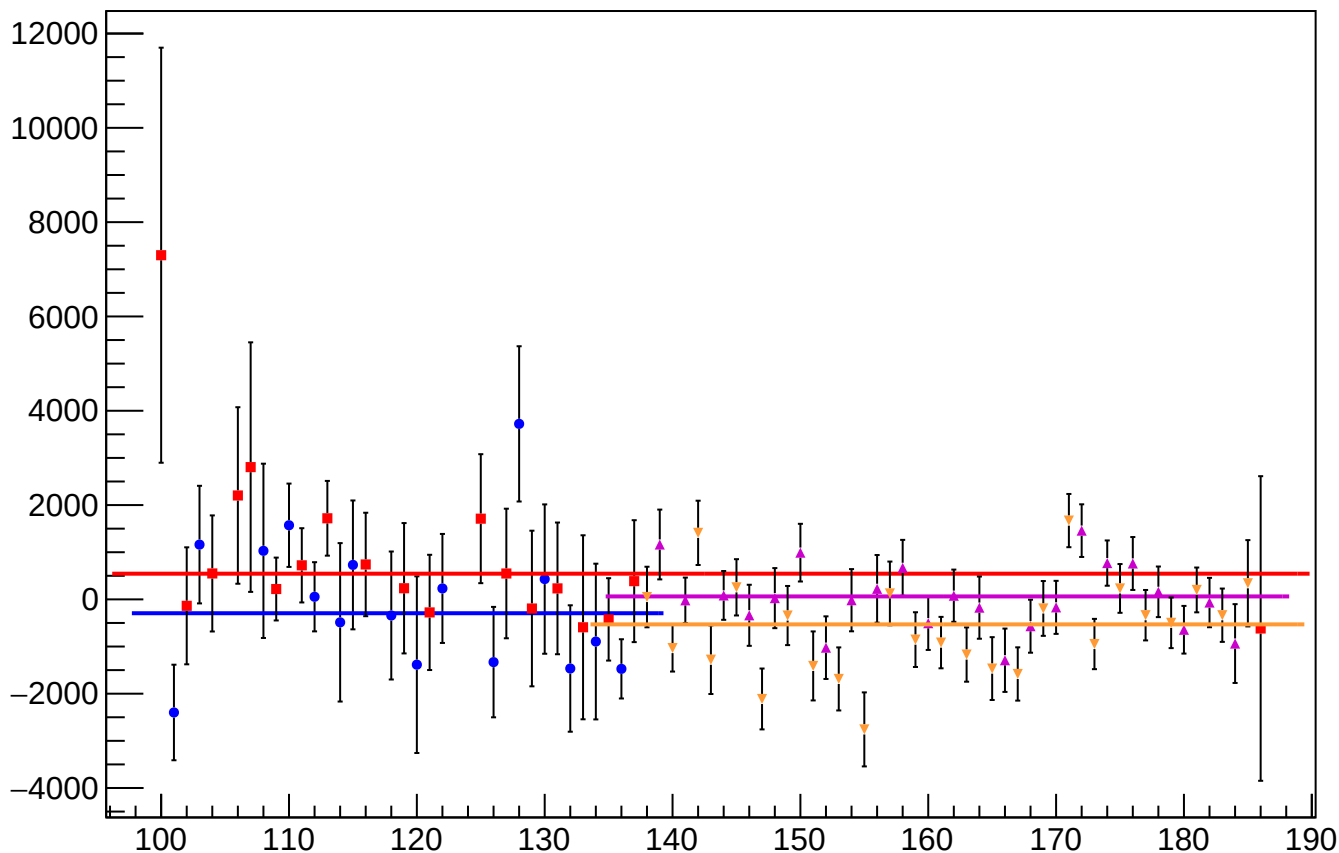
In: 785.408 $\pm$ 0.113  $\chi^2$ /NDF: 23195.3/38

Out: 792.364 $\pm$ 0.111  $\chi^2$ /NDF: 674795.6/43

All: 788.955 $\pm$ 0.079  $\chi^2$ /NDF: 699919.1/82



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



Right In: -293.772 $\pm$ 283.190  $\chi^2$ /NDF: 23.4/15

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

Right Out: 544.884 $\pm$ 272.348  $\chi^2$ /NDF: 9.9/18

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

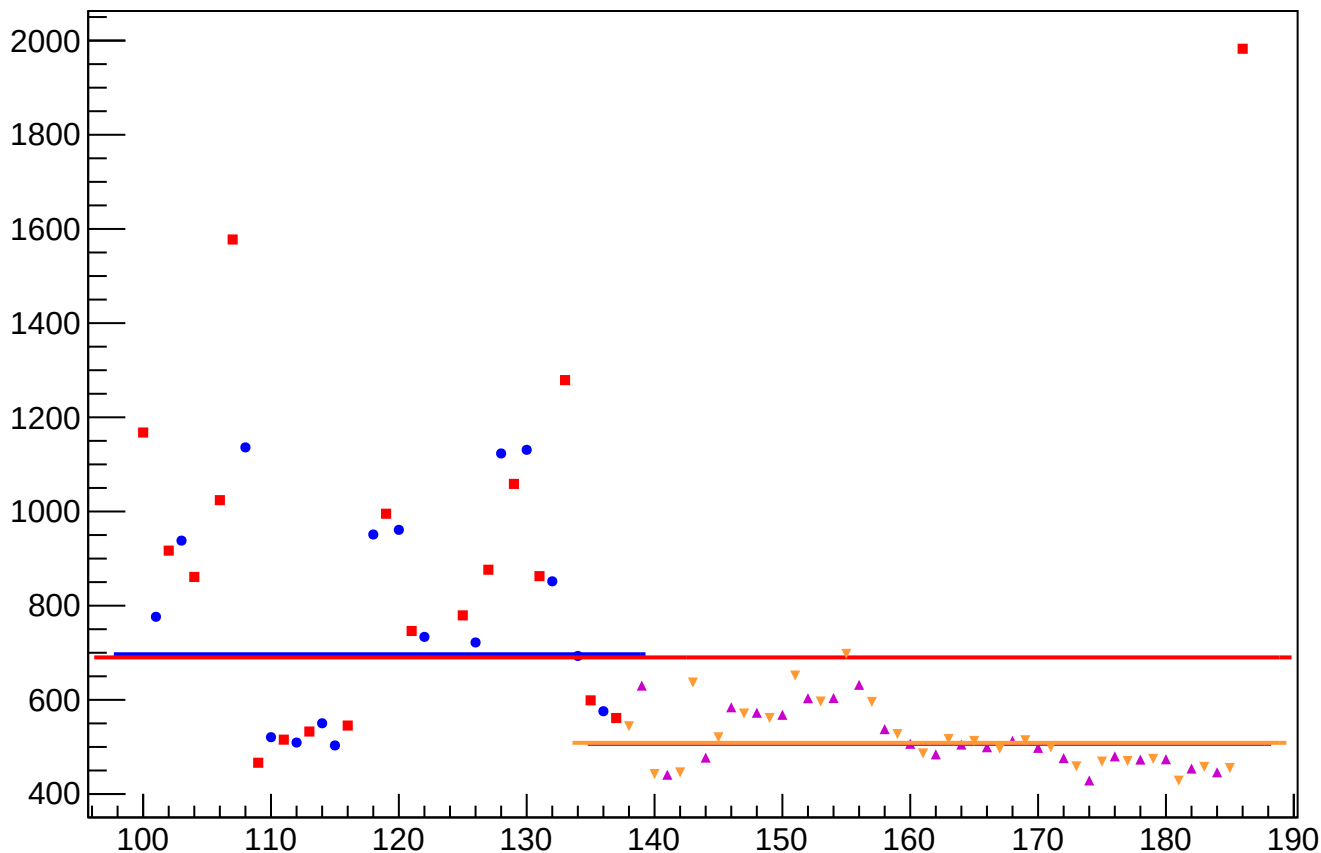
Right: 141.917 $\pm$ 196.300  $\chi^2$ /NDF: 37.8/34

In: 6.919 $\pm$ 112.080  $\chi^2$ /NDF:53.5/38

Out: -356.447 $\pm$ 109.462  $\chi^2$ /NDF:84.6/43

All: -179.057 $\pm$ 78.311  $\chi^2$ /NDF: 143.4/82

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



Right In: 696.803+/-0.200  $\chi^2/\text{NDF}$ : 963973.0/15

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

Right Out: 690.139+/-0.193  $\chi^2/\text{NDF}$ : 1676217.4/18

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

Left: 507.601+/-0.060  $\chi^2/\text{NDF}$ : 985931.7/47

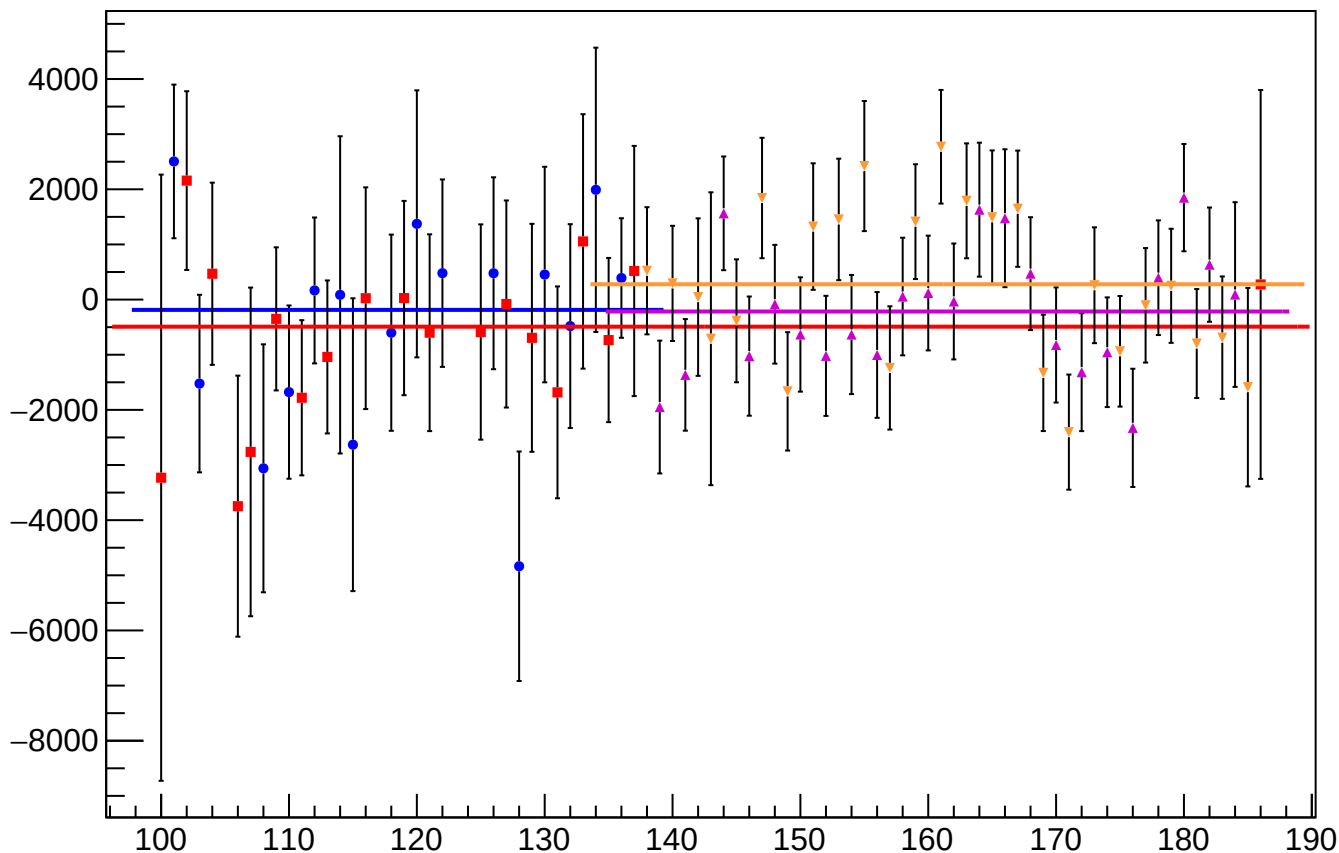
Right: 693.341+/-0.139  $\chi^2/\text{NDF}$ : 2640765.8/34

In: 536.208+/-0.079  $\chi^2/\text{NDF}$ : 2162923.0/38

Out: 538.071+/-0.077  $\chi^2/\text{NDF}$ : 2969129.1/43

All: 537.161+/-0.055  $\chi^2/\text{NDF}$ : 5132334.8/82

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



Right In:  $-186.802 \pm 434.855$   $\chi^2/\text{NDF}$ : 14.8/15

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

Right Out:  $-491.039 \pm 424.923$   $\chi^2/\text{NDF}$ : 8.1/18

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

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

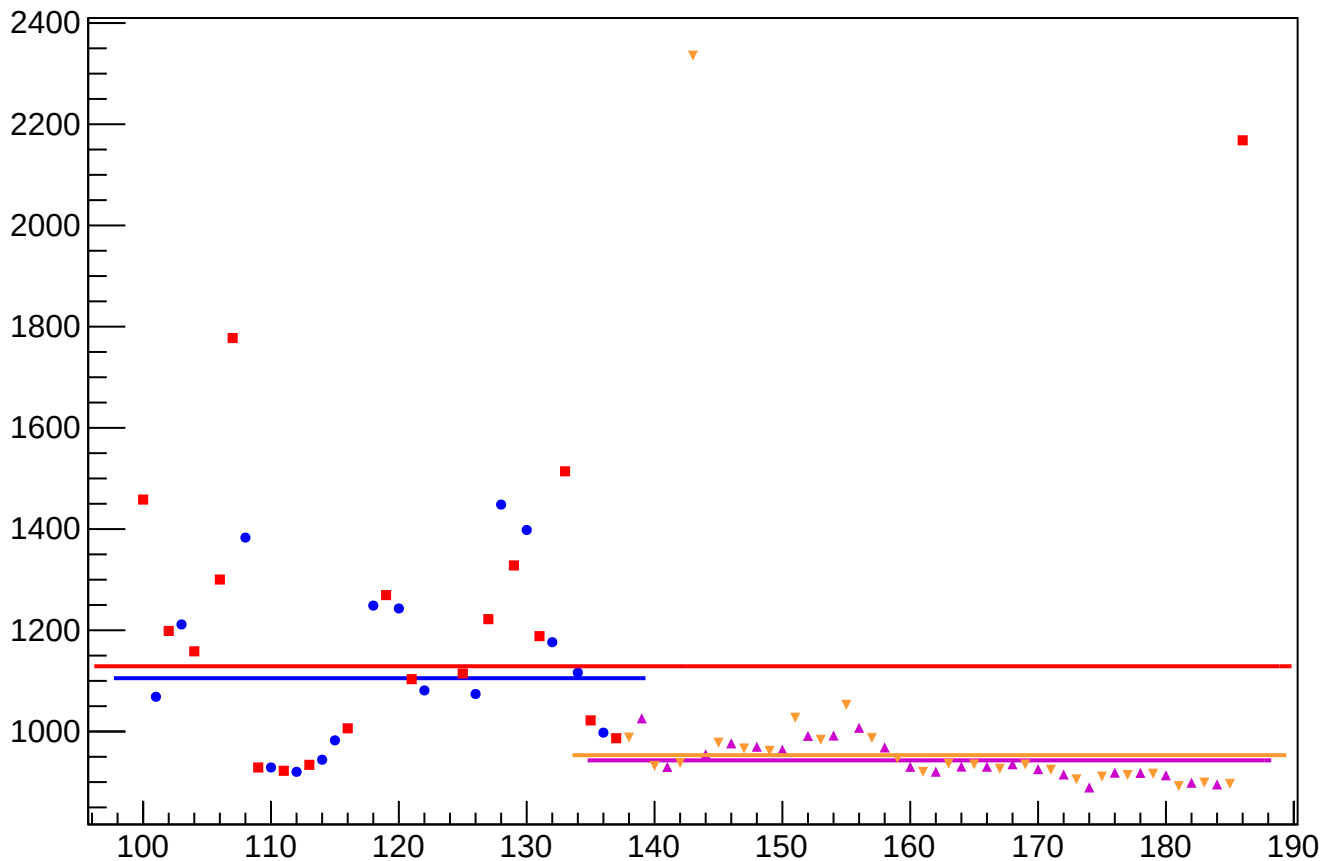
Right:  $-342.435 \pm 303.917$   $\chi^2/\text{NDF}$ : 23.1/34

In:  $-209.903 \pm 200.255$   $\chi^2/\text{NDF}$ : 39.2/38

Out:  $111.325 \pm 197.863$   $\chi^2/\text{NDF}$ : 49.0/43

All:  $-47.359 \pm 140.748$   $\chi^2/\text{NDF}$ : 89.5/82

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



Right In: 1105.313 $\pm$ 0.307  $\chi^2/\text{NDF}$ : 258052.8/15

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

Right Out: 1128.903 $\pm$ 0.300  $\chi^2/\text{NDF}$ : 540681.4/18

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

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

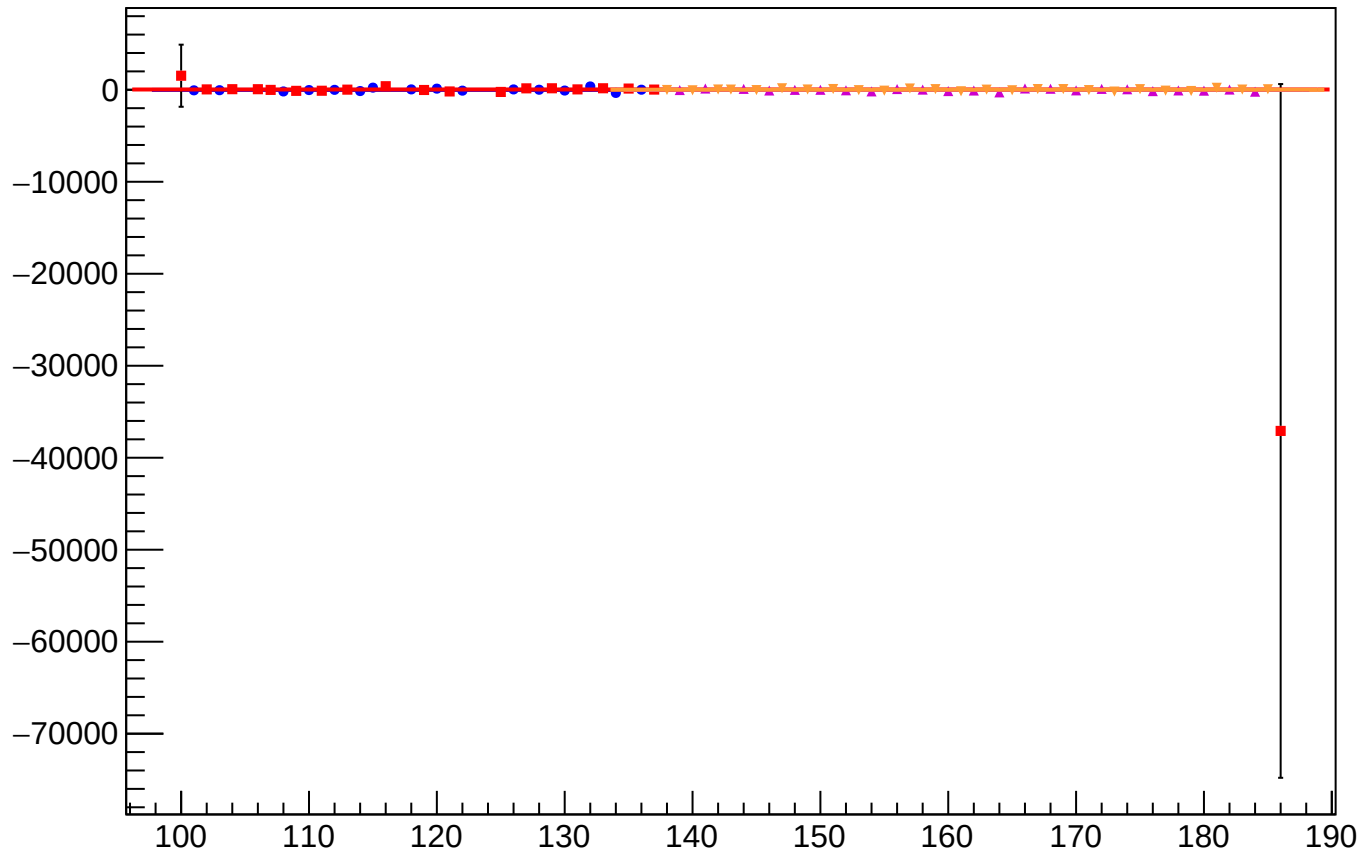
Right: 1117.381 $\pm$ 0.215  $\chi^2/\text{NDF}$ : 801745.1/34

In: 977.364 $\pm$ 0.142  $\chi^2/\text{NDF}$ : 526205.0/38

Out: 991.313 $\pm$ 0.140  $\chi^2/\text{NDF}$ : 1414702.0/43

All: 984.422 $\pm$ 0.100  $\chi^2/\text{NDF}$ : 1945817.6/82

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



Right In:  $-15.551 \pm 30.032$   $\chi^2/\text{NDF}$ : 15.9/15

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

Right Out:  $31.730 \pm 30.492$   $\chi^2/\text{NDF}$ : 17.8/18

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

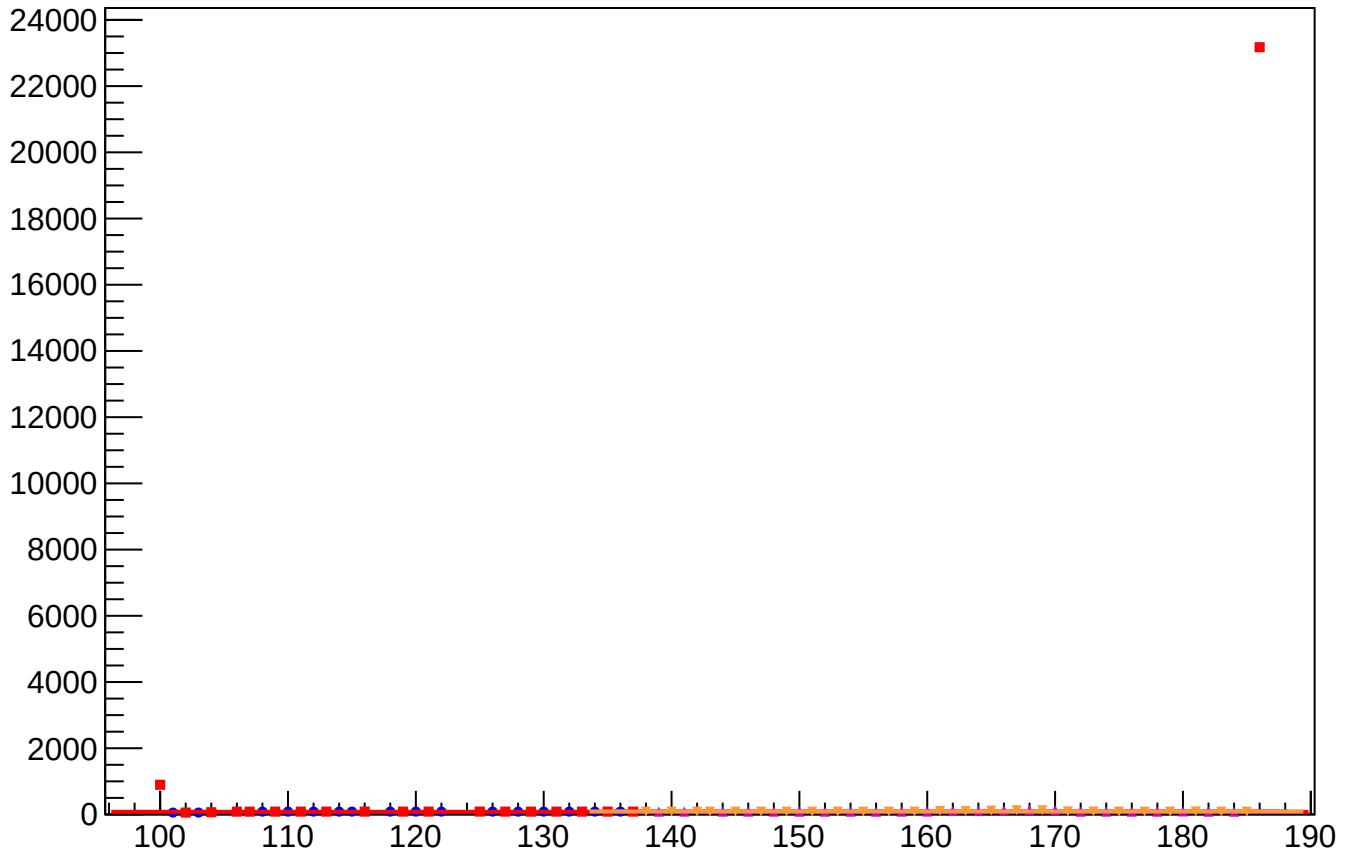
Right:  $7.731 \pm 21.397$   $\chi^2/\text{NDF}$ : 34.9/34

In:  $-20.418 \pm 17.527$   $\chi^2/\text{NDF}$ : 38.5/38

Out:  $13.276 \pm 17.272$   $\chi^2/\text{NDF}$ : 40.8/43

All:  $-3.324 \pm 12.302$   $\chi^2/\text{NDF}$ : 81.2/82

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



Right In: 76.053 $\pm$ 0.021  $\chi^2/\text{NDF}$ : 408670.6/15

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

Right Out: 79.386 $\pm$ 0.022  $\chi^2/\text{NDF}$ : 1128481.1/18

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

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

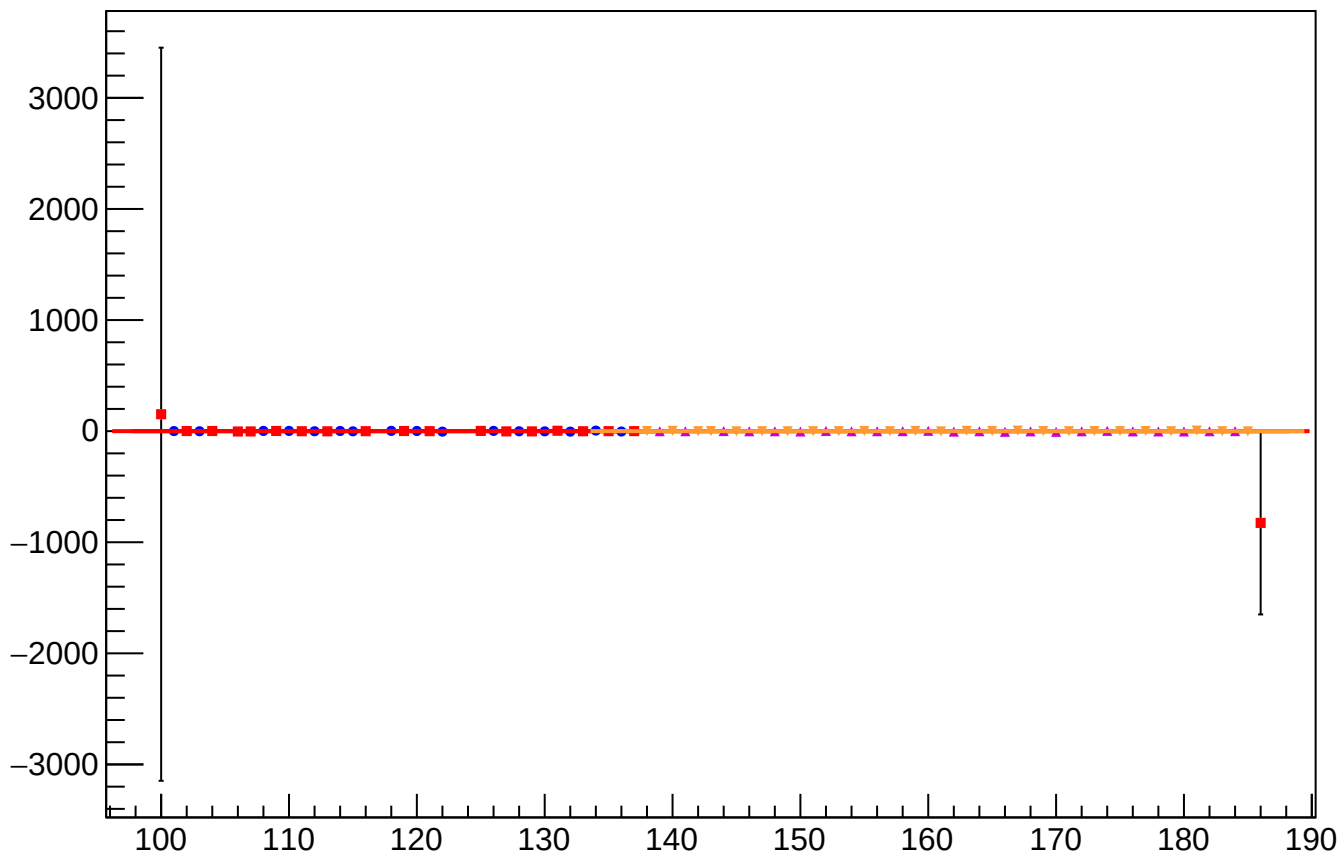
Right: 77.694 $\pm$ 0.015  $\chi^2/\text{NDF}$ : 1549278.6/34

In: 84.983 $\pm$ 0.012  $\chi^2/\text{NDF}$ : 1185332.9/38

Out: 86.243 $\pm$ 0.012  $\chi^2/\text{NDF}$ : 1747757.8/43

All: 85.622 $\pm$ 0.009  $\chi^2/\text{NDF}$ : 2938336.5/82

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



Right In:  $-0.290 \pm 0.502$   $\chi^2/\text{NDF}$ : 20.9/15

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

Right Out:  $0.038 \pm 0.525$   $\chi^2/\text{NDF}$ : 10.9/18

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

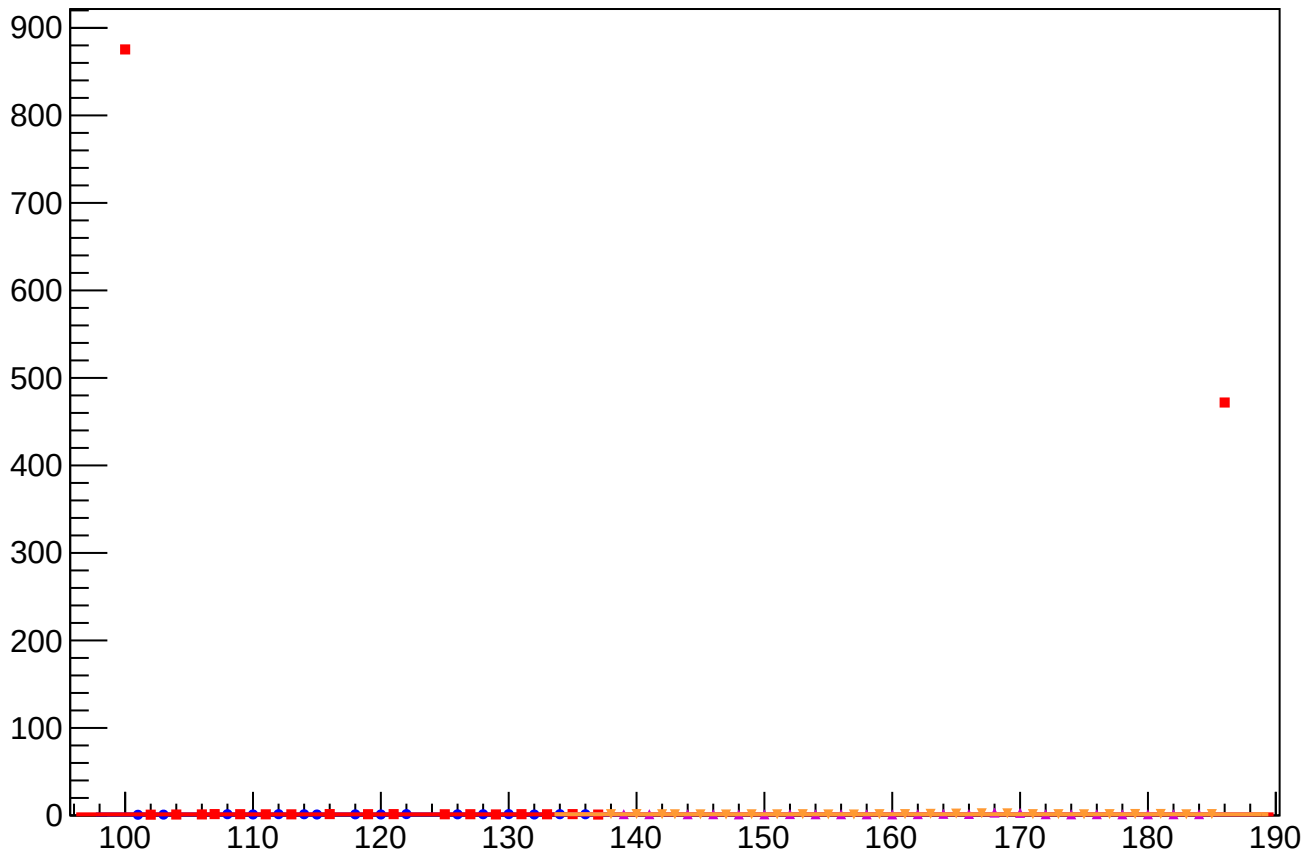
Right:  $-0.133 \pm 0.363$   $\chi^2/\text{NDF}$ : 32.1/34

In:  $-0.433 \pm 0.306$   $\chi^2/\text{NDF}$ : 47.4/38

Out:  $0.102 \pm 0.301$   $\chi^2/\text{NDF}$ : 32.3/43

All:  $-0.161 \pm 0.215$   $\chi^2/\text{NDF}$ : 81.2/82

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



Right In: 1.152+/-0.000  $\chi^2/\text{NDF}$ : 506239.7/15

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

Right Out: 1.259+/-0.000  $\chi^2/\text{NDF}$ : 1141868.2/18

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  $\chi^2/\text{NDF}$ : 1691638.0/34

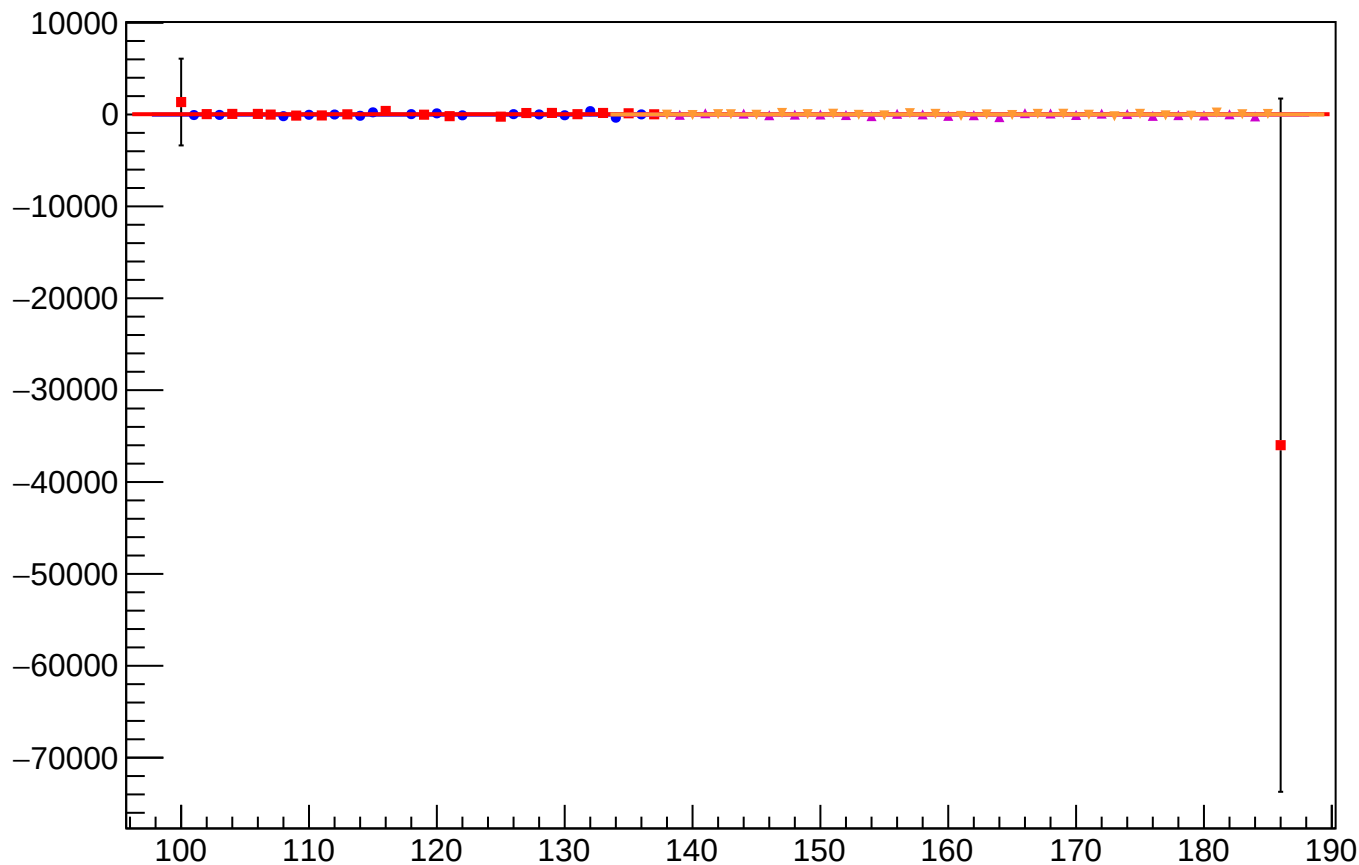
In: 1.341+/-0.000  $\chi^2/\text{NDF}$ : 1953849.4/38

Out: 1.357+/-0.000  $\chi^2/\text{NDF}$ : 2236678.7/43

All: 1.349+/-0.000  $\chi^2/\text{NDF}$ : 4193193.5/82



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



Right In: -14.487+/-30.040  $\chi^2/\text{NDF}$ : 16.2/15

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

Right Out: 32.009+/-30.500  $\chi^2/\text{NDF}$ : 17.7/18

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

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

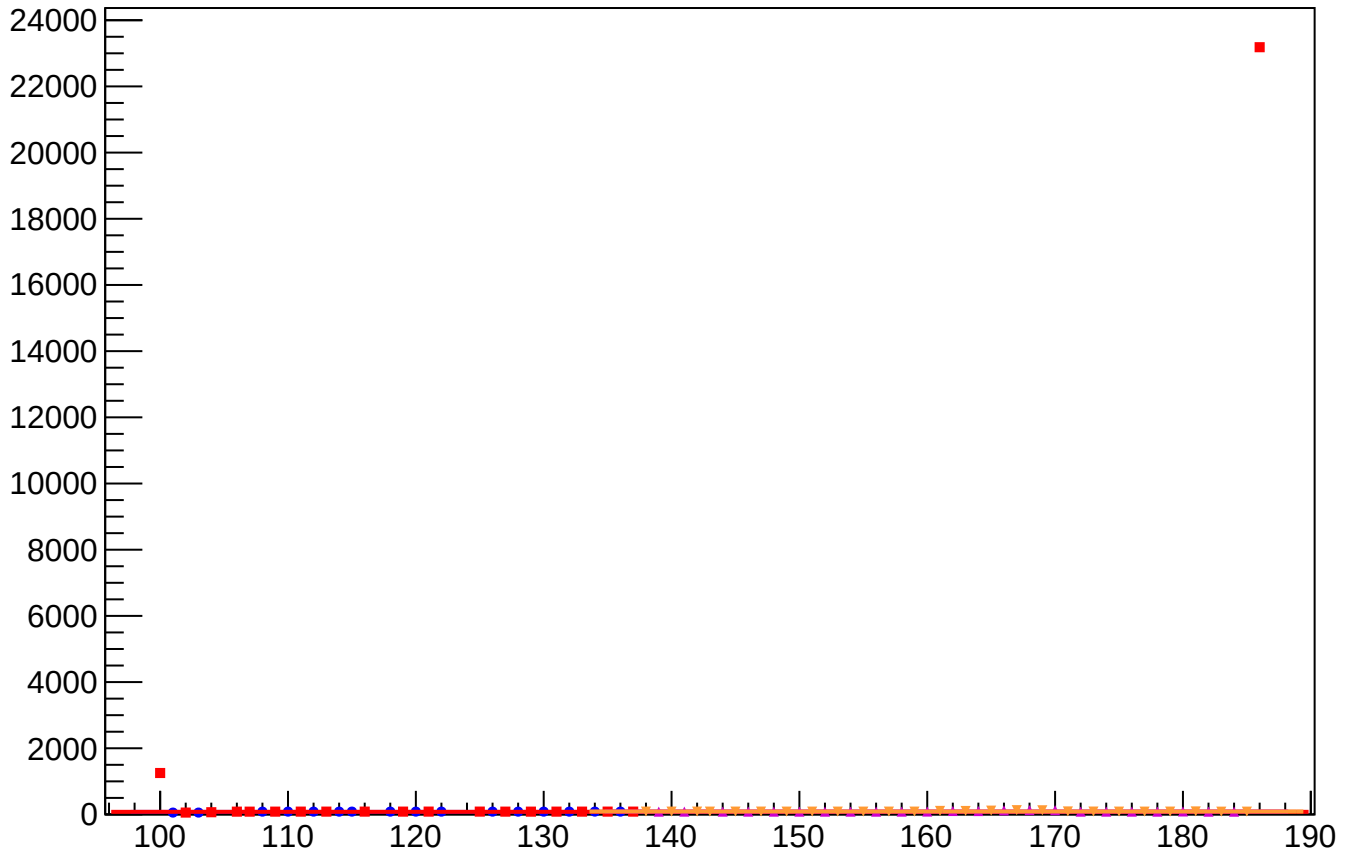
Right: 8.408+/-21.402  $\chi^2/\text{NDF}$ : 35.1/34

In: -19.735+/-17.532  $\chi^2/\text{NDF}$ : 38.6/38

Out: 13.271+/-17.277  $\chi^2/\text{NDF}$ : 40.4/43

All: -2.990+/-12.306  $\chi^2/\text{NDF}$ : 80.8/82

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



Right In: 76.073+/-0.021  $\chi^2/\text{NDF}$ : 408699.5/15

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

Right Out: 79.389+/-0.022  $\chi^2/\text{NDF}$ : 1135008.7/18

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

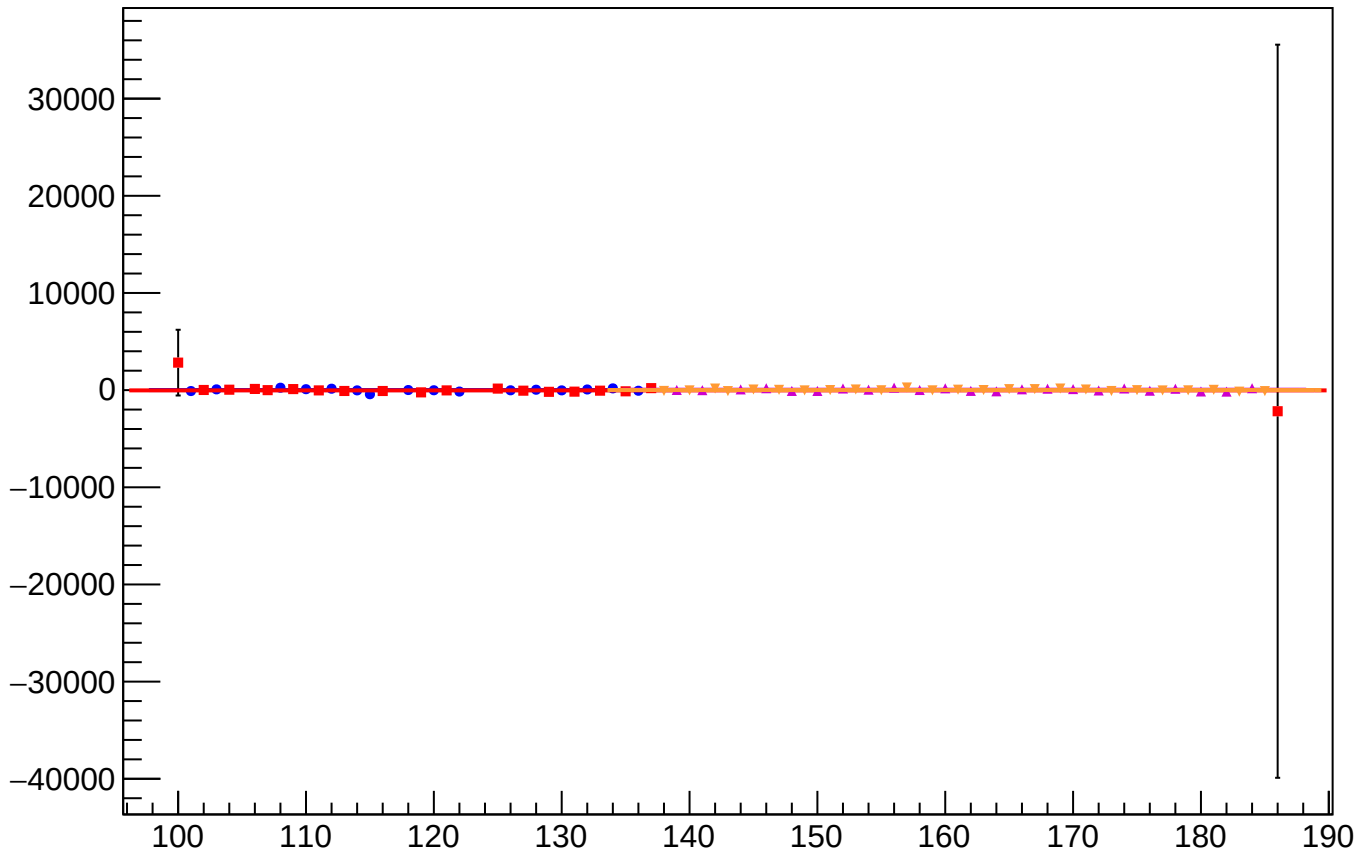
Right: 77.706+/-0.015  $\chi^2/\text{NDF}$ : 1555709.3/34

In: 85.007+/-0.012  $\chi^2/\text{NDF}$ : 1186365.0/38

Out: 86.262+/-0.012  $\chi^2/\text{NDF}$ : 1755631.7/43

All: 85.644+/-0.009  $\chi^2/\text{NDF}$ : 2947197.4/82

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



Right In: 8.113+/-30.012  $\chi^2/\text{NDF}$ : 14.0/15

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

Right Out: -25.776+/-30.473  $\chi^2/\text{NDF}$ : 12.8/18

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

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

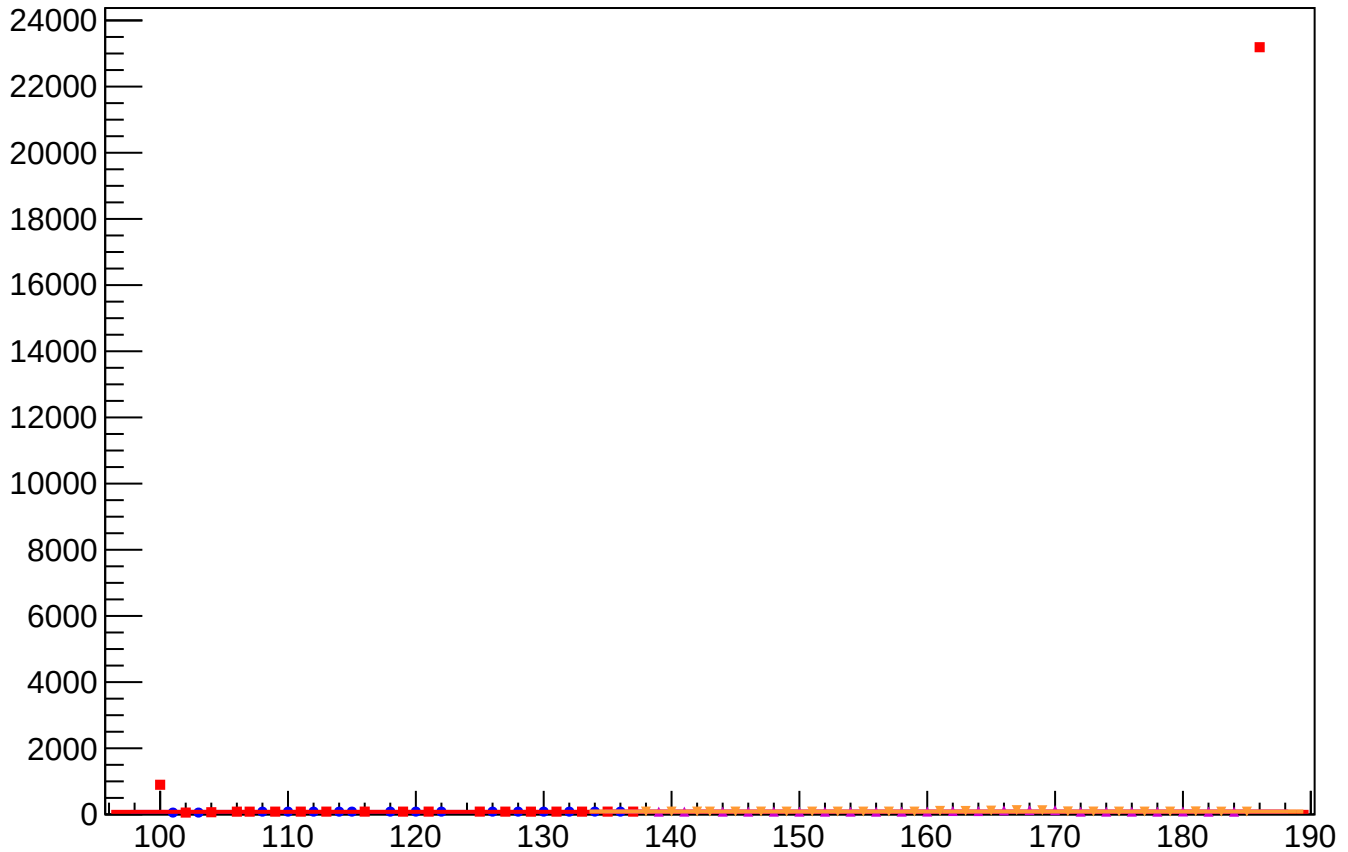
Right: -8.573+/-21.383  $\chi^2/\text{NDF}$ : 27.4/34

In: 31.380+/-17.528  $\chi^2/\text{NDF}$ : 46.4/38

Out: -1.576+/-17.272  $\chi^2/\text{NDF}$ : 32.2/43

All: 14.659+/-12.303  $\chi^2/\text{NDF}$ : 80.4/82

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



Right In: 76.004 $\pm$ 0.021  $\chi^2$ /NDF: 408328.4/15

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

Right Out: 79.337 $\pm$ 0.022  $\chi^2$ /NDF: 1128645.6/18

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

Left: 89.566 $\pm$ 0.011  $\chi^2$ /NDF: 980063.3/47

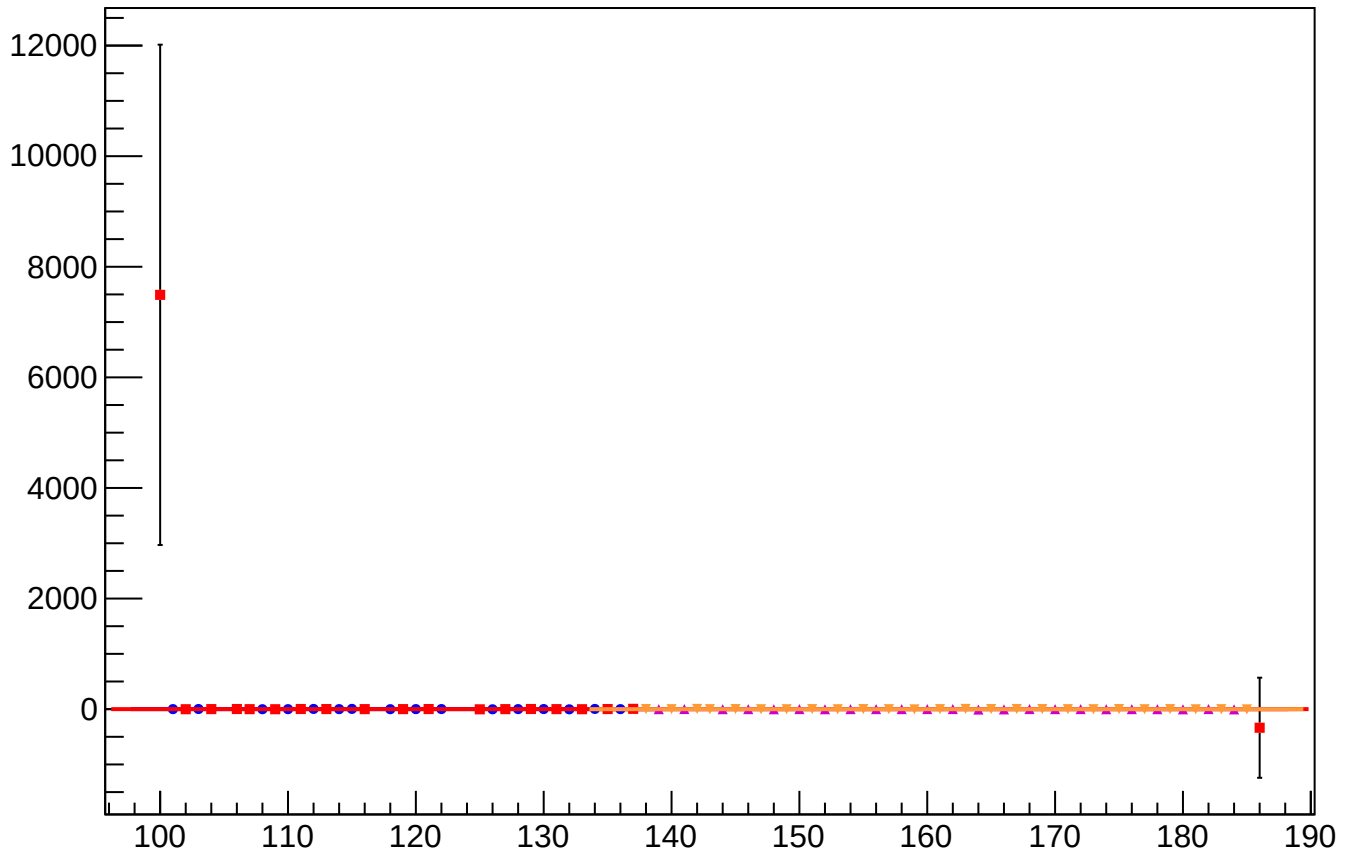
Right: 77.645 $\pm$ 0.015  $\chi^2$ /NDF: 1549121.9/34

In: 84.981 $\pm$ 0.012  $\chi^2$ /NDF: 1190918.1/38

Out: 86.240 $\pm$ 0.012  $\chi^2$ /NDF: 1748830.9/43

All: 85.620 $\pm$ 0.009  $\chi^2$ /NDF: 2944986.3/82

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



Right In:  $0.892 \pm 0.531$   $\chi^2/\text{NDF}: 11.9/15$

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

Right Out:  $0.347 \pm 0.549$   $\chi^2/\text{NDF}: 13.6/18$

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

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

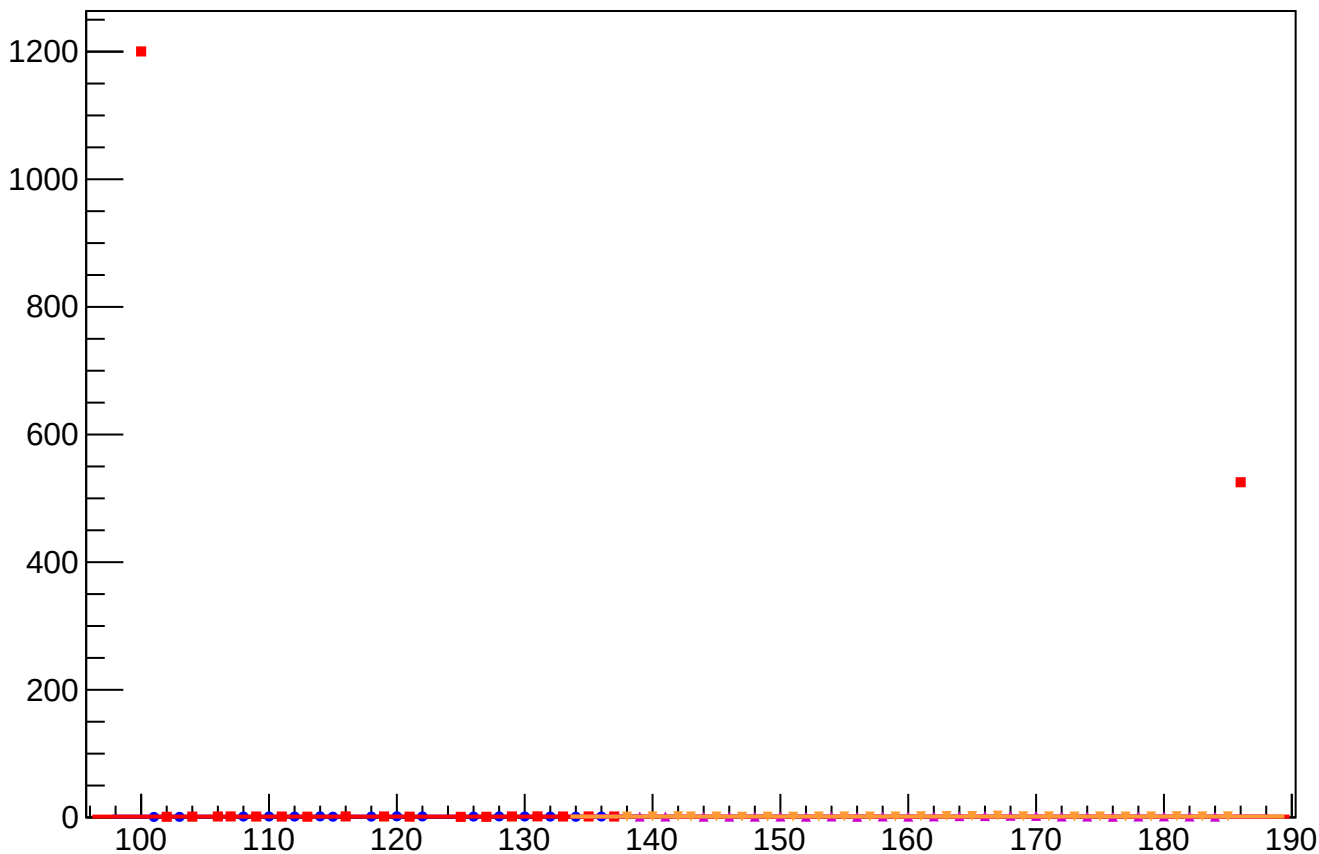
Right:  $0.629 \pm 0.382$   $\chi^2/\text{NDF}: 26.0/34$

In:  $0.266 \pm 0.315$   $\chi^2/\text{NDF}: 34.4/38$

Out:  $-0.235 \pm 0.314$   $\chi^2/\text{NDF}: 36.0/43$

All:  $0.015 \pm 0.222$   $\chi^2/\text{NDF}: 71.7/82$

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



Right In: 1.233+/-0.000  $\chi^2/\text{NDF}$ : 625758.9/15

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

Right Out: 1.315+/-0.000  $\chi^2/\text{NDF}$ : 1187365.3/18

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

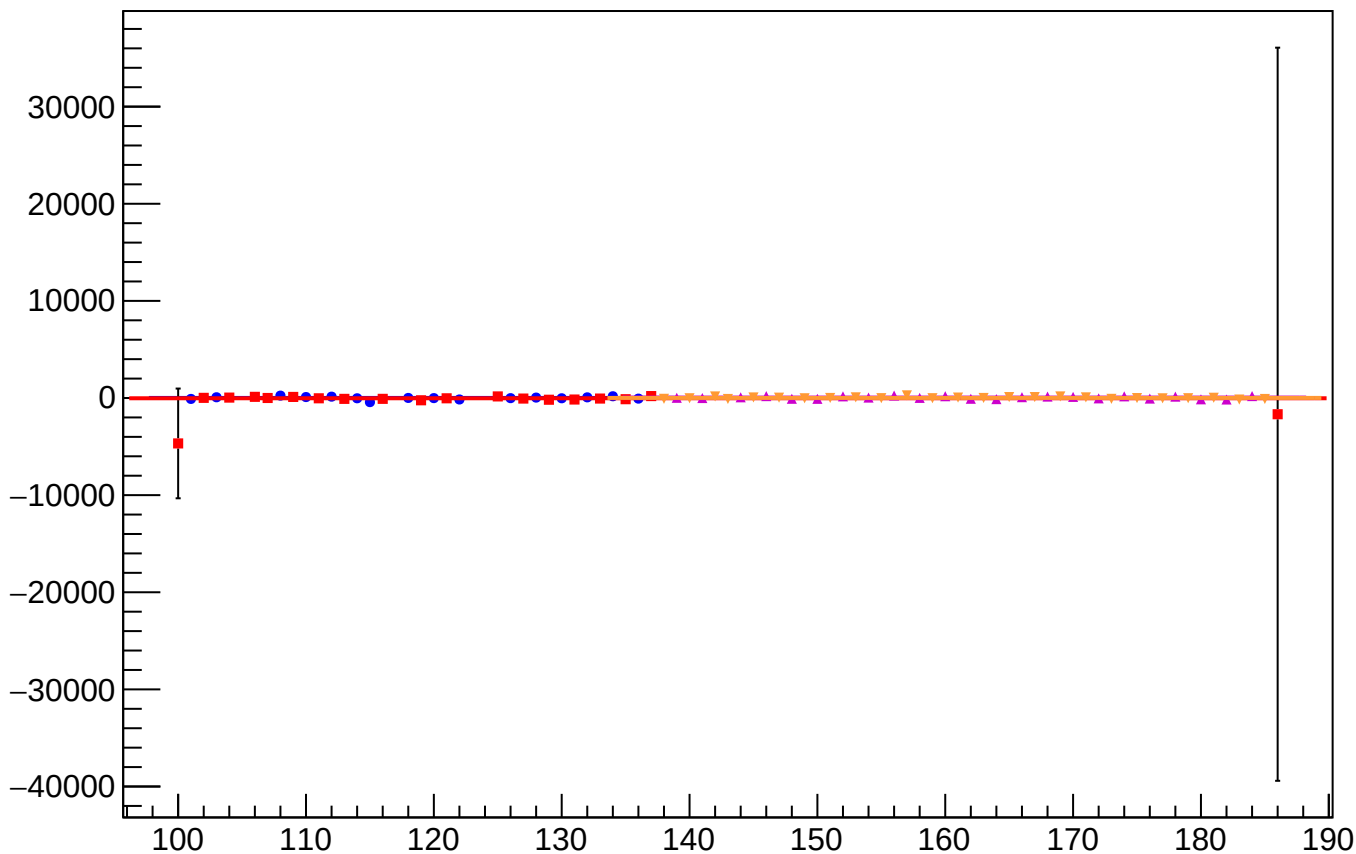
Right: 1.273+/-0.000  $\chi^2/\text{NDF}$ : 1836404.5/34

In: 1.381+/-0.000  $\chi^2/\text{NDF}$ : 1913455.7/38

Out: 1.421+/-0.000  $\chi^2/\text{NDF}$ : 2453411.5/43

All: 1.401+/-0.000  $\chi^2/\text{NDF}$ : 4383046.7/82

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



Right In: 7.406 $\pm$ 30.020  $\chi^2$ /NDF: 13.9/15

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

Right Out: -26.385 $\pm$ 30.482  $\chi^2$ /NDF: 13.0/18

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

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

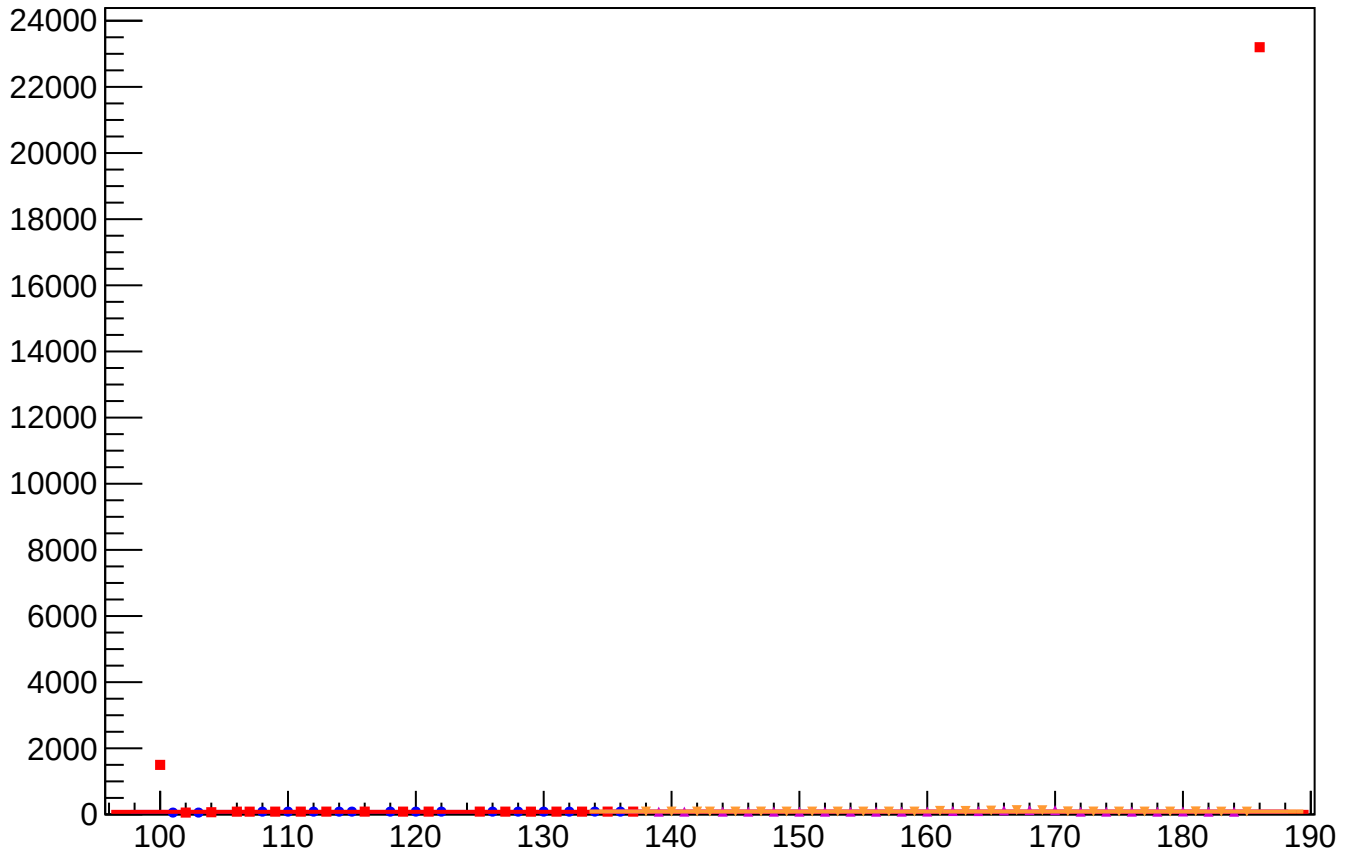
Right: -9.232 $\pm$ 21.389  $\chi^2$ /NDF: 27.5/34

In: 31.455 $\pm$ 17.533  $\chi^2$ /NDF:46.0/38

Out: -1.402 $\pm$ 17.277  $\chi^2$ /NDF:32.4/43

All: 14.785 $\pm$ 12.306  $\chi^2$ /NDF: 80.1/82

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



Right In: 76.025+/-0.021  $\chi^2/\text{NDF}$ : 408370.9/15

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

Right Out: 79.334+/-0.022  $\chi^2/\text{NDF}$ : 1137899.4/18

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: 77.654+/-0.015  $\chi^2/\text{NDF}$ : 1558237.9/34

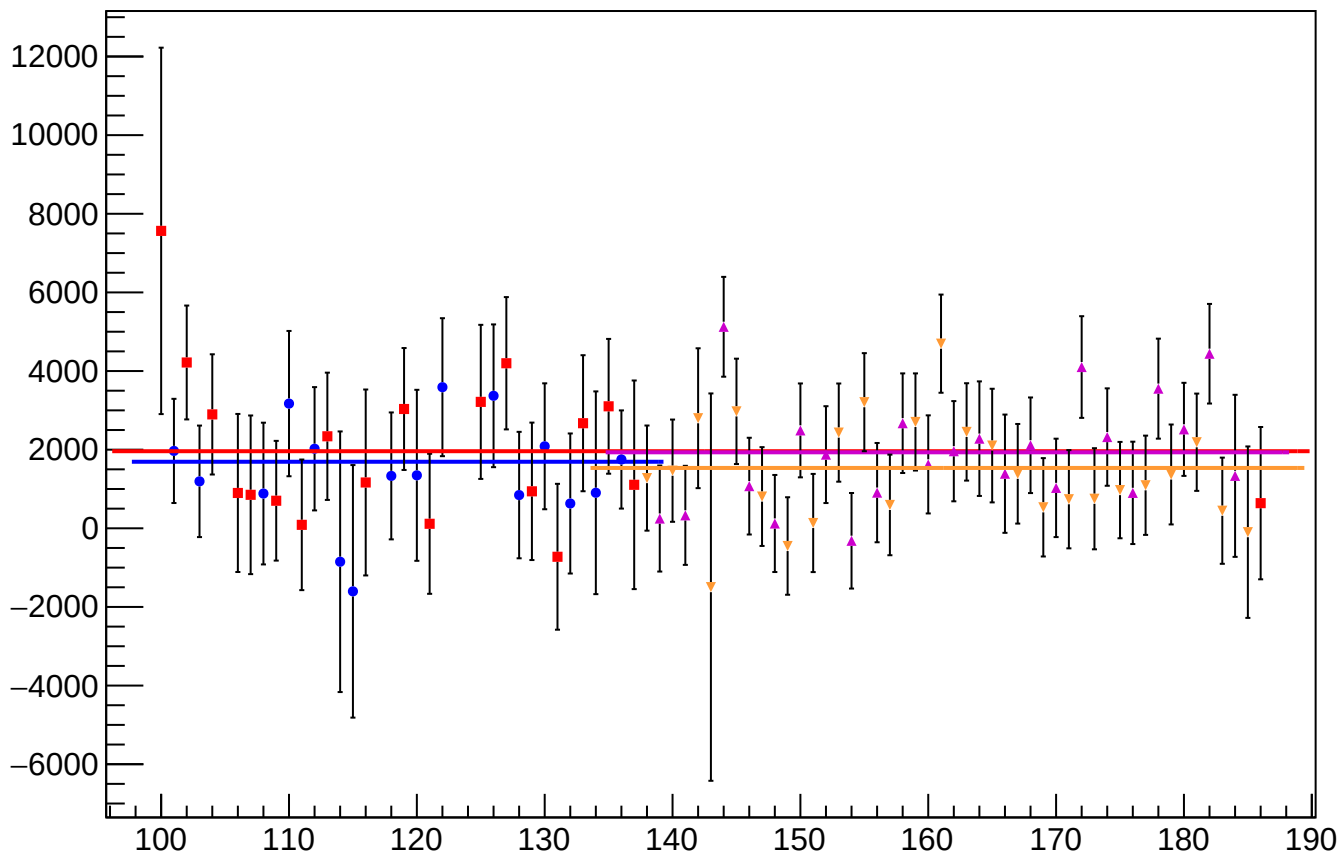
In: 85.005+/-0.012  $\chi^2/\text{NDF}$ : 1191863.2/38

Out: 86.257+/-0.012  $\chi^2/\text{NDF}$ : 1759660.0/43

All: 85.641+/-0.009  $\chi^2/\text{NDF}$ : 2956699.1/82



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



Right In: 1692.799 $\pm$ 431.563  $\chi^2$ /NDF: 5.6/15

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

Right Out: 1961.051 $\pm$ 413.662  $\chi^2$ /NDF: 14.3/18

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

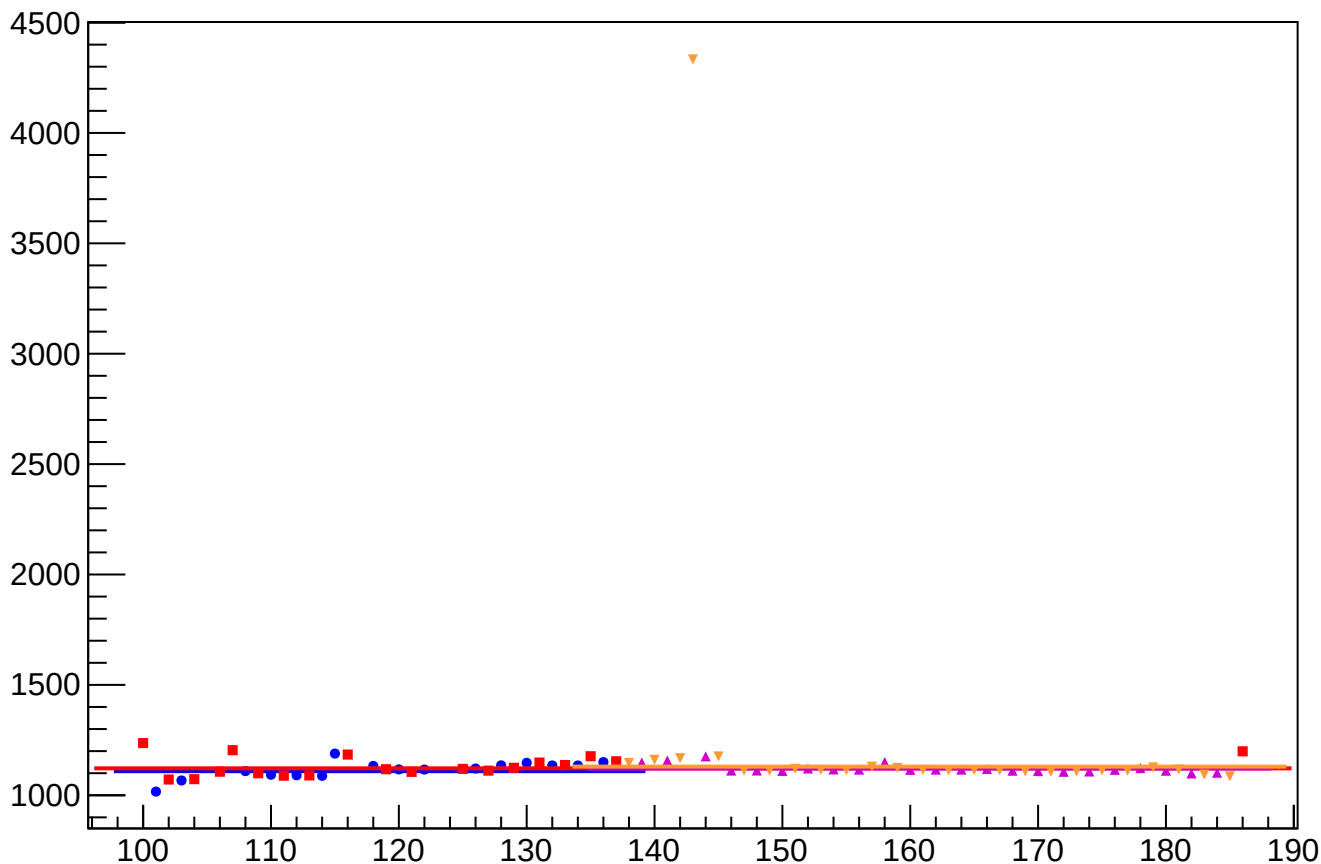
Right: 1832.604 $\pm$ 298.631  $\chi^2$ /NDF: 20.1/34

In: 1866.147 $\pm$ 227.676  $\chi^2$ /NDF: 32.8/38

Out: 1659.730 $\pm$ 223.665  $\chi^2$ /NDF: 35.4/43

All: 1761.104 $\pm$ 159.554  $\chi^2$ /NDF: 68.6/82

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



Right In: 1109.203+/-0.305  $\chi^2/\text{NDF}$ : 18241.7/15

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

Right Out: 1122.034+/-0.293  $\chi^2/\text{NDF}$ : 18838.1/18

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

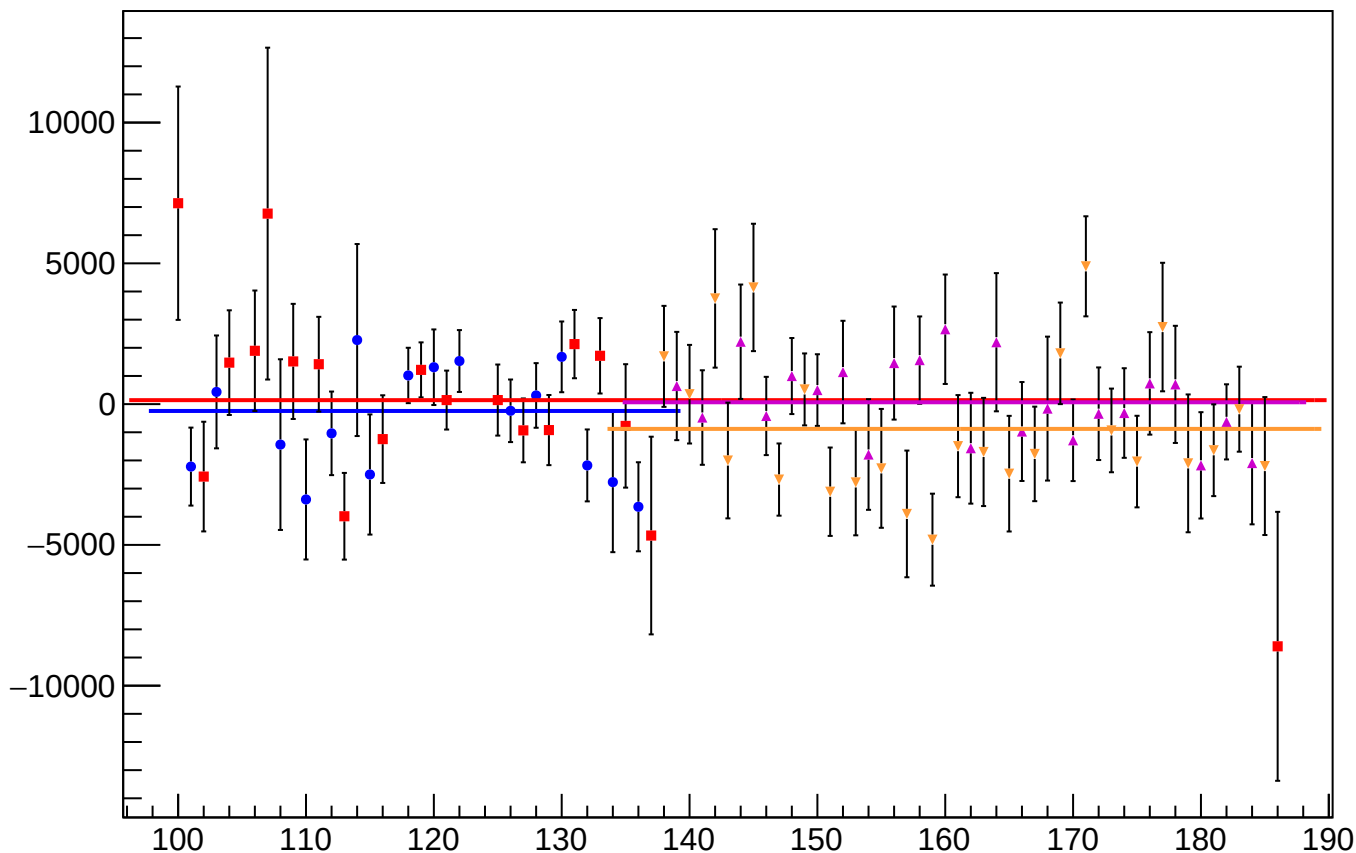
Right: 1115.890+/-0.211  $\chi^2/\text{NDF}$ : 38001.2/34

In: 1117.710+/-0.161  $\chi^2/\text{NDF}$ : 28960.3/38

Out: 1127.601+/-0.158  $\chi^2/\text{NDF}$ : 877609.9/43

All: 1122.744+/-0.113  $\chi^2/\text{NDF}$ : 908491.1/82

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



Right In: -242.985 $\pm$ 361.487  $\chi^2/\text{NDF}$ : 22.5/15

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

Right Out: 140.819 $\pm$ 356.557  $\chi^2/\text{NDF}$ : 28.5/18

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

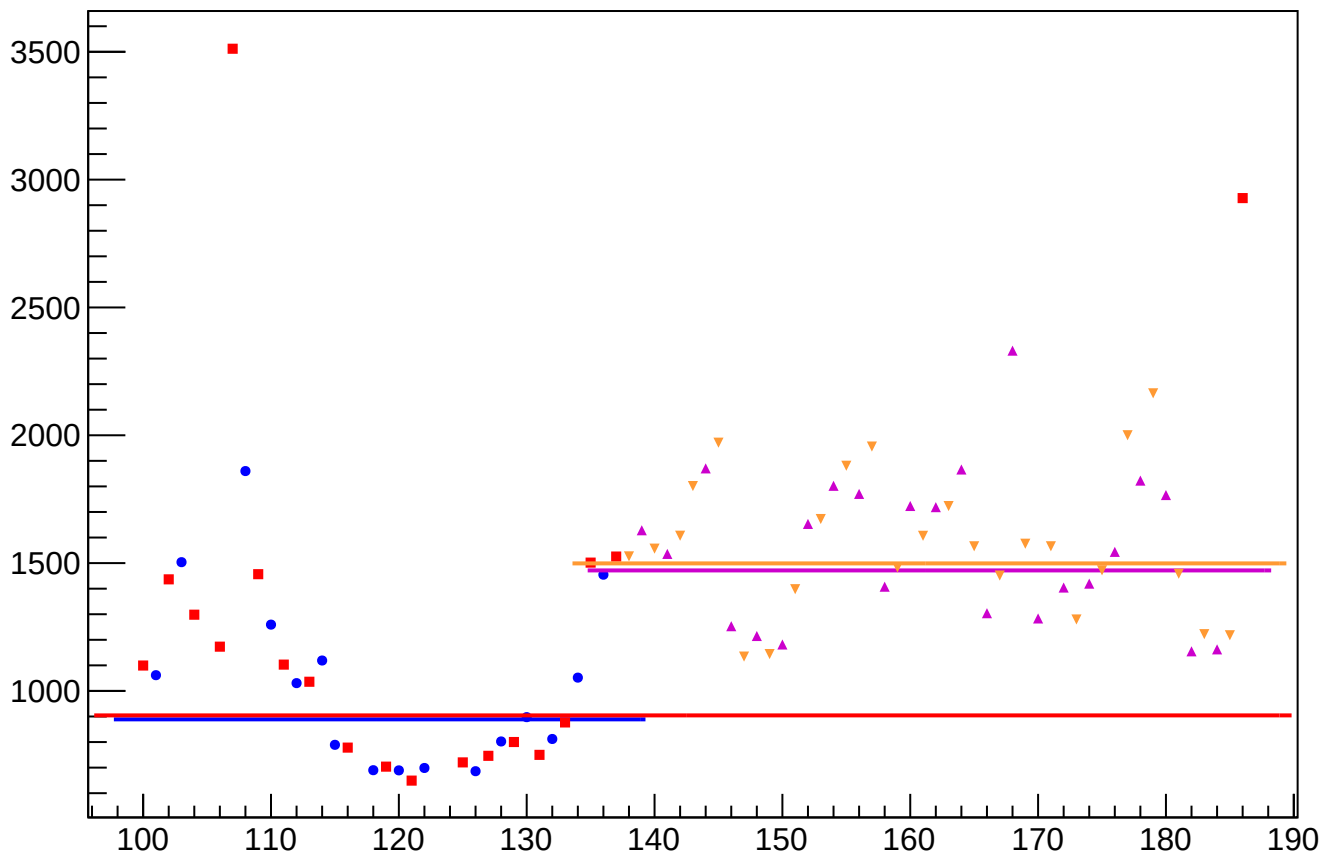
Right: -48.449 $\pm$ 253.849  $\chi^2/\text{NDF}$ : 51.7/34

In: -87.466 $\pm$ 254.649  $\chi^2/\text{NDF}$ : 35.0/38

Out: -370.673 $\pm$ 251.818  $\chi^2/\text{NDF}$ : 76.2/43

All: -230.653 $\pm$ 179.055  $\chi^2/\text{NDF}$ : 111.9/82

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



Right In: 888.808 $\pm$ 0.256  $\chi^2$ /NDF: 1052628.4/15

Left Out: 1498.849 $\pm$ 0.252  $\chi^2$ /NDF:1053906.2/24

Right Out: 904.315 $\pm$ 0.252  $\chi^2$ /NDF: 1770141.0/18

Left In: 1471.394 $\pm$ 0.254  $\chi^2$ /NDF:1105310.5/22

Left: 1485.240 $\pm$ 0.179  $\chi^2$ /NDF: 2165123.0/47

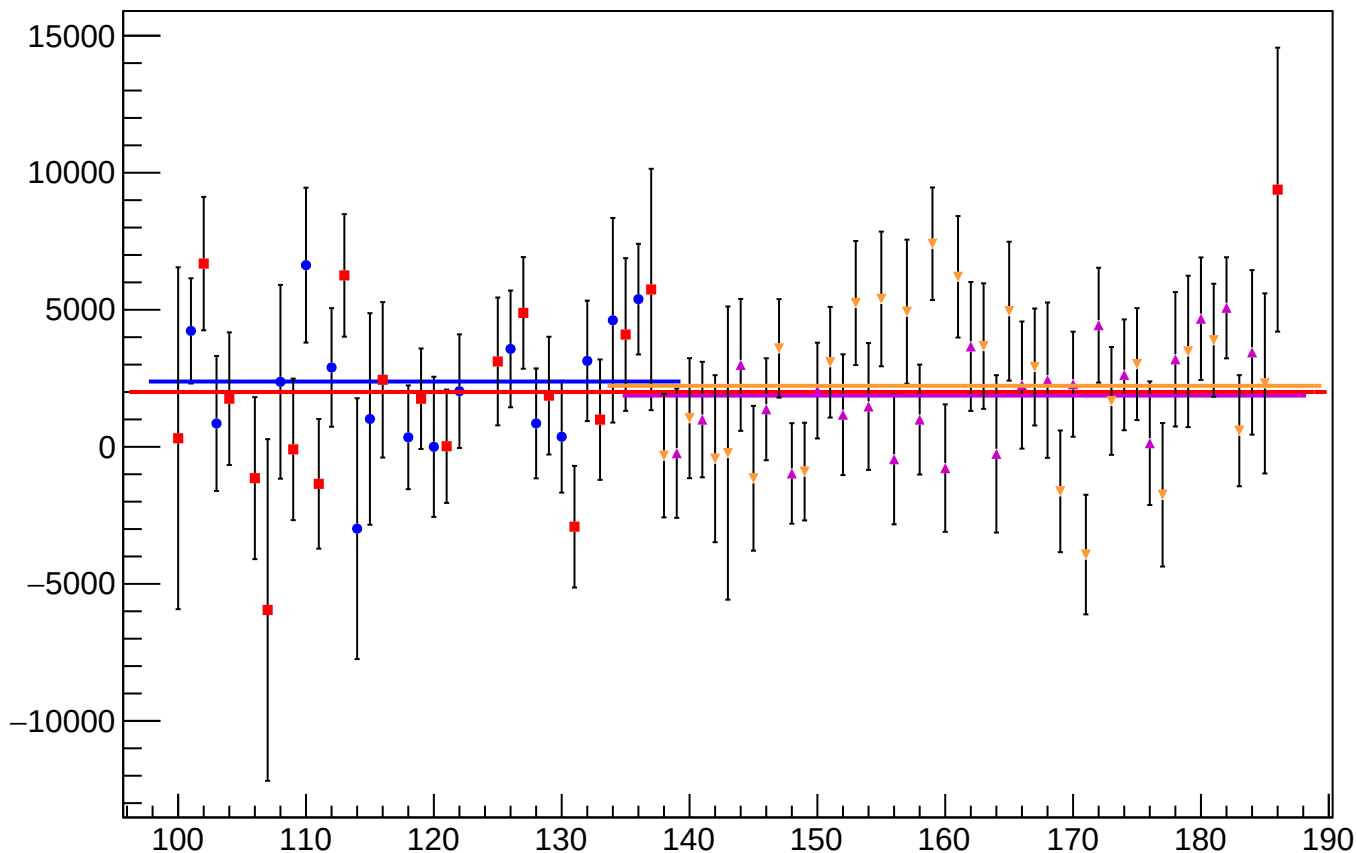
Right: 896.668 $\pm$ 0.179  $\chi^2$ /NDF: 2824634.8/34

In: 1182.286 $\pm$ 0.180  $\chi^2$ /NDF:4774799.0/38

Out: 1202.304 $\pm$ 0.178  $\chi^2$ /NDF:5611121.2/43

All: 1192.407 $\pm$ 0.127  $\chi^2$ /NDF: 10392169.2/8

# asym\_usl\_mean vs Slug, Sign Corrected



Right In: 2382.736 $\pm$ 590.698  $\chi^2$ /NDF: 11.6/15

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

Right Out: 2001.013 $\pm$ 581.261  $\chi^2$ /NDF: 24.5/18

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

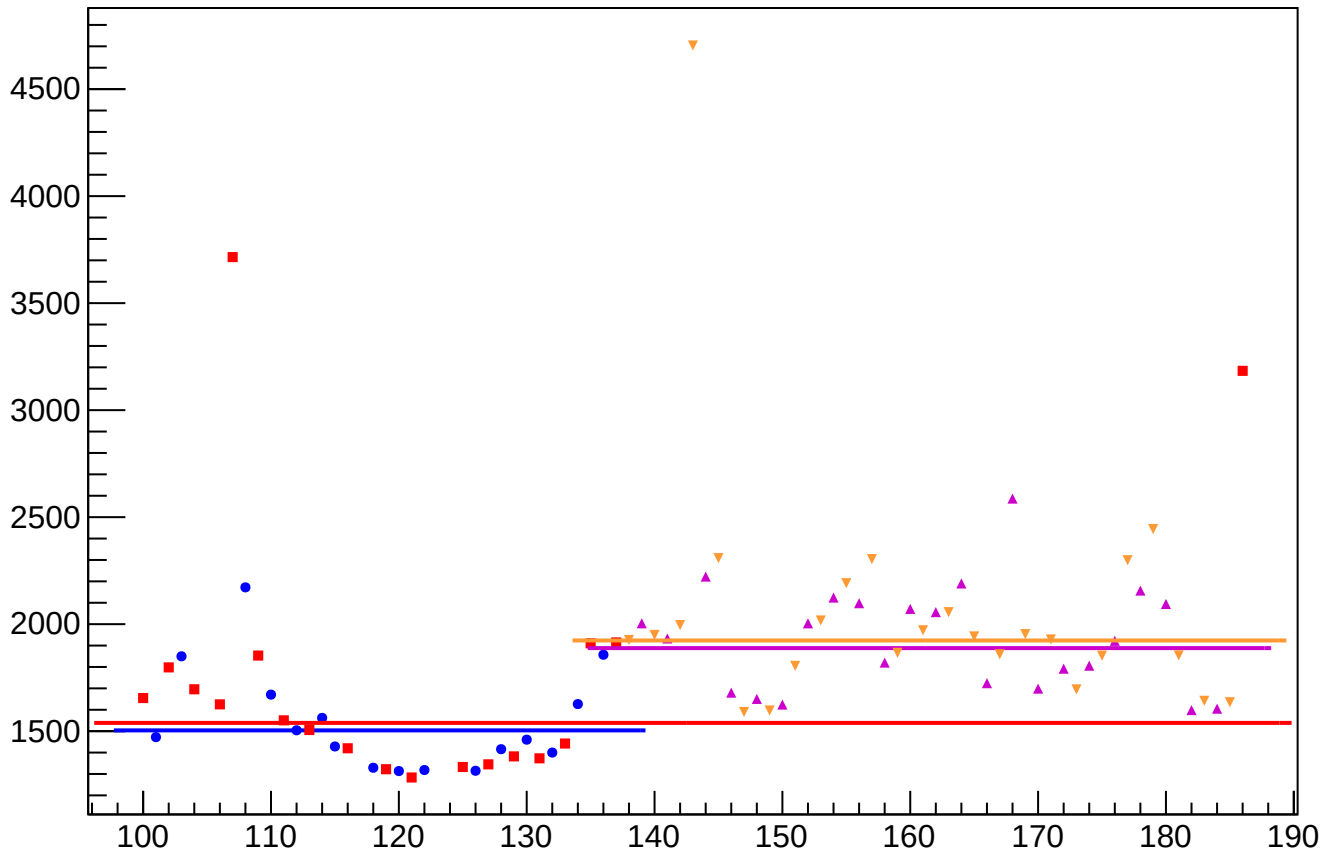
Right: 2188.801 $\pm$ 414.310  $\chi^2$ /NDF: 36.3/34

In: 2061.048 $\pm$ 360.693  $\chi^2$ /NDF:27.0/38

Out: 2140.891 $\pm$ 358.197  $\chi^2$ /NDF:63.4/43

All: 2101.247 $\pm$ 254.161  $\chi^2$ /NDF: 90.4/82

# asym\_usl\_rms vs Slug, Sign Corrected



Right In: 1503.676 $\pm$ 0.418  $\chi^2$ /NDF: 252138.4/15

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

Right Out: 1538.670 $\pm$ 0.411  $\chi^2$ /NDF: 680734.9/18

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

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

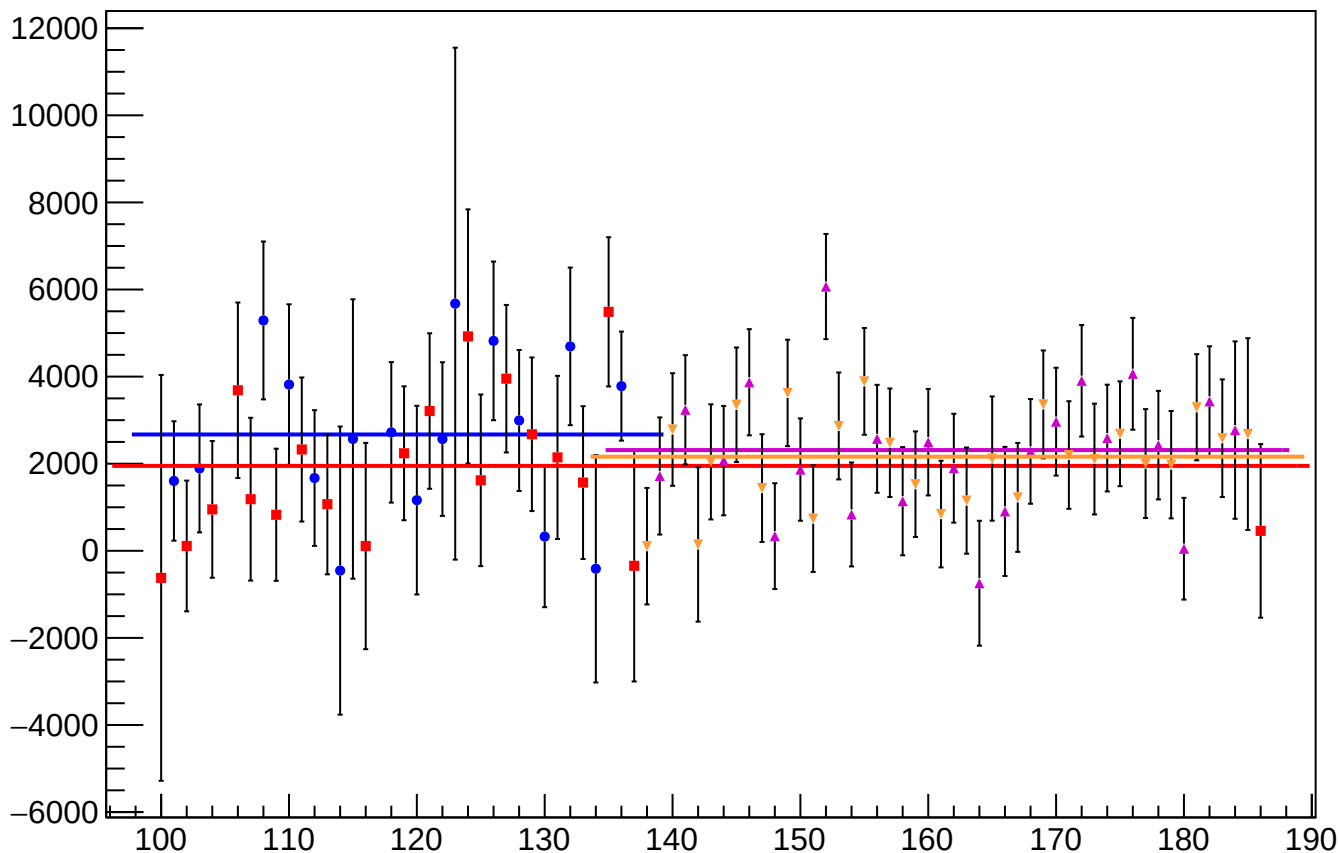
Right: 1521.455 $\pm$ 0.293  $\chi^2$ /NDF: 936439.4/34

In: 1744.778 $\pm$ 0.255  $\chi^2$ /NDF: 1287998.4/38

Out: 1777.566 $\pm$ 0.253  $\chi^2$ /NDF: 2231565.8/43

All: 1761.286 $\pm$ 0.180  $\chi^2$ /NDF: 3527885.0/82

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



Right In: 2671.295 $\pm$ 434.567  $\chi^2$ /NDF: 12.4/16

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

Right Out: 1949.911 $\pm$ 411.113  $\chi^2$ /NDF: 13.4/19

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

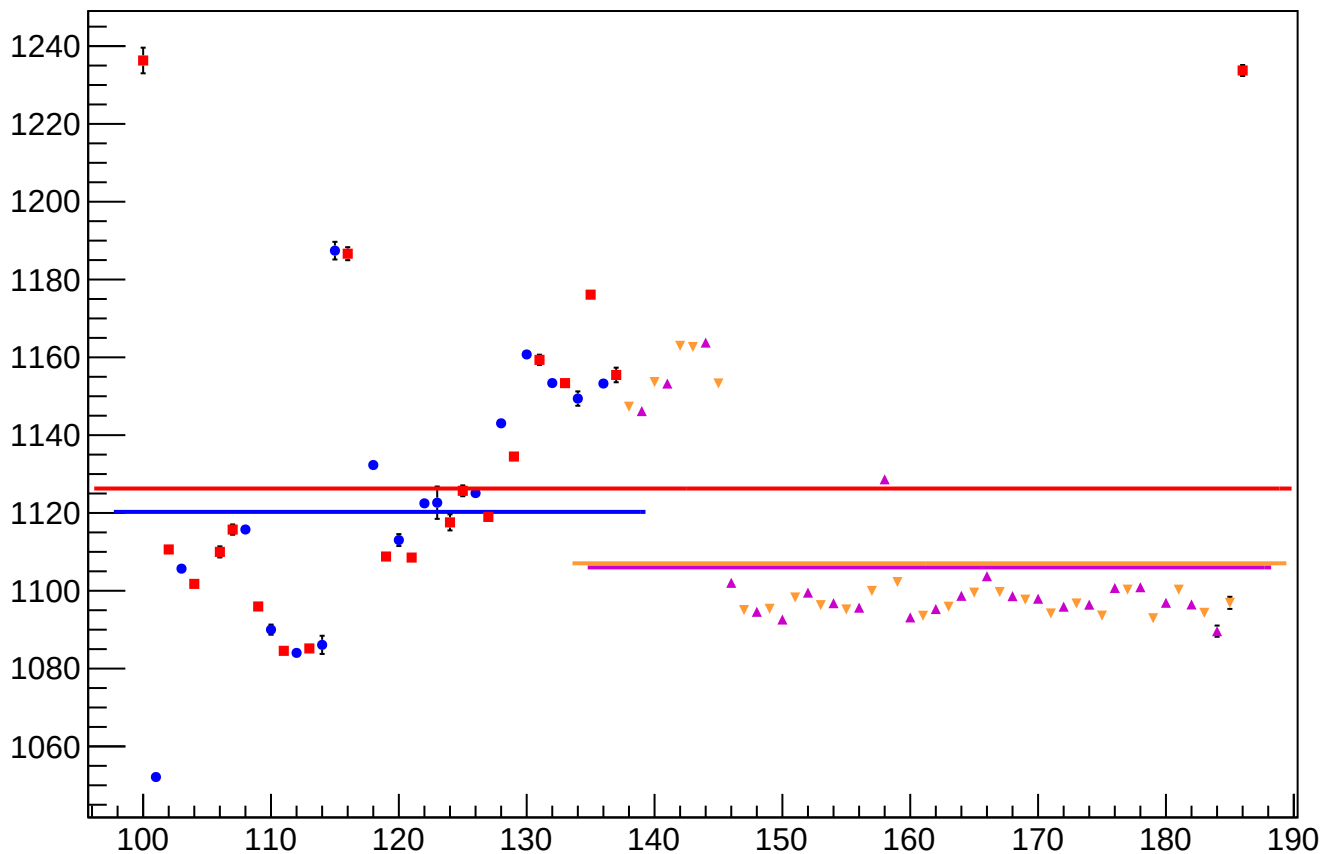
Right: 2290.612 $\pm$ 298.648  $\chi^2$ /NDF: 27.2/36

In: 2410.184 $\pm$ 225.896  $\chi^2$ /NDF:44.1/39

Out: 2101.822 $\pm$ 218.238  $\chi^2$ /NDF:28.7/44

All: 2250.688 $\pm$ 156.955  $\chi^2$ /NDF: 73.8/84

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



Right In: 1120.277 $\pm$ 0.307  $\chi^2$ /NDF: 11962.7/16

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

Right Out: 1126.282 $\pm$ 0.291  $\chi^2$ /NDF: 16085.6/19

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: 1123.446 $\pm$ 0.211  $\chi^2$ /NDF: 28249.8/36

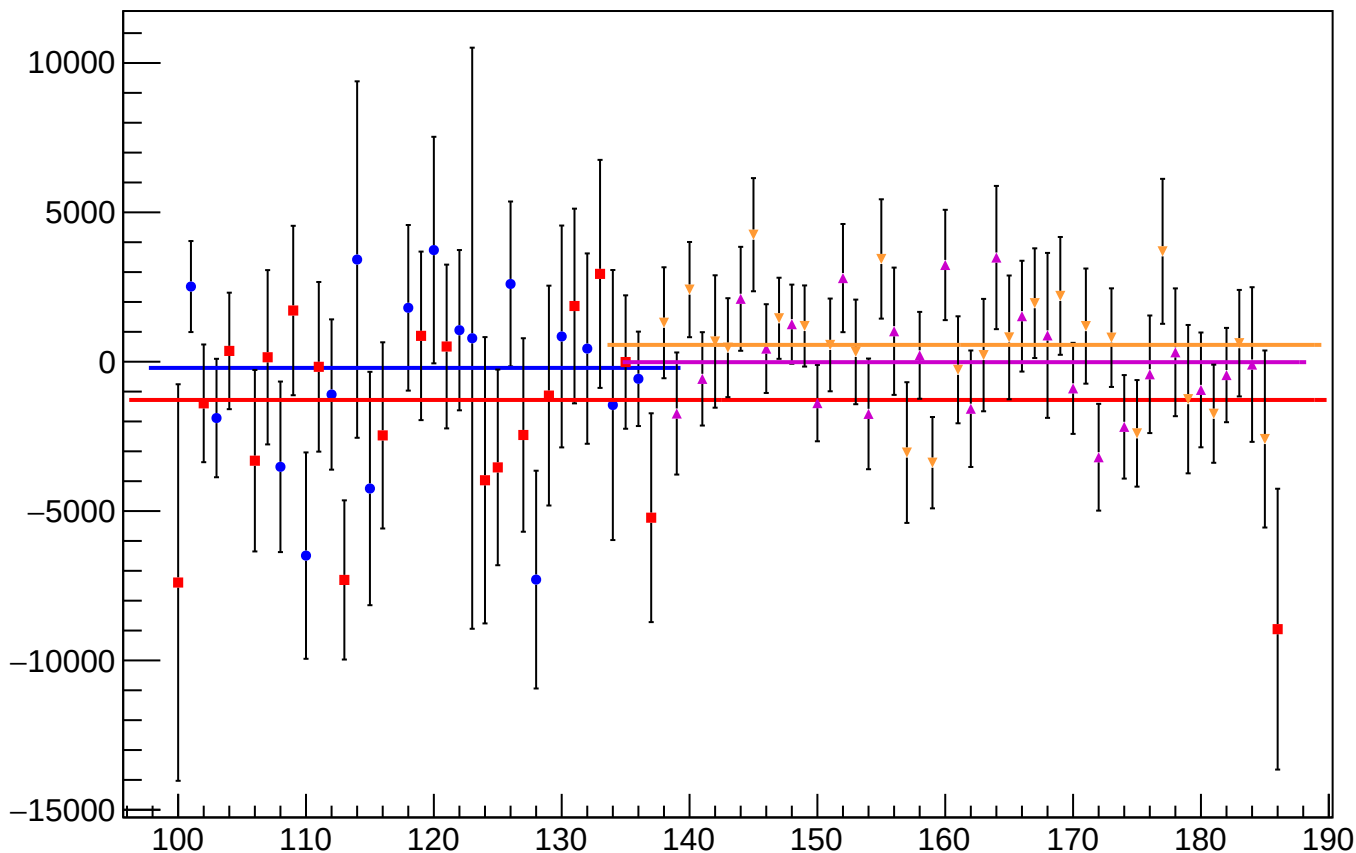
In: 1109.855 $\pm$ 0.160  $\chi^2$ /NDF:25090.3/39

Out: 1112.474 $\pm$ 0.154  $\chi^2$ /NDF:34402.3/44

All: 1111.210 $\pm$ 0.111  $\chi^2$ /NDF: 59631.7/84



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



Right In:  $-207.352 \pm 656.632$   $\chi^2/\text{NDF}: 17.0/16$

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

Right Out:  $-1280.334 \pm 657.055$   $\chi^2/\text{NDF}: 17.1/19$

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

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

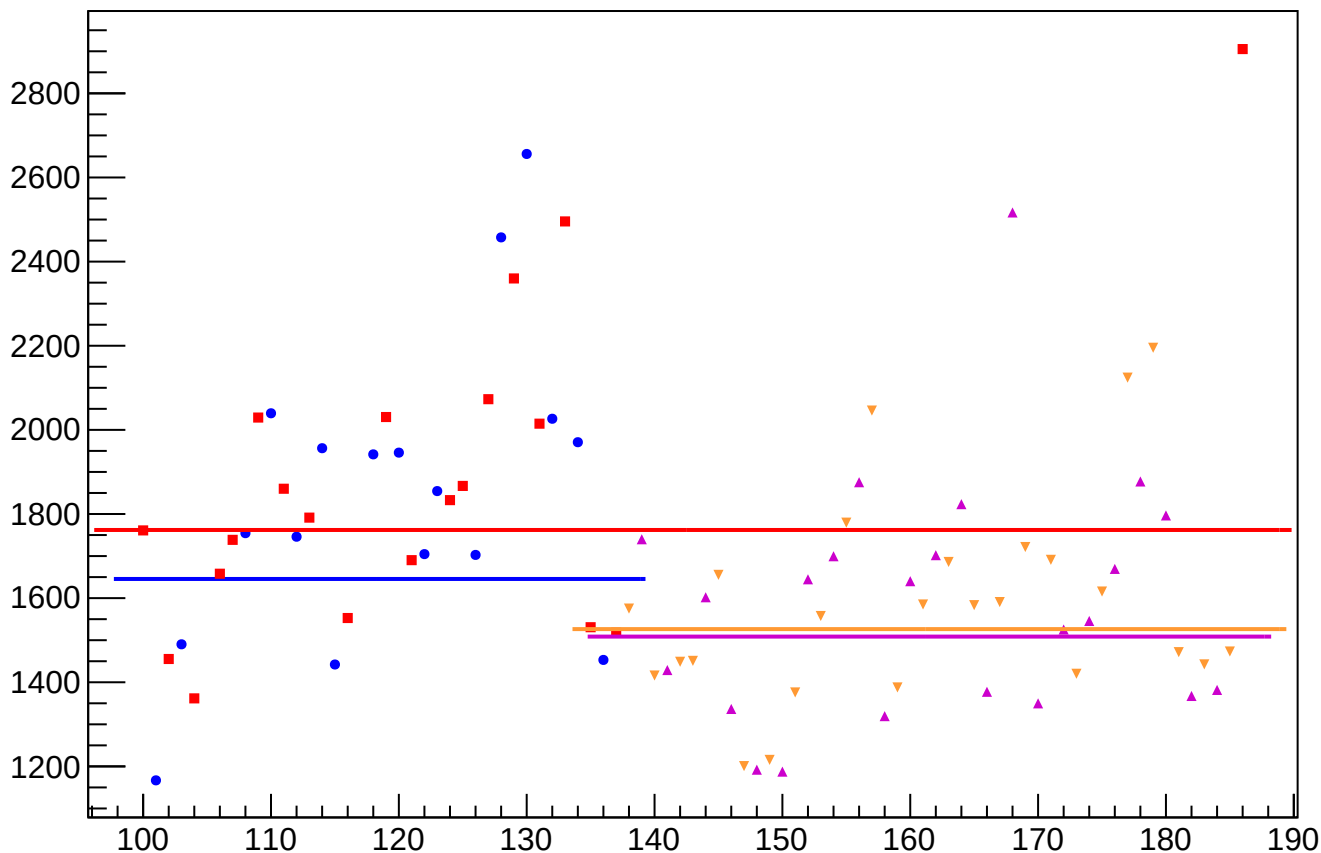
Right:  $-743.497 \pm 464.459$   $\chi^2/\text{NDF}: 35.5/36$

In:  $-61.154 \pm 320.261$   $\chi^2/\text{NDF}: 37.3/39$

Out:  $135.982 \pm 316.325$   $\chi^2/\text{NDF}: 49.9/44$

All:  $38.633 \pm 225.054$   $\chi^2/\text{NDF}: 87.4/84$

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



Right In: 1645.579 $\pm$ 0.464  $\chi^2/\text{NDF}$ : 606697.8/16

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

Right Out: 1762.034 $\pm$ 0.465  $\chi^2/\text{NDF}$ : 493223.5/19

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

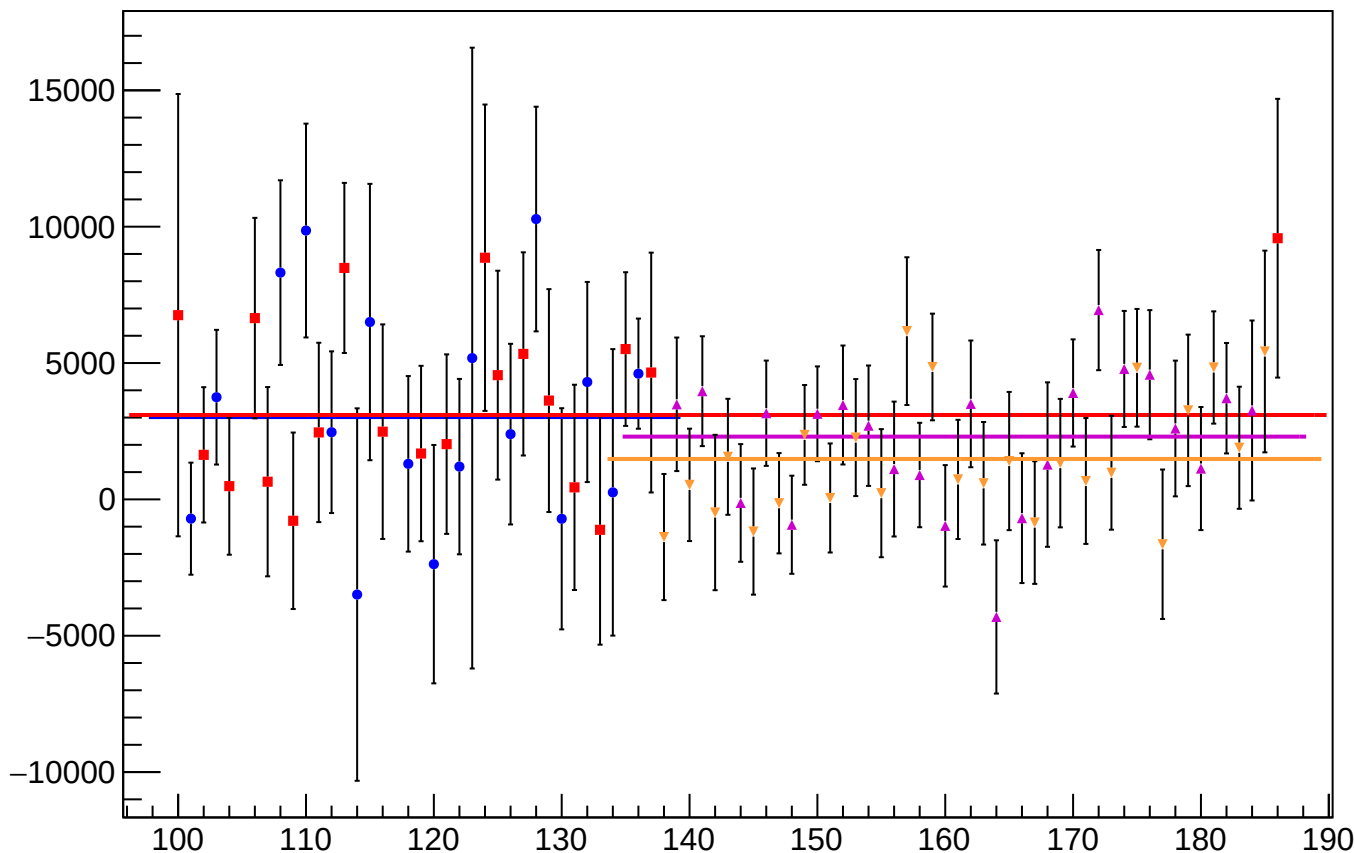
Right: 1703.769 $\pm$ 0.328  $\chi^2/\text{NDF}$ : 1131354.9/36

In: 1541.170 $\pm$ 0.226  $\chi^2/\text{NDF}$ : 1604731.6/39

Out: 1581.007 $\pm$ 0.224  $\chi^2/\text{NDF}$ : 1444555.1/44

All: 1561.335 $\pm$ 0.159  $\chi^2/\text{NDF}$ : 3064950.2/84

# asym\_usr\_mean vs Slug, Sign Corrected



Right In: 3018.495 $\pm$ 804.013  $\chi^2$ /NDF: 17.5/16

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

Right Out: 3094.276 $\pm$ 787.629  $\chi^2$ /NDF: 13.4/19

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

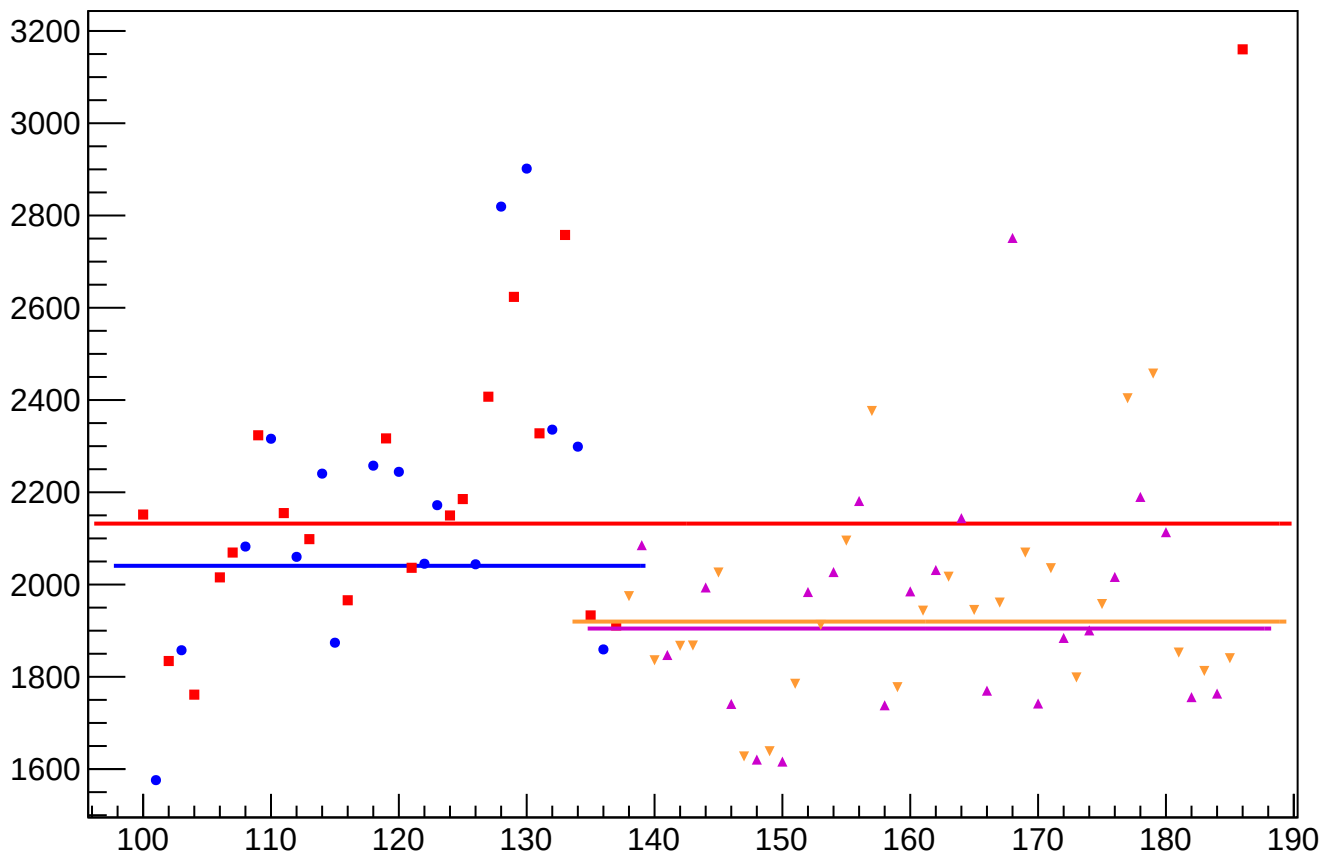
Right: 3057.166 $\pm$ 562.641  $\chi^2$ /NDF: 30.9/36

In: 2477.571 $\pm$ 398.643  $\chi^2$ /NDF: 42.9/39

Out: 1879.023 $\pm$ 390.714  $\chi^2$ /NDF: 37.5/44

All: 2172.285 $\pm$ 279.038  $\chi^2$ /NDF: 81.5/84

# asym\_usr\_rms vs Slug, Sign Corrected



Right In: 2040.634 $\pm$ 0.569  $\chi^2$ /NDF: 336565.5/16

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

Right Out: 2132.130 $\pm$ 0.557  $\chi^2$ /NDF: 279900.5/19

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

Left: 1912.331 $\pm$ 0.227  $\chi^2$ /NDF: 814672.9/47

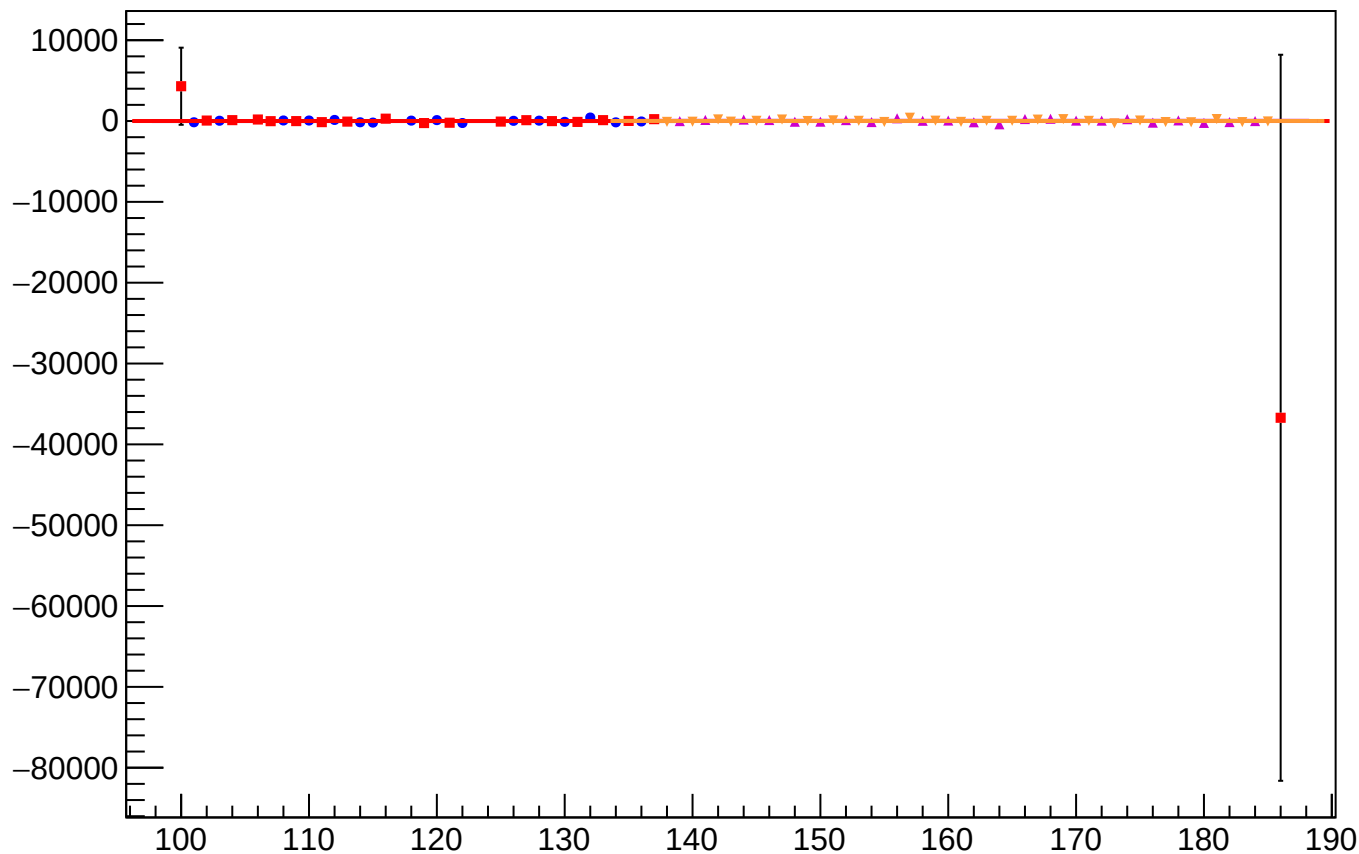
Right: 2087.324 $\pm$ 0.398  $\chi^2$ /NDF: 629682.9/36

In: 1938.063 $\pm$ 0.282  $\chi^2$ /NDF:827076.2/39

Out: 1971.999 $\pm$ 0.276  $\chi^2$ /NDF:755770.3/44

All: 1955.372 $\pm$ 0.197  $\chi^2$ /NDF: 1590238.7/84

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



Right In:  $-0.770 \pm 36.771$   $\chi^2/\text{NDF}$ : 16.5/15

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

Right Out:  $1.435 \pm 36.756$   $\chi^2/\text{NDF}$ : 14.4/18

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

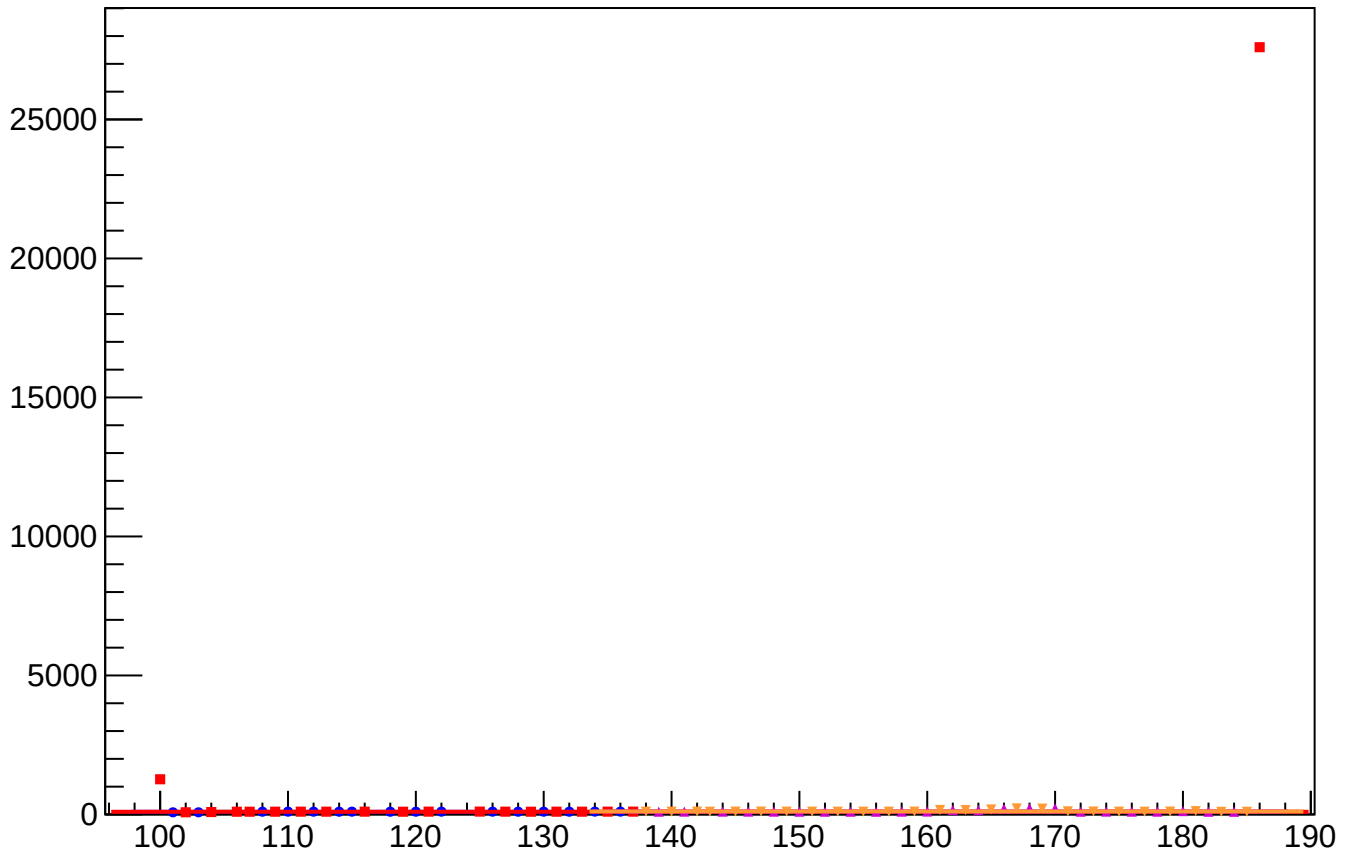
Right:  $0.333 \pm 25.996$   $\chi^2/\text{NDF}$ : 30.9/34

In:  $16.118 \pm 21.415$   $\chi^2/\text{NDF}$ : 53.2/38

Out:  $5.595 \pm 20.992$   $\chi^2/\text{NDF}$ : 50.9/43

All:  $10.752 \pm 14.991$   $\chi^2/\text{NDF}$ : 104.3/82

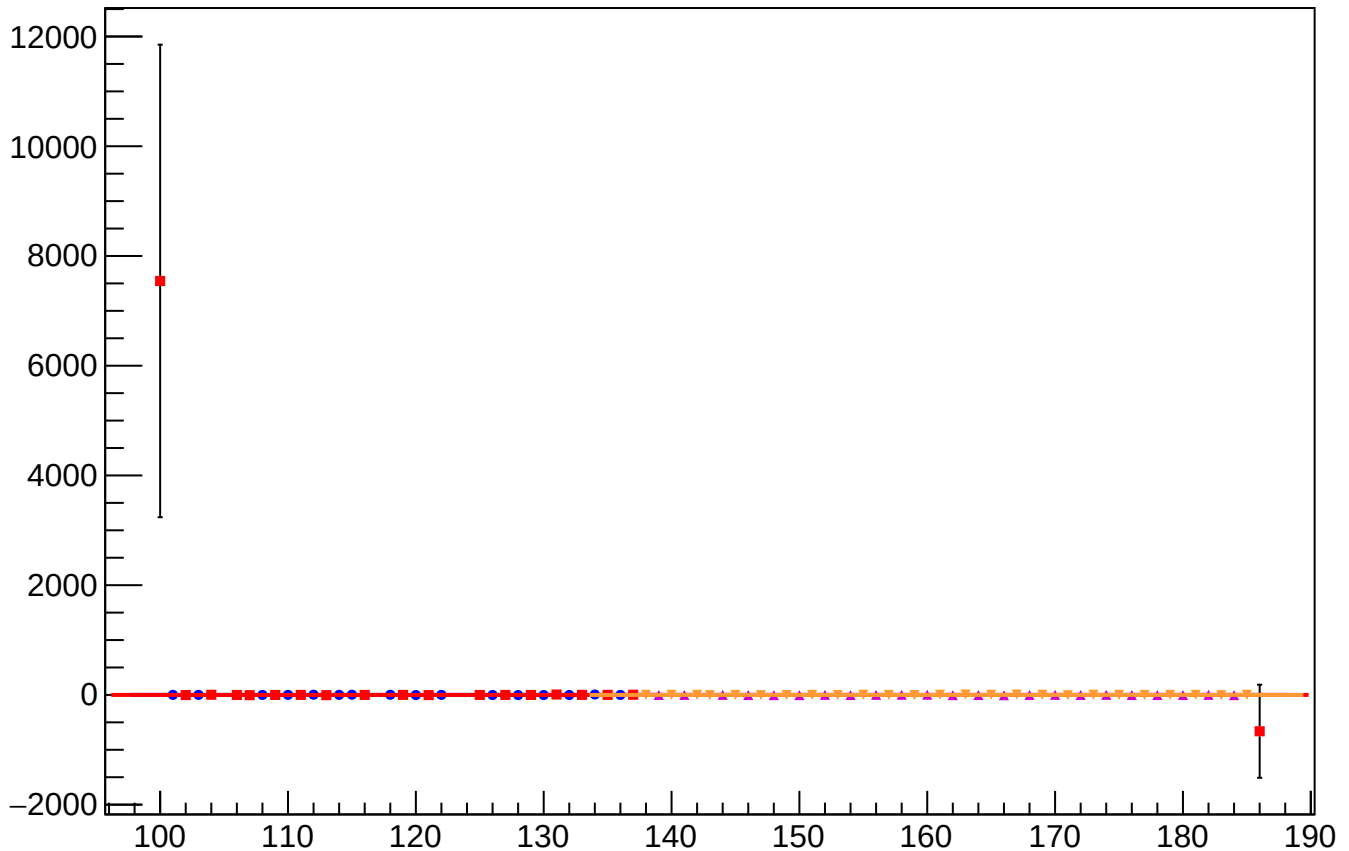
# reg\_asym\_dsl\_rms vs Slug, Sign Corrected



Right In: 94.047+/-0.026  $\chi^2$ /NDF: 152068.3/15  
Left Out: 107.590+/-0.018  $\chi^2$ /NDF:1447372.1/24  
Right Out: 96.376+/-0.026  $\chi^2$ /NDF: 959204.9/18  
Left In: 107.672+/-0.019  $\chi^2$ /NDF:1491034.7/22

Left: 107.630+/-0.013  $\chi^2$ /NDF: 2938417.0/47  
Right: 95.212+/-0.018  $\chi^2$ /NDF: 1115287.9/34  
In: 103.051+/-0.015  $\chi^2$ /NDF:1824568.8/38  
Out: 103.932+/-0.015  $\chi^2$ /NDF:2532001.4/43  
All: 103.500+/-0.011  $\chi^2$ /NDF: 4358296.7/82

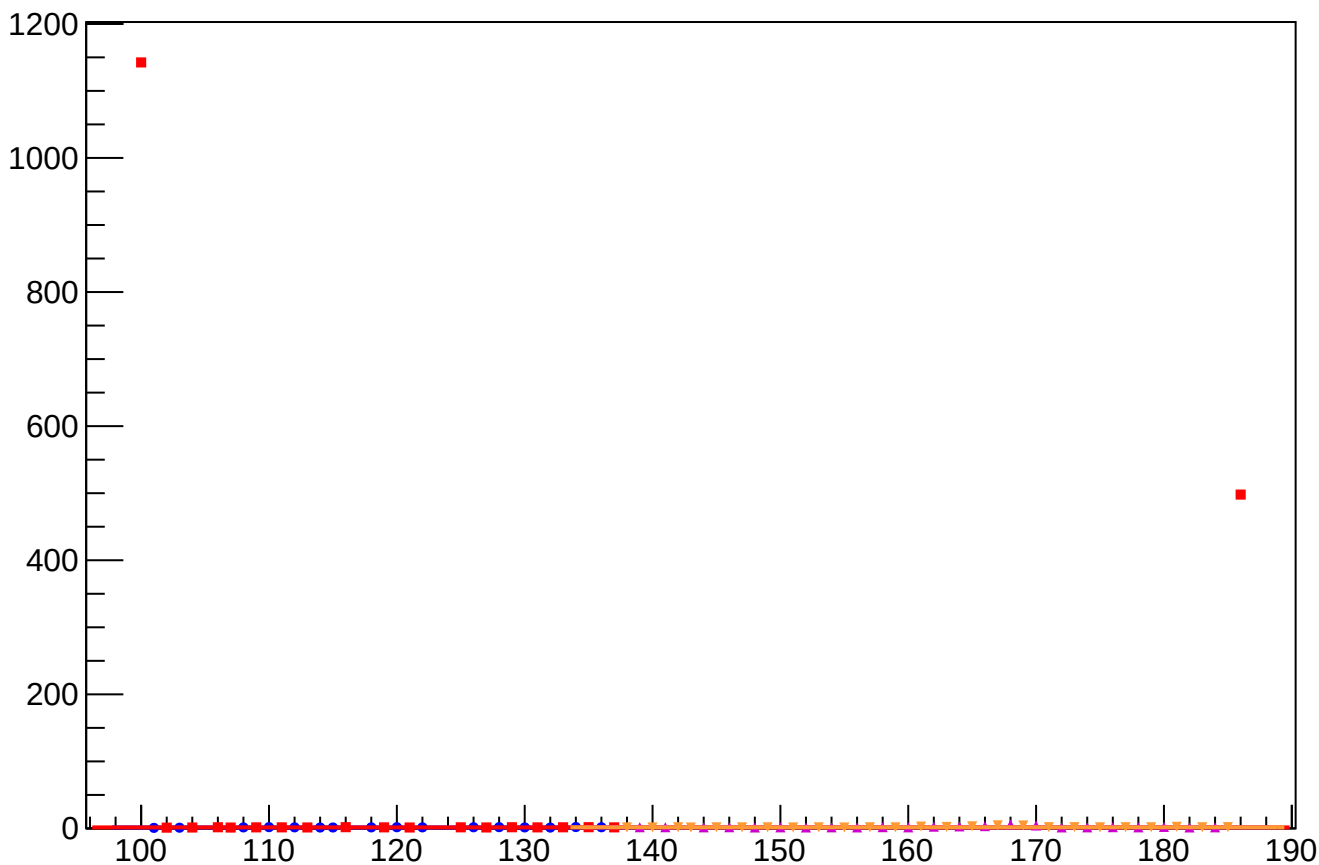
# asym\_dsl\_correction\_mean vs Slug, Sign Corrected



Right In:  $0.390 \pm 0.617$   $\chi^2/\text{NDF}: 10.4/15$   
 Left Out:  $-0.765 \pm 0.459$   $\chi^2/\text{NDF}: 34.1/24$   
 Right Out:  $-0.345 \pm 0.644$   $\chi^2/\text{NDF}: 21.6/18$   
 Left In:  $-0.067 \pm 0.485$   $\chi^2/\text{NDF}: 25.0/22$

Left:  $-0.435 \pm 0.333$   $\chi^2/\text{NDF}: 60.2/47$   
 Right:  $0.038 \pm 0.445$   $\chi^2/\text{NDF}: 32.7/34$   
 In:  $0.107 \pm 0.381$   $\chi^2/\text{NDF}: 35.7/38$   
 Out:  $-0.623 \pm 0.374$   $\chi^2/\text{NDF}: 56.0/43$   
 All:  $-0.265 \pm 0.267$   $\chi^2/\text{NDF}: 93.6/82$

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



Right In: 1.420+/-0.000  $\chi^2/\text{NDF}$ : 713301.5/15

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

Right Out: 1.555+/-0.000  $\chi^2/\text{NDF}$ : 998606.0/18

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: 1.485+/-0.000  $\chi^2/\text{NDF}$ : 1757873.4/34

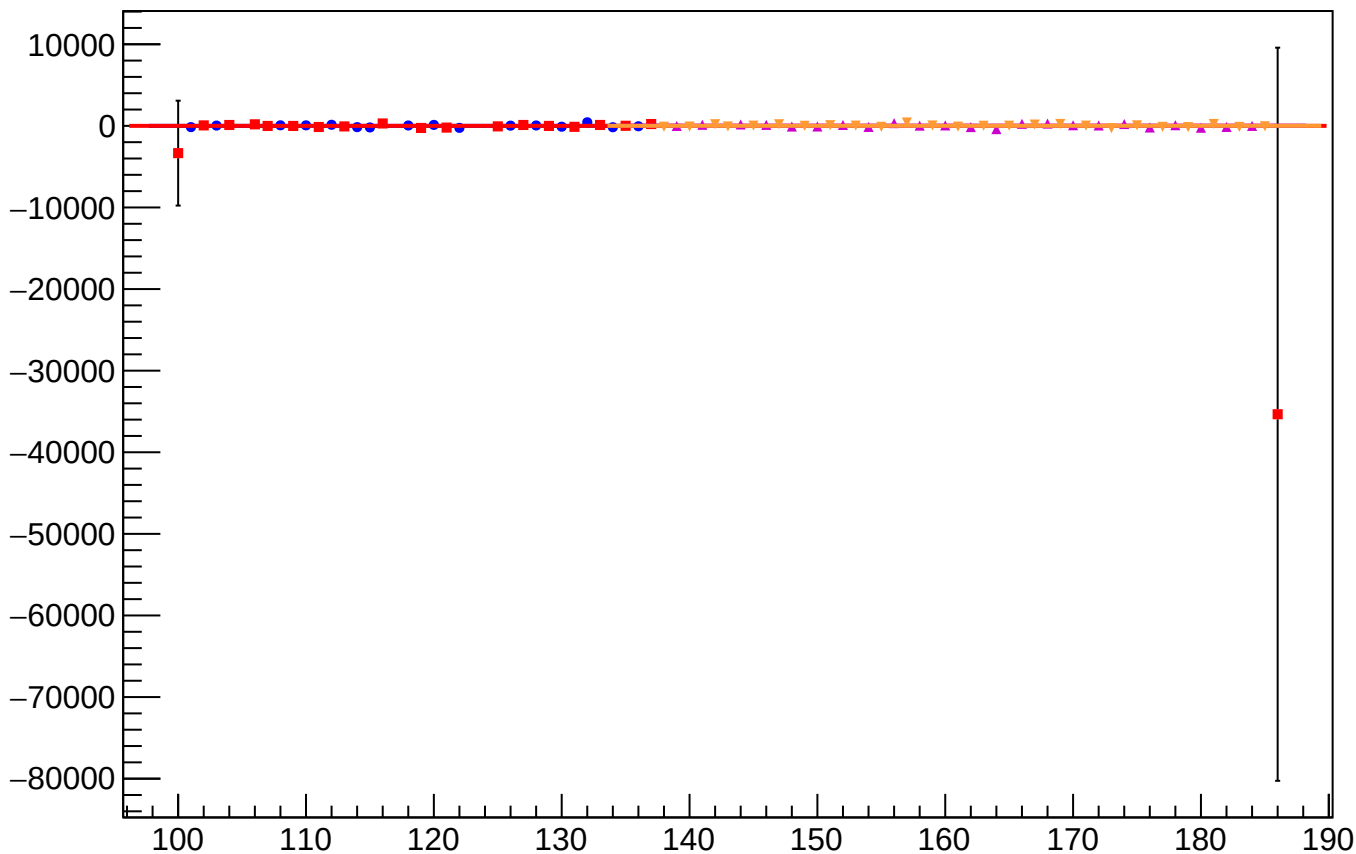
In: 1.657+/-0.000  $\chi^2/\text{NDF}$ : 3109795.2/38

Out: 1.682+/-0.000  $\chi^2/\text{NDF}$ : 2799285.7/43

All: 1.669+/-0.000  $\chi^2/\text{NDF}$ : 5913574.6/82



# asym\_dsl\_mean vs Slug, Sign Corrected



Right In:  $-0.474 \pm 36.781$   $\chi^2/\text{NDF}$ : 16.7/15

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

Right Out:  $1.200 \pm 36.766$   $\chi^2/\text{NDF}$ : 13.9/18

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

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

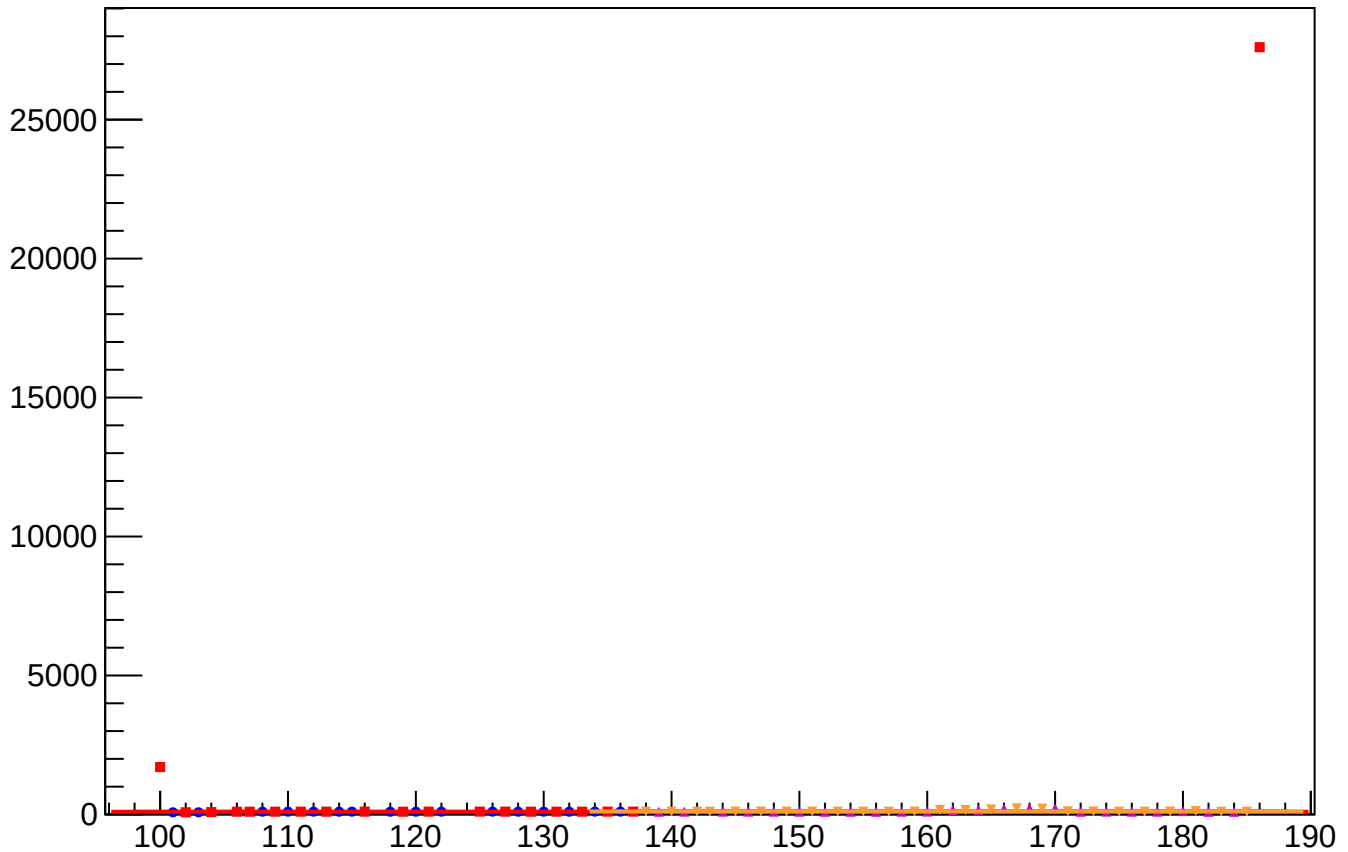
Right:  $0.363 \pm 26.003$   $\chi^2/\text{NDF}$ : 30.6/34

In:  $16.566 \pm 21.421$   $\chi^2/\text{NDF}$ : 52.7/38

Out:  $6.059 \pm 20.998$   $\chi^2/\text{NDF}$ : 50.3/43

All:  $11.208 \pm 14.995$   $\chi^2/\text{NDF}$ : 103.1/82

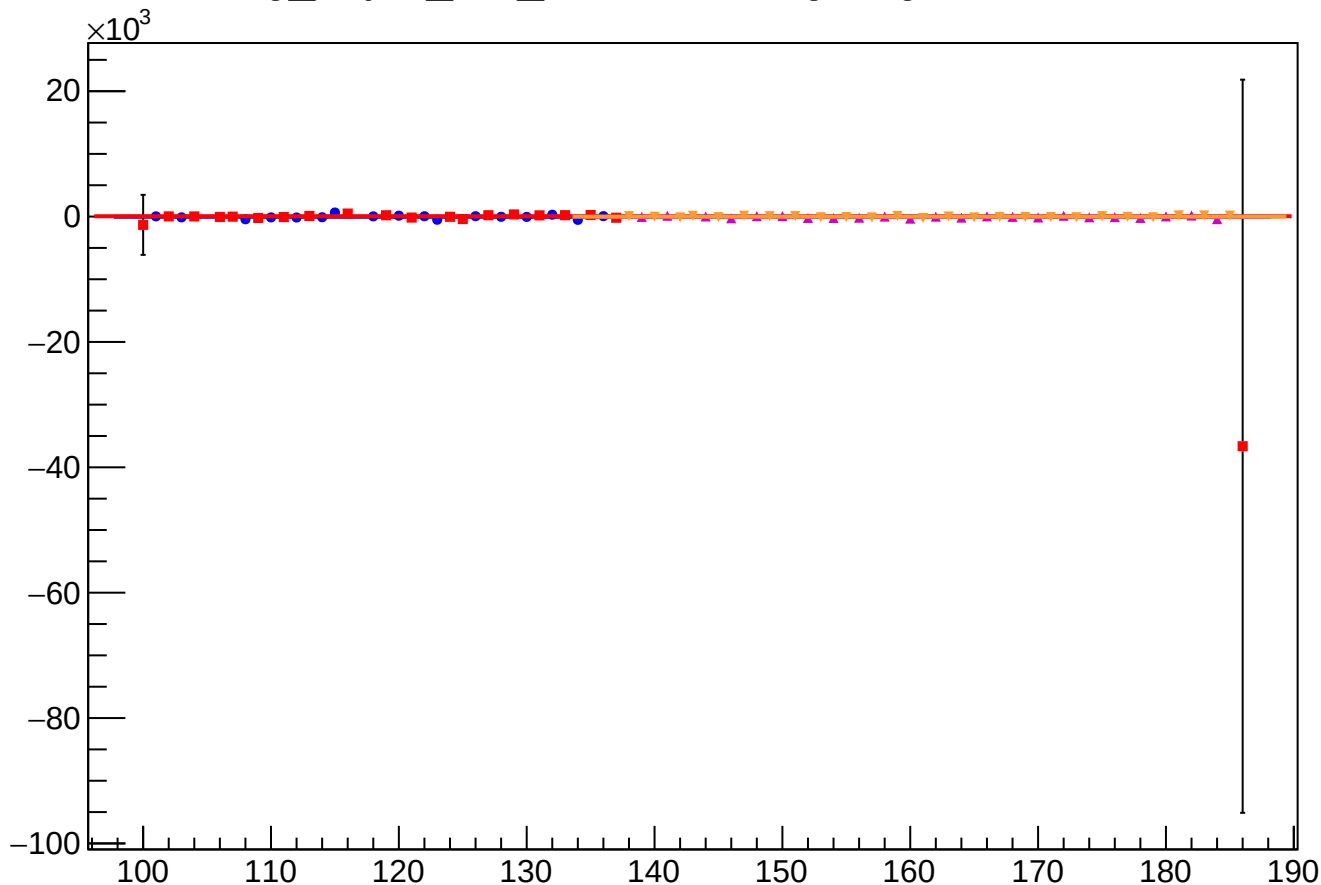
# asym\_dsl\_rms vs Slug, Sign Corrected



Right In: 94.071 $\pm$ 0.026     $\chi^2$ /NDF: 152087.2/15  
Left Out: 107.620 $\pm$ 0.018     $\chi^2$ /NDF: 1448769.2/24  
Right Out: 96.385 $\pm$ 0.026     $\chi^2$ /NDF: 964345.9/18  
Left In: 107.703 $\pm$ 0.019     $\chi^2$ /NDF: 1492338.5/22

Left: 107.660 $\pm$ 0.013     $\chi^2$ /NDF: 2941117.9/47  
Right: 95.229 $\pm$ 0.018     $\chi^2$ /NDF: 1120392.5/34  
In: 103.079 $\pm$ 0.015     $\chi^2$ /NDF: 1825964.5/38  
Out: 103.956 $\pm$ 0.015     $\chi^2$ /NDF: 2538953.4/43  
All: 103.526 $\pm$ 0.011     $\chi^2$ /NDF: 4366624.0/82

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



Right In: -26.797 $\pm$ 46.841  $\chi^2$ /NDF: 14.4/16

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

Right Out: 53.360 $\pm$ 47.775  $\chi^2$ /NDF: 15.8/19

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

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

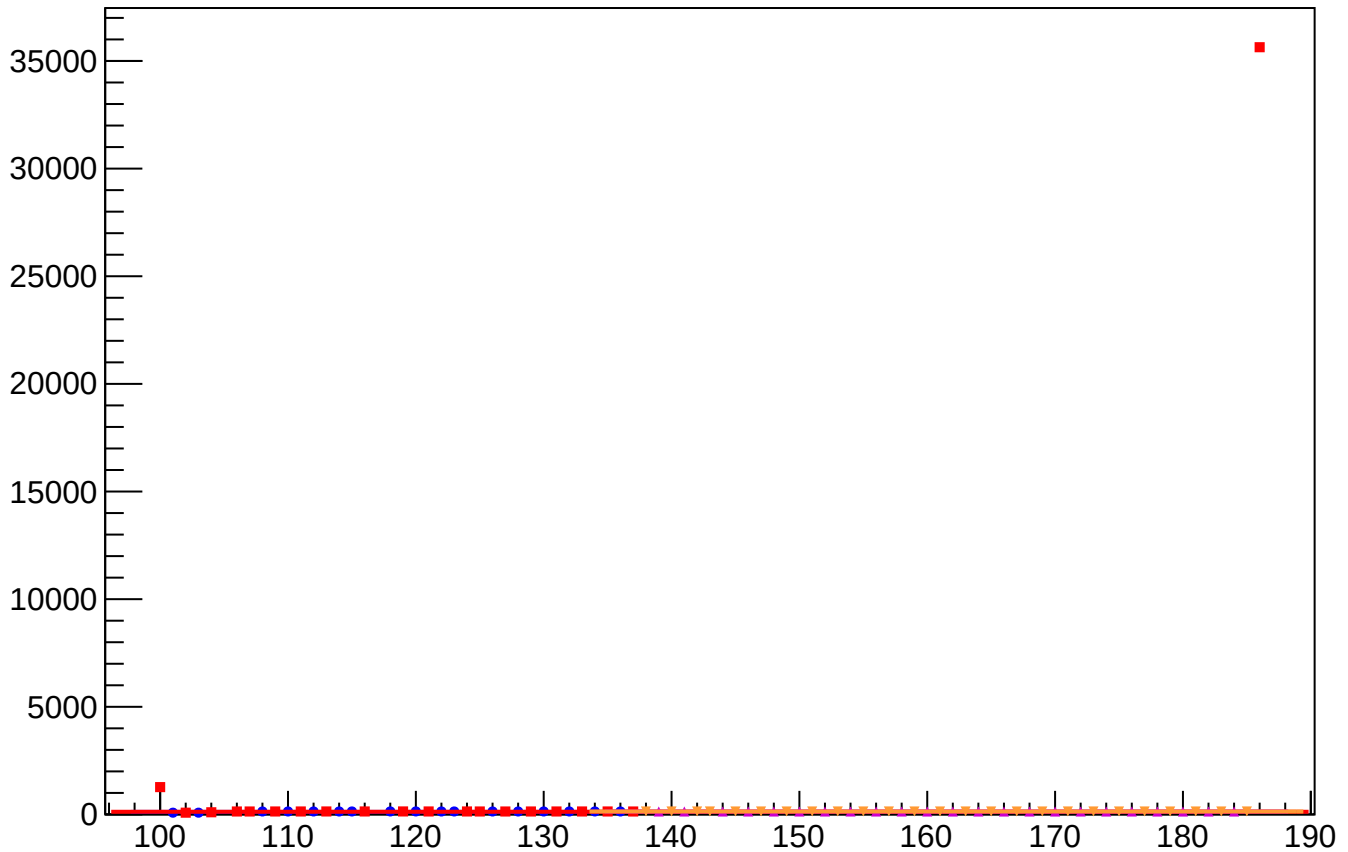
Right: 12.490 $\pm$ 33.447  $\chi^2$ /NDF: 31.7/36

In: -52.581 $\pm$ 26.947  $\chi^2$ /NDF:34.2/39

Out: 7.725 $\pm$ 26.623  $\chi^2$ /NDF:29.1/44

All: -22.064 $\pm$ 18.939  $\chi^2$ /NDF: 65.8/84

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



Right In: 117.762 $\pm$ 0.033  $\chi^2$ /NDF: 665636.8/16

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

Right Out: 124.748 $\pm$ 0.034  $\chi^2$ /NDF: 1306936.4/19

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

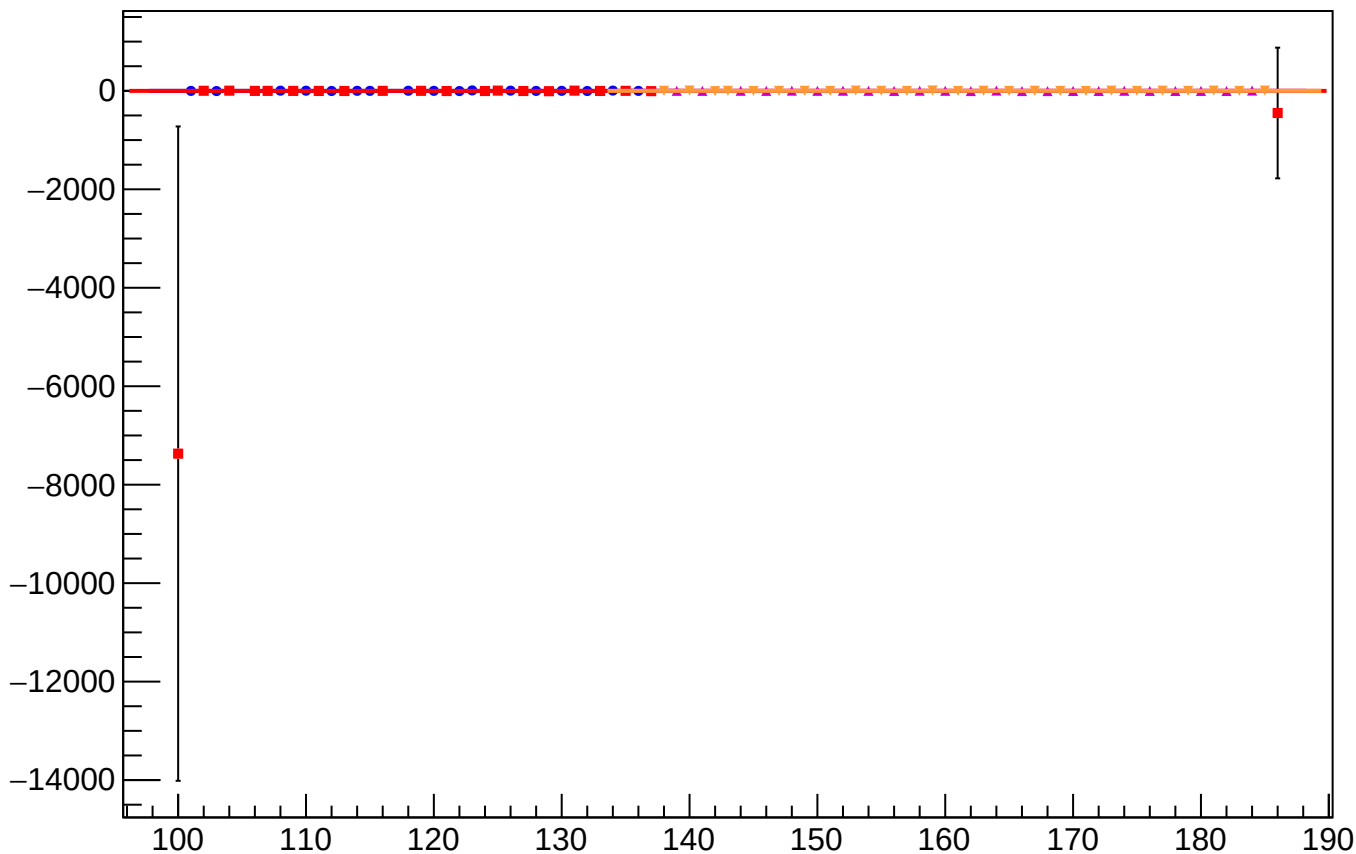
Right: 121.186 $\pm$ 0.024  $\chi^2$ /NDF: 1994379.6/36

In: 131.171 $\pm$ 0.019  $\chi^2$ /NDF: 911091.3/39

Out: 133.786 $\pm$ 0.019  $\chi^2$ /NDF: 1411194.6/44

All: 132.494 $\pm$ 0.013  $\chi^2$ /NDF: 2331812.9/84

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



Right In:  $-0.719 \pm 0.810$   $\chi^2/\text{NDF}: 12.2/16$

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

Right Out:  $-0.638 \pm 0.852$   $\chi^2/\text{NDF}: 14.8/19$

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

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

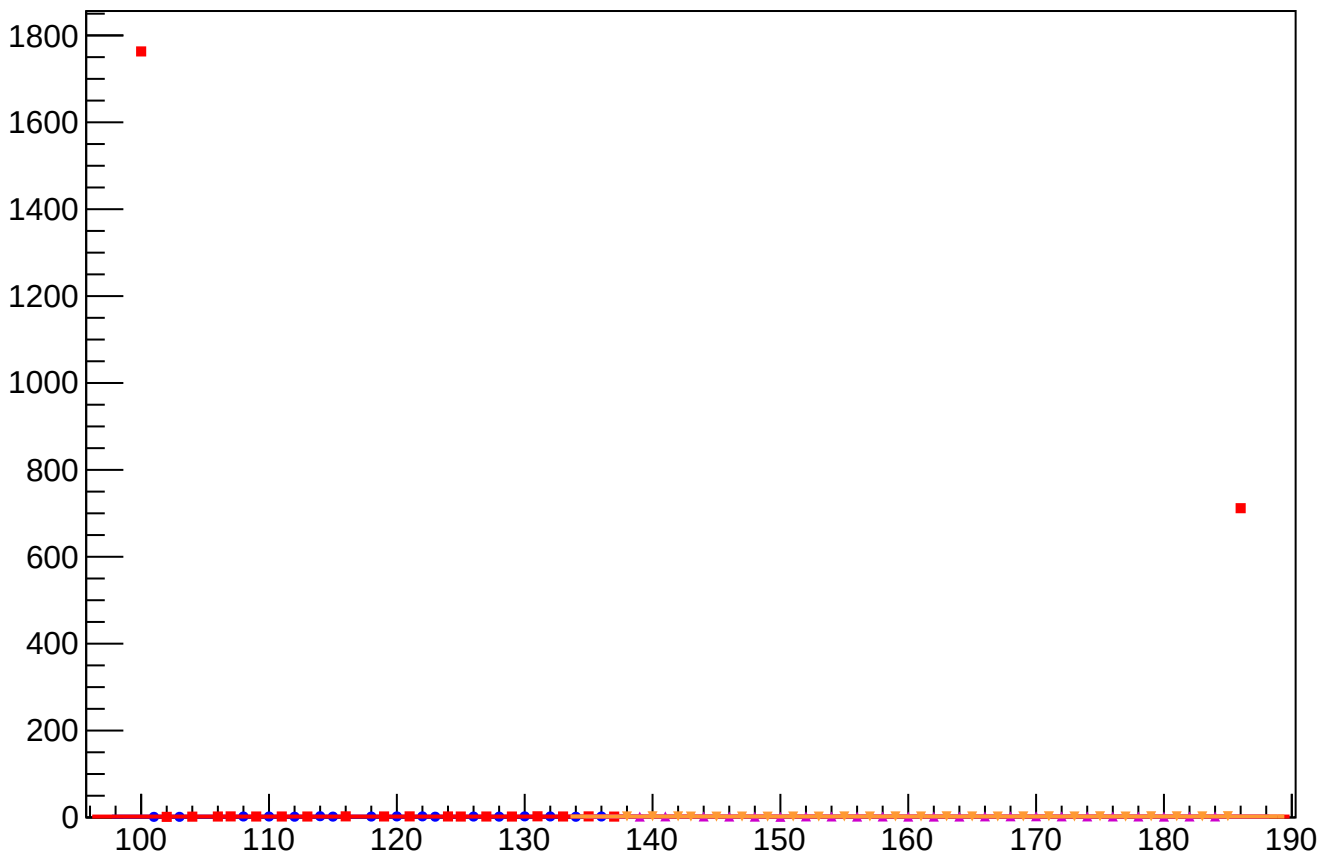
Right:  $-0.681 \pm 0.587$   $\chi^2/\text{NDF}: 27.0/36$

In:  $-0.052 \pm 0.471$   $\chi^2/\text{NDF}: 33.9/39$

Out:  $0.139 \pm 0.475$   $\chi^2/\text{NDF}: 45.0/44$

All:  $0.043 \pm 0.334$   $\chi^2/\text{NDF}: 79.0/84$

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



Right In: 1.865+/-0.001  $\chi^2/\text{NDF}$ : 489750.7/16

Left Out: 2.262+/-0.000  $\chi^2/\text{NDF}$ : 374973.2/24

Right Out: 2.064+/-0.001  $\chi^2/\text{NDF}$ : 1093892.4/19

Left In: 2.193+/-0.000  $\chi^2/\text{NDF}$ : 510890.7/22

Left: 2.228+/-0.000  $\chi^2/\text{NDF}$ : 900243.0/47

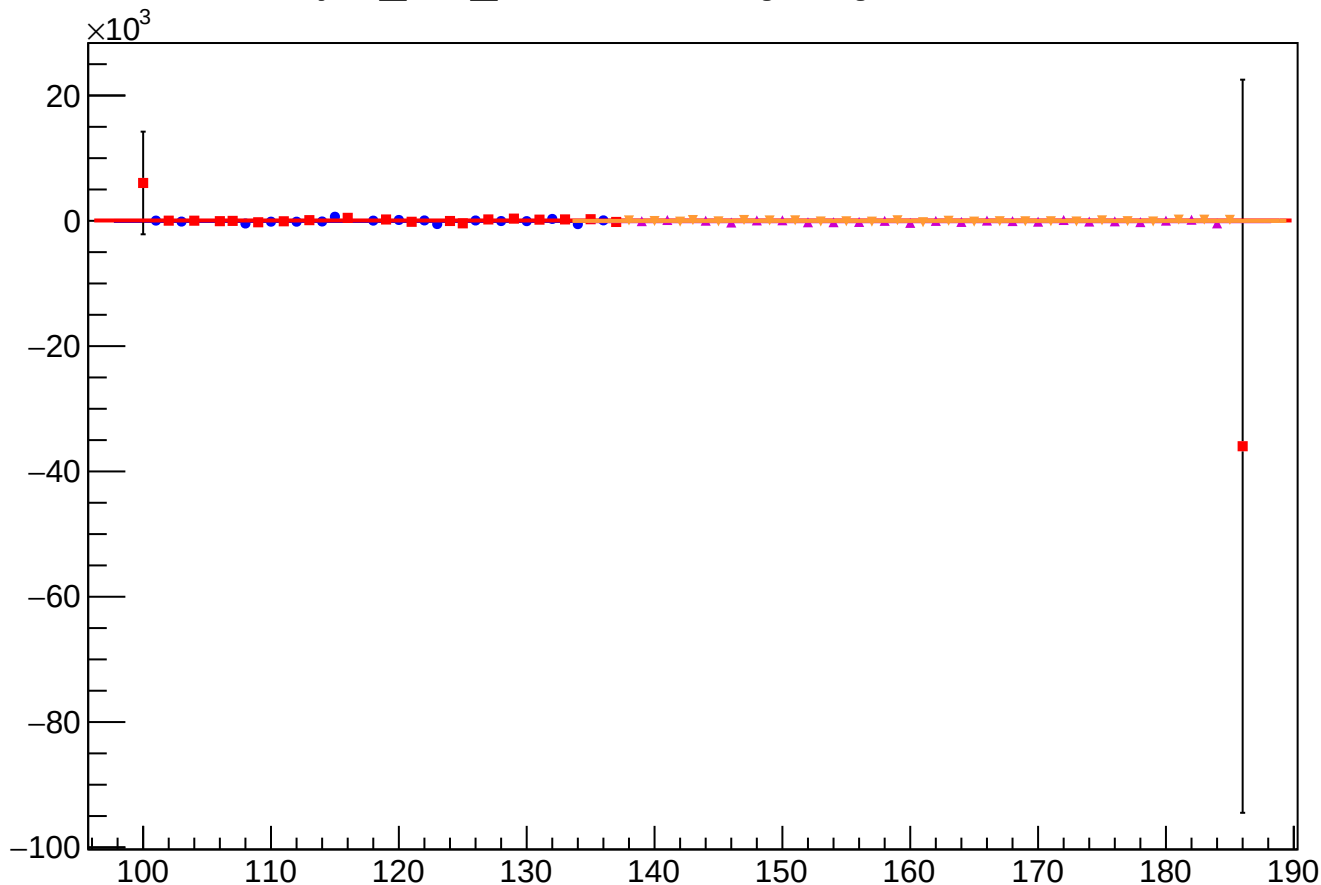
Right: 1.960+/-0.000  $\chi^2/\text{NDF}$ : 1640679.0/36

In: 2.082+/-0.000  $\chi^2/\text{NDF}$ : 1217183.0/39

Out: 2.200+/-0.000  $\chi^2/\text{NDF}$ : 1543319.9/44

All: 2.141+/-0.000  $\chi^2/\text{NDF}$ : 2823015.9/84

# asym\_dsr\_mean vs Slug, Sign Corrected



Right In:  $-25.059 \pm 46.854$   $\chi^2/\text{NDF}: 14.5/16$

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

Right Out:  $54.262 \pm 47.789$   $\chi^2/\text{NDF}: 16.5/19$

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

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

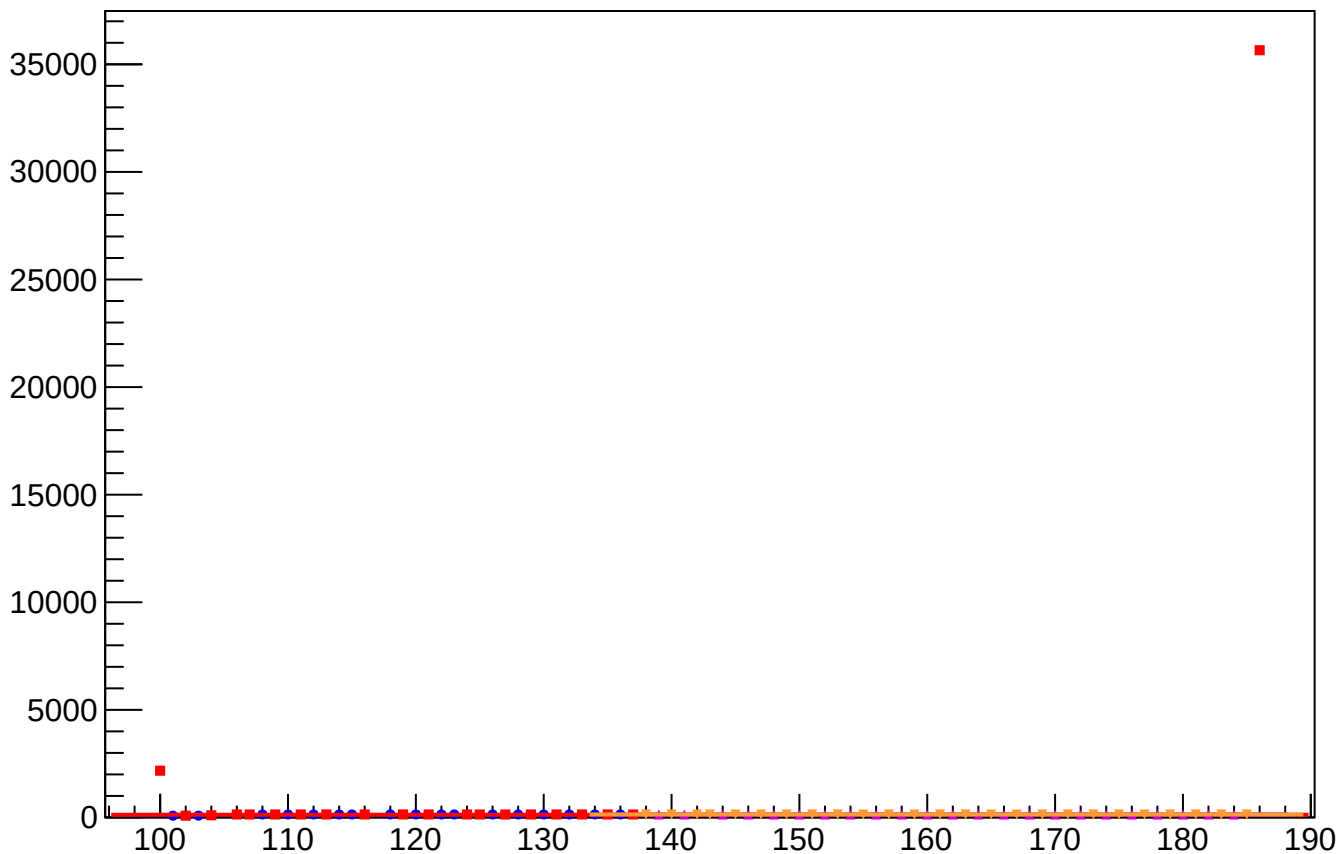
Right:  $13.817 \pm 33.456$   $\chi^2/\text{NDF}: 32.4/36$

In:  $-51.936 \pm 26.954$   $\chi^2/\text{NDF}: 34.3/39$

Out:  $7.623 \pm 26.631$   $\chi^2/\text{NDF}: 29.6/44$

All:  $-21.797 \pm 18.944$   $\chi^2/\text{NDF}: 66.4/84$

# asym\_dsr\_rms vs Slug, Sign Corrected



Right In: 117.793 $\pm$ 0.033  $\chi^2$ /NDF: 665675.4/16

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

Right Out: 124.737 $\pm$ 0.034  $\chi^2$ /NDF: 1317510.2/19

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: 121.196 $\pm$ 0.024  $\chi^2$ /NDF: 2004713.1/36

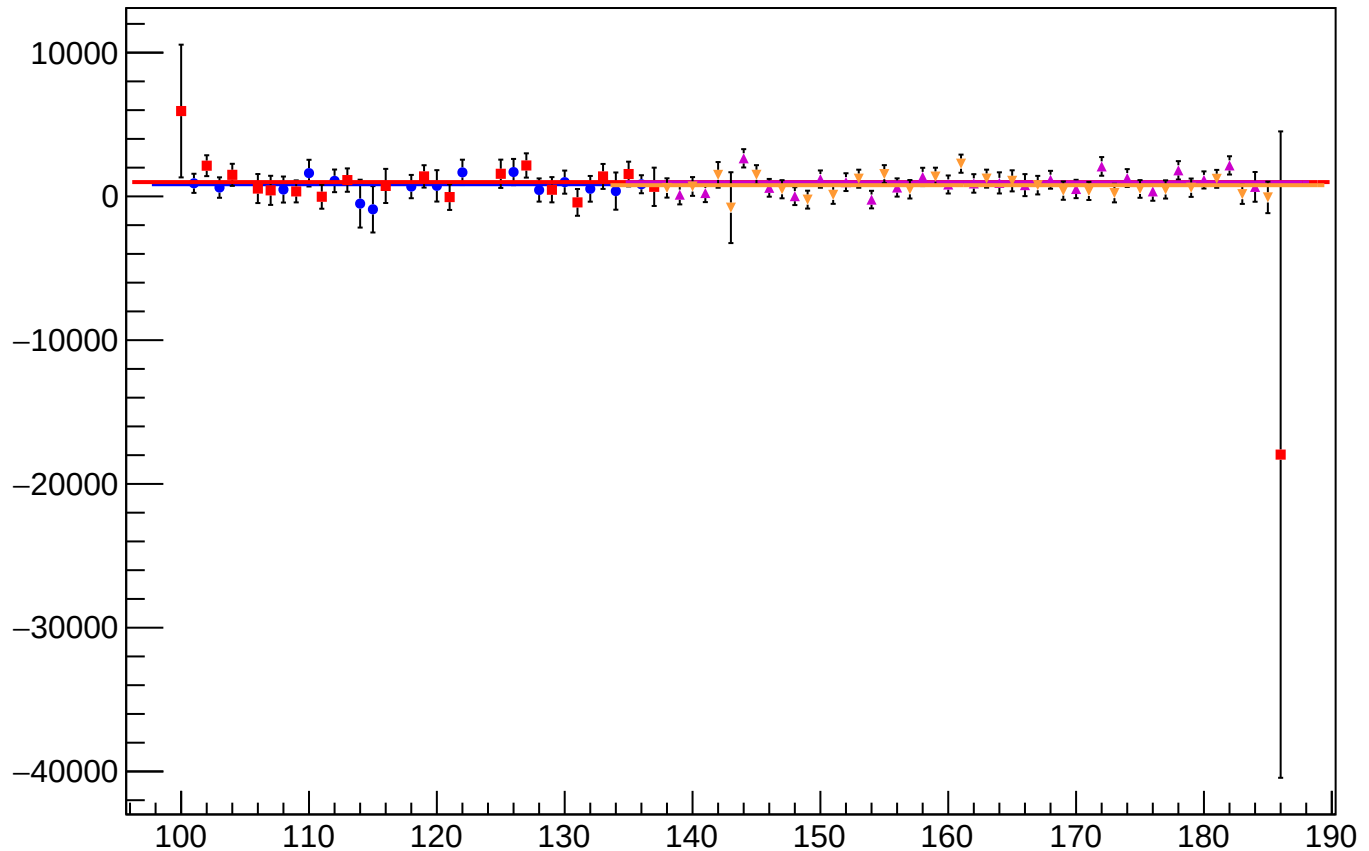
In: 131.208 $\pm$ 0.019  $\chi^2$ /NDF: 911165.4/39

Out: 133.809 $\pm$ 0.019  $\chi^2$ /NDF: 1422493.5/44

All: 132.524 $\pm$ 0.013  $\chi^2$ /NDF: 2343085.3/84



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



Right In: 847.032 $\pm$ 216.666  $\chi^2$ /NDF: 5.2/15

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

Right Out: 995.406 $\pm$ 213.254  $\chi^2$ /NDF: 14.7/18

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

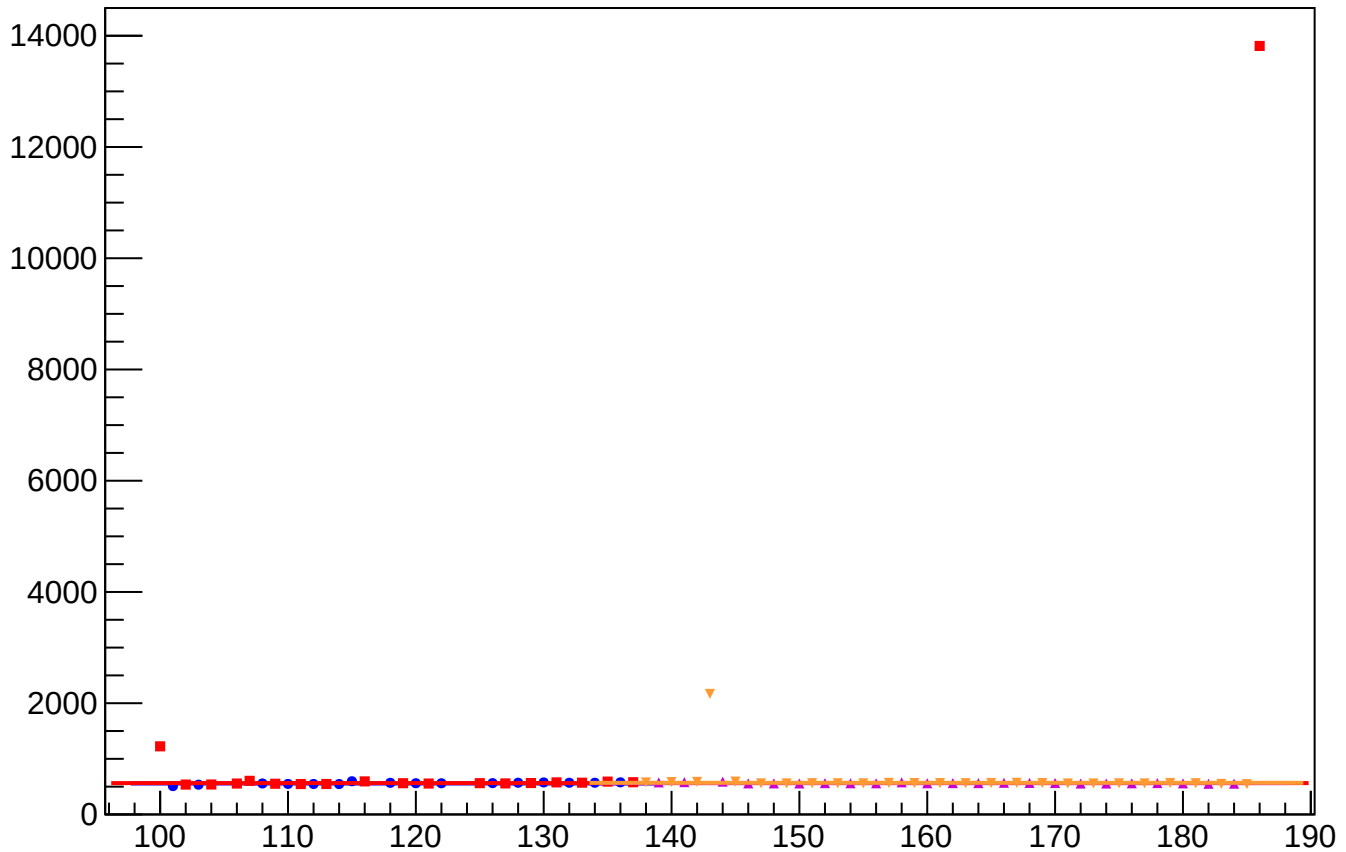
Right: 922.396 $\pm$ 151.985  $\chi^2$ /NDF: 20.2/34

In: 938.808 $\pm$ 114.537  $\chi^2$ /NDF:32.9/38

Out: 840.697 $\pm$ 113.373  $\chi^2$ /NDF:35.1/43

All: 889.251 $\pm$ 80.575  $\chi^2$ /NDF: 68.4/82

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



Right In: 556.871+/-0.153  $\chi^2/\text{NDF}$ : 18555.7/15

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

Right Out: 563.652+/-0.151  $\chi^2/\text{NDF}$ : 750650.0/18

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

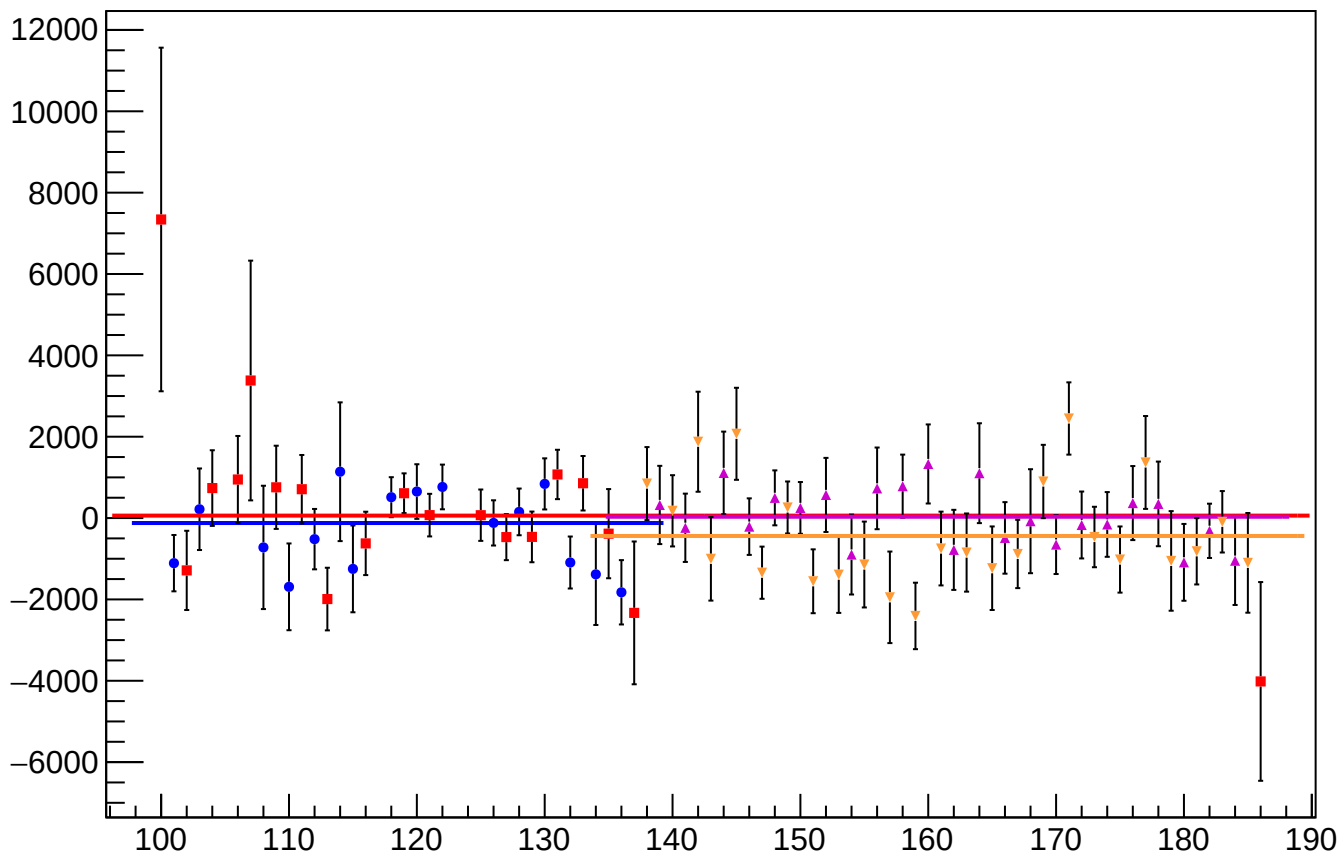
Right: 560.316+/-0.107  $\chi^2/\text{NDF}$ : 770200.7/34

In: 562.284+/-0.081  $\chi^2/\text{NDF}$ : 29497.4/38

Out: 567.398+/-0.080  $\chi^2/\text{NDF}$ : 1605224.9/43

All: 564.867+/-0.057  $\chi^2/\text{NDF}$ : 1636736.7/82

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



Right In: -121.777 $\pm$ 180.788  $\chi^2$ /NDF: 22.6/15

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

Right Out: 60.305 $\pm$ 178.849  $\chi^2$ /NDF: 28.1/18

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

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

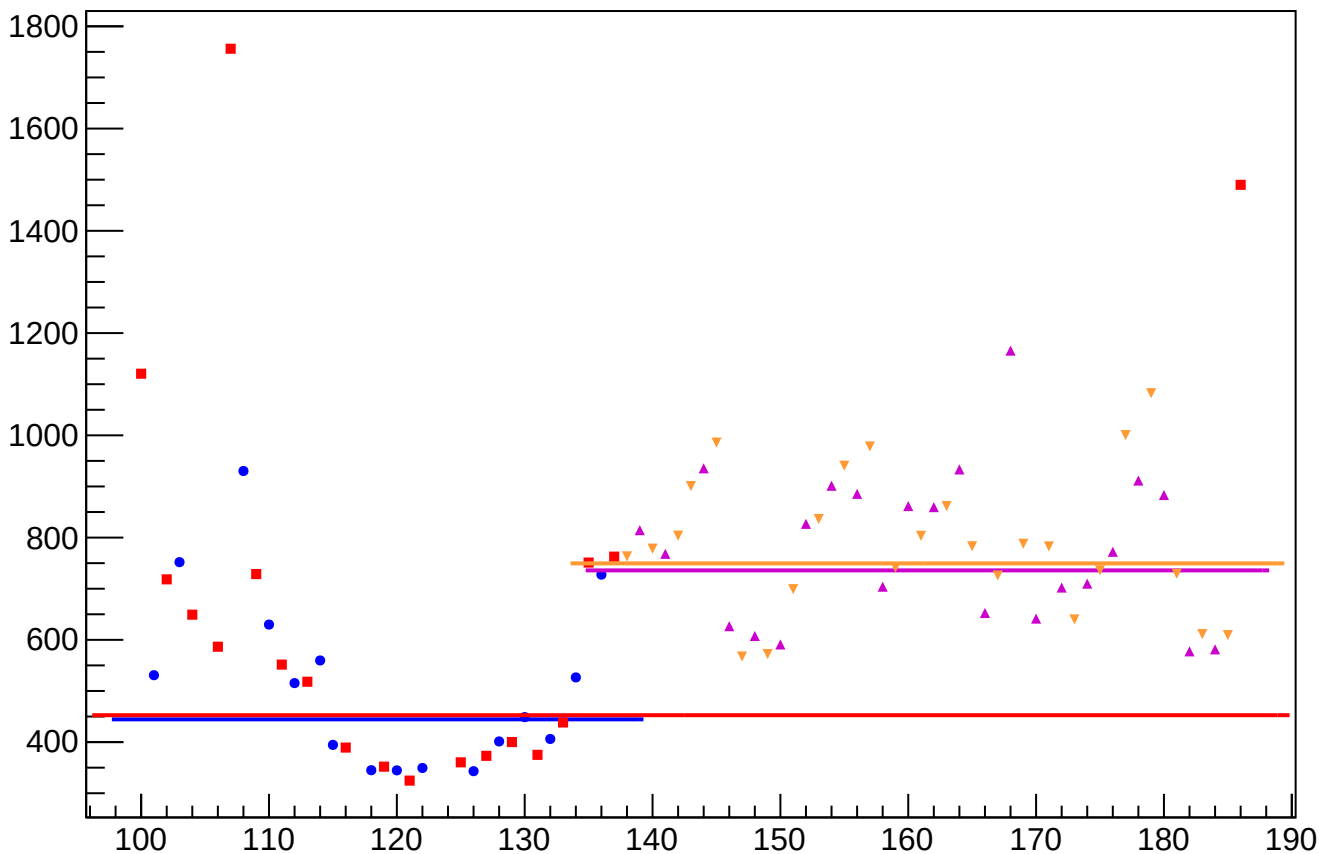
Right: -29.755 $\pm$ 127.145  $\chi^2$ /NDF: 51.2/34

In: -44.102 $\pm$ 127.354  $\chi^2$ /NDF:35.1/38

Out: -191.212 $\pm$ 126.122  $\chi^2$ /NDF:75.6/43

All: -118.372 $\pm$ 89.614  $\chi^2$ /NDF: 111.4/82

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



Right In:  $444.510 \pm 0.128$   $\chi^2/\text{NDF}$ : 1052706.5/15

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

Right Out:  $452.633 \pm 0.126$   $\chi^2/\text{NDF}$ : 1817518.2/18

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

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

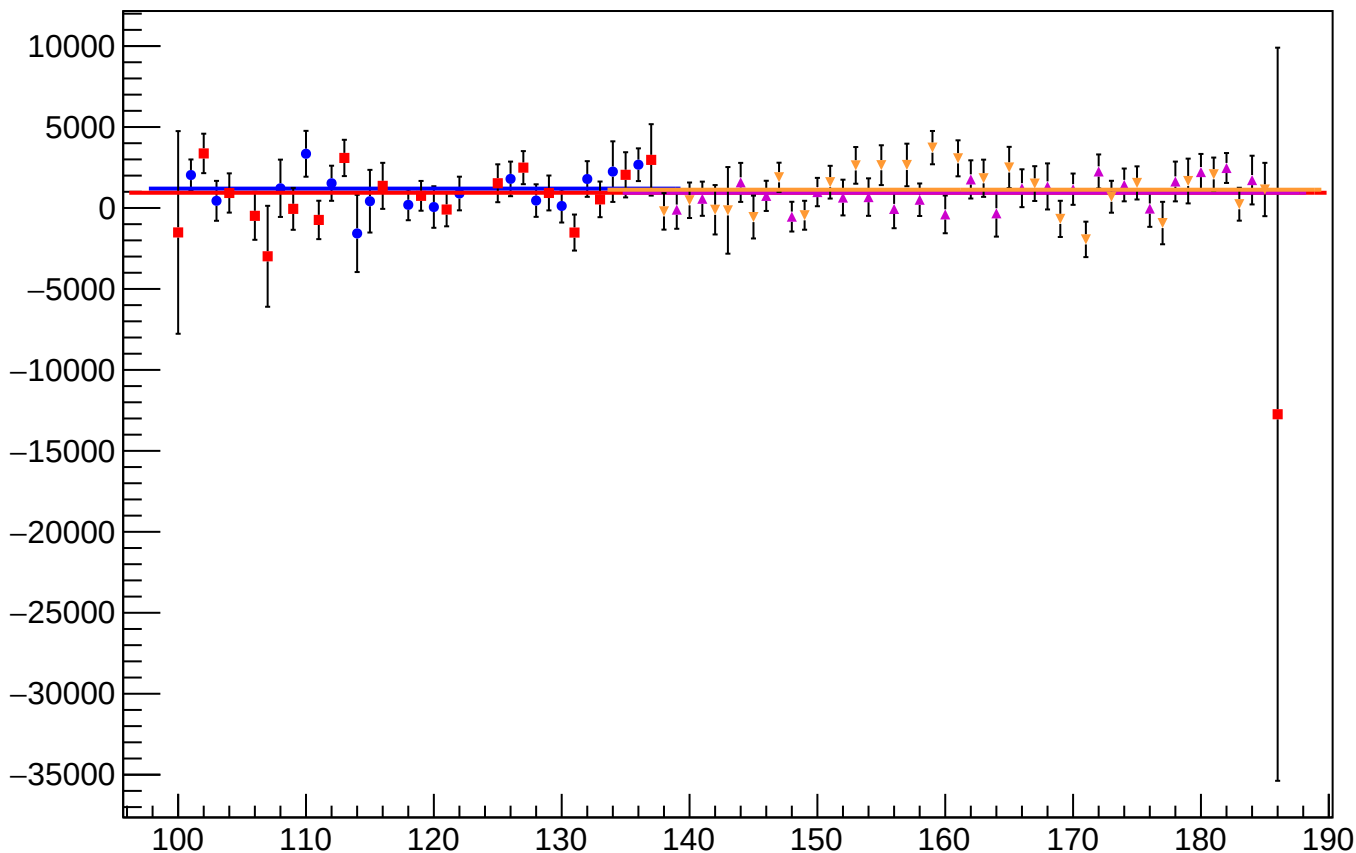
Right:  $448.616 \pm 0.090$   $\chi^2/\text{NDF}$ : 2872265.2/34

In:  $591.278 \pm 0.090$   $\chi^2/\text{NDF}$ : 4774623.0/38

Out:  $601.909 \pm 0.089$   $\chi^2/\text{NDF}$ : 5642524.6/43

All:  $596.645 \pm 0.063$   $\chi^2/\text{NDF}$ : 10424183.6/82

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



Right In: 1196.174 $\pm$ 296.098  $\chi^2$ /NDF: 11.7/15

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

Right Out: 940.472 $\pm$ 294.196  $\chi^2$ /NDF: 23.5/18

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

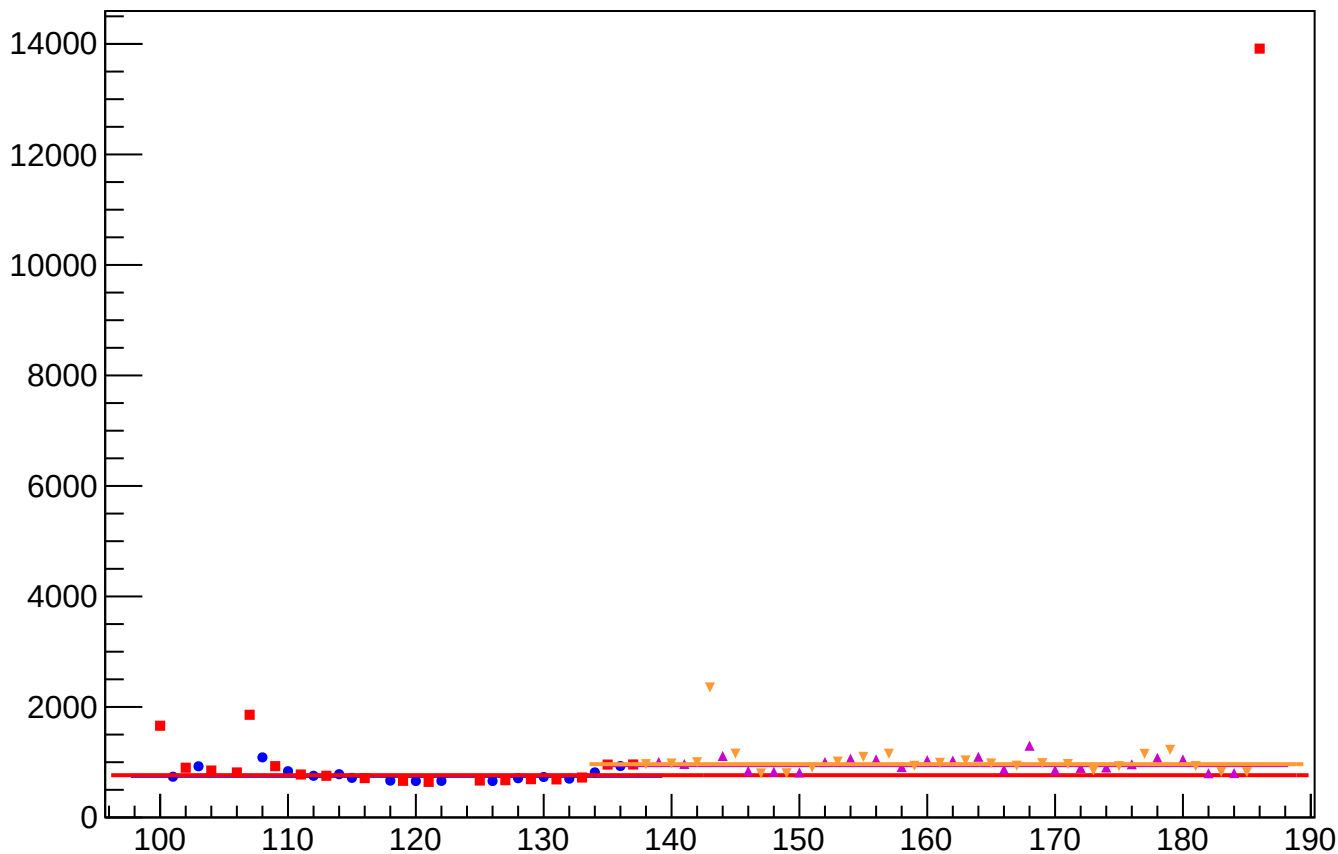
Right: 1067.499 $\pm$ 208.697  $\chi^2$ /NDF: 35.6/34

In: 1036.591 $\pm$ 180.811  $\chi^2$ /NDF:27.0/38

Out: 1058.007 $\pm$ 180.216  $\chi^2$ /NDF:62.8/43

All: 1047.335 $\pm$ 127.642  $\chi^2$ /NDF: 89.8/82

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



Right In: 753.808 $\pm$ 0.209  $\chi^2$ /NDF: 250129.9/15

Left Out: 964.493 $\pm$ 0.161  $\chi^2$ /NDF: 1002763.0/24

Right Out: 764.538 $\pm$ 0.208  $\chi^2$ /NDF: 1188827.1/18

Left In: 946.573 $\pm$ 0.161  $\chi^2$ /NDF: 501366.9/22

Left: 955.545 $\pm$ 0.114  $\chi^2$ /NDF: 1510298.5/47

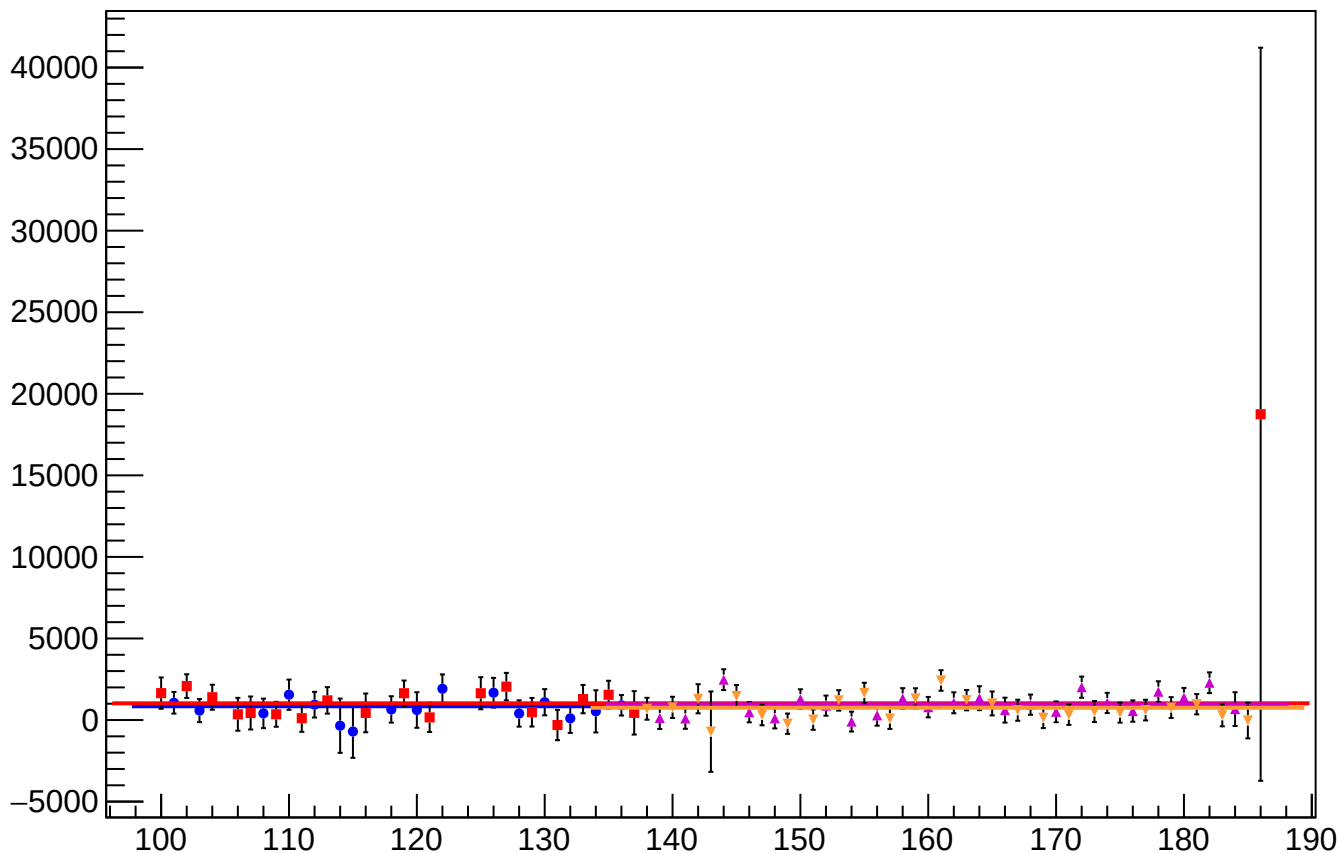
Right: 759.208 $\pm$ 0.148  $\chi^2$ /NDF: 1440278.6/34

In: 874.693 $\pm$ 0.128  $\chi^2$ /NDF: 1283065.3/38

Out: 889.461 $\pm$ 0.127  $\chi^2$ /NDF: 2768796.6/43

All: 882.102 $\pm$ 0.090  $\chi^2$ /NDF: 4058555.0/82

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



Right In: 845.362 $\pm$ 216.498  $\chi^2$ /NDF: 6.1/15

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

Right Out: 1024.573 $\pm$ 208.221  $\chi^2$ /NDF: 13.0/18

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

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

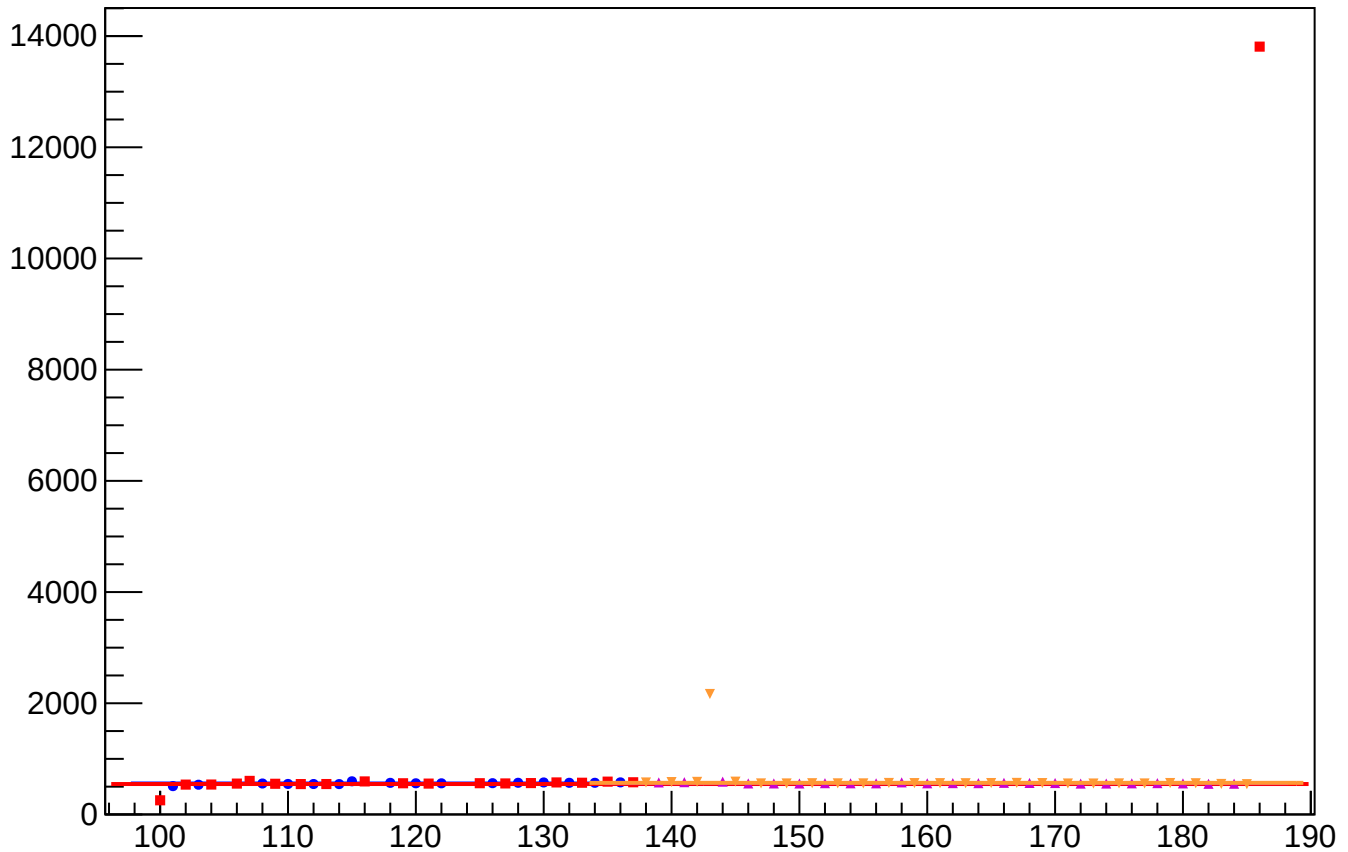
Right: 938.459 $\pm$ 150.075  $\chi^2$ /NDF: 19.4/34

In: 926.896 $\pm$ 114.446  $\chi^2$ /NDF:33.1/38

Out: 832.538 $\pm$ 112.531  $\chi^2$ /NDF:35.5/43

All: 878.921 $\pm$ 80.240  $\chi^2$ /NDF: 69.0/82

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

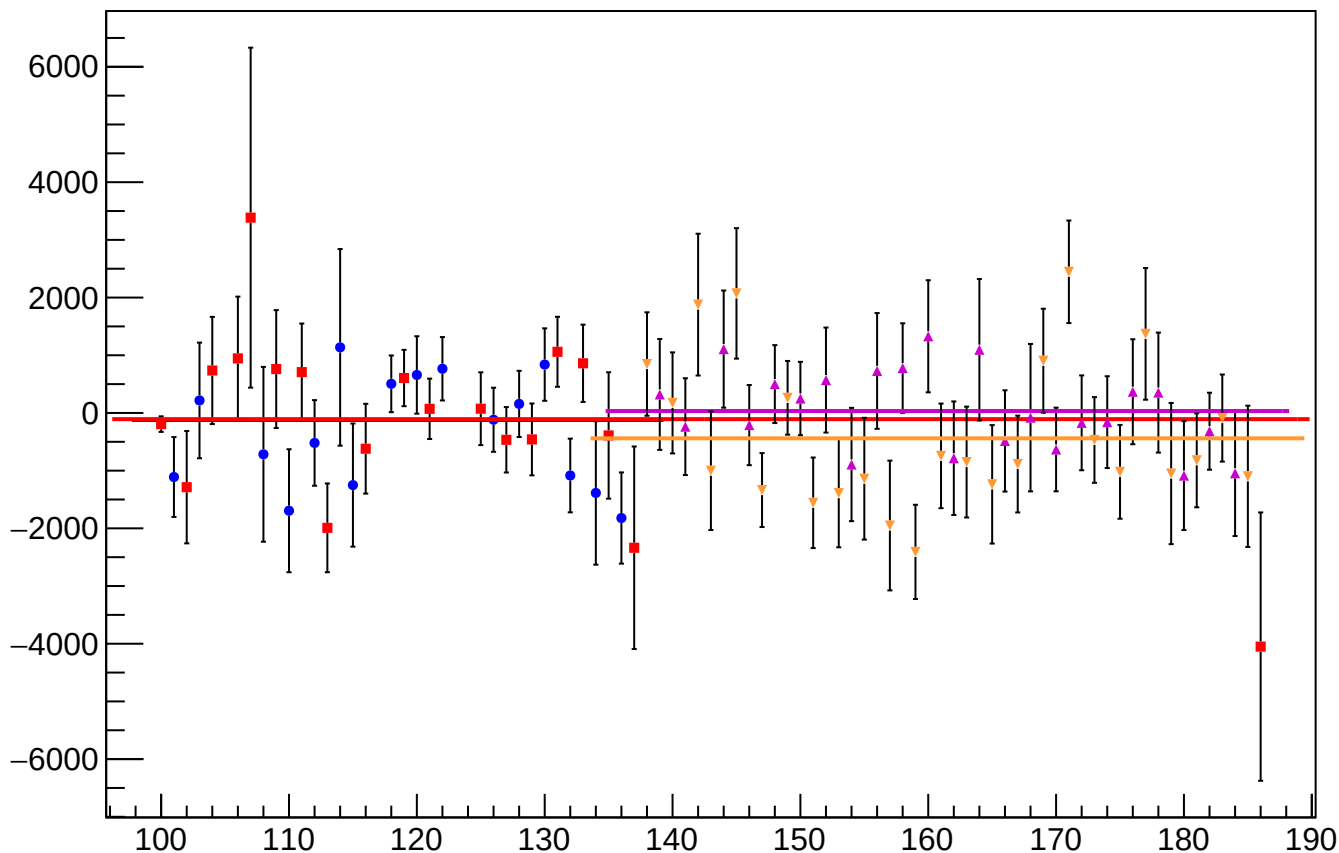


Right In: 556.437 $\pm$ 0.153  $\chi^2$ /NDF: 18580.5/15  
Left Out: 568.400 $\pm$ 0.095  $\chi^2$ /NDF: 854012.8/24  
Right Out: 547.302 $\pm$ 0.147  $\chi^2$ /NDF: 904898.2/18  
Left In: 563.934 $\pm$ 0.095  $\chi^2$ /NDF: 9204.6/22

Left: 566.185 $\pm$ 0.067  $\chi^2$ /NDF: 864323.4/47  
Right: 551.691 $\pm$ 0.106  $\chi^2$ /NDF: 925328.5/34  
In: 561.839 $\pm$ 0.081  $\chi^2$ /NDF: 29513.1/38  
Out: 562.238 $\pm$ 0.080  $\chi^2$ /NDF: 1773447.3/43  
All: 562.042 $\pm$ 0.057  $\chi^2$ /NDF: 1802972.8/82



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



Right In: -121.208 $\pm$ 180.699  $\chi^2/\text{NDF}$ : 22.5/15

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

Right Out: -107.269 $\pm$ 107.737  $\chi^2/\text{NDF}$ : 26.6/18

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

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

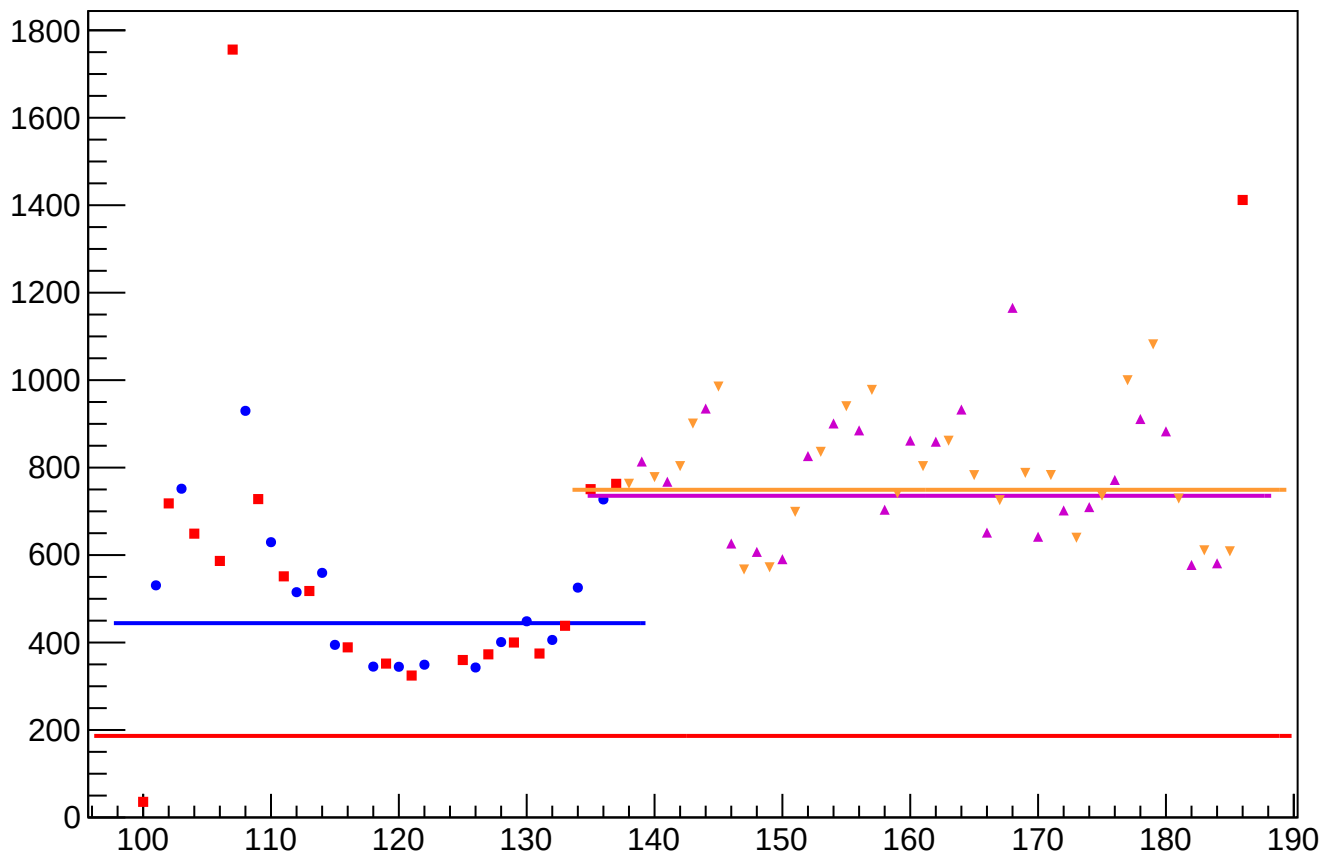
Right: -110.924 $\pm$ 92.537  $\chi^2/\text{NDF}$ : 49.1/34

In: -43.364 $\pm$ 127.296  $\chi^2/\text{NDF}$ : 35.0/38

Out: -196.529 $\pm$ 92.142  $\chi^2/\text{NDF}$ : 72.7/43

All: -143.870 $\pm$ 74.640  $\chi^2/\text{NDF}$ : 108.6/82

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



Right In: 444.298 $\pm$ 0.128  $\chi^2$ /NDF: 1052547.8/15

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

Right Out: 186.469 $\pm$ 0.076  $\chi^2$ /NDF: 8628650.6/18

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

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

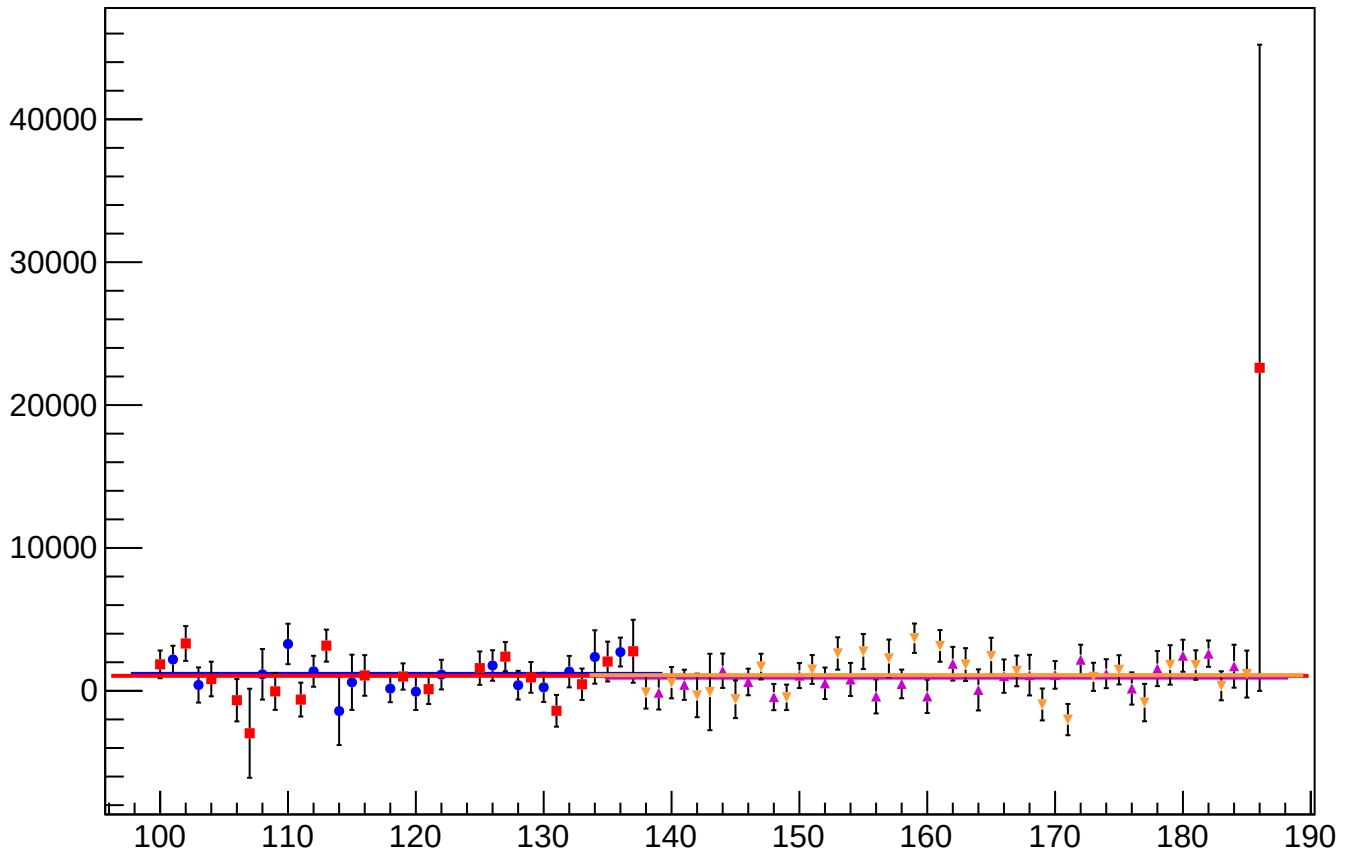
Right: 254.085 $\pm$ 0.065  $\chi^2$ /NDF: 12685114.6/34

In: 591.008 $\pm$ 0.090  $\chi^2$ /NDF: 4774953.1/38

Out: 337.605 $\pm$ 0.065  $\chi^2$ /NDF: 24339303.0/43

All: 424.727 $\pm$ 0.053  $\chi^2$ /NDF: 34314872.2/82

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



Right In: 1186.962 $\pm$ 295.897  $\chi^2$ /NDF: 11.6/15

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

Right Out: 1051.000 $\pm$ 281.615  $\chi^2$ /NDF: 23.3/18

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

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

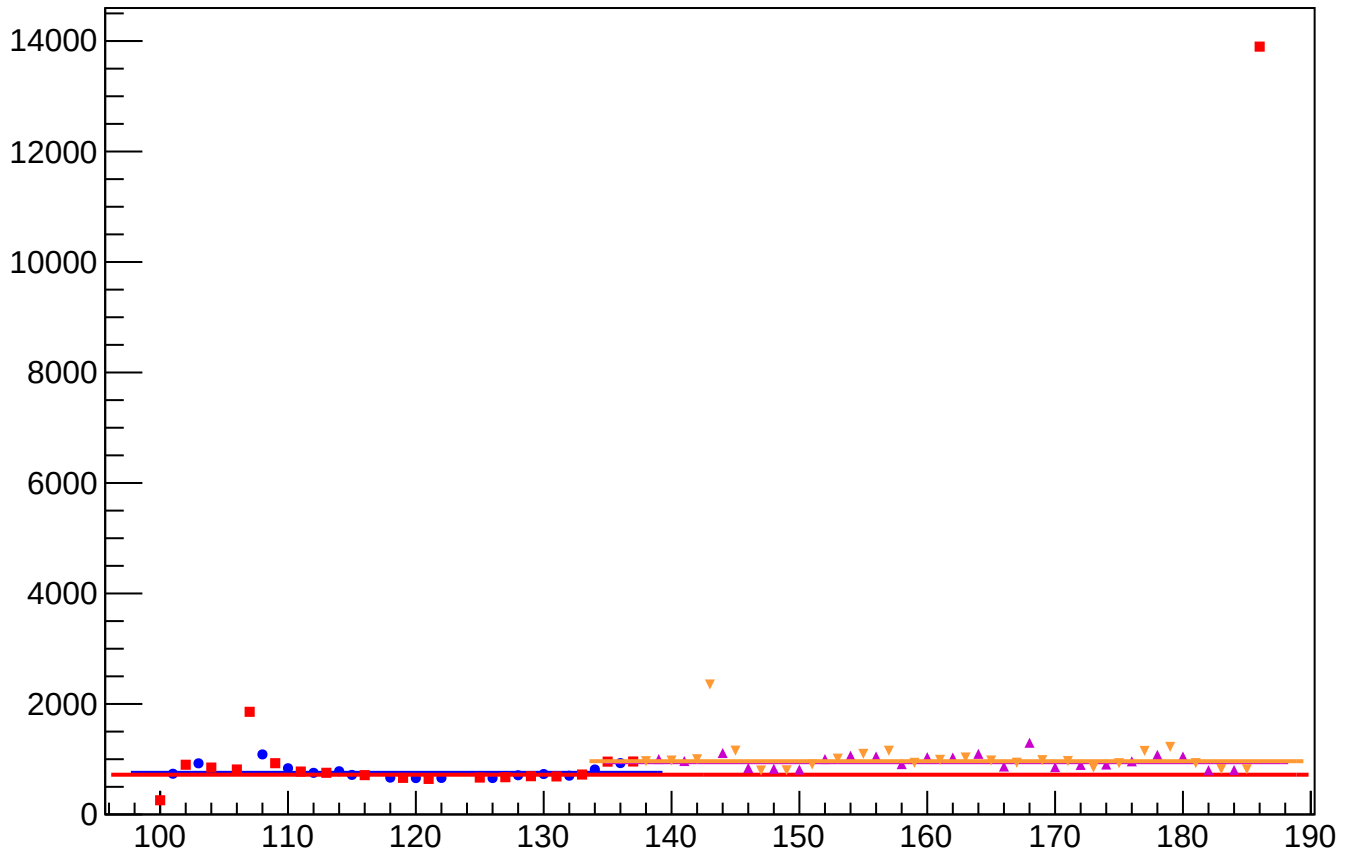
Right: 1115.621 $\pm$ 203.994  $\chi^2$ /NDF: 35.1/34

In: 1023.500 $\pm$ 180.702  $\chi^2$ /NDF: 27.2/38

Out: 1078.516 $\pm$ 177.142  $\chi^2$ /NDF: 61.8/43

All: 1051.555 $\pm$ 126.498  $\chi^2$ /NDF: 89.1/82

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



Right In: 753.290+/-0.209  $\chi^2/\text{NDF}$ : 250330.3/15

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

Right Out: 719.371+/-0.199  $\chi^2/\text{NDF}$ : 1645155.3/18

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

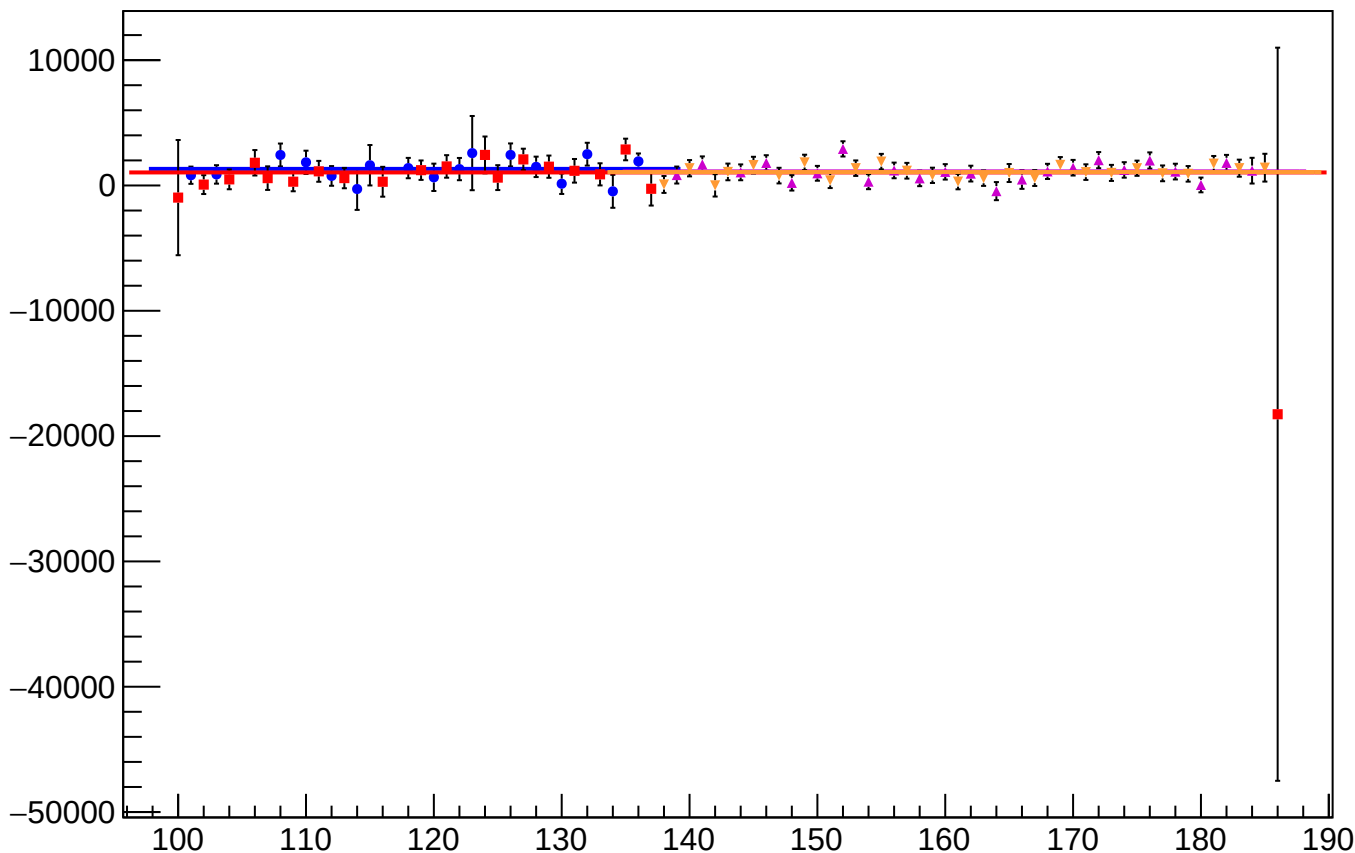
Right: 735.493+/-0.144  $\chi^2/\text{NDF}$ : 1909275.4/34

In: 874.156+/-0.128  $\chi^2/\text{NDF}$ :1283937.1/38

Out: 867.168+/-0.125  $\chi^2/\text{NDF}$ :3559780.9/43

All: 870.592+/-0.089  $\chi^2/\text{NDF}$ : 4845243.2/82

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



Right In: 1324.051+/-218.600  $\chi^2/\text{NDF}$ : 12.8/16

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

Right Out: 1039.487+/-212.074  $\chi^2/\text{NDF}$ : 13.9/19

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

Left: 1098.077+/-92.908  $\chi^2/\text{NDF}$ : 45.2/47

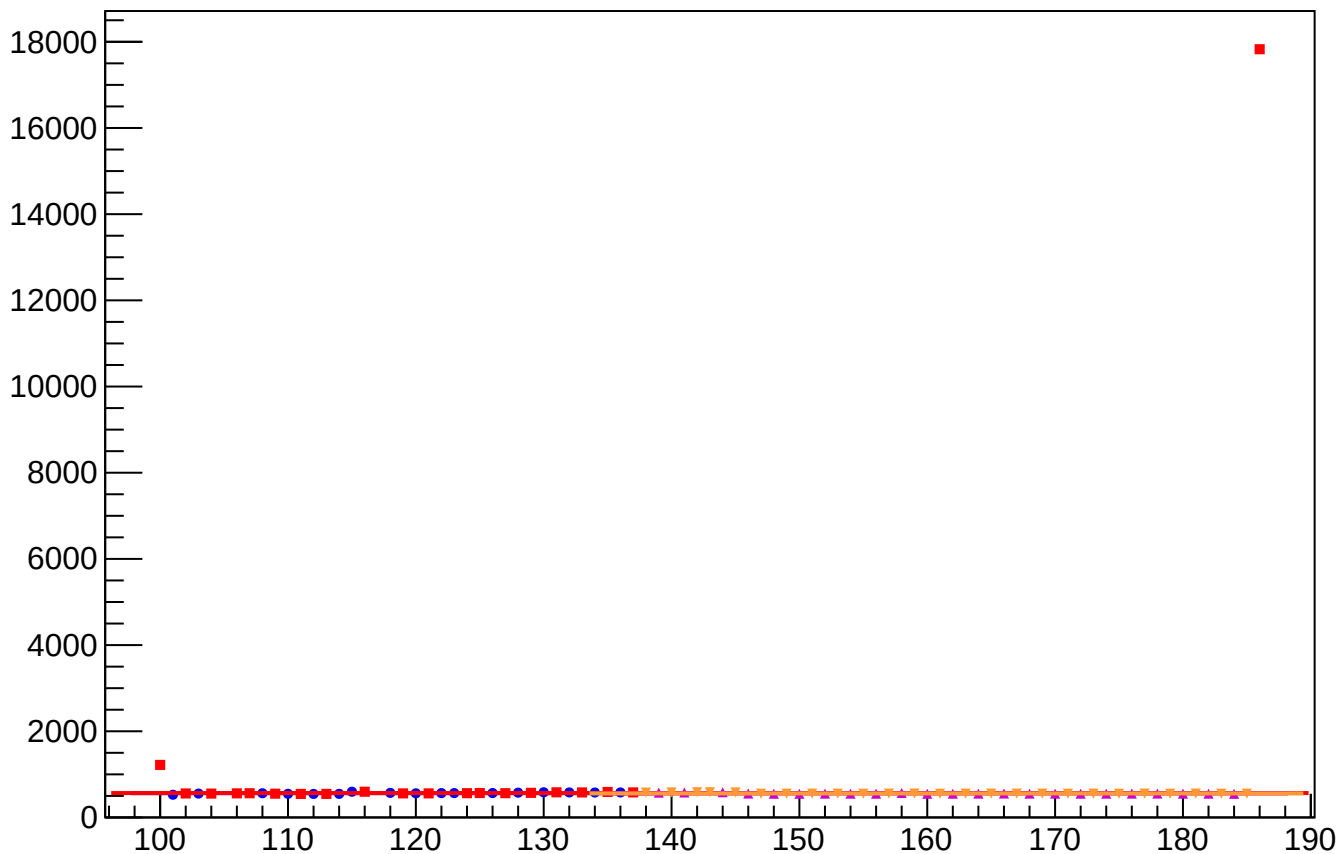
Right: 1177.458+/-152.214  $\chi^2/\text{NDF}$ : 27.6/36

In: 1178.039+/-113.724  $\chi^2/\text{NDF}$ :43.4/39

Out: 1064.334+/-110.641  $\chi^2/\text{NDF}$ :29.1/44

All: 1119.624+/-79.303  $\chi^2/\text{NDF}$ : 73.0/84

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



Right In: 563.522 $\pm$ 0.155  $\chi^2$ /NDF: 12614.9/16

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

Right Out: 566.235 $\pm$ 0.150  $\chi^2$ /NDF: 745832.1/19

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

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

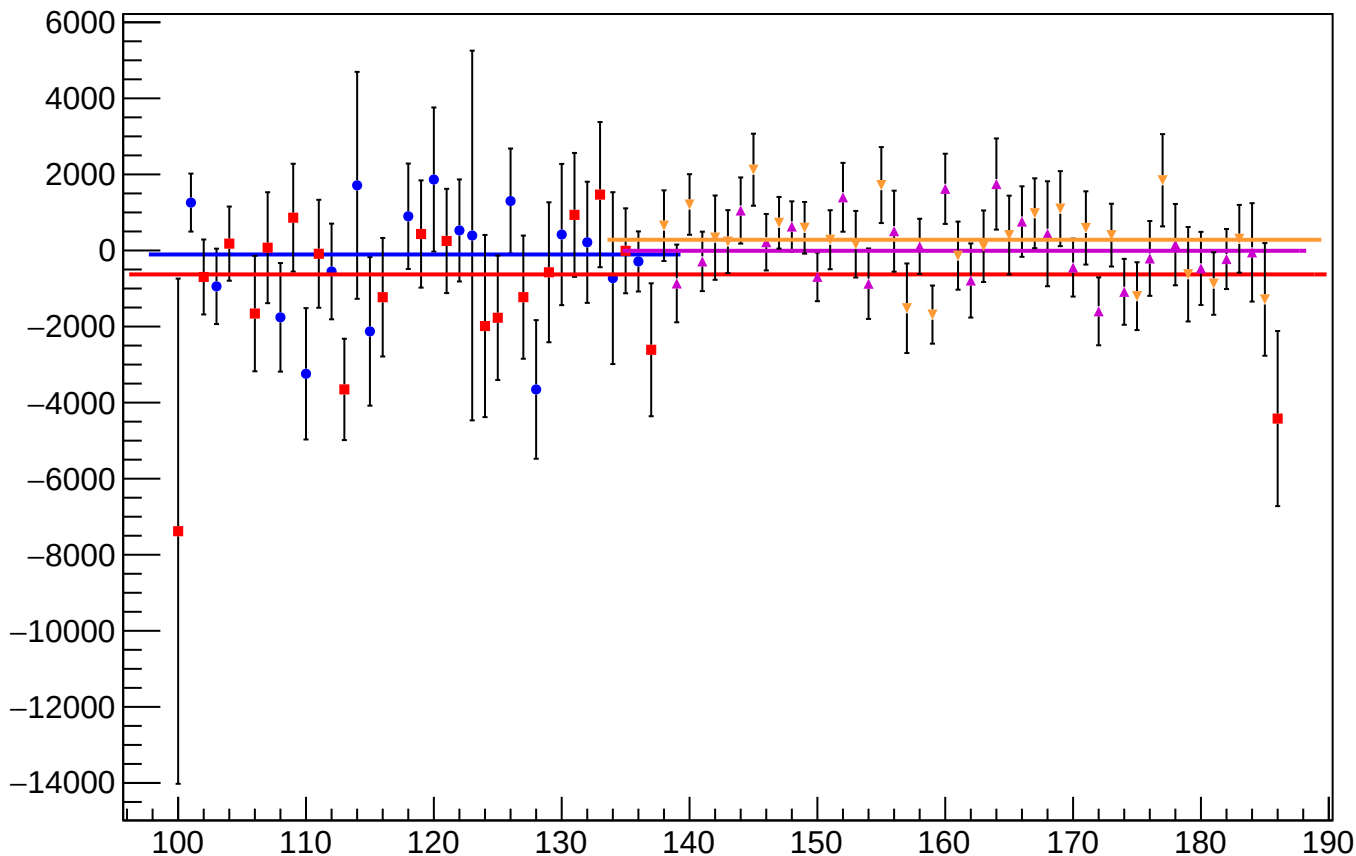
Right: 564.919 $\pm$ 0.108  $\chi^2$ /NDF: 758605.7/36

In: 558.743 $\pm$ 0.080  $\chi^2$ /NDF: 25135.4/39

Out: 559.902 $\pm$ 0.078  $\chi^2$ /NDF: 763034.9/44

All: 559.338 $\pm$ 0.056  $\chi^2$ /NDF: 788277.1/84

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



Right In: -104.813+/-328.267  $\chi^2/\text{NDF}$ : 17.0/16

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

Right Out: -628.939+/-329.551  $\chi^2/\text{NDF}$ : 17.3/19

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

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

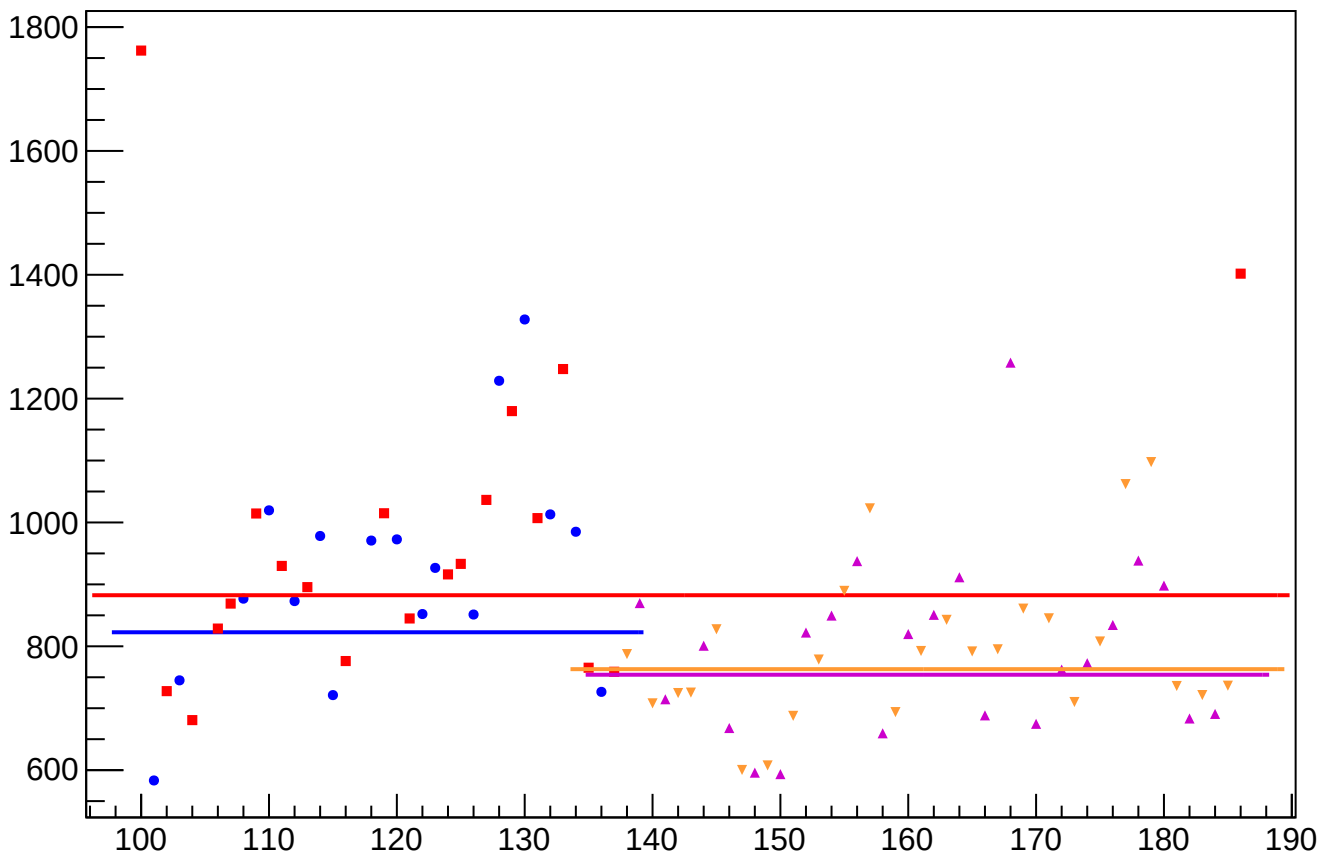
Right: -365.853+/-232.572  $\chi^2/\text{NDF}$ : 35.6/36

In: -31.188+/-160.094  $\chi^2/\text{NDF}$ : 37.3/39

Out: 71.829+/-158.258  $\chi^2/\text{NDF}$ : 49.9/44

All: 20.915+/-112.549  $\chi^2/\text{NDF}$ : 87.4/84

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



Right In: 822.664+/-0.232  $\chi^2/\text{NDF}$ : 606735.8/16

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

Right Out: 882.487+/-0.233  $\chi^2/\text{NDF}$ : 512343.9/19

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

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

Right: 852.459+/-0.164  $\chi^2/\text{NDF}$ : 1152161.0/36

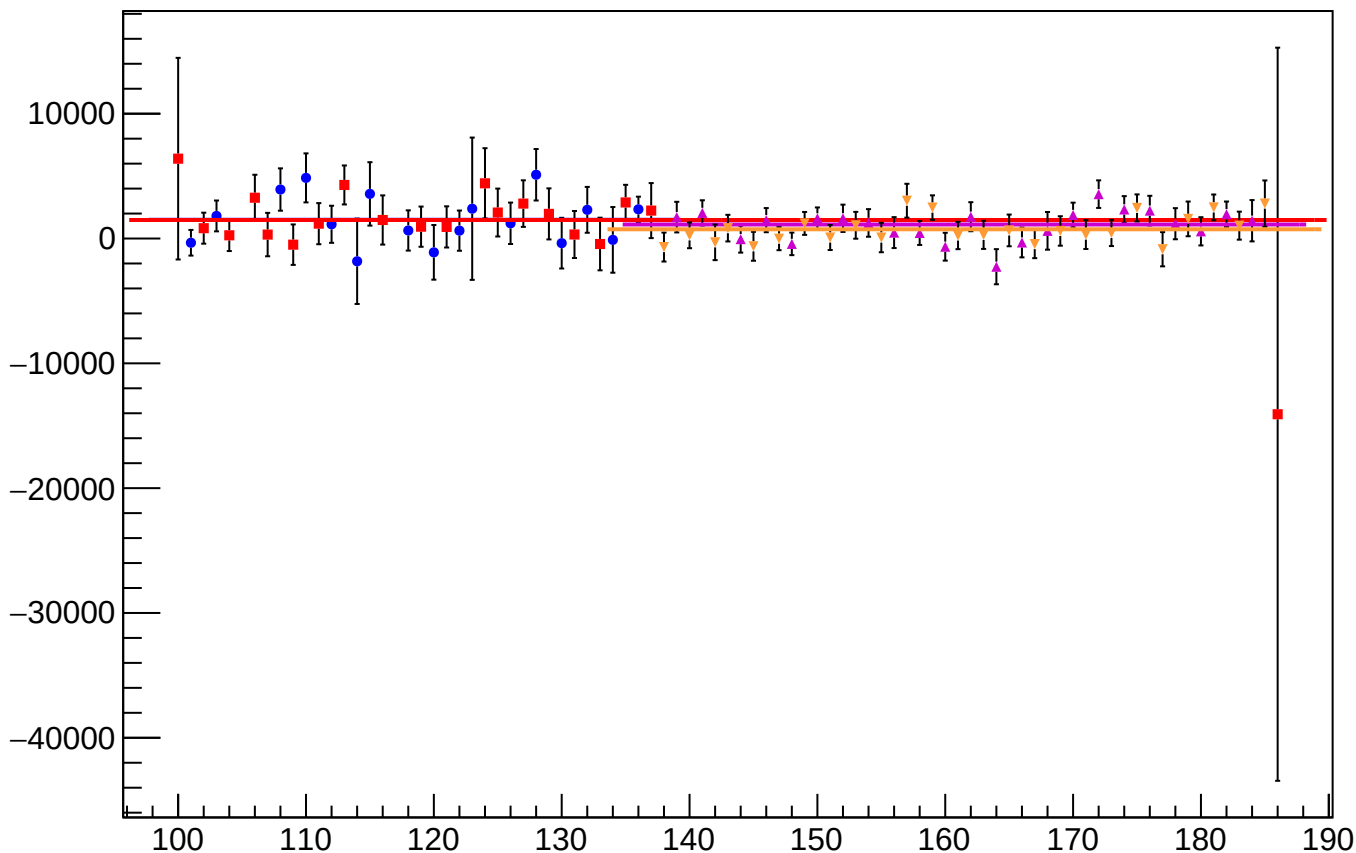
In: 770.407+/-0.113  $\chi^2/\text{NDF}$ : 1605066.1/39

Out: 790.621+/-0.112  $\chi^2/\text{NDF}$ : 1468045.7/44

All: 780.630+/-0.080  $\chi^2/\text{NDF}$ : 3089237.5/84



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



Right In: 1497.967 $\pm$ 402.667  $\chi^2$ /NDF: 17.1/16

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

Right Out: 1484.857 $\pm$ 400.681  $\chi^2$ /NDF: 12.3/19

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

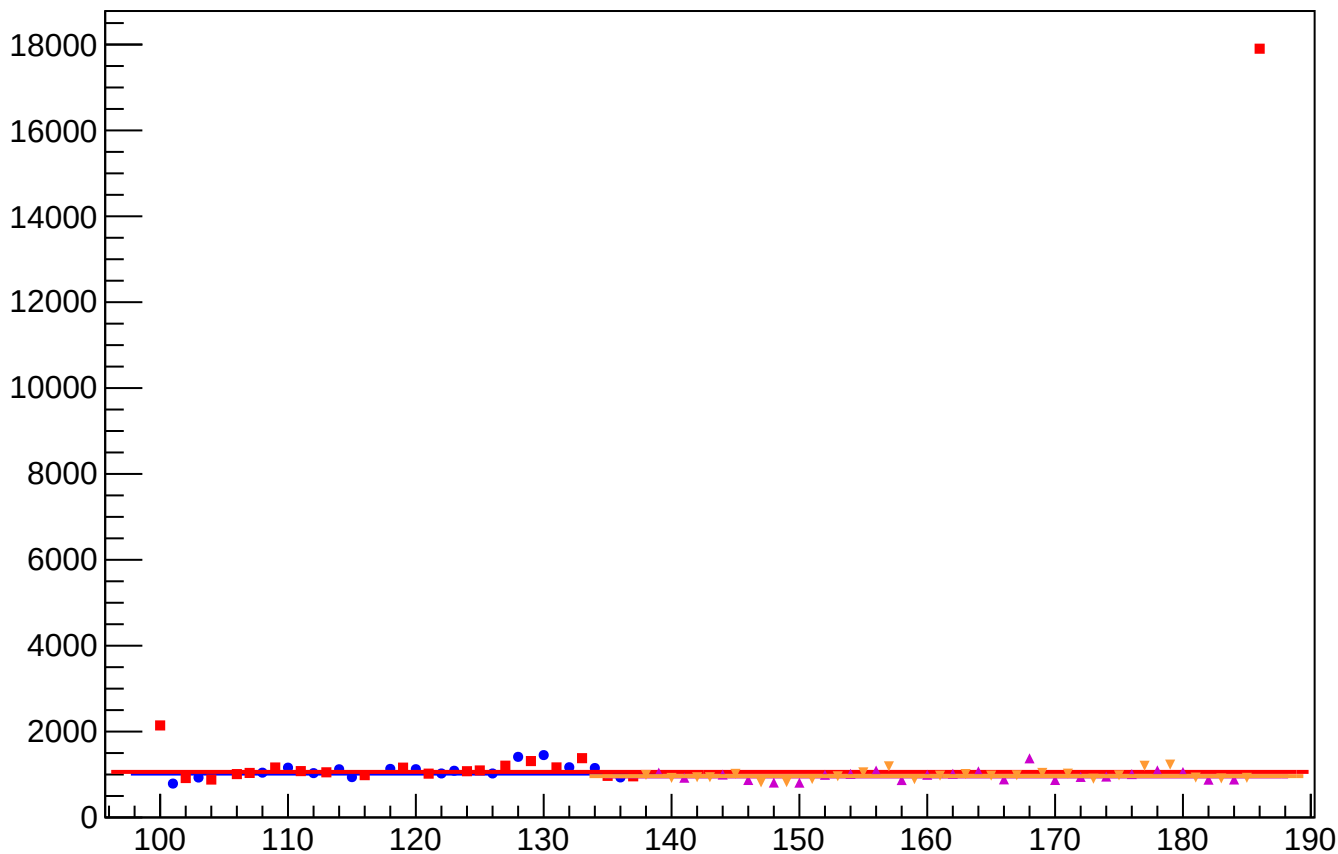
Right: 1491.379 $\pm$ 284.024  $\chi^2$ /NDF: 29.4/36

In: 1216.478 $\pm$ 199.759  $\chi^2$ /NDF: 43.1/39

Out: 918.942 $\pm$ 196.539  $\chi^2$ /NDF: 36.5/44

All: 1065.292 $\pm$ 140.099  $\chi^2$ /NDF: 80.7/84

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



Right In: 1022.011+/-0.285  $\chi^2/\text{NDF}$ : 336507.1/16

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

Right Out: 1061.037+/-0.283  $\chi^2/\text{NDF}$ : 890384.5/19

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

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

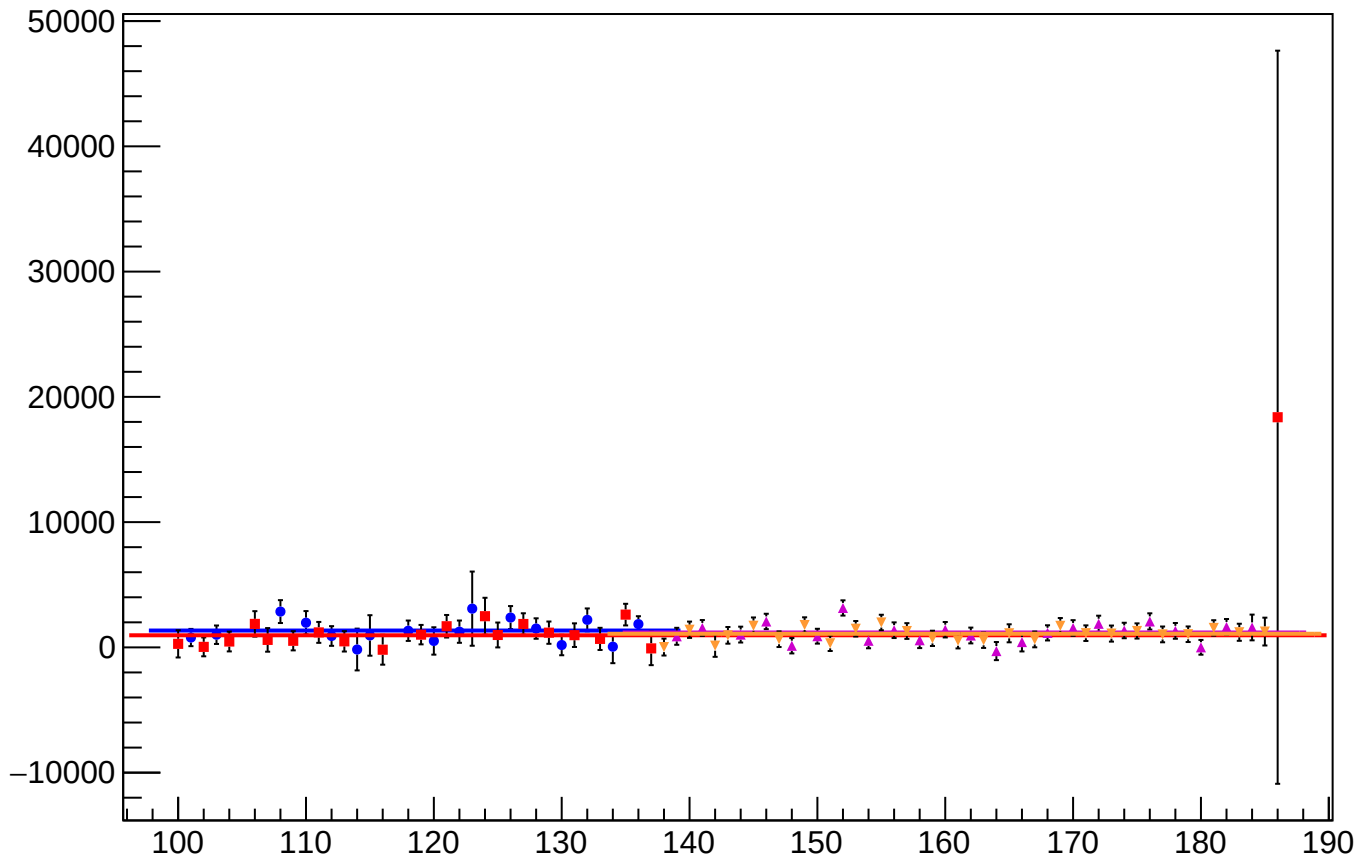
Right: 1041.620+/-0.201  $\chi^2/\text{NDF}$ : 1236331.0/36

In: 971.223+/-0.141  $\chi^2/\text{NDF}$ : 822106.2/39

Out: 986.023+/-0.139  $\chi^2/\text{NDF}$ : 1345632.2/44

All: 978.743+/-0.099  $\chi^2/\text{NDF}$ : 2173316.5/84

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



Right In: 1345.401+/-218.855  $\chi^2/\text{NDF}$ : 12.0/16

Left Out: 1087.627+/-129.821  $\chi^2/\text{NDF}$ : 14.9/24

Right Out: 966.323+/-208.609  $\chi^2/\text{NDF}$ : 12.6/19

Left In: 1189.481+/-133.313  $\chi^2/\text{NDF}$ : 32.2/22

Left: 1137.202+/-93.008  $\chi^2/\text{NDF}$ : 47.4/47

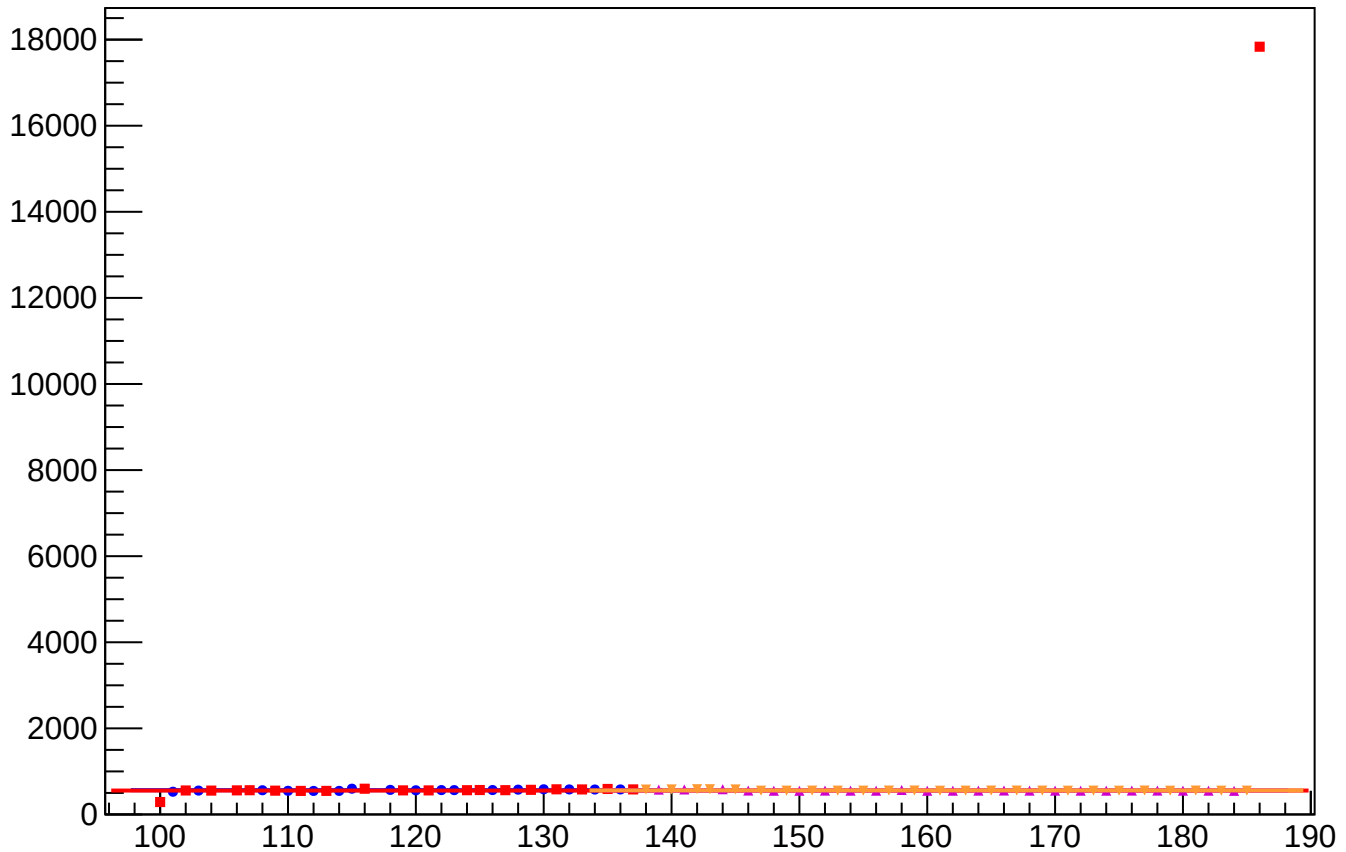
Right: 1146.781+/-151.001  $\chi^2/\text{NDF}$ : 26.1/36

In: 1231.678+/-113.854  $\chi^2/\text{NDF}$ : 44.5/39

Out: 1053.763+/-110.221  $\chi^2/\text{NDF}$ : 27.8/44

All: 1139.837+/-79.191  $\chi^2/\text{NDF}$ : 73.5/84

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



Right In: 564.174+/-0.155  $\chi^2/\text{NDF}$ : 12759.8/16

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

Right Out: 555.341+/-0.148  $\chi^2/\text{NDF}$ : 829782.8/19

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

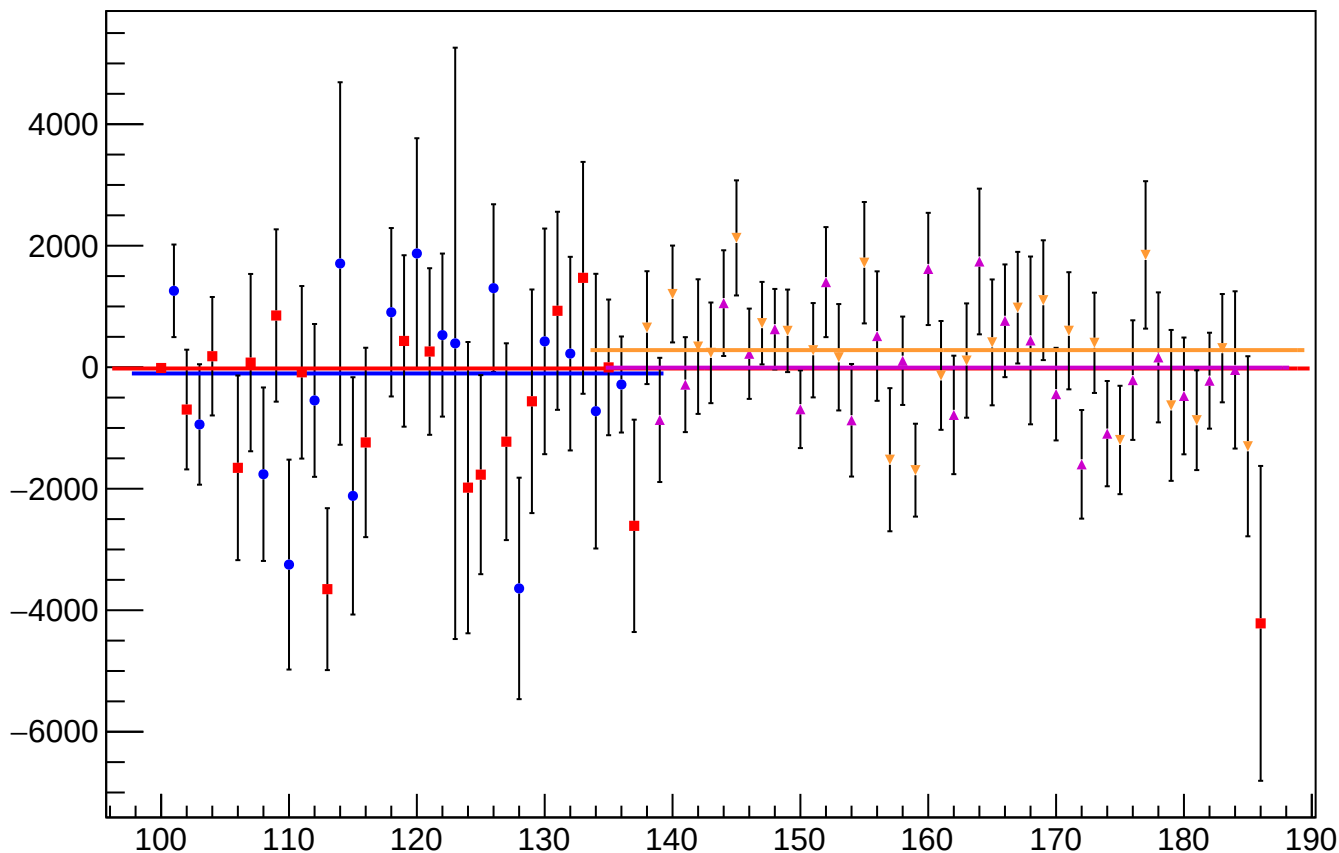
Right: 559.546+/-0.107  $\chi^2/\text{NDF}$ : 844249.9/36

In: 559.377+/-0.081  $\chi^2/\text{NDF}$ : 25354.4/39

Out: 557.329+/-0.078  $\chi^2/\text{NDF}$ : 844820.1/44

All: 558.320+/-0.056  $\chi^2/\text{NDF}$ : 870508.5/84

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



Right In:  $-102.542 \pm 328.366$   $\chi^2/\text{NDF}$ : 17.0/16

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

Right Out:  $-21.028 \pm 38.951$   $\chi^2/\text{NDF}$ : 18.5/19

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

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

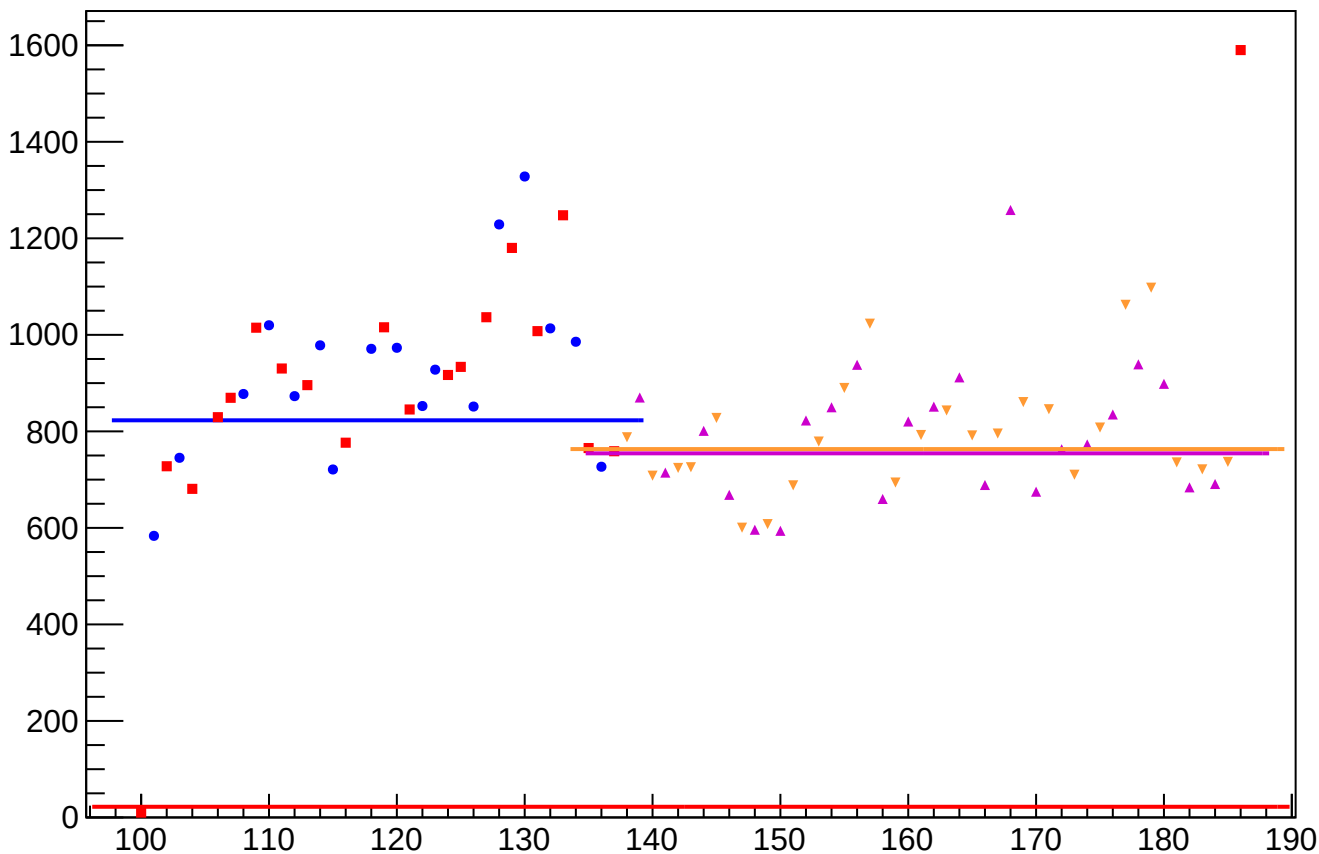
Right:  $-22.159 \pm 38.680$   $\chi^2/\text{NDF}$ : 35.6/36

In:  $-29.964 \pm 160.167$   $\chi^2/\text{NDF}$ : 37.2/39

Out:  $-7.568 \pm 38.074$   $\chi^2/\text{NDF}$ : 48.0/44

All:  $-8.766 \pm 37.042$   $\chi^2/\text{NDF}$ : 85.2/84

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



Right In: 822.915 $\pm$ 0.232  $\chi^2$ /NDF: 606659.4/16

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

Right Out: 22.125 $\pm$ 0.028  $\chi^2$ /NDF: 14210647.0/19

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

Left: 758.967 $\pm$ 0.091  $\chi^2$ /NDF: 1687616.8/47

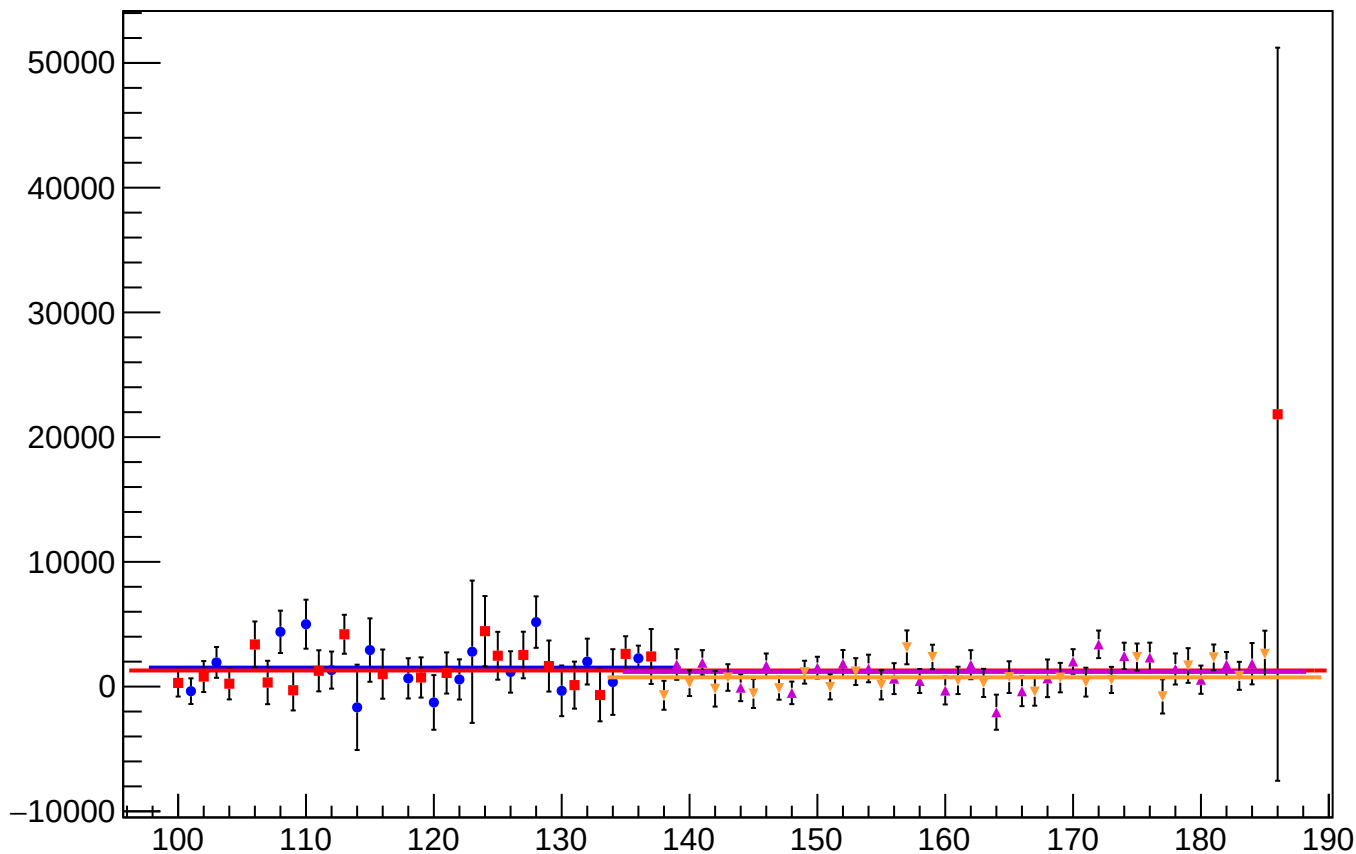
Right: 33.237 $\pm$ 0.027  $\chi^2$ /NDF: 26546879.2/36

In: 770.764 $\pm$ 0.113  $\chi^2$ /NDF: 1604392.5/39

Out: 55.112 $\pm$ 0.027  $\chi^2$ /NDF: 47194220.7/44

All: 93.389 $\pm$ 0.026  $\chi^2$ /NDF: 86591962.0/84

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



Right In: 1519.485+/-402.890  $\chi^2/\text{NDF}$ : 17.8/16

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

Right Out: 1290.912+/-376.648  $\chi^2/\text{NDF}$ : 12.8/19

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

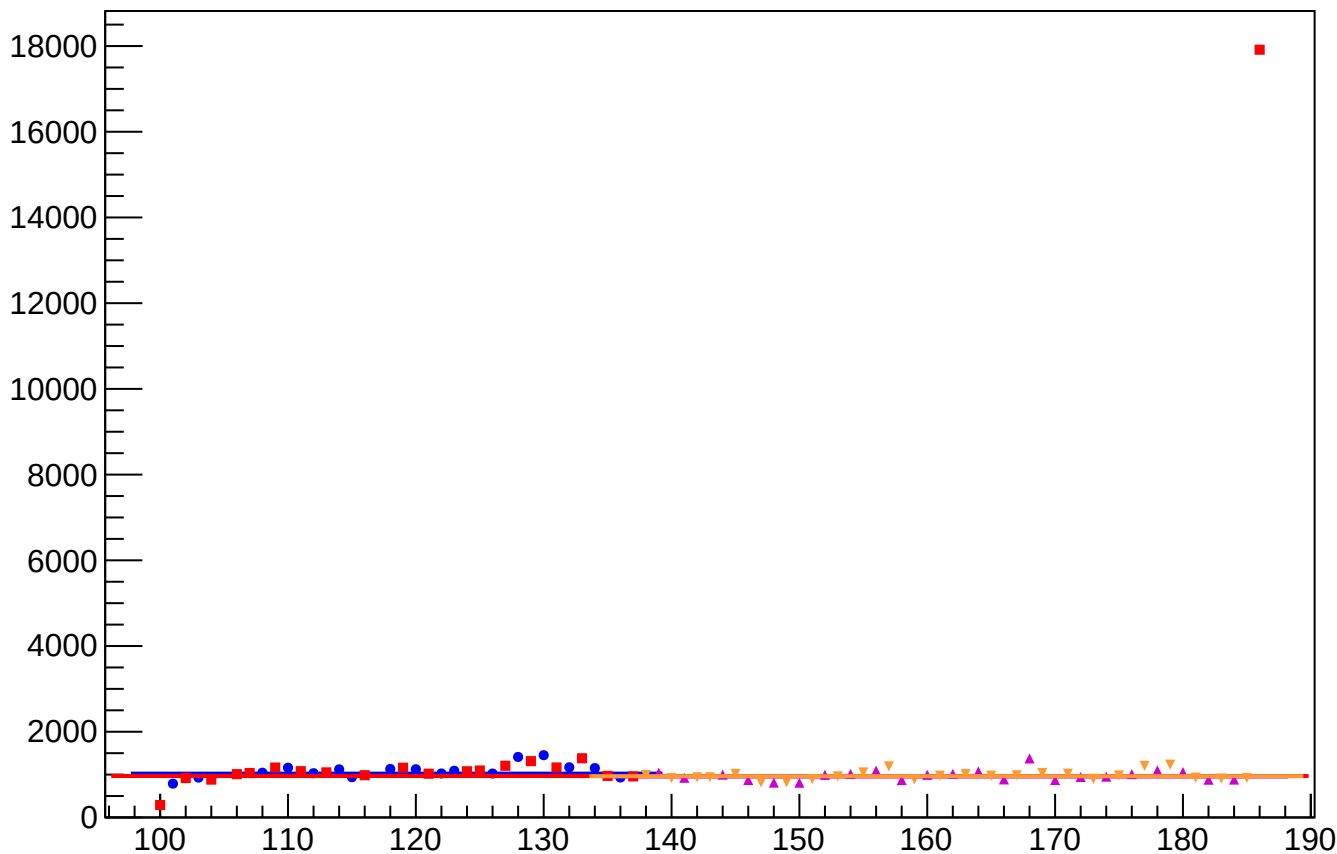
Right: 1397.513+/-275.140  $\chi^2/\text{NDF}$ : 30.8/36

In: 1260.770+/-199.893  $\chi^2/\text{NDF}$ : 42.6/39

Out: 887.594+/-193.575  $\chi^2/\text{NDF}$ : 34.7/44

All: 1068.191+/-139.058  $\chi^2/\text{NDF}$ : 79.0/84

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



Right In: 1022.583+/-0.285  $\chi^2/\text{NDF}$ : 336434.0/16

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

Right Out: 966.933+/-0.266  $\chi^2/\text{NDF}$ : 1733943.7/19

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: 992.887+/-0.195  $\chi^2/\text{NDF}$ : 2090739.5/36

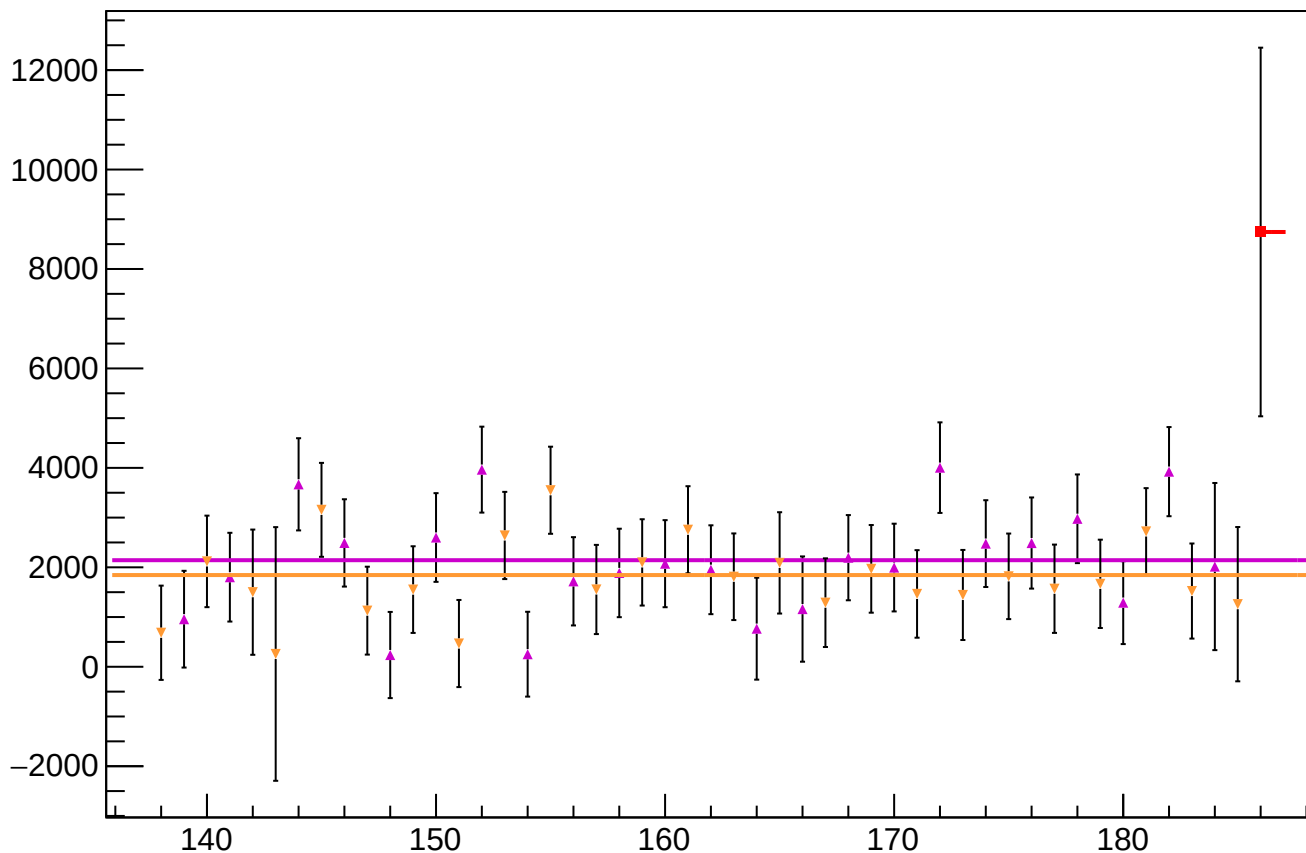
In: 971.886+/-0.141  $\chi^2/\text{NDF}$ : 821512.1/39

Out: 963.874+/-0.137  $\chi^2/\text{NDF}$ : 2096960.8/44

All: 967.751+/-0.098  $\chi^2/\text{NDF}$ : 2920130.6/84



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



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

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

Right Out: 8744.107 $\pm$ 3706.906  $\chi^2$ /NDF: 0.0/0

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

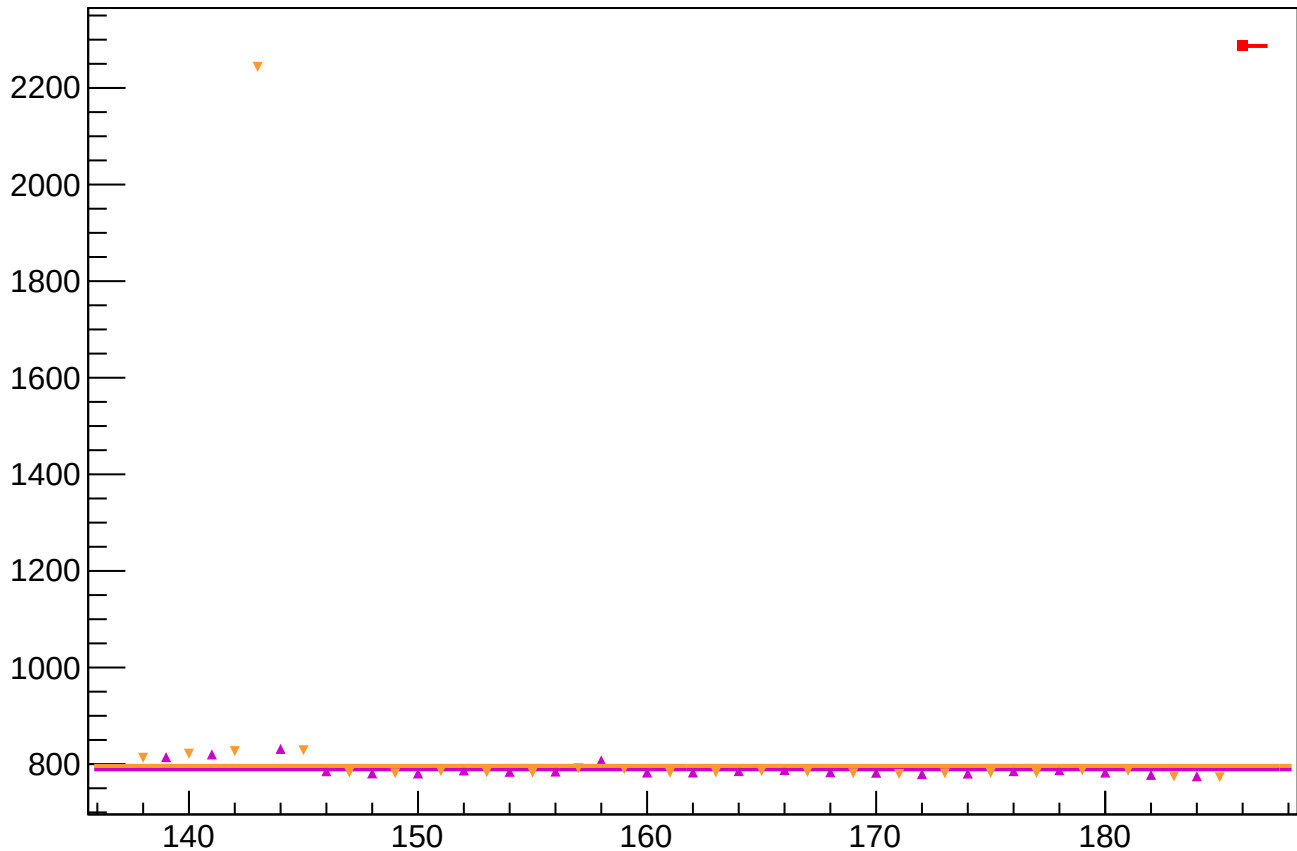
Right: 8744.107 $\pm$ 3706.906  $\chi^2$ /NDF: 0.0/0

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

Out: 1861.858 $\pm$ 186.672  $\chi^2$ /NDF:18.8/25

All: 1999.963 $\pm$ 133.207  $\chi^2$ /NDF: 52.3/48

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



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 796.470+/-0.132  $\chi^2/\text{NDF}$ : 658729.4/24

Right Out: 2287.028+/-2.621  $\chi^2/\text{NDF}$ : 0.0/0

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

Left: 792.886+/-0.094  $\chi^2/\text{NDF}$ : 671086.4/47

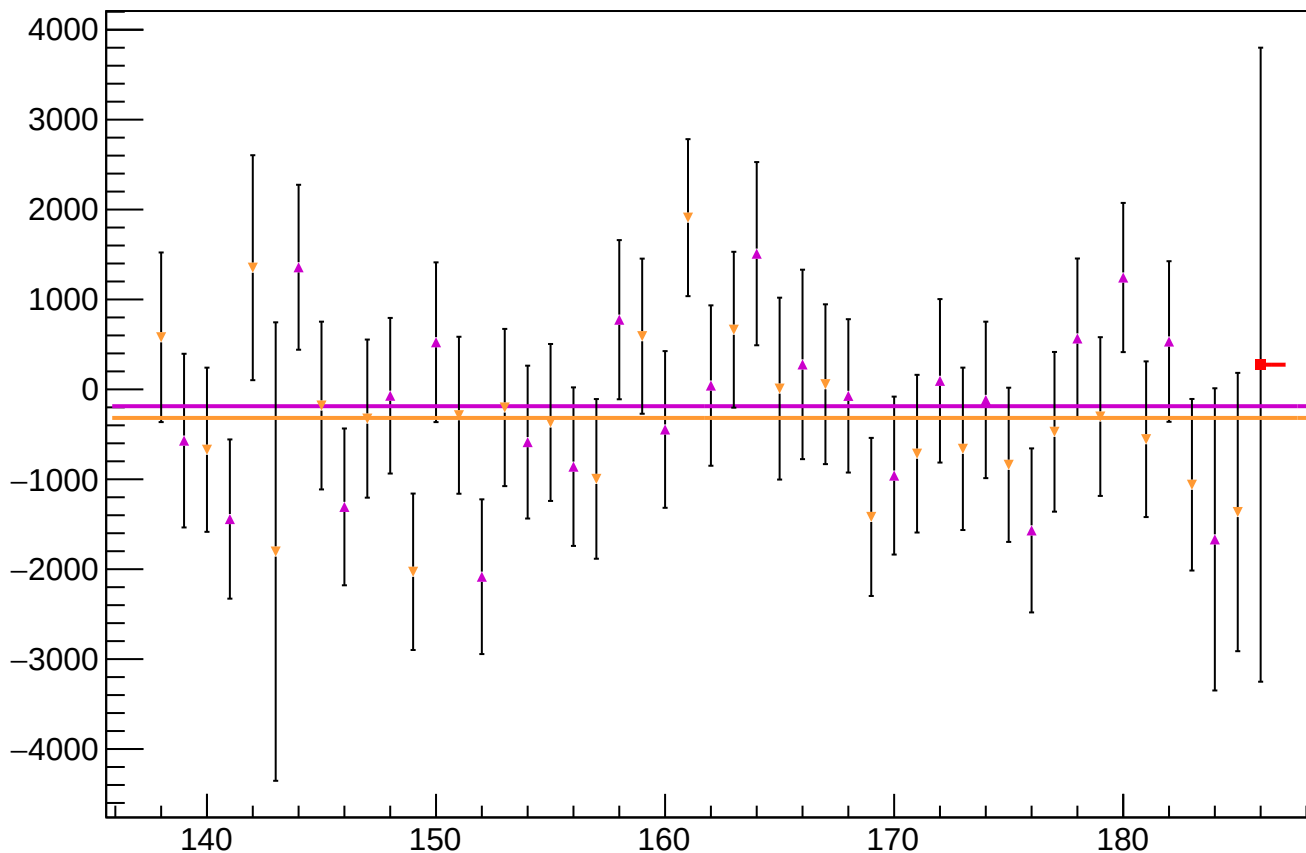
Right: 2287.028+/-2.621  $\chi^2/\text{NDF}$ : 0.0/0

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

Out: 800.250+/-0.132  $\chi^2/\text{NDF}$ : 981282.7/25

All: 794.815+/-0.094  $\chi^2/\text{NDF}$ : 995597.2/48

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



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

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

Right Out: 274.526 $\pm$ 3525.993  $\chi^2$ /NDF: 0.0/0

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

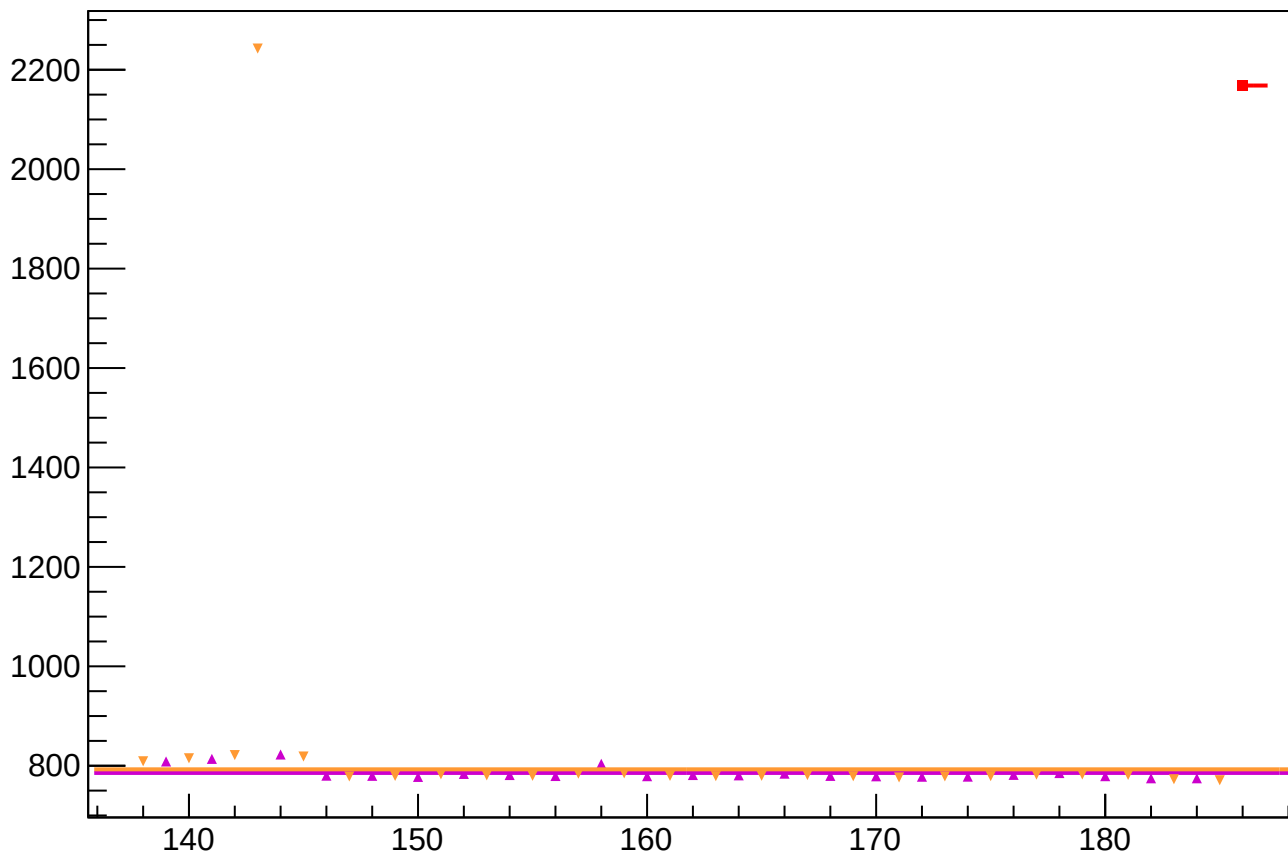
Right: 274.526 $\pm$ 3525.993  $\chi^2$ /NDF: 0.0/0

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

Out: -315.968 $\pm$ 185.787  $\chi^2$ /NDF:20.3/25

All: -252.731 $\pm$ 132.584  $\chi^2$ /NDF: 46.2/48

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



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

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

Right Out: 2168.262+/-2.493  $\chi^2/\text{NDF}$ : 0.0/0

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

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

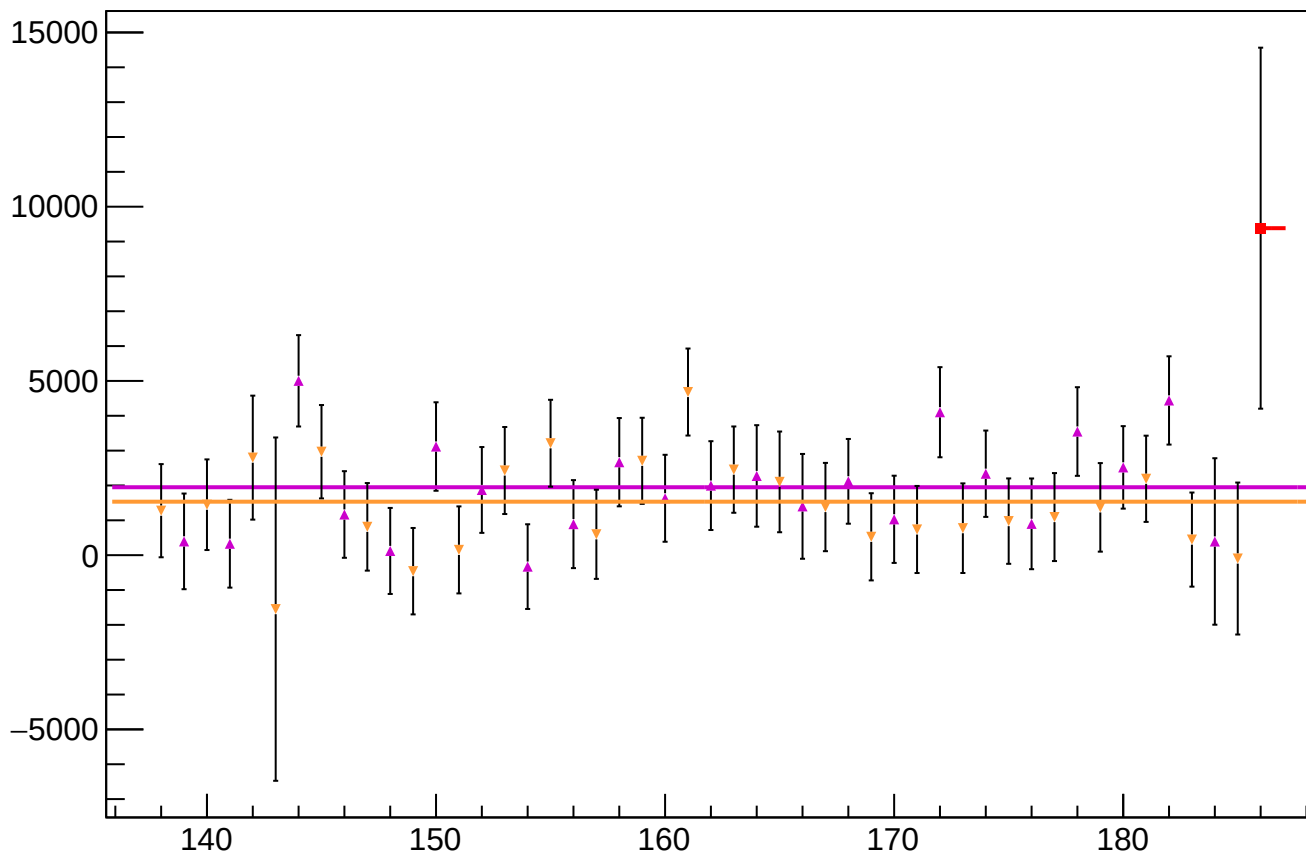
Right: 2168.262+/-2.493  $\chi^2/\text{NDF}$ : 0.0/0

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

Out: 796.630+/-0.131  $\chi^2/\text{NDF}$ : 963002.6/25

All: 791.198+/-0.094  $\chi^2/\text{NDF}$ : 975518.6/48

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



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

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

Right Out: 9383.501 $\pm$ 5180.036  $\chi^2$ /NDF: 0.0/0

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

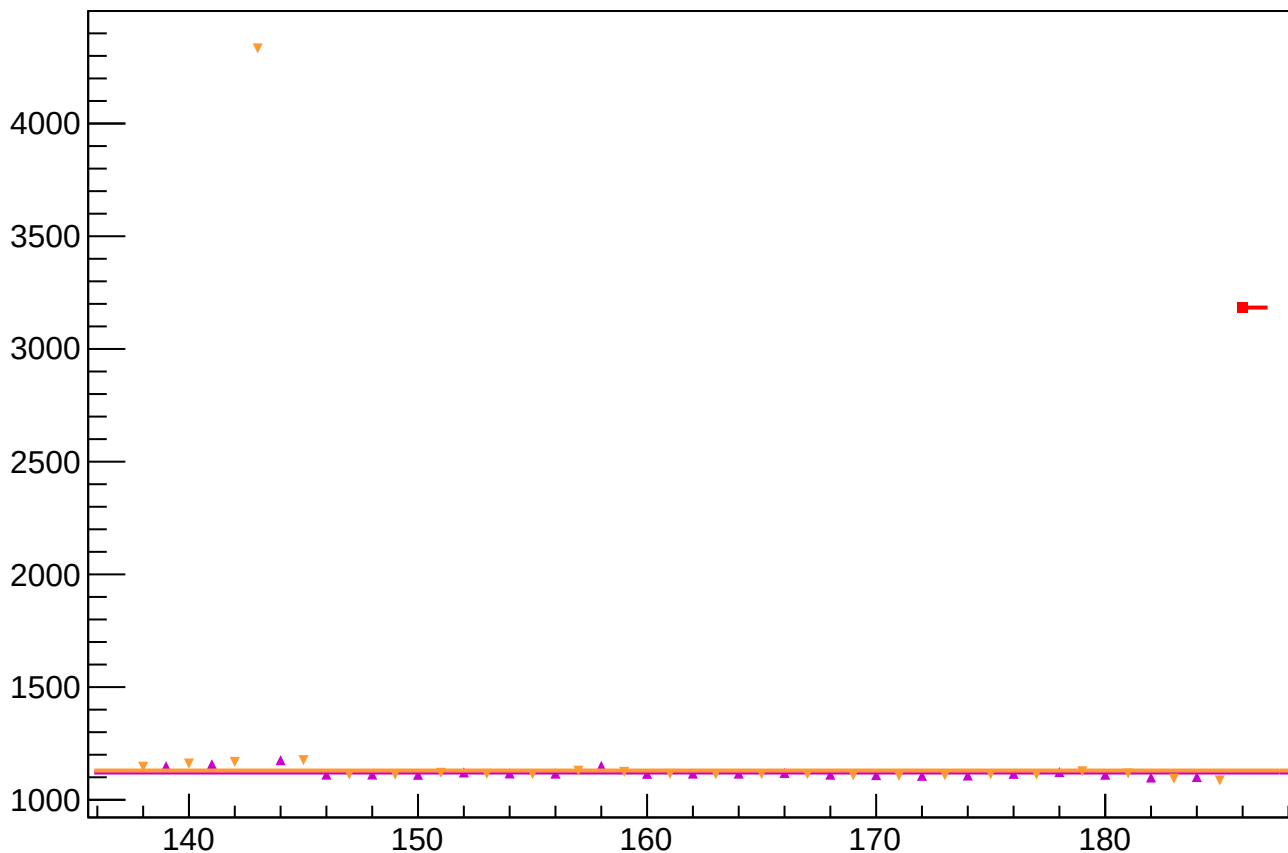
Right: 9383.501 $\pm$ 5180.036  $\chi^2$ /NDF: 0.0/0

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

Out: 1555.345 $\pm$ 265.541  $\chi^2$ /NDF:22.6/25

All: 1748.874 $\pm$ 189.350  $\chi^2$ /NDF: 50.4/48

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



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 0.0/0

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

Right Out:  $3183.662 \pm 3.663$   $\chi^2/\text{NDF}$ : 0.0/0

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

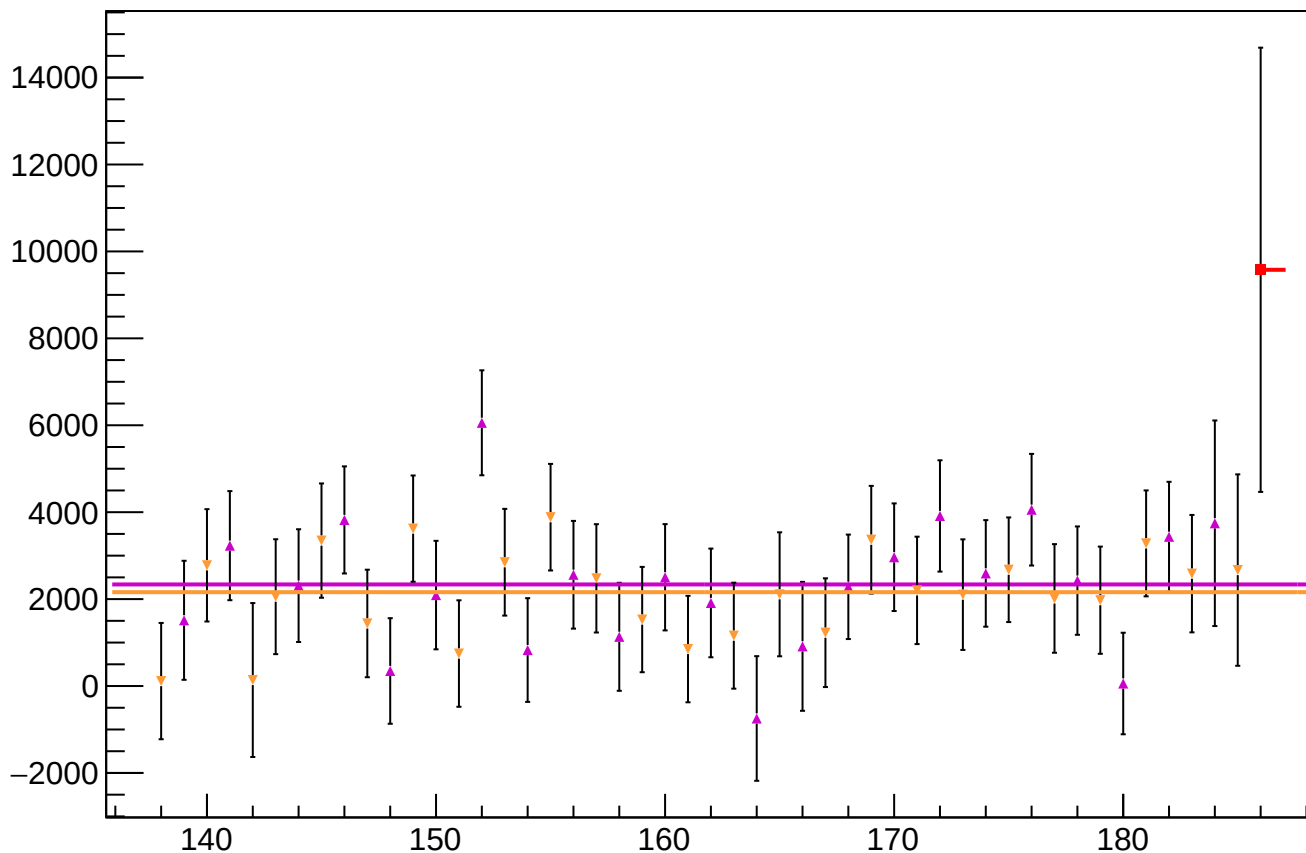
Right:  $3183.662 \pm 3.663$   $\chi^2/\text{NDF}$ : 0.0/0

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

Out:  $1135.334 \pm 0.188$   $\chi^2/\text{NDF}$ : 1171819.6/25

All:  $1128.277 \pm 0.134$   $\chi^2/\text{NDF}$ : 1183952.6/48

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



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

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

Right Out: 9577.327+/-5110.896  $\chi^2/\text{NDF}$ : 0.0/0

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

Left: 2245.530+/-185.179  $\chi^2/\text{NDF}$ : 46.5/47

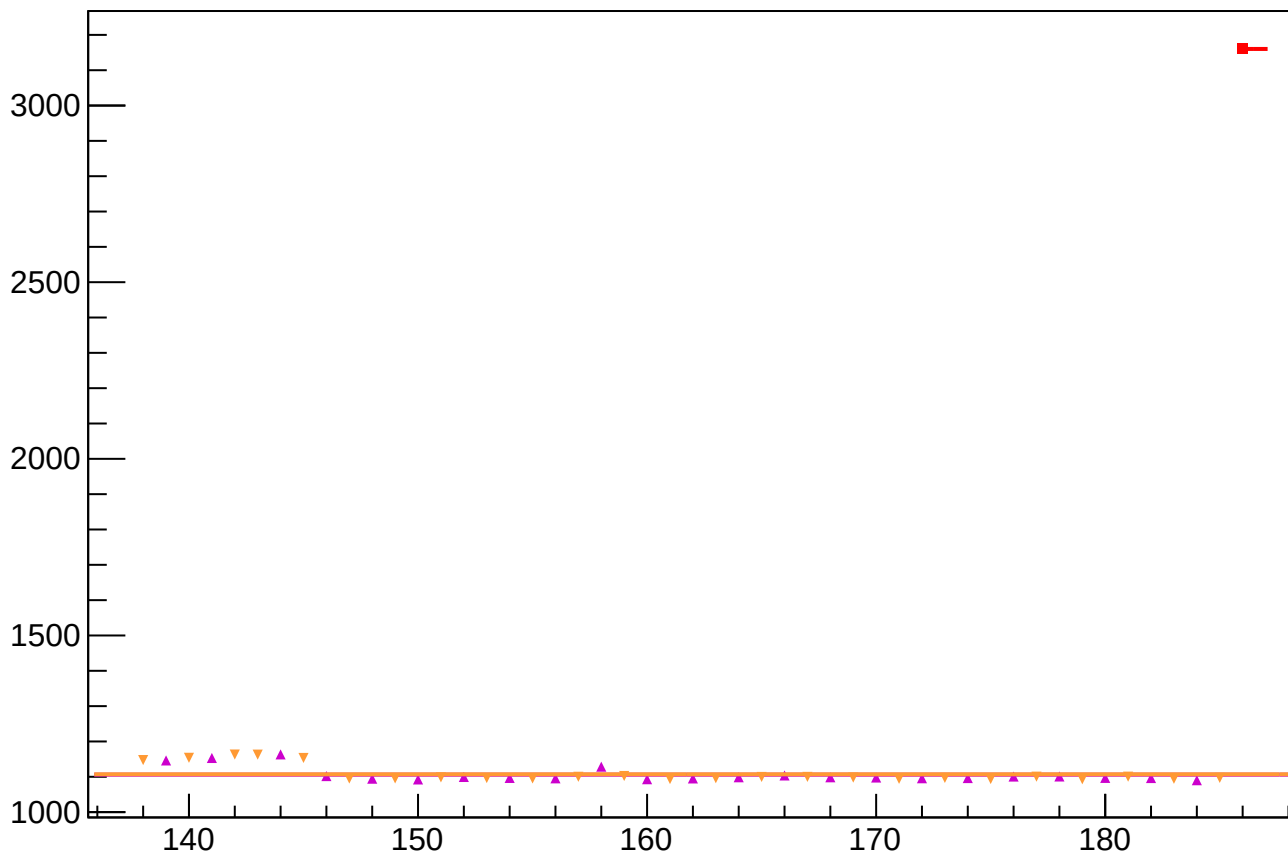
Right: 9577.327+/-5110.896  $\chi^2/\text{NDF}$ : 0.0/0

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

Out: 2178.664+/-257.199  $\chi^2/\text{NDF}$ :17.1/25

All: 2255.142+/-185.057  $\chi^2/\text{NDF}$ : 48.6/48

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



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

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

Right Out: 3160.201+/-3.614  $\chi^2/\text{NDF}$ : 0.0/0

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

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

Right: 3160.201+/-3.614  $\chi^2/\text{NDF}$ : 0.0/0

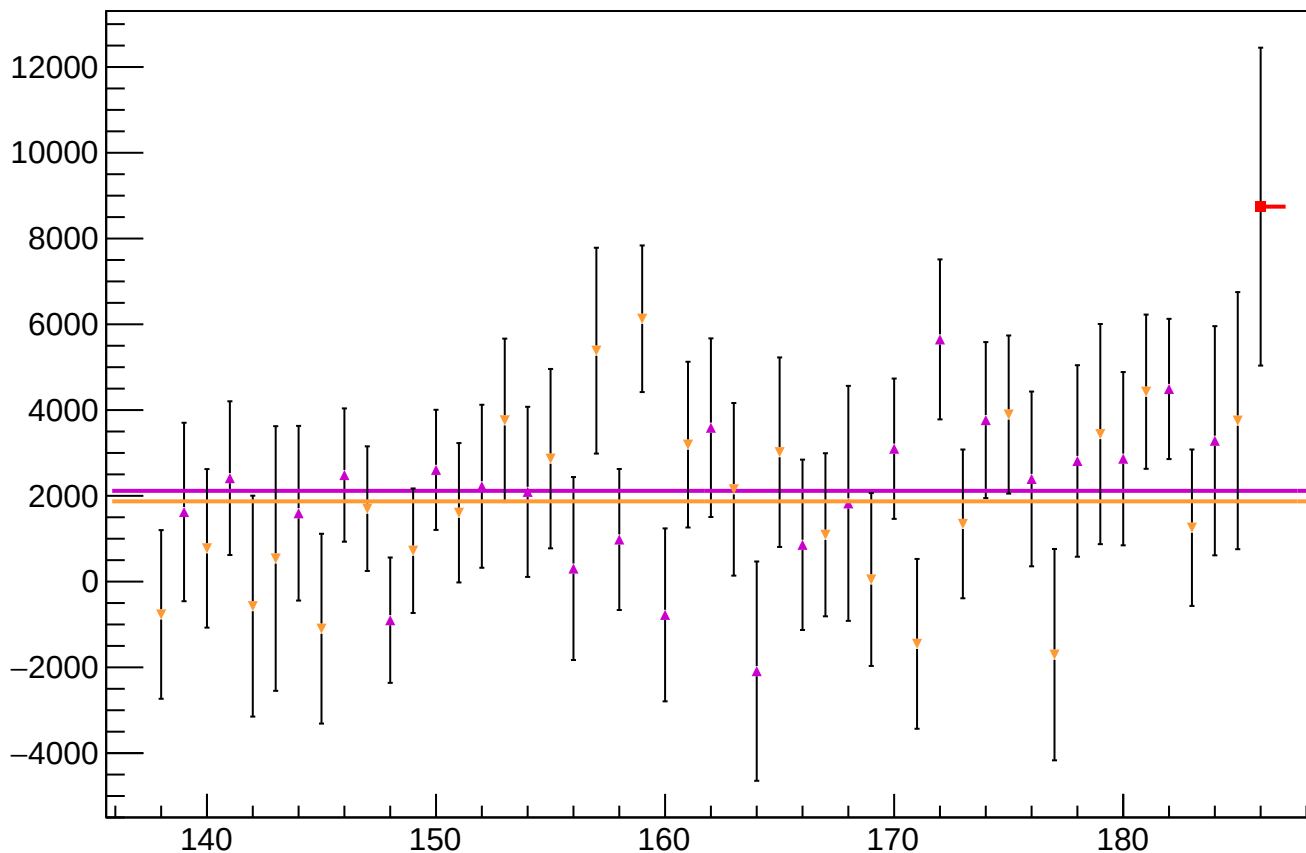
In: 1105.955+/-0.188  $\chi^2/\text{NDF}$ : 11111.3/22

Out: 1112.291+/-0.182  $\chi^2/\text{NDF}$ : 337113.4/25

All: 1109.235+/-0.131  $\chi^2/\text{NDF}$ : 348809.9/48



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



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

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

Right Out: 8744.107+/-3706.906  $\chi^2/\text{NDF}$ : 0.0/0

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

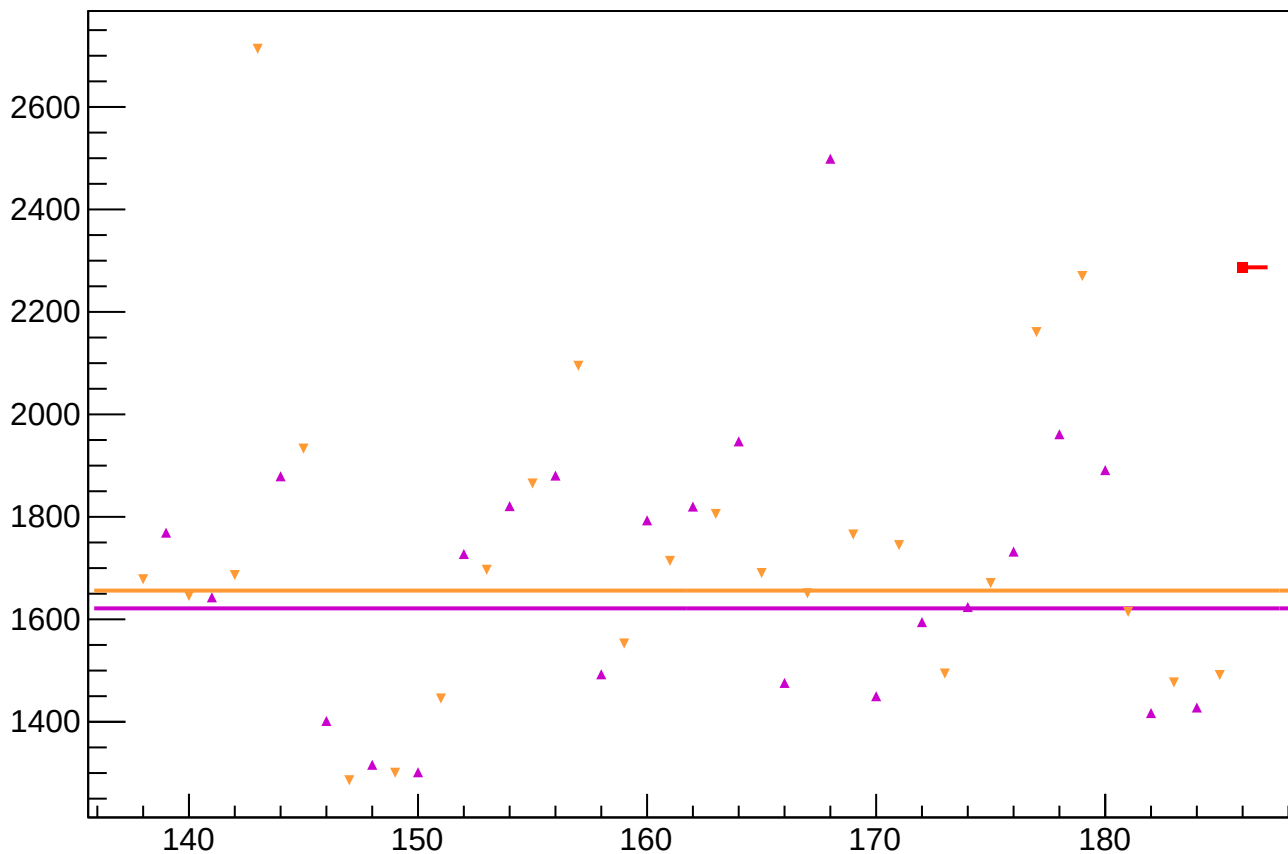
Right: 8744.107+/-3706.906  $\chi^2/\text{NDF}$ : 0.0/0

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

Out: 1947.520+/-389.515  $\chi^2/\text{NDF}$ :29.5/25

All: 2031.067+/-276.651  $\chi^2/\text{NDF}$ : 48.4/48

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



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

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

Right Out: 2287.028+/-2.621  $\chi^2/\text{NDF}$ : 0.0/0

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

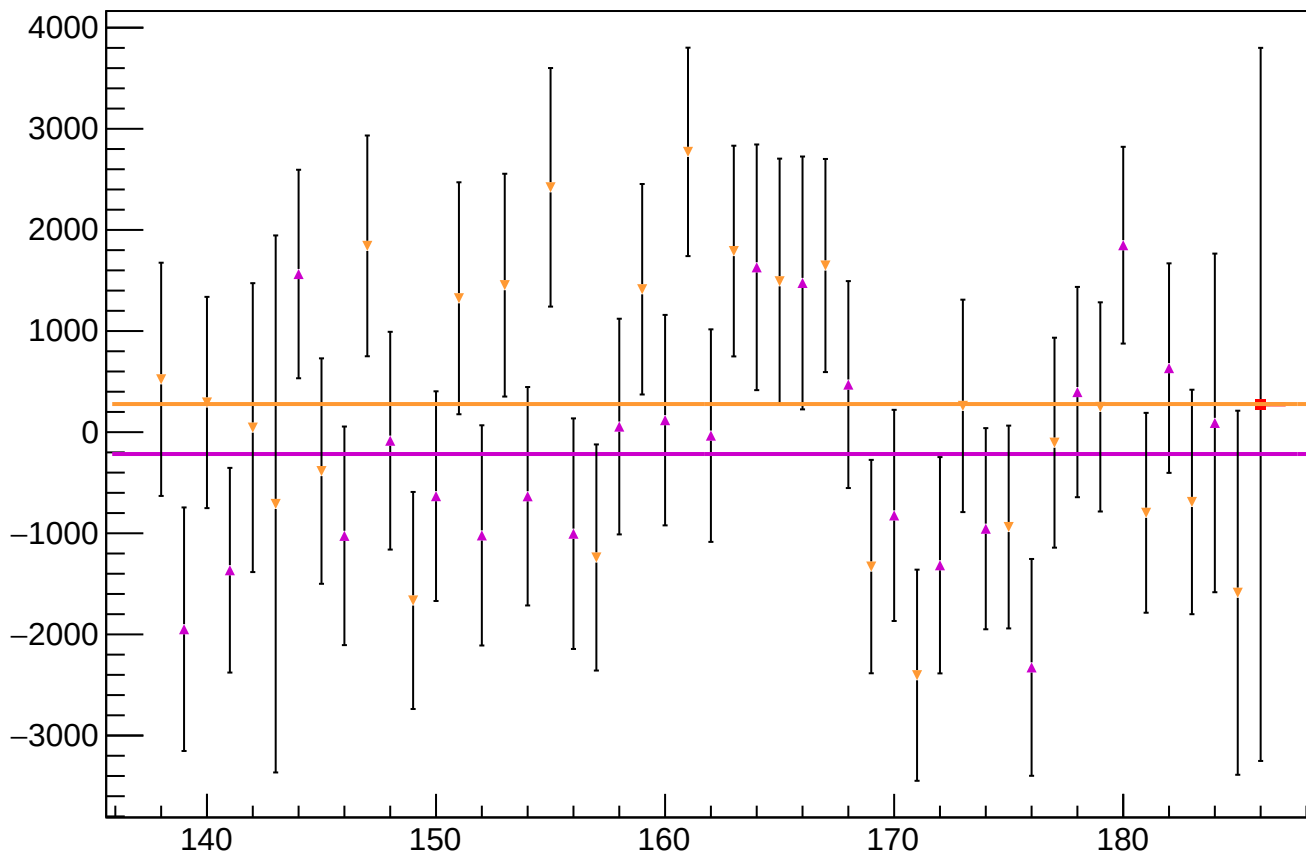
Right: 2287.028+/-2.621  $\chi^2/\text{NDF}$ : 0.0/0

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

Out: 1663.085+/-0.275  $\chi^2/\text{NDF}$ : 967868.5/25

All: 1642.437+/-0.196  $\chi^2/\text{NDF}$ : 1754520.5/48

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



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

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

Right Out: 274.526+/-3525.993  $\chi^2/\text{NDF}$ : 0.0/0

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

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

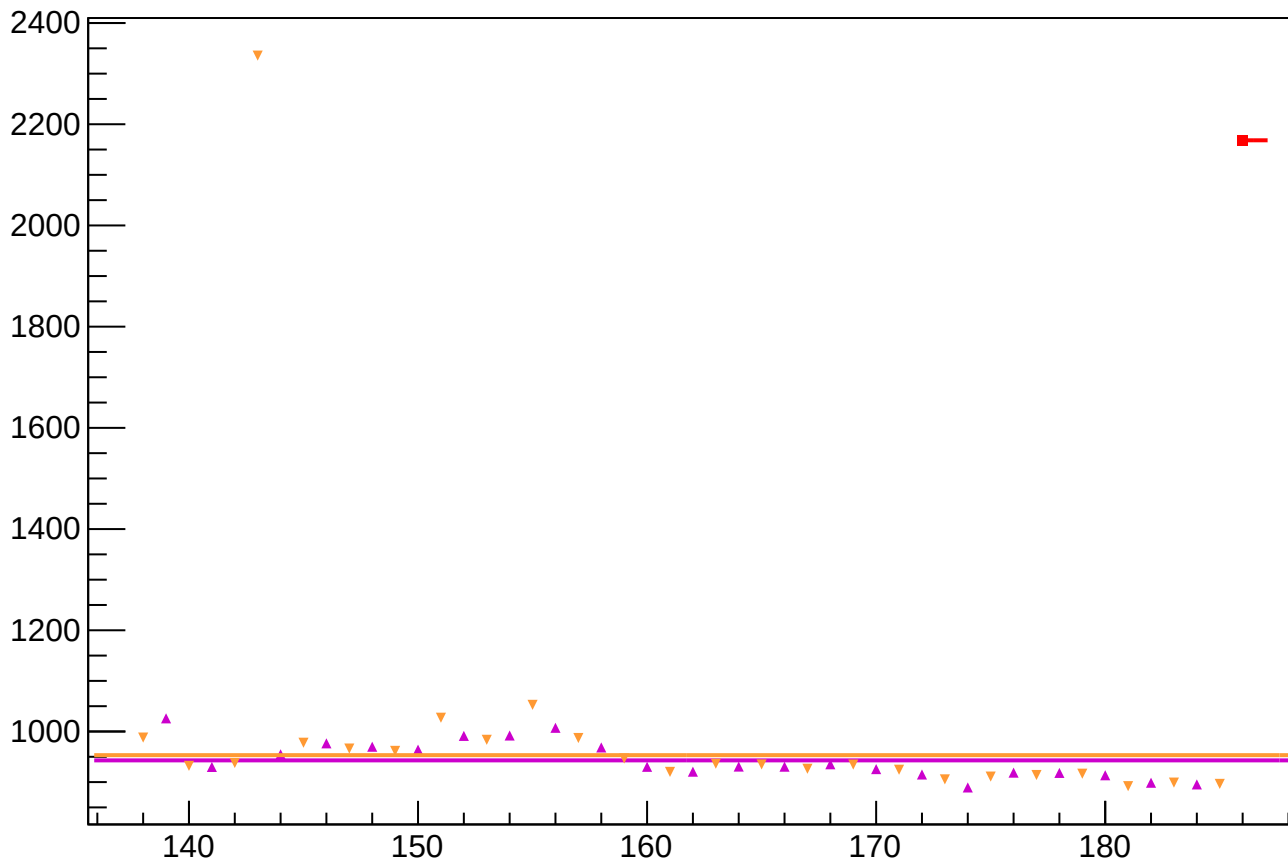
Right: 274.526+/-3525.993  $\chi^2/\text{NDF}$ : 0.0/0

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

Out: 278.076+/-223.133  $\chi^2/\text{NDF}$ :38.4/25

All: 33.695+/-158.644  $\chi^2/\text{NDF}$ : 65.2/48

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



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

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

Right Out: 2168.262+/-2.493  $\chi^2/\text{NDF}$ : 0.0/0

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

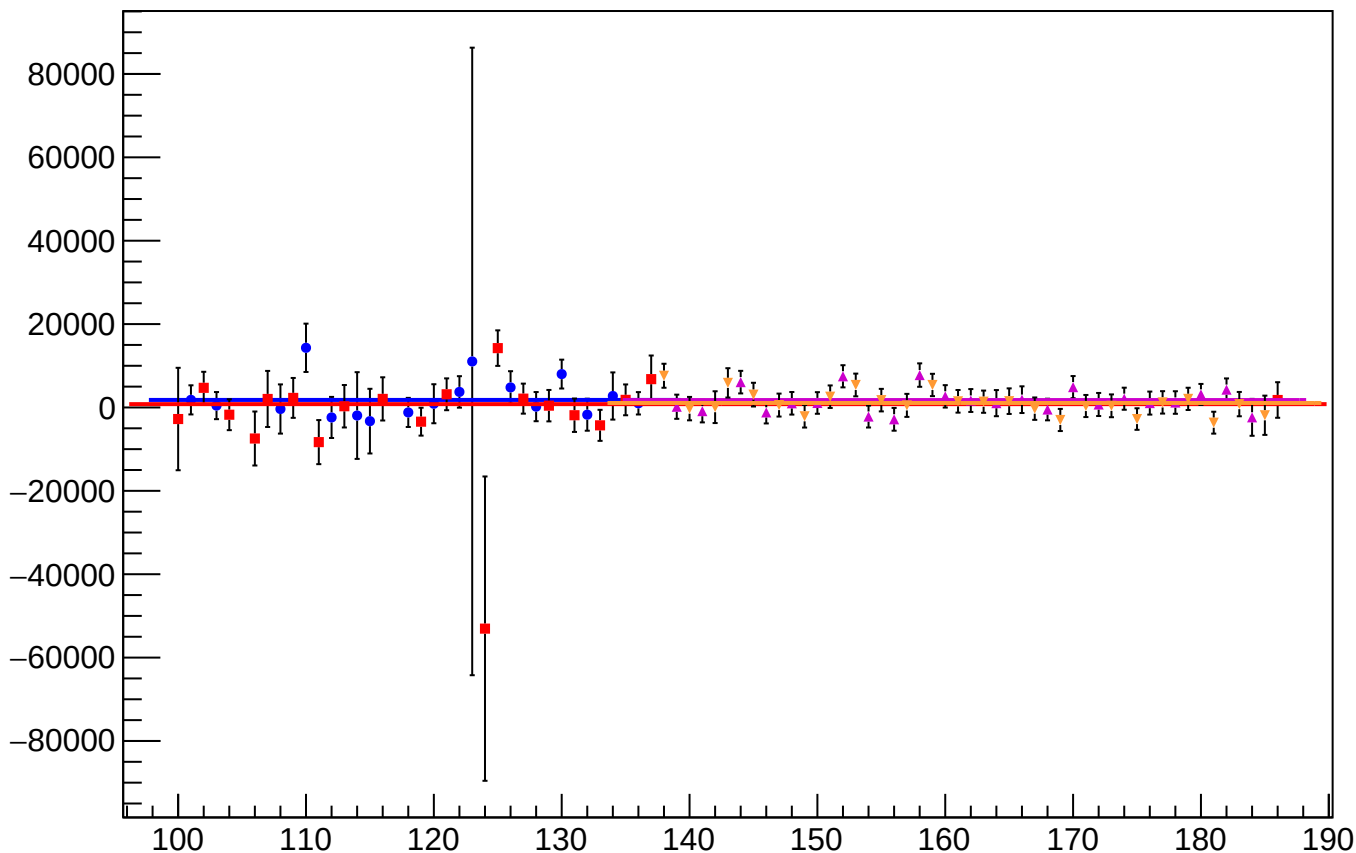
Right: 2168.262+/-2.493  $\chi^2/\text{NDF}$ : 0.0/0

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

Out: 958.087+/-0.158  $\chi^2/\text{NDF}$ : 842814.0/25

All: 950.590+/-0.112  $\chi^2/\text{NDF}$ : 895782.4/48

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



Right In: 1807.995+/-1015.862  $\chi^2/\text{NDF}$ : 12.3/16

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

Right Out: 797.292+/-998.365  $\chi^2/\text{NDF}$ : 24.2/19

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

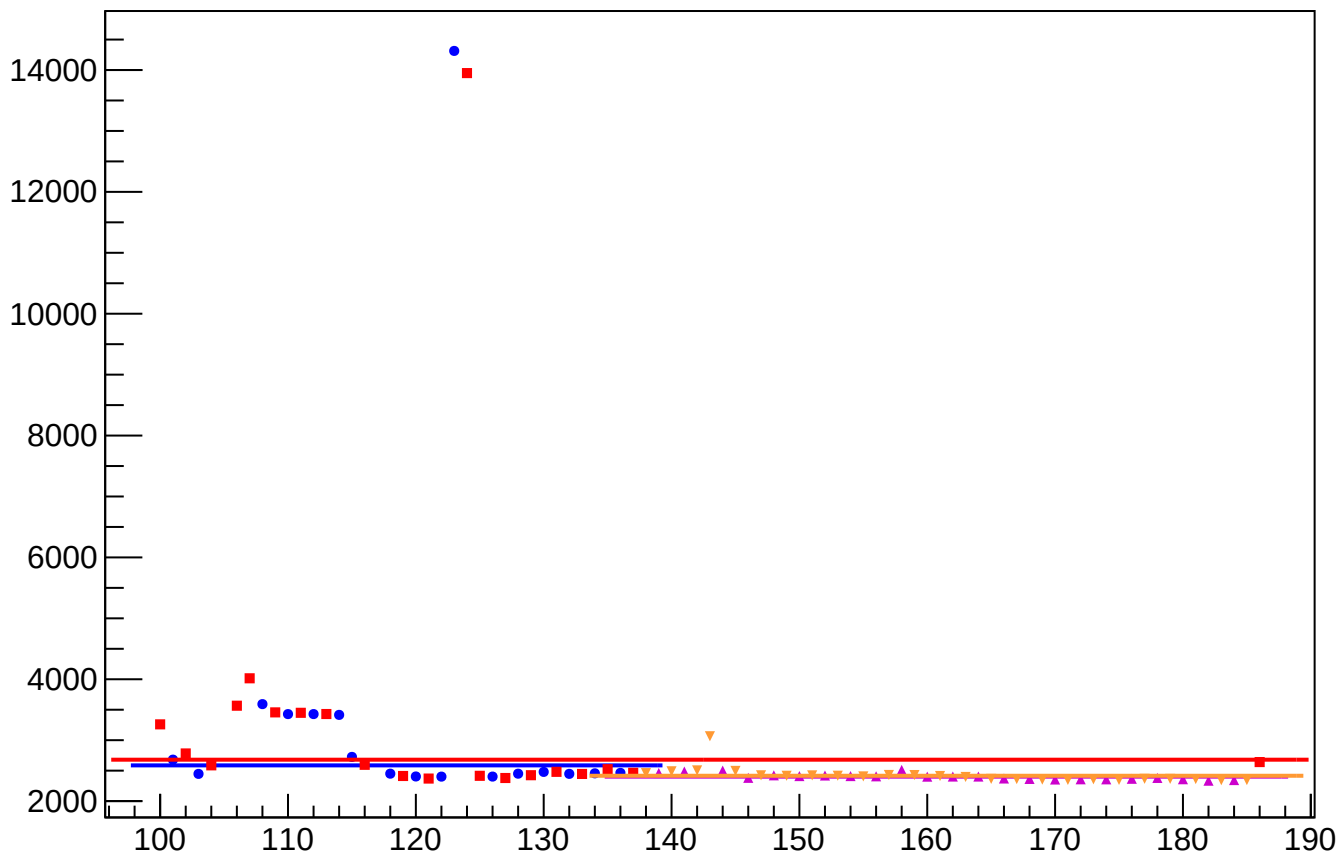
Right: 1293.865+/-712.056  $\chi^2/\text{NDF}$ : 36.9/36

In: 1784.614+/-500.991  $\chi^2/\text{NDF}$ : 36.3/39

Out: 1010.129+/-491.063  $\chi^2/\text{NDF}$ : 47.8/44

All: 1389.622+/-350.691  $\chi^2/\text{NDF}$ : 85.4/84

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



Right In: 2586.401+/-0.718  $\chi^2/\text{NDF}$ : 253848.4/16

Left Out: 2416.019+/-0.399  $\chi^2/\text{NDF}$ : 82636.1/24

Right Out: 2679.750+/-0.706  $\chi^2/\text{NDF}$ : 529241.6/19

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

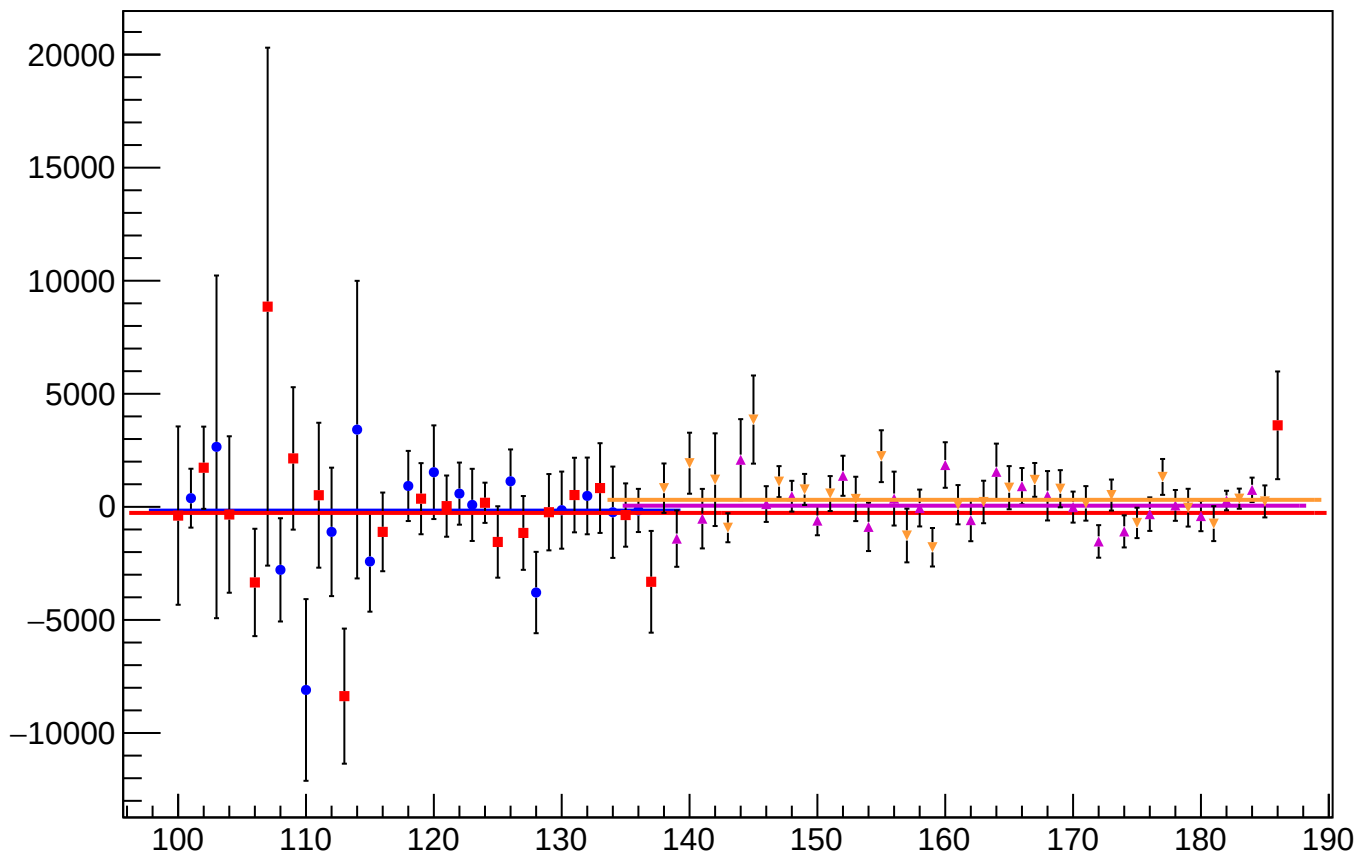
Right: 2633.886+/-0.503  $\chi^2/\text{NDF}$ : 791680.8/36

In: 2446.411+/-0.354  $\chi^2/\text{NDF}$ : 317781.6/39

Out: 2479.824+/-0.347  $\chi^2/\text{NDF}$ : 717676.3/44

All: 2463.452+/-0.248  $\chi^2/\text{NDF}$ : 1039995.0/84

# asym\_atl1\_correction\_mean vs Slug, Sign Corrected



Right In:  $-166.806 \pm 421.387$   $\chi^2/\text{NDF}: 13.5/16$

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

Right Out:  $-267.730 \pm 404.076$   $\chi^2/\text{NDF}: 18.2/19$

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

Left:  $182.044 \pm 113.982$   $\chi^2/\text{NDF}: 54.9/47$

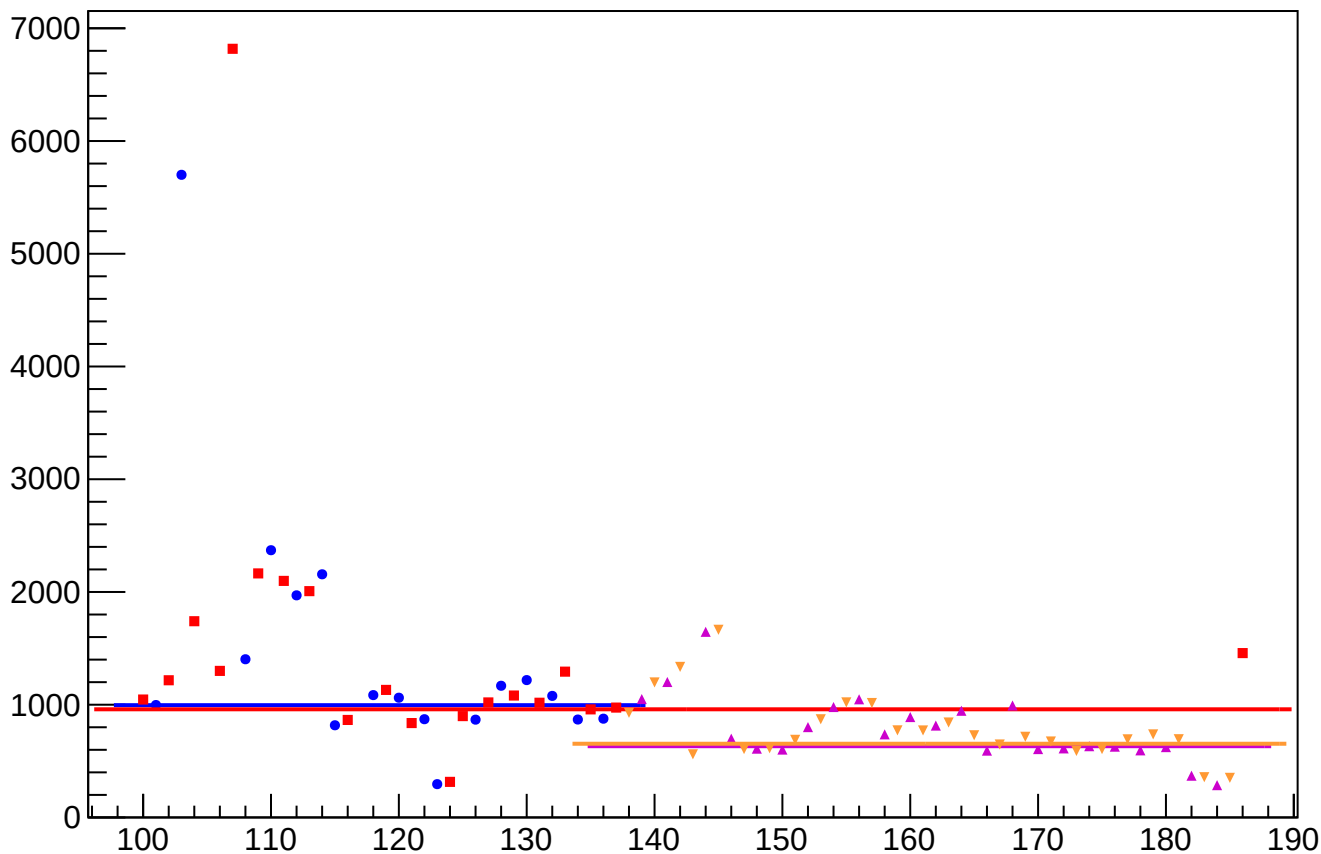
Right:  $-219.384 \pm 291.653$   $\chi^2/\text{NDF}: 31.7/36$

In:  $23.427 \pm 151.003$   $\chi^2/\text{NDF}: 37.6/39$

Out:  $231.899 \pm 149.285$   $\chi^2/\text{NDF}: 49.7/44$

All:  $128.855 \pm 106.162$   $\chi^2/\text{NDF}: 88.3/84$

# asym\_atl1\_correction\_rms vs Slug, Sign Corrected



Right In: 995.873+/-0.298     $\chi^2/\text{NDF}$ : 1903000.1/16

Left Out: 653.803+/-0.114     $\chi^2/\text{NDF}$ : 3254694.4/24

Right Out: 959.338+/-0.286     $\chi^2/\text{NDF}$ : 2756691.4/19

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: 976.840+/-0.206     $\chi^2/\text{NDF}$ : 4667523.7/36

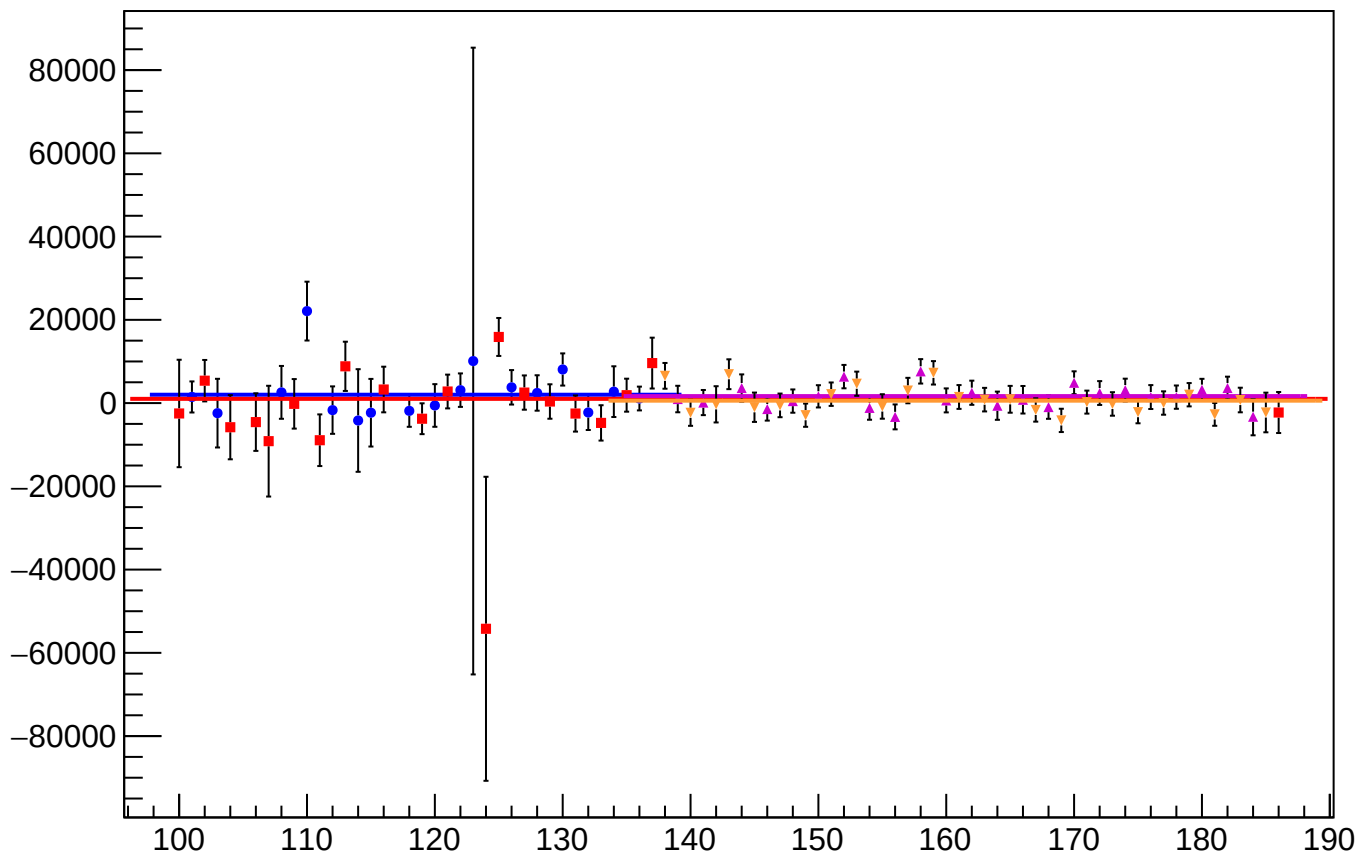
In: 678.772+/-0.107     $\chi^2/\text{NDF}$ : 7145281.5/39

Out: 695.505+/-0.106     $\chi^2/\text{NDF}$ : 6998790.1/44

All: 687.234+/-0.075     $\chi^2/\text{NDF}$ : 14156492.6/84



# asym\_atl1\_mean vs Slug, Sign Corrected



Right In: 2009.141+/-1163.584  $\chi^2/\text{NDF}$ : 14.5/16

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

Right Out: 1016.781+/-1157.678  $\chi^2/\text{NDF}$ : 27.3/19

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

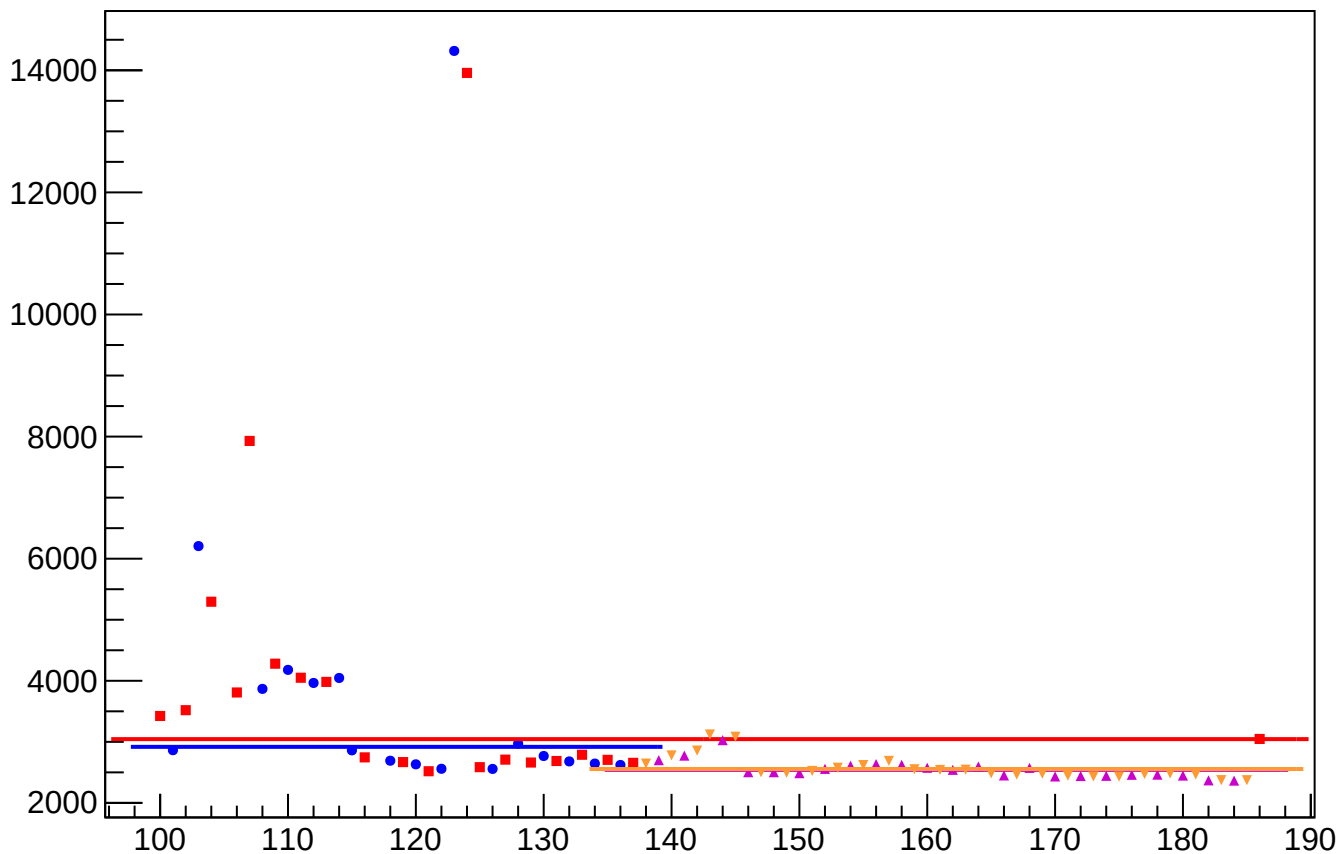
Right: 1510.436+/-820.682  $\chi^2/\text{NDF}$ : 42.2/36

In: 1750.642+/-540.338  $\chi^2/\text{NDF}$ : 32.8/39

Out: 672.491+/-530.723  $\chi^2/\text{NDF}$ : 52.7/44

All: 1201.889+/-378.632  $\chi^2/\text{NDF}$ : 87.5/84

# asym\_atl1\_rms vs Slug, Sign Corrected



Right In: 2918.002+/-0.823  $\chi^2/\text{NDF}$ : 636720.5/16

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

Right Out: 3044.644+/-0.819  $\chi^2/\text{NDF}$ : 1006713.1/19

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

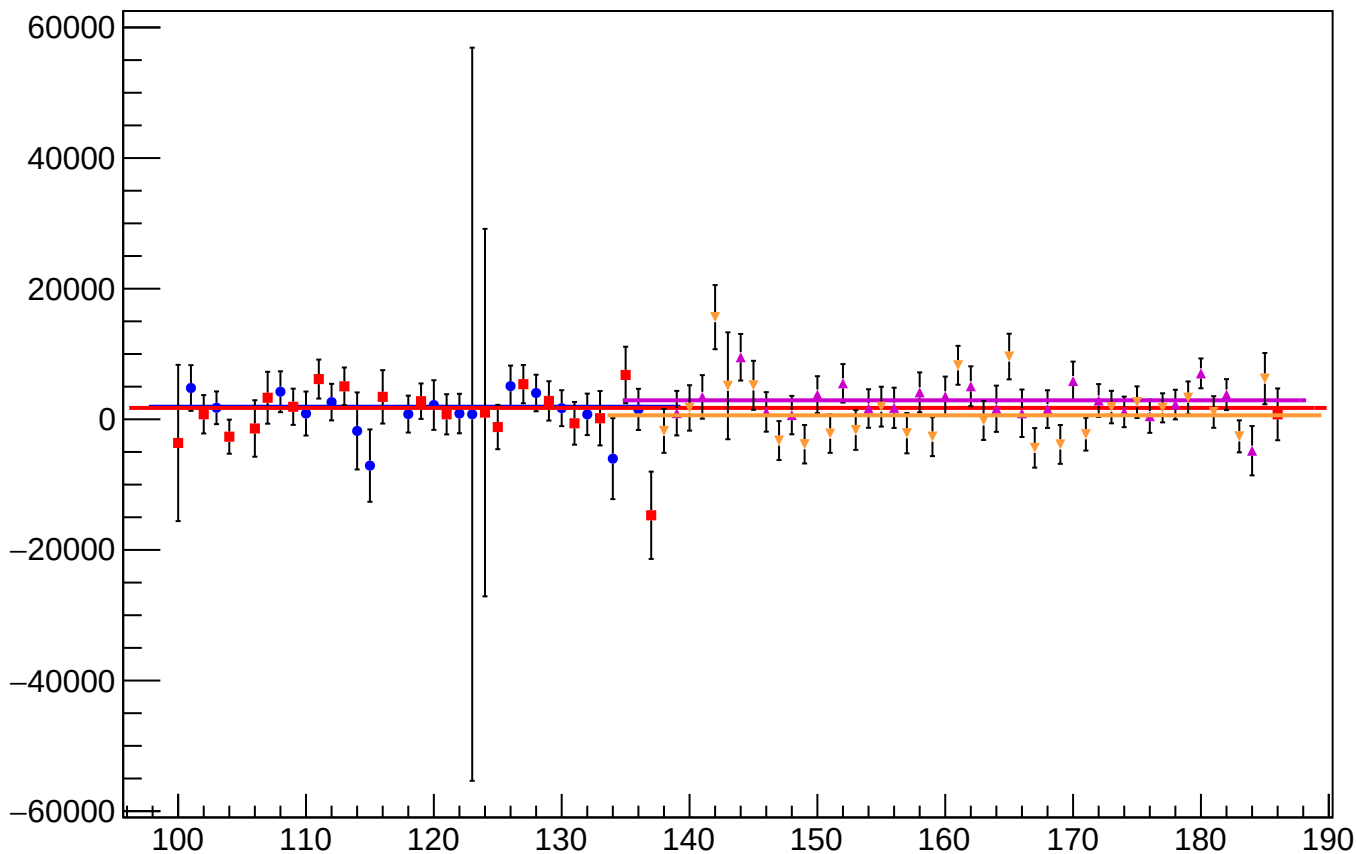
Right: 2981.645+/-0.580  $\chi^2/\text{NDF}$ : 1655339.6/36

In: 2622.288+/-0.382  $\chi^2/\text{NDF}$ :896166.0/39

Out: 2658.127+/-0.375  $\chi^2/\text{NDF}$ :1443721.6/44

All: 2640.529+/-0.268  $\chi^2/\text{NDF}$ : 2344365.8/84

# reg\_asym\_atl2\_mean vs Slug, Sign Corrected



Right In: 1924.076+/-813.616  $\chi^2/\text{NDF}$ : 8.1/16

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

Right Out: 1743.838+/-777.024  $\chi^2/\text{NDF}$ : 18.3/19

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

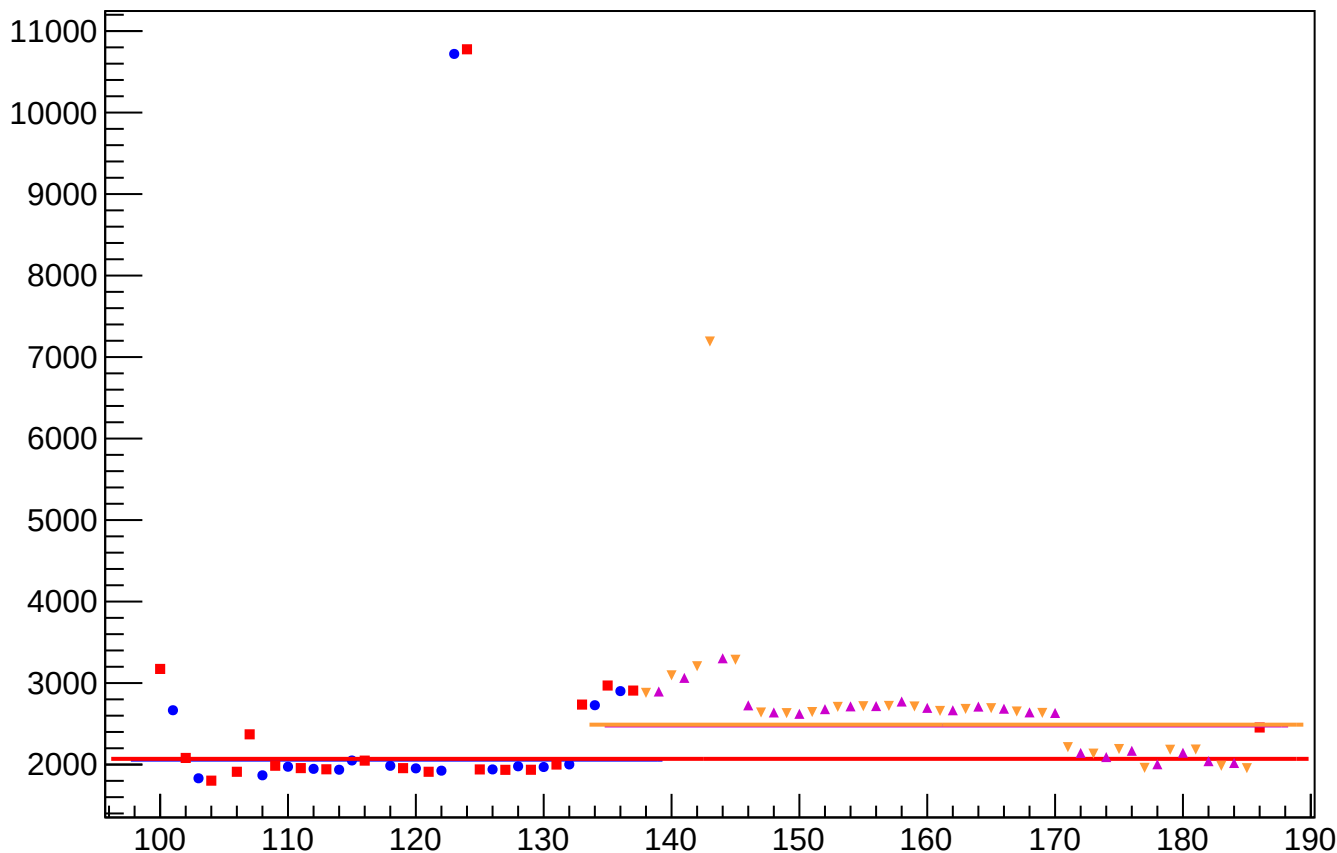
Right: 1829.813+/-561.930  $\chi^2/\text{NDF}$ : 26.4/36

In: 2562.364+/-482.723  $\chi^2/\text{NDF}$ : 26.4/39

Out: 1028.752+/-470.472  $\chi^2/\text{NDF}$ : 64.8/44

All: 1775.850+/-336.922  $\chi^2/\text{NDF}$ : 96.4/84

# reg\_asym\_atl2\_rms vs Slug, Sign Corrected



Right In: 2060.723+/-0.575  $\chi^2/\text{NDF}$ : 317606.8/16

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

Right Out: 2070.044+/-0.549  $\chi^2/\text{NDF}$ : 461236.2/19

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

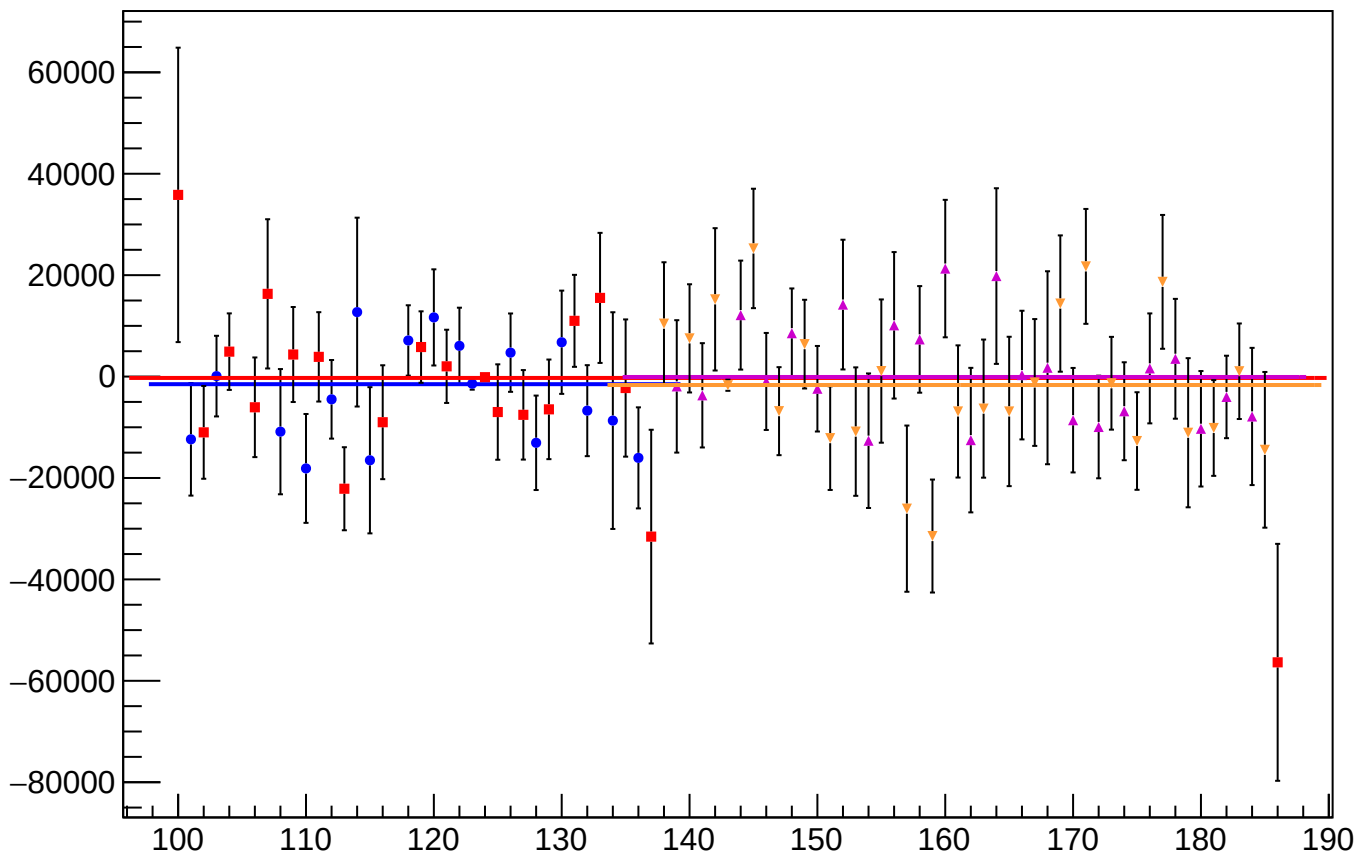
Right: 2065.598+/-0.397  $\chi^2/\text{NDF}$ : 778980.3/36

In: 2331.987+/-0.341  $\chi^2/\text{NDF}$ :1329095.7/39

Out: 2335.773+/-0.333  $\chi^2/\text{NDF}$ :2194731.4/44

All: 2333.929+/-0.238  $\chi^2/\text{NDF}$ : 3523890.2/84

asym\_atl2\_correction\_mean vs Slug, Sign Corrected



Right In:  $-1500.129 \pm 1054.661$   $\chi^2/\text{NDF}: 15.7/16$

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

Right Out:  $-269.641 \pm 695.030$   $\chi^2/\text{NDF}: 26.7/19$

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

Left:  $-1422.008 \pm 913.639$   $\chi^2/\text{NDF}: 46.6/47$

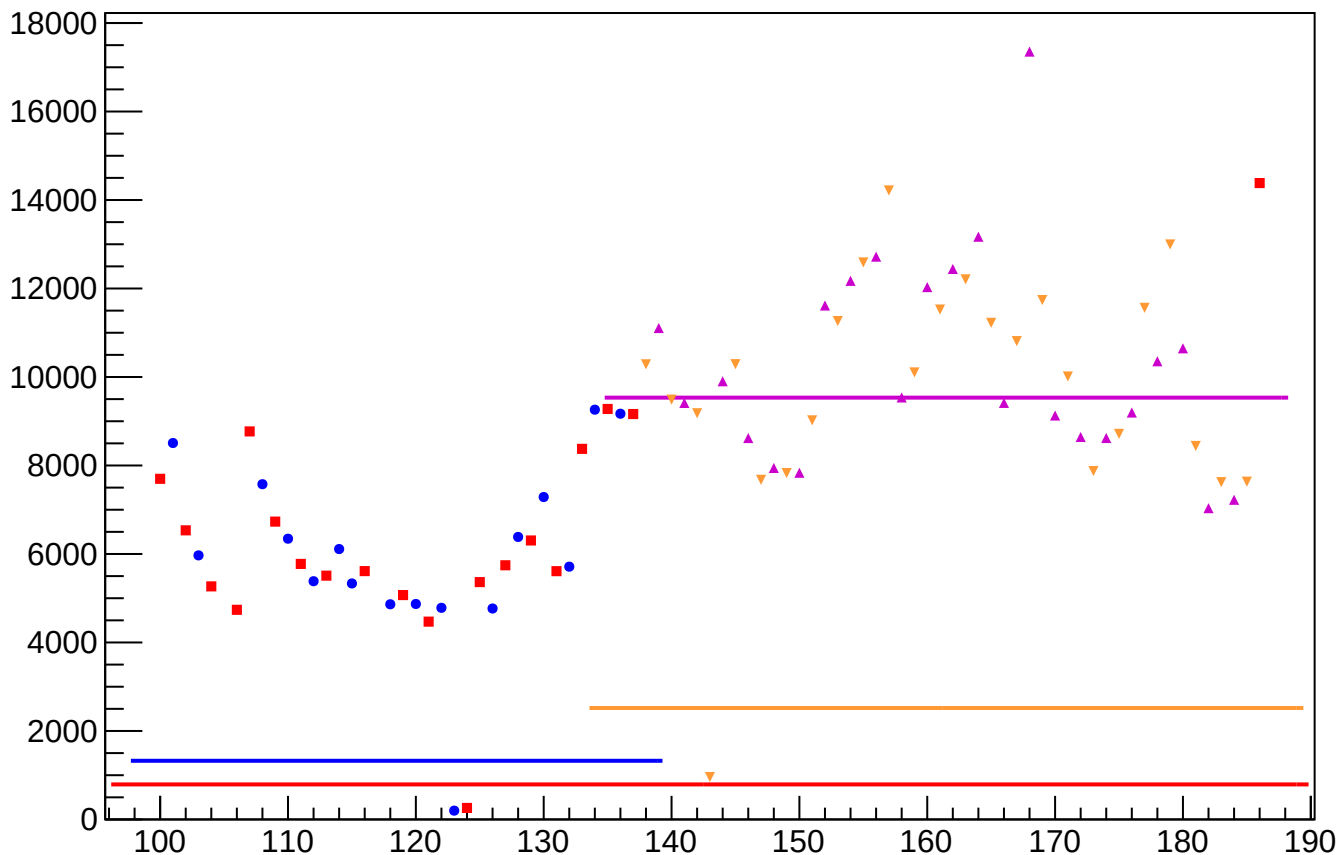
Right:  $-642.222 \pm 580.343$   $\chi^2/\text{NDF}: 43.4/36$

In:  $-1258.950 \pm 960.923$   $\chi^2/\text{NDF}: 29.8/39$

Out:  $-728.555 \pm 569.421$   $\chi^2/\text{NDF}: 60.4/44$

All:  $-866.399 \pm 489.871$   $\chi^2/\text{NDF}: 90.5/84$

asym\_atl2\_correction\_rms vs Slug, Sign Corrected



Right In: 1326.061+/-0.746

$\chi^2/\text{NDF}$ : 10027581.6/16

Left Out: 2519.359+/-0.702

$\chi^2/\text{NDF}$ : 23642118.3/24

Right Out: 791.844+/-0.491

$\chi^2/\text{NDF}$ : 12083748.3/19

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: 953.600+/-0.410

$\chi^2/\text{NDF}$ : 22469099.4/36

In: 2720.198+/-0.679

$\chi^2/\text{NDF}$ : 31918292.9/39

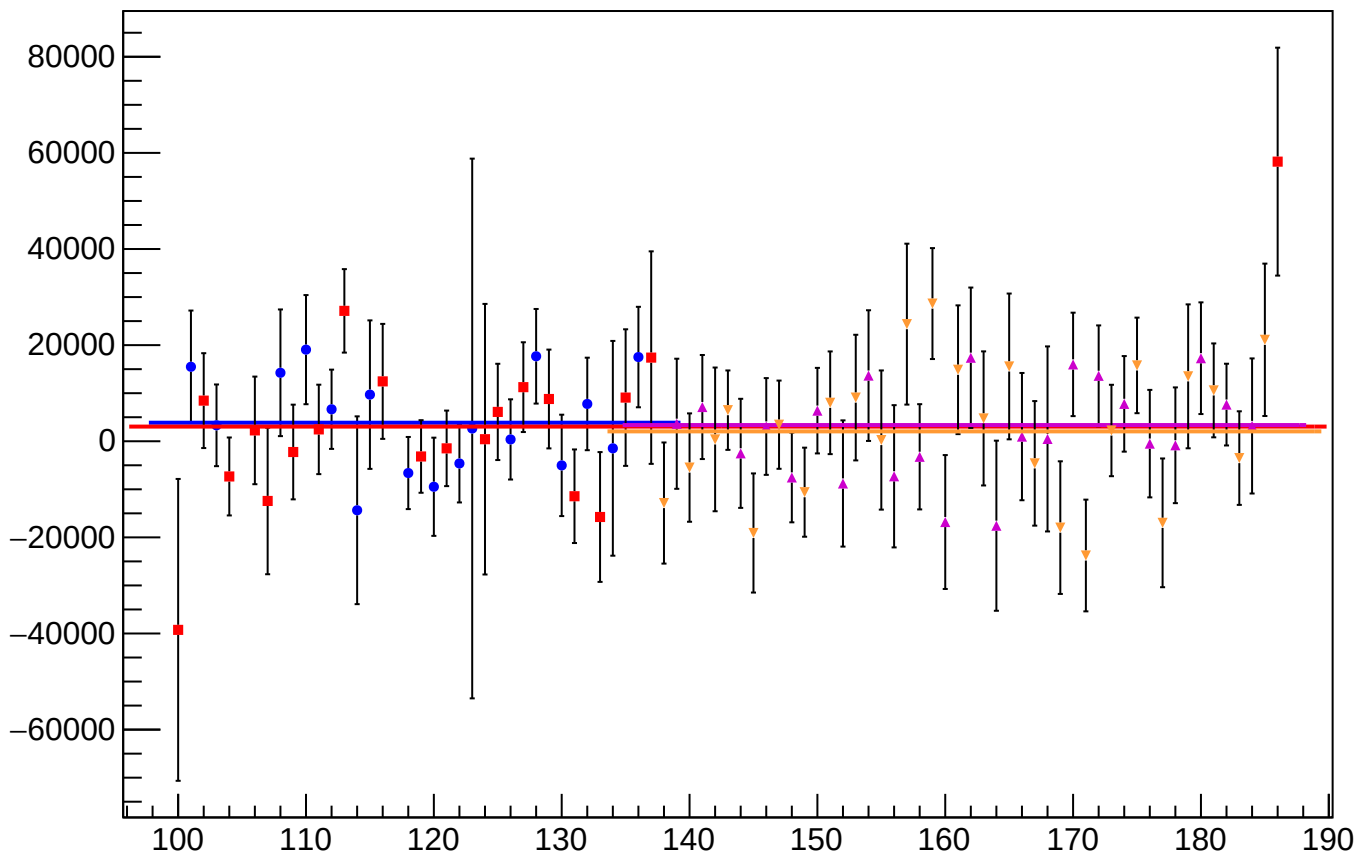
Out: 1359.830+/-0.403

$\chi^2/\text{NDF}$ : 39788266.2/44

All: 1713.374+/-0.346

$\chi^2/\text{NDF}$ : 74673189.2/8

# asym\_atl2\_mean vs Slug, Sign Corrected



Right In: 3858.326+/-2543.101  $\chi^2/\text{NDF}$ : 14.1/16

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

Right Out: 3052.127+/-2414.349  $\chi^2/\text{NDF}$ : 25.7/19

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

Left: 2689.120+/-1680.862  $\chi^2/\text{NDF}$ : 44.0/47

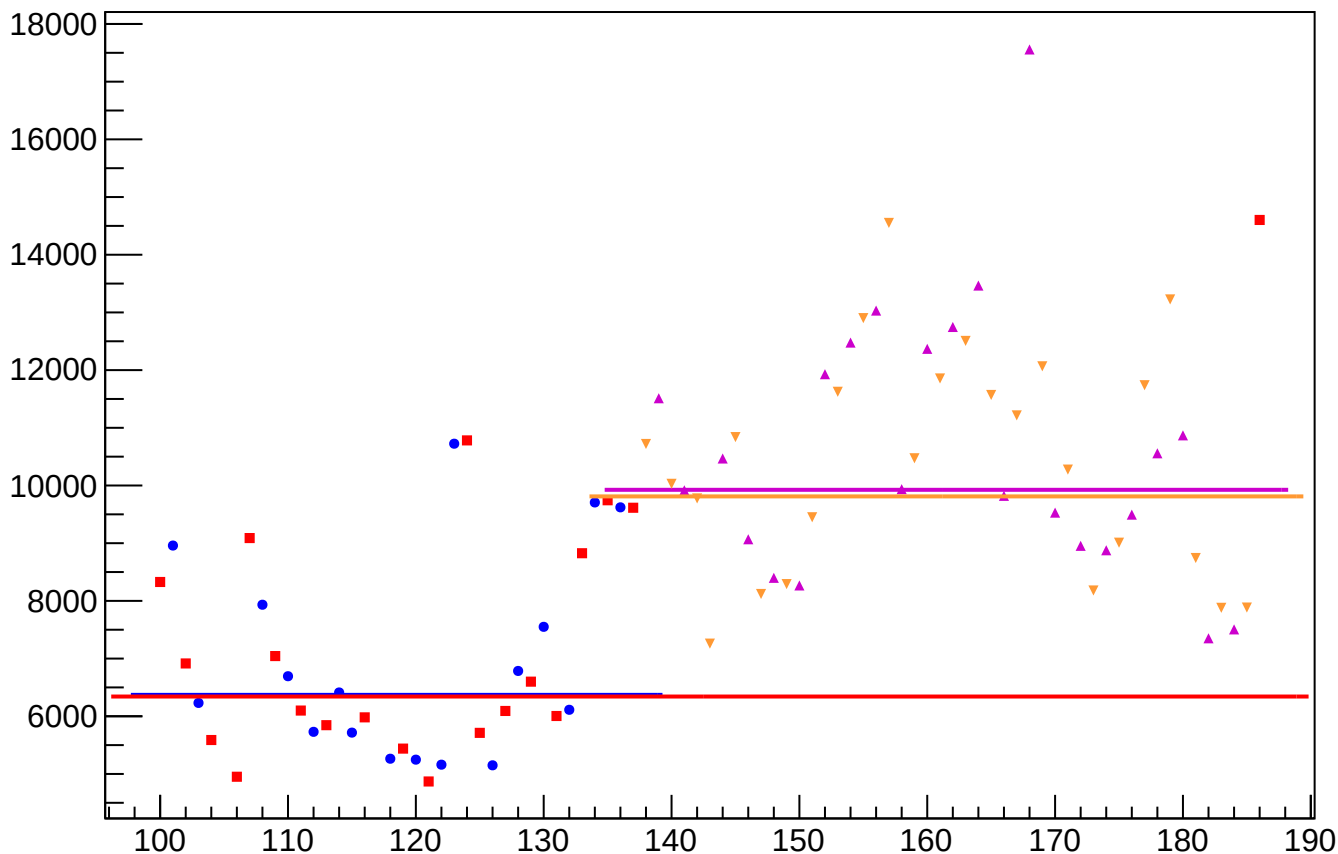
Right: 3434.302+/-1750.951  $\chi^2/\text{NDF}$ : 39.9/36

In: 3603.396+/-1754.334  $\chi^2/\text{NDF}$ : 27.2/39

Out: 2537.079+/-1677.886  $\chi^2/\text{NDF}$ : 56.6/44

All: 3046.499+/-1212.570  $\chi^2/\text{NDF}$ : 83.9/84

# asym\_atl2\_rms vs Slug, Sign Corrected



Right In: 6370.939+/-1.798  $\chi^2/\text{NDF}$ : 578725.9/16

Left Out: 9811.053+/-1.650  $\chi^2/\text{NDF}$ : 1213831.0/24

Right Out: 6342.087+/-1.707  $\chi^2/\text{NDF}$ : 777984.3/19

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: 6355.764+/-1.238  $\chi^2/\text{NDF}$ : 1356845.6/36

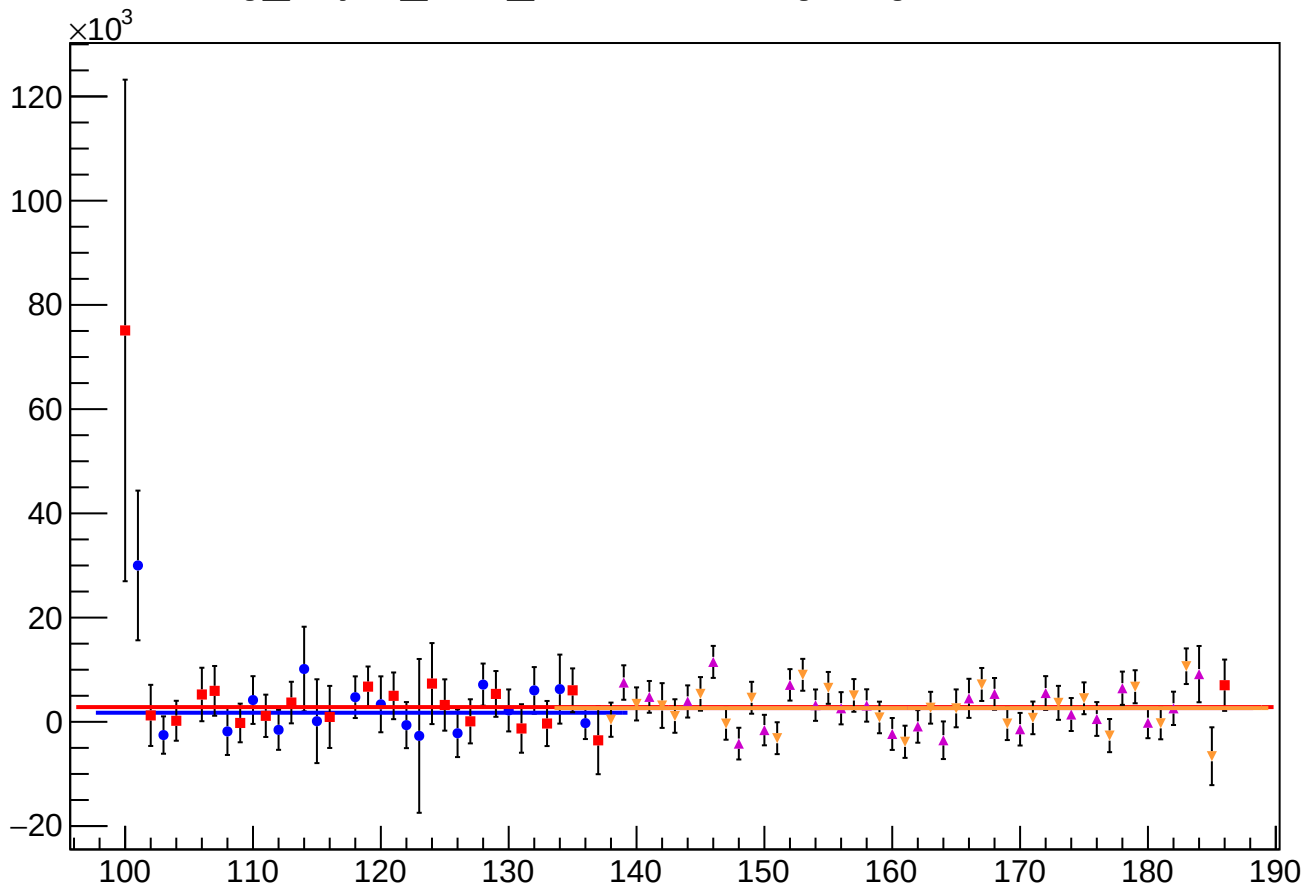
In: 8233.862+/-1.240  $\chi^2/\text{NDF}$ : 3837988.1/39

Out: 8135.549+/-1.186  $\chi^2/\text{NDF}$ : 4126638.4/44

All: 8182.516+/-0.857  $\chi^2/\text{NDF}$ : 7967906.9/84



# reg\_asym\_atr1\_mean vs Slug, Sign Corrected



Right In: 1745.509+/-1131.300  $\chi^2/\text{NDF}$ : 13.4/16

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

Right Out: 2829.049+/-1049.804  $\chi^2/\text{NDF}$ : 10.4/19

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

Left: 2637.181+/-463.261  $\chi^2/\text{NDF}$ : 70.3/47

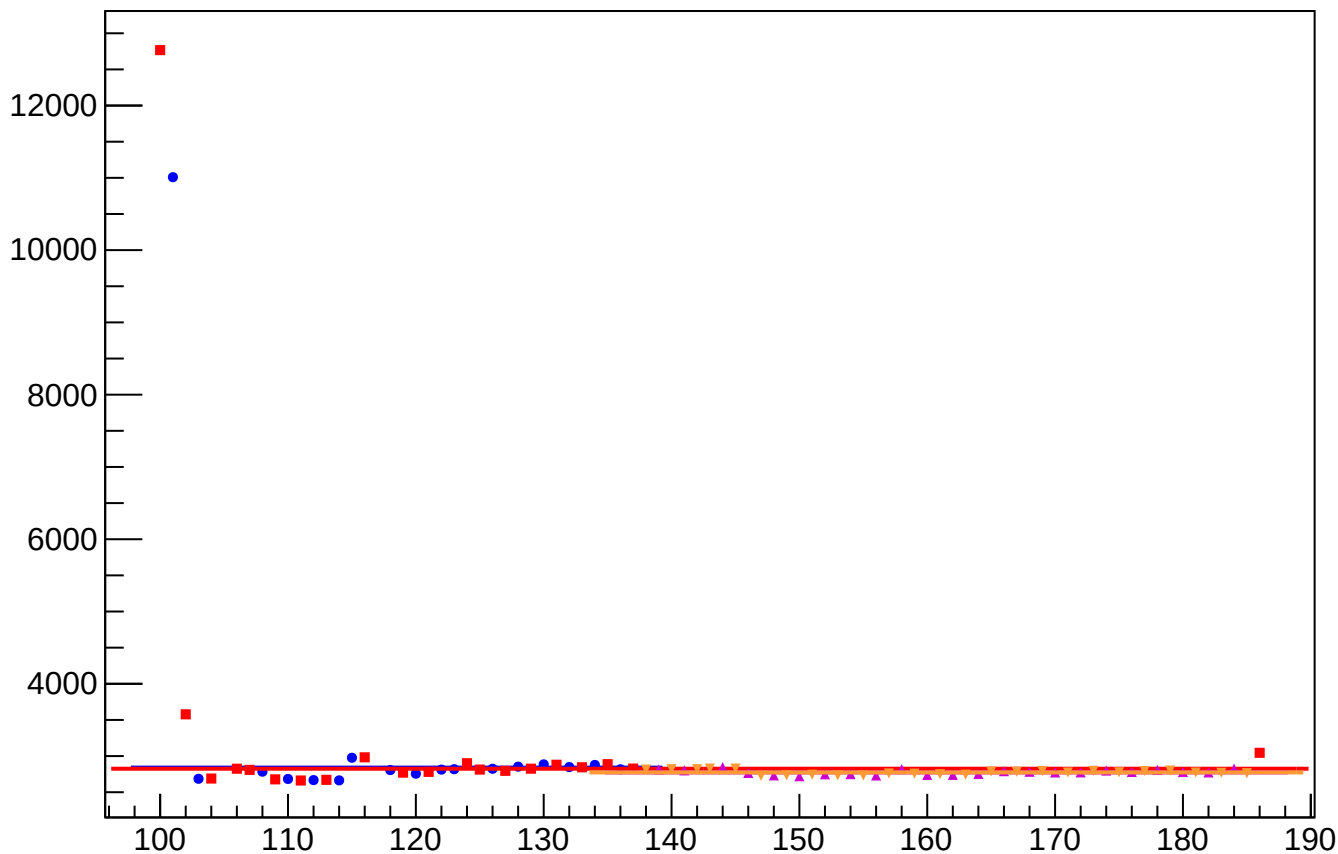
Right: 2327.709+/-769.523  $\chi^2/\text{NDF}$ : 24.3/36

In: 2409.481+/-573.015  $\chi^2/\text{NDF}$ : 49.1/39

Out: 2688.916+/-550.254  $\chi^2/\text{NDF}$ : 45.5/44

All: 2554.858+/-396.891  $\chi^2/\text{NDF}$ : 94.7/84

# reg\_asym\_atr1\_rms vs Slug, Sign Corrected



Right In: 2840.326+/-0.800  $\chi^2/\text{NDF}$ : 660130.0/16

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

Right Out: 2825.128+/-0.742  $\chi^2/\text{NDF}$ : 137234.2/19

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

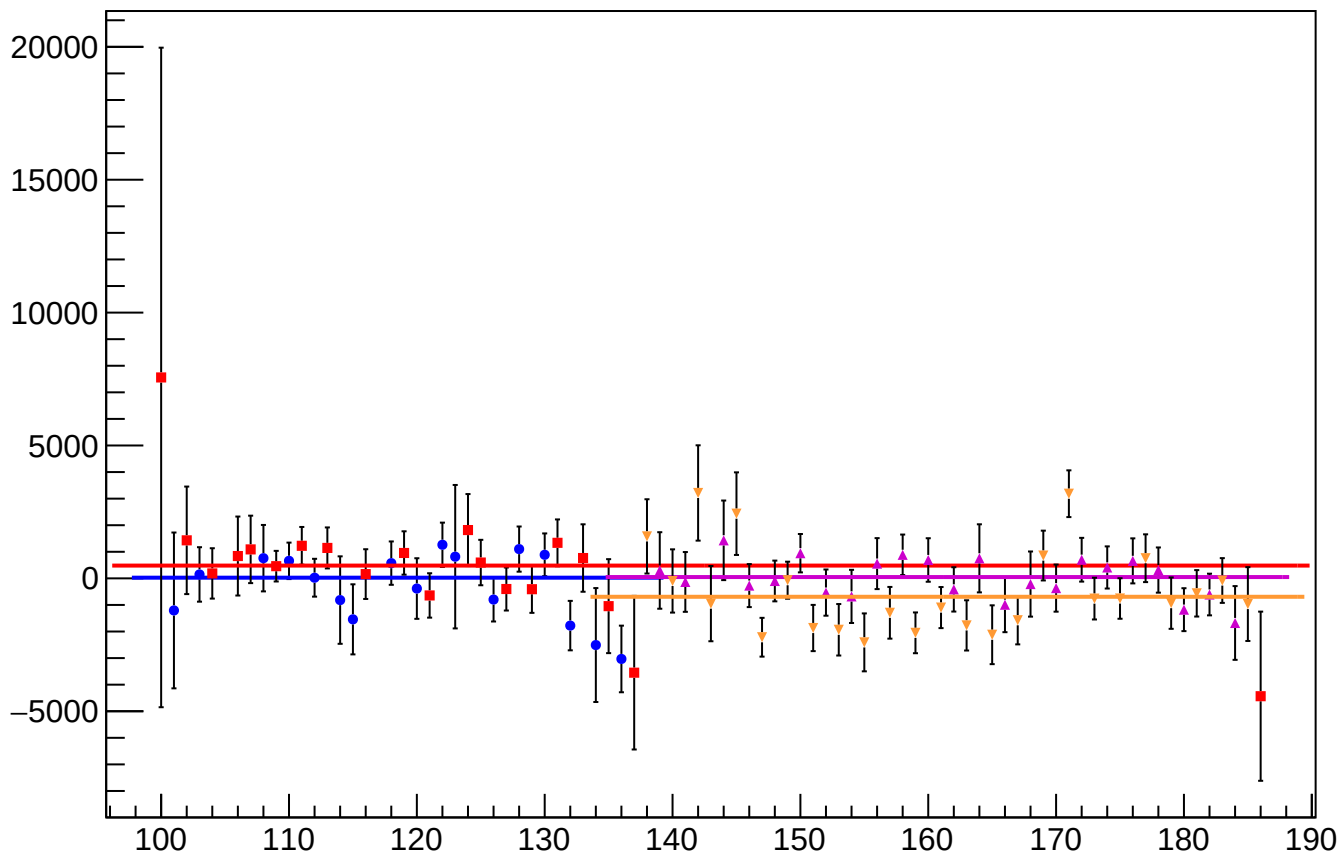
Right: 2832.160+/-0.544  $\chi^2/\text{NDF}$ : 797558.2/36

In: 2791.043+/-0.405  $\chi^2/\text{NDF}$ : 670220.6/39

Out: 2787.839+/-0.389  $\chi^2/\text{NDF}$ : 145329.9/44

All: 2789.376+/-0.281  $\chi^2/\text{NDF}$ : 815583.1/84

# asym\_atr1\_correction\_mean vs Slug, Sign Corrected



Right In:  $25.744 \pm 242.455$   $\chi^2/\text{NDF}: 20.8/16$

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

Right Out:  $480.988 \pm 221.640$   $\chi^2/\text{NDF}: 14.3/19$

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

Left:  $-325.512 \pm 133.103$   $\chi^2/\text{NDF}: 77.4/47$

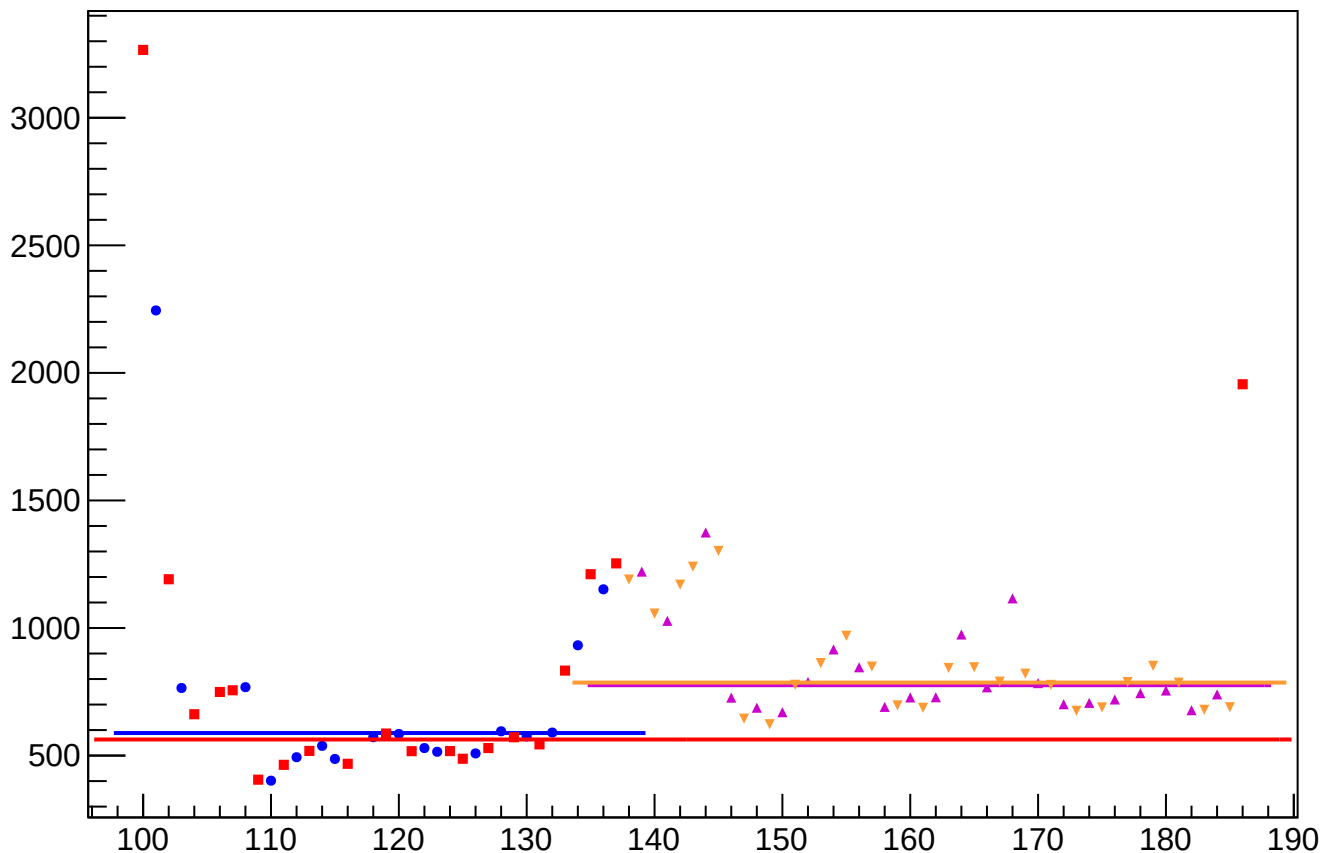
Right:  $273.743 \pm 163.588$   $\chi^2/\text{NDF}: 37.0/36$

In:  $40.350 \pm 149.154$   $\chi^2/\text{NDF}: 34.4/39$

Out:  $-203.796 \pm 143.058$   $\chi^2/\text{NDF}: 86.6/44$

All:  $-86.814 \pm 103.245$   $\chi^2/\text{NDF}: 122.5/84$

# asym\_atr1\_correction\_rms vs Slug, Sign Corrected



Right In: 588.381+/-0.171  $\chi^2/\text{NDF}$ : 1423934.9/16

Left Out: 786.173+/-0.132  $\chi^2/\text{NDF}$ : 1249536.1/24

Right Out: 563.067+/-0.157  $\chi^2/\text{NDF}$ : 1489556.3/19

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

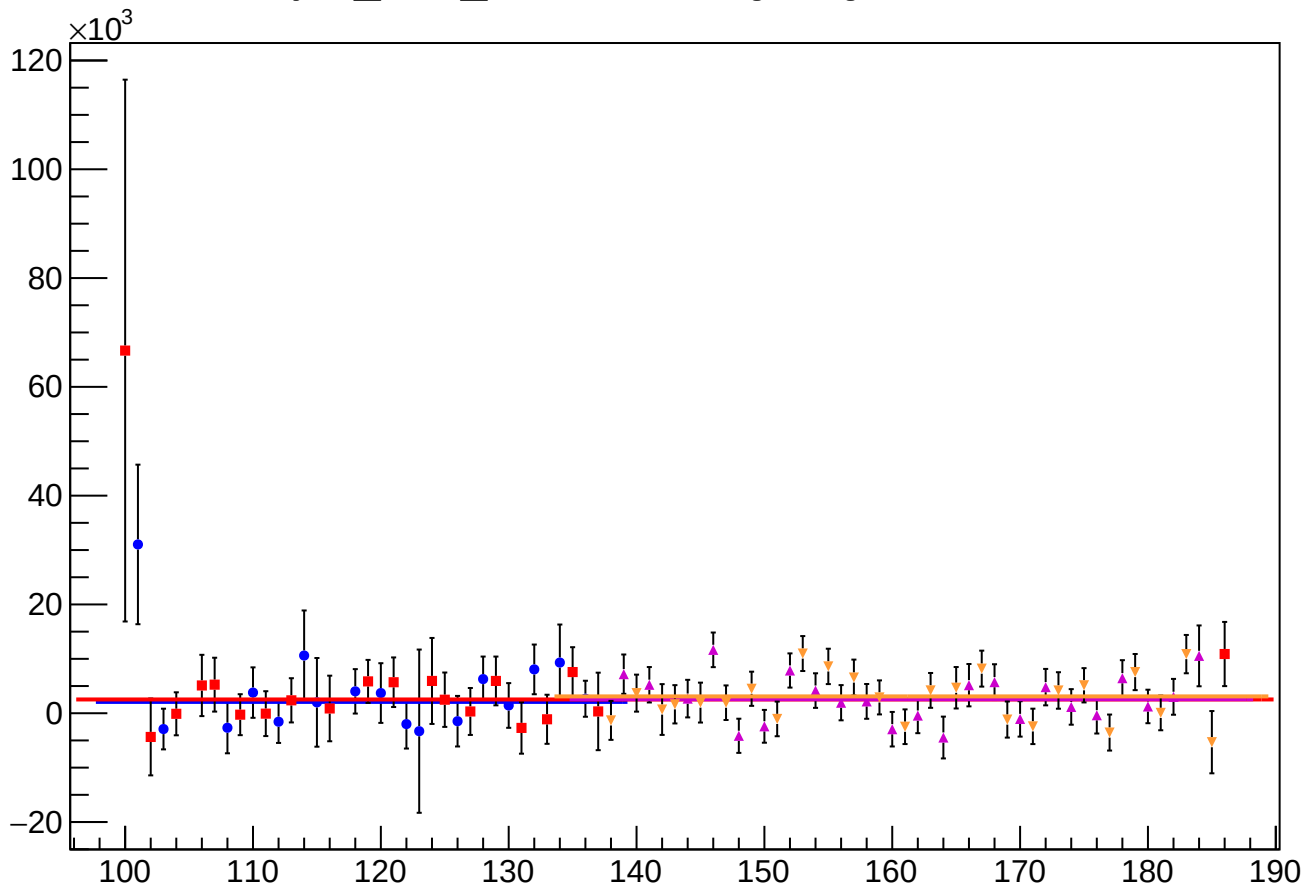
Right: 574.591+/-0.116  $\chi^2/\text{NDF}$ : 2925367.1/36

In: 704.952+/-0.105  $\chi^2/\text{NDF}$ : 3224533.8/39

Out: 693.226+/-0.101  $\chi^2/\text{NDF}$ : 3921358.5/44

All: 698.844+/-0.073  $\chi^2/\text{NDF}$ : 7152331.1/84

# asym\_atr1\_mean vs Slug, Sign Corrected



Right In: 2083.008 $\pm$ 1167.281  $\chi^2$ /NDF: 14.5/16

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

Right Out: 2531.723 $\pm$ 1093.758  $\chi^2$ /NDF: 12.0/19

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

Left: 2840.565 $\pm$ 485.775  $\chi^2$ /NDF: 74.6/47

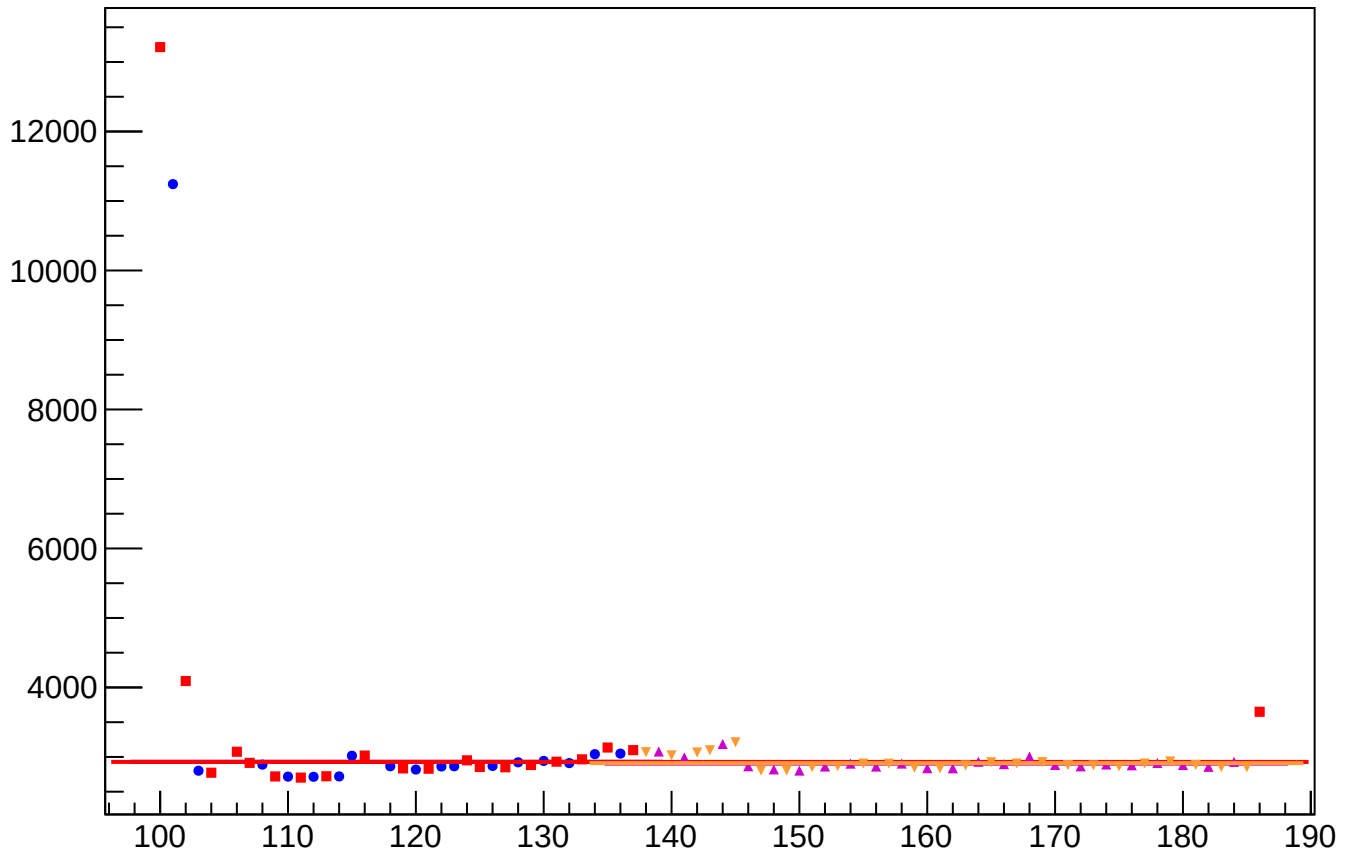
Right: 2321.941 $\pm$ 798.131  $\chi^2$ /NDF: 26.6/36

In: 2444.678 $\pm$ 597.670  $\chi^2$ /NDF: 50.3/39

Out: 2938.345 $\pm$ 576.578  $\chi^2$ /NDF: 50.9/44

All: 2700.376 $\pm$ 414.958  $\chi^2$ /NDF: 101.5/84

# asym\_atr1\_rms vs Slug, Sign Corrected



Right In: 2930.563 $\pm$ 0.825  $\chi^2$ /NDF: 662106.1/16

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

Right Out: 2928.434 $\pm$ 0.773  $\chi^2$ /NDF: 200395.5/19

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

Left: 2907.416 $\pm$ 0.343  $\chi^2$ /NDF: 65612.1/47

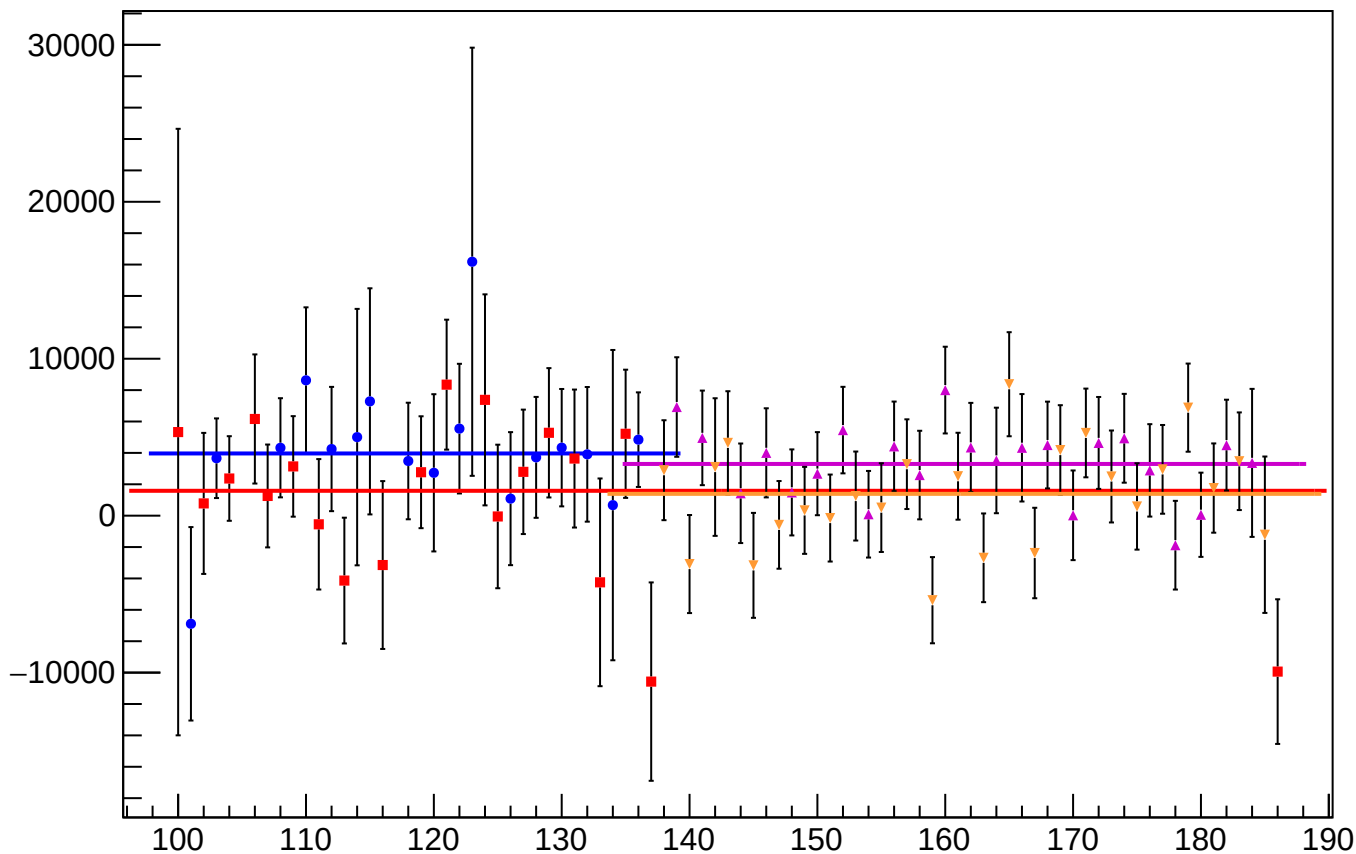
Right: 2929.429 $\pm$ 0.564  $\chi^2$ /NDF: 862505.2/36

In: 2910.529 $\pm$ 0.423  $\chi^2$ /NDF: 691743.1/39

Out: 2916.008 $\pm$ 0.408  $\chi^2$ /NDF: 237397.3/44

All: 2913.367 $\pm$ 0.293  $\chi^2$ /NDF: 929227.5/84

# reg\_asym\_atr2\_mean vs Slug, Sign Corrected



Right In: 3964.122+/-1014.452  $\chi^2/\text{NDF}$ : 6.1/16

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

Right Out: 1584.905+/-940.358  $\chi^2/\text{NDF}$ : 21.0/19

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

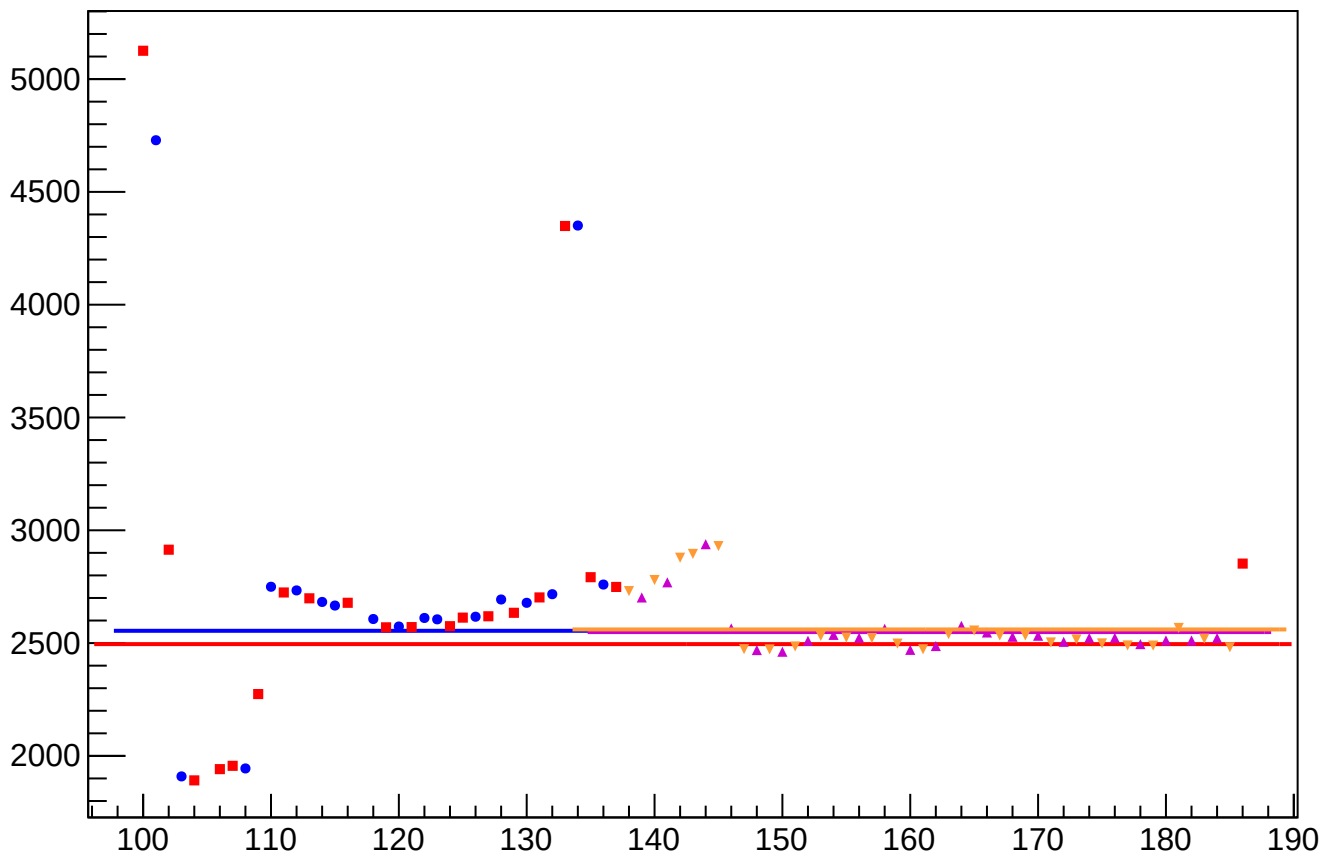
Right: 2684.463+/-689.642  $\chi^2/\text{NDF}$ : 30.0/36

In: 3472.955+/-522.763  $\chi^2/\text{NDF}$ : 21.3/39

Out: 1446.121+/-503.717  $\chi^2/\text{NDF}$ : 50.2/44

All: 2421.943+/-362.728  $\chi^2/\text{NDF}$ : 79.3/84

# reg\_asym\_atr2\_rms vs Slug, Sign Corrected



Right In: 2554.506+/-0.717  $\chi^2/\text{NDF}$ : 545770.3/16

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

Right Out: 2495.463+/-0.665  $\chi^2/\text{NDF}$ : 462831.7/19

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

Left: 2554.831+/-0.302  $\chi^2/\text{NDF}$ : 142411.2/47

Right: 2522.750+/-0.488  $\chi^2/\text{NDF}$ : 1012245.9/36

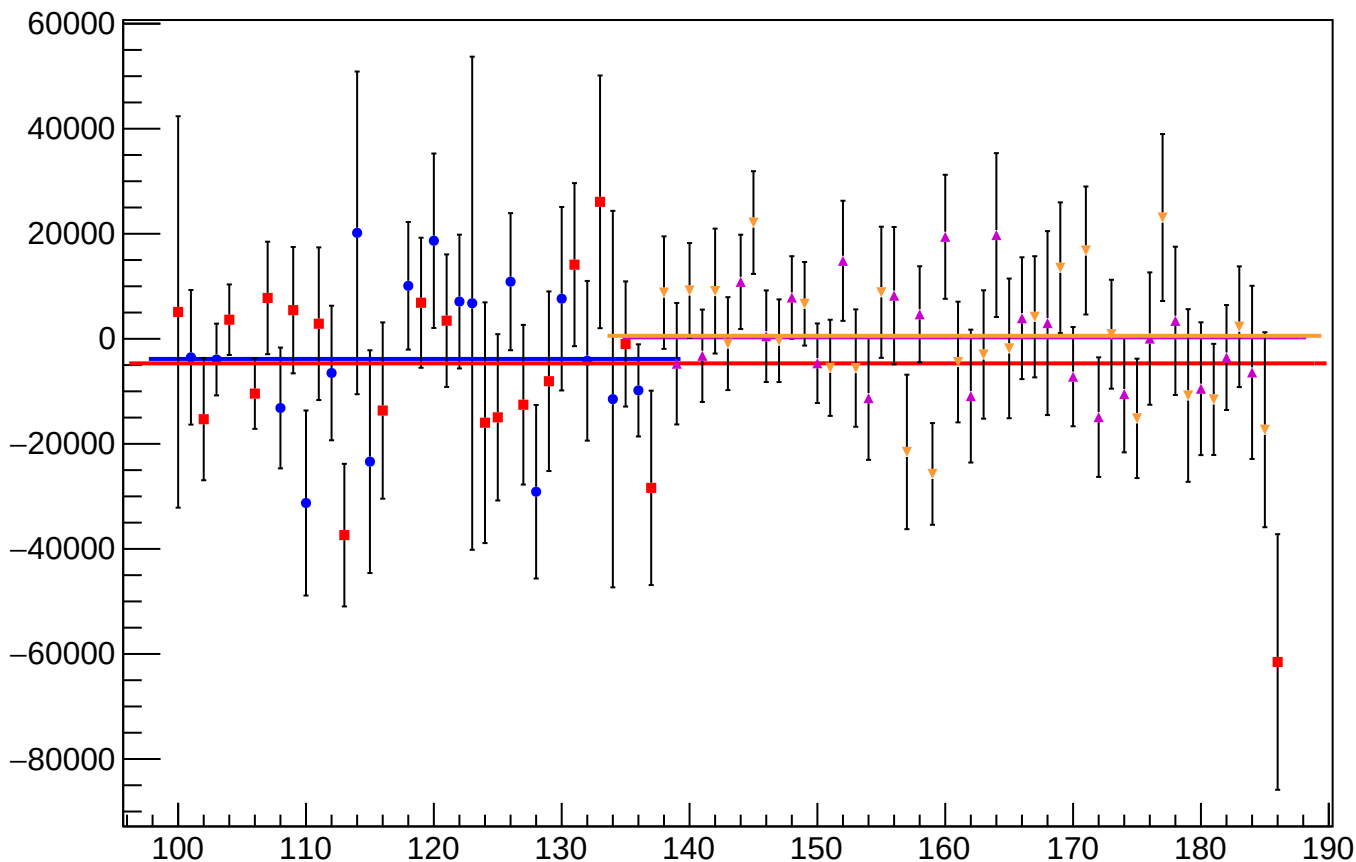
In: 2550.366+/-0.370  $\chi^2/\text{NDF}$ : 601081.8/39

Out: 2541.861+/-0.356  $\chi^2/\text{NDF}$ : 556431.4/44

All: 2545.956+/-0.256  $\chi^2/\text{NDF}$ : 1157787.8/84



asym\_atr2\_correction\_mean vs Slug, Sign Corrected



Right In: -3830.114+/-3234.150  $\chi^2/\text{NDF}$ : 13.1/16

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

Right Out: -4675.713+/-2819.178  $\chi^2/\text{NDF}$ : 24.1/19

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

Left: 427.723+/-1564.847  $\chi^2/\text{NDF}$ : 43.9/47

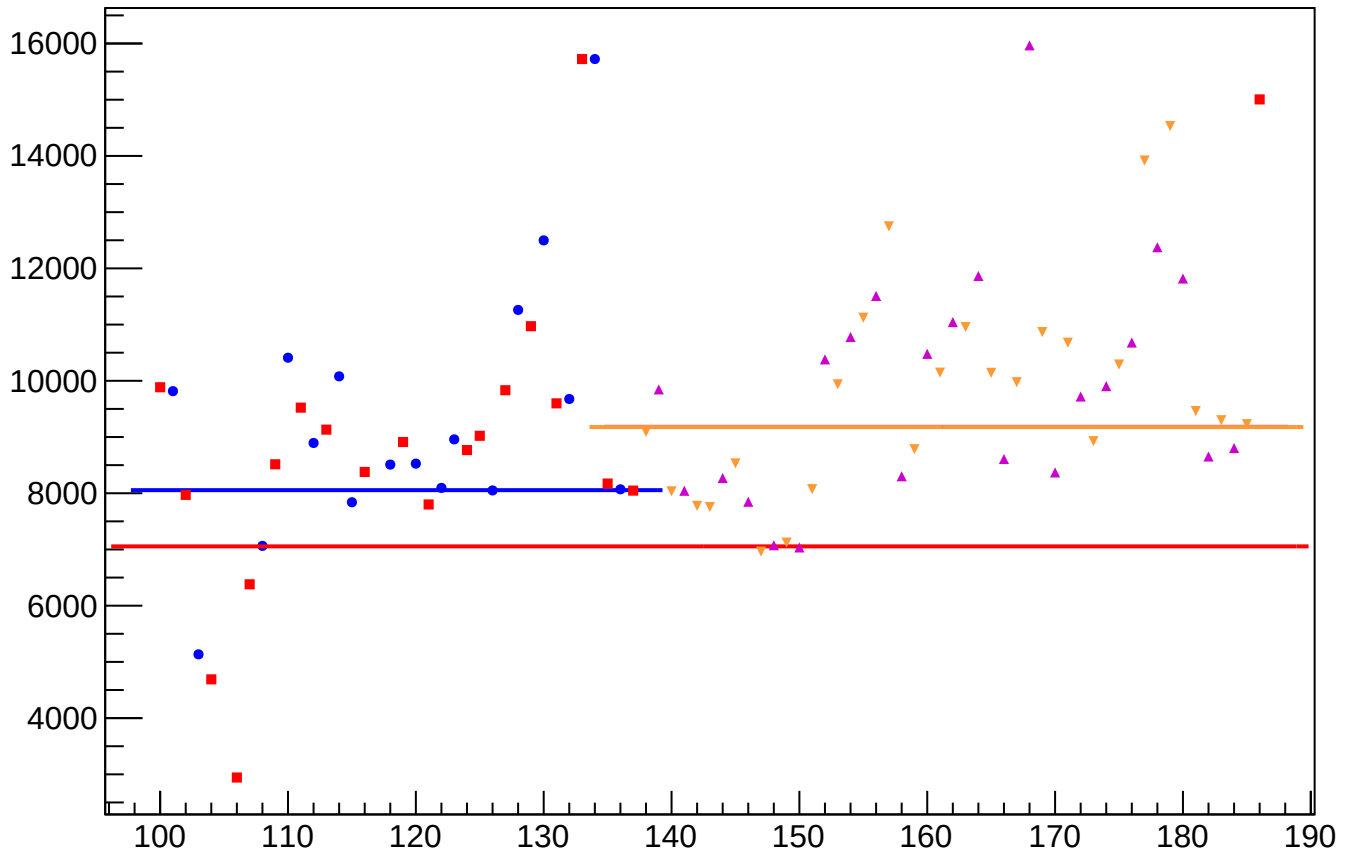
Right: -4310.611+/-2125.129  $\chi^2/\text{NDF}$ : 37.3/36

In: -1058.037+/-1843.026  $\chi^2/\text{NDF}$ : 29.9/39

Out: -1396.327+/-1726.708  $\chi^2/\text{NDF}$ : 54.6/44

All: -1238.193+/-1260.083  $\chi^2/\text{NDF}$ : 84.4/84

# asym\_atr2\_correction\_rms vs Slug, Sign Corrected



Right In: 8054.857+/-2.287  $\chi^2/\text{NDF}$ : 795337.9/16

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

Right Out: 7054.907+/-1.993  $\chi^2/\text{NDF}$ : 1993113.0/19

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

Left: 9179.424+/-1.107  $\chi^2/\text{NDF}$ : 2412668.1/47

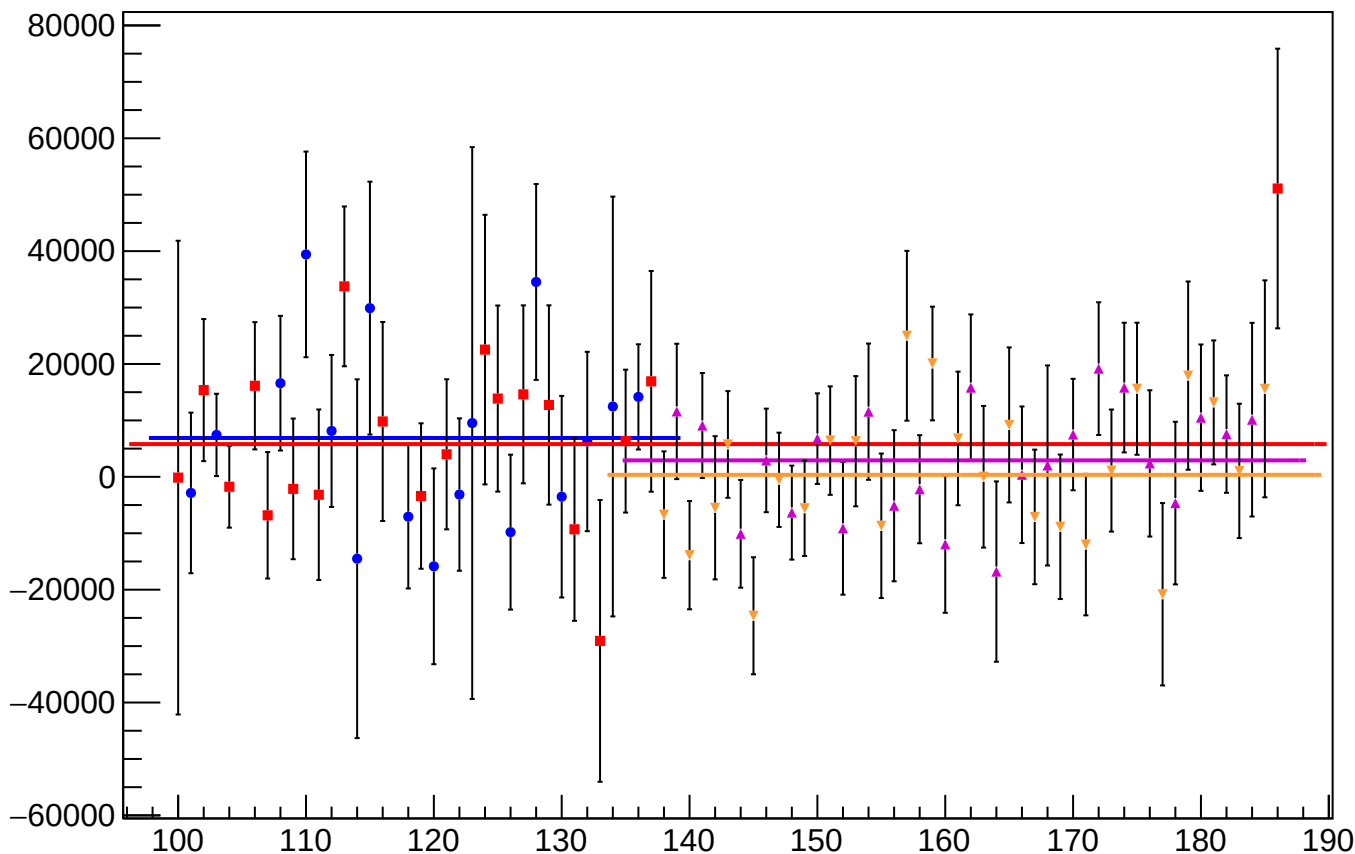
Right: 7486.654+/-1.503  $\chi^2/\text{NDF}$ : 2897091.5/36

In: 8815.462+/-1.303  $\chi^2/\text{NDF}$ :2195625.1/39

Out: 8381.349+/-1.221  $\chi^2/\text{NDF}$ :3877871.4/44

All: 8584.275+/-0.891  $\chi^2/\text{NDF}$ : 6132589.3/84

# asym\_atr2\_mean vs Slug, Sign Corrected



Right In: 6886.765+/-3417.693  $\chi^2/\text{NDF}$ : 14.3/16

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

Right Out: 5801.956+/-3147.597  $\chi^2/\text{NDF}$ : 16.7/19

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

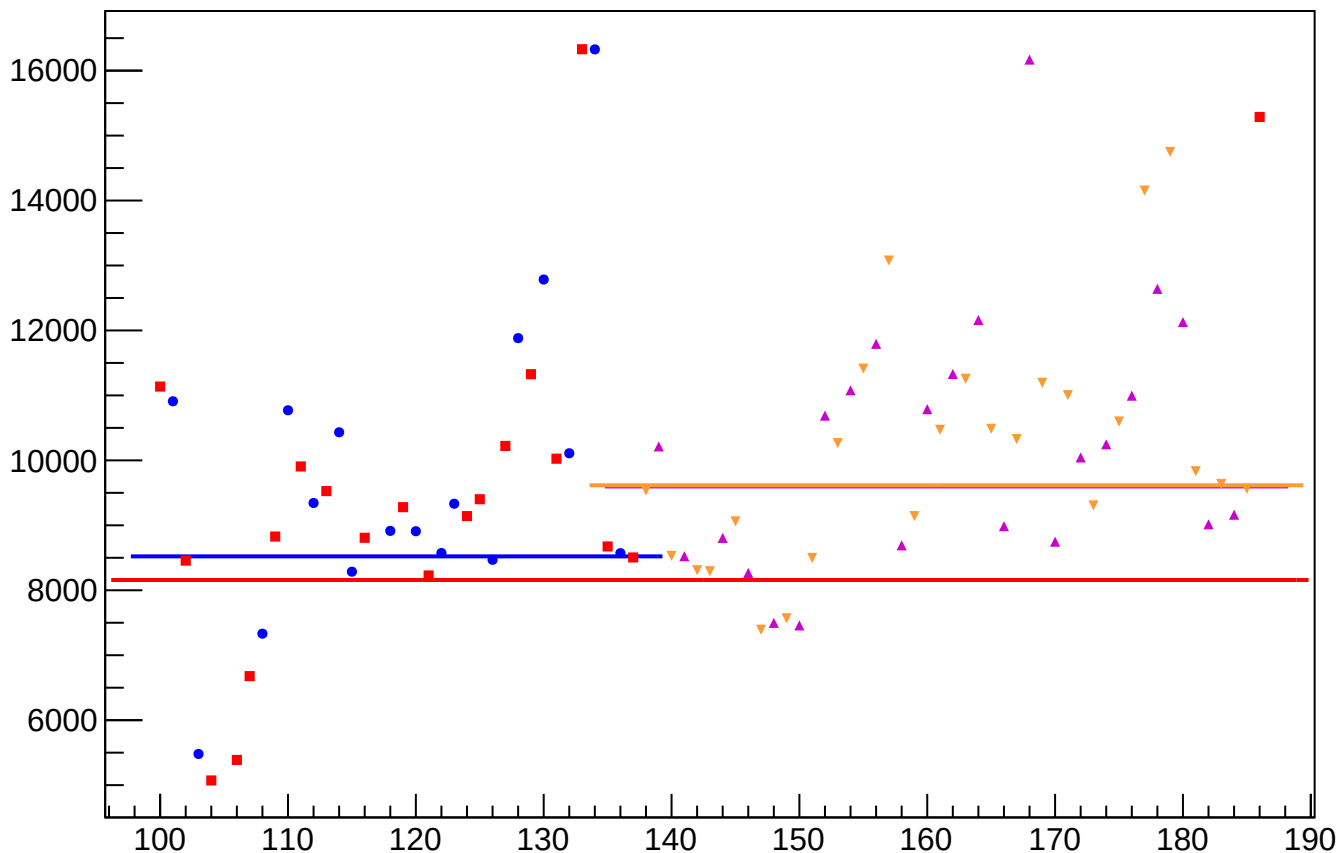
Right: 6299.807+/-2315.294  $\chi^2/\text{NDF}$ : 31.1/36

In: 4183.784+/-1929.938  $\chi^2/\text{NDF}$ : 30.1/39

Out: 2231.764+/-1847.365  $\chi^2/\text{NDF}$ : 44.9/44

All: 3165.122+/-1334.521  $\chi^2/\text{NDF}$ : 75.6/84

# asym\_atr2\_rms vs Slug, Sign Corrected



Right In: 8521.835+/-2.417  $\chi^2/\text{NDF}$ : 769872.2/16

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

Right Out: 8158.433+/-2.226  $\chi^2/\text{NDF}$ : 1121466.2/19

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

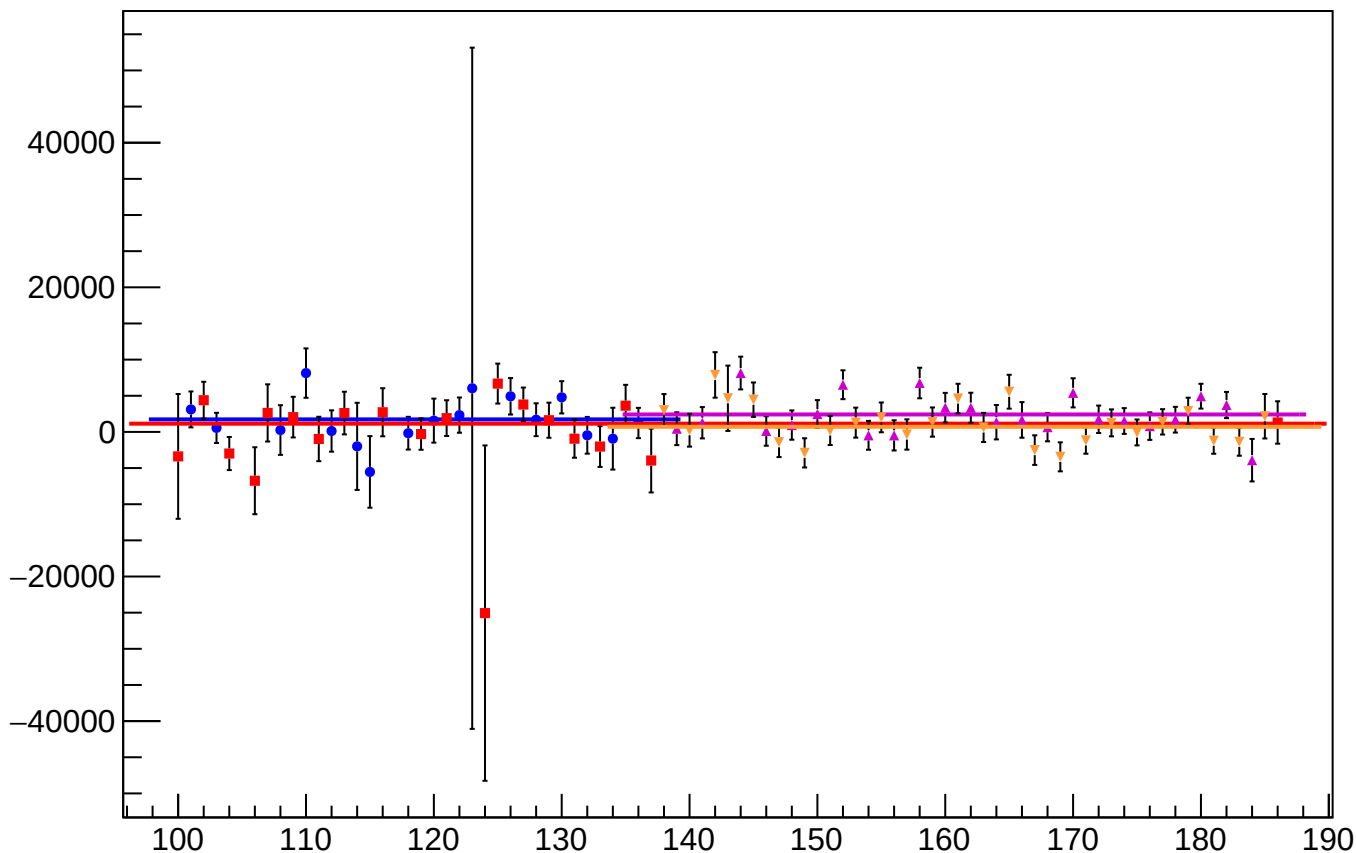
Right: 8325.203+/-1.637  $\chi^2/\text{NDF}$ : 1903573.5/36

In: 9255.199+/-1.365  $\chi^2/\text{NDF}$ :1987243.8/39

Out: 9114.055+/-1.306  $\chi^2/\text{NDF}$ :2414380.0/44

All: 9181.542+/-0.944  $\chi^2/\text{NDF}$ : 4407206.2/84

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



Right In: 1733.256+/-672.118  $\chi^2/\text{NDF}$ : 12.6/16

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

Right Out: 1140.480+/-656.050  $\chi^2/\text{NDF}$ : 20.3/19

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

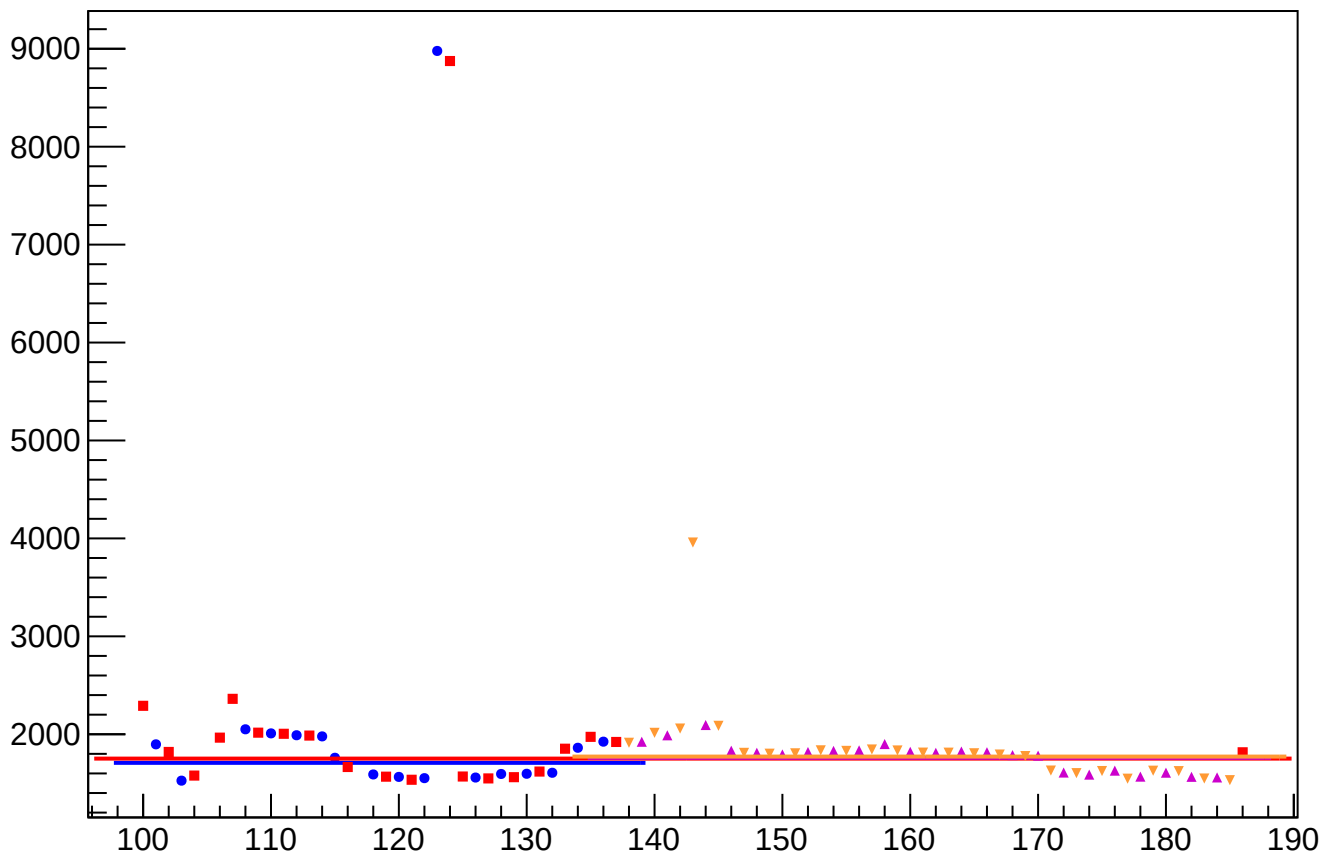
Right: 1429.698+/-469.475  $\chi^2/\text{NDF}$ : 33.4/36

In: 2221.092+/-358.287  $\chi^2/\text{NDF}$ : 47.4/39

Out: 833.836+/-352.152  $\chi^2/\text{NDF}$ : 55.5/44

All: 1515.485+/-251.150  $\chi^2/\text{NDF}$ : 110.5/84

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



Right In: 1708.196 $\pm$ 0.475  $\chi^2$ /NDF: 195783.3/16

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

Right Out: 1751.433 $\pm$ 0.462  $\chi^2$ /NDF: 397373.1/19

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

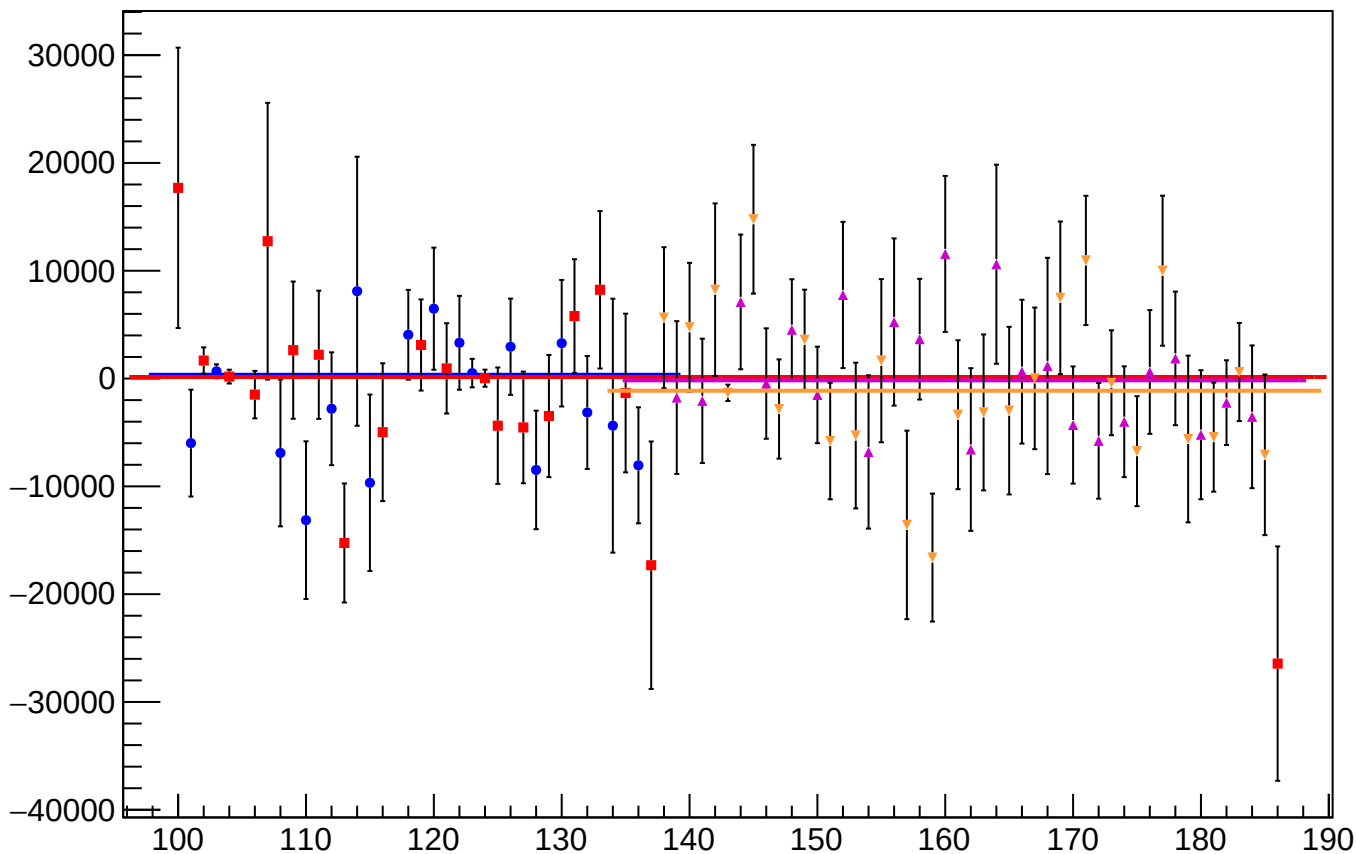
Right: 1730.430 $\pm$ 0.331  $\chi^2$ /NDF: 597412.5/36

In: 1744.992 $\pm$ 0.253  $\chi^2$ /NDF: 419048.8/39

Out: 1766.070 $\pm$ 0.249  $\chi^2$ /NDF: 1101259.6/44

All: 1755.726 $\pm$ 0.177  $\chi^2$ /NDF: 1523833.4/84

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



Right In: 350.603 $\pm$ 540.664  $\chi^2$ /NDF: 17.3/16

Left Out: -1129.807 $\pm$ 647.600  $\chi^2$ /NDF:31.5/24

Right Out: 145.898 $\pm$ 433.328  $\chi^2$ /NDF: 26.8/19

Left In: -168.182 $\pm$ 1232.411  $\chi^2$ /NDF:14.2/22

Left: -921.734 $\pm$ 573.272  $\chi^2$ /NDF: 46.1/47

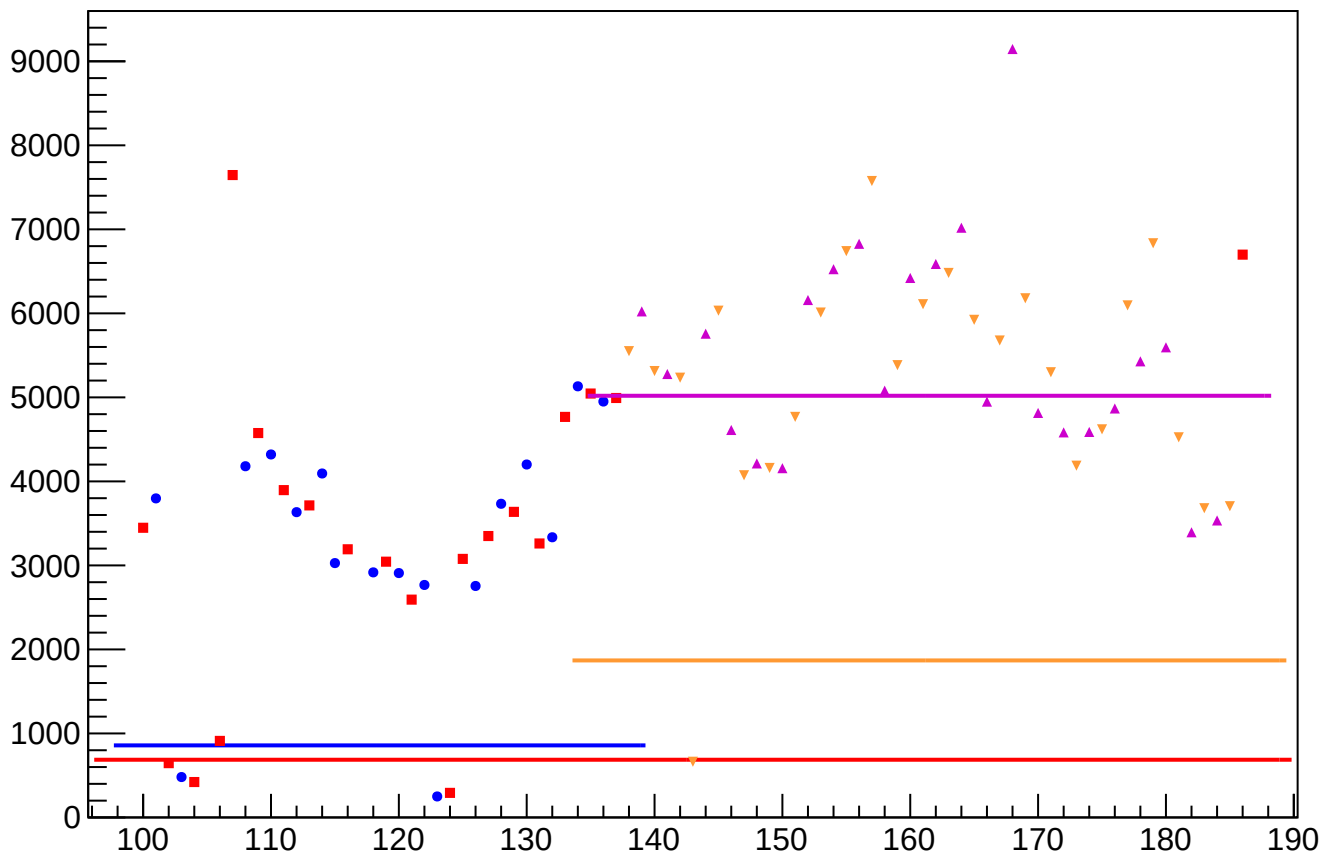
Right: 225.962 $\pm$ 338.129  $\chi^2$ /NDF: 44.2/36

In: 266.872 $\pm$ 495.114  $\chi^2$ /NDF:31.6/39

Out: -248.633 $\pm$ 360.141  $\chi^2$ /NDF:61.0/44

All: -70.259 $\pm$ 291.243  $\chi^2$ /NDF: 93.3/84

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



Right In: 857.789 $\pm$ 0.382  $\chi^2$ /NDF: 8126360.1/16

Left Out: 1868.983 $\pm$ 0.458  $\chi^2$ /NDF: 19852416.6/24

Right Out: 686.937 $\pm$ 0.306  $\chi^2$ /NDF: 8970045.1/19

Left In: 5019.114 $\pm$ 0.871  $\chi^2$ /NDF: 1569031.9/22

Left: 2550.597 $\pm$ 0.405  $\chi^2$ /NDF: 31661059.7/47

Right: 753.761 $\pm$ 0.239  $\chi^2$ /NDF: 17218008.0/36

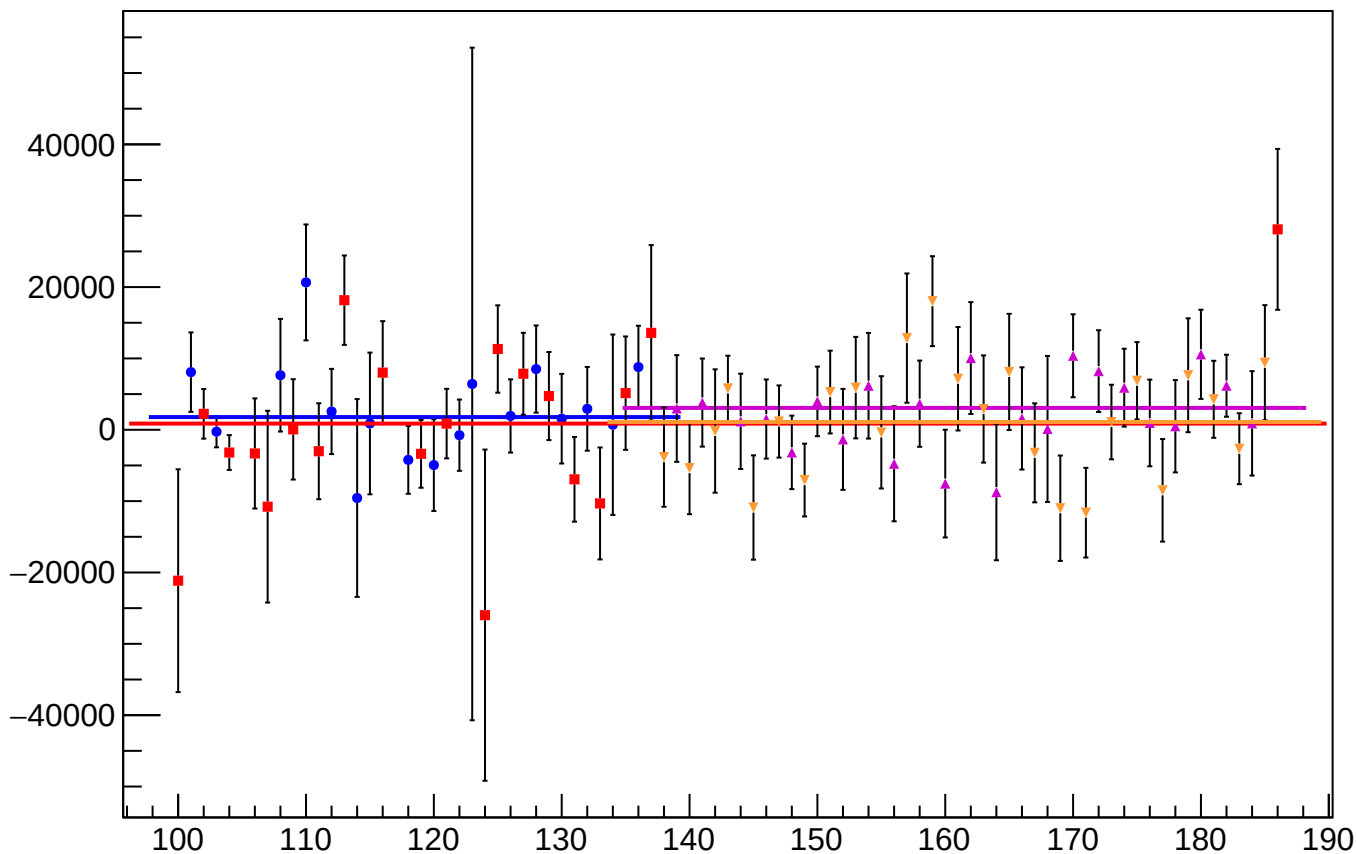
In: 1529.421 $\pm$ 0.350  $\chi^2$ /NDF: 28817580.6/39

Out: 1052.503 $\pm$ 0.255  $\chi^2$ /NDF: 33424990.9/44

All: 1217.526 $\pm$ 0.206  $\chi^2$ /NDF: 63456158.3/80



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



Right In: 1778.180+/-1313.267  $\chi^2/\text{NDF}$ : 14.5/16

Left Out: 1094.317+/-1273.113  $\chi^2/\text{NDF}$ : 32.0/24

Right Out: 868.289+/-1280.089  $\chi^2/\text{NDF}$ : 32.8/19

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

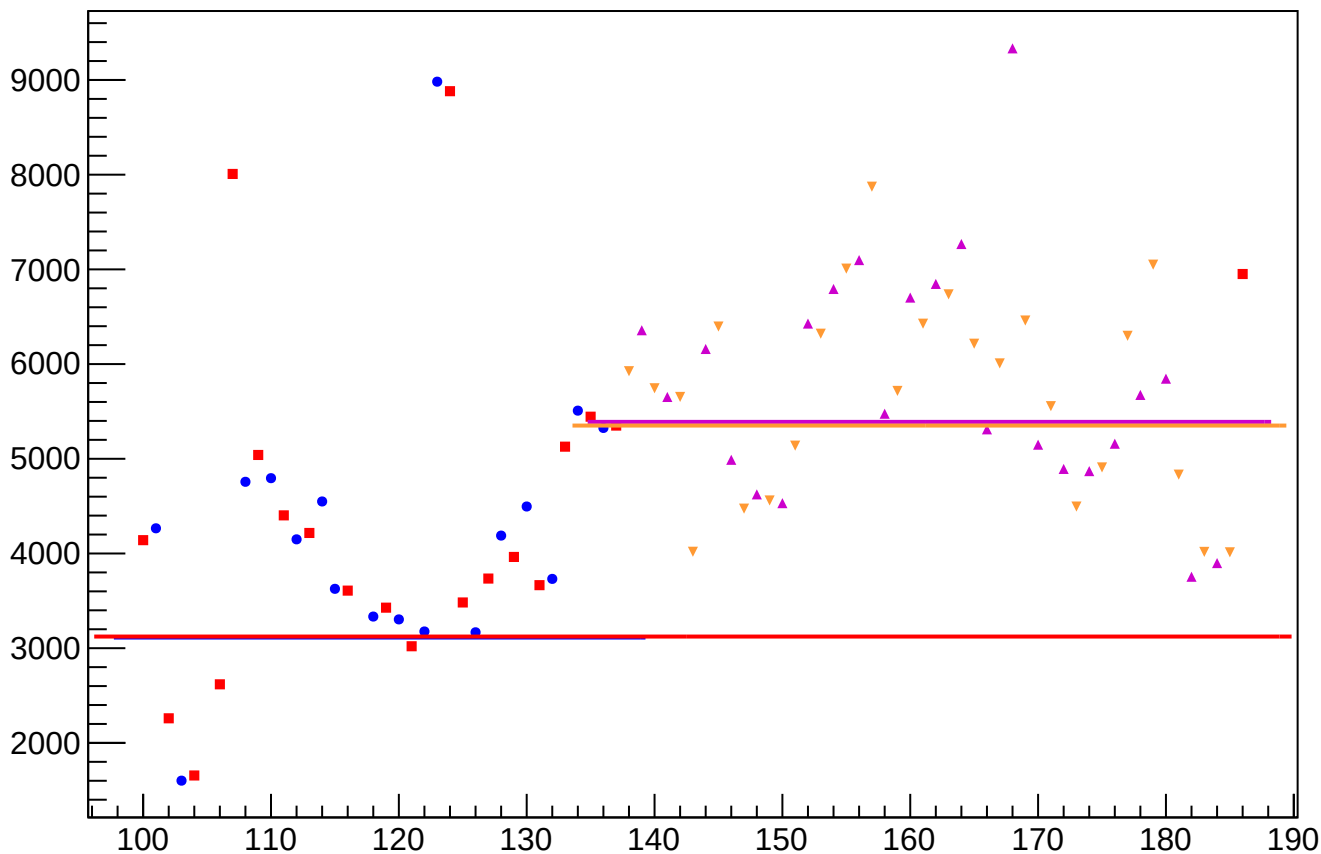
Right: 1311.596+/-916.665  $\chi^2/\text{NDF}$ : 47.5/36

In: 2419.079+/-930.350  $\chi^2/\text{NDF}$ : 27.6/39

Out: 981.921+/-902.683  $\chi^2/\text{NDF}$ : 64.7/44

All: 1678.813+/-647.853  $\chi^2/\text{NDF}$ : 93.5/84

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



Right In: 3112.592 $\pm$ 0.929  $\chi^2$ /NDF: 1882559.8/16

Left Out: 5350.804 $\pm$ 0.900  $\chi^2$ /NDF: 1241497.9/24

Right Out: 3122.919 $\pm$ 0.892  $\chi^2$ /NDF: 2240688.5/19

Left In: 5389.724 $\pm$ 0.932  $\chi^2$ /NDF: 1309863.0/22

Left: 5369.587 $\pm$ 0.648  $\chi^2$ /NDF: 2552263.0/47

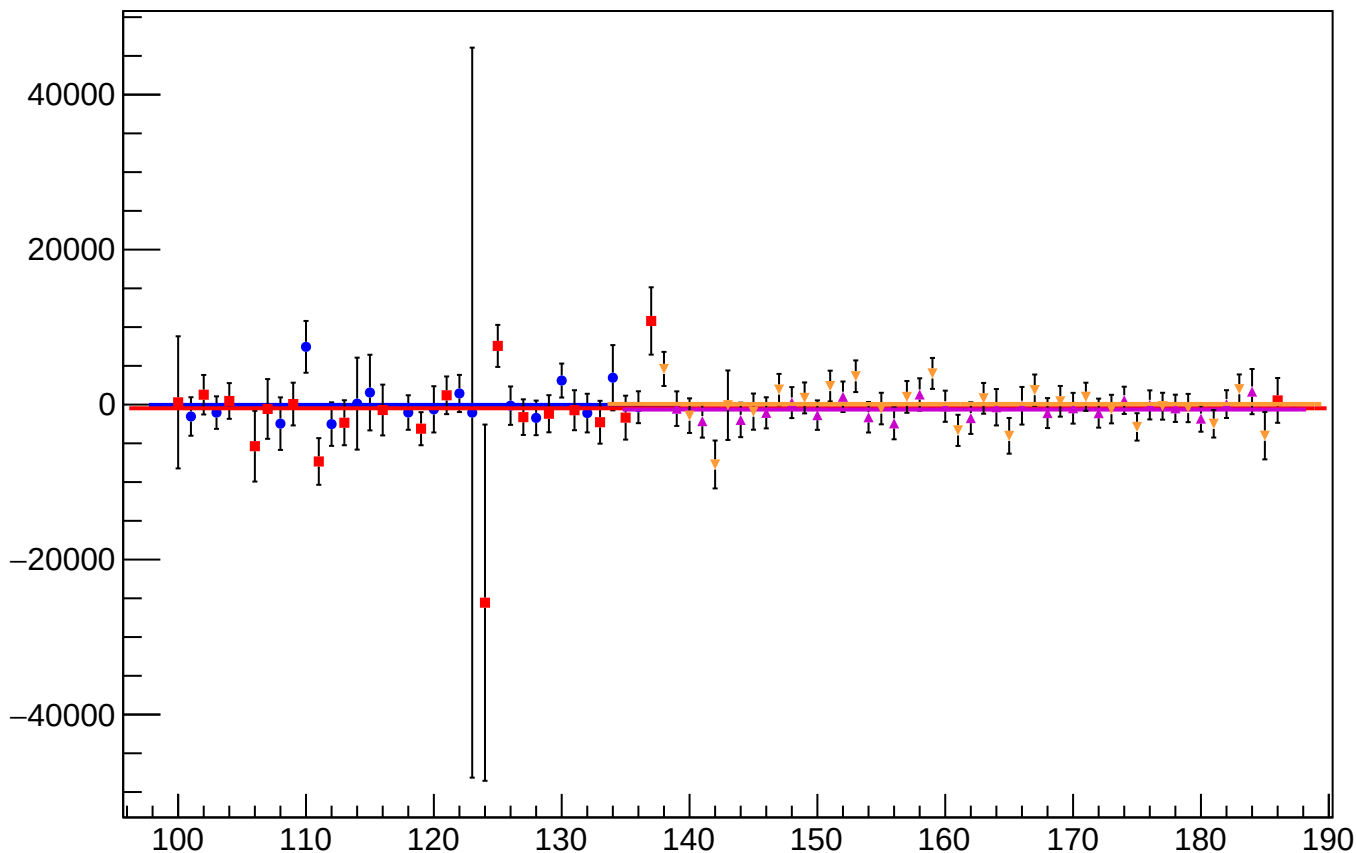
Right: 3117.962 $\pm$ 0.643  $\chi^2$ /NDF: 4123312.6/36

In: 4246.907 $\pm$ 0.658  $\chi^2$ /NDF: 6187788.9/39

Out: 4226.857 $\pm$ 0.634  $\chi^2$ /NDF: 6572018.7/44

All: 4236.507 $\pm$ 0.456  $\chi^2$ /NDF: 12760289.4/80

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



Right In:  $-38.244 \pm 662.838$   $\chi^2/\text{NDF}$ : 11.1/16

Left Out:  $86.214 \pm 411.530$   $\chi^2/\text{NDF}$ : 36.0/24

Right Out:  $-476.623 \pm 646.443$   $\chi^2/\text{NDF}$ : 27.2/19

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

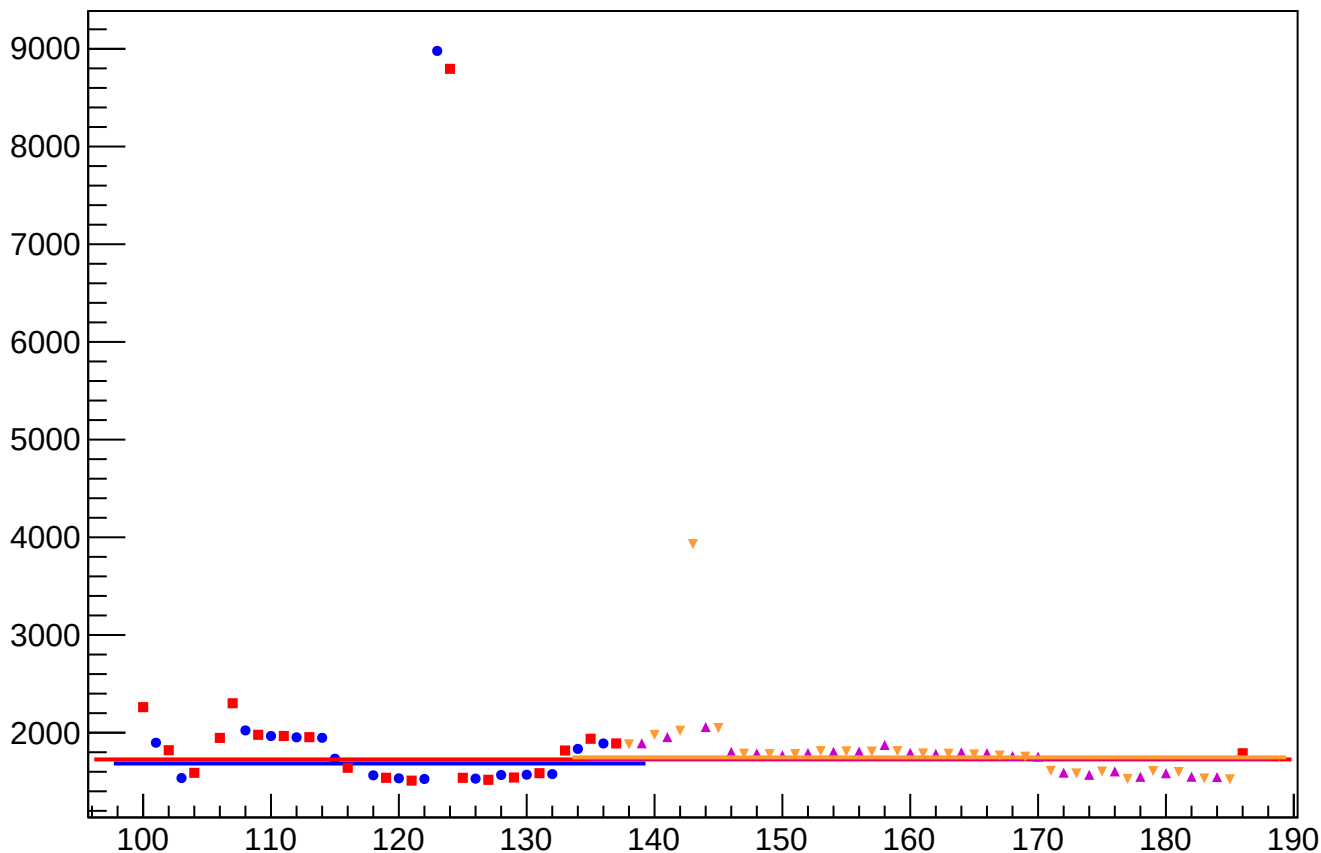
Right:  $-262.921 \pm 462.792$   $\chi^2/\text{NDF}$ : 38.6/36

In:  $-469.158 \pm 353.352$   $\chi^2/\text{NDF}$ : 17.9/39

Out:  $-76.103 \pm 347.154$   $\chi^2/\text{NDF}$ : 63.8/44

All:  $-269.153 \pm 247.637$   $\chi^2/\text{NDF}$ : 82.3/84

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



Right In: 1684.672 $\pm$ 0.469  $\chi^2$ /NDF: 194019.0/16

Left Out: 1747.320 $\pm$ 0.291  $\chi^2$ /NDF: 698192.3/24

Right Out: 1726.317 $\pm$ 0.455  $\chi^2$ /NDF: 393557.1/19

Left In: 1735.540 $\pm$ 0.295  $\chi^2$ /NDF: 206766.6/22

Left: 1741.517 $\pm$ 0.207  $\chi^2$ /NDF: 905766.2/47

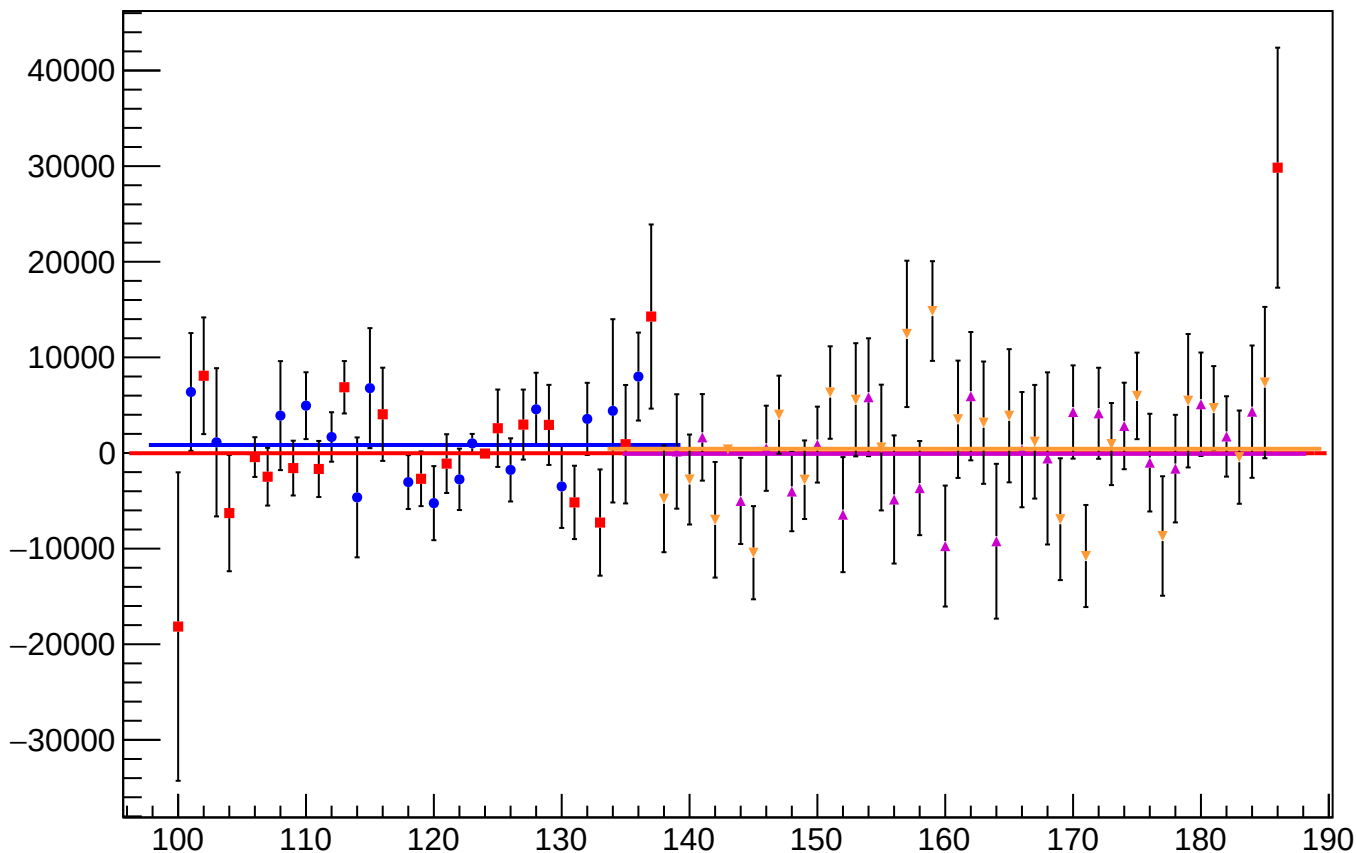
Right: 1706.102 $\pm$ 0.327  $\chi^2$ /NDF: 591638.6/36

In: 1721.084 $\pm$ 0.250  $\chi^2$ /NDF: 409217.3/39

Out: 1741.227 $\pm$ 0.245  $\chi^2$ /NDF: 1093260.8/44

All: 1731.346 $\pm$ 0.175  $\chi^2$ /NDF: 1505789.0/84

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



Right In: 838.236 $\pm$ 706.837  $\chi^2/\text{NDF}$ : 15.6/16

Left Out: 442.187 $\pm$ 440.335  $\chi^2/\text{NDF}$ : 33.9/24

Right Out: -23.336 $\pm$ 357.163  $\chi^2/\text{NDF}$ : 26.4/19

Left In: -88.508 $\pm$ 1094.838  $\chi^2/\text{NDF}$ : 13.4/22

Left: 368.296 $\pm$ 408.531  $\chi^2/\text{NDF}$ : 47.5/47

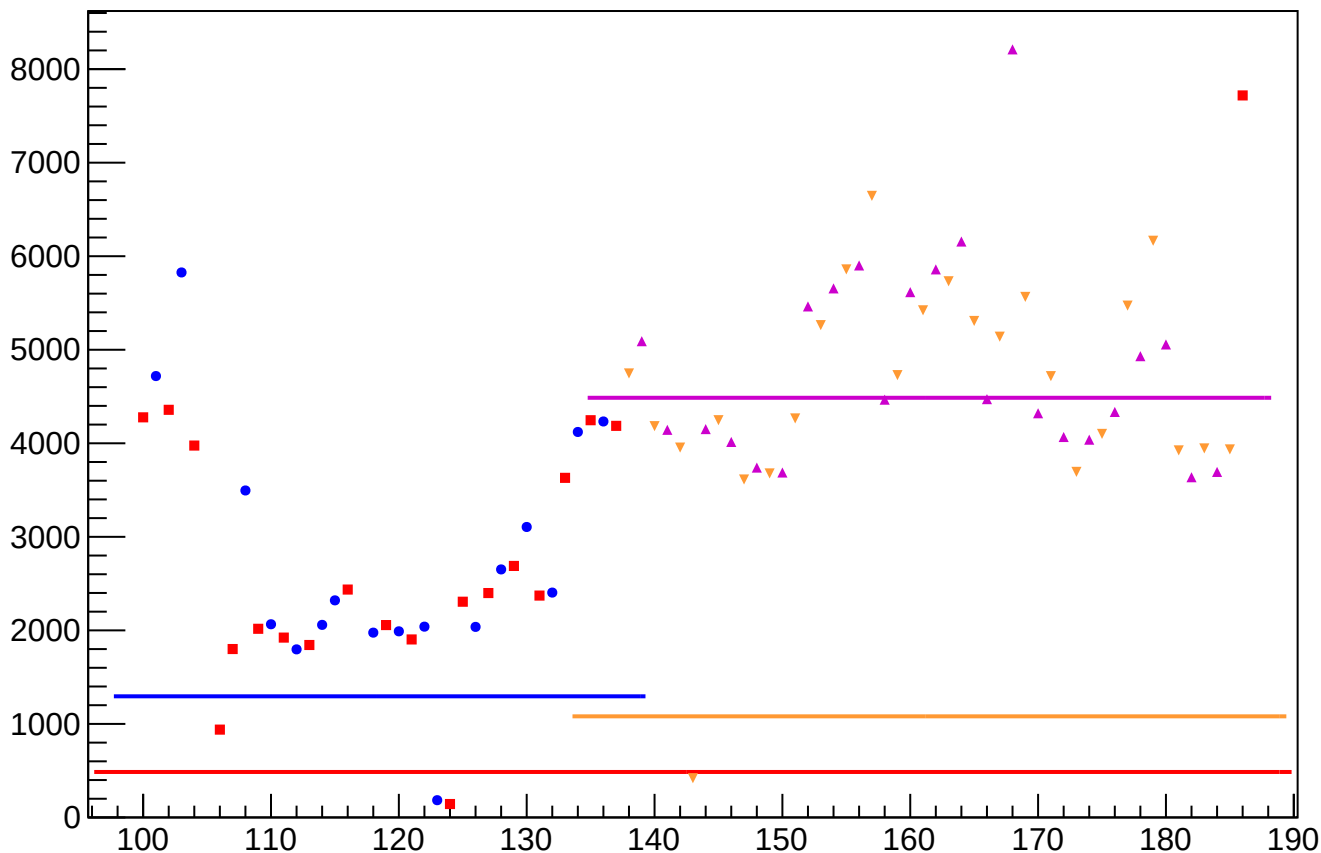
Right: 151.902 $\pm$ 318.778  $\chi^2/\text{NDF}$ : 43.2/36

In: 565.598 $\pm$ 593.832  $\chi^2/\text{NDF}$ : 29.5/39

Out: 161.398 $\pm$ 277.387  $\chi^2/\text{NDF}$ : 61.0/44

All: 233.795 $\pm$ 251.320  $\chi^2/\text{NDF}$ : 90.9/84

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



Right In: 1295.065+/-0.500

$\chi^2/\text{NDF}$ : 6509427.9/16

Left Out: 1081.004+/-0.311

$\chi^2/\text{NDF}$ : 24456244.2/24

Right Out: 486.265+/-0.253

$\chi^2/\text{NDF}$ : 10781408.1/19

Left In: 4486.570+/-0.774

$\chi^2/\text{NDF}$ : 1181598.1/22

Left: 1555.179+/-0.289

$\chi^2/\text{NDF}$ : 42294704.7/47

Right: 650.770+/-0.225

$\chi^2/\text{NDF}$ : 19376851.0/36

In: 2233.971+/-0.420

$\chi^2/\text{NDF}$ : 19686285.5/39

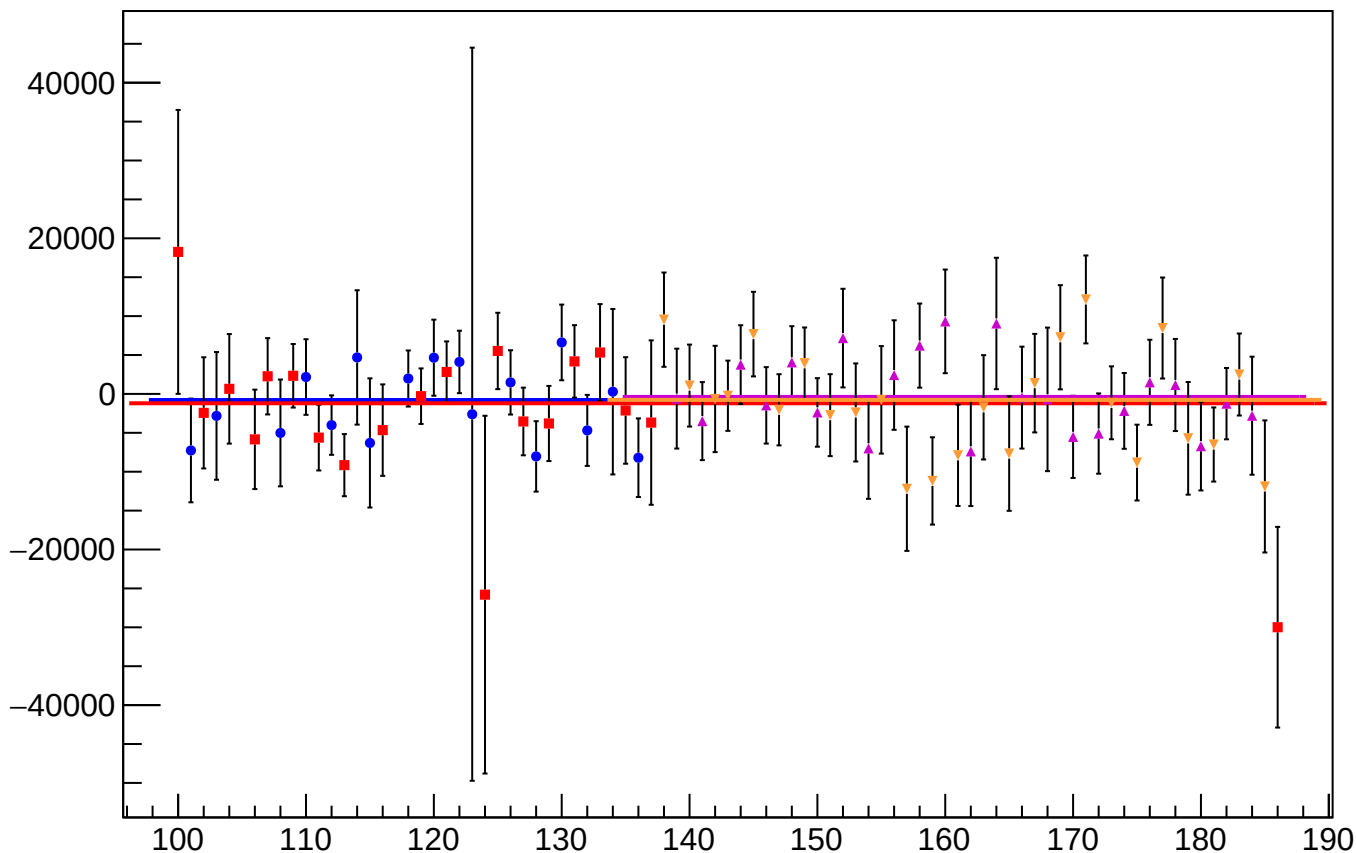
Out: 722.276+/-0.196

$\chi^2/\text{NDF}$ : 37438328.7/44

All: 993.040+/-0.178

$\chi^2/\text{NDF}$ : 67763967.6/84

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



Right In:  $-786.677 \pm 1265.533$   $\chi^2/\text{NDF}$ : 14.7/16

Left Out:  $-766.008 \pm 1147.372$   $\chi^2/\text{NDF}$ : 29.9/24

Right Out:  $-1204.259 \pm 1189.090$   $\chi^2/\text{NDF}$ : 20.6/19

Left In:  $-388.944 \pm 1186.300$   $\chi^2/\text{NDF}$ : 14.2/22

Left:  $-583.764 \pm 824.733$   $\chi^2/\text{NDF}$ : 44.2/47

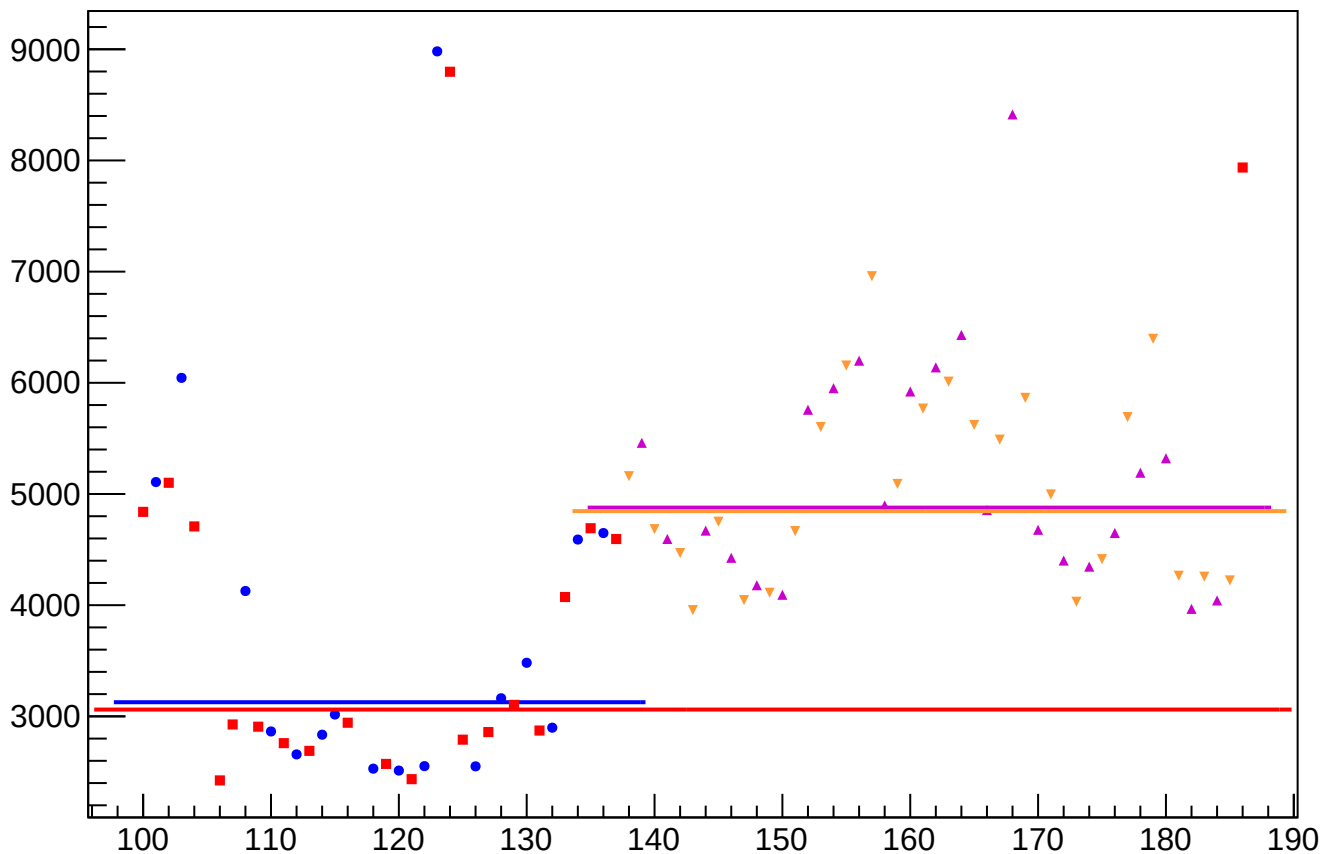
Right:  $-1008.460 \pm 866.578$   $\chi^2/\text{NDF}$ : 35.4/36

In:  $-574.971 \pm 865.497$   $\chi^2/\text{NDF}$ : 28.9/39

Out:  $-977.311 \pm 825.669$   $\chi^2/\text{NDF}$ : 50.6/44

All:  $-785.611 \pm 597.420$   $\chi^2/\text{NDF}$ : 79.7/84

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



Right In:  $3127.109 \pm 0.895$   $\chi^2/NDF: 942783.2/16$

Left Out:  $4845.779 \pm 0.811$   $\chi^2/NDF: 909173.9/24$

Right Out:  $3061.122 \pm 0.830$   $\chi^2/NDF: 1079678.2/19$

Left In:  $4877.456 \pm 0.839$   $\chi^2/NDF: 958623.2/22$

Left:  $4861.089 \pm 0.583$   $\chi^2/NDF: 1868533.9/47$

Right:  $3091.652 \pm 0.609$   $\chi^2/NDF: 2025383.2/36$

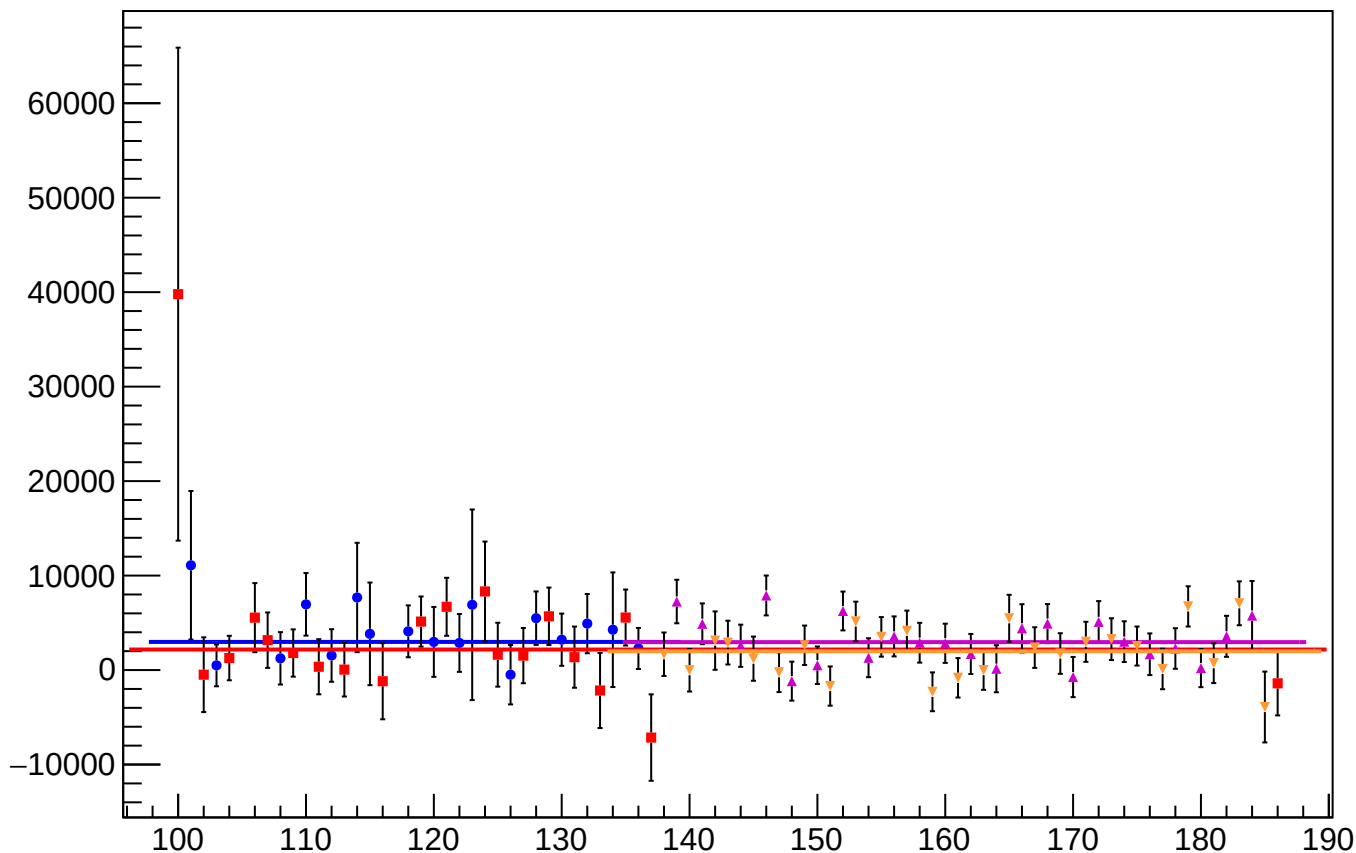
In:  $4058.783 \pm 0.612$   $\chi^2/NDF: 3937864.3/39$

Out:  $3974.170 \pm 0.580$   $\chi^2/NDF: 4352038.4/44$

All:  $4014.229 \pm 0.421$   $\chi^2/NDF: 8299967.9/84$



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



Right In: 2978.237+/-777.589  $\chi^2/\text{NDF}$ : 8.0/16

Left Out: 1985.469+/-443.190  $\chi^2/\text{NDF}$ :32.4/24

Right Out: 2173.612+/-725.081  $\chi^2/\text{NDF}$ : 19.3/19

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

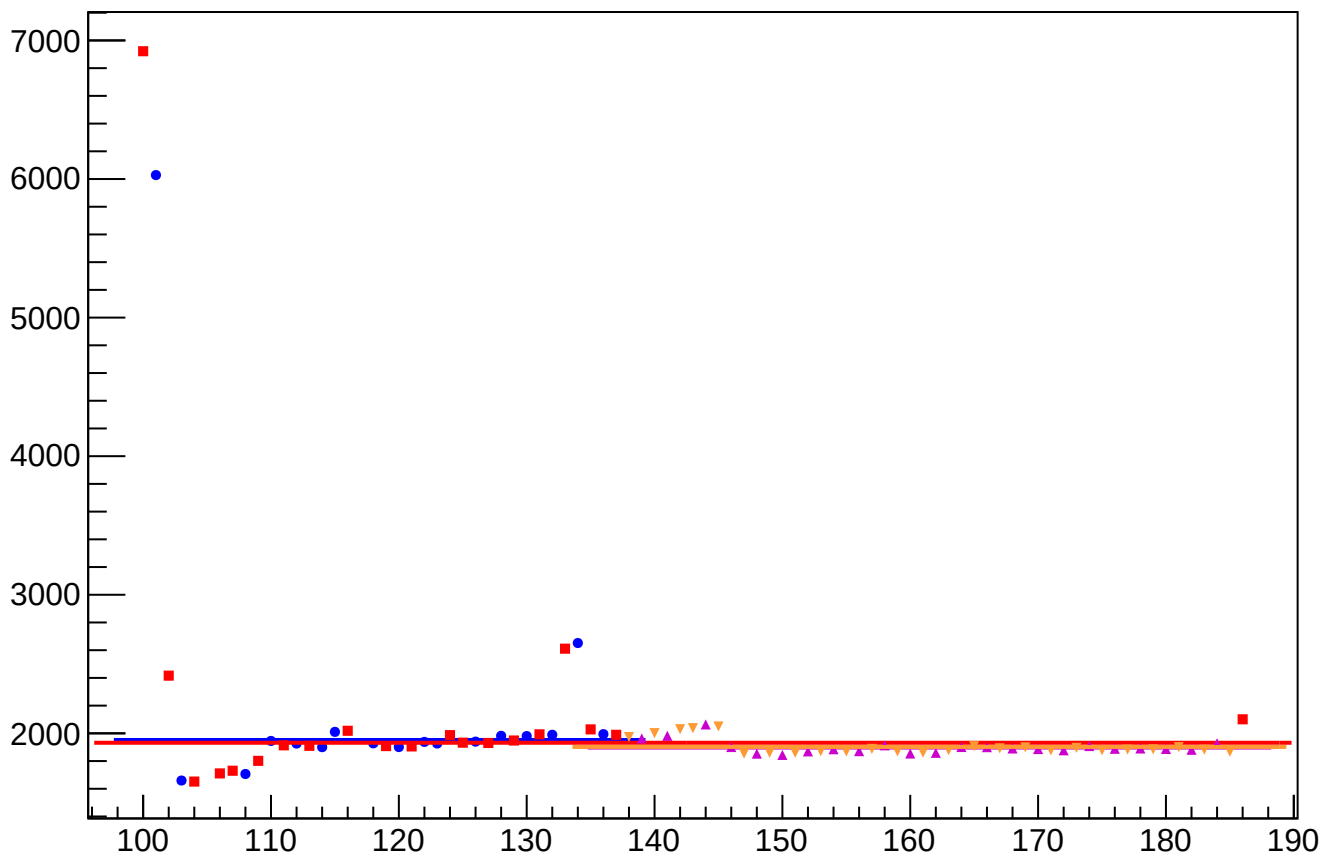
Right: 2547.842+/-530.301  $\chi^2/\text{NDF}$ : 27.9/36

In: 2961.589+/-392.421  $\chi^2/\text{NDF}$ :36.4/39

Out: 2036.641+/-378.146  $\chi^2/\text{NDF}$ :51.8/44

All: 2481.986+/-272.296  $\chi^2/\text{NDF}$ : 91.1/84

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



Right In: 1952.104+/-0.550  $\chi^2/\text{NDF}$ : 617388.5/16

Left Out: 1901.884+/-0.313  $\chi^2/\text{NDF}$ : 30446.9/24

Right Out: 1932.064+/-0.512  $\chi^2/\text{NDF}$ : 222710.2/19

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

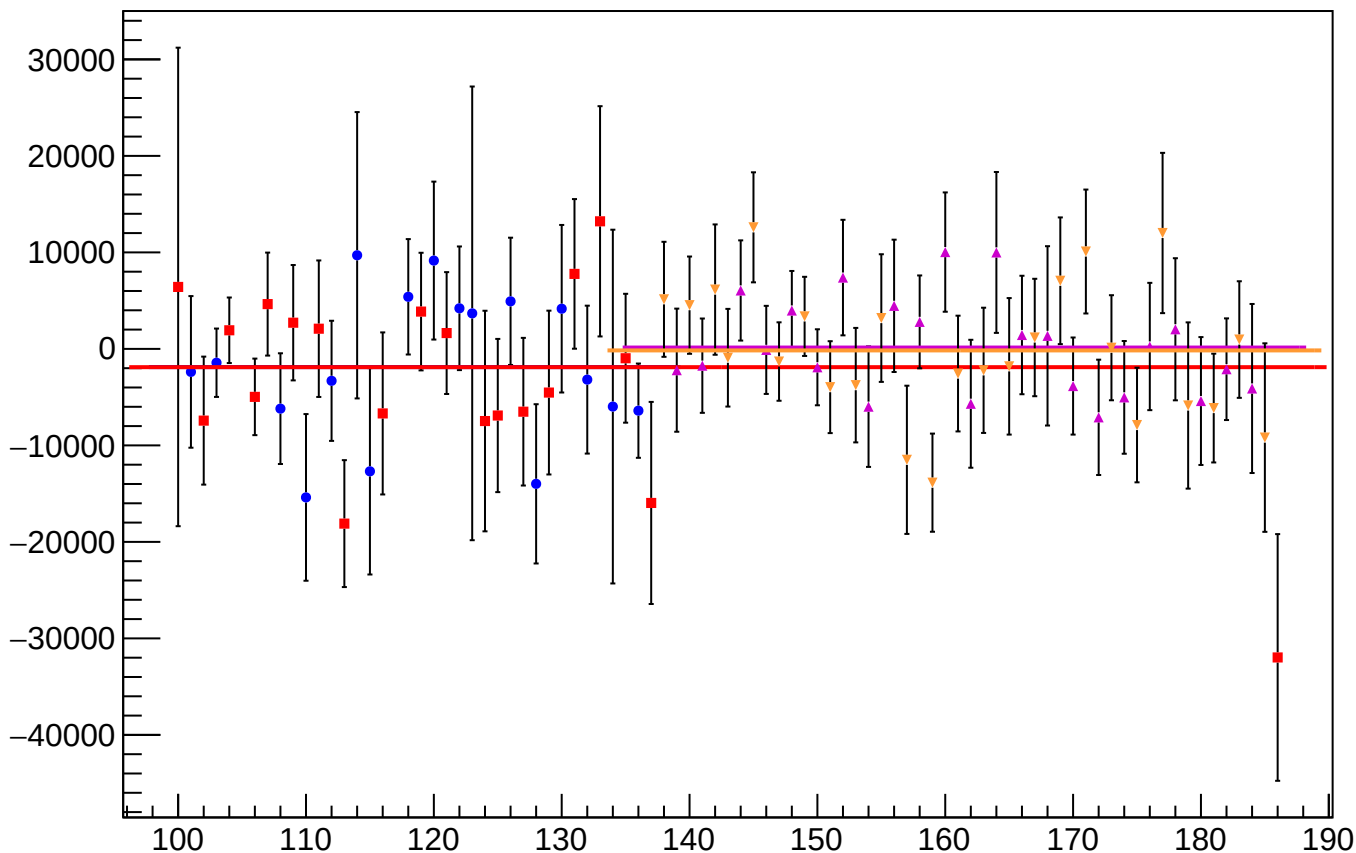
Right: 1941.362+/-0.375  $\chi^2/\text{NDF}$ : 840810.8/36

In: 1911.374+/-0.277  $\chi^2/\text{NDF}$ : 645931.1/39

Out: 1910.119+/-0.267  $\chi^2/\text{NDF}$ : 255687.8/44

All: 1910.723+/-0.192  $\chi^2/\text{NDF}$ : 901629.6/84

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



Right In: -1885.502 $\pm$ 1665.011  $\chi^2$ /NDF: 13.6/16

Left Out: -157.539 $\pm$ 1165.844  $\chi^2$ /NDF:29.5/24

Right Out: -1894.104 $\pm$ 1469.831  $\chi^2$ /NDF: 24.3/19

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

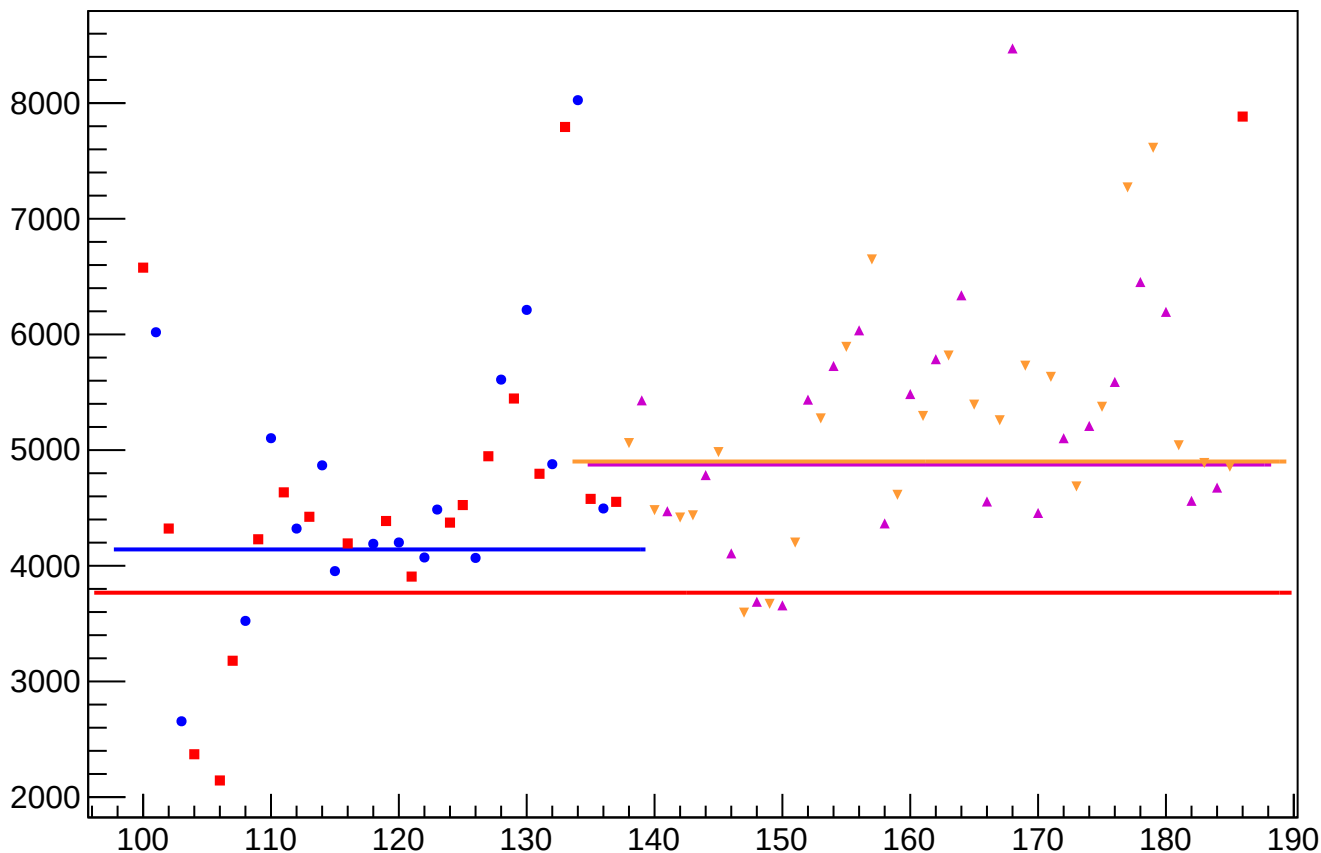
Right: -1890.337 $\pm$ 1101.904  $\chi^2$ /NDF: 37.9/36

In: -546.168 $\pm$ 968.627  $\chi^2$ /NDF:29.3/39

Out: -828.163 $\pm$ 913.401  $\chi^2$ /NDF:54.7/44

All: -695.433 $\pm$ 664.539  $\chi^2$ /NDF: 84.0/84

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



Right In: 4141.263+/-1.177  $\chi^2/\text{NDF}$ : 818140.6/16

Left Out: 4901.357+/-0.824  $\chi^2/\text{NDF}$ : 1136916.0/24

Right Out: 3767.121+/-1.039  $\chi^2/\text{NDF}$ : 1486938.9/19

Left In: 4875.112+/-0.842  $\chi^2/\text{NDF}$ : 1229198.0/22

Left: 4888.513+/-0.589  $\chi^2/\text{NDF}$ : 2366610.1/47

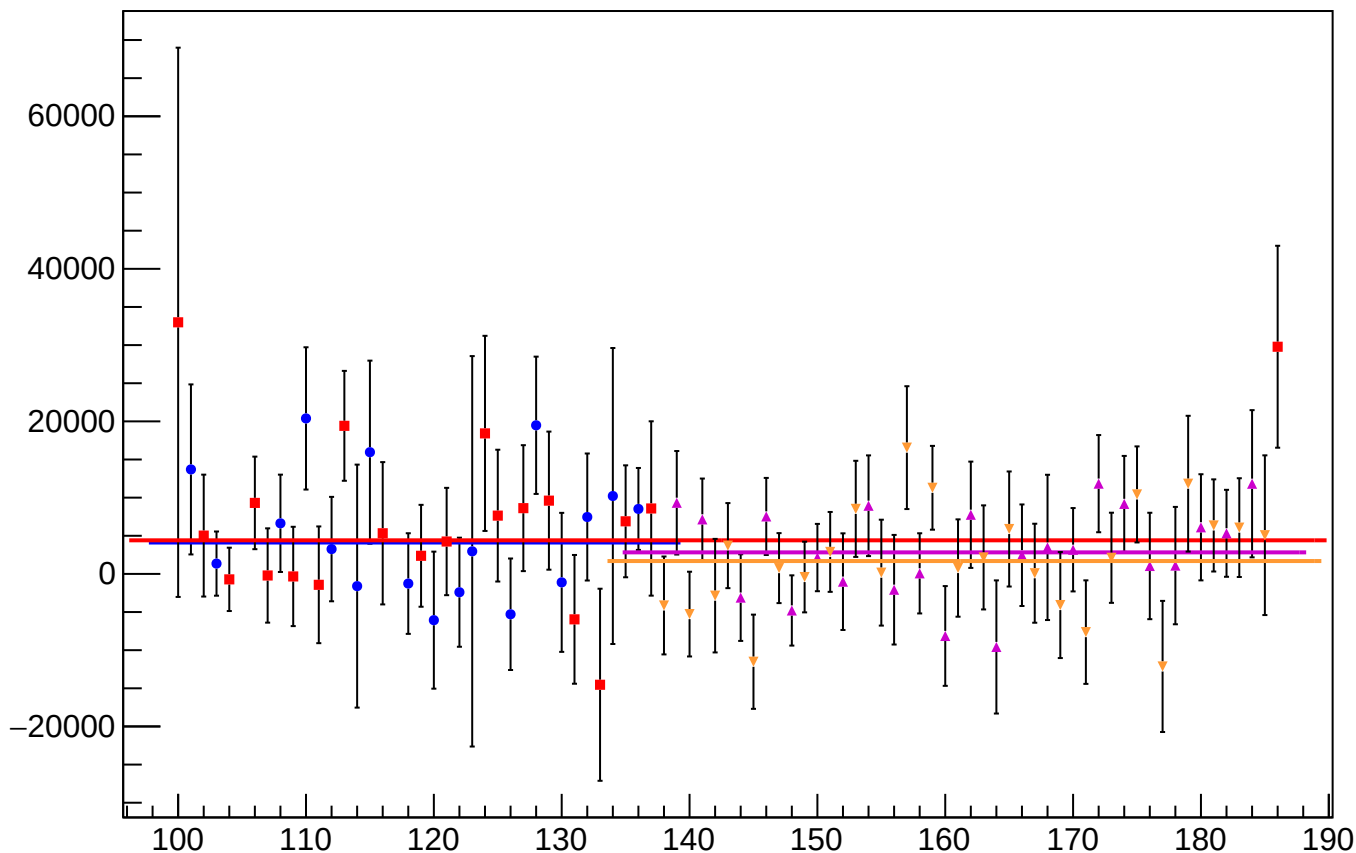
Right: 3930.988+/-0.779  $\chi^2/\text{NDF}$ : 2361836.7/36

In: 4626.750+/-0.685  $\chi^2/\text{NDF}$ : 2304365.9/39

Out: 4463.339+/-0.646  $\chi^2/\text{NDF}$ : 3354898.8/44

All: 4540.254+/-0.470  $\chi^2/\text{NDF}$ : 5689394.3/84

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



Right In: 4116.431+/-1876.246  $\chi^2/\text{NDF}$ : 14.1/16

Left Out: 1686.531+/-1261.650  $\chi^2/\text{NDF}$ : 25.4/24

Right Out: 4403.721+/-1713.839  $\chi^2/\text{NDF}$ : 18.5/19

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

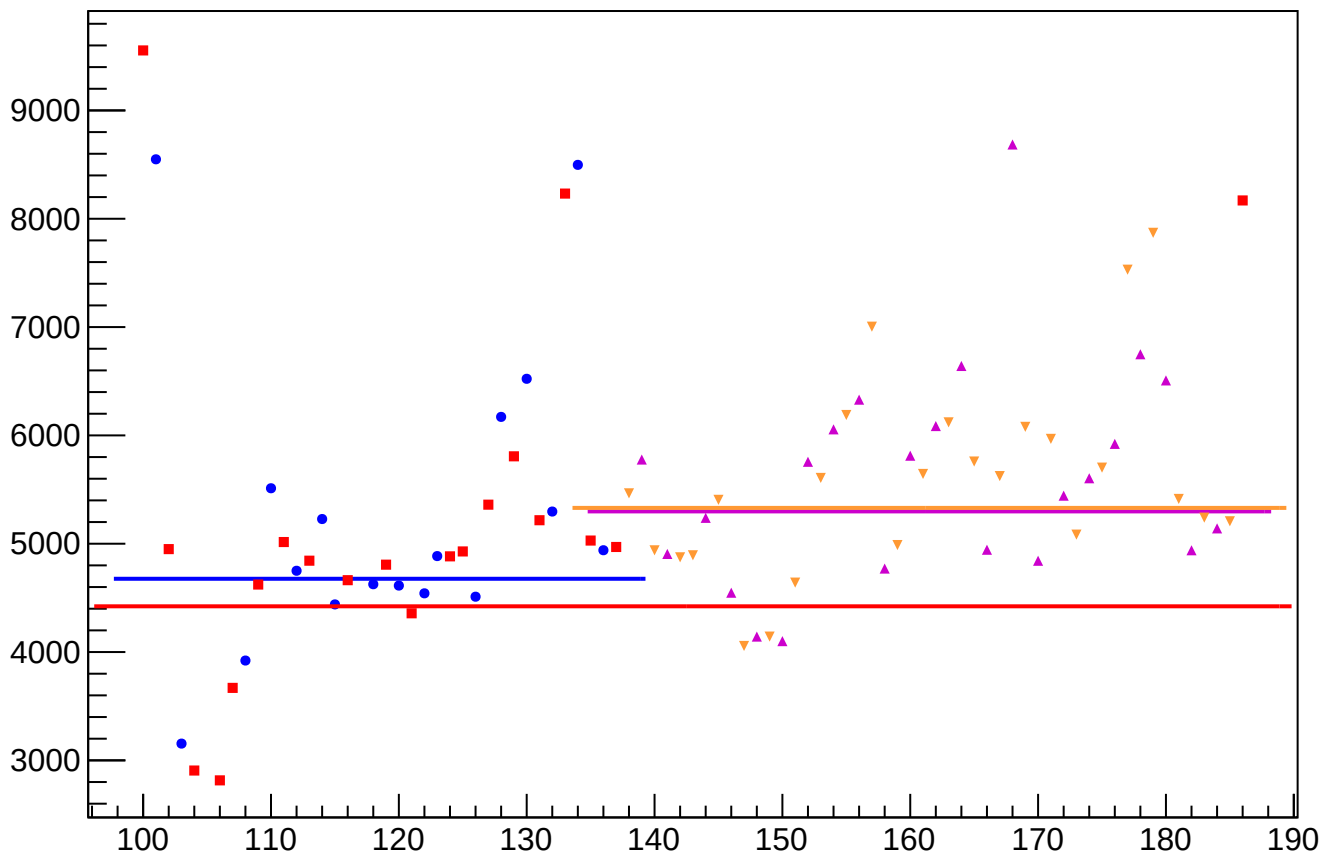
Right: 4273.046+/-1265.395  $\chi^2/\text{NDF}$ : 32.7/36

In: 3238.208+/-1062.105  $\chi^2/\text{NDF}$ : 32.4/39

Out: 2641.513+/-1016.033  $\chi^2/\text{NDF}$ : 45.6/44

All: 2926.638+/-734.191  $\chi^2/\text{NDF}$ : 78.2/84

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



Right In: 4676.405+/-1.327  $\chi^2/\text{NDF}$ : 783034.3/16

Left Out: 5330.725+/-0.892  $\chi^2/\text{NDF}$ : 868061.7/24

Right Out: 4422.208+/-1.205  $\chi^2/\text{NDF}$ : 996478.0/19

Left In: 5298.329+/-0.911  $\chi^2/\text{NDF}$ : 956021.6/22

Left: 5314.867+/-0.637  $\chi^2/\text{NDF}$ : 1824728.8/47

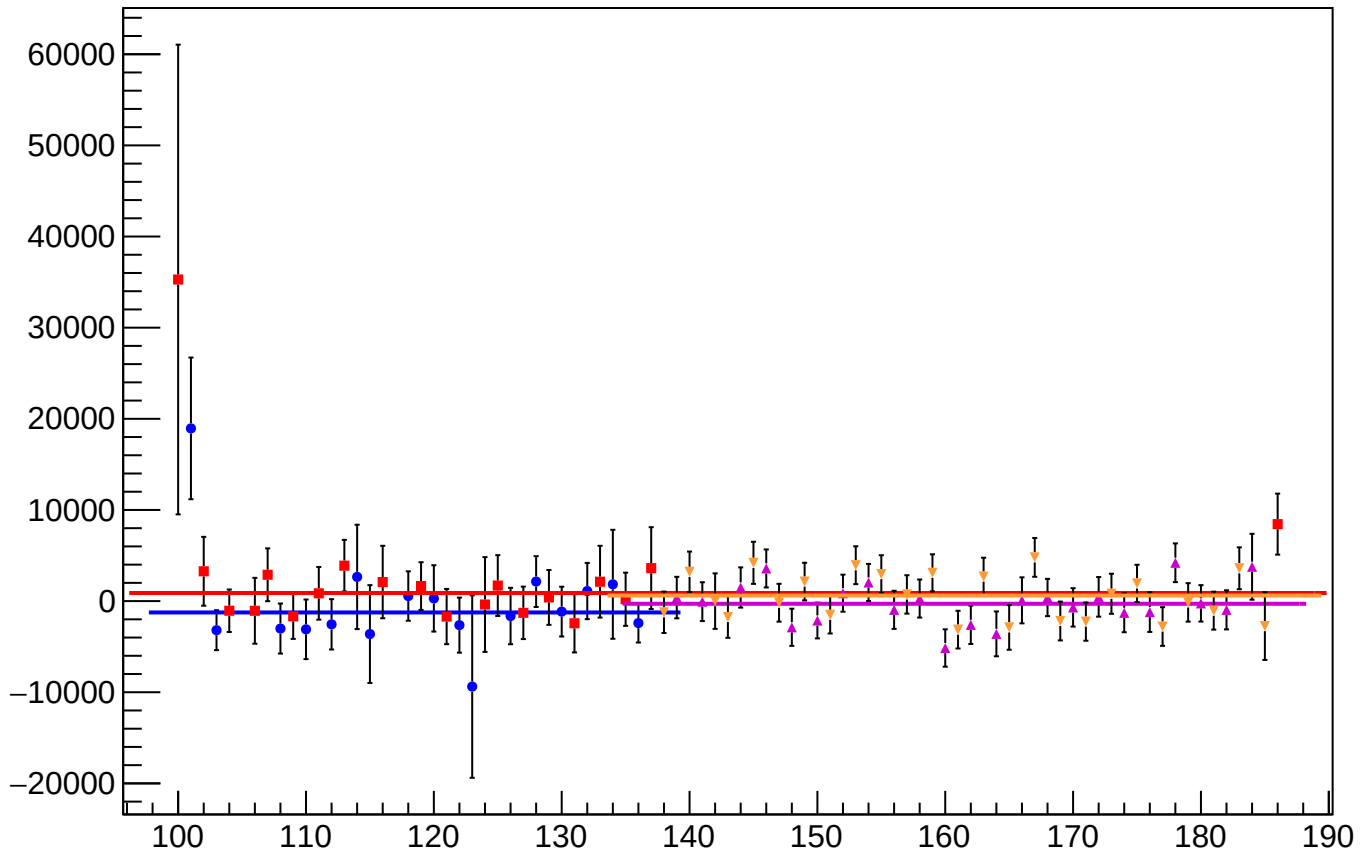
Right: 4537.110+/-0.892  $\chi^2/\text{NDF}$ : 1799629.0/36

In: 5099.036+/-0.751  $\chi^2/\text{NDF}$ : 1888387.0/39

Out: 5009.047+/-0.717  $\chi^2/\text{NDF}$ : 2231742.9/44

All: 5051.957+/-0.519  $\chi^2/\text{NDF}$ : 4127641.2/84

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



Right In: -1245.595 $\pm$ 767.454  $\chi^2$ /NDF: 13.3/16

Left Out: 612.314 $\pm$ 438.264  $\chi^2$ /NDF: 32.7/24

Right Out: 890.616 $\pm$ 715.508  $\chi^2$ /NDF: 14.2/19

Left In: -293.009 $\pm$ 449.575  $\chi^2$ /NDF: 23.6/22

Left: 171.185 $\pm$ 313.822  $\chi^2$ /NDF: 58.4/47

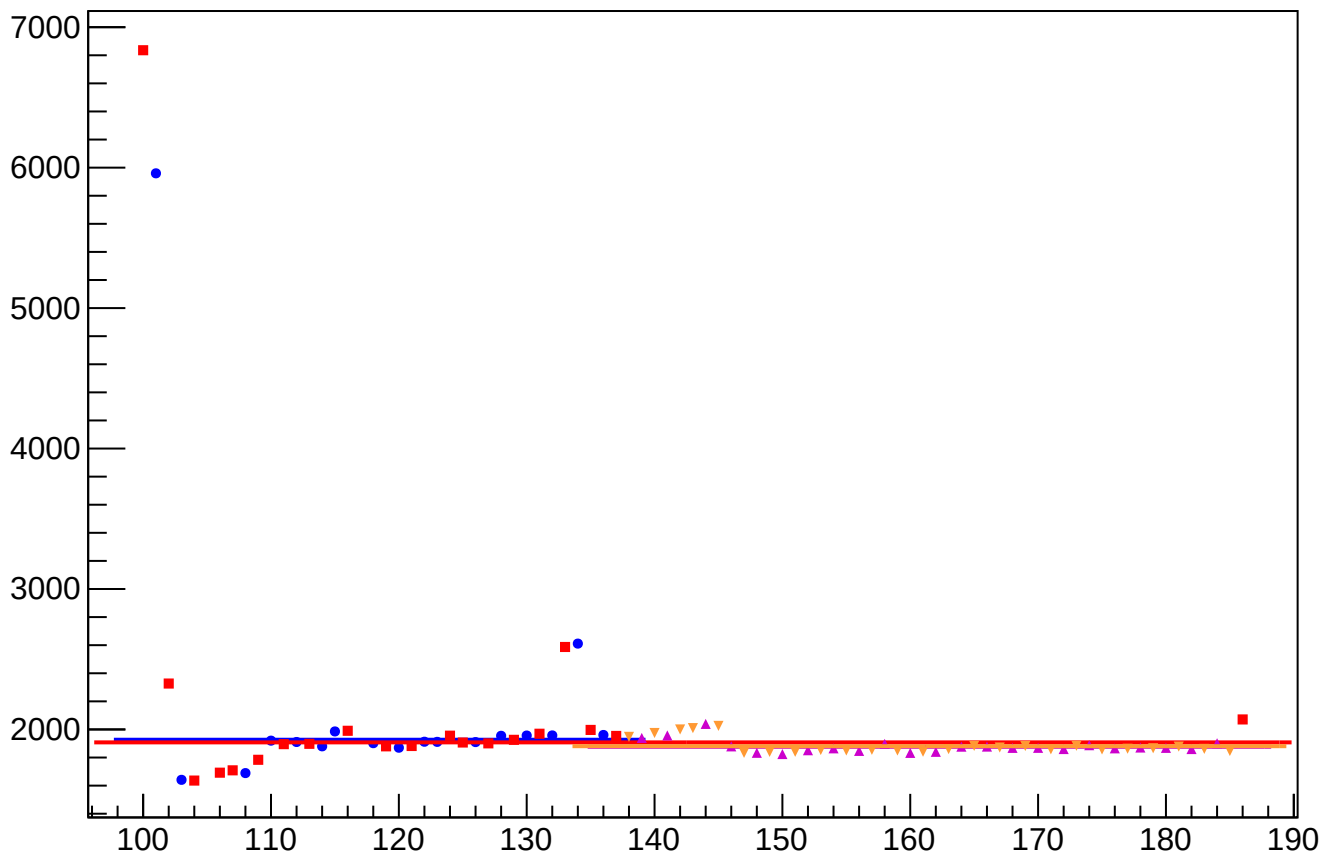
Right: -102.753 $\pm$ 523.342  $\chi^2$ /NDF: 31.6/36

In: -536.384 $\pm$ 387.916  $\chi^2$ /NDF: 38.1/39

Out: 688.241 $\pm$ 373.728  $\chi^2$ /NDF: 47.0/44

All: 98.734 $\pm$ 269.142  $\chi^2$ /NDF: 90.2/84

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



Right In: 1926.691 $\pm$ 0.543  $\chi^2$ /NDF: 615898.2/16

Left Out: 1880.808 $\pm$ 0.310  $\chi^2$ /NDF: 28655.5/24

Right Out: 1907.923 $\pm$ 0.505  $\chi^2$ /NDF: 215974.4/19

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: 1916.630 $\pm$ 0.370  $\chi^2$ /NDF: 832513.8/36

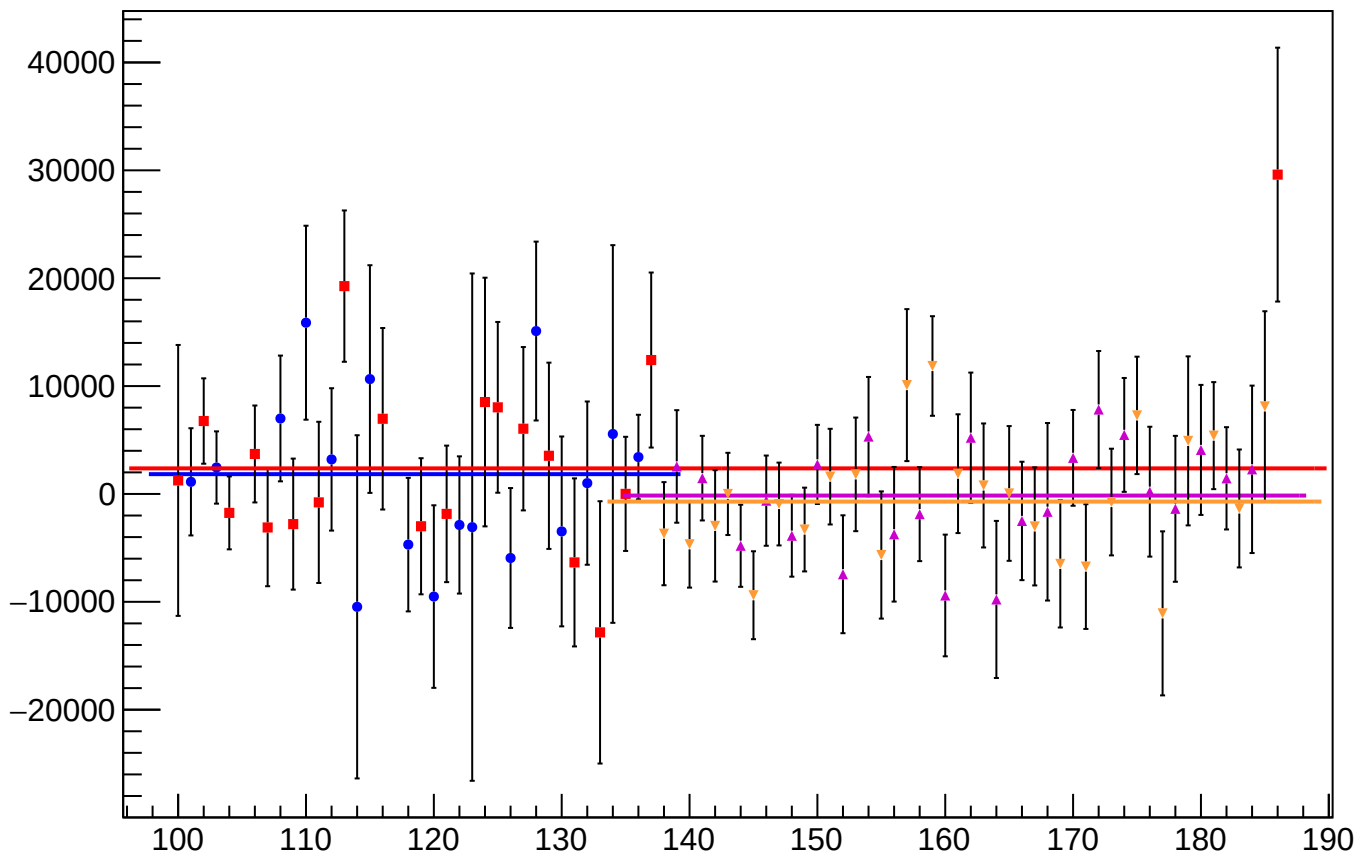
In: 1889.461 $\pm$ 0.274  $\chi^2$ /NDF: 642719.9/39

Out: 1888.229 $\pm$ 0.264  $\chi^2$ /NDF: 246725.1/44

All: 1888.822 $\pm$ 0.190  $\chi^2$ /NDF: 889455.4/84



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



Right In: 1834.690 $\pm$ 1559.964  $\chi^2/\text{NDF}$ : 12.7/16

Left Out: -707.785 $\pm$ 1017.719  $\chi^2/\text{NDF}$ : 27.1/24

Right Out: 2371.078 $\pm$ 1405.468  $\chi^2/\text{NDF}$ : 23.0/19

Left In: -150.495 $\pm$ 1053.655  $\chi^2/\text{NDF}$ : 16.9/22

Left: -438.806 $\pm$ 732.011  $\chi^2/\text{NDF}$ : 44.2/47

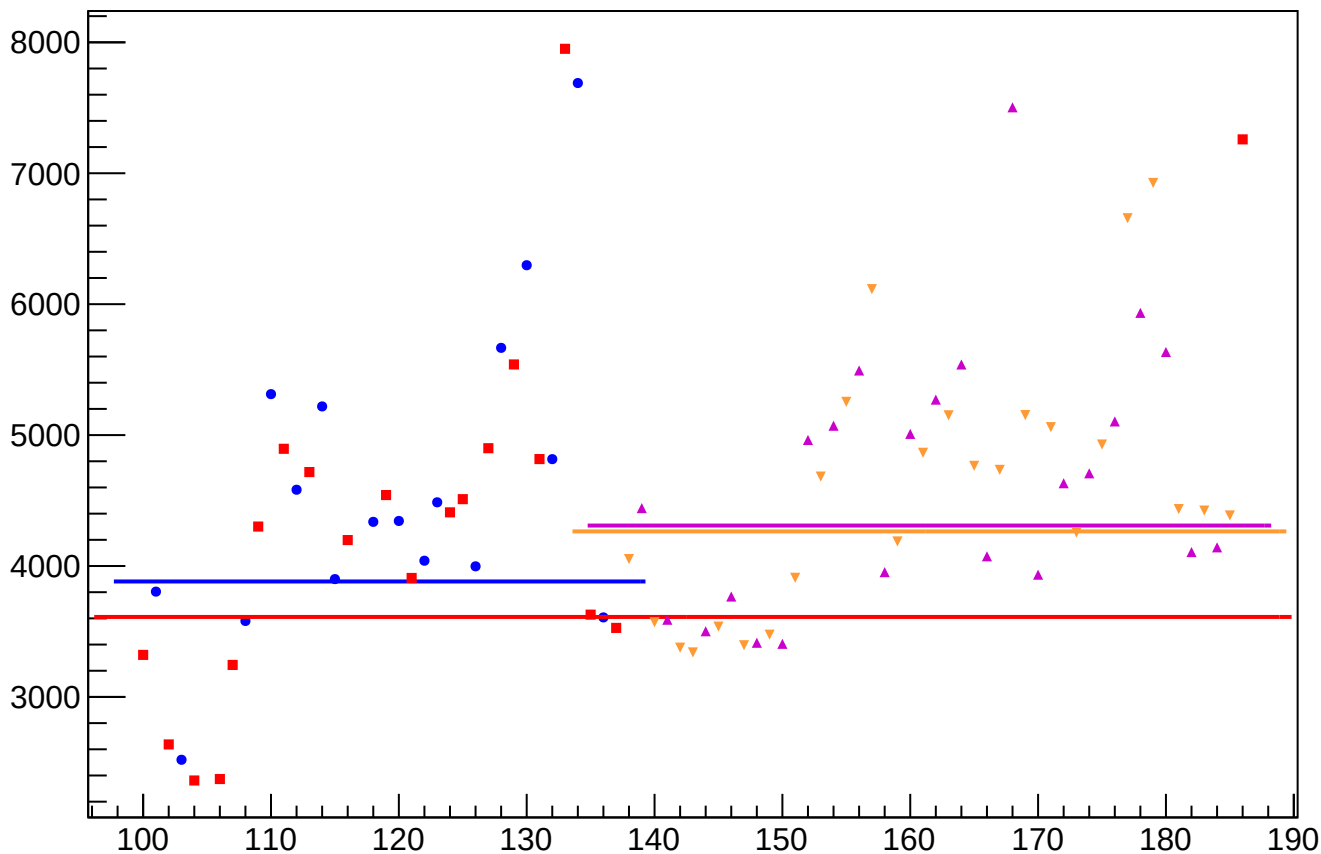
Right: 2130.754 $\pm$ 1044.177  $\chi^2/\text{NDF}$ : 35.7/36

In: 471.438 $\pm$ 873.144  $\chi^2/\text{NDF}$ : 30.7/39

Out: 351.279 $\pm$ 824.303  $\chi^2/\text{NDF}$ : 53.2/44

All: 407.904 $\pm$ 599.393  $\chi^2/\text{NDF}$ : 83.9/84

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



Right In: 3881.913 $\pm$ 1.103  $\chi^2$ /NDF: 821979.1/16

Left Out: 4264.433 $\pm$ 0.720  $\chi^2$ /NDF: 1354900.8/24

Right Out: 3610.968 $\pm$ 0.994  $\chi^2$ /NDF: 1436960.9/19

Left In: 4309.034 $\pm$ 0.745  $\chi^2$ /NDF: 1305133.3/22

Left: 4285.960 $\pm$ 0.518  $\chi^2$ /NDF: 2661888.1/47

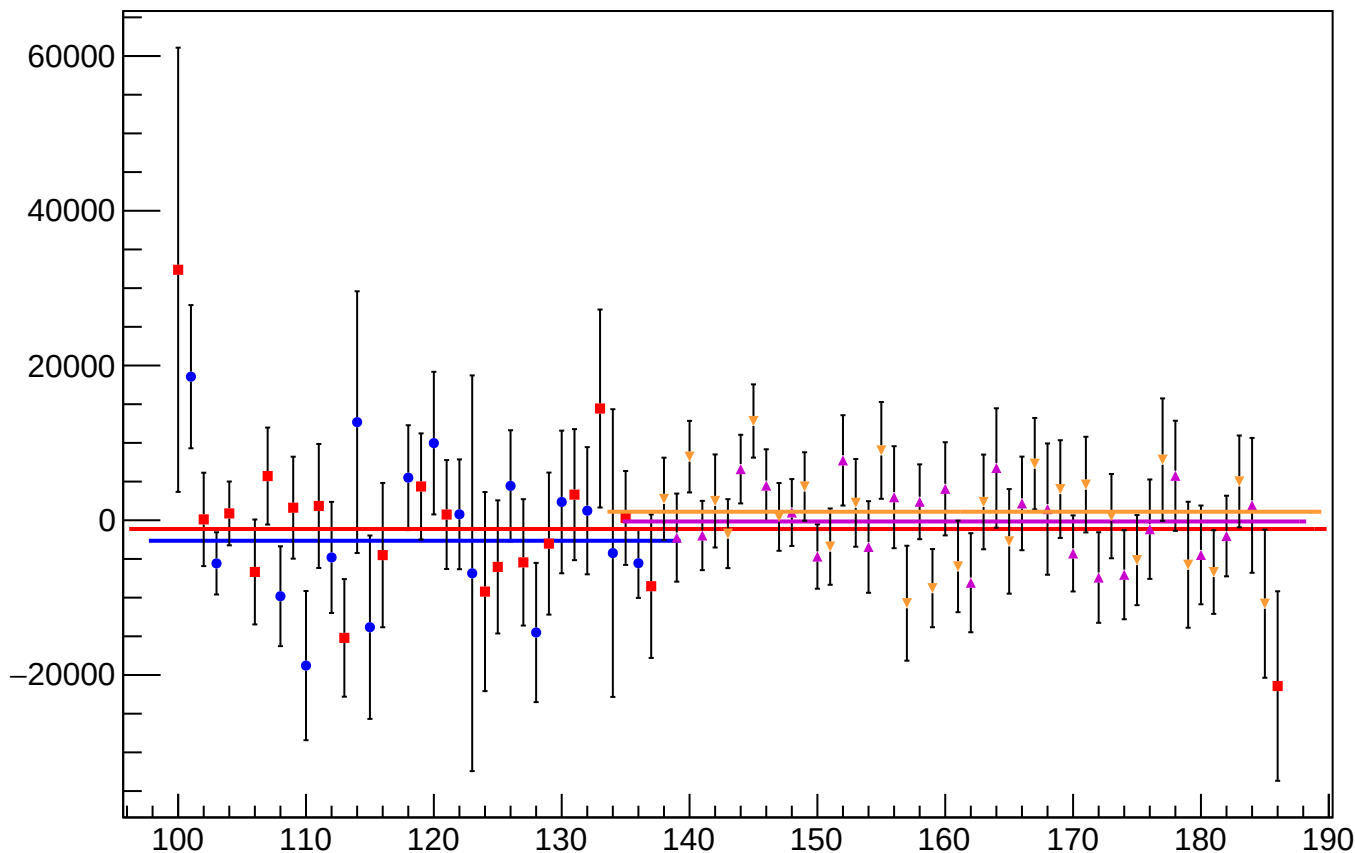
Right: 3732.363 $\pm$ 0.738  $\chi^2$ /NDF: 2292241.9/36

In: 4175.222 $\pm$ 0.617  $\chi^2$ /NDF: 2230074.2/39

Out: 4039.655 $\pm$ 0.583  $\chi^2$ /NDF: 3075490.7/44

All: 4103.541 $\pm$ 0.424  $\chi^2$ /NDF: 5331057.8/84

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



Right In: -2650.826 $\pm$ 1813.388  $\chi^2$ /NDF: 18.9/16

Left Out: 1102.204 $\pm$ 1126.663  $\chi^2$ /NDF: 28.6/24

Right Out: -1127.614 $\pm$ 1677.273  $\chi^2$ /NDF: 14.3/19

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

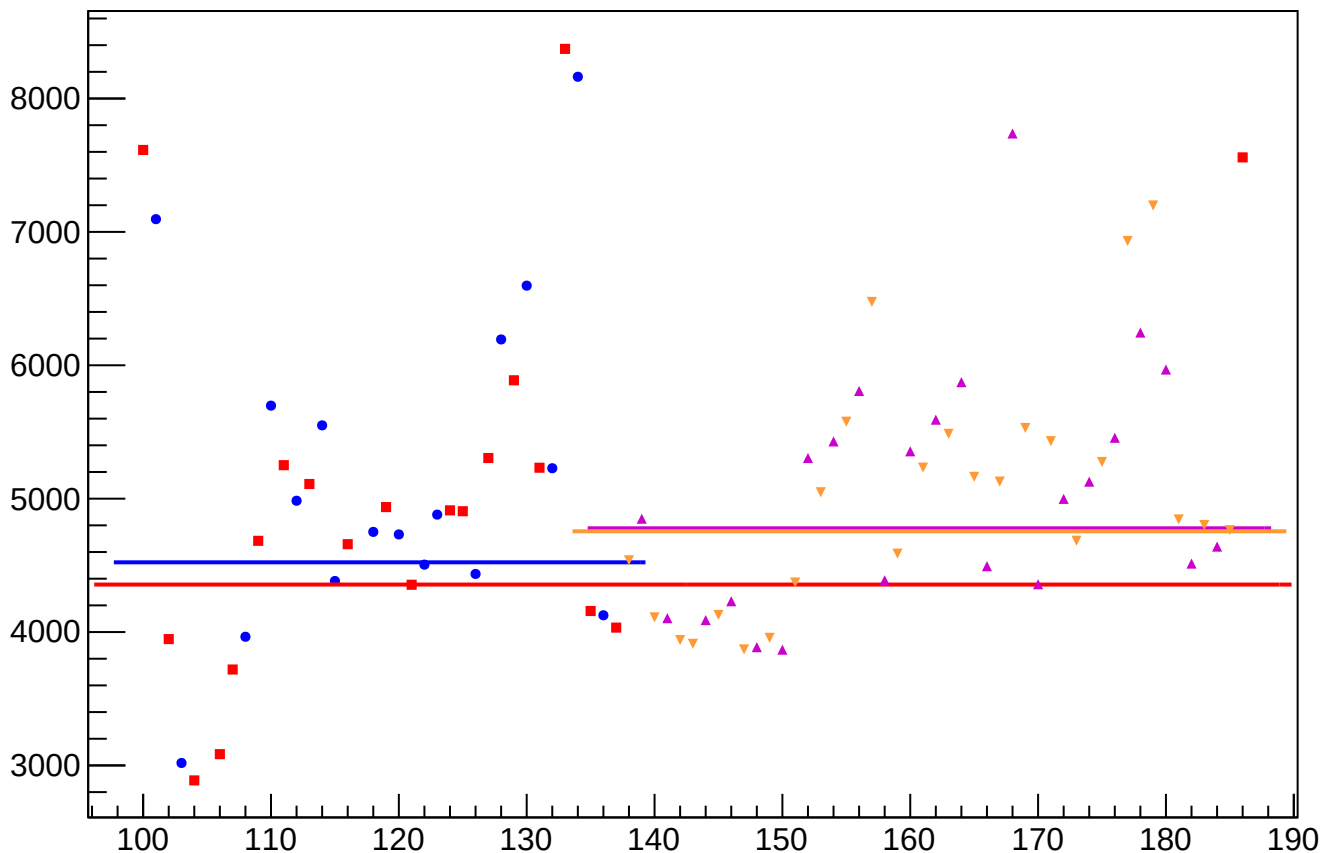
Right: -1829.914 $\pm$ 1231.323  $\chi^2$ /NDF: 33.6/36

In: -883.678 $\pm$ 978.074  $\chi^2$ /NDF: 35.7/39

Out: 408.907 $\pm$ 935.252  $\chi^2$ /NDF: 44.1/44

All: -208.471 $\pm$ 675.955  $\chi^2$ /NDF: 80.7/84

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



Right In: 4522.775+/-1.282     $\chi^2/\text{NDF}$ : 776612.8/16

Left Out: 4755.383+/-0.797     $\chi^2/\text{NDF}$ : 953328.0/24

Right Out: 4356.145+/-1.180     $\chi^2/\text{NDF}$ : 912539.4/19

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

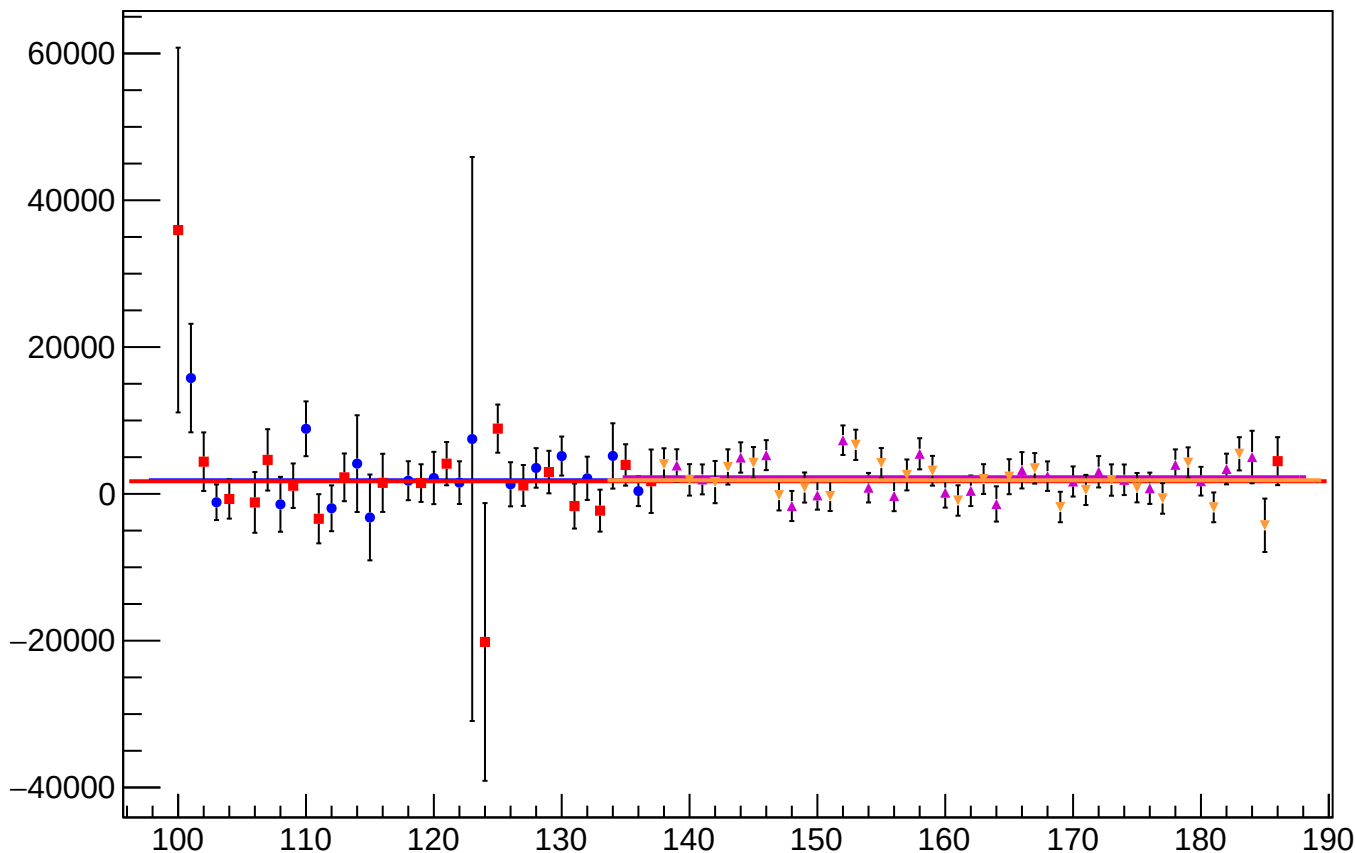
Right: 4432.519+/-0.868     $\chi^2/\text{NDF}$ : 1698299.2/36

In: 4703.632+/-0.692     $\chi^2/\text{NDF}$ : 1754959.6/39

Out: 4630.313+/-0.660     $\chi^2/\text{NDF}$ : 1944540.7/44

All: 4665.270+/-0.478     $\chi^2/\text{NDF}$ : 3705380.6/84

# reg\_asym\_at1\_avg\_mean vs Slug, Sign Corrected



Right In: 1850.872 $\pm$ 785.814  $\chi^2$ /NDF: 14.8/16

Left Out: 1856.570 $\pm$ 430.977  $\chi^2$ /NDF:30.0/24

Right Out: 1722.157 $\pm$ 747.677  $\chi^2$ /NDF: 18.0/19

Left In: 2268.464 $\pm$ 441.710  $\chi^2$ /NDF:26.9/22

Left: 2057.452 $\pm$ 308.471  $\chi^2$ /NDF: 57.3/47

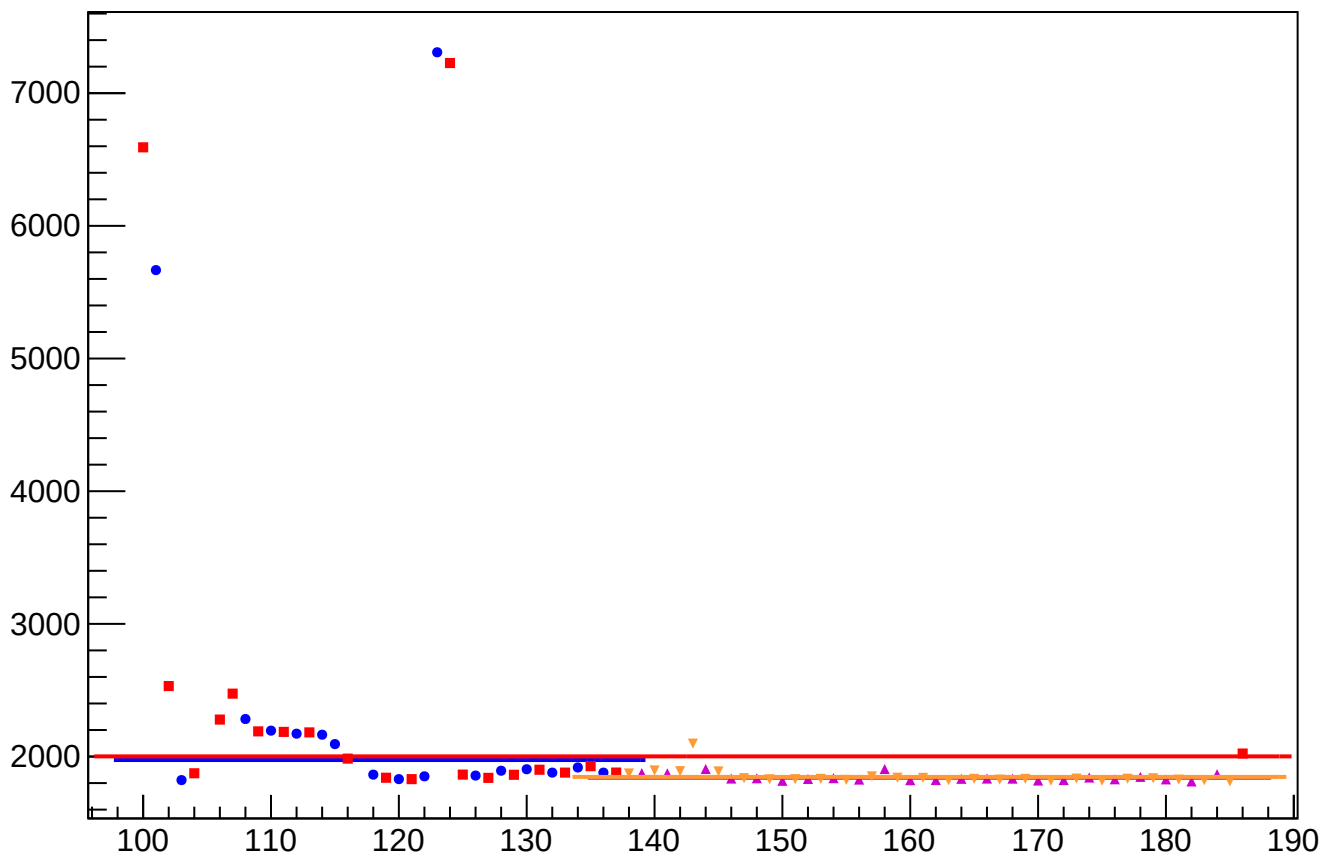
Right: 1783.316 $\pm$ 541.668  $\chi^2$ /NDF: 32.9/36

In: 2168.200 $\pm$ 385.049  $\chi^2$ /NDF:41.9/39

Out: 1823.048 $\pm$ 373.387  $\chi^2$ /NDF:48.1/44

All: 1990.318 $\pm$ 268.052  $\chi^2$ /NDF: 90.4/84

# reg\_asym\_at1\_avg\_rms vs Slug, Sign Corrected



Right In: 1973.812 $\pm$ 0.556  $\chi^2$ /NDF: 599877.2/16

Left Out: 1846.602 $\pm$ 0.305  $\chi^2$ /NDF: 27302.8/24

Right Out: 2001.260 $\pm$ 0.529  $\chi^2$ /NDF: 353712.4/19

Left In: 1840.541 $\pm$ 0.312  $\chi^2$ /NDF: 6740.2/22

Left: 1843.646 $\pm$ 0.218  $\chi^2$ /NDF: 34235.8/47

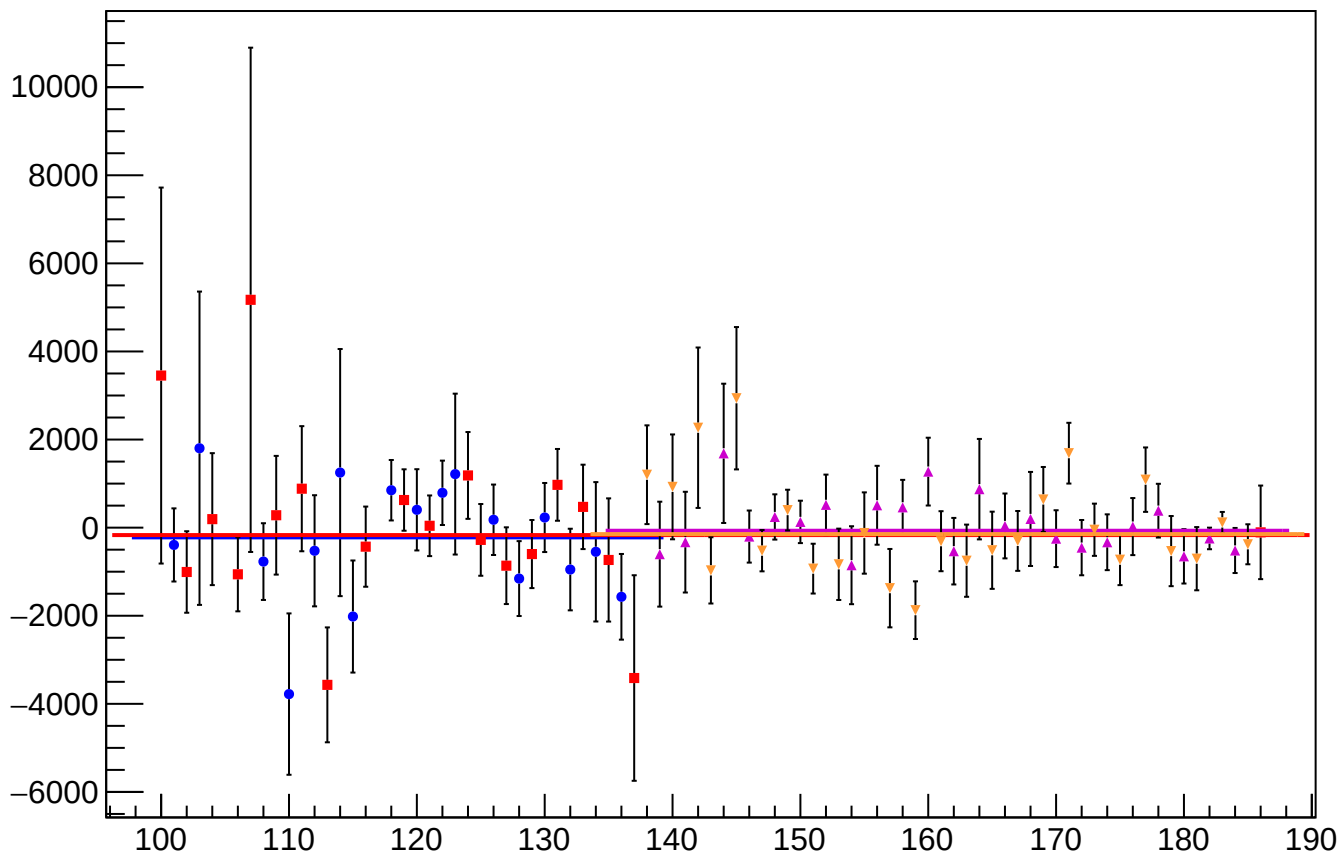
Right: 1988.218 $\pm$ 0.383  $\chi^2$ /NDF: 954870.3/36

In: 1872.540 $\pm$ 0.272  $\chi^2$ /NDF: 650330.8/39

Out: 1885.173 $\pm$ 0.264  $\chi^2$ /NDF: 445248.3/44

All: 1879.051 $\pm$ 0.190  $\chi^2$ /NDF: 1096688.7/84

asym\_at1\_avg\_correction\_mean vs Slug, Sign Corrected



Right In: -220.797+/-241.210  $\chi^2/\text{NDF}$ : 16.7/16

Left Out: -146.999+/-121.984  $\chi^2/\text{NDF}$ : 37.7/24

Right Out: -168.768+/-224.566  $\chi^2/\text{NDF}$ : 19.9/19

Left In: -70.340+/-126.373  $\chi^2/\text{NDF}$ : 12.3/22

Left: -110.024+/-87.766  $\chi^2/\text{NDF}$ : 50.1/47

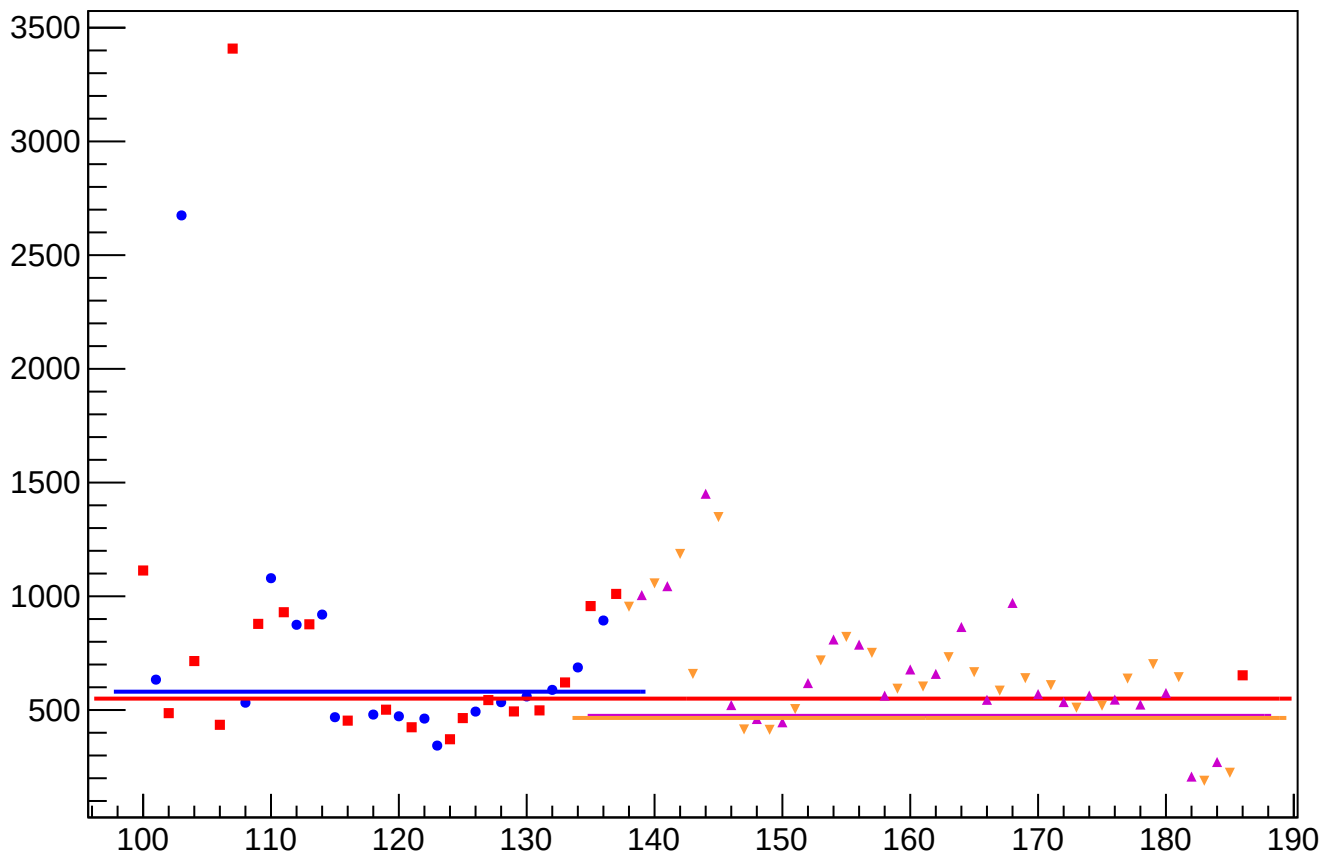
Right: -192.926+/-164.361  $\chi^2/\text{NDF}$ : 36.6/36

In: -102.744+/-111.940  $\chi^2/\text{NDF}$ : 29.3/39

Out: -151.959+/-107.191  $\chi^2/\text{NDF}$ : 57.6/44

All: -128.418+/-77.420  $\chi^2/\text{NDF}$ : 86.9/84

asym\_at1\_avg\_correction\_rms vs Slug, Sign Corrected



Right In:  $580.578 \pm 0.171$   $\chi^2/\text{NDF}: 1413766.8/16$

Left Out:  $465.080 \pm 0.086$   $\chi^2/\text{NDF}: 7086137.6/24$

Right Out:  $550.081 \pm 0.159$   $\chi^2/\text{NDF}: 1475066.1/19$

Left In:  $474.263 \pm 0.089$   $\chi^2/\text{NDF}: 6173100.1/22$

Left:  $469.509 \pm 0.062$   $\chi^2/\text{NDF}: 13264703.6/47$

Right:  $564.241 \pm 0.116$   $\chi^2/\text{NDF}: 2905959.3/36$

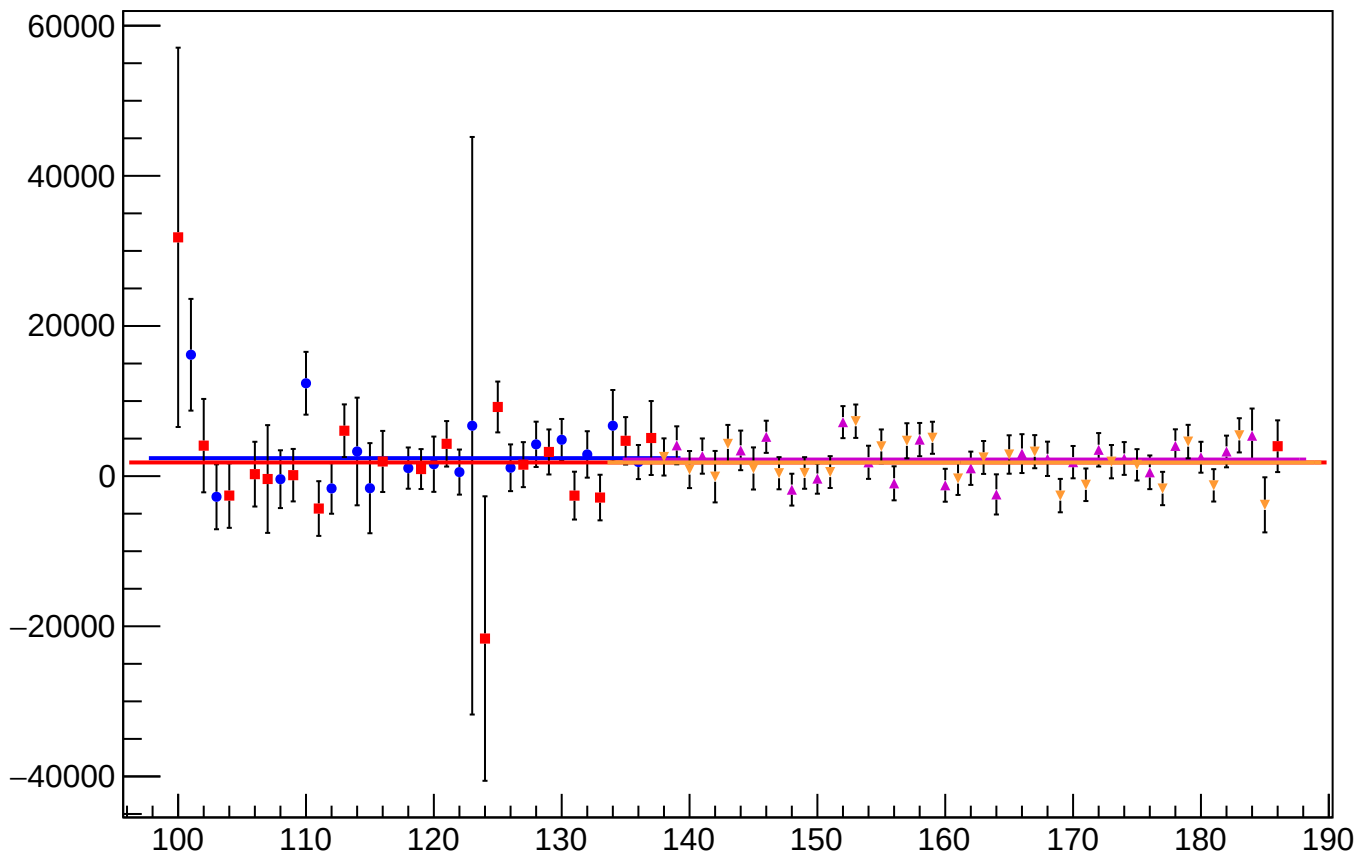
In:  $497.160 \pm 0.079$   $\chi^2/\text{NDF}: 7891726.7/39$

Out:  $484.447 \pm 0.076$   $\chi^2/\text{NDF}: 8782461.7/44$

All:  $490.528 \pm 0.055$   $\chi^2/\text{NDF}: 16687645.1/84$



# asym\_at1\_avg\_mean vs Slug, Sign Corrected



Right In: 2394.430+/-865.666  $\chi^2/\text{NDF}$ : 15.8/16

Left Out: 1824.066+/-462.694  $\chi^2/\text{NDF}$ : 32.1/24

Right Out: 1822.758+/-830.852  $\chi^2/\text{NDF}$ : 20.6/19

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

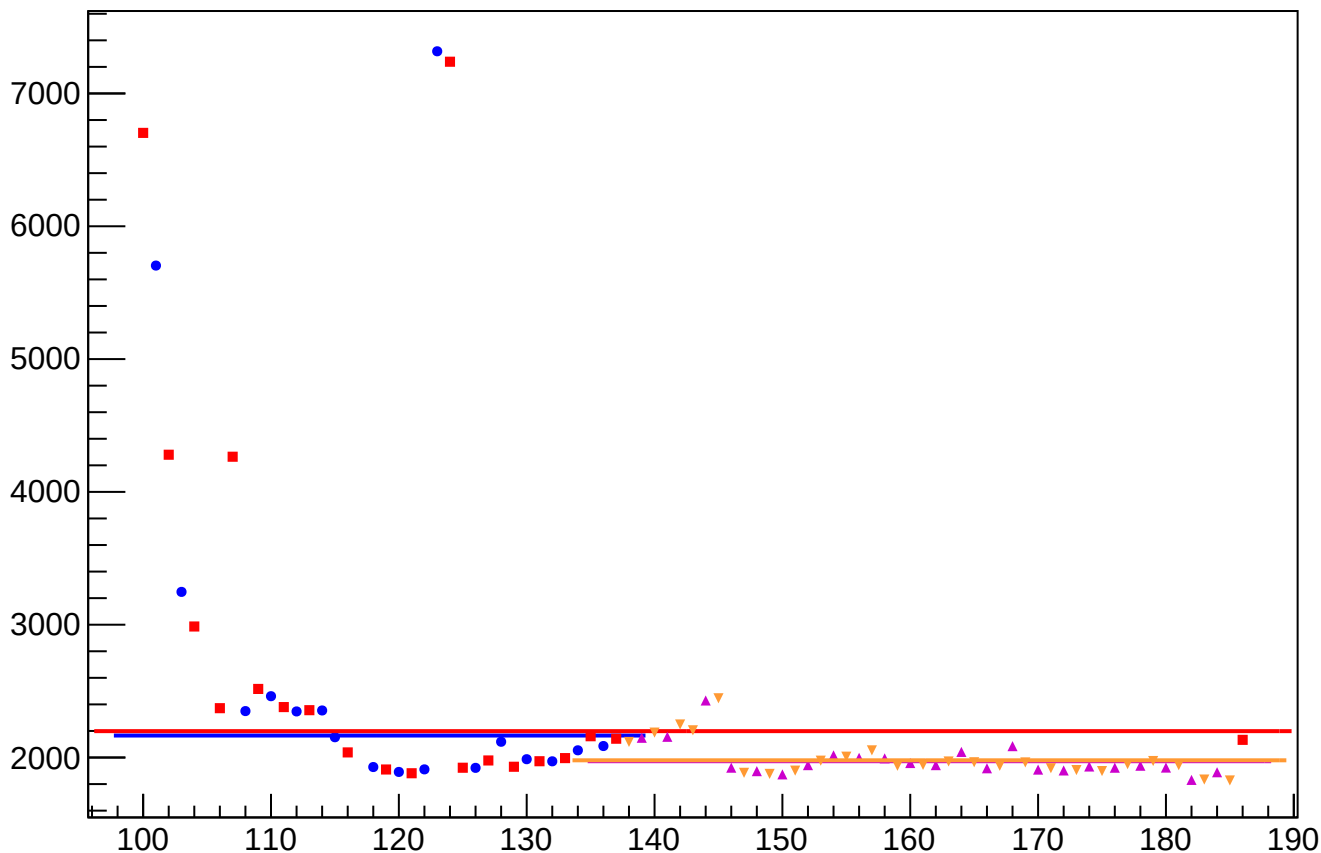
Right: 2096.868+/-599.431  $\chi^2/\text{NDF}$ : 36.7/36

In: 2251.097+/-415.789  $\chi^2/\text{NDF}$ : 41.2/39

Out: 1823.756+/-404.238  $\chi^2/\text{NDF}$ : 52.7/44

All: 2031.408+/-289.837  $\chi^2/\text{NDF}$ : 94.5/84

# asym\_at1\_avg\_rms vs Slug, Sign Corrected



Right In: 2165.566 $\pm$ 0.612  $\chi^2/\text{NDF}$ : 707806.4/16

Left Out: 1978.997 $\pm$ 0.327  $\chi^2/\text{NDF}$ :139299.8/24

Right Out: 2198.623 $\pm$ 0.587  $\chi^2/\text{NDF}$ : 799842.8/19

Left In: 1972.166 $\pm$ 0.335  $\chi^2/\text{NDF}$ :116452.5/22

Left: 1975.665 $\pm$ 0.234  $\chi^2/\text{NDF}$ : 255965.0/47

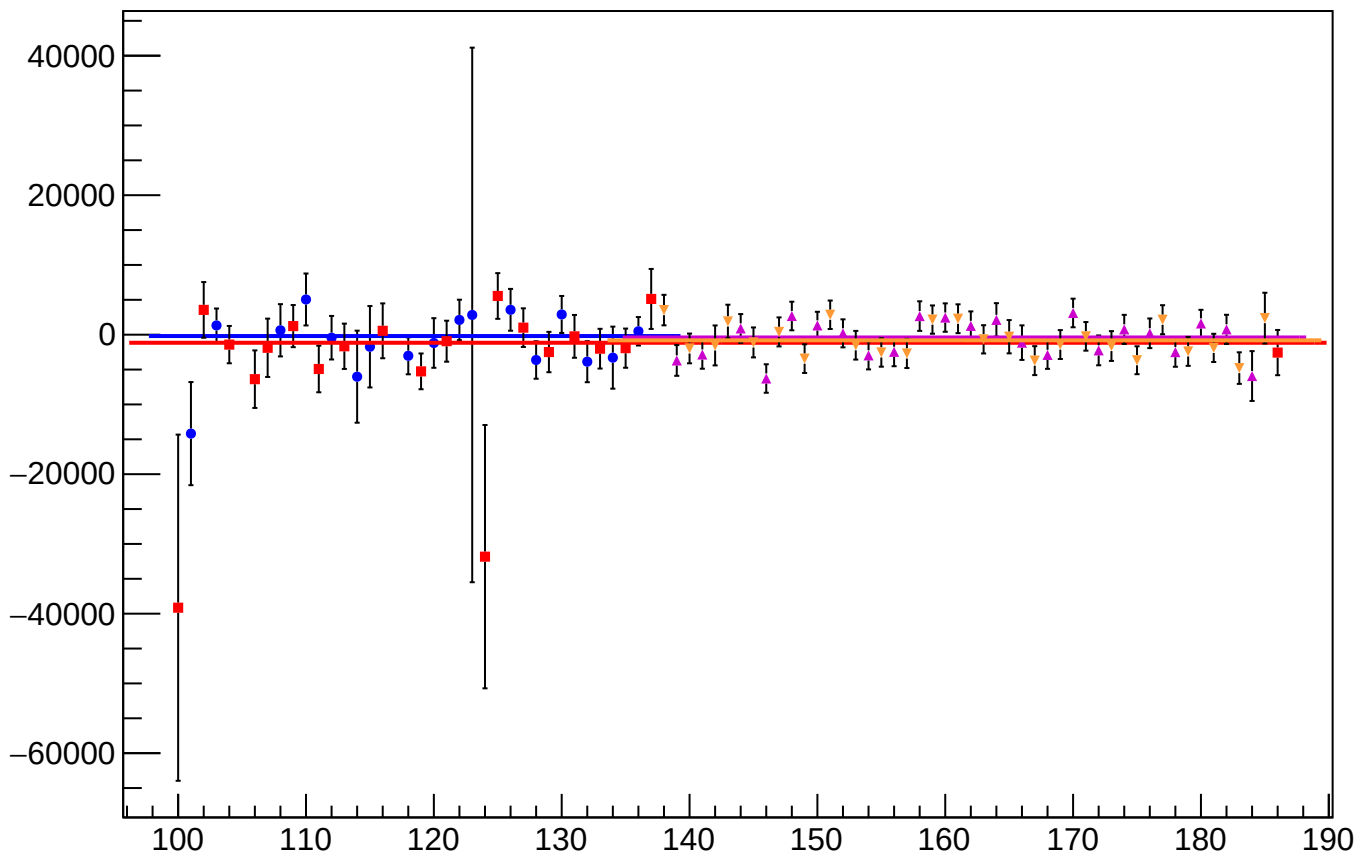
Right: 2182.773 $\pm$ 0.424  $\chi^2/\text{NDF}$ : 1509167.3/36

In: 2016.783 $\pm$ 0.294  $\chi^2/\text{NDF}$ :901054.8/39

Out: 2030.986 $\pm$ 0.286  $\chi^2/\text{NDF}$ :1045811.4/44

All: 2024.085 $\pm$ 0.205  $\chi^2/\text{NDF}$ : 1948065.9/84

# reg\_asym\_at1\_dd\_mean vs Slug, Sign Corrected



Right In: -195.092+/-784.368  $\chi^2/\text{NDF}$ : 15.4/16

Left Out: -808.436+/-430.304  $\chi^2/\text{NDF}$ : 27.9/24

Right Out: -1157.197+/-745.892  $\chi^2/\text{NDF}$ : 20.3/19

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

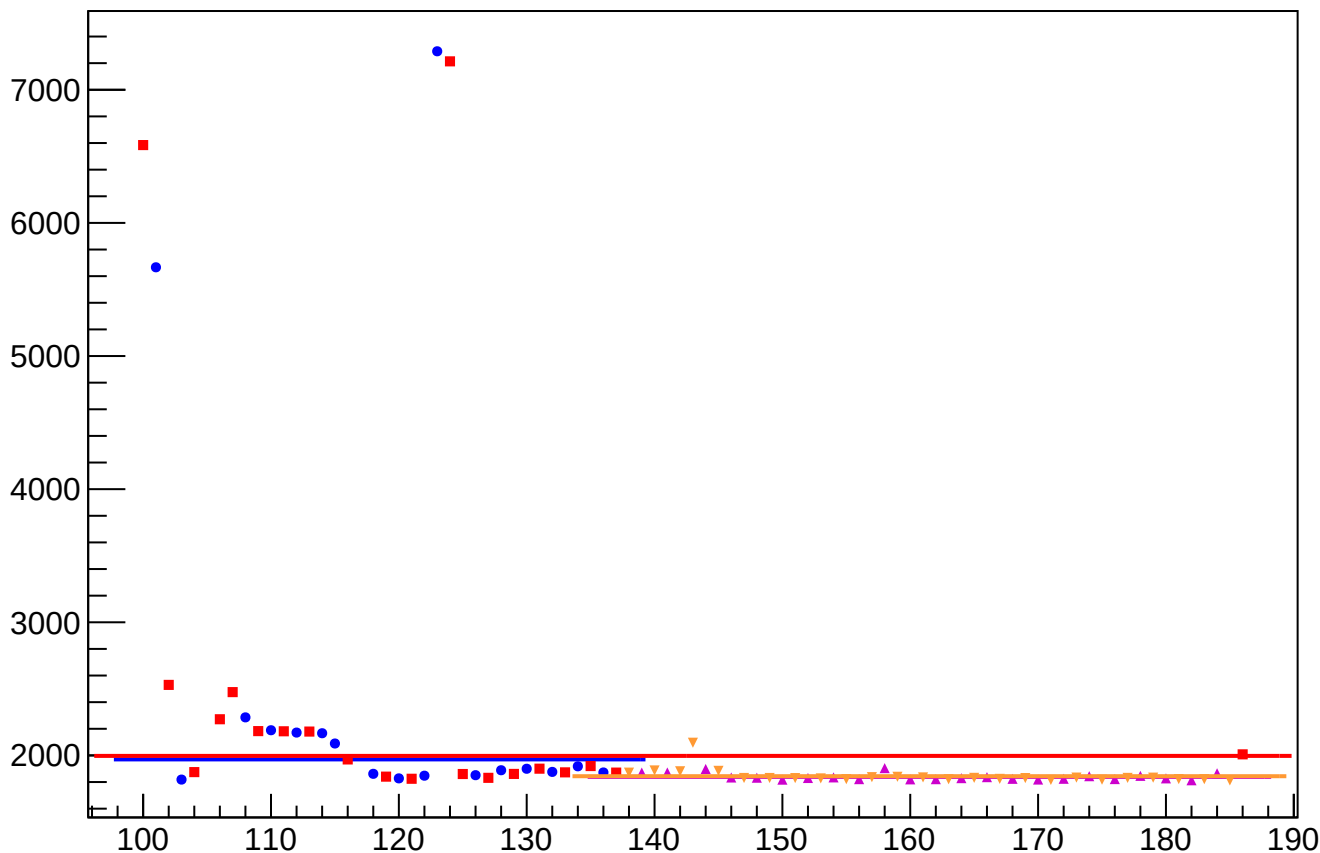
Right: -700.319+/-540.516  $\chi^2/\text{NDF}$ : 36.5/36

In: -349.829+/-384.571  $\chi^2/\text{NDF}$ : 49.9/39

Out: -895.524+/-372.727  $\chi^2/\text{NDF}$ : 48.4/44

All: -631.209+/-267.647  $\chi^2/\text{NDF}$ : 99.3/84

# reg\_asym\_at1\_dd\_rms vs Slug, Sign Corrected



Right In: 1969.951+/-0.555  $\chi^2/\text{NDF}$ : 602002.6/16

Left Out: 1843.747+/-0.304  $\chi^2/\text{NDF}$ : 26867.4/24

Right Out: 1996.400+/-0.527  $\chi^2/\text{NDF}$ : 354327.8/19

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

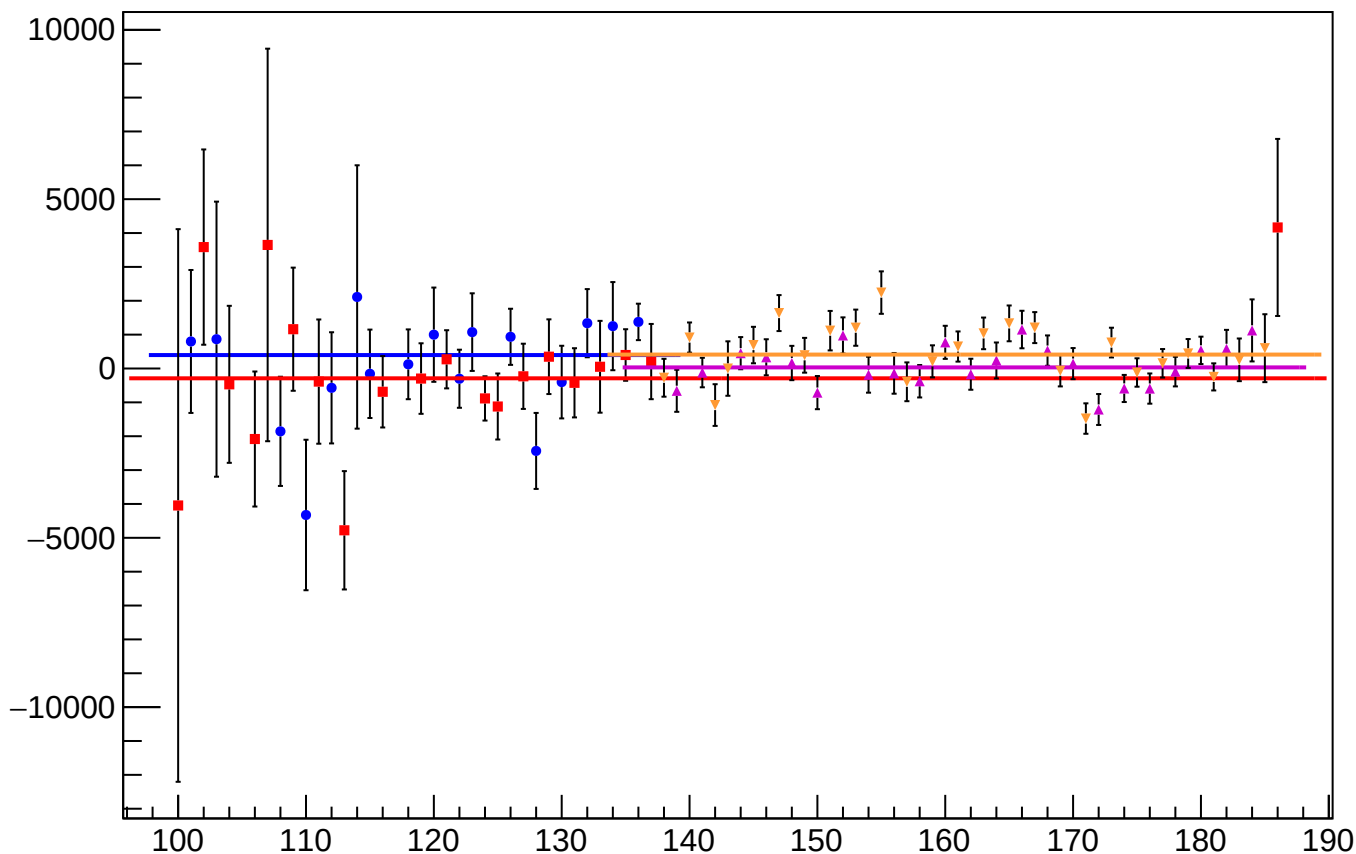
Right: 1983.840+/-0.382  $\chi^2/\text{NDF}$ : 957524.5/36

In: 1870.184+/-0.272  $\chi^2/\text{NDF}$ : 650934.5/39

Out: 1881.865+/-0.264  $\chi^2/\text{NDF}$ : 444047.5/44

All: 1876.207+/-0.189  $\chi^2/\text{NDF}$ : 1095933.5/84

asym\_at1\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: 396.702 $\pm$ 270.925  $\chi^2$ /NDF: 20.5/16

Left Out: 411.072 $\pm$ 100.456  $\chi^2$ /NDF:61.2/24

Right Out: -289.857 $\pm$ 265.511  $\chi^2$ /NDF: 17.0/19

Left In: 32.456 $\pm$ 102.403  $\chi^2$ /NDF:32.7/22

Left: 225.398 $\pm$ 71.712  $\chi^2$ /NDF: 100.9/47

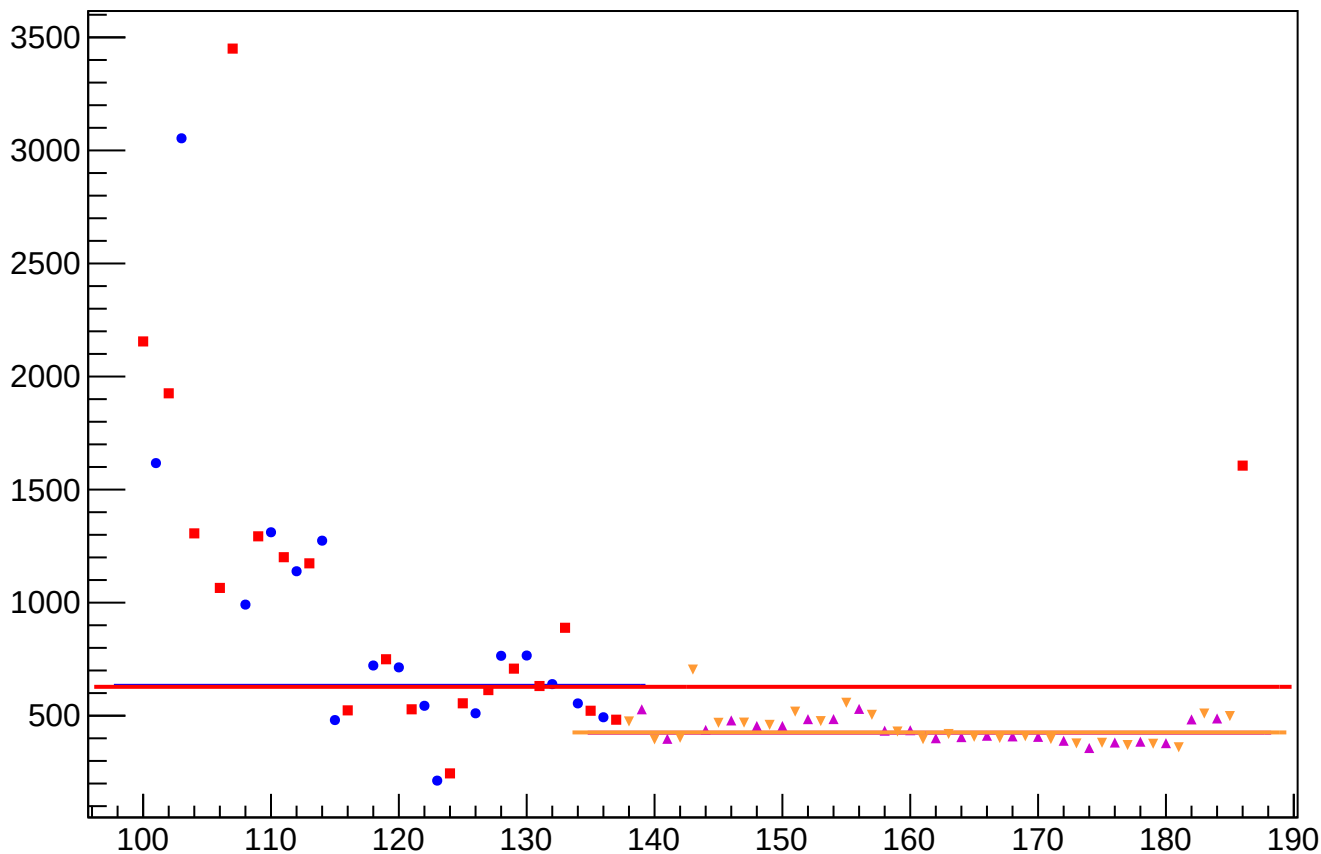
Right: 46.494 $\pm$ 189.630  $\chi^2$ /NDF: 40.7/36

In: 77.989 $\pm$ 95.789  $\chi^2$ /NDF:54.8/39

Out: 323.299 $\pm$ 93.956  $\chi^2$ /NDF:84.3/44

All: 203.014 $\pm$ 67.076  $\chi^2$ /NDF: 142.4/84

asym\_at1\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 632.093 $\pm$ 0.192  $\chi^2$ /NDF: 2258413.9/16

Left Out: 426.027 $\pm$ 0.071  $\chi^2$ /NDF: 733072.9/24

Right Out: 627.713 $\pm$ 0.188  $\chi^2$ /NDF: 3085318.9/19

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

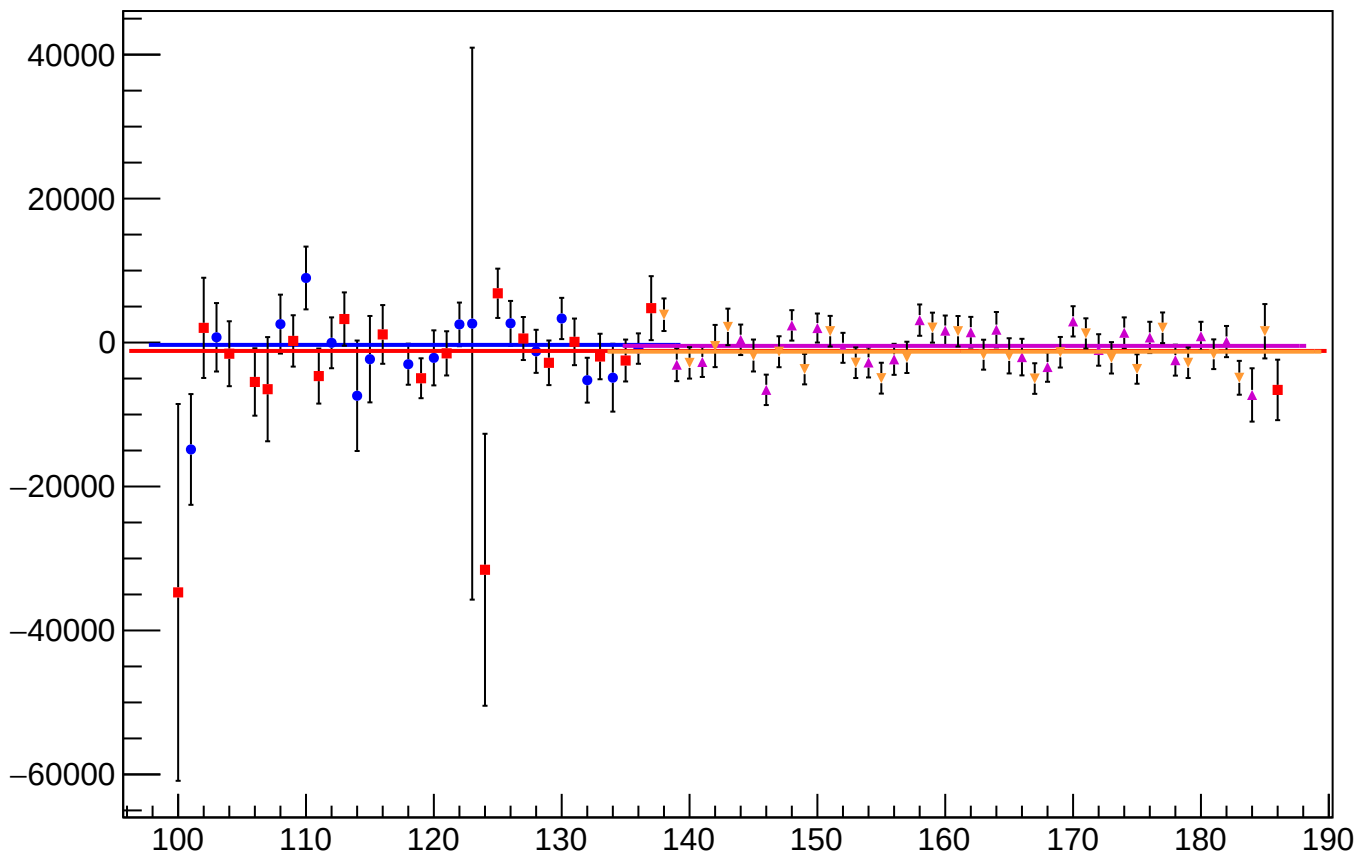
Right: 629.859 $\pm$ 0.134  $\chi^2$ /NDF: 5343999.5/36

In: 450.572 $\pm$ 0.068  $\chi^2$ /NDF: 3676105.1/39

Out: 451.283 $\pm$ 0.066  $\chi^2$ /NDF: 4827899.6/44

All: 450.934 $\pm$ 0.047  $\chi^2$ /NDF: 8504060.8/84

# asym\_at1\_dd\_mean vs Slug, Sign Corrected



Right In: -324.791+/-874.352  $\chi^2/\text{NDF}$ : 17.7/16

Left Out: -1267.885+/-443.219  $\chi^2/\text{NDF}$ : 30.8/24

Right Out: -1164.725+/-852.170  $\chi^2/\text{NDF}$ : 20.4/19

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

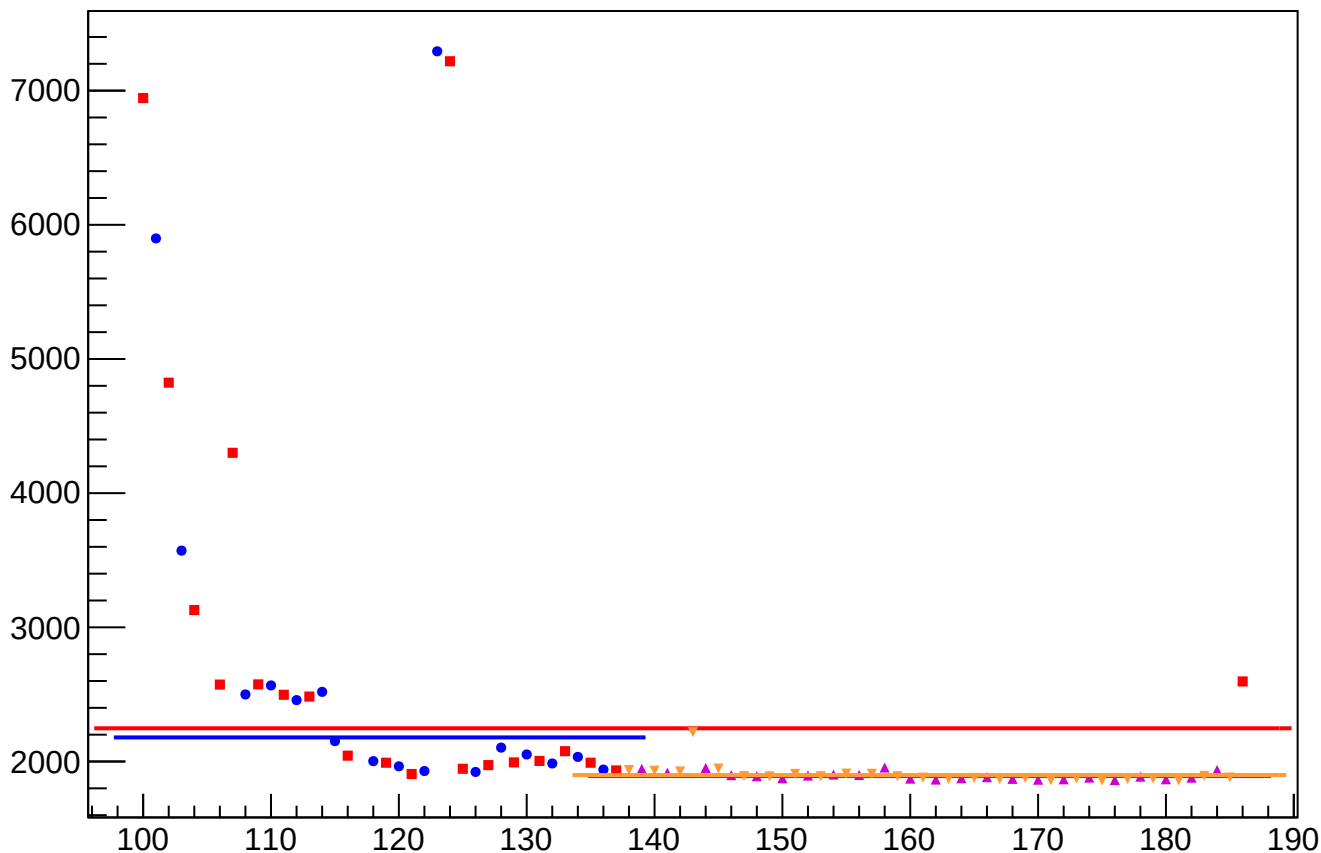
Right: -755.547+/-610.267  $\chi^2/\text{NDF}$ : 38.6/36

In: -433.340+/-402.884  $\chi^2/\text{NDF}$ : 50.3/39

Out: -1245.921+/-393.214  $\chi^2/\text{NDF}$ : 51.2/44

All: -849.499+/-281.401  $\chi^2/\text{NDF}$ : 103.6/84

# asym\_at1\_dd\_rms vs Slug, Sign Corrected



Right In: 2179.524+/-0.618  $\chi^2/\text{NDF}$ : 800832.9/16

Left Out: 1898.962+/-0.313  $\chi^2/\text{NDF}$ : 38680.4/24

Right Out: 2247.572+/-0.603  $\chi^2/\text{NDF}$ : 906428.4/19

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: 2214.422+/-0.432  $\chi^2/\text{NDF}$ : 1713473.9/36

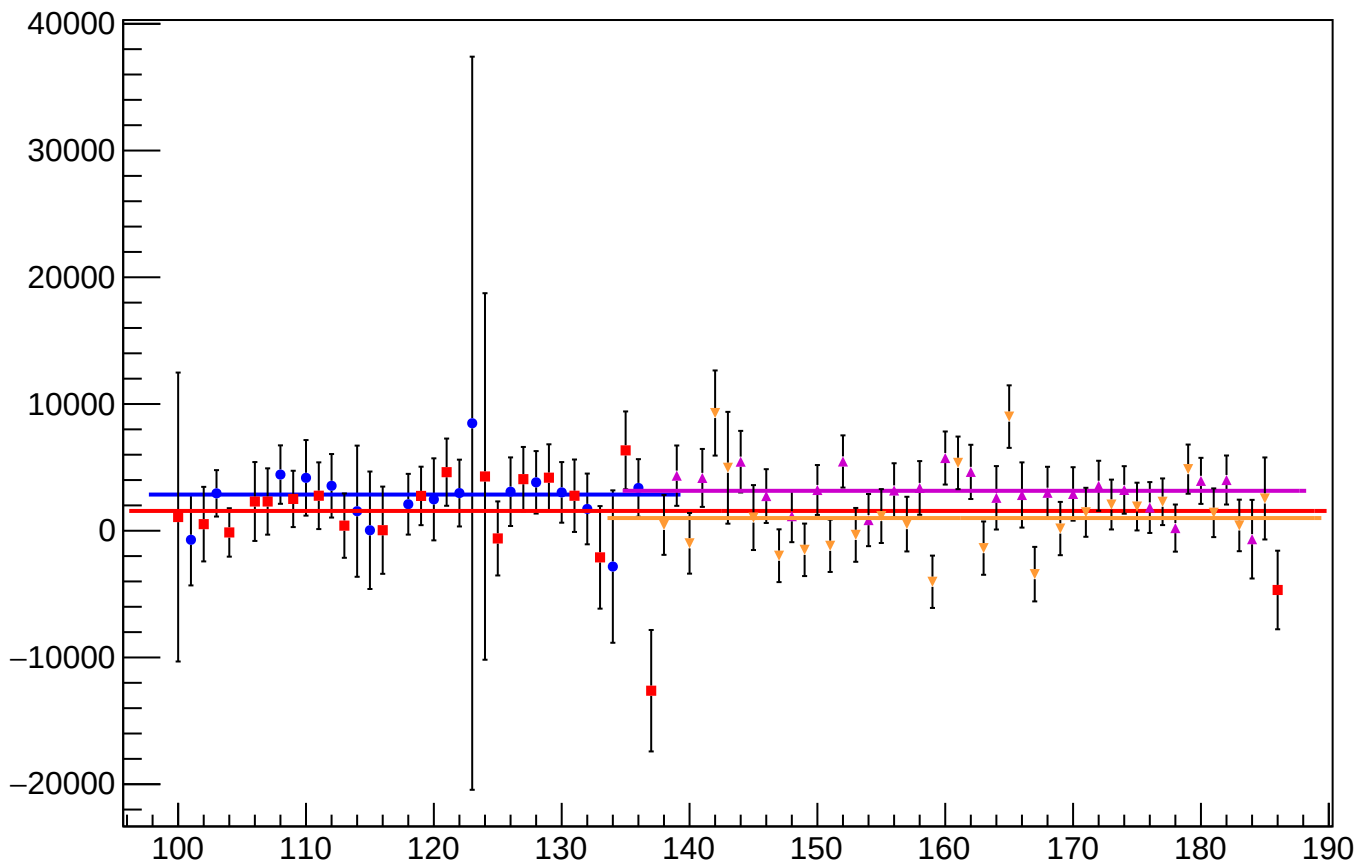
In: 1952.805+/-0.285  $\chi^2/\text{NDF}$ : 978973.6/39

Out: 1973.186+/-0.278  $\chi^2/\text{NDF}$ : 1208548.4/44

All: 1963.243+/-0.199  $\chi^2/\text{NDF}$ : 2190143.4/84



# reg\_asym\_at2\_avg\_mean vs Slug, Sign Corrected



Right In: 2855.433 $\pm$ 680.542  $\chi^2/\text{NDF}$ : 3.6/16

Left Out: 1001.263 $\pm$ 435.247  $\chi^2/\text{NDF}$ : 44.6/24

Right Out: 1562.766 $\pm$ 642.717  $\chi^2/\text{NDF}$ : 22.2/19

Left In: 3150.437 $\pm$ 441.145  $\chi^2/\text{NDF}$ : 11.8/22

Left: 2061.387 $\pm$ 309.830  $\chi^2/\text{NDF}$ : 68.5/47

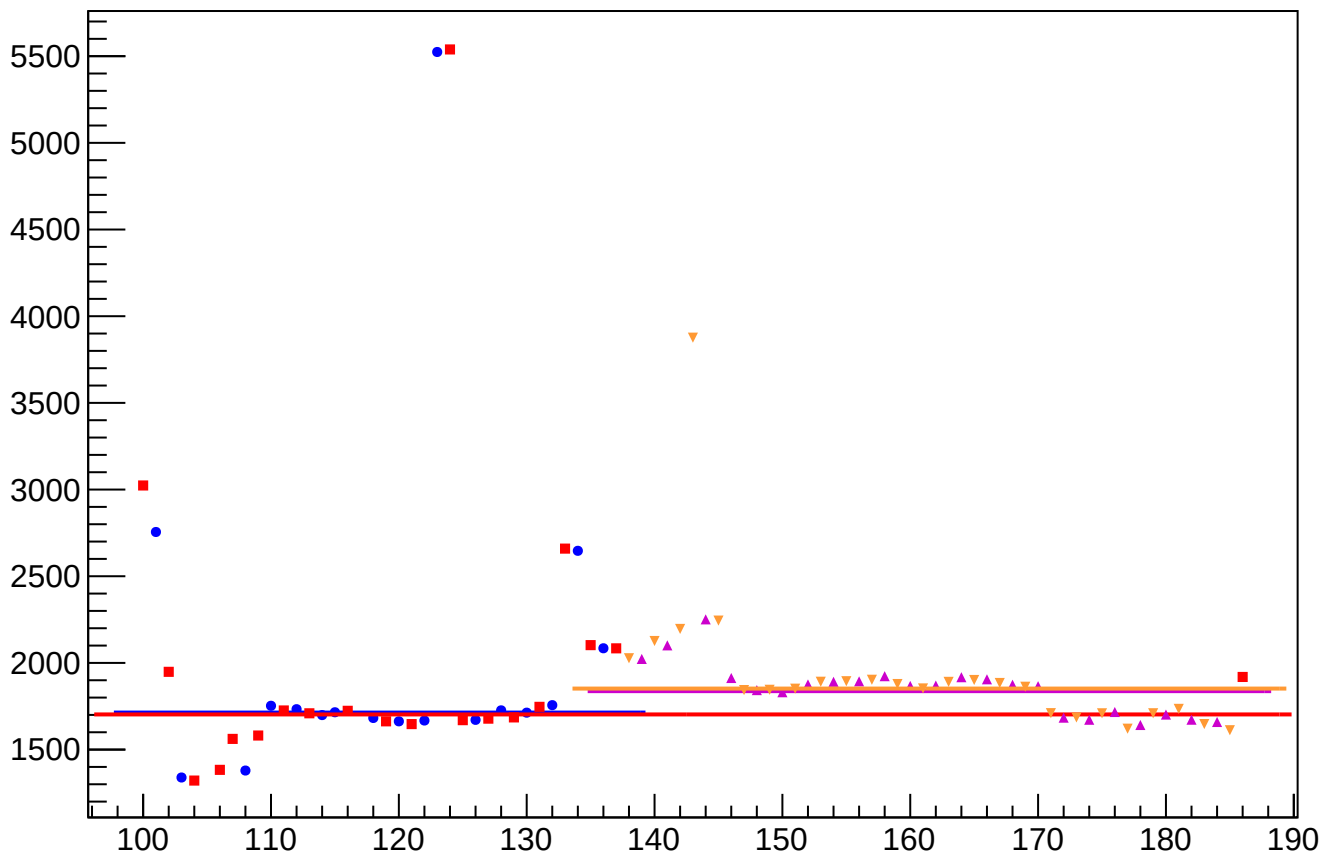
Right: 2172.179 $\pm$ 467.270  $\chi^2/\text{NDF}$ : 27.7/36

In: 3063.153 $\pm$ 370.175  $\chi^2/\text{NDF}$ : 15.6/39

Out: 1177.805 $\pm$ 360.386  $\chi^2/\text{NDF}$ : 67.4/44

All: 2095.222 $\pm$ 258.223  $\chi^2/\text{NDF}$ : 96.2/84

# reg\_asym\_at2\_avg\_rms vs Slug, Sign Corrected



Right In: 1713.549+/-0.481  $\chi^2/\text{NDF}$ : 432300.3/16

Left Out: 1851.959+/-0.308  $\chi^2/\text{NDF}$ : 648954.2/24

Right Out: 1702.805+/-0.454  $\chi^2/\text{NDF}$ : 464822.6/19

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

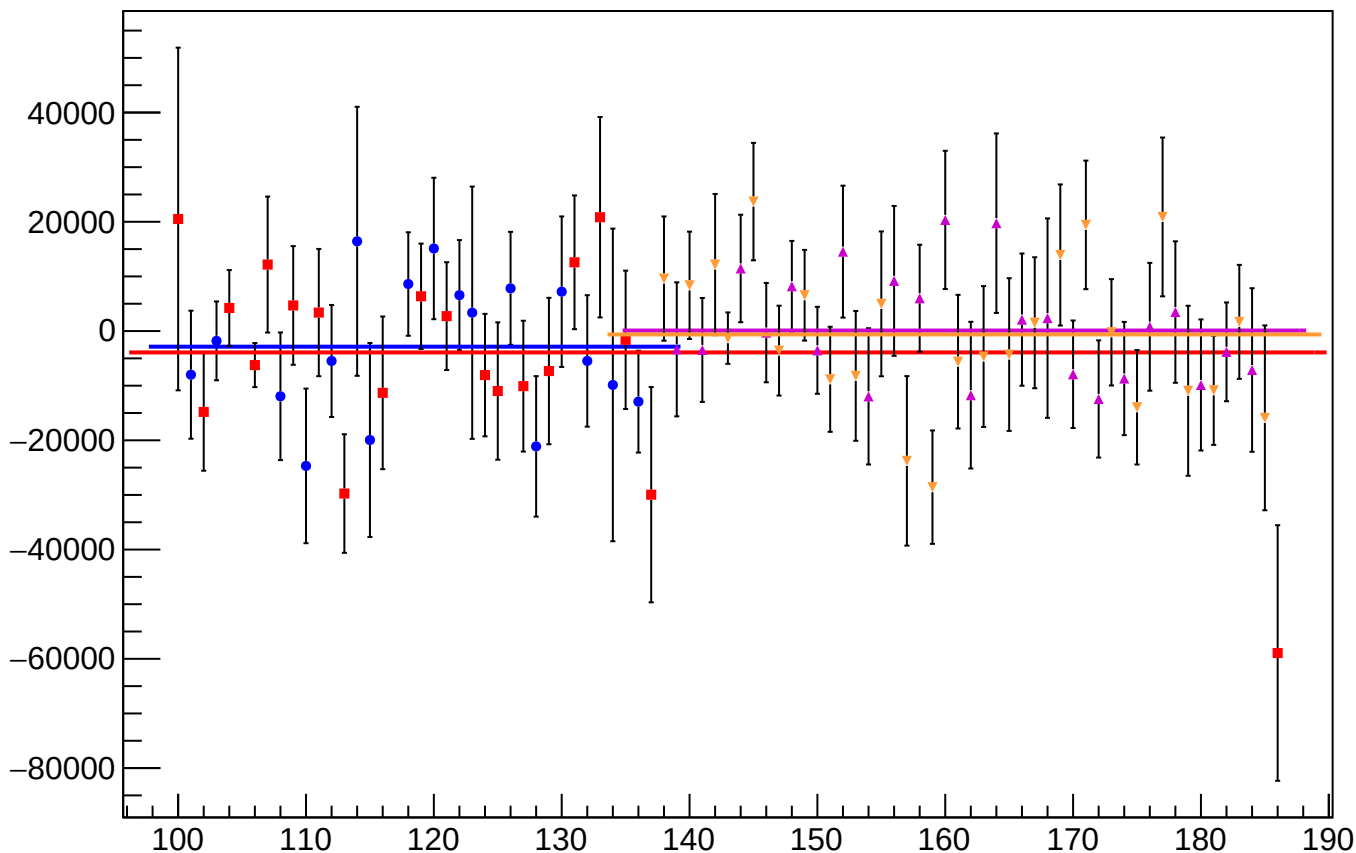
Right: 1707.870+/-0.330  $\chi^2/\text{NDF}$ : 897386.3/36

In: 1800.580+/-0.262  $\chi^2/\text{NDF}$ : 679268.1/39

Out: 1805.063+/-0.255  $\chi^2/\text{NDF}$ : 1187622.5/44

All: 1802.882+/-0.183  $\chi^2/\text{NDF}$ : 1867041.1/84

asym\_at2\_avg\_correction\_mean vs Slug, Sign Corrected



Right In: -2861.382 $\pm$ 2859.849  $\chi^2$ /NDF: 14.0/16

Left Out: -619.372 $\pm$ 2069.686  $\chi^2$ /NDF:30.1/24

Right Out: -3913.037 $\pm$ 2259.172  $\chi^2$ /NDF: 25.3/19

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

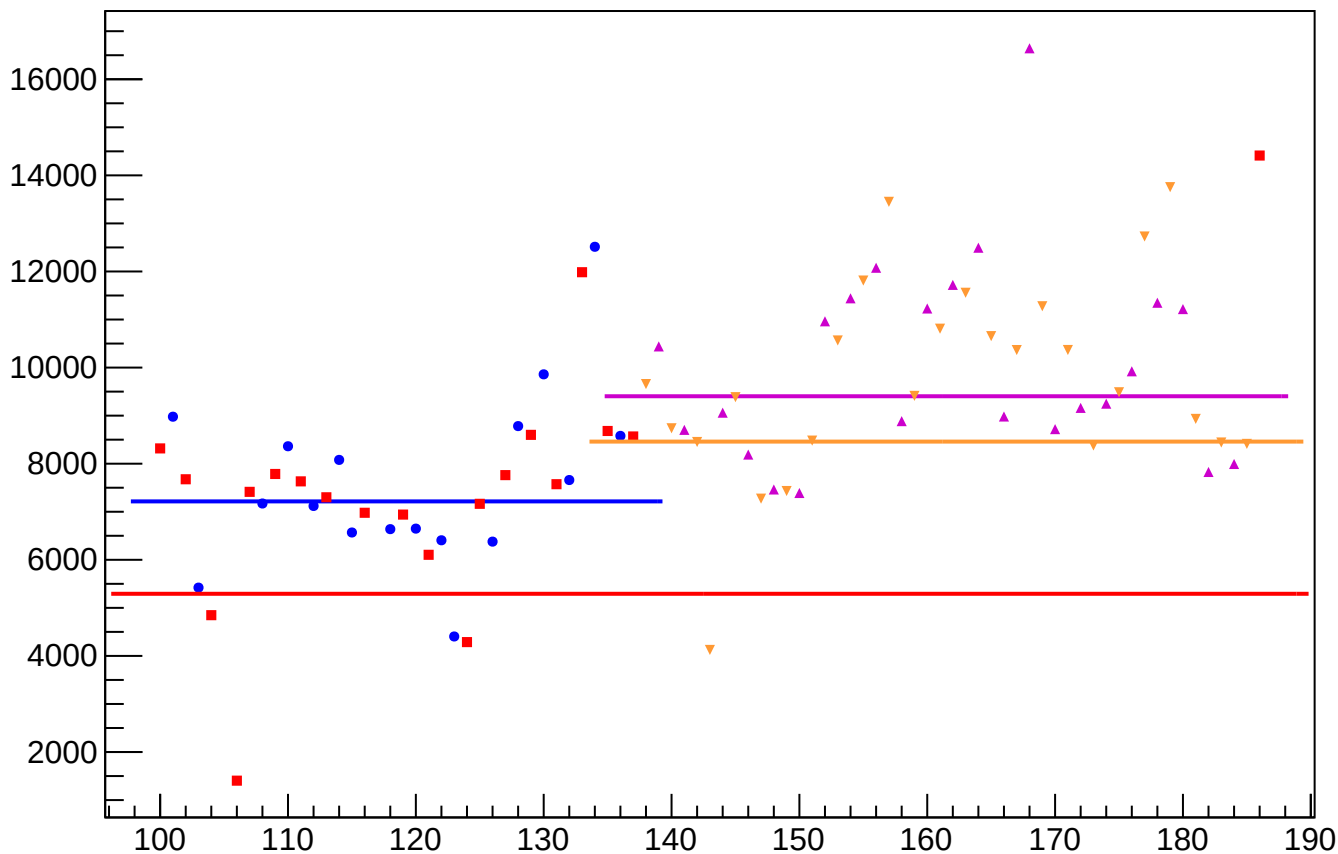
Right: -3508.937 $\pm$ 1772.764  $\chi^2$ /NDF: 39.4/36

In: -1063.378 $\pm$ 1789.361  $\chi^2$ /NDF:29.3/39

Out: -2122.307 $\pm$ 1526.089  $\chi^2$ /NDF:56.6/44

All: -1676.403 $\pm$ 1161.142  $\chi^2$ /NDF: 86.1/84

asym\_at2\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 7215.564 $\pm$ 2.022  $\chi^2$ /NDF: 471682.0/16

Left Out: 8459.960 $\pm$ 1.463  $\chi^2$ /NDF:3087200.5/24

Right Out: 5292.841 $\pm$ 1.597  $\chi^2$ /NDF: 3502999.8/19

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

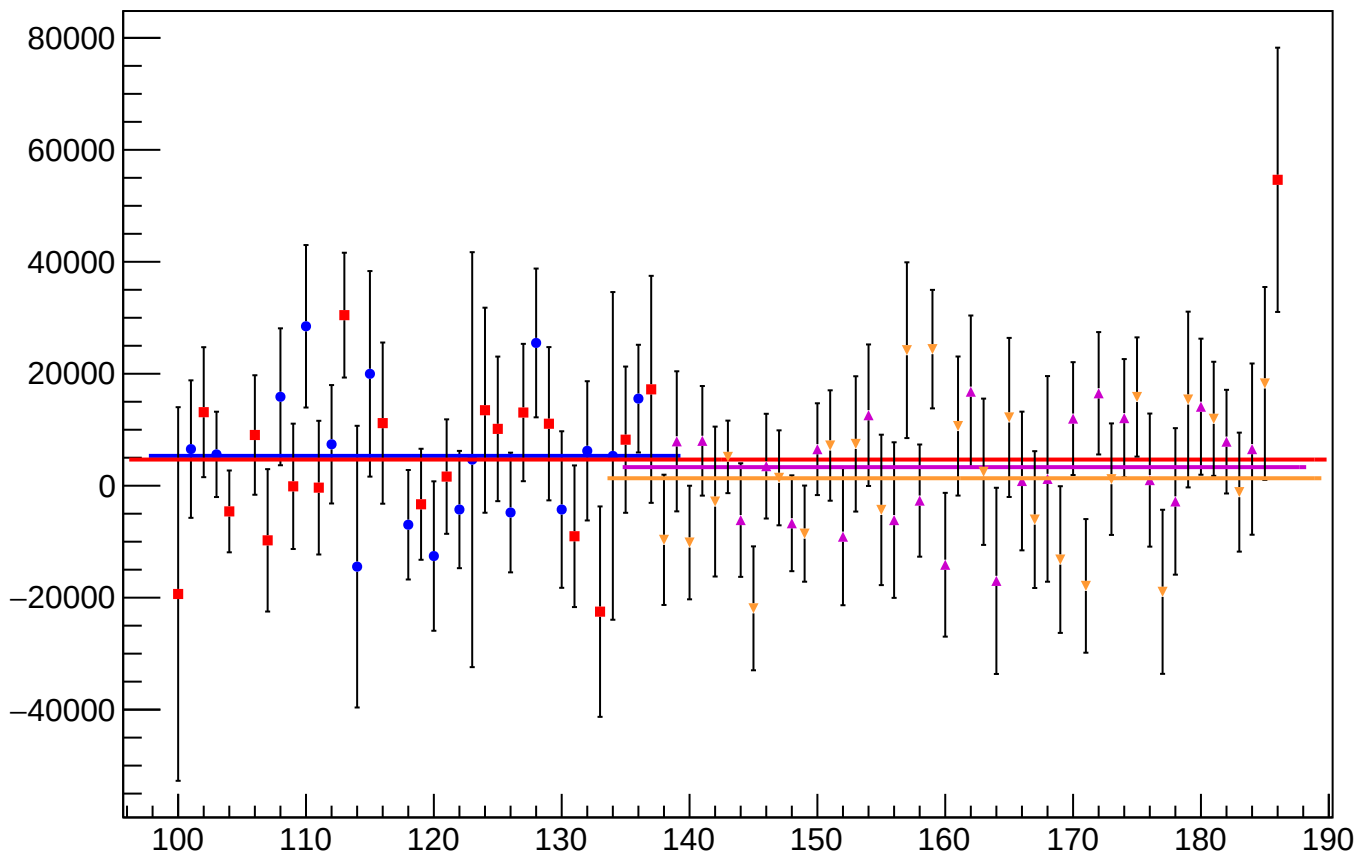
Right: 6031.651 $\pm$ 1.254  $\chi^2$ /NDF: 4531329.7/36

In: 8546.955 $\pm$ 1.265  $\chi^2$ /NDF:2326657.7/39

Out: 7014.769 $\pm$ 1.079  $\chi^2$ /NDF:8727230.7/44

All: 7659.957 $\pm$ 0.821  $\chi^2$ /NDF: 11902811.6/8

# asym\_at2\_avg\_mean vs Slug, Sign Corrected



Right In: 5329.954 $\pm$ 2979.601  $\chi^2/\text{NDF}$ : 13.6/16

Left Out: 1332.828 $\pm$ 2213.733  $\chi^2/\text{NDF}$ : 28.0/24

Right Out: 4672.389 $\pm$ 2776.555  $\chi^2/\text{NDF}$ : 20.1/19

Left In: 3316.909 $\pm$ 2344.543  $\chi^2/\text{NDF}$ : 13.7/22

Left: 2267.978 $\pm$ 1609.604  $\chi^2/\text{NDF}$ : 42.2/47

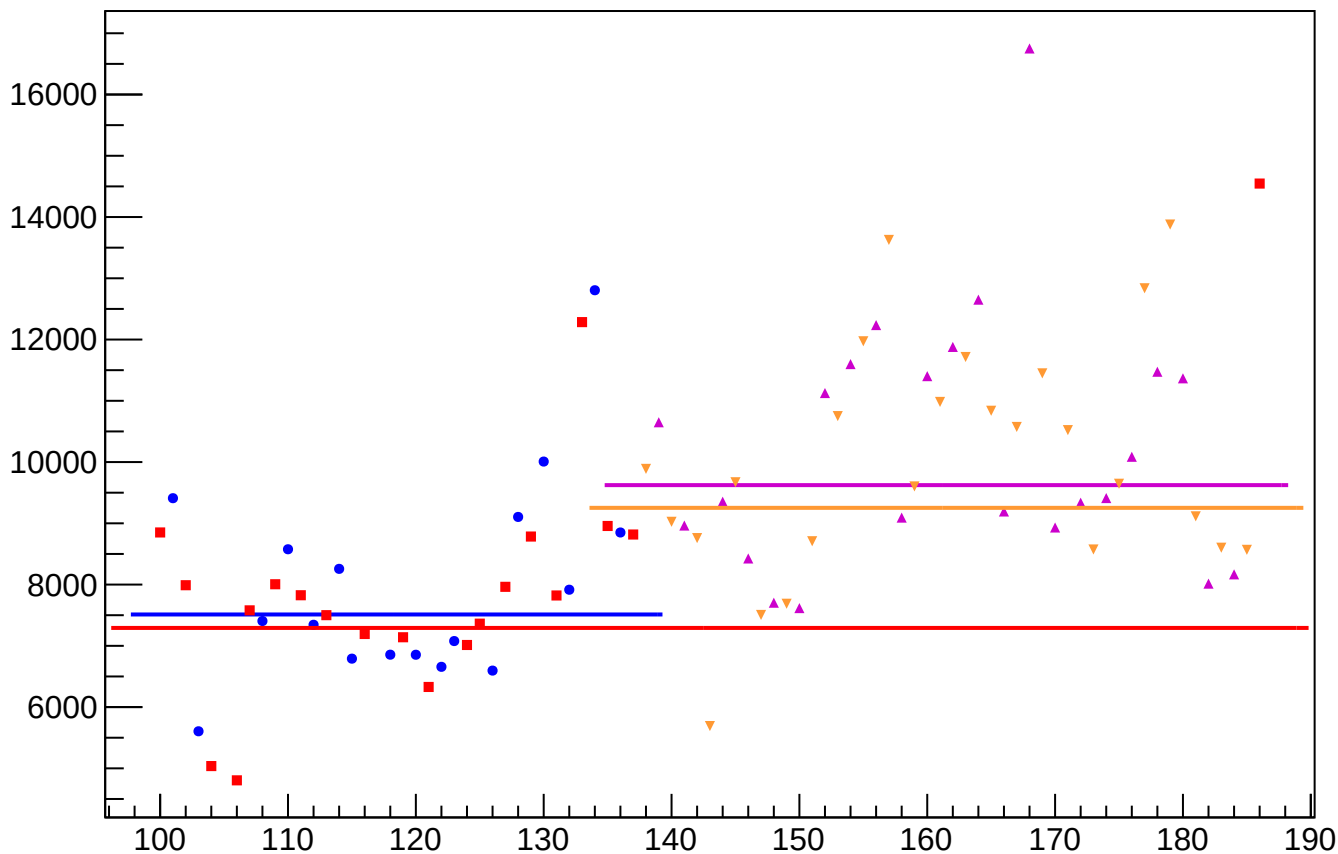
Right: 4978.005 $\pm$ 2031.313  $\chi^2/\text{NDF}$ : 33.7/36

In: 4086.685 $\pm$ 1842.527  $\chi^2/\text{NDF}$ : 27.6/39

Out: 2630.692 $\pm$ 1730.917  $\chi^2/\text{NDF}$ : 49.0/44

All: 3313.258 $\pm$ 1261.556  $\chi^2/\text{NDF}$ : 77.0/84

# asym\_at2\_avg\_rms vs Slug, Sign Corrected



Right In: 7511.954 $\pm$ 2.107  $\chi^2$ /NDF: 430092.6/16

Left Out: 9252.712 $\pm$ 1.565  $\chi^2$ /NDF:1597668.9/24

Right Out: 7292.345 $\pm$ 1.963  $\chi^2$ /NDF: 750688.5/19

Left In: 9623.485 $\pm$ 1.658  $\chi^2$ /NDF:1069924.0/22

Left: 9427.467 $\pm$ 1.138  $\chi^2$ /NDF: 2694036.4/47

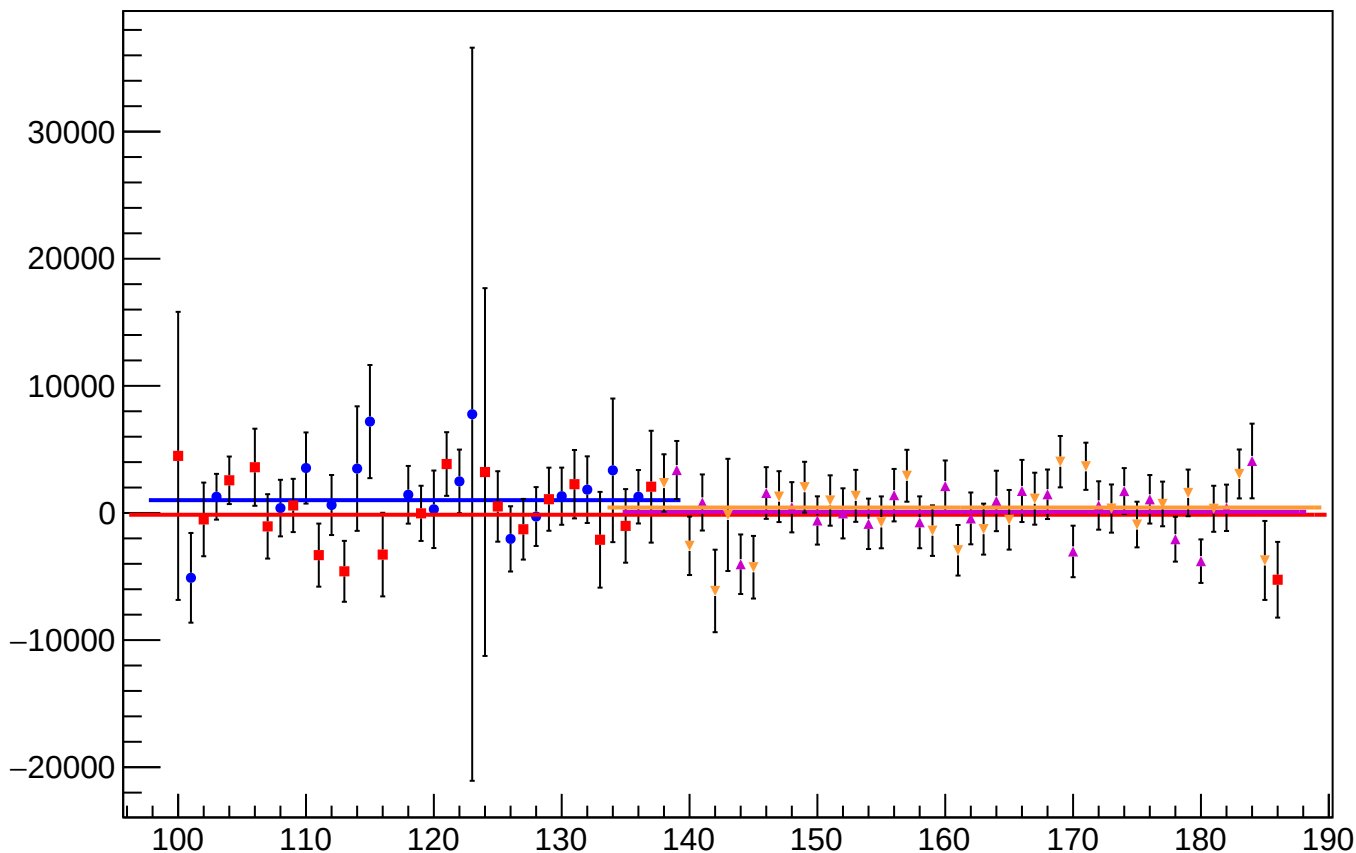
Right: 7394.402 $\pm$ 1.436  $\chi^2$ /NDF: 1186597.0/36

In: 8816.022 $\pm$ 1.303  $\chi^2$ /NDF:2120362.6/39

Out: 8490.730 $\pm$ 1.224  $\chi^2$ /NDF:2957980.5/44

All: 8643.220 $\pm$ 0.892  $\chi^2$ /NDF: 5111458.8/84

# reg\_asym\_at2\_dd\_mean vs Slug, Sign Corrected



Right In: 1007.483 $\pm$ 646.543  $\chi^2$ /NDF: 8.6/16

Left Out: 429.447 $\pm$ 416.378  $\chi^2$ /NDF: 28.7/24

Right Out: -139.457 $\pm$ 611.857  $\chi^2$ /NDF: 17.5/19

Left In: 88.373 $\pm$ 421.957  $\chi^2$ /NDF: 21.0/22

Left: 261.180 $\pm$ 296.376  $\chi^2$ /NDF: 50.0/47

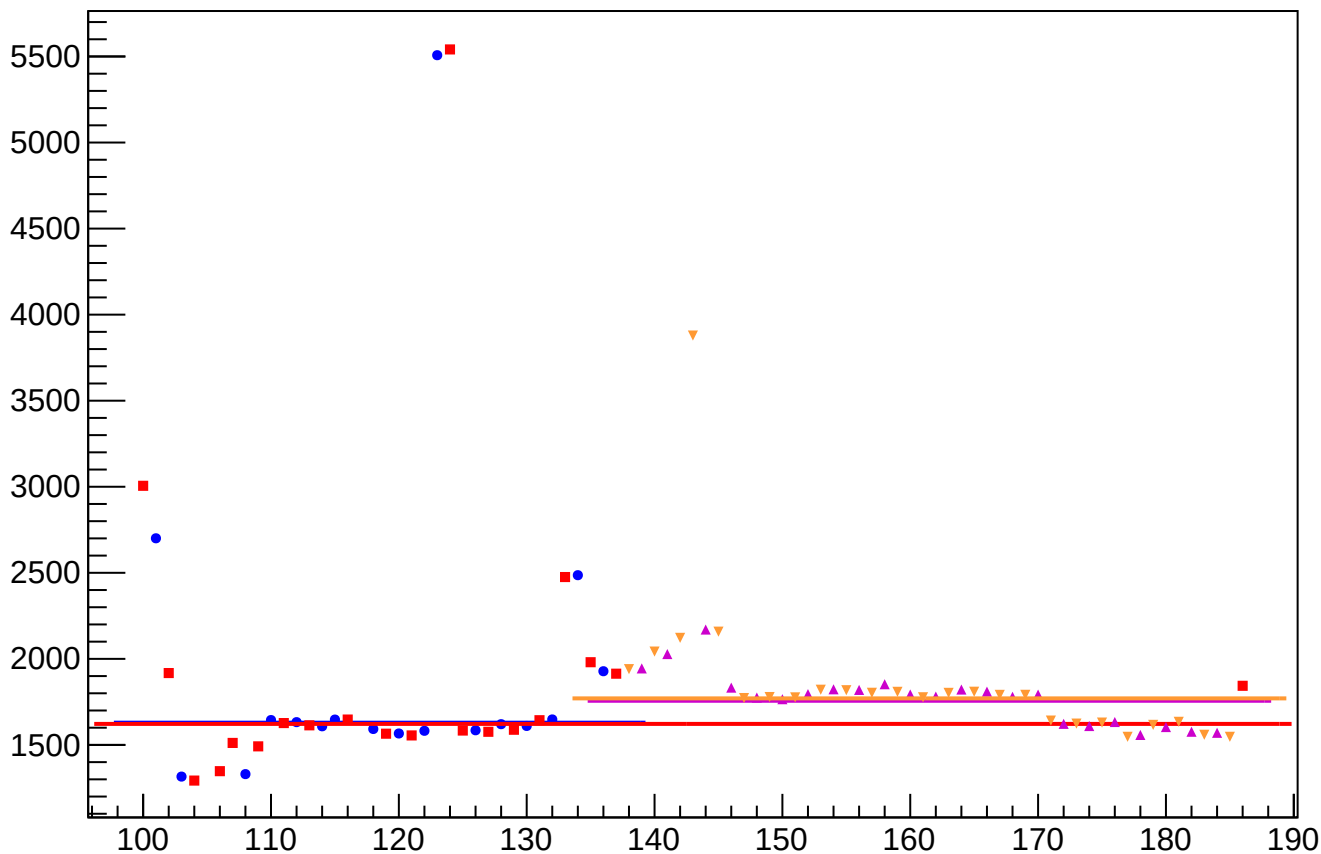
Right: 402.423 $\pm$ 444.405  $\chi^2$ /NDF: 27.8/36

In: 362.916 $\pm$ 353.361  $\chi^2$ /NDF: 31.0/39

Out: 249.377 $\pm$ 344.231  $\chi^2$ /NDF: 46.8/44

All: 304.661 $\pm$ 246.573  $\chi^2$ /NDF: 77.9/84

# reg\_asym\_at2\_dd\_rms vs Slug, Sign Corrected



Right In: 1629.197 $\pm$ 0.457  $\chi^2$ /NDF: 406744.5/16

Left Out: 1770.384 $\pm$ 0.294  $\chi^2$ /NDF: 699536.9/24

Right Out: 1622.104 $\pm$ 0.433  $\chi^2$ /NDF: 445067.2/19

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: 1625.455 $\pm$ 0.314  $\chi^2$ /NDF: 851938.7/36

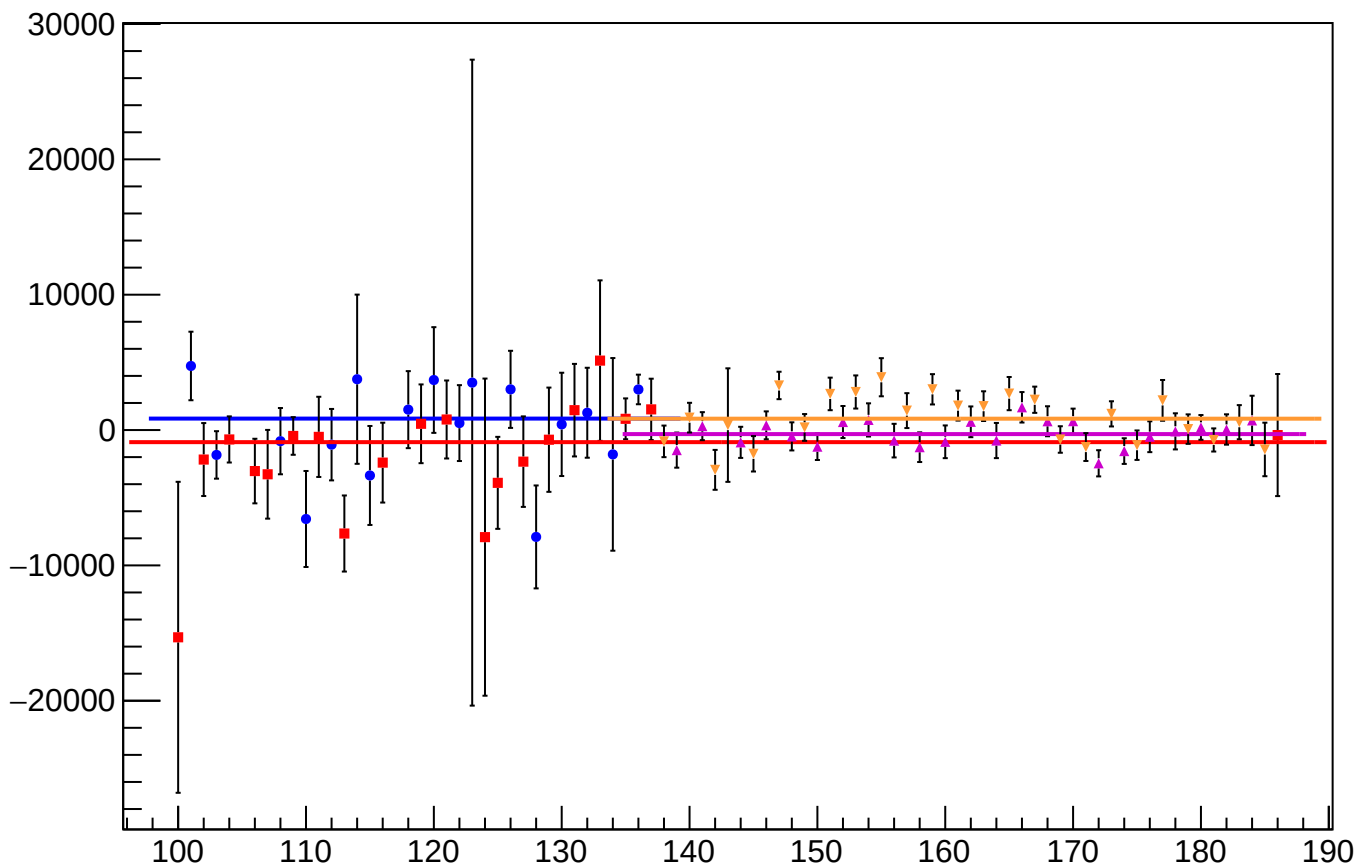
In: 1718.560 $\pm$ 0.250  $\chi^2$ /NDF: 684303.7/39

Out: 1723.450 $\pm$ 0.243  $\chi^2$ /NDF: 1224887.0/44

All: 1721.069 $\pm$ 0.174  $\chi^2$ /NDF: 1909387.2/84



asym\_at2\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: 846.430+/-632.780  $\chi^2/\text{NDF}$ : 22.1/16

Left Out: 839.344+/-230.465  $\chi^2/\text{NDF}$ :54.4/24

Right Out: -894.045+/-585.477  $\chi^2/\text{NDF}$ : 15.2/19

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

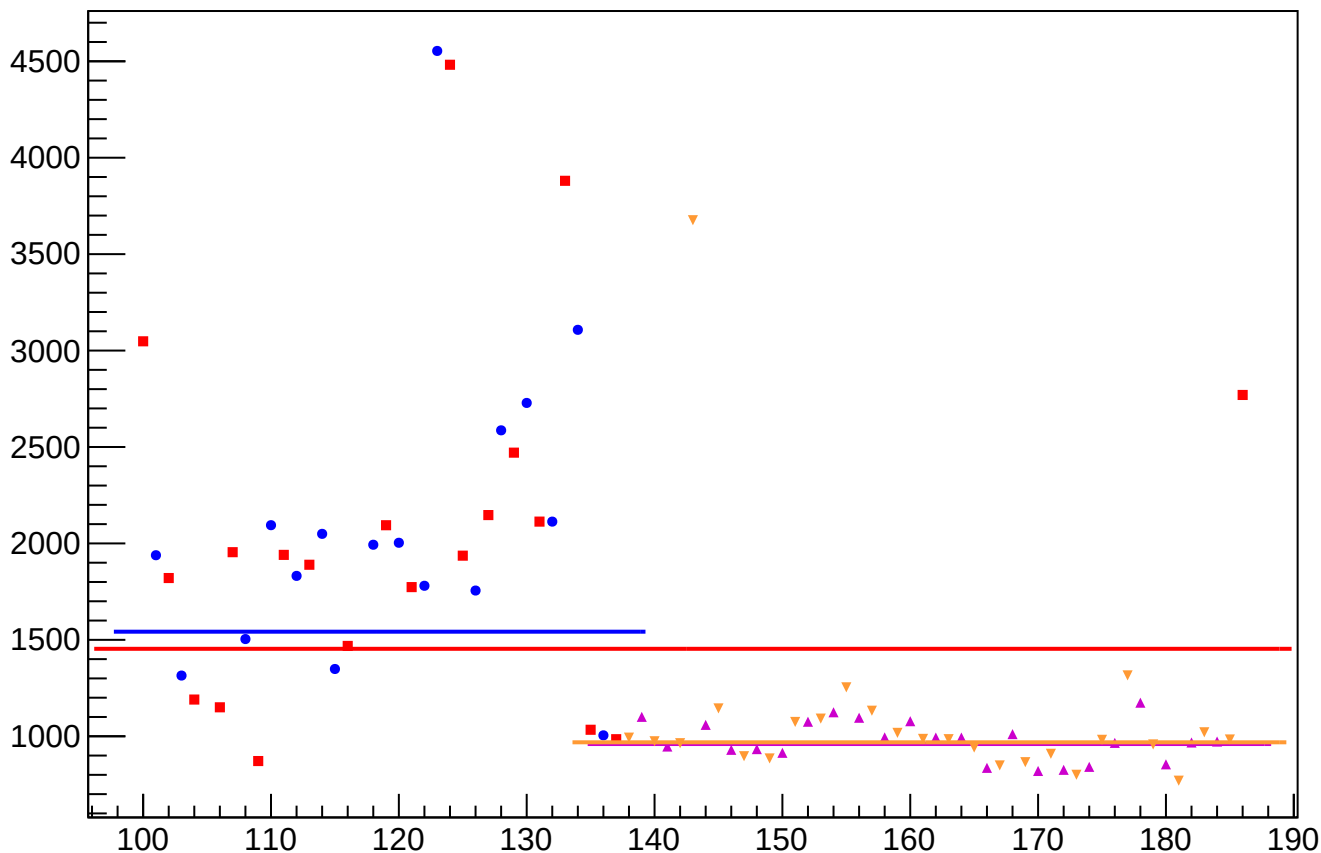
Right: -91.285+/-429.746  $\chi^2/\text{NDF}$ : 41.4/36

In: -163.717+/-217.324  $\chi^2/\text{NDF}$ :43.3/39

Out: 606.790+/-214.449  $\chi^2/\text{NDF}$ :77.1/44

All: 226.668+/-152.645  $\chi^2/\text{NDF}$ : 126.9/84

asym\_at2\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 1542.291+/-0.447  $\chi^2/\text{NDF}$ : 1293220.0/16

Left Out: 968.712+/-0.163  $\chi^2/\text{NDF}$ : 1393696.6/24

Right Out: 1453.529+/-0.414  $\chi^2/\text{NDF}$ : 1996313.0/19

Left In: 959.805+/-0.164  $\chi^2/\text{NDF}$ : 371210.5/22

Left: 964.276+/-0.115  $\chi^2/\text{NDF}$ : 1766394.7/47

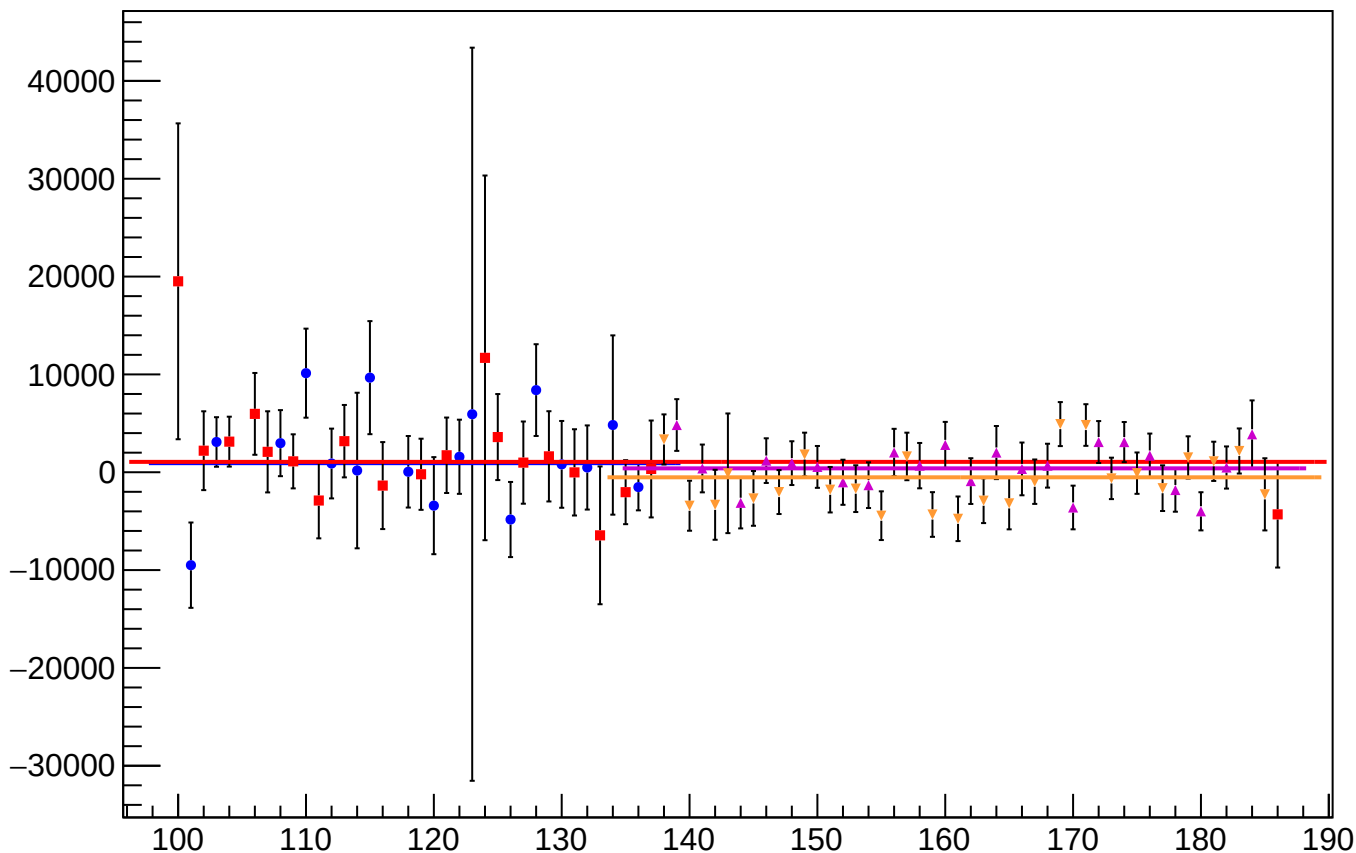
Right: 1494.469+/-0.304  $\chi^2/\text{NDF}$ : 3310735.1/36

In: 1028.511+/-0.154  $\chi^2/\text{NDF}$ : 3159246.6/39

Out: 1033.756+/-0.152  $\chi^2/\text{NDF}$ : 4577427.3/44

All: 1031.168+/-0.108  $\chi^2/\text{NDF}$ : 7737264.0/84

# asym\_at2\_dd\_mean vs Slug, Sign Corrected



Right In: 928.405 $\pm$ 970.555  $\chi^2$ /NDF: 20.1/16

Left Out: -517.719 $\pm$ 481.486  $\chi^2$ /NDF:34.0/24

Right Out: 1060.333 $\pm$ 914.051  $\chi^2$ /NDF: 9.1/19

Left In: 397.398 $\pm$ 485.048  $\chi^2$ /NDF:21.8/22

Left: -63.533 $\pm$ 341.714  $\chi^2$ /NDF: 57.7/47

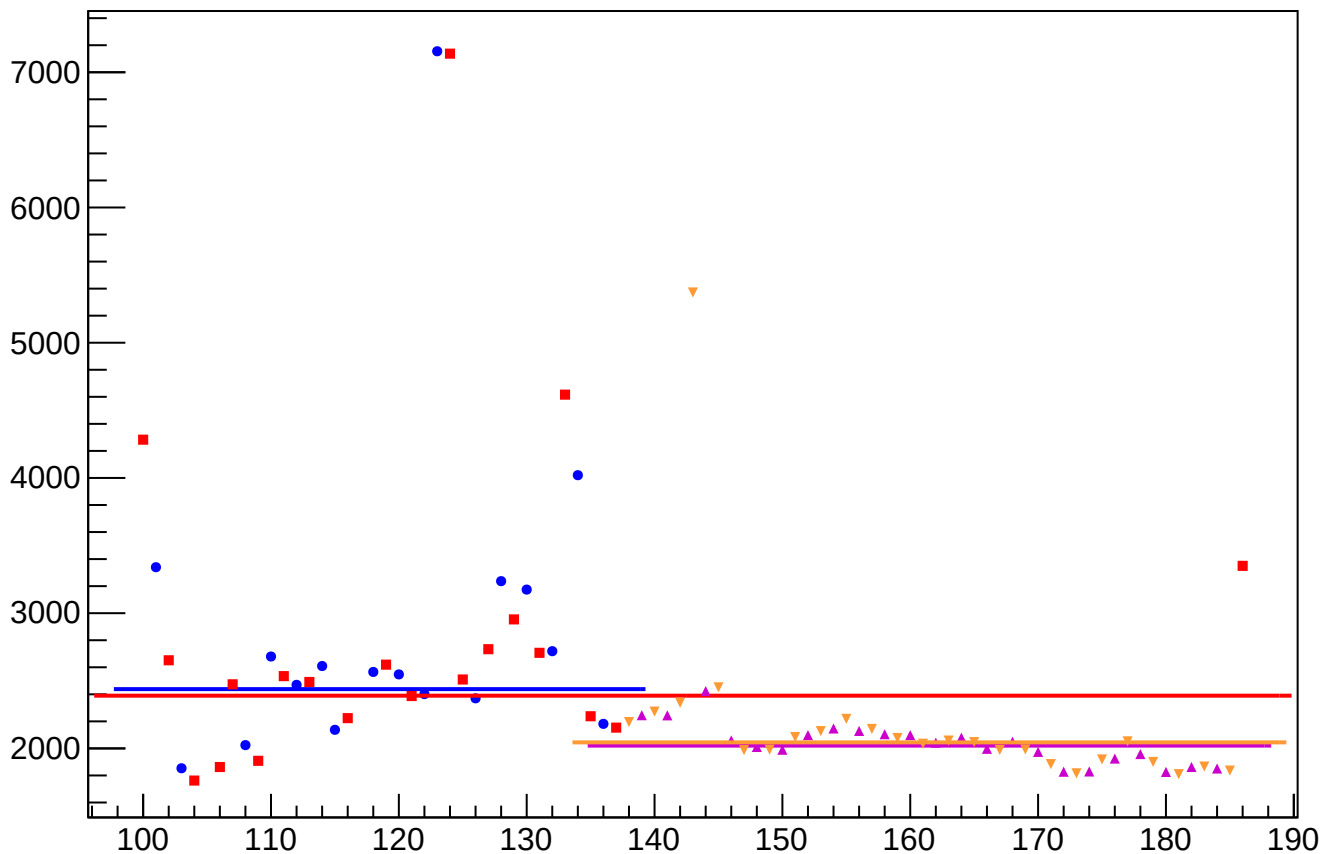
Right: 998.321 $\pm$ 665.411  $\chi^2$ /NDF: 29.2/36

In: 503.519 $\pm$ 433.881  $\chi^2$ /NDF:42.2/39

Out: -174.955 $\pm$ 425.998  $\chi^2$ /NDF:45.4/44

All: 158.062 $\pm$ 303.975  $\chi^2$ /NDF: 88.9/84

# asym\_at2\_dd\_rms vs Slug, Sign Corrected



Right In: 2438.478+/-0.686  $\chi^2/\text{NDF}$ : 474942.5/16

Left Out: 2044.722+/-0.340  $\chi^2/\text{NDF}$ : 788703.5/24

Right Out: 2390.003+/-0.646  $\chi^2/\text{NDF}$ : 721543.4/19

Left In: 2020.802+/-0.343  $\chi^2/\text{NDF}$ : 173502.0/22

Left: 2032.850+/-0.242  $\chi^2/\text{NDF}$ : 964655.5/47

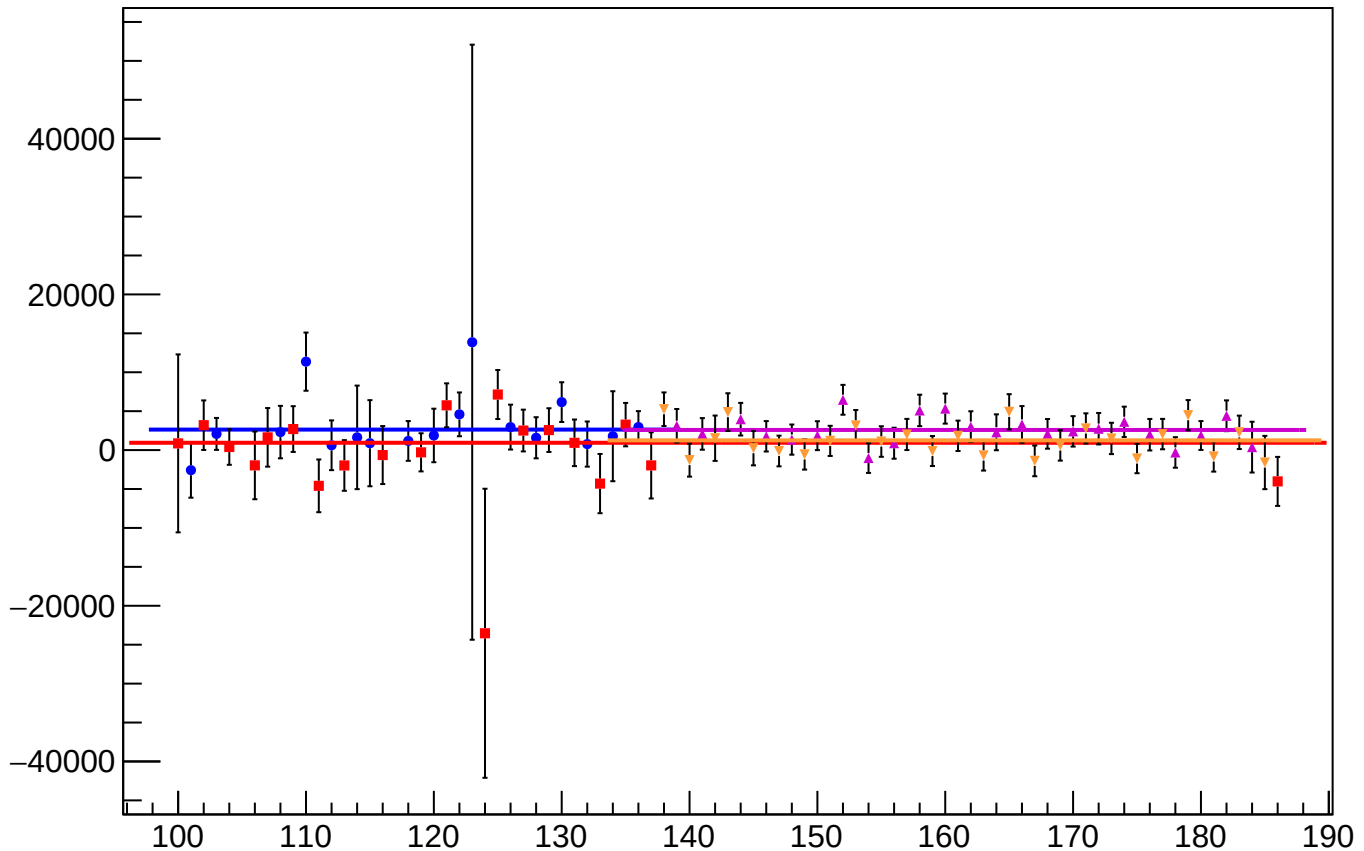
Right: 2412.788+/-0.471  $\chi^2/\text{NDF}$ : 1199130.0/36

In: 2104.274+/-0.307  $\chi^2/\text{NDF}$ : 944820.8/39

Out: 2119.720+/-0.301  $\chi^2/\text{NDF}$ : 1733647.4/44

All: 2112.139+/-0.215  $\chi^2/\text{NDF}$ : 2679758.8/84

reg\_asym\_atl1r2\_avg\_mean vs Slug, Sign Corrected



Right In: 2633.941 $\pm$ 745.154  $\chi^2$ /NDF: 11.7/16

Left Out: 1249.917 $\pm$ 412.486  $\chi^2$ /NDF: 23.0/24

Right Out: 940.184 $\pm$ 721.977  $\chi^2$ /NDF: 20.0/19

Left In: 2586.937 $\pm$ 421.510  $\chi^2$ /NDF: 17.5/22

Left: 1903.961 $\pm$ 294.810  $\chi^2$ /NDF: 45.6/47

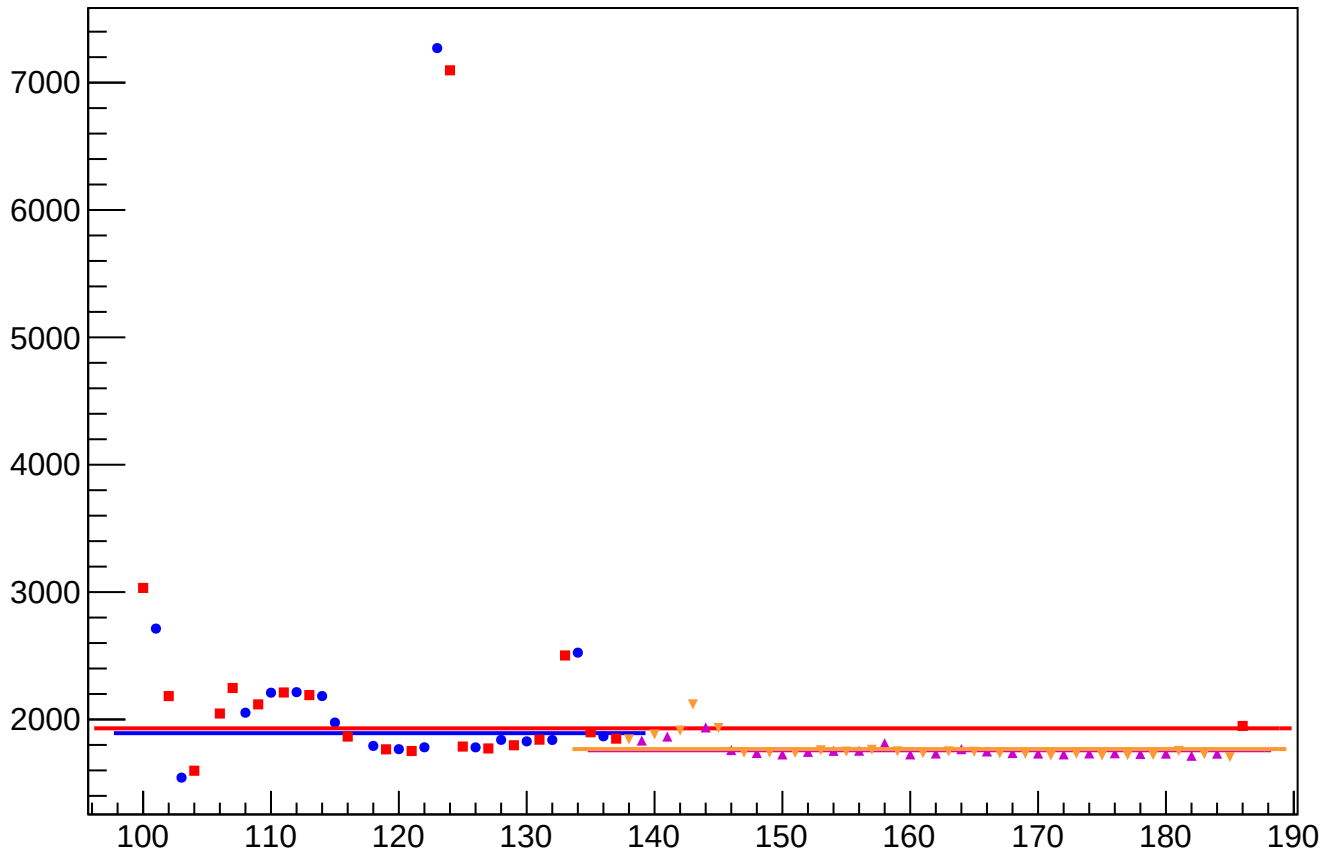
Right: 1760.311 $\pm$ 518.515  $\chi^2$ /NDF: 34.4/36

In: 2598.332 $\pm$ 366.880  $\chi^2$ /NDF: 29.2/39

Out: 1173.695 $\pm$ 358.153  $\chi^2$ /NDF: 43.2/44

All: 1868.868 $\pm$ 256.282  $\chi^2$ /NDF: 80.1/84

reg\_asym\_atl1r2\_avg\_rms vs Slug, Sign Corrected



Right In: 1892.368+/-0.527  $\chi^2/\text{NDF}$ : 287730.3/16

Left Out: 1767.517+/-0.292  $\chi^2/\text{NDF}$ : 77674.7/24

Right Out: 1930.280+/-0.510  $\chi^2/\text{NDF}$ : 360353.9/19

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

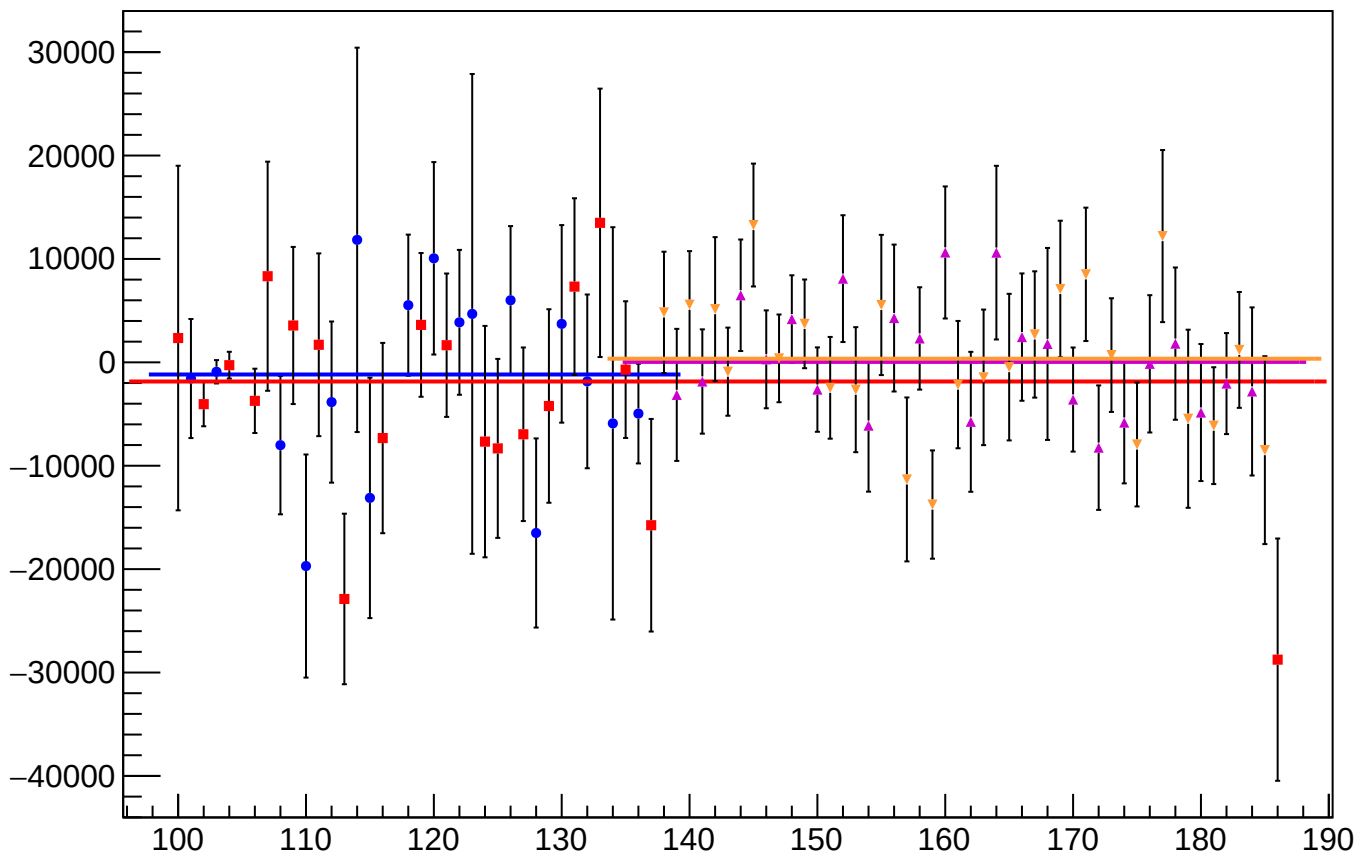
Right: 1911.951+/-0.366  $\chi^2/\text{NDF}$ : 650758.3/36

In: 1790.630+/-0.259  $\chi^2/\text{NDF}$ : 366748.4/39

Out: 1807.661+/-0.253  $\chi^2/\text{NDF}$ : 514834.8/44

All: 1799.354+/-0.181  $\chi^2/\text{NDF}$ : 883790.7/84

asym\_atl1r2\_avg\_correction\_mean vs Slug, Sign Corrected



Right In:  $-1175.288 \pm 985.256$   $\chi^2/\text{NDF}: 13.5/16$

Left Out:  $351.227 \pm 1170.051$   $\chi^2/\text{NDF}: 27.8/24$

Right Out:  $-1852.995 \pm 939.027$   $\chi^2/\text{NDF}: 23.2/19$

Left In:  $40.618 \pm 1207.491$   $\chi^2/\text{NDF}: 16.0/22$

Left:  $200.813 \pm 840.276$   $\chi^2/\text{NDF}: 43.9/47$

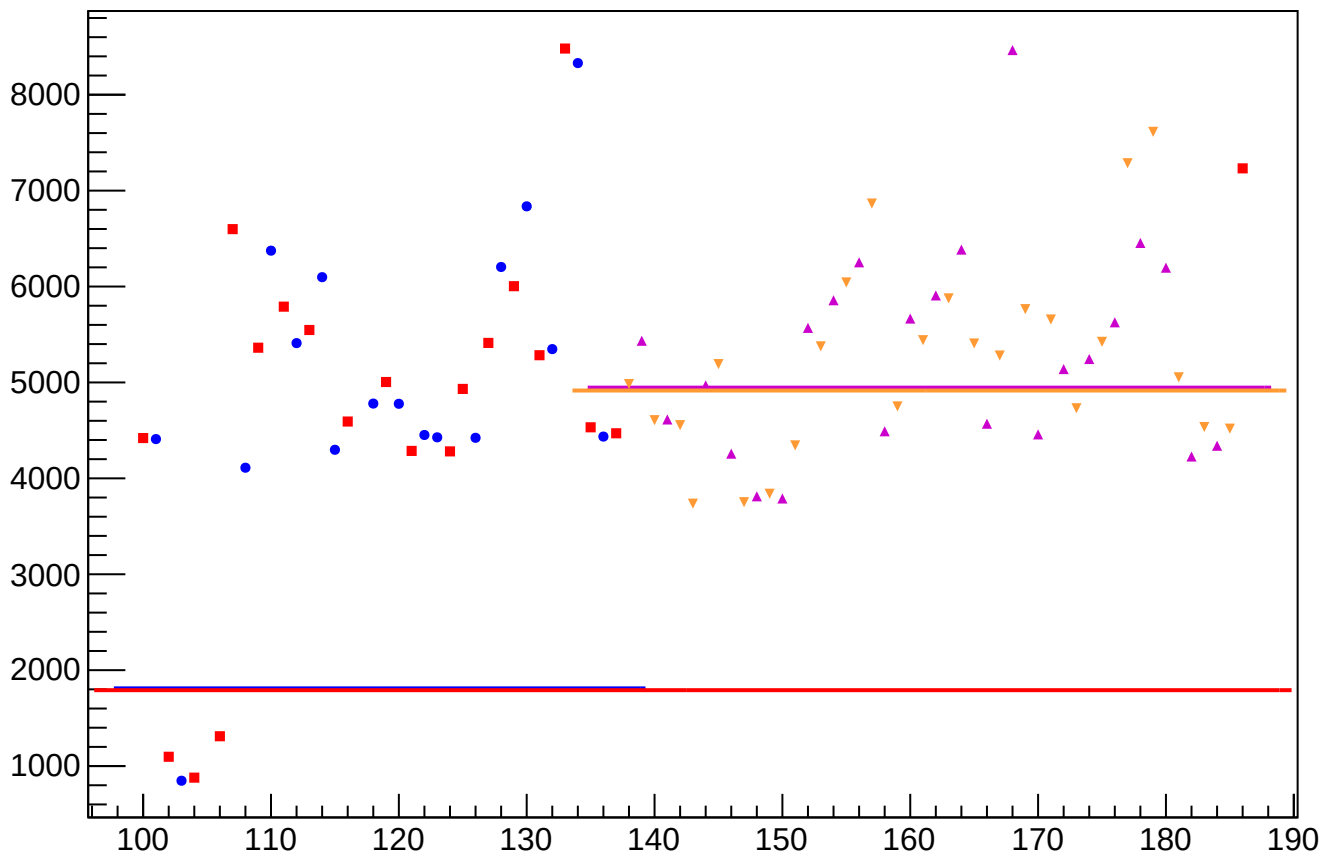
Right:  $-1530.413 \pm 679.748$   $\chi^2/\text{NDF}: 36.9/36$

In:  $-689.314 \pm 763.379$   $\chi^2/\text{NDF}: 30.1/39$

Out:  $-989.468 \pm 732.344$   $\chi^2/\text{NDF}: 53.1/44$

All:  $-845.616 \pm 528.477$   $\chi^2/\text{NDF}: 83.3/84$

asym\_atl1r2\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 1810.087 $\pm$ 0.697  $\chi^2$ /NDF: 6438570.3/16

Left Out: 4915.865 $\pm$ 0.827  $\chi^2$ /NDF:1186479.7/24

Right Out: 1791.375 $\pm$ 0.664  $\chi^2$ /NDF: 6729548.1/19

Left In: 4945.817 $\pm$ 0.854  $\chi^2$ /NDF:1188288.6/22

Left: 4930.370 $\pm$ 0.594  $\chi^2$ /NDF: 2375402.9/47

Right: 1800.281 $\pm$ 0.481  $\chi^2$ /NDF: 13168496.4/36

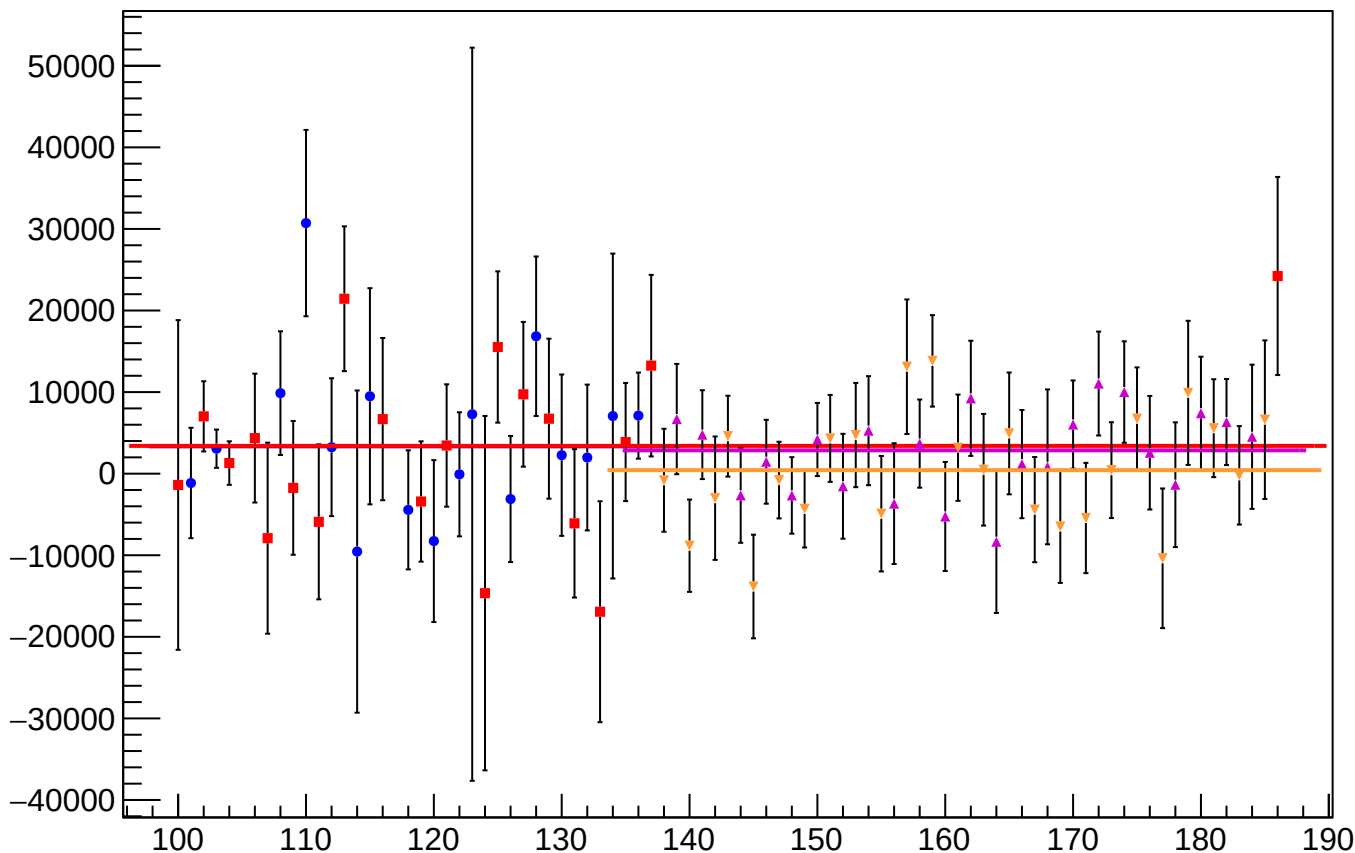
In: 3063.376 $\pm$ 0.540  $\chi^2$ /NDF:15723819.2/39

Out: 3015.427 $\pm$ 0.518  $\chi^2$ /NDF:16590701.1/44

All: 3038.407 $\pm$ 0.374  $\chi^2$ /NDF: 32318629.3/83



# asym\_atl1r2\_avg\_mean vs Slug, Sign Corrected



Right In: 3354.333+/-1609.286  $\chi^2/\text{NDF}$ : 13.5/16

Left Out: 430.860+/-1258.273  $\chi^2/\text{NDF}$ : 27.1/24

Right Out: 3407.538+/-1594.120  $\chi^2/\text{NDF}$ : 18.9/19

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

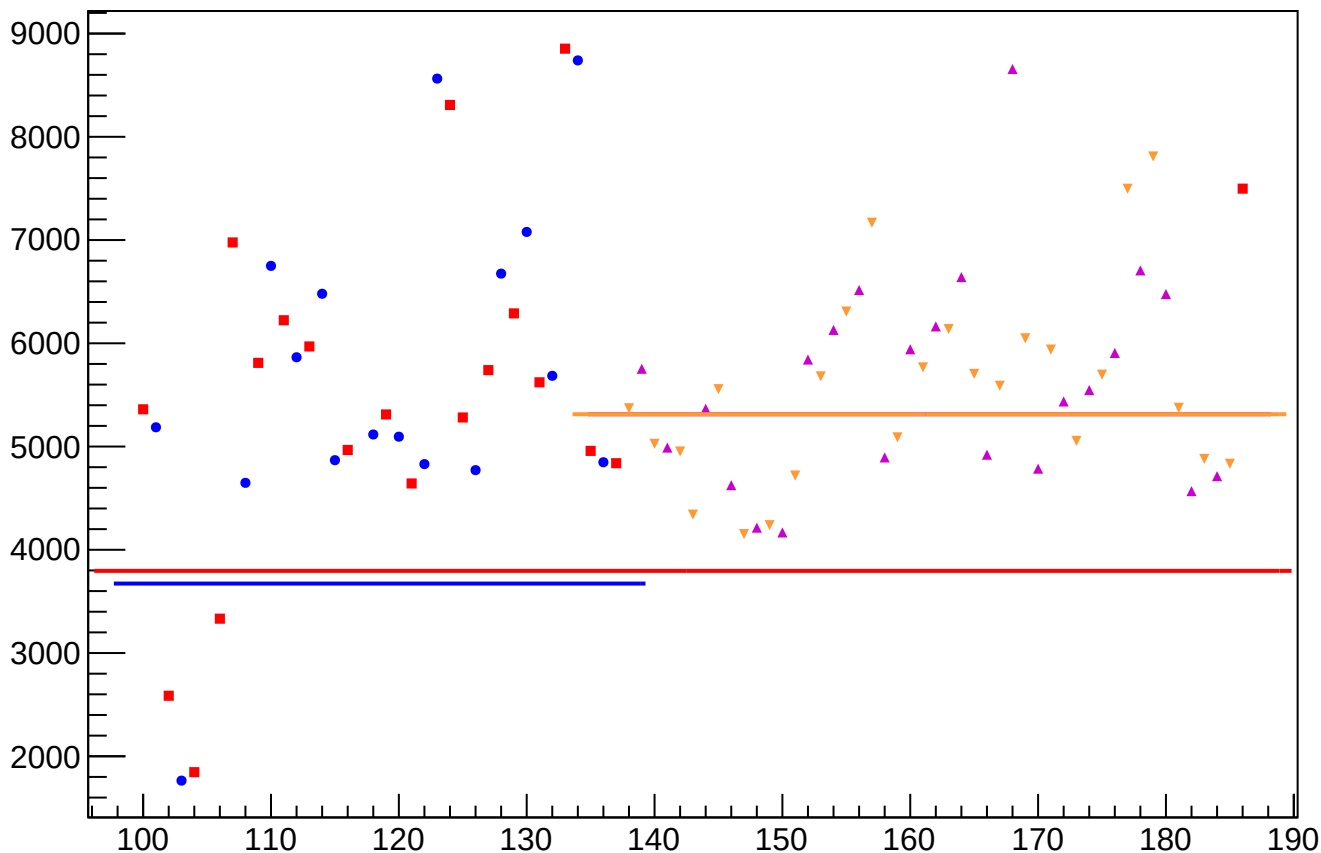
Right: 3381.187+/-1132.537  $\chi^2/\text{NDF}$ : 32.4/36

In: 3053.958+/-1007.641  $\chi^2/\text{NDF}$ : 26.4/39

Out: 1573.511+/-987.670  $\chi^2/\text{NDF}$ : 48.2/44

All: 2298.918+/-705.343  $\chi^2/\text{NDF}$ : 75.7/84

# asym\_atl1r2\_avg\_rms vs Slug, Sign Corrected



Right In: 3672.737 $\pm$ 1.138  $\chi^2$ /NDF: 2780170.9/16

Left Out: 5313.008 $\pm$ 0.890  $\chi^2$ /NDF: 894369.8/24

Right Out: 3795.768 $\pm$ 1.120  $\chi^2$ /NDF: 2881638.7/19

Left In: 5312.861 $\pm$ 0.914  $\chi^2$ /NDF: 957400.7/22

Left: 5312.937 $\pm$ 0.637  $\chi^2$ /NDF: 1851770.5/47

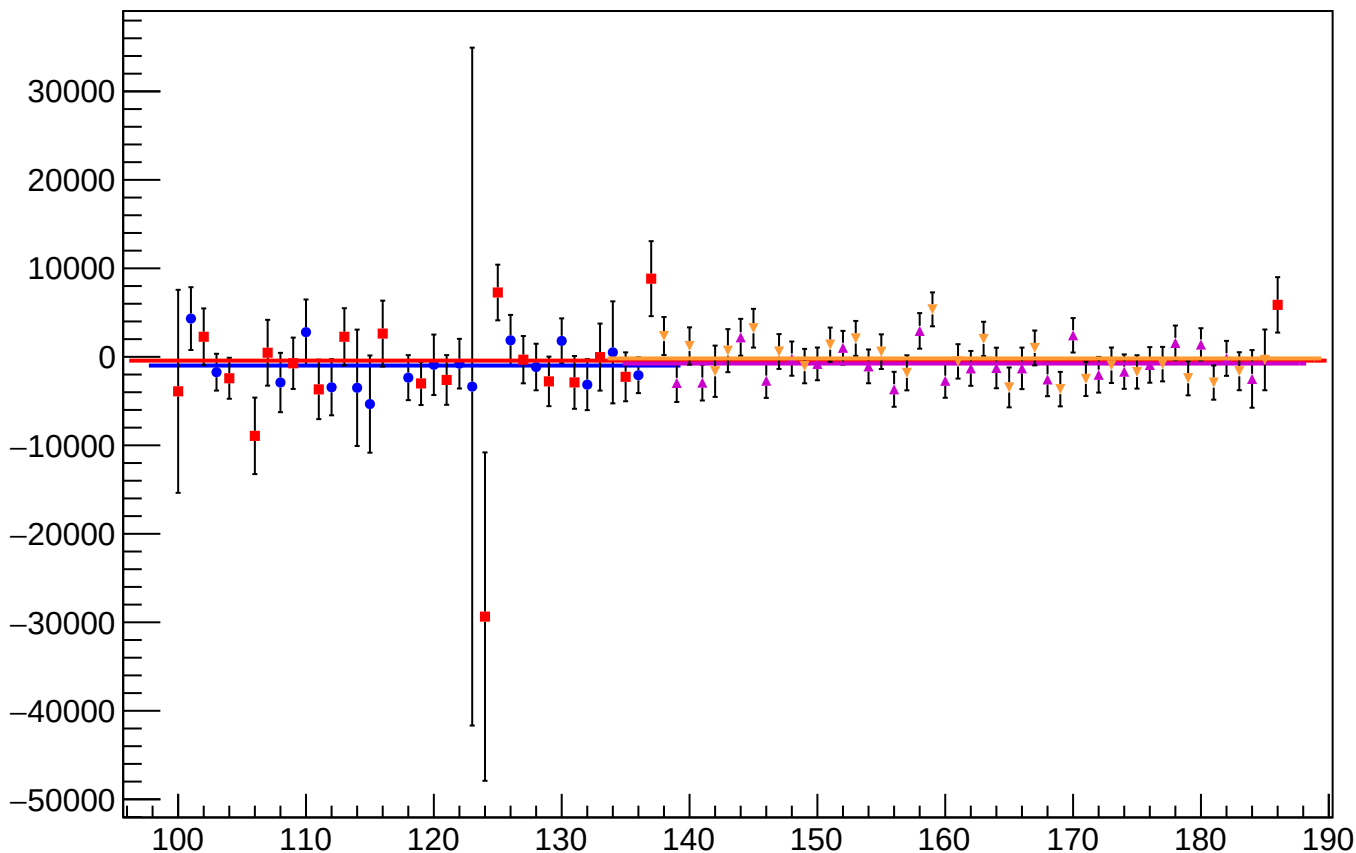
Right: 3735.238 $\pm$ 0.798  $\chi^2$ /NDF: 5667748.0/36

In: 4669.845 $\pm$ 0.713  $\chi^2$ /NDF: 5000511.6/39

Out: 4725.869 $\pm$ 0.697  $\chi^2$ /NDF: 4901327.0/44

All: 4698.489 $\pm$ 0.498  $\chi^2$ /NDF: 9904999.6/84

# reg\_asym\_atl1r2\_dd\_mean vs Slug, Sign Corrected



Right In: -984.395+/-742.831  $\chi^2/\text{NDF}$ : 8.5/16

Left Out: -179.794+/-410.976  $\chi^2/\text{NDF}$ : 29.3/24

Right Out: -426.962+/-719.833  $\chi^2/\text{NDF}$ : 28.6/19

Left In: -759.753+/-419.905  $\chi^2/\text{NDF}$ : 20.3/22

Left: -463.542+/-293.710  $\chi^2/\text{NDF}$ : 50.5/47

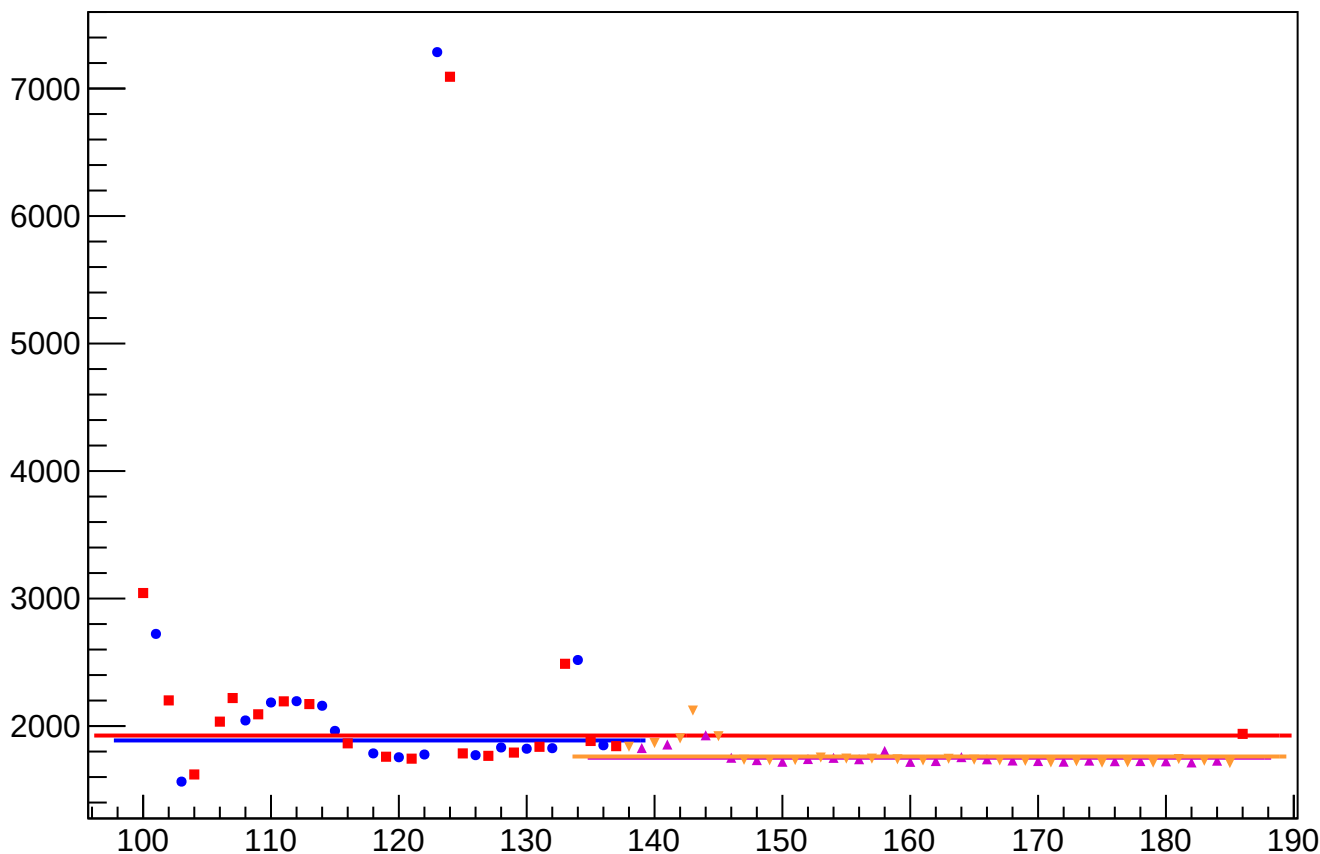
Right: -696.916+/-516.938  $\chi^2/\text{NDF}$ : 37.4/36

In: -814.152+/-365.544  $\chi^2/\text{NDF}$ : 28.9/39

Out: -240.556+/-356.903  $\chi^2/\text{NDF}$ : 57.9/44

All: -520.494+/-255.369  $\chi^2/\text{NDF}$ : 88.1/84

# reg\_asym\_atl1r2\_dd\_rms vs Slug, Sign Corrected



Right In: 1887.042+/-0.525  $\chi^2/\text{NDF}$ : 279163.5/16

Left Out: 1761.091+/-0.291  $\chi^2/\text{NDF}$ : 77468.5/24

Right Out: 1925.537+/-0.508  $\chi^2/\text{NDF}$ : 349593.0/19

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

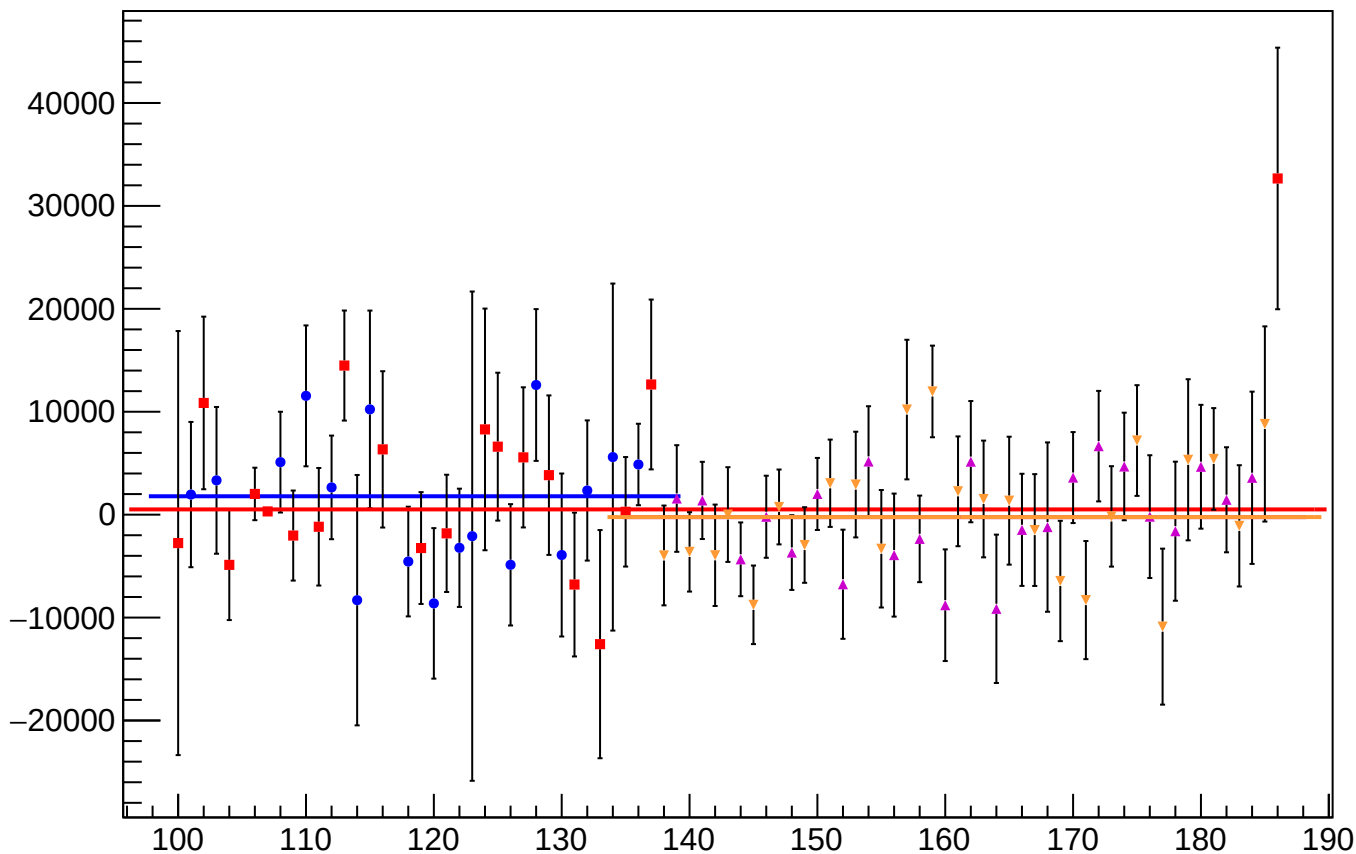
Right: 1906.923+/-0.365  $\chi^2/\text{NDF}$ : 631530.4/36

In: 1784.260+/-0.258  $\chi^2/\text{NDF}$ : 358266.7/39

Out: 1801.608+/-0.252  $\chi^2/\text{NDF}$ : 505957.9/44

All: 1793.145+/-0.181  $\chi^2/\text{NDF}$ : 866531.4/84

asym\_atl1r2\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: 1787.135+/-1585.326  $\chi^2/\text{NDF}$ : 12.9/16

Left Out: -235.806+/-1005.144  $\chi^2/\text{NDF}$ : 28.9/24

Right Out: 510.566+/-453.476  $\chi^2/\text{NDF}$ : 24.5/19

Left In: -239.224+/-1028.883  $\chi^2/\text{NDF}$ : 15.3/22

Left: -237.475+/-718.990  $\chi^2/\text{NDF}$ : 44.2/47

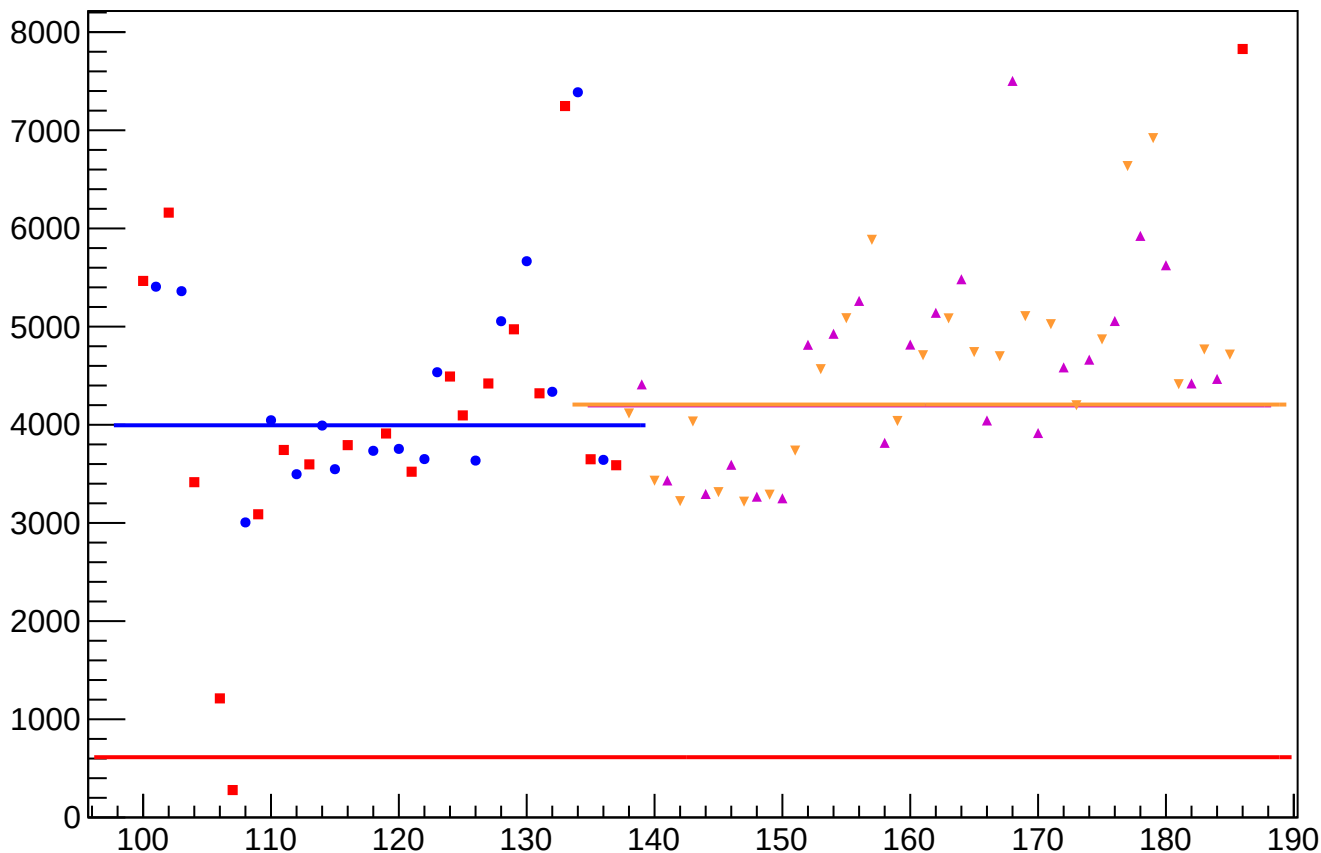
Right: 607.118+/-435.990  $\chi^2/\text{NDF}$ : 38.0/36

In: 361.333+/-863.053  $\chi^2/\text{NDF}$ : 29.3/39

Out: 384.341+/-413.356  $\chi^2/\text{NDF}$ : 53.8/44

All: 380.048+/-372.803  $\chi^2/\text{NDF}$ : 83.2/84

asym\_atl1r2\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 3994.850+/-1.121  $\chi^2/\text{NDF}$ : 514121.6/16

Left Out: 4206.076+/-0.711  $\chi^2/\text{NDF}$ : 1442269.3/24

Right Out: 613.795+/-0.321  $\chi^2/\text{NDF}$ : 10858607.9/19

Left In: 4197.267+/-0.728  $\chi^2/\text{NDF}$ : 1471012.9/22

Left: 4201.775+/-0.508  $\chi^2/\text{NDF}$ : 2913357.2/47

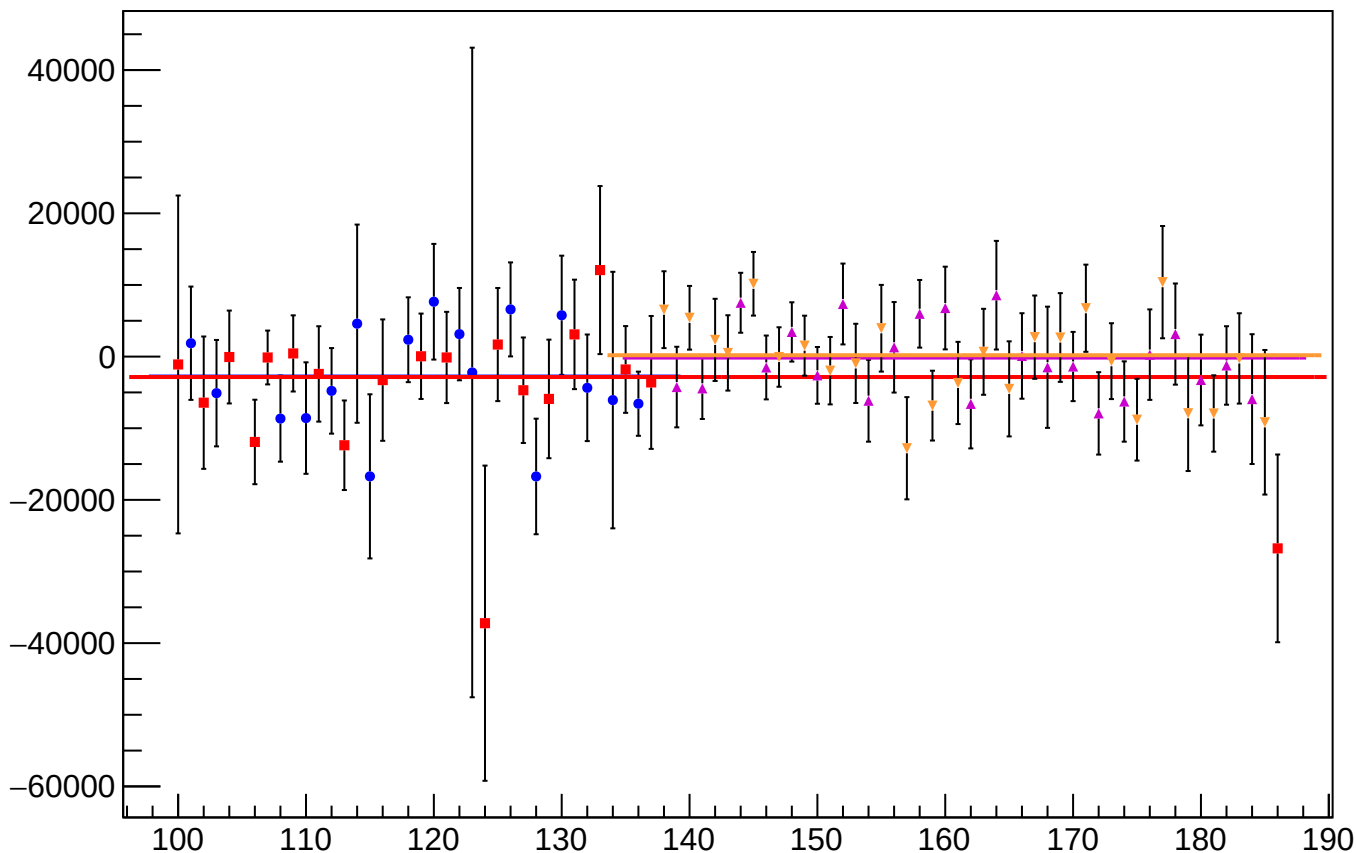
Right: 869.517+/-0.308  $\chi^2/\text{NDF}$ : 19781670.5/36

In: 4137.277+/-0.610  $\chi^2/\text{NDF}$ : 2008076.4/39

Out: 1221.317+/-0.292  $\chi^2/\text{NDF}$ : 33526154.2/44

All: 1765.399+/-0.264  $\chi^2/\text{NDF}$ : 54104950.7/8

# asym\_atl1r2\_dd\_mean vs Slug, Sign Corrected



Right In: -2785.964+/-1791.352  $\chi^2/\text{NDF}$ : 14.0/16

Left Out: 189.721+/-1106.851  $\chi^2/\text{NDF}$ : 25.0/24

Right Out: -2852.655+/-1566.646  $\chi^2/\text{NDF}$ : 14.9/19

Left In: -137.477+/-1129.656  $\chi^2/\text{NDF}$ : 18.6/22

Left: 29.458+/-790.601  $\chi^2/\text{NDF}$ : 43.6/47

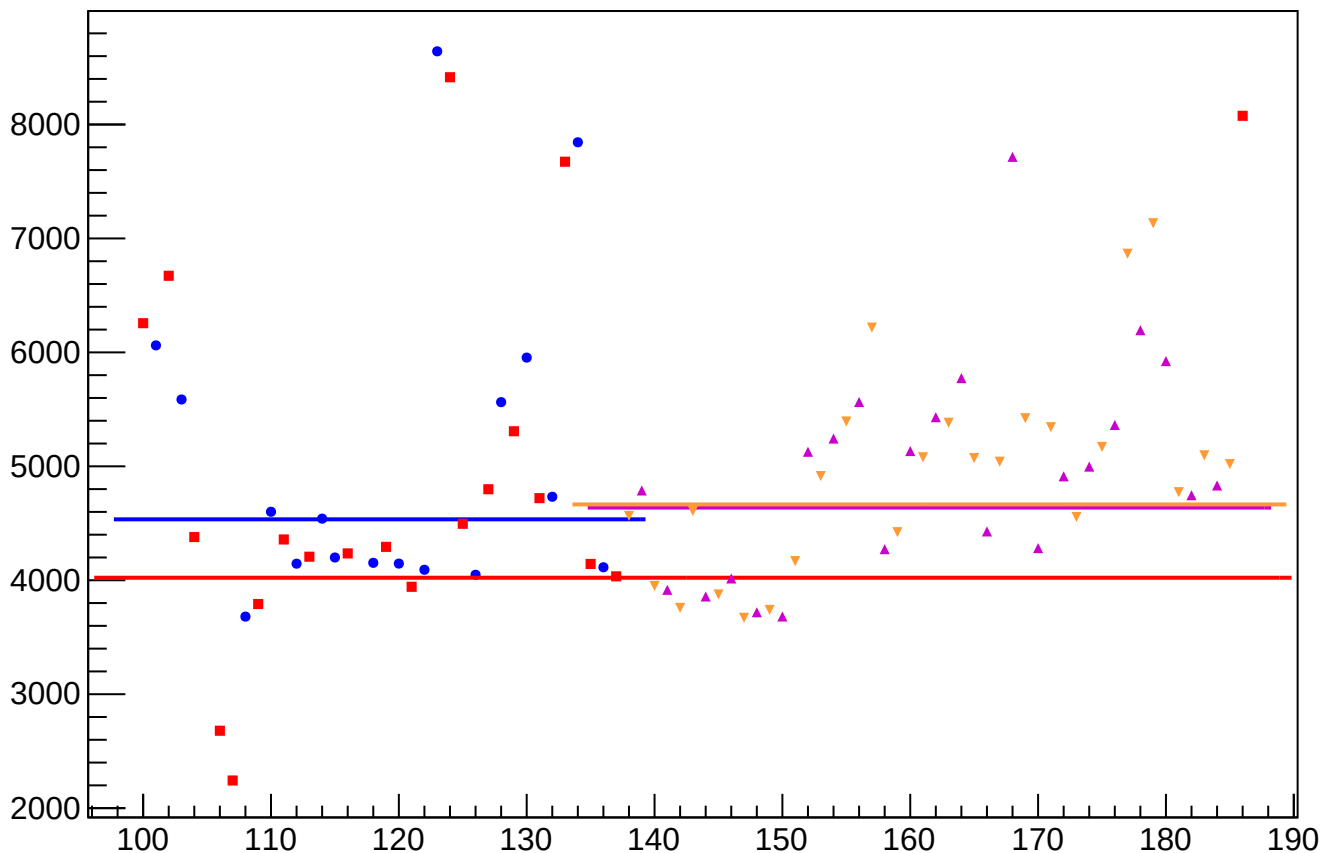
Right: -2823.752+/-1179.278  $\chi^2/\text{NDF}$ : 28.9/36

In: -891.043+/-955.527  $\chi^2/\text{NDF}$ : 34.1/39

Out: -823.264+/-903.994  $\chi^2/\text{NDF}$ : 42.4/44

All: -855.277+/-656.683  $\chi^2/\text{NDF}$ : 76.6/84

# asym\_atl1r2\_dd\_rms vs Slug, Sign Corrected



Right In: 4534.748+/-1.267  $\chi^2/\text{NDF}$ : 393206.7/16

Left Out: 4665.620+/-0.783  $\chi^2/\text{NDF}$ : 1017235.0/24

Right Out: 4022.300+/-1.101  $\chi^2/\text{NDF}$ : 1336204.5/19

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: 4242.791+/-0.831  $\chi^2/\text{NDF}$ : 1822658.6/36

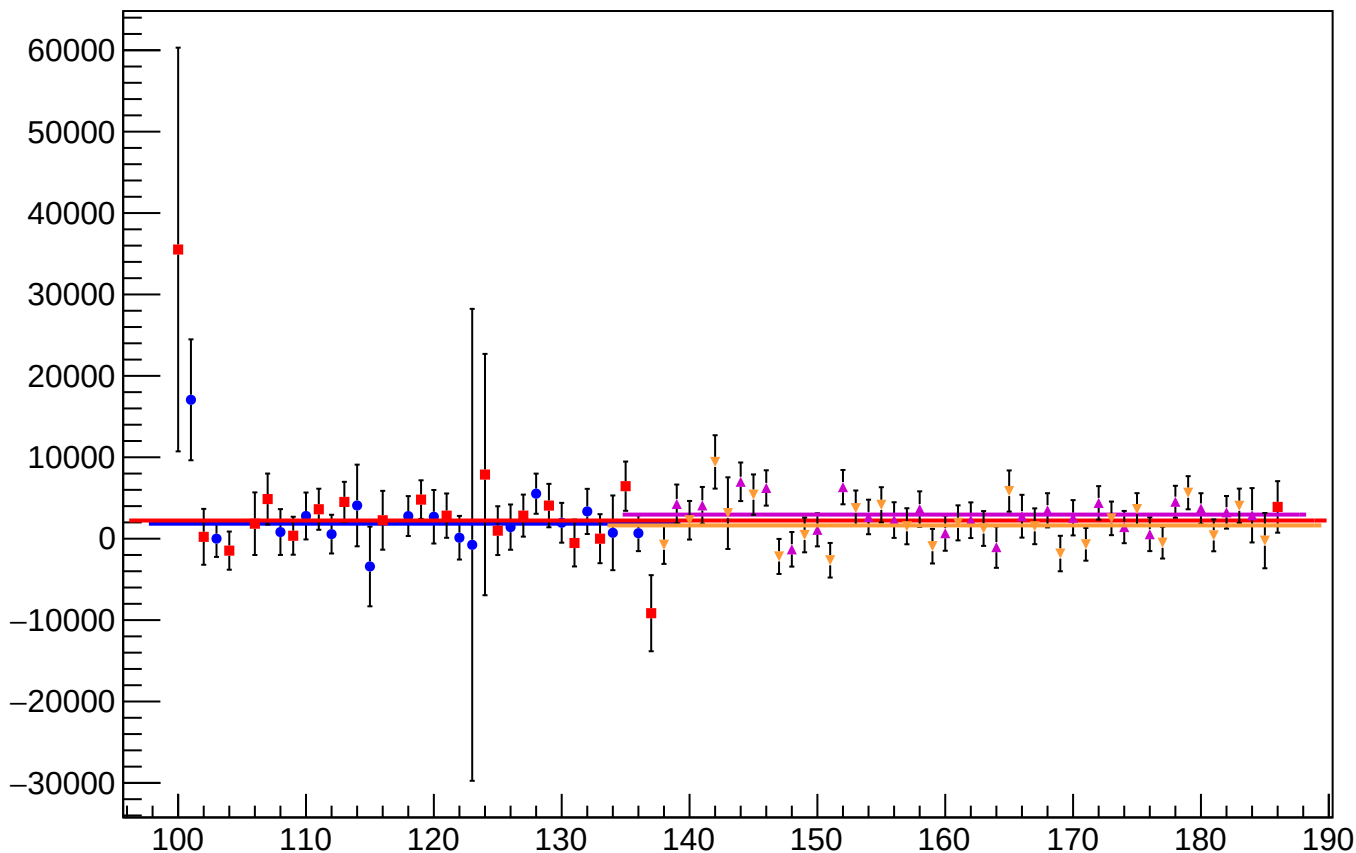
In: 4608.463+/-0.676  $\chi^2/\text{NDF}$ : 1463157.4/39

Out: 4449.605+/-0.638  $\chi^2/\text{NDF}$ : 2580301.4/44

All: 4524.467+/-0.464  $\chi^2/\text{NDF}$ : 4072687.6/84



# reg\_asym\_atr1l2\_avg\_mean vs Slug, Sign Corrected



Right In: 1842.914+/-713.221  $\chi^2/\text{NDF}$ : 10.3/16

Left Out: 1630.035+/-447.063  $\chi^2/\text{NDF}$ : 35.4/24

Right Out: 2232.976+/-670.488  $\chi^2/\text{NDF}$ : 18.8/19

Left In: 2958.620+/-453.688  $\chi^2/\text{NDF}$ : 20.4/22

Left: 2284.557+/-318.438  $\chi^2/\text{NDF}$ : 60.2/47

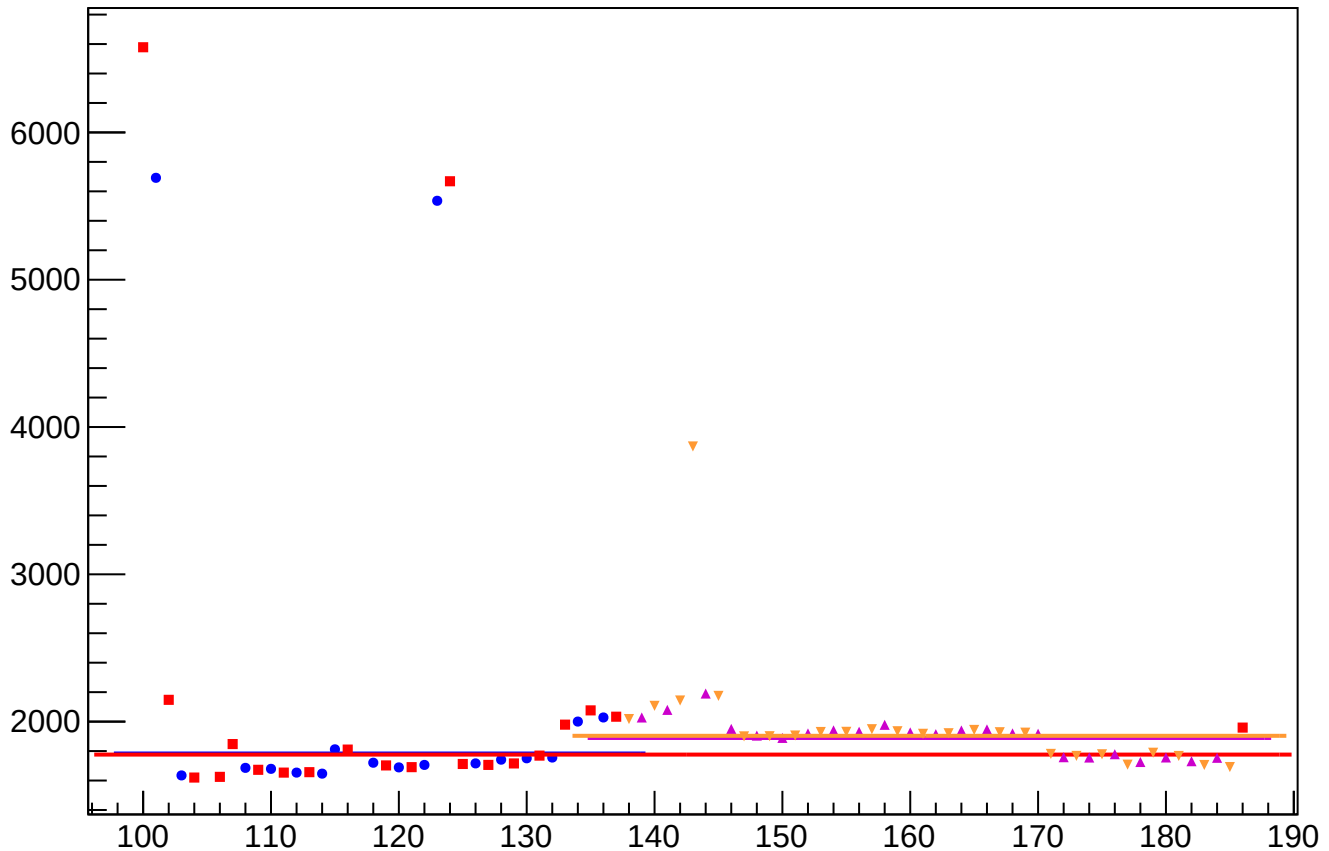
Right: 2049.980+/-488.516  $\chi^2/\text{NDF}$ : 29.3/36

In: 2637.216+/-382.803  $\chi^2/\text{NDF}$ : 32.4/39

Out: 1815.596+/-371.961  $\chi^2/\text{NDF}$ : 54.8/44

All: 2214.606+/-266.767  $\chi^2/\text{NDF}$ : 89.6/84

reg\_asym\_atr1l2\_avg\_rms vs Slug, Sign Corrected



Right In: 1783.480+/-0.504  $\chi^2/\text{NDF}$ : 644626.7/16

Left Out: 1903.618+/-0.316  $\chi^2/\text{NDF}$ : 541575.7/24

Right Out: 1776.119+/-0.471  $\chi^2/\text{NDF}$ : 313039.9/19

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

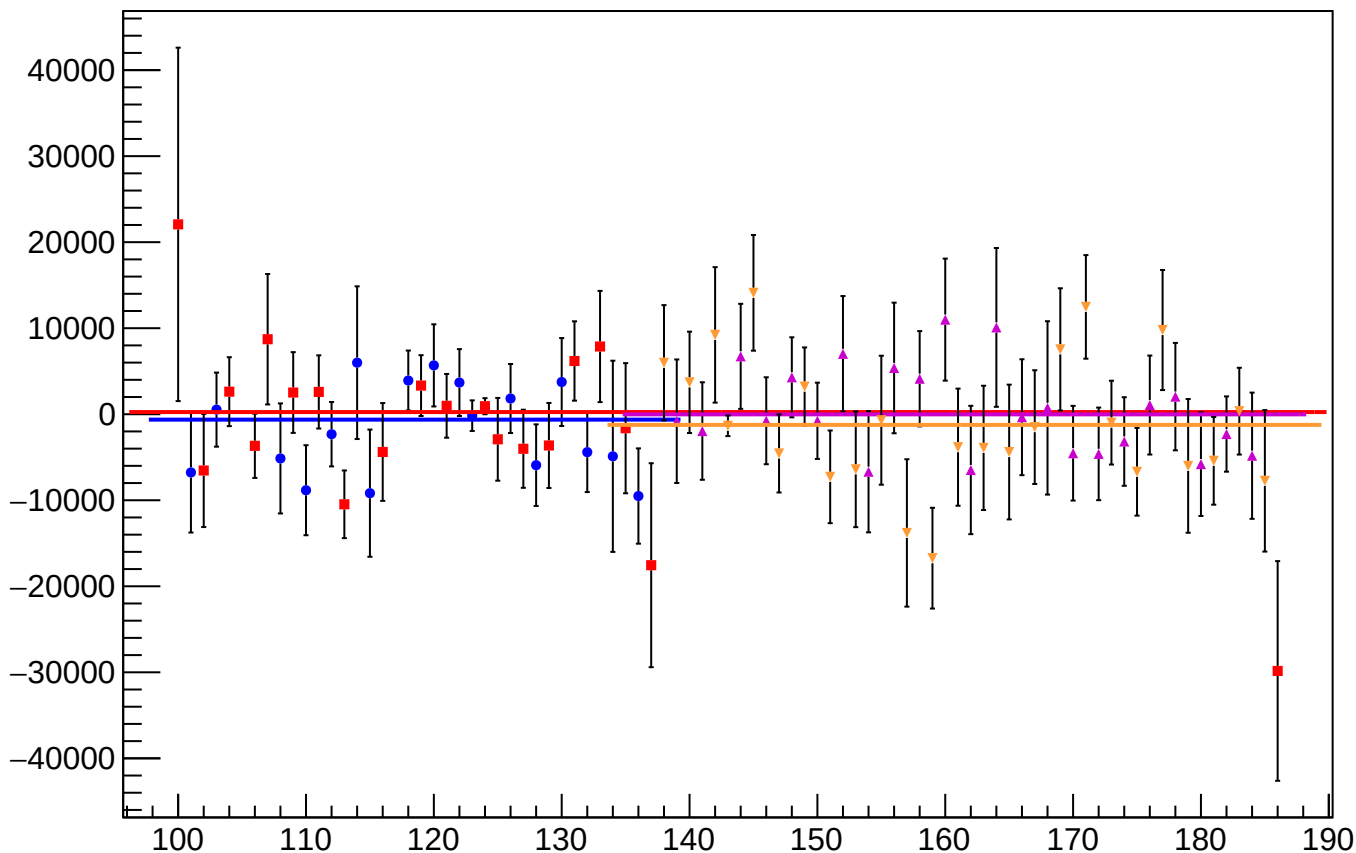
Right: 1779.548+/-0.344  $\chi^2/\text{NDF}$ : 957780.4/36

In: 1858.551+/-0.271  $\chi^2/\text{NDF}$ : 802166.9/39

Out: 1864.020+/-0.262  $\chi^2/\text{NDF}$ : 905137.3/44

All: 1861.369+/-0.188  $\chi^2/\text{NDF}$ : 1707514.6/84

asym\_atr1l2\_avg\_correction\_mean vs Slug, Sign Corrected



Right In: -628.255+/-1010.986  $\chi^2/\text{NDF}$ : 16.4/16

Left Out: -1239.833+/-865.201  $\chi^2/\text{NDF}$ : 33.9/24

Right Out: 250.568+/-724.707  $\chi^2/\text{NDF}$ : 27.7/19

Left In: -15.863+/-1243.317  $\chi^2/\text{NDF}$ : 13.2/22

Left: -840.501+/-710.172  $\chi^2/\text{NDF}$ : 47.8/47

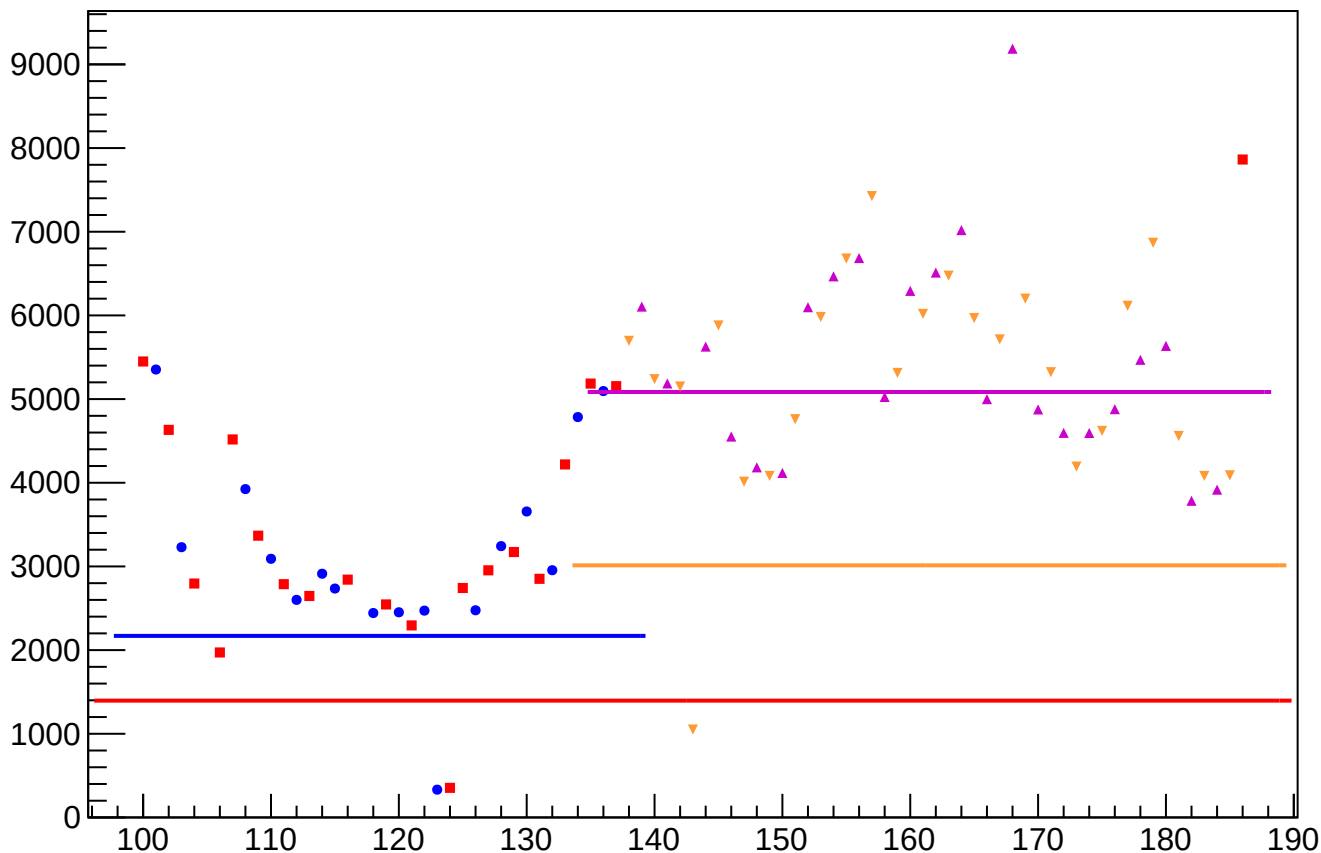
Right: -47.732+/-589.008  $\chi^2/\text{NDF}$ : 44.6/36

In: -384.510+/-784.396  $\chi^2/\text{NDF}$ : 29.8/39

Out: -363.951+/-555.563  $\chi^2/\text{NDF}$ : 63.4/44

All: -370.819+/-453.367  $\chi^2/\text{NDF}$ : 93.1/84

asym\_atr1l2\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 2169.912 $\pm$ 0.715  $\chi^2$ /NDF: 3978081.8/16

Left Out: 3013.268 $\pm$ 0.612  $\chi^2$ /NDF: 12270753.9/24

Right Out: 1396.263 $\pm$ 0.512  $\chi^2$ /NDF: 7353343.6/19

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

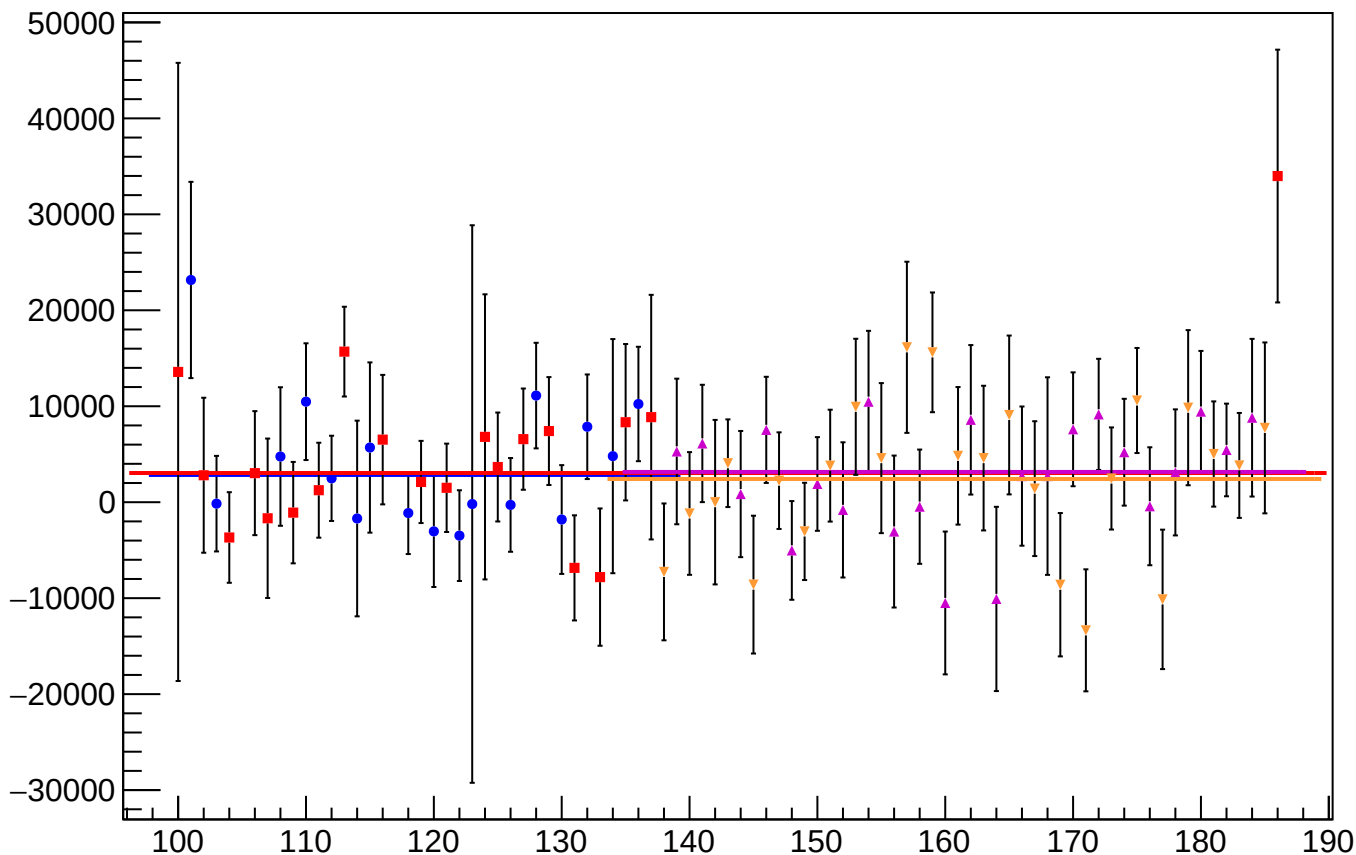
Right: 1658.864 $\pm$ 0.416  $\chi^2$ /NDF: 12105076.0/36

In: 3330.040 $\pm$ 0.555  $\chi^2$ /NDF: 11898413.0/39

Out: 2062.984 $\pm$ 0.393  $\chi^2$ /NDF: 23729547.6/44

All: 2486.261 $\pm$ 0.321  $\chi^2$ /NDF: 39103189.7/8

# asym\_atr1l2\_avg\_mean vs Slug, Sign Corrected



Right In: 2842.572 $\pm$ 1452.178  $\chi^2$ /NDF: 15.7/16

Left Out: 2417.210 $\pm$ 1286.482  $\chi^2$ /NDF:29.9/24

Right Out: 3043.719 $\pm$ 1375.375  $\chi^2$ /NDF: 23.8/19

Left In: 3153.449 $\pm$ 1337.378  $\chi^2$ /NDF:15.5/22

Left: 2771.054 $\pm$ 927.151  $\chi^2$ /NDF: 45.5/47

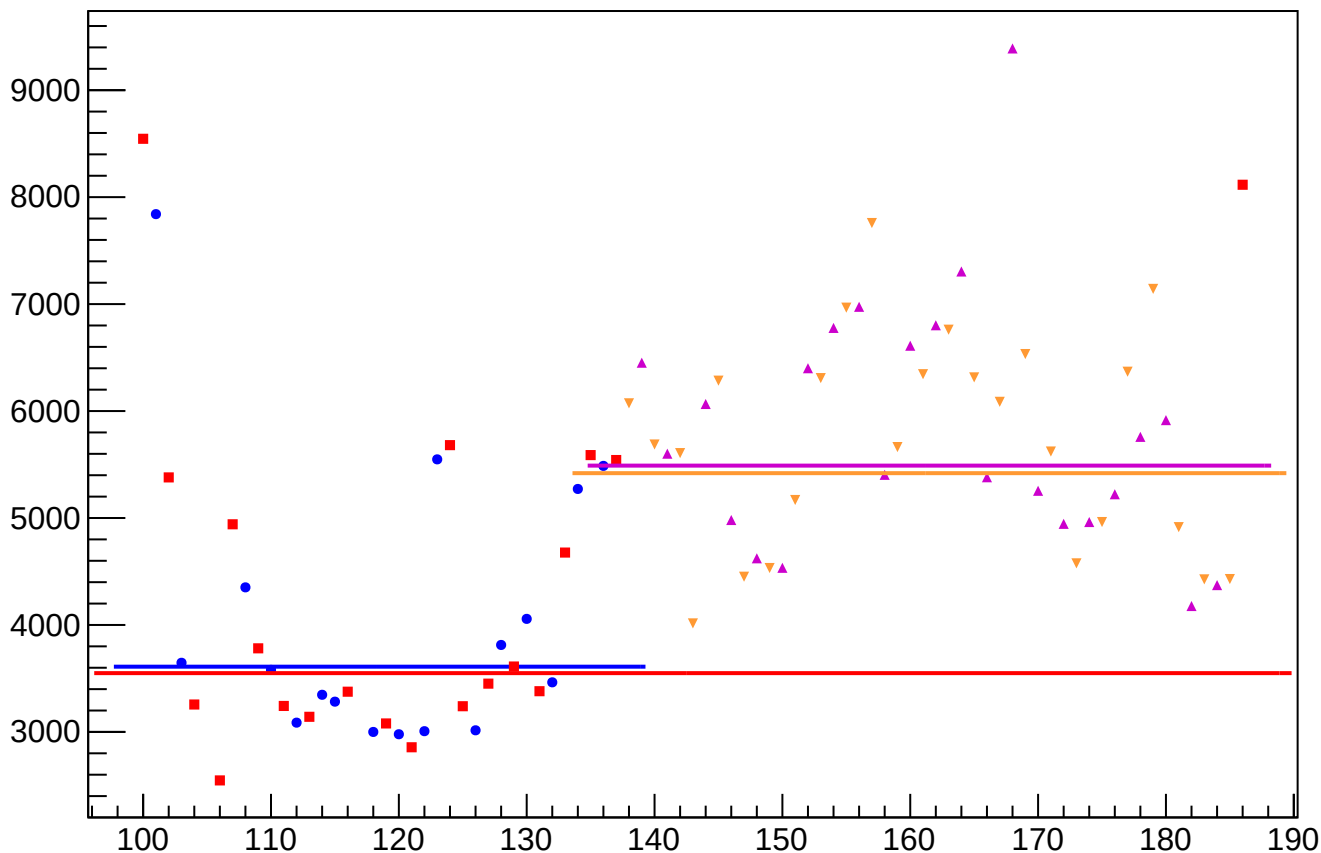
Right: 2948.605 $\pm$ 998.585  $\chi^2$ /NDF: 39.5/36

In: 3010.782 $\pm$ 983.754  $\chi^2$ /NDF:31.2/39

Out: 2709.566 $\pm$ 939.535  $\chi^2$ /NDF:53.8/44

All: 2853.252 $\pm$ 679.446  $\chi^2$ /NDF: 85.1/84

# asym\_atr1l2\_avg\_rms vs Slug, Sign Corrected



Right In: 3610.008 $\pm$ 1.027  $\chi^2$ /NDF: 783187.3/16

Left Out: 5419.305 $\pm$ 0.910  $\chi^2$ /NDF:1109972.1/24

Right Out: 3549.663 $\pm$ 0.959  $\chi^2$ /NDF: 904515.4/19

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

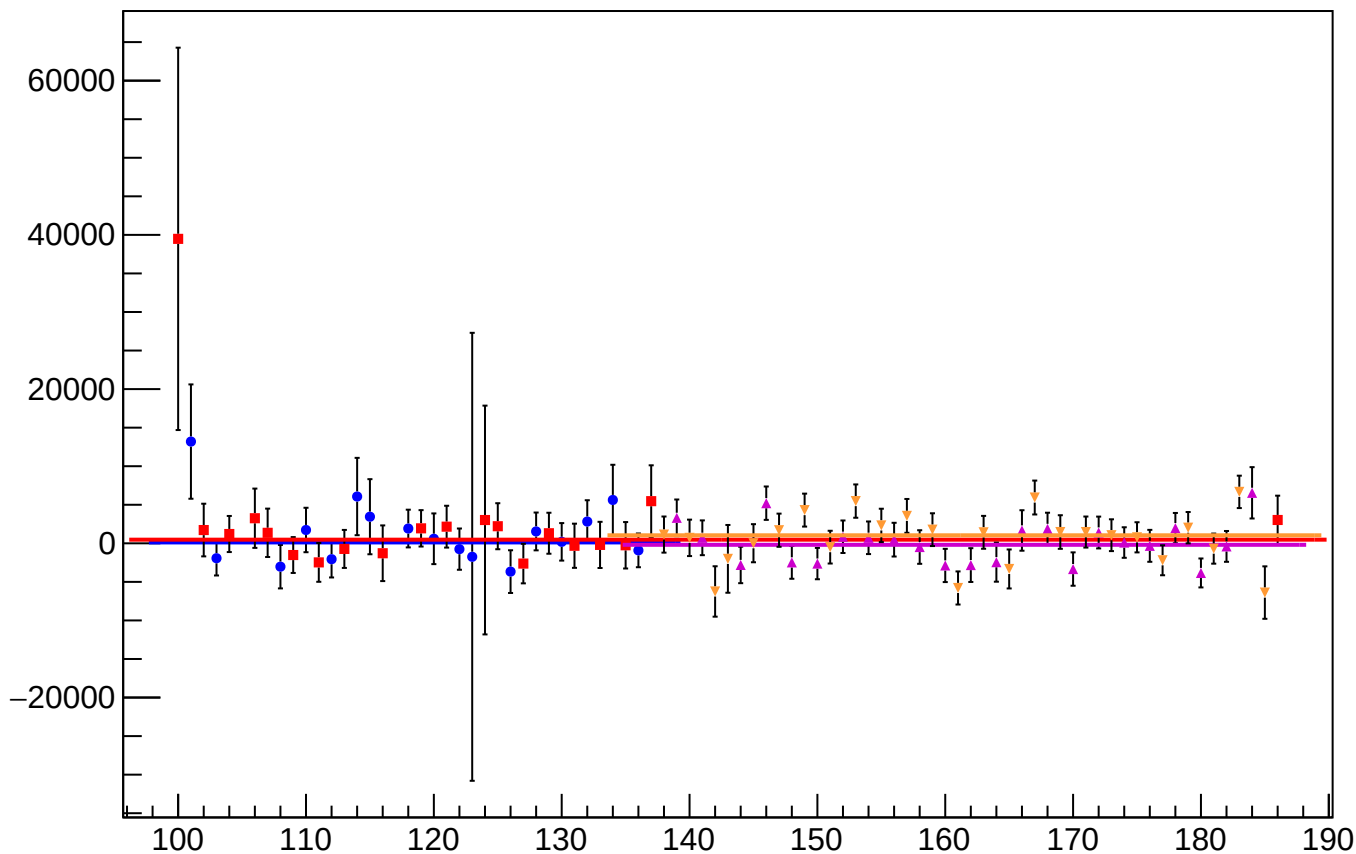
Right: 3577.779 $\pm$ 0.701  $\chi^2$ /NDF: 1689547.2/36

In: 4627.173 $\pm$ 0.696  $\chi^2$ /NDF:3661037.3/39

Out: 4533.885 $\pm$ 0.660  $\chi^2$ /NDF:4014950.0/44

All: 4578.081 $\pm$ 0.479  $\chi^2$ /NDF: 7685451.8/84

# reg\_asym\_atr1l2\_dd\_mean vs Slug, Sign Corrected



Right In: 115.789+/-711.081  $\chi^2/\text{NDF}$ : 13.7/16

Left Out: 1041.262+/-446.249  $\chi^2/\text{NDF}$ : 48.6/24

Right Out: 473.439+/-668.170  $\chi^2/\text{NDF}$ : 10.6/19

Left In: -191.966+/-453.055  $\chi^2/\text{NDF}$ : 30.0/22

Left: 433.980+/-317.925  $\chi^2/\text{NDF}$ : 82.3/47

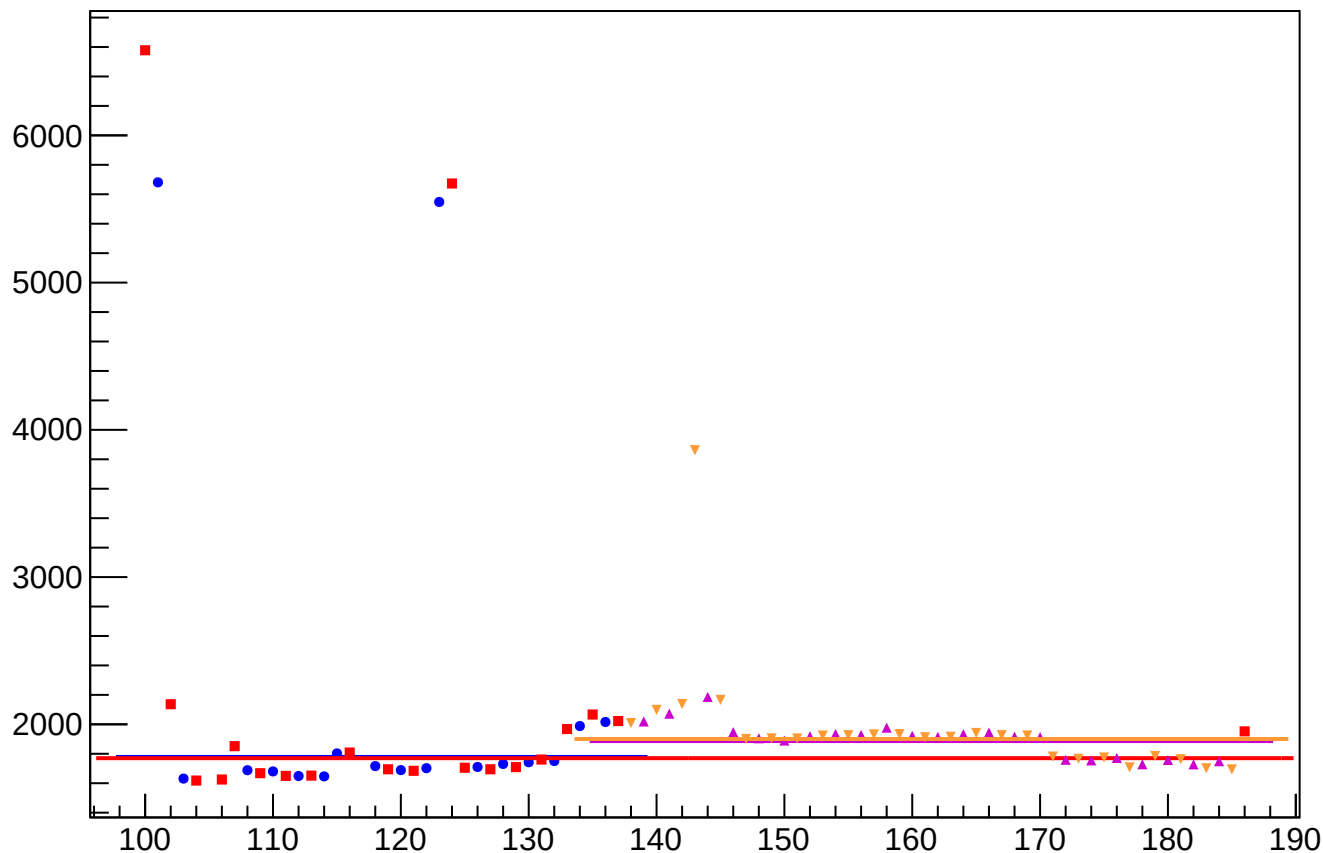
Right: 305.731+/-486.931  $\chi^2/\text{NDF}$ : 24.5/36

In: -103.107+/-382.091  $\chi^2/\text{NDF}$ : 43.9/39

Out: 866.111+/-371.096  $\chi^2/\text{NDF}$ : 59.6/44

All: 395.648+/-266.207  $\chi^2/\text{NDF}$ : 106.8/84

# reg\_asym\_atr1l2\_dd\_rms vs Slug, Sign Corrected



Right In: 1778.202+/-0.503  $\chi^2/\text{NDF}$ : 642982.9/16

Left Out: 1900.295+/-0.316  $\chi^2/\text{NDF}$ : 537892.5/24

Right Out: 1770.098+/-0.469  $\chi^2/\text{NDF}$ : 312348.9/19

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: 1773.872+/-0.343  $\chi^2/\text{NDF}$ : 955470.6/36

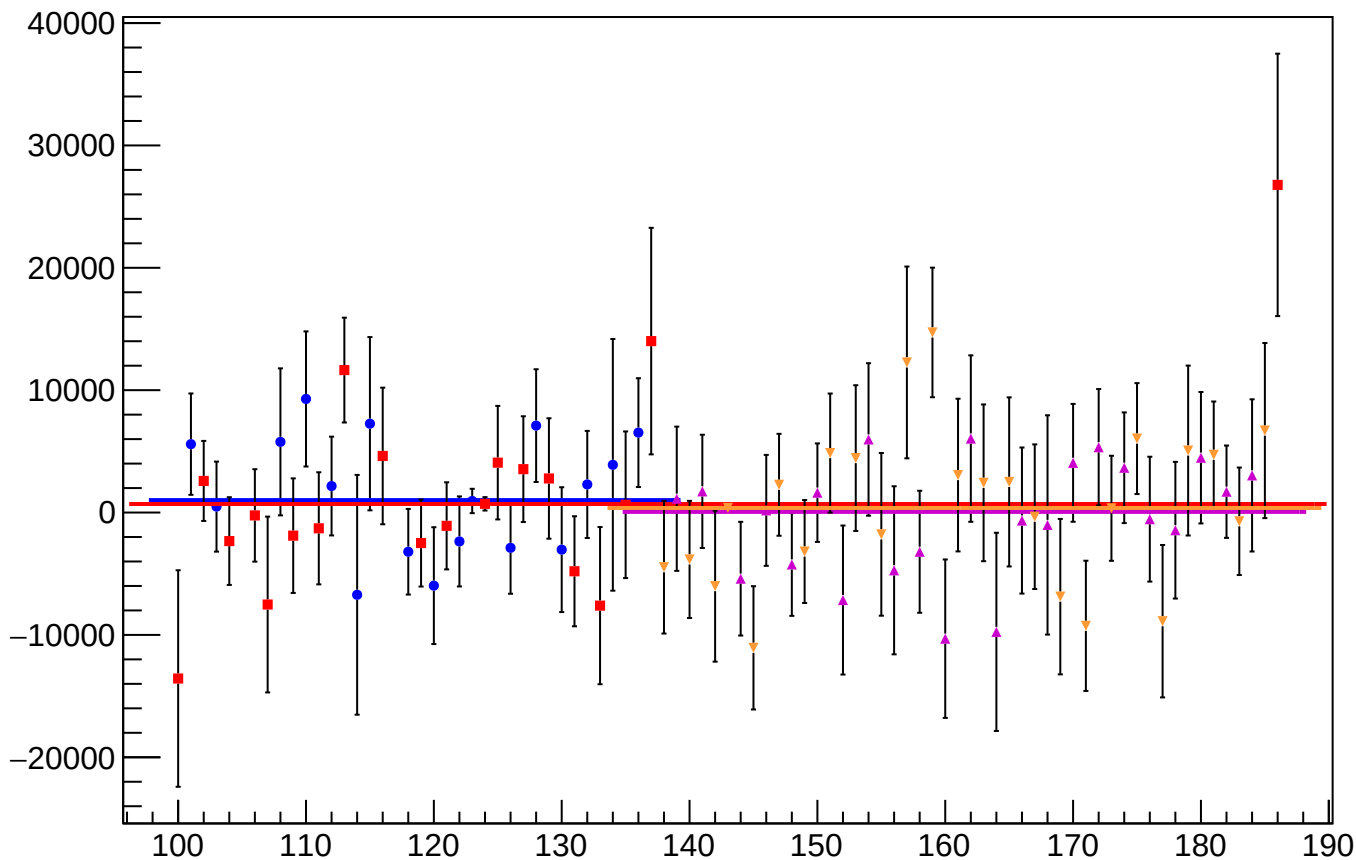
In: 1855.144+/-0.270  $\chi^2/\text{NDF}$ : 799425.3/39

Out: 1859.769+/-0.262  $\chi^2/\text{NDF}$ : 903232.4/44

All: 1857.529+/-0.188  $\chi^2/\text{NDF}$ : 1702808.8/84



asym\_atr1l2\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: 1015.864 $\pm$ 753.323  $\chi^2$ /NDF: 15.2/16

Left Out: 373.277 $\pm$ 382.071  $\chi^2$ /NDF:30.8/24

Right Out: 697.775 $\pm$ 487.769  $\chi^2$ /NDF: 25.9/19

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

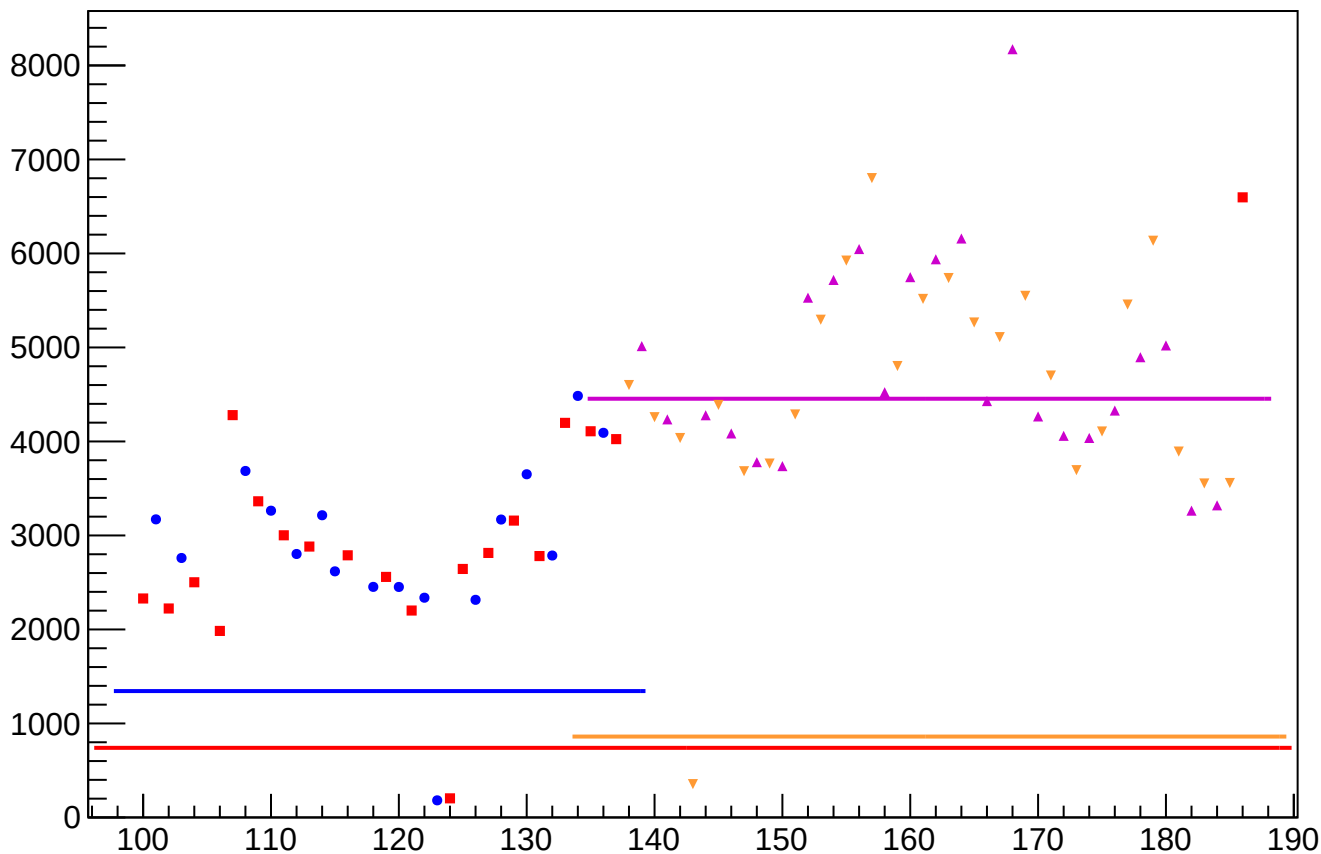
Right: 791.738 $\pm$ 409.436  $\chi^2$ /NDF: 41.2/36

In: 704.607 $\pm$ 619.699  $\chi^2$ /NDF:30.3/39

Out: 496.669 $\pm$ 300.782  $\chi^2$ /NDF:57.0/44

All: 536.315 $\pm$ 270.592  $\chi^2$ /NDF: 87.3/84

asym\_atr1l2\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 1344.476 $\pm$ 0.533  $\chi^2$ /NDF: 6835525.9/16

Left Out: 860.545 $\pm$ 0.270  $\chi^2$ /NDF: 26340106.5/24

Right Out: 740.565 $\pm$ 0.345  $\chi^2$ /NDF: 10078196.7/19

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

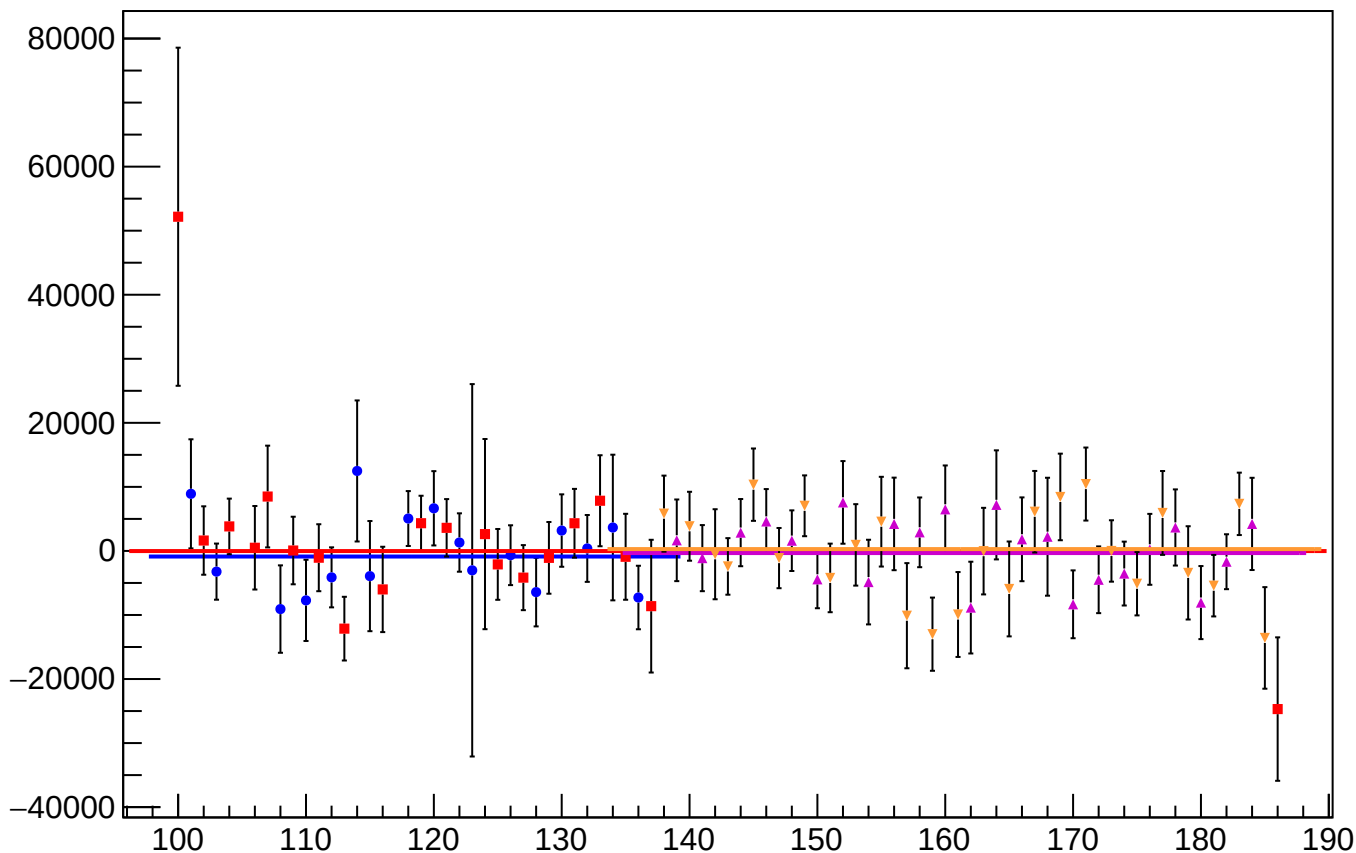
Right: 918.960 $\pm$ 0.290  $\chi^2$ /NDF: 17819364.2/36

In: 2349.899 $\pm$ 0.438  $\chi^2$ /NDF: 19204891.0/39

Out: 814.922 $\pm$ 0.213  $\chi^2$ /NDF: 36493298.8/44

All: 1107.587 $\pm$ 0.191  $\chi^2$ /NDF: 65629349.6/80

# asym\_atr1l2\_dd\_mean vs Slug, Sign Corrected



Right In:  $-874.074 \pm 1400.106$   $\chi^2/\text{NDF}: 13.6/16$

Left Out:  $288.508 \pm 1155.419$   $\chi^2/\text{NDF}: 32.4/24$

Right Out:  $-21.330 \pm 1323.994$   $\chi^2/\text{NDF}: 22.7/19$

Left In:  $-332.488 \pm 1196.011$   $\chi^2/\text{NDF}: 14.7/22$

Left:  $-11.273 \pm 830.984$   $\chi^2/\text{NDF}: 47.2/47$

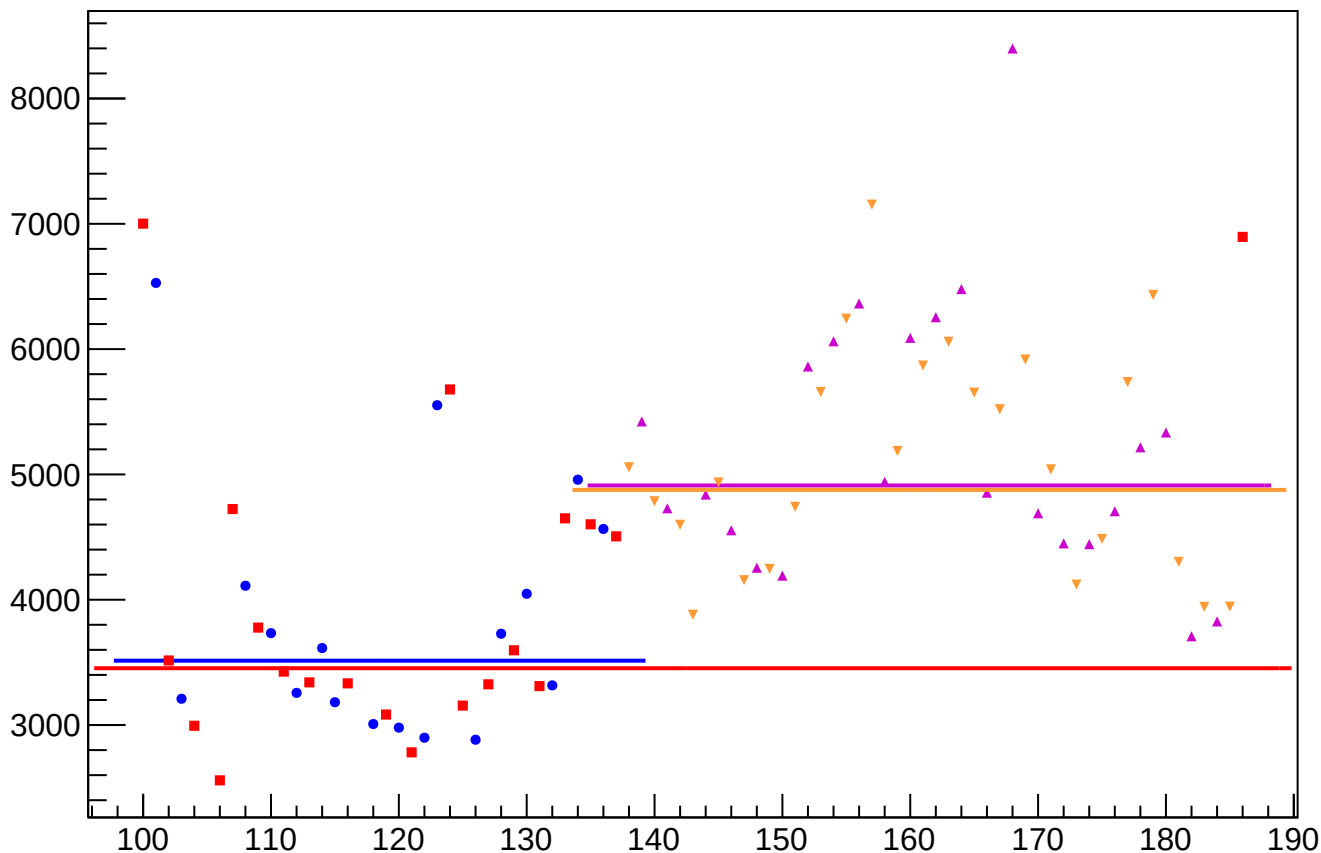
Right:  $-423.895 \pm 961.987$   $\chi^2/\text{NDF}: 36.5/36$

In:  $-560.966 \pm 909.387$   $\chi^2/\text{NDF}: 28.4/39$

Out:  $154.558 \pm 870.543$   $\chi^2/\text{NDF}: 55.2/44$

All:  $-187.596 \pm 628.851$   $\chi^2/\text{NDF}: 83.9/84$

# asym\_atr1l2\_dd\_rms vs Slug, Sign Corrected



Right In: 3513.685 $\pm$ 0.990  $\chi^2/\text{NDF}$ : 560775.0/16

Left Out: 4876.564 $\pm$ 0.817  $\chi^2/\text{NDF}$ : 972528.1/24

Right Out: 3453.309 $\pm$ 0.924  $\chi^2/\text{NDF}$ : 620090.3/19

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

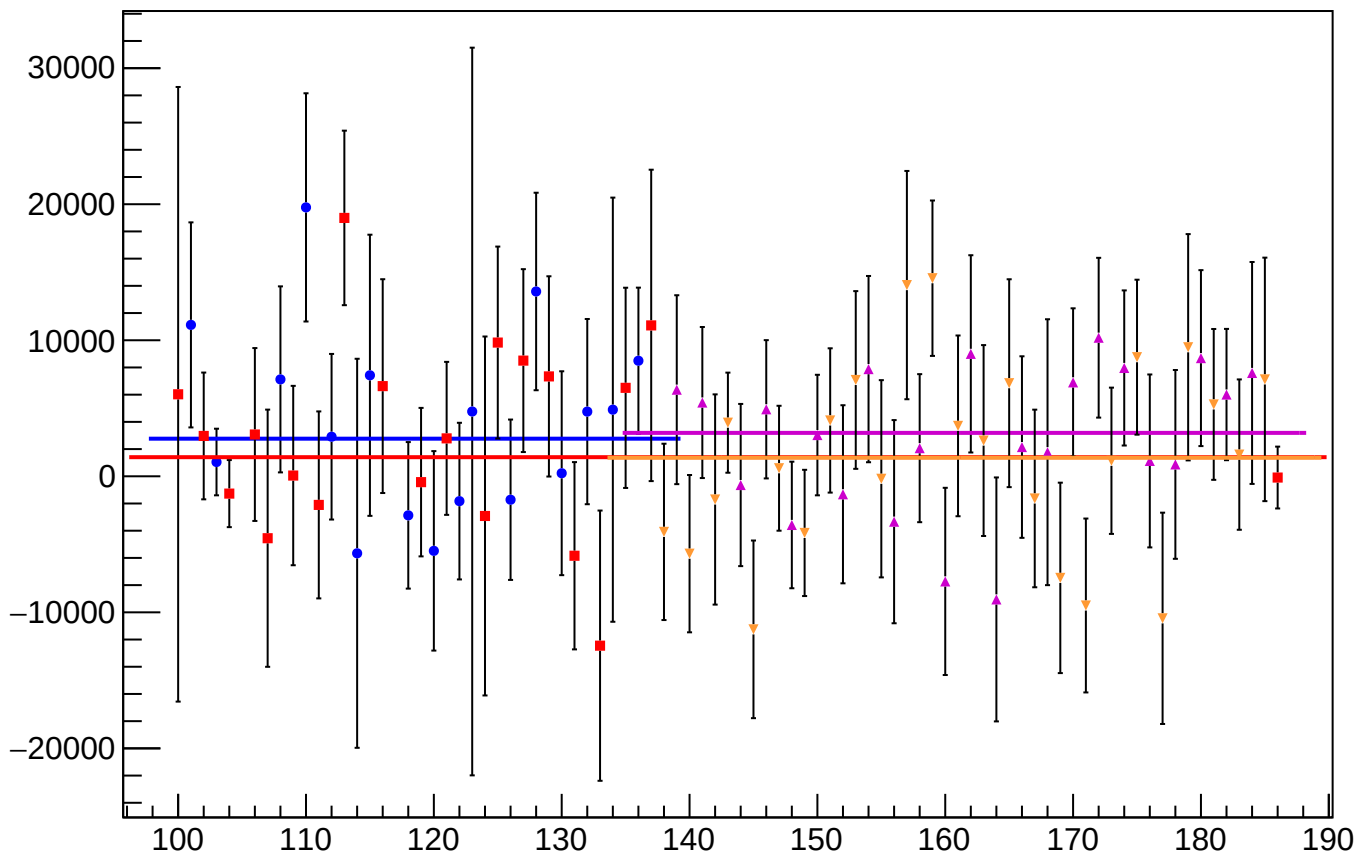
Right: 3481.423 $\pm$ 0.676  $\chi^2/\text{NDF}$ : 1182852.6/36

In: 4321.830 $\pm$ 0.643  $\chi^2/\text{NDF}$ : 2756507.9/39

Out: 4252.219 $\pm$ 0.612  $\chi^2/\text{NDF}$ : 2923864.3/44

All: 4285.311 $\pm$ 0.443  $\chi^2/\text{NDF}$ : 5686520.2/84

reg\_asym\_atl\_avg\_atr\_avg\_avg\_mean vs Slug, Sign Corrected



Right In: 2764.928+/-1455.950  $\chi^2/\text{NDF}$ : 13.9/16

Left Out: 1365.082+/-1206.268  $\chi^2/\text{NDF}$ : 28.0/24

Right Out: 1404.879+/-1182.089  $\chi^2/\text{NDF}$ : 18.2/19

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

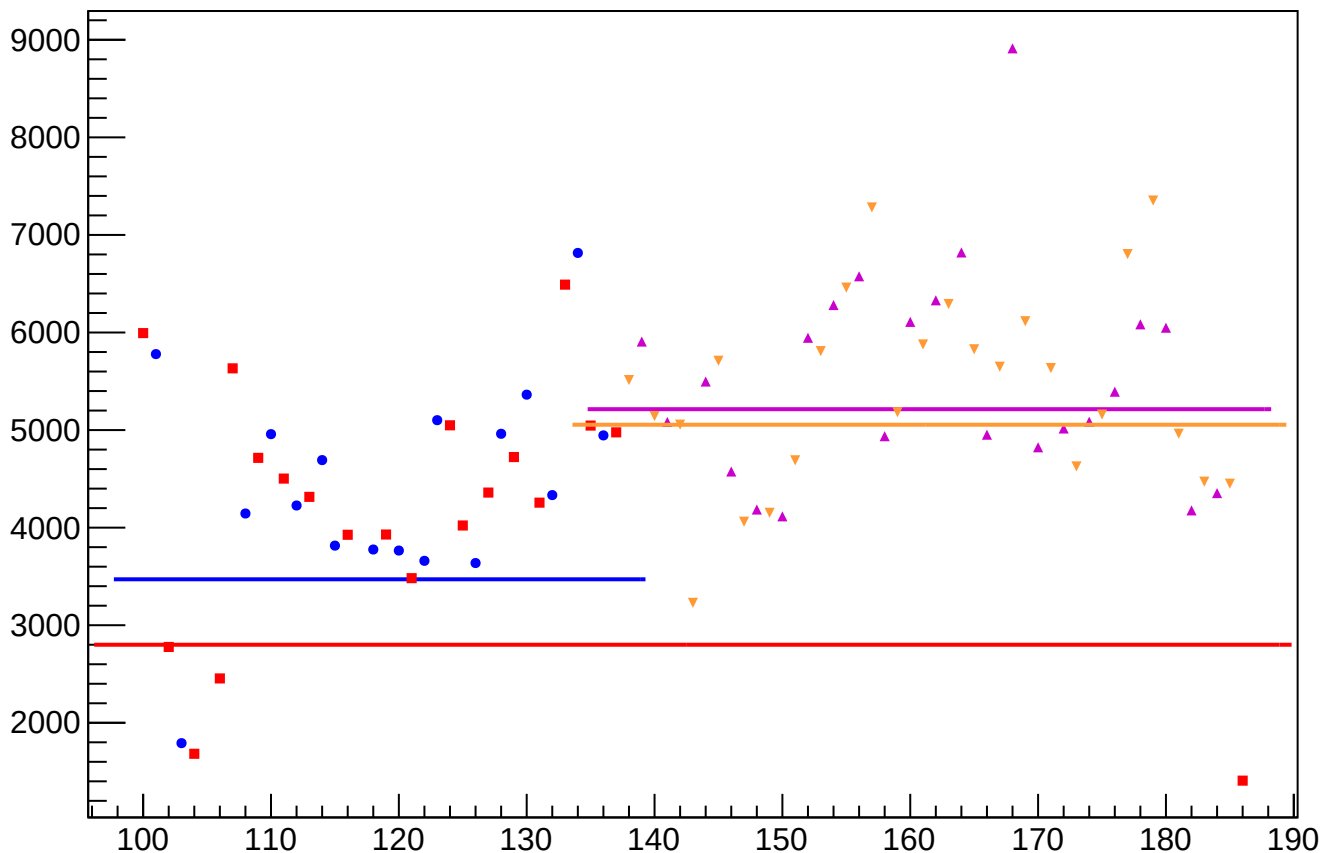
Right: 1945.219+/-917.704  $\chi^2/\text{NDF}$ : 32.7/36

In: 3006.981+/-957.069  $\chi^2/\text{NDF}$ : 28.0/39

Out: 1385.383+/-844.282  $\chi^2/\text{NDF}$ : 46.2/44

All: 2095.046+/-633.137  $\chi^2/\text{NDF}$ : 75.8/84

reg\_asym\_atl\_avg\_atr\_avg\_avg\_rms vs Slug, Sign Corrected



Right In: 3470.650+/-1.029  $\chi^2/\text{NDF}$ : 1765892.2/16

Left Out: 5054.711+/-0.853  $\chi^2/\text{NDF}$ : 1437224.7/24

Right Out: 2799.975+/-0.830  $\chi^2/\text{NDF}$ : 2935835.3/19

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

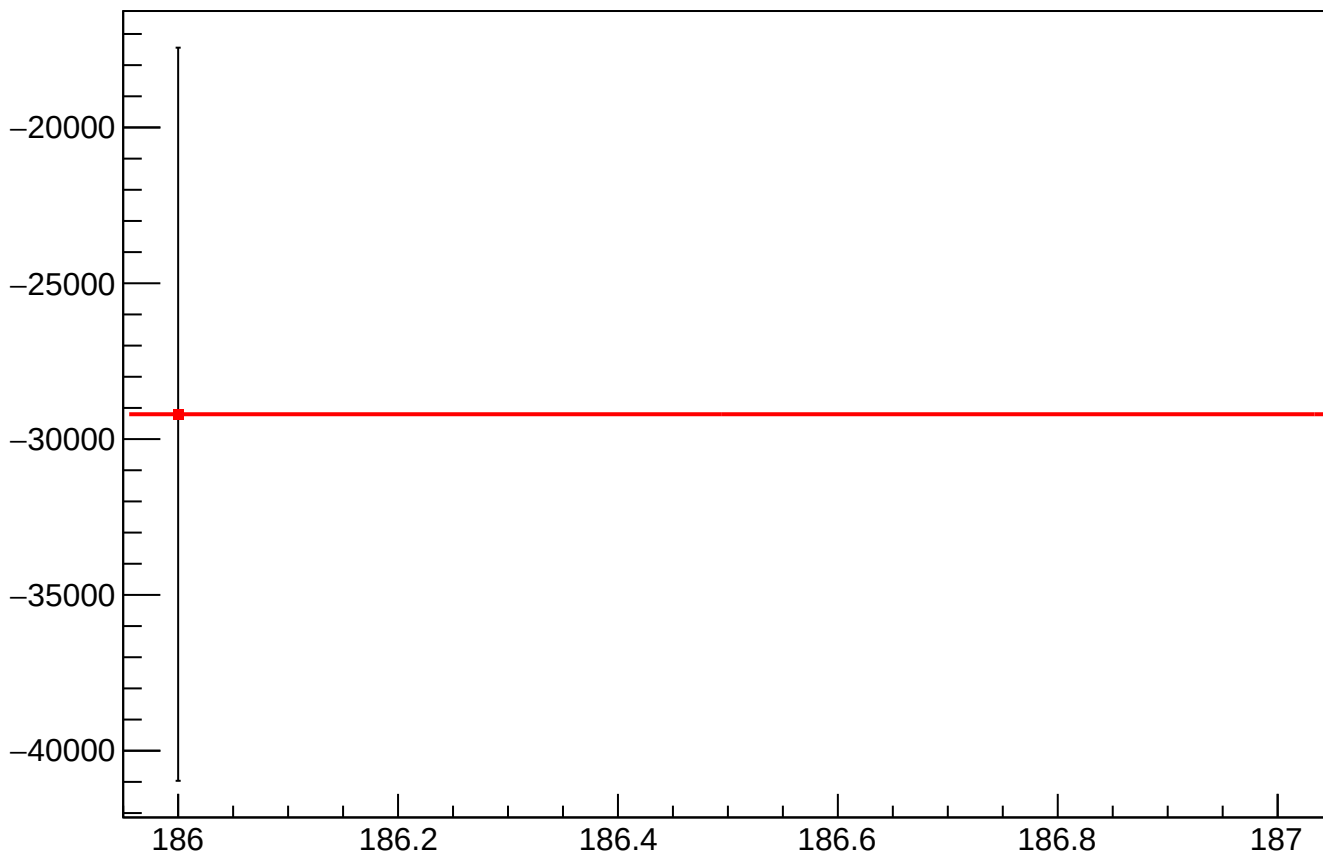
Right: 3064.278+/-0.646  $\chi^2/\text{NDF}$ : 4958881.7/36

In: 4460.729+/-0.677  $\chi^2/\text{NDF}$ : 4447101.4/39

Out: 3896.931+/-0.595  $\chi^2/\text{NDF}$ : 7961160.3/44

All: 4142.713+/-0.447  $\chi^2/\text{NDF}$ : 12799754.8/86

asym\_atl\_avg\_atr\_avg\_avg\_correction\_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: -29202.265+/-11762.699  $\chi^2/\text{NDF}$ : 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

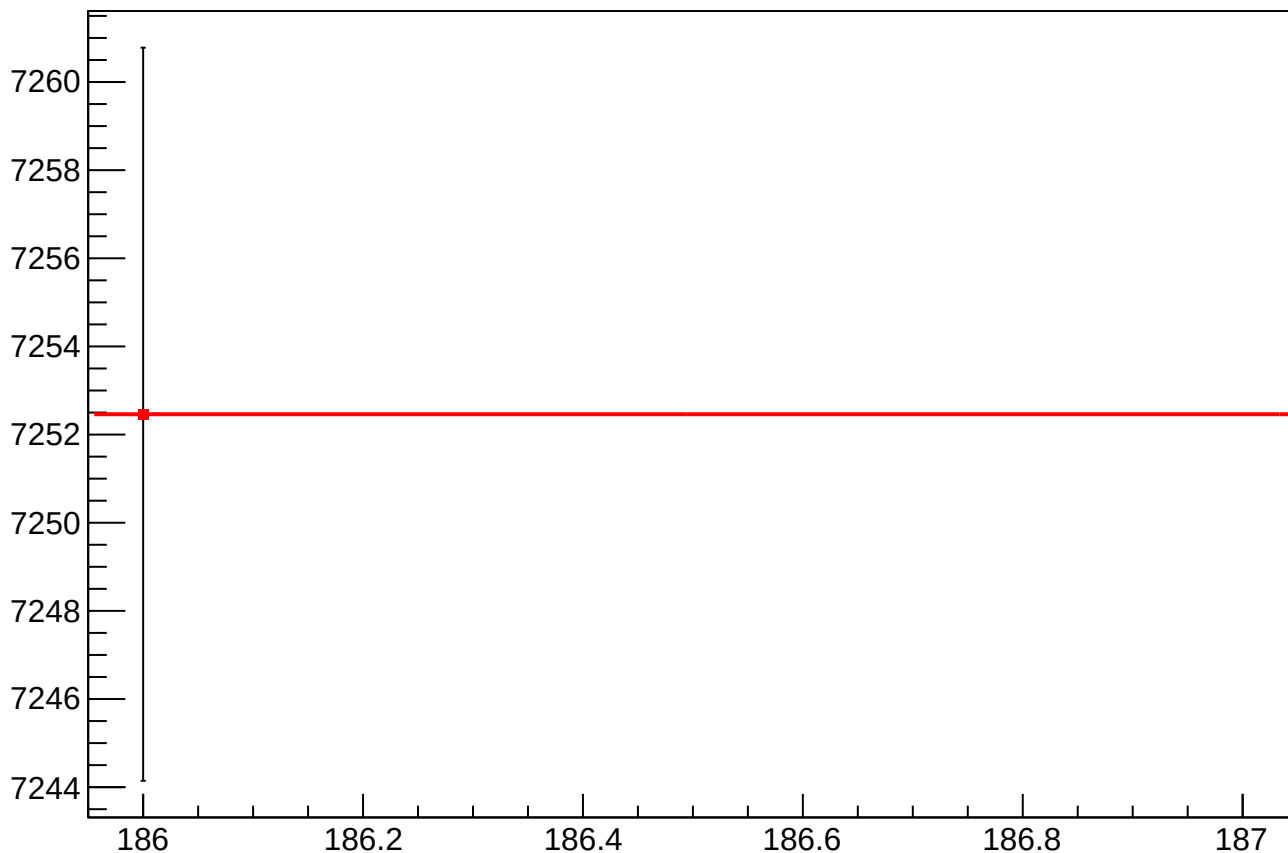
Right: -29202.265+/-11762.699  $\chi^2/\text{NDF}$ : 0.0/0

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: -29202.265+/-11762.699  $\chi^2/\text{NDF}$ : 0.0/0

asym\_atl\_avg\_atr\_avg\_avg\_correction\_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: 7252.462+/-8.317  $\chi^2/\text{NDF}$ : 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: 7252.462+/-8.317  $\chi^2/\text{NDF}$ : 0.0/0

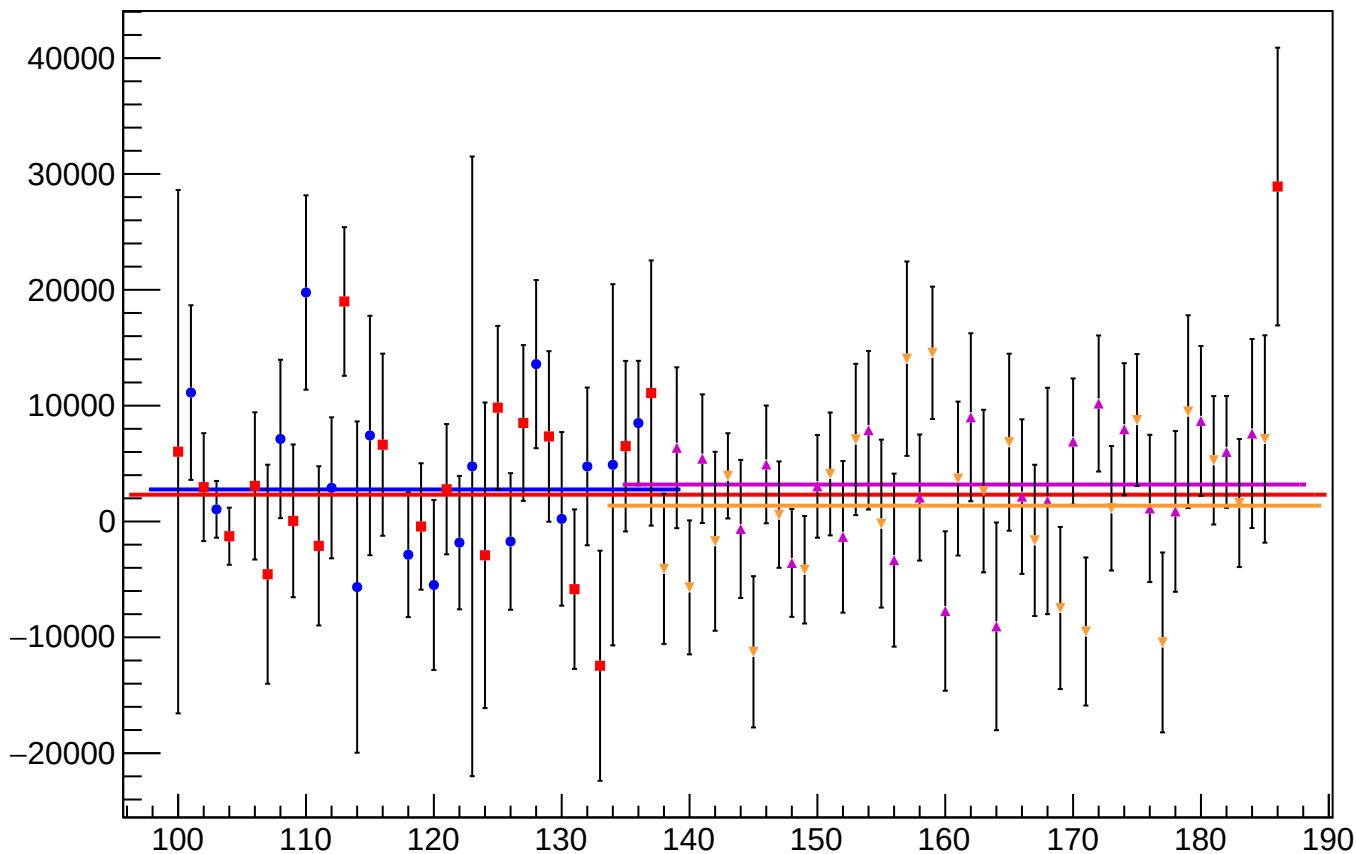
In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

All: 7252.462+/-8.317  $\chi^2/\text{NDF}$ : 0.0/0



asym\_atl\_avg\_atr\_avg\_avg\_mean vs Slug, Sign Corrected



Right In: 2764.928+/-1455.950  $\chi^2/\text{NDF}$ : 13.9/16

Left Out: 1365.082+/-1206.268  $\chi^2/\text{NDF}$ : 28.0/24

Right Out: 2314.340+/-1374.797  $\chi^2/\text{NDF}$ : 22.6/19

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

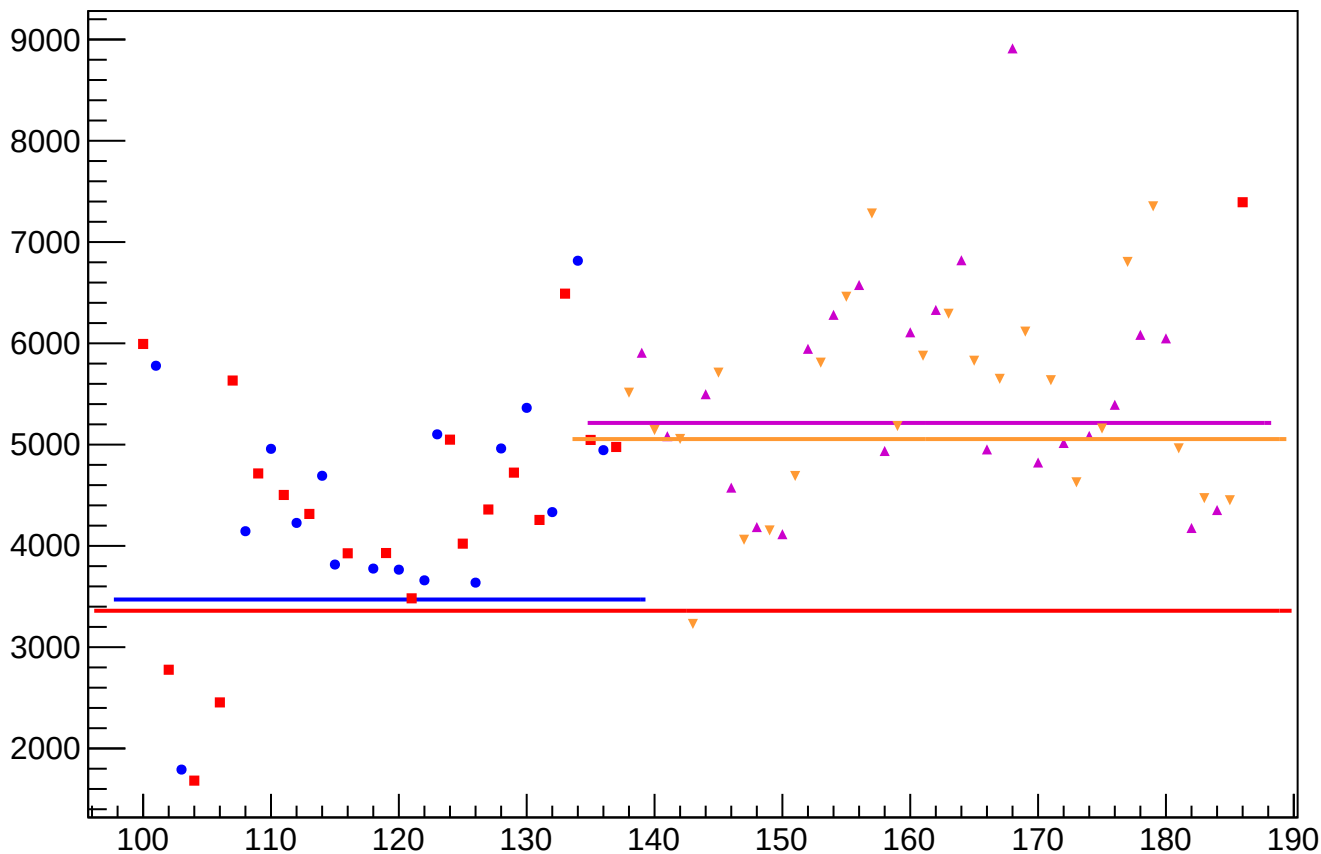
Right: 2526.727+/-999.587  $\chi^2/\text{NDF}$ : 36.6/36

In: 3006.981+/-957.069  $\chi^2/\text{NDF}$ : 28.0/39

Out: 1777.993+/-906.723  $\chi^2/\text{NDF}$ : 50.8/44

All: 2359.313+/-658.229  $\chi^2/\text{NDF}$ : 79.7/84

asym\_atl\_avg\_atr\_avg\_avg\_rms vs Slug, Sign Corrected



Right In: 3470.650+/-1.029  $\chi^2/\text{NDF}$ : 1765892.2/16

Left Out: 5054.711+/-0.853  $\chi^2/\text{NDF}$ : 1437224.7/24

Right Out: 3359.607+/-0.963  $\chi^2/\text{NDF}$ : 2141057.7/19

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

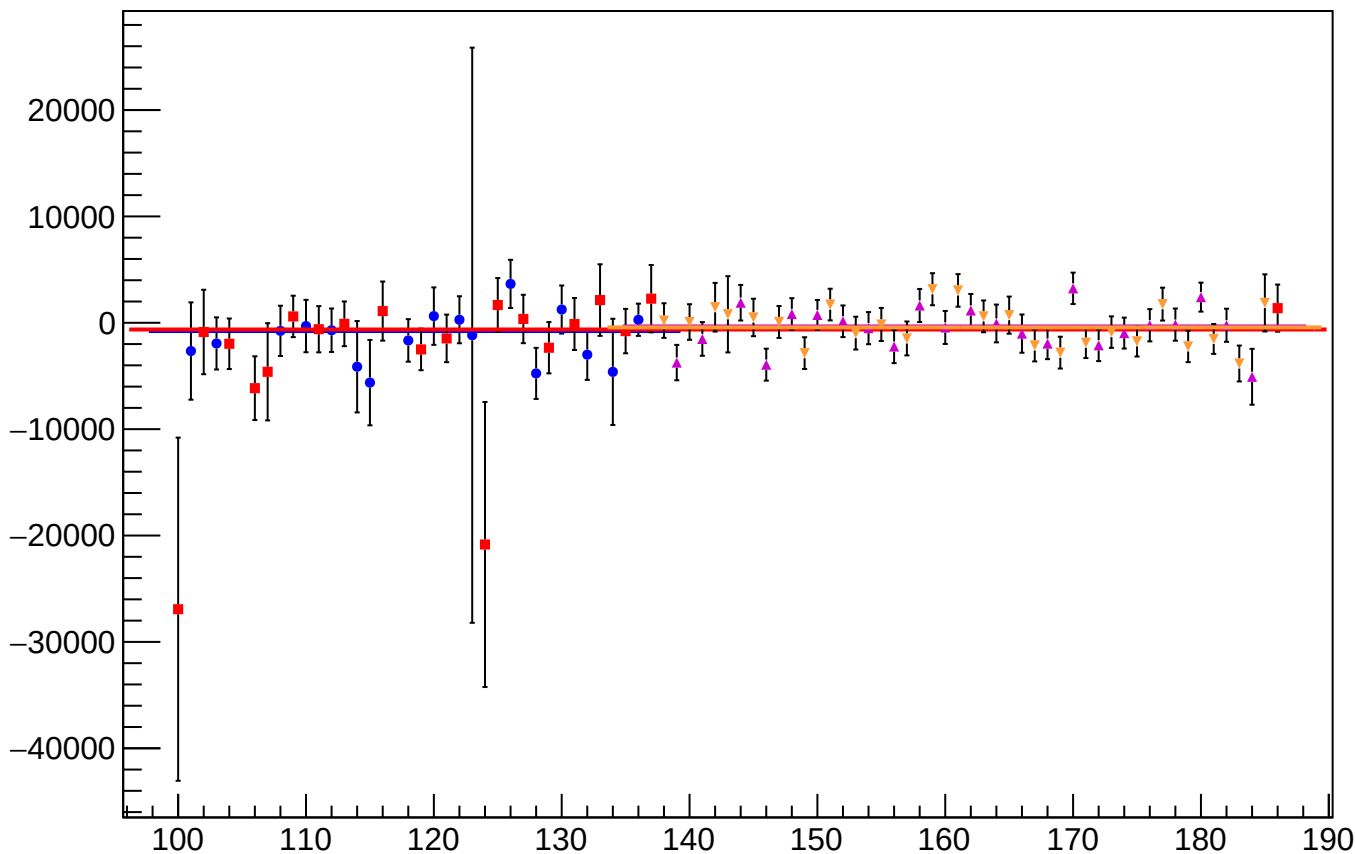
Right: 3411.446+/-0.703  $\chi^2/\text{NDF}$ : 3913152.9/36

In: 4460.729+/-0.677  $\chi^2/\text{NDF}$ : 4447101.4/39

Out: 4309.788+/-0.639  $\chi^2/\text{NDF}$ : 5313886.1/44

All: 4380.886+/-0.464  $\chi^2/\text{NDF}$ : 9787302.0/84

reg\_asym\_atl\_avg\_atr\_avg\_dd\_mean vs Slug, Sign Corrected



Right In: -774.709+/-605.594  $\chi^2/\text{NDF}$ : 12.5/16

Left Out: -431.715+/-320.540  $\chi^2/\text{NDF}$ :33.1/24

Right Out: -630.739+/-576.109  $\chi^2/\text{NDF}$ : 15.2/19

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

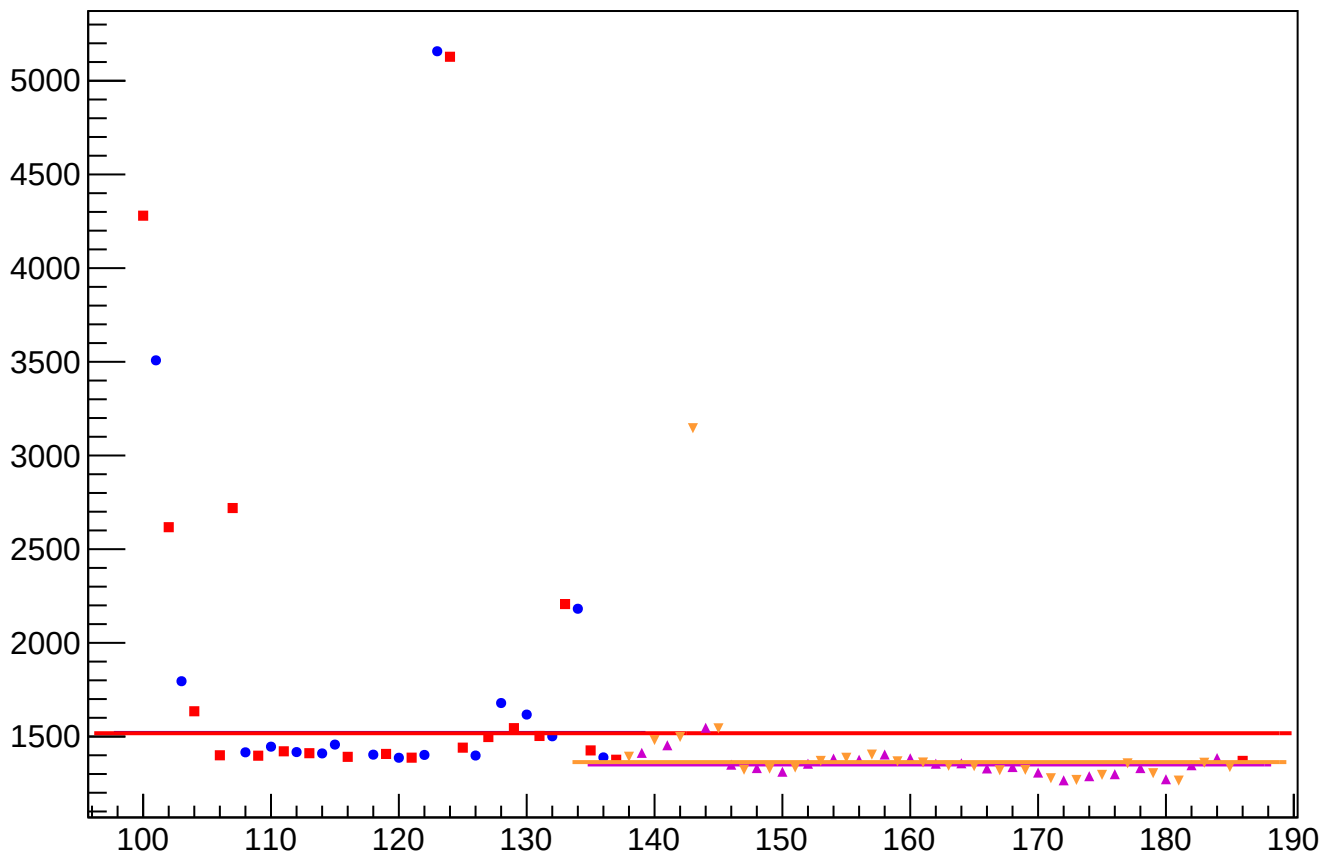
Right: -699.134+/-417.405  $\chi^2/\text{NDF}$ : 27.8/36

In: -439.815+/-285.935  $\chi^2/\text{NDF}$ :46.7/39

Out: -478.762+/-280.103  $\chi^2/\text{NDF}$ :48.4/44

All: -459.689+/-200.093  $\chi^2/\text{NDF}$ : 95.1/84

reg\_asym\_atl\_avg\_atr\_avg\_dd\_rms vs Slug, Sign Corrected



Right In: 1519.171+/-0.428  $\chi^2/\text{NDF}$ : 537680.2/16

Left Out: 1363.561+/-0.227  $\chi^2/\text{NDF}$ : 575226.6/24

Right Out: 1517.705+/-0.407  $\chi^2/\text{NDF}$ : 640714.0/19

Left In: 1350.909+/-0.229  $\chi^2/\text{NDF}$ : 67144.5/22

Left: 1357.310+/-0.161  $\chi^2/\text{NDF}$ : 643910.7/47

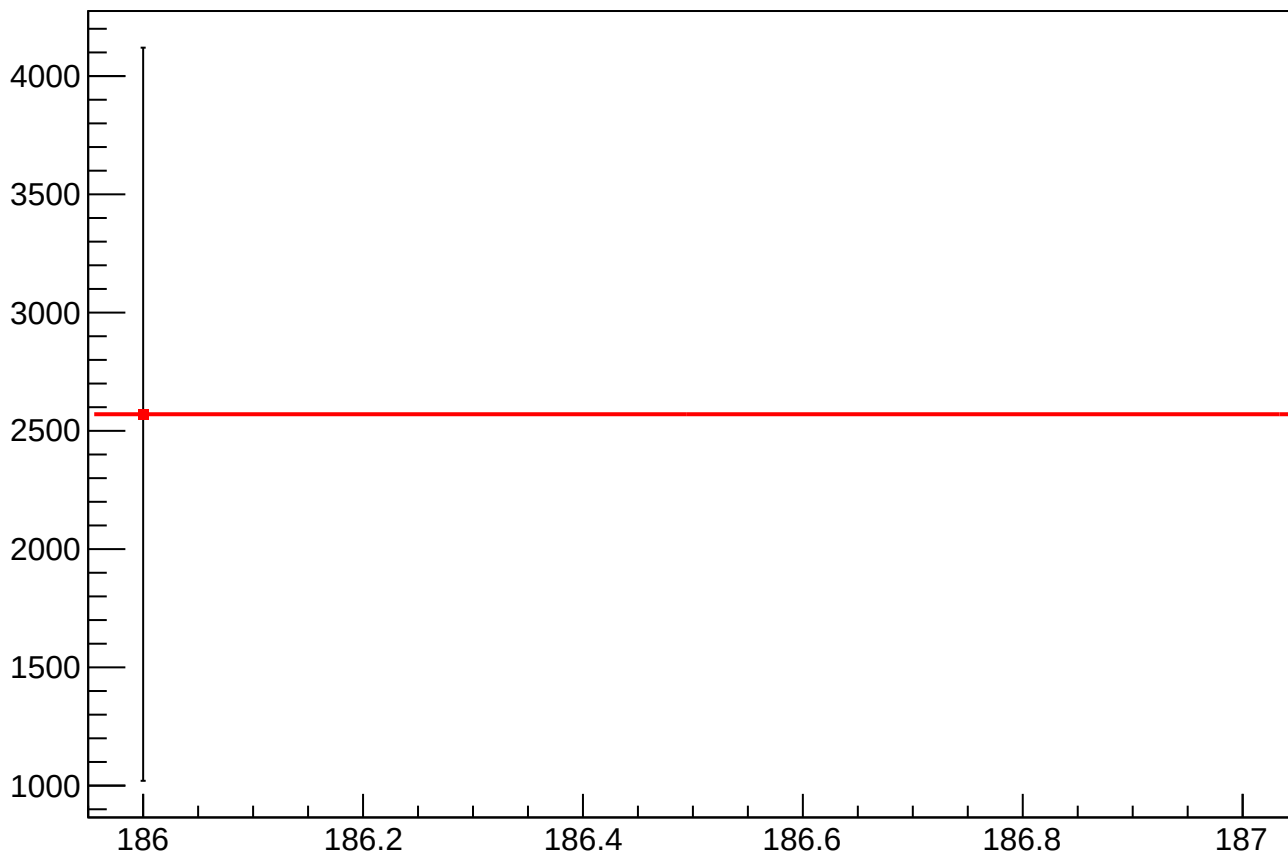
Right: 1518.401+/-0.295  $\chi^2/\text{NDF}$ : 1178400.3/36

In: 1388.420+/-0.202  $\chi^2/\text{NDF}$ : 724802.9/39

Out: 1399.999+/-0.198  $\chi^2/\text{NDF}$ : 1325272.5/44

All: 1394.329+/-0.141  $\chi^2/\text{NDF}$ : 2051749.1/84

asym\_atl\_avg\_atr\_avg\_dd\_correction\_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: 2570.258+/-1549.880  $\chi^2/\text{NDF}$ : 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

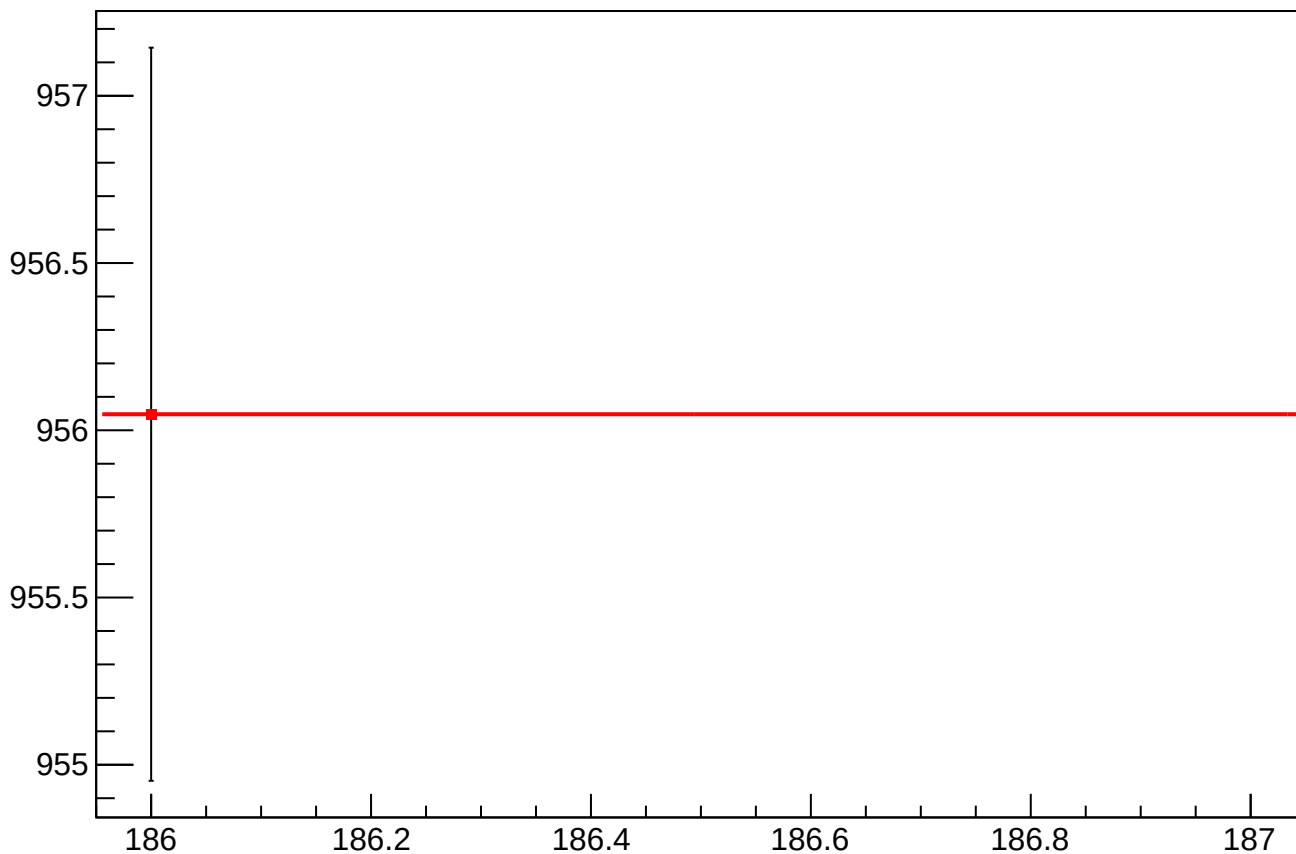
Right: 2570.258+/-1549.880  $\chi^2/\text{NDF}$ : 0.0/0

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: 2570.258+/-1549.880  $\chi^2/\text{NDF}$ : 0.0/0

asym\_atl\_avg\_atr\_avg\_dd\_correction\_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: 956.048+/-1.096  $\chi^2/\text{NDF}$ : 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

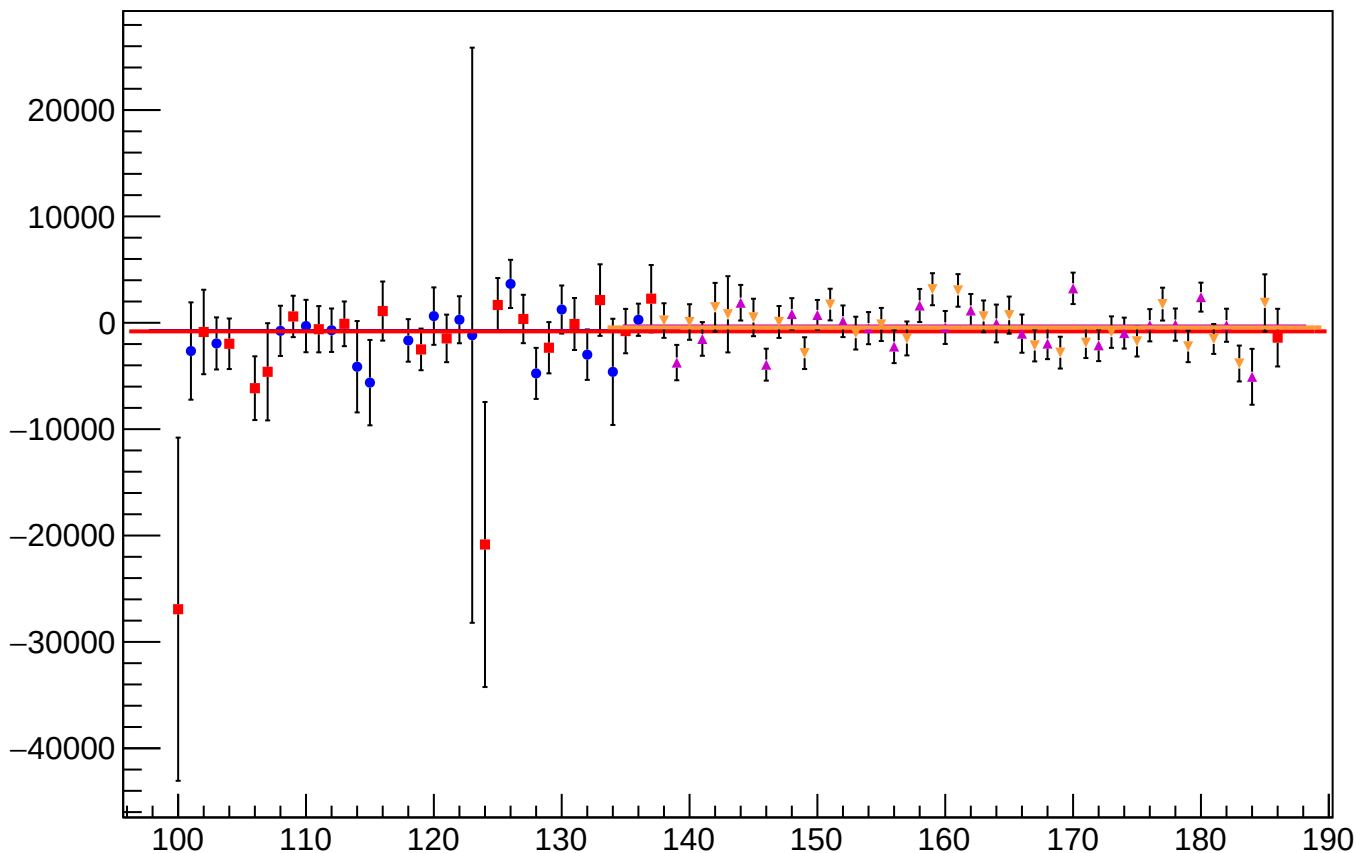
Right: 956.048+/-1.096  $\chi^2/\text{NDF}$ : 0.0/0

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: 956.048+/-1.096  $\chi^2/\text{NDF}$ : 0.0/0

asym\_atl\_avg\_atr\_avg\_dd\_mean vs Slug, Sign Corrected



Right In: -774.709+/-605.594  $\chi^2/\text{NDF}$ : 12.5/16

Left Out: -431.715+/-320.540  $\chi^2/\text{NDF}$ : 33.1/24

Right Out: -805.343+/-582.727  $\chi^2/\text{NDF}$ : 14.4/19

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

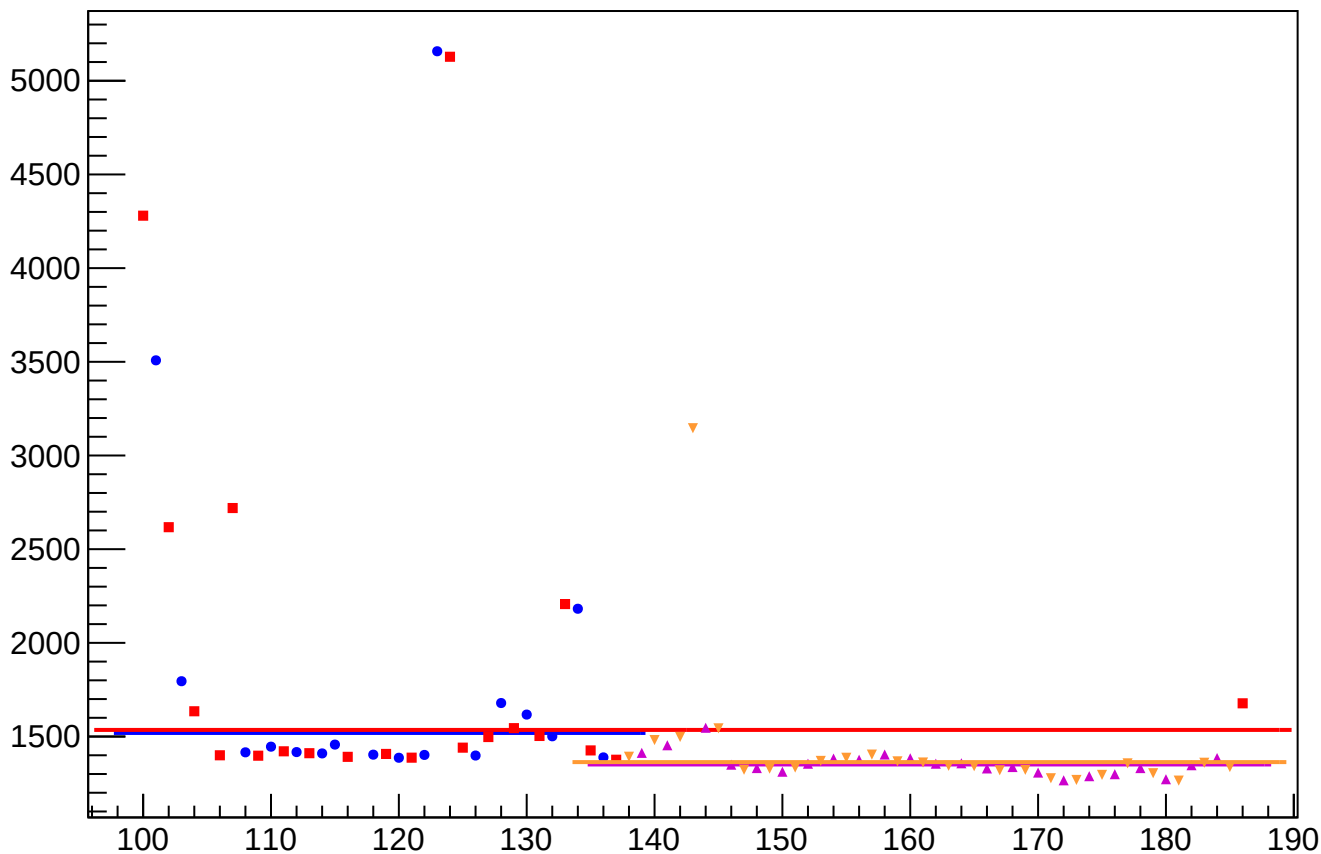
Right: -790.615+/-419.902  $\chi^2/\text{NDF}$ : 26.9/36

In: -439.815+/-285.935  $\chi^2/\text{NDF}$ : 46.7/39

Out: -518.505+/-280.854  $\chi^2/\text{NDF}$ : 47.8/44

All: -479.865+/-200.366  $\chi^2/\text{NDF}$ : 94.5/84

asym\_atl\_avg\_atr\_avg\_dd\_rms vs Slug, Sign Corrected



Right In: 1519.171+/-0.428  $\chi^2/\text{NDF}$ : 537680.2/16

Left Out: 1363.561+/-0.227  $\chi^2/\text{NDF}$ : 575226.6/24

Right Out: 1535.315+/-0.412  $\chi^2/\text{NDF}$ : 636921.3/19

Left In: 1350.909+/-0.229  $\chi^2/\text{NDF}$ : 67144.5/22

Left: 1357.310+/-0.161  $\chi^2/\text{NDF}$ : 643910.7/47

Right: 1527.554+/-0.297  $\chi^2/\text{NDF}$ : 1175339.5/36

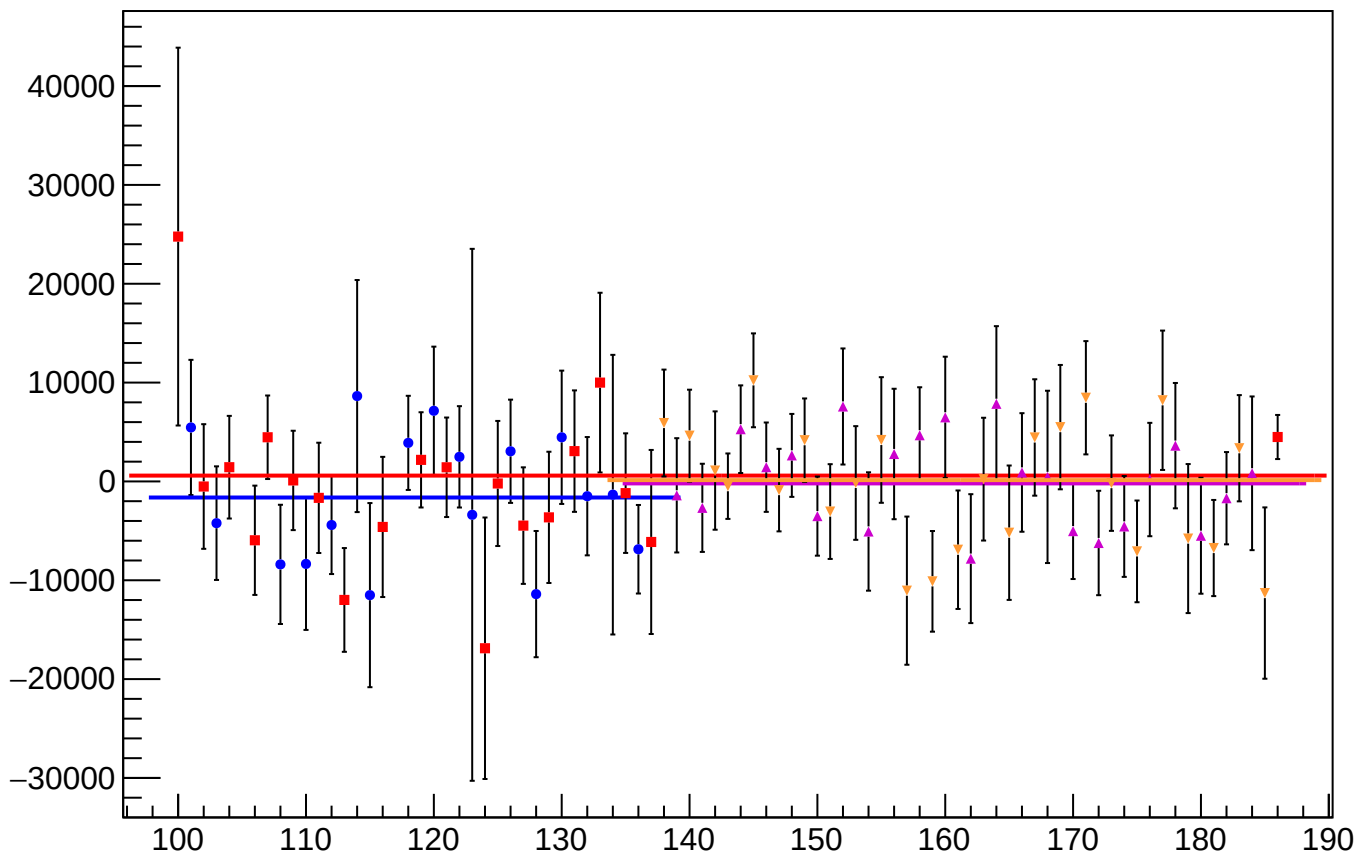
In: 1388.420+/-0.202  $\chi^2/\text{NDF}$ : 724802.9/39

Out: 1403.458+/-0.199  $\chi^2/\text{NDF}$ : 1345535.5/44

All: 1396.074+/-0.142  $\chi^2/\text{NDF}$ : 2073154.0/84



reg\_asym\_atl\_dd\_atr\_dd\_avg\_mean vs Slug, Sign Corrected



Right In:  $-1626.973 \pm 1517.678$   $\chi^2/\text{NDF}: 14.9/16$

Left Out:  $132.142 \pm 1065.543$   $\chi^2/\text{NDF}: 28.1/24$

Right Out:  $589.526 \pm 1174.813$   $\chi^2/\text{NDF}: 18.3/19$

Left In:  $-200.182 \pm 1123.499$   $\chi^2/\text{NDF}: 14.7/22$

Left:  $-25.227 \pm 773.130$   $\chi^2/\text{NDF}: 42.9/47$

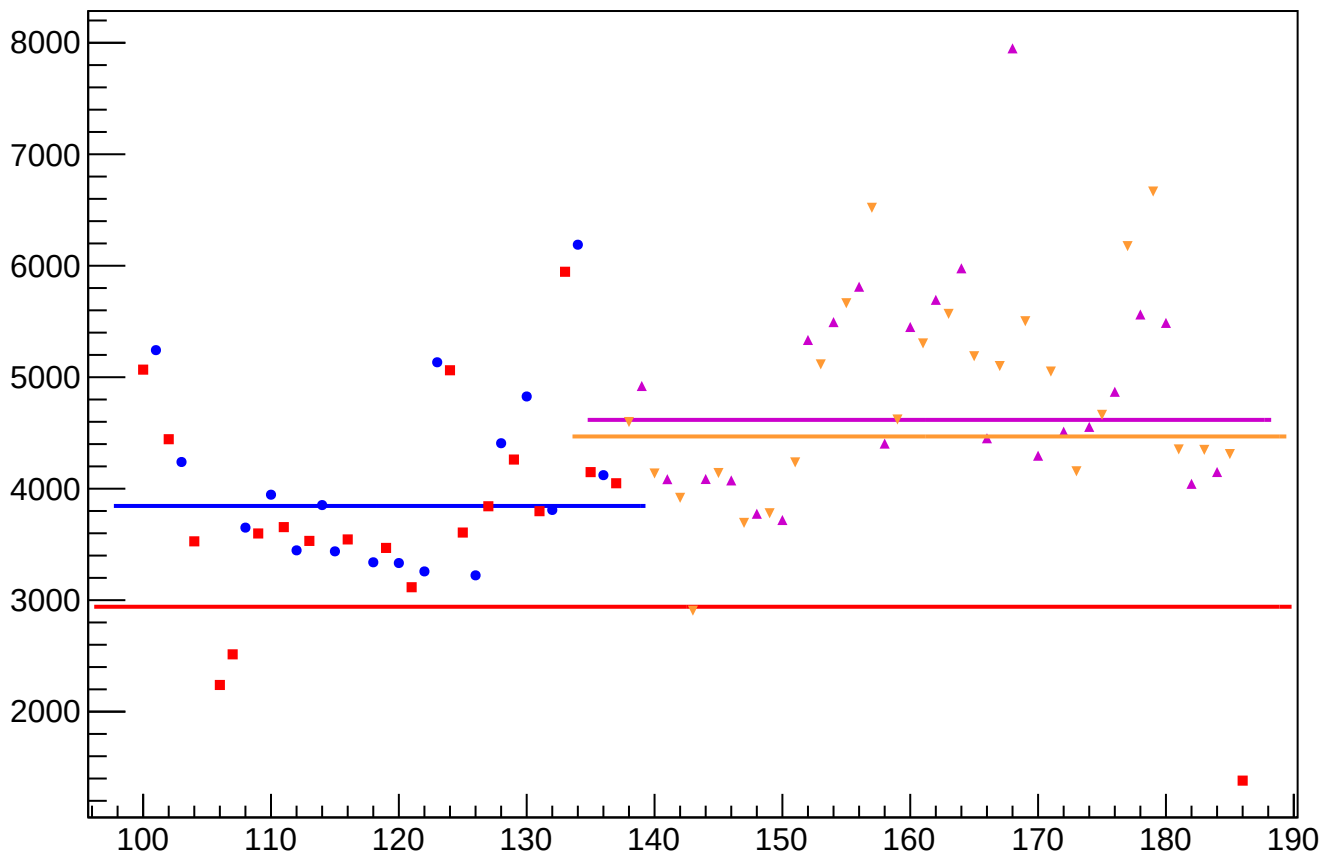
Right:  $-240.976 \pm 929.001$   $\chi^2/\text{NDF}: 34.5/36$

In:  $-705.278 \pm 902.997$   $\chi^2/\text{NDF}: 30.2/39$

Out:  $338.579 \pm 789.263$   $\chi^2/\text{NDF}: 46.5/44$

All:  $-113.509 \pm 594.261$   $\chi^2/\text{NDF}: 77.5/84$

reg\_asym\_atl\_dd\_atr\_dd\_avg\_rms vs Slug, Sign Corrected



Right In: 3845.187 $\pm$ 1.073  $\chi^2$ /NDF: 326944.8/16

Left Out: 4468.520 $\pm$ 0.753  $\chi^2$ /NDF:1380601.0/24

Right Out: 2940.927 $\pm$ 0.825  $\chi^2$ /NDF: 1901456.6/19

Left In: 4617.293 $\pm$ 0.794  $\chi^2$ /NDF:999599.8/22

Left: 4538.970 $\pm$ 0.547  $\chi^2$ /NDF: 2398663.8/47

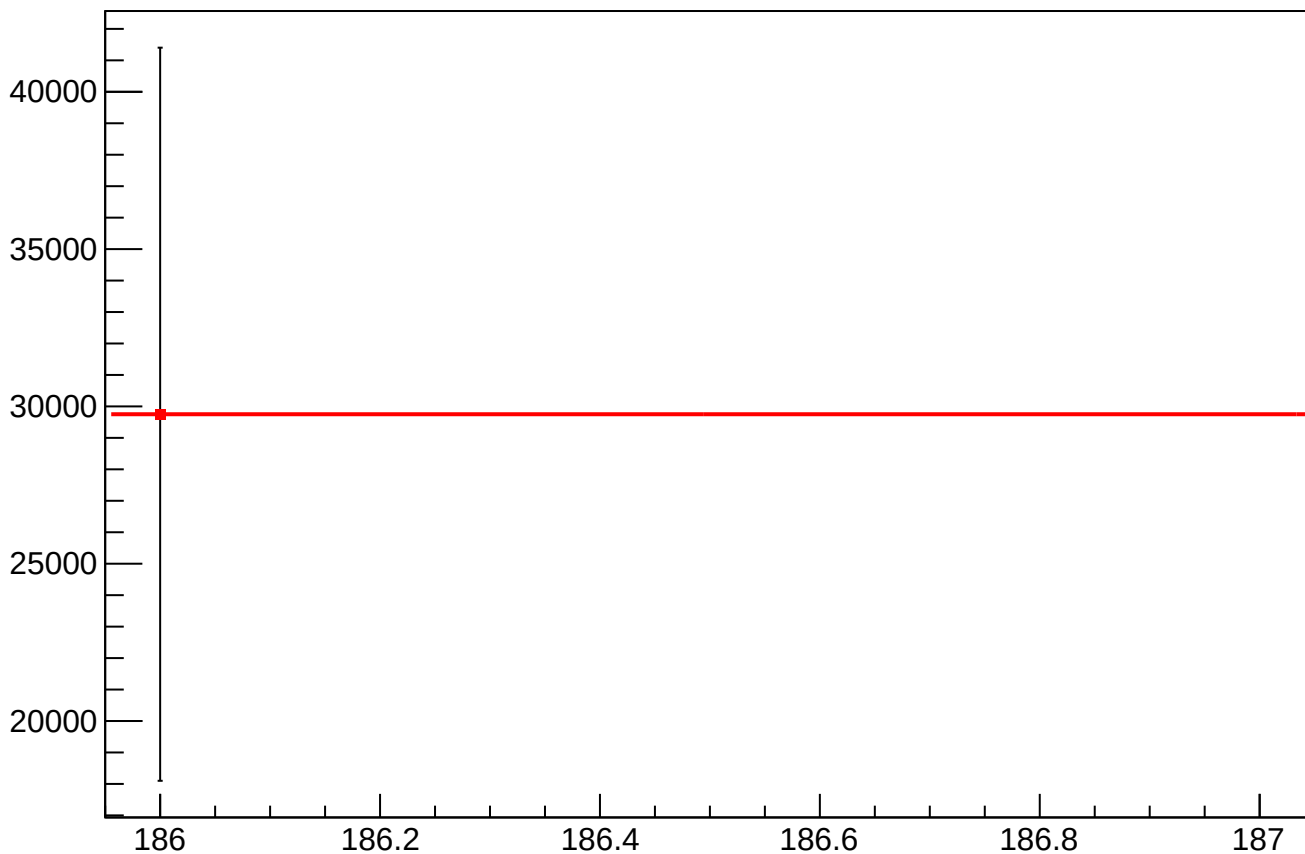
Right: 3276.945 $\pm$ 0.654  $\chi^2$ /NDF: 2674591.2/36

In: 4343.952 $\pm$ 0.639  $\chi^2$ /NDF:1660945.4/39

Out: 3774.023 $\pm$ 0.556  $\chi^2$ /NDF:5150871.7/44

All: 4020.016 $\pm$ 0.419  $\chi^2$ /NDF: 7264657.4/84

asym\_atl\_dd\_atr\_dd\_avg\_correction\_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: 29751.201+/-11651.754  $\chi^2/\text{NDF}$ : 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

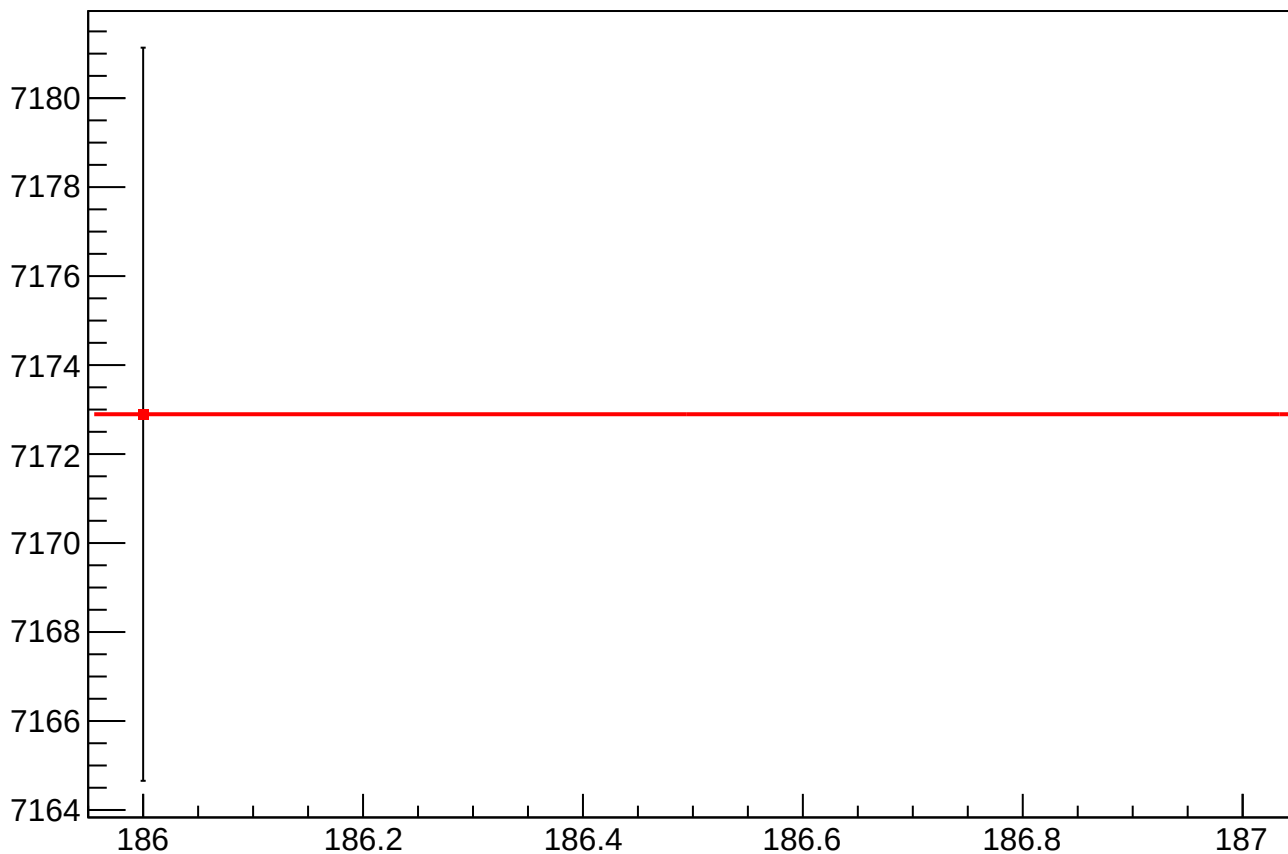
Right: 29751.201+/-11651.754  $\chi^2/\text{NDF}$ : 0.0/0

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: 29751.201+/-11651.754  $\chi^2/\text{NDF}$ : 0.0/0

asym\_atl\_dd\_atr\_dd\_avg\_correction\_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: 7172.895+/-8.239  $\chi^2/\text{NDF}$ : 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

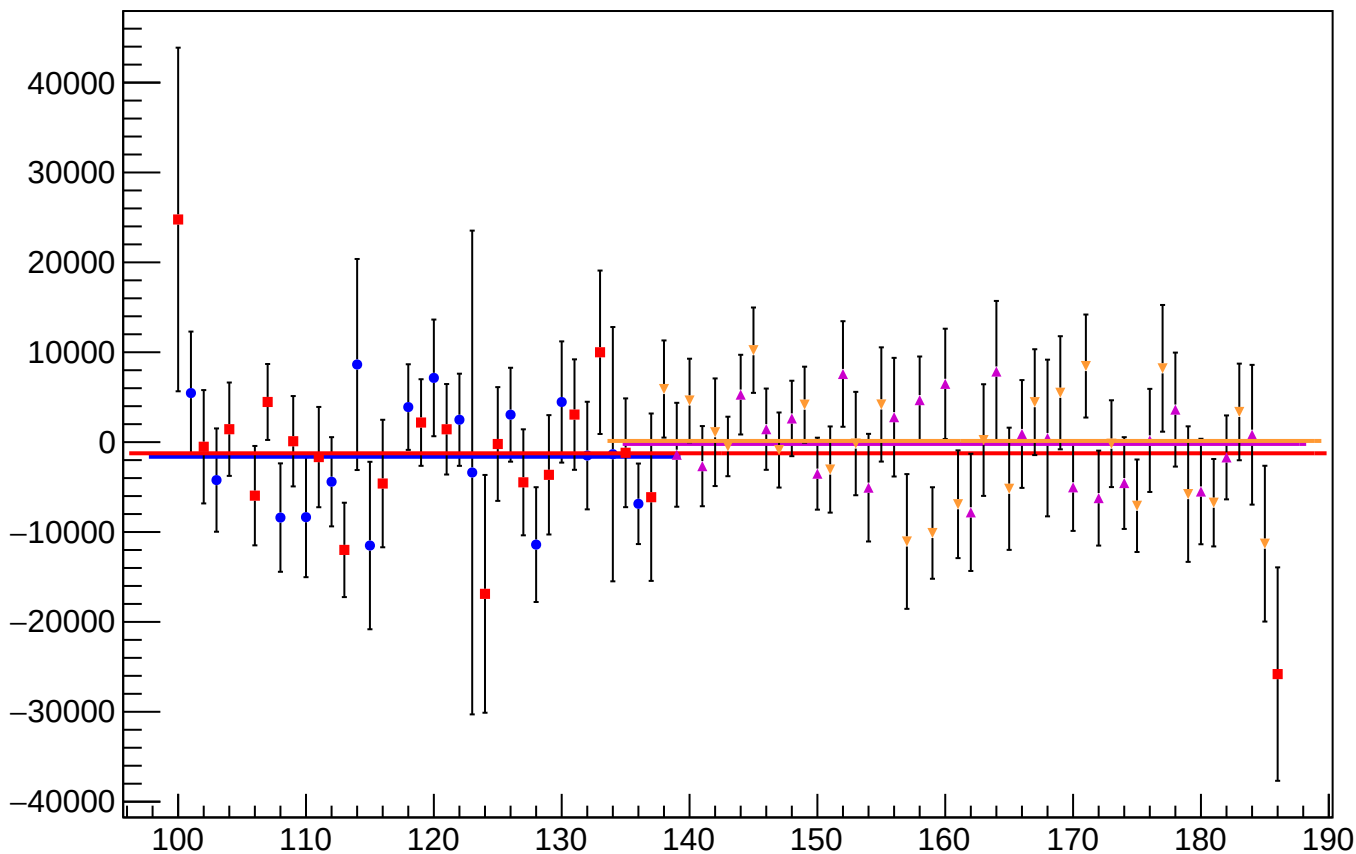
Right: 7172.895+/-8.239  $\chi^2/\text{NDF}$ : 0.0/0

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: 7172.895+/-8.239  $\chi^2/\text{NDF}$ : 0.0/0

asym\_atl\_dd\_atr\_dd\_avg\_mean vs Slug, Sign Corrected



Right In:  $-1626.973 \pm 1517.678$   $\chi^2/\text{NDF}: 14.9/16$

Left Out:  $132.142 \pm 1065.543$   $\chi^2/\text{NDF}: 28.1/24$

Right Out:  $-1240.756 \pm 1372.584$   $\chi^2/\text{NDF}: 18.4/19$

Left In:  $-200.182 \pm 1123.499$   $\chi^2/\text{NDF}: 14.7/22$

Left:  $-25.227 \pm 773.130$   $\chi^2/\text{NDF}: 42.9/47$

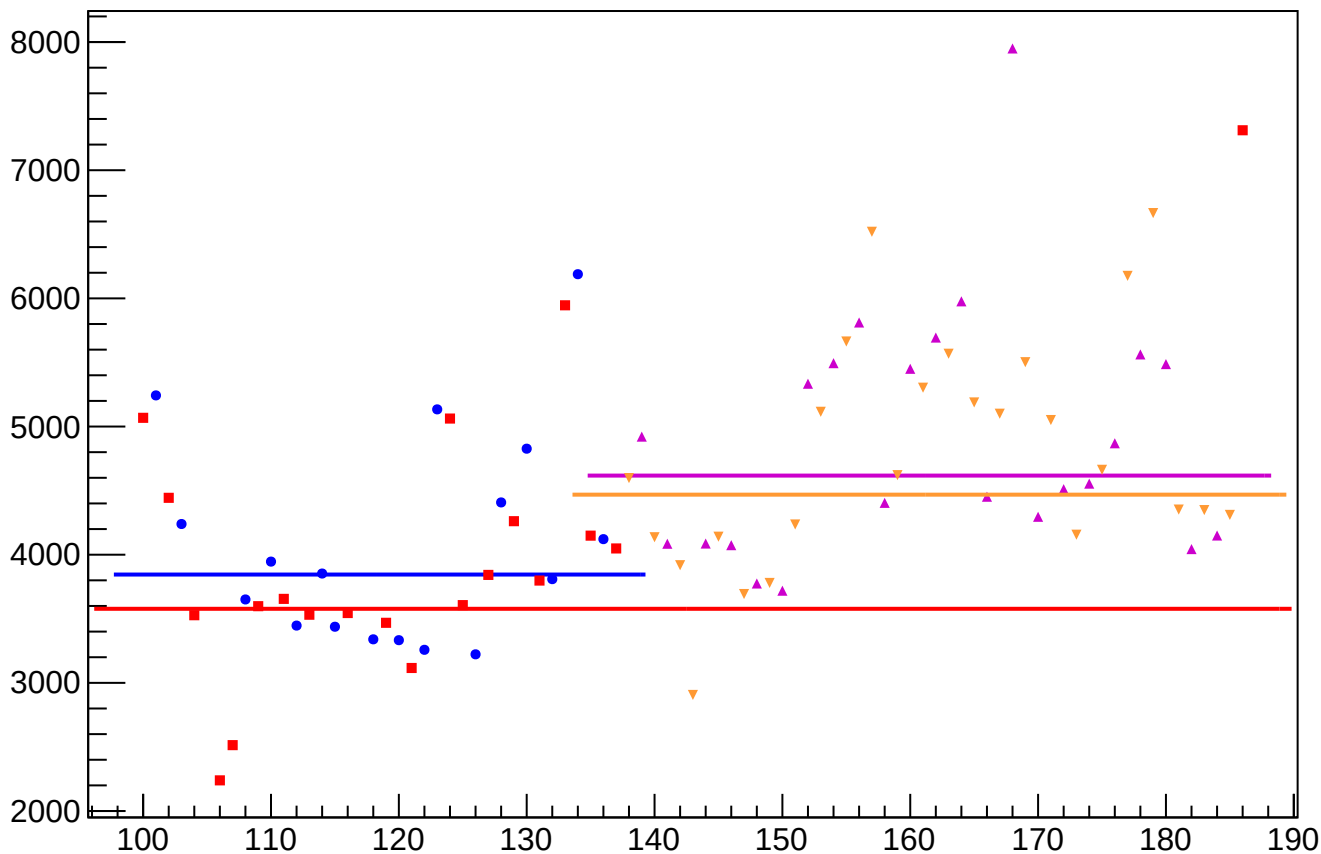
Right:  $-1414.525 \pm 1018.005$   $\chi^2/\text{NDF}: 33.3/36$

In:  $-705.278 \pm 902.997$   $\chi^2/\text{NDF}: 30.2/39$

Out:  $-384.112 \pm 841.689$   $\chi^2/\text{NDF}: 47.1/44$

All:  $-533.423 \pm 615.698$   $\chi^2/\text{NDF}: 77.4/84$

asym\_atl\_dd\_atr\_dd\_avg\_rms vs Slug, Sign Corrected



Right In: 3845.187 $\pm$ 1.073  $\chi^2/\text{NDF}$ : 326944.8/16

Left Out: 4468.520 $\pm$ 0.753  $\chi^2/\text{NDF}$ :1380601.0/24

Right Out: 3577.892 $\pm$ 0.962  $\chi^2/\text{NDF}$ : 756749.9/19

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

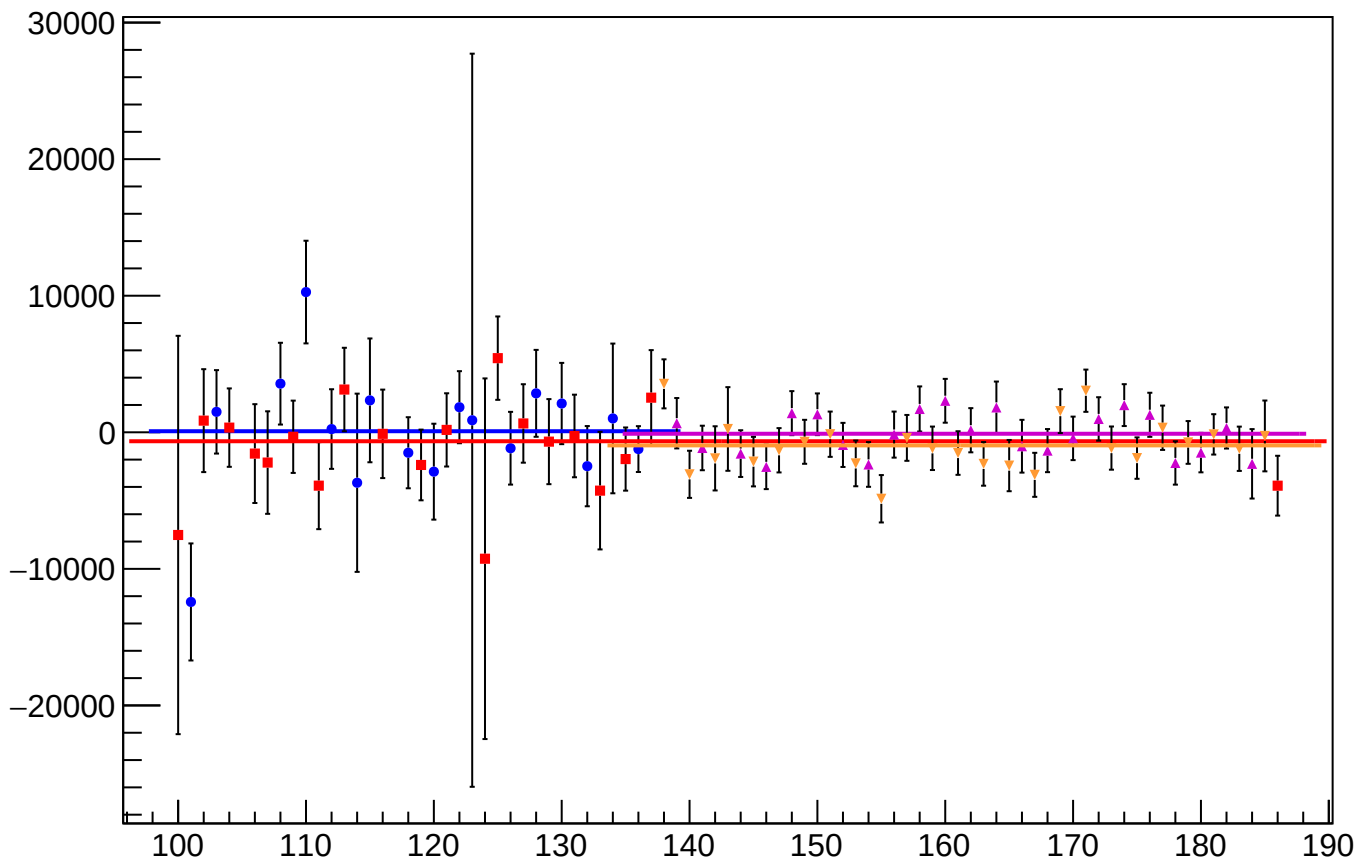
Right: 3696.962 $\pm$ 0.716  $\chi^2/\text{NDF}$ : 1118098.3/36

In: 4343.952 $\pm$ 0.639  $\chi^2/\text{NDF}$ :1660945.4/39

Out: 4129.824 $\pm$ 0.593  $\chi^2/\text{NDF}$ :2668716.4/44

All: 4229.009 $\pm$ 0.435  $\chi^2/\text{NDF}$ : 4390031.1/84

reg\_asym\_atl\_dd\_atr\_dd\_dd\_mean vs Slug, Sign Corrected



Right In: 78.213+/-752.844  $\chi^2/\text{NDF}$ : 22.4/16

Left Out: -958.410+/-339.496  $\chi^2/\text{NDF}$ : 28.5/24

Right Out: -655.228+/-697.722  $\chi^2/\text{NDF}$ : 12.6/19

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

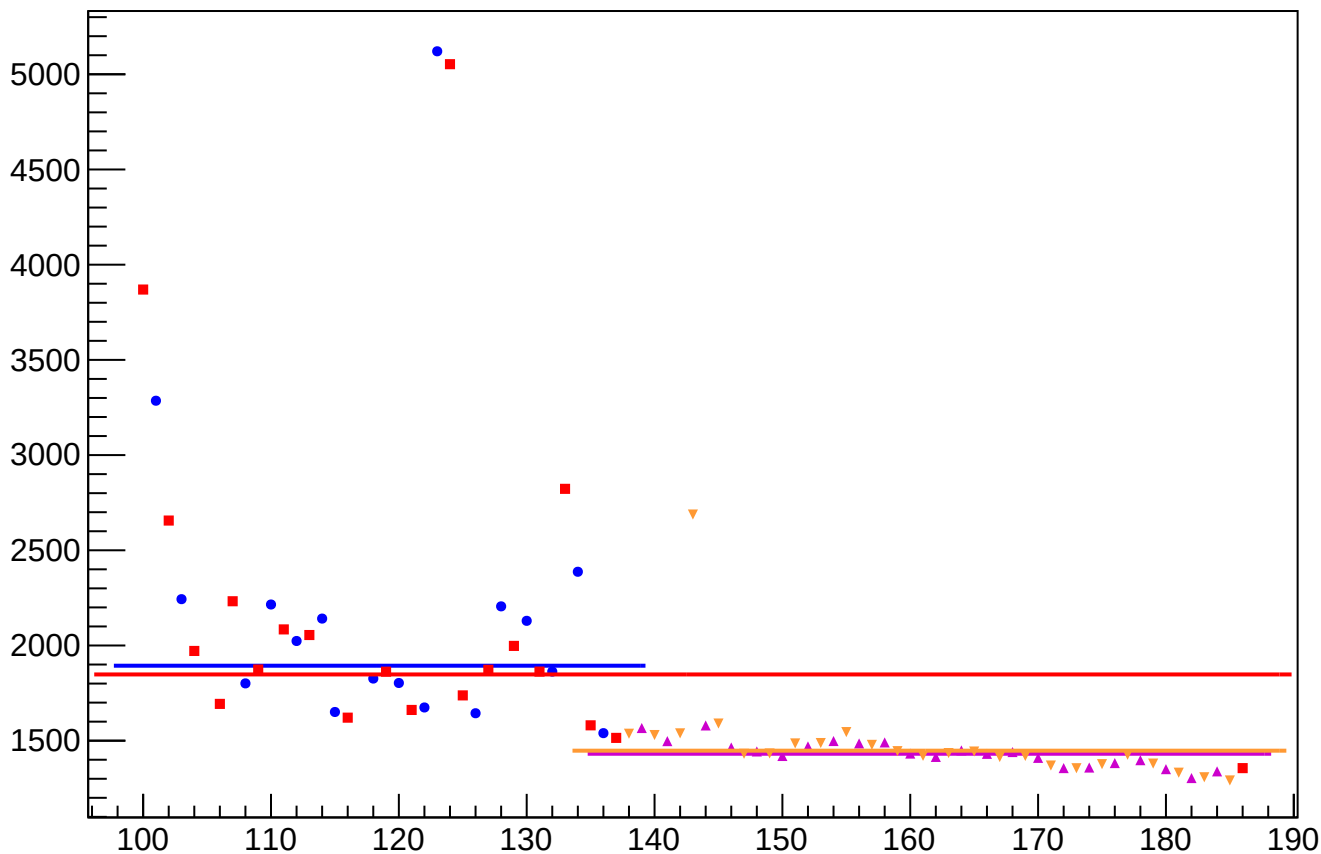
Right: -316.338+/-511.743  $\chi^2/\text{NDF}$ : 35.5/36

In: -75.485+/-312.630  $\chi^2/\text{NDF}$ : 41.9/39

Out: -900.371+/-305.276  $\chi^2/\text{NDF}$ : 41.3/44

All: -497.744+/-218.416  $\chi^2/\text{NDF}$ : 86.7/84

reg\_asym\_atl\_dd\_atr\_dd\_dd\_rms vs Slug, Sign Corrected



Right In: 1893.797 $\pm$ 0.532  $\chi^2$ /NDF: 466447.3/16

Left Out: 1447.554 $\pm$ 0.240  $\chi^2$ /NDF: 419254.7/24

Right Out: 1847.932 $\pm$ 0.493  $\chi^2$ /NDF: 572501.2/19

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: 1869.124 $\pm$ 0.362  $\chi^2$ /NDF: 1042941.8/36

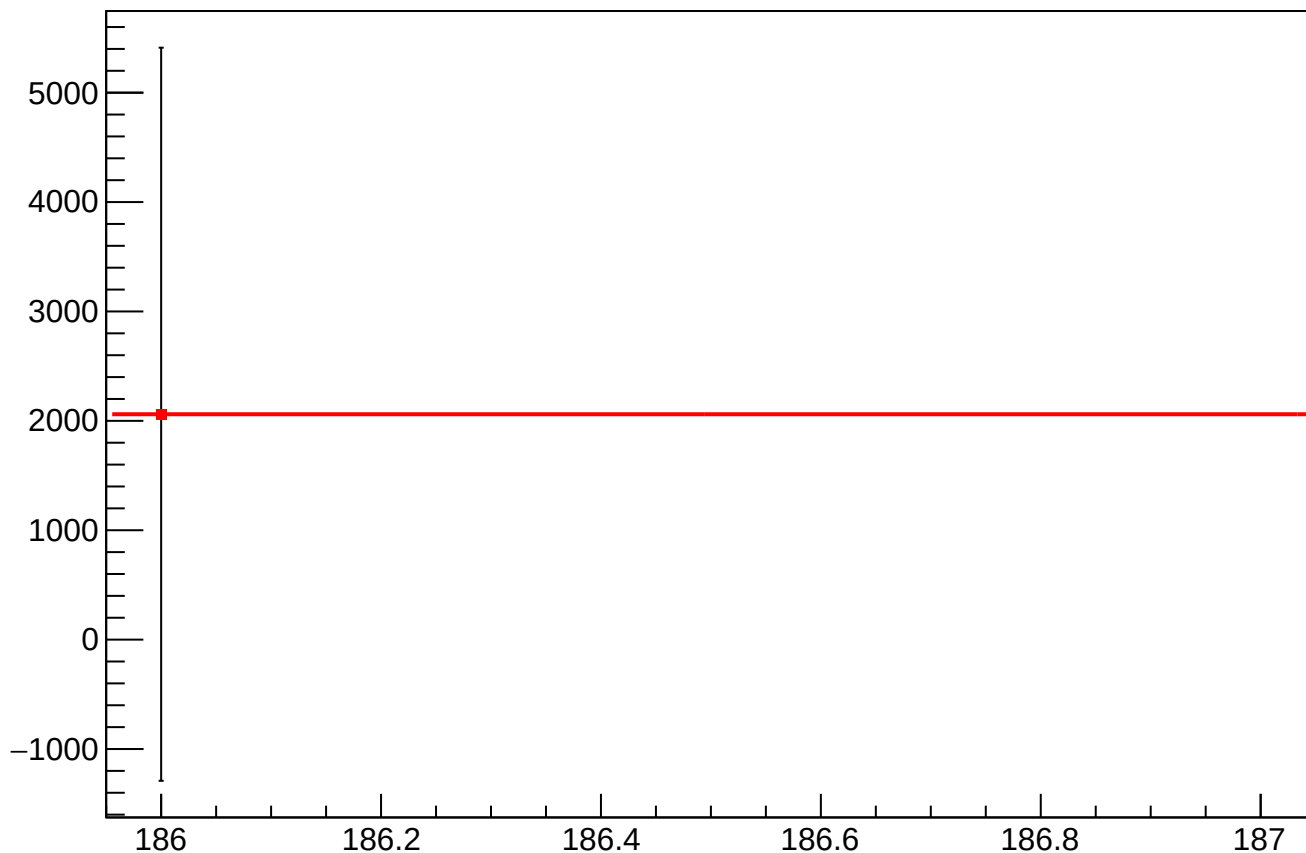
In: 1511.185 $\pm$ 0.221  $\chi^2$ /NDF: 1165810.5/39

Out: 1524.202 $\pm$ 0.216  $\chi^2$ /NDF: 1524266.8/44

All: 1517.848 $\pm$ 0.154  $\chi^2$ /NDF: 2691852.2/84



asym\_atl\_dd\_atr\_dd\_dd\_correction\_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: 2060.424+/-3350.994  $\chi^2/\text{NDF}$ : 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

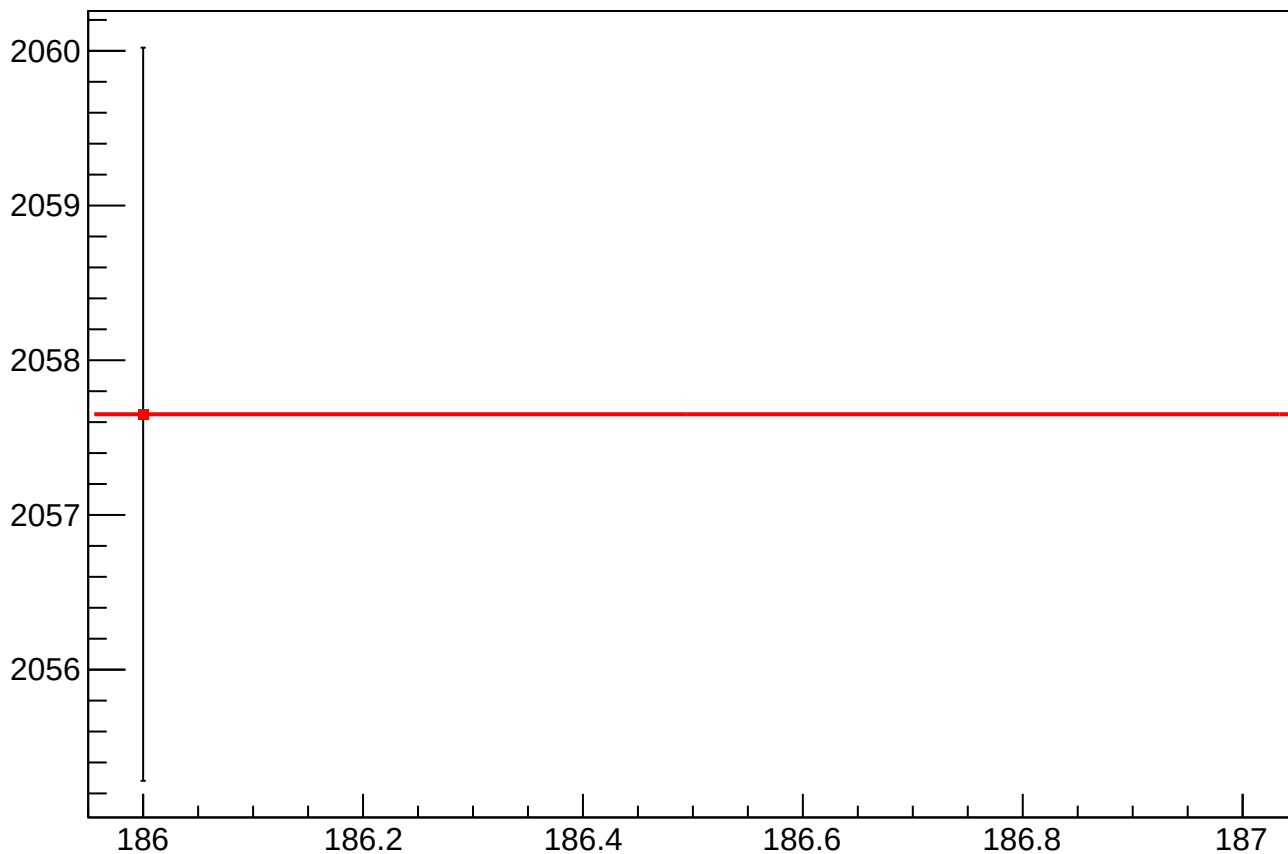
Right: 2060.424+/-3350.994  $\chi^2/\text{NDF}$ : 0.0/0

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: 2060.424+/-3350.994  $\chi^2/\text{NDF}$ : 0.0/0

asym\_atl\_dd\_atr\_dd\_dd\_correction\_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: 2057.651+/-2.370  $\chi^2/\text{NDF}$ : 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

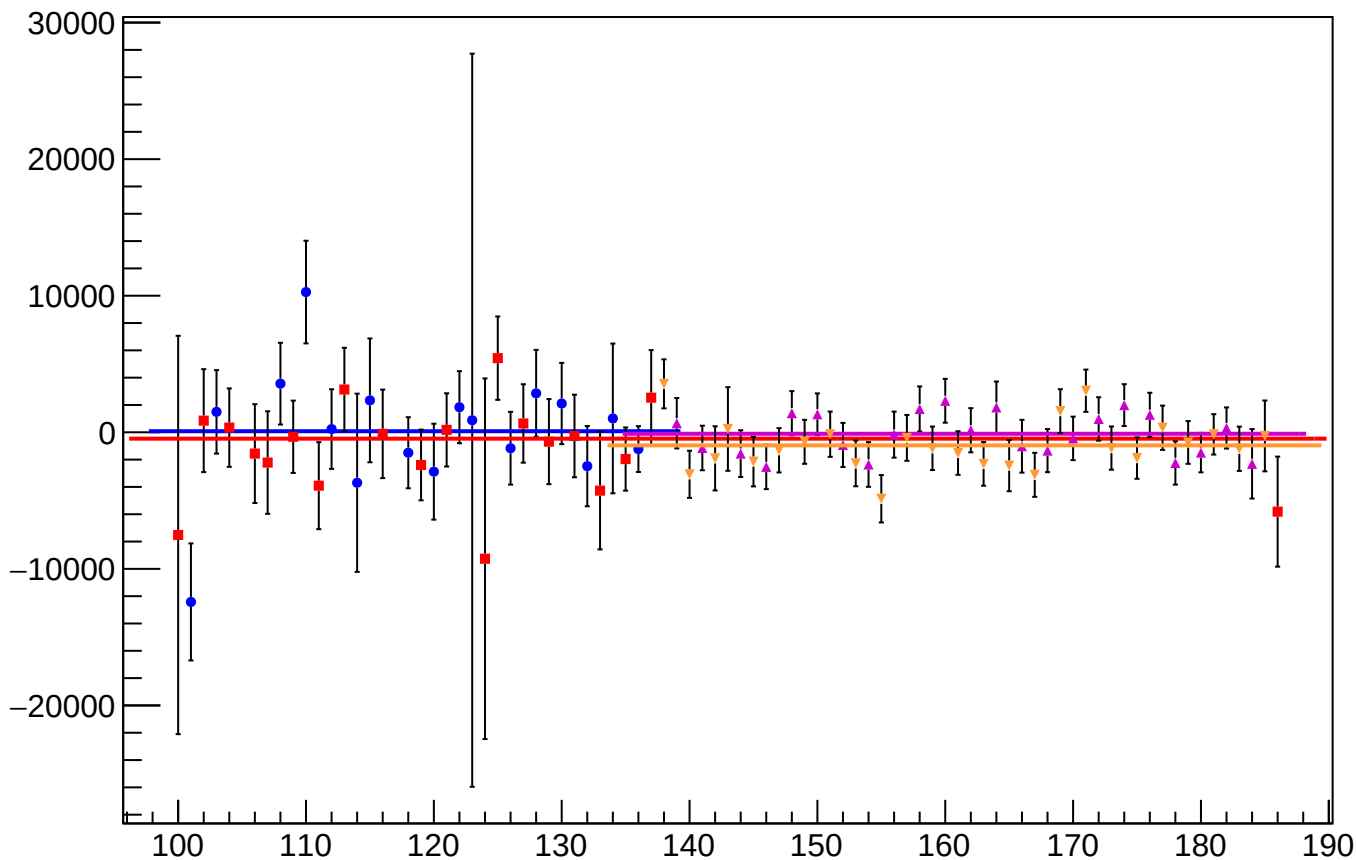
Right: 2057.651+/-2.370  $\chi^2/\text{NDF}$ : 0.0/0

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: 2057.651+/-2.370  $\chi^2/\text{NDF}$ : 0.0/0

asym\_atl\_dd\_atr\_dd\_dd\_mean vs Slug, Sign Corrected



Right In: 78.213+/-752.844  $\chi^2/\text{NDF}$ : 22.4/16

Left Out: -958.410+/-339.496  $\chi^2/\text{NDF}$ :28.5/24

Right Out: -466.082+/-724.074  $\chi^2/\text{NDF}$ : 12.0/19

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

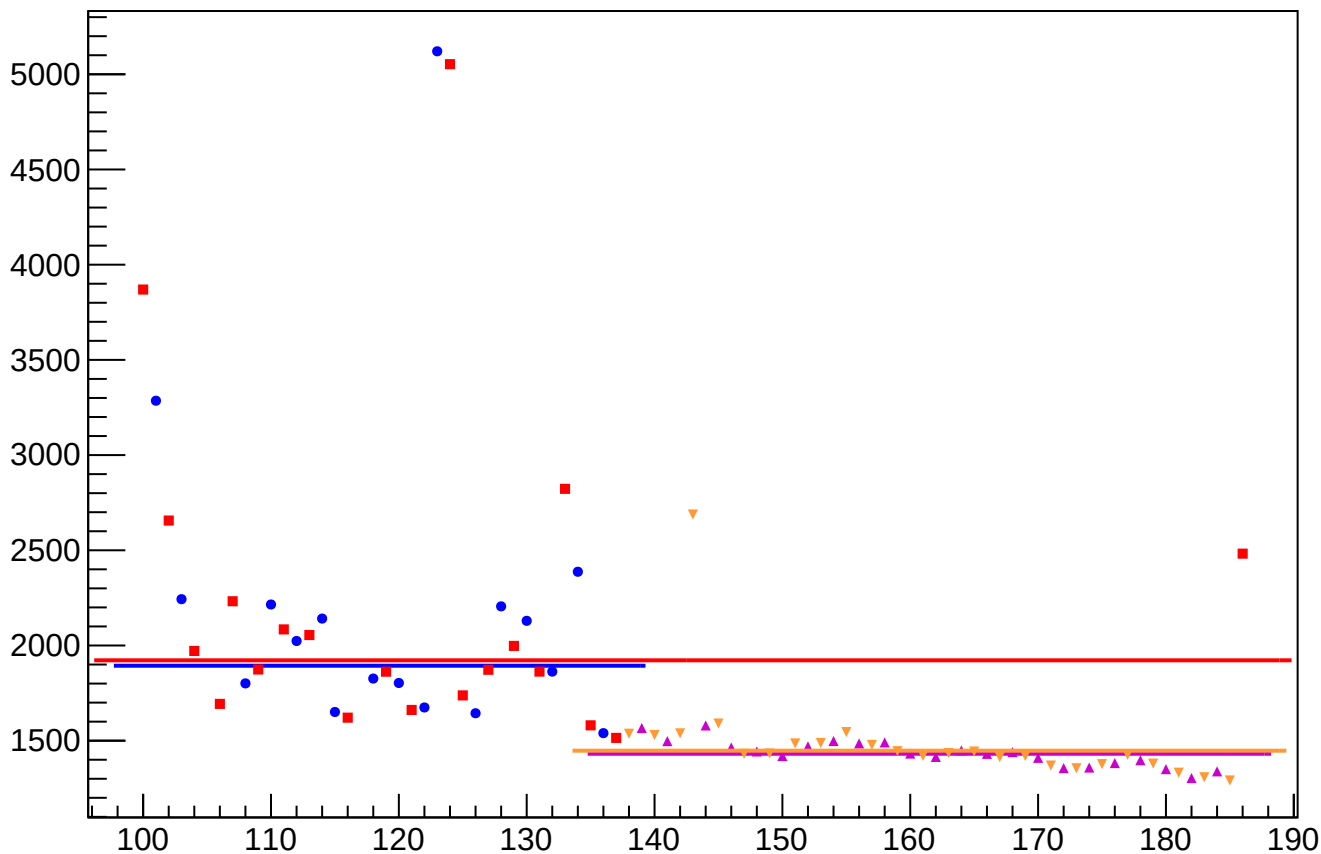
Right: -204.534+/-521.872  $\chi^2/\text{NDF}$ : 34.6/36

In: -75.485+/-312.630  $\chi^2/\text{NDF}$ :41.9/39

Out: -869.683+/-307.386  $\chi^2/\text{NDF}$ :40.9/44

All: -479.301+/-219.185  $\chi^2/\text{NDF}$ : 86.0/84

asym\_atl\_dd\_atr\_dd\_dd\_rms vs Slug, Sign Corrected



Right In: 1893.797 $\pm$ 0.532  $\chi^2$ /NDF: 466447.3/16

Left Out: 1447.554 $\pm$ 0.240  $\chi^2$ /NDF: 419254.7/24

Right Out: 1922.172 $\pm$ 0.512  $\chi^2$ /NDF: 500187.4/19

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

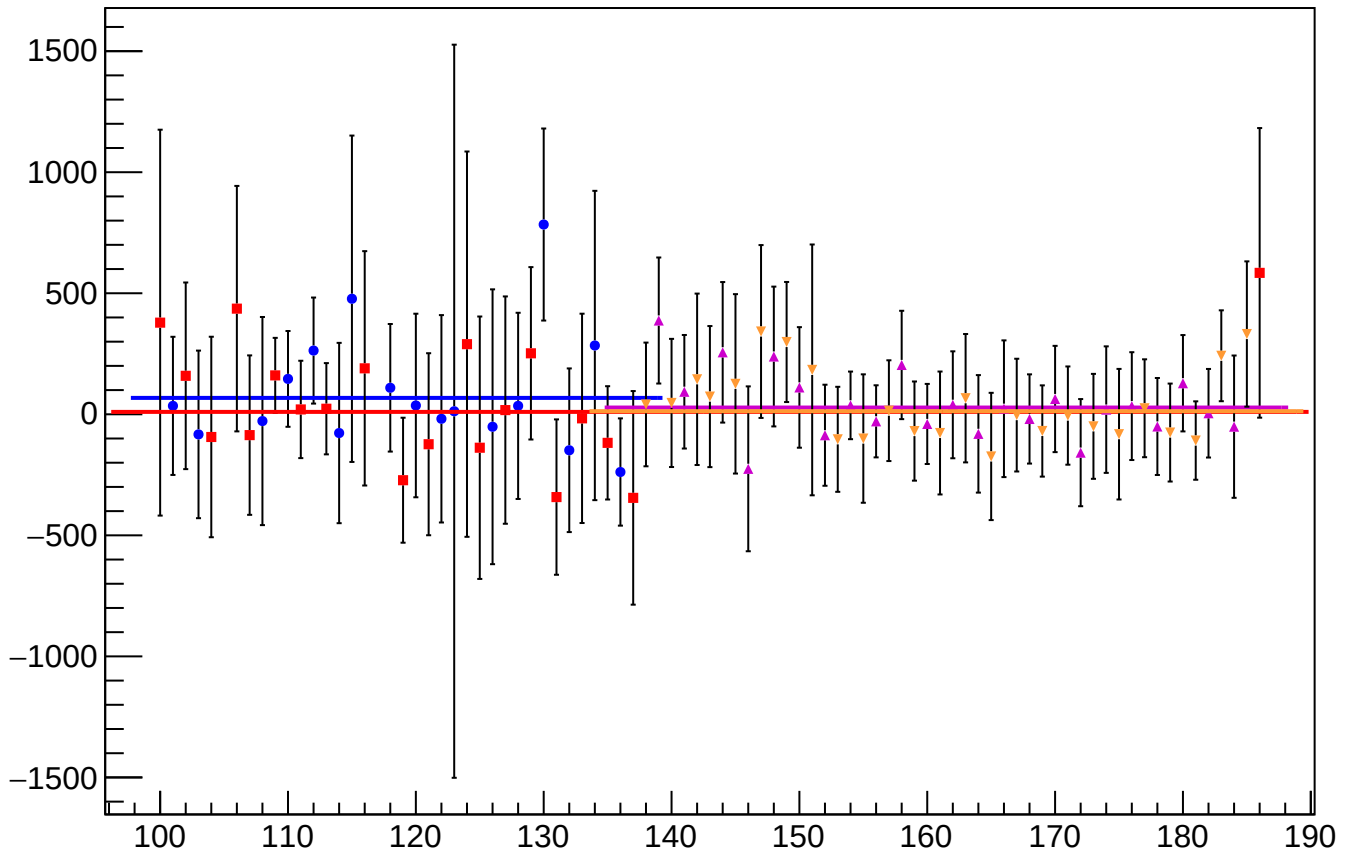
Right: 1908.537 $\pm$ 0.369  $\chi^2$ /NDF: 968110.6/36

In: 1511.185 $\pm$ 0.221  $\chi^2$ /NDF: 1165810.5/39

Out: 1533.092 $\pm$ 0.217  $\chi^2$ /NDF: 1623906.7/44

All: 1522.324 $\pm$ 0.155  $\chi^2$ /NDF: 2794710.4/84

asym\_bcm\_an\_us\_bcm\_an\_ds\_agg\_avg\_mean vs Slug, Sign Corrected



Right In: 67.747 $\pm$ 79.837  $\chi^2$ /NDF: 7.5/16

Left Out: 12.618 $\pm$ 47.486  $\chi^2$ /NDF: 7.7/24

Right Out: 9.928 $\pm$ 69.545  $\chi^2$ /NDF: 7.4/19

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

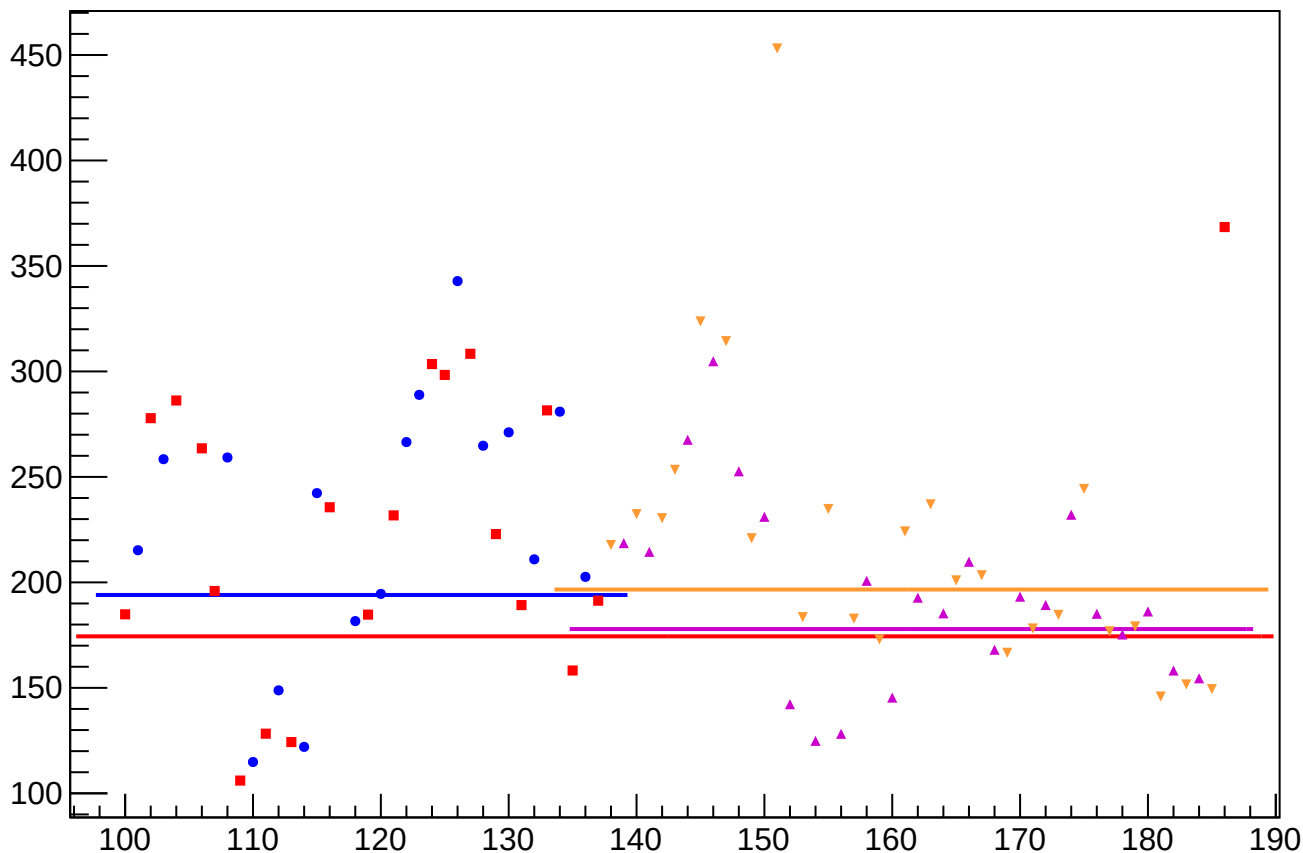
Right: 34.873 $\pm$ 52.440  $\chi^2$ /NDF: 15.2/36

In: 37.369 $\pm$ 38.885  $\chi^2$ /NDF: 14.3/39

Out: 11.763 $\pm$ 39.216  $\chi^2$ /NDF: 15.0/44

All: 24.674 $\pm$ 27.612  $\chi^2$ /NDF: 29.5/84

asym\_bcm\_an\_us\_bcm\_an\_ds\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 194.032 $\pm$ 0.056  $\chi^2$ /NDF: 1011944.3/16

Left Out: 196.620 $\pm$ 0.034  $\chi^2$ /NDF:1793507.9/24

Right Out: 174.419 $\pm$ 0.049  $\chi^2$ /NDF: 1784905.9/19

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

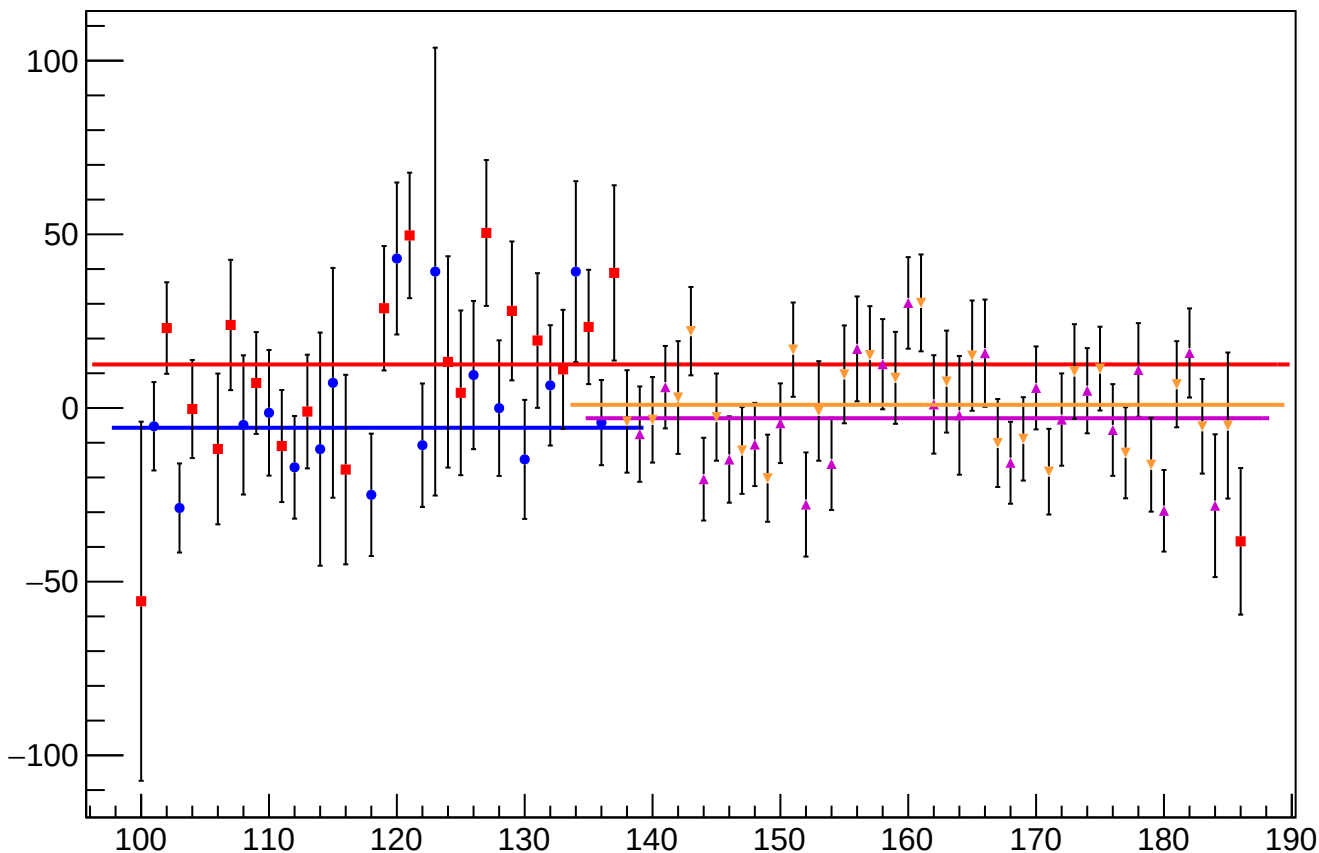
Right: 182.881 $\pm$ 0.037  $\chi^2$ /NDF: 2865478.8/36

In: 181.710 $\pm$ 0.027  $\chi^2$ /NDF:2718490.7/39

Out: 189.560 $\pm$ 0.028  $\chi^2$ /NDF:3717418.1/44

All: 185.602 $\pm$ 0.020  $\chi^2$ /NDF: 6476321.1/84

asym\_bcm\_an\_us\_bcm\_an\_ds\_agg\_dd\_mean vs Slug, Sign Corrected



Right In:  $-5.687 \pm 4.361$   $\chi^2/\text{NDF}$ : 15.2/16

Left Out:  $0.920 \pm 2.696$   $\chi^2/\text{NDF}$ : 24.0/24

Right Out:  $12.545 \pm 4.187$   $\chi^2/\text{NDF}$ : 25.5/19

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

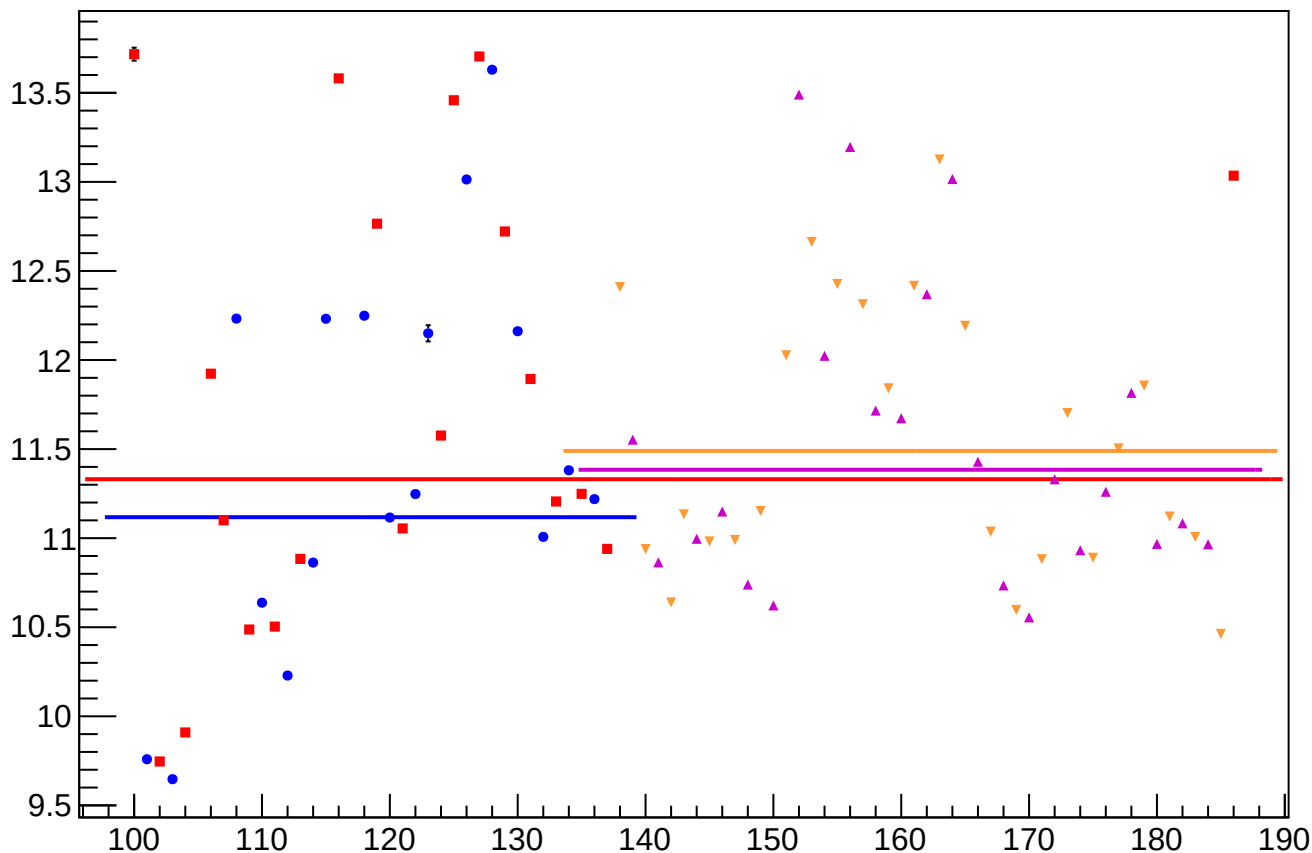
Right:  $3.801 \pm 3.020$   $\chi^2/\text{NDF}$ : 49.7/36

In:  $-3.720 \pm 2.323$   $\chi^2/\text{NDF}$ : 46.5/39

Out:  $4.328 \pm 2.267$   $\chi^2/\text{NDF}$ : 54.9/44

All:  $0.402 \pm 1.622$   $\chi^2/\text{NDF}$ : 107.6/84

asym\_bcm\_an\_us\_bcm\_an\_ds\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 11.118 $\pm$ 0.003  $\chi^2$ /NDF: 131951.0/16

Left Out: 11.490 $\pm$ 0.002  $\chi^2$ /NDF:132399.1/24

Right Out: 11.331 $\pm$ 0.003  $\chi^2$ /NDF: 162266.2/19

Left In: 11.384 $\pm$ 0.002  $\chi^2$ /NDF:149799.6/22

Left: 11.438 $\pm$ 0.001  $\chi^2$ /NDF: 283707.5/47

Right: 11.229 $\pm$ 0.002  $\chi^2$ /NDF: 296705.0/36

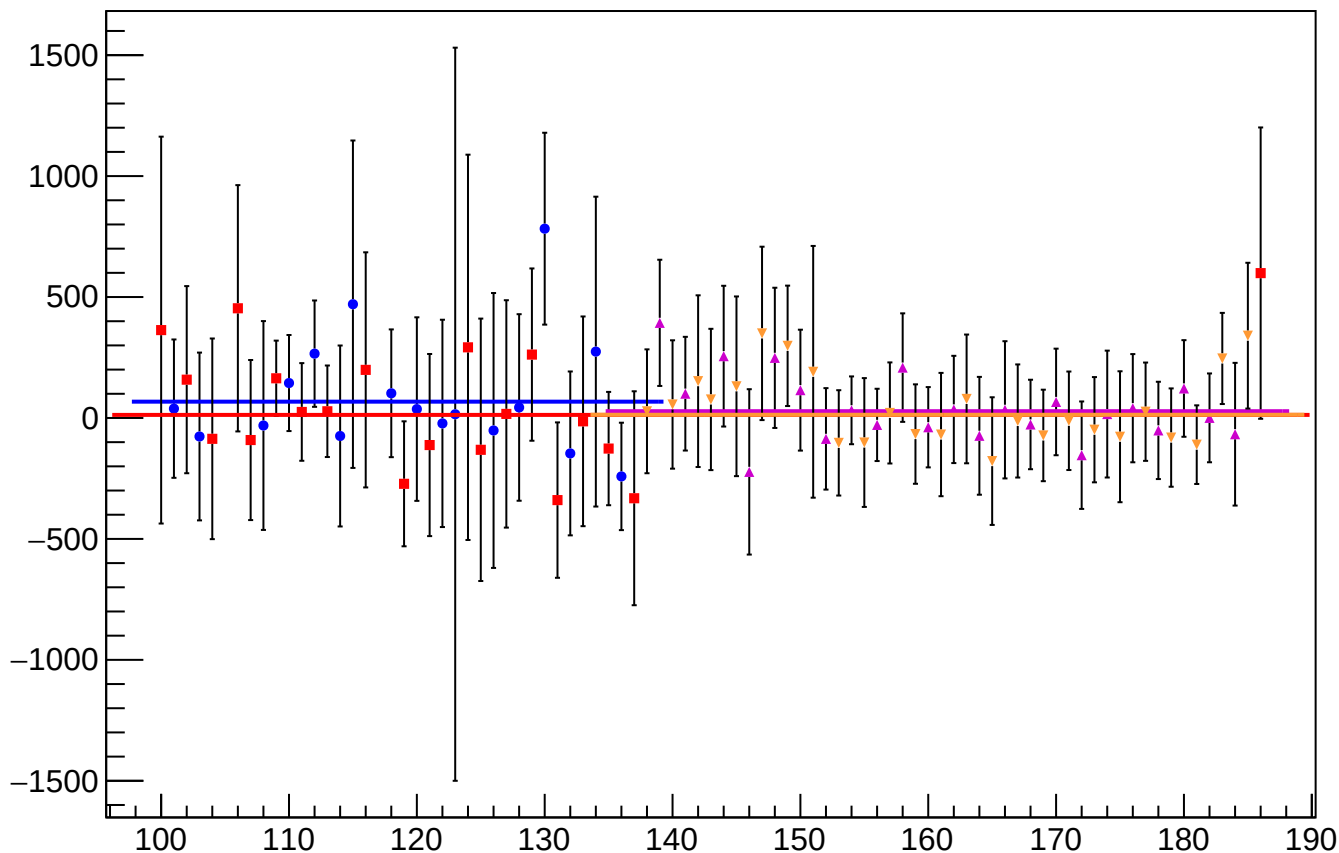
In: 11.309 $\pm$ 0.002  $\chi^2$ /NDF:287094.4/39

Out: 11.443 $\pm$ 0.002  $\chi^2$ /NDF:296699.9/44

All: 11.378 $\pm$ 0.001  $\chi^2$ /NDF: 587238.6/84



asym\_bcm\_an\_us\_bcm\_an\_ds3\_agg\_avg\_mean vs Slug, Sign Corrected



Right In: 67.460 $\pm$ 80.048  $\chi^2$ /NDF: 7.5/16

Left Out: 13.323 $\pm$ 47.662  $\chi^2$ /NDF:7.9/24

Right Out: 12.690 $\pm$ 69.752  $\chi^2$ /NDF: 7.5/19

Left In: 28.050 $\pm$ 44.681  $\chi^2$ /NDF:6.6/22

Left: 21.161 $\pm$ 32.597  $\chi^2$ /NDF: 14.6/47

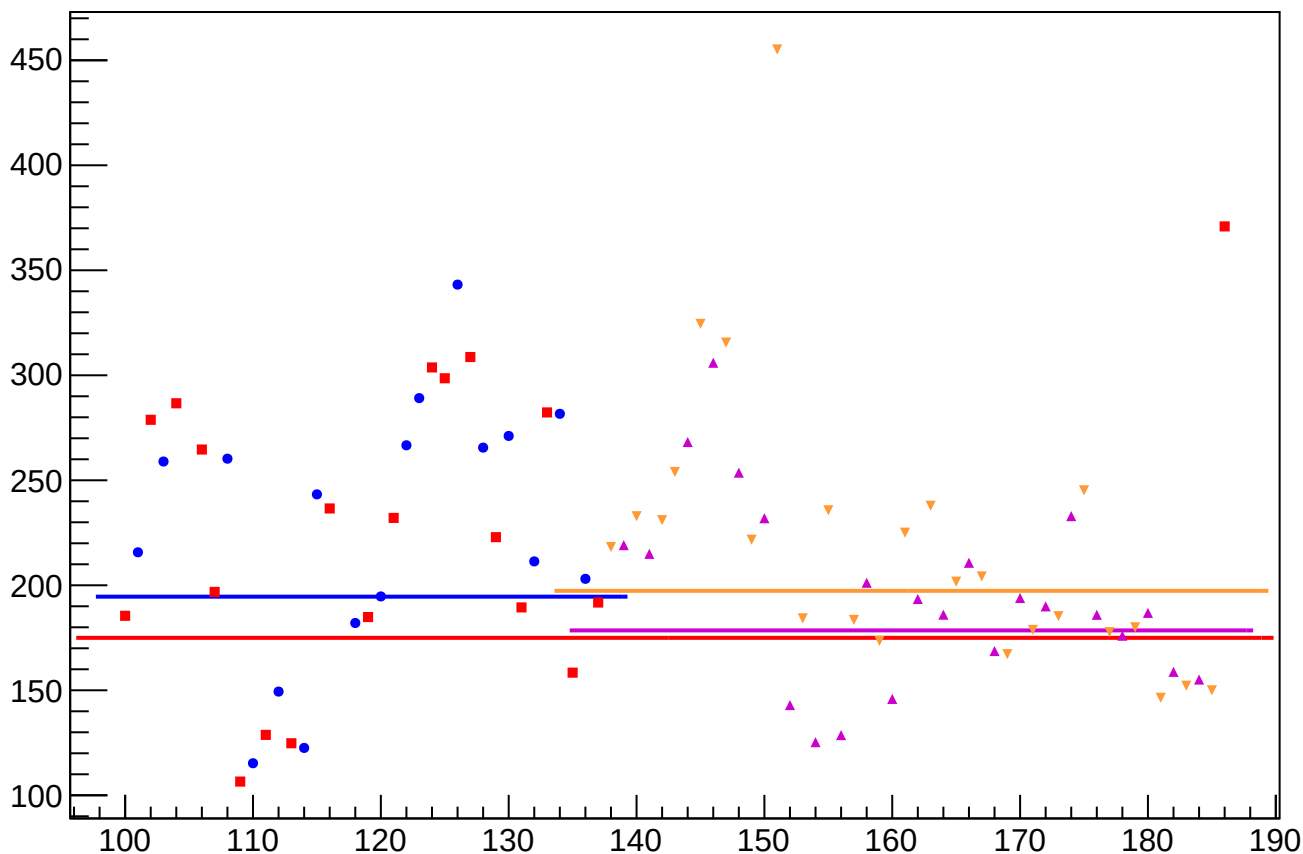
Right: 36.328 $\pm$ 52.588  $\chi^2$ /NDF: 15.2/36

In: 37.412 $\pm$ 39.015  $\chi^2$ /NDF:14.3/39

Out: 13.121 $\pm$ 39.352  $\chi^2$ /NDF:15.3/44

All: 25.371 $\pm$ 27.706  $\chi^2$ /NDF: 29.8/84

asym\_bcm\_an\_us\_bcm\_an\_ds3\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 194.582 $\pm$ 0.057  $\chi^2$ /NDF: 1006984.2/16

Left Out: 197.355 $\pm$ 0.034  $\chi^2$ /NDF:1790824.5/24

Right Out: 174.977 $\pm$ 0.049  $\chi^2$ /NDF: 1778891.2/19

Left In: 178.512 $\pm$ 0.032  $\chi^2$ /NDF:1642304.1/22

Left: 187.326 $\pm$ 0.023  $\chi^2$ /NDF: 3599509.2/47

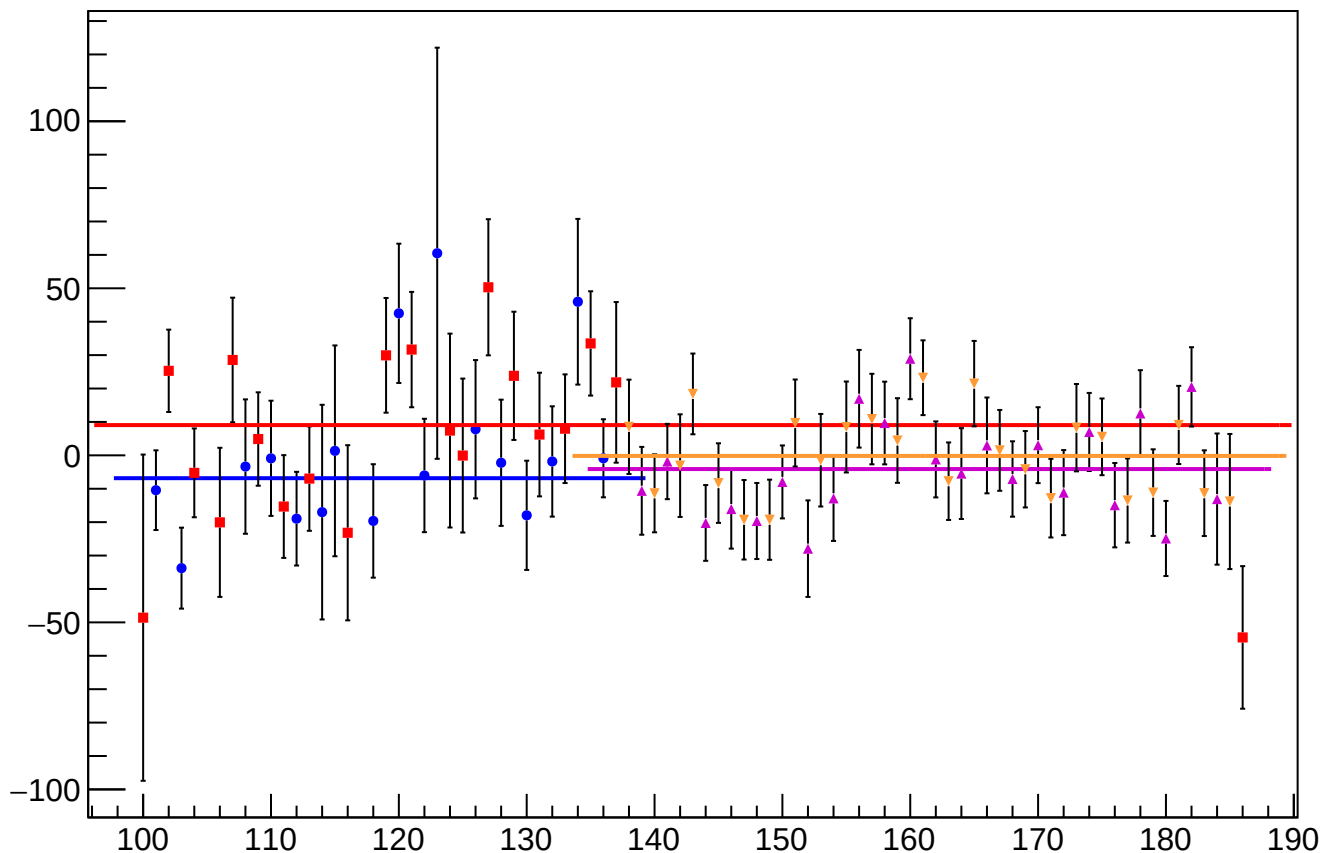
Right: 183.438 $\pm$ 0.037  $\chi^2$ /NDF: 2854072.1/36

In: 182.330 $\pm$ 0.028  $\chi^2$ /NDF:2710748.6/39

Out: 190.232 $\pm$ 0.028  $\chi^2$ /NDF:3710055.5/44

All: 186.247 $\pm$ 0.020  $\chi^2$ /NDF: 6461477.9/84

asym\_bcm\_an\_us\_bcm\_an\_ds3\_agg\_dd\_mean vs Slug, Sign Corrected



Right In:  $-6.841 \pm 4.162$   $\chi^2/\text{NDF}: 19.4/16$

Left Out:  $-0.170 \pm 2.520$   $\chi^2/\text{NDF}: 24.4/24$

Right Out:  $9.053 \pm 4.013$   $\chi^2/\text{NDF}: 31.9/19$

Left In:  $-4.107 \pm 2.577$   $\chi^2/\text{NDF}: 31.5/22$

Left:  $-2.095 \pm 1.802$   $\chi^2/\text{NDF}: 57.1/47$

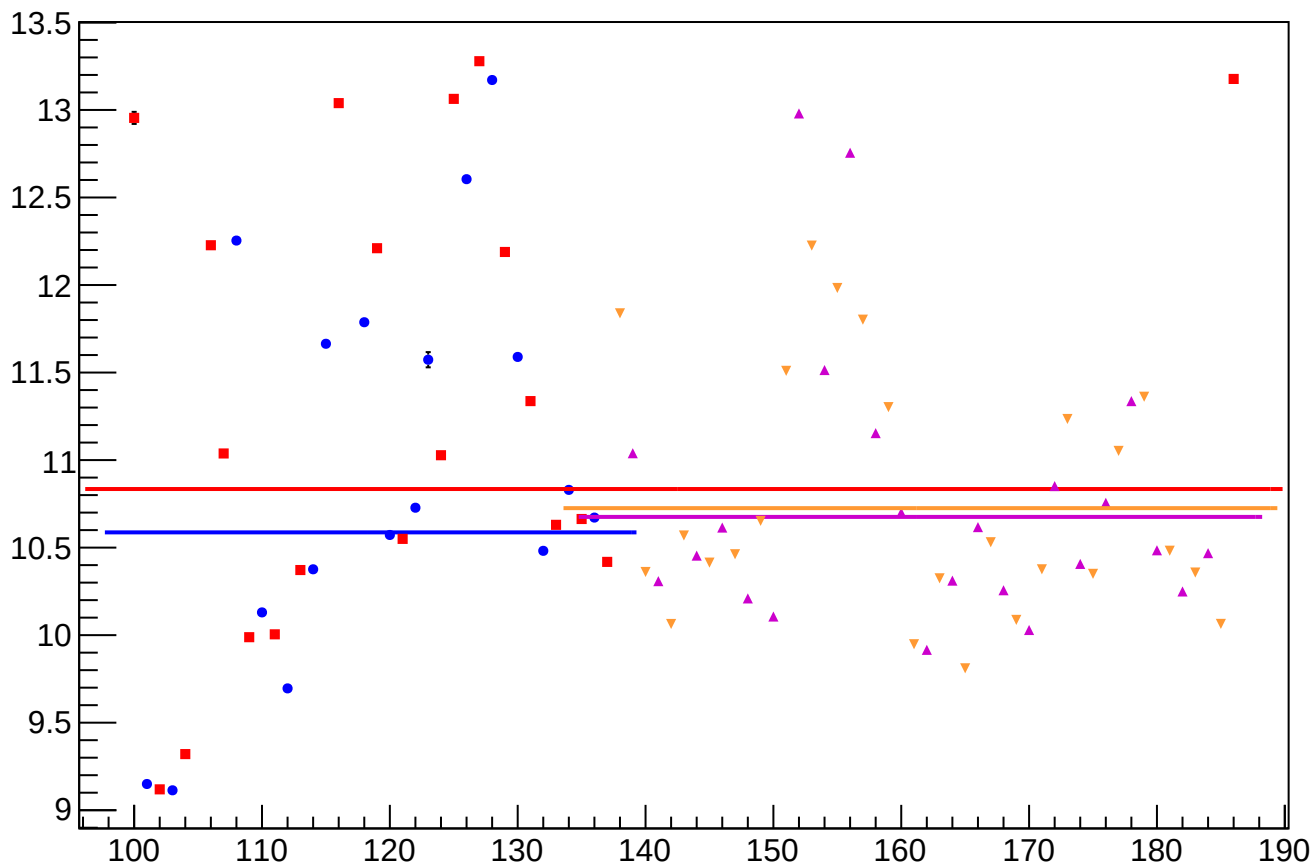
Right:  $1.395 \pm 2.889$   $\chi^2/\text{NDF}: 58.9/36$

In:  $-4.865 \pm 2.191$   $\chi^2/\text{NDF}: 51.2/39$

Out:  $2.439 \pm 2.134$   $\chi^2/\text{NDF}: 60.1/44$

All:  $-1.117 \pm 1.529$   $\chi^2/\text{NDF}: 117.0/84$

asym\_bcm\_an\_us\_bcm\_an\_ds3\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 10.587 $\pm$ 0.003  $\chi^2$ /NDF: 159222.7/16

Left Out: 10.725 $\pm$ 0.002  $\chi^2$ /NDF:132170.8/24

Right Out: 10.835 $\pm$ 0.003  $\chi^2$ /NDF: 203166.0/19

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

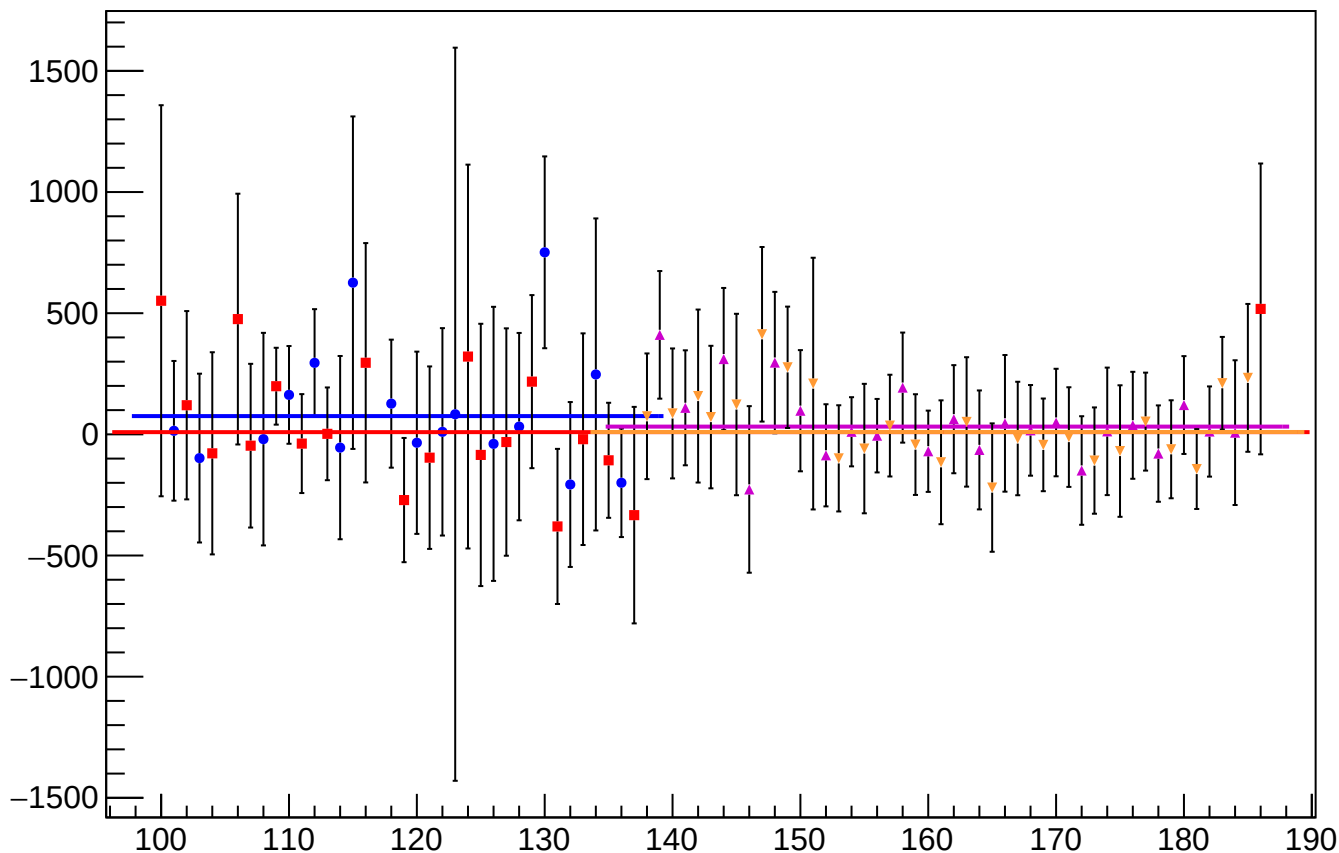
Right: 10.715 $\pm$ 0.002  $\chi^2$ /NDF: 366059.4/36

In: 10.651 $\pm$ 0.002  $\chi^2$ /NDF:305812.8/39

Out: 10.756 $\pm$ 0.002  $\chi^2$ /NDF:336400.0/44

All: 10.705 $\pm$ 0.001  $\chi^2$ /NDF: 644589.4/84

asym\_bcm\_dg\_us\_bcm\_an\_ds\_agg\_avg\_mean vs Slug, Sign Corrected



Right In: 75.370+/-80.583  $\chi^2/\text{NDF}$ : 7.7/16

Left Out: 9.801+/-47.979  $\chi^2/\text{NDF}$ : 7.5/24

Right Out: 9.145+/-70.406  $\chi^2/\text{NDF}$ : 8.1/19

Left In: 31.989+/-45.038  $\chi^2/\text{NDF}$ : 7.2/22

Left: 21.596+/-32.837  $\chi^2/\text{NDF}$ : 14.8/47

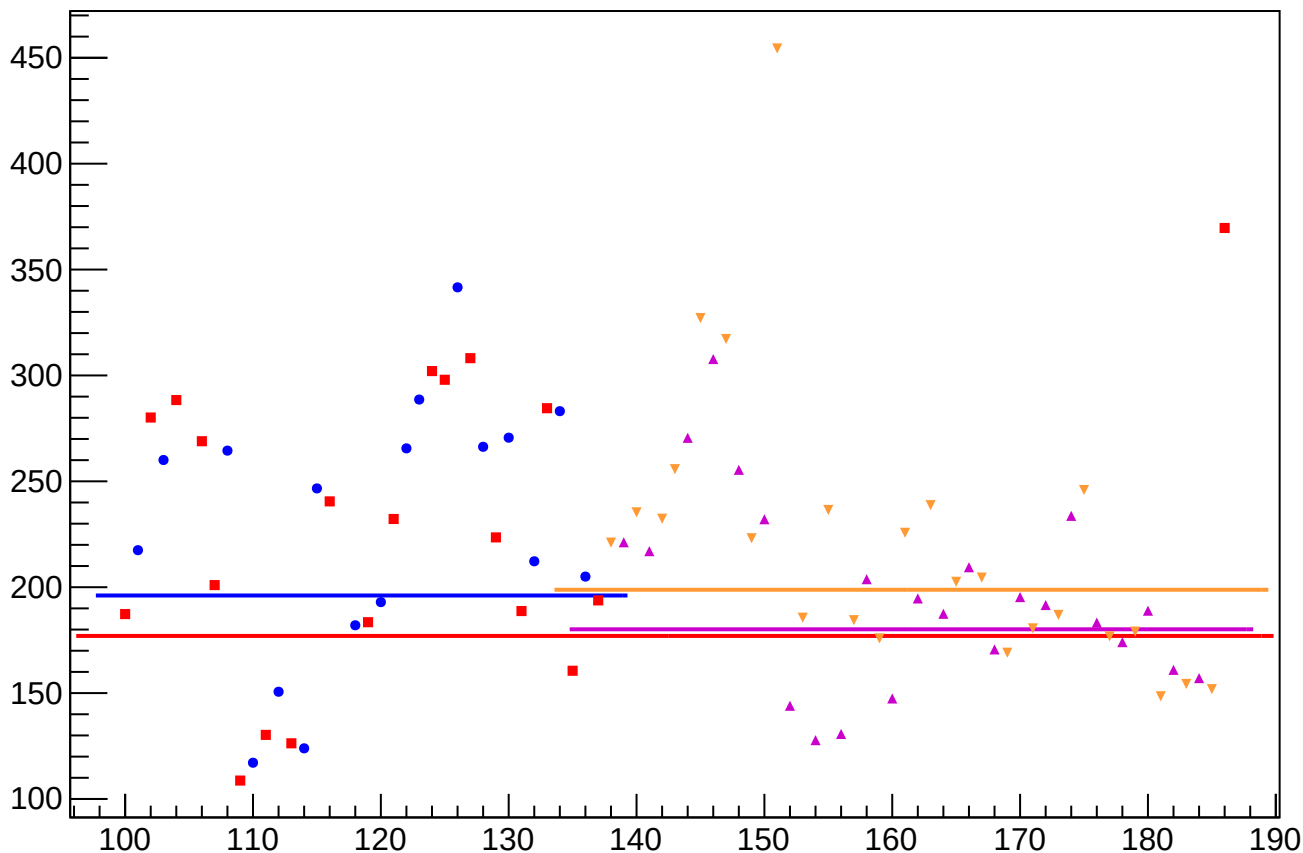
Right: 37.814+/-53.020  $\chi^2/\text{NDF}$ : 16.1/36

In: 42.314+/-39.315  $\chi^2/\text{NDF}$ : 15.1/39

Out: 9.593+/-39.648  $\chi^2/\text{NDF}$ : 15.6/44

All: 26.092+/-27.917  $\chi^2/\text{NDF}$ : 31.0/84

asym\_bcm\_dg\_us\_bcm\_an\_ds\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 196.085 $\pm$ 0.057  $\chi^2$ /NDF: 981134.1/16

Left Out: 198.800 $\pm$ 0.034  $\chi^2$ /NDF:1763119.1/24

Right Out: 176.990 $\pm$ 0.050  $\chi^2$ /NDF: 1732859.9/19

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

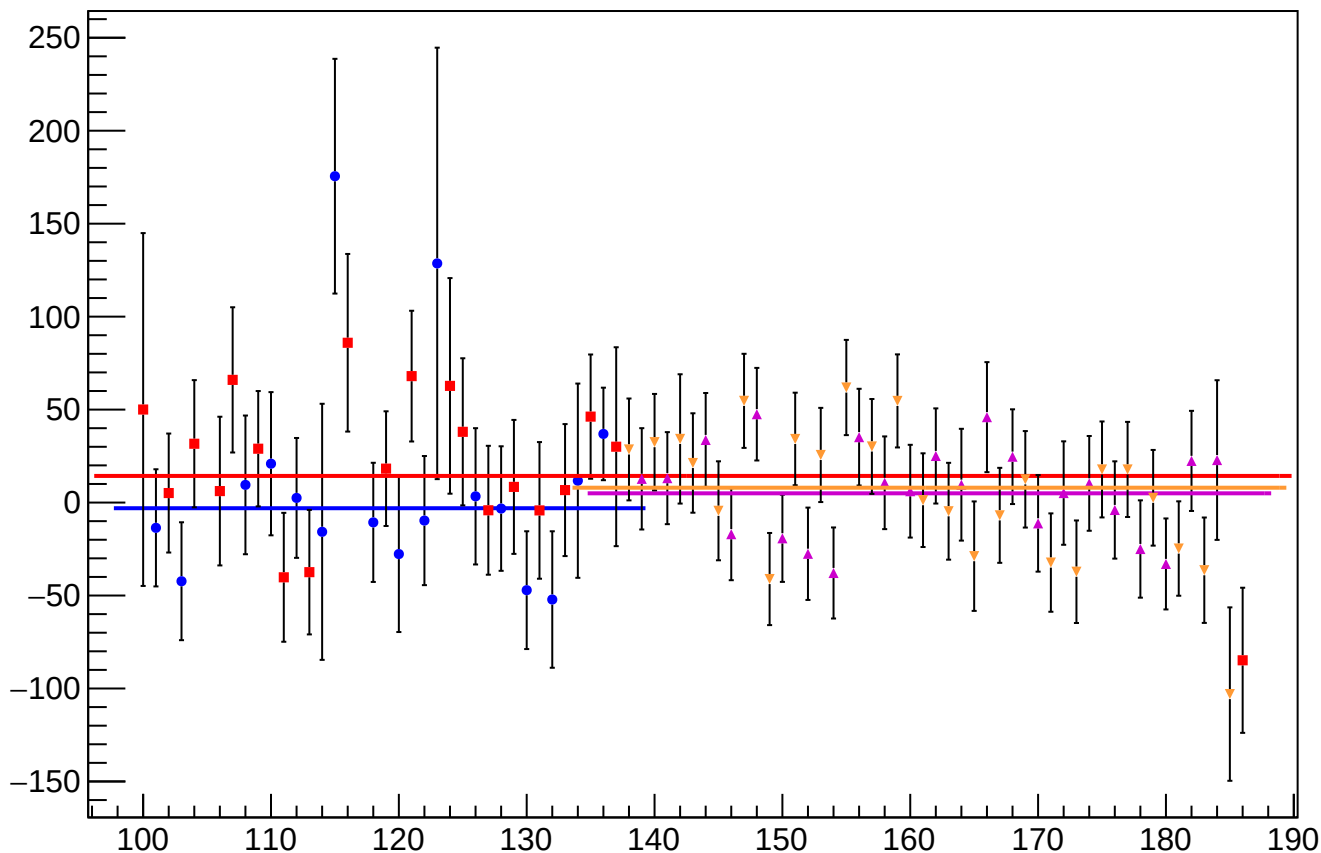
Right: 185.257 $\pm$ 0.037  $\chi^2$ /NDF: 2777679.8/36

In: 183.922 $\pm$ 0.028  $\chi^2$ /NDF:2634773.0/39

Out: 191.884 $\pm$ 0.028  $\chi^2$ /NDF:3627037.3/44

All: 187.870 $\pm$ 0.020  $\chi^2$ /NDF: 6302472.6/84

asym\_bcm\_dg\_us\_bcm\_an\_ds\_agg\_dd\_mean vs Slug, Sign Corrected



Right In:  $-3.043 \pm 8.901$   $\chi^2/\text{NDF}$ : 18.4/16

Left Out:  $7.990 \pm 5.327$   $\chi^2/\text{NDF}$ : 37.4/24

Right Out:  $14.326 \pm 8.374$   $\chi^2/\text{NDF}$ : 21.1/19

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

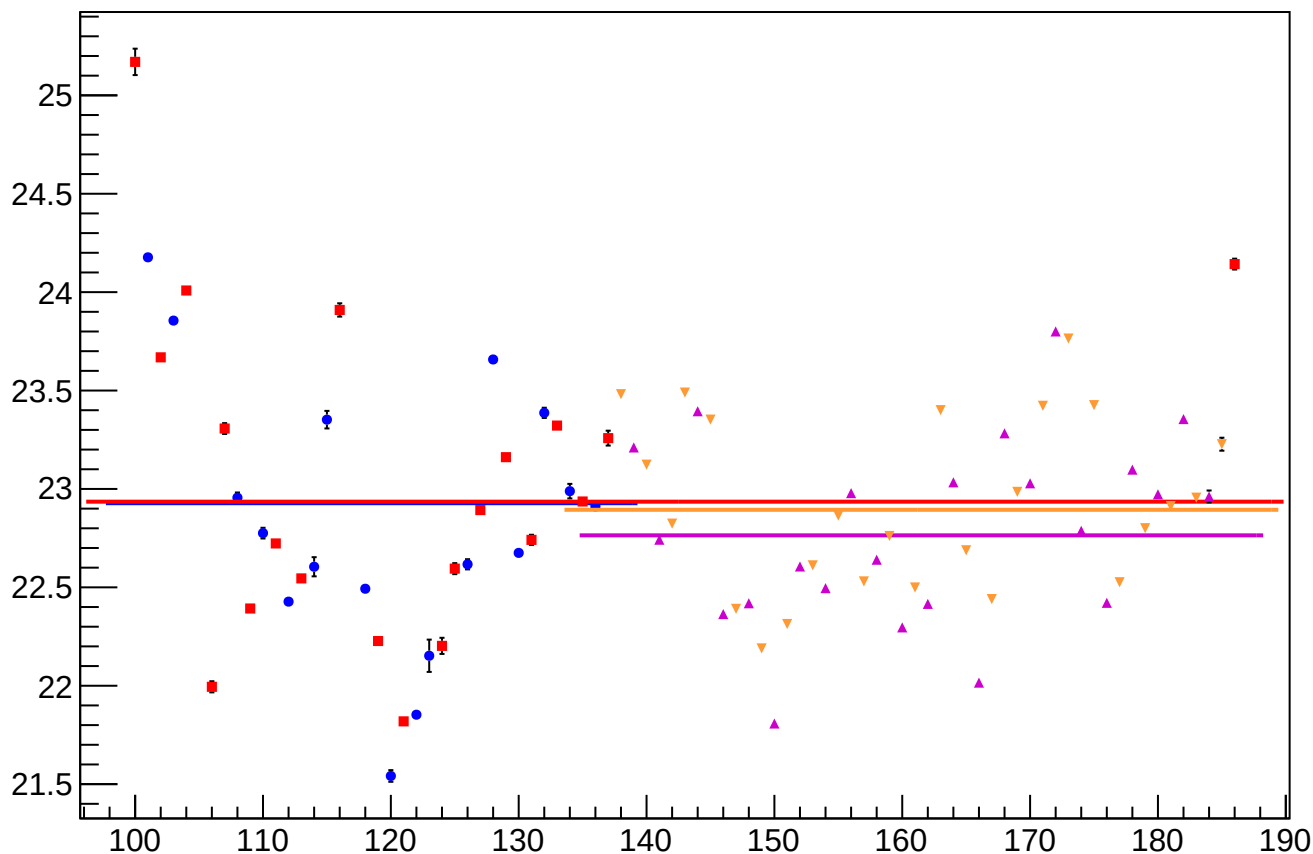
Right:  $6.171 \pm 6.099$   $\chi^2/\text{NDF}$ : 41.4/36

In:  $2.790 \pm 4.644$   $\chi^2/\text{NDF}$ : 39.4/39

Out:  $9.815 \pm 4.495$   $\chi^2/\text{NDF}$ : 58.9/44

All:  $6.418 \pm 3.230$   $\chi^2/\text{NDF}$ : 99.5/84

asym\_bcm\_dg\_us\_bcm\_an\_ds\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 22.928 $\pm$ 0.006  $\chi^2$ /NDF: 11600.9/16

Left Out: 22.894 $\pm$ 0.004  $\chi^2$ /NDF:13070.5/24

Right Out: 22.935 $\pm$ 0.006  $\chi^2$ /NDF: 13104.8/19

Left In: 22.764 $\pm$ 0.004  $\chi^2$ /NDF:14665.7/22

Left: 22.831 $\pm$ 0.003  $\chi^2$ /NDF: 28317.3/47

Right: 22.932 $\pm$ 0.004  $\chi^2$ /NDF: 24706.4/36

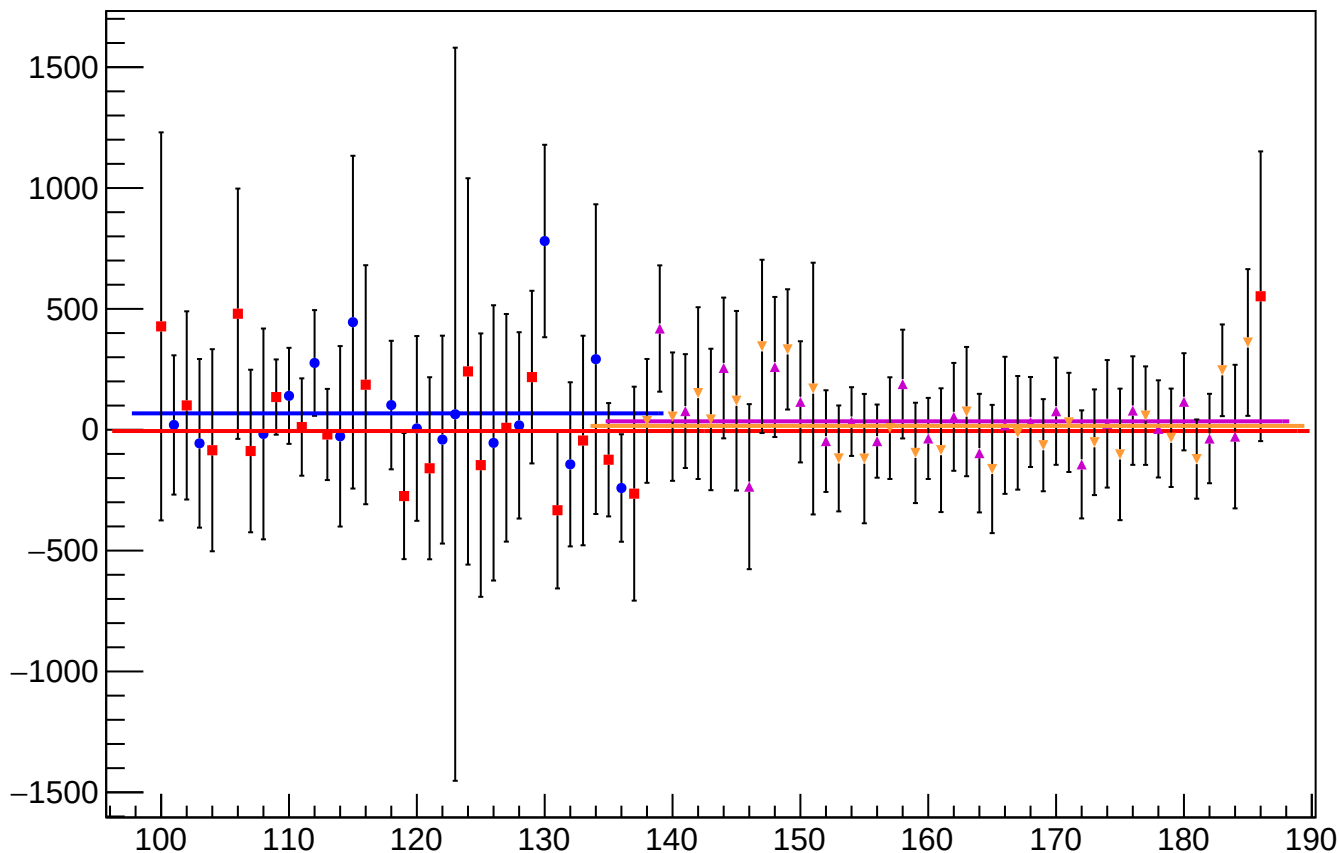
In: 22.809 $\pm$ 0.003  $\chi^2$ /NDF:26756.9/39

Out: 22.906 $\pm$ 0.003  $\chi^2$ /NDF:26209.7/44

All: 22.859 $\pm$ 0.002  $\chi^2$ /NDF: 53419.2/84



asym\_bcm\_dg\_ds\_bcm\_an\_ds\_agg\_avg\_mean vs Slug, Sign Corrected



Right In: 67.779 $\pm$ 80.229  $\chi^2$ /NDF: 7.4/16

Left Out: 15.904 $\pm$ 47.898  $\chi^2$ /NDF:8.4/24

Right Out: -5.314 $\pm$ 69.918  $\chi^2$ /NDF: 6.6/19

Left In: 34.919 $\pm$ 44.971  $\chi^2$ /NDF:6.6/22

Left: 26.010 $\pm$ 32.785  $\chi^2$ /NDF: 15.1/47

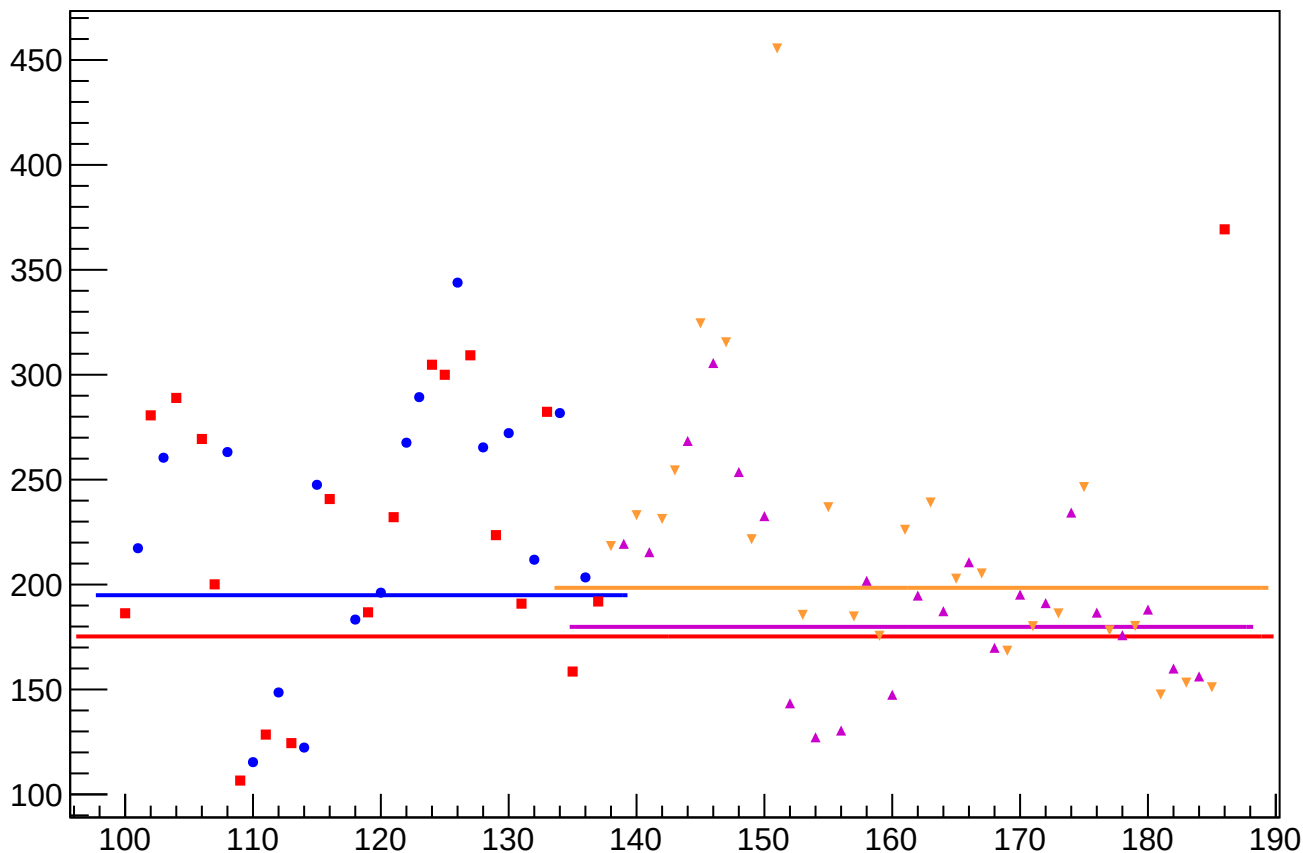
Right: 26.236 $\pm$ 52.710  $\chi^2$ /NDF: 14.5/36

In: 42.775 $\pm$ 39.228  $\chi^2$ /NDF:14.1/39

Out: 9.126 $\pm$ 39.515  $\chi^2$ /NDF:15.1/44

All: 26.073 $\pm$ 27.839  $\chi^2$ /NDF: 29.6/84

asym\_bcm\_dg\_ds\_bcm\_an\_ds\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 194.927 $\pm$ 0.057  $\chi^2$ /NDF: 1021893.7/16

Left Out: 198.450 $\pm$ 0.034  $\chi^2$ /NDF:1761433.9/24

Right Out: 175.271 $\pm$ 0.049  $\chi^2$ /NDF: 1803915.6/19

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

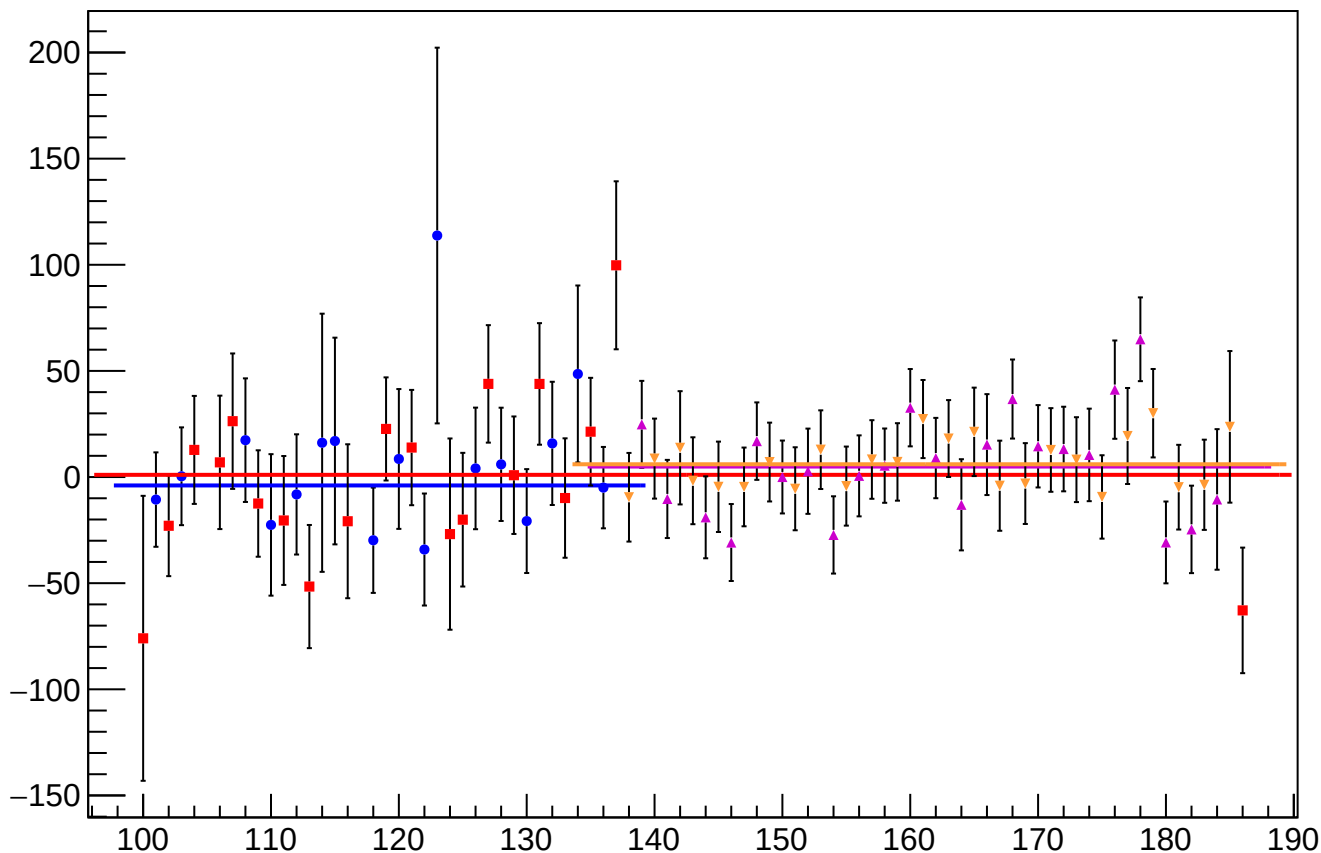
Right: 183.755 $\pm$ 0.037  $\chi^2$ /NDF: 2894039.9/36

In: 183.446 $\pm$ 0.028  $\chi^2$ /NDF:2664548.5/39

Out: 191.046 $\pm$ 0.028  $\chi^2$ /NDF:3714951.8/44

All: 187.218 $\pm$ 0.020  $\chi^2$ /NDF: 6416760.2/84

asym\_bcm\_dg\_ds\_bcm\_an\_ds\_agg\_dd\_mean vs Slug, Sign Corrected



Right In:  $-3.959 \pm 6.931$   $\chi^2/\text{NDF}$ : 8.3/16

Left Out:  $6.020 \pm 4.017$   $\chi^2/\text{NDF}$ : 8.1/24

Right Out:  $1.040 \pm 6.573$   $\chi^2/\text{NDF}$ : 25.8/19

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

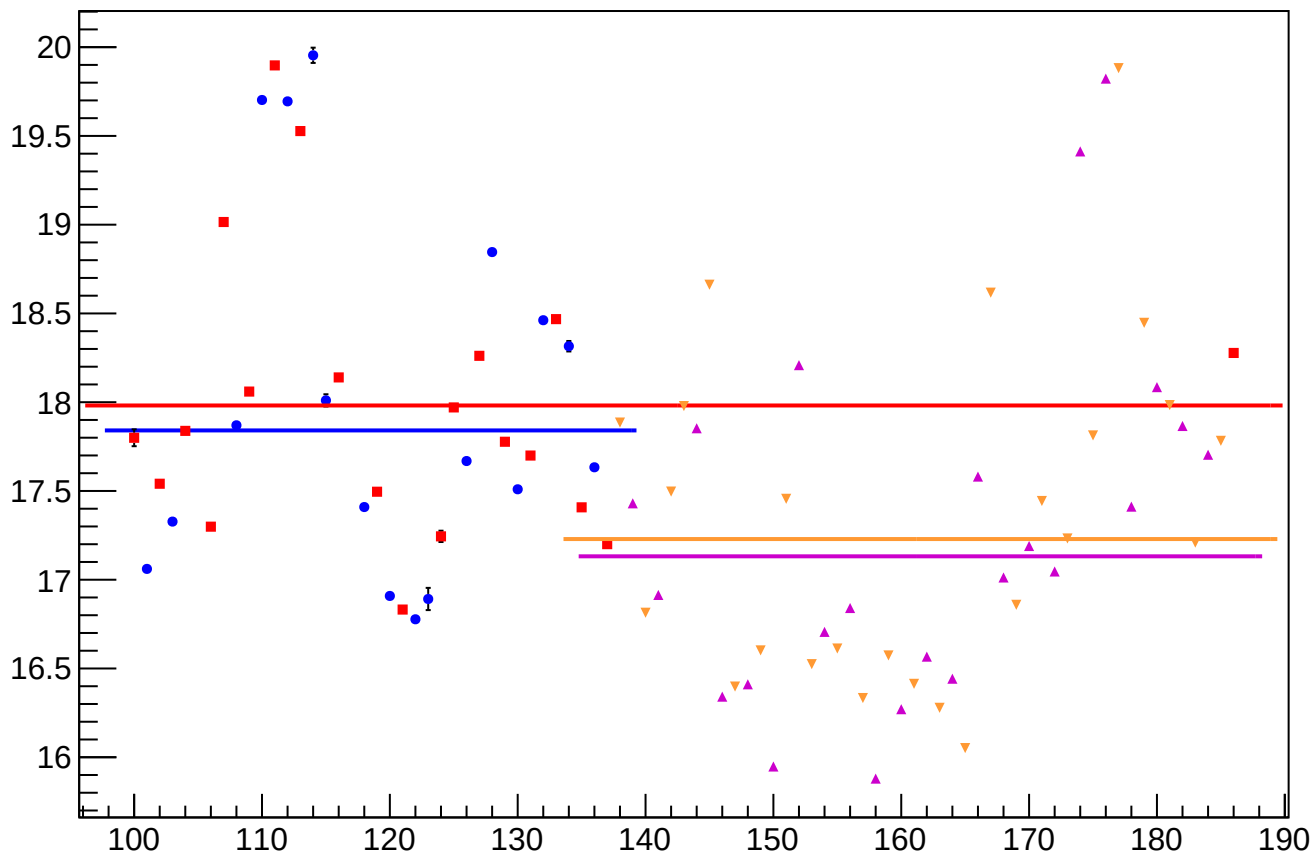
Right:  $-1.327 \pm 4.770$   $\chi^2/\text{NDF}$ : 34.4/36

In:  $2.630 \pm 3.534$   $\chi^2/\text{NDF}$ : 44.4/39

Out:  $4.666 \pm 3.428$   $\chi^2/\text{NDF}$ : 34.4/44

All:  $3.679 \pm 2.460$   $\chi^2/\text{NDF}$ : 78.9/84

asym\_bcm\_dg\_ds\_bcm\_an\_ds\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 17.841 $\pm$ 0.005  $\chi^2$ /NDF: 31077.0/16

Left Out: 17.229 $\pm$ 0.003  $\chi^2$ /NDF: 98624.7/24

Right Out: 17.982 $\pm$ 0.005  $\chi^2$ /NDF: 25534.5/19

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

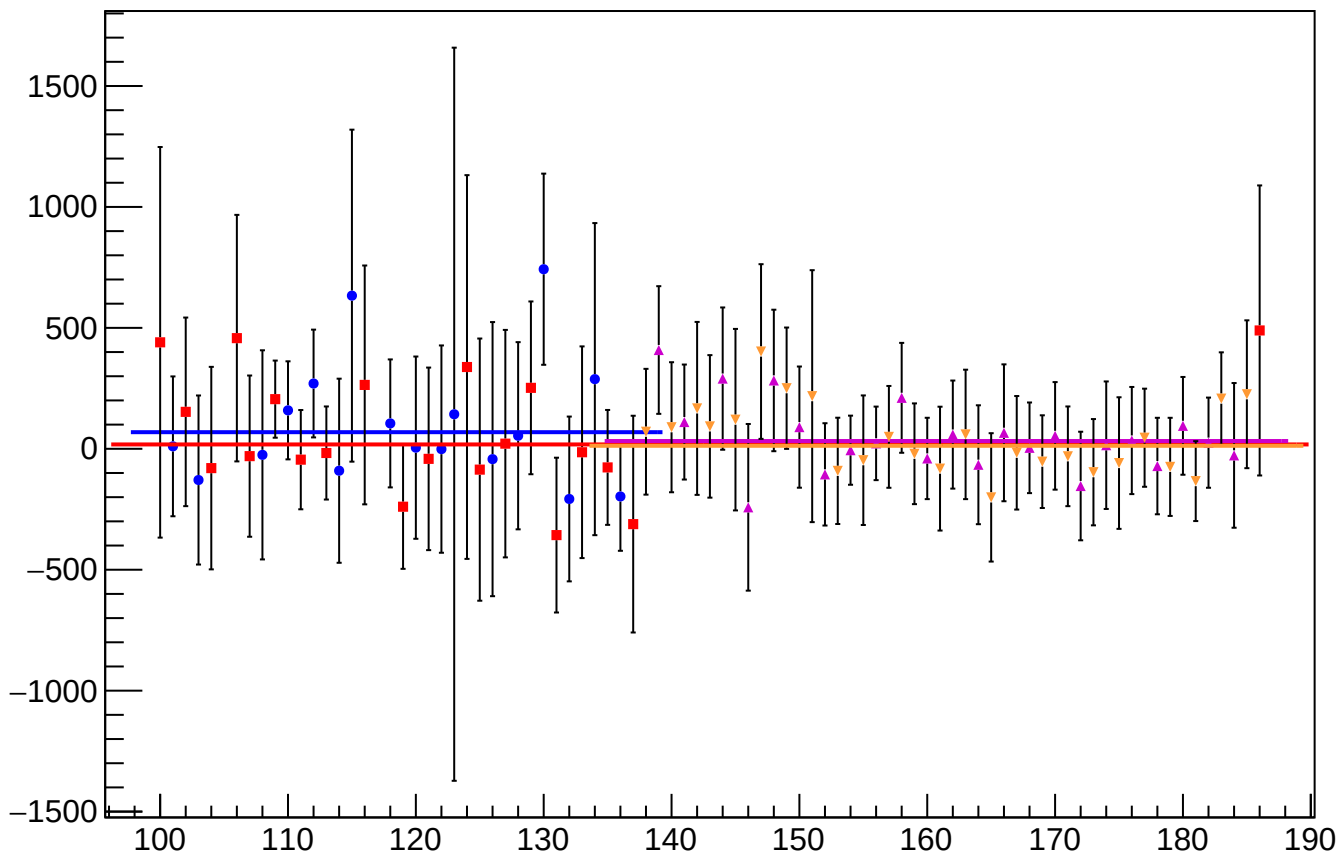
Right: 17.915 $\pm$ 0.003  $\chi^2$ /NDF: 57044.4/36

In: 17.316 $\pm$ 0.002  $\chi^2$ /NDF: 150570.2/39

Out: 17.434 $\pm$ 0.002  $\chi^2$ /NDF: 143239.6/44

All: 17.377 $\pm$ 0.002  $\chi^2$ /NDF: 294950.4/84

asym\_bcm\_dg\_us\_bcm\_an\_us\_agg\_avg\_mean vs Slug, Sign Corrected



Right In: 68.704 $\pm$ 80.783  $\chi^2$ /NDF: 7.5/16

Left Out: 12.474 $\pm$ 48.086  $\chi^2$ /NDF:6.8/24

Right Out: 18.020 $\pm$ 70.560  $\chi^2$ /NDF: 7.3/19

Left In: 32.159 $\pm$ 45.131  $\chi^2$ /NDF:6.9/22

Left: 22.940 $\pm$ 32.908  $\chi^2$ /NDF: 13.9/47

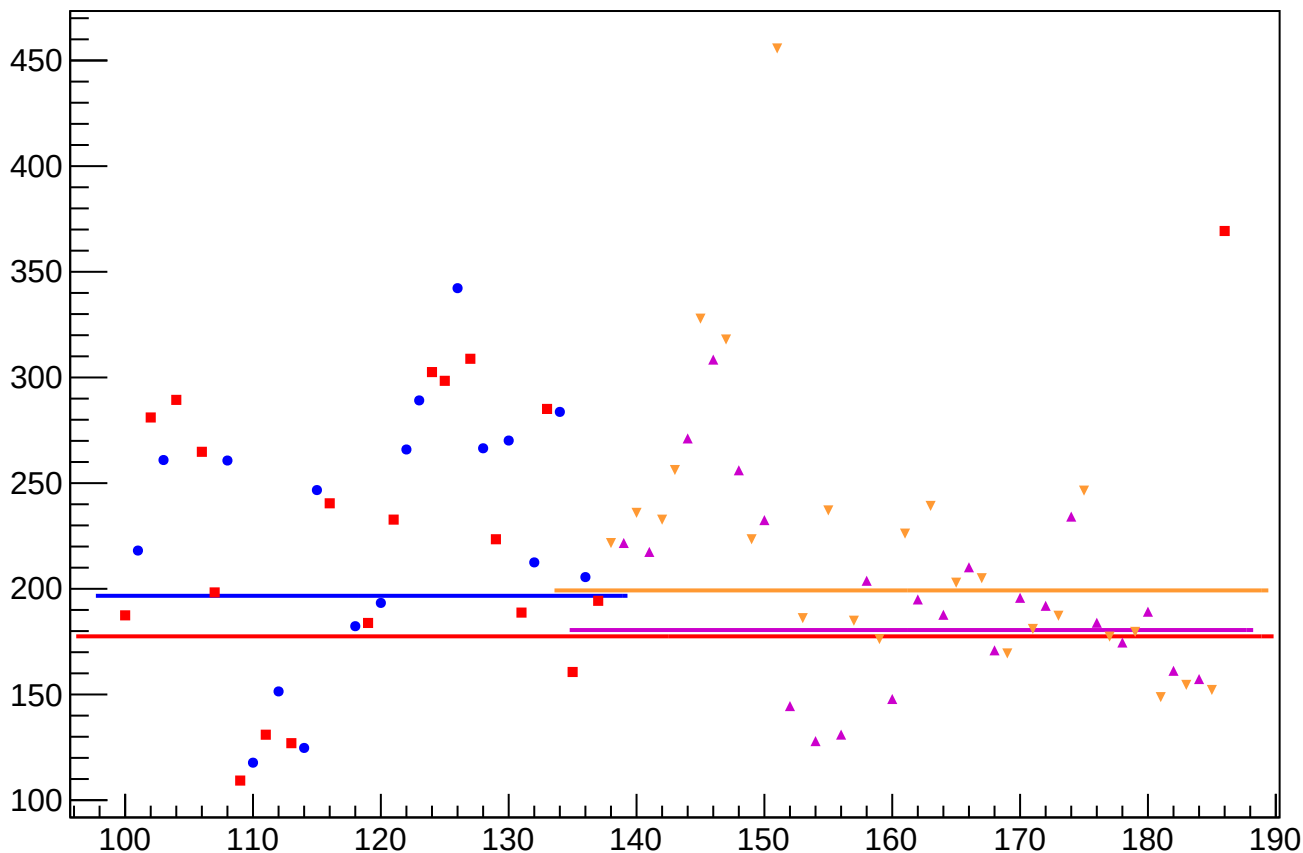
Right: 39.954 $\pm$ 53.143  $\chi^2$ /NDF: 15.0/36

In: 40.852 $\pm$ 39.399  $\chi^2$ /NDF:14.6/39

Out: 14.233 $\pm$ 39.736  $\chi^2$ /NDF:14.2/44

All: 27.656 $\pm$ 27.978  $\chi^2$ /NDF: 29.0/84

asym\_bcm\_dg\_us\_bcm\_an\_us\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 196.690 $\pm$ 0.057  $\chi^2$ /NDF: 966153.1/16

Left Out: 199.241 $\pm$ 0.034  $\chi^2$ /NDF:1764097.7/24

Right Out: 177.510 $\pm$ 0.050  $\chi^2$ /NDF: 1713744.2/19

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

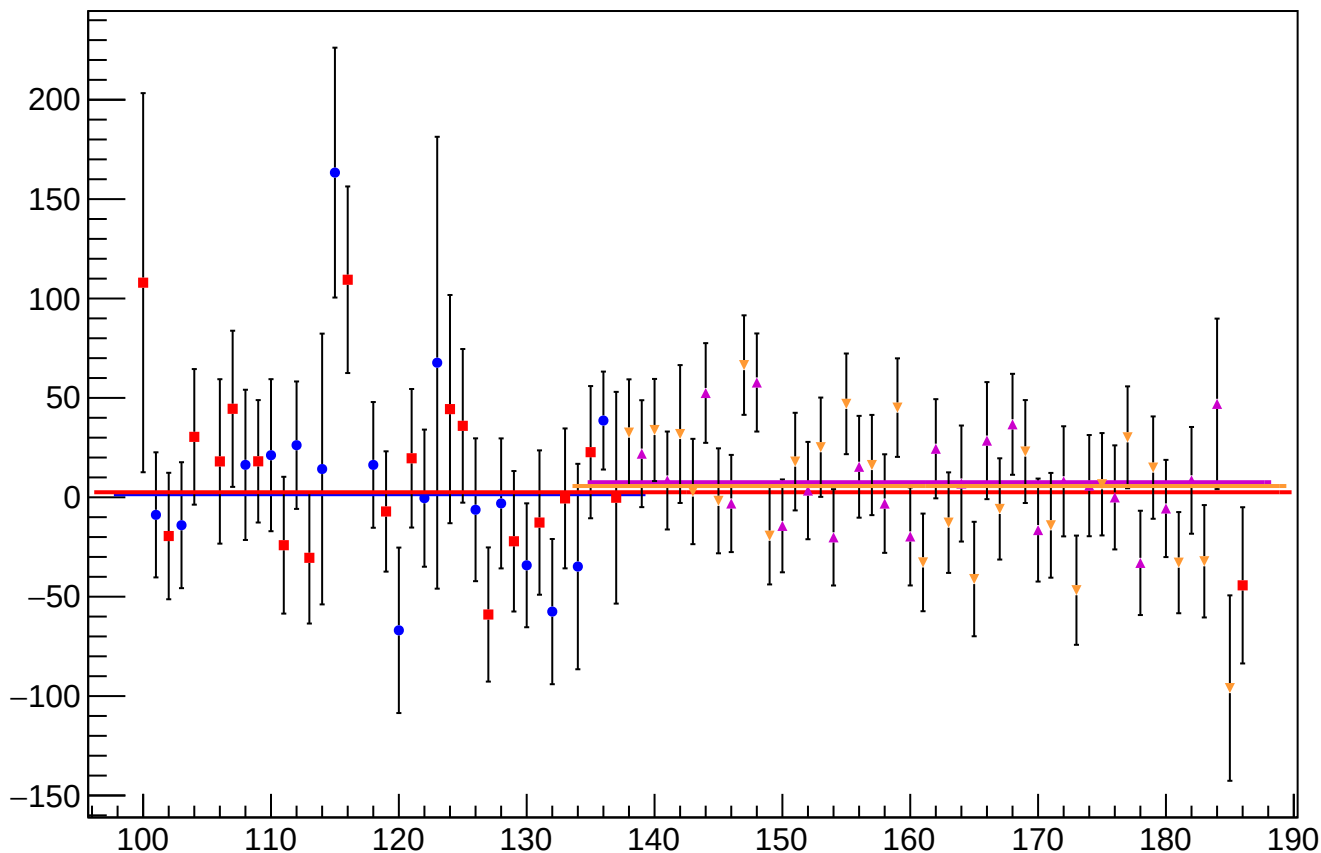
Right: 185.810 $\pm$ 0.038  $\chi^2$ /NDF: 2743851.8/36

In: 184.346 $\pm$ 0.028  $\chi^2$ /NDF:2621209.2/39

Out: 192.349 $\pm$ 0.028  $\chi^2$ /NDF:3607386.0/44

All: 188.314 $\pm$ 0.020  $\chi^2$ /NDF: 6269503.2/84

asym\_bcm\_dg\_us\_bcm\_an\_us\_agg\_dd\_mean vs Slug, Sign Corrected



Right In: 1.556 $\pm$ 8.826     $\chi^2$ /NDF: 18.0/16

Left Out: 5.673 $\pm$ 5.278     $\chi^2$ /NDF:36.4/24

Right Out: 2.543 $\pm$ 8.306     $\chi^2$ /NDF: 18.1/19

Left In: 7.594 $\pm$ 5.402     $\chi^2$ /NDF:18.3/22

Left: 6.611 $\pm$ 3.775     $\chi^2$ /NDF: 54.8/47

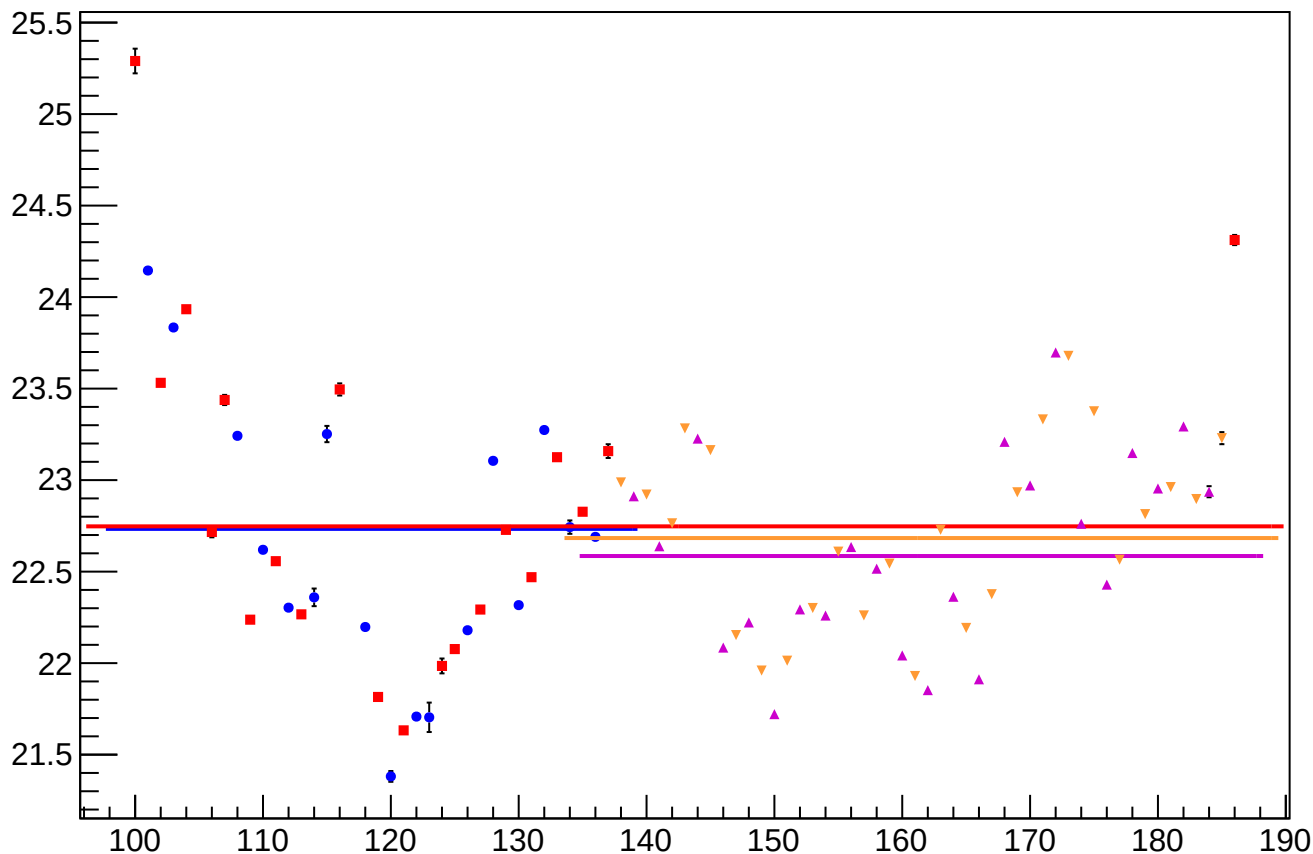
Right: 2.079 $\pm$ 6.049     $\chi^2$ /NDF: 36.1/36

In: 5.948 $\pm$ 4.607     $\chi^2$ /NDF:36.7/39

Out: 4.773 $\pm$ 4.455     $\chi^2$ /NDF:54.6/44

All: 5.341 $\pm$ 3.202     $\chi^2$ /NDF: 91.3/84

asym\_bcm\_dg\_us\_bcm\_an\_us\_agg\_dd\_rms vs Slug, Sign Corrected



Right In:  $22.734 \pm 0.006$   $\chi^2/\text{NDF}$ : 13530.3/16

Left Out:  $22.683 \pm 0.004$   $\chi^2/\text{NDF}$ : 16318.1/24

Right Out:  $22.747 \pm 0.006$   $\chi^2/\text{NDF}$ : 16127.0/19

Left In:  $22.585 \pm 0.004$   $\chi^2/\text{NDF}$ : 18087.5/22

Left:  $22.635 \pm 0.003$   $\chi^2/\text{NDF}$ : 34743.7/47

Right:  $22.741 \pm 0.004$   $\chi^2/\text{NDF}$ : 29659.8/36

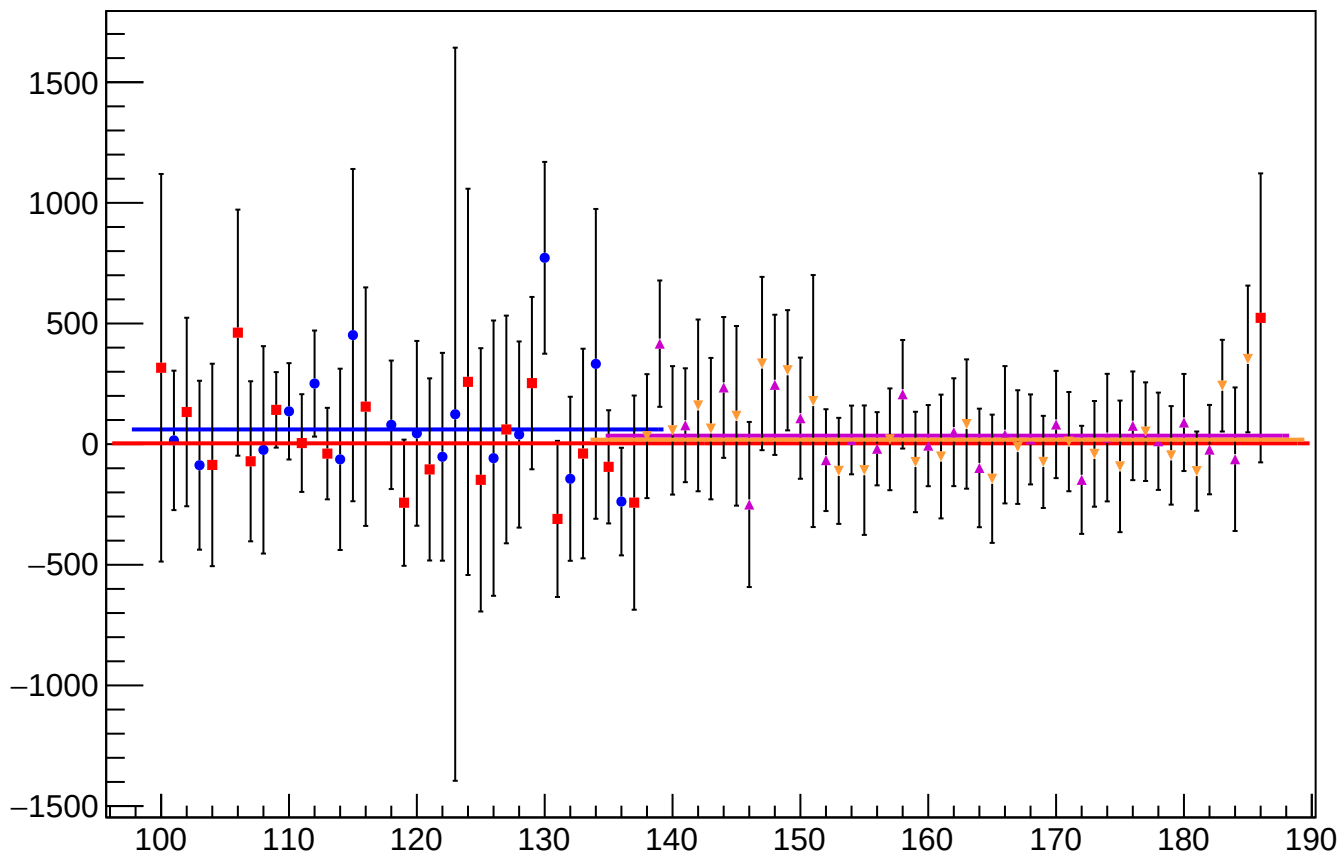
In:  $22.626 \pm 0.003$   $\chi^2/\text{NDF}$ : 32028.7/39

Out:  $22.702 \pm 0.003$   $\chi^2/\text{NDF}$ : 32529.3/44

All:  $22.665 \pm 0.002$   $\chi^2/\text{NDF}$ : 64840.4/84



asym\_bcm\_dg\_ds\_bcm\_an\_us\_agg\_avg\_mean vs Slug, Sign Corrected



Right In: 60.929+/-80.431  $\chi^2/\text{NDF}$ : 7.2/16

Left Out: 18.633+/-48.006  $\chi^2/\text{NDF}$ : 7.6/24

Right Out: 3.374+/-70.076  $\chi^2/\text{NDF}$ : 5.9/19

Left In: 35.046+/-45.063  $\chi^2/\text{NDF}$ : 6.3/22

Left: 27.358+/-32.855  $\chi^2/\text{NDF}$ : 13.9/47

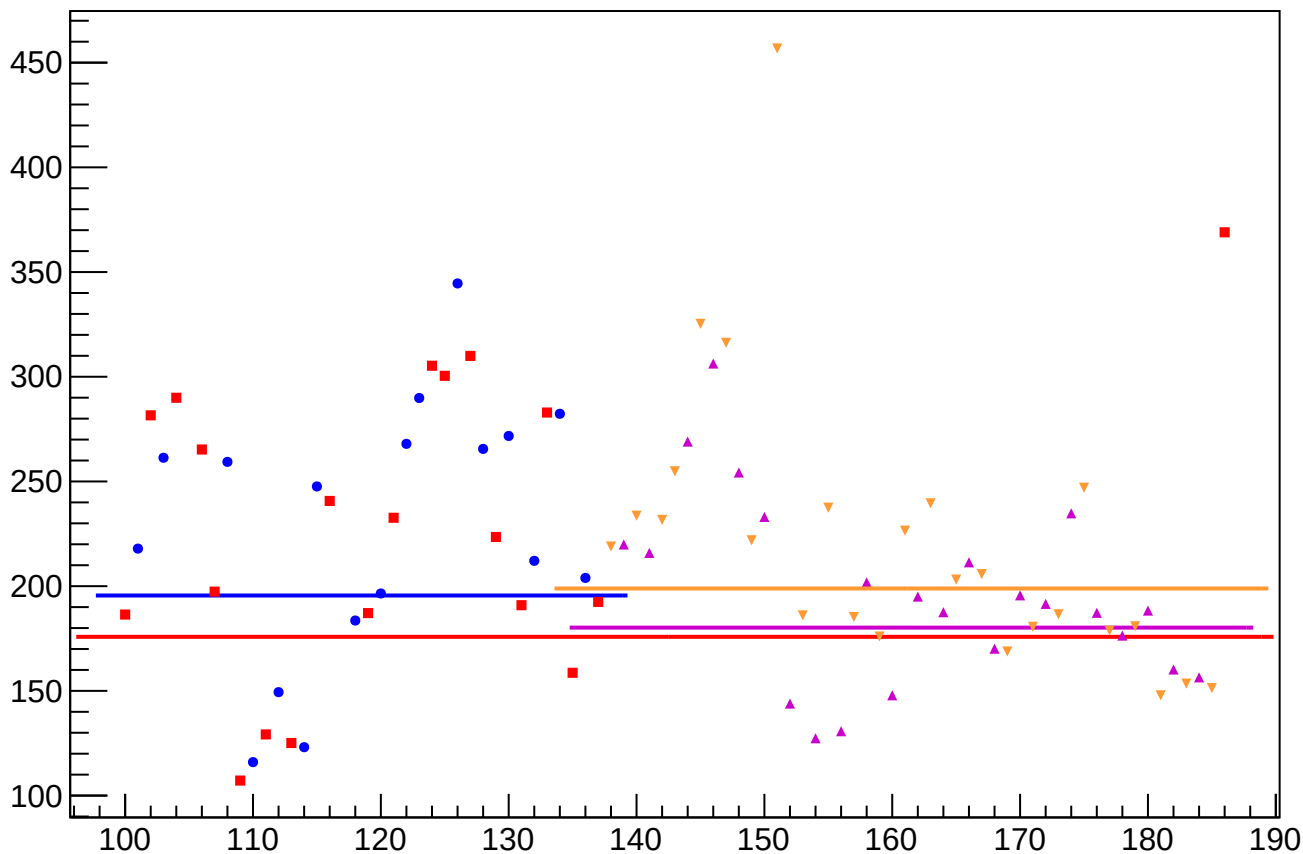
Right: 28.210+/-52.836  $\chi^2/\text{NDF}$ : 13.5/36

In: 41.230+/-39.313  $\chi^2/\text{NDF}$ : 13.6/39

Out: 13.759+/-39.604  $\chi^2/\text{NDF}$ : 13.6/44

All: 27.596+/-27.901  $\chi^2/\text{NDF}$ : 27.4/84

asym\_bcm\_dg\_ds\_bcm\_an\_us\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 195.543 $\pm$ 0.057  $\chi^2$ /NDF: 1006207.5/16

Left Out: 198.891 $\pm$ 0.034  $\chi^2$ /NDF:1762454.6/24

Right Out: 175.806 $\pm$ 0.050  $\chi^2$ /NDF: 1783879.2/19

Left In: 180.207 $\pm$ 0.032  $\chi^2$ /NDF:1589005.4/22

Left: 188.959 $\pm$ 0.023  $\chi^2$ /NDF: 3512499.2/47

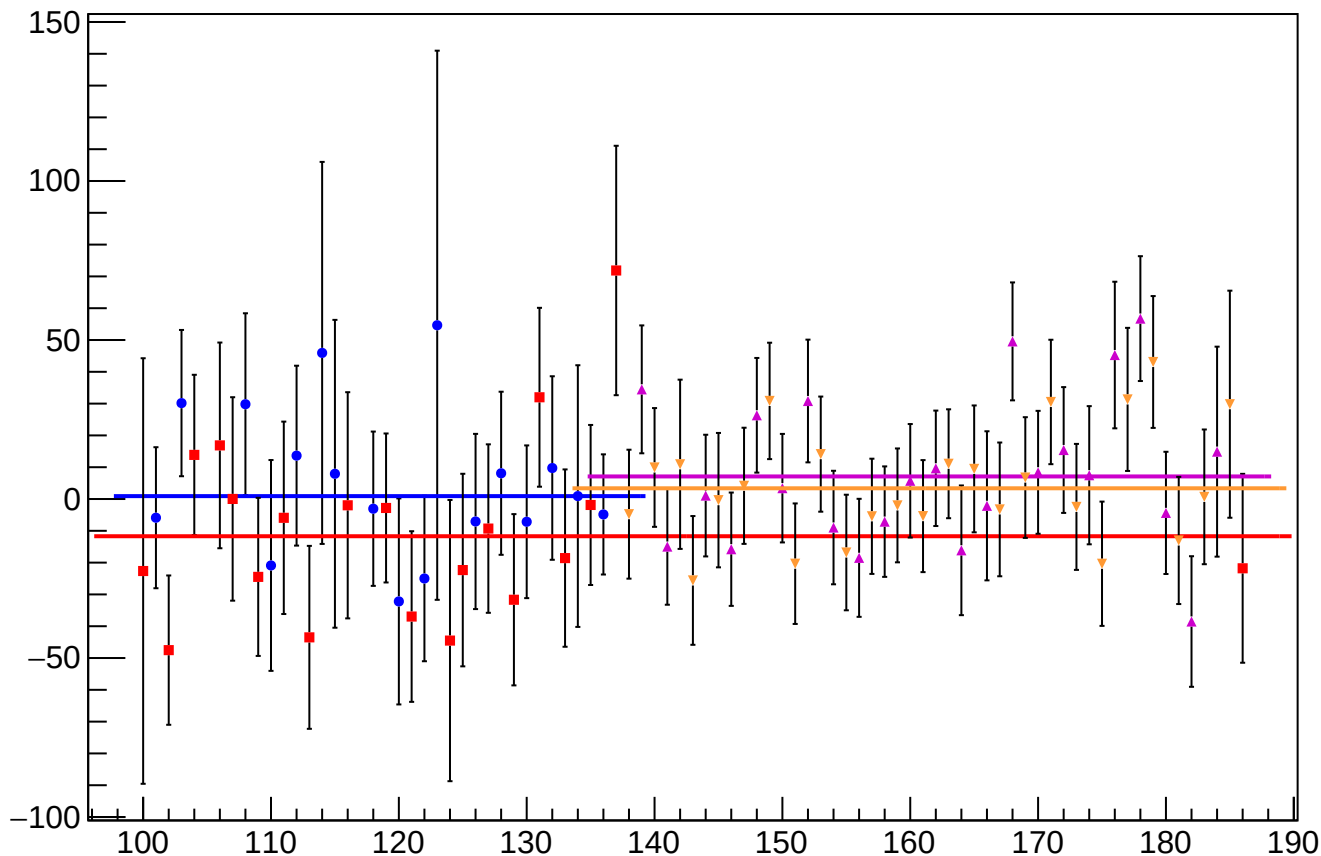
Right: 184.323 $\pm$ 0.037  $\chi^2$ /NDF: 2858549.7/36

In: 183.871 $\pm$ 0.028  $\chi^2$ /NDF:2650554.6/39

Out: 191.517 $\pm$ 0.028  $\chi^2$ /NDF:3694044.8/44

All: 187.666 $\pm$ 0.020  $\chi^2$ /NDF: 6382150.2/84

asym\_bcm\_dg\_ds\_bcm\_an\_us\_agg\_dd\_mean vs Slug, Sign Corrected



Right In:  $0.909 \pm 6.829$   $\chi^2/\text{NDF}$ : 6.9/16

Left Out:  $3.372 \pm 3.947$   $\chi^2/\text{NDF}$ : 18.8/24

Right Out:  $-11.705 \pm 6.483$   $\chi^2/\text{NDF}$ : 15.4/19

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

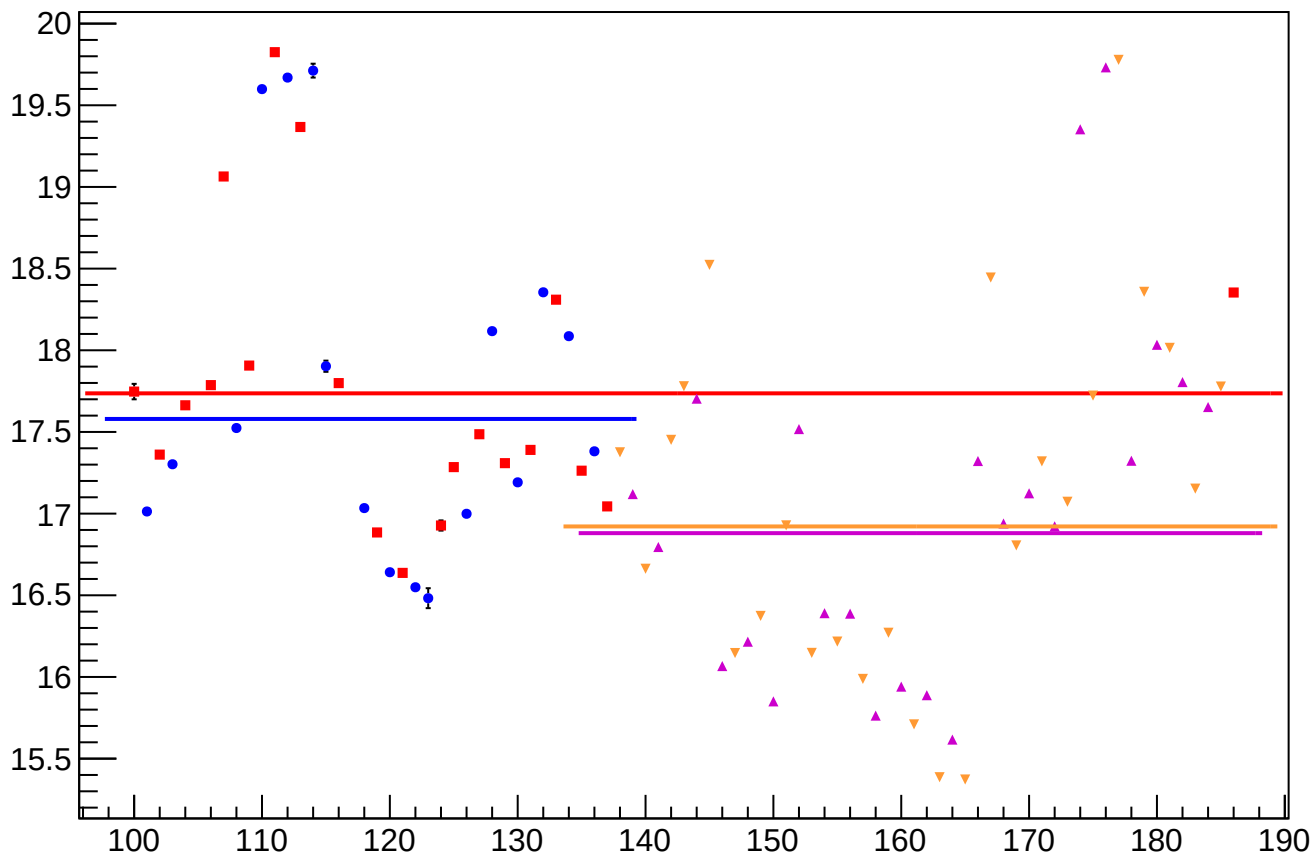
Right:  $-5.725 \pm 4.702$   $\chi^2/\text{NDF}$ : 24.1/36

In:  $5.490 \pm 3.482$   $\chi^2/\text{NDF}$ : 40.0/39

Out:  $-0.705 \pm 3.371$   $\chi^2/\text{NDF}$ : 38.2/44

All:  $2.293 \pm 2.422$   $\chi^2/\text{NDF}$ : 79.8/84

asym\_bcm\_dg\_ds\_bcm\_an\_us\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 17.580 $\pm$ 0.005  $\chi^2$ /NDF: 32962.1/16

Left Out: 16.921 $\pm$ 0.003  $\chi^2$ /NDF:138990.4/24

Right Out: 17.736 $\pm$ 0.005  $\chi^2$ /NDF: 31184.1/19

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

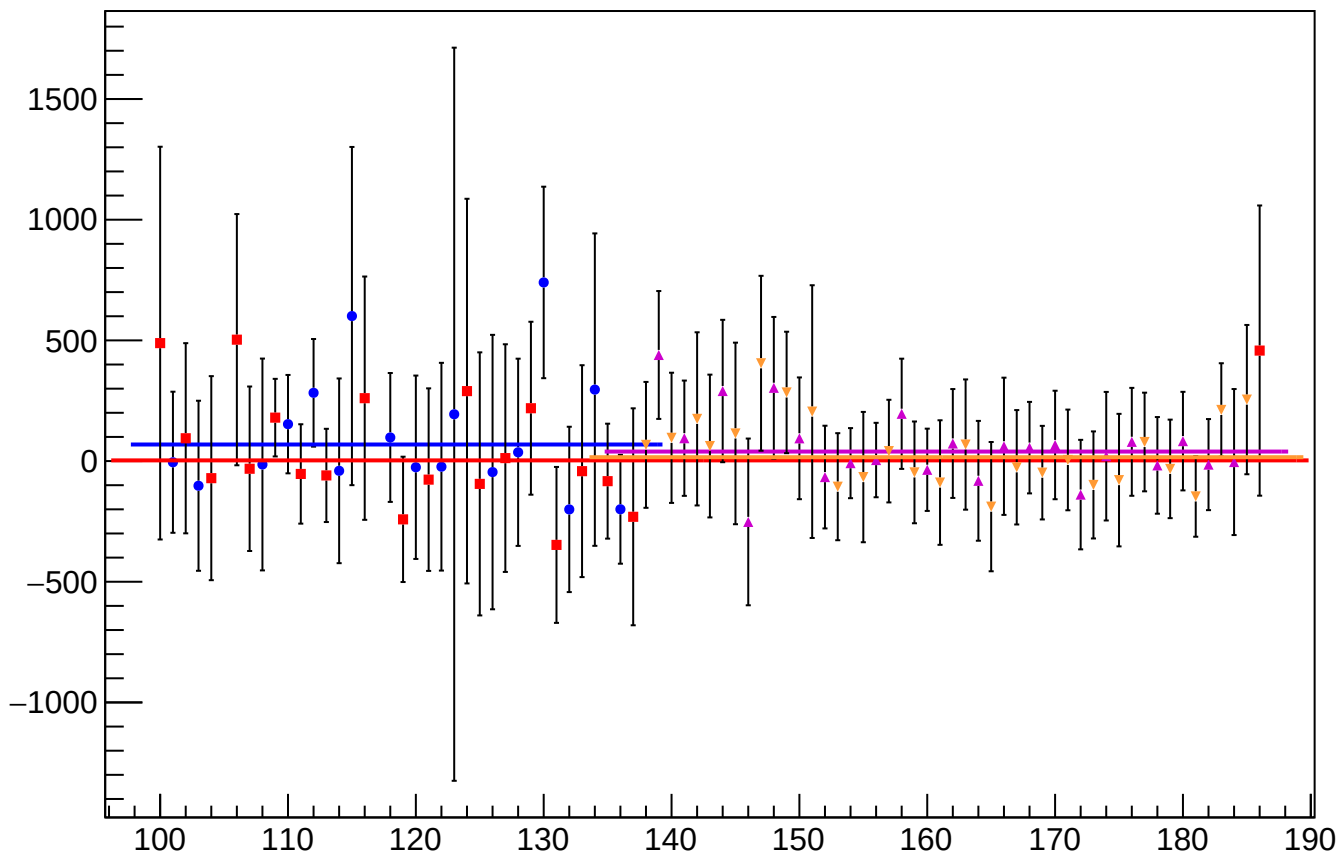
Right: 17.662 $\pm$ 0.003  $\chi^2$ /NDF: 64700.4/36

In: 17.062 $\pm$ 0.002  $\chi^2$ /NDF:170210.8/39

Out: 17.142 $\pm$ 0.002  $\chi^2$ /NDF:193226.7/44

All: 17.103 $\pm$ 0.002  $\chi^2$ /NDF: 363977.3/84

asym\_bcm\_dg\_us\_bcm\_dg\_ds\_agg\_avg\_mean vs Slug, Sign Corrected



Right In: 68.625 $\pm$ 81.256  $\chi^2$ /NDF: 7.3/16

Left Out: 15.970 $\pm$ 48.503  $\chi^2$ /NDF: 7.4/24

Right Out: 2.828 $\pm$ 71.050  $\chi^2$ /NDF: 6.6/19

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

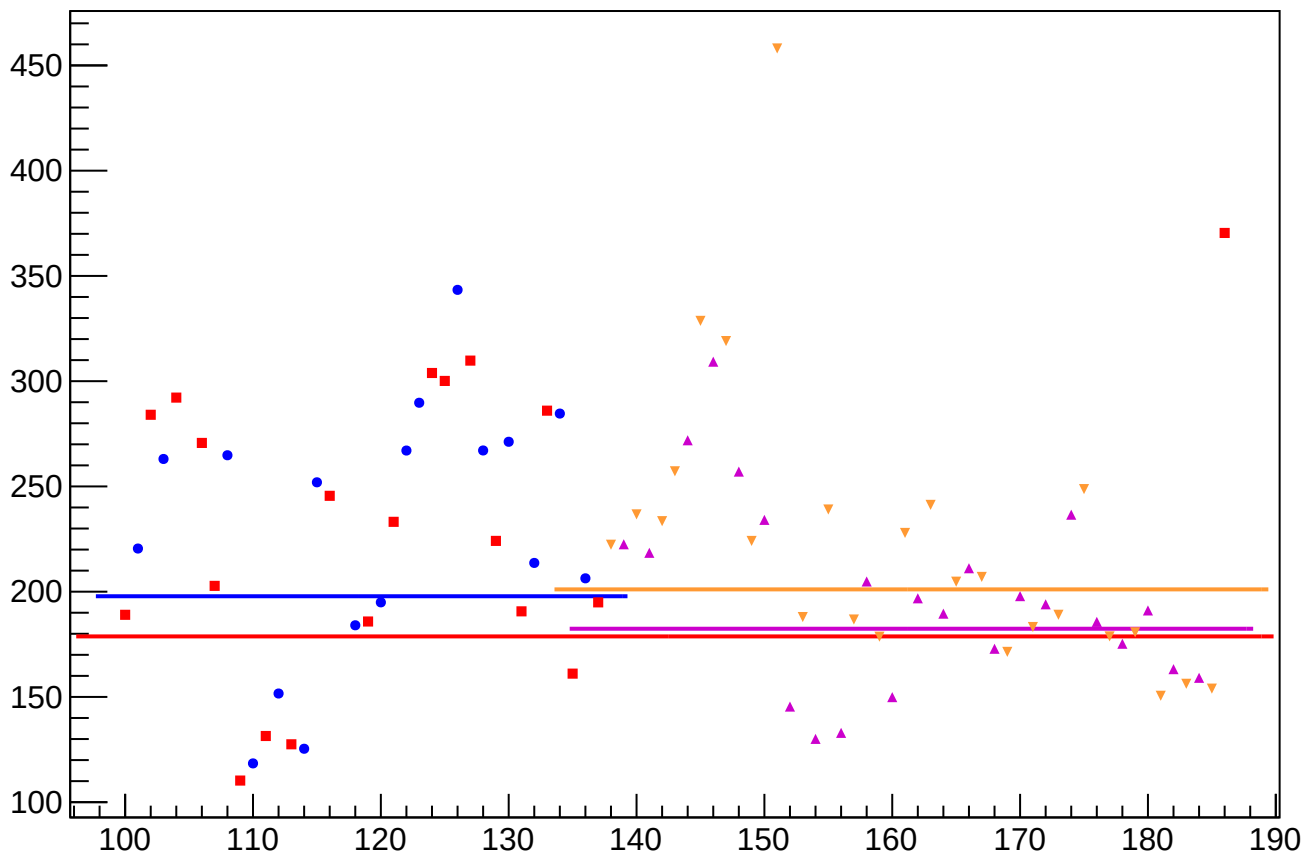
Right: 31.337 $\pm$ 53.486  $\chi^2$ /NDF: 14.3/36

In: 46.375 $\pm$ 39.747  $\chi^2$ /NDF: 14.3/39

Out: 11.792 $\pm$ 40.059  $\chi^2$ /NDF: 14.0/44

All: 29.219 $\pm$ 28.215  $\chi^2$ /NDF: 28.7/84

asym\_bcm\_dg\_us\_bcm\_dg\_ds\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 197.832 $\pm$ 0.057  $\chi^2$ /NDF: 971081.8/16

Left Out: 201.091 $\pm$ 0.034  $\chi^2$ /NDF:1731069.1/24

Right Out: 178.752 $\pm$ 0.050  $\chi^2$ /NDF: 1721078.5/19

Left In: 182.396 $\pm$ 0.032  $\chi^2$ /NDF:1548907.7/22

Left: 191.161 $\pm$ 0.023  $\chi^2$ /NDF: 3437793.2/47

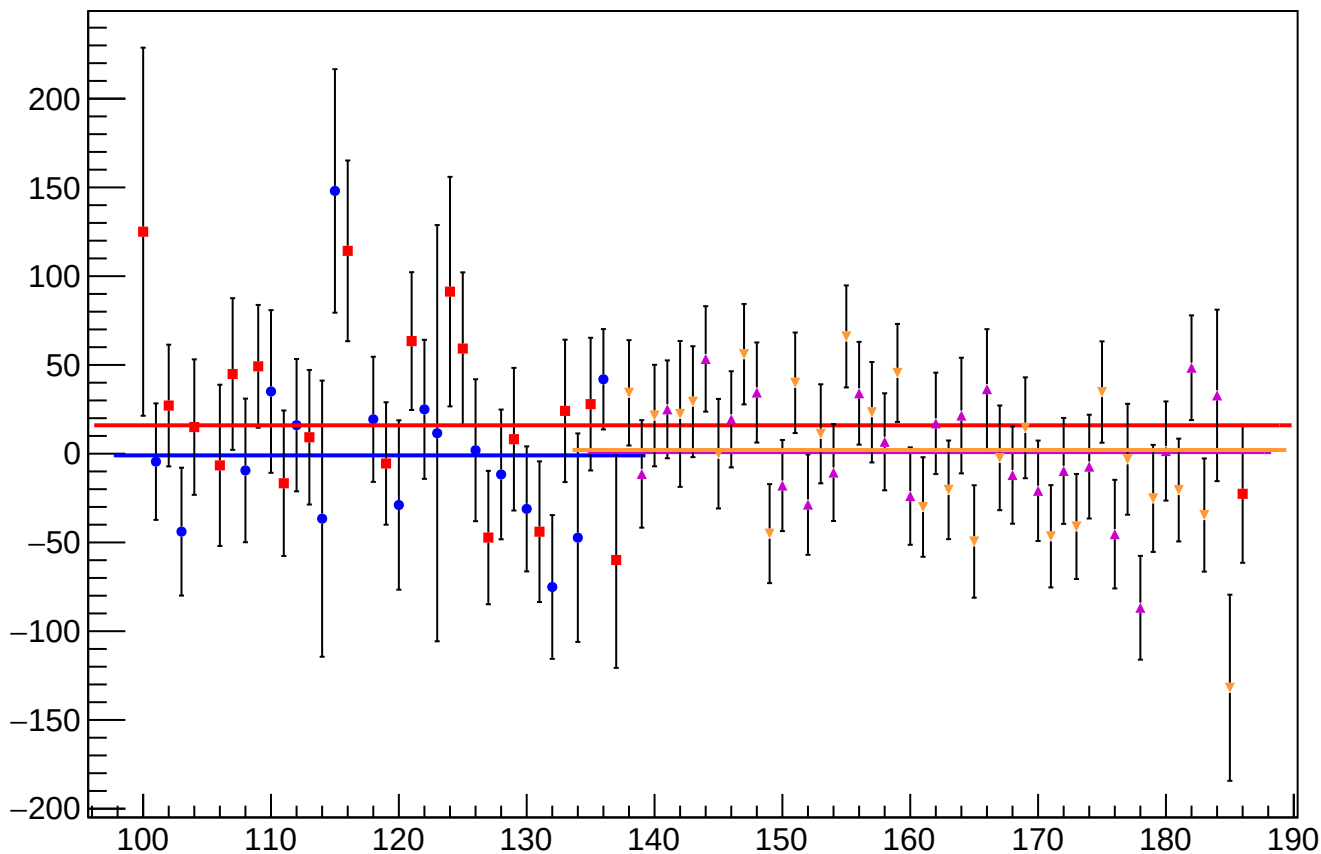
Right: 187.019 $\pm$ 0.038  $\chi^2$ /NDF: 2754656.7/36

In: 186.089 $\pm$ 0.028  $\chi^2$ /NDF:2574894.7/39

Out: 193.990 $\pm$ 0.028  $\chi^2$ /NDF:3587015.2/44

All: 190.009 $\pm$ 0.020  $\chi^2$ /NDF: 6201108.2/84

asym\_bcm\_dg\_us\_bcm\_dg\_ds\_agg\_dd\_mean vs Slug, Sign Corrected



Right In:  $-0.953 \pm 9.909$   $\chi^2/\text{NDF}$ : 15.5/16

Left Out:  $2.054 \pm 5.970$   $\chi^2/\text{NDF}$ : 39.4/24

Right Out:  $15.989 \pm 9.246$   $\chi^2/\text{NDF}$ : 19.3/19

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

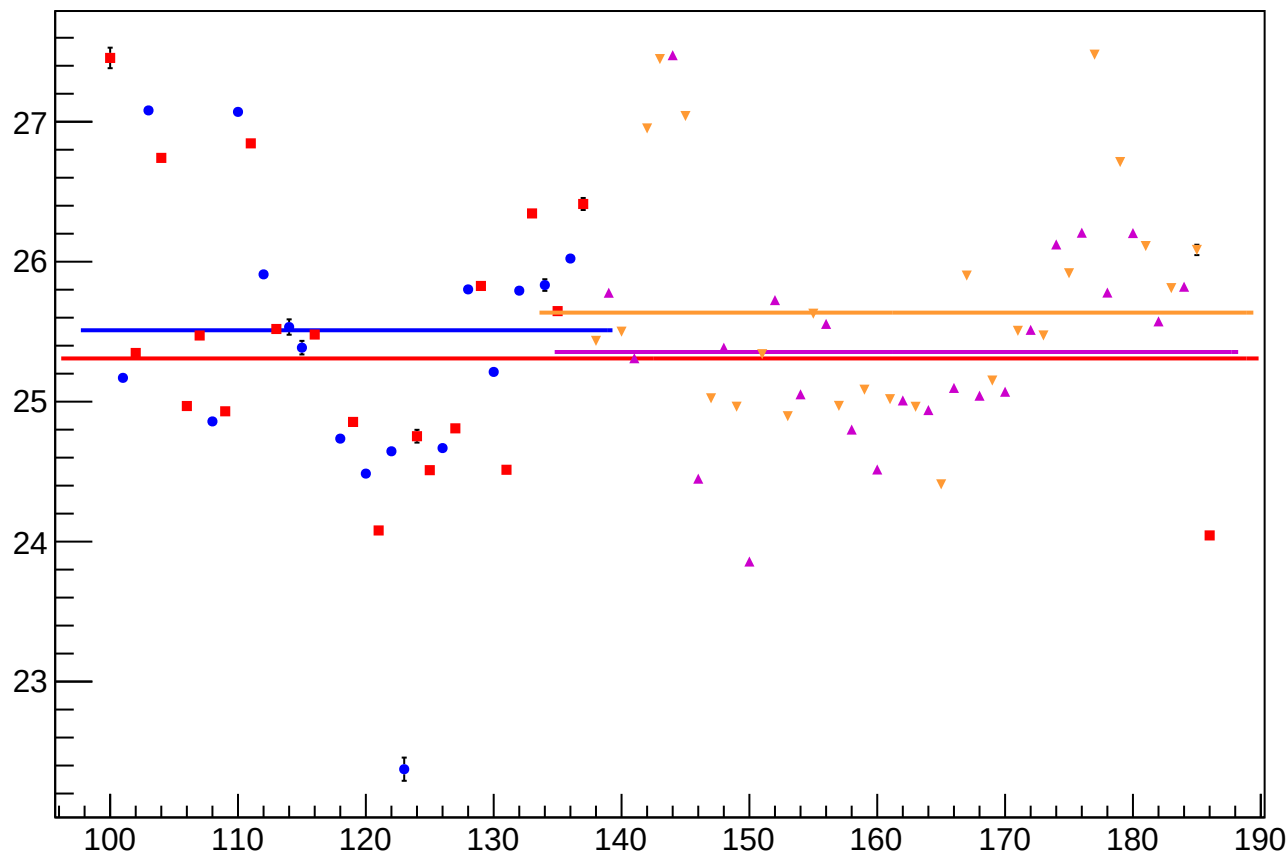
Right:  $8.104 \pm 6.760$   $\chi^2/\text{NDF}$ : 36.4/36

In:  $0.395 \pm 5.176$   $\chi^2/\text{NDF}$ : 42.6/39

Out:  $6.154 \pm 5.016$   $\chi^2/\text{NDF}$ : 60.4/44

All:  $3.365 \pm 3.602$   $\chi^2/\text{NDF}$ : 103.6/84

asym\_bcm\_dg\_us\_bcm\_dg\_ds\_agg\_dd\_rms vs Slug, Sign Corrected



Right In:  $25.510 \pm 0.007$   $\chi^2/\text{NDF}: 13357.4/16$

Left Out:  $25.636 \pm 0.004$   $\chi^2/\text{NDF}: 35130.7/24$

Right Out:  $25.309 \pm 0.007$   $\chi^2/\text{NDF}: 15913.3/19$

Left In:  $25.355 \pm 0.004$   $\chi^2/\text{NDF}: 29766.2/22$

Left:  $25.498 \pm 0.003$   $\chi^2/\text{NDF}: 67081.3/47$

Right:  $25.402 \pm 0.005$   $\chi^2/\text{NDF}: 29712.2/36$

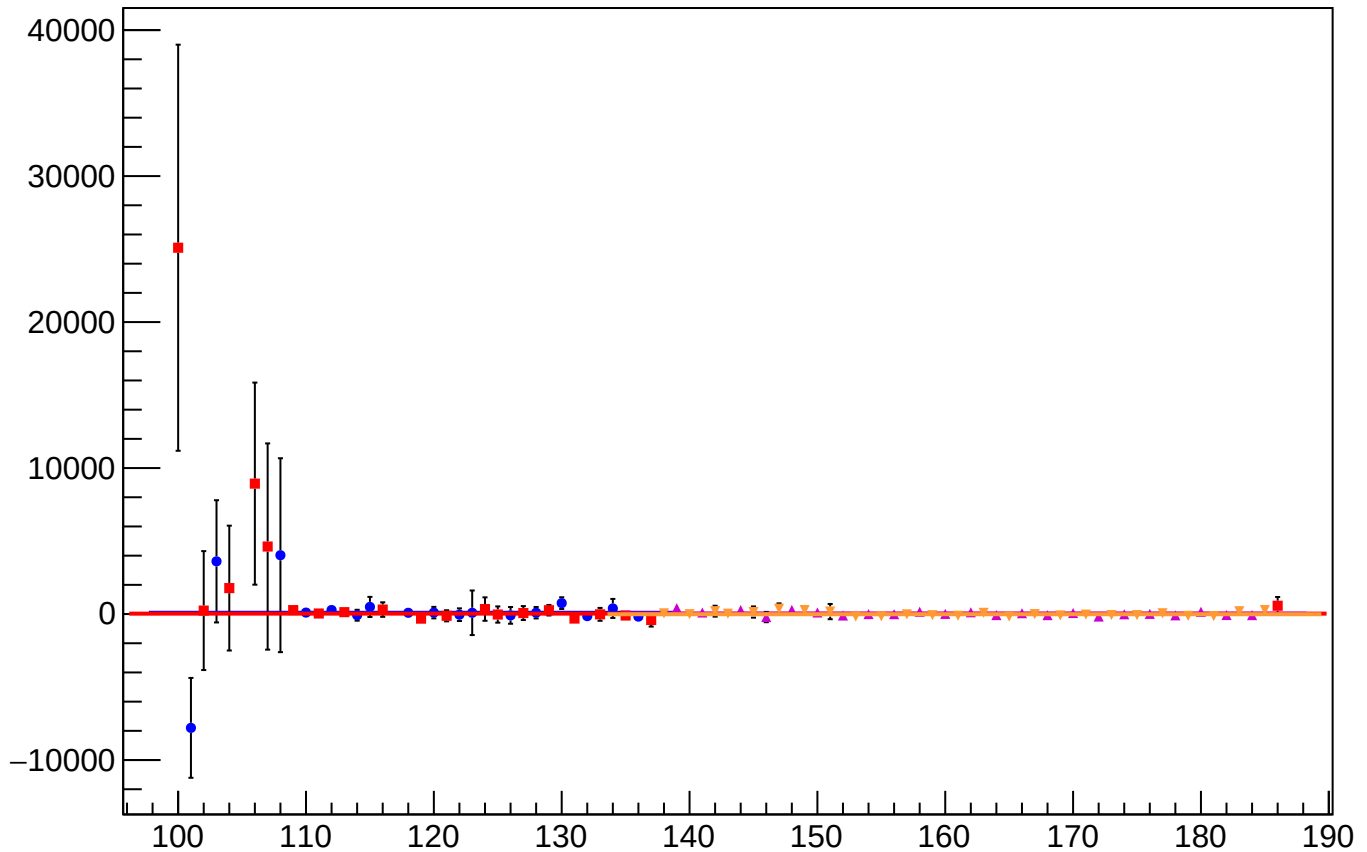
In:  $25.397 \pm 0.004$   $\chi^2/\text{NDF}: 43480.8/39$

Out:  $25.540 \pm 0.004$   $\chi^2/\text{NDF}: 52814.1/44$

All:  $25.471 \pm 0.003$   $\chi^2/\text{NDF}: 97078.5/84$



asym\_bcm\_cav4cQ\_bcm\_an\_us\_agg\_avg\_mean vs Slug, Sign Corrected



Right In: 88.017+/-88.732  $\chi^2/\text{NDF}$ : 12.6/16

Left Out: -12.820+/-48.216  $\chi^2/\text{NDF}$ : 7.9/24

Right Out: 29.470+/-80.239  $\chi^2/\text{NDF}$ : 12.8/19

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

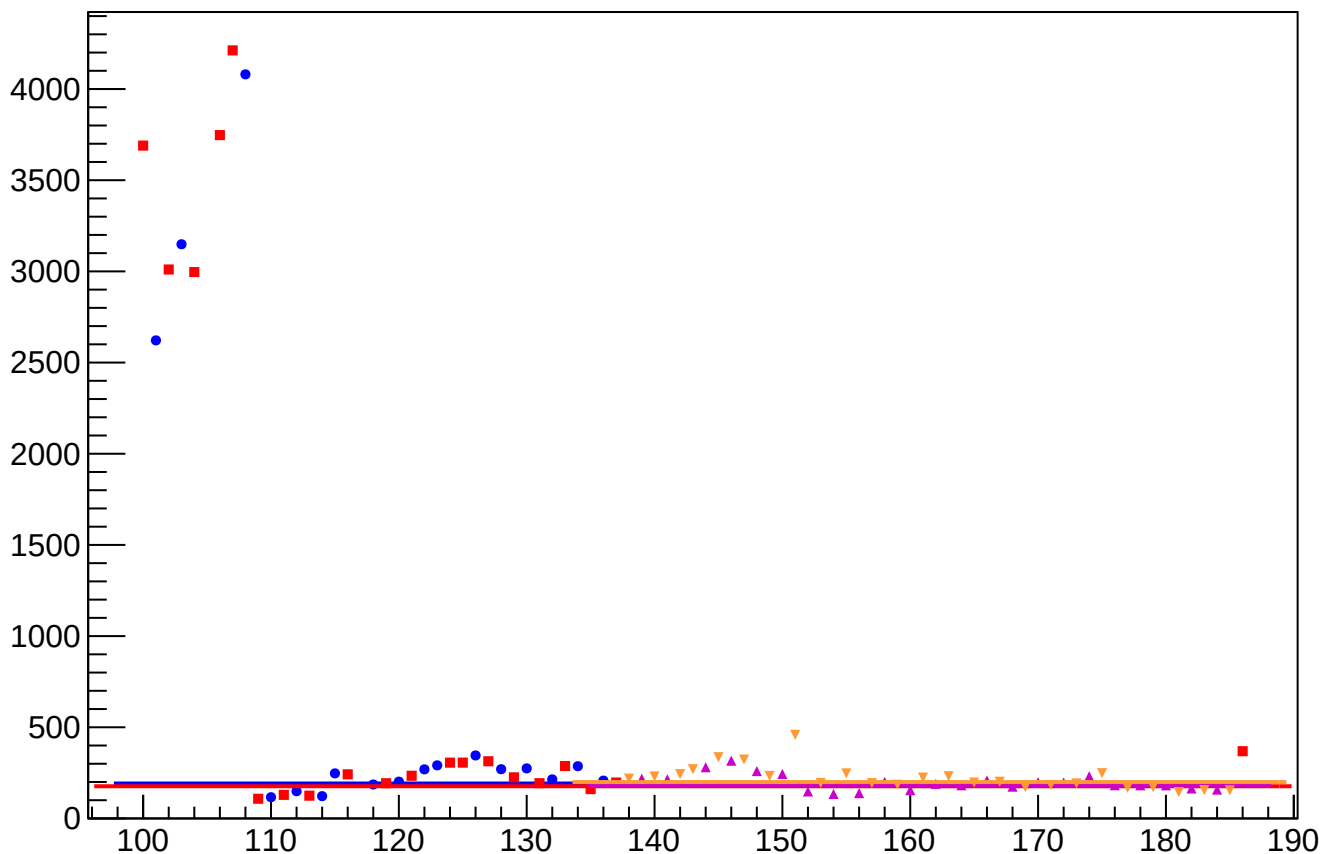
Right: 55.808+/-59.514  $\chi^2/\text{NDF}$ : 25.6/36

In: 39.741+/-40.751  $\chi^2/\text{NDF}$ : 20.4/39

Out: -1.601+/-41.329  $\chi^2/\text{NDF}$ : 20.9/44

All: 19.361+/-29.018  $\chi^2/\text{NDF}$ : 41.8/84

asym\_bcm\_cav4cQ\_bcm\_an\_us\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 191.711 $\pm$ 0.063  $\chi^2$ /NDF: 3575897.6/16

Left Out: 199.536 $\pm$ 0.034  $\chi^2$ /NDF:1880548.8/24

Right Out: 176.612 $\pm$ 0.057  $\chi^2$ /NDF: 4411616.6/19

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

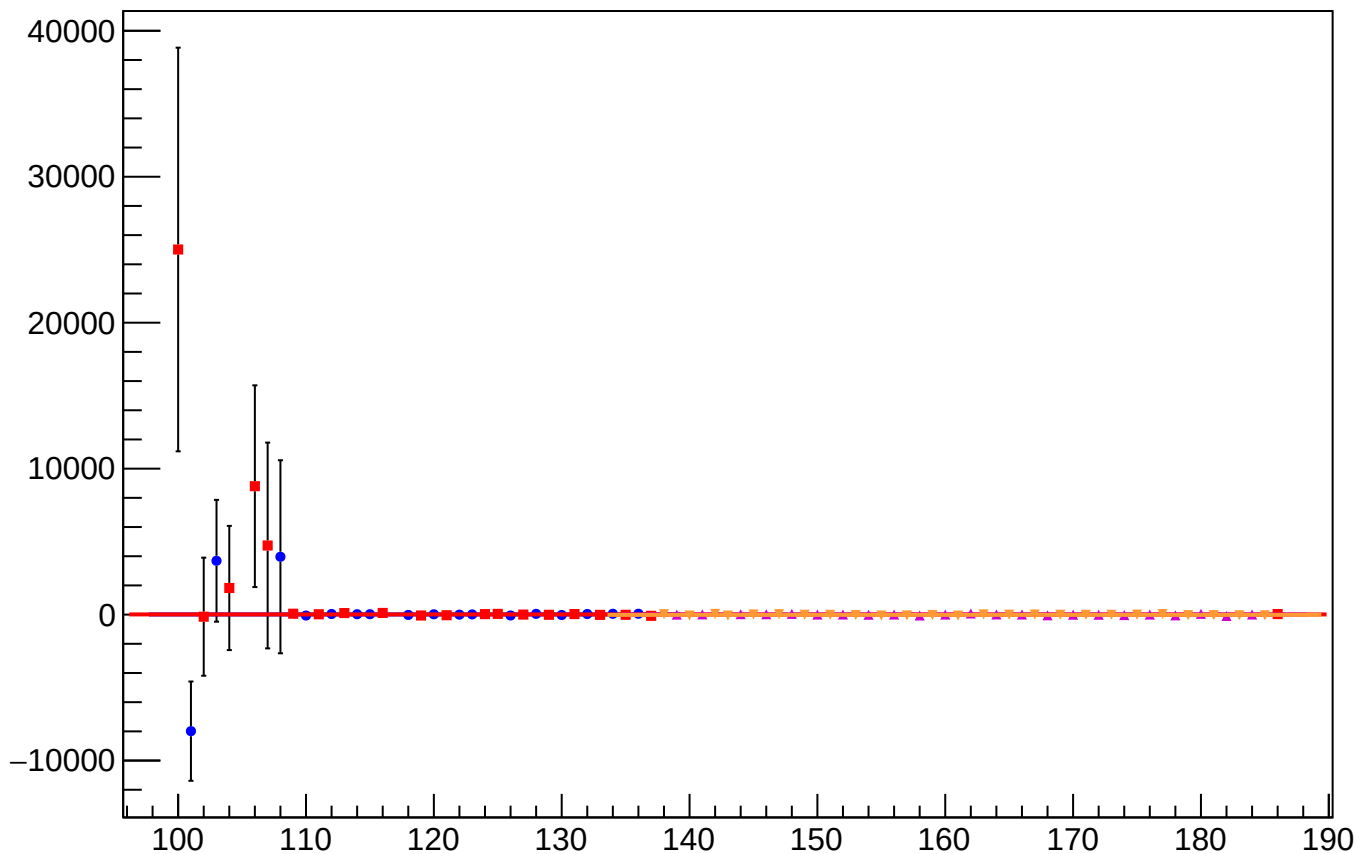
Right: 183.405 $\pm$ 0.042  $\chi^2$ /NDF: 8019376.3/36

In: 185.651 $\pm$ 0.029  $\chi^2$ /NDF:5011174.2/39

Out: 193.454 $\pm$ 0.029  $\chi^2$ /NDF:6412099.8/44

All: 189.498 $\pm$ 0.021  $\chi^2$ /NDF: 11459418.4/84

asym\_bcm\_cav4cQ\_bcm\_an\_us\_agg\_dd\_mean vs Slug, Sign Corrected



Right In: 10.697+/-12.319  $\chi^2/\text{NDF}$ : 19.0/16

Left Out: -17.580+/-6.694  $\chi^2/\text{NDF}$ : 22.3/24

Right Out: 13.005+/-11.943  $\chi^2/\text{NDF}$ : 24.5/19

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

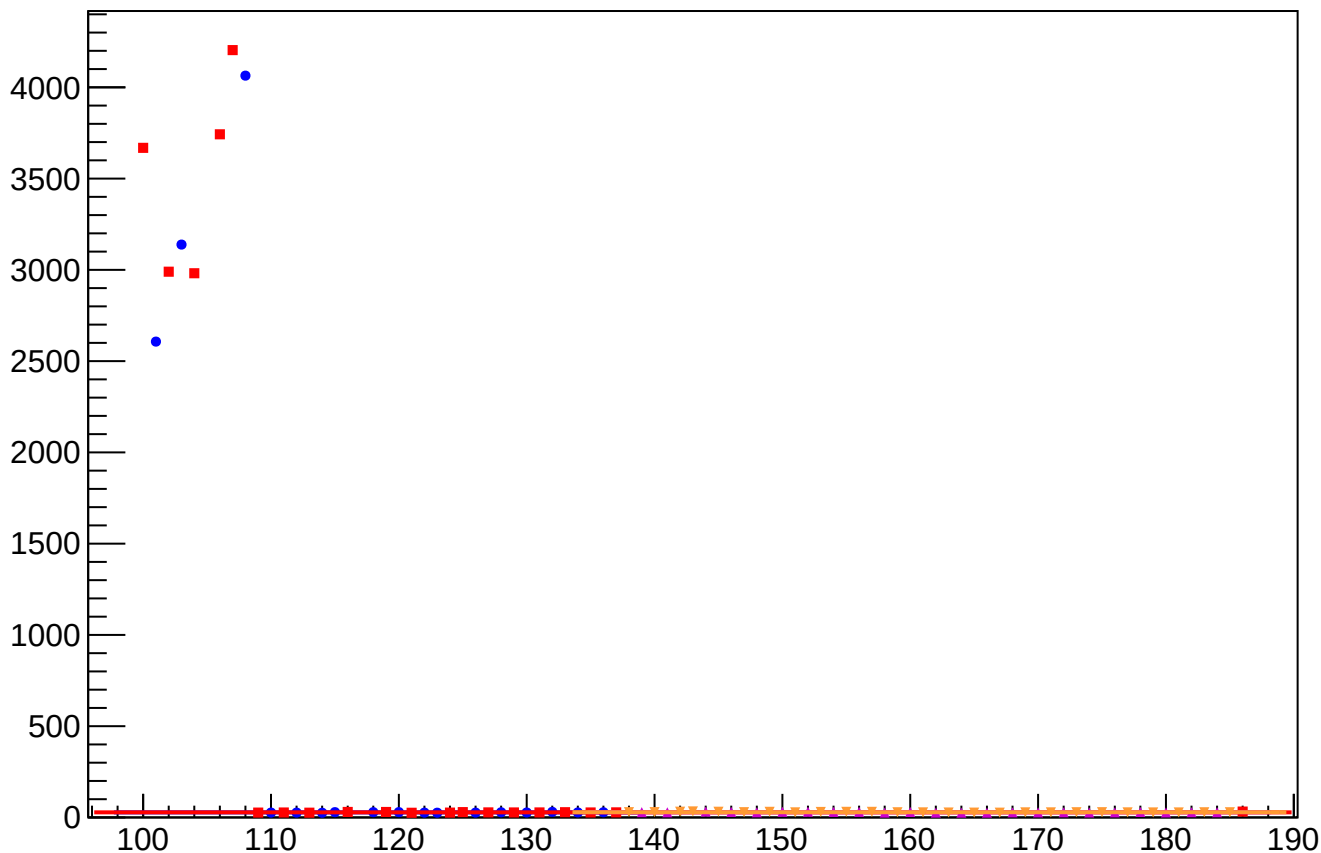
Right: 11.887+/-8.575  $\chi^2/\text{NDF}$ : 43.5/36

In: 3.334+/-6.007  $\chi^2/\text{NDF}$ : 51.8/39

Out: -10.269+/-5.839  $\chi^2/\text{NDF}$ : 51.8/44

All: -3.660+/-4.187  $\chi^2/\text{NDF}$ : 106.3/84

asym\_bcm\_cav4cQ\_bcm\_an\_us\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 27.874+/-0.009  $\chi^2/\text{NDF}$ : 3027804.9/16

Left Out: 28.691+/-0.005  $\chi^2/\text{NDF}$ : 110483.8/24

Right Out: 27.951+/-0.008  $\chi^2/\text{NDF}$ : 3491056.4/19

Left In: 28.673+/-0.005  $\chi^2/\text{NDF}$ : 124751.4/22

Left: 28.682+/-0.003  $\chi^2/\text{NDF}$ : 235242.3/47

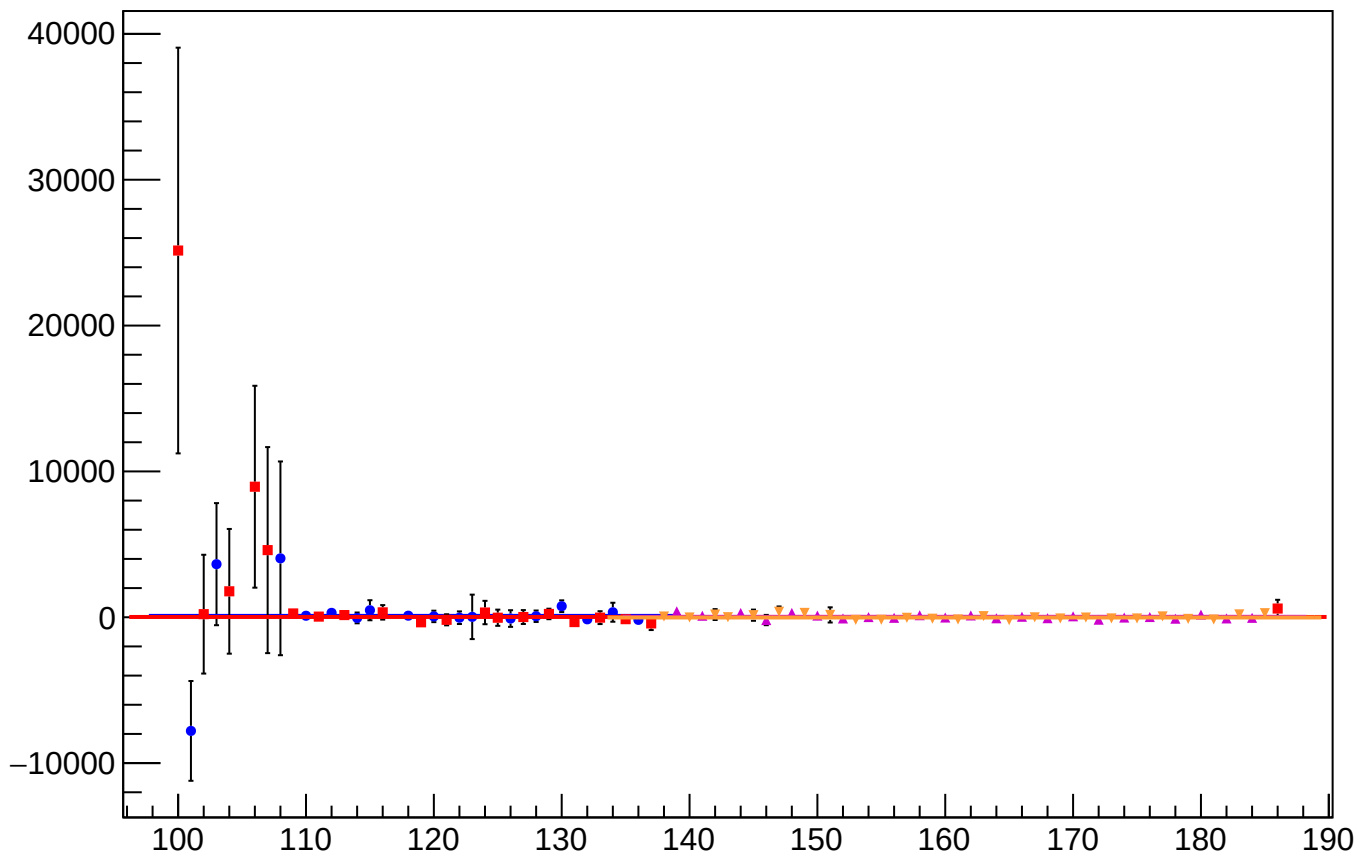
Right: 27.913+/-0.006  $\chi^2/\text{NDF}$ : 6518901.4/36

In: 28.483+/-0.004  $\chi^2/\text{NDF}$ : 3158967.6/39

Out: 28.514+/-0.004  $\chi^2/\text{NDF}$ : 3607384.0/44

All: 28.499+/-0.003  $\chi^2/\text{NDF}$ : 6766379.2/84

asym\_bcm\_cav4cQ\_bcm\_an\_ds\_agg\_avg\_mean vs Slug, Sign Corrected



Right In: 93.587+/-88.455  $\chi^2/\text{NDF}$ : 12.8/16

Left Out: -15.483+/-48.109  $\chi^2/\text{NDF}$ : 8.7/24

Right Out: 20.154+/-79.986  $\chi^2/\text{NDF}$ : 13.7/19

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

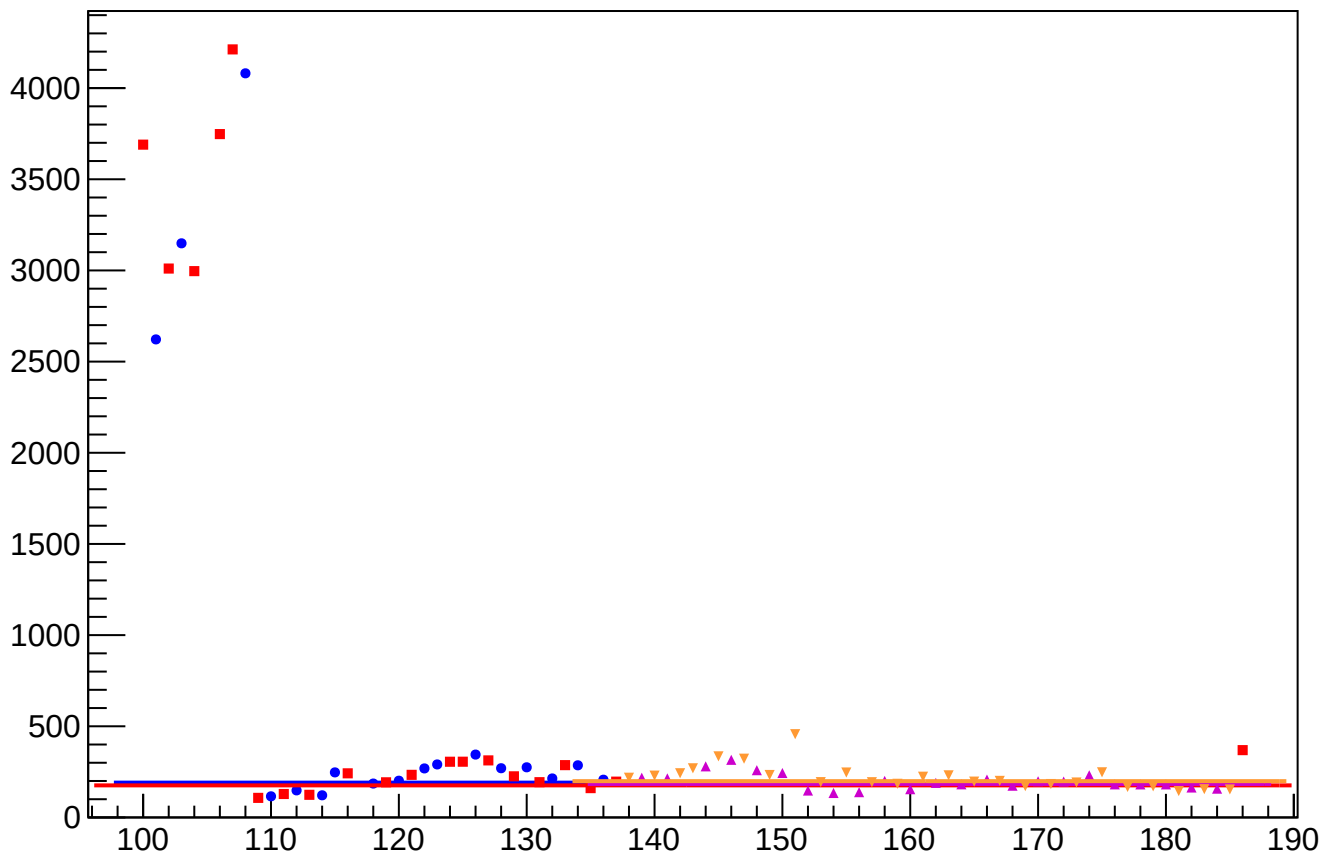
Right: 53.188+/-59.327  $\chi^2/\text{NDF}$ : 26.9/36

In: 41.077+/-40.661  $\chi^2/\text{NDF}$ : 21.0/39

Out: -6.015+/-41.226  $\chi^2/\text{NDF}$ : 22.6/44

All: 17.856+/-28.949  $\chi^2/\text{NDF}$ : 44.2/84

asym\_bcm\_cav4cQ\_bcm\_an\_ds\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 190.997 $\pm$ 0.063  $\chi^2$ /NDF: 3587805.7/16

Left Out: 199.094 $\pm$ 0.034  $\chi^2$ /NDF:1880343.4/24

Right Out: 175.934 $\pm$ 0.057  $\chi^2$ /NDF: 4424659.7/19

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

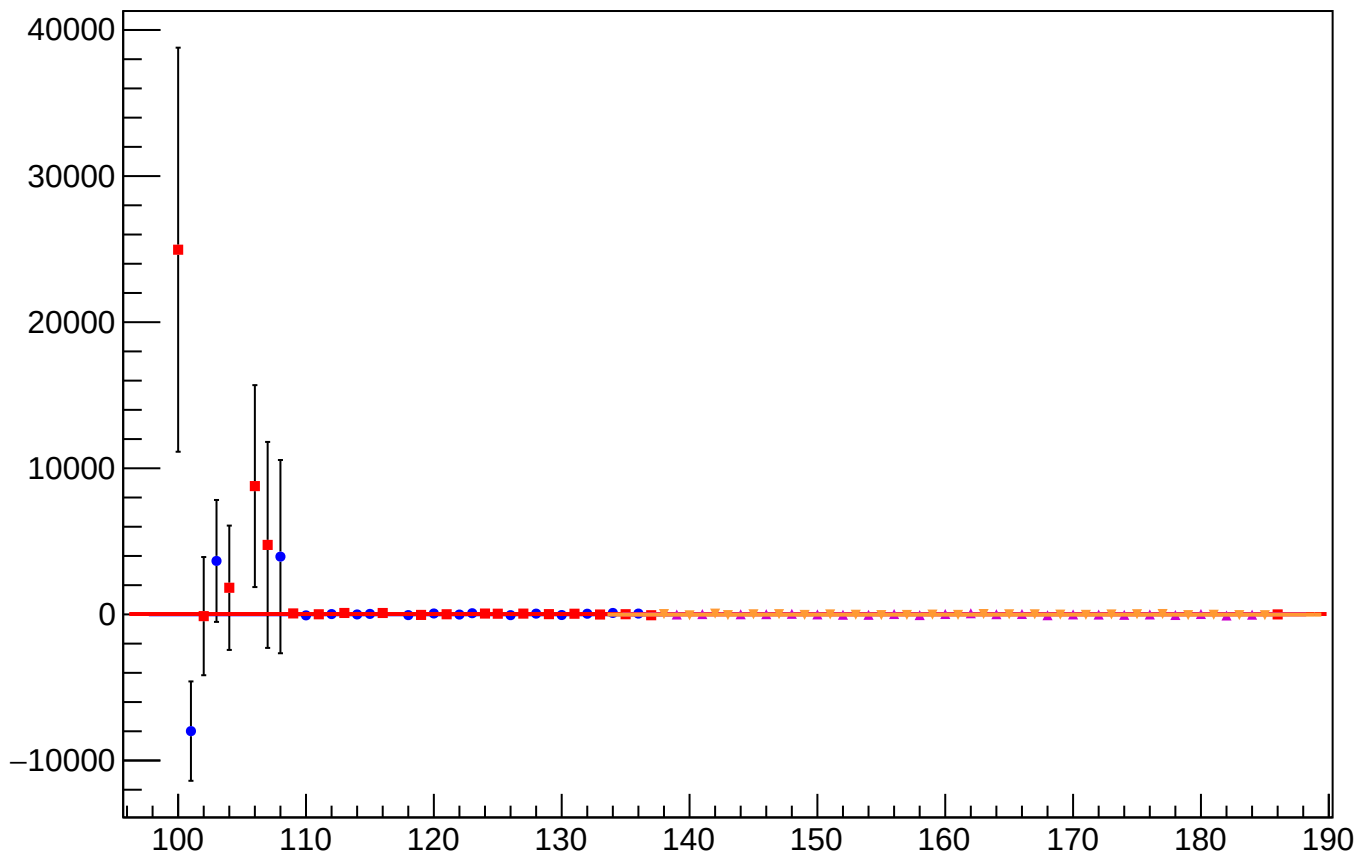
Right: 182.710 $\pm$ 0.042  $\chi^2$ /NDF: 8044372.0/36

In: 185.216 $\pm$ 0.029  $\chi^2$ /NDF:5021533.5/39

Out: 192.941 $\pm$ 0.029  $\chi^2$ /NDF:6428130.6/44

All: 189.025 $\pm$ 0.020  $\chi^2$ /NDF: 11485263.1/84

asym\_bcm\_cav4cQ\_bcm\_an\_ds\_agg\_dd\_mean vs Slug, Sign Corrected



Right In: 7.963+/-12.403  $\chi^2/\text{NDF}$ : 22.9/16

Left Out: -15.006+/-6.723  $\chi^2/\text{NDF}$ : 17.5/24

Right Out: 26.520+/-12.016  $\chi^2/\text{NDF}$ : 16.8/19

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

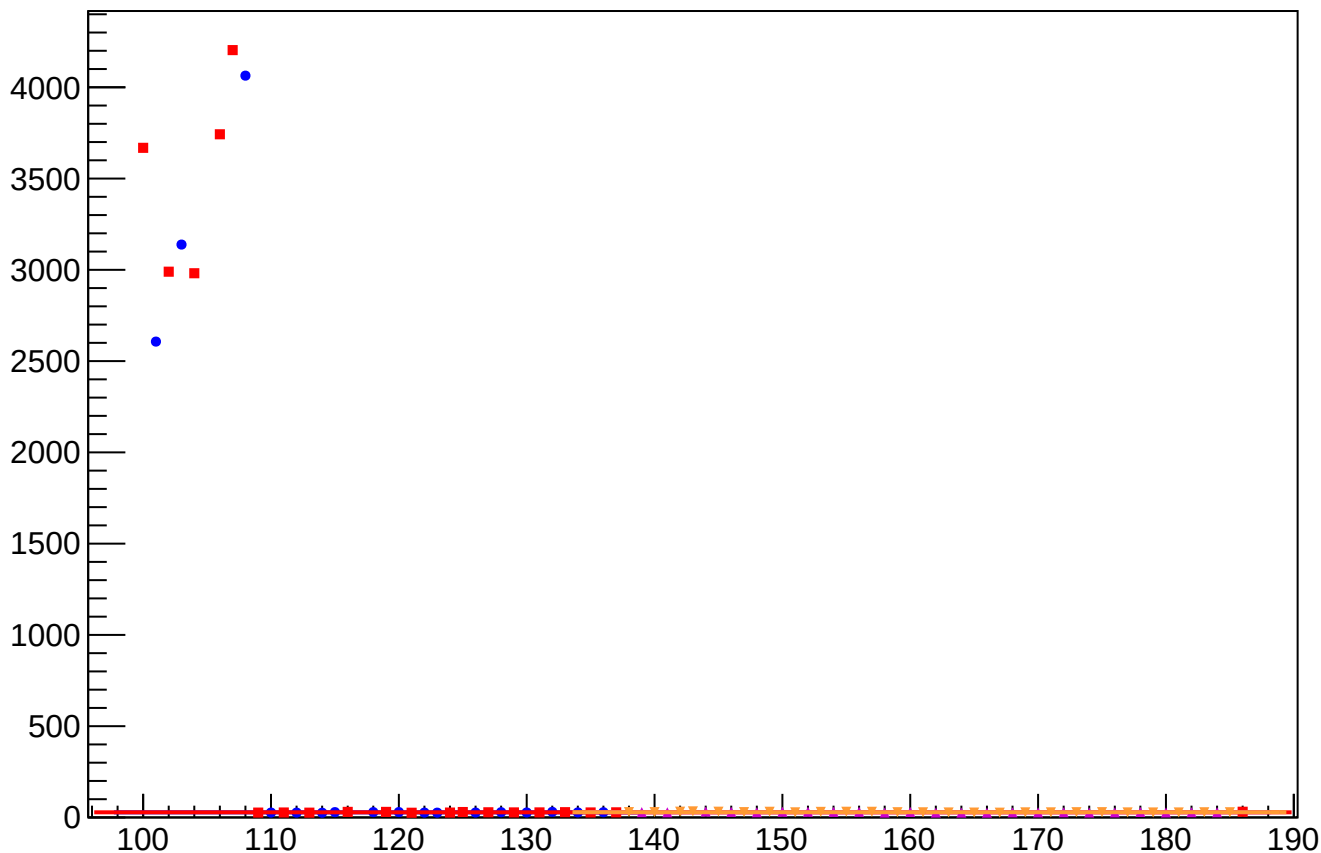
Right: 17.535+/-8.630  $\chi^2/\text{NDF}$ : 40.9/36

In: 1.350+/-6.036  $\chi^2/\text{NDF}$ : 49.6/39

Out: -5.105+/-5.867  $\chi^2/\text{NDF}$ : 43.4/44

All: -1.969+/-4.207  $\chi^2/\text{NDF}$ : 93.6/84

asym\_bcm\_cav4cQ\_bcm\_an\_ds\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 28.059 $\pm$ 0.009  $\chi^2$ /NDF: 3028297.0/16

Left Out: 28.813 $\pm$ 0.005  $\chi^2$ /NDF: 121973.8/24

Right Out: 28.126 $\pm$ 0.008  $\chi^2$ /NDF: 3488271.9/19

Left In: 28.792 $\pm$ 0.005  $\chi^2$ /NDF: 129393.1/22

Left: 28.803 $\pm$ 0.003  $\chi^2$ /NDF: 251375.8/47

Right: 28.093 $\pm$ 0.006  $\chi^2$ /NDF: 6516598.8/36

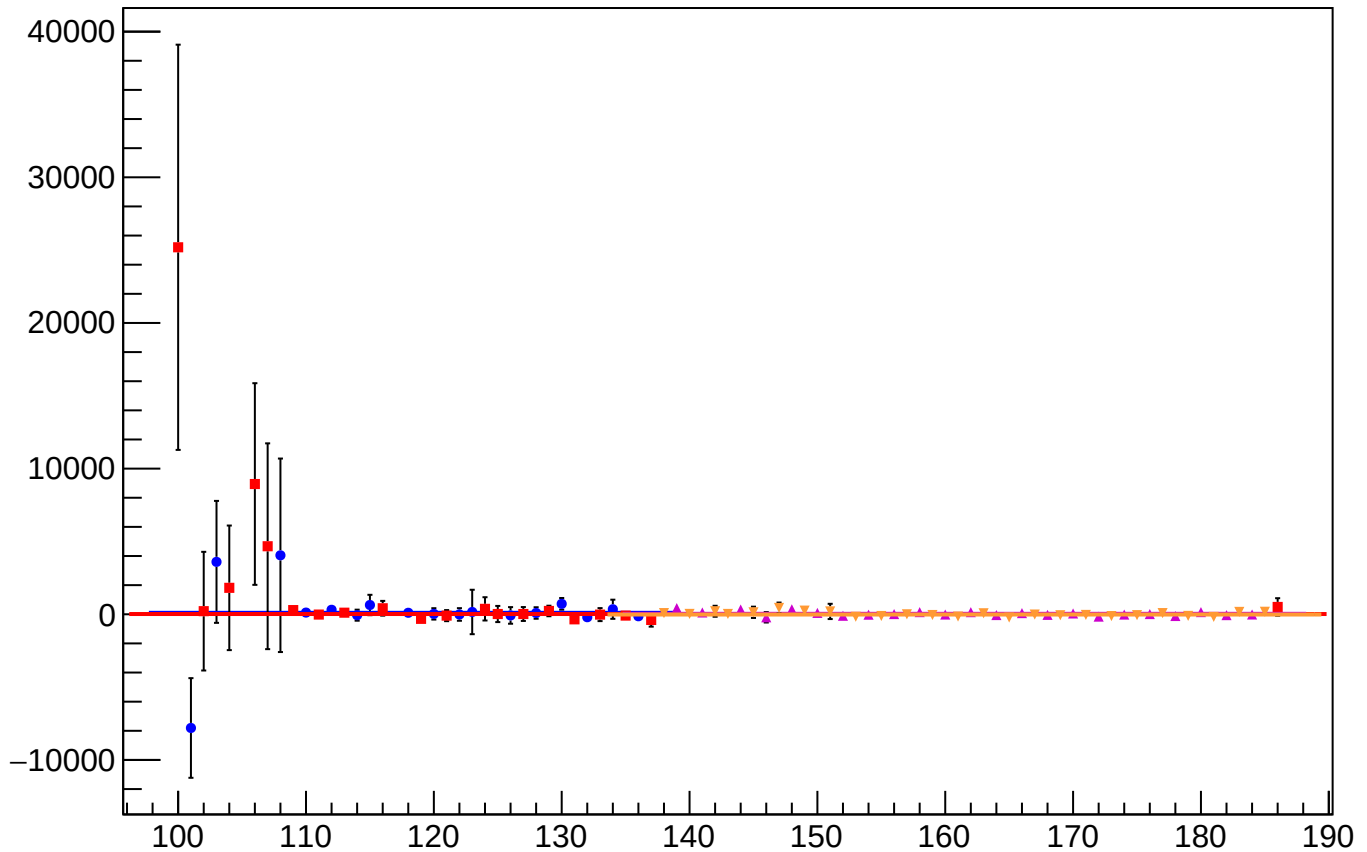
In: 28.619 $\pm$ 0.004  $\chi^2$ /NDF: 3163028.8/39

Out: 28.649 $\pm$ 0.004  $\chi^2$ /NDF: 3615224.5/44

All: 28.634 $\pm$ 0.003  $\chi^2$ /NDF: 6778279.0/84



asym\_bcm\_cav4cQ\_bcm\_dg\_us\_agg\_avg\_mean vs Slug, Sign Corrected



Right In: 99.706 $\pm$ 89.513  $\chi^2$ /NDF: 12.6/16

Left Out: -15.548 $\pm$ 48.688  $\chi^2$ /NDF: 8.0/24

Right Out: 17.448 $\pm$ 81.048  $\chi^2$ /NDF: 13.0/19

Left In: 31.170 $\pm$ 46.359  $\chi^2$ /NDF: 8.2/22

Left: 8.955 $\pm$ 33.574  $\chi^2$ /NDF: 16.6/47

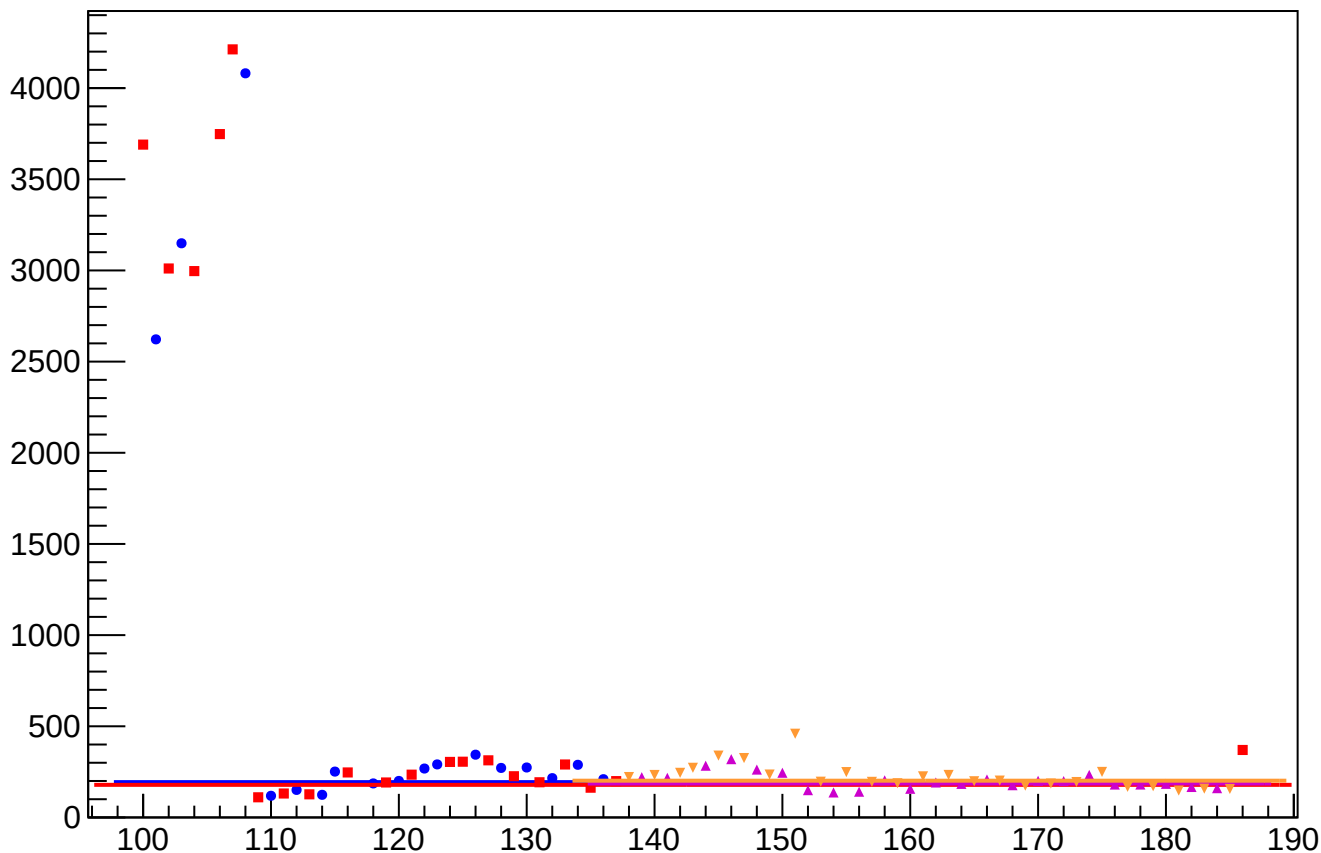
Right: 54.505 $\pm$ 60.080  $\chi^2$ /NDF: 26.0/36

In: 45.665 $\pm$ 41.166  $\chi^2$ /NDF: 21.2/39

Out: -6.798 $\pm$ 41.736  $\chi^2$ /NDF: 21.1/44

All: 19.795 $\pm$ 29.308  $\chi^2$ /NDF: 43.1/84

asym\_bcm\_cav4cQ\_bcm\_dg\_us\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 193.748+/-0.063  $\chi^2/\text{NDF}$ : 3539977.5/16

Left Out: 201.600+/-0.034  $\chi^2/\text{NDF}$ :1857453.2/24

Right Out: 178.850+/-0.057  $\chi^2/\text{NDF}$ : 4366792.7/19

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

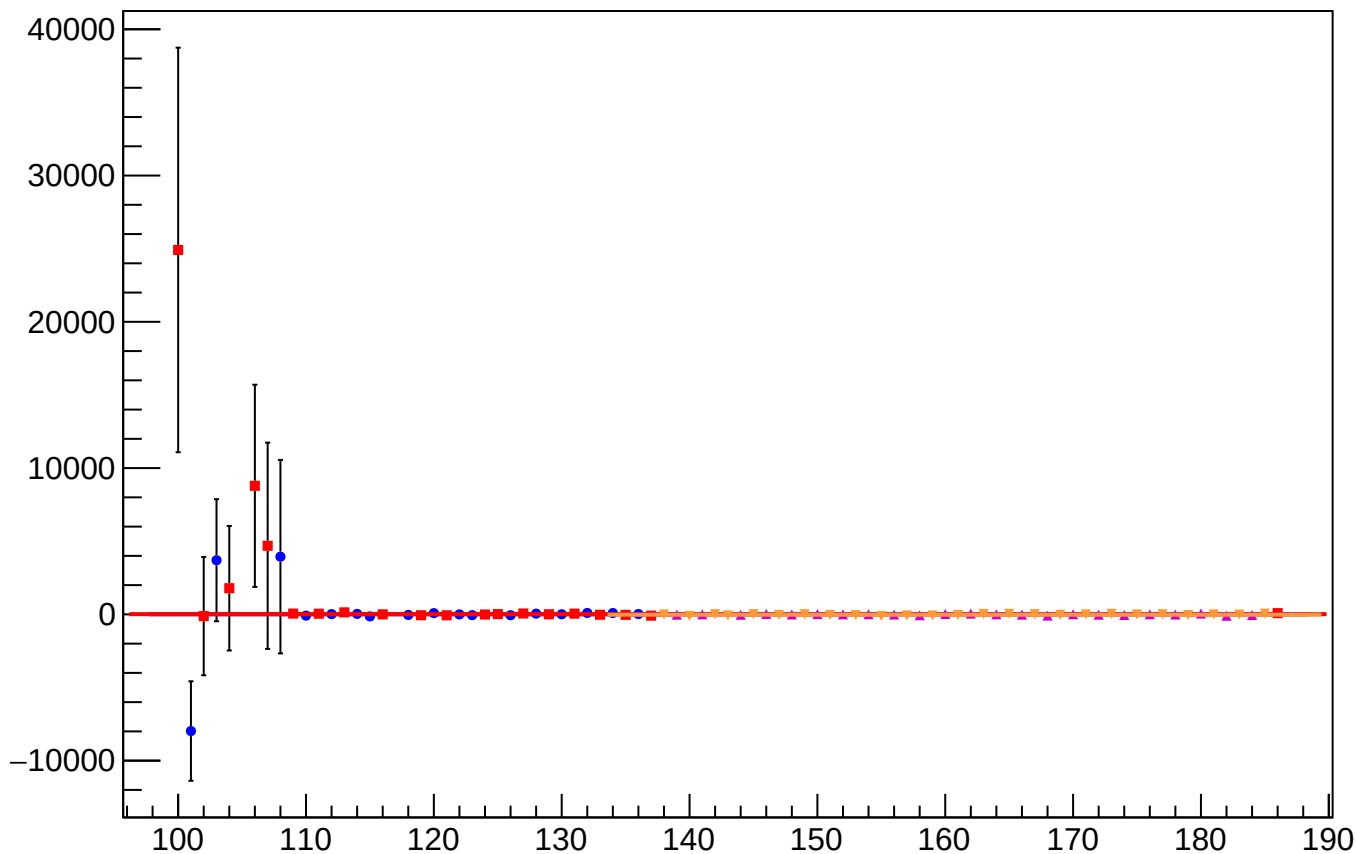
Right: 185.561+/-0.042  $\chi^2/\text{NDF}$ : 7937212.8/36

In: 187.723+/-0.029  $\chi^2/\text{NDF}$ :4942795.0/39

Out: 195.567+/-0.030  $\chi^2/\text{NDF}$ :6340043.5/44

All: 191.591+/-0.021  $\chi^2/\text{NDF}$ : 11318648.9/84

asym\_bcm\_cav4cQ\_bcm\_dg\_us\_agg\_dd\_mean vs Slug, Sign Corrected



Right In: 6.968+/-15.099  $\chi^2/\text{NDF}$ : 20.2/16

Left Out: -23.360+/-8.064  $\chi^2/\text{NDF}$ : 25.8/24

Right Out: 15.565+/-14.553  $\chi^2/\text{NDF}$ : 22.9/19

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

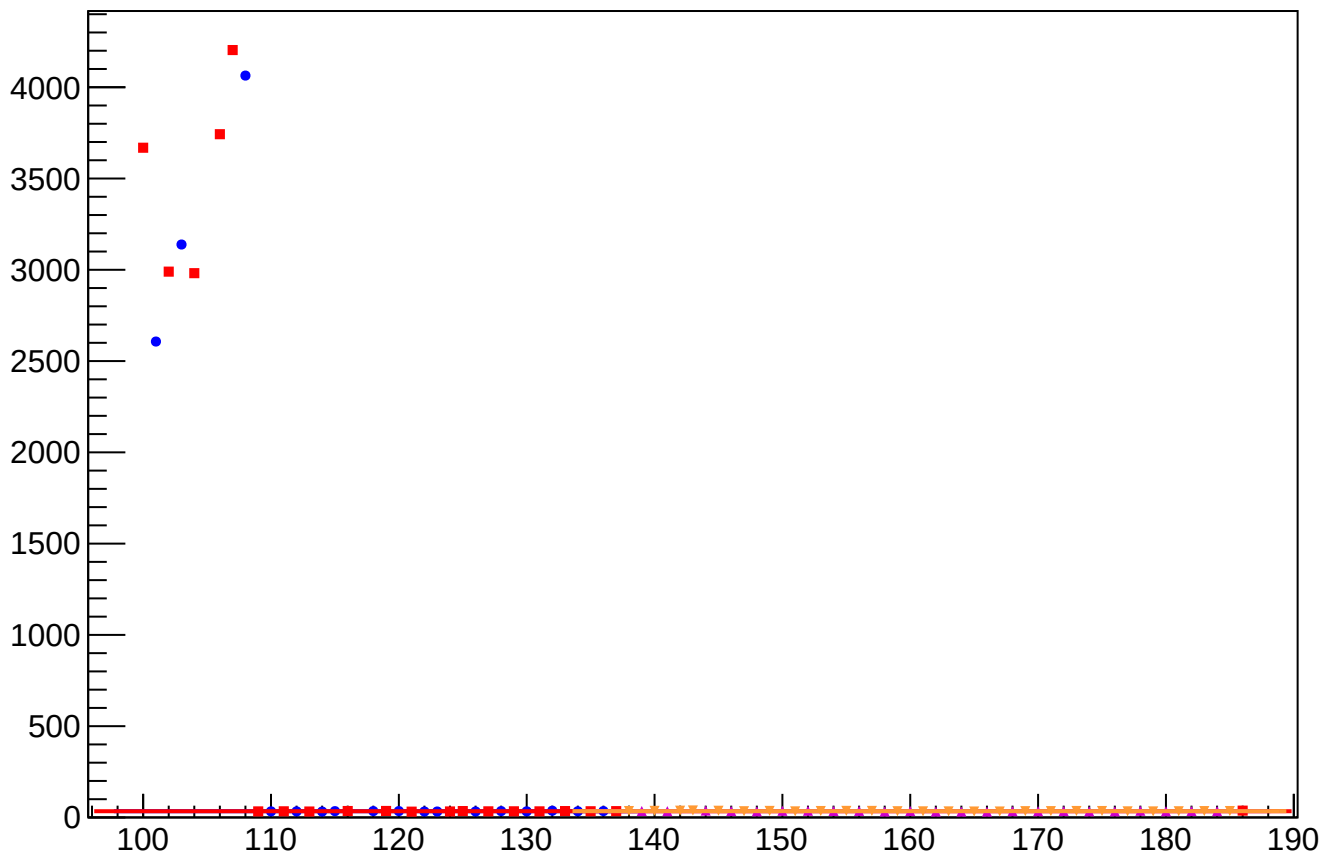
Right: 11.424+/-10.478  $\chi^2/\text{NDF}$ : 43.2/36

In: -2.987+/-7.279  $\chi^2/\text{NDF}$ : 41.9/39

Out: -14.215+/-7.054  $\chi^2/\text{NDF}$ : 54.1/44

All: -8.778+/-5.066  $\chi^2/\text{NDF}$ : 97.3/84

asym\_bcm\_cav4cQ\_bcm\_dg\_us\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 34.196 $\pm$ 0.011  $\chi^2$ /NDF: 3006449.1/16

Left Out: 34.614 $\pm$ 0.006  $\chi^2$ /NDF: 57946.1/24

Right Out: 34.131 $\pm$ 0.010  $\chi^2$ /NDF: 3458014.1/19

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

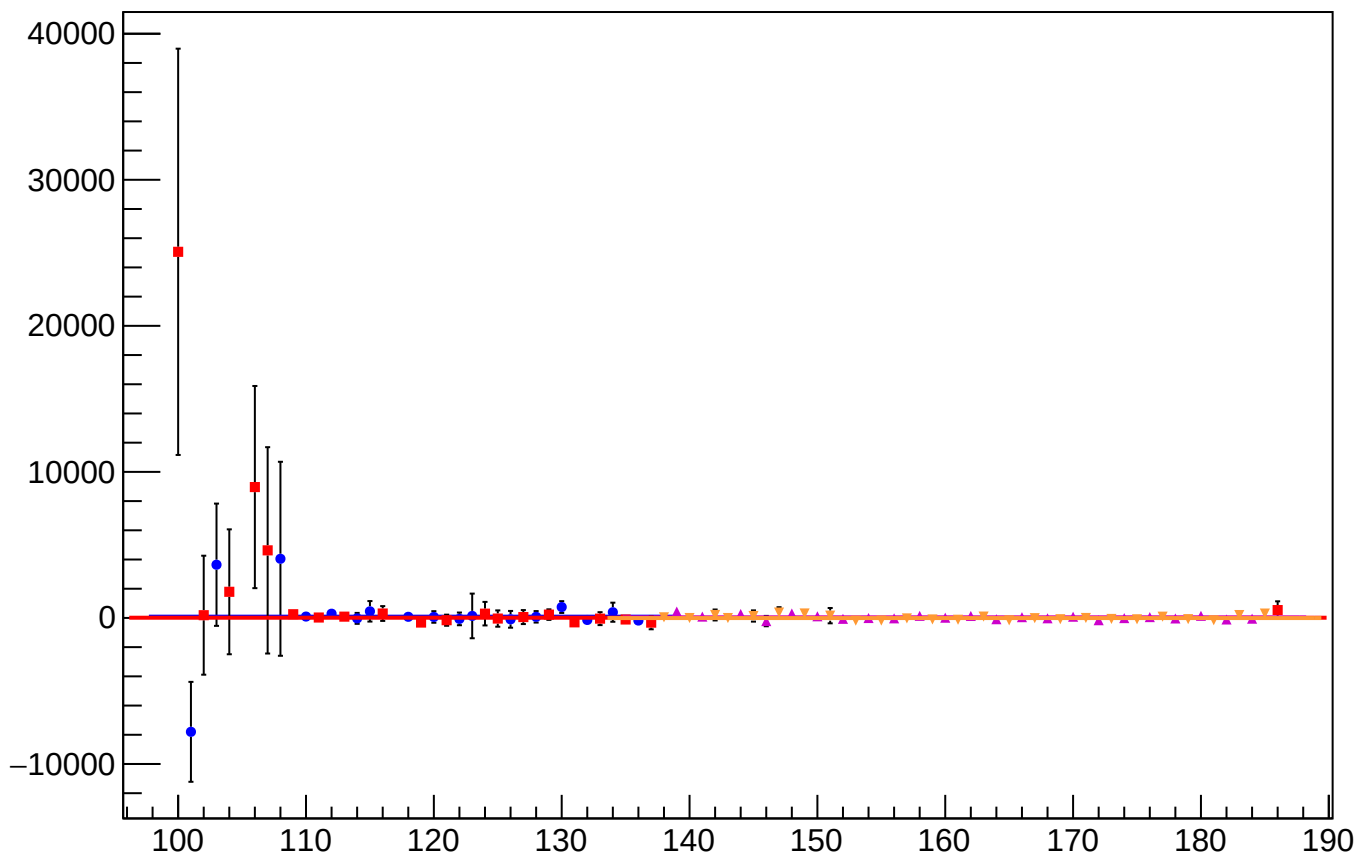
Right: 34.162 $\pm$ 0.007  $\chi^2$ /NDF: 6464482.8/36

In: 34.571 $\pm$ 0.005  $\chi^2$ /NDF: 3068371.7/39

Out: 34.501 $\pm$ 0.005  $\chi^2$ /NDF: 3517649.2/44

All: 34.535 $\pm$ 0.004  $\chi^2$ /NDF: 6586118.1/84

asym\_bcm\_cav4cQ\_bcm\_dg\_ds\_agg\_avg\_mean vs Slug, Sign Corrected



Right In: 87.034+/-89.059  $\chi^2/\text{NDF}$ : 12.5/16

Left Out: -8.916+/-48.615  $\chi^2/\text{NDF}$ : 8.6/24

Right Out: 14.697+/-80.544  $\chi^2/\text{NDF}$ : 11.9/19

Left In: 34.127+/-46.296  $\chi^2/\text{NDF}$ : 7.4/22

Left: 13.656+/-33.526  $\chi^2/\text{NDF}$ : 16.5/47

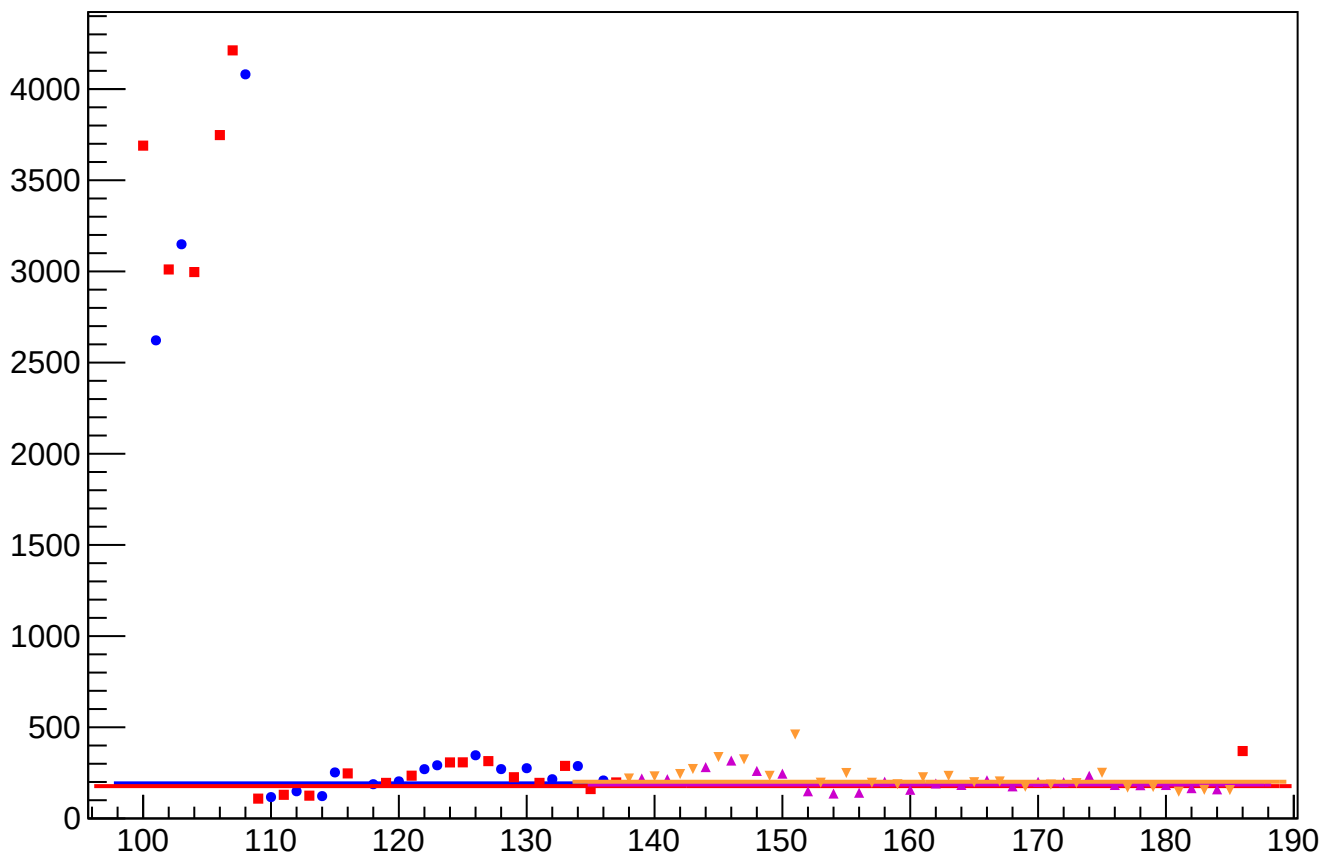
Right: 47.243+/-59.737  $\chi^2/\text{NDF}$ : 24.8/36

In: 45.383+/-41.078  $\chi^2/\text{NDF}$ : 20.2/39

Out: -2.611+/-41.621  $\chi^2/\text{NDF}$ : 20.6/44

All: 21.701+/-29.236  $\chi^2/\text{NDF}$ : 41.5/84

asym\_bcm\_cav4cQ\_bcm\_dg\_ds\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 192.416 $\pm$ 0.063  $\chi^2$ /NDF: 3577822.3/16

Left Out: 201.296 $\pm$ 0.034  $\chi^2$ /NDF:1851134.1/24

Right Out: 177.292 $\pm$ 0.057  $\chi^2$ /NDF: 4415318.7/19

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

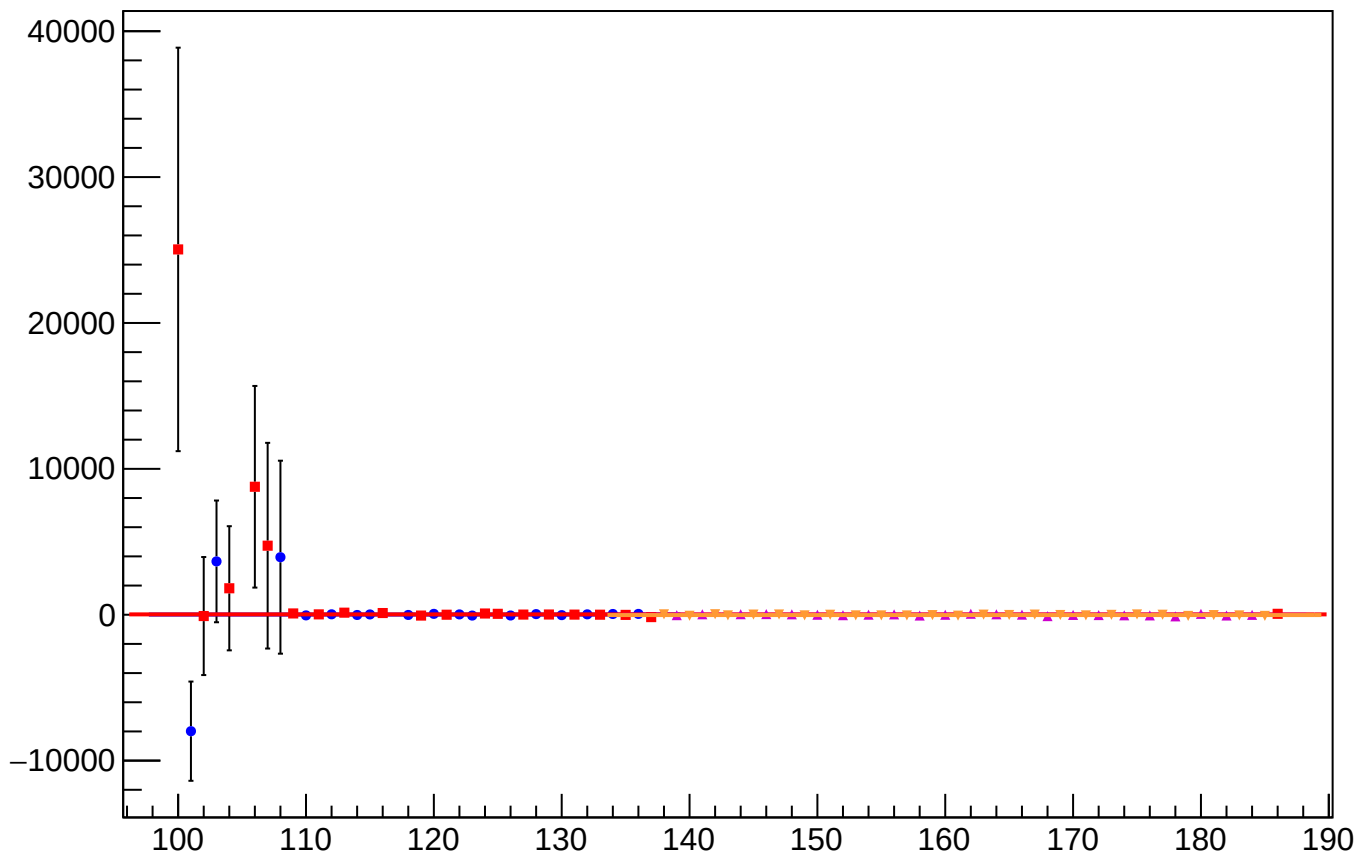
Right: 184.096 $\pm$ 0.042  $\chi^2$ /NDF: 8024868.5/36

In: 187.250 $\pm$ 0.029  $\chi^2$ /NDF:4968142.2/39

Out: 194.886 $\pm$ 0.029  $\chi^2$ /NDF:6396660.4/44

All: 191.018 $\pm$ 0.021  $\chi^2$ /NDF: 11398909.2/84

asym\_bcm\_cav4cQ\_bcm\_dg\_ds\_agg\_dd\_mean vs Slug, Sign Corrected



Right In: 12.332+/-13.769  $\chi^2/\text{NDF}$ : 14.5/16

Left Out: -22.879+/-7.340  $\chi^2/\text{NDF}$ : 18.8/24

Right Out: 24.427+/-13.308  $\chi^2/\text{NDF}$ : 28.4/19

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

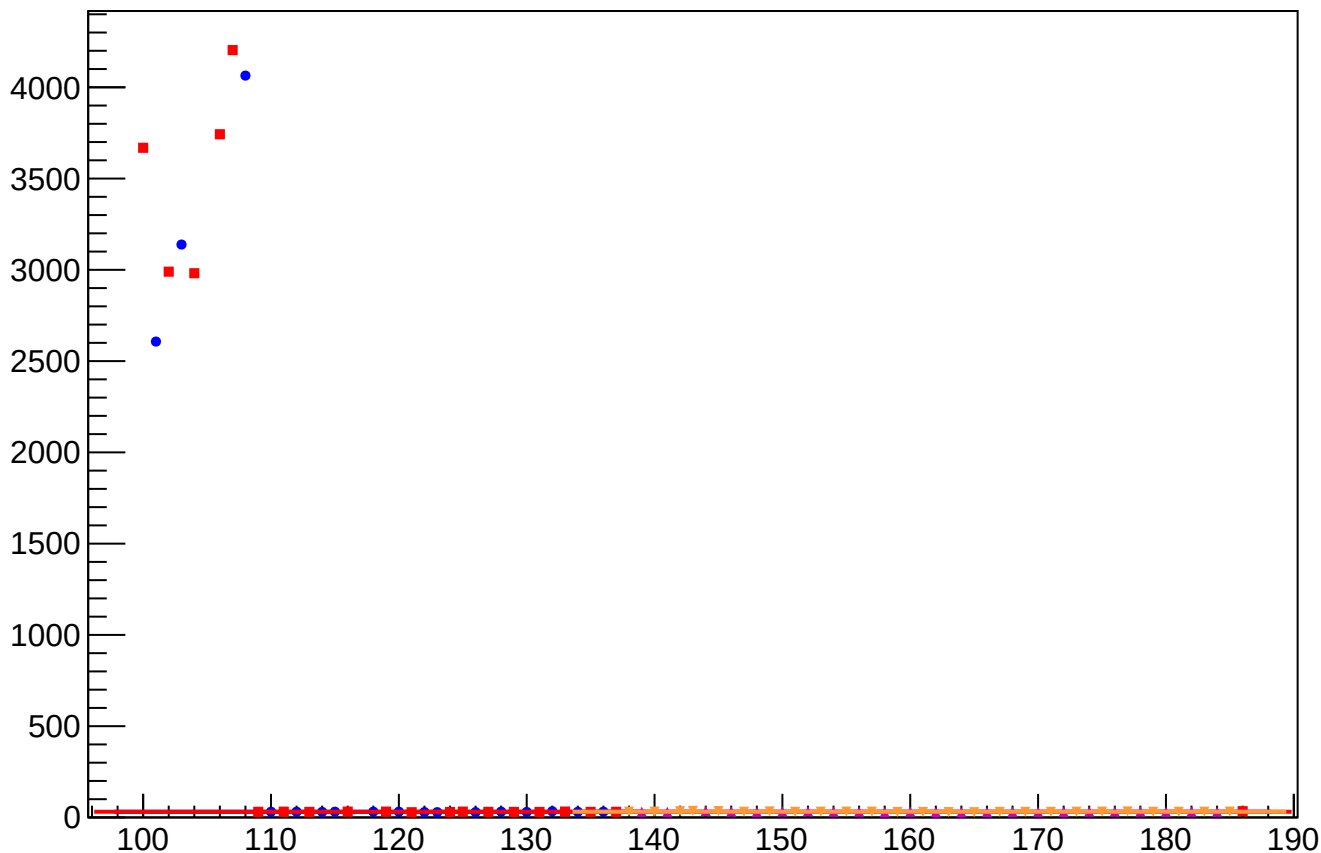
Right: 18.586+/-9.569  $\chi^2/\text{NDF}$ : 43.3/36

In: -1.719+/-6.620  $\chi^2/\text{NDF}$ : 54.2/39

Out: -11.844+/-6.427  $\chi^2/\text{NDF}$ : 56.8/44

All: -6.931+/-4.611  $\chi^2/\text{NDF}$ : 112.3/84

asym\_bcm\_cav4cQ\_bcm\_dg\_ds\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 31.184+/-0.010  $\chi^2/\text{NDF}$ : 3014248.1/16

Left Out: 31.482+/-0.005  $\chi^2/\text{NDF}$ : 82437.2/24

Right Out: 31.187+/-0.009  $\chi^2/\text{NDF}$ : 3466620.4/19

Left In: 31.484+/-0.005  $\chi^2/\text{NDF}$ : 87981.1/22

Left: 31.483+/-0.004  $\chi^2/\text{NDF}$ : 170418.5/47

Right: 31.186+/-0.007  $\chi^2/\text{NDF}$ : 6480868.5/36

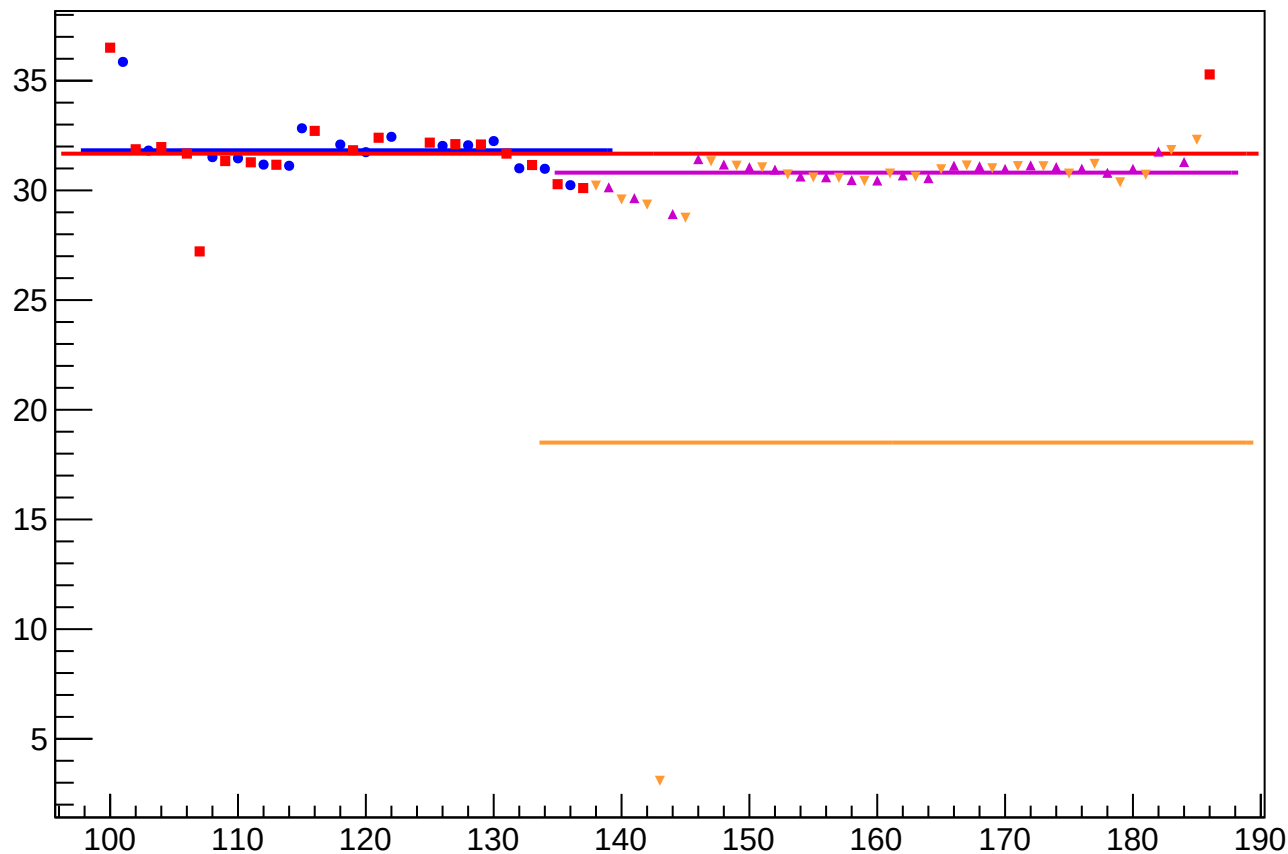
In: 31.415+/-0.005  $\chi^2/\text{NDF}$ : 3102959.8/39

Out: 31.413+/-0.005  $\chi^2/\text{NDF}$ : 3549808.7/44

All: 31.414+/-0.003  $\chi^2/\text{NDF}$ : 6652768.7/84



# yield\_usl\_mean vs Slug, Sign Corrected



Right In: 31.828+/-0.000  $\chi^2/\text{NDF}$ : 1553310195.5/15

Left Out: 18.505+/-0.000  $\chi^2/\text{NDF}$ : 940607632746.3/24

Right Out: 31.675+/-0.000  $\chi^2/\text{NDF}$ : 1041343497.4/18

Left In: 30.809+/-0.000  $\chi^2/\text{NDF}$ : 821961762.3/22

Left: 22.806+/-0.000  $\chi^2/\text{NDF}$ : 1203928236724.3/47

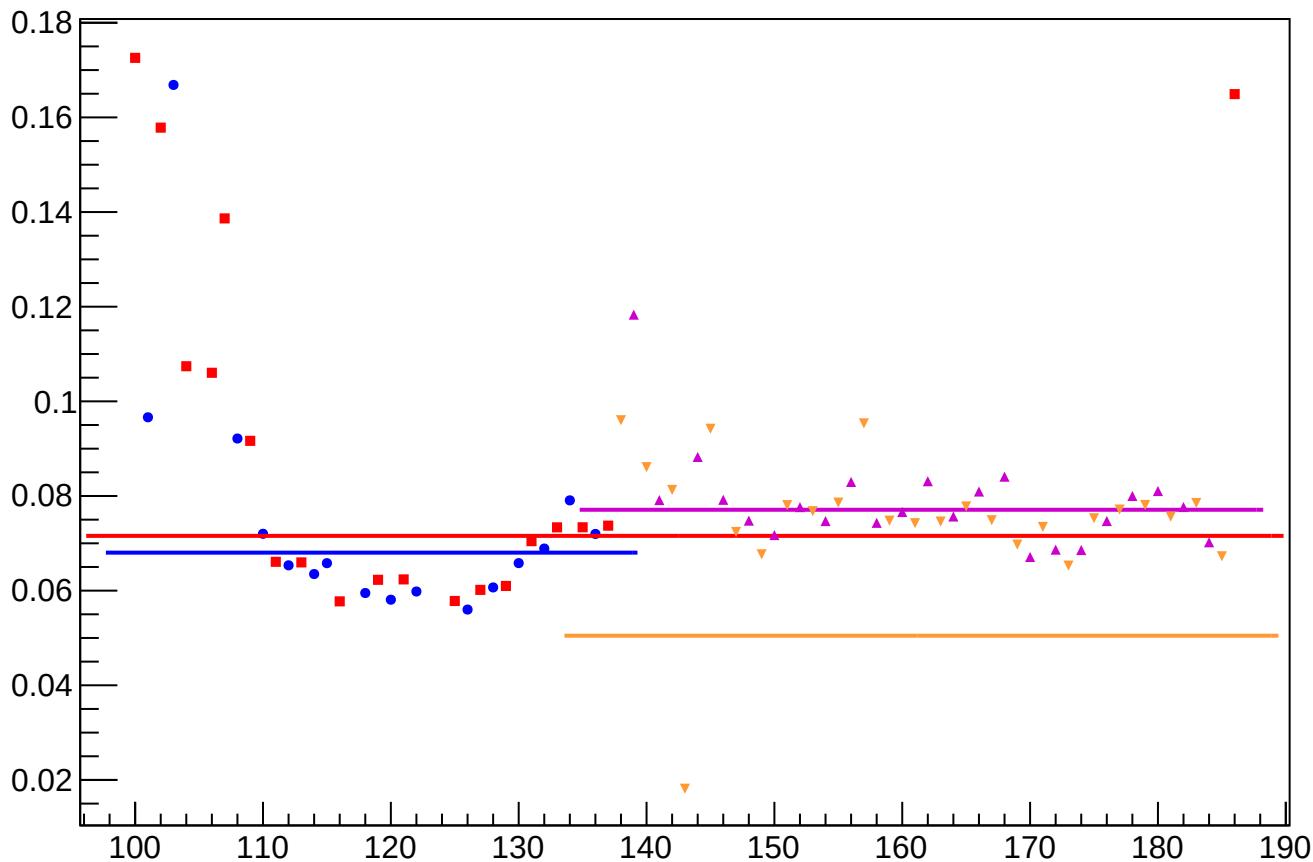
Right: 31.753+/-0.000  $\chi^2/\text{NDF}$ : 2608993326.1/34

In: 31.133+/-0.000  $\chi^2/\text{NDF}$ : 3255285062.3/38

Out: 21.070+/-0.000  $\chi^2/\text{NDF}$ : 1109192025768.3/43

All: 24.977+/-0.000  $\chi^2/\text{NDF}$ : 1354639052018

# yield\_usl\_rms vs Slug, Sign Corrected



Right In: 0.068 $\pm$ 0.000  $\chi^2$ /NDF: 632212.4/15

Left Out: 0.050 $\pm$ 0.000  $\chi^2$ /NDF:8543648.6/24

Right Out: 0.072 $\pm$ 0.000  $\chi^2$ /NDF: 1080023.3/18

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

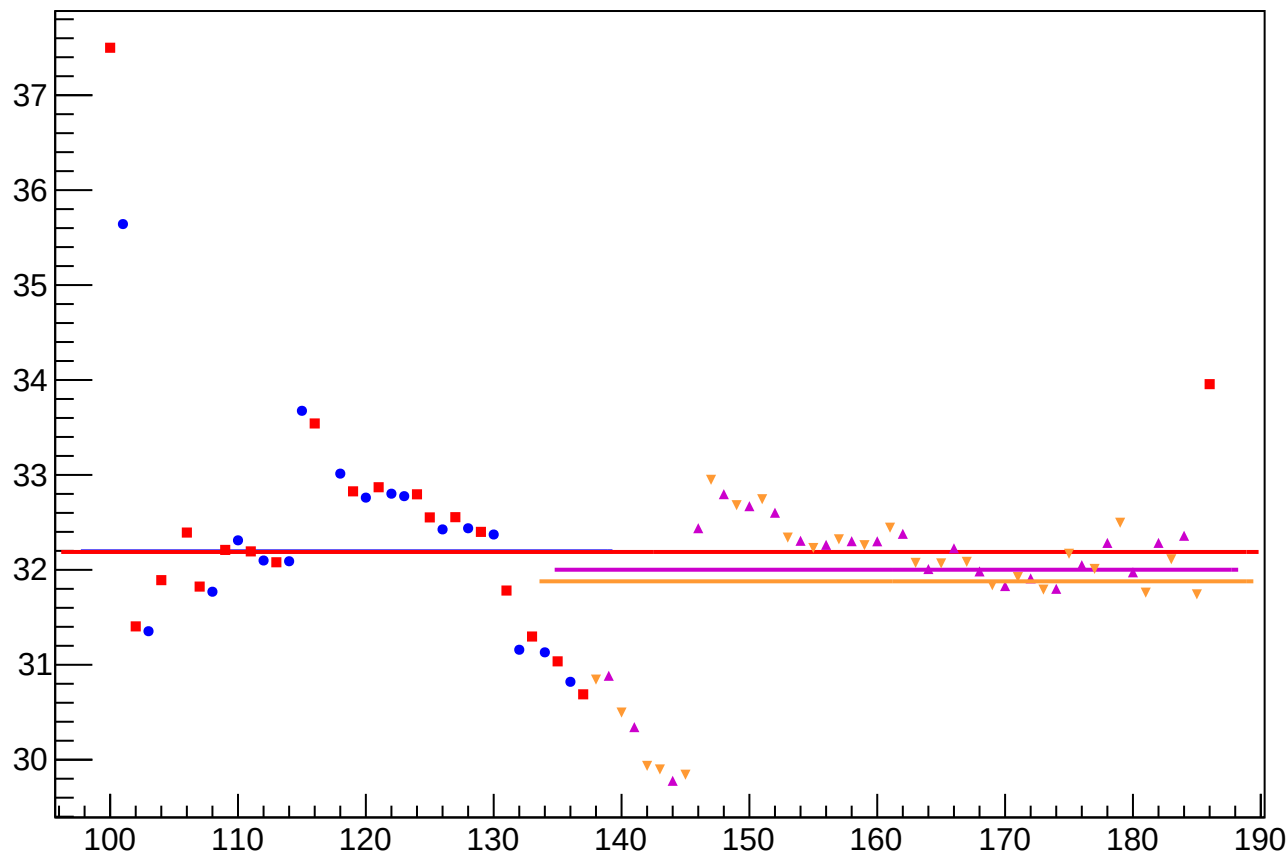
Right: 0.070 $\pm$ 0.000  $\chi^2$ /NDF: 1727582.4/34

In: 0.074 $\pm$ 0.000  $\chi^2$ /NDF:1097293.1/38

Out: 0.055 $\pm$ 0.000  $\chi^2$ /NDF:10483575.8/43

All: 0.062 $\pm$ 0.000  $\chi^2$ /NDF: 13422325.5/82

# yield\_usr\_mean vs Slug, Sign Corrected



Right In: 32.195+/-0.000  $\chi^2/\text{NDF}$ : 1002008039.3/16

Left Out: 31.879+/-0.000  $\chi^2/\text{NDF}$ : 1976281391.1/24

Right Out: 32.189+/-0.000  $\chi^2/\text{NDF}$ : 488251155.6/19

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

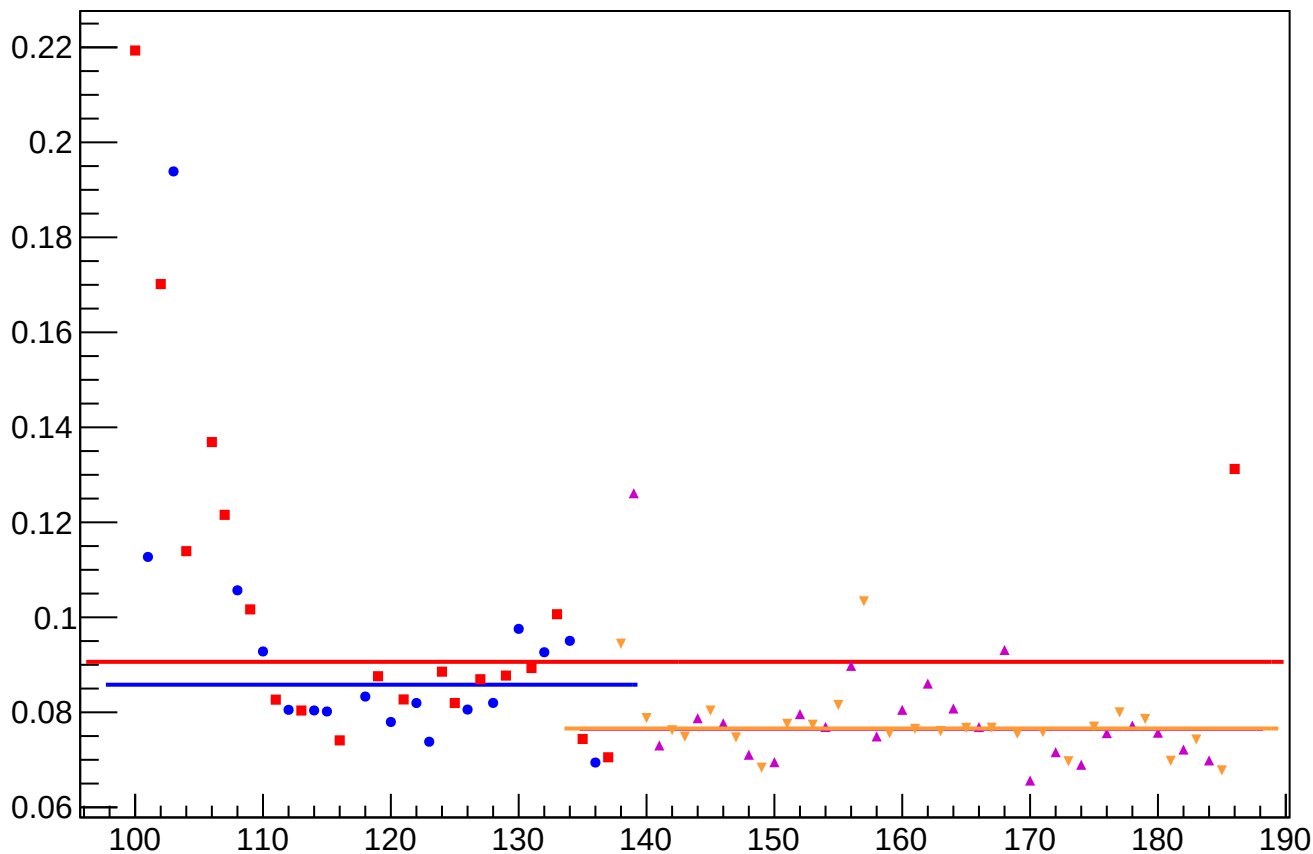
Right: 32.192+/-0.000  $\chi^2/\text{NDF}$ : 1490273726.0/36

In: 32.044+/-0.000  $\chi^2/\text{NDF}$ : 2435921536.4/39

Out: 31.945+/-0.000  $\chi^2/\text{NDF}$ : 2523554017.4/44

All: 31.994+/-0.000  $\chi^2/\text{NDF}$ : 4977027937.7/8

# yield\_usr\_rms vs Slug, Sign Corrected



Right In: 0.086+/-0.000  $\chi^2/\text{NDF}$ : 554772.3/16

Left Out: 0.077+/-0.000  $\chi^2/\text{NDF}$ : 209648.5/24

Right Out: 0.091+/-0.000  $\chi^2/\text{NDF}$ : 609663.0/19

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

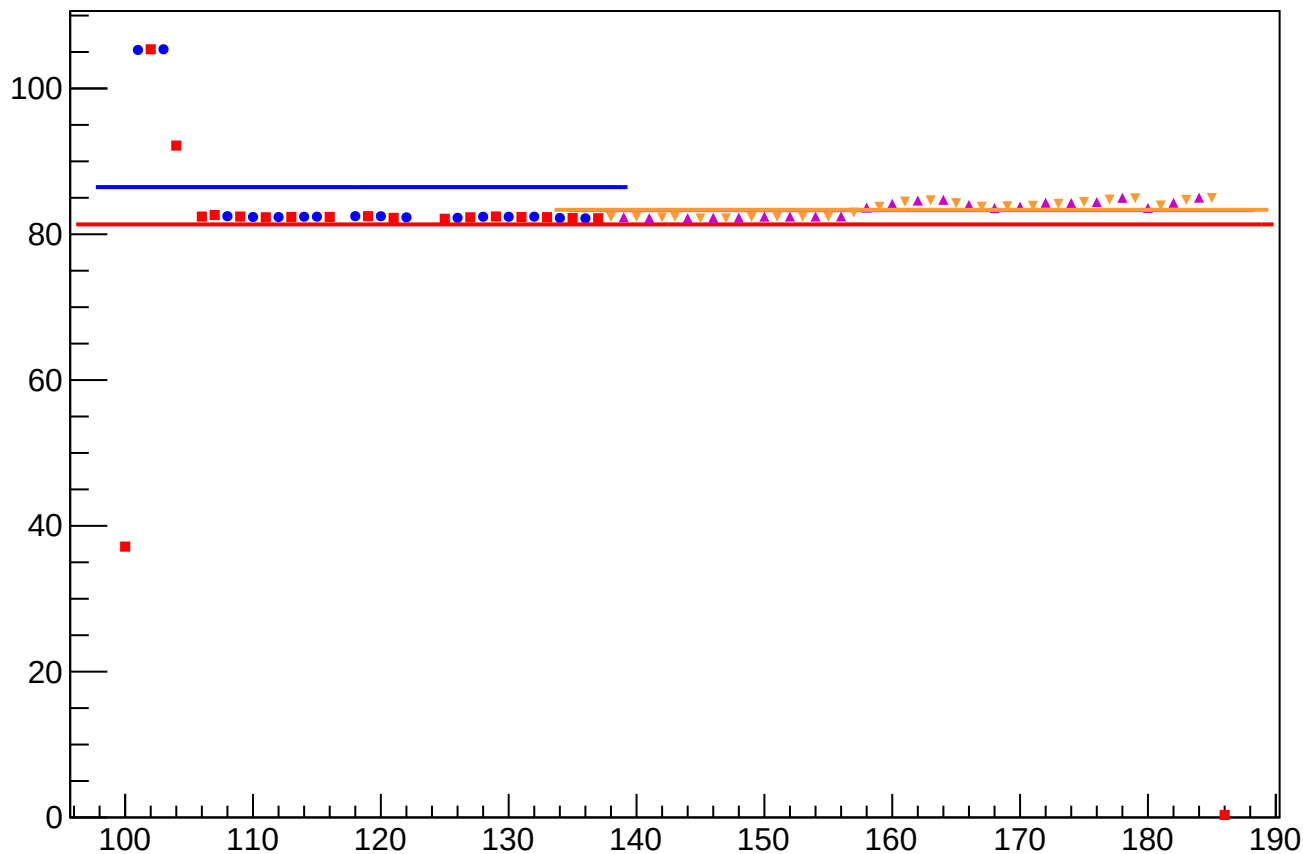
Right: 0.088+/-0.000  $\chi^2/\text{NDF}$ : 1182621.8/36

In: 0.079+/-0.000  $\chi^2/\text{NDF}$ : 1093212.5/39

Out: 0.080+/-0.000  $\chi^2/\text{NDF}$ : 1062276.5/44

All: 0.079+/-0.000  $\chi^2/\text{NDF}$ : 2159313.0/84

# yield\_dsl\_mean vs Slug, Sign Corrected



Right In: 86.468 $\pm$ 0.000  $\chi^2$ /NDF: 291253714999.8/15

Left Out: 83.355 $\pm$ 0.000  $\chi^2$ /NDF: 9142393022.8/24

Right Out: 81.353 $\pm$ 0.000  $\chi^2$ /NDF: 1349353004852.9/18

Left In: 83.309 $\pm$ 0.000  $\chi^2$ /NDF: 8421247810.9/22

Left: 83.332 $\pm$ 0.000  $\chi^2$ /NDF: 17572666767.1/47

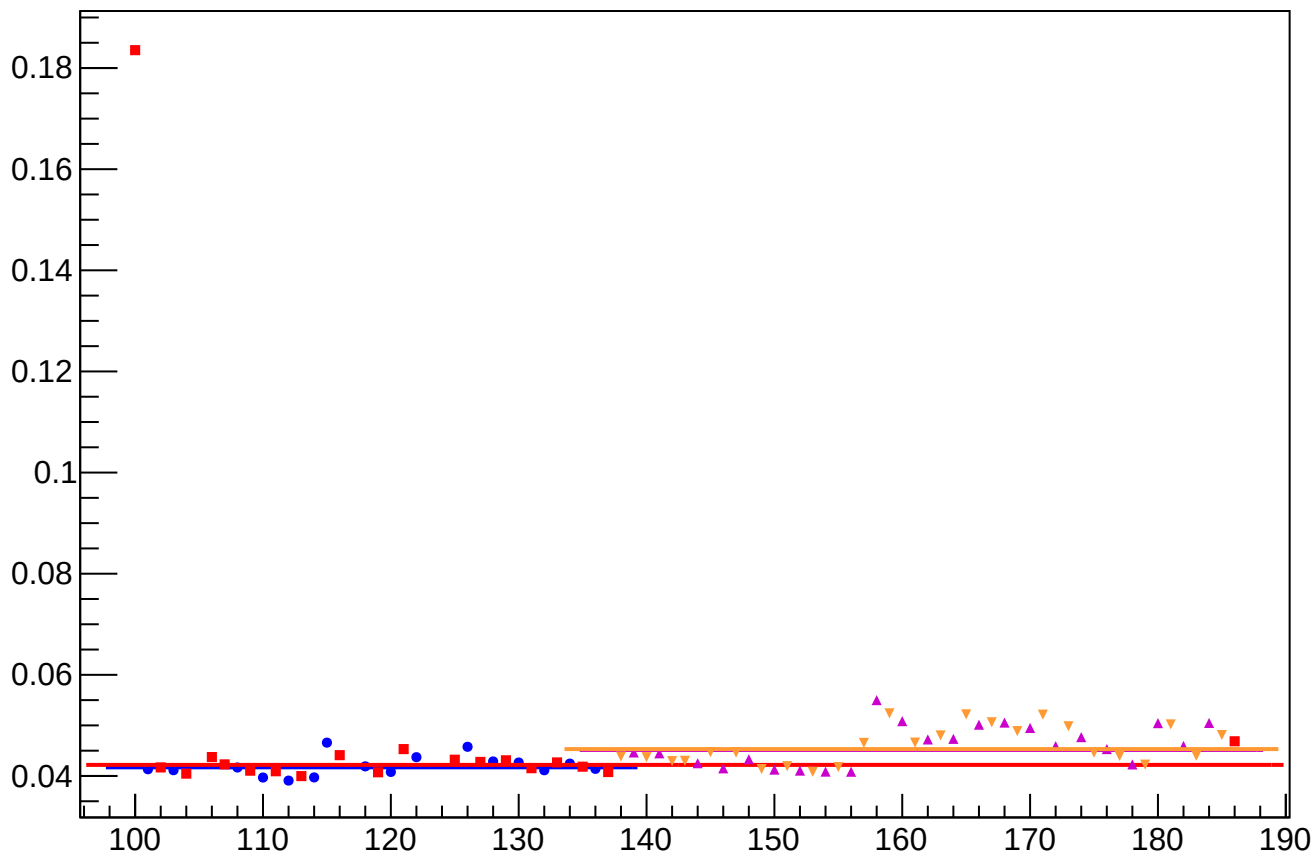
Right: 83.810 $\pm$ 0.000  $\chi^2$ /NDF: 1691691881165.7/3

In: 84.292 $\pm$ 0.000  $\chi^2$ /NDF: 325510748675.6/38

Out: 82.717 $\pm$ 0.000  $\chi^2$ /NDF: 1369597448929.6/43

All: 83.483 $\pm$ 0.000  $\chi^2$ /NDF: 1710490349084

# yield\_dsl\_rms vs Slug, Sign Corrected



Right In: 0.042+/-0.000  $\chi^2/\text{NDF}$ : 19442.4/15

Left Out: 0.045+/-0.000  $\chi^2/\text{NDF}$ : 211358.2/24

Right Out: 0.042+/-0.000  $\chi^2/\text{NDF}$ : 104808.4/18

Left In: 0.045+/-0.000  $\chi^2/\text{NDF}$ : 242885.4/22

Left: 0.045+/-0.000  $\chi^2/\text{NDF}$ : 454494.8/47

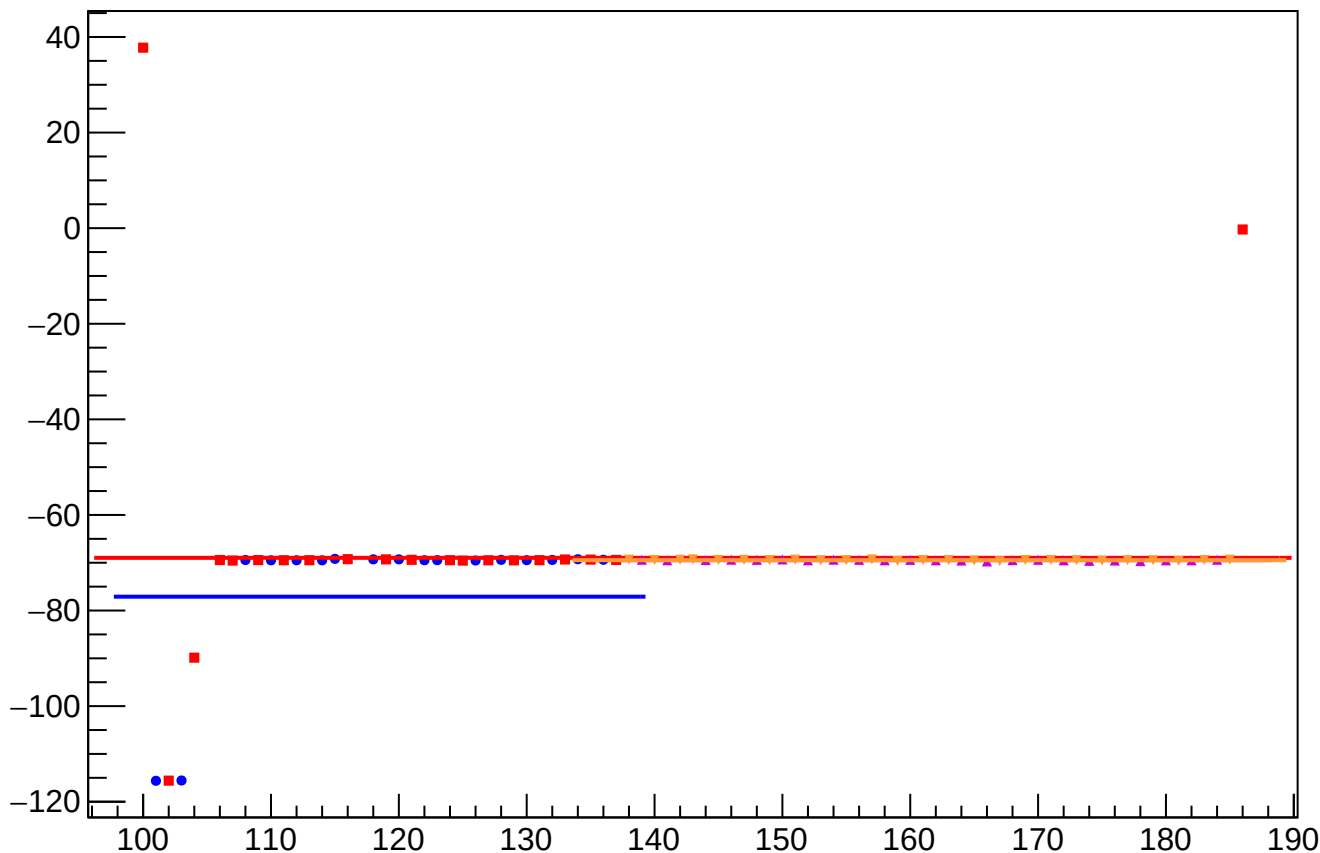
Right: 0.042+/-0.000  $\chi^2/\text{NDF}$ : 125153.9/34

In: 0.044+/-0.000  $\chi^2/\text{NDF}$ : 323382.4/38

Out: 0.044+/-0.000  $\chi^2/\text{NDF}$ : 370263.1/43

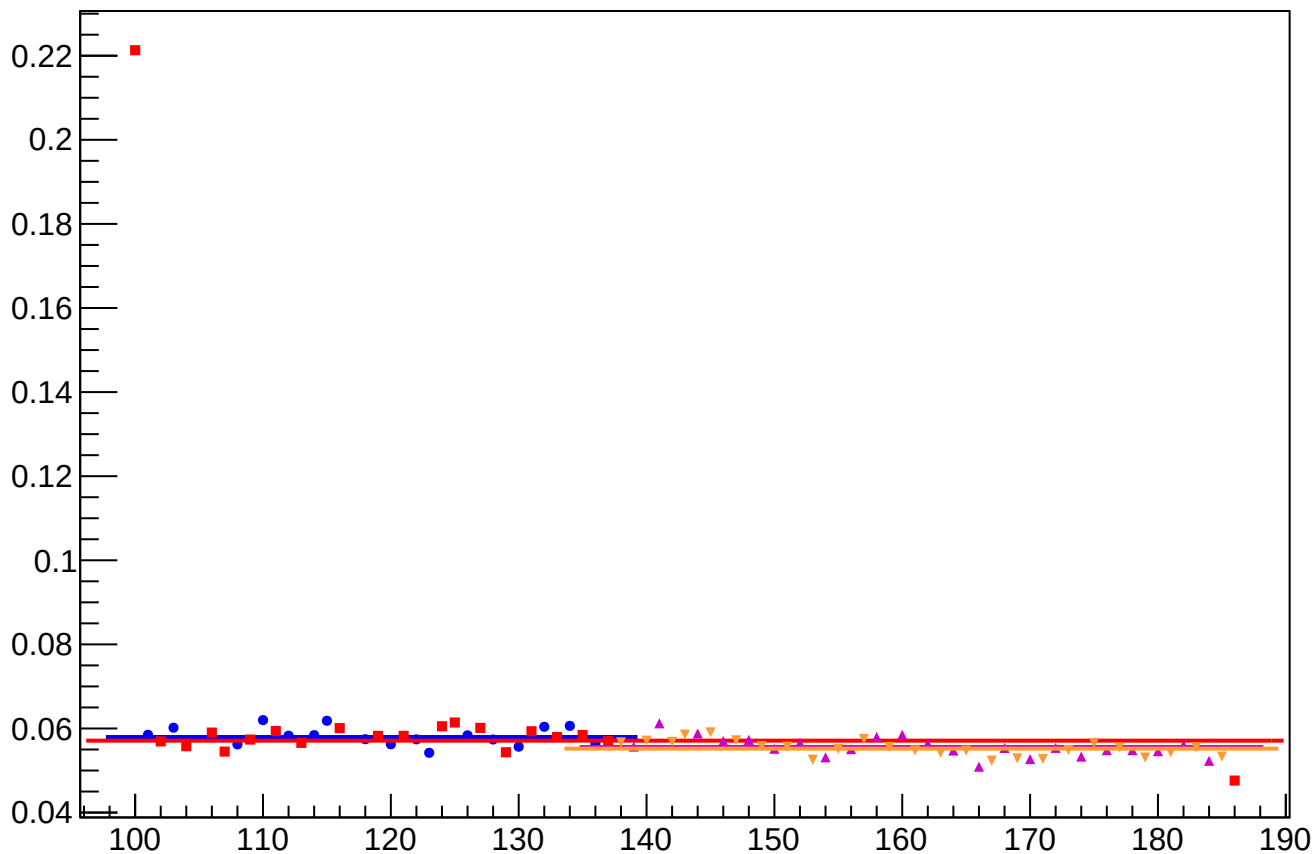
All: 0.044+/-0.000  $\chi^2/\text{NDF}$ : 694394.8/82

# yield\_dsr\_mean vs Slug, Sign Corrected



|                            |                                          |                        |                                          |
|----------------------------|------------------------------------------|------------------------|------------------------------------------|
| Right In: -77.101+/-0.000  | $\chi^2/\text{NDF}$ : 564992278701.1/16  | 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: -72.743+/-0.000 | $\chi^2/\text{NDF}$ : 1850009929921.0/47 |
| Right Out: -68.973+/-0.000 | $\chi^2/\text{NDF}$ : 1217410537568.1/19 | In: -71.440+/-0.000    | $\chi^2/\text{NDF}$ : 647611656547.7/39  |
| Left In: -69.458+/-0.000   | $\chi^2/\text{NDF}$ : 52798704.3/22      | Out: -69.327+/-0.000   | $\chi^2/\text{NDF}$ : 1217842417370.3/47 |
|                            |                                          | All: -70.337+/-0.000   | $\chi^2/\text{NDF}$ : 188260704158.1/47  |

# yield\_dsr\_rms vs Slug, Sign Corrected



Right In: 0.058 $\pm$ 0.000  $\chi^2$ /NDF: 12317.7/16

Left Out: 0.055 $\pm$ 0.000  $\chi^2$ /NDF:38761.8/24

Right Out: 0.057 $\pm$ 0.000  $\chi^2$ /NDF: 119989.4/19

Left In: 0.056 $\pm$ 0.000  $\chi^2$ /NDF:52190.5/22

Left: 0.055 $\pm$ 0.000  $\chi^2$ /NDF: 91784.6/47

Right: 0.058 $\pm$ 0.000  $\chi^2$ /NDF: 133853.7/36

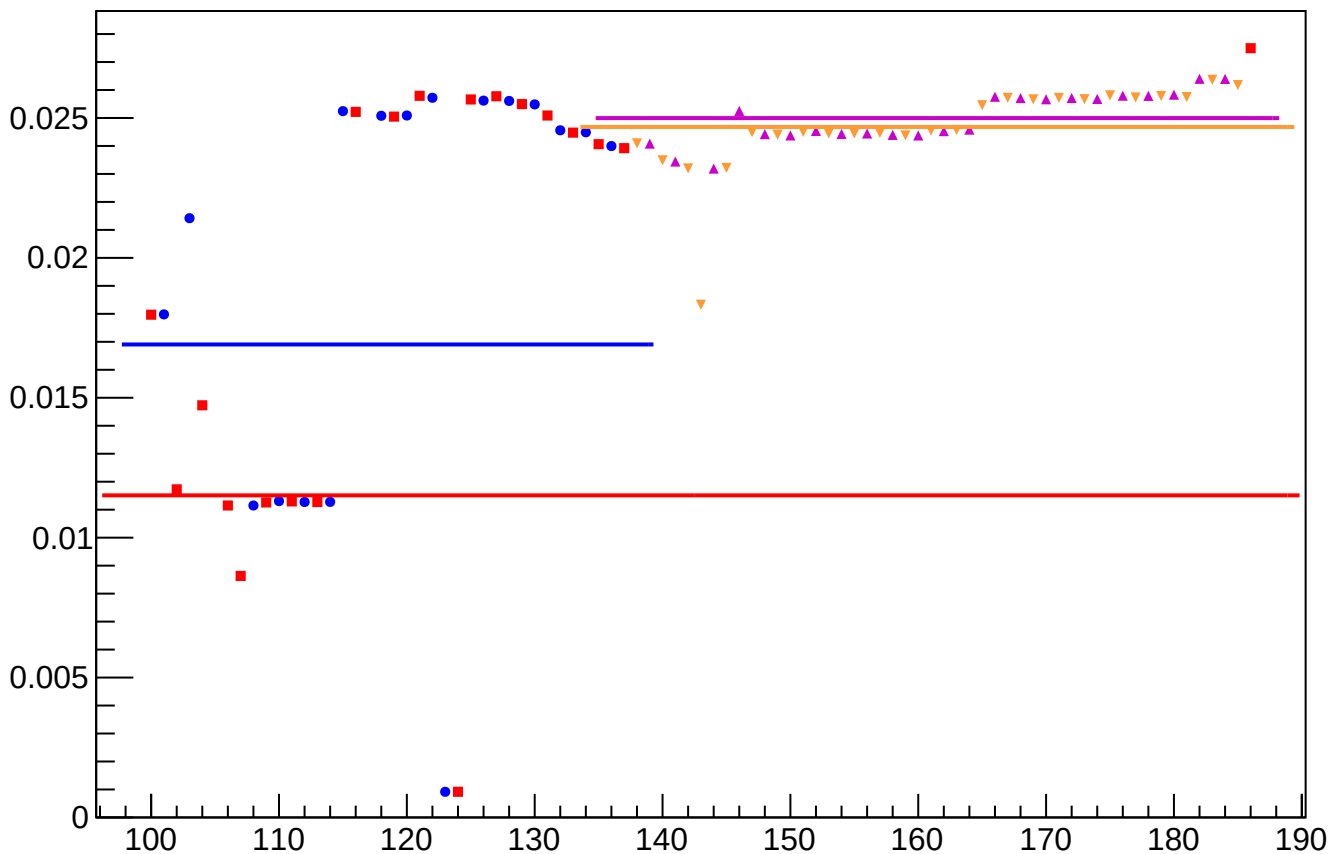
In: 0.056 $\pm$ 0.000  $\chi^2$ /NDF:80521.9/39

Out: 0.056 $\pm$ 0.000  $\chi^2$ /NDF:170246.6/44

All: 0.056 $\pm$ 0.000  $\chi^2$ /NDF: 252549.0/84



# yield\_atl1\_mean vs Slug, Sign Corrected



Right In: 0.017 $\pm$ 0.000  $\chi^2$ /NDF: 126025885261.2/16

Left Out: 0.025 $\pm$ 0.000  $\chi^2$ /NDF: 9641065555.8/24

Right Out: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 241794821578.4/19

Left In: 0.025 $\pm$ 0.000  $\chi^2$ /NDF: 2462473687.7/22

Left: 0.025 $\pm$ 0.000  $\chi^2$ /NDF: 12284812437.7/47

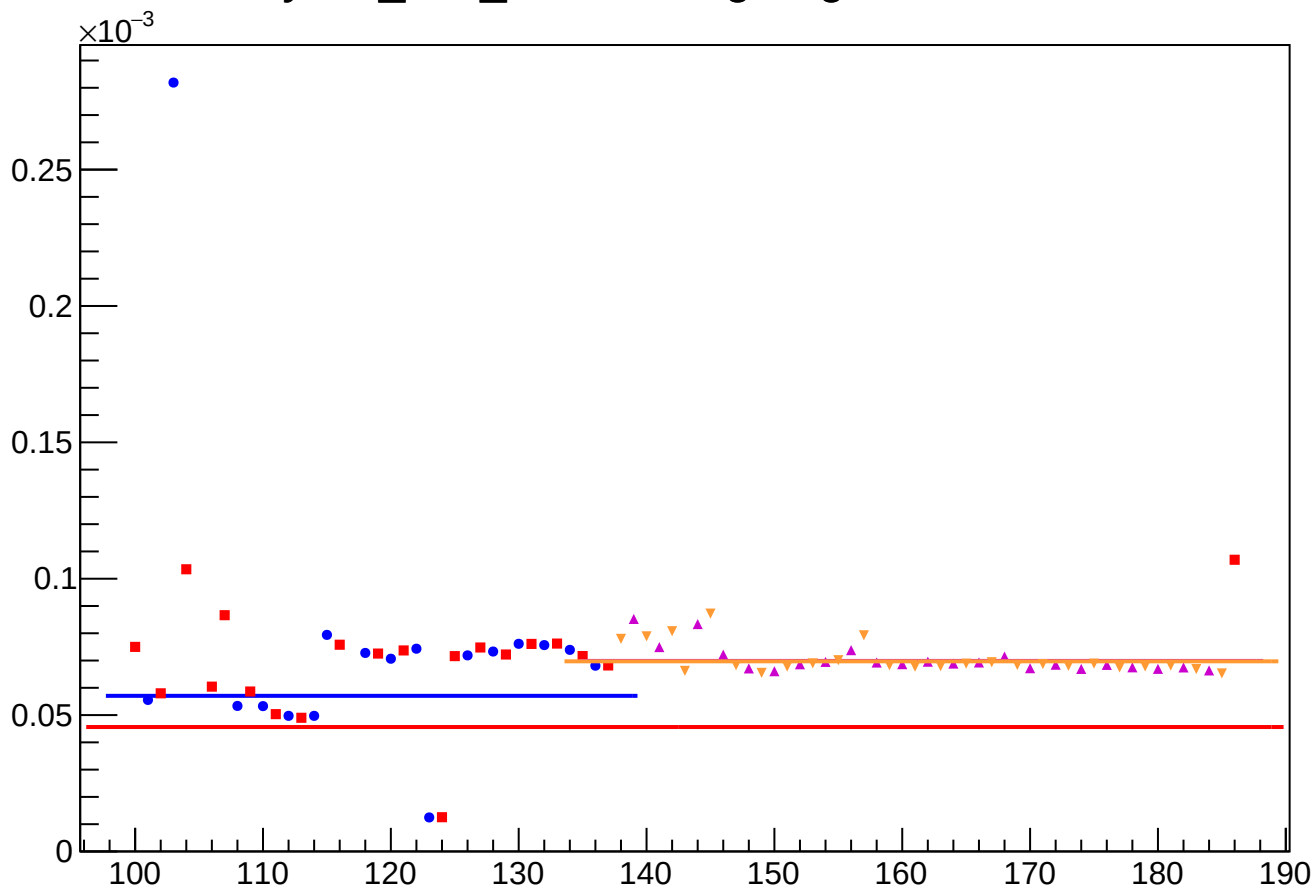
Right: 0.014 $\pm$ 0.000  $\chi^2$ /NDF: 396643911888.4/36

In: 0.022 $\pm$ 0.000  $\chi^2$ /NDF: 202807995367.9/39

Out: 0.019 $\pm$ 0.000  $\chi^2$ /NDF: 505898150348.1/44

All: 0.021 $\pm$ 0.000  $\chi^2$ /NDF: 732458447318.3

# yield\_atl1\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1998313.1/16

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 158125.0/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3836980.0/19

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

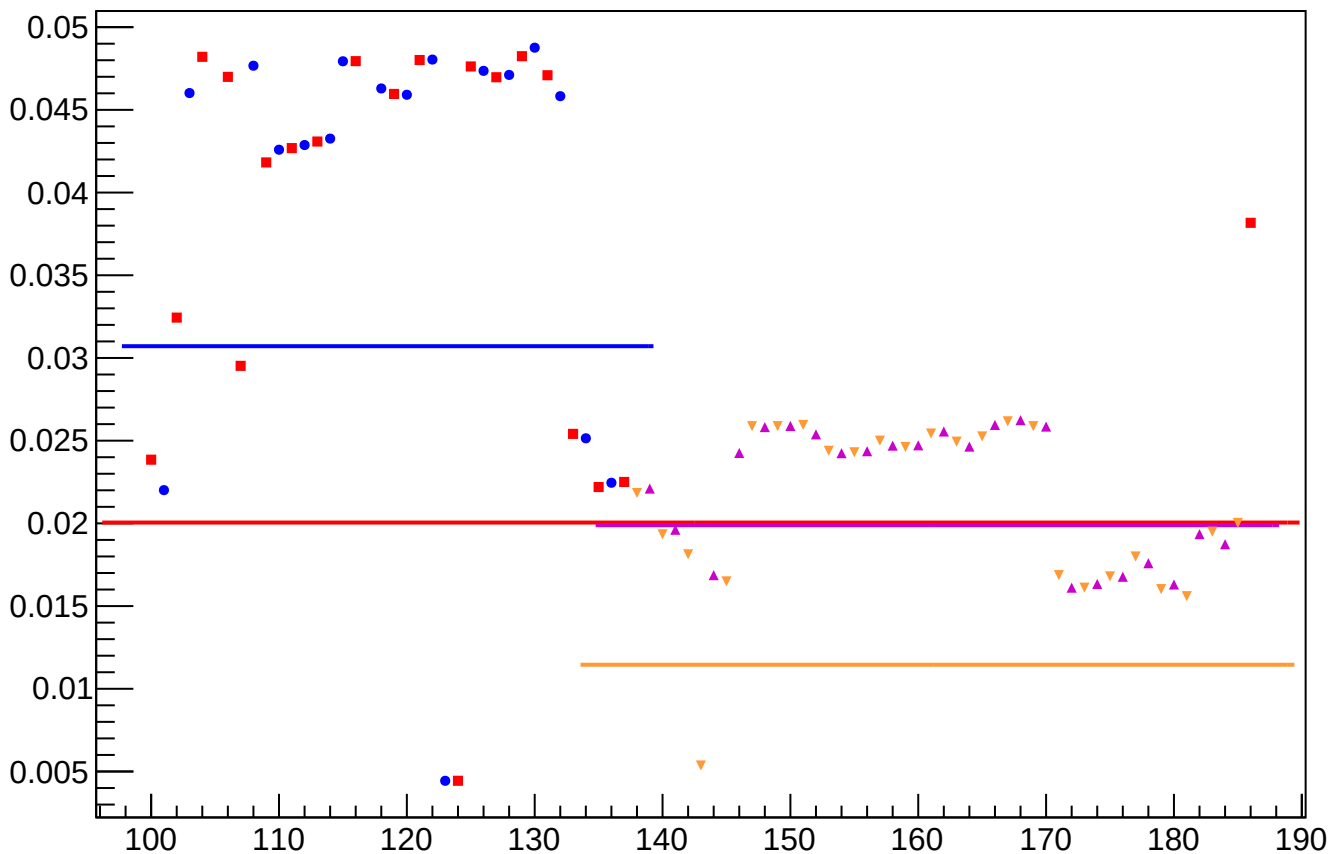
Right: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6094540.8/36

In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2499538.5/39

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5699075.3/44

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8370454.6/84

# yield\_atl2\_mean vs Slug, Sign Corrected



Right In: 0.031+/-0.000

$\chi^2/\text{NDF}$ : 21081896587.0/16

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: 0.024+/-0.000

$\chi^2/\text{NDF}$ : 66074441556.1/36

Right Out: 0.020+/-0.000

$\chi^2/\text{NDF}$ : 39971268253.6/19

In: 0.022+/-0.000

$\chi^2/\text{NDF}$ : 32208265927.1/39

Out: 0.013+/-0.000

$\chi^2/\text{NDF}$ : 87737298444.8/44

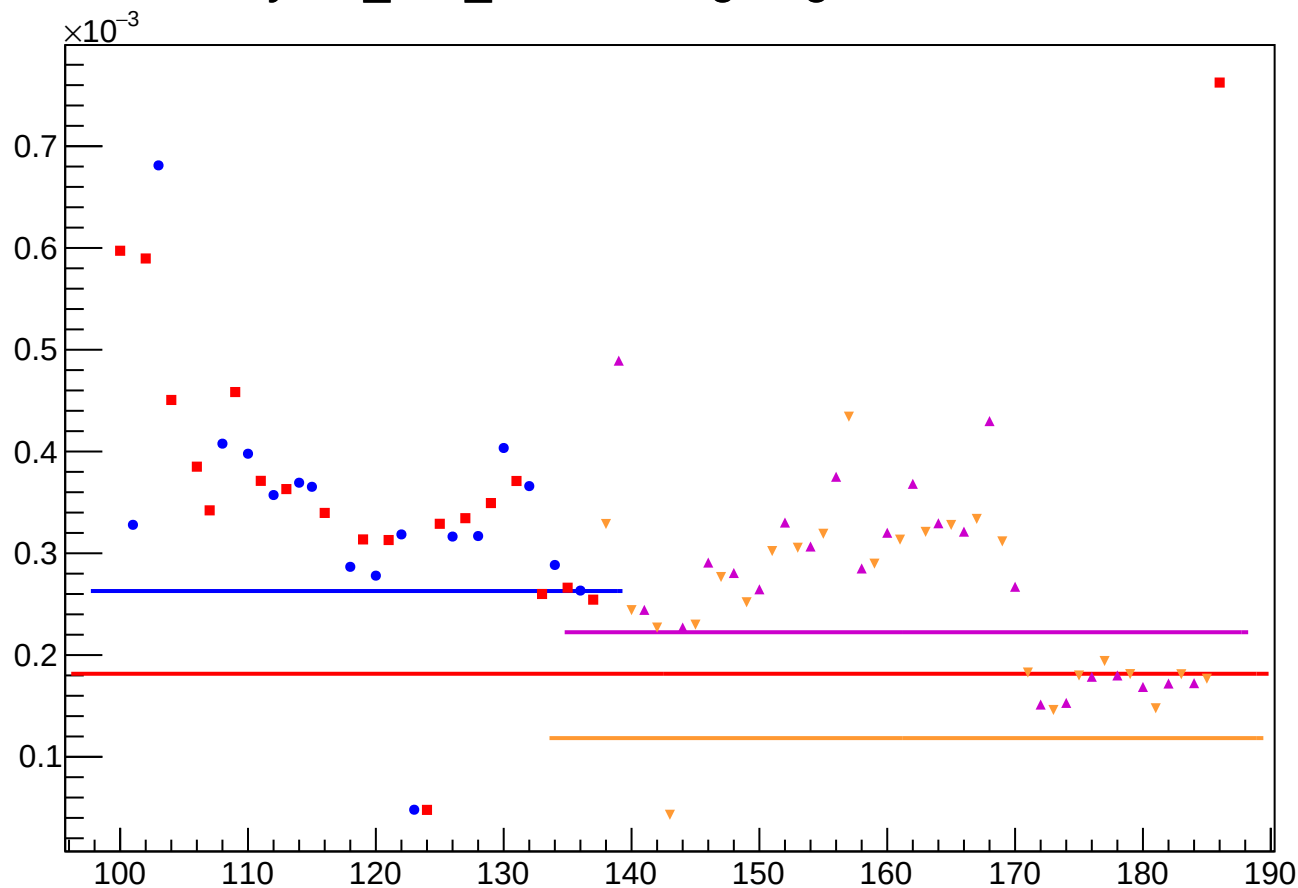
Left In: 0.020+/-0.000

$\chi^2/\text{NDF}$ : 4458790813.3/22

All: 0.015+/-0.000

$\chi^2/\text{NDF}$ : 141961669509.0

# yield\_atl2\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2393587.9/16

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :13563132.9/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5768953.0/19

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

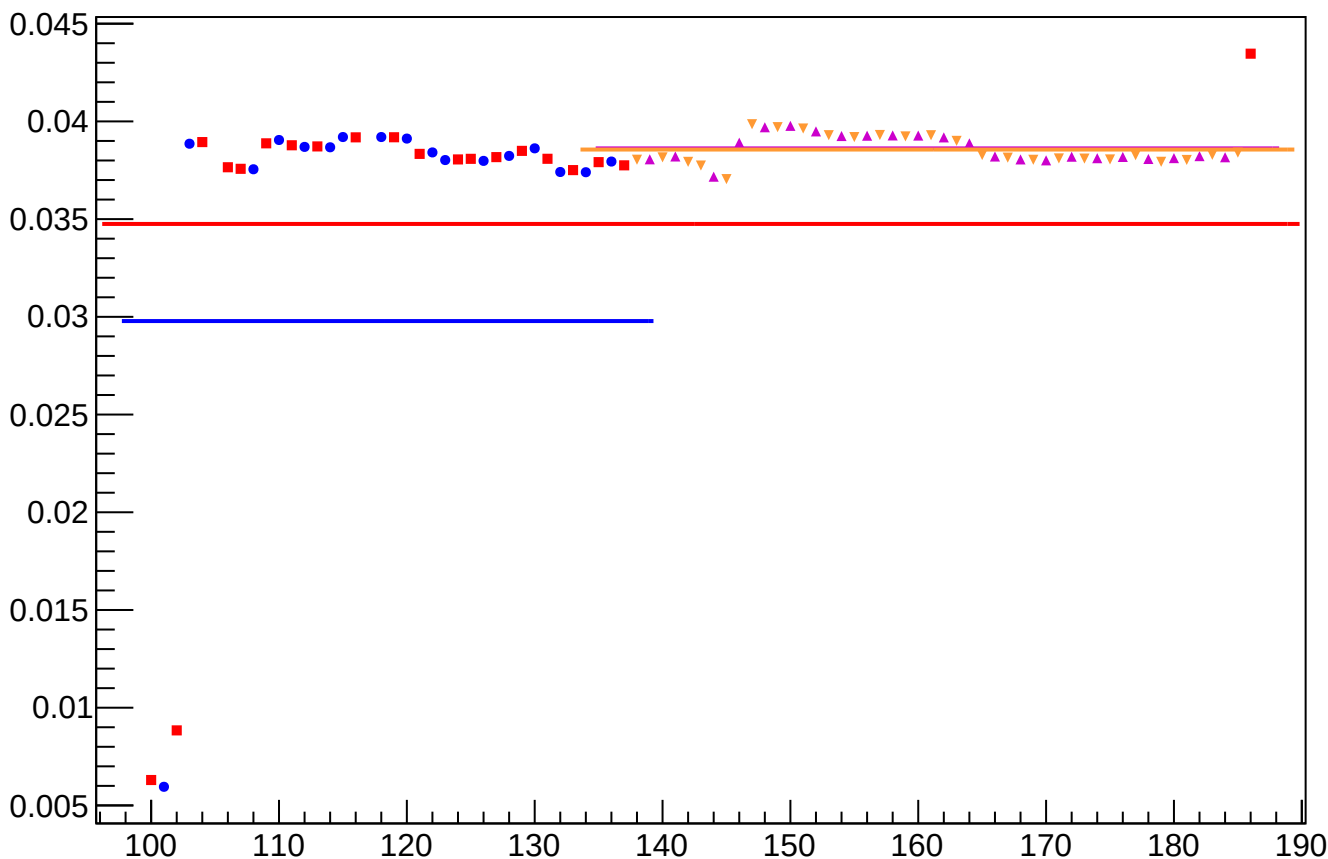
Right: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8746465.7/36

In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :5861406.4/39

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :20140234.9/44

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 31365925.8/84

# yield\_atr1\_mean vs Slug, Sign Corrected



Right In: 0.030+/-0.000

$\chi^2/\text{NDF}$ : 96939094269.8/16

Left: 0.039+/-0.000

$\chi^2/\text{NDF}$ : 1007039623.8/47

Left Out: 0.039+/-0.000

$\chi^2/\text{NDF}$ : 539468437.3/24

Right: 0.032+/-0.000

$\chi^2/\text{NDF}$ : 146891525484.5/36

Right Out: 0.035+/-0.000

$\chi^2/\text{NDF}$ : 44322675104.4/19

In: 0.036+/-0.000

$\chi^2/\text{NDF}$ : 122558573059.1/39

Out: 0.037+/-0.000

$\chi^2/\text{NDF}$ : 49403311587.3/44

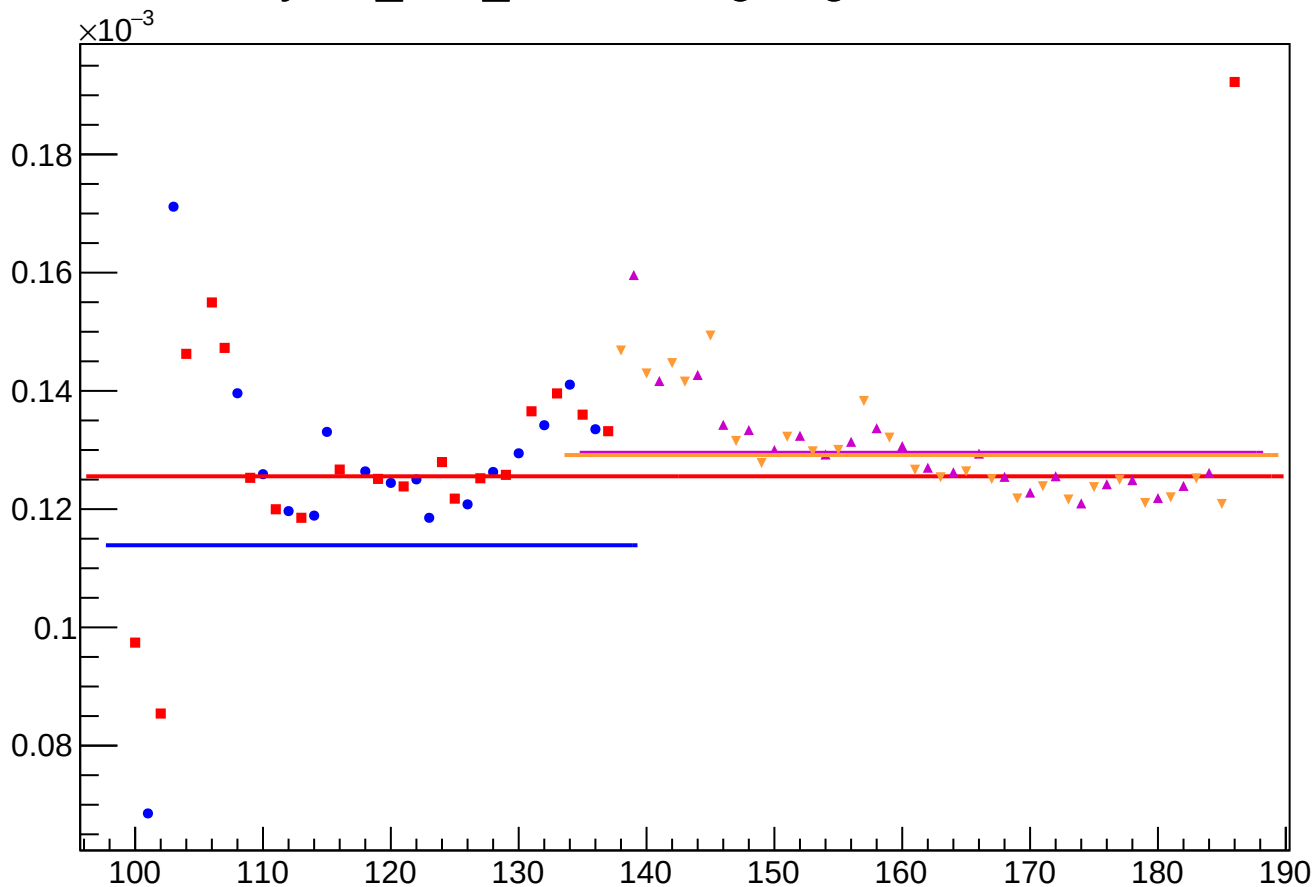
Left In: 0.039+/-0.000

$\chi^2/\text{NDF}$ : 465745982.6/22

All: 0.037+/-0.000

$\chi^2/\text{NDF}$ : 173971254665.3

# yield\_atr1\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 792994.9/16

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :130321.6/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 336474.9/19

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

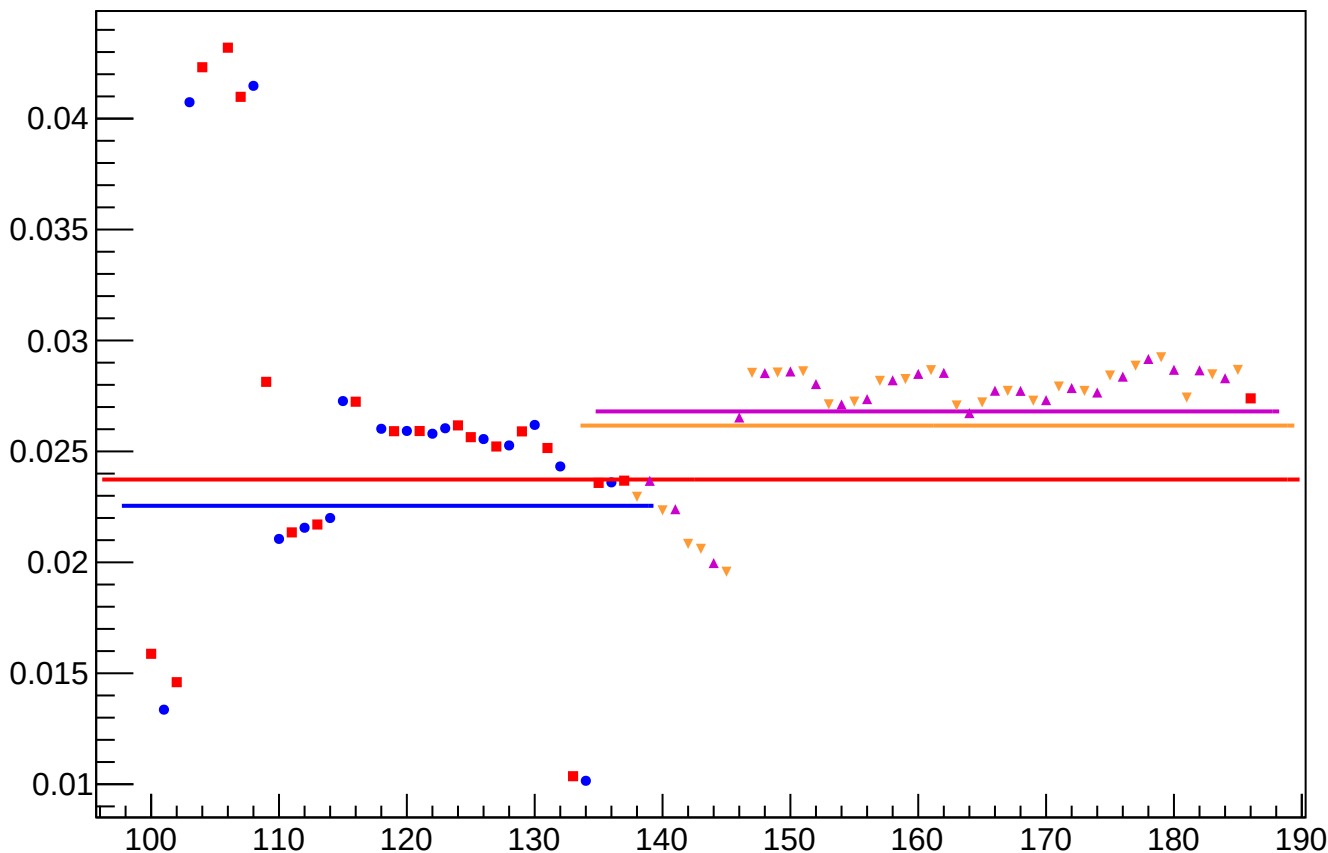
Right: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1191498.9/36

In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :1065379.3/39

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :474902.8/44

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1559032.1/84

# yield\_atr2\_mean vs Slug, Sign Corrected



Right In: 0.023+/-0.000  $\chi^2/\text{NDF}$ : 4235847516.4/16

Left Out: 0.026+/-0.000  $\chi^2/\text{NDF}$ : 2056710635.1/24

Right Out: 0.024+/-0.000  $\chi^2/\text{NDF}$ : 5661274443.5/19

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

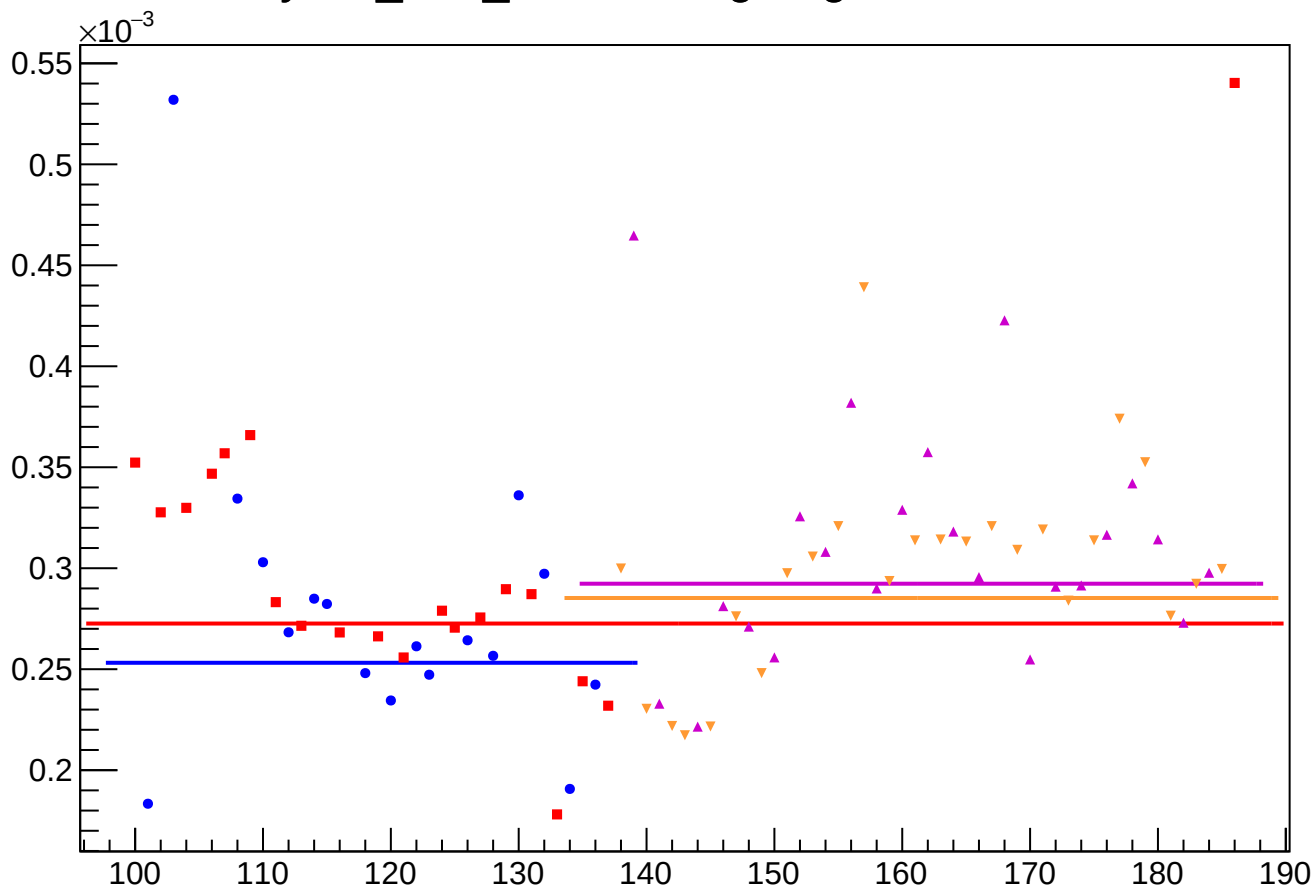
Right: 0.023+/-0.000  $\chi^2/\text{NDF}$ : 9958955861.8/36

In: 0.025+/-0.000  $\chi^2/\text{NDF}$ : 6662492696.7/39

Out: 0.025+/-0.000  $\chi^2/\text{NDF}$ : 8074879791.4/44

All: 0.025+/-0.000  $\chi^2/\text{NDF}$ : 14737470442.6/80

# yield\_atr2\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 626352.9/16

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :813464.1/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 613334.2/19

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  $\chi^2/\text{NDF}$ : 1272935.1/36

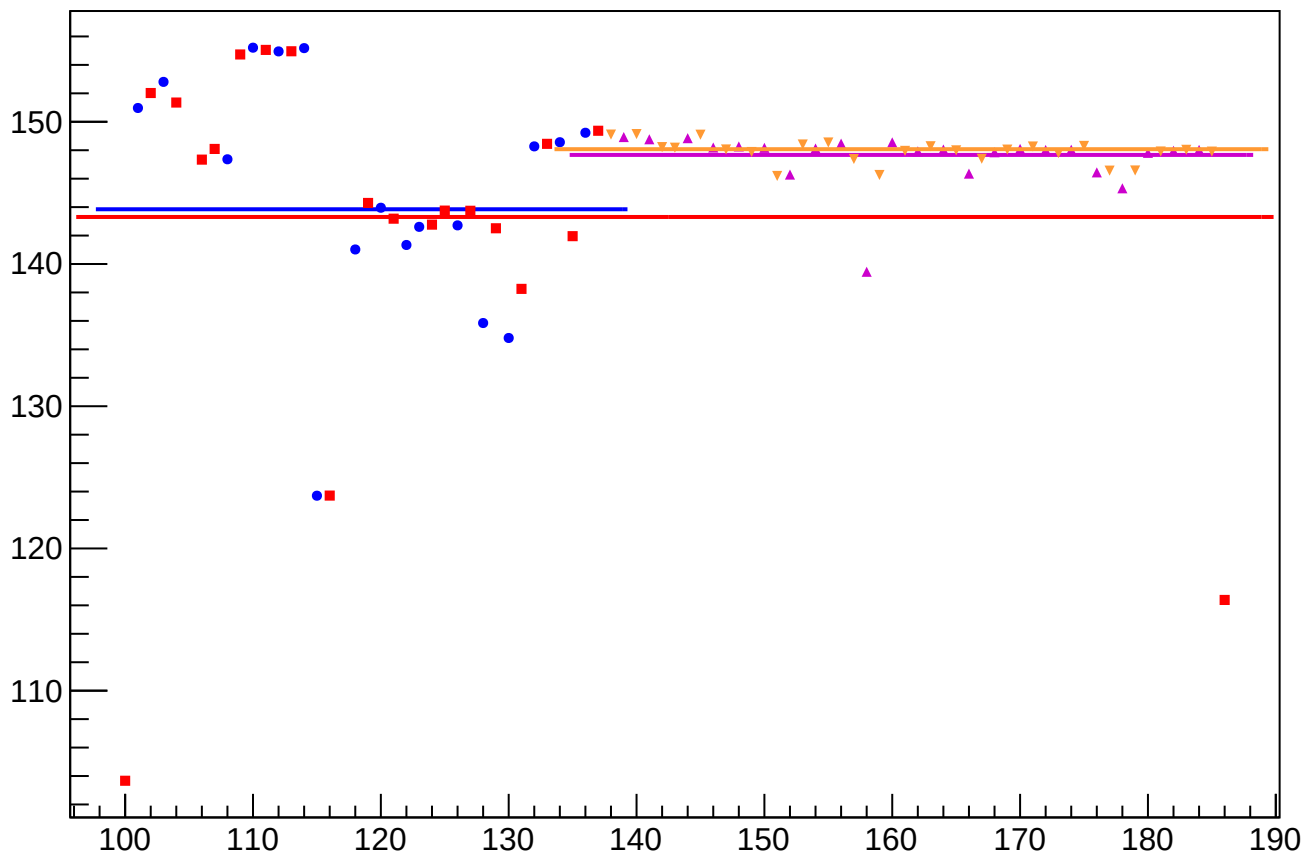
In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :1710609.4/39

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :1446132.5/44

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3157818.3/84



# yield\_bcm\_an\_ds\_mean vs Slug, Sign Corrected



Right In: 143.849 $\pm$ 0.000  $\chi^2$ /NDF: 3450807407.9/16

Left Out: 148.073 $\pm$ 0.000  $\chi^2$ /NDF: 65614067.4/24

Right Out: 143.307 $\pm$ 0.000  $\chi^2$ /NDF: 6071206706.2/19

Left In: 147.670 $\pm$ 0.000  $\chi^2$ /NDF: 345222604.4/22

Left: 147.879 $\pm$ 0.000  $\chi^2$ /NDF: 418091602.5/47

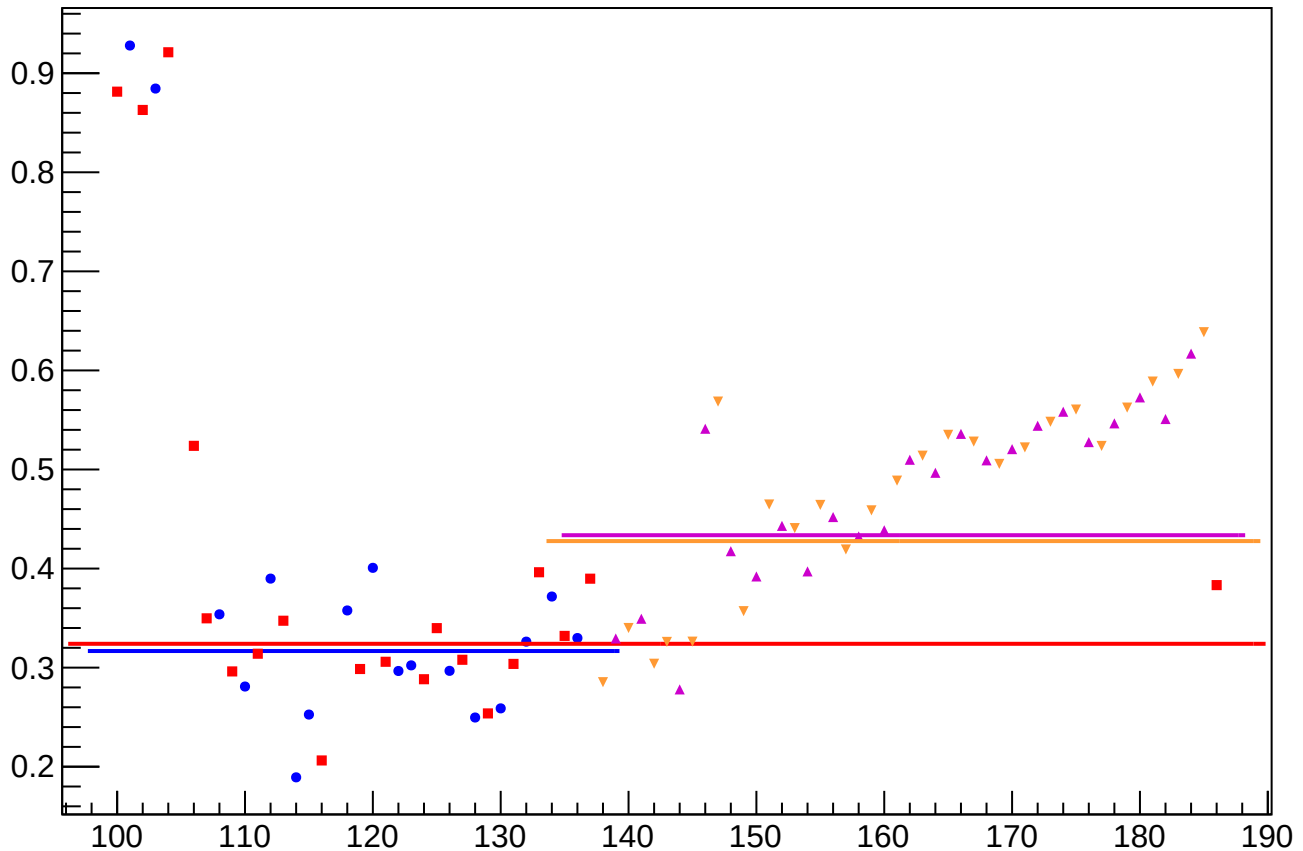
Right: 143.569 $\pm$ 0.000  $\chi^2$ /NDF: 9530393428.6/36

In: 146.182 $\pm$ 0.000  $\chi^2$ /NDF: 4287806155.2/39

Out: 146.220 $\pm$ 0.000  $\chi^2$ /NDF: 6956108069.1/44

All: 146.202 $\pm$ 0.000  $\chi^2$ /NDF: 11244022595.

# yield\_bcm\_an\_ds\_rms vs Slug, Sign Corrected



Right In: 0.317 $\pm$ 0.000  $\chi^2$ /NDF: 1260273.9/16

Left Out: 0.428 $\pm$ 0.000  $\chi^2$ /NDF:1896808.7/24

Right Out: 0.324 $\pm$ 0.000  $\chi^2$ /NDF: 1234803.9/19

Left In: 0.434 $\pm$ 0.000  $\chi^2$ /NDF:1496343.5/22

Left: 0.431 $\pm$ 0.000  $\chi^2$ /NDF: 3396308.8/47

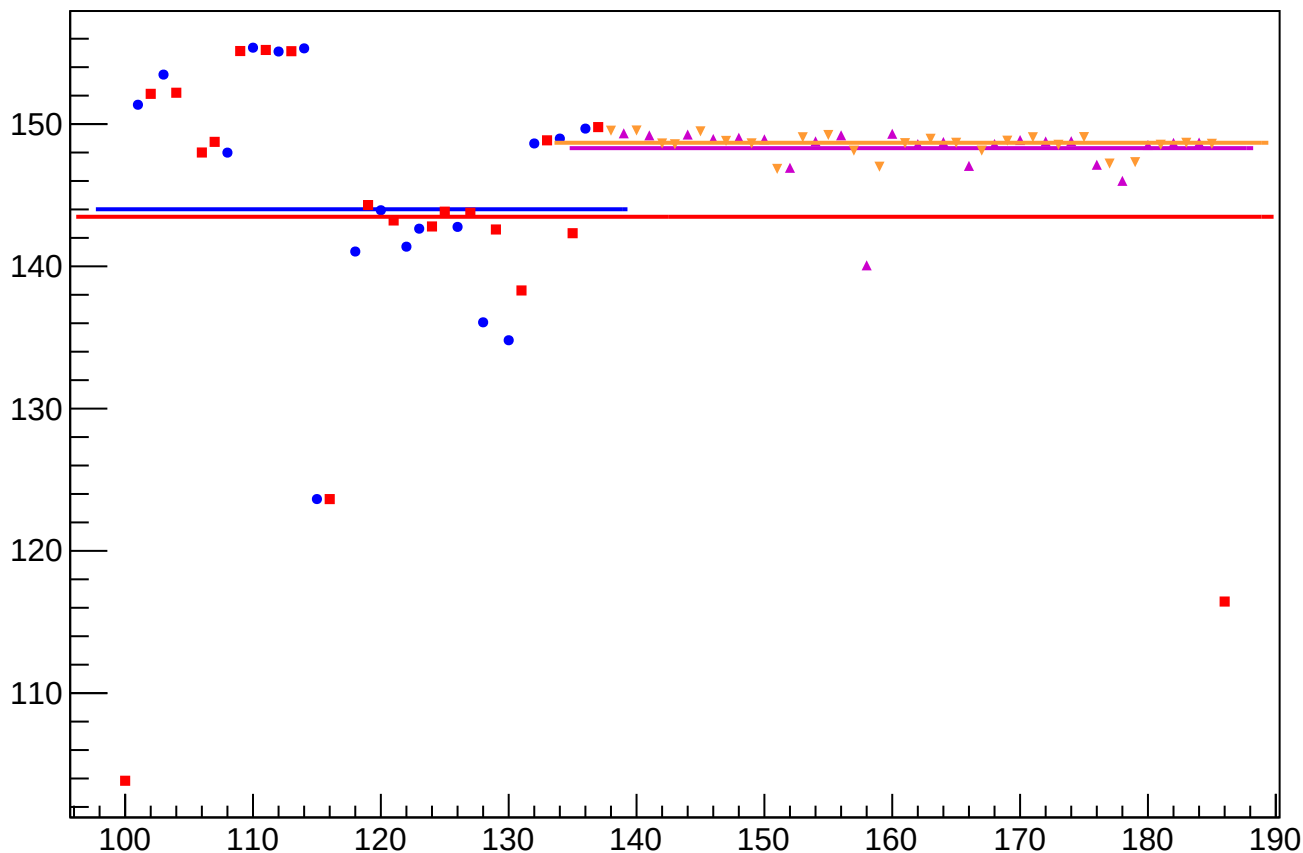
Right: 0.321 $\pm$ 0.000  $\chi^2$ /NDF: 2498110.8/36

In: 0.388 $\pm$ 0.000  $\chi^2$ /NDF:3677264.1/39

Out: 0.387 $\pm$ 0.000  $\chi^2$ /NDF:3907042.6/44

All: 0.388 $\pm$ 0.000  $\chi^2$ /NDF: 7584378.6/84

yield\_bcm\_an\_ds3\_mean vs Slug, Sign Corrected



Right In: 144.013 $\pm$ 0.000  $\chi^2$ /NDF: 3495287828.5/16

Left Out: 148.686 $\pm$ 0.000  $\chi^2$ /NDF: 52218185.1/24

Right Out: 143.484 $\pm$ 0.000  $\chi^2$ /NDF: 6057950414.0/19

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

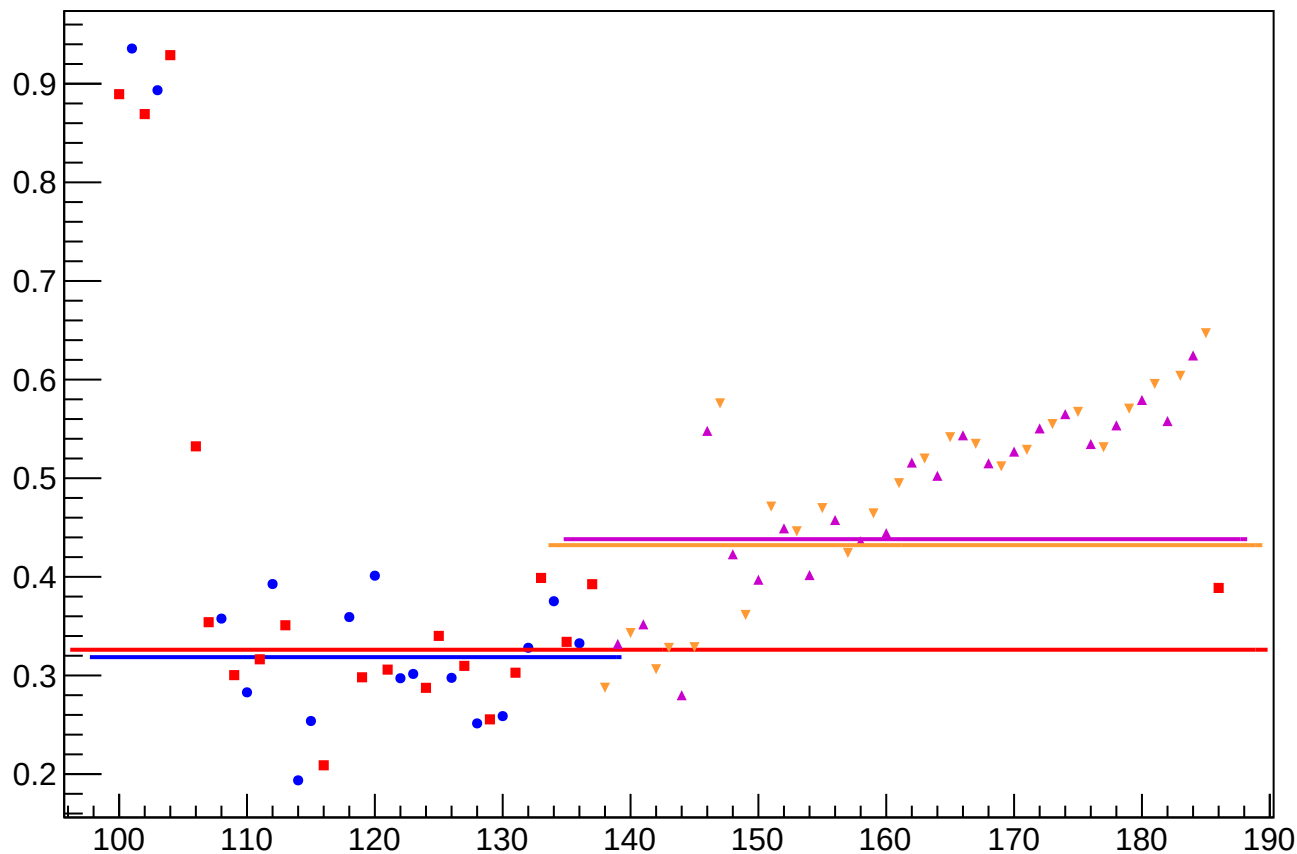
Right: 143.740 $\pm$ 0.000  $\chi^2$ /NDF: 9561102136.7/36

In: 146.624 $\pm$ 0.000  $\chi^2$ /NDF: 4440547621.8/39

Out: 146.654 $\pm$ 0.000  $\chi^2$ /NDF: 7070597464.5/44

All: 146.639 $\pm$ 0.000  $\chi^2$ /NDF: 11511207548.

# yield\_bcm\_an\_ds3\_rms vs Slug, Sign Corrected



Right In: 0.319 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1262045.4/16

Left Out: 0.432 $\pm$ 0.000  $\chi^2/\text{NDF}$ :1929031.5/24

Right Out: 0.326 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1238759.2/19

Left In: 0.438 $\pm$ 0.000  $\chi^2/\text{NDF}$ :1521893.6/22

Left: 0.435 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 3454164.8/47

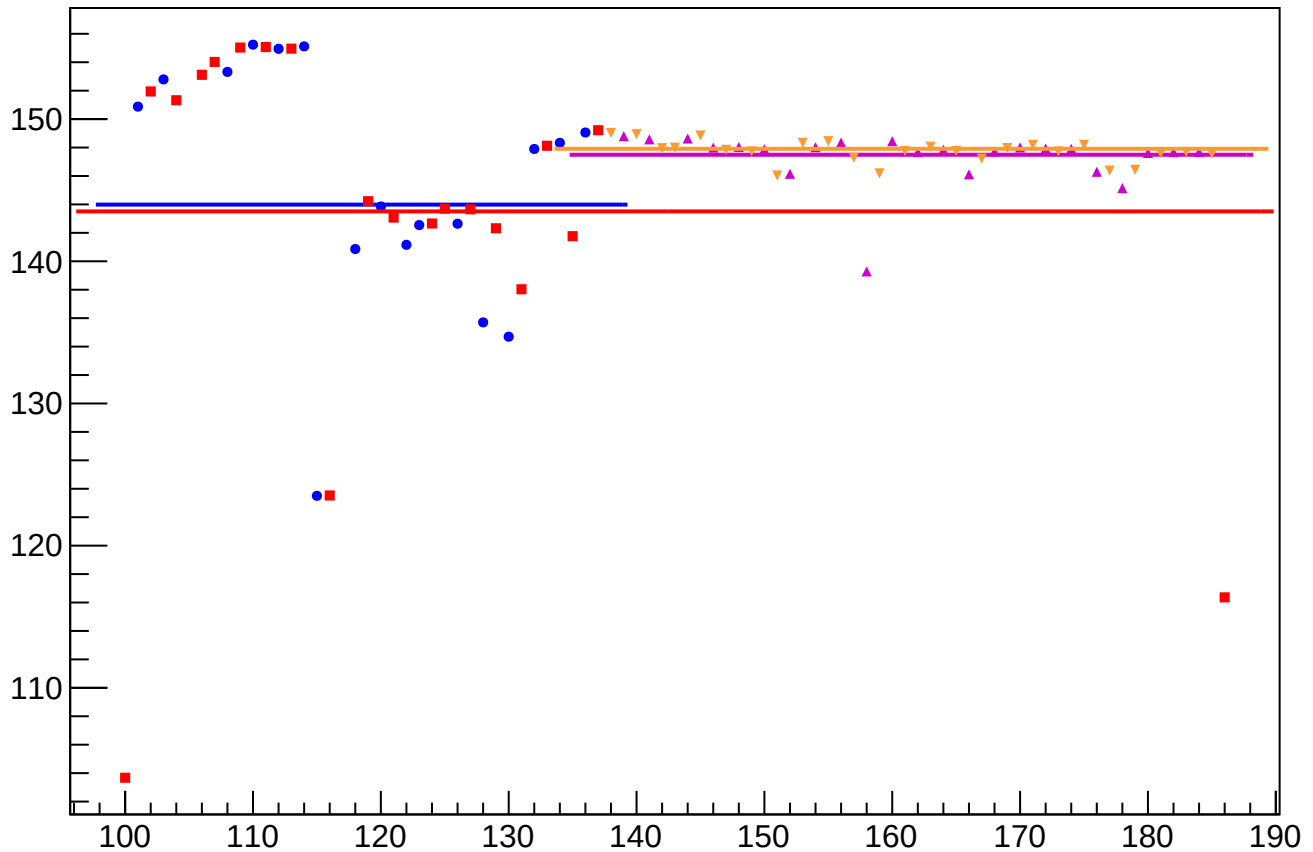
Right: 0.322 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2503979.2/36

In: 0.391 $\pm$ 0.000  $\chi^2/\text{NDF}$ :3733054.3/39

Out: 0.391 $\pm$ 0.000  $\chi^2/\text{NDF}$ :3965891.6/44

All: 0.391 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7699003.2/84

# yield\_bcm\_an\_us\_mean vs Slug, Sign Corrected



Right In: 143.986 $\pm$ 0.000  $\chi^2$ /NDF: 3664472942.4/16

Left Out: 147.911 $\pm$ 0.000  $\chi^2$ /NDF: 64412407.9/24

Right Out: 143.508 $\pm$ 0.000  $\chi^2$ /NDF: 6406536791.6/19

Left In: 147.493 $\pm$ 0.000  $\chi^2$ /NDF: 343978473.2/22

Left: 147.709 $\pm$ 0.000  $\chi^2$ /NDF: 416149781.4/47

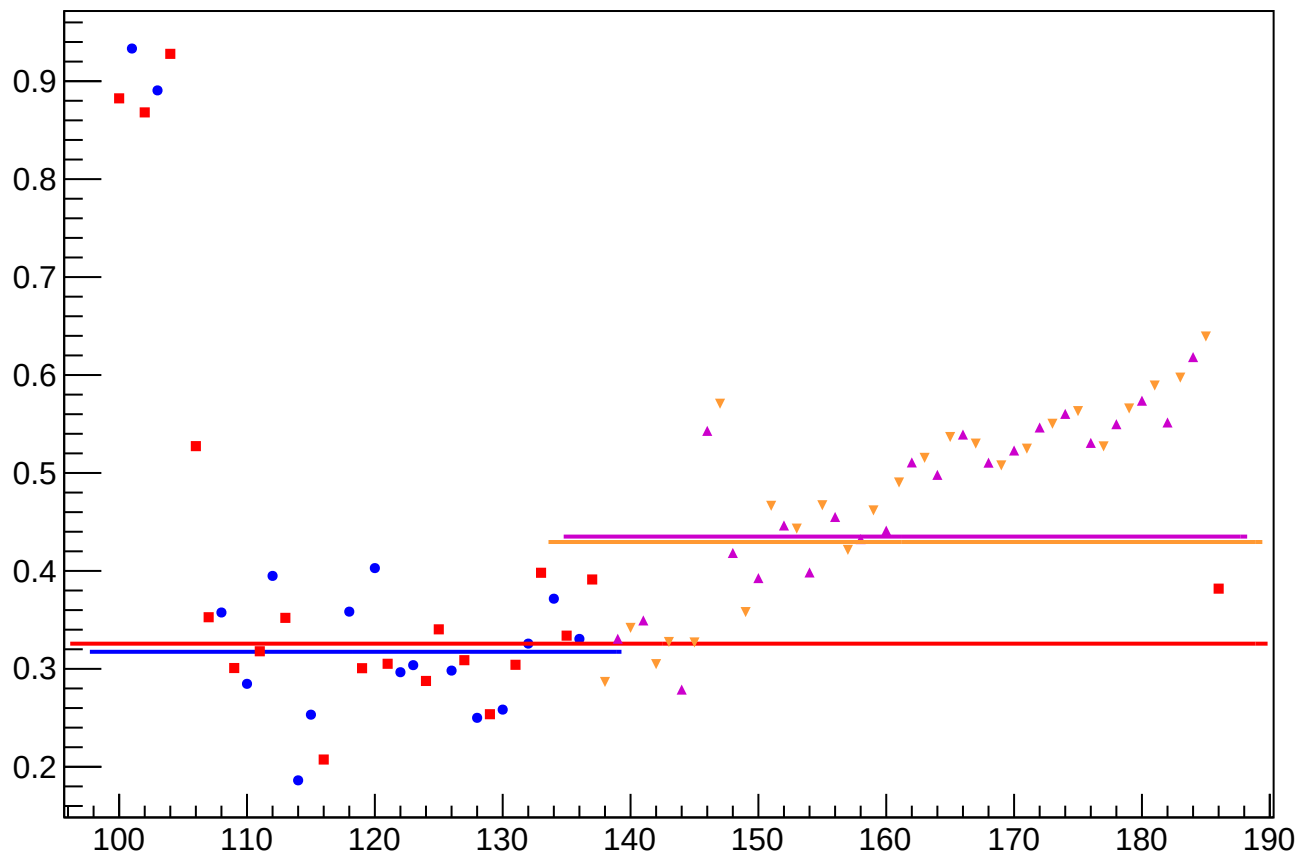
Right: 143.739 $\pm$ 0.000  $\chi^2$ /NDF: 10077452693.1/36

In: 146.127 $\pm$ 0.000  $\chi^2$ /NDF: 4420254341.5/39

Out: 146.202 $\pm$ 0.000  $\chi^2$ /NDF: 7163533987.7/44

All: 146.165 $\pm$ 0.000  $\chi^2$ /NDF: 11584198300.0

# yield\_bcm\_an\_us\_rms vs Slug, Sign Corrected



Right In: 0.317+/-0.000  $\chi^2/\text{NDF}$ : 1274892.4/16

Left Out: 0.430+/-0.000  $\chi^2/\text{NDF}$ :1895701.4/24

Right Out: 0.326+/-0.000  $\chi^2/\text{NDF}$ : 1237766.4/19

Left In: 0.435+/-0.000  $\chi^2/\text{NDF}$ :1502712.5/22

Left: 0.432+/-0.000  $\chi^2/\text{NDF}$ : 3401133.5/47

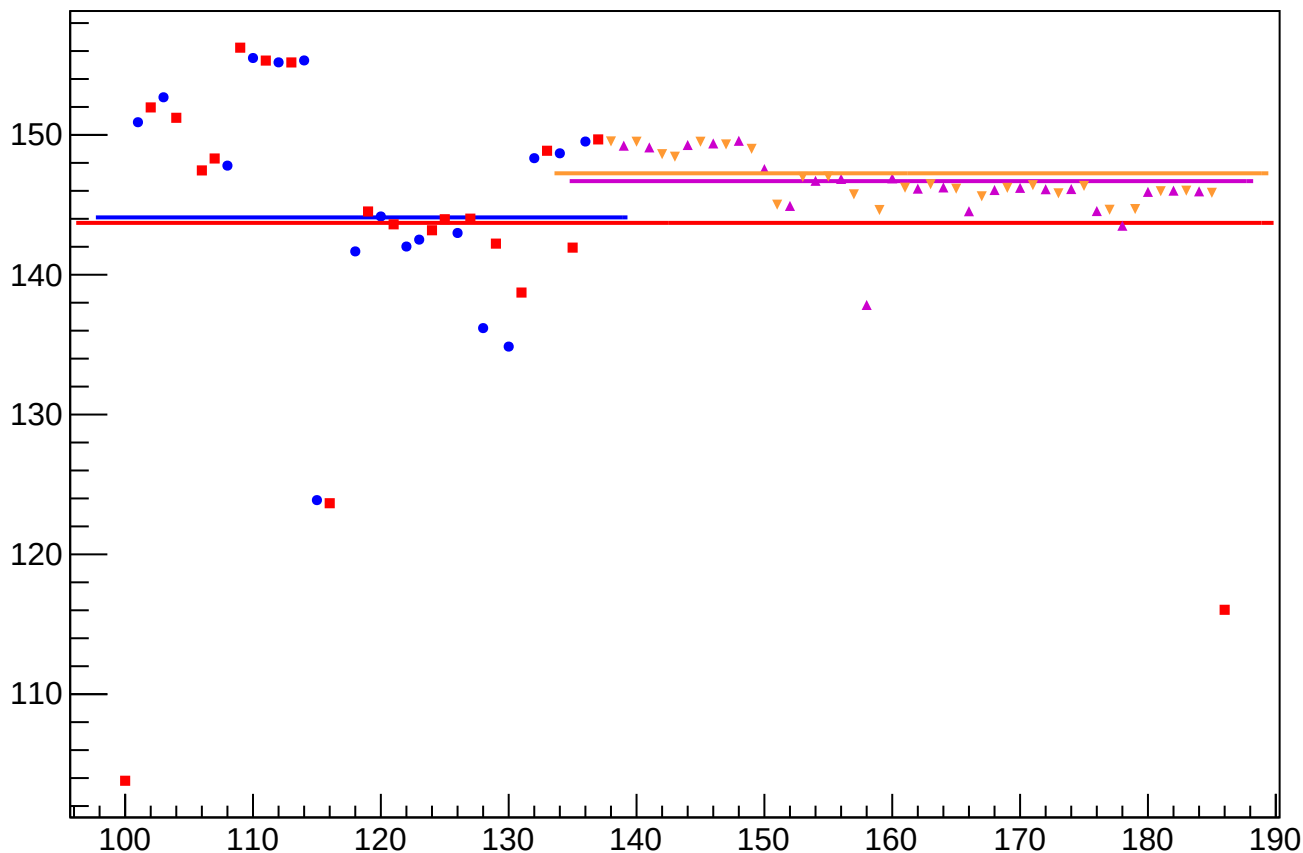
Right: 0.322+/-0.000  $\chi^2/\text{NDF}$ : 2516545.9/36

In: 0.389+/-0.000  $\chi^2/\text{NDF}$ :3703639.6/39

Out: 0.389+/-0.000  $\chi^2/\text{NDF}$ :3903283.6/44

All: 0.389+/-0.000  $\chi^2/\text{NDF}$ : 7606923.2/84

# yield\_bcm\_dg\_us\_mean vs Slug, Sign Corrected



Right In: 144.101 $\pm$ 0.000  $\chi^2$ /NDF: 3163250979.7/16

Left Out: 147.255 $\pm$ 0.000  $\chi^2$ /NDF: 262138049.8/24

Right Out: 143.709 $\pm$ 0.000  $\chi^2$ /NDF: 5819564853.4/19

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

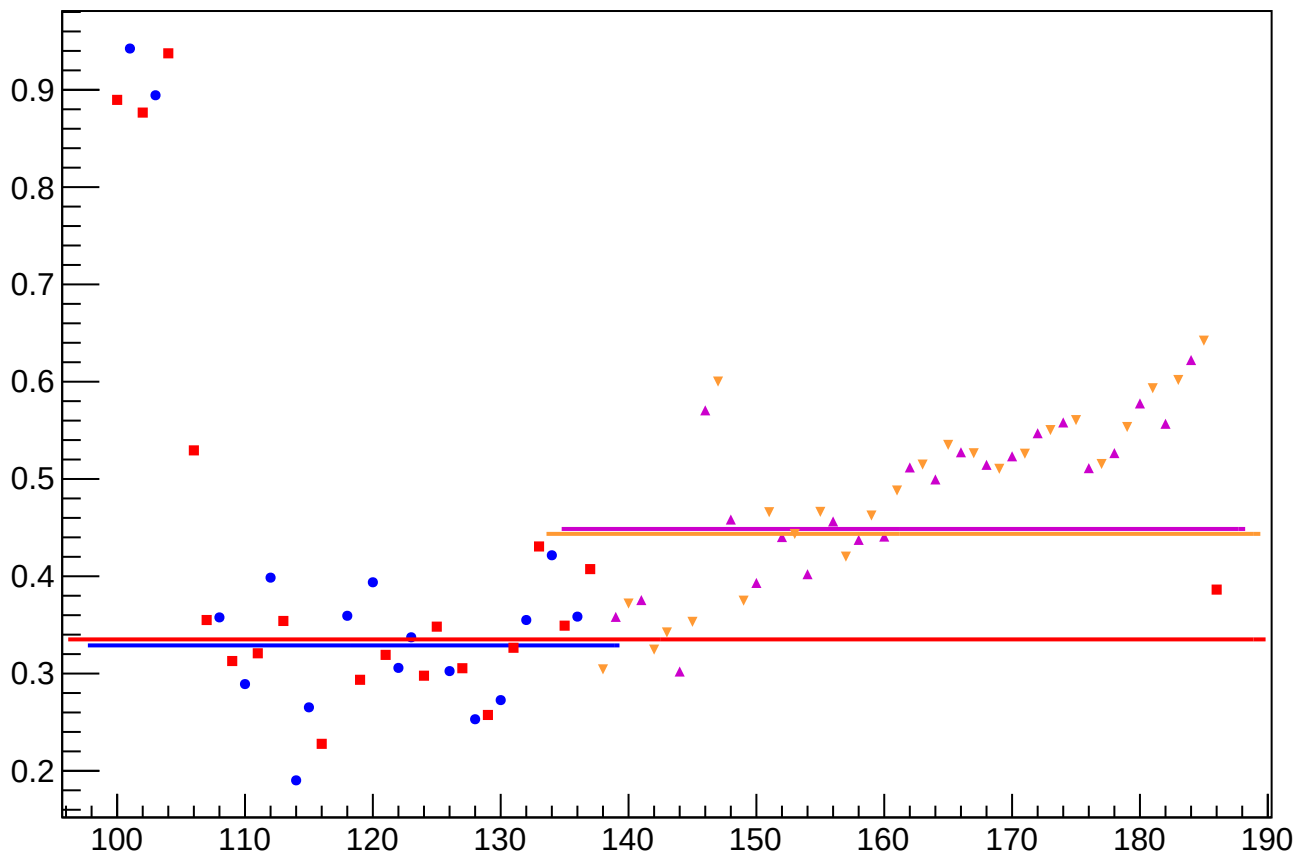
Right: 143.897 $\pm$ 0.000  $\chi^2$ /NDF: 8986893665.0/36

In: 145.699 $\pm$ 0.000  $\chi^2$ /NDF: 3932161223.1/39

Out: 145.881 $\pm$ 0.000  $\chi^2$ /NDF: 6506105060.0/44

All: 145.793 $\pm$ 0.000  $\chi^2$ /NDF: 10440537783.

# yield\_bcm\_dg\_us\_rms vs Slug, Sign Corrected



Right In: 0.329 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1259207.9/16

Left Out: 0.444 $\pm$ 0.000  $\chi^2/\text{NDF}$ :1483434.7/24

Right Out: 0.335 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1195083.7/19

Left In: 0.449 $\pm$ 0.000  $\chi^2/\text{NDF}$ :1132620.8/22

Left: 0.446 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2618207.6/47

Right: 0.332 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2456317.3/36

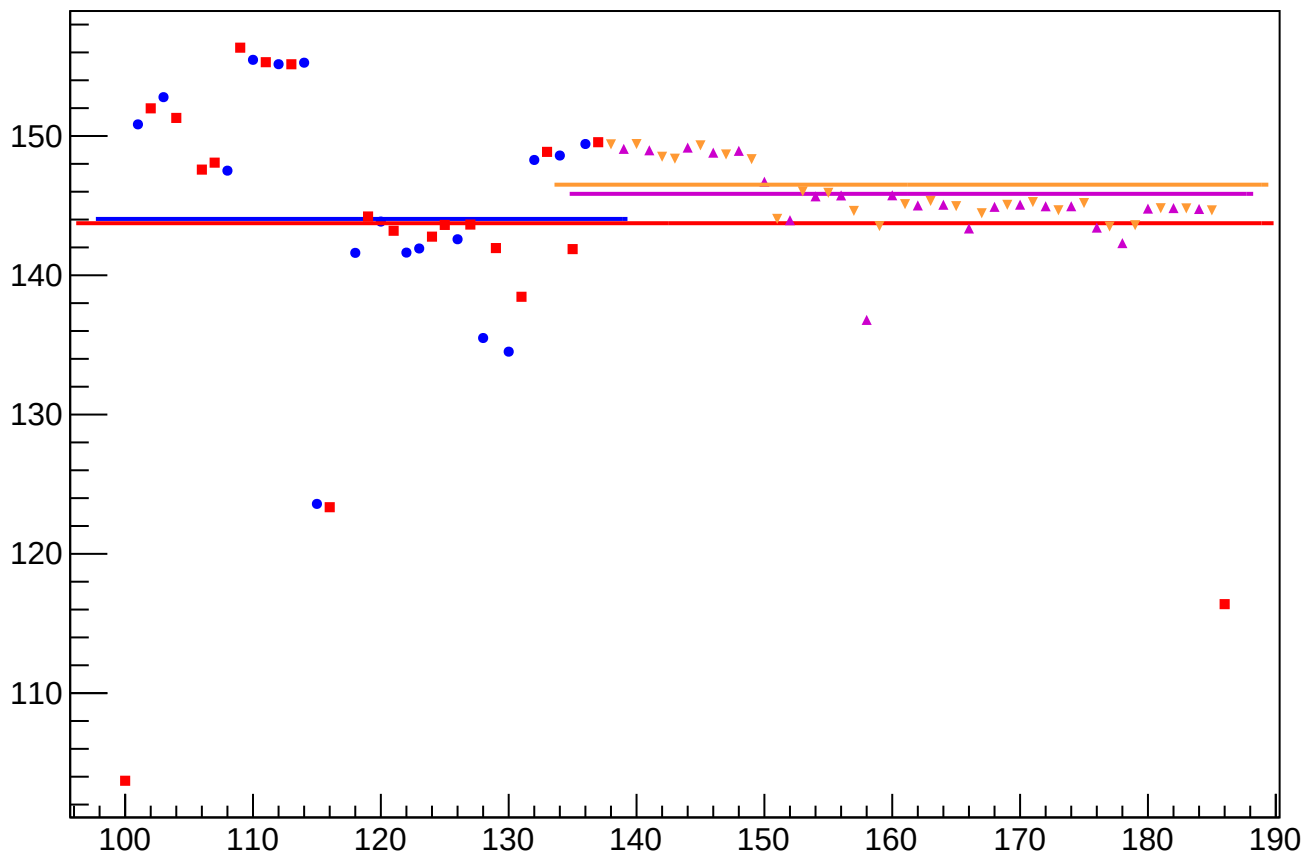
In: 0.403 $\pm$ 0.000  $\chi^2/\text{NDF}$ :3290644.0/39

Out: 0.402 $\pm$ 0.000  $\chi^2/\text{NDF}$ :3472836.8/44

All: 0.402 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 6763643.6/84



# yield\_bcm\_dg\_ds\_mean vs Slug, Sign Corrected



Right In: 144.046 $\pm$ 0.000  $\chi^2$ /NDF: 3282867390.8/16

Left Out: 146.505 $\pm$ 0.000  $\chi^2$ /NDF: 401688176.3/24

Right Out: 143.738 $\pm$ 0.000  $\chi^2$ /NDF: 5834953628.5/19

Left In: 145.847 $\pm$ 0.000  $\chi^2$ /NDF: 694764545.6/22

Left: 146.187 $\pm$ 0.000  $\chi^2$ /NDF: 1114638549.0/47

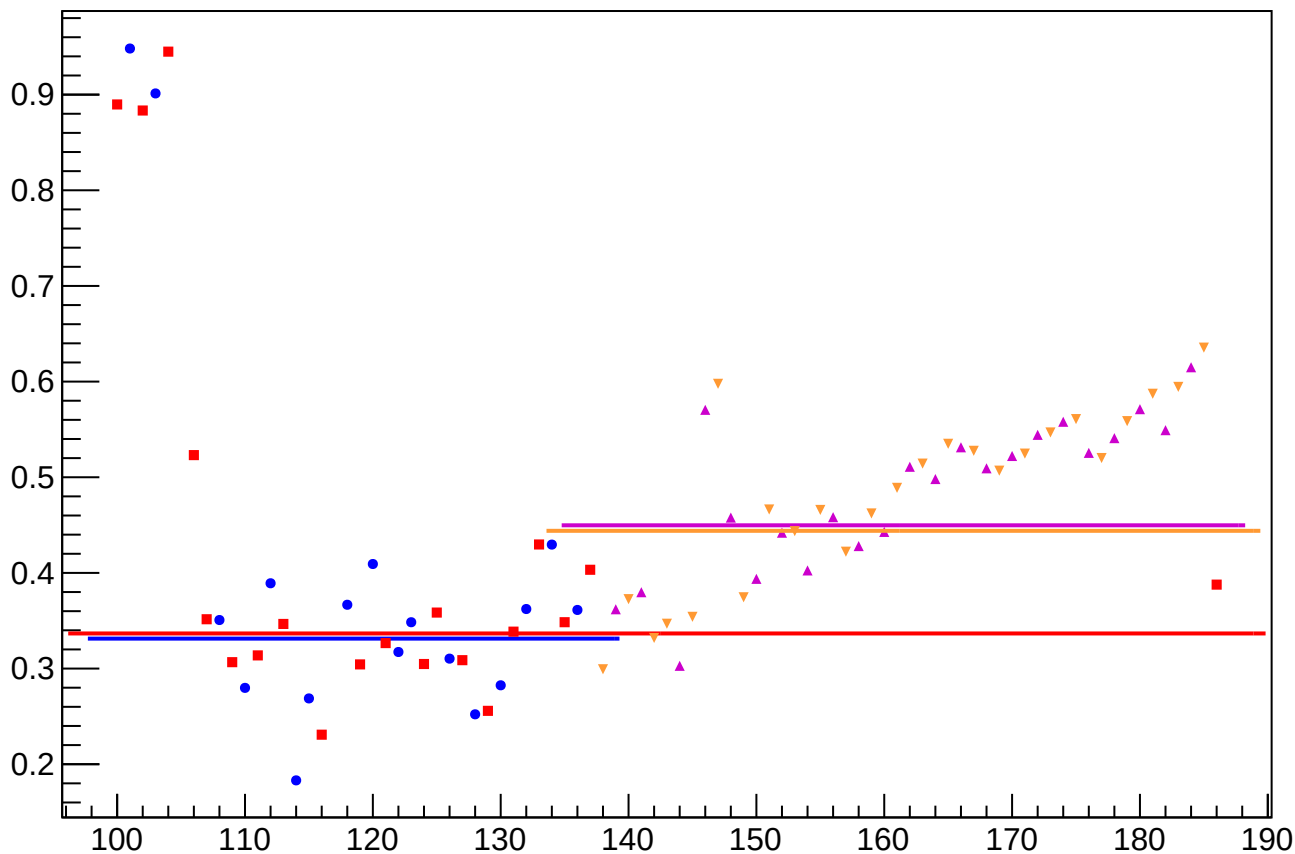
Right: 143.885 $\pm$ 0.000  $\chi^2$ /NDF: 9120287614.9/36

In: 145.160 $\pm$ 0.000  $\chi^2$ /NDF: 4078016148.5/39

Out: 145.438 $\pm$ 0.000  $\chi^2$ /NDF: 6493063274.8/44

All: 145.304 $\pm$ 0.000  $\chi^2$ /NDF: 10576352233.

# yield\_bcm\_dg\_ds\_rms vs Slug, Sign Corrected



Right In: 0.331 $\pm$ 0.000  $\chi^2$ /NDF: 1275232.9/16

Left Out: 0.444 $\pm$ 0.000  $\chi^2$ /NDF:1463293.5/24

Right Out: 0.337 $\pm$ 0.000  $\chi^2$ /NDF: 1183501.6/19

Left In: 0.450 $\pm$ 0.000  $\chi^2$ /NDF:1105405.0/22

Left: 0.447 $\pm$ 0.000  $\chi^2$ /NDF: 2571486.5/47

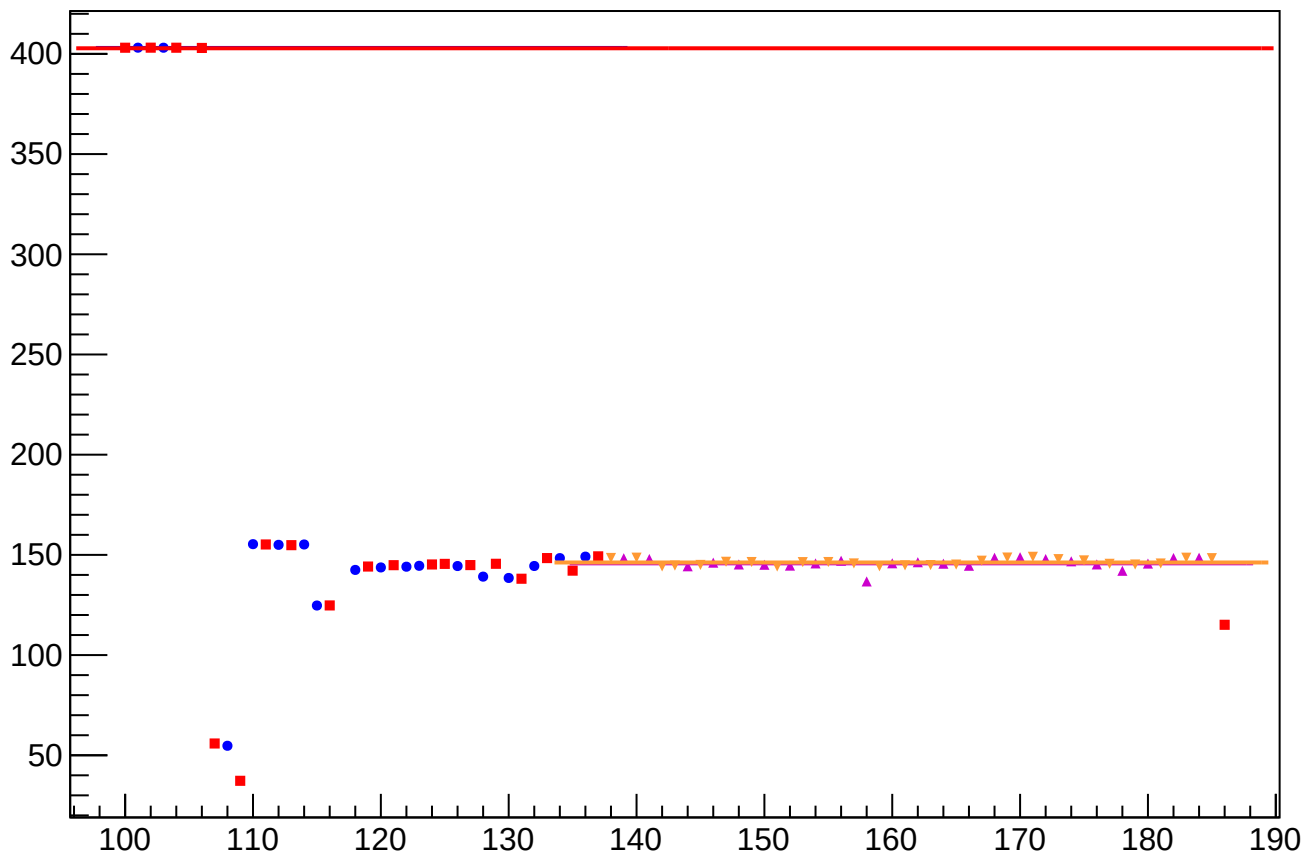
Right: 0.334 $\pm$ 0.000  $\chi^2$ /NDF: 2460250.8/36

In: 0.405 $\pm$ 0.000  $\chi^2$ /NDF:3249184.6/39

Out: 0.403 $\pm$ 0.000  $\chi^2$ /NDF:3418169.3/44

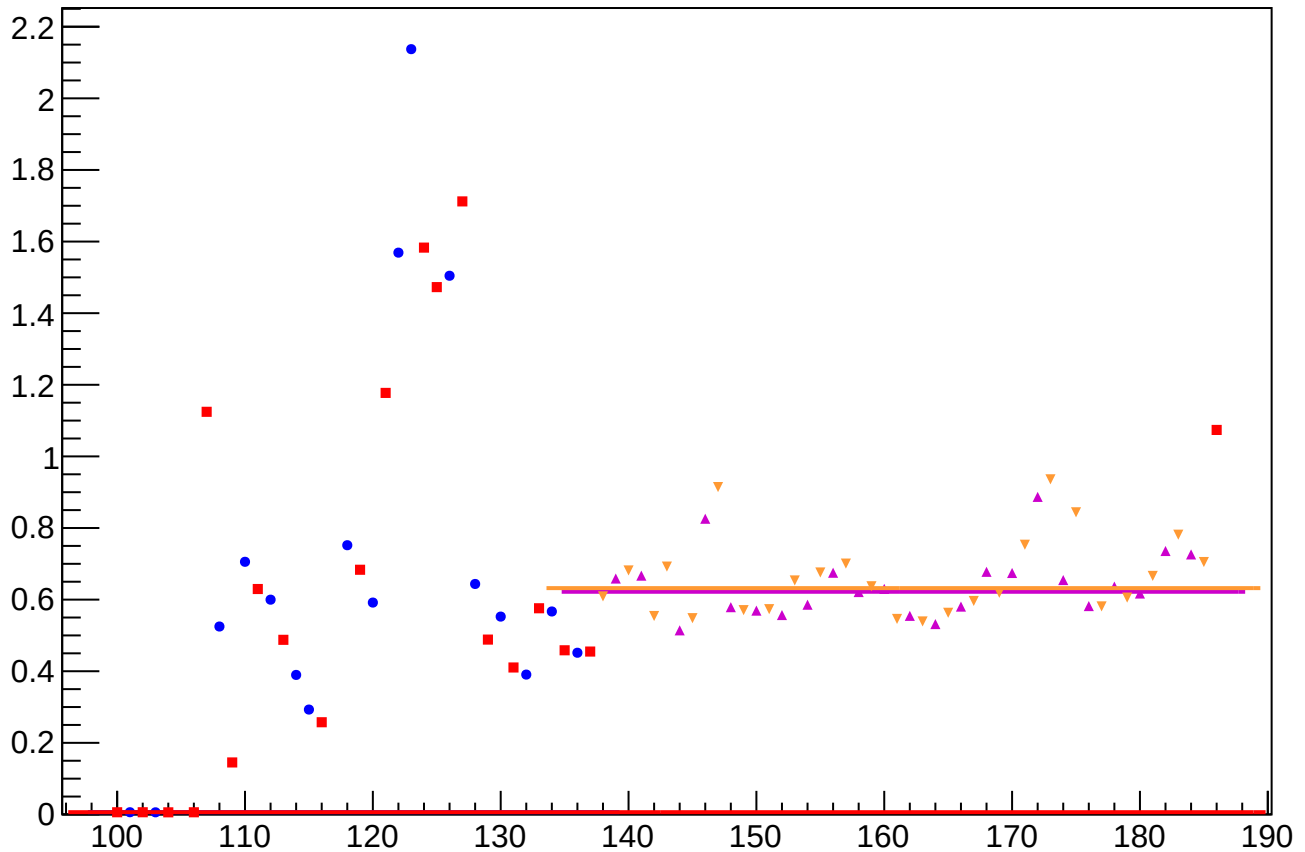
All: 0.404 $\pm$ 0.000  $\chi^2$ /NDF: 6667879.7/84

# yield\_cav4bQ\_mean vs Slug, Sign Corrected



|                            |                                          |                        |                                          |
|----------------------------|------------------------------------------|------------------------|------------------------------------------|
| Right In: 402.957+/-0.000  | $\chi^2/\text{NDF}$ : 1095567172365.3/16 | 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: 402.872+/-0.000 | $\chi^2/\text{NDF}$ : 4223602846582.9/16 |
| Right Out: 402.796+/-0.000 | $\chi^2/\text{NDF}$ : 3127606048178.3/19 | In: 402.664+/-0.000    | $\chi^2/\text{NDF}$ : 3445596825685.6/39 |
| Left In: 145.773+/-0.000   | $\chi^2/\text{NDF}$ : 207332354.9/22     | Out: 402.534+/-0.000   | $\chi^2/\text{NDF}$ : 5496941000955.5/47 |
|                            |                                          | All: 402.595+/-0.000   | $\chi^2/\text{NDF}$ : 894281642245.1/100 |

# yield\_cav4bQ\_rms vs Slug, Sign Corrected



Right In: 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 9047828.5/16

Left Out: 0.632 $\pm$ 0.000  $\chi^2$ /NDF: 614155.9/24

Right Out: 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 9792241.8/19

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

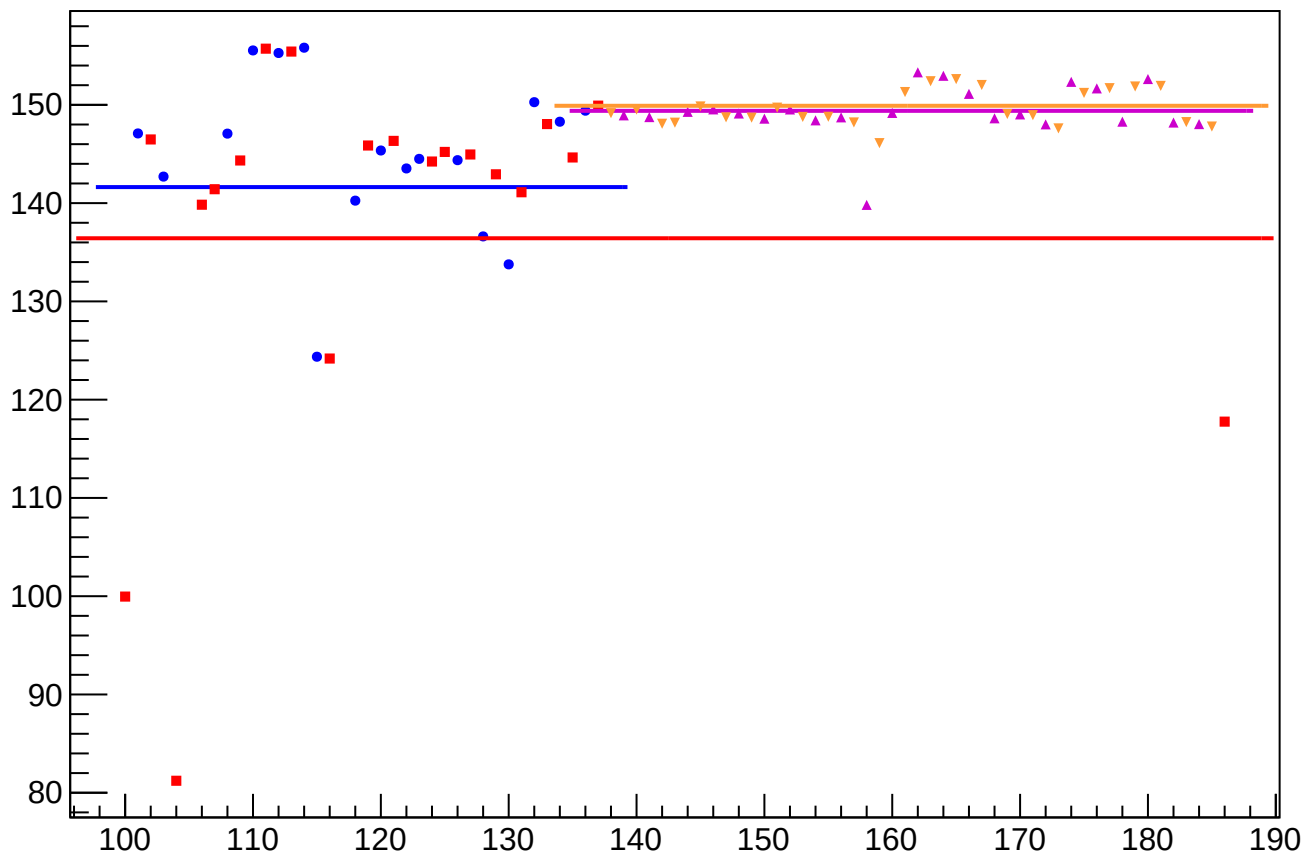
Right: 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 18840070.4/36

In: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 36378471.9/39

Out: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 38589880.5/44

All: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 74968492.9/84

# yield\_cav4cQ\_mean vs Slug, Sign Corrected



Right In: 141.632 $\pm$ 0.000  $\chi^2$ /NDF: 977430315.6/16

Left Out: 149.906 $\pm$ 0.000  $\chi^2$ /NDF: 163261802.4/24

Right Out: 136.425 $\pm$ 0.000  $\chi^2$ /NDF: 1552516405.5/19

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

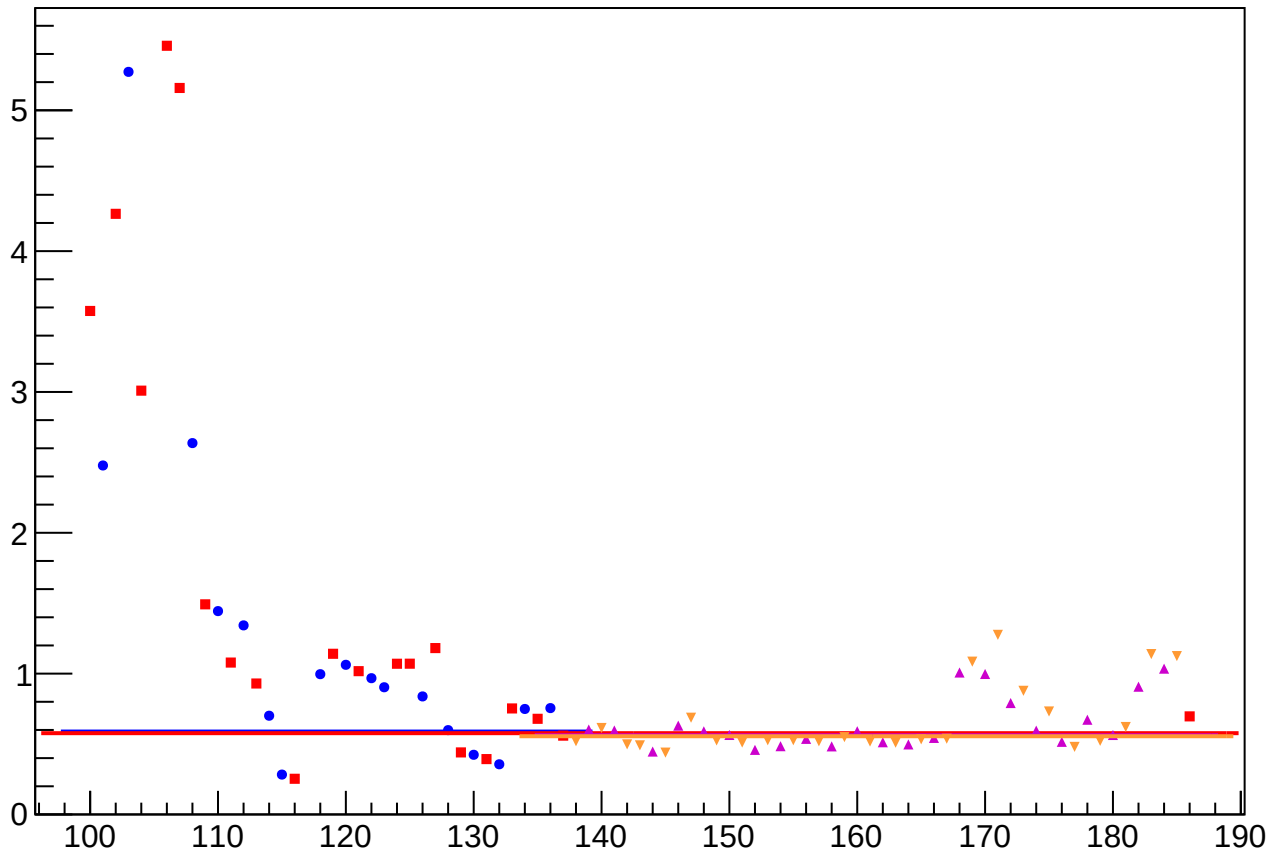
Right: 138.904 $\pm$ 0.000  $\chi^2$ /NDF: 2673620136.6/36

In: 148.031 $\pm$ 0.000  $\chi^2$ /NDF: 1916597777.9/39

Out: 147.488 $\pm$ 0.000  $\chi^2$ /NDF: 3375765802.5/44

All: 147.750 $\pm$ 0.000  $\chi^2$ /NDF: 5301180826.7

# yield\_cav4cQ\_rms vs Slug, Sign Corrected



Right In: 0.589 $\pm$ 0.000  $\chi^2$ /NDF: 3472432.4/16

Left Out: 0.555 $\pm$ 0.000  $\chi^2$ /NDF:1773380.1/24

Right Out: 0.577 $\pm$ 0.000  $\chi^2$ /NDF: 4665572.9/19

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

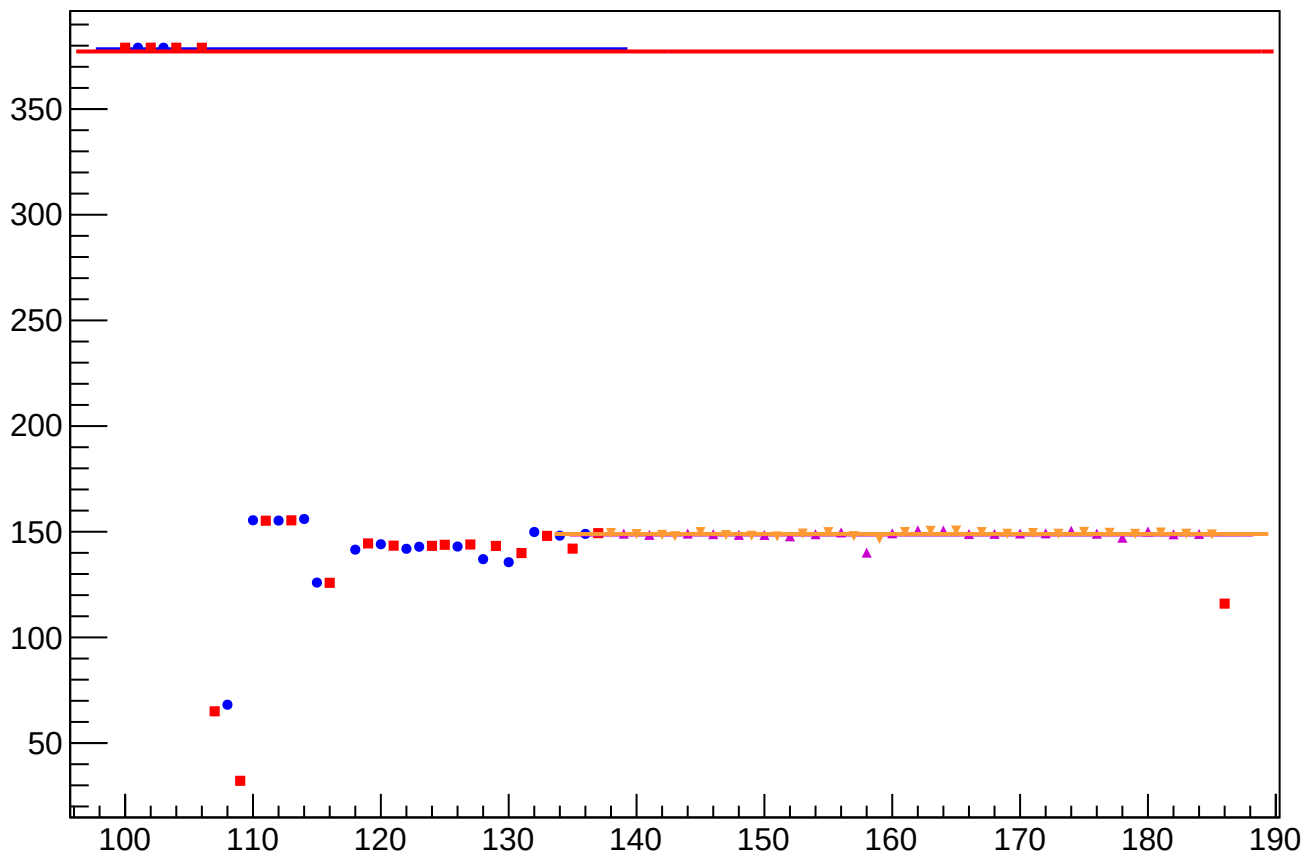
Right: 0.583 $\pm$ 0.000  $\chi^2$ /NDF: 8139421.9/36

In: 0.567 $\pm$ 0.000  $\chi^2$ /NDF:4795325.2/39

Out: 0.559 $\pm$ 0.000  $\chi^2$ /NDF:6447577.1/44

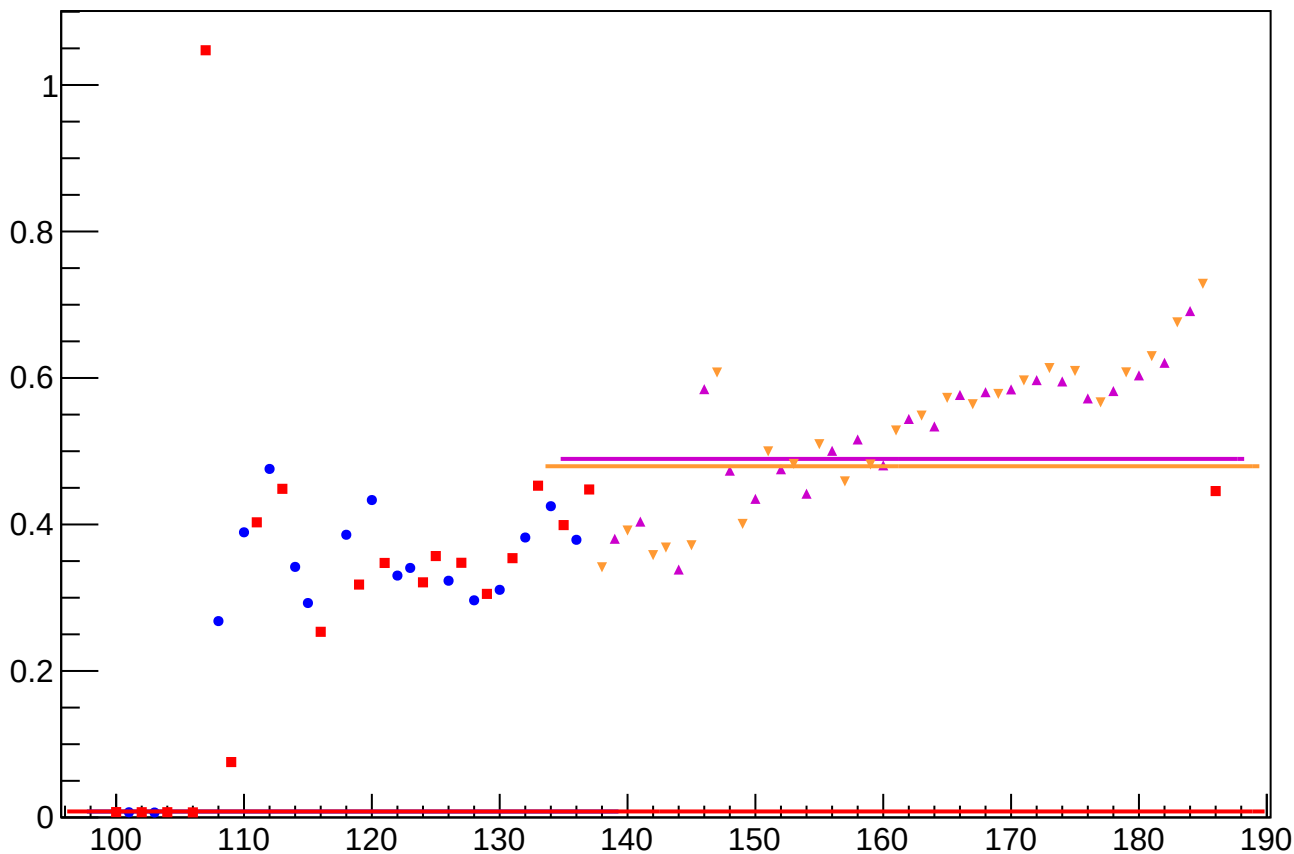
All: 0.563 $\pm$ 0.000  $\chi^2$ /NDF: 11246212.7/84

# yield\_cav4dQ\_mean vs Slug, Sign Corrected



|                            |                                          |                        |                                          |
|----------------------------|------------------------------------------|------------------------|------------------------------------------|
| Right In: 378.290+/-0.000  | $\chi^2/\text{NDF}$ : 2485728057854.8/16 | 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: 377.739+/-0.000 | $\chi^2/\text{NDF}$ : 10902299288090.1   |
| Right Out: 377.256+/-0.000 | $\chi^2/\text{NDF}$ : 8408997383265.7/19 | In: 377.108+/-0.000    | $\chi^2/\text{NDF}$ : 6100097559736.5/39 |
| Left In: 148.683+/-0.000   | $\chi^2/\text{NDF}$ : 253848207.3/22     | Out: 376.136+/-0.000   | $\chi^2/\text{NDF}$ : 12292038042048.3   |
|                            |                                          | All: 376.590+/-0.000   | $\chi^2/\text{NDF}$ : 183988610832.1     |

# yield\_cav4dQ\_rms vs Slug, Sign Corrected



Right In: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 9762871.0/16

Left Out: 0.479 $\pm$ 0.000  $\chi^2$ /NDF:1518765.9/24

Right Out: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 10179961.6/19

Left In: 0.490 $\pm$ 0.000  $\chi^2$ /NDF:1090532.3/22

Left: 0.484 $\pm$ 0.000  $\chi^2$ /NDF: 2616511.3/47

Right: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 19942928.0/36

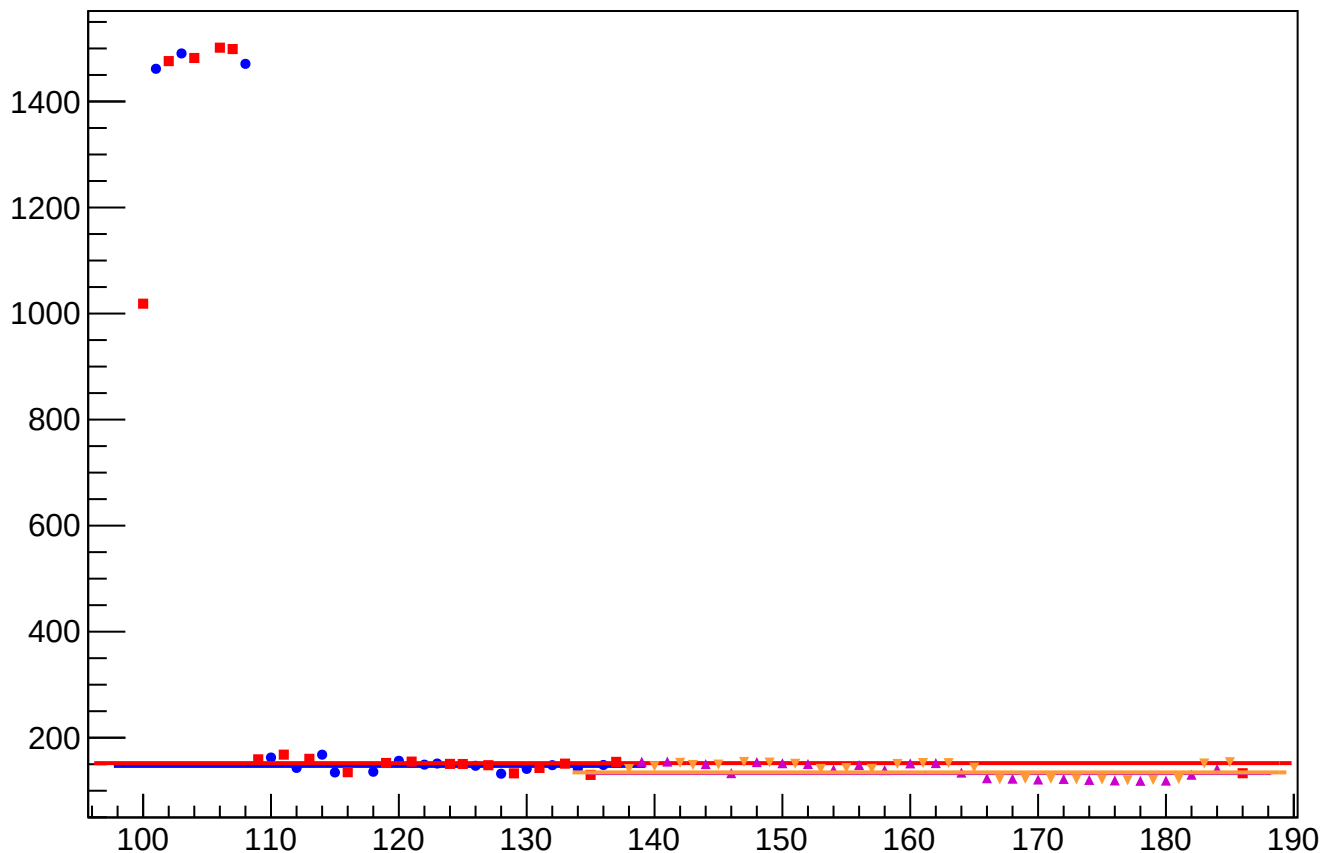
In: 0.011 $\pm$ 0.000  $\chi^2$ /NDF:42628009.1/39

Out: 0.011 $\pm$ 0.000  $\chi^2$ /NDF:44791218.0/44

All: 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 87419328.6/84

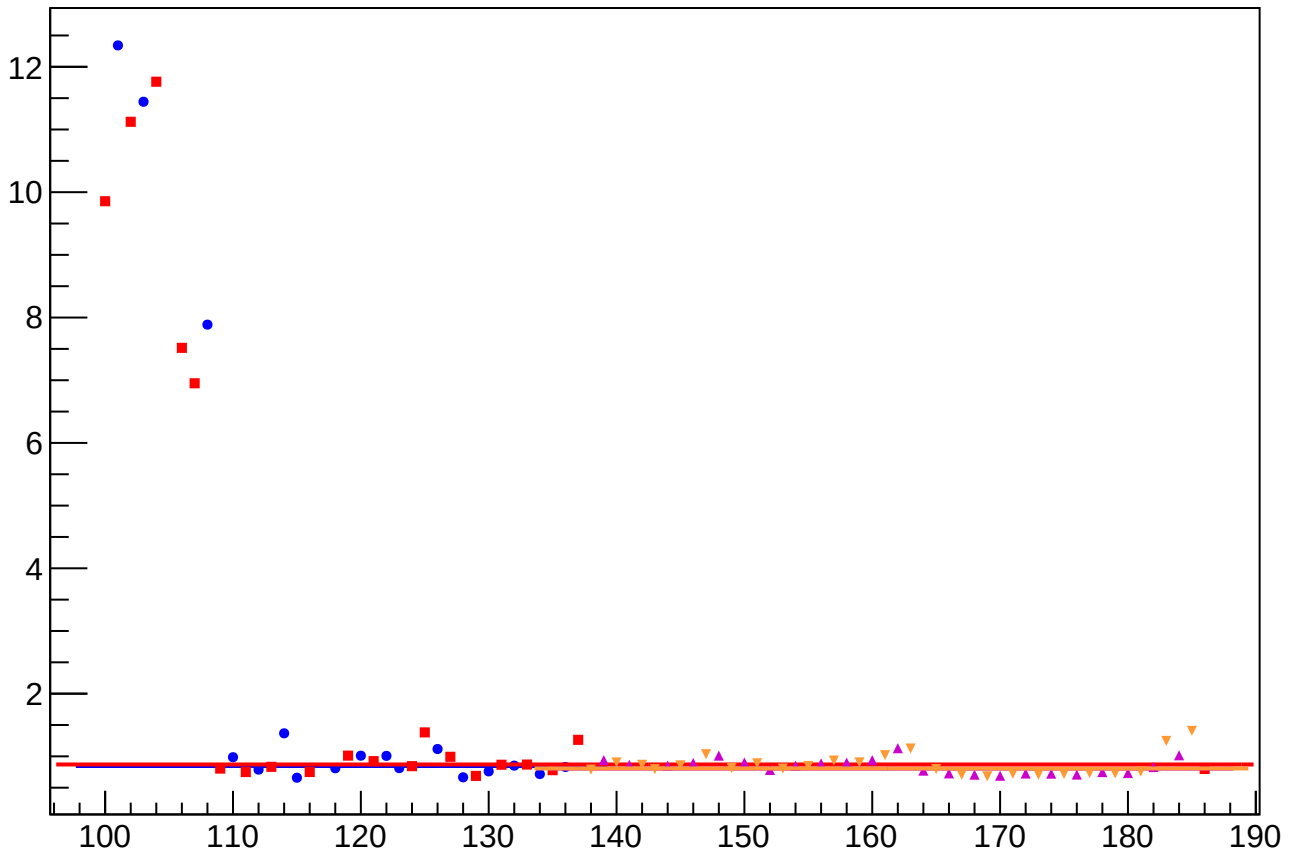


# yield\_bcm0l02\_mean vs Slug, Sign Corrected



Right In: 146.867 $\pm$ 0.000  $\chi^2$ /NDF: 24355015272.8/16  
 Left Out: 134.585 $\pm$ 0.000  $\chi^2$ /NDF: 4387324151.1/24  
 Right Out: 152.072 $\pm$ 0.000  $\chi^2$ /NDF: 33958775492.2/19  
 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: 149.581 $\pm$ 0.000  $\chi^2$ /NDF: 58388098245.6/36  
 In: 135.838 $\pm$ 0.000  $\chi^2$ /NDF: 29494642891.0/39  
 Out: 137.985 $\pm$ 0.000  $\chi^2$ /NDF: 39757577698.0/44  
 All: 136.935 $\pm$ 0.000  $\chi^2$ /NDF: 69318650970.0/100

# yield\_bcm0l02\_rms vs Slug, Sign Corrected



Right In: 0.846 $\pm$ 0.000  $\chi^2$ /NDF: 2668298.4/16

Left Out: 0.807 $\pm$ 0.000  $\chi^2$ /NDF:704181.3/24

Right Out: 0.870 $\pm$ 0.000  $\chi^2$ /NDF: 2833593.7/19

Left In: 0.805 $\pm$ 0.000  $\chi^2$ /NDF:479689.4/22

Left: 0.806 $\pm$ 0.000  $\chi^2$ /NDF: 1183976.9/47

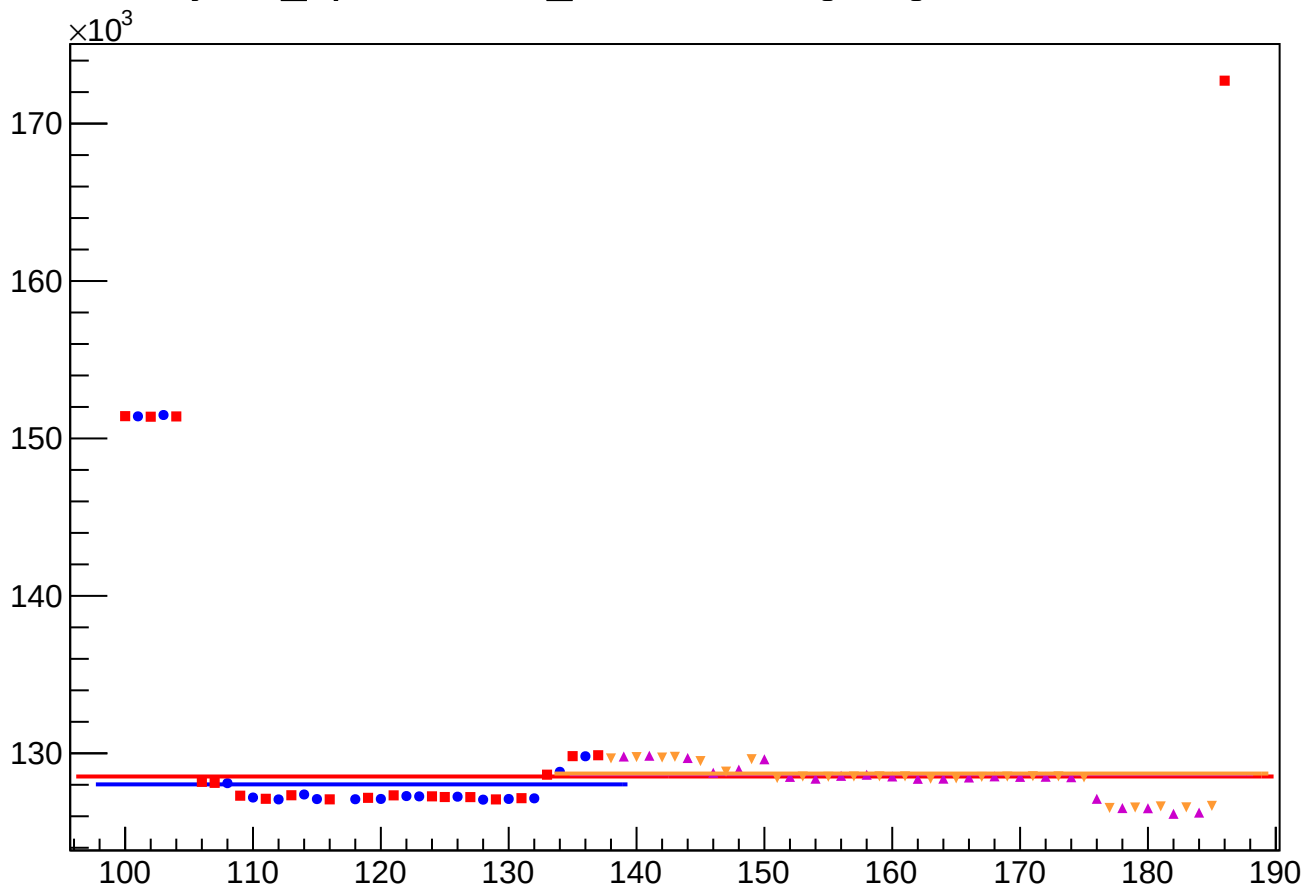
Right: 0.859 $\pm$ 0.000  $\chi^2$ /NDF: 5505069.2/36

In: 0.812 $\pm$ 0.000  $\chi^2$ /NDF:3162869.4/39

Out: 0.819 $\pm$ 0.000  $\chi^2$ /NDF:3575151.2/44

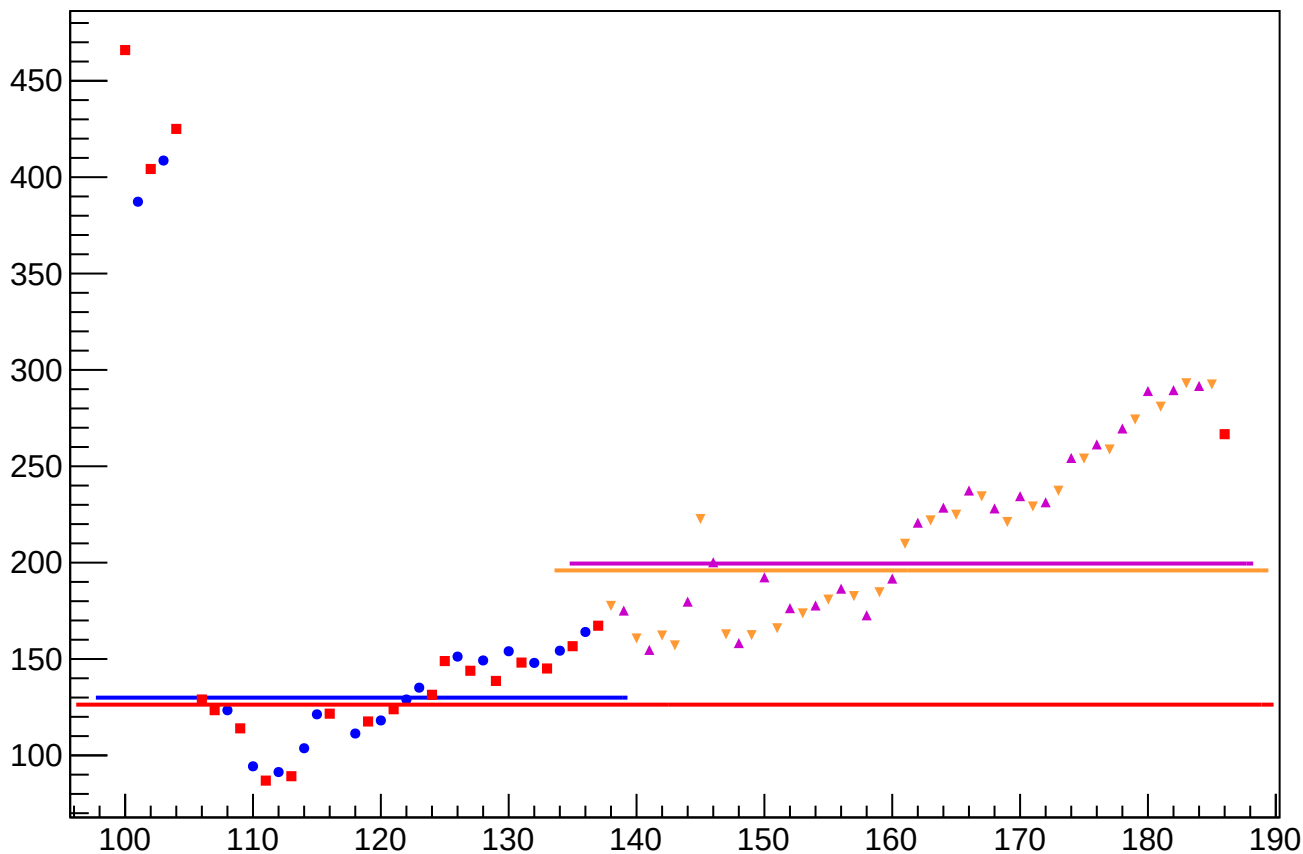
All: 0.816 $\pm$ 0.000  $\chi^2$ /NDF: 6739325.6/84

# yield\_bpm2i01WS\_mean vs Slug, Sign Corrected



|                               |                                        |                           |                                        |
|-------------------------------|----------------------------------------|---------------------------|----------------------------------------|
| Right In: 128026.197+/-0.055  | $\chi^2/\text{NDF}$ : 4315820742.0/16  | Left: 128692.941+/-0.034  | $\chi^2/\text{NDF}$ : 683588051.4/47   |
| Left Out: 128713.791+/-0.047  | $\chi^2/\text{NDF}$ : 348293942.5/24   | Right: 128298.513+/-0.037 | $\chi^2/\text{NDF}$ : 18703062494.4/16 |
| Right Out: 128527.021+/-0.050 | $\chi^2/\text{NDF}$ : 14341548187.9/19 | In: 128384.121+/-0.036    | $\chi^2/\text{NDF}$ : 4727911614.5/39  |
| Left In: 128670.094+/-0.049   | $\chi^2/\text{NDF}$ : 334875494.0/22   | Out: 128626.953+/-0.034   | $\chi^2/\text{NDF}$ : 14697294222.5/16 |
|                               |                                        | All: 128513.393+/-0.025   | $\chi^2/\text{NDF}$ : 194488867.4/16   |

# yield\_bpm2i01WS\_rms vs Slug, Sign Corrected



Right In: 129.956 $\pm$ 0.039  $\chi^2$ /NDF: 1484094.0/16

Left Out: 195.964 $\pm$ 0.033  $\chi^2$ /NDF:1316091.7/24

Right Out: 126.322 $\pm$ 0.035  $\chi^2$ /NDF: 1738914.2/19

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

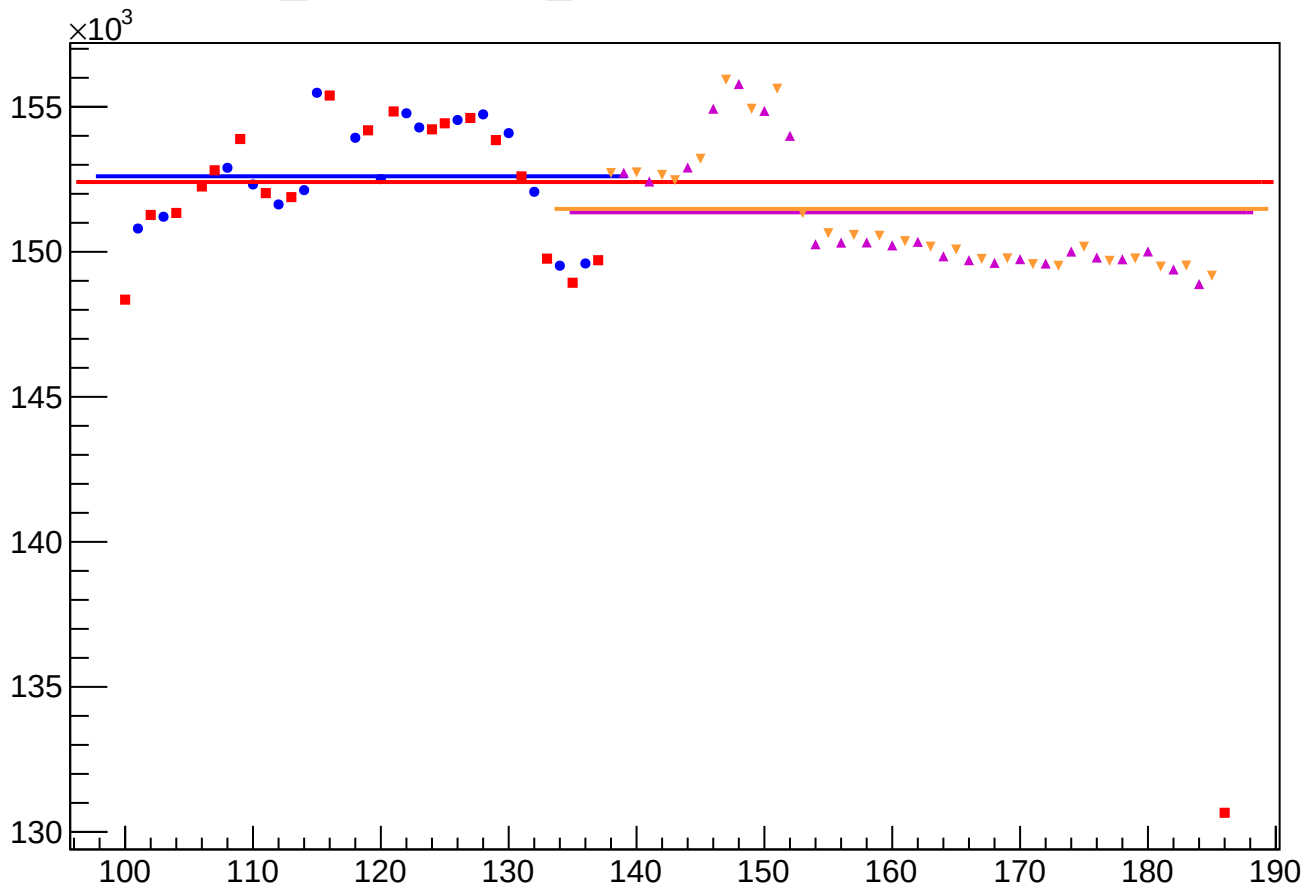
Right: 127.980 $\pm$ 0.026  $\chi^2$ /NDF: 3227821.6/36

In: 168.631 $\pm$ 0.026  $\chi^2$ /NDF:4462471.6/39

Out: 163.584 $\pm$ 0.024  $\chi^2$ /NDF:5127256.5/44

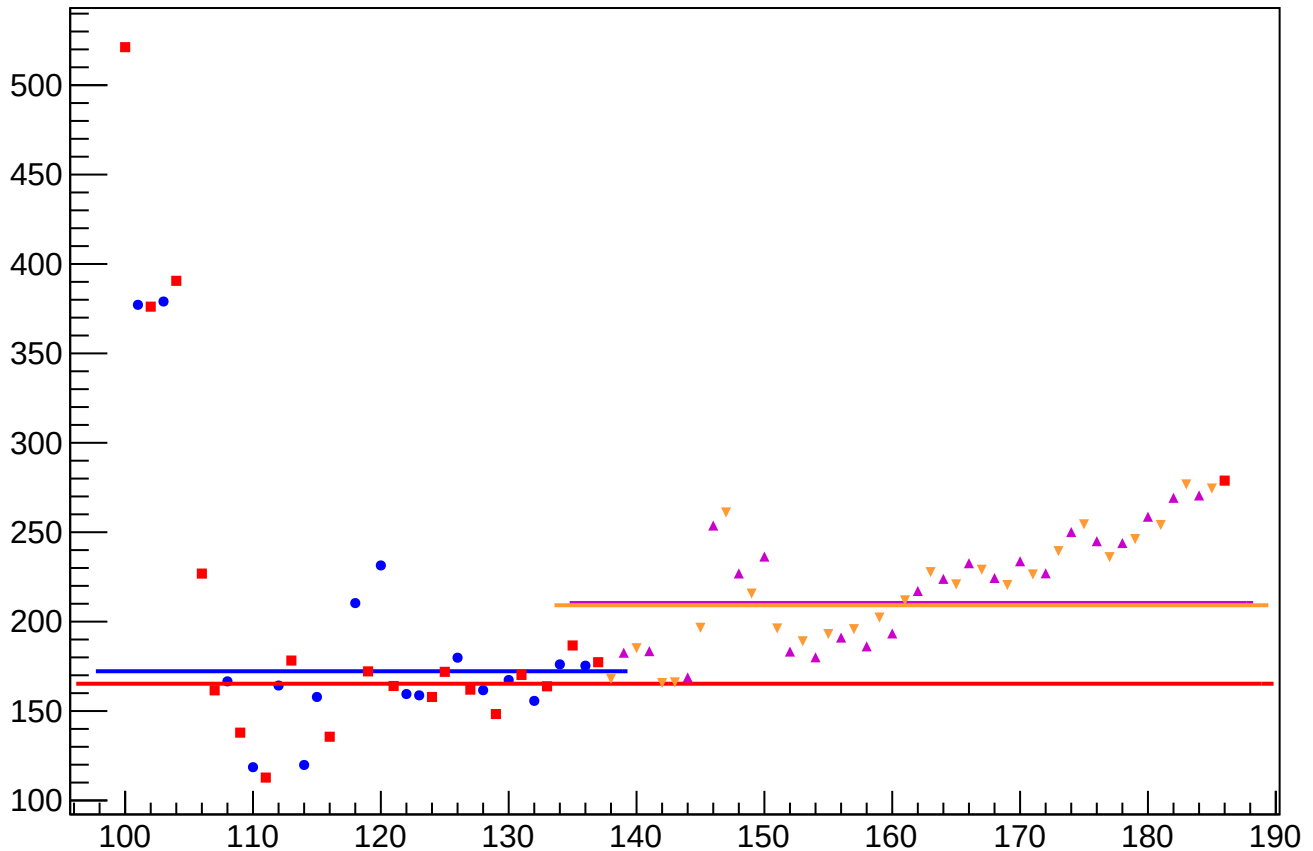
All: 165.944 $\pm$ 0.018  $\chi^2$ /NDF: 9610186.1/84

# yield\_bpm0i07WS\_mean vs Slug, Sign Corrected



|                                   |                                       |                               |                                       |
|-----------------------------------|---------------------------------------|-------------------------------|---------------------------------------|
| Right In: 152604.581 $\pm$ 0.072  | $\chi^2/\text{NDF}$ : 618623287.4/16  | Left: 151423.440 $\pm$ 0.036  | $\chi^2/\text{NDF}$ : 2913216467.1/4  |
| Left Out: 151480.339 $\pm$ 0.049  | $\chi^2/\text{NDF}$ : 1483692735.3/24 | Right: 152495.779 $\pm$ 0.049 | $\chi^2/\text{NDF}$ : 3698890217.5/4  |
| Right Out: 152406.612 $\pm$ 0.066 | $\chi^2/\text{NDF}$ : 3076155223.3/19 | In: 151776.968 $\pm$ 0.042    | $\chi^2/\text{NDF}$ : 2241646178.5/39 |
| Left In: 151362.440 $\pm$ 0.051   | $\chi^2/\text{NDF}$ : 1426782789.9/22 | Out: 151816.660 $\pm$ 0.039   | $\chi^2/\text{NDF}$ : 4687132349.4/4  |
|                                   |                                       | All: 151797.950 $\pm$ 0.029   | $\chi^2/\text{NDF}$ : 692925493.0/10  |

# yield\_bpm0i07WS\_rms vs Slug, Sign Corrected



Right In: 172.246+/-0.051  $\chi^2/\text{NDF}$ : 925645.6/16

Left Out: 209.156+/-0.035  $\chi^2/\text{NDF}$ : 710094.9/24

Right Out: 165.276+/-0.046  $\chi^2/\text{NDF}$ : 1159880.0/19

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

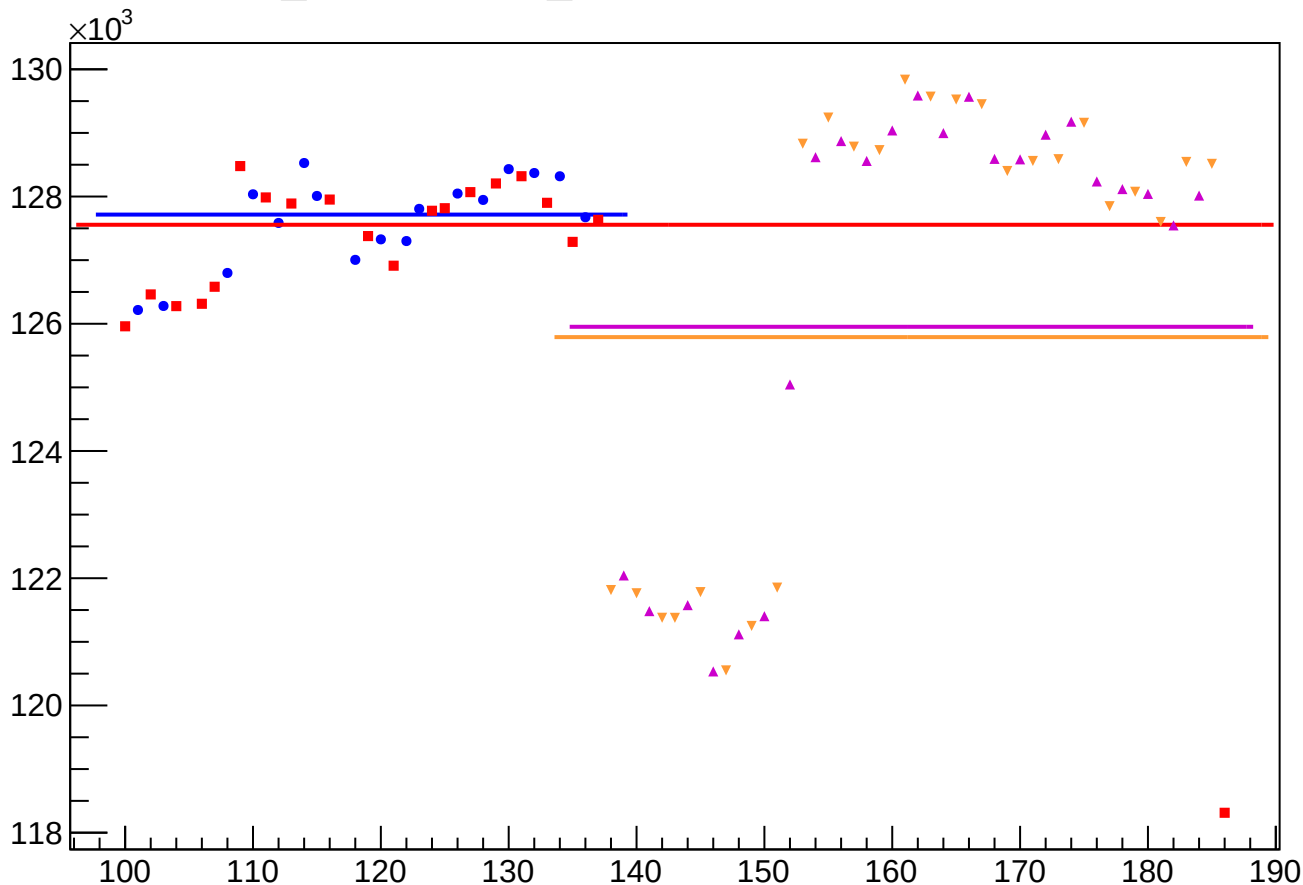
Right: 168.416+/-0.034  $\chi^2/\text{NDF}$ : 2095718.1/36

In: 197.688+/-0.030  $\chi^2/\text{NDF}$ : 1980558.2/39

Out: 193.223+/-0.028  $\chi^2/\text{NDF}$ : 2441252.6/44

All: 195.328+/-0.020  $\chi^2/\text{NDF}$ : 4433863.2/84

yield\_bpm0l01WS\_mean vs Slug, Sign Corrected



Right In: 127716.166 $\pm$ 0.058

$\chi^2$ /NDF: 94931980.7/16

Left: 125870.001 $\pm$ 0.031

$\chi^2$ /NDF: 12592819321.6/16

Left Out: 125790.126 $\pm$ 0.044

$\chi^2$ /NDF: 6744310079.8/24

Right: 127629.985 $\pm$ 0.040

$\chi^2$ /NDF: 744197961.1/30

Right Out: 127556.176 $\pm$ 0.054

$\chi^2$ /NDF: 645224567.4/19

In: 126603.182 $\pm$ 0.035

$\chi^2$ /NDF: 6512098312.0/30

Out: 126493.189 $\pm$ 0.034

$\chi^2$ /NDF: 8032015551.0/40

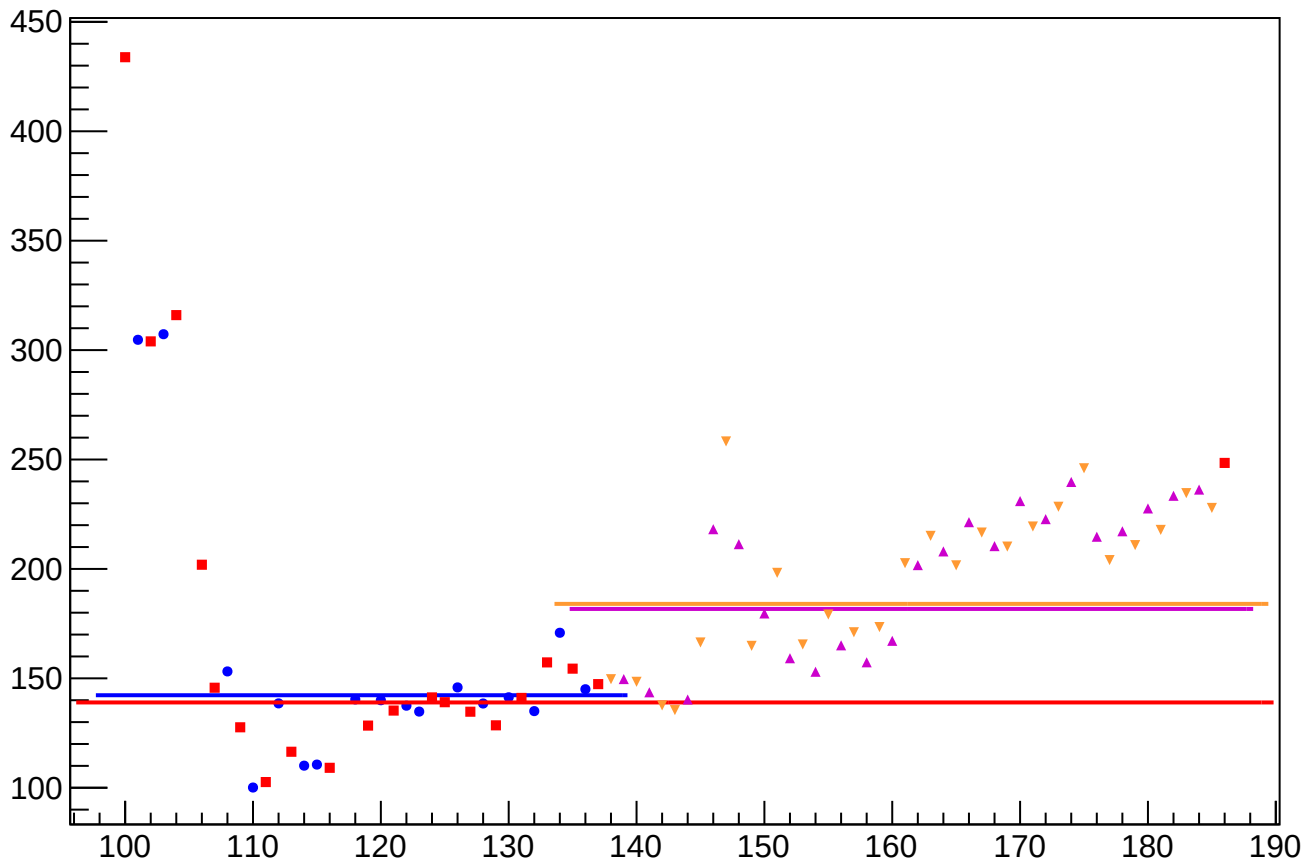
Left In: 125952.447 $\pm$ 0.045

$\chi^2$ /NDF: 5841800367.5/22

All: 126546.016 $\pm$ 0.025

$\chi^2$ /NDF: 1454910931.0/100

# yield\_bpm0l01WS\_rms vs Slug, Sign Corrected



Right In: 142.282 $\pm$ 0.041  $\chi^2$ /NDF: 836459.8/16

Left Out: 184.029 $\pm$ 0.031  $\chi^2$ /NDF: 1126592.5/24

Right Out: 138.983 $\pm$ 0.038  $\chi^2$ /NDF: 1106282.7/19

Left In: 181.714 $\pm$ 0.032  $\chi^2$ /NDF: 1116142.0/22

Left: 182.890 $\pm$ 0.022  $\chi^2$ /NDF: 2245464.4/47

Right: 140.505 $\pm$ 0.028  $\chi^2$ /NDF: 1946178.0/36

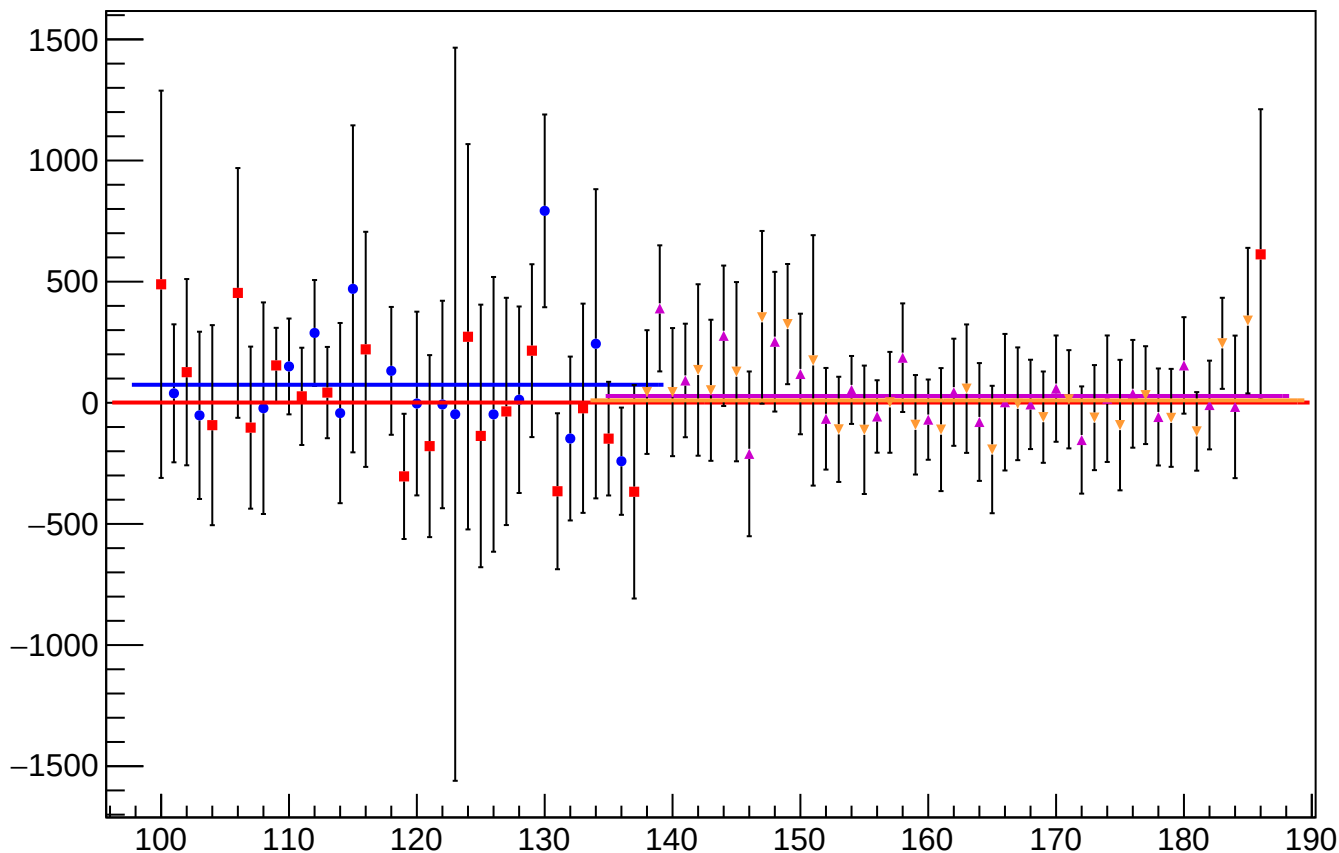
In: 167.165 $\pm$ 0.025  $\chi^2$ /NDF: 2527798.7/39

Out: 166.096 $\pm$ 0.024  $\chi^2$ /NDF: 3068853.3/44

All: 166.610 $\pm$ 0.017  $\chi^2$ /NDF: 5597595.1/84



asym\_bcm\_an\_ds\_mean vs Slug, Sign Corrected



Right In: 74.411 $\pm$ 79.831  $\chi^2$ /NDF: 7.7/16

Left Out: 10.078 $\pm$ 47.488  $\chi^2$ /NDF:8.5/24

Right Out: 1.048 $\pm$ 69.635  $\chi^2$ /NDF: 8.2/19

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

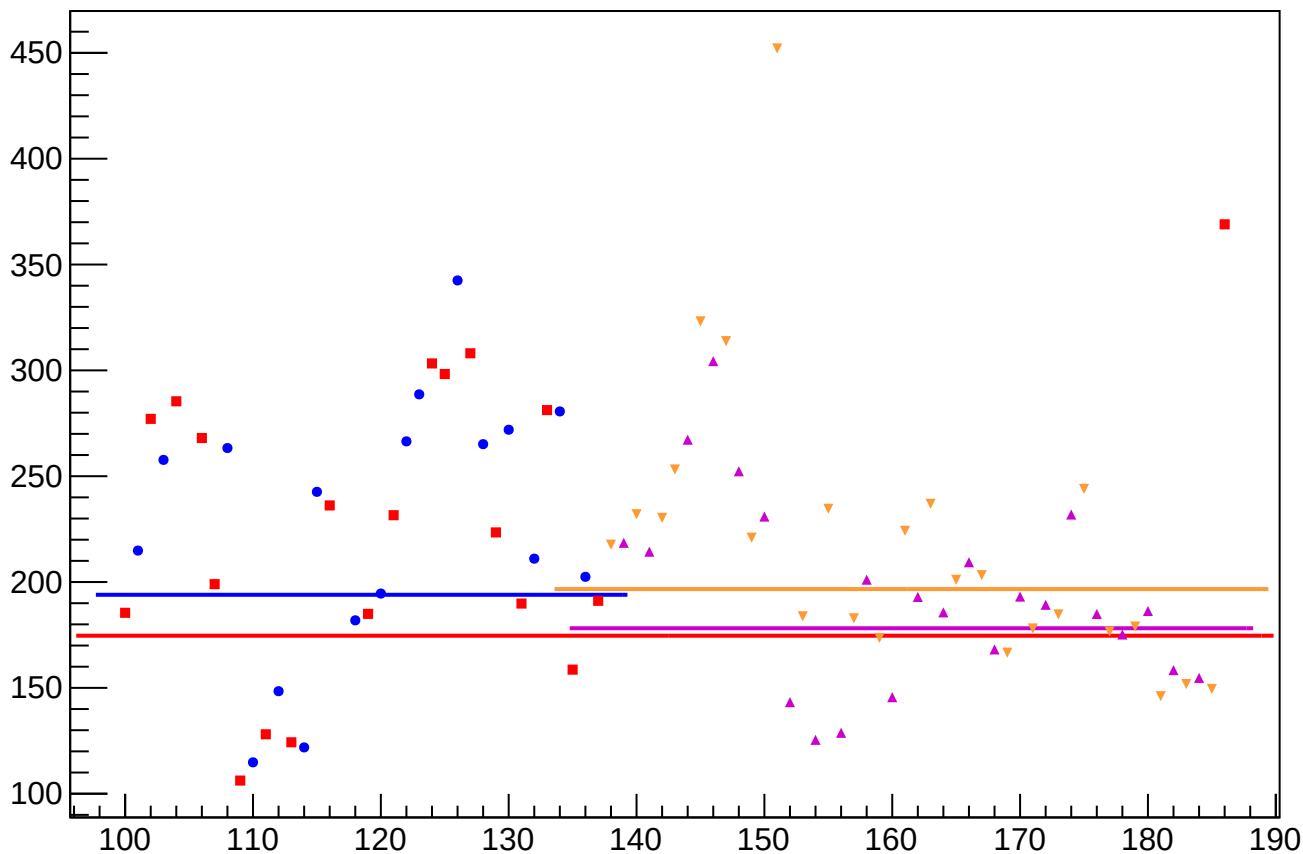
Right: 32.748 $\pm$ 52.476  $\chi^2$ /NDF: 16.5/36

In: 39.068 $\pm$ 38.917  $\chi^2$ /NDF:15.0/39

Out: 7.211 $\pm$ 39.233  $\chi^2$ /NDF:16.7/44

All: 23.268 $\pm$ 27.630  $\chi^2$ /NDF: 32.0/84

# asym\_bcm\_an\_ds\_rms vs Slug, Sign Corrected



Right In: 193.981 $\pm$ 0.056  $\chi^2$ /NDF: 1018863.8/16

Left Out: 196.682 $\pm$ 0.034  $\chi^2$ /NDF: 1782715.7/24

Right Out: 174.644 $\pm$ 0.049  $\chi^2$ /NDF: 1787975.5/19

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

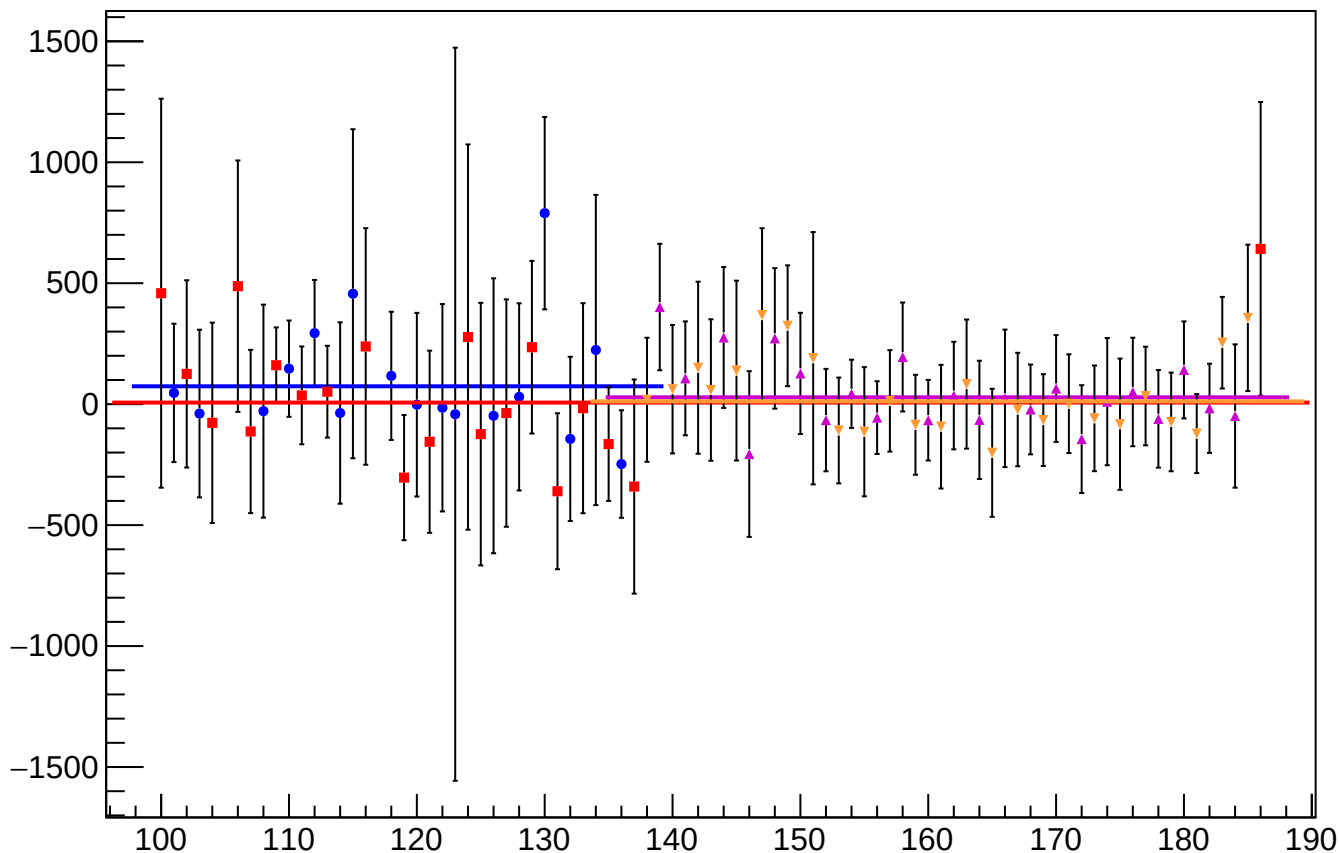
Right: 183.000 $\pm$ 0.037  $\chi^2$ /NDF: 2873476.9/36

In: 181.924 $\pm$ 0.028  $\chi^2$ /NDF: 2697671.4/39

Out: 189.686 $\pm$ 0.028  $\chi^2$ /NDF: 3707413.6/44

All: 185.774 $\pm$ 0.020  $\chi^2$ /NDF: 6444541.7/84

# asym\_bcm\_an\_ds3\_mean vs Slug, Sign Corrected



Right In: 73.870+/-80.221  $\chi^2/\text{NDF}$ : 7.7/16

Left Out: 11.479+/-47.819  $\chi^2/\text{NDF}$ : 8.8/24

Right Out: 6.525+/-70.010  $\chi^2/\text{NDF}$ : 8.5/19

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

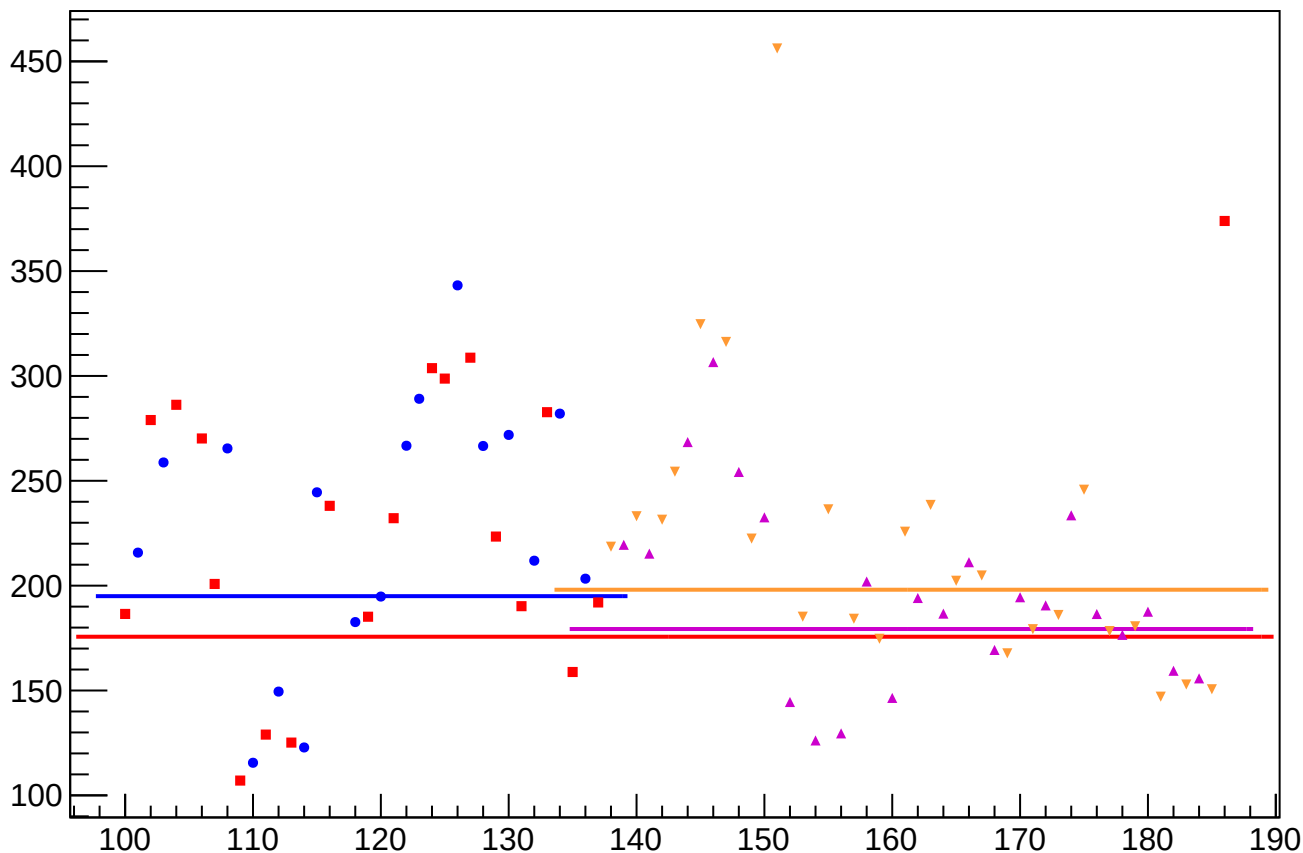
Right: 35.641+/-52.747  $\chi^2/\text{NDF}$ : 16.5/36

In: 39.142+/-39.156  $\chi^2/\text{NDF}$ : 15.0/39

Out: 9.903+/-39.487  $\chi^2/\text{NDF}$ : 17.3/44

All: 24.645+/-27.804  $\chi^2/\text{NDF}$ : 32.6/84

# asym\_bcm\_an\_ds3\_rms vs Slug, Sign Corrected



Right In: 194.991 $\pm$ 0.057  $\chi^2/\text{NDF}$ : 1010319.8/16

Left Out: 198.059 $\pm$ 0.034  $\chi^2/\text{NDF}$ :1778526.5/24

Right Out: 175.645 $\pm$ 0.050  $\chi^2/\text{NDF}$ : 1778526.3/19

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

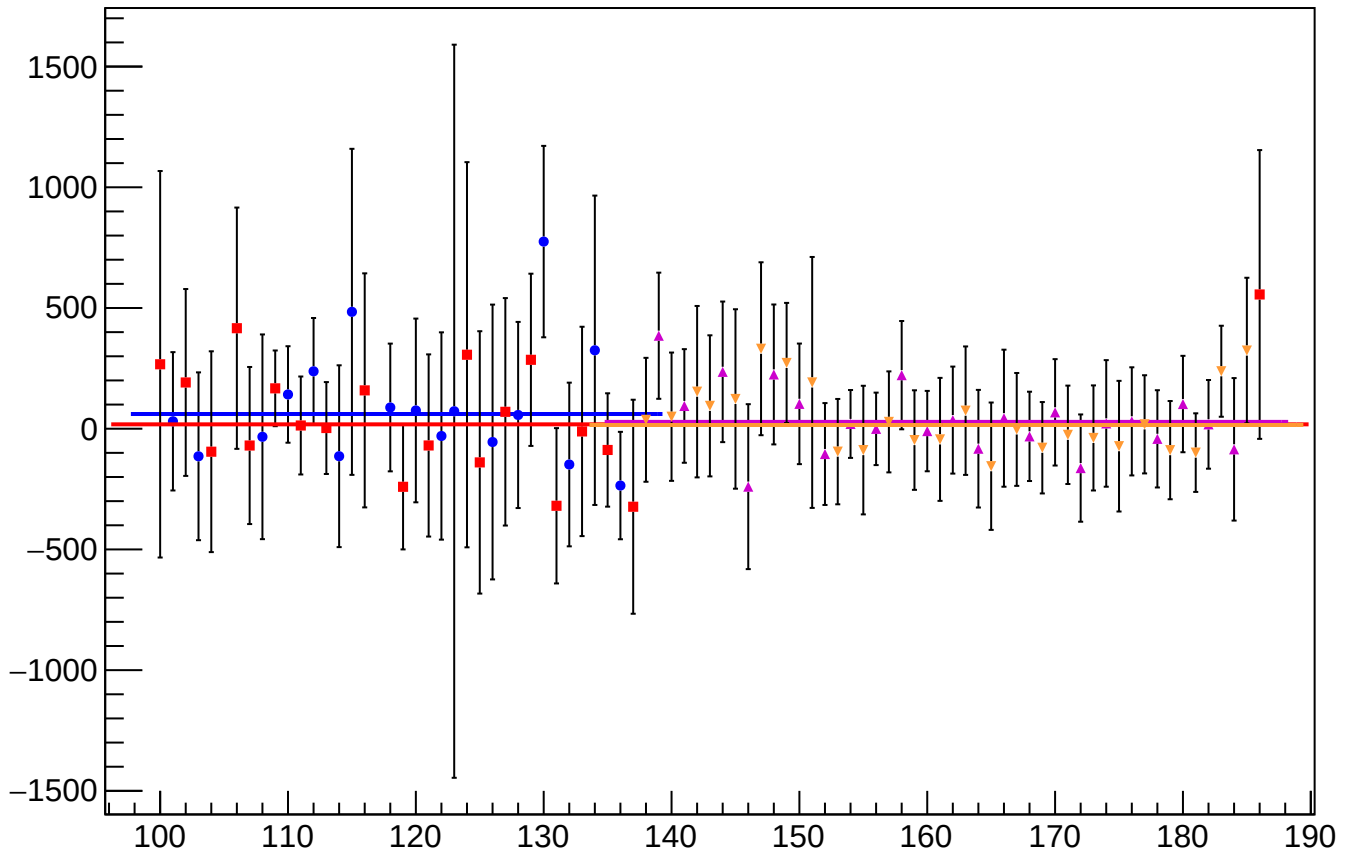
Right: 184.009 $\pm$ 0.037  $\chi^2/\text{NDF}$ : 2854874.0/36

In: 183.057 $\pm$ 0.028  $\chi^2/\text{NDF}$ :2686698.8/39

Out: 190.929 $\pm$ 0.028  $\chi^2/\text{NDF}$ :3696832.7/44

All: 186.959 $\pm$ 0.020  $\chi^2/\text{NDF}$ : 6423609.7/84

# asym\_bcm\_an\_us\_mean vs Slug, Sign Corrected



Right In: 60.929 $\pm$ 80.216  $\chi^2$ /NDF: 7.4/16

Left Out: 15.437 $\pm$ 47.695  $\chi^2$ /NDF:7.0/24

Right Out: 18.121 $\pm$ 69.919  $\chi^2$ /NDF: 6.6/19

Left In: 28.277 $\pm$ 44.743  $\chi^2$ /NDF:6.4/22

Left: 22.267 $\pm$ 32.632  $\chi^2$ /NDF: 13.4/47

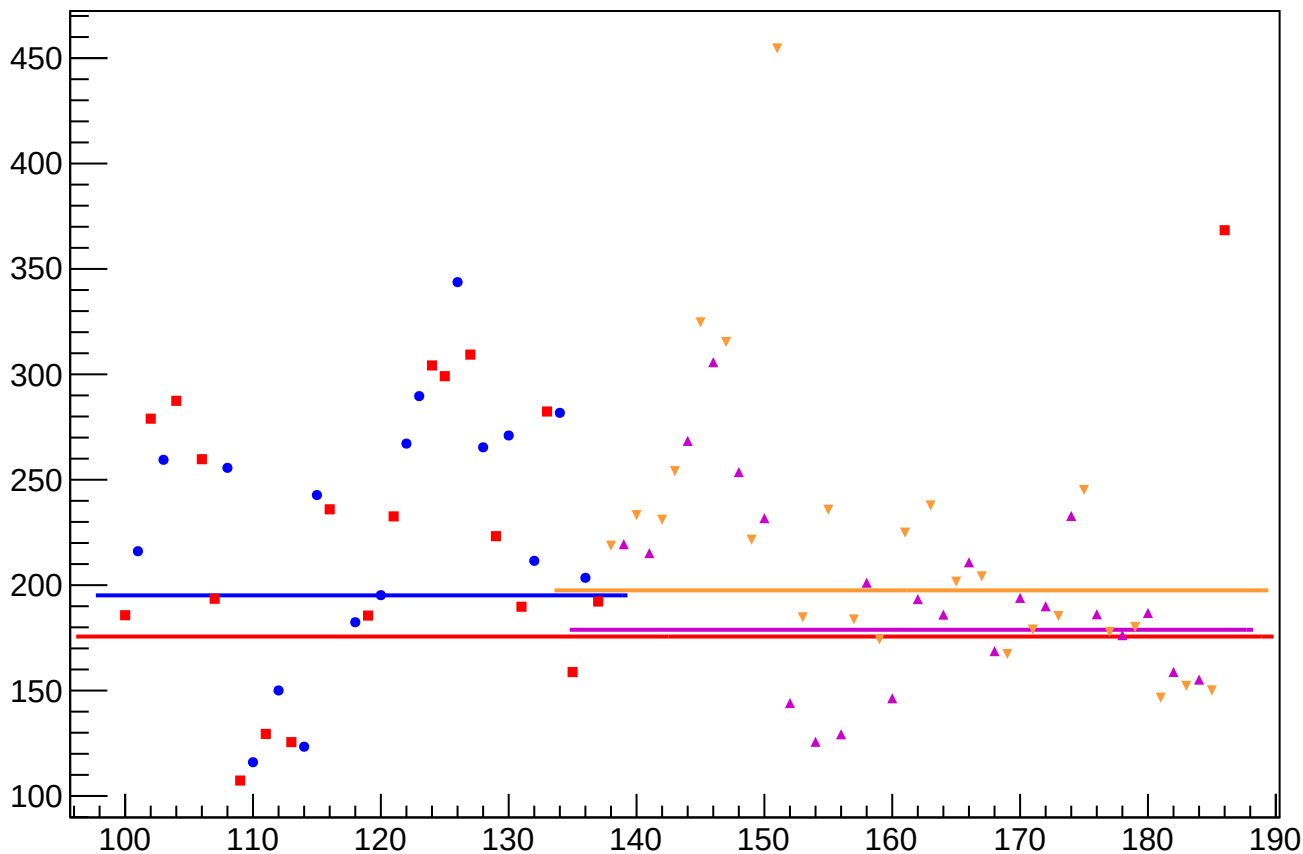
Right: 36.602 $\pm$ 52.707  $\chi^2$ /NDF: 14.2/36

In: 36.025 $\pm$ 39.076  $\chi^2$ /NDF:13.9/39

Out: 16.290 $\pm$ 39.401  $\chi^2$ /NDF:13.6/44

All: 26.239 $\pm$ 27.745  $\chi^2$ /NDF: 27.6/84

# asym\_bcm\_an\_us\_rms vs Slug, Sign Corrected



Right In: 195.157+/-0.057  $\chi^2/\text{NDF}$ : 988306.7/16

Left Out: 197.527+/-0.034  $\chi^2/\text{NDF}$ :1784225.5/24

Right Out: 175.618+/-0.049  $\chi^2/\text{NDF}$ : 1749929.7/19

Left In: 178.836+/-0.032  $\chi^2/\text{NDF}$ :1622266.9/22

Left: 187.585+/-0.023  $\chi^2/\text{NDF}$ : 3569877.1/47

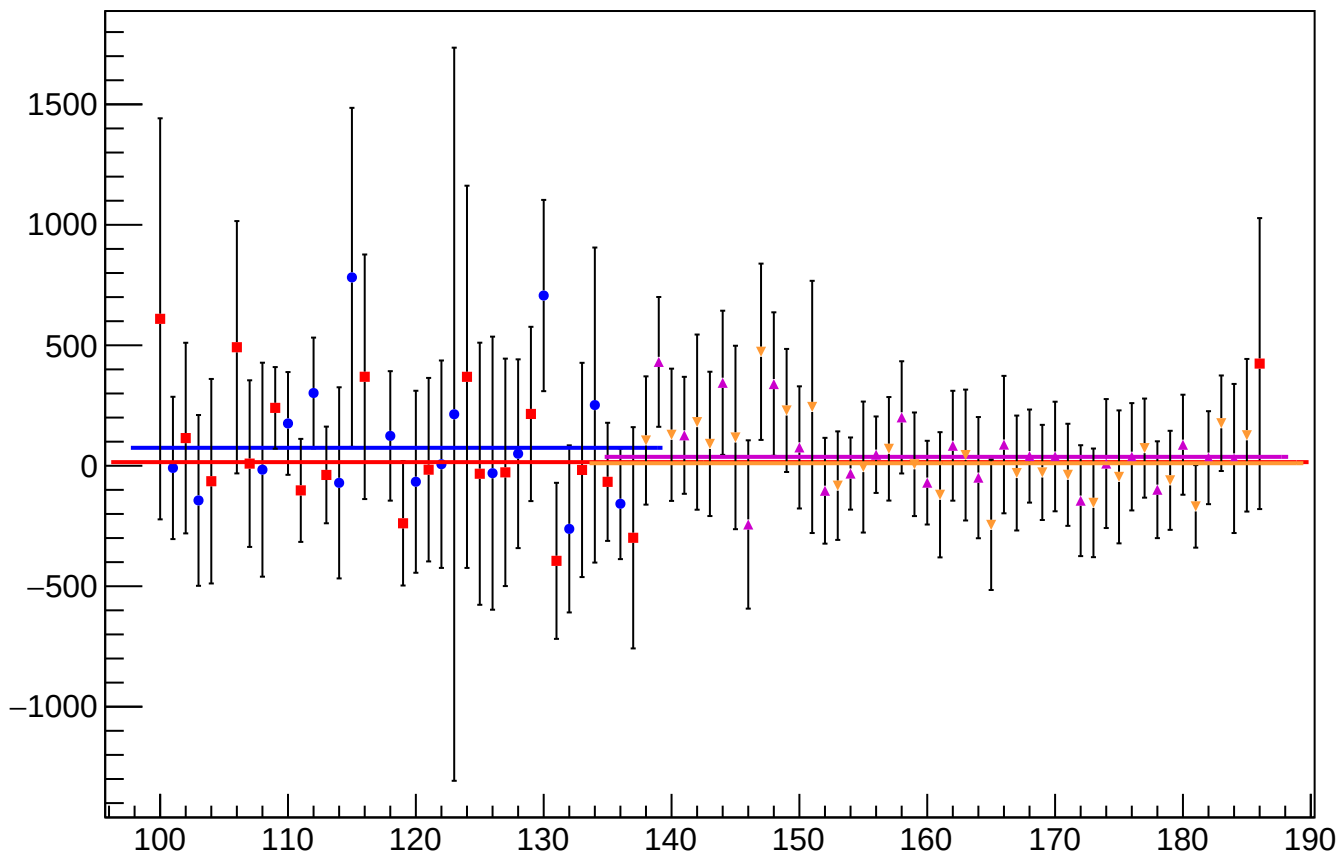
Right: 184.054+/-0.037  $\chi^2/\text{NDF}$ : 2805661.6/36

In: 182.709+/-0.028  $\chi^2/\text{NDF}$ :2673719.8/39

Out: 190.570+/-0.028  $\chi^2/\text{NDF}$ :3668169.2/44

All: 186.607+/-0.020  $\chi^2/\text{NDF}$ : 6382030.0/84

# asym\_bcm\_dg\_us\_mean vs Slug, Sign Corrected



Right In: 74.541 $\pm$ 82.742  $\chi^2$ /NDF: 7.7/16

Left Out: 10.534 $\pm$ 49.197  $\chi^2$ /NDF: 7.5/24

Right Out: 15.091 $\pm$ 72.818  $\chi^2$ /NDF: 8.2/19

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

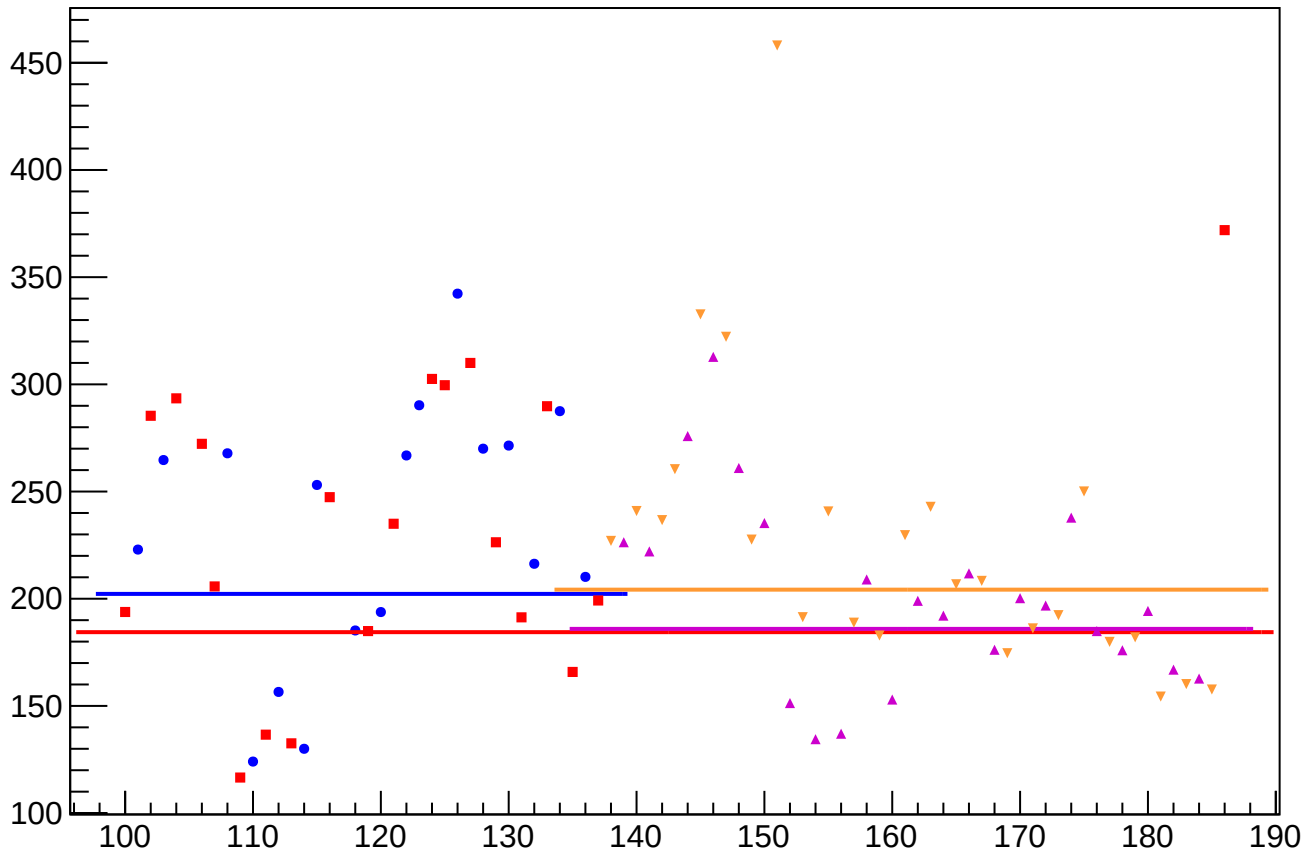
Right: 41.039 $\pm$ 54.664  $\chi^2$ /NDF: 16.2/36

In: 45.969 $\pm$ 40.443  $\chi^2$ /NDF: 15.7/39

Out: 11.962 $\pm$ 40.765  $\chi^2$ /NDF: 15.7/44

All: 29.100 $\pm$ 28.711  $\chi^2$ /NDF: 31.7/84

# asym\_bcm\_dg\_us\_rms vs Slug, Sign Corrected



Right In:  $202.251 \pm 0.059$   $\chi^2/\text{NDF}: 883731.1/16$

Left Out:  $204.236 \pm 0.035$   $\chi^2/\text{NDF}: 1675666.0/24$

Right Out:  $184.407 \pm 0.051$   $\chi^2/\text{NDF}: 1569256.5/19$

Left In:  $185.931 \pm 0.033$   $\chi^2/\text{NDF}: 1460065.0/22$

Left:  $194.540 \pm 0.024$   $\chi^2/\text{NDF}: 3282383.3/47$

Right:  $192.196 \pm 0.039$   $\chi^2/\text{NDF}: 2505404.2/36$

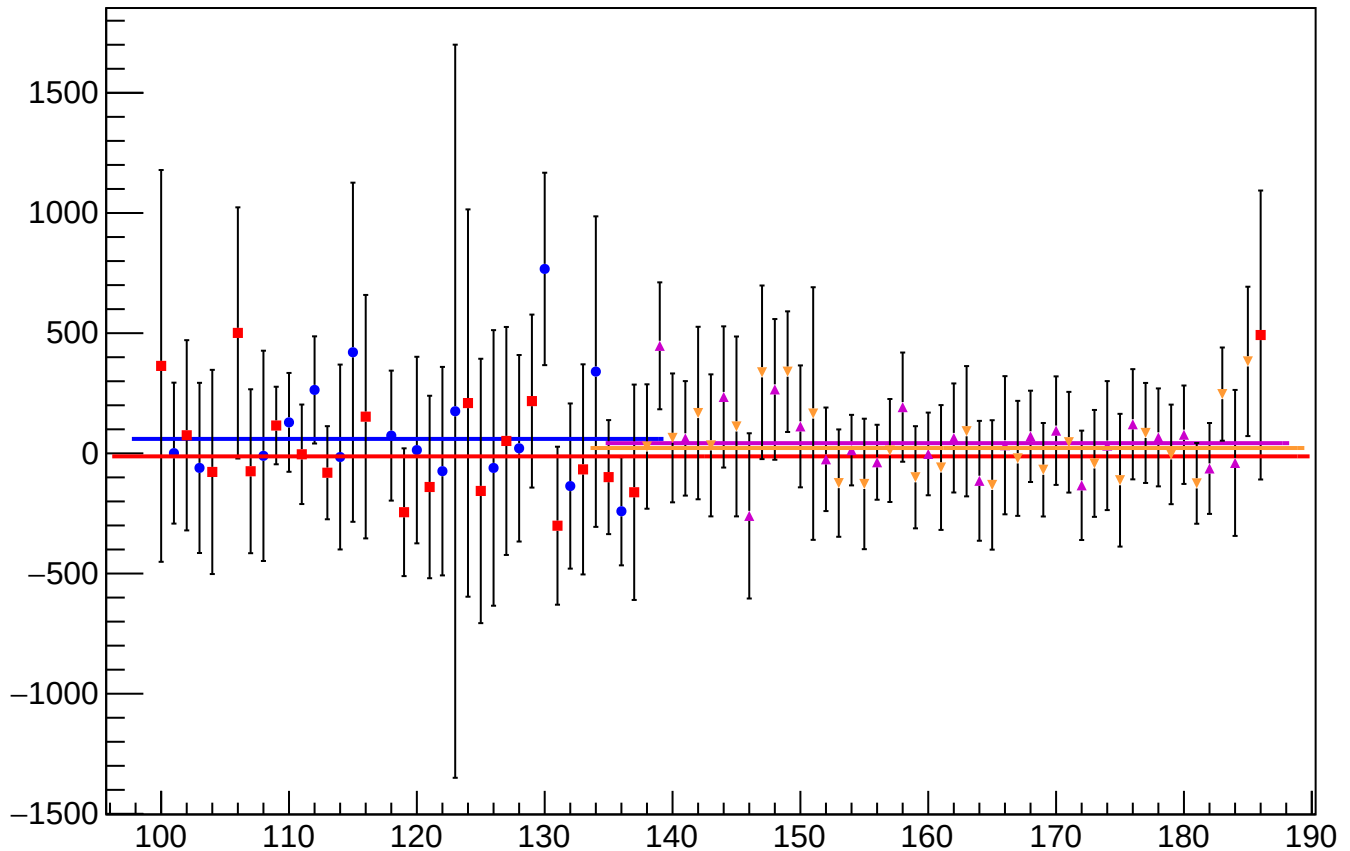
In:  $189.830 \pm 0.029$   $\chi^2/\text{NDF}: 2403012.0/39$

Out:  $198.022 \pm 0.029$   $\chi^2/\text{NDF}: 3346742.6/44$

All:  $193.893 \pm 0.020$   $\chi^2/\text{NDF}: 5790452.1/84$



# asym\_bcm\_dg\_ds\_mean vs Slug, Sign Corrected



Right In: 60.119 $\pm$ 81.659  $\chi^2$ /NDF: 7.0/16

Left Out: 22.189 $\pm$ 48.738  $\chi^2$ /NDF:8.4/24

Right Out: -12.520 $\pm$ 71.404  $\chi^2$ /NDF: 5.3/19

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

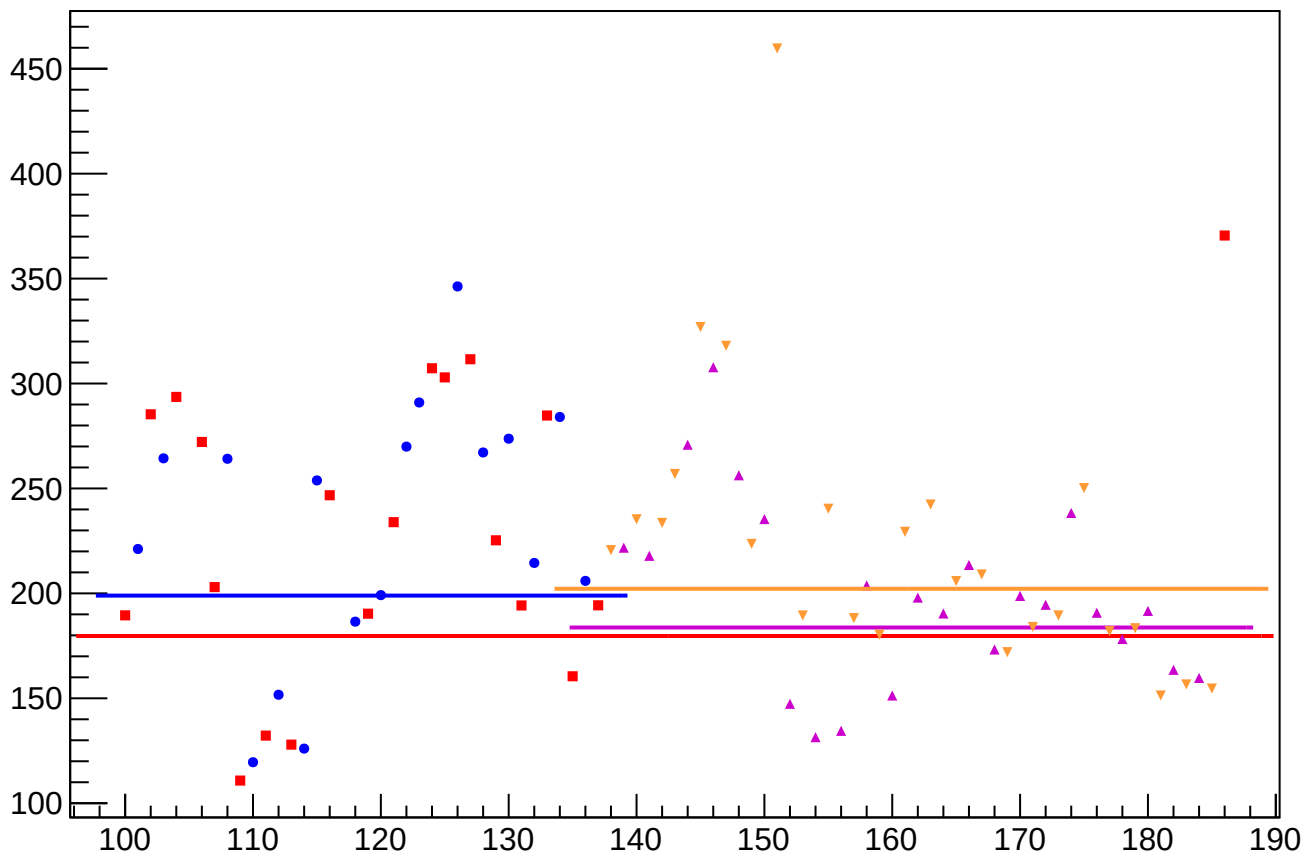
Right: 18.954 $\pm$ 53.753  $\chi^2$ /NDF: 12.8/36

In: 46.684 $\pm$ 39.986  $\chi^2$ /NDF:13.8/39

Out: 11.157 $\pm$ 40.255  $\chi^2$ /NDF:13.9/44

All: 29.039 $\pm$ 28.369  $\chi^2$ /NDF: 28.1/84

# asym\_bcm\_dg\_ds\_rms vs Slug, Sign Corrected



Right In:  $198.943 \pm 0.058$   $\chi^2/NDF: 965773.2/16$

Left Out:  $202.186 \pm 0.034$   $\chi^2/NDF: 1696571.9/24$

Right Out:  $179.693 \pm 0.050$   $\chi^2/NDF: 1723997.3/19$

Left In:  $183.732 \pm 0.032$   $\chi^2/NDF: 1495930.4/22$

Left:  $192.398 \pm 0.024$   $\chi^2/NDF: 3344580.1/47$

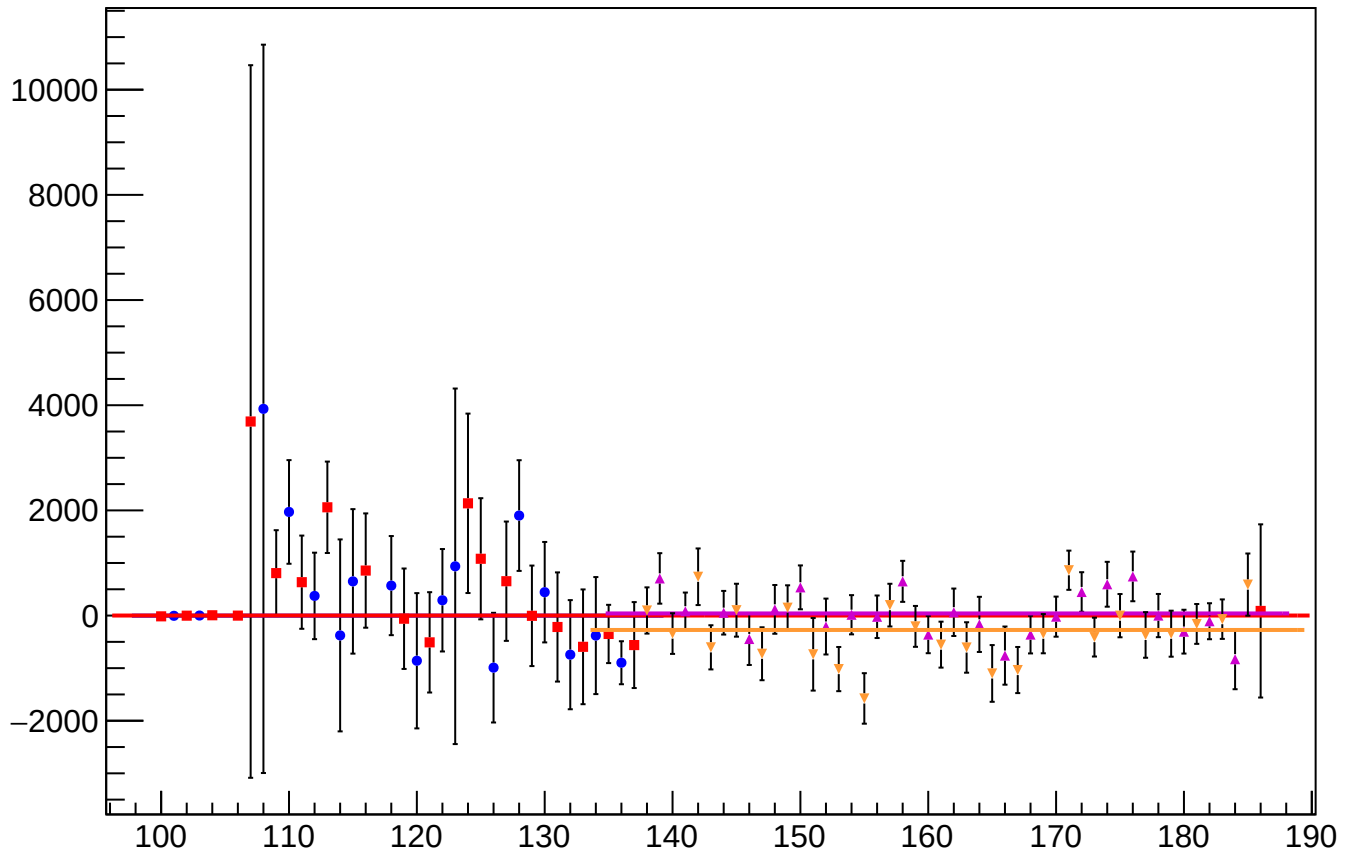
Right:  $188.034 \pm 0.038$   $\chi^2/NDF: 2752753.2/36$

In:  $187.379 \pm 0.028$   $\chi^2/NDF: 2514456.5/39$

Out:  $195.037 \pm 0.028$   $\chi^2/NDF: 3555957.3/44$

All:  $191.183 \pm 0.020$   $\chi^2/NDF: 6106845.7/84$

# asym\_cav4bQ\_mean vs Slug, Sign Corrected



Right In:  $-1.529 \pm 2.251$   $\chi^2/\text{NDF}$ : 16.9/16

Left Out:  $-273.664 \pm 86.869$   $\chi^2/\text{NDF}$ : 38.3/24

Right Out:  $0.731 \pm 2.111$   $\chi^2/\text{NDF}$ : 18.2/19

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

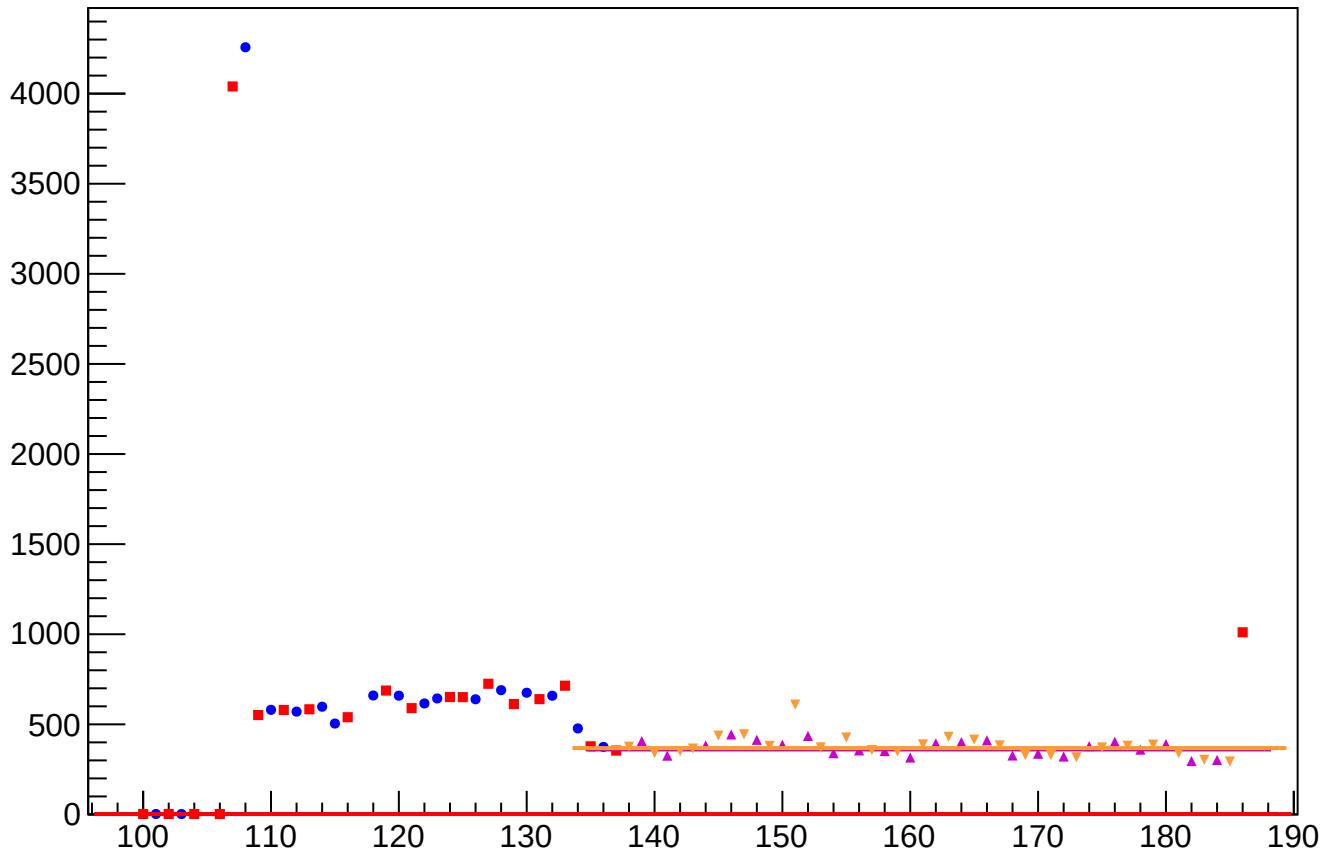
Right:  $-0.326 \pm 1.540$   $\chi^2/\text{NDF}$ : 35.7/36

In:  $-1.501 \pm 2.251$   $\chi^2/\text{NDF}$ : 37.3/39

Out:  $0.569 \pm 2.111$   $\chi^2/\text{NDF}$ : 66.5/44

All:  $-0.399 \pm 1.540$   $\chi^2/\text{NDF}$ : 104.3/84

# asym\_cav4bQ\_rms vs Slug, Sign Corrected



Right In: 2.456+/-0.002  $\chi^2/\text{NDF}$ : 10667142.2/16

Left Out: 368.500+/-0.061  $\chi^2/\text{NDF}$ : 623011.6/24

Right Out: 2.438+/-0.001  $\chi^2/\text{NDF}$ : 11843953.6/19

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

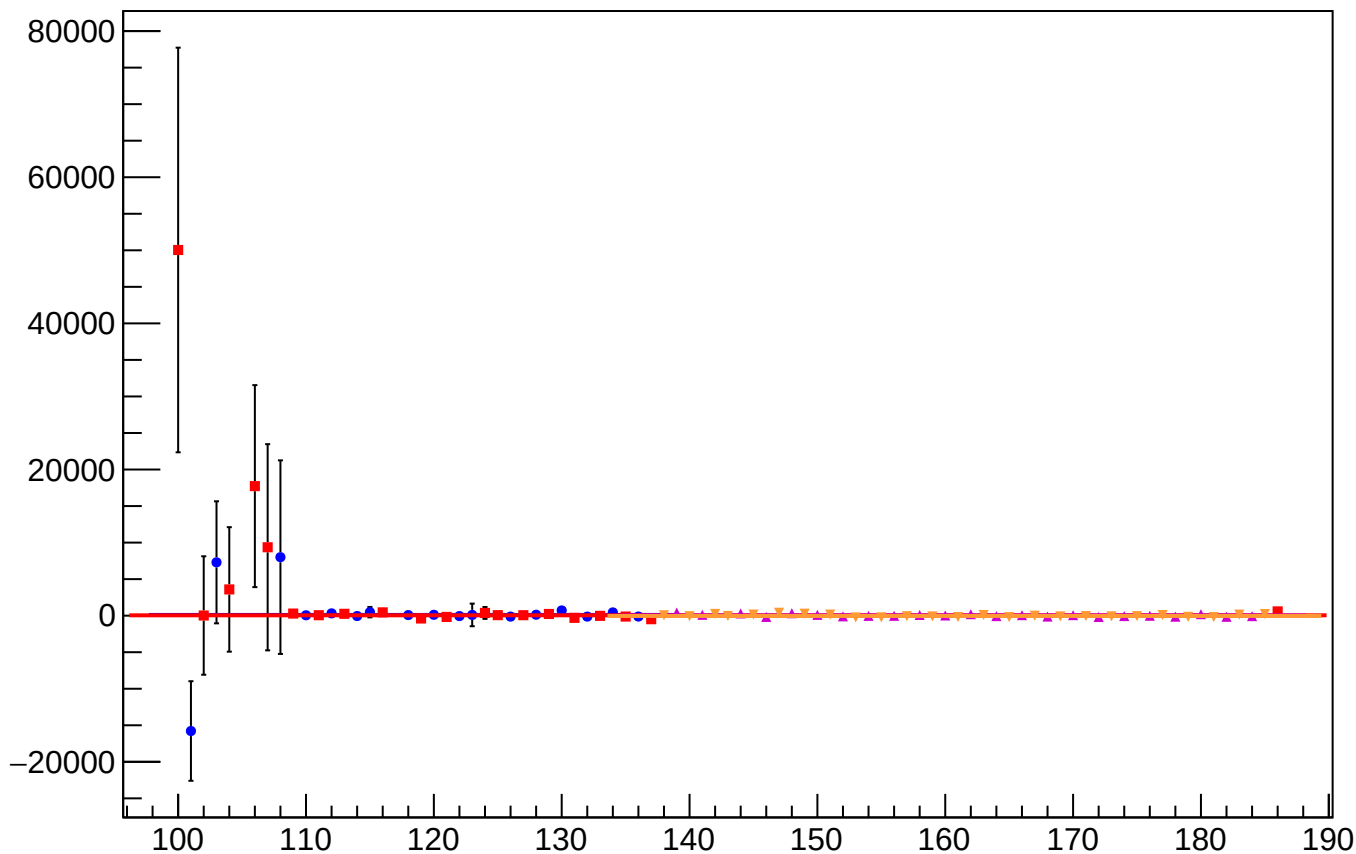
Right: 2.446+/-0.001  $\chi^2/\text{NDF}$ : 22511161.7/36

In: 2.693+/-0.002  $\chi^2/\text{NDF}$ : 44591142.4/39

Out: 2.654+/-0.001  $\chi^2/\text{NDF}$ : 47960571.0/44

All: 2.672+/-0.001  $\chi^2/\text{NDF}$ : 92552029.0/84

# asym\_cav4cQ\_mean vs Slug, Sign Corrected



Right In: 99.358 $\pm$ 92.026  $\chi^2$ /NDF: 12.0/16

Left Out: -39.036 $\pm$ 49.576  $\chi^2$ /NDF:9.1/24

Right Out: 48.669 $\pm$ 83.759  $\chi^2$ /NDF: 14.9/19

Left In: 28.062 $\pm$ 48.032  $\chi^2$ /NDF:9.6/22

Left: -4.426 $\pm$ 34.497  $\chi^2$ /NDF: 19.7/47

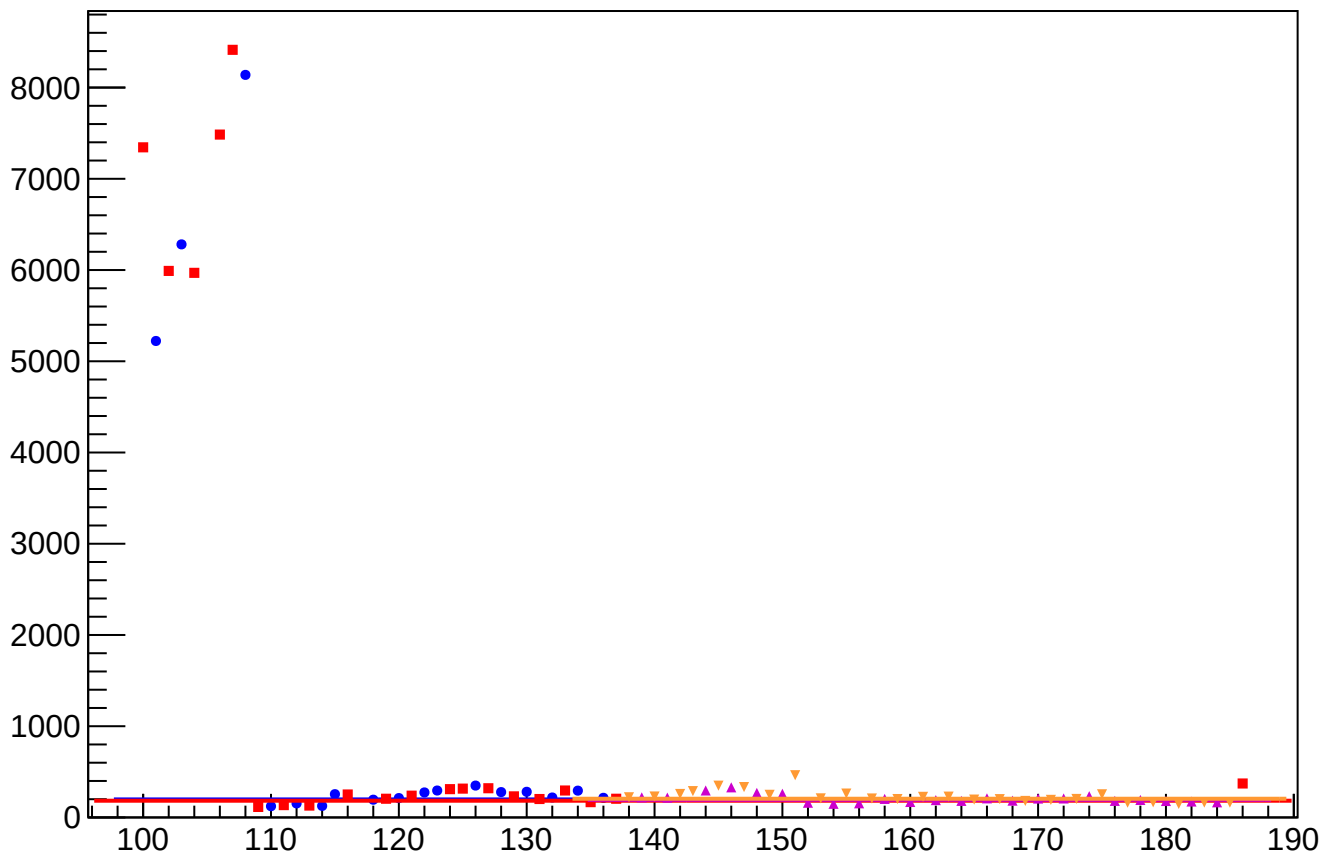
Right: 71.635 $\pm$ 61.944  $\chi^2$ /NDF: 27.1/36

In: 43.326 $\pm$ 42.581  $\chi^2$ /NDF:22.1/39

Out: -16.281 $\pm$ 42.663  $\chi^2$ /NDF:24.9/44

All: 13.579 $\pm$ 30.138  $\chi^2$ /NDF: 47.9/84

# asym\_cav4cQ\_rms vs Slug, Sign Corrected



Right In: 197.646 $\pm$ 0.065  $\chi^2$ /NDF: 3699445.6/16

Left Out: 205.114 $\pm$ 0.035  $\chi^2$ /NDF: 1957484.4/24

Right Out: 183.481 $\pm$ 0.059  $\chi^2$ /NDF: 4514861.8/19

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

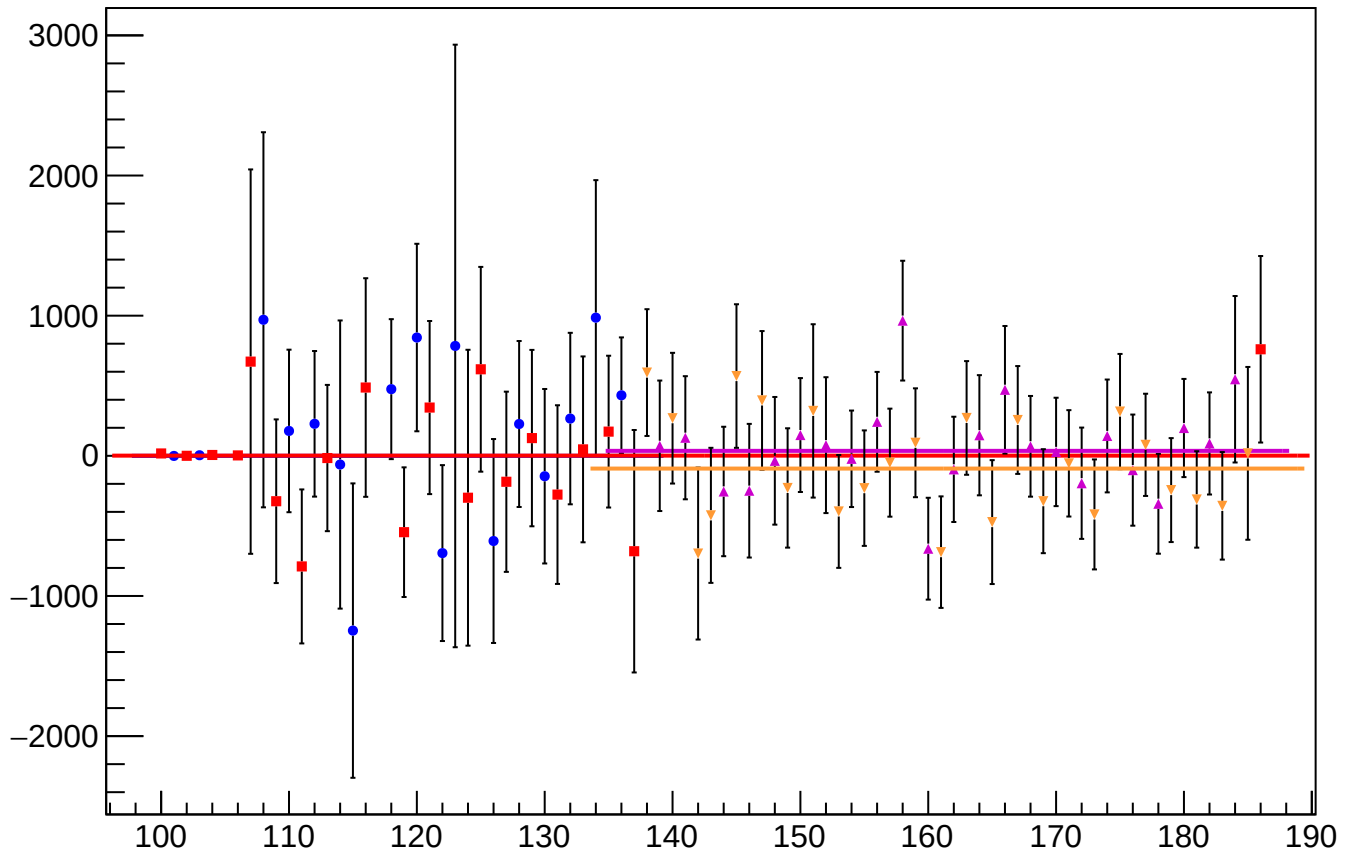
Right: 189.899 $\pm$ 0.044  $\chi^2$ /NDF: 8240222.1/36

In: 194.479 $\pm$ 0.030  $\chi^2$ /NDF: 4881930.6/39

Out: 199.501 $\pm$ 0.030  $\chi^2$ /NDF: 6571142.6/44

All: 196.985 $\pm$ 0.021  $\chi^2$ /NDF: 11466959.3/84

# asym\_cav4dQ\_mean vs Slug, Sign Corrected



Right In: -0.141 $\pm$ 1.737  $\chi^2/\text{NDF}$ : 10.1/16

Left Out: -90.945 $\pm$ 84.079  $\chi^2/\text{NDF}$ :16.4/24

Right Out: 1.327 $\pm$ 1.623  $\chi^2/\text{NDF}$ : 10.6/19

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

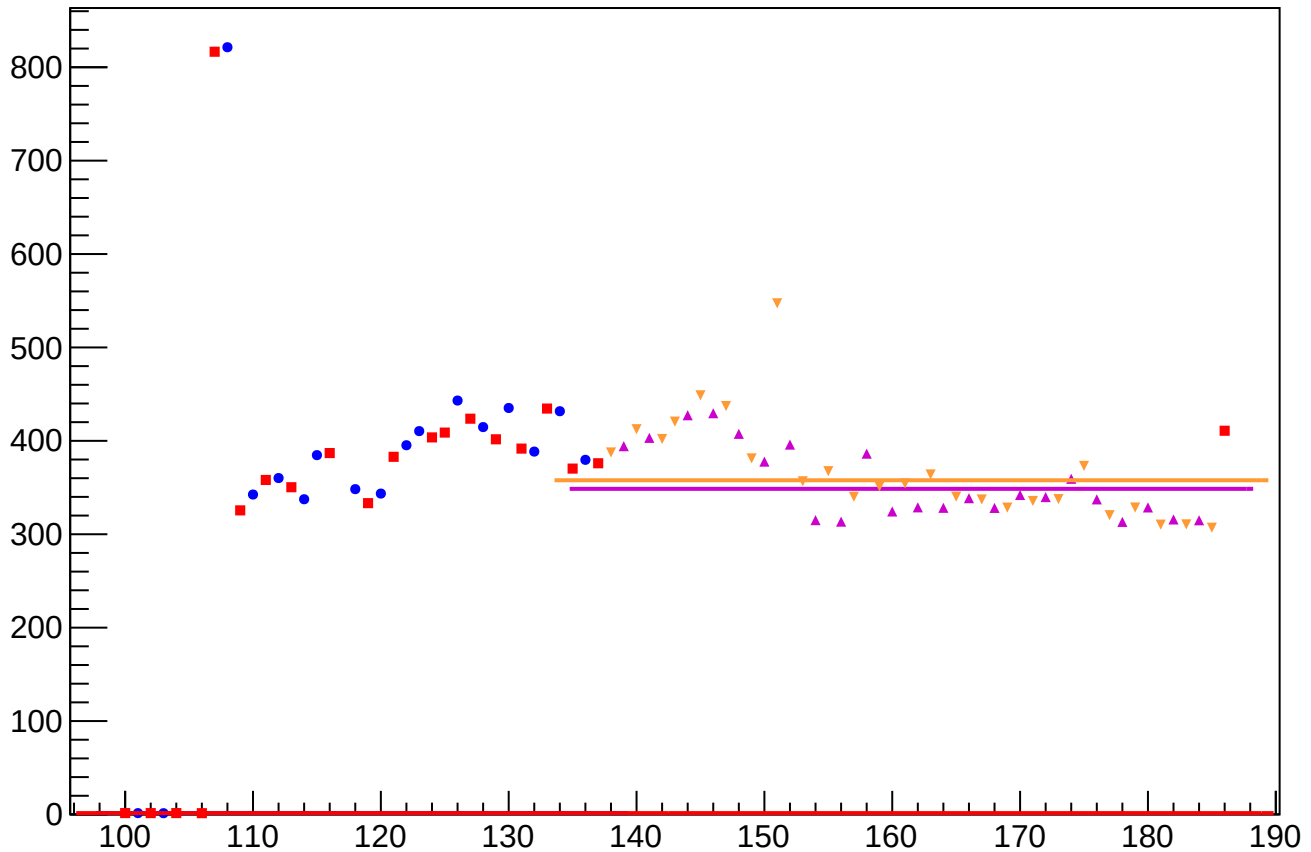
Right: 0.643 $\pm$ 1.186  $\chi^2/\text{NDF}$ : 21.1/36

In: -0.126 $\pm$ 1.736  $\chi^2/\text{NDF}$ :23.7/39

Out: 1.293 $\pm$ 1.622  $\chi^2/\text{NDF}$ :28.2/44

All: 0.632 $\pm$ 1.185  $\chi^2/\text{NDF}$ : 52.3/84

# asym\_cav4dQ\_rms vs Slug, Sign Corrected



Right In: 1.452 $\pm$ 0.001  $\chi^2$ /NDF: 10771707.1/16

Left Out: 357.804 $\pm$ 0.059  $\chi^2$ /NDF: 547036.5/24

Right Out: 1.453 $\pm$ 0.001  $\chi^2$ /NDF: 11588634.5/19

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: 1.453 $\pm$ 0.001  $\chi^2$ /NDF: 22360342.3/36

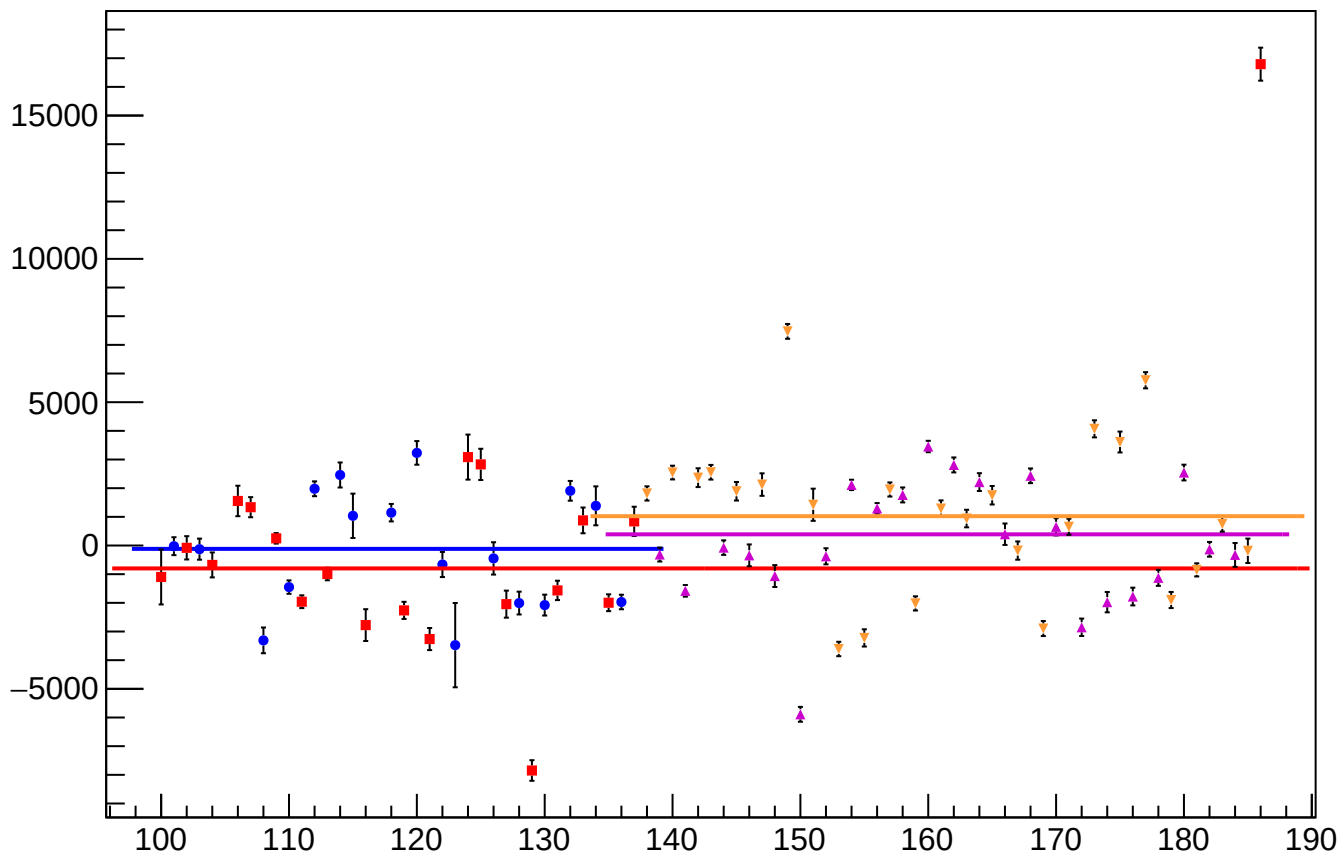
In: 1.599 $\pm$ 0.001  $\chi^2$ /NDF: 44971836.0/39

Out: 1.586 $\pm$ 0.001  $\chi^2$ /NDF: 48048804.1/44

All: 1.592 $\pm$ 0.001  $\chi^2$ /NDF: 93020699.6/84



# asym\_bcm0l02\_mean vs Slug, Sign Corrected



Right In:  $-116.817 \pm 88.319$   $\chi^2/\text{NDF}: 420.4/16$

Left Out:  $1023.439 \pm 57.338$   $\chi^2/\text{NDF}: 2309.4/24$

Right Out:  $-799.280 \pm 77.744$   $\chi^2/\text{NDF}: 1639.1/19$

Left In:  $390.237 \pm 54.931$   $\chi^2/\text{NDF}: 1584.9/22$

Left:  $693.270 \pm 39.666$   $\chi^2/\text{NDF}: 3957.9/47$

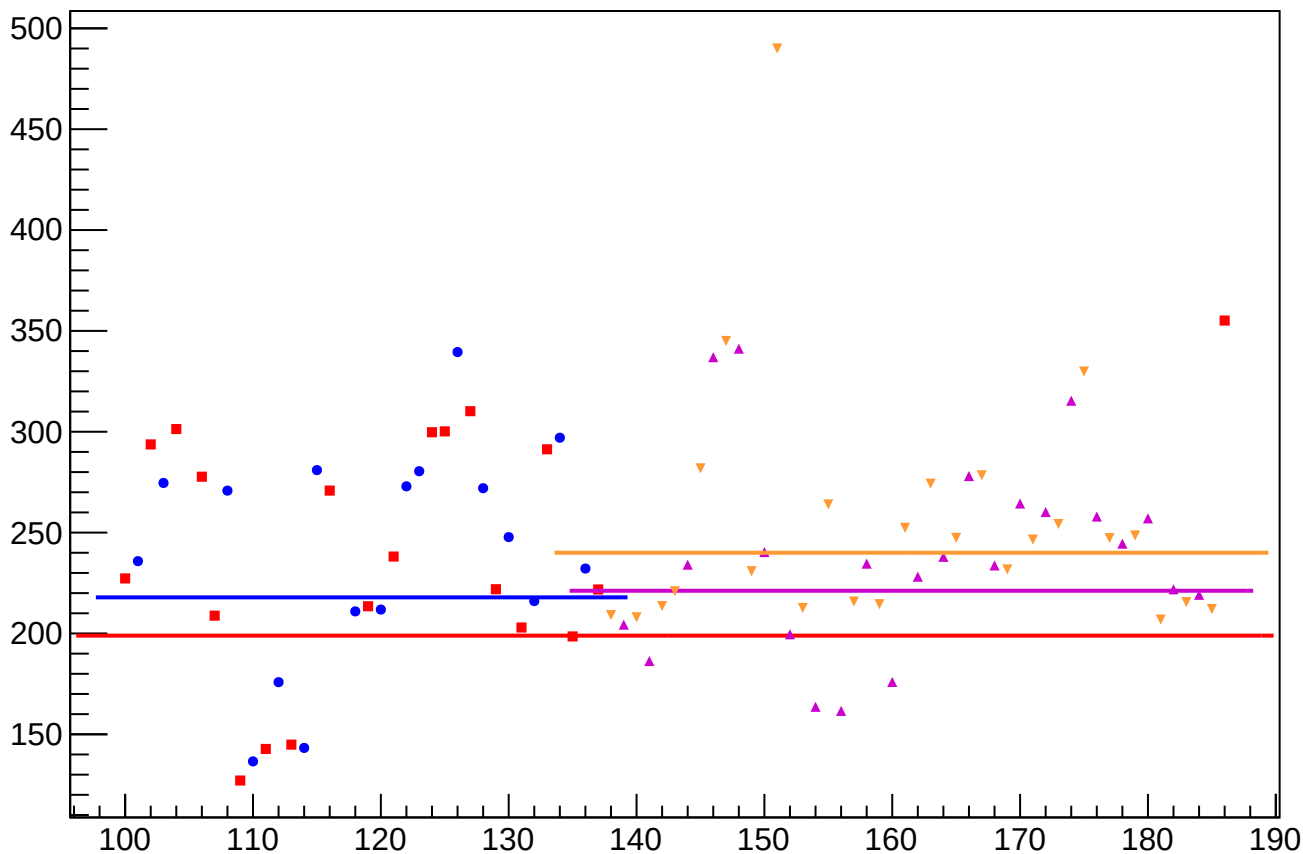
Right:  $-501.333 \pm 58.356$   $\chi^2/\text{NDF}: 2093.2/36$

In:  $248.801 \pm 46.645$   $\chi^2/\text{NDF}: 2029.1/39$

Out:  $381.280 \pm 46.145$   $\chi^2/\text{NDF}: 4304.5/44$

All:  $315.754 \pm 32.805$   $\chi^2/\text{NDF}: 6337.7/84$

# asym\_bcm0l02\_rms vs Slug, Sign Corrected



Right In:  $217.896 \pm 0.062$   $\chi^2/\text{NDF}$ : 661999.5/16

Left Out:  $240.019 \pm 0.041$   $\chi^2/\text{NDF}$ : 1002427.9/24

Right Out:  $198.923 \pm 0.055$   $\chi^2/\text{NDF}$ : 1339275.9/19

Left In:  $221.173 \pm 0.039$   $\chi^2/\text{NDF}$ : 1342517.8/22

Left:  $230.192 \pm 0.028$   $\chi^2/\text{NDF}$ : 2457612.6/47

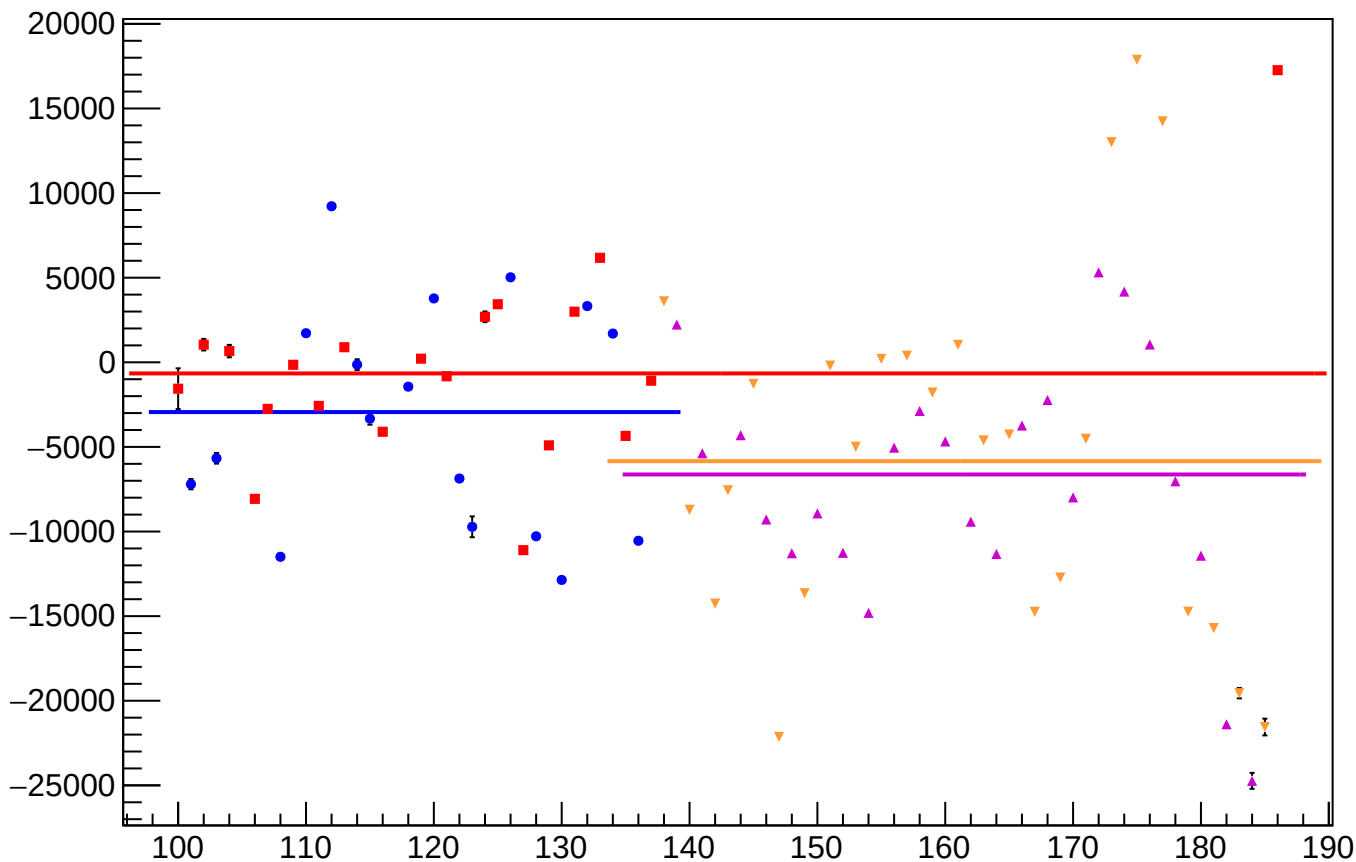
Right:  $207.206 \pm 0.041$   $\chi^2/\text{NDF}$ : 2053279.4/36

In:  $220.259 \pm 0.033$   $\chi^2/\text{NDF}$ : 2006502.5/39

Out:  $225.541 \pm 0.033$   $\chi^2/\text{NDF}$ : 2703675.3/44

All:  $222.928 \pm 0.023$   $\chi^2/\text{NDF}$ : 4723138.0/84

# asym\_bpm2i01WS\_mean vs Slug, Sign Corrected



Right In:  $-2940.841 \pm 48.696$   $\chi^2/\text{NDF}: 20909.3/16$

Left Out:  $-5841.615 \pm 35.848$   $\chi^2/\text{NDF}: 63397.3/24$

Right Out:  $-657.882 \pm 45.398$   $\chi^2/\text{NDF}: 14833.5/19$

Left In:  $-6628.388 \pm 37.160$   $\chi^2/\text{NDF}: 21738.0/22$

Left:  $-6220.862 \pm 25.800$   $\chi^2/\text{NDF}: 85367.5/47$

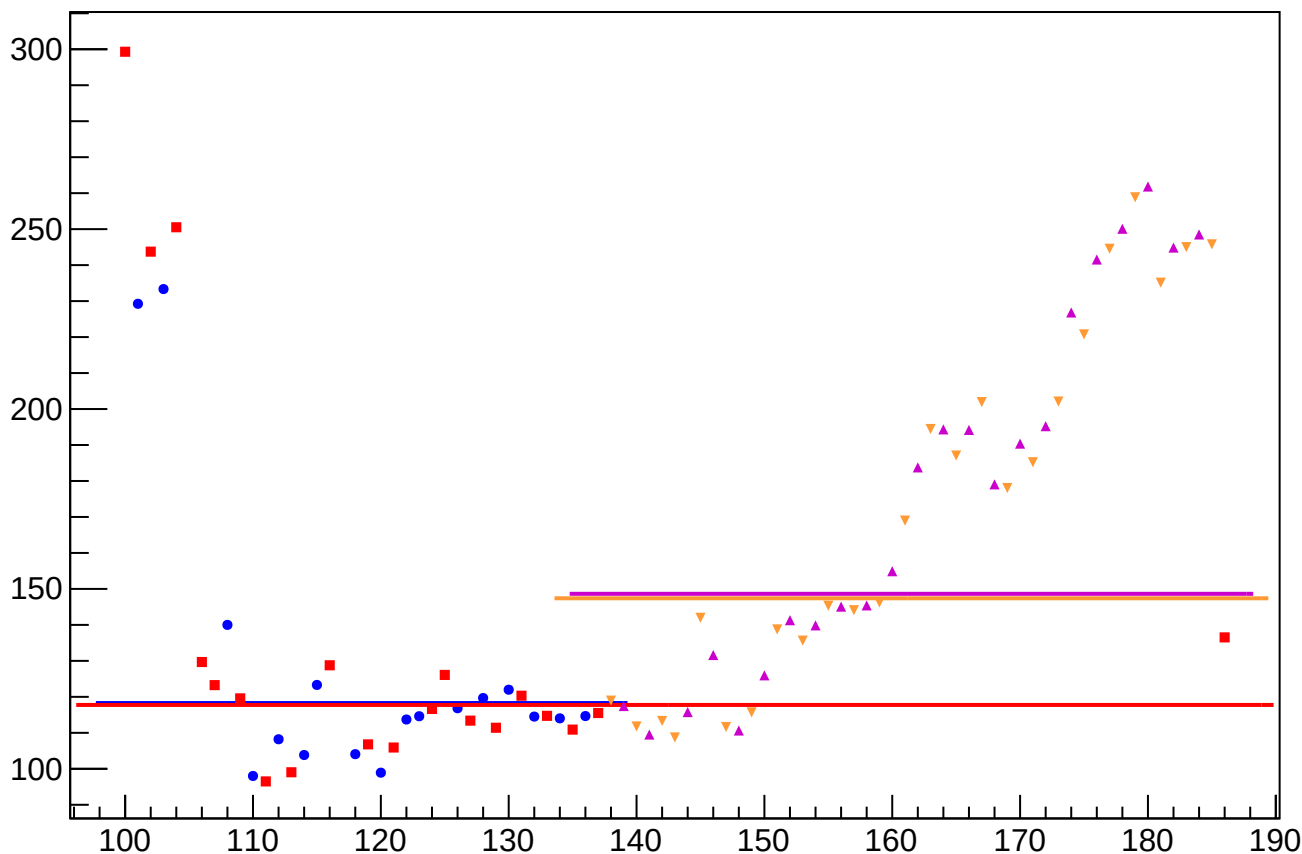
Right:  $-1719.436 \pm 33.206$   $\chi^2/\text{NDF}: 36918.7/36$

In:  $-5271.313 \pm 29.541$   $\chi^2/\text{NDF}: 46271.4/39$

Out:  $-3850.796 \pm 28.134$   $\chi^2/\text{NDF}: 86261.4/44$

All:  $-4526.415 \pm 20.373$   $\chi^2/\text{NDF}: 133745.3/8$

# asym\_bpm2i01WS\_rms vs Slug, Sign Corrected



Right In: 118.278+/-0.034  $\chi^2/\text{NDF}$ : 637027.4/16

Left Out: 147.396+/-0.025  $\chi^2/\text{NDF}$ : 2517097.1/24

Right Out: 117.751+/-0.032  $\chi^2/\text{NDF}$ : 704564.2/19

Left In: 148.642+/-0.026  $\chi^2/\text{NDF}$ : 2415531.9/22

Left: 147.997+/-0.018  $\chi^2/\text{NDF}$ : 4933793.6/47

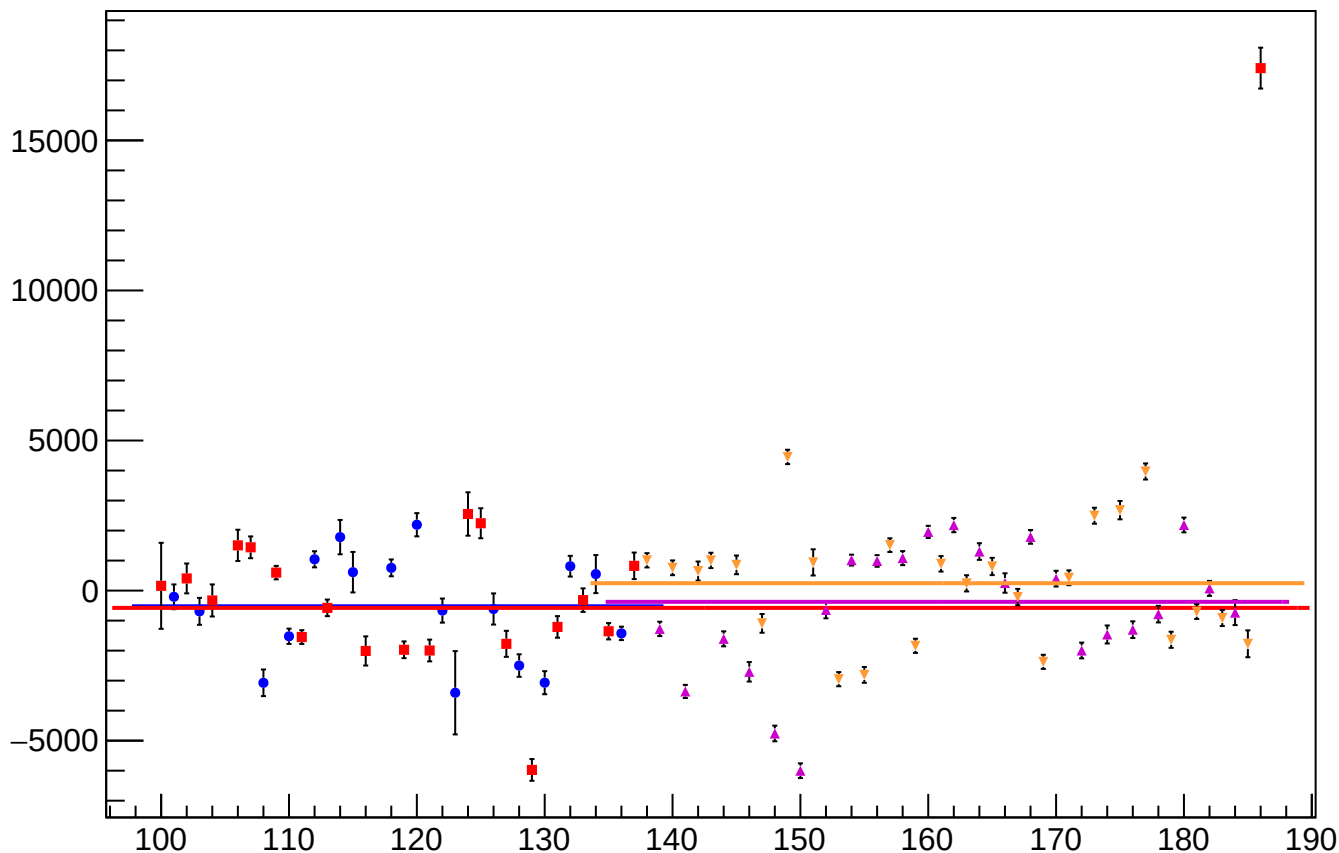
Right: 117.996+/-0.023  $\chi^2/\text{NDF}$ : 1341716.9/36

In: 137.468+/-0.021  $\chi^2/\text{NDF}$ : 3543984.1/39

Out: 136.011+/-0.020  $\chi^2/\text{NDF}$ : 3746951.5/44

All: 136.704+/-0.014  $\chi^2/\text{NDF}$ : 7293485.7/84

# asym\_bpm0i07WS\_mean vs Slug, Sign Corrected



Right In:  $-523.148 \pm 89.404$   $\chi^2/\text{NDF}$ : 282.6/16

Left Out:  $246.120 \pm 53.492$   $\chi^2/\text{NDF}$ : 1354.8/24

Right Out:  $-575.826 \pm 81.670$   $\chi^2/\text{NDF}$ : 1144.5/19

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

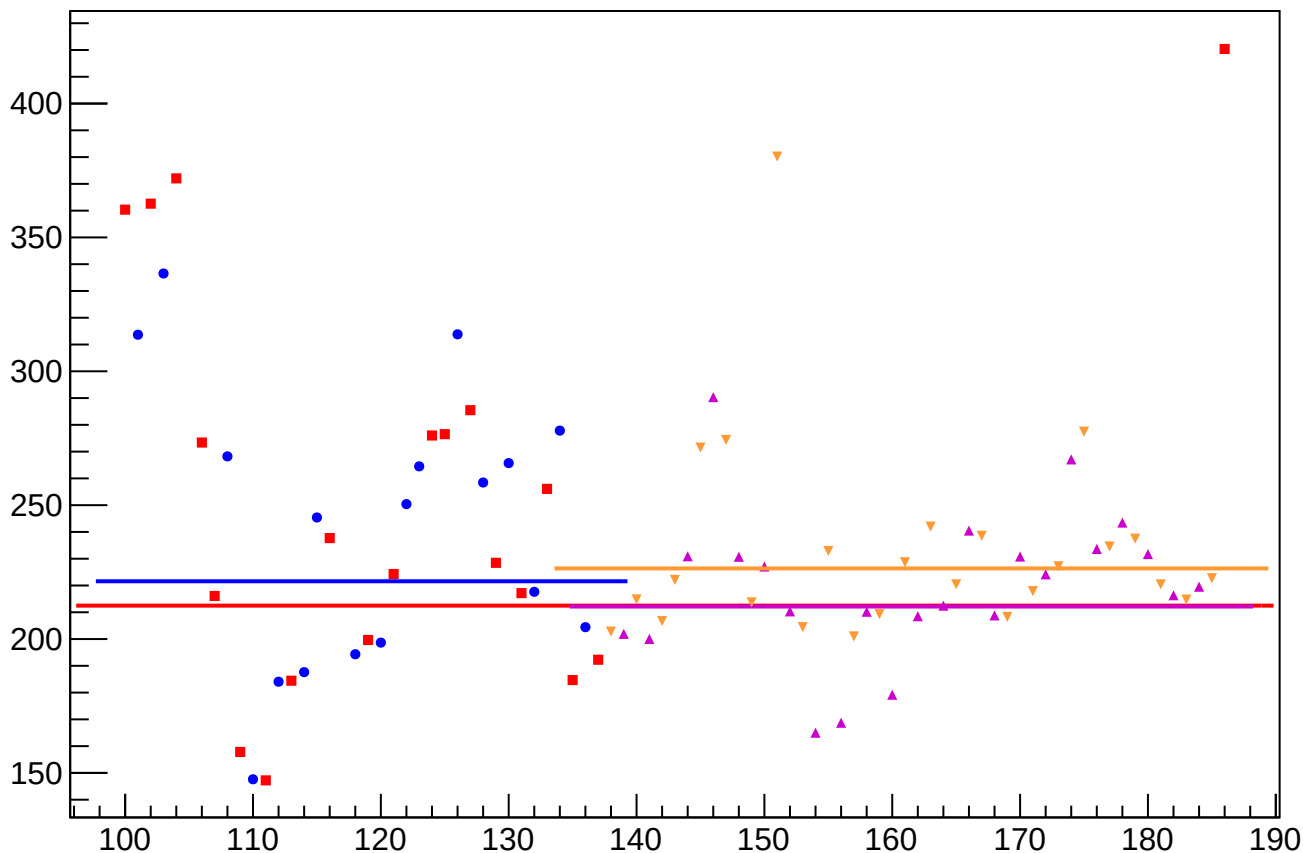
Right:  $-551.864 \pm 60.298$   $\chi^2/\text{NDF}$ : 1427.3/36

In:  $-411.933 \pm 44.880$   $\chi^2/\text{NDF}$ : 2082.9/39

Out:  $-0.635 \pm 44.748$   $\chi^2/\text{NDF}$ : 2570.2/44

All:  $-205.676 \pm 31.688$   $\chi^2/\text{NDF}$ : 4695.3/84

# asym\_bpm0i07WS\_rms vs Slug, Sign Corrected



Right In: 221.577 $\pm$ 0.063  $\chi^2$ /NDF: 645771.3/16

Left Out: 226.376 $\pm$ 0.038  $\chi^2$ /NDF: 521770.1/24

Right Out: 212.478 $\pm$ 0.058  $\chi^2$ /NDF: 1068244.8/19

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

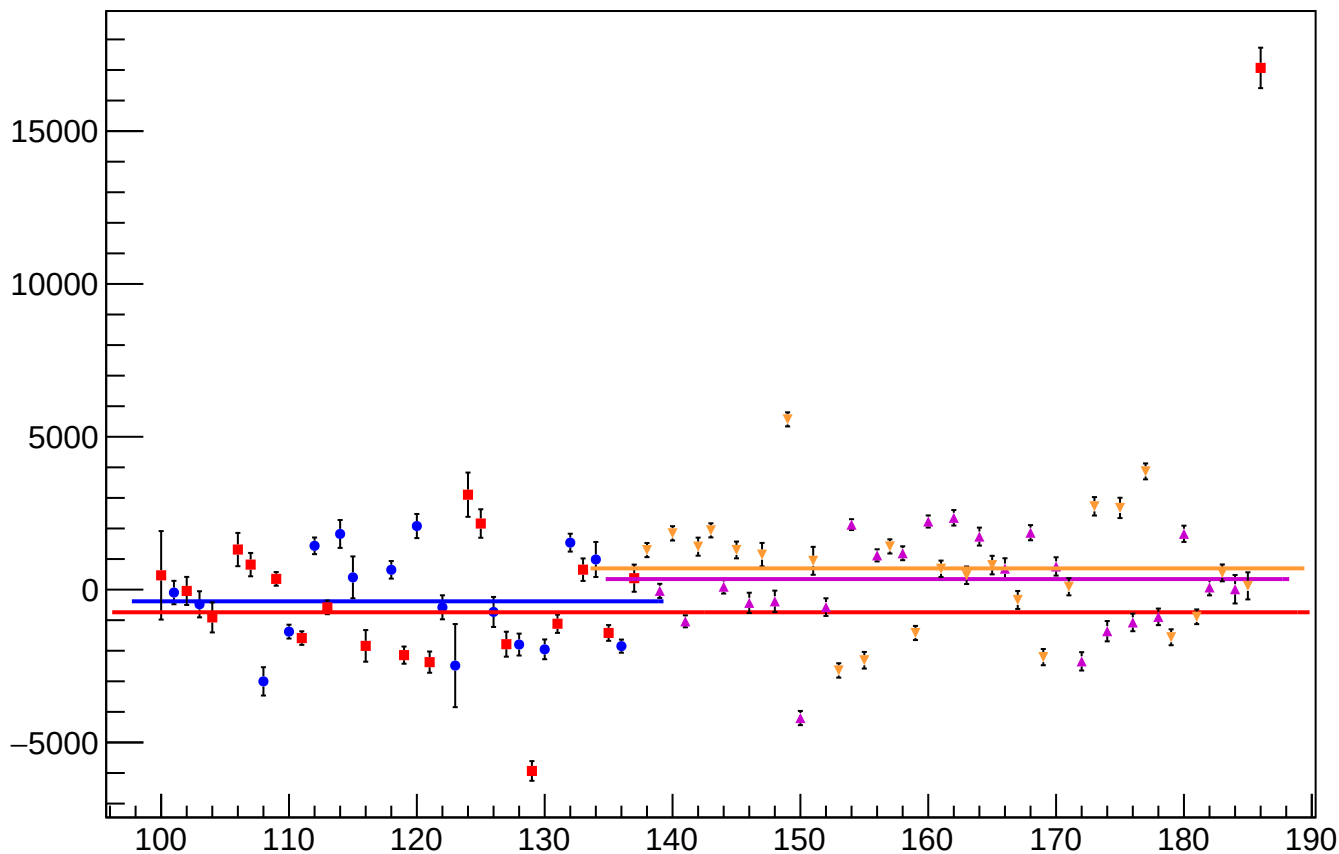
Right: 216.617 $\pm$ 0.043  $\chi^2$ /NDF: 1725309.9/36

In: 214.522 $\pm$ 0.032  $\chi^2$ /NDF: 1254121.6/39

Out: 222.203 $\pm$ 0.032  $\chi^2$ /NDF: 1630544.1/44

All: 218.374 $\pm$ 0.022  $\chi^2$ /NDF: 2914046.6/84

# asym\_bpm0l01WS\_mean vs Slug, Sign Corrected



Left: 515.236 ± 37.893  $\chi^2/\text{NDF}$ : 2428.4/47

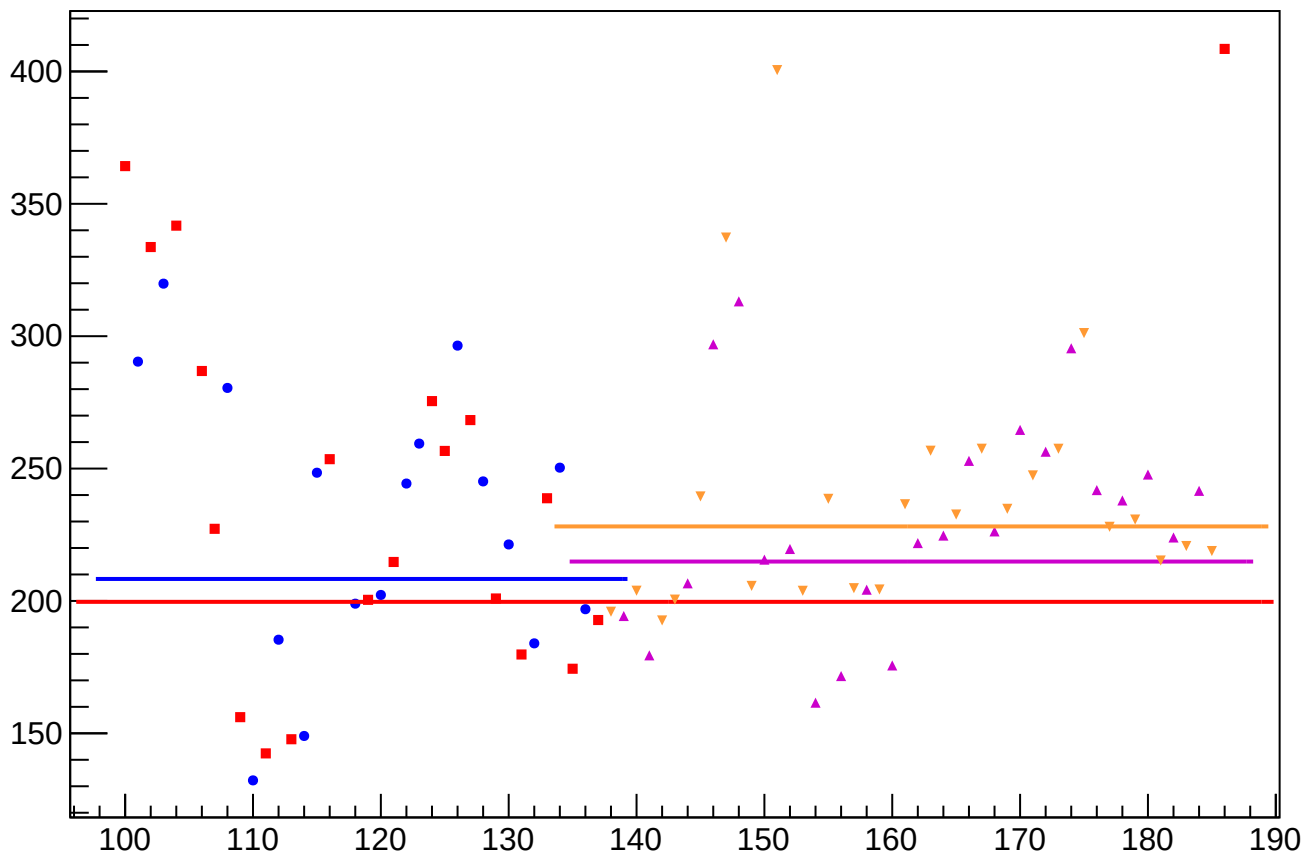
Right: -578.106 ± 56.970  $\chi^2/\text{NDF}$ : 1530.3/36

In: 139.380 ± 44.866  $\chi^2/\text{NDF}$ : 1348.1/39

Out: 219.531 ± 44.378  $\chi^2/\text{NDF}$ : 2864.3/44

All: 179.894 ± 31.551  $\chi^2/\text{NDF}$ : 4214.0/84

# asym\_bpm0l01WS\_rms vs Slug, Sign Corrected



Right In: 208.304 $\pm$ 0.060  $\chi^2/\text{NDF}$ : 698771.8/16

Left Out: 228.144 $\pm$ 0.038  $\chi^2/\text{NDF}$ :828399.3/24

Right Out: 199.658 $\pm$ 0.055  $\chi^2/\text{NDF}$ : 1126956.4/19

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: 203.591 $\pm$ 0.040  $\chi^2/\text{NDF}$ : 1837149.1/36

In: 213.023 $\pm$ 0.032  $\chi^2/\text{NDF}$ :1744979.5/39

Out: 218.722 $\pm$ 0.031  $\chi^2/\text{NDF}$ :2137756.8/44

All: 215.904 $\pm$ 0.022  $\chi^2/\text{NDF}$ : 3899047.8/84



# 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

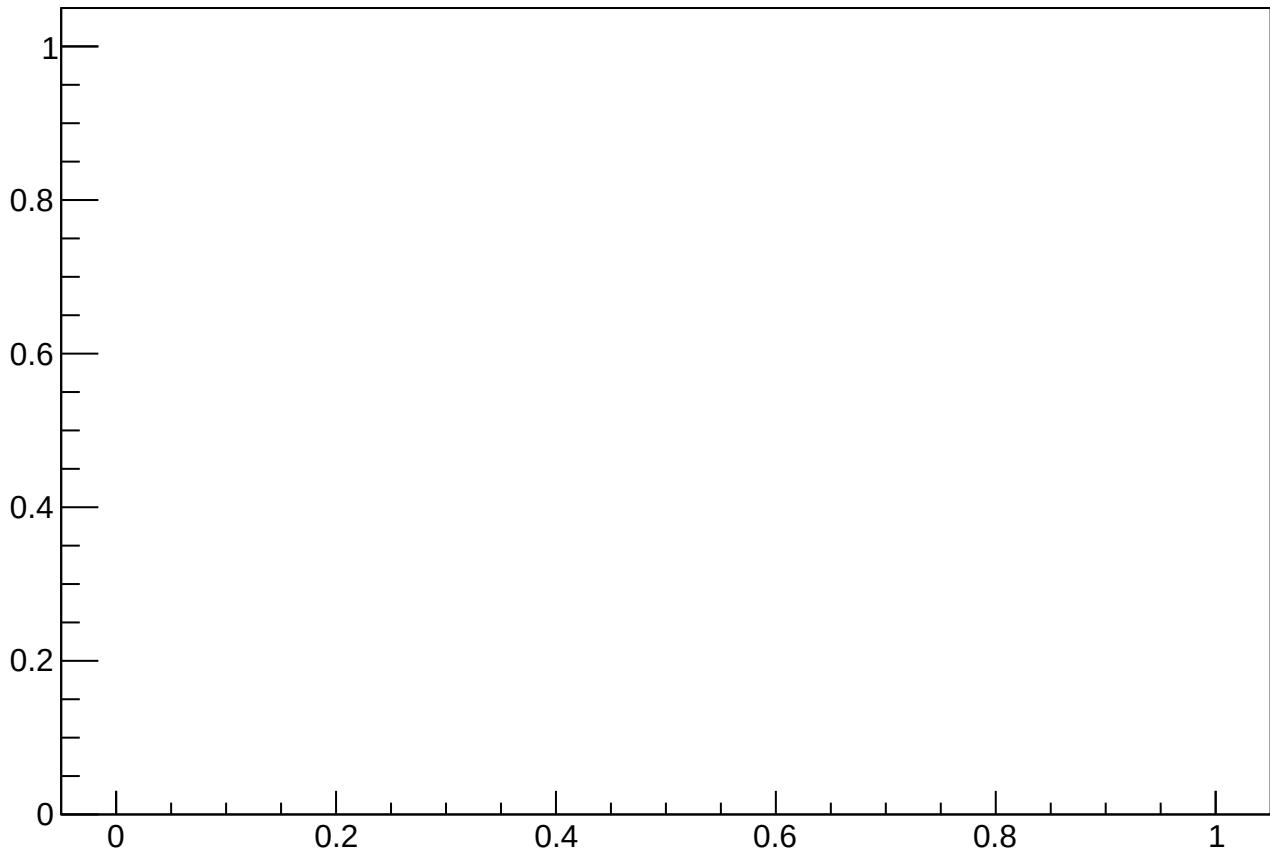
Right: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

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

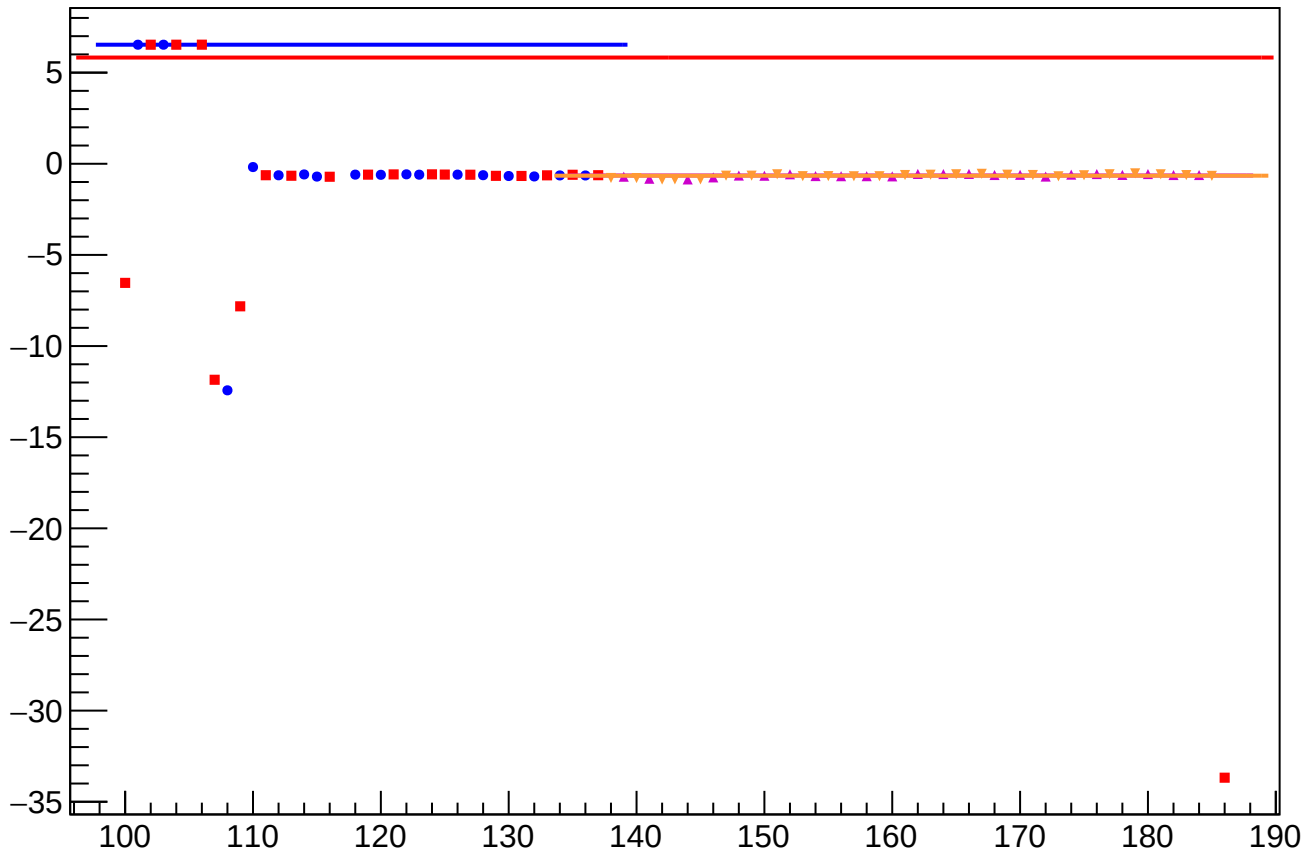
In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

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  $\chi^2/\text{NDF}$ : 127601781164.3/16

Left Out: -0.654+/-0.000  $\chi^2/\text{NDF}$ : 179069954.8/24

Right Out: 5.827+/-0.000  $\chi^2/\text{NDF}$ : 755961944202336.5/19

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

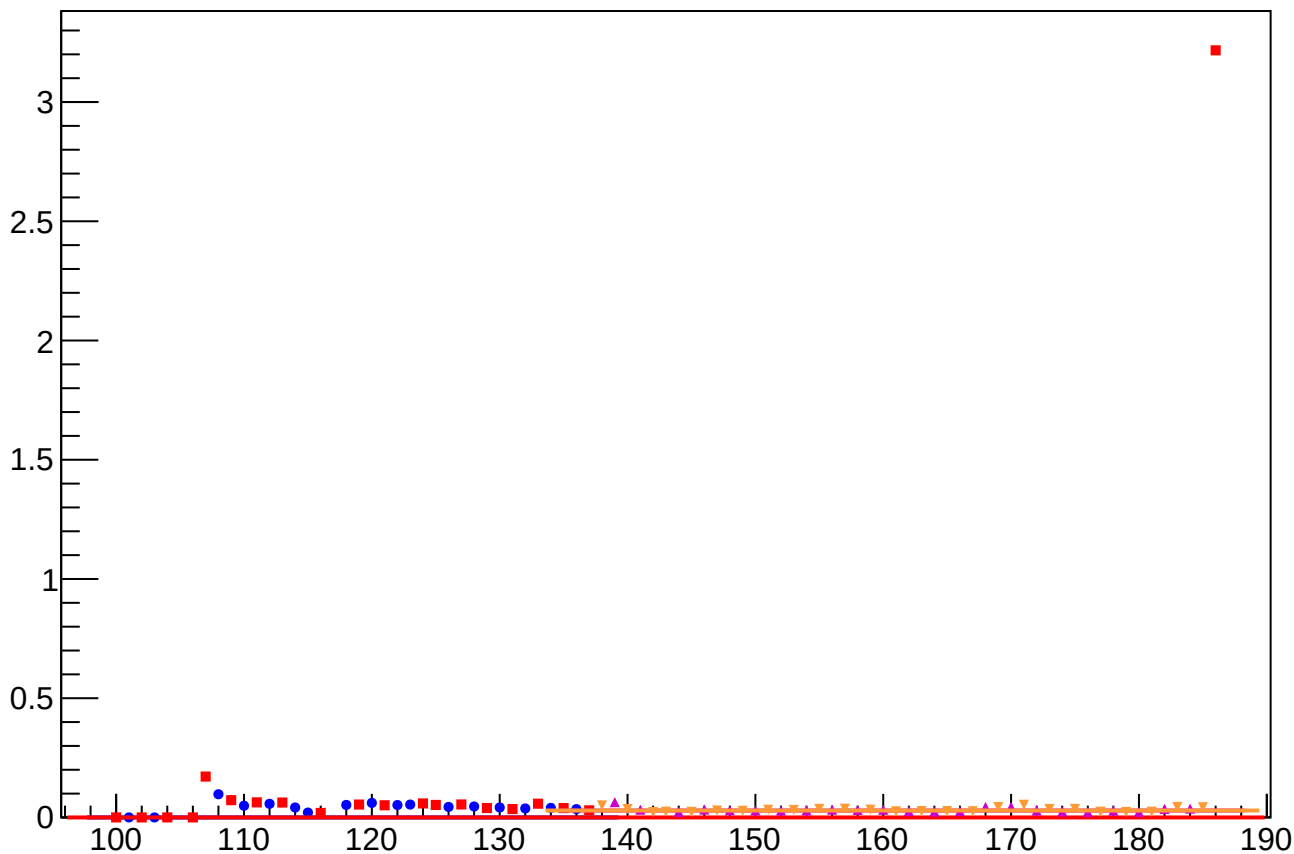
Right: 6.155+/-0.000  $\chi^2/\text{NDF}$ : 776093509686870.4/47

In: 6.530+/-0.000  $\chi^2/\text{NDF}$ : 961720392446.2/39

Out: 5.826+/-0.000  $\chi^2/\text{NDF}$ : 756672961117249.8/47

All: 6.153+/-0.000  $\chi^2/\text{NDF}$ : 77762694161696.4/94

# yield\_cav4bX\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8848188.8/16

Left Out: 0.029+/-0.000  $\chi^2/\text{NDF}$ :1484308.2/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10035964.6/19

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

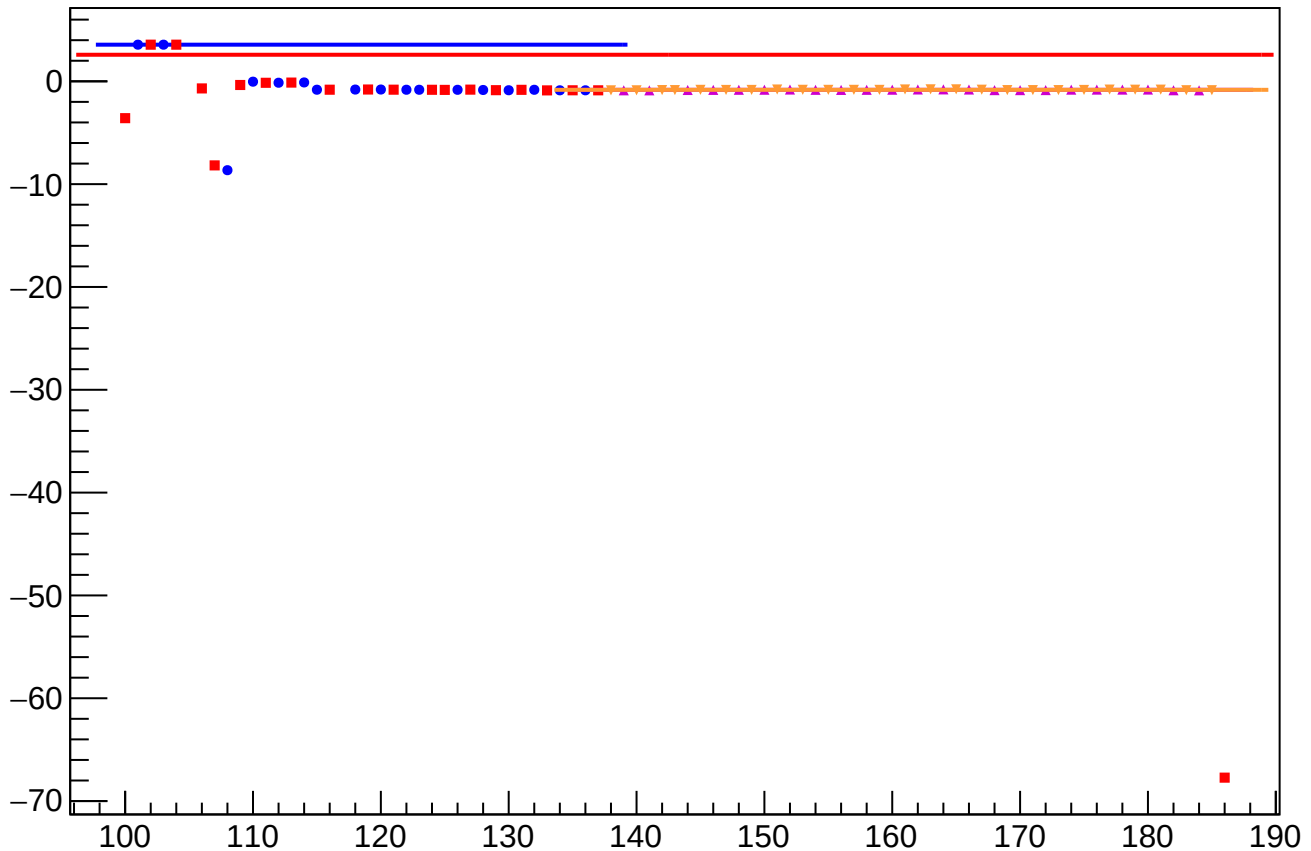
Right: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 18884401.2/36

In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :37026014.3/39

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :40004027.7/44

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 77030467.9/84

# yield\_cav4bY\_mean vs Slug, Sign Corrected



Right In: 3.563+/-0.000  $\chi^2/\text{NDF}$ : 480140963917.5/16

Left Out: -0.827+/-0.000  $\chi^2/\text{NDF}$ : 170052639.9/24

Right Out: 2.583+/-0.000  $\chi^2/\text{NDF}$ : 1253501393802194.8/19

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

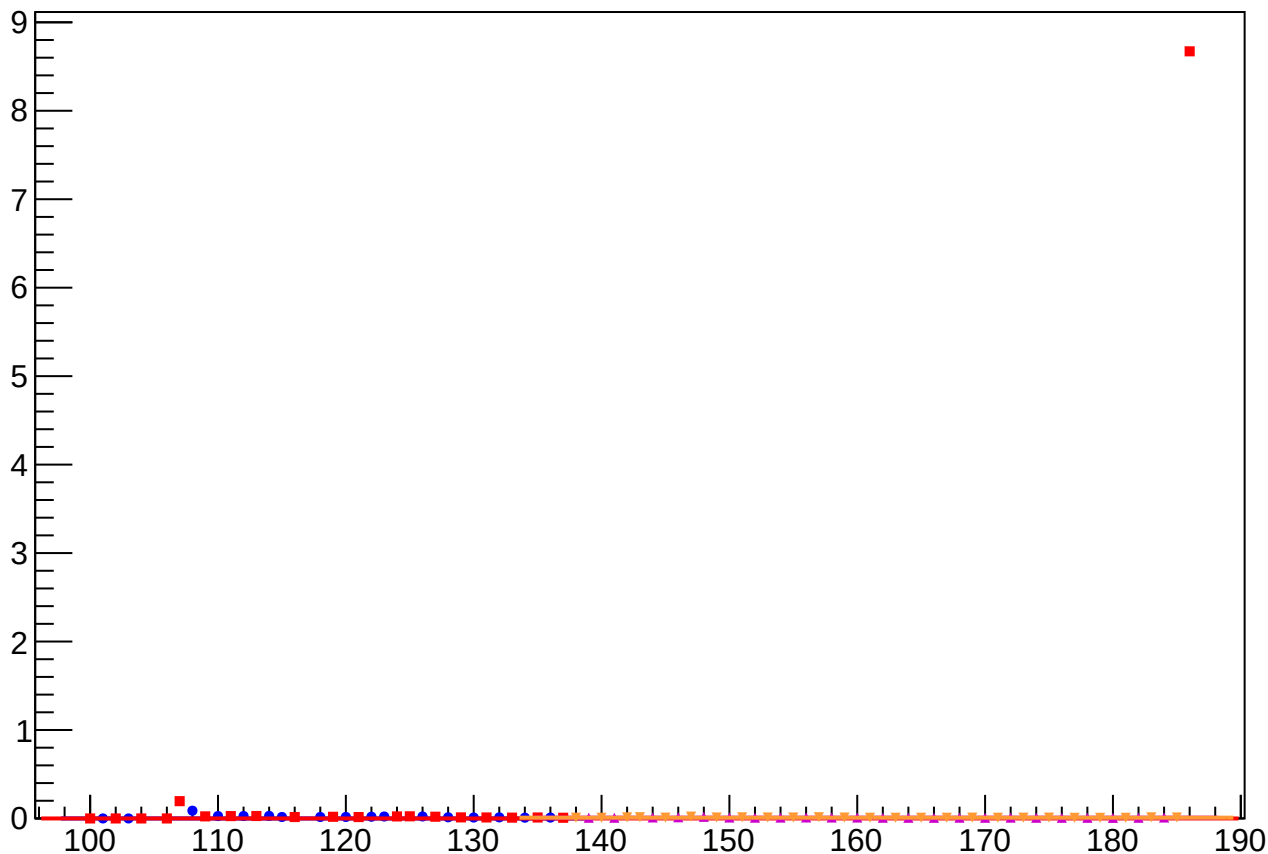
Right: 3.040+/-0.000  $\chi^2/\text{NDF}$ : 1382252638226410.0

In: 3.560+/-0.000  $\chi^2/\text{NDF}$ : 4160703297842.5/39

Out: 2.581+/-0.000  $\chi^2/\text{NDF}$ : 1255732296008127.2

All: 3.038+/-0.000  $\chi^2/\text{NDF}$ : 13879772019937.0

yield\_cav4bY\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9686061.1/16

Left Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 1455379.3/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10539753.4/19

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

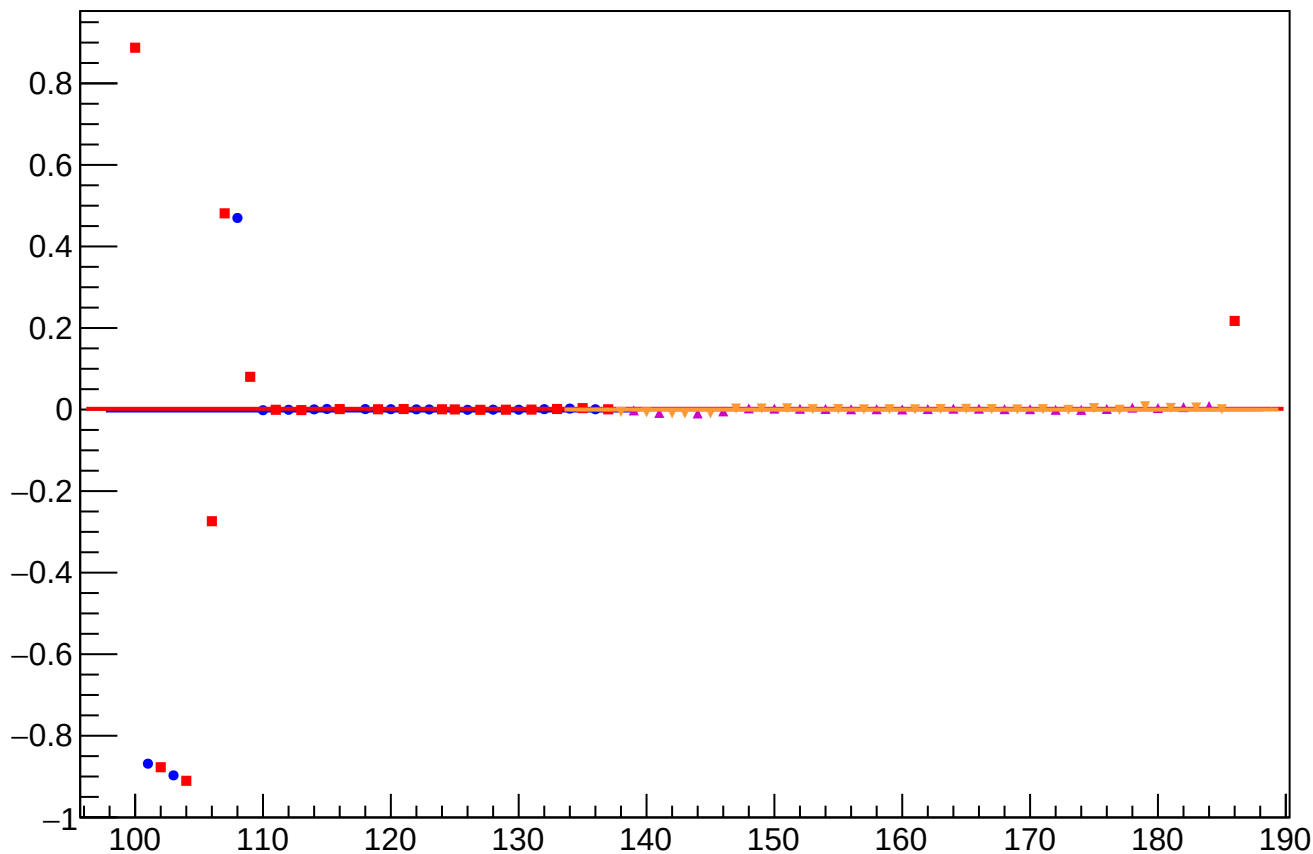
Right: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 20226088.6/36

In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 39483302.7/39

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 42057995.7/44

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 81542077.3/84

# yield\_cav4cX\_mean vs Slug, Sign Corrected



Right In: -0.002 $\pm$ 0.000  $\chi^2$ /NDF: 9794882359.1/16

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 151559332.0/24

Right Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 3041332917.7/19

Left In: 0.001 $\pm$ 0.000  $\chi^2$ /NDF: 101468517.6/22

Left: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 254489625.0/47

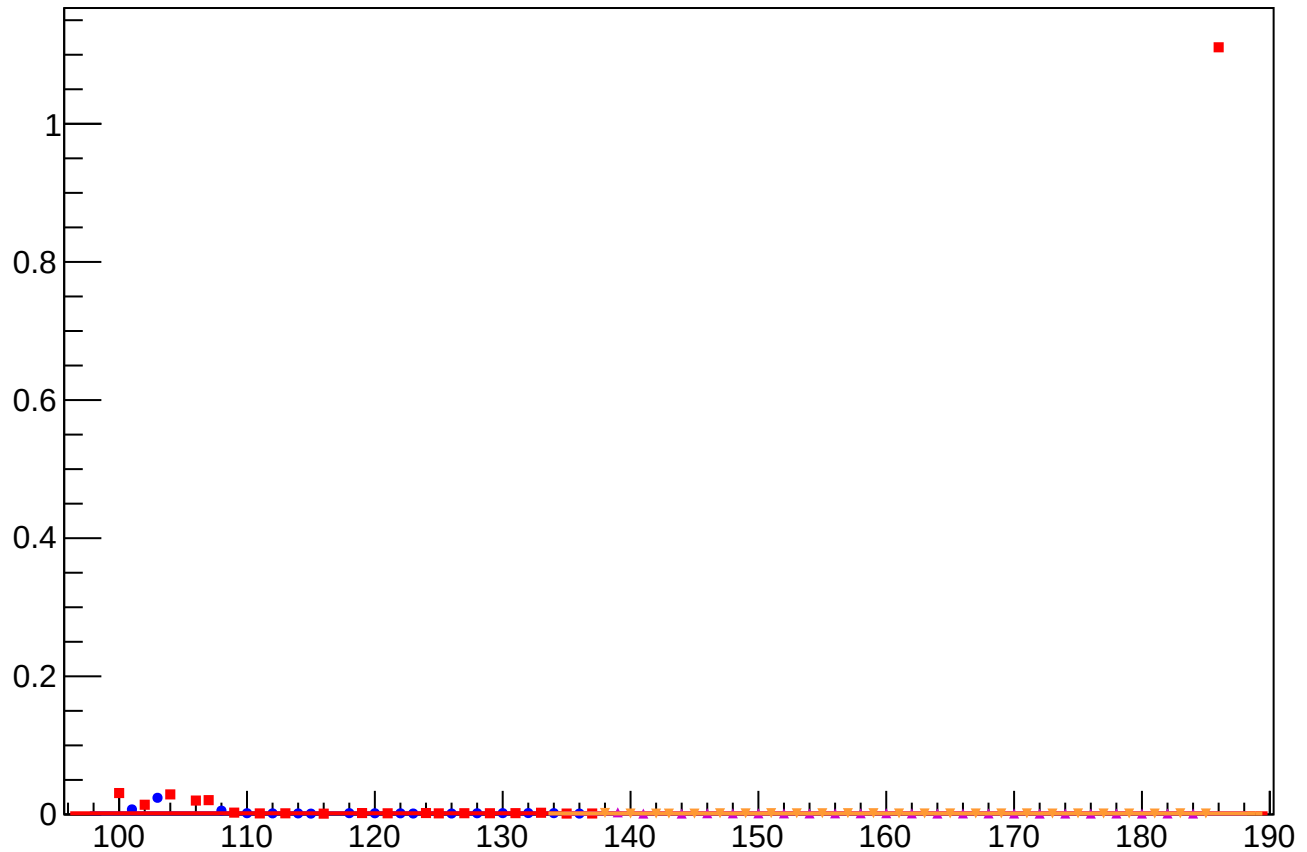
Right: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 12850360753.4/36

In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 9907798796.5/39

Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 3197563441.2/44

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 13105733676.9/8

# yield\_cav4cX\_rms vs Slug, Sign Corrected



Right In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 1921590.0/16

Left Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 539040.4/24

Right Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 3726564.3/19

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

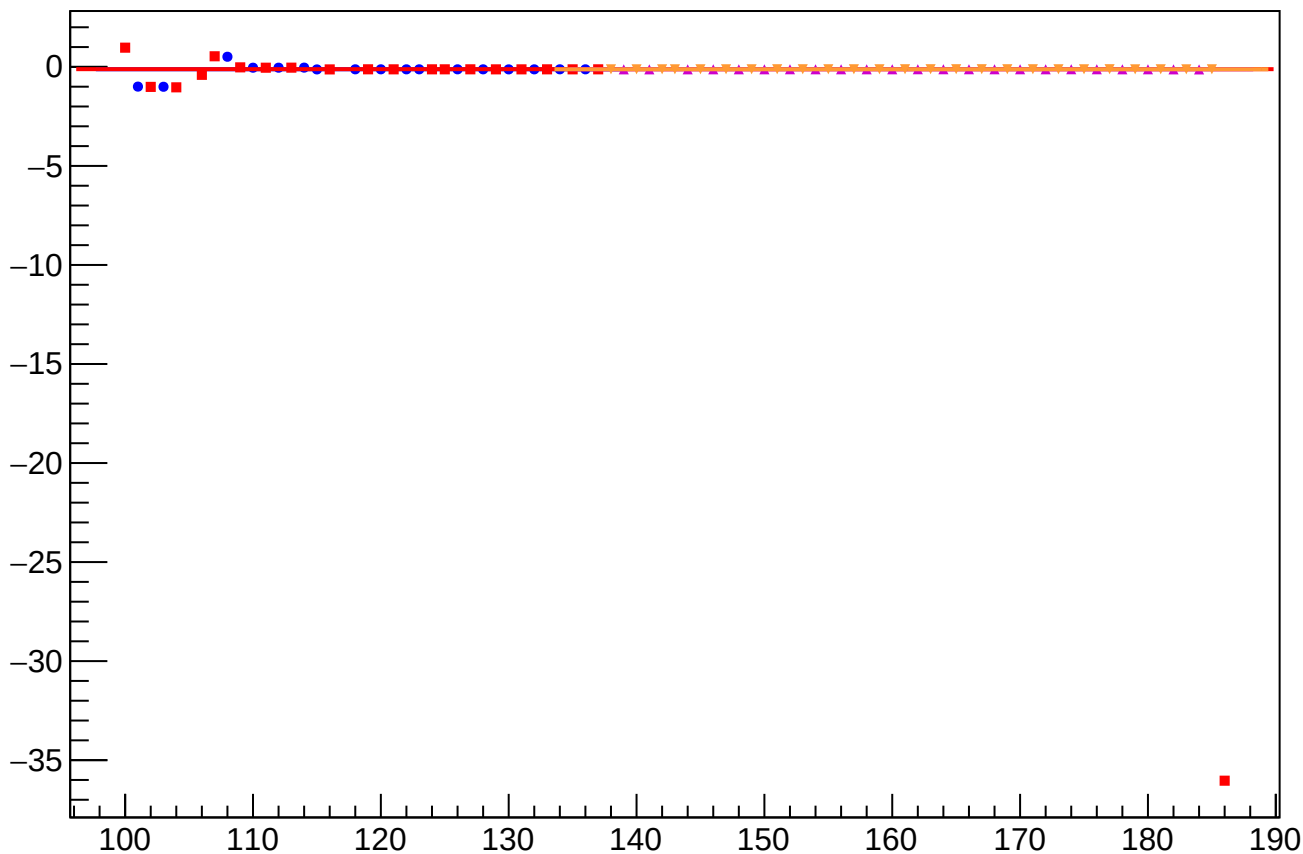
Right: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 5656030.1/36

In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 2632122.3/39

Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 4398764.9/44

All: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 7031518.8/84

# yield\_cav4cY\_mean vs Slug, Sign Corrected



Right In: -0.120+/-0.000  $\chi^2/\text{NDF}$ : 3932599788.9/16

Left Out: -0.121+/-0.000  $\chi^2/\text{NDF}$ : 58329026.8/24

Right Out: -0.115+/-0.000  $\chi^2/\text{NDF}$ : 2498317388.1/19

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

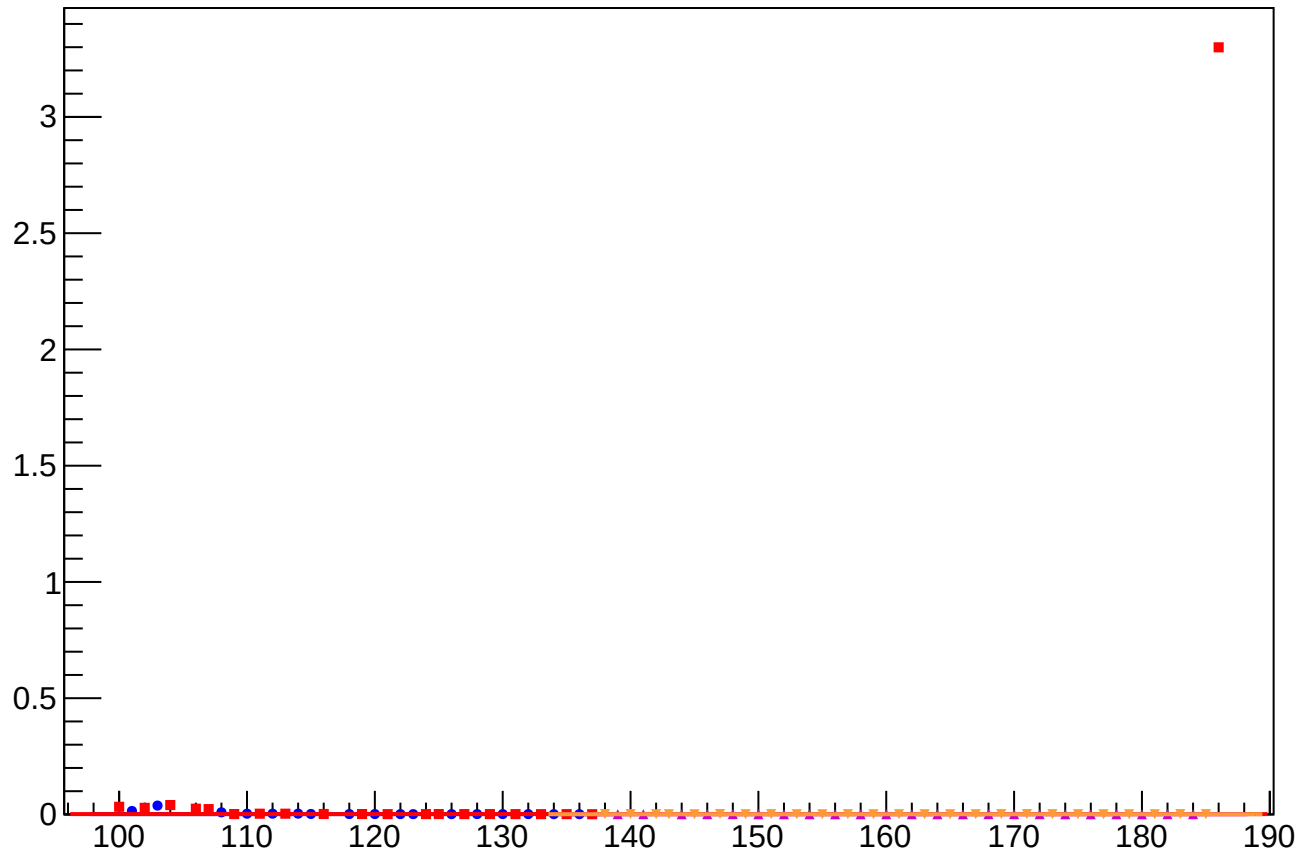
Right: -0.118+/-0.000  $\chi^2/\text{NDF}$ : 6453711141.1/36

In: -0.121+/-0.000  $\chi^2/\text{NDF}$ : 3986347616.1/39

Out: -0.121+/-0.000  $\chi^2/\text{NDF}$ : 2611976225.4/44

All: -0.121+/-0.000  $\chi^2/\text{NDF}$ : 6599278567.7/8

yield\_cav4cY\_rms vs Slug, Sign Corrected



Right In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 2897244.2/16

Left Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ :1362851.8/24

Right Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 4246759.1/19

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  $\chi^2/\text{NDF}$ : 7144055.3/36

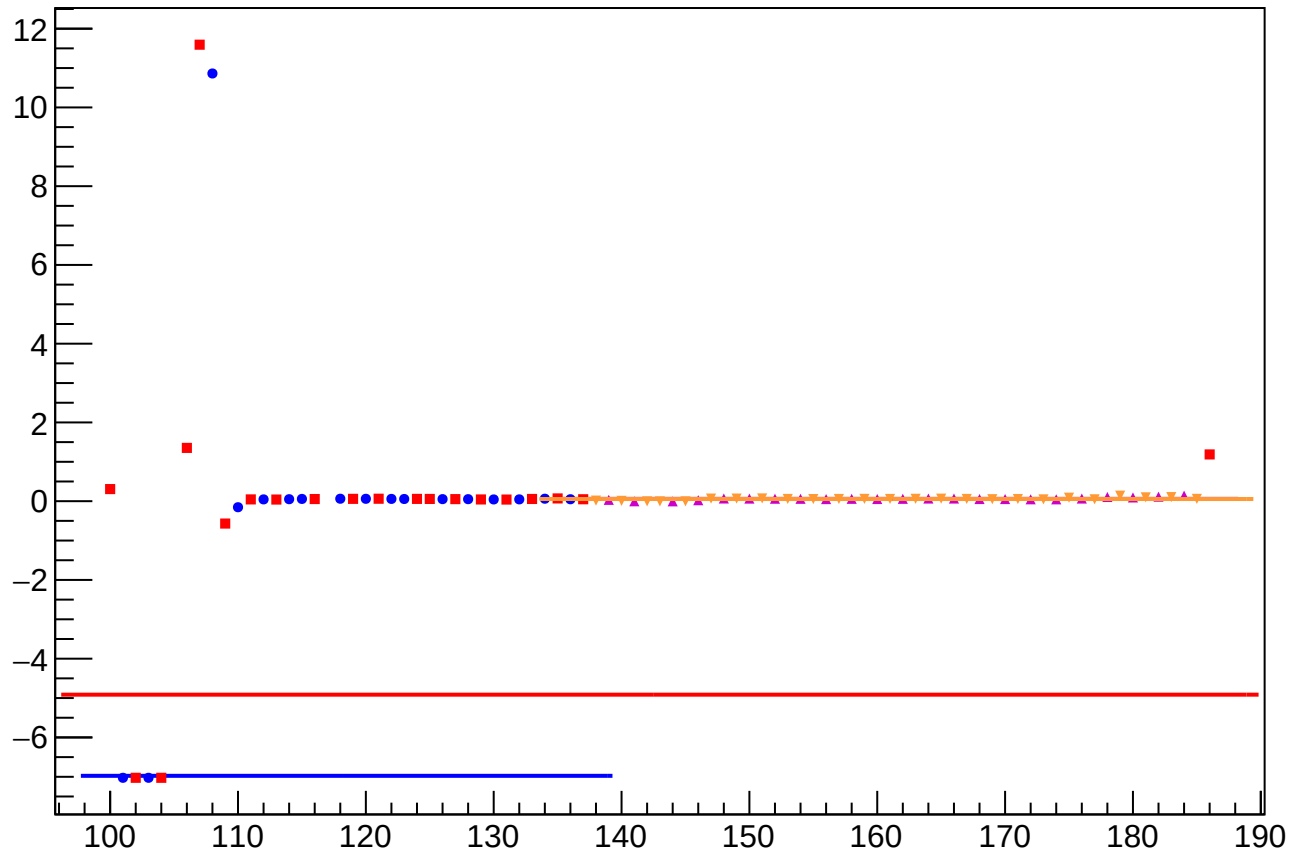
In: 0.001+/-0.000  $\chi^2/\text{NDF}$ :4987414.7/39

Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ :6750927.2/44

All: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 11740479.5/84

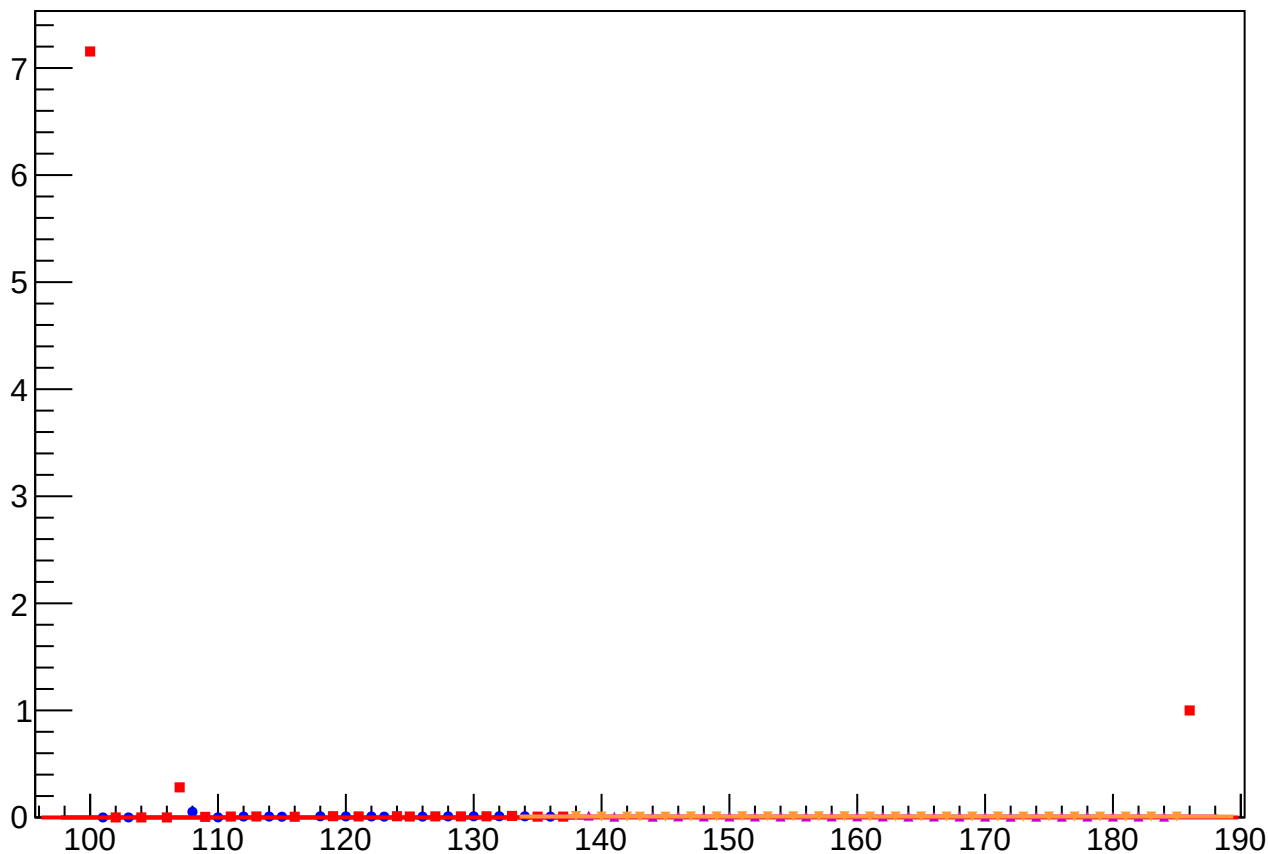


# yield\_cav4dX\_mean vs Slug, Sign Corrected



Right In: -6.975+/-0.000  $\chi^2/\text{NDF}$ : 8762449111165.9/16  
 Left Out: 0.055+/-0.000  $\chi^2/\text{NDF}$ : 243733184.3/24  
 Right Out: -4.914+/-0.000  $\chi^2/\text{NDF}$ : 365348546867901.9/19  
 Left In: 0.059+/-0.000  $\chi^2/\text{NDF}$ : 178713649.9/22  
 Left: 0.057+/-0.000  $\chi^2/\text{NDF}$ : 423872259.5/47  
 Right: -5.900+/-0.000  $\chi^2/\text{NDF}$ : 430303208531857.0  
 In: -6.925+/-0.000  $\chi^2/\text{NDF}$ : 17604978041532.6/39  
 Out: -4.879+/-0.000  $\chi^2/\text{NDF}$ : 370175234907113.3/19  
 All: -5.858+/-0.000  $\chi^2/\text{NDF}$ : 4435811758998.0/100

# yield\_cav4dX\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8227727.7/16

Left Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 513737.0/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9455873.0/19

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

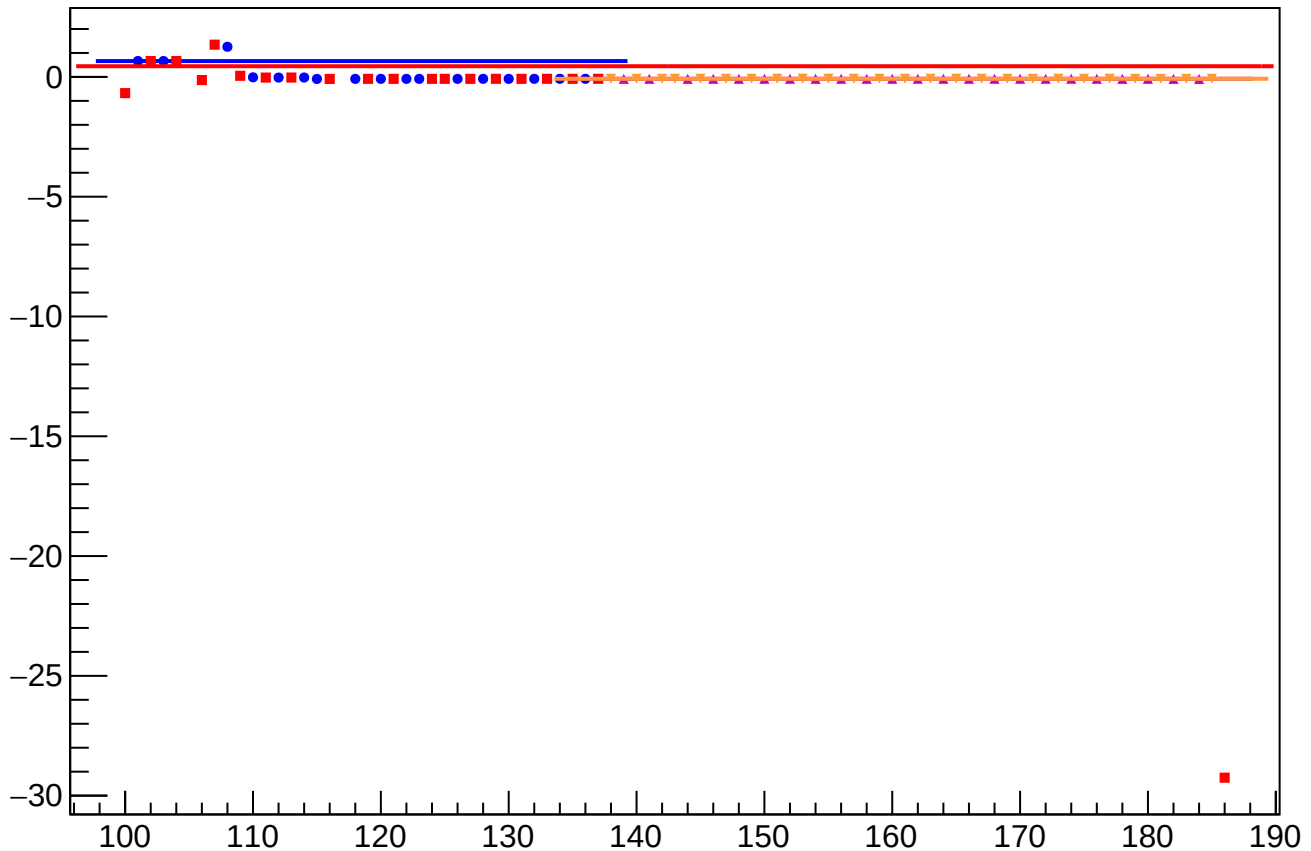
Right: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 17683906.6/36

In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 35865360.2/39

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 38484900.7/44

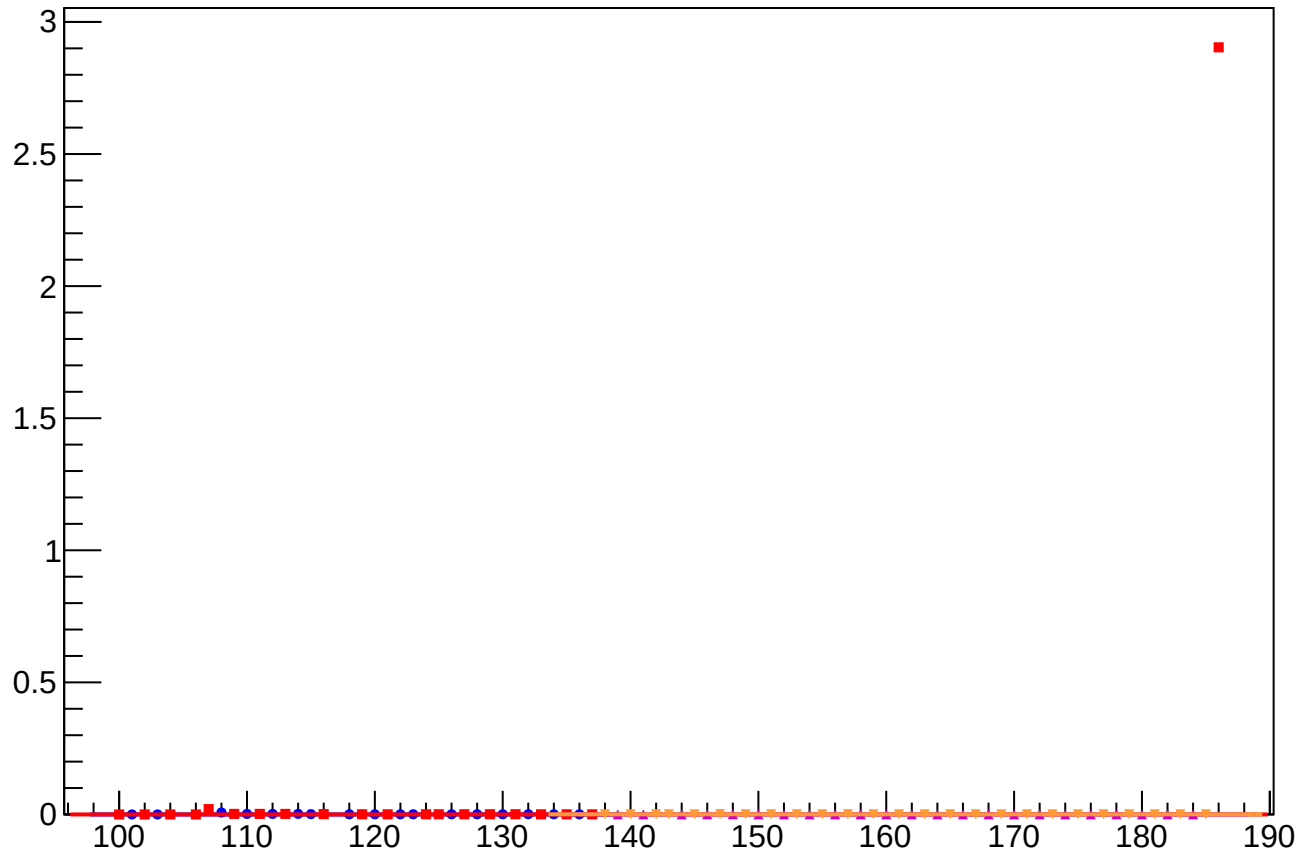
All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 74350750.0/84

# yield\_cav4dY\_mean vs Slug, Sign Corrected



|                          |                                            |                      |                                           |
|--------------------------|--------------------------------------------|----------------------|-------------------------------------------|
| Right In: 0.661+/-0.000  | $\chi^2/\text{NDF}$ : 5585151330309.5/16   | 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 | $\chi^2/\text{NDF}$ : 473931142516253.8   |
| Right Out: 0.446+/-0.000 | $\chi^2/\text{NDF}$ : 405416779429110.9/19 | In: 0.647+/-0.000    | $\chi^2/\text{NDF}$ : 33845142859279.3/39 |
| Left In: -0.077+/-0.000  | $\chi^2/\text{NDF}$ : 111221084.5/22       | Out: 0.436+/-0.000   | $\chi^2/\text{NDF}$ : 420611386496322.8/4 |
|                          |                                            | All: 0.537+/-0.000   | $\chi^2/\text{NDF}$ : 51598120149119      |

yield\_cav4dY\_rms vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 9835626.2/16

Left Out: 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 466355.6/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 10152999.5/19

Left In: 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 355587.5/22

Left: 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 822908.9/47

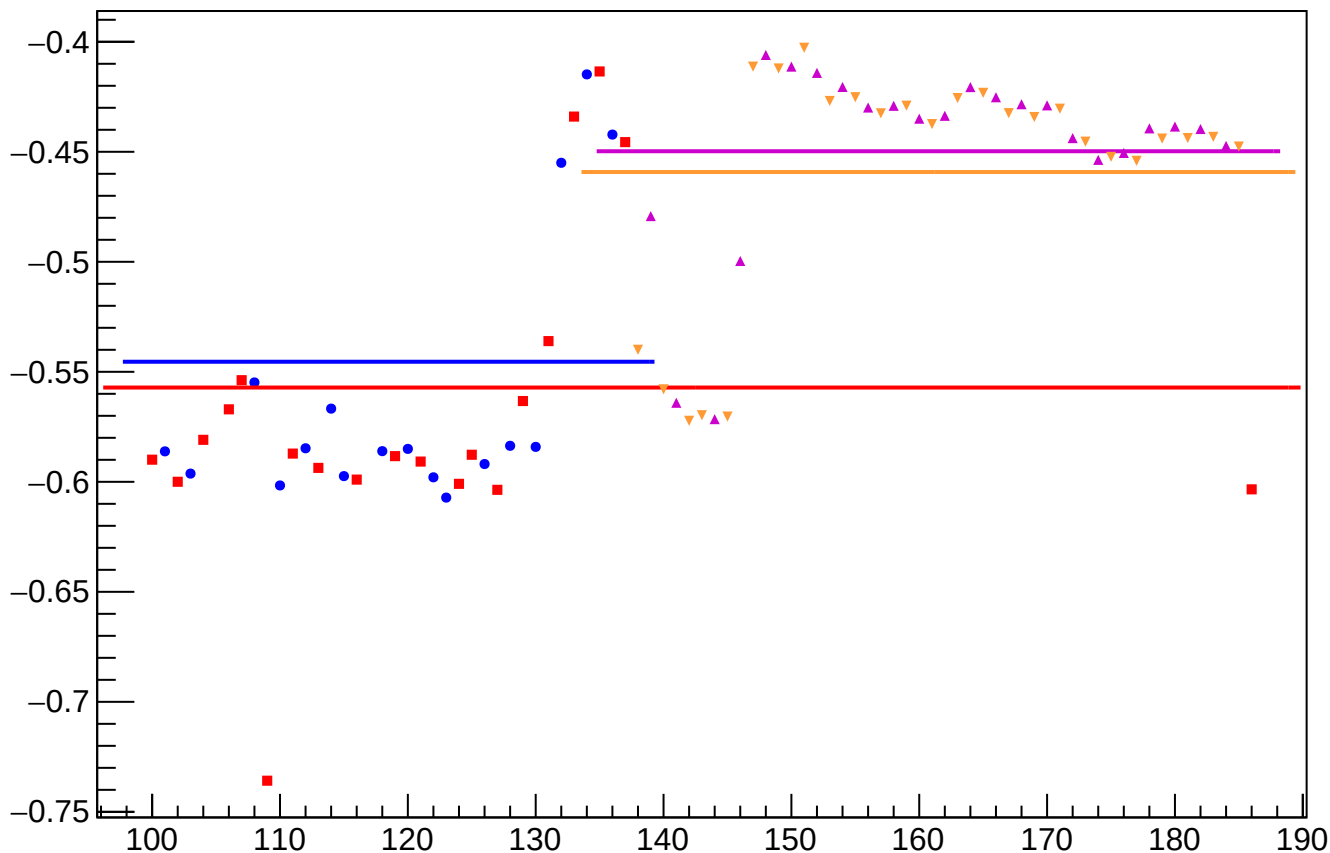
Right: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 19988632.1/36

In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 40814670.1/39

Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 42867594.3/44

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 83682663.7/84

# yield\_bpm4aX\_mean vs Slug, Sign Corrected



Right In: -0.545+/-0.000  $\chi^2/\text{NDF}$ : 46353554.3/16

Left Out: -0.459+/-0.000  $\chi^2/\text{NDF}$ : 113808762.6/24

Right Out: -0.557+/-0.000  $\chi^2/\text{NDF}$ : 64138565.6/19

Left In: -0.450+/-0.000  $\chi^2/\text{NDF}$ : 76151485.7/22

Left: -0.455+/-0.000  $\chi^2/\text{NDF}$ : 191688333.2/47

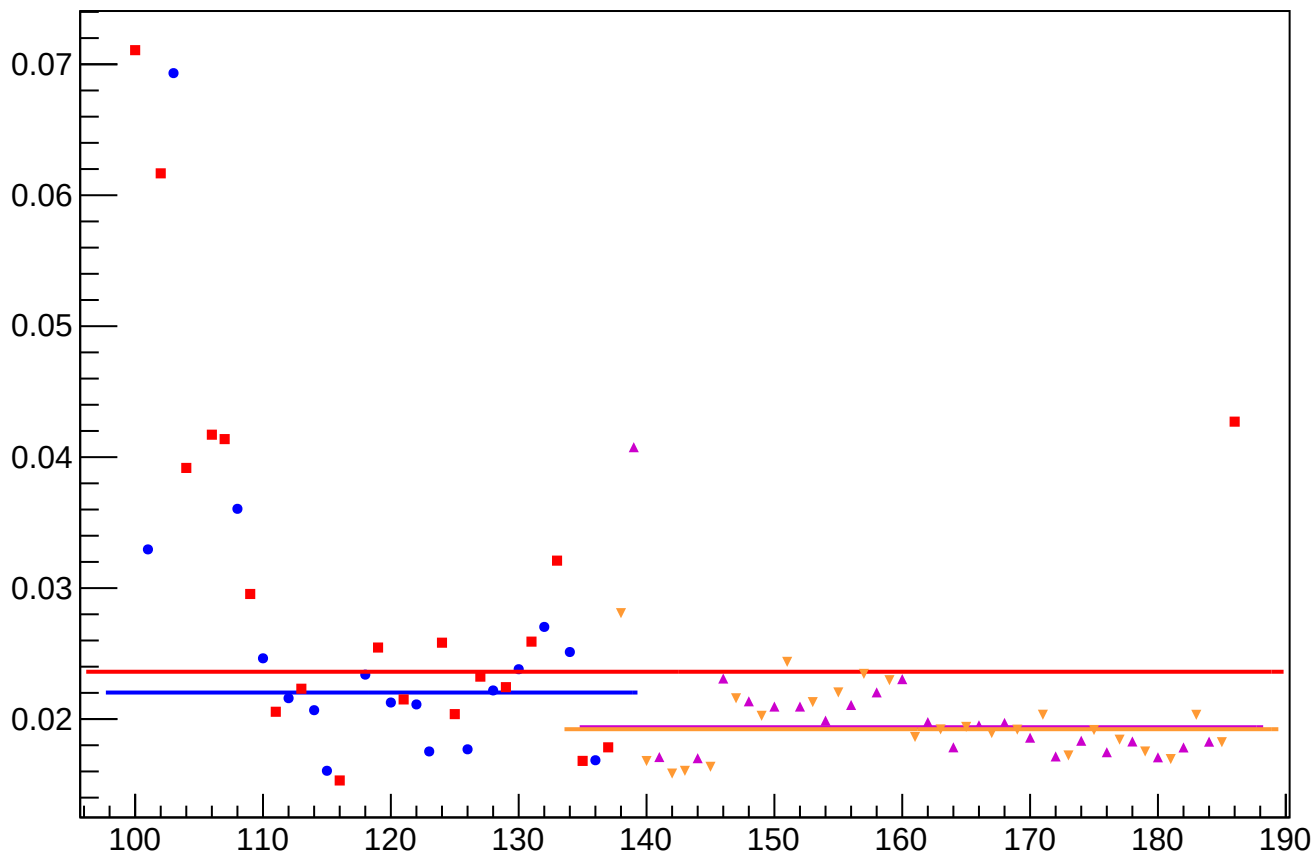
Right: -0.551+/-0.000  $\chi^2/\text{NDF}$ : 111193255.5/36

In: -0.471+/-0.000  $\chi^2/\text{NDF}$ : 196875229.2/39

Out: -0.479+/-0.000  $\chi^2/\text{NDF}$ : 254919261.1/44

All: -0.475+/-0.000  $\chi^2/\text{NDF}$ : 453435282.7/84

# yield\_bpm4aX\_rms vs Slug, Sign Corrected



Right In: 0.022+/-0.000  $\chi^2/\text{NDF}$ : 958242.5/16

Left Out: 0.019+/-0.000  $\chi^2/\text{NDF}$ : 501253.7/24

Right Out: 0.024+/-0.000  $\chi^2/\text{NDF}$ : 1297162.1/19

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

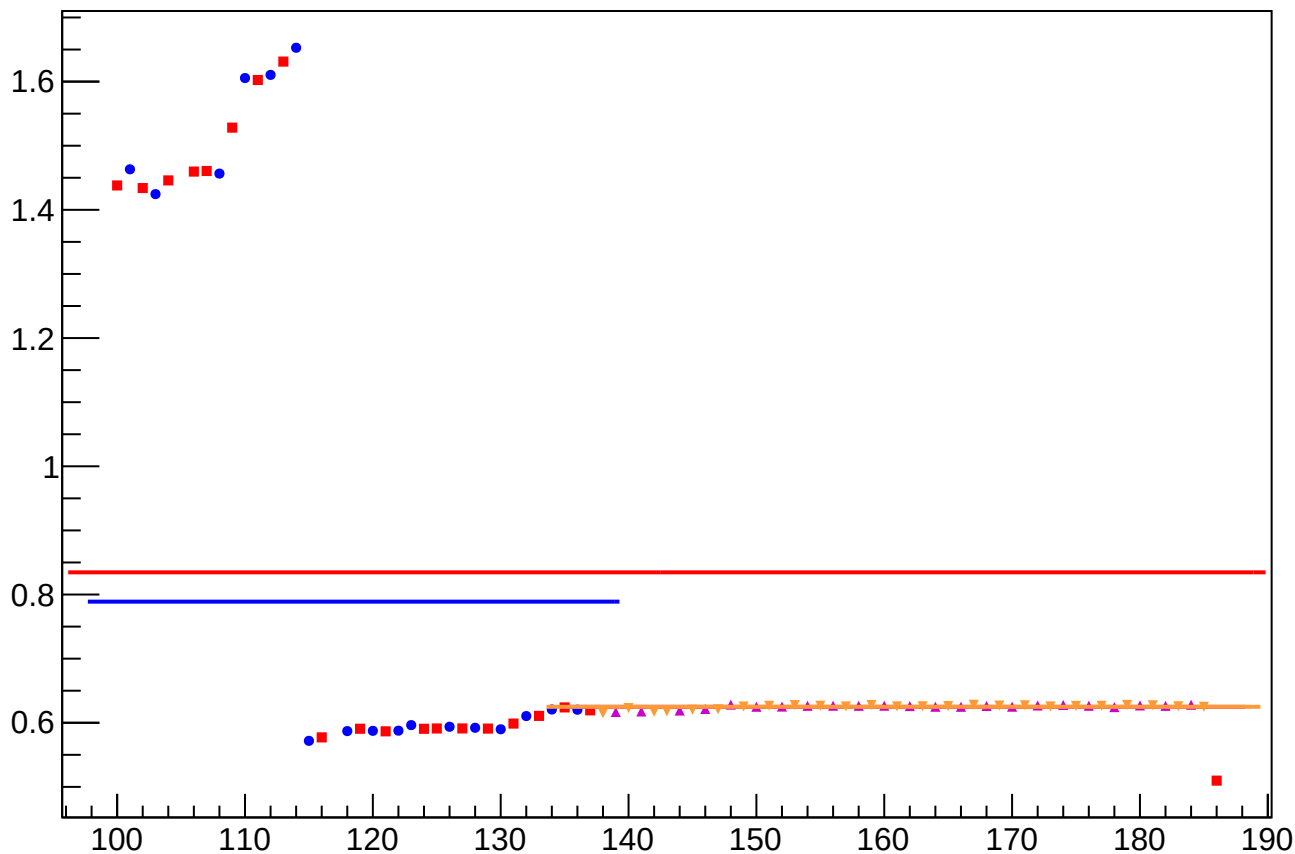
Right: 0.023+/-0.000  $\chi^2/\text{NDF}$ : 2281104.3/36

In: 0.020+/-0.000  $\chi^2/\text{NDF}$ : 1728353.9/39

Out: 0.020+/-0.000  $\chi^2/\text{NDF}$ : 2107197.6/44

All: 0.020+/-0.000  $\chi^2/\text{NDF}$ : 3836621.4/84

# yield\_bpm4aY\_mean vs Slug, Sign Corrected



Right In: 0.789+/-0.000  $\chi^2/\text{NDF}$ : 3572292316.9/16

Left Out: 0.625+/-0.000  $\chi^2/\text{NDF}$ :1442225.6/24

Right Out: 0.835+/-0.000  $\chi^2/\text{NDF}$ : 4147427451.5/19

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

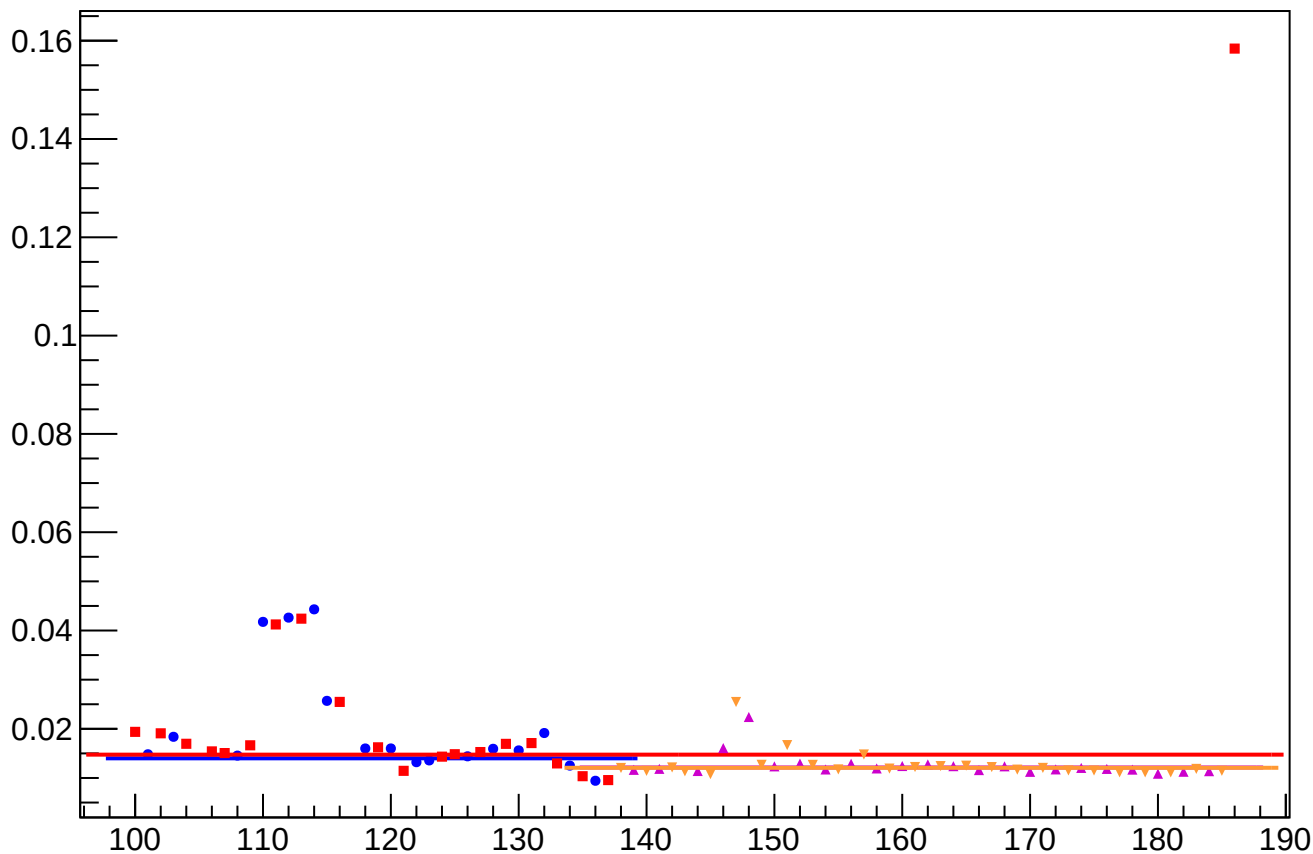
Right: 0.811+/-0.000  $\chi^2/\text{NDF}$ : 7749161045.3/36

In: 0.658+/-0.000  $\chi^2/\text{NDF}$ :4189094448.8/39

Out: 0.664+/-0.000  $\chi^2/\text{NDF}$ :5144051124.5/44

All: 0.661+/-0.000  $\chi^2/\text{NDF}$ : 9336073309.4/84

# yield\_bpm4aY\_rms vs Slug, Sign Corrected



Right In: 0.014 $\pm$ 0.000  $\chi^2$ /NDF: 1393658.1/16

Left Out: 0.012 $\pm$ 0.000  $\chi^2$ /NDF:657433.9/24

Right Out: 0.015 $\pm$ 0.000  $\chi^2$ /NDF: 1842922.5/19

Left In: 0.012 $\pm$ 0.000  $\chi^2$ /NDF:488249.4/22

Left: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 1146144.5/47

Right: 0.014 $\pm$ 0.000  $\chi^2$ /NDF: 3252467.1/36

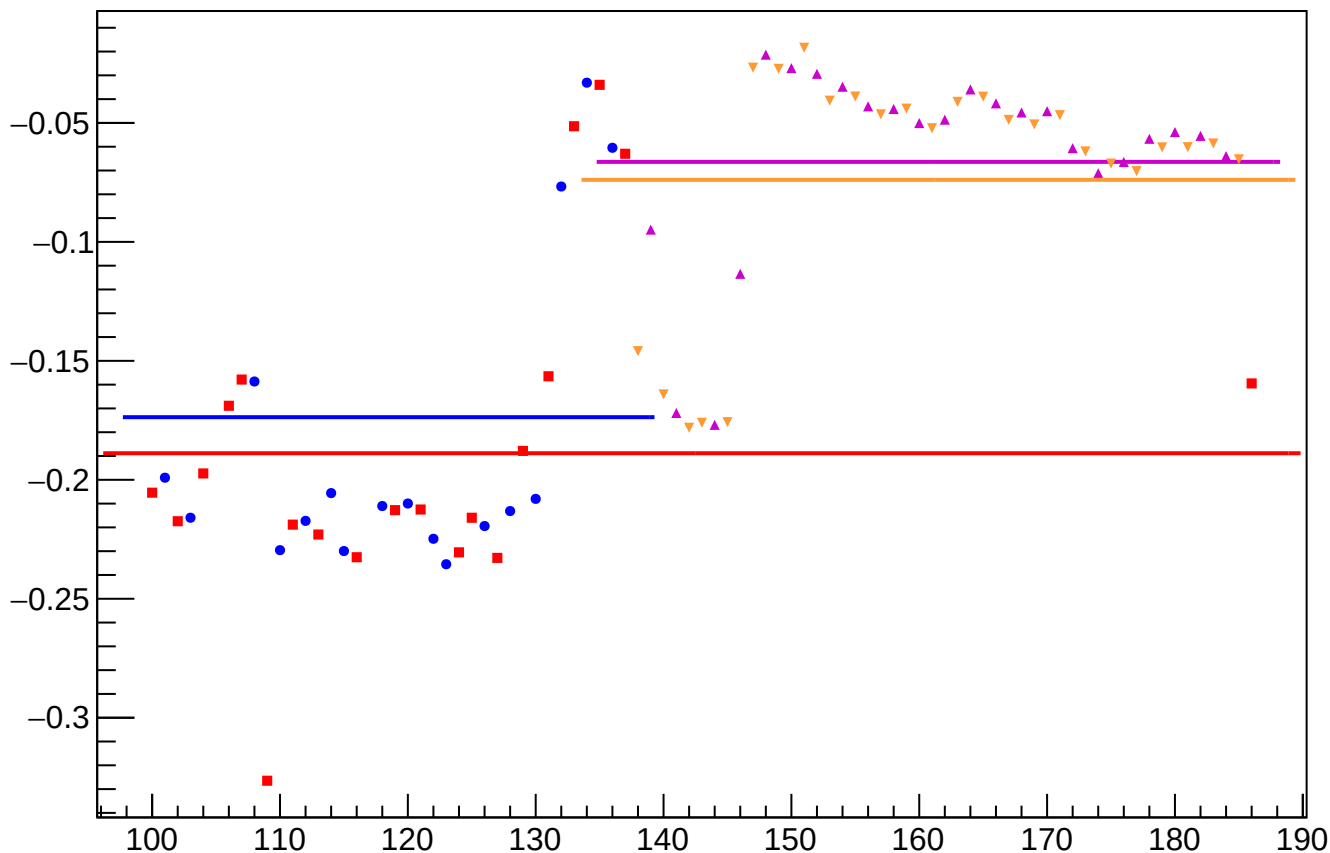
In: 0.013 $\pm$ 0.000  $\chi^2$ /NDF:2040316.4/39

Out: 0.013 $\pm$ 0.000  $\chi^2$ /NDF:2824037.7/44

All: 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 4864943.7/84



# yield\_bpm4eX\_mean vs Slug, Sign Corrected



Right In: -0.174+/-0.000  $\chi^2/\text{NDF}$ : 66840344.3/16

Left Out: -0.074+/-0.000  $\chi^2/\text{NDF}$ : 107858881.3/24

Right Out: -0.189+/-0.000  $\chi^2/\text{NDF}$ : 81602165.2/19

Left In: -0.066+/-0.000  $\chi^2/\text{NDF}$ : 76283954.4/22

Left: -0.070+/-0.000  $\chi^2/\text{NDF}$ : 185261776.8/47

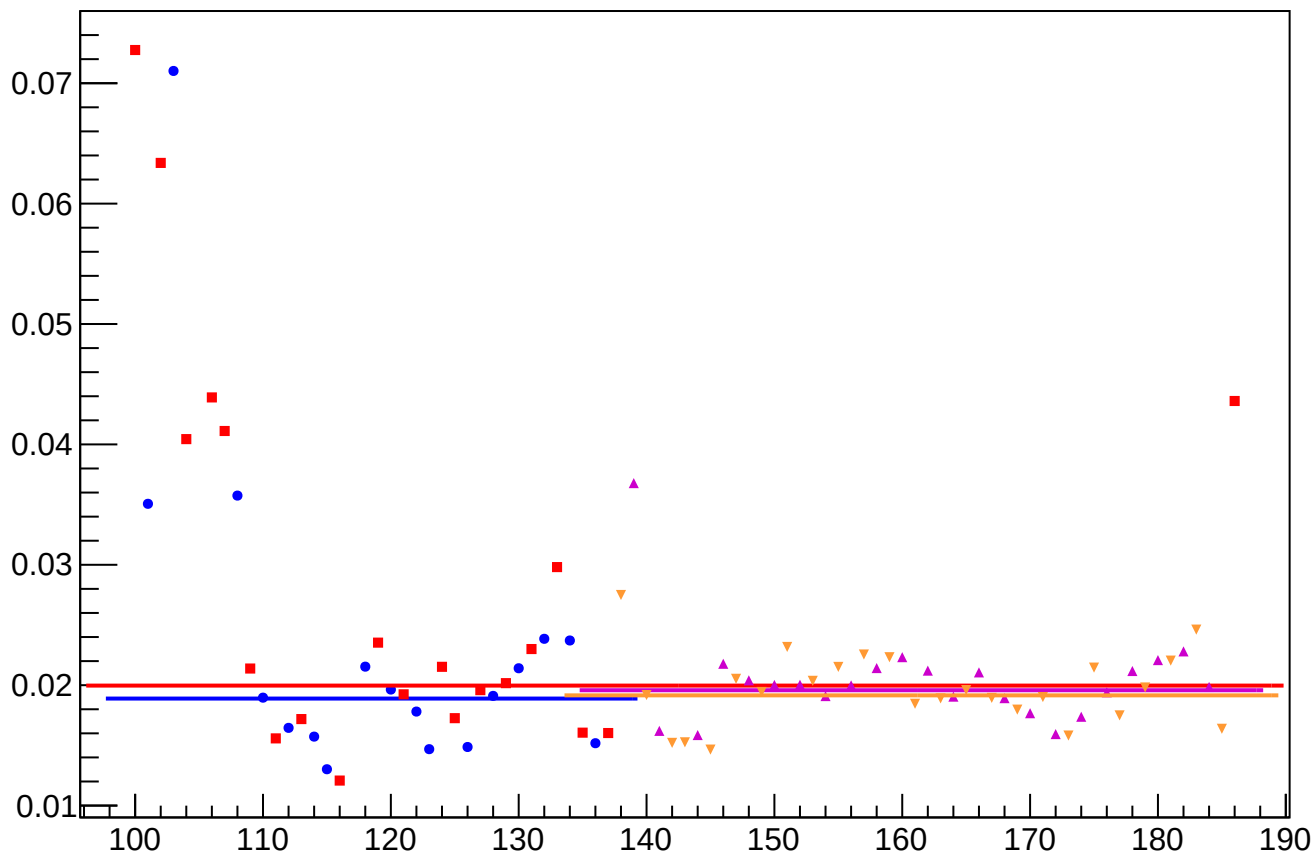
Right: -0.181+/-0.000  $\chi^2/\text{NDF}$ : 150016290.0/36

In: -0.095+/-0.000  $\chi^2/\text{NDF}$ : 259462568.3/39

Out: -0.102+/-0.000  $\chi^2/\text{NDF}$ : 324363452.6/44

All: -0.099+/-0.000  $\chi^2/\text{NDF}$ : 585158184.1/84

# yield\_bpm4eX\_rms vs Slug, Sign Corrected



Right In: 0.019+/-0.000  $\chi^2/\text{NDF}$ : 1212238.5/16

Left Out: 0.019+/-0.000  $\chi^2/\text{NDF}$ : 641027.3/24

Right Out: 0.020+/-0.000  $\chi^2/\text{NDF}$ : 1661485.7/19

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

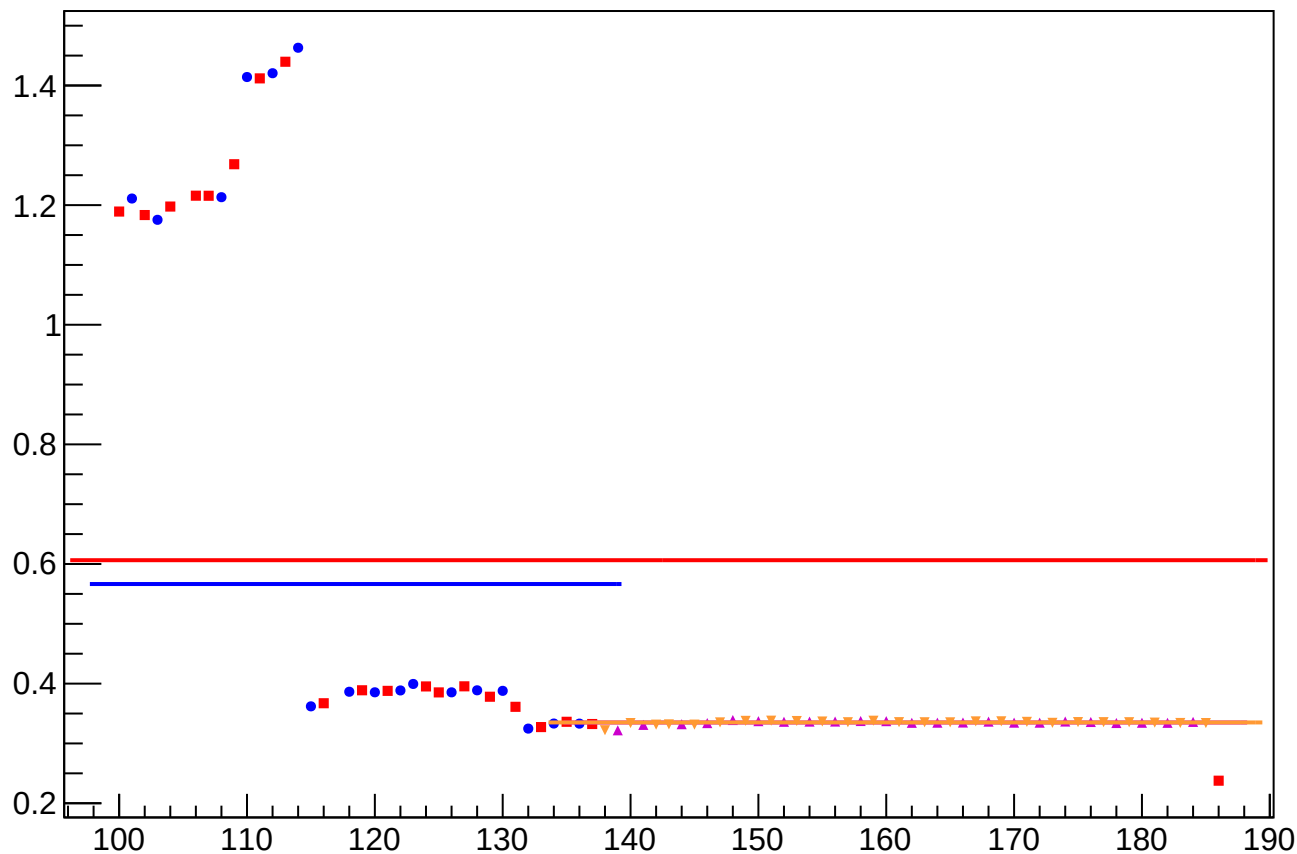
Right: 0.019+/-0.000  $\chi^2/\text{NDF}$ : 2889640.8/36

In: 0.019+/-0.000  $\chi^2/\text{NDF}$ : 1873233.4/39

Out: 0.019+/-0.000  $\chi^2/\text{NDF}$ : 2315965.1/44

All: 0.019+/-0.000  $\chi^2/\text{NDF}$ : 4189274.4/84

# yield\_bpm4eY\_mean vs Slug, Sign Corrected



Right In: 0.567 $\pm$ 0.000  $\chi^2$ /NDF: 5026553135.6/16

Left Out: 0.335 $\pm$ 0.000  $\chi^2$ /NDF:1153956.7/24

Right Out: 0.606 $\pm$ 0.000  $\chi^2$ /NDF: 5525190982.5/19

Left In: 0.335 $\pm$ 0.000  $\chi^2$ /NDF:1198302.8/22

Left: 0.335 $\pm$ 0.000  $\chi^2$ /NDF: 2352818.7/47

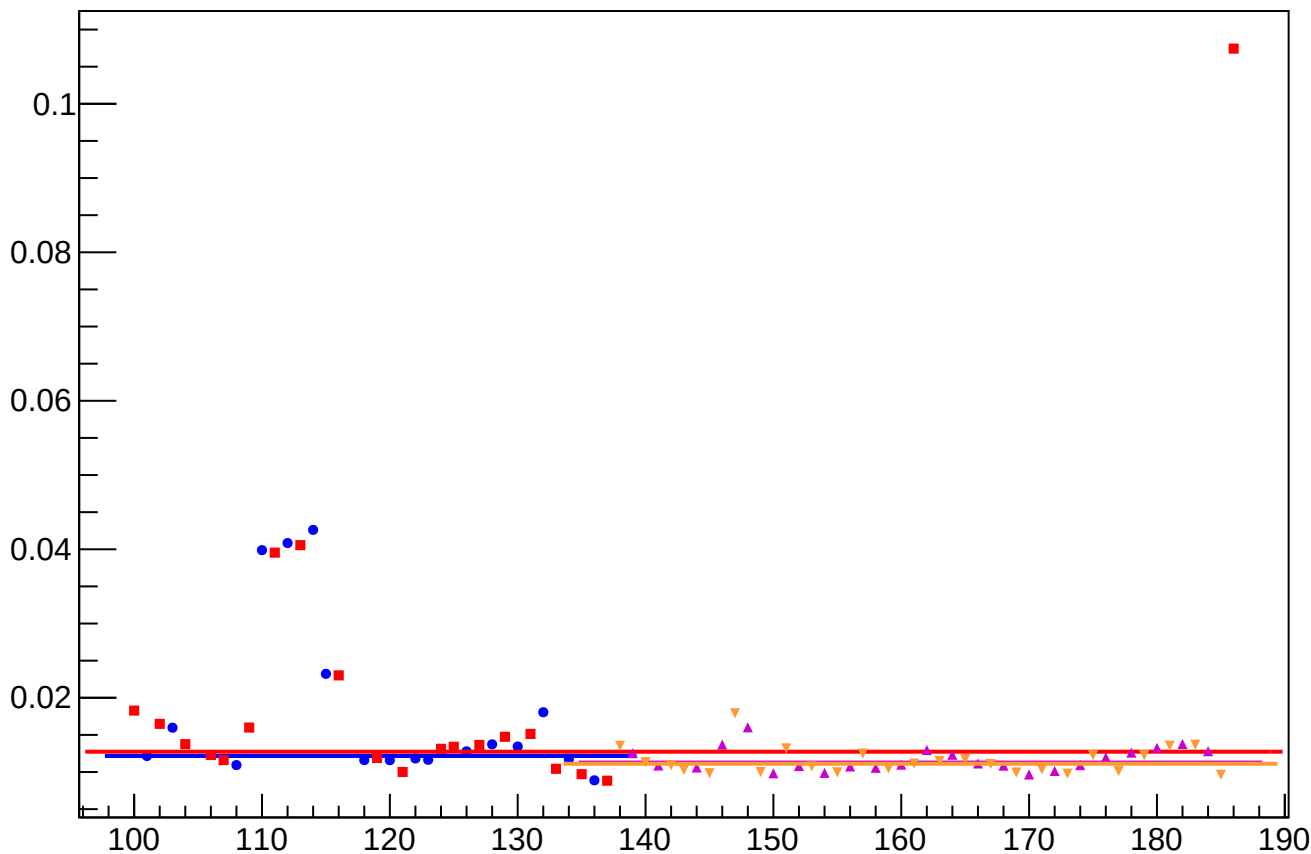
Right: 0.586 $\pm$ 0.000  $\chi^2$ /NDF: 10581245752.8/36

In: 0.387 $\pm$ 0.000  $\chi^2$ /NDF:6598128540.7/39

Out: 0.391 $\pm$ 0.000  $\chi^2$ /NDF:7668267353.5/44

All: 0.389 $\pm$ 0.000  $\chi^2$ /NDF: 14267750685.4/83

# yield\_bpm4eY\_rms vs Slug, Sign Corrected



Right In: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 1302333.7/16

Left Out: 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 608235.7/24

Right Out: 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 1819205.3/19

Left In: 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 502226.7/22

Left: 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 1113859.9/47

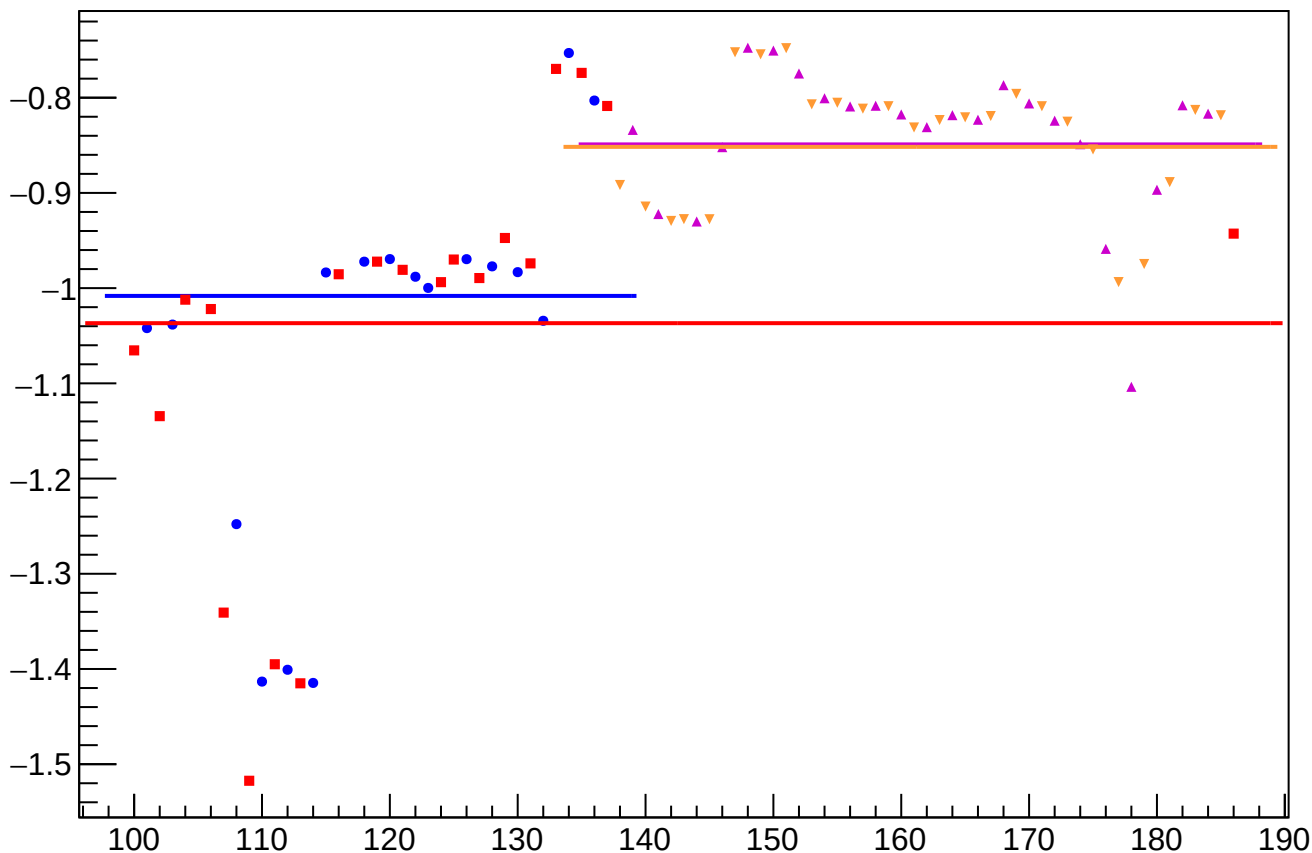
Right: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 3133824.9/36

In: 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 1850803.3/39

Out: 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 2580456.1/44

All: 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 4431359.1/84

# yield\_bpm4acX\_mean vs Slug, Sign Corrected



Right In: -1.008 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 393095883.4/16

Left Out: -0.852 $\pm$ 0.000  $\chi^2/\text{NDF}$ :189276591.7/24

Right Out: -1.037 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 536301392.2/19

Left In: -0.849 $\pm$ 0.000  $\chi^2/\text{NDF}$ :256438306.8/22

Left: -0.850 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 445849768.4/47

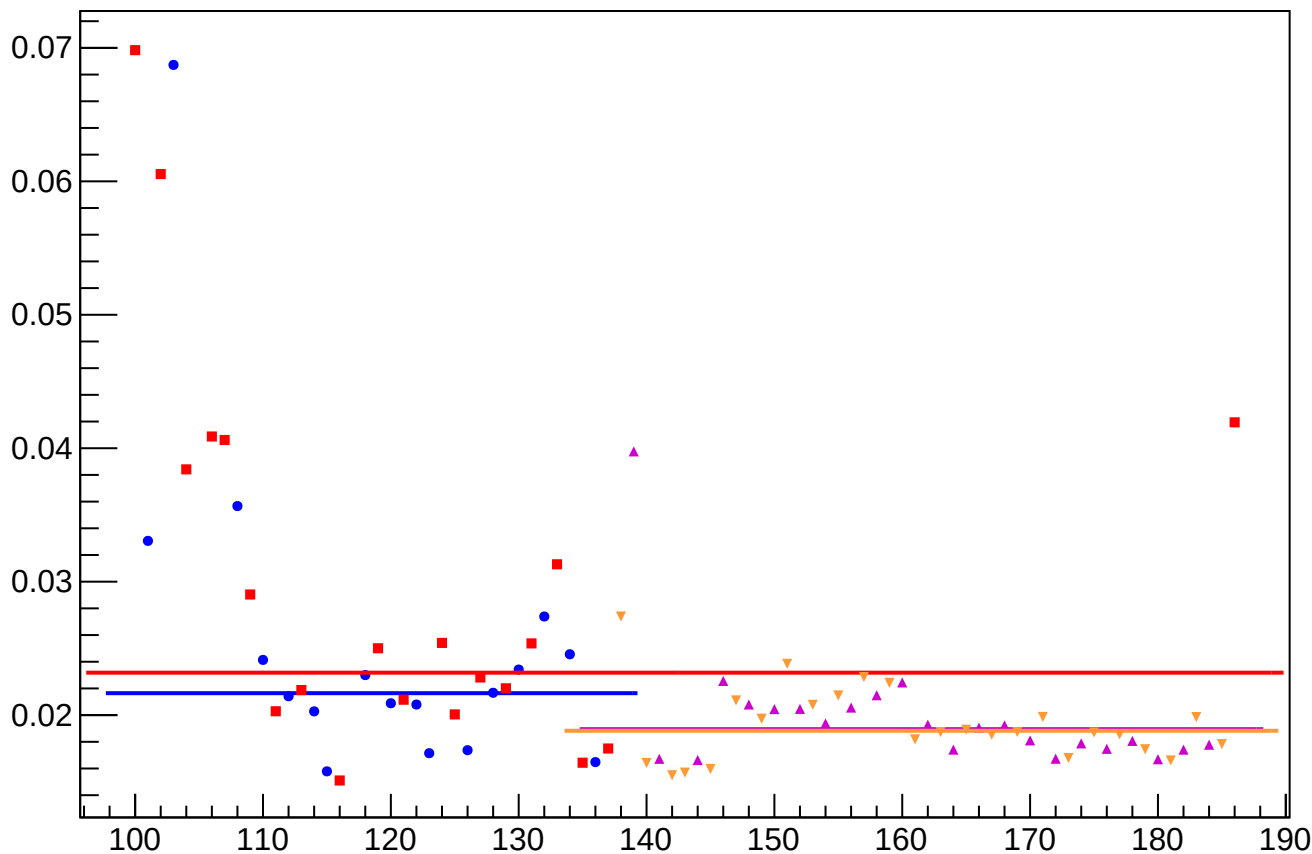
Right: -1.022 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 933721518.3/36

In: -0.883 $\pm$ 0.000  $\chi^2/\text{NDF}$ :862697843.0/39

Out: -0.888 $\pm$ 0.000  $\chi^2/\text{NDF}$ :1010698732.9/44

All: -0.886 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1874052767.0/8

# yield\_bpm4acX\_rms vs Slug, Sign Corrected



Right In: 0.022+/-0.000  $\chi^2/\text{NDF}$ : 983373.6/16

Left Out: 0.019+/-0.000  $\chi^2/\text{NDF}$ : 490084.5/24

Right Out: 0.023+/-0.000  $\chi^2/\text{NDF}$ : 1293319.4/19

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

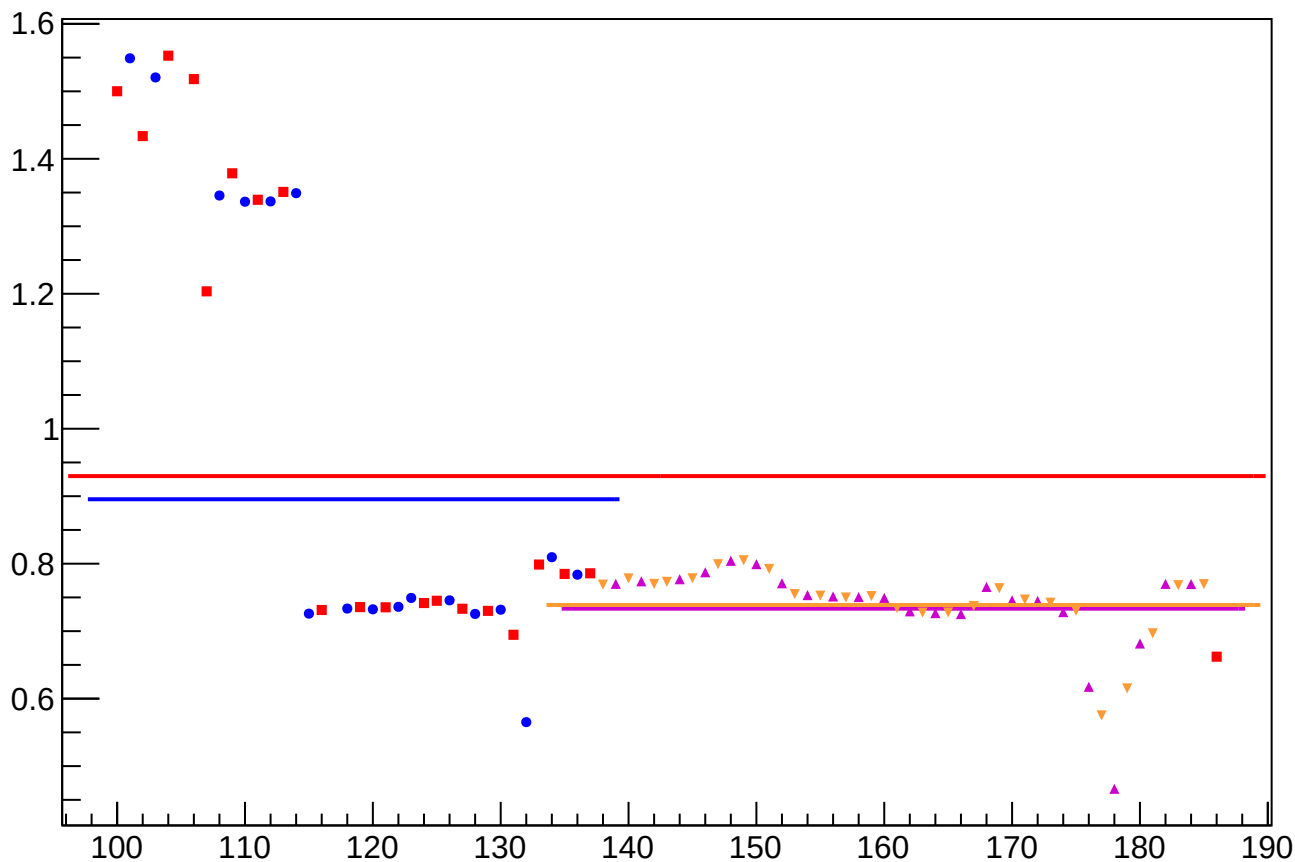
Right: 0.022+/-0.000  $\chi^2/\text{NDF}$ : 2301625.3/36

In: 0.020+/-0.000  $\chi^2/\text{NDF}$ : 1750682.1/39

Out: 0.020+/-0.000  $\chi^2/\text{NDF}$ : 2098696.3/44

All: 0.020+/-0.000  $\chi^2/\text{NDF}$ : 3850713.1/84

# yield\_bpm4acY\_mean vs Slug, Sign Corrected



Right In: 0.895 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2392918091.7/16

Left Out: 0.739 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 333086309.0/24

Right Out: 0.930 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2421113217.2/19

Left In: 0.733 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 570264411.7/22

Left: 0.736 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 905100069.4/47

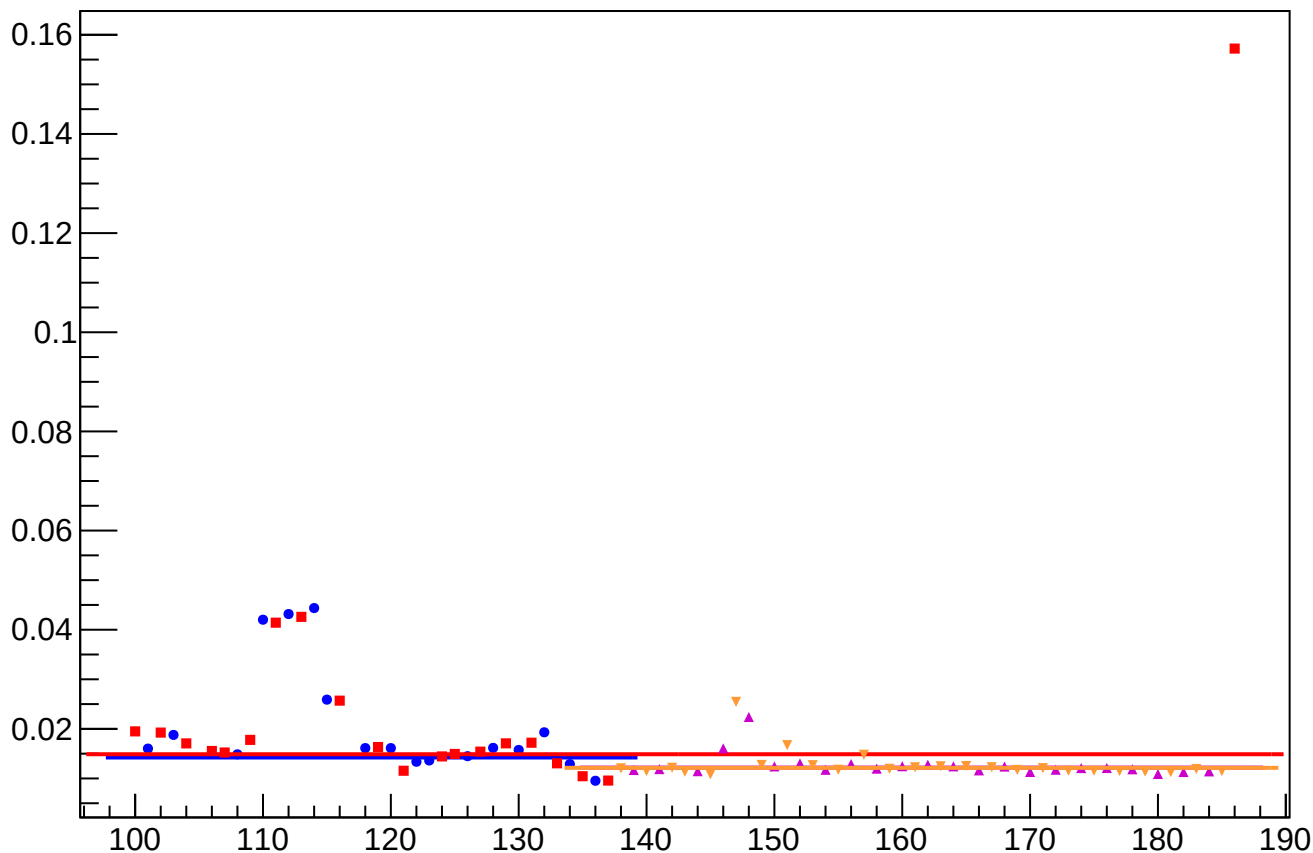
Right: 0.913 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 4830153131.7/36

In: 0.765 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 3544819865.9/39

Out: 0.774 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 3562398435.3/44

All: 0.770 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7113192274.6/84

# yield\_bpm4acY\_rms vs Slug, Sign Corrected



Right In: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 1403945.8/16

Left Out: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 638211.9/24

Right Out: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 1851004.2/19

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  $\chi^2/\text{NDF}$ : 3266782.4/36

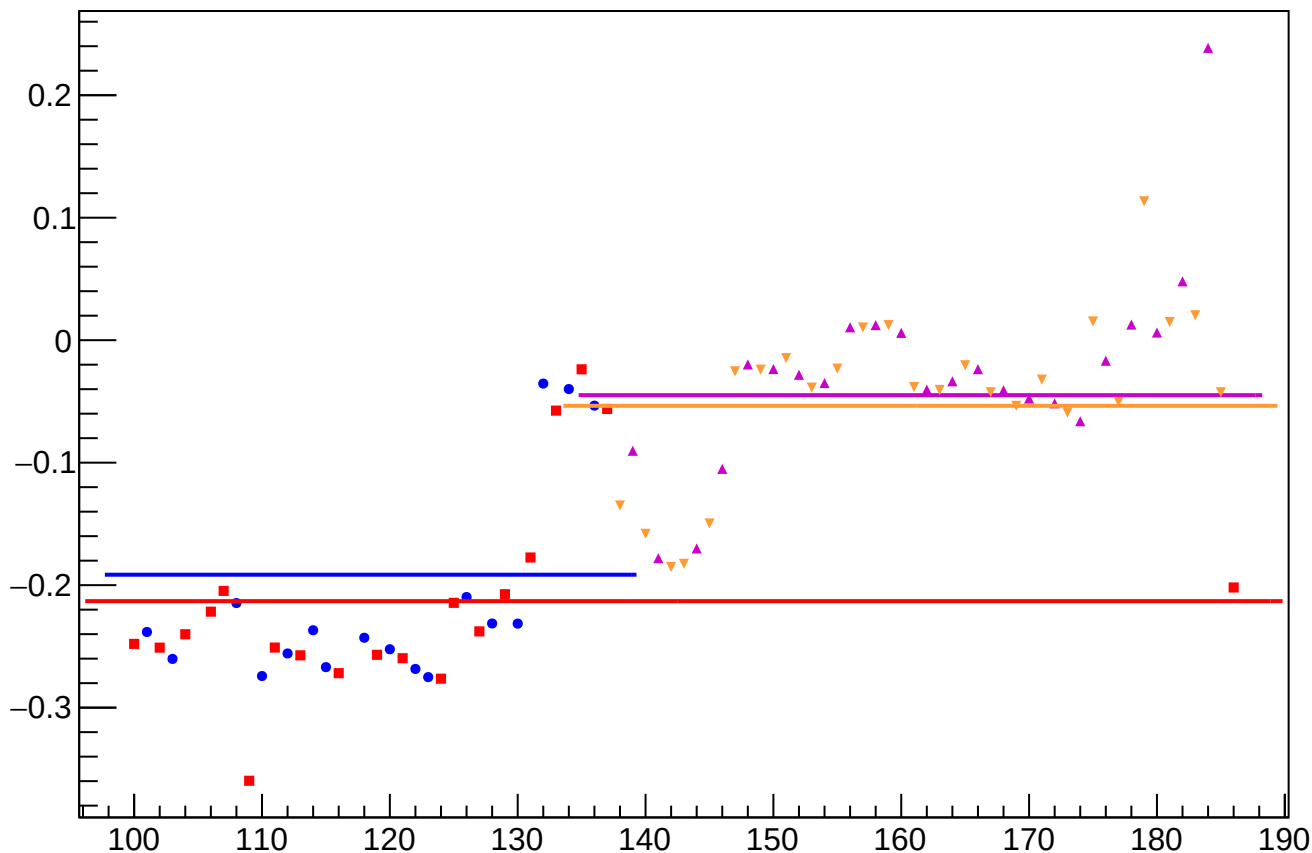
In: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 2069350.9/39

Out: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 2823050.5/44

All: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 4892923.6/84



# yield\_bpm4ecX\_mean vs Slug, Sign Corrected



Right In:  $-0.191 \pm 0.000$   $\chi^2/\text{NDF}: 105957051.0/16$

Left Out:  $-0.054 \pm 0.000$   $\chi^2/\text{NDF}: 167879648.0/24$

Right Out:  $-0.213 \pm 0.000$   $\chi^2/\text{NDF}: 109627554.4/19$

Left In:  $-0.045 \pm 0.000$   $\chi^2/\text{NDF}: 127324000.1/22$

Left:  $-0.049 \pm 0.000$   $\chi^2/\text{NDF}: 296677486.5/47$

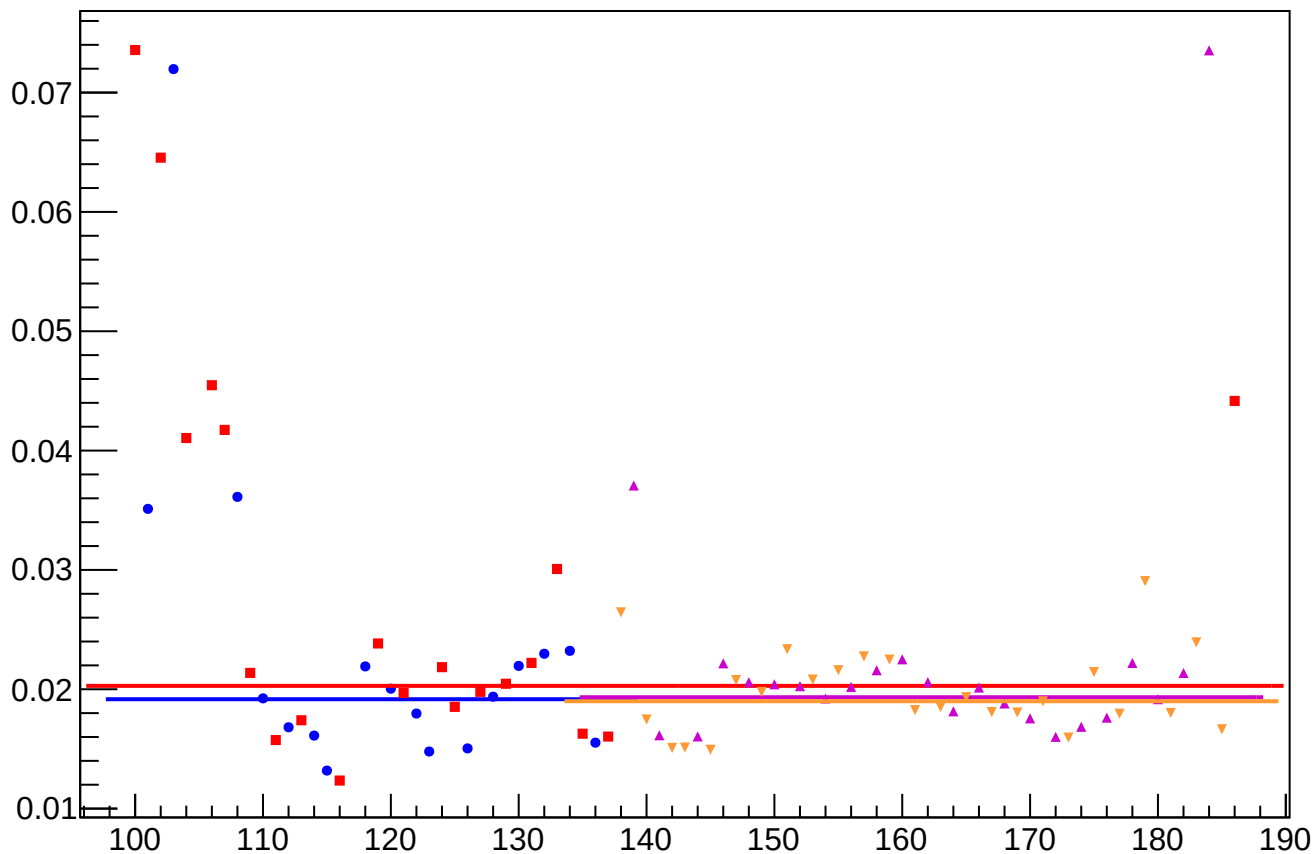
Right:  $-0.202 \pm 0.000$   $\chi^2/\text{NDF}: 218676709.4/36$

In:  $-0.084 \pm 0.000$   $\chi^2/\text{NDF}: 445862200.1/39$

Out:  $-0.093 \pm 0.000$   $\chi^2/\text{NDF}: 529916166.5/44$

All:  $-0.088 \pm 0.000$   $\chi^2/\text{NDF}: 977824541.1/84$

# yield\_bpm4ecX\_rms vs Slug, Sign Corrected



Right In: 0.019+/-0.000  $\chi^2/\text{NDF}$ : 1183198.6/16

Left Out: 0.019+/-0.000  $\chi^2/\text{NDF}$ : 699267.5/24

Right Out: 0.020+/-0.000  $\chi^2/\text{NDF}$ : 1651236.9/19

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

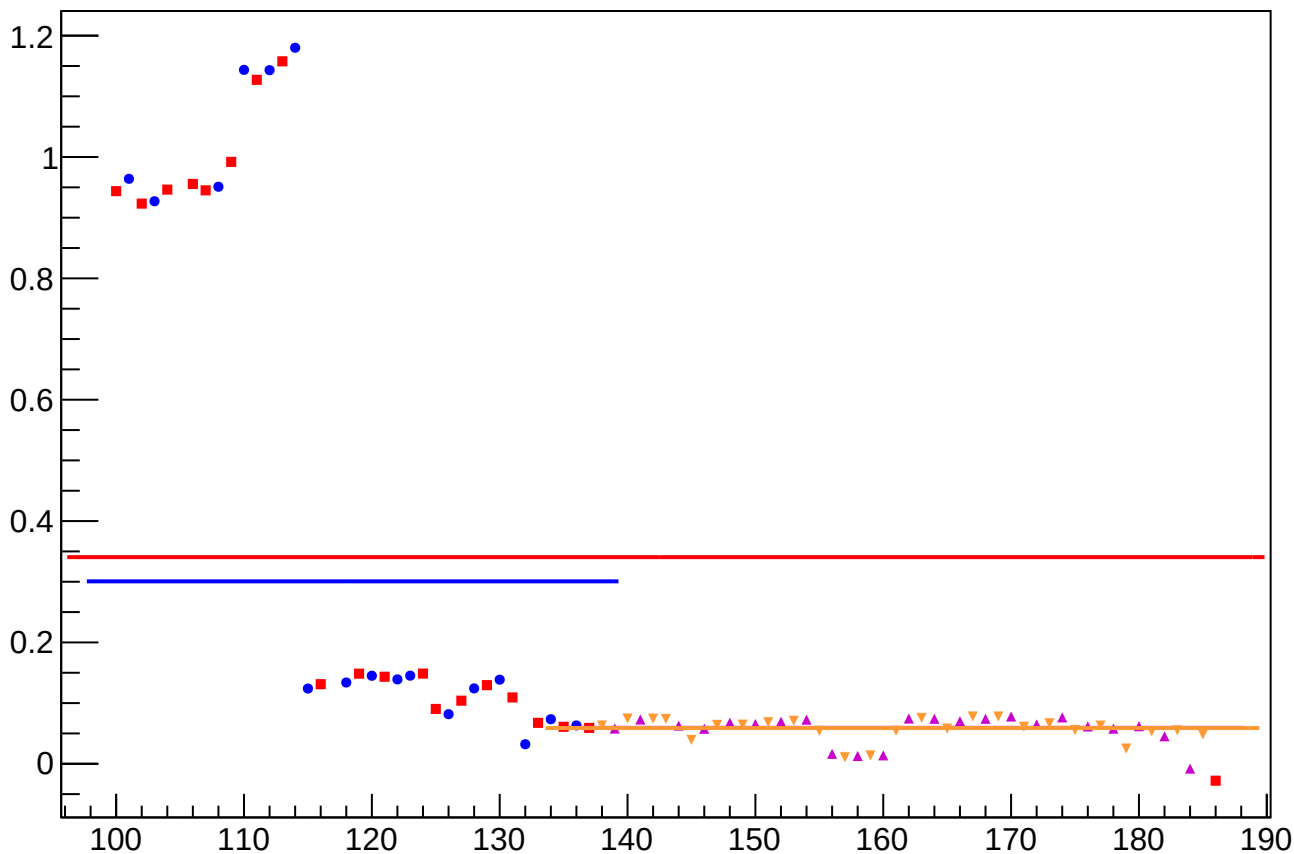
Right: 0.020+/-0.000  $\chi^2/\text{NDF}$ : 2851102.0/36

In: 0.019+/-0.000  $\chi^2/\text{NDF}$ : 2076554.3/39

Out: 0.019+/-0.000  $\chi^2/\text{NDF}$ : 2383396.3/44

All: 0.019+/-0.000  $\chi^2/\text{NDF}$ : 4459983.8/84

# yield\_bpm4ecY\_mean vs Slug, Sign Corrected



Right In: 0.301 $\pm$ 0.000  $\chi^2$ /NDF: 5169454550.2/16

Left Out: 0.059 $\pm$ 0.000  $\chi^2$ /NDF: 46902918.4/24

Right Out: 0.341 $\pm$ 0.000  $\chi^2$ /NDF: 5470120538.7/19

Left In: 0.059 $\pm$ 0.000  $\chi^2$ /NDF: 58640898.5/22

Left: 0.059 $\pm$ 0.000  $\chi^2$ /NDF: 105549886.8/47

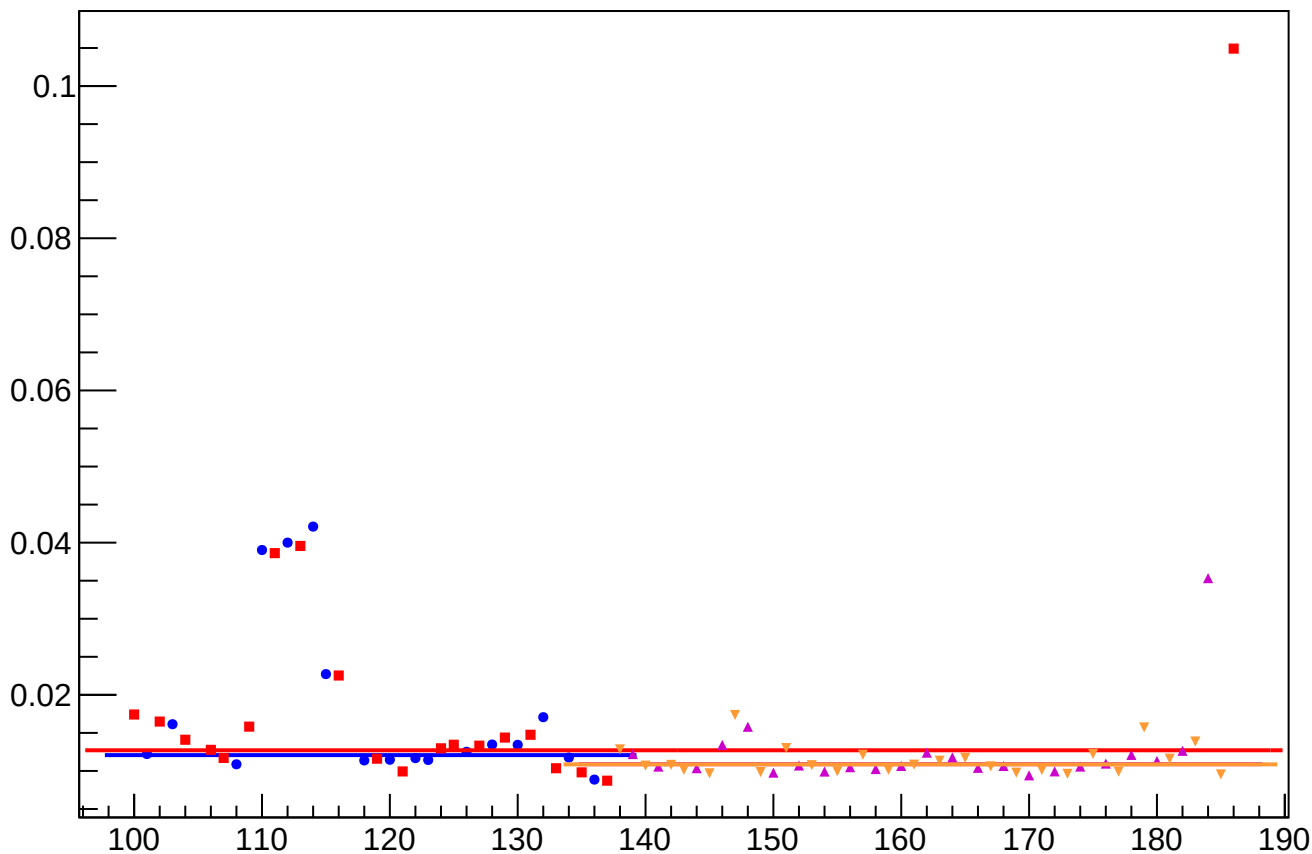
Right: 0.320 $\pm$ 0.000  $\chi^2$ /NDF: 10669450277.0/36

In: 0.112 $\pm$ 0.000  $\chi^2$ /NDF: 6973729168.5/39

Out: 0.116 $\pm$ 0.000  $\chi^2$ /NDF: 7841976691.1/44

All: 0.114 $\pm$ 0.000  $\chi^2$ /NDF: 14817239413.3/80

# yield\_bpm4ecY\_rms vs Slug, Sign Corrected



Right In: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 1275060.9/16

Left Out: 0.011 $\pm$ 0.000  $\chi^2$ /NDF:605519.3/24

Right Out: 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 1784798.7/19

Left In: 0.011 $\pm$ 0.000  $\chi^2$ /NDF:529867.3/22

Left: 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 1135492.7/47

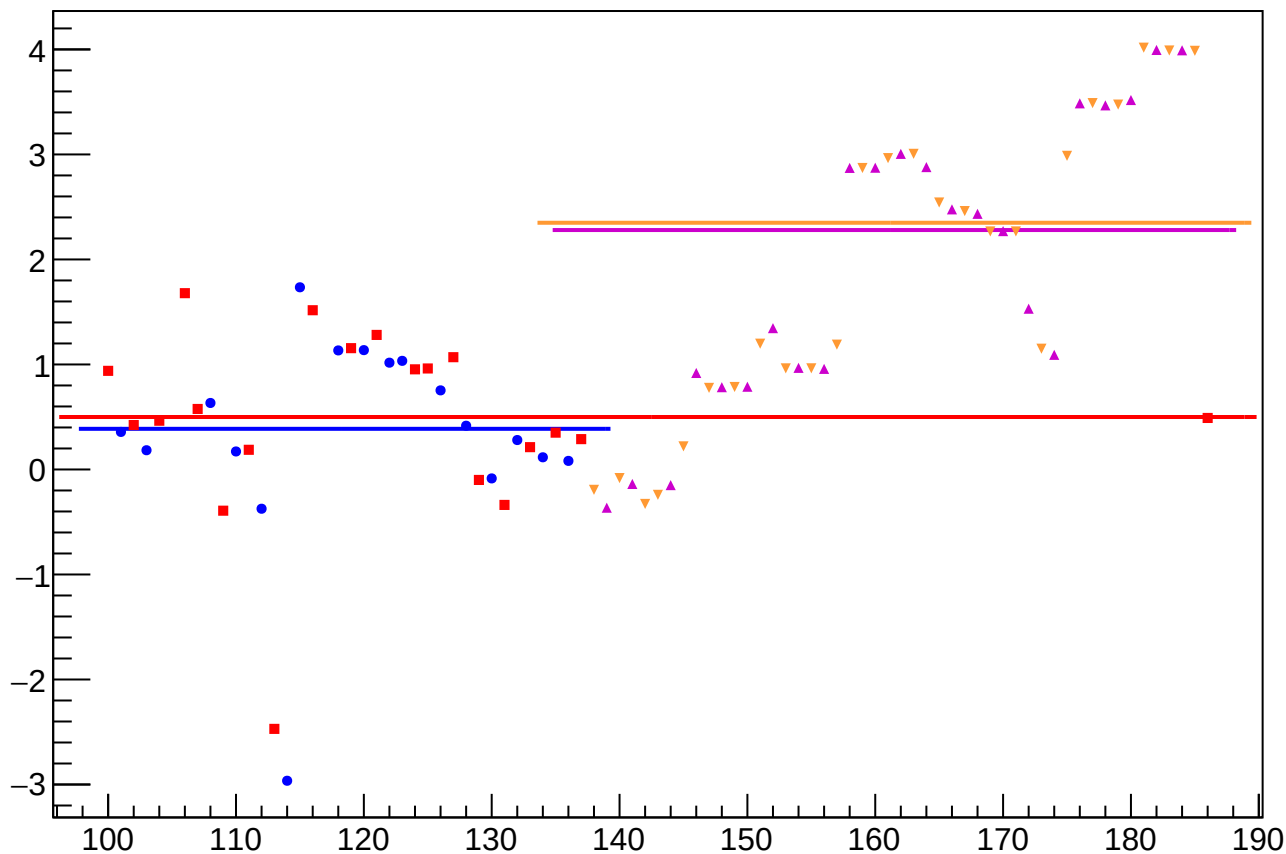
Right: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 3074969.6/36

In: 0.011 $\pm$ 0.000  $\chi^2$ /NDF:1889511.8/39

Out: 0.011 $\pm$ 0.000  $\chi^2$ /NDF:2591032.6/44

All: 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 4481945.4/84

# yield\_bpm1X\_mean vs Slug, Sign Corrected



Right In: 0.387 $\pm$ 0.000  $\chi^2$ /NDF: 243730591.1/16

Left Out: 2.349 $\pm$ 0.000  $\chi^2$ /NDF: 63600066268.3/24

Right Out: 0.500 $\pm$ 0.000  $\chi^2$ /NDF: 983086023.6/19

Left In: 2.280 $\pm$ 0.000  $\chi^2$ /NDF: 61444254541.3/22

Left: 2.314 $\pm$ 0.000  $\chi^2$ /NDF: 125168787170.9/47

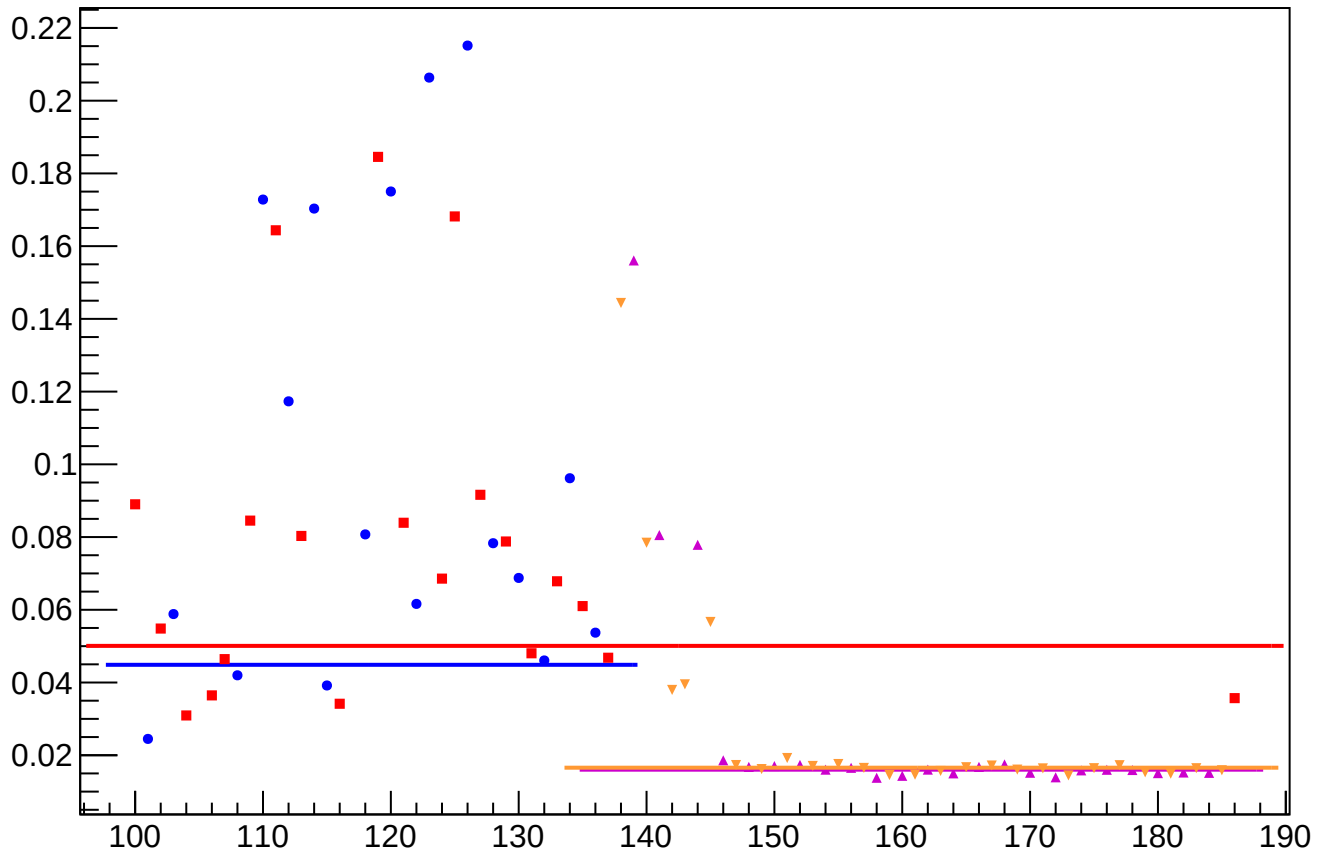
Right: 0.443 $\pm$ 0.000  $\chi^2$ /NDF: 1237870858.7/36

In: 2.219 $\pm$ 0.000  $\chi^2$ /NDF: 67742170297.7/39

Out: 2.288 $\pm$ 0.000  $\chi^2$ /NDF: 70358735054.7/44

All: 2.253 $\pm$ 0.000  $\chi^2$ /NDF: 138230220344.2

# yield\_bpm1X\_rms vs Slug, Sign Corrected



Right In: 0.045 $\pm$ 0.000  $\chi^2$ /NDF: 2772873.5/16

Left Out: 0.017 $\pm$ 0.000  $\chi^2$ /NDF:2623615.6/24

Right Out: 0.050 $\pm$ 0.000  $\chi^2$ /NDF: 2304770.5/19

Left In: 0.016 $\pm$ 0.000  $\chi^2$ /NDF:2463853.3/22

Left: 0.016 $\pm$ 0.000  $\chi^2$ /NDF: 5102815.6/47

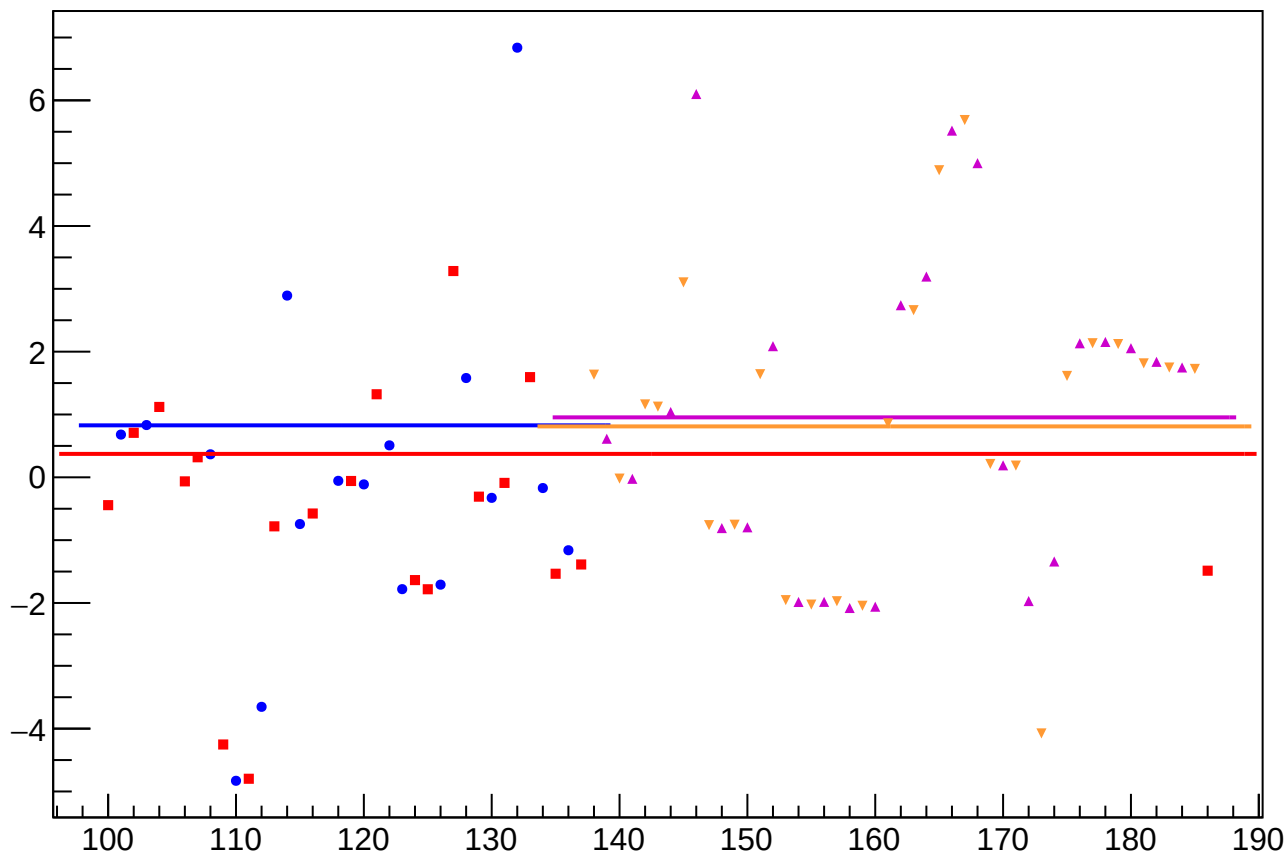
Right: 0.047 $\pm$ 0.000  $\chi^2$ /NDF: 5124965.1/36

In: 0.017 $\pm$ 0.000  $\chi^2$ /NDF:8047069.4/39

Out: 0.018 $\pm$ 0.000  $\chi^2$ /NDF:8716765.6/44

All: 0.017 $\pm$ 0.000  $\chi^2$ /NDF: 16791367.1/84

# yield\_bpm1Y\_mean vs Slug, Sign Corrected



Right In:  $0.827 \pm 0.000$   $\chi^2/\text{NDF}: 10943374014.3/16$

Left Out:  $0.810 \pm 0.000$   $\chi^2/\text{NDF}: 507583198570.2/24$

Right Out:  $0.373 \pm 0.000$   $\chi^2/\text{NDF}: 4967504159.4/19$

Left In:  $0.954 \pm 0.000$   $\chi^2/\text{NDF}: 574792794608.3/22$

Left:  $0.883 \pm 0.000$   $\chi^2/\text{NDF}: 1083260277372.9/47$

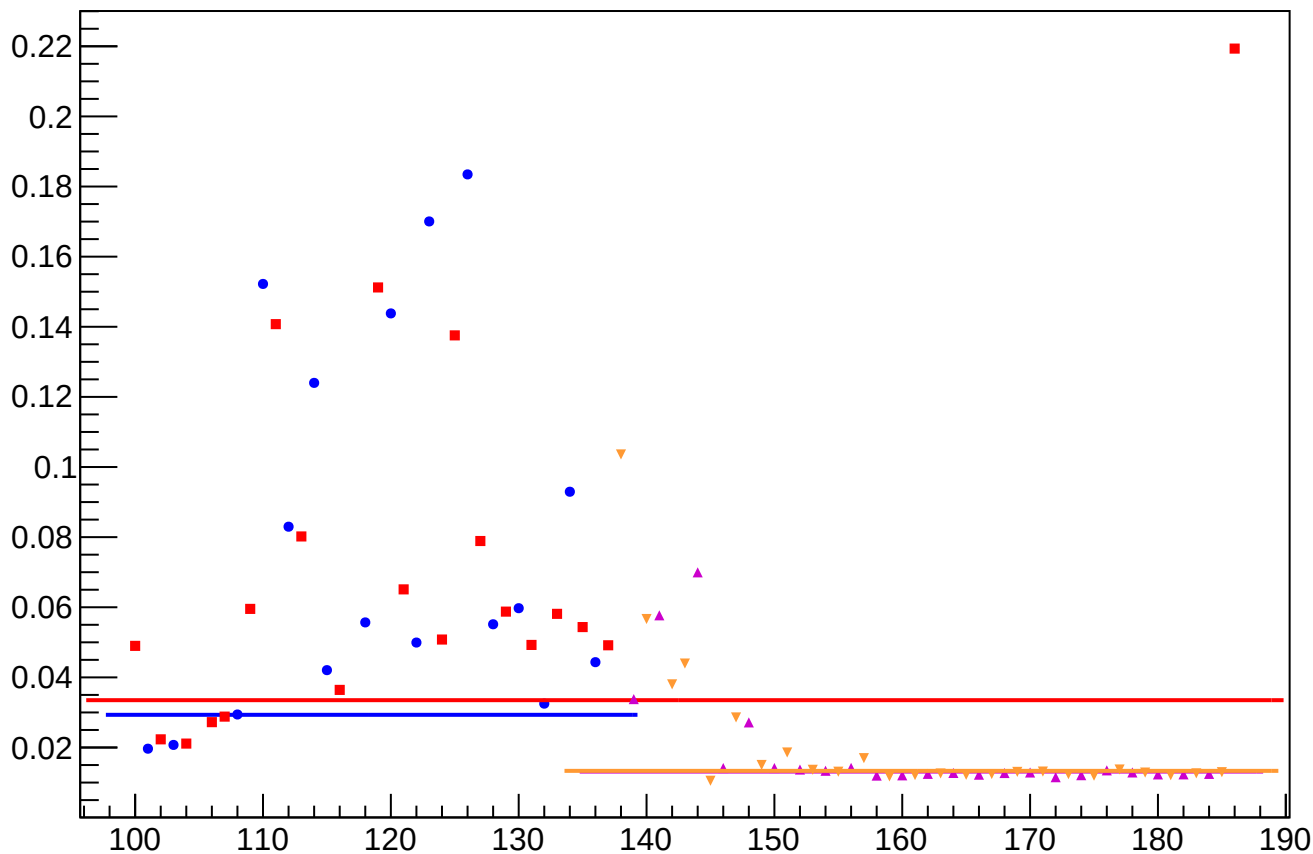
Right:  $0.613 \pm 0.000$   $\chi^2/\text{NDF}: 16293137936.8/36$

In:  $0.949 \pm 0.000$   $\chi^2/\text{NDF}: 585796848987.1/39$

Out:  $0.793 \pm 0.000$   $\chi^2/\text{NDF}: 513194119494.3/44$

All:  $0.871 \pm 0.000$   $\chi^2/\text{NDF}: 1100069857297.$

# yield\_bpm1Y\_rms vs Slug, Sign Corrected



Right In: 0.029 $\pm$ 0.000  $\chi^2$ /NDF: 2967975.9/16

Left Out: 0.013 $\pm$ 0.000  $\chi^2$ /NDF:2829070.5/24

Right Out: 0.033 $\pm$ 0.000  $\chi^2$ /NDF: 3584780.9/19

Left In: 0.013 $\pm$ 0.000  $\chi^2$ /NDF:1968206.9/22

Left: 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 4800890.3/47

Right: 0.031 $\pm$ 0.000  $\chi^2$ /NDF: 6617293.0/36

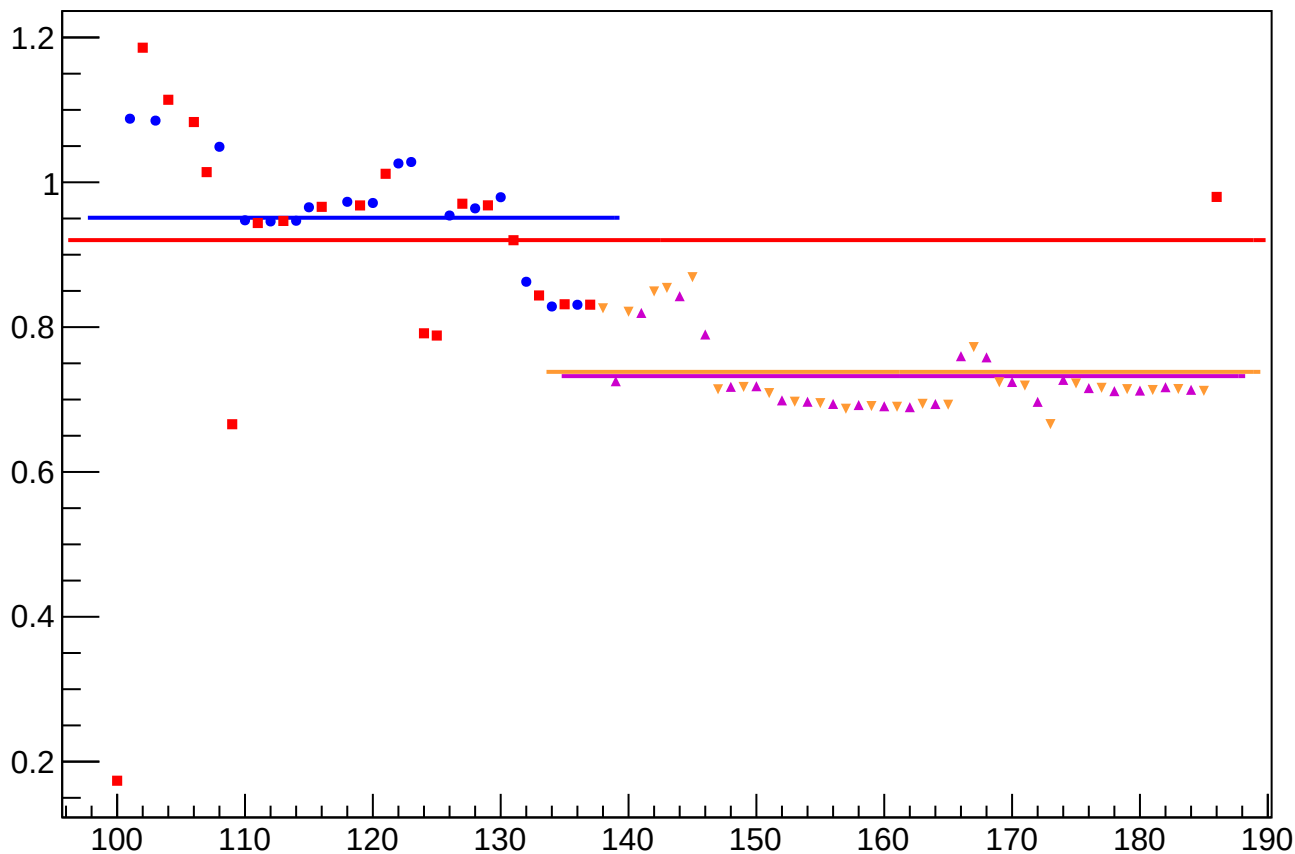
In: 0.014 $\pm$ 0.000  $\chi^2$ /NDF:6906478.4/39

Out: 0.014 $\pm$ 0.000  $\chi^2$ /NDF:9145331.3/44

All: 0.014 $\pm$ 0.000  $\chi^2$ /NDF: 16059369.4/84



# yield\_bpm11X\_mean vs Slug, Sign Corrected



Right In: 0.951 $\pm$ 0.000  $\chi^2$ /NDF: 174262904.5/16

Left Out: 0.738 $\pm$ 0.000  $\chi^2$ /NDF: 310610047.7/24

Right Out: 0.920 $\pm$ 0.000  $\chi^2$ /NDF: 376593548.3/19

Left In: 0.732 $\pm$ 0.000  $\chi^2$ /NDF: 170806298.1/22

Left: 0.735 $\pm$ 0.000  $\chi^2$ /NDF: 482865670.9/47

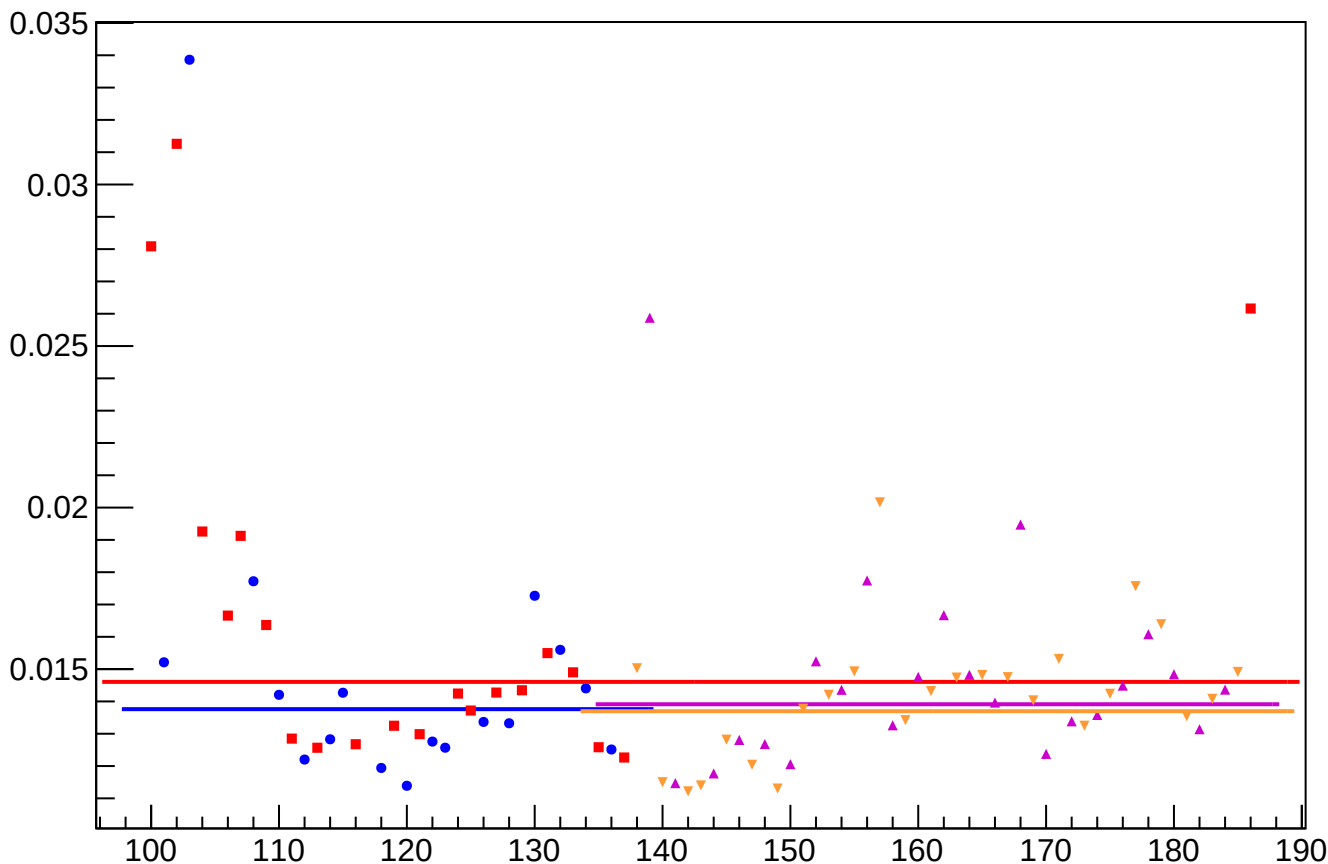
Right: 0.936 $\pm$ 0.000  $\chi^2$ /NDF: 565181751.0/36

In: 0.792 $\pm$ 0.000  $\chi^2$ /NDF: 1397401956.9/39

Out: 0.785 $\pm$ 0.000  $\chi^2$ /NDF: 1419980650.3/44

All: 0.788 $\pm$ 0.000  $\chi^2$ /NDF: 2820471667.4/84

# yield\_bpm11X\_rms vs Slug, Sign Corrected



Right In: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 538388.7/16

Left Out: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 530851.9/24

Right Out: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 650045.7/19

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

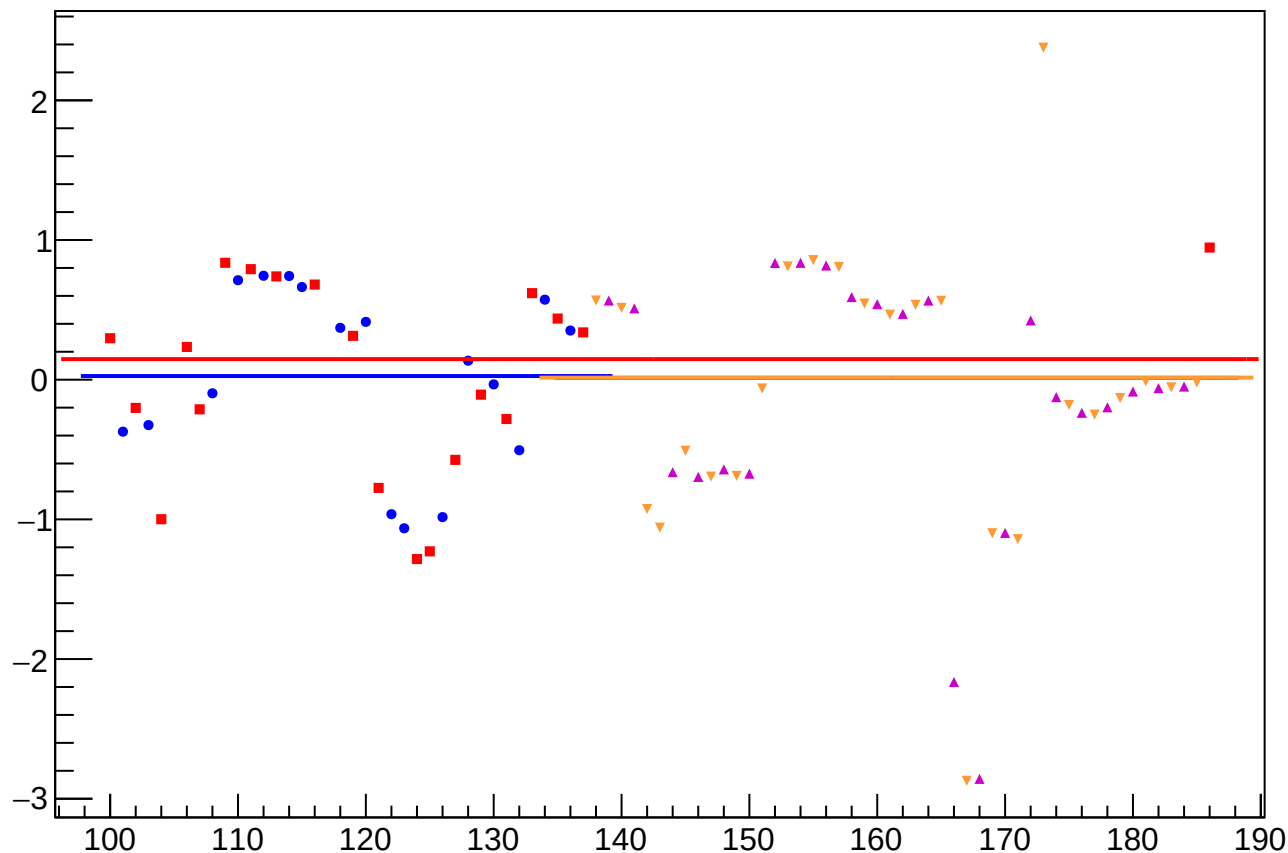
Right: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 1209848.7/36

In: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 1333964.0/39

Out: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 1217353.1/44

All: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 2551712.9/84

# yield\_bpm11Y\_mean vs Slug, Sign Corrected



Right In: 0.026 $\pm$ 0.000  $\chi^2$ /NDF: 6307097032.6/16

Left Out: 0.015 $\pm$ 0.000  $\chi^2$ /NDF: 96087835995.8/24

Right Out: 0.147 $\pm$ 0.000  $\chi^2$ /NDF: 12781367391.0/19

Left In: 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 79445696658.6/22

Left: 0.014 $\pm$ 0.000  $\chi^2$ /NDF: 175533691121.4/47

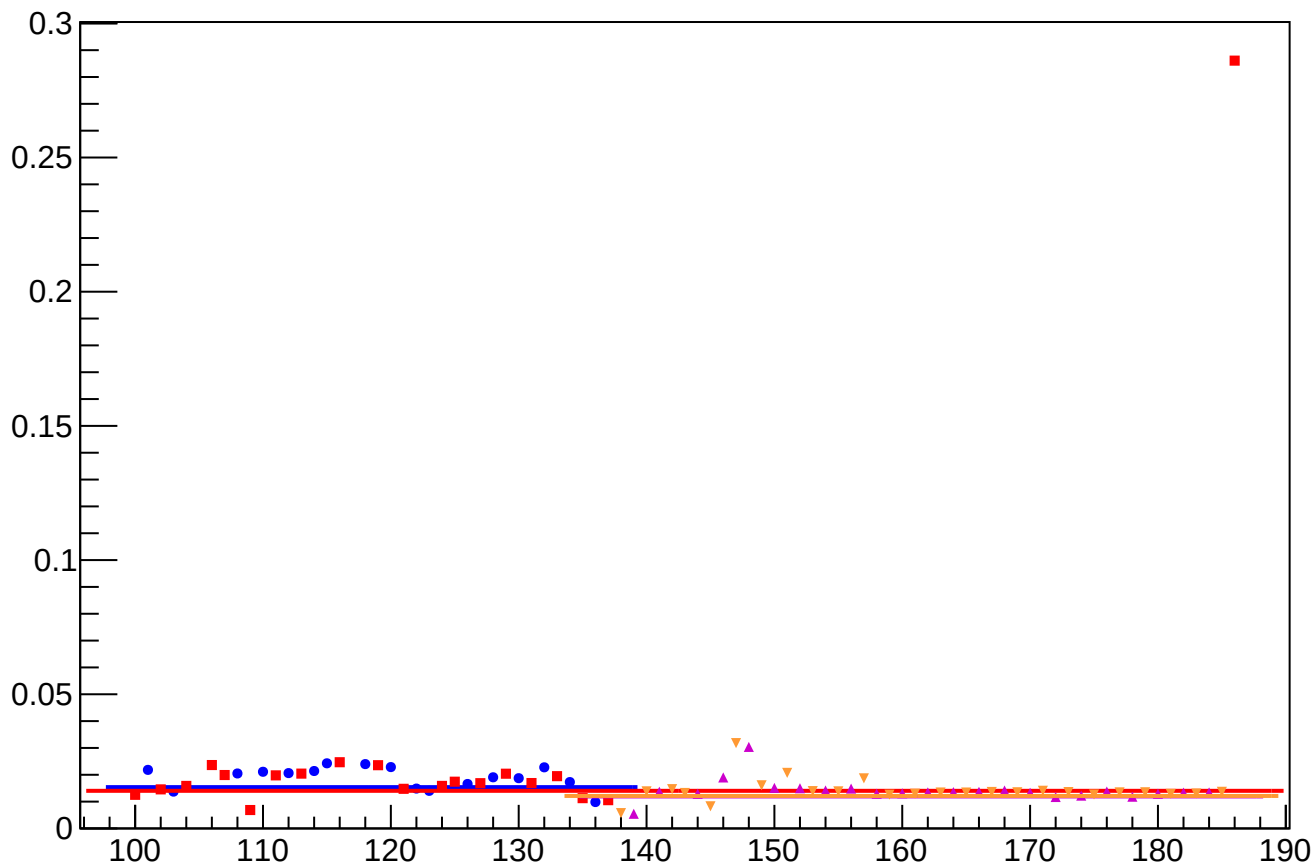
Right: 0.092 $\pm$ 0.000  $\chi^2$ /NDF: 19277295989.6/36

In: 0.015 $\pm$ 0.000  $\chi^2$ /NDF: 85756127201.7/39

Out: 0.042 $\pm$ 0.000  $\chi^2$ /NDF: 109266292896.8/44

All: 0.029 $\pm$ 0.000  $\chi^2$ /NDF: 195070240933.0

# yield\_bpm11Y\_rms vs Slug, Sign Corrected



Right In: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 1140025.0/16

Left Out: 0.012+/-0.000  $\chi^2/\text{NDF}$ :3107648.9/24

Right Out: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 2192859.6/19

Left In: 0.012+/-0.000  $\chi^2/\text{NDF}$ :3105948.8/22

Left: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 6217411.2/47

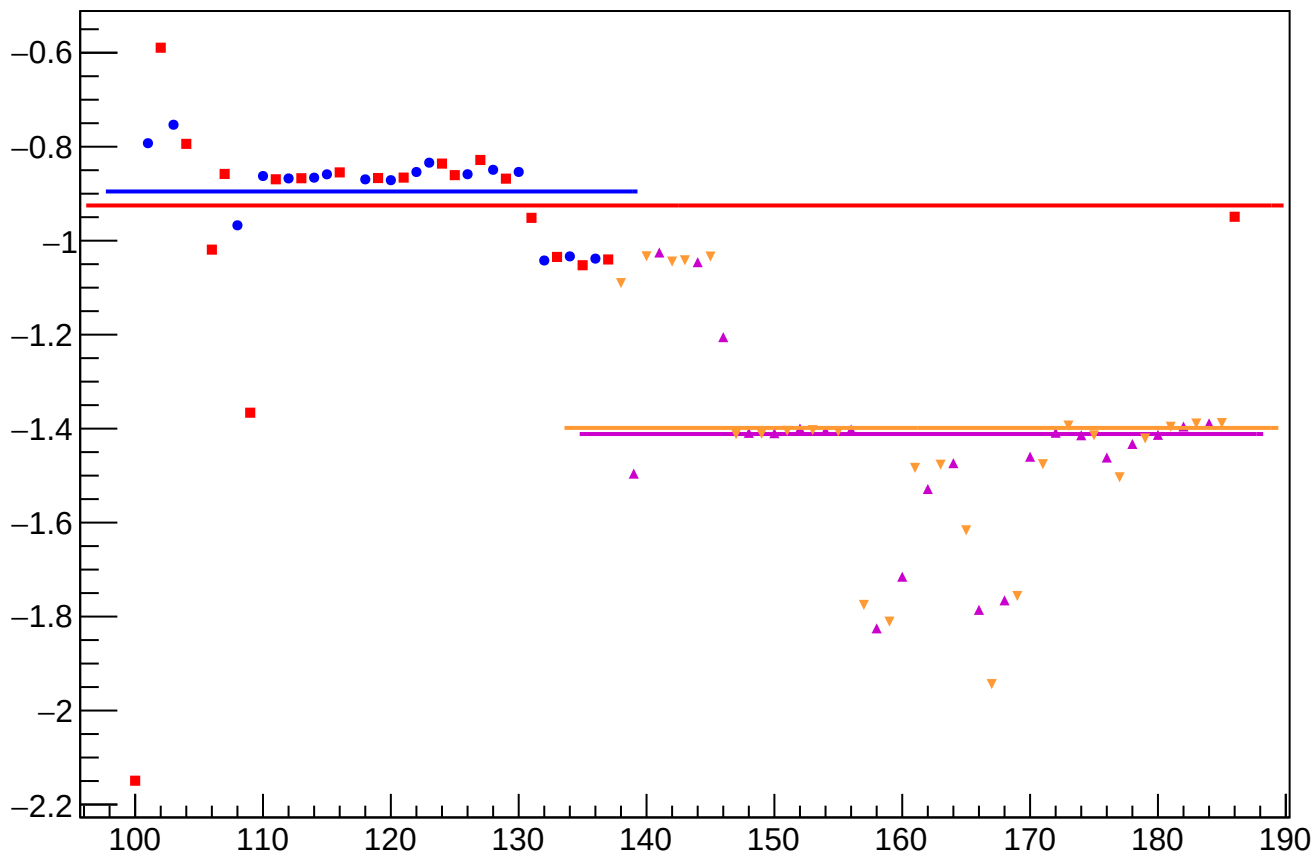
Right: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 3381710.8/36

In: 0.013+/-0.000  $\chi^2/\text{NDF}$ :4711247.1/39

Out: 0.013+/-0.000  $\chi^2/\text{NDF}$ :5465835.4/44

All: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 10177363.2/84

# yield\_bpm12X\_mean vs Slug, Sign Corrected



Right In:  $-0.895 \pm 0.000$   $\chi^2/\text{NDF}: 37924701.6/16$

Left Out:  $-1.398 \pm 0.000$   $\chi^2/\text{NDF}: 734579404.3/24$

Right Out:  $-0.925 \pm 0.000$   $\chi^2/\text{NDF}: 128504949.6/19$

Left In:  $-1.412 \pm 0.000$   $\chi^2/\text{NDF}: 512629872.4/22$

Left:  $-1.405 \pm 0.000$   $\chi^2/\text{NDF}: 1248268857.1/47$

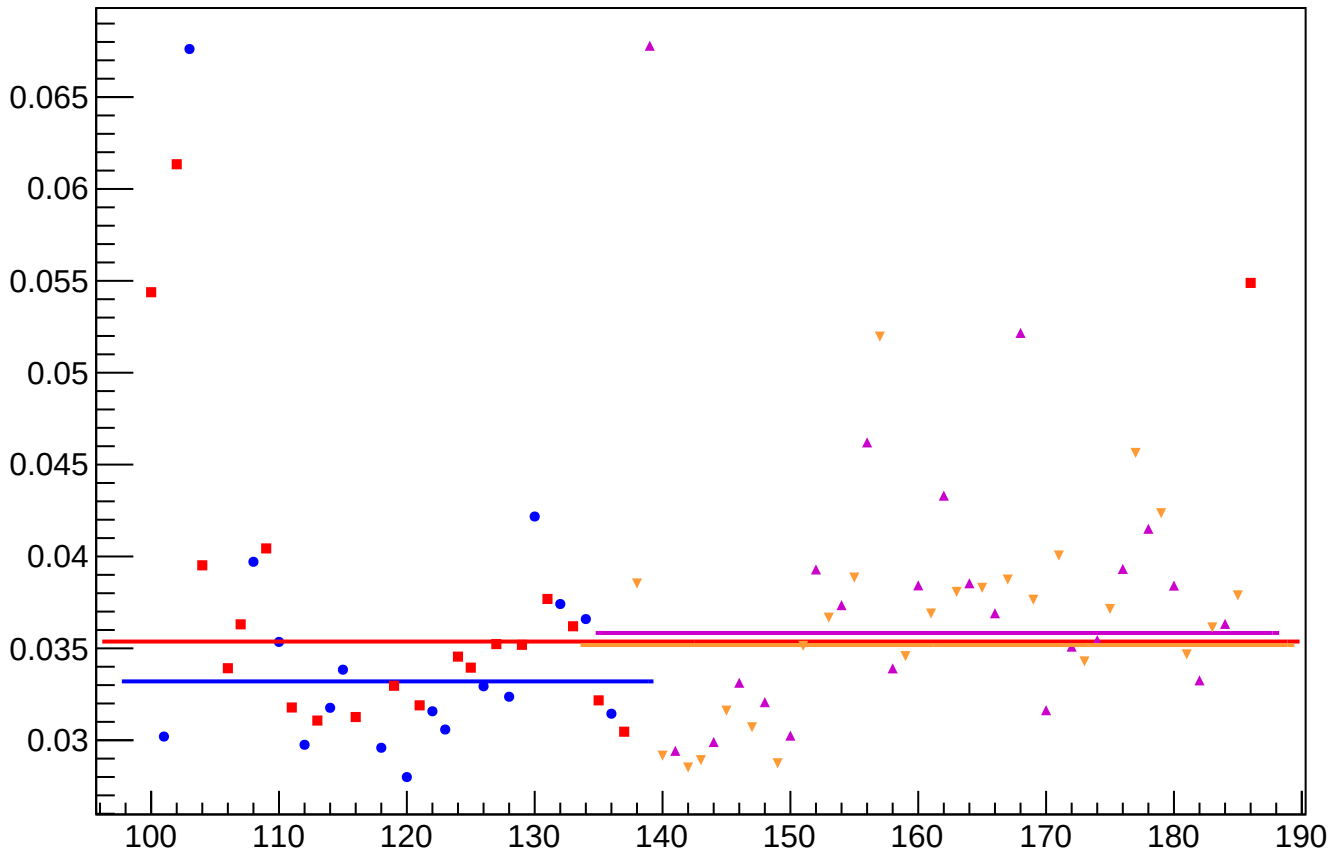
Right:  $-0.910 \pm 0.000$   $\chi^2/\text{NDF}: 168739236.4/36$

In:  $-1.254 \pm 0.000$   $\chi^2/\text{NDF}: 1523968599.9/39$

Out:  $-1.264 \pm 0.000$   $\chi^2/\text{NDF}: 1689731221.1/44$

All:  $-1.259 \pm 0.000$   $\chi^2/\text{NDF}: 3214568219.3/8$

# yield\_bpm12X\_rms vs Slug, Sign Corrected



Right In: 0.033+/-0.000  $\chi^2/\text{NDF}$ : 399489.1/16

Left Out: 0.035+/-0.000  $\chi^2/\text{NDF}$ : 597886.0/24

Right Out: 0.035+/-0.000  $\chi^2/\text{NDF}$ : 370300.0/19

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

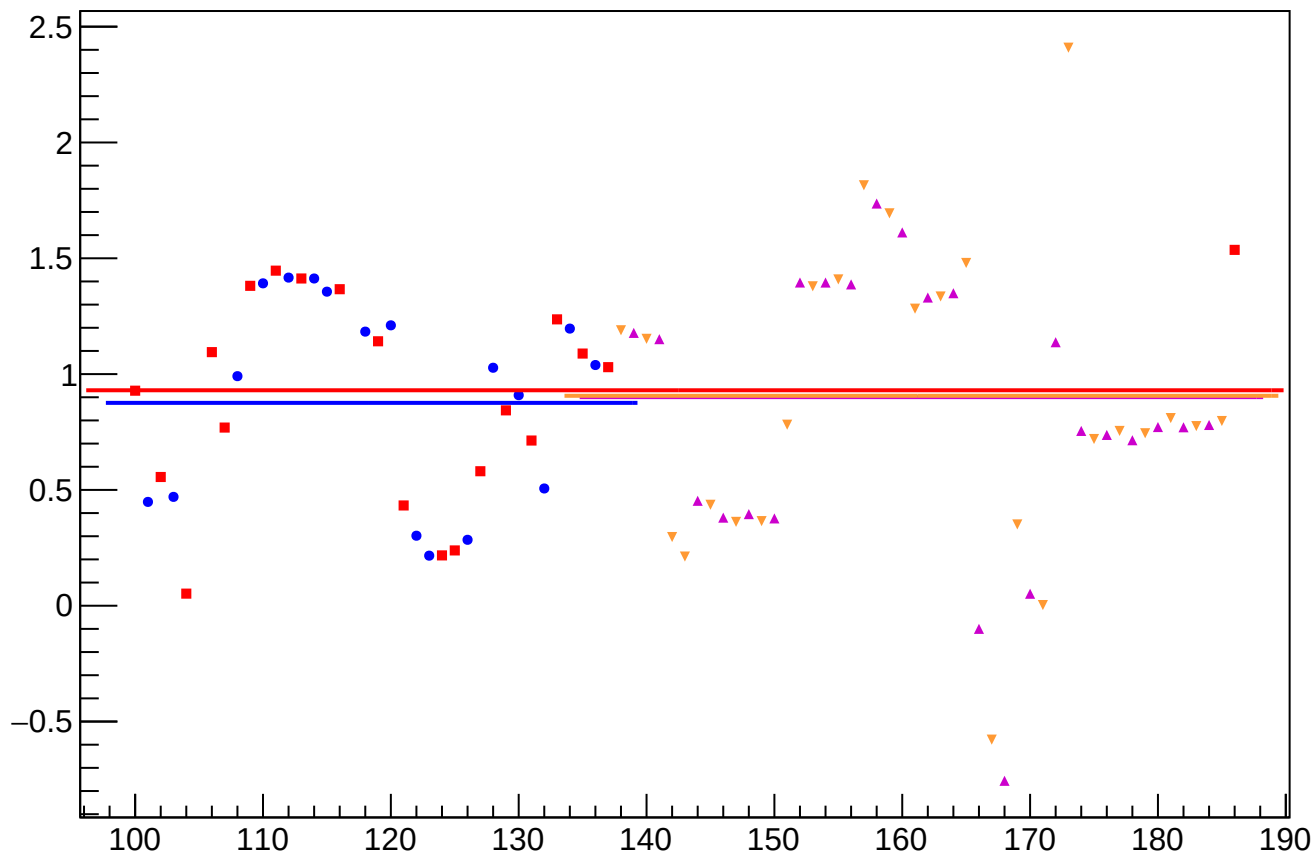
Right: 0.034+/-0.000  $\chi^2/\text{NDF}$ : 794258.6/36

In: 0.035+/-0.000  $\chi^2/\text{NDF}$ : 1341218.2/39

Out: 0.035+/-0.000  $\chi^2/\text{NDF}$ : 968452.5/44

All: 0.035+/-0.000  $\chi^2/\text{NDF}$ : 2310383.1/84

# yield\_bpm12Y\_mean vs Slug, Sign Corrected



Right In: 0.876 $\pm$ 0.000  $\chi^2$ /NDF: 6459481069.8/16

Left Out: 0.906 $\pm$ 0.000  $\chi^2$ /NDF: 84108410196.2/24

Right Out: 0.930 $\pm$ 0.000  $\chi^2$ /NDF: 9959863570.1/19

Left In: 0.901 $\pm$ 0.000  $\chi^2$ /NDF: 66932223067.8/22

Left: 0.904 $\pm$ 0.000  $\chi^2$ /NDF: 151044220035.9/47

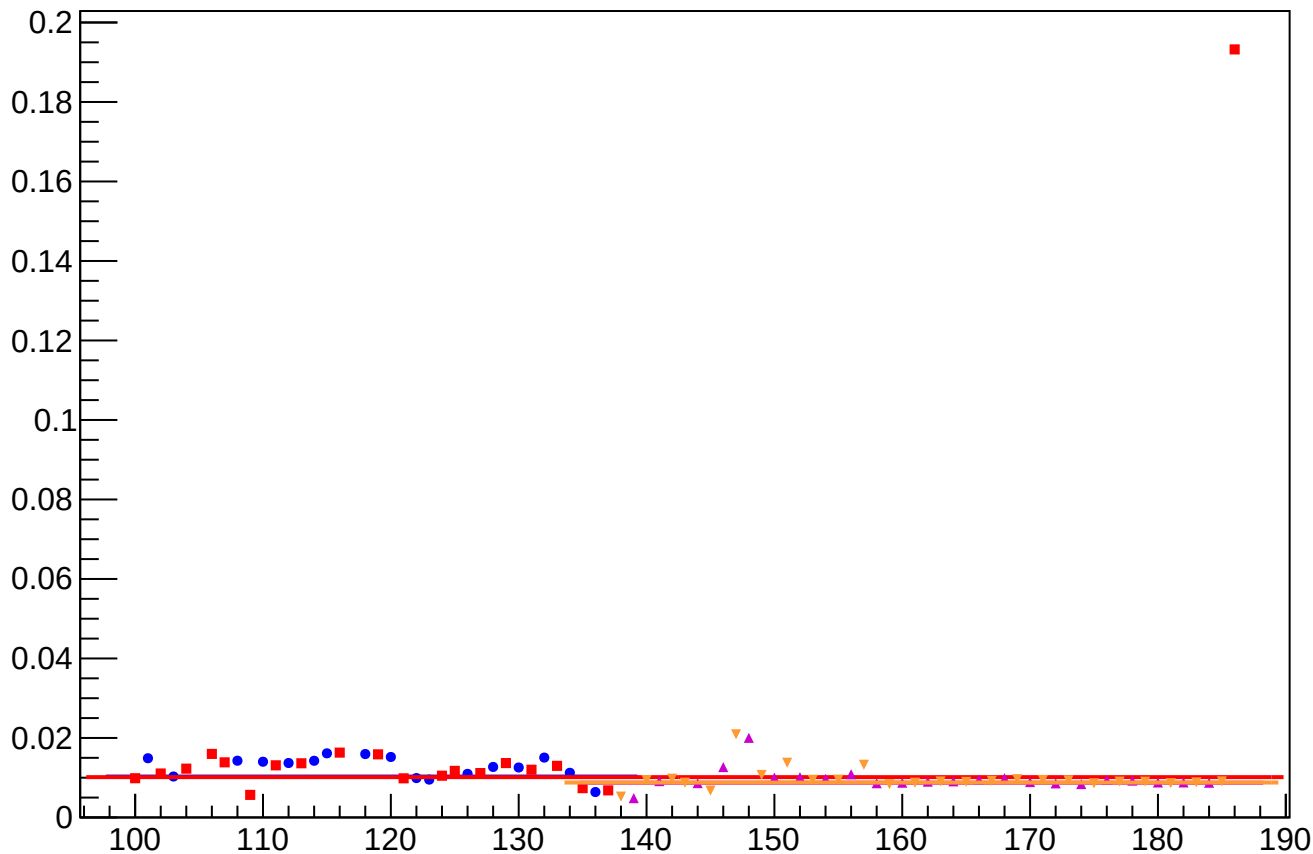
Right: 0.904 $\pm$ 0.000  $\chi^2$ /NDF: 16499941700.2/36

In: 0.896 $\pm$ 0.000  $\chi^2$ /NDF: 73417350193.7/39

Out: 0.911 $\pm$ 0.000  $\chi^2$ /NDF: 94093873496.8/44

All: 0.904 $\pm$ 0.000  $\chi^2$ /NDF: 167544191310.1

# yield\_bpm12Y\_rms vs Slug, Sign Corrected



Right In: 0.010+/-0.000  $\chi^2/\text{NDF}$ : 1205873.2/16

Left Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 1698526.2/24

Right Out: 0.010+/-0.000  $\chi^2/\text{NDF}$ : 1804312.3/19

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  $\chi^2/\text{NDF}$ : 3011244.4/36

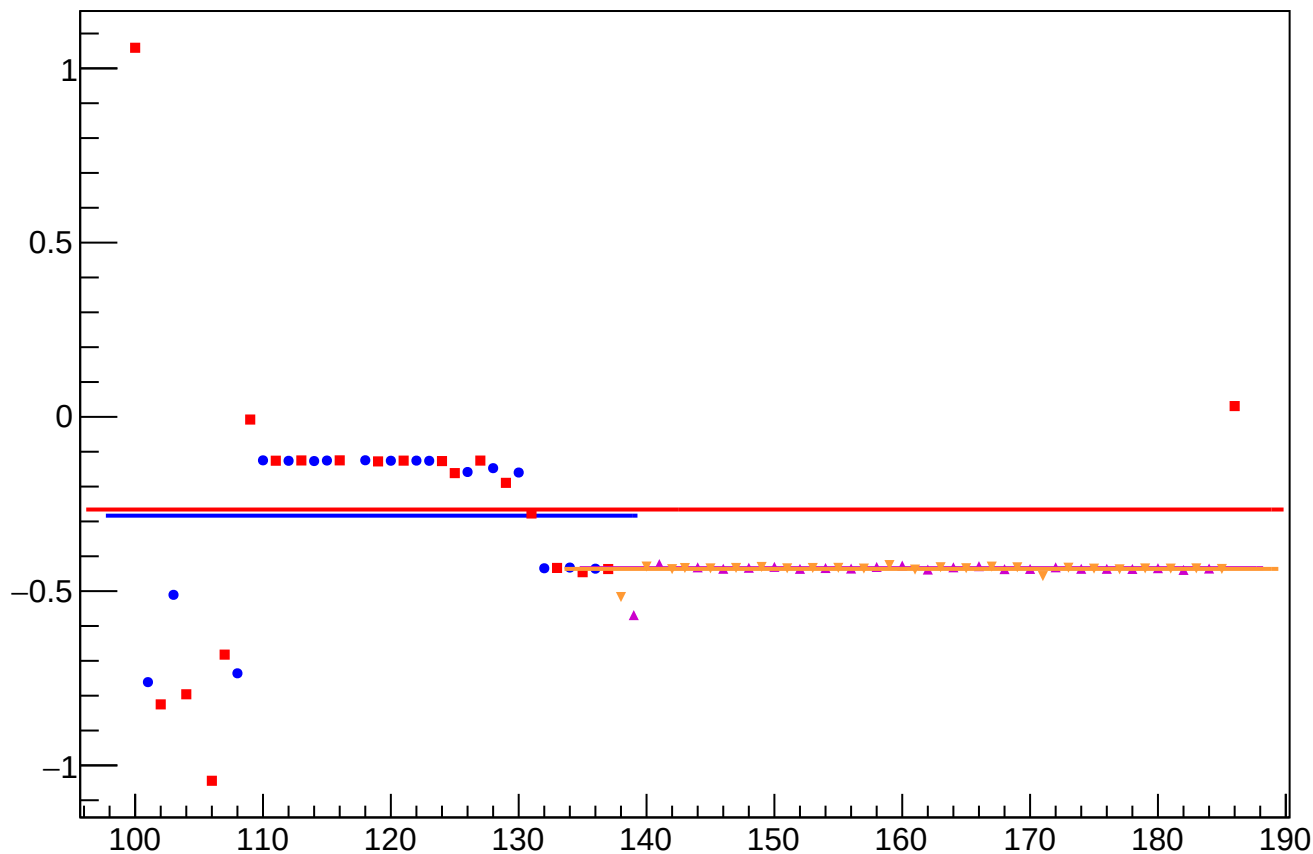
In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 3075888.5/39

Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 3669693.8/44

All: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 6745665.3/84



# yield\_bpm16X\_mean vs Slug, Sign Corrected



Right In:  $-0.283 \pm 0.000$   $\chi^2/\text{NDF}$ : 894148140.5/16

Left Out:  $-0.436 \pm 0.000$   $\chi^2/\text{NDF}$ : 28776503.9/24

Right Out:  $-0.266 \pm 0.000$   $\chi^2/\text{NDF}$ : 983134292.6/19

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

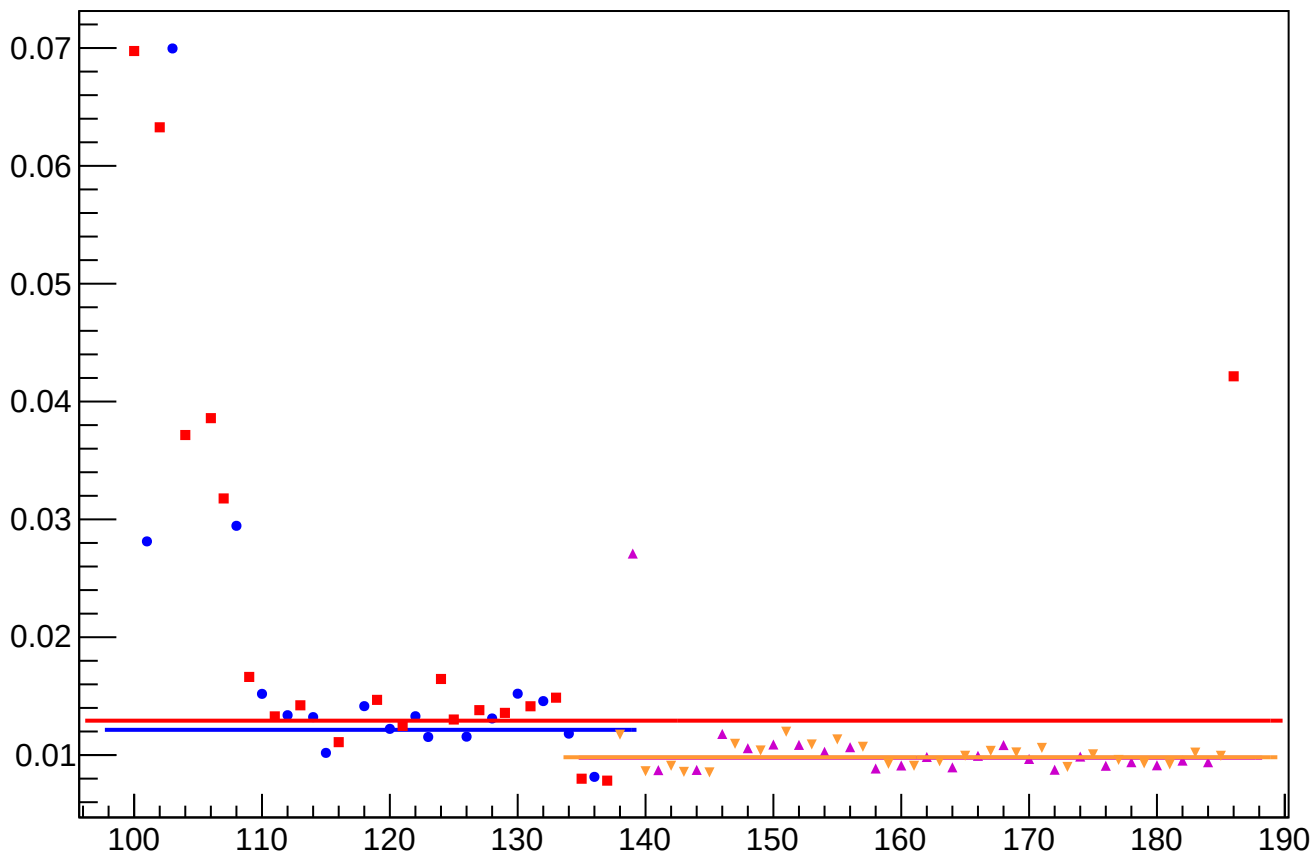
Right:  $-0.275 \pm 0.000$   $\chi^2/\text{NDF}$ : 1882059205.4/36

In:  $-0.408 \pm 0.000$   $\chi^2/\text{NDF}$ : 1506676334.4/39

Out:  $-0.410 \pm 0.000$   $\chi^2/\text{NDF}$ : 1745961748.7/44

All:  $-0.409 \pm 0.000$   $\chi^2/\text{NDF}$ : 3252810898.4/8

# yield\_bpm16X\_rms vs Slug, Sign Corrected



Right In: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 1720286.9/16

Left Out: 0.010 $\pm$ 0.000  $\chi^2$ /NDF:271172.3/24

Right Out: 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 2307366.4/19

Left In: 0.010 $\pm$ 0.000  $\chi^2$ /NDF:786577.8/22

Left: 0.010 $\pm$ 0.000  $\chi^2$ /NDF: 1058038.1/47

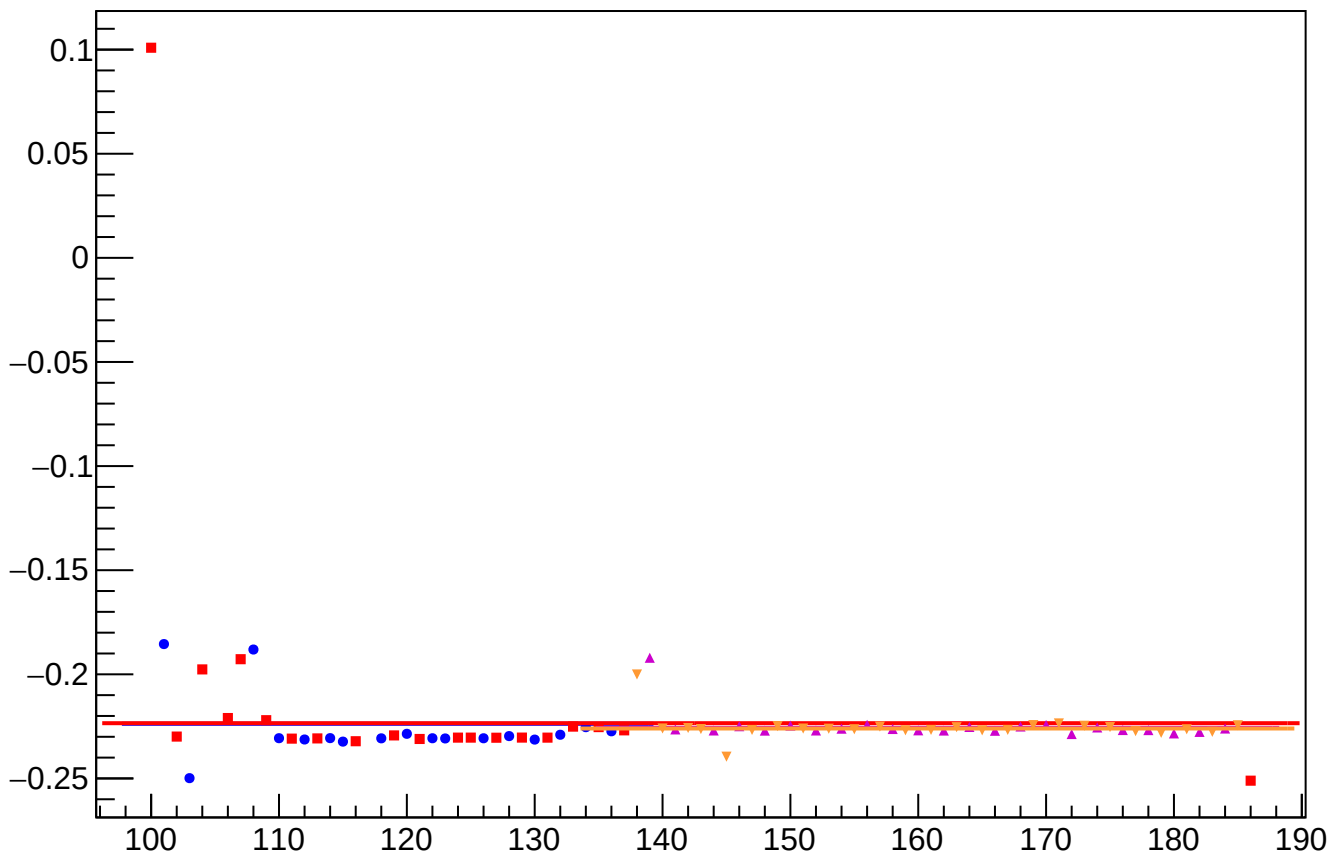
Right: 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 4046255.6/36

In: 0.010 $\pm$ 0.000  $\chi^2$ /NDF:2800039.0/39

Out: 0.010 $\pm$ 0.000  $\chi^2$ /NDF:3065746.8/44

All: 0.010 $\pm$ 0.000  $\chi^2$ /NDF: 5868585.9/84

# yield\_bpm16Y\_mean vs Slug, Sign Corrected



Right In:  $-0.224 \pm 0.000$   $\chi^2/\text{NDF}$ : 74201194.4/16

Left Out:  $-0.226 \pm 0.000$   $\chi^2/\text{NDF}$ : 21207366.3/24

Right Out:  $-0.223 \pm 0.000$   $\chi^2/\text{NDF}$ : 168015339.3/19

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

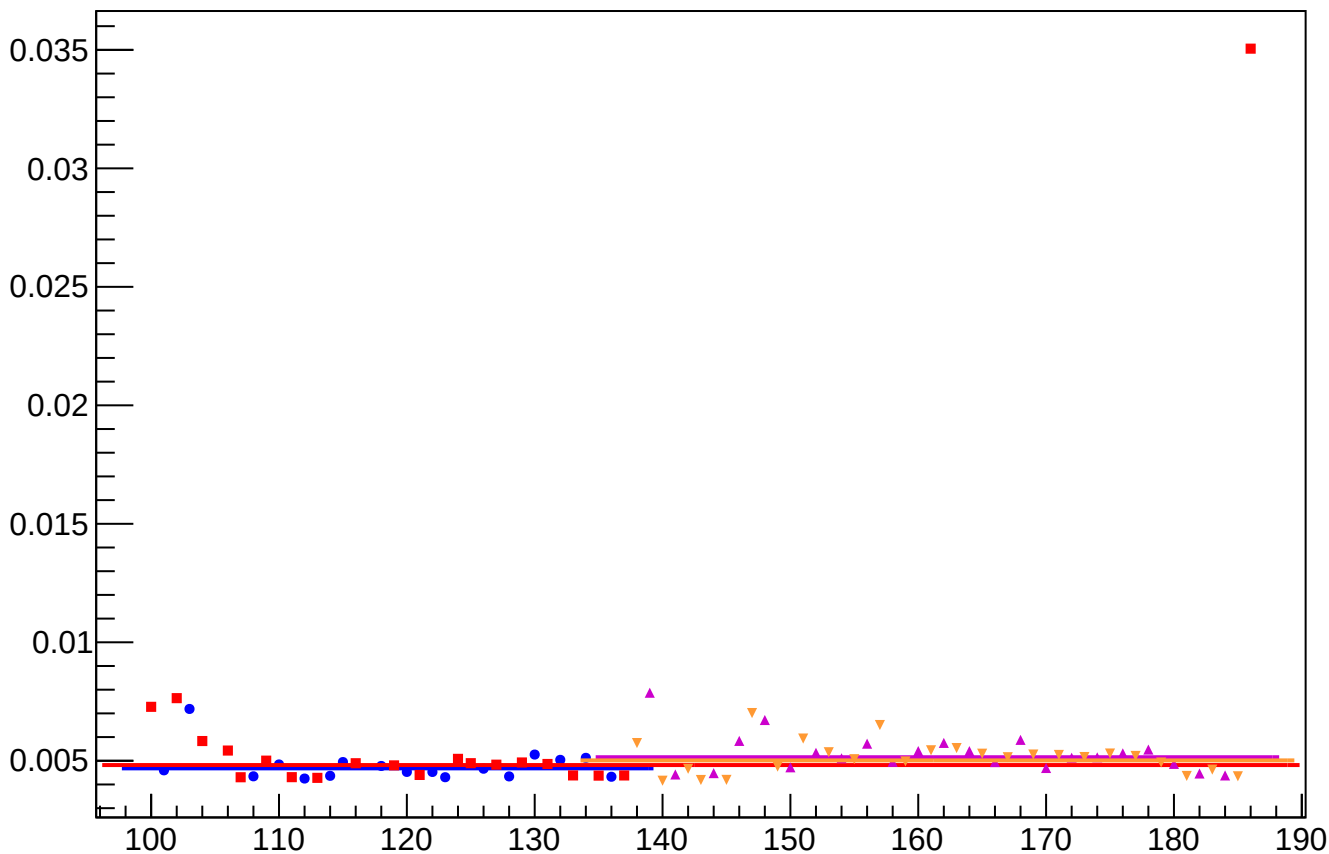
Right:  $-0.224 \pm 0.000$   $\chi^2/\text{NDF}$ : 242227758.6/36

In:  $-0.225 \pm 0.000$   $\chi^2/\text{NDF}$ : 88656187.0/39

Out:  $-0.225 \pm 0.000$   $\chi^2/\text{NDF}$ : 190506839.7/44

All:  $-0.225 \pm 0.000$   $\chi^2/\text{NDF}$ : 279174218.6/84

# yield\_bpm16Y\_rms vs Slug, Sign Corrected



Right In: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 180080.7/16

Left Out: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 532623.0/24

Right Out: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 778310.4/19

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

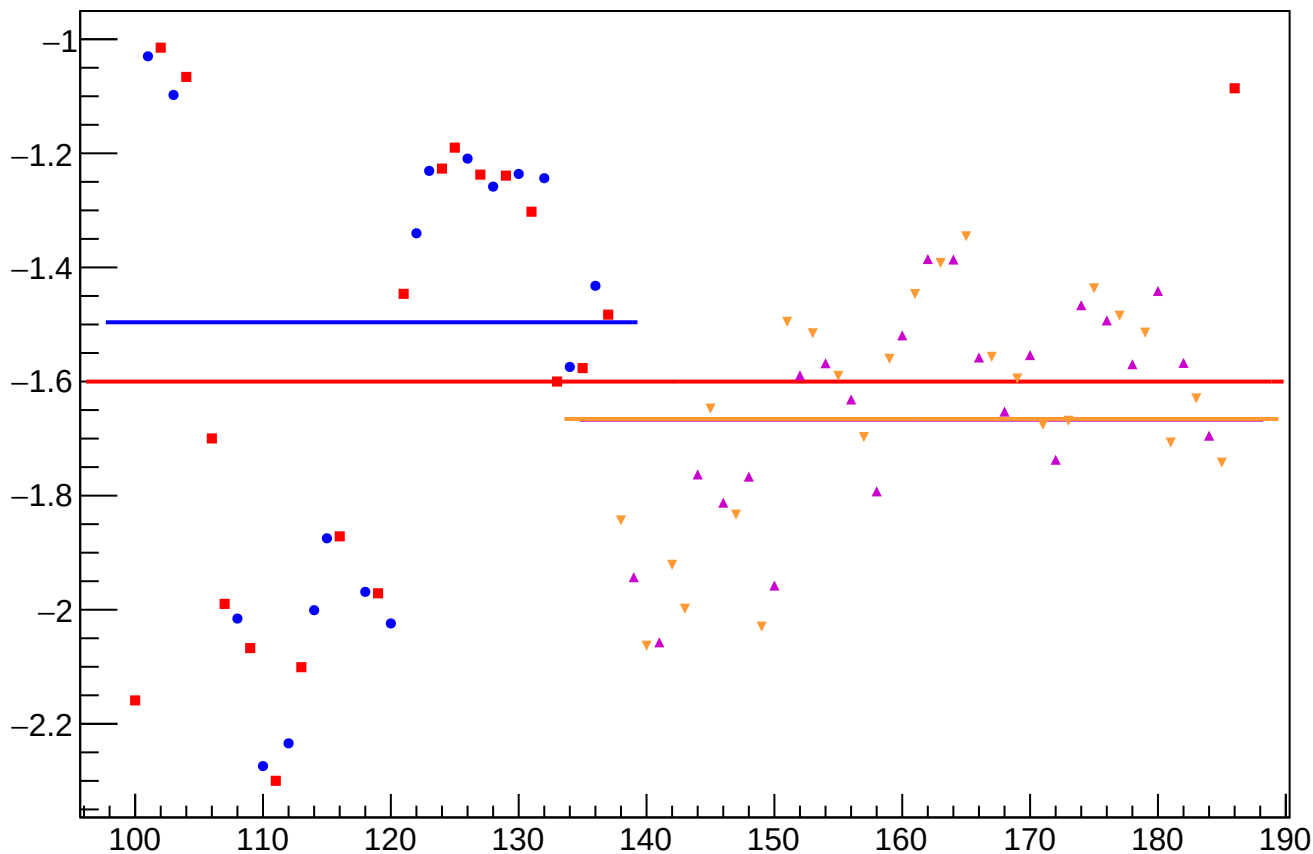
Right: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 963727.5/36

In: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 767408.5/39

Out: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 1326220.6/44

All: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 2095653.0/84

# yield\_bpm0l01X\_mean vs Slug, Sign Corrected



Right In:  $-1.496 \pm 0.000$   $\chi^2/\text{NDF}: 22454192322.7/16$

Left Out:  $-1.666 \pm 0.000$   $\chi^2/\text{NDF}: 18368038680.8/24$

Right Out:  $-1.600 \pm 0.000$   $\chi^2/\text{NDF}: 28520801432.4/19$

Left In:  $-1.667 \pm 0.000$   $\chi^2/\text{NDF}: 14615453869.3/22$

Left:  $-1.666 \pm 0.000$   $\chi^2/\text{NDF}: 32983827631.4/47$

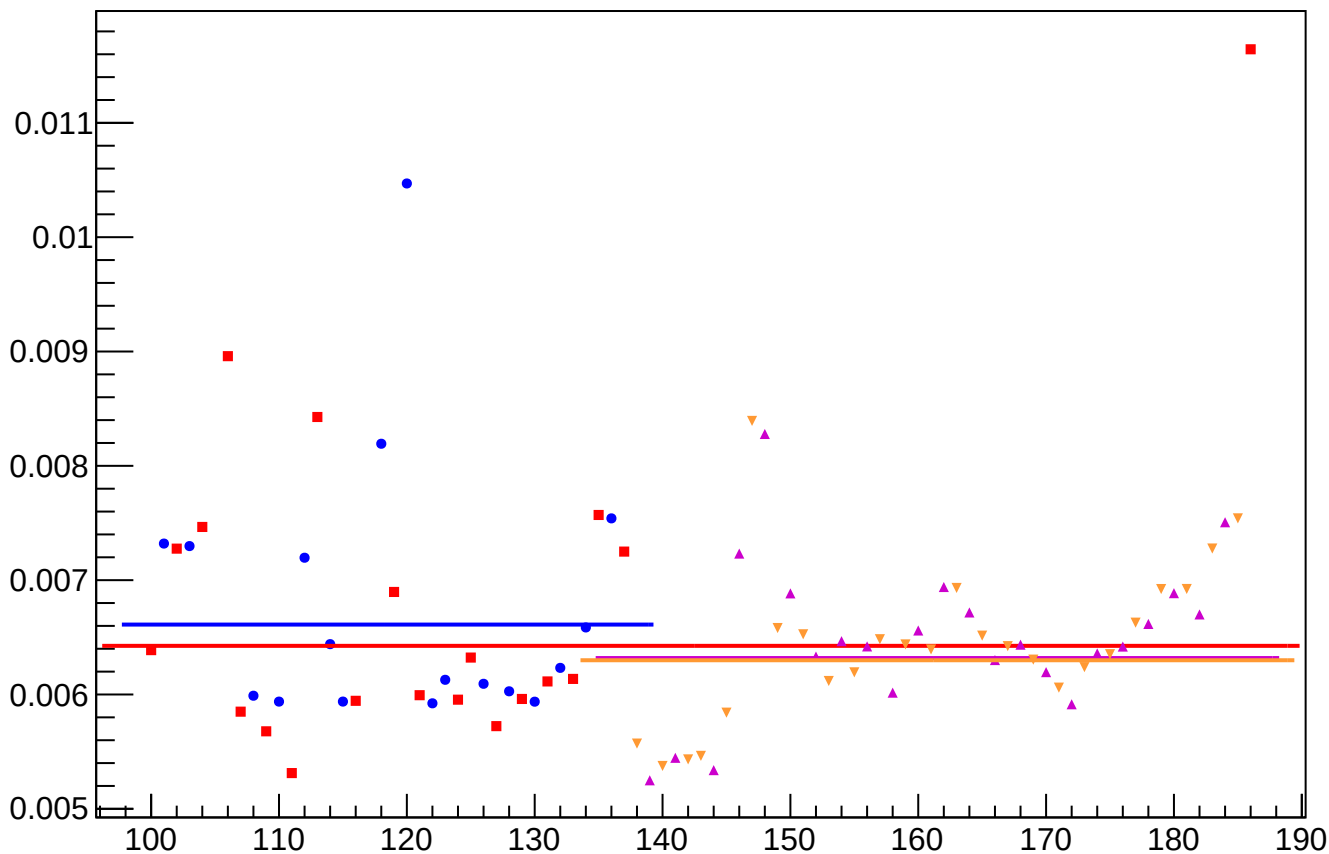
Right:  $-1.553 \pm 0.000$   $\chi^2/\text{NDF}: 51789200549.3/36$

In:  $-1.624 \pm 0.000$   $\chi^2/\text{NDF}: 40090344894.2/39$

Out:  $-1.648 \pm 0.000$   $\chi^2/\text{NDF}: 47407149253.3/44$

All:  $-1.637 \pm 0.000$   $\chi^2/\text{NDF}: 87658653975.6/100$

# yield\_bpm0l01X\_rms vs Slug, Sign Corrected



Right In: 0.007 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 199824.5/16

Left Out: 0.006 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 312811.2/24

Right Out: 0.006 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 368091.1/19

Left In: 0.006 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 334332.4/22

Left: 0.006 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 647302.7/47

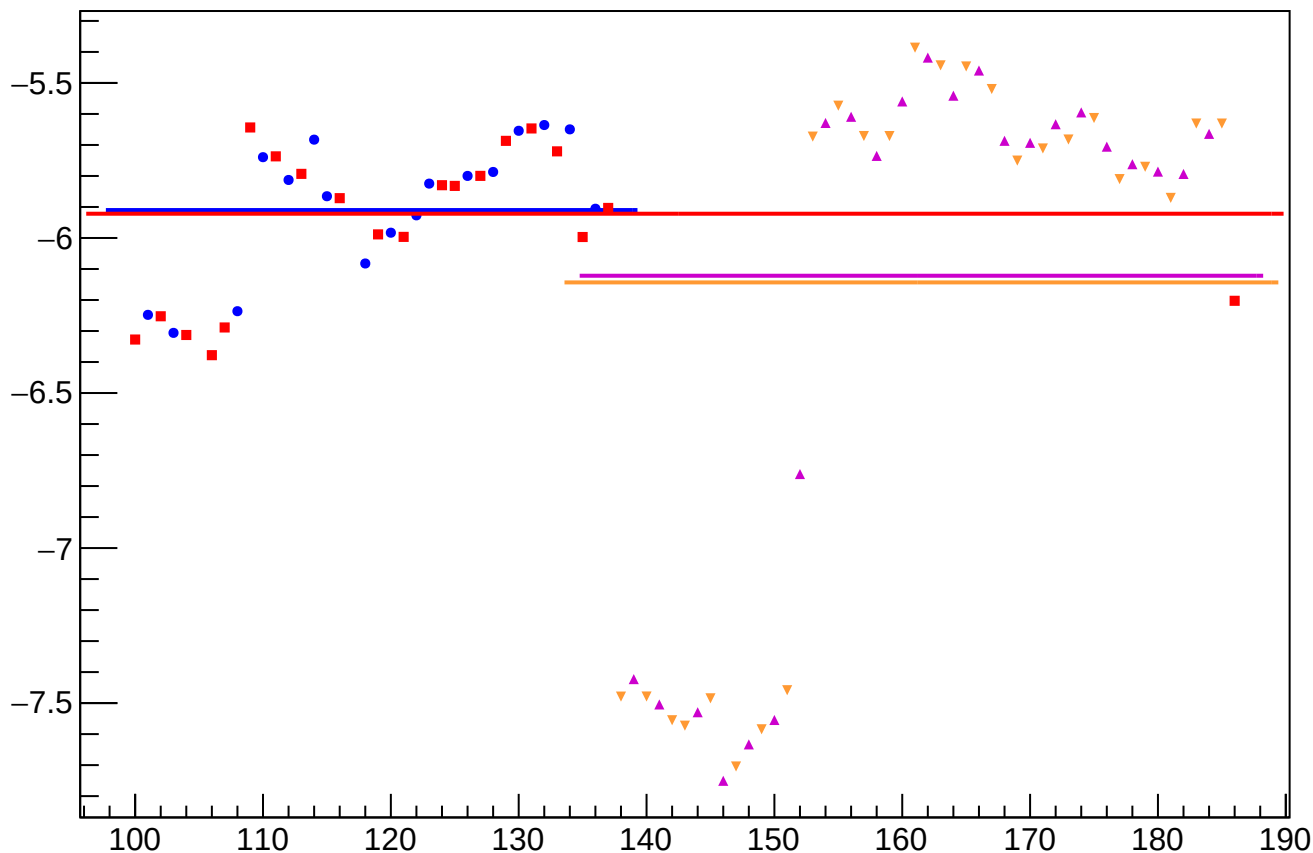
Right: 0.007 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 573130.6/36

In: 0.006 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 551905.7/39

Out: 0.006 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 684729.0/44

All: 0.006 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1238593.7/84

# yield\_bpm0l01Y\_mean vs Slug, Sign Corrected



Right In: -5.910 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 11105112836.5/16

Left Out: -6.143 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 185721259239.3/24

Right Out: -5.922 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 12960017392.1/19

Left In: -6.122 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 159909473006.6/22

Left: -6.133 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 345689393988.1/47

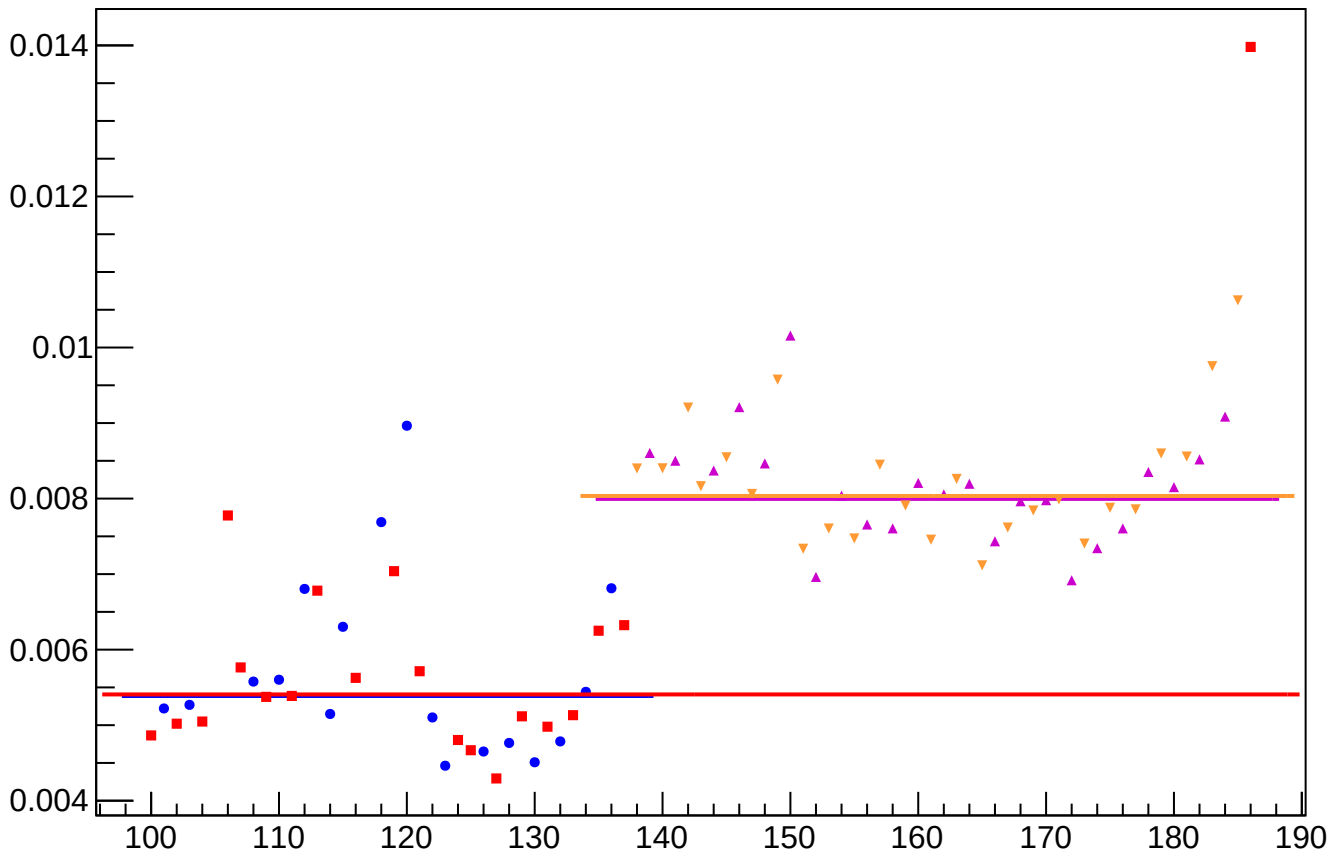
Right: -5.916 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 24080032857.3/36

In: -6.027 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 176009285839.8/39

Out: -6.040 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 204571831295.2/44

All: -6.034 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 380620700540.6

# yield\_bpm0l01Y\_rms vs Slug, Sign Corrected



Right In: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 346475.5/16

Left Out: 0.008+/-0.000  $\chi^2/\text{NDF}$ :205976.0/24

Right Out: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 513654.8/19

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: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 860219.1/36

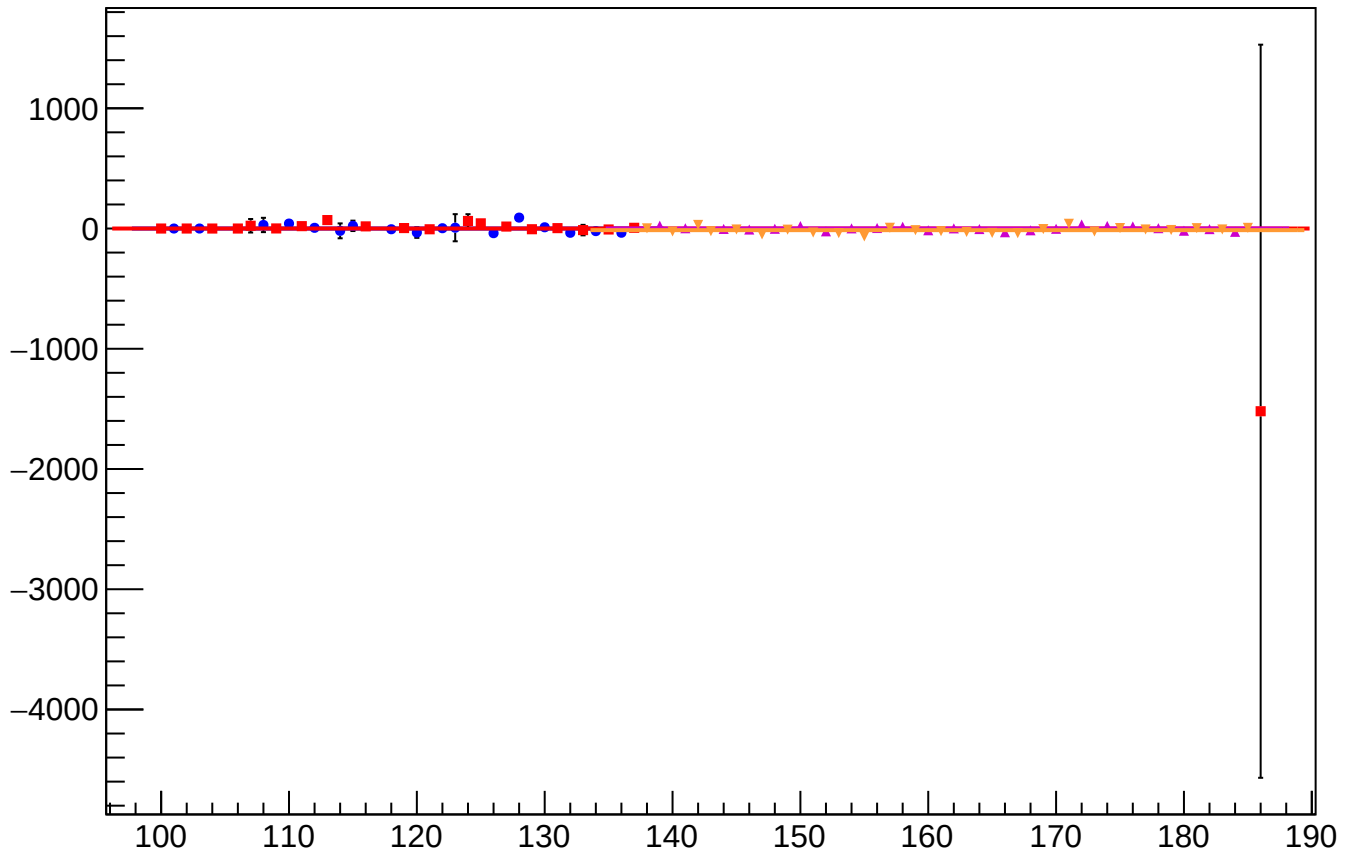
In: 0.007+/-0.000  $\chi^2/\text{NDF}$ :2082334.7/39

Out: 0.007+/-0.000  $\chi^2/\text{NDF}$ :2377335.9/44

All: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 4459835.0/84



# diff\_cav4bX\_mean vs Slug, Sign Corrected



Right In: 0.013 $\pm$ 0.017  $\chi^2$ /NDF: 16.3/16

Left Out: -13.472 $\pm$ 2.796  $\chi^2$ /NDF:58.5/24

Right Out: -0.003 $\pm$ 0.016  $\chi^2$ /NDF: 15.2/19

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

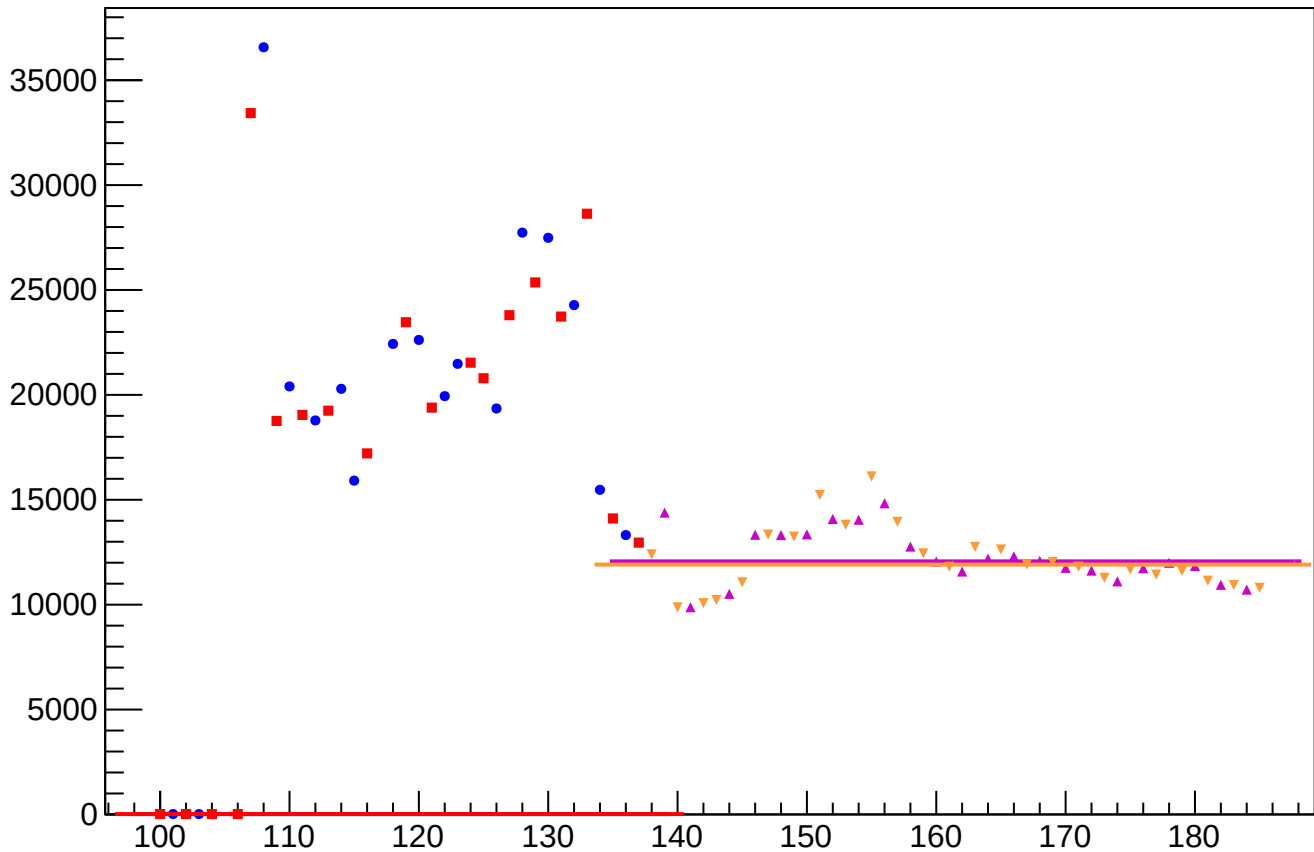
Right: 0.004 $\pm$ 0.012  $\chi^2$ /NDF: 31.9/36

In: 0.013 $\pm$ 0.017  $\chi^2$ /NDF:45.0/39

Out: -0.004 $\pm$ 0.016  $\chi^2$ /NDF:96.9/44

All: 0.004 $\pm$ 0.012  $\chi^2$ /NDF: 142.4/84

# diff\_cav4bX\_rms vs Slug, Sign Corrected



Right In: 18.640 $\pm$ 0.012  $\chi^2$ /NDF: 10799270.4/16

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

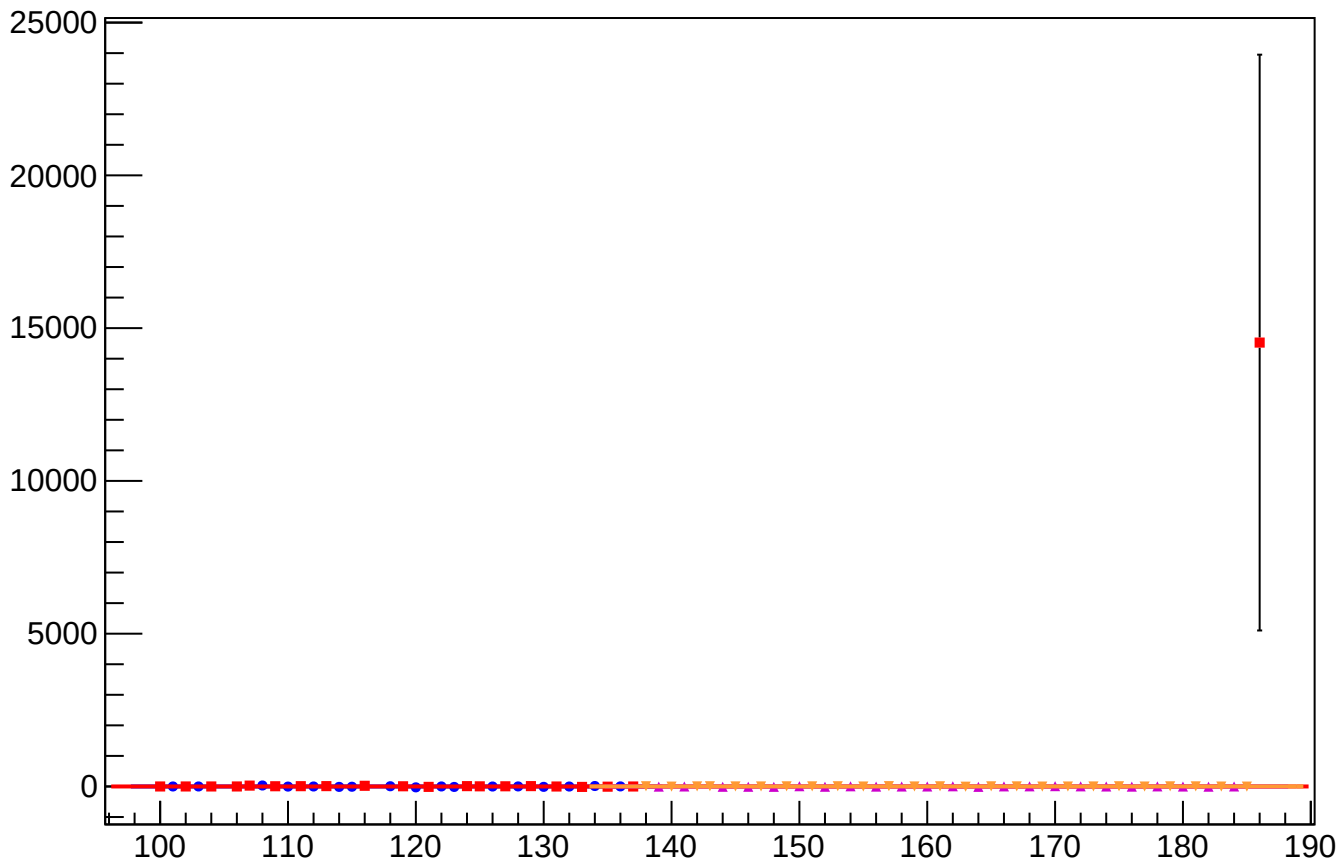
Right: 18.463 $\pm$ 0.008  $\chi^2$ /NDF: 21855713.8/35

In: 19.069 $\pm$ 0.012  $\chi^2$ /NDF: 45549762.6/39

Out: 18.704 $\pm$ 0.011  $\chi^2$ /NDF: 47698495.9/43

All: 18.873 $\pm$ 0.008  $\chi^2$ /NDF: 93248736.0/83

# diff\_cav4bY\_mean vs Slug, Sign Corrected



Right In: 0.001 $\pm$ 0.009  $\chi^2/\text{NDF}$ : 14.6/16

Left Out: 1.675 $\pm$ 1.021  $\chi^2/\text{NDF}$ : 17.9/24

Right Out: -0.014 $\pm$ 0.009  $\chi^2/\text{NDF}$ : 21.0/19

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

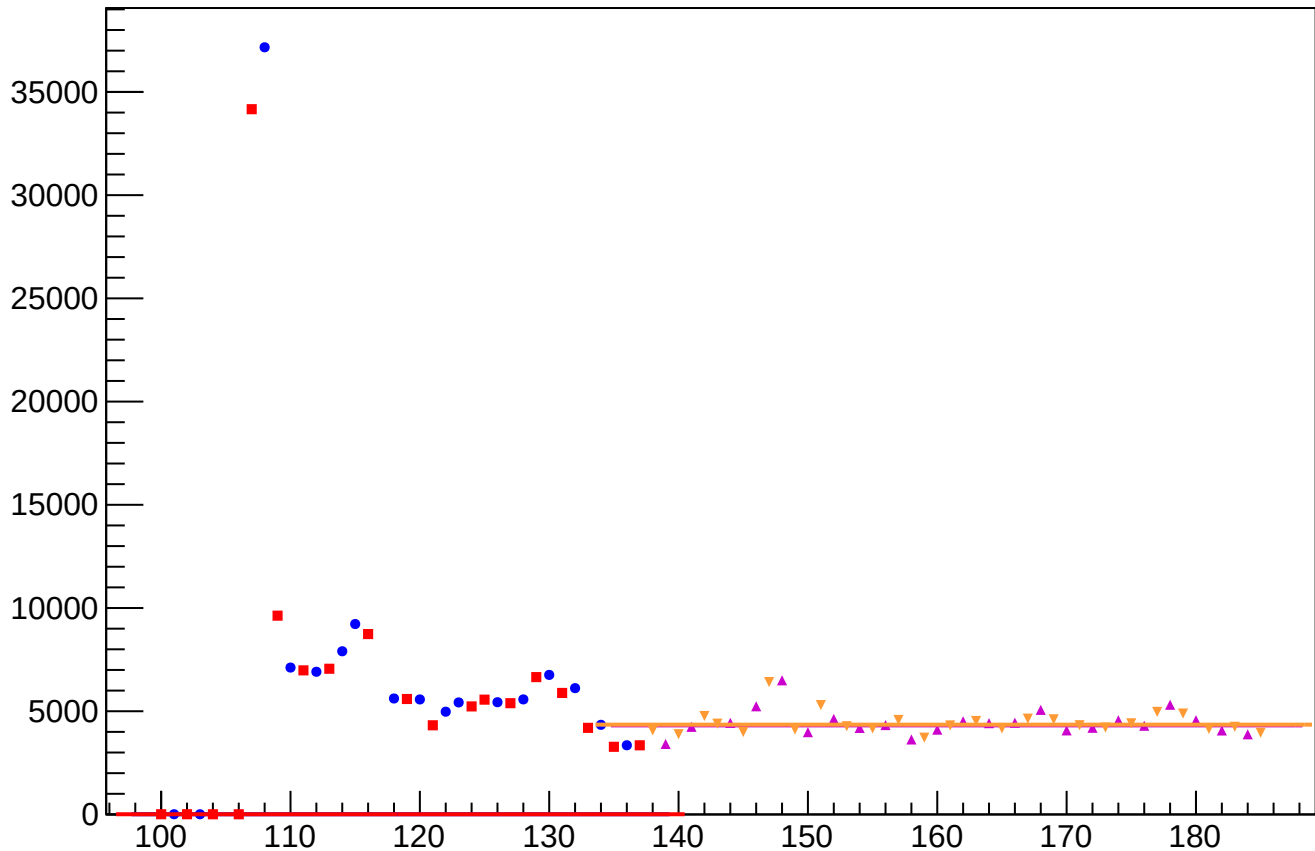
Right: -0.007 $\pm$ 0.006  $\chi^2/\text{NDF}$ : 37.0/36

In: 0.001 $\pm$ 0.009  $\chi^2/\text{NDF}$ : 51.0/39

Out: -0.014 $\pm$ 0.009  $\chi^2/\text{NDF}$ : 41.6/44

All: -0.007 $\pm$ 0.006  $\chi^2/\text{NDF}$ : 93.9/84

# diff\_cav4bY\_rms vs Slug, Sign Corrected



Right In: 9.938 $\pm$ 0.007  $\chi^2$ /NDF: 10926318.4/16

Left Out: 4350.545 $\pm$ 0.722  $\chi^2$ /NDF:384749.0/24

Right Out: 9.854 $\pm$ 0.006  $\chi^2$ /NDF: 11106435.3/18

Left In: 4314.568 $\pm$ 0.738  $\chi^2$ /NDF:534594.3/22

Left: 4332.940 $\pm$ 0.516  $\chi^2$ /NDF: 920558.3/47

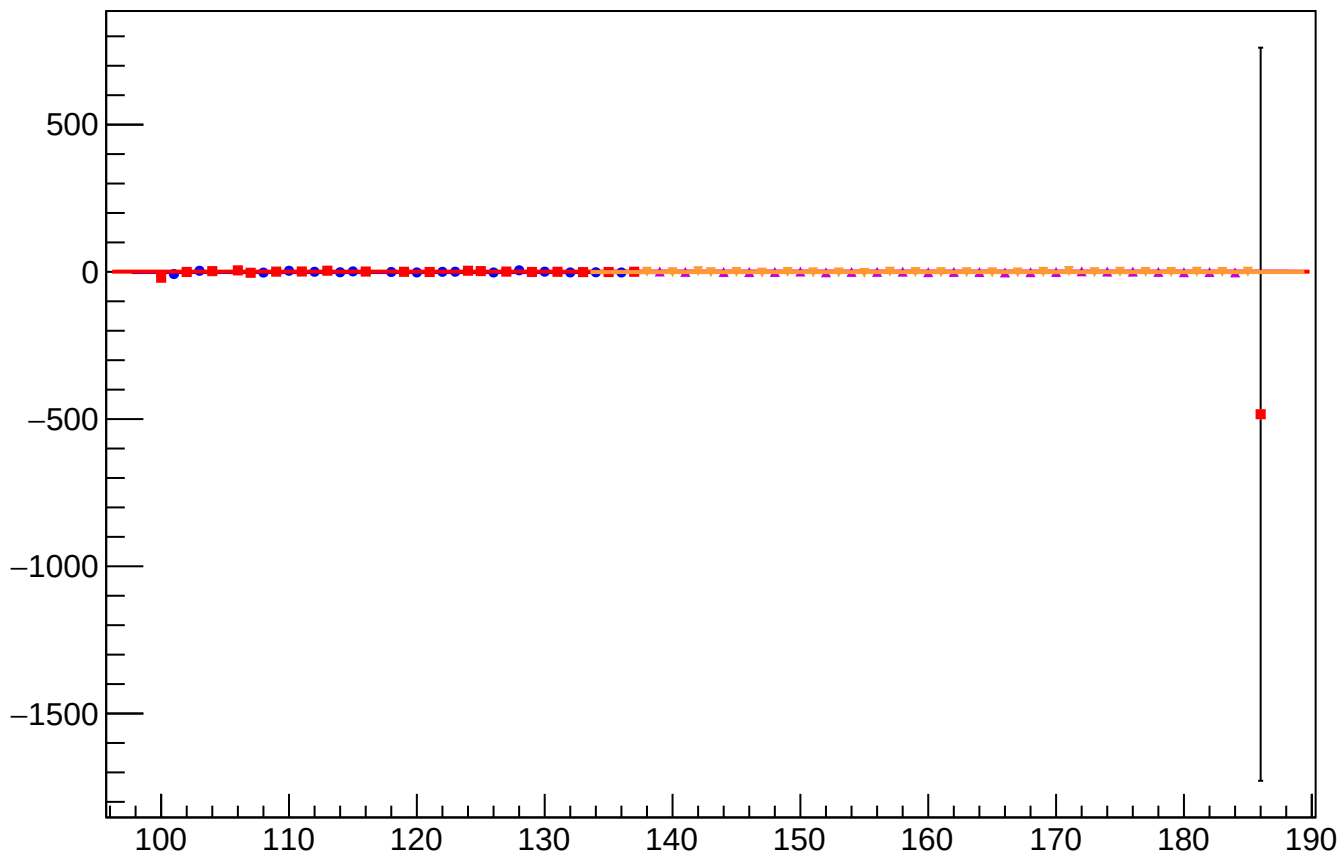
Right: 9.893 $\pm$ 0.004  $\chi^2$ /NDF: 22032841.6/35

In: 10.273 $\pm$ 0.007  $\chi^2$ /NDF:45522351.0/39

Out: 10.165 $\pm$ 0.006  $\chi^2$ /NDF:47636168.3/43

All: 10.216 $\pm$ 0.004  $\chi^2$ /NDF: 93158663.3/83

# diff\_cav4cX\_mean vs Slug, Sign Corrected



Right In:  $-0.702 \pm 0.485$   $\chi^2/\text{NDF}$ : 22.5/16

Left Out:  $-0.774 \pm 0.164$   $\chi^2/\text{NDF}$ : 58.4/24

Right Out:  $0.760 \pm 0.502$   $\chi^2/\text{NDF}$ : 11.9/19

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

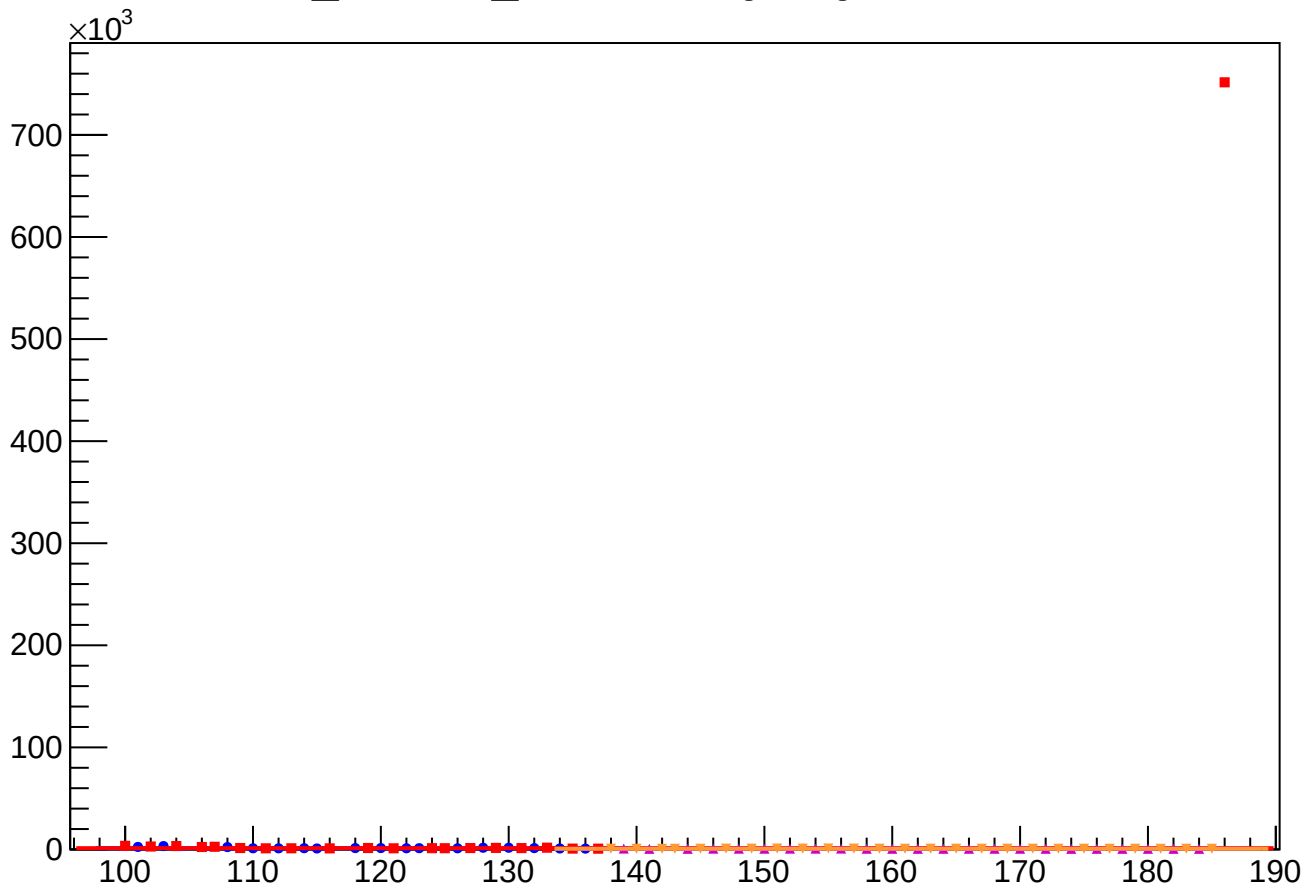
Right:  $0.004 \pm 0.349$   $\chi^2/\text{NDF}$ : 38.8/36

In:  $-0.059 \pm 0.161$   $\chi^2/\text{NDF}$ : 53.7/39

Out:  $-0.626 \pm 0.156$   $\chi^2/\text{NDF}$ : 78.7/44

All:  $-0.350 \pm 0.112$   $\chi^2/\text{NDF}$ : 138.8/84

# diff\_cav4cX\_rms vs Slug, Sign Corrected



Right In: 1164.211 $\pm$ 0.343  $\chi^2/\text{NDF}$ : 1586062.6/16

Left Out: 700.797 $\pm$ 0.116  $\chi^2/\text{NDF}$ : 392521.4/24

Right Out: 1249.389 $\pm$ 0.355  $\chi^2/\text{NDF}$ : 2342871.2/19

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

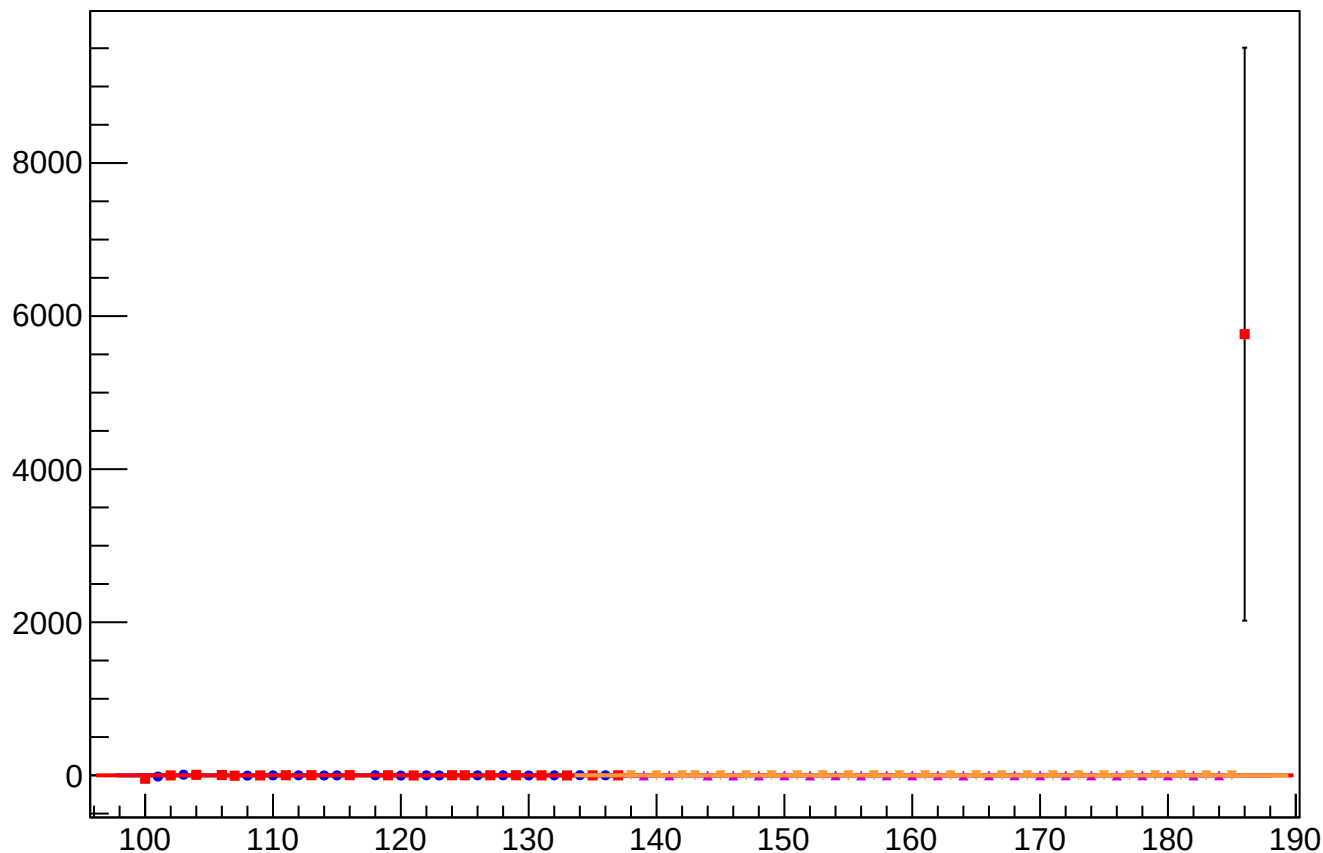
Right: 1205.327 $\pm$ 0.247  $\chi^2/\text{NDF}$ : 3958709.1/36

In: 757.044 $\pm$ 0.114  $\chi^2/\text{NDF}$ : 3507163.5/39

Out: 753.859 $\pm$ 0.110  $\chi^2/\text{NDF}$ : 4892045.6/44

All: 755.407 $\pm$ 0.079  $\chi^2/\text{NDF}$ : 8399613.7/84

# diff\_cav4cY\_mean vs Slug, Sign Corrected



Right In: -0.060 $\pm$ 0.271  $\chi^2/\text{NDF}$ : 20.9/16

Left Out: 0.236 $\pm$ 0.122  $\chi^2/\text{NDF}$ :17.6/24

Right Out: -0.245 $\pm$ 0.265  $\chi^2/\text{NDF}$ : 23.1/19

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

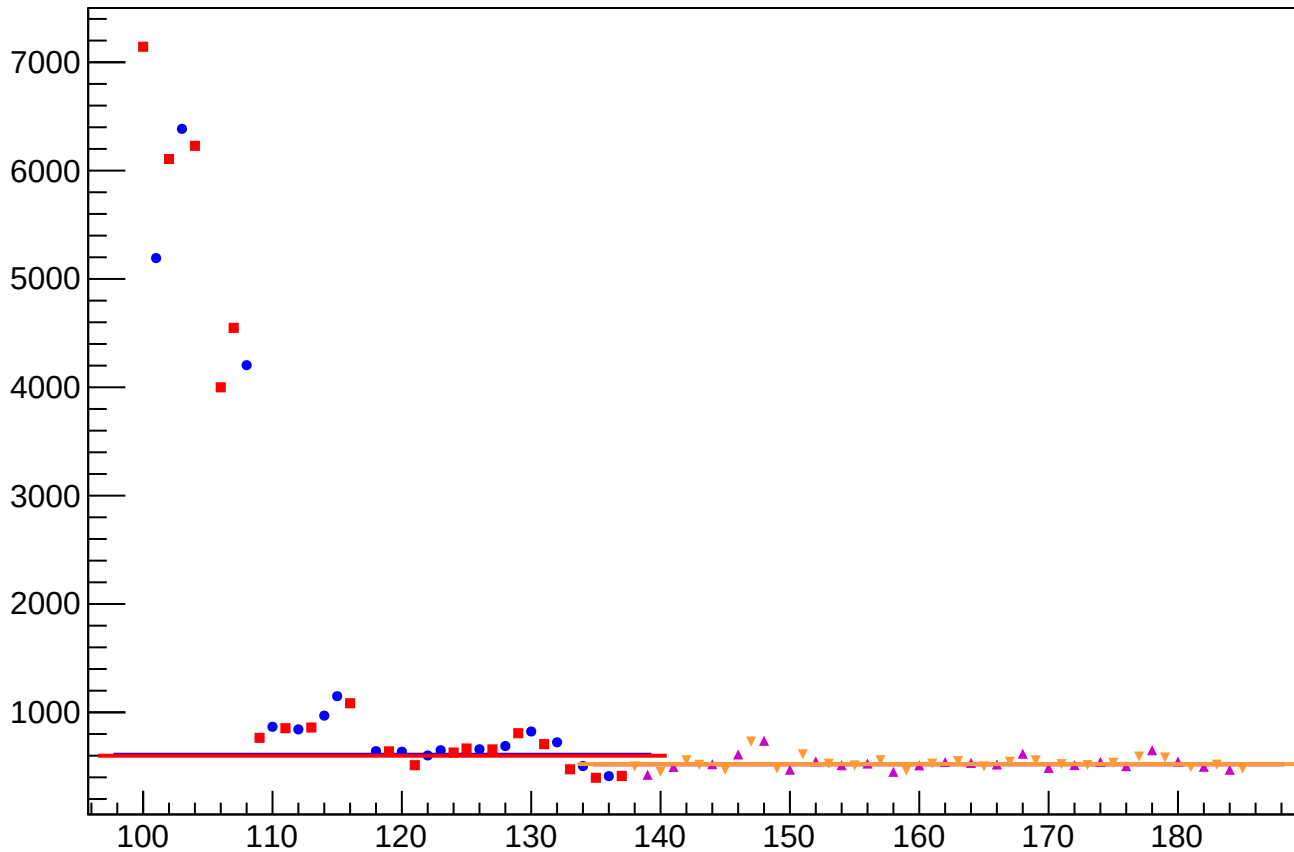
Right: -0.154 $\pm$ 0.189  $\chi^2/\text{NDF}$ : 44.2/36

In: -0.105 $\pm$ 0.114  $\chi^2/\text{NDF}$ :55.9/39

Out: 0.152 $\pm$ 0.111  $\chi^2/\text{NDF}$ :43.4/44

All: 0.026 $\pm$ 0.080  $\chi^2/\text{NDF}$ : 101.9/84

# diff\_cav4cY\_rms vs Slug, Sign Corrected



Right In: 608.589 $\pm$ 0.191  $\chi^2$ /NDF: 3137480.1/16

Left Out: 522.416 $\pm$ 0.087  $\chi^2$ /NDF:331573.1/24

Right Out: 599.715 $\pm$ 0.187  $\chi^2$ /NDF: 3547458.7/18

Left In: 519.909 $\pm$ 0.089  $\chi^2$ /NDF:444746.3/22

Left: 521.193 $\pm$ 0.062  $\chi^2$ /NDF: 776728.3/47

Right: 604.058 $\pm$ 0.134  $\chi^2$ /NDF: 6686037.5/35

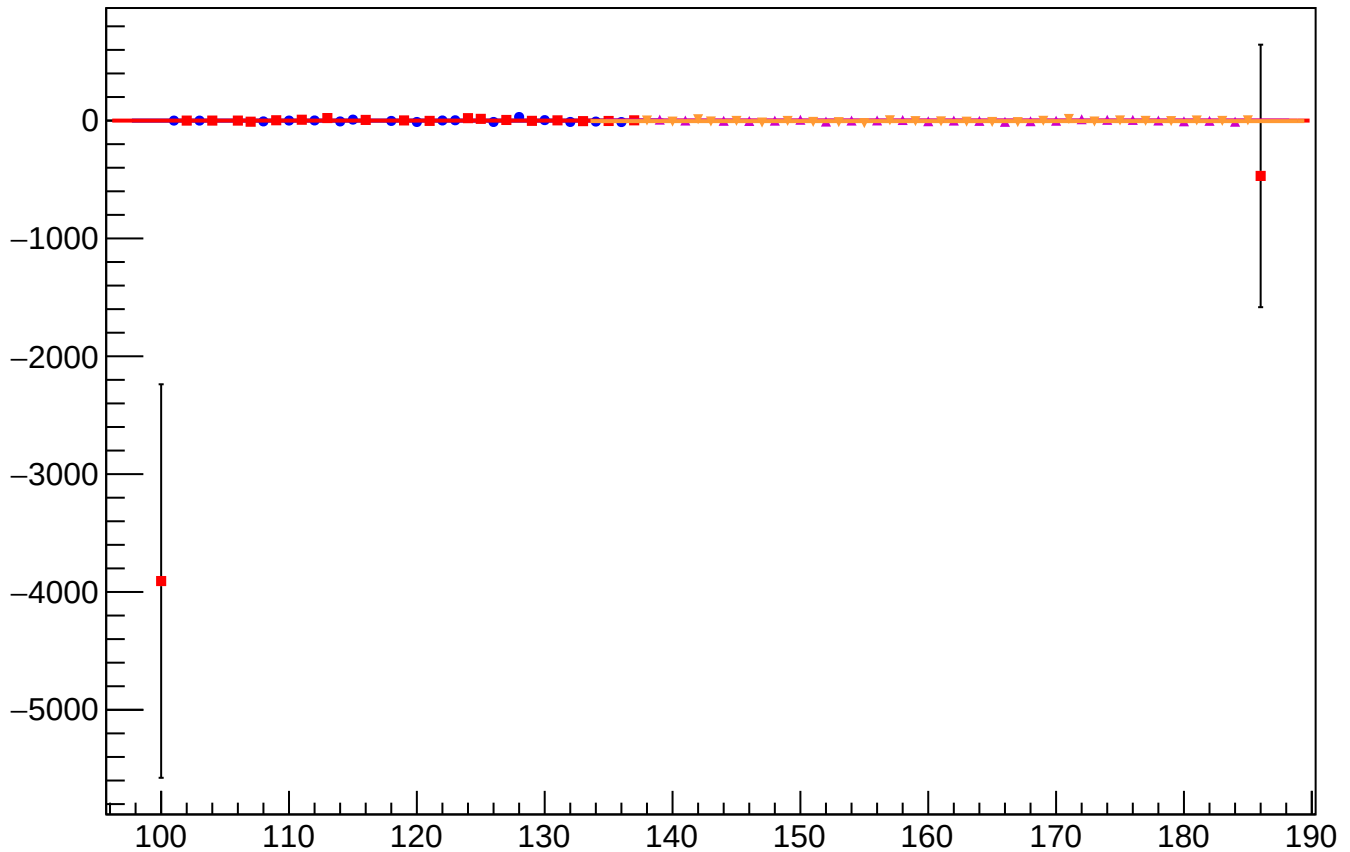
In: 535.609 $\pm$ 0.081  $\chi^2$ /NDF:3759040.3/39

Out: 536.035 $\pm$ 0.079  $\chi^2$ /NDF:4019381.9/43

All: 535.827 $\pm$ 0.056  $\chi^2$ /NDF: 7778436.5/83



# diff\_cav4dX\_mean vs Slug, Sign Corrected



Right In:  $-0.022 \pm 0.021$   $\chi^2/\text{NDF}$ : 15.6/16

Left Out:  $-4.474 \pm 0.956$   $\chi^2/\text{NDF}$ : 58.2/24

Right Out:  $0.027 \pm 0.020$   $\chi^2/\text{NDF}$ : 17.0/19

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

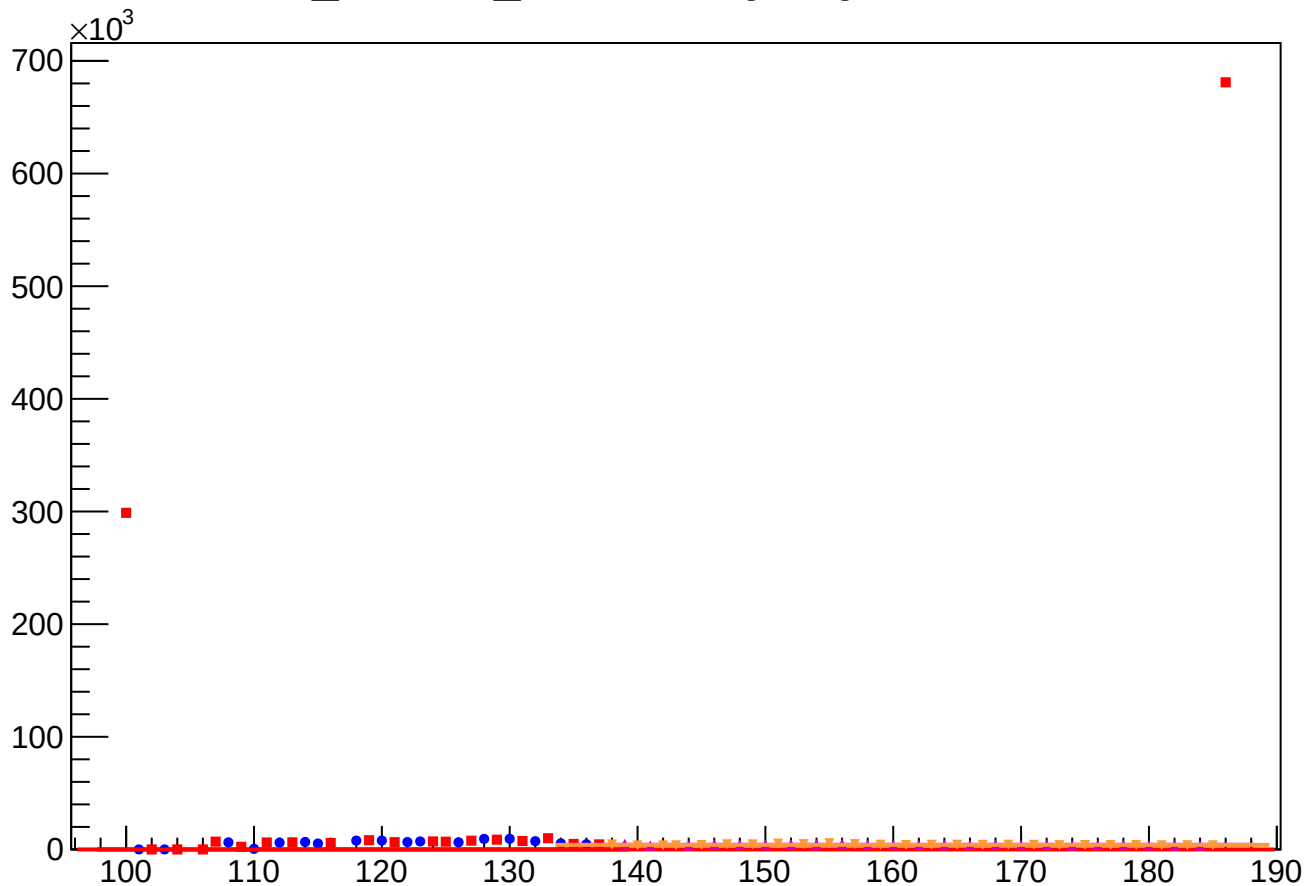
Right:  $0.004 \pm 0.014$   $\chi^2/\text{NDF}$ : 35.5/36

In:  $-0.022 \pm 0.021$   $\chi^2/\text{NDF}$ : 44.9/39

Out:  $0.025 \pm 0.020$   $\chi^2/\text{NDF}$ : 97.4/44

All:  $0.003 \pm 0.014$   $\chi^2/\text{NDF}$ : 144.9/84

# diff\_cav4dX\_rms vs Slug, Sign Corrected



Right In: 17.335 $\pm$ 0.015  $\chi^2/\text{NDF}$ : 10315348.6/16

Left Out: 4074.257 $\pm$ 0.676  $\chi^2/\text{NDF}$ : 416916.0/24

Right Out: 17.267 $\pm$ 0.014  $\chi^2/\text{NDF}$ : 11506002.7/19

Left In: 4113.744 $\pm$ 0.700  $\chi^2/\text{NDF}$ : 354965.8/22

Left: 4093.298 $\pm$ 0.486  $\chi^2/\text{NDF}$ : 773528.6/47

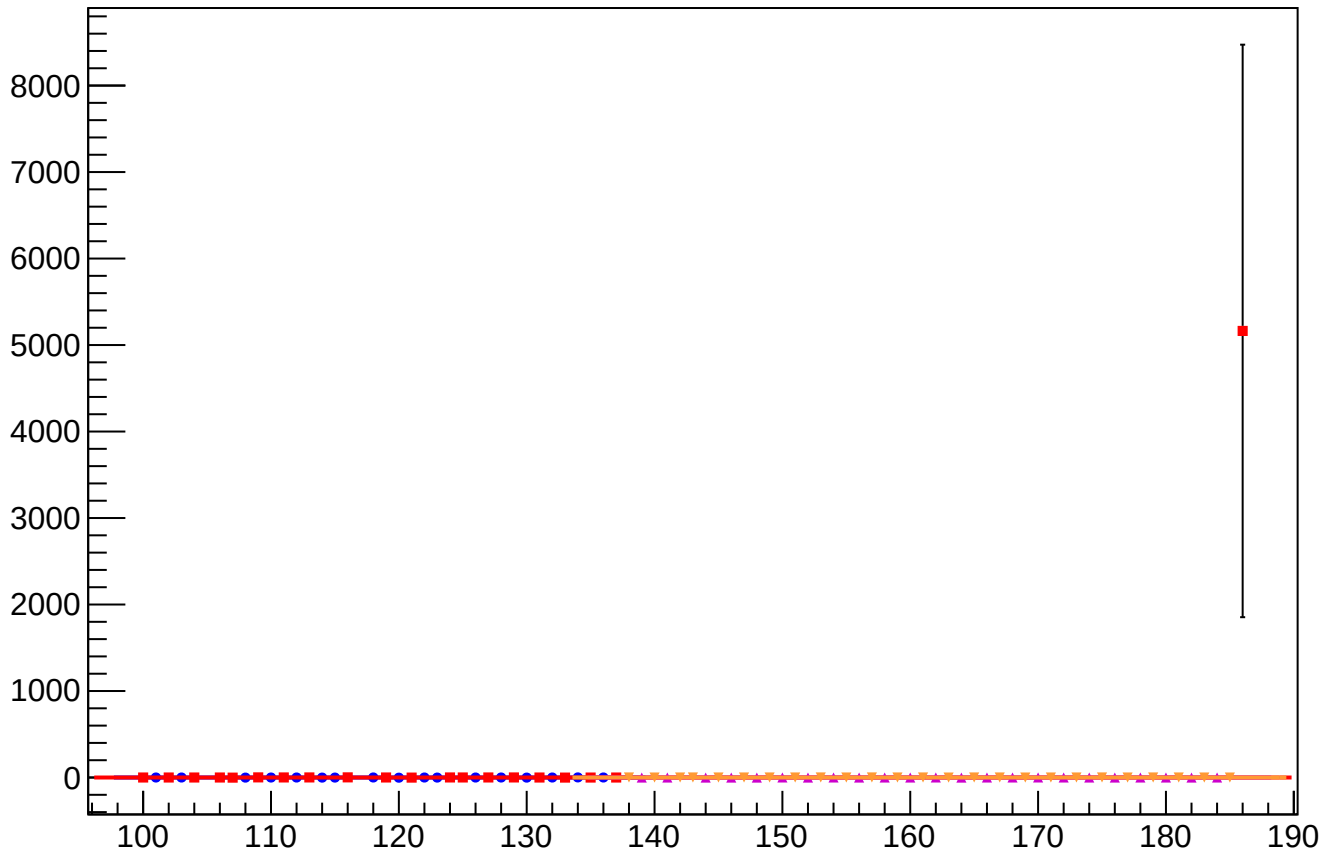
Right: 17.300 $\pm$ 0.010  $\chi^2/\text{NDF}$ : 21821362.6/36

In: 19.141 $\pm$ 0.015  $\chi^2/\text{NDF}$ : 44884597.1/39

Out: 19.004 $\pm$ 0.014  $\chi^2/\text{NDF}$ : 47958994.4/44

All: 19.069 $\pm$ 0.010  $\chi^2/\text{NDF}$ : 92843637.1/84

# diff\_cav4dY\_mean vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.002  $\chi^2$ /NDF: 15.3/16

Left Out: 0.151 $\pm$ 0.076  $\chi^2$ /NDF:16.8/24

Right Out: -0.001 $\pm$ 0.002  $\chi^2$ /NDF: 20.5/19

Left In: -0.075 $\pm$ 0.078  $\chi^2$ /NDF:34.8/22

Left: 0.041 $\pm$ 0.055  $\chi^2$ /NDF: 55.8/47

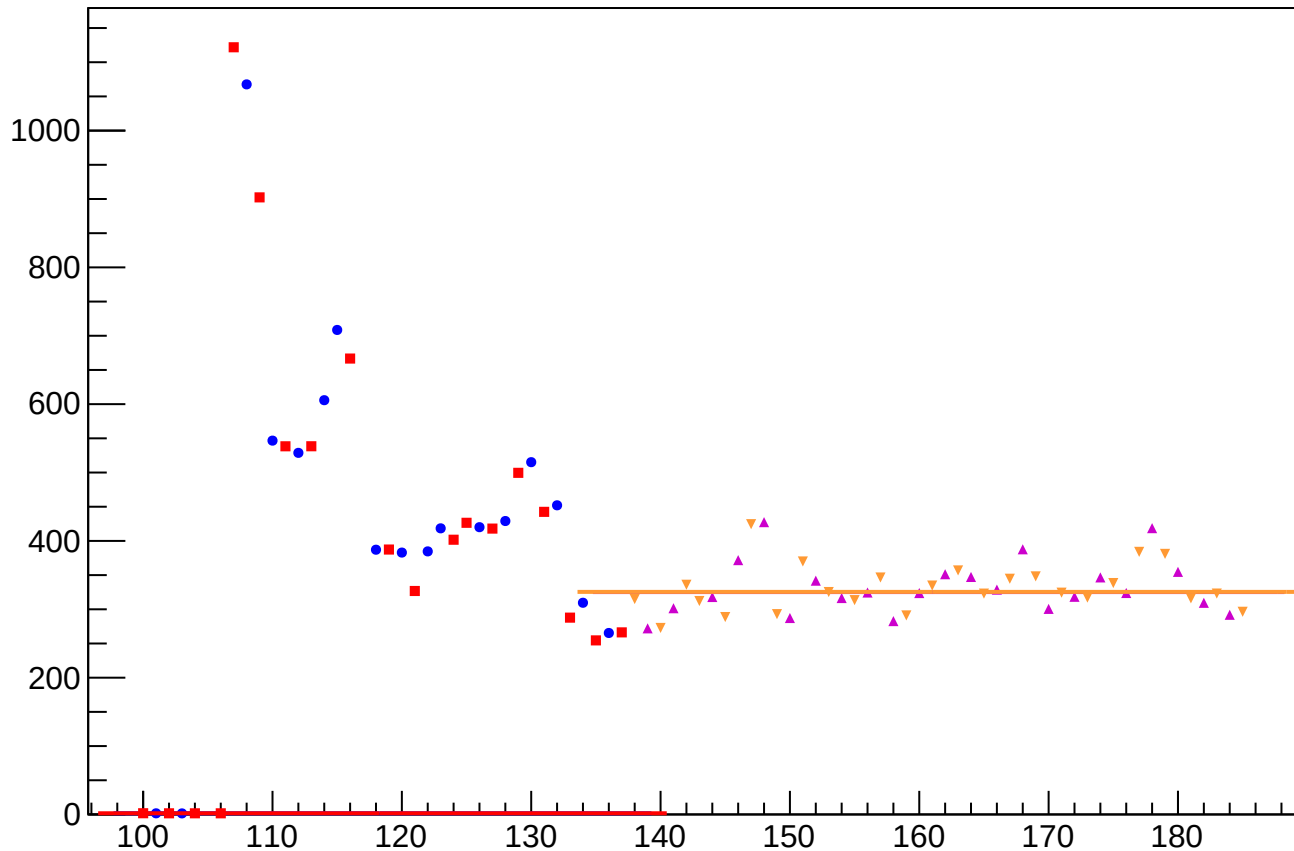
Right: -0.000 $\pm$ 0.001  $\chi^2$ /NDF: 36.0/36

In: 0.000 $\pm$ 0.002  $\chi^2$ /NDF:51.1/39

Out: -0.001 $\pm$ 0.002  $\chi^2$ /NDF:41.2/44

All: -0.000 $\pm$ 0.001  $\chi^2$ /NDF: 92.4/84

# diff\_cav4dY\_rms vs Slug, Sign Corrected



Right In:  $1.698 \pm 0.001$   $\chi^2/\text{NDF}$ : 10864983.9/16

Left Out:  $325.469 \pm 0.054$   $\chi^2/\text{NDF}$ : 350046.8/24

Right Out:  $1.728 \pm 0.001$   $\chi^2/\text{NDF}$ : 10690594.4/18

Left In:  $325.201 \pm 0.055$   $\chi^2/\text{NDF}$ : 428069.7/22

Left:  $325.339 \pm 0.039$   $\chi^2/\text{NDF}$ : 778128.6/47

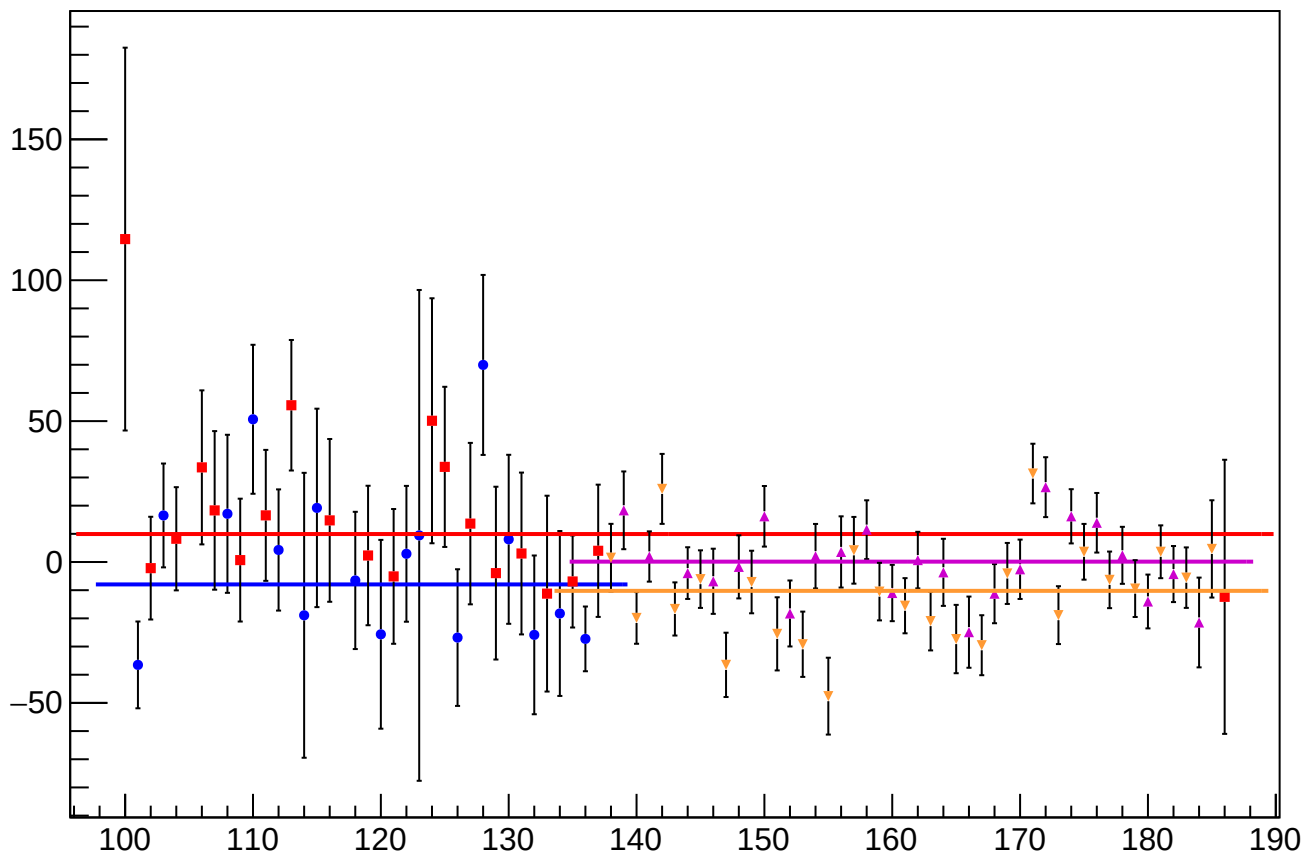
Right:  $1.714 \pm 0.001$   $\chi^2/\text{NDF}$ : 21555805.2/35

In:  $1.914 \pm 0.001$   $\chi^2/\text{NDF}$ : 45268449.8/39

Out:  $1.937 \pm 0.001$   $\chi^2/\text{NDF}$ : 46998448.2/43

All:  $1.926 \pm 0.001$   $\chi^2/\text{NDF}$ : 92267035.9/83

# diff\_bpm4aX\_mean vs Slug, Sign Corrected



Right In:  $-7.952 \pm 5.639$   $\chi^2/\text{NDF}: 22.6/16$

Left Out:  $-10.235 \pm 2.167$   $\chi^2/\text{NDF}: 58.0/24$

Right Out:  $9.928 \pm 5.654$   $\chi^2/\text{NDF}: 11.9/19$

Left In:  $0.130 \pm 2.242$   $\chi^2/\text{NDF}: 29.8/22$

Left:  $-5.230 \pm 1.558$   $\chi^2/\text{NDF}: 98.9/47$

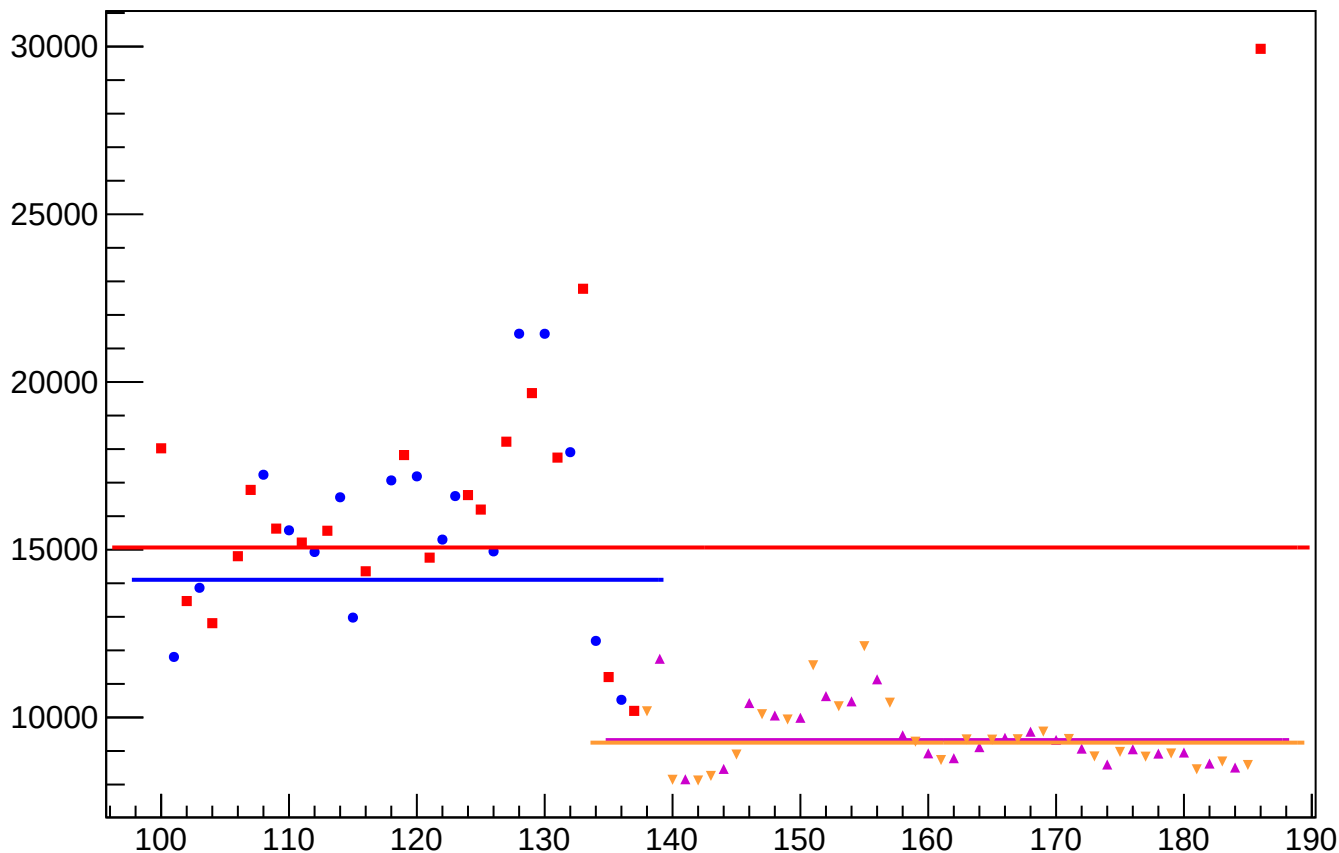
Right:  $0.964 \pm 3.992$   $\chi^2/\text{NDF}: 39.5/36$

In:  $-0.974 \pm 2.084$   $\chi^2/\text{NDF}: 54.2/39$

Out:  $-7.653 \pm 2.023$   $\chi^2/\text{NDF}: 80.9/44$

All:  $-4.411 \pm 1.451$   $\chi^2/\text{NDF}: 140.4/84$

# diff\_bpm4aX\_rms vs Slug, Sign Corrected



Right In: 14104.125+/-3.987  $\chi^2/\text{NDF}$ : 604857.2/16

Left Out: 9249.358+/-1.532  $\chi^2/\text{NDF}$ :332003.4/24

Right Out: 15067.147+/-3.998  $\chi^2/\text{NDF}$ : 661492.7/19

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

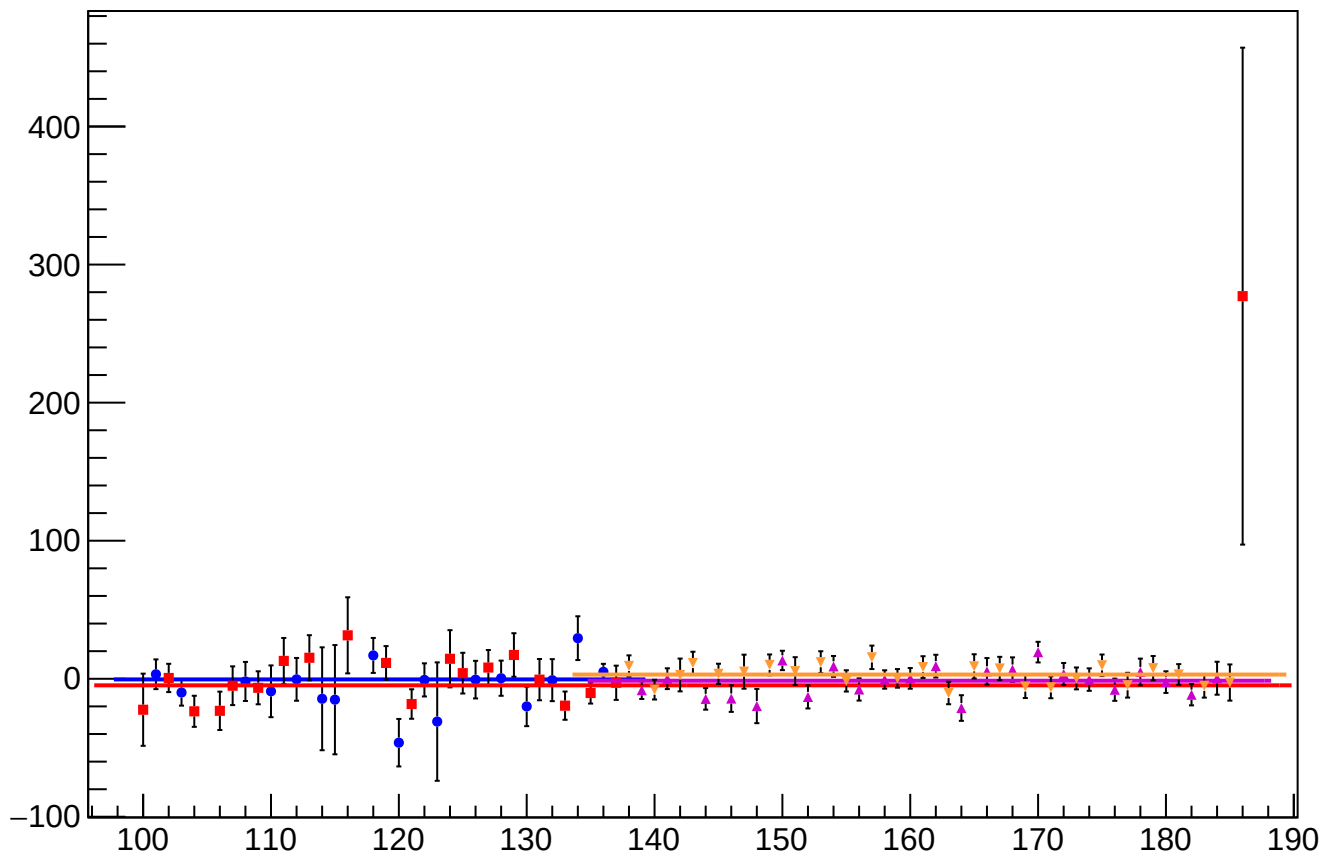
Right: 14584.349+/-2.823  $\chi^2/\text{NDF}$ : 1295440.6/36

In: 9977.610+/-1.473  $\chi^2/\text{NDF}$ :2126281.2/39

Out: 9994.341+/-1.431  $\chi^2/\text{NDF}$ :2840038.6/44

All: 9986.221+/-1.026  $\chi^2/\text{NDF}$ : 4966386.2/84

# diff\_bpm4aY\_mean vs Slug, Sign Corrected



Right In: -0.456 $\pm$ 3.089  $\chi^2/\text{NDF}$ : 17.4/16

Left Out: 3.062 $\pm$ 1.659  $\chi^2/\text{NDF}$ : 18.3/24

Right Out: -4.739 $\pm$ 2.945  $\chi^2/\text{NDF}$ : 22.4/19

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

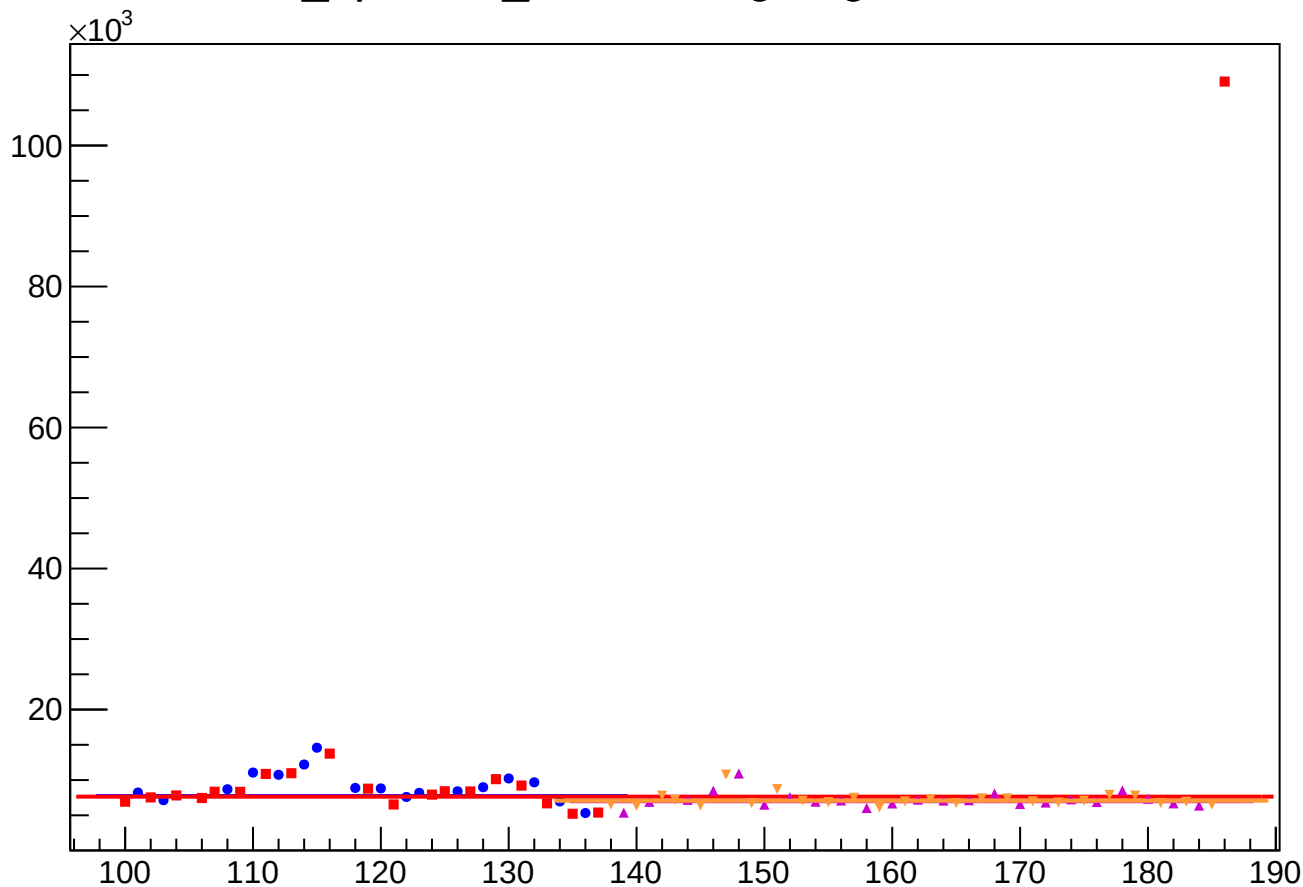
Right: -2.699 $\pm$ 2.132  $\chi^2/\text{NDF}$ : 40.8/36

In: -1.178 $\pm$ 1.485  $\chi^2/\text{NDF}$ : 52.9/39

Out: 1.183 $\pm$ 1.445  $\chi^2/\text{NDF}$ : 46.0/44

All: 0.035 $\pm$ 1.036  $\chi^2/\text{NDF}$ : 100.2/84

# diff\_bpm4aY\_rms vs Slug, Sign Corrected



Right In: 7726.613 $\pm$ 2.184  $\chi^2/\text{NDF}$ : 742603.6/16

Left Out: 7066.826 $\pm$ 1.173  $\chi^2/\text{NDF}$ : 387449.8/24

Right Out: 7647.285 $\pm$ 2.083  $\chi^2/\text{NDF}$ : 1314650.1/19

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: 7685.059 $\pm$ 1.507  $\chi^2/\text{NDF}$ : 2057944.4/36

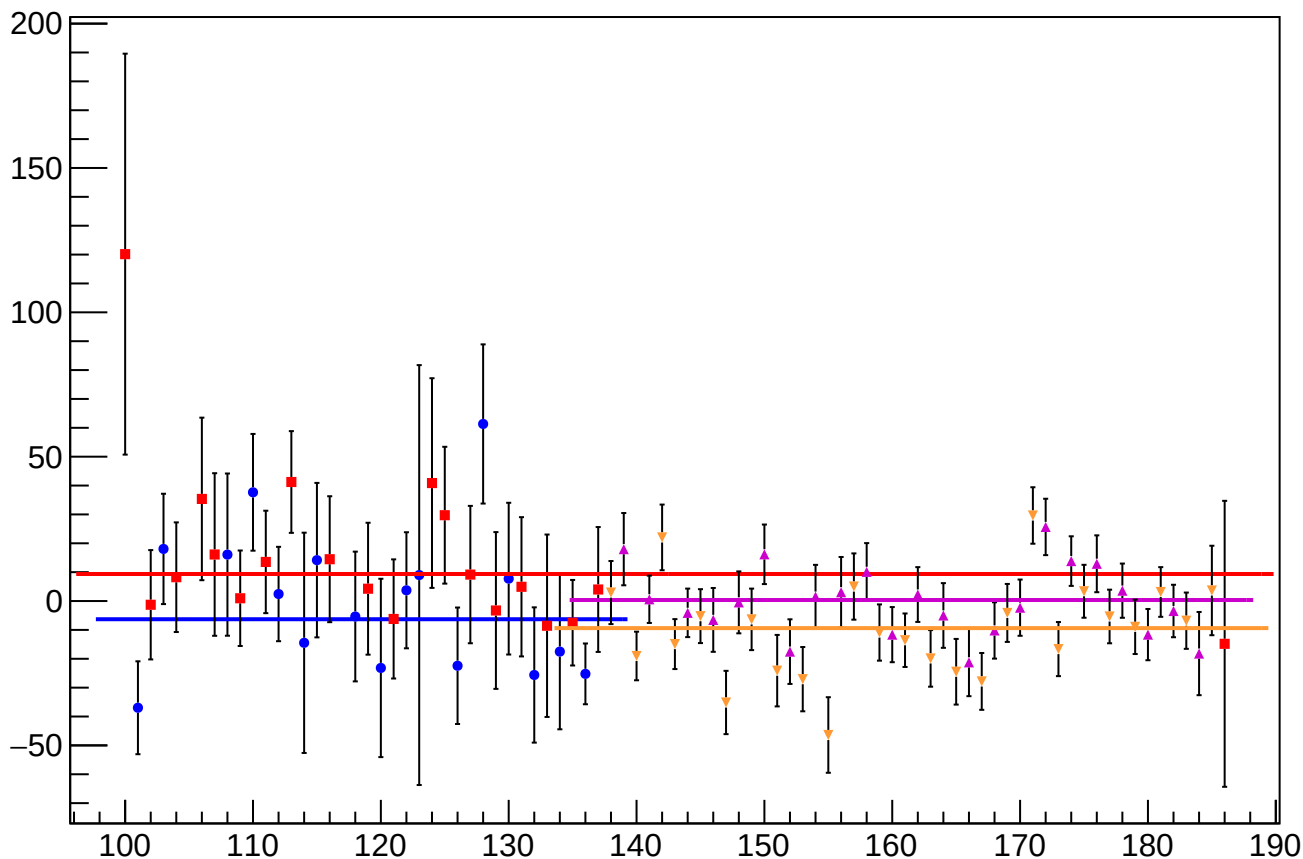
In: 7168.258 $\pm$ 1.050  $\chi^2/\text{NDF}$ : 1377591.2/39

Out: 7206.603 $\pm$ 1.022  $\chi^2/\text{NDF}$ : 1761069.9/44

All: 7187.946 $\pm$ 0.732  $\chi^2/\text{NDF}$ : 3139345.9/84



# diff\_bpm4eX\_mean vs Slug, Sign Corrected



Right In:  $-6.303 \pm 5.045$   $\chi^2/\text{NDF}: 23.2/16$

Left Out:  $-9.376 \pm 2.018$   $\chi^2/\text{NDF}: 58.4/24$

Right Out:  $9.366 \pm 4.987$   $\chi^2/\text{NDF}: 11.7/19$

Left In:  $0.353 \pm 2.092$   $\chi^2/\text{NDF}: 29.6/22$

Left:  $-4.688 \pm 1.452$   $\chi^2/\text{NDF}: 99.3/47$

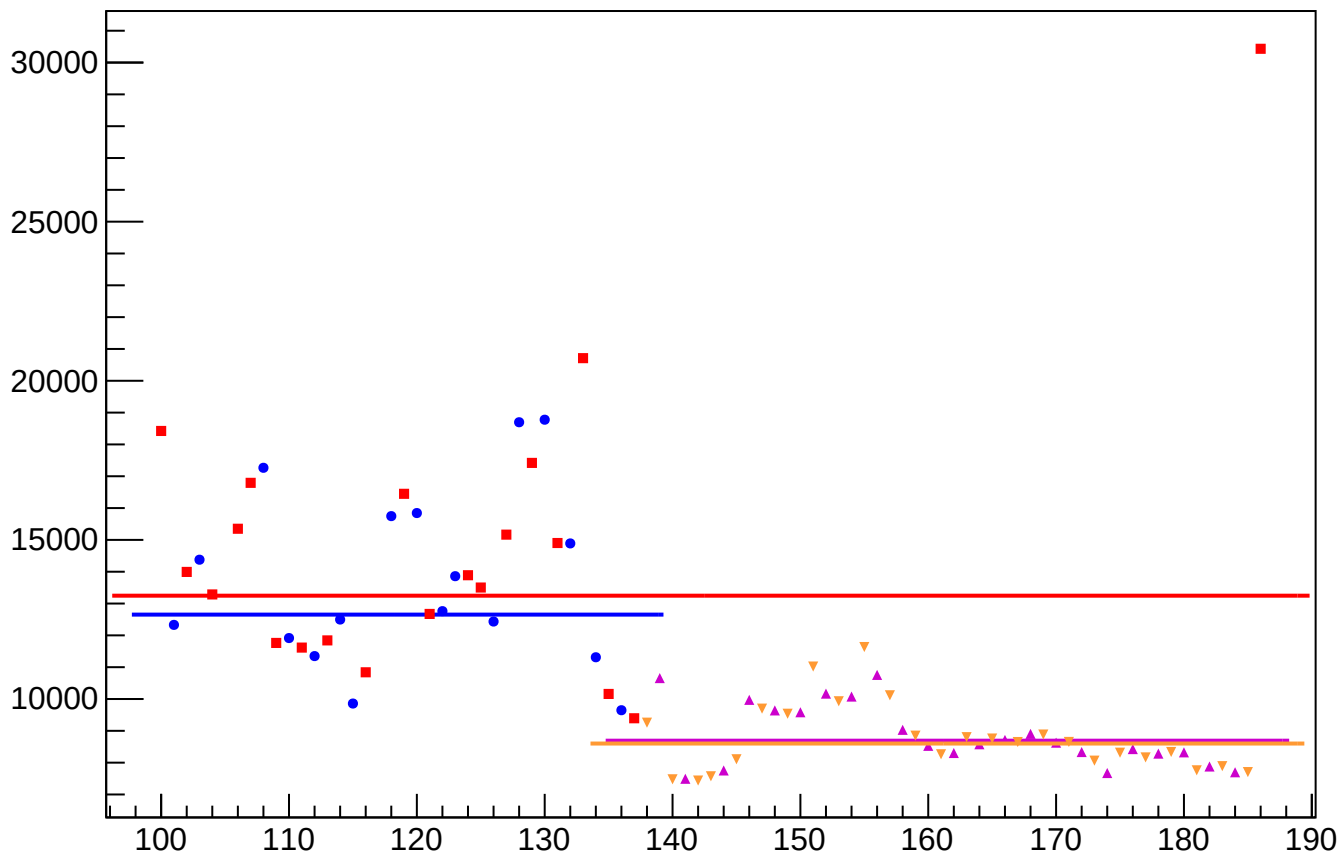
Right:  $1.622 \pm 3.547$   $\chi^2/\text{NDF}: 39.7/36$

In:  $-0.623 \pm 1.933$   $\chi^2/\text{NDF}: 54.3/39$

Out:  $-6.740 \pm 1.870$   $\chi^2/\text{NDF}: 82.2/44$

All:  $-3.782 \pm 1.344$   $\chi^2/\text{NDF}: 141.7/84$

# diff\_bpm4eX\_rms vs Slug, Sign Corrected



Right In: 12652.101 $\pm$ 3.567  $\chi^2$ /NDF: 559356.1/16

Left Out: 8600.457 $\pm$ 1.427  $\chi^2$ /NDF: 438229.4/24

Right Out: 13246.891 $\pm$ 3.527  $\chi^2$ /NDF: 741379.6/19

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

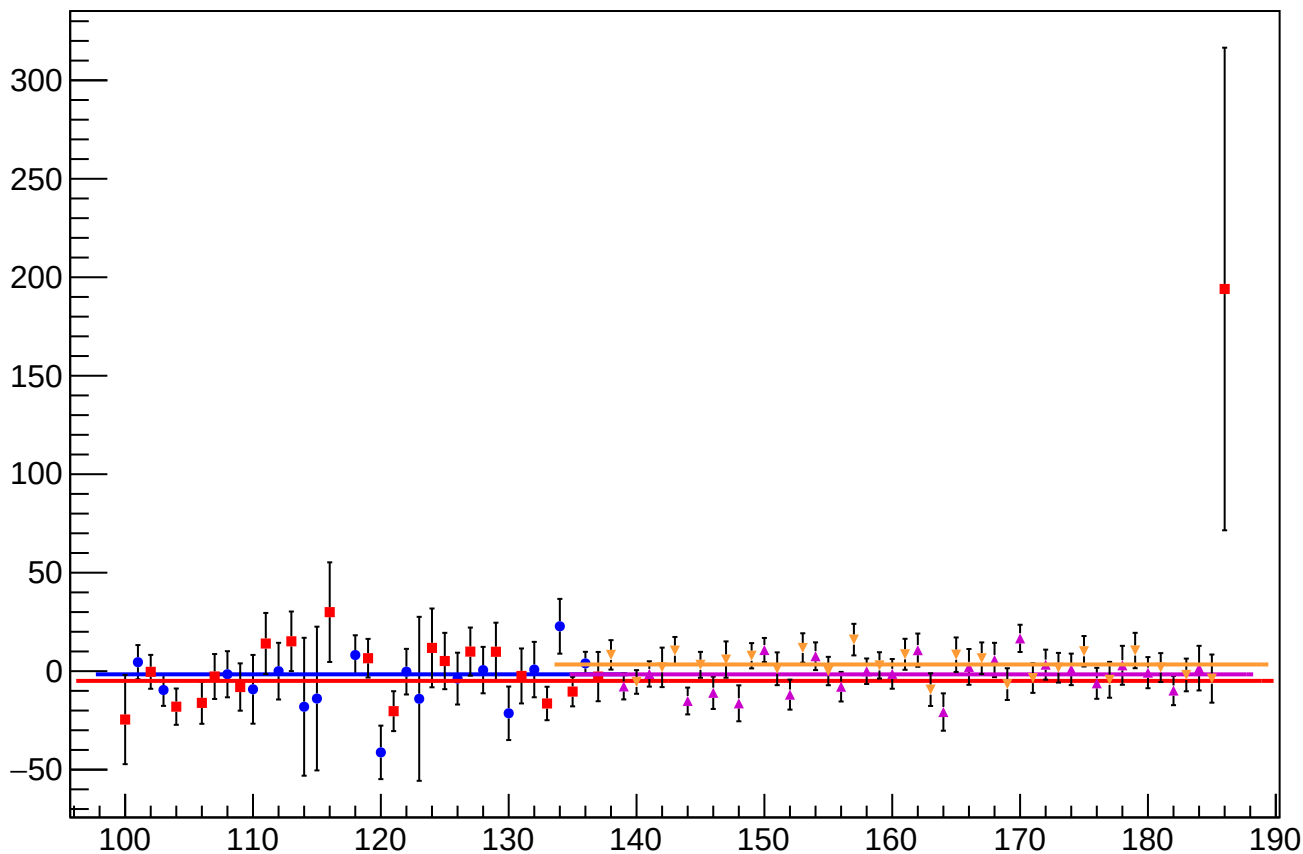
Right: 12952.916 $\pm$ 2.508  $\chi^2$ /NDF: 1314794.2/36

In: 9271.568 $\pm$ 1.367  $\chi^2$ /NDF: 1982546.7/39

Out: 9253.979 $\pm$ 1.323  $\chi^2$ /NDF: 2671285.5/44

All: 9262.486 $\pm$ 0.950  $\chi^2$ /NDF: 4653917.7/84

# diff\_bpm4eY\_mean vs Slug, Sign Corrected



Right In:  $-1.604 \pm 2.811$   $\chi^2/\text{NDF}$ : 17.8/16

Left Out:  $3.406 \pm 1.550$   $\chi^2/\text{NDF}$ : 16.8/24

Right Out:  $-4.930 \pm 2.646$   $\chi^2/\text{NDF}$ : 21.8/19

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

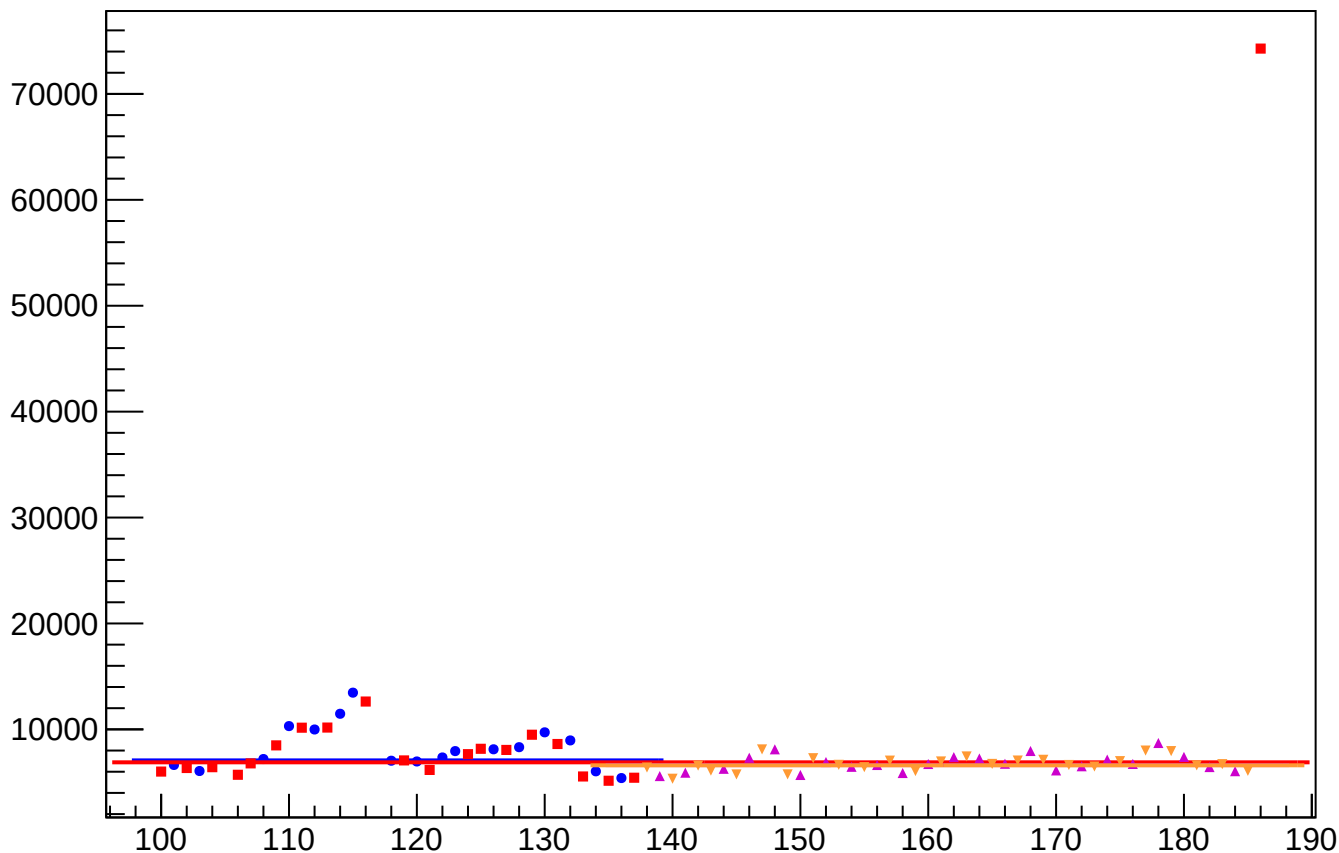
Right:  $-3.367 \pm 1.927$   $\chi^2/\text{NDF}$ : 40.3/36

In:  $-1.621 \pm 1.390$   $\chi^2/\text{NDF}$ : 51.2/39

Out:  $1.276 \pm 1.338$   $\chi^2/\text{NDF}$ : 46.1/44

All:  $-0.118 \pm 0.964$   $\chi^2/\text{NDF}$ : 99.6/84

# diff\_bpm4eY\_rms vs Slug, Sign Corrected



Right In: 7069.683+/-1.988  $\chi^2/\text{NDF}$ : 601725.0/16

Left Out: 6607.100+/-1.096  $\chi^2/\text{NDF}$ : 398416.1/24

Right Out: 6887.593+/-1.871  $\chi^2/\text{NDF}$ : 1291771.2/19

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

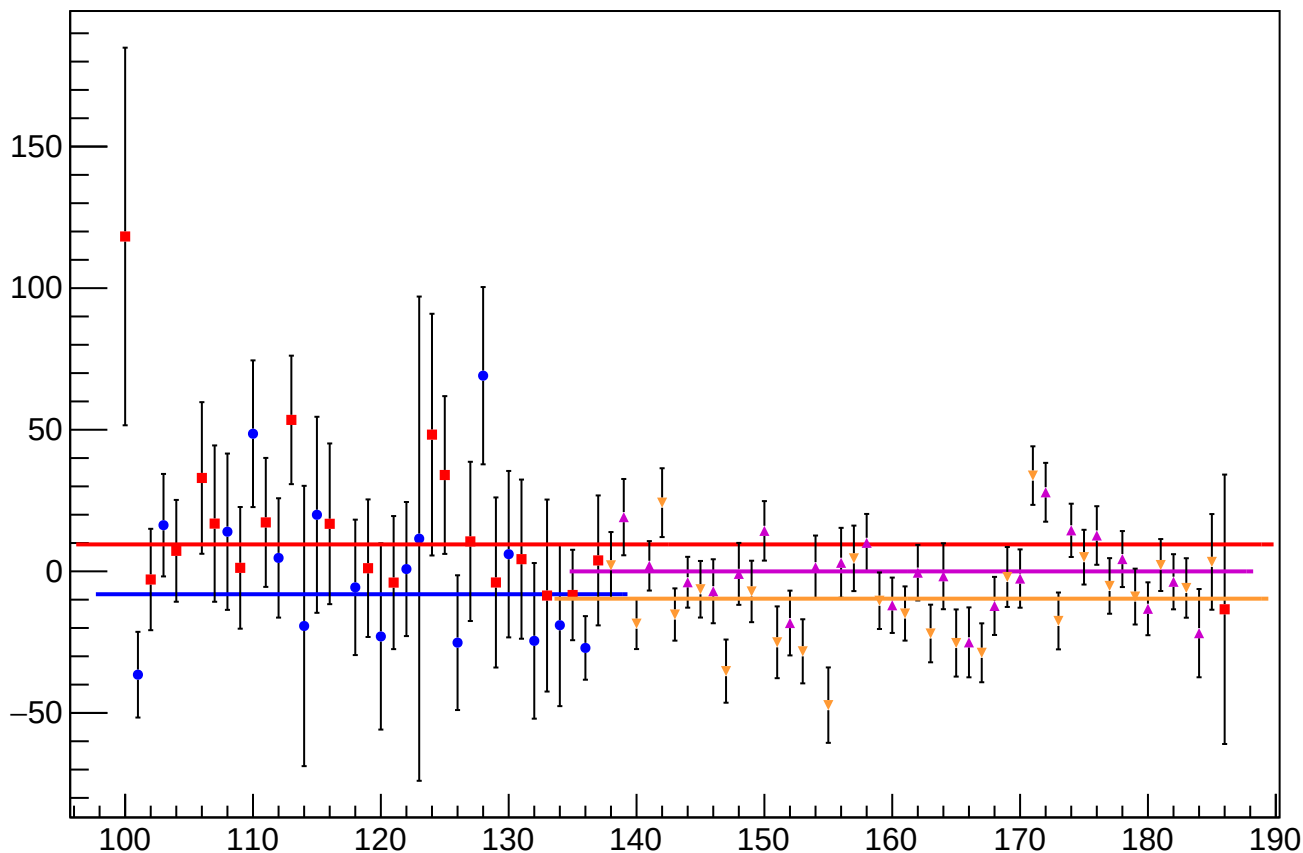
Right: 6973.151+/-1.362  $\chi^2/\text{NDF}$ : 1897945.7/36

In: 6736.493+/-0.983  $\chi^2/\text{NDF}$ : 1069205.3/39

Out: 6678.781+/-0.946  $\chi^2/\text{NDF}$ : 1706915.5/44

All: 6706.533+/-0.682  $\chi^2/\text{NDF}$ : 2777910.8/84

# diff\_bpm4acX\_mean vs Slug, Sign Corrected



Right In:  $-8.084 \pm 5.527$   $\chi^2/\text{NDF}: 22.4/16$

Left Out:  $-9.649 \pm 2.118$   $\chi^2/\text{NDF}: 59.8/24$

Right Out:  $9.512 \pm 5.543$   $\chi^2/\text{NDF}: 12.2/19$

Left In:  $-0.019 \pm 2.192$   $\chi^2/\text{NDF}: 30.6/22$

Left:  $-4.999 \pm 1.523$   $\chi^2/\text{NDF}: 100.4/47$

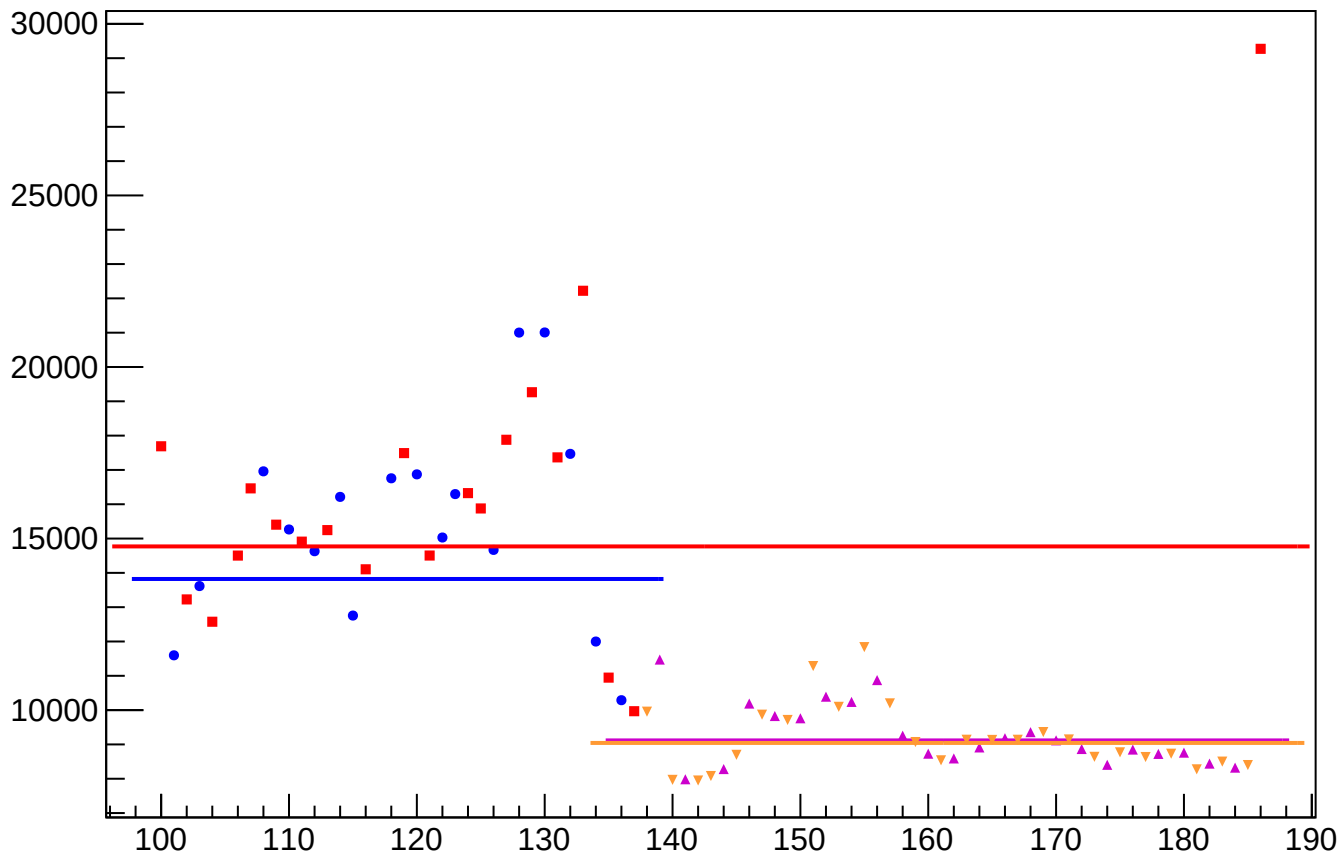
Right:  $0.688 \pm 3.914$   $\chi^2/\text{NDF}: 39.7/36$

In:  $-1.116 \pm 2.038$   $\chi^2/\text{NDF}: 54.9/39$

Out:  $-7.207 \pm 1.979$   $\chi^2/\text{NDF}: 82.4/44$

All:  $-4.251 \pm 1.419$   $\chi^2/\text{NDF}: 141.9/84$

# diff\_bpm4acX\_rms vs Slug, Sign Corrected



Right In: 13821.849 $\pm$ 3.908  $\chi^2$ /NDF: 607967.7/16

Left Out: 9043.485 $\pm$ 1.498  $\chi^2$ /NDF:328192.2/24

Right Out: 14770.789 $\pm$ 3.919  $\chi^2$ /NDF: 662393.4/19

Left In: 9116.921 $\pm$ 1.550  $\chi^2$ /NDF:277594.8/22

Left: 9078.947 $\pm$ 1.077  $\chi^2$ /NDF: 606947.8/47

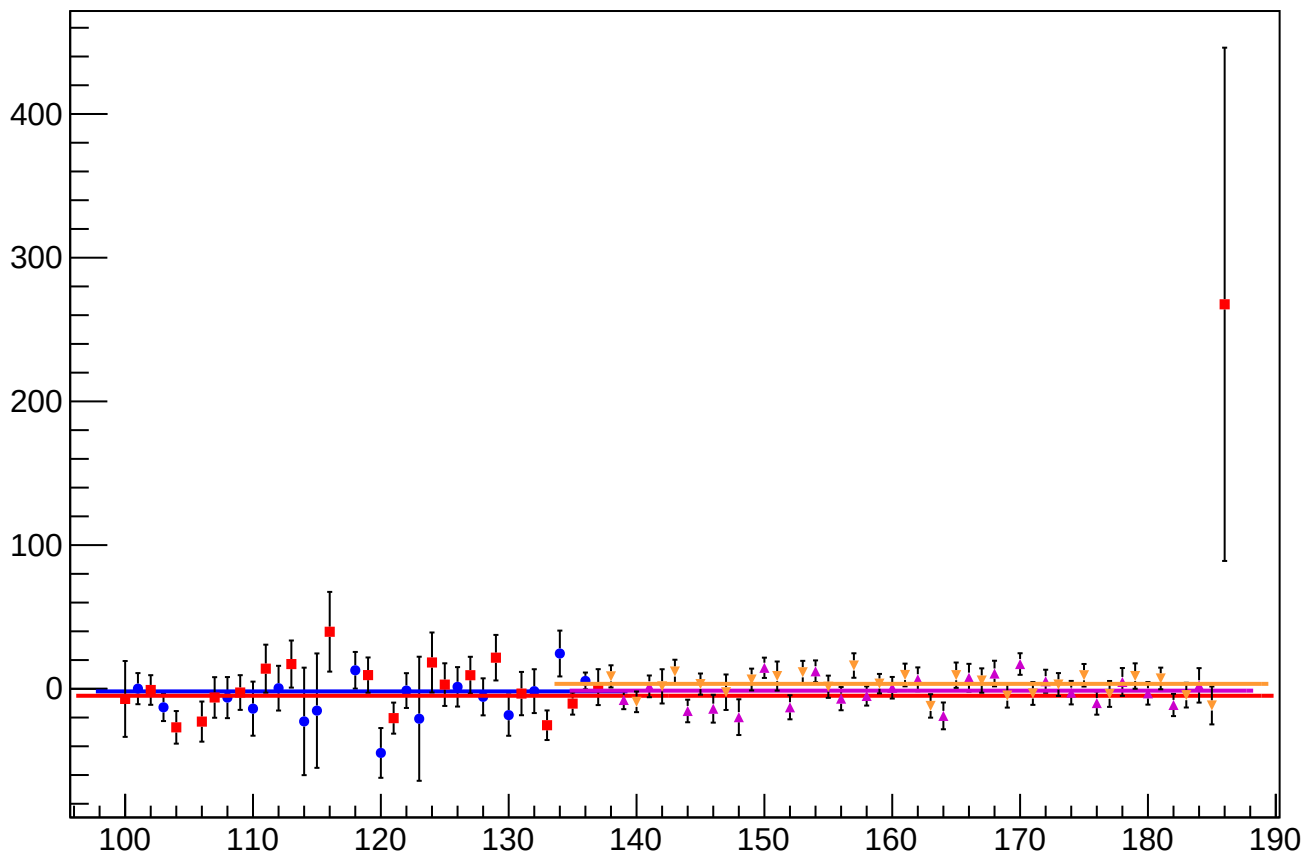
Right: 14294.934 $\pm$ 2.767  $\chi^2$ /NDF: 1299757.7/36

In: 9756.463 $\pm$ 1.441  $\chi^2$ /NDF:2138049.0/39

Out: 9773.356 $\pm$ 1.399  $\chi^2$ /NDF:2853874.5/44

All: 9765.157 $\pm$ 1.004  $\chi^2$ /NDF: 4991994.2/84

# diff\_bpm4acY\_mean vs Slug, Sign Corrected



Right In: -1.806 $\pm$ 3.112  $\chi^2/\text{NDF}$ : 15.7/16

Left Out: 3.439 $\pm$ 1.666  $\chi^2/\text{NDF}$ : 18.9/24

Right Out: -4.845 $\pm$ 2.968  $\chi^2/\text{NDF}$ : 27.3/19

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

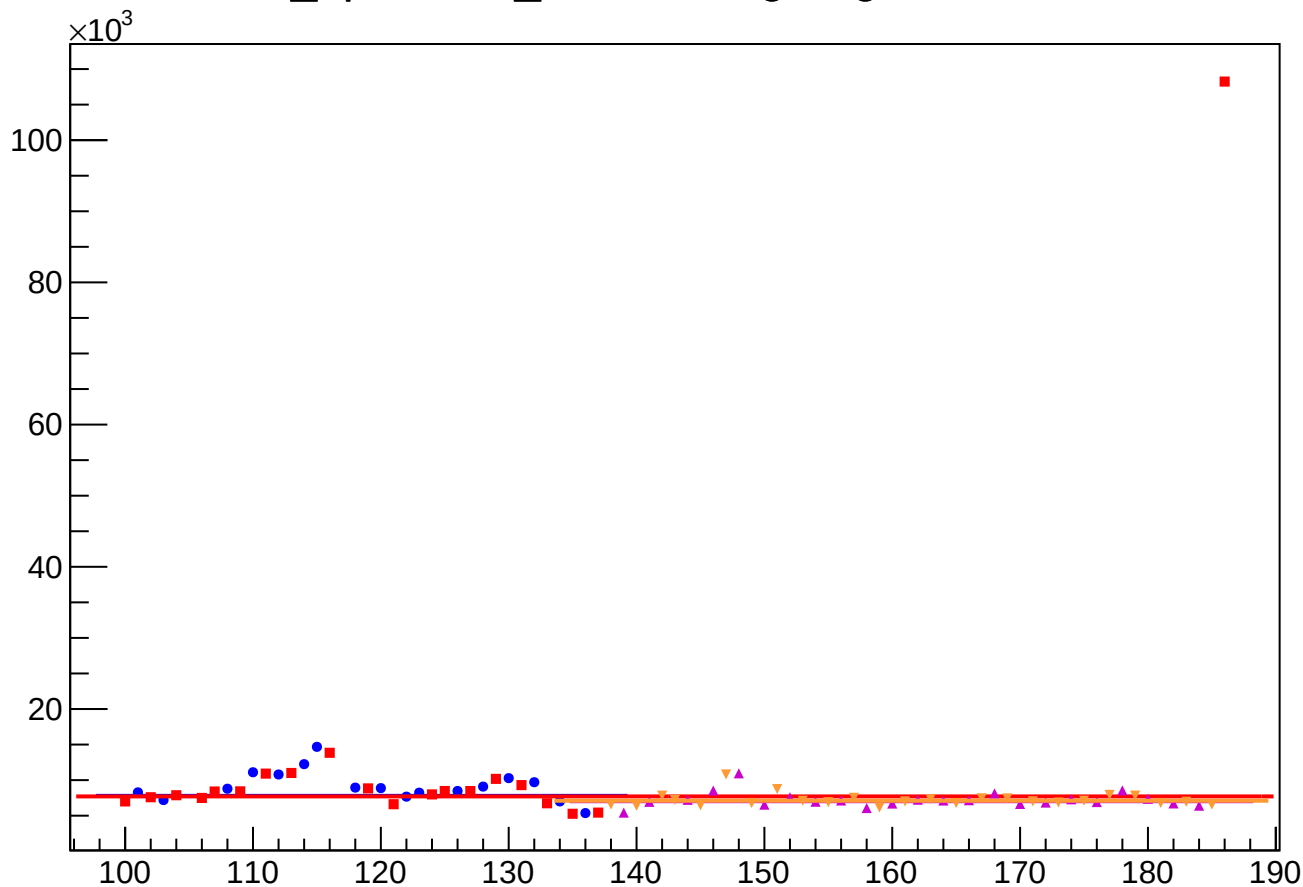
Right: -3.398 $\pm$ 2.148  $\chi^2/\text{NDF}$ : 43.5/36

In: -1.409 $\pm$ 1.493  $\chi^2/\text{NDF}$ : 52.3/39

Out: 1.454 $\pm$ 1.453  $\chi^2/\text{NDF}$ : 52.1/44

All: 0.061 $\pm$ 1.041  $\chi^2/\text{NDF}$ : 106.3/84

# diff\_bpm4acY\_rms vs Slug, Sign Corrected



Right In: 7785.499 $\pm$ 2.201  $\chi^2/\text{NDF}$ : 738102.3/16

Left Out: 7098.726 $\pm$ 1.178  $\chi^2/\text{NDF}$ : 382550.4/24

Right Out: 7708.844 $\pm$ 2.099  $\chi^2/\text{NDF}$ : 1306658.9/19

Left In: 7033.702 $\pm$ 1.203  $\chi^2/\text{NDF}$ : 541035.5/22

Left: 7066.886 $\pm$ 0.842  $\chi^2/\text{NDF}$ : 925077.6/47

Right: 7745.356 $\pm$ 1.519  $\chi^2/\text{NDF}$ : 2045396.7/36

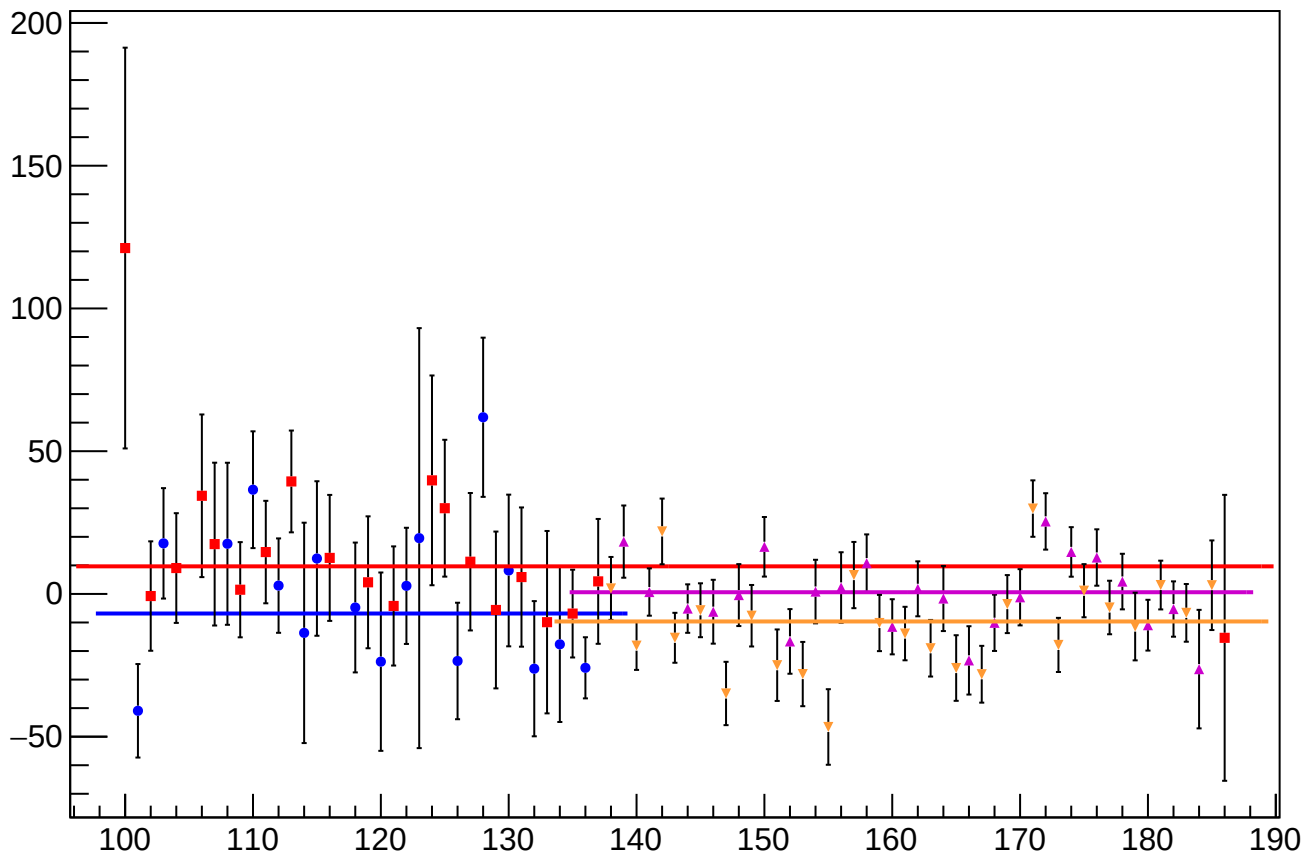
In: 7206.612 $\pm$ 1.055  $\chi^2/\text{NDF}$ : 1369005.3/39

Out: 7244.910 $\pm$ 1.027  $\chi^2/\text{NDF}$ : 1753470.1/44

All: 7226.277 $\pm$ 0.736  $\chi^2/\text{NDF}$ : 3123151.6/84



# diff\_bpm4ecX\_mean vs Slug, Sign Corrected



Right In: -6.855 $\pm$ 5.113  $\chi^2/\text{NDF}$ : 23.8/16

Left Out: -9.640 $\pm$ 2.057  $\chi^2/\text{NDF}$ : 57.6/24

Right Out: 9.664 $\pm$ 5.058  $\chi^2/\text{NDF}$ : 10.8/19

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

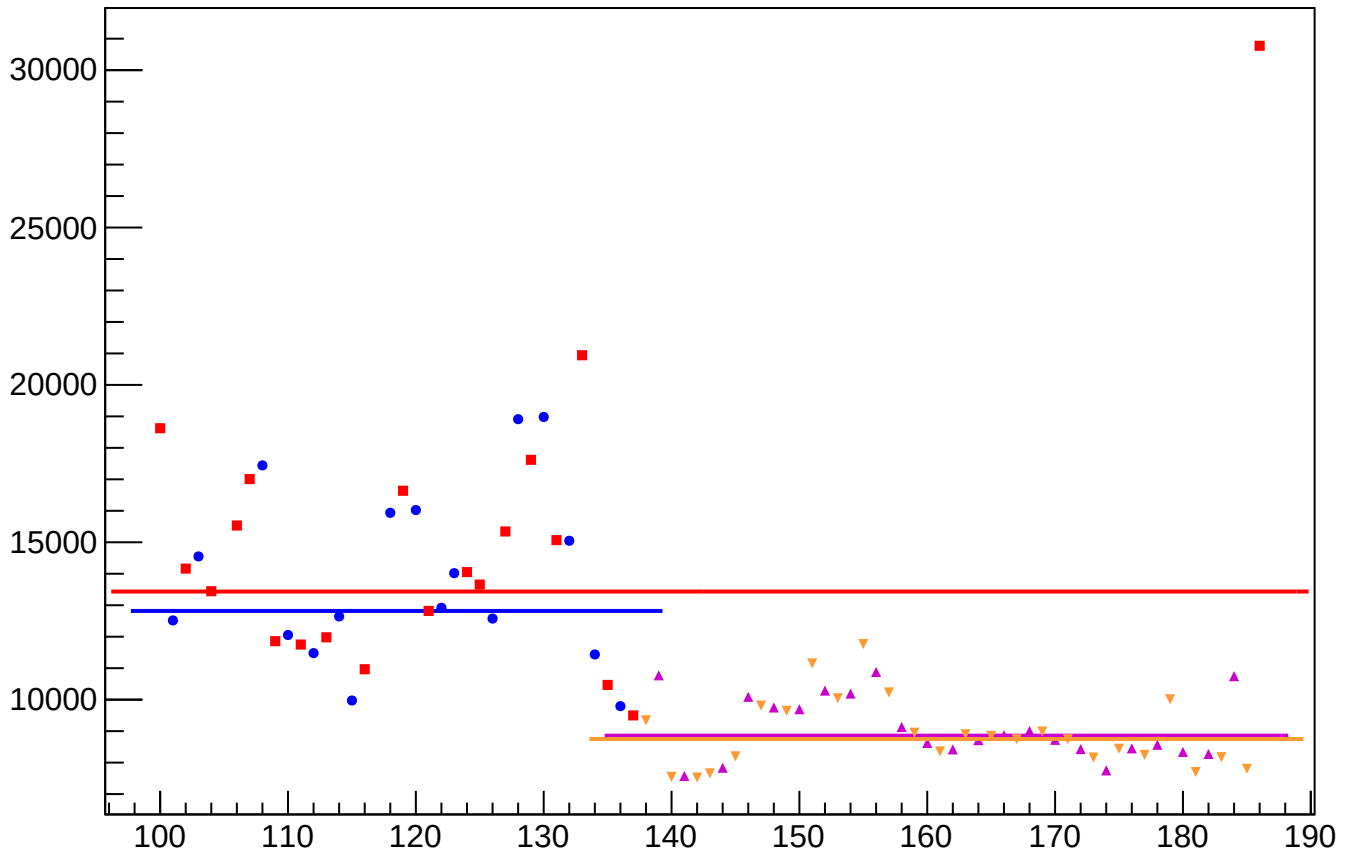
Right: 1.493 $\pm$ 3.596  $\chi^2/\text{NDF}$ : 39.9/36

In: -0.508 $\pm$ 1.970  $\chi^2/\text{NDF}$ : 55.2/39

Out: -6.900 $\pm$ 1.906  $\chi^2/\text{NDF}$ : 81.0/44

All: -3.810 $\pm$ 1.370  $\chi^2/\text{NDF}$ : 141.7/84

# diff\_bpm4ecX\_rms vs Slug, Sign Corrected



Right In:  $12818.610 \pm 3.615$   $\chi^2/\text{NDF}: 553065.0/16$

Left Out:  $8748.407 \pm 1.455$   $\chi^2/\text{NDF}: 463394.1/24$

Right Out:  $13435.149 \pm 3.577$   $\chi^2/\text{NDF}: 728235.9/19$

Left In:  $8855.591 \pm 1.510$   $\chi^2/\text{NDF}: 367542.7/22$

Left:  $8800.011 \pm 1.048$   $\chi^2/\text{NDF}: 833550.6/47$

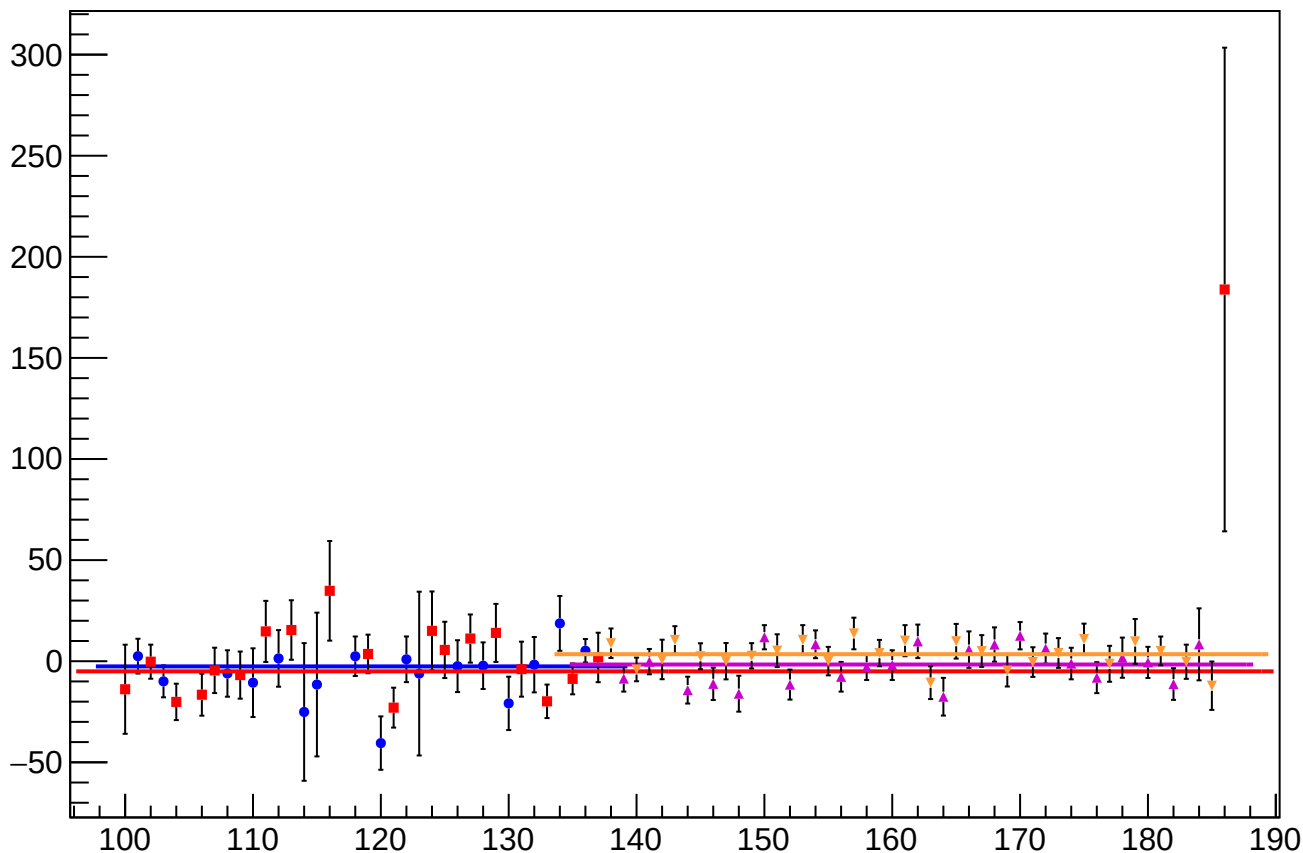
Right:  $13130.189 \pm 2.543$   $\chi^2/\text{NDF}: 1295997.4/36$

In:  $9444.008 \pm 1.393$   $\chi^2/\text{NDF}: 1943742.2/39$

Out:  $9413.607 \pm 1.348$   $\chi^2/\text{NDF}: 2664871.6/44$

All:  $9428.302 \pm 0.969$   $\chi^2/\text{NDF}: 4608859.8/84$

# diff\_bpm4ecY\_mean vs Slug, Sign Corrected



Right In:  $-2.566 \pm 2.752$   $\chi^2/\text{NDF}$ : 16.9/16

Left Out:  $3.473 \pm 1.524$   $\chi^2/\text{NDF}$ : 15.8/24

Right Out:  $-5.010 \pm 2.594$   $\chi^2/\text{NDF}$ : 26.5/19

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

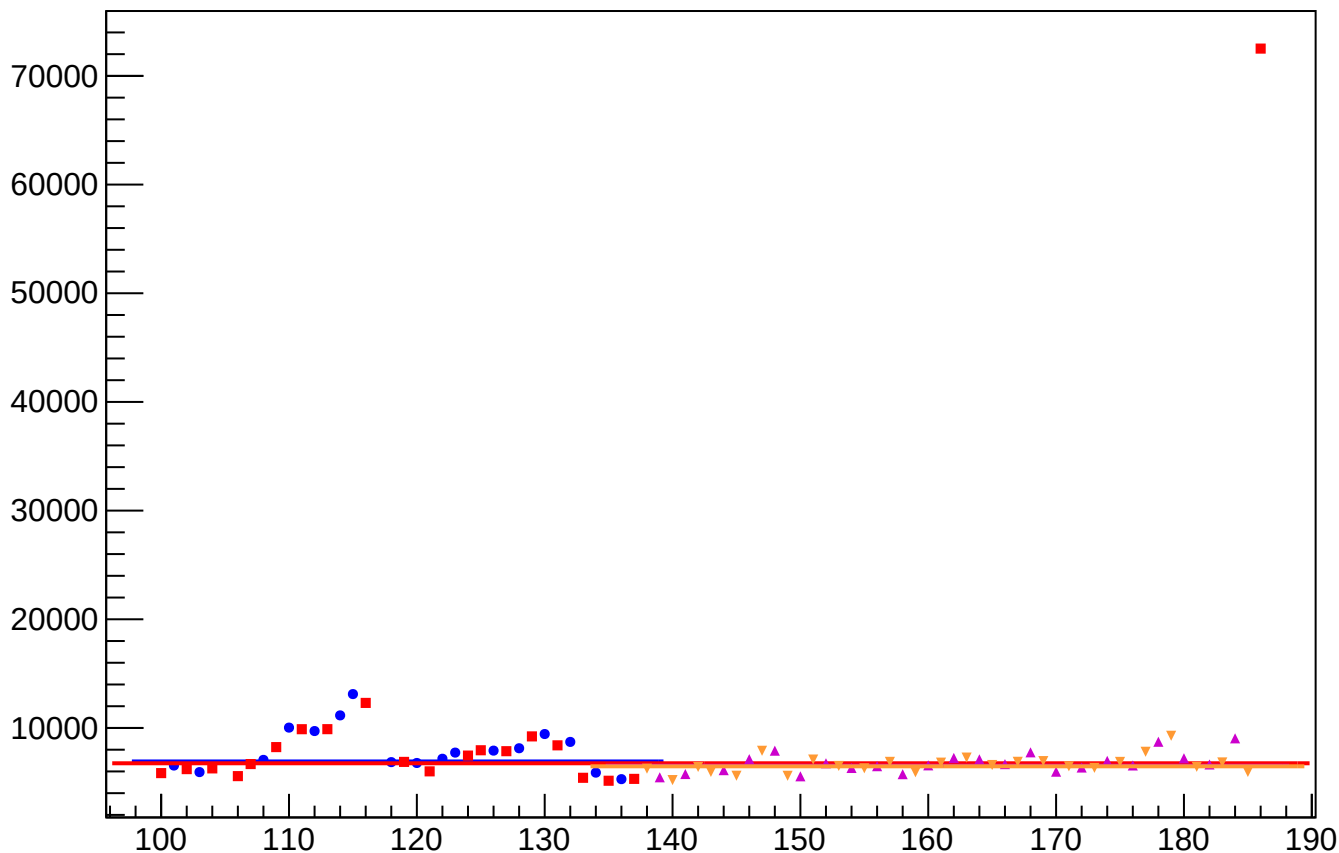
Right:  $-3.860 \pm 1.888$   $\chi^2/\text{NDF}$ : 43.8/36

In:  $-1.868 \pm 1.369$   $\chi^2/\text{NDF}$ : 50.7/39

Out:  $1.296 \pm 1.314$   $\chi^2/\text{NDF}$ : 50.2/44

All:  $-0.222 \pm 0.948$   $\chi^2/\text{NDF}$ : 103.7/84

# diff\_bpm4ecY\_rms vs Slug, Sign Corrected



Right In:  $6917.621 \pm 1.946$   $\chi^2/\text{NDF}: 588010.6/16$

Left Out:  $6471.976 \pm 1.078$   $\chi^2/\text{NDF}: 490282.9/24$

Right Out:  $6750.431 \pm 1.834$   $\chi^2/\text{NDF}: 1262747.1/19$

Left In:  $6521.975 \pm 1.116$   $\chi^2/\text{NDF}: 480034.7/22$

Left:  $6496.112 \pm 0.775$   $\chi^2/\text{NDF}: 971356.4/47$

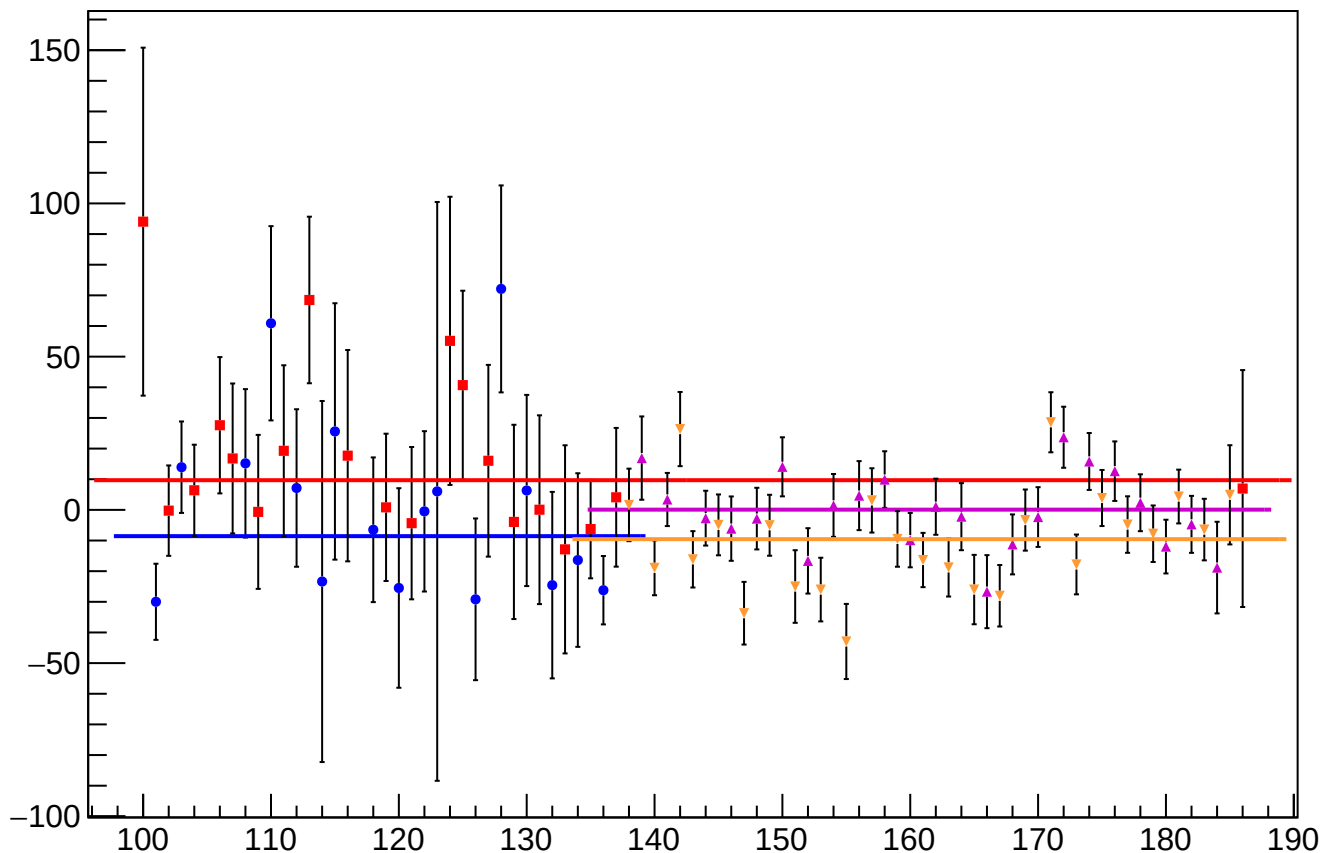
Right:  $6829.090 \pm 1.335$   $\chi^2/\text{NDF}: 1854666.7/36$

In:  $6619.867 \pm 0.968$   $\chi^2/\text{NDF}: 1099157.8/39$

Out:  $6543.452 \pm 0.929$   $\chi^2/\text{NDF}: 1770161.7/44$

All:  $6580.104 \pm 0.670$   $\chi^2/\text{NDF}: 2872562.9/84$

# diff\_bpm1X\_mean vs Slug, Sign Corrected



Left: -4.885 $\pm$ 1.444  $\chi^2/\text{NDF}$ : 100.5/47

Right: 0.479 $\pm$ 3.848  $\chi^2/\text{NDF}$ : 40.2/36

In: -1.032 $\pm$ 1.936  $\chi^2/\text{NDF}$ : 53.9/39

Out: -7.258 $\pm$ 1.888  $\chi^2/\text{NDF}$ : 83.1/44

All: -4.223 $\pm$ 1.352  $\chi^2/\text{NDF}$ : 142.4/84

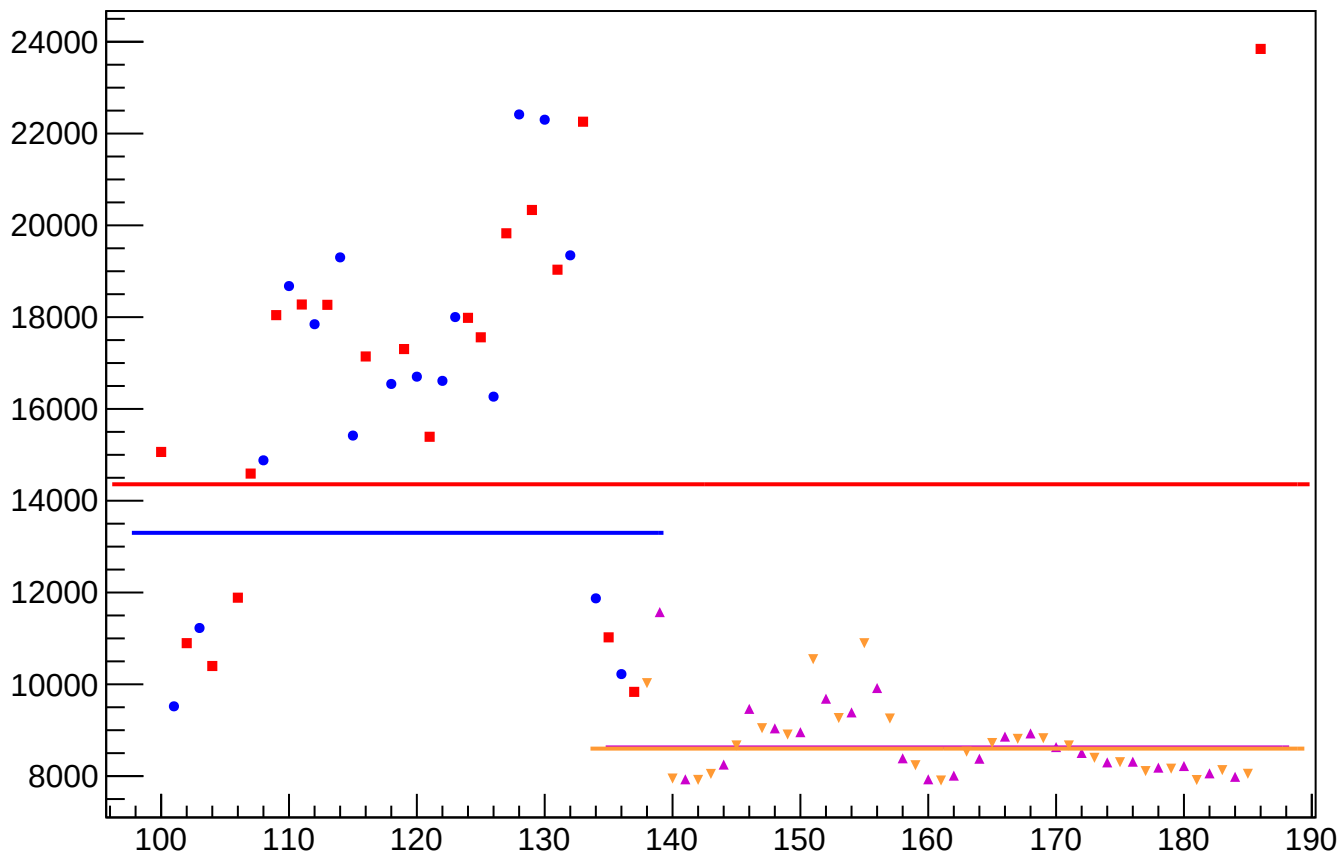
Right In: -8.571 $\pm$ 5.419  $\chi^2/\text{NDF}$ : 21.9/16

Left Out: -9.554 $\pm$ 2.012  $\chi^2/\text{NDF}$ : 59.5/24

Right Out: 9.687 $\pm$ 5.465  $\chi^2/\text{NDF}$ : 12.7/19

Left In: 0.072 $\pm$ 2.073  $\chi^2/\text{NDF}$ : 29.8/22

# diff\_bpm1X\_rms vs Slug, Sign Corrected



Right In: 13300.415+/-3.832  $\chi^2/\text{NDF}$ : 1048873.0/16

Left Out: 8598.983+/-1.423  $\chi^2/\text{NDF}$ : 249070.5/24

Right Out: 14358.314+/-3.865  $\chi^2/\text{NDF}$ : 1054148.5/19

Left In: 8625.233+/-1.466  $\chi^2/\text{NDF}$ : 237310.9/22

Left: 8611.717+/-1.021  $\chi^2/\text{NDF}$ : 486546.6/47

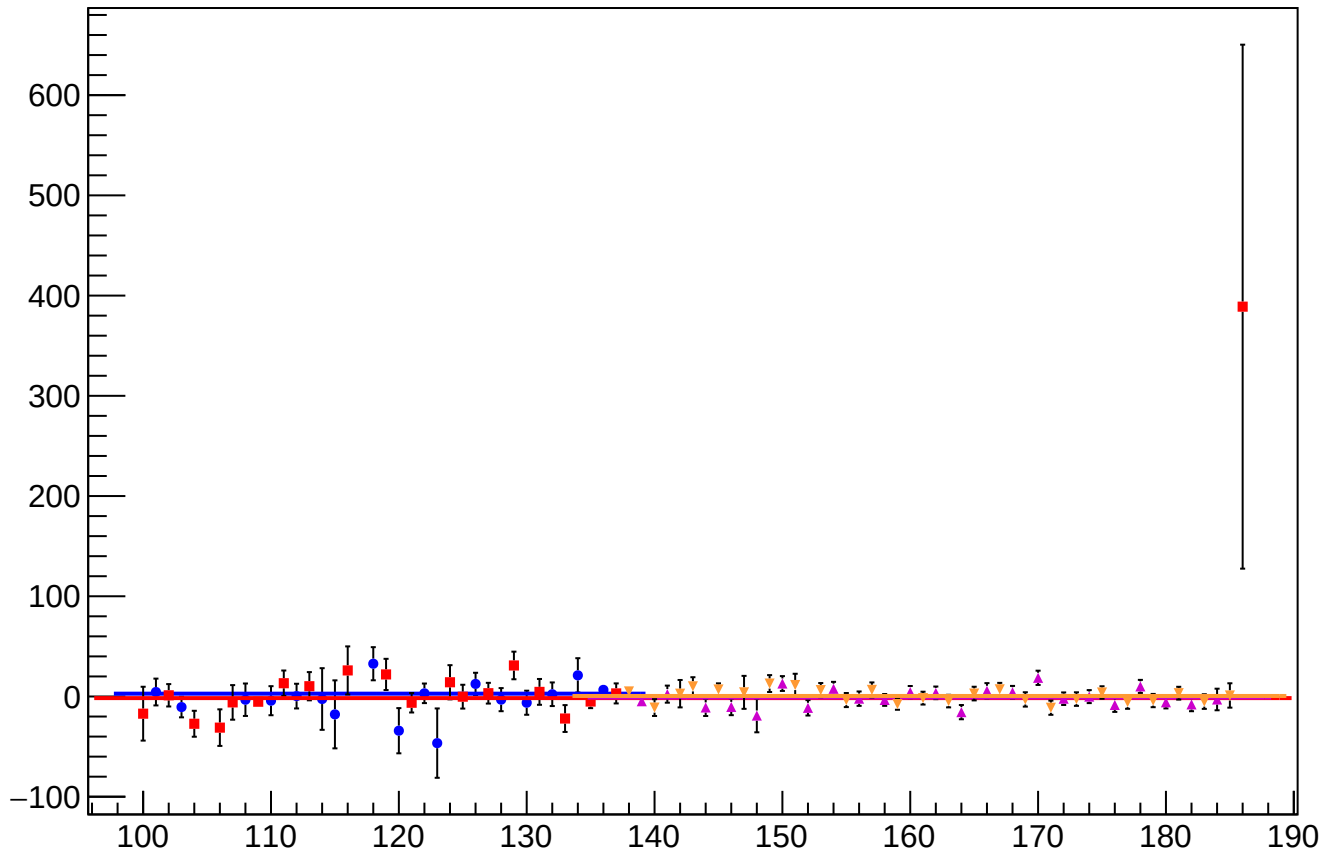
Right: 13824.816+/-2.721  $\chi^2/\text{NDF}$ : 2140809.0/36

In: 9221.982+/-1.369  $\chi^2/\text{NDF}$ : 2584958.2/39

Out: 9286.185+/-1.335  $\chi^2/\text{NDF}$ : 3259061.6/44

All: 9254.889+/-0.956  $\chi^2/\text{NDF}$ : 5845147.2/84

# diff\_bpm1Y\_mean vs Slug, Sign Corrected



Right In:  $2.820 \pm 2.762$   $\chi^2/\text{NDF}: 14.0/16$

Left Out:  $0.528 \pm 1.418$   $\chi^2/\text{NDF}: 19.5/24$

Right Out:  $-1.609 \pm 2.447$   $\chi^2/\text{NDF}: 25.5/19$

Left In:  $-1.050 \pm 1.396$   $\chi^2/\text{NDF}: 32.5/22$

Left:  $-0.273 \pm 0.995$   $\chi^2/\text{NDF}: 52.6/47$

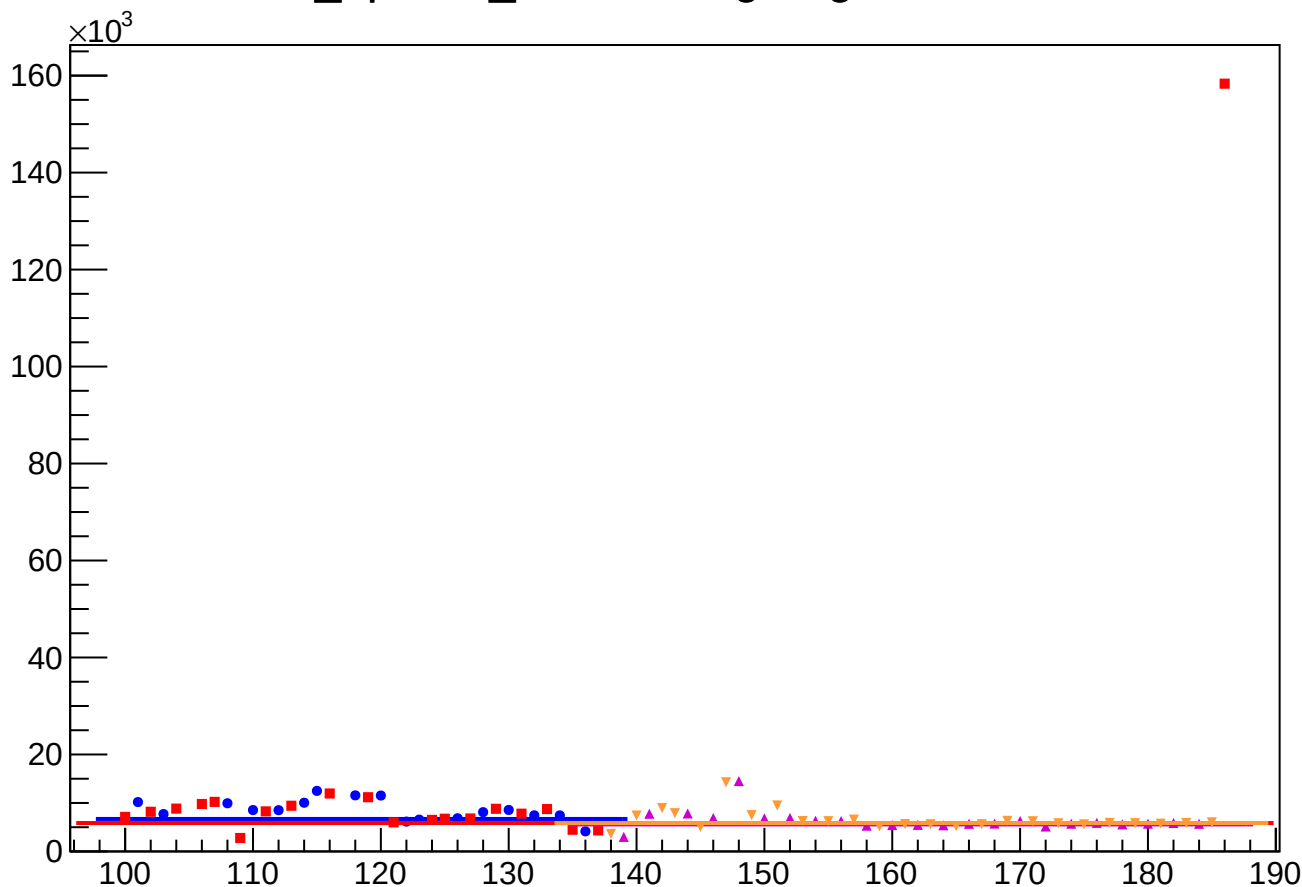
Right:  $0.339 \pm 1.832$   $\chi^2/\text{NDF}: 40.9/36$

In:  $-0.263 \pm 1.246$   $\chi^2/\text{NDF}: 48.1/39$

Out:  $-0.009 \pm 1.227$   $\chi^2/\text{NDF}: 45.5/44$

All:  $-0.134 \pm 0.874$   $\chi^2/\text{NDF}: 93.6/84$

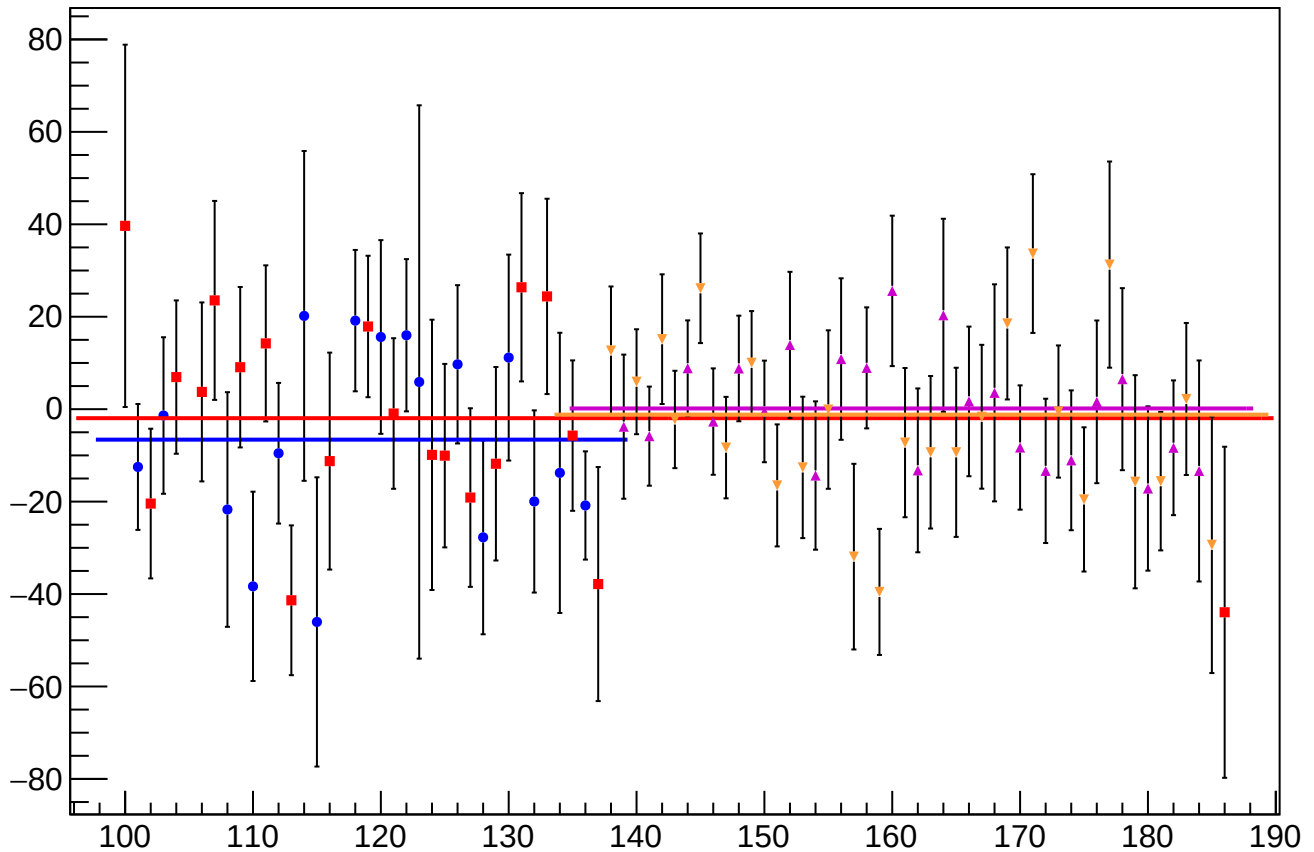
# diff\_bpm1Y\_rms vs Slug, Sign Corrected



|                                 |                                    |                             |                                    |
|---------------------------------|------------------------------------|-----------------------------|------------------------------------|
| Right In: 6702.778 $\pm$ 1.953  | $\chi^2/\text{NDF}$ : 1389564.7/16 | Left: 5713.698 $\pm$ 0.703  | $\chi^2/\text{NDF}$ : 3895130.2/47 |
| Left Out: 5860.605 $\pm$ 1.002  | $\chi^2/\text{NDF}$ : 1690049.2/24 | Right: 6231.795 $\pm$ 1.295 | $\chi^2/\text{NDF}$ : 4455849.5/36 |
| Right Out: 5862.170 $\pm$ 1.730 | $\chi^2/\text{NDF}$ : 2962525.5/19 | In: 5801.372 $\pm$ 0.881    | $\chi^2/\text{NDF}$ : 3819643.3/39 |
| Left In: 5571.330 $\pm$ 0.987   | $\chi^2/\text{NDF}$ : 2162788.3/22 | Out: 5860.999 $\pm$ 0.867   | $\chi^2/\text{NDF}$ : 4652575.3/44 |
|                                 |                                    | All: 5831.642 $\pm$ 0.618   | $\chi^2/\text{NDF}$ : 8474545.1/84 |



# diff\_bpm11X\_mean vs Slug, Sign Corrected



Right In: -6.592 $\pm$ 4.559  $\chi^2/\text{NDF}$ : 15.7/16

Left Out: -1.182 $\pm$ 2.939  $\chi^2/\text{NDF}$ : 33.7/24

Right Out: -1.948 $\pm$ 4.350  $\chi^2/\text{NDF}$ : 21.5/19

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

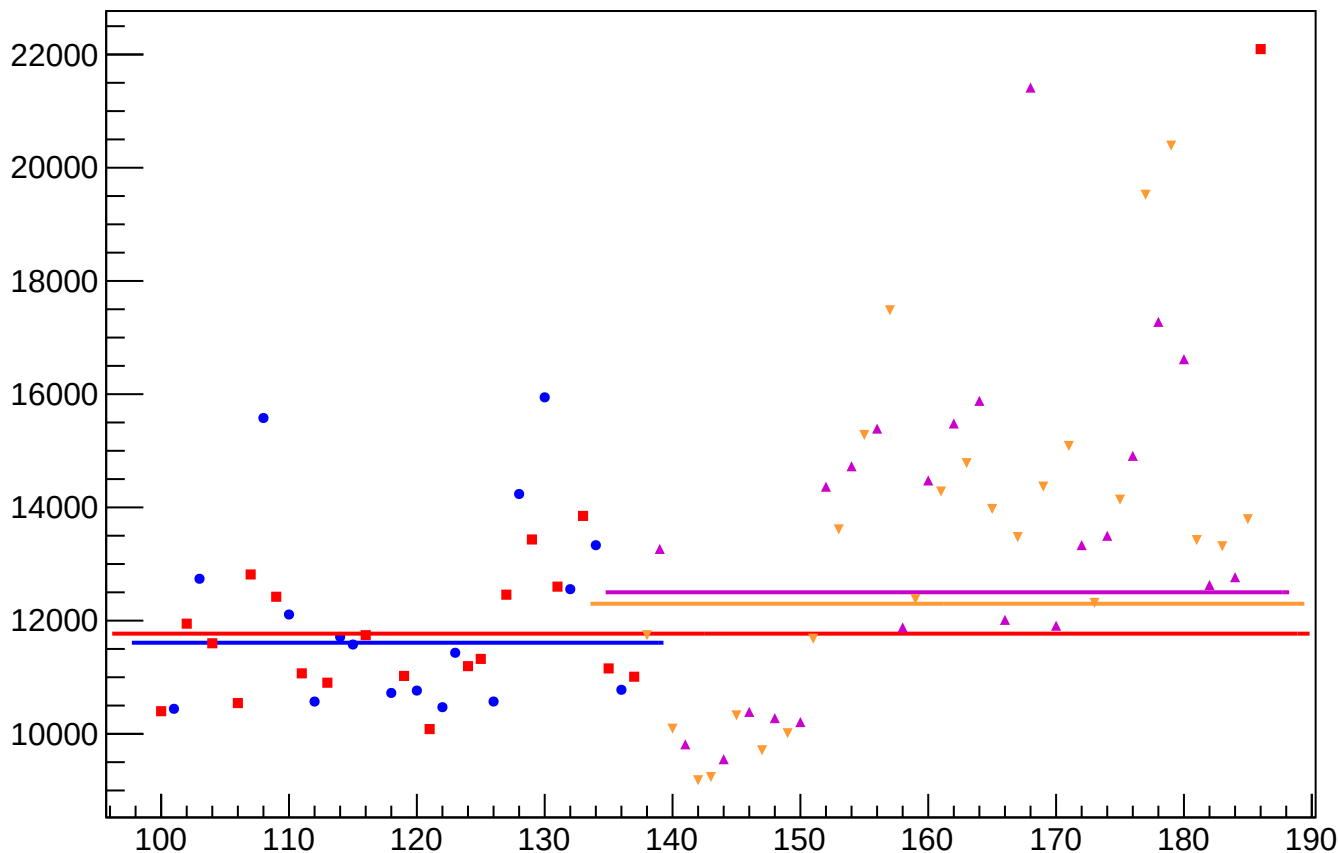
Right: -4.161 $\pm$ 3.147  $\chi^2/\text{NDF}$ : 37.7/36

In: -1.937 $\pm$ 2.540  $\chi^2/\text{NDF}$ : 28.7/39

Out: -1.422 $\pm$ 2.435  $\chi^2/\text{NDF}$ : 55.2/44

All: -1.669 $\pm$ 1.758  $\chi^2/\text{NDF}$ : 83.9/84

# diff\_bpm11X\_rms vs Slug, Sign Corrected



Right In: 11609.845+/-3.224  $\chi^2/\text{NDF}$ : 238142.5/16

Left Out: 12298.676+/-2.078  $\chi^2/\text{NDF}$ : 1506026.8/24

Right Out: 11770.150+/-3.076  $\chi^2/\text{NDF}$ : 264308.1/19

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

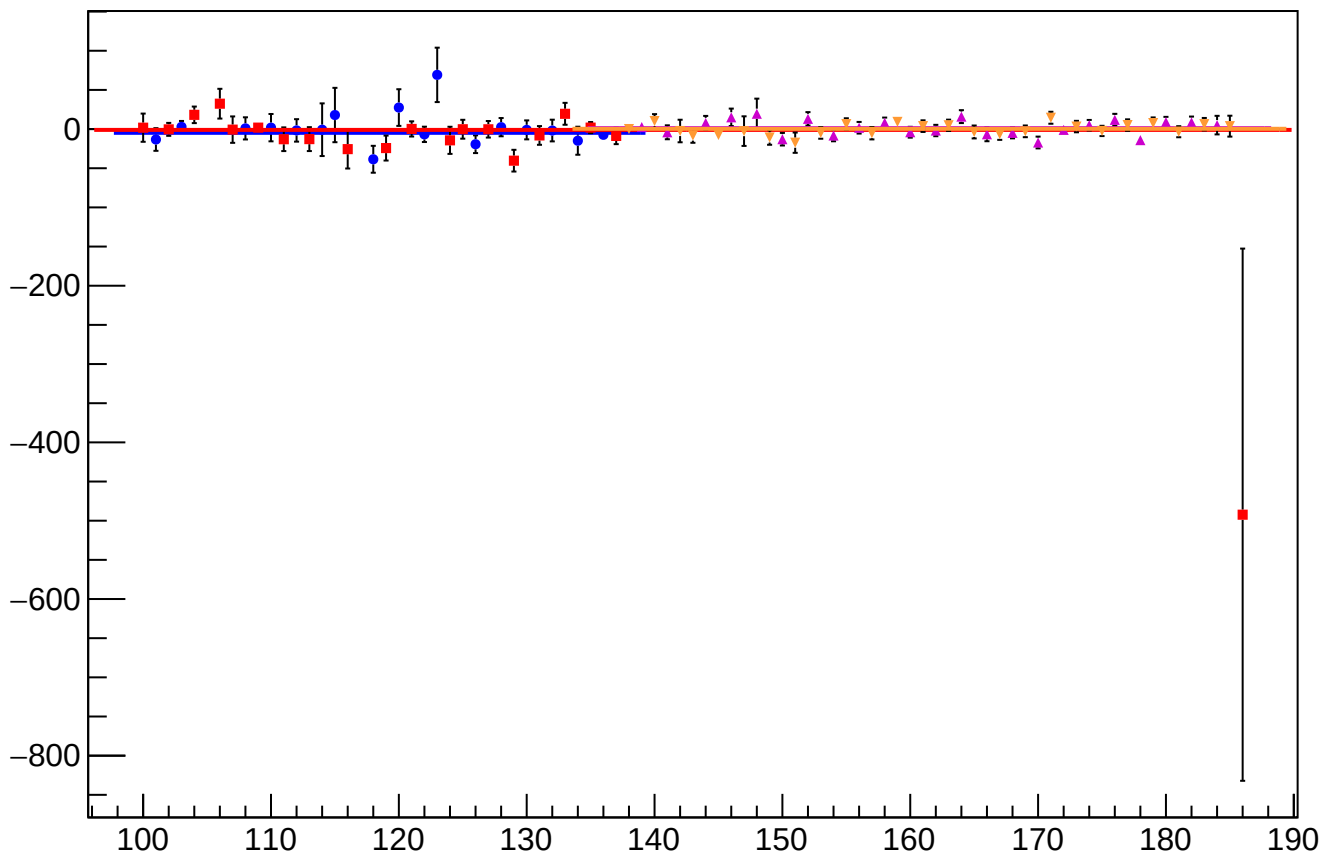
Right: 11693.762+/-2.225  $\chi^2/\text{NDF}$ : 503744.9/36

In: 12224.351+/-1.796  $\chi^2/\text{NDF}$ : 1648706.9/39

Out: 12133.039+/-1.722  $\chi^2/\text{NDF}$ : 1790607.0/44

All: 12176.778+/-1.243  $\chi^2/\text{NDF}$ : 3440660.9/8

# diff\_bpm11Y\_mean vs Slug, Sign Corrected



Right In:  $-4.776 \pm 2.787$   $\chi^2/\text{NDF}: 15.3/16$

Left Out:  $0.353 \pm 1.433$   $\chi^2/\text{NDF}: 19.1/24$

Right Out:  $-1.057 \pm 2.434$   $\chi^2/\text{NDF}: 25.1/19$

Left In:  $1.165 \pm 1.371$   $\chi^2/\text{NDF}: 33.6/22$

Left:  $0.777 \pm 0.991$   $\chi^2/\text{NDF}: 52.9/47$

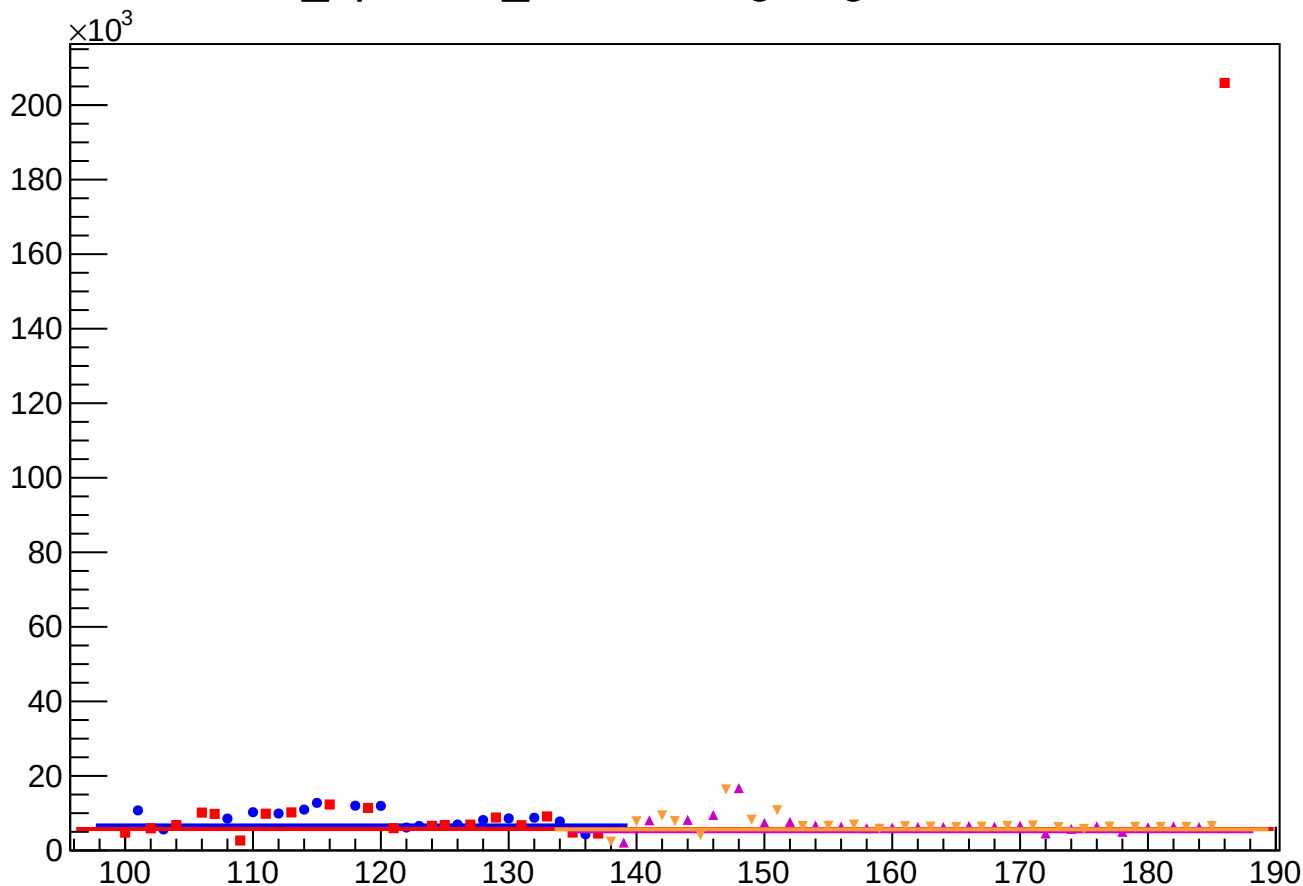
Right:  $-2.666 \pm 1.833$   $\chi^2/\text{NDF}: 41.4/36$

In:  $0.007 \pm 1.231$   $\chi^2/\text{NDF}: 52.5/39$

Out:  $-0.010 \pm 1.235$   $\chi^2/\text{NDF}: 44.5/44$

All:  $-0.001 \pm 0.872$   $\chi^2/\text{NDF}: 97.0/84$

# diff\_bpm11Y\_rms vs Slug, Sign Corrected



Right In: 6711.784 $\pm$ 1.971  $\chi^2/\text{NDF}$ : 1446319.6/16

Left Out: 5659.441 $\pm$ 1.014  $\chi^2/\text{NDF}$ : 4128583.6/24

Right Out: 5759.850 $\pm$ 1.721  $\chi^2/\text{NDF}$ : 2861902.2/19

Left In: 5137.772 $\pm$ 0.970  $\chi^2/\text{NDF}$ : 5495609.7/22

Left: 5387.078 $\pm$ 0.701  $\chi^2/\text{NDF}$ : 9762498.7/47

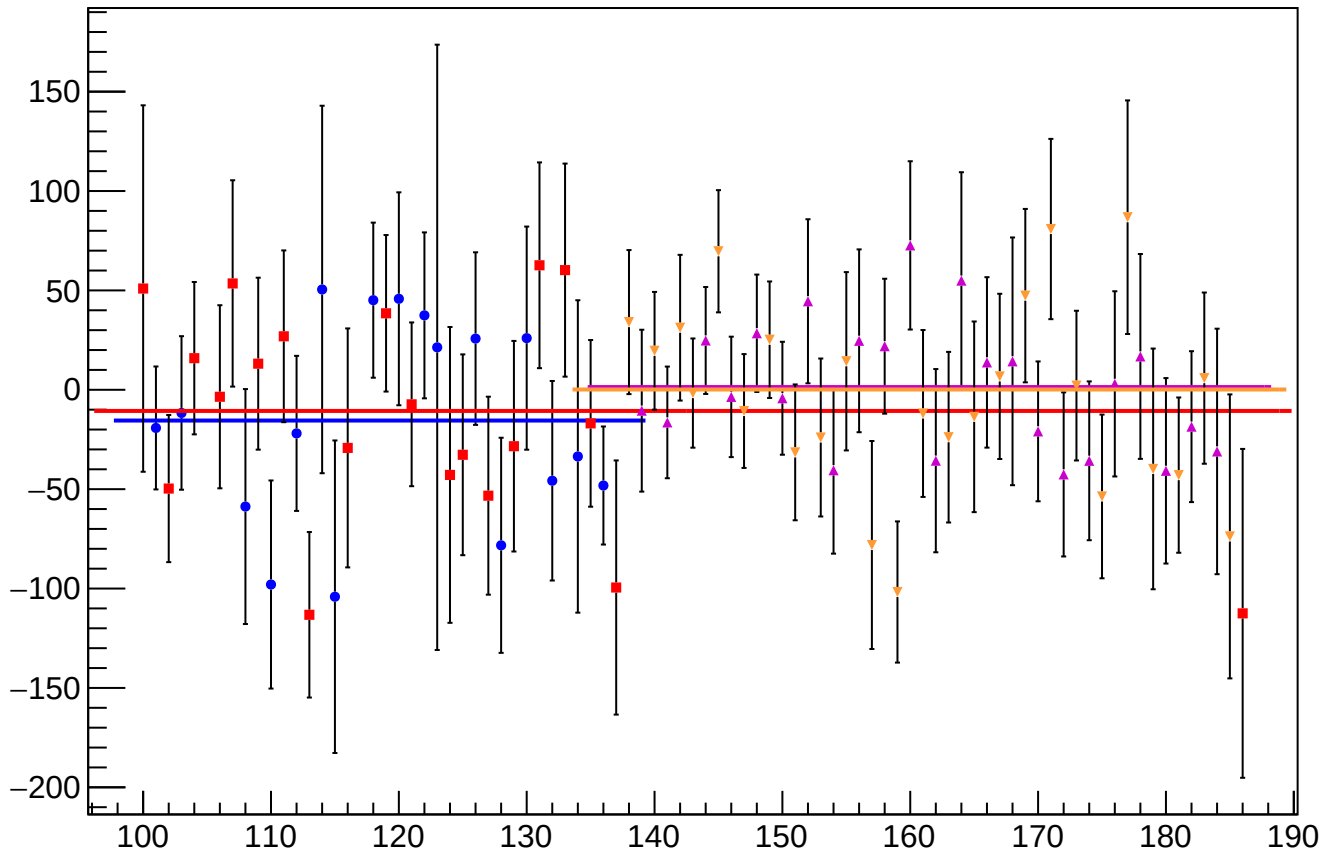
Right: 6171.595 $\pm$ 1.296  $\chi^2/\text{NDF}$ : 4440595.2/36

In: 5444.533 $\pm$ 0.870  $\chi^2/\text{NDF}$ : 7455404.2/39

Out: 5685.305 $\pm$ 0.873  $\chi^2/\text{NDF}$ : 6993013.6/44

All: 5564.474 $\pm$ 0.616  $\chi^2/\text{NDF}$ : 14486562.2/80

# diff\_bpm12X\_mean vs Slug, Sign Corrected



Right In: -15.474+/-11.317  $\chi^2/\text{NDF}$ : 14.7/16

Left Out: 0.143+/-7.683  $\chi^2/\text{NDF}$ :31.3/24

Right Out: -10.637+/-10.820  $\chi^2/\text{NDF}$ : 20.8/19

Left In: 1.374+/-7.990  $\chi^2/\text{NDF}$ :13.3/22

Left: 0.734+/-5.538  $\chi^2/\text{NDF}$ : 44.6/47

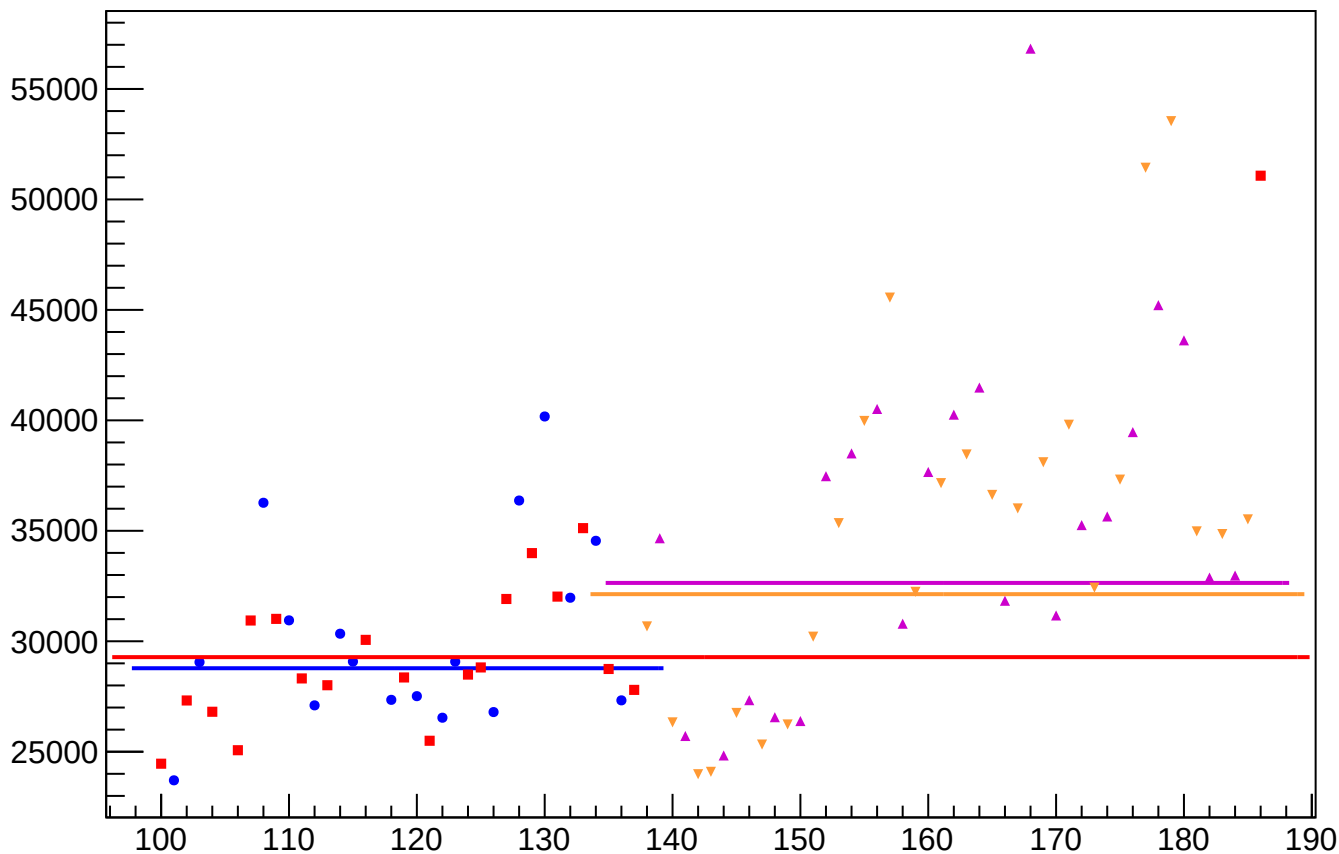
Right: -12.947+/-7.821  $\chi^2/\text{NDF}$ : 35.6/36

In: -4.230+/-6.527  $\chi^2/\text{NDF}$ :29.4/39

Out: -3.471+/-6.265  $\chi^2/\text{NDF}$ :52.8/44

All: -3.835+/-4.520  $\chi^2/\text{NDF}$ : 82.2/84

# diff\_bpm12X\_rms vs Slug, Sign Corrected



Right In: 28779.223+/-8.003

$\chi^2/\text{NDF}$ : 252972.7/16

Left Out: 32132.314+/-5.433

$\chi^2/\text{NDF}$ :1540079.4/24

Right Out: 29281.634+/-7.651

$\chi^2/\text{NDF}$ : 253879.8/19

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

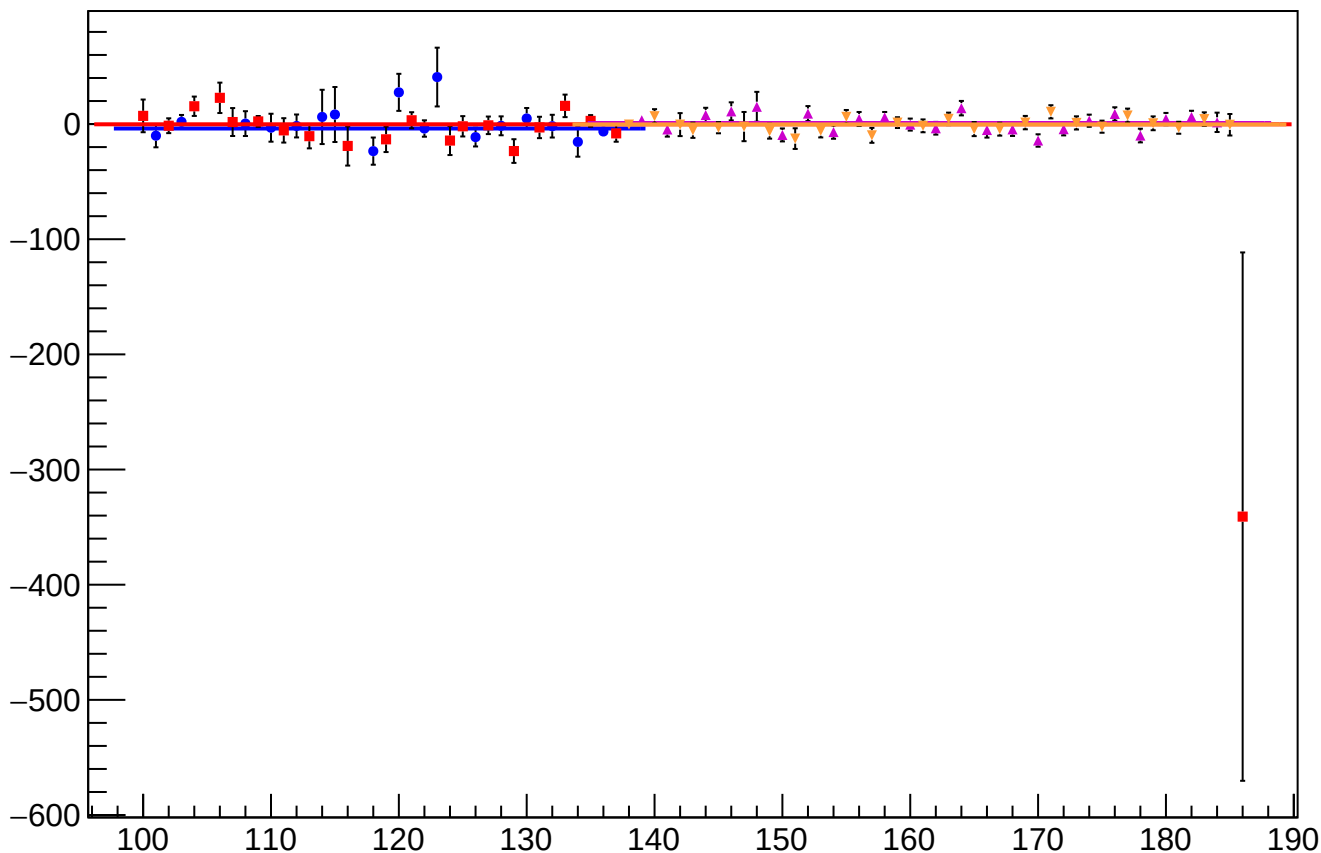
Right: 29041.707+/-5.530  $\chi^2/\text{NDF}$ : 508911.7/36

In: 31356.480+/-4.616  $\chi^2/\text{NDF}$ :1810555.1/39

Out: 31176.741+/-4.430  $\chi^2/\text{NDF}$ :1886248.3/44

All: 31262.919+/-3.196  $\chi^2/\text{NDF}$ : 3697592.8/80

# diff\_bpm12Y\_mean vs Slug, Sign Corrected



Right In:  $-3.861 \pm 2.014$   $\chi^2/\text{NDF}: 14.9/16$

Left Out:  $-0.312 \pm 1.172$   $\chi^2/\text{NDF}: 17.6/24$

Right Out:  $-0.209 \pm 1.897$   $\chi^2/\text{NDF}: 24.1/19$

Left In:  $0.908 \pm 1.142$   $\chi^2/\text{NDF}: 36.2/22$

Left:  $0.313 \pm 0.818$   $\chi^2/\text{NDF}: 54.4/47$

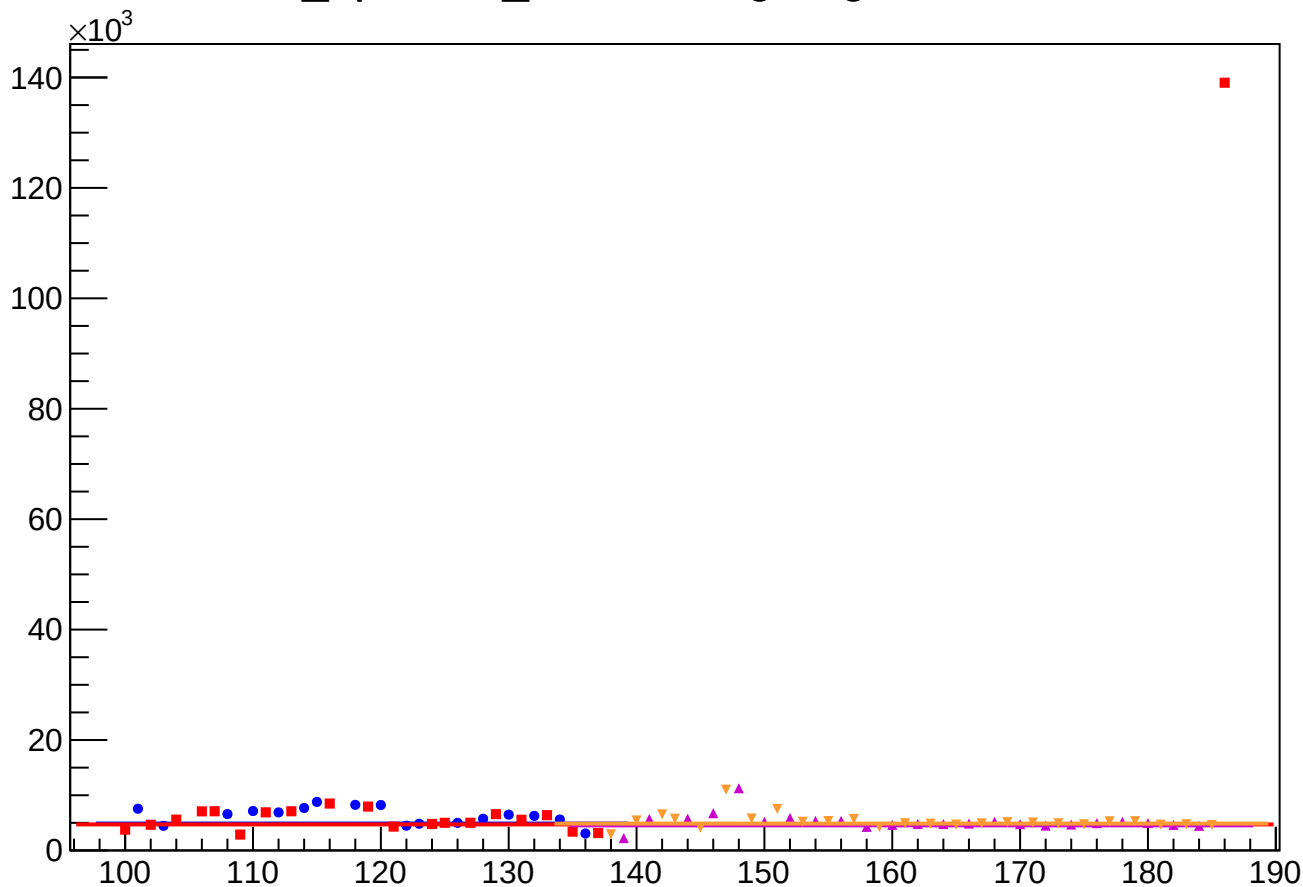
Right:  $-1.926 \pm 1.381$   $\chi^2/\text{NDF}: 40.8/36$

In:  $-0.253 \pm 0.994$   $\chi^2/\text{NDF}: 55.3/39$

Out:  $-0.284 \pm 0.997$   $\chi^2/\text{NDF}: 41.7/44$

All:  $-0.268 \pm 0.704$   $\chi^2/\text{NDF}: 97.1/84$

# diff\_bpm12Y\_rms vs Slug, Sign Corrected



Right In: 4872.339 $\pm$ 1.424  $\chi^2/\text{NDF}$ : 1404599.6/16

Left Out: 4868.567 $\pm$ 0.829  $\chi^2/\text{NDF}$ : 1511151.0/24

Right Out: 4712.851 $\pm$ 1.341  $\chi^2/\text{NDF}$ : 2001540.4/19

Left In: 4544.337 $\pm$ 0.808  $\chi^2/\text{NDF}$ : 2634314.4/22

Left: 4702.320 $\pm$ 0.578  $\chi^2/\text{NDF}$ : 4223993.0/47

Right: 4787.822 $\pm$ 0.976  $\chi^2/\text{NDF}$ : 3412787.2/36

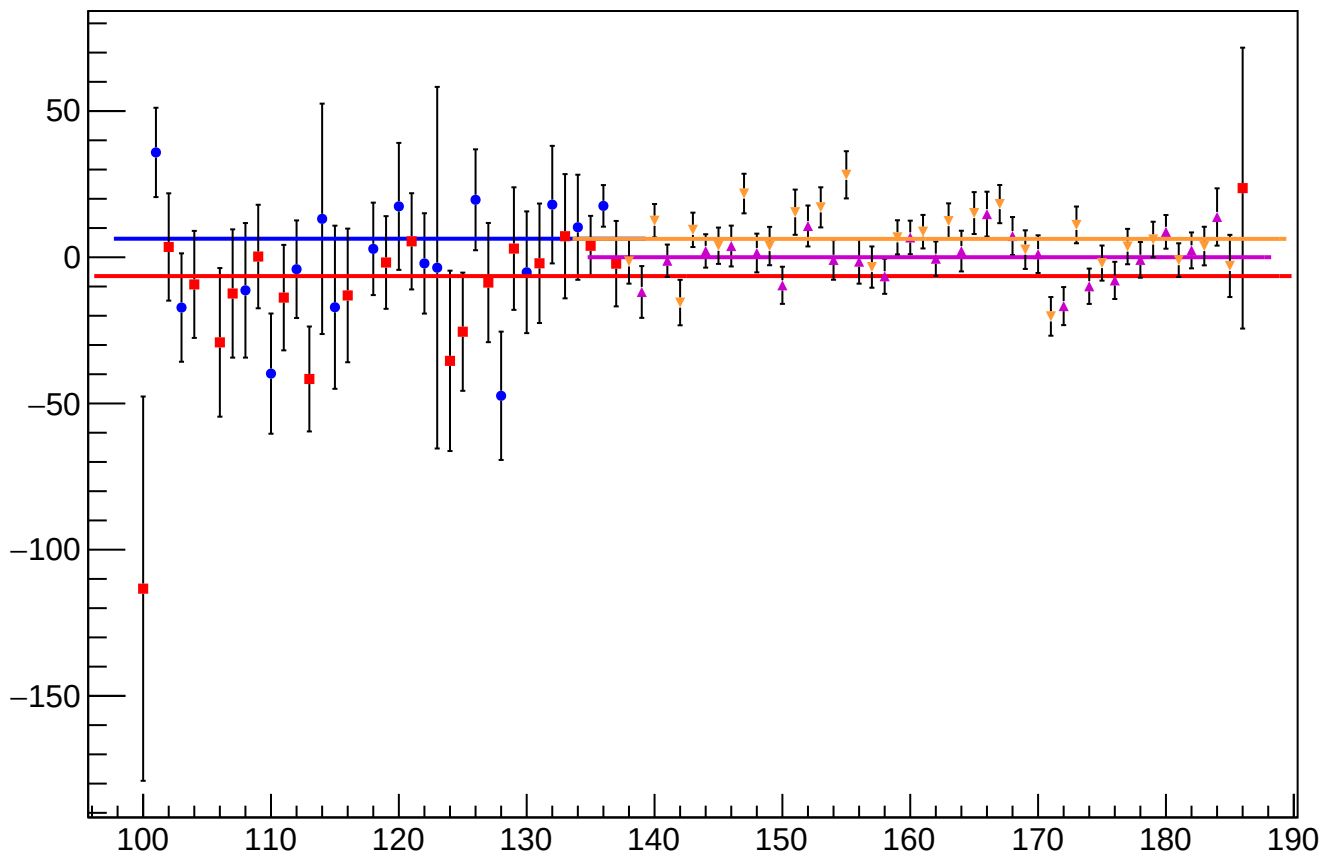
In: 4624.167 $\pm$ 0.703  $\chi^2/\text{NDF}$ : 4079056.1/39

Out: 4825.559 $\pm$ 0.705  $\chi^2/\text{NDF}$ : 3522448.1/44

All: 4724.528 $\pm$ 0.498  $\chi^2/\text{NDF}$ : 7642457.5/84



# diff\_bpm16X\_mean vs Slug, Sign Corrected



Right In:  $6.348 \pm 4.088$   $\chi^2/\text{NDF}: 22.4/16$

Left Out:  $6.296 \pm 1.310$   $\chi^2/\text{NDF}: 56.5/24$

Right Out:  $-6.435 \pm 4.216$   $\chi^2/\text{NDF}: 12.6/19$

Left In:  $0.020 \pm 1.353$   $\chi^2/\text{NDF}: 29.9/22$

Left:  $3.259 \pm 0.941$   $\chi^2/\text{NDF}: 97.5/47$

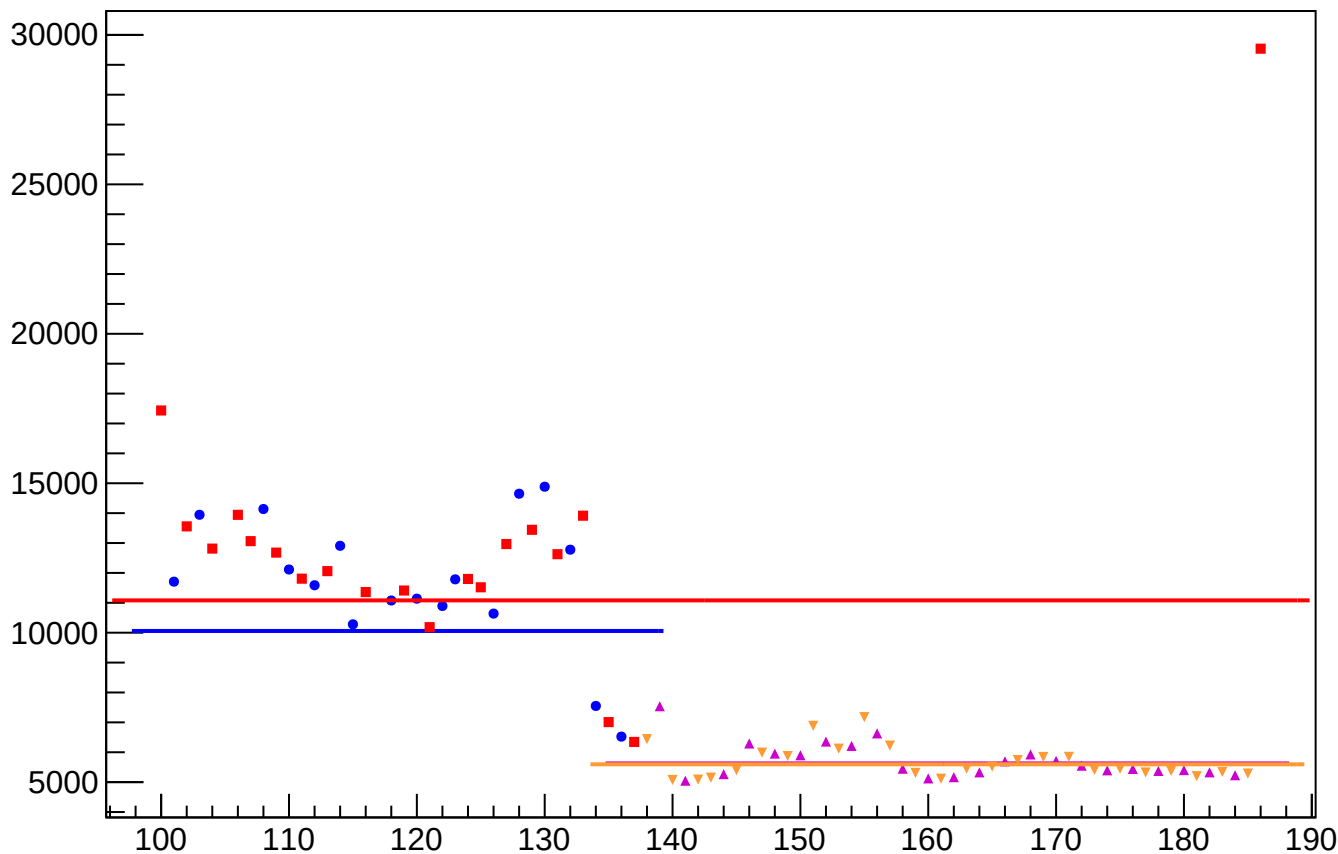
Right:  $0.153 \pm 2.935$   $\chi^2/\text{NDF}: 39.8/36$

In:  $0.645 \pm 1.285$   $\chi^2/\text{NDF}: 54.5/39$

Out:  $5.175 \pm 1.251$   $\chi^2/\text{NDF}: 77.5/44$

All:  $2.969 \pm 0.896$   $\chi^2/\text{NDF}: 138.4/84$

# diff\_bpm16X\_rms vs Slug, Sign Corrected



Right In: 10057.738+/-2.891  $\chi^2/\text{NDF}$ : 1007657.1/16

Left Out: 5596.370+/-0.926  $\chi^2/\text{NDF}$ : 283998.1/24

Right Out: 11081.340+/-2.981  $\chi^2/\text{NDF}$ : 1061769.5/19

Left In: 5627.283+/-0.957  $\chi^2/\text{NDF}$ : 279318.7/22

Left: 5611.329+/-0.666  $\chi^2/\text{NDF}$ : 563855.6/47

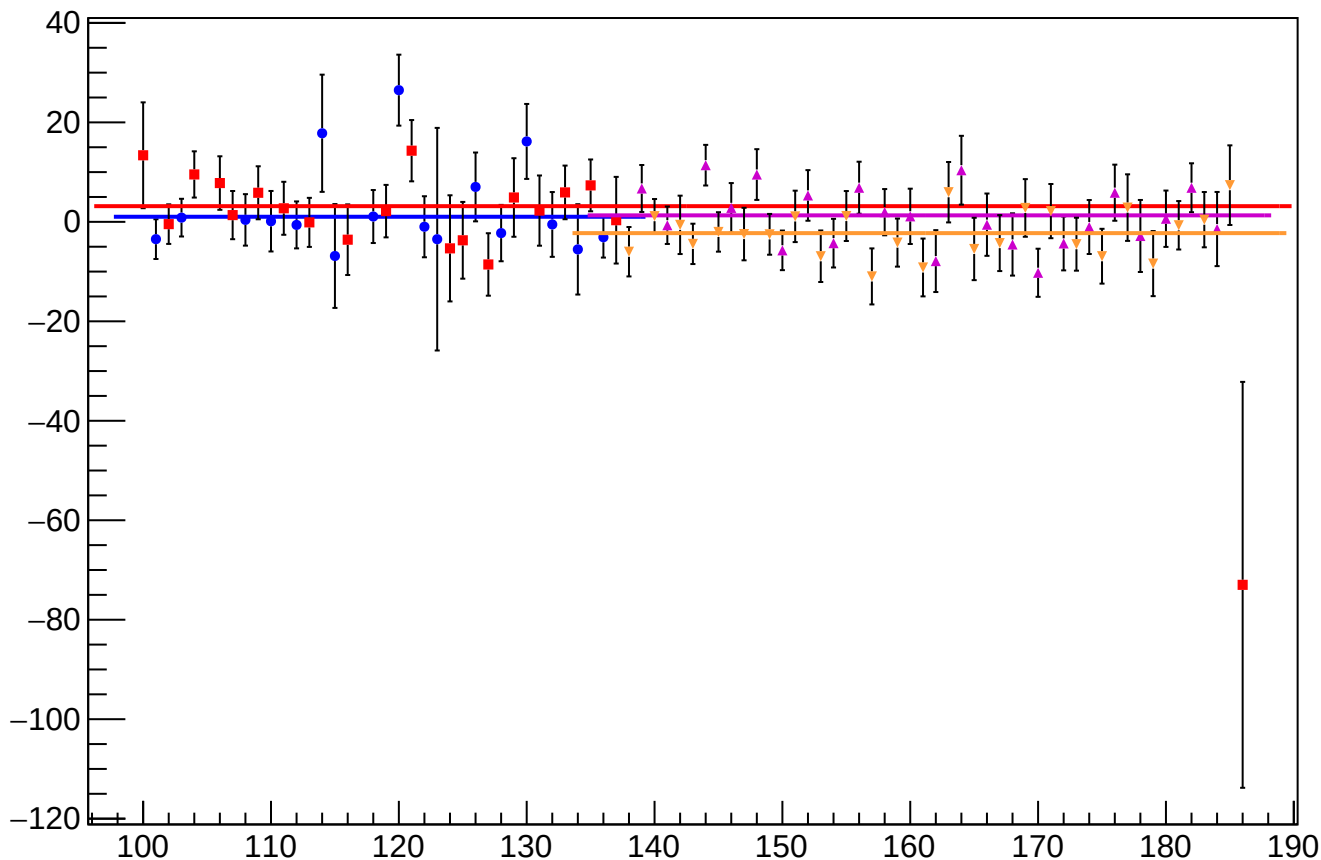
Right: 10553.830+/-2.075  $\chi^2/\text{NDF}$ : 2130183.7/36

In: 6064.637+/-0.908  $\chi^2/\text{NDF}$ : 3403695.7/39

Out: 6079.434+/-0.885  $\chi^2/\text{NDF}$ : 4432828.6/44

All: 6072.231+/-0.634  $\chi^2/\text{NDF}$ : 7836660.5/84

# diff\_bpm16Y\_mean vs Slug, Sign Corrected



Right In:  $1.024 \pm 1.405$   $\chi^2/\text{NDF}: 23.6/16$

Left Out:  $-2.268 \pm 1.029$   $\chi^2/\text{NDF}: 15.4/24$

Right Out:  $3.153 \pm 1.335$   $\chi^2/\text{NDF}: 18.9/19$

Left In:  $1.305 \pm 1.077$   $\chi^2/\text{NDF}: 30.8/22$

Left:  $-0.562 \pm 0.744$   $\chi^2/\text{NDF}: 51.9/47$

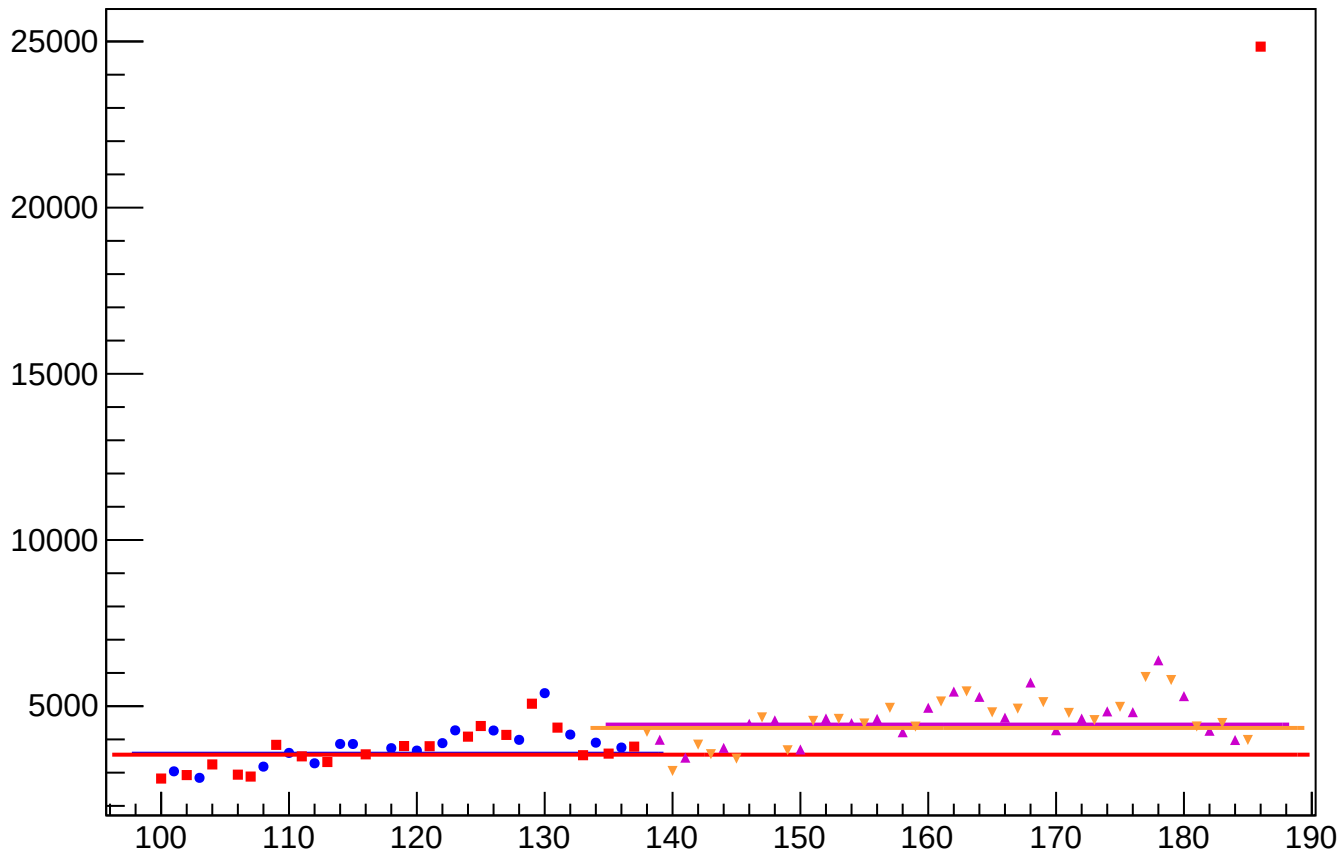
Right:  $2.143 \pm 0.968$   $\chi^2/\text{NDF}: 43.7/36$

In:  $1.201 \pm 0.855$   $\chi^2/\text{NDF}: 54.4/39$

Out:  $-0.246 \pm 0.815$   $\chi^2/\text{NDF}: 44.6/44$

All:  $0.443 \pm 0.590$   $\chi^2/\text{NDF}: 100.5/84$

# diff\_bpm16Y\_rms vs Slug, Sign Corrected



Right In:  $3570.193 \pm 0.994$   $\chi^2/\text{NDF}$ : 310317.2/16

Left Out:  $4345.381 \pm 0.728$   $\chi^2/\text{NDF}$ : 1000636.1/24

Right Out:  $3541.042 \pm 0.944$   $\chi^2/\text{NDF}$ : 841965.8/19

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

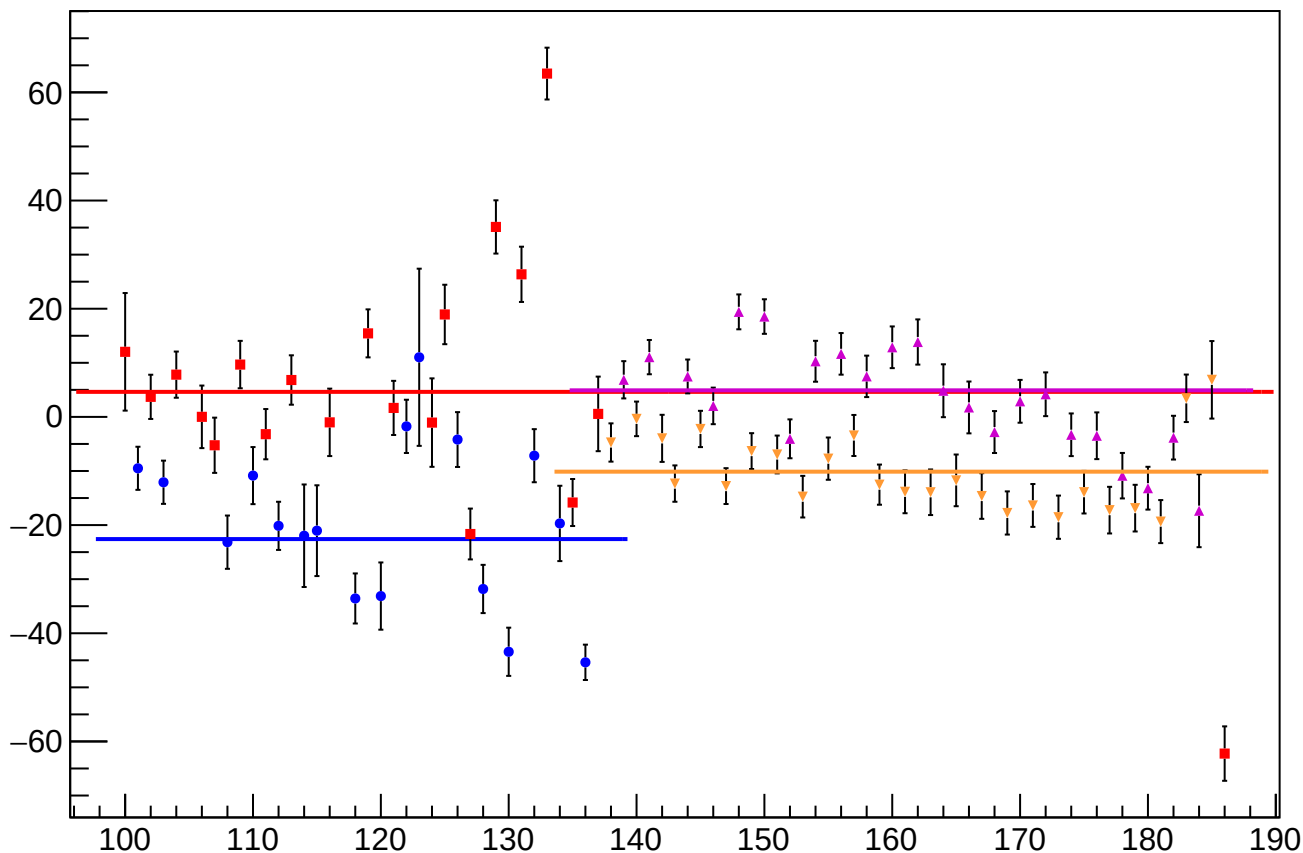
Right:  $3554.870 \pm 0.684$   $\chi^2/\text{NDF}$ : 1152735.3/36

In:  $4122.031 \pm 0.604$   $\chi^2/\text{NDF}$ : 1502667.8/39

Out:  $4045.454 \pm 0.576$   $\chi^2/\text{NDF}$ : 2297888.7/44

All:  $4081.926 \pm 0.417$   $\chi^2/\text{NDF}$ : 3808961.7/84

# diff\_bpm0l01X\_mean vs Slug, Sign Corrected



Right In:  $-22.588 \pm 1.203$   $\chi^2/\text{NDF}$ : 151.6/16

Left Out:  $-10.125 \pm 0.775$   $\chi^2/\text{NDF}$ : 67.9/24

Right Out:  $4.629 \pm 1.129$   $\chi^2/\text{NDF}$ : 461.9/19

Left In:  $4.911 \pm 0.797$   $\chi^2/\text{NDF}$ : 127.9/22

Left:  $-2.814 \pm 0.556$   $\chi^2/\text{NDF}$ : 378.7/47

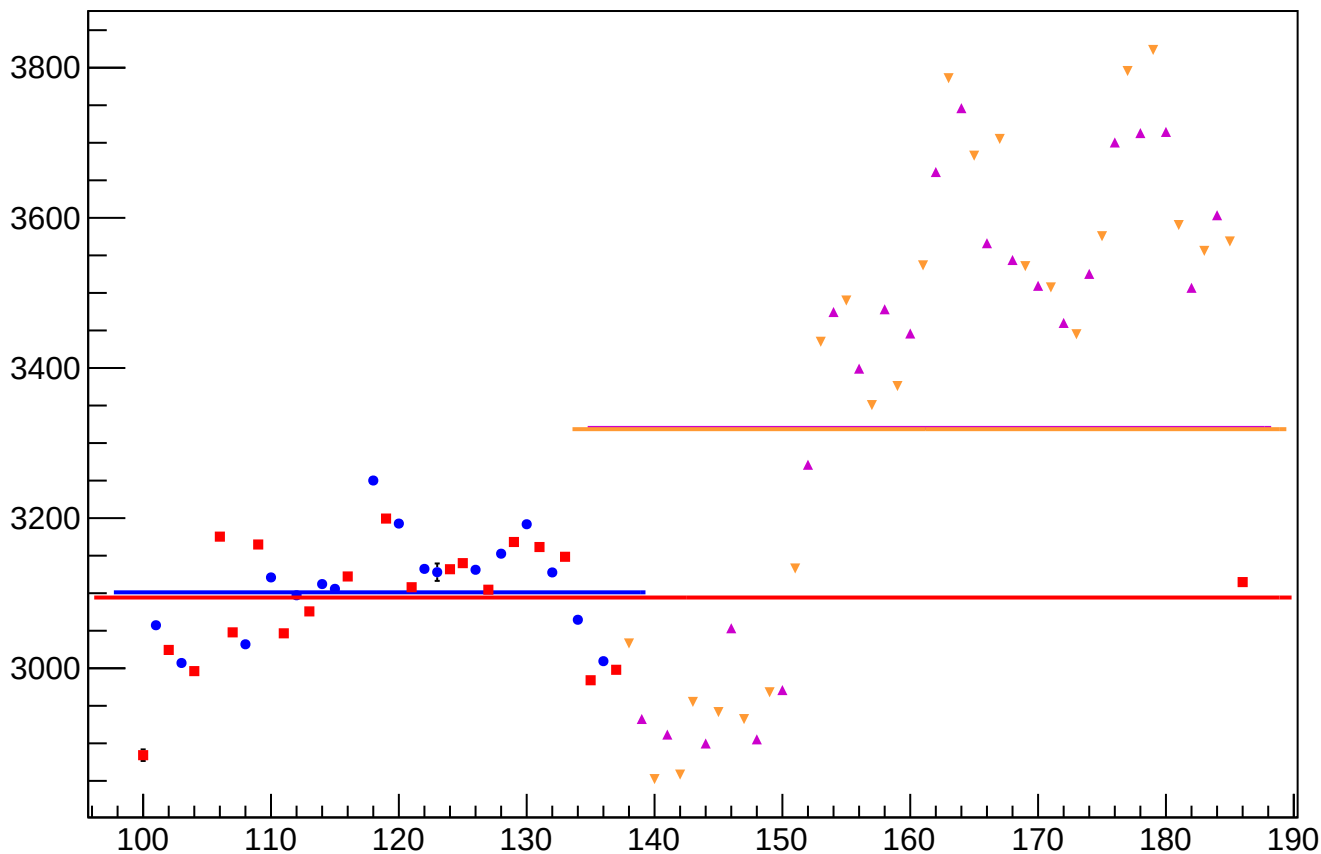
Right:  $-8.125 \pm 0.823$   $\chi^2/\text{NDF}$ : 885.7/36

In:  $-3.482 \pm 0.664$   $\chi^2/\text{NDF}$ : 642.8/39

Out:  $-5.397 \pm 0.639$   $\chi^2/\text{NDF}$ : 645.8/44

All:  $-4.477 \pm 0.461$   $\chi^2/\text{NDF}$ : 1292.9/84

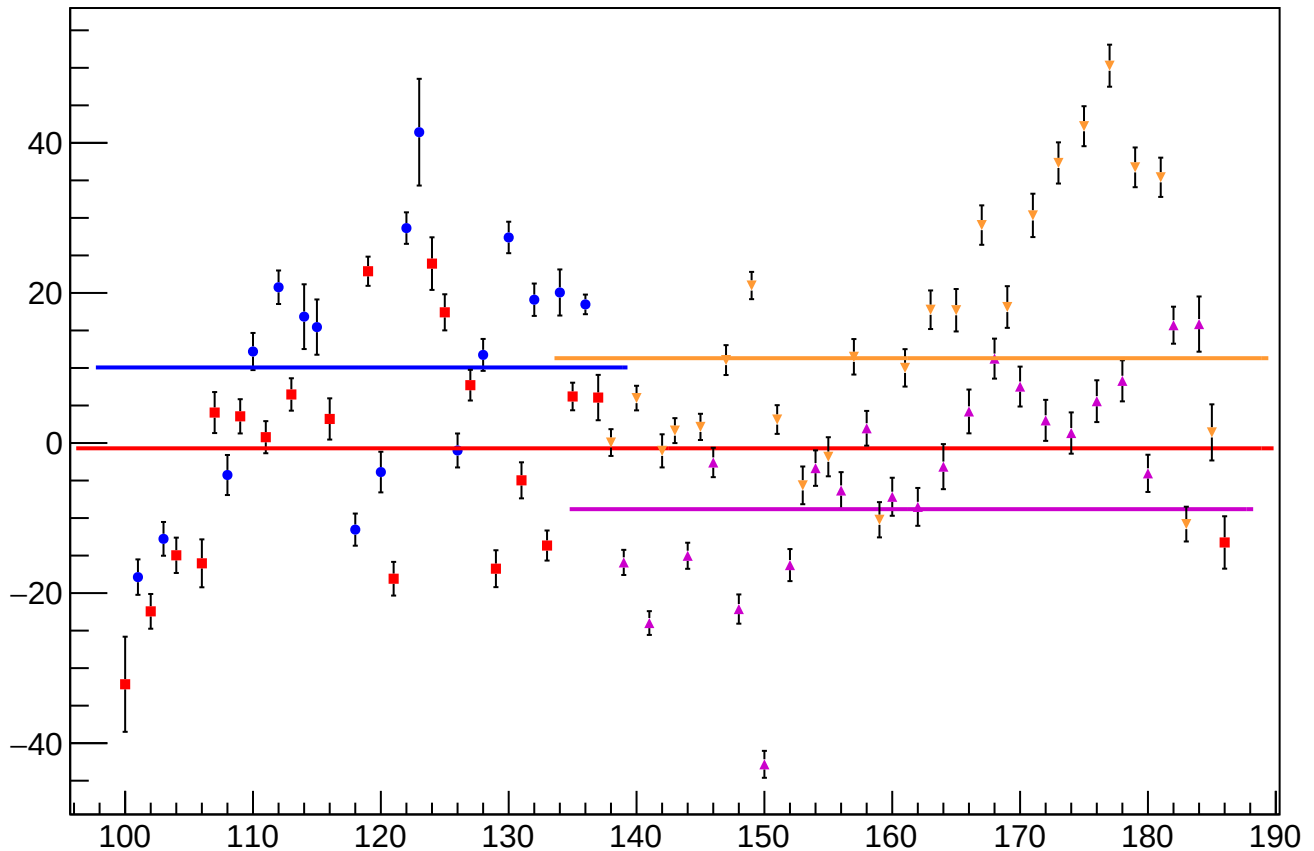
# diff\_bpm0l01X\_rms vs Slug, Sign Corrected



Right In: 3101.155 $\pm$ 0.850  $\chi^2/\text{NDF}$ : 7225.5/16  
 Left Out: 3318.506 $\pm$ 0.548  $\chi^2/\text{NDF}$ : 337694.2/24  
 Right Out: 3094.244 $\pm$ 0.799  $\chi^2/\text{NDF}$ : 7840.3/19  
 Left In: 3320.170 $\pm$ 0.564  $\chi^2/\text{NDF}$ : 287634.9/22

Left: 3319.315 $\pm$ 0.393  $\chi^2/\text{NDF}$ : 625333.6/47  
 Right: 3097.482 $\pm$ 0.582  $\chi^2/\text{NDF}$ : 15100.8/36  
 In: 3253.318 $\pm$ 0.470  $\chi^2/\text{NDF}$ : 340945.8/39  
 Out: 3246.646 $\pm$ 0.452  $\chi^2/\text{NDF}$ : 399133.4/44  
 All: 3249.853 $\pm$ 0.326  $\chi^2/\text{NDF}$ : 740184.0/84

# diff\_bpm0l01Y\_mean vs Slug, Sign Corrected



Right In:  $10.071 \pm 0.563$   $\chi^2/\text{NDF}$ : 688.1/16

Left Out:  $11.305 \pm 0.454$   $\chi^2/\text{NDF}$ : 1144.3/24

Right Out:  $-0.706 \pm 0.541$   $\chi^2/\text{NDF}$ : 642.2/19

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

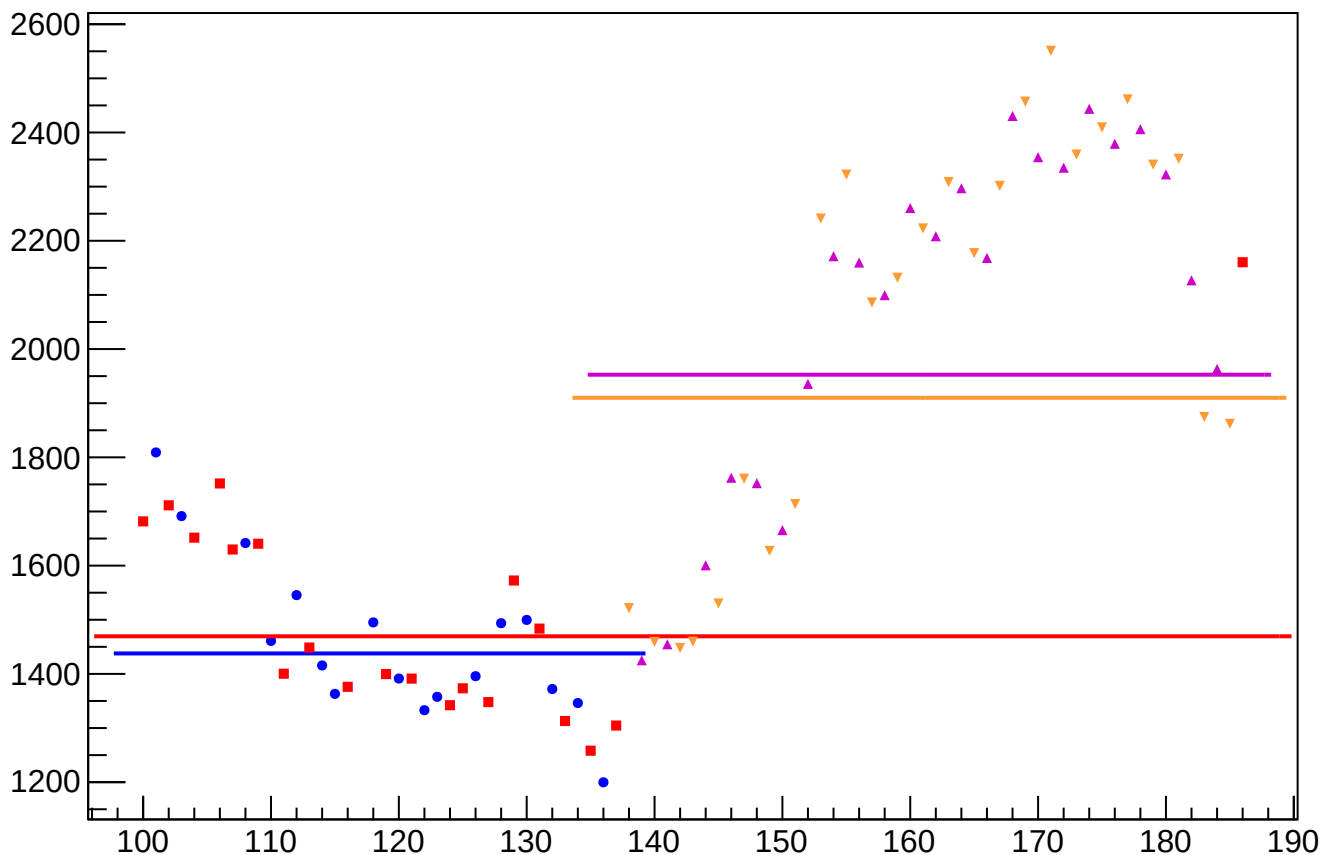
Right:  $4.474 \pm 0.390$   $\chi^2/\text{NDF}$ : 1520.9/36

In:  $-0.949 \pm 0.363$   $\chi^2/\text{NDF}$ : 2287.7/39

Out:  $6.347 \pm 0.348$   $\chi^2/\text{NDF}$ : 2075.6/44

All:  $2.856 \pm 0.251$   $\chi^2/\text{NDF}$ : 4573.9/84

# diff\_bpm0l01Y\_rms vs Slug, Sign Corrected



Right In:  $1437.799 \pm 0.398$   $\chi^2/\text{NDF}: 173192.9/16$

Left Out:  $1909.963 \pm 0.321$   $\chi^2/\text{NDF}: 1399467.7/24$

Right Out:  $1469.470 \pm 0.383$   $\chi^2/\text{NDF}: 218691.8/19$

Left In:  $1952.637 \pm 0.336$   $\chi^2/\text{NDF}: 1065333.8/22$

Left:  $1930.313 \pm 0.232$   $\chi^2/\text{NDF}: 2473233.3/47$

Right:  $1454.246 \pm 0.276$   $\chi^2/\text{NDF}: 395175.4/36$

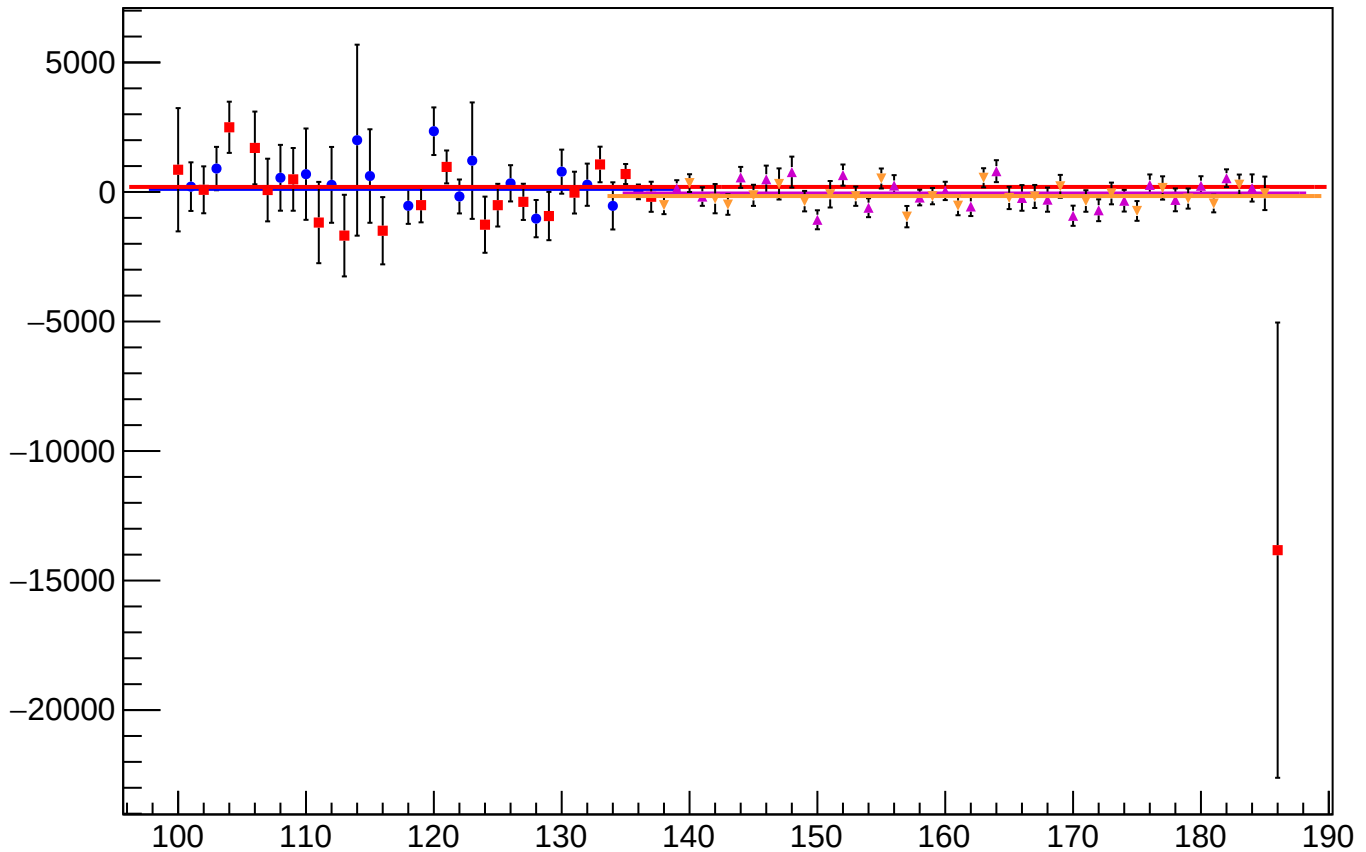
In:  $1738.212 \pm 0.257$   $\chi^2/\text{NDF}: 2215579.0/39$

Out:  $1728.135 \pm 0.246$   $\chi^2/\text{NDF}: 2395851.6/44$

All:  $1732.956 \pm 0.178$   $\chi^2/\text{NDF}: 4612233.9/84$



# asym\_sam1\_mean vs Slug, Sign Corrected



Right In: 119.363+/-180.601  $\chi^2/\text{NDF}$ : 12.6/16

Left Out: -157.242+/-80.796  $\chi^2/\text{NDF}$ : 22.0/24

Right Out: 194.441+/-184.748  $\chi^2/\text{NDF}$ : 24.2/19

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

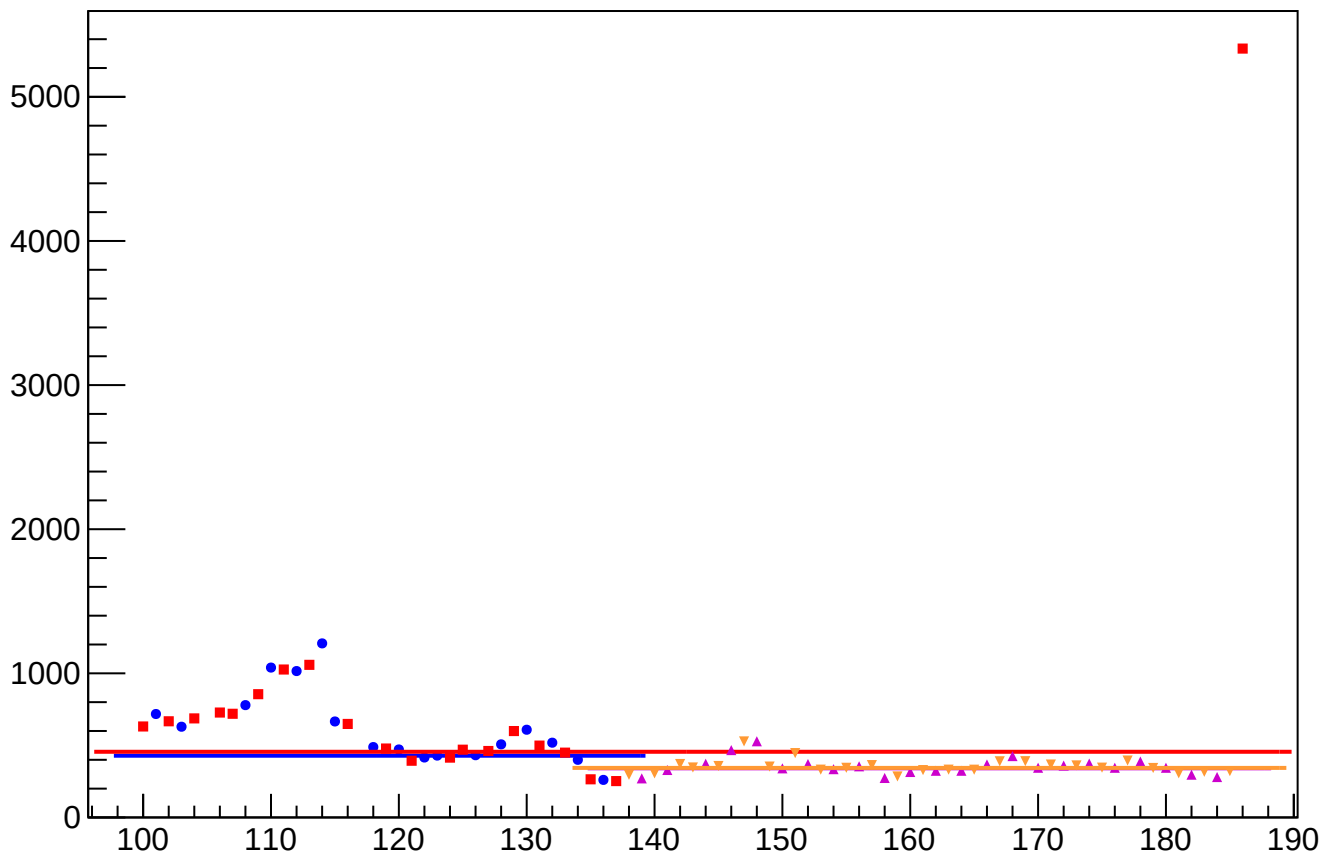
Right: 156.050+/-129.146  $\chi^2/\text{NDF}$ : 36.9/36

In: -28.099+/-75.105  $\chi^2/\text{NDF}$ : 52.0/39

Out: -100.779+/-74.026  $\chi^2/\text{NDF}$ : 49.3/44

All: -64.965+/-52.722  $\chi^2/\text{NDF}$ : 101.7/84

# asym\_sam1\_rms vs Slug, Sign Corrected



Right In: 428.425+/-0.128  $\chi^2/\text{NDF}$ : 2006981.5/16

Left Out: 343.807+/-0.057  $\chi^2/\text{NDF}$ : 539431.0/24

Right Out: 455.736+/-0.131  $\chi^2/\text{NDF}$ : 2649268.8/19

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

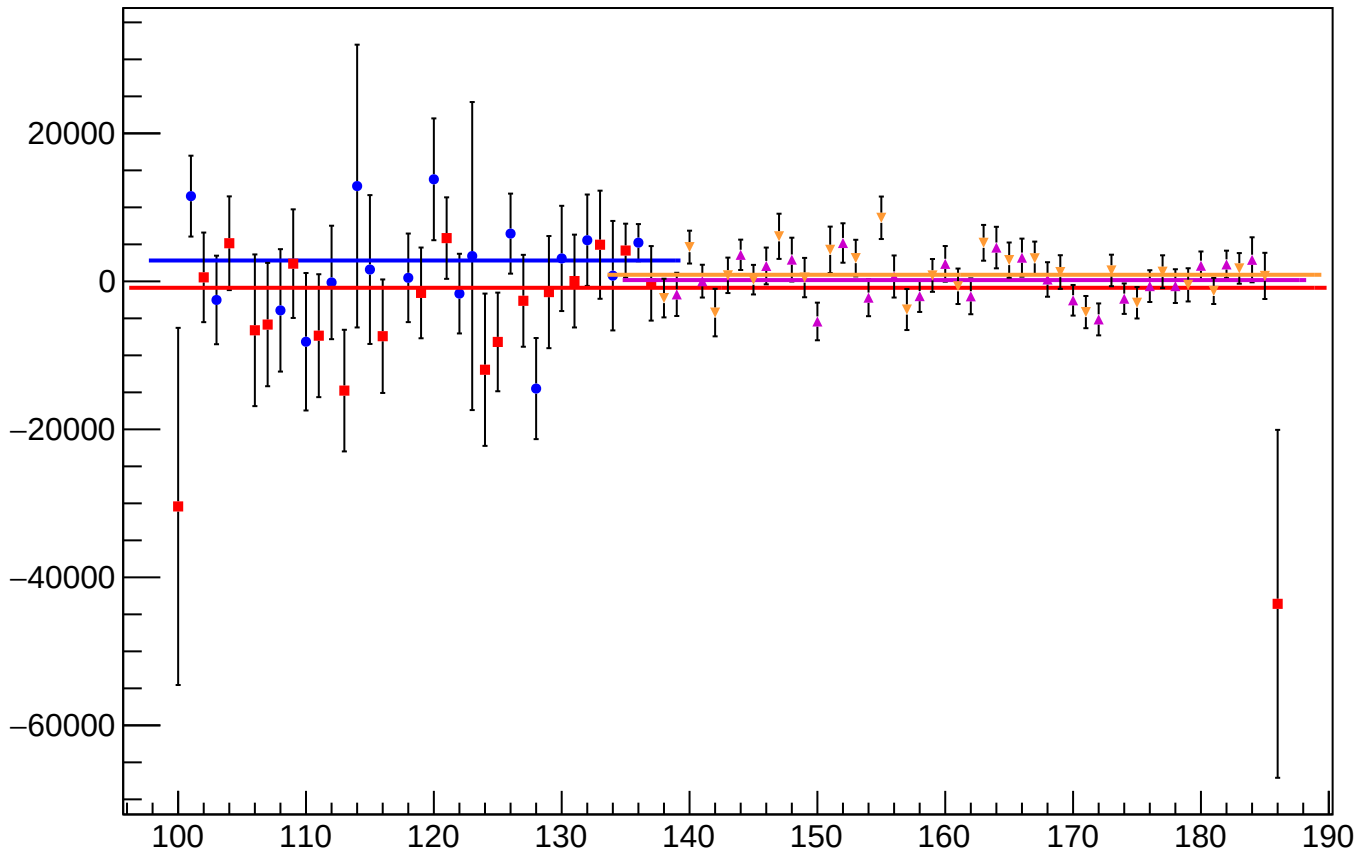
Right: 441.771+/-0.091  $\chi^2/\text{NDF}$ : 4678599.2/36

In: 356.017+/-0.053  $\chi^2/\text{NDF}$ : 3120364.0/39

Out: 361.777+/-0.052  $\chi^2/\text{NDF}$ : 3804942.5/44

All: 358.939+/-0.037  $\chi^2/\text{NDF}$ : 6931273.9/84

# asym\_sam2\_mean vs Slug, Sign Corrected



Right In: 2819.632+/-1450.791  $\chi^2/\text{NDF}$ : 16.5/16

Left Out: 890.395+/-473.262  $\chi^2/\text{NDF}$ : 38.0/24

Right Out: -868.604+/-1509.500  $\chi^2/\text{NDF}$ : 17.4/19

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

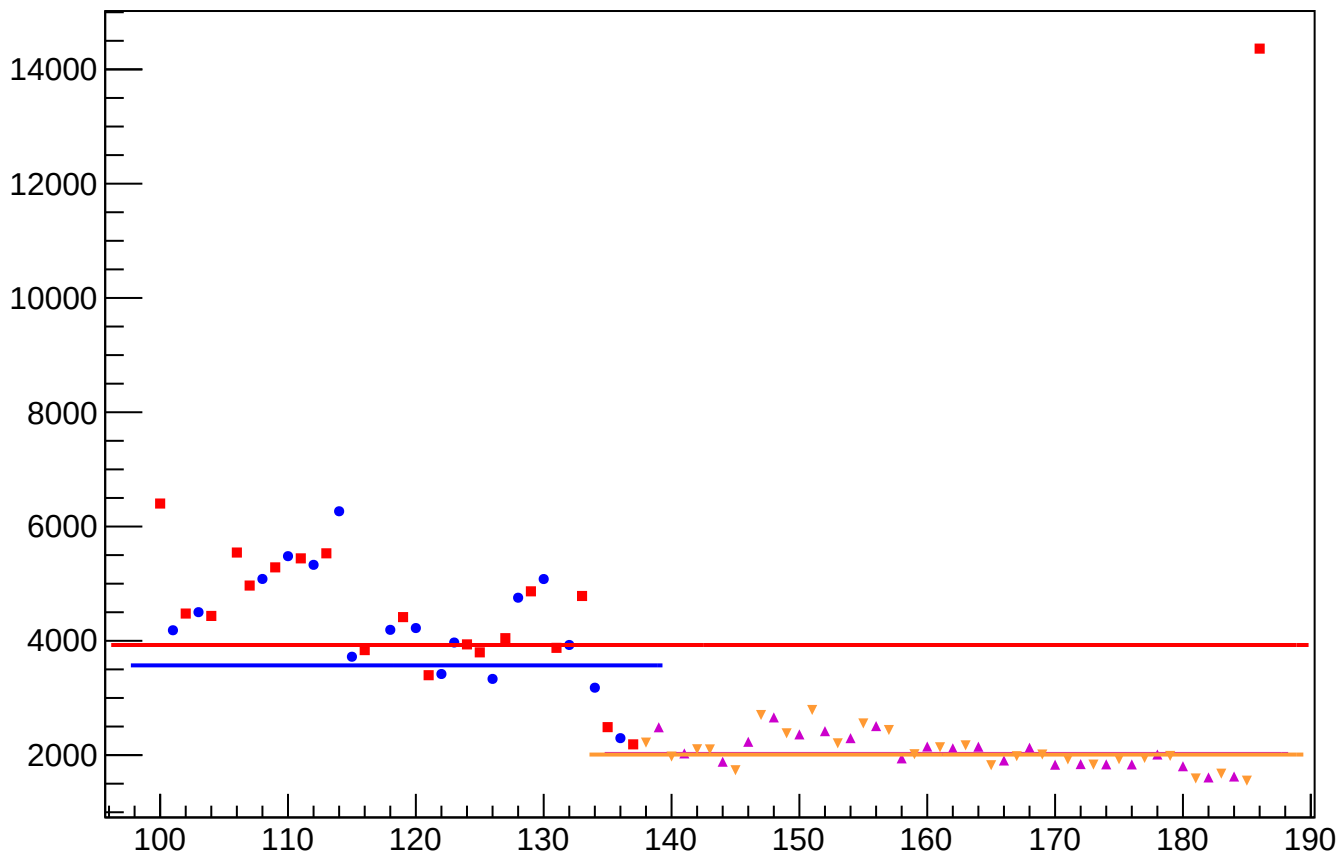
Right: 1048.630+/-1046.004  $\chi^2/\text{NDF}$ : 37.0/36

In: 441.532+/-462.592  $\chi^2/\text{NDF}$ : 52.7/39

Out: 732.967+/-451.587  $\chi^2/\text{NDF}$ : 56.5/44

All: 590.757+/-323.141  $\chi^2/\text{NDF}$ : 109.5/84

# asym\_sam2\_rms vs Slug, Sign Corrected



Right In: 3570.185+/-1.026  $\chi^2/\text{NDF}$ : 1087907.4/16

Left Out: 2009.631+/-0.335  $\chi^2/\text{NDF}$ : 709977.6/24

Right Out: 3926.927+/-1.067  $\chi^2/\text{NDF}$ : 1380273.9/19

Left In: 2020.365+/-0.345  $\chi^2/\text{NDF}$ : 573483.0/22

Left: 2014.833+/-0.240  $\chi^2/\text{NDF}$ : 1283959.2/47

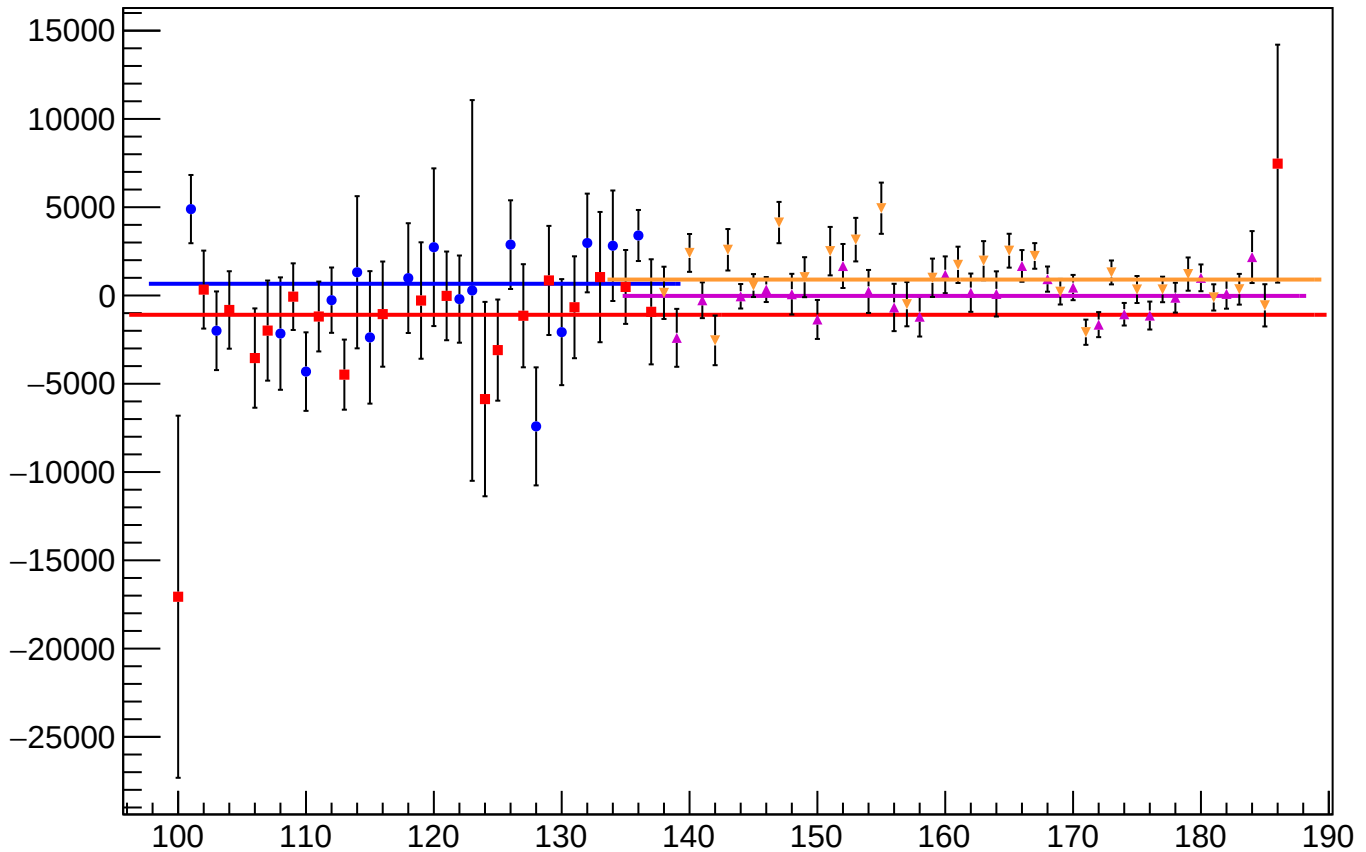
Right: 3741.484+/-0.740  $\chi^2/\text{NDF}$ : 2526248.0/36

In: 2177.933+/-0.327  $\chi^2/\text{NDF}$ : 3711699.8/39

Out: 2181.227+/-0.319  $\chi^2/\text{NDF}$ : 5028054.1/44

All: 2179.620+/-0.228  $\chi^2/\text{NDF}$ : 8739805.8/84

# asym\_sam3\_mean vs Slug, Sign Corrected



Right In: 663.409+/-622.512  $\chi^2/\text{NDF}$ : 25.5/16

Left Out: 902.091+/-185.850  $\chi^2/\text{NDF}$ : 63.5/24

Right Out: -1093.487+/-601.934  $\chi^2/\text{NDF}$ : 11.4/19

Left In: -23.529+/-188.137  $\chi^2/\text{NDF}$ : 28.2/22

Left: 444.940+/-132.217  $\chi^2/\text{NDF}$ : 104.0/47

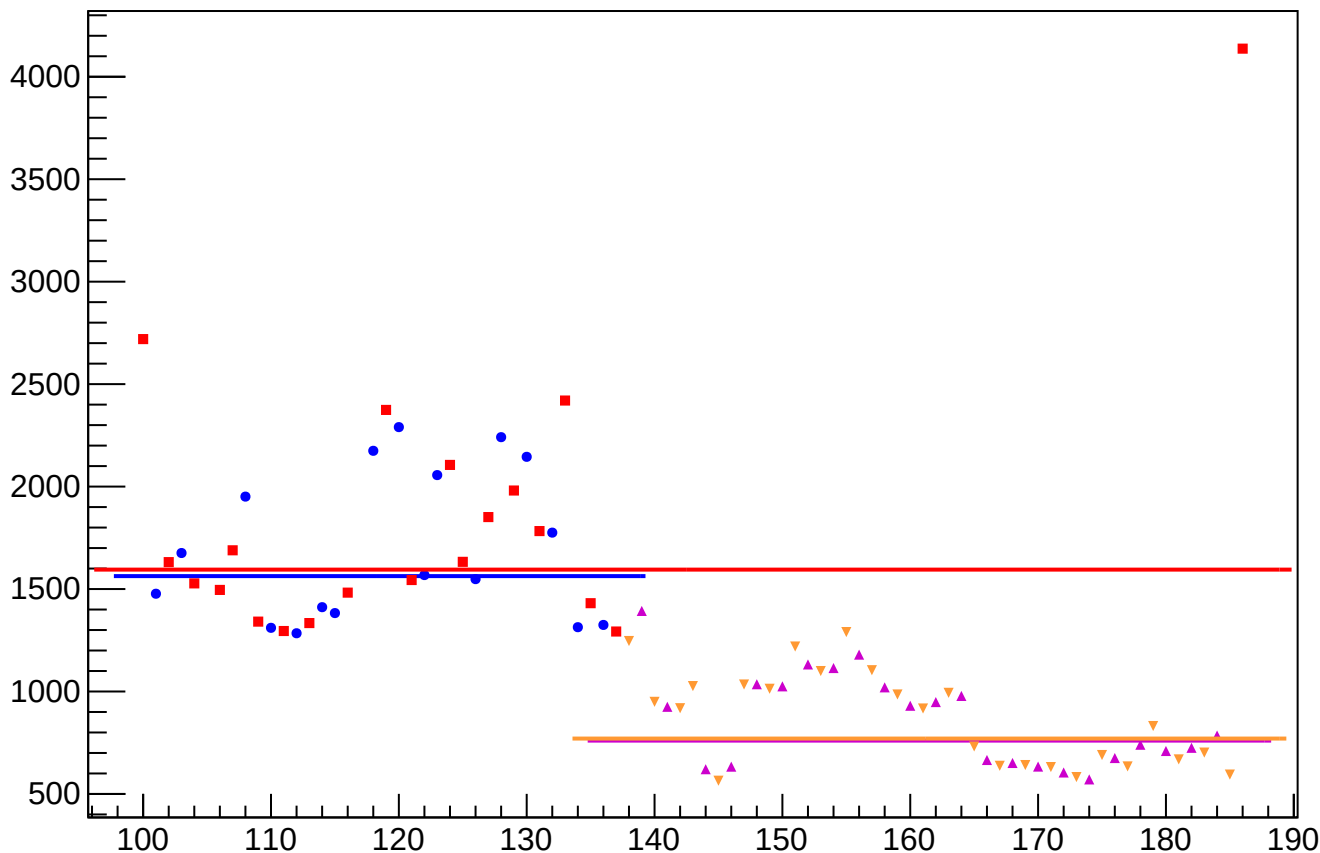
Right: -244.556+/-432.724  $\chi^2/\text{NDF}$ : 40.9/36

In: 33.963+/-180.092  $\chi^2/\text{NDF}$ : 54.8/39

Out: 728.411+/-177.579  $\chi^2/\text{NDF}$ : 84.9/44

All: 386.066+/-126.446  $\chi^2/\text{NDF}$ : 147.3/84

# asym\_sam3\_rms vs Slug, Sign Corrected



Right In:  $1563.098 \pm 0.440$   $\chi^2/\text{NDF}: 487653.4/16$

Left Out:  $770.320 \pm 0.131$   $\chi^2/\text{NDF}: 2287655.1/24$

Right Out:  $1594.811 \pm 0.426$   $\chi^2/\text{NDF}: 753414.9/19$

Left In:  $760.352 \pm 0.133$   $\chi^2/\text{NDF}: 1986749.8/22$

Left:  $765.397 \pm 0.093$   $\chi^2/\text{NDF}: 4277246.5/47$

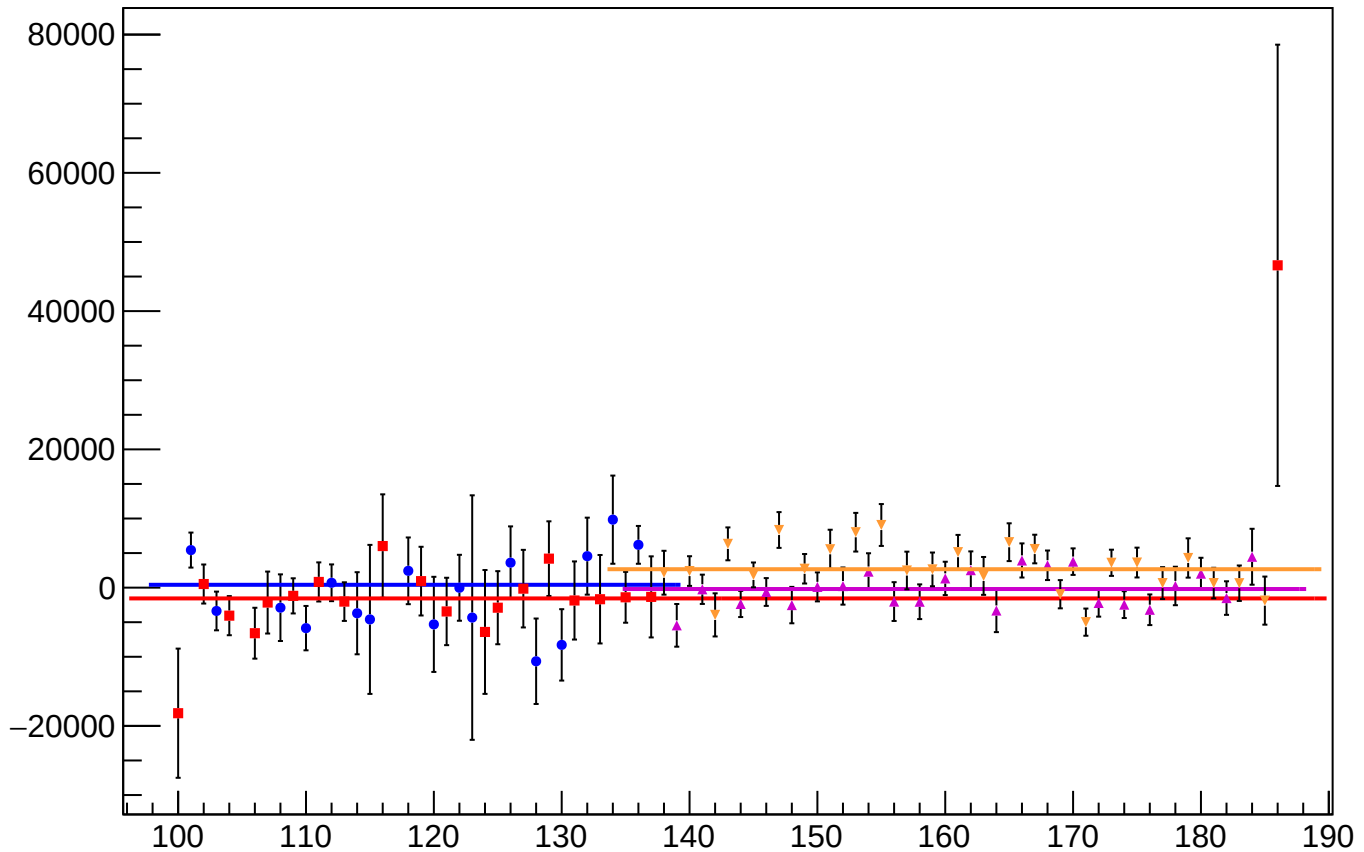
Right:  $1579.487 \pm 0.306$   $\chi^2/\text{NDF}: 1243750.7/36$

In:  $827.537 \pm 0.127$   $\chi^2/\text{NDF}: 5521821.5/39$

Out:  $842.078 \pm 0.126$   $\chi^2/\text{NDF}: 6466841.8/44$

All:  $834.909 \pm 0.089$   $\chi^2/\text{NDF}: 11995274.3/84$

# asym\_sam4\_mean vs Slug, Sign Corrected



Right In: 411.092 $\pm$ 998.047  $\chi^2$ /NDF: 25.3/16

Left Out: 2665.587 $\pm$ 479.773  $\chi^2$ /NDF:49.2/24

Right Out: -1560.531 $\pm$ 925.388  $\chi^2$ /NDF: 12.4/19

Left In: -199.371 $\pm$ 492.082  $\chi^2$ /NDF:25.8/22

Left: 1269.388 $\pm$ 343.520  $\chi^2$ /NDF: 92.4/47

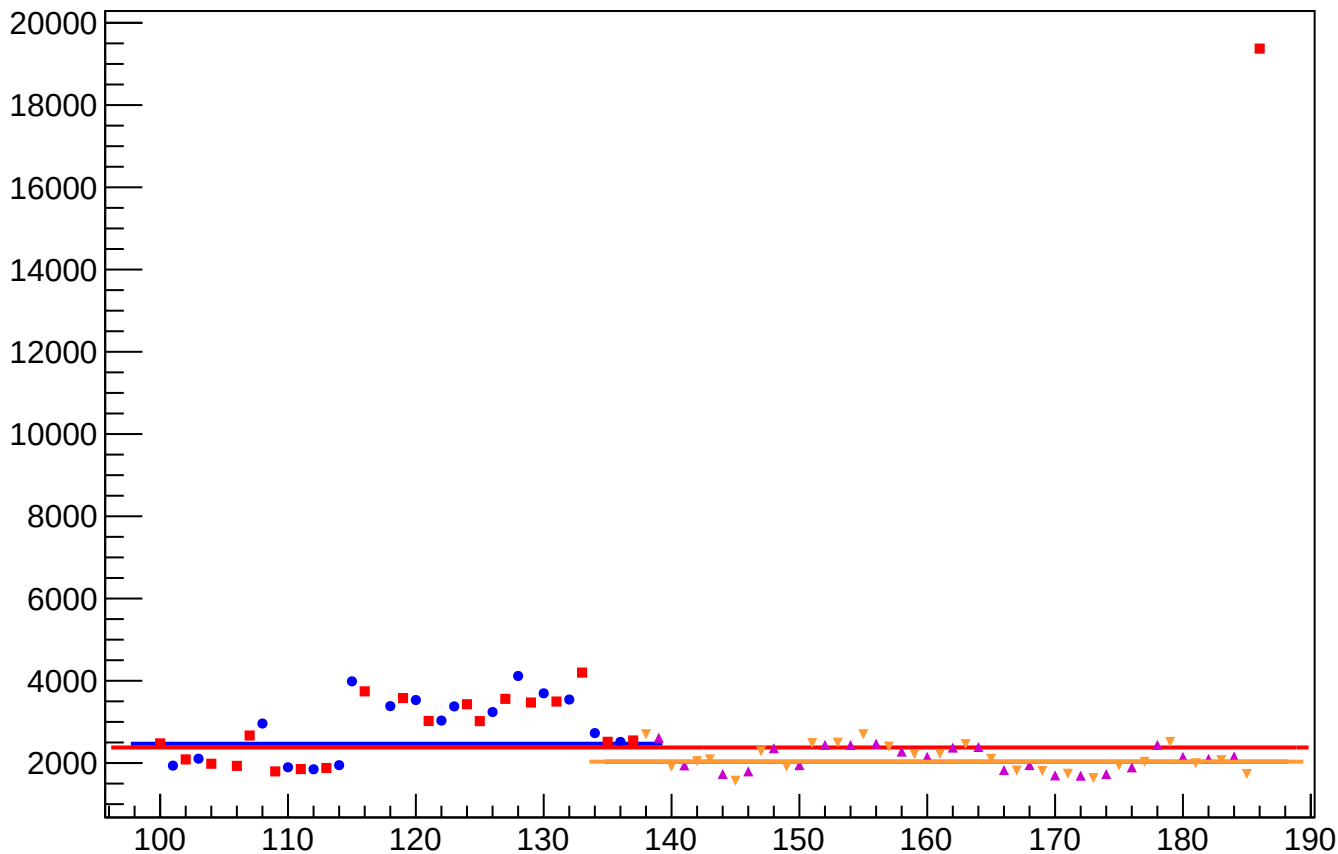
Right: -649.093 $\pm$ 678.583  $\chi^2$ /NDF: 39.8/36

In: -79.992 $\pm$ 441.353  $\chi^2$ /NDF:51.4/39

Out: 1770.277 $\pm$ 425.932  $\chi^2$ /NDF:78.1/44

All: 878.031 $\pm$ 306.486  $\chi^2$ /NDF: 138.5/84

# asym\_sam4\_rms vs Slug, Sign Corrected



Right In: 2469.233 $\pm$ 0.706  $\chi^2$ /NDF: 900151.2/16

Left Out: 2033.337 $\pm$ 0.339  $\chi^2$ /NDF: 824062.2/24

Right Out: 2378.145 $\pm$ 0.654  $\chi^2$ /NDF: 1593808.3/19

Left In: 2032.655 $\pm$ 0.348  $\chi^2$ /NDF: 652763.7/22

Left: 2033.004 $\pm$ 0.243  $\chi^2$ /NDF: 1476827.9/47

Right: 2420.253 $\pm$ 0.480  $\chi^2$ /NDF: 2502917.5/36

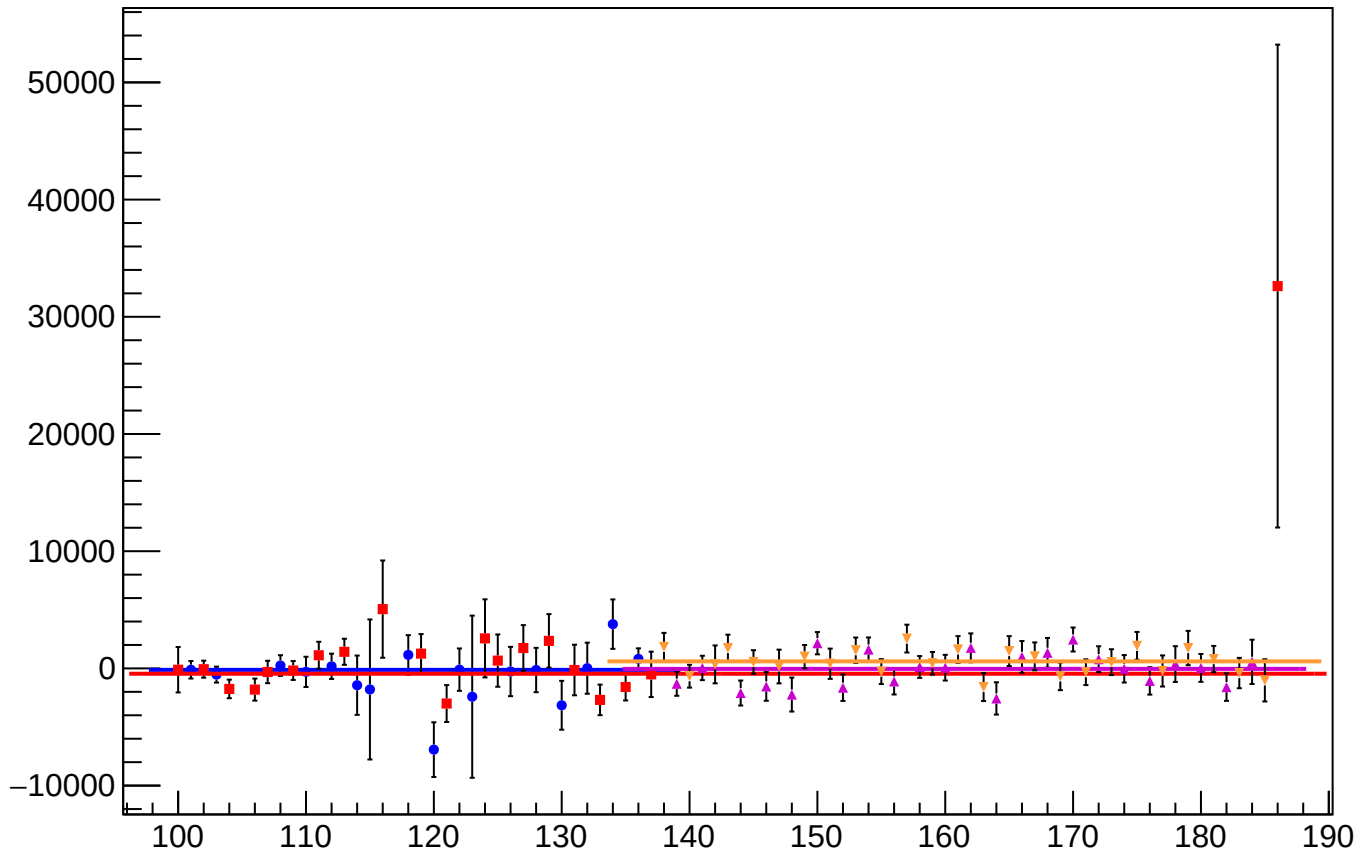
In: 2118.030 $\pm$ 0.312  $\chi^2$ /NDF: 1860771.7/39

Out: 2106.385 $\pm$ 0.301  $\chi^2$ /NDF: 2636719.1/44

All: 2112.000 $\pm$ 0.217  $\chi^2$ /NDF: 4498211.7/84



# asym\_sam5\_mean vs Slug, Sign Corrected



Right In: -124.338 $\pm$ 313.734  $\chi^2/\text{NDF}$ : 16.8/16

Left Out: 600.005 $\pm$ 234.968  $\chi^2/\text{NDF}$ : 18.5/24

Right Out: -454.954 $\pm$ 283.109  $\chi^2/\text{NDF}$ : 25.7/19

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

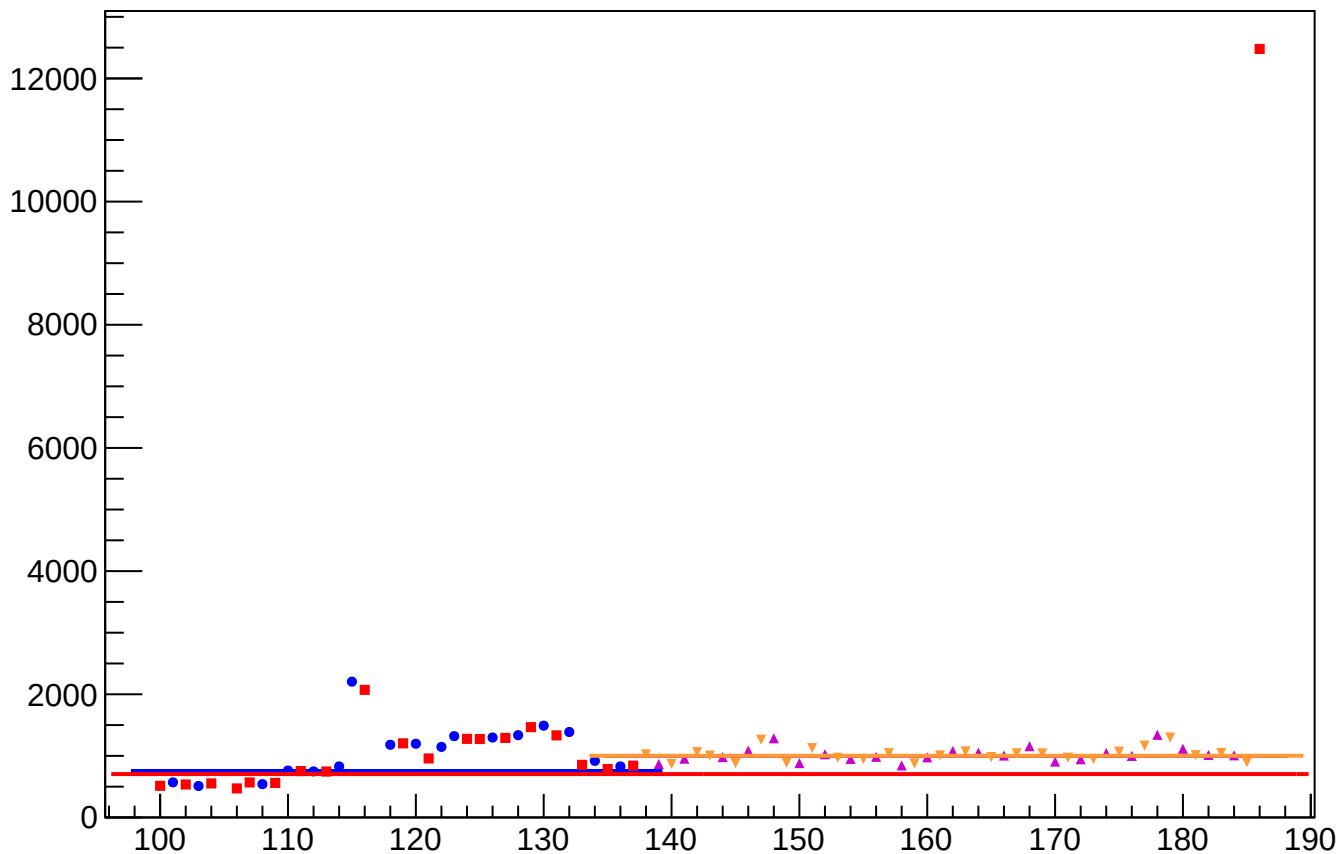
Right: -306.566 $\pm$ 210.184  $\chi^2/\text{NDF}$ : 43.1/36

In: -72.248 $\pm$ 191.025  $\chi^2/\text{NDF}$ : 53.2/39

Out: 169.716 $\pm$ 180.807  $\chi^2/\text{NDF}$ : 52.4/44

All: 55.378 $\pm$ 131.314  $\chi^2/\text{NDF}$ : 106.4/84

# asym\_sam5\_rms vs Slug, Sign Corrected



Right In: 754.219+/-0.222  $\chi^2/\text{NDF}$ : 1689131.5/16

Left Out: 1001.472+/-0.166  $\chi^2/\text{NDF}$ : 370299.3/24

Right Out: 704.299+/-0.200  $\chi^2/\text{NDF}$ : 2342699.1/19

Left In: 998.050+/-0.170  $\chi^2/\text{NDF}$ : 404656.2/22

Left: 999.803+/-0.119  $\chi^2/\text{NDF}$ : 775162.3/47

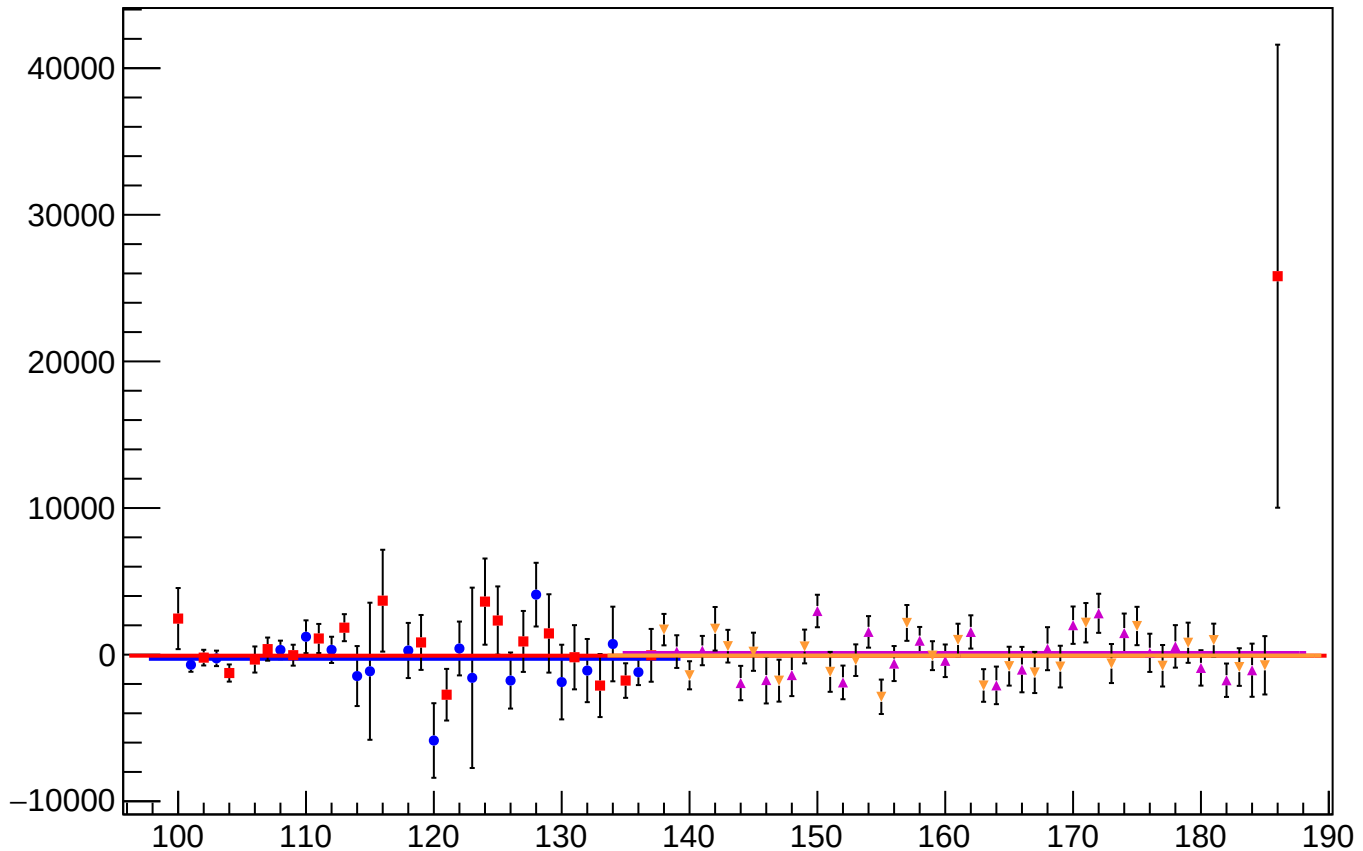
Right: 726.704+/-0.149  $\chi^2/\text{NDF}$ : 4059740.0/36

In: 907.655+/-0.135  $\chi^2/\text{NDF}$ : 2853979.8/39

Out: 880.263+/-0.128  $\chi^2/\text{NDF}$ : 4017835.9/44

All: 893.207+/-0.093  $\chi^2/\text{NDF}$ : 6893507.8/84

# asym\_sam6\_mean vs Slug, Sign Corrected



Right In: -283.172 $\pm$ 250.683  $\chi^2$ /NDF: 15.8/16

Left Out: -59.827 $\pm$ 246.503  $\chi^2$ /NDF:31.0/24

Right Out: -71.299 $\pm$ 246.181  $\chi^2$ /NDF: 24.3/19

Left In: 112.398 $\pm$ 255.409  $\chi^2$ /NDF:34.9/22

Left: 23.230 $\pm$ 177.369  $\chi^2$ /NDF: 66.1/47

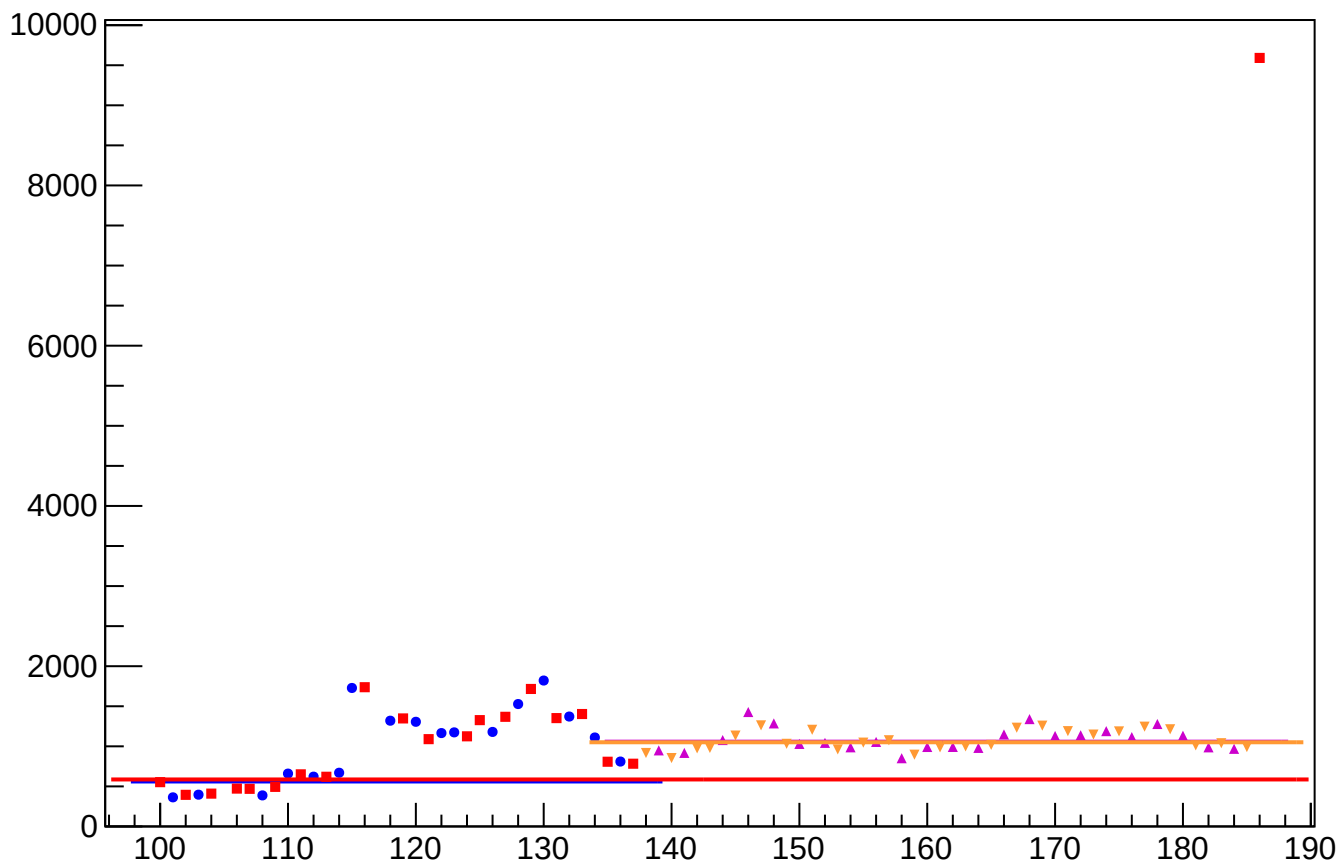
Right: -175.316 $\pm$ 175.646  $\chi^2$ /NDF: 40.4/36

In: -89.081 $\pm$ 178.907  $\chi^2$ /NDF:51.9/39

Out: -65.571 $\pm$ 174.190  $\chi^2$ /NDF:55.2/44

All: -77.012 $\pm$ 124.805  $\chi^2$ /NDF: 107.1/84

## asym\_sam6\_rms vs Slug, Sign Corrected



Right In: 561.319+/-0.177     $\chi^2/\text{NDF}$ : 3211255.9/16

Left Out: 1050.649+/-0.174     $\chi^2/\text{NDF}$ :483144.2/24

Right Out:  $586.534 \pm 0.174$      $\chi^2/\text{NDF}$ : 3464132.4/19

Left In: 1058.097+/-0.181     $\chi^2/\text{NDF}$ :528574.7/22

Left:  $1054.241 \pm 0.125$      $\chi^2/\text{NDF}$ : 1012599.4/47

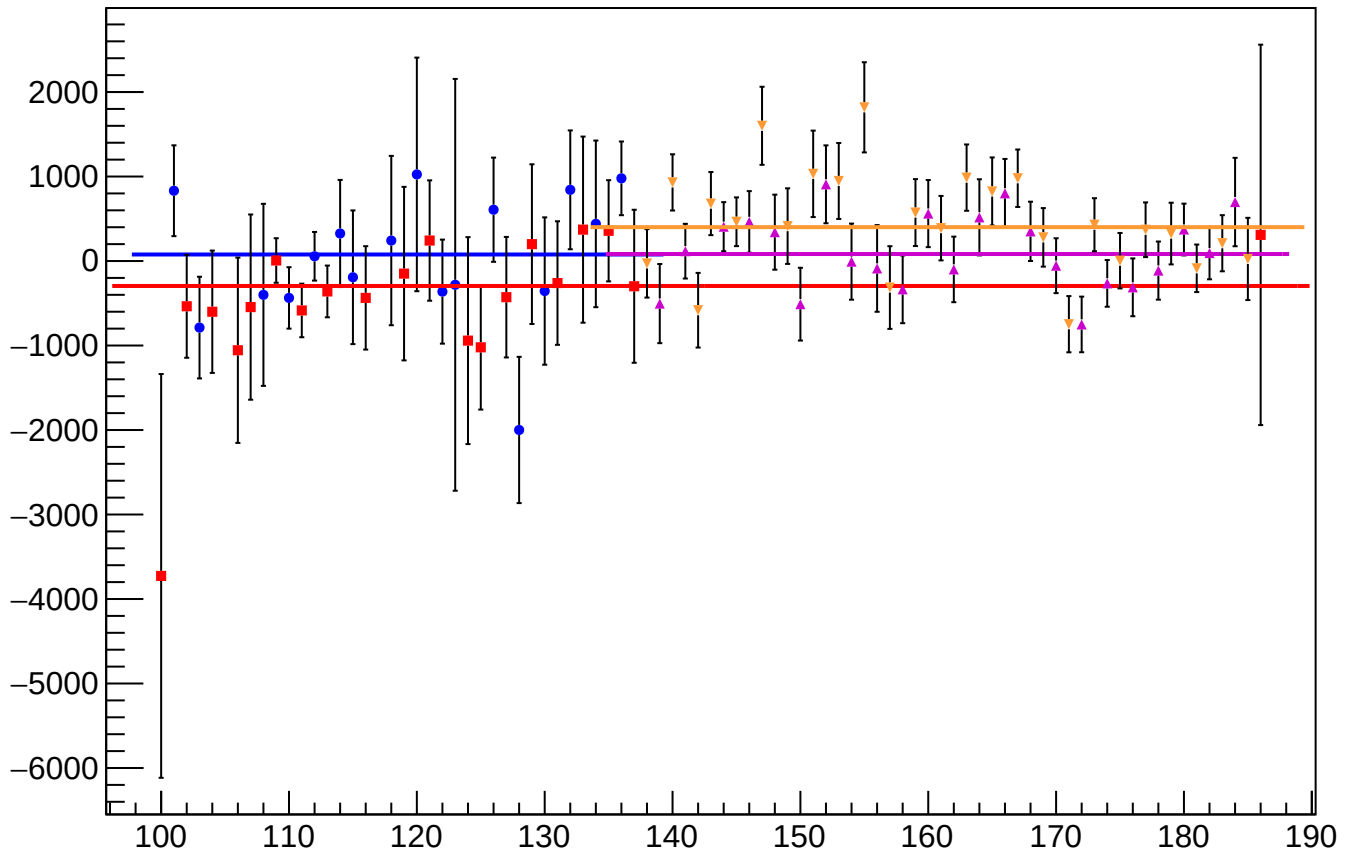
Right: 574.155+/-0.124     $\chi^2/\text{NDF}$ : 6685688.9/36

In: 805.069+/-0.127     $\chi^2/\text{NDF}$ :7593612.5/39

Out: 818.288+/-0.123     $\chi^2/\text{NDF}$ :7496832.0/44

All:  $811.855 \pm 0.088$      $\chi^2/\text{NDF}$ : 15096049.8/8

# asym\_sam7\_mean vs Slug, Sign Corrected



Right In: 77.417 $\pm$ 143.270  $\chi^2$ /NDF: 19.9/16

Left Out: 400.988 $\pm$ 74.546  $\chi^2$ /NDF: 52.1/24

Right Out: -295.198 $\pm$ 129.599  $\chi^2$ /NDF: 9.0/19

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

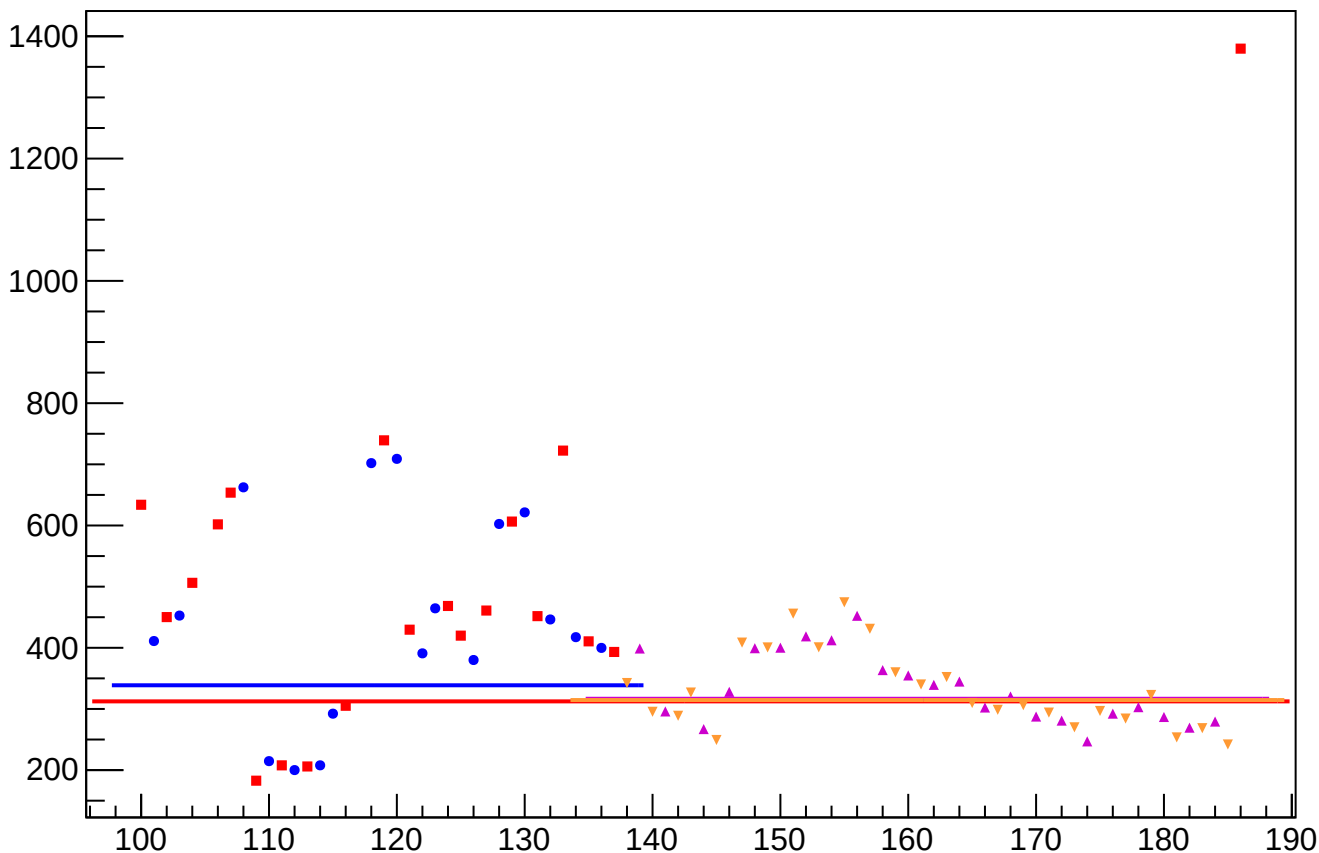
Right: -127.512 $\pm$ 96.111  $\chi^2$ /NDF: 32.5/36

In: 81.666 $\pm$ 67.759  $\chi^2$ /NDF: 48.9/39

Out: 227.909 $\pm$ 64.619  $\chi^2$ /NDF: 82.7/44

All: 158.255 $\pm$ 46.763  $\chi^2$ /NDF: 134.0/84

# asym\_sam7\_rms vs Slug, Sign Corrected



Right In: 338.706+/-0.101  $\chi^2/\text{NDF}$ : 2007568.0/16

Left Out: 314.538+/-0.053  $\chi^2/\text{NDF}$ : 1112445.6/24

Right Out: 312.383+/-0.092  $\chi^2/\text{NDF}$ : 3183873.4/19

Left In: 316.647+/-0.054  $\chi^2/\text{NDF}$ : 920874.0/22

Left: 315.560+/-0.038  $\chi^2/\text{NDF}$ : 2034094.8/47

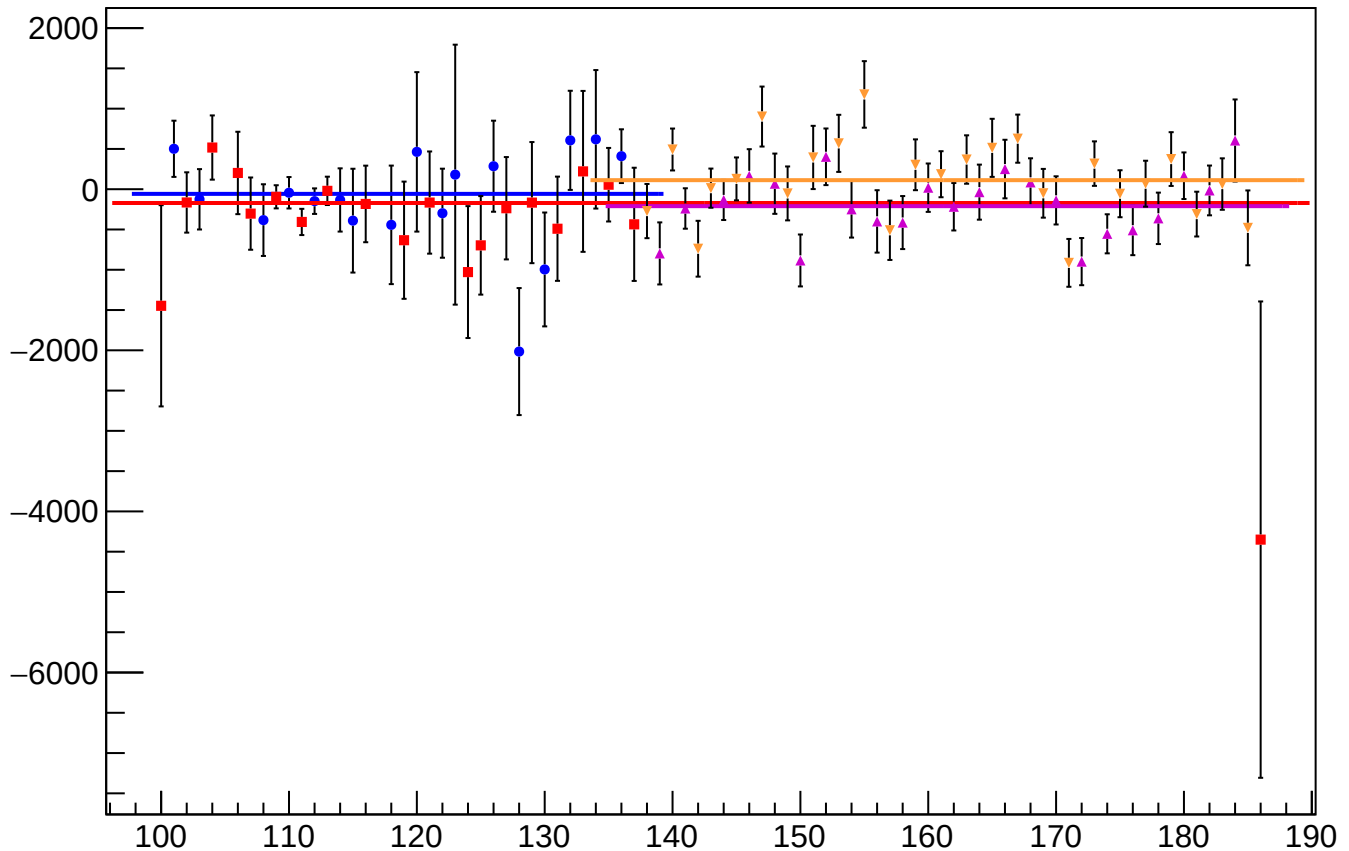
Right: 324.229+/-0.068  $\chi^2/\text{NDF}$ : 5228571.8/36

In: 321.581+/-0.048  $\chi^2/\text{NDF}$ : 2965249.4/39

Out: 314.002+/-0.046  $\chi^2/\text{NDF}$ : 4296734.7/44

All: 317.612+/-0.033  $\chi^2/\text{NDF}$ : 7275086.6/84

# asym\_sam8\_mean vs Slug, Sign Corrected



Right In:  $-57.851 \pm 90.694$   $\chi^2/\text{NDF}$ : 16.6/16

Left Out:  $112.242 \pm 62.643$   $\chi^2/\text{NDF}$ : 49.1/24

Right Out:  $-171.155 \pm 76.942$   $\chi^2/\text{NDF}$ : 12.8/19

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

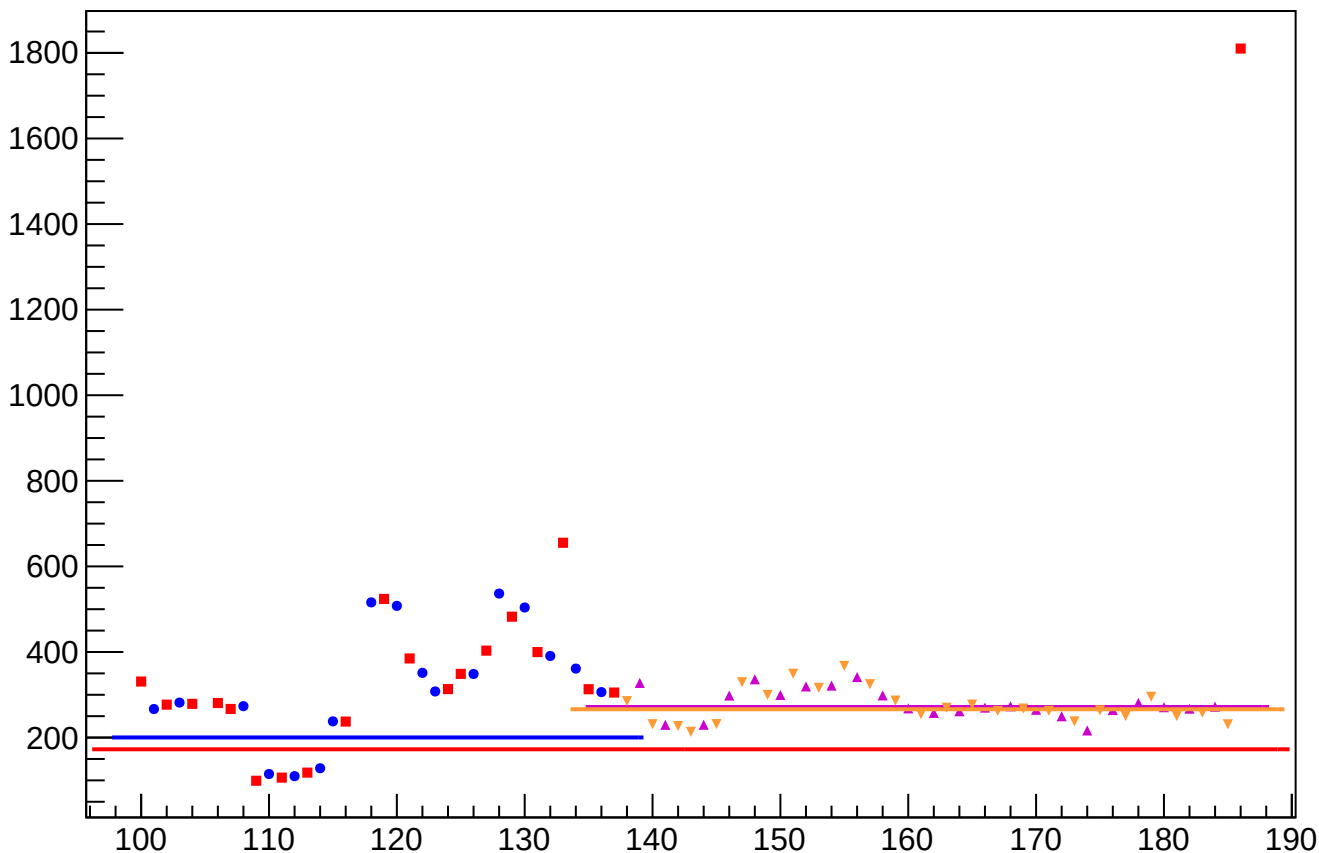
Right:  $-123.736 \pm 58.672$   $\chi^2/\text{NDF}$ : 30.3/36

In:  $-158.132 \pm 53.105$   $\chi^2/\text{NDF}$ : 47.6/39

Out:  $-0.728 \pm 48.579$   $\chi^2/\text{NDF}$ : 70.1/44

All:  $-72.437 \pm 35.844$   $\chi^2/\text{NDF}$ : 122.5/84

# asym\_sam8\_rms vs Slug, Sign Corrected



Right In: 200.283 $\pm$ 0.064  $\chi^2$ /NDF: 3381863.8/16

Left Out: 266.207 $\pm$ 0.044  $\chi^2$ /NDF: 649629.9/24

Right Out: 172.656 $\pm$ 0.054  $\chi^2$ /NDF: 4697030.3/19

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: 184.219 $\pm$ 0.041  $\chi^2$ /NDF: 8186808.3/36

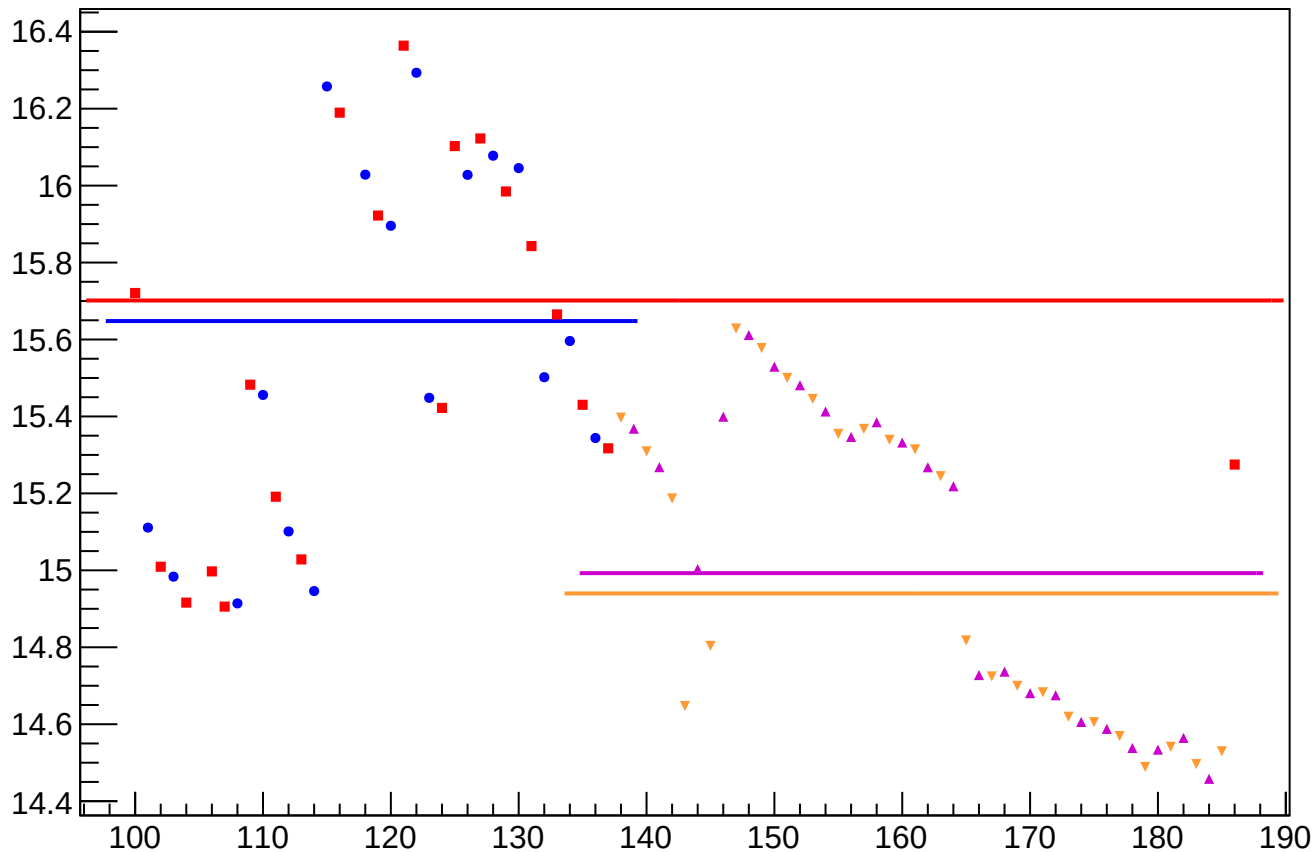
In: 247.027 $\pm$ 0.038  $\chi^2$ /NDF: 4712185.9/39

Out: 228.915 $\pm$ 0.034  $\chi^2$ /NDF: 7124712.3/44

All: 237.166 $\pm$ 0.025  $\chi^2$ /NDF: 11963548.8/84



# yield\_sam1\_mean vs Slug, Sign Corrected



Right In: 15.648 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 5445005645.2/16

Left Out: 14.940 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 24199653913.9/24

Right Out: 15.701 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 5137705689.4/19

Left In: 14.993 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 22023159634.7/22

Left: 14.965 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 46444749587.5/47

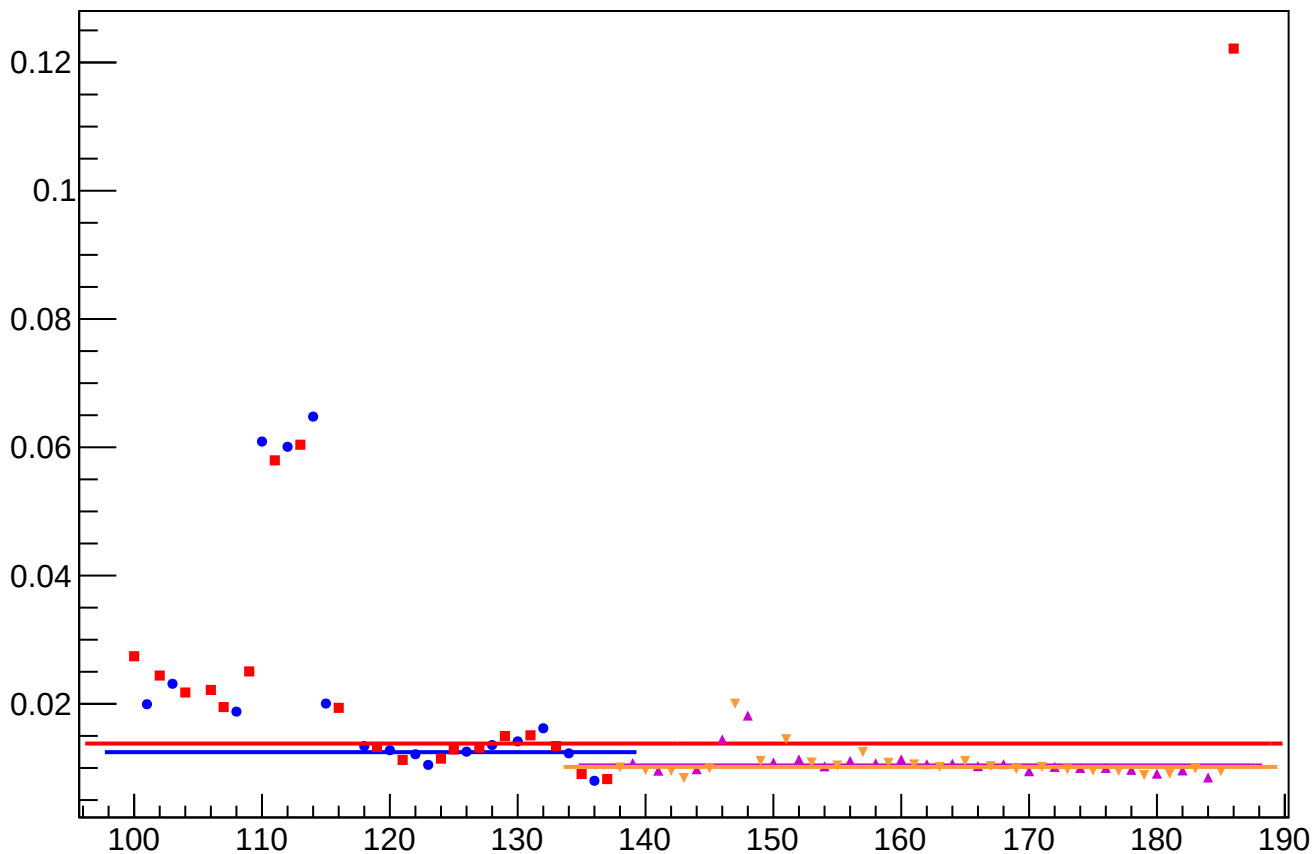
Right: 15.673 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 10626842470.4/36

In: 15.110 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 39136485627.9/39

Out: 15.052 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 43610765181.4/44

All: 15.080 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 83065087658.5

# yield\_sam1\_rms vs Slug, Sign Corrected



Right In: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 2144984.5/16

Left Out: 0.010+/-0.000  $\chi^2/\text{NDF}$ : 717351.4/24

Right Out: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 2643067.5/19

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

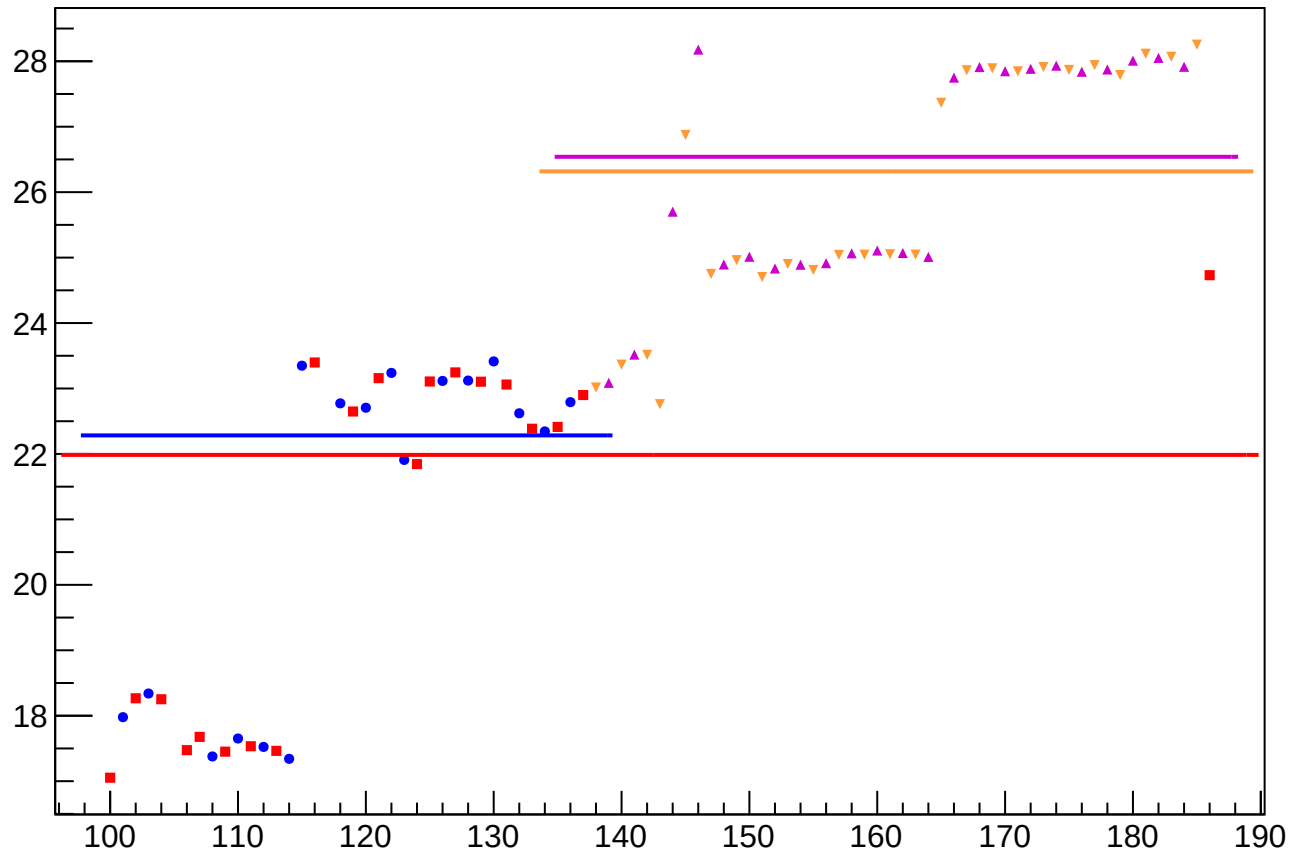
Right: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 4843511.8/36

In: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 2921945.0/39

Out: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 4014175.4/44

All: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 6936984.0/84

# yield\_sam2\_mean vs Slug, Sign Corrected



Right In: 22.283+/-0.000  $\chi^2/\text{NDF}$ : 929007366.8/16

Left Out: 26.318+/-0.000  $\chi^2/\text{NDF}$ : 4715403741.0/24

Right Out: 21.985+/-0.000  $\chi^2/\text{NDF}$ : 1058651860.5/19

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

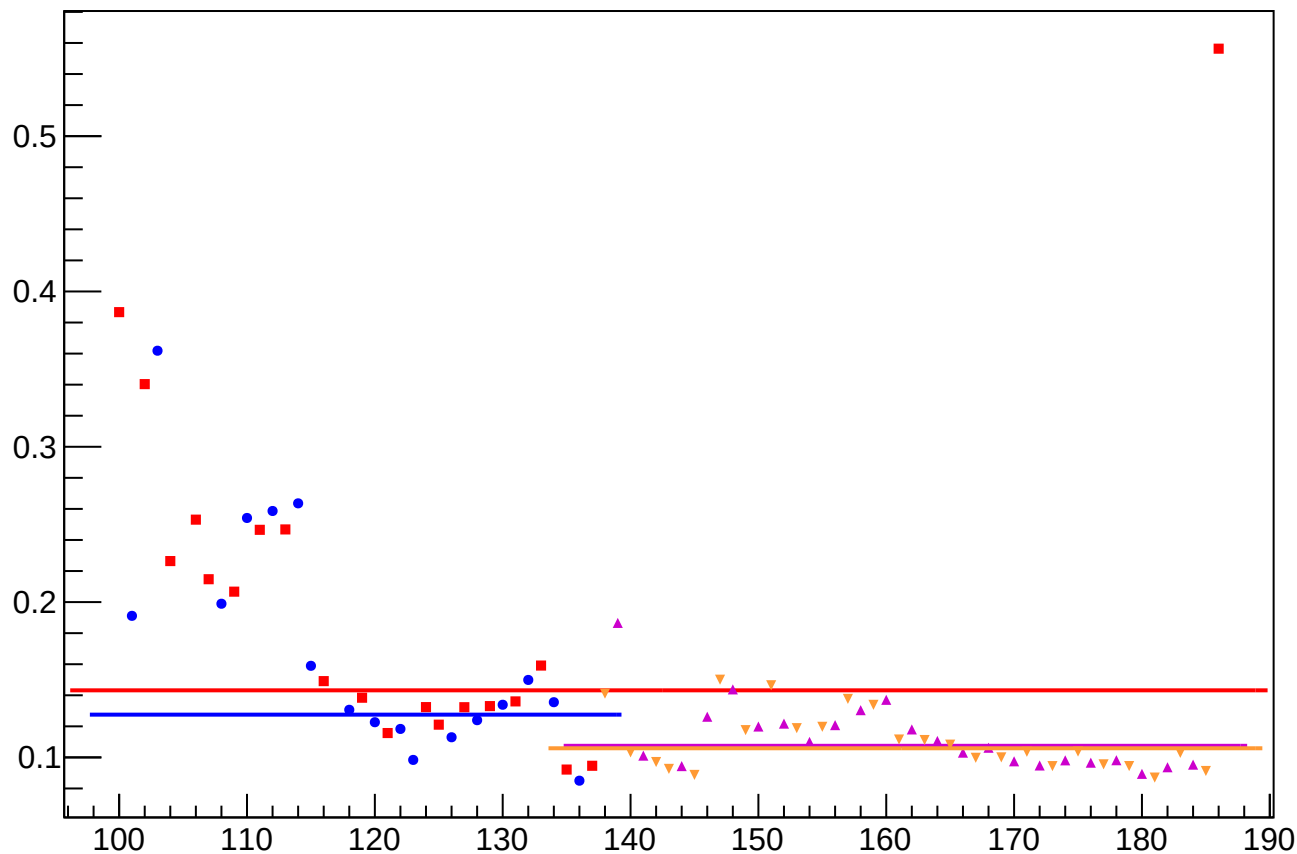
Right: 22.143+/-0.000  $\chi^2/\text{NDF}$ : 2000609070.8/36

In: 25.717+/-0.000  $\chi^2/\text{NDF}$ : 8776287471.6/39

Out: 25.609+/-0.000  $\chi^2/\text{NDF}$ : 10102465071.6/44

All: 25.662+/-0.000  $\chi^2/\text{NDF}$ : 18888388385.0

# yield\_sam2\_rms vs Slug, Sign Corrected



Right In: 0.128+/-0.000  $\chi^2/\text{NDF}$ : 1490198.9/16

Left Out: 0.106+/-0.000  $\chi^2/\text{NDF}$ : 732883.8/24

Right Out: 0.143+/-0.000  $\chi^2/\text{NDF}$ : 1854767.8/19

Left In: 0.107+/-0.000  $\chi^2/\text{NDF}$ : 771132.0/22

Left: 0.107+/-0.000  $\chi^2/\text{NDF}$ : 1507414.2/47

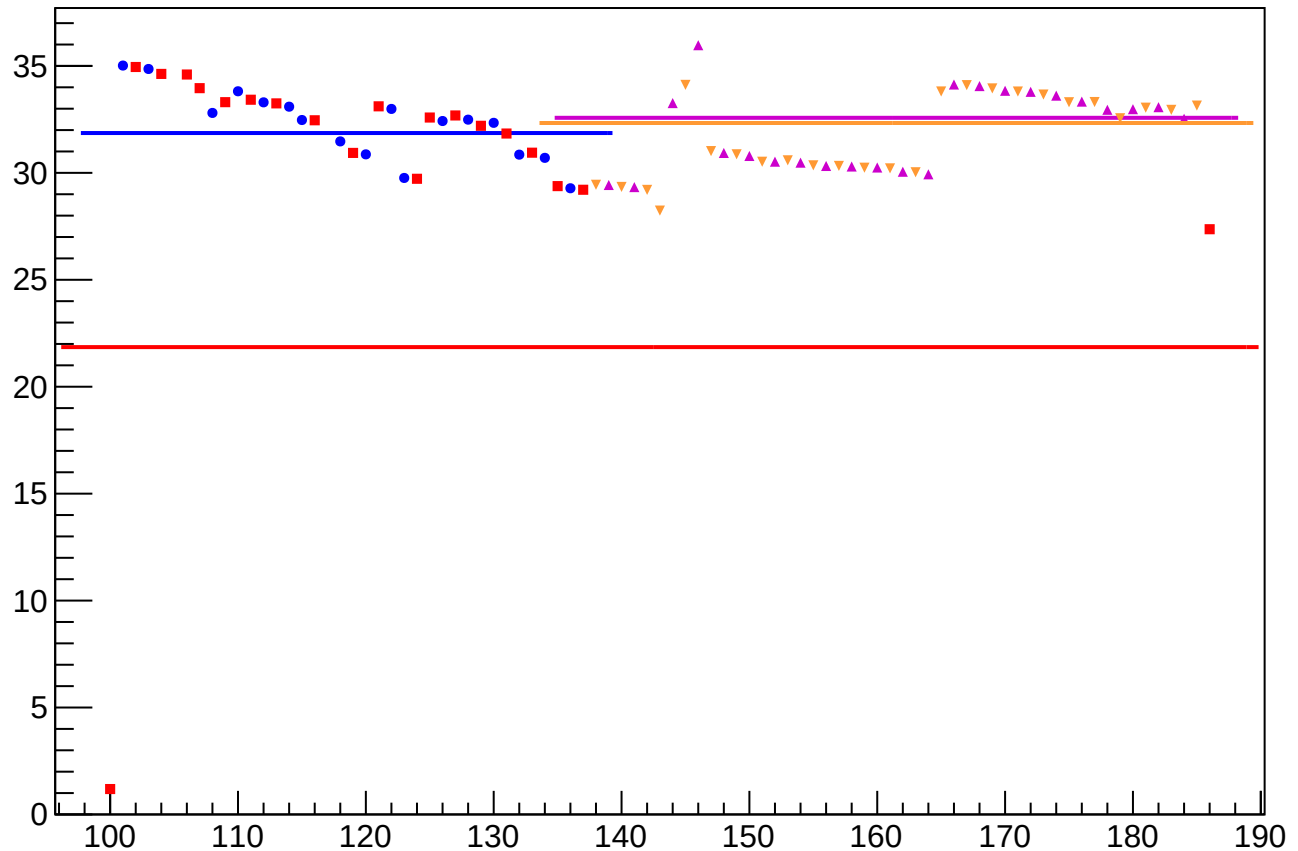
Right: 0.135+/-0.000  $\chi^2/\text{NDF}$ : 3416509.8/36

In: 0.111+/-0.000  $\chi^2/\text{NDF}$ : 2463020.3/39

Out: 0.112+/-0.000  $\chi^2/\text{NDF}$ : 3229619.2/44

All: 0.112+/-0.000  $\chi^2/\text{NDF}$ : 5693303.4/84

# yield\_sam3\_mean vs Slug, Sign Corrected



Right In: 31.862 $\pm$ 0.000  $\chi^2$ /NDF: 1902439059.8/16

Left Out: 32.331 $\pm$ 0.000  $\chi^2$ /NDF: 12850475096.2/24

Right Out: 21.852 $\pm$ 0.000  $\chi^2$ /NDF: 229271466327.8/19

Left In: 32.574 $\pm$ 0.000  $\chi^2$ /NDF: 11797772603.7/22

Left: 32.450 $\pm$ 0.000  $\chi^2$ /NDF: 24766521375.8/47

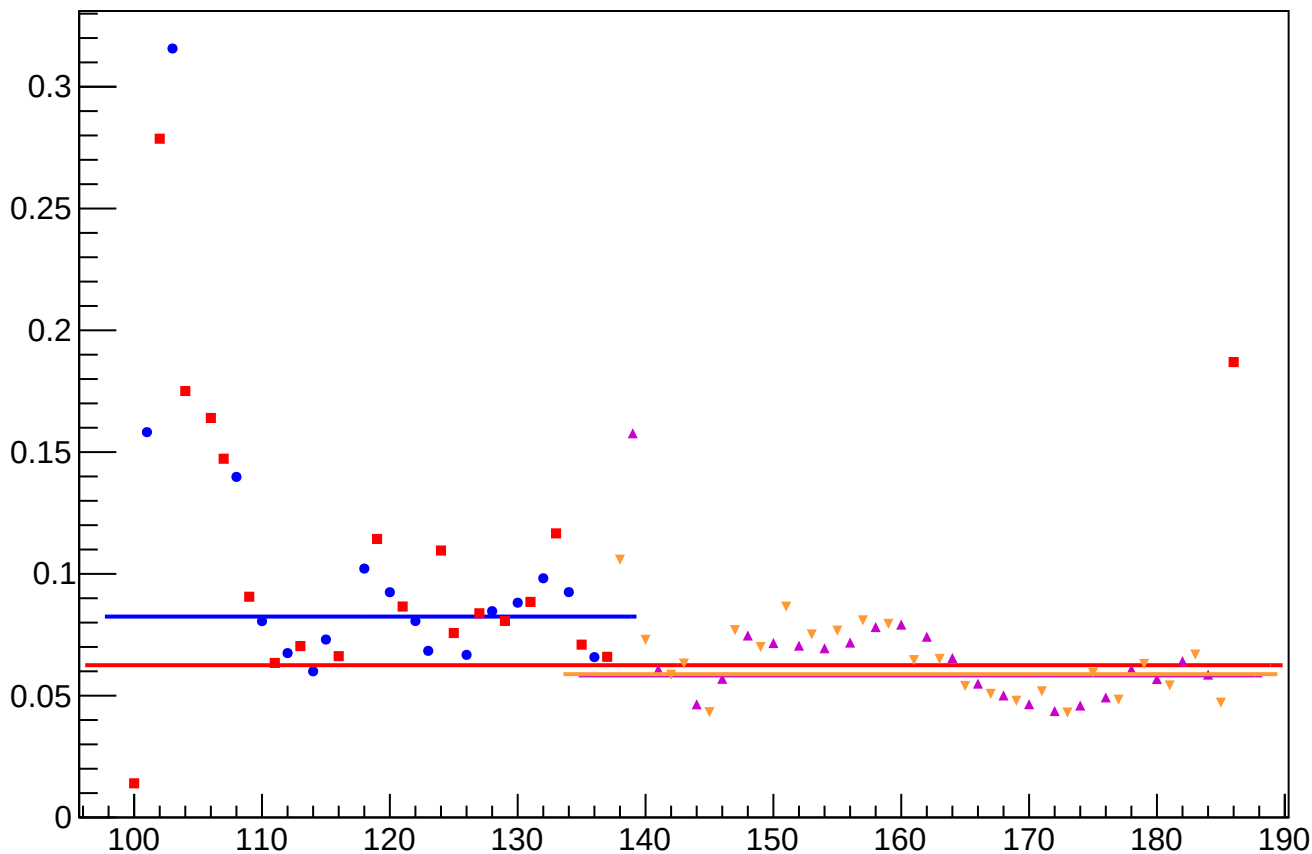
Right: 25.870 $\pm$ 0.000  $\chi^2$ /NDF: 274239231394.5/36

In: 32.464 $\pm$ 0.000  $\chi^2$ /NDF: 14008114012.7/39

Out: 30.159 $\pm$ 0.000  $\chi^2$ /NDF: 335336705435.8/44

All: 31.249 $\pm$ 0.000  $\chi^2$ /NDF: 362323979382.0

# yield\_sam3\_rms vs Slug, Sign Corrected



Right In: 0.082+/-0.000  $\chi^2/\text{NDF}$ : 1182597.0/16

Left Out: 0.059+/-0.000  $\chi^2/\text{NDF}$ : 1402605.2/24

Right Out: 0.063+/-0.000  $\chi^2/\text{NDF}$ : 3932823.6/19

Left In: 0.058+/-0.000  $\chi^2/\text{NDF}$ : 1525476.4/22

Left: 0.059+/-0.000  $\chi^2/\text{NDF}$ : 2929140.7/47

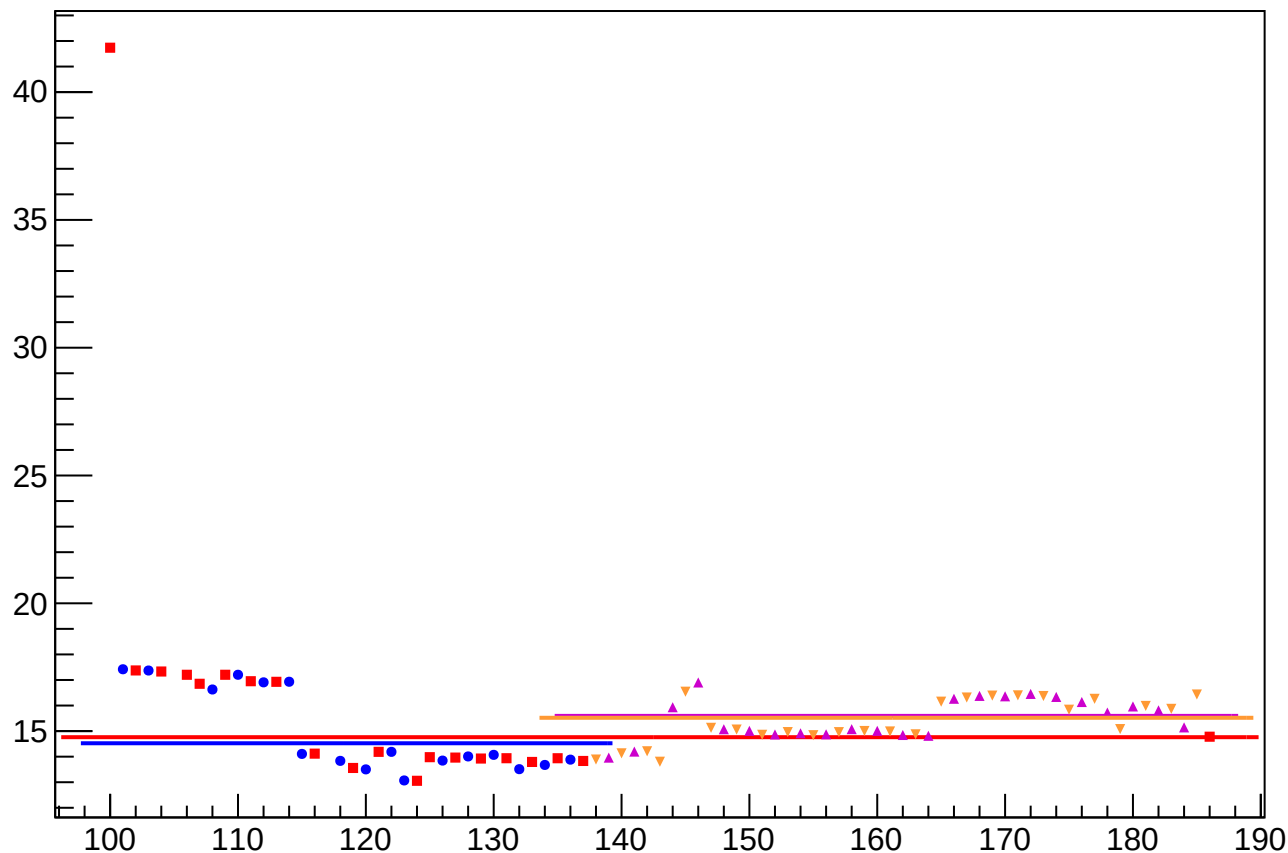
Right: 0.071+/-0.000  $\chi^2/\text{NDF}$ : 5458038.2/36

In: 0.062+/-0.000  $\chi^2/\text{NDF}$ : 3416466.4/39

Out: 0.060+/-0.000  $\chi^2/\text{NDF}$ : 5358431.9/44

All: 0.061+/-0.000  $\chi^2/\text{NDF}$ : 8804565.9/84

# yield\_sam4\_mean vs Slug, Sign Corrected



Right In: 14.524+/-0.000  $\chi^2/\text{NDF}$ : 1485492036.5/16

Left Out: 15.521+/-0.000  $\chi^2/\text{NDF}$ : 2591377740.5/24

Right Out: 14.762+/-0.000  $\chi^2/\text{NDF}$ : 1903089577.9/19

Left In: 15.595+/-0.000  $\chi^2/\text{NDF}$ : 1908733580.5/22

Left: 15.557+/-0.000  $\chi^2/\text{NDF}$ : 4510008259.4/47

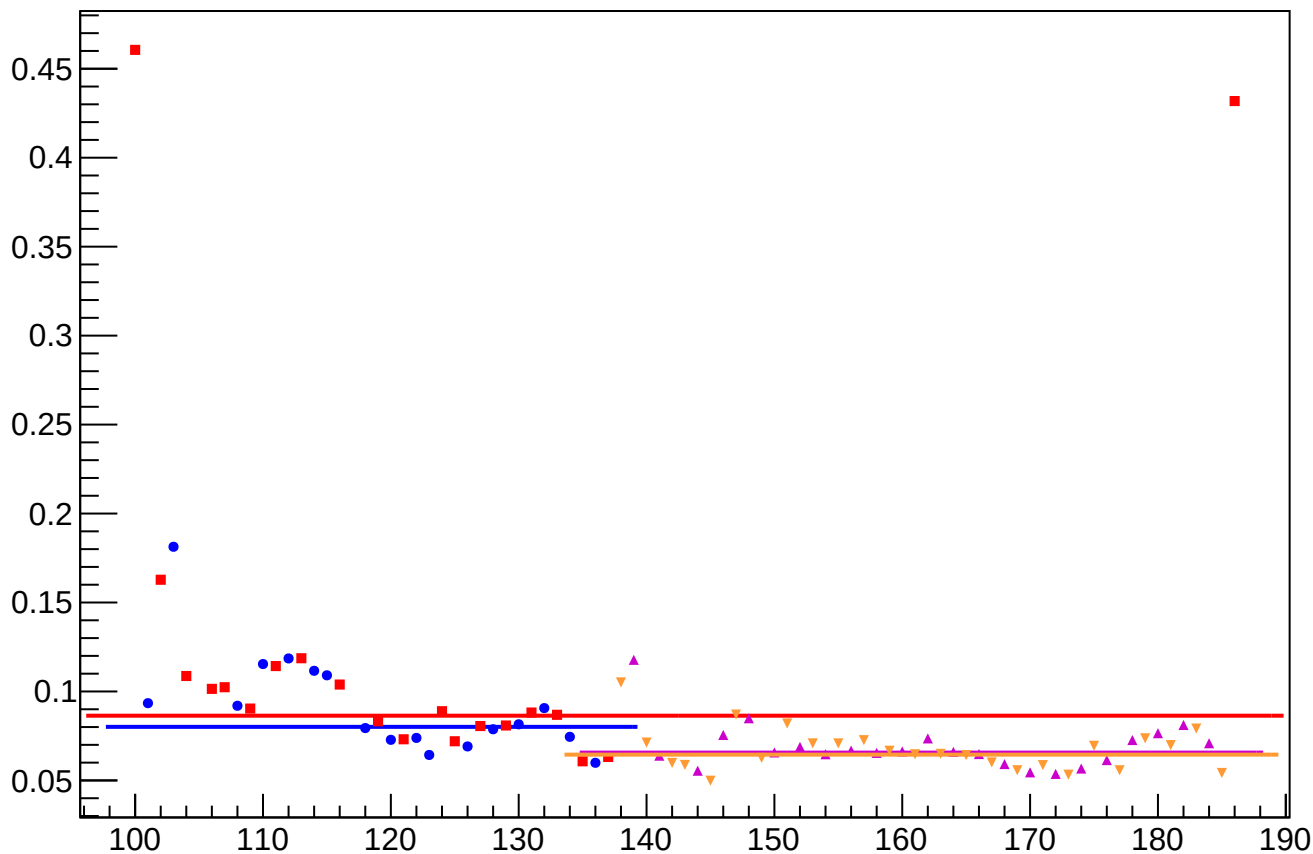
Right: 14.639+/-0.000  $\chi^2/\text{NDF}$ : 3411967926.8/36

In: 15.381+/-0.000  $\chi^2/\text{NDF}$ : 4182070230.9/39

Out: 15.387+/-0.000  $\chi^2/\text{NDF}$ : 4875380076.2/44

All: 15.384+/-0.000  $\chi^2/\text{NDF}$ : 9057527107.2/86

# yield\_sam4\_rms vs Slug, Sign Corrected



Right In: 0.080+/-0.000  $\chi^2/\text{NDF}$ : 775791.3/16

Left Out: 0.064+/-0.000  $\chi^2/\text{NDF}$ : 761552.3/24

Right Out: 0.086+/-0.000  $\chi^2/\text{NDF}$ : 1203460.6/19

Left In: 0.066+/-0.000  $\chi^2/\text{NDF}$ : 714703.1/22

Left: 0.065+/-0.000  $\chi^2/\text{NDF}$ : 1481007.6/47

Right: 0.083+/-0.000  $\chi^2/\text{NDF}$ : 2011888.9/36

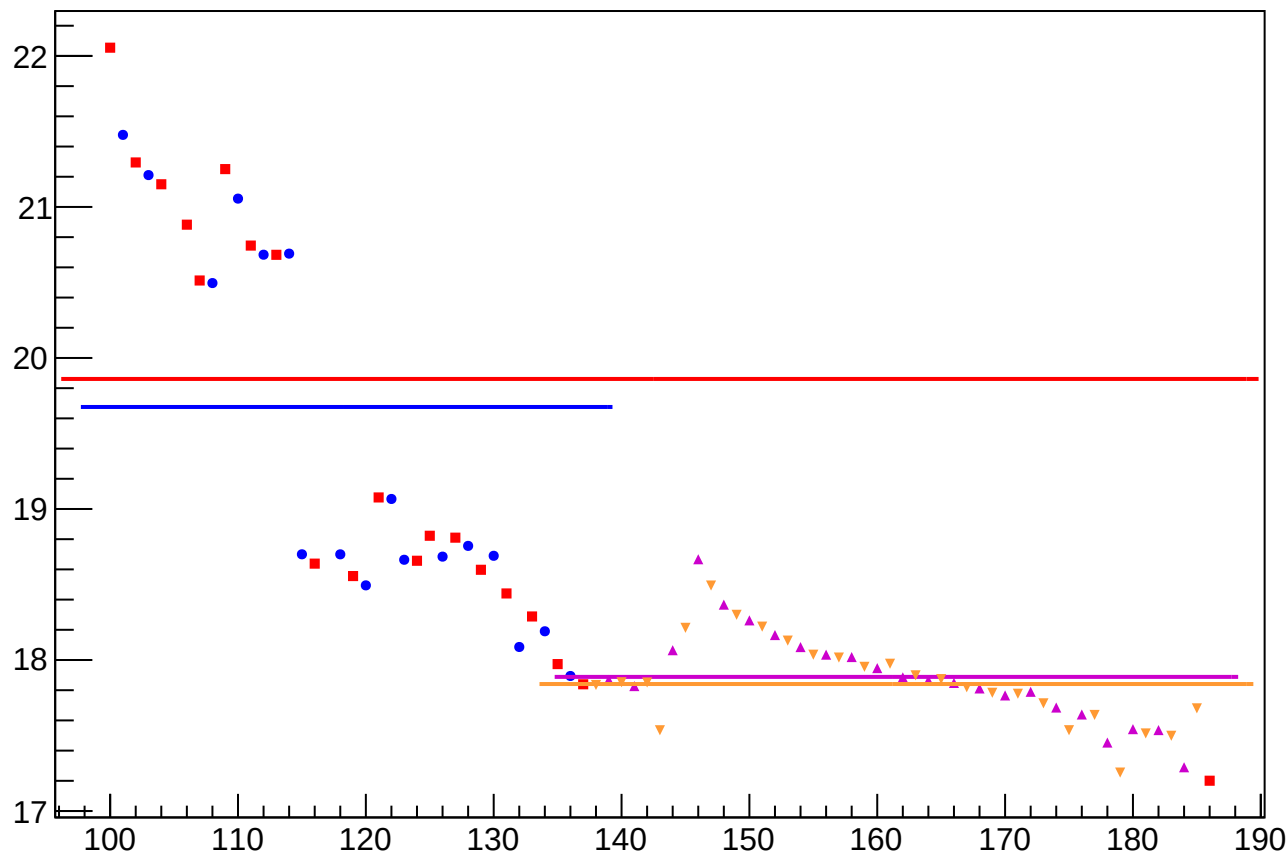
In: 0.069+/-0.000  $\chi^2/\text{NDF}$ : 1777970.3/39

Out: 0.068+/-0.000  $\chi^2/\text{NDF}$ : 2598330.4/44

All: 0.068+/-0.000  $\chi^2/\text{NDF}$ : 4376450.1/84



# yield\_sam5\_mean vs Slug, Sign Corrected



Right In: 19.676+/-0.000  $\chi^2/NDF$ : 12360927493.1/16

Left Out: 17.841+/-0.000  $\chi^2/NDF$ : 1283287989.7/24

Right Out: 19.861+/-0.000  $\chi^2/NDF$ : 11468190878.1/19

Left In: 17.888+/-0.000  $\chi^2/NDF$ : 1203002311.3/22

Left: 17.864+/-0.000  $\chi^2/NDF$ : 2506375288.6/47

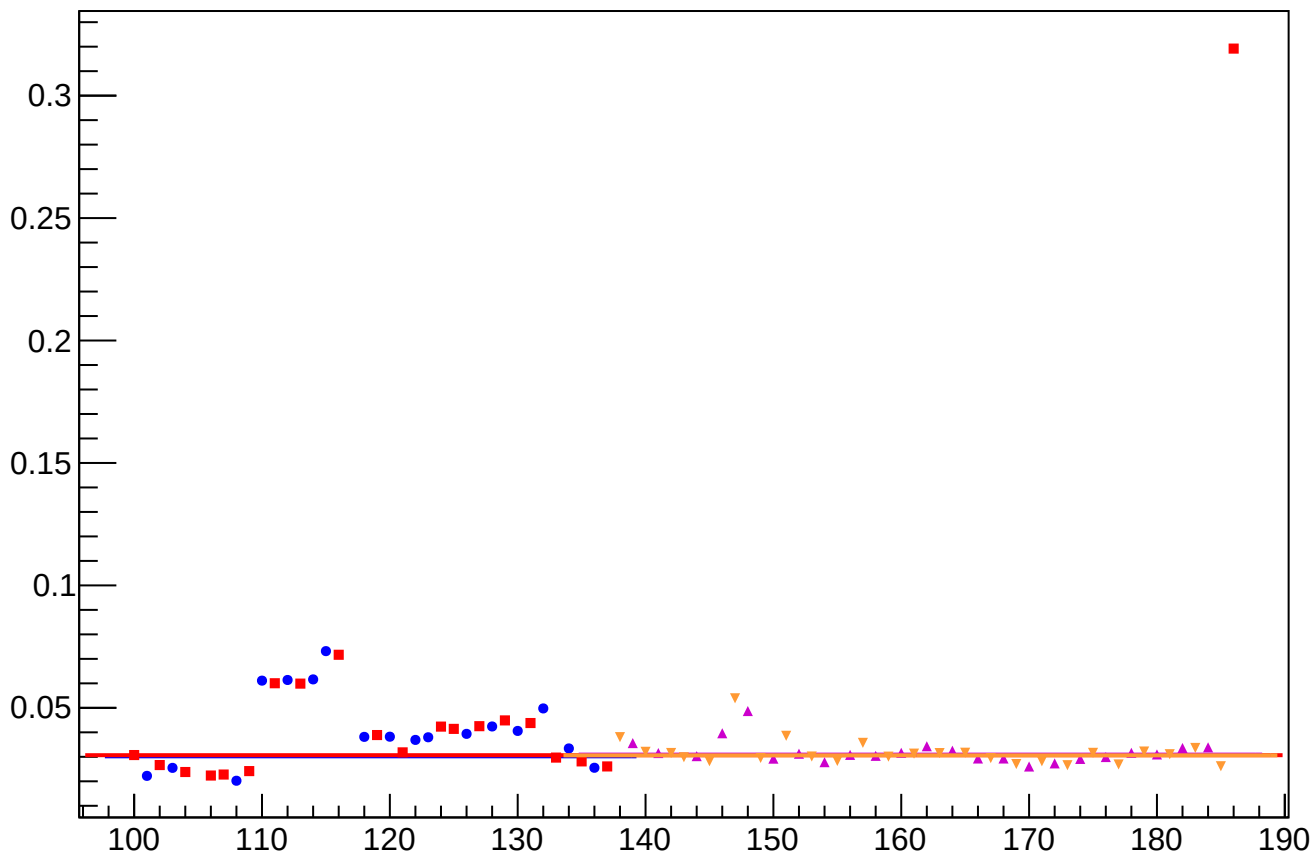
Right: 19.770+/-0.000  $\chi^2/NDF$ : 23936124617.0/36

In: 18.353+/-0.000  $\chi^2/NDF$ : 27992693401.7/39

Out: 18.353+/-0.000  $\chi^2/NDF$ : 32029953341.3/44

All: 18.353+/-0.000  $\chi^2/NDF$ : 60022647123.4

# yield\_sam5\_rms vs Slug, Sign Corrected



Right In: 0.030+/-0.000  $\chi^2/\text{NDF}$ : 1318915.0/16

Left Out: 0.031+/-0.000  $\chi^2/\text{NDF}$ :590475.6/24

Right Out: 0.031+/-0.000  $\chi^2/\text{NDF}$ : 1760460.0/19

Left In: 0.031+/-0.000  $\chi^2/\text{NDF}$ :453524.6/22

Left: 0.031+/-0.000  $\chi^2/\text{NDF}$ : 1045553.8/47

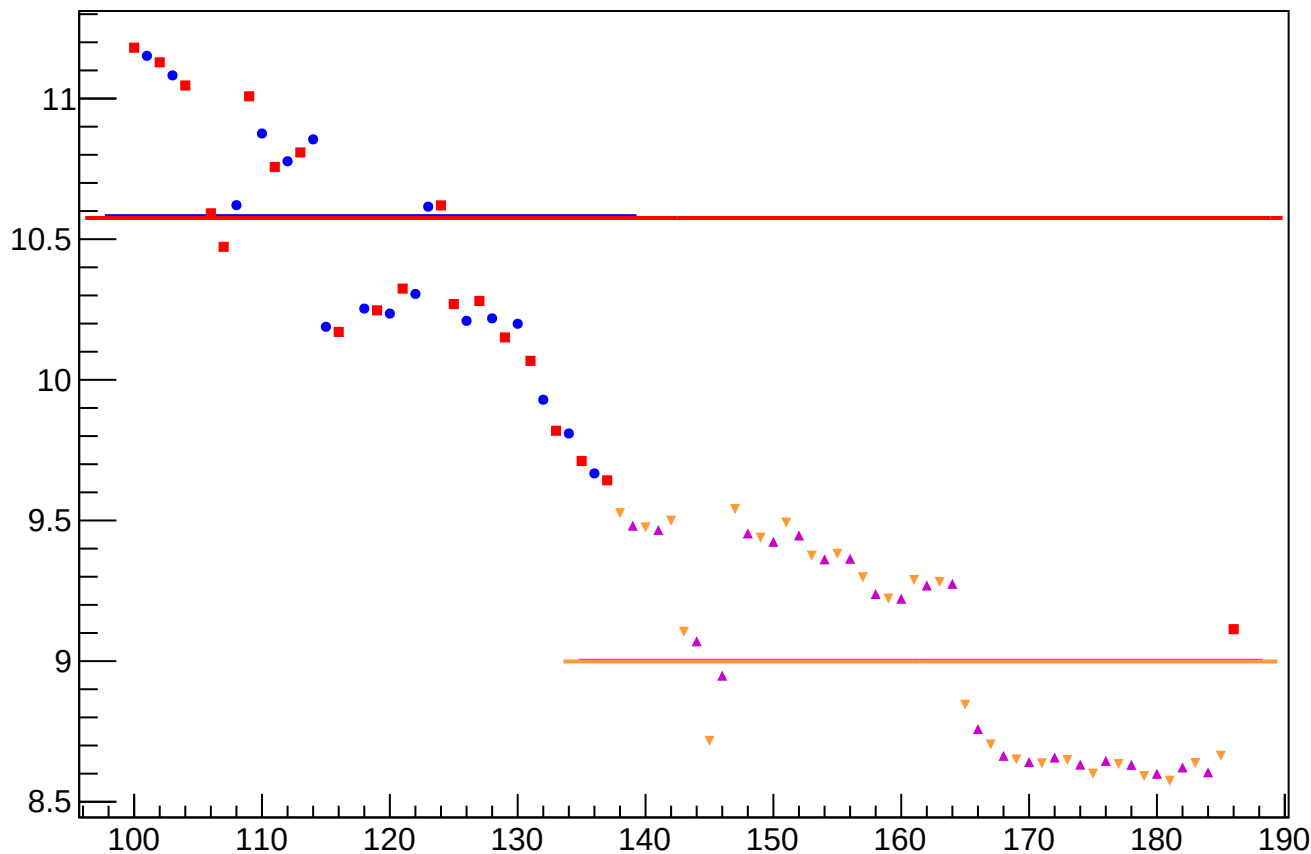
Right: 0.030+/-0.000  $\chi^2/\text{NDF}$ : 3080706.2/36

In: 0.031+/-0.000  $\chi^2/\text{NDF}$ :1776857.9/39

Out: 0.031+/-0.000  $\chi^2/\text{NDF}$ :2350966.8/44

All: 0.031+/-0.000  $\chi^2/\text{NDF}$ : 4128054.6/84

# yield\_sam6\_mean vs Slug, Sign Corrected



Right In: 10.582 $\pm$ 0.000  $\chi^2$ /NDF: 7496301993.4/16

Left Out: 8.999 $\pm$ 0.000  $\chi^2$ /NDF: 6392583736.5/24

Right Out: 10.575 $\pm$ 0.000  $\chi^2$ /NDF: 5875181569.9/19

Left In: 9.001 $\pm$ 0.000  $\chi^2$ /NDF: 5314536205.4/22

Left: 9.000 $\pm$ 0.000  $\chi^2$ /NDF: 11707260677.5/47

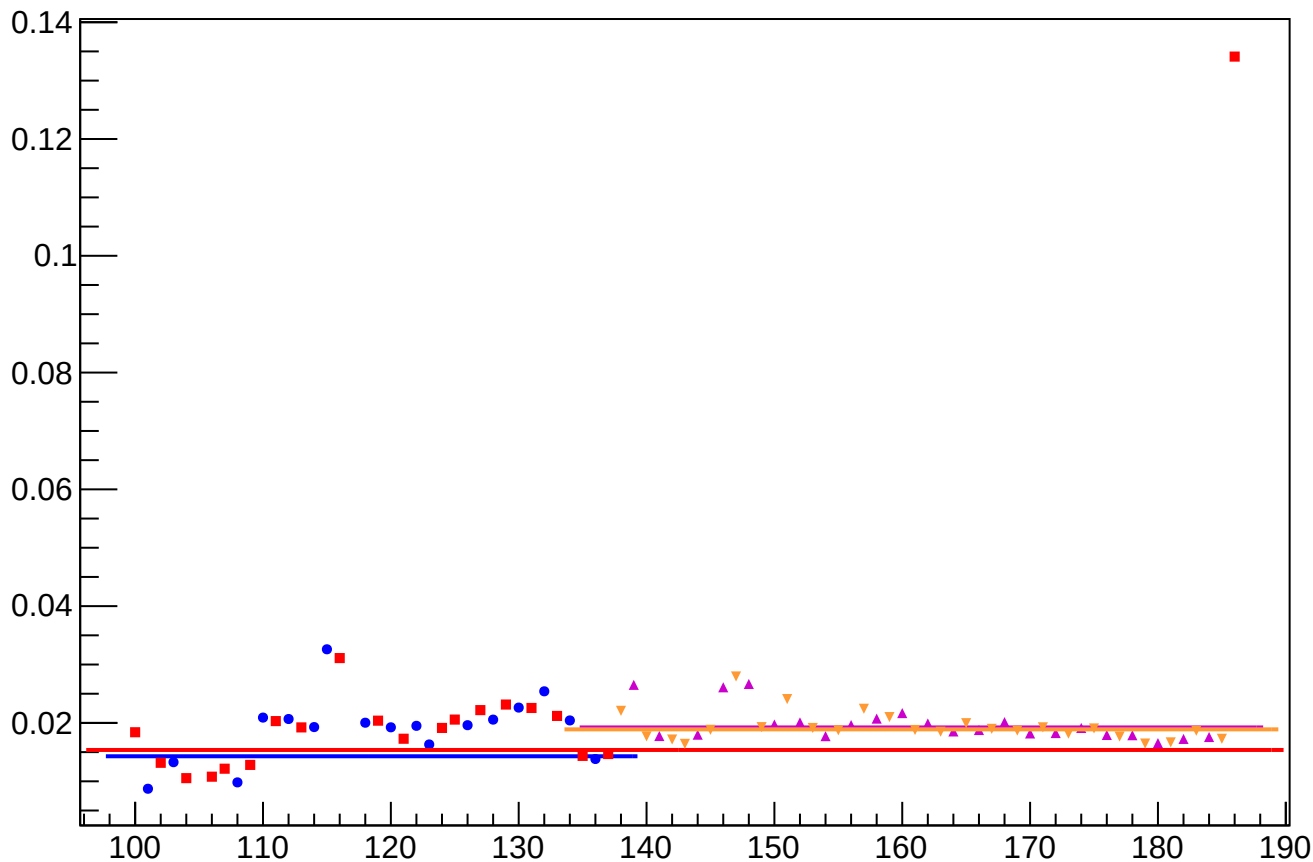
Right: 10.579 $\pm$ 0.000  $\chi^2$ /NDF: 13372026875.9/36

In: 9.599 $\pm$ 0.000  $\chi^2$ /NDF: 53255051659.7/39

Out: 9.550 $\pm$ 0.000  $\chi^2$ /NDF: 53100360703.2/44

All: 9.574 $\pm$ 0.000  $\chi^2$ /NDF: 106439943194.4

# yield\_sam6\_rms vs Slug, Sign Corrected



Right In: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 1401060.2/16

Left Out: 0.019+/-0.000  $\chi^2/\text{NDF}$ : 428169.5/24

Right Out: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 1551720.0/19

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

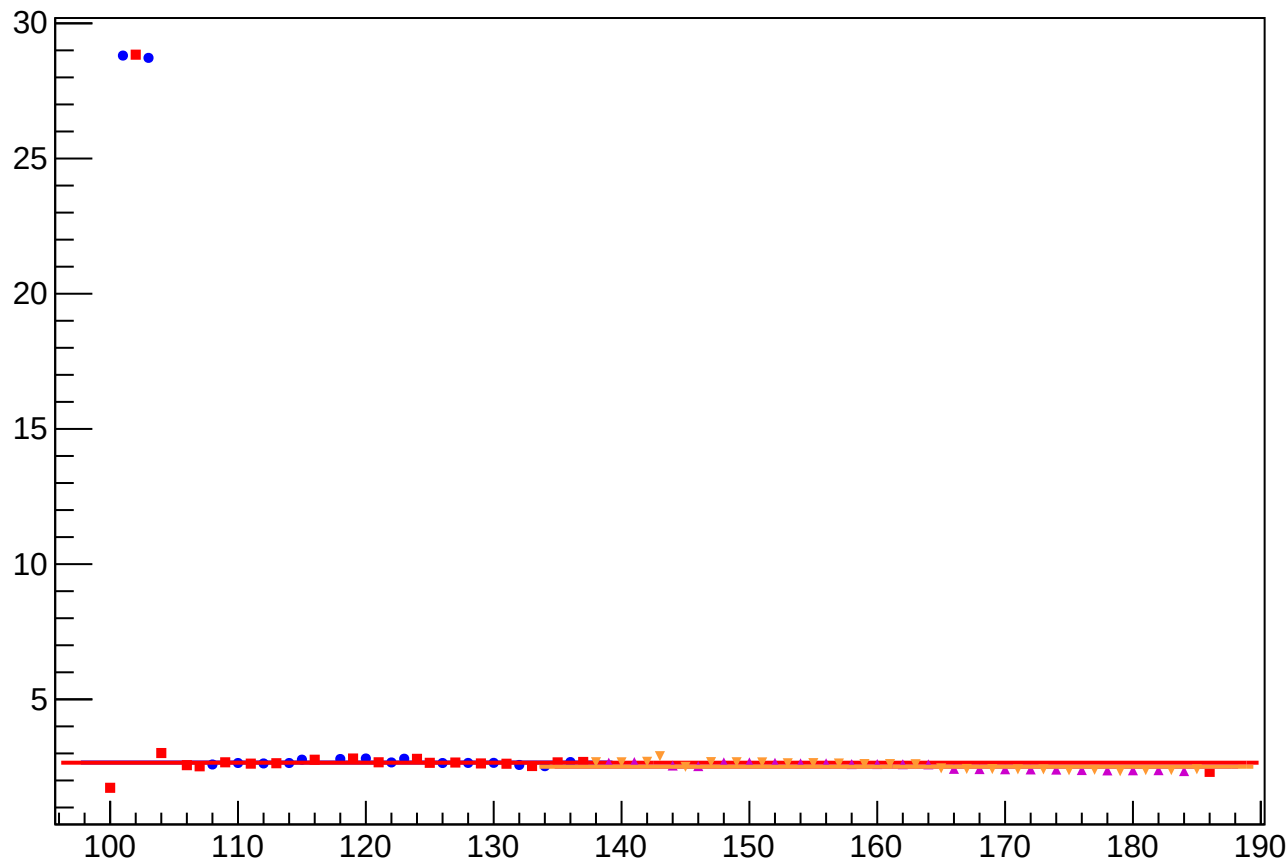
Right: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 2982639.4/36

In: 0.017+/-0.000  $\chi^2/\text{NDF}$ : 2671708.2/39

Out: 0.018+/-0.000  $\chi^2/\text{NDF}$ : 2389109.7/44

All: 0.018+/-0.000  $\chi^2/\text{NDF}$ : 5067376.1/84

# yield\_sam7\_mean vs Slug, Sign Corrected



Right In: 2.664 $\pm$ 0.000  $\chi^2$ /NDF: 163239224312.8/16

Left Out: 2.507 $\pm$ 0.000  $\chi^2$ /NDF: 64277969186.7/24

Right Out: 2.657 $\pm$ 0.000  $\chi^2$ /NDF: 72359130448.6/19

Left In: 2.505 $\pm$ 0.000  $\chi^2$ /NDF: 42893630742.5/22

Left: 2.506 $\pm$ 0.000  $\chi^2$ /NDF: 107174595641.7/47

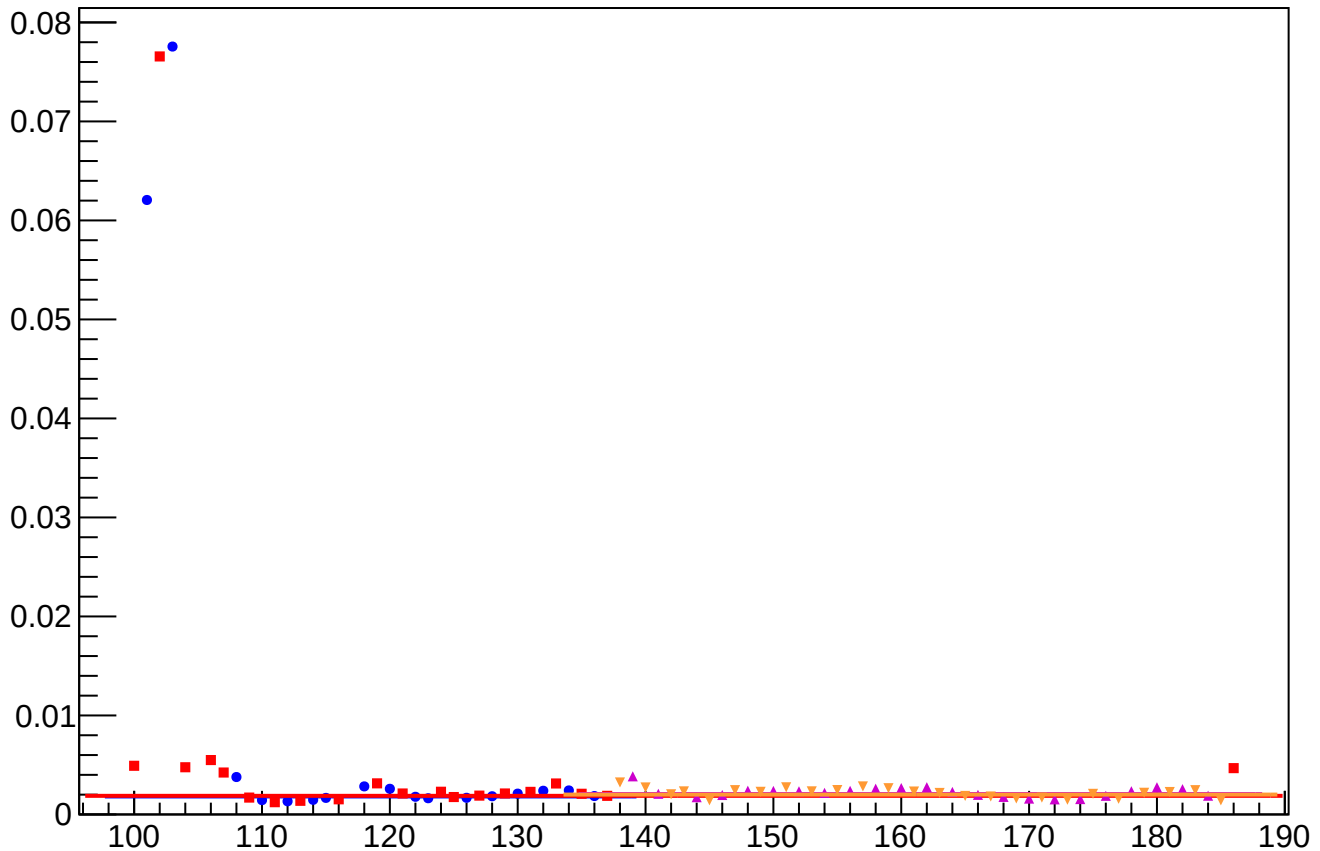
Right: 2.660 $\pm$ 0.000  $\chi^2$ /NDF: 235630399816.2/36

In: 2.551 $\pm$ 0.000  $\chi^2$ /NDF: 230136115004.3/39

Out: 2.549 $\pm$ 0.000  $\chi^2$ /NDF: 159801689086.8/44

All: 2.550 $\pm$ 0.000  $\chi^2$ /NDF: 389951563141.1

# yield\_sam7\_rms vs Slug, Sign Corrected



Right In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 2661214.8/16

Left Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ :1469103.5/24

Right Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 2586137.6/19

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

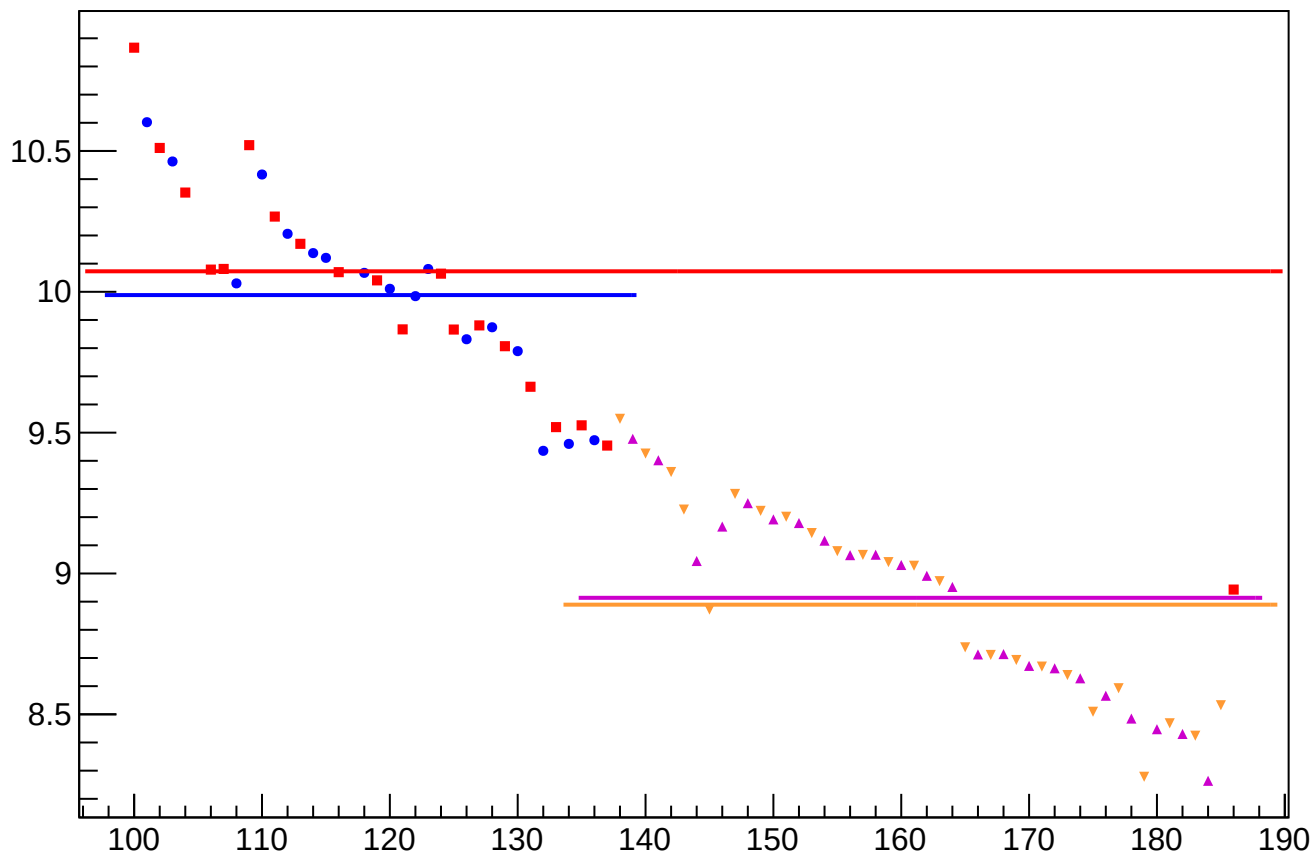
Right: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 5252715.9/36

In: 0.002+/-0.000  $\chi^2/\text{NDF}$ :4076054.0/39

Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ :4088246.6/44

All: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 8165903.2/84

# yield\_sam8\_mean vs Slug, Sign Corrected



Right In: 9.988 $\pm$ 0.000  $\chi^2$ /NDF: 19058102133.2/16

Left Out: 8.889 $\pm$ 0.000  $\chi^2$ /NDF: 34704694045.9/24

Right Out: 10.073 $\pm$ 0.000  $\chi^2$ /NDF: 16633305462.7/19

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

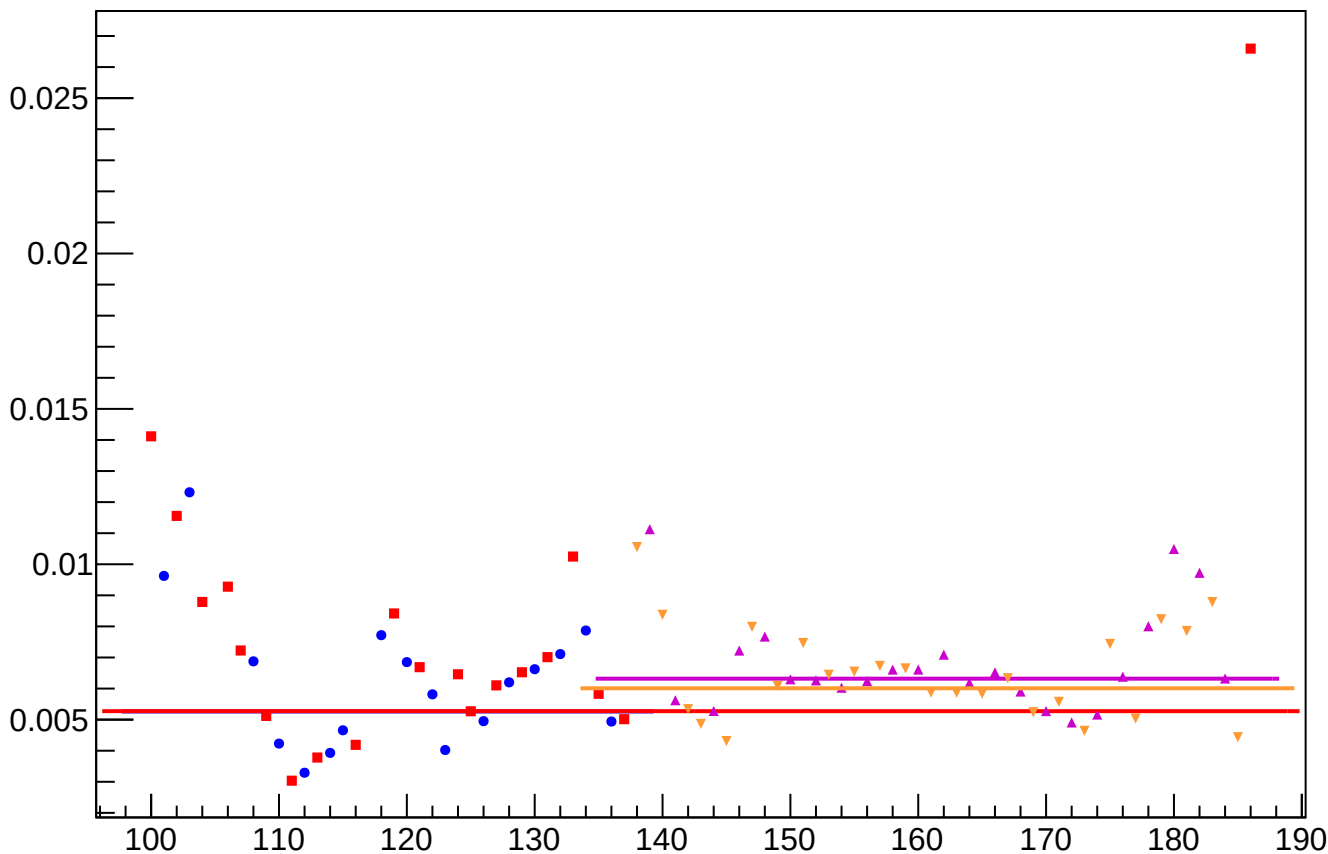
Right: 10.032 $\pm$ 0.000  $\chi^2$ /NDF: 36355305638.5/36

In: 9.281 $\pm$ 0.000  $\chi^2$ /NDF: 185189416142.8/39

Out: 9.272 $\pm$ 0.000  $\chi^2$ /NDF: 233501336978.3/44

All: 9.276 $\pm$ 0.000  $\chi^2$ /NDF: 418717765673.0

# yield\_sam8\_rms vs Slug, Sign Corrected



Right In: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 1249771.4/16

Left Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ :1312525.9/24

Right Out: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 2132002.4/19

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: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 3381788.0/36

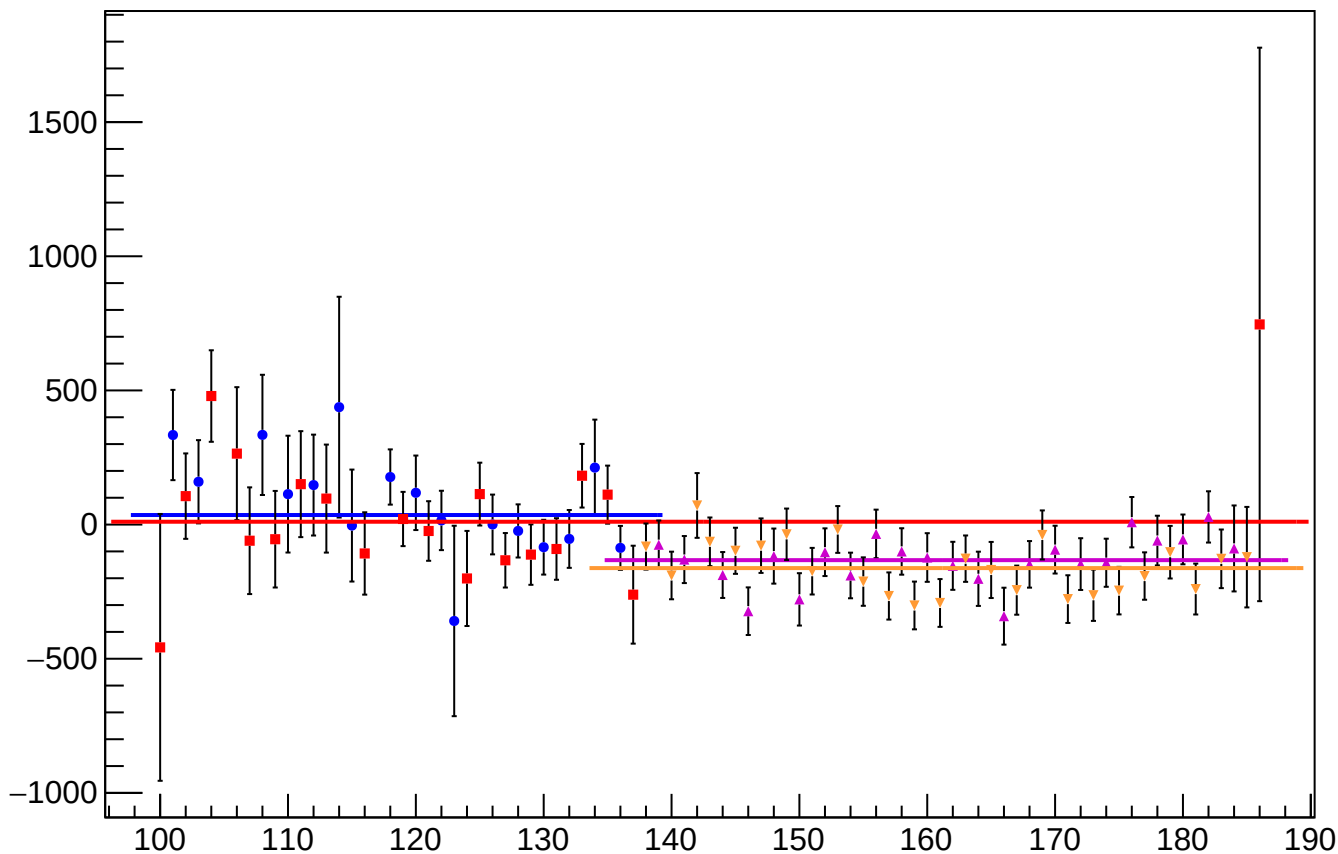
In: 0.006+/-0.000  $\chi^2/\text{NDF}$ :2601692.4/39

Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ :3585660.5/44

All: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 6206748.5/84



# reg\_asym\_sam1\_mean vs Slug, Sign Corrected



Right In:  $35.612 \pm 32.342$   $\chi^2/\text{NDF}: 16.3/16$

Left Out:  $-162.161 \pm 18.745$   $\chi^2/\text{NDF}: 25.7/24$

Right Out:  $10.637 \pm 32.171$   $\chi^2/\text{NDF}: 23.3/19$

Left In:  $-132.557 \pm 19.403$   $\chi^2/\text{NDF}: 20.7/22$

Left:  $-147.870 \pm 13.481$   $\chi^2/\text{NDF}: 47.6/47$

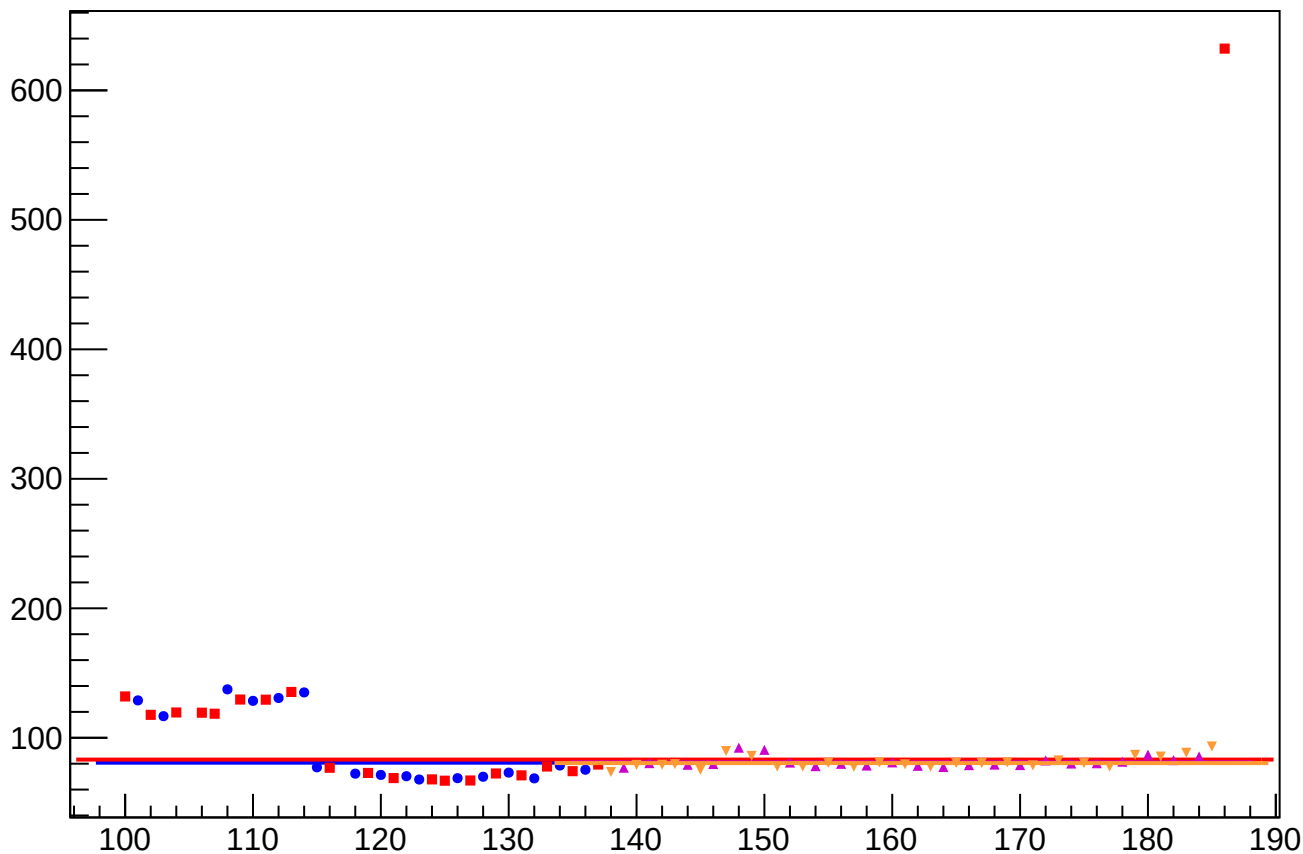
Right:  $23.058 \pm 22.808$   $\chi^2/\text{NDF}: 39.9/36$

In:  $-88.048 \pm 16.639$   $\chi^2/\text{NDF}: 56.9/39$

Out:  $-118.365 \pm 16.196$   $\chi^2/\text{NDF}: 70.6/44$

All:  $-103.615 \pm 11.606$   $\chi^2/\text{NDF}: 129.2/84$

# reg\_asym\_sam1\_rms vs Slug, Sign Corrected



Right In: 80.781+/-0.023  $\chi^2/\text{NDF}$ : 807781.3/16

Left Out: 80.459+/-0.013  $\chi^2/\text{NDF}$ : 89942.2/24

Right Out: 83.180+/-0.023  $\chi^2/\text{NDF}$ : 1475680.0/19

Left In: 81.014+/-0.014  $\chi^2/\text{NDF}$ : 72250.2/22

Left: 80.727+/-0.010  $\chi^2/\text{NDF}$ : 163039.2/47

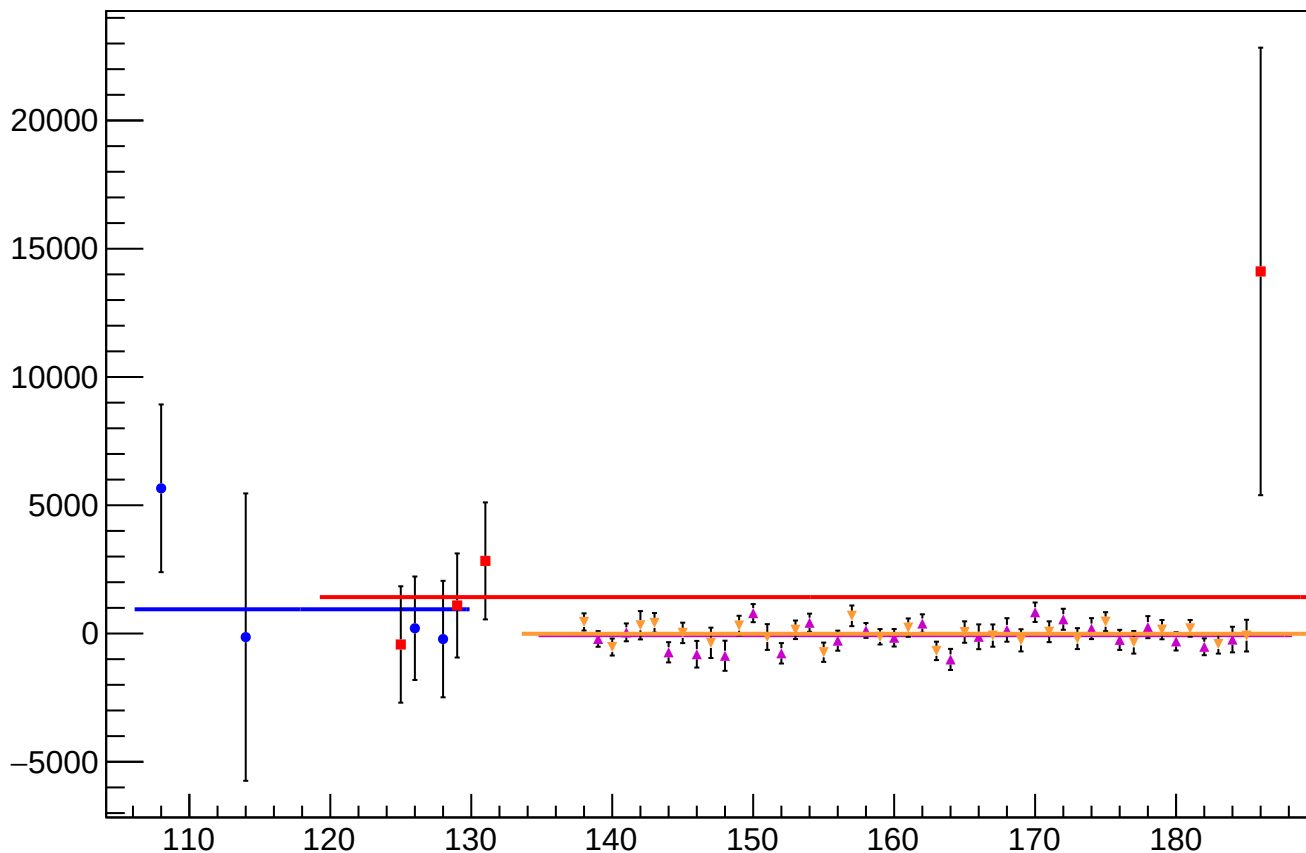
Right: 81.987+/-0.016  $\chi^2/\text{NDF}$ : 2288991.5/36

In: 80.952+/-0.012  $\chi^2/\text{NDF}$ : 880107.9/39

Out: 81.148+/-0.011  $\chi^2/\text{NDF}$ : 1576302.6/44

All: 81.053+/-0.008  $\chi^2/\text{NDF}$ : 2456553.2/84

asym\_sam1\_correction\_mean vs Slug, Sign Corrected



Right In:  $944.622 \pm 1329.889$   $\chi^2/\text{NDF}: 2.5/3$

Left Out:  $-10.486 \pm 78.391$   $\chi^2/\text{NDF}: 22.5/24$

Right Out:  $1419.732 \pm 1247.349$   $\chi^2/\text{NDF}: 3.2/3$

Left In:  $-64.591 \pm 80.047$   $\chi^2/\text{NDF}: 37.4/22$

Left:  $-36.973 \pm 56.007$   $\chi^2/\text{NDF}: 60.2/47$

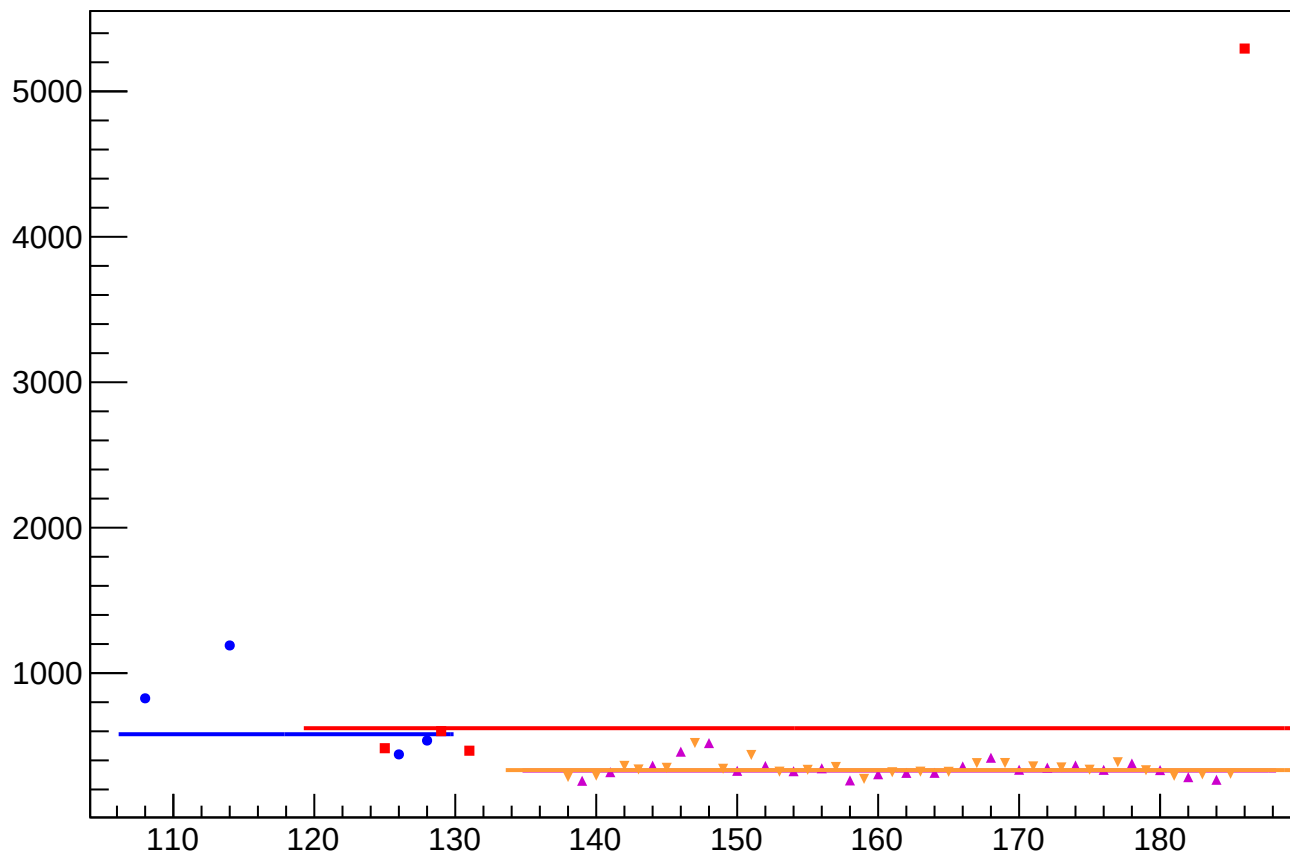
Right:  $1197.377 \pm 909.790$   $\chi^2/\text{NDF}: 5.8/7$

In:  $-60.948 \pm 79.902$   $\chi^2/\text{NDF}: 40.5/26$

Out:  $-4.860 \pm 78.237$   $\chi^2/\text{NDF}: 27.0/28$

All:  $-32.313 \pm 55.901$   $\chi^2/\text{NDF}: 67.8/55$

# asym\_sam1\_correction\_rms vs Slug, Sign Corrected



Right In: 579.917 $\pm$ 0.940  $\chi^2$ /NDF: 45346.8/3

Left Out: 333.233 $\pm$ 0.055  $\chi^2$ /NDF: 592122.2/24

Right Out: 621.304 $\pm$ 0.882  $\chi^2$ /NDF: 590757.7/3

Left In: 329.985 $\pm$ 0.057  $\chi^2$ /NDF: 795969.0/22

Left: 331.643 $\pm$ 0.040  $\chi^2$ /NDF: 1389771.8/47

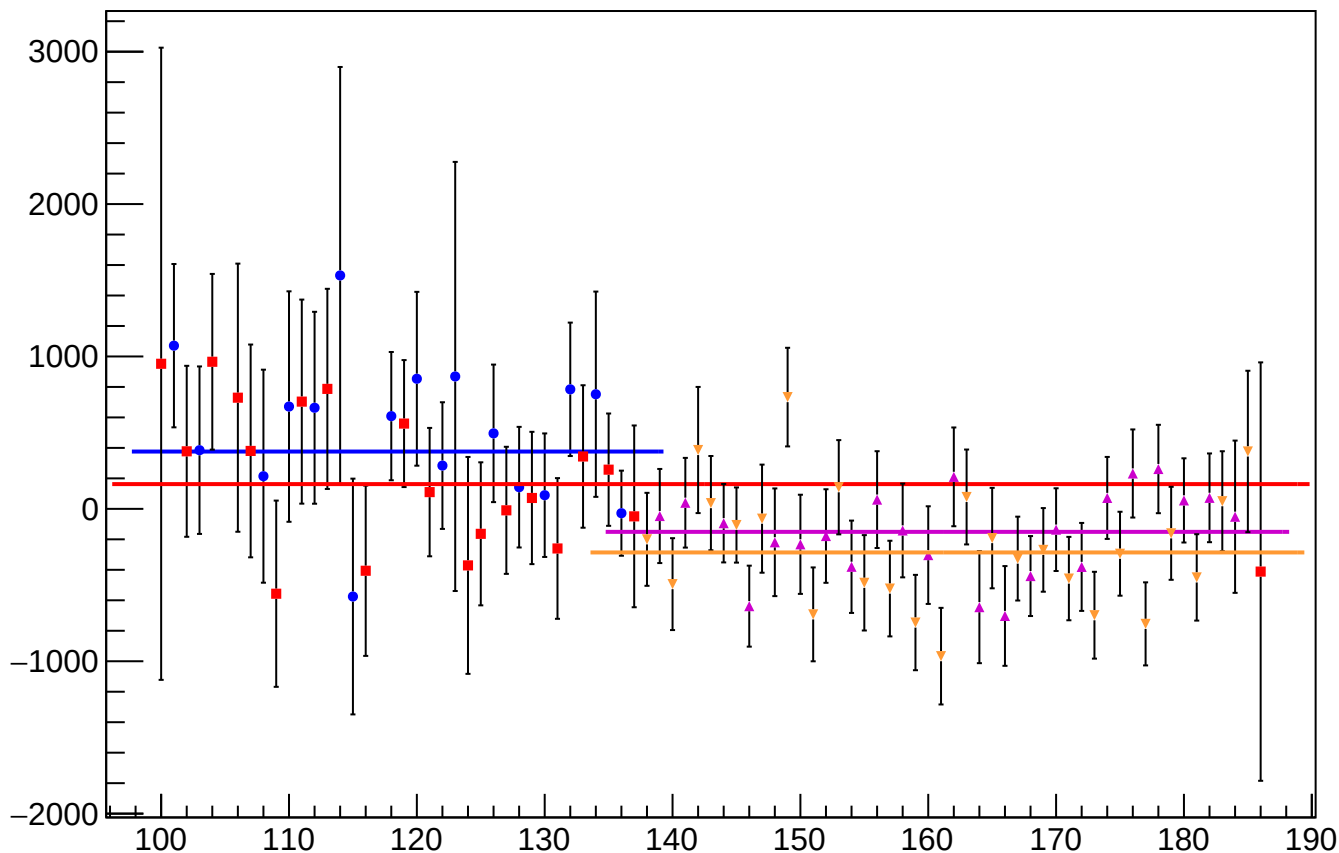
Right: 601.935 $\pm$ 0.643  $\chi^2$ /NDF: 637135.0/7

In: 330.888 $\pm$ 0.056  $\chi^2$ /NDF: 911699.5/26

Out: 334.366 $\pm$ 0.055  $\chi^2$ /NDF: 1289132.6/28

All: 332.664 $\pm$ 0.040  $\chi^2$ /NDF: 2202767.6/55

# reg\_asym\_sam2\_mean vs Slug, Sign Corrected



Right In: 376.077+/-121.292  $\chi^2/\text{NDF}$ : 9.7/16

Left Out: -286.030+/-61.095  $\chi^2/\text{NDF}$ :36.6/24

Right Out: 162.432+/-120.266  $\chi^2/\text{NDF}$ : 10.3/19

Left In: -150.920+/-62.818  $\chi^2/\text{NDF}$ :18.7/22

Left: -220.353+/-43.797  $\chi^2/\text{NDF}$ : 57.6/47

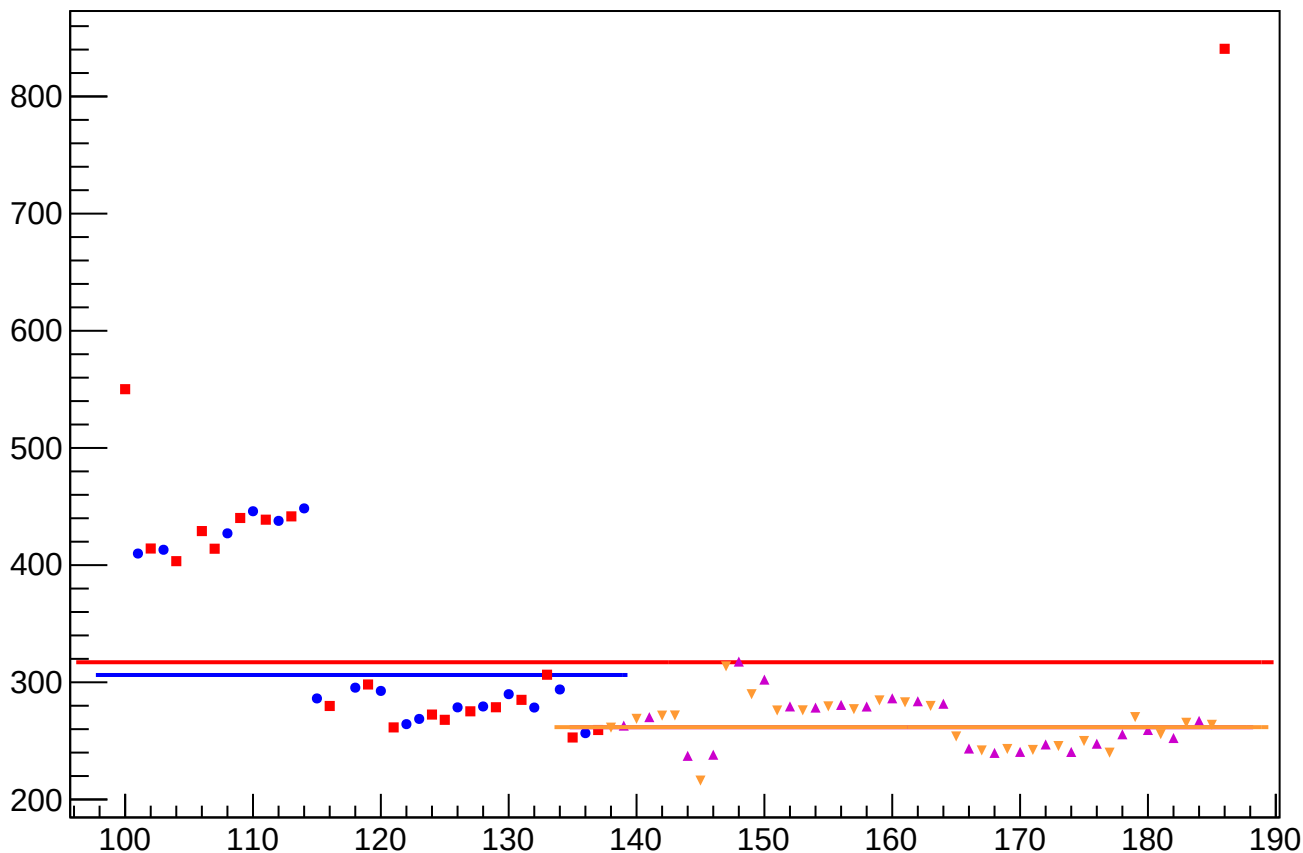
Right: 268.348+/-85.401  $\chi^2/\text{NDF}$ : 21.5/36

In: -39.461+/-55.781  $\chi^2/\text{NDF}$ :43.3/39

Out: -194.040+/-54.469  $\chi^2/\text{NDF}$ :57.9/44

All: -118.589+/-38.971  $\chi^2/\text{NDF}$ : 105.1/84

# reg\_asym\_sam2\_rms vs Slug, Sign Corrected



Right In: 306.241+/-0.086  $\chi^2/\text{NDF}$ : 505092.7/16

Left Out: 261.722+/-0.043  $\chi^2/\text{NDF}$ : 233222.6/24

Right Out: 317.115+/-0.085  $\chi^2/\text{NDF}$ : 914658.8/19

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

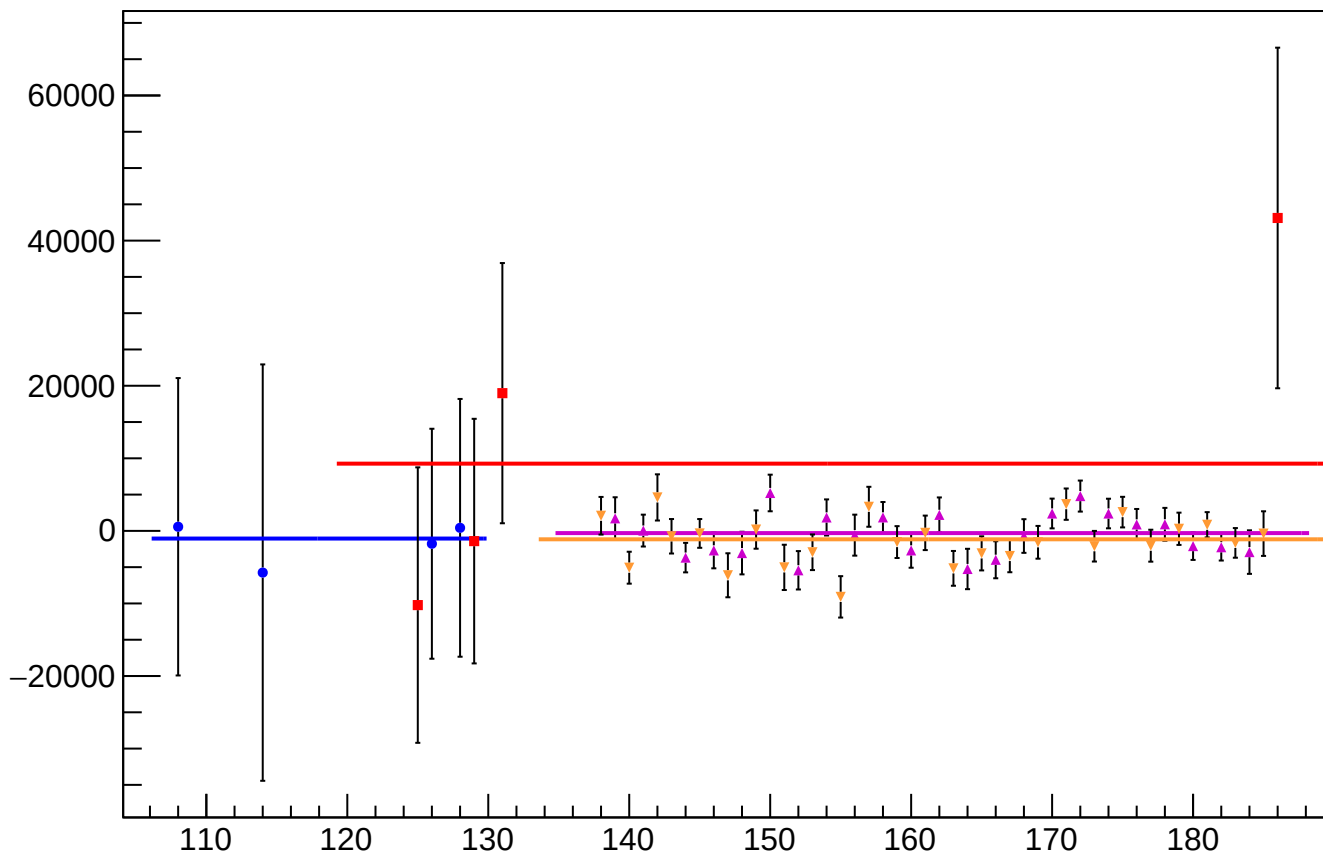
Right: 311.724+/-0.060  $\chi^2/\text{NDF}$ : 1427857.7/36

In: 271.070+/-0.039  $\chi^2/\text{NDF}$ : 946602.5/39

Out: 273.084+/-0.039  $\chi^2/\text{NDF}$ : 1485139.8/44

All: 272.101+/-0.028  $\chi^2/\text{NDF}$ : 2433076.8/84

asym\_sam2\_correction\_mean vs Slug, Sign Corrected



Right In: -1057.023+/-9645.185  $\chi^2/\text{NDF}$ : 0.0/3

Left Out: -1161.443+/-469.036  $\chi^2/\text{NDF}$ :38.8/24

Right Out: 9265.876+/-9439.536  $\chi^2/\text{NDF}$ : 3.8/3

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

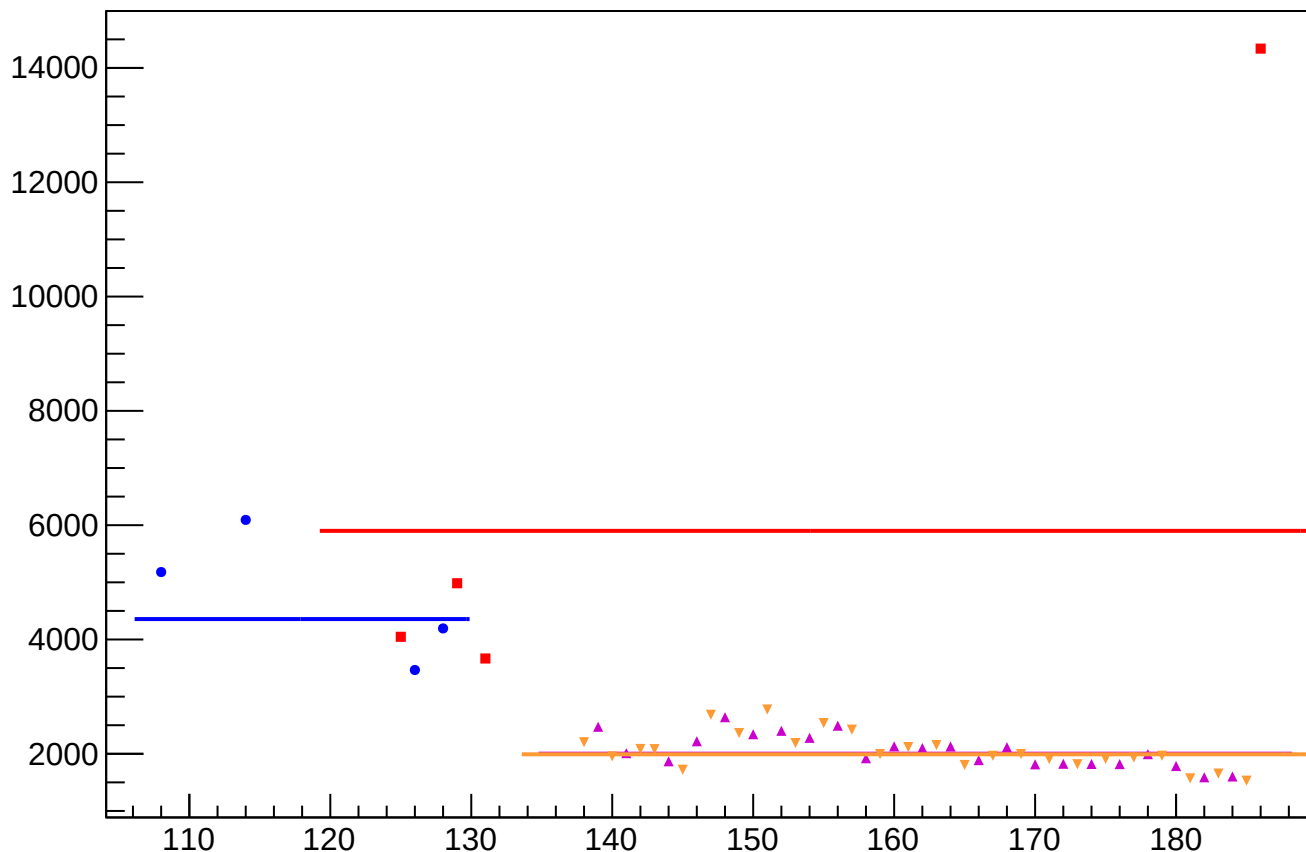
Right: 4215.649+/-6746.293  $\chi^2/\text{NDF}$ : 4.5/7

In: -306.255+/-483.171  $\chi^2/\text{NDF}$ :35.4/26

Out: -1135.761+/-468.458  $\chi^2/\text{NDF}$ :43.8/28

All: -733.830+/-336.331  $\chi^2/\text{NDF}$ : 80.7/55

# asym\_sam2\_correction\_rms vs Slug, Sign Corrected

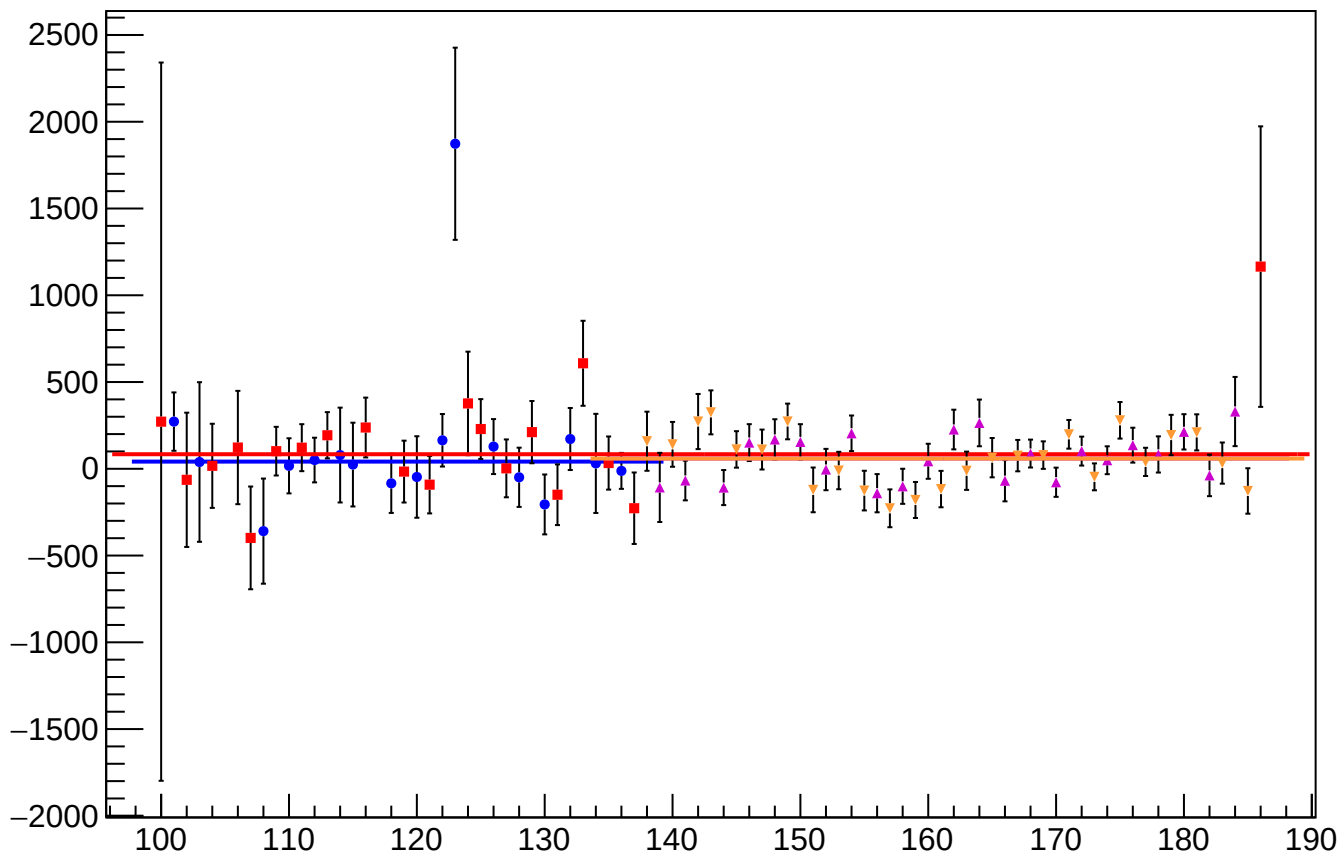


Right In: 4357.248 $\pm$ 6.820  $\chi^2/\text{NDF}$ : 17030.4/3  
 Left Out: 1991.105 $\pm$ 0.332  $\chi^2/\text{NDF}$ : 726310.6/24  
 Right Out: 5900.636 $\pm$ 6.675  $\chi^2/\text{NDF}$ : 314540.8/3  
 Left In: 2002.154 $\pm$ 0.342  $\chi^2/\text{NDF}$ : 585947.4/22

Left: 1996.458 $\pm$ 0.238  $\chi^2/\text{NDF}$ : 1312795.7/47  
 Right: 5145.571 $\pm$ 4.770  $\chi^2/\text{NDF}$ : 357728.2/7  
 In: 2008.064 $\pm$ 0.342  $\chi^2/\text{NDF}$ : 721919.5/26  
 Out: 2000.733 $\pm$ 0.331  $\chi^2/\text{NDF}$ : 1383072.8/28  
 All: 2004.285 $\pm$ 0.238  $\chi^2/\text{NDF}$ : 2105229.6/55



# reg\_asym\_sam3\_mean vs Slug, Sign Corrected



Right In: 41.443 $\pm$ 43.633  $\chi^2$ /NDF: 19.4/16

Left Out: 58.983 $\pm$ 21.137  $\chi^2$ /NDF: 46.9/24

Right Out: 83.898 $\pm$ 43.151  $\chi^2$ /NDF: 18.9/19

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

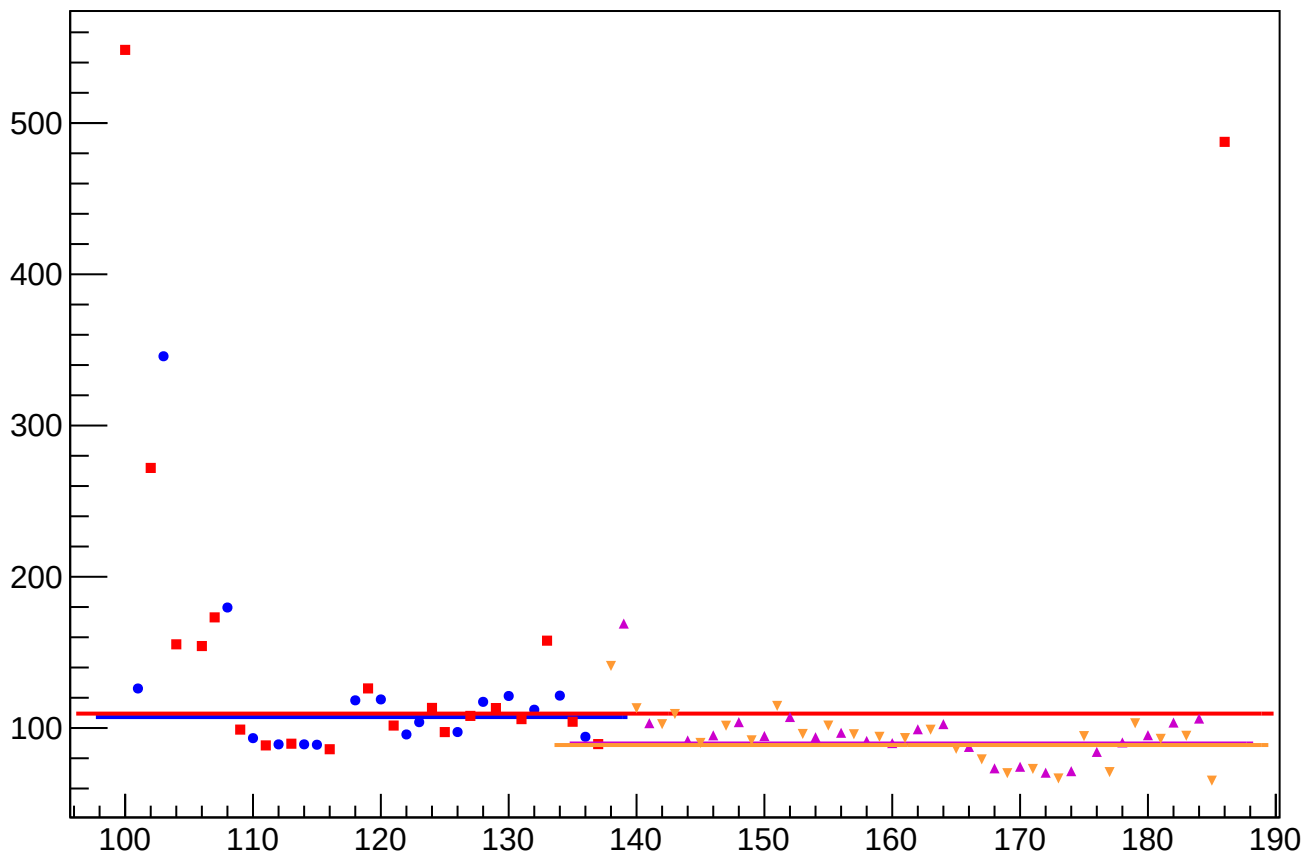
Right: 62.906 $\pm$ 30.681  $\chi^2$ /NDF: 38.7/36

In: 55.649 $\pm$ 19.588  $\chi^2$ /NDF: 48.9/39

Out: 63.804 $\pm$ 18.982  $\chi^2$ /NDF: 66.0/44

All: 59.855 $\pm$ 13.632  $\chi^2$ /NDF: 115.0/84

# reg\_asym\_sam3\_rms vs Slug, Sign Corrected



Right In: 107.231 $\pm$ 0.031  $\chi^2$ /NDF: 843493.4/16

Left Out: 88.748 $\pm$ 0.015  $\chi^2$ /NDF:1079338.8/24

Right Out: 109.527 $\pm$ 0.031  $\chi^2$ /NDF: 1356208.1/19

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

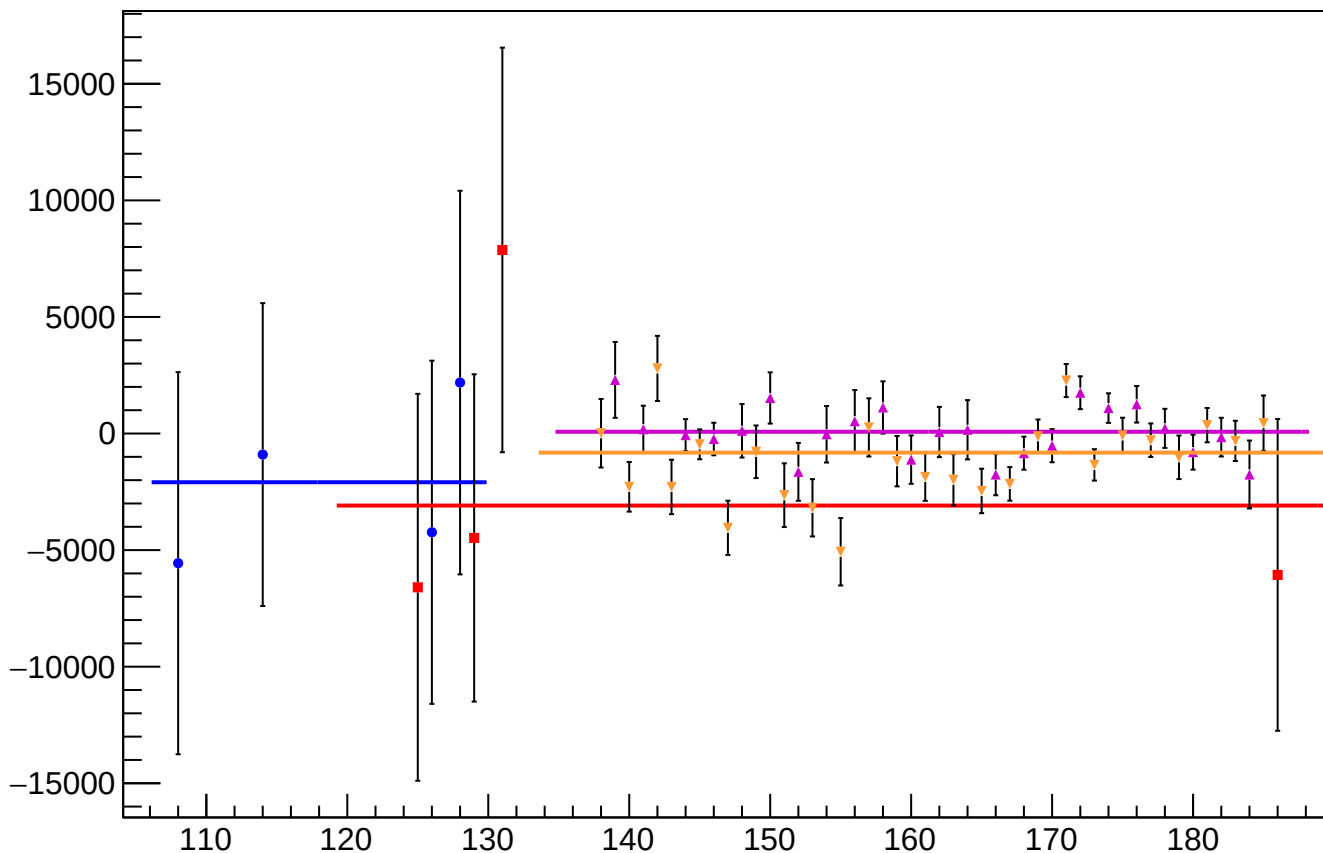
Right: 108.392 $\pm$ 0.022  $\chi^2$ /NDF: 2202500.2/36

In: 93.286 $\pm$ 0.014  $\chi^2$ /NDF:1985182.9/39

Out: 92.769 $\pm$ 0.013  $\chi^2$ /NDF:2809554.4/44

All: 93.019 $\pm$ 0.010  $\chi^2$ /NDF: 4795454.5/84

asym\_sam3\_correction\_mean vs Slug, Sign Corrected



Right In: -2089.367 $\pm$ 3731.168  $\chi^2$ /NDF: 0.6/3

Left Out: -818.877 $\pm$ 184.464  $\chi^2$ /NDF:68.2/24

Right Out: -3089.101 $\pm$ 3766.833  $\chi^2$ /NDF: 2.0/3

Left In: 76.204 $\pm$ 186.651  $\chi^2$ /NDF:28.3/22

Left: -376.610 $\pm$ 131.202  $\chi^2$ /NDF: 108.1/47

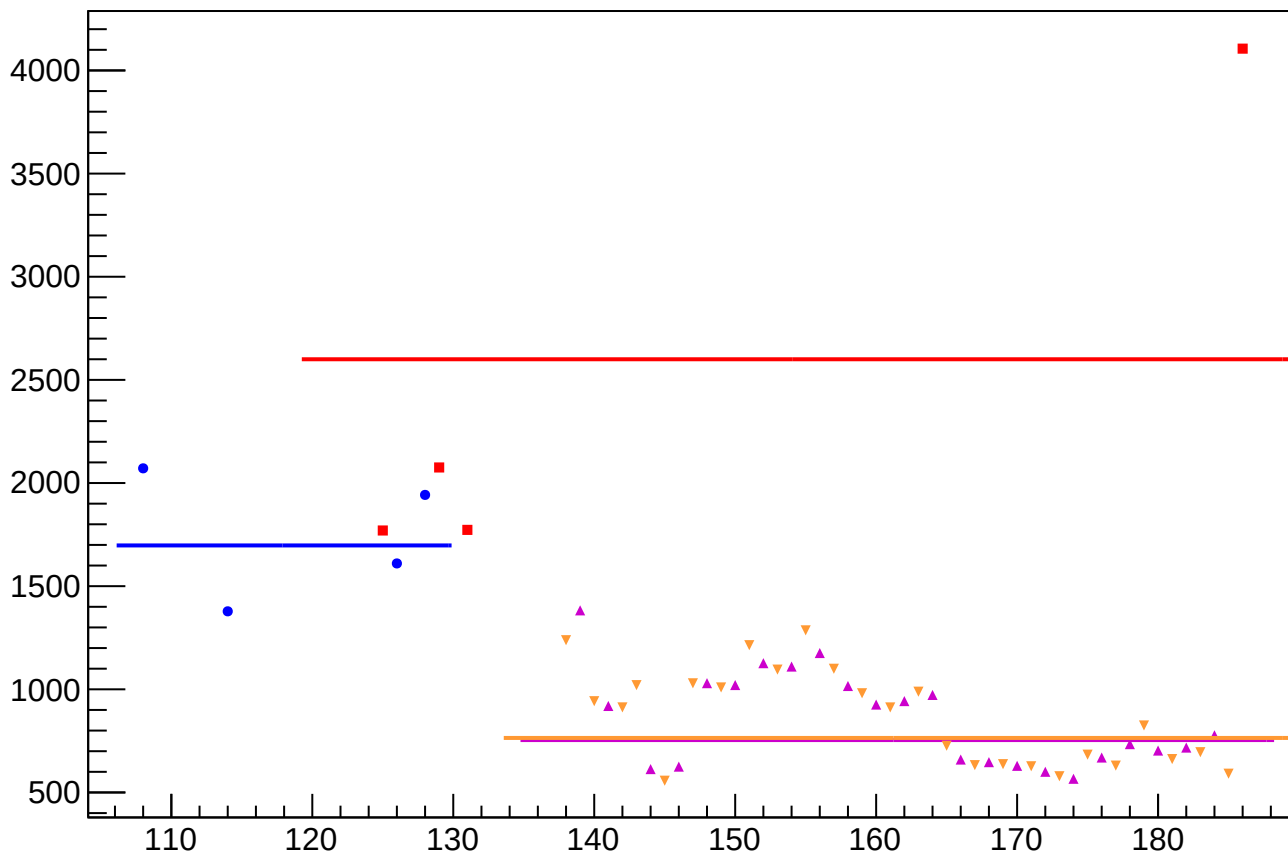
Right: -2584.479 $\pm$ 2650.854  $\chi^2$ /NDF: 2.6/7

In: 70.798 $\pm$ 186.418  $\chi^2$ /NDF:29.2/26

Out: -824.308 $\pm$ 184.243  $\chi^2$ /NDF:70.6/28

All: -382.006 $\pm$ 131.042  $\chi^2$ /NDF: 111.4/55

# asym\_sam3\_correction\_rms vs Slug, Sign Corrected



Right In: 1697.477+/-2.638  $\chi^2/\text{NDF}$ : 11050.0/3

Left Out: 764.280+/-0.130  $\chi^2/\text{NDF}$ : 2315985.8/24

Right Out: 2599.953+/-2.664  $\chi^2/\text{NDF}$ : 150804.4/3

Left In: 754.027+/-0.132  $\chi^2/\text{NDF}$ : 2013386.7/22

Left: 759.214+/-0.093  $\chi^2/\text{NDF}$ : 4332425.4/47

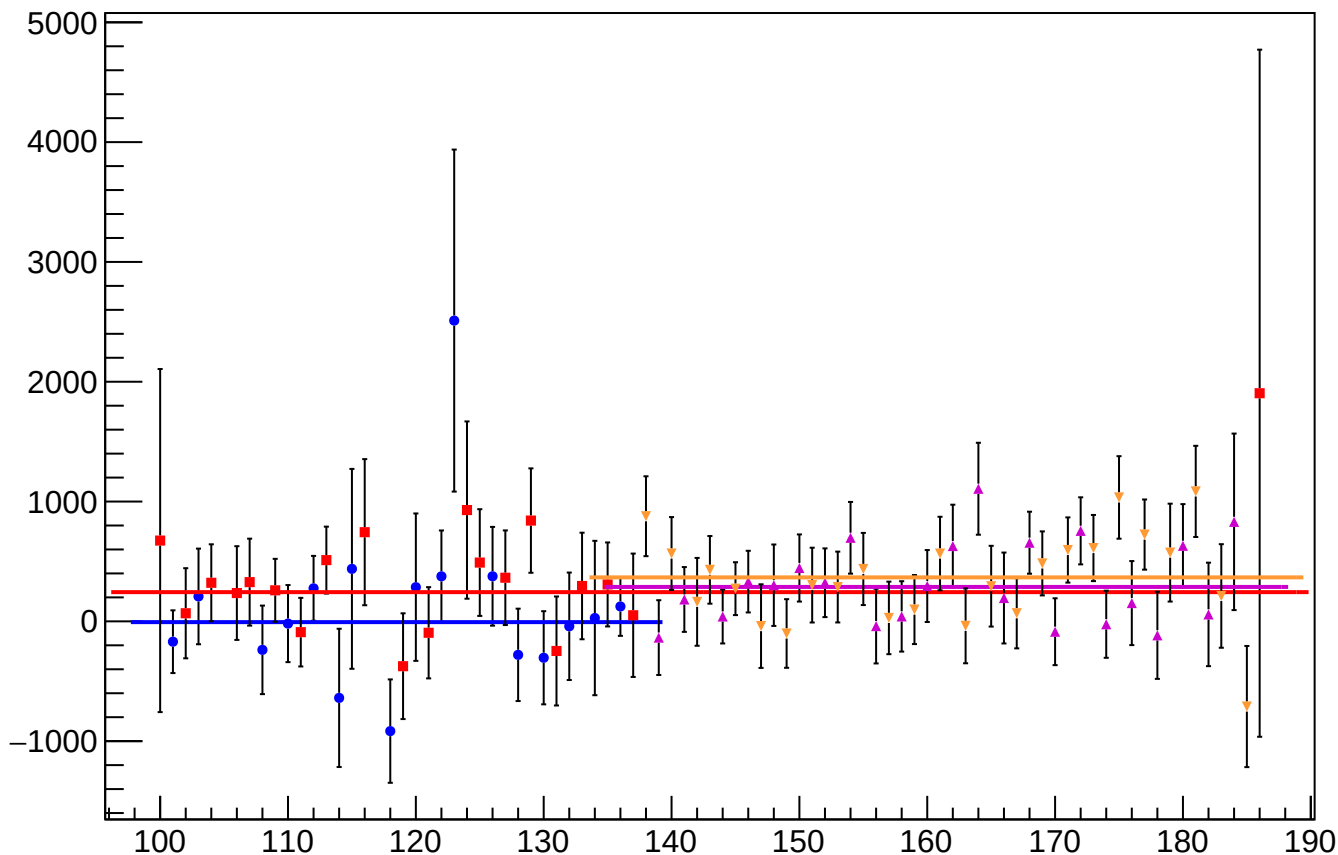
Right: 2144.423+/-1.874  $\chi^2/\text{NDF}$ : 219801.3/7

In: 756.382+/-0.132  $\chi^2/\text{NDF}$ : 2151990.4/26

Out: 768.671+/-0.130  $\chi^2/\text{NDF}$ : 2940626.0/28

All: 762.599+/-0.093  $\chi^2/\text{NDF}$ : 5097013.4/55

# reg\_asym\_sam4\_mean vs Slug, Sign Corrected



Right In:  $-6.497 \pm 93.462$   $\chi^2/\text{NDF}: 14.7/16$

Left Out:  $367.028 \pm 61.943$   $\chi^2/\text{NDF}: 28.2/24$

Right Out:  $243.849 \pm 89.065$   $\chi^2/\text{NDF}: 11.0/19$

Left In:  $287.246 \pm 64.141$   $\chi^2/\text{NDF}: 23.9/22$

Left:  $328.527 \pm 44.557$   $\chi^2/\text{NDF}: 52.9/47$

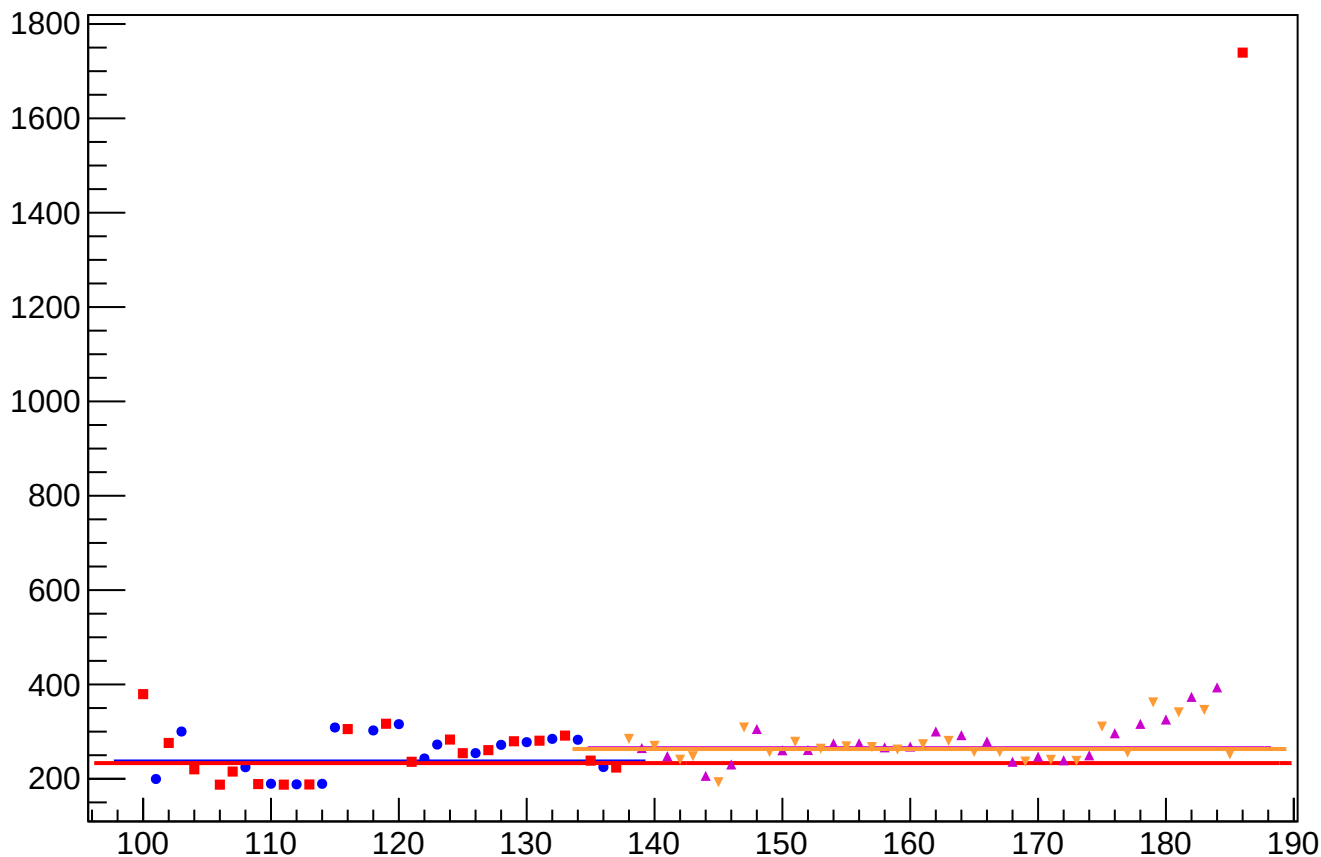
Right:  $124.704 \pm 64.477$   $\chi^2/\text{NDF}: 29.4/36$

In:  $193.196 \pm 52.885$   $\chi^2/\text{NDF}: 45.3/39$

Out:  $326.870 \pm 50.853$   $\chi^2/\text{NDF}: 40.5/44$

All:  $262.649 \pm 36.656$   $\chi^2/\text{NDF}: 89.1/84$

# reg\_asym\_sam4\_rms vs Slug, Sign Corrected



Right In: 236.750 $\pm$ 0.066  $\chi^2$ /NDF: 390018.3/16

Left Out: 263.103 $\pm$ 0.044  $\chi^2$ /NDF: 642226.0/24

Right Out: 233.308 $\pm$ 0.063  $\chi^2$ /NDF: 997301.3/19

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

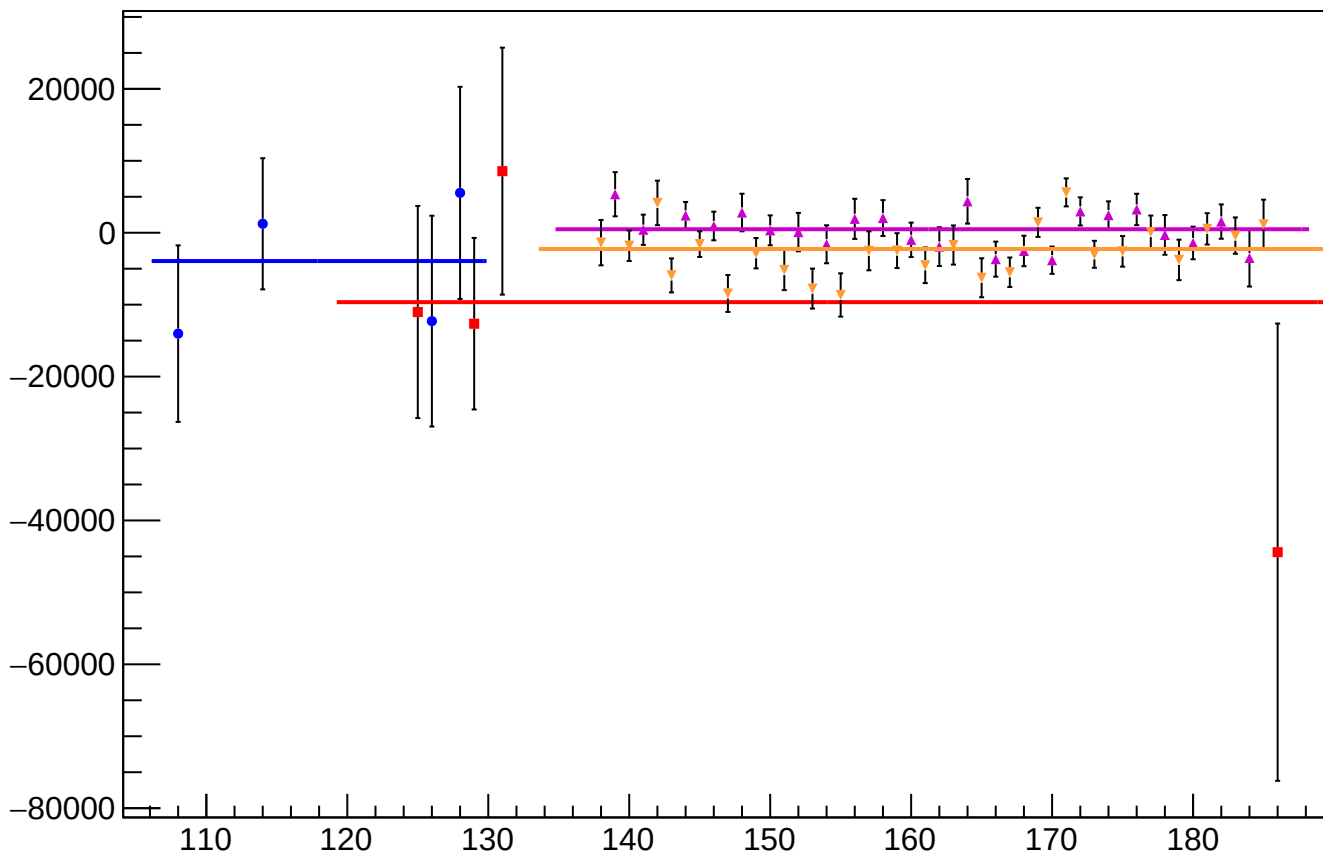
Right: 234.946 $\pm$ 0.046  $\chi^2$ /NDF: 1388741.2/36

In: 255.902 $\pm$ 0.037  $\chi^2$ /NDF: 1122592.3/39

Out: 253.389 $\pm$ 0.036  $\chi^2$ /NDF: 1790385.5/44

All: 254.597 $\pm$ 0.026  $\chi^2$ /NDF: 2915324.4/84

asym\_sam4\_correction\_mean vs Slug, Sign Corrected



Right In: -3937.127+/-5984.477  $\chi^2/\text{NDF}$ : 1.7/3

Left Out: -2260.196+/-475.336  $\chi^2/\text{NDF}$ : 52.3/24

Right Out: -9649.514+/-7902.495  $\chi^2/\text{NDF}$ : 2.4/3

Left In: 485.590+/-487.465  $\chi^2/\text{NDF}$ : 24.8/22

Left: -921.890+/-340.321  $\chi^2/\text{NDF}$ : 93.4/47

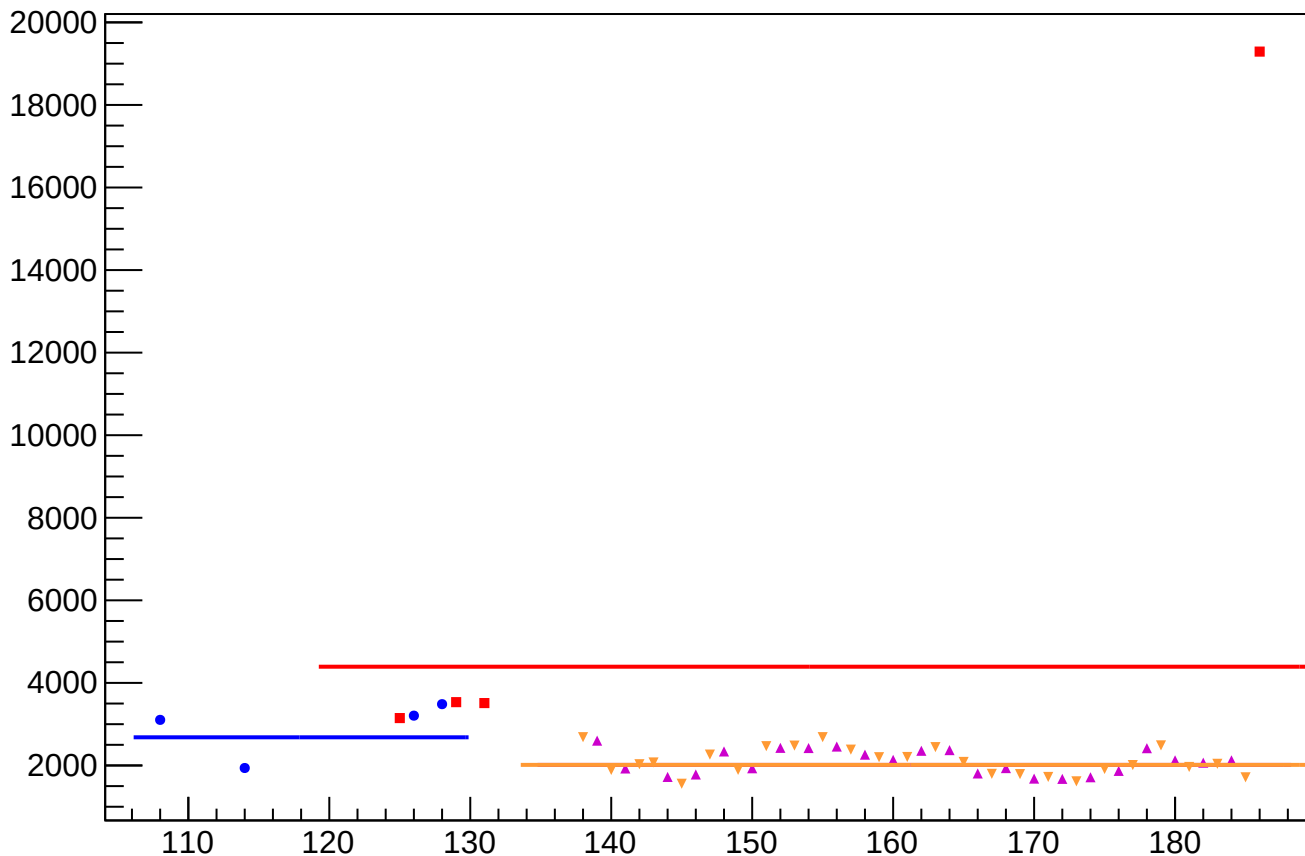
Right: -6019.115+/-4770.837  $\chi^2/\text{NDF}$ : 4.5/7

In: 456.439+/-485.856  $\chi^2/\text{NDF}$ : 27.0/26

Out: -2286.835+/-474.478  $\chi^2/\text{NDF}$ : 55.6/28

All: -947.696+/-339.458  $\chi^2/\text{NDF}$ : 99.0/55

# asym\_sam4\_correction\_rms vs Slug, Sign Corrected

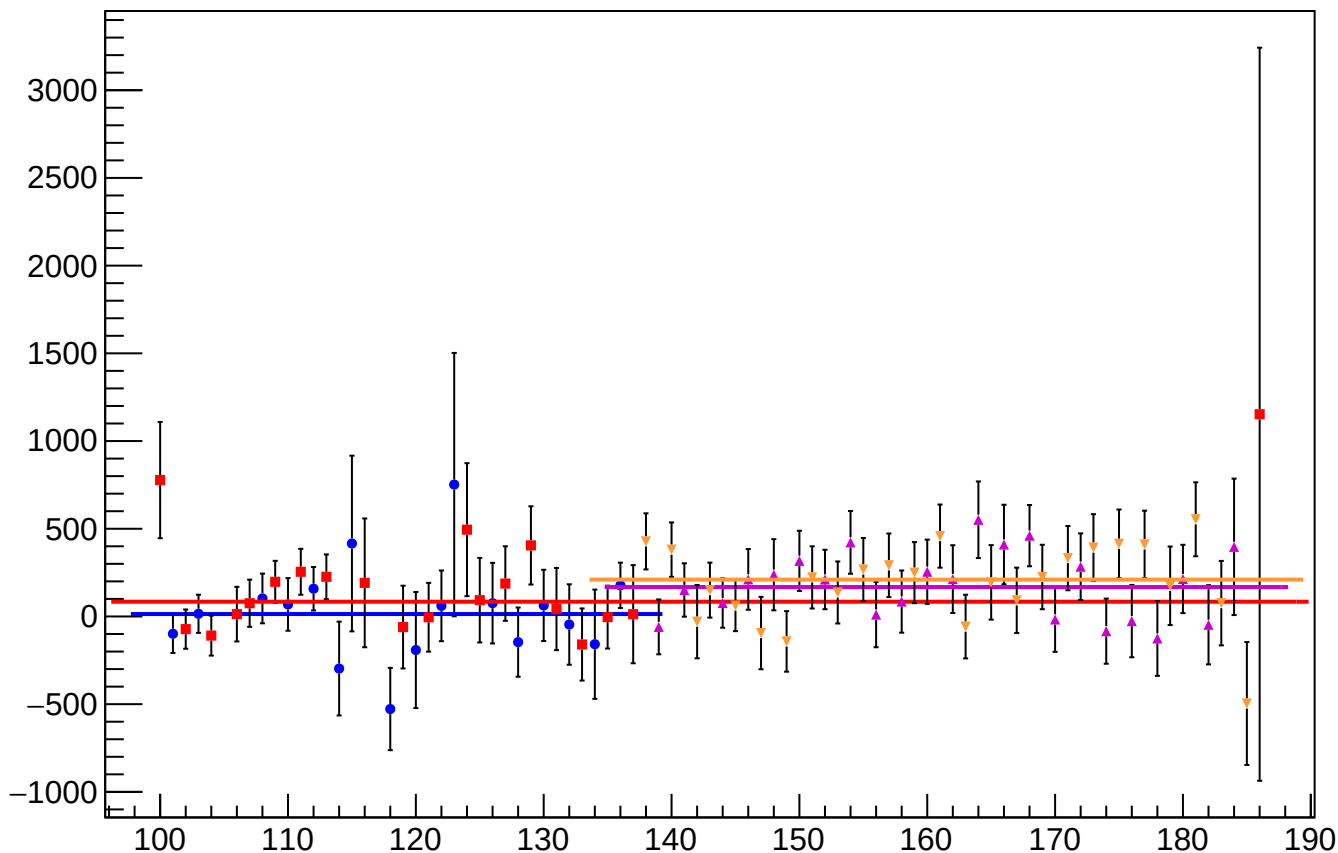


Right In: 2682.064 $\pm$ 4.232  $\chi^2/\text{NDF}$ : 24157.5/3  
 Left Out: 2014.106 $\pm$ 0.336  $\chi^2/\text{NDF}$ :835656.9/24  
 Right Out: 4392.298 $\pm$ 5.588  $\chi^2/\text{NDF}$ : 469419.8/3  
 Left In: 2013.245 $\pm$ 0.345  $\chi^2/\text{NDF}$ :662077.8/22

Left: 2013.686 $\pm$ 0.241  $\chi^2/\text{NDF}$ : 1497737.9/47  
 Right: 3305.392 $\pm$ 3.373  $\chi^2/\text{NDF}$ : 553109.1/7  
 In: 2017.654 $\pm$ 0.344  $\chi^2/\text{NDF}$ :711050.8/26  
 Out: 2022.679 $\pm$ 0.336  $\chi^2/\text{NDF}$ :1485555.8/28  
 All: 2020.226 $\pm$ 0.240  $\chi^2/\text{NDF}$ : 2196716.2/55



# reg\_asym\_sam5\_mean vs Slug, Sign Corrected



Right In: 13.853 $\pm$ 42.364  $\chi^2/\text{NDF}$ : 14.4/16

Left Out: 210.086 $\pm$ 37.093  $\chi^2/\text{NDF}$ : 27.5/24

Right Out: 84.016 $\pm$ 39.030  $\chi^2/\text{NDF}$ : 19.4/19

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

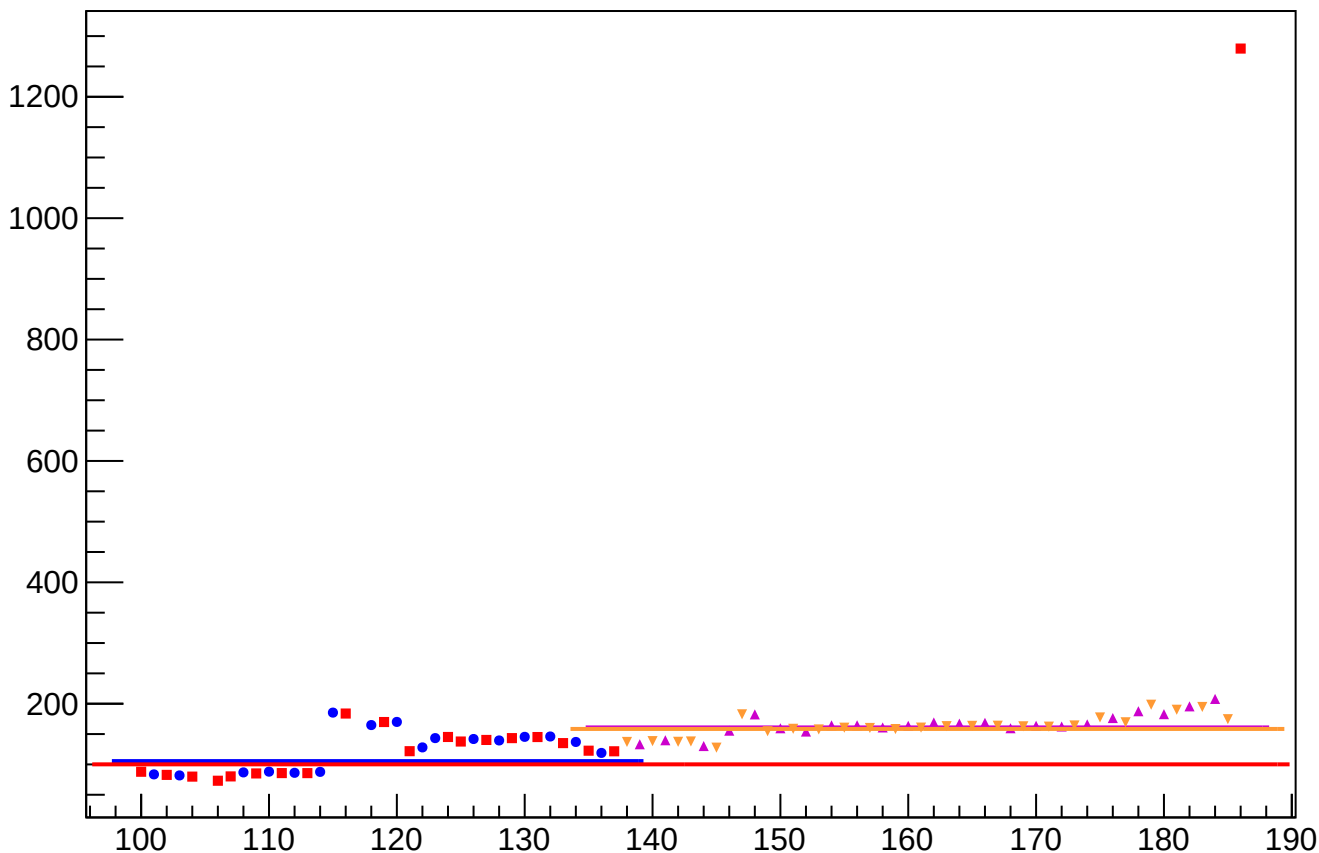
Right: 51.803 $\pm$ 28.705  $\chi^2/\text{NDF}$ : 35.3/36

In: 97.747 $\pm$ 28.580  $\chi^2/\text{NDF}$ : 42.8/39

Out: 150.256 $\pm$ 26.888  $\chi^2/\text{NDF}$ : 52.4/44

All: 125.602 $\pm$ 19.583  $\chi^2/\text{NDF}$ : 97.0/84

# reg\_asym\_sam5\_rms vs Slug, Sign Corrected



Right In: 105.470 $\pm$ 0.030  $\chi^2$ /NDF: 870293.2/16

Left Out: 158.440 $\pm$ 0.026  $\chi^2$ /NDF: 434300.9/24

Right Out: 100.106 $\pm$ 0.028  $\chi^2$ /NDF: 1637917.5/19

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

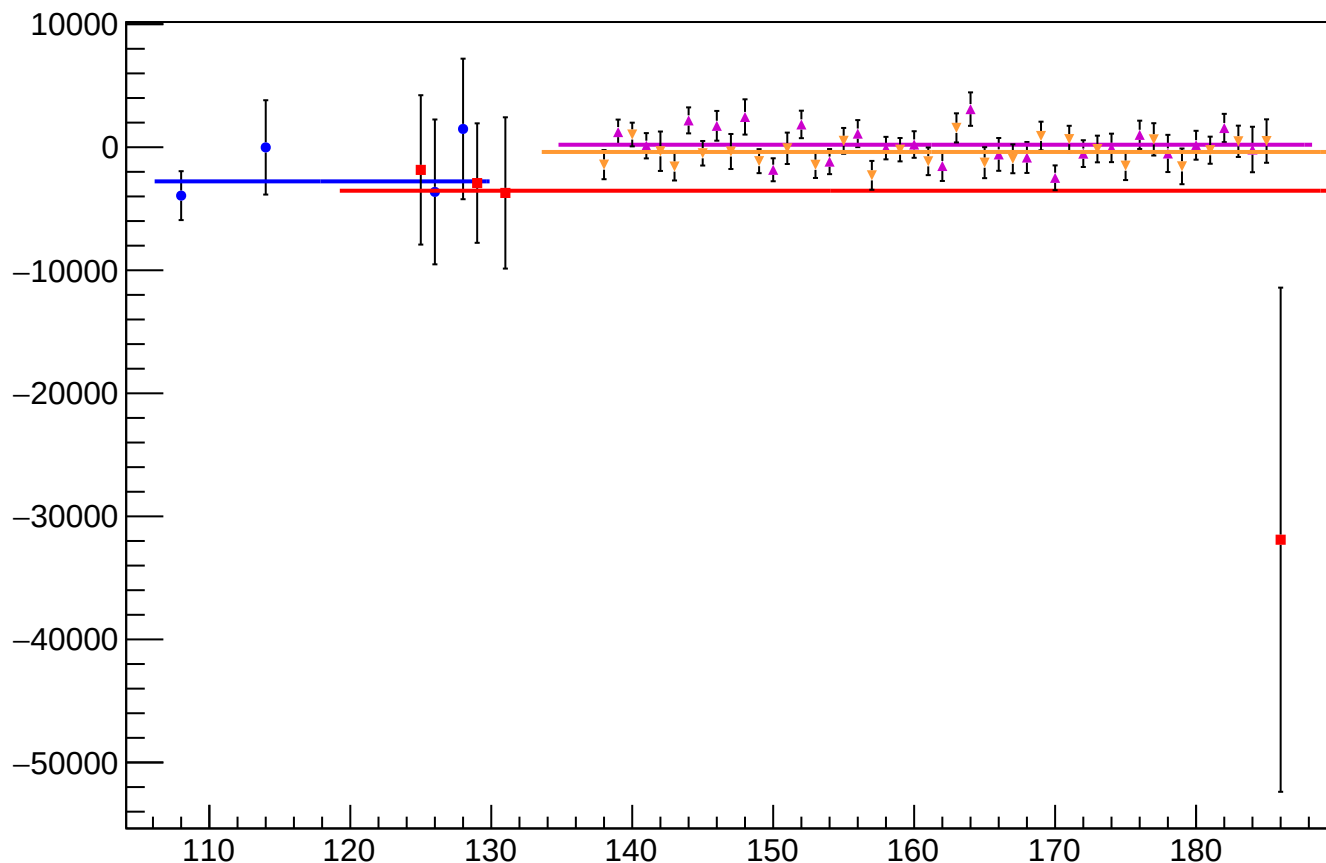
Right: 102.569 $\pm$ 0.020  $\chi^2$ /NDF: 2525554.7/36

In: 135.698 $\pm$ 0.020  $\chi^2$ /NDF: 3118806.7/39

Out: 130.756 $\pm$ 0.019  $\chi^2$ /NDF: 4419622.9/44

All: 133.077 $\pm$ 0.014  $\chi^2$ /NDF: 7570155.1/84

asym\_sam5\_correction\_mean vs Slug, Sign Corrected



Right In: -2774.520 $\pm$ 1620.377  $\chi^2$ /NDF: 1.4/3

Left Out: -385.018 $\pm$ 231.833  $\chi^2$ /NDF:18.1/24

Right Out: -3535.466 $\pm$ 3187.767  $\chi^2$ /NDF: 2.0/3

Left In: 202.234 $\pm$ 237.460  $\chi^2$ /NDF:35.5/22

Left: -98.432 $\pm$ 165.884  $\chi^2$ /NDF: 56.7/47

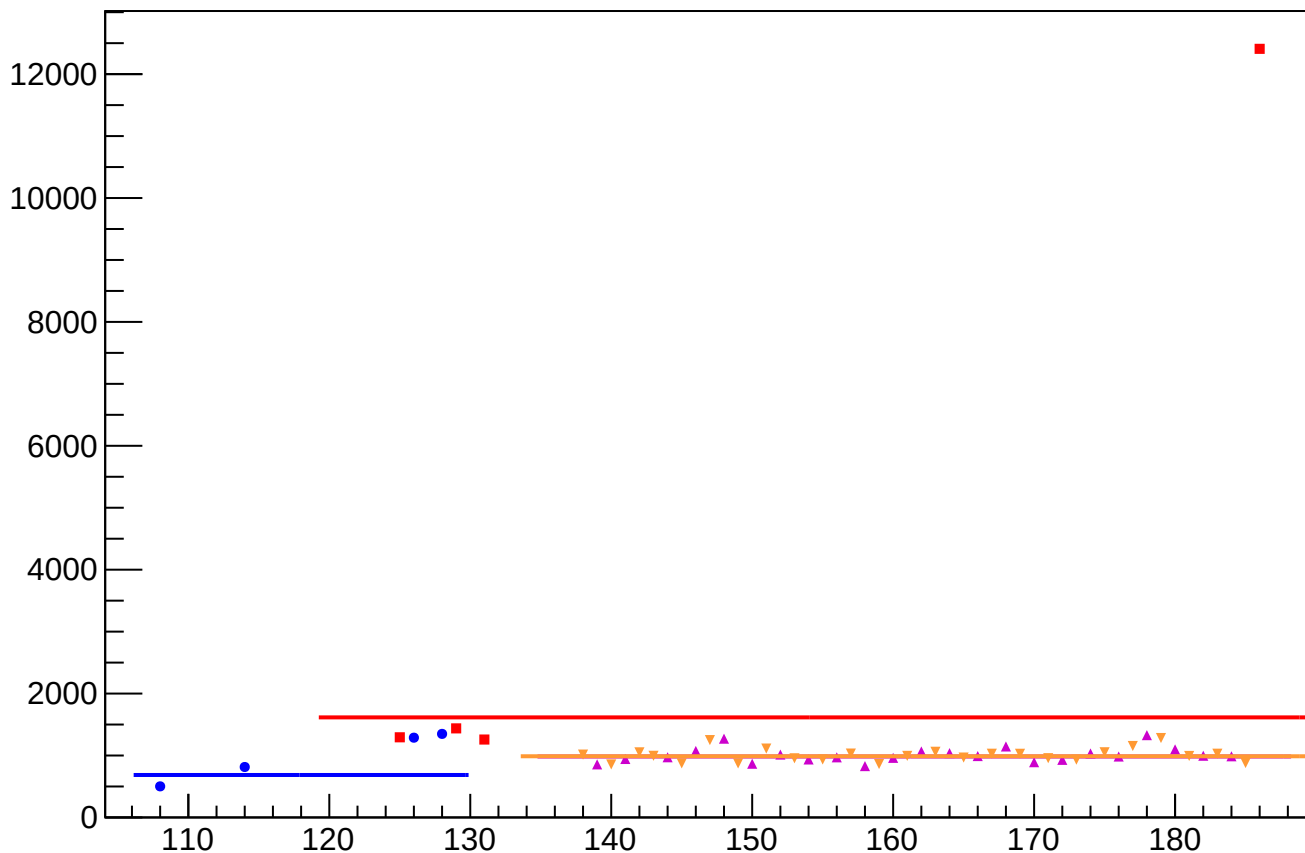
Right: -2930.763 $\pm$ 1444.476  $\chi^2$ /NDF: 3.5/7

In: 139.650 $\pm$ 234.950  $\chi^2$ /NDF:40.2/26

Out: -401.594 $\pm$ 231.223  $\chi^2$ /NDF:21.0/28

All: -135.299 $\pm$ 164.801  $\chi^2$ /NDF: 64.0/55

asym\_sam5\_correction\_rms vs Slug, Sign Corrected



Right In: 685.658+/-1.146  $\chi^2/\text{NDF}$ : 67240.3/3

Left Out: 987.869+/-0.164  $\chi^2/\text{NDF}$ : 376958.5/24

Right Out: 1615.512+/-2.254  $\chi^2/\text{NDF}$ : 570115.1/3

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

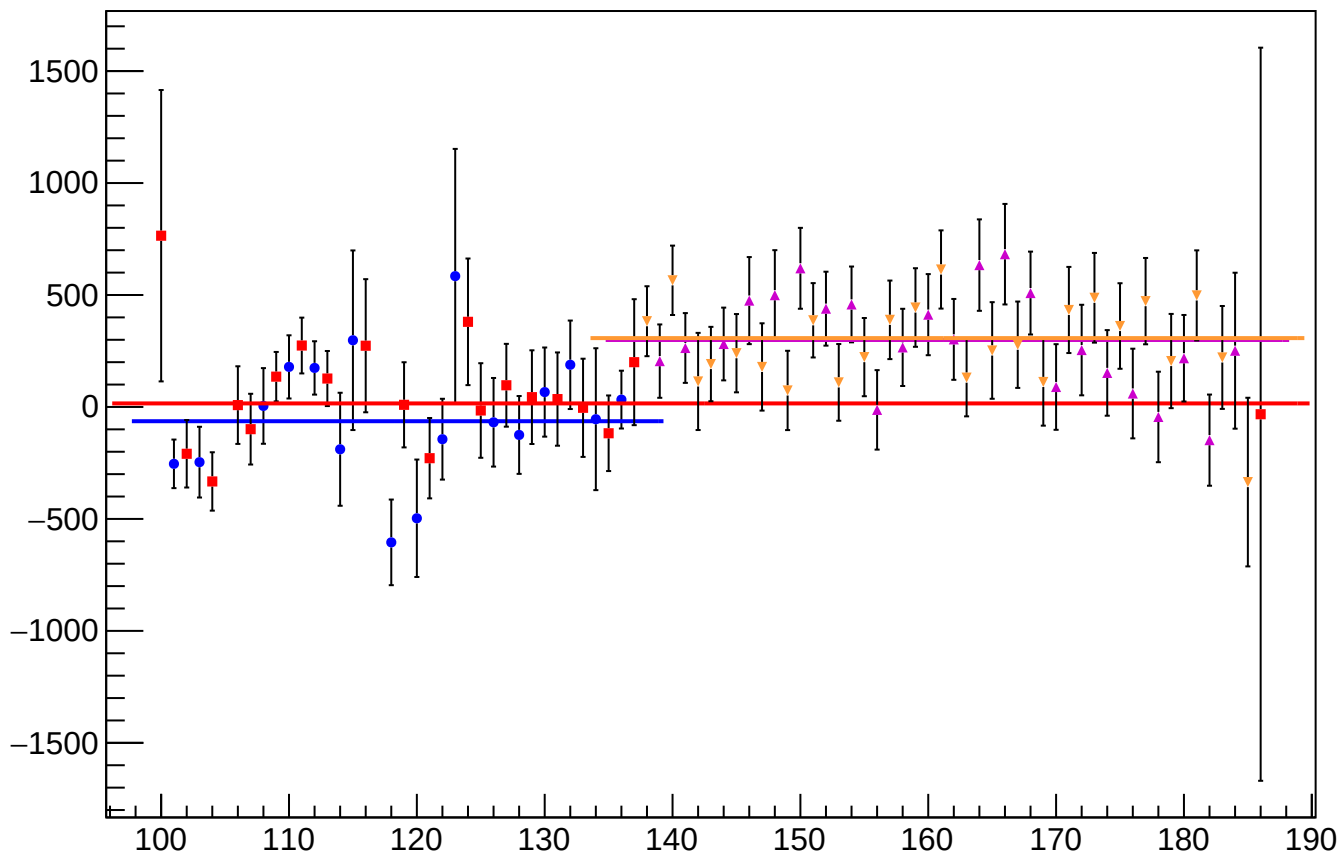
Right: 876.582+/-1.021  $\chi^2/\text{NDF}$ : 772586.1/7

In: 977.623+/-0.166  $\chi^2/\text{NDF}$ : 549832.8/26

Out: 991.171+/-0.163  $\chi^2/\text{NDF}$ : 1024197.9/28

All: 984.505+/-0.117  $\chi^2/\text{NDF}$ : 1577409.0/55

# reg\_asym\_sam6\_mean vs Slug, Sign Corrected



Right In:  $-63.627 \pm 42.336$   $\chi^2/\text{NDF}: 27.6/16$

Left Out:  $307.487 \pm 37.278$   $\chi^2/\text{NDF}: 20.7/24$

Right Out:  $15.831 \pm 39.520$   $\chi^2/\text{NDF}: 23.1/19$

Left In:  $299.192 \pm 39.009$   $\chi^2/\text{NDF}: 28.5/22$

Left:  $303.528 \pm 26.951$   $\chi^2/\text{NDF}: 49.3/47$

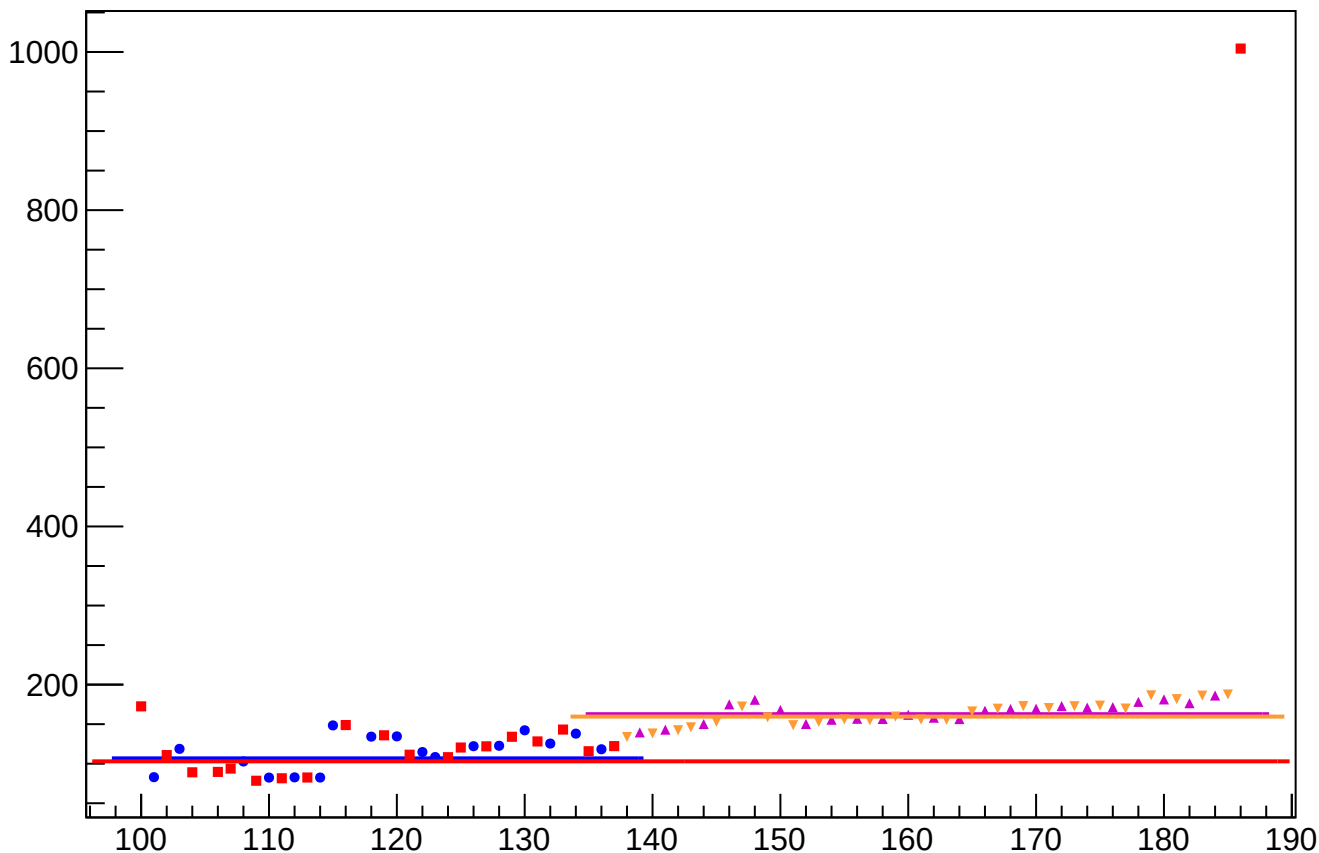
Right:  $-21.168 \pm 28.889$   $\chi^2/\text{NDF}: 52.5/36$

In:  $132.597 \pm 28.688$   $\chi^2/\text{NDF}: 95.8/39$

Out:  $170.169 \pm 27.117$   $\chi^2/\text{NDF}: 72.6/44$

All:  $152.440 \pm 19.707$   $\chi^2/\text{NDF}: 169.3/84$

# reg\_asym\_sam6\_rms vs Slug, Sign Corrected



Right In: 106.733 $\pm$ 0.030  $\chi^2$ /NDF: 503149.3/16

Left Out: 159.568 $\pm$ 0.026  $\chi^2$ /NDF: 287744.2/24

Right Out: 102.977 $\pm$ 0.028  $\chi^2$ /NDF: 1197678.8/19

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

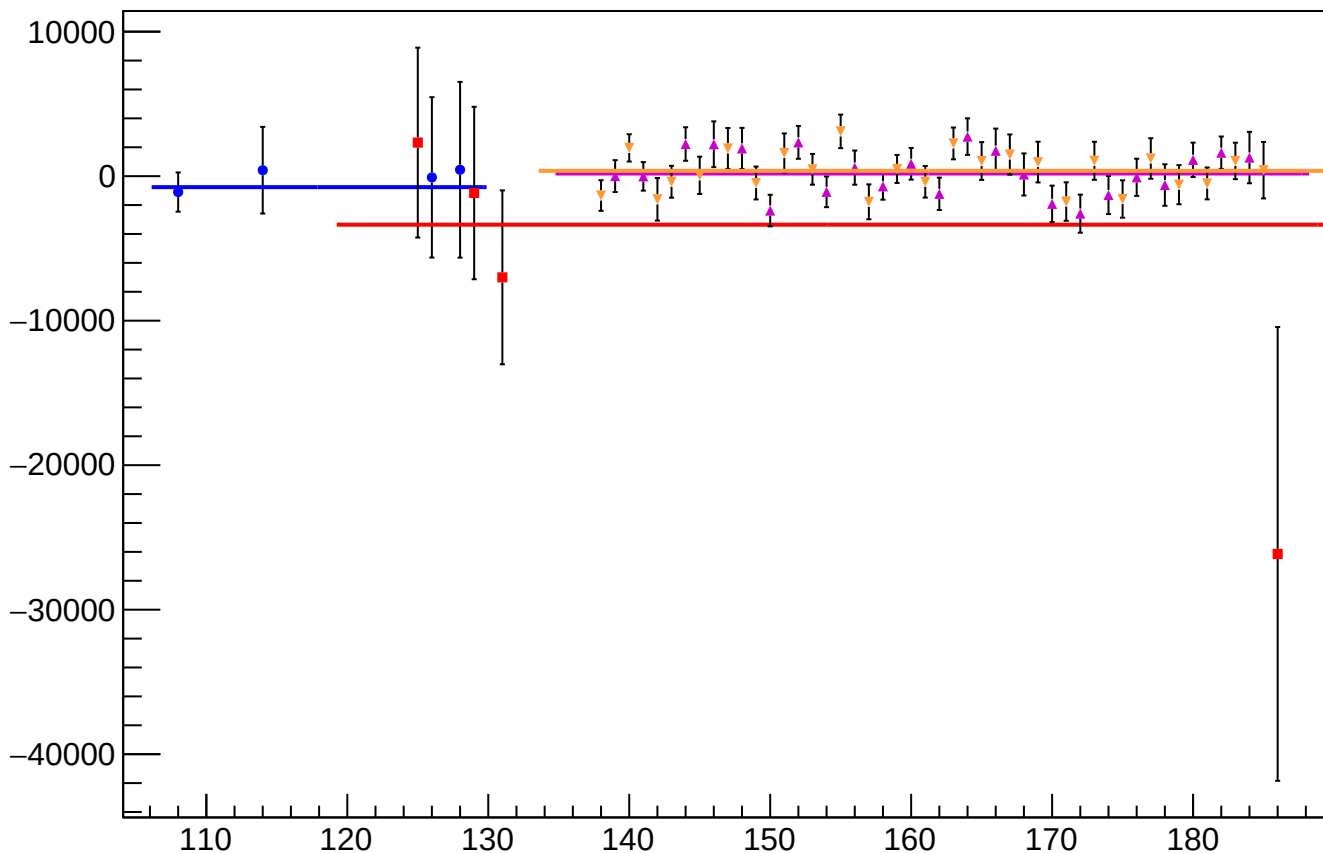
Right: 104.726 $\pm$ 0.020  $\chi^2$ /NDF: 1709241.2/36

In: 136.951 $\pm$ 0.020  $\chi^2$ /NDF: 2586665.8/39

Out: 132.924 $\pm$ 0.019  $\chi^2$ /NDF: 3655567.9/44

All: 134.824 $\pm$ 0.014  $\chi^2$ /NDF: 6263050.0/84

asym\_sam6\_correction\_mean vs Slug, Sign Corrected



Right In: -760.095 $\pm$ 1183.340  $\chi^2$ /NDF: 0.3/3

Left Out: 370.001 $\pm$ 243.521  $\chi^2$ /NDF:30.5/24

Right Out: -3356.740 $\pm$ 3472.430  $\chi^2$ /NDF: 3.4/3

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

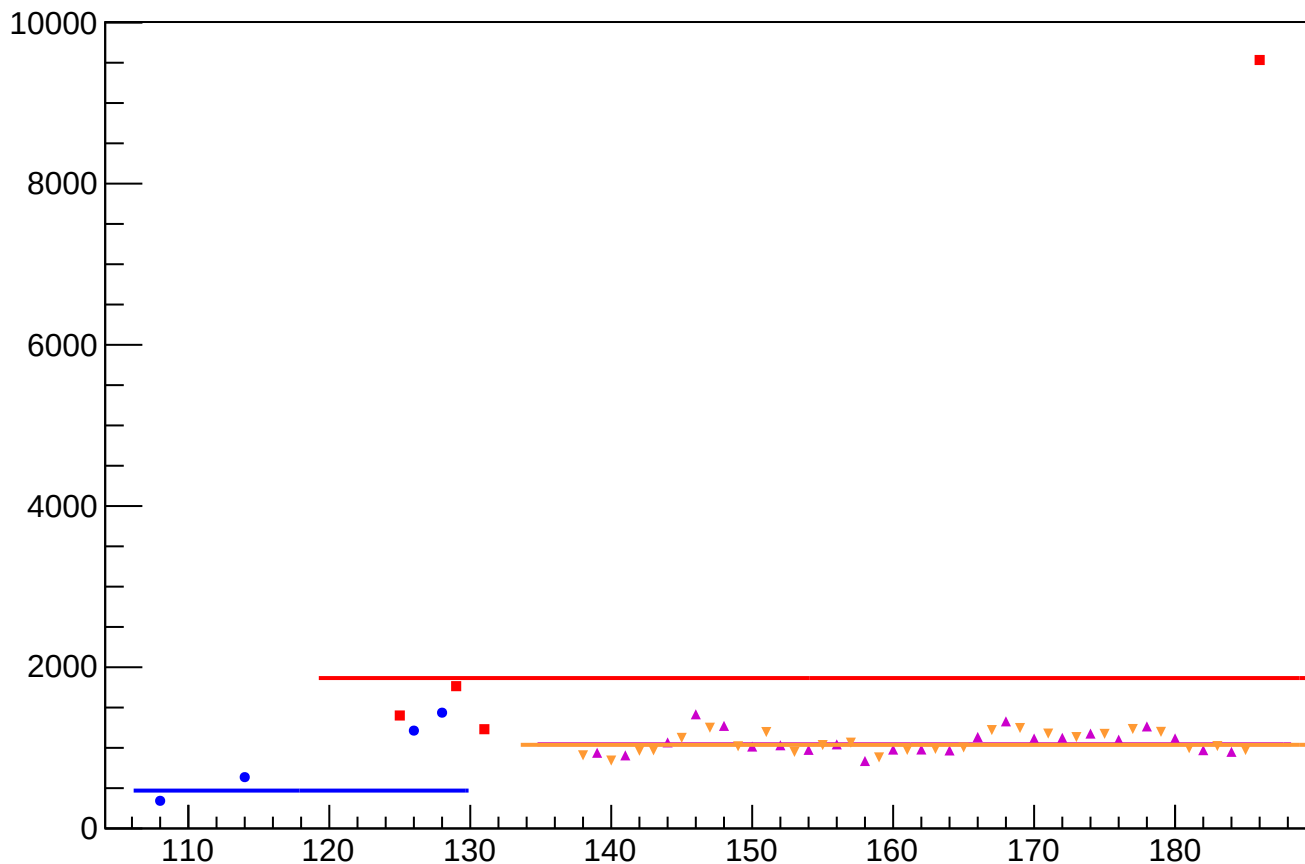
Right: -1030.272 $\pm$ 1120.087  $\chi^2$ /NDF: 4.1/7

In: 142.108 $\pm$ 246.715  $\chi^2$ /NDF:37.4/26

Out: 351.762 $\pm$ 242.924  $\chi^2$ /NDF:35.0/28

All: 248.558 $\pm$ 173.098  $\chi^2$ /NDF: 72.7/55

# asym\_sam6\_correction\_rms vs Slug, Sign Corrected

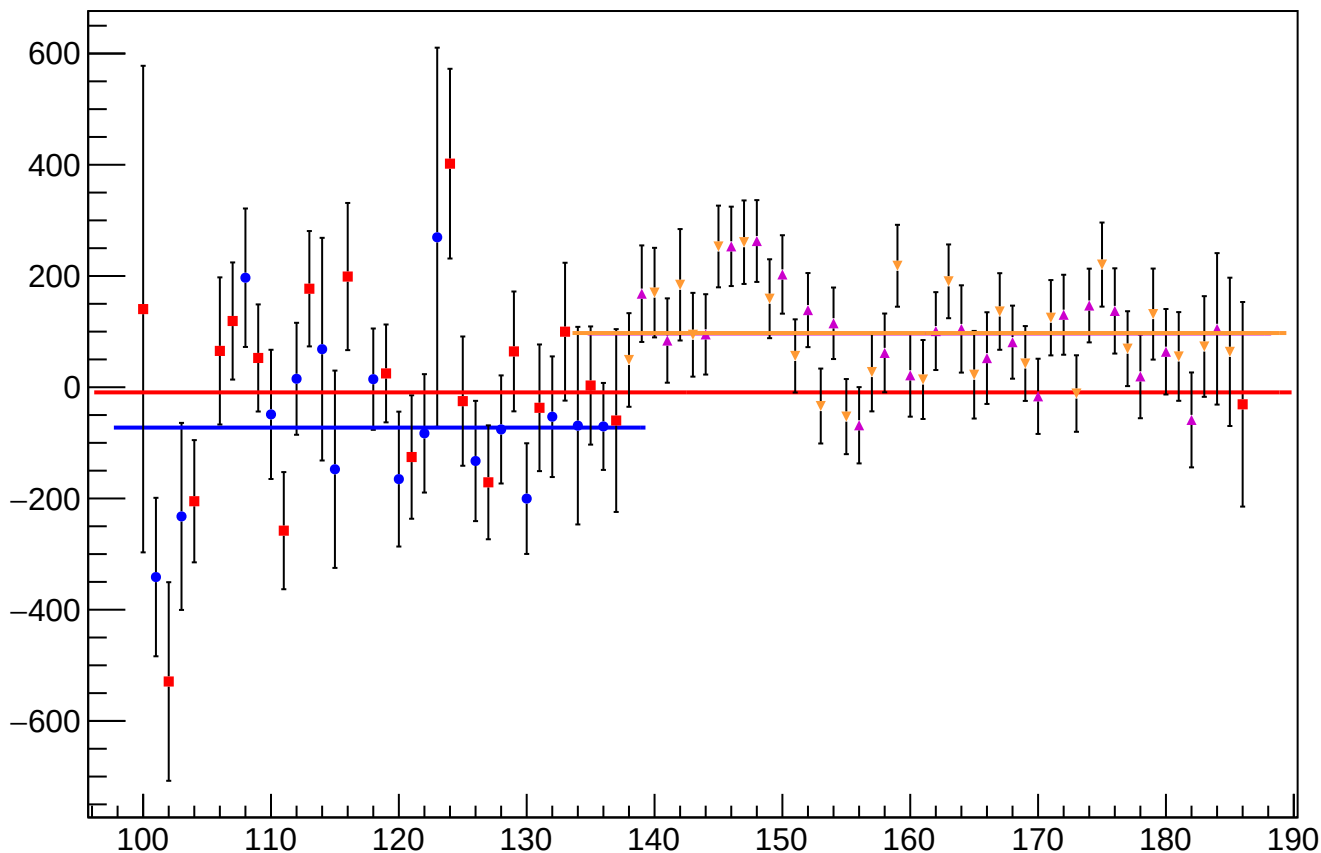


Right In: 469.775 $\pm$ 0.837     $\chi^2/\text{NDF}$ : 110192.0/3  
 Left Out: 1037.689 $\pm$ 0.172     $\chi^2/\text{NDF}$ :494981.4/24  
 Right Out: 1865.892 $\pm$ 2.455     $\chi^2/\text{NDF}$ : 509863.6/3  
 Left In: 1044.746 $\pm$ 0.178     $\chi^2/\text{NDF}$ :543315.5/22

Left: 1041.093 $\pm$ 0.124     $\chi^2/\text{NDF}$ : 1039107.0/47  
 Right: 615.039 $\pm$ 0.792     $\chi^2/\text{NDF}$ : 909717.2/7  
 In: 1019.753 $\pm$ 0.174     $\chi^2/\text{NDF}$ :1105157.2/26  
 Out: 1041.743 $\pm$ 0.172     $\chi^2/\text{NDF}$ :1118060.5/28  
 All: 1030.918 $\pm$ 0.122     $\chi^2/\text{NDF}$ : 2231284.9/55



# reg\_asym\_sam7\_mean vs Slug, Sign Corrected



Right In:  $-72.547 \pm 28.434$   $\chi^2/\text{NDF}: 15.1/16$

Left Out:  $97.445 \pm 14.880$   $\chi^2/\text{NDF}: 36.0/24$

Right Out:  $-9.248 \pm 26.607$   $\chi^2/\text{NDF}: 36.3/19$

Left In:  $96.704 \pm 15.369$   $\chi^2/\text{NDF}: 29.2/22$

Left:  $97.087 \pm 10.690$   $\chi^2/\text{NDF}: 65.2/47$

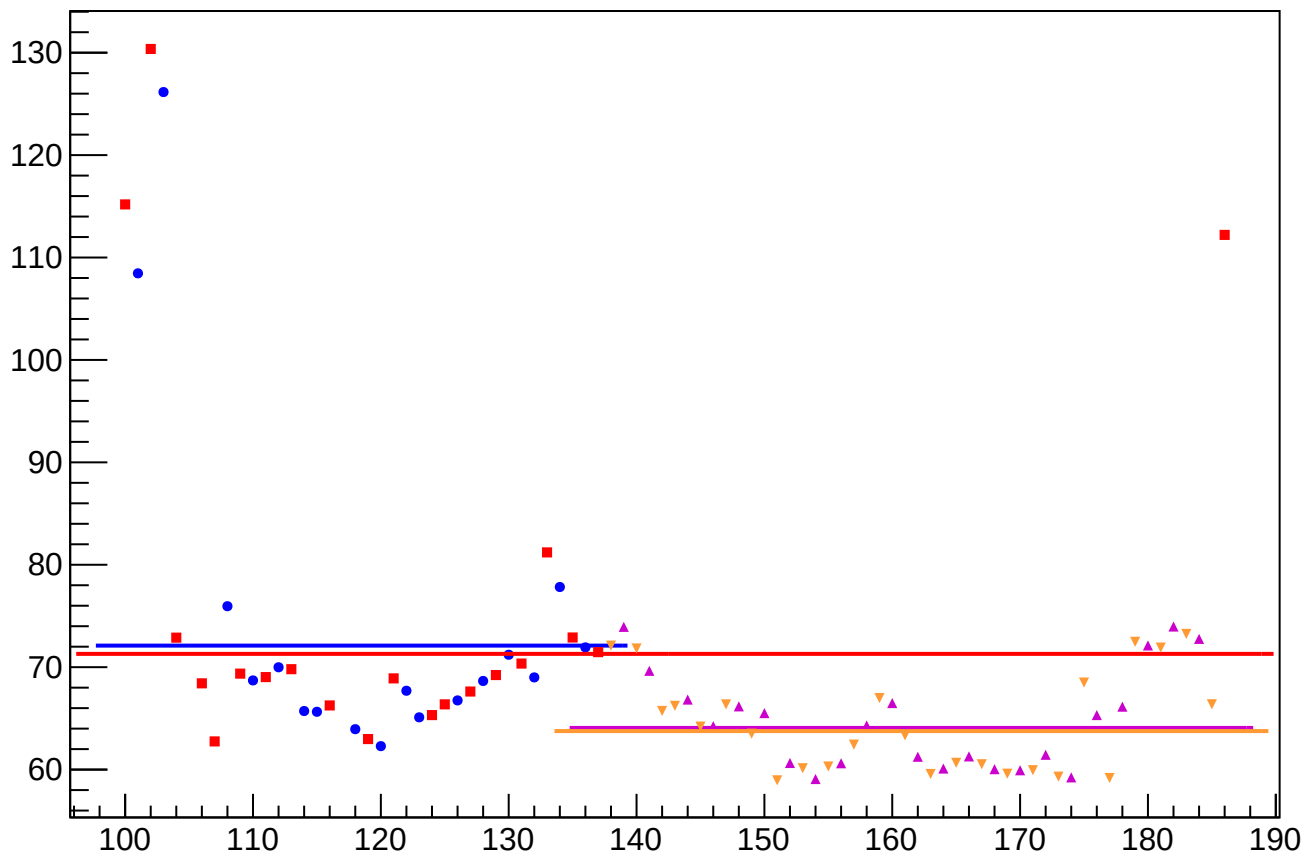
Right:  $-38.798 \pm 19.428$   $\chi^2/\text{NDF}: 54.0/36$

In:  $58.436 \pm 13.521$   $\chi^2/\text{NDF}: 71.8/39$

Out:  $72.026 \pm 12.987$   $\chi^2/\text{NDF}: 84.5/44$

All:  $65.505 \pm 9.366$   $\chi^2/\text{NDF}: 156.8/84$

# reg\_asym\_sam7\_rms vs Slug, Sign Corrected



Right In: 72.106 $\pm$ 0.020  $\chi^2$ /NDF: 390789.8/16

Left Out: 63.761 $\pm$ 0.011  $\chi^2$ /NDF:192803.8/24

Right Out: 71.299 $\pm$ 0.019  $\chi^2$ /NDF: 399103.2/19

Left In: 64.069 $\pm$ 0.011  $\chi^2$ /NDF:164660.4/22

Left: 63.910 $\pm$ 0.008  $\chi^2$ /NDF: 357877.2/47

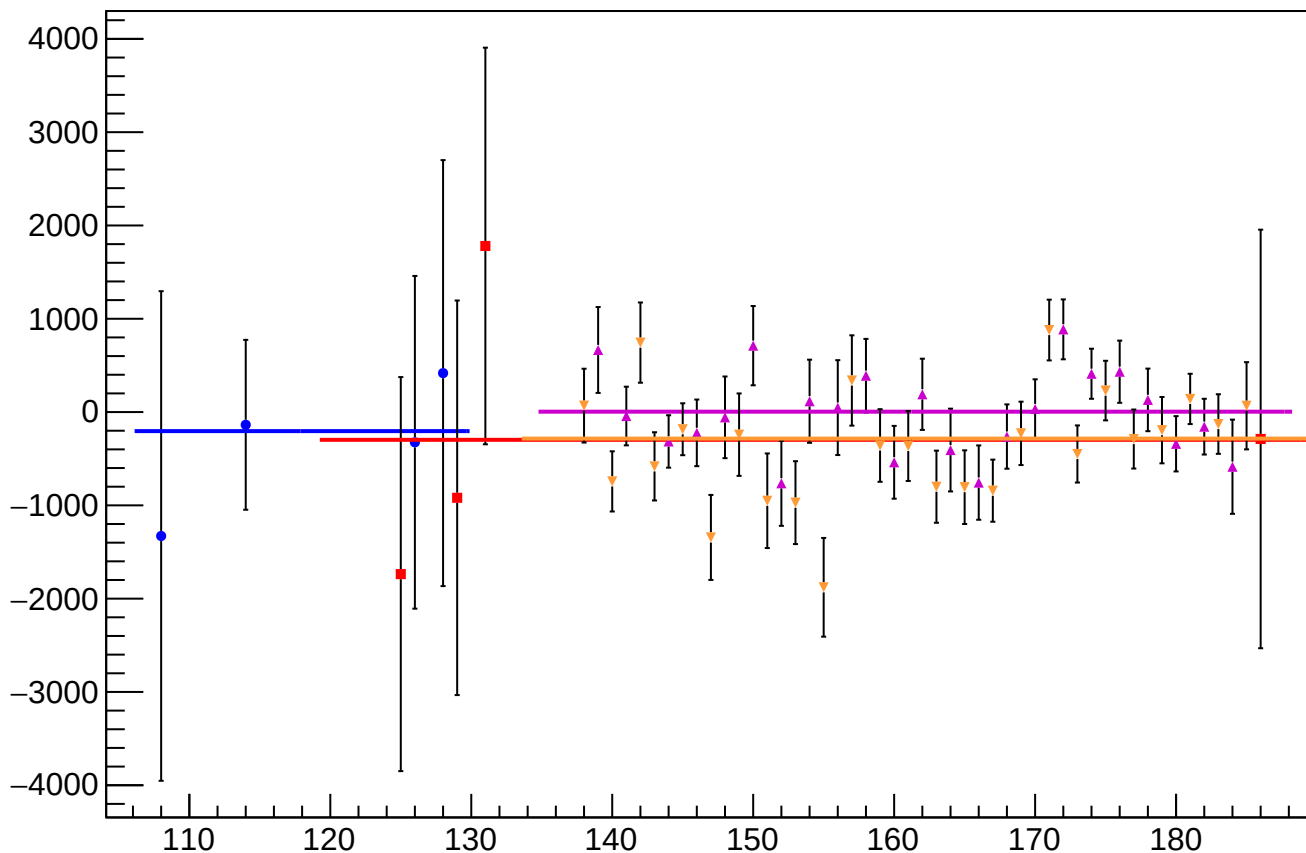
Right: 71.676 $\pm$ 0.014  $\chi^2$ /NDF: 790752.6/36

In: 65.886 $\pm$ 0.010  $\chi^2$ /NDF:679127.5/39

Out: 65.557 $\pm$ 0.009  $\chi^2$ /NDF:714188.2/44

All: 65.715 $\pm$ 0.007  $\chi^2$ /NDF: 1393931.2/84

asym\_sam7\_correction\_mean vs Slug, Sign Corrected



Right In: -204.257+/-733.668  $\chi^2$ /NDF: 0.3/3

Left Out: -284.304+/-72.732  $\chi^2$ /NDF:55.1/24

Right Out: -297.576+/-1073.424  $\chi^2$ /NDF: 1.5/3

Left In: 4.037+/-75.084  $\chi^2$ /NDF:32.4/22

Left: -144.720+/-52.241  $\chi^2$ /NDF: 95.0/47

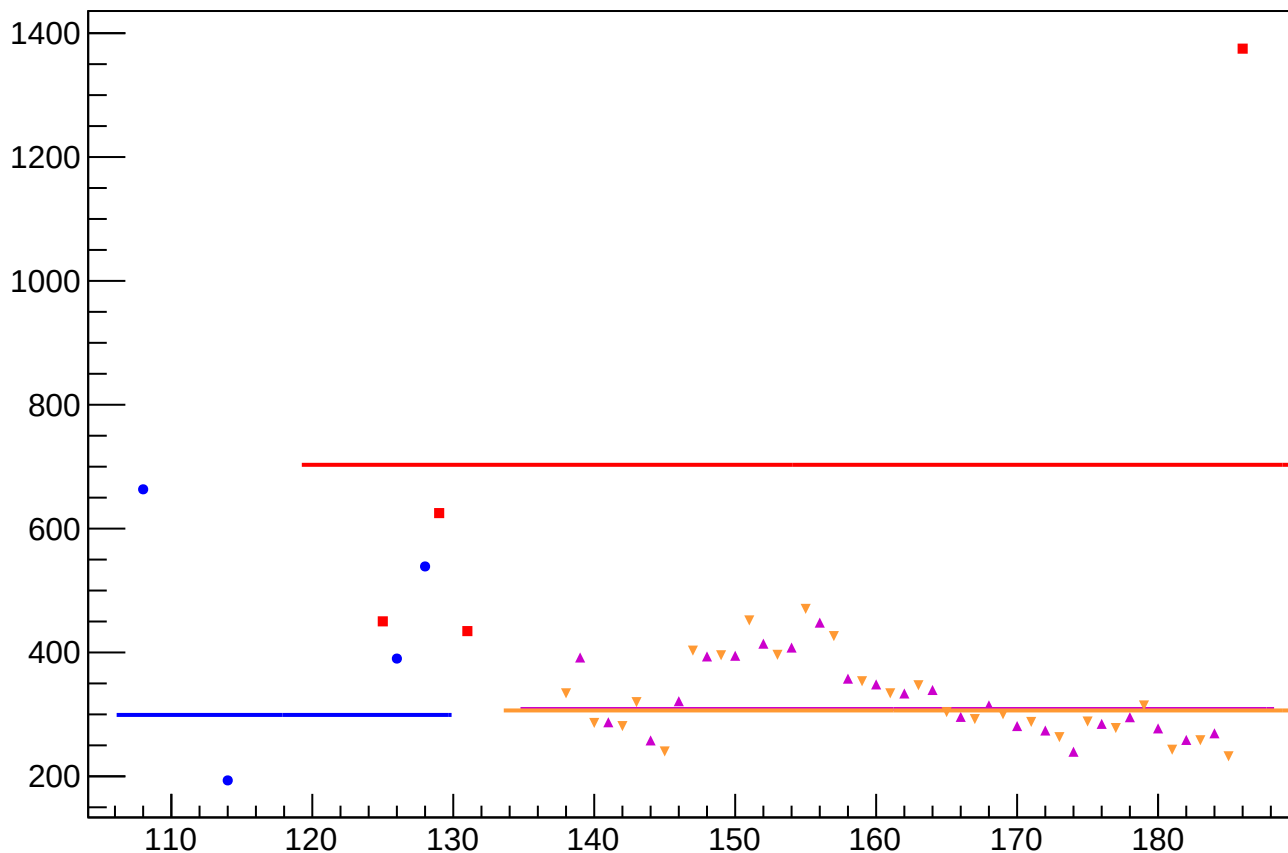
Right: -233.970+/-605.706  $\chi^2$ /NDF: 1.8/7

In: 1.878+/-74.694  $\chi^2$ /NDF:32.7/26

Out: -284.364+/-72.566  $\chi^2$ /NDF:56.6/28

All: -145.379+/-52.048  $\chi^2$ /NDF: 96.8/55

# asym\_sam7\_correction\_rms vs Slug, Sign Corrected



Right In: 299.143+/-0.519     $\chi^2/\text{NDF}$ : 92782.9/3

Left Out: 306.363+/-0.051     $\chi^2/\text{NDF}$ : 1215669.9/24

Right Out: 703.014+/-0.759     $\chi^2/\text{NDF}$ : 242754.8/3

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

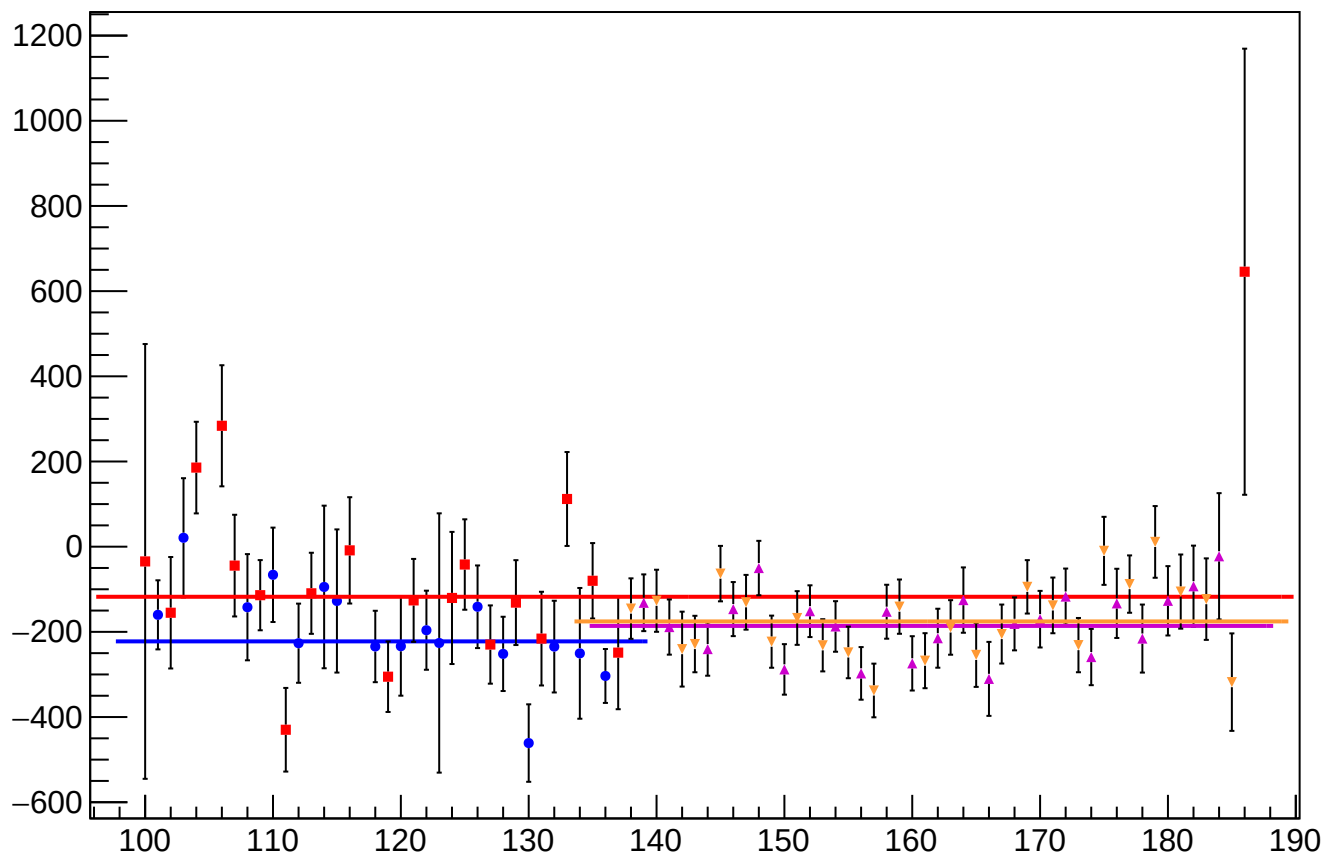
Right: 427.738+/-0.428     $\chi^2/\text{NDF}$ : 528511.5/7

In: 308.627+/-0.053     $\chi^2/\text{NDF}$ : 1096068.1/26

Out: 308.176+/-0.051     $\chi^2/\text{NDF}$ : 1730266.2/28

All: 308.395+/-0.037     $\chi^2/\text{NDF}$ : 2826371.8/55

# reg\_asym\_sam8\_mean vs Slug, Sign Corrected



Right In: -222.347+/-24.941  $\chi^2/\text{NDF}$ : 16.3/16

Left Out: -175.471+/-13.846  $\chi^2/\text{NDF}$ : 34.6/24

Right Out: -117.620+/-24.639  $\chi^2/\text{NDF}$ : 42.9/19

Left In: -186.047+/-14.315  $\chi^2/\text{NDF}$ : 23.6/22

Left: -180.583+/-9.952  $\chi^2/\text{NDF}$ : 58.5/47

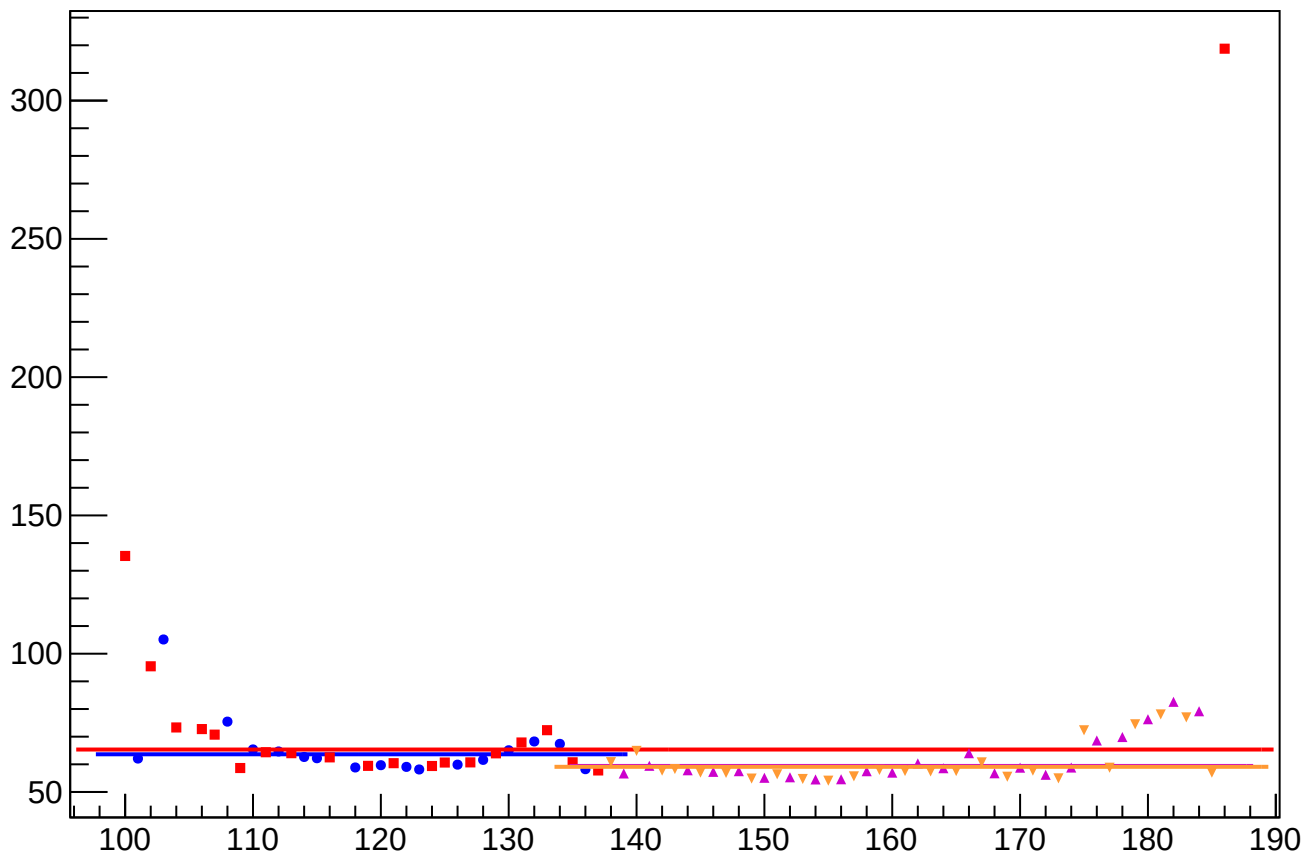
Right: -169.346+/-17.528  $\chi^2/\text{NDF}$ : 68.1/36

In: -195.043+/-12.416  $\chi^2/\text{NDF}$ : 41.4/39

Out: -161.587+/-12.070  $\chi^2/\text{NDF}$ : 81.7/44

All: -177.843+/-8.655  $\chi^2/\text{NDF}$ : 126.9/84

# reg\_asym\_sam8\_rms vs Slug, Sign Corrected



Right In: 63.629 $\pm$ 0.018  $\chi^2$ /NDF: 233899.4/16

Left Out: 59.099 $\pm$ 0.010  $\chi^2$ /NDF: 369788.6/24

Right Out: 65.349 $\pm$ 0.017  $\chi^2$ /NDF: 695692.4/19

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

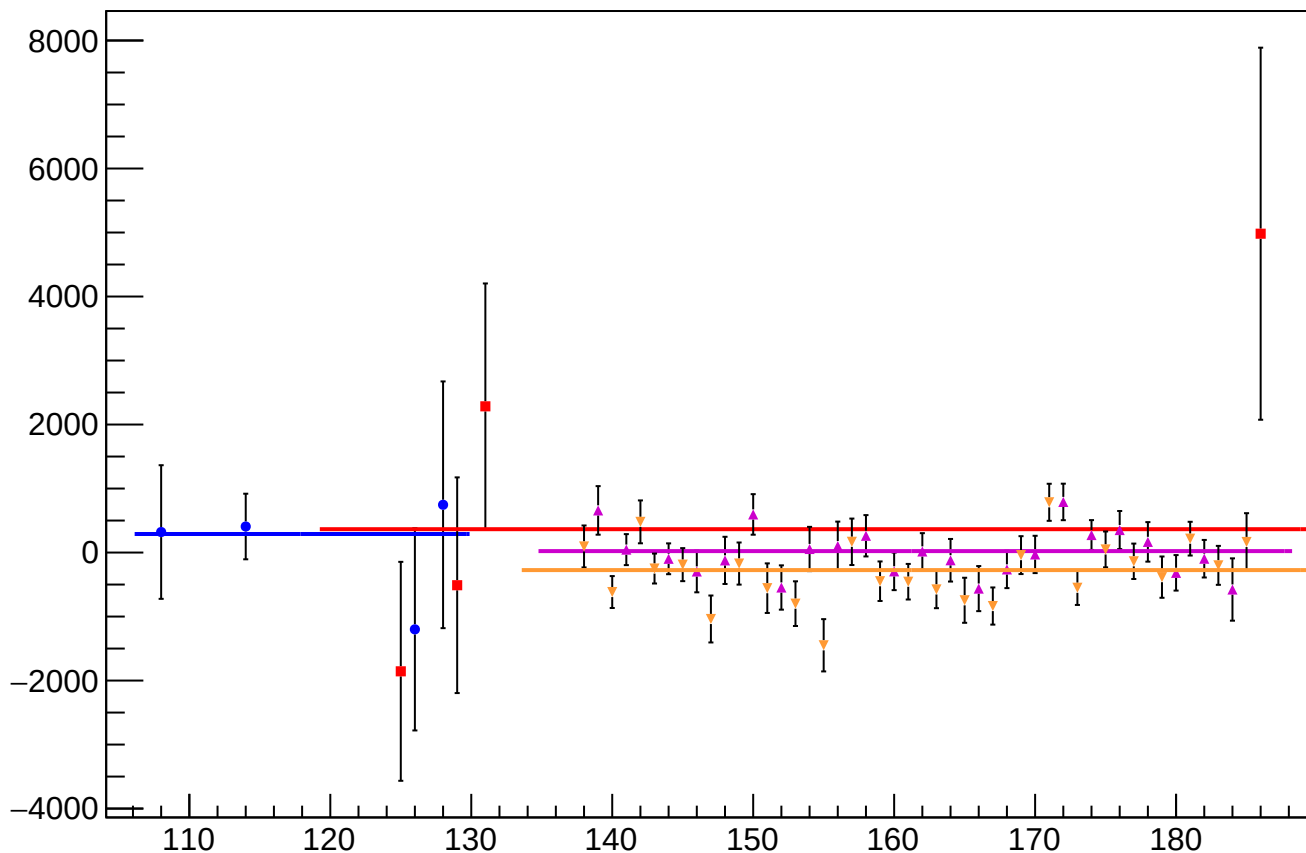
Right: 64.500 $\pm$ 0.012  $\chi^2$ /NDF: 934410.4/36

In: 60.456 $\pm$ 0.009  $\chi^2$ /NDF: 649987.1/39

Out: 60.599 $\pm$ 0.009  $\chi^2$ /NDF: 1163293.4/44

All: 60.530 $\pm$ 0.006  $\chi^2$ /NDF: 1813418.3/84

asym\_sam8\_correction\_mean vs Slug, Sign Corrected

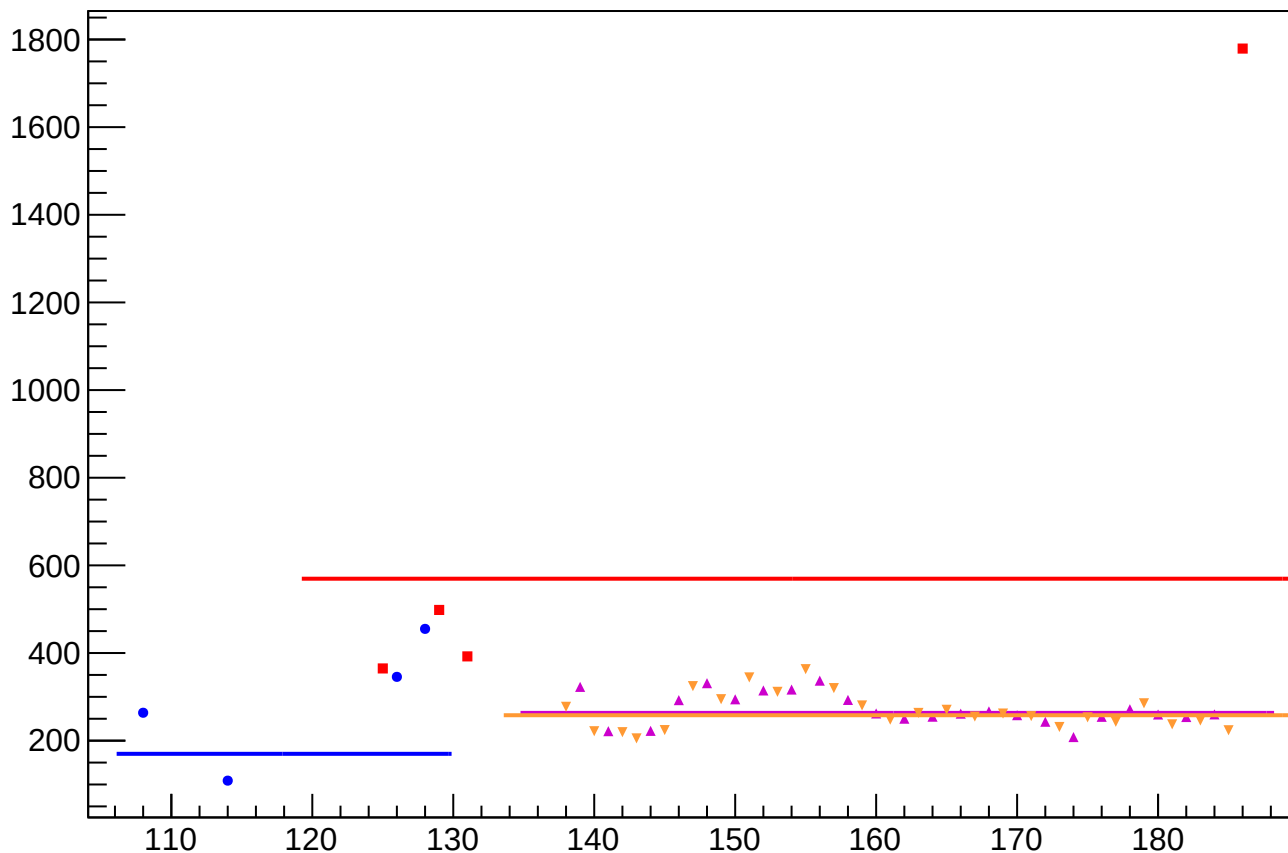


Right In:  $289.832 \pm 430.437$   $\chi^2/\text{NDF}: 1.0/3$   
 Left Out:  $-274.091 \pm 60.799$   $\chi^2/\text{NDF}: 53.9/24$   
 Right Out:  $364.950 \pm 960.555$   $\chi^2/\text{NDF}: 5.5/3$   
 Left In:  $22.631 \pm 63.643$   $\chi^2/\text{NDF}: 28.9/22$

Left:  $-132.507 \pm 43.963$   $\chi^2/\text{NDF}: 94.2/47$   
 Right:  $302.394 \pm 392.802$   $\chi^2/\text{NDF}: 6.5/7$   
 In:  $28.347 \pm 62.959$   $\chi^2/\text{NDF}: 30.3/26$   
 Out:  $-271.541 \pm 60.678$   $\chi^2/\text{NDF}: 59.8/28$

All:  $-127.127 \pm 43.690$   $\chi^2/\text{NDF}: 101.9/55$

# asym\_sam8\_correction\_rms vs Slug, Sign Corrected



Right In: 169.977 $\pm$ 0.304     $\chi^2$ /NDF: 113149.8/3

Left Out: 258.040 $\pm$ 0.043     $\chi^2$ /NDF: 724823.3/24

Right Out: 569.570 $\pm$ 0.679     $\chi^2$ /NDF: 395752.4/3

Left In: 263.397 $\pm$ 0.045     $\chi^2$ /NDF: 585600.2/22

Left: 260.596 $\pm$ 0.031     $\chi^2$ /NDF: 1317830.8/47

Right: 236.799 $\pm$ 0.278     $\chi^2$ /NDF: 797138.4/7

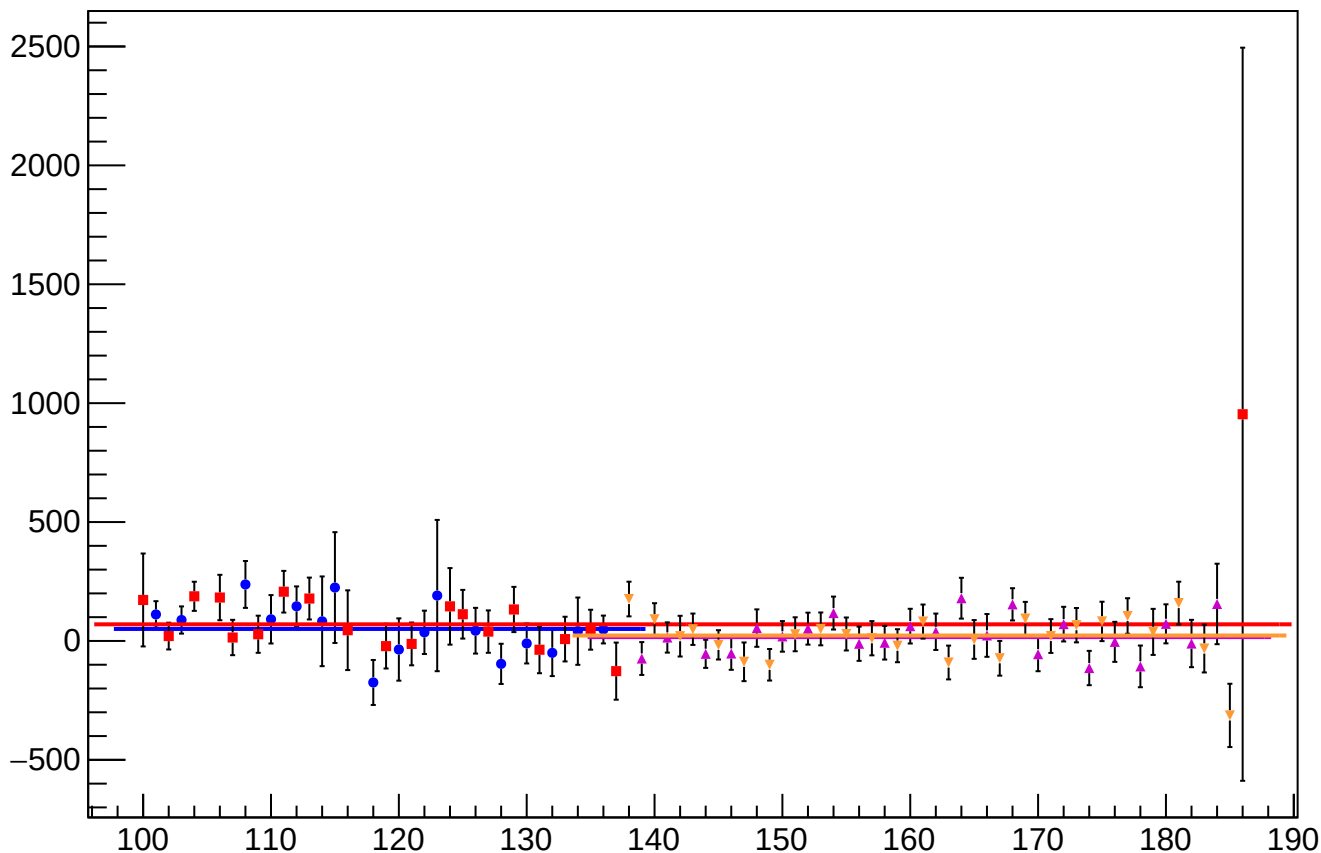
In: 261.398 $\pm$ 0.045     $\chi^2$ /NDF: 790942.2/26

Out: 259.283 $\pm$ 0.043     $\chi^2$ /NDF: 1330106.8/28

All: 260.302 $\pm$ 0.031     $\chi^2$ /NDF: 2122218.9/55



reg\_asym\_sam\_15\_avg\_mean vs Slug, Sign Corrected



Right In: 50.467 $\pm$ 21.547  $\chi^2$ /NDF: 18.2/16

Left Out: 22.871 $\pm$ 14.968  $\chi^2$ /NDF:29.0/24

Right Out: 69.894 $\pm$ 20.446  $\chi^2$ /NDF: 18.4/19

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

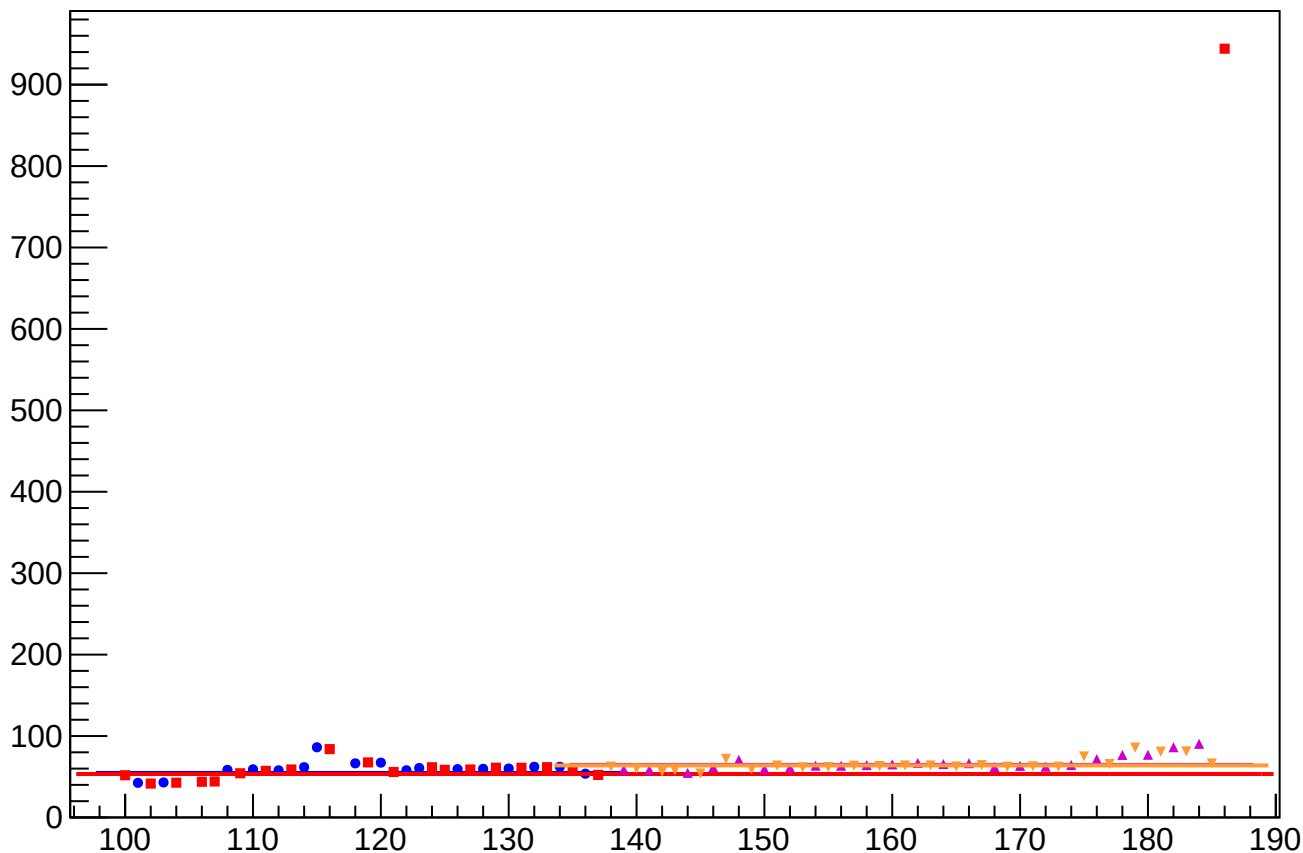
Right: 60.689 $\pm$ 14.832  $\chi^2$ /NDF: 37.0/36

In: 27.915 $\pm$ 12.599  $\chi^2$ /NDF:43.2/39

Out: 39.278 $\pm$ 12.077  $\chi^2$ /NDF:50.8/44

All: 33.836 $\pm$ 8.719  $\chi^2$ /NDF: 94.5/84

reg\_asym\_sam\_15\_avg\_rms vs Slug, Sign Corrected



Right In: 54.640 $\pm$ 0.015  $\chi^2$ /NDF: 318989.1/16

Left Out: 63.920 $\pm$ 0.011  $\chi^2$ /NDF: 395410.4/24

Right Out: 53.375 $\pm$ 0.014  $\chi^2$ /NDF: 1055822.6/19

Left In: 64.511 $\pm$ 0.011  $\chi^2$ /NDF: 370515.2/22

Left: 64.204 $\pm$ 0.008  $\chi^2$ /NDF: 767426.6/47

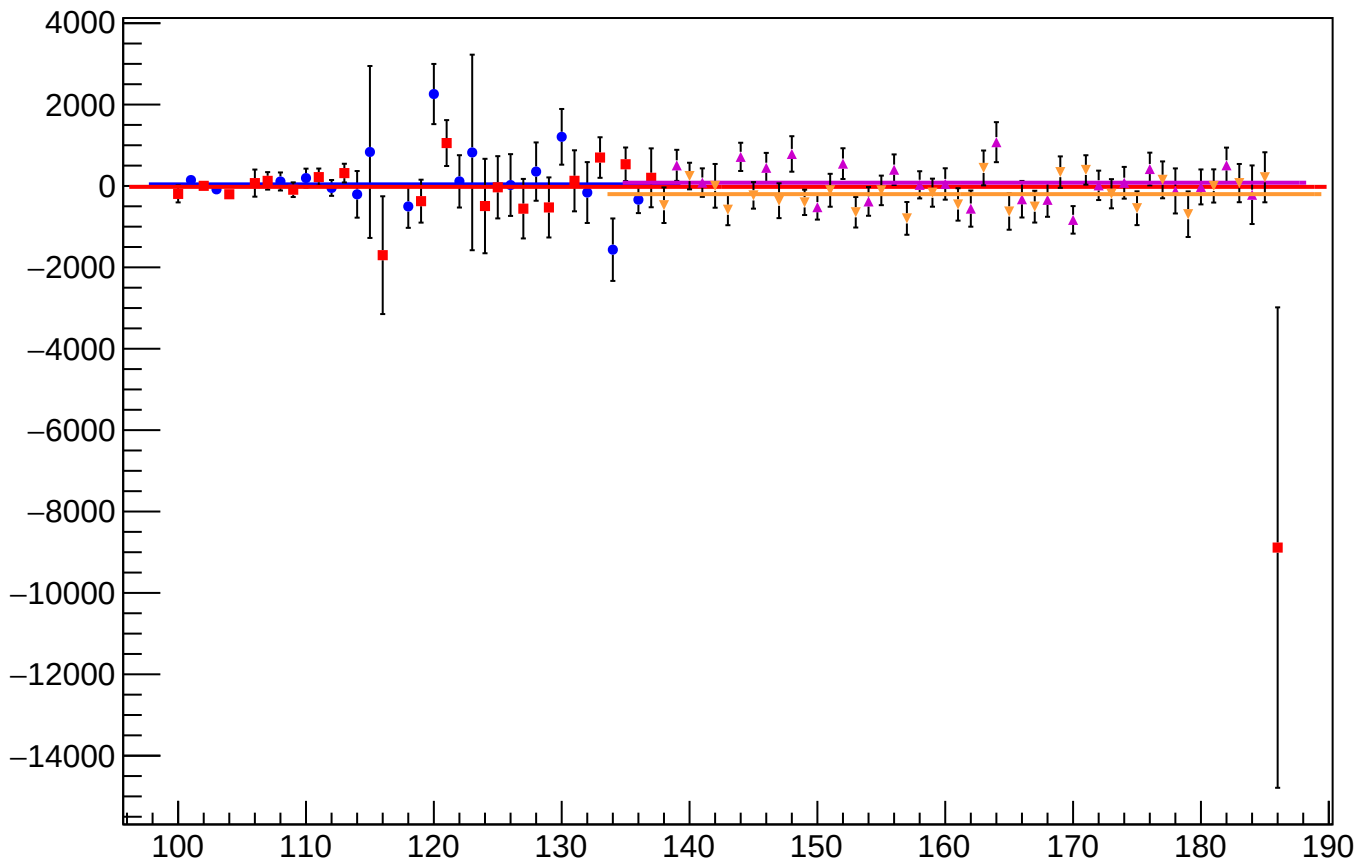
Right: 53.975 $\pm$ 0.010  $\chi^2$ /NDF: 1378439.2/36

In: 61.136 $\pm$ 0.009  $\chi^2$ /NDF: 965704.8/39

Out: 60.241 $\pm$ 0.009  $\chi^2$ /NDF: 1797571.6/44

All: 60.669 $\pm$ 0.006  $\chi^2$ /NDF: 2768540.6/84

asym\_sam\_15\_avg\_correction\_mean vs Slug, Sign Corrected



Right In:  $39.017 \pm 51.561$   $\chi^2/\text{NDF}: 23.8/16$

Left Out:  $-201.082 \pm 79.549$   $\chi^2/\text{NDF}: 19.7/24$

Right Out:  $-22.141 \pm 53.286$   $\chi^2/\text{NDF}: 21.0/19$

Left In:  $79.985 \pm 81.781$   $\chi^2/\text{NDF}: 33.4/22$

Left:  $-64.438 \pm 57.022$   $\chi^2/\text{NDF}: 59.1/47$

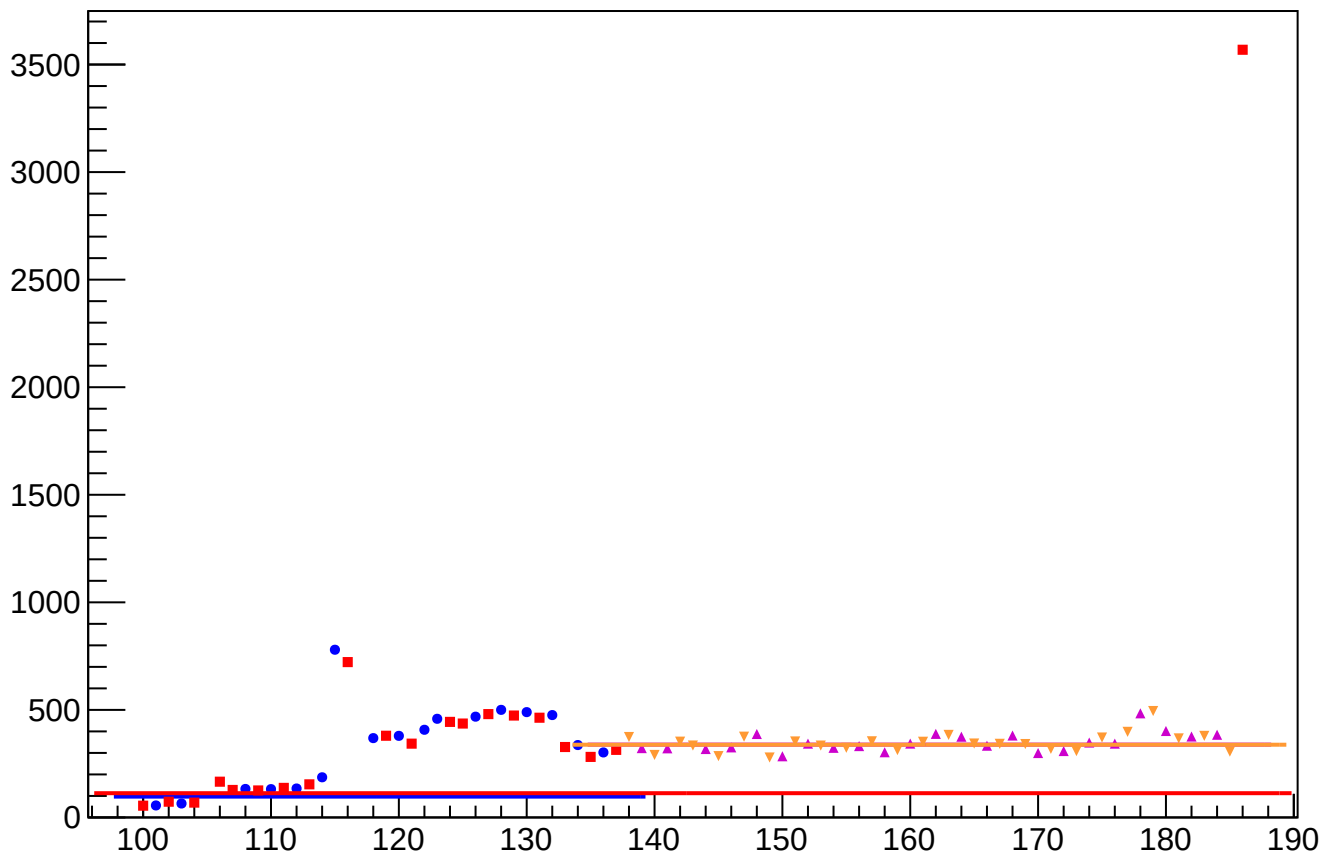
Right:  $9.444 \pm 37.054$   $\chi^2/\text{NDF}: 45.5/36$

In:  $50.669 \pm 43.616$   $\chi^2/\text{NDF}: 57.4/39$

Out:  $-77.564 \pm 44.271$   $\chi^2/\text{NDF}: 44.2/44$

All:  $-12.491 \pm 31.070$   $\chi^2/\text{NDF}: 105.9/84$

asym\_sam\_15\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 96.900+/-0.036  $\chi^2/\text{NDF}$ : 5800378.0/16

Left Out: 338.130+/-0.056  $\chi^2/\text{NDF}$ : 498601.7/24

Right Out: 112.801+/-0.038  $\chi^2/\text{NDF}$ : 5701352.9/19

Left In: 338.564+/-0.058  $\chi^2/\text{NDF}$ : 437243.0/22

Left: 338.341+/-0.040  $\chi^2/\text{NDF}$ : 935873.7/47

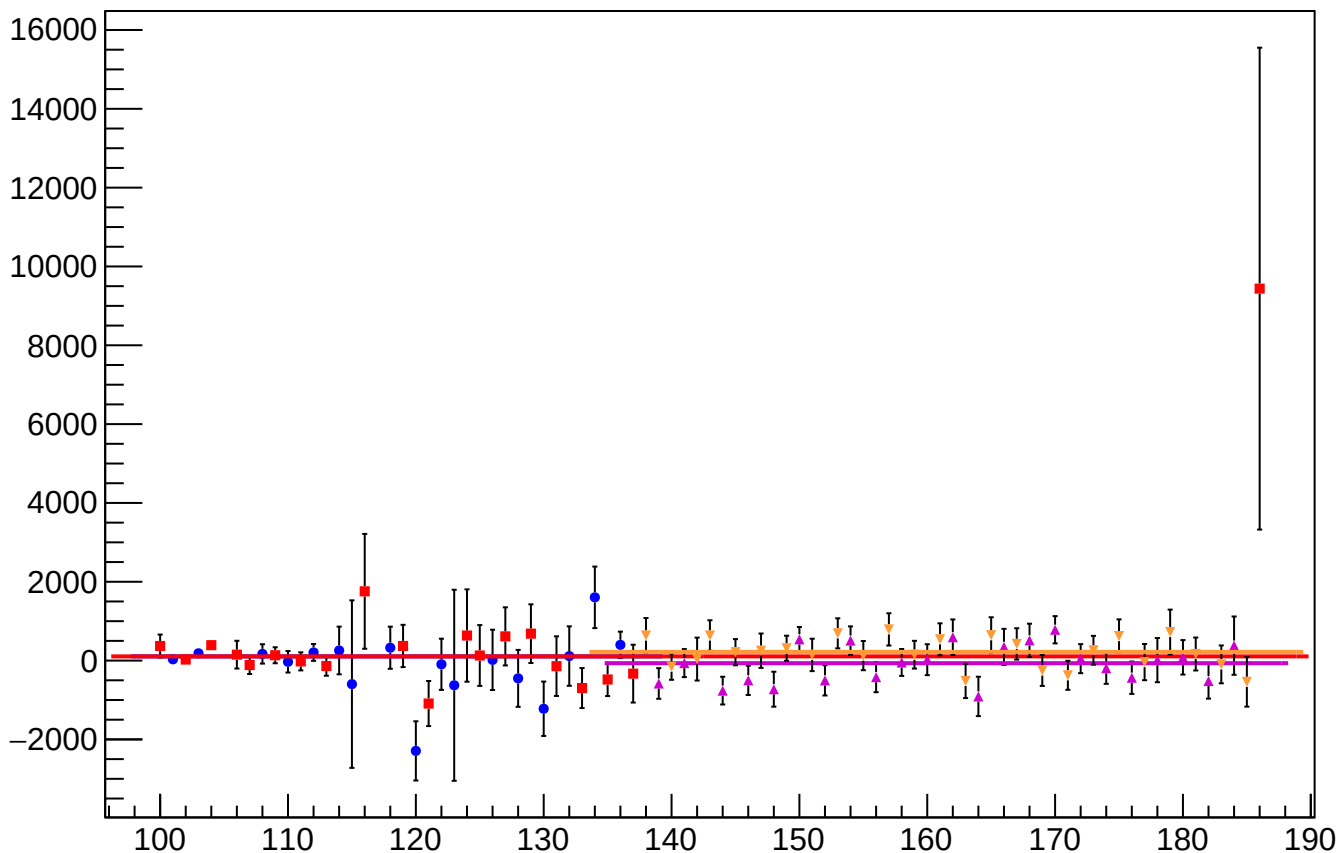
Right: 104.589+/-0.026  $\chi^2/\text{NDF}$ : 11593715.5/36

In: 165.638+/-0.031  $\chi^2/\text{NDF}$ : 18734362.6/39

Out: 182.592+/-0.031  $\chi^2/\text{NDF}$ : 17276795.3/44

All: 173.989+/-0.022  $\chi^2/\text{NDF}$ : 36159999.1/84

asym\_sam\_15\_avg\_mean vs Slug, Sign Corrected



Right In: 105.662 $\pm$ 63.187  $\chi^2$ /NDF: 21.0/16

Left Out: 221.083 $\pm$ 81.018  $\chi^2$ /NDF:19.7/24

Right Out: 106.660 $\pm$ 60.875  $\chi^2$ /NDF: 23.6/19

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

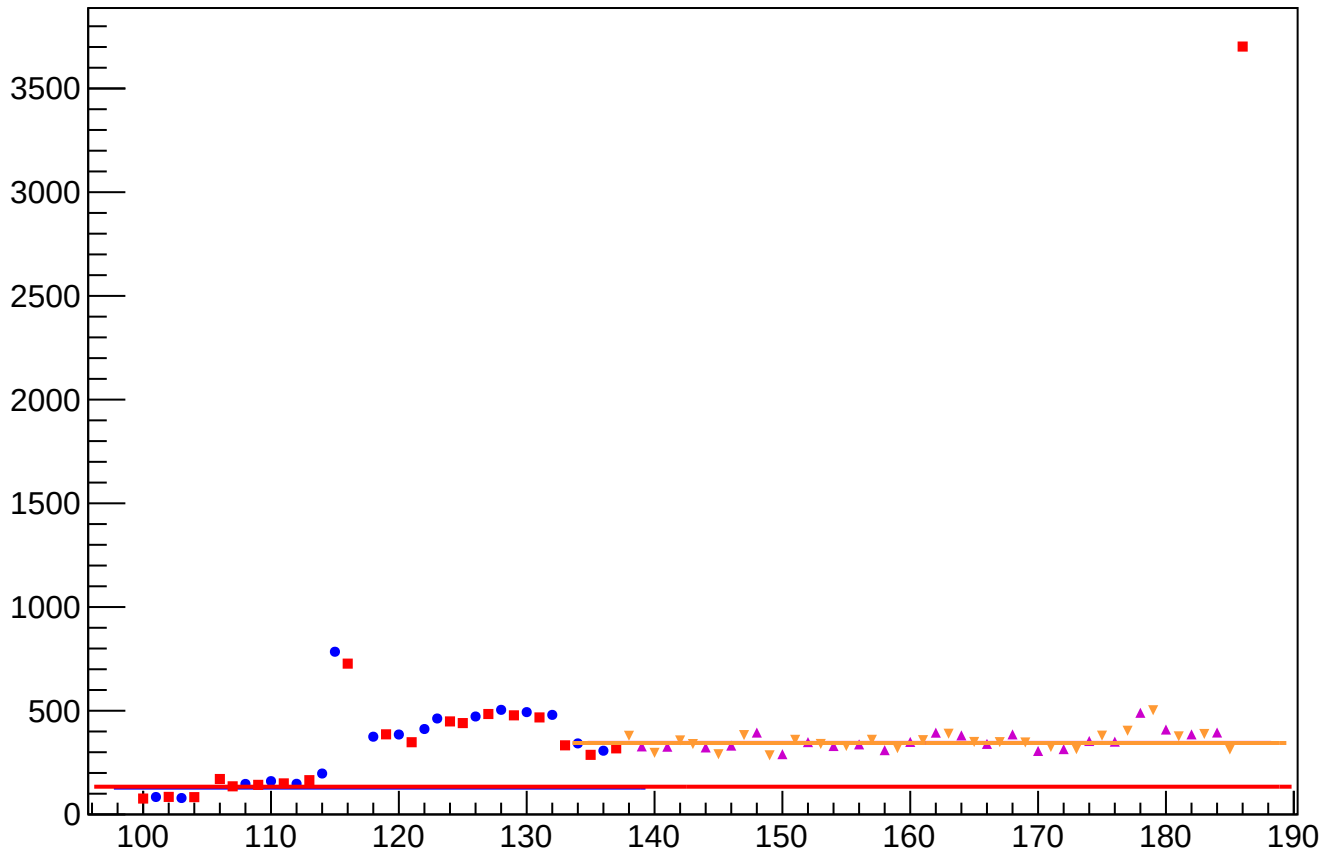
Right: 106.179 $\pm$ 43.840  $\chi^2$ /NDF: 44.6/36

In: 43.161 $\pm$ 50.346  $\chi^2$ /NDF:57.7/39

Out: 147.949 $\pm$ 48.668  $\chi^2$ /NDF:44.5/44

All: 97.331 $\pm$ 34.992  $\chi^2$ /NDF: 104.4/84

# asym\_sam\_15\_avg\_rms vs Slug, Sign Corrected



Right In: 129.376+/-0.045  $\chi^2/\text{NDF}$ : 4758533.8/16

Left Out: 344.506+/-0.057  $\chi^2/\text{NDF}$ : 488323.4/24

Right Out: 133.787+/-0.043  $\chi^2/\text{NDF}$ : 5030664.7/19

Left In: 345.039+/-0.059  $\chi^2/\text{NDF}$ : 427381.3/22

Left: 344.765+/-0.041  $\chi^2/\text{NDF}$ : 915746.8/47

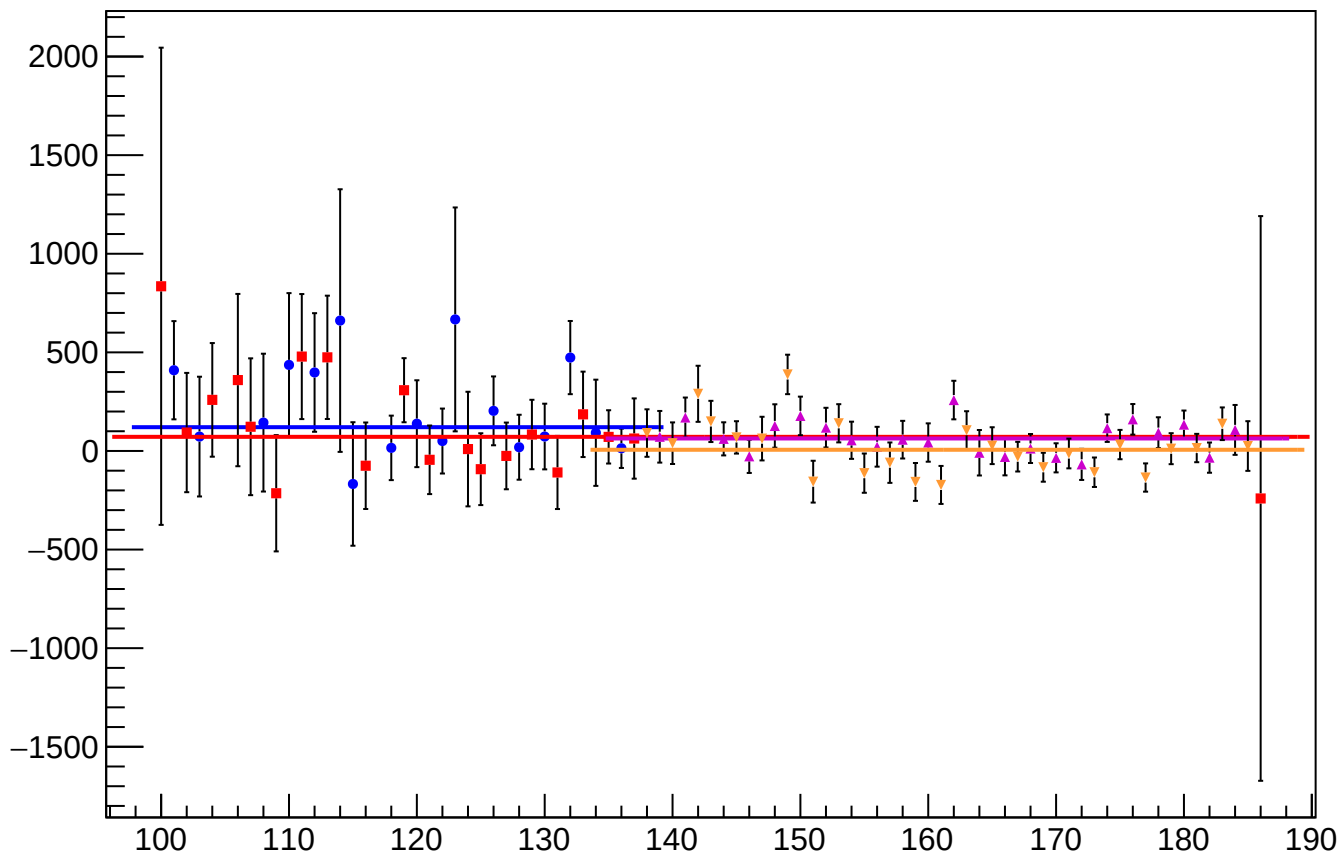
Right: 131.664+/-0.031  $\chi^2/\text{NDF}$ : 9794253.1/36

In: 208.122+/-0.036  $\chi^2/\text{NDF}$ : 13692940.9/39

Out: 209.823+/-0.034  $\chi^2/\text{NDF}$ : 14166242.8/44

All: 209.001+/-0.025  $\chi^2/\text{NDF}$ : 27860363.9/84

# reg\_asym\_sam\_26\_avg\_mean vs Slug, Sign Corrected



Right In: 120.594 $\pm$ 49.201  $\chi^2$ /NDF: 11.5/16

Left Out: 6.020 $\pm$ 17.910  $\chi^2$ /NDF:46.0/24

Right Out: 71.642 $\pm$ 50.020  $\chi^2$ /NDF: 11.0/19

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

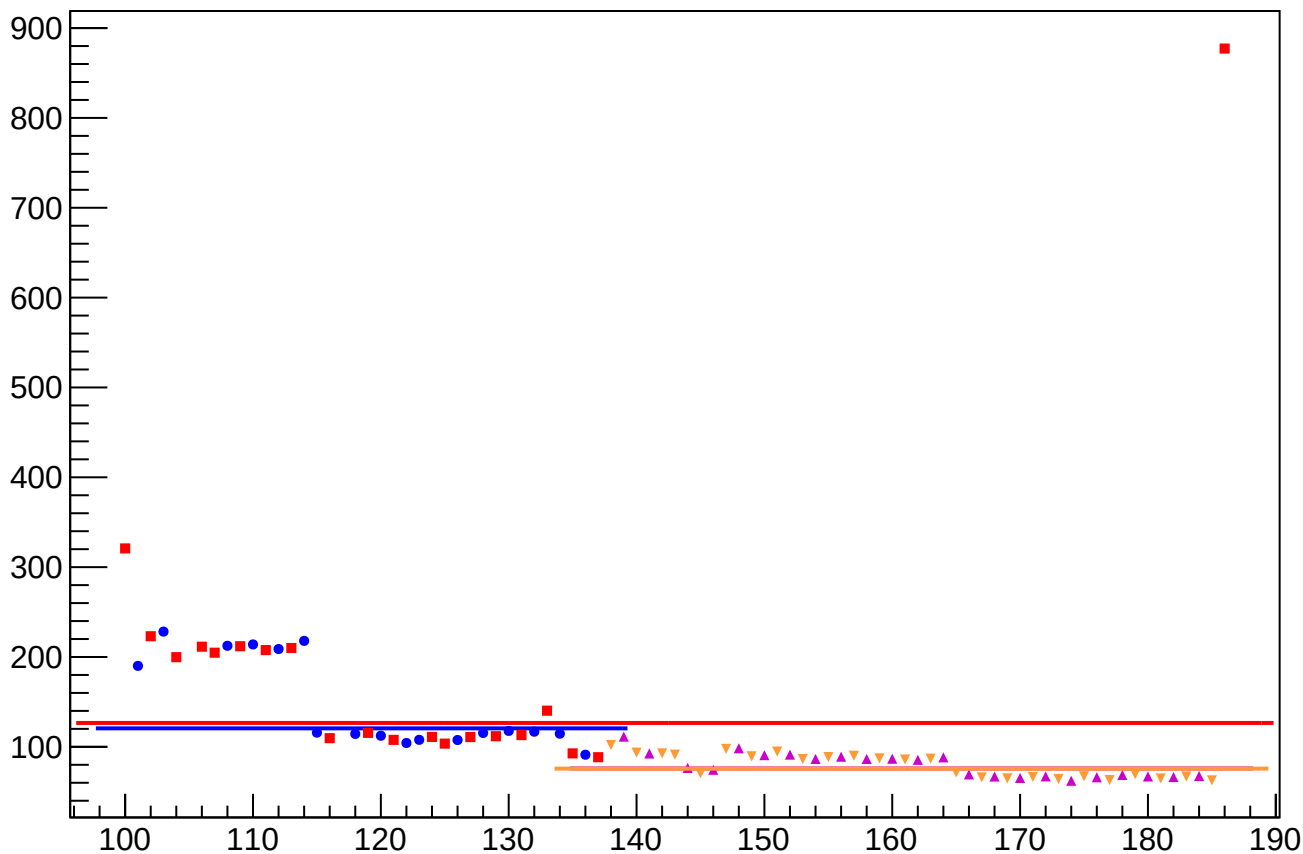
Right: 96.522 $\pm$ 35.076  $\chi^2$ /NDF: 23.0/36

In: 70.343 $\pm$ 17.272  $\chi^2$ /NDF:32.5/39

Out: 13.476 $\pm$ 16.862  $\chi^2$ /NDF:58.5/44

All: 41.225 $\pm$ 12.066  $\chi^2$ /NDF: 96.6/84

reg\_asym\_sam\_26\_avg\_rms vs Slug, Sign Corrected



Right In: 120.576 $\pm$ 0.035  $\chi^2$ /NDF: 1107352.4/16

Left Out: 75.743 $\pm$ 0.013  $\chi^2$ /NDF: 937821.8/24

Right Out: 126.583 $\pm$ 0.035  $\chi^2$ /NDF: 1879993.5/19

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: 123.530 $\pm$ 0.025  $\chi^2$ /NDF: 3002007.2/36

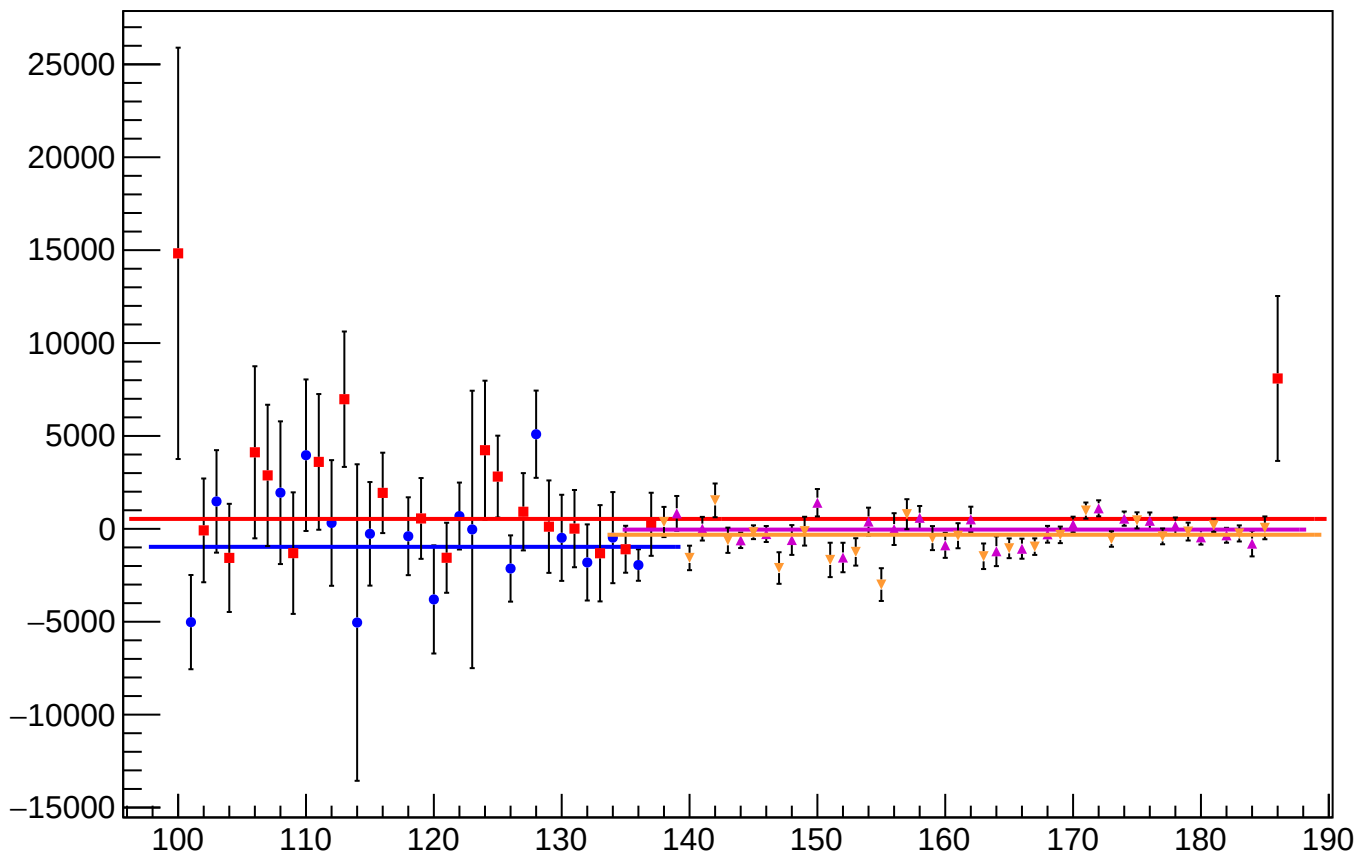
In: 81.414 $\pm$ 0.012  $\chi^2$ /NDF: 3383929.5/39

Out: 81.520 $\pm$ 0.012  $\chi^2$ /NDF: 4649157.3/44

All: 81.468 $\pm$ 0.009  $\chi^2$ /NDF: 8033125.0/84



asym\_sam\_26\_avg\_correction\_mean vs Slug, Sign Corrected



Right In: -968.648+/-513.413  $\chi^2/\text{NDF}$ : 16.4/16

Left Out: -318.064+/-108.014  $\chi^2/\text{NDF}$ : 50.0/24

Right Out: 533.796+/-542.687  $\chi^2/\text{NDF}$ : 16.3/19

Left In: -40.473+/-110.252  $\chi^2/\text{NDF}$ : 34.7/22

Left: -182.115+/-77.156  $\chi^2/\text{NDF}$ : 88.0/47

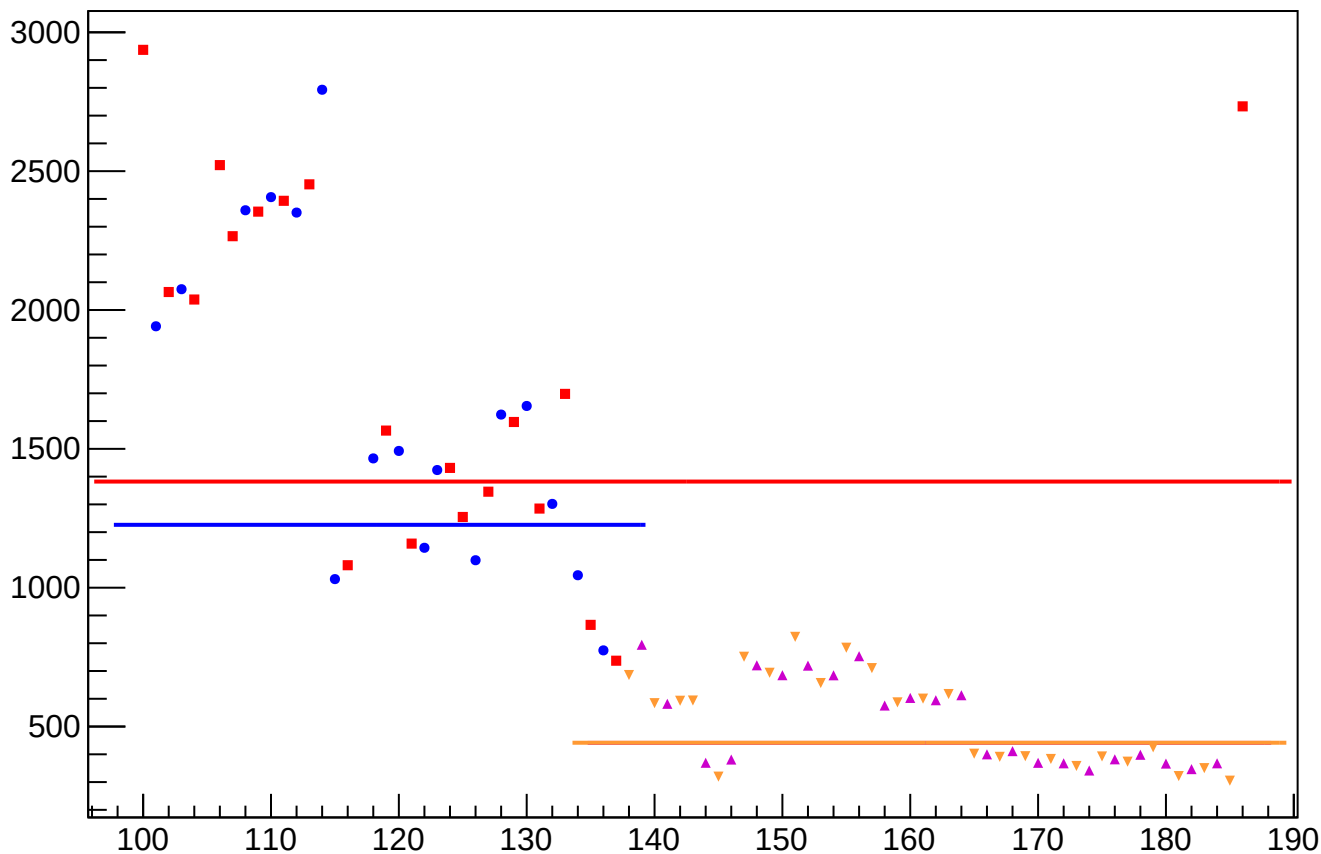
Right: -259.040+/-372.958  $\chi^2/\text{NDF}$ : 36.7/36

In: -81.389+/-107.795  $\chi^2/\text{NDF}$ : 54.2/39

Out: -285.604+/-105.936  $\chi^2/\text{NDF}$ : 68.7/44

All: -185.273+/-75.557  $\chi^2/\text{NDF}$ : 124.8/84

asym\_sam\_26\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 1226.408+/-0.363  $\chi^2/\text{NDF}$ : 1754373.1/16

Left Out: 441.685+/-0.076  $\chi^2/\text{NDF}$ : 3169140.9/24

Right Out: 1382.197+/-0.384  $\chi^2/\text{NDF}$ : 1937702.9/19

Left In: 441.009+/-0.078  $\chi^2/\text{NDF}$ : 2597018.1/22

Left: 441.354+/-0.055  $\chi^2/\text{NDF}$ : 5766197.3/47

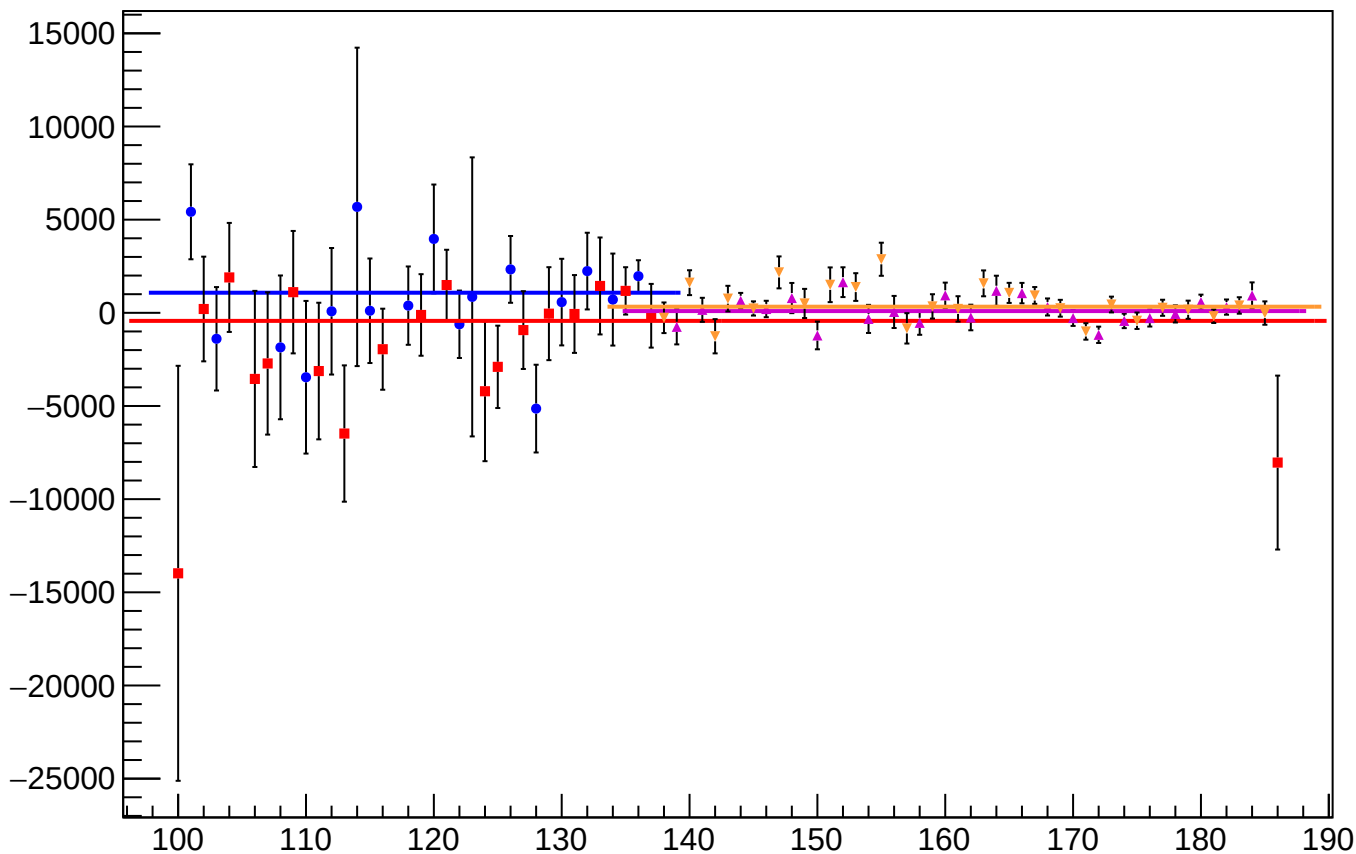
Right: 1299.987+/-0.264  $\chi^2/\text{NDF}$ : 3779050.2/36

In: 475.631+/-0.076  $\chi^2/\text{NDF}$ : 8825405.8/39

Out: 477.523+/-0.075  $\chi^2/\text{NDF}$ : 10884975.9/44

All: 476.593+/-0.053  $\chi^2/\text{NDF}$ : 19710695.2/84

# asym\_sam\_26\_avg\_mean vs Slug, Sign Corrected



Right In: 1078.872 $\pm$ 516.347  $\chi^2$ /NDF: 16.9/16

Left Out: 328.599 $\pm$ 109.668  $\chi^2$ /NDF:47.7/24

Right Out: -432.477 $\pm$ 545.852  $\chi^2$ /NDF: 15.2/19

Left In: 93.310 $\pm$ 111.960  $\chi^2$ /NDF:33.3/22

Left: 213.387 $\pm$ 78.345  $\chi^2$ /NDF: 83.3/47

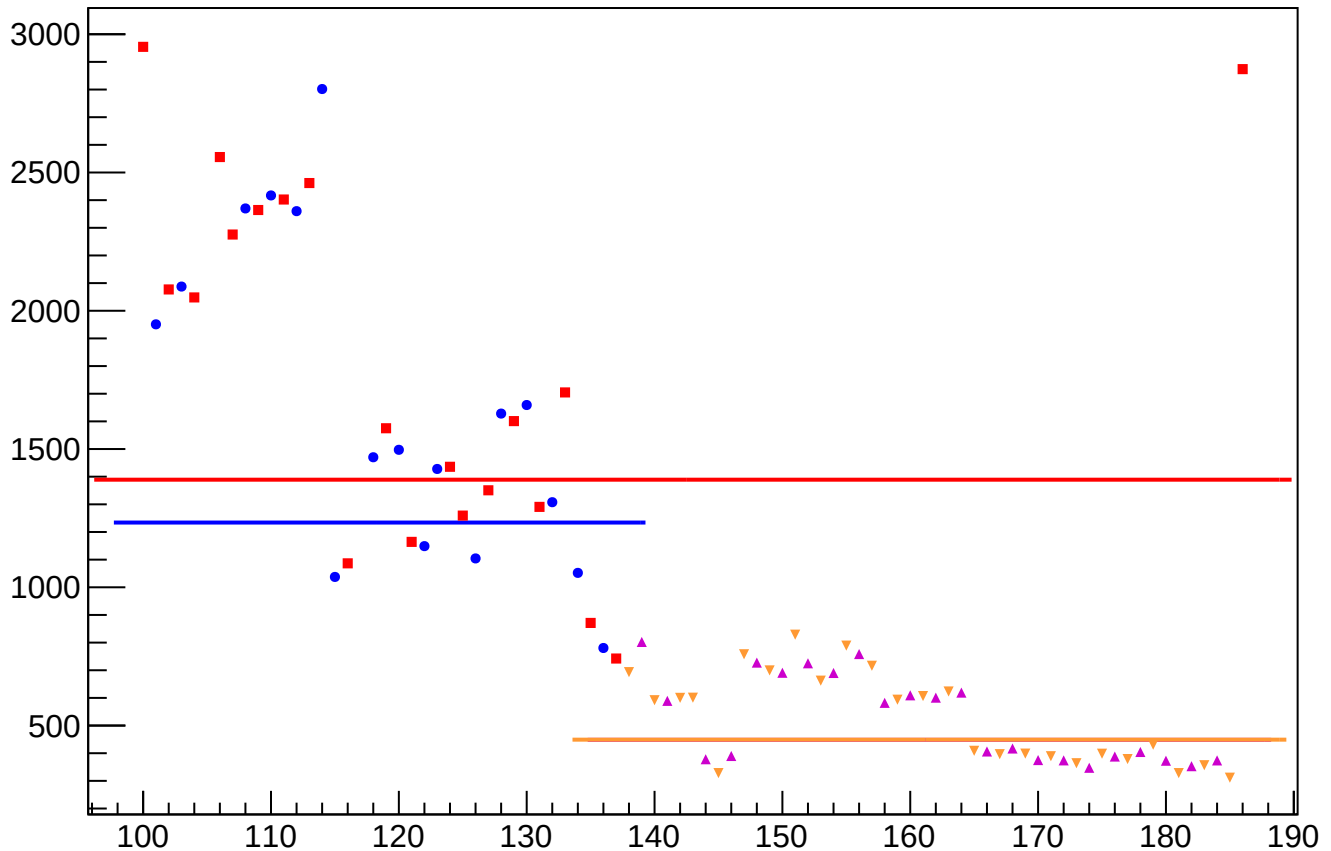
Right: 365.147 $\pm$ 375.109  $\chi^2$ /NDF: 36.1/36

In: 137.566 $\pm$ 109.417  $\chi^2$ /NDF:53.7/39

Out: 299.069 $\pm$ 107.520  $\chi^2$ /NDF:64.8/44

All: 219.730 $\pm$ 76.690  $\chi^2$ /NDF: 119.6/84

# asym\_sam\_26\_avg\_rms vs Slug, Sign Corrected



Right In: 1234.132+/-0.365  $\chi^2/\text{NDF}$ : 1741964.9/16

Left Out: 449.016+/-0.078  $\chi^2/\text{NDF}$ : 3090476.2/24

Right Out: 1389.132+/-0.386  $\chi^2/\text{NDF}$ : 1950190.5/19

Left In: 448.307+/-0.079  $\chi^2/\text{NDF}$ : 2537376.0/22

Left: 448.669+/-0.055  $\chi^2/\text{NDF}$ : 5627893.2/47

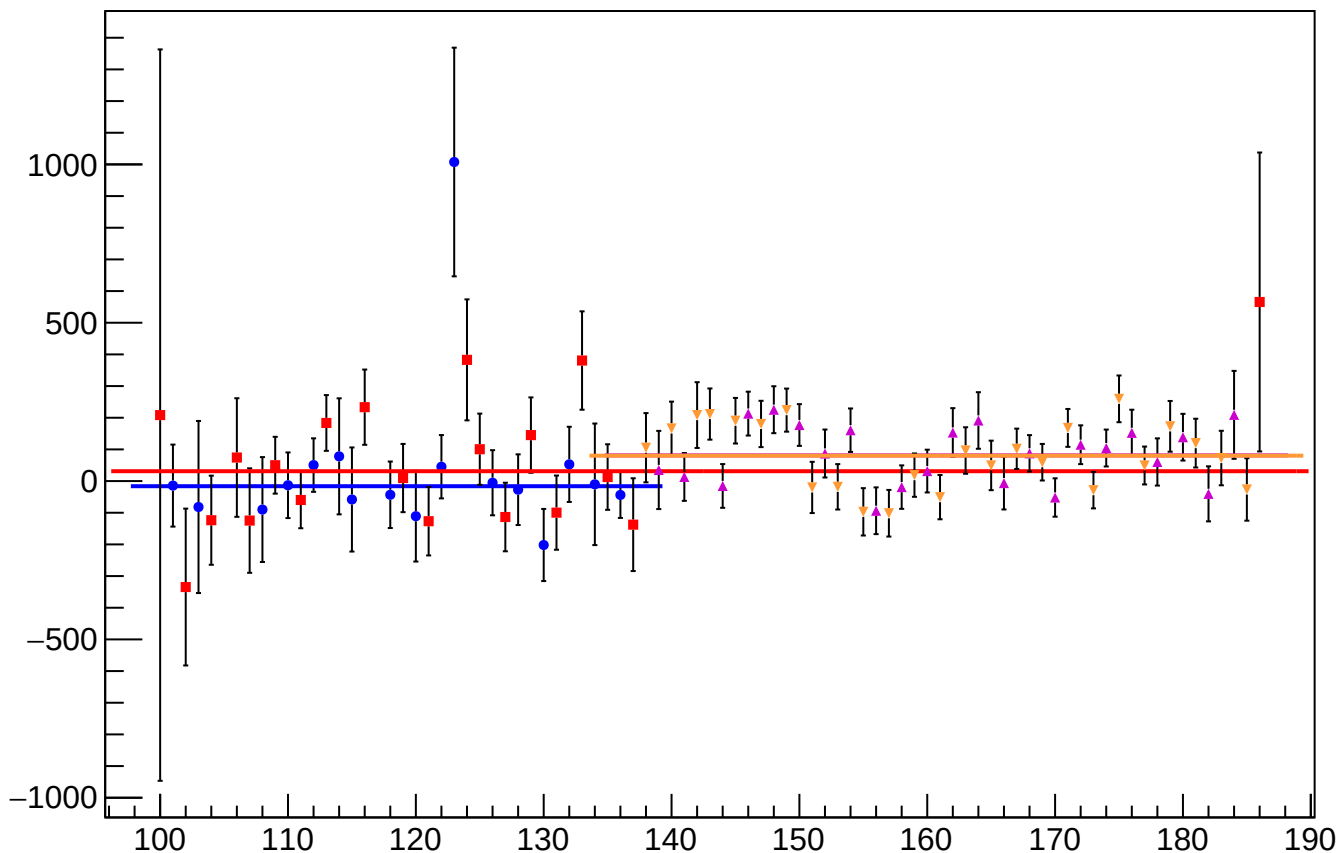
Right: 1307.330+/-0.265  $\chi^2/\text{NDF}$ : 3777264.6/36

In: 483.594+/-0.077  $\chi^2/\text{NDF}$ : 8703660.2/39

Out: 485.492+/-0.076  $\chi^2/\text{NDF}$ : 10743062.8/44

All: 484.560+/-0.054  $\chi^2/\text{NDF}$ : 19447029.4/84

reg\_asym\_sam\_37\_avg\_mean vs Slug, Sign Corrected



Right In:  $-16.204 \pm 28.906$   $\chi^2/\text{NDF}$ : 13.3/16

Left Out:  $80.171 \pm 14.592$   $\chi^2/\text{NDF}$ : 48.6/24

Right Out:  $31.167 \pm 28.000$   $\chi^2/\text{NDF}$ : 28.9/19

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

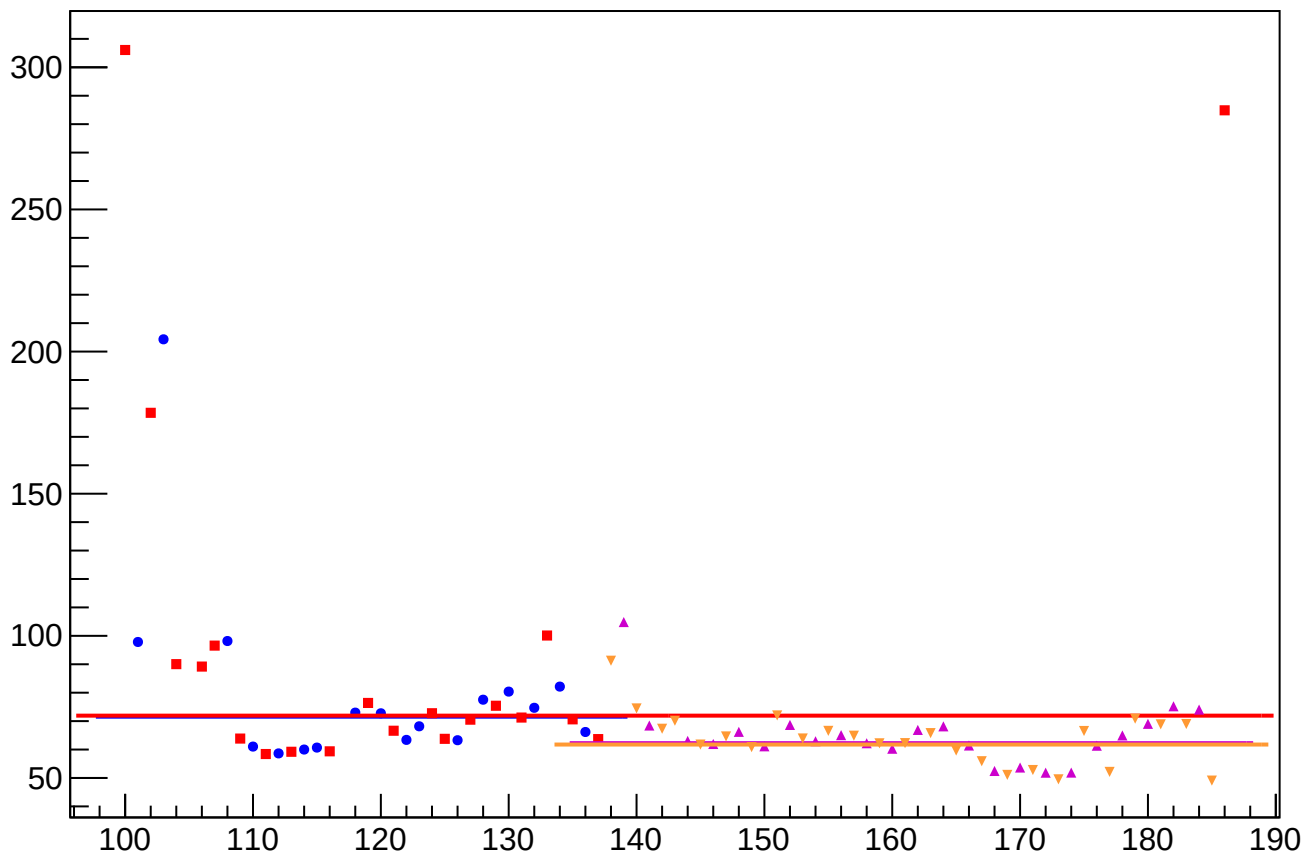
Right:  $8.235 \pm 20.112$   $\chi^2/\text{NDF}$ : 43.6/36

In:  $60.272 \pm 13.388$   $\chi^2/\text{NDF}$ : 57.5/39

Out:  $69.704 \pm 12.940$   $\chi^2/\text{NDF}$ : 79.9/44

All:  $65.148 \pm 9.304$   $\chi^2/\text{NDF}$ : 137.6/84

reg\_asym\_sam\_37\_avg\_rms vs Slug, Sign Corrected



Right In: 71.567 $\pm$ 0.020  $\chi^2$ /NDF: 758733.9/16

Left Out: 61.761 $\pm$ 0.010  $\chi^2$ /NDF: 645535.0/24

Right Out: 71.925 $\pm$ 0.020  $\chi^2$ /NDF: 1173726.3/19

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

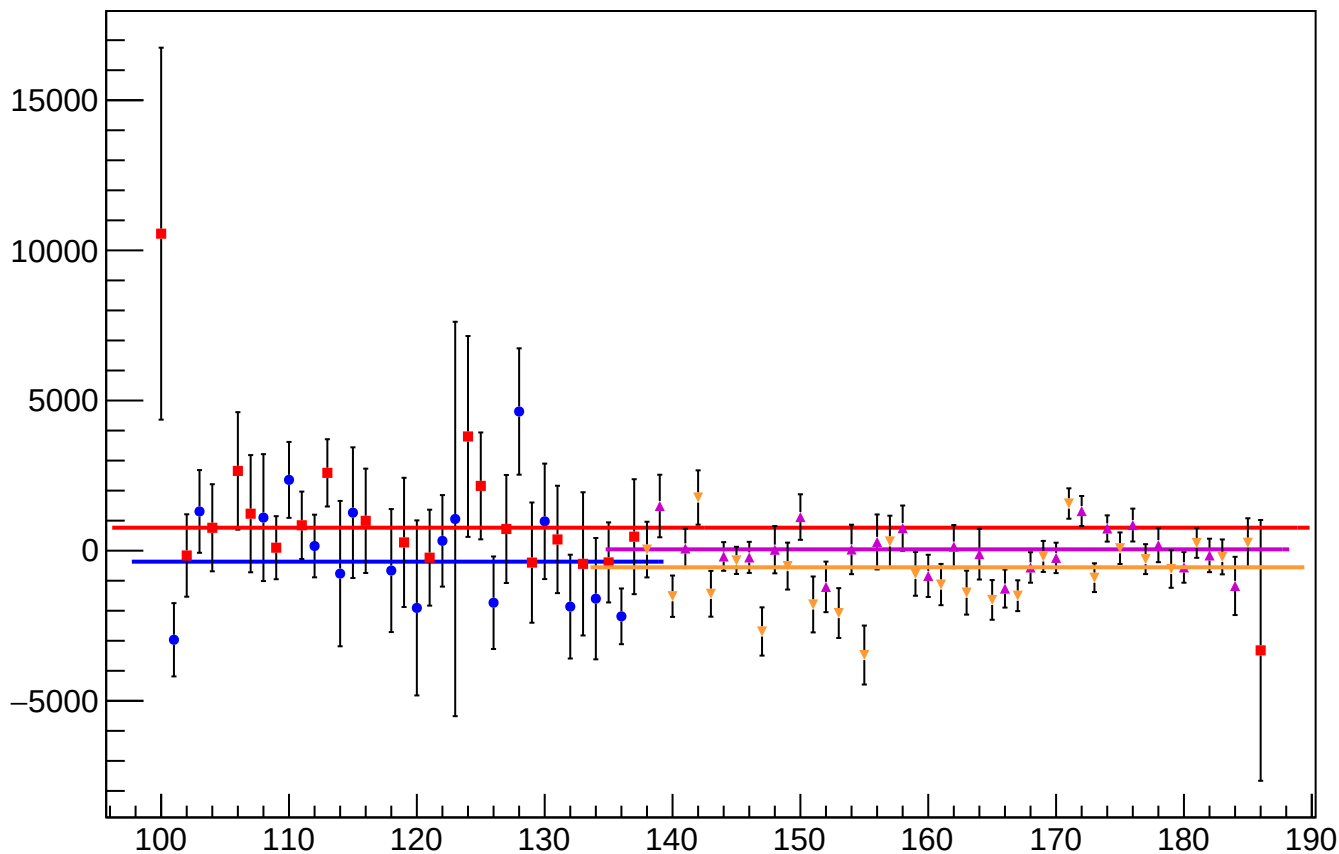
Right: 71.752 $\pm$ 0.014  $\chi^2$ /NDF: 1932618.7/36

In: 64.248 $\pm$ 0.009  $\chi^2$ /NDF: 1513023.4/39

Out: 63.932 $\pm$ 0.009  $\chi^2$ /NDF: 2026502.1/44

All: 64.085 $\pm$ 0.007  $\chi^2$ /NDF: 3540103.5/84

asym\_sam\_37\_avg\_correction\_mean vs Slug, Sign Corrected



Right In:  $-365.739 \pm 382.977$   $\chi^2/\text{NDF}: 24.4/16$

Left Out:  $-552.511 \pm 126.981$   $\chi^2/\text{NDF}: 65.3/24$

Right Out:  $764.987 \pm 369.206$   $\chi^2/\text{NDF}: 11.2/19$

Left In:  $44.578 \pm 129.095$   $\chi^2/\text{NDF}: 29.6/22$

Left:  $-258.894 \pm 90.527$   $\chi^2/\text{NDF}: 105.7/47$

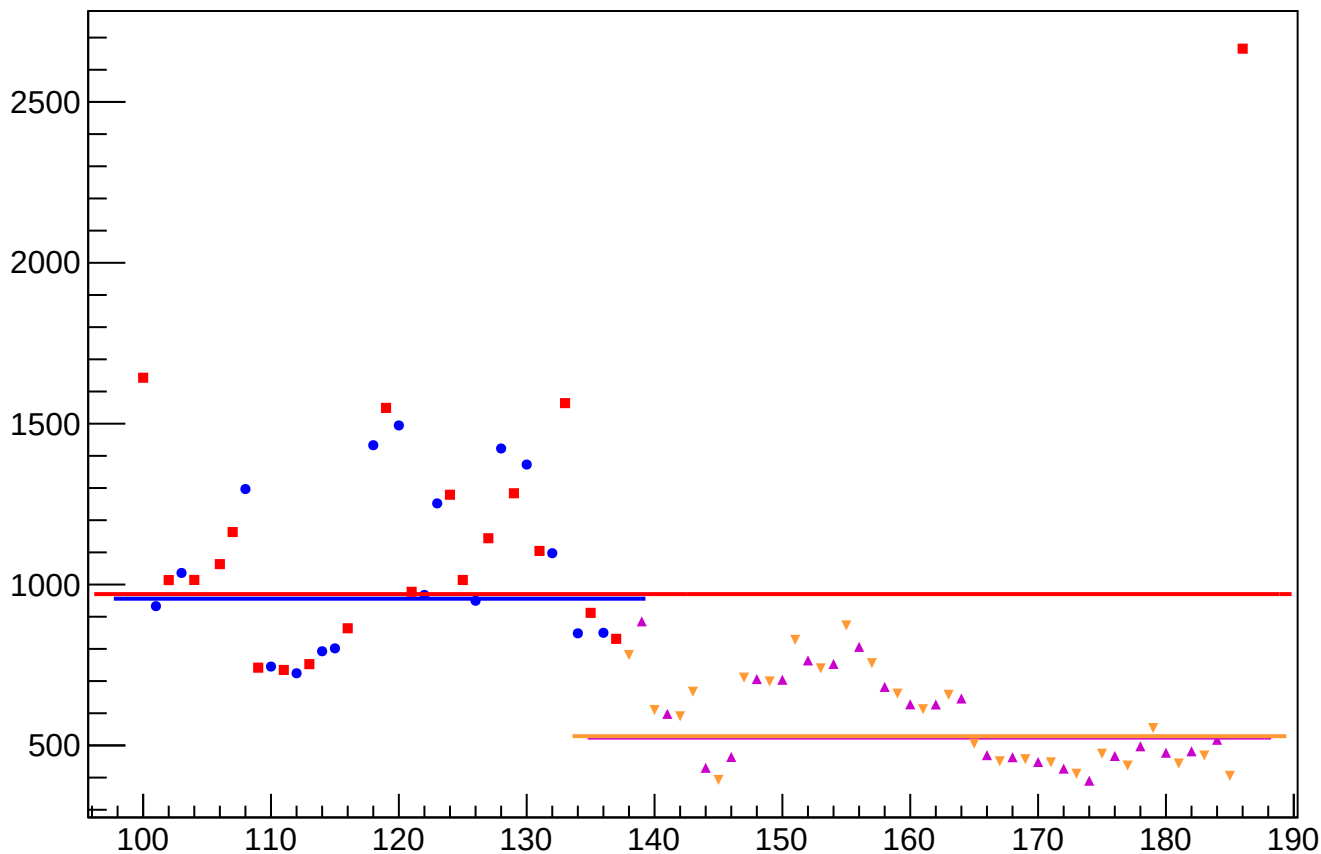
Right:  $220.319 \pm 265.803$   $\chi^2/\text{NDF}: 40.2/36$

In:  $2.713 \pm 122.332$   $\chi^2/\text{NDF}: 55.0/39$

Out:  $-413.151 \pm 120.078$   $\chi^2/\text{NDF}: 87.9/44$

All:  $-209.086 \pm 85.693$   $\chi^2/\text{NDF}: 148.8/84$

asym\_sam\_37\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 956.049 $\pm$ 0.271  $\chi^2$ /NDF: 651701.4/16

Left Out: 528.736 $\pm$ 0.090  $\chi^2$ /NDF:1983697.7/24

Right Out: 970.304 $\pm$ 0.261  $\chi^2$ /NDF: 1002673.8/19

Left In: 524.268 $\pm$ 0.091  $\chi^2$ /NDF:1716257.3/22

Left: 526.539 $\pm$ 0.064  $\chi^2$ /NDF: 3701172.5/47

Right: 963.437 $\pm$ 0.188  $\chi^2$ /NDF: 1655811.4/36

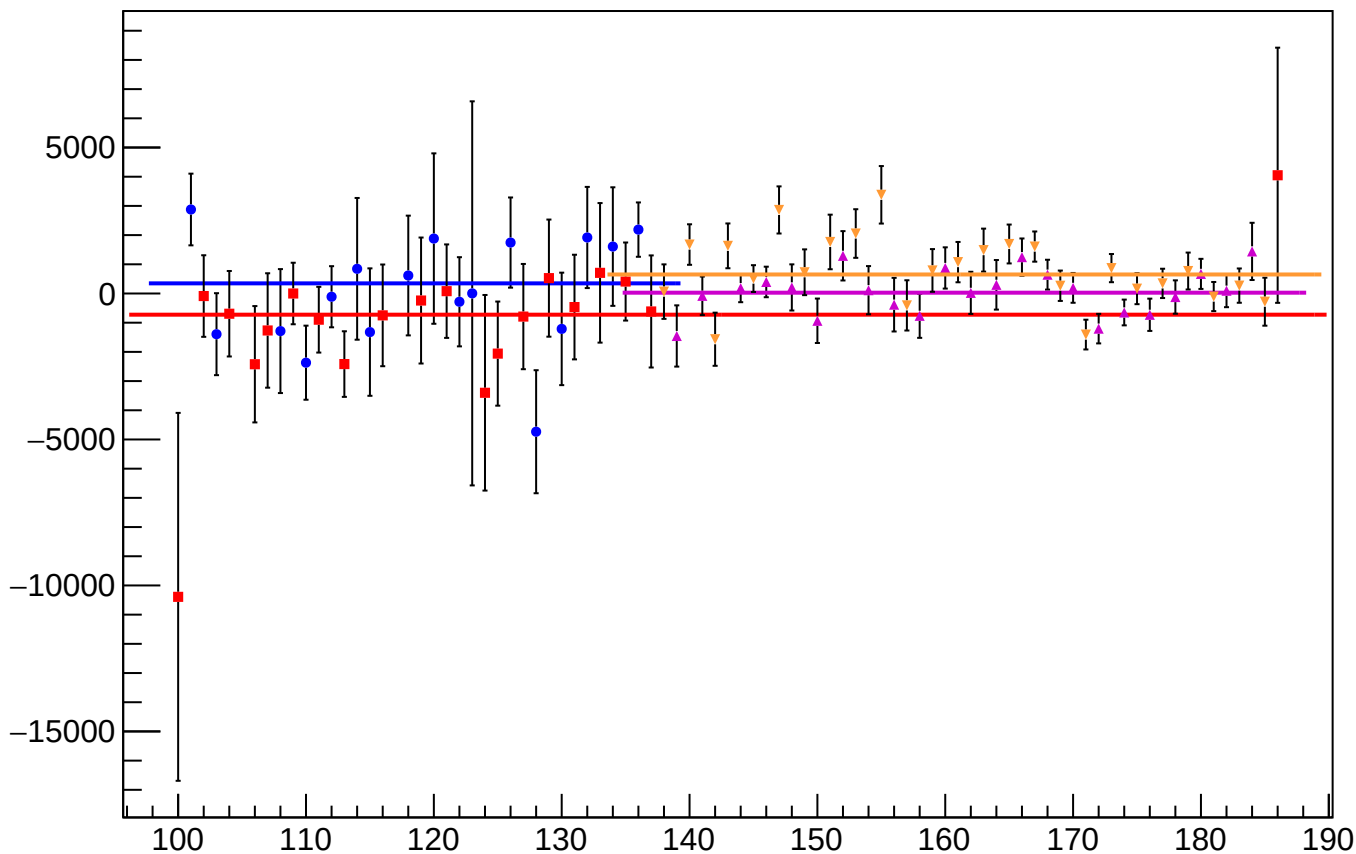
In: 568.323 $\pm$ 0.087  $\chi^2$ /NDF:4650775.4/39

Out: 575.443 $\pm$ 0.085  $\chi^2$ /NDF:5544567.4/44

All: 571.949 $\pm$ 0.061  $\chi^2$ /NDF: 10198793.3/84



# asym\_sam\_37\_avg\_mean vs Slug, Sign Corrected



Right In: 347.157 $\pm$ 384.717  $\chi^2/\text{NDF}$ : 24.7/16

Left Out: 651.560 $\pm$ 127.961  $\chi^2/\text{NDF}$ : 61.1/24

Right Out: -725.736 $\pm$ 371.076  $\chi^2/\text{NDF}$ : 10.3/19

Left In: 27.483 $\pm$ 130.127  $\chi^2/\text{NDF}$ : 28.5/22

Left: 344.758 $\pm$ 91.238  $\chi^2/\text{NDF}$ : 101.2/47

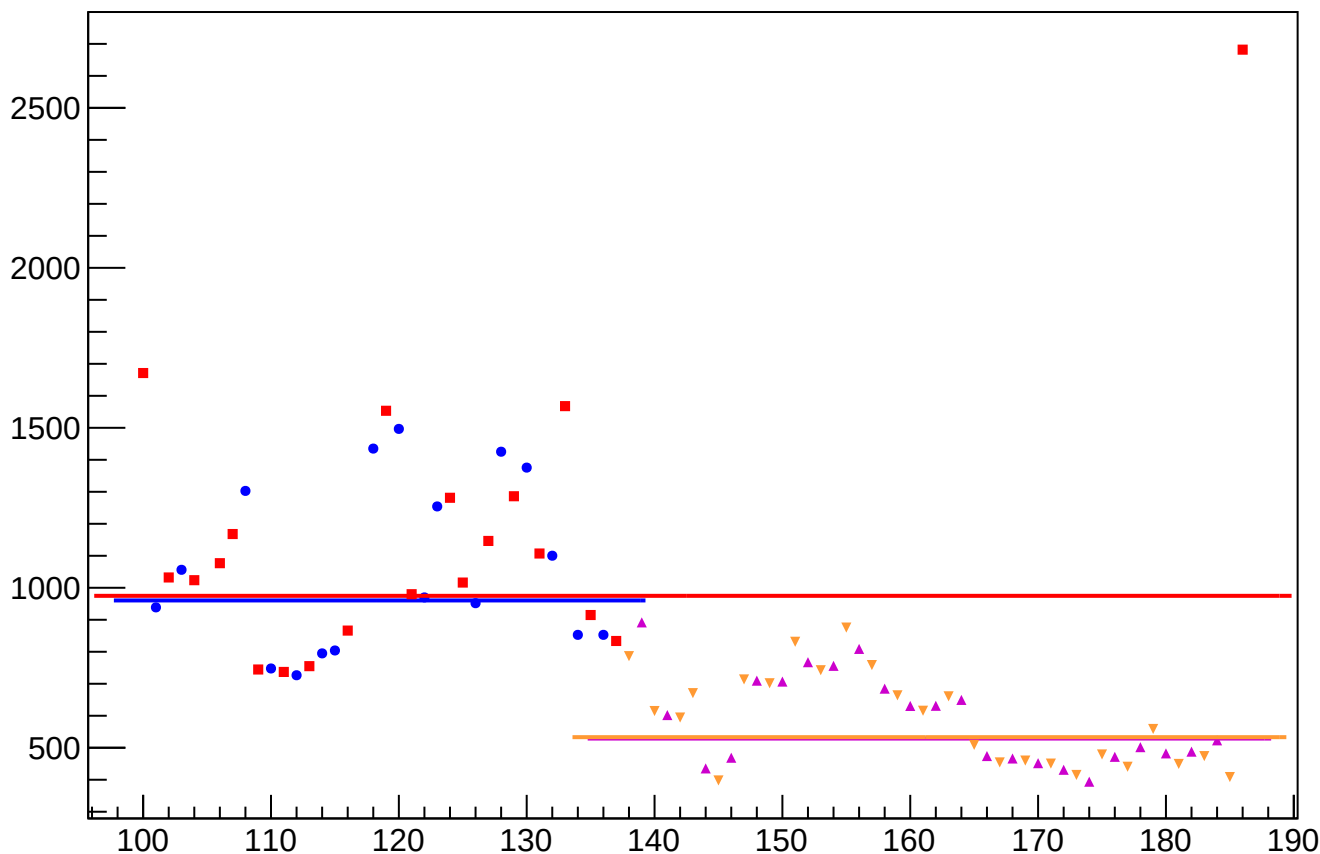
Right: -208.647 $\pm$ 267.083  $\chi^2/\text{NDF}$ : 39.0/36

In: 60.301 $\pm$ 123.266  $\chi^2/\text{NDF}$ : 53.7/39

Out: 505.187 $\pm$ 120.971  $\chi^2/\text{NDF}$ : 83.7/44

All: 286.926 $\pm$ 86.339  $\chi^2/\text{NDF}$ : 144.1/84

# asym\_sam\_37\_avg\_rms vs Slug, Sign Corrected



Right In: 960.401 $\pm$ 0.272  $\chi^2$ /NDF: 651758.1/16

Left Out: 533.060 $\pm$ 0.090  $\chi^2$ /NDF:1951536.4/24

Right Out: 974.834 $\pm$ 0.262  $\chi^2$ /NDF: 1005730.0/19

Left In: 528.694 $\pm$ 0.092  $\chi^2$ /NDF:1688511.2/22

Left: 530.914 $\pm$ 0.065  $\chi^2$ /NDF: 3641192.3/47

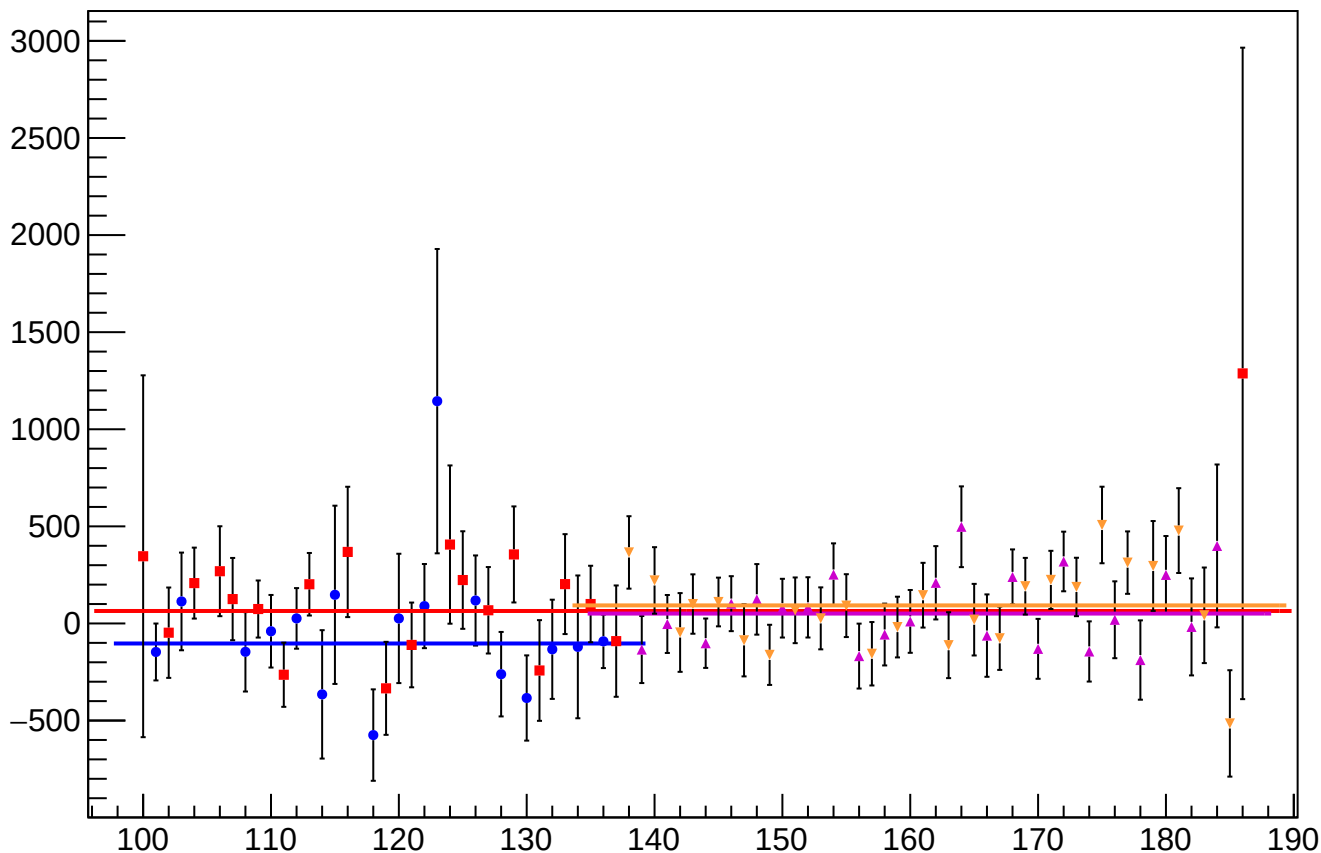
Right: 967.878 $\pm$ 0.189  $\chi^2$ /NDF: 1658946.5/36

In: 573.014 $\pm$ 0.087  $\chi^2$ /NDF:4600130.4/39

Out: 580.010 $\pm$ 0.086  $\chi^2$ /NDF:5490691.1/44

All: 576.578 $\pm$ 0.061  $\chi^2$ /NDF: 10094103.6/84

reg\_asym\_sam\_48\_avg\_mean vs Slug, Sign Corrected



Right In:  $-103.183 \pm 53.022$   $\chi^2/\text{NDF}$ : 13.2/16

Left Out:  $92.994 \pm 34.054$   $\chi^2/\text{NDF}$ : 29.4/24

Right Out:  $64.210 \pm 50.899$   $\chi^2/\text{NDF}$ : 15.8/19

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

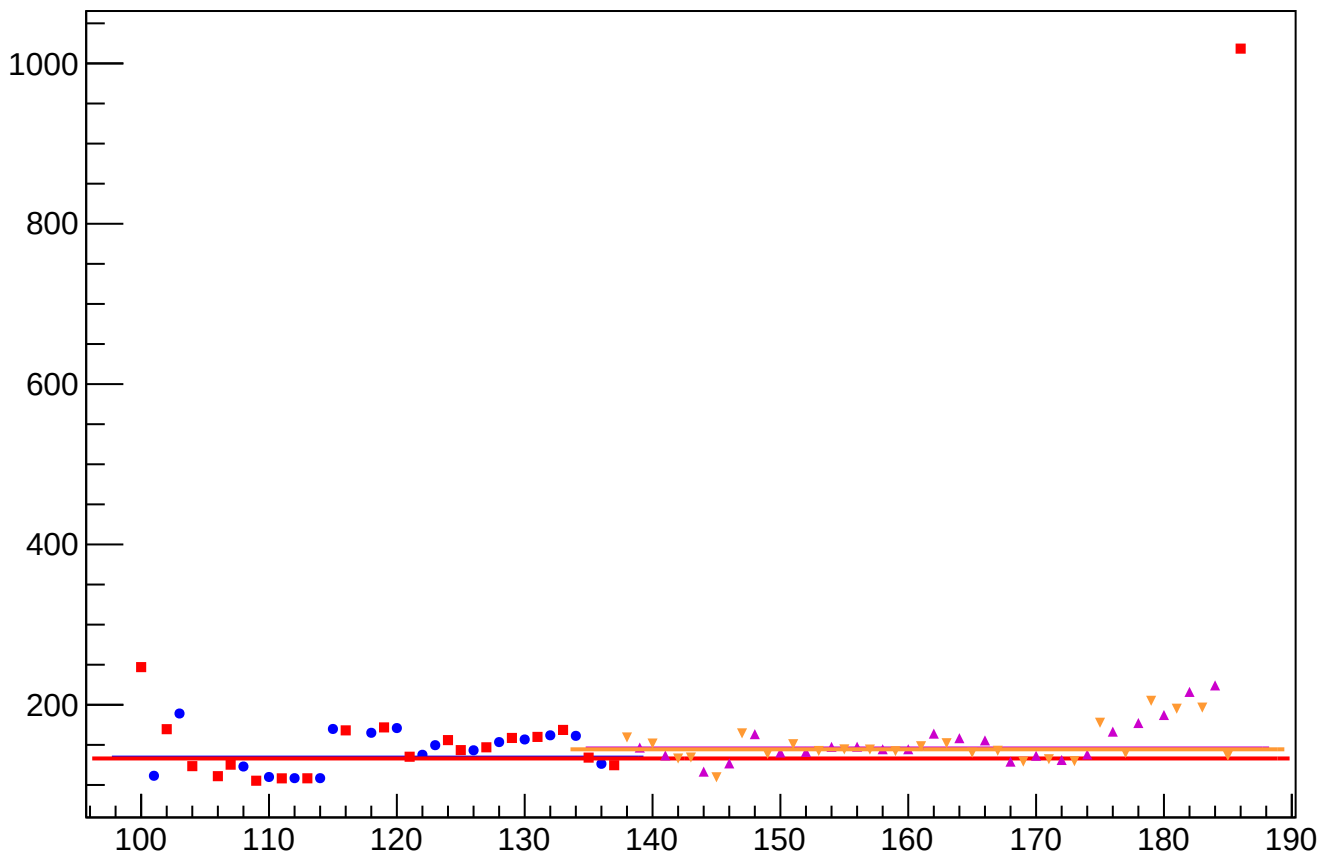
Right:  $-16.067 \pm 36.719$   $\chi^2/\text{NDF}$ : 34.1/36

In:  $3.614 \pm 29.372$   $\chi^2/\text{NDF}$ : 42.5/39

Out:  $84.094 \pm 28.303$   $\chi^2/\text{NDF}$ : 45.4/44

All:  $45.345 \pm 20.381$   $\chi^2/\text{NDF}$ : 91.8/84

reg\_asym\_sam\_48\_avg\_rms vs Slug, Sign Corrected



Right In: 134.122 $\pm$ 0.037  $\chi^2$ /NDF: 402473.7/16

Left Out: 144.475 $\pm$ 0.024  $\chi^2$ /NDF:670488.7/24

Right Out: 133.055 $\pm$ 0.036  $\chi^2$ /NDF: 1001281.9/19

Left In: 145.535 $\pm$ 0.025  $\chi^2$ /NDF:643529.3/22

Left: 144.986 $\pm$ 0.017  $\chi^2$ /NDF: 1314951.6/47

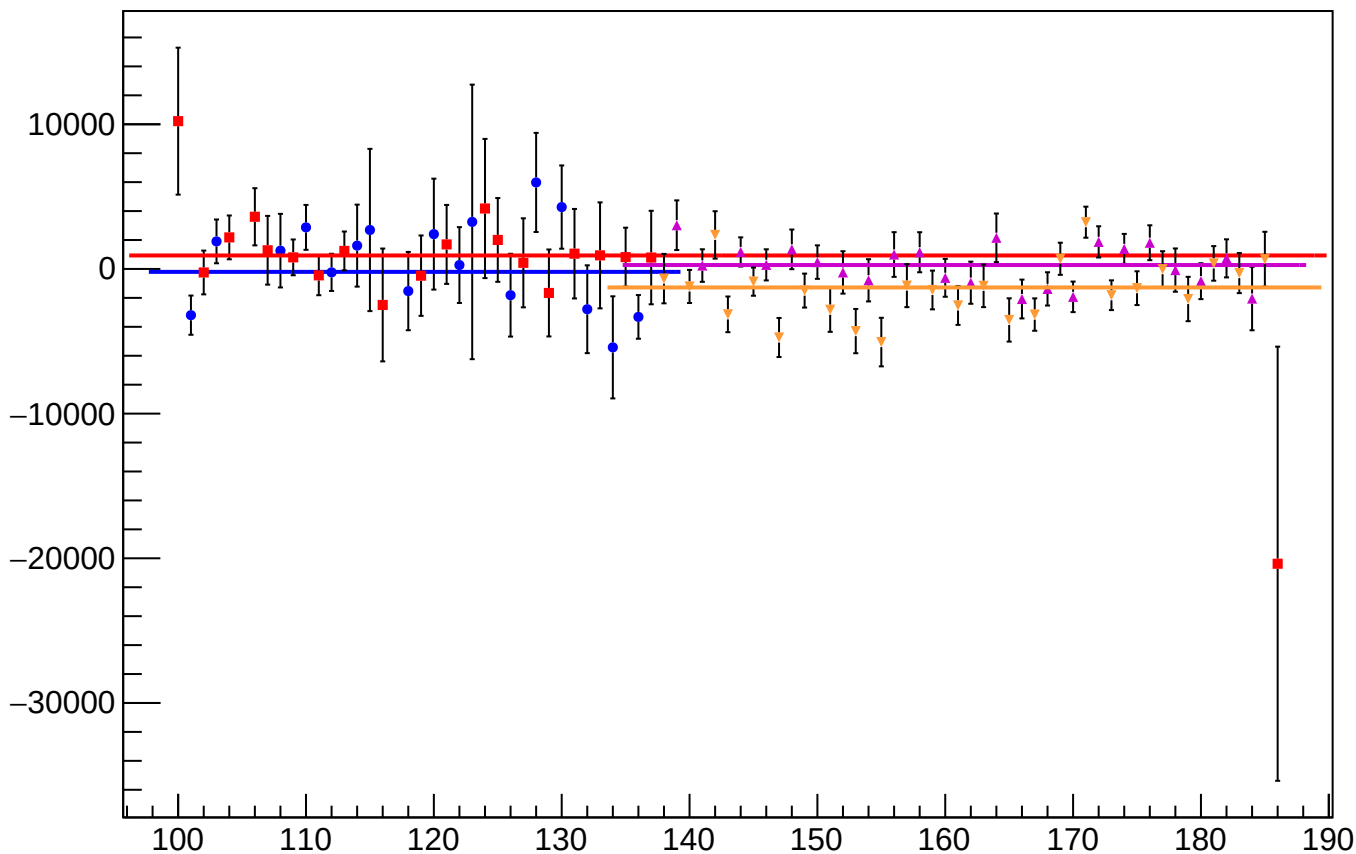
Right: 133.567 $\pm$ 0.026  $\chi^2$ /NDF: 1404177.1/36

In: 142.033 $\pm$ 0.021  $\chi^2$ /NDF:1110226.7/39

Out: 140.944 $\pm$ 0.020  $\chi^2$ /NDF:1741320.8/44

All: 141.468 $\pm$ 0.014  $\chi^2$ /NDF: 2852971.9/84

asym\_sam\_48\_avg\_correction\_mean vs Slug, Sign Corrected



Right In: -201.740+/-524.888  $\chi^2/\text{NDF}$ : 25.8/16

Left Out: -1279.328+/-259.299  $\chi^2/\text{NDF}$ :55.9/24

Right Out: 931.858+/-481.328  $\chi^2/\text{NDF}$ : 12.0/19

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

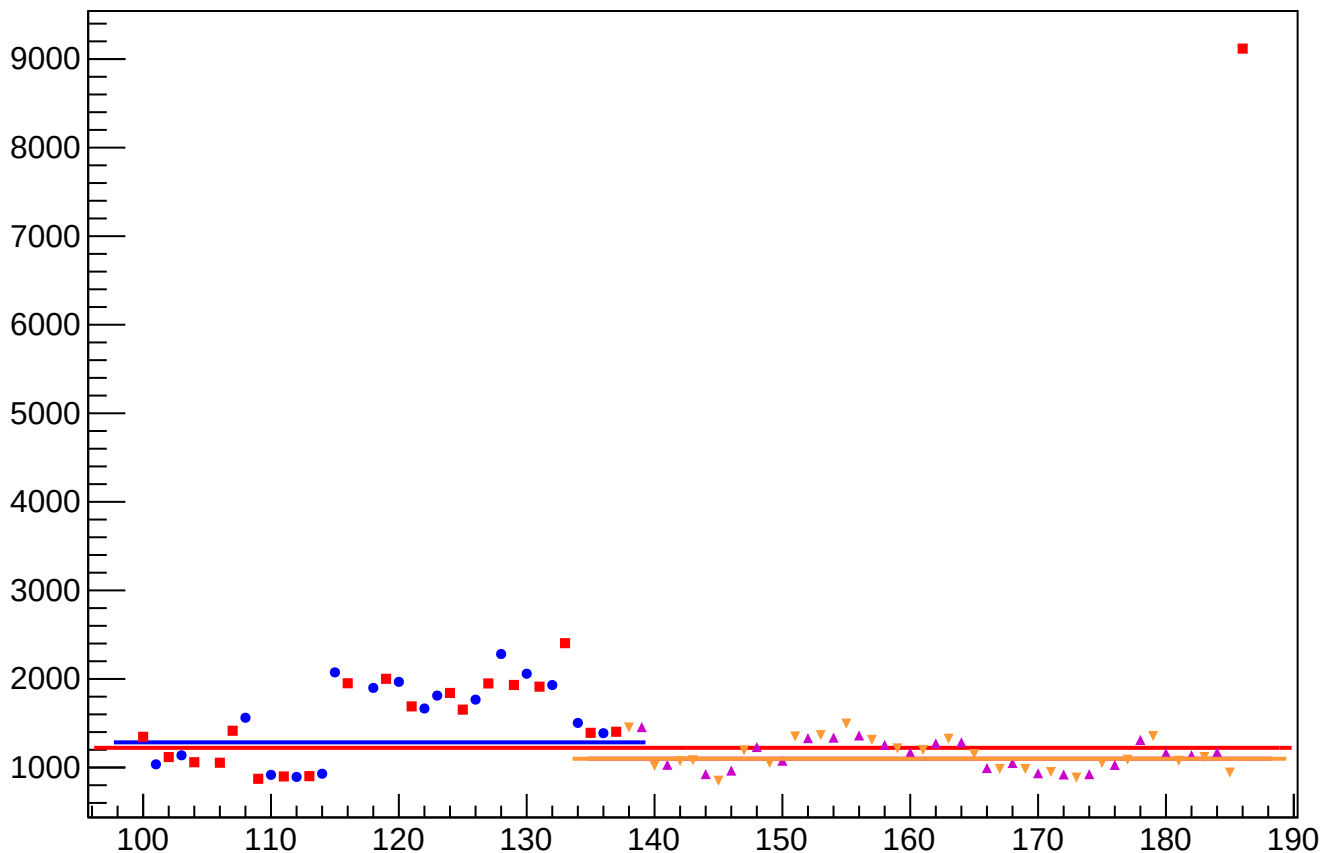
Right: 414.041+/-354.752  $\chi^2/\text{NDF}$ : 40.4/36

In: 173.424+/-237.445  $\chi^2/\text{NDF}$ :50.7/39

Out: -781.955+/-228.281  $\chi^2/\text{NDF}$ :84.3/44

All: -323.057+/-164.563  $\chi^2/\text{NDF}$ : 143.4/84

asym\_sam\_48\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 1283.882 $\pm$ 0.371  $\chi^2$ /NDF: 1171665.2/16

Left Out: 1098.909 $\pm$ 0.183  $\chi^2$ /NDF: 824328.7/24

Right Out: 1222.296 $\pm$ 0.340  $\chi^2$ /NDF: 1915293.5/19

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

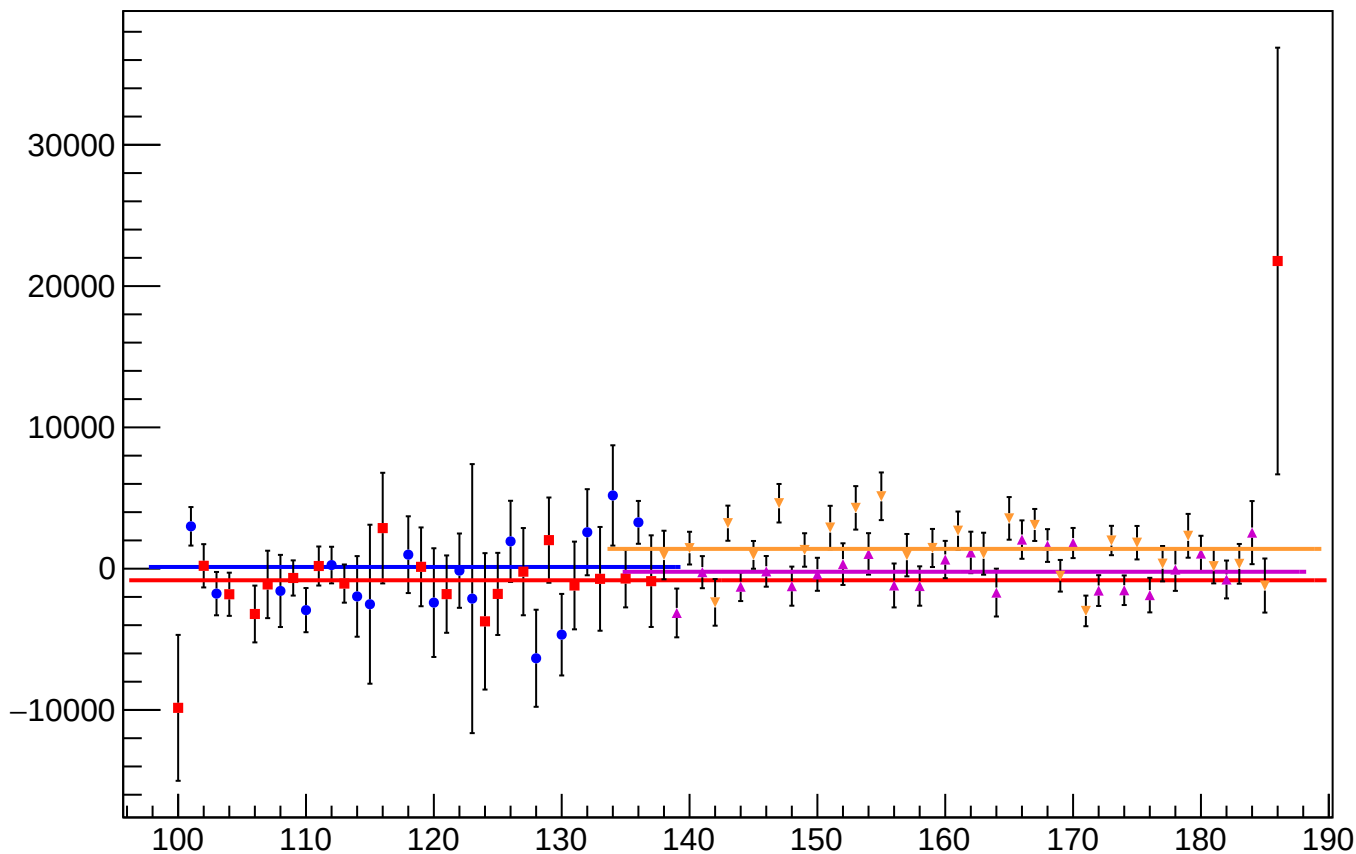
Right: 1250.428 $\pm$ 0.251  $\chi^2$ /NDF: 3101915.2/36

In: 1137.300 $\pm$ 0.168  $\chi^2$ /NDF: 2047669.9/39

Out: 1126.663 $\pm$ 0.161  $\chi^2$ /NDF: 2841487.0/44

All: 1131.772 $\pm$ 0.116  $\chi^2$ /NDF: 4891242.6/84

asym\_sam\_48\_avg\_mean vs Slug, Sign Corrected



Right In: 120.212+/-528.305  $\chi^2/\text{NDF}$ : 25.3/16

Left Out: 1400.458+/-261.804  $\chi^2/\text{NDF}$ : 52.2/24

Right Out: -821.701+/-485.014  $\chi^2/\text{NDF}$ : 10.7/19

Left In: -219.393+/-268.852  $\chi^2/\text{NDF}$ : 25.0/22

Left: 612.044+/-187.566  $\chi^2/\text{NDF}$ : 95.9/47

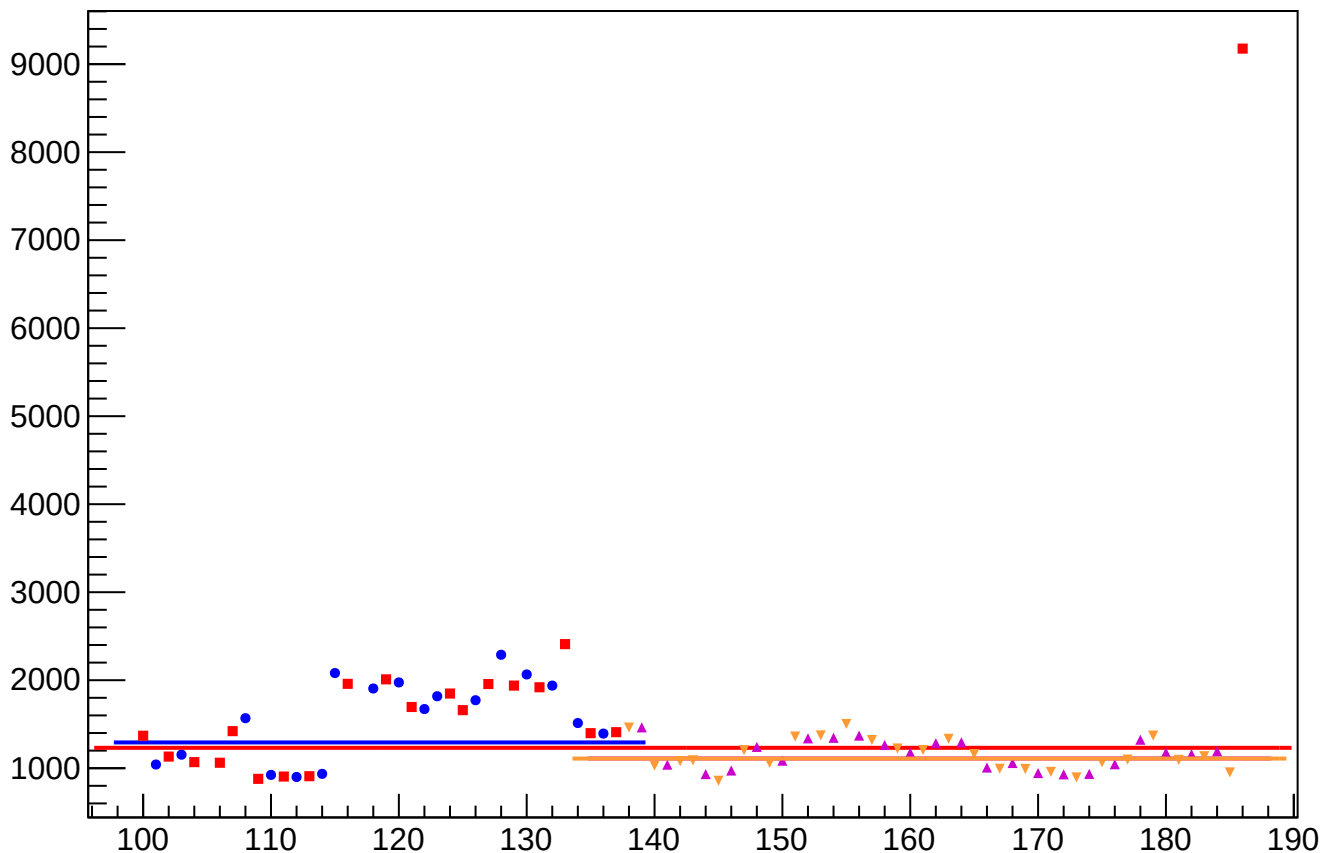
Right: -390.912+/-357.282  $\chi^2/\text{NDF}$ : 37.8/36

In: -149.535+/-239.610  $\chi^2/\text{NDF}$ : 50.6/39

Out: 899.076+/-230.383  $\chi^2/\text{NDF}$ : 79.2/44

All: 395.348+/-166.072  $\chi^2/\text{NDF}$ : 139.8/84

# asym\_sam\_48\_avg\_rms vs Slug, Sign Corrected



Right In: 1292.993+/-0.374  $\chi^2/\text{NDF}$ : 1158775.5/16

Left Out: 1109.761+/-0.185  $\chi^2/\text{NDF}$ : 812174.9/24

Right Out: 1231.918+/-0.343  $\chi^2/\text{NDF}$ : 1900028.3/19

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: 1259.851+/-0.253  $\chi^2/\text{NDF}$ : 3073308.5/36

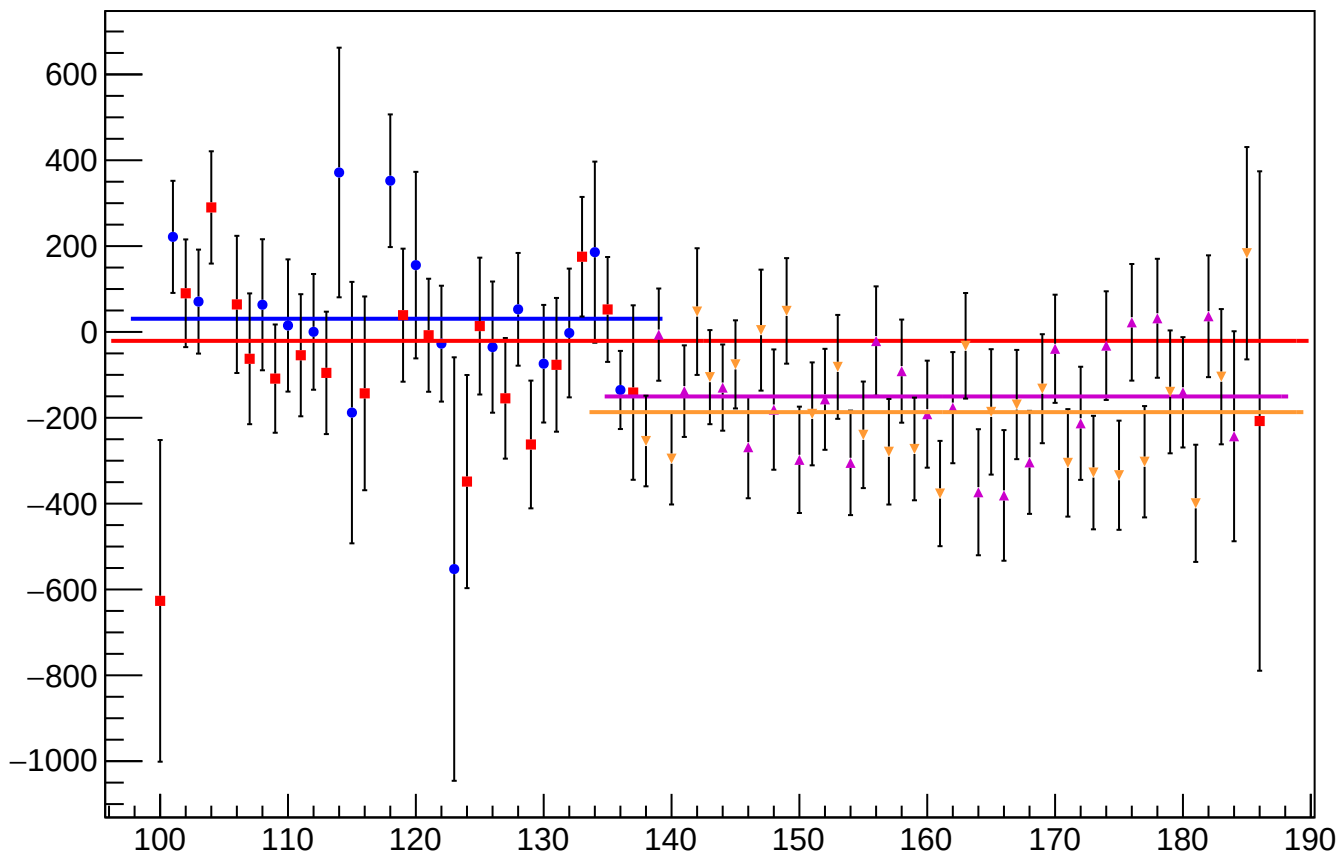
In: 1148.073+/-0.169  $\chi^2/\text{NDF}$ : 2018173.4/39

Out: 1137.323+/-0.163  $\chi^2/\text{NDF}$ : 2810447.0/44

All: 1142.487+/-0.117  $\chi^2/\text{NDF}$ : 4830711.9/84



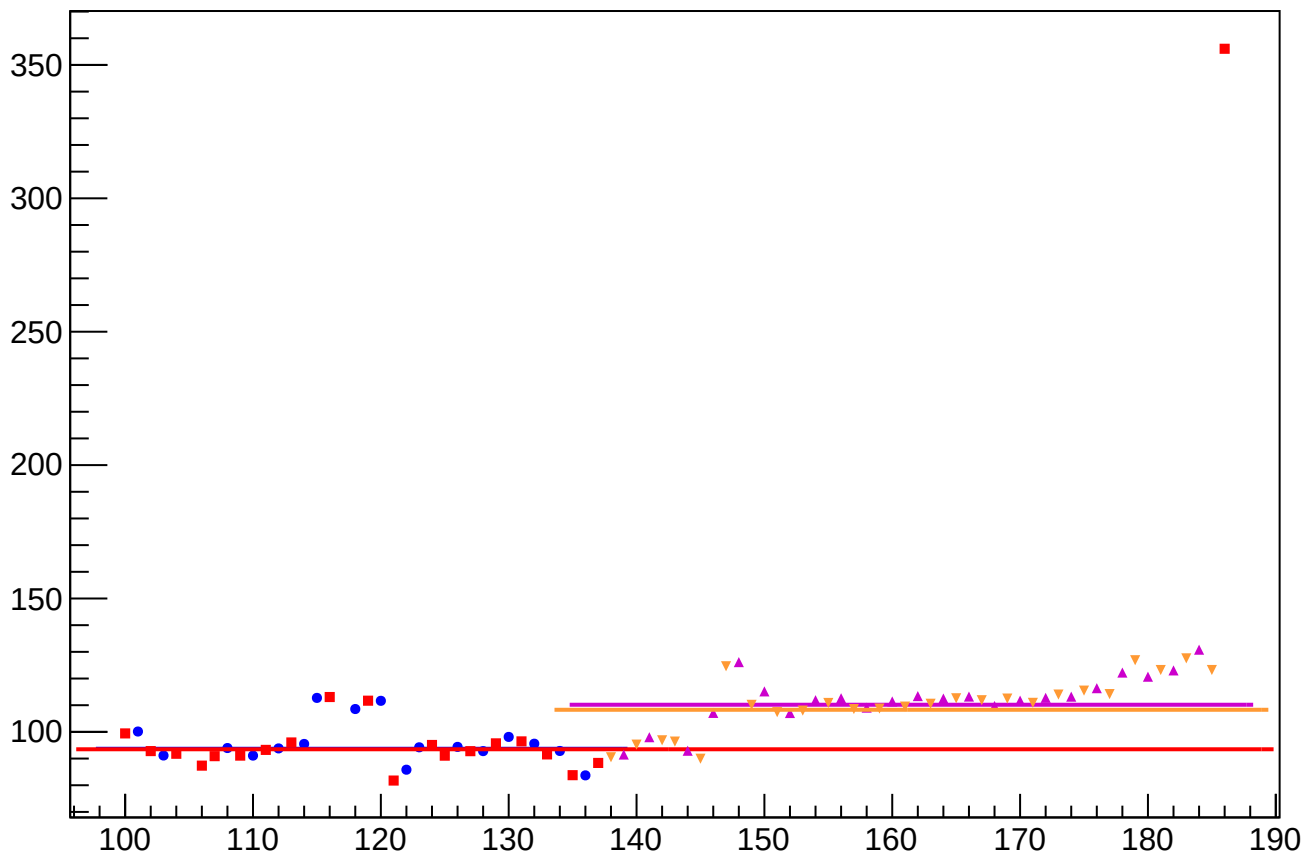
reg\_asym\_sam\_15\_dd\_mean vs Slug, Sign Corrected



Right In:  $30.740 \pm 36.437$   $\chi^2/\text{NDF}: 15.2/16$   
 Left Out:  $-186.838 \pm 25.308$   $\chi^2/\text{NDF}: 26.6/24$   
 Right Out:  $-20.777 \pm 34.712$   $\chi^2/\text{NDF}: 18.9/19$   
 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:  $3.734 \pm 25.133$   $\chi^2/\text{NDF}: 35.2/36$   
 In:  $-87.849 \pm 21.402$   $\chi^2/\text{NDF}: 52.1/39$   
 Out:  $-129.203 \pm 20.450$   $\chi^2/\text{NDF}: 60.5/44$   
 All:  $-109.467 \pm 14.786$   $\chi^2/\text{NDF}: 114.5/84$

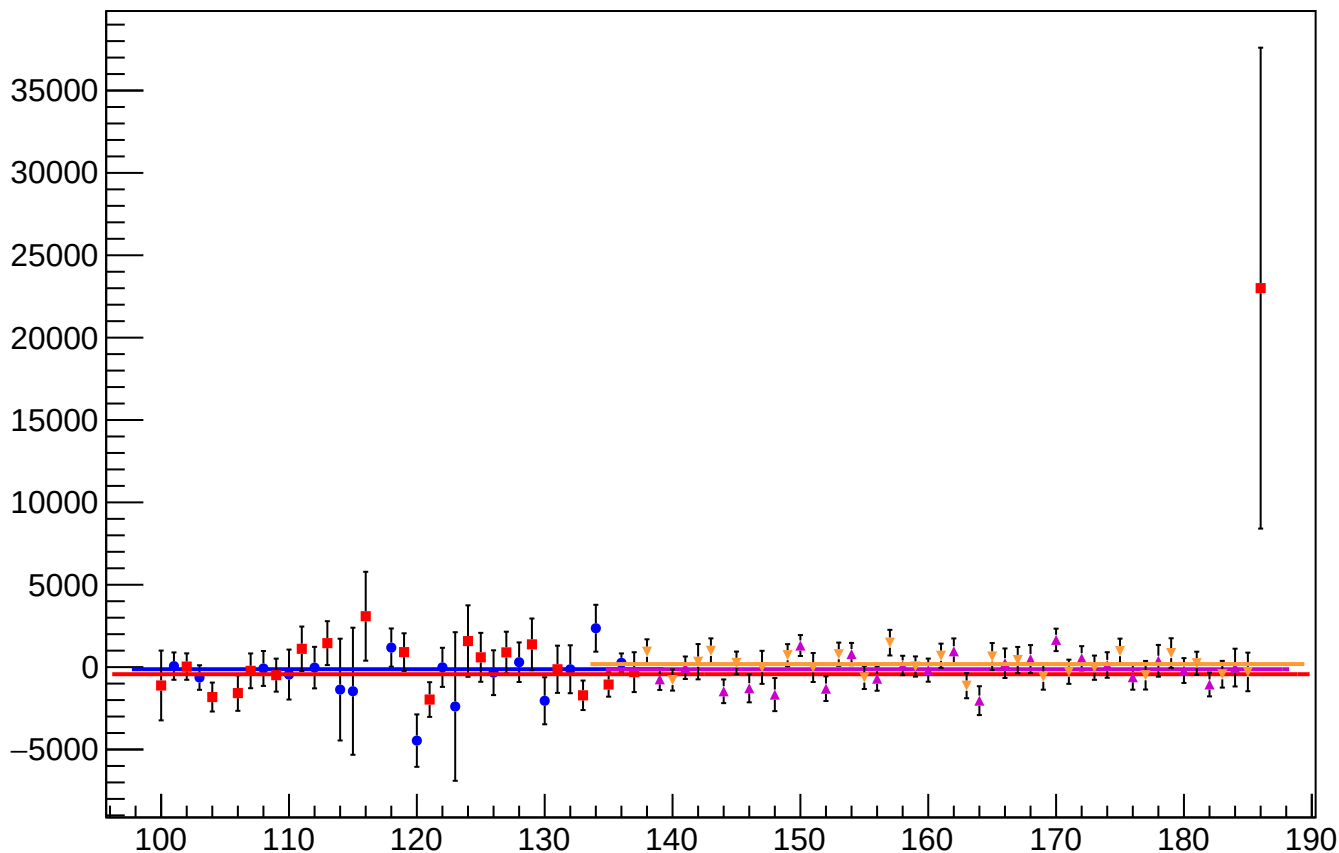
reg\_asym\_sam\_15\_dd\_rms vs Slug, Sign Corrected



Right In: 93.670 $\pm$ 0.026  $\chi^2$ /NDF: 79871.5/16  
 Left Out: 108.287 $\pm$ 0.018  $\chi^2$ /NDF: 330693.5/24  
 Right Out: 93.483 $\pm$ 0.025  $\chi^2$ /NDF: 487698.7/19  
 Left In: 110.173 $\pm$ 0.019  $\chi^2$ /NDF: 246967.7/22

Left: 109.189 $\pm$ 0.013  $\chi^2$ /NDF: 582969.0/47  
 Right: 93.572 $\pm$ 0.018  $\chi^2$ /NDF: 567598.0/36  
 In: 104.480 $\pm$ 0.015  $\chi^2$ /NDF: 595551.2/39  
 Out: 103.149 $\pm$ 0.014  $\chi^2$ /NDF: 1055925.0/44  
 All: 103.784 $\pm$ 0.010  $\chi^2$ /NDF: 1655515.5/84

asym\_sam\_15\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: -127.998 $\pm$ 277.067  $\chi^2$ /NDF: 15.3/16

Left Out: 185.392 $\pm$ 153.683  $\chi^2$ /NDF:18.4/24

Right Out: -430.619 $\pm$ 260.652  $\chi^2$ /NDF: 21.8/19

Left In: -128.782 $\pm$ 157.155  $\chi^2$ /NDF:36.2/22

Left: 31.814 $\pm$ 109.877  $\chi^2$ /NDF: 56.6/47

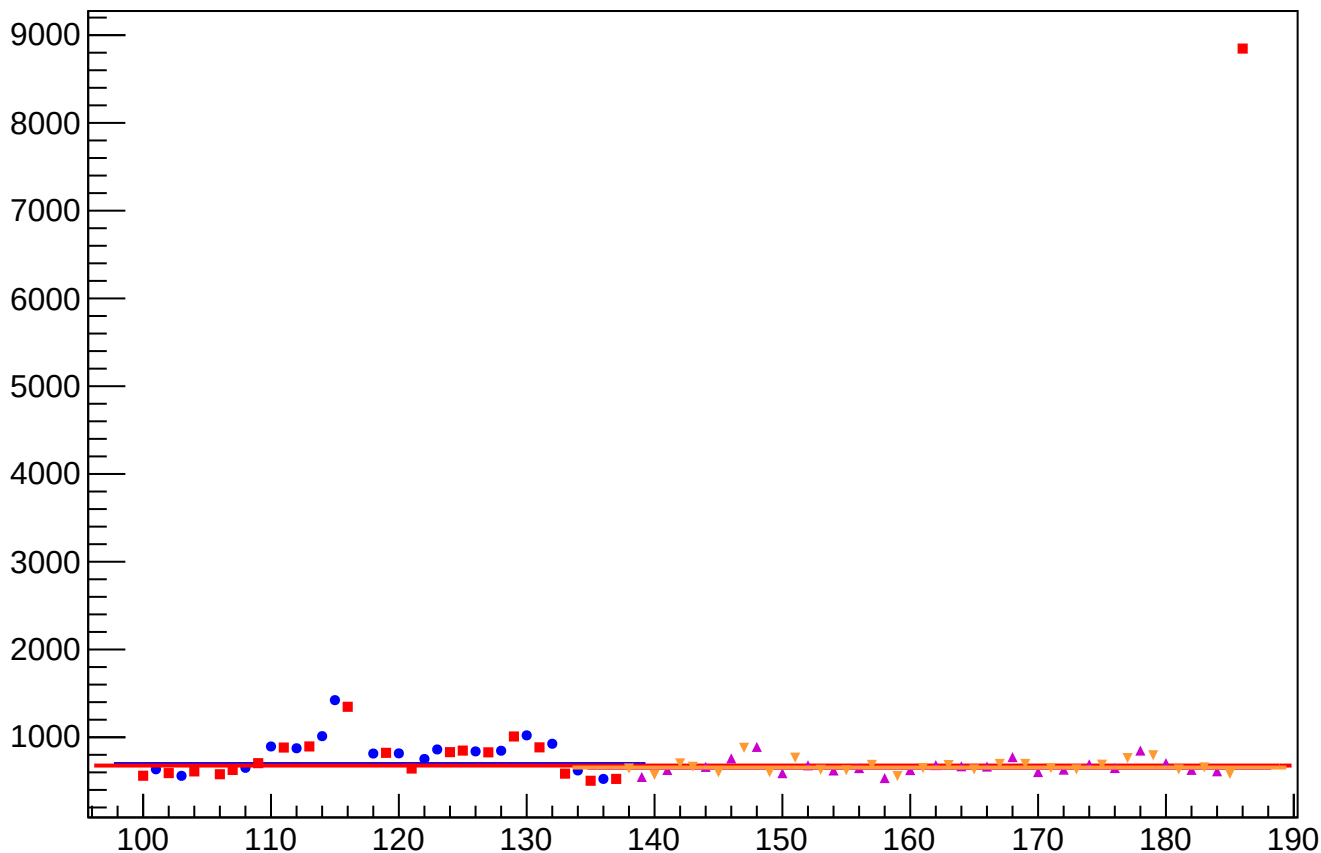
Right: -288.538 $\pm$ 189.847  $\chi^2$ /NDF: 37.7/36

In: -128.591 $\pm$ 136.697  $\chi^2$ /NDF:51.5/39

Out: 26.485 $\pm$ 132.385  $\chi^2$ /NDF:44.3/44

All: -48.569 $\pm$ 95.098  $\chi^2$ /NDF: 96.5/84

asym\_sam\_15\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 694.803+/-0.196  $\chi^2/\text{NDF}$ : 677838.4/16

Left Out: 655.155+/-0.109  $\chi^2/\text{NDF}$ : 367349.8/24

Right Out: 677.592+/-0.184  $\chi^2/\text{NDF}$ : 1306343.2/19

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

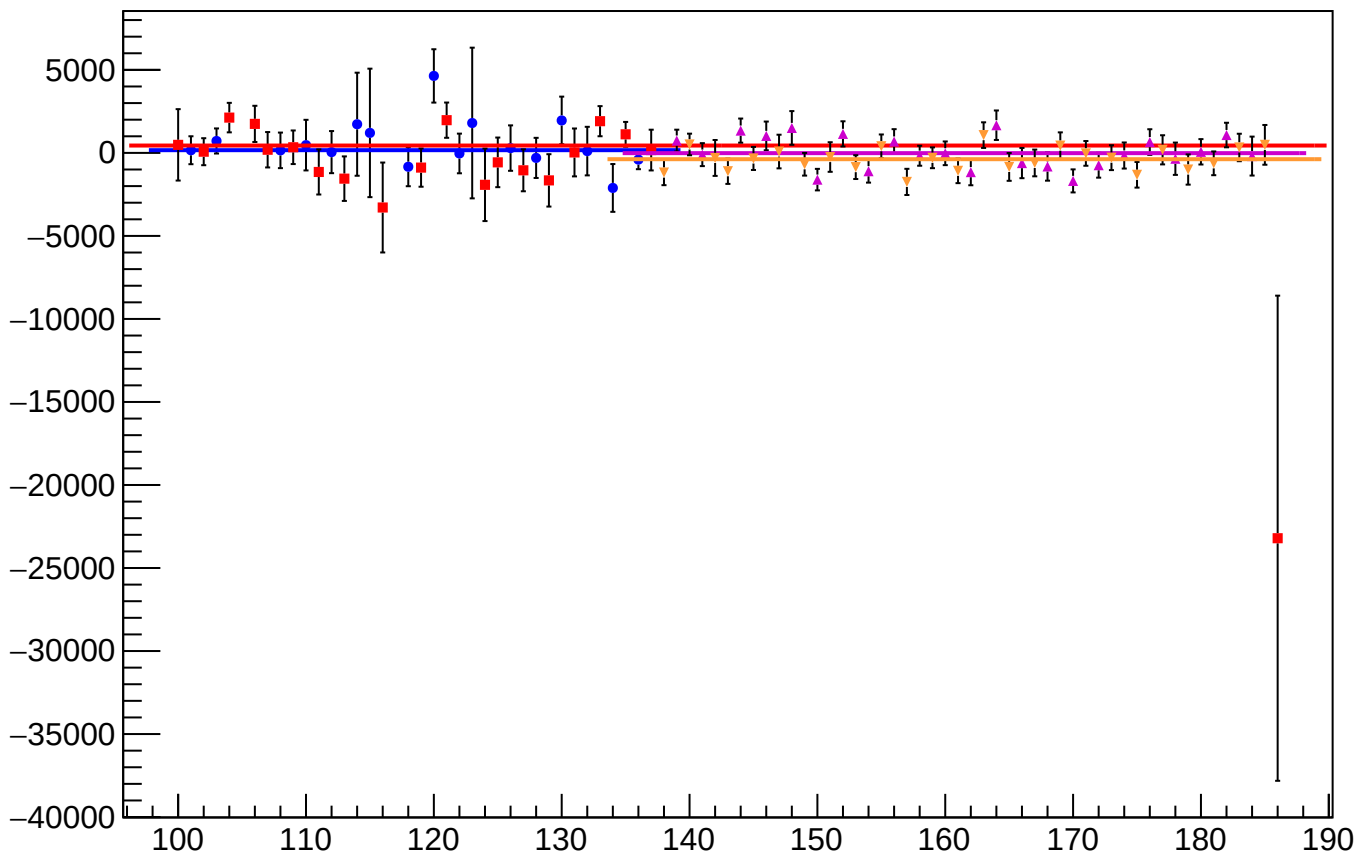
Right: 685.672+/-0.134  $\chi^2/\text{NDF}$ : 1988275.7/36

In: 661.574+/-0.097  $\chi^2/\text{NDF}$ : 1181977.0/39

Out: 660.943+/-0.094  $\chi^2/\text{NDF}$ : 1684689.1/44

All: 661.248+/-0.067  $\chi^2/\text{NDF}$ : 2866688.1/84

# asym\_sam\_15\_dd\_mean vs Slug, Sign Corrected



Right In: 163.513+/-279.836  $\chi^2/\text{NDF}$ : 14.7/16

Left Out: -379.470+/-155.892  $\chi^2/\text{NDF}$ :18.8/24

Right Out: 443.202+/-263.343  $\chi^2/\text{NDF}$ : 25.2/19

Left In: -14.768+/-159.513  $\chi^2/\text{NDF}$ :37.2/22

Left: -201.306+/-111.491  $\chi^2/\text{NDF}$ : 58.7/47

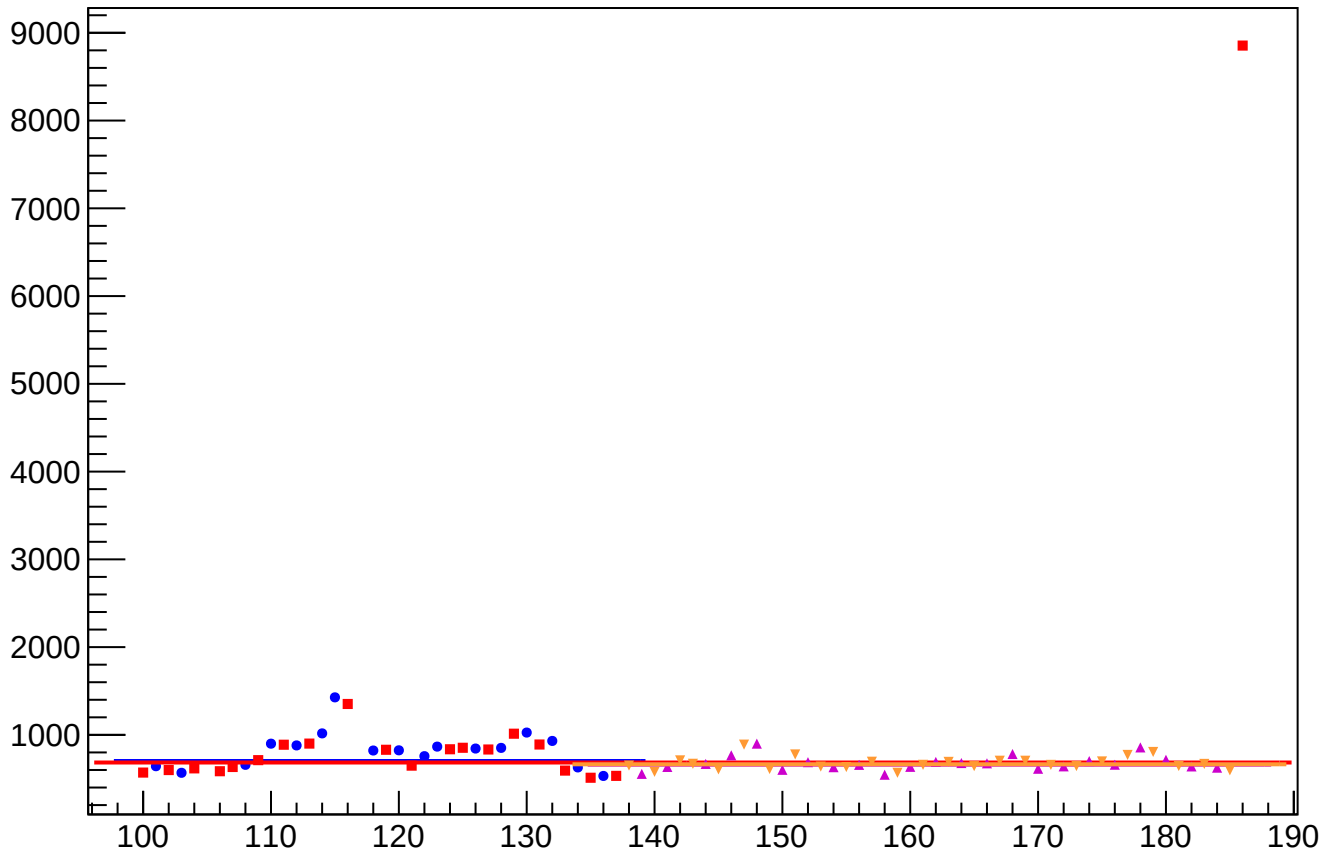
Right: 311.842+/-191.778  $\chi^2/\text{NDF}$ : 40.4/36

In: 28.954+/-138.580  $\chi^2/\text{NDF}$ :52.2/39

Out: -165.990+/-134.149  $\chi^2/\text{NDF}$ :51.2/44

All: -71.684+/-96.386  $\chi^2/\text{NDF}$ : 104.5/84

# asym\_sam\_15\_dd\_rms vs Slug, Sign Corrected



Right In: 702.265+/-0.198     $\chi^2/\text{NDF}$ : 660691.4/16

Left Out: 664.773+/-0.110     $\chi^2/\text{NDF}$ : 357053.8/24

Right Out: 685.161+/-0.186     $\chi^2/\text{NDF}$ : 1288451.6/19

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

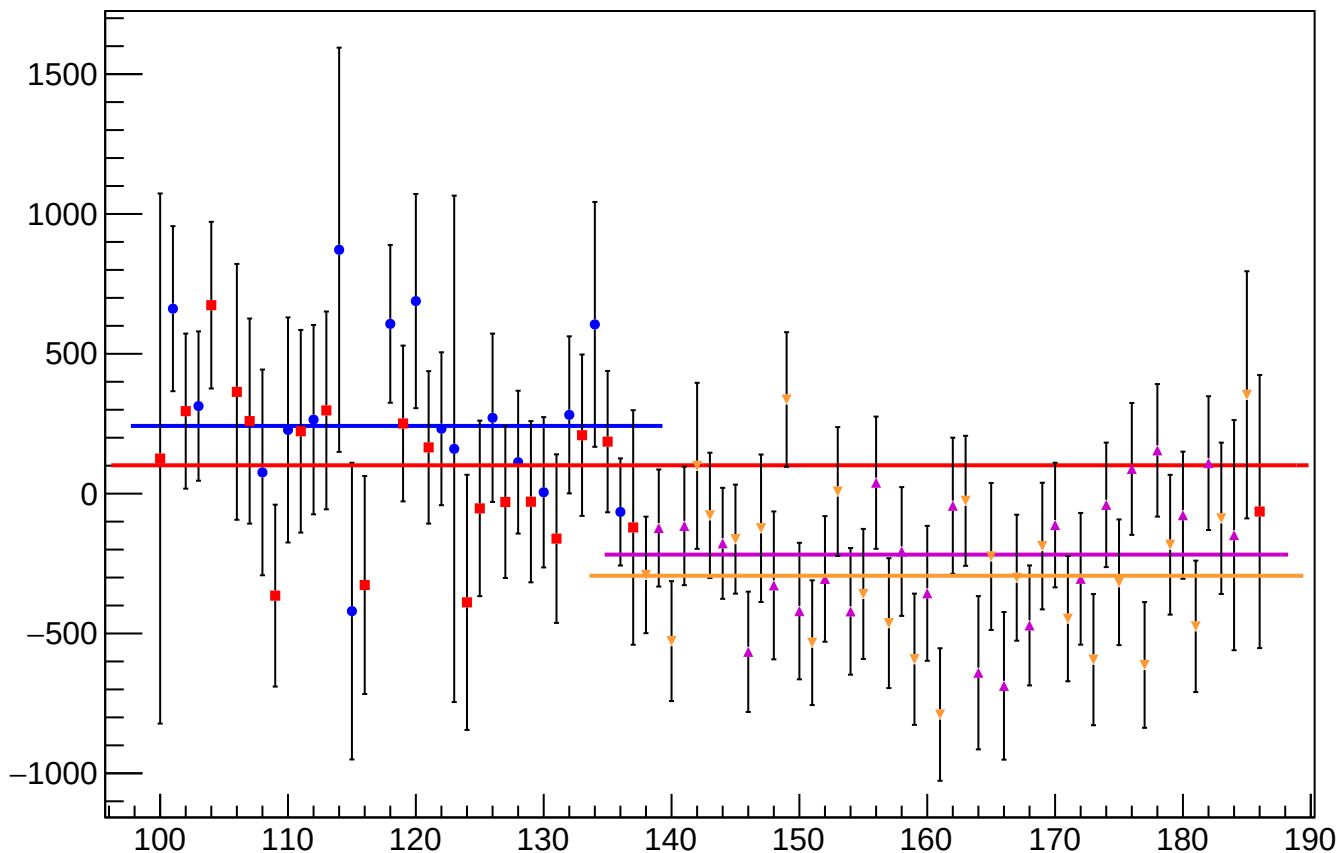
Right: 693.194+/-0.136     $\chi^2/\text{NDF}$ : 1953105.8/36

In: 671.037+/-0.098     $\chi^2/\text{NDF}$ : 1142871.0/39

Out: 670.063+/-0.095     $\chi^2/\text{NDF}$ : 1654382.7/44

All: 670.534+/-0.068     $\chi^2/\text{NDF}$ : 2797304.7/84

reg\_asym\_sam\_26\_dd\_mean vs Slug, Sign Corrected



Right In:  $242.121 \pm 76.105$   $\chi^2/\text{NDF}: 12.0/16$

Left Out:  $-293.590 \pm 47.203$   $\chi^2/\text{NDF}: 30.3/24$

Right Out:  $101.348 \pm 73.576$   $\chi^2/\text{NDF}: 12.0/19$

Left In:  $-217.964 \pm 48.819$   $\chi^2/\text{NDF}: 21.3/22$

Left:  $-257.050 \pm 33.934$   $\chi^2/\text{NDF}: 52.9/47$

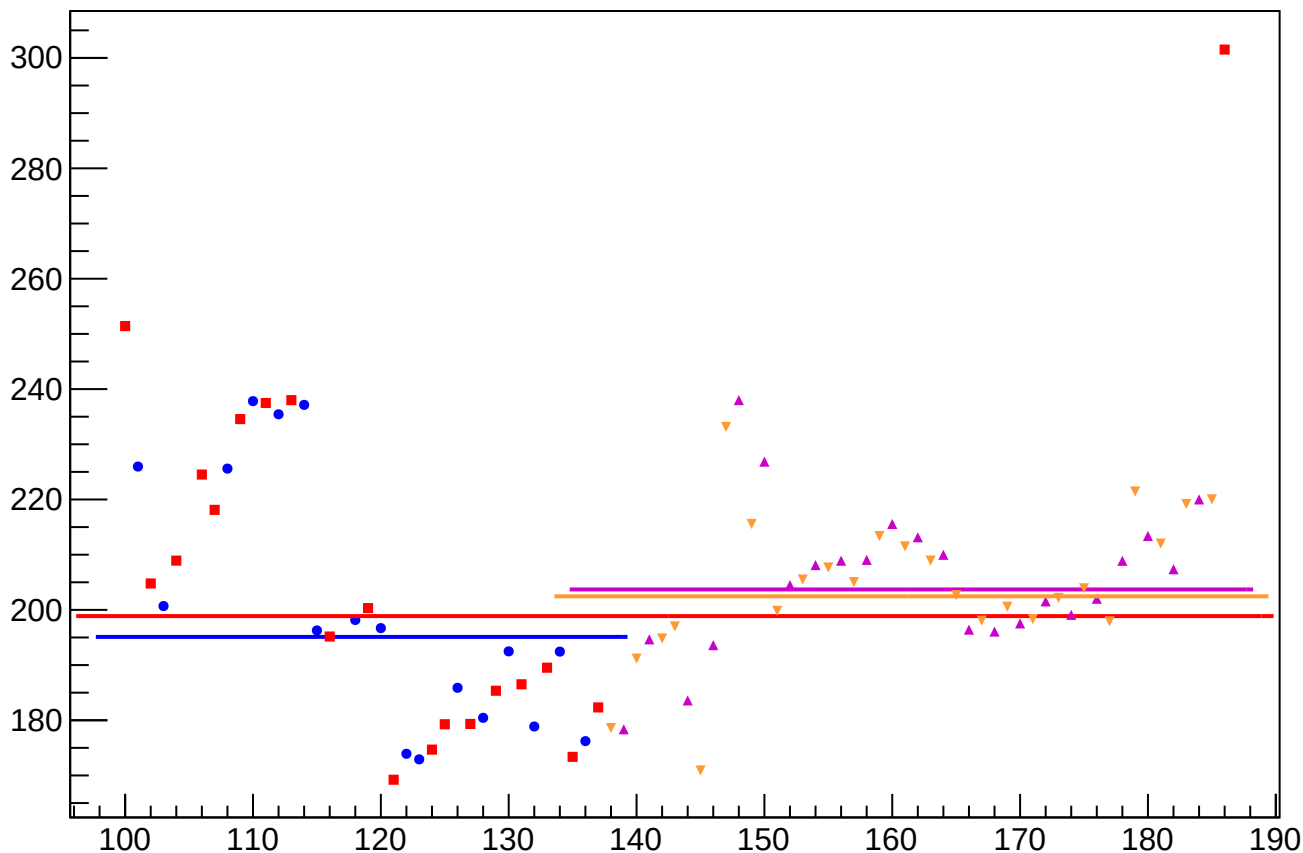
Right:  $169.357 \pm 52.898$   $\chi^2/\text{NDF}: 25.7/36$

In:  $-83.839 \pm 41.091$   $\chi^2/\text{NDF}: 59.2/39$

Out:  $-178.436 \pm 39.730$   $\chi^2/\text{NDF}: 62.7/44$

All:  $-132.731 \pm 28.562$   $\chi^2/\text{NDF}: 124.6/84$

reg\_asym\_sam\_26\_dd\_rms vs Slug, Sign Corrected



Right In: 195.104 $\pm$ 0.054  $\chi^2/\text{NDF}$ : 142538.2/16

Left Out: 202.459 $\pm$ 0.033  $\chi^2/\text{NDF}$ :158582.3/24

Right Out: 198.873 $\pm$ 0.052  $\chi^2/\text{NDF}$ : 261820.1/19

Left In: 203.699 $\pm$ 0.035  $\chi^2/\text{NDF}$ :136193.4/22

Left: 203.058 $\pm$ 0.024  $\chi^2/\text{NDF}$ : 295442.7/47

Right: 197.052 $\pm$ 0.037  $\chi^2/\text{NDF}$ : 406892.8/36

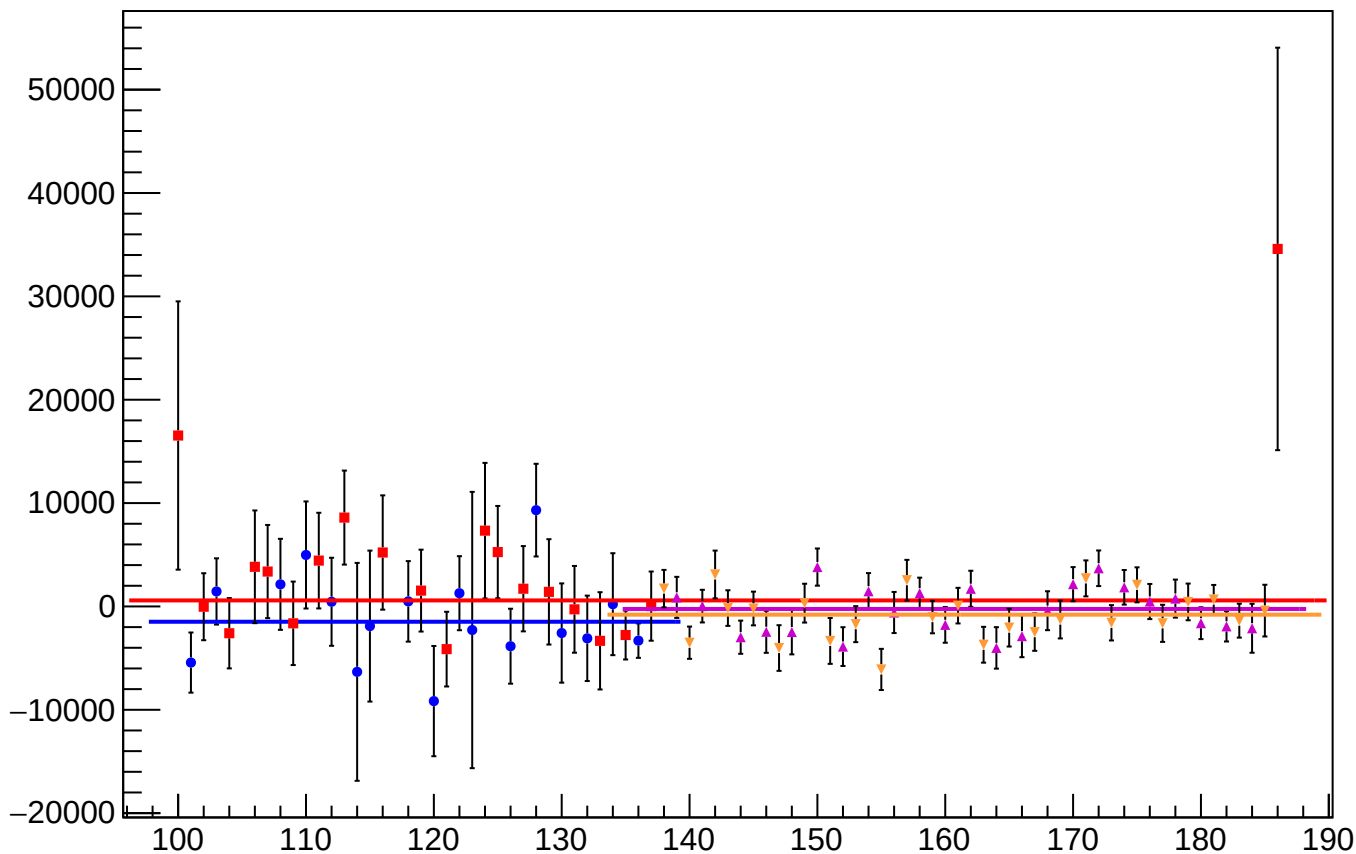
In: 201.193 $\pm$ 0.029  $\chi^2/\text{NDF}$ :296801.5/39

Out: 201.413 $\pm$ 0.028  $\chi^2/\text{NDF}$ :423767.7/44

All: 201.307 $\pm$ 0.020  $\chi^2/\text{NDF}$ : 720598.8/84



asym\_sam\_26\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: -1480.760 $\pm$ 912.560  $\chi^2$ /NDF: 16.0/16

Left Out: -796.528 $\pm$ 357.851  $\chi^2$ /NDF: 35.7/24

Right Out: 582.409 $\pm$ 935.461  $\chi^2$ /NDF: 17.8/19

Left In: -245.102 $\pm$ 369.846  $\chi^2$ /NDF: 35.7/22

Left: -529.902 $\pm$ 257.175  $\chi^2$ /NDF: 72.6/47

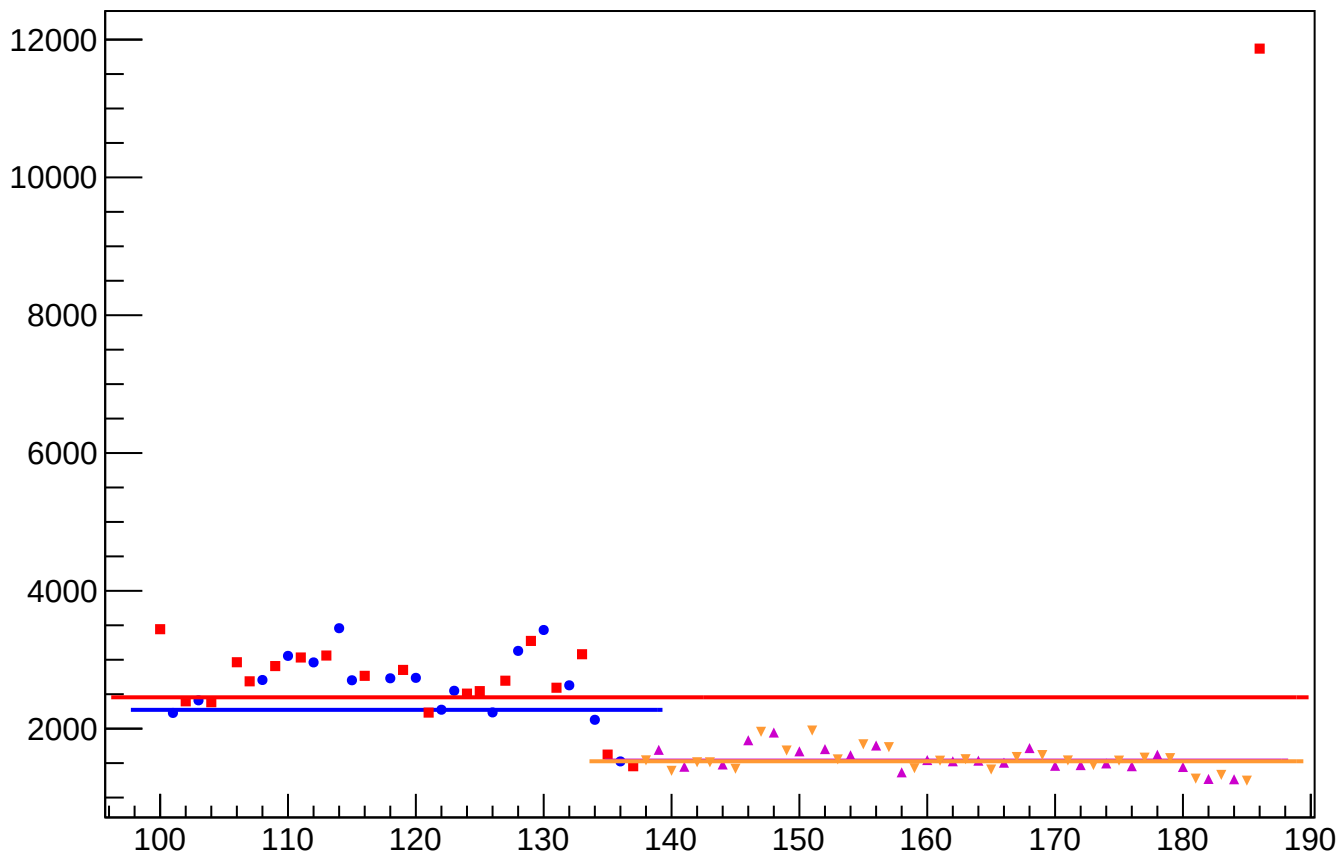
Right: -474.739 $\pm$ 653.224  $\chi^2$ /NDF: 36.3/36

In: -419.431 $\pm$ 342.765  $\chi^2$ /NDF: 53.3/39

Out: -620.499 $\pm$ 334.231  $\chi^2$ /NDF: 55.4/44

All: -522.499 $\pm$ 239.297  $\chi^2$ /NDF: 108.9/84

asym\_sam\_26\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 2272.950+/-0.645  $\chi^2/\text{NDF}$ : 806901.4/16

Left Out: 1526.712+/-0.253  $\chi^2/\text{NDF}$ : 394892.7/24

Right Out: 2455.028+/-0.661  $\chi^2/\text{NDF}$ : 1151368.0/19

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

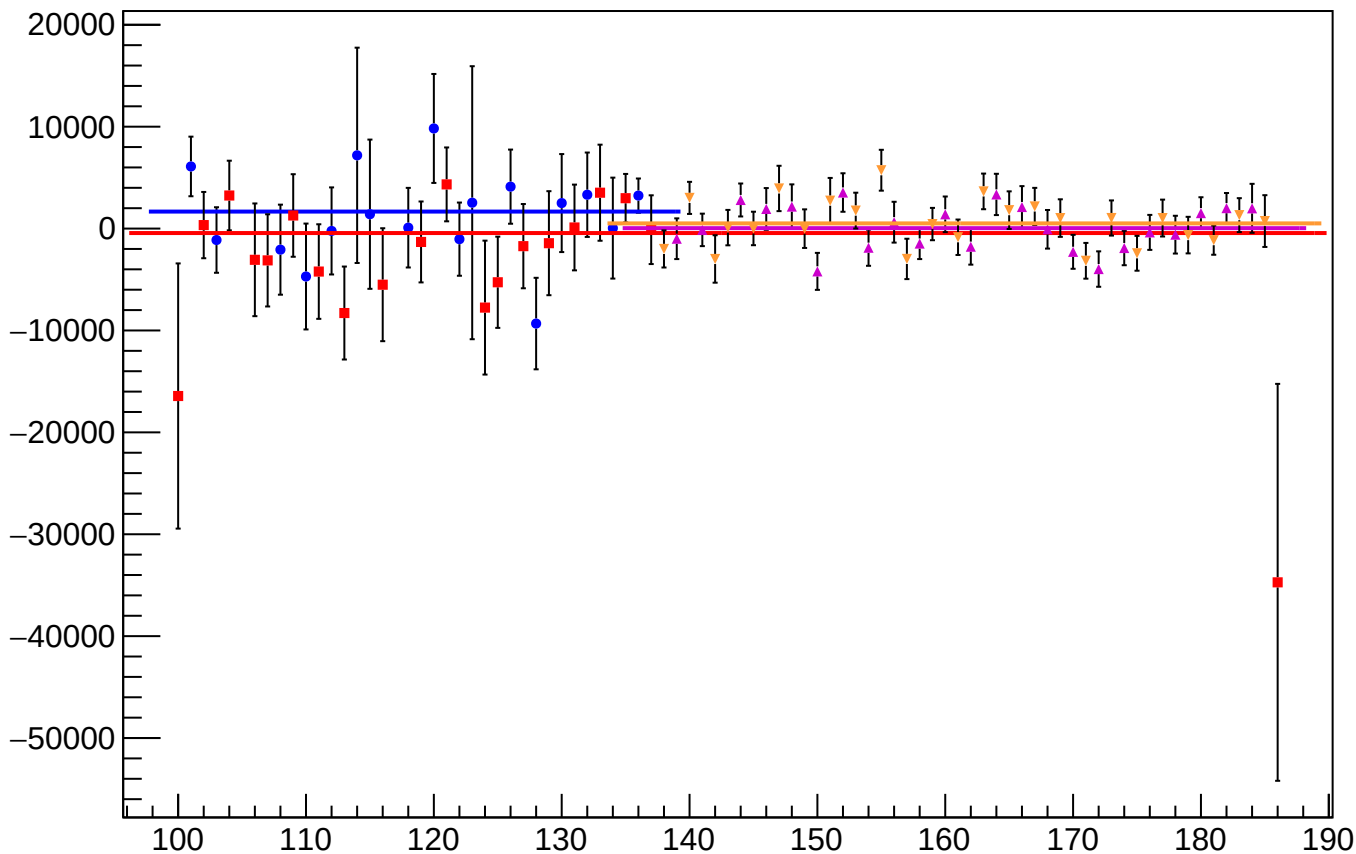
Right: 2361.733+/-0.462  $\chi^2/\text{NDF}$ : 1997093.0/36

In: 1640.432+/-0.242  $\chi^2/\text{NDF}$ : 2275942.7/39

Out: 1645.217+/-0.236  $\chi^2/\text{NDF}$ : 3264401.3/44

All: 1642.885+/-0.169  $\chi^2/\text{NDF}$ : 5540543.8/84

# asym\_sam\_26\_dd\_mean vs Slug, Sign Corrected



Right In: 1668.629 $\pm$ 916.594  $\chi^2$ /NDF: 16.4/16

Left Out: 507.982 $\pm$ 361.172  $\chi^2$ /NDF:35.4/24

Right Out: -438.587 $\pm$ 939.273  $\chi^2$ /NDF: 18.2/19

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

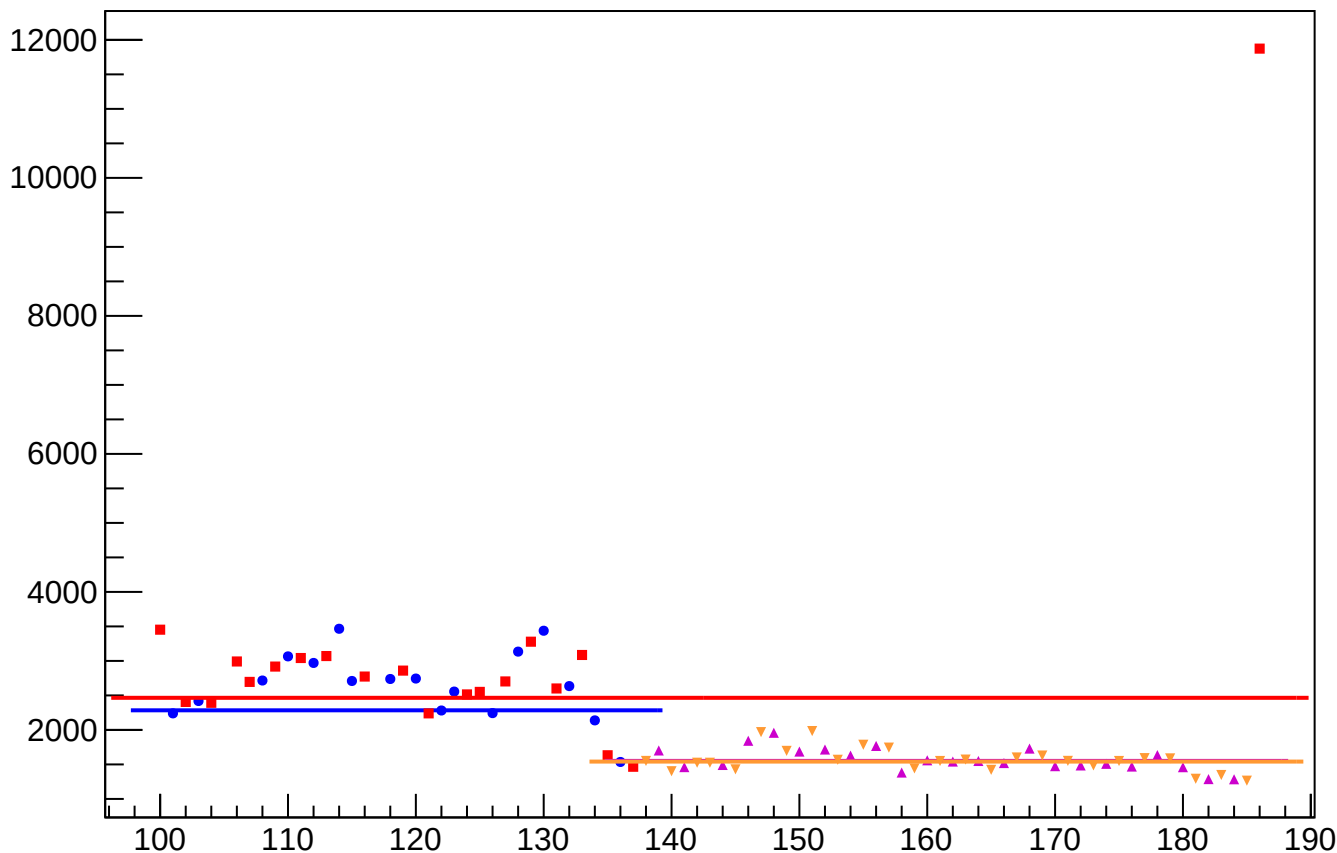
Right: 640.768 $\pm$ 656.001  $\chi^2$ /NDF: 37.2/36

In: 271.732 $\pm$ 345.696  $\chi^2$ /NDF:52.7/39

Out: 386.052 $\pm$ 337.109  $\chi^2$ /NDF:54.4/44

All: 330.329 $\pm$ 241.351  $\chi^2$ /NDF: 107.2/84

# asym\_sam\_26\_dd\_rms vs Slug, Sign Corrected



Right In: 2284.187+/-0.648  $\chi^2/\text{NDF}$ : 795230.1/16

Left Out: 1541.258+/-0.255  $\chi^2/\text{NDF}$ : 382045.4/24

Right Out: 2465.371+/-0.664  $\chi^2/\text{NDF}$ : 1142558.3/19

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

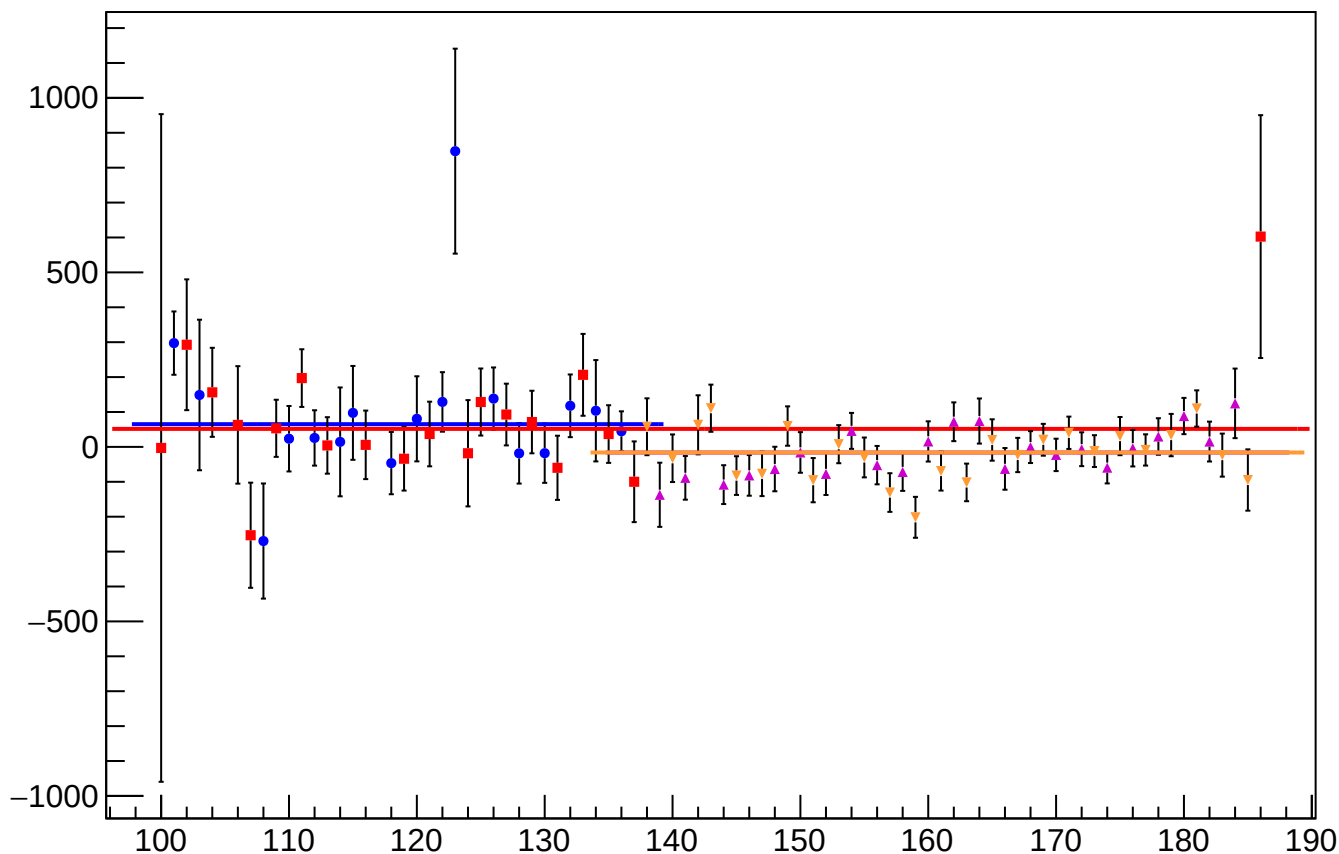
Right: 2372.566+/-0.464  $\chi^2/\text{NDF}$ : 1975907.4/36

In: 1655.346+/-0.244  $\chi^2/\text{NDF}$ : 2231604.1/39

Out: 1660.296+/-0.238  $\chi^2/\text{NDF}$ : 3211188.9/44

All: 1657.883+/-0.171  $\chi^2/\text{NDF}$ : 5443003.2/84

reg\_asym\_sam\_37\_dd\_mean vs Slug, Sign Corrected



Right In:  $65.082 \pm 23.794$   $\chi^2/\text{NDF}$ : 23.8/16

Left Out:  $-16.049 \pm 11.340$   $\chi^2/\text{NDF}$ : 39.7/24

Right Out:  $51.591 \pm 23.676$   $\chi^2/\text{NDF}$ : 19.6/19

Left In:  $-16.162 \pm 11.649$   $\chi^2/\text{NDF}$ : 25.2/22

Left:  $-16.104 \pm 8.126$   $\chi^2/\text{NDF}$ : 64.9/47

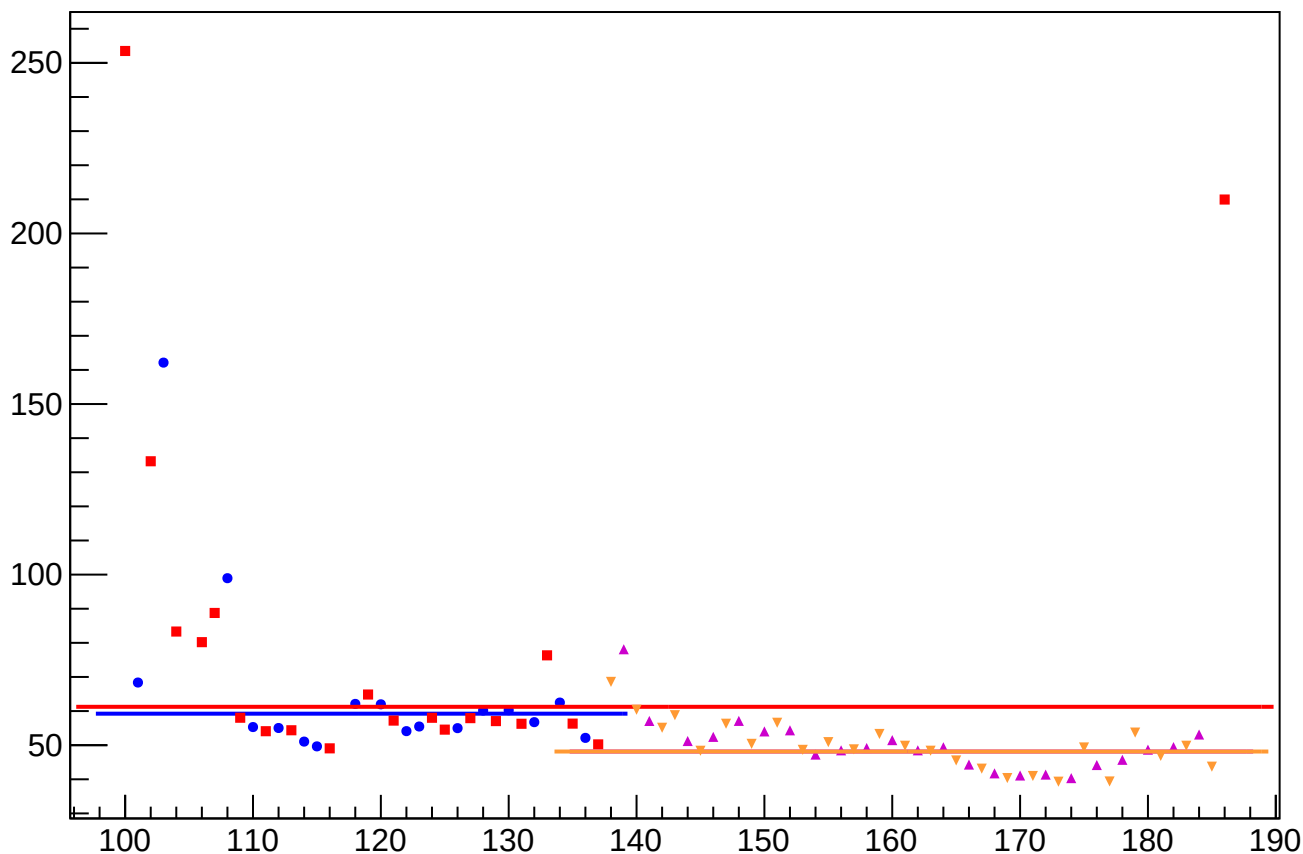
Right:  $58.303 \pm 16.783$   $\chi^2/\text{NDF}$ : 43.5/36

In:  $-0.452 \pm 10.463$   $\chi^2/\text{NDF}$ : 58.4/39

Out:  $-3.428 \pm 10.227$   $\chi^2/\text{NDF}$ : 65.9/44

All:  $-1.974 \pm 7.314$   $\chi^2/\text{NDF}$ : 124.3/84

# reg\_asym\_sam\_37\_dd\_rms vs Slug, Sign Corrected



Right In: 59.236+/-0.017  $\chi^2/\text{NDF}$ : 665304.8/16

Left Out: 48.141+/-0.008  $\chi^2/\text{NDF}$ : 655250.3/24

Right Out: 61.250+/-0.017  $\chi^2/\text{NDF}$ : 1045278.3/19

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

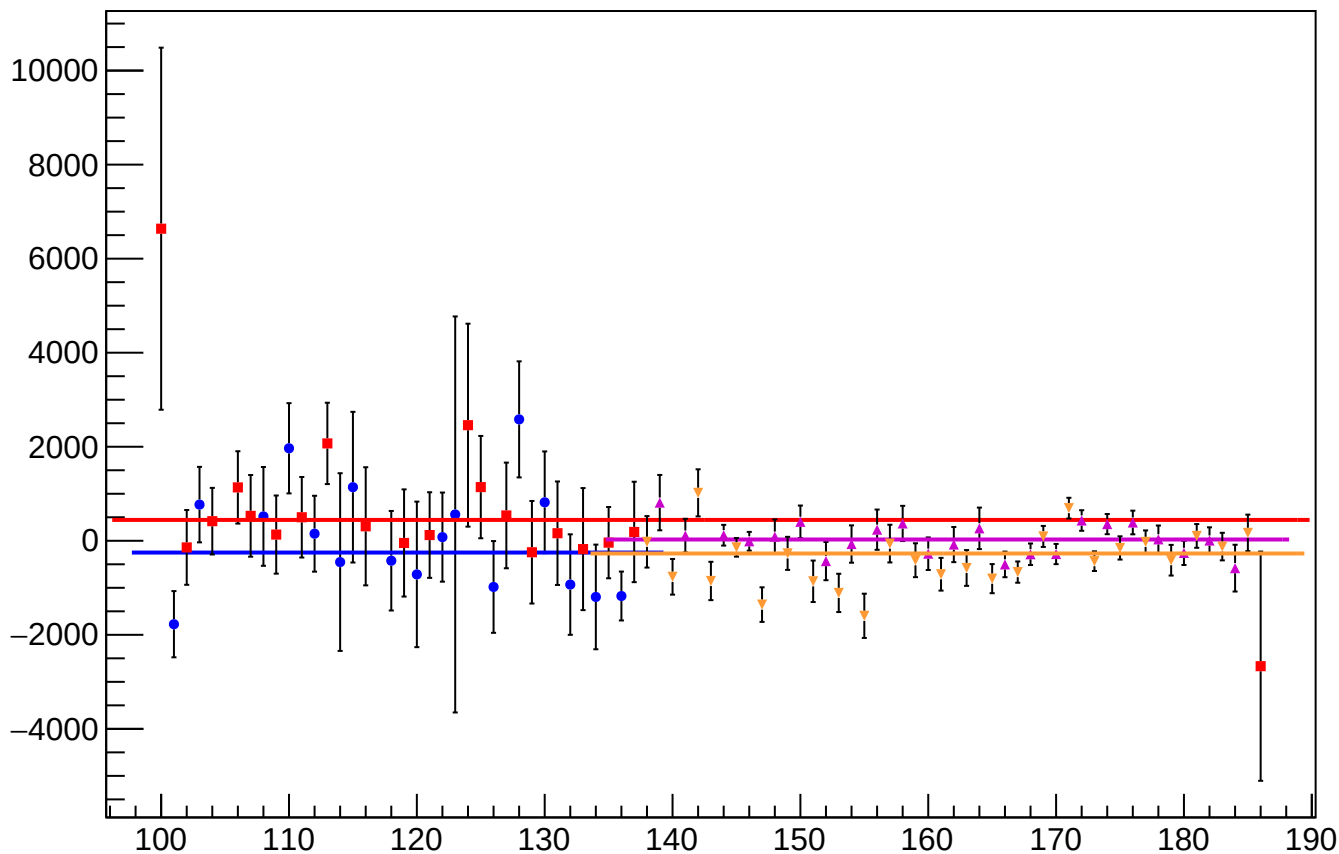
Right: 60.248+/-0.012  $\chi^2/\text{NDF}$ : 1717783.7/36

In: 50.285+/-0.007  $\chi^2/\text{NDF}$ : 1591207.0/39

Out: 50.587+/-0.007  $\chi^2/\text{NDF}$ : 2199239.9/44

All: 50.439+/-0.005  $\chi^2/\text{NDF}$ : 3791299.0/84

asym\_sam\_37\_dd\_correction\_mean vs Slug, Sign Corrected



Right In:  $-250.295 \pm 234.463$   $\chi^2/\text{NDF}$ : 24.6/16

Left Out:  $-270.214 \pm 60.177$   $\chi^2/\text{NDF}$ : 70.1/24

Right Out:  $443.706 \pm 221.875$   $\chi^2/\text{NDF}$ : 12.0/19

Left In:  $27.271 \pm 60.430$   $\chi^2/\text{NDF}$ : 25.1/22

Left:  $-122.095 \pm 42.641$   $\chi^2/\text{NDF}$ : 107.3/47

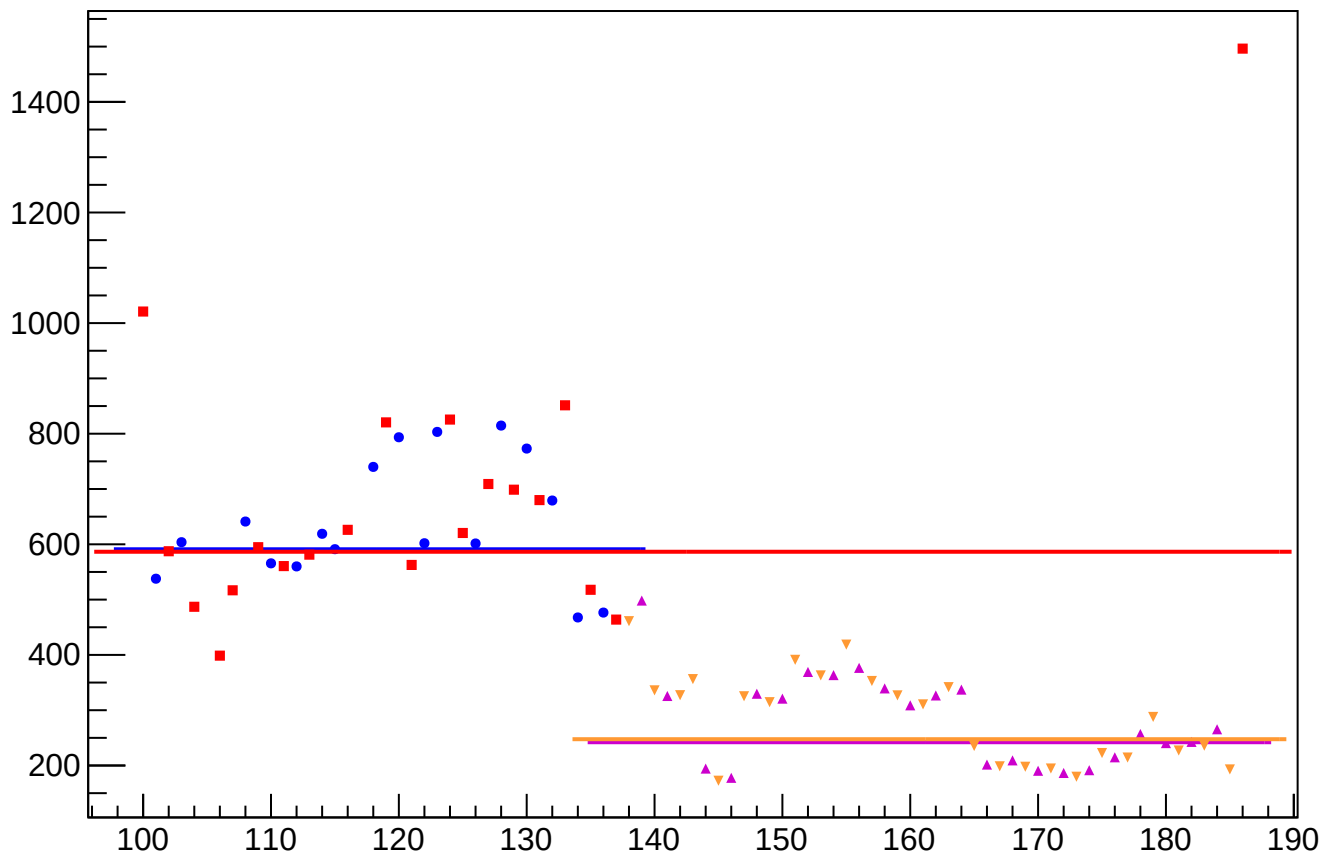
Right:  $115.835 \pm 161.156$   $\chi^2/\text{NDF}$ : 41.2/36

In:  $9.981 \pm 58.518$   $\chi^2/\text{NDF}$ : 50.9/39

Out:  $-221.295 \pm 58.079$   $\chi^2/\text{NDF}$ : 91.8/44

All:  $-106.527 \pm 41.222$   $\chi^2/\text{NDF}$ : 150.6/84

asym\_sam\_37\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 591.003 $\pm$ 0.166  $\chi^2$ /NDF: 358207.6/16

Left Out: 247.570 $\pm$ 0.043  $\chi^2$ /NDF: 2780931.0/24

Right Out: 586.538 $\pm$ 0.157  $\chi^2$ /NDF: 777362.5/19

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: 588.647 $\pm$ 0.114  $\chi^2$ /NDF: 1135952.7/36

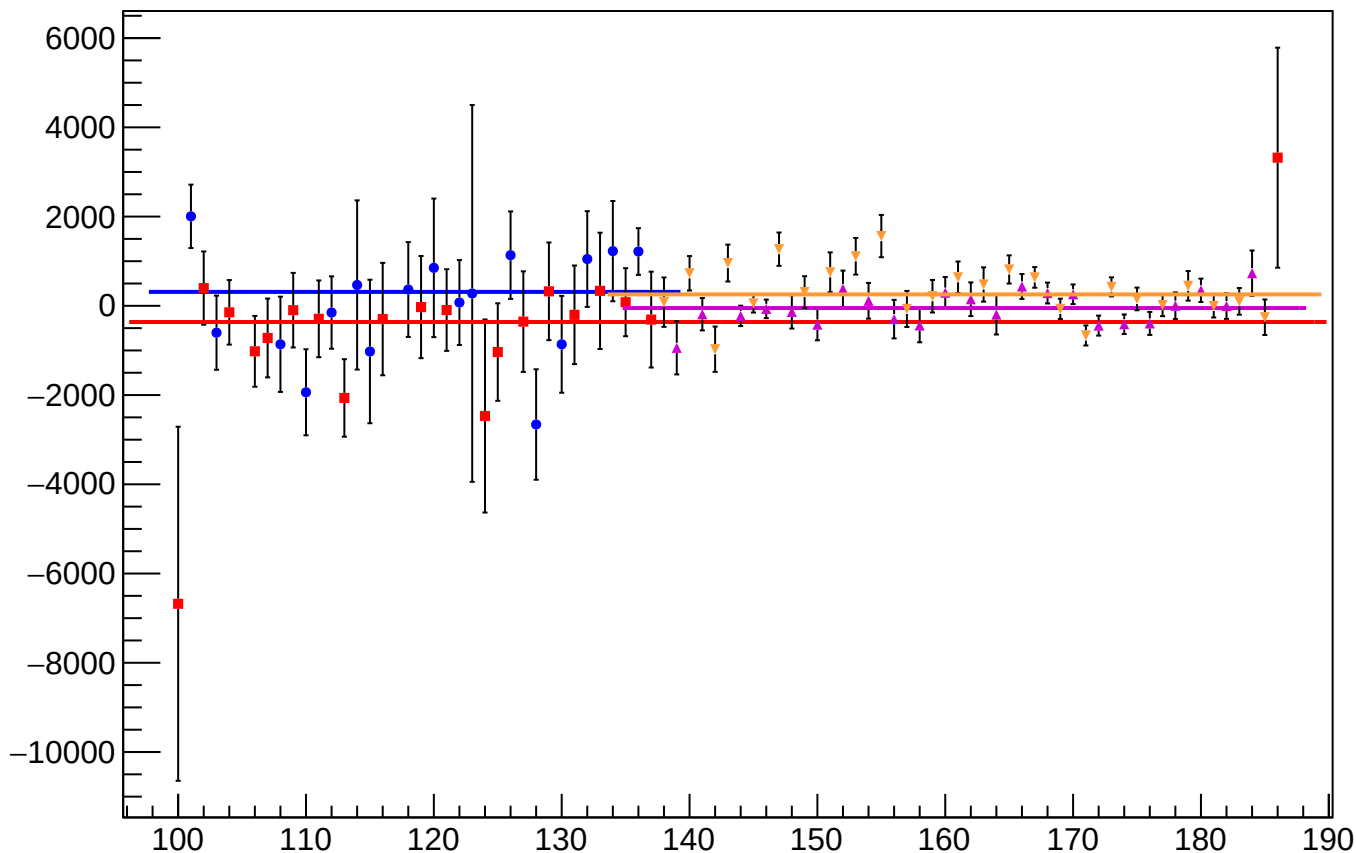
In: 263.849 $\pm$ 0.041  $\chi^2$ /NDF: 6976881.5/39

Out: 270.797 $\pm$ 0.041  $\chi^2$ /NDF: 7906411.9/44

All: 267.349 $\pm$ 0.029  $\chi^2$ /NDF: 14897494.2/84



# asym\_sam\_37\_dd\_mean vs Slug, Sign Corrected



Right In:  $312.362 \pm 236.449$   $\chi^2/\text{NDF}$ : 26.5/16

Left Out:  $255.995 \pm 61.418$   $\chi^2/\text{NDF}$ : 63.6/24

Right Out:  $-362.500 \pm 224.418$   $\chi^2/\text{NDF}$ : 13.1/19

Left In:  $-49.832 \pm 61.781$   $\chi^2/\text{NDF}$ : 27.5/22

Left:  $103.982 \pm 43.557$   $\chi^2/\text{NDF}$ : 103.4/47

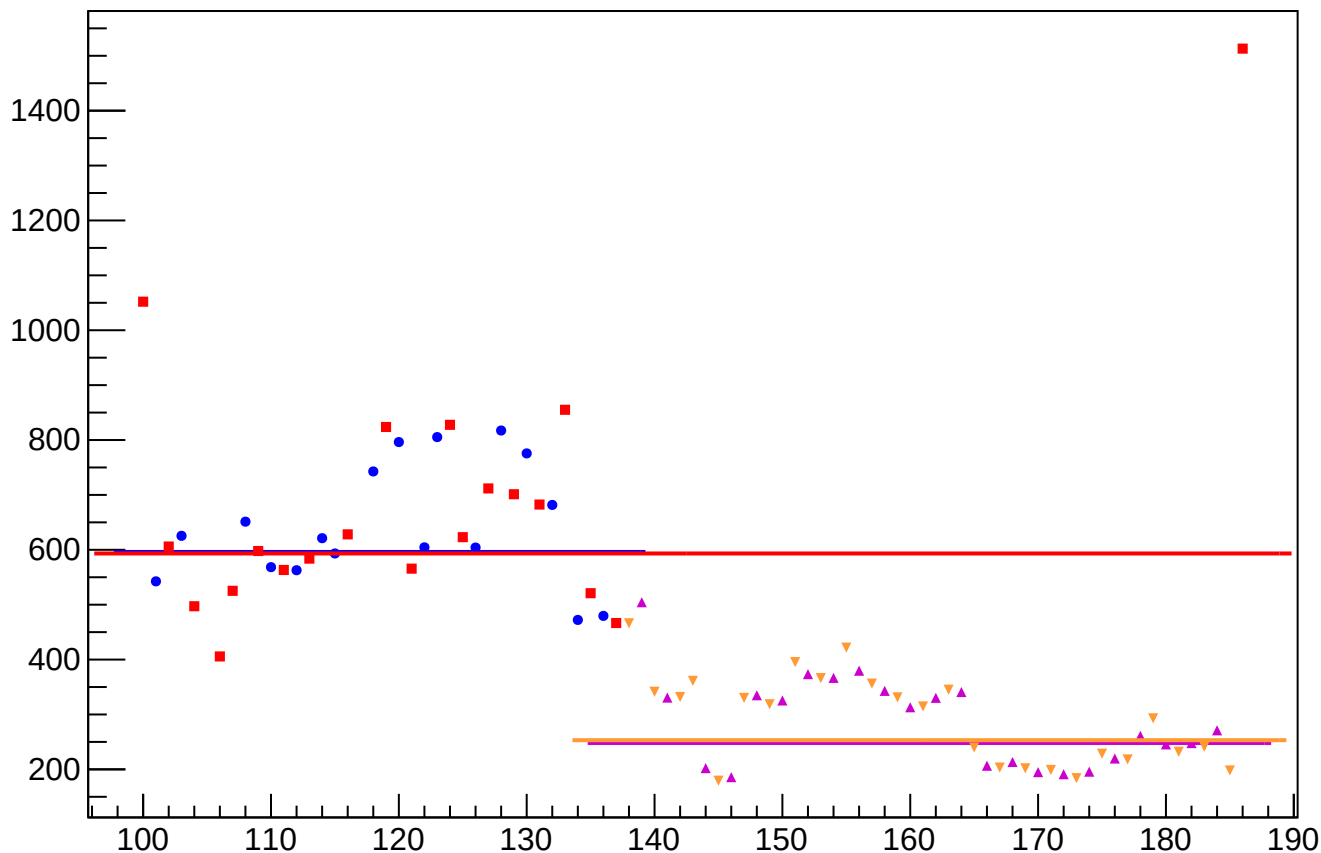
Right:  $-42.674 \pm 162.775$   $\chi^2/\text{NDF}$ : 43.9/36

In:  $-26.685 \pm 59.774$   $\chi^2/\text{NDF}$ : 56.2/39

Out:  $212.898 \pm 59.240$   $\chi^2/\text{NDF}$ : 83.7/44

All:  $94.183 \pm 42.077$   $\chi^2/\text{NDF}$ : 148.1/84

# asym\_sam\_37\_dd\_rms vs Slug, Sign Corrected



Right In: 596.086 $\pm$ 0.167  $\chi^2$ /NDF: 355935.3/16

Left Out: 253.137 $\pm$ 0.043  $\chi^2$ /NDF: 2665975.8/24

Right Out: 593.312 $\pm$ 0.159  $\chi^2$ /NDF: 757507.0/19

Left In: 248.069 $\pm$ 0.044  $\chi^2$ /NDF: 2343295.0/22

Left: 250.618 $\pm$ 0.031  $\chi^2$ /NDF: 5016040.5/47

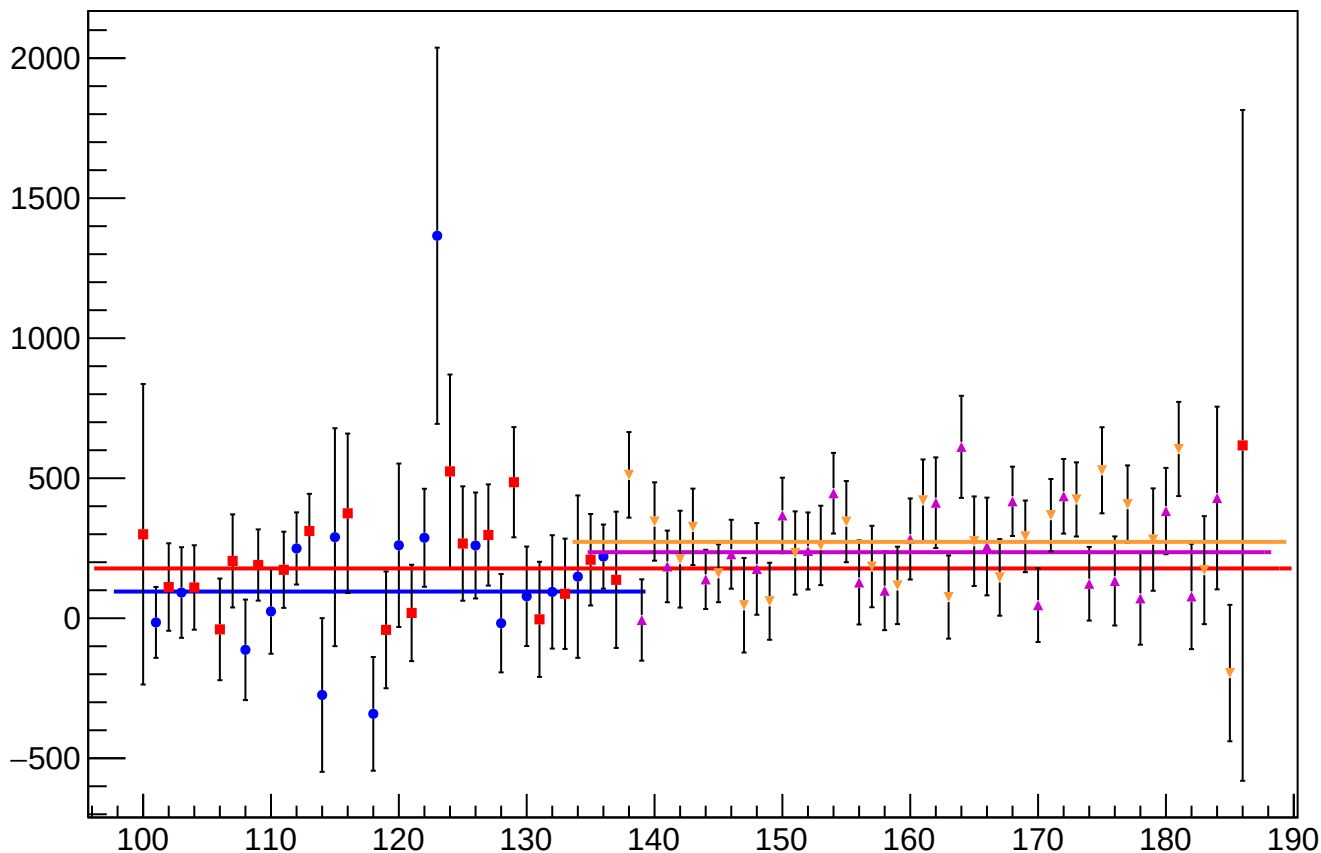
Right: 594.626 $\pm$ 0.115  $\chi^2$ /NDF: 1113587.2/36

In: 270.310 $\pm$ 0.042  $\chi^2$ /NDF: 6755024.9/39

Out: 276.841 $\pm$ 0.042  $\chi^2$ /NDF: 7698621.6/44

All: 273.604 $\pm$ 0.030  $\chi^2$ /NDF: 14465691.1/84

reg\_asym\_sam\_48\_dd\_mean vs Slug, Sign Corrected



Right In: 95.316+/-43.397  $\chi^2/\text{NDF}$ : 17.9/16

Left Out: 272.684+/-29.221  $\chi^2/\text{NDF}$ :27.4/24

Right Out: 177.789+/-41.157  $\chi^2/\text{NDF}$ : 10.6/19

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

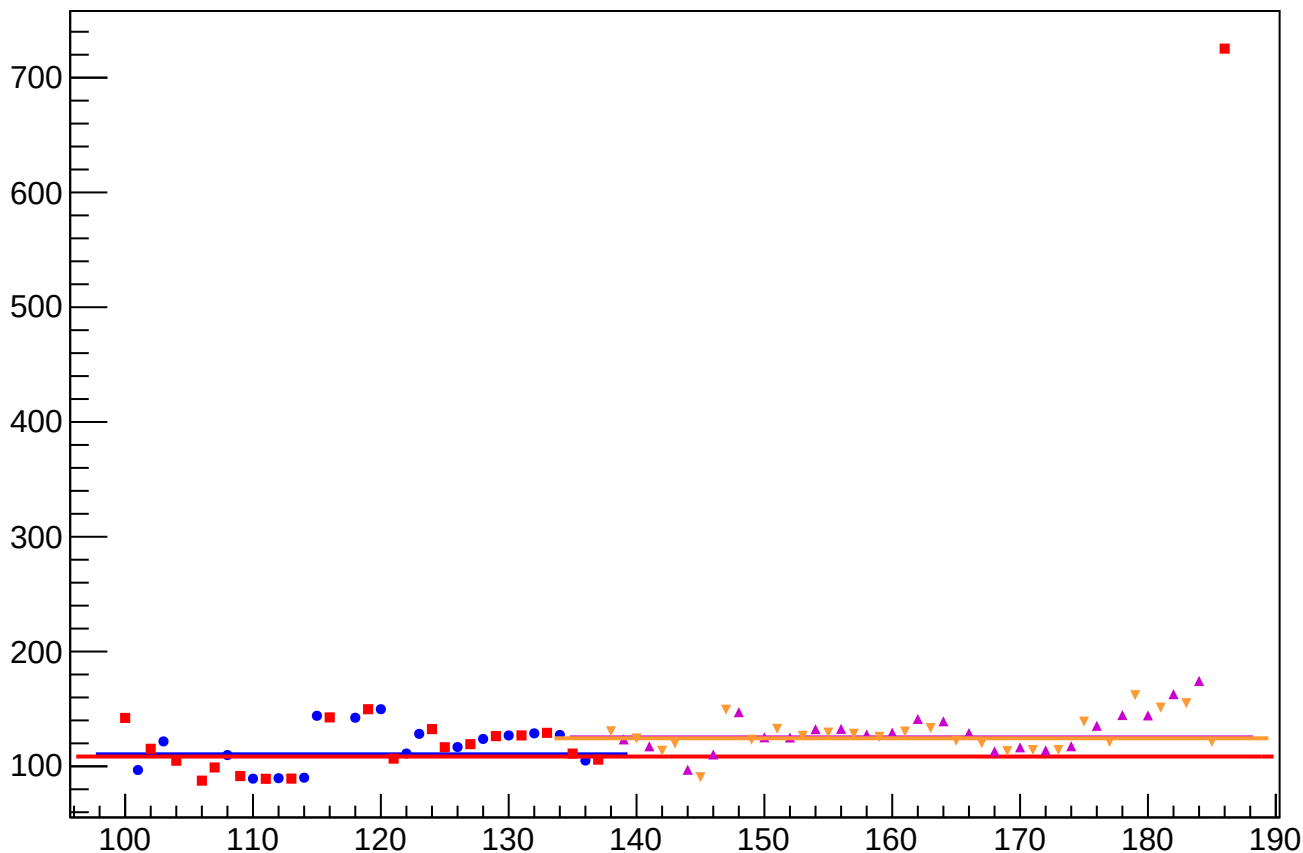
Right: 138.735+/-29.863  $\chi^2/\text{NDF}$ : 30.5/36

In: 189.900+/-24.806  $\chi^2/\text{NDF}$ :49.6/39

Out: 240.880+/-23.827  $\chi^2/\text{NDF}$ :41.6/44

All: 216.416+/-17.184  $\chi^2/\text{NDF}$ : 93.4/84

reg\_asym\_sam\_48\_dd\_rms vs Slug, Sign Corrected



Right In: 110.439+/-0.031  $\chi^2/\text{NDF}$ : 296029.7/16

Left Out: 124.429+/-0.021  $\chi^2/\text{NDF}$ : 539731.8/24

Right Out: 108.516+/-0.029  $\chi^2/\text{NDF}$ : 877166.0/19

Left In: 125.205+/-0.021  $\chi^2/\text{NDF}$ : 501388.2/22

Left: 124.804+/-0.015  $\chi^2/\text{NDF}$ : 1041801.9/47

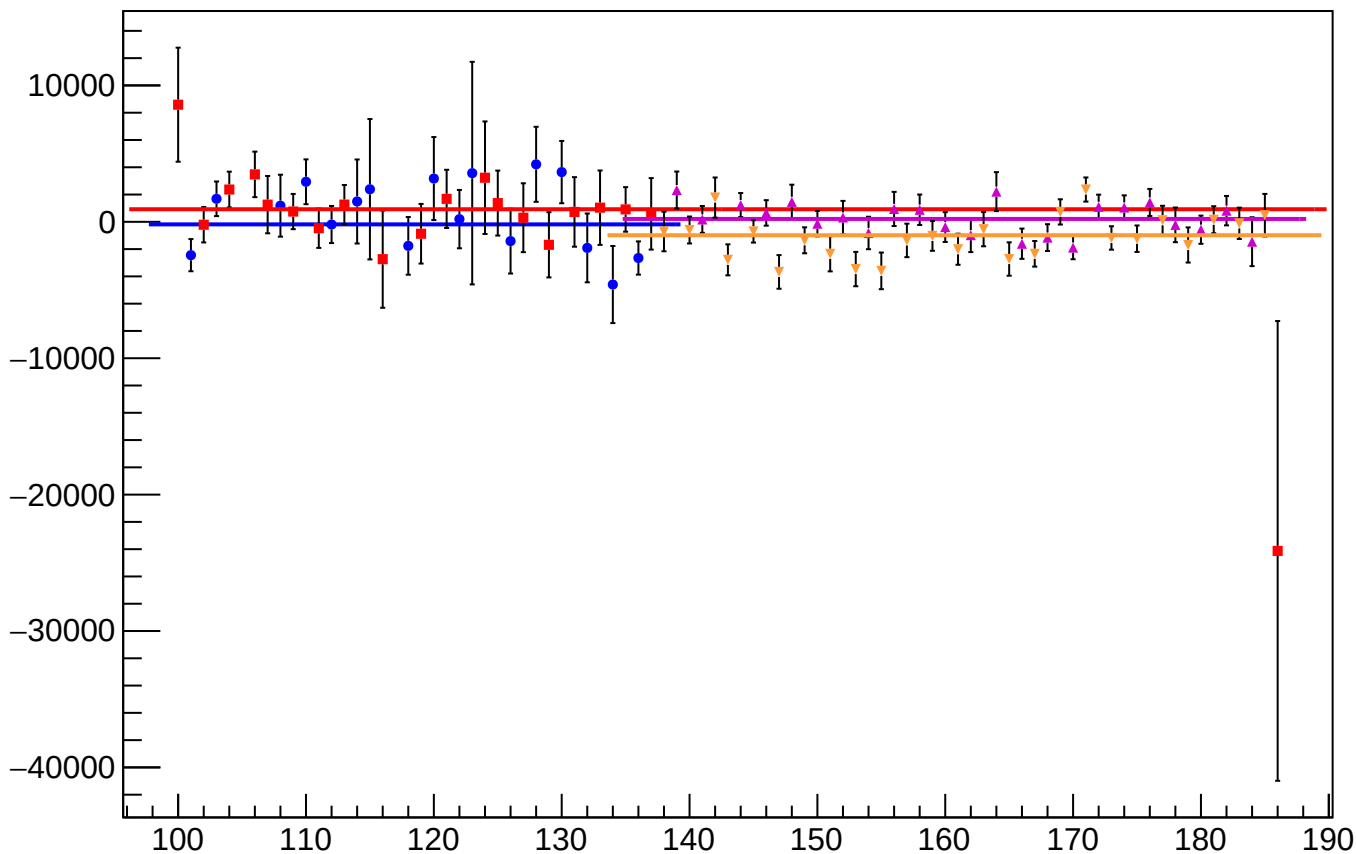
Right: 109.427+/-0.021  $\chi^2/\text{NDF}$ : 1175263.8/36

In: 120.381+/-0.018  $\chi^2/\text{NDF}$ : 953305.3/39

Out: 119.096+/-0.017  $\chi^2/\text{NDF}$ : 1615667.5/44

All: 119.712+/-0.012  $\chi^2/\text{NDF}$ : 2571764.0/84

asym\_sam\_48\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: -186.780+/-465.749  $\chi^2/\text{NDF}$ : 25.0/16

Left Out: -982.839+/-218.021  $\chi^2/\text{NDF}$ : 47.2/24

Right Out: 923.024+/-435.665  $\chi^2/\text{NDF}$ : 14.4/19

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

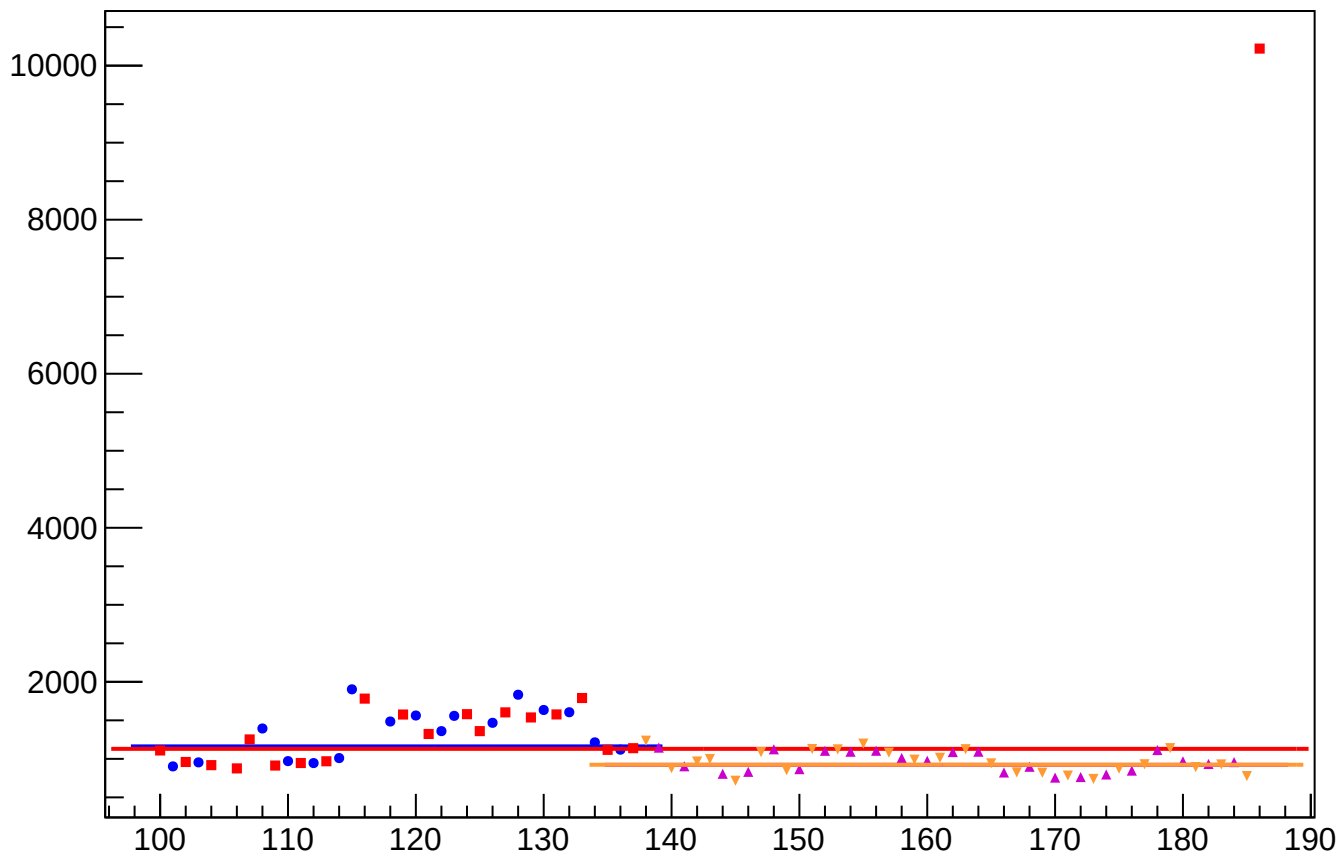
Right: 405.120+/-318.166  $\chi^2/\text{NDF}$ : 42.5/36

In: 136.998+/-201.351  $\chi^2/\text{NDF}$ : 51.3/39

Out: -601.138+/-194.970  $\chi^2/\text{NDF}$ : 76.9/44

All: -243.951+/-140.066  $\chi^2/\text{NDF}$ : 135.1/84

asym\_sam\_48\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 1161.775 $\pm$ 0.329  $\chi^2$ /NDF: 701230.3/16

Left Out: 923.586 $\pm$ 0.154  $\chi^2$ /NDF: 842758.6/24

Right Out: 1130.054 $\pm$ 0.308  $\chi^2$ /NDF: 1351924.1/19

Left In: 922.245 $\pm$ 0.158  $\chi^2$ /NDF: 634712.1/22

Left: 922.932 $\pm$ 0.110  $\chi^2$ /NDF: 1477507.6/47

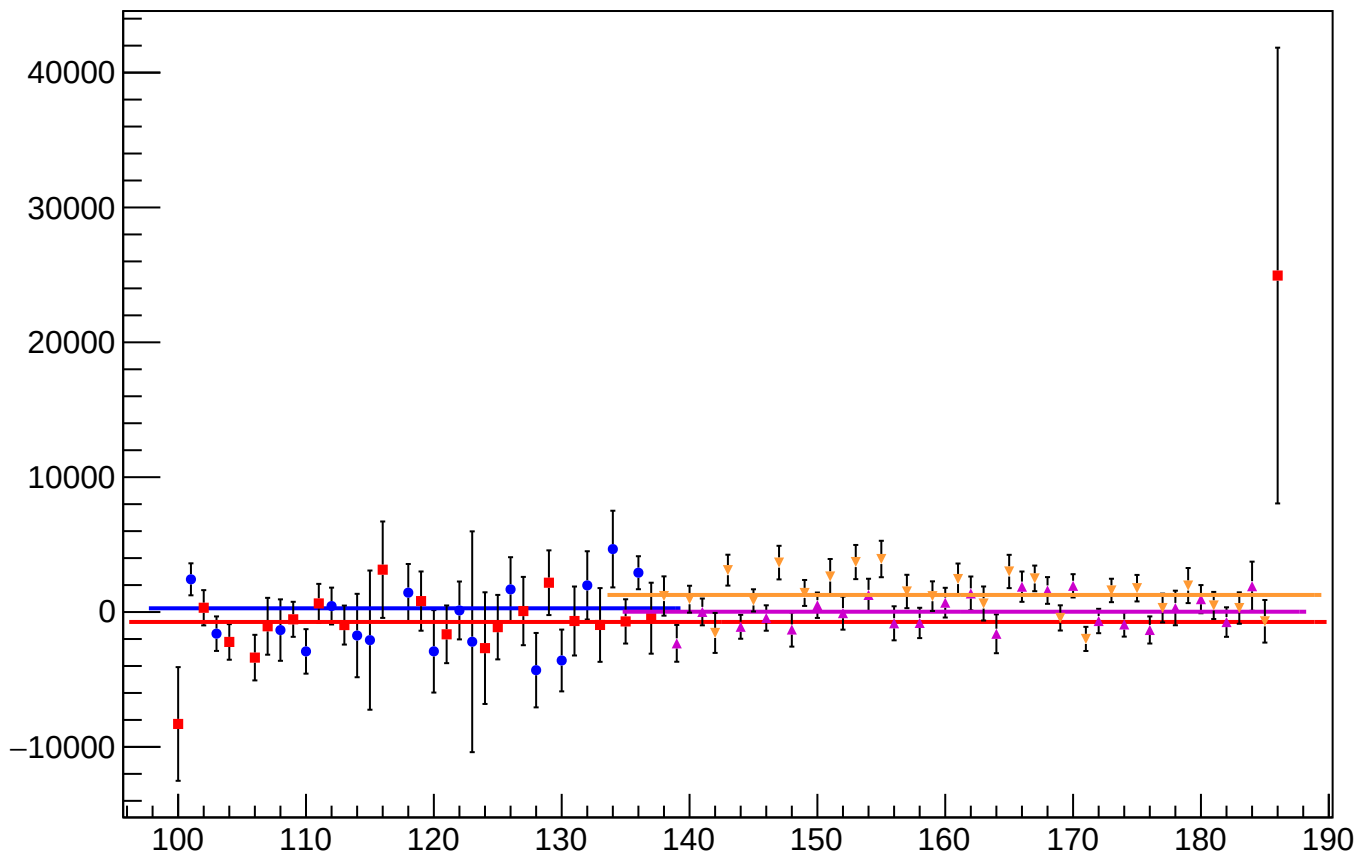
Right: 1144.857 $\pm$ 0.225  $\chi^2$ /NDF: 2058102.2/36

In: 967.013 $\pm$ 0.142  $\chi^2$ /NDF: 1766062.1/39

Out: 964.937 $\pm$ 0.138  $\chi^2$ /NDF: 2553908.3/44

All: 965.941 $\pm$ 0.099  $\chi^2$ /NDF: 4320080.1/84

# asym\_sam\_48\_dd\_mean vs Slug, Sign Corrected



Right In:  $277.871 \pm 468.037$   $\chi^2/\text{NDF}$ : 25.3/16

Left Out:  $1267.344 \pm 220.133$   $\chi^2/\text{NDF}$ : 44.9/24

Right Out:  $-735.254 \pm 438.045$   $\chi^2/\text{NDF}$ : 14.5/19

Left In:  $23.478 \pm 225.490$   $\chi^2/\text{NDF}$ : 27.2/22

Left:  $660.362 \pm 157.518$   $\chi^2/\text{NDF}$ : 87.7/47

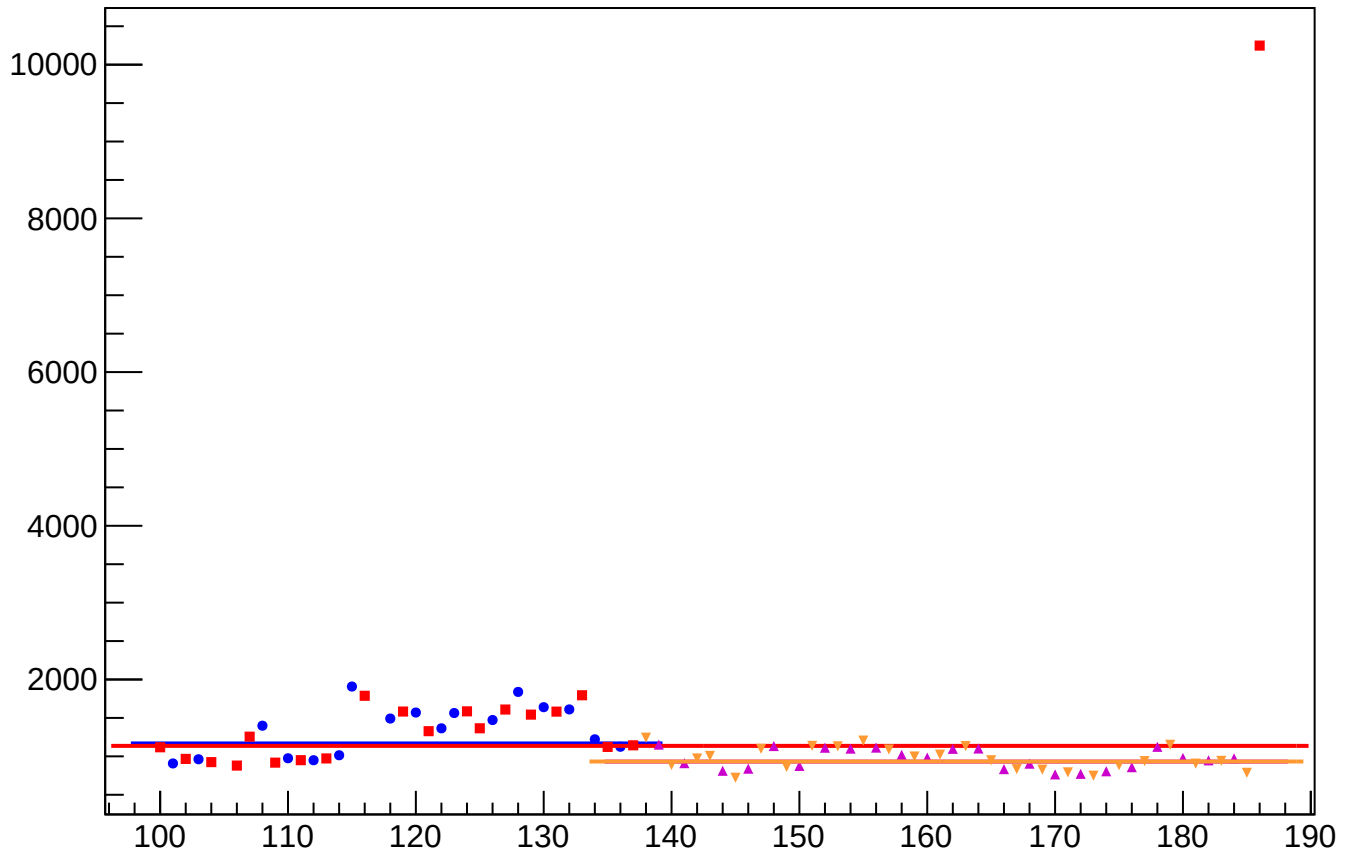
Right:  $-262.189 \pm 319.822$   $\chi^2/\text{NDF}$ : 42.3/36

In:  $71.402 \pm 203.143$   $\chi^2/\text{NDF}$ : 52.7/39

Out:  $863.573 \pm 196.693$   $\chi^2/\text{NDF}$ : 76.2/44

All:  $480.263 \pm 141.308$   $\chi^2/\text{NDF}$ : 136.7/84

# asym\_sam\_48\_dd\_rms vs Slug, Sign Corrected



Right In: 1167.786 $\pm$ 0.331  $\chi^2$ /NDF: 695715.2/16

Left Out: 932.764 $\pm$ 0.156  $\chi^2$ /NDF: 829798.4/24

Right Out: 1136.173 $\pm$ 0.310  $\chi^2$ /NDF: 1345259.4/19

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: 1150.934 $\pm$ 0.226  $\chi^2$ /NDF: 2045838.6/36

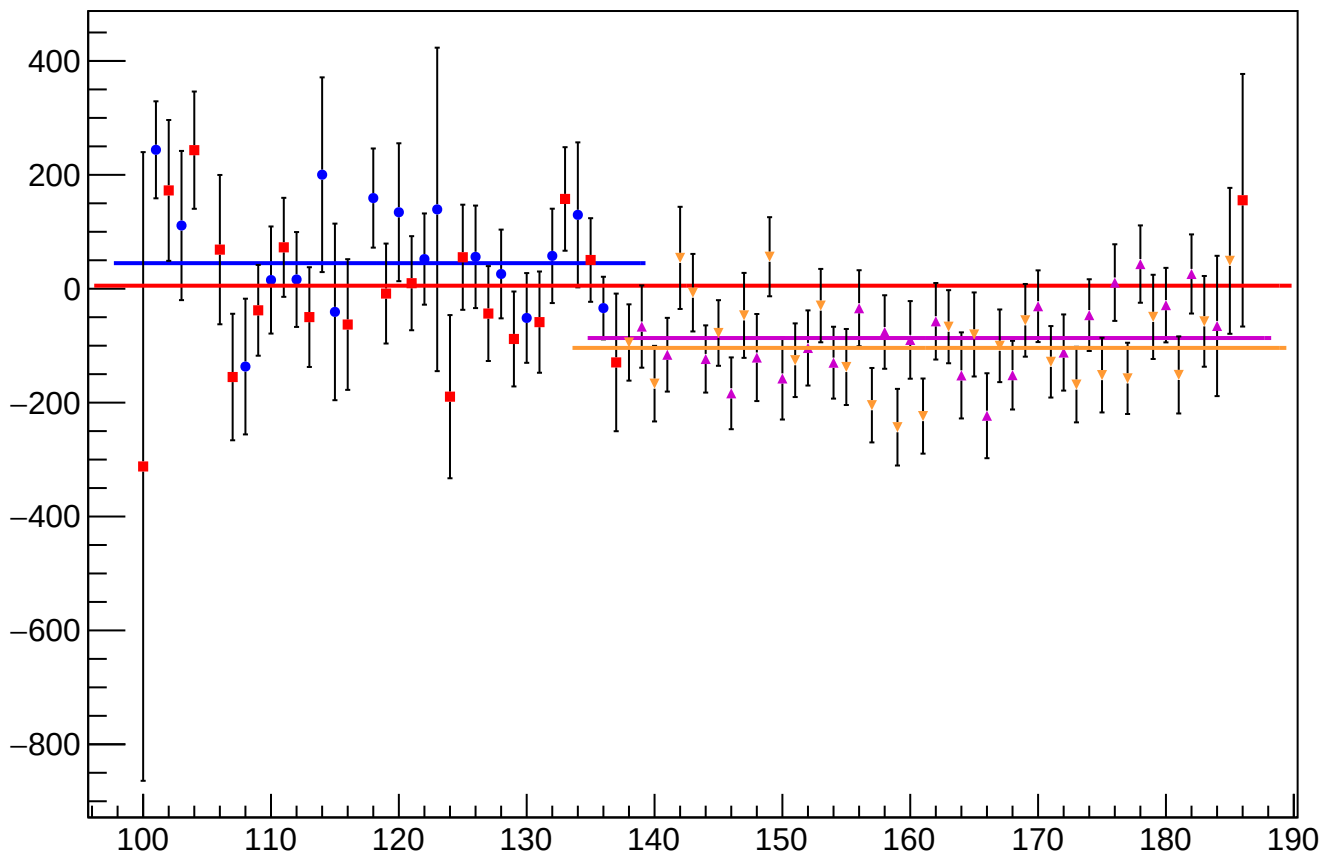
In: 976.007 $\pm$ 0.144  $\chi^2$ /NDF: 1733888.4/39

Out: 973.776 $\pm$ 0.139  $\chi^2$ /NDF: 2519359.8/44

All: 974.855 $\pm$ 0.100  $\chi^2$ /NDF: 4253372.7/84



reg\_asym\_sam\_13\_57\_dd\_mean vs Slug, Sign Corrected



Right In:  $44.919 \pm 22.614$   $\chi^2/\text{NDF}: 15.9/16$

Left Out:  $-103.899 \pm 13.642$   $\chi^2/\text{NDF}: 30.0/24$

Right Out:  $5.352 \pm 22.083$   $\chi^2/\text{NDF}: 20.6/19$

Left In:  $-86.542 \pm 14.120$   $\chi^2/\text{NDF}: 21.4/22$

Left:  $-95.520 \pm 9.811$   $\chi^2/\text{NDF}: 52.1/47$

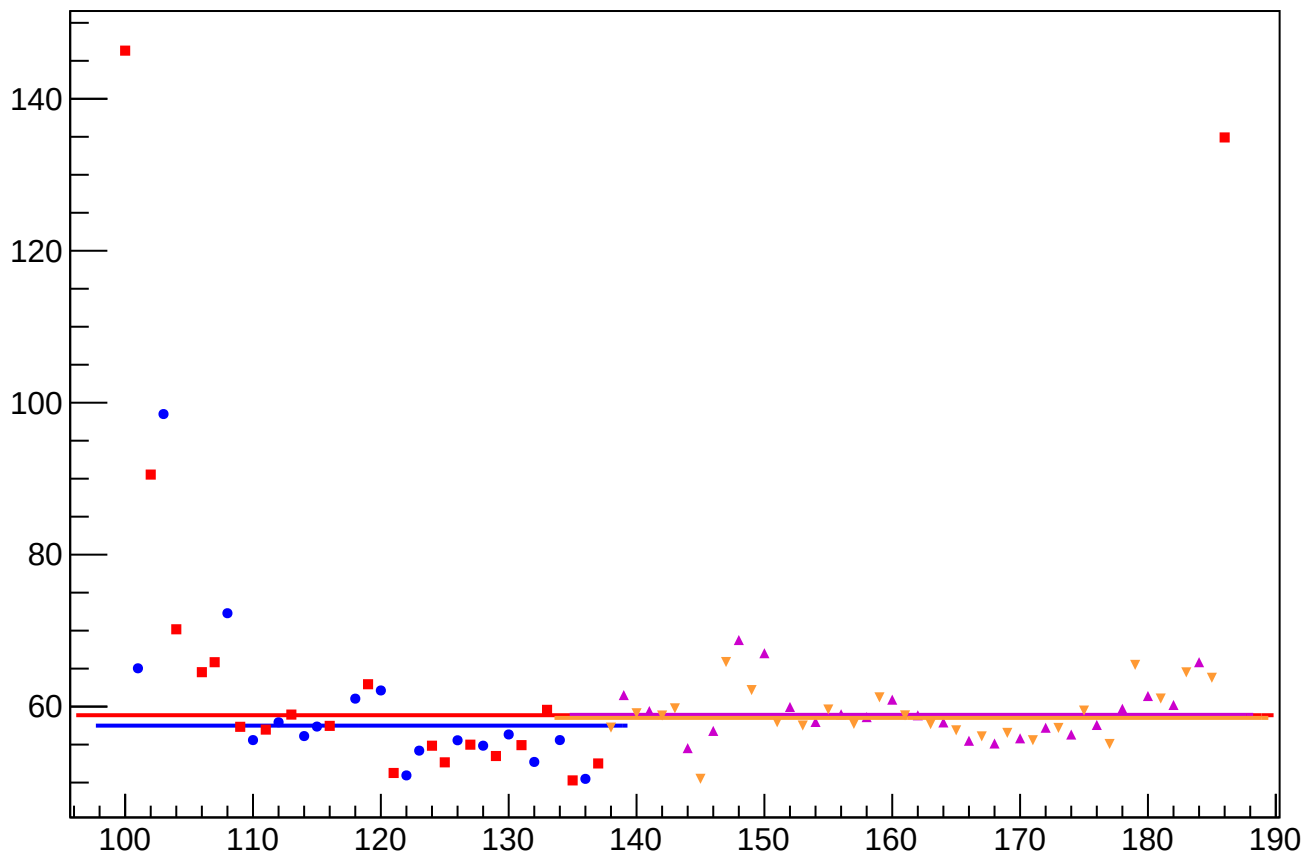
Right:  $24.665 \pm 15.799$   $\chi^2/\text{NDF}: 38.1/36$

In:  $-49.668 \pm 11.977$   $\chi^2/\text{NDF}: 61.6/39$

Out:  $-73.721 \pm 11.606$   $\chi^2/\text{NDF}: 68.3/44$

All:  $-62.073 \pm 8.335$   $\chi^2/\text{NDF}: 132.0/84$

reg\_asym\_sam\_13\_57\_dd\_rms vs Slug, Sign Corrected



Right In: 57.495 $\pm$ 0.016  $\chi^2/\text{NDF}$ : 306695.7/16

Left Out: 58.513 $\pm$ 0.010  $\chi^2/\text{NDF}$ : 123221.6/24

Right Out: 58.866 $\pm$ 0.016  $\chi^2/\text{NDF}$ : 535709.5/19

Left In: 58.913 $\pm$ 0.010  $\chi^2/\text{NDF}$ : 109968.0/22

Left: 58.706 $\pm$ 0.007  $\chi^2/\text{NDF}$ : 234021.7/47

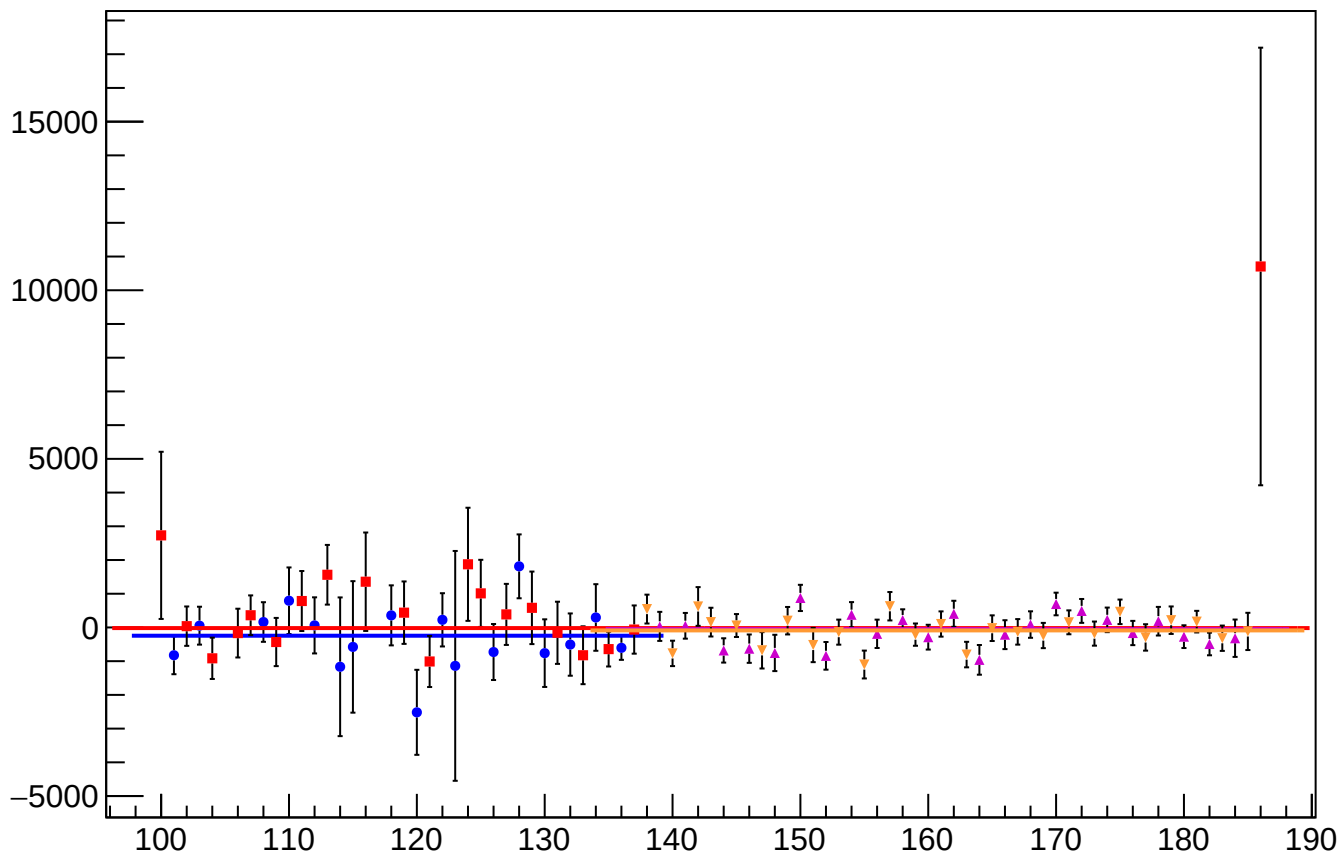
Right: 58.197 $\pm$ 0.011  $\chi^2/\text{NDF}$ : 846169.2/36

In: 58.516 $\pm$ 0.008  $\chi^2/\text{NDF}$ : 422324.6/39

Out: 58.611 $\pm$ 0.008  $\chi^2/\text{NDF}$ : 659301.7/44

All: 58.565 $\pm$ 0.006  $\chi^2/\text{NDF}$ : 1081691.2/84

asym\_sam\_13\_57\_dd\_correction\_mean vs Slug, Sign Corrected



Right In:  $-245.129 \pm 184.410$   $\chi^2/\text{NDF}$ : 14.1/16

Left Out:  $-87.459 \pm 78.556$   $\chi^2/\text{NDF}$ : 27.7/24

Right Out:  $-18.679 \pm 182.077$   $\chi^2/\text{NDF}$ : 19.0/19

Left In:  $-48.742 \pm 80.548$   $\chi^2/\text{NDF}$ : 35.3/22

Left:  $-68.585 \pm 56.239$   $\chi^2/\text{NDF}$ : 63.2/47

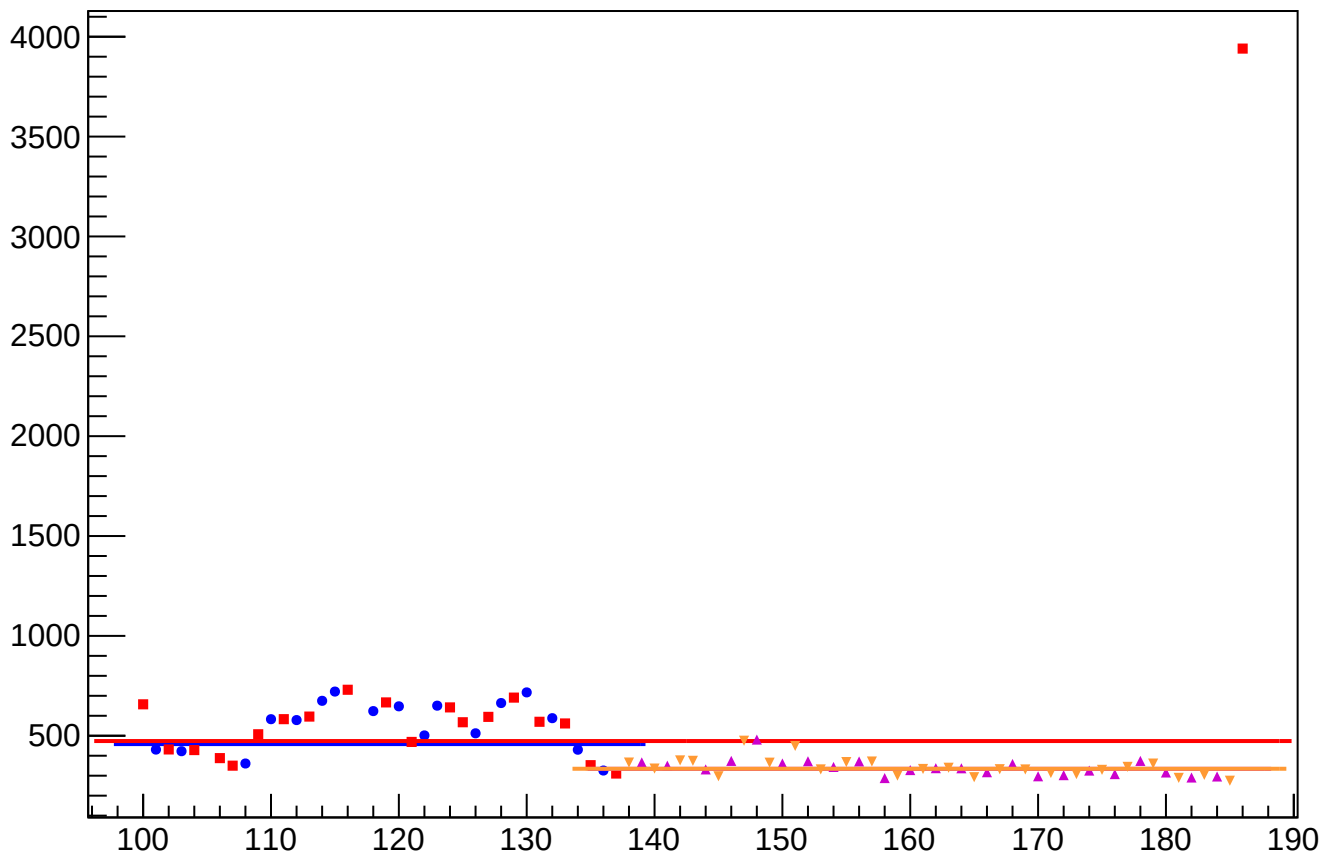
Right:  $-130.463 \pm 129.565$   $\chi^2/\text{NDF}$ : 33.9/36

In:  $-80.206 \pm 73.814$   $\chi^2/\text{NDF}$ : 50.4/39

Out:  $-76.665 \pm 72.129$   $\chi^2/\text{NDF}$ : 46.8/44

All:  $-78.395 \pm 51.588$   $\chi^2/\text{NDF}$ : 97.3/84

asym\_sam\_13\_57\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 458.231+/-0.130  $\chi^2/\text{NDF}$ : 879276.8/16

Left Out: 334.749+/-0.056  $\chi^2/\text{NDF}$ : 491370.4/24

Right Out: 473.483+/-0.129  $\chi^2/\text{NDF}$ : 1353395.7/19

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

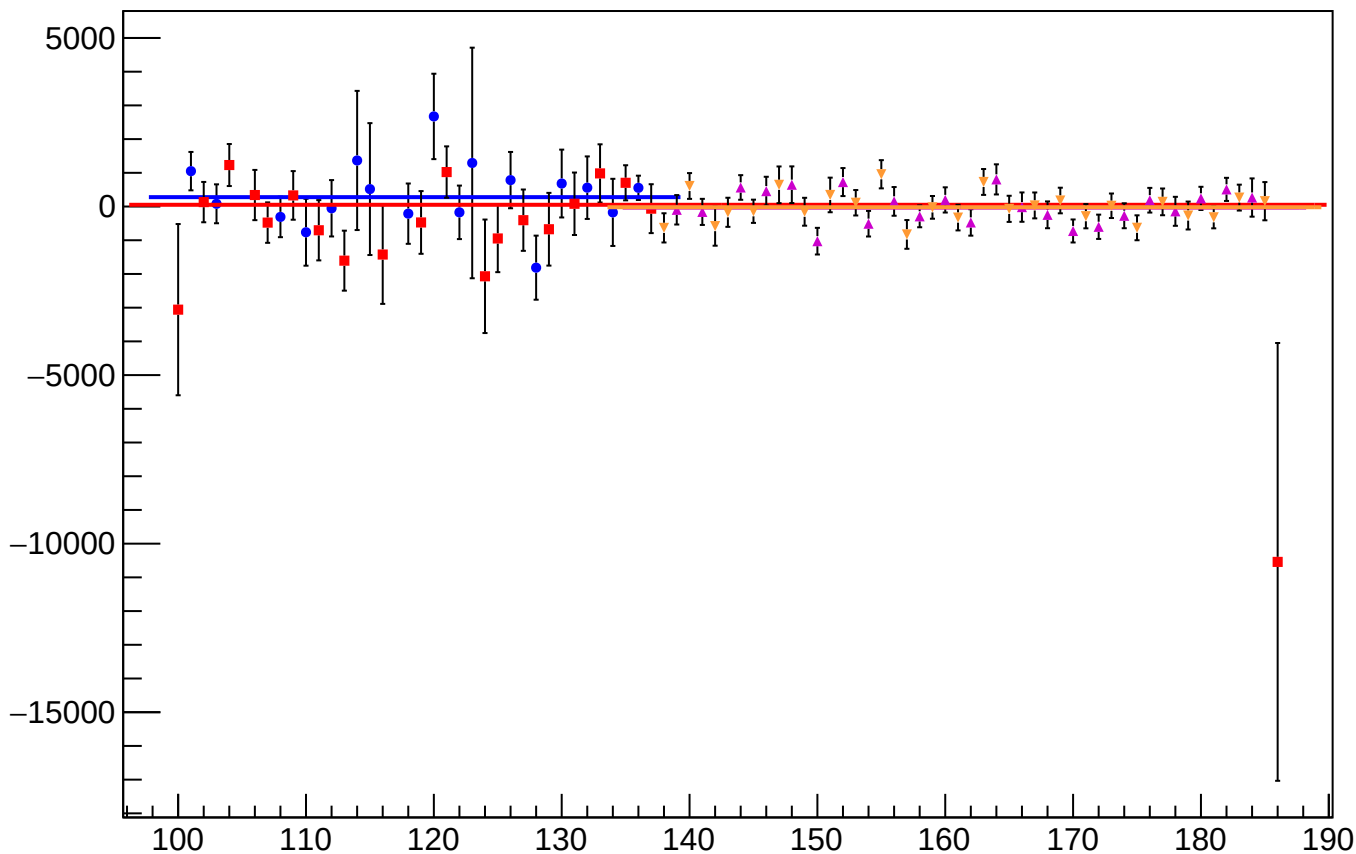
Right: 465.954+/-0.092  $\chi^2/\text{NDF}$ : 2239600.1/36

In: 354.027+/-0.052  $\chi^2/\text{NDF}$ : 2036916.0/39

Out: 356.521+/-0.051  $\chi^2/\text{NDF}$ : 2823686.8/44

All: 355.303+/-0.036  $\chi^2/\text{NDF}$ : 4861770.5/84

# asym\_sam\_13\_57\_dd\_mean vs Slug, Sign Corrected



Right In:  $278.553 \pm 186.587$   $\chi^2/\text{NDF}$ : 15.0/16

Left Out:  $-20.895 \pm 79.812$   $\chi^2/\text{NDF}$ : 27.2/24

Right Out:  $51.760 \pm 184.323$   $\chi^2/\text{NDF}$ : 22.0/19

Left In:  $-31.800 \pm 81.839$   $\chi^2/\text{NDF}$ : 34.0/22

Left:  $-26.211 \pm 57.139$   $\chi^2/\text{NDF}$ : 61.3/47

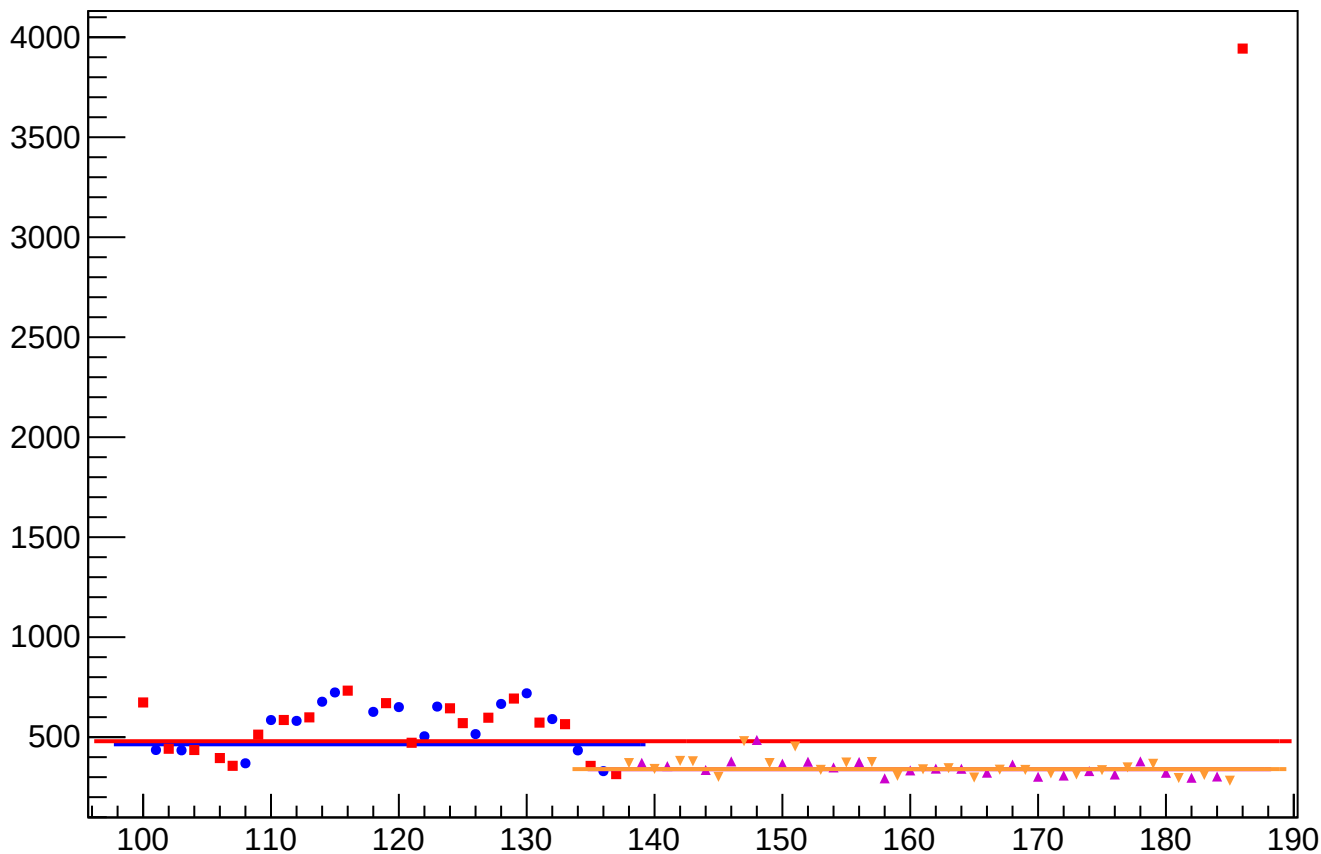
Right:  $163.773 \pm 131.129$   $\chi^2/\text{NDF}$ : 37.8/36

In:  $18.273 \pm 74.947$   $\chi^2/\text{NDF}$ : 51.4/39

Out:  $-9.424 \pm 73.241$   $\chi^2/\text{NDF}$ : 49.4/44

All:  $4.106 \pm 52.382$   $\chi^2/\text{NDF}$ : 100.8/84

asym\_sam\_13\_57\_dd\_rms vs Slug, Sign Corrected



Right In: 464.257 $\pm$ 0.132  $\chi^2$ /NDF: 847933.8/16

Left Out: 340.238 $\pm$ 0.056  $\chi^2$ /NDF: 468863.6/24

Right Out: 479.719 $\pm$ 0.130  $\chi^2$ /NDF: 1322197.9/19

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

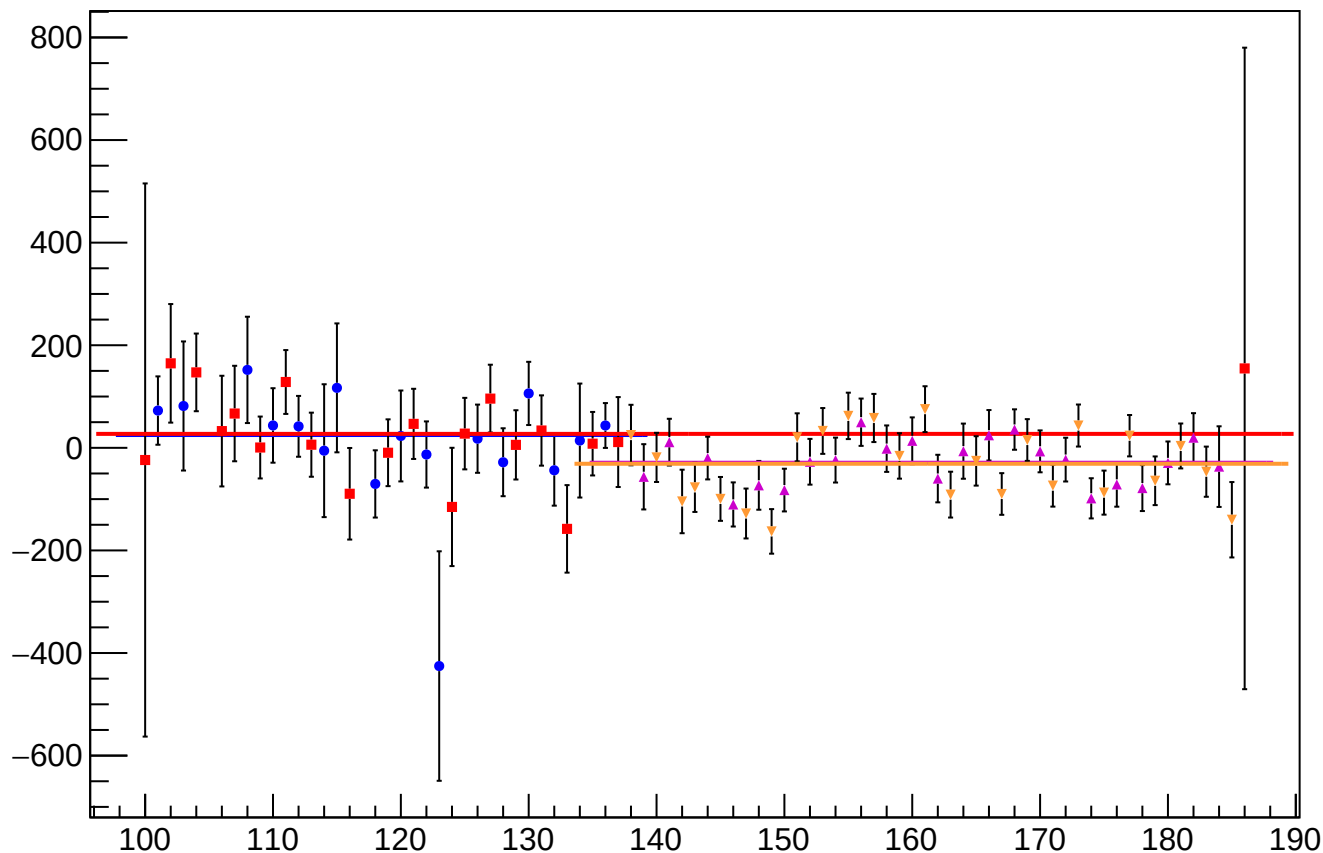
Right: 472.082 $\pm$ 0.093  $\chi^2$ /NDF: 2177082.5/36

In: 359.730 $\pm$ 0.053  $\chi^2$ /NDF: 1976148.8/39

Out: 362.260 $\pm$ 0.052  $\chi^2$ /NDF: 2755492.4/44

All: 361.024 $\pm$ 0.037  $\chi^2$ /NDF: 4732806.8/84

reg\_asym\_sam\_15\_37\_dd\_mean vs Slug, Sign Corrected



Right In: 24.974 $\pm$ 17.871  $\chi^2$ /NDF: 13.0/16

Left Out: -31.063 $\pm$ 9.170  $\chi^2$ /NDF:52.6/24

Right Out: 27.196 $\pm$ 17.429  $\chi^2$ /NDF: 16.8/19

Left In: -29.055 $\pm$ 9.449  $\chi^2$ /NDF:22.4/22

Left: -30.089 $\pm$ 6.581  $\chi^2$ /NDF: 75.1/47

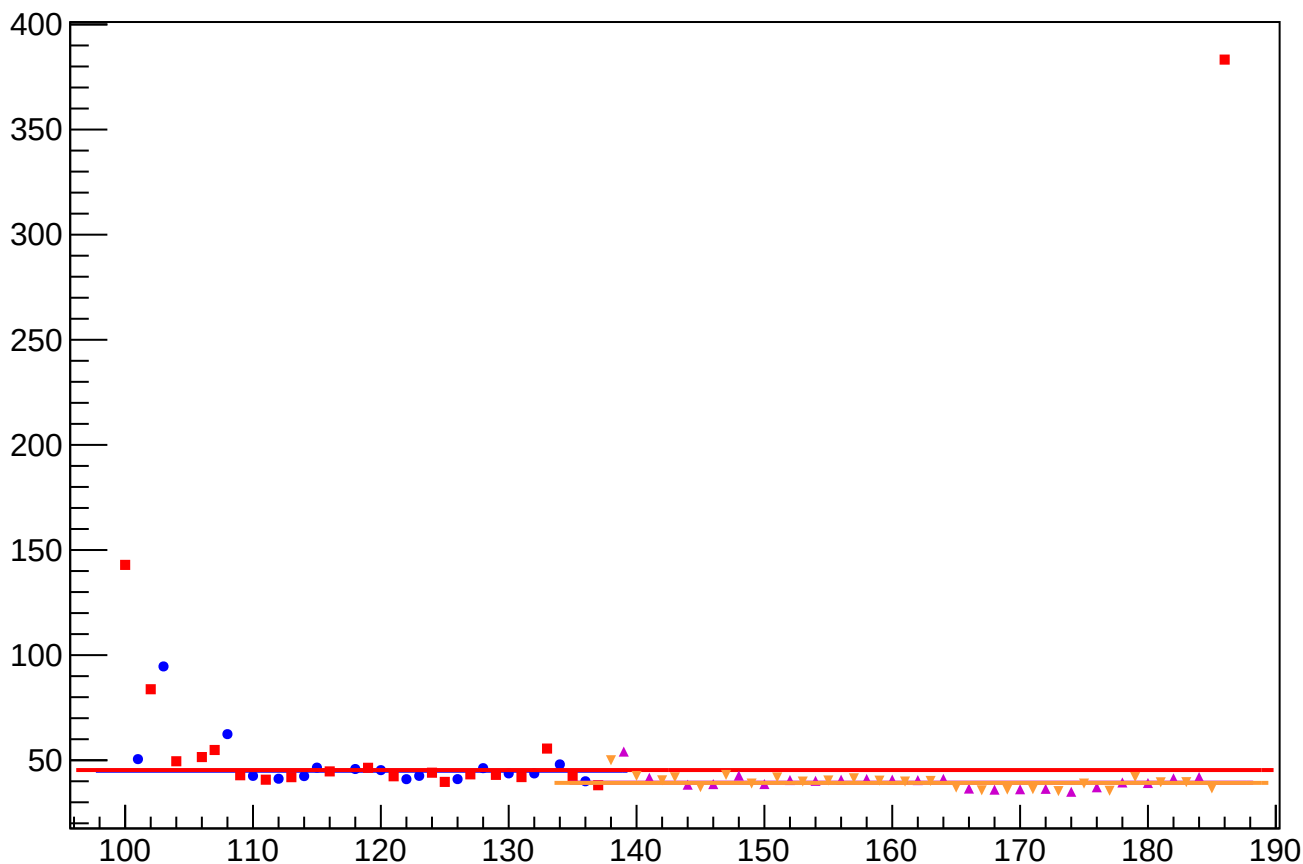
Right: 26.113 $\pm$ 12.478  $\chi^2$ /NDF: 29.8/36

In: -17.250 $\pm$ 8.354  $\chi^2$ /NDF:42.6/39

Out: -18.433 $\pm$ 8.115  $\chi^2$ /NDF:78.1/44

All: -17.859 $\pm$ 5.821  $\chi^2$ /NDF: 120.8/84

reg\_asym\_sam\_15\_37\_dd\_rms vs Slug, Sign Corrected



Right In: 45.010 $\pm$ 0.013  $\chi^2$ /NDF: 438252.0/16

Left Out: 39.235 $\pm$ 0.006  $\chi^2$ /NDF: 201960.7/24

Right Out: 45.333 $\pm$ 0.012  $\chi^2$ /NDF: 998286.8/19

Left In: 39.338 $\pm$ 0.007  $\chi^2$ /NDF: 215671.3/22

Left: 39.285 $\pm$ 0.005  $\chi^2$ /NDF: 417755.0/47

Right: 45.175 $\pm$ 0.009  $\chi^2$ /NDF: 1436874.3/36

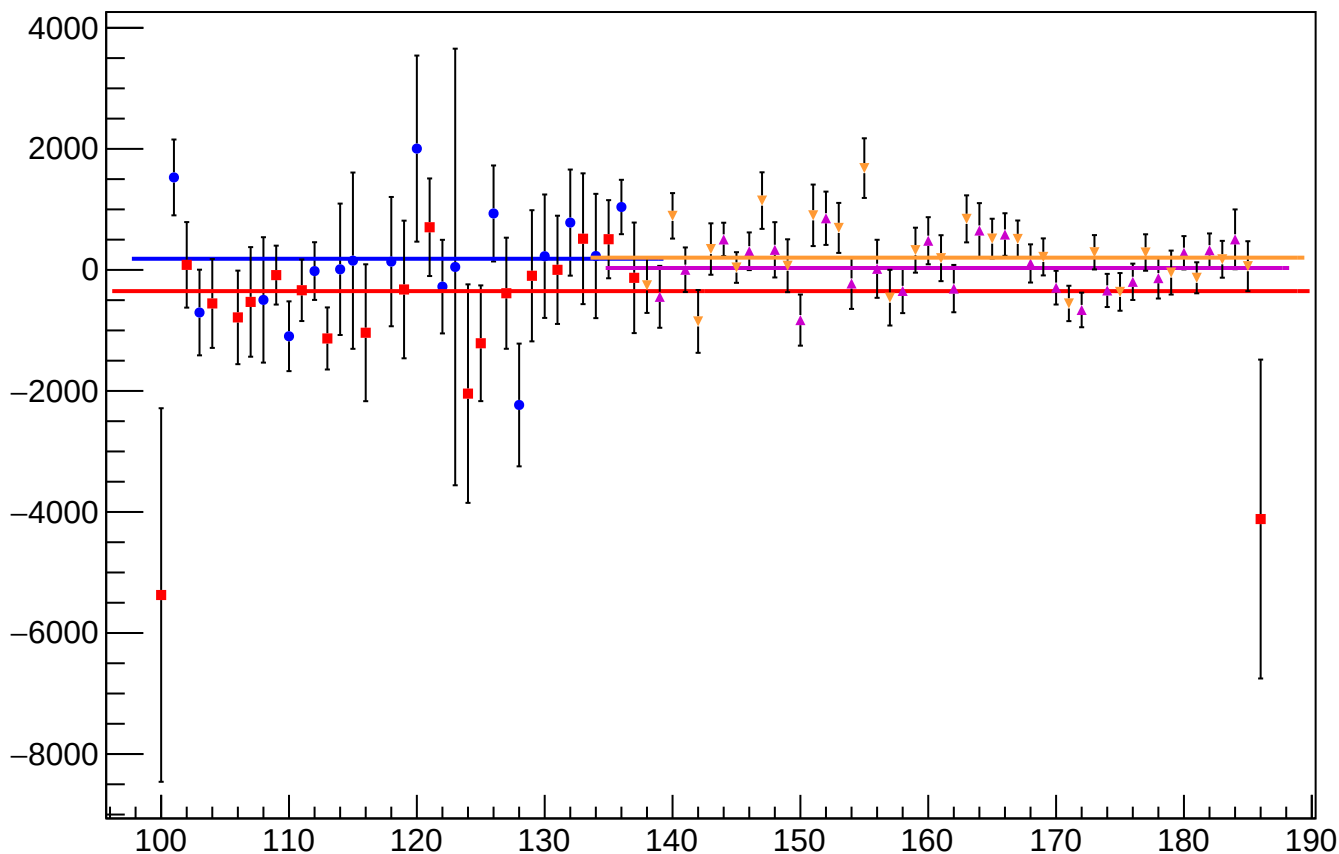
In: 40.577 $\pm$ 0.006  $\chi^2$ /NDF: 811326.4/39

Out: 40.557 $\pm$ 0.006  $\chi^2$ /NDF: 1391985.4/44

All: 40.567 $\pm$ 0.004  $\chi^2$ /NDF: 2203318.0/84



asym\_sam\_15\_37\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: 184.085 $\pm$ 189.043  $\chi^2$ /NDF: 24.2/16

Left Out: 202.369 $\pm$ 70.426  $\chi^2$ /NDF:44.8/24

Right Out: -350.563 $\pm$ 179.275  $\chi^2$ /NDF: 14.6/19

Left In: 31.548 $\pm$ 72.100  $\chi^2$ /NDF:33.4/22

Left: 118.965 $\pm$ 50.380  $\chi^2$ /NDF: 81.1/47

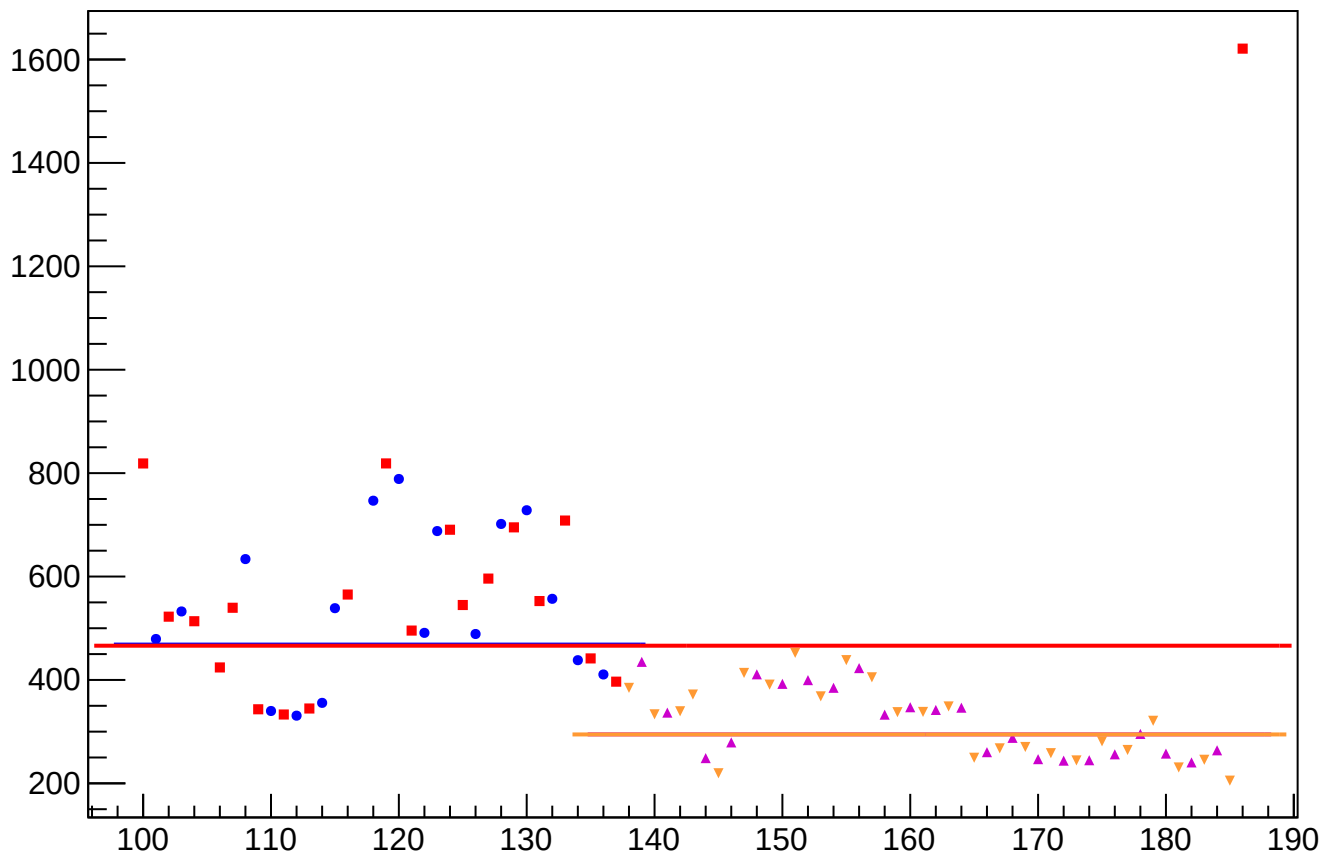
Right: -97.408 $\pm$ 130.083  $\chi^2$ /NDF: 43.0/36

In: 50.919 $\pm$ 67.367  $\chi^2$ /NDF:58.1/39

Out: 128.448 $\pm$ 65.549  $\chi^2$ /NDF:67.6/44

All: 90.743 $\pm$ 46.980  $\chi^2$ /NDF: 126.4/84

asym\_sam\_15\_37\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 468.371+/-0.134  $\chi^2/\text{NDF}$ : 883769.0/16

Left Out: 294.591+/-0.050  $\chi^2/\text{NDF}$ : 1680474.5/24

Right Out: 466.220+/-0.127  $\chi^2/\text{NDF}$ : 1344156.2/19

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

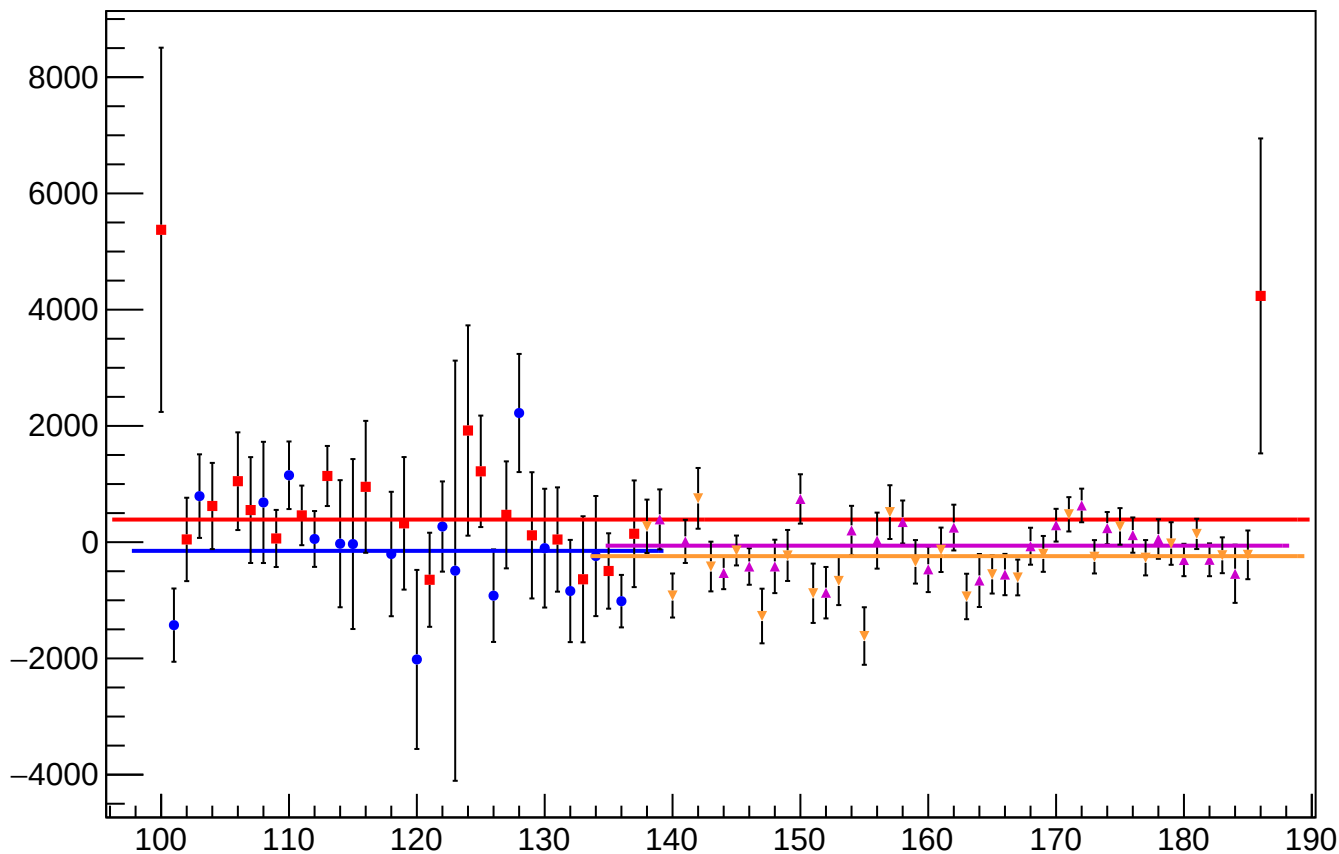
Right: 467.239+/-0.092  $\chi^2/\text{NDF}$ : 2228061.6/36

In: 316.774+/-0.048  $\chi^2/\text{NDF}$ : 3654324.3/39

Out: 317.536+/-0.046  $\chi^2/\text{NDF}$ : 4612602.8/44

All: 317.165+/-0.033  $\chi^2/\text{NDF}$ : 8267058.8/84

asym\_sam\_15\_37\_dd\_mean vs Slug, Sign Corrected



Right In: -149.502 $\pm$ 190.216  $\chi^2$ /NDF: 24.1/16

Left Out: -240.357 $\pm$ 71.100  $\chi^2$ /NDF:42.9/24

Right Out: 389.015 $\pm$ 181.170  $\chi^2$ /NDF: 14.5/19

Left In: -60.330 $\pm$ 72.788  $\chi^2$ /NDF:30.9/22

Left: -152.455 $\pm$ 50.862  $\chi^2$ /NDF: 77.0/47

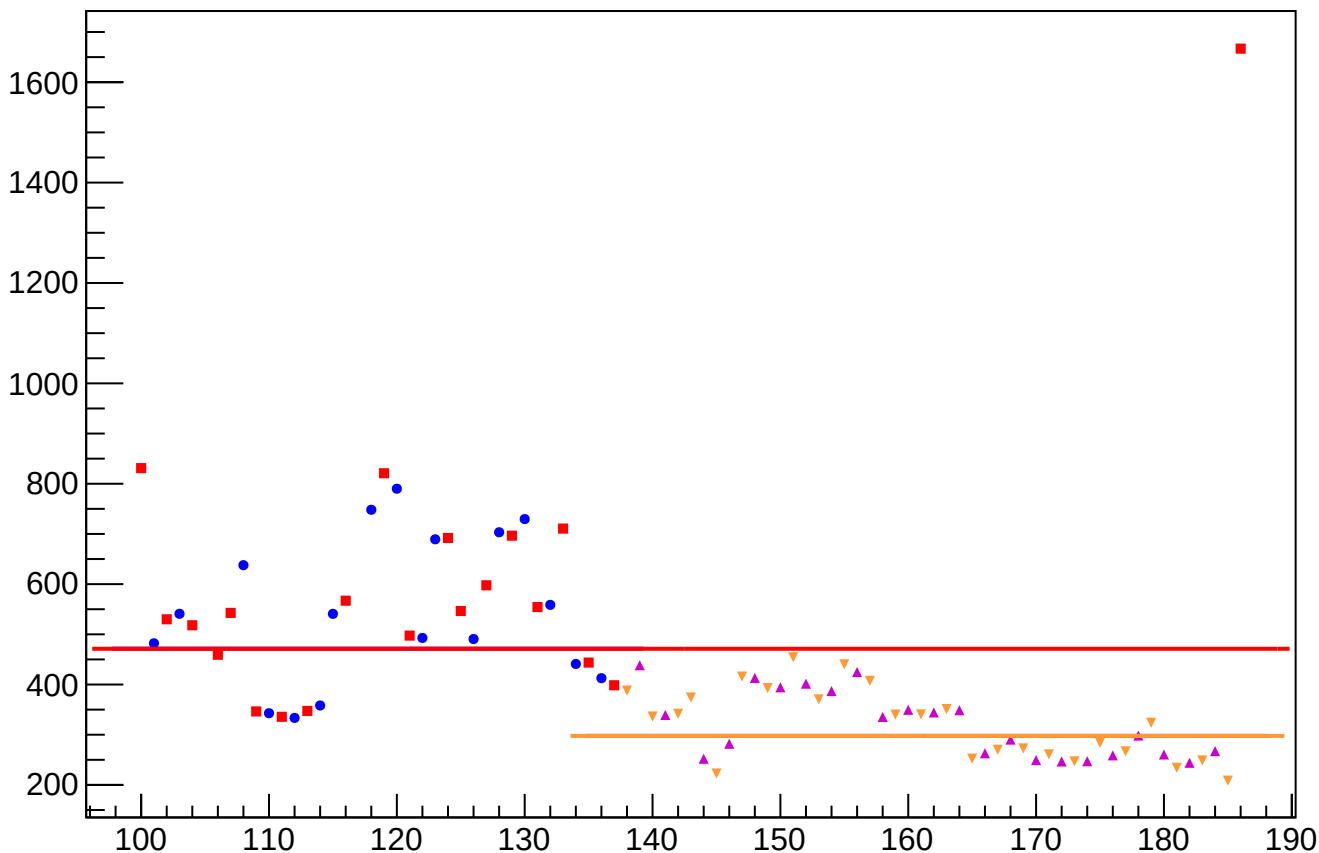
Right: 132.865 $\pm$ 131.188  $\chi^2$ /NDF: 42.8/36

In: -71.719 $\pm$ 67.981  $\chi^2$ /NDF:55.2/39

Out: -156.359 $\pm$ 66.186  $\chi^2$ /NDF:67.9/44

All: -115.171 $\pm$ 47.422  $\chi^2$ /NDF: 123.9/84

asym\_sam\_15\_37\_dd\_rms vs Slug, Sign Corrected



Right In: 471.454+/-0.135  $\chi^2/\text{NDF}$ : 875217.0/16

Left Out: 297.613+/-0.050  $\chi^2/\text{NDF}$ : 1637757.8/24

Right Out: 471.226+/-0.128  $\chi^2/\text{NDF}$ : 1334904.5/19

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

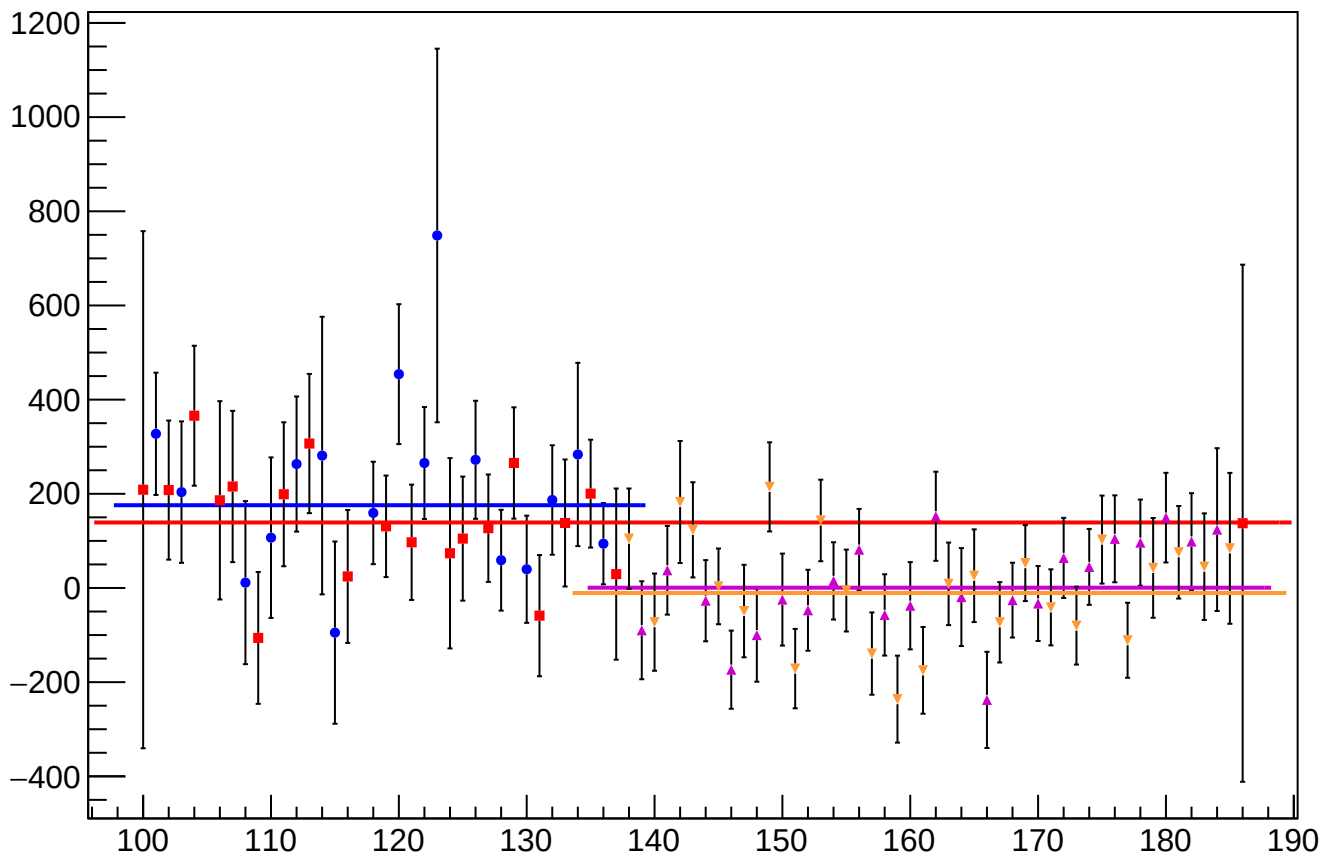
Right: 471.335+/-0.093  $\chi^2/\text{NDF}$ : 2210123.0/36

In: 319.892+/-0.048  $\chi^2/\text{NDF}$ : 3597208.0/39

Out: 320.784+/-0.047  $\chi^2/\text{NDF}$ : 4564183.6/44

All: 320.350+/-0.034  $\chi^2/\text{NDF}$ : 8161568.2/84

reg\_asym\_sam\_24\_68\_dd\_mean vs Slug, Sign Corrected



Right In: 175.771 $\pm$ 32.833  $\chi^2$ /NDF: 15.5/16

Left Out: -10.667 $\pm$ 18.610  $\chi^2$ /NDF:36.3/24

Right Out: 139.136 $\pm$ 32.381  $\chi^2$ /NDF: 12.5/19

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

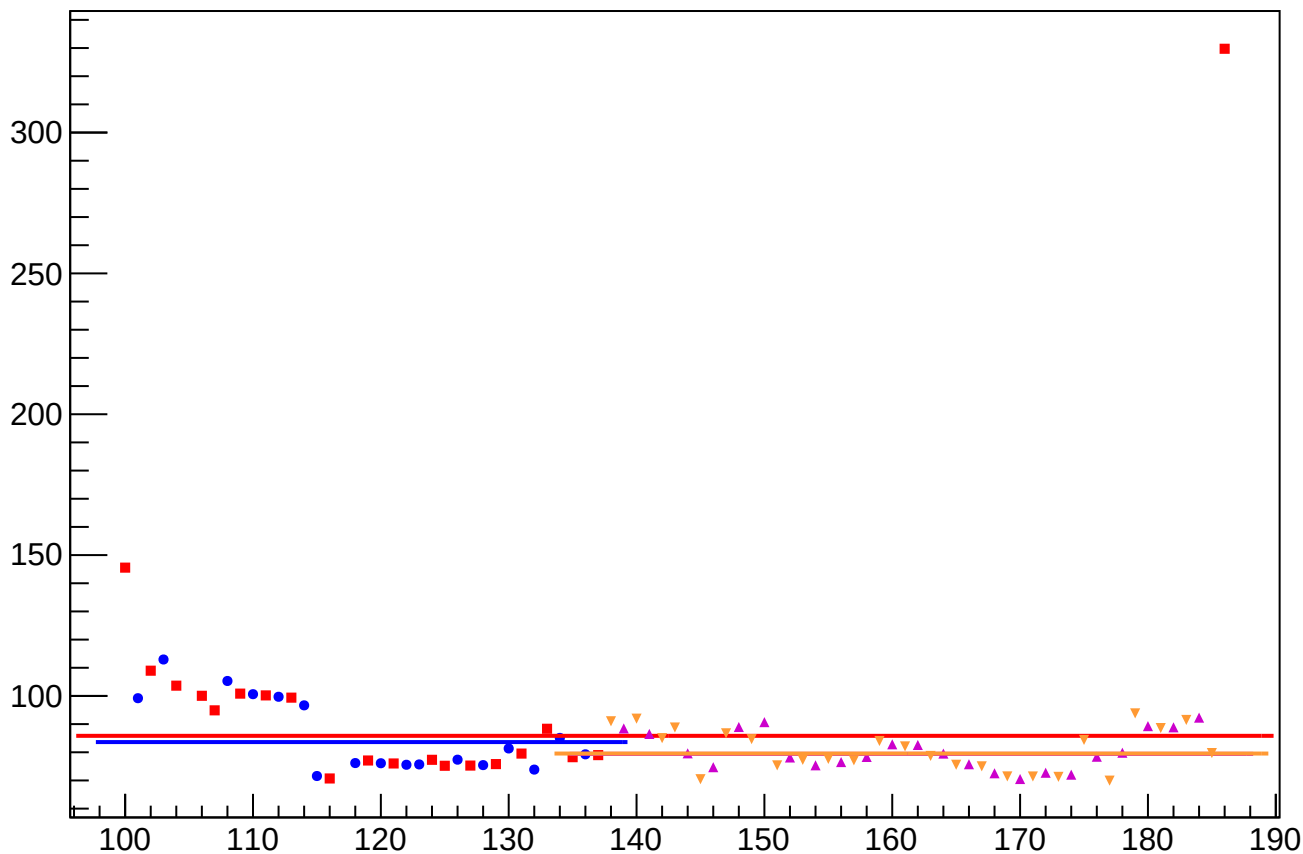
Right: 157.199 $\pm$ 23.055  $\chi^2$ /NDF: 28.6/36

In: 44.842 $\pm$ 16.504  $\chi^2$ /NDF:60.6/39

Out: 26.527 $\pm$ 16.135  $\chi^2$ /NDF:64.9/44

All: 35.477 $\pm$ 11.537  $\chi^2$ /NDF: 126.1/84

reg\_asym\_sam\_24\_68\_dd\_rms vs Slug, Sign Corrected



Right In: 83.622 $\pm$ 0.023  $\chi^2$ /NDF: 254251.0/16

Left Out: 79.551 $\pm$ 0.013  $\chi^2$ /NDF:309075.2/24

Right Out: 85.840 $\pm$ 0.023  $\chi^2$ /NDF: 682915.5/19

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

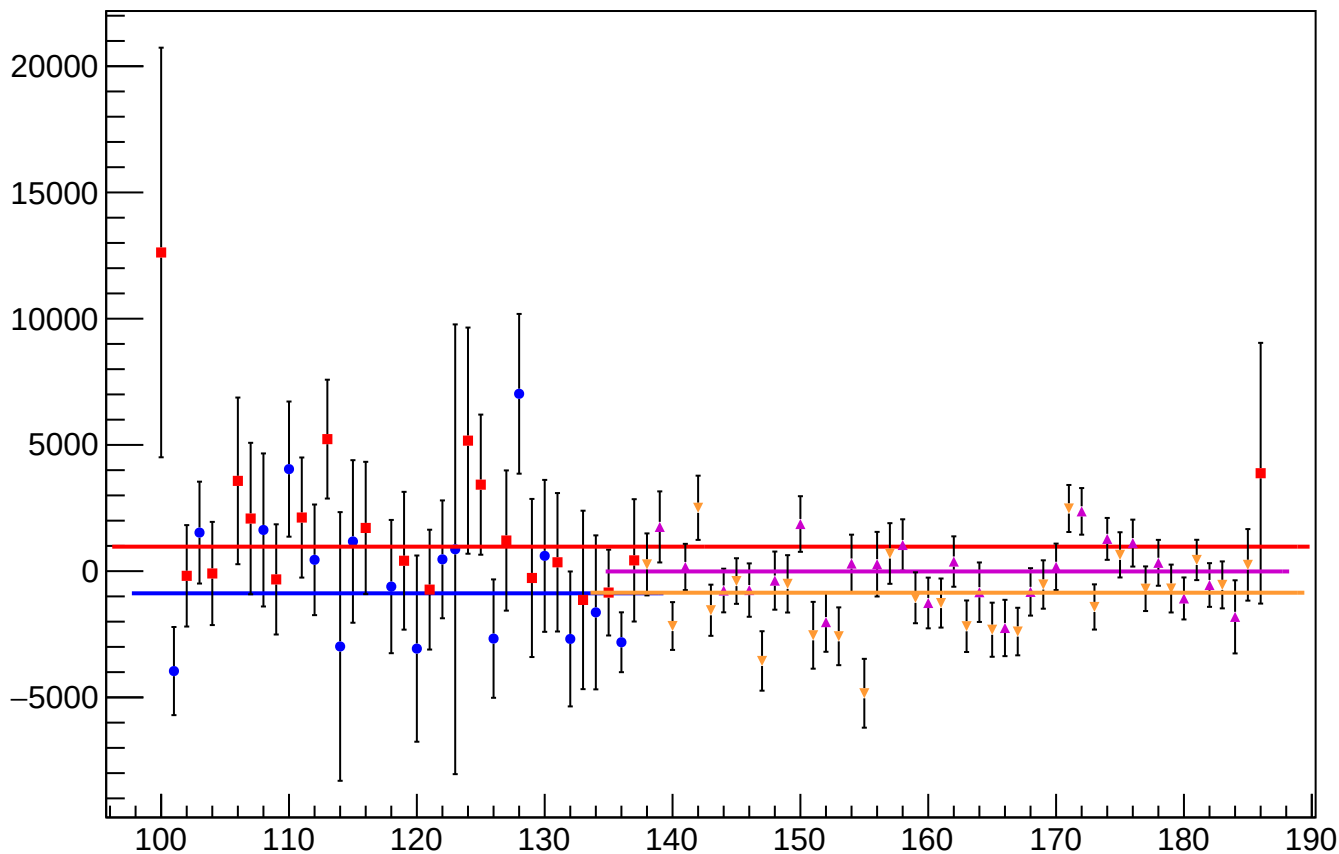
Right: 84.746 $\pm$ 0.016  $\chi^2$ /NDF: 941796.3/36

In: 80.494 $\pm$ 0.012  $\chi^2$ /NDF:490976.5/39

Out: 81.113 $\pm$ 0.011  $\chi^2$ /NDF:1048707.4/44

All: 80.810 $\pm$ 0.008  $\chi^2$ /NDF: 1541120.8/84

asym\_sam\_24\_68\_dd\_correction\_mean vs Slug, Sign Corrected



Right In:  $-877.743 \pm 584.504$   $\chi^2/\text{NDF}: 20.5/16$

Left Out:  $-854.130 \pm 204.090$   $\chi^2/\text{NDF}: 56.0/24$

Right Out:  $970.219 \pm 586.364$   $\chi^2/\text{NDF}: 11.7/19$

Left In:  $-11.687 \pm 210.073$   $\chi^2/\text{NDF}: 31.2/22$

Left:  $-445.076 \pm 146.383$   $\chi^2/\text{NDF}: 95.5/47$

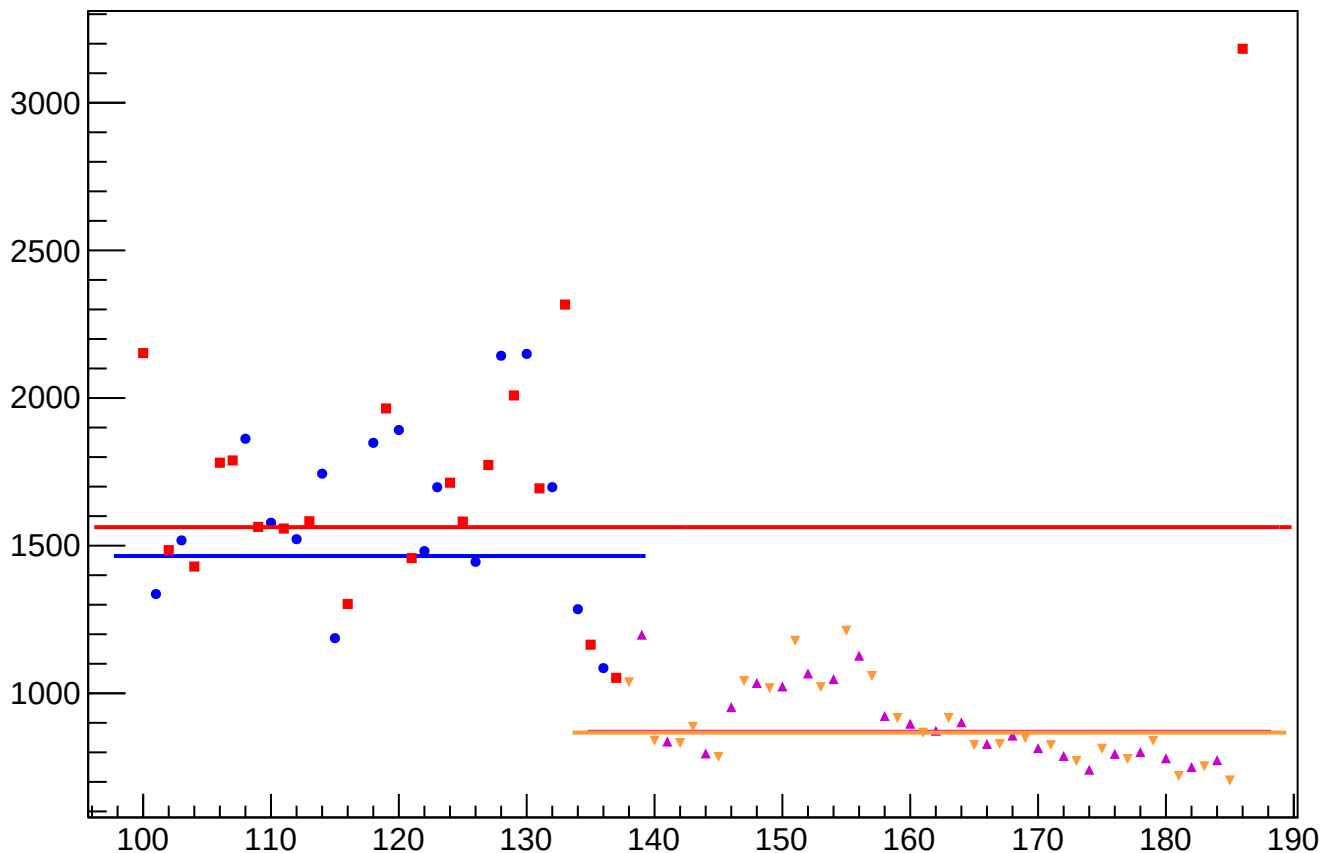
Right:  $43.301 \pm 413.963$   $\chi^2/\text{NDF}: 37.2/36$

In:  $-110.760 \pm 197.693$   $\chi^2/\text{NDF}: 53.7/39$

Out:  $-656.999 \pm 192.748$   $\chi^2/\text{NDF}: 76.3/44$

All:  $-390.795 \pm 138.009$   $\chi^2/\text{NDF}: 133.9/84$

asym\_sam\_24\_68\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 1464.922 $\pm$ 0.413  $\chi^2$ /NDF: 565343.8/16

Left Out: 866.893 $\pm$ 0.144  $\chi^2$ /NDF: 661712.5/24

Right Out: 1562.688 $\pm$ 0.415  $\chi^2$ /NDF: 654736.8/19

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: 1513.650 $\pm$ 0.293  $\chi^2$ /NDF: 1247968.3/36

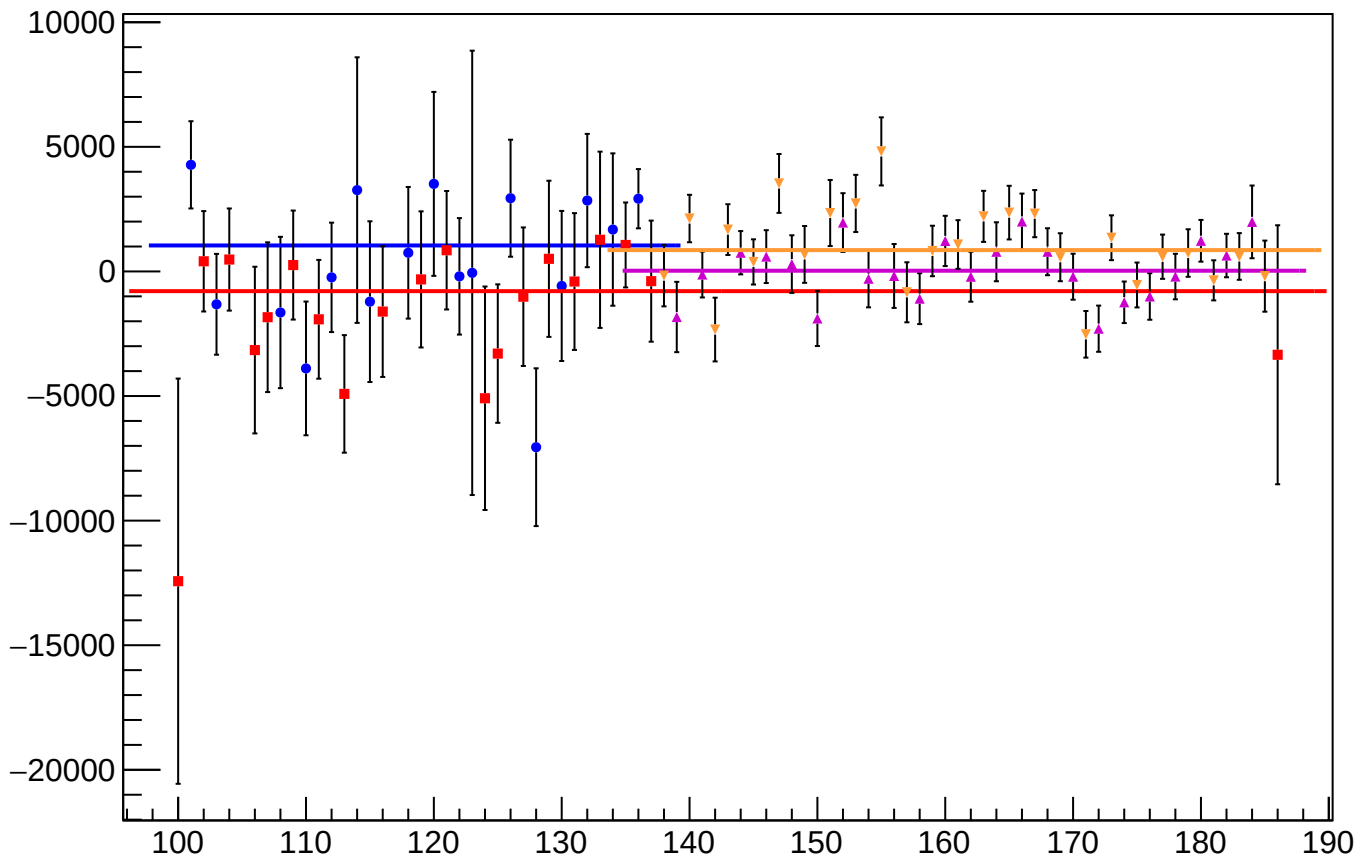
In: 937.674 $\pm$ 0.140  $\chi^2$ /NDF: 2985221.5/39

Out: 942.078 $\pm$ 0.136  $\chi^2$ /NDF: 3828303.8/44

All: 939.932 $\pm$ 0.098  $\chi^2$ /NDF: 6814033.9/84



asym\_sam\_24\_68\_dd\_mean vs Slug, Sign Corrected



Right In: 1042.489+/-585.716  $\chi^2/\text{NDF}$ : 21.2/16

Left Out: 855.664+/-205.047  $\chi^2/\text{NDF}$ : 54.1/24

Right Out: -791.137+/-587.710  $\chi^2/\text{NDF}$ : 11.2/19

Left In: 28.553+/-211.034  $\chi^2/\text{NDF}$ : 29.7/22

Left: 454.007+/-147.061  $\chi^2/\text{NDF}$ : 91.7/47

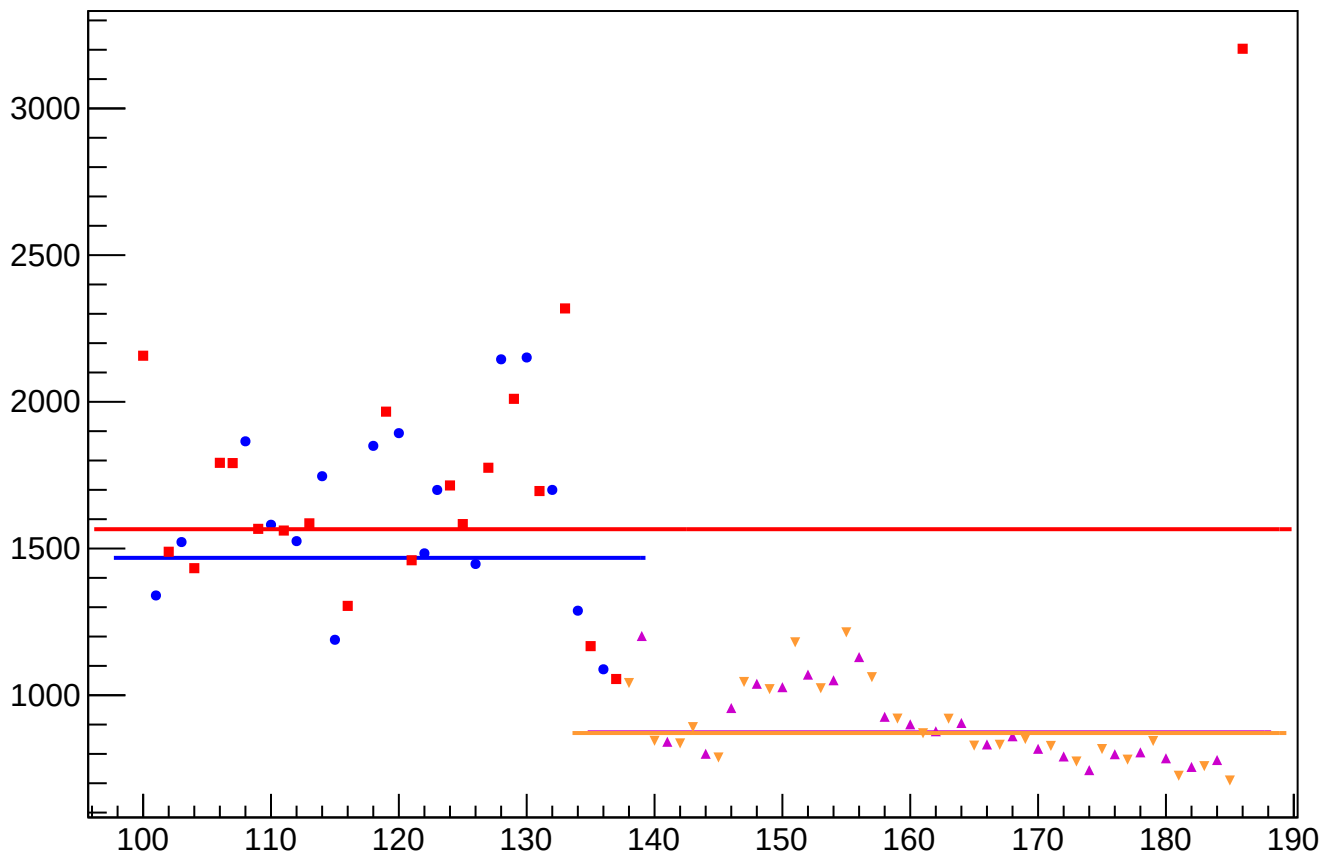
Right: 128.793+/-414.867  $\chi^2/\text{NDF}$ : 37.3/36

In: 145.055+/-198.540  $\chi^2/\text{NDF}$ : 53.6/39

Out: 676.960+/-193.602  $\chi^2/\text{NDF}$ : 72.3/44

All: 417.704+/-138.610  $\chi^2/\text{NDF}$ : 129.6/84

asym\_sam\_24\_68\_dd\_rms vs Slug, Sign Corrected



Right In: 1468.195 $\pm$ 0.414  $\chi^2$ /NDF: 561893.4/16

Left Out: 871.109 $\pm$ 0.145  $\chi^2$ /NDF: 651751.1/24

Right Out: 1565.865 $\pm$ 0.416  $\chi^2$ /NDF: 654478.7/19

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

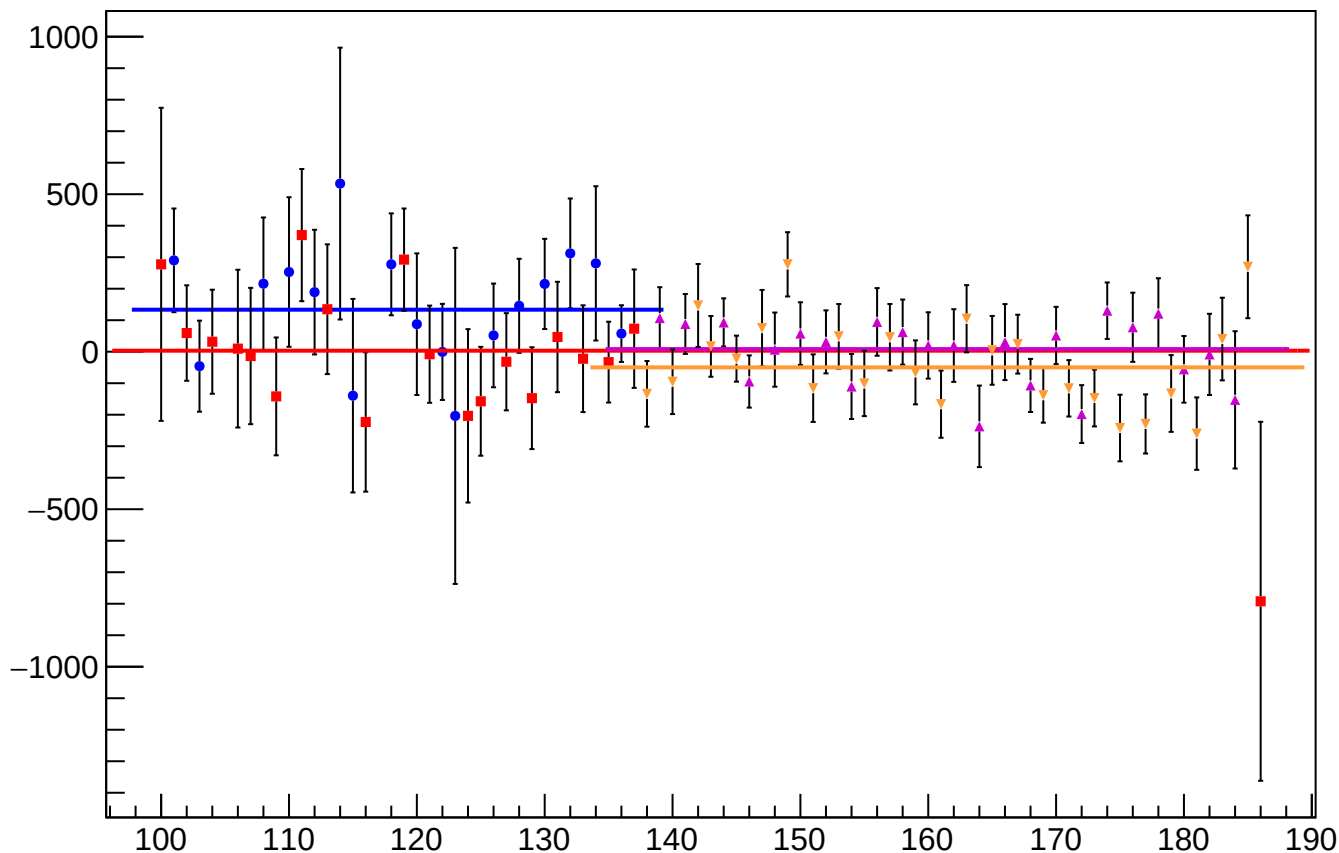
Right: 1516.864 $\pm$ 0.293  $\chi^2$ /NDF: 1244084.6/36

In: 941.986 $\pm$ 0.140  $\chi^2$ /NDF: 2959531.7/39

Out: 946.501 $\pm$ 0.137  $\chi^2$ /NDF: 3797853.4/44

All: 944.300 $\pm$ 0.098  $\chi^2$ /NDF: 6757915.3/84

reg\_asym\_sam\_26\_48\_dd\_mean vs Slug, Sign Corrected



Right In: 133.408 $\pm$ 41.705  $\chi^2$ /NDF: 9.3/16

Left Out: -49.717 $\pm$ 20.580  $\chi^2$ /NDF:39.4/24

Right Out: 3.273 $\pm$ 41.402  $\chi^2$ /NDF: 13.4/19

Left In: 8.343 $\pm$ 21.271  $\chi^2$ /NDF:22.0/22

Left: -21.646 $\pm$ 14.791  $\chi^2$ /NDF: 65.3/47

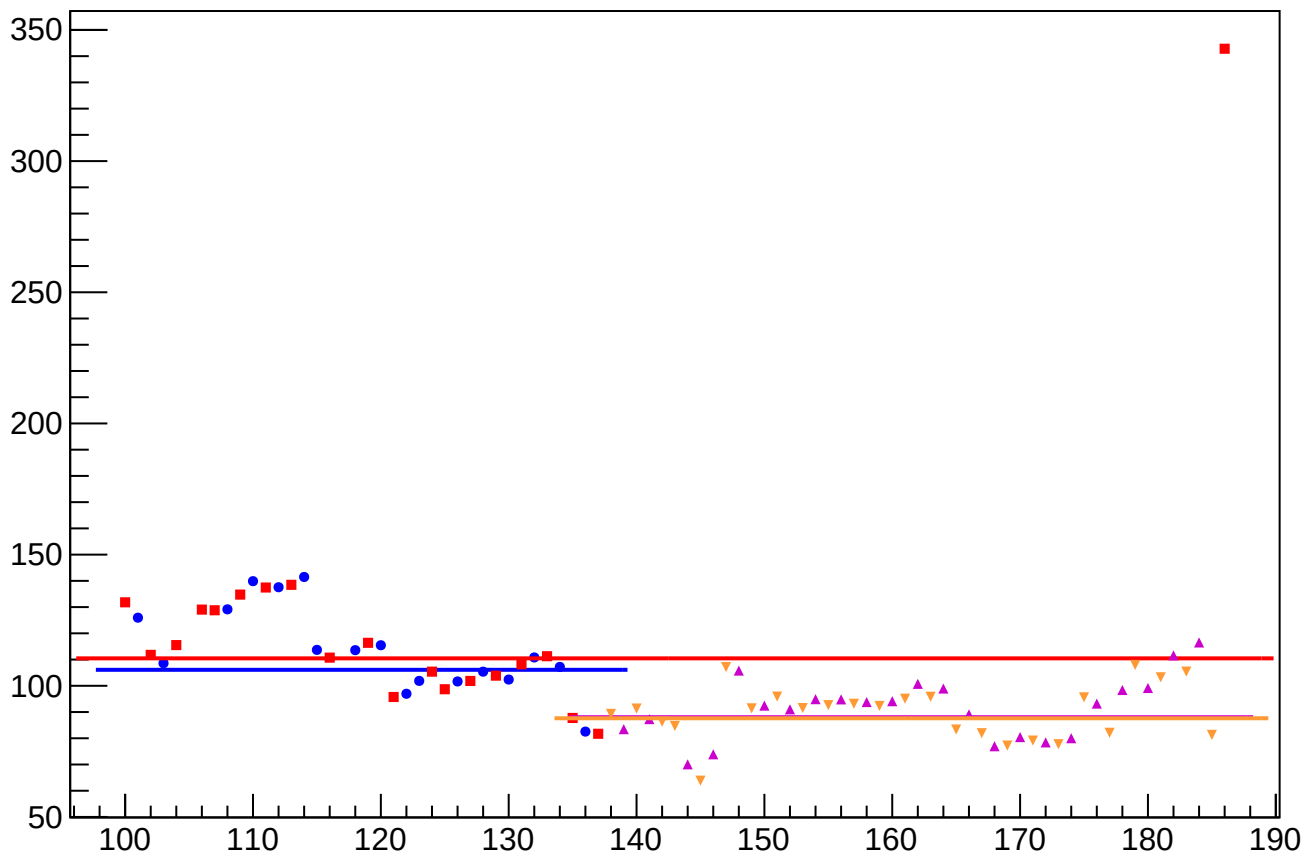
Right: 67.866 $\pm$ 29.382  $\chi^2$ /NDF: 27.6/36

In: 34.161 $\pm$ 18.949  $\chi^2$ /NDF:38.4/39

Out: -39.218 $\pm$ 18.429  $\chi^2$ /NDF:54.1/44

All: -3.549 $\pm$ 13.211  $\chi^2$ /NDF: 100.2/84

reg\_asym\_sam\_26\_48\_dd\_rms vs Slug, Sign Corrected



Right In: 106.094 $\pm$ 0.029  $\chi^2$ /NDF: 316104.7/16

Left Out: 87.625 $\pm$ 0.015  $\chi^2$ /NDF: 554690.7/24

Right Out: 110.460 $\pm$ 0.029  $\chi^2$ /NDF: 617993.1/19

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

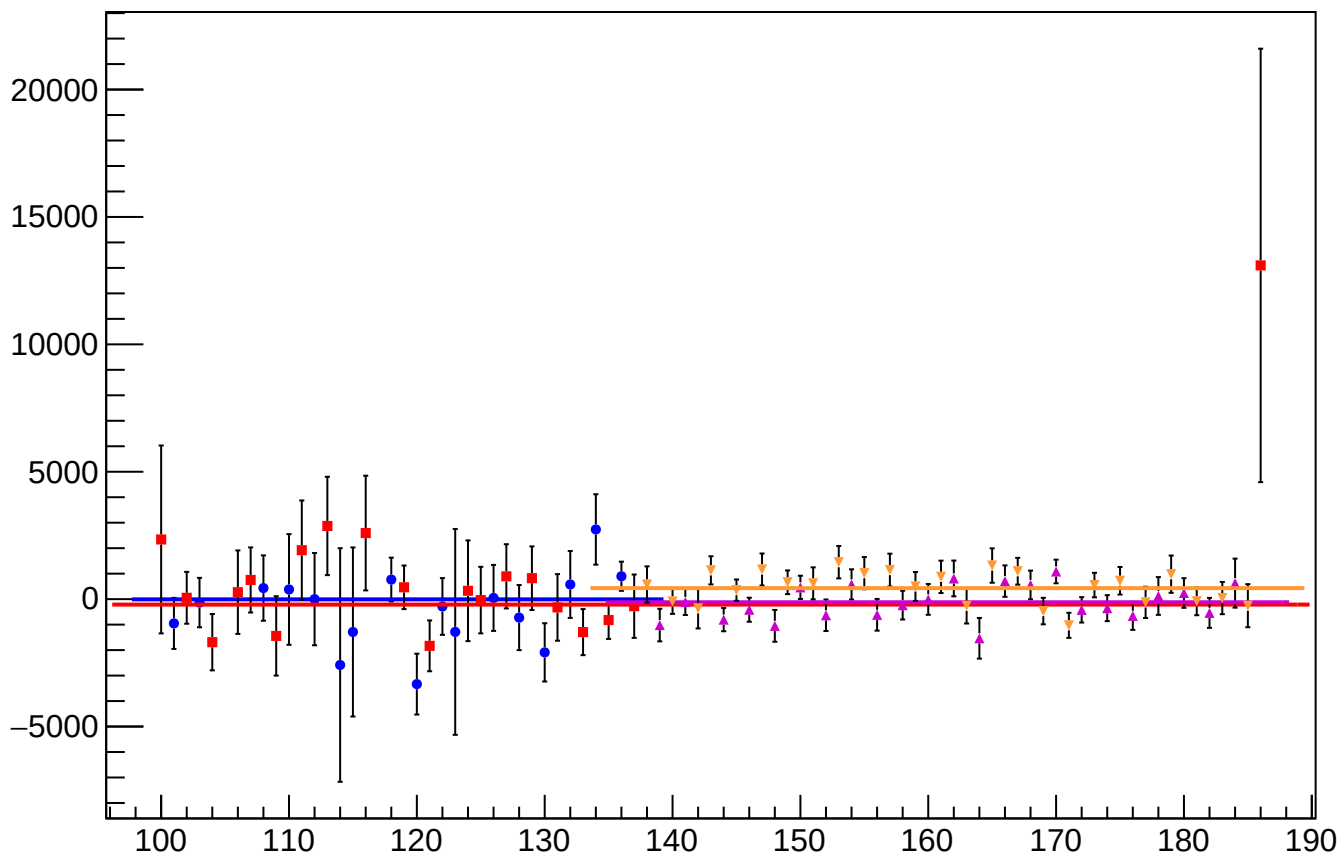
Right: 108.293 $\pm$ 0.021  $\chi^2$ /NDF: 945140.3/36

In: 91.761 $\pm$ 0.013  $\chi^2$ /NDF: 1137489.4/39

Out: 92.150 $\pm$ 0.013  $\chi^2$ /NDF: 1660532.5/44

All: 91.961 $\pm$ 0.009  $\chi^2$ /NDF: 2798455.2/84

asym\_sam\_26\_48\_dd\_correction\_mean vs Slug, Sign Corrected



Right In:  $-8.296 \pm 284.265$   $\chi^2/\text{NDF}$ : 20.5/16

Left Out:  $431.658 \pm 115.706$   $\chi^2/\text{NDF}$ : 30.5/24

Right Out:  $-213.388 \pm 279.994$   $\chi^2/\text{NDF}$ : 18.3/19

Left In:  $-123.017 \pm 118.849$   $\chi^2/\text{NDF}$ : 29.3/22

Left:  $161.753 \pm 82.905$   $\chi^2/\text{NDF}$ : 70.9/47

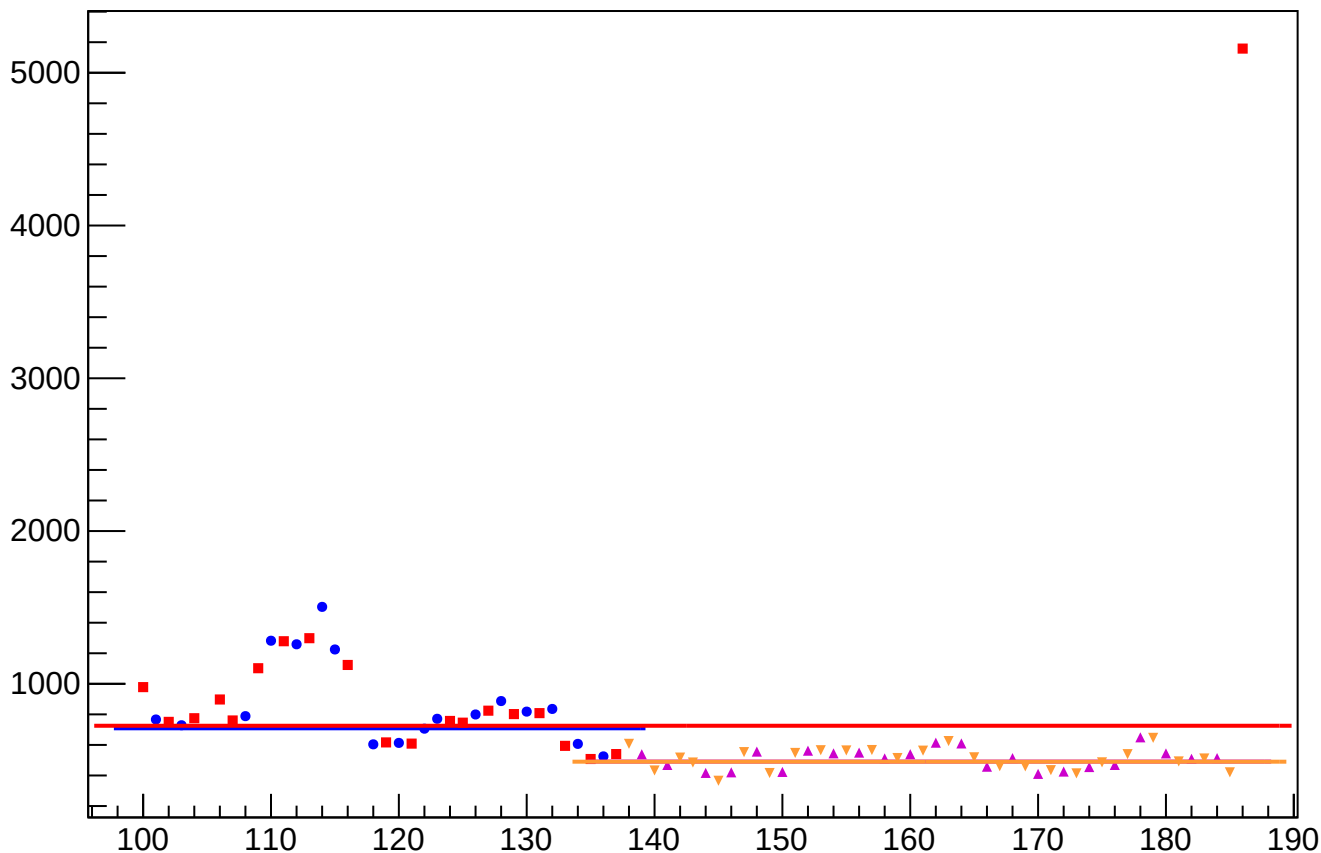
Right:  $-112.394 \pm 199.479$   $\chi^2/\text{NDF}$ : 39.1/36

In:  $-105.947 \pm 109.651$   $\chi^2/\text{NDF}$ : 49.9/39

Out:  $337.571 \pm 106.935$   $\chi^2/\text{NDF}$ : 53.3/44

All:  $121.374 \pm 76.557$   $\chi^2/\text{NDF}$ : 111.6/84

asym\_sam\_26\_48\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 708.820 $\pm$ 0.201  $\chi^2$ /NDF: 793495.1/16

Left Out: 490.267 $\pm$ 0.082  $\chi^2$ /NDF: 750277.0/24

Right Out: 725.490 $\pm$ 0.198  $\chi^2$ /NDF: 1445566.2/19

Left In: 490.910 $\pm$ 0.084  $\chi^2$ /NDF: 589235.5/22

Left: 490.580 $\pm$ 0.059  $\chi^2$ /NDF: 1339542.5/47

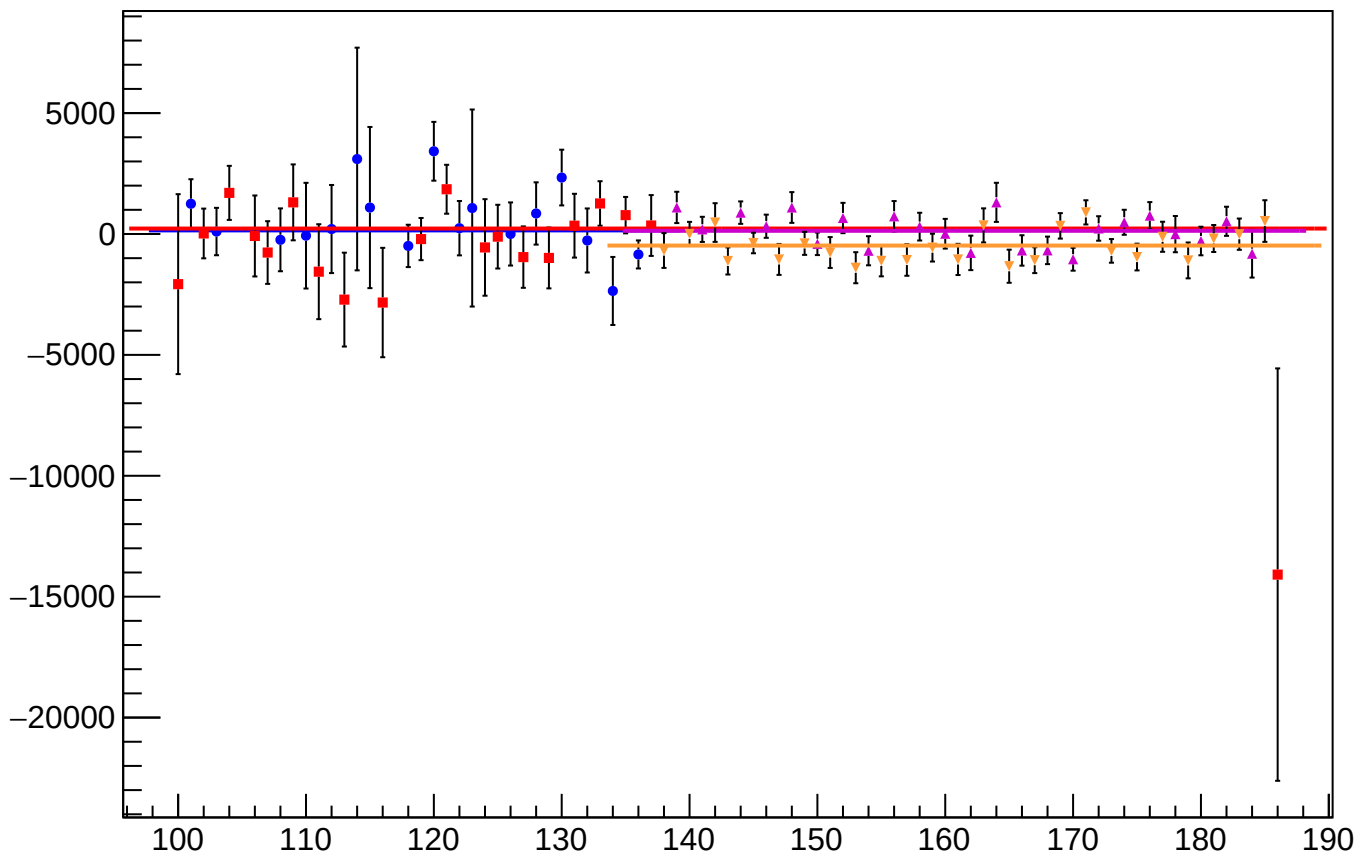
Right: 717.281 $\pm$ 0.141  $\chi^2$ /NDF: 2242552.4/36

In: 523.333 $\pm$ 0.078  $\chi^2$ /NDF: 2383130.6/39

Out: 524.577 $\pm$ 0.076  $\chi^2$ /NDF: 3401488.1/44

All: 523.970 $\pm$ 0.054  $\chi^2$ /NDF: 5784750.6/84

asym\_sam\_26\_48\_dd\_mean vs Slug, Sign Corrected



Right In: 149.114 $\pm$ 287.749  $\chi^2$ /NDF: 19.7/16

Left Out: -478.197 $\pm$ 117.659  $\chi^2$ /NDF:27.8/24

Right Out: 225.361 $\pm$ 283.626  $\chi^2$ /NDF: 17.7/19

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

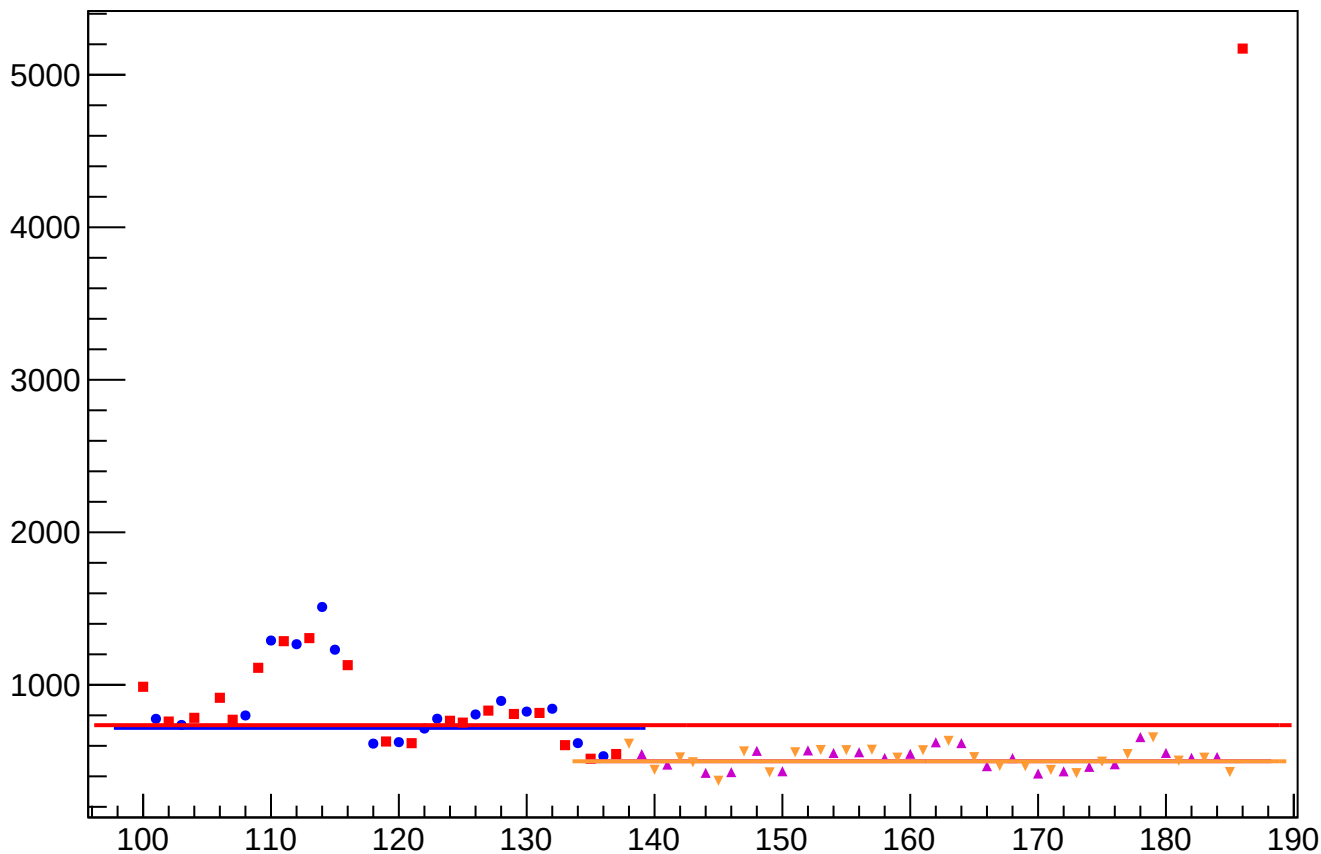
Right: 187.788 $\pm$ 201.996  $\chi^2$ /NDF: 37.5/36

In: 135.028 $\pm$ 111.435  $\chi^2$ /NDF:49.3/39

Out: -374.898 $\pm$ 108.679  $\chi^2$ /NDF:50.7/44

All: -126.319 $\pm$ 77.804  $\chi^2$ /NDF: 110.8/84

asym\_sam\_26\_48\_dd\_rms vs Slug, Sign Corrected



Right In: 718.014 $\pm$ 0.203  $\chi^2$ /NDF: 778471.9/16

Left Out: 498.754 $\pm$ 0.083  $\chi^2$ /NDF: 734302.8/24

Right Out: 735.456 $\pm$ 0.201  $\chi^2$ /NDF: 1425434.7/19

Left In: 499.393 $\pm$ 0.085  $\chi^2$ /NDF: 576539.2/22

Left: 499.065 $\pm$ 0.060  $\chi^2$ /NDF: 1310870.7/47

Right: 726.861 $\pm$ 0.143  $\chi^2$ /NDF: 2207633.8/36

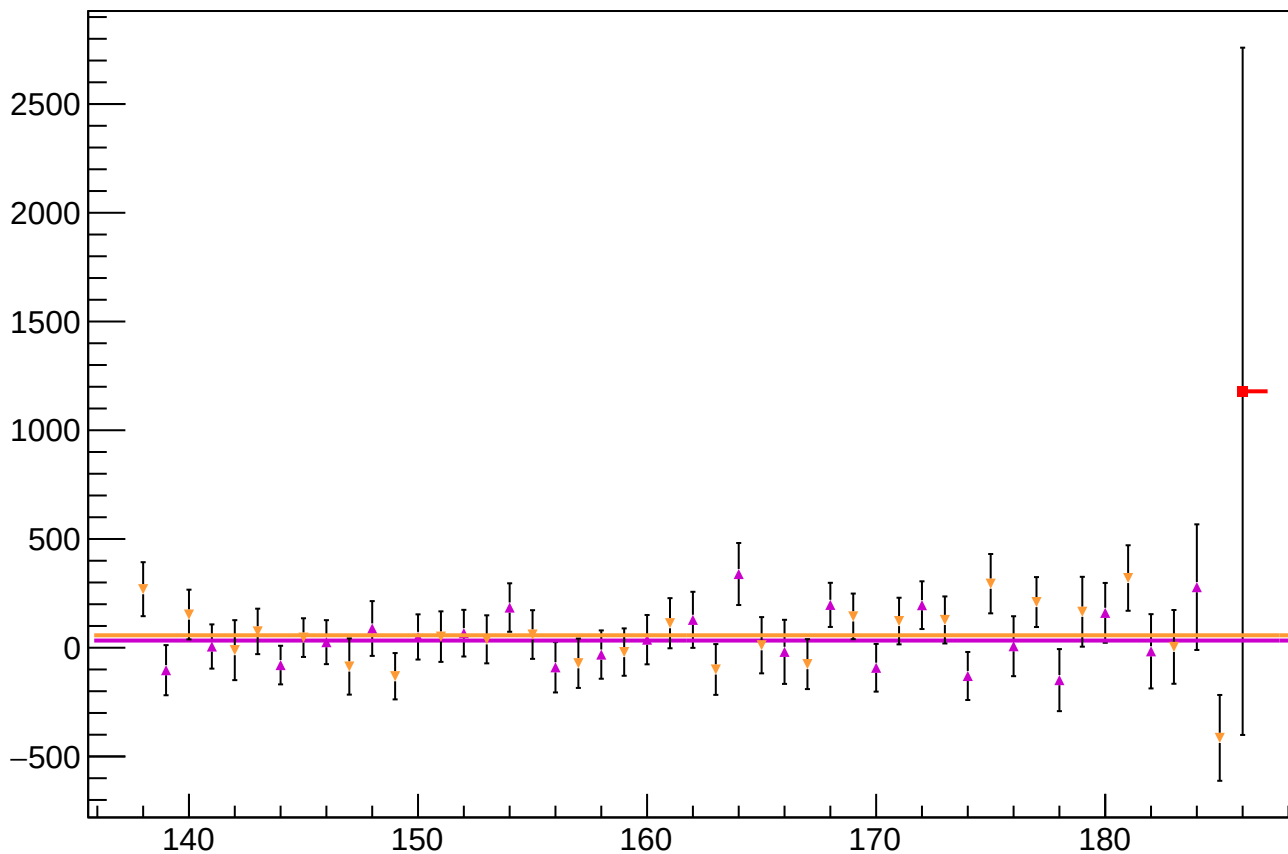
In: 532.180 $\pm$ 0.079  $\chi^2$ /NDF: 2336346.0/39

Out: 533.508 $\pm$ 0.077  $\chi^2$ /NDF: 3348178.1/44

All: 532.861 $\pm$ 0.055  $\chi^2$ /NDF: 5684669.5/84



reg\_asym\_sam\_1548\_avg\_mean vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 57.211+/-23.714  $\chi^2/\text{NDF}$ :29.2/24

Right Out: 1179.060+/-1580.134  $\chi^2/\text{NDF}$ : 0.0/0

Left In: 32.948+/-24.587  $\chi^2/\text{NDF}$ :23.6/22

Left: 45.518+/-17.069  $\chi^2/\text{NDF}$ : 53.3/47

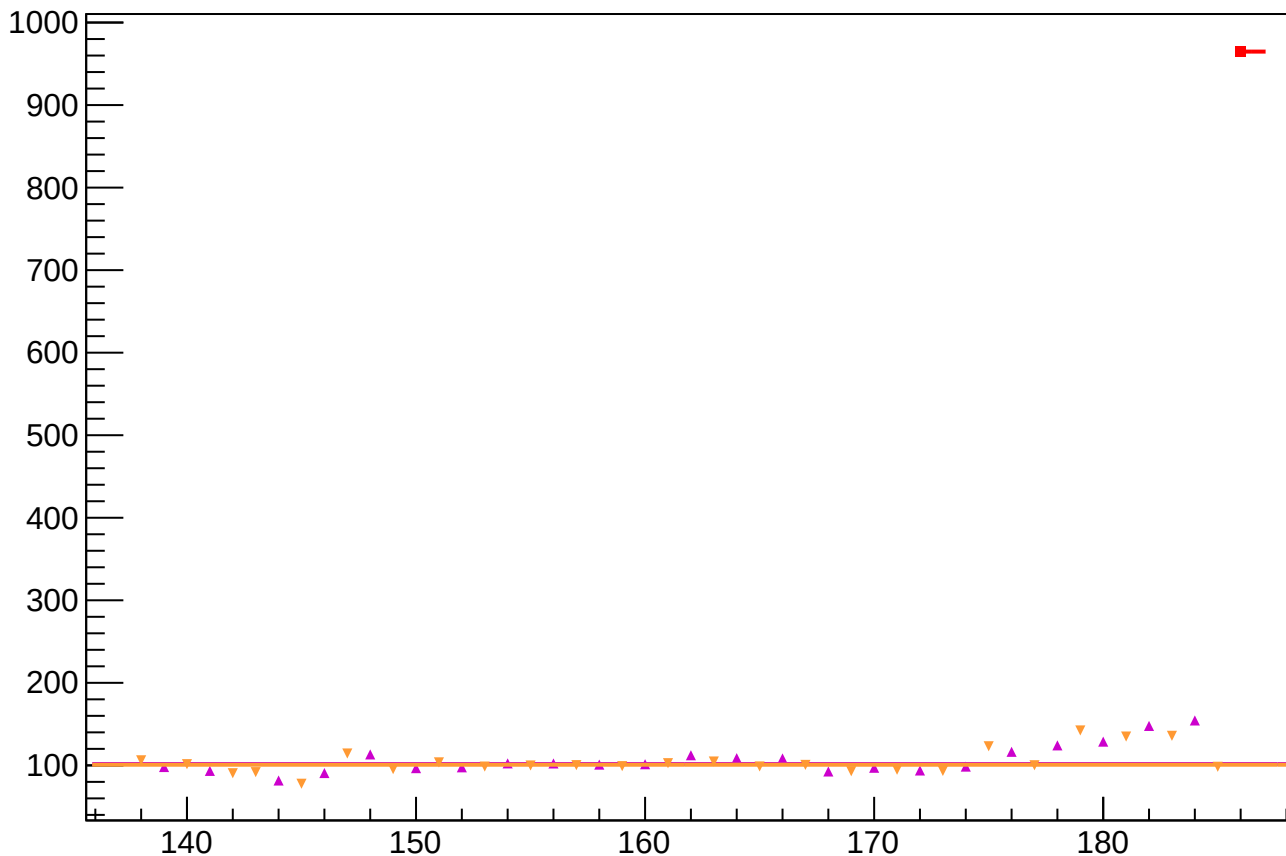
Right: 1179.060+/-1580.134  $\chi^2/\text{NDF}$ : 0.0/0

In: 32.948+/-24.587  $\chi^2/\text{NDF}$ :23.6/22

Out: 57.463+/-23.711  $\chi^2/\text{NDF}$ :29.7/25

All: 45.650+/-17.068  $\chi^2/\text{NDF}$ : 53.8/48

reg\_asym\_sam\_1548\_avg\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 100.801+/-0.017  $\chi^2/\text{NDF}$ :600502.4/24

Right Out: 964.788+/-1.117  $\chi^2/\text{NDF}$ : 0.0/0

Left In: 101.622+/-0.017  $\chi^2/\text{NDF}$ :582329.3/22

Left: 101.196+/-0.012  $\chi^2/\text{NDF}$ : 1183987.6/47

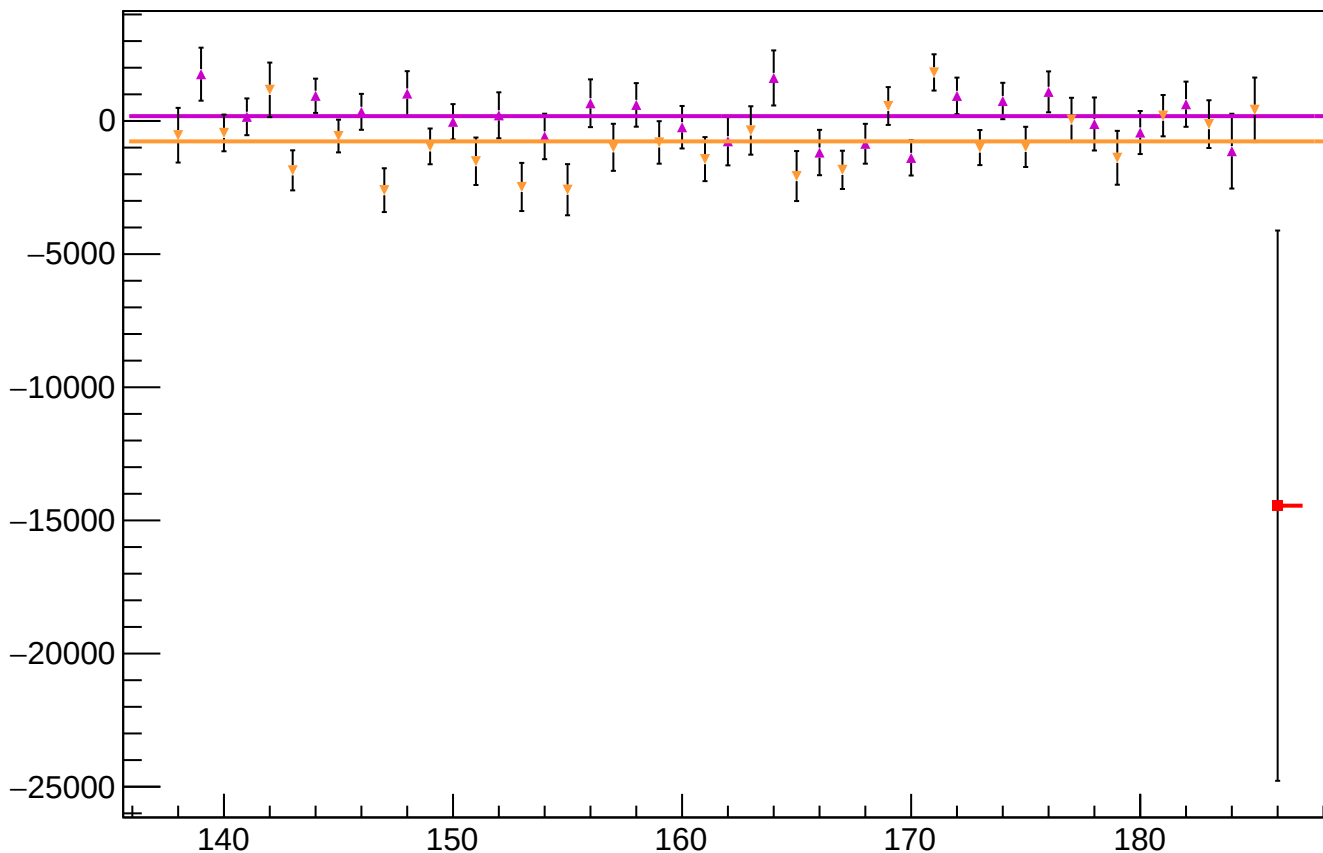
Right: 964.788+/-1.117  $\chi^2/\text{NDF}$ : 0.0/0

In: 101.622+/-0.017  $\chi^2/\text{NDF}$ :582329.3/22

Out: 100.995+/-0.017  $\chi^2/\text{NDF}$ :1198306.6/25

All: 101.297+/-0.012  $\chi^2/\text{NDF}$ : 1781309.0/48

asym\_sam\_1548\_avg\_correction\_mean vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -766.358+/-161.066  $\chi^2/\text{NDF}$ : 46.5/24

Right Out: -14446.137+/-10331.594  $\chi^2/\text{NDF}$ : 0.0/0

Left In: 181.584+/-165.671  $\chi^2/\text{NDF}$ : 25.0/22

Left: -305.743+/-115.485  $\chi^2/\text{NDF}$ : 88.4/47

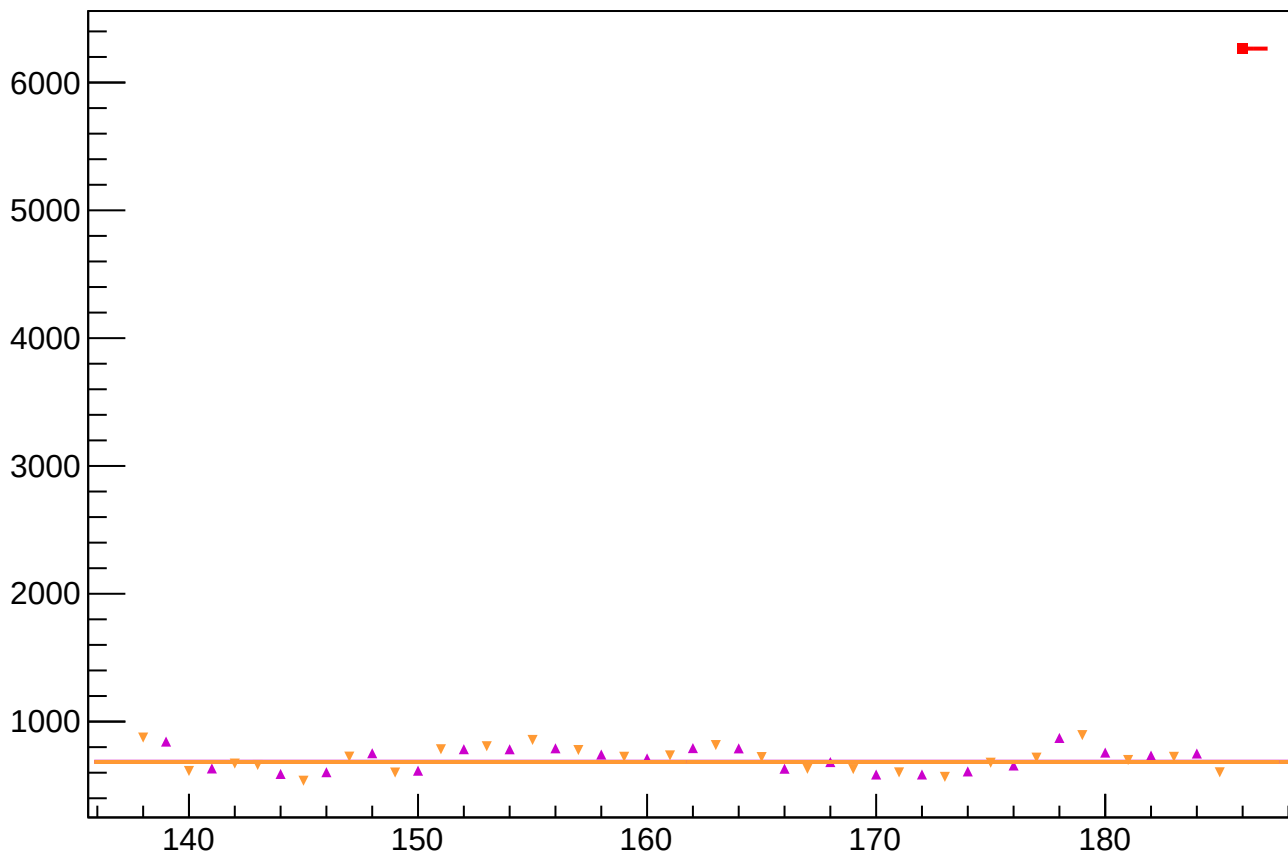
Right: -14446.137+/-10331.594  $\chi^2/\text{NDF}$ : 0.0/0

In: 181.584+/-165.671  $\chi^2/\text{NDF}$ : 25.0/22

Out: -769.682+/-161.047  $\chi^2/\text{NDF}$ : 48.3/25

All: -307.510+/-115.477  $\chi^2/\text{NDF}$ : 90.2/48

asym\_sam\_1548\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Left Out: 683.884 $\pm$ 0.114  $\chi^2$ /NDF:667158.2/24

Right Out: 6265.420 $\pm$ 7.306  $\chi^2$ /NDF: 0.0/0

Left In: 685.593 $\pm$ 0.117  $\chi^2$ /NDF:529353.6/22

Left: 684.715 $\pm$ 0.082  $\chi^2$ /NDF: 1196621.1/47

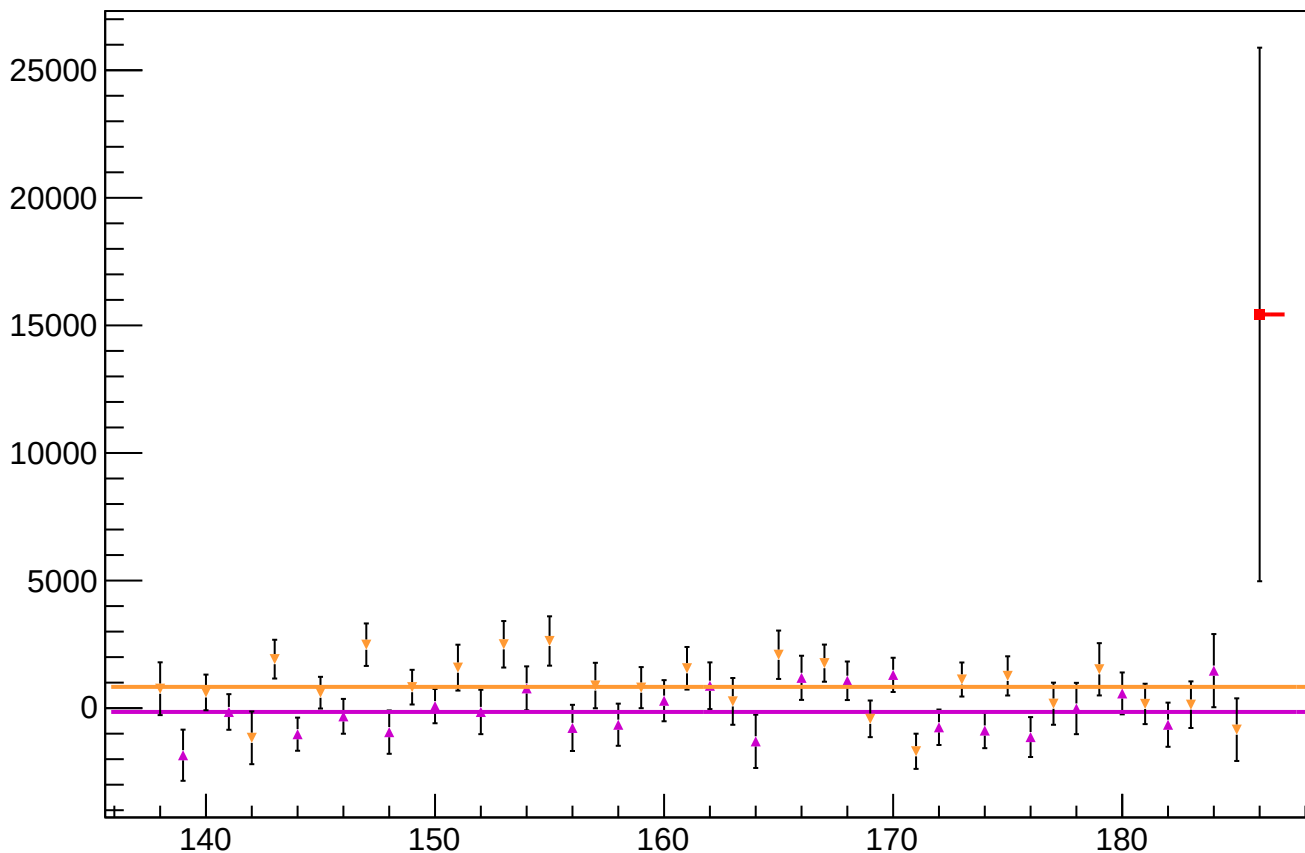
Right: 6265.420 $\pm$ 7.306  $\chi^2$ /NDF: 0.0/0

In: 685.593 $\pm$ 0.117  $\chi^2$ /NDF:529353.6/22

Out: 685.241 $\pm$ 0.114  $\chi^2$ /NDF:1250733.8/25

All: 685.412 $\pm$ 0.082  $\chi^2$ /NDF: 1780092.1/48

asym\_sam\_1548\_avg\_mean vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 833.395+/-162.965  $\chi^2/\text{NDF}$ :43.2/24

Right Out: 15429.058+/-10455.613  $\chi^2/\text{NDF}$ : 0.0/0

Left In: -148.814+/-167.644  $\chi^2/\text{NDF}$ :26.0/22

Left: 356.189+/-116.853  $\chi^2/\text{NDF}$ : 86.9/47

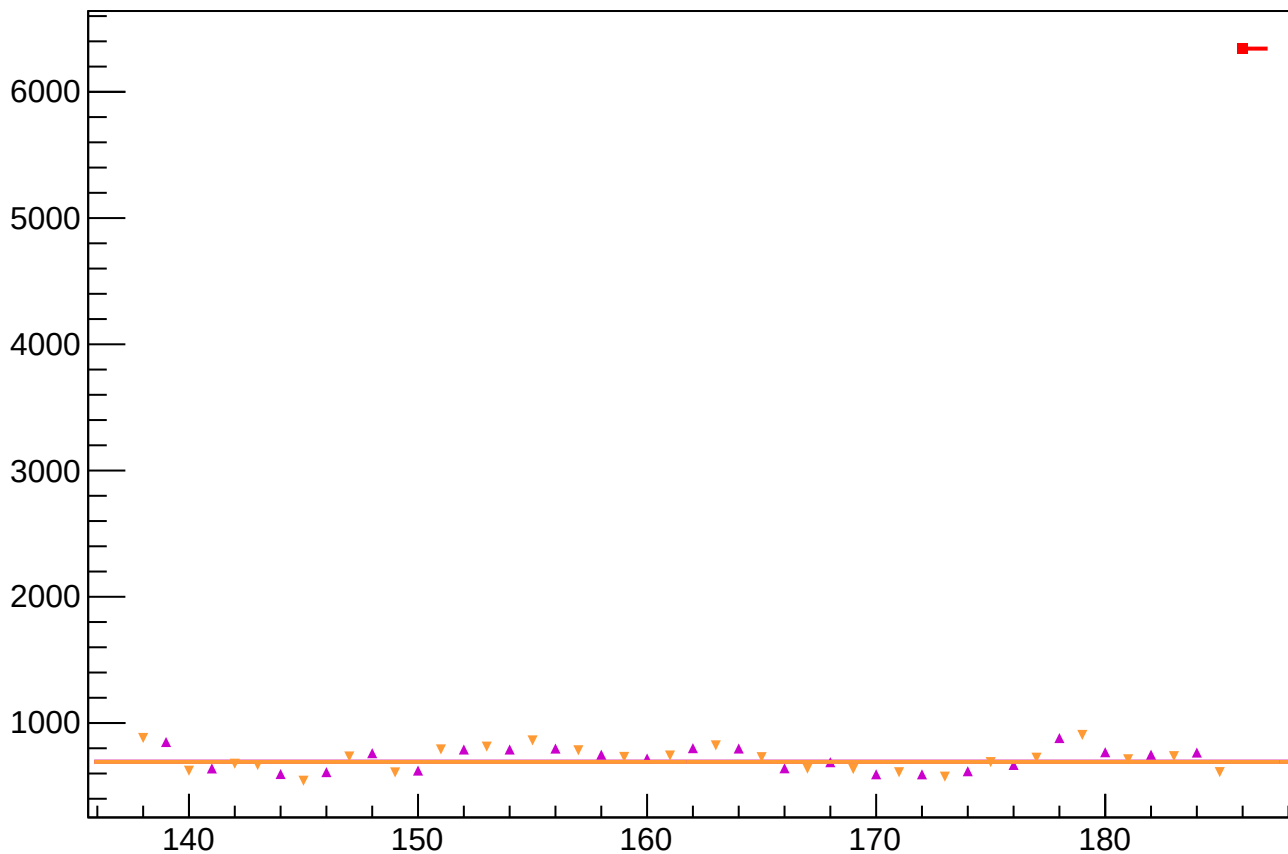
Right: 15429.058+/-10455.613  $\chi^2/\text{NDF}$ : 0.0/0

In: -148.814+/-167.644  $\chi^2/\text{NDF}$ :26.0/22

Out: 836.940+/-162.945  $\chi^2/\text{NDF}$ :45.2/25

All: 358.071+/-116.846  $\chi^2/\text{NDF}$ : 89.0/48

# asym\_sam\_1548\_avg\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 692.097+/-0.115  $\chi^2/\text{NDF}$ : 657259.6/24

Right Out: 6342.458+/-7.393  $\chi^2/\text{NDF}$ : 0.0/0

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

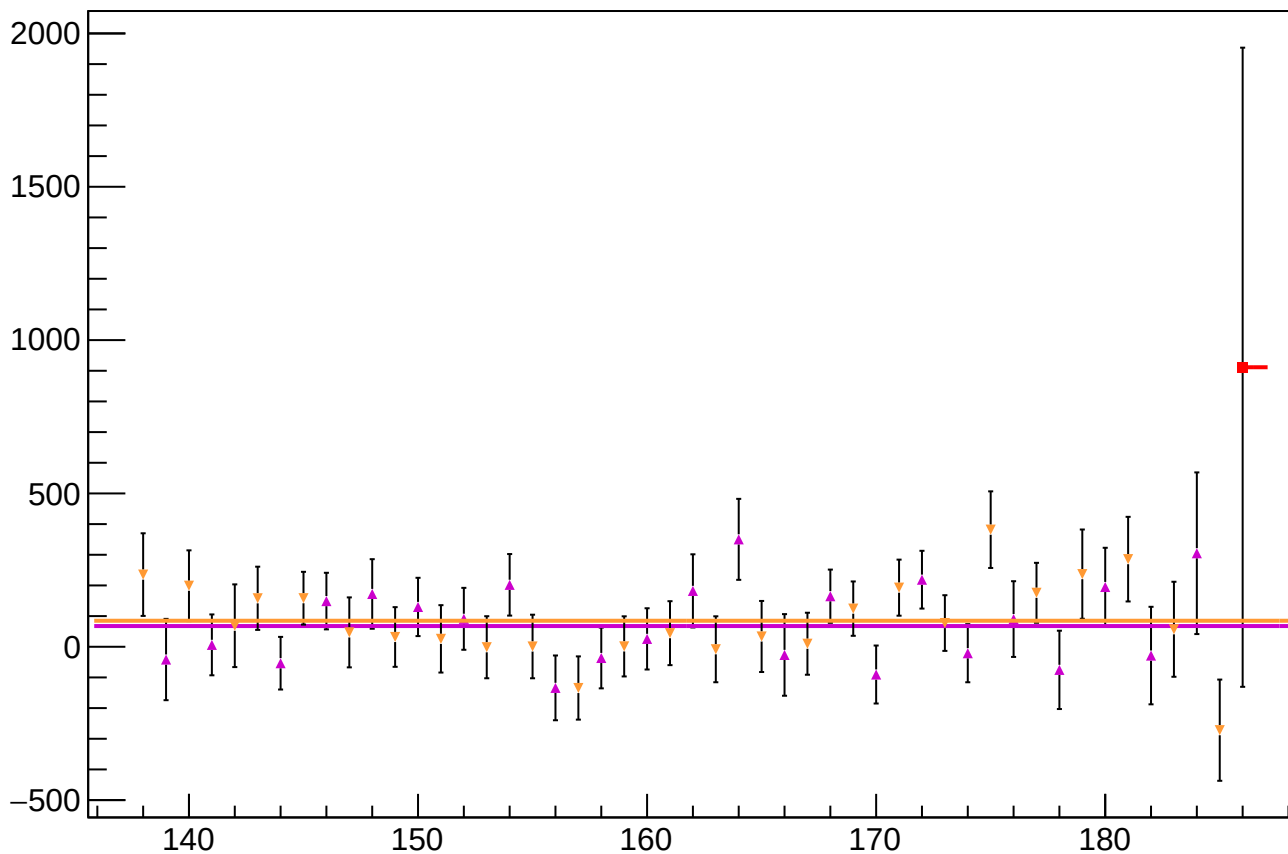
Right: 6342.458+/-7.393  $\chi^2/\text{NDF}$ : 0.0/0

In: 693.867+/-0.119  $\chi^2/\text{NDF}$ : 522053.5/22

Out: 693.469+/-0.115  $\chi^2/\text{NDF}$ : 1241212.6/25

All: 693.662+/-0.083  $\chi^2/\text{NDF}$ : 1763271.9/48

reg\_asym\_sam\_3748\_avg\_mean vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Left Out: 84.860 $\pm$ 21.643  $\chi^2$ /NDF:28.5/24

Right Out: 911.496 $\pm$ 1042.106  $\chi^2$ /NDF: 0.0/0

Left In: 67.552 $\pm$ 22.449  $\chi^2$ /NDF:28.9/22

Left: 76.522 $\pm$ 15.581  $\chi^2$ /NDF: 57.7/47

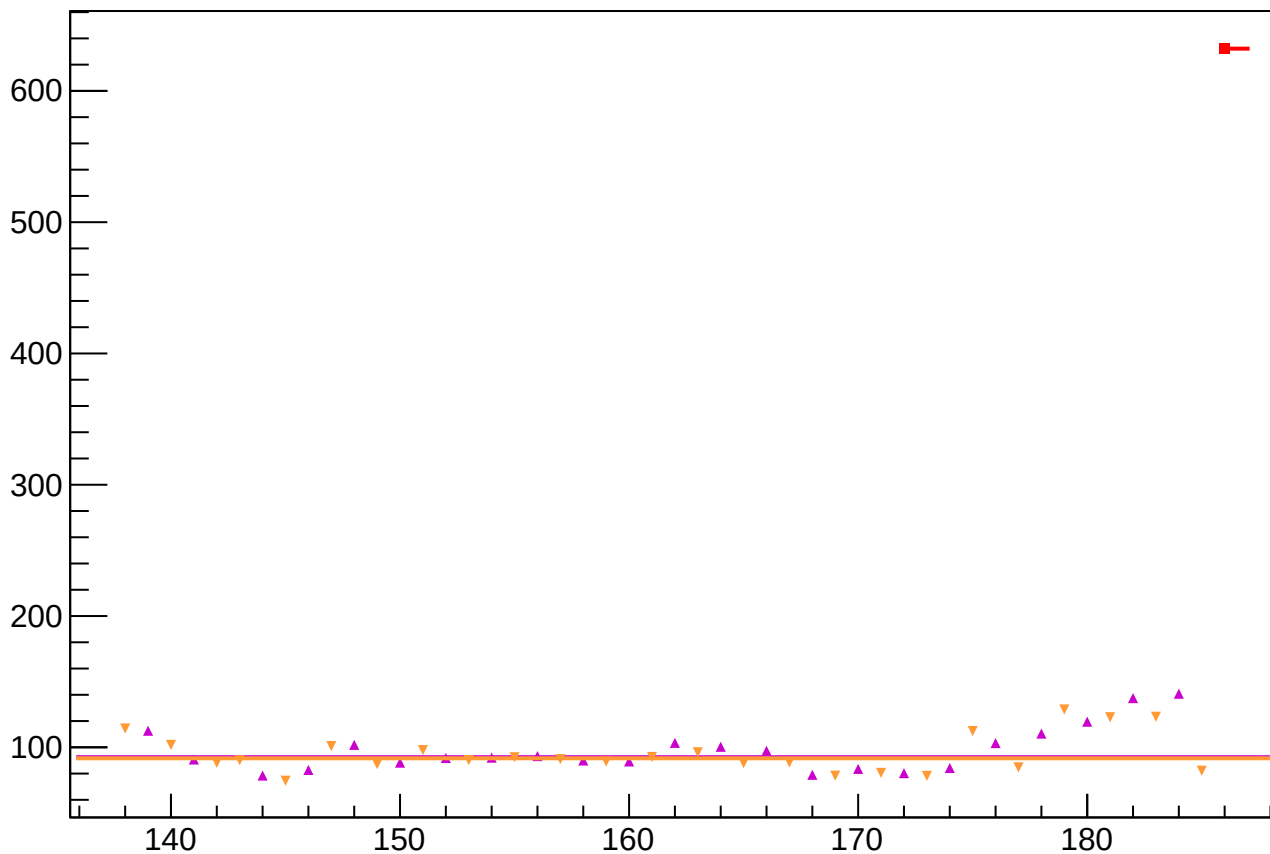
Right: 911.496 $\pm$ 1042.106  $\chi^2$ /NDF: 0.0/0

In: 67.552 $\pm$ 22.449  $\chi^2$ /NDF:28.9/22

Out: 85.216 $\pm$ 21.638  $\chi^2$ /NDF:29.1/25

All: 76.709 $\pm$ 15.579  $\chi^2$ /NDF: 58.3/48

reg\_asym\_sam\_3748\_avg\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 91.633+/-0.015  $\chi^2/\text{NDF}$ : 693122.0/24

Right Out: 632.197+/-0.737  $\chi^2/\text{NDF}$ : 0.0/0

Left In: 92.466+/-0.016  $\chi^2/\text{NDF}$ : 655700.4/22

Left: 92.034+/-0.011  $\chi^2/\text{NDF}$ : 1350250.3/47

Right: 632.197+/-0.737  $\chi^2/\text{NDF}$ : 0.0/0

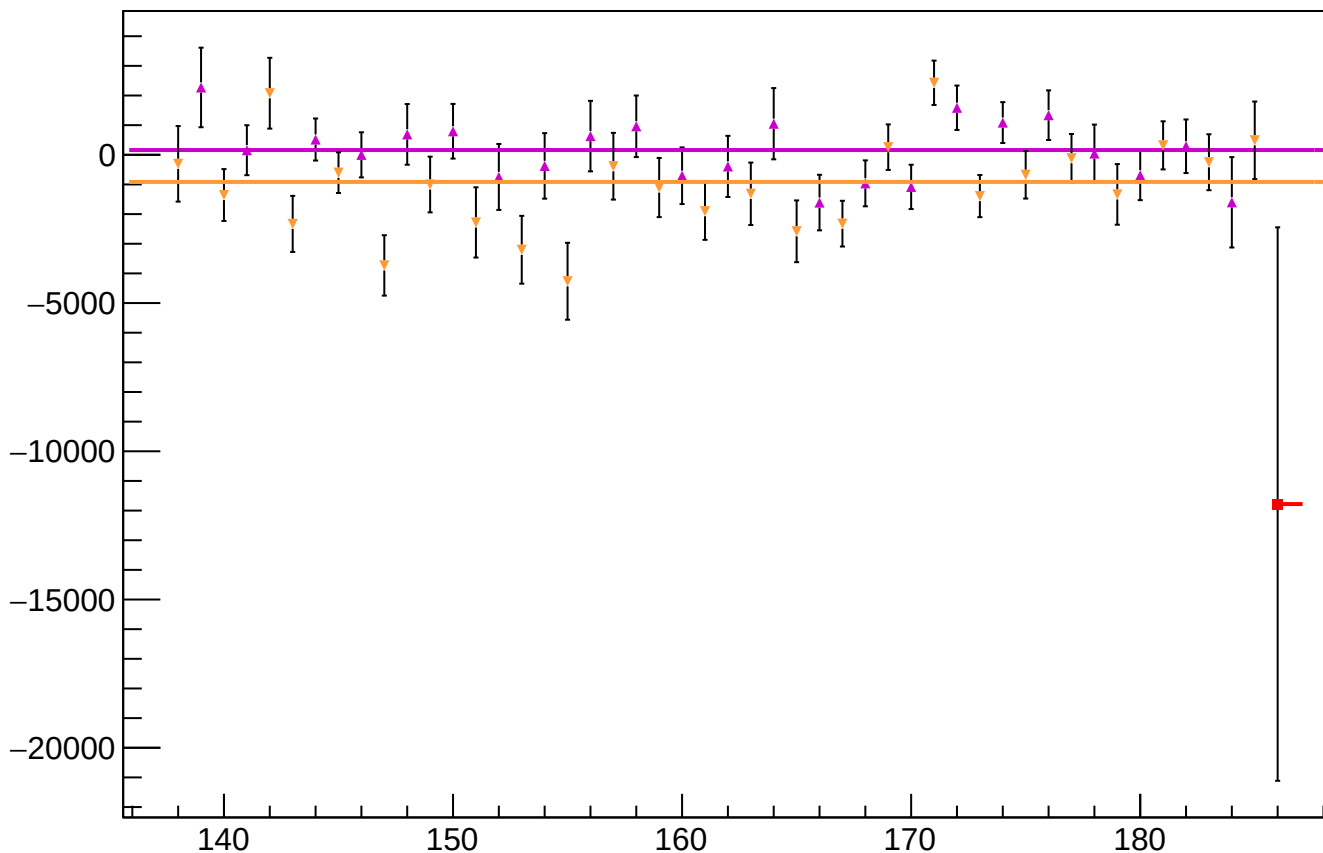
In: 92.466+/-0.016  $\chi^2/\text{NDF}$ : 655700.4/22

Out: 91.866+/-0.015  $\chi^2/\text{NDF}$ : 1231037.1/25

All: 92.155+/-0.011  $\chi^2/\text{NDF}$ : 1887478.4/48



asym\_sam\_3748\_avg\_correction\_mean vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -914.719+/-185.341  $\chi^2/\text{NDF}$ :64.2/24

Right Out: -11780.130+/-9334.043  $\chi^2/\text{NDF}$ : 0.0/0

Left In: 161.076+/-189.491  $\chi^2/\text{NDF}$ :25.1/22

Left: -388.730+/-132.499  $\chi^2/\text{NDF}$ : 105.7/47

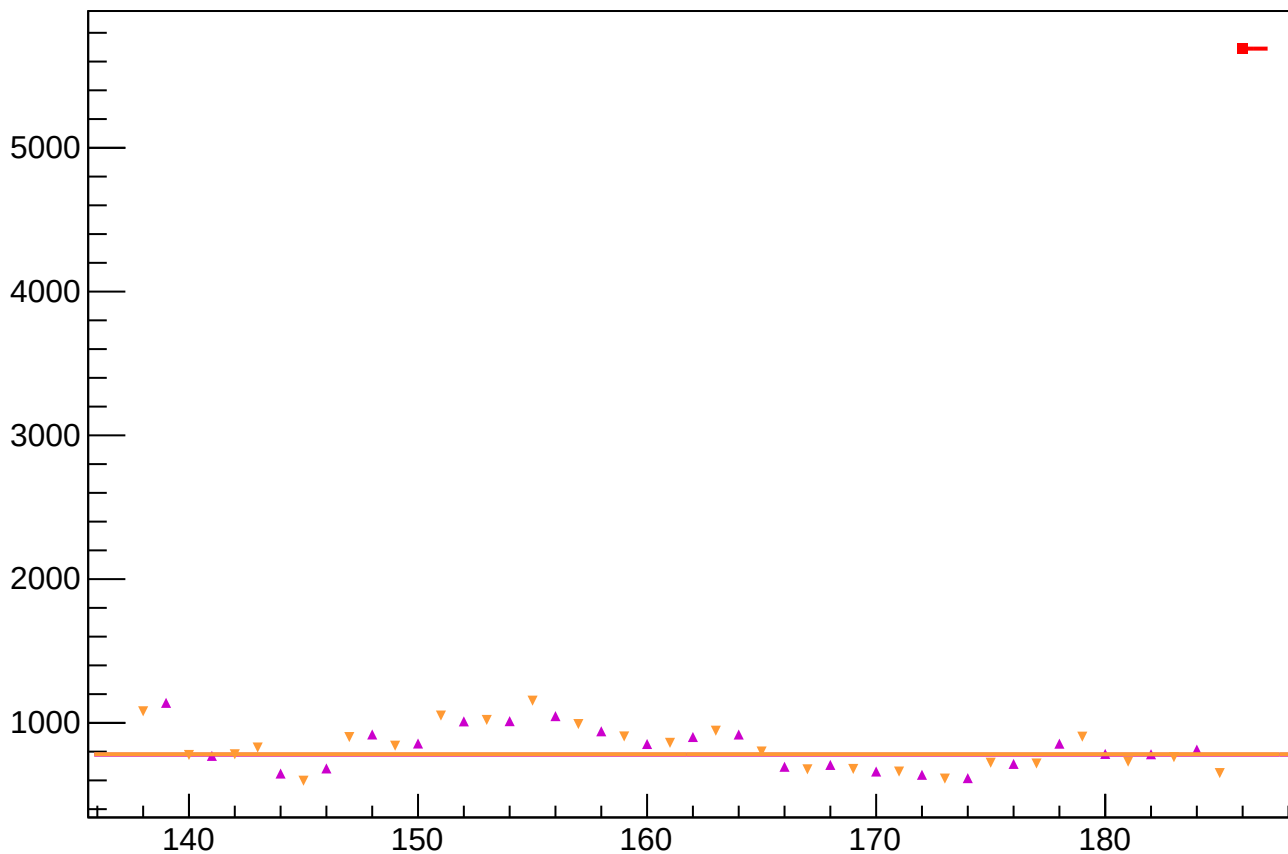
Right: -11780.130+/-9334.043  $\chi^2/\text{NDF}$ : 0.0/0

In: 161.076+/-189.491  $\chi^2/\text{NDF}$ :25.1/22

Out: -919.001+/-185.304  $\chi^2/\text{NDF}$ :65.5/25

All: -391.025+/-132.485  $\chi^2/\text{NDF}$ : 107.2/48

asym\_sam\_3748\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 782.042+/-0.131  $\chi^2/\text{NDF}$ :1130984.3/24

Right Out: 5690.010+/-6.600  $\chi^2/\text{NDF}$ : 0.0/0

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

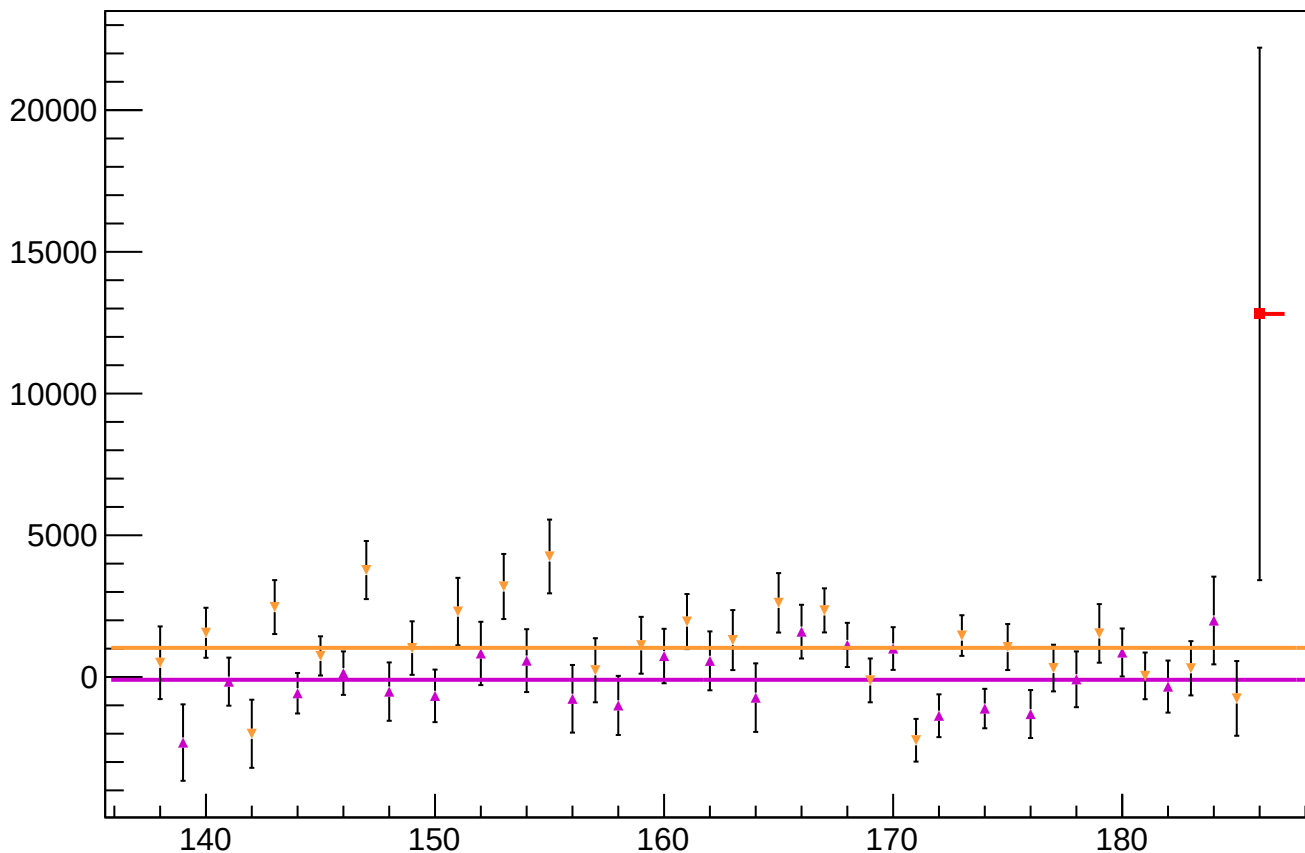
Right: 5690.010+/-6.600  $\chi^2/\text{NDF}$ : 0.0/0

In: 778.995+/-0.134  $\chi^2/\text{NDF}$ :980243.4/22

Out: 783.976+/-0.131  $\chi^2/\text{NDF}$ :1683726.7/25

All: 781.541+/-0.094  $\chi^2/\text{NDF}$ : 2664676.7/48

asym\_sam\_3748\_avg\_mean vs Slug, Sign Corrected



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 0.0/0$

Left Out:  $1028.864 \pm 186.810$   $\chi^2/\text{NDF}: 60.2/24$

Right Out:  $12810.123 \pm 9393.692$   $\chi^2/\text{NDF}: 0.0/0$

Left In:  $-98.691 \pm 191.027$   $\chi^2/\text{NDF}: 25.4/22$

Left:  $477.669 \pm 133.561$   $\chi^2/\text{NDF}: 103.3/47$

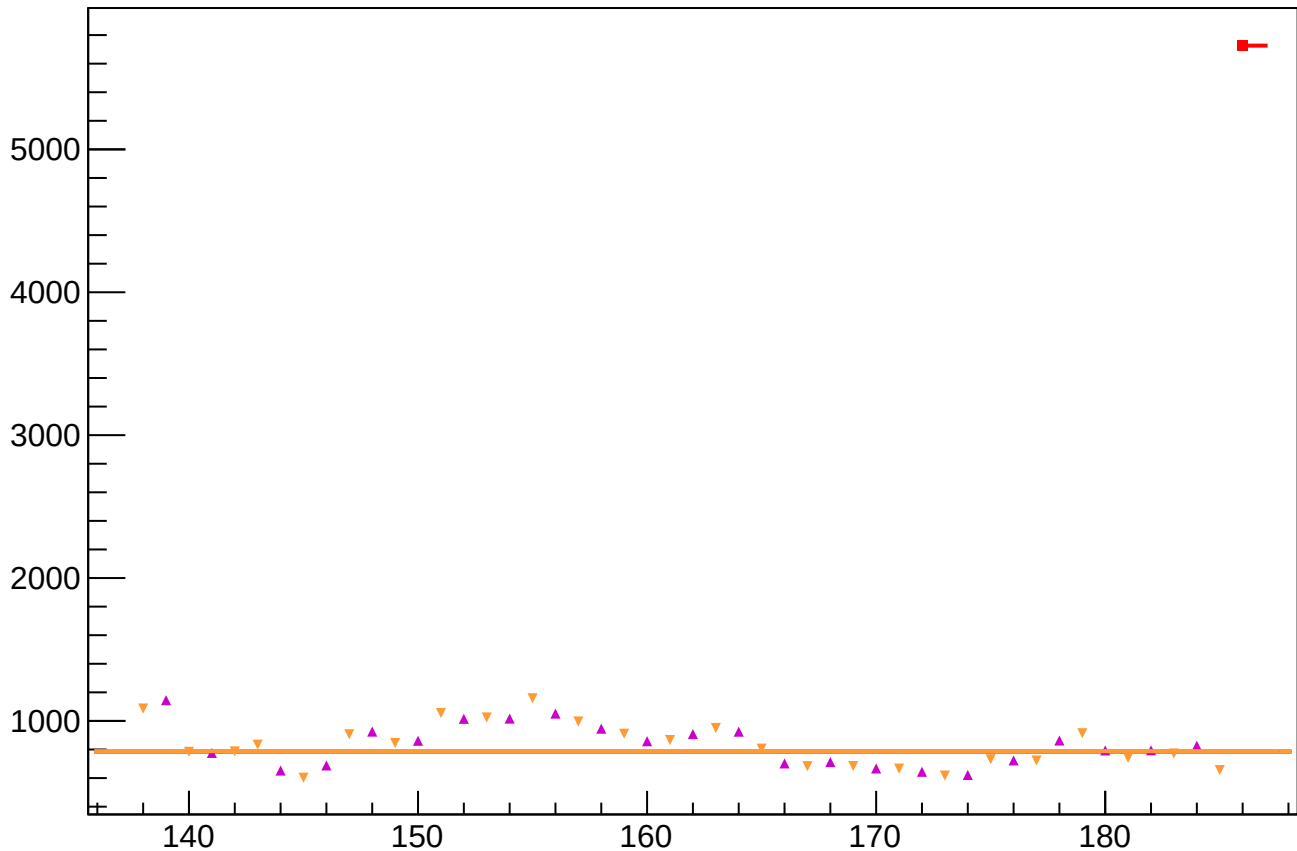
Right:  $12810.123 \pm 9393.692$   $\chi^2/\text{NDF}: 0.0/0$

In:  $-98.691 \pm 191.027$   $\chi^2/\text{NDF}: 25.4/22$

Out:  $1033.521 \pm 186.773$   $\chi^2/\text{NDF}: 61.7/25$

All:  $480.161 \pm 133.547$   $\chi^2/\text{NDF}: 105.1/48$

asym\_sam\_3748\_avg\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 788.442+/-0.132  $\chi^2/\text{NDF}$ :1113741.6/24

Right Out: 5726.201+/-6.642  $\chi^2/\text{NDF}$ : 0.0/0

Left In: 785.490+/-0.135  $\chi^2/\text{NDF}$ :965338.9/22

Left: 786.999+/-0.094  $\chi^2/\text{NDF}$ : 2079324.6/47

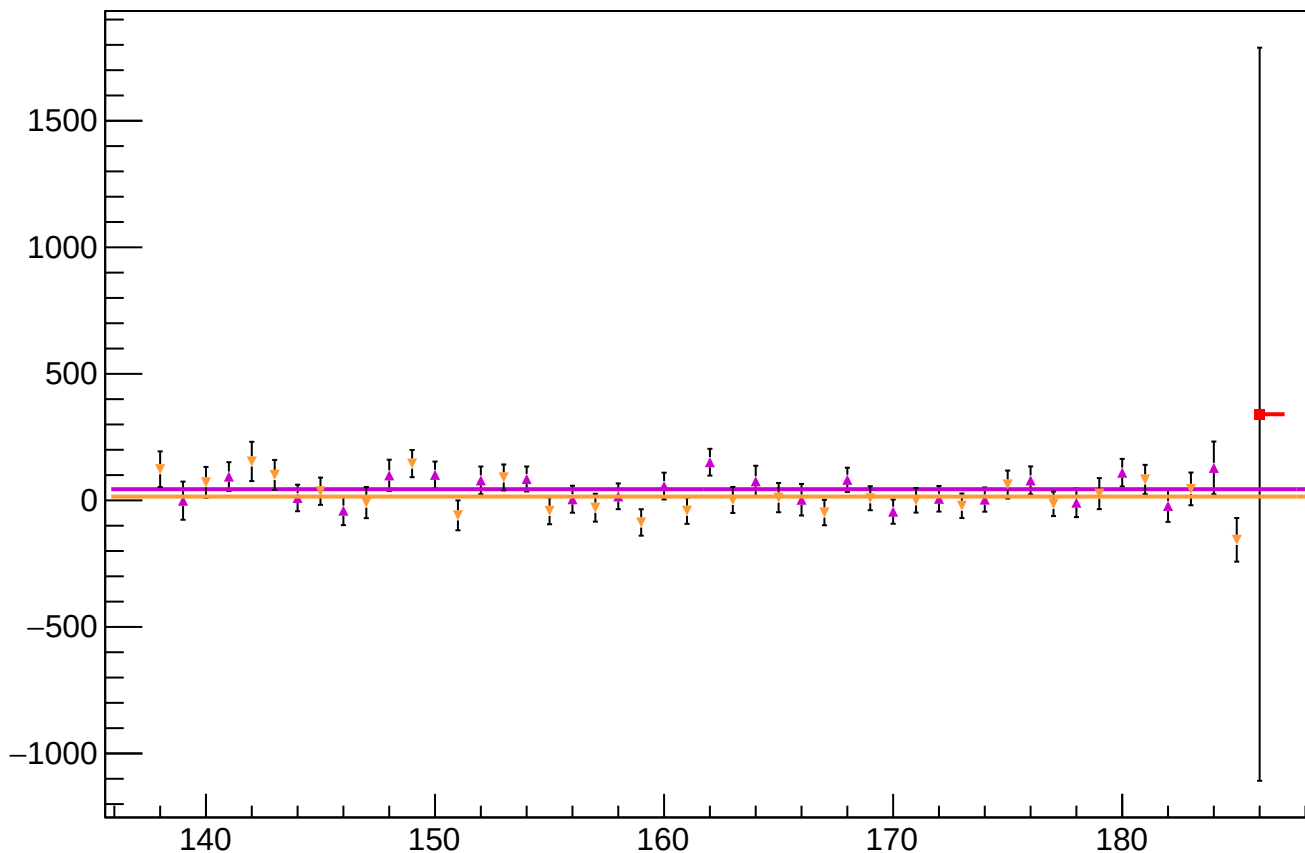
Right: 5726.201+/-6.642  $\chi^2/\text{NDF}$ : 0.0/0

In: 785.490+/-0.135  $\chi^2/\text{NDF}$ :965338.9/22

Out: 790.394+/-0.132  $\chi^2/\text{NDF}$ :1666131.0/25

All: 787.997+/-0.094  $\chi^2/\text{NDF}$ : 2632143.7/48

reg\_asym\_sam\_1526\_avg\_mean vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Left Out: 15.099 $\pm$ 11.154  $\chi^2$ /NDF:34.2/24

Right Out: 340.459 $\pm$ 1448.453  $\chi^2$ /NDF: 0.0/0

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

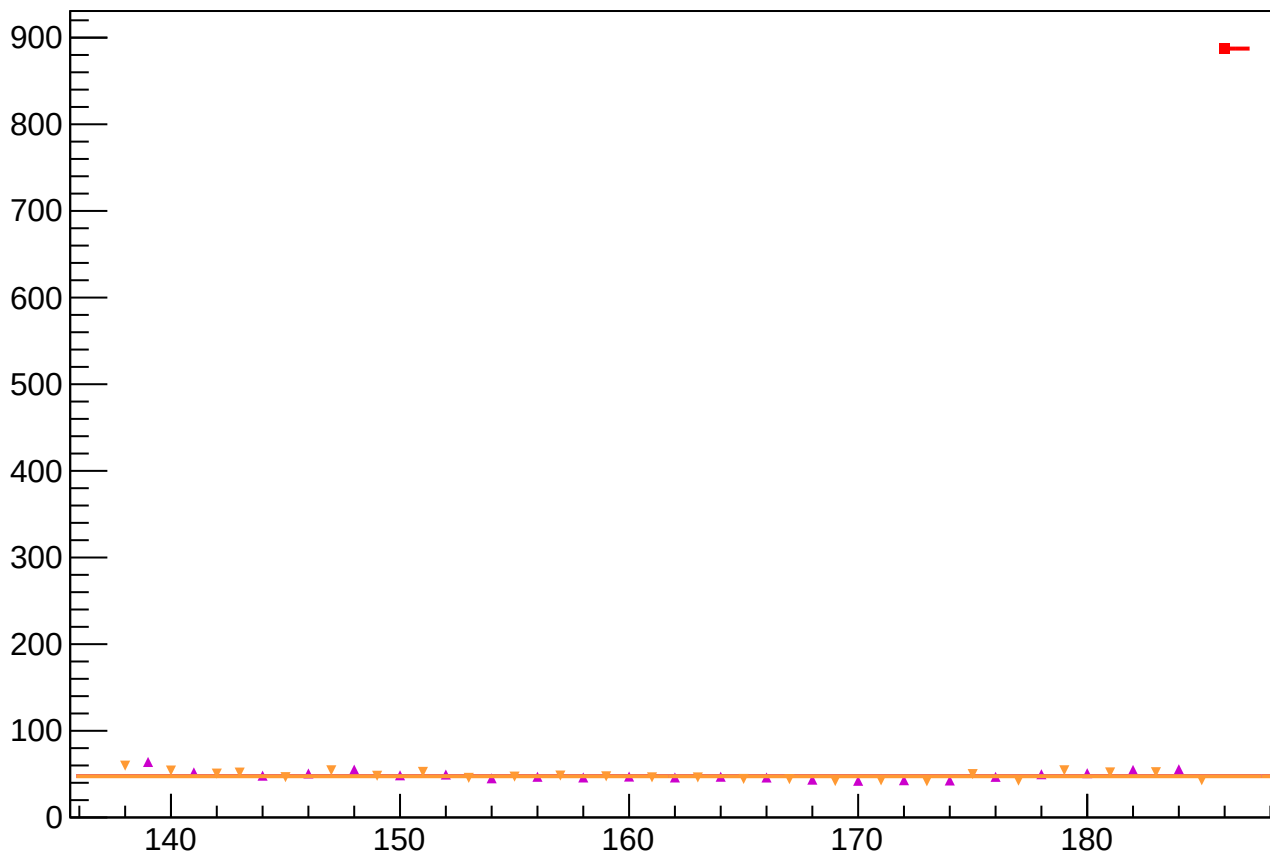
Right: 340.459 $\pm$ 1448.453  $\chi^2$ /NDF: 0.0/0

In: 44.297 $\pm$ 11.530  $\chi^2$ /NDF:22.3/22

Out: 15.118 $\pm$ 11.154  $\chi^2$ /NDF:34.2/25

All: 29.225 $\pm$ 8.017  $\chi^2$ /NDF: 59.8/48

reg\_asym\_sam\_1526\_avg\_rms vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Left Out: 47.586 $\pm$ 0.008  $\chi^2$ /NDF:312874.8/24

Right Out: 887.366 $\pm$ 1.024  $\chi^2$ /NDF: 0.0/0

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

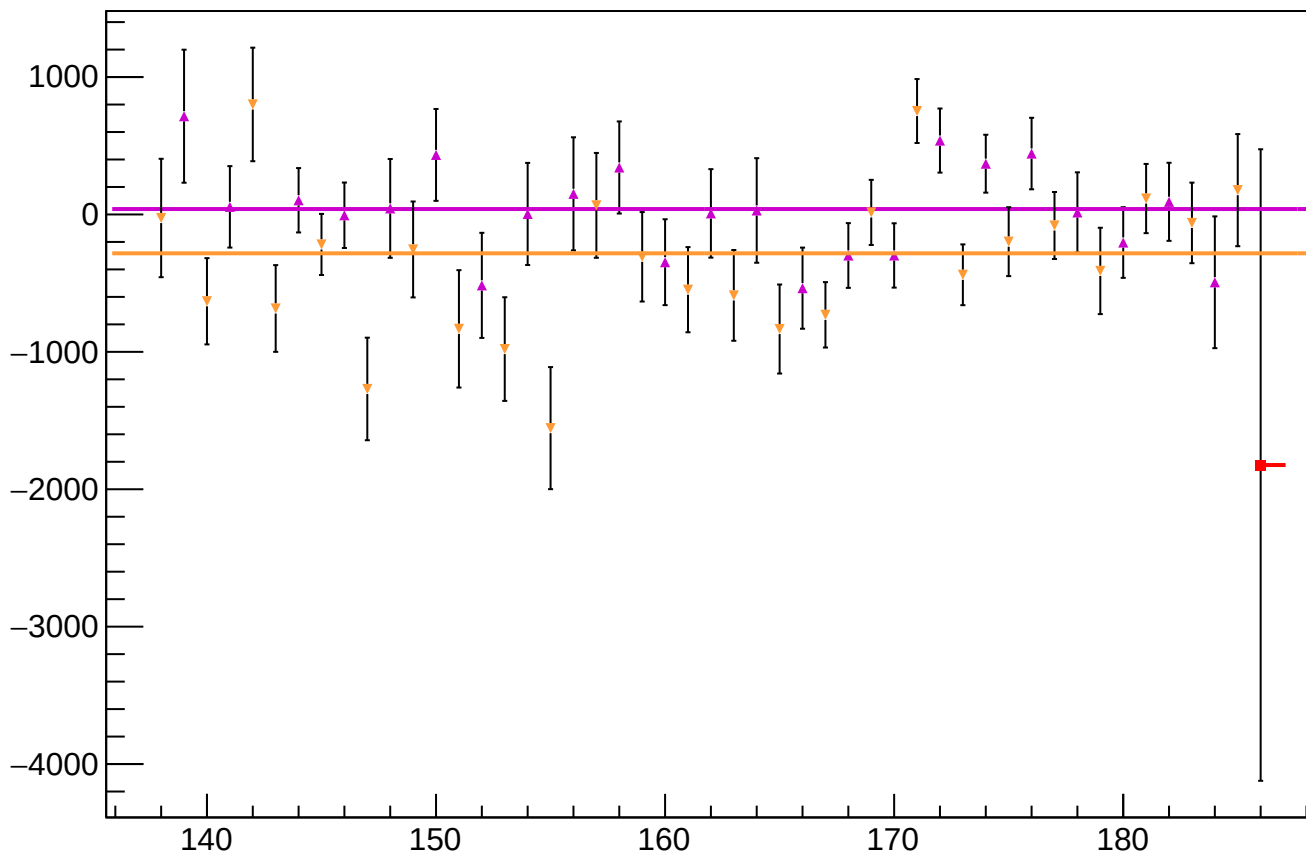
Right: 887.366 $\pm$ 1.024  $\chi^2$ /NDF: 0.0/0

In: 47.846 $\pm$ 0.008  $\chi^2$ /NDF:281790.1/22

Out: 47.636 $\pm$ 0.008  $\chi^2$ /NDF:985117.9/25

All: 47.738 $\pm$ 0.006  $\chi^2$ /NDF: 1267251.0/48

asym\_sam\_1526\_avg\_correction\_mean vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -282.798+/-59.690  $\chi^2/\text{NDF}$ :66.5/24

Right Out: -1823.674+/-2298.233  $\chi^2/\text{NDF}$ : 0.0/0

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

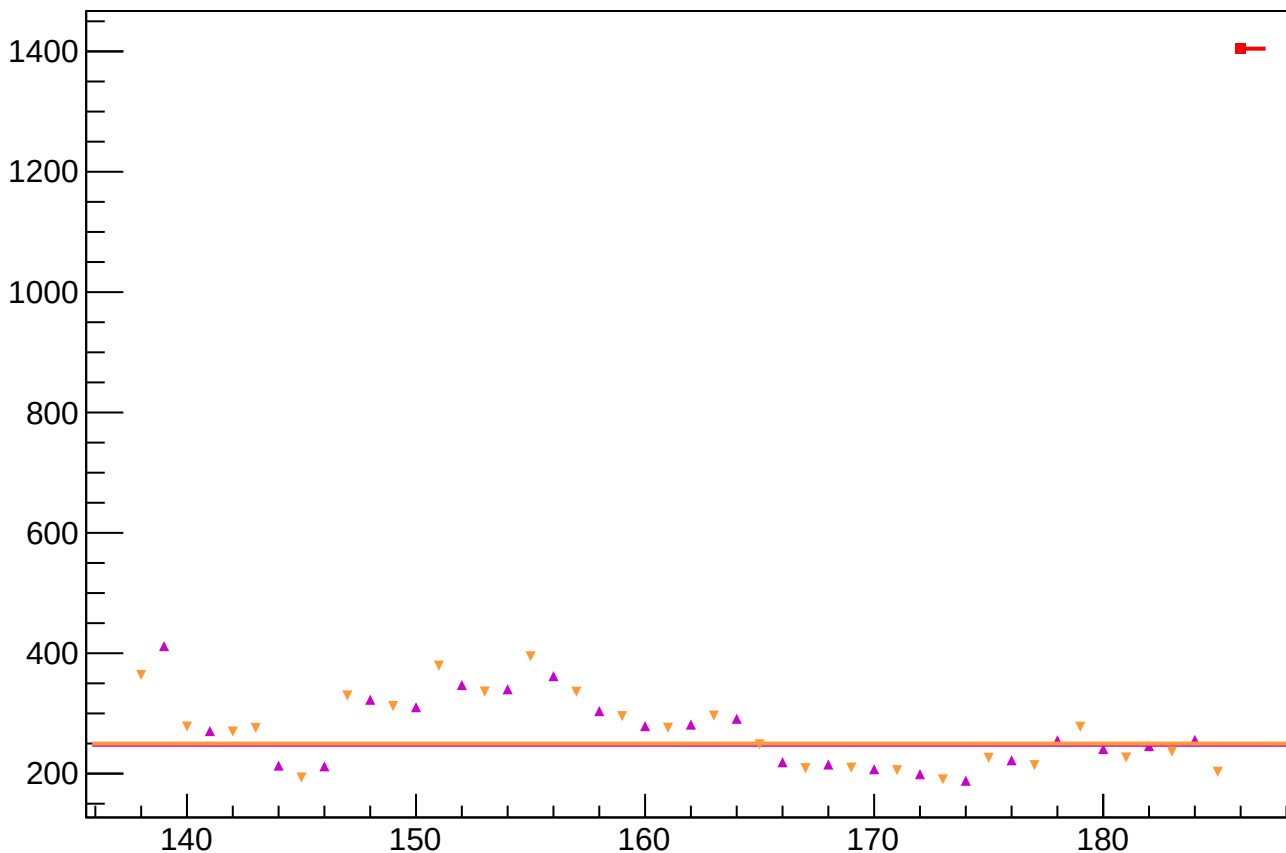
Right: -1823.674+/-2298.233  $\chi^2/\text{NDF}$ : 0.0/0

In: 39.432+/-60.759  $\chi^2/\text{NDF}$ :27.5/22

Out: -283.837+/-59.670  $\chi^2/\text{NDF}$ :67.0/25

All: -125.126+/-42.573  $\chi^2/\text{NDF}$ : 108.9/48

asym\_sam\_1526\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 249.956+/-0.042  $\chi^2/\text{NDF}$ :1614205.9/24

Right Out: 1404.564+/-1.625  $\chi^2/\text{NDF}$ : 0.0/0

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: 1404.564+/-1.625  $\chi^2/\text{NDF}$ : 0.0/0

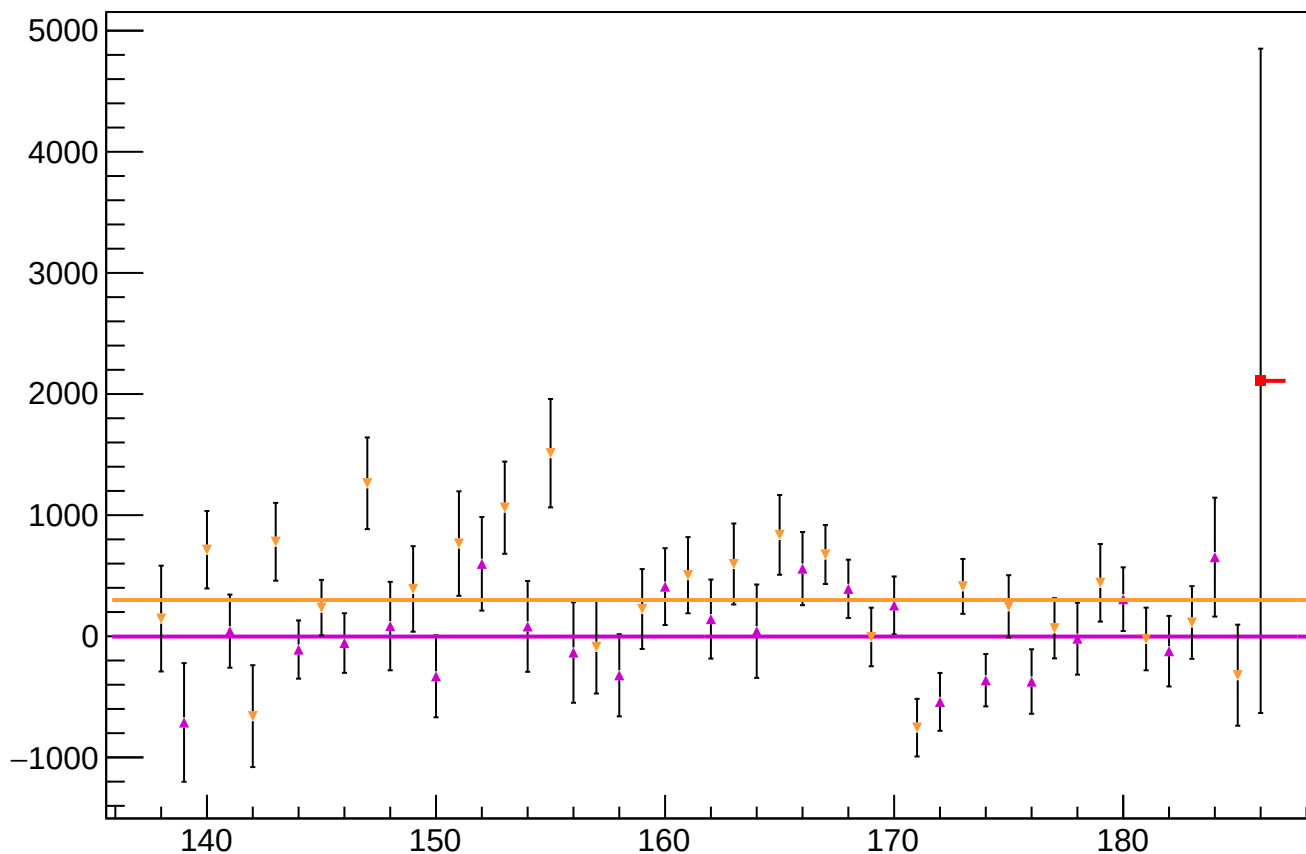
In: 247.917+/-0.043  $\chi^2/\text{NDF}$ :1410847.5/22

Out: 250.735+/-0.042  $\chi^2/\text{NDF}$ :2118655.3/25

All: 249.351+/-0.030  $\chi^2/\text{NDF}$ : 3531692.5/48



asym\_sam\_1526\_avg\_mean vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 299.562+/-60.860  $\chi^2/\text{NDF}$ : 62.5/24

Right Out: 2109.016+/-2742.402  $\chi^2/\text{NDF}$ : 0.0/0

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

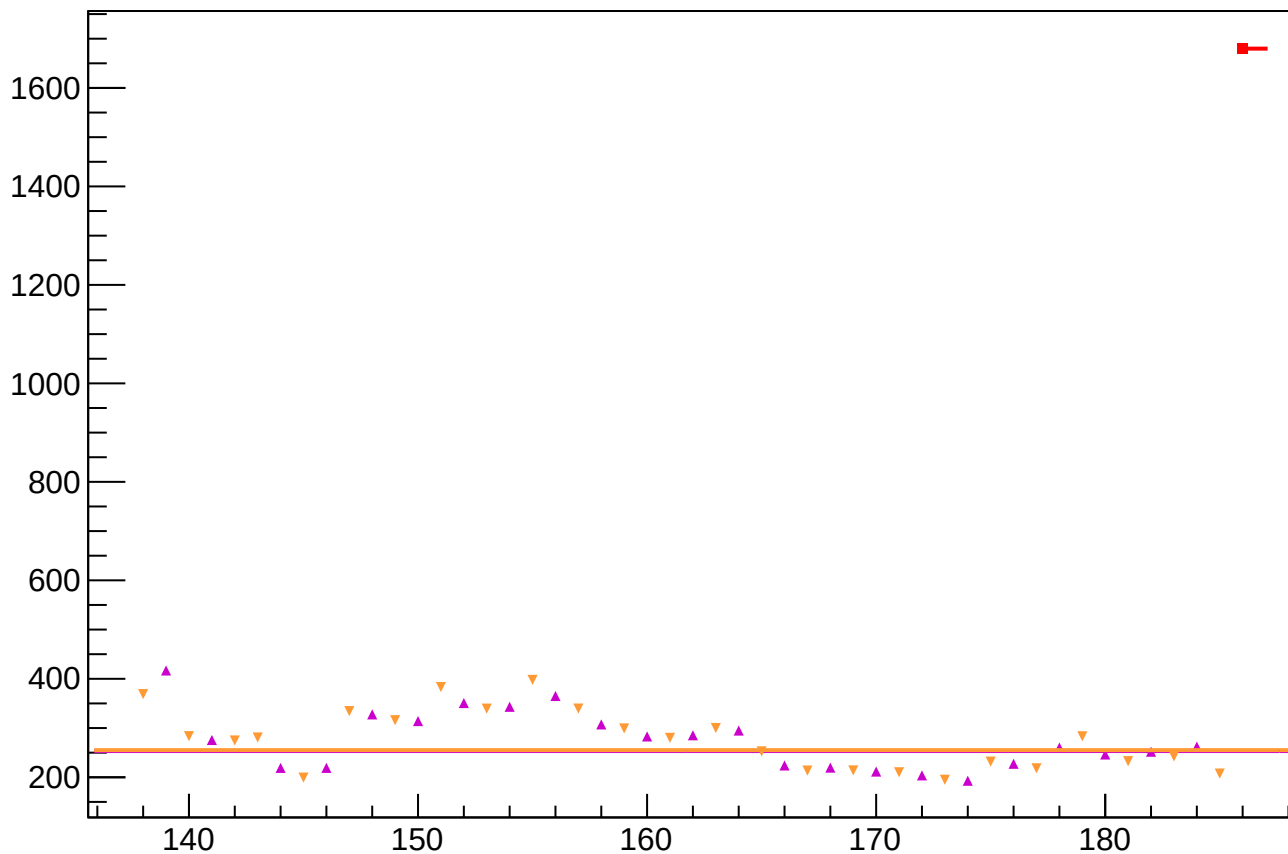
Right: 2109.016+/-2742.402  $\chi^2/\text{NDF}$ : 0.0/0

In: -2.185+/-62.005  $\chi^2/\text{NDF}$ : 29.2/22

Out: 300.453+/-60.845  $\chi^2/\text{NDF}$ : 62.9/25

All: 151.991+/-43.428  $\chi^2/\text{NDF}$ : 104.2/48

asym\_sam\_1526\_avg\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 255.135+/-0.043  $\chi^2/\text{NDF}$ :1542039.5/24

Right Out: 1679.837+/-1.939  $\chi^2/\text{NDF}$ : 0.0/0

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

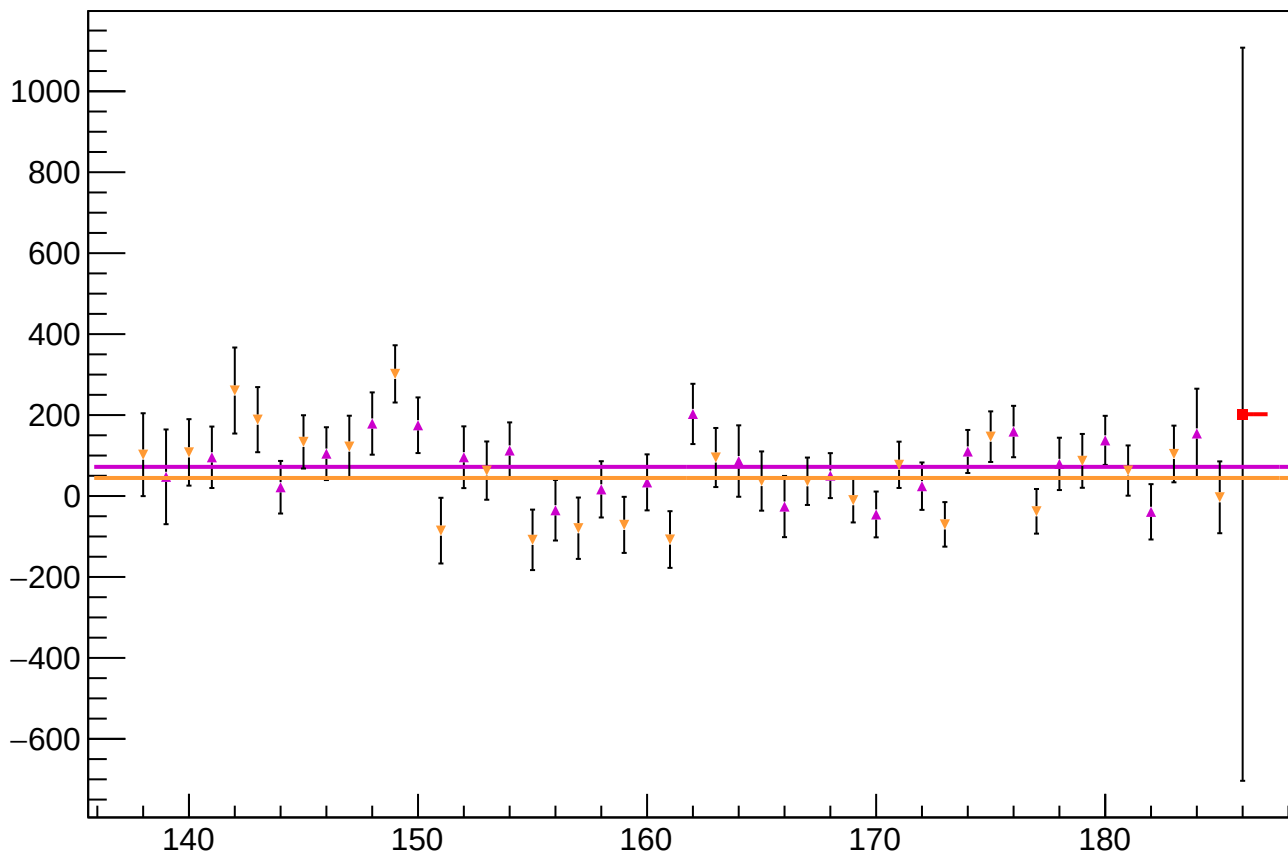
Right: 1679.837+/-1.939  $\chi^2/\text{NDF}$ : 0.0/0

In: 253.287+/-0.044  $\chi^2/\text{NDF}$ :1341662.3/22

Out: 255.837+/-0.043  $\chi^2/\text{NDF}$ :2081552.4/25

All: 254.586+/-0.031  $\chi^2/\text{NDF}$ : 3424936.9/48

reg\_asym\_sam\_3726\_avg\_mean vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Left Out: 44.602 $\pm$ 13.824  $\chi^2$ /NDF:53.9/24

Right Out: 202.060 $\pm$ 905.673  $\chi^2$ /NDF: 0.0/0

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

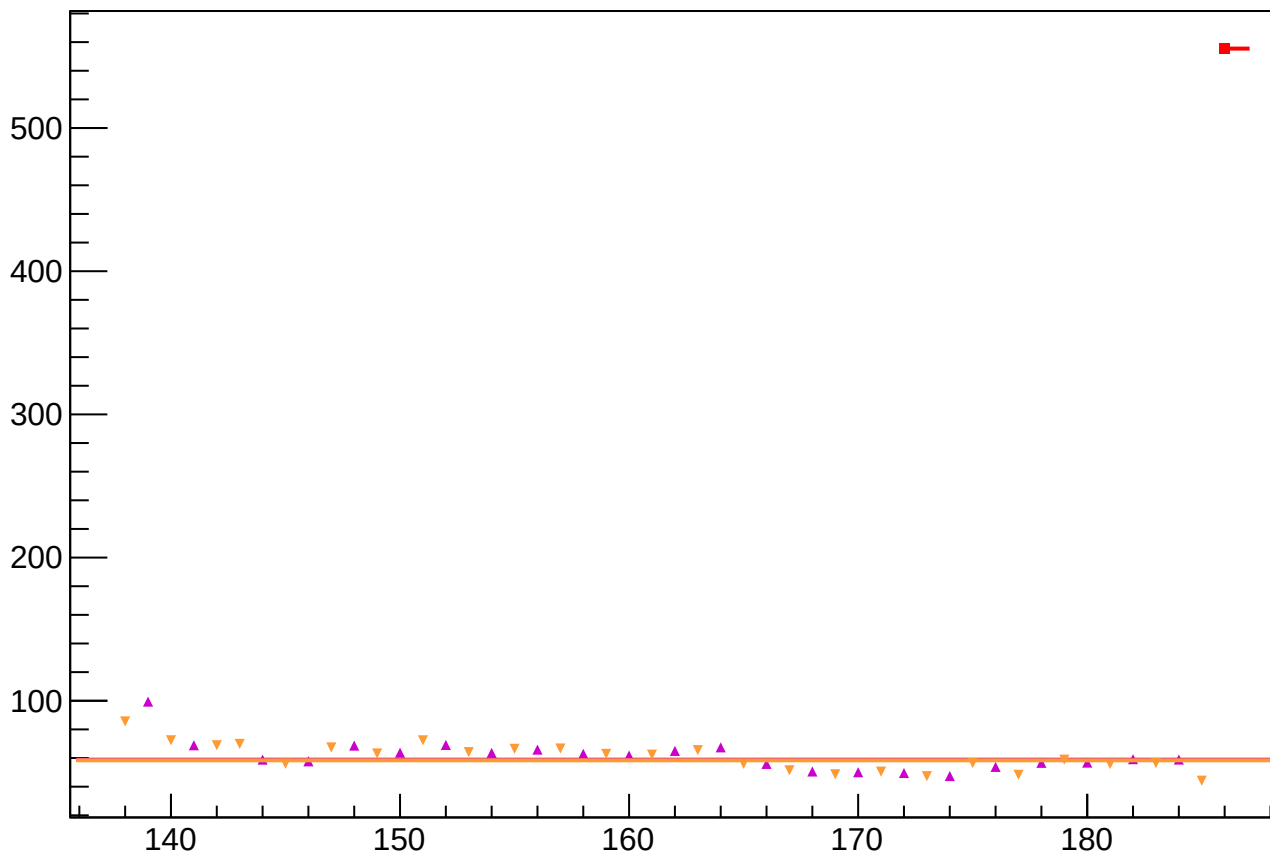
Right: 202.060 $\pm$ 905.673  $\chi^2$ /NDF: 0.0/0

In: 72.037 $\pm$ 14.296  $\chi^2$ /NDF:25.3/22

Out: 44.639 $\pm$ 13.823  $\chi^2$ /NDF:53.9/25

All: 57.876 $\pm$ 9.937  $\chi^2$ /NDF: 81.1/48

reg\_asym\_sam\_3726\_avg\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 58.423+/-0.010  $\chi^2/\text{NDF}$ : 790091.3/24

Right Out: 555.480+/-0.640  $\chi^2/\text{NDF}$ : 0.0/0

Left In: 58.840+/-0.010  $\chi^2/\text{NDF}$ : 679925.7/22

Left: 58.624+/-0.007  $\chi^2/\text{NDF}$ : 1470896.0/47

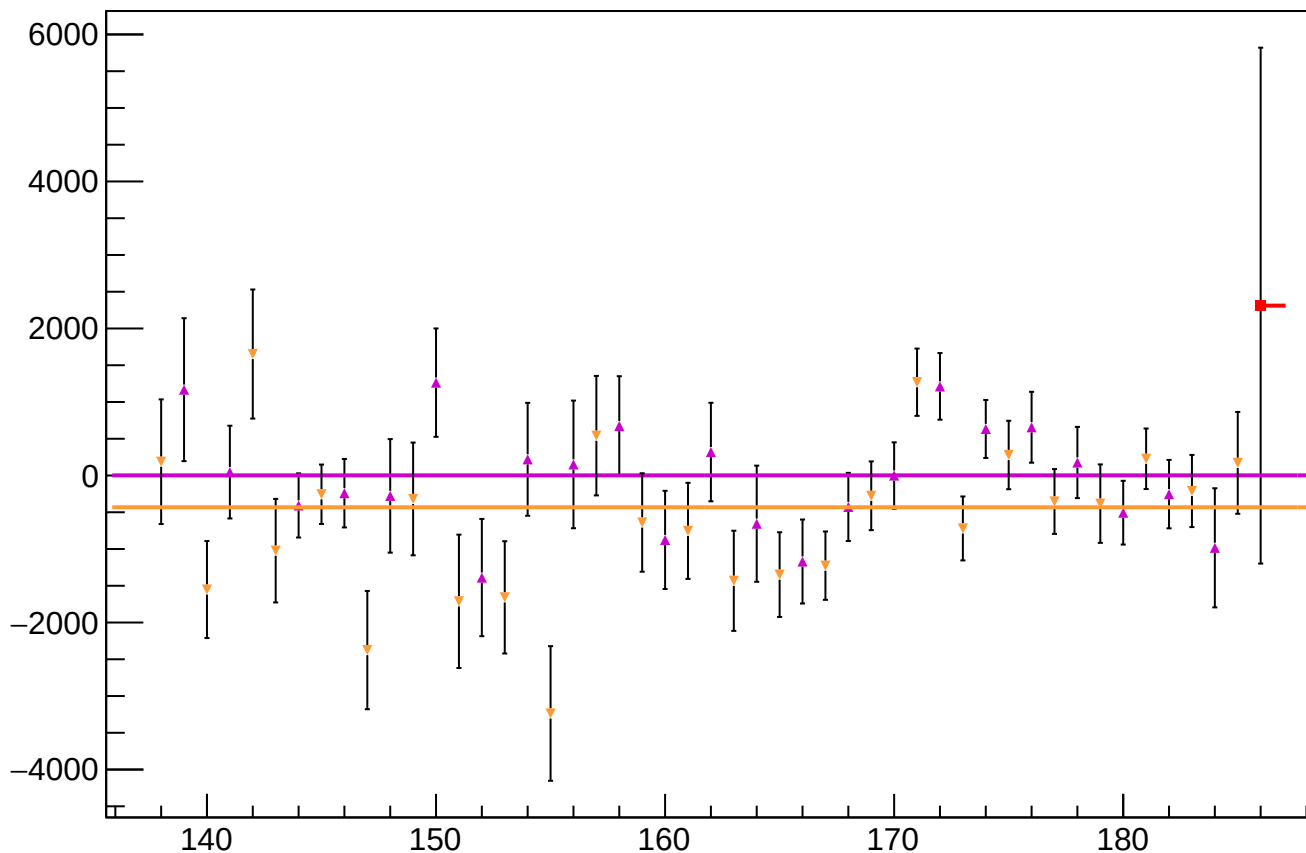
Right: 555.480+/-0.640  $\chi^2/\text{NDF}$ : 0.0/0

In: 58.840+/-0.010  $\chi^2/\text{NDF}$ : 679925.7/22

Out: 58.539+/-0.010  $\chi^2/\text{NDF}$ : 1392370.9/25

All: 58.684+/-0.007  $\chi^2/\text{NDF}$ : 2072755.3/48

asym\_sam\_3726\_avg\_correction\_mean vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -432.330+/-114.408  $\chi^2/\text{NDF}$ :59.4/24

Right Out: 2310.998+/-3509.061  $\chi^2/\text{NDF}$ : 0.0/0

Left In: 1.825+/-116.459  $\chi^2/\text{NDF}$ :32.3/22

Left: -219.109+/-81.614  $\chi^2/\text{NDF}$ : 98.8/47

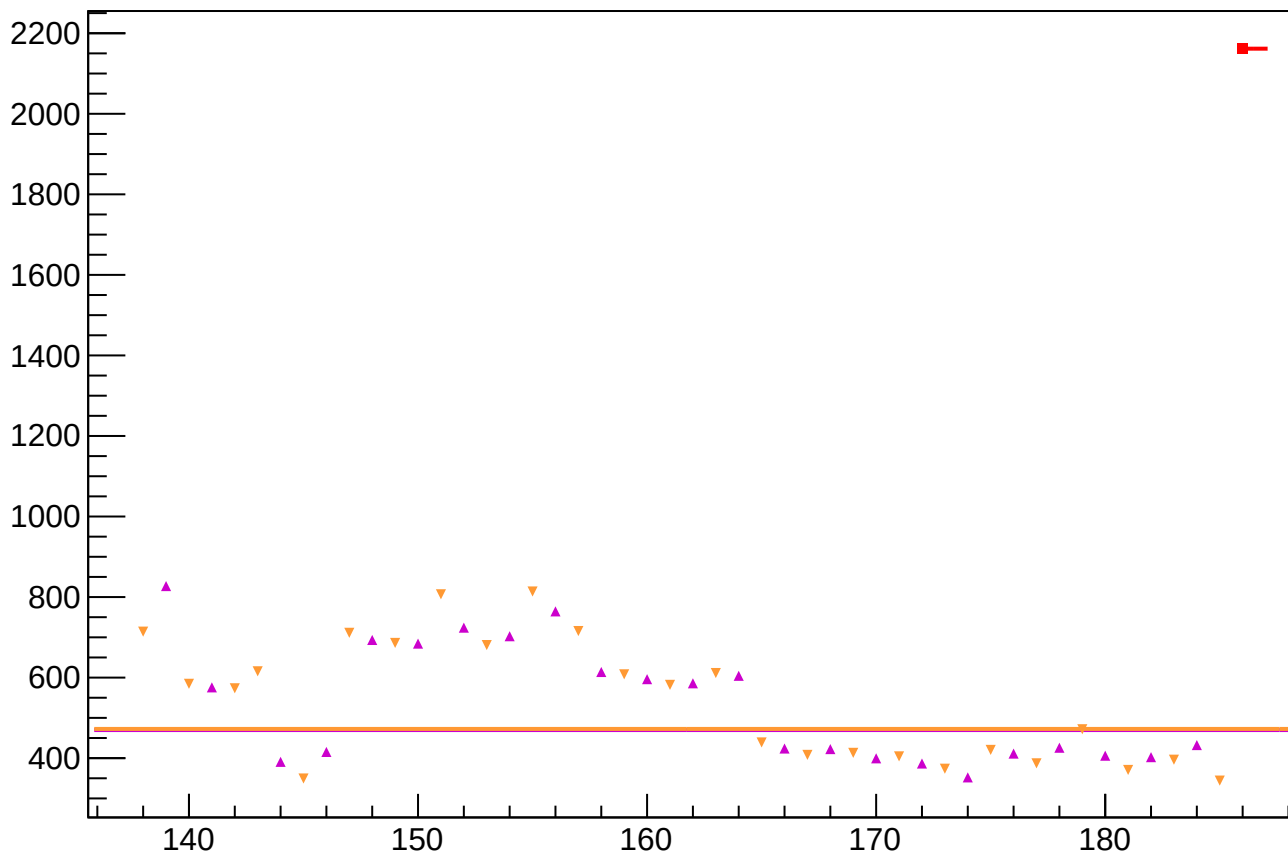
Right: 2310.998+/-3509.061  $\chi^2/\text{NDF}$ : 0.0/0

In: 1.825+/-116.459  $\chi^2/\text{NDF}$ :32.3/22

Out: -429.417+/-114.347  $\chi^2/\text{NDF}$ :60.0/25

All: -217.741+/-81.592  $\chi^2/\text{NDF}$ : 99.3/48

asym\_sam\_3726\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 472.569+/-0.081  $\chi^2/\text{NDF}$ :2508168.9/24

Right Out: 2161.707+/-2.481  $\chi^2/\text{NDF}$ : 0.0/0

Left In: 469.761+/-0.082  $\chi^2/\text{NDF}$ :2116885.7/22

Left: 471.190+/-0.058  $\chi^2/\text{NDF}$ : 4625646.2/47

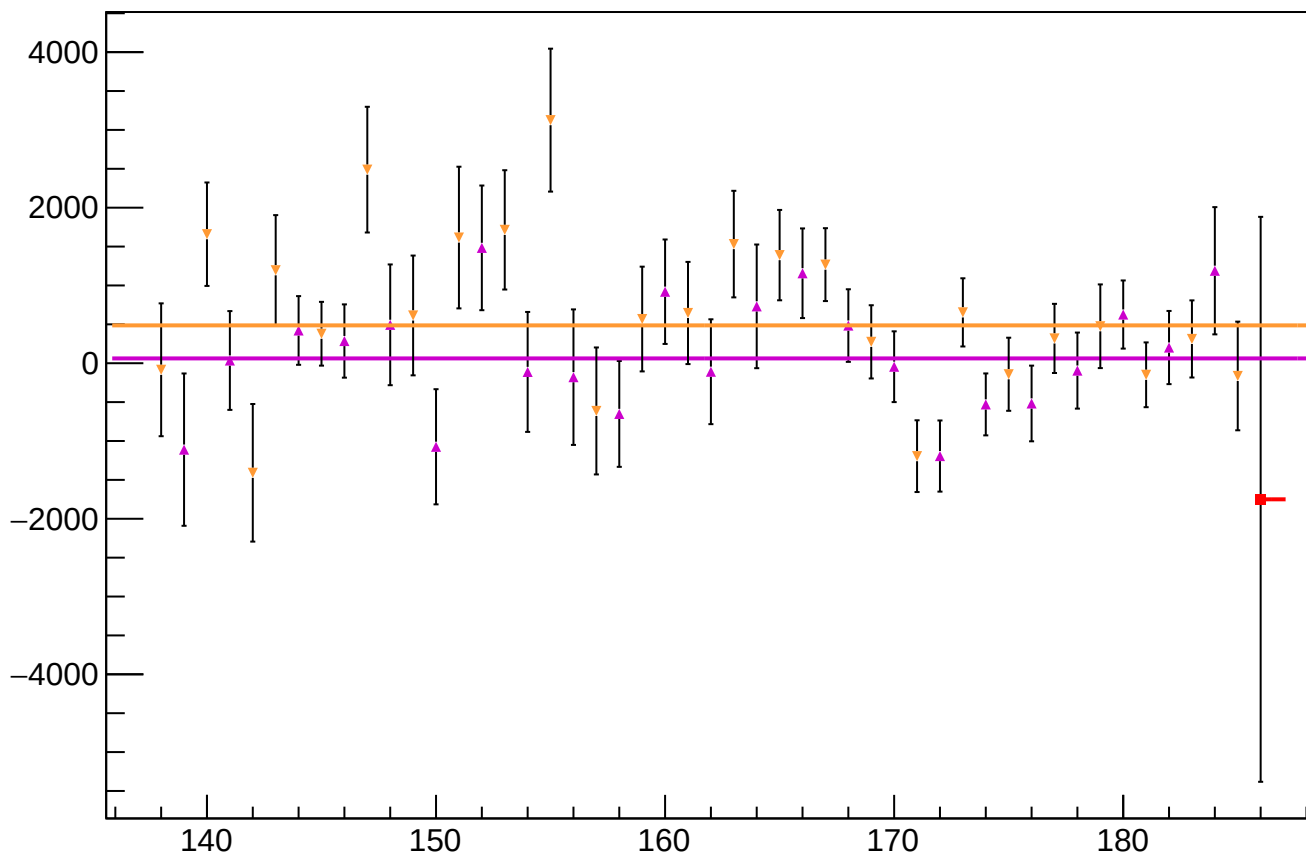
Right: 2161.707+/-2.481  $\chi^2/\text{NDF}$ : 0.0/0

In: 469.761+/-0.082  $\chi^2/\text{NDF}$ :2116885.7/22

Out: 474.362+/-0.081  $\chi^2/\text{NDF}$ :2971100.7/25

All: 472.104+/-0.058  $\chi^2/\text{NDF}$ : 5089576.0/48

# asym\_sam\_3726\_avg\_mean vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Left Out: 486.645 $\pm$ 115.346  $\chi^2$ /NDF:56.0/24

Right Out: -1750.016 $\pm$ 3632.106  $\chi^2$ /NDF: 0.0/0

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

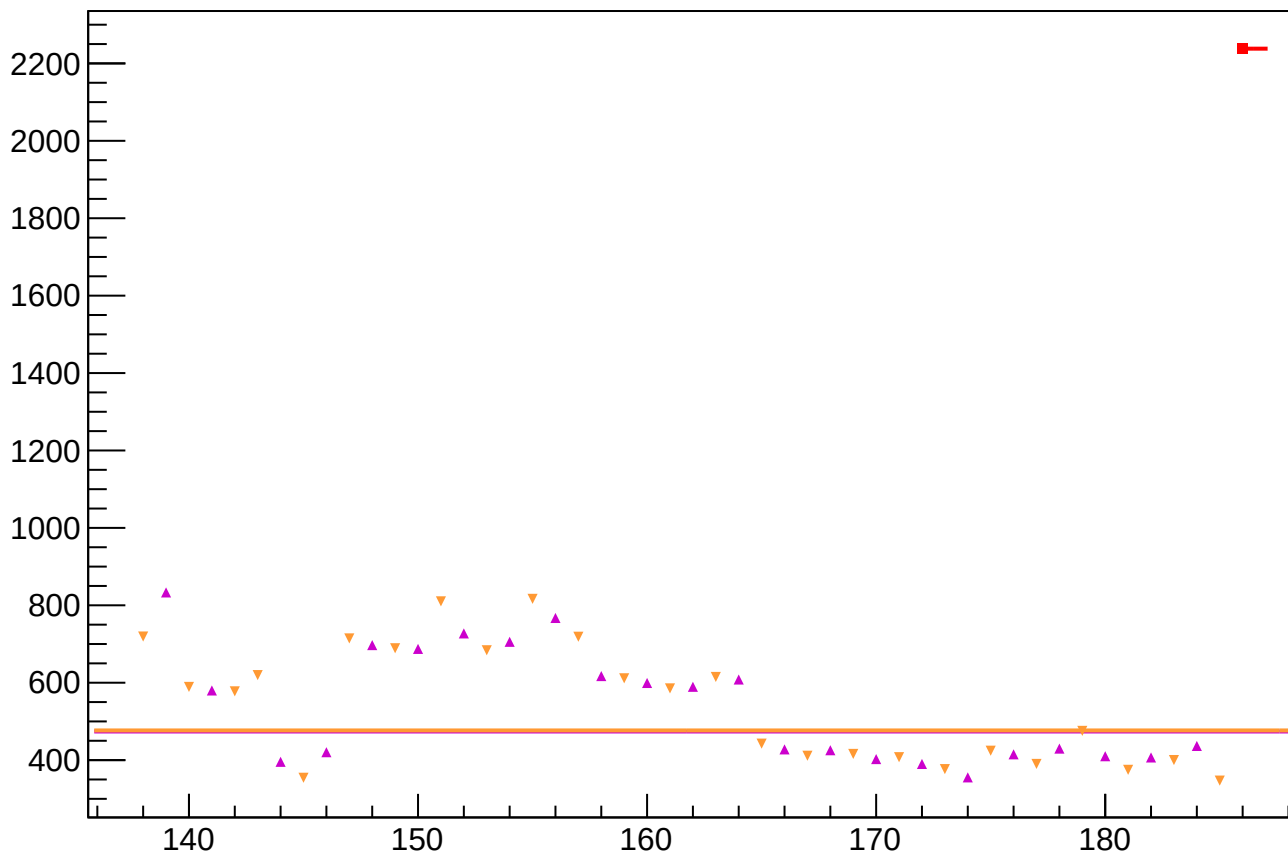
Right: -1750.016 $\pm$ 3632.106  $\chi^2$ /NDF: 0.0/0

In: 61.775 $\pm$ 117.449  $\chi^2$ /NDF:31.2/22

Out: 484.392 $\pm$ 115.288  $\chi^2$ /NDF:56.4/25

All: 277.007 $\pm$ 82.274  $\chi^2$ /NDF: 94.2/48

# asym\_sam\_3726\_avg\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 476.690+/-0.082  $\chi^2/\text{NDF}$ : 2472737.6/24

Right Out: 2238.098+/-2.568  $\chi^2/\text{NDF}$ : 0.0/0

Left In: 473.983+/-0.083  $\chi^2/\text{NDF}$ : 2087113.7/22

Left: 475.361+/-0.058  $\chi^2/\text{NDF}$ : 4560392.0/47

Right: 2238.098+/-2.568  $\chi^2/\text{NDF}$ : 0.0/0

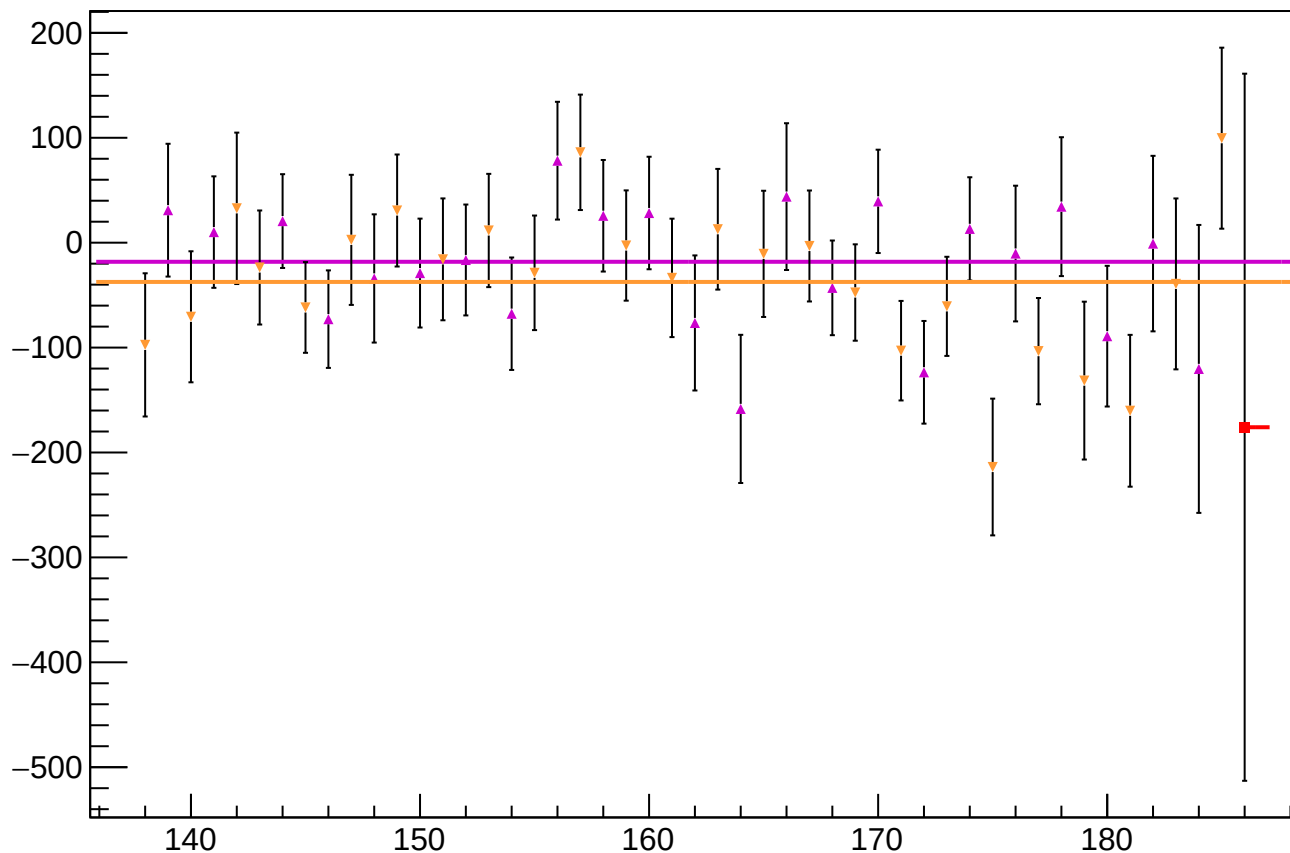
In: 473.983+/-0.083  $\chi^2/\text{NDF}$ : 2087113.7/22

Out: 478.465+/-0.082  $\chi^2/\text{NDF}$ : 2942626.6/25

All: 476.266+/-0.058  $\chi^2/\text{NDF}$ : 5031223.1/48



reg\_asym\_sam\_15\_48\_dd\_mean vs Slug, Sign Corrected



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 0.0/0$

Left Out:  $-37.413 \pm 11.390$   $\chi^2/\text{NDF}: 30.5/24$

Right Out:  $-175.929 \pm 337.026$   $\chi^2/\text{NDF}: 0.0/0$

Left In:  $-18.210 \pm 11.788$   $\chi^2/\text{NDF}: 23.0/22$

Left:  $-28.141 \pm 8.191$   $\chi^2/\text{NDF}: 54.8/47$

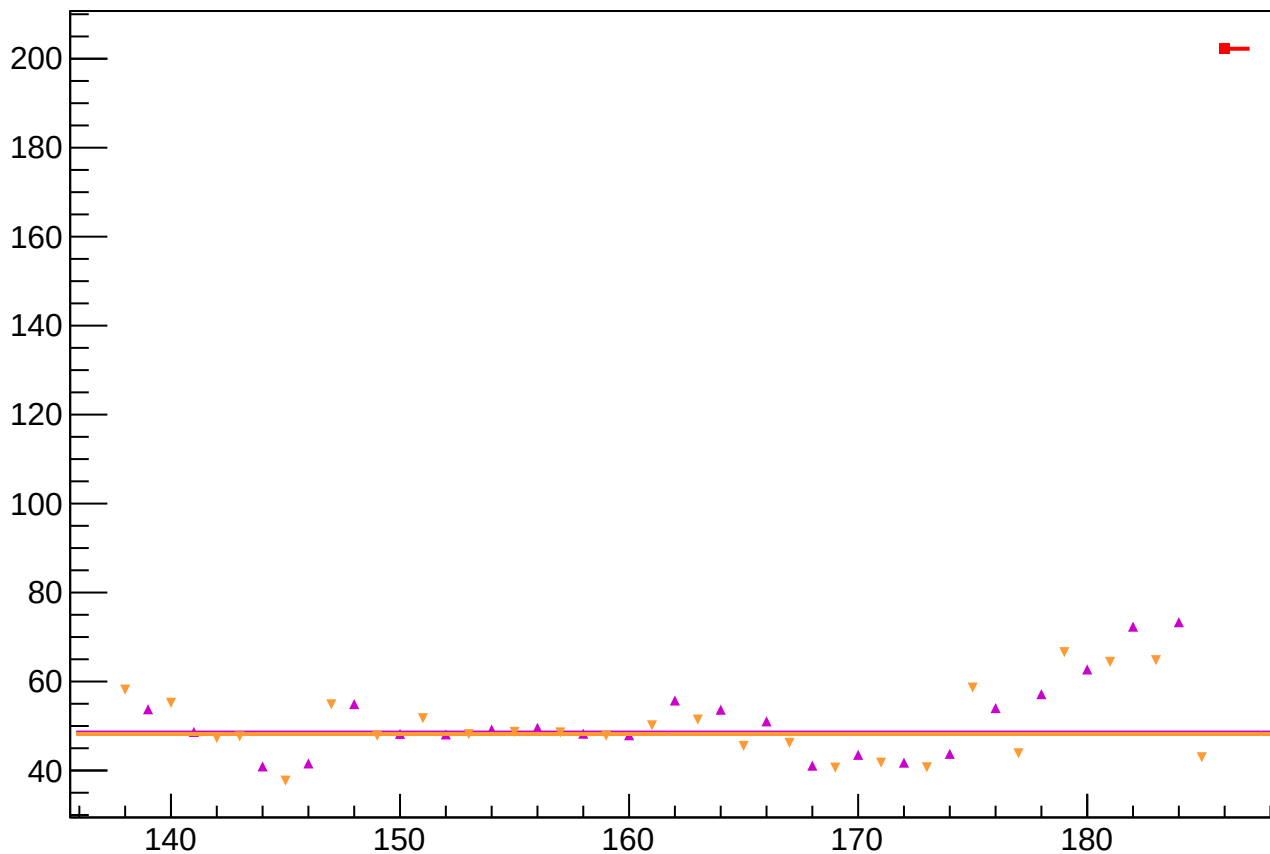
Right:  $-175.929 \pm 337.026$   $\chi^2/\text{NDF}: 0.0/0$

In:  $-18.210 \pm 11.788$   $\chi^2/\text{NDF}: 23.0/22$

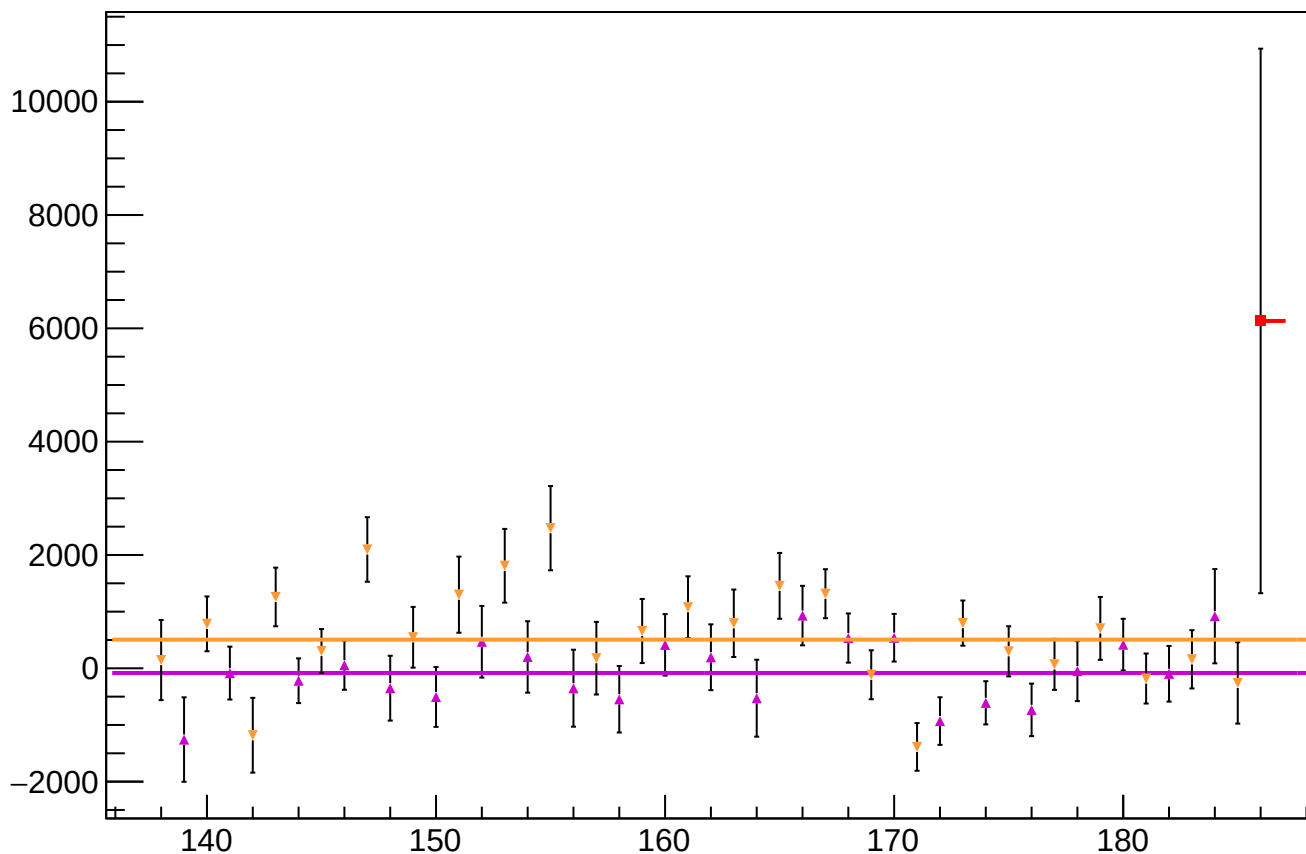
Out:  $-37.571 \pm 11.383$   $\chi^2/\text{NDF}: 30.6/25$

All:  $-28.228 \pm 8.188$   $\chi^2/\text{NDF}: 55.0/48$

reg\_asym\_sam\_15\_48\_dd\_rms vs Slug, Sign Corrected



asym\_sam\_15\_48\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 506.205+/-103.468  $\chi^2/\text{NDF}$ :65.7/24

Right Out: 6130.555+/-4805.433  $\chi^2/\text{NDF}$ : 0.0/0

Left In: -82.421+/-105.935  $\chi^2/\text{NDF}$ :25.3/22

Left: 218.827+/-74.020  $\chi^2/\text{NDF}$ : 106.9/47

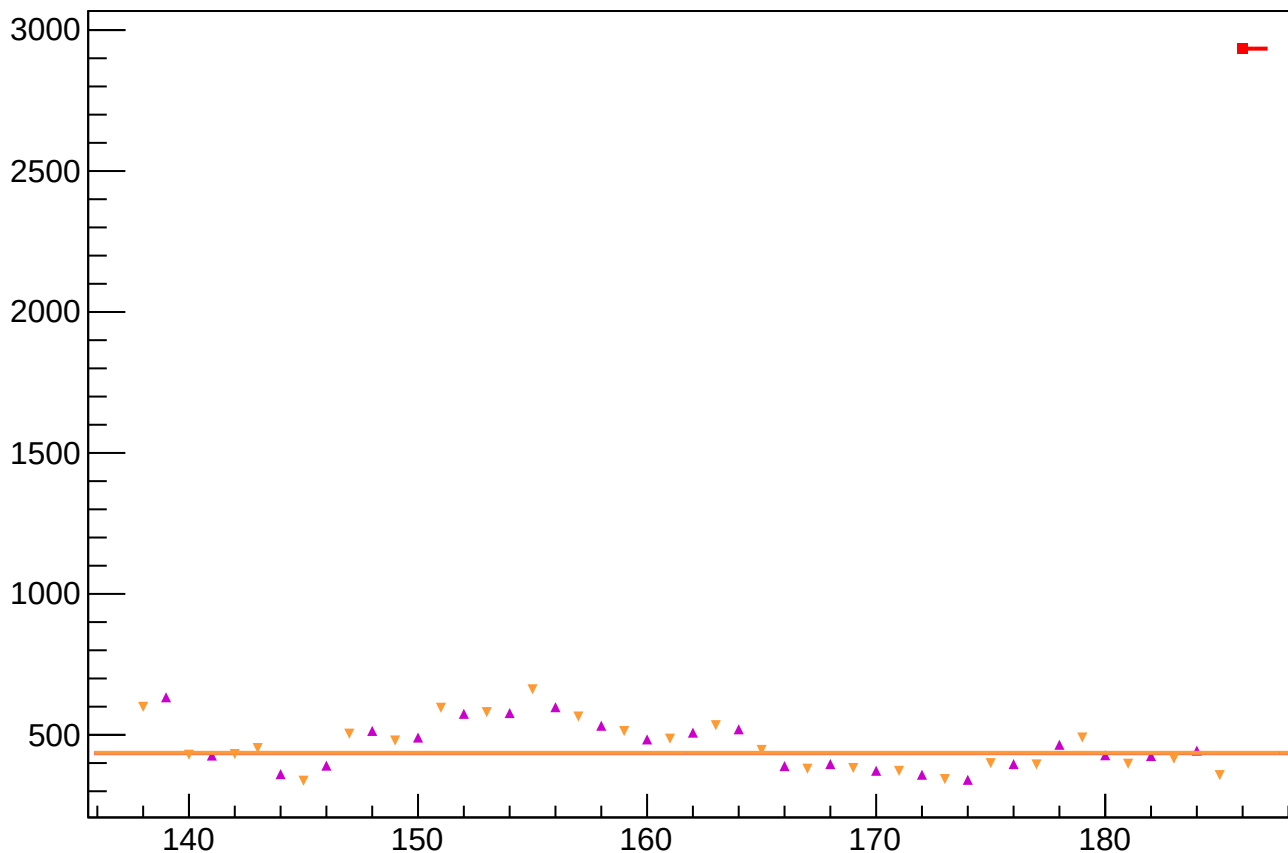
Right: 6130.555+/-4805.433  $\chi^2/\text{NDF}$ : 0.0/0

In: -82.421+/-105.935  $\chi^2/\text{NDF}$ :25.3/22

Out: 508.811+/-103.444  $\chi^2/\text{NDF}$ :67.1/25

All: 220.230+/-74.011  $\chi^2/\text{NDF}$ : 108.4/48

asym\_sam\_15\_48\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 436.301+/-0.073  $\chi^2/\text{NDF}$ :1179348.4/24

Right Out: 2934.195+/-3.398  $\chi^2/\text{NDF}$ : 0.0/0

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

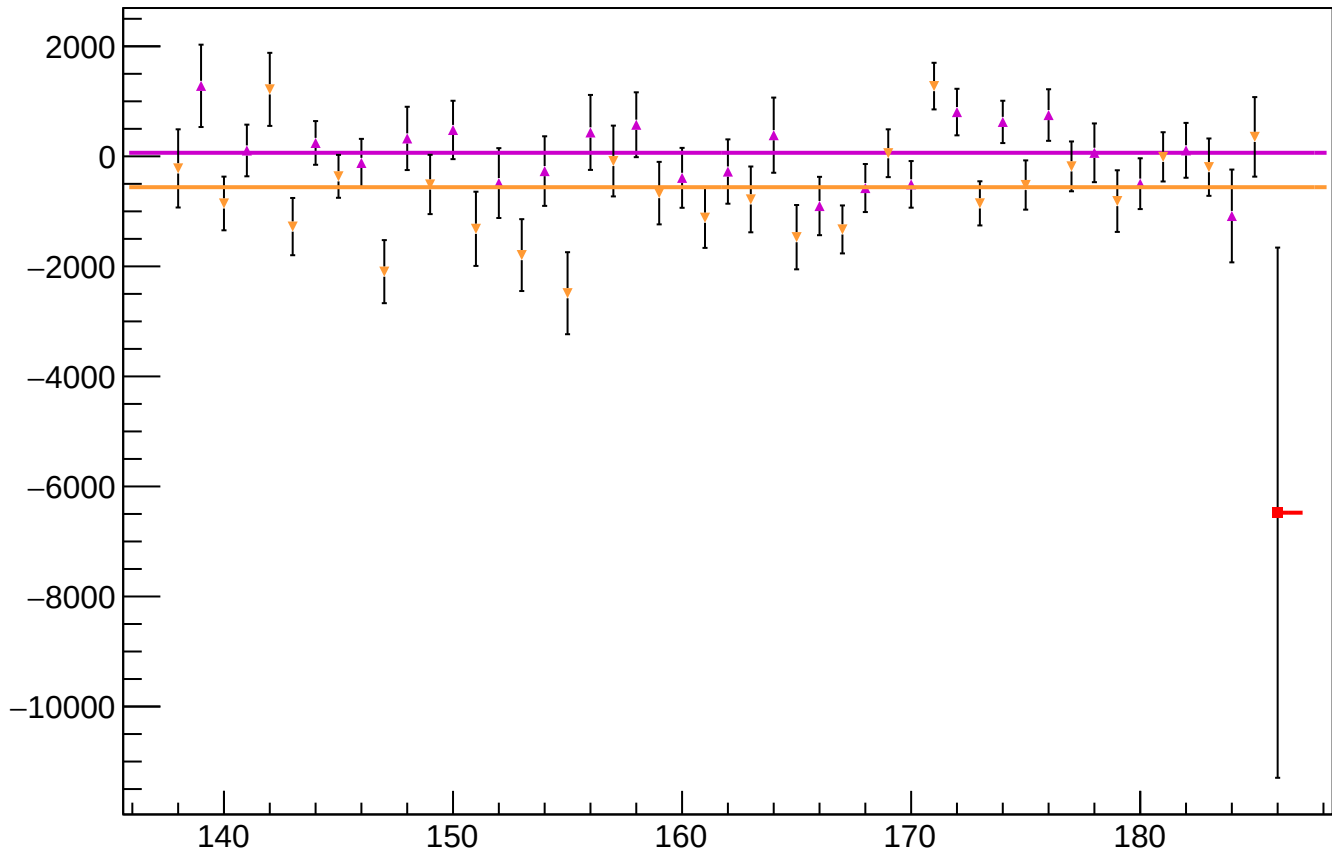
Right: 2934.195+/-3.398  $\chi^2/\text{NDF}$ : 0.0/0

In: 435.275+/-0.075  $\chi^2/\text{NDF}$ :1027713.1/22

Out: 437.459+/-0.073  $\chi^2/\text{NDF}$ :1719494.9/25

All: 436.393+/-0.052  $\chi^2/\text{NDF}$ : 2747643.2/48

asym\_sam\_15\_48\_dd\_mean vs Slug, Sign Corrected



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 0.0/0$

Left Out:  $-560.684 \pm 104.207$   $\chi^2/\text{NDF}: 61.8/24$

Right Out:  $-6476.893 \pm 4818.554$   $\chi^2/\text{NDF}: 0.0/0$

Left In:  $64.594 \pm 106.708$   $\chi^2/\text{NDF}: 25.2/22$

Left:  $-255.457 \pm 74.554$   $\chi^2/\text{NDF}: 104.5/47$

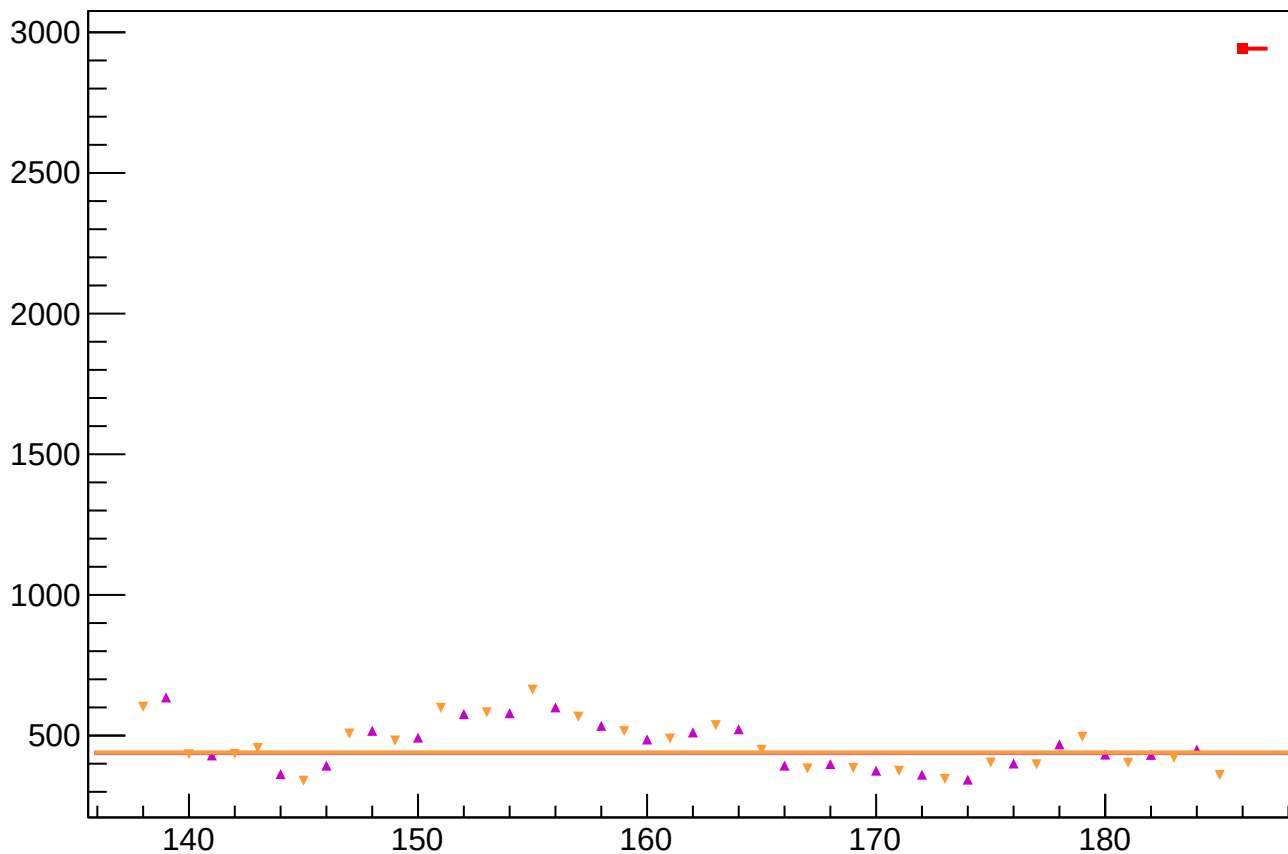
Right:  $-6476.893 \pm 4818.554$   $\chi^2/\text{NDF}: 0.0/0$

In:  $64.594 \pm 106.708$   $\chi^2/\text{NDF}: 25.2/22$

Out:  $-563.450 \pm 104.183$   $\chi^2/\text{NDF}: 63.3/25$

All:  $-256.946 \pm 74.545$   $\chi^2/\text{NDF}: 106.2/48$

# asym\_sam\_15\_48\_dd\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 439.527+/-0.074  $\chi^2/\text{NDF}$ :1163352.8/24

Right Out: 2942.010+/-3.407  $\chi^2/\text{NDF}$ : 0.0/0

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

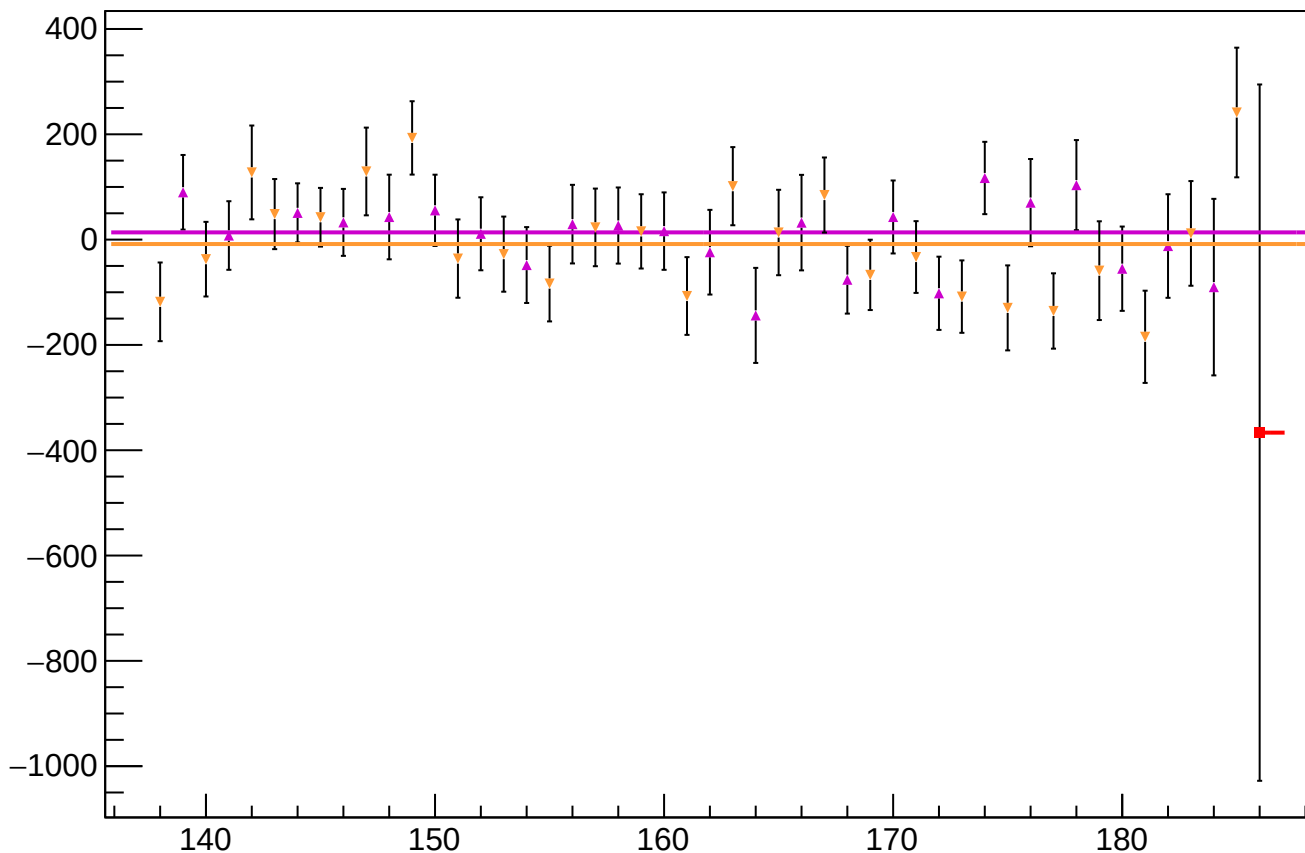
Right: 2942.010+/-3.407  $\chi^2/\text{NDF}$ : 0.0/0

In: 438.548+/-0.075  $\chi^2/\text{NDF}$ :1013071.4/22

Out: 440.697+/-0.074  $\chi^2/\text{NDF}$ :1702535.1/25

All: 439.648+/-0.053  $\chi^2/\text{NDF}$ : 2716021.9/48

reg\_asym\_sam\_37\_48\_dd\_mean vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -8.416+/-14.935  $\chi^2/\text{NDF}$ : 41.6/24

Right Out: -366.581+/-661.204  $\chi^2/\text{NDF}$ : 0.0/0

Left In: 13.723+/-15.478  $\chi^2/\text{NDF}$ : 16.3/22

Left: 2.258+/-10.747  $\chi^2/\text{NDF}$ : 58.9/47

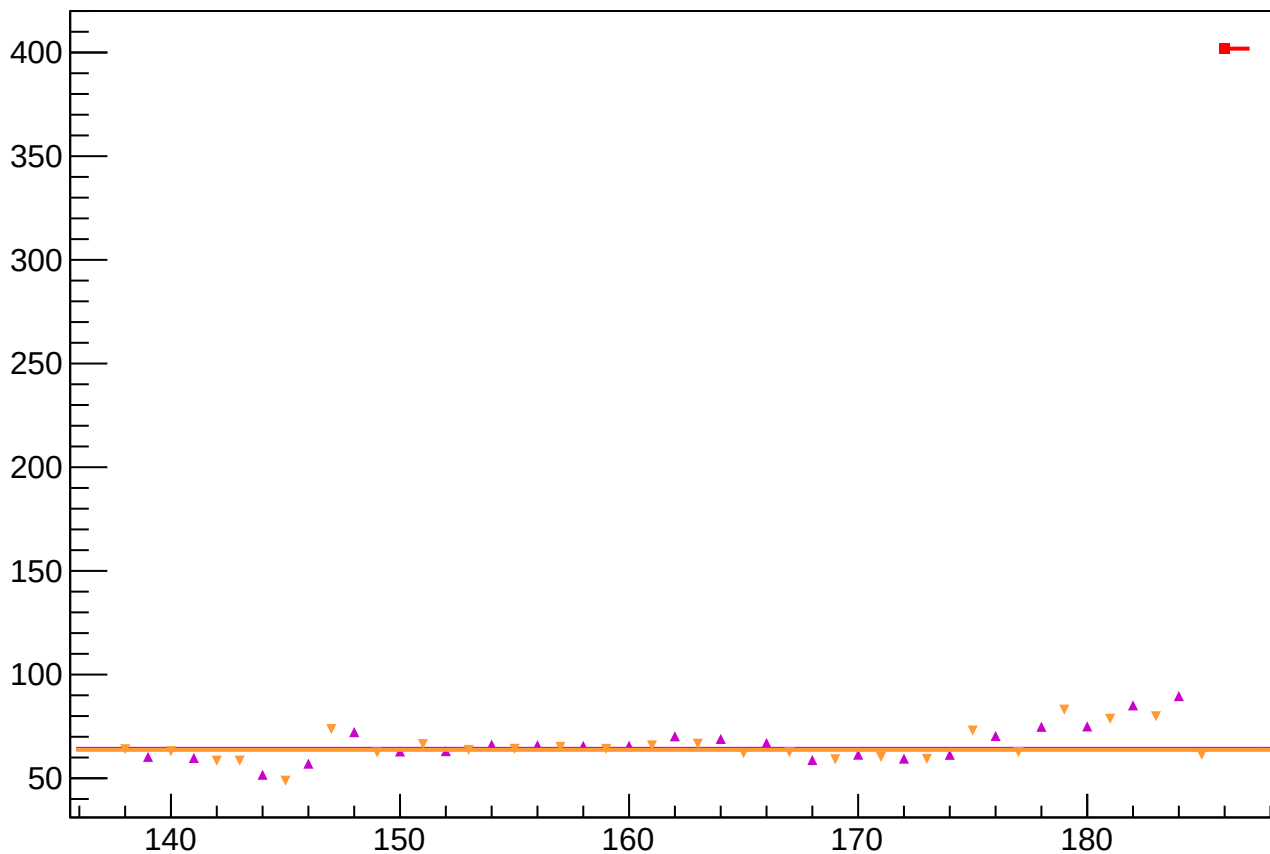
Right: -366.581+/-661.204  $\chi^2/\text{NDF}$ : 0.0/0

In: 13.723+/-15.478  $\chi^2/\text{NDF}$ : 16.3/22

Out: -8.599+/-14.931  $\chi^2/\text{NDF}$ : 41.9/25

All: 2.161+/-10.746  $\chi^2/\text{NDF}$ : 59.2/48

reg\_asym\_sam\_37\_48\_dd\_rms vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Left Out: 63.696 $\pm$ 0.011  $\chi^2$ /NDF:448439.3/24

Right Out: 401.865 $\pm$ 0.468  $\chi^2$ /NDF: 0.0/0

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: 401.865 $\pm$ 0.468  $\chi^2$ /NDF: 0.0/0

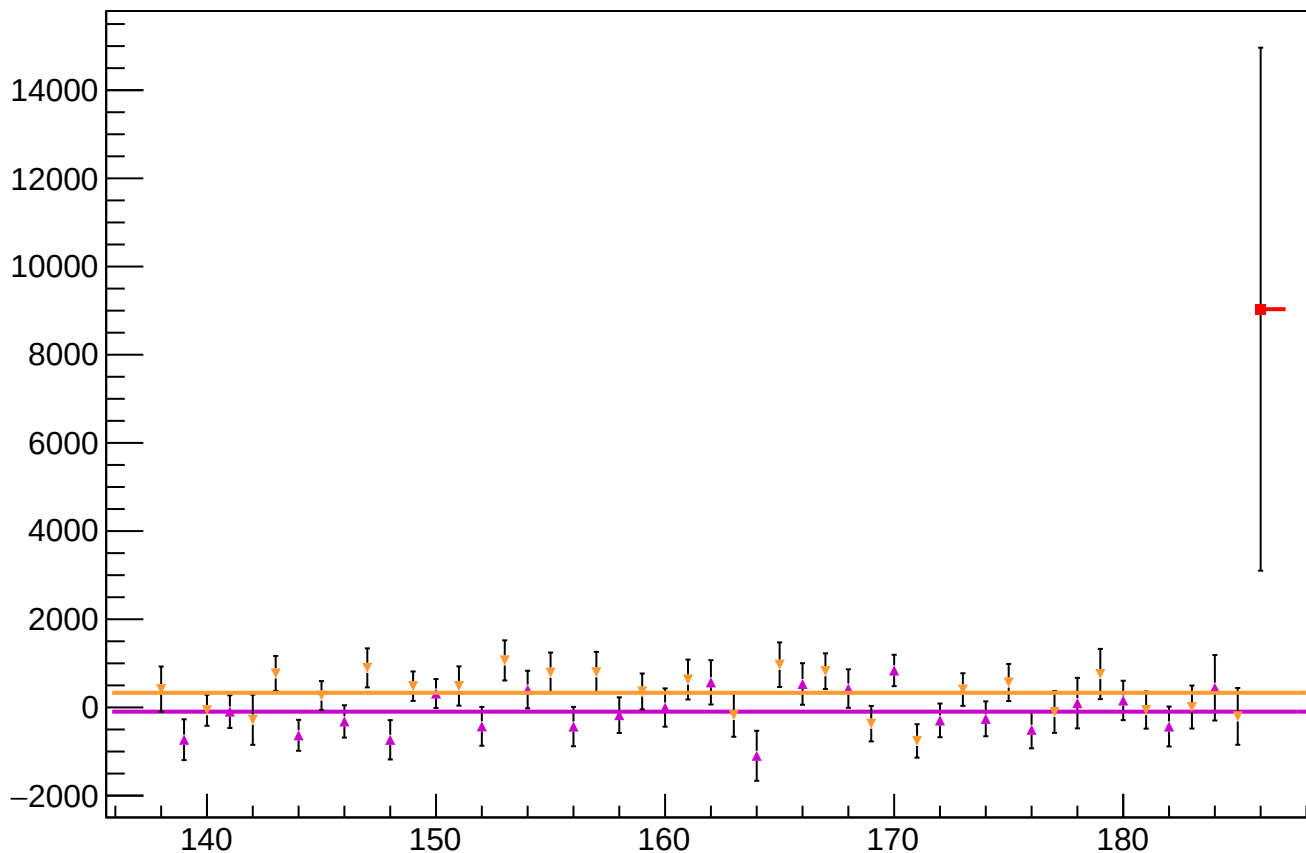
In: 64.189 $\pm$ 0.011  $\chi^2$ /NDF:429670.3/22

Out: 63.868 $\pm$ 0.011  $\chi^2$ /NDF:971321.3/25

All: 64.023 $\pm$ 0.008  $\chi^2$ /NDF: 1401436.4/48



asym\_sam\_37\_48\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 331.739+/-86.071  $\chi^2/\text{NDF}$ :29.9/24

Right Out: 9032.937+/-5931.328  $\chi^2/\text{NDF}$ : 0.0/0

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

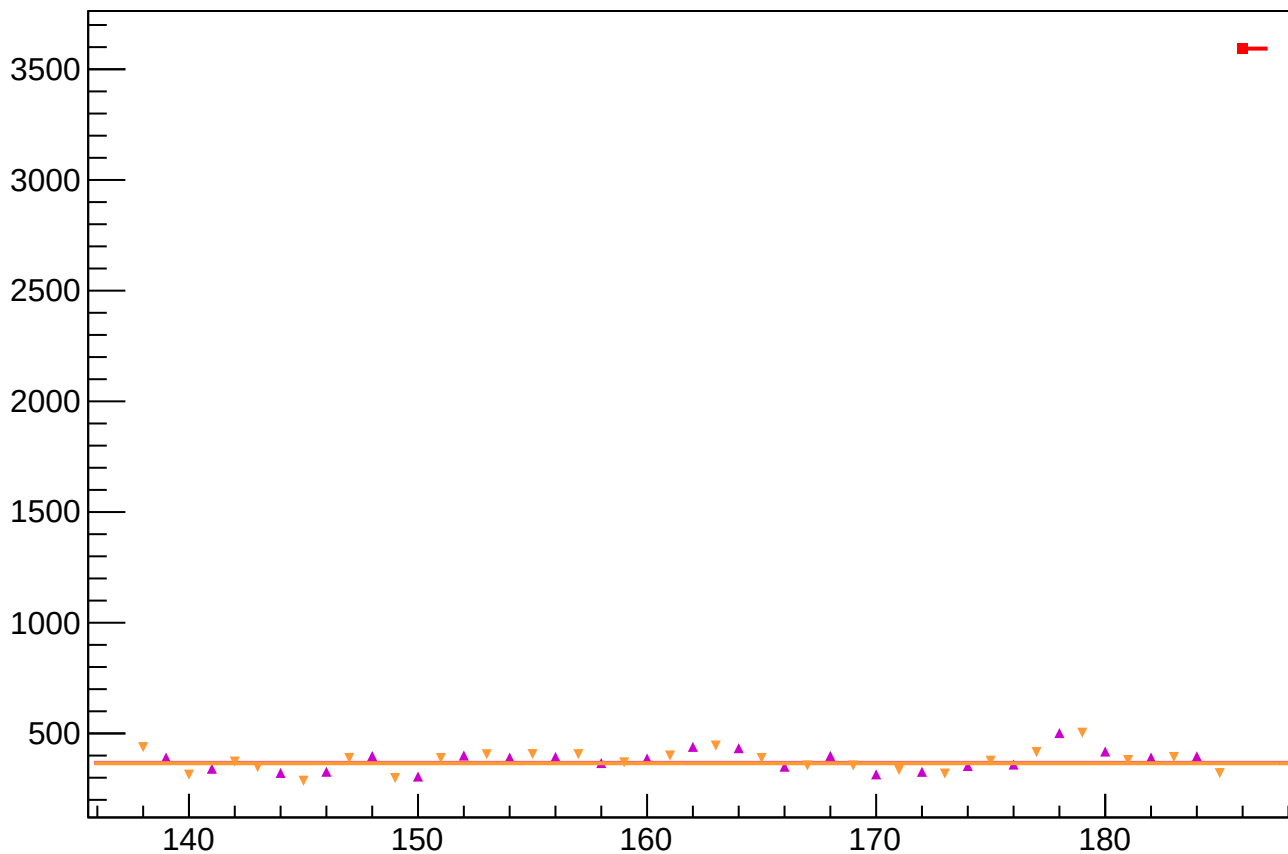
Right: 9032.937+/-5931.328  $\chi^2/\text{NDF}$ : 0.0/0

In: -95.910+/-88.656  $\chi^2/\text{NDF}$ :28.7/22

Out: 333.571+/-86.062  $\chi^2/\text{NDF}$ :32.0/25

All: 125.206+/-61.752  $\chi^2/\text{NDF}$ : 72.8/48

asym\_sam\_37\_48\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 365.355+/-0.061  $\chi^2/\text{NDF}$ : 618453.7/24

Right Out: 3593.341+/-4.194  $\chi^2/\text{NDF}$ : 0.0/0

Left In: 366.925+/-0.063  $\chi^2/\text{NDF}$ : 478082.1/22

Left: 366.117+/-0.044  $\chi^2/\text{NDF}$ : 1096858.5/47

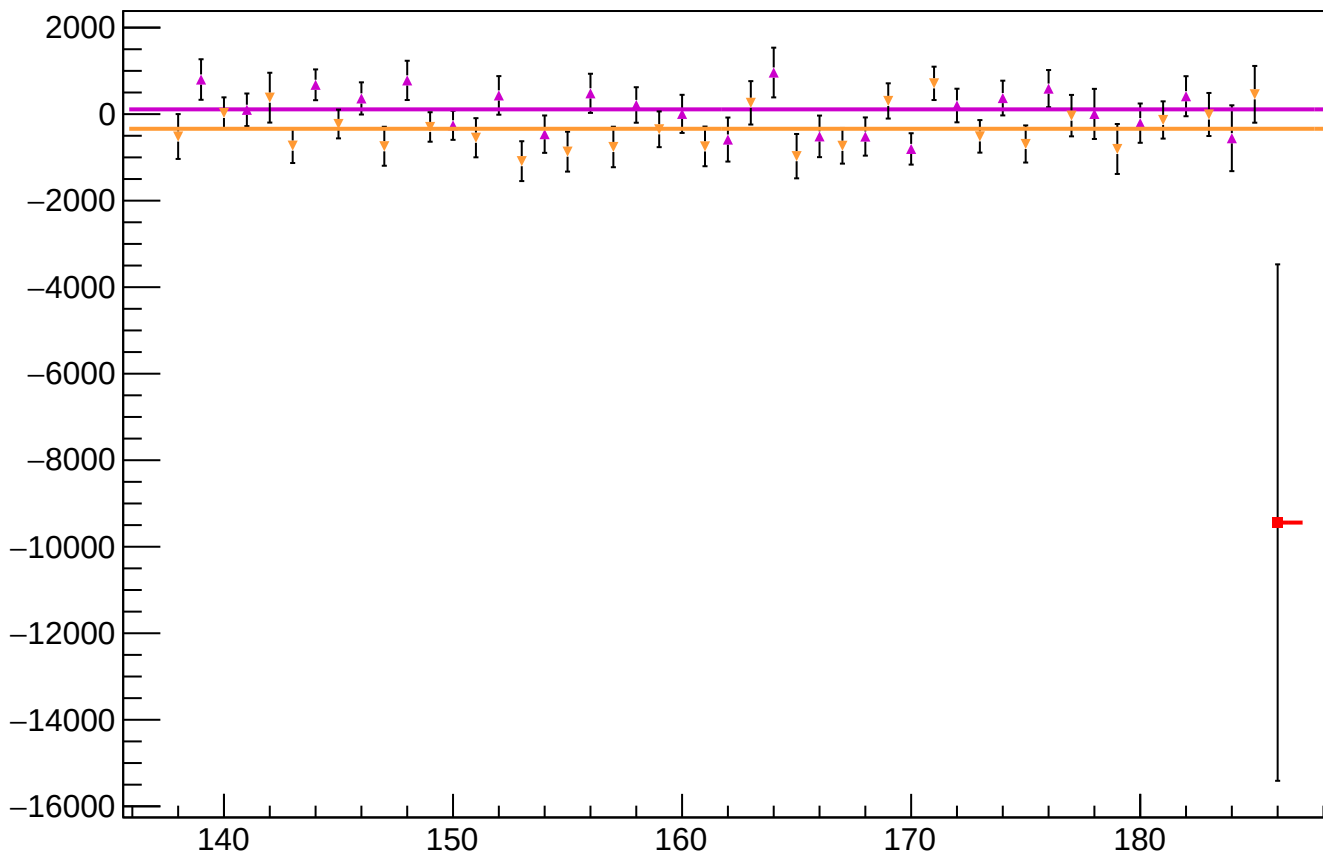
Right: 3593.341+/-4.194  $\chi^2/\text{NDF}$ : 0.0/0

In: 366.925+/-0.063  $\chi^2/\text{NDF}$ : 478082.1/22

Out: 366.035+/-0.061  $\chi^2/\text{NDF}$ : 1210694.1/25

All: 366.467+/-0.044  $\chi^2/\text{NDF}$ : 1688880.0/48

# asym\_sam\_37\_48\_dd\_mean vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -338.528+/-87.450  $\chi^2/\text{NDF}$ :28.2/24

Right Out: -9441.407+/-5969.101  $\chi^2/\text{NDF}$ : 0.0/0

Left In: 110.341+/-90.084  $\chi^2/\text{NDF}$ :29.2/22

Left: -120.751+/-62.747  $\chi^2/\text{NDF}$ : 70.2/47

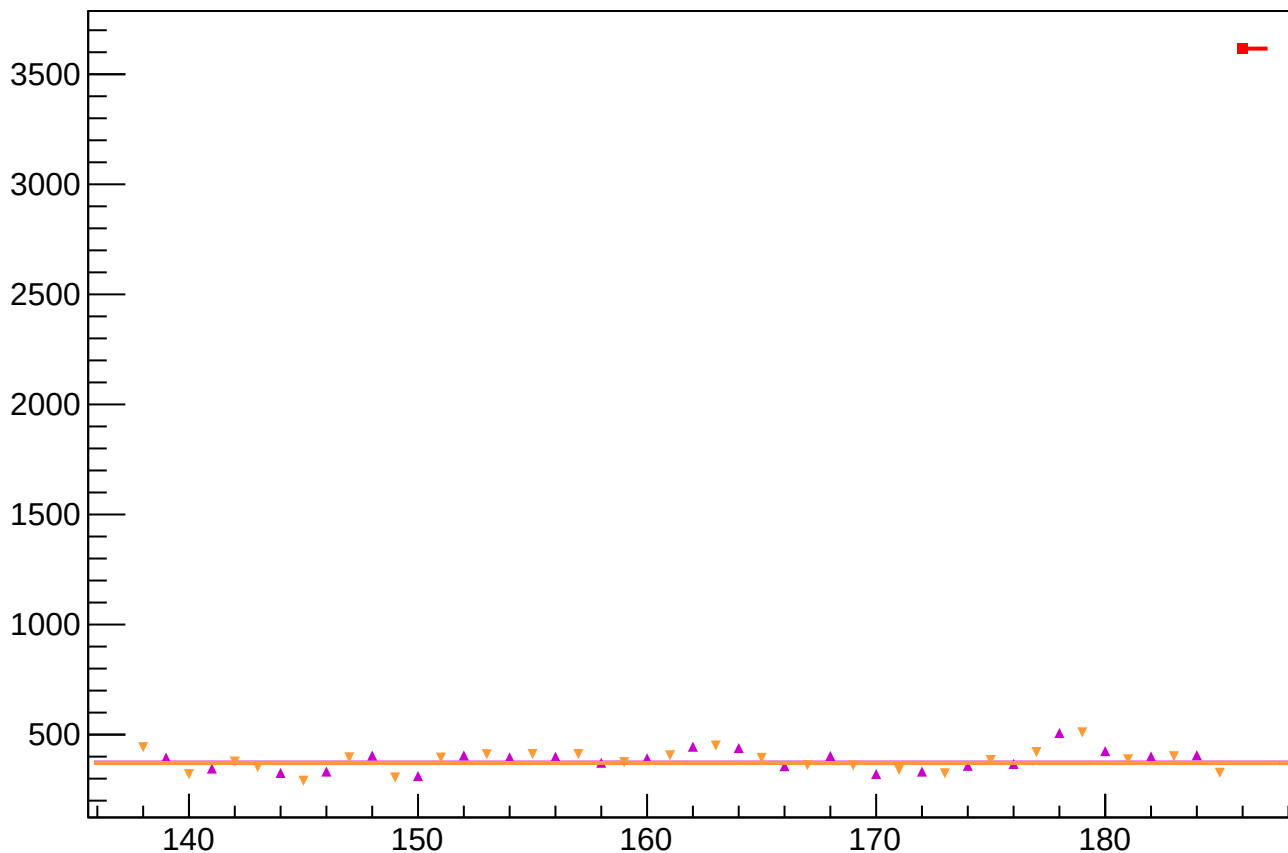
Right: -9441.407+/-5969.101  $\chi^2/\text{NDF}$ : 0.0/0

In: 110.341+/-90.084  $\chi^2/\text{NDF}$ :29.2/22

Out: -340.482+/-87.441  $\chi^2/\text{NDF}$ :30.5/25

All: -121.781+/-62.744  $\chi^2/\text{NDF}$ : 72.7/48

# asym\_sam\_37\_48\_dd\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 371.356+/-0.062  $\chi^2/\text{NDF}$ : 604070.6/24

Right Out: 3616.538+/-4.221  $\chi^2/\text{NDF}$ : 0.0/0

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

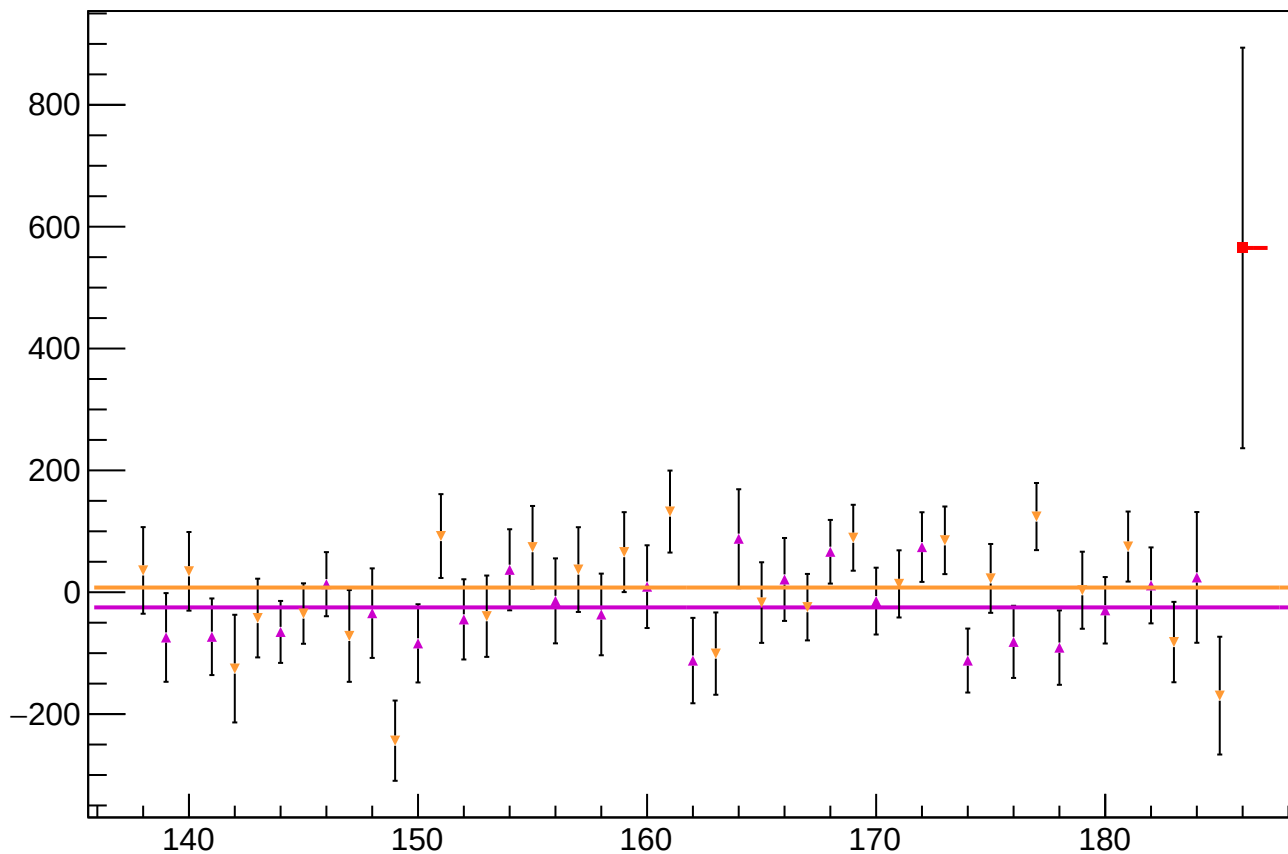
Right: 3616.538+/-4.221  $\chi^2/\text{NDF}$ : 0.0/0

In: 372.938+/-0.064  $\chi^2/\text{NDF}$ : 467340.9/22

Out: 372.052+/-0.062  $\chi^2/\text{NDF}$ : 1195083.8/25

All: 372.482+/-0.044  $\chi^2/\text{NDF}$ : 1662524.2/48

reg\_asym\_sam\_15\_26\_dd\_mean vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 7.723+/-12.656  $\chi^2/\text{NDF}$ :45.4/24

Right Out: 565.110+/-328.739  $\chi^2/\text{NDF}$ : 0.0/0

Left In: -24.887+/-13.029  $\chi^2/\text{NDF}$ :19.7/22

Left: -8.108+/-9.078  $\chi^2/\text{NDF}$ : 68.4/47

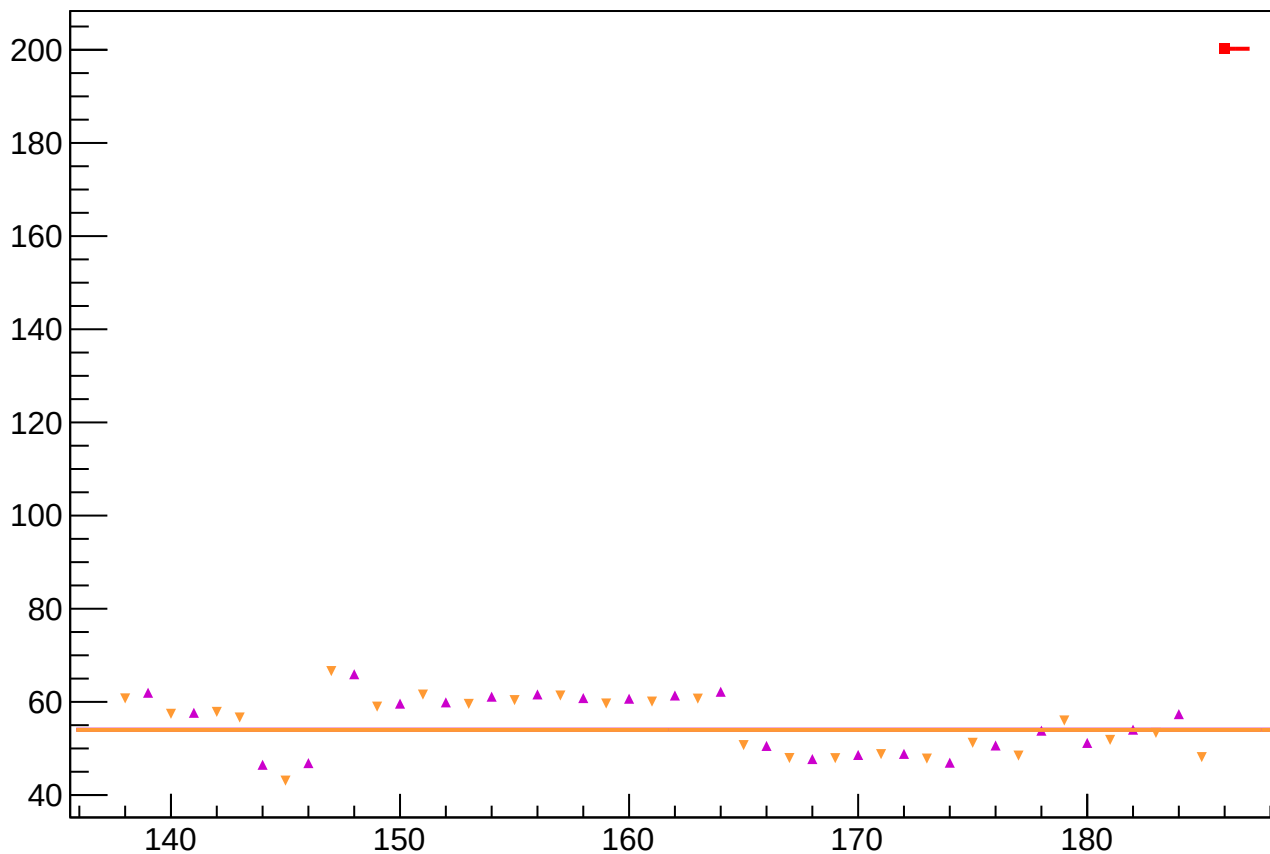
Right: 565.110+/-328.739  $\chi^2/\text{NDF}$ : 0.0/0

In: -24.887+/-13.029  $\chi^2/\text{NDF}$ :19.7/22

Out: 8.548+/-12.646  $\chi^2/\text{NDF}$ :48.3/25

All: -7.672+/-9.074  $\chi^2/\text{NDF}$ : 71.4/48

reg\_asym\_sam\_15\_26\_dd\_rms vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Left Out: 53.984 $\pm$ 0.009  $\chi^2$ /NDF:458972.1/24

Right Out: 200.225 $\pm$ 0.232  $\chi^2$ /NDF: 0.0/0

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

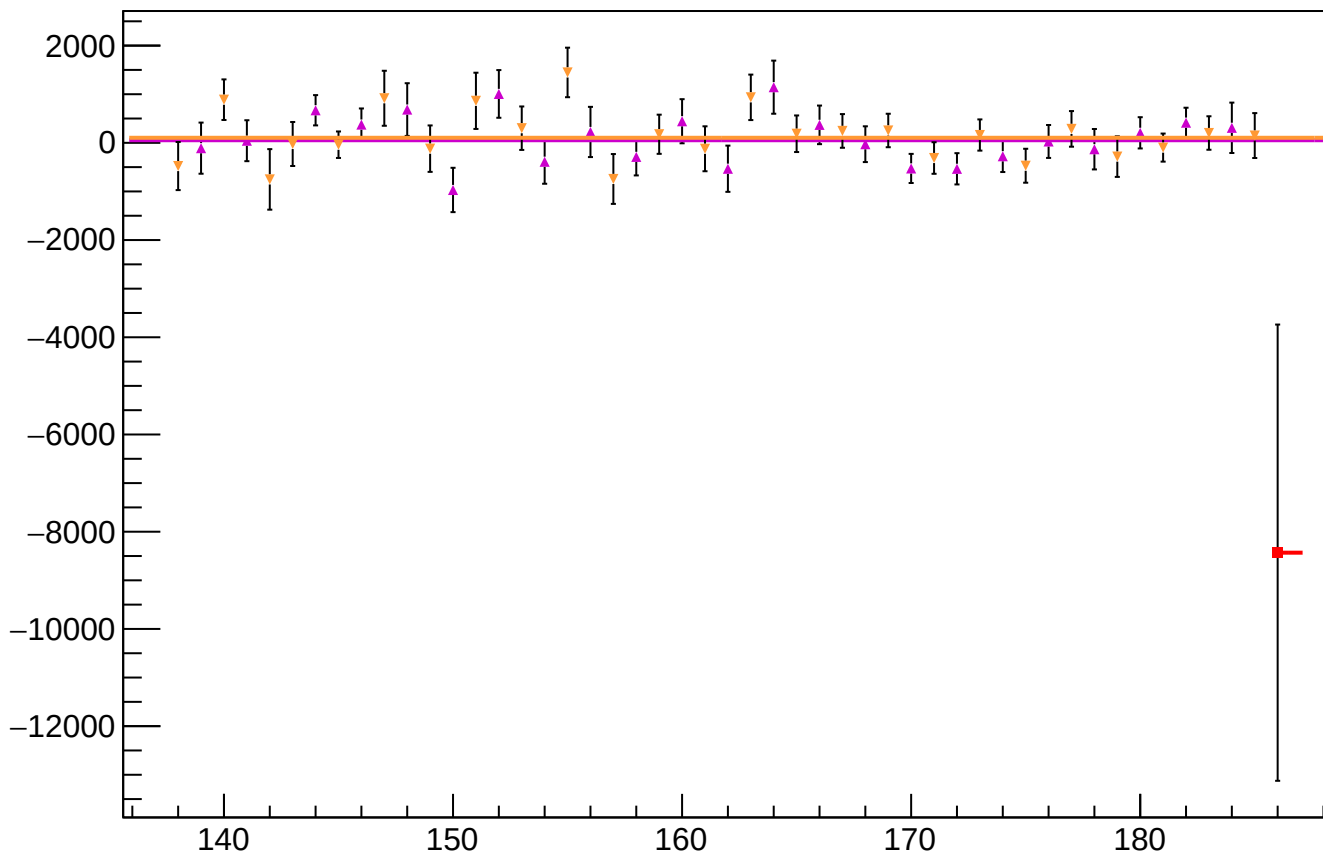
Right: 200.225 $\pm$ 0.232  $\chi^2$ /NDF: 0.0/0

In: 54.028 $\pm$ 0.009  $\chi^2$ /NDF:443819.5/22

Out: 54.200 $\pm$ 0.009  $\chi^2$ /NDF:854179.3/25

All: 54.116 $\pm$ 0.006  $\chi^2$ /NDF: 1298179.1/48

asym\_sam\_15\_26\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 103.768+/-79.344  $\chi^2/\text{NDF}$ :31.0/24

Right Out: -8431.254+/-4692.802  $\chi^2/\text{NDF}$ : 0.0/0

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

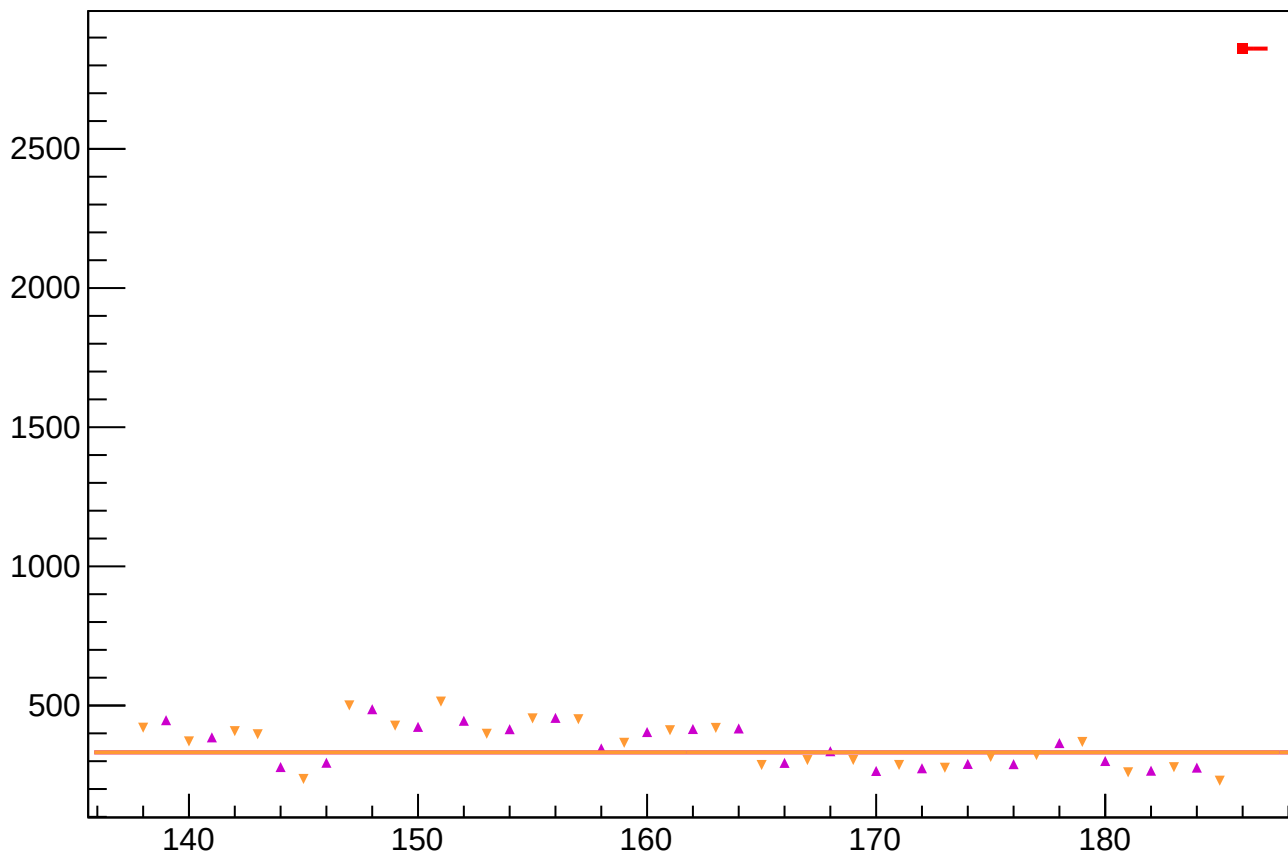
Right: -8431.254+/-4692.802  $\chi^2/\text{NDF}$ : 0.0/0

In: 53.493+/-81.201  $\chi^2/\text{NDF}$ :34.1/22

Out: 101.328+/-79.333  $\chi^2/\text{NDF}$ :34.3/25

All: 77.967+/-56.746  $\chi^2/\text{NDF}$ : 68.6/48

asym\_sam\_15\_26\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 331.770+/-0.056  $\chi^2/\text{NDF}$ : 1711721.9/24

Right Out: 2860.394+/-3.318  $\chi^2/\text{NDF}$ : 0.0/0

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: 2860.394+/-3.318  $\chi^2/\text{NDF}$ : 0.0/0

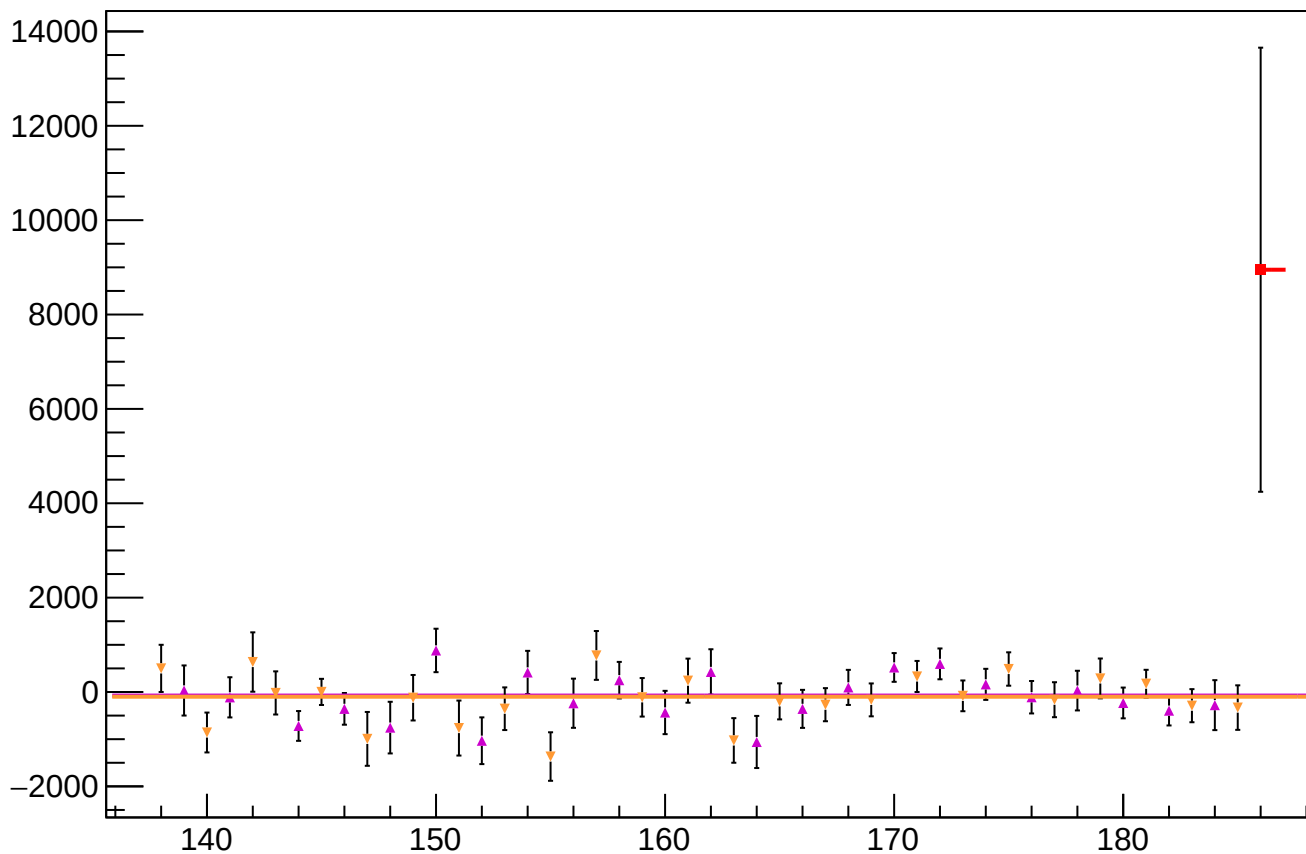
In: 331.666+/-0.057  $\chi^2/\text{NDF}$ : 1303192.2/22

Out: 332.493+/-0.056  $\chi^2/\text{NDF}$ : 2292231.9/25

All: 332.089+/-0.040  $\chi^2/\text{NDF}$ : 3595530.3/48



# asym\_sam\_15\_26\_dd\_mean vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -99.785+/-80.428  $\chi^2/\text{NDF}$ :30.7/24

Right Out: 8949.643+/-4706.210  $\chi^2/\text{NDF}$ : 0.0/0

Left In: -75.579+/-82.319  $\chi^2/\text{NDF}$ :32.1/22

Left: -87.963+/-57.528  $\chi^2/\text{NDF}$ : 62.8/47

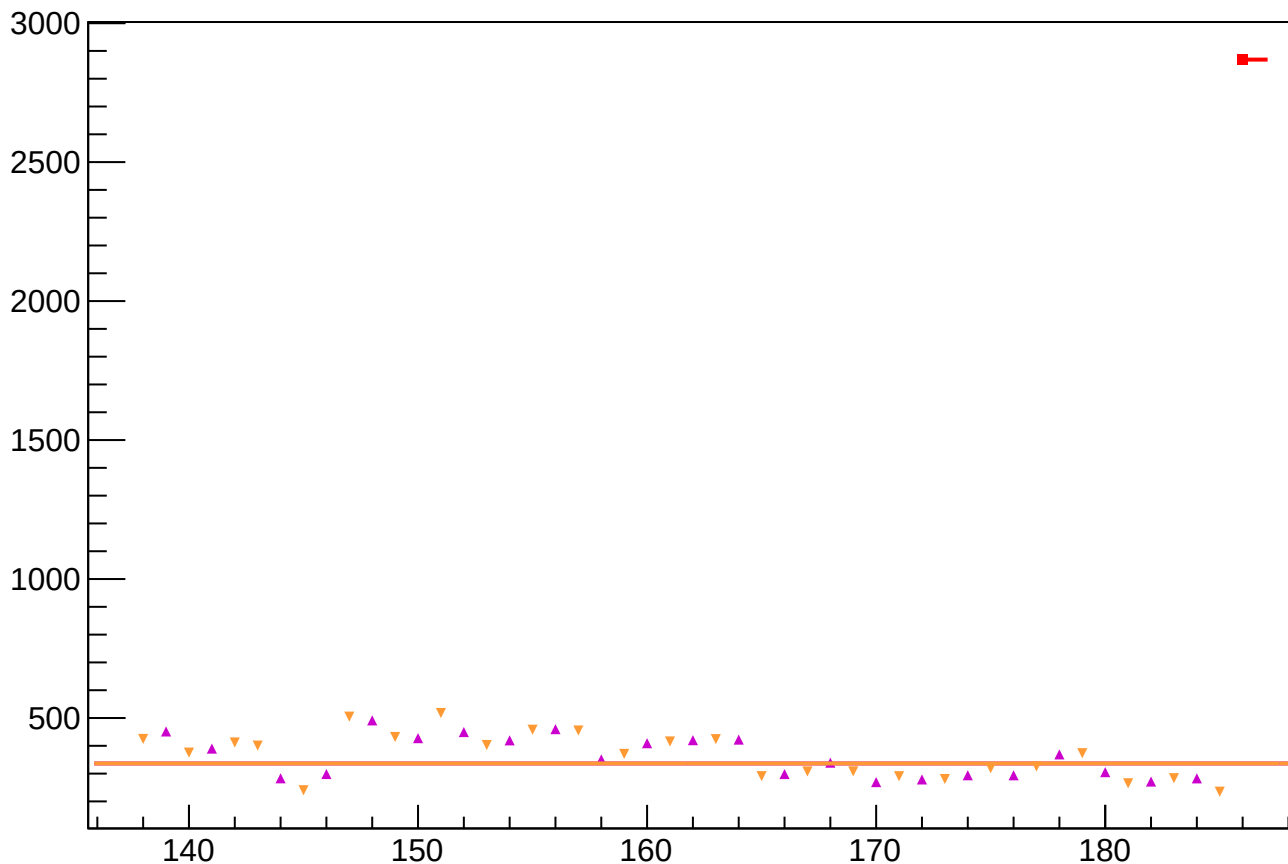
Right: 8949.643+/-4706.210  $\chi^2/\text{NDF}$ : 0.0/0

In: -75.579+/-82.319  $\chi^2/\text{NDF}$ :32.1/22

Out: -97.143+/-80.416  $\chi^2/\text{NDF}$ :34.4/25

All: -86.613+/-57.524  $\chi^2/\text{NDF}$ : 66.5/48

asym\_sam\_15\_26\_dd\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 336.557+/-0.057  $\chi^2/\text{NDF}$ :1665919.4/24

Right Out: 2868.780+/-3.328  $\chi^2/\text{NDF}$ : 0.0/0

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

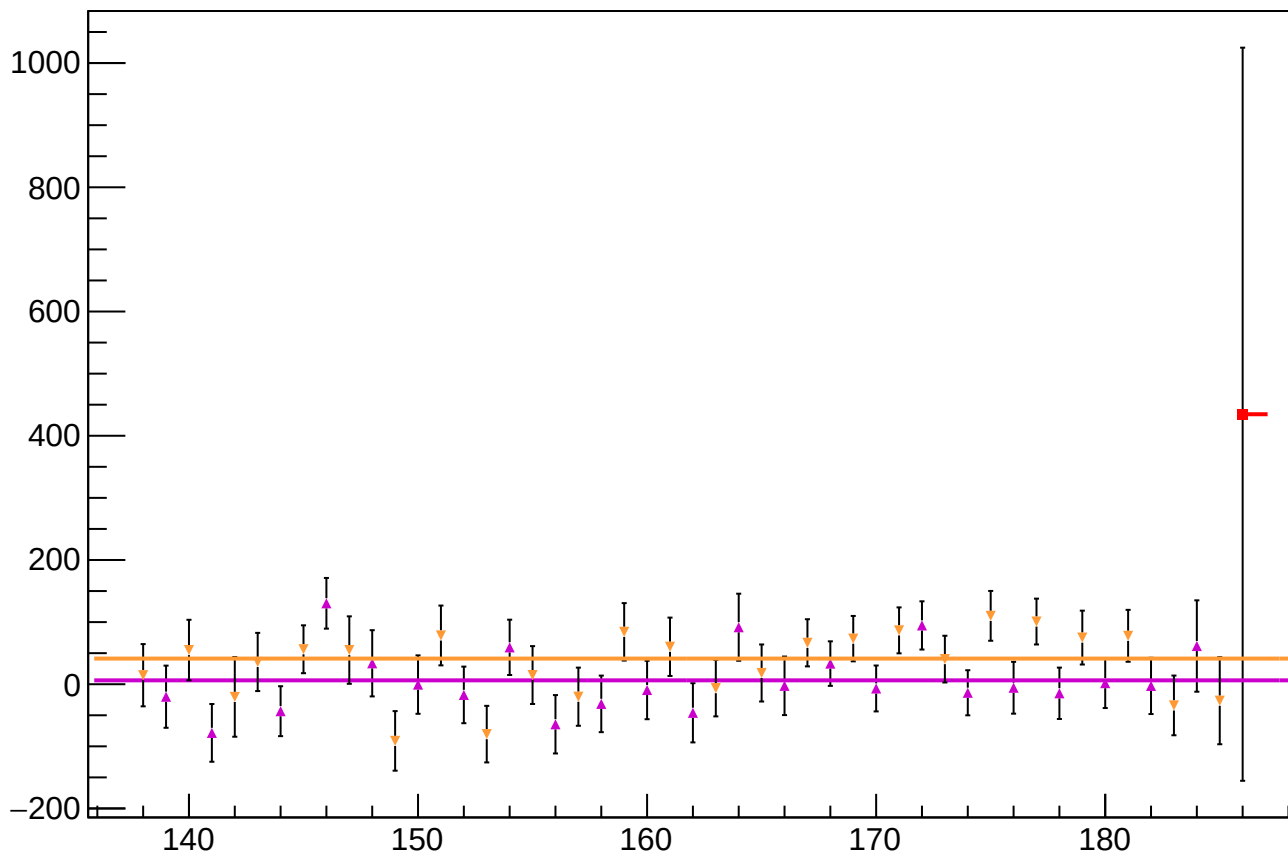
Right: 2868.780+/-3.328  $\chi^2/\text{NDF}$ : 0.0/0

In: 336.439+/-0.058  $\chi^2/\text{NDF}$ :1269066.3/22

Out: 337.297+/-0.057  $\chi^2/\text{NDF}$ :2244767.0/25

All: 336.878+/-0.041  $\chi^2/\text{NDF}$ : 3513944.4/48

reg\_asym\_sam\_37\_26\_dd\_mean vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Left Out: 41.283 $\pm$ 8.889  $\chi^2$ /NDF:34.4/24

Right Out: 434.648 $\pm$ 590.122  $\chi^2$ /NDF: 0.0/0

Left In: 6.254 $\pm$ 9.175  $\chi^2$ /NDF:30.3/22

Left: 24.322 $\pm$ 6.384  $\chi^2$ /NDF: 72.2/47

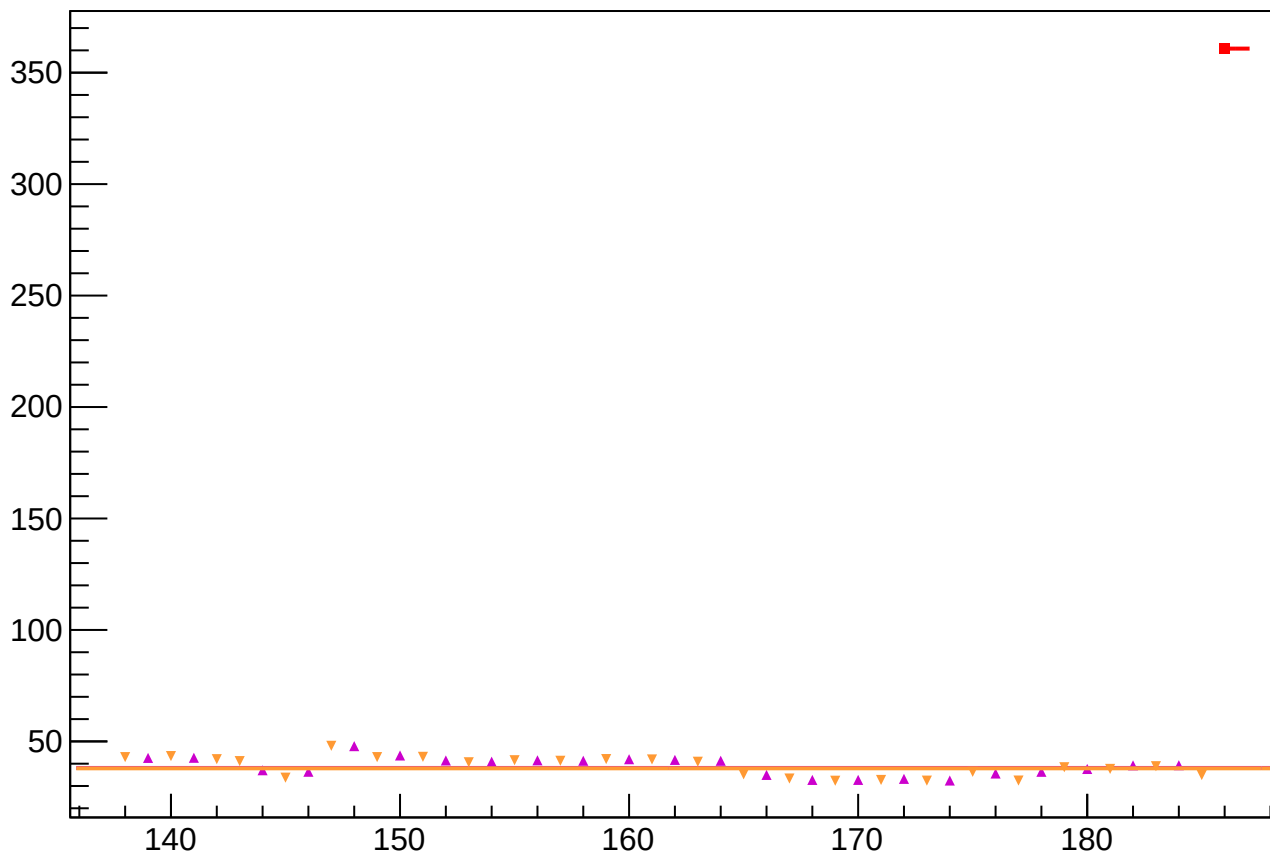
Right: 434.648 $\pm$ 590.122  $\chi^2$ /NDF: 0.0/0

In: 6.254 $\pm$ 9.175  $\chi^2$ /NDF:30.3/22

Out: 41.372 $\pm$ 8.888  $\chi^2$ /NDF:34.8/25

All: 24.370 $\pm$ 6.384  $\chi^2$ /NDF: 72.6/48

reg\_asym\_sam\_37\_26\_dd\_rms vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Left Out: 37.925 $\pm$ 0.006  $\chi^2$ /NDF:487085.3/24

Right Out: 360.791 $\pm$ 0.417  $\chi^2$ /NDF: 0.0/0

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

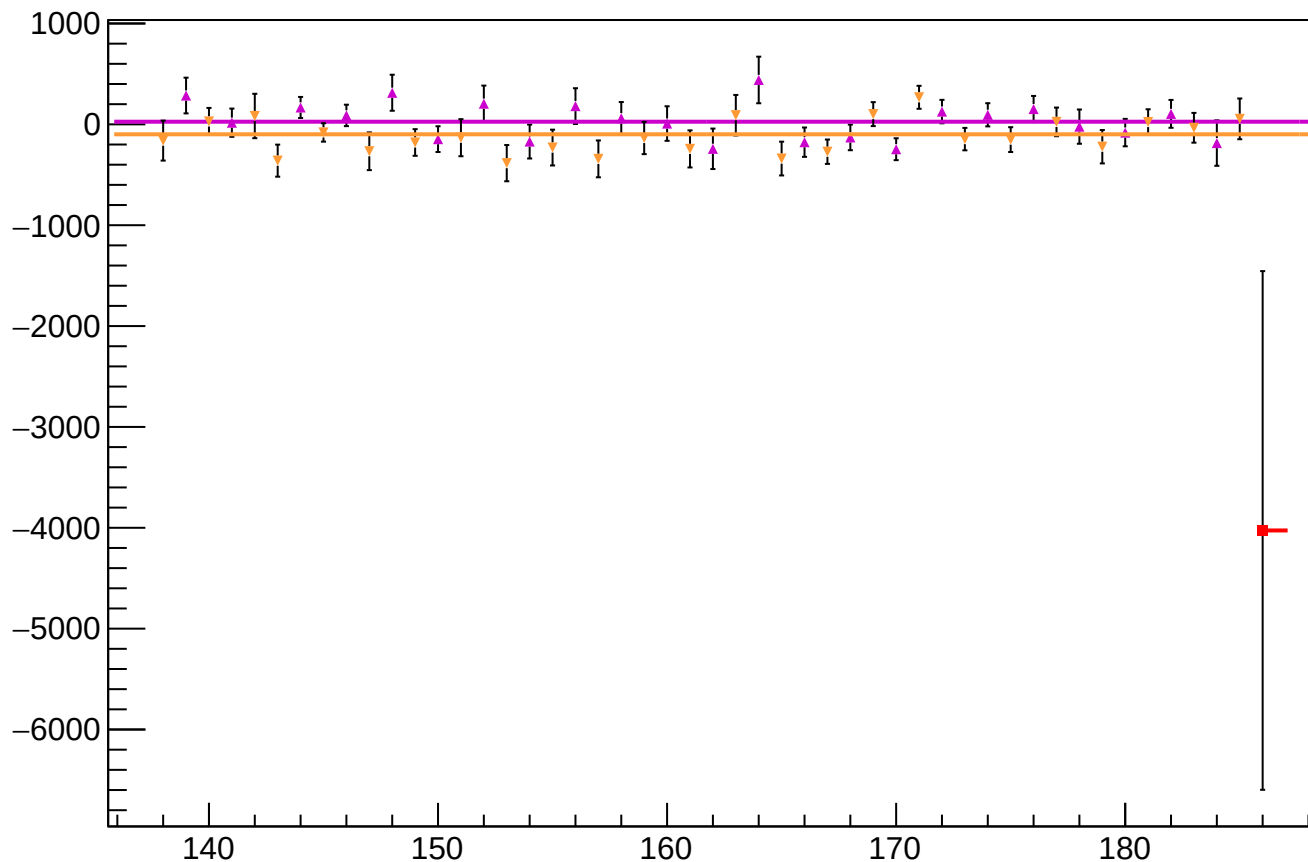
Right: 360.791 $\pm$ 0.417  $\chi^2$ /NDF: 0.0/0

In: 38.087 $\pm$ 0.006  $\chi^2$ /NDF:396334.5/22

Out: 37.998 $\pm$ 0.006  $\chi^2$ /NDF:1085622.4/25

All: 38.041 $\pm$ 0.005  $\chi^2$ /NDF: 1482053.9/48

asym\_sam\_37\_26\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -98.741+/-29.095  $\chi^2/\text{NDF}$ :32.7/24

Right Out: -4026.492+/-2571.269  $\chi^2/\text{NDF}$ : 0.0/0

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

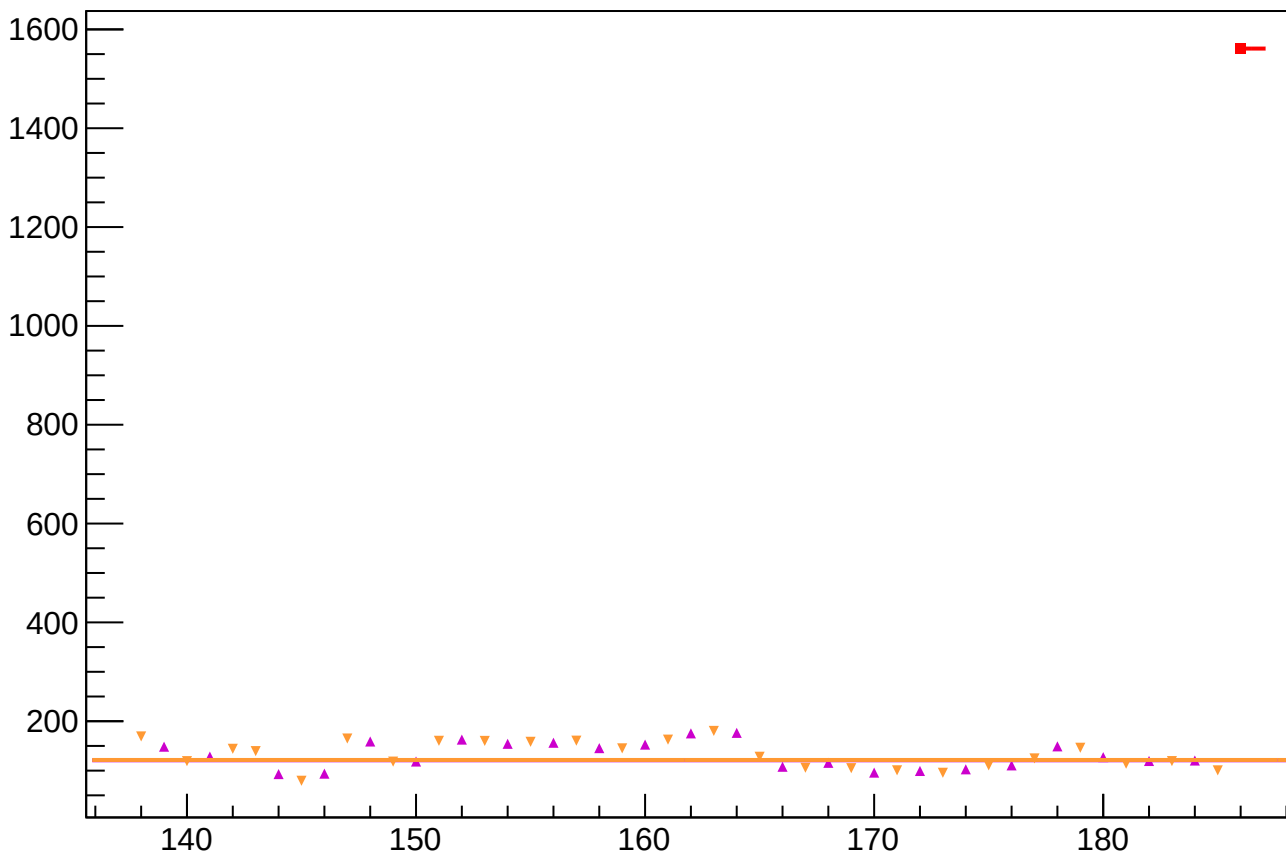
Right: -4026.492+/-2571.269  $\chi^2/\text{NDF}$ : 0.0/0

In: 26.223+/-29.676  $\chi^2/\text{NDF}$ :30.7/22

Out: -99.244+/-29.093  $\chi^2/\text{NDF}$ :35.1/25

All: -37.753+/-20.775  $\chi^2/\text{NDF}$ : 74.9/48

asym\_sam\_37\_26\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 121.592+/-0.021  $\chi^2/\text{NDF}$ :1711423.9/24

Right Out: 1561.206+/-1.818  $\chi^2/\text{NDF}$ : 0.0/0

Left In: 120.927+/-0.021  $\chi^2/\text{NDF}$ :1382861.4/22

Left: 121.266+/-0.015  $\chi^2/\text{NDF}$ : 3094797.5/47

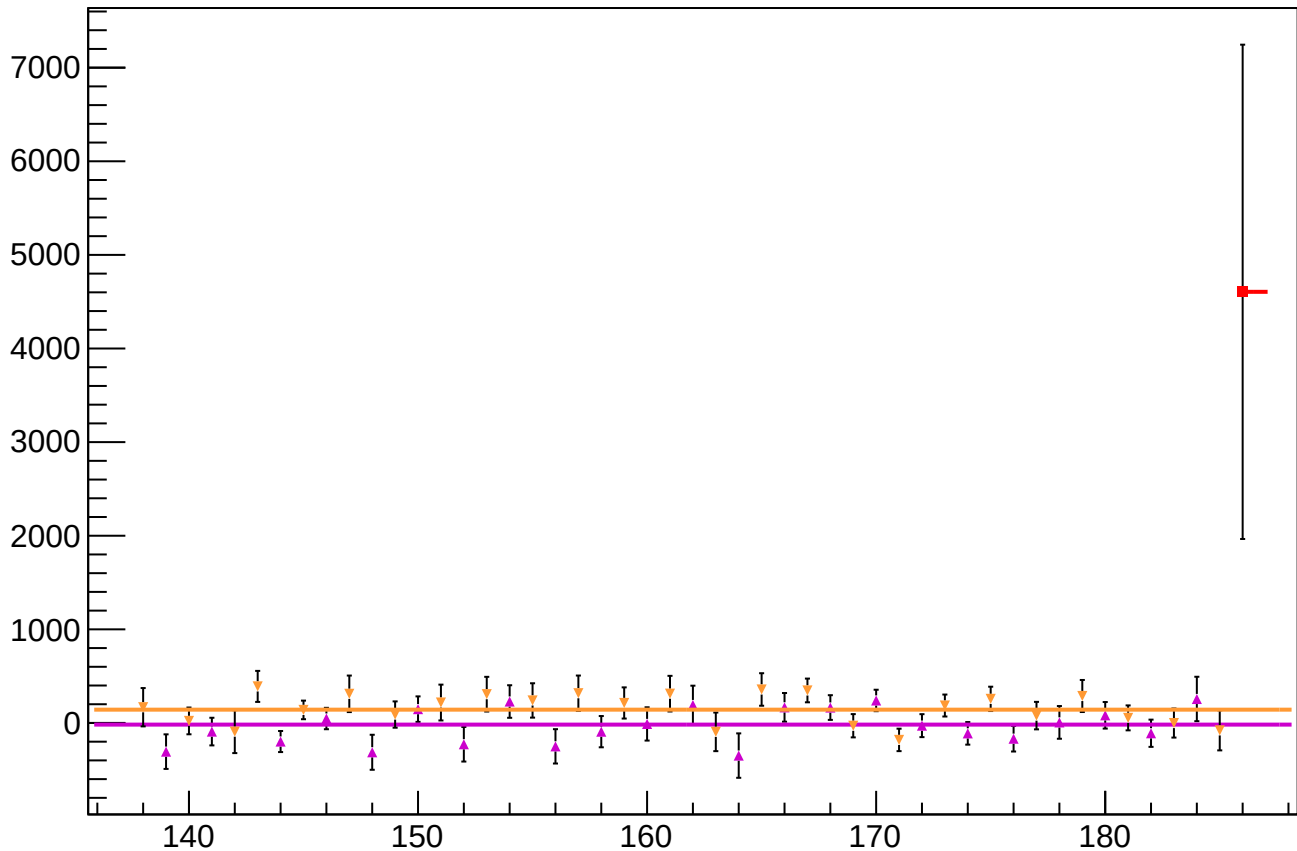
Right: 1561.206+/-1.818  $\chi^2/\text{NDF}$ : 0.0/0

In: 120.927+/-0.021  $\chi^2/\text{NDF}$ :1382861.4/22

Out: 121.776+/-0.021  $\chi^2/\text{NDF}$ :2338285.1/25

All: 121.360+/-0.015  $\chi^2/\text{NDF}$ : 3721982.0/48

asym\_sam\_37\_26\_dd\_mean vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Left Out: 142.014 $\pm$ 30.574  $\chi^2$ /NDF:26.9/24

Right Out: 4605.425 $\pm$ 2640.214  $\chi^2$ /NDF: 0.0/0

Left In: -17.679 $\pm$ 31.209  $\chi^2$ /NDF:30.1/22

Left: 63.807 $\pm$ 21.840  $\chi^2$ /NDF: 70.4/47

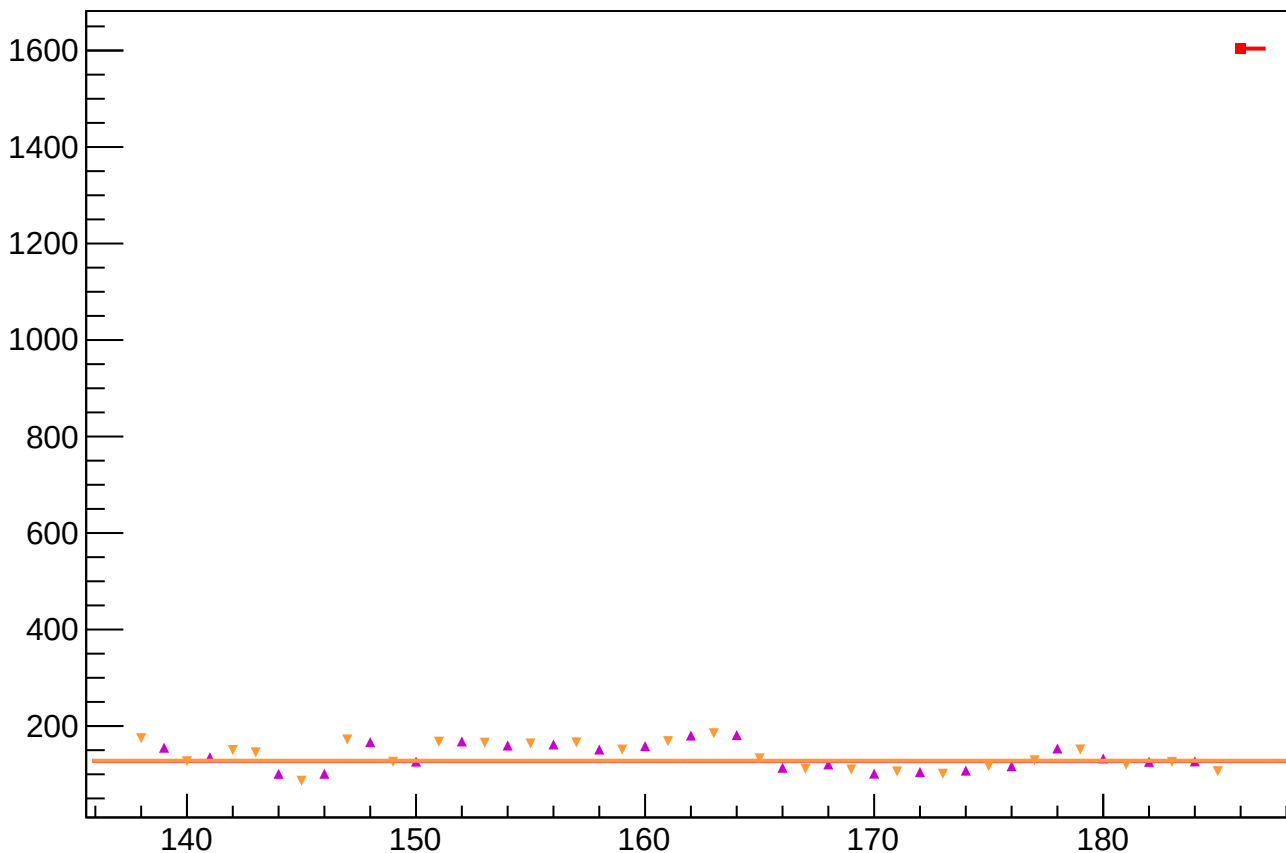
Right: 4605.425 $\pm$ 2640.214  $\chi^2$ /NDF: 0.0/0

In: -17.679 $\pm$ 31.209  $\chi^2$ /NDF:30.1/22

Out: 142.613 $\pm$ 30.572  $\chi^2$ /NDF:29.7/25

All: 64.118 $\pm$ 21.839  $\chi^2$ /NDF: 73.3/48

# asym\_sam\_37\_26\_dd\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 128.175+/-0.022  $\chi^2/\text{NDF}$ :1532922.0/24

Right Out: 1604.044+/-1.867  $\chi^2/\text{NDF}$ : 0.0/0

Left In: 127.544+/-0.022  $\chi^2/\text{NDF}$ :1235705.3/22

Left: 127.866+/-0.015  $\chi^2/\text{NDF}$ : 2769045.1/47

Right: 1604.044+/-1.867  $\chi^2/\text{NDF}$ : 0.0/0

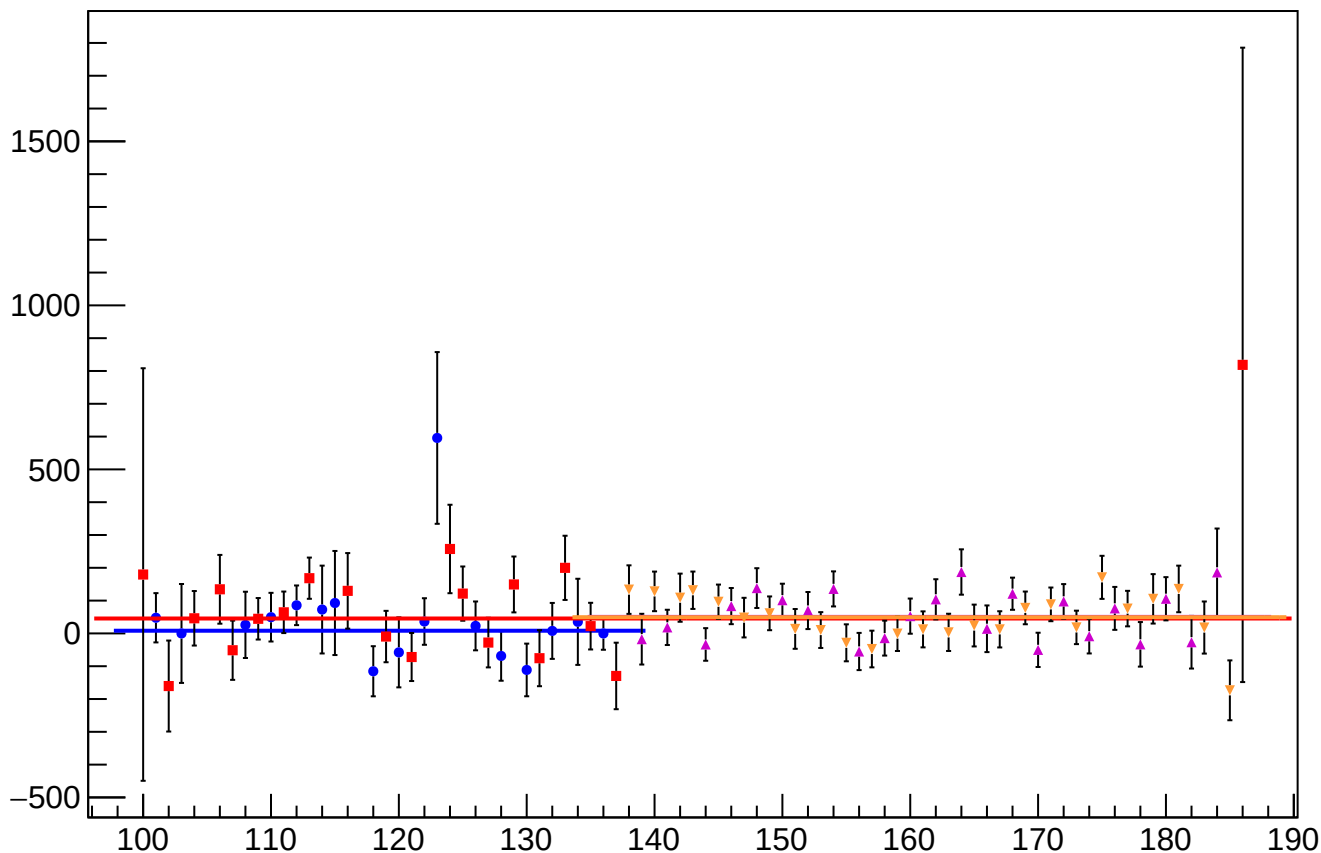
In: 127.544+/-0.022  $\chi^2/\text{NDF}$ :1235705.3/22

Out: 128.373+/-0.022  $\chi^2/\text{NDF}$ :2157791.2/25

All: 127.967+/-0.015  $\chi^2/\text{NDF}$ : 3394217.1/48



reg\_asym\_sam\_1357\_avg\_mean vs Slug, Sign Corrected



Right In:  $8.177 \pm 20.186$   $\chi^2/\text{NDF}$ : 14.3/16

Left Out:  $49.402 \pm 11.806$   $\chi^2/\text{NDF}$ : 28.1/24

Right Out:  $45.452 \pm 19.455$   $\chi^2/\text{NDF}$ : 25.6/19

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

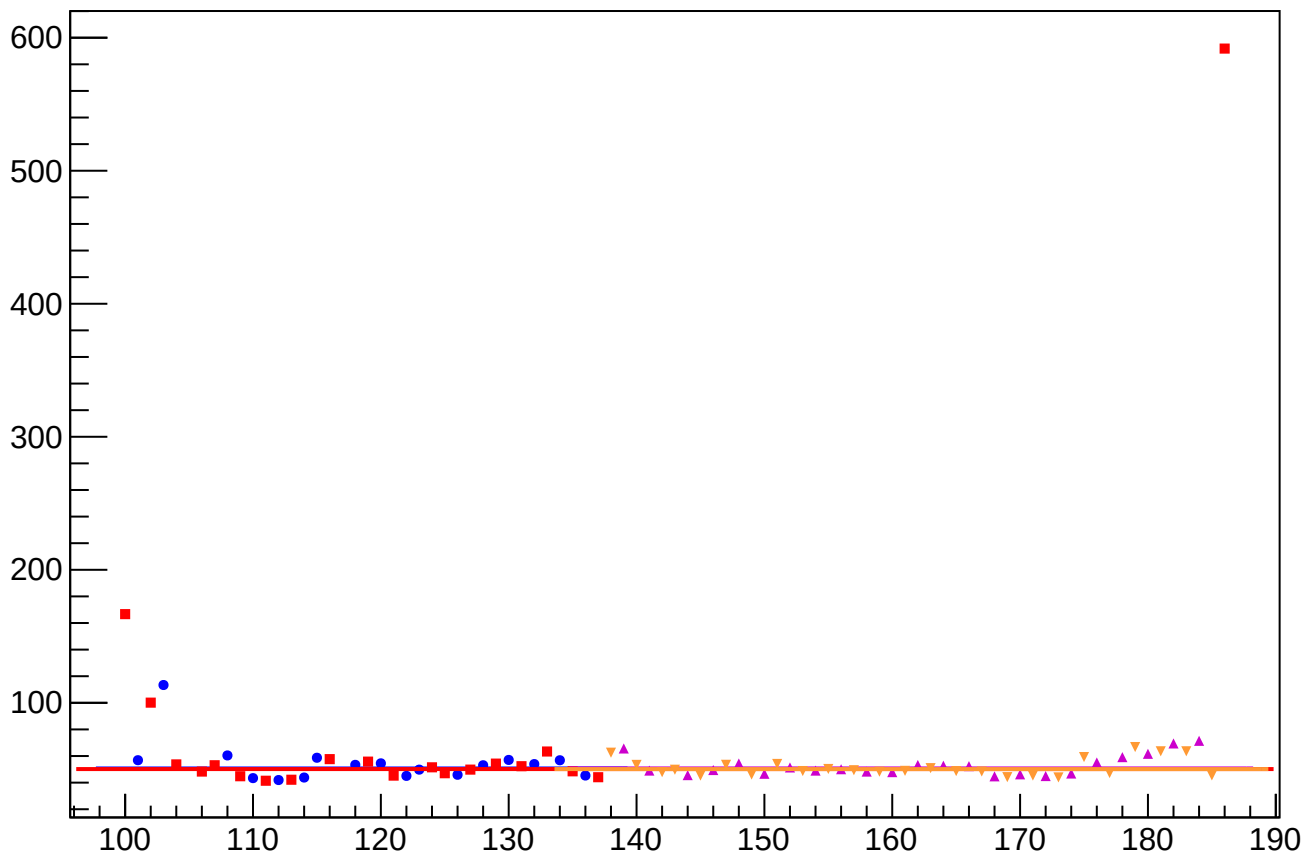
Right:  $27.502 \pm 14.008$   $\chi^2/\text{NDF}$ : 41.7/36

In:  $38.980 \pm 10.475$   $\chi^2/\text{NDF}$ : 49.7/39

Out:  $48.339 \pm 10.093$   $\chi^2/\text{NDF}$ : 53.7/44

All:  $43.833 \pm 7.268$   $\chi^2/\text{NDF}$ : 103.8/84

reg\_asym\_sam\_1357\_avg\_rms vs Slug, Sign Corrected



Right In: 50.637 $\pm$ 0.014  $\chi^2$ /NDF: 520284.7/16

Left Out: 50.189 $\pm$ 0.008  $\chi^2$ /NDF: 467679.2/24

Right Out: 50.197 $\pm$ 0.014  $\chi^2$ /NDF: 1128721.9/19

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

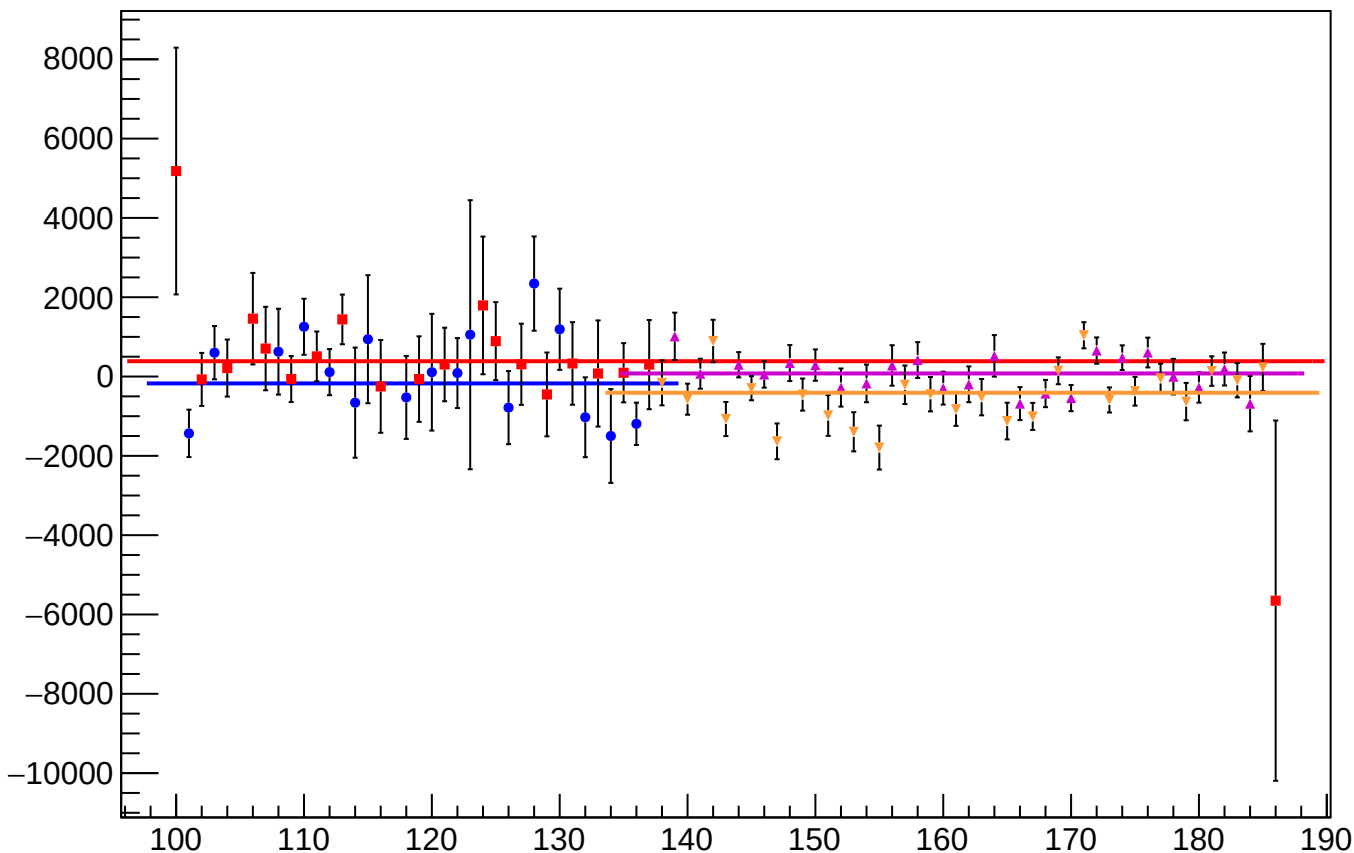
Right: 50.409 $\pm$ 0.010  $\chi^2$ /NDF: 1649500.2/36

In: 50.671 $\pm$ 0.007  $\chi^2$ /NDF: 989584.5/39

Out: 50.191 $\pm$ 0.007  $\chi^2$ /NDF: 1596401.3/44

All: 50.422 $\pm$ 0.005  $\chi^2$ /NDF: 2588157.6/84

asym\_sam\_1357\_avg\_correction\_mean vs Slug, Sign Corrected



Right In:  $-173.371 \pm 210.671$   $\chi^2/\text{NDF}: 23.9/16$

Left Out:  $-409.164 \pm 82.348$   $\chi^2/\text{NDF}: 61.7/24$

Right Out:  $386.434 \pm 203.836$   $\chi^2/\text{NDF}: 11.3/19$

Left In:  $77.872 \pm 84.072$   $\chi^2/\text{NDF}: 24.8/22$

Left:  $-170.691 \pm 58.829$   $\chi^2/\text{NDF}: 103.6/47$

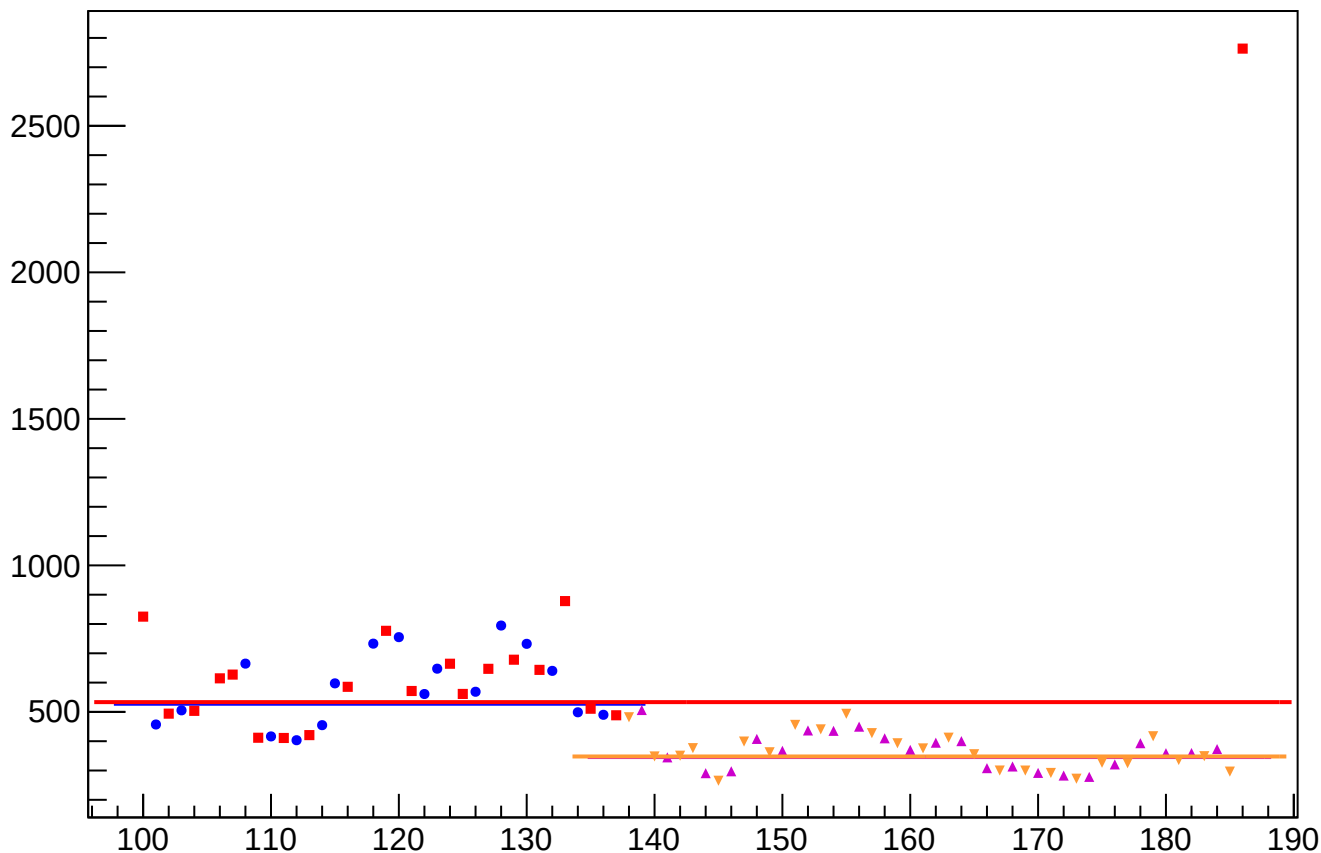
Right:  $115.759 \pm 146.491$   $\chi^2/\text{NDF}: 38.9/36$

In:  $43.356 \pm 78.084$   $\chi^2/\text{NDF}: 50.0/39$

Out:  $-297.533 \pm 76.353$   $\chi^2/\text{NDF}: 86.1/44$

All:  $-130.909 \pm 54.591$   $\chi^2/\text{NDF}: 145.9/84$

asym\_sam\_1357\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 527.871+/-0.149  $\chi^2/\text{NDF}$ : 563444.4/16

Left Out: 347.875+/-0.058  $\chi^2/\text{NDF}$ : 1044096.7/24

Right Out: 533.386+/-0.144  $\chi^2/\text{NDF}$ : 1108611.4/19

Left In: 345.954+/-0.059  $\chi^2/\text{NDF}$ : 900847.0/22

Left: 346.935+/-0.042  $\chi^2/\text{NDF}$ : 1945476.7/47

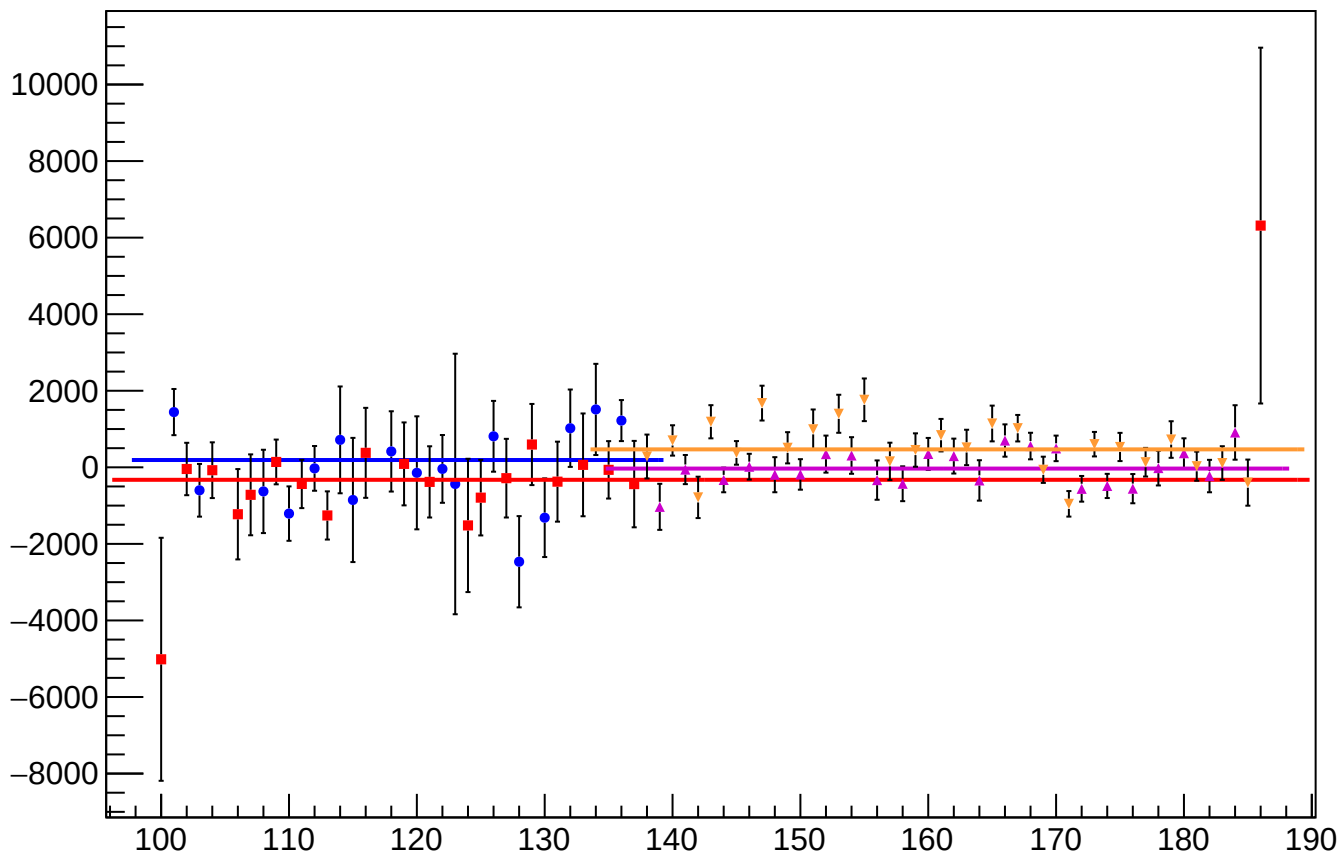
Right: 530.719+/-0.104  $\chi^2/\text{NDF}$ : 1672763.8/36

In: 370.945+/-0.055  $\chi^2/\text{NDF}$ : 2750722.1/39

Out: 373.904+/-0.054  $\chi^2/\text{NDF}$ : 3576836.7/44

All: 372.458+/-0.039  $\chi^2/\text{NDF}$ : 6329026.7/84

asym\_sam\_1357\_avg\_mean vs Slug, Sign Corrected



Right In: 190.958 $\pm$ 212.155  $\chi^2$ /NDF: 24.1/16

Left Out: 468.863 $\pm$ 83.295  $\chi^2$ /NDF:57.5/24

Right Out: -326.085 $\pm$ 205.417  $\chi^2$ /NDF: 10.3/19

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

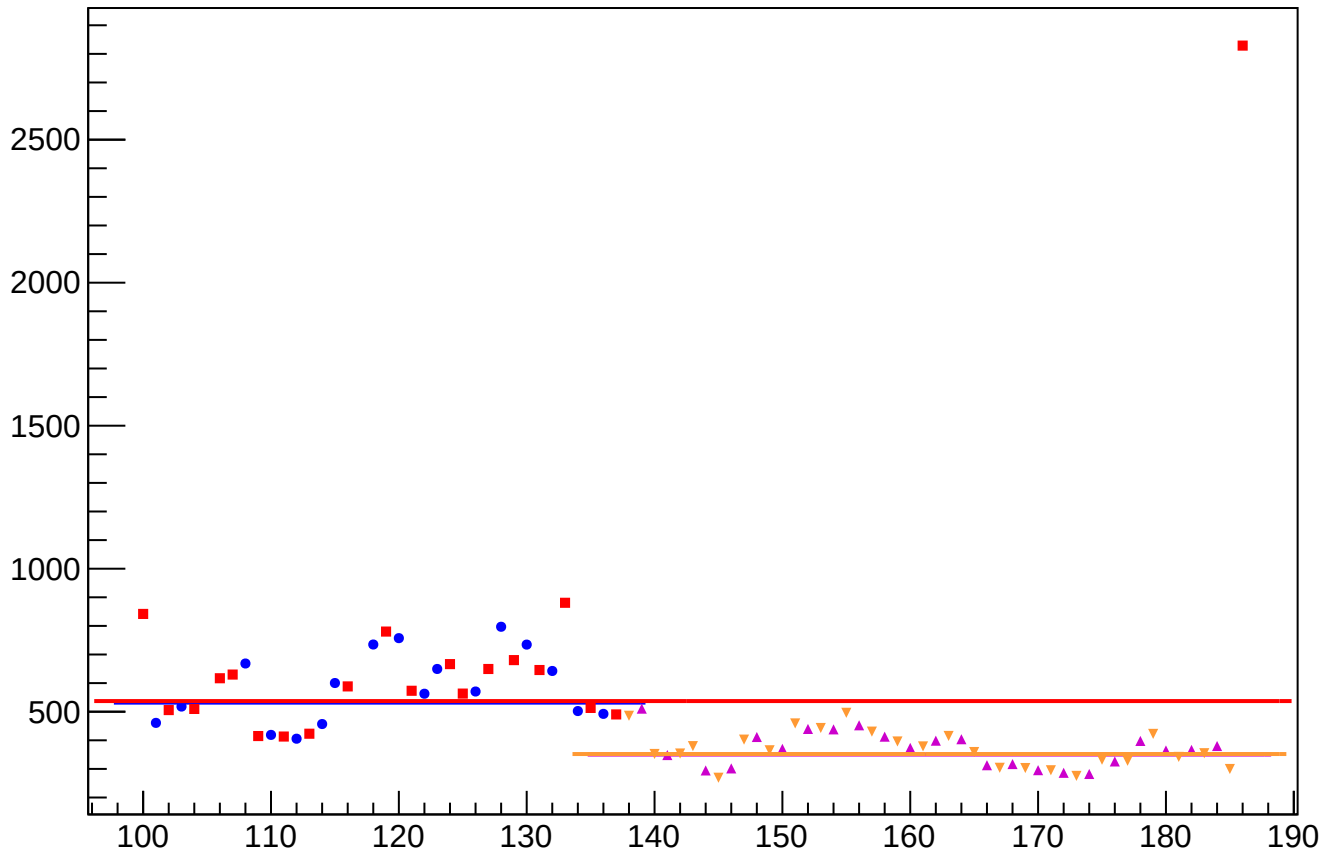
Right: -75.904 $\pm$ 147.577  $\chi^2$ /NDF: 37.5/36

In: -1.811 $\pm$ 78.954  $\chi^2$ /NDF:50.8/39

Out: 356.611 $\pm$ 77.191  $\chi^2$ /NDF:80.6/44

All: 181.446 $\pm$ 55.195  $\chi^2$ /NDF: 141.9/84

asym\_sam\_1357\_avg\_rms vs Slug, Sign Corrected



Right In: 531.765+/-0.150  $\chi^2/\text{NDF}$ : 555969.6/16

Left Out: 352.015+/-0.059  $\chi^2/\text{NDF}$ : 1017195.6/24

Right Out: 537.195+/-0.145  $\chi^2/\text{NDF}$ : 1105164.7/19

Left In: 350.160+/-0.060  $\chi^2/\text{NDF}$ : 878380.0/22

Left: 351.107+/-0.042  $\chi^2/\text{NDF}$ : 1896060.8/47

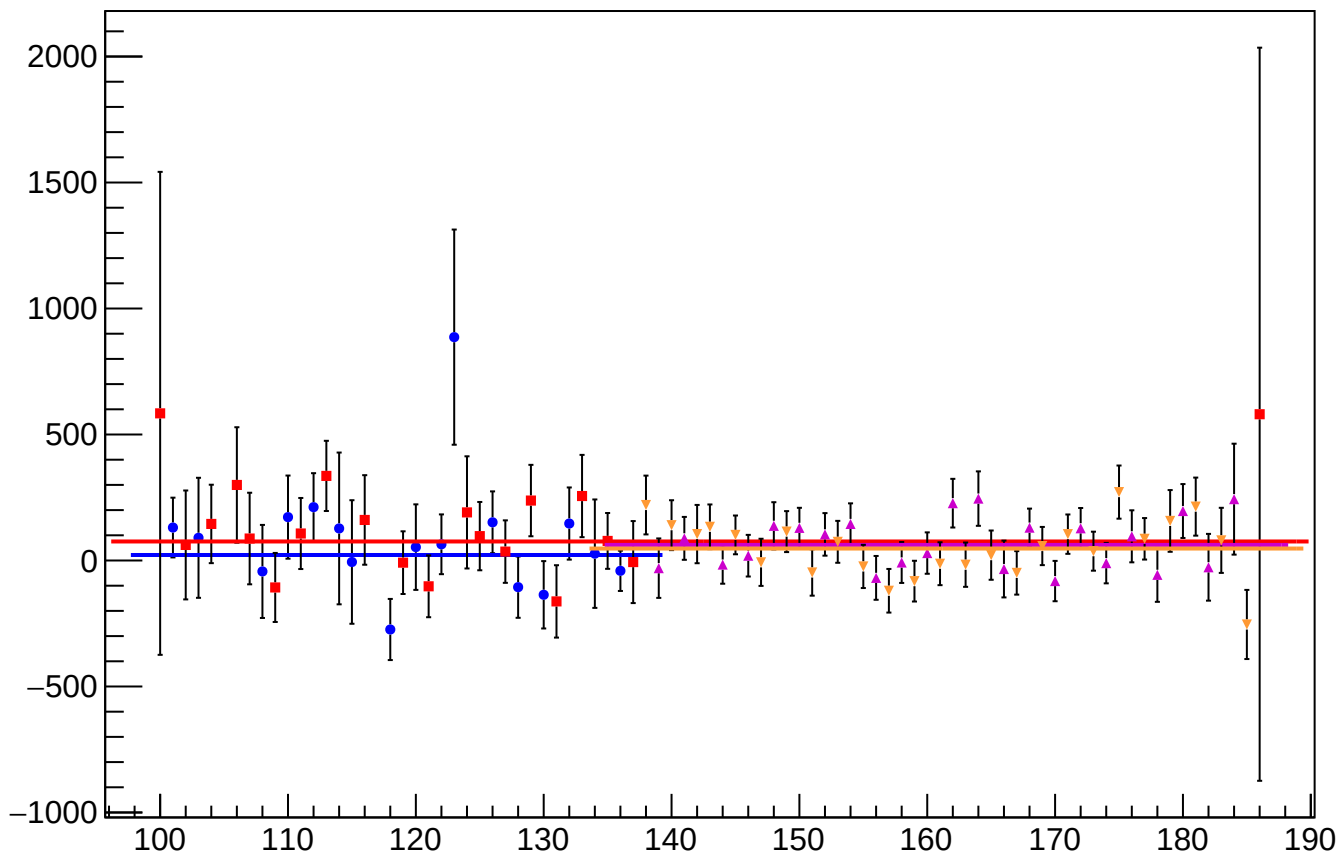
Right: 534.568+/-0.104  $\chi^2/\text{NDF}$ : 1661810.4/36

In: 375.312+/-0.056  $\chi^2/\text{NDF}$ : 2696861.8/39

Out: 378.163+/-0.055  $\chi^2/\text{NDF}$ : 3518191.1/44

All: 376.770+/-0.039  $\chi^2/\text{NDF}$ : 6216386.7/84

reg\_asym\_sam\_2468\_avg\_mean vs Slug, Sign Corrected



Right In: 21.833+/-34.638  $\chi^2/\text{NDF}$ : 19.2/16

Left Out: 47.426+/-18.253  $\chi^2/\text{NDF}$ : 29.4/24

Right Out: 75.496+/-34.790  $\chi^2/\text{NDF}$ : 15.6/19

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

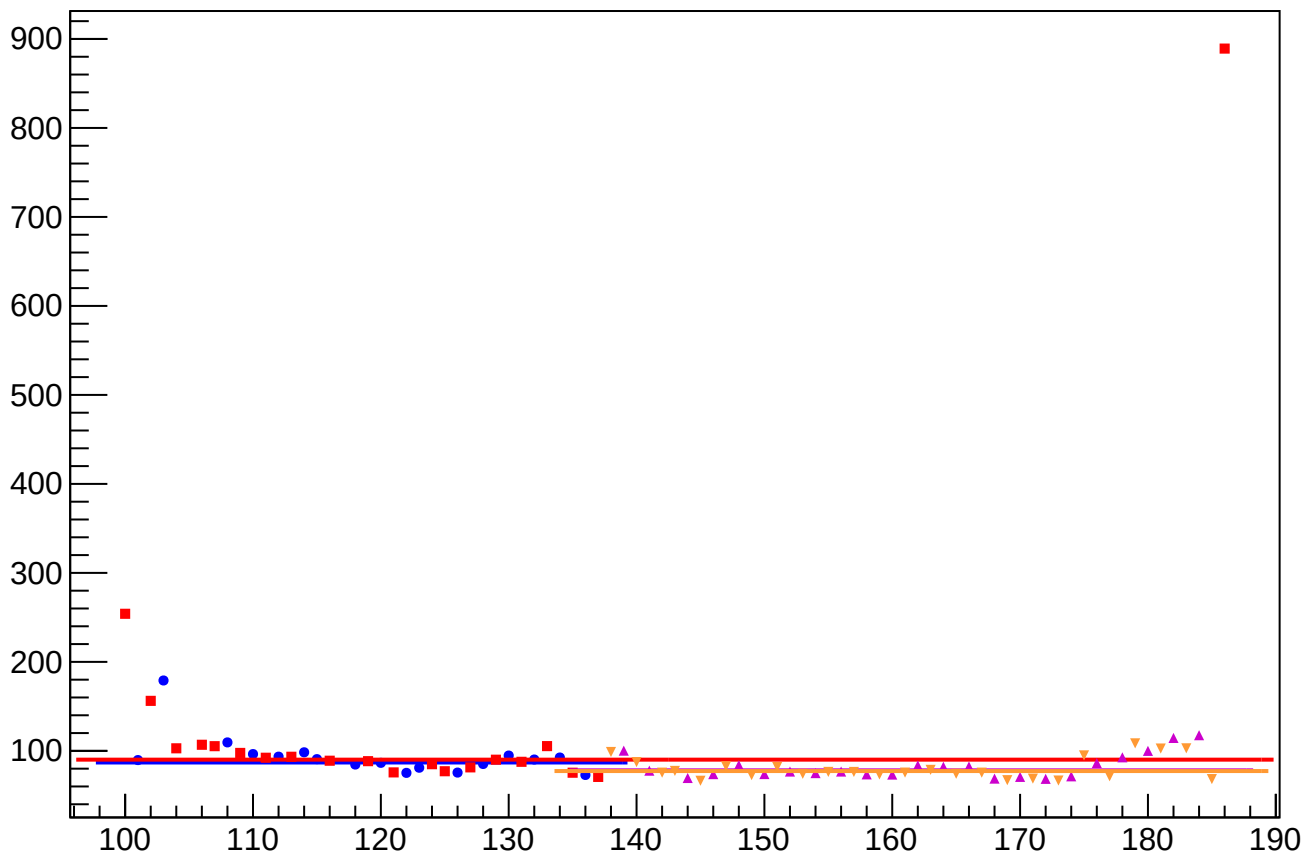
Right: 48.547+/-24.546  $\chi^2/\text{NDF}$ : 36.0/36

In: 52.610+/-16.630  $\chi^2/\text{NDF}$ : 44.2/39

Out: 53.484+/-16.163  $\chi^2/\text{NDF}$ : 45.5/44

All: 53.060+/-11.591  $\chi^2/\text{NDF}$ : 89.7/84

reg\_asym\_sam\_2468\_avg\_rms vs Slug, Sign Corrected



Right In: 86.949 $\pm$ 0.024  $\chi^2$ /NDF: 453620.2/16

Left Out: 77.316 $\pm$ 0.013  $\chi^2$ /NDF: 635622.3/24

Right Out: 90.131 $\pm$ 0.025  $\chi^2$ /NDF: 1033019.9/19

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: 88.533 $\pm$ 0.017  $\chi^2$ /NDF: 1495043.6/36

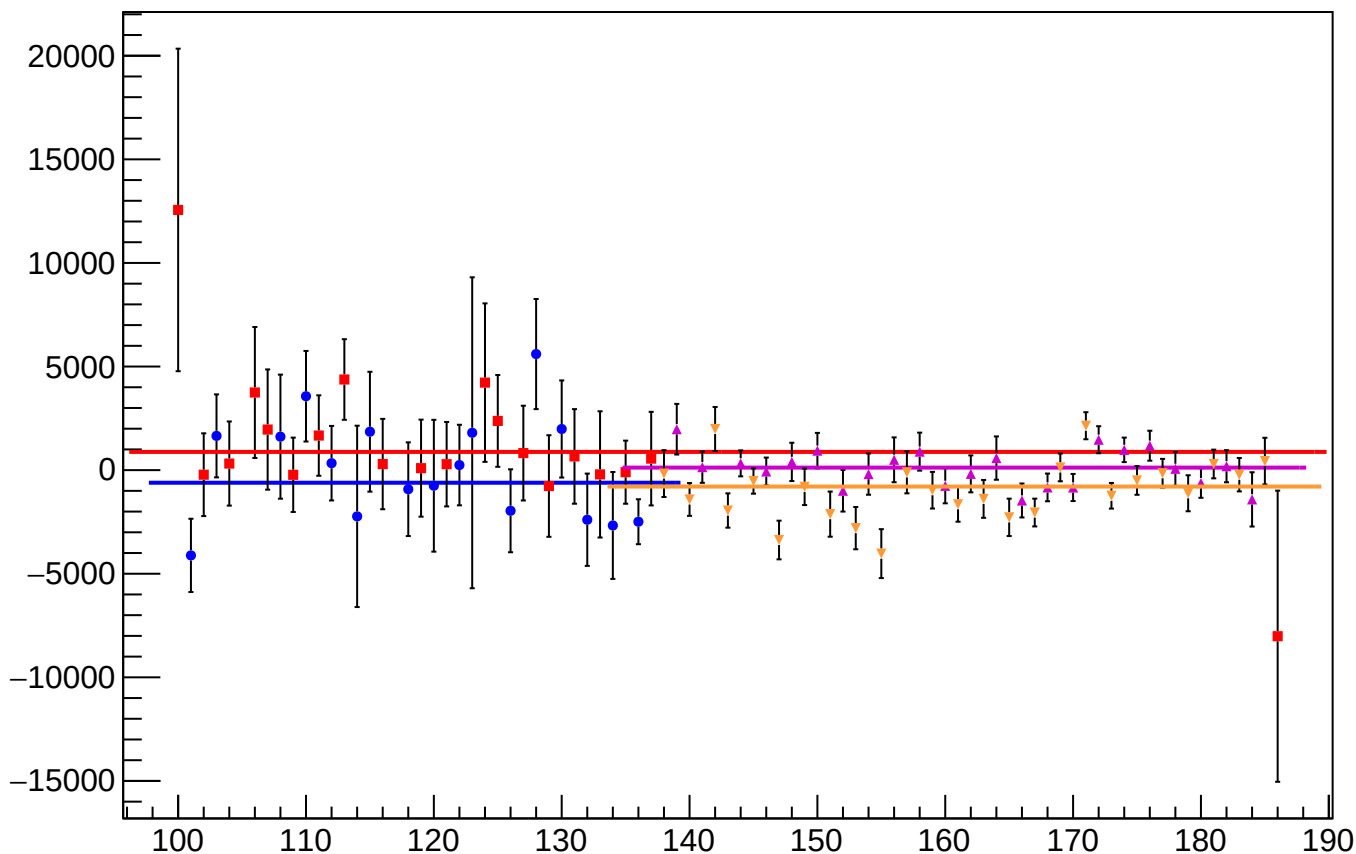
In: 80.169 $\pm$ 0.012  $\chi^2$ /NDF: 1135295.8/39

Out: 80.082 $\pm$ 0.011  $\chi^2$ /NDF: 1881433.6/44

All: 80.125 $\pm$ 0.008  $\chi^2$ /NDF: 3016757.7/84



asym\_sam\_2468\_avg\_correction\_mean vs Slug, Sign Corrected



Right In: -607.702+/-518.220  $\chi^2/\text{NDF}$ : 22.3/16

Left Out: -792.776+/-162.659  $\chi^2/\text{NDF}$ : 66.6/24

Right Out: 880.002+/-514.392  $\chi^2/\text{NDF}$ : 11.5/19

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

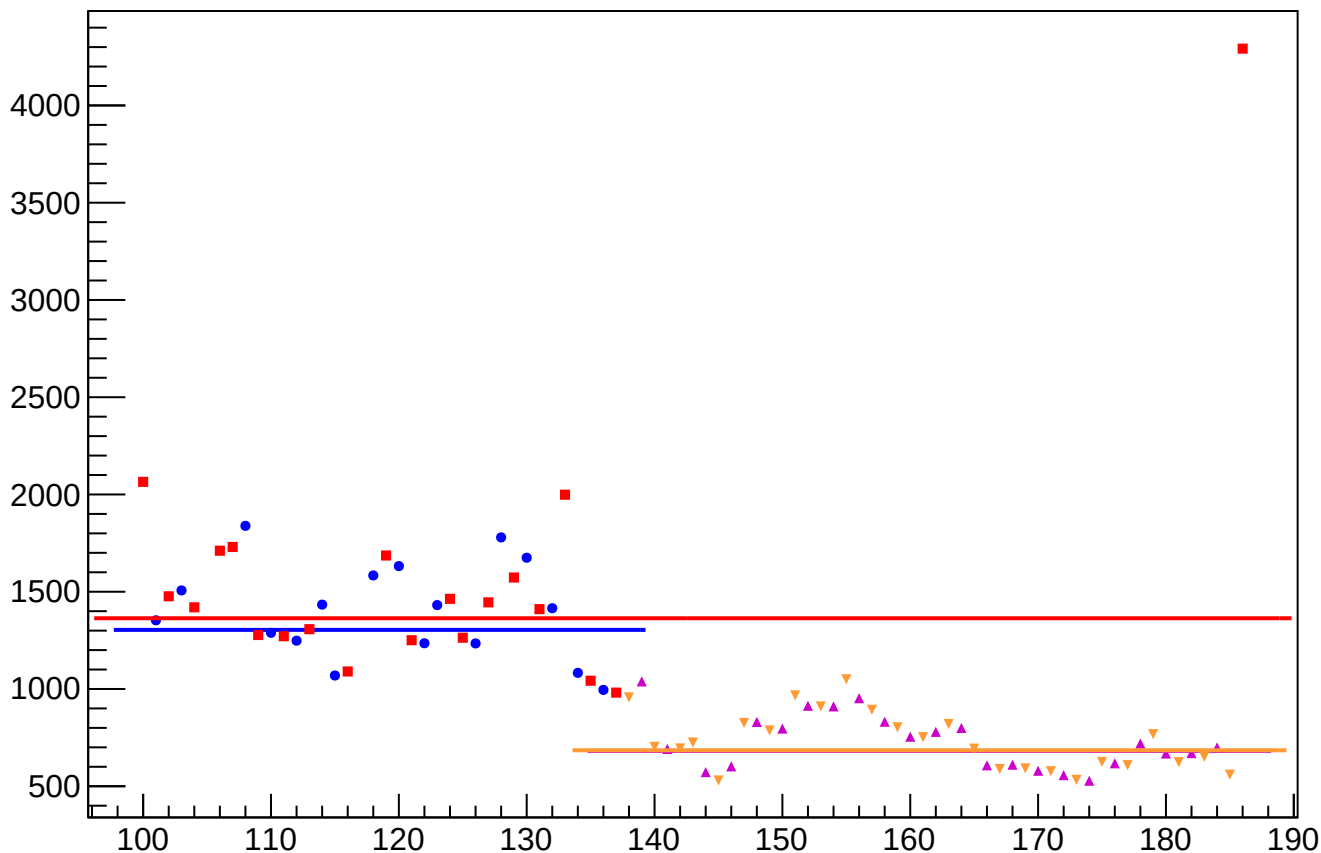
Right: 141.664+/-365.076  $\chi^2/\text{NDF}$ : 37.9/36

In: 54.129+/-158.254  $\chi^2/\text{NDF}$ : 50.0/39

Out: -640.716+/-155.090  $\chi^2/\text{NDF}$ : 87.7/44

All: -300.310+/-110.767  $\chi^2/\text{NDF}$ : 147.6/84

asym\_sam\_2468\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 1303.810+/-0.366  $\chi^2/\text{NDF}$ : 456027.3/16

Left Out: 684.785+/-0.115  $\chi^2/\text{NDF}$ : 1280146.2/24

Right Out: 1363.607+/-0.364  $\chi^2/\text{NDF}$ : 770764.5/19

Left In: 681.712+/-0.118  $\chi^2/\text{NDF}$ : 1119637.0/22

Left: 683.282+/-0.082  $\chi^2/\text{NDF}$ : 2400132.5/47

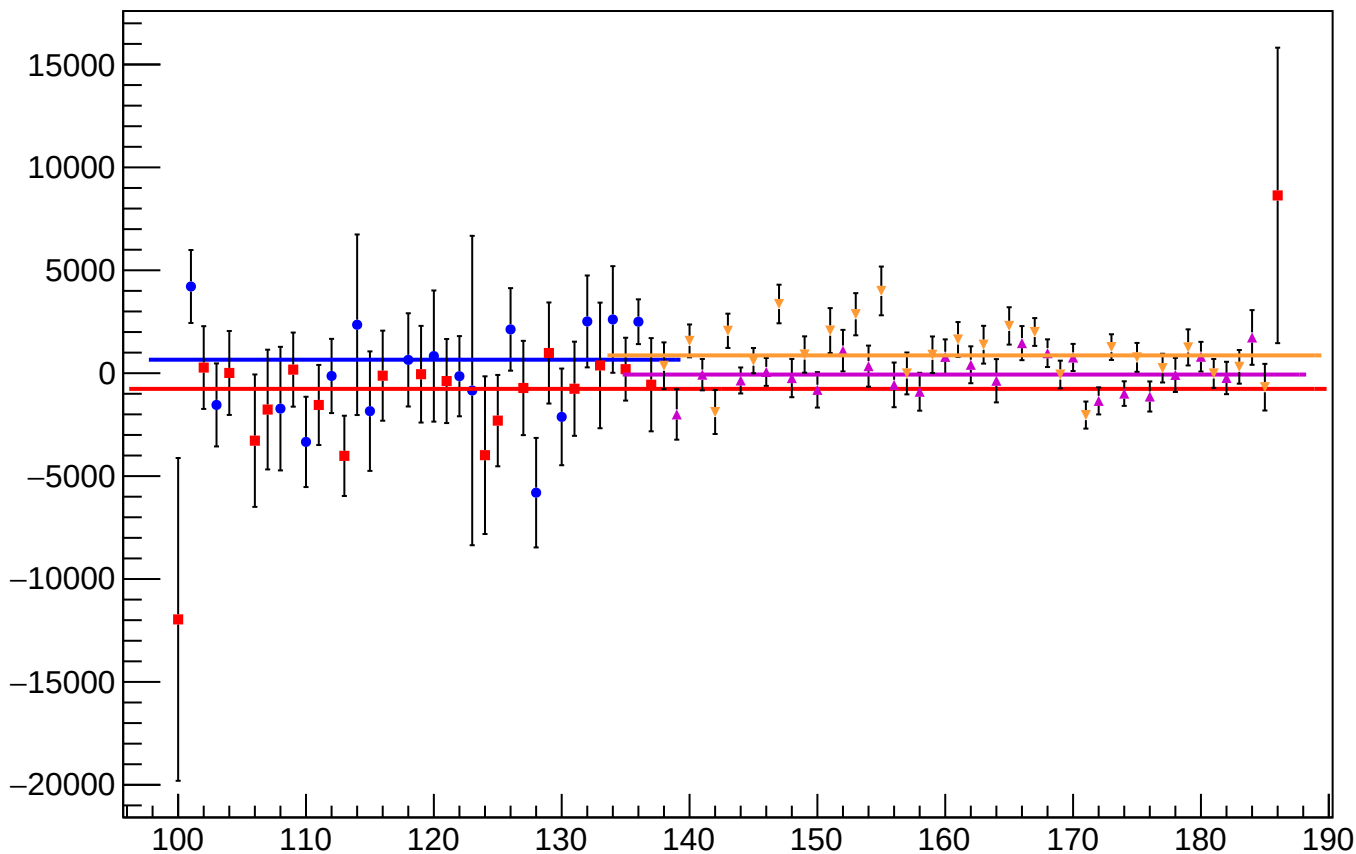
Right: 1333.930+/-0.258  $\chi^2/\text{NDF}$ : 1240205.3/36

In: 739.727+/-0.112  $\chi^2/\text{NDF}$ : 4189050.3/39

Out: 746.492+/-0.110  $\chi^2/\text{NDF}$ : 5217296.5/44

All: 743.178+/-0.078  $\chi^2/\text{NDF}$ : 9408210.7/84

asym\_sam\_2468\_avg\_mean vs Slug, Sign Corrected



Right In: 655.779 $\pm$ 519.695  $\chi^2$ /NDF: 22.4/16

Left Out: 865.597 $\pm$ 163.885  $\chi^2$ /NDF:62.8/24

Right Out: -761.478 $\pm$ 516.148  $\chi^2$ /NDF: 10.6/19

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

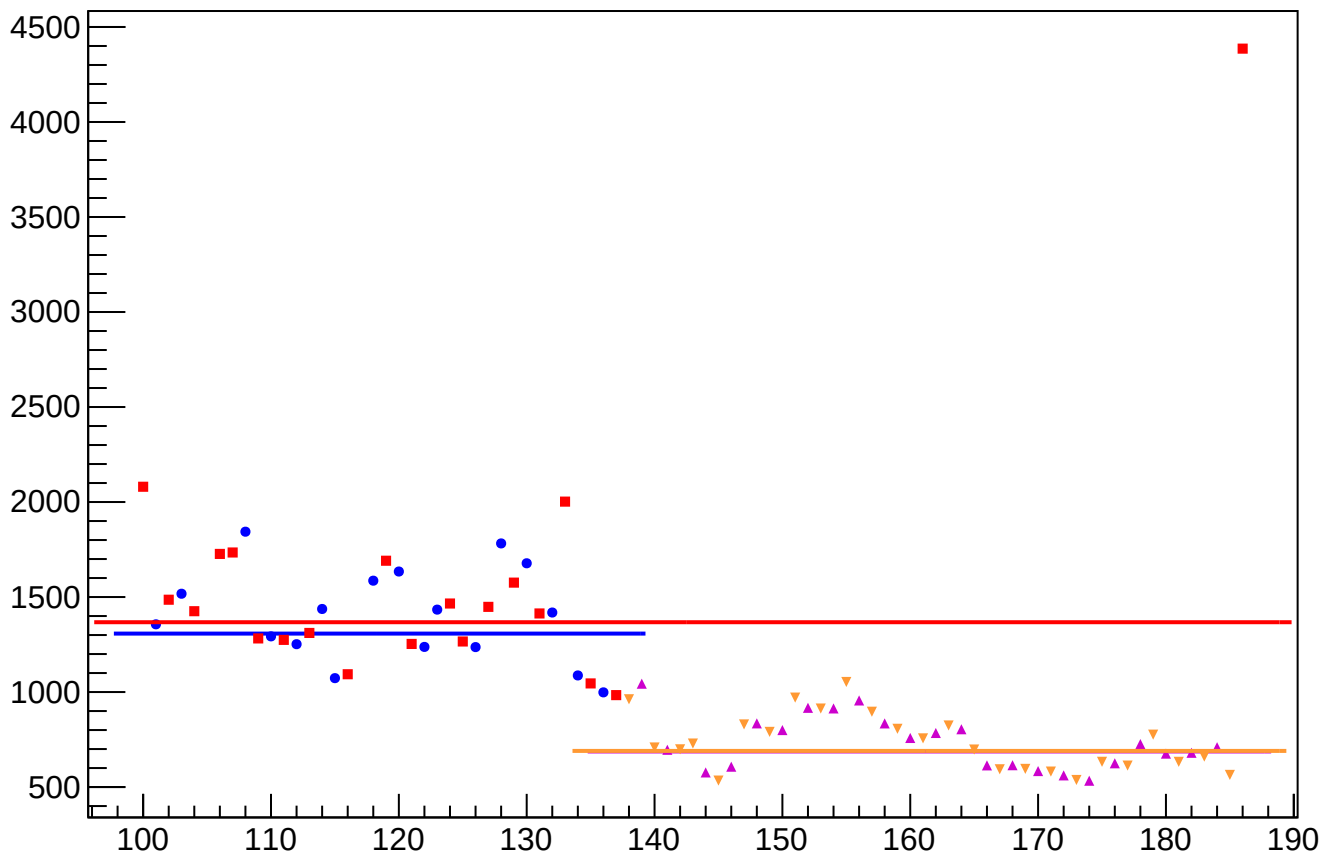
Right: -57.702 $\pm$ 366.219  $\chi^2$ /NDF: 36.7/36

In: 1.980 $\pm$ 159.411  $\chi^2$ /NDF:50.6/39

Out: 716.584 $\pm$ 156.201  $\chi^2$ /NDF:82.4/44

All: 366.549 $\pm$ 111.568  $\chi^2$ /NDF: 143.3/84

asym\_sam\_2468\_avg\_rms vs Slug, Sign Corrected



Right In: 1307.585 $\pm$ 0.367  $\chi^2$ /NDF: 455146.3/16

Left Out: 690.166 $\pm$ 0.116  $\chi^2$ /NDF: 1258158.2/24

Right Out: 1367.441 $\pm$ 0.365  $\chi^2$ /NDF: 777911.1/19

Left In: 687.216 $\pm$ 0.118  $\chi^2$ /NDF: 1099706.1/22

Left: 688.723 $\pm$ 0.083  $\chi^2$ /NDF: 2358181.3/47

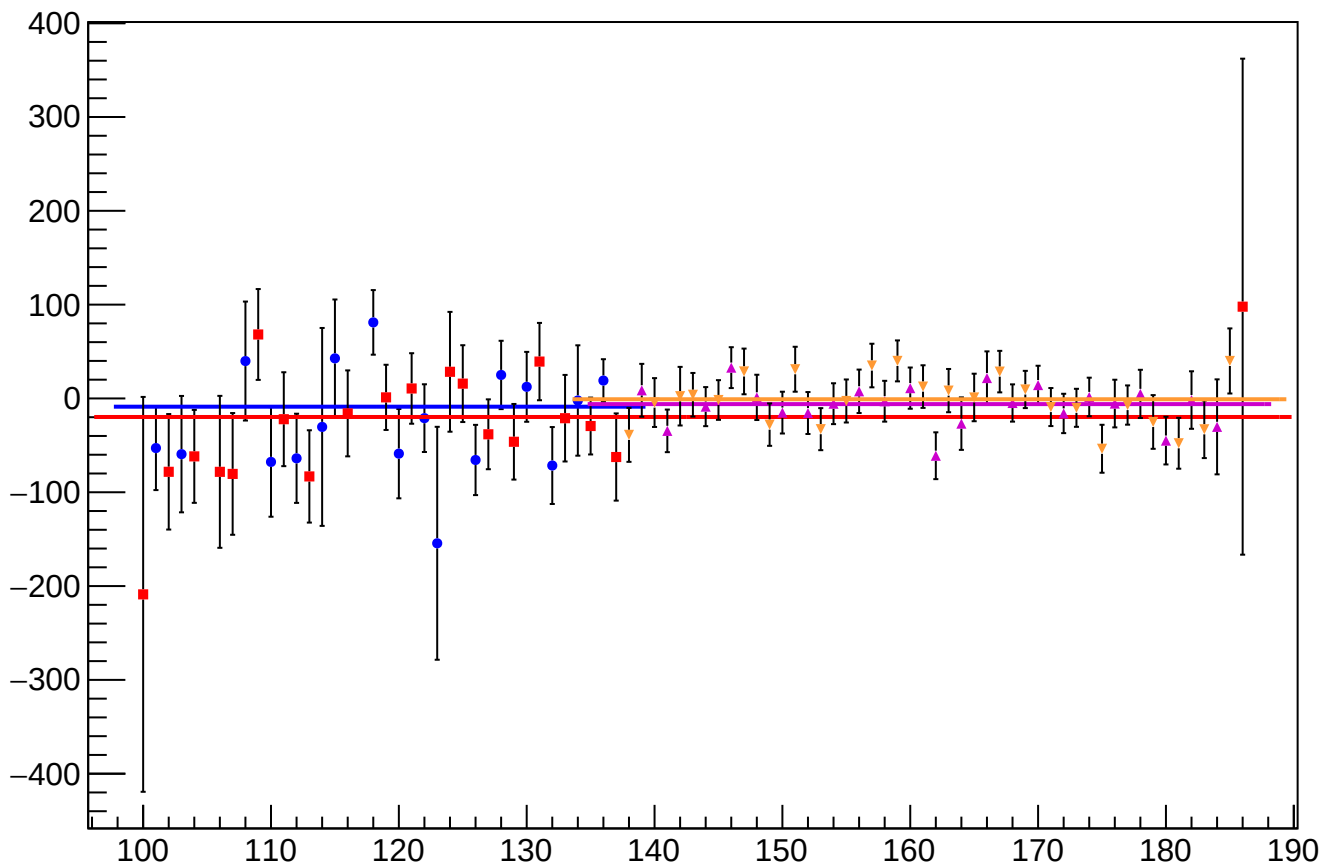
Right: 1337.718 $\pm$ 0.259  $\chi^2$ /NDF: 1246413.7/36

In: 745.586 $\pm$ 0.113  $\chi^2$ /NDF: 4136624.8/39

Out: 752.193 $\pm$ 0.110  $\chi^2$ /NDF: 5164278.3/44

All: 748.957 $\pm$ 0.079  $\chi^2$ /NDF: 9302656.0/84

reg\_asym\_sam\_1357\_2468\_dd\_mean vs Slug, Sign Corrected



Right In:  $-8.789 \pm 10.423$   $\chi^2/\text{NDF}: 22.0/16$

Left Out:  $-0.861 \pm 4.760$   $\chi^2/\text{NDF}: 27.9/24$

Right Out:  $-19.764 \pm 10.462$   $\chi^2/\text{NDF}: 15.0/19$

Left In:  $-6.042 \pm 4.925$   $\chi^2/\text{NDF}: 16.9/22$

Left:  $-3.363 \pm 3.423$   $\chi^2/\text{NDF}: 45.4/47$

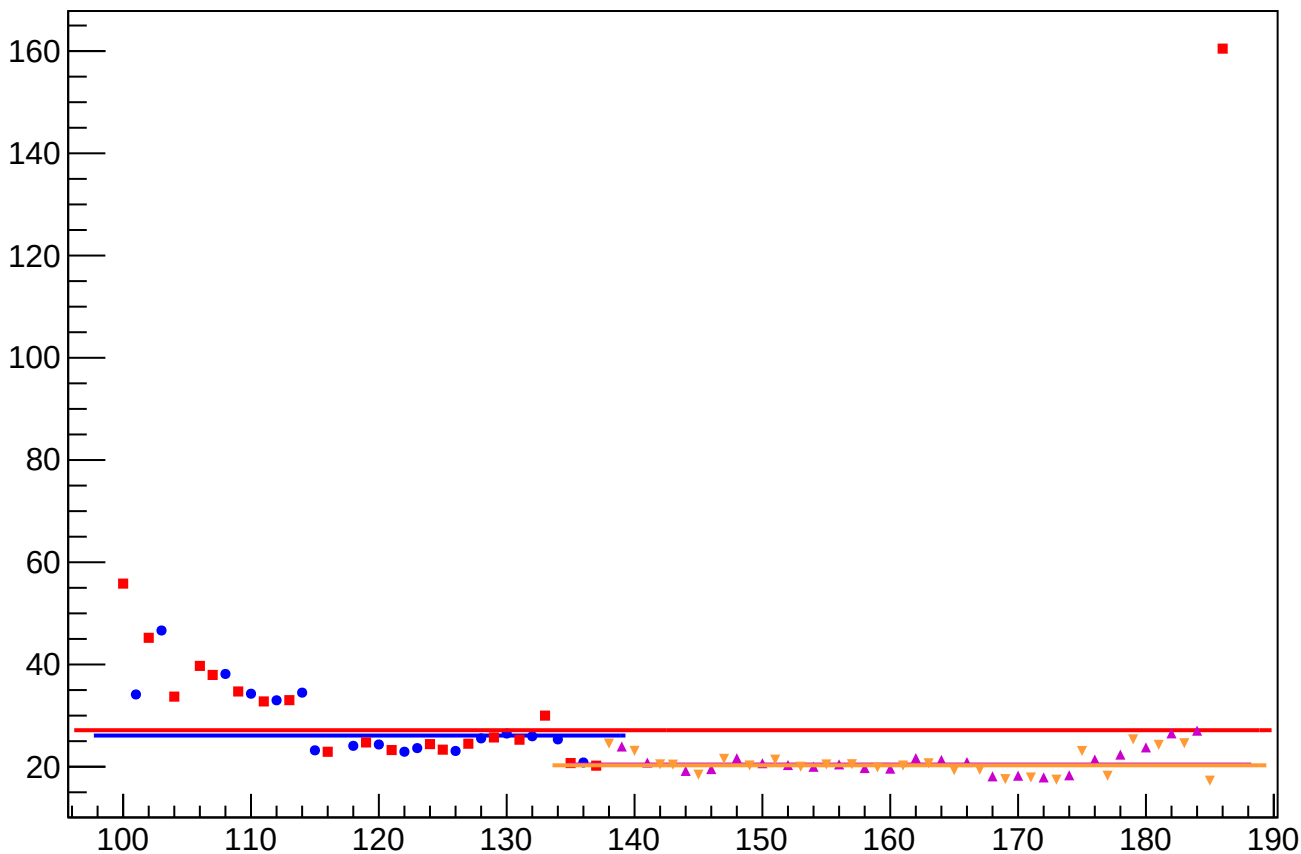
Right:  $-14.256 \pm 7.384$   $\chi^2/\text{NDF}: 37.6/36$

In:  $-6.543 \pm 4.453$   $\chi^2/\text{NDF}: 39.0/39$

Out:  $-4.104 \pm 4.333$   $\chi^2/\text{NDF}: 45.6/44$

All:  $-5.290 \pm 3.105$   $\chi^2/\text{NDF}: 84.8/84$

reg\_asym\_sam\_1357\_2468\_dd\_rms vs Slug, Sign Corrected



Right In: 26.100 $\pm$ 0.007  $\chi^2$ /NDF: 601502.5/16

Left Out: 20.279 $\pm$ 0.003  $\chi^2$ /NDF: 407056.4/24

Right Out: 27.144 $\pm$ 0.007  $\chi^2$ /NDF: 1187603.3/19

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

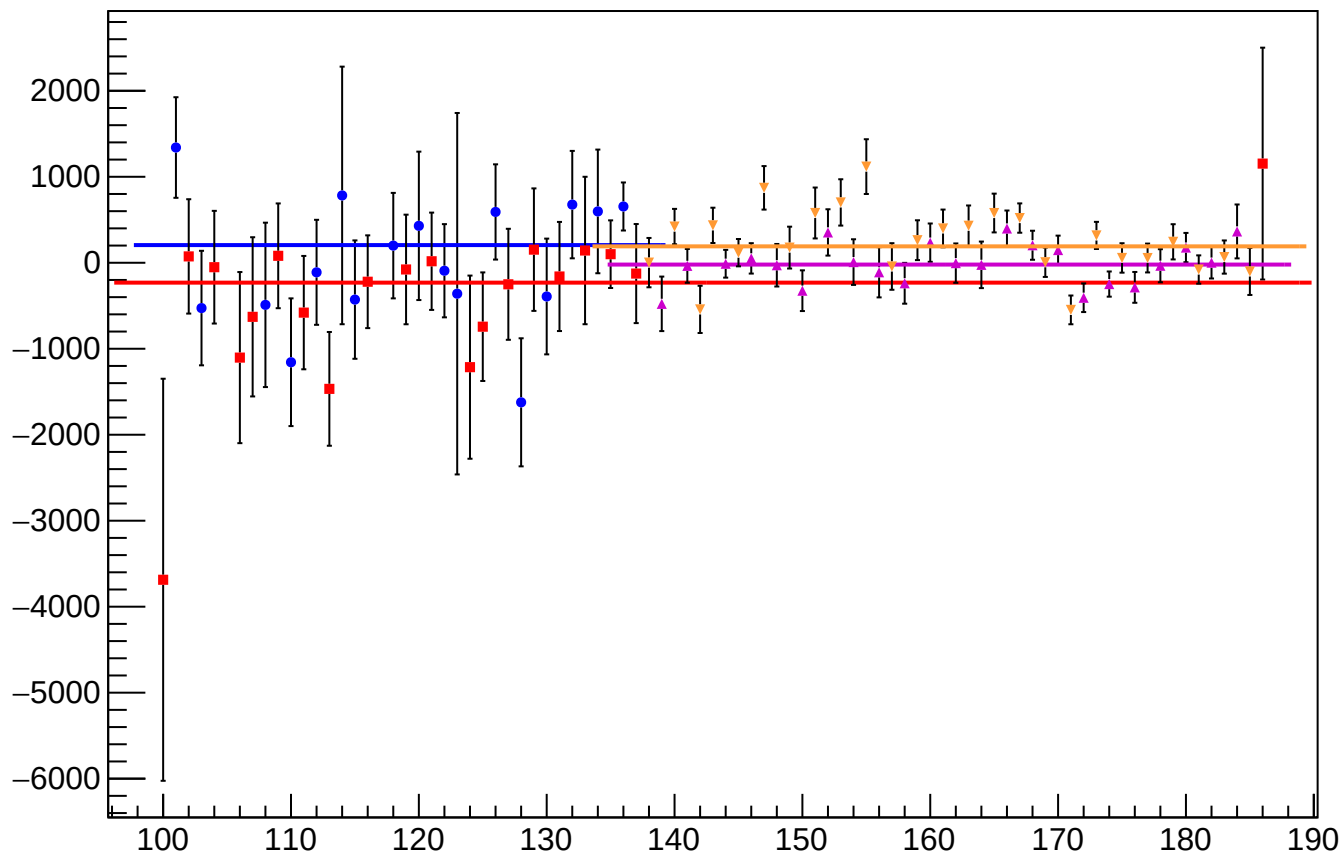
Right: 26.620 $\pm$ 0.005  $\chi^2$ /NDF: 1799104.6/36

In: 21.460 $\pm$ 0.003  $\chi^2$ /NDF: 1409796.8/39

Out: 21.457 $\pm$ 0.003  $\chi^2$ /NDF: 2308076.7/44

All: 21.458 $\pm$ 0.002  $\chi^2$ /NDF: 3717873.9/84

asym\_sam\_1357\_2468\_dd\_correction\_mean vs Slug, Sign Corrected



Right In: 205.606 $\pm$ 148.196  $\chi^2$ /NDF: 21.3/16

Left Out: 190.867 $\pm$ 41.314  $\chi^2$ /NDF: 67.9/24

Right Out: -231.151 $\pm$ 149.265  $\chi^2$ /NDF: 11.5/19

Left In: -20.998 $\pm$ 42.291  $\chi^2$ /NDF: 27.7/22

Left: 87.410 $\pm$ 29.553  $\chi^2$ /NDF: 108.4/47

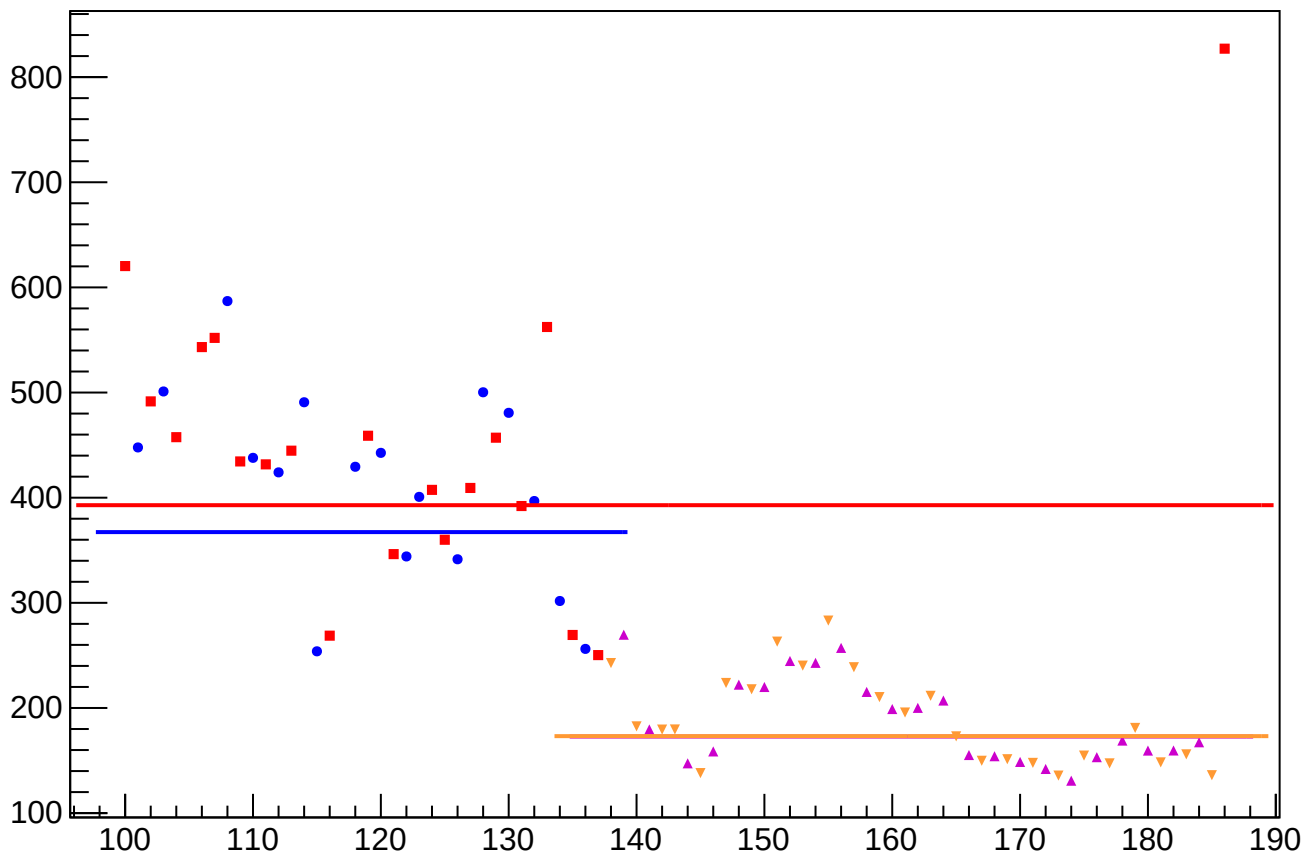
Right: -11.202 $\pm$ 105.166  $\chi^2$ /NDF: 37.1/36

In: -3.934 $\pm$ 40.667  $\chi^2$ /NDF: 51.2/39

Out: 160.838 $\pm$ 39.817  $\chi^2$ /NDF: 86.8/44

All: 80.193 $\pm$ 28.451  $\chi^2$ /NDF: 146.4/84

asym\_sam\_1357\_2468\_dd\_correction\_rms vs Slug, Sign Corrected



Right In: 367.272+/-0.105  $\chi^2/\text{NDF}$ : 829589.7/16

Left Out: 173.210+/-0.029  $\chi^2/\text{NDF}$ :1561250.6/24

Right Out: 392.867+/-0.106  $\chi^2/\text{NDF}$ : 984892.6/19

Left In: 172.828+/-0.030  $\chi^2/\text{NDF}$ :1372131.7/22

Left: 173.023+/-0.021  $\chi^2/\text{NDF}$ : 2933465.9/47

Right: 379.977+/-0.074  $\chi^2/\text{NDF}$ : 1844096.4/36

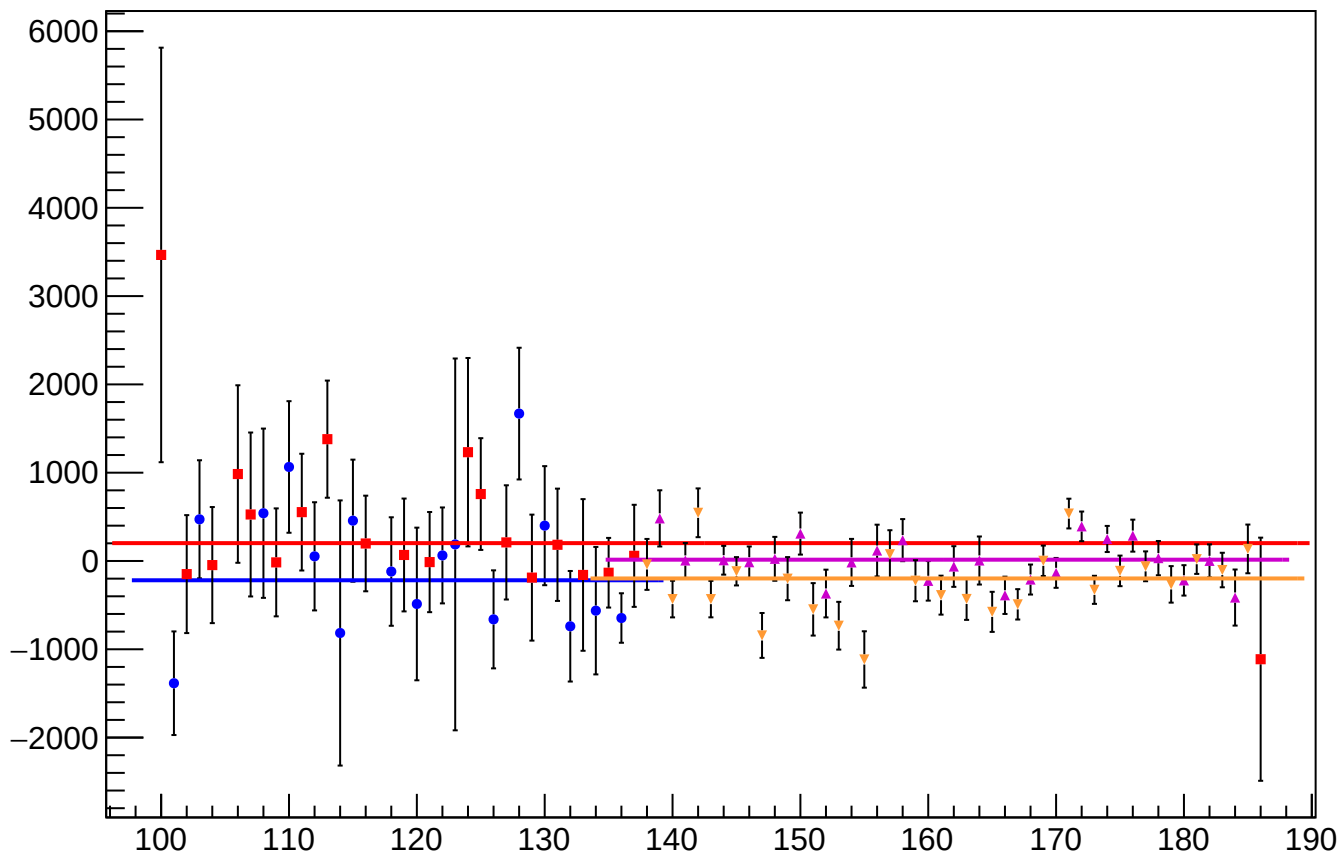
In: 187.470+/-0.029  $\chi^2/\text{NDF}$ :5385533.3/39

Out: 188.840+/-0.028  $\chi^2/\text{NDF}$ :6569080.3/44

All: 188.170+/-0.020  $\chi^2/\text{NDF}$ : 11955772.1/84



asym\_sam\_1357\_2468\_dd\_mean vs Slug, Sign Corrected



Right In:  $-218.471 \pm 148.628$   $\chi^2/\text{NDF}: 21.5/16$

Left Out:  $-197.918 \pm 41.638$   $\chi^2/\text{NDF}: 64.3/24$

Right Out:  $202.186 \pm 149.746$   $\chi^2/\text{NDF}: 10.7/19$

Left In:  $14.616 \pm 42.629$   $\chi^2/\text{NDF}: 27.7/22$

Left:  $-94.151 \pm 29.787$   $\chi^2/\text{NDF}: 104.7/47$

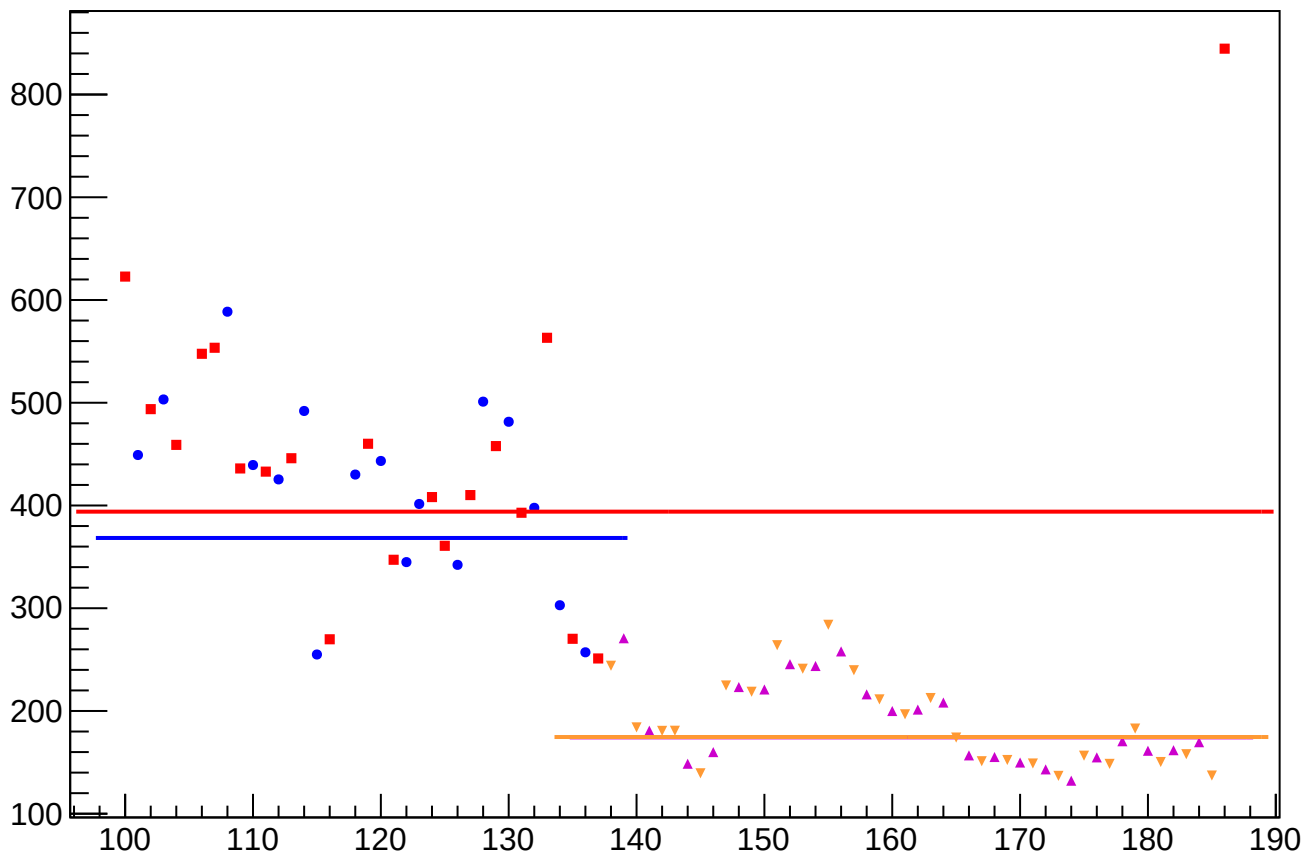
Right:  $-9.719 \pm 105.489$   $\chi^2/\text{NDF}: 36.1/36$

In:  $-3.102 \pm 40.977$   $\chi^2/\text{NDF}: 51.5/39$

Out:  $-169.203 \pm 40.116$   $\chi^2/\text{NDF}: 81.6/44$

All:  $-87.916 \pm 28.666$   $\chi^2/\text{NDF}: 141.4/84$

asym\_sam\_1357\_2468\_dd\_rms vs Slug, Sign Corrected



Right In: 368.392 $\pm$ 0.105  $\chi^2$ /NDF: 826964.8/16

Left Out: 174.648 $\pm$ 0.029  $\chi^2$ /NDF:1531999.5/24

Right Out: 394.004 $\pm$ 0.106  $\chi^2$ /NDF: 991868.7/19

Left In: 174.288 $\pm$ 0.030  $\chi^2$ /NDF:1344779.5/22

Left: 174.472 $\pm$ 0.021  $\chi^2$ /NDF: 2876851.9/47

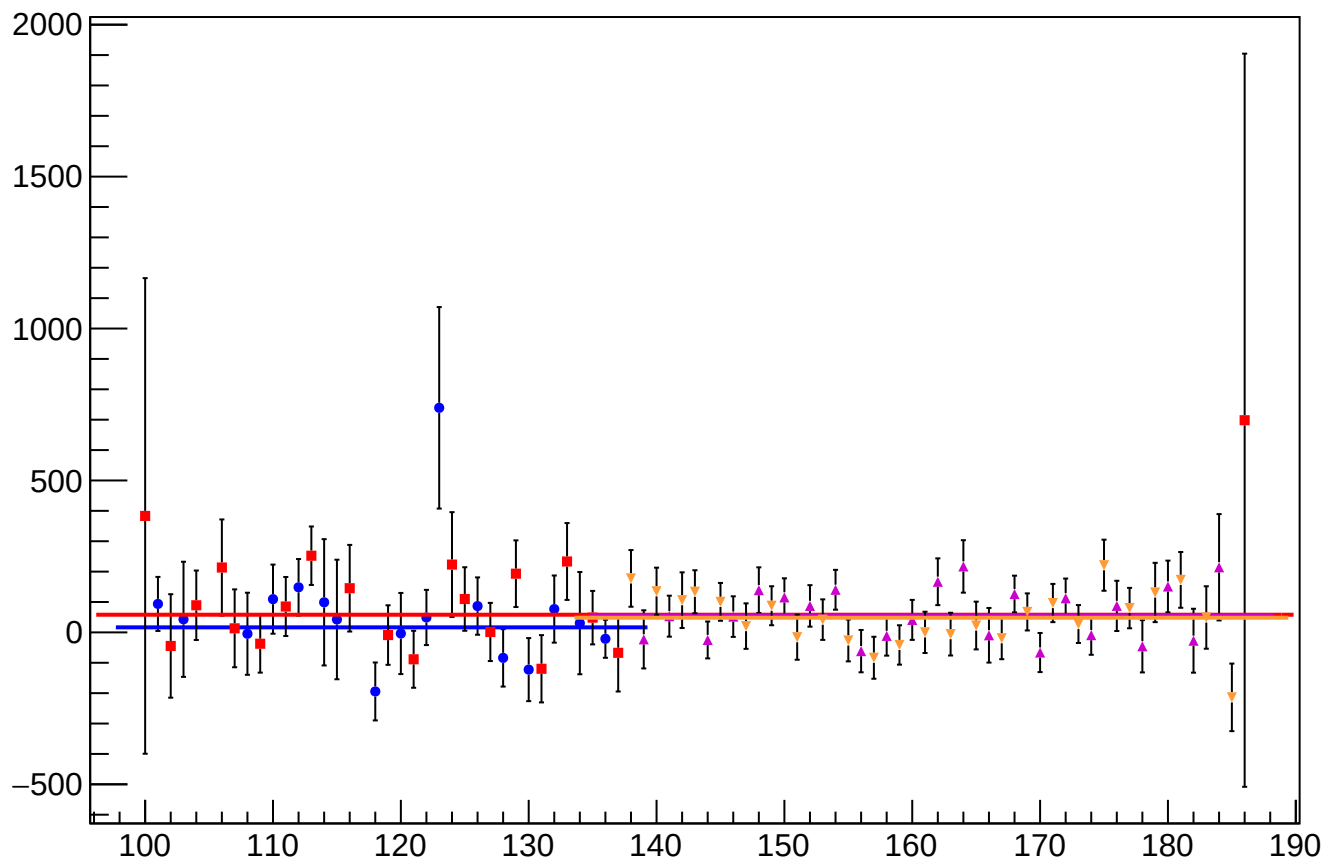
Right: 381.102 $\pm$ 0.075  $\chi^2$ /NDF: 1848307.1/36

In: 189.042 $\pm$ 0.029  $\chi^2$ /NDF:5323560.7/39

Out: 190.390 $\pm$ 0.028  $\chi^2$ /NDF:6507460.3/44

All: 189.731 $\pm$ 0.020  $\chi^2$ /NDF: 11832126.3/84

reg\_asym\_sam\_12345678\_avg\_mean vs Slug, Sign Corrected



Right In: 16.561+/-26.377  $\chi^2/\text{NDF}$ : 17.6/16

Left Out: 48.233+/-14.616  $\chi^2/\text{NDF}$ : 29.3/24

Right Out: 58.141+/-26.190  $\chi^2/\text{NDF}$ : 18.9/19

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

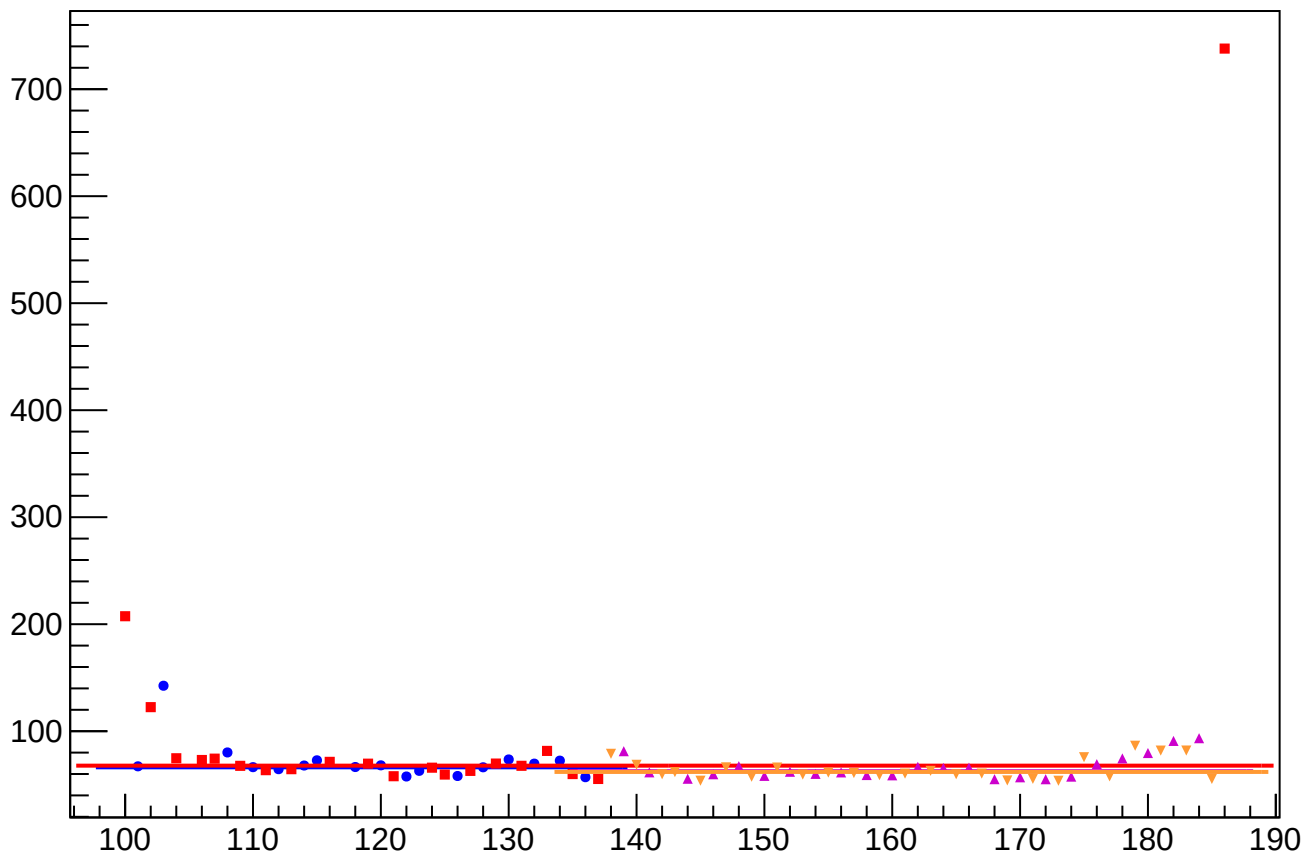
Right: 37.499+/-18.585  $\chi^2/\text{NDF}$ : 37.8/36

In: 46.488+/-13.158  $\chi^2/\text{NDF}$ : 46.8/39

Out: 50.586+/-12.763  $\chi^2/\text{NDF}$ : 48.3/44

All: 48.600+/-9.161  $\chi^2/\text{NDF}$ : 95.1/84

reg\_asym\_sam\_12345678\_avg\_rms vs Slug, Sign Corrected



Right In: 66.252+/-0.019  $\chi^2/\text{NDF}$ : 439625.4/16

Left Out: 61.946+/-0.010  $\chi^2/\text{NDF}$ : 604989.2/24

Right Out: 67.809+/-0.019  $\chi^2/\text{NDF}$ : 1009744.1/19

Left In: 62.607+/-0.011  $\chi^2/\text{NDF}$ : 575516.1/22

Left: 62.264+/-0.007  $\chi^2/\text{NDF}$ : 1182470.7/47

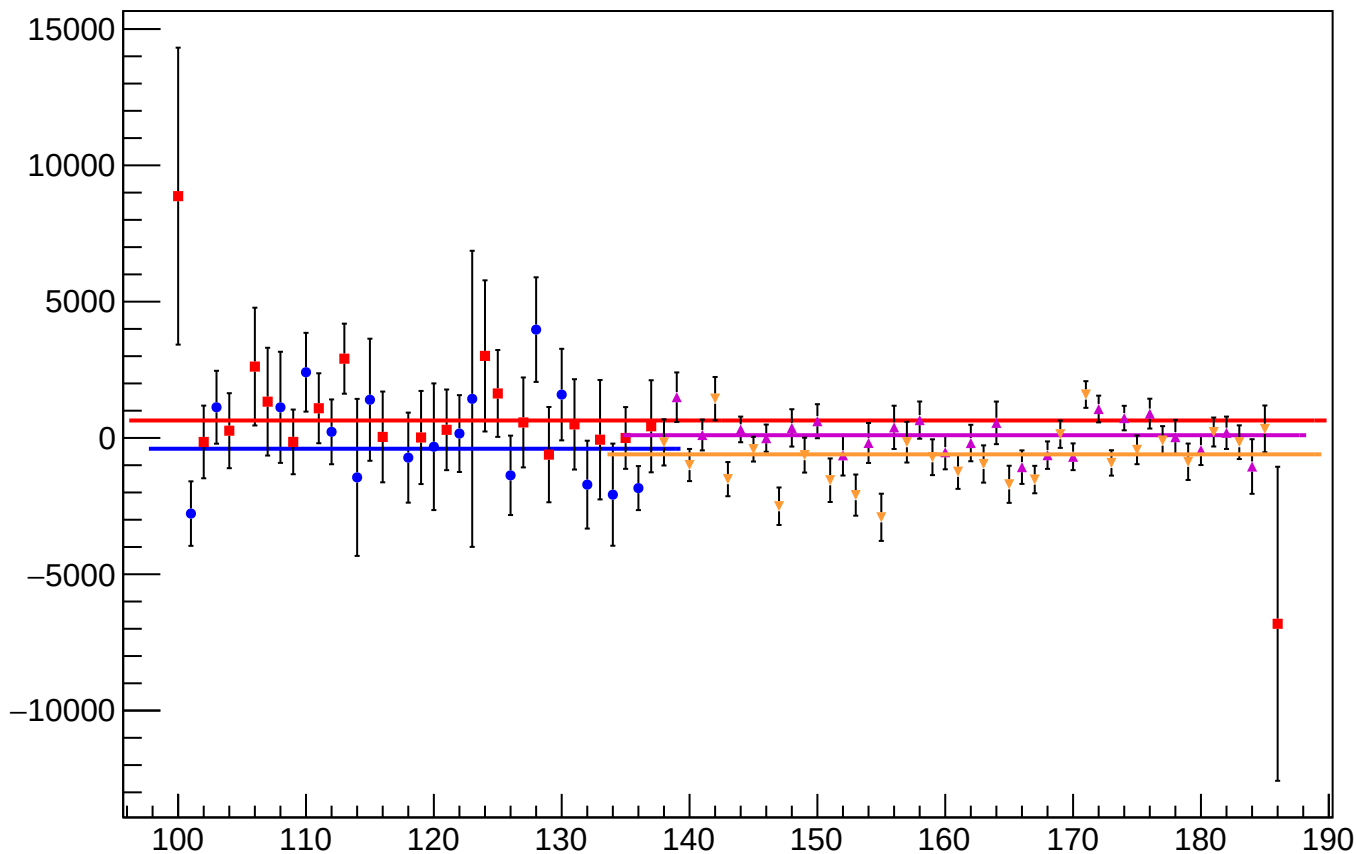
Right: 67.036+/-0.013  $\chi^2/\text{NDF}$ : 1452877.5/36

In: 63.514+/-0.009  $\chi^2/\text{NDF}$ : 1043835.7/39

Out: 63.339+/-0.009  $\chi^2/\text{NDF}$ : 1691154.9/44

All: 63.424+/-0.006  $\chi^2/\text{NDF}$ : 2735173.9/84

asym\_sam\_12345678\_avg\_correction\_mean vs Slug, Sign Corrected



Right In: -395.700+/-367.296  $\chi^2/\text{NDF}$ : 22.7/16

Left Out: -601.486+/-122.119  $\chi^2/\text{NDF}$ : 65.4/24

Right Out: 640.897+/-361.975  $\chi^2/\text{NDF}$ : 11.4/19

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

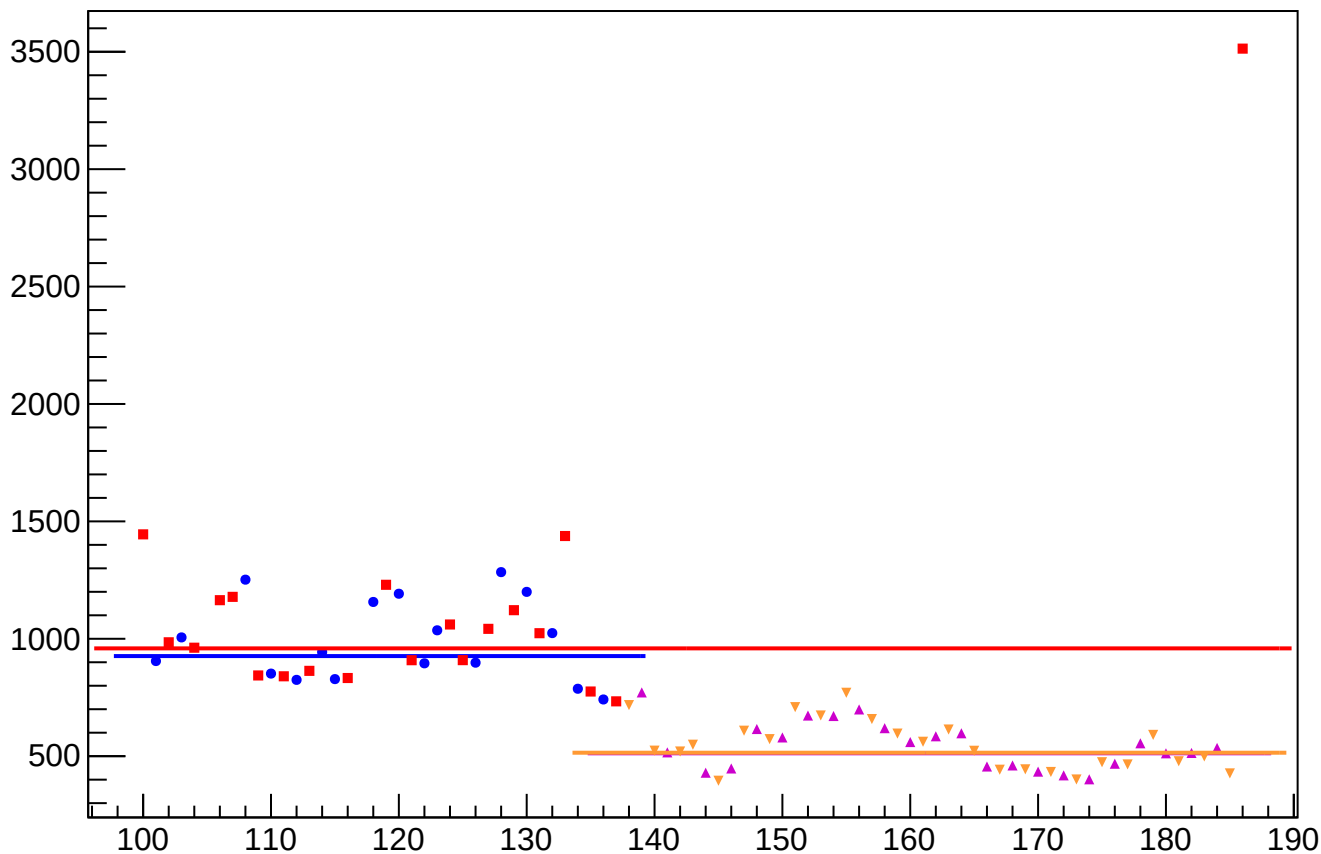
Right: 130.161+/-257.816  $\chi^2/\text{NDF}$ : 38.2/36

In: 49.241+/-118.101  $\chi^2/\text{NDF}$ : 49.8/39

Out: -474.532+/-115.711  $\chi^2/\text{NDF}$ : 87.4/44

All: -217.999+/-82.652  $\chi^2/\text{NDF}$ : 147.2/84

asym\_sam\_12345678\_avg\_correction\_rms vs Slug, Sign Corrected



Right In: 926.339+/-0.260  $\chi^2/\text{NDF}$ : 395813.5/16

Left Out: 514.758+/-0.086  $\chi^2/\text{NDF}$ :1194945.9/24

Right Out: 959.108+/-0.256  $\chi^2/\text{NDF}$ : 777784.7/19

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

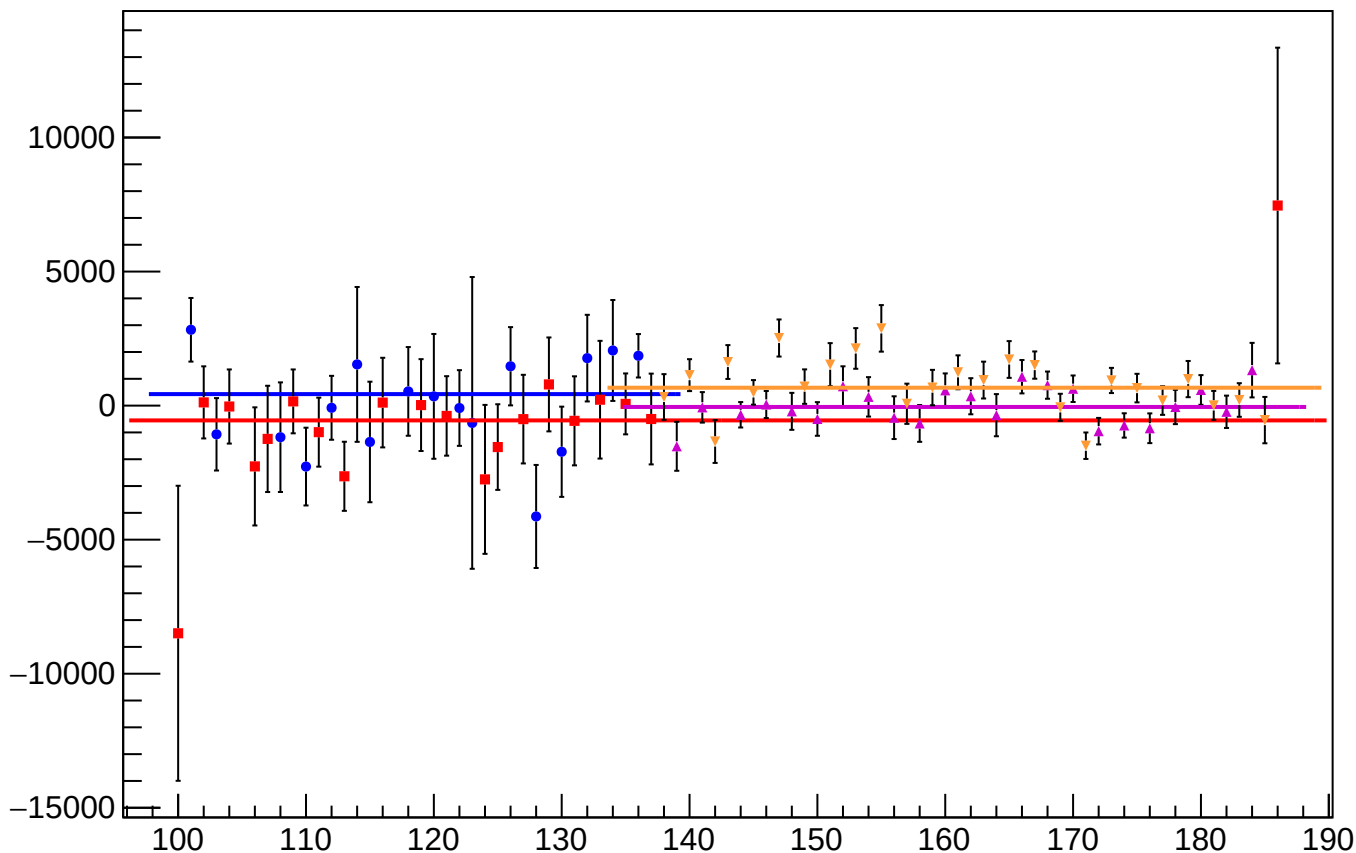
Right: 942.963+/-0.182  $\chi^2/\text{NDF}$ : 1181673.9/36

In: 555.017+/-0.084  $\chi^2/\text{NDF}$ :3716915.2/39

Out: 560.164+/-0.082  $\chi^2/\text{NDF}$ :4678612.9/44

All: 557.643+/-0.058  $\chi^2/\text{NDF}$ : 8397466.4/84

asym\_sam\_12345678\_avg\_mean vs Slug, Sign Corrected



Right In: 429.343+/-368.550  $\chi^2/\text{NDF}$ : 22.9/16

Left Out: 667.625+/-123.146  $\chi^2/\text{NDF}$ : 61.5/24

Right Out: -551.523+/-363.444  $\chi^2/\text{NDF}$ : 10.4/19

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

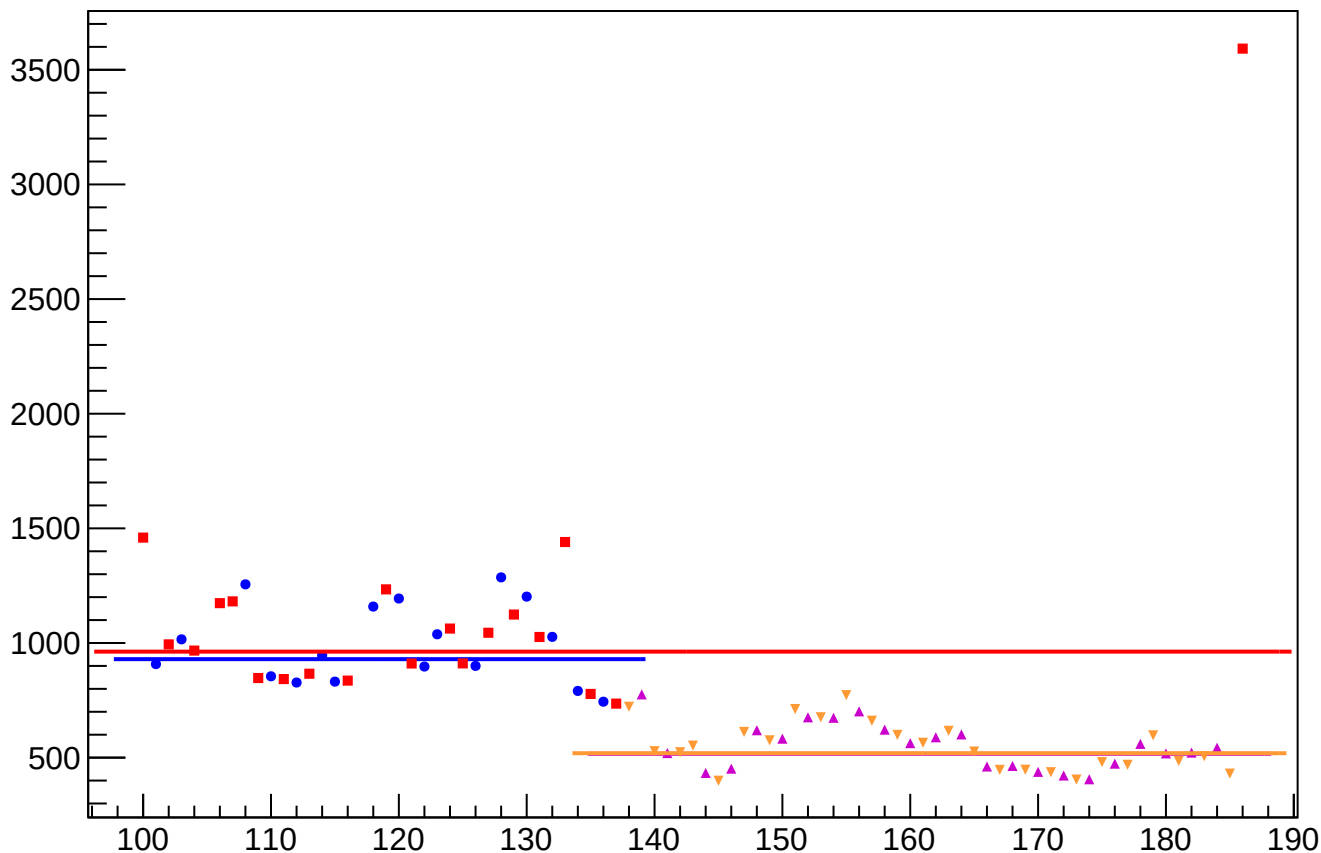
Right: -67.931+/-258.780  $\chi^2/\text{NDF}$ : 36.9/36

In: -0.046+/-119.059  $\chi^2/\text{NDF}$ : 50.5/39

Out: 542.074+/-116.632  $\chi^2/\text{NDF}$ : 82.0/44

All: 276.596+/-83.316  $\chi^2/\text{NDF}$ : 143.1/84

asym\_sam\_12345678\_avg\_rms vs Slug, Sign Corrected



Right In: 929.549+/-0.261  $\chi^2/\text{NDF}$ : 394903.7/16

Left Out: 519.254+/-0.087  $\chi^2/\text{NDF}$ : 1172411.1/24

Right Out: 962.342+/-0.257  $\chi^2/\text{NDF}$ : 783756.2/19

Left In: 516.792+/-0.089  $\chi^2/\text{NDF}$ : 1021374.1/22

Left: 518.049+/-0.062  $\chi^2/\text{NDF}$ : 2194176.4/47

Right: 946.174+/-0.183  $\chi^2/\text{NDF}$ : 1186687.9/36

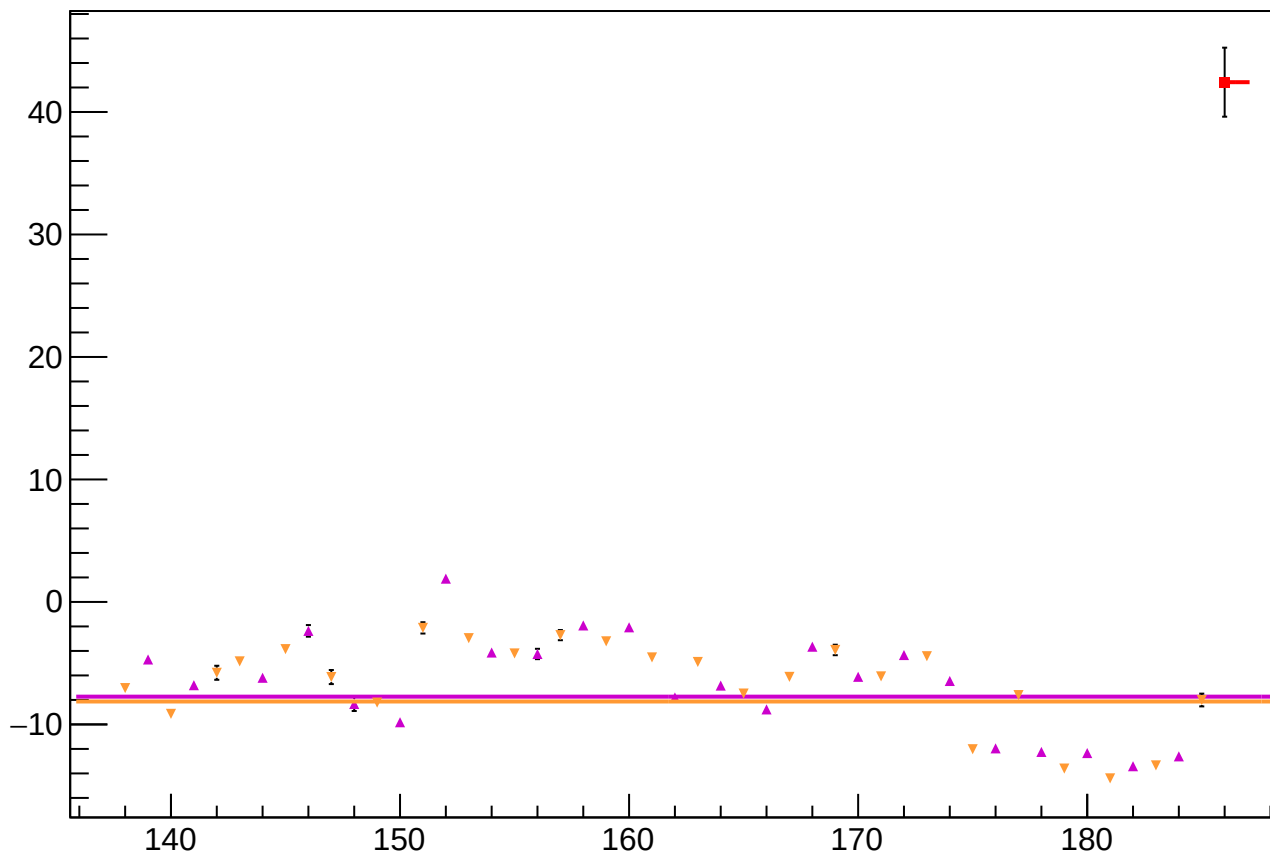
In: 559.867+/-0.084  $\chi^2/\text{NDF}$ : 3663053.9/39

Out: 564.884+/-0.082  $\chi^2/\text{NDF}$ : 4622631.5/44

All: 562.427+/-0.059  $\chi^2/\text{NDF}$ : 8287497.5/84



reg\_asym\_sam1\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Left Out: -8.127 $\pm$ 0.067  $\chi^2$ /NDF:3635.5/24

Right Out: 42.434 $\pm$ 2.817  $\chi^2$ /NDF: 0.0/0

Left In: -7.732 $\pm$ 0.069  $\chi^2$ /NDF:3719.0/22

Left: -7.934 $\pm$ 0.048  $\chi^2$ /NDF: 7371.4/47

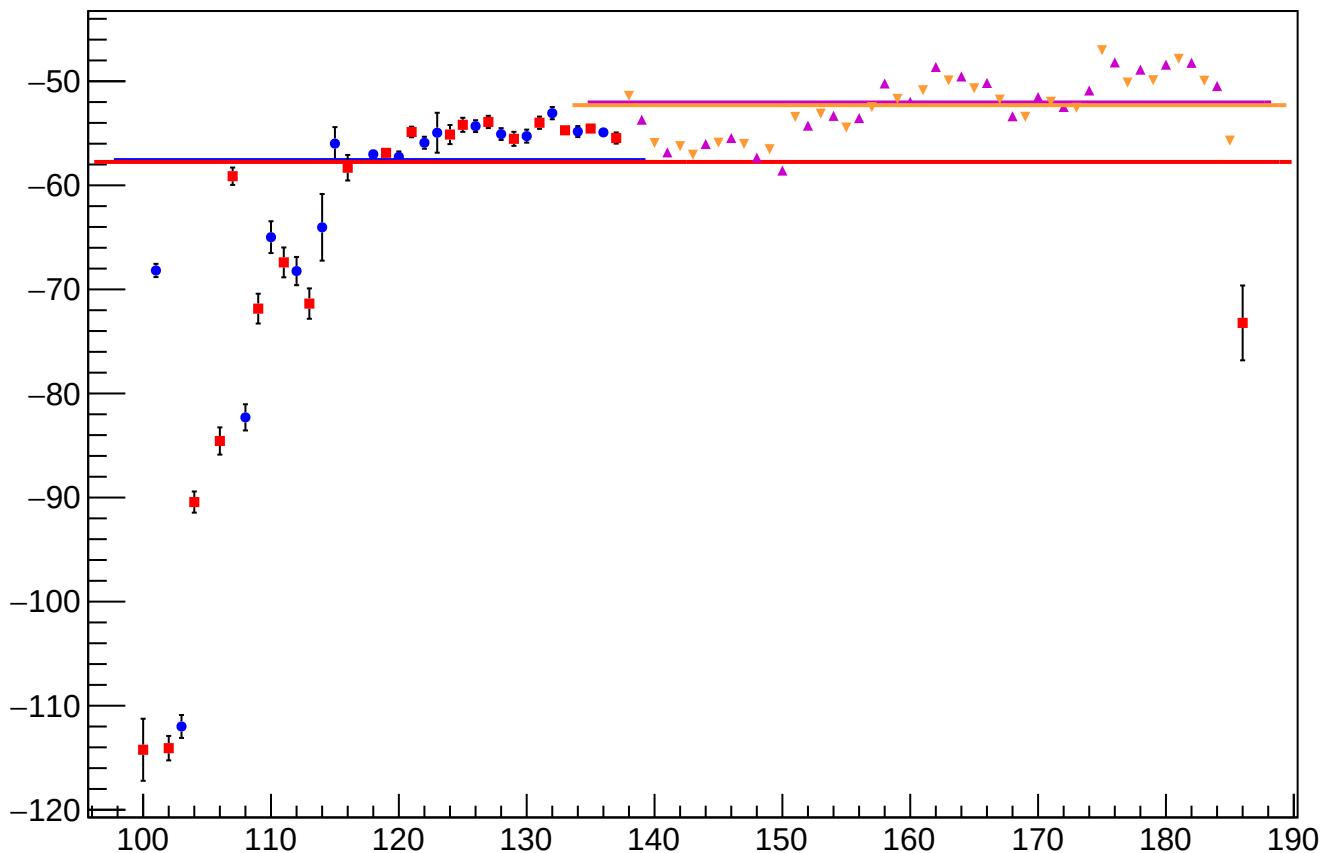
Right: 42.434 $\pm$ 2.817  $\chi^2$ /NDF: 0.0/0

In: -7.732 $\pm$ 0.069  $\chi^2$ /NDF:3719.0/22

Out: -8.098 $\pm$ 0.067  $\chi^2$ /NDF:3957.4/25

All: -7.919 $\pm$ 0.048  $\chi^2$ /NDF: 7690.9/48

reg\_asym\_sam1\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: -57.574 $\pm$ 0.143  $\chi^2$ /NDF: 3458.2/16

Left Out: -52.297 $\pm$ 0.055  $\chi^2$ /NDF: 2657.5/24

Right Out: -57.753 $\pm$ 0.143  $\chi^2$ /NDF: 4719.1/19

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

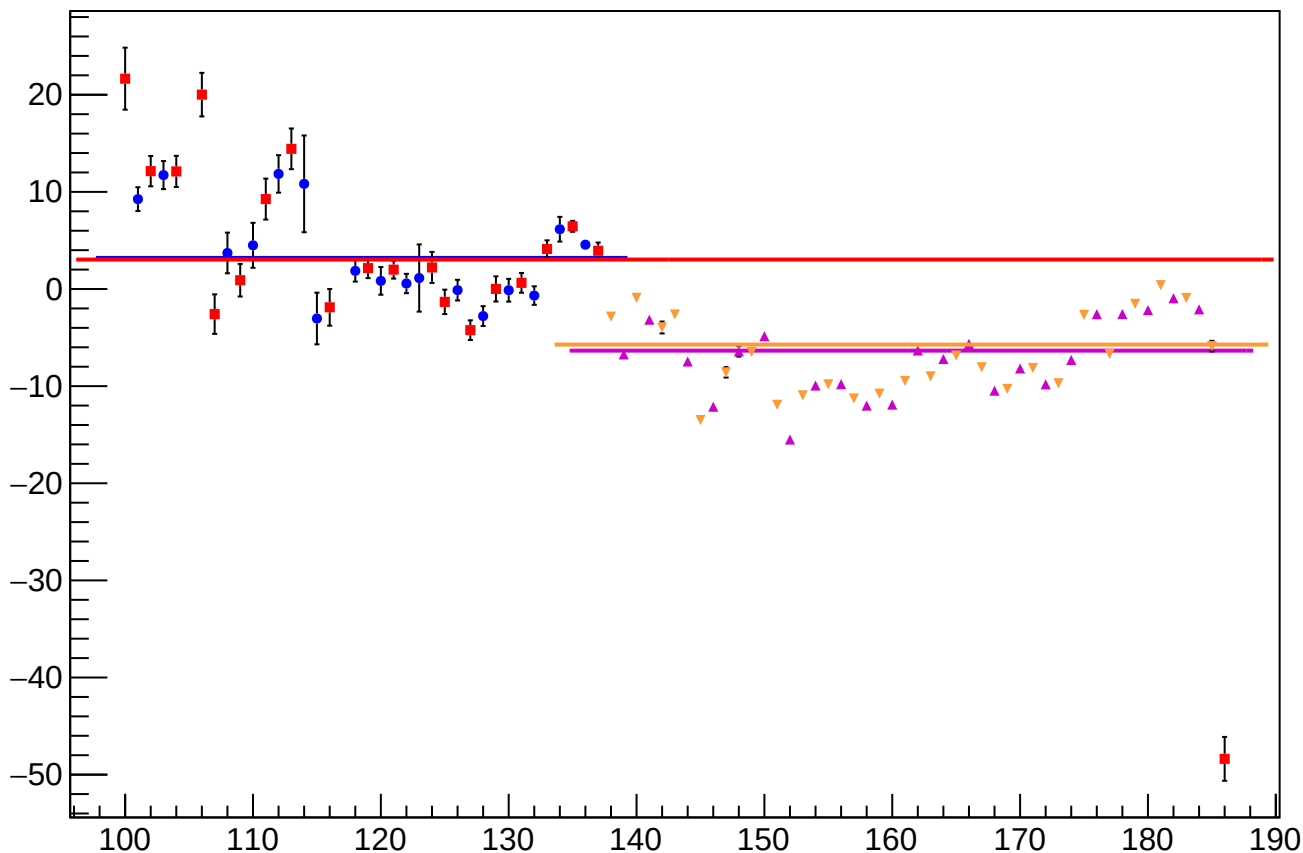
Right: -57.663 $\pm$ 0.101  $\chi^2$ /NDF: 8178.0/36

In: -52.799 $\pm$ 0.053  $\chi^2$ /NDF: 7927.8/39

Out: -53.001 $\pm$ 0.051  $\chi^2$ /NDF: 8643.3/44

All: -52.903 $\pm$ 0.037  $\chi^2$ /NDF: 16578.6/84

reg\_asym\_sam1\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $3.200 \pm 0.259$   $\chi^2/\text{NDF}: 184.7/16$

Left Out:  $-5.722 \pm 0.068$   $\chi^2/\text{NDF}: 3983.0/24$

Right Out:  $3.034 \pm 0.266$   $\chi^2/\text{NDF}: 846.2/19$

Left In:  $-6.344 \pm 0.069$   $\chi^2/\text{NDF}: 3383.7/22$

Left:  $-6.028 \pm 0.048$   $\chi^2/\text{NDF}: 7408.5/47$

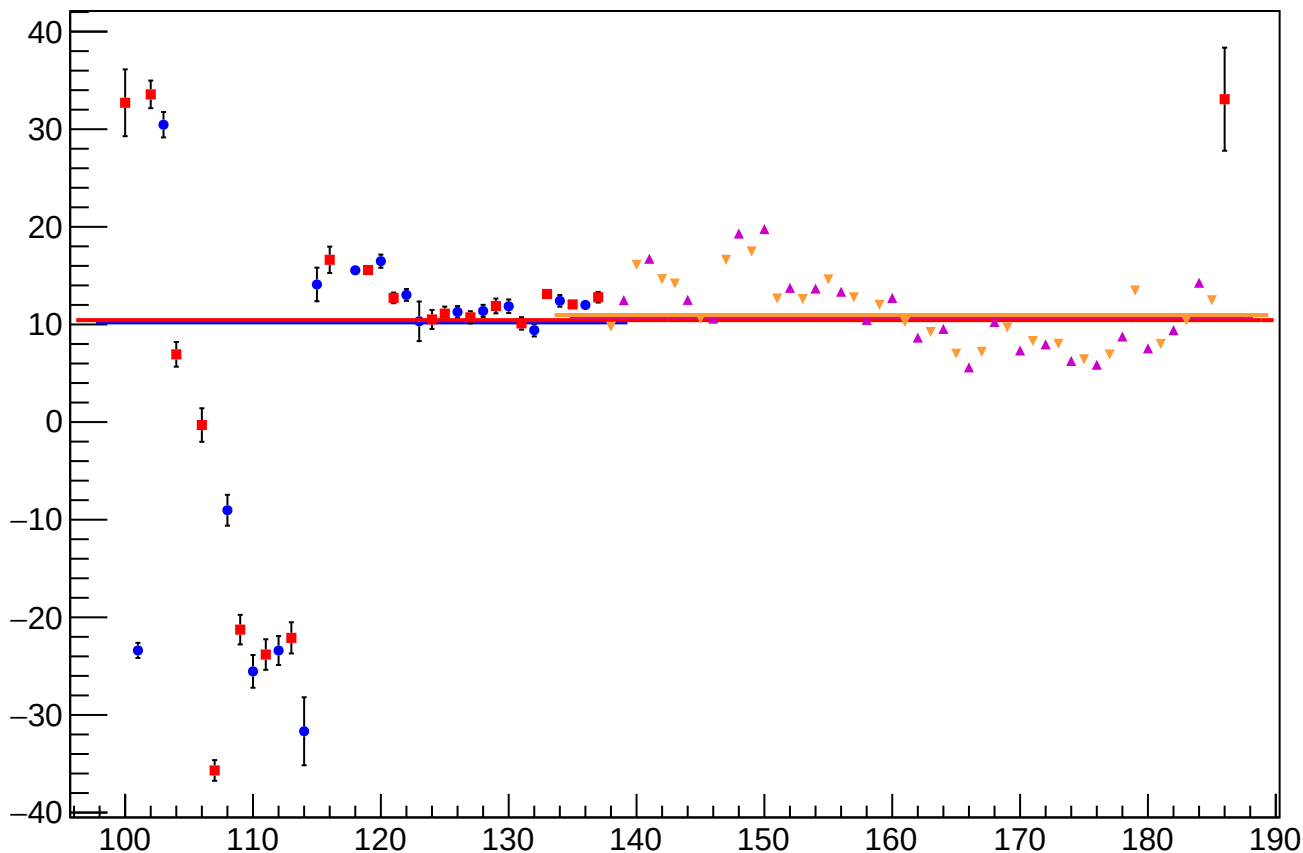
Right:  $3.119 \pm 0.186$   $\chi^2/\text{NDF}: 1031.1/36$

In:  $-5.719 \pm 0.066$   $\chi^2/\text{NDF}: 4834.8/39$

Out:  $-5.192 \pm 0.065$   $\chi^2/\text{NDF}: 5845.9/44$

All:  $-5.452 \pm 0.047$   $\chi^2/\text{NDF}: 10712.7/84$

reg\_asym\_sam1\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 10.213+/-0.158  $\chi^2/\text{NDF}$ : 3680.0/16

Left Out: 10.967+/-0.061  $\chi^2/\text{NDF}$ : 2637.7/24

Right Out: 10.443+/-0.160  $\chi^2/\text{NDF}$ : 3844.6/19

Left In: 10.813+/-0.063  $\chi^2/\text{NDF}$ : 3546.8/22

Left: 10.892+/-0.044  $\chi^2/\text{NDF}$ : 6187.5/47

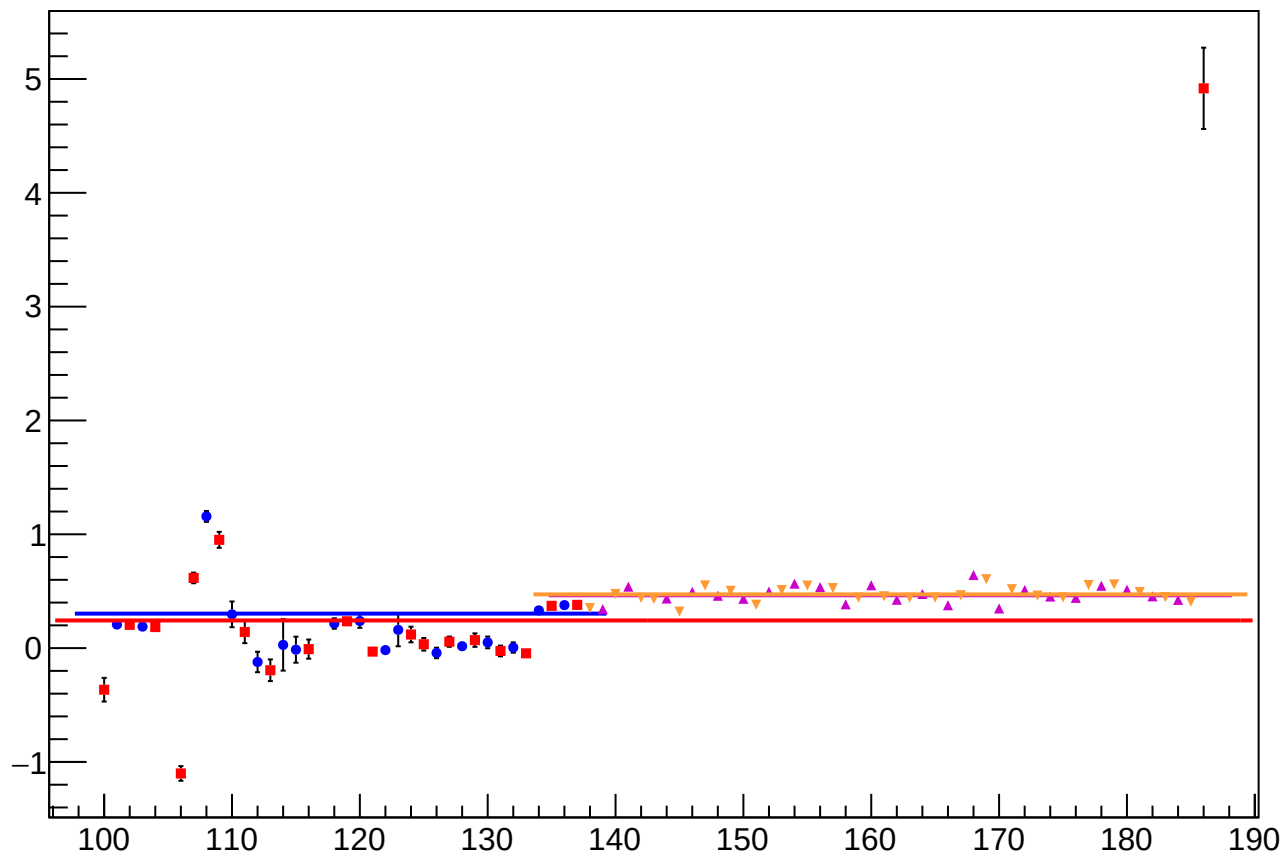
Right: 10.326+/-0.113  $\chi^2/\text{NDF}$ : 7525.7/36

In: 10.731+/-0.059  $\chi^2/\text{NDF}$ : 7239.2/39

Out: 10.900+/-0.057  $\chi^2/\text{NDF}$ : 6491.7/44

All: 10.817+/-0.041  $\chi^2/\text{NDF}$ : 13735.1/84

reg\_asym\_sam1\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.303+/-0.008  $\chi^2/\text{NDF}$ : 647.2/16

Left Out: 0.472+/-0.003  $\chi^2/\text{NDF}$ : 519.0/24

Right Out: 0.243+/-0.009  $\chi^2/\text{NDF}$ : 1154.6/19

Left In: 0.464+/-0.003  $\chi^2/\text{NDF}$ : 733.1/22

Left: 0.468+/-0.002  $\chi^2/\text{NDF}$ : 1256.2/47

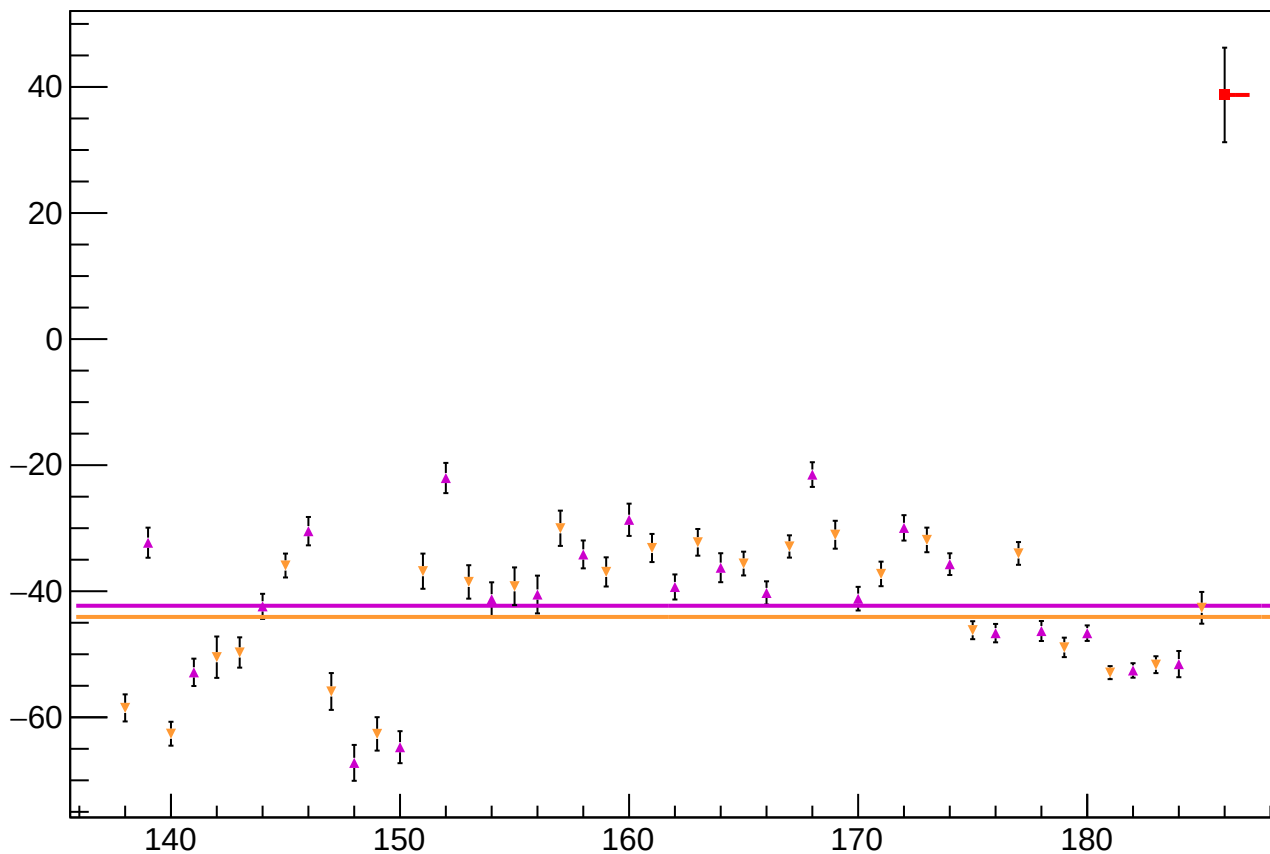
Right: 0.274+/-0.006  $\chi^2/\text{NDF}$ : 1827.4/36

In: 0.448+/-0.003  $\chi^2/\text{NDF}$ : 1725.1/39

Out: 0.451+/-0.003  $\chi^2/\text{NDF}$ : 2326.3/44

All: 0.449+/-0.002  $\chi^2/\text{NDF}$ : 4052.1/84

reg\_asym\_sam2\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -44.077+/-0.389  $\chi^2/\text{NDF}$ : 632.6/24

Right Out: 38.733+/-7.499  $\chi^2/\text{NDF}$ : 0.0/0

Left In: -42.304+/-0.399  $\chi^2/\text{NDF}$ : 640.6/22

Left: -43.214+/-0.278  $\chi^2/\text{NDF}$ : 1283.3/47

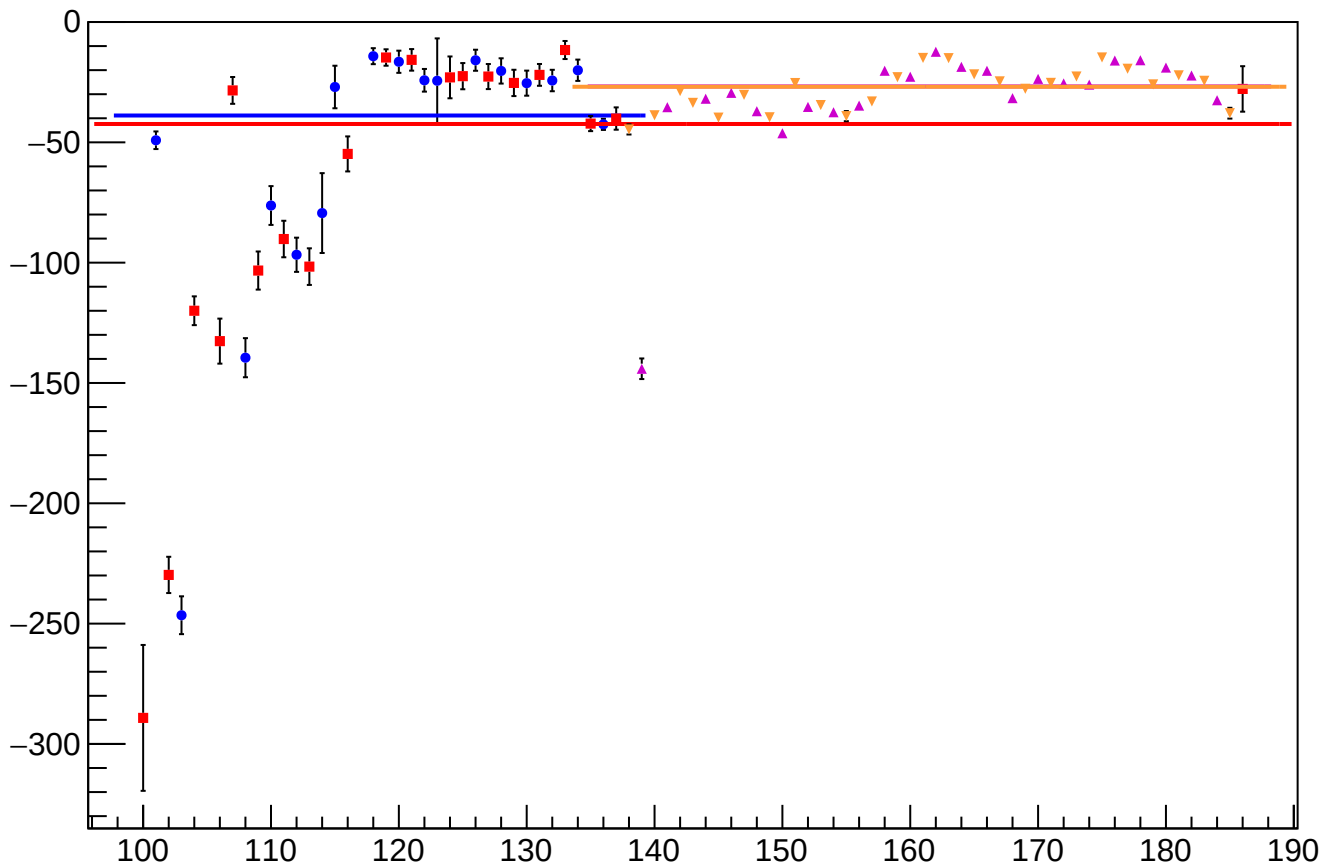
Right: 38.733+/-7.499  $\chi^2/\text{NDF}$ : 0.0/0

In: -42.304+/-0.399  $\chi^2/\text{NDF}$ : 640.6/22

Out: -43.856+/-0.388  $\chi^2/\text{NDF}$ : 754.2/25

All: -43.102+/-0.278  $\chi^2/\text{NDF}$ : 1402.6/48

reg\_asym\_sam2\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-38.852 \pm 1.150$   $\chi^2/\text{NDF}: 1121.7/16$

Left Out:  $-26.902 \pm 0.316$   $\chi^2/\text{NDF}: 631.0/24$

Right Out:  $-42.376 \pm 1.202$   $\chi^2/\text{NDF}: 1348.0/19$

Left In:  $-26.774 \pm 0.326$   $\chi^2/\text{NDF}: 1394.5/22$

Left:  $-26.840 \pm 0.227$   $\chi^2/\text{NDF}: 2025.6/47$

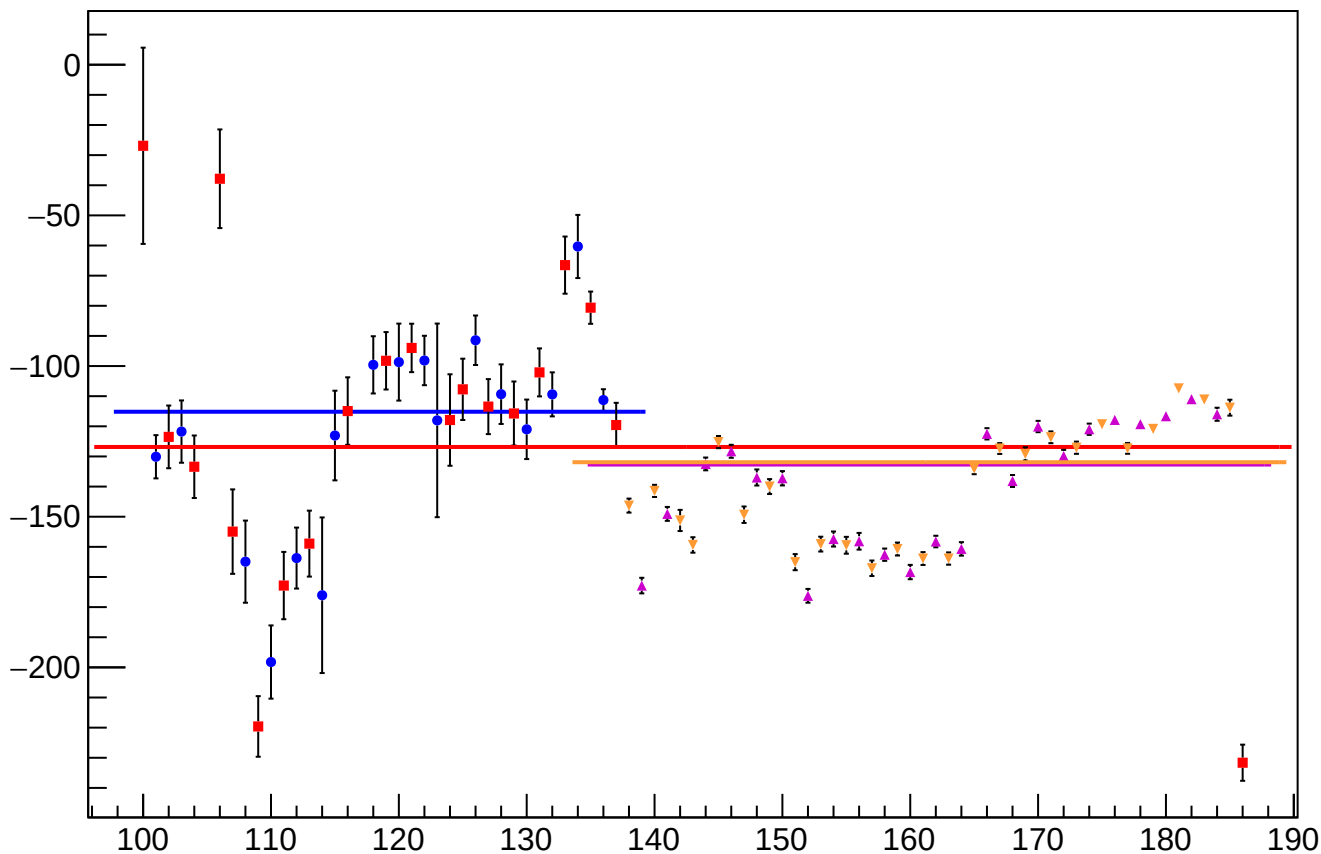
Right:  $-40.536 \pm 0.831$   $\chi^2/\text{NDF}: 2474.3/36$

In:  $-27.674 \pm 0.314$   $\chi^2/\text{NDF}: 2618.4/39$

Out:  $-27.904 \pm 0.306$   $\chi^2/\text{NDF}: 2134.0/44$

All:  $-27.792 \pm 0.219$   $\chi^2/\text{NDF}: 4752.7/84$

reg\_asym\_sam2\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-115.163 \pm 2.084$   $\chi^2/\text{NDF}$ : 140.5/16

Left Out:  $-131.912 \pm 0.391$   $\chi^2/\text{NDF}$ : 2439.3/24

Right Out:  $-126.855 \pm 2.076$   $\chi^2/\text{NDF}$ : 619.2/19

Left In:  $-132.690 \pm 0.399$   $\chi^2/\text{NDF}$ : 2480.2/22

Left:  $-132.293 \pm 0.280$   $\chi^2/\text{NDF}$ : 4921.5/47

Right:  $-121.030 \pm 1.471$   $\chi^2/\text{NDF}$ : 775.5/36

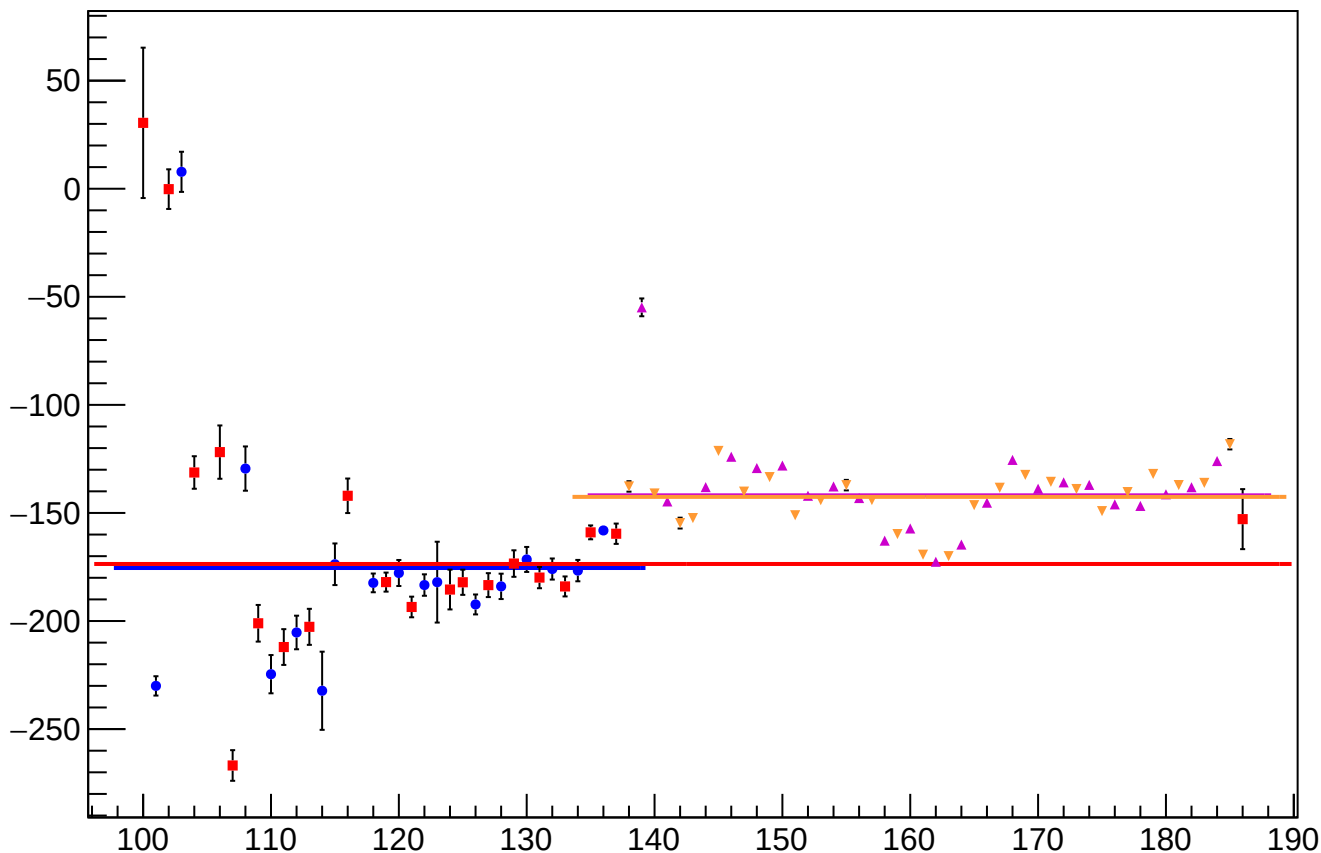
In:  $-132.068 \pm 0.392$   $\chi^2/\text{NDF}$ : 2689.0/39

Out:  $-131.739 \pm 0.385$   $\chi^2/\text{NDF}$ : 3064.3/44

All:  $-131.900 \pm 0.275$   $\chi^2/\text{NDF}$ : 5753.6/84



reg\_asym\_sam2\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: -175.476 $\pm$ 1.279  $\chi^2$ /NDF: 691.2/16

Left Out: -142.564 $\pm$ 0.354  $\chi^2$ /NDF:1147.7/24

Right Out: -173.610 $\pm$ 1.352  $\chi^2$ /NDF: 740.2/19

Left In: -141.856 $\pm$ 0.364  $\chi^2$ /NDF:1544.3/22

Left: -142.220 $\pm$ 0.254  $\chi^2$ /NDF: 2693.9/47

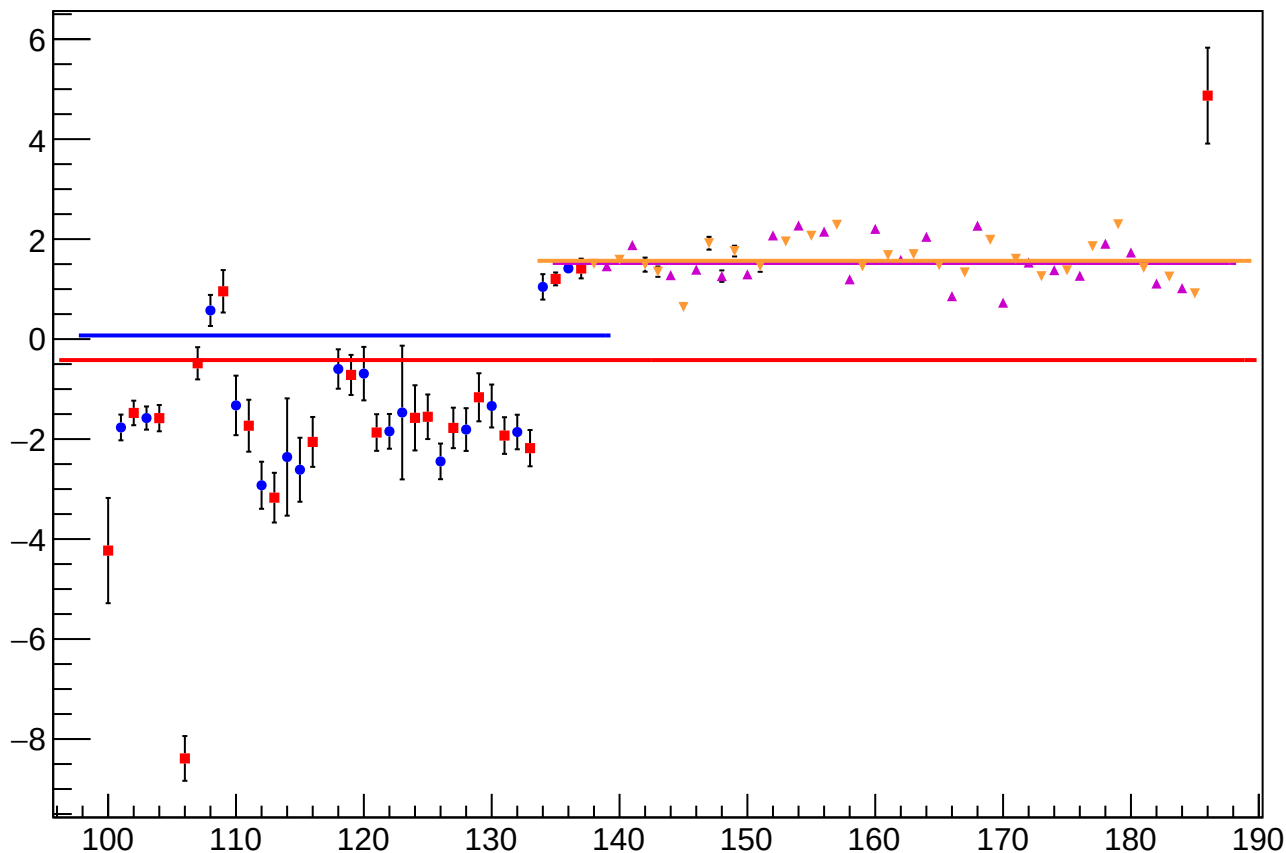
Right: -174.595 $\pm$ 0.929  $\chi^2$ /NDF: 1432.4/36

In: -144.373 $\pm$ 0.350  $\chi^2$ /NDF:2874.9/39

Out: -144.555 $\pm$ 0.342  $\chi^2$ /NDF:2381.2/44

All: -144.466 $\pm$ 0.245  $\chi^2$ /NDF: 5256.2/84

reg\_asym\_sam2\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.073 $\pm$ 0.067  $\chi^2$ /NDF: 525.2/16

Left Out: 1.566 $\pm$ 0.016  $\chi^2$ /NDF:542.8/24

Right Out: -0.420 $\pm$ 0.071  $\chi^2$ /NDF: 781.3/19

Left In: 1.523 $\pm$ 0.017  $\chi^2$ /NDF:738.5/22

Left: 1.545 $\pm$ 0.012  $\chi^2$ /NDF: 1284.8/47

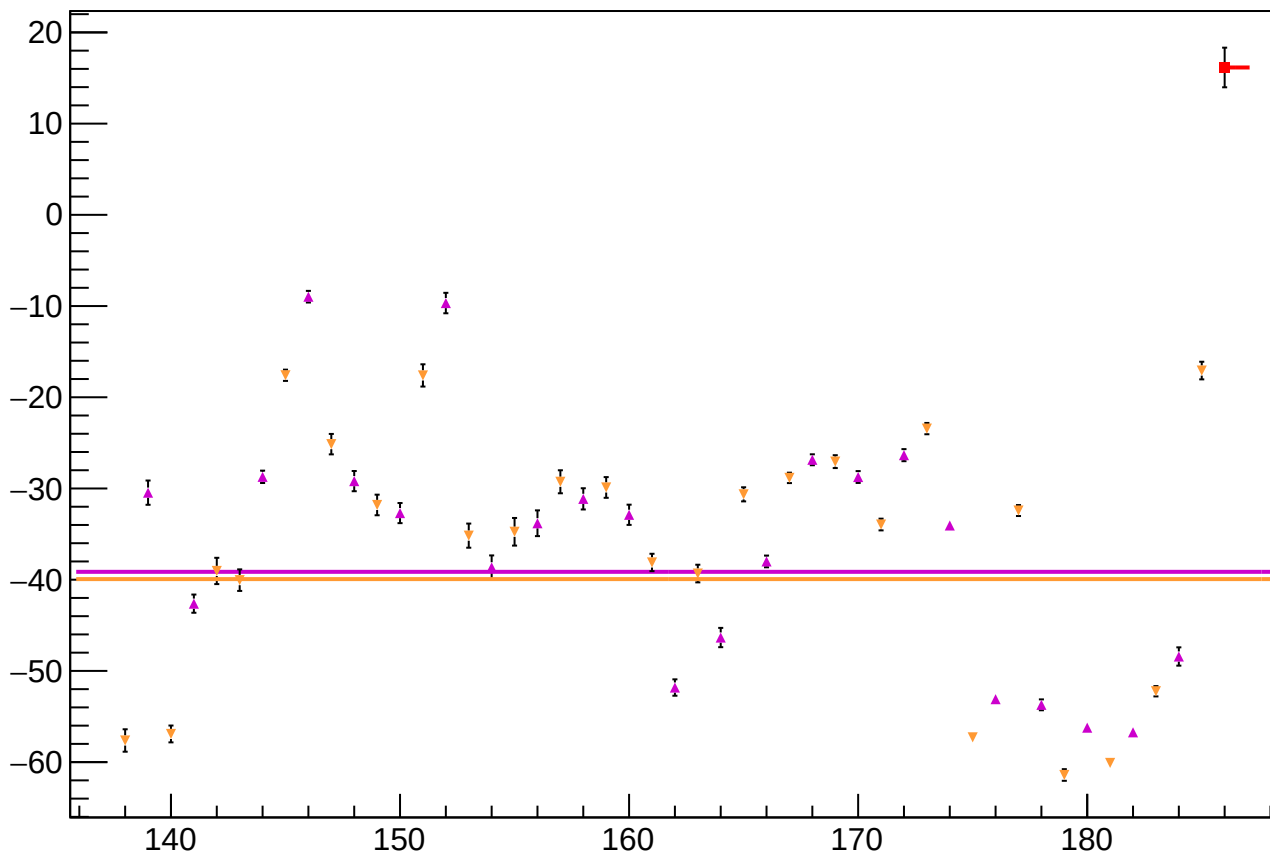
Right: -0.159 $\pm$ 0.049  $\chi^2$ /NDF: 1331.7/36

In: 1.440 $\pm$ 0.016  $\chi^2$ /NDF:1703.0/39

Out: 1.469 $\pm$ 0.016  $\chi^2$ /NDF:2063.7/44

All: 1.455 $\pm$ 0.011  $\chi^2$ /NDF: 3768.3/84

reg\_asym\_sam3\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -39.935+/-0.153  $\chi^2/\text{NDF}$ : 9806.5/24

Right Out: 16.154+/-2.172  $\chi^2/\text{NDF}$ : 0.0/0

Left In: -39.137+/-0.155  $\chi^2/\text{NDF}$ : 8534.5/22

Left: -39.540+/-0.109  $\chi^2/\text{NDF}$ : 18354.5/47

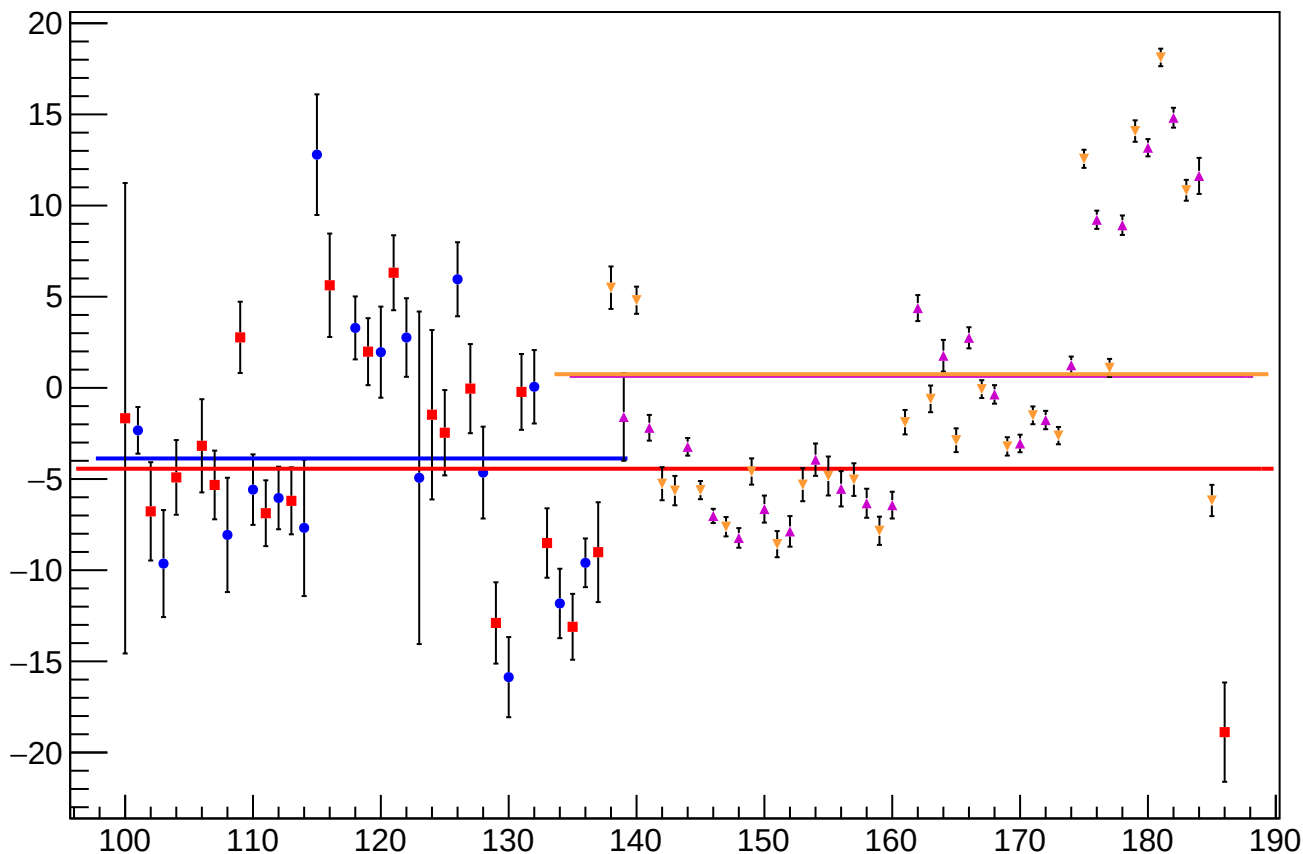
Right: 16.154+/-2.172  $\chi^2/\text{NDF}$ : 0.0/0

In: -39.137+/-0.155  $\chi^2/\text{NDF}$ : 8534.5/22

Out: -39.657+/-0.153  $\chi^2/\text{NDF}$ : 10470.0/25

All: -39.400+/-0.109  $\chi^2/\text{NDF}$ : 19010.2/48

reg\_asym\_sam3\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-3.872 \pm 0.499$   $\chi^2/\text{NDF}$ : 161.0/16

Left Out:  $0.749 \pm 0.124$   $\chi^2/\text{NDF}$ : 3970.9/24

Right Out:  $-4.435 \pm 0.499$   $\chi^2/\text{NDF}$ : 151.2/19

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

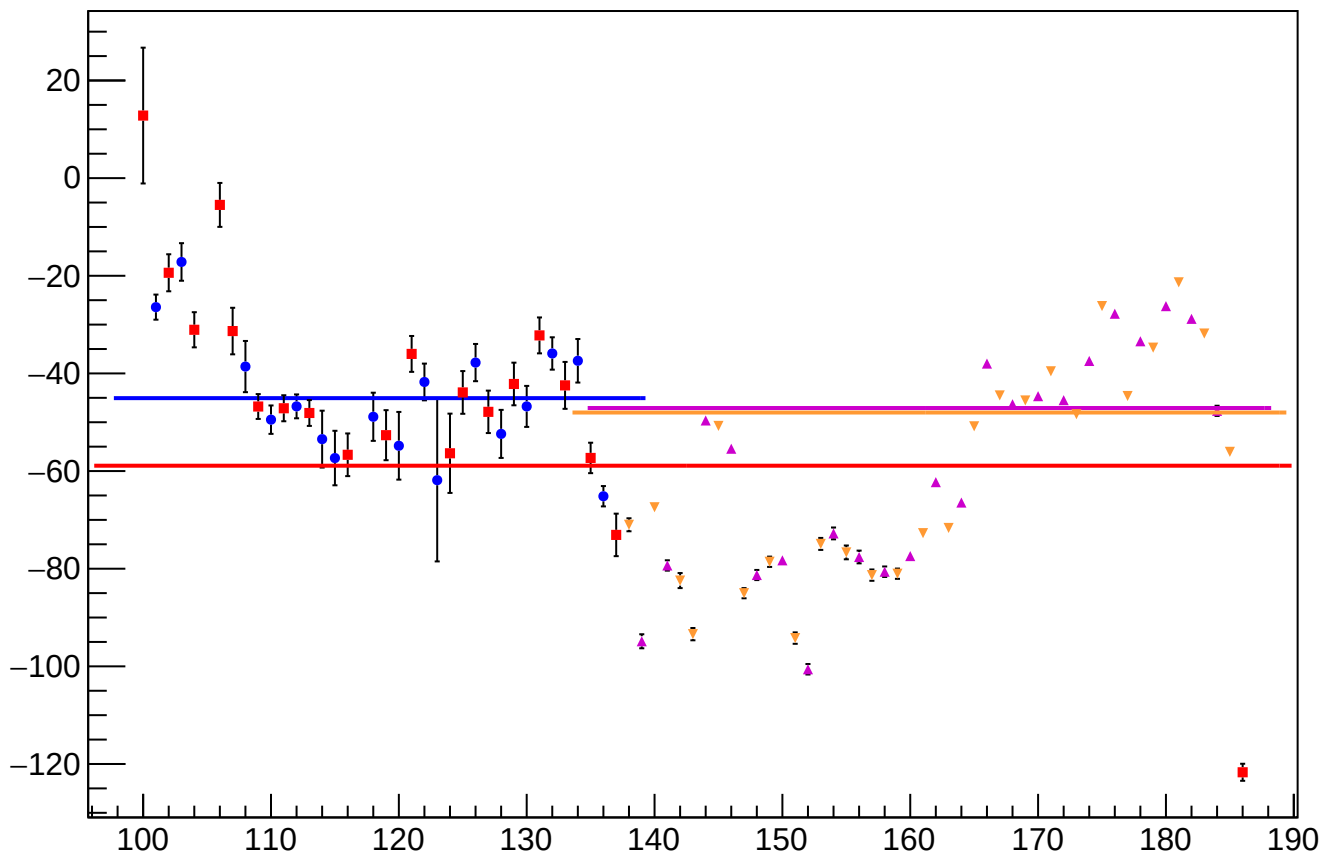
Right:  $-4.154 \pm 0.353$   $\chi^2/\text{NDF}$ : 312.8/36

In:  $0.395 \pm 0.121$   $\chi^2/\text{NDF}$ : 3576.4/39

Out:  $0.447 \pm 0.121$   $\chi^2/\text{NDF}$ : 4223.7/44

All:  $0.421 \pm 0.085$   $\chi^2/\text{NDF}$ : 7800.1/84

reg\_asym\_sam3\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-45.063 \pm 0.885$   $\chi^2/\text{NDF}$ : 230.3/16

Left Out:  $-48.008 \pm 0.155$   $\chi^2/\text{NDF}$ : 16950.0/24

Right Out:  $-58.902 \pm 0.785$   $\chi^2/\text{NDF}$ : 1872.4/19

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

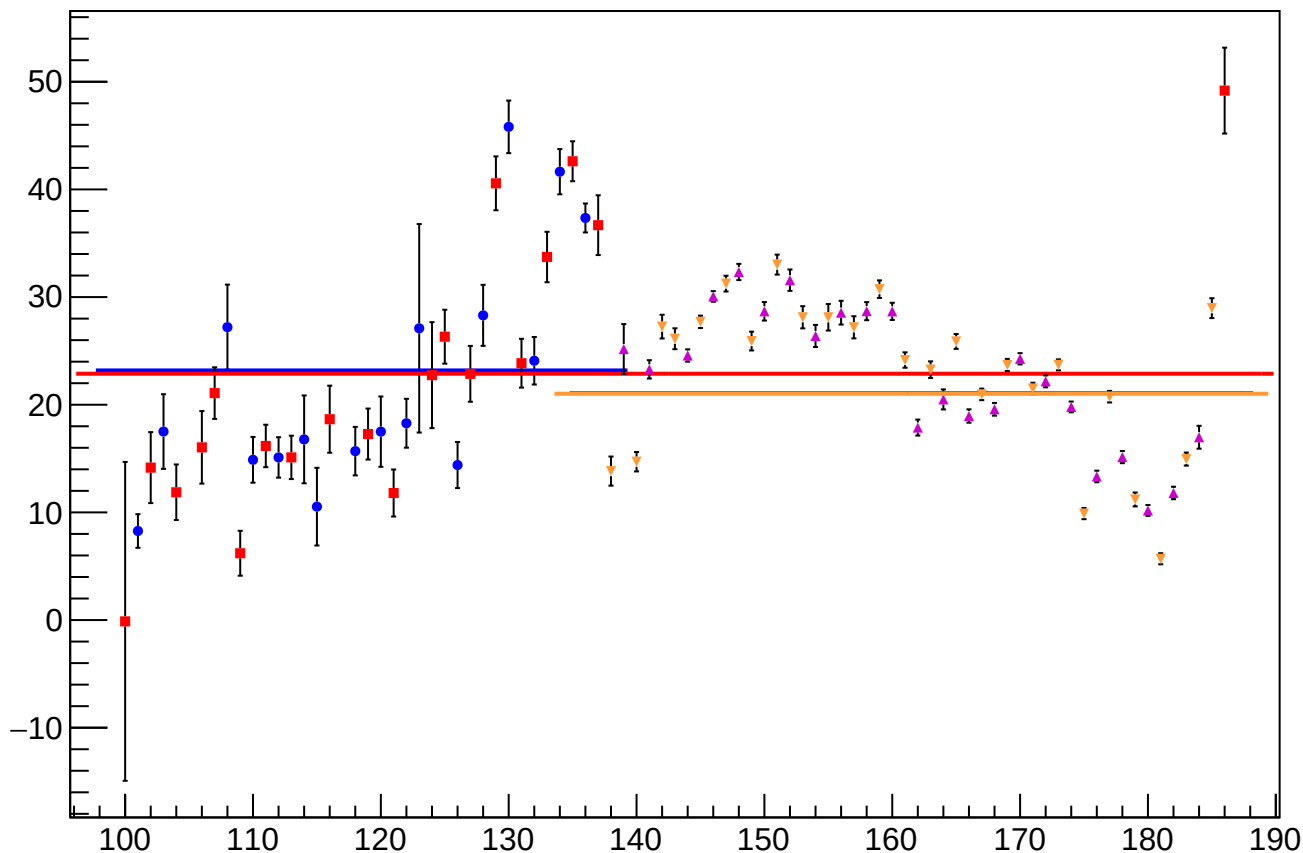
Right:  $-52.807 \pm 0.587$   $\chi^2/\text{NDF}$ : 2239.6/36

In:  $-47.024 \pm 0.153$   $\chi^2/\text{NDF}$ : 15750.6/39

Out:  $-48.415 \pm 0.152$   $\chi^2/\text{NDF}$ : 19007.7/44

All:  $-47.725 \pm 0.108$   $\chi^2/\text{NDF}$ : 34800.0/84

reg\_asym\_sam3\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 23.185 $\pm$ 0.560  $\chi^2$ /NDF: 456.9/16

Left Out: 21.020 $\pm$ 0.139  $\chi^2$ /NDF:2799.3/24

Right Out: 22.881 $\pm$ 0.568  $\chi^2$ /NDF: 410.7/19

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

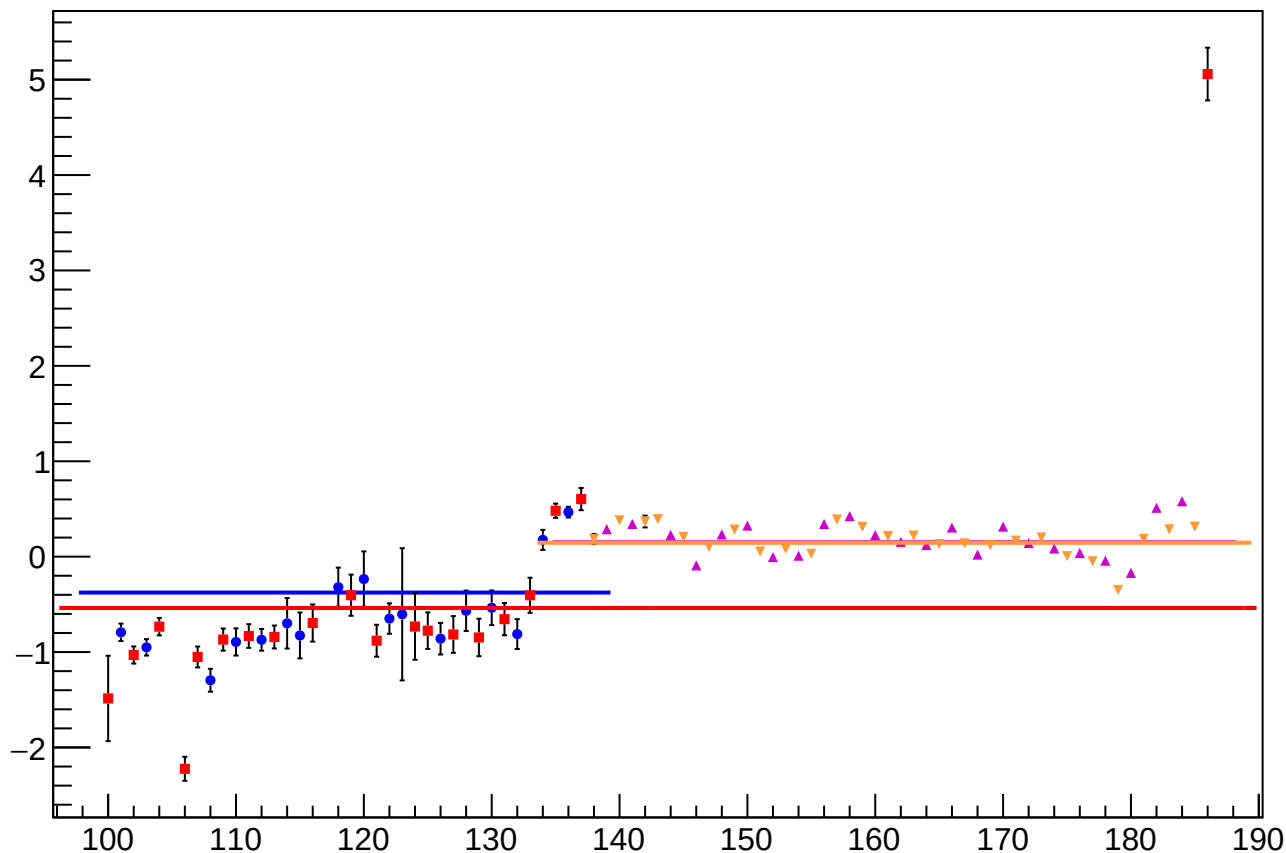
Right: 23.035 $\pm$ 0.399  $\chi^2$ /NDF: 867.8/36

In: 21.202 $\pm$ 0.135  $\chi^2$ /NDF:2643.5/39

Out: 21.125 $\pm$ 0.135  $\chi^2$ /NDF:3220.1/44

All: 21.163 $\pm$ 0.096  $\chi^2$ /NDF: 5863.7/84

reg\_asym\_sam3\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.376 \pm 0.030$   $\chi^2/\text{NDF}: 437.6/16$

Left Out:  $0.146 \pm 0.006$   $\chi^2/\text{NDF}: 610.2/24$

Right Out:  $-0.538 \pm 0.030$   $\chi^2/\text{NDF}: 966.2/19$

Left In:  $0.151 \pm 0.006$   $\chi^2/\text{NDF}: 869.5/22$

Left:  $0.149 \pm 0.005$   $\chi^2/\text{NDF}: 1480.1/47$

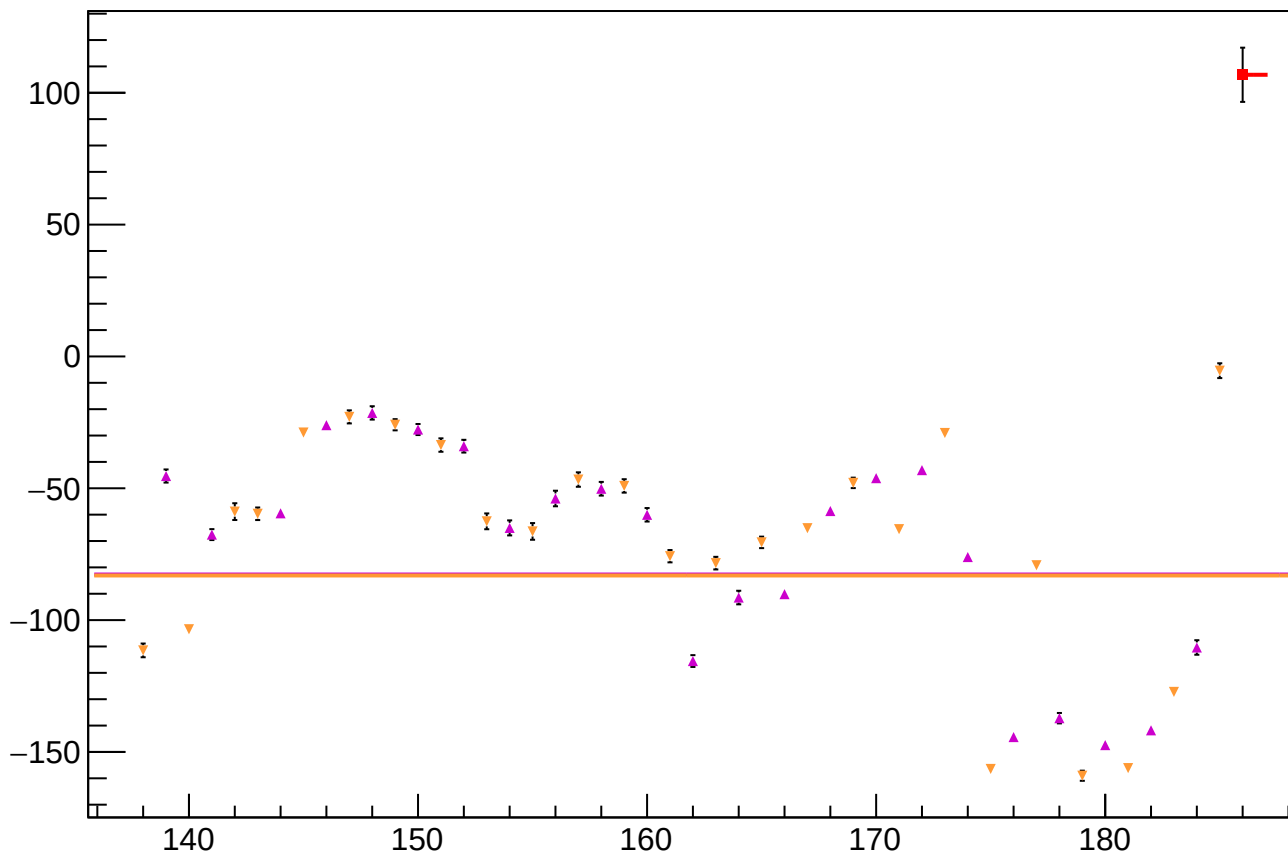
Right:  $-0.457 \pm 0.021$   $\chi^2/\text{NDF}: 1418.2/36$

In:  $0.128 \pm 0.006$   $\chi^2/\text{NDF}: 1600.0/39$

Out:  $0.117 \pm 0.006$   $\chi^2/\text{NDF}: 2071.8/44$

All:  $0.123 \pm 0.004$   $\chi^2/\text{NDF}: 3673.5/84$

reg\_asym\_sam4\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -83.068+/-0.406  $\chi^2/\text{NDF}$ :13817.3/24

Right Out: 106.825+/-10.282  $\chi^2/\text{NDF}$ : 0.0/0

Left In: -82.711+/-0.415  $\chi^2/\text{NDF}$ :10841.4/22

Left: -82.893+/-0.290  $\chi^2/\text{NDF}$ : 24659.1/47

Right: 106.825+/-10.282  $\chi^2/\text{NDF}$ : 0.0/0

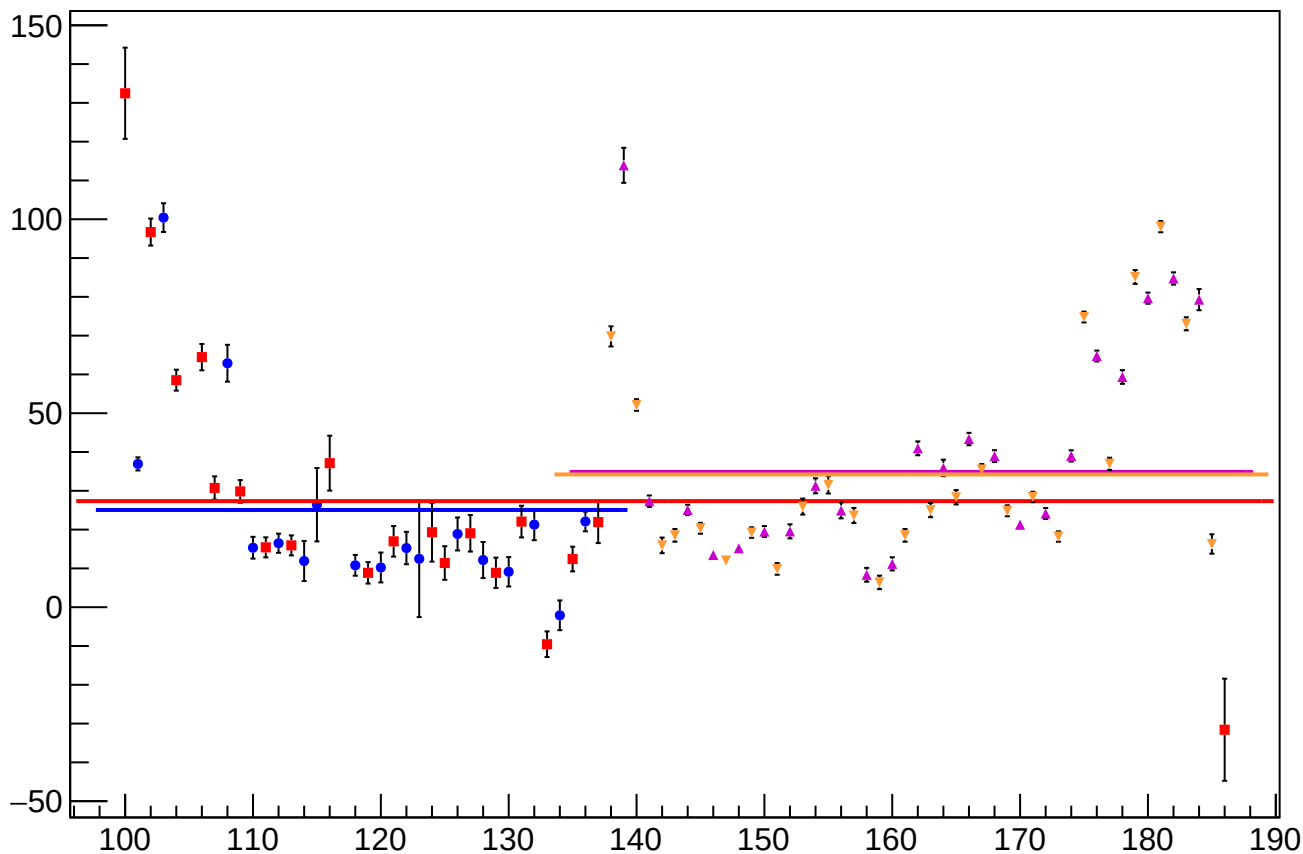
In: -82.711+/-0.415  $\chi^2/\text{NDF}$ :10841.4/22

Out: -82.772+/-0.406  $\chi^2/\text{NDF}$ :14157.9/25

All: -82.742+/-0.290  $\chi^2/\text{NDF}$ : 24999.3/48



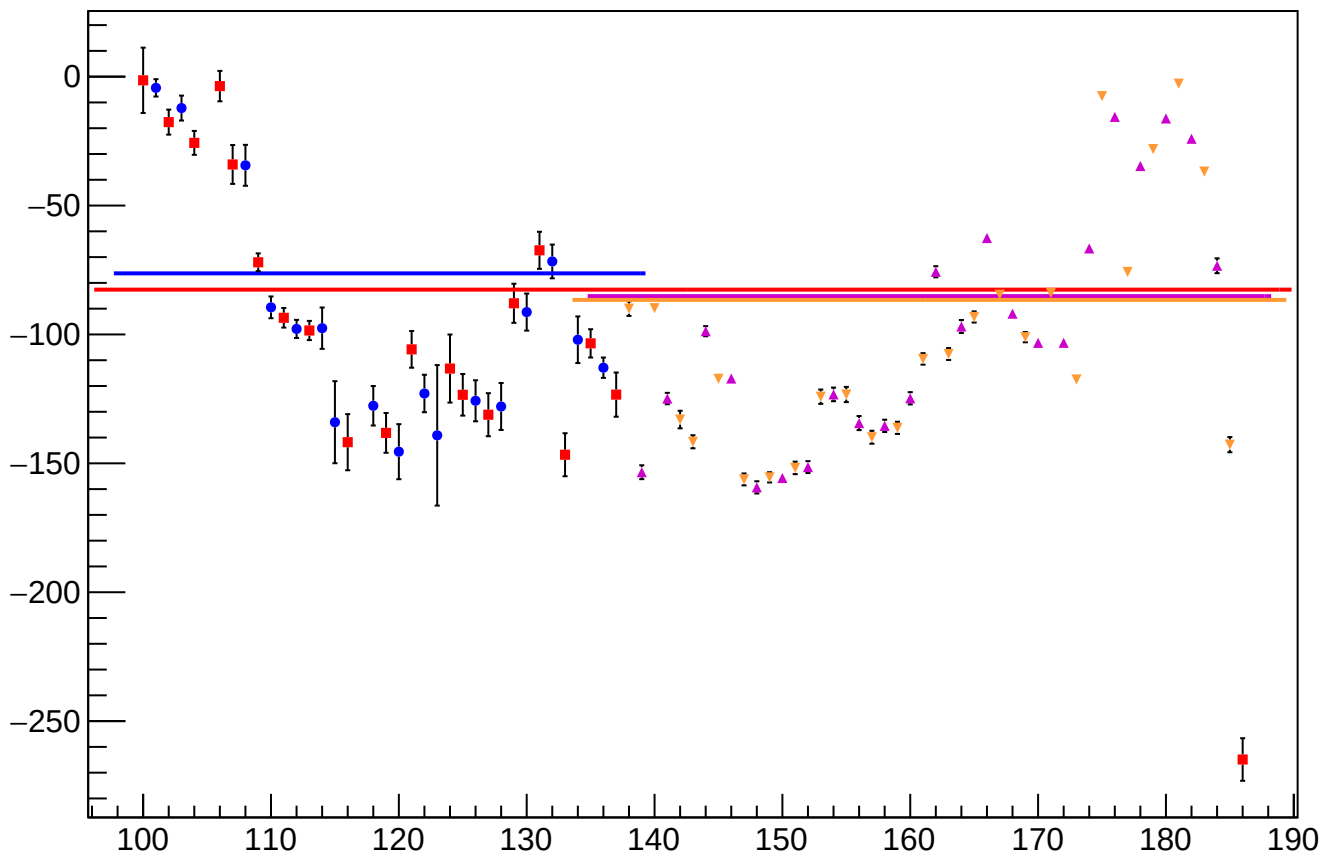
reg\_asym\_sam4\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $25.063 \pm 0.808$   $\chi^2/\text{NDF}: 686.5/16$   
 Left Out:  $34.219 \pm 0.320$   $\chi^2/\text{NDF}: 6192.6/24$   
 Right Out:  $27.344 \pm 0.809$   $\chi^2/\text{NDF}: 1033.7/19$   
 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:  $26.201 \pm 0.572$   $\chi^2/\text{NDF}: 1724.2/36$   
 In:  $33.472 \pm 0.305$   $\chi^2/\text{NDF}: 5529.1/39$   
 Out:  $33.288 \pm 0.298$   $\chi^2/\text{NDF}: 7288.7/44$   
 All:  $33.378 \pm 0.213$   $\chi^2/\text{NDF}: 12817.9/84$

reg\_asym\_sam4\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-76.304 \pm 1.419$   $\chi^2/\text{NDF}: 1030.8/16$

Left Out:  $-86.595 \pm 0.408$   $\chi^2/\text{NDF}: 14515.7/24$

Right Out:  $-82.617 \pm 1.336$   $\chi^2/\text{NDF}: 1372.6/19$

Left In:  $-85.134 \pm 0.415$   $\chi^2/\text{NDF}: 12841.3/22$

Left:  $-85.876 \pm 0.291$   $\chi^2/\text{NDF}: 27363.3/47$

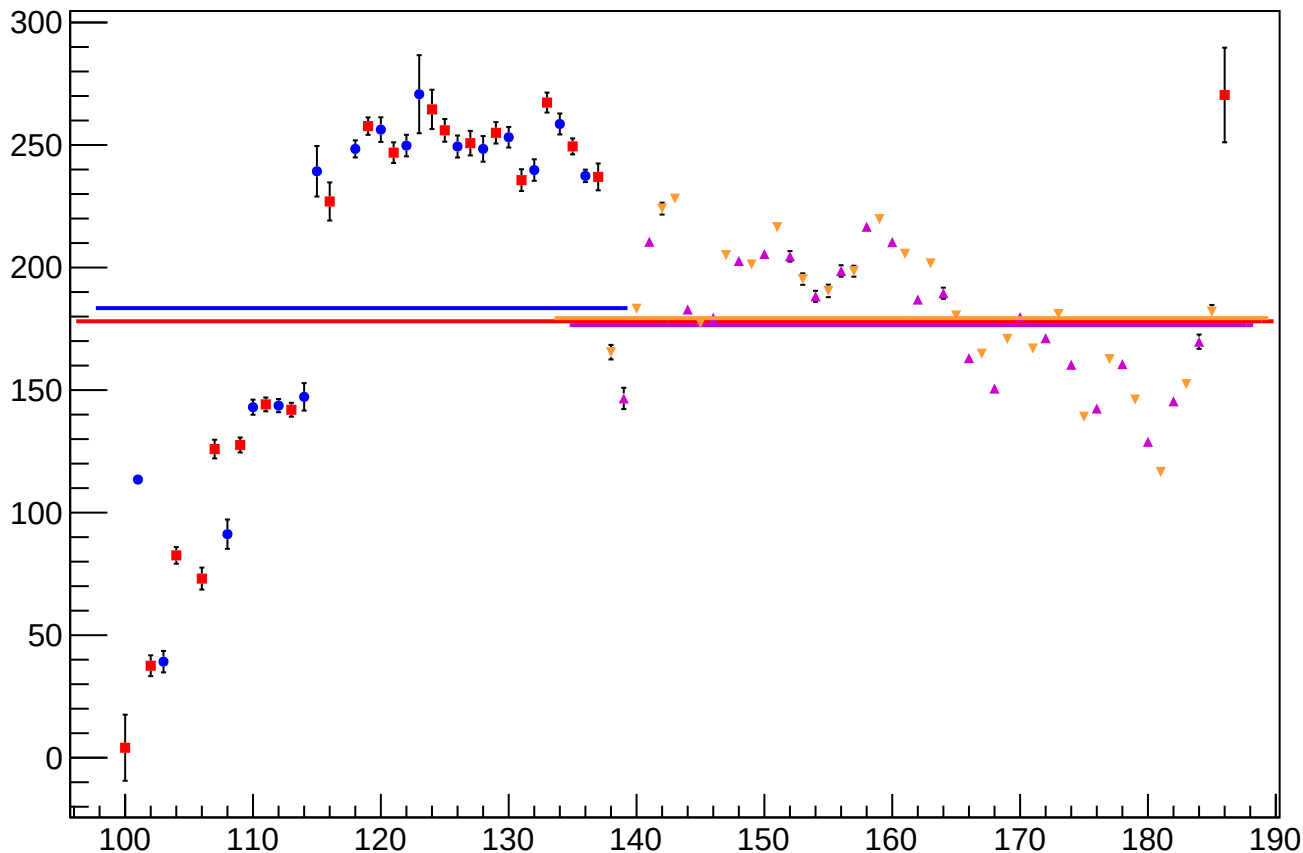
Right:  $-79.649 \pm 0.973$   $\chi^2/\text{NDF}: 2413.9/36$

In:  $-84.438 \pm 0.398$   $\chi^2/\text{NDF}: 13907.8/39$

Out:  $-86.255 \pm 0.391$   $\chi^2/\text{NDF}: 15896.4/44$

All:  $-85.365 \pm 0.279$   $\chi^2/\text{NDF}: 29814.8/84$

reg\_asym\_sam4\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 183.448 $\pm$ 0.920  $\chi^2$ /NDF: 5318.3/16

Left Out: 179.359 $\pm$ 0.362  $\chi^2$ /NDF: 5982.2/24

Right Out: 178.080 $\pm$ 0.924  $\chi^2$ /NDF: 6359.5/19

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

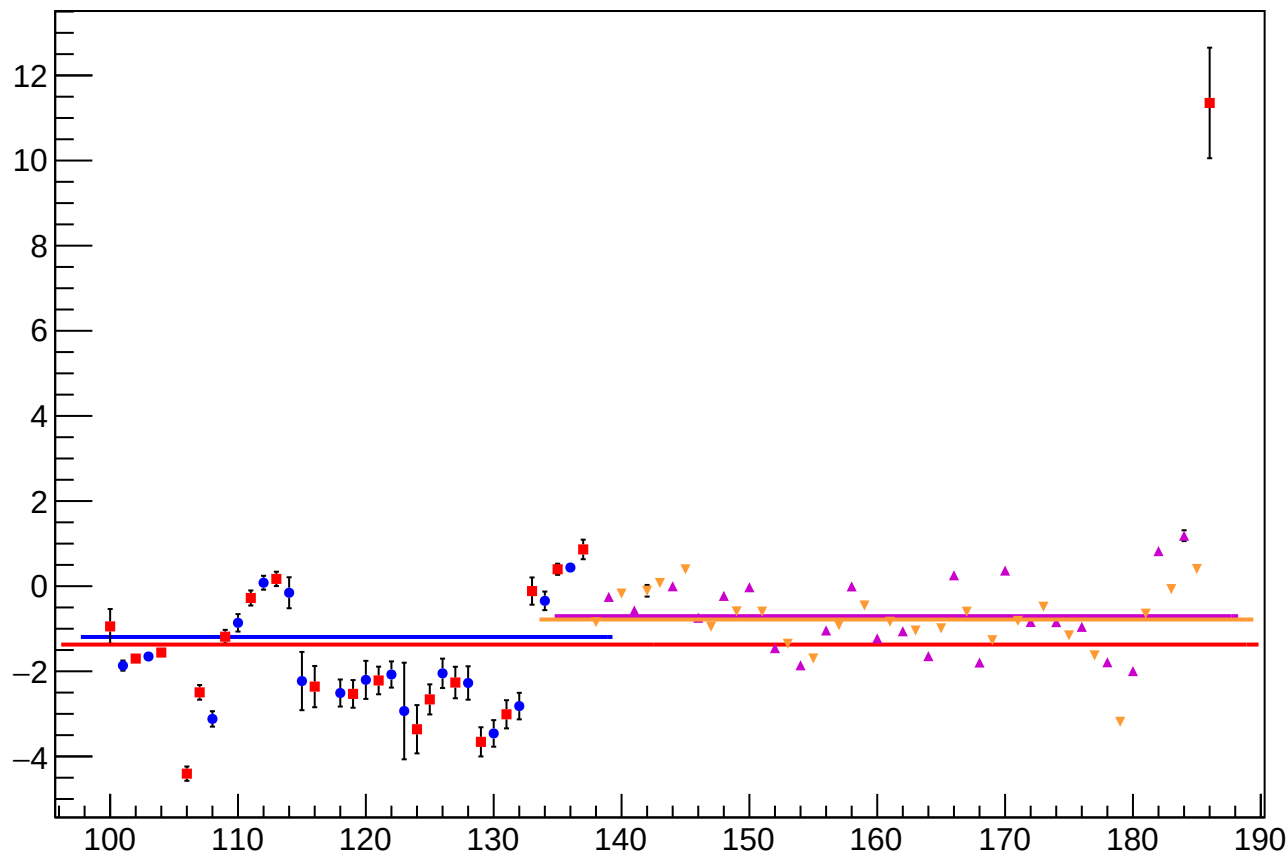
Right: 180.775 $\pm$ 0.652  $\chi^2$ /NDF: 11694.7/36

In: 177.498 $\pm$ 0.344  $\chi^2$ /NDF: 9792.8/39

Out: 179.189 $\pm$ 0.337  $\chi^2$ /NDF: 12343.4/44

All: 178.361 $\pm$ 0.241  $\chi^2$ /NDF: 22148.5/84

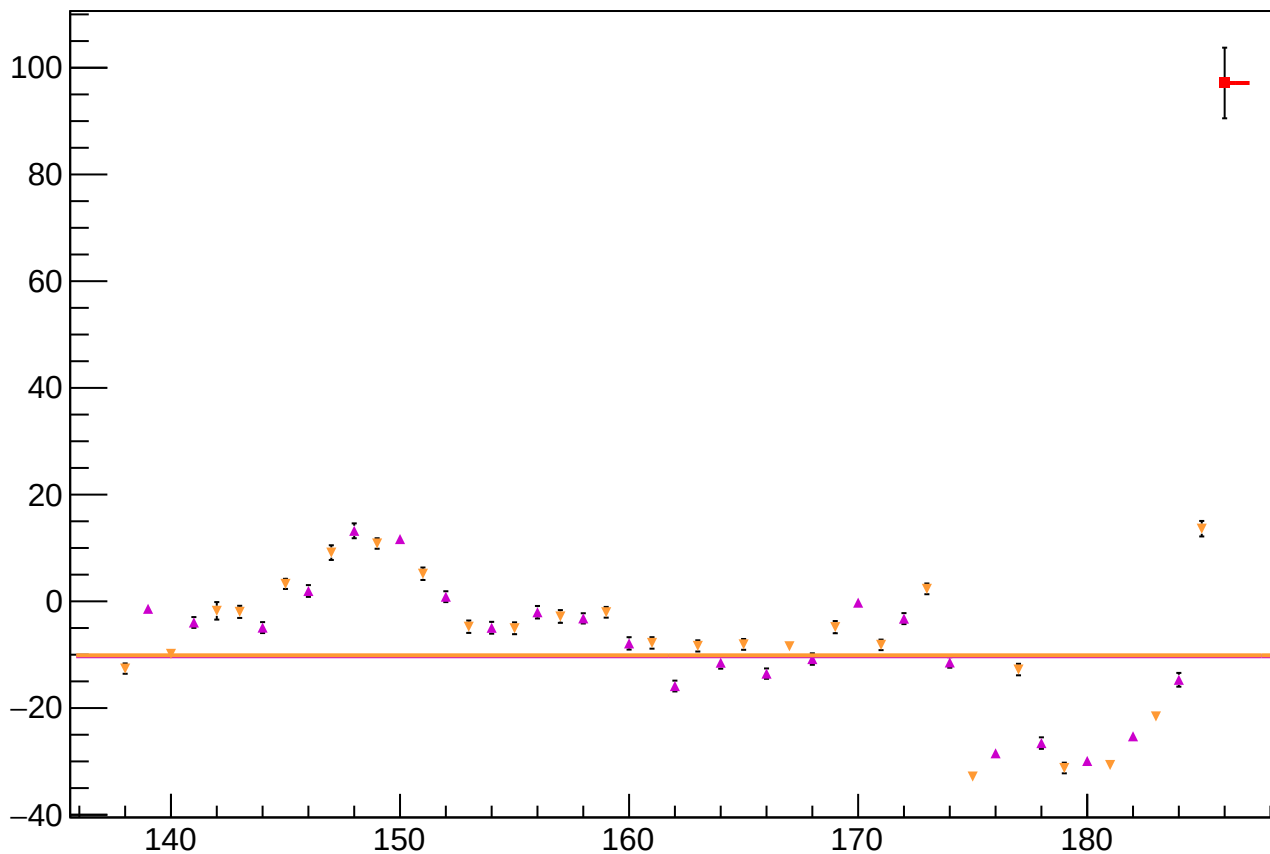
reg\_asym\_sam4\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-1.193 \pm 0.048$   $\chi^2/\text{NDF}$ : 620.4/16  
 Left Out:  $-0.783 \pm 0.017$   $\chi^2/\text{NDF}$ : 1771.6/24  
 Right Out:  $-1.372 \pm 0.046$   $\chi^2/\text{NDF}$ : 1015.6/19  
 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:  $-1.287 \pm 0.033$   $\chi^2/\text{NDF}$ : 1643.1/36  
 In:  $-0.758 \pm 0.016$   $\chi^2/\text{NDF}$ : 3119.5/39  
 Out:  $-0.852 \pm 0.016$   $\chi^2/\text{NDF}$ : 2932.9/44  
 All:  $-0.806 \pm 0.011$   $\chi^2/\text{NDF}$ : 6069.9/84

reg\_asym\_sam5\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -10.117+/-0.201  $\chi^2/\text{NDF}$ : 4138.1/24

Right Out: 97.143+/-6.619  $\chi^2/\text{NDF}$ : 0.0/0

Left In: -10.290+/-0.205  $\chi^2/\text{NDF}$ : 3451.0/22

Left: -10.202+/-0.144  $\chi^2/\text{NDF}$ : 7589.5/47

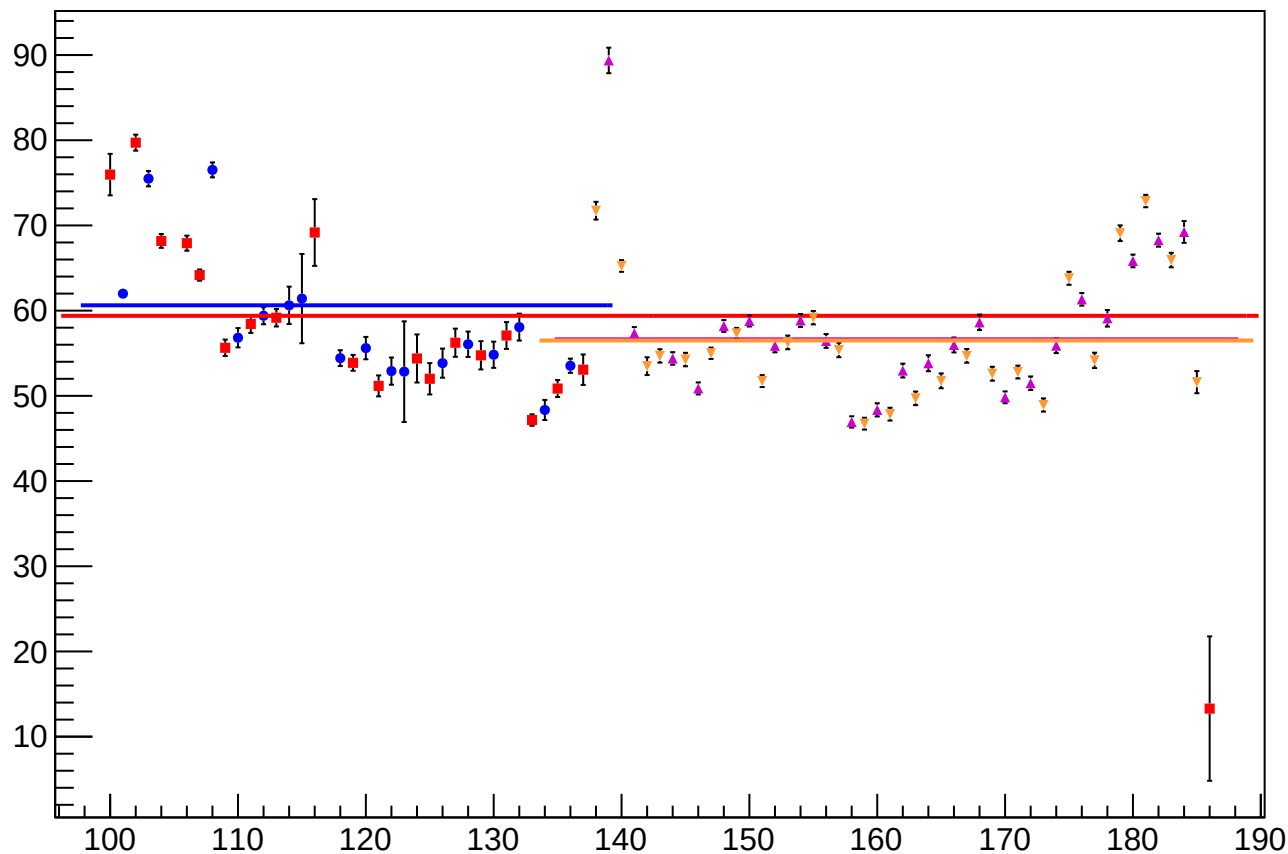
Right: 97.143+/-6.619  $\chi^2/\text{NDF}$ : 0.0/0

In: -10.290+/-0.205  $\chi^2/\text{NDF}$ : 3451.0/22

Out: -10.018+/-0.201  $\chi^2/\text{NDF}$ : 4400.5/25

All: -10.151+/-0.144  $\chi^2/\text{NDF}$ : 7852.4/48

reg\_asym\_sam5\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 60.626 $\pm$ 0.263  $\chi^2$ /NDF: 924.5/16

Left Out: 56.496 $\pm$ 0.159  $\chi^2$ /NDF: 1968.0/24

Right Out: 59.393 $\pm$ 0.248  $\chi^2$ /NDF: 1354.8/19

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

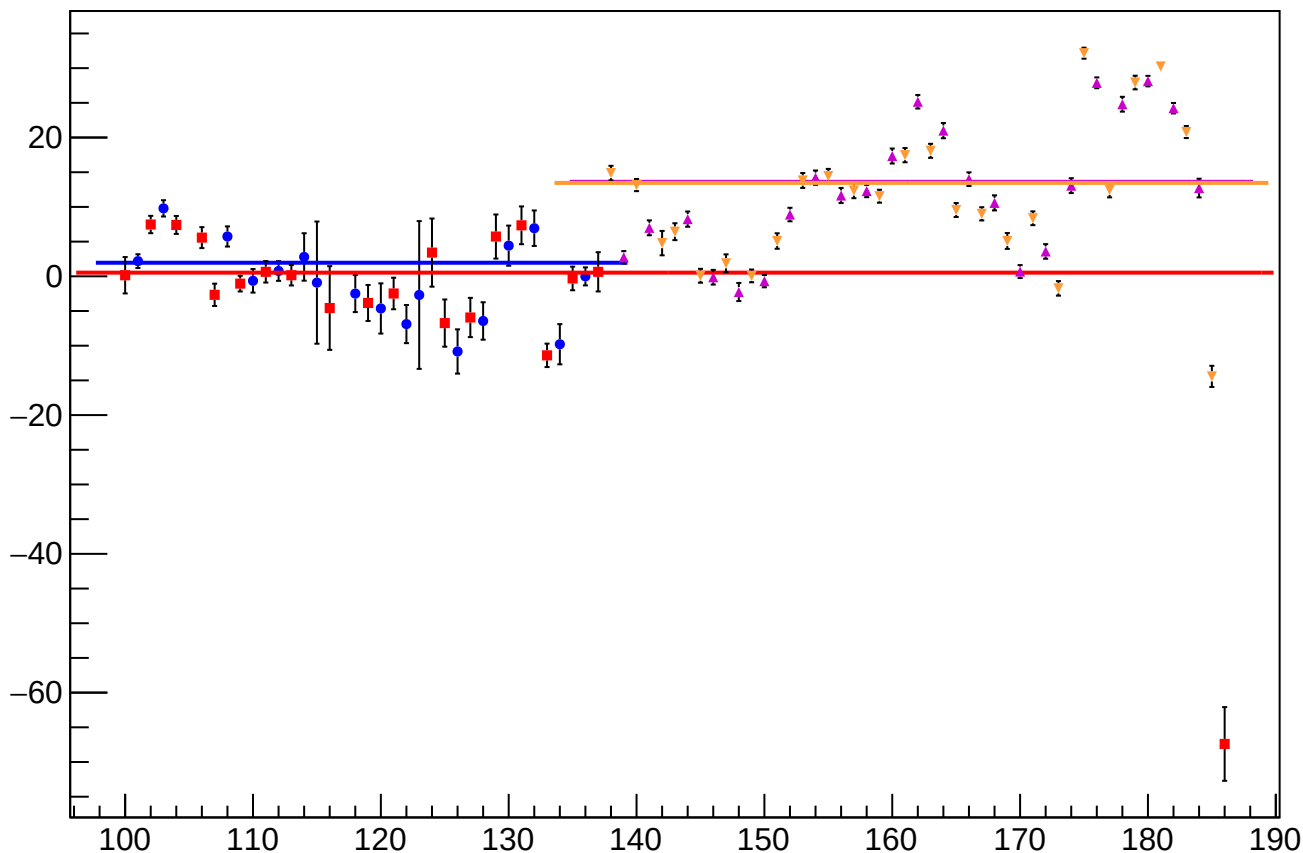
Right: 59.972 $\pm$ 0.180  $\chi^2$ /NDF: 2290.9/36

In: 57.761 $\pm$ 0.140  $\chi^2$ /NDF: 2697.3/39

Out: 57.340 $\pm$ 0.134  $\chi^2$ /NDF: 3419.6/44

All: 57.541 $\pm$ 0.097  $\chi^2$ /NDF: 6121.7/84

reg\_asym\_sam5\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $1.955 \pm 0.459$   $\chi^2/\text{NDF}$ : 120.2/16

Left Out:  $13.462 \pm 0.202$   $\chi^2/\text{NDF}$ : 2736.3/24

Right Out:  $0.529 \pm 0.423$   $\chi^2/\text{NDF}$ : 314.3/19

Left In:  $13.620 \pm 0.204$   $\chi^2/\text{NDF}$ : 2315.4/22

Left:  $13.540 \pm 0.144$   $\chi^2/\text{NDF}$ : 5052.0/47

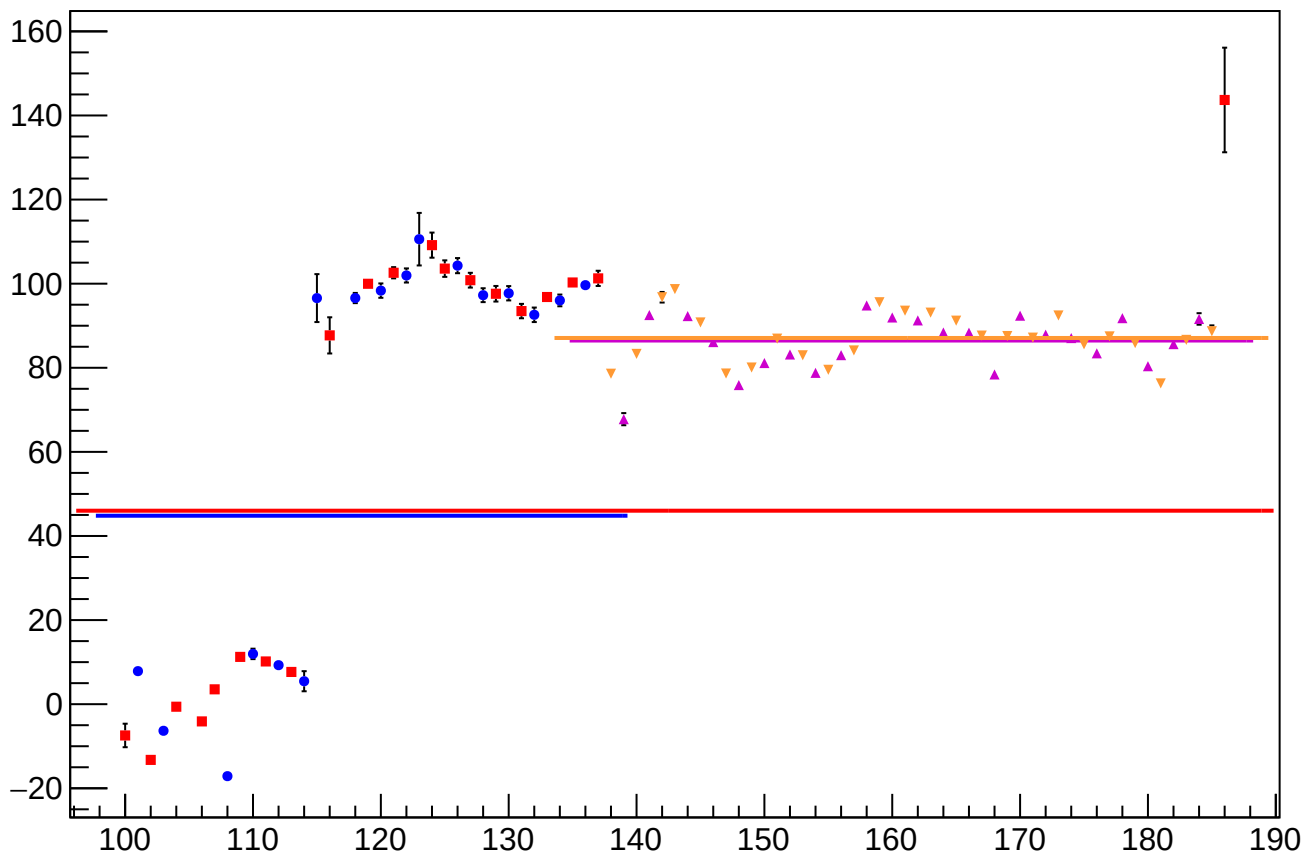
Right:  $1.184 \pm 0.311$   $\chi^2/\text{NDF}$ : 439.8/36

In:  $11.691 \pm 0.187$   $\chi^2/\text{NDF}$ : 2973.8/39

Out:  $11.073 \pm 0.182$   $\chi^2/\text{NDF}$ : 3811.6/44

All:  $11.374 \pm 0.130$   $\chi^2/\text{NDF}$ : 6791.1/84

reg\_asym\_sam5\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 44.818 $\pm$ 0.305  $\chi^2$ /NDF: 24700.1/16

Left Out: 87.087 $\pm$ 0.179  $\chi^2$ /NDF:1085.8/24

Right Out: 46.011 $\pm$ 0.290  $\chi^2$ /NDF: 28277.8/19

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: 45.445 $\pm$ 0.210  $\chi^2$ /NDF: 52986.0/36

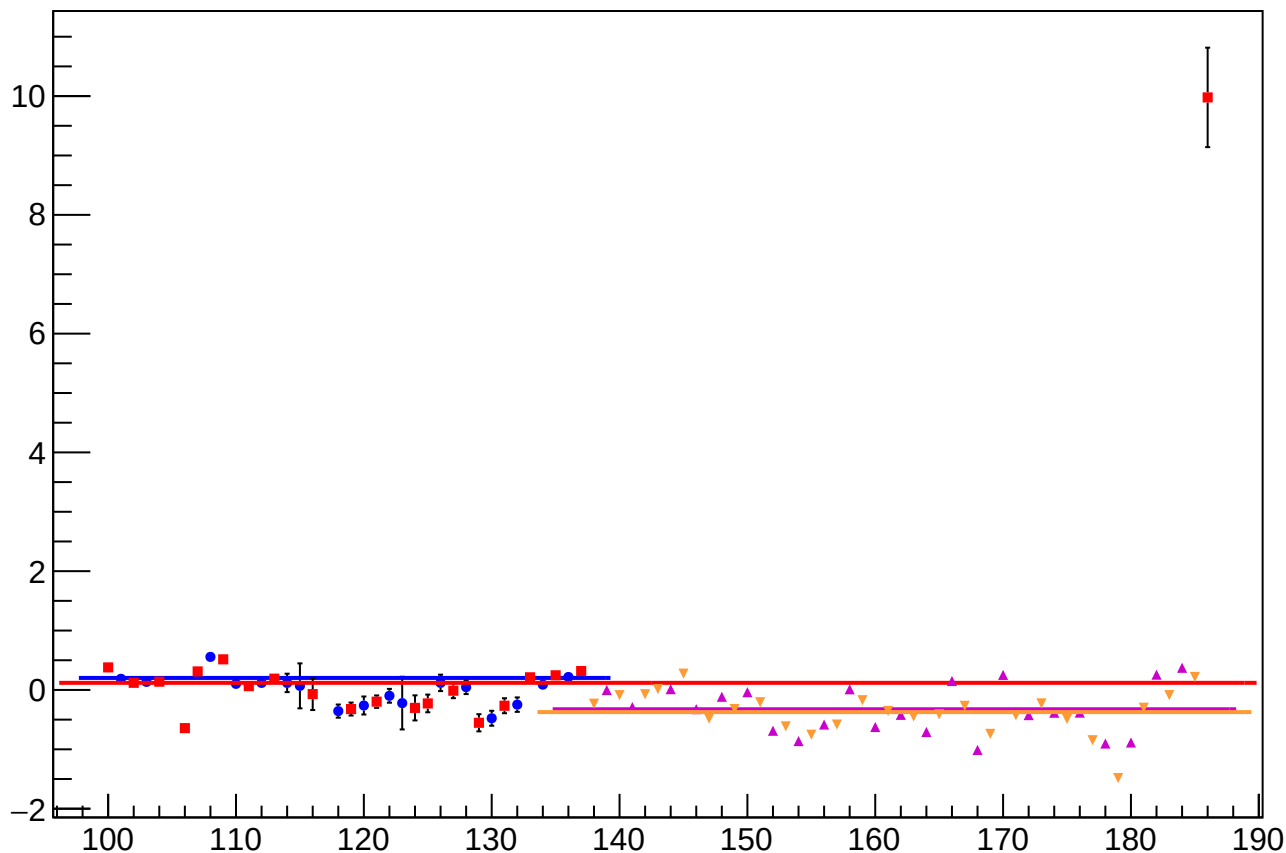
In: 75.311 $\pm$ 0.158  $\chi^2$ /NDF:39360.0/39

Out: 75.727 $\pm$ 0.152  $\chi^2$ /NDF:43913.9/44

All: 75.526 $\pm$ 0.110  $\chi^2$ /NDF: 83277.5/84



reg\_asym\_sam5\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $0.202 \pm 0.014$   $\chi^2/\text{NDF}$ : 215.7/16

Left Out:  $-0.373 \pm 0.008$   $\chi^2/\text{NDF}$ : 1668.6/24

Right Out:  $0.120 \pm 0.013$   $\chi^2/\text{NDF}$ : 637.7/19

Left In:  $-0.325 \pm 0.008$   $\chi^2/\text{NDF}$ : 2284.1/22

Left:  $-0.349 \pm 0.006$   $\chi^2/\text{NDF}$ : 3970.2/47

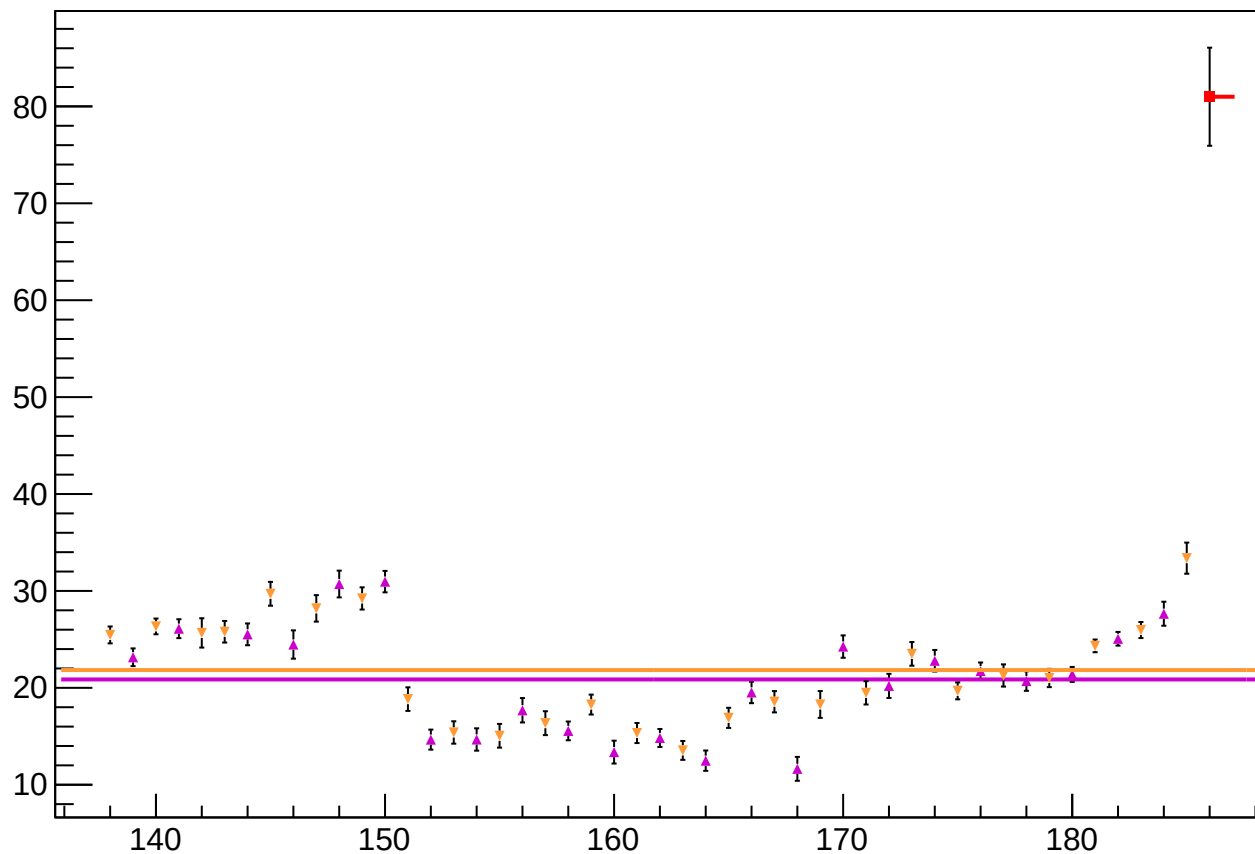
Right:  $0.158 \pm 0.010$   $\chi^2/\text{NDF}$ : 871.9/36

In:  $-0.191 \pm 0.007$   $\chi^2/\text{NDF}$ : 3548.9/39

Out:  $-0.235 \pm 0.007$   $\chi^2/\text{NDF}$ : 3336.5/44

All:  $-0.214 \pm 0.005$   $\chi^2/\text{NDF}$ : 6905.4/84

reg\_asym\_sam6\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 21.836+/-0.210  $\chi^2/\text{NDF}$ :524.3/24

Right Out: 80.998+/-5.062  $\chi^2/\text{NDF}$ : 0.0/0

Left In: 20.866+/-0.217  $\chi^2/\text{NDF}$ :576.9/22

Left: 21.366+/-0.151  $\chi^2/\text{NDF}$ : 1111.6/47

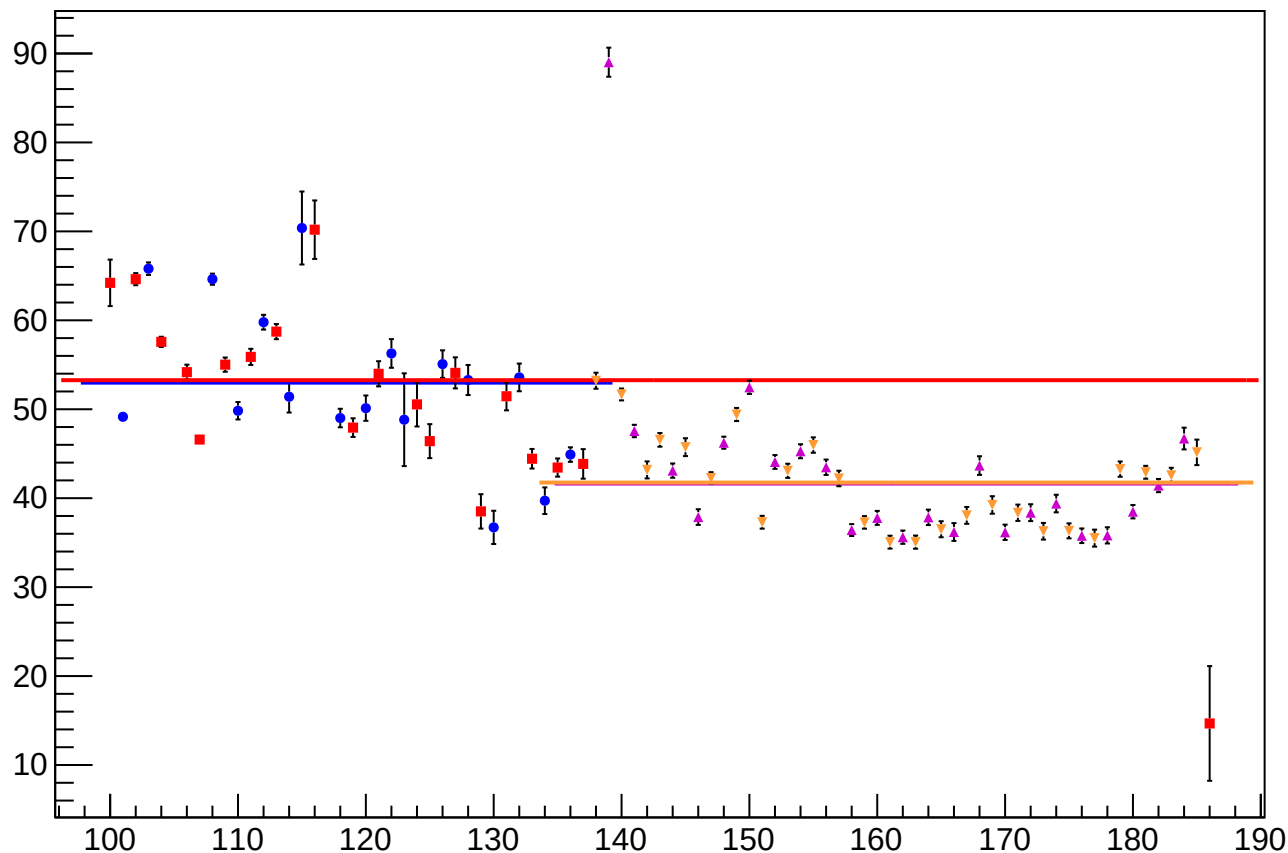
Right: 80.998+/-5.062  $\chi^2/\text{NDF}$ : 0.0/0

In: 20.866+/-0.217  $\chi^2/\text{NDF}$ :576.9/22

Out: 21.938+/-0.210  $\chi^2/\text{NDF}$ :660.7/25

All: 21.419+/-0.151  $\chi^2/\text{NDF}$ : 1250.2/48

reg\_asym\_sam6\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 52.994 $\pm$ 0.211  $\chi^2$ /NDF: 1197.9/16

Left Out: 41.757 $\pm$ 0.165  $\chi^2$ /NDF:1015.7/24

Right Out: 53.268 $\pm$ 0.227  $\chi^2$ /NDF: 912.5/19

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

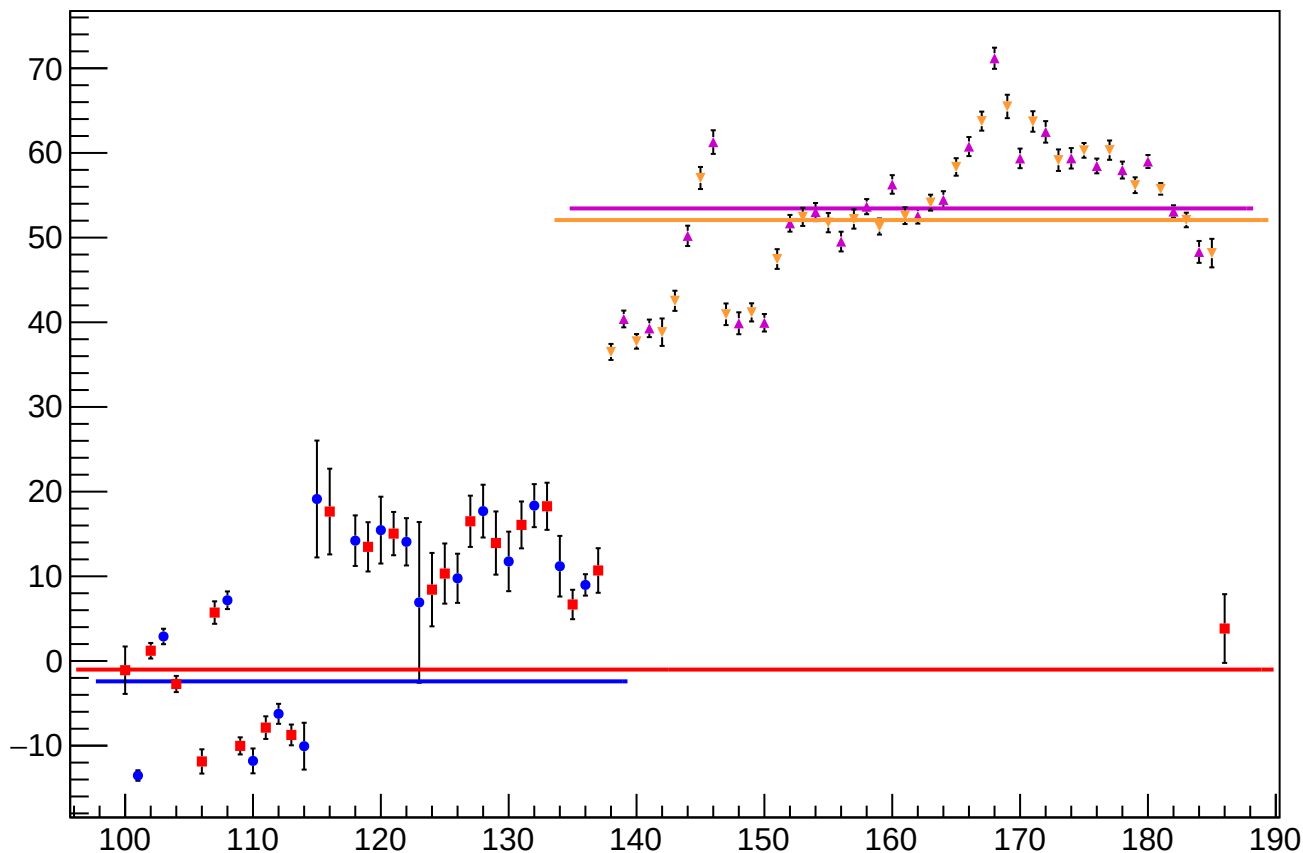
Right: 53.121 $\pm$ 0.154  $\chi^2$ /NDF: 2111.2/36

In: 46.229 $\pm$ 0.134  $\chi^2$ /NDF:4532.8/39

Out: 45.755 $\pm$ 0.134  $\chi^2$ /NDF:3611.2/44

All: 45.991 $\pm$ 0.095  $\chi^2$ /NDF: 8150.3/84

reg\_asym\_sam6\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-2.405 \pm 0.365$   $\chi^2/\text{NDF}$ : 832.0/16

Left Out:  $52.076 \pm 0.210$   $\chi^2/\text{NDF}$ : 1450.9/24

Right Out:  $-1.014 \pm 0.376$   $\chi^2/\text{NDF}$ : 506.9/19

Left In:  $53.447 \pm 0.215$   $\chi^2/\text{NDF}$ : 1169.0/22

Left:  $52.744 \pm 0.150$   $\chi^2/\text{NDF}$ : 2640.6/47

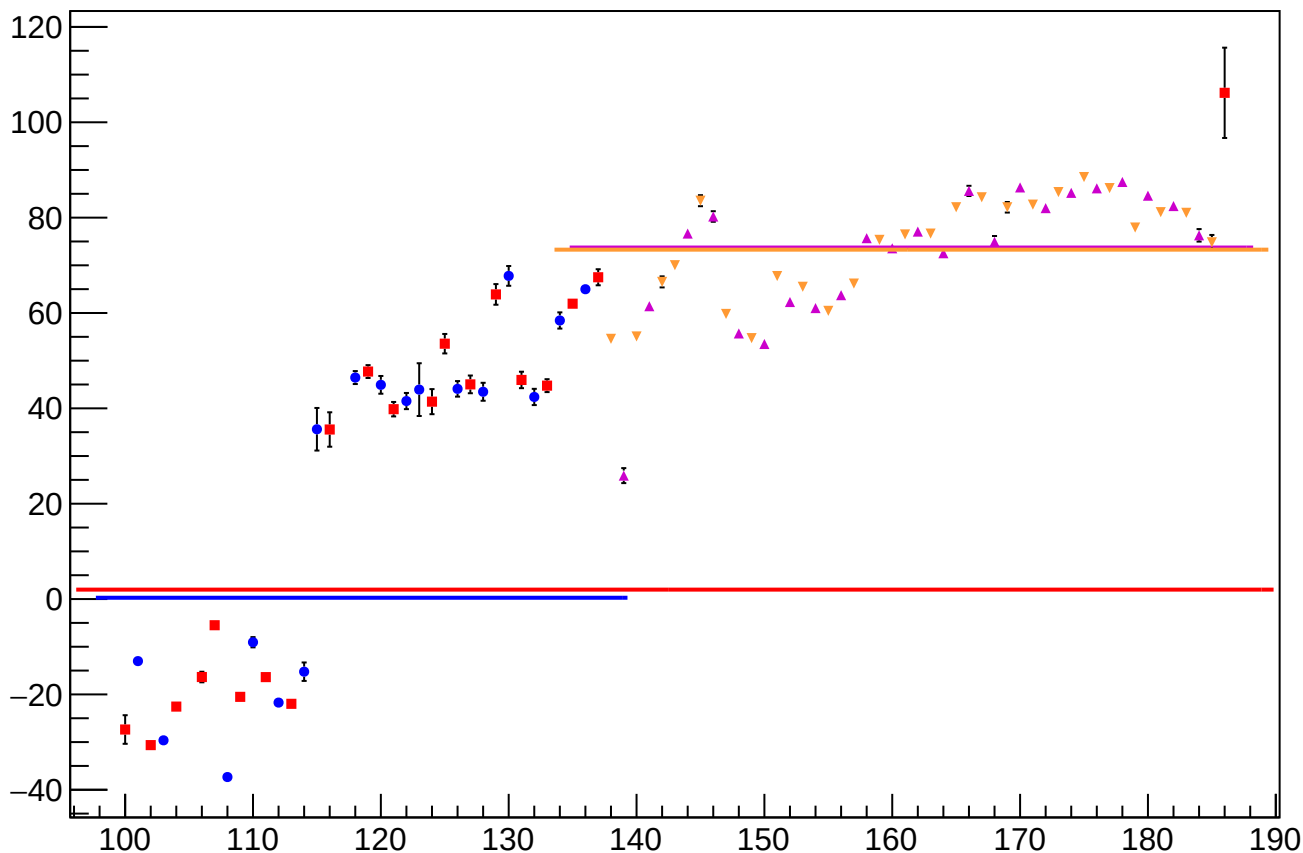
Right:  $-1.730 \pm 0.262$   $\chi^2/\text{NDF}$ : 1346.0/36

In:  $39.004 \pm 0.185$   $\chi^2/\text{NDF}$ : 19395.4/39

Out:  $39.432 \pm 0.183$   $\chi^2/\text{NDF}$ : 17178.4/44

All:  $39.220 \pm 0.130$   $\chi^2/\text{NDF}$ : 36576.5/84

reg\_asym\_sam6\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 0.275+/-0.248     $\chi^2/\text{NDF}$ : 18220.1/16

Left Out: 73.284+/-0.187     $\chi^2/\text{NDF}$ : 3144.2/24

Right Out: 1.980+/-0.267     $\chi^2/\text{NDF}$ : 15534.0/19

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

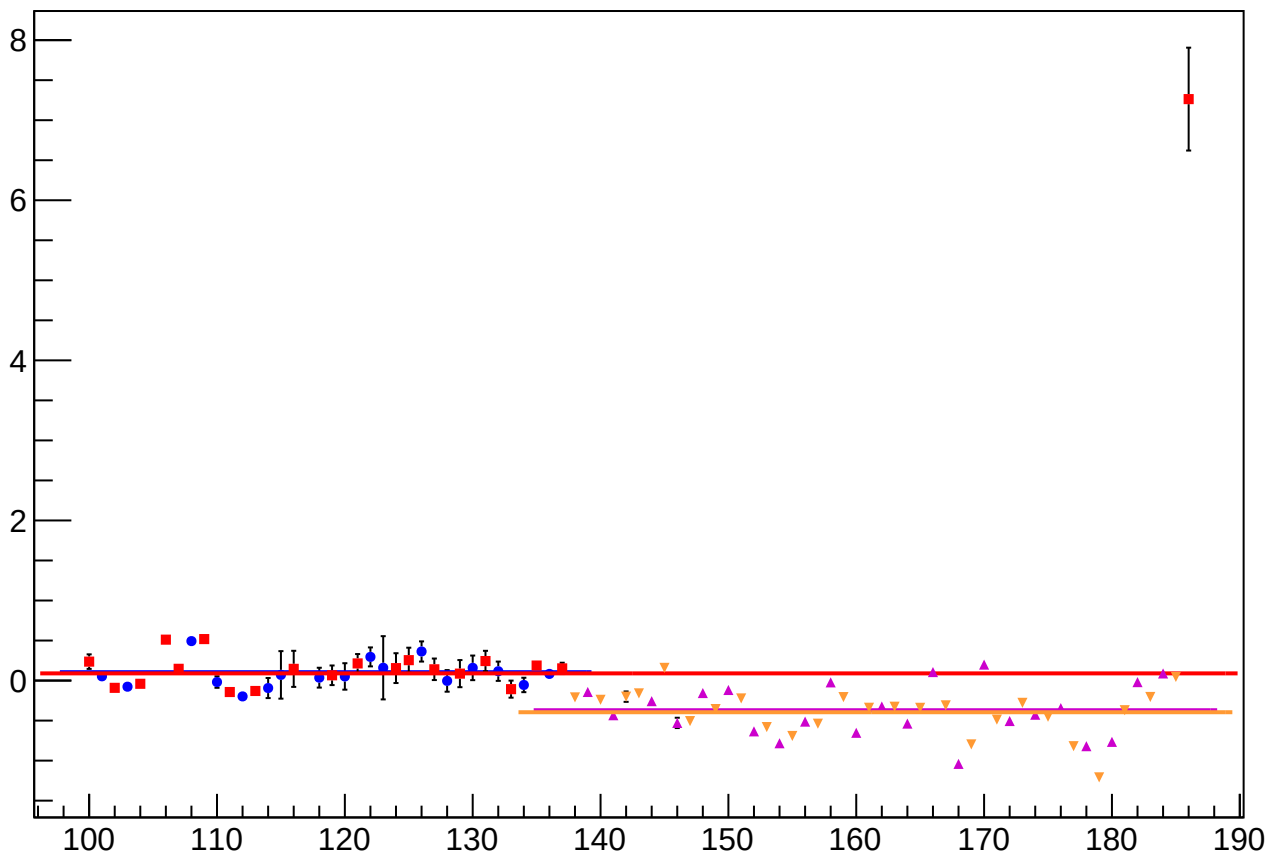
Right: 1.064+/-0.181     $\chi^2/\text{NDF}$ : 33776.0/36

In: 45.735+/-0.153     $\chi^2/\text{NDF}$ : 76445.7/39

Out: 49.805+/-0.153     $\chi^2/\text{NDF}$ : 66631.1/44

All: 47.768+/-0.108     $\chi^2/\text{NDF}$ : 143430.8/84

reg\_asym\_sam6\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $0.105 \pm 0.011$   $\chi^2/\text{NDF}: 400.8/16$

Left Out:  $-0.396 \pm 0.009$   $\chi^2/\text{NDF}: 950.0/24$

Right Out:  $0.090 \pm 0.011$   $\chi^2/\text{NDF}: 515.4/19$

Left In:  $-0.371 \pm 0.009$   $\chi^2/\text{NDF}: 1313.7/22$

Left:  $-0.383 \pm 0.006$   $\chi^2/\text{NDF}: 2268.0/47$

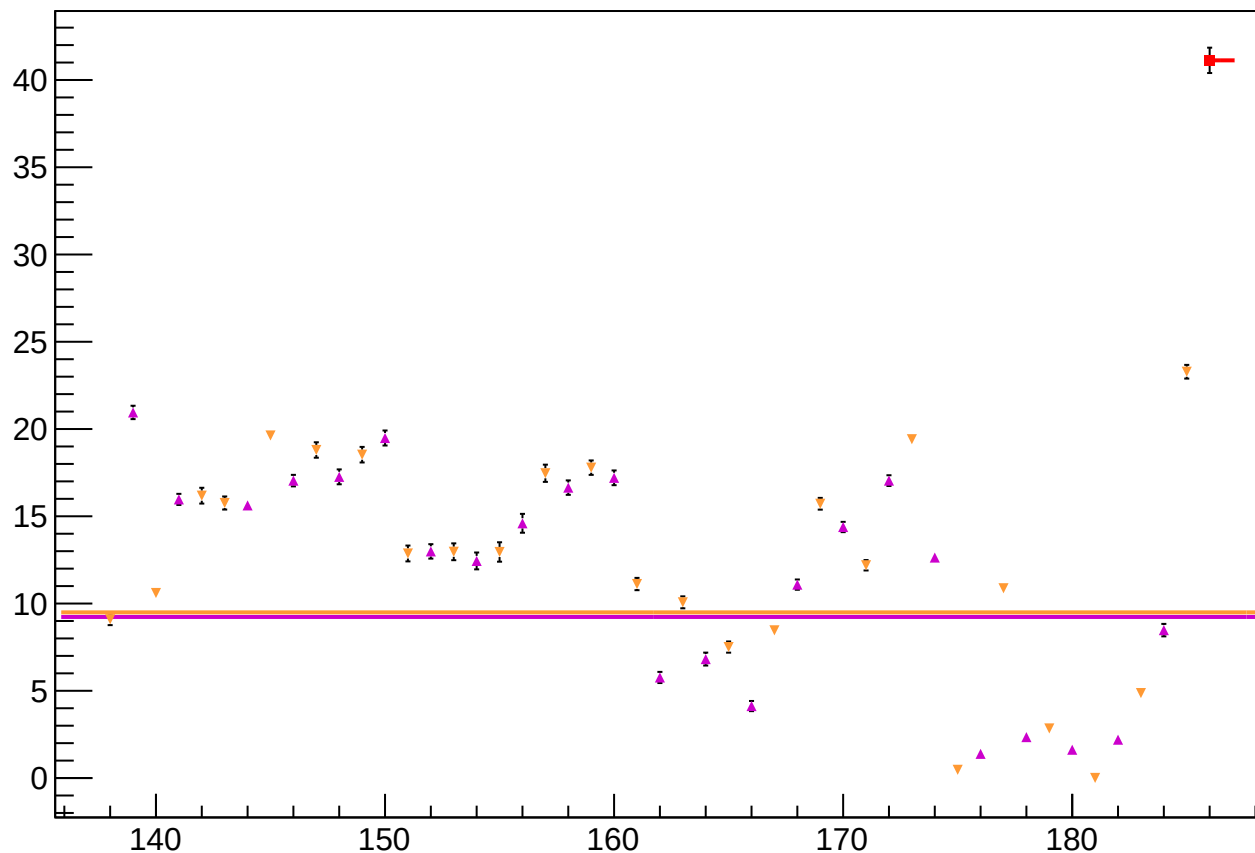
Right:  $0.097 \pm 0.008$   $\chi^2/\text{NDF}: 917.2/36$

In:  $-0.188 \pm 0.007$   $\chi^2/\text{NDF}: 2857.6/39$

Out:  $-0.213 \pm 0.007$   $\chi^2/\text{NDF}: 2678.0/44$

All:  $-0.201 \pm 0.005$   $\chi^2/\text{NDF}: 5542.2/84$

reg\_asym\_sam7\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000 +/- 0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 9.495 +/- 0.061  $\chi^2/\text{NDF}$ : 12609.1/24

Right Out: 41.126 +/- 0.726  $\chi^2/\text{NDF}$ : 0.0/0

Left In: 9.231 +/- 0.063  $\chi^2/\text{NDF}$ : 10736.2/22

Left: 9.367 +/- 0.044  $\chi^2/\text{NDF}$ : 23354.3/47

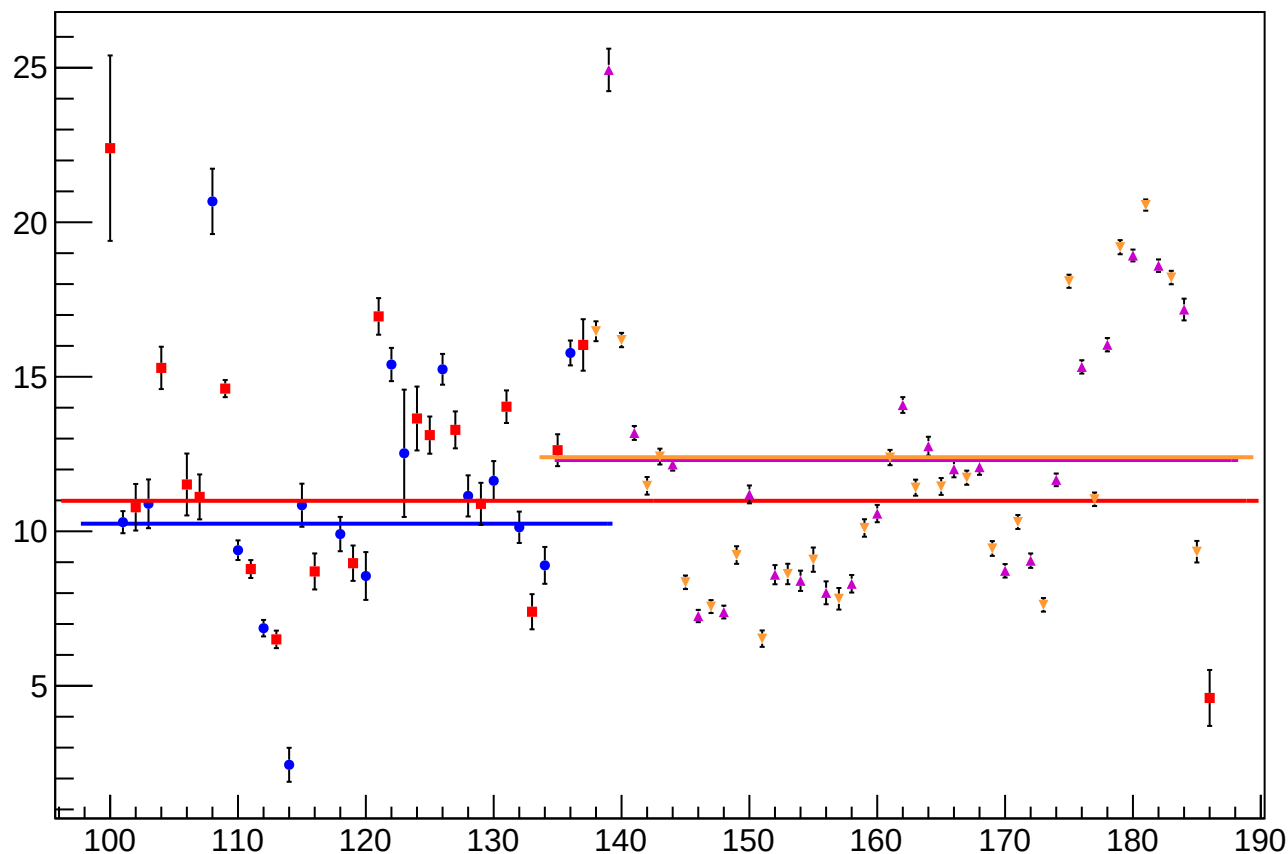
Right: 41.126 +/- 0.726  $\chi^2/\text{NDF}$ : 0.0/0

In: 9.231 +/- 0.063  $\chi^2/\text{NDF}$ : 10736.2/22

Out: 9.718 +/- 0.061  $\chi^2/\text{NDF}$ : 14491.5/25

All: 9.482 +/- 0.044  $\chi^2/\text{NDF}$ : 25258.5/48

reg\_asym\_sam7\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 10.246 $\pm$ 0.120  $\chi^2$ /NDF: 866.1/16

Left Out: 12.397 $\pm$ 0.050  $\chi^2$ /NDF: 7542.8/24

Right Out: 10.987 $\pm$ 0.116  $\chi^2$ /NDF: 867.1/19

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: 10.630 $\pm$ 0.083  $\chi^2$ /NDF: 1753.1/36

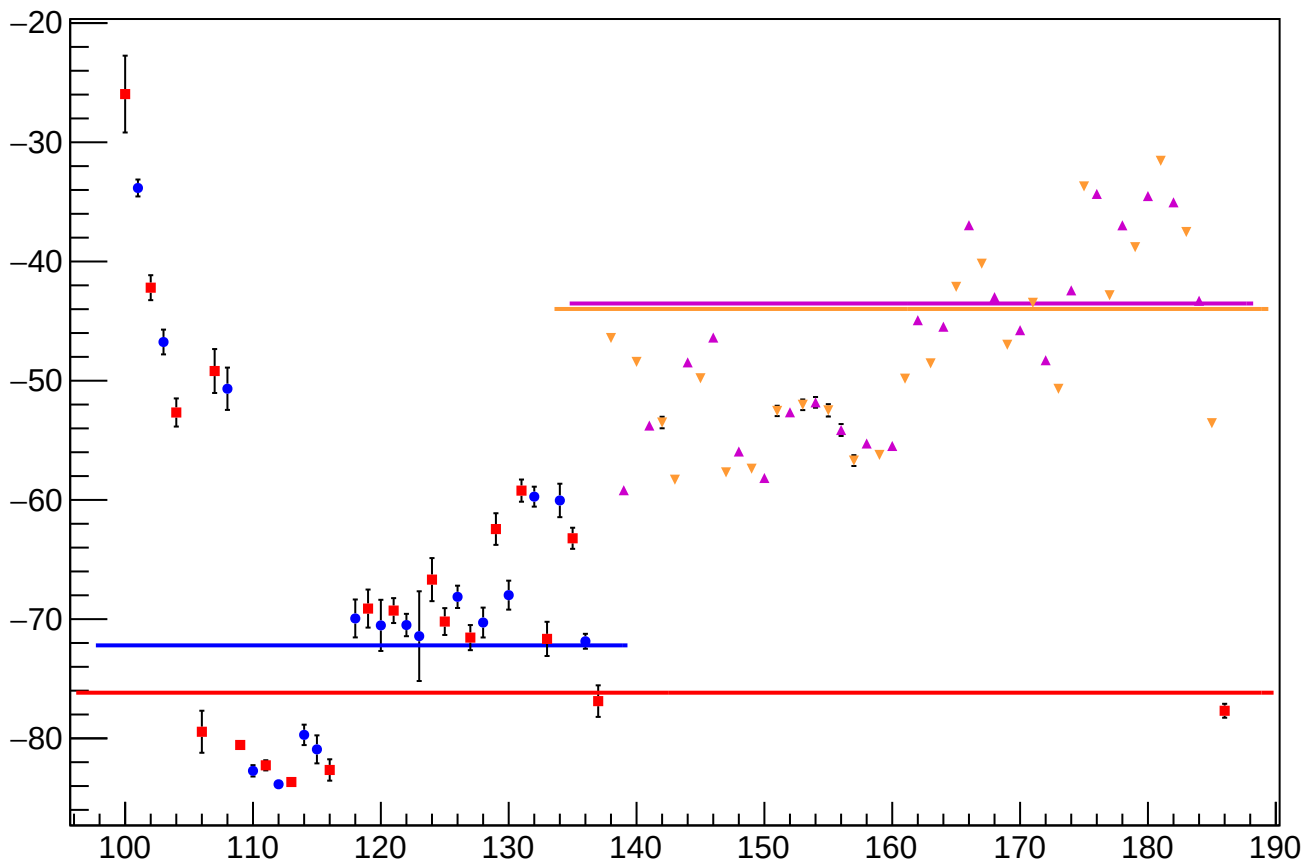
In: 11.988 $\pm$ 0.047  $\chi^2$ /NDF: 6718.6/39

Out: 12.177 $\pm$ 0.046  $\chi^2$ /NDF: 8535.7/44

All: 12.085 $\pm$ 0.033  $\chi^2$ /NDF: 15262.5/84



reg\_asym\_sam7\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-72.200 \pm 0.198$   $\chi^2/\text{NDF}$ : 5562.7/16

Left Out:  $-43.982 \pm 0.062$   $\chi^2/\text{NDF}$ : 17736.8/24

Right Out:  $-76.170 \pm 0.173$   $\chi^2/\text{NDF}$ : 3466.6/19

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

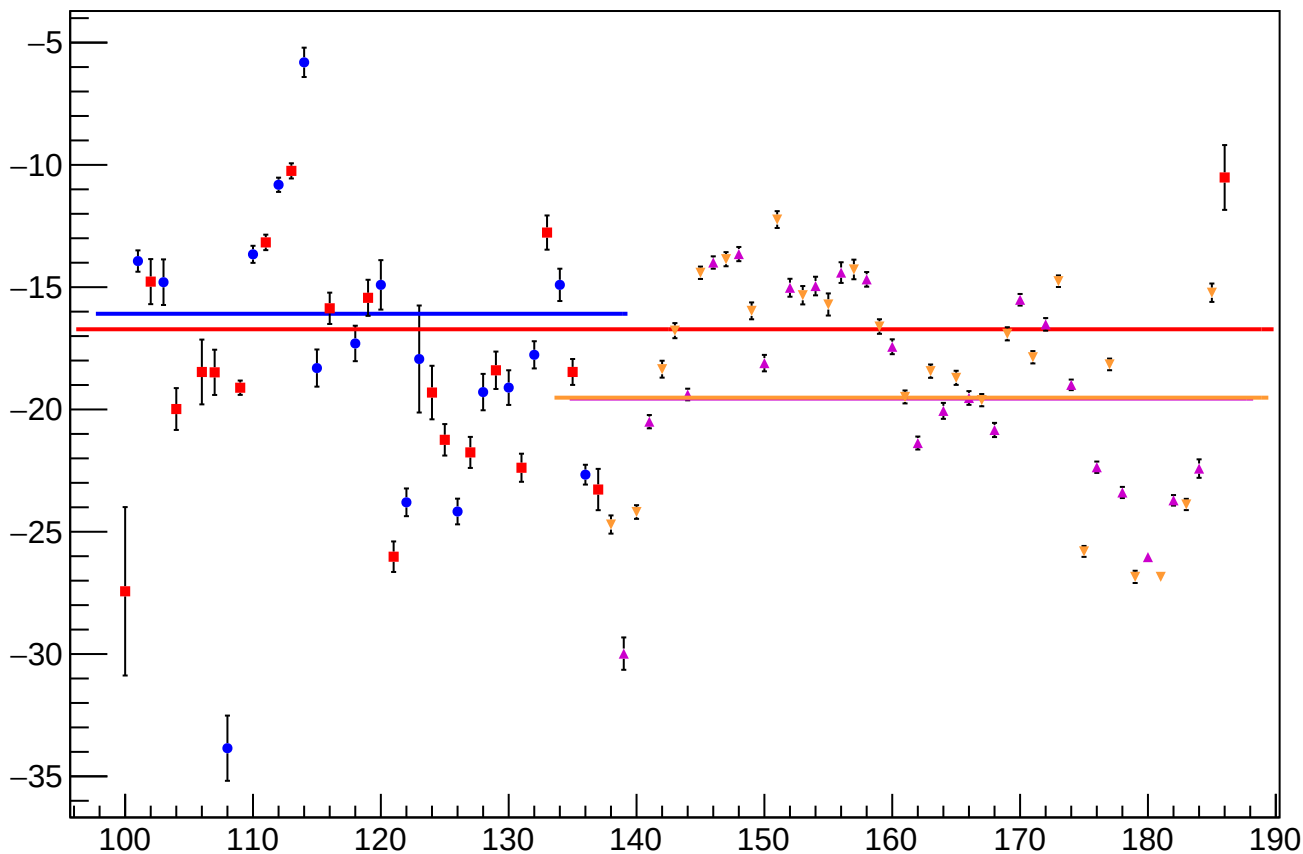
Right:  $-74.456 \pm 0.130$   $\chi^2/\text{NDF}$ : 9256.7/36

In:  $-46.173 \pm 0.060$   $\chi^2/\text{NDF}$ : 39784.8/39

Out:  $-47.638 \pm 0.058$   $\chi^2/\text{NDF}$ : 51885.5/44

All:  $-46.931 \pm 0.042$   $\chi^2/\text{NDF}$ : 91975.1/84

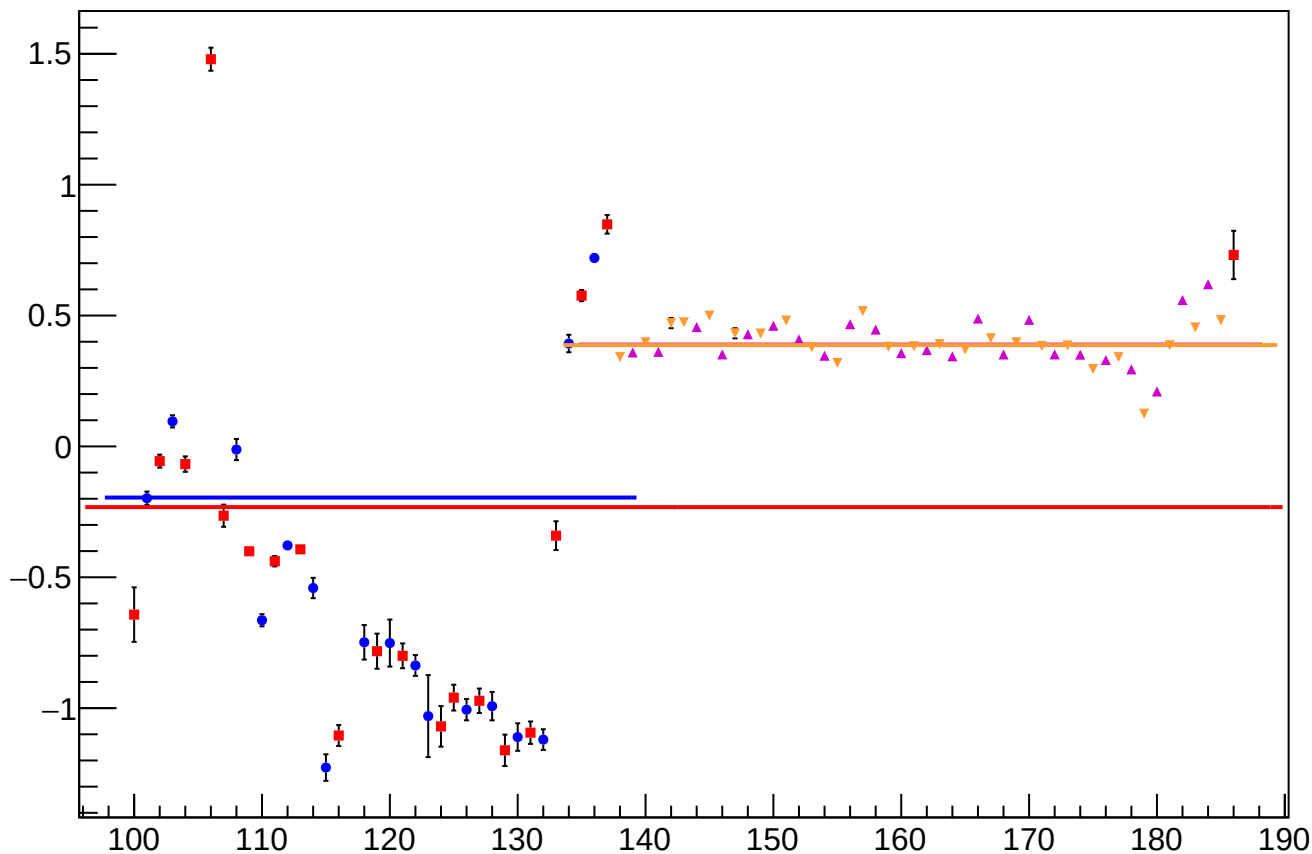
reg\_asym\_sam7\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-16.087 \pm 0.133$   $\chi^2/\text{NDF}: 1620.7/16$   
 Left Out:  $-19.517 \pm 0.056$   $\chi^2/\text{NDF}: 6518.3/24$   
 Right Out:  $-16.721 \pm 0.128$   $\chi^2/\text{NDF}: 1233.4/19$   
 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:  $-16.417 \pm 0.092$   $\chi^2/\text{NDF}: 2865.9/36$   
 In:  $-19.010 \pm 0.053$   $\chi^2/\text{NDF}: 6506.4/39$   
 Out:  $-19.070 \pm 0.051$   $\chi^2/\text{NDF}: 8154.1/44$   
 All:  $-19.041 \pm 0.037$   $\chi^2/\text{NDF}: 14661.1/84$

reg\_asym\_sam7\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: -0.195+/-0.008  $\chi^2/\text{NDF}$ : 6316.5/16

Left Out: 0.387+/-0.003  $\chi^2/\text{NDF}$ :995.0/24

Right Out: -0.232+/-0.007  $\chi^2/\text{NDF}$ : 6285.9/19

Left In: 0.389+/-0.003  $\chi^2/\text{NDF}$ :1256.9/22

Left: 0.388+/-0.002  $\chi^2/\text{NDF}$ : 2252.2/47

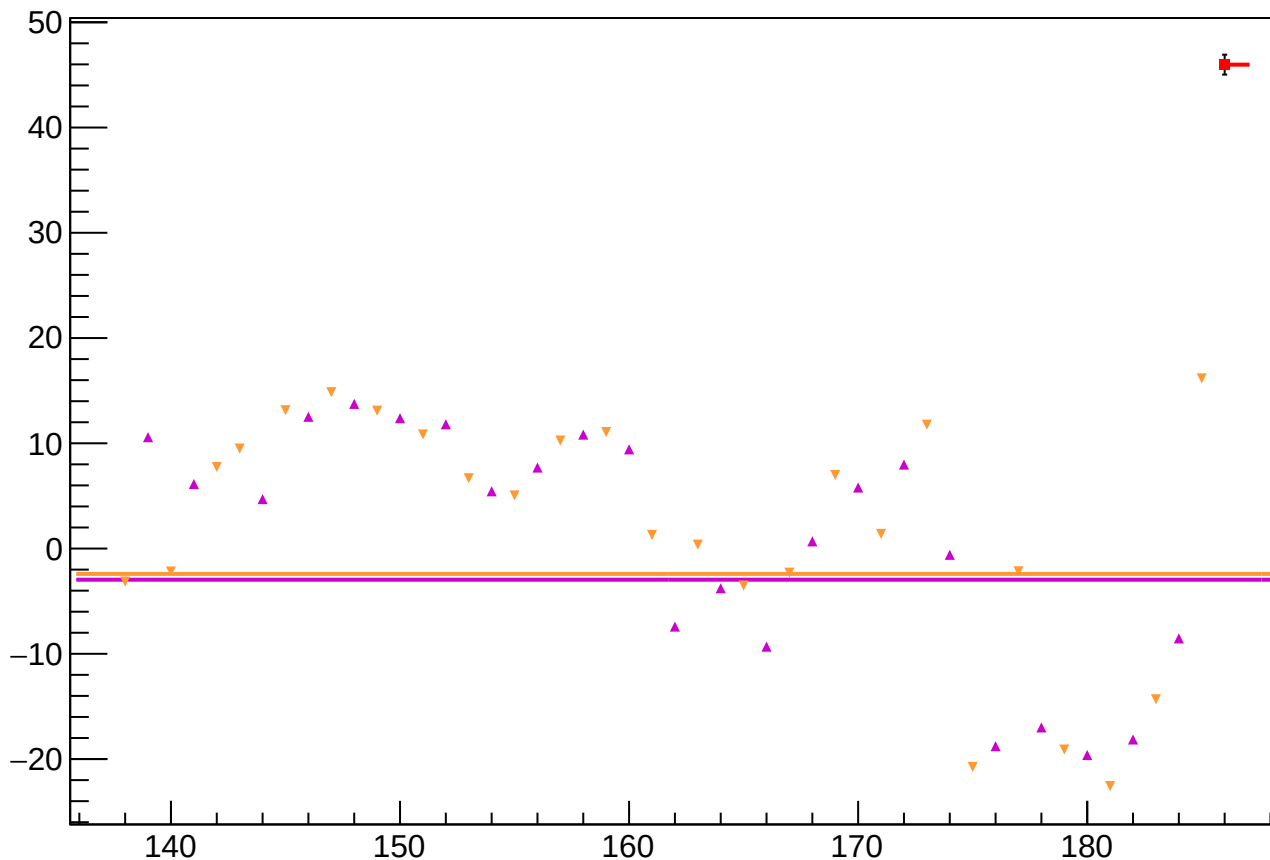
Right: -0.215+/-0.005  $\chi^2/\text{NDF}$ : 12614.7/36

In: 0.326+/-0.002  $\chi^2/\text{NDF}$ :12915.5/39

Out: 0.317+/-0.002  $\chi^2/\text{NDF}$ :13904.5/44

All: 0.322+/-0.002  $\chi^2/\text{NDF}$ : 26827.3/84

reg\_asym\_sam8\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -2.407+/-0.053  $\chi^2/\text{NDF}$ : 56368.5/24

Right Out: 45.976+/-0.947  $\chi^2/\text{NDF}$ : 0.0/0

Left In: -2.959+/-0.055  $\chi^2/\text{NDF}$ : 45922.6/22

Left: -2.672+/-0.038  $\chi^2/\text{NDF}$ : 102343.8/47

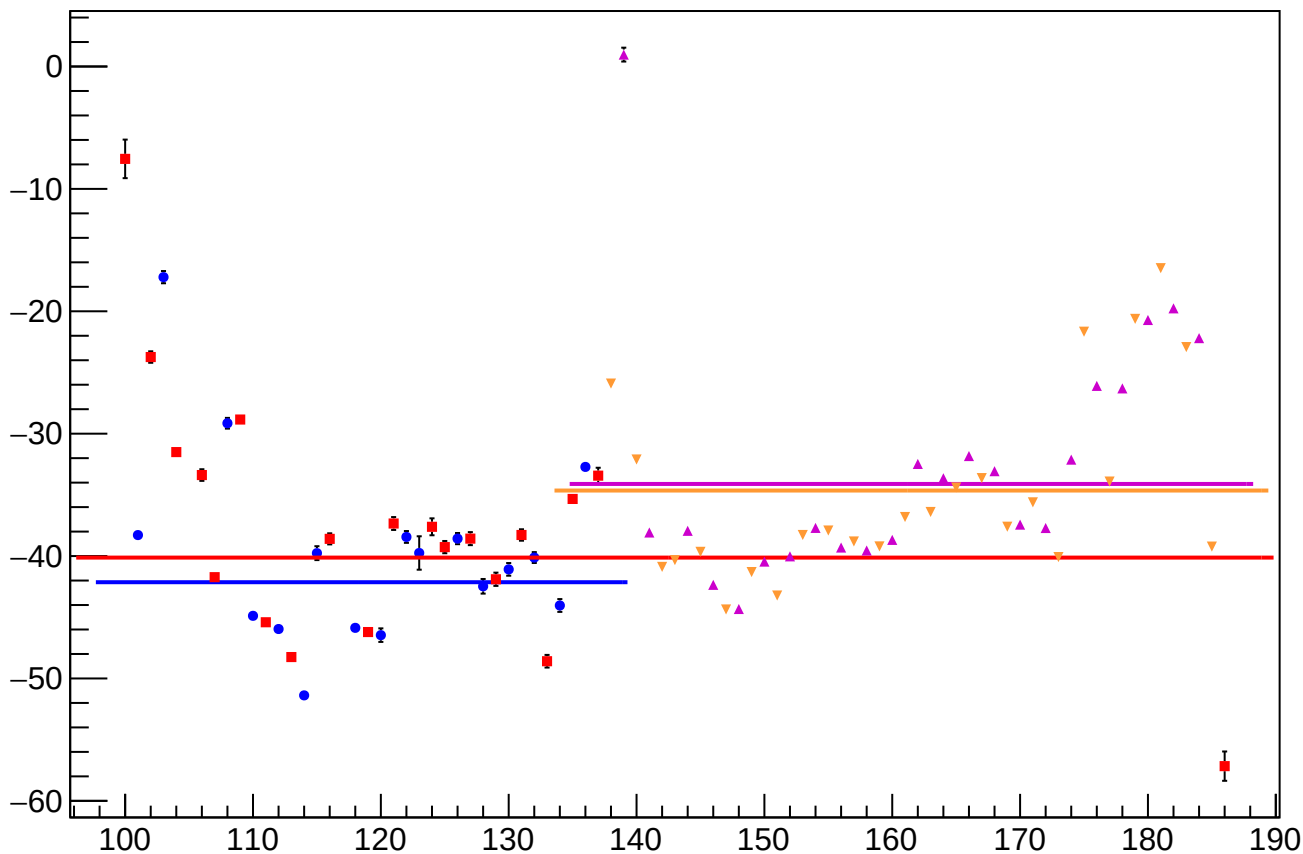
Right: 45.976+/-0.947  $\chi^2/\text{NDF}$ : 0.0/0

In: -2.959+/-0.055  $\chi^2/\text{NDF}$ : 45922.6/22

Out: -2.257+/-0.053  $\chi^2/\text{NDF}$ : 58968.4/25

All: -2.594+/-0.038  $\chi^2/\text{NDF}$ : 104976.2/48

reg\_asym\_sam8\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-42.136 \pm 0.078$   $\chi^2/\text{NDF}: 6553.2/16$

Left Out:  $-34.646 \pm 0.042$   $\chi^2/\text{NDF}: 34674.7/24$

Right Out:  $-40.125 \pm 0.073$   $\chi^2/\text{NDF}: 11523.6/19$

Left In:  $-34.108 \pm 0.044$   $\chi^2/\text{NDF}: 29052.8/22$

Left:  $-34.390 \pm 0.030$   $\chi^2/\text{NDF}: 63806.0/47$

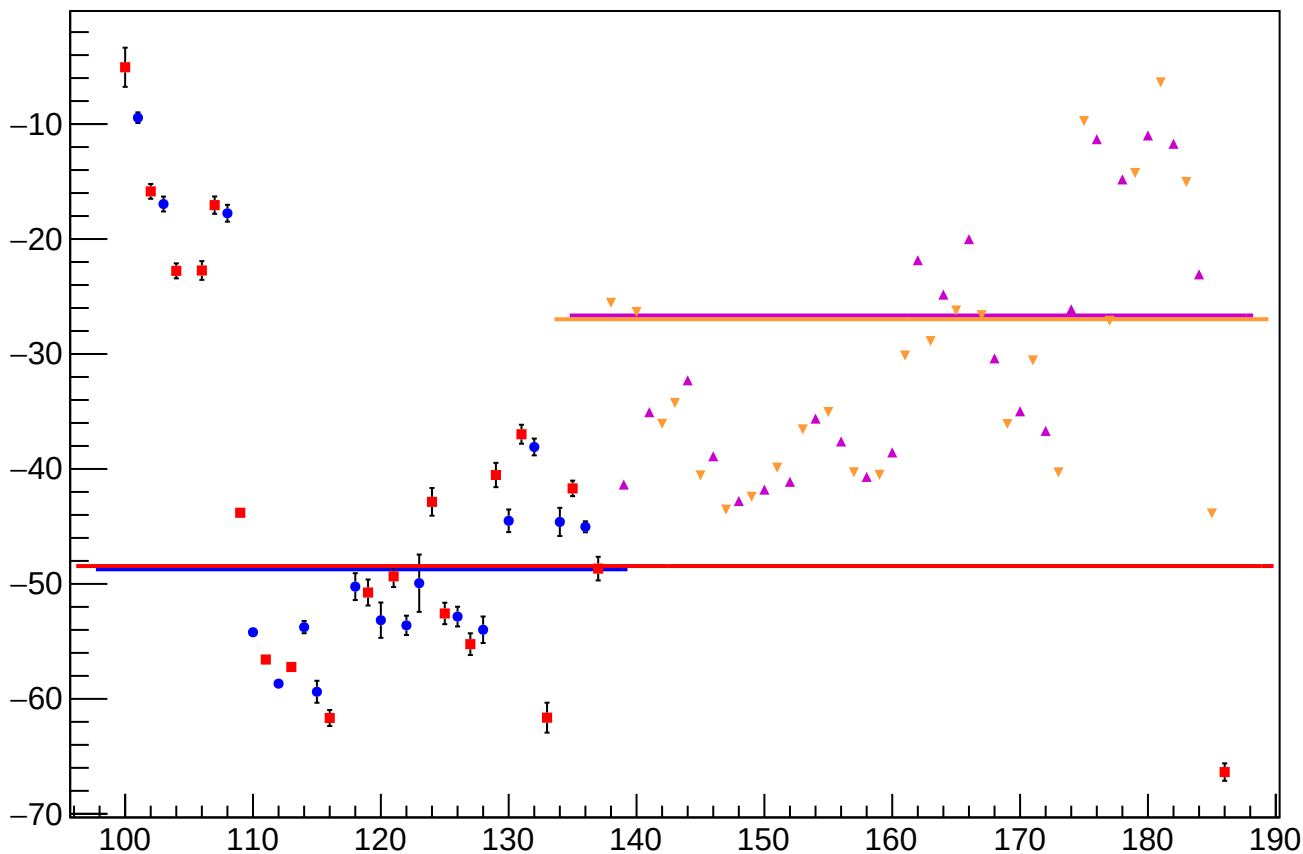
Right:  $-41.057 \pm 0.053$   $\chi^2/\text{NDF}: 18432.0/36$

In:  $-36.037 \pm 0.038$   $\chi^2/\text{NDF}: 43618.7/39$

Out:  $-36.007 \pm 0.036$   $\chi^2/\text{NDF}: 50469.9/44$

All:  $-36.021 \pm 0.026$   $\chi^2/\text{NDF}: 94089.0/84$

reg\_asym\_sam8\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-48.729 \pm 0.125$   $\chi^2/\text{NDF}: 14659.5/16$

Left Out:  $-26.978 \pm 0.053$   $\chi^2/\text{NDF}: 49361.1/24$

Right Out:  $-48.446 \pm 0.106$   $\chi^2/\text{NDF}: 12301.1/19$

Left In:  $-26.654 \pm 0.055$   $\chi^2/\text{NDF}: 42106.8/22$

Left:  $-26.821 \pm 0.038$   $\chi^2/\text{NDF}: 91485.8/47$

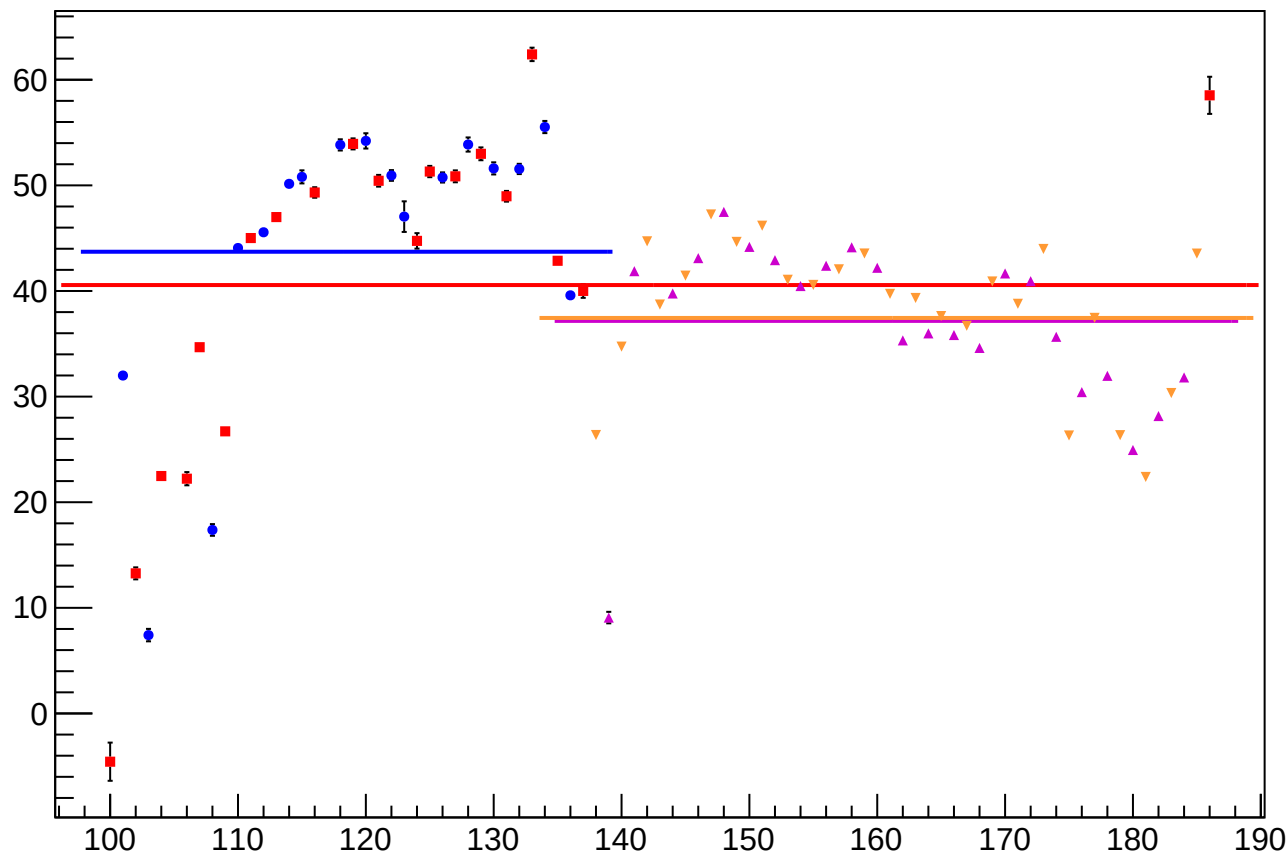
Right:  $-48.565 \pm 0.081$   $\chi^2/\text{NDF}: 26963.5/36$

In:  $-30.236 \pm 0.050$   $\chi^2/\text{NDF}: 82966.3/39$

Out:  $-31.281 \pm 0.048$   $\chi^2/\text{NDF}: 94321.0/44$

All:  $-30.788 \pm 0.035$   $\chi^2/\text{NDF}: 177515.6/84$

reg\_asym\_sam8\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 43.716 $\pm$ 0.087  $\chi^2$ /NDF: 10564.2/16

Left Out: 37.447 $\pm$ 0.047  $\chi^2$ /NDF: 21570.6/24

Right Out: 40.562 $\pm$ 0.080  $\chi^2$ /NDF: 17683.2/19

Left In: 37.169 $\pm$ 0.049  $\chi^2$ /NDF: 17236.9/22

Left: 37.314 $\pm$ 0.034  $\chi^2$ /NDF: 38824.1/47

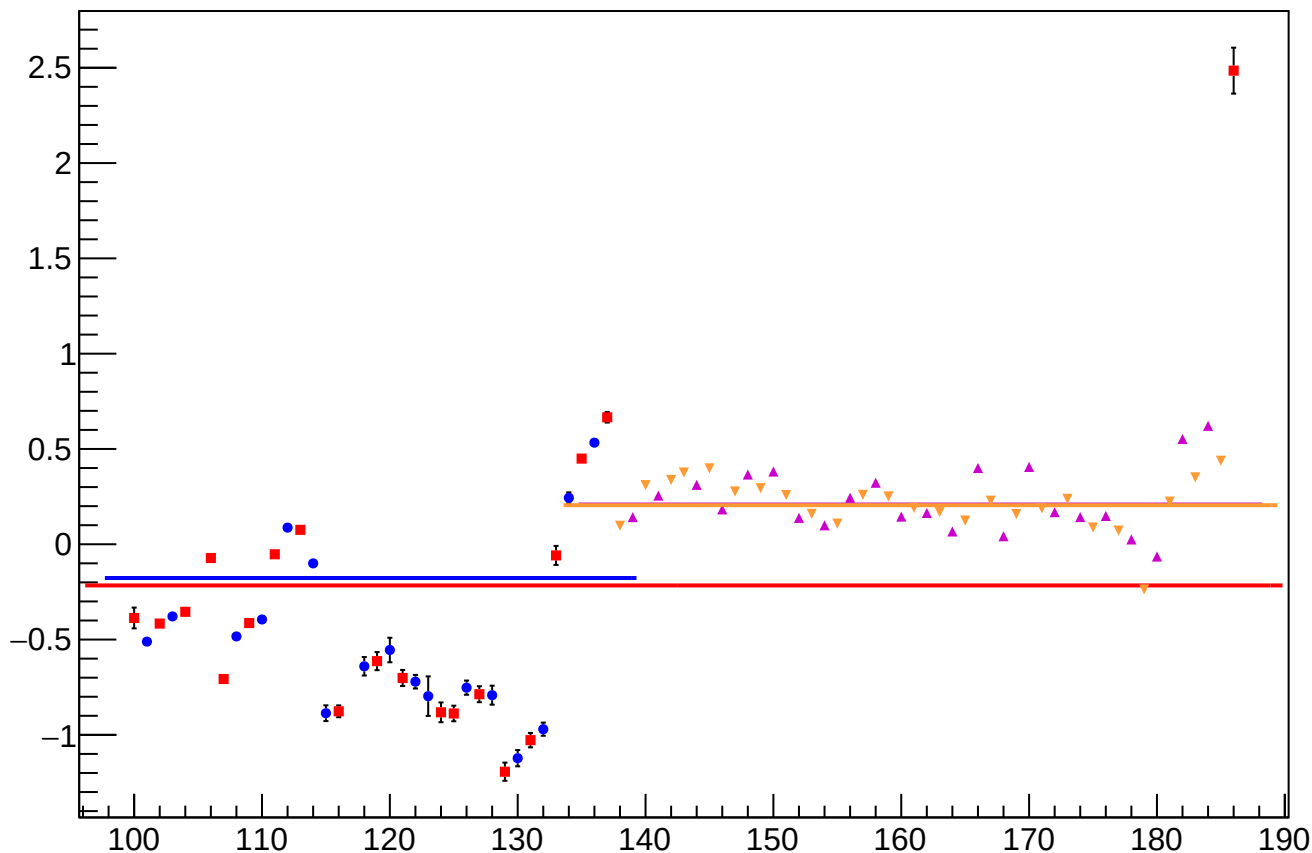
Right: 42.010 $\pm$ 0.059  $\chi^2$ /NDF: 28958.1/36

In: 38.758 $\pm$ 0.043  $\chi^2$ /NDF: 32086.8/39

Out: 38.248 $\pm$ 0.041  $\chi^2$ /NDF: 40376.0/44

All: 38.489 $\pm$ 0.029  $\chi^2$ /NDF: 72537.6/84

reg\_asym\_sam8\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.177 \pm 0.005$   $\chi^2/\text{NDF}$ : 7353.5/16

Left Out:  $0.205 \pm 0.002$   $\chi^2/\text{NDF}$ : 3826.2/24

Right Out:  $-0.216 \pm 0.004$   $\chi^2/\text{NDF}$ : 7919.7/19

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:  $-0.199 \pm 0.003$   $\chi^2/\text{NDF}$ : 15309.2/36

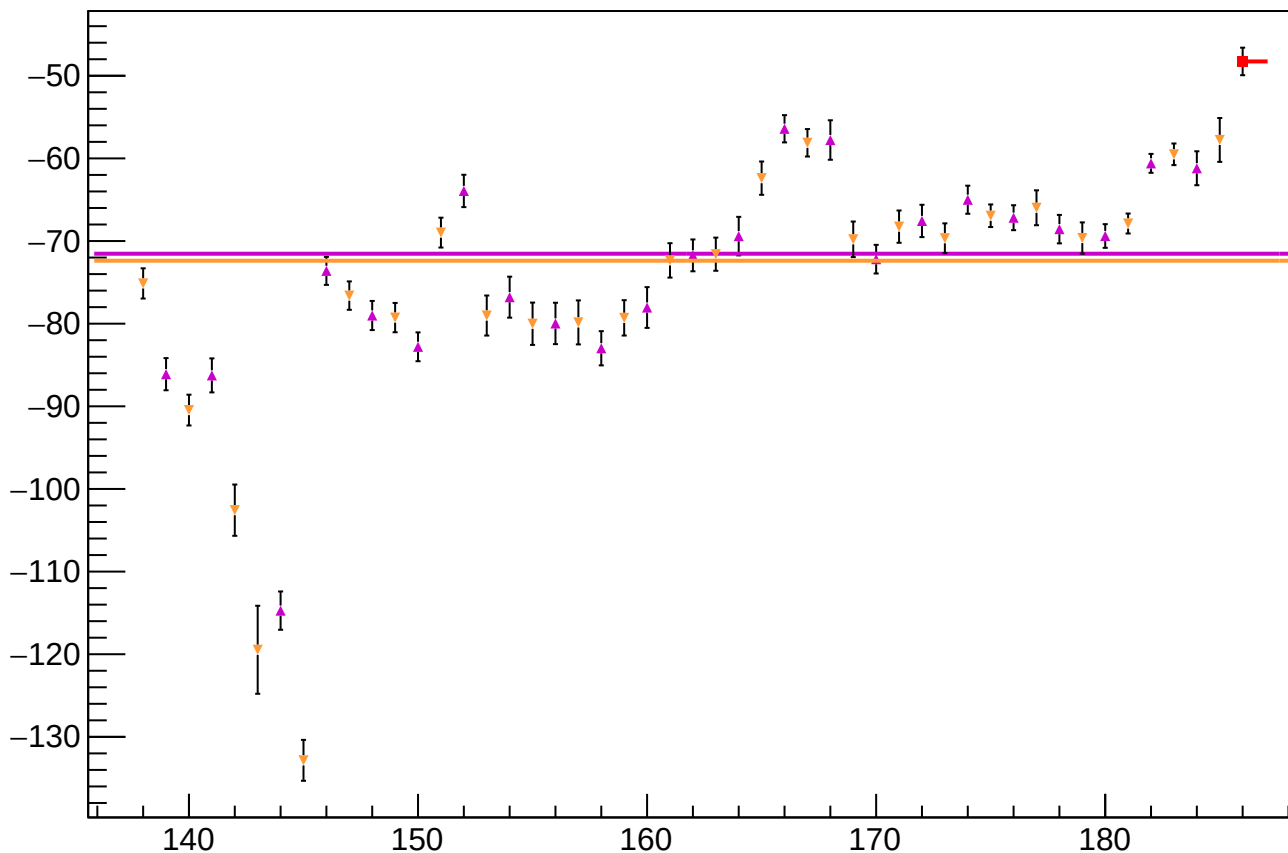
In:  $0.140 \pm 0.002$   $\chi^2/\text{NDF}$ : 17657.0/39

Out:  $0.119 \pm 0.002$   $\chi^2/\text{NDF}$ : 19375.7/44

All:  $0.129 \pm 0.001$   $\chi^2/\text{NDF}$ : 37088.1/84



reg\_asym\_usl\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -72.381+/-0.382  $\chi^2/\text{NDF}$ :1199.9/24

Right Out: -48.267+/-1.666  $\chi^2/\text{NDF}$ : 0.0/0

Left In: -71.534+/-0.382  $\chi^2/\text{NDF}$ :851.4/22

Left: -71.957+/-0.270  $\chi^2/\text{NDF}$ : 2053.7/47

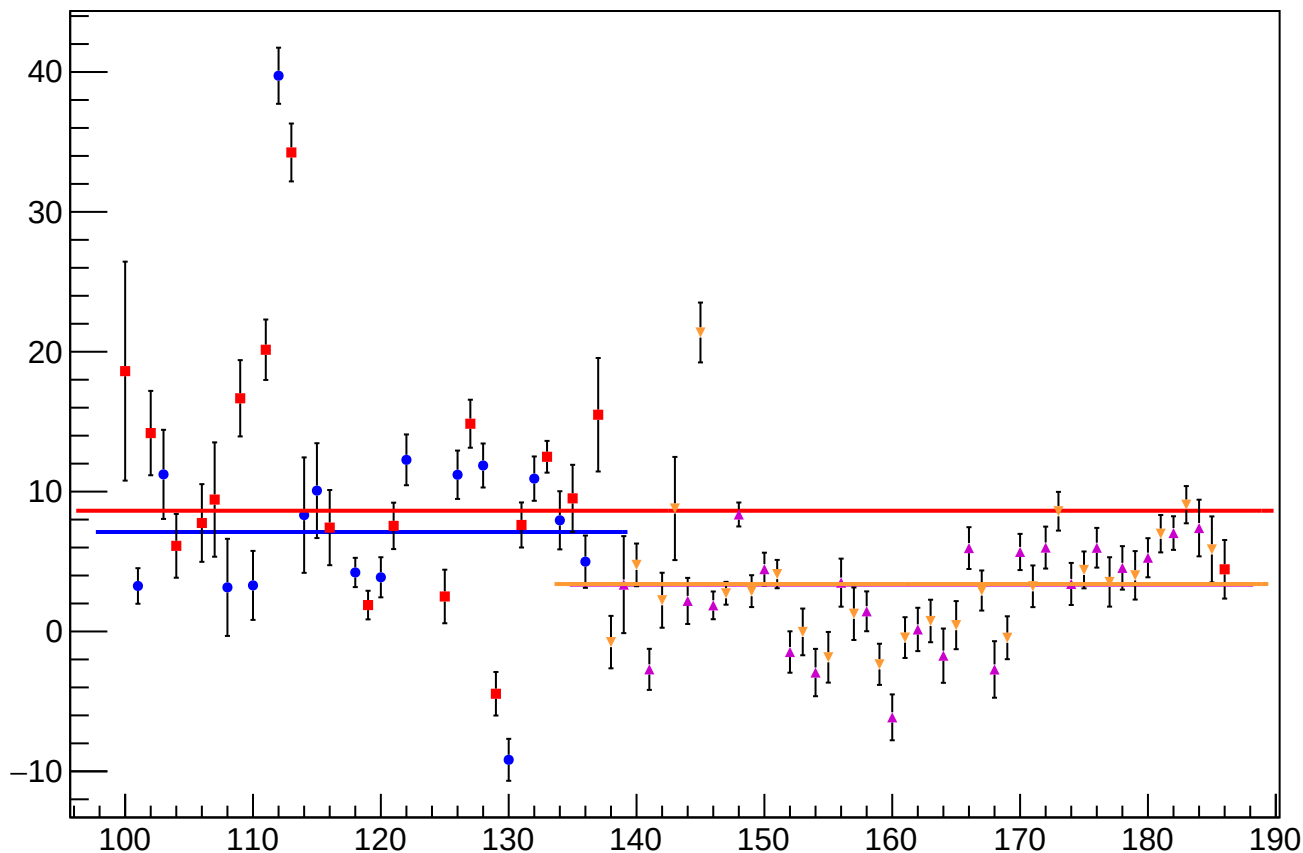
Right: -48.267+/-1.666  $\chi^2/\text{NDF}$ : 0.0/0

In: -71.534+/-0.382  $\chi^2/\text{NDF}$ :851.4/22

Out: -71.178+/-0.372  $\chi^2/\text{NDF}$ :1398.9/25

All: -71.351+/-0.266  $\chi^2/\text{NDF}$ : 2250.8/48

reg\_asym\_usl\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 7.112 $\pm$ 0.440  $\chi^2$ /NDF: 440.4/15

Left Out: 3.392 $\pm$ 0.294  $\chi^2$ /NDF:169.9/24

Right Out: 8.632 $\pm$ 0.439  $\chi^2$ /NDF: 353.8/18

Left In: 3.349 $\pm$ 0.298  $\chi^2$ /NDF:163.5/22

Left: 3.371 $\pm$ 0.209  $\chi^2$ /NDF: 333.4/47

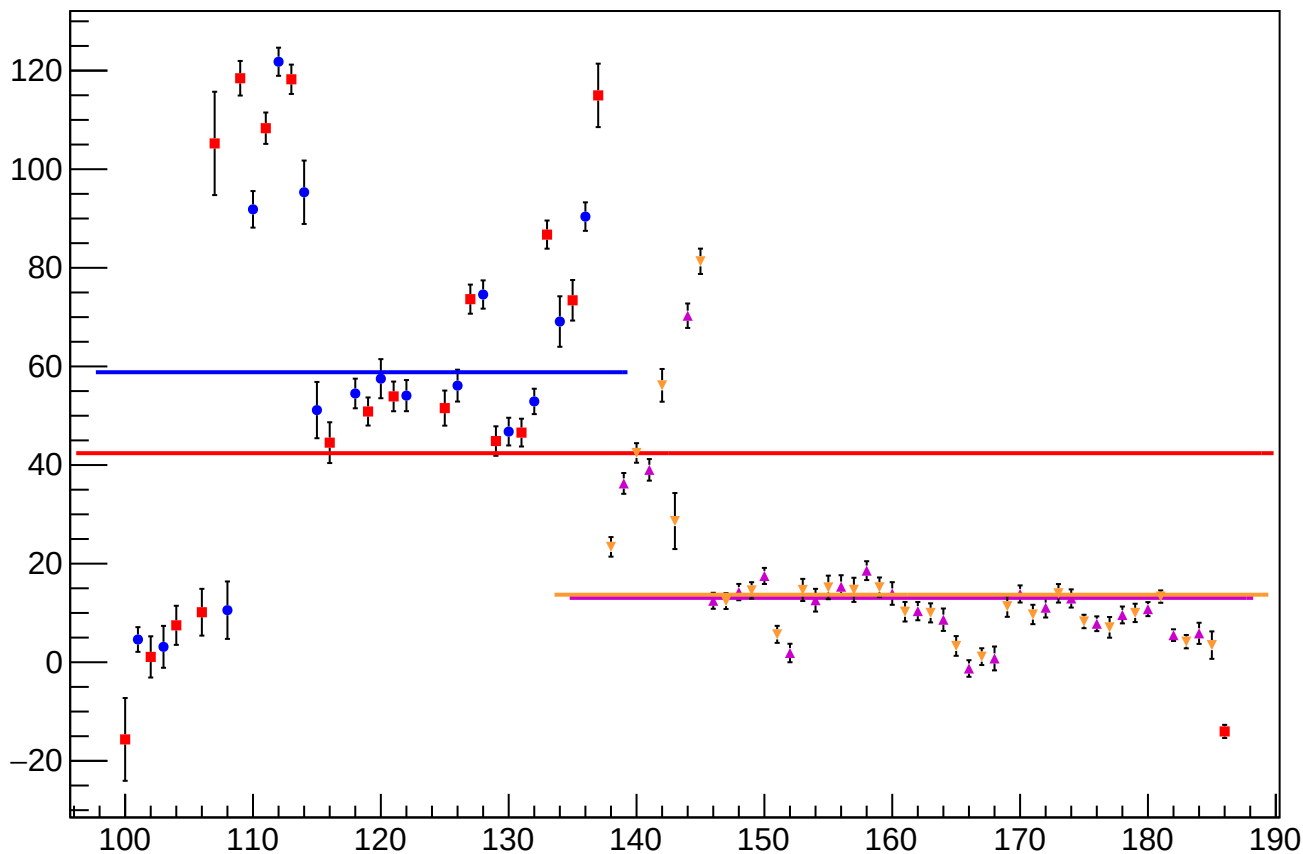
Right: 7.875 $\pm$ 0.311  $\chi^2$ /NDF: 800.3/34

In: 4.532 $\pm$ 0.247  $\chi^2$ /NDF:654.0/38

Out: 5.015 $\pm$ 0.244  $\chi^2$ /NDF:622.2/43

All: 4.776 $\pm$ 0.174  $\chi^2$ /NDF: 1278.2/82

# reg\_asym\_usl\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 58.825+/-0.839  $\chi^2/\text{NDF}$ : 1491.4/15

Left Out: 13.700+/-0.381  $\chi^2/\text{NDF}$ :1307.0/24

Right Out: 42.405+/-0.712  $\chi^2/\text{NDF}$ : 4204.9/18

Left In: 13.058+/-0.380  $\chi^2/\text{NDF}$ :1024.7/22

Left: 13.378+/-0.269  $\chi^2/\text{NDF}$ : 2333.1/47

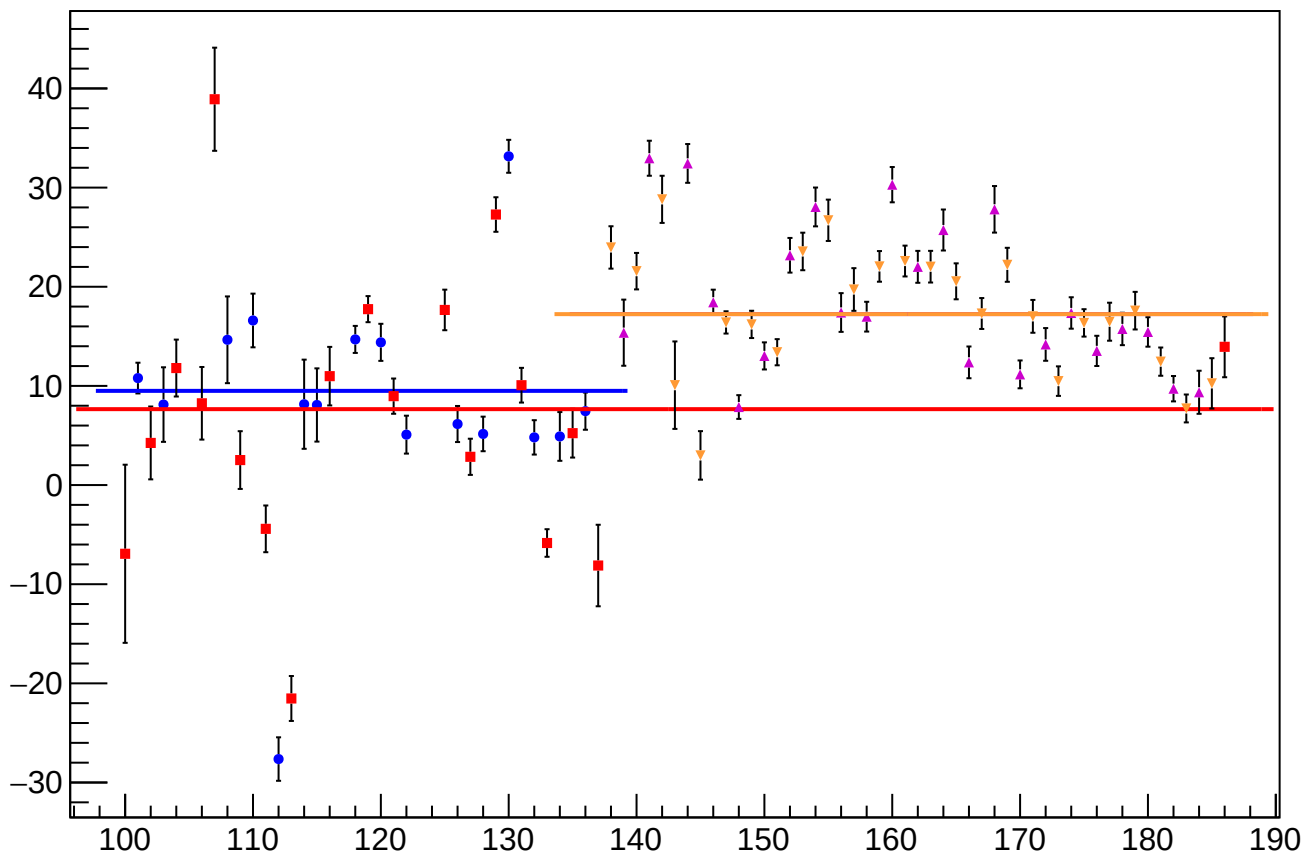
Right: 49.288+/-0.543  $\chi^2/\text{NDF}$ : 5918.9/34

In: 20.847+/-0.346  $\chi^2/\text{NDF}$ :4988.0/38

Out: 20.082+/-0.336  $\chi^2/\text{NDF}$ :6774.4/43

All: 20.453+/-0.241  $\chi^2/\text{NDF}$ : 11764.9/82

reg\_asym\_usl\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $9.499 \pm 0.508$   $\chi^2/\text{NDF}: 547.2/15$

Left Out:  $17.238 \pm 0.336$   $\chi^2/\text{NDF}: 246.5/24$

Right Out:  $7.655 \pm 0.509$   $\chi^2/\text{NDF}: 571.2/18$

Left In:  $17.245 \pm 0.339$   $\chi^2/\text{NDF}: 440.8/22$

Left:  $17.241 \pm 0.239$   $\chi^2/\text{NDF}: 687.3/47$

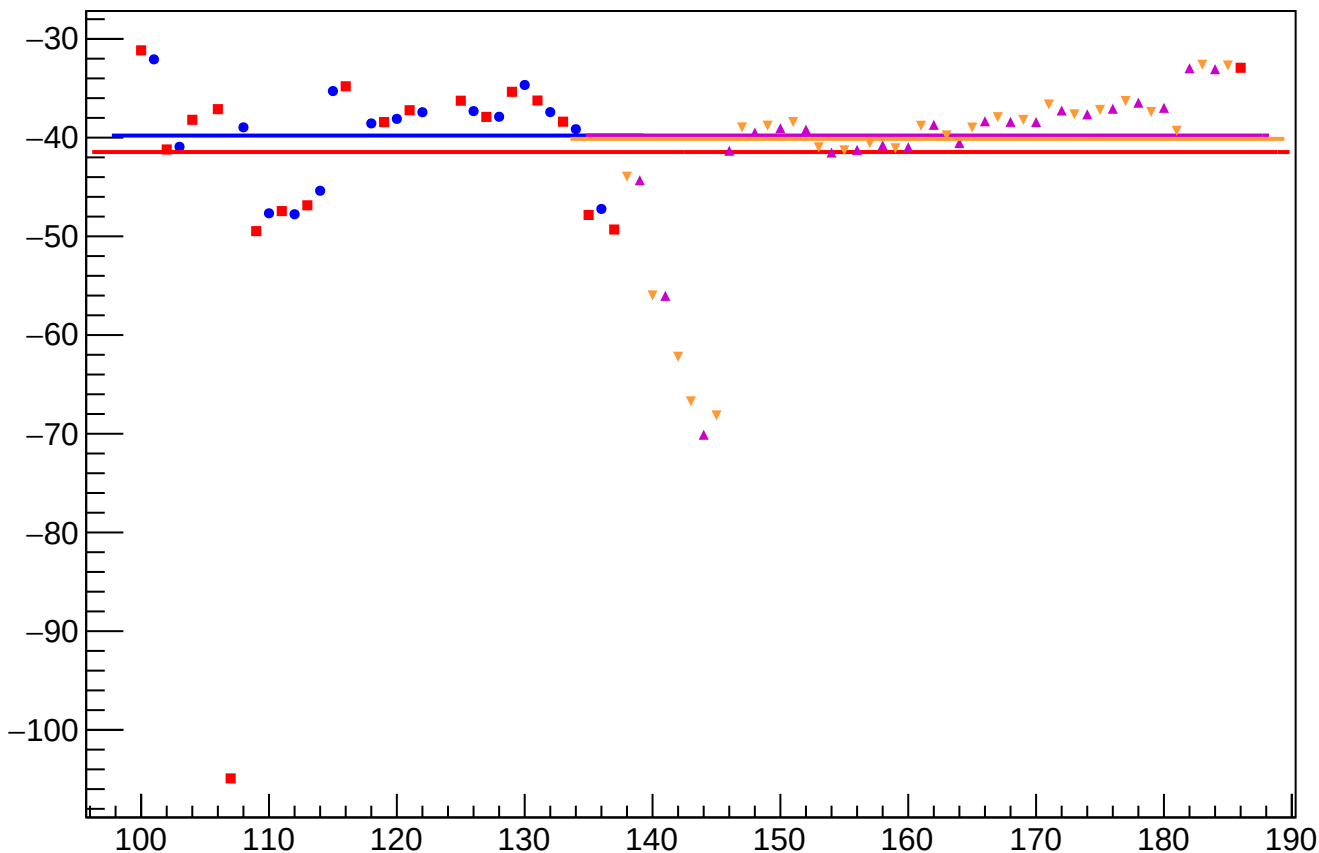
Right:  $8.579 \pm 0.359$   $\chi^2/\text{NDF}: 1125.0/34$

In:  $14.852 \pm 0.282$   $\chi^2/\text{NDF}: 1148.9/38$

Out:  $14.326 \pm 0.280$   $\chi^2/\text{NDF}: 1064.7/43$

All:  $14.588 \pm 0.199$   $\chi^2/\text{NDF}: 2215.3/82$

# reg\_asym\_usl\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-39.790 \pm 0.031$   $\chi^2/\text{NDF}$ : 26103.4/15

Left Out:  $-40.126 \pm 0.016$   $\chi^2/\text{NDF}$ : 185897.0/24

Right Out:  $-41.459 \pm 0.031$   $\chi^2/\text{NDF}$ : 96037.3/18

Left In:  $-39.785 \pm 0.016$   $\chi^2/\text{NDF}$ : 144494.5/22

Left:  $-39.955 \pm 0.011$   $\chi^2/\text{NDF}$ : 330628.3/47

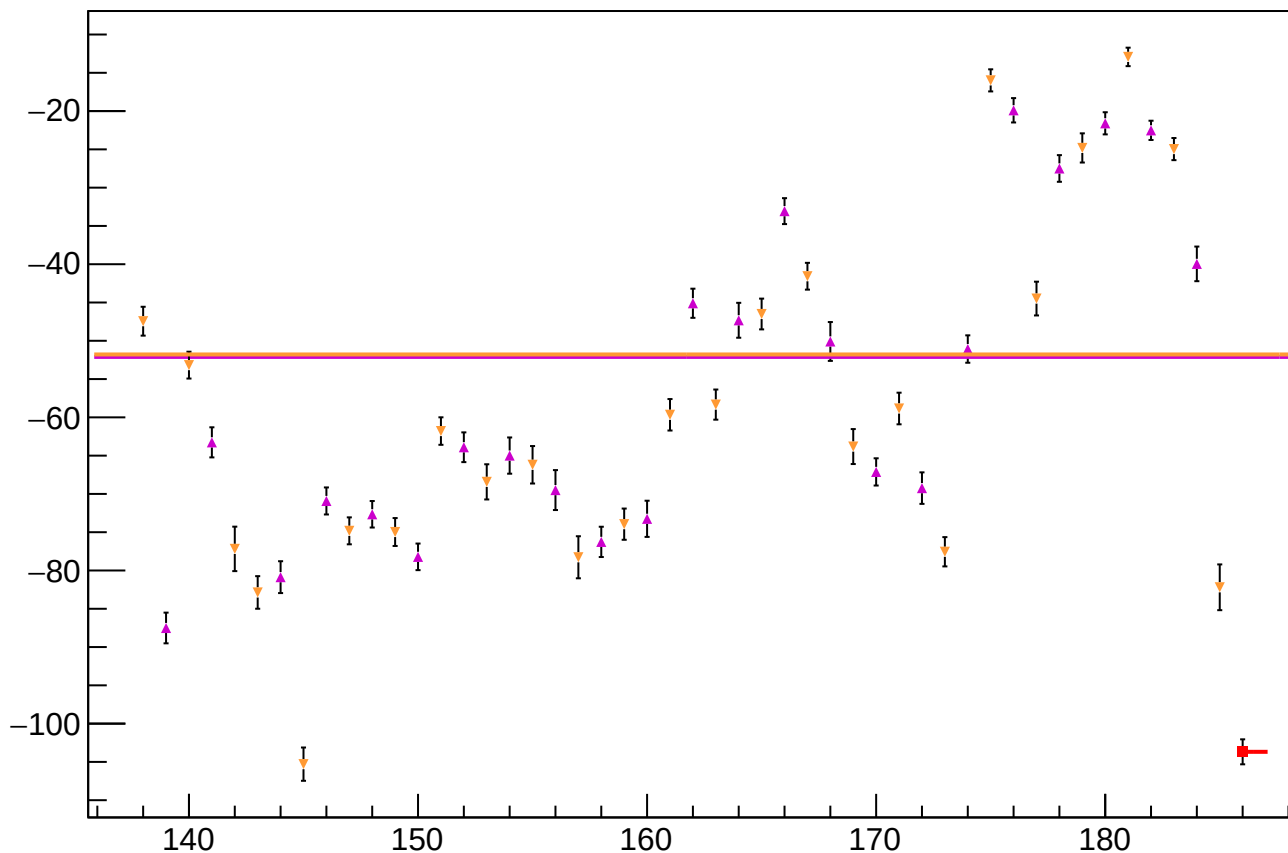
Right:  $-40.634 \pm 0.022$   $\chi^2/\text{NDF}$ : 123582.2/34

In:  $-39.786 \pm 0.014$   $\chi^2/\text{NDF}$ : 170597.9/38

Out:  $-40.399 \pm 0.014$   $\chi^2/\text{NDF}$ : 283412.6/43

All:  $-40.092 \pm 0.010$   $\chi^2/\text{NDF}$ : 454971.7/82

reg\_asym\_usr\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Left Out: -51.787 $\pm$ 0.383  $\chi^2$ /NDF:4164.8/24

Right Out: -103.683 $\pm$ 1.632  $\chi^2$ /NDF: 0.0/0

Left In: -52.104 $\pm$ 0.389  $\chi^2$ /NDF:3280.2/22

Left: -51.943 $\pm$ 0.273  $\chi^2$ /NDF: 7445.3/47

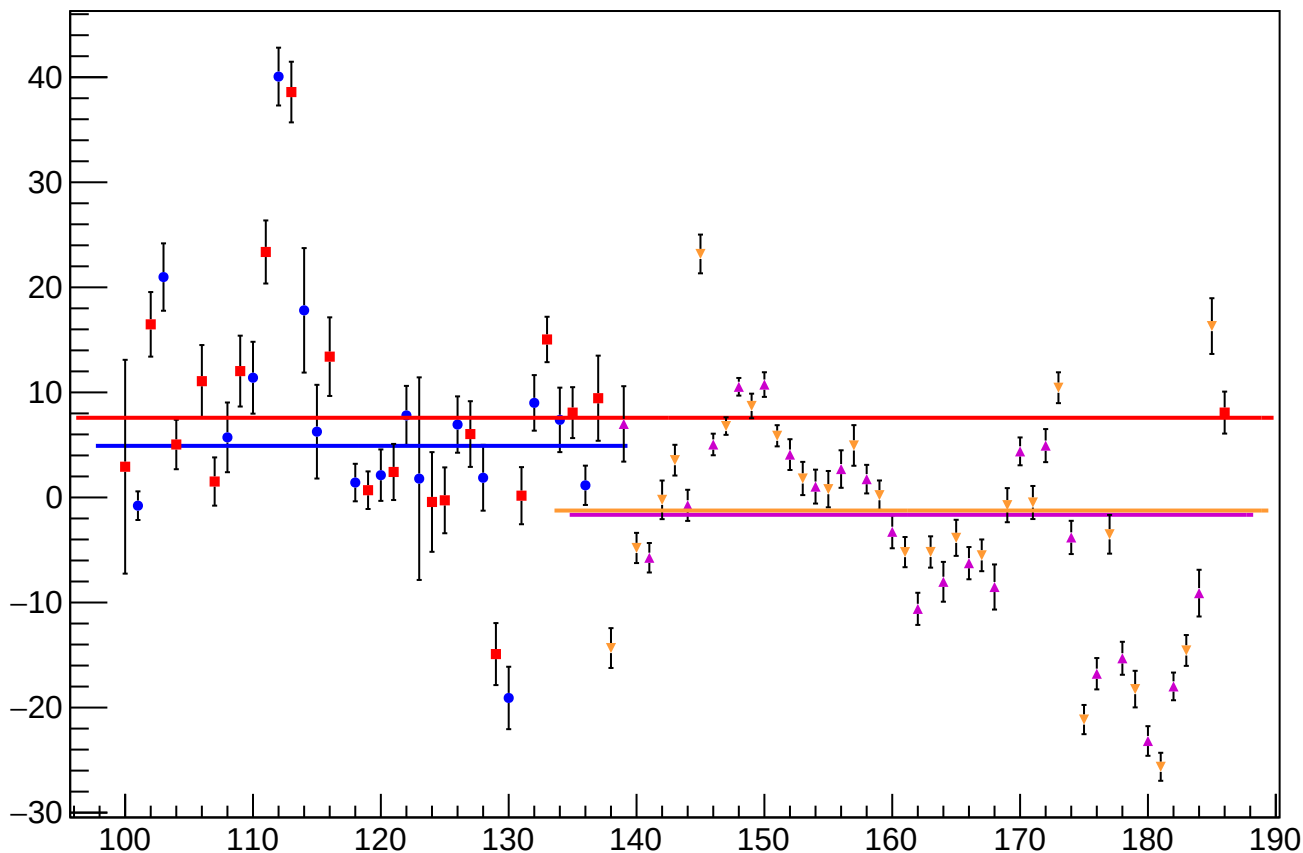
Right: -103.683 $\pm$ 1.632  $\chi^2$ /NDF: 0.0/0

In: -52.104 $\pm$ 0.389  $\chi^2$ /NDF:3280.2/22

Out: -54.492 $\pm$ 0.373  $\chi^2$ /NDF:5123.8/25

All: -53.349 $\pm$ 0.269  $\chi^2$ /NDF: 8423.7/48

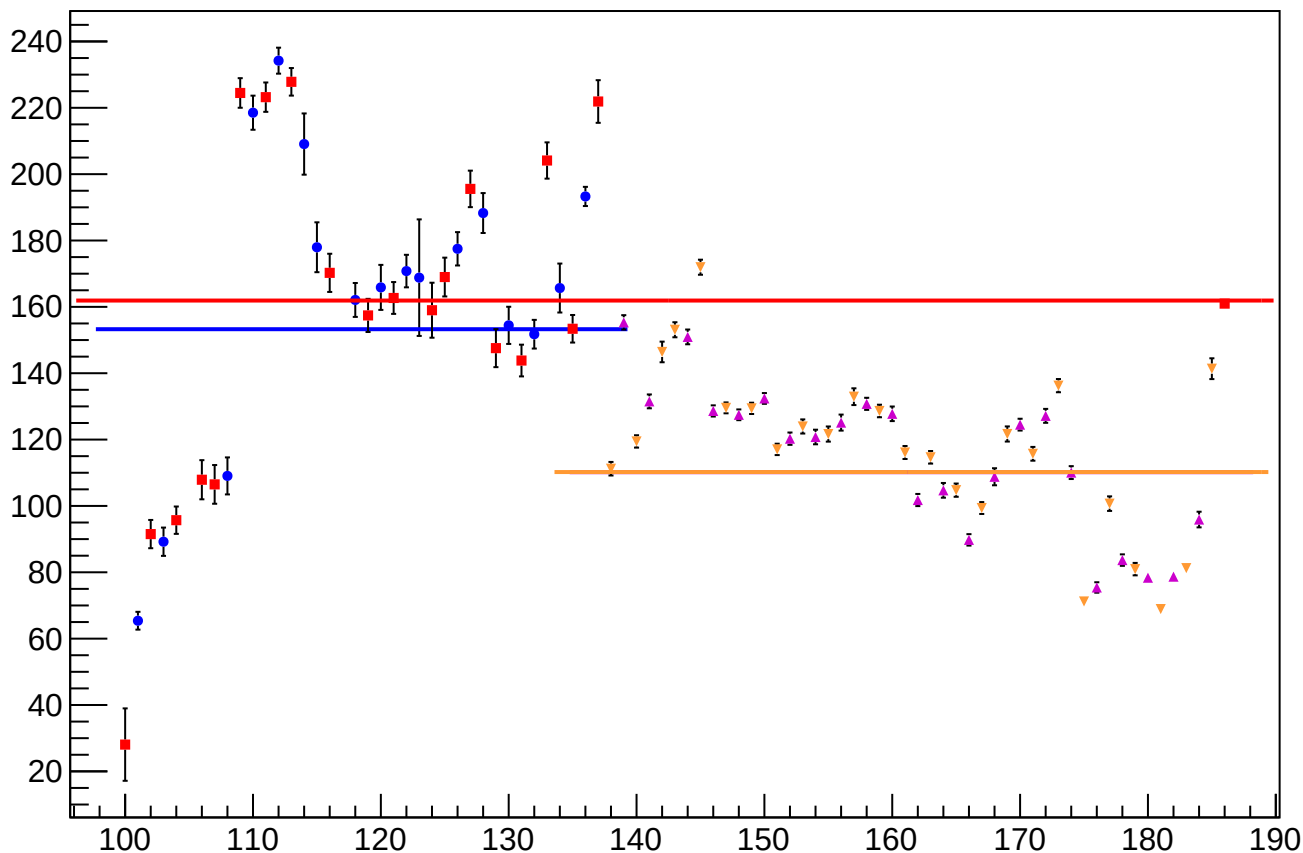
reg\_asym\_usr\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $4.912 \pm 0.629$   $\chi^2/\text{NDF}: 294.3/16$   
 Left Out:  $-1.245 \pm 0.292$   $\chi^2/\text{NDF}: 1322.6/24$   
 Right Out:  $7.585 \pm 0.619$   $\chi^2/\text{NDF}: 270.6/19$   
 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:  $6.268 \pm 0.441$   $\chi^2/\text{NDF}: 574.1/36$   
 In:  $-0.432 \pm 0.271$   $\chi^2/\text{NDF}: 1475.3/39$   
 Out:  $0.358 \pm 0.264$   $\chi^2/\text{NDF}: 1759.6/44$   
 All:  $-0.026 \pm 0.189$   $\chi^2/\text{NDF}: 3239.3/84$

reg\_asym\_usr\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $153.268 \pm 1.152$   $\chi^2/\text{NDF}: 2266.2/16$

Left Out:  $110.213 \pm 0.382$   $\chi^2/\text{NDF}: 4593.7/24$

Right Out:  $161.906 \pm 0.875$   $\chi^2/\text{NDF}: 1709.7/19$

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:  $158.748 \pm 0.697$   $\chi^2/\text{NDF}: 4011.6/36$

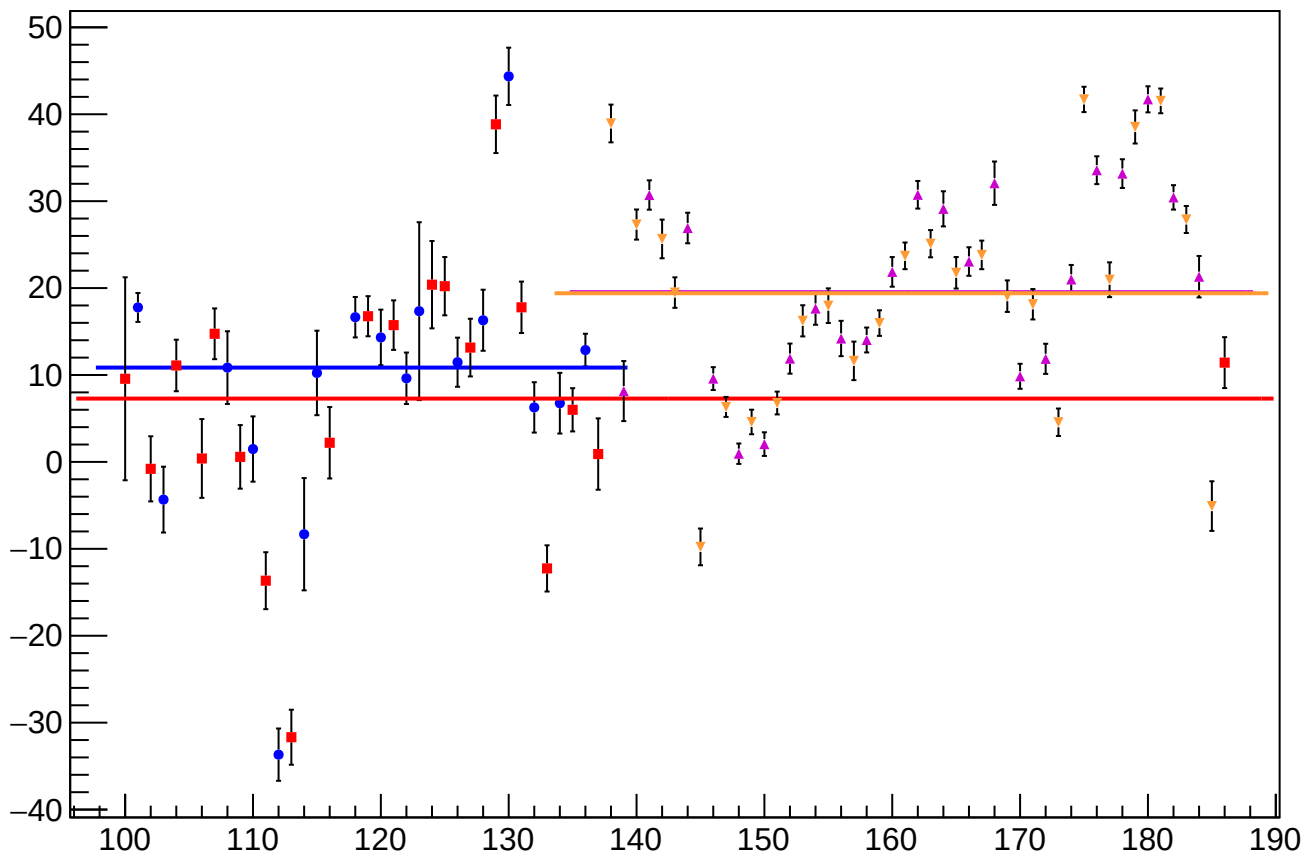
In:  $114.521 \pm 0.366$   $\chi^2/\text{NDF}: 7227.3/39$

Out:  $118.497 \pm 0.350$   $\chi^2/\text{NDF}: 9237.3/44$

All:  $116.597 \pm 0.253$   $\chi^2/\text{NDF}: 16526.2/84$



reg\_asym\_usr\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $10.853 \pm 0.721$   $\chi^2/\text{NDF}$ : 386.3/16

Left Out:  $19.405 \pm 0.335$   $\chi^2/\text{NDF}$ : 1453.4/24

Right Out:  $7.287 \pm 0.725$   $\chi^2/\text{NDF}$ : 425.5/19

Left In:  $19.530 \pm 0.342$   $\chi^2/\text{NDF}$ : 1181.3/22

Left:  $19.466 \pm 0.239$   $\chi^2/\text{NDF}$ : 2634.8/47

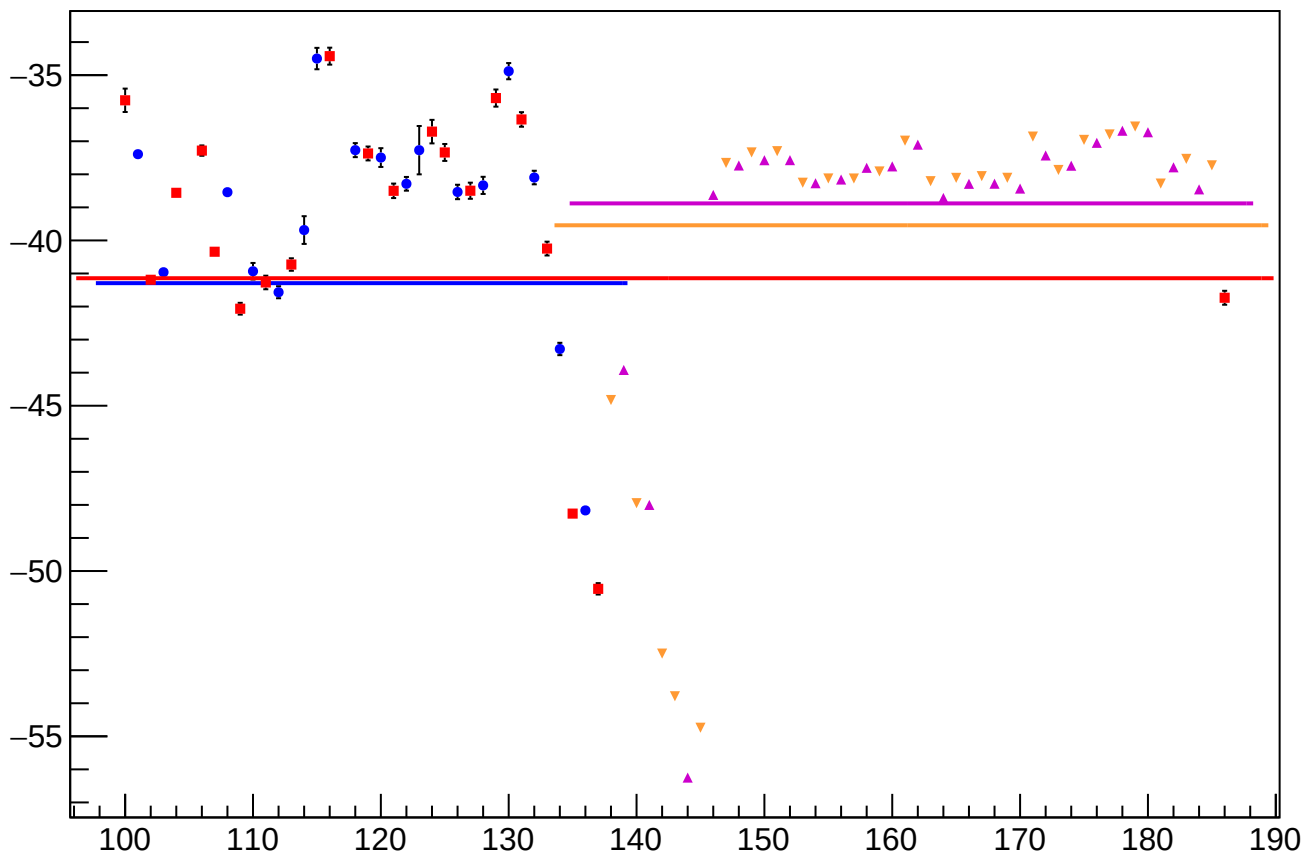
Right:  $9.081 \pm 0.511$   $\chi^2/\text{NDF}$ : 823.9/36

In:  $17.931 \pm 0.309$   $\chi^2/\text{NDF}$ : 1685.9/39

Out:  $17.278 \pm 0.304$   $\chi^2/\text{NDF}$ : 2109.0/44

All:  $17.599 \pm 0.217$   $\chi^2/\text{NDF}$ : 3797.2/84

reg\_asym\_usr\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-41.292 \pm 0.039$   $\chi^2/\text{NDF}$ : 12502.4/16

Left Out:  $-39.542 \pm 0.016$   $\chi^2/\text{NDF}$ : 92024.1/24

Right Out:  $-41.143 \pm 0.038$   $\chi^2/\text{NDF}$ : 12123.1/19

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

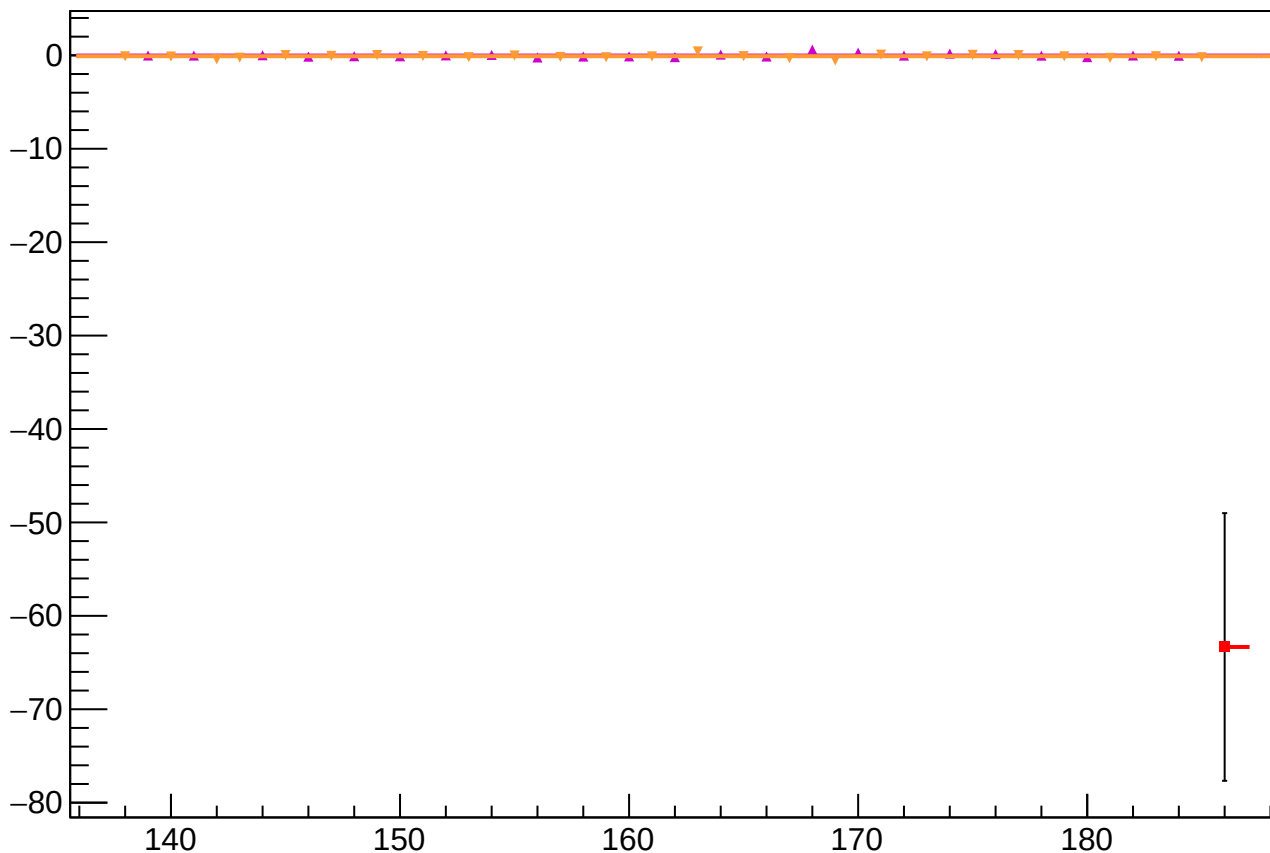
Right:  $-41.217 \pm 0.027$   $\chi^2/\text{NDF}$ : 24633.1/36

In:  $-39.228 \pm 0.015$   $\chi^2/\text{NDF}$ : 69248.2/39

Out:  $-39.775 \pm 0.015$   $\chi^2/\text{NDF}$ : 105659.1/44

All:  $-39.504 \pm 0.010$   $\chi^2/\text{NDF}$ : 175610.2/84

reg\_asym\_dsl\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Left Out: -0.095 $\pm$ 0.022  $\chi^2$ /NDF:41.8/24

Right Out: -63.334 $\pm$ 14.326  $\chi^2$ /NDF: 0.0/0

Left In: -0.026 $\pm$ 0.022  $\chi^2$ /NDF:33.3/22

Left: -0.061 $\pm$ 0.016  $\chi^2$ /NDF: 80.1/47

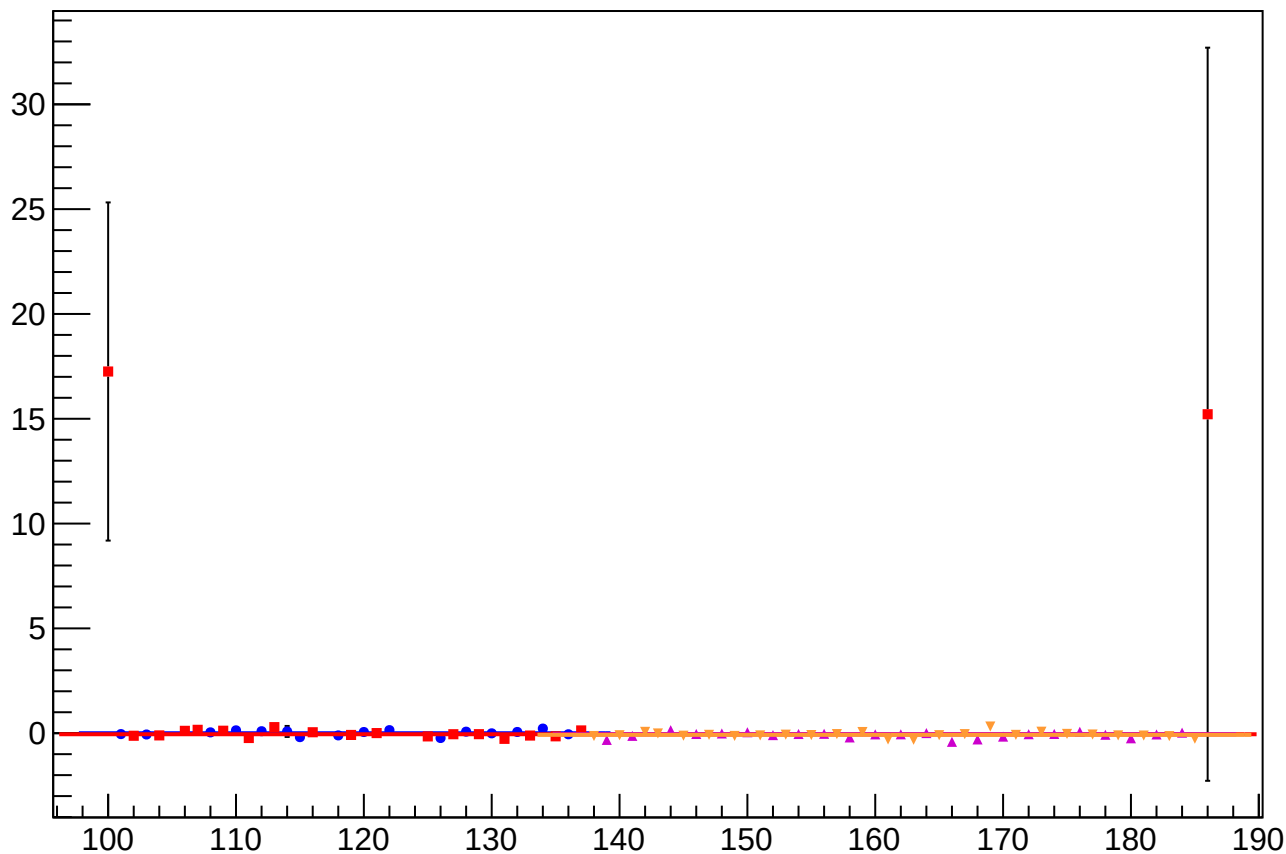
Right: -63.334 $\pm$ 14.326  $\chi^2$ /NDF: 0.0/0

In: -0.026 $\pm$ 0.022  $\chi^2$ /NDF:33.3/22

Out: -0.095 $\pm$ 0.022  $\chi^2$ /NDF:61.3/25

All: -0.061 $\pm$ 0.016  $\chi^2$ /NDF: 99.6/48

reg\_asym\_dsl\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: -0.002 $\pm$ 0.029  $\chi^2$ /NDF: 12.7/15

Left Out: -0.078 $\pm$ 0.017  $\chi^2$ /NDF: 26.6/24

Right Out: -0.050 $\pm$ 0.029  $\chi^2$ /NDF: 26.3/18

Left In: -0.052 $\pm$ 0.018  $\chi^2$ /NDF: 31.7/22

Left: -0.065 $\pm$ 0.012  $\chi^2$ /NDF: 59.4/47

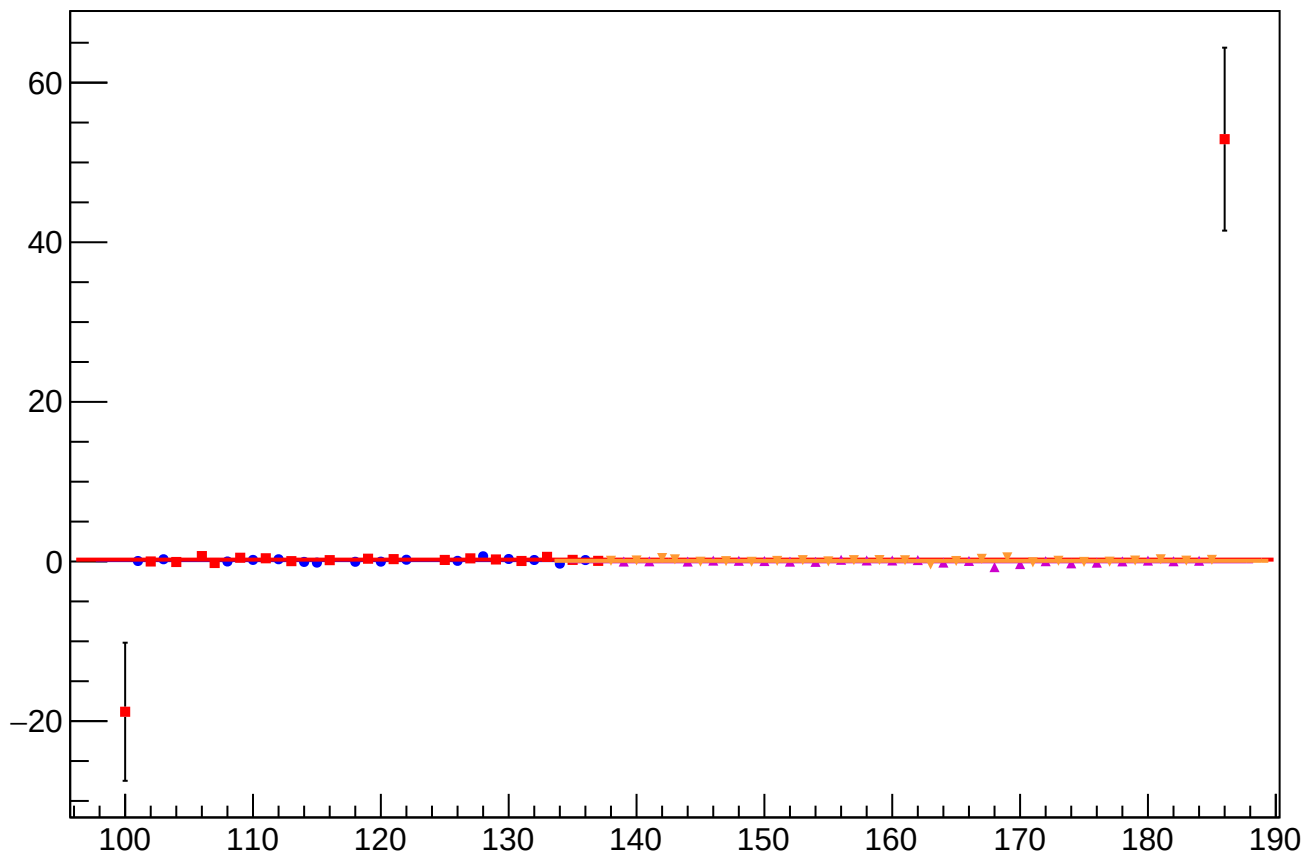
Right: -0.025 $\pm$ 0.020  $\chi^2$ /NDF: 40.3/34

In: -0.038 $\pm$ 0.015  $\chi^2$ /NDF: 46.6/38

Out: -0.071 $\pm$ 0.015  $\chi^2$ /NDF: 53.5/43

All: -0.055 $\pm$ 0.010  $\chi^2$ /NDF: 102.6/82

reg\_asym\_dsl\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 0.174 $\pm$ 0.053  $\chi^2$ /NDF: 12.4/15

Left Out: 0.088 $\pm$ 0.022  $\chi^2$ /NDF:40.7/24

Right Out: 0.237 $\pm$ 0.054  $\chi^2$ /NDF: 42.6/18

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

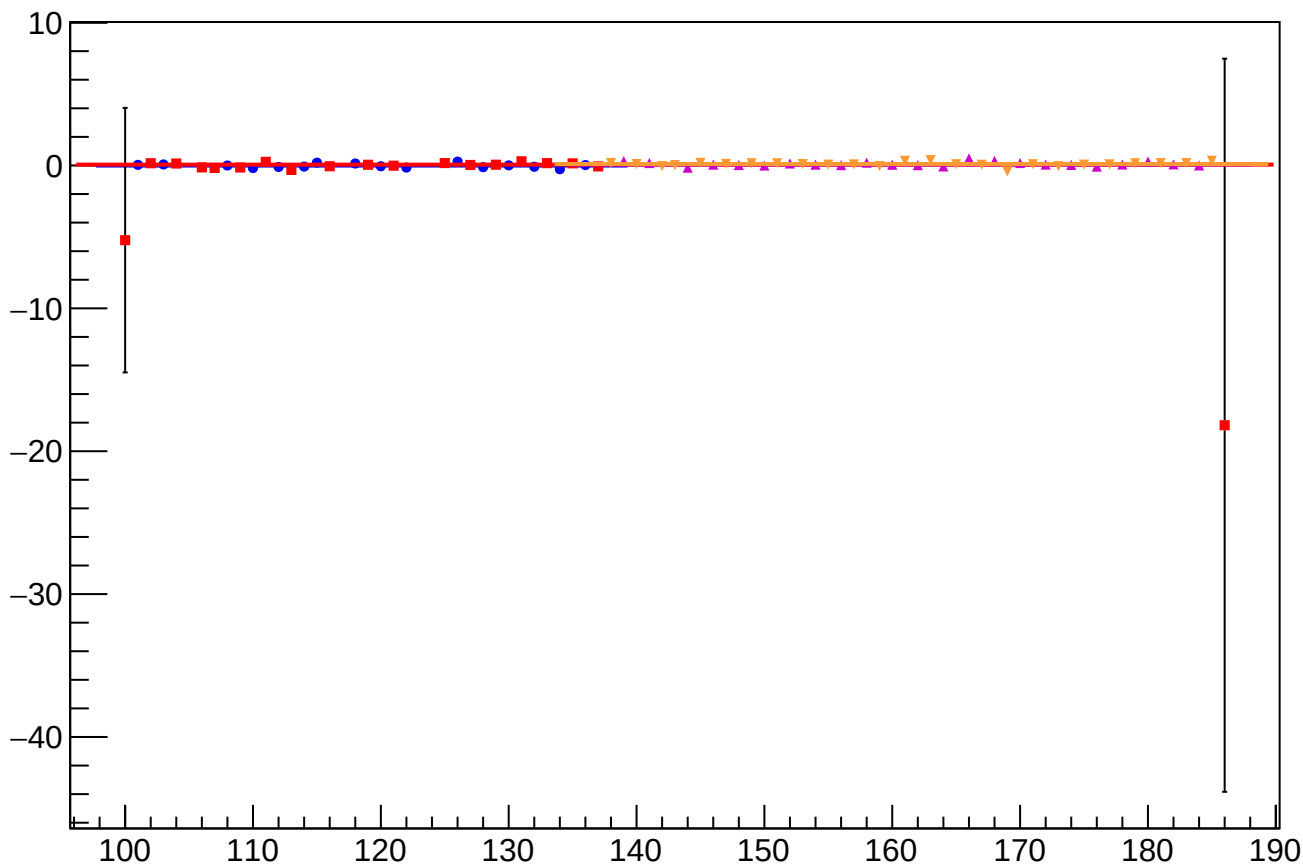
Right: 0.205 $\pm$ 0.038  $\chi^2$ /NDF: 55.7/34

In: 0.043 $\pm$ 0.020  $\chi^2$ /NDF:55.2/38

Out: 0.108 $\pm$ 0.020  $\chi^2$ /NDF:90.0/43

All: 0.076 $\pm$ 0.014  $\chi^2$ /NDF: 150.3/82

reg\_asym\_dsl\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-0.006 \pm 0.033$   $\chi^2/\text{NDF}: 14.1/15$

Left Out:  $0.102 \pm 0.019$   $\chi^2/\text{NDF}: 30.2/24$

Right Out:  $0.057 \pm 0.034$   $\chi^2/\text{NDF}: 20.8/18$

Left In:  $0.069 \pm 0.020$   $\chi^2/\text{NDF}: 31.3/22$

Left:  $0.086 \pm 0.014$   $\chi^2/\text{NDF}: 63.0/47$

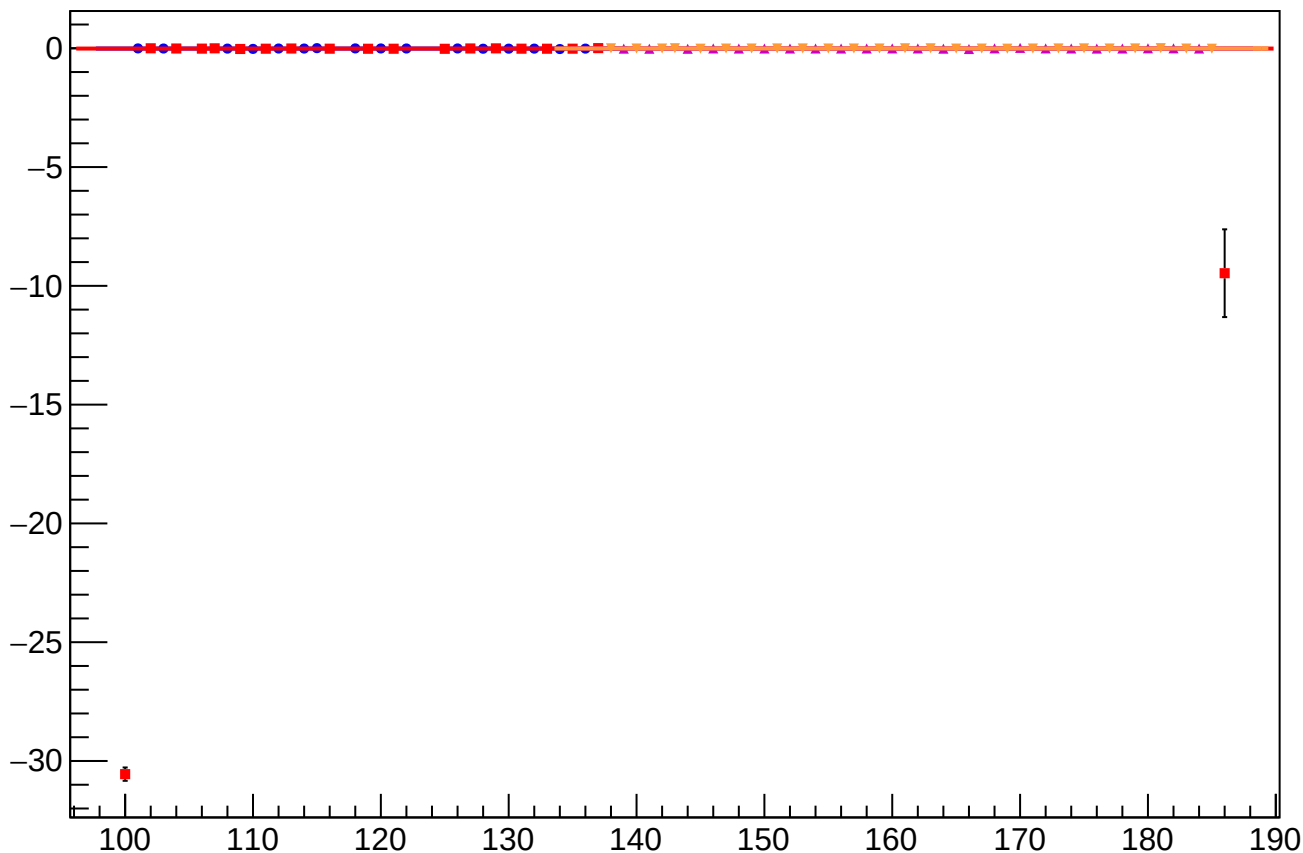
Right:  $0.024 \pm 0.024$   $\chi^2/\text{NDF}: 36.7/34$

In:  $0.049 \pm 0.017$   $\chi^2/\text{NDF}: 49.3/38$

Out:  $0.091 \pm 0.017$   $\chi^2/\text{NDF}: 52.4/43$

All:  $0.070 \pm 0.012$   $\chi^2/\text{NDF}: 104.8/82$

# reg\_asym\_dsl\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.012 \pm 0.002$   $\chi^2/\text{NDF}$ : 12.8/15

Left Out:  $-0.008 \pm 0.001$   $\chi^2/\text{NDF}$ : 34.7/24

Right Out:  $-0.012 \pm 0.002$   $\chi^2/\text{NDF}$ : 11917.0/18

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

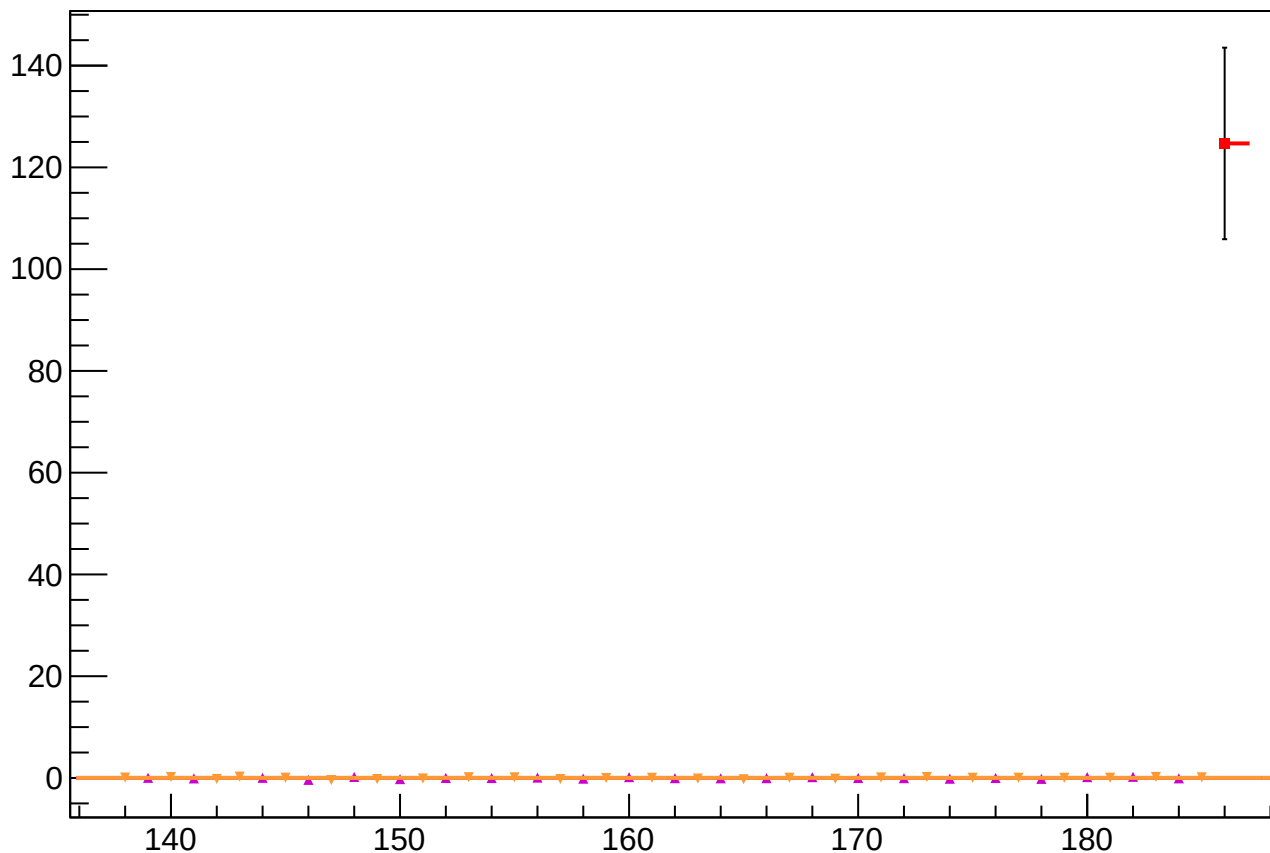
Right:  $-0.012 \pm 0.001$   $\chi^2/\text{NDF}$ : 11929.7/34

In:  $-0.009 \pm 0.001$   $\chi^2/\text{NDF}$ : 56.0/38

Out:  $-0.008 \pm 0.001$   $\chi^2/\text{NDF}$ : 11956.6/43

All:  $-0.009 \pm 0.001$   $\chi^2/\text{NDF}$ : 12013.2/82

reg\_asym\_dsr\_diff\_bpm1X\_slope vs Slug, Sign Corrected

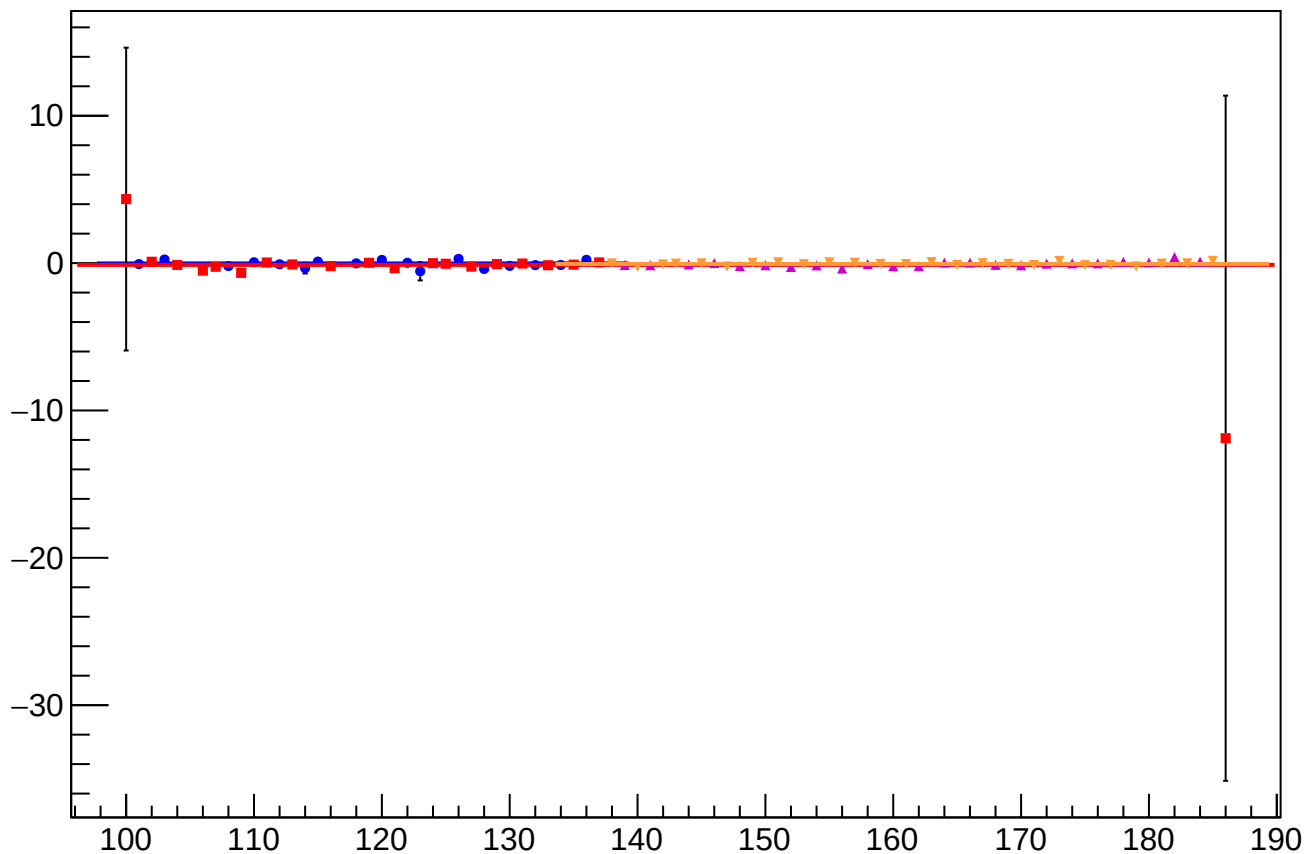


Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0  
 Left Out: 0.017 $\pm$ 0.027  $\chi^2$ /NDF:30.9/24  
 Right Out: 124.707 $\pm$ 18.821  $\chi^2$ /NDF: 0.0/0  
 Left In: 0.002 $\pm$ 0.028  $\chi^2$ /NDF:29.0/22

Left: 0.010 $\pm$ 0.019  $\chi^2$ /NDF: 60.1/47  
 Right: 124.707 $\pm$ 18.821  $\chi^2$ /NDF: 0.0/0  
 In: 0.002 $\pm$ 0.028  $\chi^2$ /NDF:29.0/22  
 Out: 0.018 $\pm$ 0.027  $\chi^2$ /NDF:74.8/25  
 All: 0.010 $\pm$ 0.019  $\chi^2$ /NDF: 104.0/48



reg\_asym\_dsr\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-0.022 \pm 0.037$   $\chi^2/\text{NDF}$ : 22.9/16

Left Out:  $-0.060 \pm 0.021$   $\chi^2/\text{NDF}$ : 24.6/24

Right Out:  $-0.120 \pm 0.039$   $\chi^2/\text{NDF}$ : 18.7/19

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

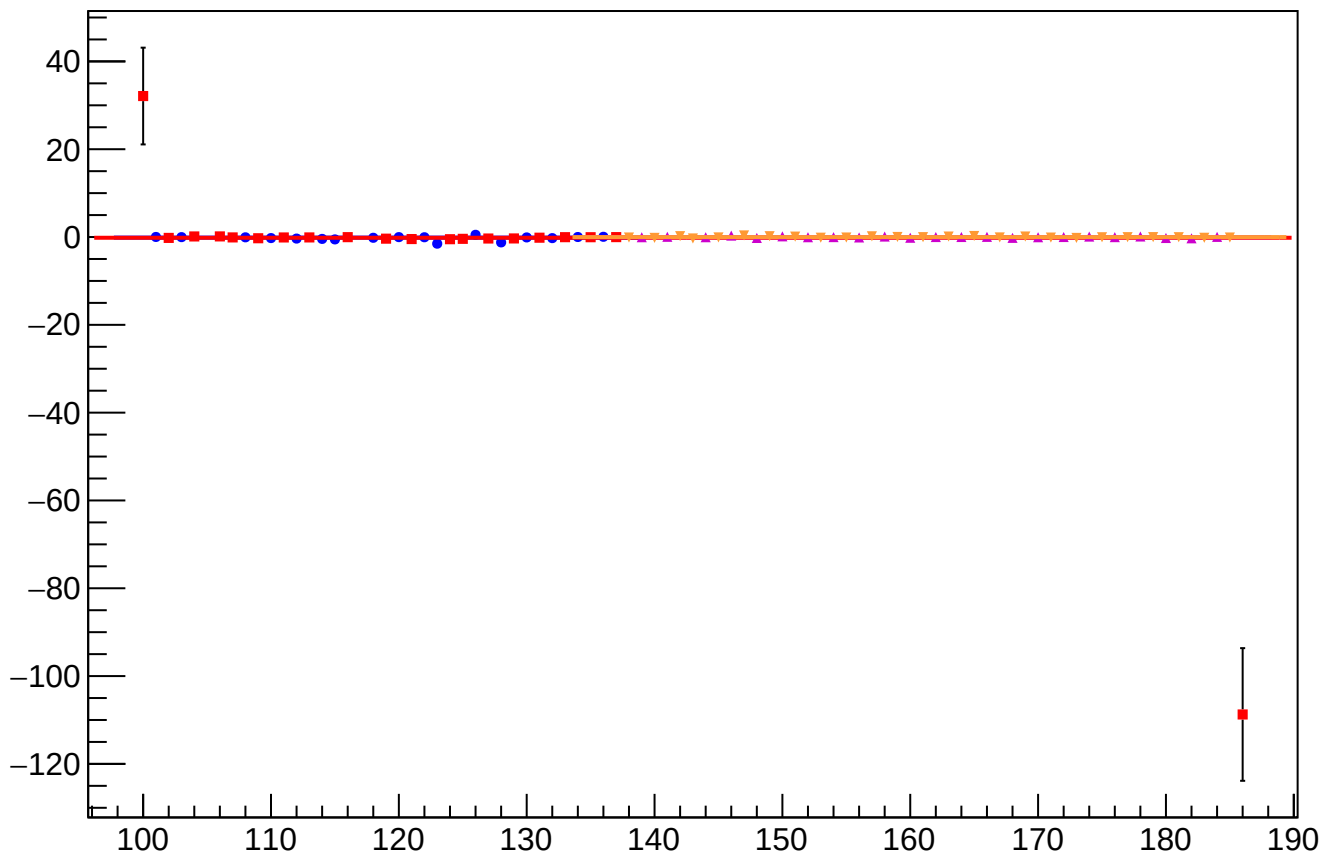
Right:  $-0.068 \pm 0.027$   $\chi^2/\text{NDF}$ : 45.0/36

In:  $-0.058 \pm 0.019$   $\chi^2/\text{NDF}$ : 73.2/39

Out:  $-0.073 \pm 0.019$   $\chi^2/\text{NDF}$ : 45.2/44

All:  $-0.066 \pm 0.013$   $\chi^2/\text{NDF}$ : 118.7/84

reg\_asym\_dsr\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-0.135 \pm 0.067$   $\chi^2/\text{NDF}$ : 24.7/16

Left Out:  $-0.018 \pm 0.027$   $\chi^2/\text{NDF}$ : 29.0/24

Right Out:  $-0.167 \pm 0.071$   $\chi^2/\text{NDF}$ : 66.1/19

Left In:  $-0.033 \pm 0.027$   $\chi^2/\text{NDF}$ : 28.5/22

Left:  $-0.025 \pm 0.019$   $\chi^2/\text{NDF}$ : 57.6/47

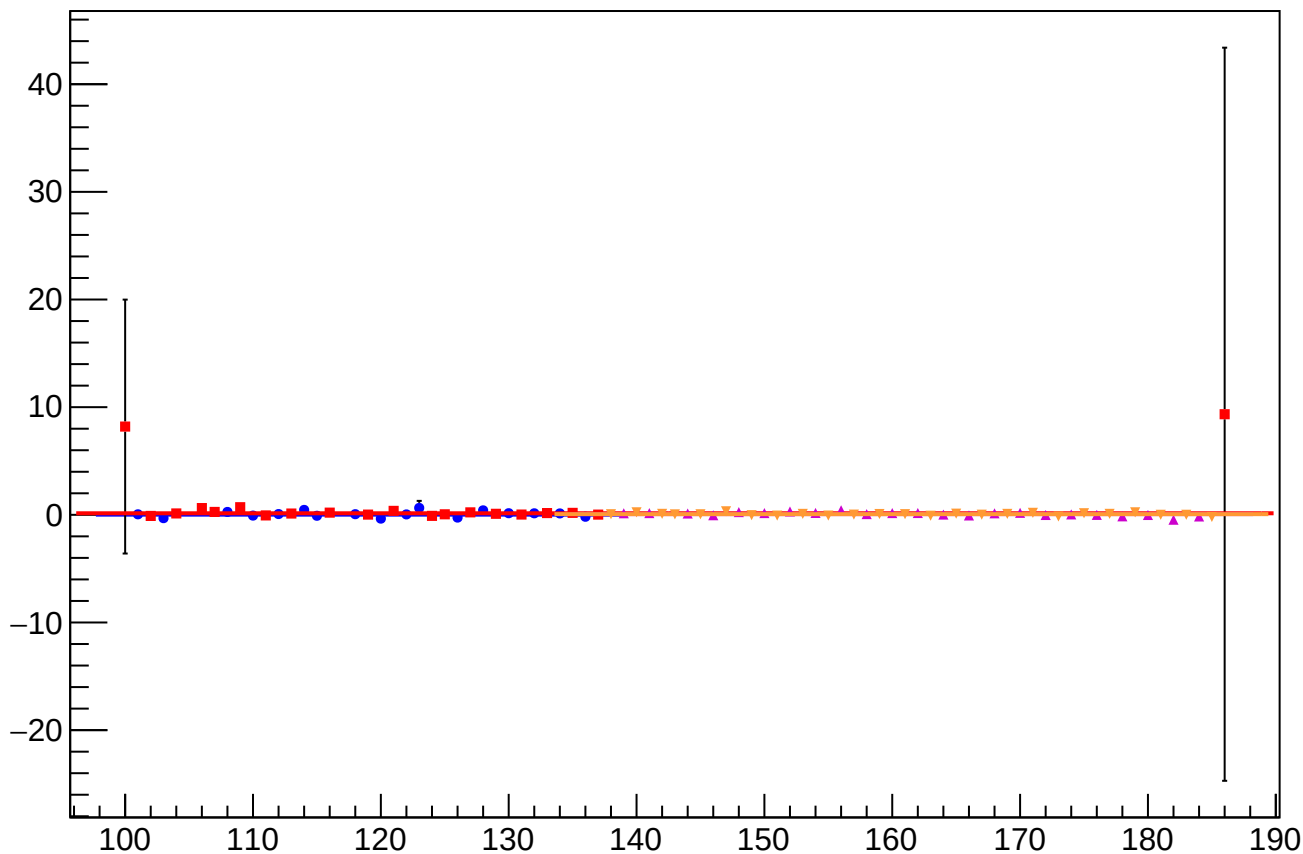
Right:  $-0.150 \pm 0.049$   $\chi^2/\text{NDF}$ : 90.9/36

In:  $-0.047 \pm 0.025$   $\chi^2/\text{NDF}$ : 55.2/39

Out:  $-0.037 \pm 0.025$   $\chi^2/\text{NDF}$ : 98.9/44

All:  $-0.042 \pm 0.018$   $\chi^2/\text{NDF}$ : 154.2/84

reg\_asym\_dsr\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 0.019 $\pm$ 0.043  $\chi^2$ /NDF: 21.6/16

Left Out: 0.063 $\pm$ 0.024  $\chi^2$ /NDF:24.6/24

Right Out: 0.144 $\pm$ 0.045  $\chi^2$ /NDF: 16.9/19

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

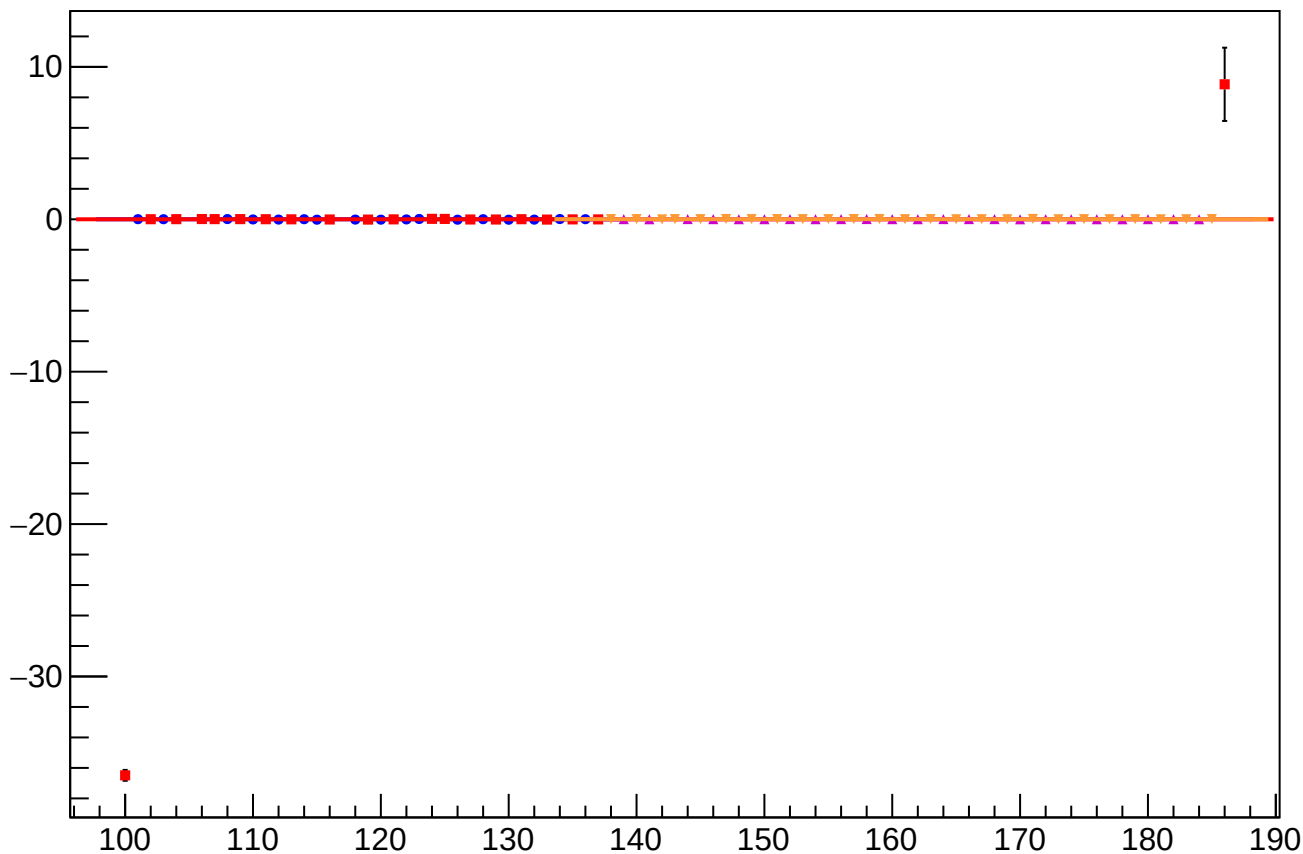
Right: 0.077 $\pm$ 0.031  $\chi^2$ /NDF: 42.6/36

In: 0.056 $\pm$ 0.021  $\chi^2$ /NDF:74.5/39

Out: 0.081 $\pm$ 0.021  $\chi^2$ /NDF:44.0/44

All: 0.069 $\pm$ 0.015  $\chi^2$ /NDF: 119.2/84

reg\_asym\_dsr\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.001 $\pm$ 0.002  $\chi^2$ /NDF: 30.5/16

Left Out: 0.008 $\pm$ 0.001  $\chi^2$ /NDF: 26.3/24

Right Out: 0.001 $\pm$ 0.002  $\chi^2$ /NDF: 10462.7/19

Left In: 0.009 $\pm$ 0.001  $\chi^2$ /NDF: 15.0/22

Left: 0.009 $\pm$ 0.001  $\chi^2$ /NDF: 41.4/47

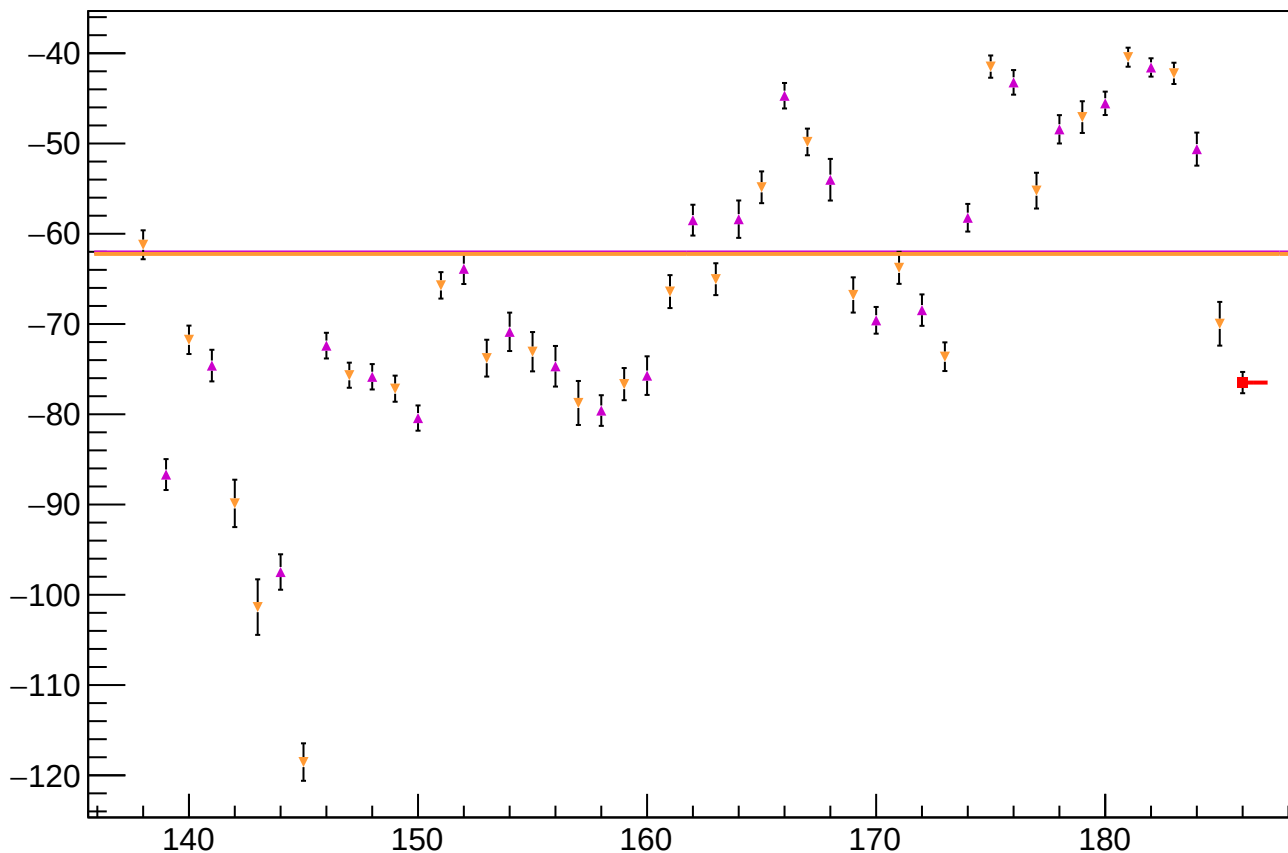
Right: 0.001 $\pm$ 0.002  $\chi^2$ /NDF: 10493.2/36

In: 0.007 $\pm$ 0.001  $\chi^2$ /NDF: 55.0/39

Out: 0.007 $\pm$ 0.001  $\chi^2$ /NDF: 10498.0/44

All: 0.007 $\pm$ 0.001  $\chi^2$ /NDF: 10553.1/84

reg\_asym\_us\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -62.232+/-0.332  $\chi^2/\text{NDF}$ :2668.5/24

Right Out: -76.488+/-1.179  $\chi^2/\text{NDF}$ : 0.0/0

Left In: -62.073+/-0.332  $\chi^2/\text{NDF}$ :2192.0/22

Left: -62.153+/-0.235  $\chi^2/\text{NDF}$ : 4860.6/47

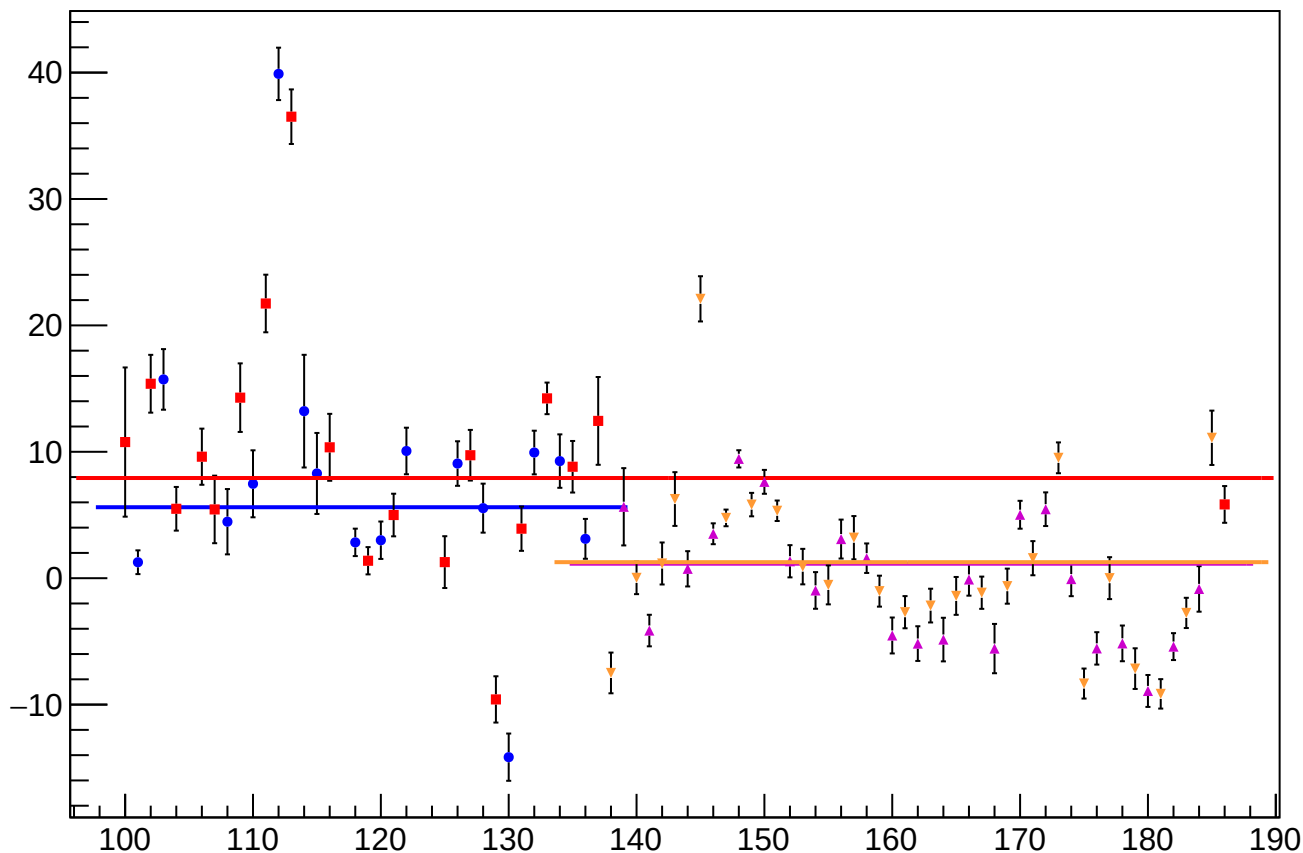
Right: -76.488+/-1.179  $\chi^2/\text{NDF}$ : 0.0/0

In: -62.073+/-0.332  $\chi^2/\text{NDF}$ :2192.0/22

Out: -63.280+/-0.319  $\chi^2/\text{NDF}$ :2804.1/25

All: -62.700+/-0.230  $\chi^2/\text{NDF}$ : 5002.9/48

reg\_asym\_us\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $5.615 \pm 0.430$   $\chi^2/\text{NDF}: 460.0/15$

Left Out:  $1.269 \pm 0.251$   $\chi^2/\text{NDF}: 531.9/24$

Right Out:  $7.926 \pm 0.433$   $\chi^2/\text{NDF}: 409.9/18$

Left In:  $1.146 \pm 0.255$   $\chi^2/\text{NDF}: 462.9/22$

Left:  $1.208 \pm 0.179$   $\chi^2/\text{NDF}: 995.0/47$

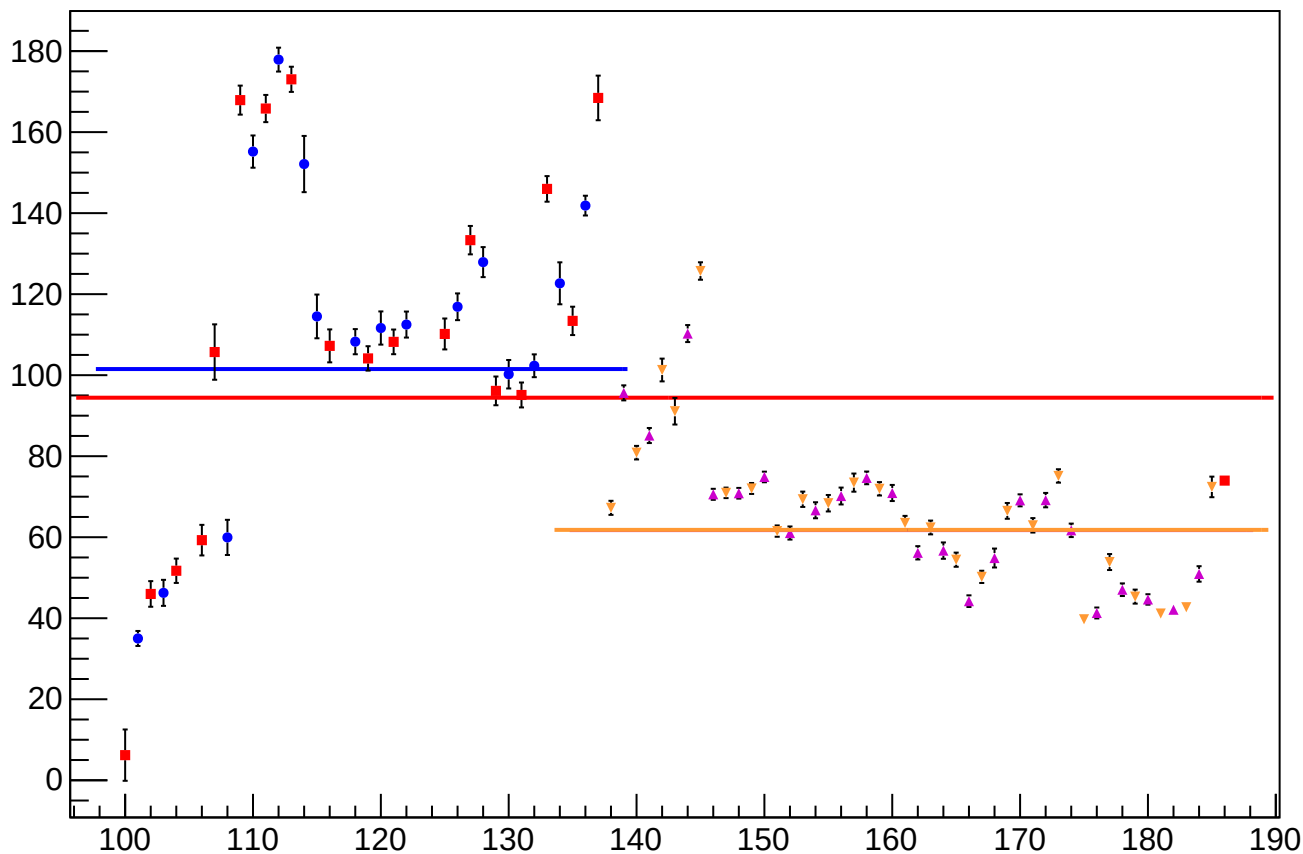
Right:  $6.763 \pm 0.305$   $\chi^2/\text{NDF}: 884.3/34$

In:  $2.312 \pm 0.220$   $\chi^2/\text{NDF}: 1002.8/38$

Out:  $2.943 \pm 0.217$   $\chi^2/\text{NDF}: 1119.1/43$

All:  $2.631 \pm 0.154$   $\chi^2/\text{NDF}: 2126.1/82$

reg\_asym\_us\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 101.513 $\pm$ 0.813  $\chi^2$ /NDF: 2973.2/15

Left Out: 61.812 $\pm$ 0.331  $\chi^2$ /NDF:2686.4/24

Right Out: 94.440 $\pm$ 0.626  $\chi^2$ /NDF: 3362.6/18

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

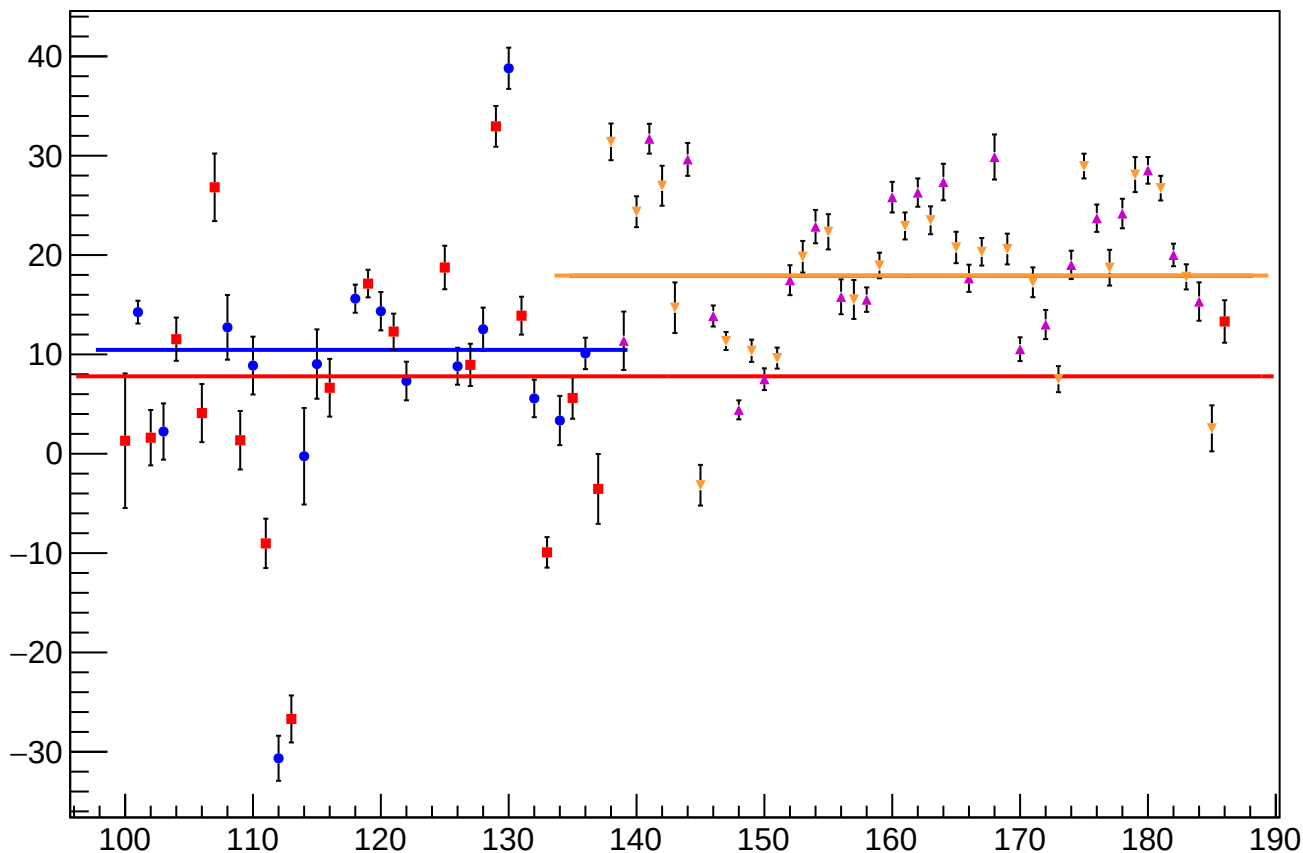
Right: 97.068 $\pm$ 0.496  $\chi^2$ /NDF: 6383.3/34

In: 67.379 $\pm$ 0.306  $\chi^2$ /NDF:7442.1/38

Out: 68.937 $\pm$ 0.292  $\chi^2$ /NDF:8175.6/43

All: 68.193 $\pm$ 0.211  $\chi^2$ /NDF: 15631.3/82

reg\_asym\_us\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 10.455 $\pm$ 0.498  $\chi^2$ /NDF: 577.9/15

Left Out: 17.937 $\pm$ 0.289  $\chi^2$ /NDF: 676.0/24

Right Out: 7.793 $\pm$ 0.509  $\chi^2$ /NDF: 693.6/18

Left In: 17.916 $\pm$ 0.292  $\chi^2$ /NDF: 726.5/22

Left: 17.927 $\pm$ 0.206  $\chi^2$ /NDF: 1402.5/47

Right: 9.153 $\pm$ 0.356  $\chi^2$ /NDF: 1285.5/34

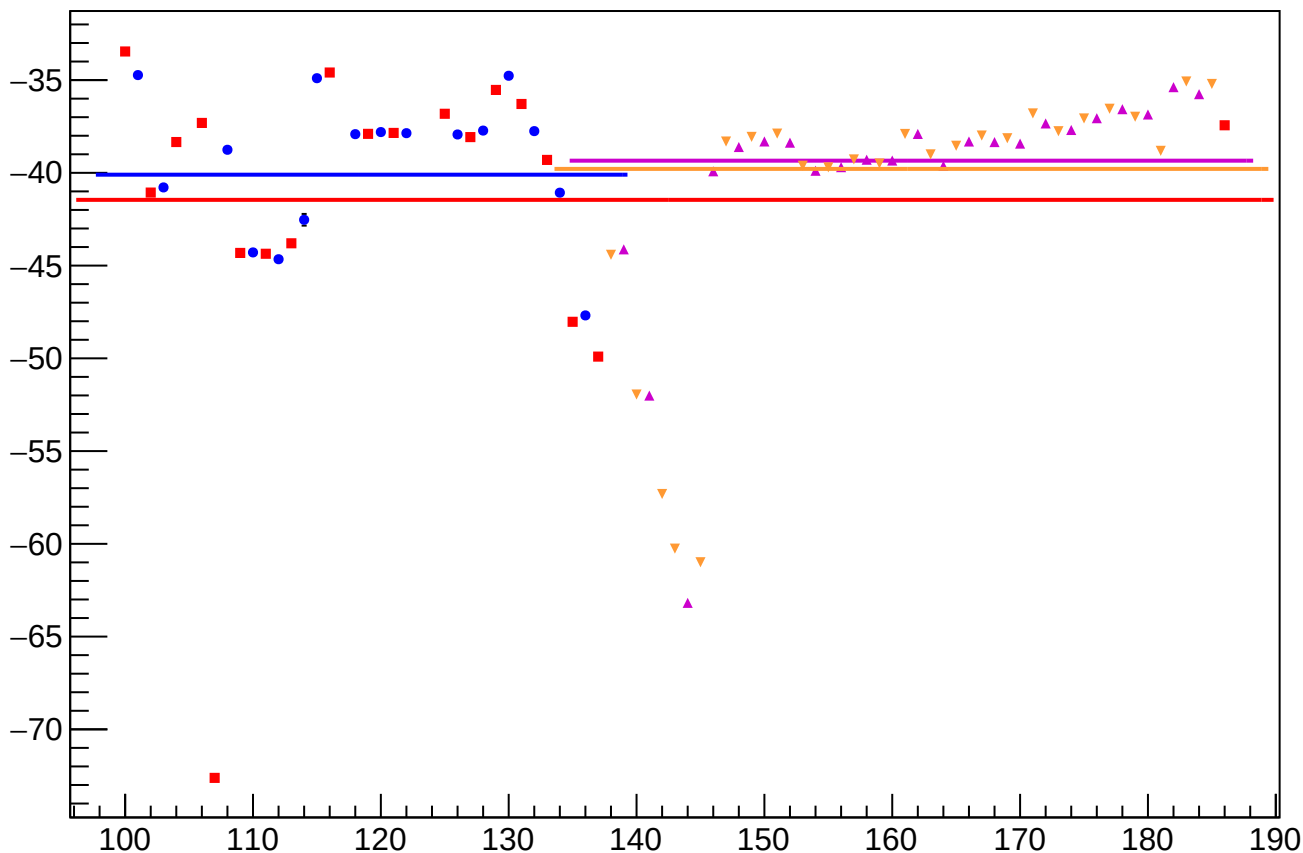
In: 16.005 $\pm$ 0.252  $\chi^2$ /NDF: 1471.2/38

Out: 15.465 $\pm$ 0.251  $\chi^2$ /NDF: 1670.0/43

All: 15.734 $\pm$ 0.178  $\chi^2$ /NDF: 3143.5/82



reg\_asym\_us\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-40.100 \pm 0.028$   $\chi^2/\text{NDF}: 25059.4/15$

Left Out:  $-39.788 \pm 0.014$   $\chi^2/\text{NDF}: 165493.8/24$

Right Out:  $-41.456 \pm 0.028$   $\chi^2/\text{NDF}: 62396.3/18$

Left In:  $-39.344 \pm 0.014$   $\chi^2/\text{NDF}: 116615.7/22$

Left:  $-39.565 \pm 0.010$   $\chi^2/\text{NDF}: 282639.2/47$

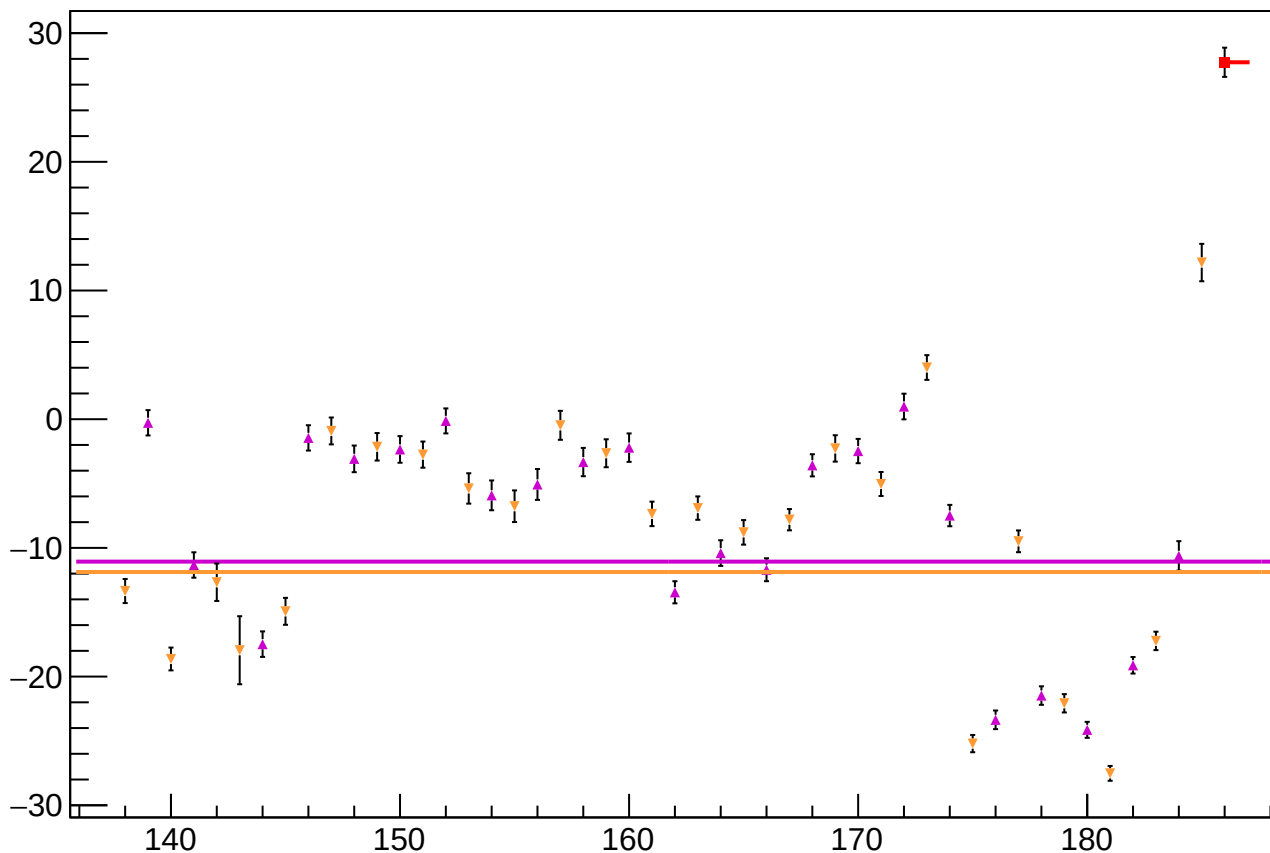
Right:  $-40.783 \pm 0.020$   $\chi^2/\text{NDF}: 88609.5/34$

In:  $-39.485 \pm 0.012$   $\chi^2/\text{NDF}: 142252.8/38$

Out:  $-40.106 \pm 0.012$   $\chi^2/\text{NDF}: 230736.3/43$

All:  $-39.795 \pm 0.009$   $\chi^2/\text{NDF}: 374267.5/82$

reg\_asym\_us\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Left Out: -11.873 $\pm$ 0.186  $\chi^2$ /NDF:2745.2/24

Right Out: 27.736 $\pm$ 1.135  $\chi^2$ /NDF: 0.0/0

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

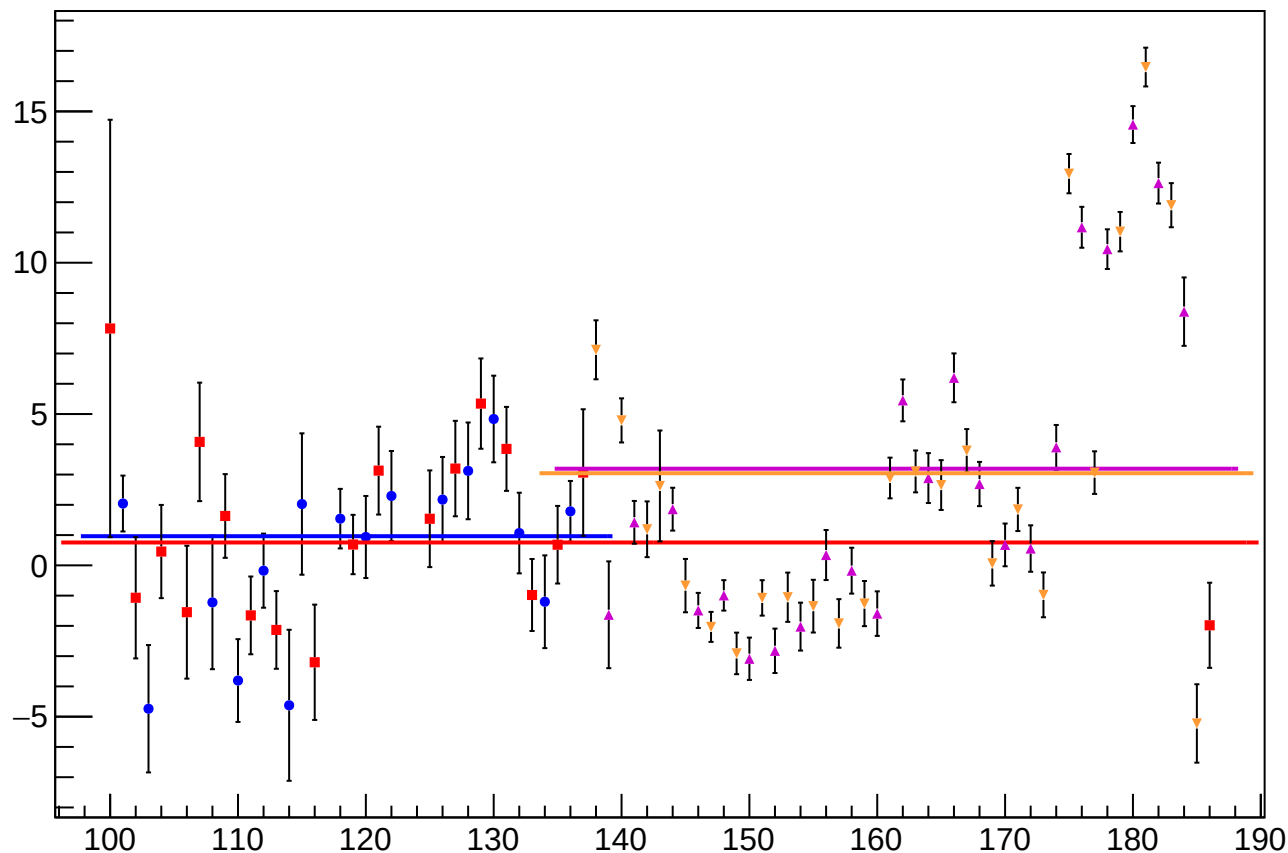
Right: 27.736 $\pm$ 1.135  $\chi^2$ /NDF: 0.0/0

In: -11.067 $\pm$ 0.188  $\chi^2$ /NDF:2104.8/22

Out: -10.833 $\pm$ 0.184  $\chi^2$ /NDF:3931.7/25

All: -10.947 $\pm$ 0.131  $\chi^2$ /NDF: 6037.2/48

reg\_asym\_us\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $0.963 \pm 0.342$   $\chi^2/\text{NDF}$ : 41.6/15

Left Out:  $3.044 \pm 0.147$   $\chi^2/\text{NDF}$ : 1457.3/24

Right Out:  $0.756 \pm 0.343$   $\chi^2/\text{NDF}$ : 46.1/18

Left In:  $3.194 \pm 0.150$   $\chi^2/\text{NDF}$ : 1295.0/22

Left:  $3.118 \pm 0.105$   $\chi^2/\text{NDF}$ : 2752.7/47

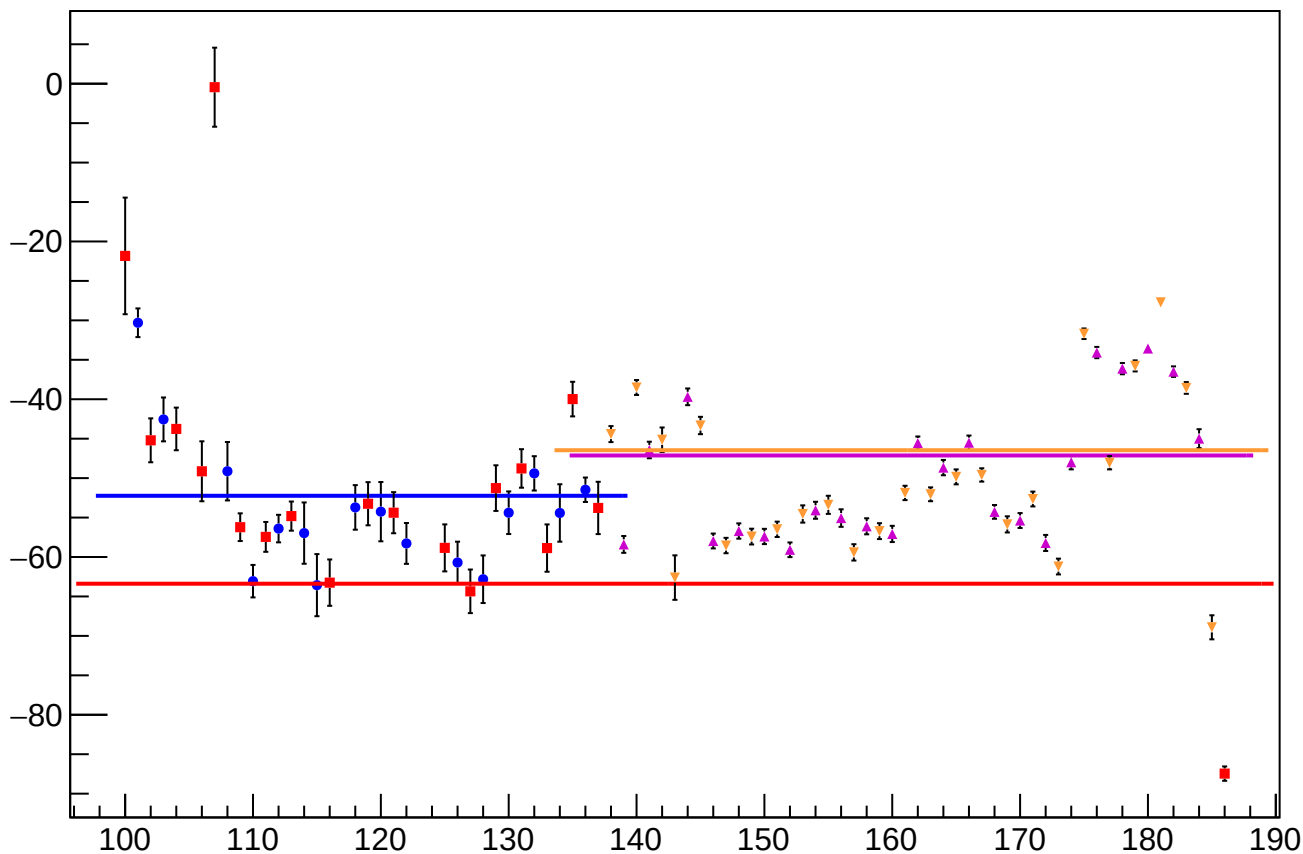
Right:  $0.860 \pm 0.242$   $\chi^2/\text{NDF}$ : 87.9/34

In:  $2.835 \pm 0.137$   $\chi^2/\text{NDF}$ : 1372.3/38

Out:  $2.688 \pm 0.135$   $\chi^2/\text{NDF}$ : 1540.9/43

All:  $2.760 \pm 0.096$   $\chi^2/\text{NDF}$ : 2913.7/82

reg\_asym\_us\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected

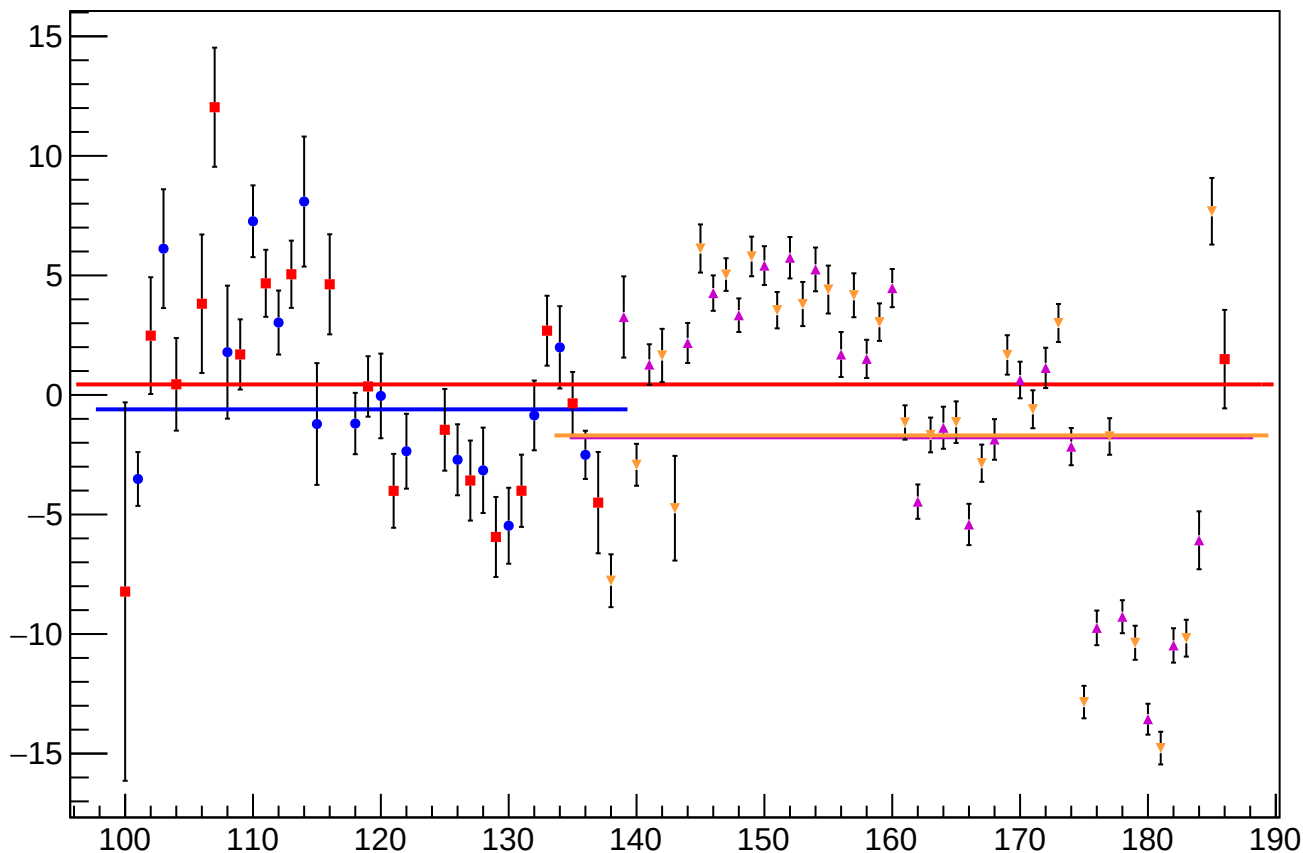


Right In:  $-52.238 \pm 0.616$   $\chi^2/\text{NDF}: 232.7/15$   
 Left Out:  $-46.463 \pm 0.186$   $\chi^2/\text{NDF}: 3319.7/24$   
 Right Out:  $-63.385 \pm 0.511$   $\chi^2/\text{NDF}: 1251.2/18$   
 Left In:  $-47.128 \pm 0.187$   $\chi^2/\text{NDF}: 2516.0/22$

Left:  $-46.793 \pm 0.132$   $\chi^2/\text{NDF}: 5842.0/47$   
 Right:  $-58.841 \pm 0.393$   $\chi^2/\text{NDF}: 1678.0/34$   
 In:  $-47.560 \pm 0.179$   $\chi^2/\text{NDF}: 2811.8/38$   
 Out:  $-48.447 \pm 0.175$   $\chi^2/\text{NDF}: 5539.6/43$

All:  $-48.014 \pm 0.125$   $\chi^2/\text{NDF}: 8364.0/82$

reg\_asym\_us\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-0.603 \pm 0.388$   $\chi^2/\text{NDF}: 80.7/15$

Left Out:  $-1.693 \pm 0.167$   $\chi^2/\text{NDF}: 1485.7/24$

Right Out:  $0.441 \pm 0.393$   $\chi^2/\text{NDF}: 96.4/18$

Left In:  $-1.771 \pm 0.169$   $\chi^2/\text{NDF}: 1251.3/22$

Left:  $-1.731 \pm 0.119$   $\chi^2/\text{NDF}: 2737.1/47$

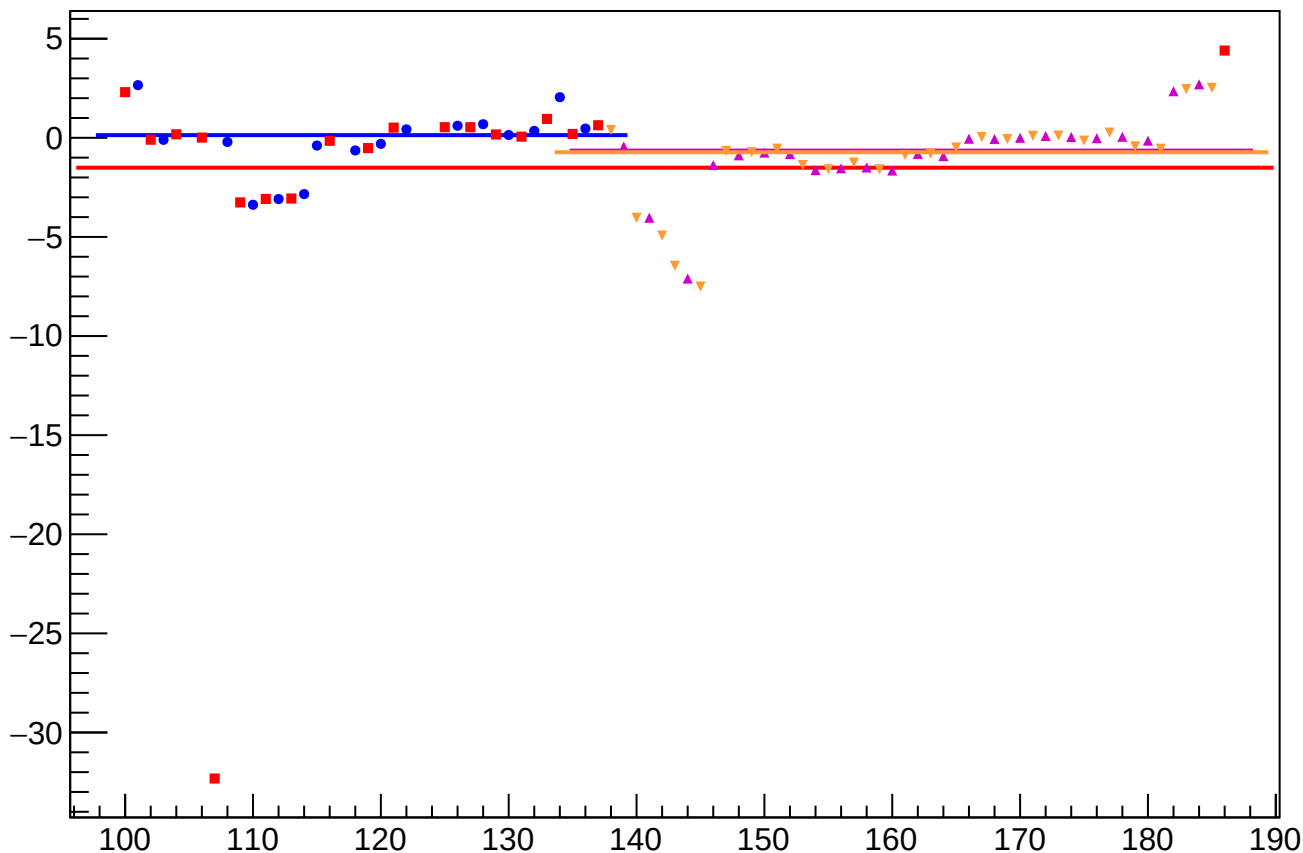
Right:  $-0.088 \pm 0.276$   $\chi^2/\text{NDF}: 180.7/34$

In:  $-1.585 \pm 0.155$   $\chi^2/\text{NDF}: 1339.6/38$

Out:  $-1.368 \pm 0.153$   $\chi^2/\text{NDF}: 1607.2/43$

All:  $-1.475 \pm 0.109$   $\chi^2/\text{NDF}: 2947.7/82$

reg\_asym\_us\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $0.135 \pm 0.022$   $\chi^2/\text{NDF}: 5228.3/15$

Left Out:  $-0.728 \pm 0.008$   $\chi^2/\text{NDF}: 56403.8/24$

Right Out:  $-1.508 \pm 0.022$   $\chi^2/\text{NDF}: 79529.3/18$

Left In:  $-0.644 \pm 0.008$   $\chi^2/\text{NDF}: 44169.2/22$

Left:  $-0.686 \pm 0.005$   $\chi^2/\text{NDF}: 100633.3/47$

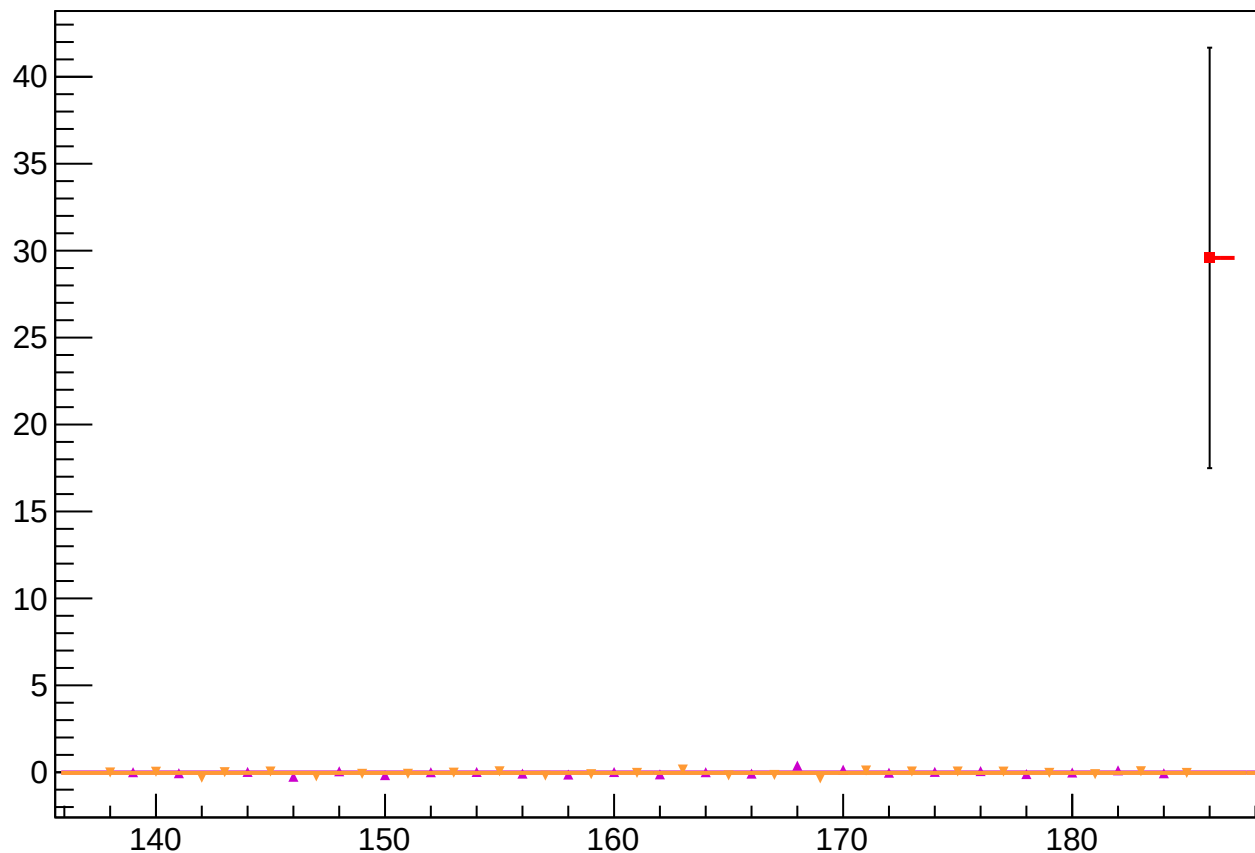
Right:  $-0.685 \pm 0.015$   $\chi^2/\text{NDF}: 87649.4/34$

In:  $-0.557 \pm 0.007$   $\chi^2/\text{NDF}: 50552.9/38$

Out:  $-0.814 \pm 0.007$   $\chi^2/\text{NDF}: 137091.1/43$

All:  $-0.686 \pm 0.005$   $\chi^2/\text{NDF}: 188282.7/82$

reg\_asym\_ds\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -0.036+/-0.018  $\chi^2/\text{NDF}$ :35.6/24

Right Out: 29.583+/-12.092  $\chi^2/\text{NDF}$ : 0.0/0

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

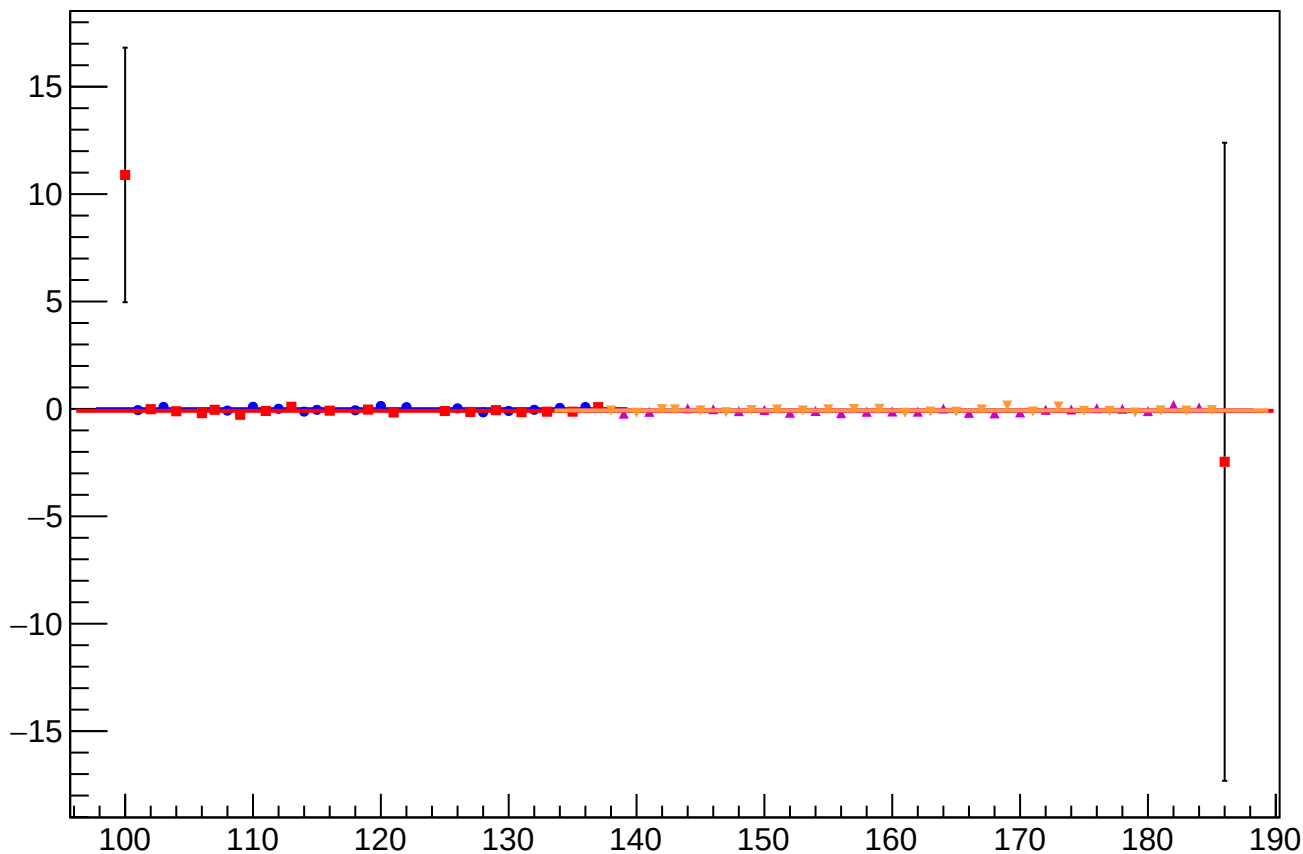
Right: 29.583+/-12.092  $\chi^2/\text{NDF}$ : 0.0/0

In: -0.010+/-0.018  $\chi^2/\text{NDF}$ :35.1/22

Out: -0.036+/-0.018  $\chi^2/\text{NDF}$ :41.6/25

All: -0.023+/-0.013  $\chi^2/\text{NDF}$ : 77.8/48

reg\_asym\_ds\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: -0.013 $\pm$ 0.023  $\chi^2$ /NDF: 12.0/15

Left Out: -0.071 $\pm$ 0.014  $\chi^2$ /NDF: 28.3/24

Right Out: -0.088 $\pm$ 0.025  $\chi^2$ /NDF: 13.0/18

Left In: -0.064 $\pm$ 0.014  $\chi^2$ /NDF: 41.1/22

Left: -0.067 $\pm$ 0.010  $\chi^2$ /NDF: 69.5/47

Right: -0.049 $\pm$ 0.017  $\chi^2$ /NDF: 29.7/34

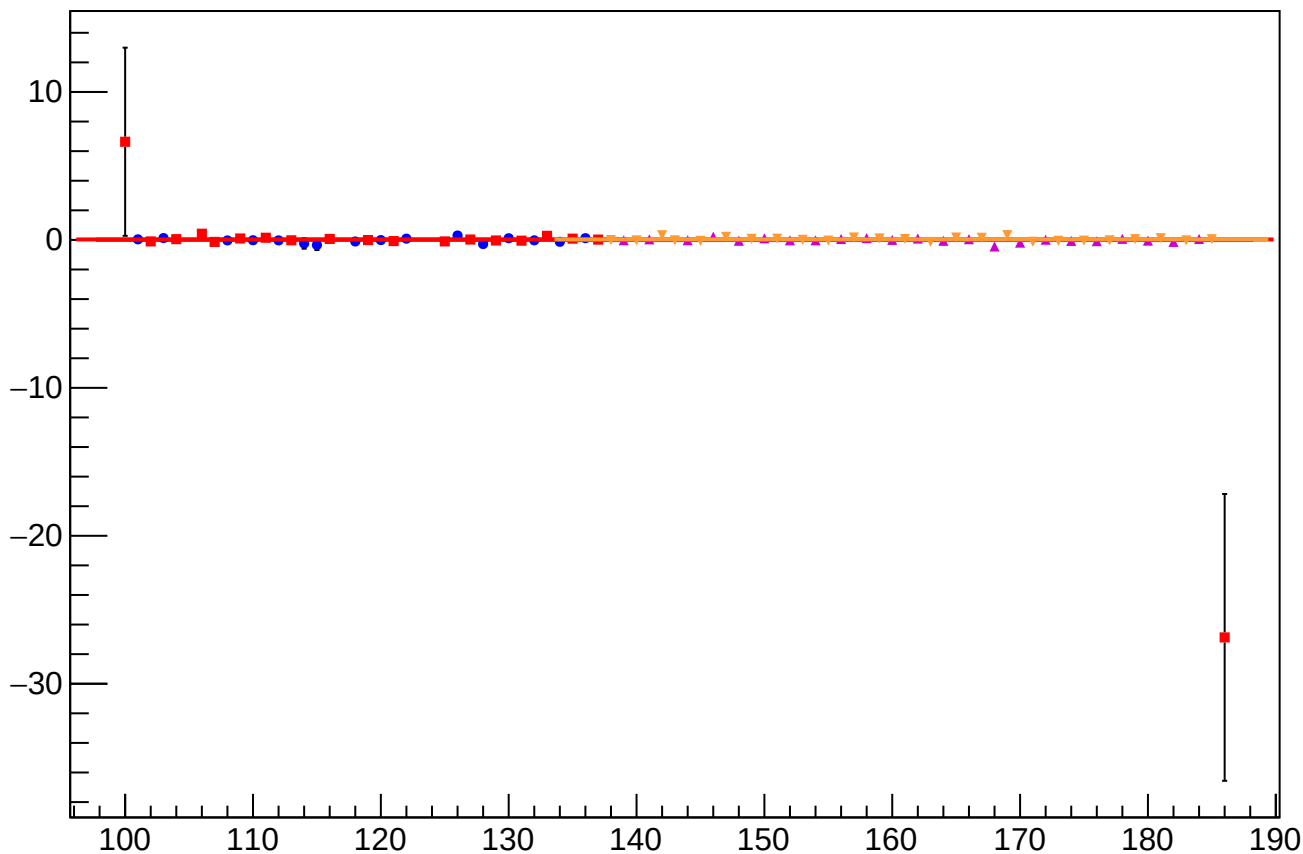
In: -0.050 $\pm$ 0.012  $\chi^2$ /NDF: 56.5/38

Out: -0.075 $\pm$ 0.012  $\chi^2$ /NDF: 41.6/43

All: -0.063 $\pm$ 0.009  $\chi^2$ /NDF: 100.1/82



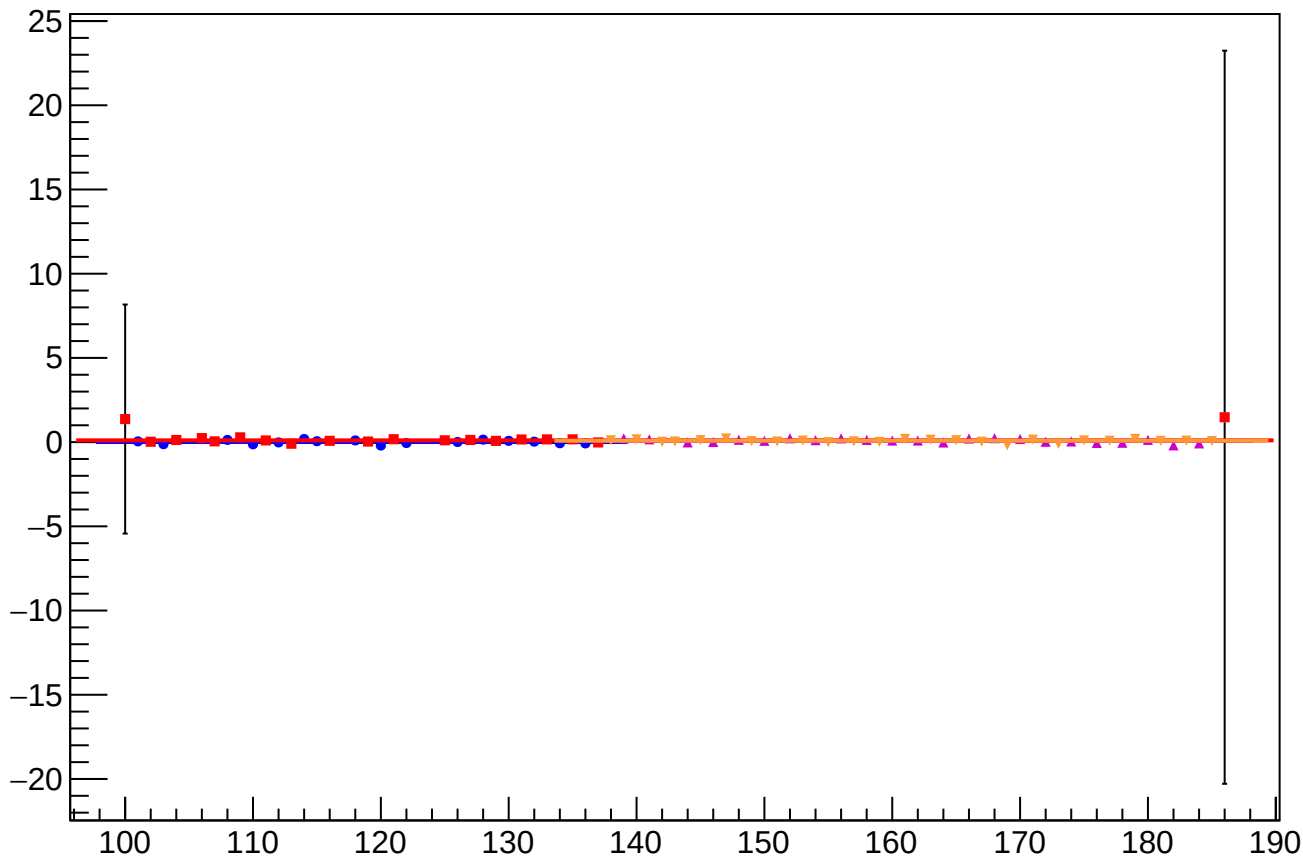
reg\_asym\_ds\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 0.016 $\pm$ 0.043  $\chi^2$ /NDF: 9.1/15  
 Left Out: 0.033 $\pm$ 0.018  $\chi^2$ /NDF:32.6/24  
 Right Out: 0.031 $\pm$ 0.045  $\chi^2$ /NDF: 16.8/18  
 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: 25.9/34  
 In: -0.005 $\pm$ 0.017  $\chi^2$ /NDF:46.2/38  
 Out: 0.033 $\pm$ 0.016  $\chi^2$ /NDF:49.3/43  
 All: 0.014 $\pm$ 0.012  $\chi^2$ /NDF: 98.2/82

reg\_asym\_ds\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 0.008 $\pm$ 0.027     $\chi^2/\text{NDF}$ : 11.7/15

Left Out: 0.084 $\pm$ 0.016     $\chi^2/\text{NDF}$ : 28.1/24

Right Out: 0.105 $\pm$ 0.029     $\chi^2/\text{NDF}$ : 8.1/18

Left In: 0.070 $\pm$ 0.016     $\chi^2/\text{NDF}$ : 44.8/22

Left: 0.077 $\pm$ 0.011     $\chi^2/\text{NDF}$ : 73.3/47

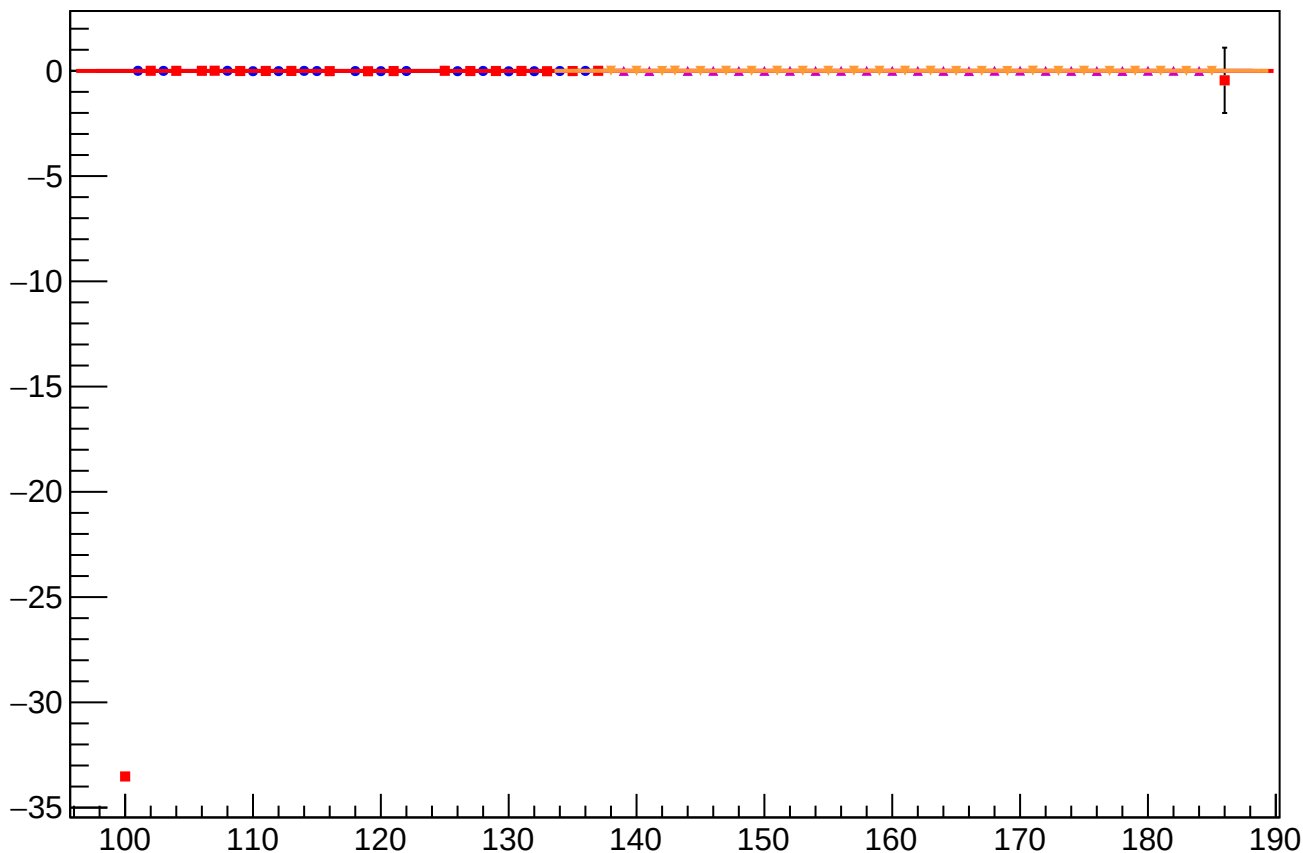
Right: 0.054 $\pm$ 0.020     $\chi^2/\text{NDF}$ : 25.9/34

In: 0.053 $\pm$ 0.014     $\chi^2/\text{NDF}$ : 60.3/38

Out: 0.089 $\pm$ 0.014     $\chi^2/\text{NDF}$ : 36.6/43

All: 0.071 $\pm$ 0.010     $\chi^2/\text{NDF}$ : 100.2/82

reg\_asym\_ds\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: -0.005 $\pm$ 0.001  $\chi^2$ /NDF: 21.5/15

Left Out: 0.001 $\pm$ 0.001  $\chi^2$ /NDF:26.1/24

Right Out: -0.006 $\pm$ 0.001  $\chi^2$ /NDF: 26509.0/18

Left In: 0.000 $\pm$ 0.001  $\chi^2$ /NDF:22.3/22

Left: 0.000 $\pm$ 0.001  $\chi^2$ /NDF: 48.6/47

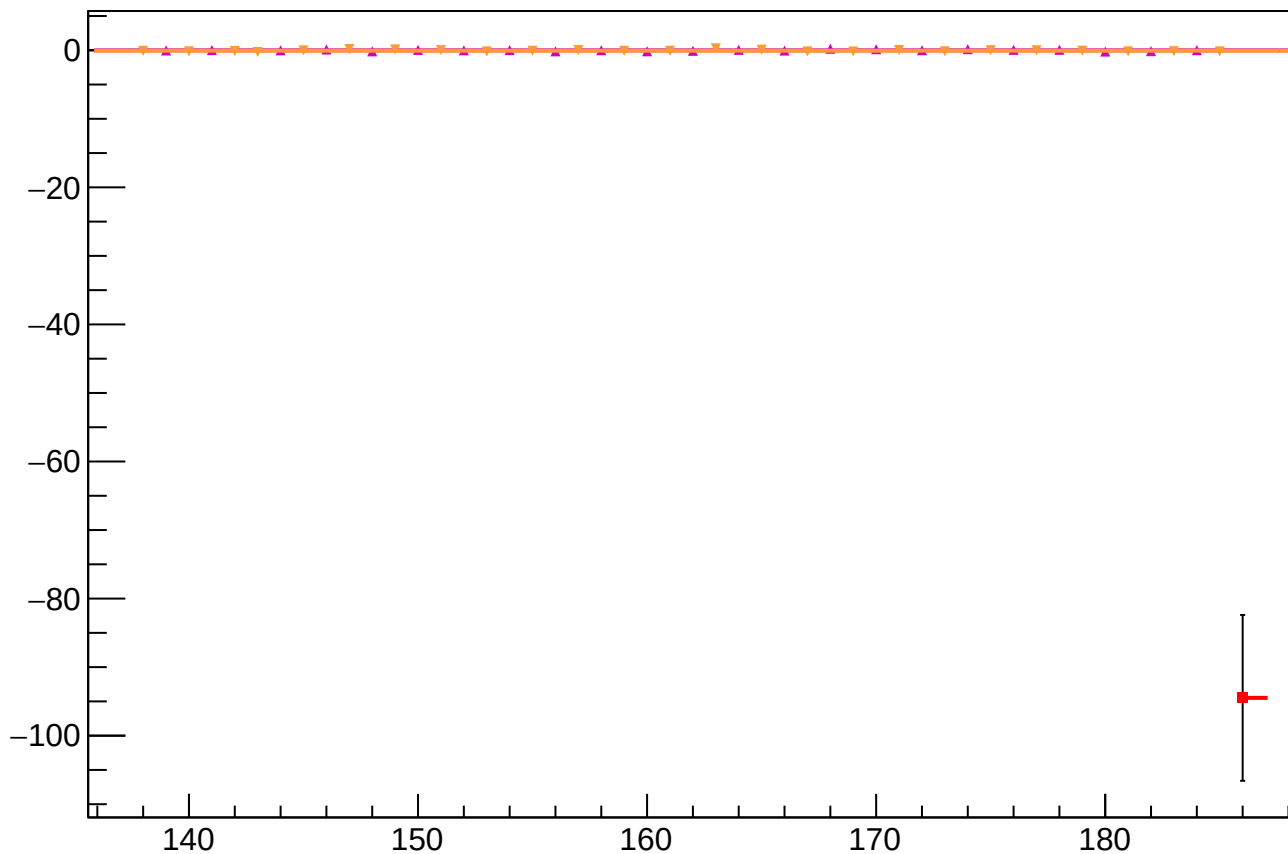
Right: -0.006 $\pm$ 0.001  $\chi^2$ /NDF: 26530.6/34

In: -0.001 $\pm$ 0.001  $\chi^2$ /NDF:55.5/38

Out: -0.001 $\pm$ 0.001  $\chi^2$ /NDF:26551.3/43

All: -0.001 $\pm$ 0.000  $\chi^2$ /NDF: 26607.0/82

reg\_asym\_ds\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -0.059+/-0.018  $\chi^2/\text{NDF}$ :41.7/24

Right Out: -94.487+/-12.098  $\chi^2/\text{NDF}$ : 0.0/0

Left In: -0.009+/-0.018  $\chi^2/\text{NDF}$ :35.1/22

Left: -0.034+/-0.013  $\chi^2/\text{NDF}$ : 80.7/47

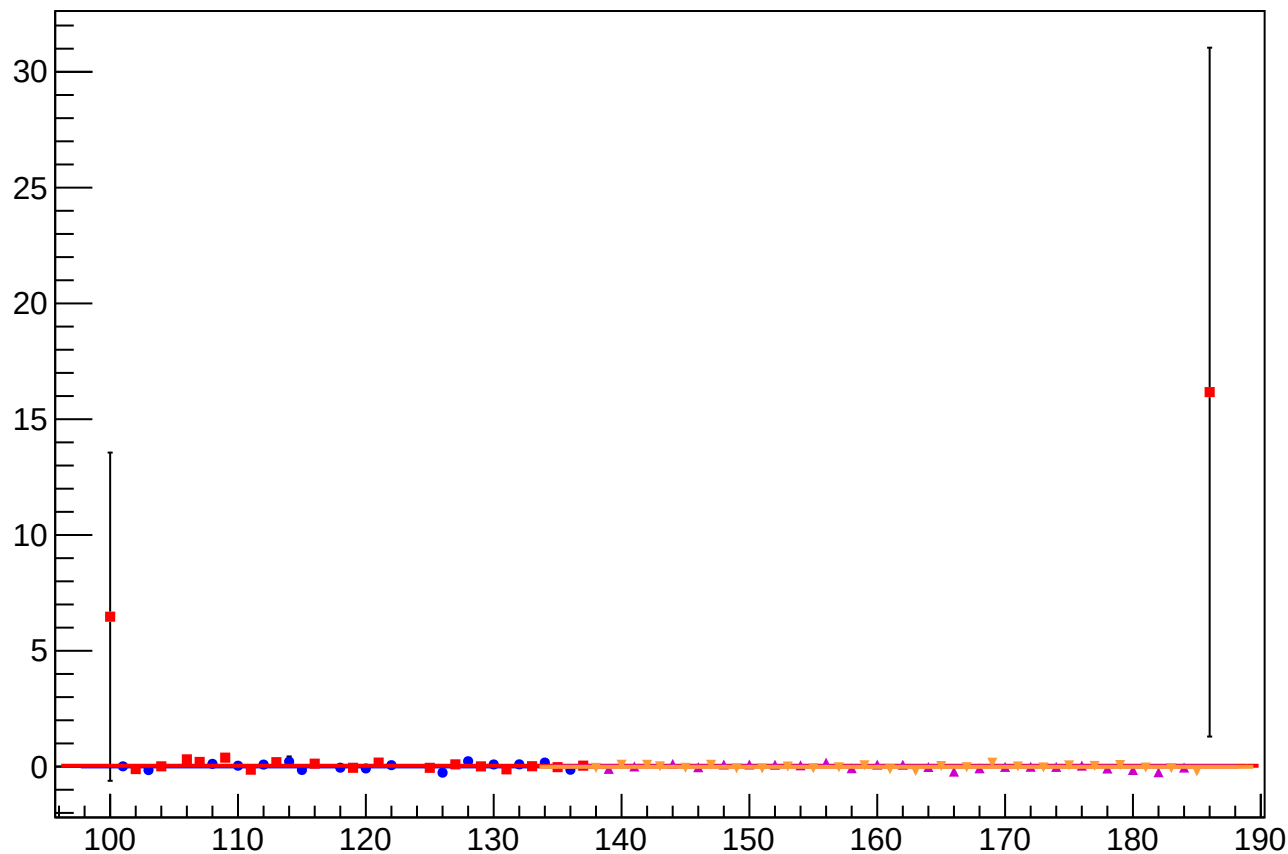
Right: -94.487+/-12.098  $\chi^2/\text{NDF}$ : 0.0/0

In: -0.009+/-0.018  $\chi^2/\text{NDF}$ :35.1/22

Out: -0.059+/-0.018  $\chi^2/\text{NDF}$ :102.6/25

All: -0.035+/-0.013  $\chi^2/\text{NDF}$ : 141.7/48

reg\_asym\_ds\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 0.008 $\pm$ 0.023  $\chi^2$ /NDF: 25.1/15

Left Out: -0.010 $\pm$ 0.014  $\chi^2$ /NDF:29.7/24

Right Out: 0.037 $\pm$ 0.025  $\chi^2$ /NDF: 29.9/18

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

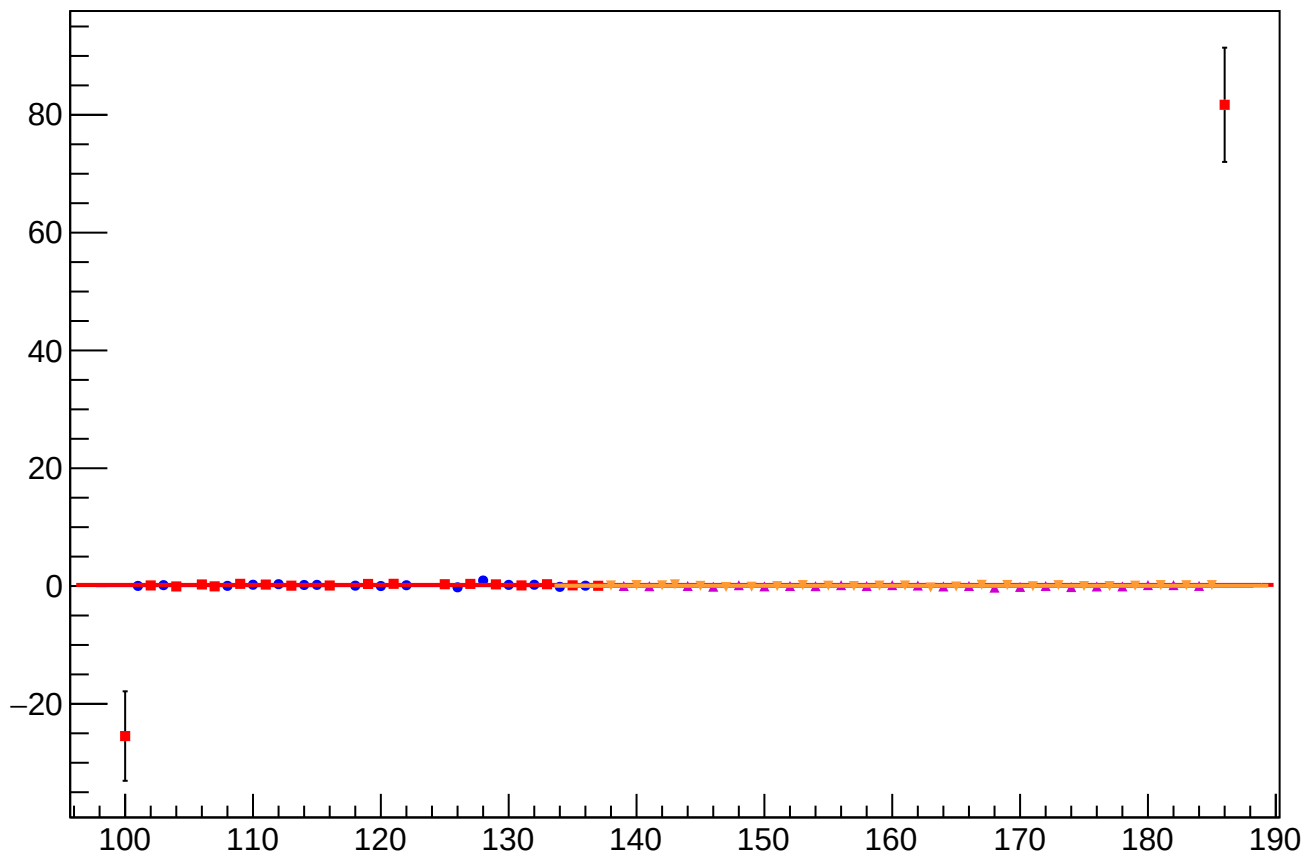
Right: 0.021 $\pm$ 0.017  $\chi^2$ /NDF: 55.7/34

In: 0.006 $\pm$ 0.012  $\chi^2$ /NDF:74.7/38

Out: 0.001 $\pm$ 0.012  $\chi^2$ /NDF:62.2/43

All: 0.003 $\pm$ 0.009  $\chi^2$ /NDF: 137.0/82

reg\_asym\_ds\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 0.157 $\pm$ 0.043  $\chi^2$ /NDF: 29.7/15

Left Out: 0.055 $\pm$ 0.018  $\chi^2$ /NDF:41.0/24

Right Out: 0.197 $\pm$ 0.045  $\chi^2$ /NDF: 92.6/18

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

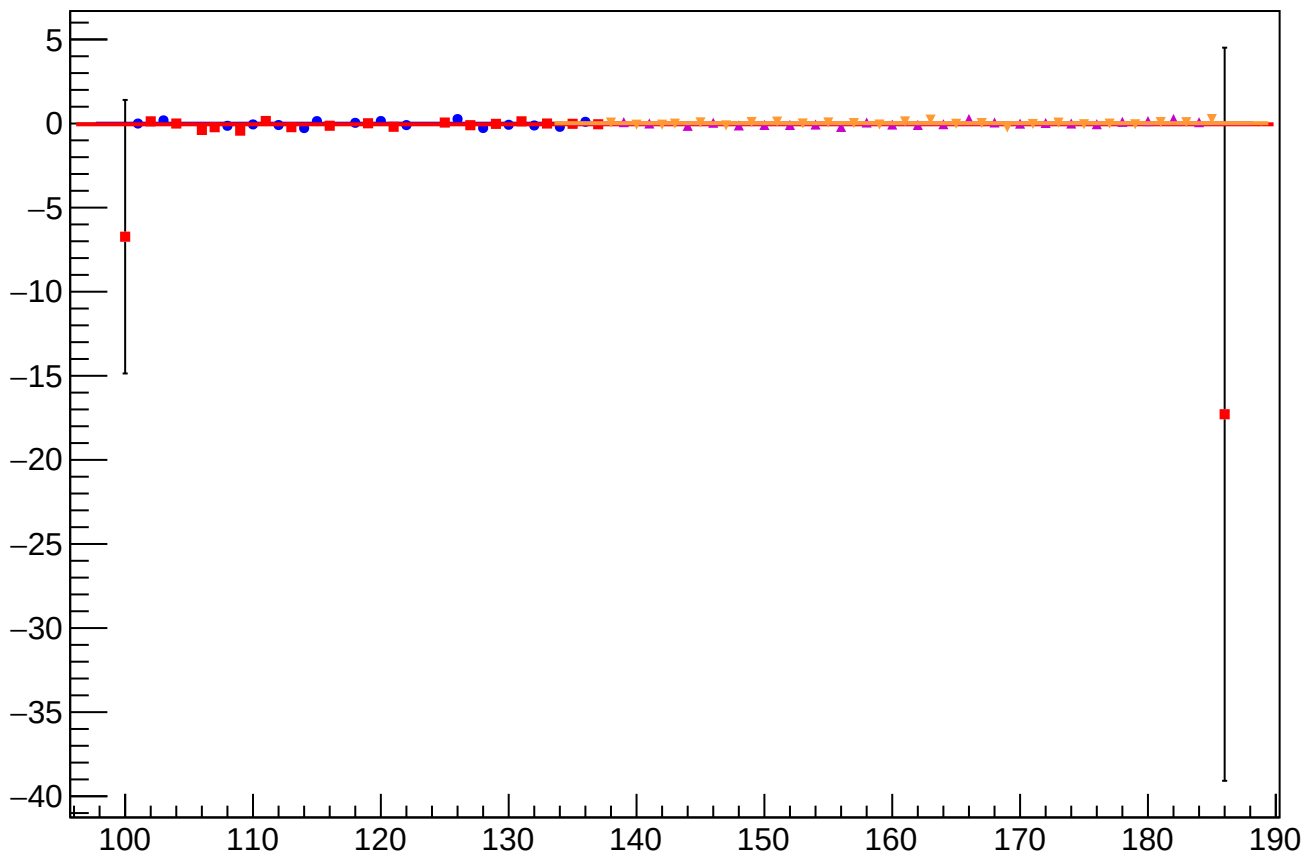
Right: 0.176 $\pm$ 0.031  $\chi^2$ /NDF: 122.7/34

In: 0.040 $\pm$ 0.017  $\chi^2$ /NDF:74.1/38

Out: 0.074 $\pm$ 0.016  $\chi^2$ /NDF:142.1/43

All: 0.057 $\pm$ 0.012  $\chi^2$ /NDF: 218.3/82

reg\_asym\_ds\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-0.010 \pm 0.027$   $\chi^2/\text{NDF}$ : 24.6/15

Left Out:  $0.021 \pm 0.016$   $\chi^2/\text{NDF}$ : 33.4/24

Right Out:  $-0.046 \pm 0.029$   $\chi^2/\text{NDF}$ : 26.9/18

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

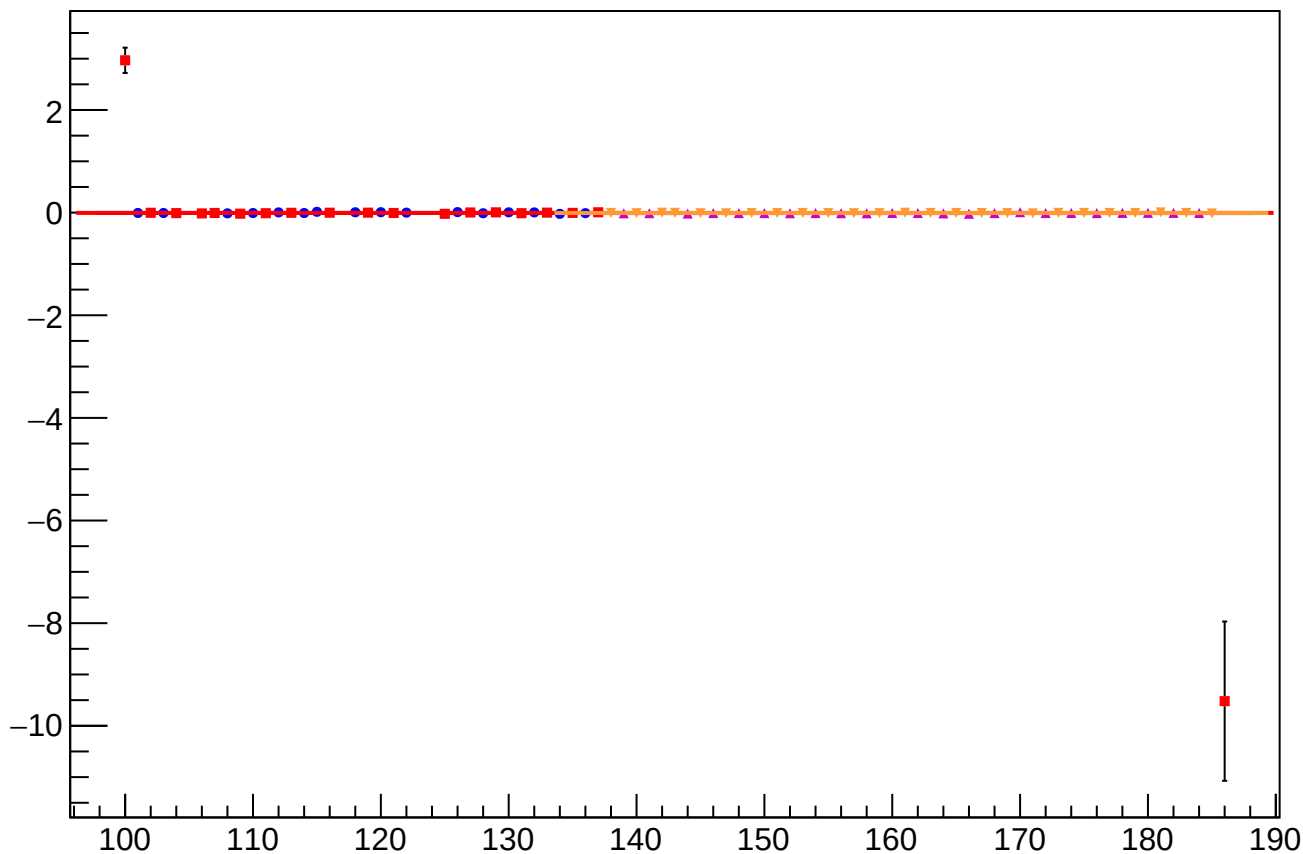
Right:  $-0.027 \pm 0.020$   $\chi^2/\text{NDF}$ : 52.3/34

In:  $0.002 \pm 0.014$   $\chi^2/\text{NDF}$ : 75.0/38

Out:  $0.005 \pm 0.014$   $\chi^2/\text{NDF}$ : 64.5/43

All:  $0.003 \pm 0.010$   $\chi^2/\text{NDF}$ : 139.5/82

reg\_asym\_ds\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: -0.006 $\pm$ 0.001  $\chi^2$ /NDF: 27.4/15

Left Out: -0.008 $\pm$ 0.001  $\chi^2$ /NDF:32.7/24

Right Out: -0.006 $\pm$ 0.001  $\chi^2$ /NDF: 202.8/18

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: 230.3/34

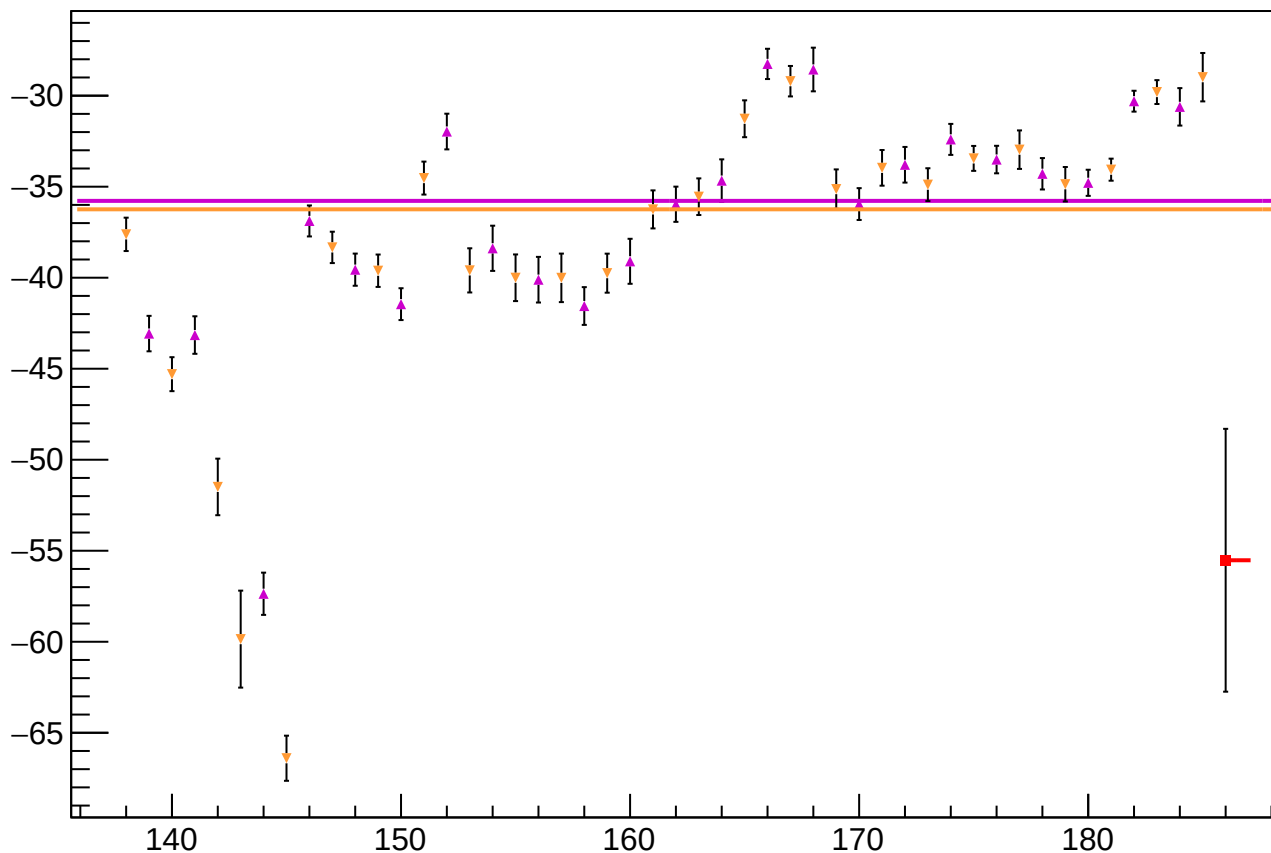
In: -0.008 $\pm$ 0.001  $\chi^2$ /NDF:67.2/38

Out: -0.008 $\pm$ 0.001  $\chi^2$ /NDF:237.5/43

All: -0.008 $\pm$ 0.000  $\chi^2$ /NDF: 305.0/82



reg\_asym\_left\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -36.243+/-0.191  $\chi^2/\text{NDF}$ :1193.9/24

Right Out: -55.523+/-7.220  $\chi^2/\text{NDF}$ : 0.0/0

Left In: -35.779+/-0.191  $\chi^2/\text{NDF}$ :854.1/22

Left: -36.011+/-0.135  $\chi^2/\text{NDF}$ : 2050.9/47

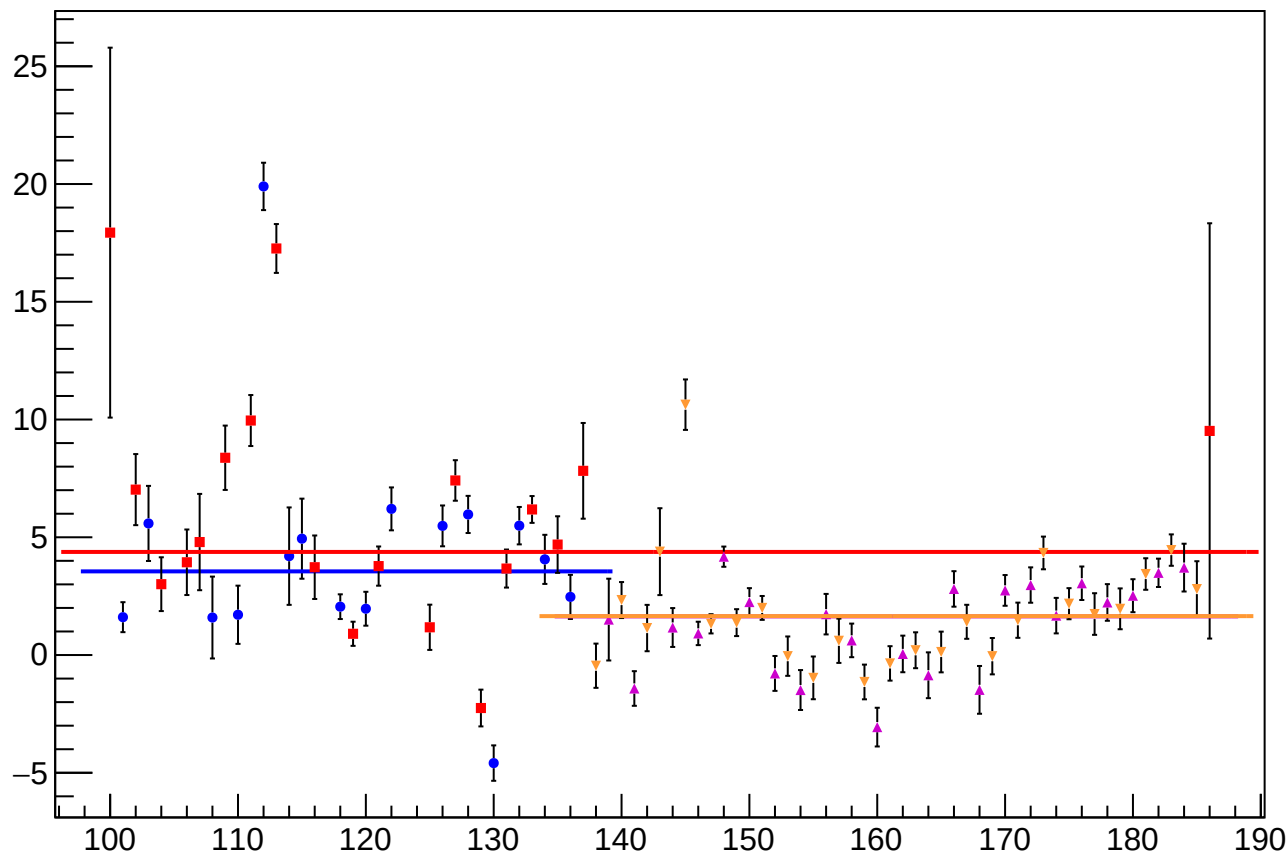
Right: -55.523+/-7.220  $\chi^2/\text{NDF}$ : 0.0/0

In: -35.779+/-0.191  $\chi^2/\text{NDF}$ :854.1/22

Out: -36.257+/-0.191  $\chi^2/\text{NDF}$ :1201.0/25

All: -36.018+/-0.135  $\chi^2/\text{NDF}$ : 2058.2/48

reg\_asym\_left\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 3.552 $\pm$ 0.221  $\chi^2$ /NDF: 439.9/15

Left Out: 1.652 $\pm$ 0.147  $\chi^2$ /NDF:168.8/24

Right Out: 4.378 $\pm$ 0.225  $\chi^2$ /NDF: 353.5/18

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

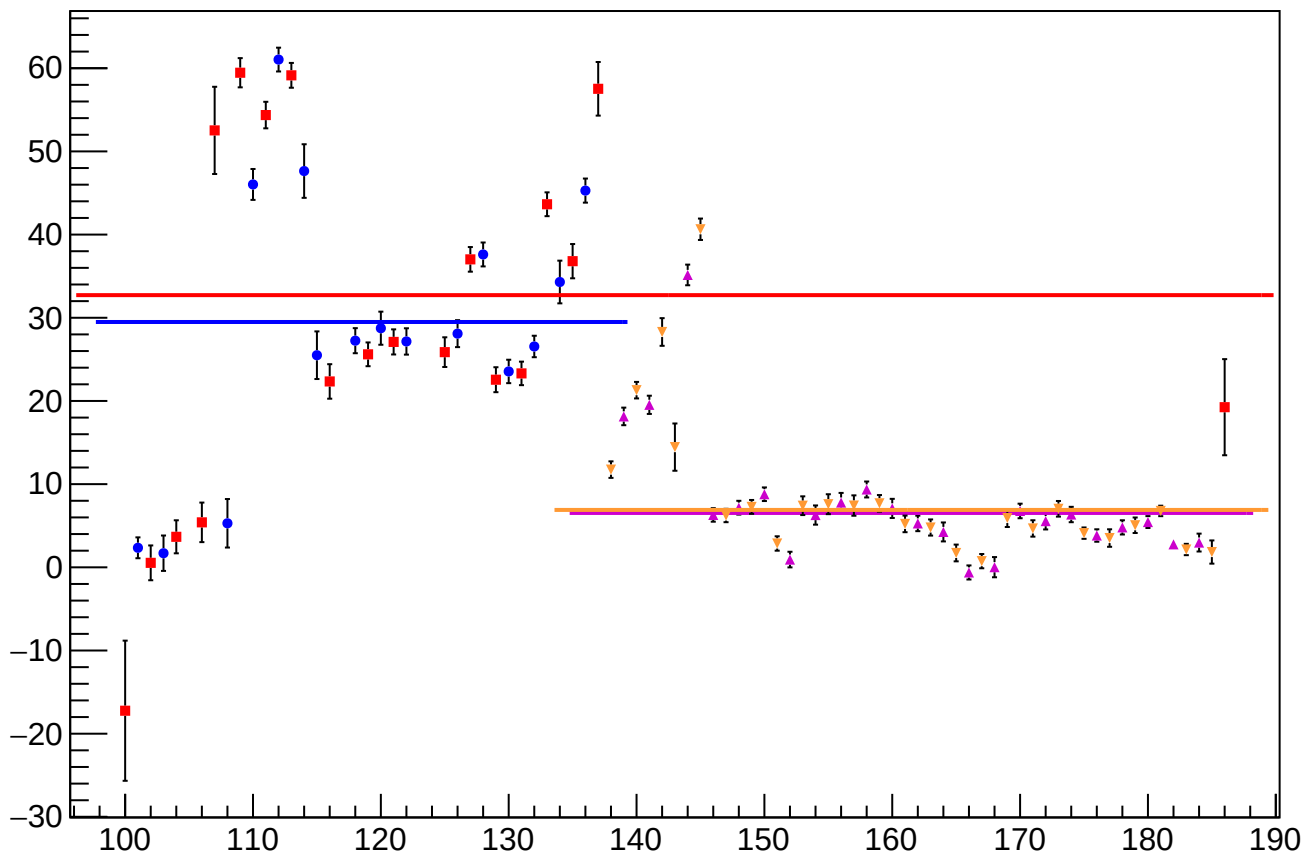
Right: 3.957 $\pm$ 0.158  $\chi^2$ /NDF: 800.2/34

In: 2.242 $\pm$ 0.124  $\chi^2$ /NDF:654.5/38

Out: 2.469 $\pm$ 0.123  $\chi^2$ /NDF:624.9/43

All: 2.356 $\pm$ 0.087  $\chi^2$ /NDF: 1281.1/82

reg\_asym\_left\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 29.493 $\pm$ 0.420  $\chi^2$ /NDF: 1489.7/15

Left Out: 6.900 $\pm$ 0.191  $\chi^2$ /NDF:1302.8/24

Right Out: 32.721 $\pm$ 0.422  $\chi^2$ /NDF: 1665.6/18

Left In: 6.537 $\pm$ 0.190  $\chi^2$ /NDF:1025.1/22

Left: 6.718 $\pm$ 0.135  $\chi^2$ /NDF: 2329.7/47

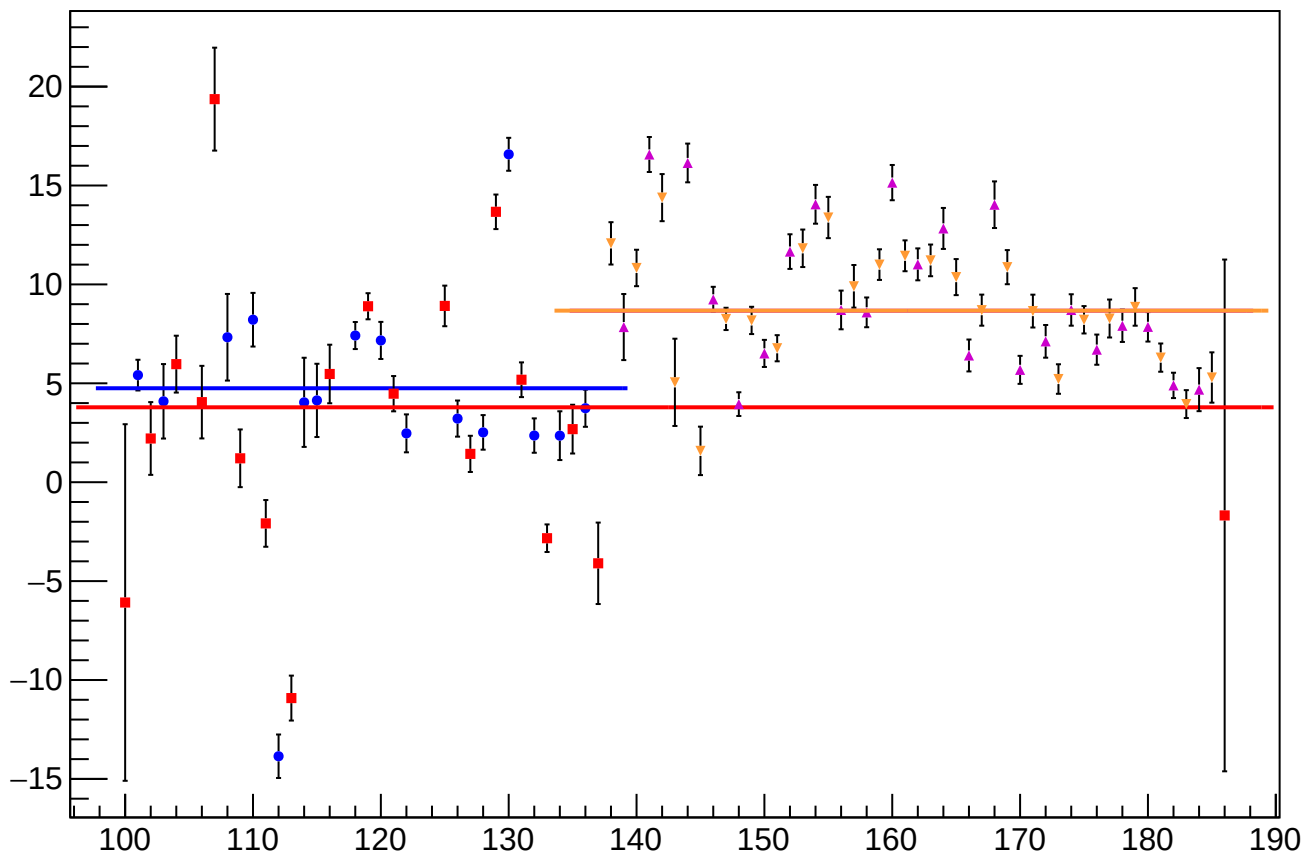
Right: 31.099 $\pm$ 0.298  $\chi^2$ /NDF: 3184.6/34

In: 10.444 $\pm$ 0.173  $\chi^2$ /NDF:4989.8/38

Out: 11.280 $\pm$ 0.174  $\chi^2$ /NDF:6070.0/43

All: 10.861 $\pm$ 0.123  $\chi^2$ /NDF: 11071.4/82

reg\_asym\_left\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 4.750 $\pm$ 0.255  $\chi^2$ /NDF: 546.5/15

Left Out: 8.674 $\pm$ 0.168  $\chi^2$ /NDF:243.7/24

Right Out: 3.787 $\pm$ 0.259  $\chi^2$ /NDF: 564.9/18

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

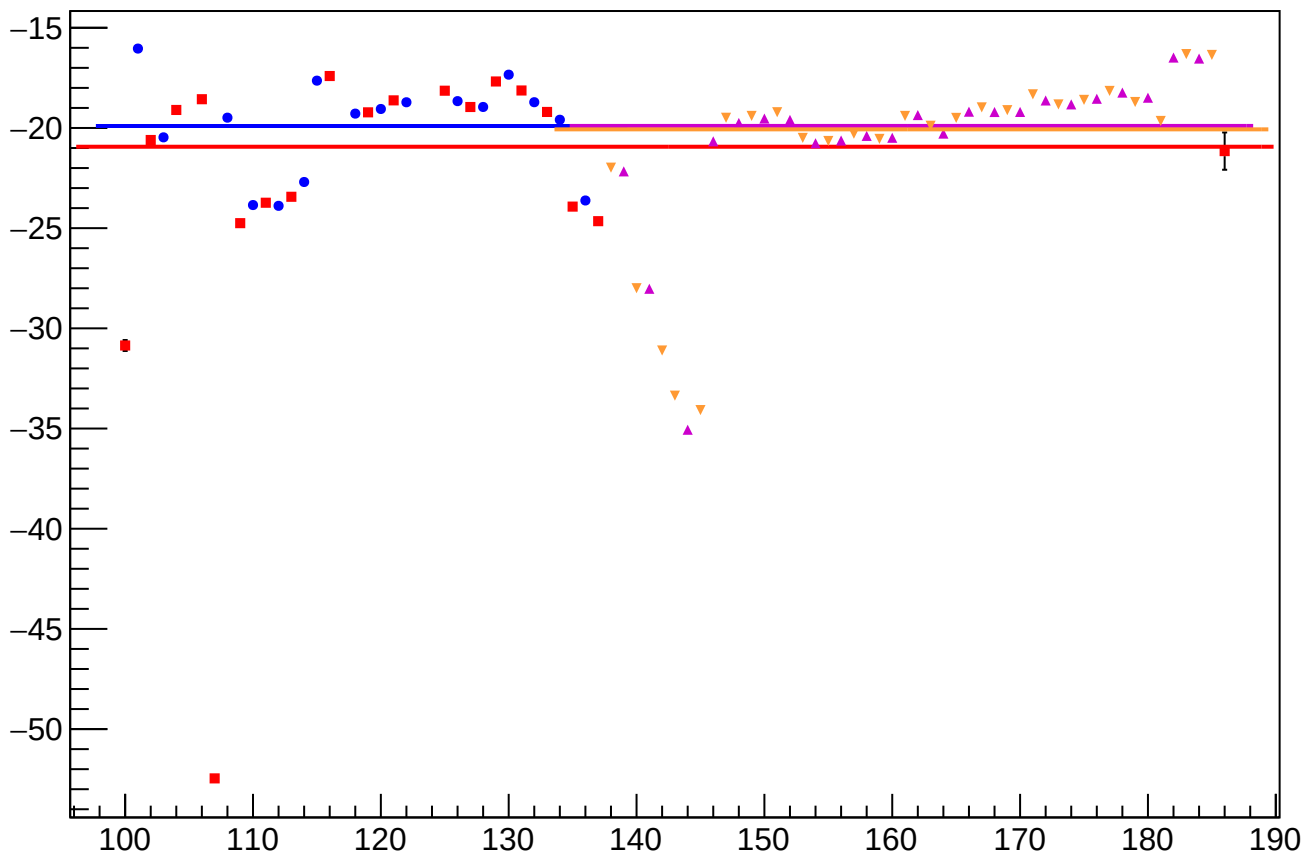
Right: 4.277 $\pm$ 0.182  $\chi^2$ /NDF: 1118.5/34

In: 7.458 $\pm$ 0.141  $\chi^2$ /NDF:1147.0/38

Out: 7.220 $\pm$ 0.141  $\chi^2$ /NDF:1058.8/43

All: 7.339 $\pm$ 0.100  $\chi^2$ /NDF: 2207.3/82

reg\_asym\_left\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-19.902 \pm 0.016$   $\chi^2/\text{NDF}: 26019.5/15$

Left Out:  $-20.069 \pm 0.008$   $\chi^2/\text{NDF}: 185373.7/24$

Right Out:  $-20.936 \pm 0.016$   $\chi^2/\text{NDF}: 93988.8/18$

Left In:  $-19.898 \pm 0.008$   $\chi^2/\text{NDF}: 144191.9/22$

Left:  $-19.983 \pm 0.006$   $\chi^2/\text{NDF}: 329802.7/47$

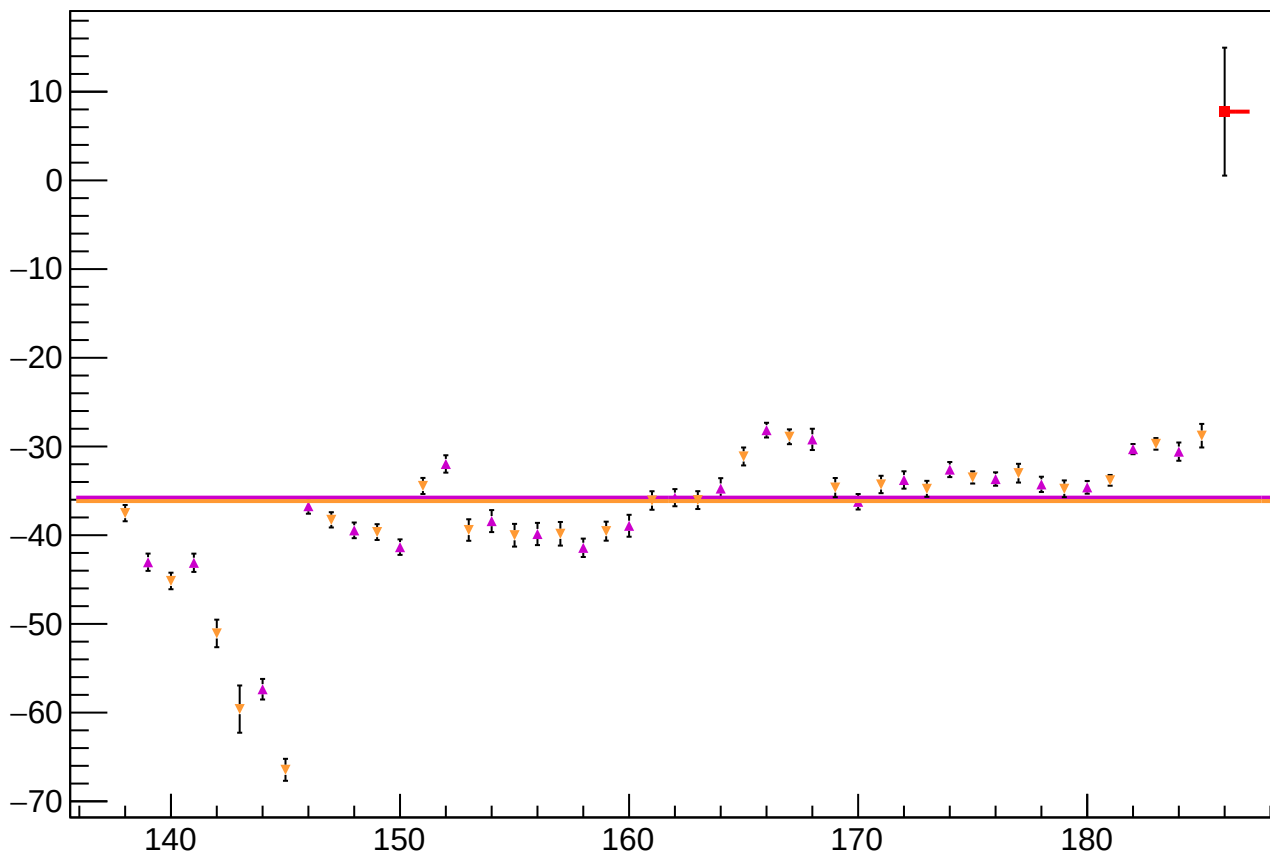
Right:  $-20.417 \pm 0.011$   $\chi^2/\text{NDF}: 122178.0/34$

In:  $-19.899 \pm 0.007$   $\chi^2/\text{NDF}: 170211.4/38$

Out:  $-20.243 \pm 0.007$   $\chi^2/\text{NDF}: 281789.1/43$

All:  $-20.070 \pm 0.005$   $\chi^2/\text{NDF}: 453198.4/82$

reg\_asym\_left\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Left Out: -36.152 $\pm$ 0.191  $\chi^2$ /NDF:1199.2/24

Right Out: 7.751 $\pm$ 7.212  $\chi^2$ /NDF: 0.0/0

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

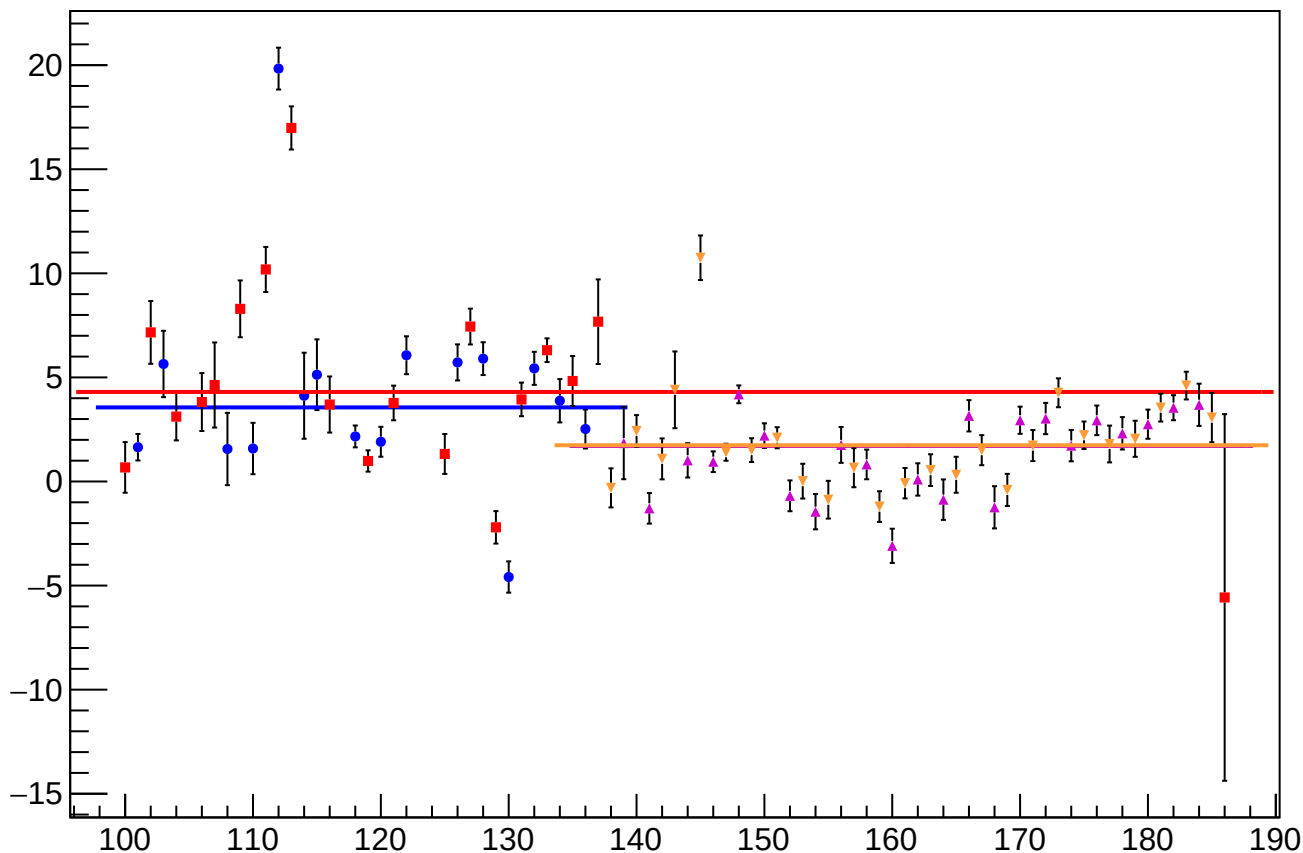
Right: 7.751 $\pm$ 7.212  $\chi^2$ /NDF: 0.0/0

In: -35.766 $\pm$ 0.191  $\chi^2$ /NDF:842.6/22

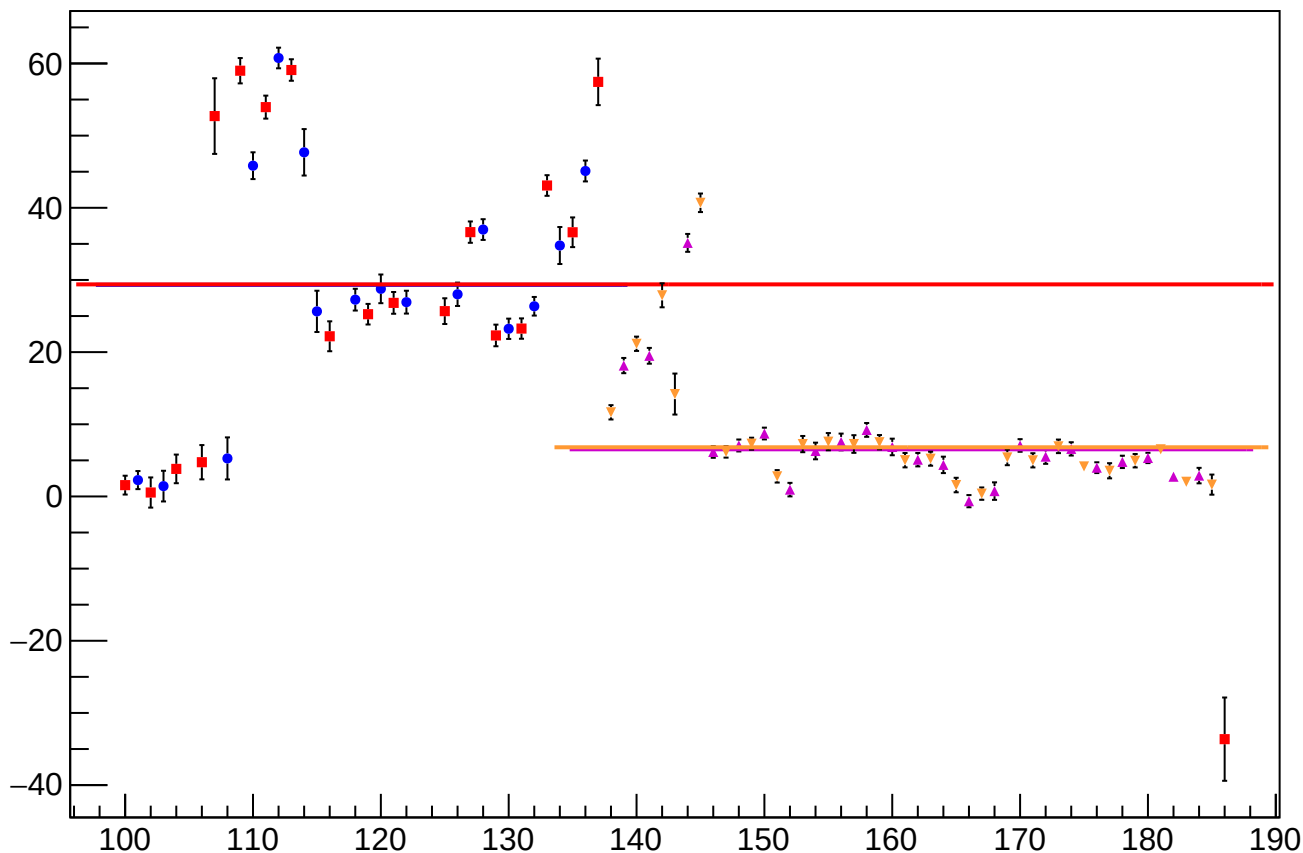
Out: -36.121 $\pm$ 0.191  $\chi^2$ /NDF:1236.2/25

All: -35.944 $\pm$ 0.135  $\chi^2$ /NDF: 2080.6/48

reg\_asym\_left\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



reg\_asym\_left\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $29.321 \pm 0.420$   $\chi^2/\text{NDF}$ : 1483.3/15

Left Out:  $6.813 \pm 0.191$   $\chi^2/\text{NDF}$ : 1304.5/24

Right Out:  $29.388 \pm 0.402$   $\chi^2/\text{NDF}$ : 2248.8/18

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:  $29.356 \pm 0.290$   $\chi^2/\text{NDF}$ : 3732.2/34

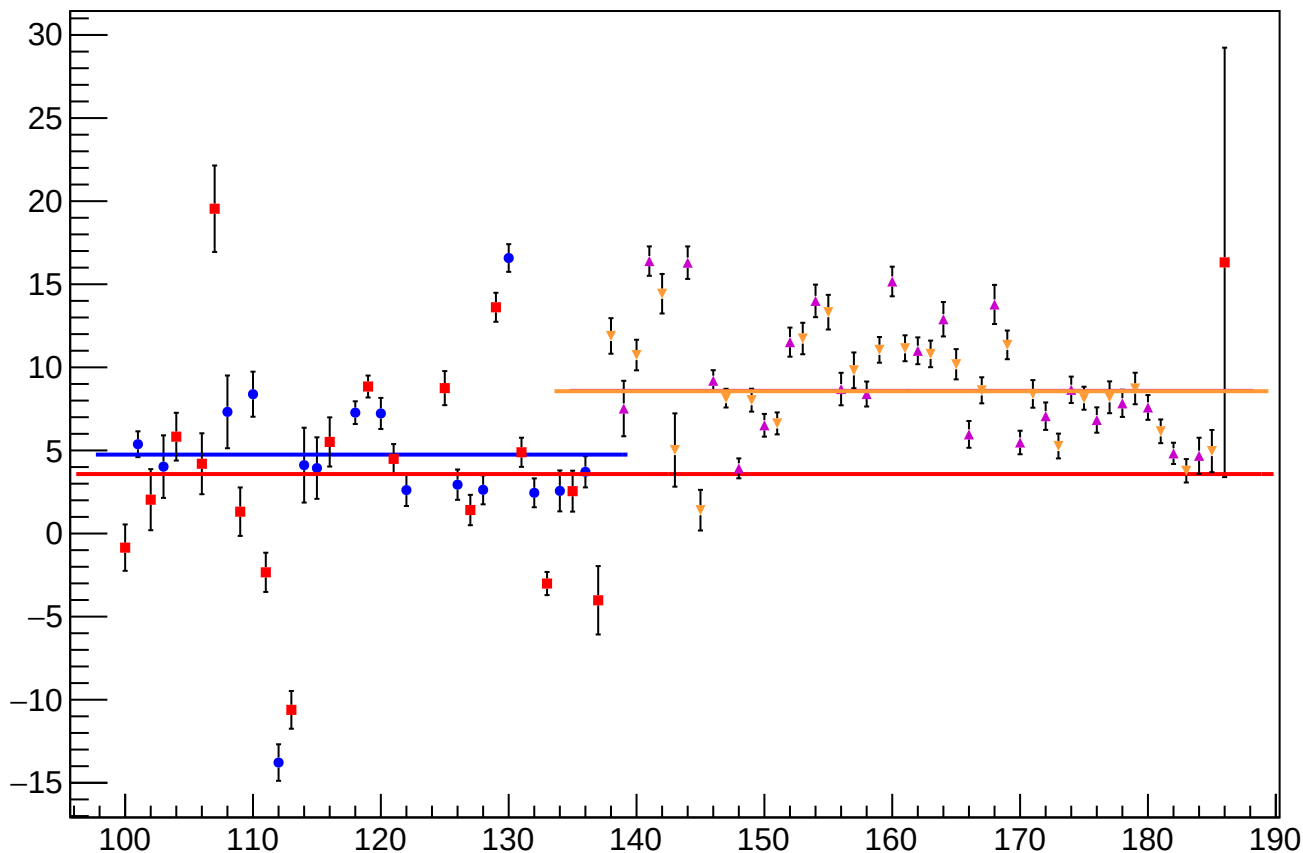
In:  $10.412 \pm 0.173$   $\chi^2/\text{NDF}$ : 4943.7/38

Out:  $10.962 \pm 0.172$   $\chi^2/\text{NDF}$ : 6125.5/43

All:  $10.689 \pm 0.122$   $\chi^2/\text{NDF}$ : 11074.2/82



reg\_asym\_left\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $4.749 \pm 0.254$   $\chi^2/\text{NDF}$ : 543.1/15

Left Out:  $8.565 \pm 0.168$   $\chi^2/\text{NDF}$ : 248.1/24

Right Out:  $3.578 \pm 0.255$   $\chi^2/\text{NDF}$ : 571.4/18

Left In:  $8.585 \pm 0.170$   $\chi^2/\text{NDF}$ : 441.8/22

Left:  $8.575 \pm 0.120$   $\chi^2/\text{NDF}$ : 689.9/47

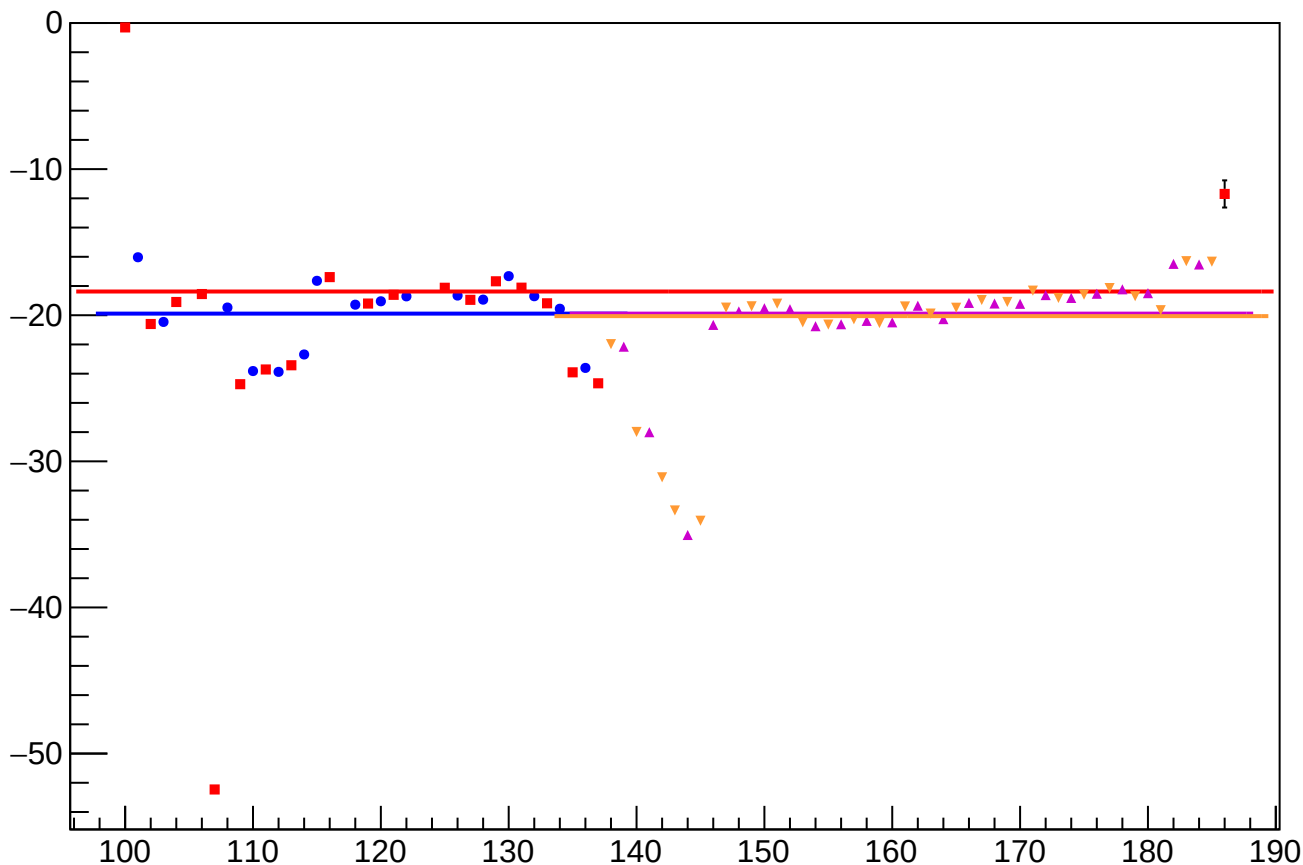
Right:  $4.164 \pm 0.180$   $\chi^2/\text{NDF}$ : 1125.0/34

In:  $7.400 \pm 0.141$   $\chi^2/\text{NDF}$ : 1142.0/38

Out:  $7.047 \pm 0.140$   $\chi^2/\text{NDF}$ : 1086.4/43

All:  $7.222 \pm 0.100$   $\chi^2/\text{NDF}$ : 2231.5/82

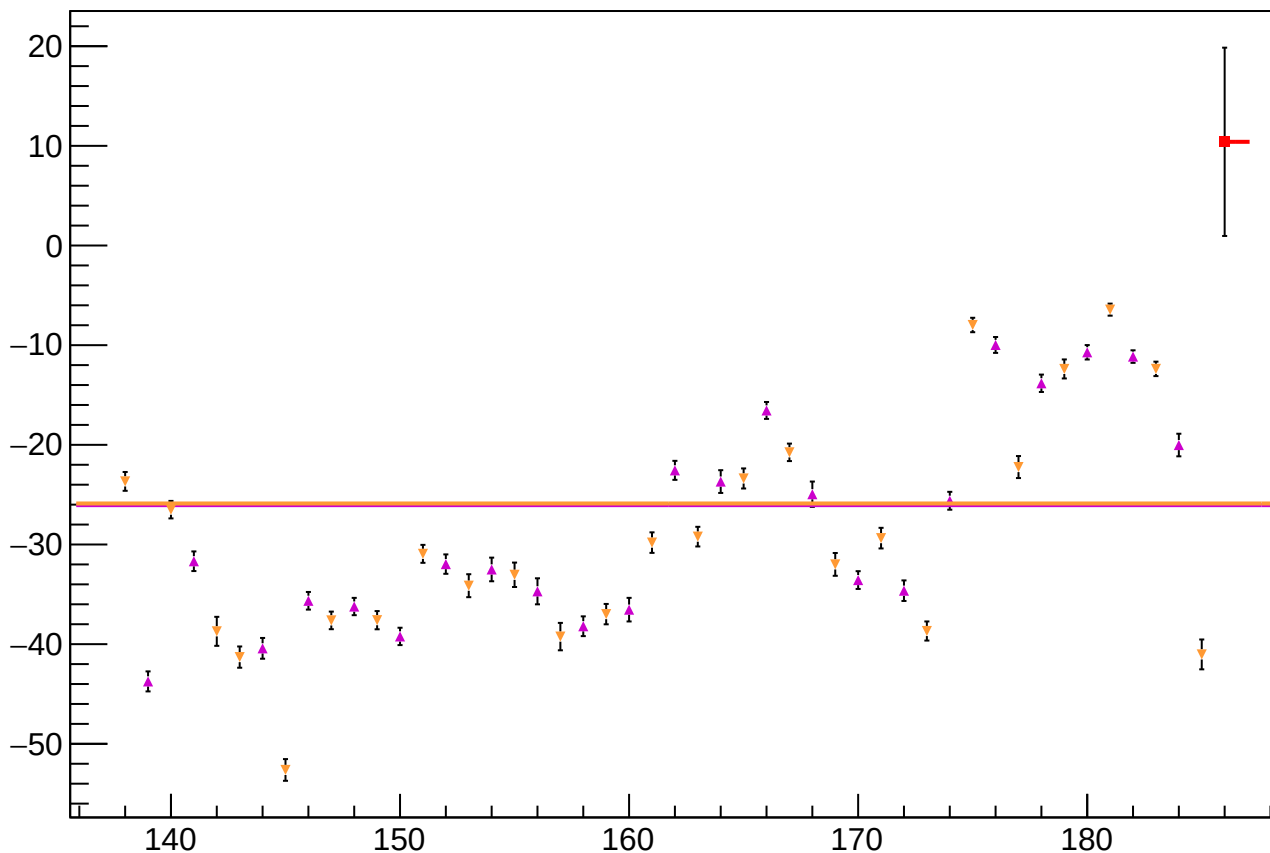
reg\_asym\_left\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-19.890 \pm 0.016$   $\chi^2/\text{NDF}: 26008.9/15$   
 Left Out:  $-20.061 \pm 0.008$   $\chi^2/\text{NDF}: 185580.2/24$   
 Right Out:  $-18.377 \pm 0.015$   $\chi^2/\text{NDF}: 301061.2/18$   
 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:  $-19.089 \pm 0.011$   $\chi^2/\text{NDF}: 332012.6/34$   
 In:  $-19.890 \pm 0.007$   $\chi^2/\text{NDF}: 170064.1/38$   
 Out:  $-19.689 \pm 0.007$   $\chi^2/\text{NDF}: 496782.6/43$   
 All:  $-19.789 \pm 0.005$   $\chi^2/\text{NDF}: 667264.1/82$

reg\_asym\_right\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -25.884+/-0.192  $\chi^2/\text{NDF}$ : 4158.0/24

Right Out: 10.404+/-9.447  $\chi^2/\text{NDF}$ : 0.0/0

Left In: -26.052+/-0.195  $\chi^2/\text{NDF}$ : 3279.5/22

Left: -25.967+/-0.137  $\chi^2/\text{NDF}$ : 7437.8/47

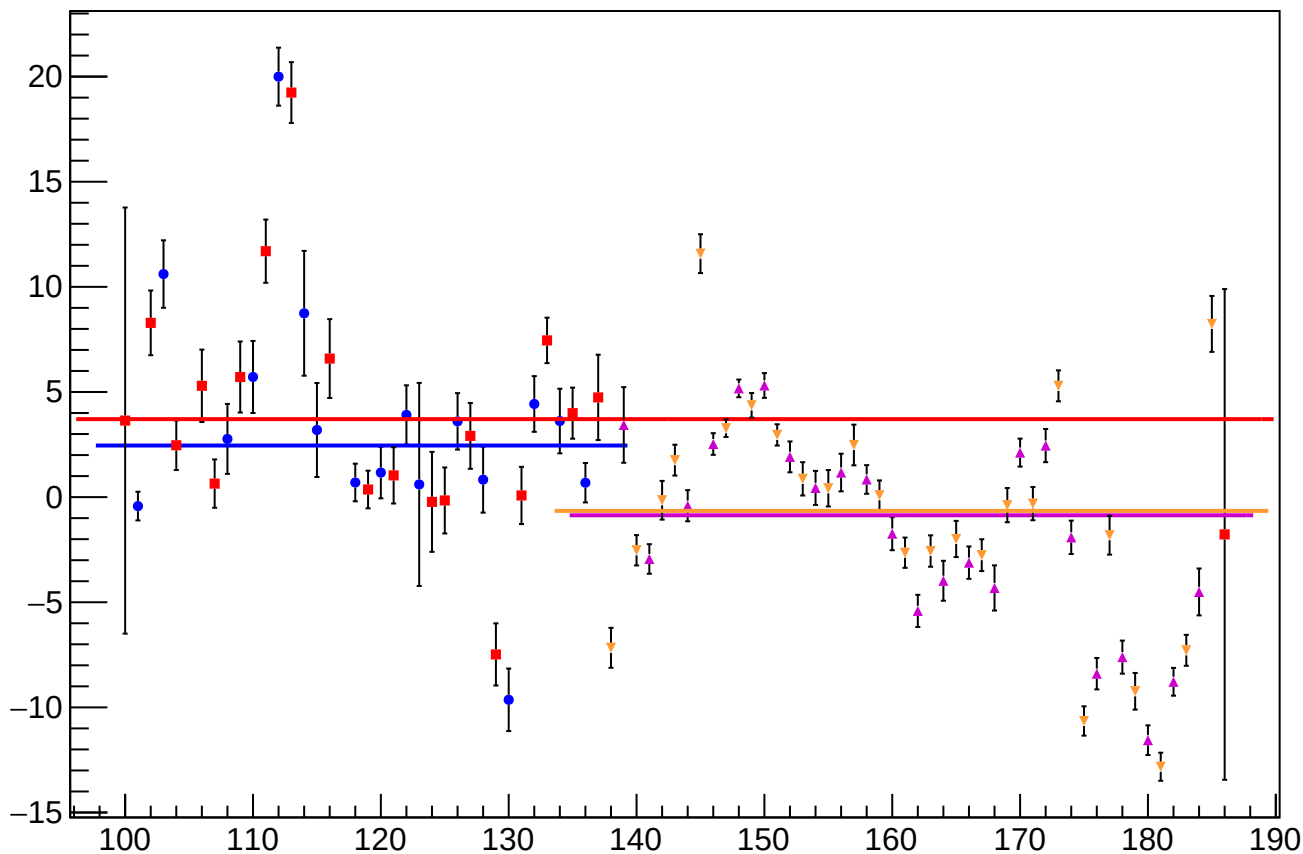
Right: 10.404+/-9.447  $\chi^2/\text{NDF}$ : 0.0/0

In: -26.052+/-0.195  $\chi^2/\text{NDF}$ : 3279.5/22

Out: -25.870+/-0.192  $\chi^2/\text{NDF}$ : 4172.7/25

All: -25.959+/-0.137  $\chi^2/\text{NDF}$ : 7452.7/48

reg\_asym\_right\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $2.454 \pm 0.315$   $\chi^2/\text{NDF}$ : 294.3/16

Left Out:  $-0.654 \pm 0.146$   $\chi^2/\text{NDF}$ : 1320.8/24

Right Out:  $3.709 \pm 0.327$   $\chi^2/\text{NDF}$ : 269.3/19

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

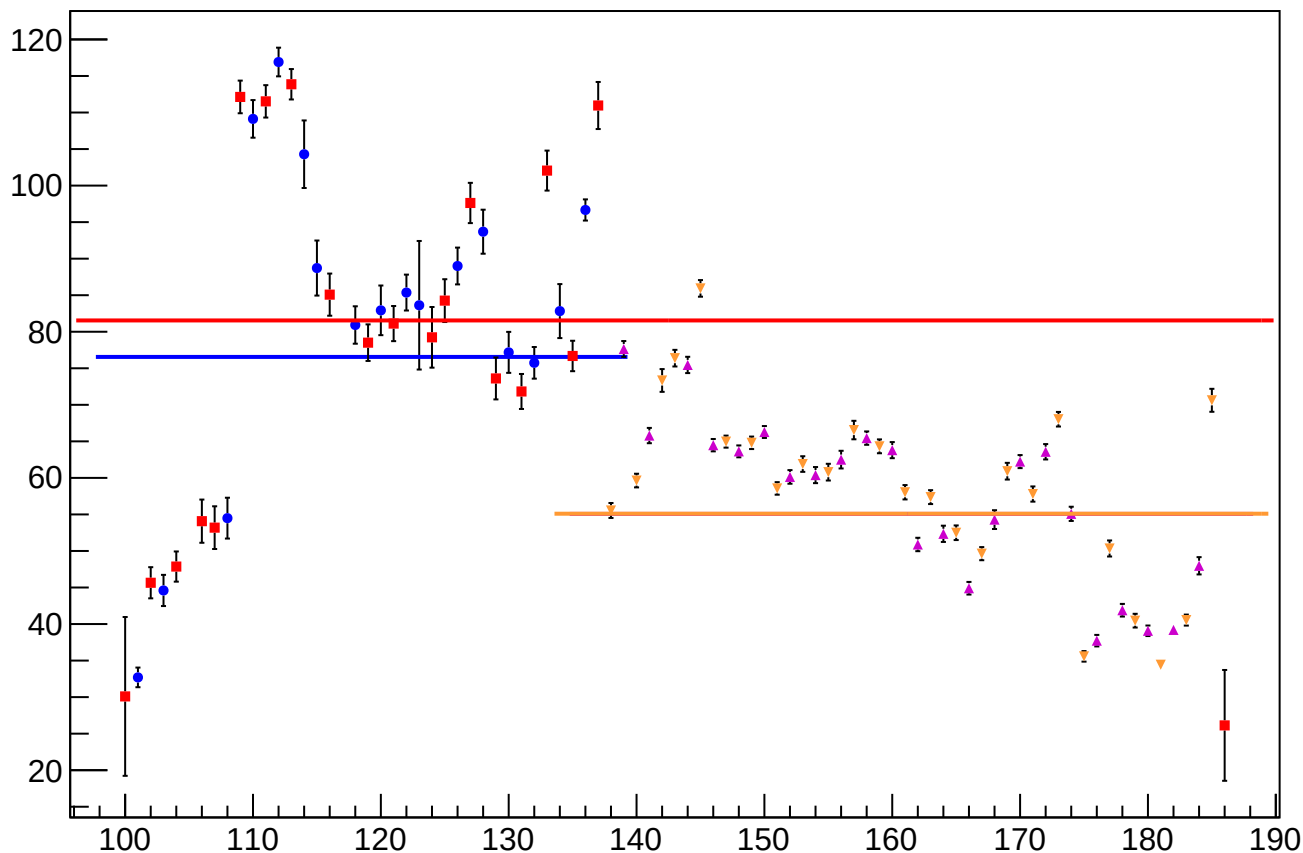
Right:  $3.059 \pm 0.227$   $\chi^2/\text{NDF}$ : 571.3/36

In:  $-0.247 \pm 0.136$   $\chi^2/\text{NDF}$ : 1451.2/39

Out:  $0.074 \pm 0.133$   $\chi^2/\text{NDF}$ : 1738.8/44

All:  $-0.083 \pm 0.095$   $\chi^2/\text{NDF}$ : 3192.9/84

reg\_asym\_right\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 76.555 +/- 0.577  $\chi^2/\text{NDF}$ : 2252.8/16

Left Out: 55.098 +/- 0.191  $\chi^2/\text{NDF}$ : 4579.3/24

Right Out: 81.547 +/- 0.591  $\chi^2/\text{NDF}$ : 1624.5/19

Left In: 55.070 +/- 0.193  $\chi^2/\text{NDF}$ : 3702.8/22

Left: 55.084 +/- 0.136  $\chi^2/\text{NDF}$ : 8282.1/47

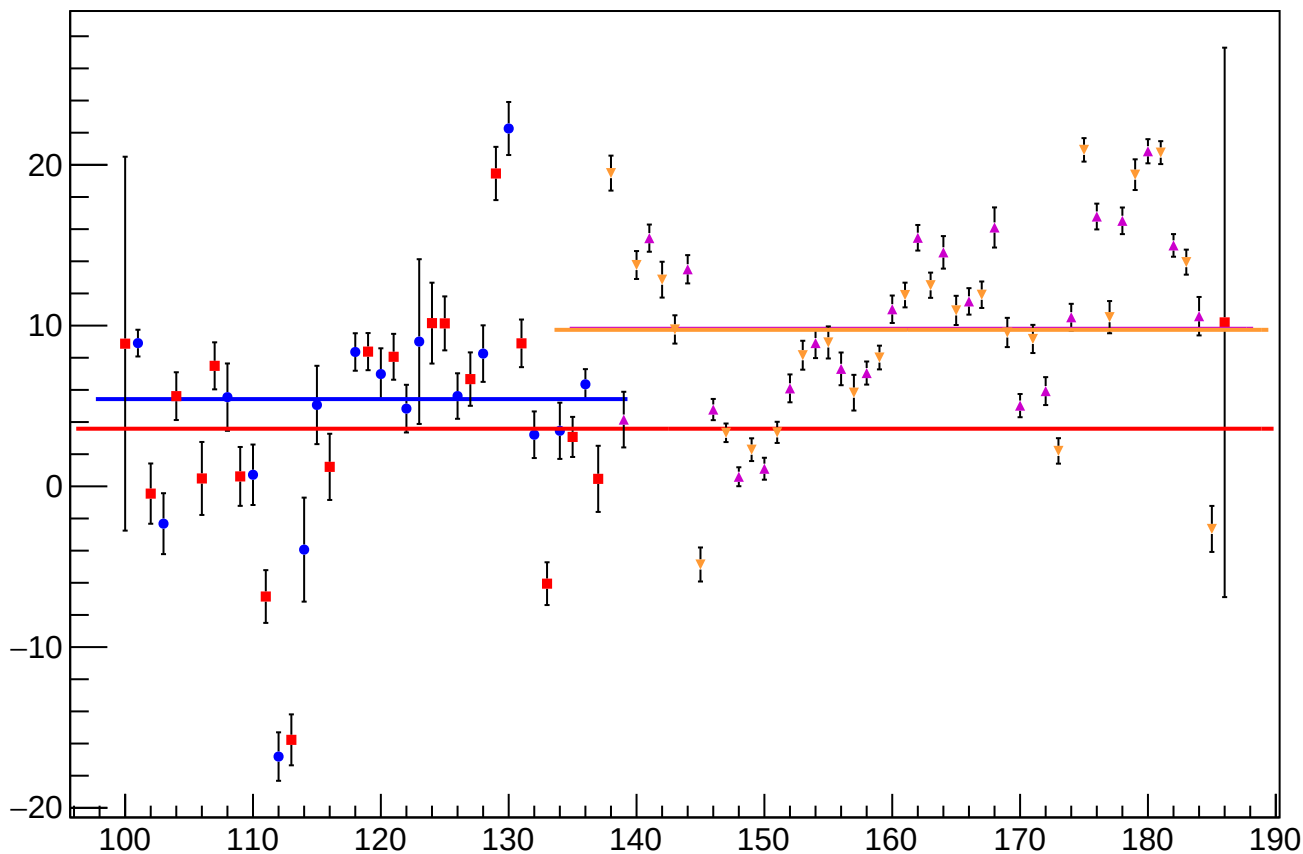
Right: 78.990 +/- 0.413  $\chi^2/\text{NDF}$ : 3913.8/36

In: 57.242 +/- 0.183  $\chi^2/\text{NDF}$ : 7202.2/39

Out: 57.610 +/- 0.182  $\chi^2/\text{NDF}$ : 8016.0/44

All: 57.427 +/- 0.129  $\chi^2/\text{NDF}$ : 15220.3/84

reg\_asym\_right\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 5.428 $\pm$ 0.361  $\chi^2$ /NDF: 385.7/16

Left Out: 9.737 $\pm$ 0.168  $\chi^2$ /NDF:1450.2/24

Right Out: 3.585 $\pm$ 0.375  $\chi^2$ /NDF: 421.8/19

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

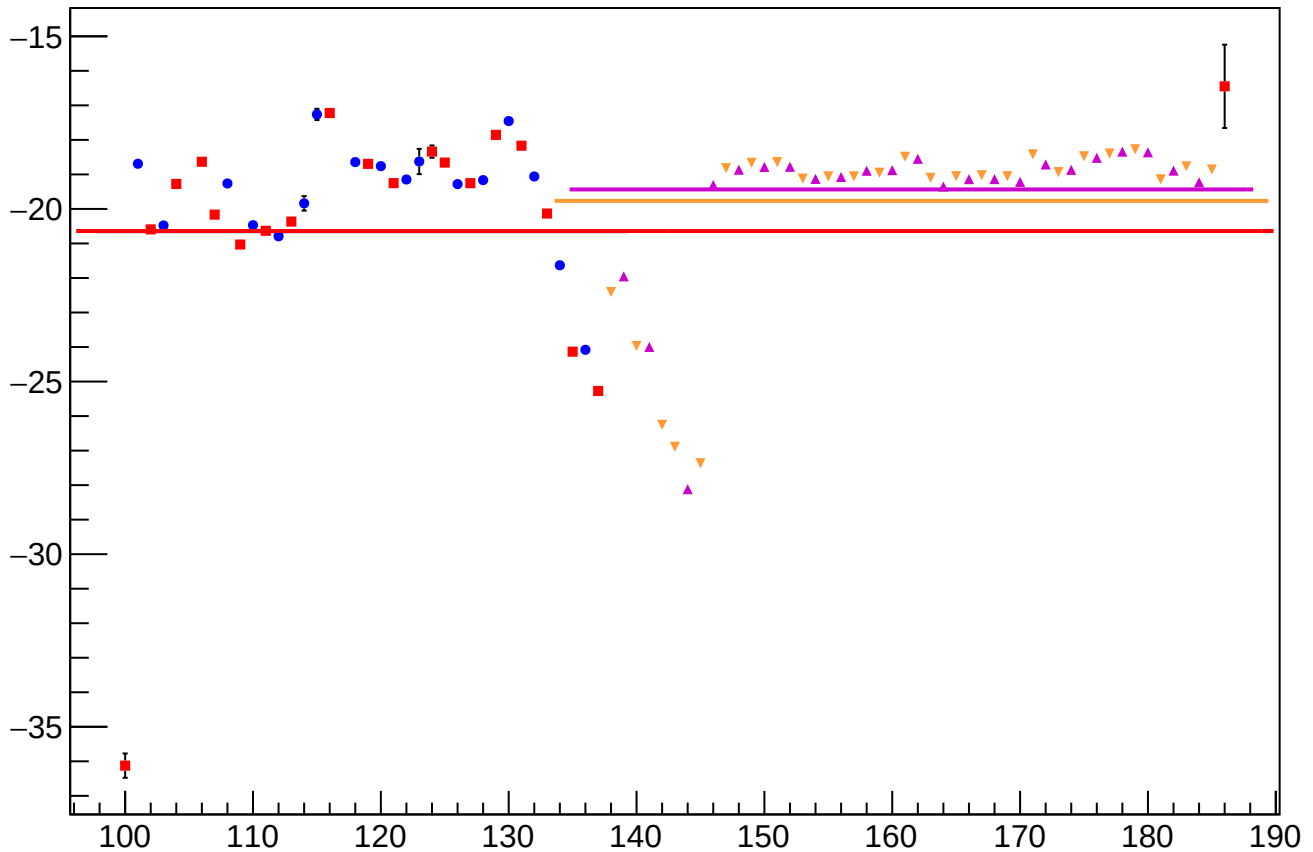
Right: 4.543 $\pm$ 0.260  $\chi^2$ /NDF: 819.9/36

In: 8.996 $\pm$ 0.155  $\chi^2$ /NDF:1664.3/39

Out: 8.713 $\pm$ 0.153  $\chi^2$ /NDF:2095.7/44

All: 8.853 $\pm$ 0.109  $\chi^2$ /NDF: 3761.7/84

reg\_asym\_right\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: -20.644 $\pm$ 0.019  $\chi^2$ /NDF: 12424.2/16

Left Out: -19.767 $\pm$ 0.008  $\chi^2$ /NDF: 91617.3/24

Right Out: -20.639 $\pm$ 0.019  $\chi^2$ /NDF: 13797.9/19

Left In: -19.435 $\pm$ 0.008  $\chi^2$ /NDF: 53170.9/22

Left: -19.603 $\pm$ 0.006  $\chi^2$ /NDF: 145665.0/47

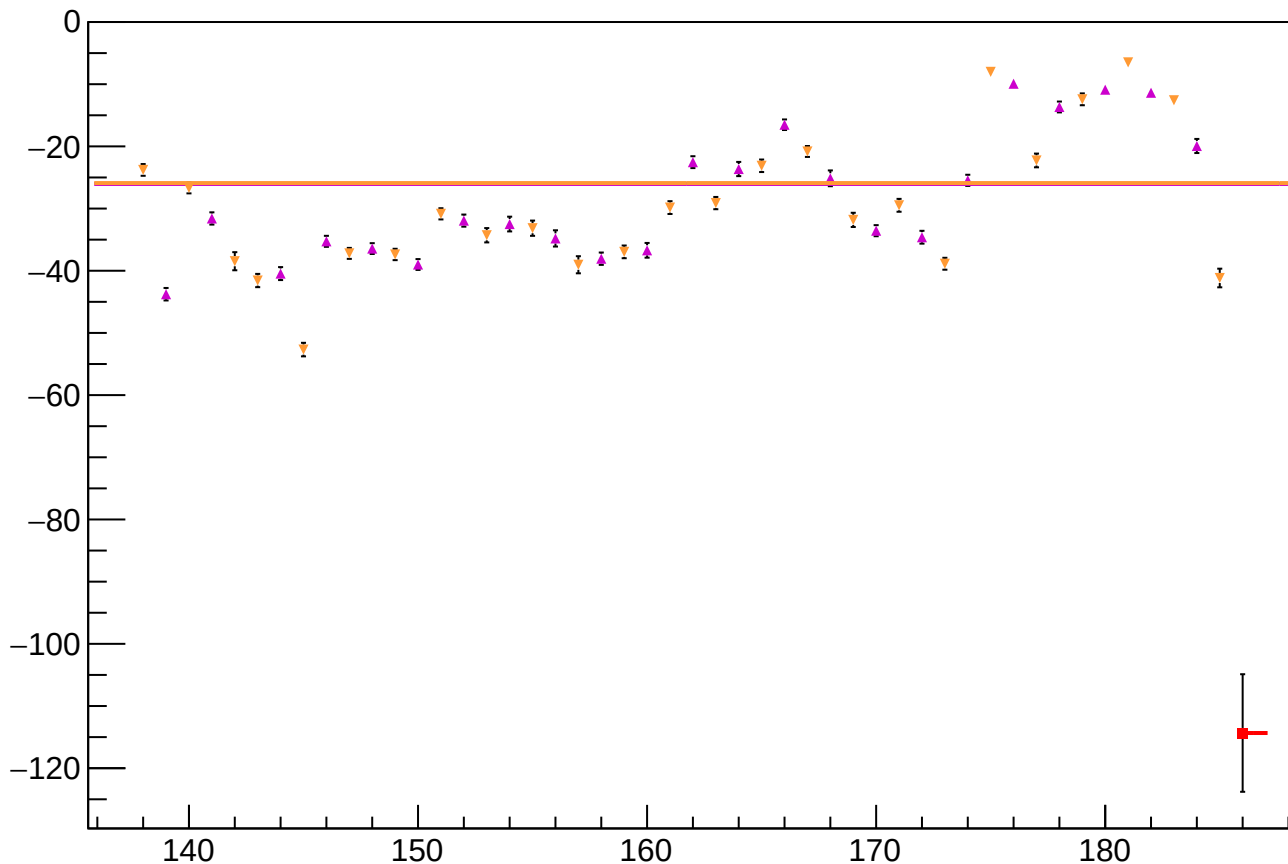
Right: -20.641 $\pm$ 0.014  $\chi^2$ /NDF: 26222.1/36

In: -19.610 $\pm$ 0.007  $\chi^2$ /NDF: 68931.6/39

Out: -19.890 $\pm$ 0.007  $\chi^2$ /NDF: 107137.8/44

All: -19.751 $\pm$ 0.005  $\chi^2$ /NDF: 176798.1/84

reg\_asym\_right\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -25.899+/-0.192  $\chi^2/\text{NDF}$ : 4127.5/24

Right Out: -114.340+/-9.454  $\chi^2/\text{NDF}$ : 0.0/0

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: -114.340+/-9.454  $\chi^2/\text{NDF}$ : 0.0/0

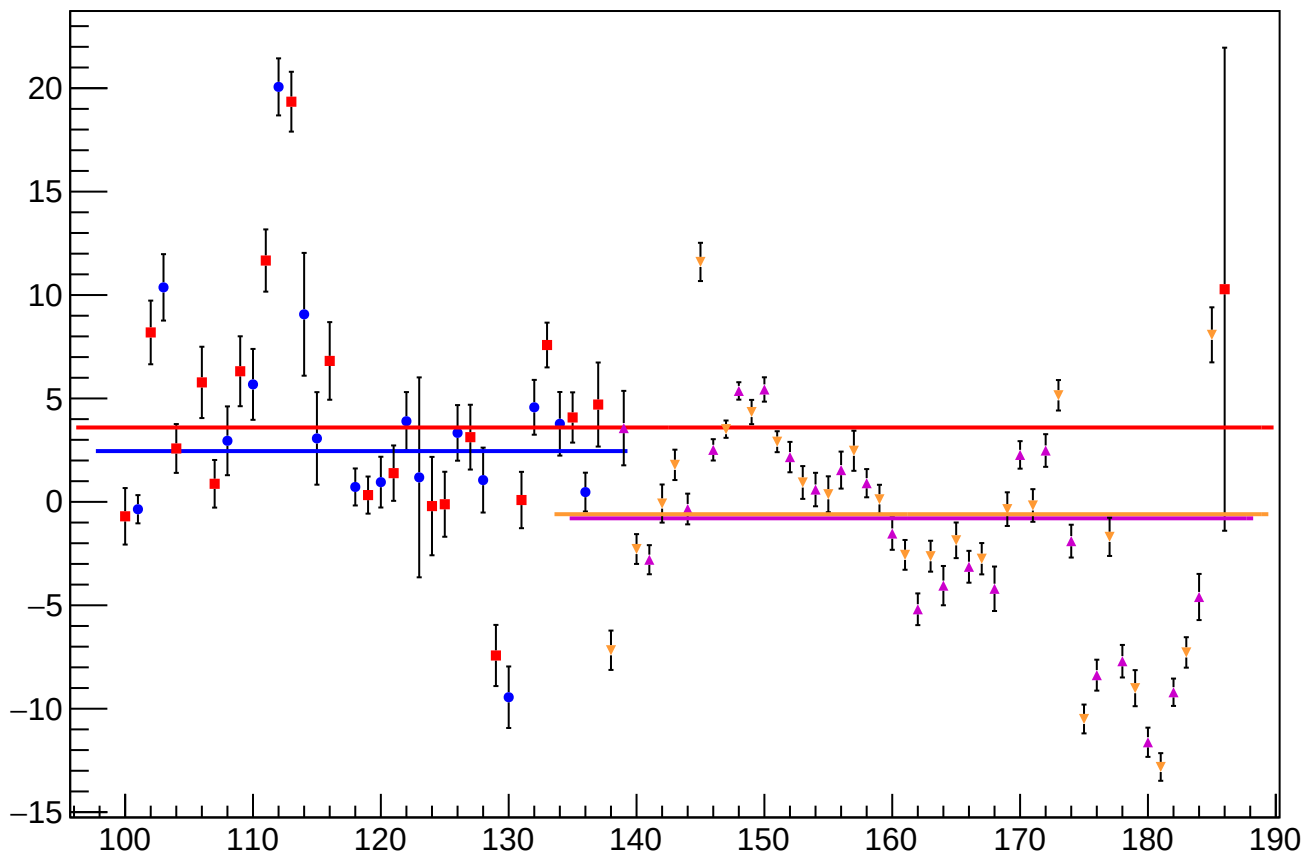
In: -26.046+/-0.195  $\chi^2/\text{NDF}$ : 3246.7/22

Out: -25.935+/-0.192  $\chi^2/\text{NDF}$ : 4215.0/25

All: -25.990+/-0.137  $\chi^2/\text{NDF}$ : 7461.9/48



reg\_asym\_right\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 2.455 $\pm$ 0.315  $\chi^2/\text{NDF}$ : 292.3/16

Left Out: -0.596 $\pm$ 0.146  $\chi^2/\text{NDF}$ :1310.7/24

Right Out: 3.597 $\pm$ 0.318  $\chi^2/\text{NDF}$ : 280.4/19

Left In: -0.795 $\pm$ 0.151  $\chi^2/\text{NDF}$ :1106.3/22

Left: -0.693 $\pm$ 0.105  $\chi^2/\text{NDF}$ : 2417.9/47

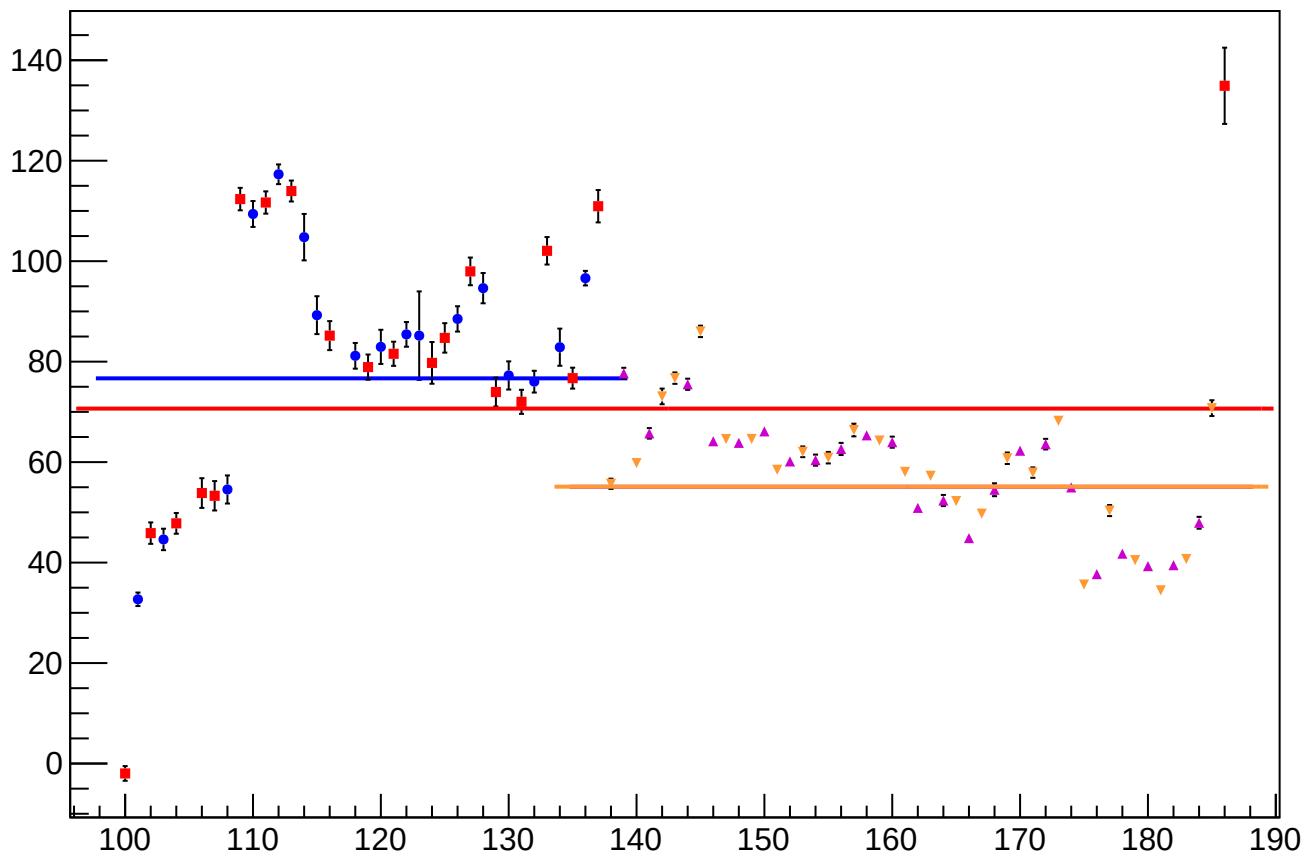
Right: 3.021 $\pm$ 0.224  $\chi^2/\text{NDF}$ : 579.2/36

In: -0.191 $\pm$ 0.136  $\chi^2/\text{NDF}$ :1485.3/39

Out: 0.136 $\pm$ 0.133  $\chi^2/\text{NDF}$ :1734.6/44

All: -0.024 $\pm$ 0.095  $\chi^2/\text{NDF}$ : 3222.8/84

reg\_asym\_right\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 76.675+/-0.577  $\chi^2/\text{NDF}$ : 2264.8/16

Left Out: 55.111+/-0.192  $\chi^2/\text{NDF}$ : 4560.2/24

Right Out: 70.654+/-0.549  $\chi^2/\text{NDF}$ : 4459.3/19

Left In: 55.094+/-0.194  $\chi^2/\text{NDF}$ : 3664.6/22

Left: 55.103+/-0.136  $\chi^2/\text{NDF}$ : 8224.8/47

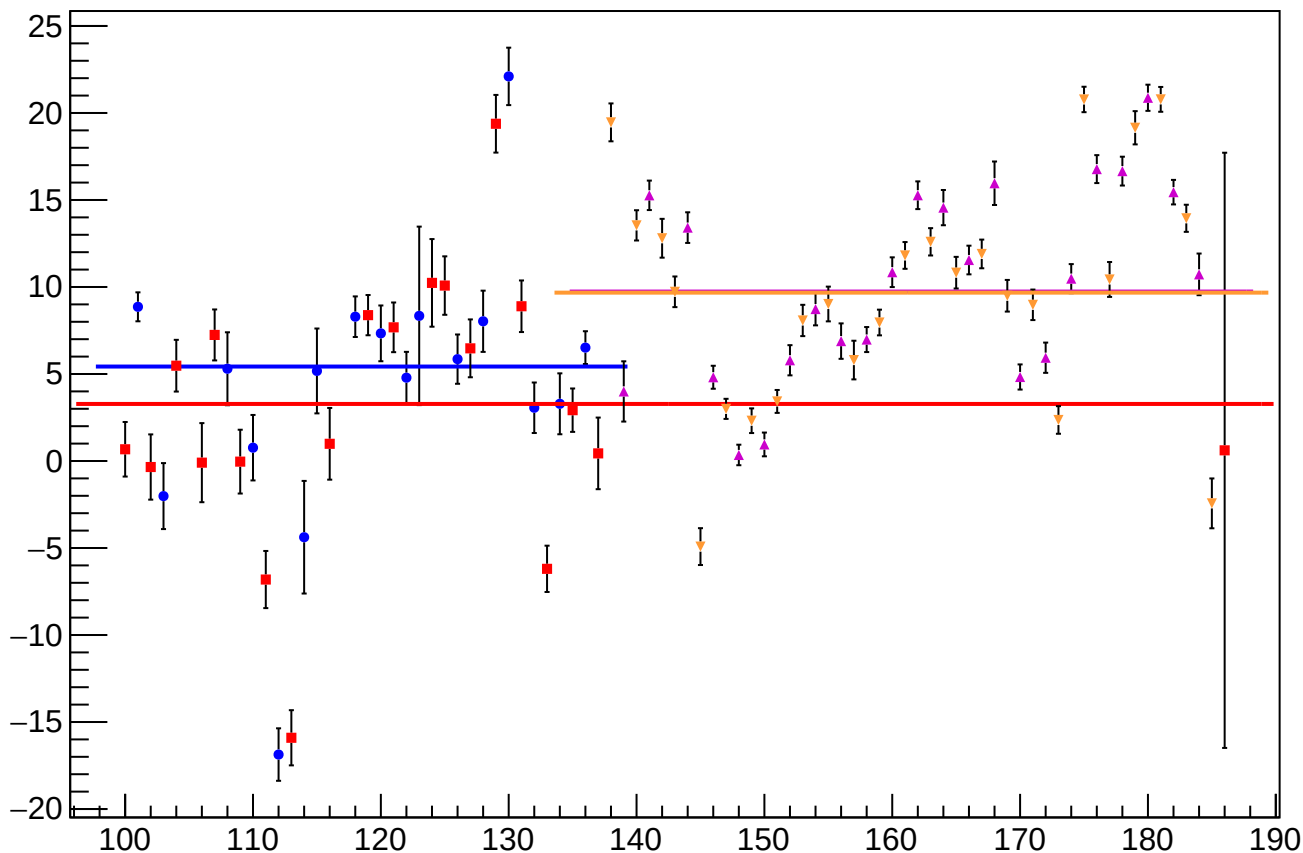
Right: 73.514+/-0.398  $\chi^2/\text{NDF}$ : 6781.3/36

In: 57.276+/-0.184  $\chi^2/\text{NDF}$ : 7185.8/39

Out: 56.798+/-0.181  $\chi^2/\text{NDF}$ : 9733.9/44

All: 57.034+/-0.129  $\chi^2/\text{NDF}$ : 16923.1/84

reg\_asym\_right\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 5.428 $\pm$ 0.361  $\chi^2$ /NDF: 384.2/16

Left Out: 9.675 $\pm$ 0.168  $\chi^2$ /NDF:1441.3/24

Right Out: 3.279 $\pm$ 0.366  $\chi^2$ /NDF: 425.1/19

Left In: 9.738 $\pm$ 0.172  $\chi^2$ /NDF:1191.1/22

Left: 9.706 $\pm$ 0.120  $\chi^2$ /NDF: 2632.6/47

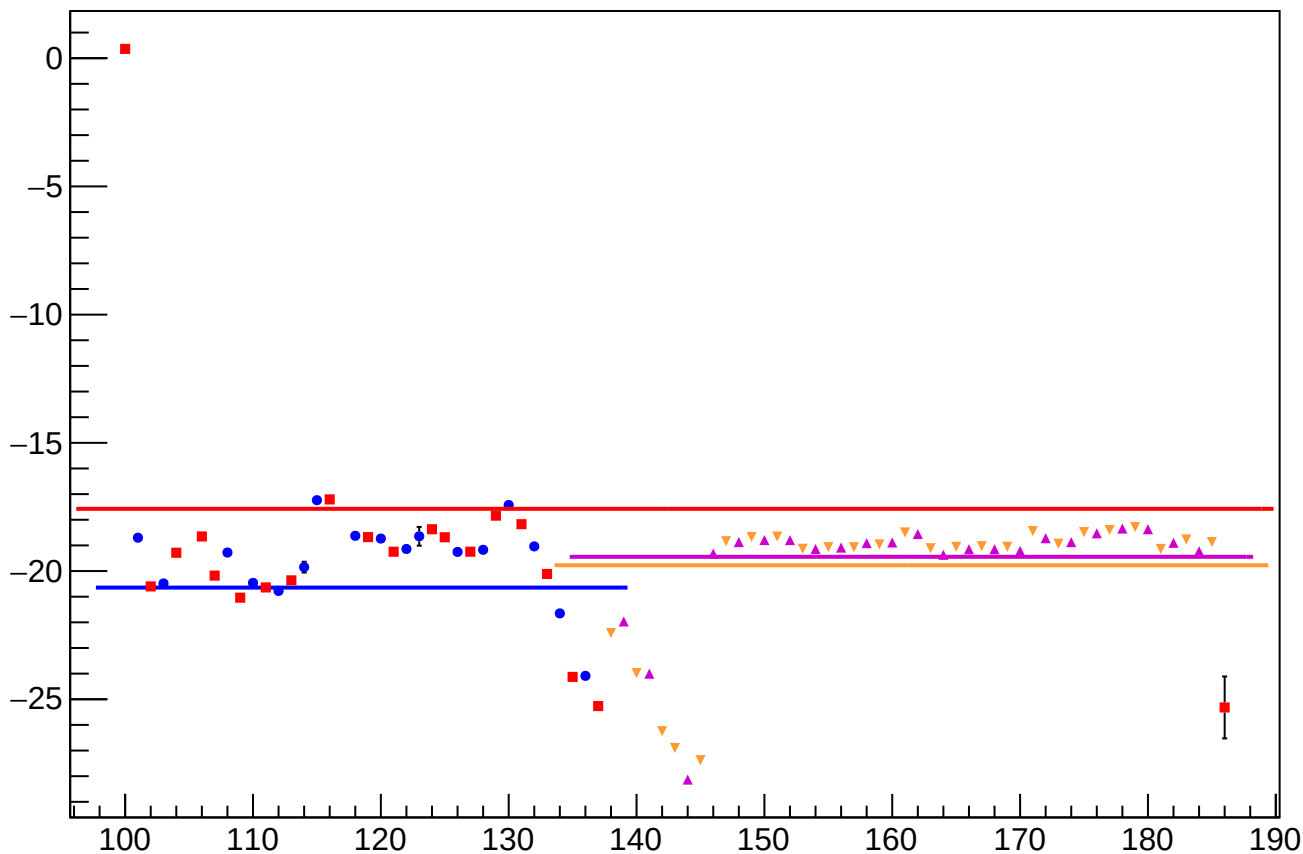
Right: 4.367 $\pm$ 0.257  $\chi^2$ /NDF: 826.8/36

In: 8.943 $\pm$ 0.155  $\chi^2$ /NDF:1691.5/39

Out: 8.562 $\pm$ 0.153  $\chi^2$ /NDF:2119.3/44

All: 8.749 $\pm$ 0.109  $\chi^2$ /NDF: 3813.9/84

reg\_asym\_right\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-20.645 \pm 0.019$   $\chi^2/\text{NDF}: 12462.7/16$

Left Out:  $-19.775 \pm 0.008$   $\chi^2/\text{NDF}: 91510.1/24$

Right Out:  $-17.573 \pm 0.018$   $\chi^2/\text{NDF}: 178359.2/19$

Left In:  $-19.445 \pm 0.008$   $\chi^2/\text{NDF}: 53124.1/22$

Left:  $-19.611 \pm 0.006$   $\chi^2/\text{NDF}: 145502.5/47$

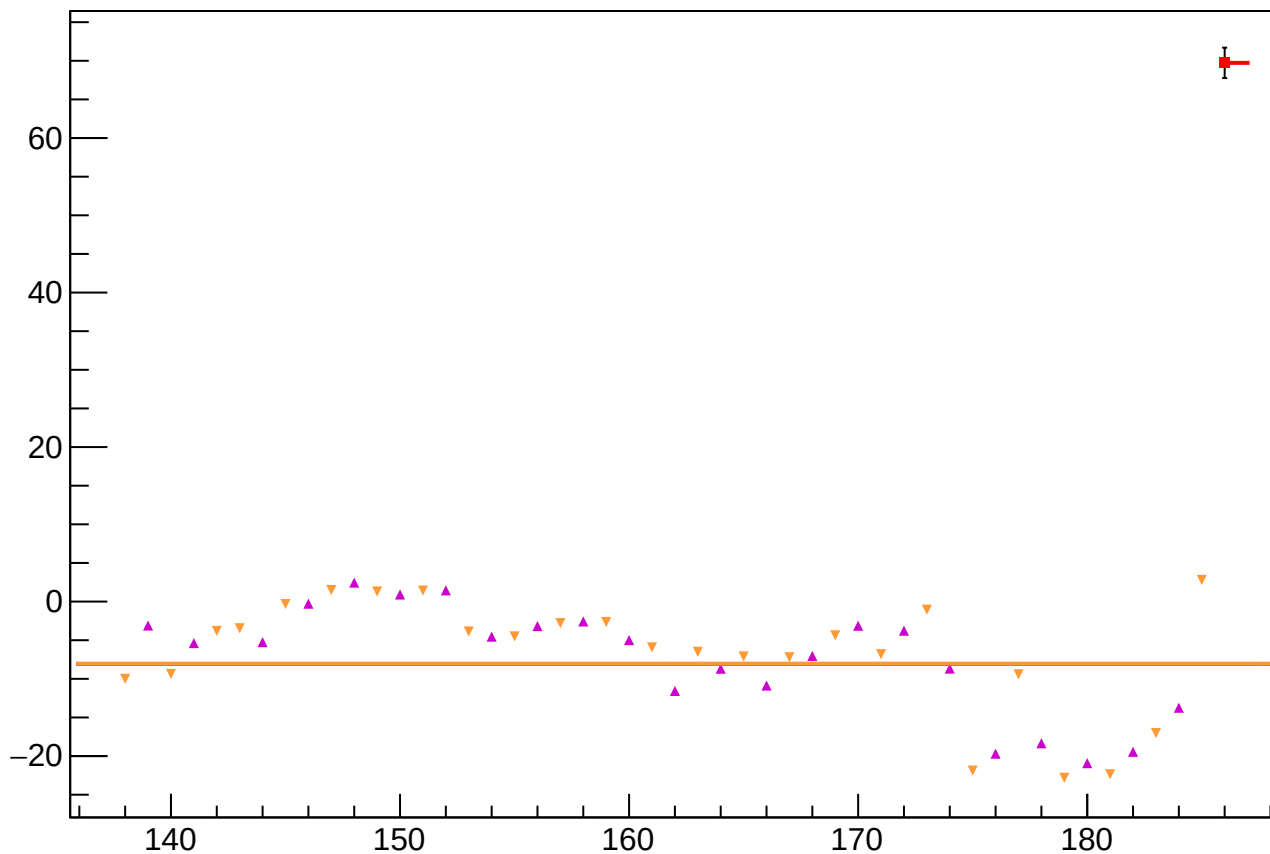
Right:  $-19.001 \pm 0.013$   $\chi^2/\text{NDF}: 204294.8/36$

In:  $-19.618 \pm 0.007$   $\chi^2/\text{NDF}: 68874.8/39$

Out:  $-19.422 \pm 0.007$   $\chi^2/\text{NDF}: 282370.6/44$

All:  $-19.518 \pm 0.005$   $\chi^2/\text{NDF}: 351608.6/84$

reg\_asym\_sam\_15\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -8.034+/-0.070  $\chi^2/\text{NDF}$ :12568.0/24

Right Out: 69.732+/-1.967  $\chi^2/\text{NDF}$ : 0.0/0

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

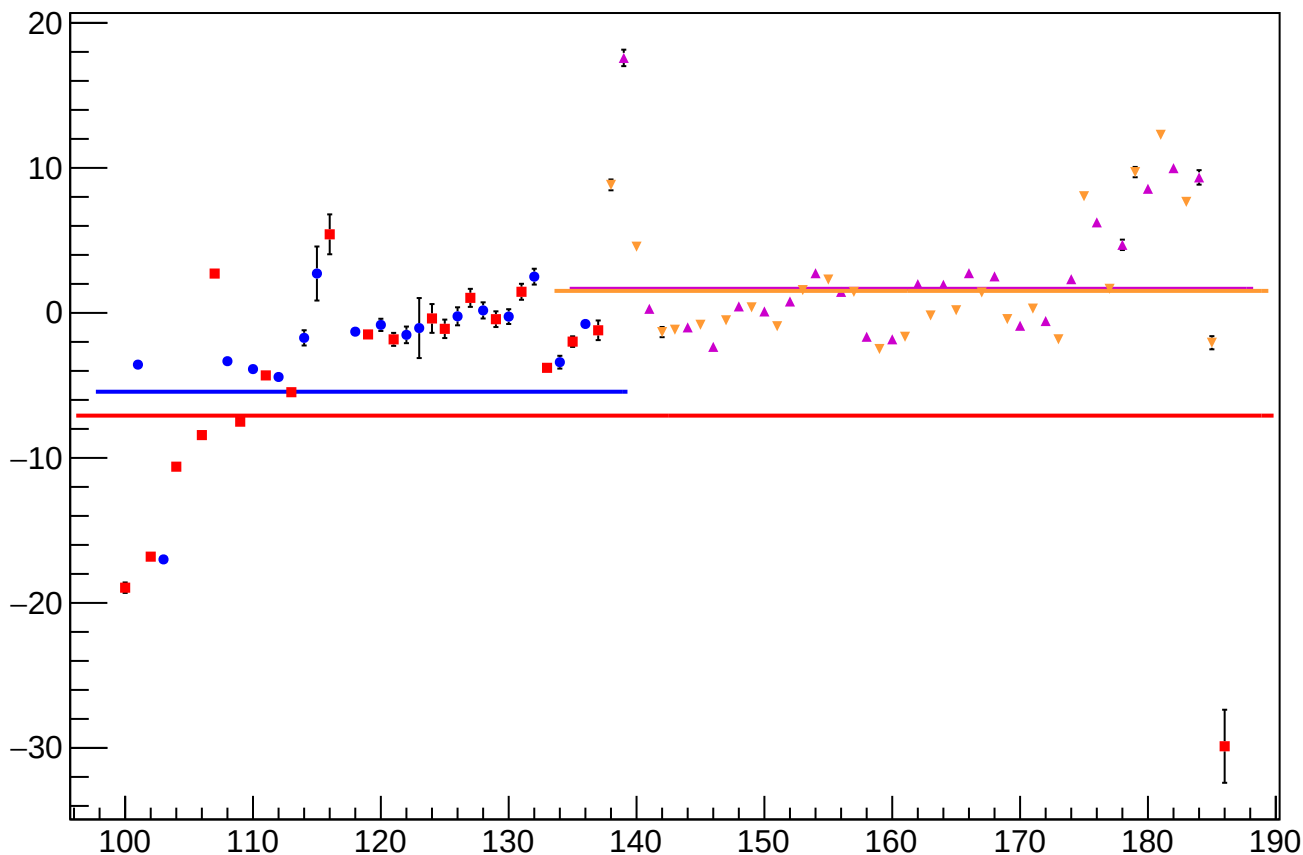
Right: 69.732+/-1.967  $\chi^2/\text{NDF}$ : 0.0/0

In: -8.078+/-0.072  $\chi^2/\text{NDF}$ :10541.6/22

Out: -7.935+/-0.070  $\chi^2/\text{NDF}$ :14129.2/25

All: -8.005+/-0.050  $\chi^2/\text{NDF}$ : 24672.8/48

reg\_asym\_sam\_15\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-5.435 \pm 0.055$   $\chi^2/\text{NDF}$ : 9226.6/16

Left Out:  $1.518 \pm 0.054$   $\chi^2/\text{NDF}$ : 4847.5/24

Right Out:  $-7.084 \pm 0.059$   $\chi^2/\text{NDF}$ : 12376.2/19

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

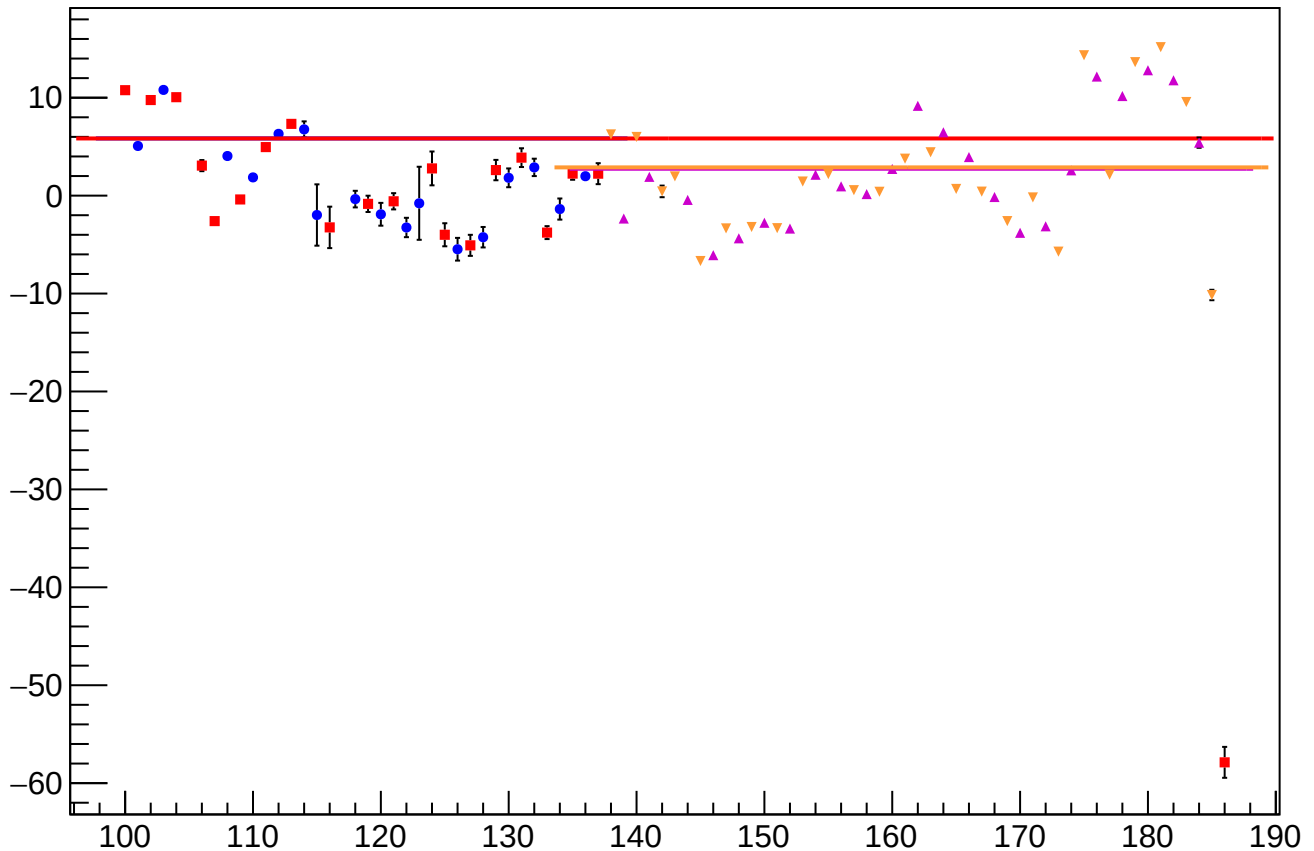
Right:  $-6.200 \pm 0.040$   $\chi^2/\text{NDF}$ : 22021.0/36

In:  $-1.994 \pm 0.039$   $\chi^2/\text{NDF}$ : 21368.8/39

Out:  $-2.429 \pm 0.040$   $\chi^2/\text{NDF}$ : 28714.2/44

All:  $-2.208 \pm 0.028$   $\chi^2/\text{NDF}$ : 50143.2/84

reg\_asym\_sam\_15\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 5.842 $\pm$ 0.090  $\chi^2$ /NDF: 1436.5/16

Left Out: 2.884 $\pm$ 0.070  $\chi^2$ /NDF: 8893.2/24

Right Out: 5.839 $\pm$ 0.093  $\chi^2$ /NDF: 4299.4/19

Left In: 2.745 $\pm$ 0.071  $\chi^2$ /NDF: 7183.1/22

Left: 2.816 $\pm$ 0.050  $\chi^2$ /NDF: 16078.2/47

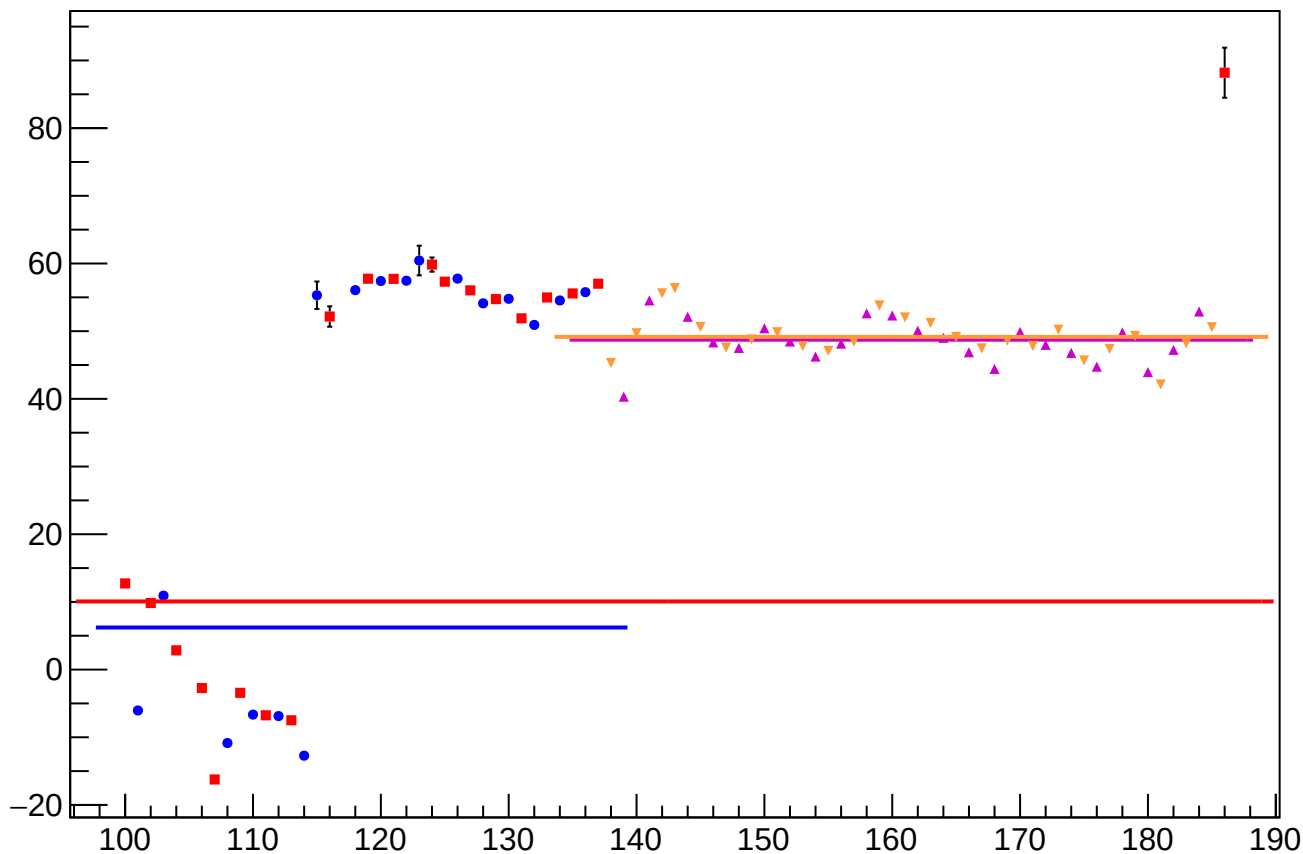
Right: 5.840 $\pm$ 0.065  $\chi^2$ /NDF: 5735.9/36

In: 3.947 $\pm$ 0.056  $\chi^2$ /NDF: 9348.7/39

Out: 3.955 $\pm$ 0.056  $\chi^2$ /NDF: 13833.6/44

All: 3.951 $\pm$ 0.040  $\chi^2$ /NDF: 23182.2/84

reg\_asym\_sam\_15\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 6.217+/-0.065  $\chi^2/\text{NDF}$ : 120600.0/16

Left Out: 49.163+/-0.062  $\chi^2/\text{NDF}$ :2259.9/24

Right Out: 10.067+/-0.070  $\chi^2/\text{NDF}$ : 122172.7/19

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: 8.002+/-0.047  $\chi^2/\text{NDF}$ : 244407.0/36

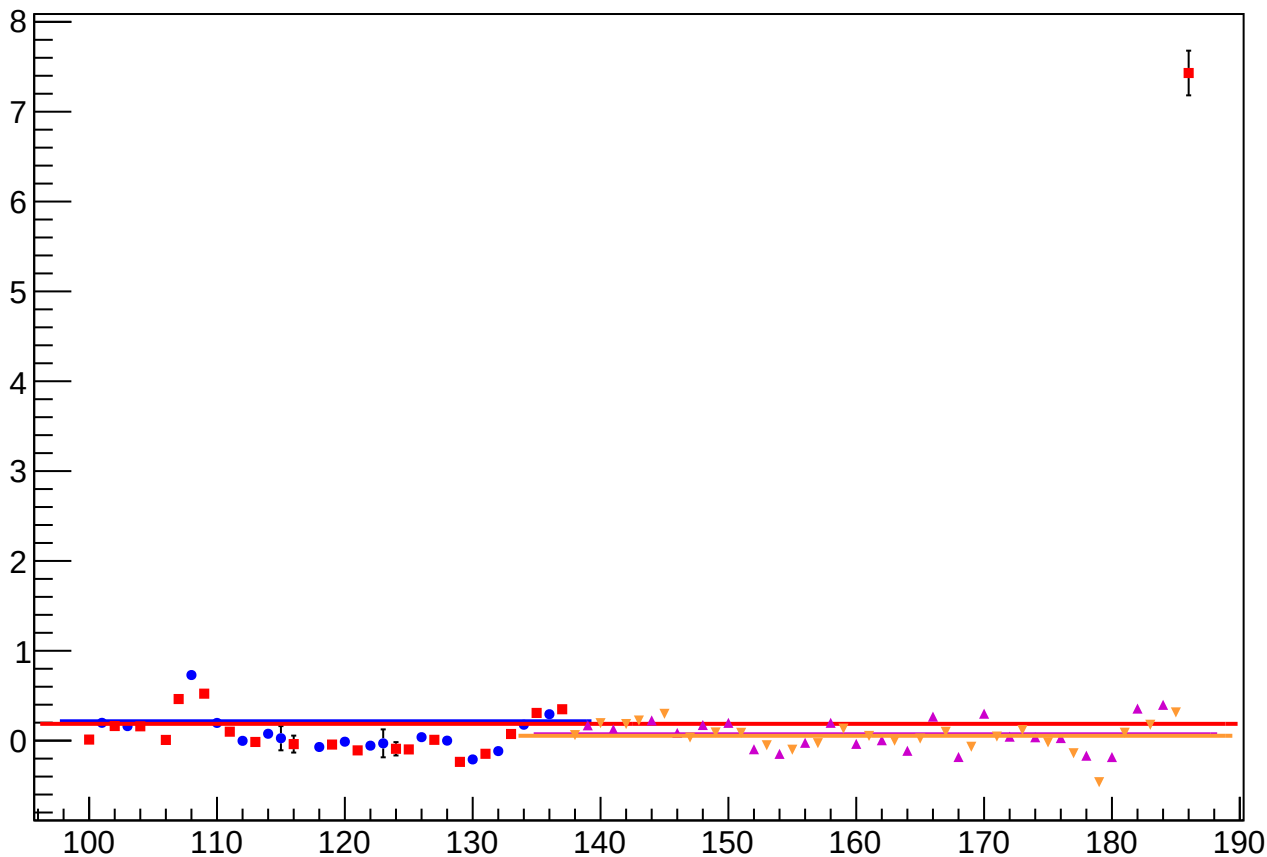
In: 27.842+/-0.045  $\chi^2/\text{NDF}$ :341306.7/39

Out: 31.989+/-0.046  $\chi^2/\text{NDF}$ :300579.3/44

All: 29.881+/-0.032  $\chi^2/\text{NDF}$ : 645975.3/84



reg\_asym\_sam\_15\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.215+/-0.003  $\chi^2/\text{NDF}$ : 3923.9/16

Left Out: 0.054+/-0.003  $\chi^2/\text{NDF}$ : 2379.8/24

Right Out: 0.187+/-0.003  $\chi^2/\text{NDF}$ : 3564.4/19

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

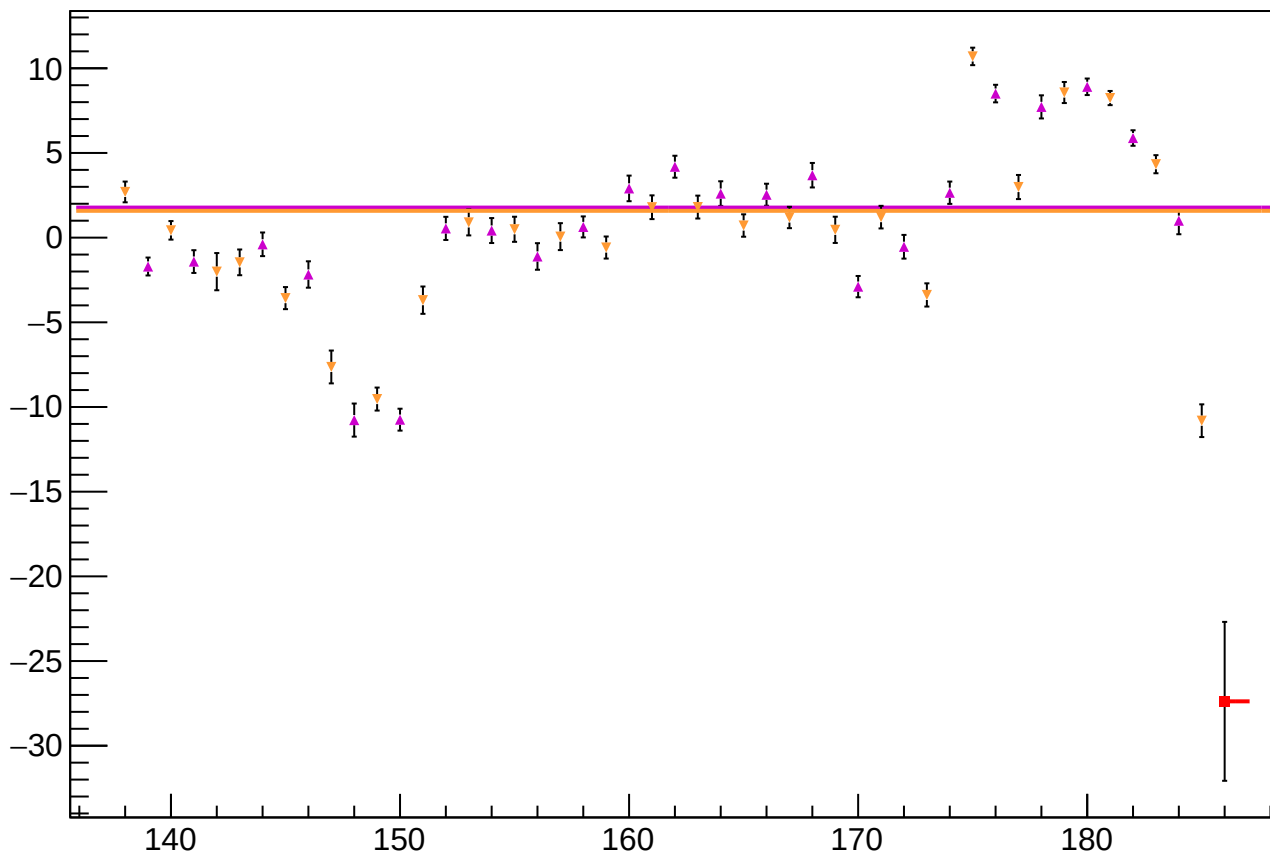
Right: 0.201+/-0.002  $\chi^2/\text{NDF}$ : 7542.6/36

In: 0.145+/-0.002  $\chi^2/\text{NDF}$ : 8480.6/39

Out: 0.124+/-0.002  $\chi^2/\text{NDF}$ : 7104.5/44

All: 0.134+/-0.001  $\chi^2/\text{NDF}$ : 15644.9/84

reg\_asym\_sam\_15\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Left Out: 1.584 $\pm$ 0.133  $\chi^2$ /NDF:1458.8/24

Right Out: -27.380 $\pm$ 4.692  $\chi^2$ /NDF: 0.0/0

Left In: 1.774 $\pm$ 0.135  $\chi^2$ /NDF:1297.3/22

Left: 1.677 $\pm$ 0.095  $\chi^2$ /NDF: 2757.2/47

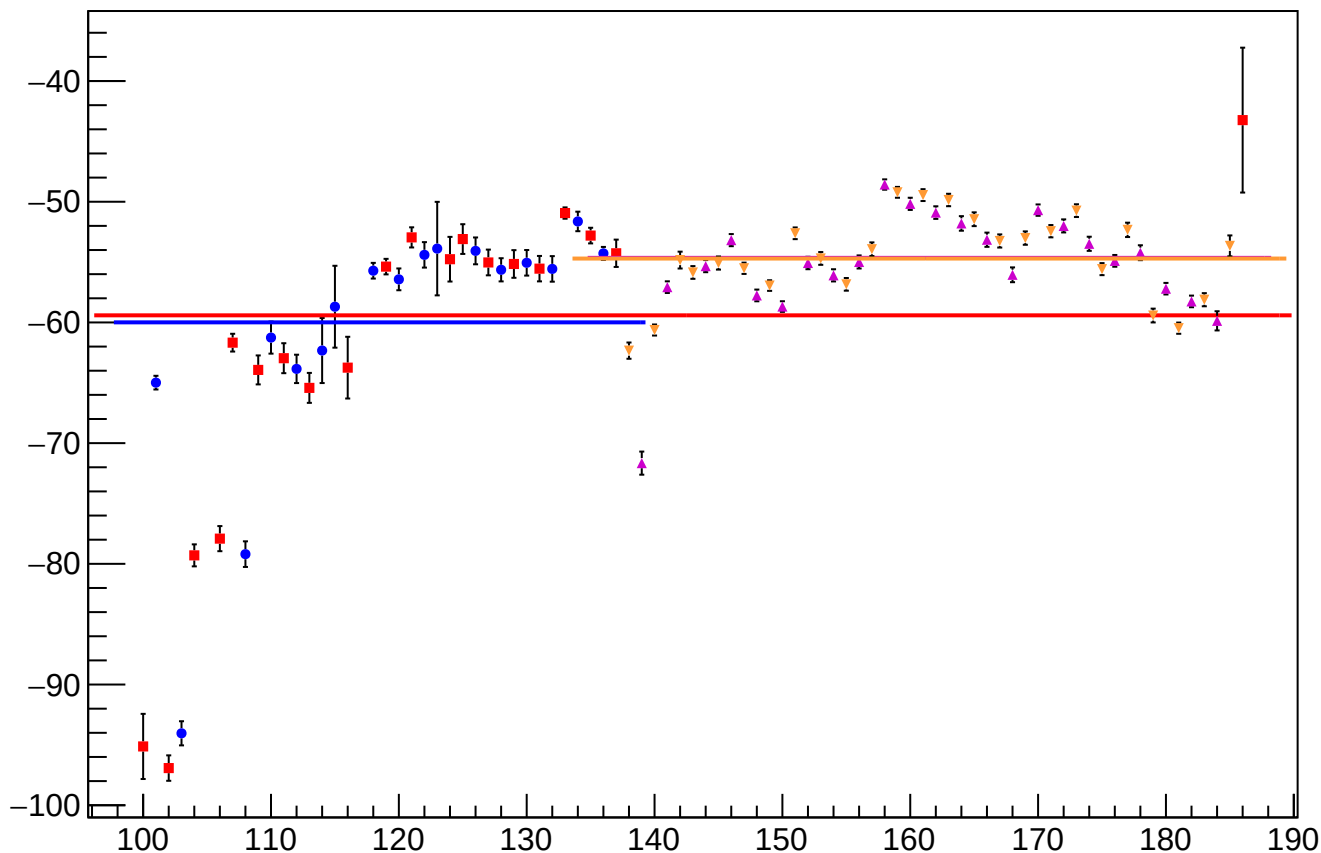
Right: -27.380 $\pm$ 4.692  $\chi^2$ /NDF: 0.0/0

In: 1.774 $\pm$ 0.135  $\chi^2$ /NDF:1297.3/22

Out: 1.561 $\pm$ 0.133  $\chi^2$ /NDF:1496.9/25

All: 1.665 $\pm$ 0.095  $\chi^2$ /NDF: 2795.5/48

reg\_asym\_sam\_15\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: -59.993 $\pm$ 0.225  $\chi^2$ /NDF: 1973.4/16

Left Out: -54.707 $\pm$ 0.106  $\chi^2$ /NDF:1126.0/24

Right Out: -59.411 $\pm$ 0.212  $\chi^2$ /NDF: 2927.4/19

Left In: -54.650 $\pm$ 0.110  $\chi^2$ /NDF:1077.1/22

Left: -54.680 $\pm$ 0.076  $\chi^2$ /NDF: 2203.2/47

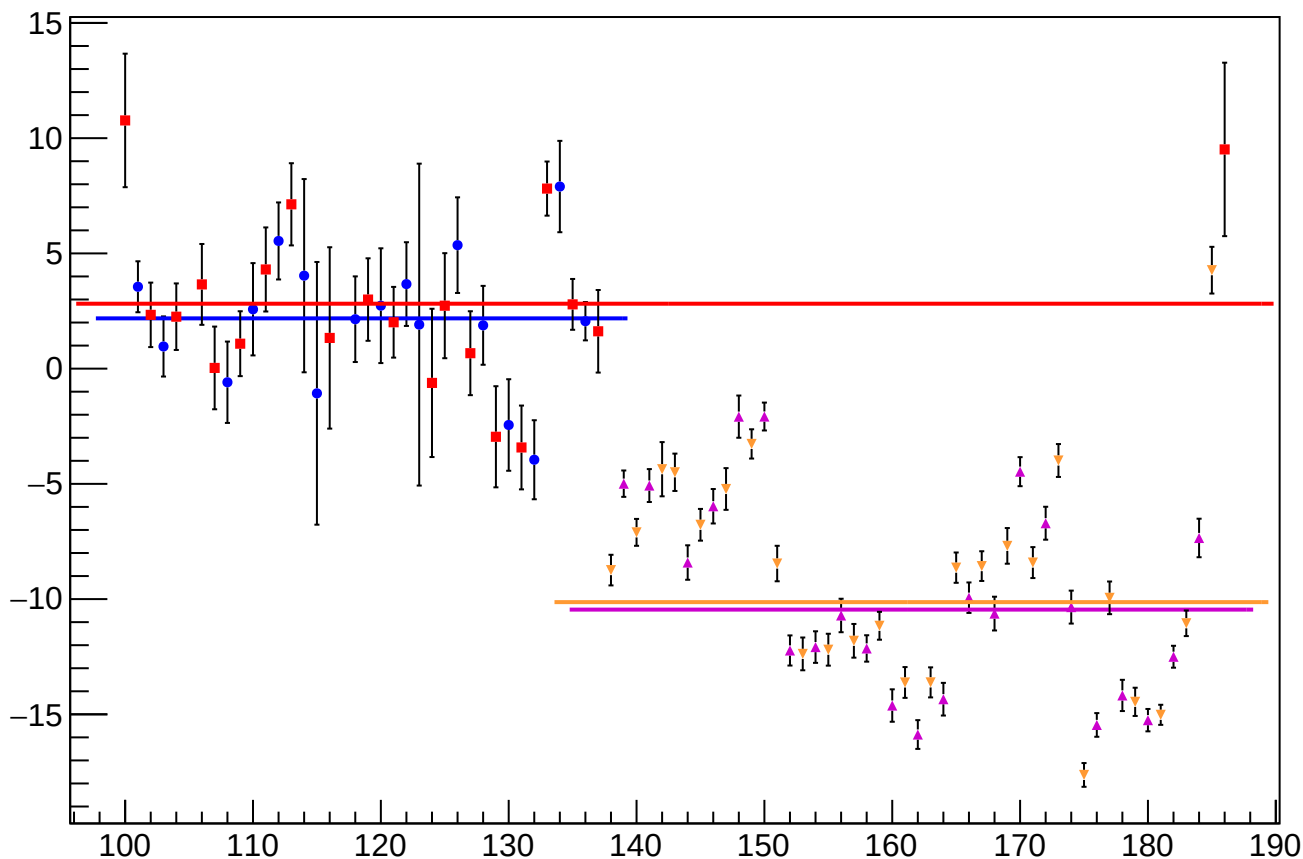
Right: -59.685 $\pm$ 0.154  $\chi^2$ /NDF: 4904.4/36

In: -55.676 $\pm$ 0.099  $\chi^2$ /NDF:3505.4/39

Out: -55.643 $\pm$ 0.095  $\chi^2$ /NDF:4447.7/44

All: -55.659 $\pm$ 0.068  $\chi^2$ /NDF: 7953.1/84

reg\_asym\_sam\_15\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $2.181 \pm 0.406$   $\chi^2/\text{NDF}: 39.2/16$

Left Out:  $-10.131 \pm 0.133$   $\chi^2/\text{NDF}: 1055.4/24$

Right Out:  $2.817 \pm 0.386$   $\chi^2/\text{NDF}: 61.8/19$

Left In:  $-10.456 \pm 0.135$   $\chi^2/\text{NDF}: 1002.7/22$

Left:  $-10.291 \pm 0.095$   $\chi^2/\text{NDF}: 2061.1/47$

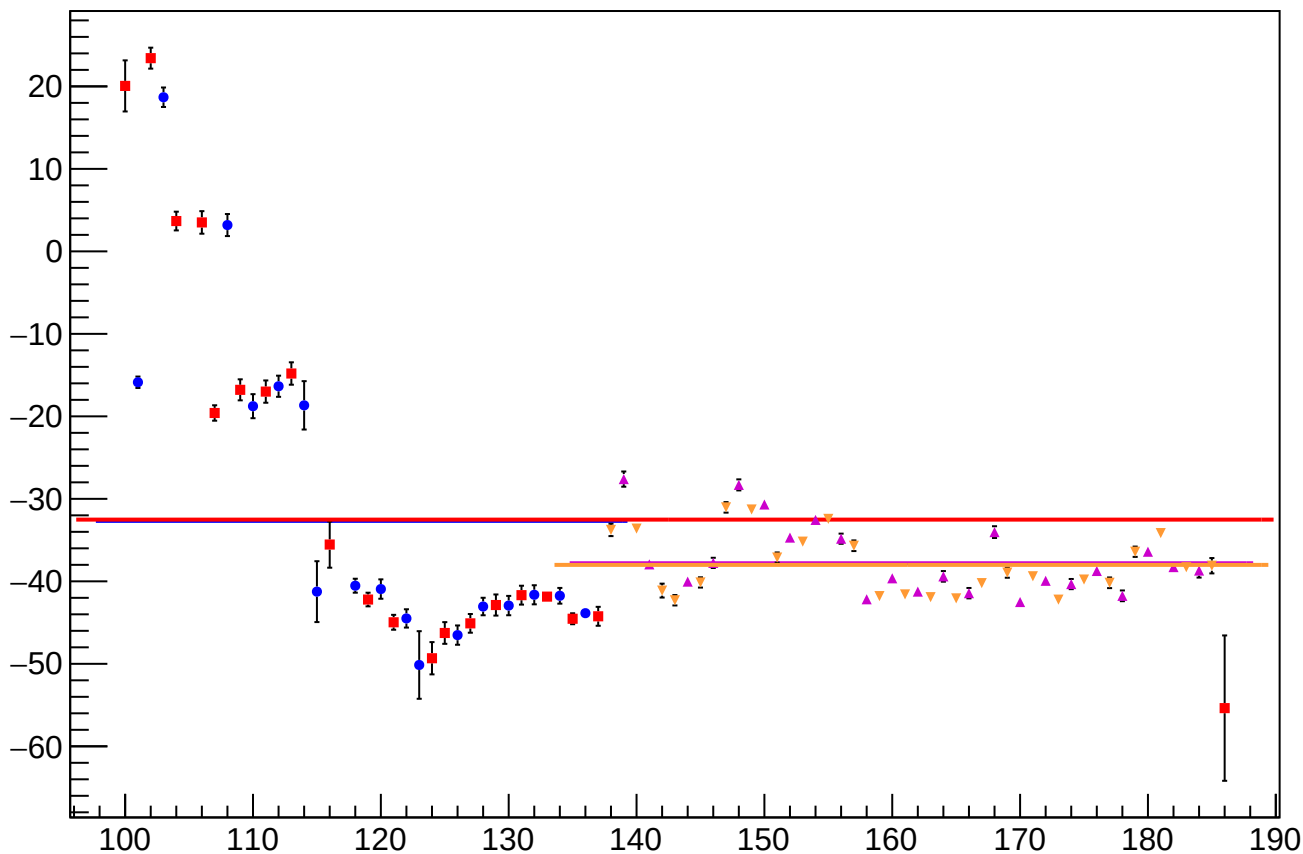
Right:  $2.515 \pm 0.280$   $\chi^2/\text{NDF}: 102.3/36$

In:  $-9.204 \pm 0.128$   $\chi^2/\text{NDF}: 1914.3/39$

Out:  $-8.763 \pm 0.126$   $\chi^2/\text{NDF}: 2121.6/44$

All:  $-8.980 \pm 0.090$   $\chi^2/\text{NDF}: 4042.0/84$

reg\_asym\_sam\_15\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-32.671 \pm 0.256$   $\chi^2/\text{NDF}: 4642.6/16$

Left Out:  $-38.006 \pm 0.119$   $\chi^2/\text{NDF}: 946.0/24$

Right Out:  $-32.518 \pm 0.244$   $\chi^2/\text{NDF}: 6049.7/19$

Left In:  $-37.809 \pm 0.122$   $\chi^2/\text{NDF}: 1039.9/22$

Left:  $-37.910 \pm 0.085$   $\chi^2/\text{NDF}: 1987.2/47$

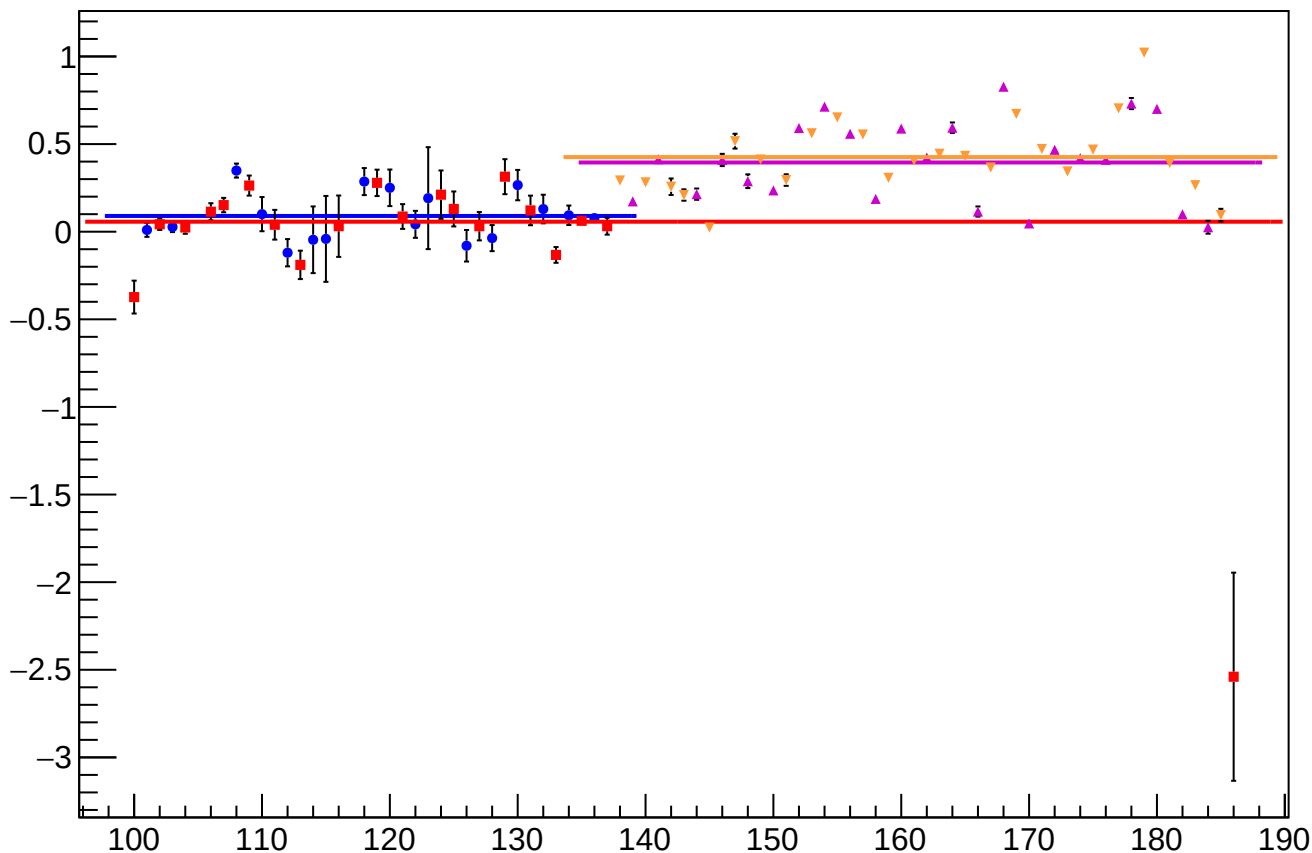
Right:  $-32.591 \pm 0.177$   $\chi^2/\text{NDF}: 10692.5/36$

In:  $-36.854 \pm 0.110$   $\chi^2/\text{NDF}: 6010.4/39$

Out:  $-36.957 \pm 0.107$   $\chi^2/\text{NDF}: 7404.1/44$

All:  $-36.907 \pm 0.077$   $\chi^2/\text{NDF}: 13415.0/84$

reg\_asym\_sam\_15\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $0.090 \pm 0.013$   $\chi^2/\text{NDF}$ : 79.1/16

Left Out:  $0.426 \pm 0.005$   $\chi^2/\text{NDF}$ : 1303.7/24

Right Out:  $0.057 \pm 0.012$   $\chi^2/\text{NDF}$ : 106.1/19

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

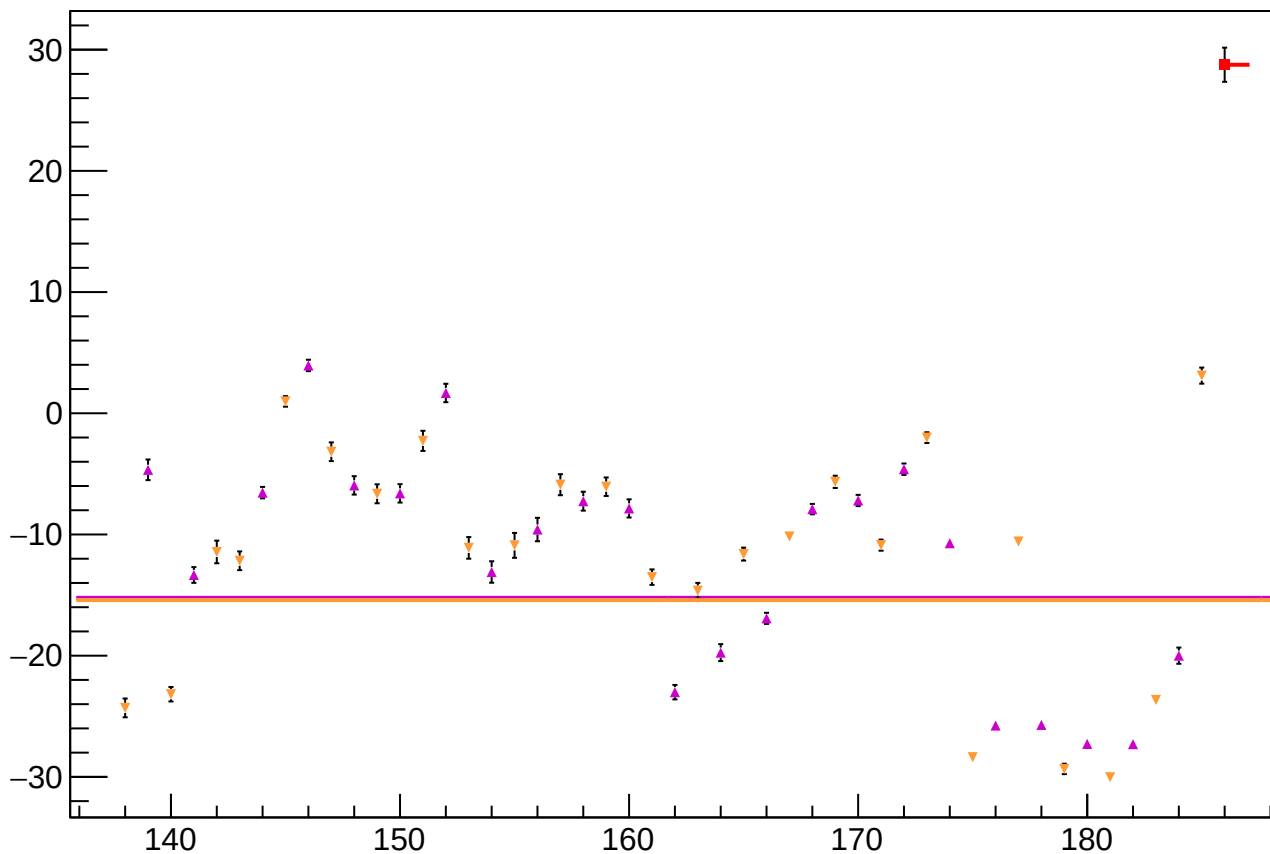
Right:  $0.073 \pm 0.009$   $\chi^2/\text{NDF}$ : 188.7/36

In:  $0.348 \pm 0.005$   $\chi^2/\text{NDF}$ : 2362.5/39

Out:  $0.366 \pm 0.005$   $\chi^2/\text{NDF}$ : 2177.7/44

All:  $0.357 \pm 0.004$   $\chi^2/\text{NDF}$ : 4546.3/84

reg\_asym\_sam\_37\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -15.413+/-0.105  $\chi^2/\text{NDF}$ :10509.1/24

Right Out: 28.756+/-1.409  $\chi^2/\text{NDF}$ : 0.0/0

Left In: -15.229+/-0.107  $\chi^2/\text{NDF}$ :8657.3/22

Left: -15.322+/-0.075  $\chi^2/\text{NDF}$ : 19167.9/47

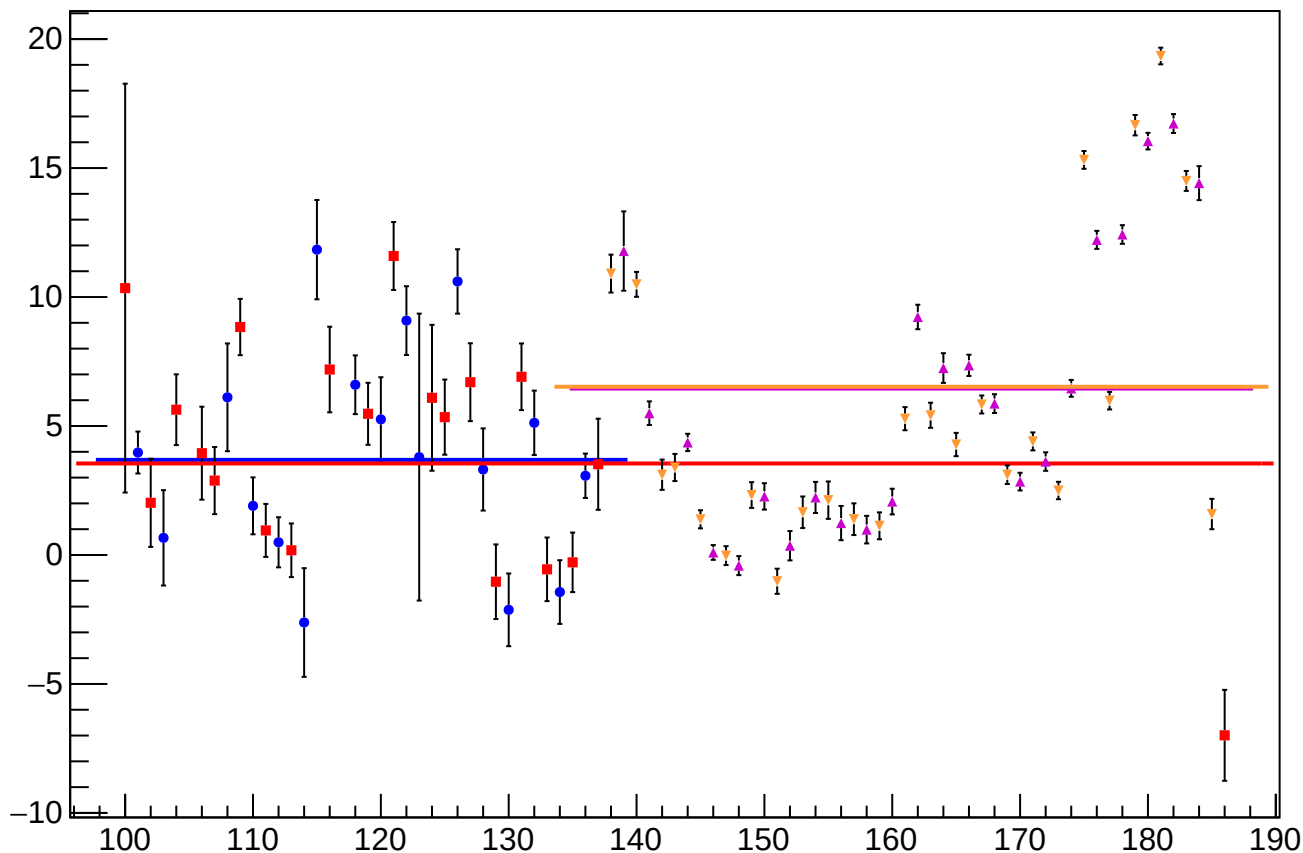
Right: 28.756+/-1.409  $\chi^2/\text{NDF}$ : 0.0/0

In: -15.229+/-0.107  $\chi^2/\text{NDF}$ :8657.3/22

Out: -15.168+/-0.105  $\chi^2/\text{NDF}$ :11485.7/25

All: -15.198+/-0.075  $\chi^2/\text{NDF}$ : 20143.2/48

reg\_asym\_sam\_37\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $3.687 \pm 0.311$   $\chi^2/\text{NDF}$ : 135.1/16

Left Out:  $6.521 \pm 0.085$   $\chi^2/\text{NDF}$ : 4985.2/24

Right Out:  $3.547 \pm 0.312$   $\chi^2/\text{NDF}$ : 170.6/19

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:  $3.617 \pm 0.220$   $\chi^2/\text{NDF}$ : 305.8/36

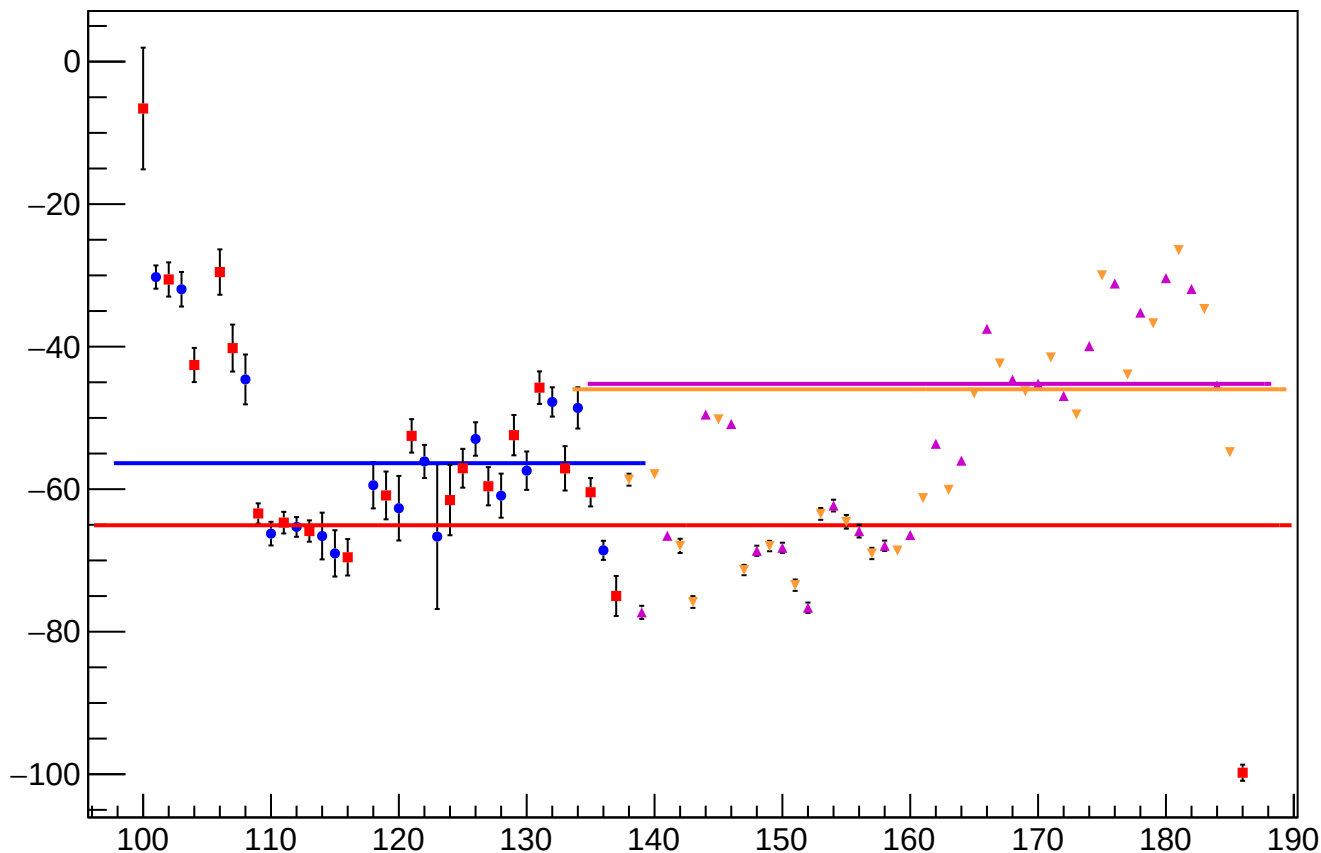
In:  $6.255 \pm 0.083$   $\chi^2/\text{NDF}$ : 4156.6/39

Out:  $6.313 \pm 0.082$   $\chi^2/\text{NDF}$ : 5240.5/44

All:  $6.284 \pm 0.058$   $\chi^2/\text{NDF}$ : 9397.3/84



reg\_asym\_sam\_37\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-56.351 \pm 0.544$   $\chi^2/\text{NDF}$ : 587.4/16

Left Out:  $-45.982 \pm 0.106$   $\chi^2/\text{NDF}$ : 17360.1/24

Right Out:  $-65.062 \pm 0.485$   $\chi^2/\text{NDF}$ : 1627.6/19

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

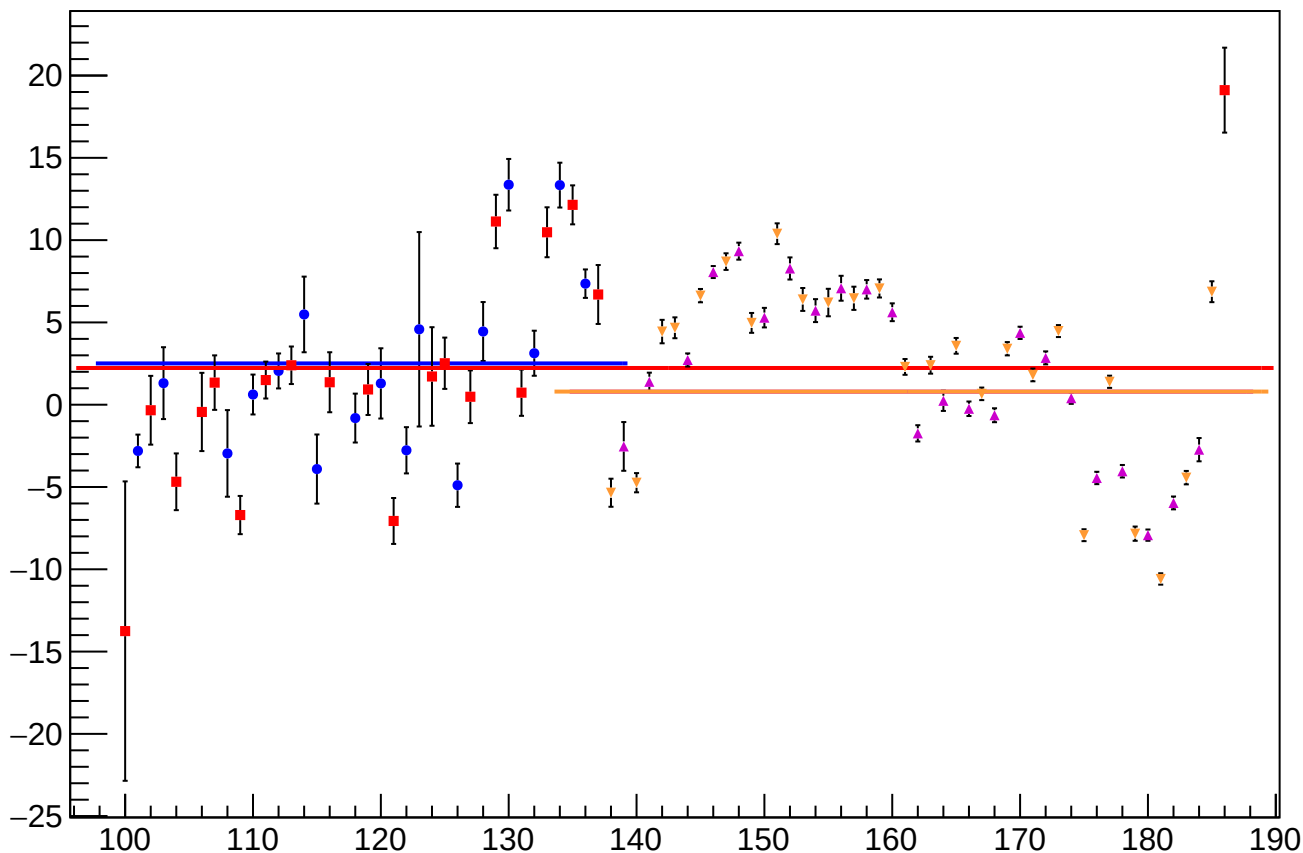
Right:  $-61.206 \pm 0.362$   $\chi^2/\text{NDF}$ : 2357.7/36

In:  $-45.637 \pm 0.105$   $\chi^2/\text{NDF}$ : 16590.1/39

Out:  $-46.855 \pm 0.104$   $\chi^2/\text{NDF}$ : 20463.8/44

All:  $-46.254 \pm 0.074$   $\chi^2/\text{NDF}$ : 37121.9/84

reg\_asym\_sam\_37\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $2.509 \pm 0.348$   $\chi^2/\text{NDF}$ : 242.2/16

Left Out:  $0.797 \pm 0.096$   $\chi^2/\text{NDF}$ : 3760.0/24

Right Out:  $2.231 \pm 0.352$   $\chi^2/\text{NDF}$ : 308.2/19

Left In:  $0.792 \pm 0.097$   $\chi^2/\text{NDF}$ : 2692.5/22

Left:  $0.795 \pm 0.068$   $\chi^2/\text{NDF}$ : 6452.5/47

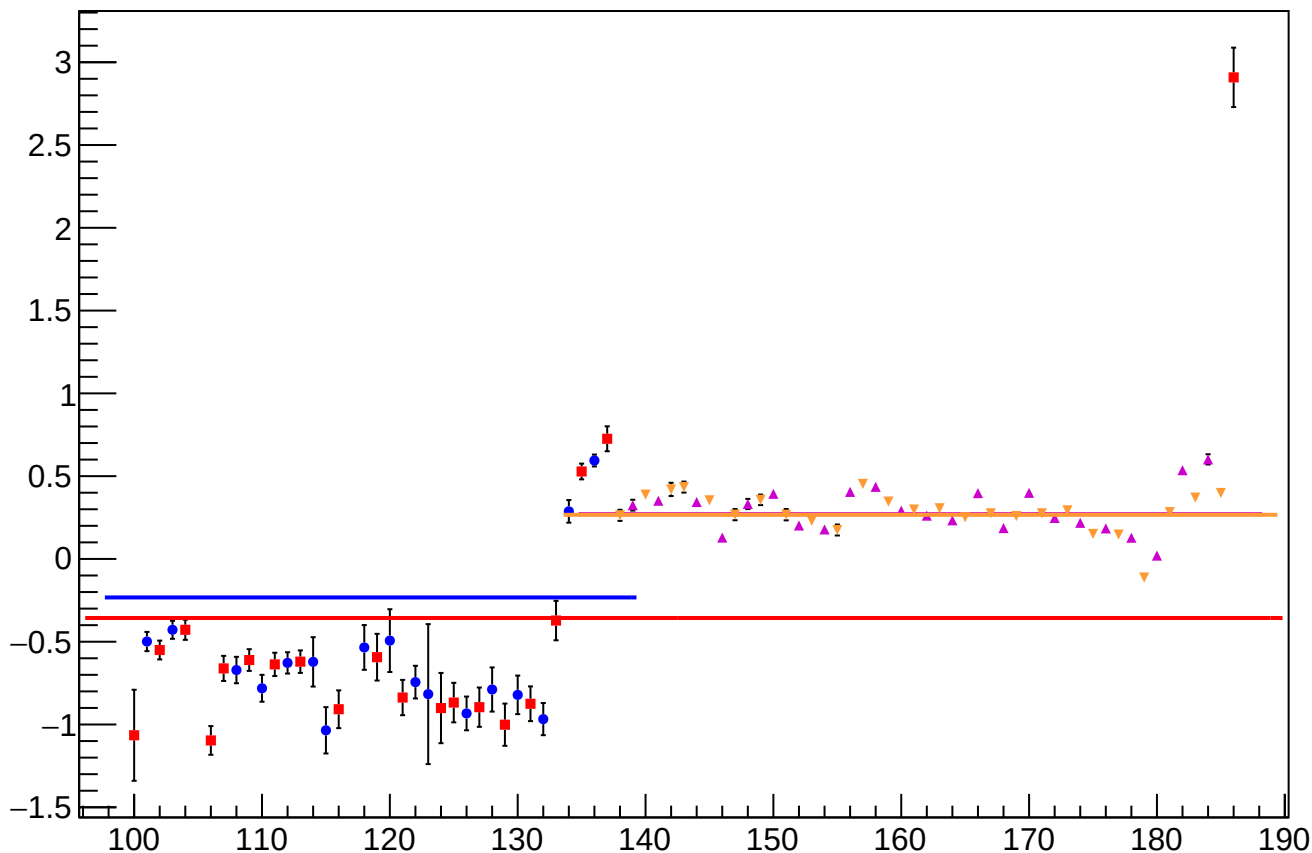
Right:  $2.372 \pm 0.247$   $\chi^2/\text{NDF}$ : 550.7/36

In:  $0.915 \pm 0.093$   $\chi^2/\text{NDF}$ : 2957.4/39

Out:  $0.896 \pm 0.092$   $\chi^2/\text{NDF}$ : 4083.6/44

All:  $0.905 \pm 0.065$   $\chi^2/\text{NDF}$ : 7041.0/84

reg\_asym\_sam\_37\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.233 \pm 0.019$   $\chi^2/\text{NDF}$ : 957.0/16

Left Out:  $0.267 \pm 0.004$   $\chi^2/\text{NDF}$ : 699.8/24

Right Out:  $-0.357 \pm 0.019$   $\chi^2/\text{NDF}$ : 1179.7/19

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

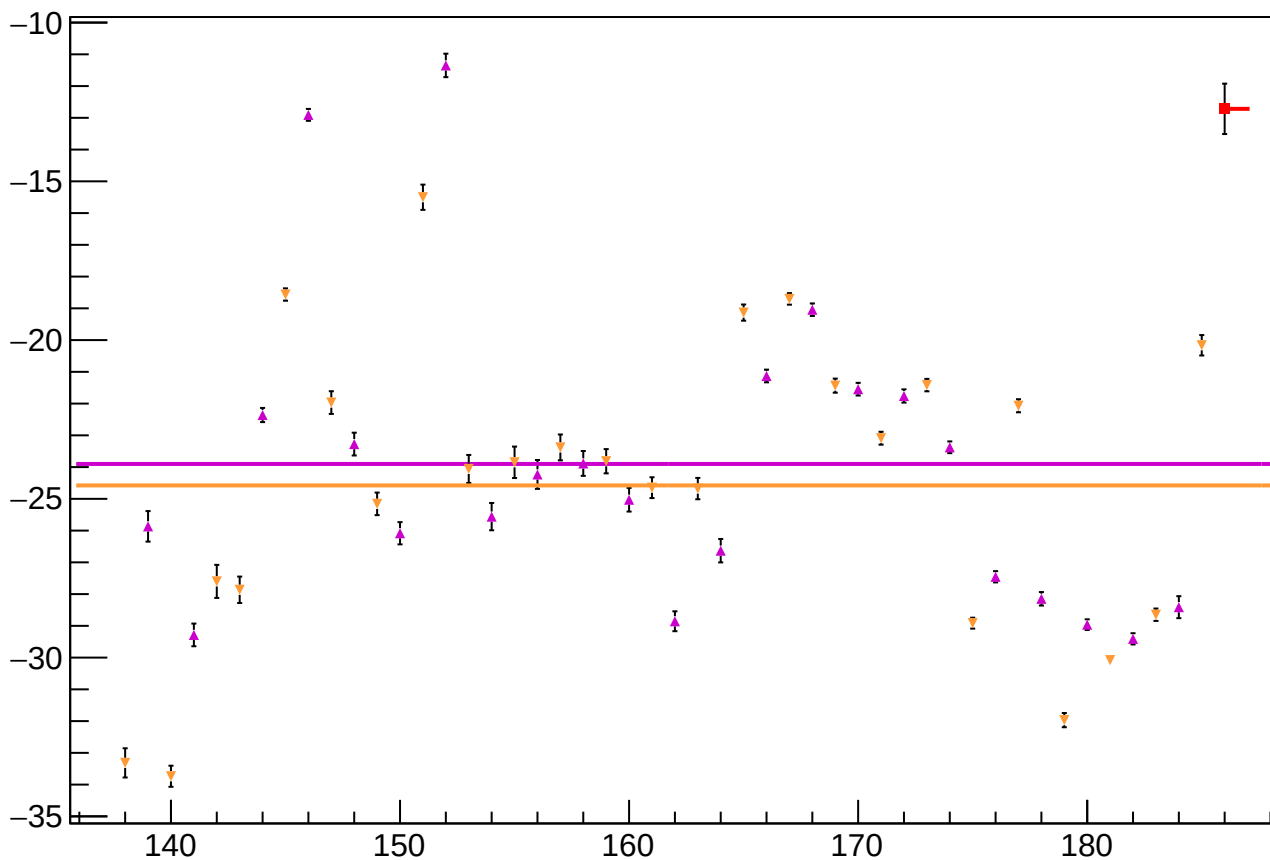
Right:  $-0.295 \pm 0.013$   $\chi^2/\text{NDF}$ : 2158.2/36

In:  $0.244 \pm 0.004$   $\chi^2/\text{NDF}$ : 2596.8/39

Out:  $0.235 \pm 0.004$   $\chi^2/\text{NDF}$ : 2911.8/44

All:  $0.240 \pm 0.003$   $\chi^2/\text{NDF}$ : 5510.8/84

reg\_asym\_sam\_37\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 0.0/0$

Left Out:  $-24.577 \pm 0.051$   $\chi^2/\text{NDF}: 8590.4/24$

Right Out:  $-12.717 \pm 0.794$   $\chi^2/\text{NDF}: 0.0/0$

Left In:  $-23.901 \pm 0.051$   $\chi^2/\text{NDF}: 9154.9/22$

Left:  $-24.240 \pm 0.036$   $\chi^2/\text{NDF}: 17833.1/47$

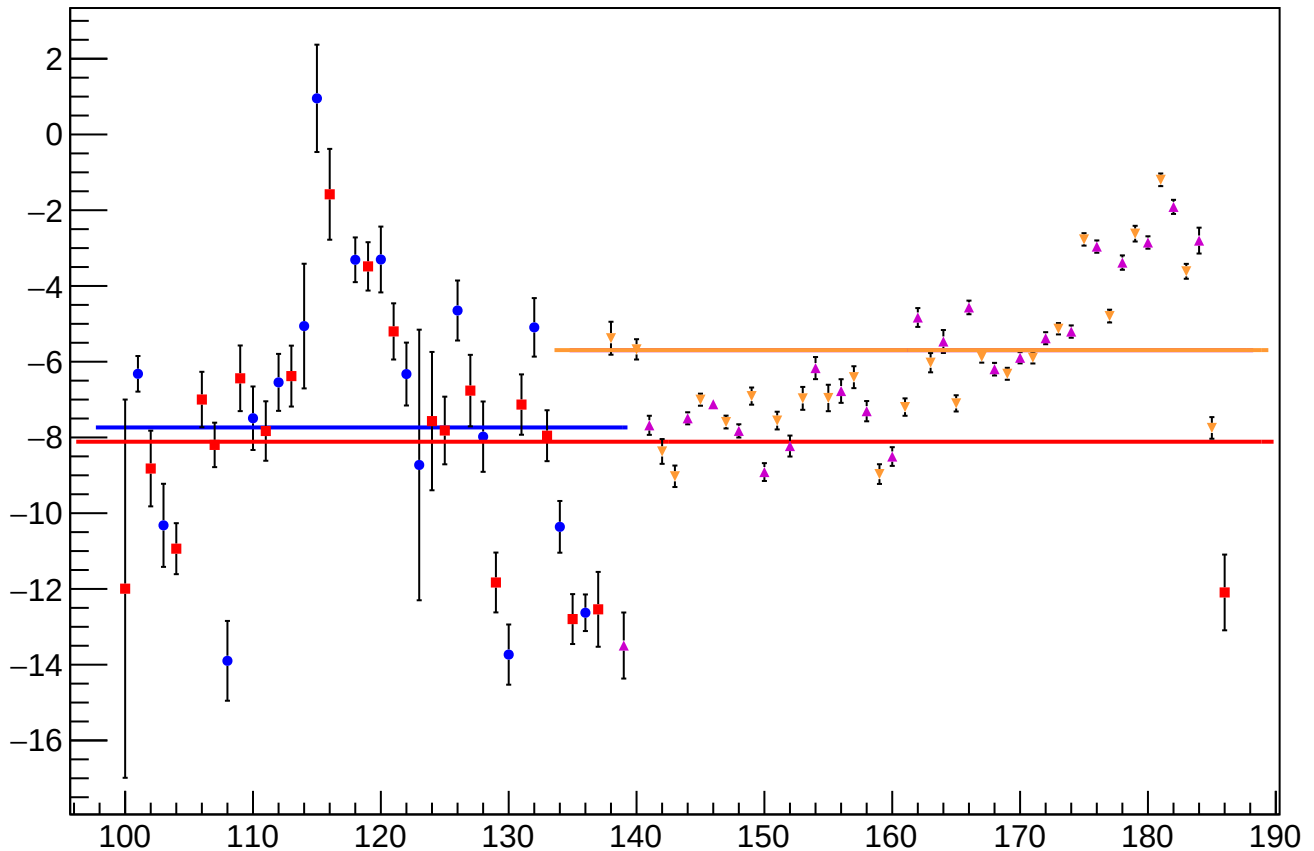
Right:  $-12.717 \pm 0.794$   $\chi^2/\text{NDF}: 0.0/0$

In:  $-23.901 \pm 0.051$   $\chi^2/\text{NDF}: 9154.9/22$

Out:  $-24.529 \pm 0.051$   $\chi^2/\text{NDF}: 8812.8/25$

All:  $-24.216 \pm 0.036$   $\chi^2/\text{NDF}: 18043.5/48$

reg\_asym\_sam\_37\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-7.736 \pm 0.187$   $\chi^2/\text{NDF}$ : 378.1/16

Left Out:  $-5.694 \pm 0.041$   $\chi^2/\text{NDF}$ : 2258.3/24

Right Out:  $-8.113 \pm 0.183$   $\chi^2/\text{NDF}$ : 239.5/19

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

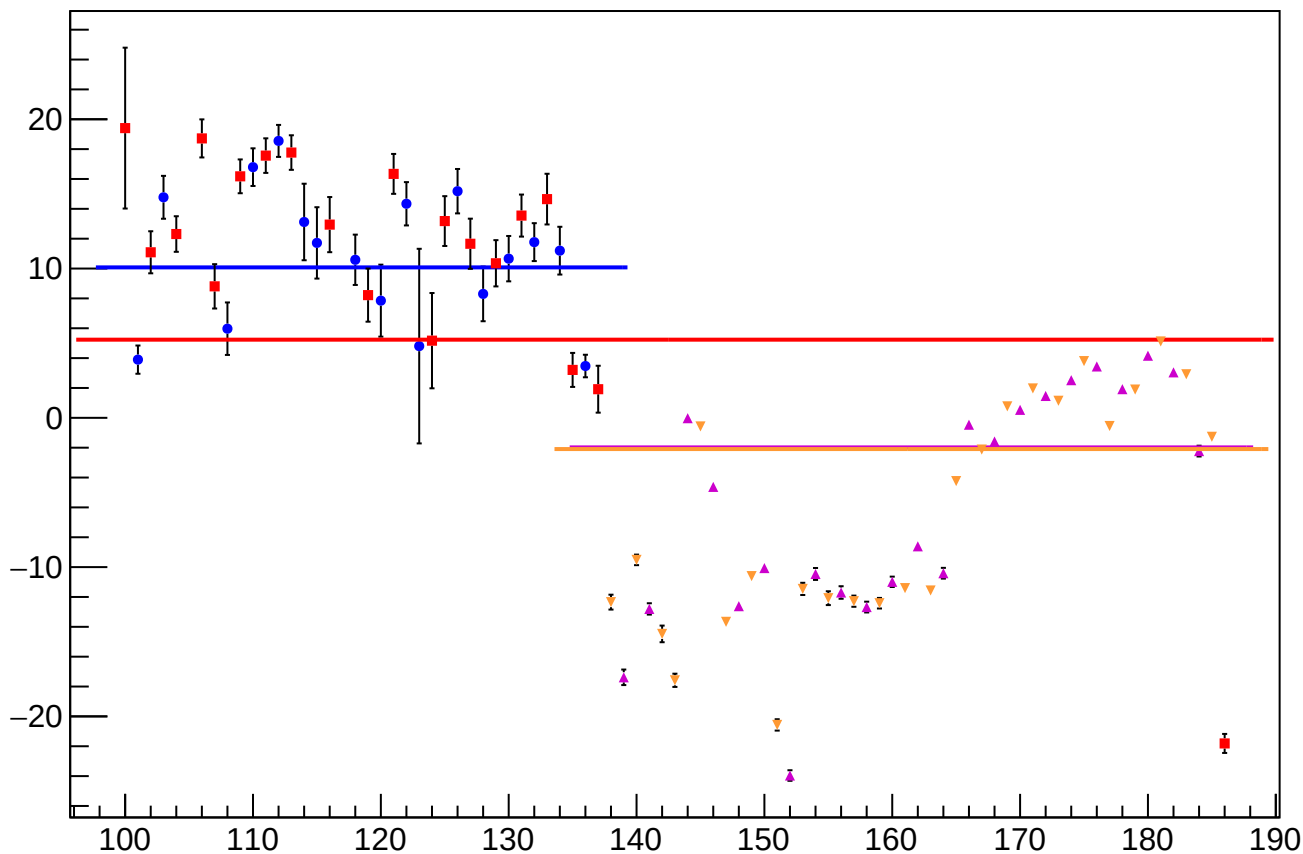
Right:  $-7.929 \pm 0.131$   $\chi^2/\text{NDF}$ : 619.7/36

In:  $-5.788 \pm 0.040$   $\chi^2/\text{NDF}$ : 2801.0/39

Out:  $-5.810 \pm 0.040$   $\chi^2/\text{NDF}$ : 2664.2/44

All:  $-5.799 \pm 0.028$   $\chi^2/\text{NDF}$ : 5465.3/84

reg\_asym\_sam\_37\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $10.078 \pm 0.339$   $\chi^2/\text{NDF}: 253.6/16$

Left Out:  $-2.092 \pm 0.051$   $\chi^2/\text{NDF}: 16305.3/24$

Right Out:  $5.236 \pm 0.295$   $\chi^2/\text{NDF}: 2514.1/19$

Left In:  $-1.980 \pm 0.051$   $\chi^2/\text{NDF}: 15382.3/22$

Left:  $-2.036 \pm 0.036$   $\chi^2/\text{NDF}: 31690.0/47$

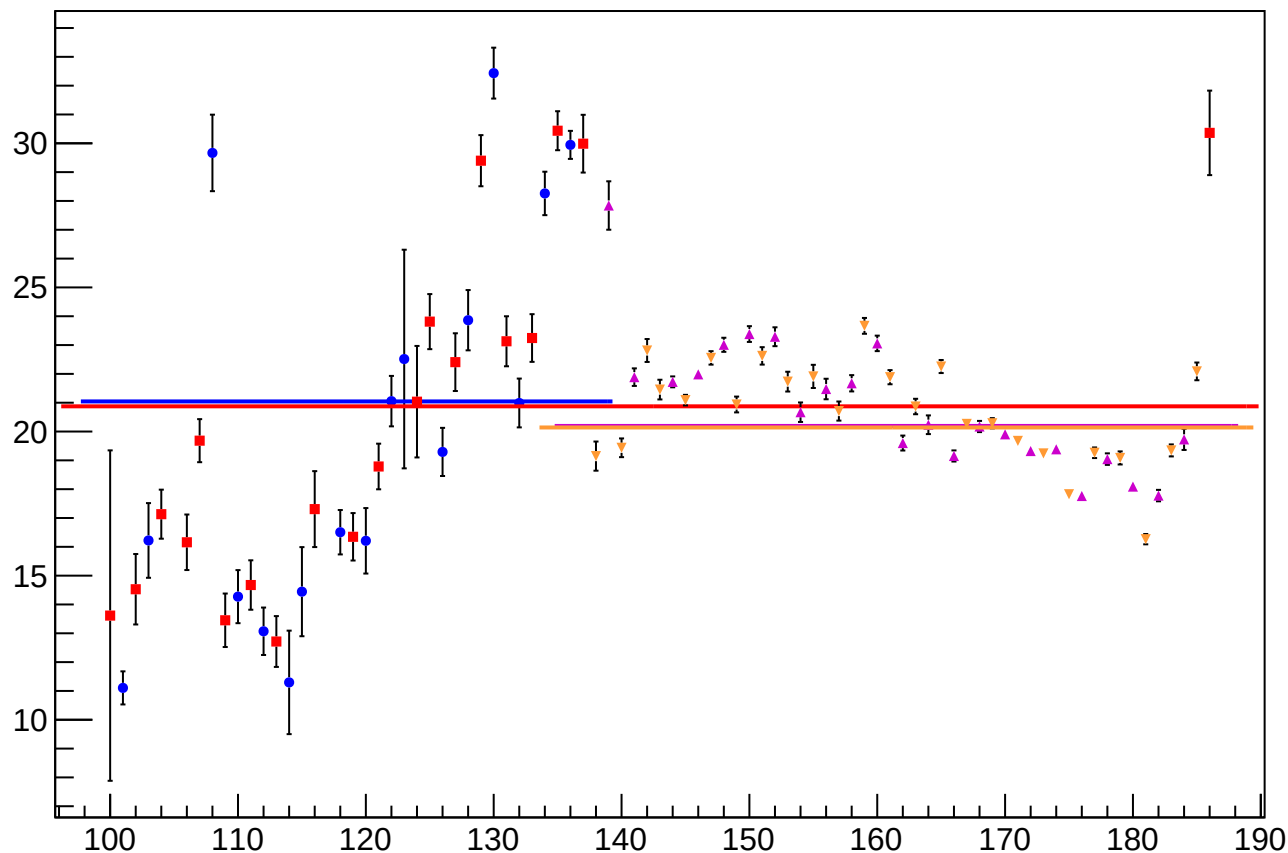
Right:  $7.328 \pm 0.223$   $\chi^2/\text{NDF}: 2883.8/36$

In:  $-1.710 \pm 0.051$   $\chi^2/\text{NDF}: 16876.2/39$

Out:  $-1.876 \pm 0.051$   $\chi^2/\text{NDF}: 19417.2/44$

All:  $-1.793 \pm 0.036$   $\chi^2/\text{NDF}: 36298.8/84$

reg\_asym\_sam\_37\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 21.045 $\pm$ 0.211  $\chi^2$ /NDF: 1209.4/16

Left Out: 20.141 $\pm$ 0.046  $\chi^2$ /NDF:1419.1/24

Right Out: 20.874 $\pm$ 0.211  $\chi^2$ /NDF: 764.4/19

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

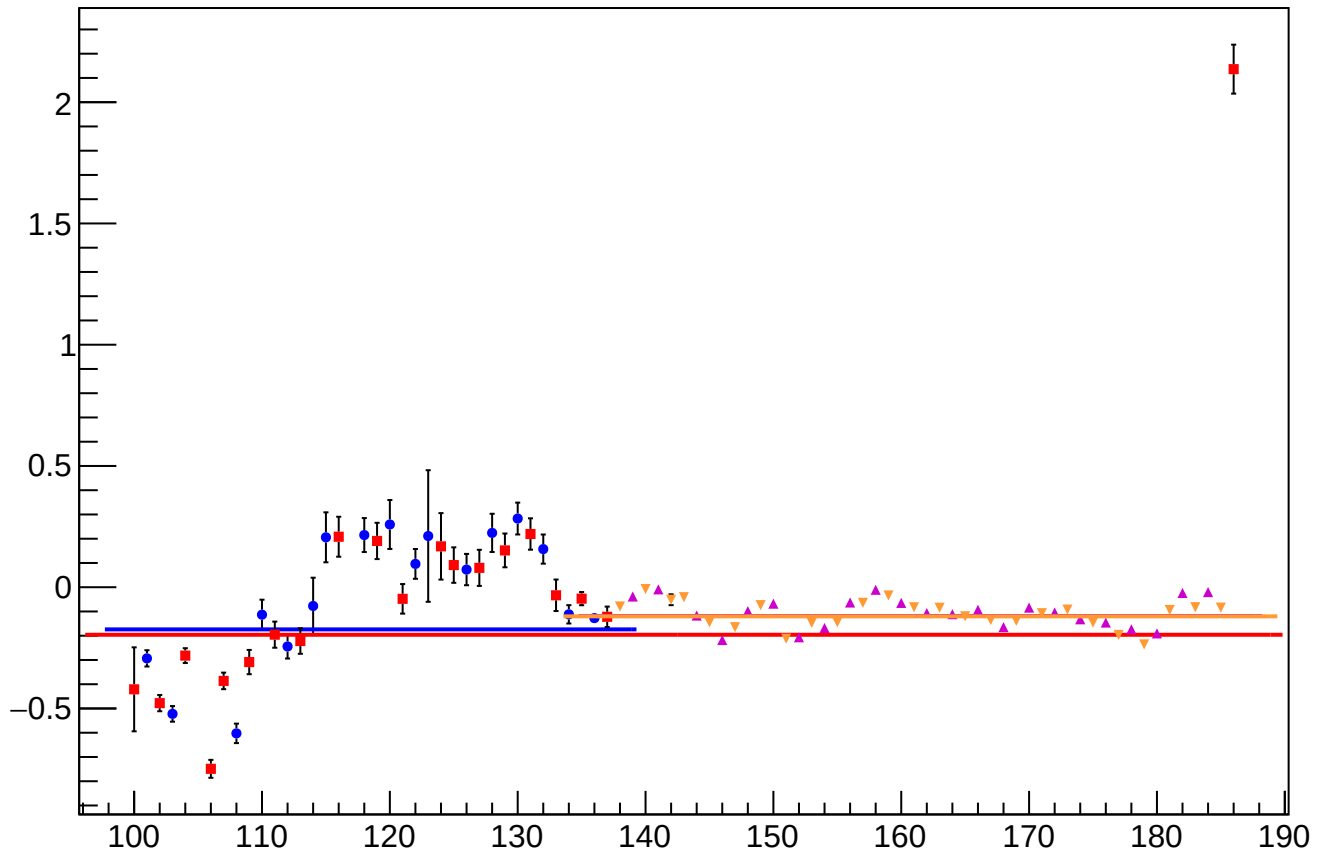
Right: 20.959 $\pm$ 0.149  $\chi^2$ /NDF: 1974.1/36

In: 20.232 $\pm$ 0.045  $\chi^2$ /NDF:2672.2/39

Out: 20.174 $\pm$ 0.045  $\chi^2$ /NDF:2195.1/44

All: 20.203 $\pm$ 0.032  $\chi^2$ /NDF: 4868.2/84

reg\_asym\_sam\_37\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.174 \pm 0.011$   $\chi^2/\text{NDF}$ : 458.2/16

Left Out:  $-0.120 \pm 0.002$   $\chi^2/\text{NDF}$ : 530.4/24

Right Out:  $-0.196 \pm 0.011$   $\chi^2/\text{NDF}$ : 1073.0/19

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:  $-0.185 \pm 0.008$   $\chi^2/\text{NDF}$ : 1533.3/36

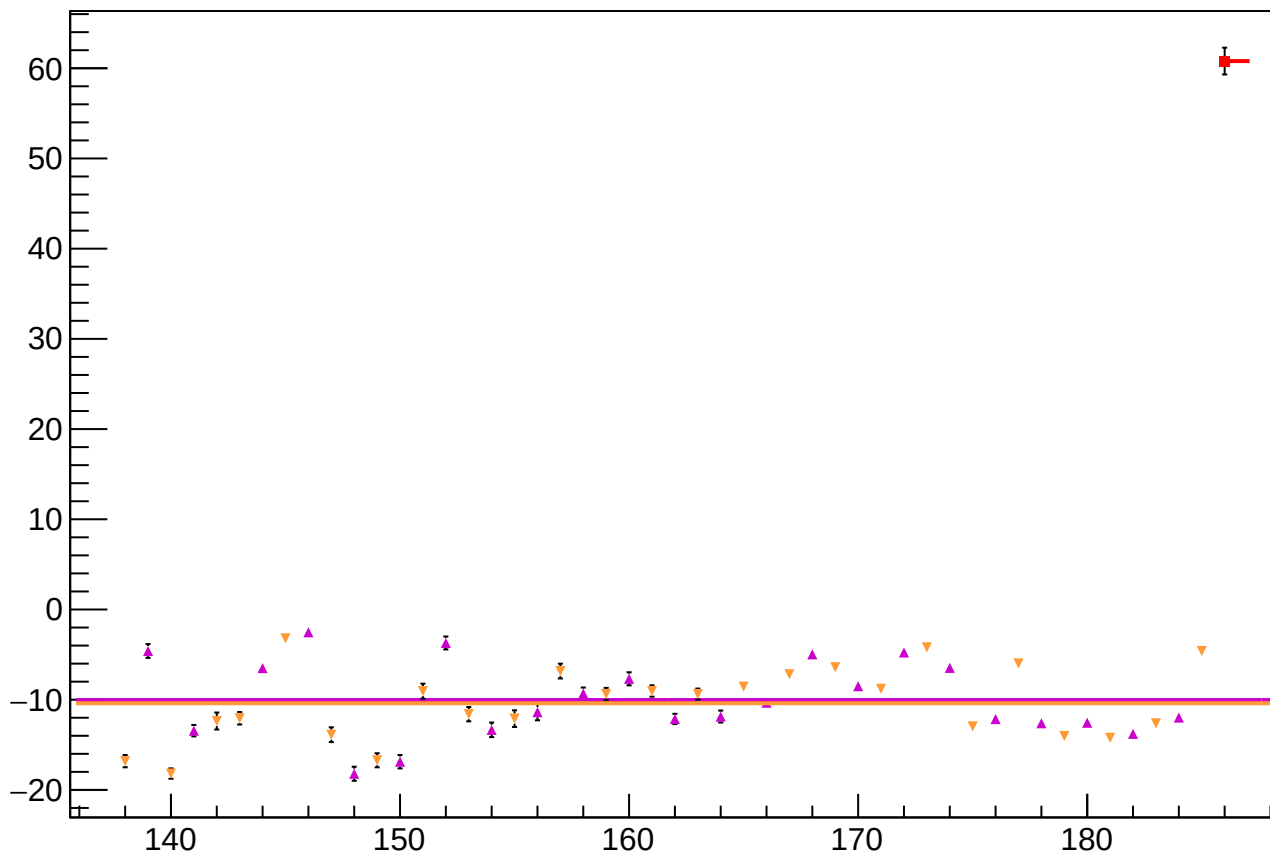
In:  $-0.121 \pm 0.002$   $\chi^2/\text{NDF}$ : 1203.4/39

Out:  $-0.123 \pm 0.002$   $\chi^2/\text{NDF}$ : 1650.2/44

All:  $-0.122 \pm 0.001$   $\chi^2/\text{NDF}$ : 2854.2/84



reg\_asym\_sam\_26\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -10.391+/-0.088  $\chi^2/\text{NDF}$ :2111.6/24

Right Out: 60.793+/-1.487  $\chi^2/\text{NDF}$ : 0.0/0

Left In: -10.036+/-0.090  $\chi^2/\text{NDF}$ :1758.7/22

Left: -10.217+/-0.063  $\chi^2/\text{NDF}$ : 3878.3/47

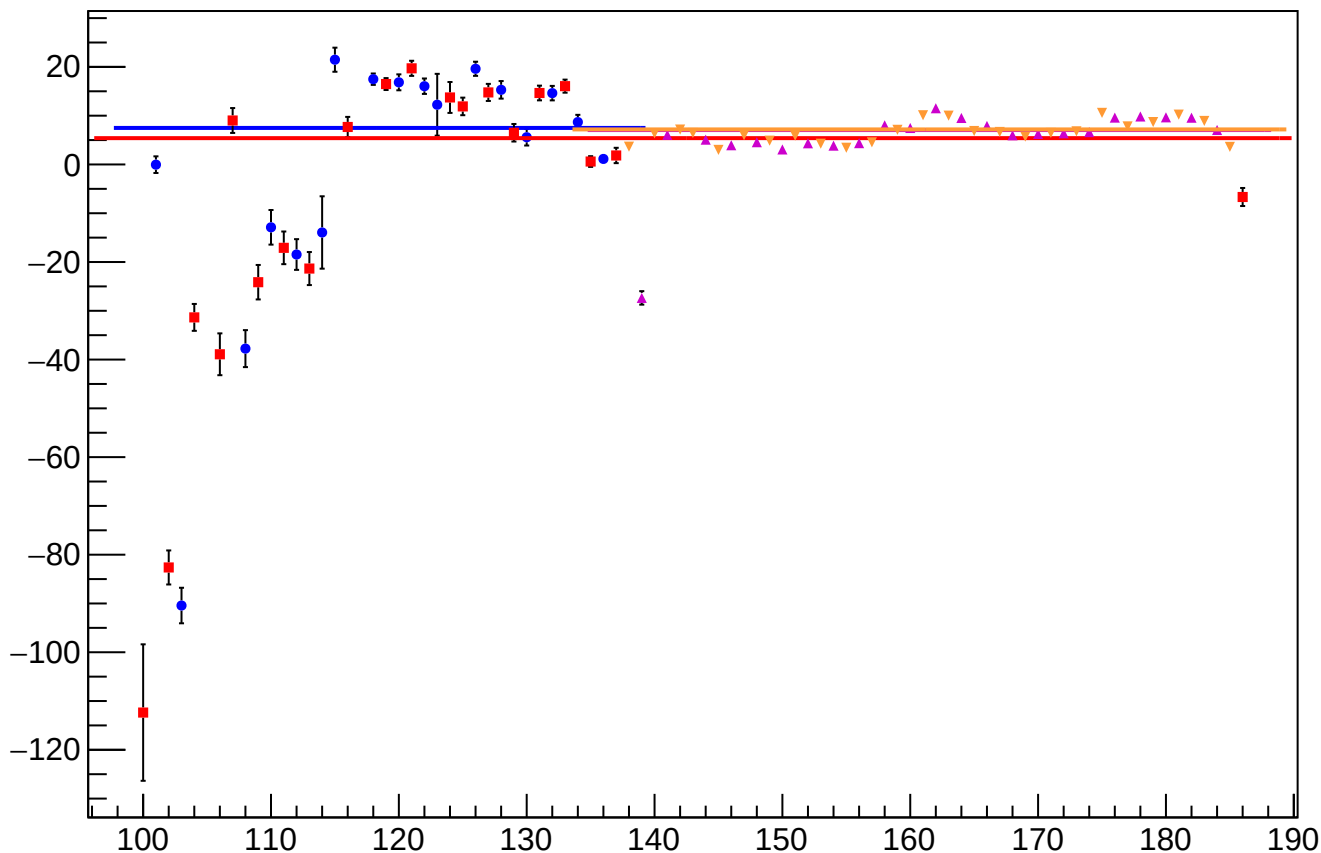
Right: 60.793+/-1.487  $\chi^2/\text{NDF}$ : 0.0/0

In: -10.036+/-0.090  $\chi^2/\text{NDF}$ :1758.7/22

Out: -10.143+/-0.088  $\chi^2/\text{NDF}$ :4396.5/25

All: -10.091+/-0.063  $\chi^2/\text{NDF}$ : 6155.9/48

reg\_asym\_sam\_26\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $7.489 \pm 0.407$   $\chi^2/\text{NDF}$ : 1340.6/16

Left Out:  $7.184 \pm 0.073$   $\chi^2/\text{NDF}$ : 917.3/24

Right Out:  $5.394 \pm 0.423$   $\chi^2/\text{NDF}$ : 1556.8/19

Left In:  $7.053 \pm 0.074$   $\chi^2/\text{NDF}$ : 1535.8/22

Left:  $7.119 \pm 0.052$   $\chi^2/\text{NDF}$ : 2454.8/47

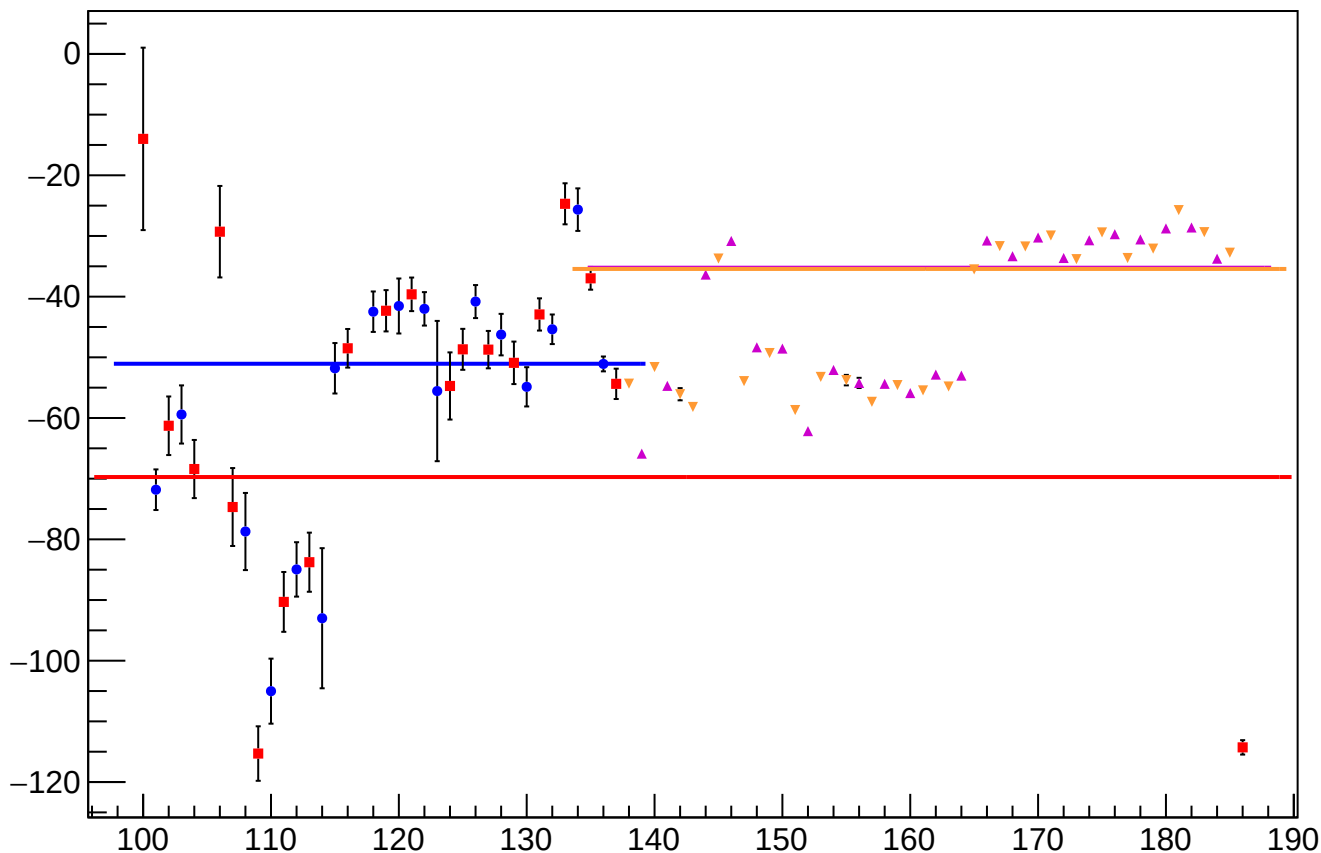
Right:  $6.483 \pm 0.293$   $\chi^2/\text{NDF}$ : 2910.1/36

In:  $7.067 \pm 0.073$   $\chi^2/\text{NDF}$ : 2877.5/39

Out:  $7.132 \pm 0.072$   $\chi^2/\text{NDF}$ : 2491.5/44

All:  $7.100 \pm 0.051$   $\chi^2/\text{NDF}$ : 5369.4/84

reg\_asym\_sam\_26\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: -51.060 $\pm$ 0.742  $\chi^2$ /NDF: 329.6/16

Left Out: -35.434 $\pm$ 0.089  $\chi^2$ /NDF:12782.8/24

Right Out: -69.729 $\pm$ 0.664  $\chi^2$ /NDF: 2553.1/19

Left In: -35.229 $\pm$ 0.090  $\chi^2$ /NDF:11602.9/22

Left: -35.333 $\pm$ 0.063  $\chi^2$ /NDF: 24388.3/47

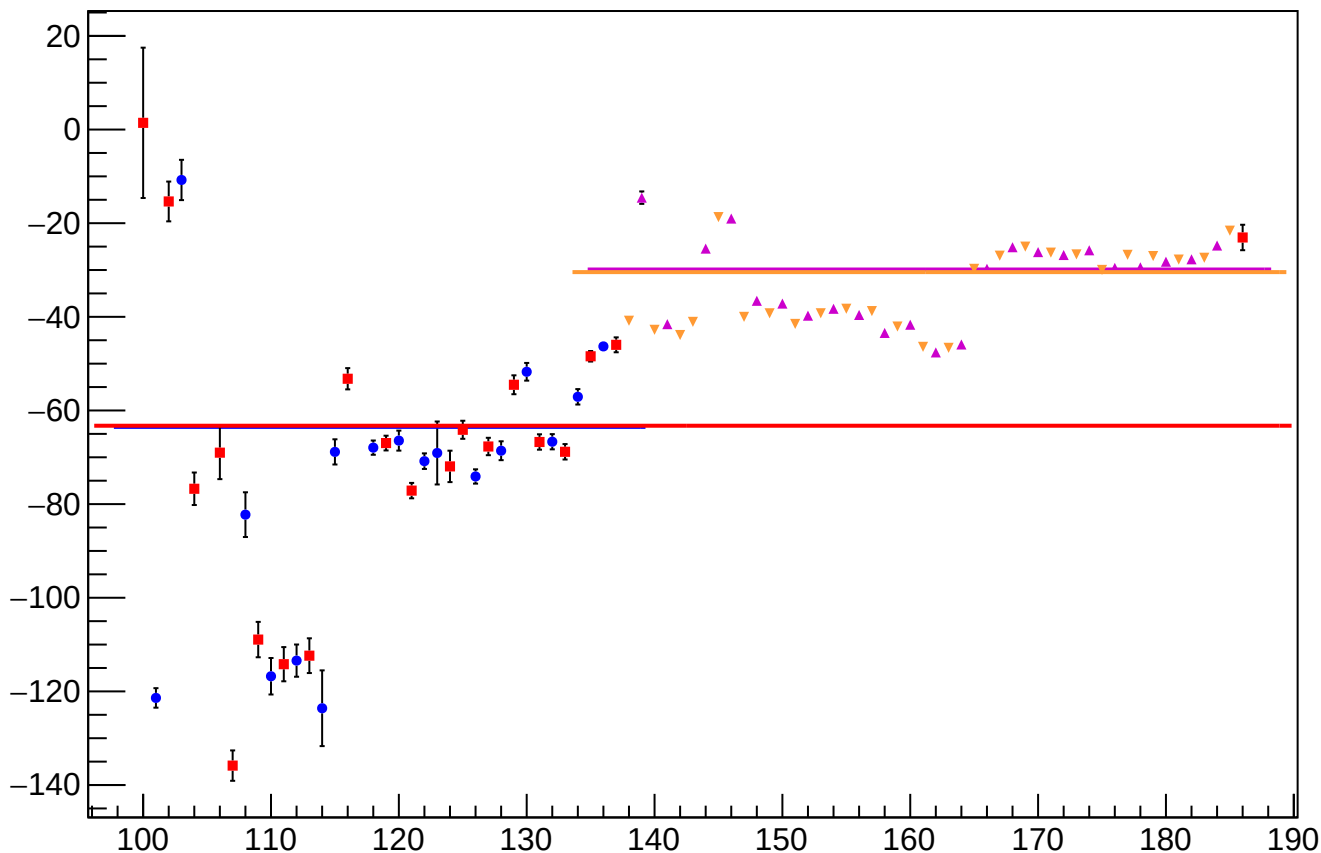
Right: -61.430 $\pm$ 0.495  $\chi^2$ /NDF: 3234.6/36

In: -35.459 $\pm$ 0.089  $\chi^2$ /NDF:12381.4/39

Out: -36.040 $\pm$ 0.088  $\chi^2$ /NDF:17960.0/44

All: -35.754 $\pm$ 0.063  $\chi^2$ /NDF: 30362.8/84

reg\_asym\_sam\_26\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-63.501 \pm 0.449$   $\chi^2/\text{NDF}$ : 2006.3/16

Left Out:  $-30.448 \pm 0.082$   $\chi^2/\text{NDF}$ : 8167.7/24

Right Out:  $-63.259 \pm 0.476$   $\chi^2/\text{NDF}$ : 1830.1/19

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

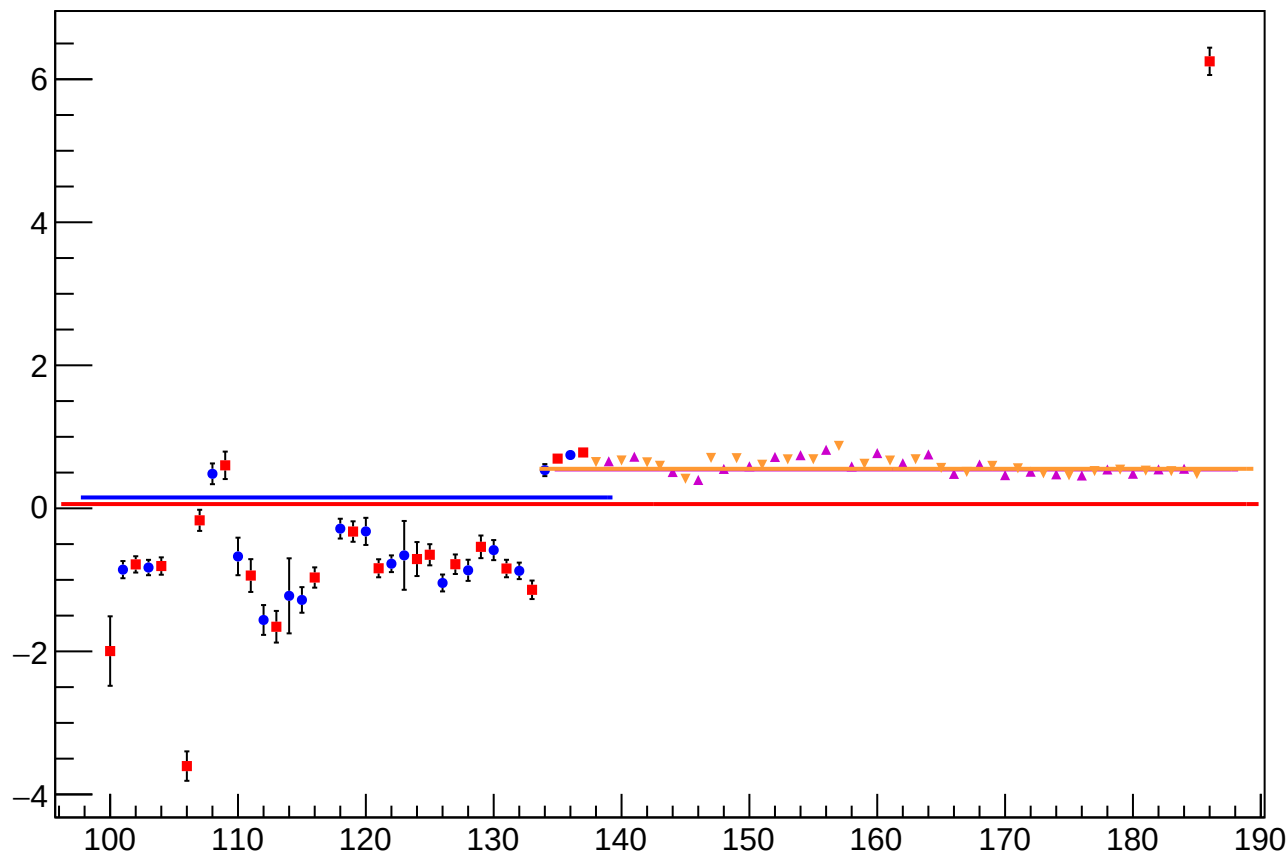
Right:  $-63.387 \pm 0.327$   $\chi^2/\text{NDF}$ : 3836.6/36

In:  $-30.991 \pm 0.081$   $\chi^2/\text{NDF}$ : 14535.8/39

Out:  $-31.382 \pm 0.080$   $\chi^2/\text{NDF}$ : 14607.2/44

All:  $-31.188 \pm 0.057$   $\chi^2/\text{NDF}$ : 29154.7/84

reg\_asym\_sam\_26\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.152 $\pm$ 0.024  $\chi^2$ /NDF: 987.4/16

Left Out: 0.553 $\pm$ 0.004  $\chi^2$ /NDF:542.1/24

Right Out: 0.060 $\pm$ 0.026  $\chi^2$ /NDF: 2228.9/19

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

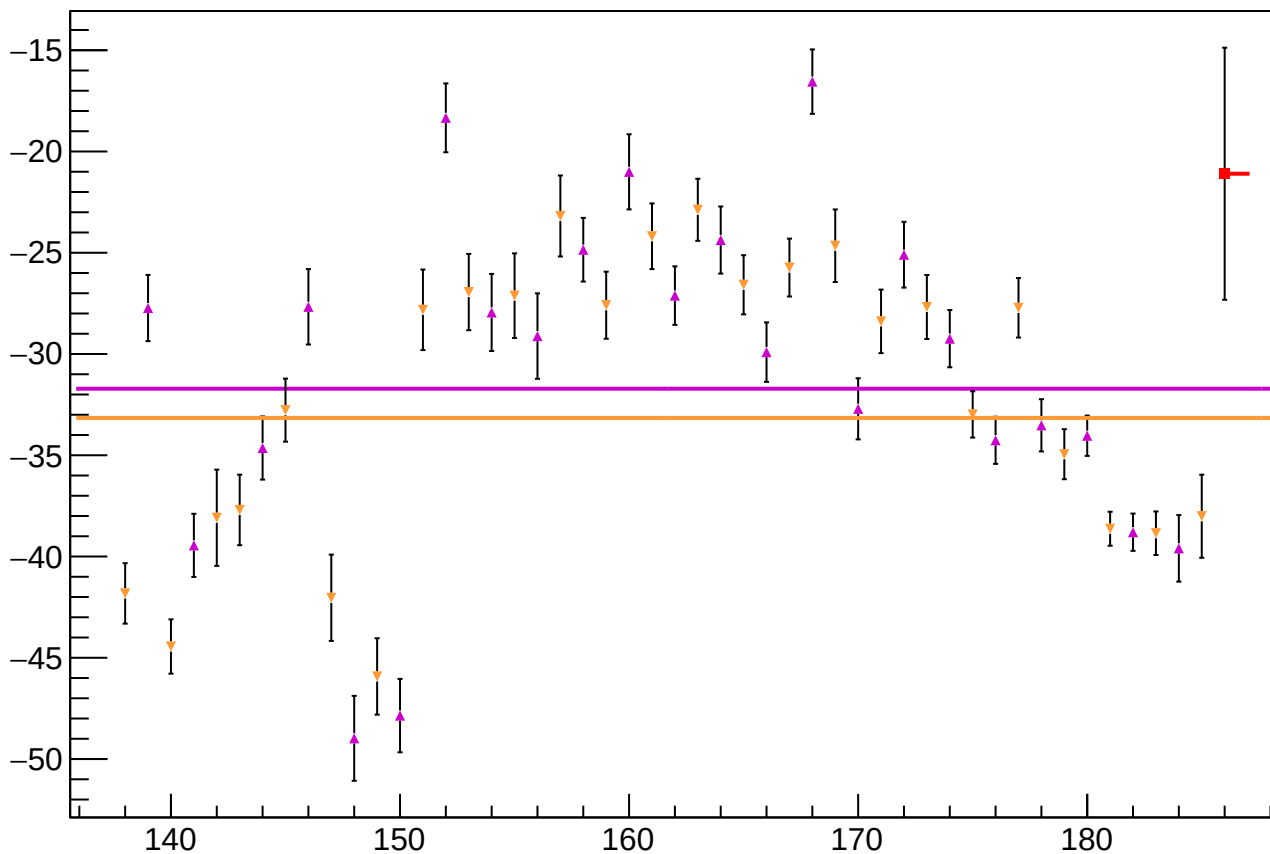
Right: 0.110 $\pm$ 0.018  $\chi^2$ /NDF: 3223.1/36

In: 0.534 $\pm$ 0.004  $\chi^2$ /NDF:1901.6/39

Out: 0.543 $\pm$ 0.004  $\chi^2$ /NDF:3121.7/44

All: 0.539 $\pm$ 0.003  $\chi^2$ /NDF: 5026.1/84

reg\_asym\_sam\_26\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



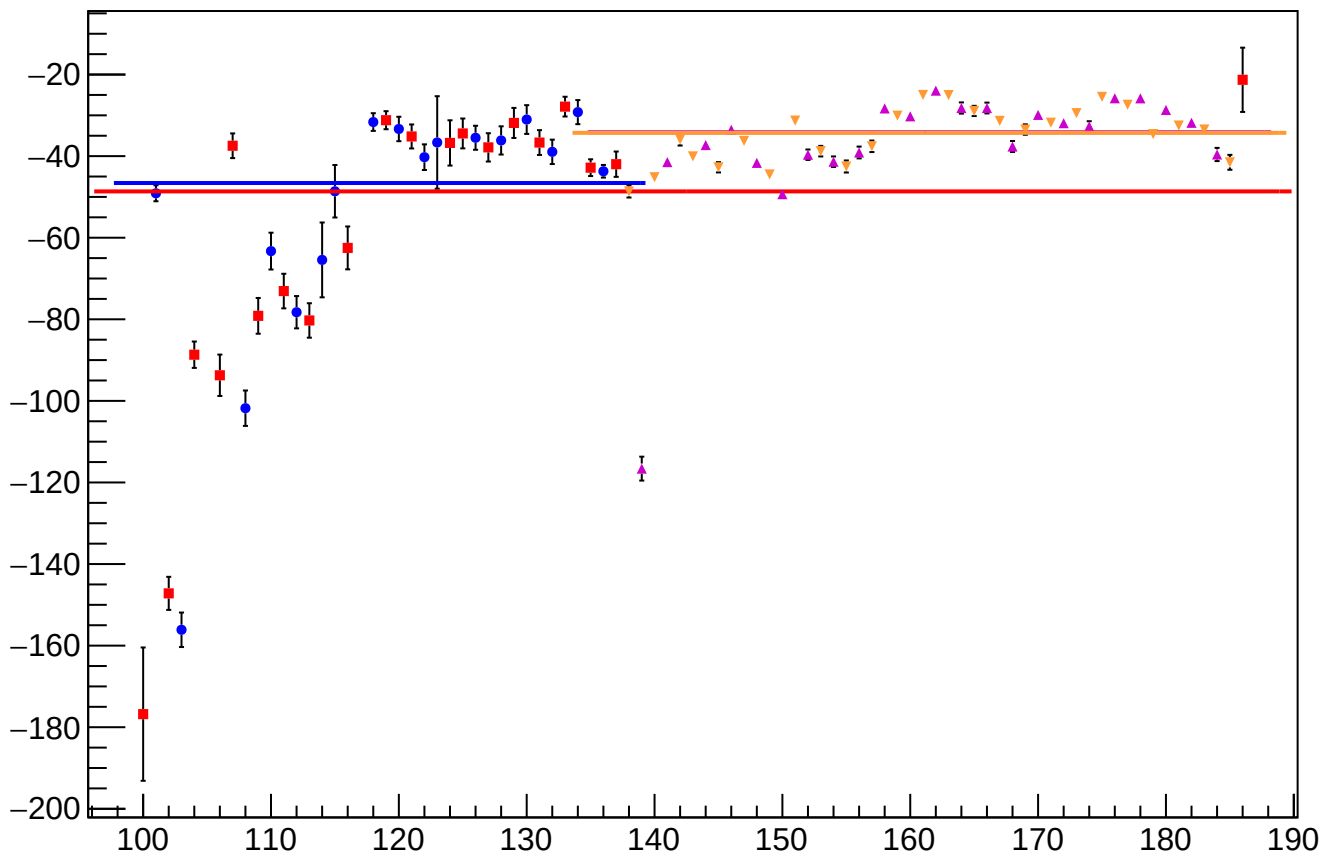
Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0  
 Left Out: -33.157 $\pm$ 0.300  $\chi^2$ /NDF:500.1/24  
 Right Out: -21.098 $\pm$ 6.224  $\chi^2$ /NDF: 0.0/0  
 Left In: -31.714 $\pm$ 0.309  $\chi^2$ /NDF:542.3/22

Left: -32.456 $\pm$ 0.215  $\chi^2$ /NDF: 1053.6/47  
 Right: -21.098 $\pm$ 6.224  $\chi^2$ /NDF: 0.0/0

In: -31.714 $\pm$ 0.309  $\chi^2$ /NDF:542.3/22  
 Out: -33.129 $\pm$ 0.300  $\chi^2$ /NDF:503.8/25

All: -32.443 $\pm$ 0.215  $\chi^2$ /NDF: 1056.9/48

reg\_asym\_sam\_26\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-46.587 \pm 0.730$   $\chi^2/\text{NDF}$ : 1076.0/16

Left Out:  $-34.287 \pm 0.241$   $\chi^2/\text{NDF}$ : 695.3/24

Right Out:  $-48.646 \pm 0.761$   $\chi^2/\text{NDF}$ : 1289.8/19

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

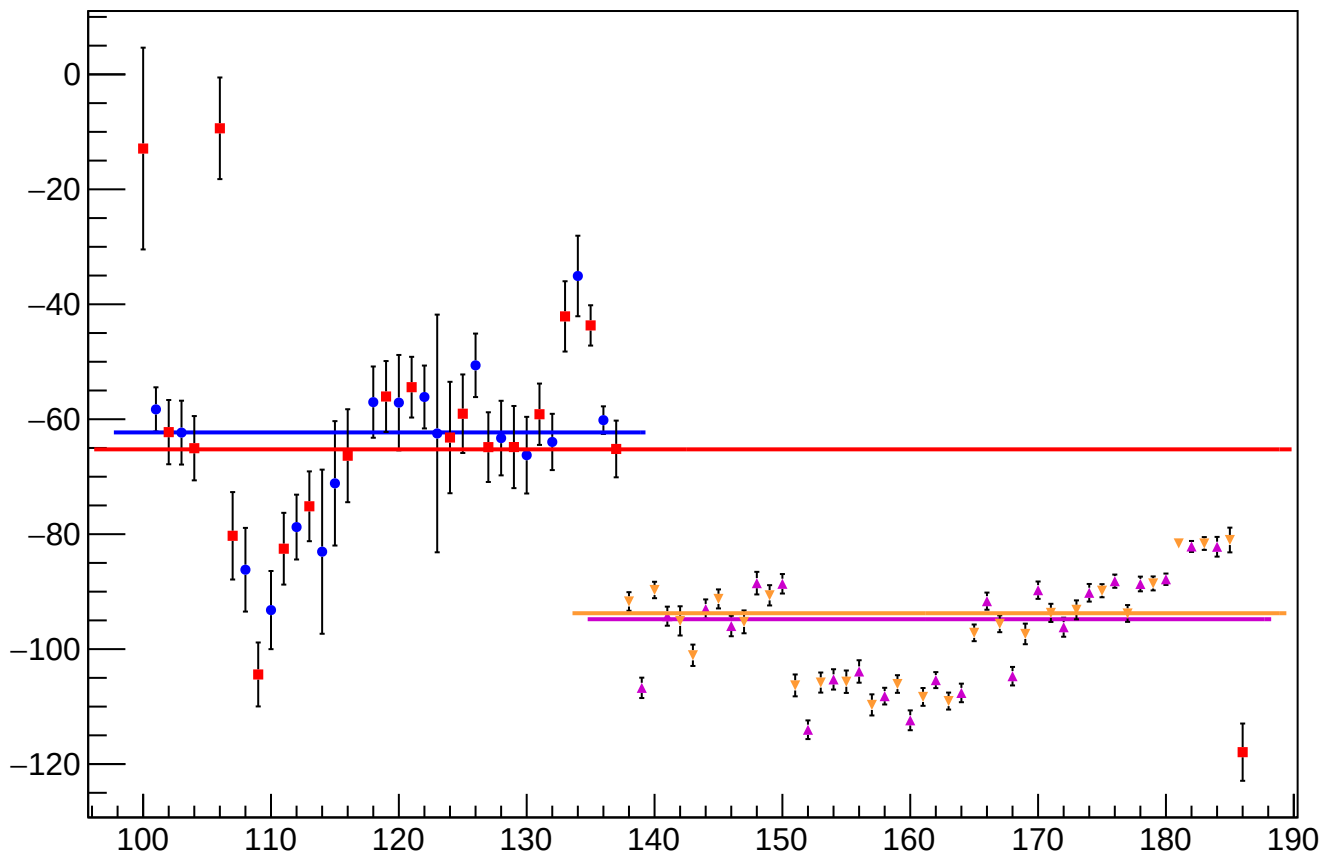
Right:  $-47.575 \pm 0.527$   $\chi^2/\text{NDF}$ : 2369.6/36

In:  $-35.457 \pm 0.237$   $\chi^2/\text{NDF}$ : 2788.2/39

Out:  $-35.601 \pm 0.230$   $\chi^2/\text{NDF}$ : 2308.7/44

All:  $-35.531 \pm 0.165$   $\chi^2/\text{NDF}$ : 5097.0/84

reg\_asym\_sam\_26\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



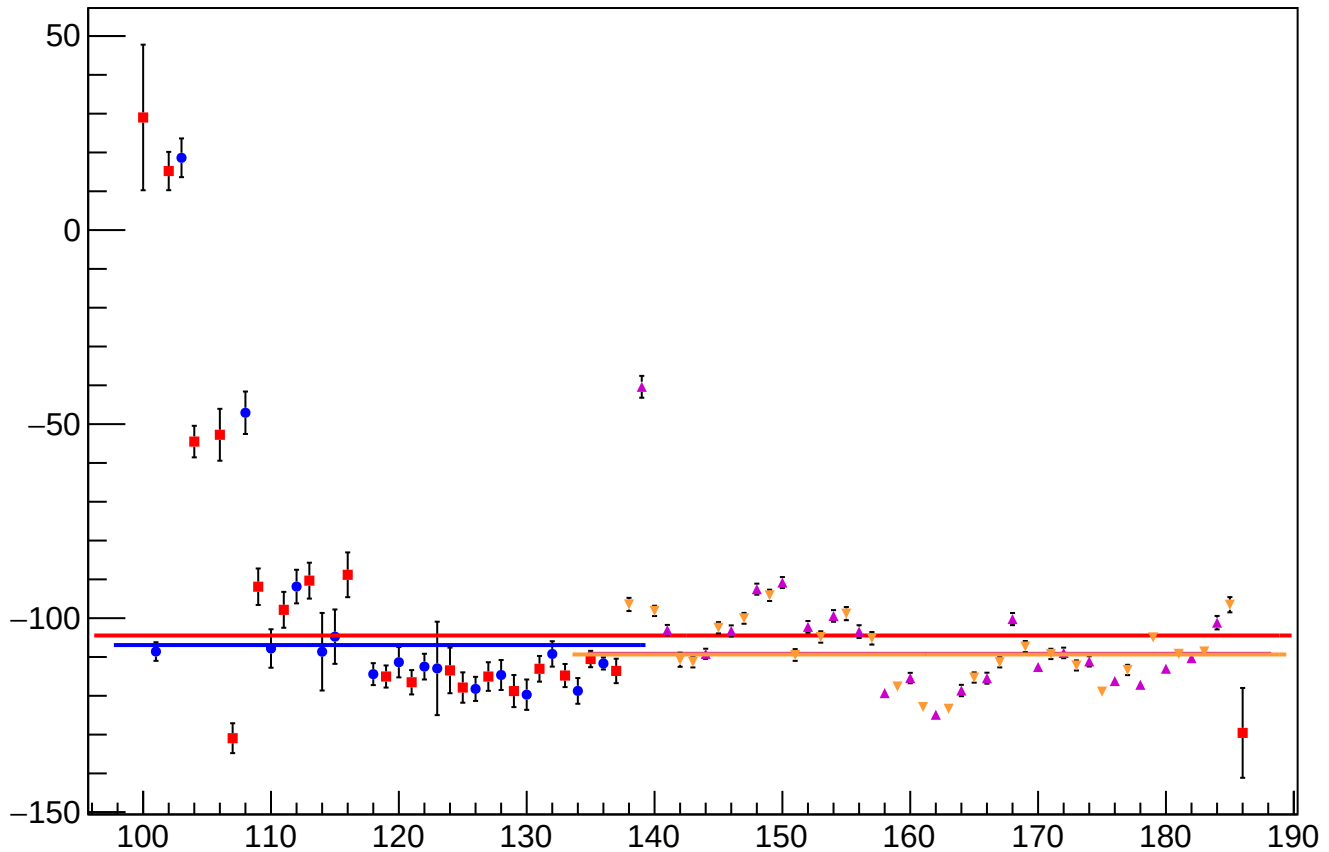
Right In:  $-62.294 \pm 1.317$   $\chi^2/\text{NDF}: 67.1/16$   
 Left Out:  $-93.754 \pm 0.302$   $\chi^2/\text{NDF}: 883.1/24$   
 Right Out:  $-65.241 \pm 1.333$   $\chi^2/\text{NDF}: 285.5/19$   
 Left In:  $-94.796 \pm 0.308$   $\chi^2/\text{NDF}: 974.7/22$

Left:  $-94.264 \pm 0.216$   $\chi^2/\text{NDF}: 1863.6/47$   
 Right:  $-63.751 \pm 0.937$   $\chi^2/\text{NDF}: 355.0/36$   
 In:  $-93.106 \pm 0.300$   $\chi^2/\text{NDF}: 1619.0/39$   
 Out:  $-92.364 \pm 0.294$   $\chi^2/\text{NDF}: 1604.0/44$

All:  $-92.727 \pm 0.210$   $\chi^2/\text{NDF}: 3226.1/84$



reg\_asym\_sam\_26\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-106.926 \pm 0.818$   $\chi^2/\text{NDF}$ : 826.7/16

Left Out:  $-109.351 \pm 0.271$   $\chi^2/\text{NDF}$ : 826.8/24

Right Out:  $-104.464 \pm 0.860$   $\chi^2/\text{NDF}$ : 1025.2/19

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

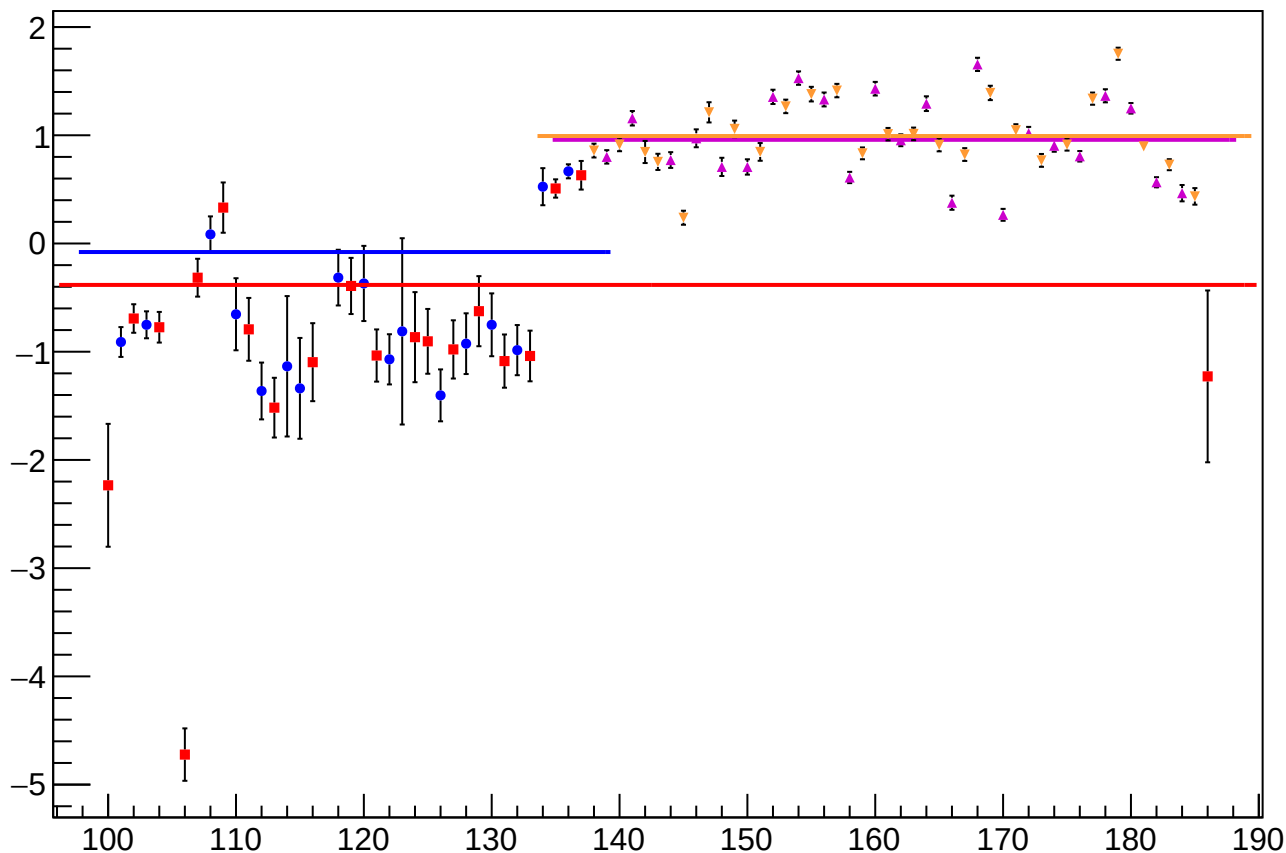
Right:  $-105.757 \pm 0.593$   $\chi^2/\text{NDF}$ : 1856.2/36

In:  $-108.948 \pm 0.265$   $\chi^2/\text{NDF}$ : 2334.7/39

Out:  $-108.910 \pm 0.259$   $\chi^2/\text{NDF}$ : 1881.4/44

All:  $-108.928 \pm 0.185$   $\chi^2/\text{NDF}$ : 4216.1/84

reg\_asym\_sam\_26\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.079 \pm 0.042$   $\chi^2/\text{NDF}$ : 328.6/16

Left Out:  $0.993 \pm 0.012$   $\chi^2/\text{NDF}$ : 638.6/24

Right Out:  $-0.383 \pm 0.044$   $\chi^2/\text{NDF}$ : 581.3/19

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

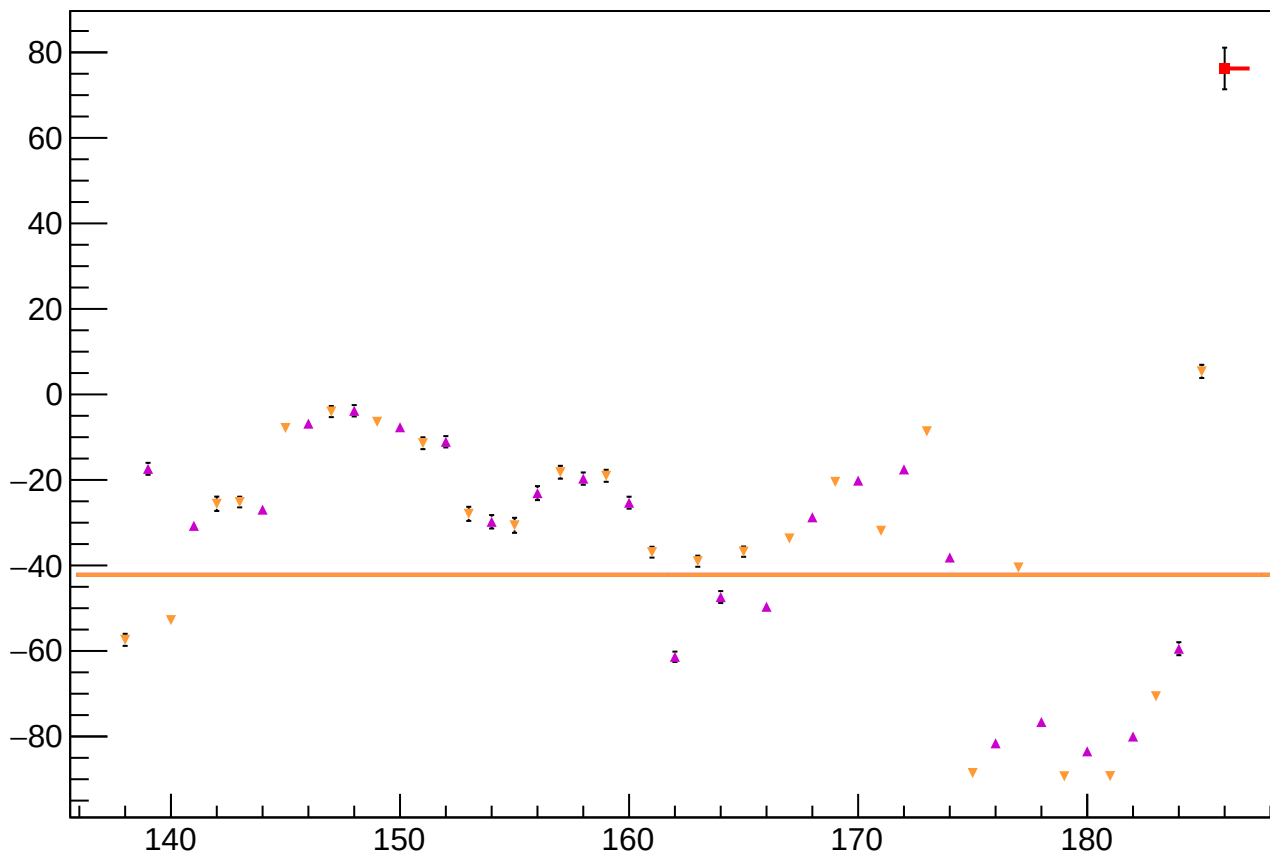
Right:  $-0.225 \pm 0.030$   $\chi^2/\text{NDF}$ : 934.7/36

In:  $0.873 \pm 0.012$   $\chi^2/\text{NDF}$ : 1774.6/39

Out:  $0.891 \pm 0.012$   $\chi^2/\text{NDF}$ : 2126.4/44

All:  $0.882 \pm 0.009$   $\chi^2/\text{NDF}$ : 3902.2/84

reg\_asym\_sam\_48\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -42.213+/-0.222  $\chi^2/\text{NDF}$ :18309.1/24

Right Out: 76.234+/-4.867  $\chi^2/\text{NDF}$ : 0.0/0

Left In: -42.176+/-0.227  $\chi^2/\text{NDF}$ :14575.9/22

Left: -42.195+/-0.159  $\chi^2/\text{NDF}$ : 32885.0/47

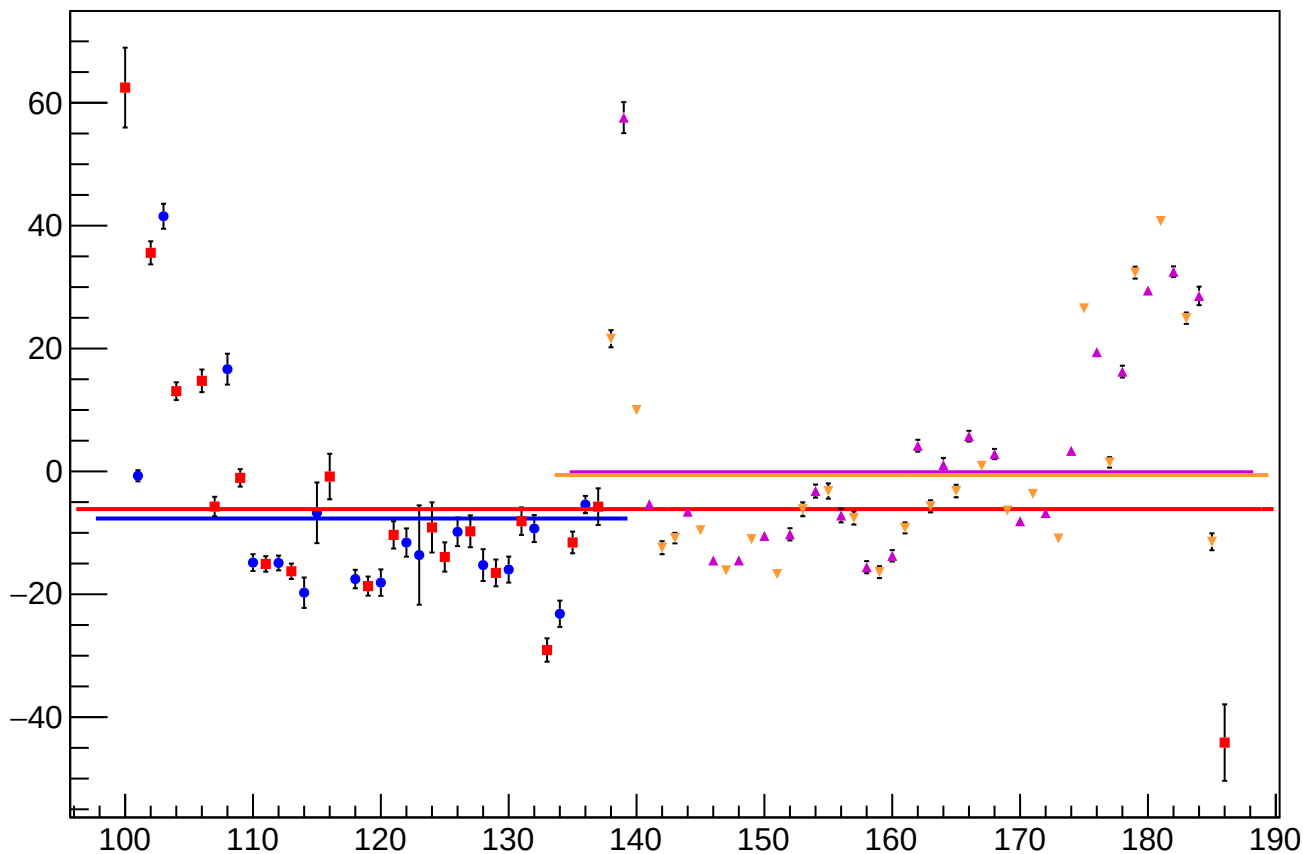
Right: 76.234+/-4.867  $\chi^2/\text{NDF}$ : 0.0/0

In: -42.176+/-0.227  $\chi^2/\text{NDF}$ :14575.9/22

Out: -41.967+/-0.222  $\chi^2/\text{NDF}$ :18900.2/25

All: -42.069+/-0.159  $\chi^2/\text{NDF}$ : 33476.6/48

reg\_asym\_sam\_48\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected

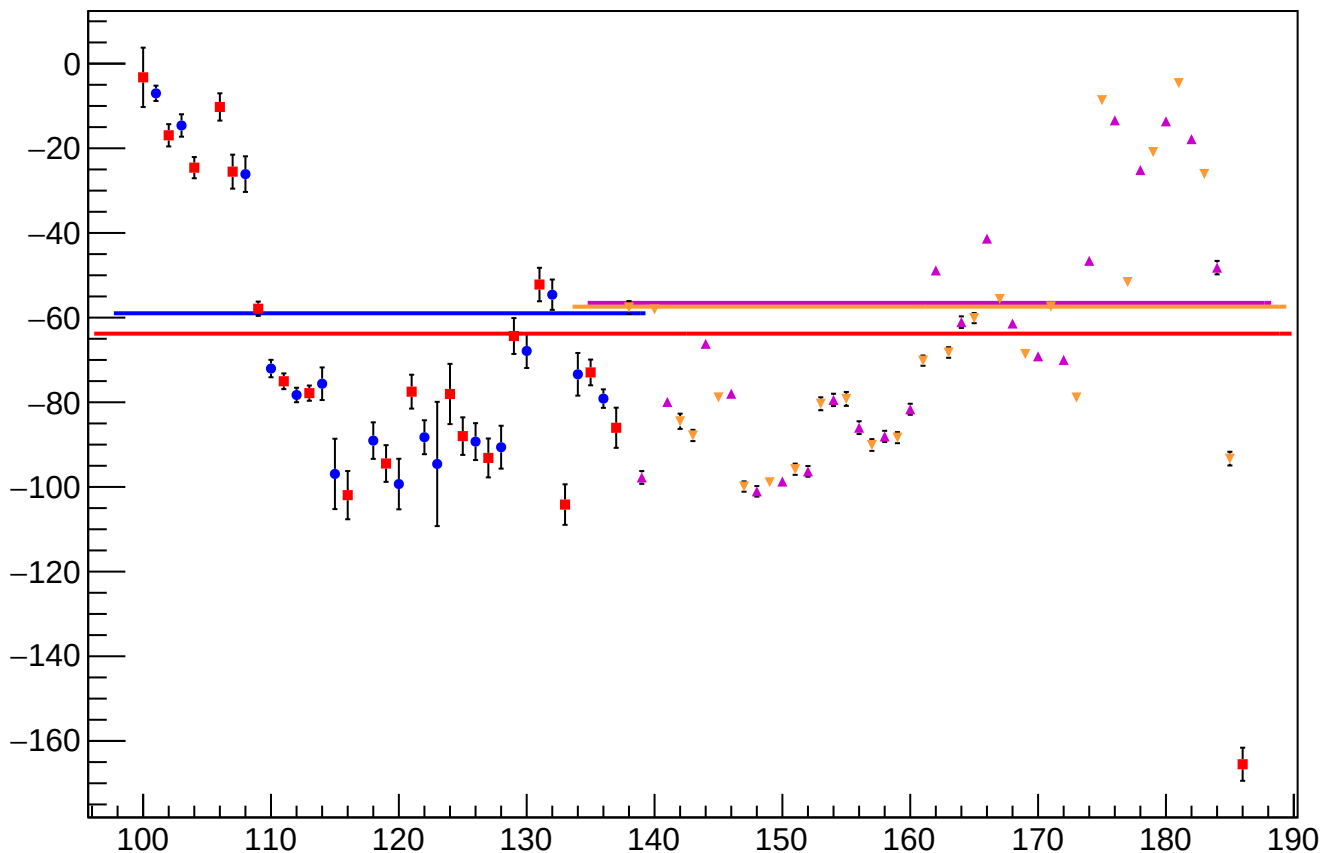


Right In:  $-7.668 \pm 0.431$   $\chi^2/\text{NDF}$ : 975.9/16  
 Left Out:  $-0.590 \pm 0.174$   $\chi^2/\text{NDF}$ : 8750.9/24  
 Right Out:  $-6.135 \pm 0.428$   $\chi^2/\text{NDF}$ : 1335.9/19  
 Left In:  $-0.142 \pm 0.179$   $\chi^2/\text{NDF}$ : 6862.5/22

Left:  $-0.372 \pm 0.125$   $\chi^2/\text{NDF}$ : 15616.6/47  
 Right:  $-6.897 \pm 0.304$   $\chi^2/\text{NDF}$ : 2318.2/36  
 In:  $-1.252 \pm 0.165$   $\chi^2/\text{NDF}$ : 8098.6/39  
 Out:  $-1.377 \pm 0.161$   $\chi^2/\text{NDF}$ : 10230.7/44

All:  $-1.316 \pm 0.116$   $\chi^2/\text{NDF}$ : 18329.6/84

reg\_asym\_sam\_48\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-58.976 \pm 0.747$   $\chi^2/\text{NDF}$ : 1707.7/16

Left Out:  $-57.413 \pm 0.223$   $\chi^2/\text{NDF}$ : 18604.1/24

Right Out:  $-63.788 \pm 0.694$   $\chi^2/\text{NDF}$ : 2083.2/19

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

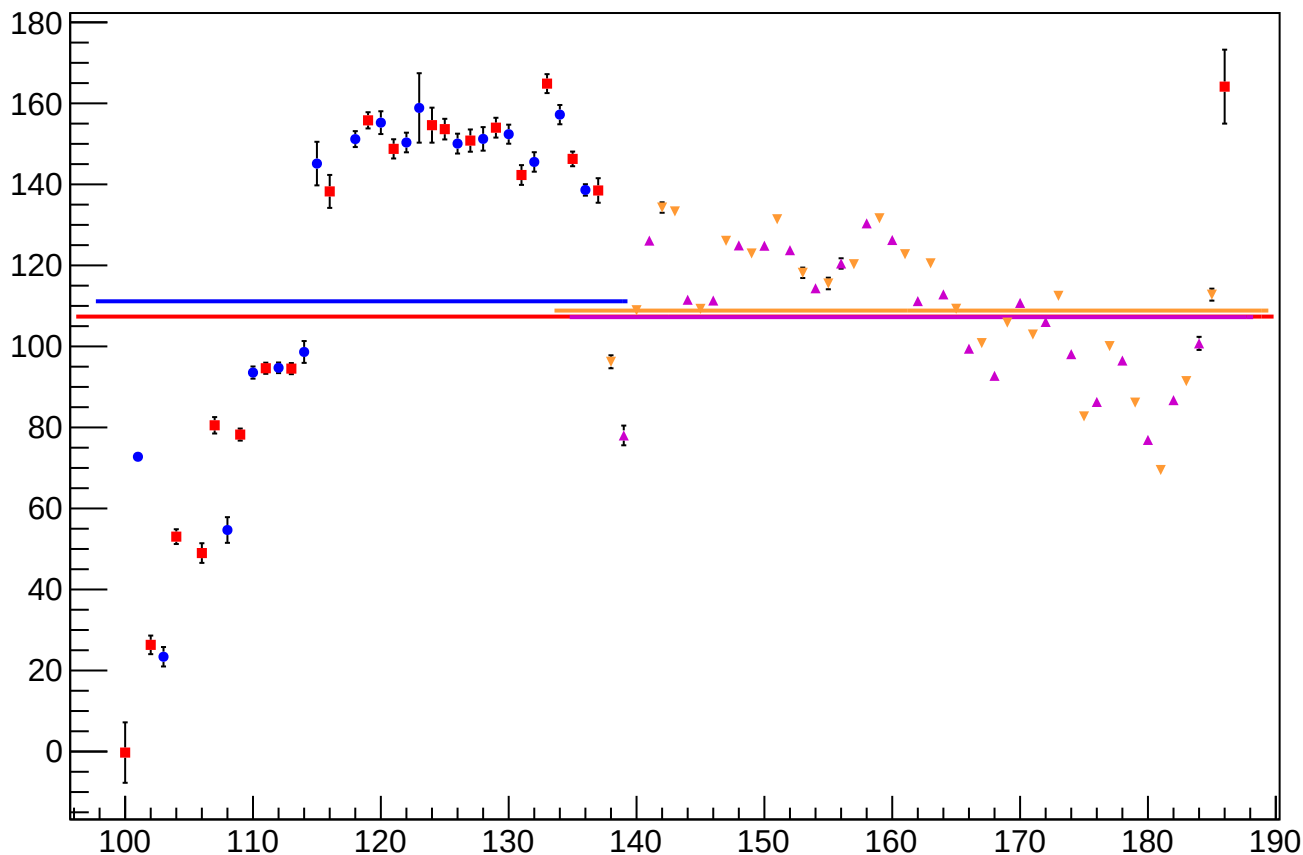
Right:  $-61.560 \pm 0.508$   $\chi^2/\text{NDF}$ : 3813.1/36

In:  $-56.727 \pm 0.217$   $\chi^2/\text{NDF}$ : 18070.1/39

Out:  $-58.011 \pm 0.212$   $\chi^2/\text{NDF}$ : 20763.8/44

All:  $-57.383 \pm 0.152$   $\chi^2/\text{NDF}$ : 38851.8/84

reg\_asym\_sam\_48\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 111.139 $\pm$ 0.490  $\chi^2$ /NDF: 5863.6/16

Left Out: 108.846 $\pm$ 0.197  $\chi^2$ /NDF:7400.2/24

Right Out: 107.364 $\pm$ 0.488  $\chi^2$ /NDF: 7081.7/19

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

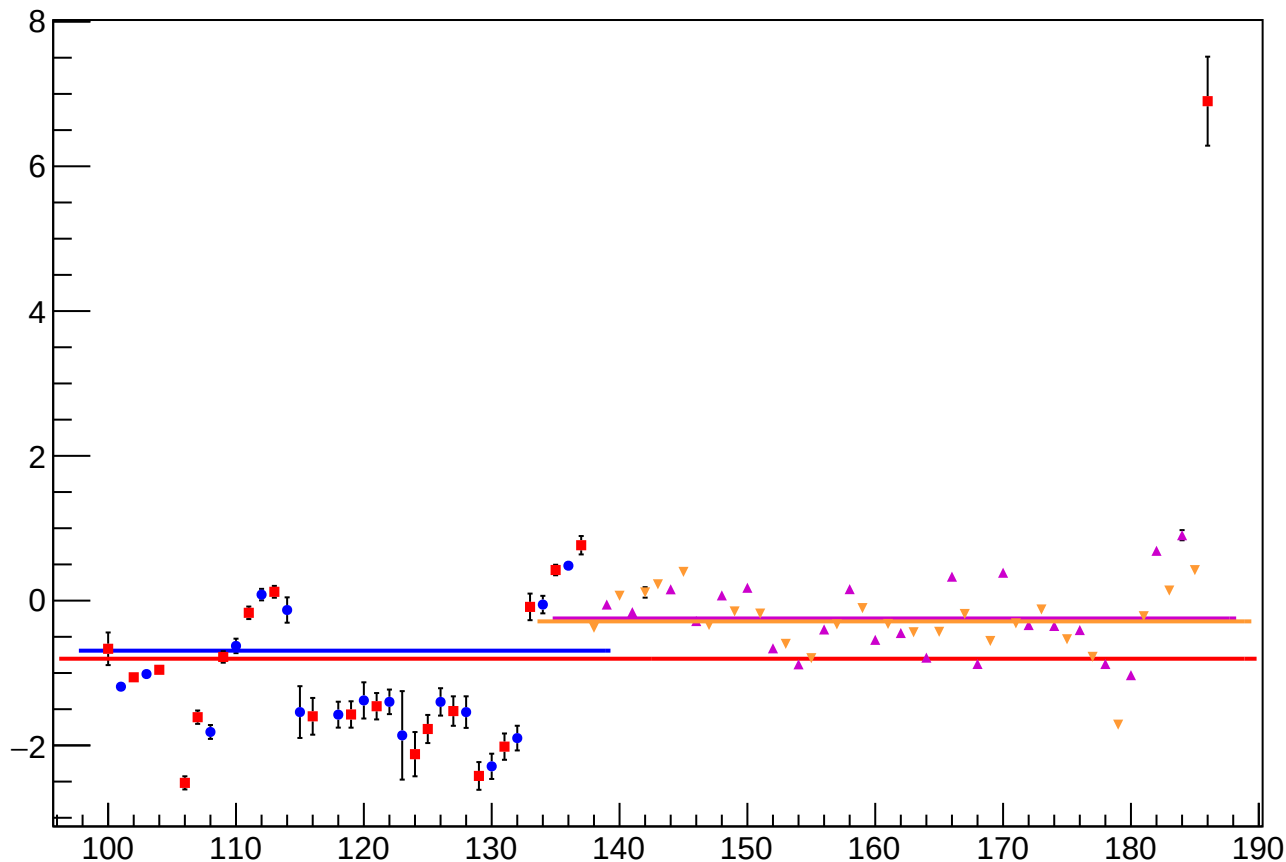
Right: 109.243 $\pm$ 0.346  $\chi^2$ /NDF: 12975.1/36

In: 107.795 $\pm$ 0.187  $\chi^2$ /NDF:11483.4/39

Out: 108.638 $\pm$ 0.183  $\chi^2$ /NDF:14489.9/44

All: 108.226 $\pm$ 0.131  $\chi^2$ /NDF: 25983.6/84

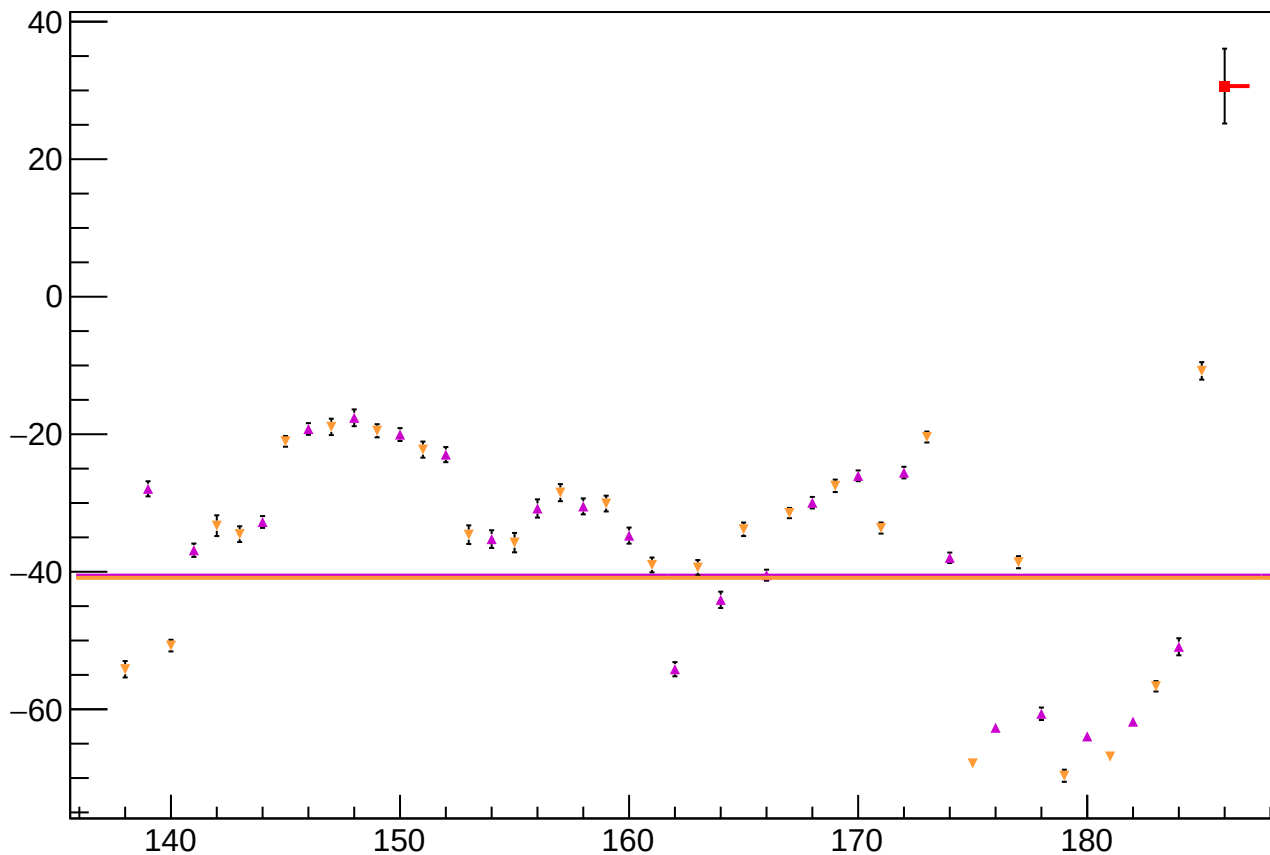
reg\_asym\_sam\_48\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.691 \pm 0.026$   $\chi^2/\text{NDF}$ : 988.9/16  
 Left Out:  $-0.287 \pm 0.009$   $\chi^2/\text{NDF}$ : 2052.9/24  
 Right Out:  $-0.803 \pm 0.024$   $\chi^2/\text{NDF}$ : 1459.8/19  
 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:  $-0.750 \pm 0.018$   $\chi^2/\text{NDF}$ : 2458.5/36  
 In:  $-0.297 \pm 0.009$   $\chi^2/\text{NDF}$ : 4044.1/39  
 Out:  $-0.350 \pm 0.009$   $\chi^2/\text{NDF}$ : 3906.5/44  
 All:  $-0.324 \pm 0.006$   $\chi^2/\text{NDF}$ : 7969.2/84

reg\_asym\_sam\_48\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected

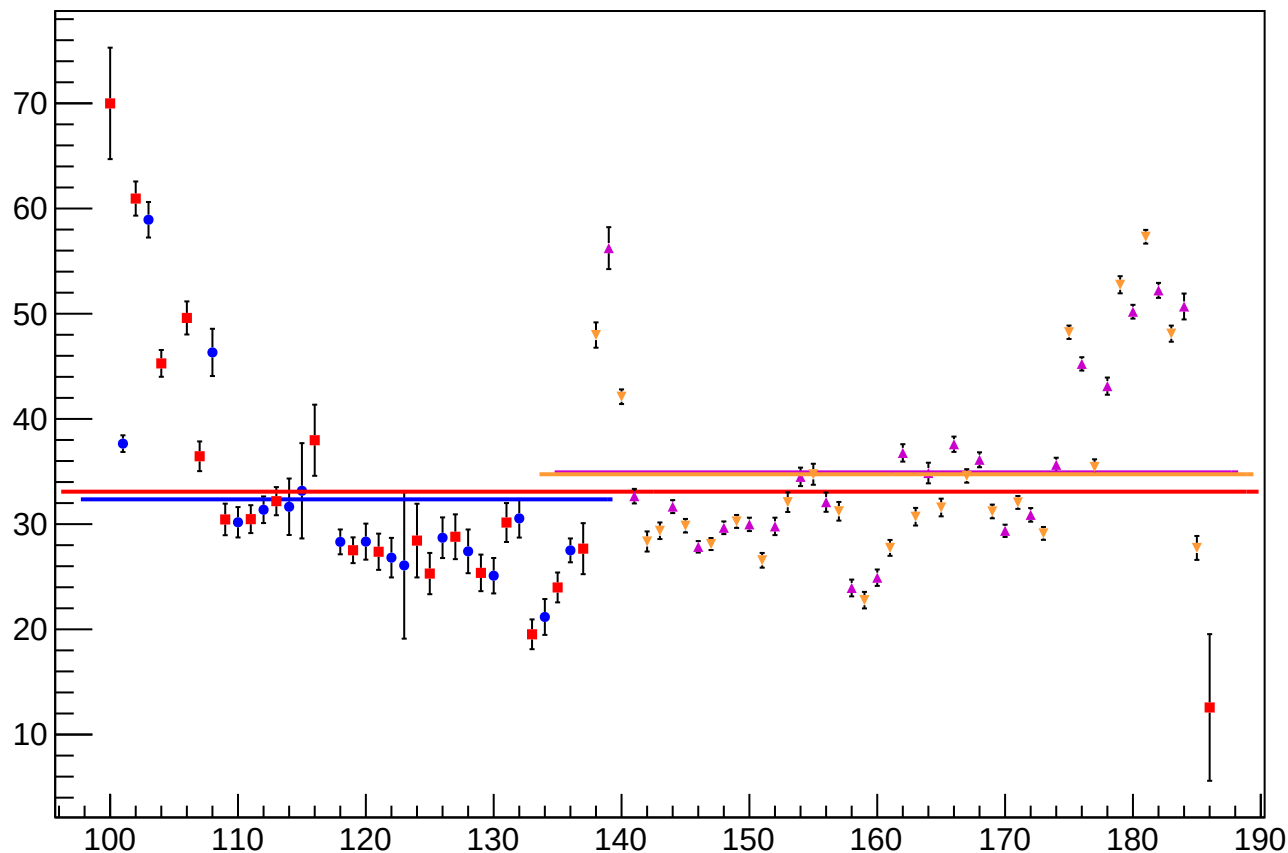


Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0  
 Left Out: -40.880+/-0.186  $\chi^2/\text{NDF}$ : 9123.2/24  
 Right Out: 30.633+/-5.441  $\chi^2/\text{NDF}$ : 0.0/0  
 Left In: -40.567+/-0.190  $\chi^2/\text{NDF}$ : 6954.7/22

Left: -40.726+/-0.133  $\chi^2/\text{NDF}$ : 16079.4/47  
 Right: 30.633+/-5.441  $\chi^2/\text{NDF}$ : 0.0/0  
 In: -40.567+/-0.190  $\chi^2/\text{NDF}$ : 6954.7/22  
 Out: -40.796+/-0.186  $\chi^2/\text{NDF}$ : 9295.8/25  
 All: -40.684+/-0.133  $\chi^2/\text{NDF}$ : 16251.3/48



reg\_asym\_sam\_48\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 32.356+/-0.376  $\chi^2/\text{NDF}$ : 450.5/16

Left Out: 34.741+/-0.147  $\chi^2/\text{NDF}$ : 3693.2/24

Right Out: 33.086+/-0.379  $\chi^2/\text{NDF}$ : 782.0/19

Left In: 34.922+/-0.152  $\chi^2/\text{NDF}$ : 2672.9/22

Left: 34.829+/-0.106  $\chi^2/\text{NDF}$ : 6366.8/47

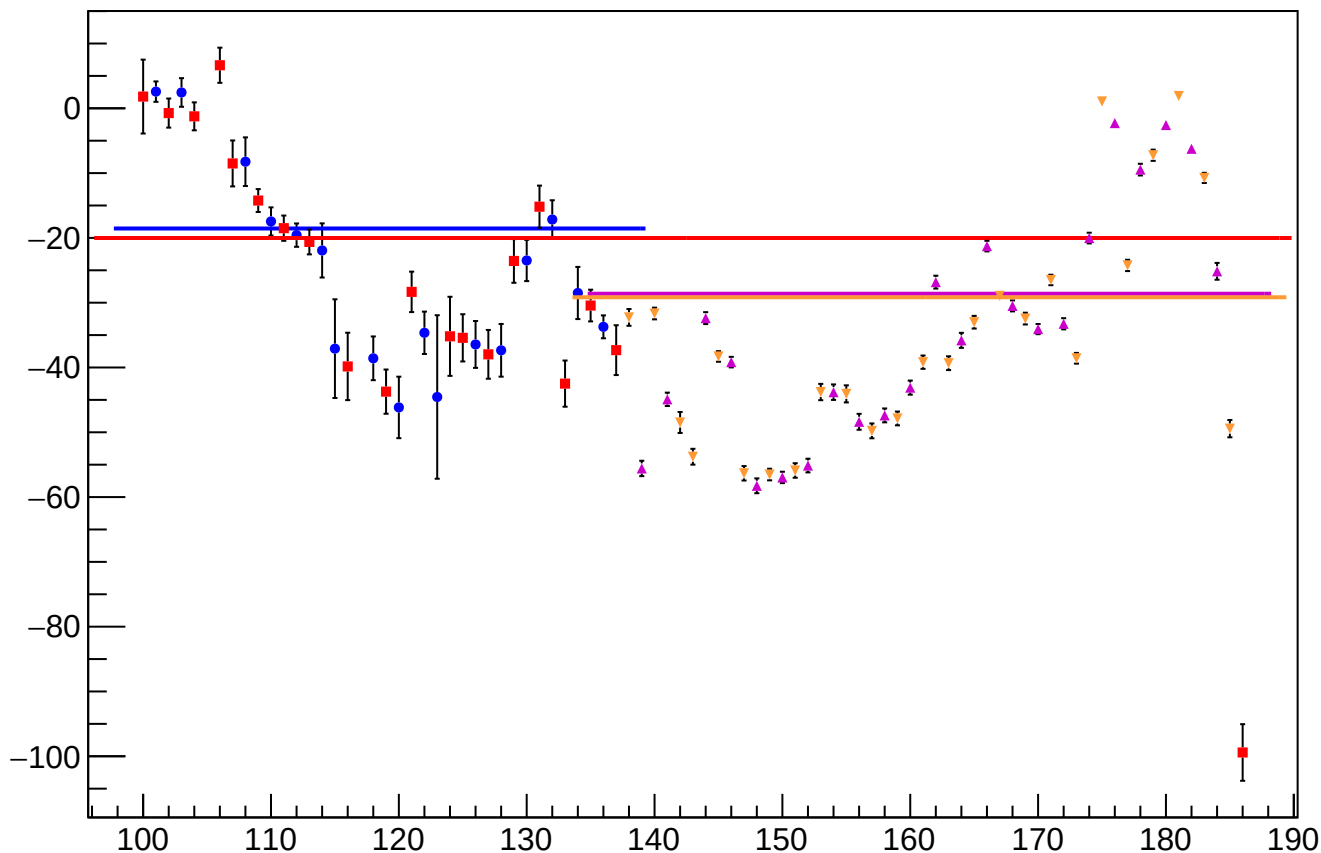
Right: 32.718+/-0.267  $\chi^2/\text{NDF}$ : 1234.3/36

In: 34.564+/-0.141  $\chi^2/\text{NDF}$ : 3163.5/39

Out: 34.523+/-0.137  $\chi^2/\text{NDF}$ : 4491.7/44

All: 34.543+/-0.098  $\chi^2/\text{NDF}$ : 7655.2/84

reg\_asym\_sam\_48\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-18.549 \pm 0.669$   $\chi^2/\text{NDF}$ : 511.1/16

Left Out:  $-29.163 \pm 0.187$   $\chi^2/\text{NDF}$ : 10126.0/24

Right Out:  $-20.014 \pm 0.638$   $\chi^2/\text{NDF}$ : 810.9/19

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

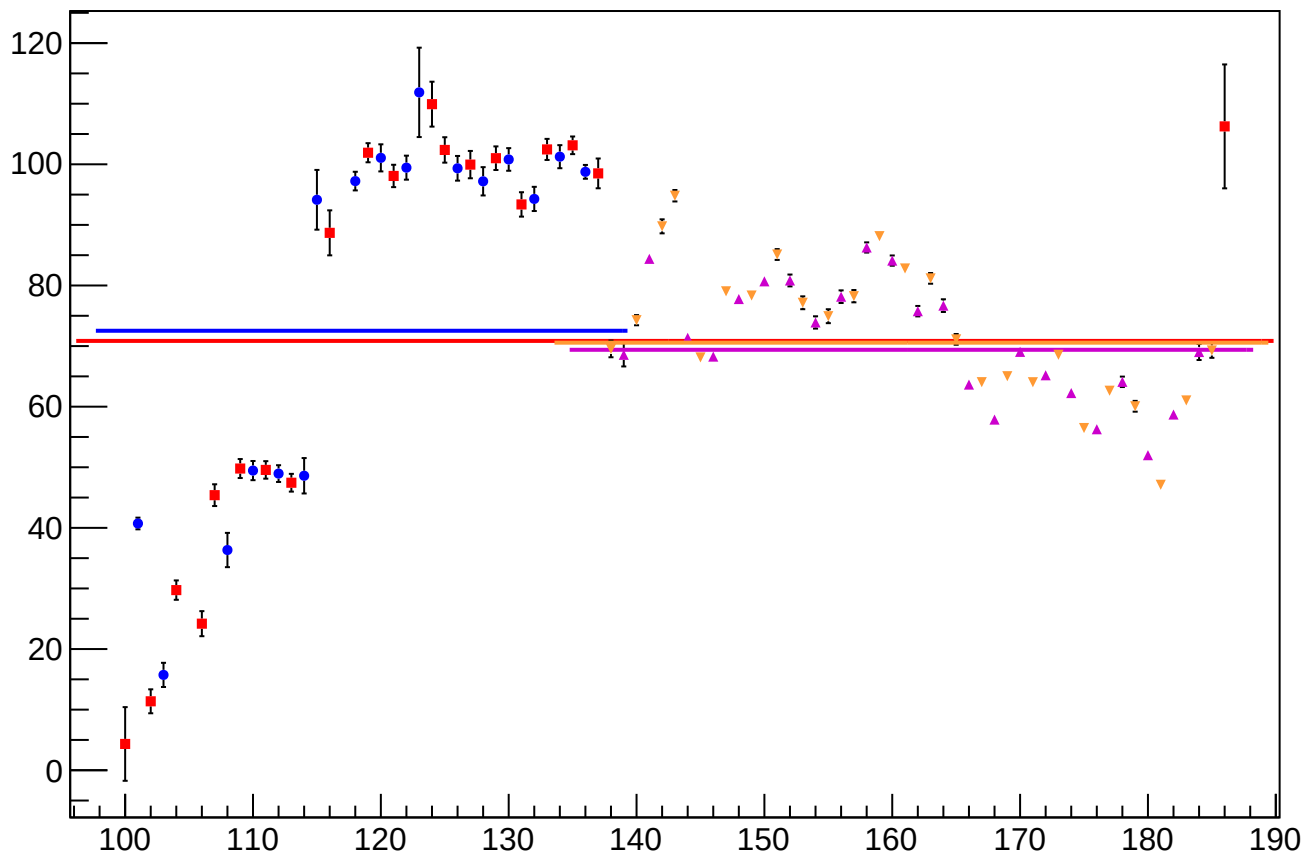
Right:  $-19.316 \pm 0.461$   $\chi^2/\text{NDF}$ : 1324.5/36

In:  $-27.866 \pm 0.183$   $\chi^2/\text{NDF}$ : 9761.8/39

Out:  $-28.438 \pm 0.179$   $\chi^2/\text{NDF}$ : 11126.5/44

All:  $-28.157 \pm 0.128$   $\chi^2/\text{NDF}$ : 20893.3/84

reg\_asym\_sam\_48\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 72.529 $\pm$ 0.429  $\chi^2$ /NDF: 4672.2/16

Left Out: 70.563 $\pm$ 0.166  $\chi^2$ /NDF: 4589.1/24

Right Out: 70.854 $\pm$ 0.433  $\chi^2$ /NDF: 5506.6/19

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

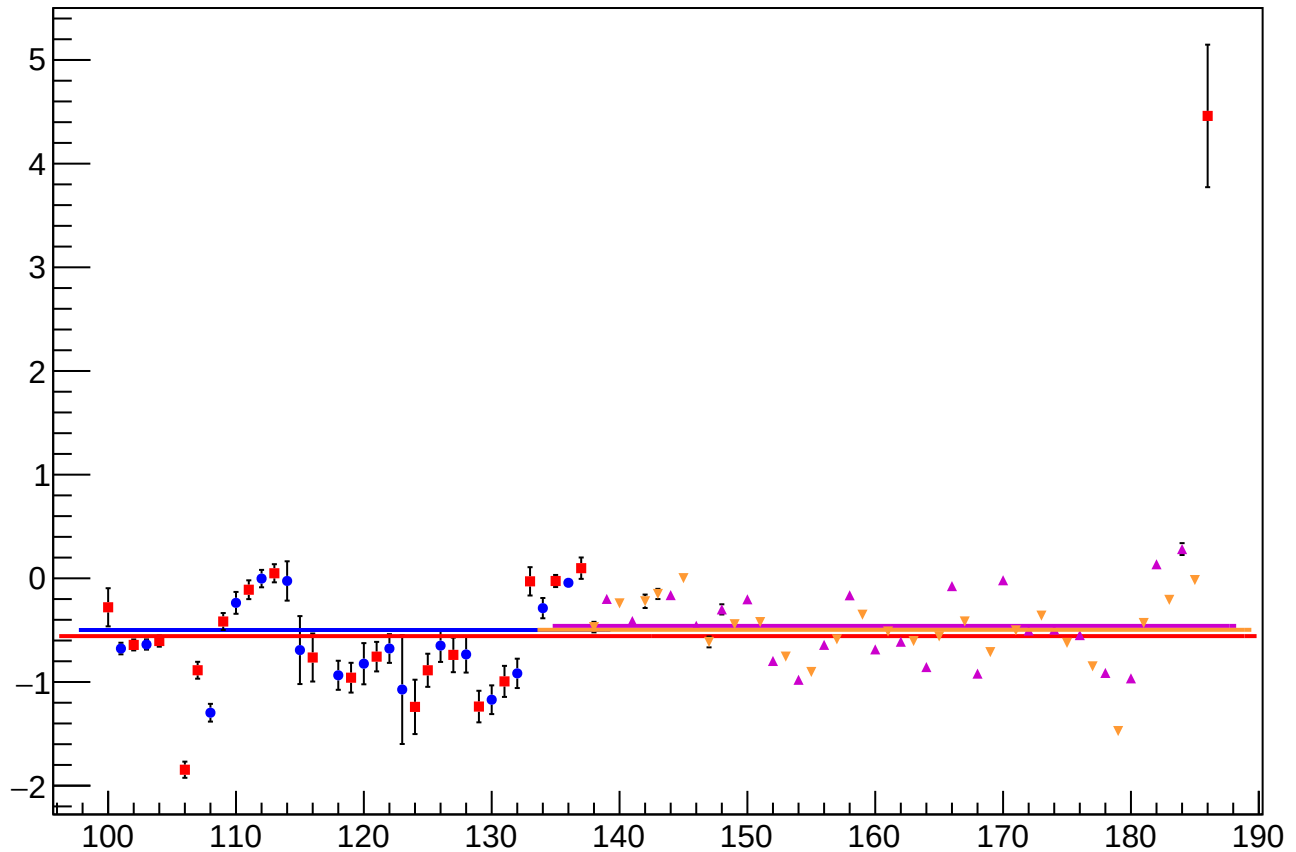
Right: 71.700 $\pm$ 0.305  $\chi^2$ /NDF: 10186.3/36

In: 69.814 $\pm$ 0.158  $\chi^2$ /NDF: 8040.3/39

Out: 70.600 $\pm$ 0.155  $\chi^2$ /NDF: 10096.1/44

All: 70.215 $\pm$ 0.111  $\chi^2$ /NDF: 18149.0/84

reg\_asym\_sam\_48\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.498 \pm 0.022$   $\chi^2/\text{NDF}$ : 302.1/16

Left Out:  $-0.497 \pm 0.008$   $\chi^2/\text{NDF}$ : 1449.3/24

Right Out:  $-0.557 \pm 0.021$   $\chi^2/\text{NDF}$ : 613.6/19

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

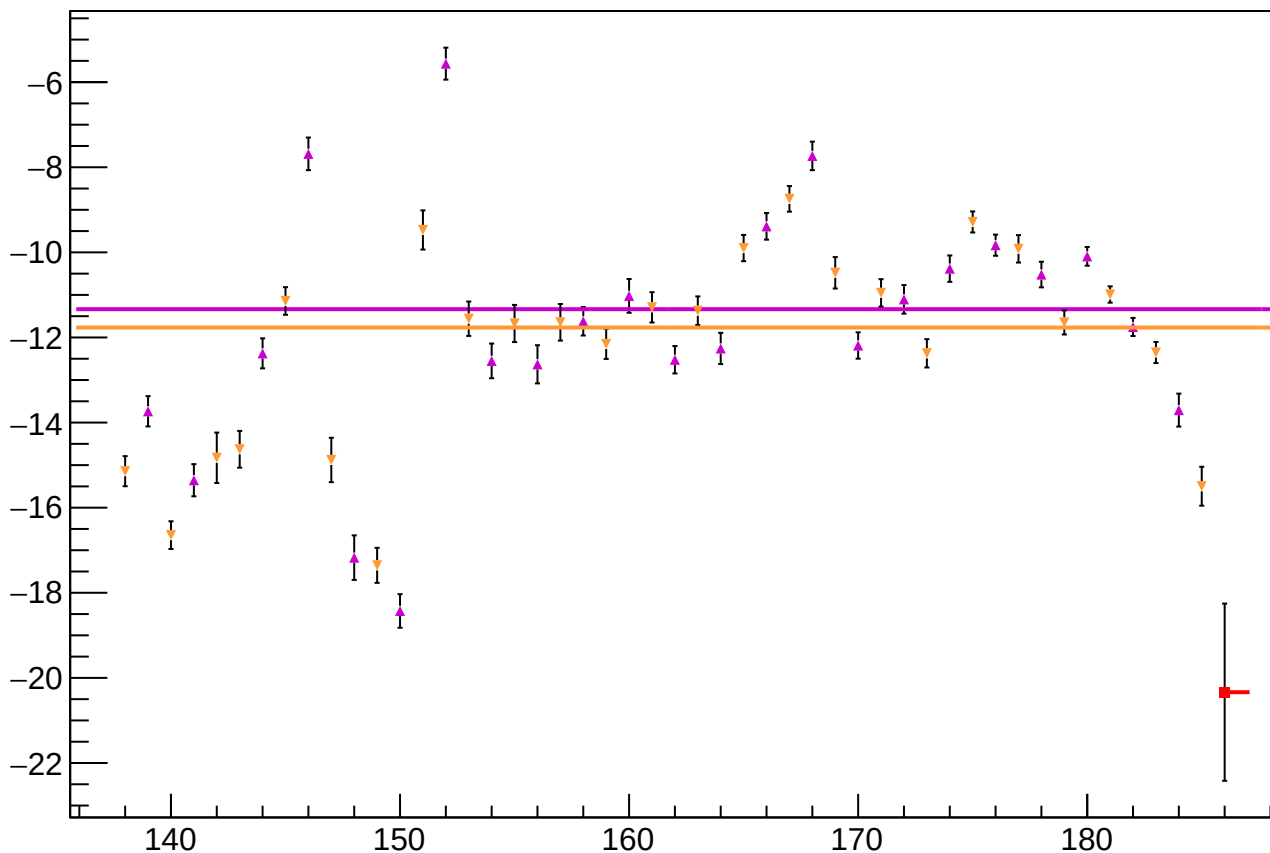
Right:  $-0.529 \pm 0.015$   $\chi^2/\text{NDF}$ : 919.4/36

In:  $-0.463 \pm 0.007$   $\chi^2/\text{NDF}$ : 2263.3/39

Out:  $-0.503 \pm 0.007$   $\chi^2/\text{NDF}$ : 2070.0/44

All:  $-0.484 \pm 0.005$   $\chi^2/\text{NDF}$ : 4349.0/84

reg\_asym\_sam\_13\_57\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Left Out: -11.767 $\pm$ 0.067  $\chi^2$ /NDF:1020.8/24

Right Out: -20.336 $\pm$ 2.082  $\chi^2$ /NDF: 0.0/0

Left In: -11.336 $\pm$ 0.068  $\chi^2$ /NDF:1269.3/22

Left: -11.556 $\pm$ 0.048  $\chi^2$ /NDF: 2310.6/47

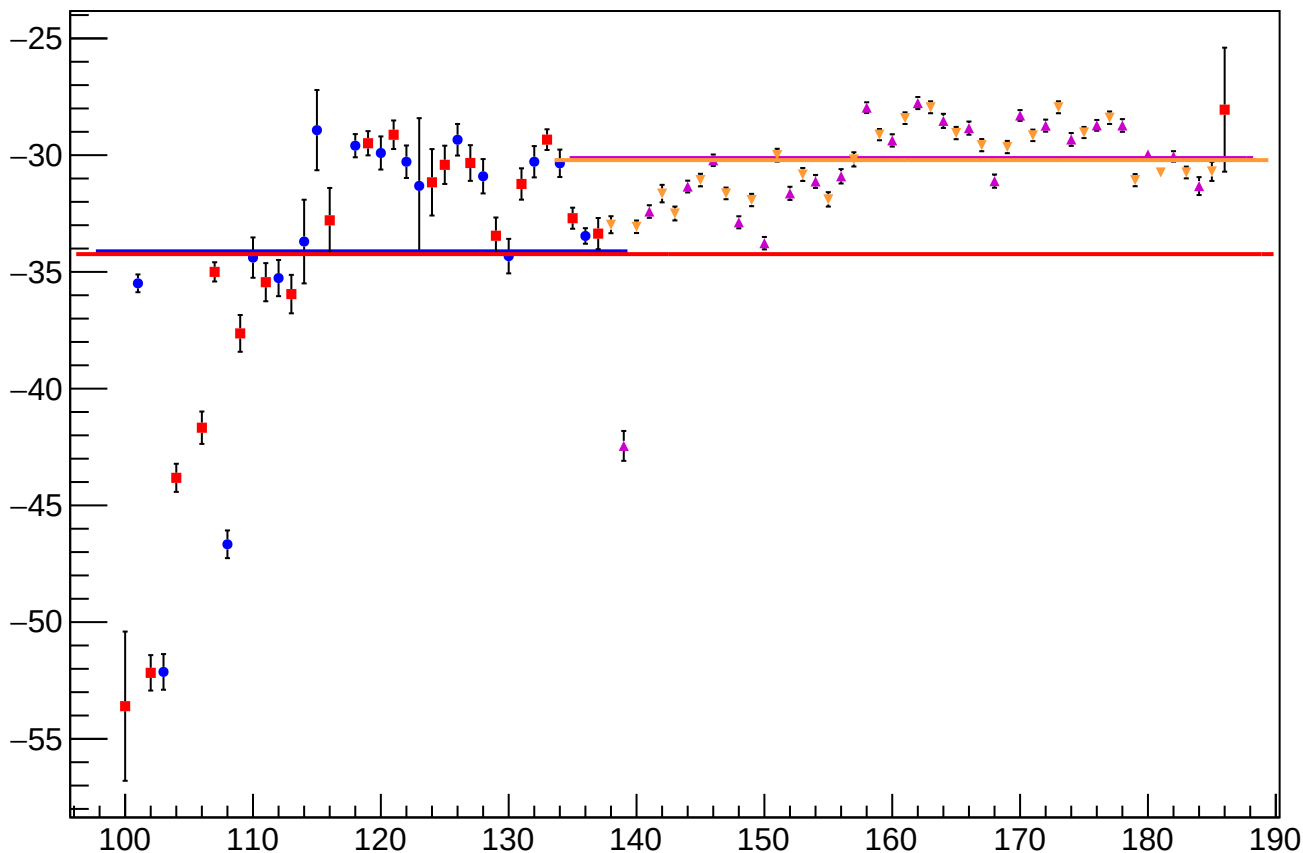
Right: -20.336 $\pm$ 2.082  $\chi^2$ /NDF: 0.0/0

In: -11.336 $\pm$ 0.068  $\chi^2$ /NDF:1269.3/22

Out: -11.776 $\pm$ 0.067  $\chi^2$ /NDF:1037.7/25

All: -11.560 $\pm$ 0.048  $\chi^2$ /NDF: 2328.4/48

reg\_asym\_sam\_13\_57\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-34.120 \pm 0.152$   $\chi^2/\text{NDF}: 1324.4/16$

Left Out:  $-30.212 \pm 0.054$   $\chi^2/\text{NDF}: 734.0/24$

Right Out:  $-34.238 \pm 0.151$   $\chi^2/\text{NDF}: 1361.5/19$

Left In:  $-30.124 \pm 0.056$   $\chi^2/\text{NDF}: 1226.2/22$

Left:  $-30.169 \pm 0.039$   $\chi^2/\text{NDF}: 1961.5/47$

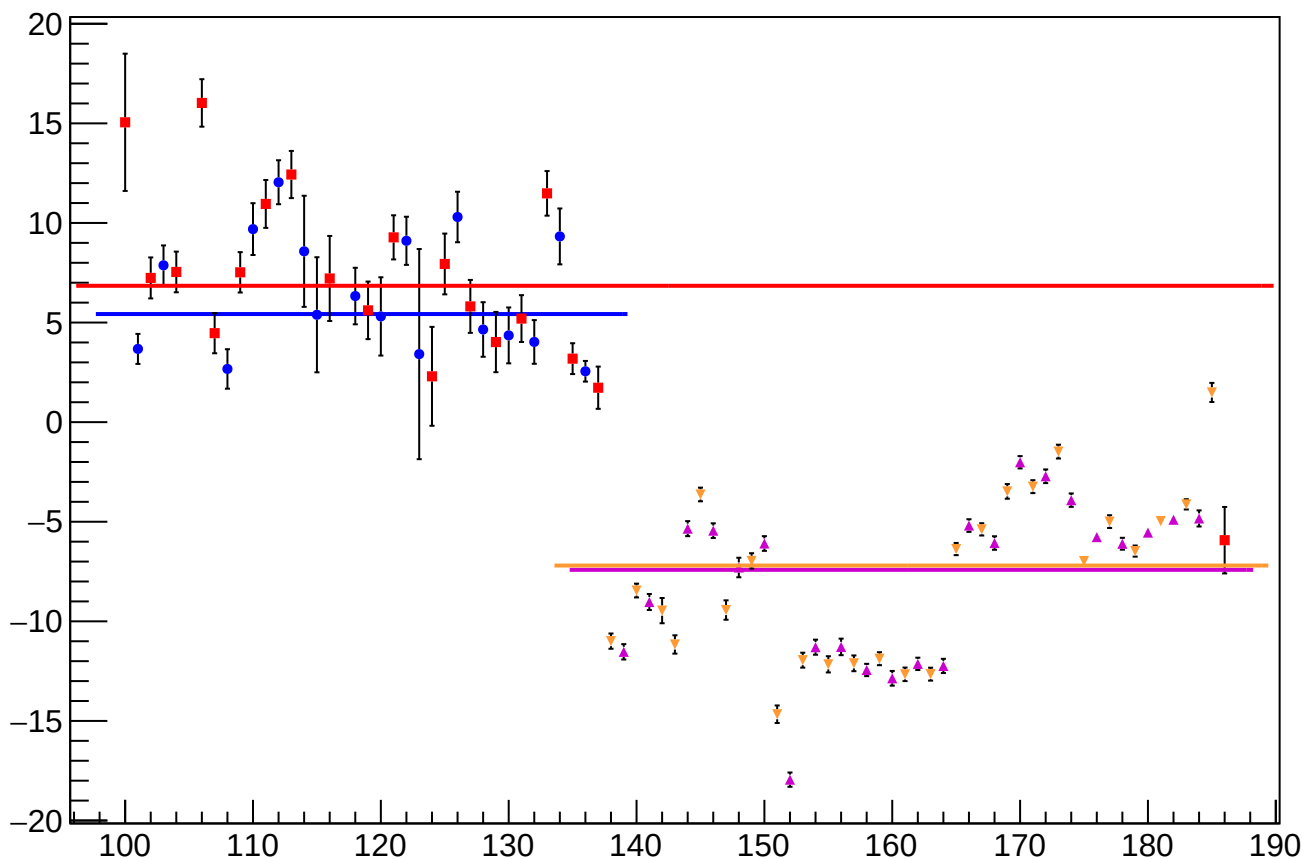
Right:  $-34.180 \pm 0.107$   $\chi^2/\text{NDF}: 2686.2/36$

In:  $-30.594 \pm 0.052$   $\chi^2/\text{NDF}: 3160.7/39$

Out:  $-30.668 \pm 0.051$   $\chi^2/\text{NDF}: 2728.0/44$

All:  $-30.632 \pm 0.036$   $\chi^2/\text{NDF}: 5889.8/84$

reg\_asym\_sam\_13\_57\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $5.427 \pm 0.271$   $\chi^2/\text{NDF}: 132.7/16$

Left Out:  $-7.199 \pm 0.067$   $\chi^2/\text{NDF}: 3037.3/24$

Right Out:  $6.846 \pm 0.271$   $\chi^2/\text{NDF}: 242.4/19$

Left In:  $-7.415 \pm 0.068$   $\chi^2/\text{NDF}: 3123.3/22$

Left:  $-7.305 \pm 0.048$   $\chi^2/\text{NDF}: 6165.7/47$

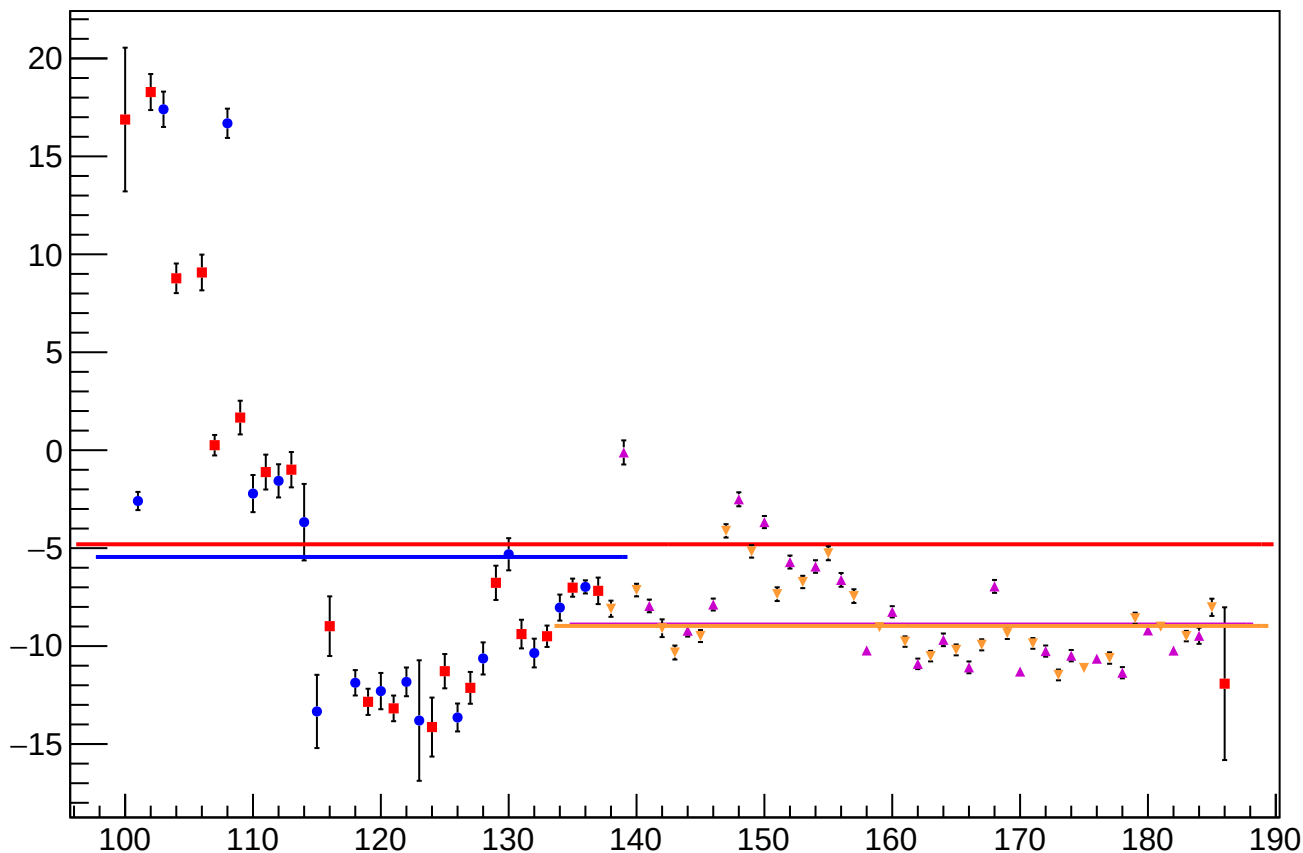
Right:  $6.135 \pm 0.192$   $\chi^2/\text{NDF}: 388.8/36$

In:  $-6.656 \pm 0.066$   $\chi^2/\text{NDF}: 5373.2/39$

Out:  $-6.394 \pm 0.065$   $\chi^2/\text{NDF}: 5808.3/44$

All:  $-6.523 \pm 0.046$   $\chi^2/\text{NDF}: 11189.6/84$

reg\_asym\_sam\_13\_57\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-5.450 \pm 0.171$   $\chi^2/\text{NDF}$ : 2097.1/16

Left Out:  $-8.970 \pm 0.060$   $\chi^2/\text{NDF}$ : 878.8/24

Right Out:  $-4.803 \pm 0.173$   $\chi^2/\text{NDF}$ : 2050.8/19

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:  $-5.130 \pm 0.122$   $\chi^2/\text{NDF}$ : 4155.0/36

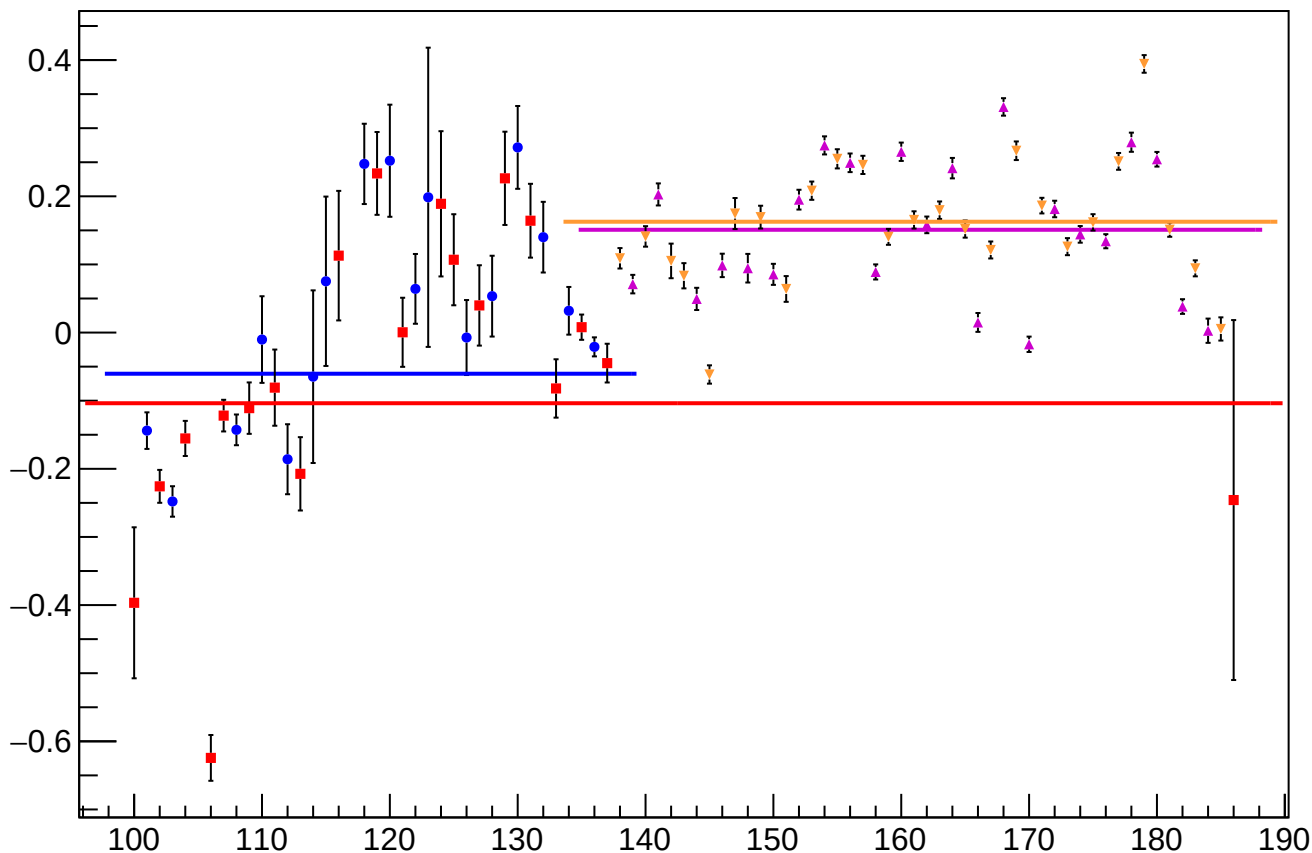
In:  $-8.504 \pm 0.058$   $\chi^2/\text{NDF}$ : 3991.0/39

Out:  $-8.520 \pm 0.057$   $\chi^2/\text{NDF}$ : 3447.2/44

All:  $-8.512 \pm 0.041$   $\chi^2/\text{NDF}$ : 7438.2/84



reg\_asym\_sam\_13\_57\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.060 \pm 0.008$   $\chi^2/\text{NDF}$ : 214.5/16

Left Out:  $0.163 \pm 0.003$   $\chi^2/\text{NDF}$ : 1018.1/24

Right Out:  $-0.104 \pm 0.008$   $\chi^2/\text{NDF}$ : 433.4/19

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

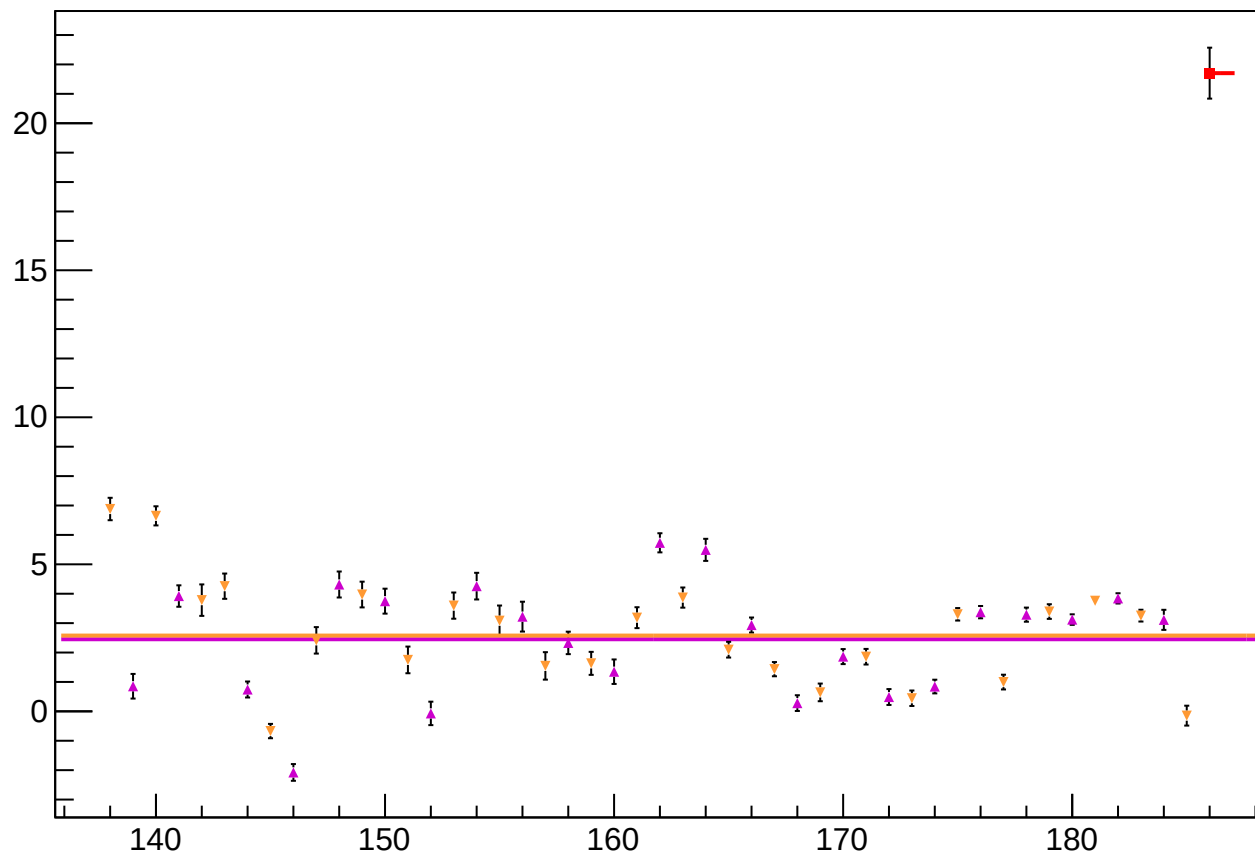
Right:  $-0.082 \pm 0.006$   $\chi^2/\text{NDF}$ : 661.1/36

In:  $0.130 \pm 0.003$   $\chi^2/\text{NDF}$ : 2071.0/39

Out:  $0.138 \pm 0.003$   $\chi^2/\text{NDF}$ : 2353.7/44

All:  $0.134 \pm 0.002$   $\chi^2/\text{NDF}$ : 4428.6/84

reg\_asym\_sam\_15\_37\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 2.577+/-0.058  $\chi^2/\text{NDF}$ :867.5/24

Right Out: 21.703+/-0.867  $\chi^2/\text{NDF}$ : 0.0/0

Left In: 2.452+/-0.059  $\chi^2/\text{NDF}$ :871.3/22

Left: 2.516+/-0.042  $\chi^2/\text{NDF}$ : 1741.0/47

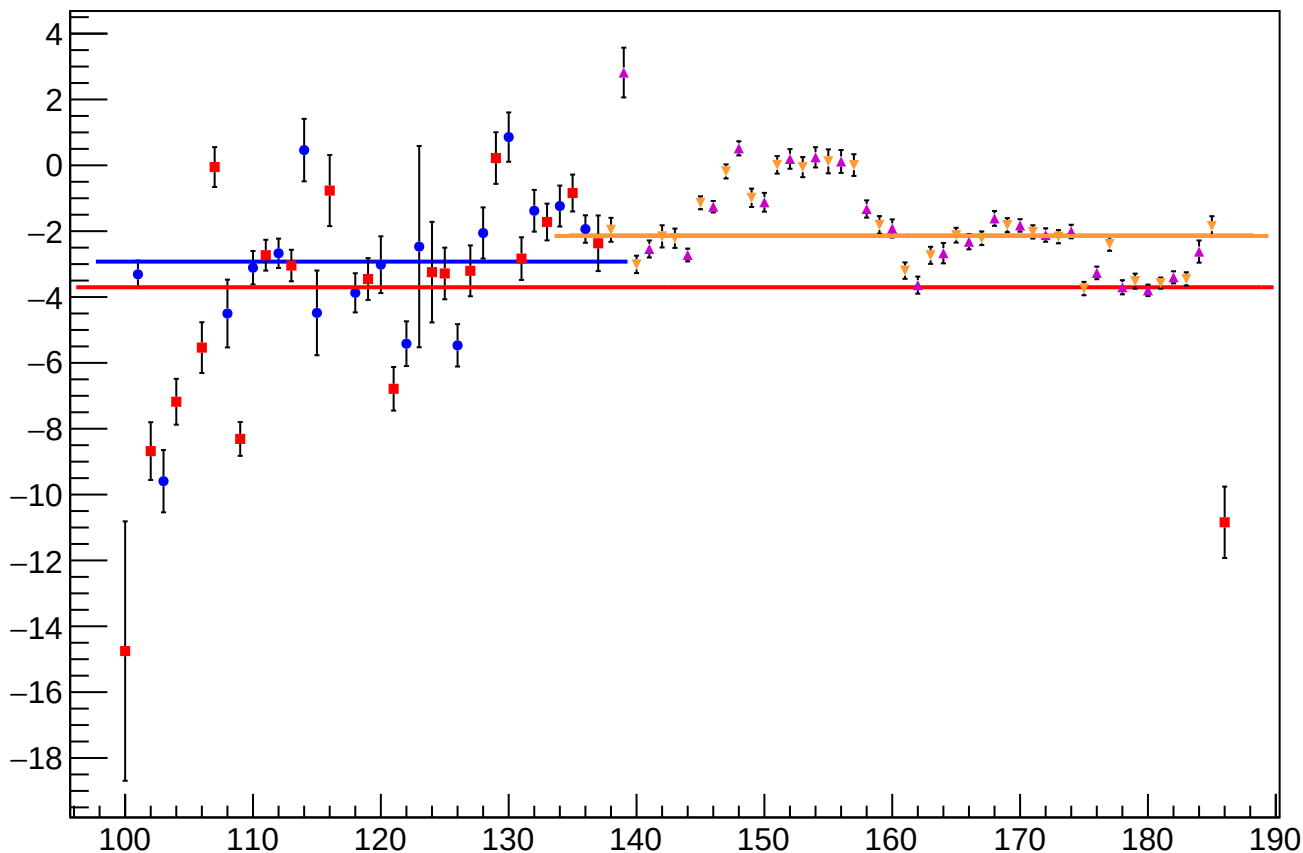
Right: 21.703+/-0.867  $\chi^2/\text{NDF}$ : 0.0/0

In: 2.452+/-0.059  $\chi^2/\text{NDF}$ :871.3/22

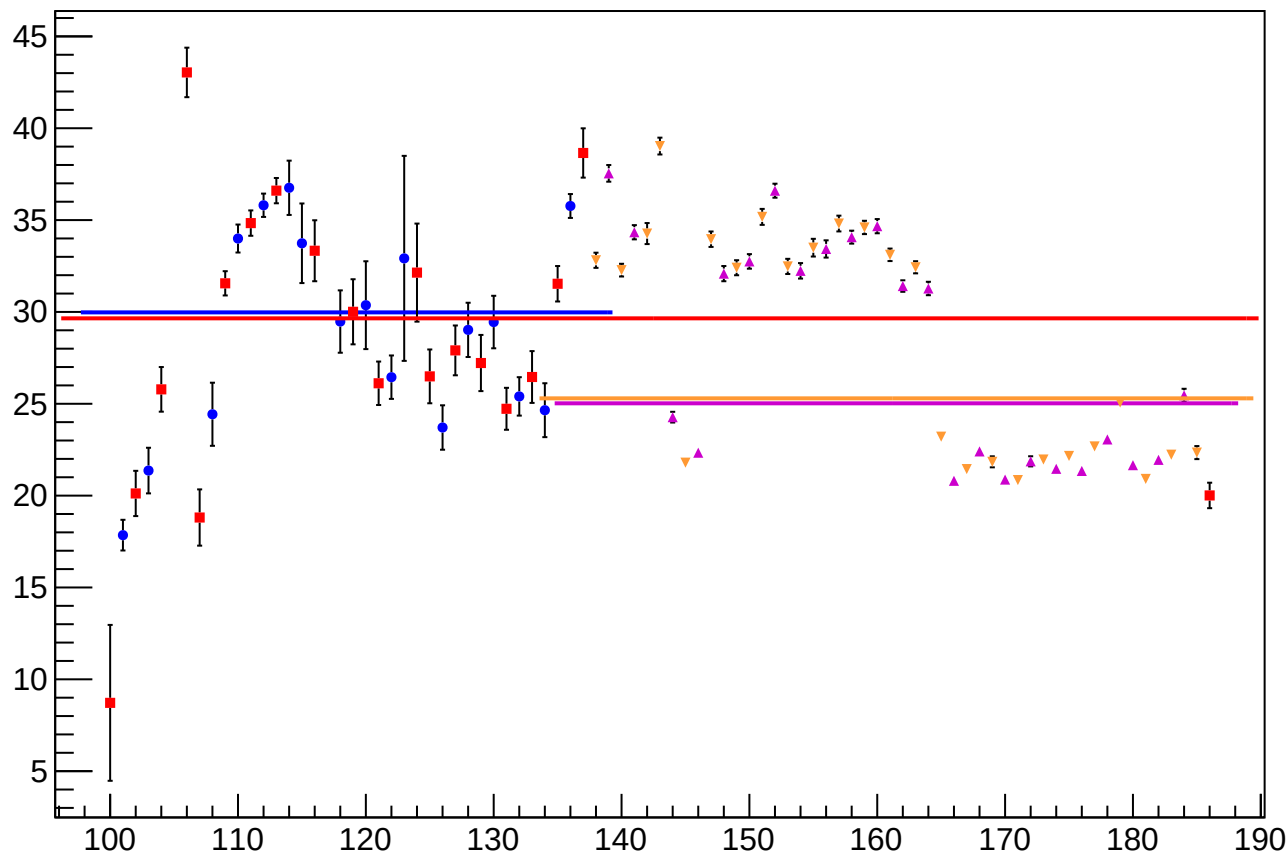
Out: 2.663+/-0.058  $\chi^2/\text{NDF}$ :1352.5/25

All: 2.560+/-0.042  $\chi^2/\text{NDF}$ : 2230.2/48

reg\_asym\_sam\_15\_37\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



reg\_asym\_sam\_15\_37\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 29.976 $\pm$ 0.268  $\chi^2$ /NDF: 554.0/16

Left Out: 25.296 $\pm$ 0.059  $\chi^2$ /NDF: 8272.3/24

Right Out: 29.651 $\pm$ 0.244  $\chi^2$ /NDF: 699.2/19

Left In: 25.025 $\pm$ 0.060  $\chi^2$ /NDF: 7610.5/22

Left: 25.162 $\pm$ 0.042  $\chi^2$ /NDF: 15893.3/47

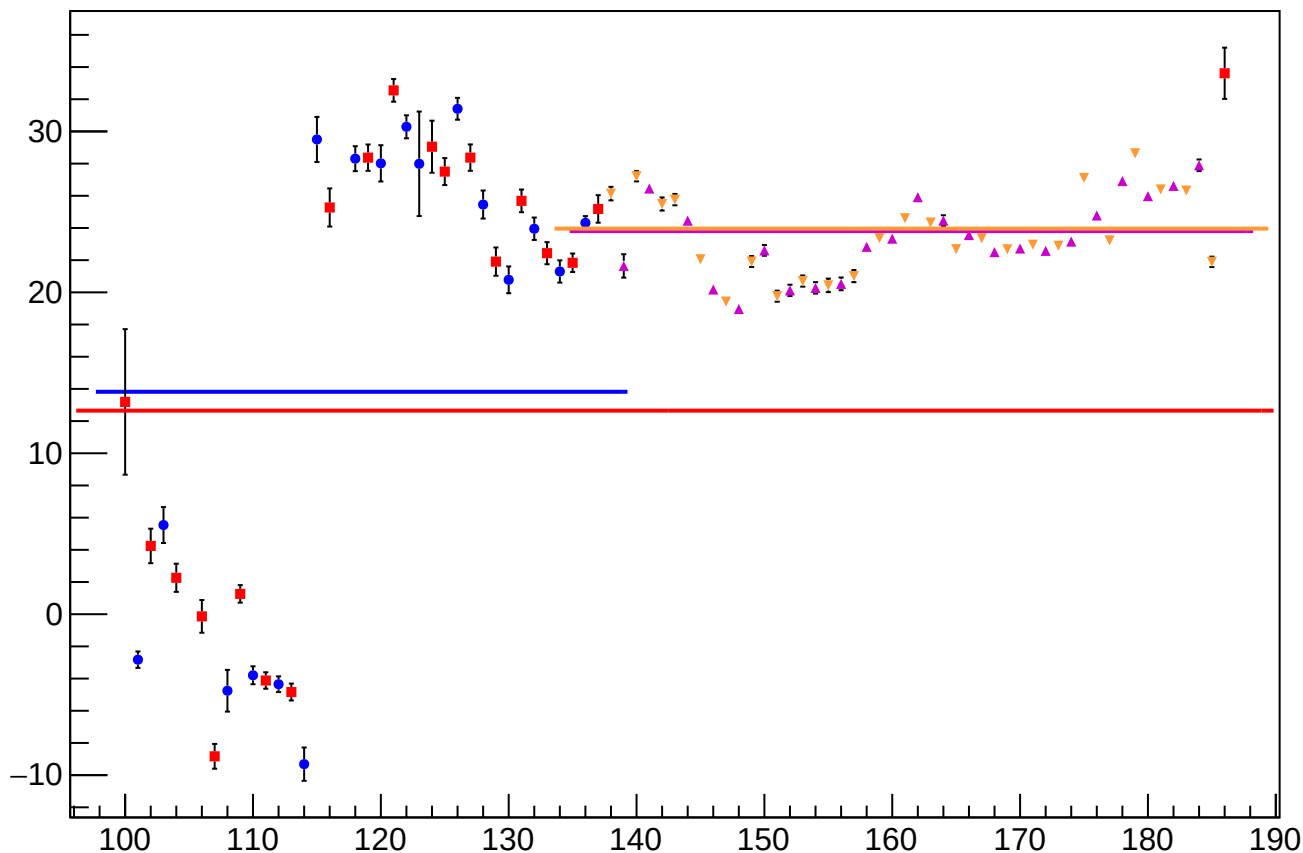
Right: 29.798 $\pm$ 0.180  $\chi^2$ /NDF: 1254.1/36

In: 25.259 $\pm$ 0.058  $\chi^2$ /NDF: 8490.2/39

Out: 25.535 $\pm$ 0.057  $\chi^2$ /NDF: 9273.0/44

All: 25.399 $\pm$ 0.041  $\chi^2$ /NDF: 17774.7/84

reg\_asym\_sam\_15\_37\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 13.822 $\pm$ 0.173  $\chi^2$ /NDF: 7274.7/16

Left Out: 23.962 $\pm$ 0.053  $\chi^2$ /NDF:1922.4/24

Right Out: 12.650 $\pm$ 0.173  $\chi^2$ /NDF: 7128.4/19

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

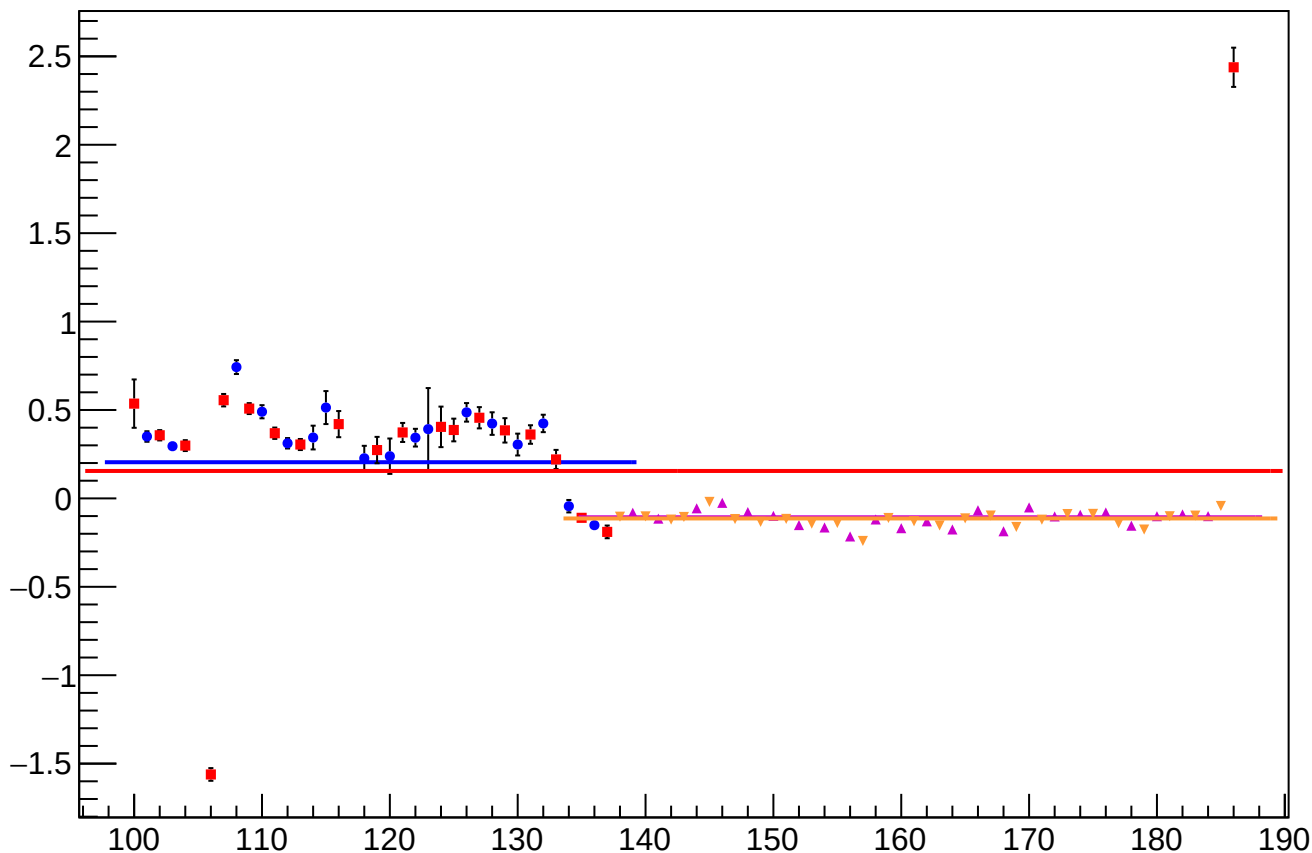
Right: 13.236 $\pm$ 0.122  $\chi^2$ /NDF: 14426.1/36

In: 22.918 $\pm$ 0.052  $\chi^2$ /NDF:12069.5/39

Out: 22.986 $\pm$ 0.051  $\chi^2$ /NDF:12959.1/44

All: 22.952 $\pm$ 0.036  $\chi^2$ /NDF: 25029.5/84

reg\_asym\_sam\_15\_37\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $0.205 \pm 0.009$   $\chi^2/\text{NDF}: 846.4/16$

Left Out:  $-0.113 \pm 0.002$   $\chi^2/\text{NDF}: 291.0/24$

Right Out:  $0.155 \pm 0.009$   $\chi^2/\text{NDF}: 3440.0/19$

Left In:  $-0.107 \pm 0.002$   $\chi^2/\text{NDF}: 321.8/22$

Left:  $-0.110 \pm 0.002$   $\chi^2/\text{NDF}: 616.6/47$

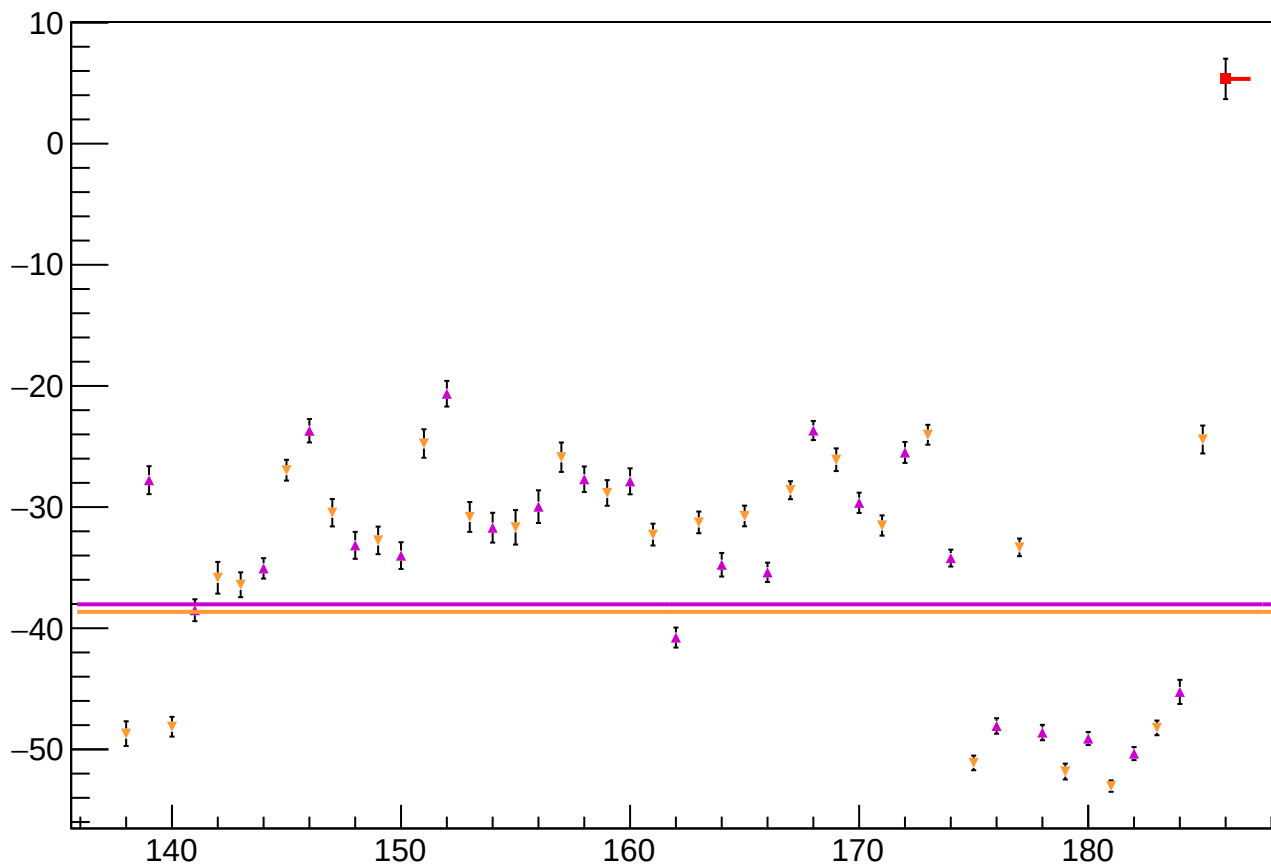
Right:  $0.179 \pm 0.007$   $\chi^2/\text{NDF}: 4300.6/36$

In:  $-0.087 \pm 0.002$   $\chi^2/\text{NDF}: 2197.7/39$

Out:  $-0.096 \pm 0.002$   $\chi^2/\text{NDF}: 4530.5/44$

All:  $-0.091 \pm 0.002$   $\chi^2/\text{NDF}: 6736.0/84$

reg\_asym\_sam\_24\_68\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Left Out: -38.650 $\pm$ 0.169  $\chi^2$ /NDF:4077.2/24

Right Out: 5.346 $\pm$ 1.669  $\chi^2$ /NDF: 0.0/0

Left In: -38.027 $\pm$ 0.173  $\chi^2$ /NDF:3091.9/22

Left: -38.346 $\pm$ 0.121  $\chi^2$ /NDF: 7175.7/47

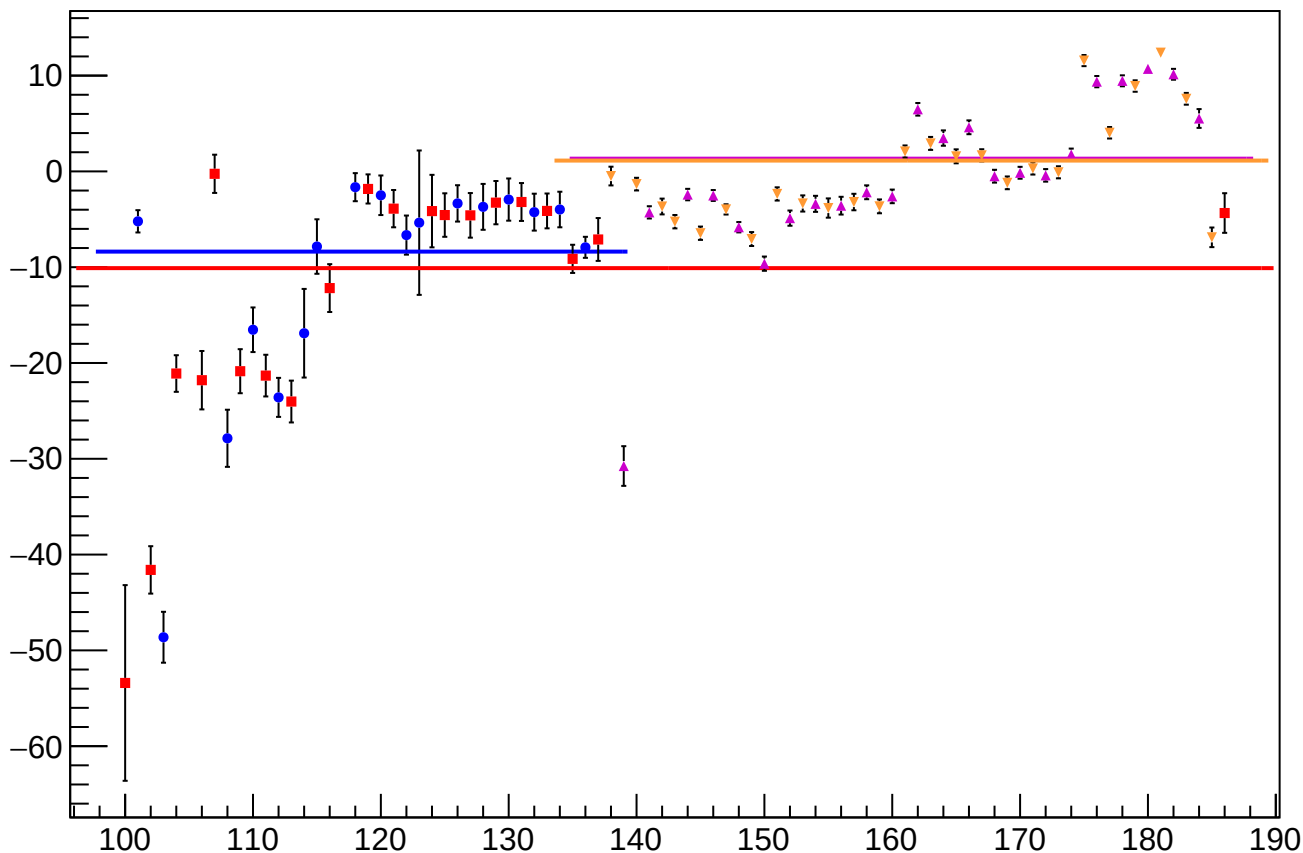
Right: 5.346 $\pm$ 1.669  $\chi^2$ /NDF: 0.0/0

In: -38.027 $\pm$ 0.173  $\chi^2$ /NDF:3091.9/22

Out: -38.203 $\pm$ 0.168  $\chi^2$ /NDF:4765.0/25

All: -38.118 $\pm$ 0.121  $\chi^2$ /NDF: 7857.4/48

reg\_asym\_sam\_24\_68\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-8.373 \pm 0.467$   $\chi^2/\text{NDF}: 408.5/16$

Left Out:  $1.130 \pm 0.136$   $\chi^2/\text{NDF}: 1799.3/24$

Right Out:  $-10.098 \pm 0.478$   $\chi^2/\text{NDF}: 438.0/19$

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:  $-9.214 \pm 0.334$   $\chi^2/\text{NDF}: 853.1/36$

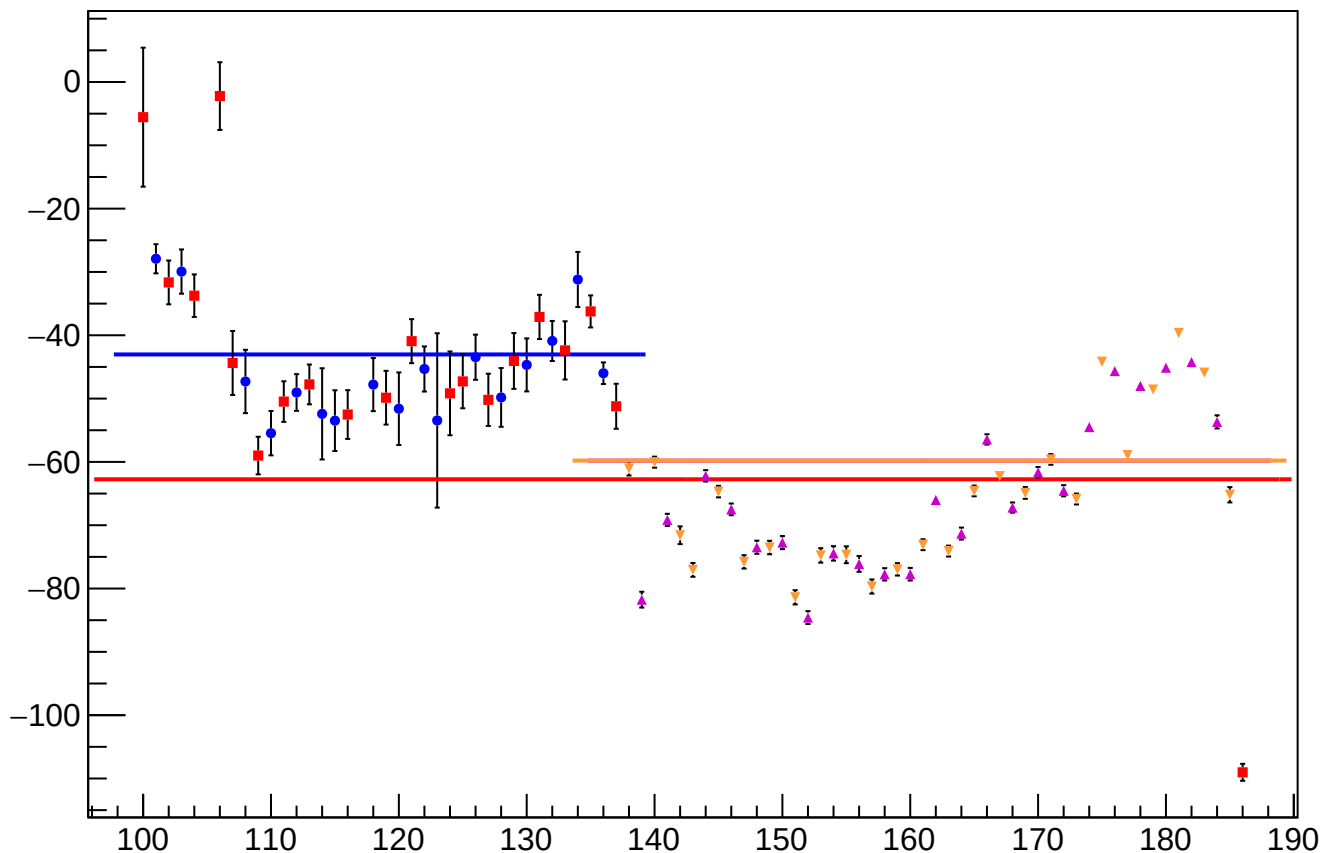
In:  $0.530 \pm 0.134$   $\chi^2/\text{NDF}: 2853.3/39$

Out:  $0.290 \pm 0.131$   $\chi^2/\text{NDF}: 2747.1/44$

All:  $0.407 \pm 0.094$   $\chi^2/\text{NDF}: 5602.0/84$



reg\_asym\_sam\_24\_68\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-43.028 \pm 0.838$   $\chi^2/\text{NDF}$ : 98.9/16

Left Out:  $-59.789 \pm 0.170$   $\chi^2/\text{NDF}$ : 5837.7/24

Right Out:  $-62.747 \pm 0.729$   $\chi^2/\text{NDF}$ : 1852.3/19

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

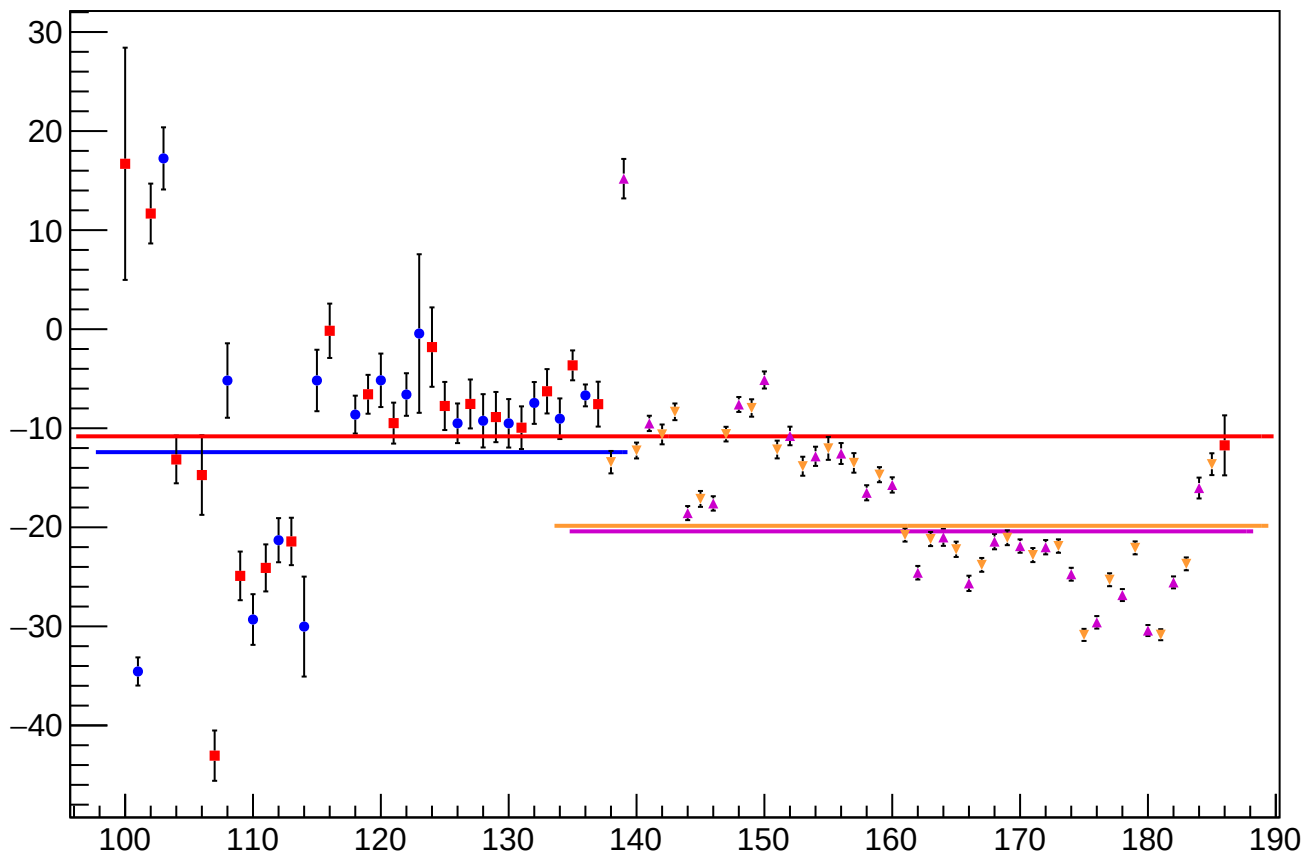
Right:  $-54.263 \pm 0.550$   $\chi^2/\text{NDF}$ : 2266.3/36

In:  $-59.115 \pm 0.170$   $\chi^2/\text{NDF}$ : 5700.3/39

Out:  $-59.942 \pm 0.166$   $\chi^2/\text{NDF}$ : 7705.6/44

All:  $-59.538 \pm 0.119$   $\chi^2/\text{NDF}$ : 13418.1/84

reg\_asym\_sam\_24\_68\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-12.412 \pm 0.524$   $\chi^2/\text{NDF}$ : 473.5/16

Left Out:  $-19.847 \pm 0.153$   $\chi^2/\text{NDF}$ : 1931.3/24

Right Out:  $-10.816 \pm 0.546$   $\chi^2/\text{NDF}$ : 366.0/19

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

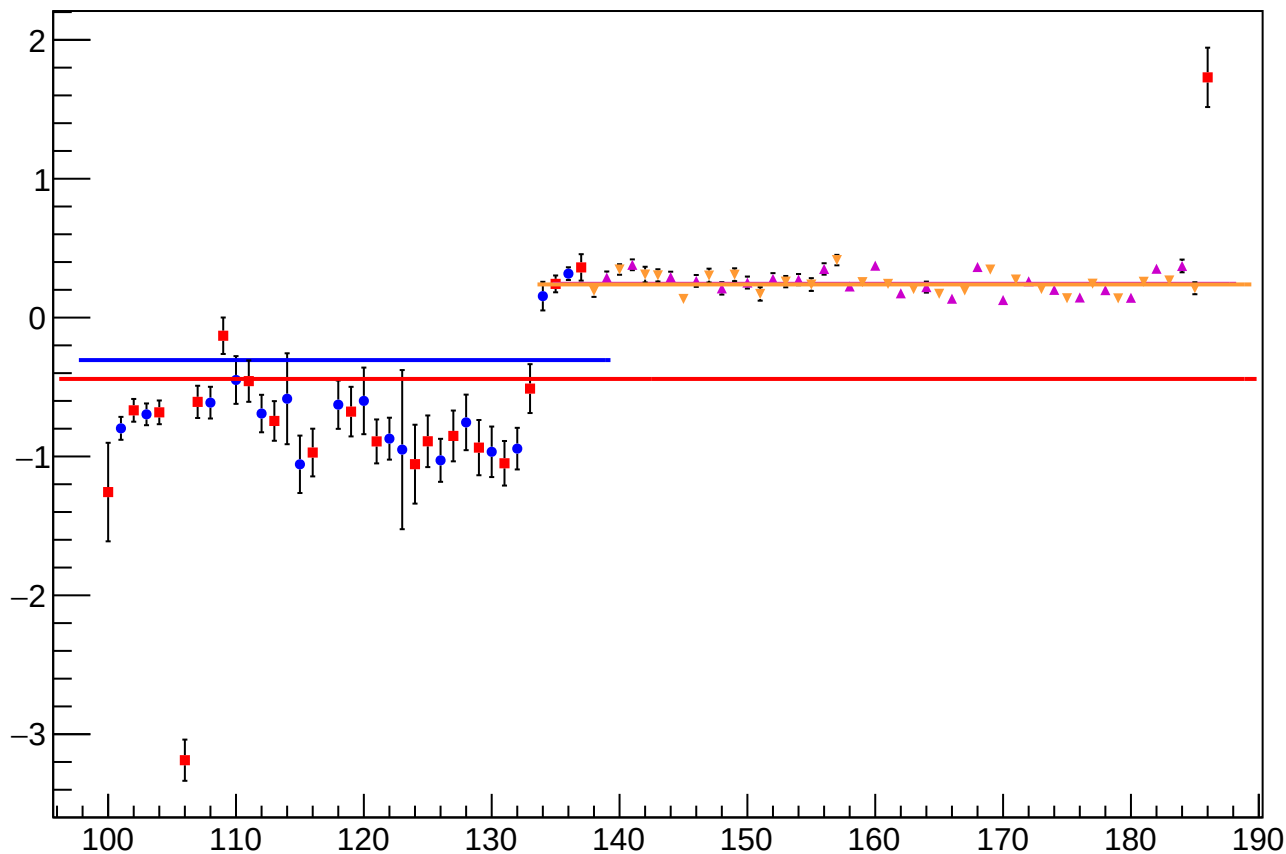
Right:  $-11.647 \pm 0.378$   $\chi^2/\text{NDF}$ : 844.0/36

In:  $-19.753 \pm 0.150$   $\chi^2/\text{NDF}$ : 2989.5/39

Out:  $-19.191 \pm 0.147$   $\chi^2/\text{NDF}$ : 2551.4/44

All:  $-19.466 \pm 0.105$   $\chi^2/\text{NDF}$ : 5548.1/84

reg\_asym\_sam\_24\_68\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.306 \pm 0.028$   $\chi^2/\text{NDF}$ : 371.7/16

Left Out:  $0.239 \pm 0.007$   $\chi^2/\text{NDF}$ : 93.0/24

Right Out:  $-0.442 \pm 0.028$   $\chi^2/\text{NDF}$ : 732.8/19

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

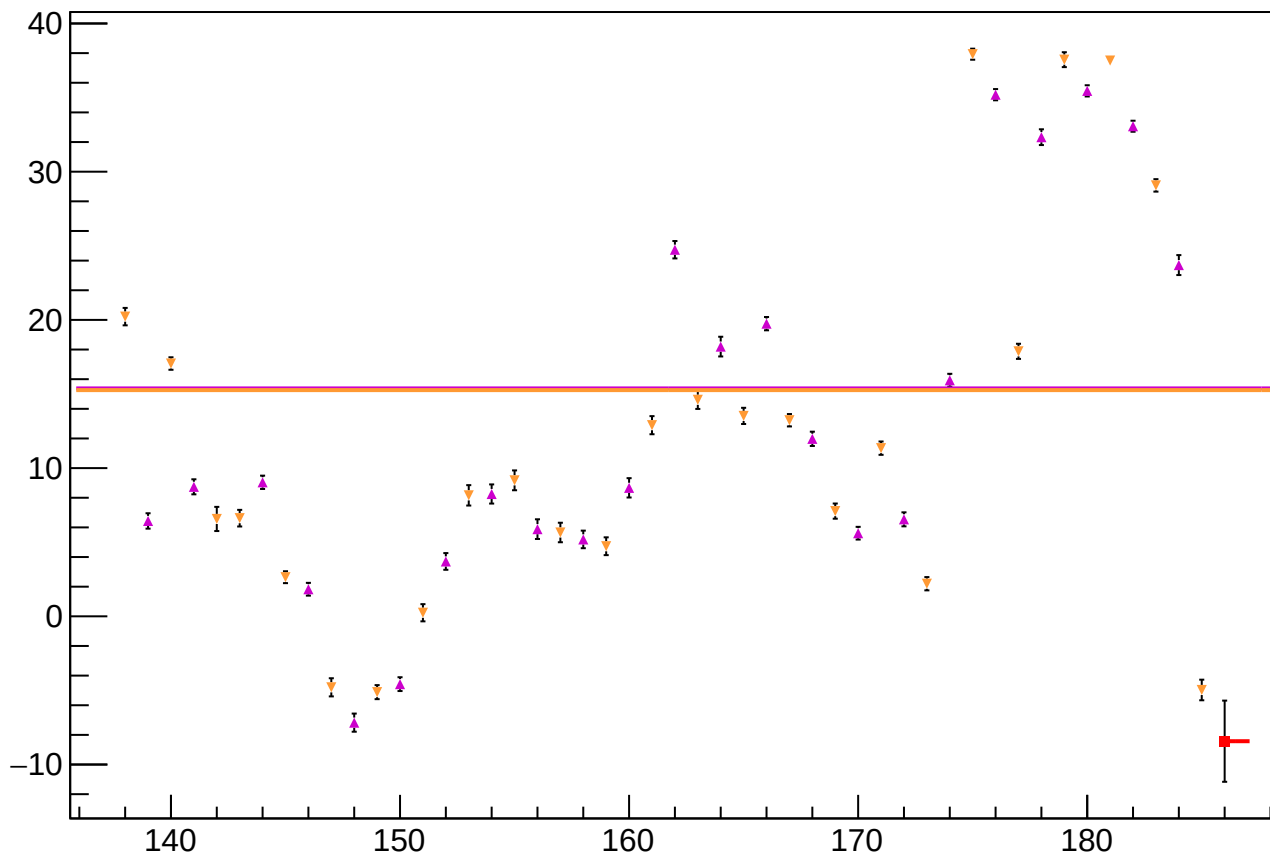
Right:  $-0.372 \pm 0.020$   $\chi^2/\text{NDF}$ : 1116.3/36

In:  $0.209 \pm 0.007$   $\chi^2/\text{NDF}$ : 881.2/39

Out:  $0.199 \pm 0.007$   $\chi^2/\text{NDF}$ : 1368.1/44

All:  $0.204 \pm 0.005$   $\chi^2/\text{NDF}$ : 2250.2/84

reg\_asym\_sam\_26\_48\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Left Out: 15.263 $\pm$ 0.100  $\chi^2$ /NDF:19175.2/24

Right Out: -8.426 $\pm$ 2.739  $\chi^2$ /NDF: 0.0/0

Left In: 15.377 $\pm$ 0.103  $\chi^2$ /NDF:16268.9/22

Left: 15.318 $\pm$ 0.072  $\chi^2$ /NDF: 35444.7/47

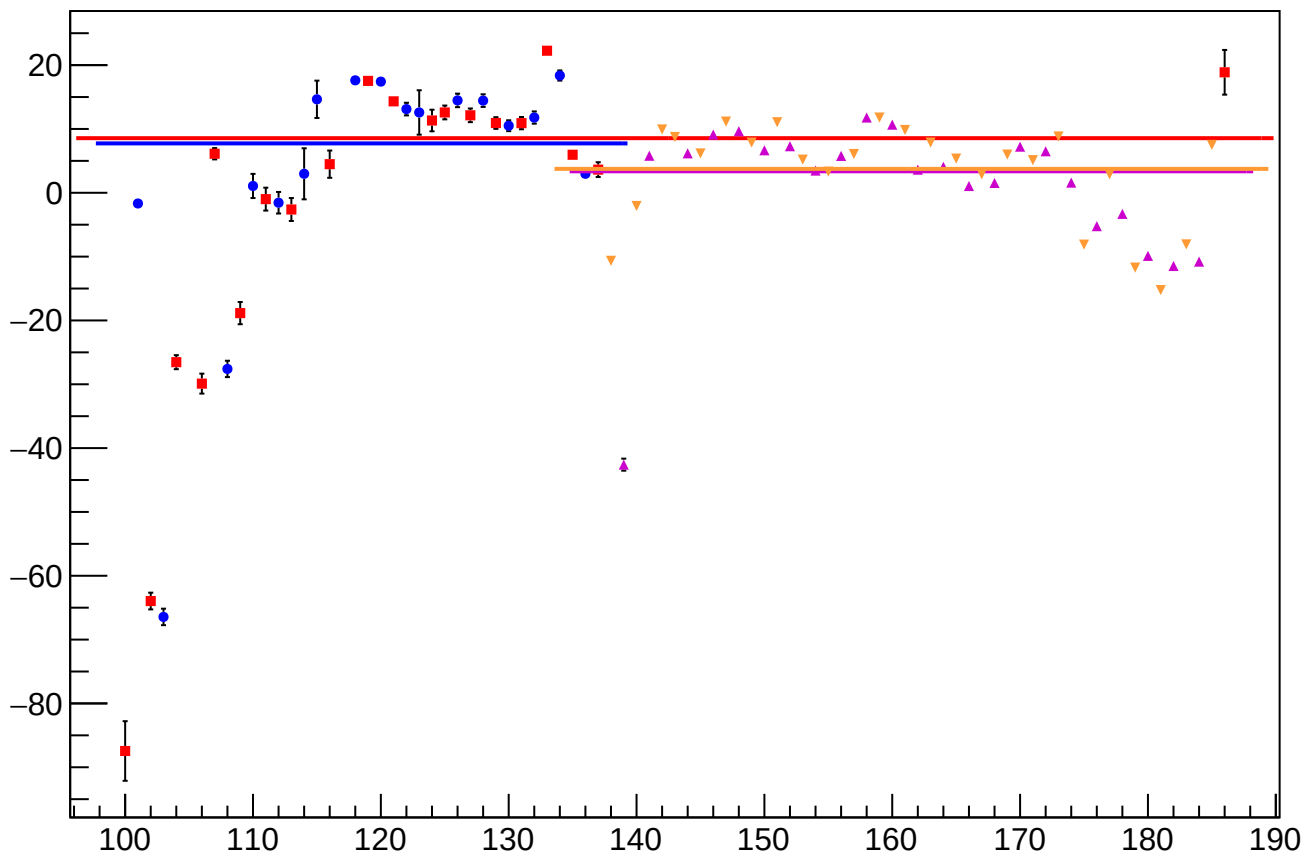
Right: -8.426 $\pm$ 2.739  $\chi^2$ /NDF: 0.0/0

In: 15.377 $\pm$ 0.103  $\chi^2$ /NDF:16268.9/22

Out: 15.231 $\pm$ 0.100  $\chi^2$ /NDF:19249.9/25

All: 15.302 $\pm$ 0.072  $\chi^2$ /NDF: 35519.8/48

reg\_asym\_sam\_26\_48\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 7.736 $\pm$ 0.218  $\chi^2$ /NDF: 5301.4/16

Left Out: 3.746 $\pm$ 0.079  $\chi^2$ /NDF:9247.4/24

Right Out: 8.556 $\pm$ 0.213  $\chi^2$ /NDF: 6729.3/19

Left In: 3.365 $\pm$ 0.081  $\chi^2$ /NDF:8527.0/22

Left: 3.561 $\pm$ 0.057  $\chi^2$ /NDF: 17785.7/47

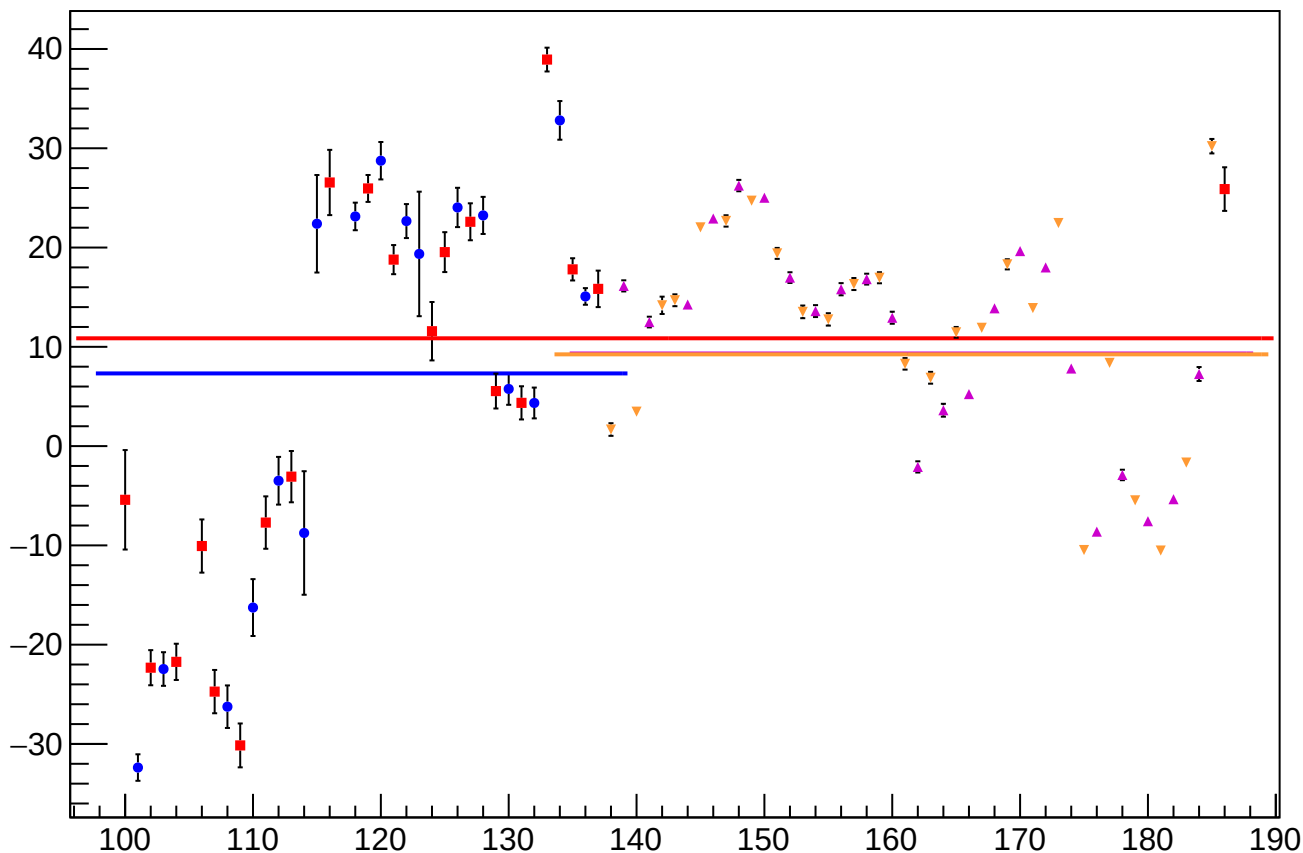
Right: 8.156 $\pm$ 0.152  $\chi^2$ /NDF: 12037.9/36

In: 3.897 $\pm$ 0.076  $\chi^2$ /NDF:14180.5/39

Out: 4.324 $\pm$ 0.074  $\chi^2$ /NDF:16425.0/44

All: 4.117 $\pm$ 0.053  $\chi^2$ /NDF: 30621.7/84

reg\_asym\_sam\_26\_48\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 7.321+/-0.419  $\chi^2/\text{NDF}$ : 2291.7/16

Left Out: 9.242+/-0.101  $\chi^2/\text{NDF}$ :13633.2/24

Right Out: 10.858+/-0.410  $\chi^2/\text{NDF}$ : 2331.4/19

Left In: 9.328+/-0.103  $\chi^2/\text{NDF}$ :11968.5/22

Left: 9.284+/-0.072  $\chi^2/\text{NDF}$ : 25602.0/47

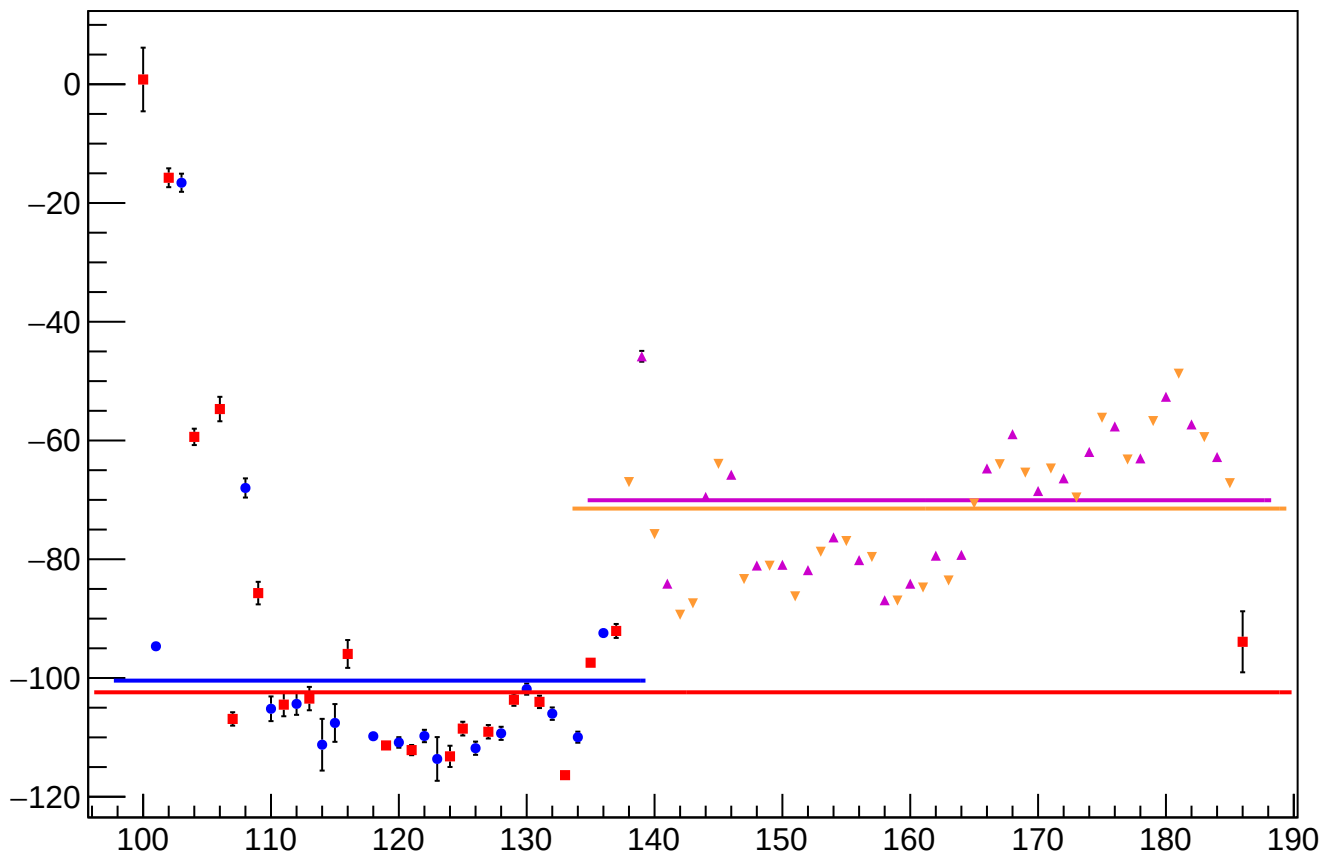
Right: 9.127+/-0.293  $\chi^2/\text{NDF}$ : 4659.4/36

In: 9.215+/-0.100  $\chi^2/\text{NDF}$ :14281.8/39

Out: 9.334+/-0.098  $\chi^2/\text{NDF}$ :15979.2/44

All: 9.276+/-0.070  $\chi^2/\text{NDF}$ : 30261.7/84

reg\_asym\_sam\_26\_48\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: -100.441+/-0.251  $\chi^2$ /NDF: 4458.9/16

Left Out: -71.465+/-0.089  $\chi^2$ /NDF:16409.7/24

Right Out: -102.408+/-0.246  $\chi^2$ /NDF: 6097.7/19

Left In: -70.061+/-0.092  $\chi^2$ /NDF:13058.5/22

Left: -70.782+/-0.064  $\chi^2$ /NDF: 29588.5/47

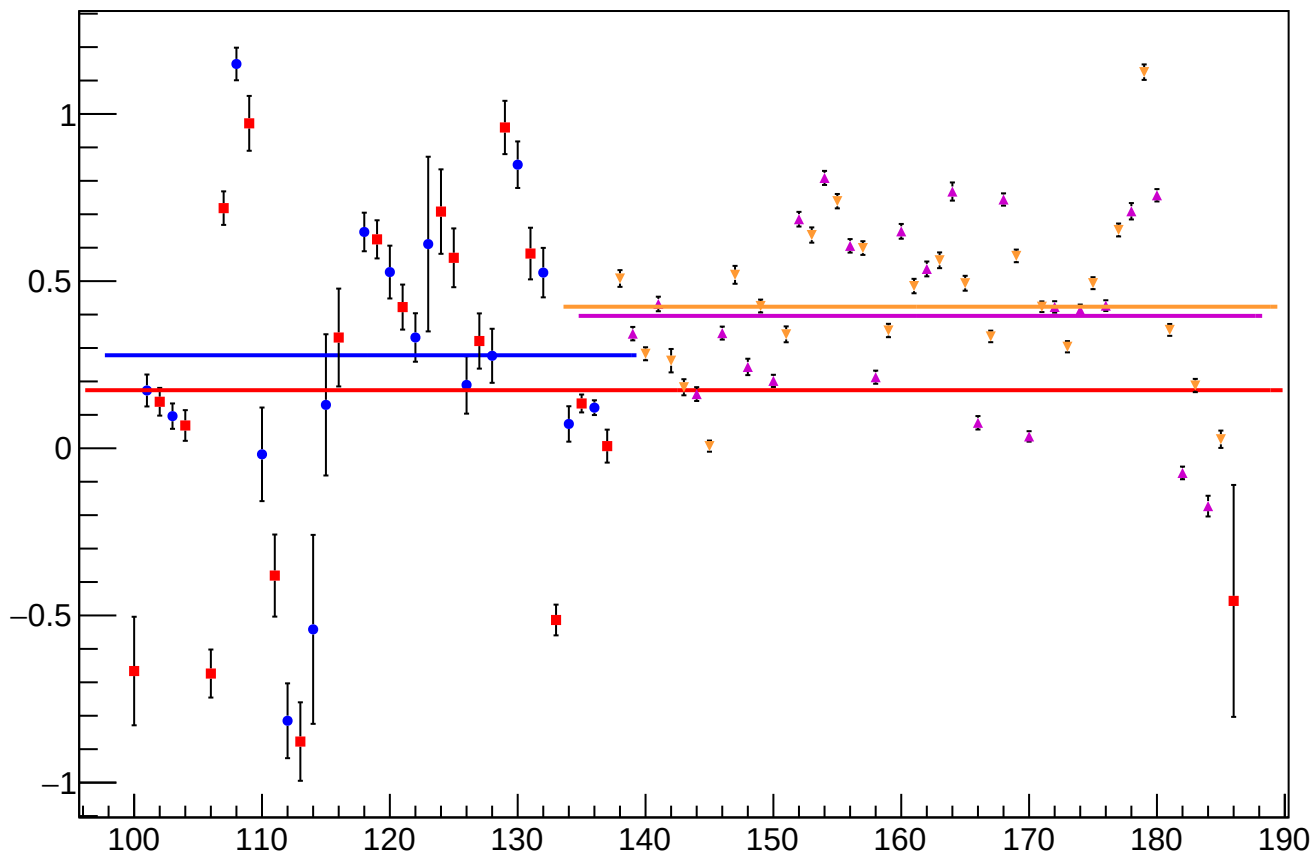
Right: -101.443+/-0.176  $\chi^2$ /NDF: 10587.8/36

In: -73.639+/-0.086  $\chi^2$ /NDF:30437.3/39

Out: -75.057+/-0.084  $\chi^2$ /NDF:36448.9/44

All: -74.366+/-0.060  $\chi^2$ /NDF: 67025.2/84

reg\_asym\_sam\_26\_48\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.278 $\pm$ 0.014  $\chi^2$ /NDF: 653.5/16

Left Out: 0.424 $\pm$ 0.004  $\chi^2$ /NDF:2885.0/24

Right Out: 0.174 $\pm$ 0.013  $\chi^2$ /NDF: 969.4/19

Left In: 0.396 $\pm$ 0.004  $\chi^2$ /NDF:4051.5/22

Left: 0.410 $\pm$ 0.003  $\chi^2$ /NDF: 6958.5/47

Right: 0.226 $\pm$ 0.010  $\chi^2$ /NDF: 1652.8/36

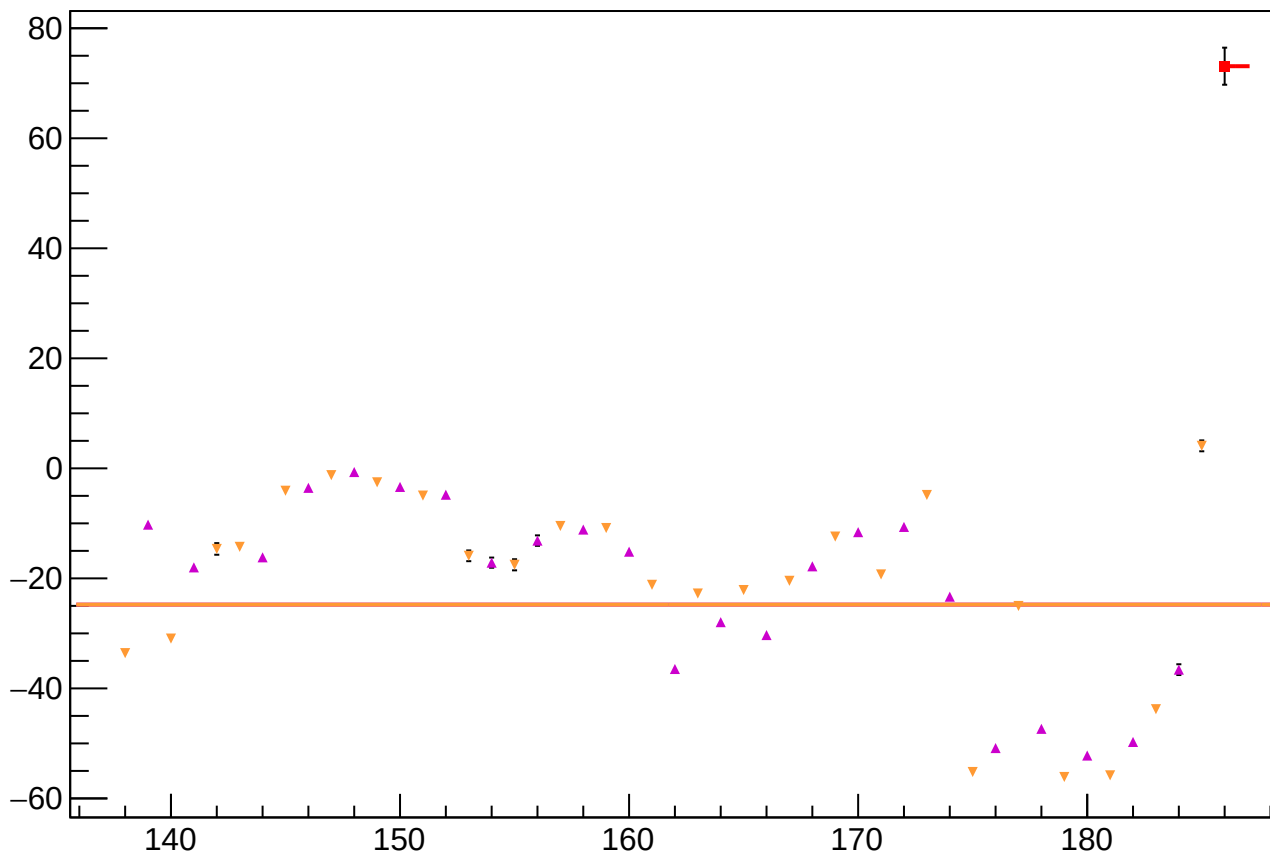
In: 0.386 $\pm$ 0.004  $\chi^2$ /NDF:4774.2/39

Out: 0.402 $\pm$ 0.004  $\chi^2$ /NDF:4168.5/44

All: 0.394 $\pm$ 0.003  $\chi^2$ /NDF: 8951.5/84



reg\_asym\_sam\_1548\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -24.769+/-0.139  $\chi^2/\text{NDF}$ :18318.8/24

Right Out: 73.101+/-3.369  $\chi^2/\text{NDF}$ : 0.0/0

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

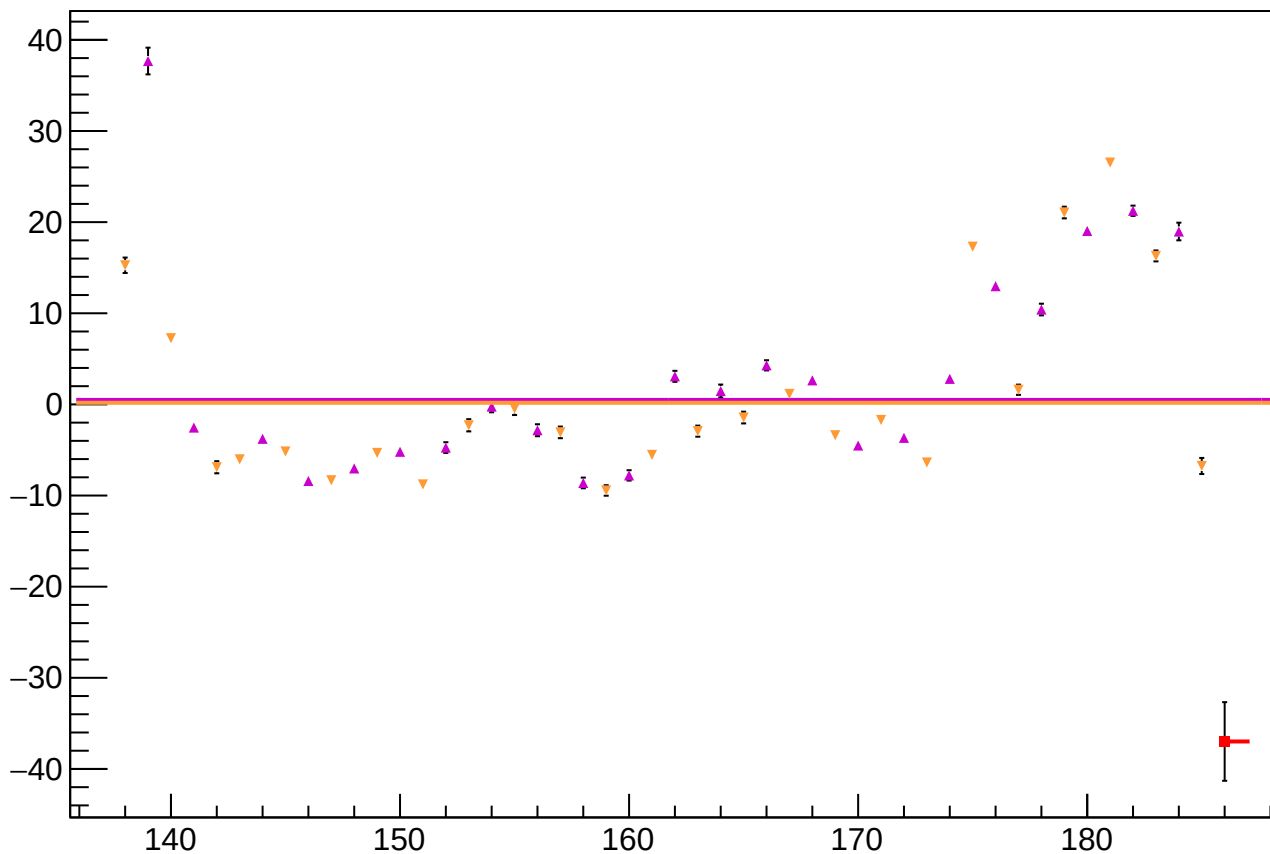
Right: 73.101+/-3.369  $\chi^2/\text{NDF}$ : 0.0/0

In: -24.775+/-0.143  $\chi^2/\text{NDF}$ :14807.4/22

Out: -24.601+/-0.139  $\chi^2/\text{NDF}$ :19161.4/25

All: -24.686+/-0.100  $\chi^2/\text{NDF}$ : 33969.5/48

reg\_asym\_sam\_1548\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 0.177+/-0.109  $\chi^2/\text{NDF}$ :8295.6/24

Right Out: -36.986+/-4.315  $\chi^2/\text{NDF}$ : 0.0/0

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

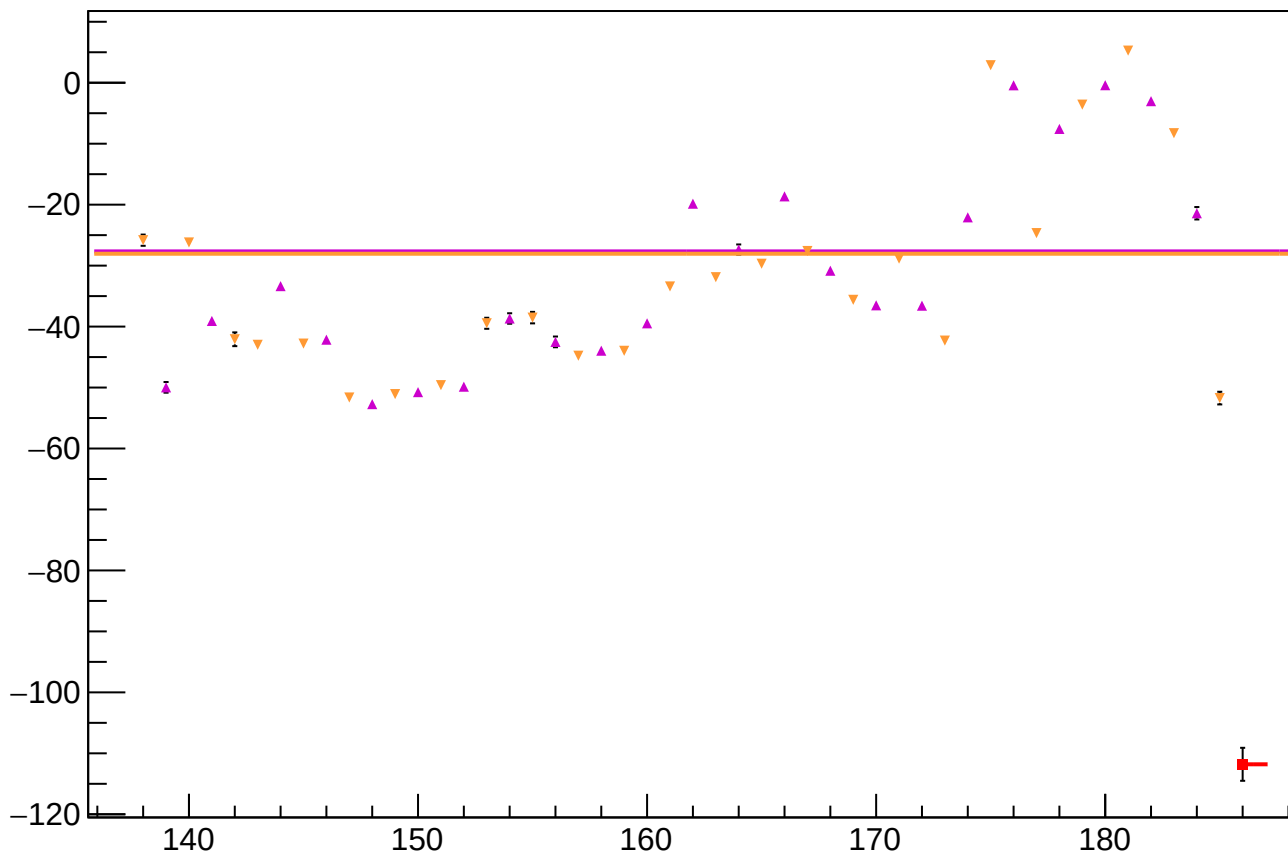
Right: -36.986+/-4.315  $\chi^2/\text{NDF}$ : 0.0/0

In: 0.493+/-0.112  $\chi^2/\text{NDF}$ :6555.4/22

Out: 0.154+/-0.108  $\chi^2/\text{NDF}$ :8369.7/25

All: 0.318+/-0.078  $\chi^2/\text{NDF}$ : 14929.8/48

reg\_asym\_sam\_1548\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -28.050+/-0.140  $\chi^2/\text{NDF}$ :17144.5/24

Right Out: -111.801+/-2.706  $\chi^2/\text{NDF}$ : 0.0/0

Left In: -27.666+/-0.142  $\chi^2/\text{NDF}$ :15003.2/22

Left: -27.862+/-0.100  $\chi^2/\text{NDF}$ : 32151.3/47

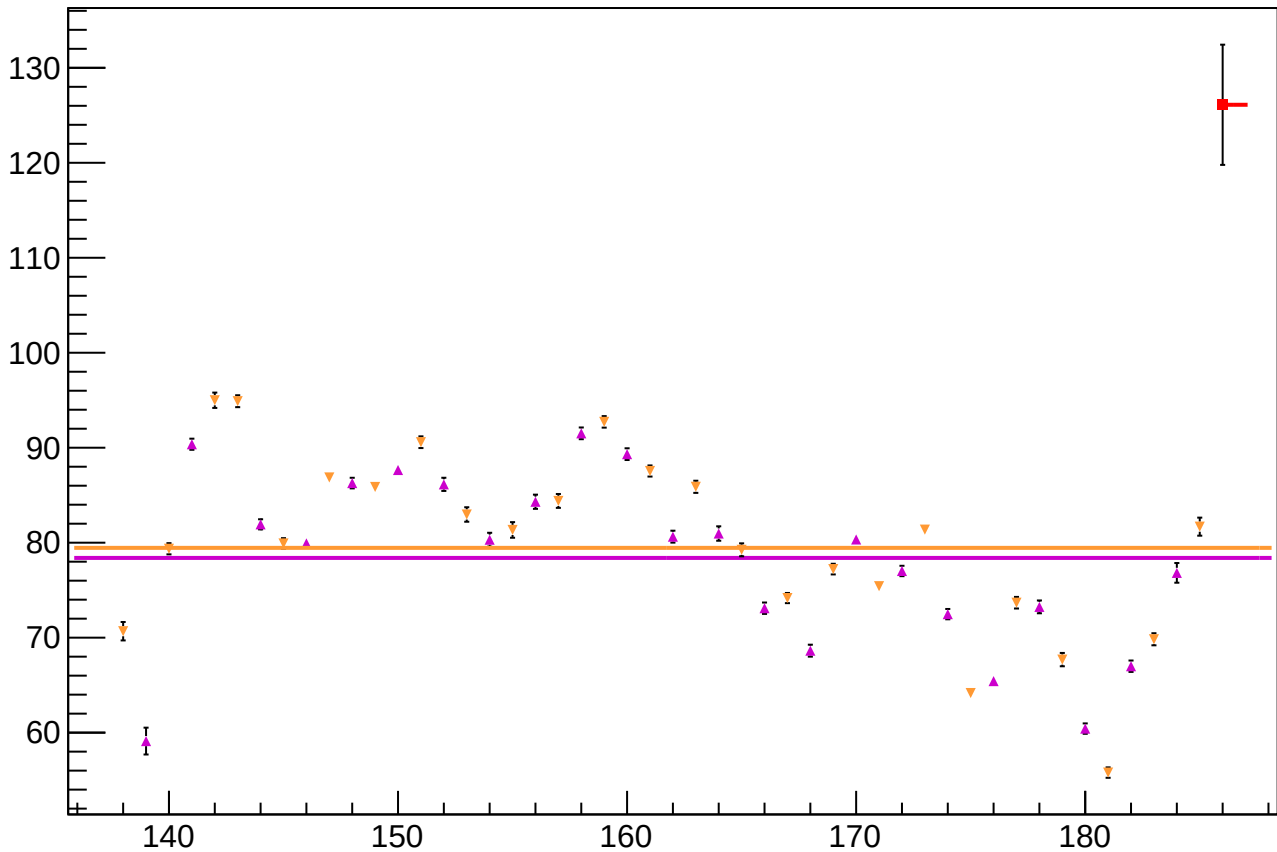
Right: -111.801+/-2.706  $\chi^2/\text{NDF}$ : 0.0/0

In: -27.666+/-0.142  $\chi^2/\text{NDF}$ :15003.2/22

Out: -28.273+/-0.140  $\chi^2/\text{NDF}$ :18100.1/25

All: -27.976+/-0.100  $\chi^2/\text{NDF}$ : 33112.5/48

reg\_asym\_sam\_1548\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 79.456+/-0.123  $\chi^2/\text{NDF}$ :6077.1/24

Right Out: 126.108+/-6.329  $\chi^2/\text{NDF}$ : 0.0/0

Left In: 78.396+/-0.127  $\chi^2/\text{NDF}$ :4707.3/22

Left: 78.941+/-0.088  $\chi^2/\text{NDF}$ : 10820.4/47

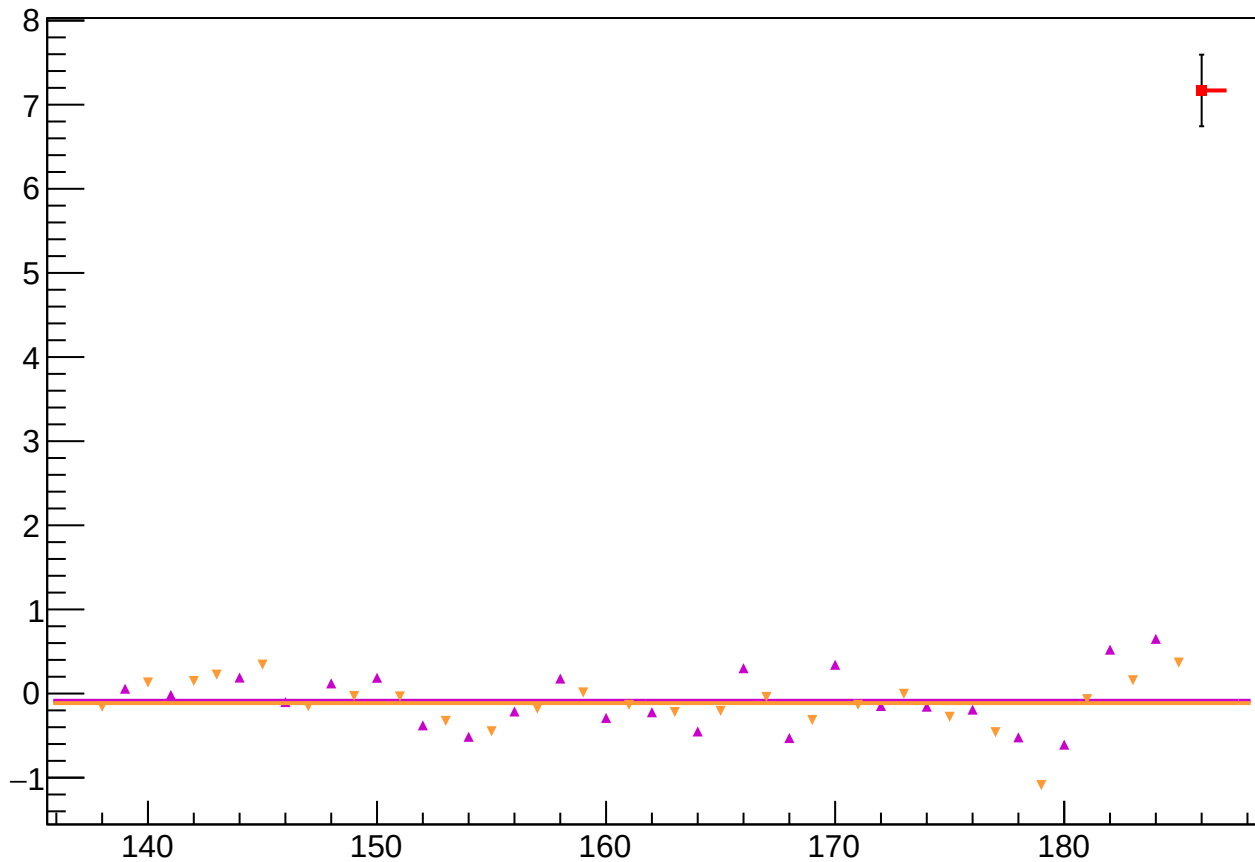
Right: 126.108+/-6.329  $\chi^2/\text{NDF}$ : 0.0/0

In: 78.396+/-0.127  $\chi^2/\text{NDF}$ :4707.3/22

Out: 79.473+/-0.123  $\chi^2/\text{NDF}$ :6131.4/25

All: 78.950+/-0.088  $\chi^2/\text{NDF}$ : 10875.9/48

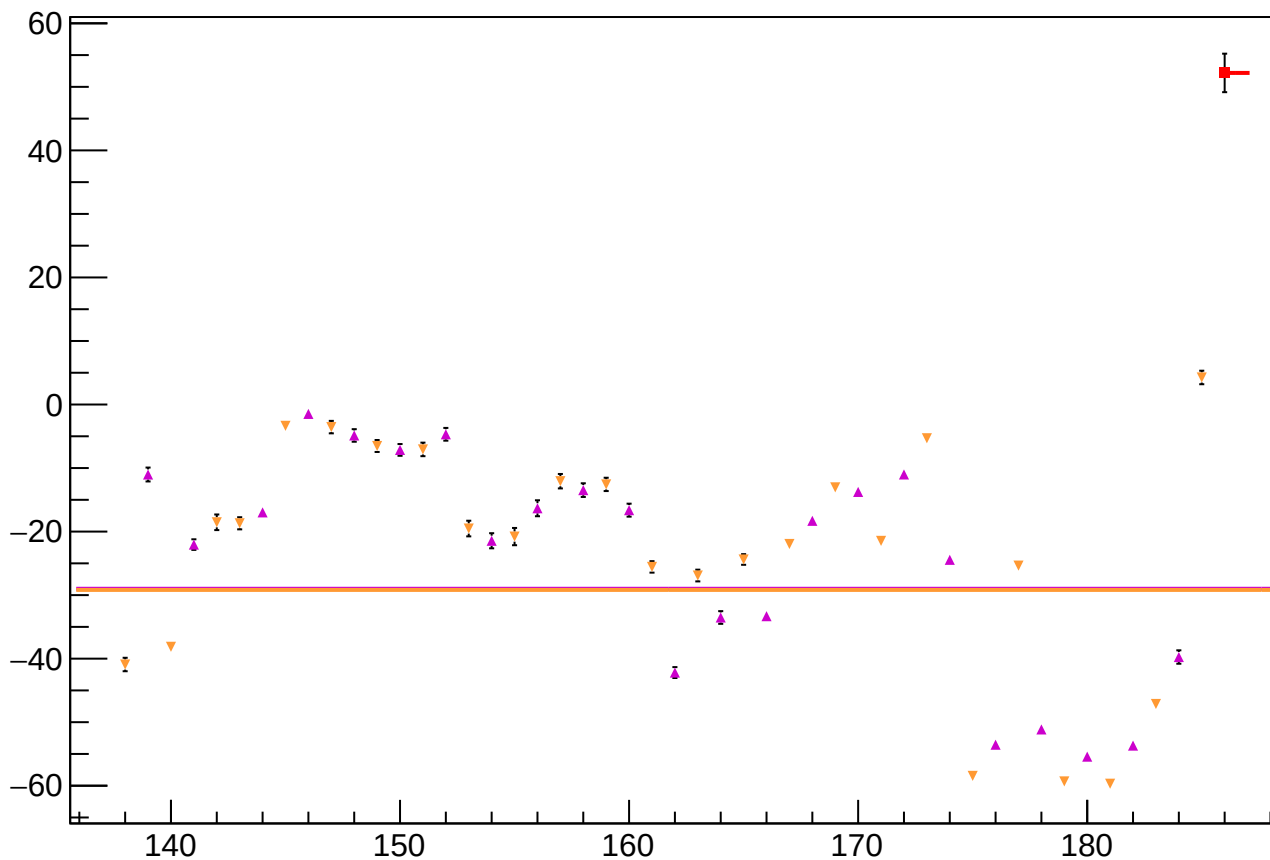
reg\_asym\_sam\_1548\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0  
 Left Out: -0.113+/-0.006  $\chi^2/\text{NDF}$ : 2303.1/24  
 Right Out: 7.169+/-0.425  $\chi^2/\text{NDF}$ : 0.0/0  
 Left In: -0.086+/-0.006  $\chi^2/\text{NDF}$ : 3132.1/22

Left: -0.100+/-0.004  $\chi^2/\text{NDF}$ : 5446.4/47  
 Right: 7.169+/-0.425  $\chi^2/\text{NDF}$ : 0.0/0  
 In: -0.086+/-0.006  $\chi^2/\text{NDF}$ : 3132.1/22  
 Out: -0.112+/-0.006  $\chi^2/\text{NDF}$ : 2596.1/25  
 All: -0.099+/-0.004  $\chi^2/\text{NDF}$ : 5738.3/48

reg\_asym\_sam\_3748\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -29.180+/-0.157  $\chi^2/\text{NDF}$ :16912.2/24

Right Out: 52.193+/-3.030  $\chi^2/\text{NDF}$ : 0.0/0

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

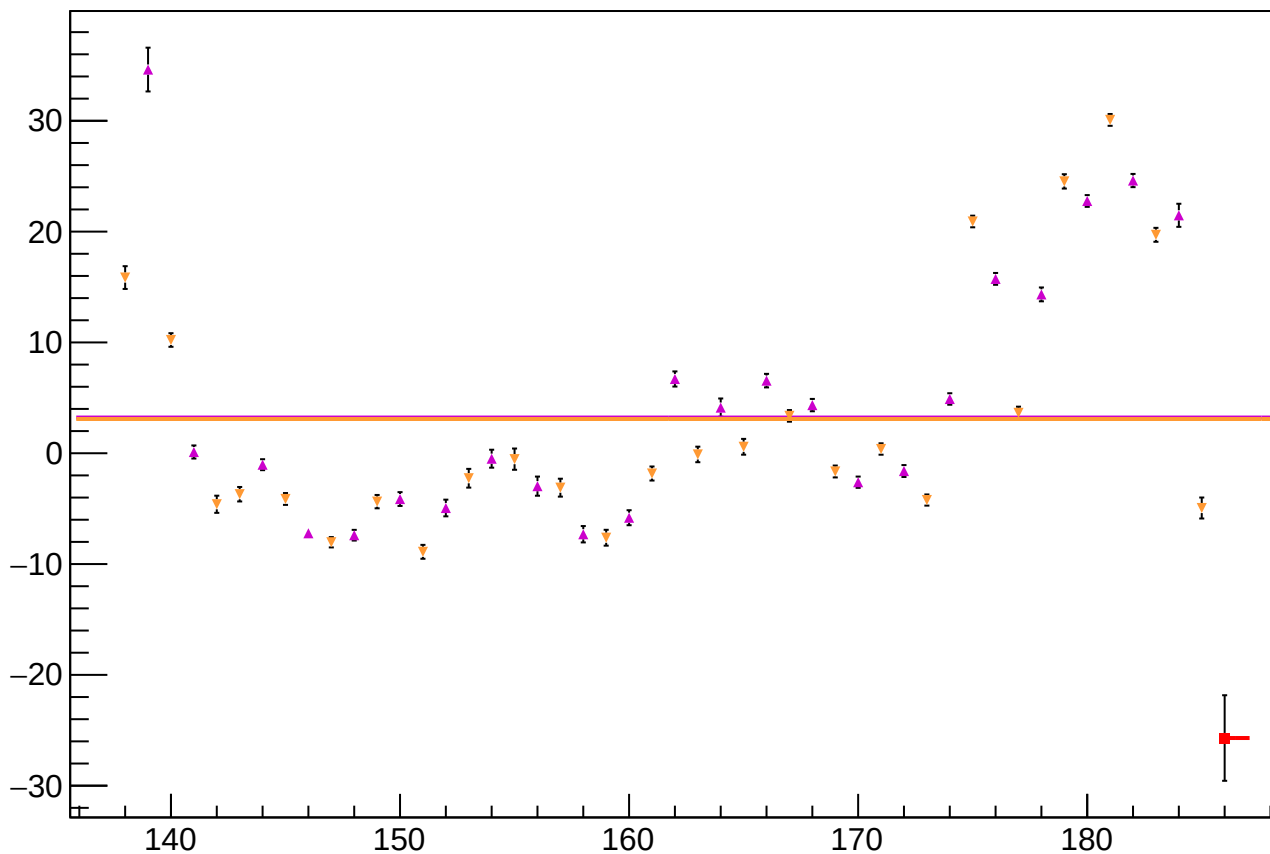
Right: 52.193+/-3.030  $\chi^2/\text{NDF}$ : 0.0/0

In: -29.093+/-0.112  $\chi^2/\text{NDF}$ :13416.8/22

Out: -28.963+/-0.157  $\chi^2/\text{NDF}$ :17631.4/25

All: -28.982+/-0.112  $\chi^2/\text{NDF}$ : 31048.2/48

reg\_asym\_sam\_3748\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 3.091+/-0.124  $\chi^2/\text{NDF}$ : 8084.1/24

Right Out: -25.698+/-3.861  $\chi^2/\text{NDF}$ : 0.0/0

Left In: 3.221+/-0.127  $\chi^2/\text{NDF}$ : 6237.6/22

Left: 3.155+/-0.089  $\chi^2/\text{NDF}$ : 14322.2/47

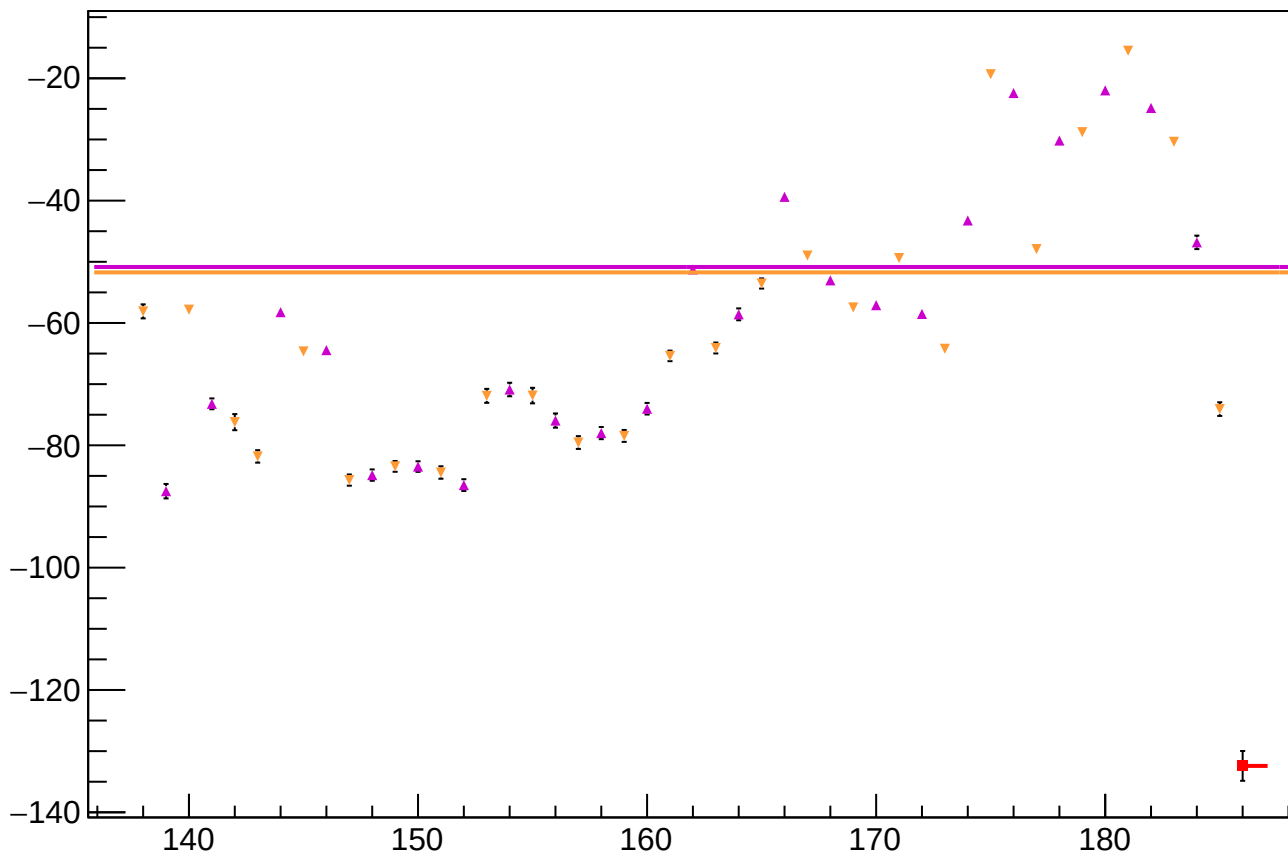
Right: -25.698+/-3.861  $\chi^2/\text{NDF}$ : 0.0/0

In: 3.221+/-0.127  $\chi^2/\text{NDF}$ : 6237.6/22

Out: 3.061+/-0.124  $\chi^2/\text{NDF}$ : 8139.6/25

All: 3.139+/-0.089  $\chi^2/\text{NDF}$ : 14378.0/48

reg\_asym\_sam\_3748\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -51.729+/-0.158  $\chi^2/\text{NDF}$ :19538.0/24

Right Out: -132.413+/-2.435  $\chi^2/\text{NDF}$ : 0.0/0

Left In: -50.844+/-0.160  $\chi^2/\text{NDF}$ :17272.0/22

Left: -51.293+/-0.112  $\chi^2/\text{NDF}$ : 36825.5/47

Right: -132.413+/-2.435  $\chi^2/\text{NDF}$ : 0.0/0

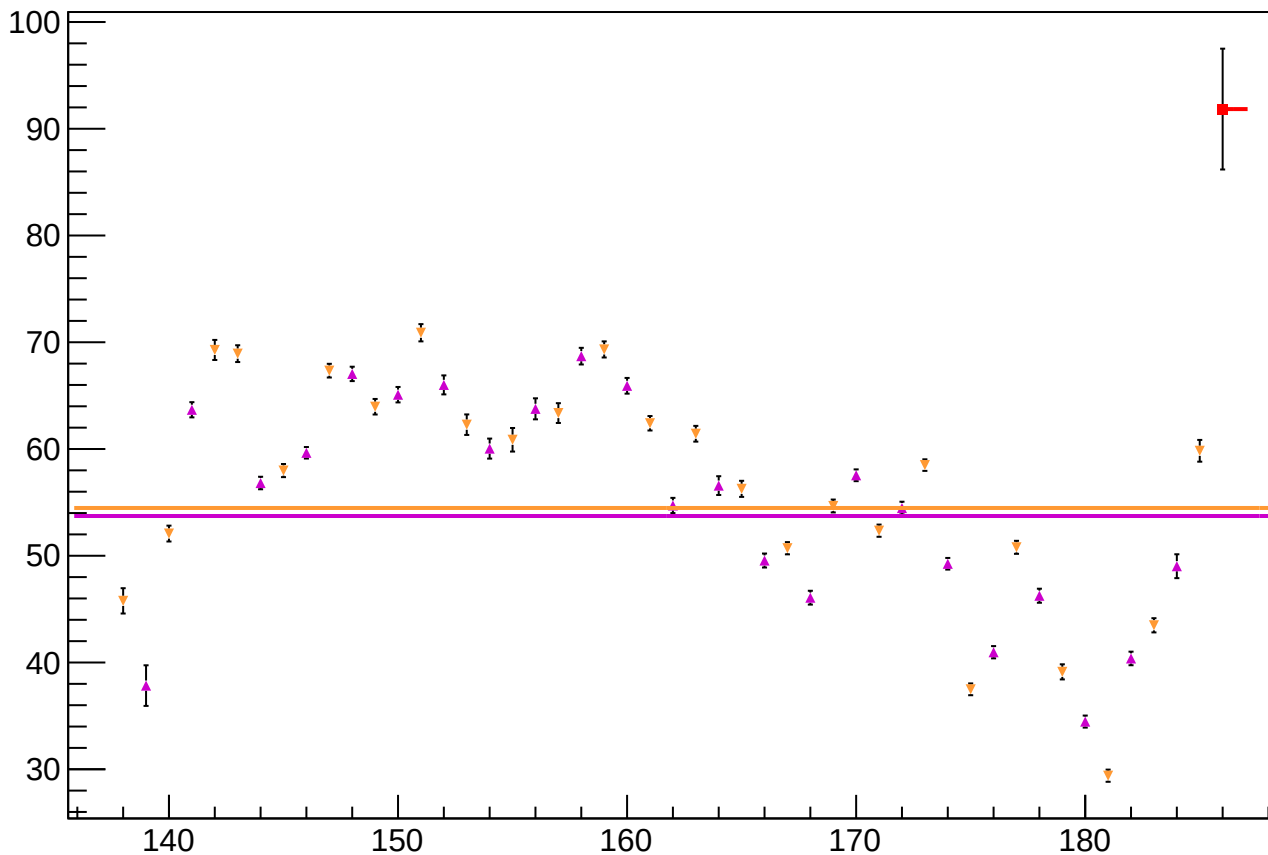
In: -50.844+/-0.160  $\chi^2/\text{NDF}$ :17272.0/22

Out: -52.067+/-0.158  $\chi^2/\text{NDF}$ :20631.5/25

All: -51.465+/-0.112  $\chi^2/\text{NDF}$ : 37933.1/48



reg\_asym\_sam\_3748\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Left Out: 54.476 $\pm$ 0.140  $\chi^2$ /NDF:6266.9/24

Right Out: 91.843 $\pm$ 5.659  $\chi^2$ /NDF: 0.0/0

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

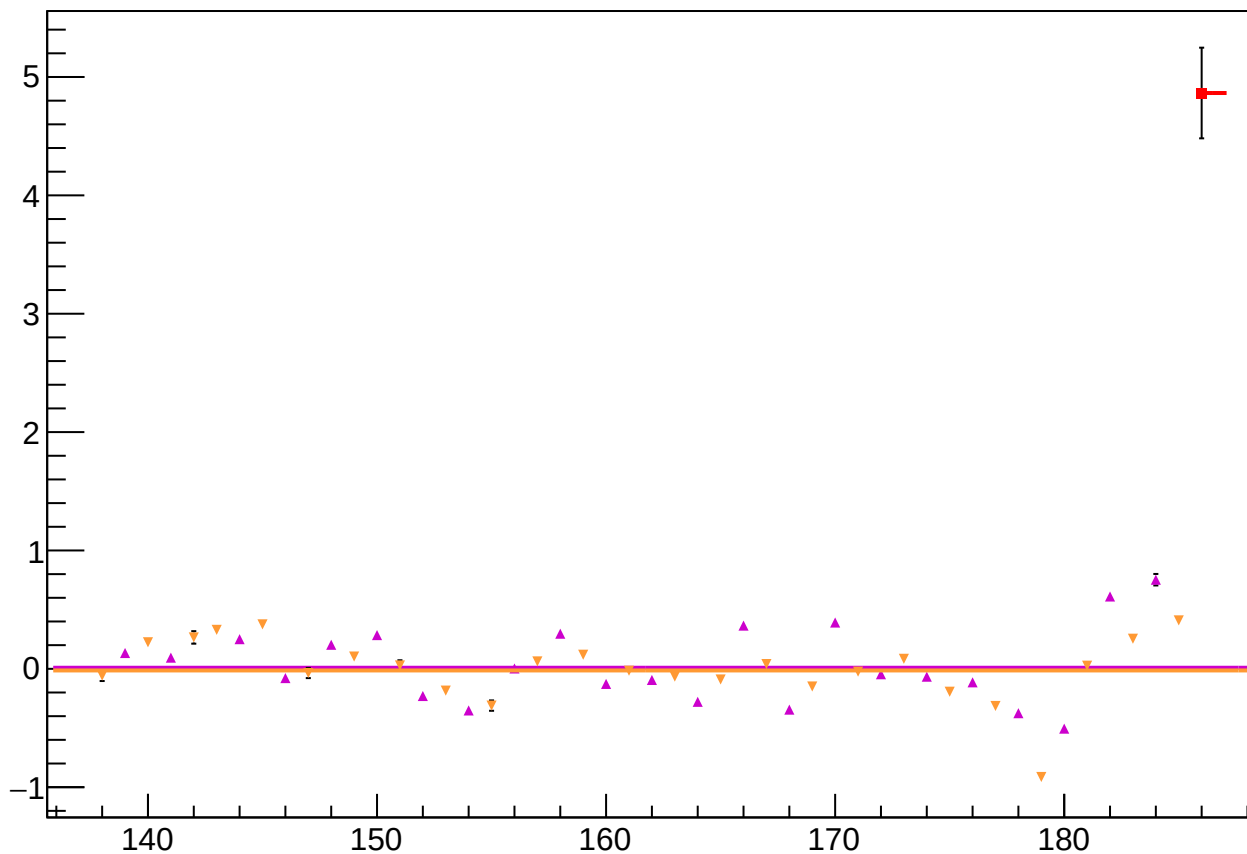
Right: 91.843 $\pm$ 5.659  $\chi^2$ /NDF: 0.0/0

In: 53.724 $\pm$ 0.143  $\chi^2$ /NDF:4585.7/22

Out: 54.499 $\pm$ 0.140  $\chi^2$ /NDF:6310.5/25

All: 54.119 $\pm$ 0.100  $\chi^2$ /NDF: 10911.2/48

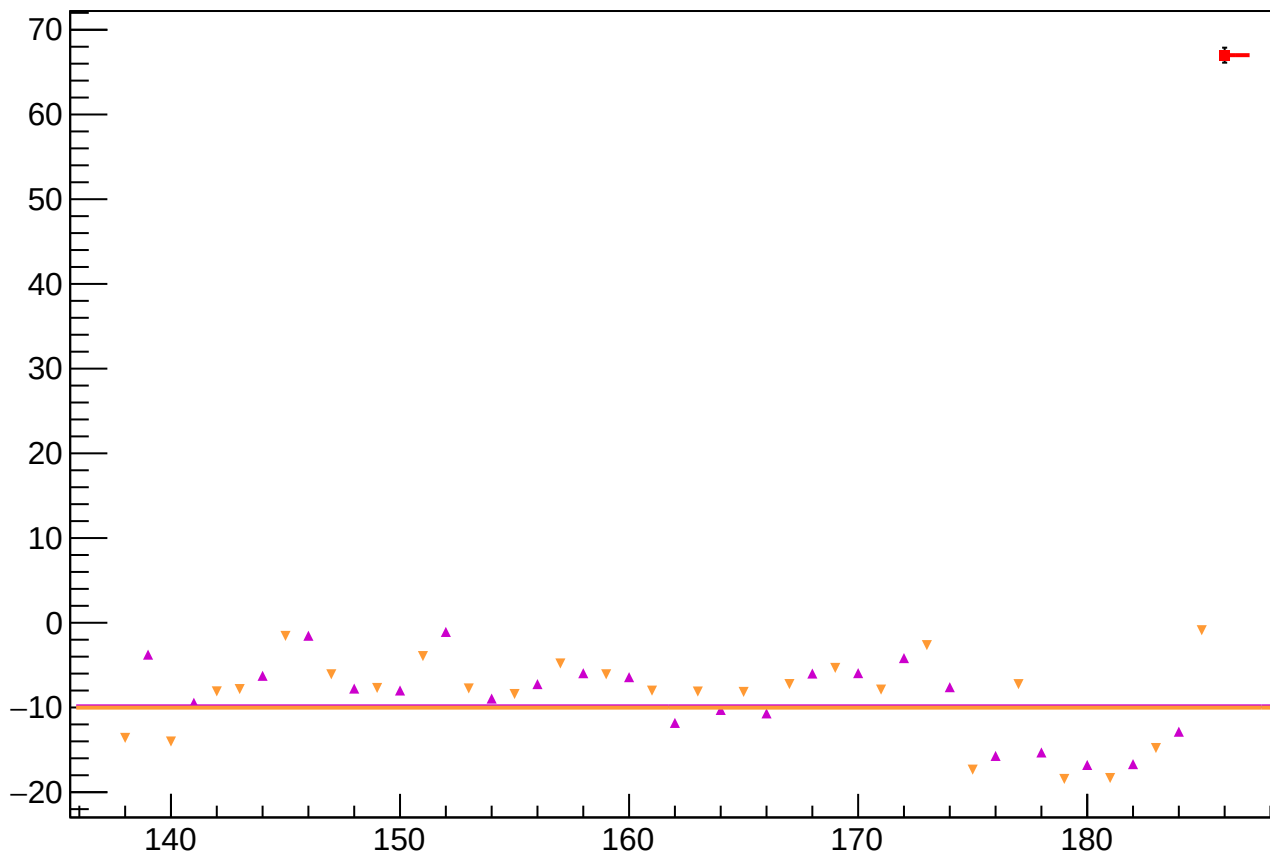
reg\_asym\_sam\_3748\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0  
 Left Out: -0.014+/-0.006  $\chi^2/\text{NDF}$ :1654.7/24  
 Right Out: 4.865+/-0.383  $\chi^2/\text{NDF}$ : 0.0/0  
 Left In: 0.009+/-0.007  $\chi^2/\text{NDF}$ :2220.5/22

Left: -0.003+/-0.005  $\chi^2/\text{NDF}$ : 3881.4/47  
 Right: 4.865+/-0.383  $\chi^2/\text{NDF}$ : 0.0/0  
 In: 0.009+/-0.007  $\chi^2/\text{NDF}$ :2220.5/22  
 Out: -0.012+/-0.006  $\chi^2/\text{NDF}$ :1816.9/25  
 All: -0.002+/-0.005  $\chi^2/\text{NDF}$ : 4042.8/48

reg\_asym\_sam\_1526\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Left Out: -10.017 $\pm$ 0.051  $\chi^2$ /NDF:12552.8/24

Right Out: 67.003 $\pm$ 0.885  $\chi^2$ /NDF: 0.0/0

Left In: -9.865 $\pm$ 0.051  $\chi^2$ /NDF:9345.4/22

Left: -9.942 $\pm$ 0.036  $\chi^2$ /NDF: 21902.5/47

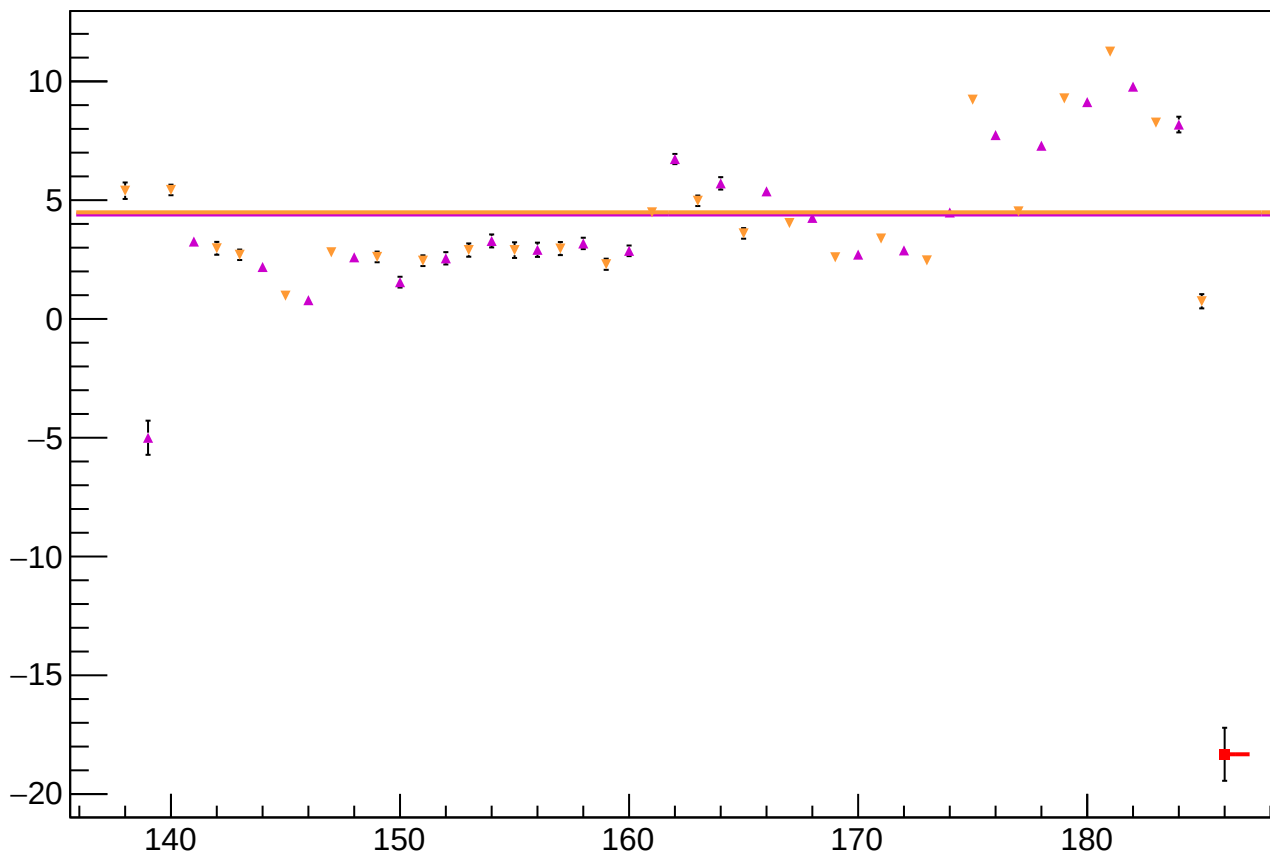
Right: 67.003 $\pm$ 0.885  $\chi^2$ /NDF: 0.0/0

In: -9.865 $\pm$ 0.051  $\chi^2$ /NDF:9345.4/22

Out: -9.765 $\pm$ 0.051  $\chi^2$ /NDF:20104.5/25

All: -9.815 $\pm$ 0.036  $\chi^2$ /NDF: 29451.8/48

reg\_asym\_sam\_1526\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 4.489+/-0.041  $\chi^2/\text{NDF}$ : 4832.3/24

Right Out: -18.325+/-1.116  $\chi^2/\text{NDF}$ : 0.0/0

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

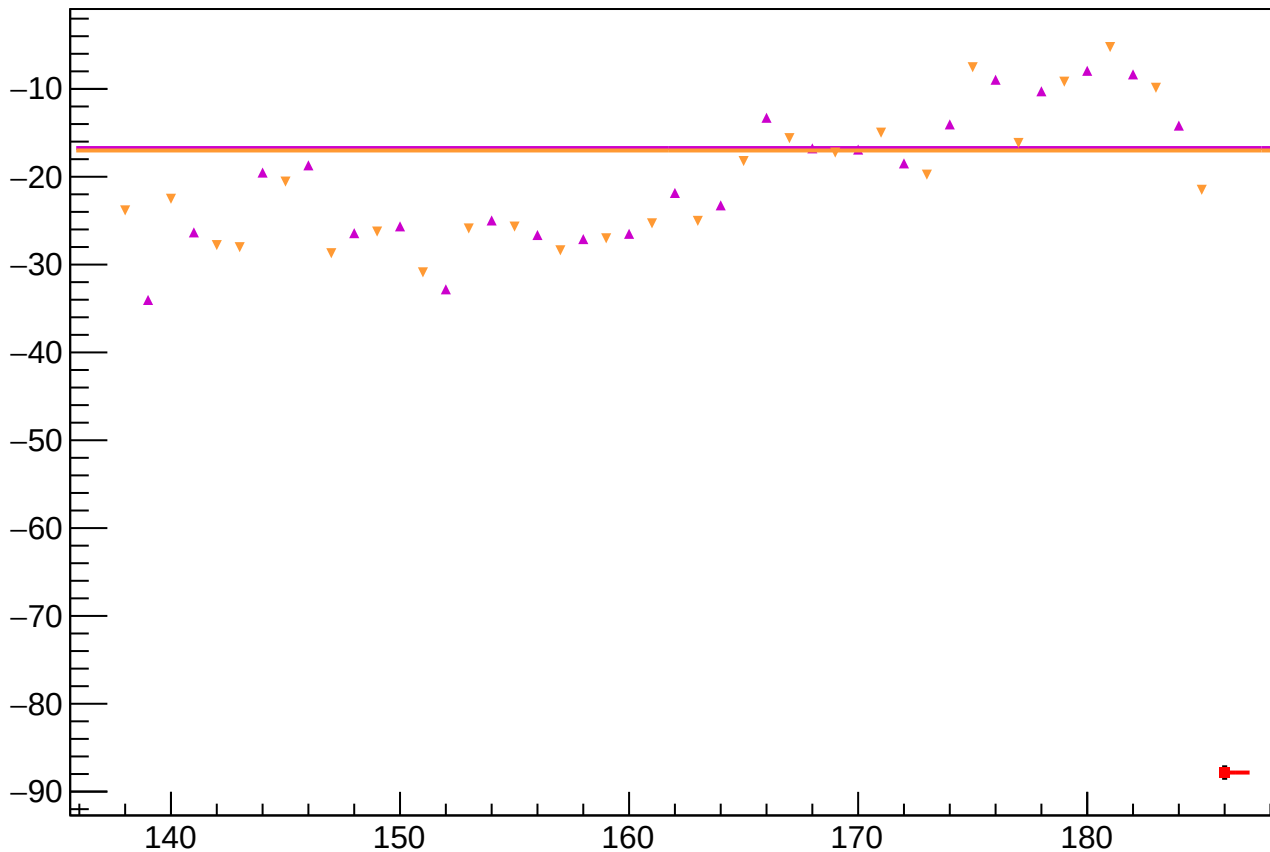
Right: -18.325+/-1.116  $\chi^2/\text{NDF}$ : 0.0/0

In: 4.396+/-0.041  $\chi^2/\text{NDF}$ : 4230.4/22

Out: 4.458+/-0.041  $\chi^2/\text{NDF}$ : 5249.5/25

All: 4.428+/-0.029  $\chi^2/\text{NDF}$ : 9481.1/48

reg\_asym\_sam\_1526\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -17.008+/-0.051  $\chi^2/\text{NDF}$ : 22094.7/24

Right Out: -87.833+/-0.711  $\chi^2/\text{NDF}$ : 0.0/0

Left In: -16.732+/-0.052  $\chi^2/\text{NDF}$ : 18777.2/22

Left: -16.871+/-0.036  $\chi^2/\text{NDF}$ : 40886.5/47

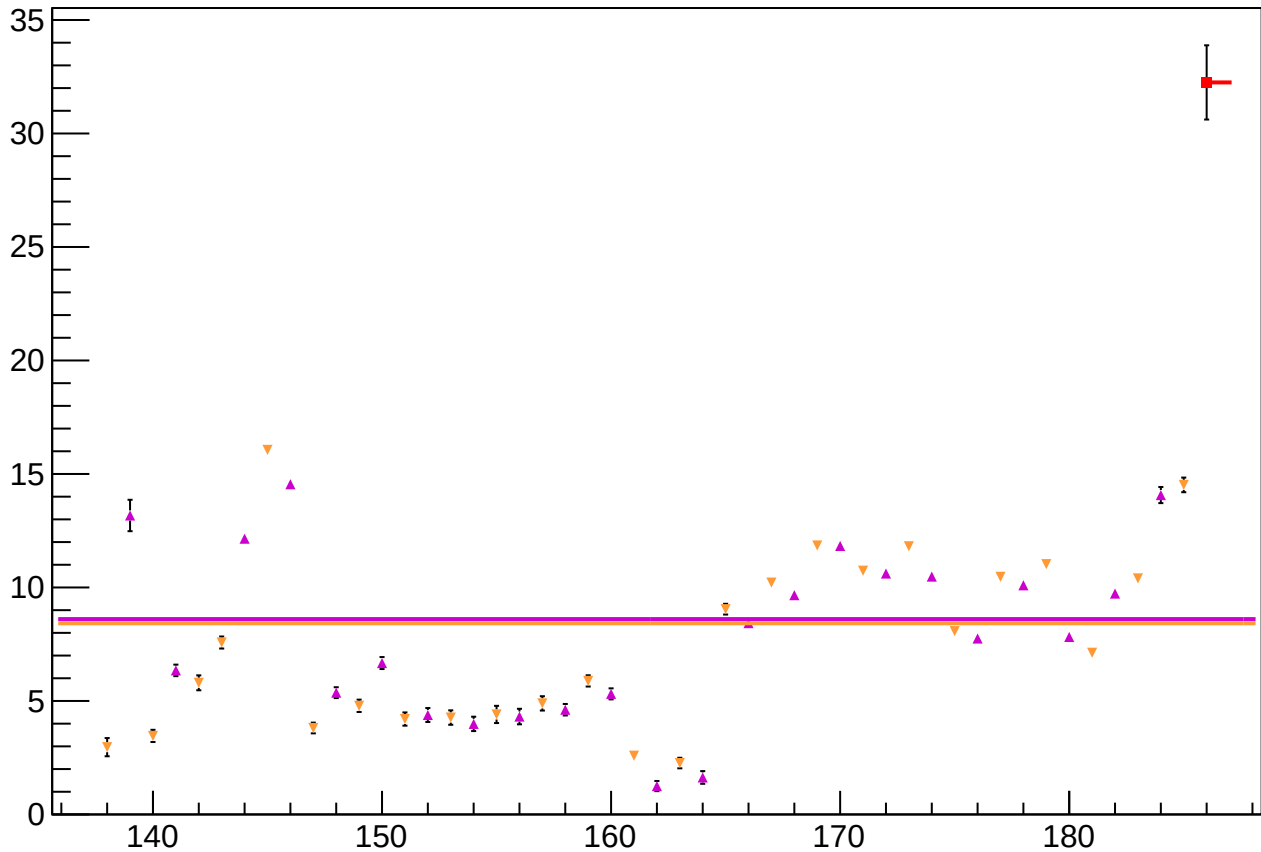
Right: -87.833+/-0.711  $\chi^2/\text{NDF}$ : 0.0/0

In: -16.732+/-0.052  $\chi^2/\text{NDF}$ : 18777.2/22

Out: -17.372+/-0.051  $\chi^2/\text{NDF}$ : 31968.7/25

All: -17.056+/-0.036  $\chi^2/\text{NDF}$ : 50824.0/48

reg\_asym\_sam\_1526\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 8.422+/-0.046  $\chi^2/\text{NDF}$ : 6470.1/24

Right Out: 32.250+/-1.635  $\chi^2/\text{NDF}$ : 0.0/0

Left In: 8.606+/-0.046  $\chi^2/\text{NDF}$ : 5504.2/22

Left: 8.513+/-0.032  $\chi^2/\text{NDF}$ : 11982.4/47

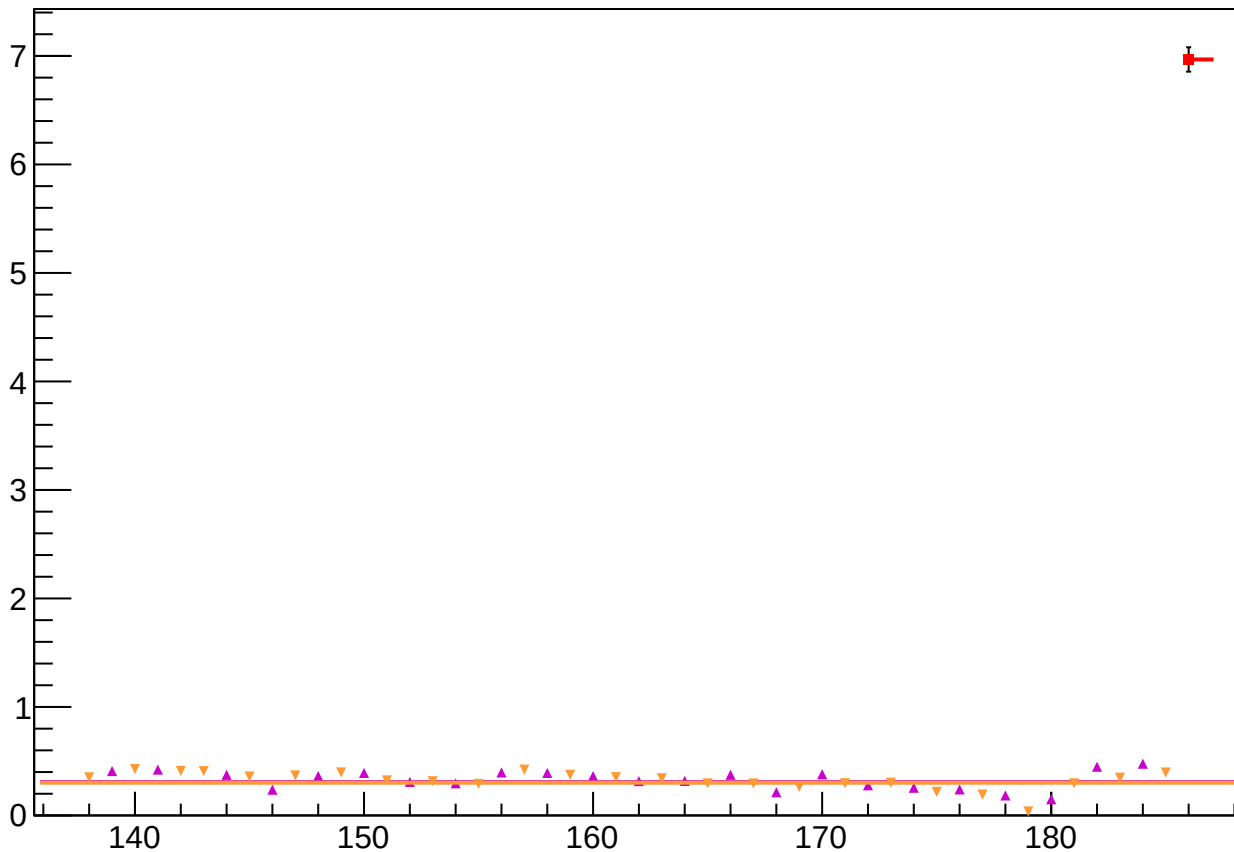
Right: 32.250+/-1.635  $\chi^2/\text{NDF}$ : 0.0/0

In: 8.606+/-0.046  $\chi^2/\text{NDF}$ : 5504.2/22

Out: 8.440+/-0.046  $\chi^2/\text{NDF}$ : 6682.3/25

All: 8.522+/-0.032  $\chi^2/\text{NDF}$ : 12193.1/48

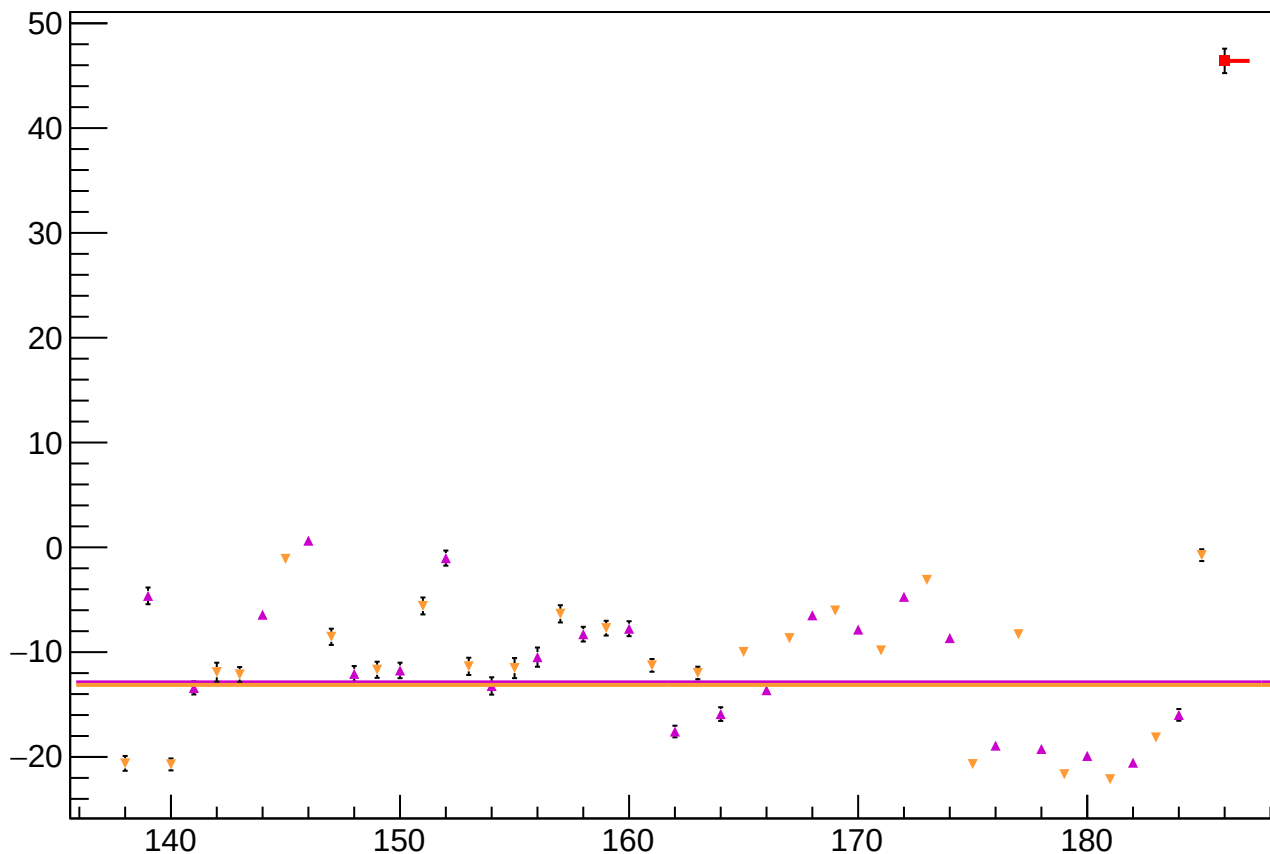
reg\_asym\_sam\_1526\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0  
 Left Out: 0.302+/-0.002  $\chi^2/\text{NDF}$ :1590.9/24  
 Right Out: 6.968+/-0.112  $\chi^2/\text{NDF}$ : 0.0/0  
 Left In: 0.307+/-0.002  $\chi^2/\text{NDF}$ :1699.5/22

Left: 0.305+/-0.001  $\chi^2/\text{NDF}$ : 3293.0/47  
 Right: 6.968+/-0.112  $\chi^2/\text{NDF}$ : 0.0/0  
 In: 0.307+/-0.002  $\chi^2/\text{NDF}$ :1699.5/22  
 Out: 0.305+/-0.002  $\chi^2/\text{NDF}$ :5119.2/25  
 All: 0.306+/-0.001  $\chi^2/\text{NDF}$ : 6819.4/48

reg\_asym\_sam\_3726\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -13.125+/-0.094  $\chi^2/\text{NDF}$ : 5977.6/24

Right Out: 46.411+/-1.167  $\chi^2/\text{NDF}$ : 0.0/0

Left In: -12.885+/-0.095  $\chi^2/\text{NDF}$ : 4776.2/22

Left: -13.007+/-0.067  $\chi^2/\text{NDF}$ : 10757.0/47

Right: 46.411+/-1.167  $\chi^2/\text{NDF}$ : 0.0/0

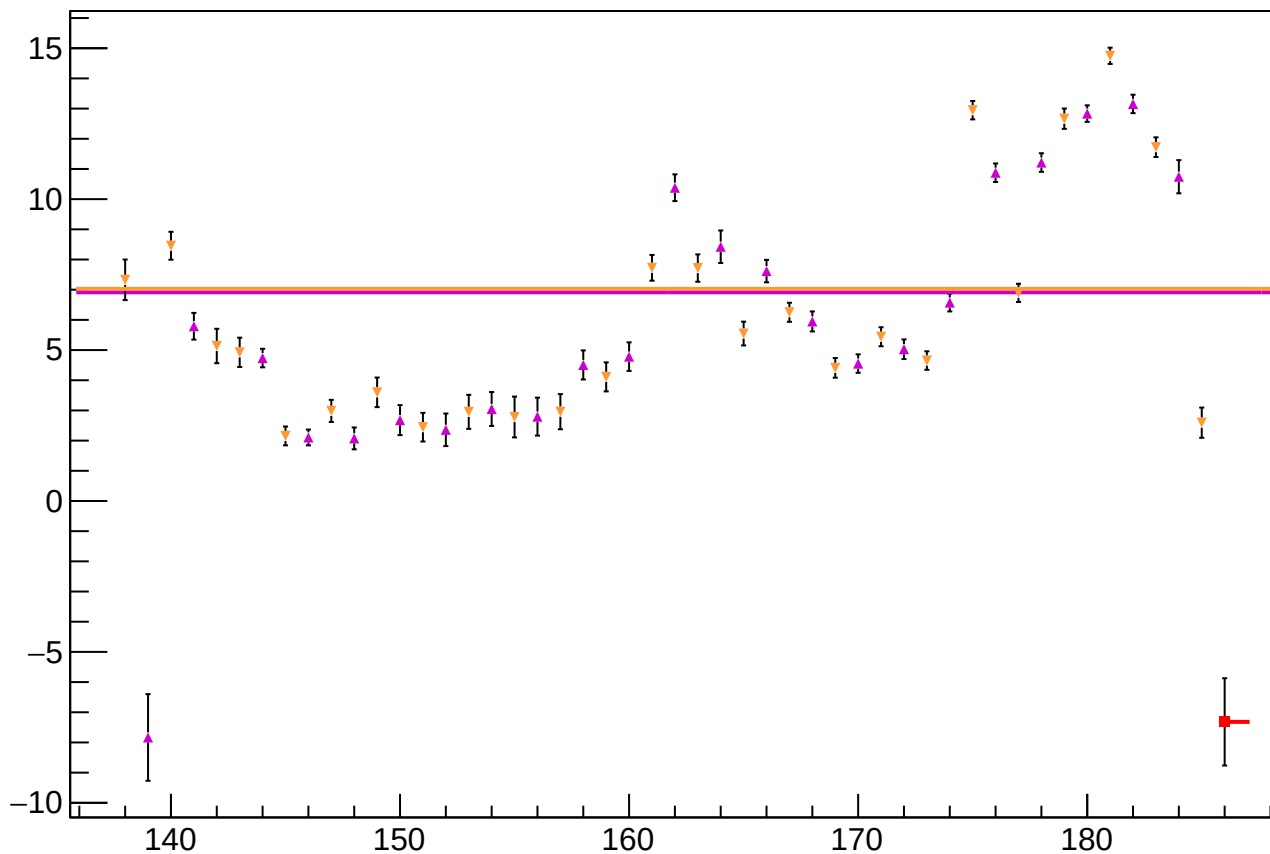
In: -12.885+/-0.095  $\chi^2/\text{NDF}$ : 4776.2/22

Out: -12.744+/-0.093  $\chi^2/\text{NDF}$ : 8565.8/25

All: -12.813+/-0.067  $\chi^2/\text{NDF}$ : 13343.1/48



reg\_asym\_sam\_3726\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Left Out: 7.028 $\pm$ 0.077  $\chi^2$ /NDF:2665.3/24

Right Out: -7.318 $\pm$ 1.446  $\chi^2$ /NDF: 0.0/0

Left In: 6.914 $\pm$ 0.078  $\chi^2$ /NDF:2428.2/22

Left: 6.971 $\pm$ 0.055  $\chi^2$ /NDF: 5094.6/47

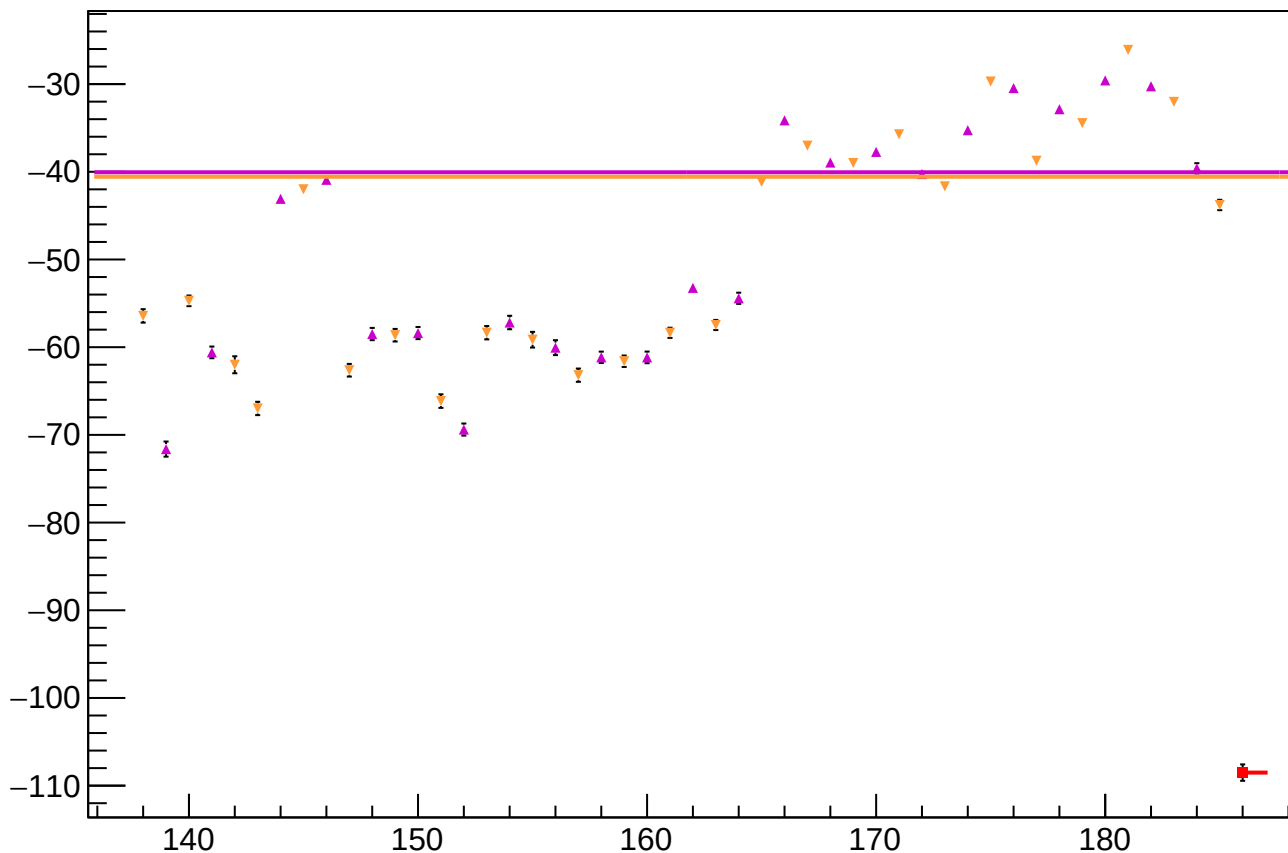
Right: -7.318 $\pm$ 1.446  $\chi^2$ /NDF: 0.0/0

In: 6.914 $\pm$ 0.078  $\chi^2$ /NDF:2428.2/22

Out: 6.987 $\pm$ 0.077  $\chi^2$ /NDF:2763.5/25

All: 6.951 $\pm$ 0.055  $\chi^2$ /NDF: 5192.2/48

reg\_asym\_sam\_3726\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -40.563+/-0.095  $\chi^2/\text{NDF}$ :15637.6/24

Right Out: -108.510+/-0.936  $\chi^2/\text{NDF}$ : 0.0/0

Left In: -40.053+/-0.096  $\chi^2/\text{NDF}$ :13927.3/22

Left: -40.310+/-0.067  $\chi^2/\text{NDF}$ : 29579.2/47

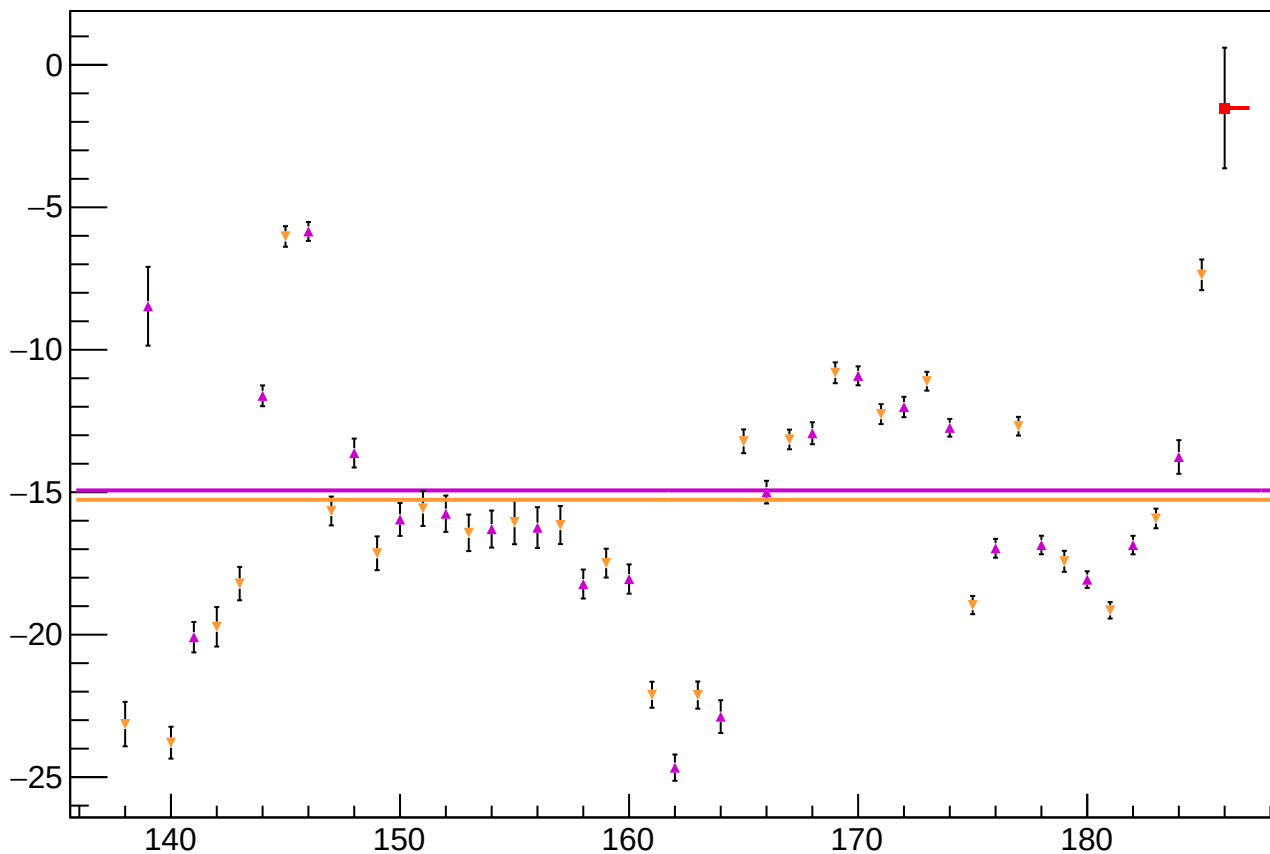
Right: -108.510+/-0.936  $\chi^2/\text{NDF}$ : 0.0/0

In: -40.053+/-0.096  $\chi^2/\text{NDF}$ :13927.3/22

Out: -41.252+/-0.094  $\chi^2/\text{NDF}$ :20858.0/25

All: -40.662+/-0.067  $\chi^2/\text{NDF}$ : 34865.0/48

reg\_asym\_sam\_3726\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Left Out: -15.266 $\pm$ 0.086  $\chi^2$ /NDF:2595.5/24

Right Out: -1.514 $\pm$ 2.118  $\chi^2$ /NDF: 0.0/0

Left In: -14.936 $\pm$ 0.087  $\chi^2$ /NDF:2199.7/22

Left: -15.103 $\pm$ 0.061  $\chi^2$ /NDF: 4802.4/47

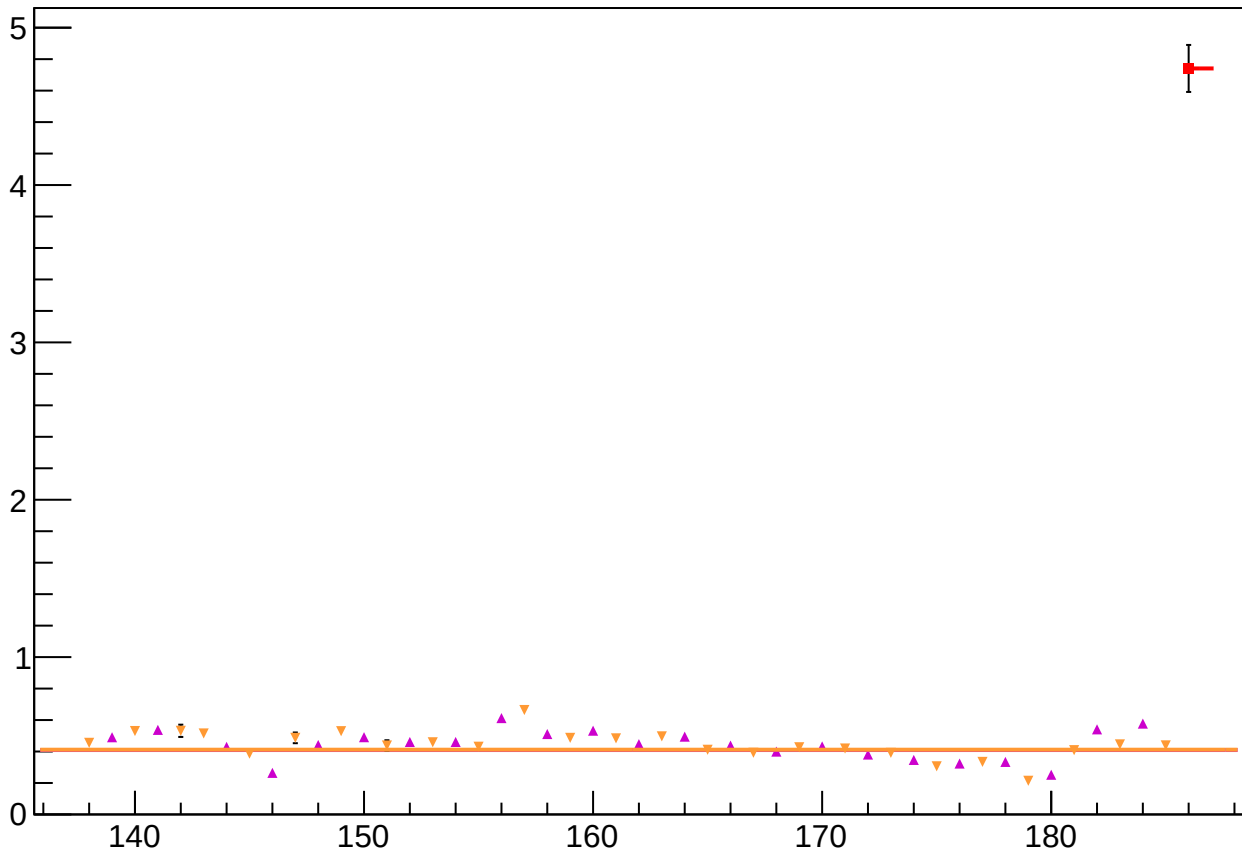
Right: -1.514 $\pm$ 2.118  $\chi^2$ /NDF: 0.0/0

In: -14.936 $\pm$ 0.087  $\chi^2$ /NDF:2199.7/22

Out: -15.243 $\pm$ 0.086  $\chi^2$ /NDF:2637.6/25

All: -15.091 $\pm$ 0.061  $\chi^2$ /NDF: 4843.6/48

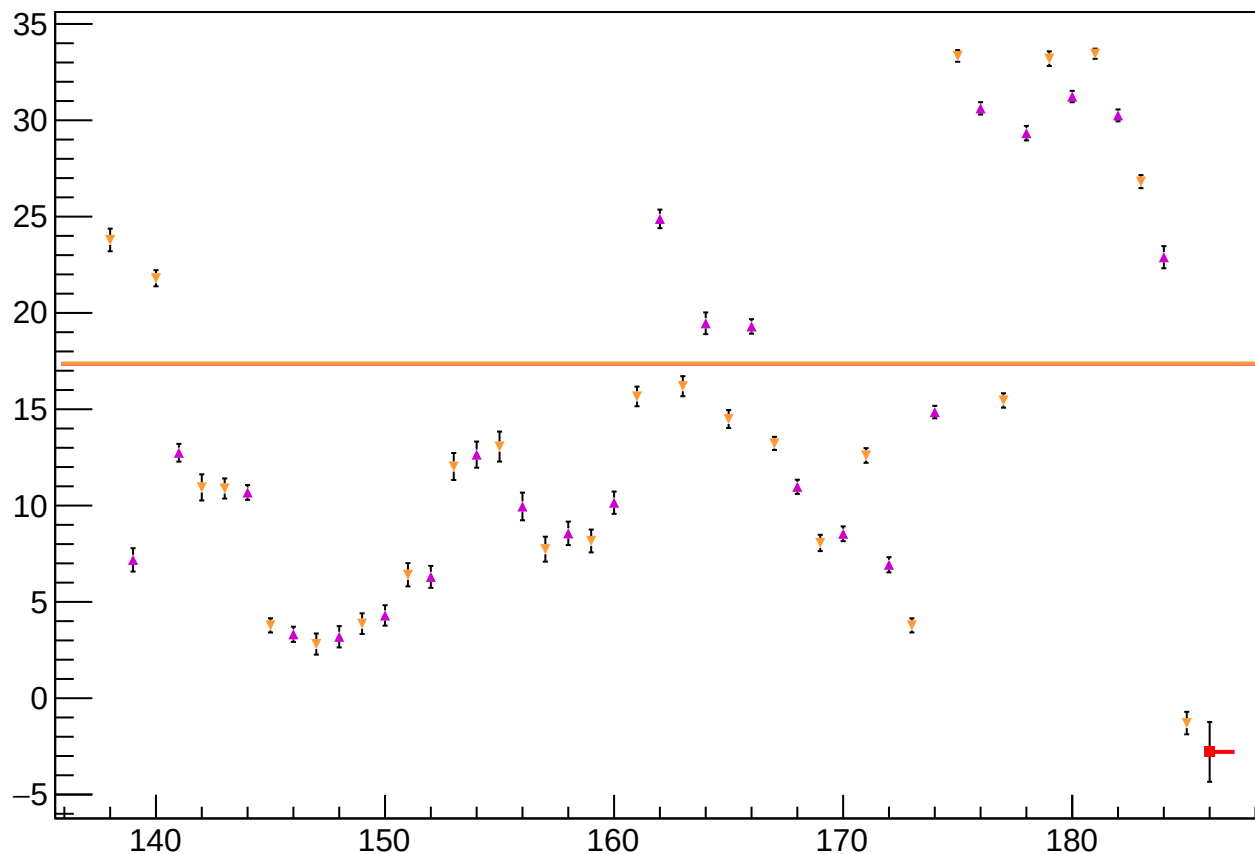
reg\_asym\_sam\_3726\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000     $\chi^2/\text{NDF}$ : 0.0/0  
 Left Out: 0.411+/-0.004     $\chi^2/\text{NDF}$ : 428.7/24  
 Right Out: 4.741+/-0.149     $\chi^2/\text{NDF}$ : 0.0/0  
 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: 4.741+/-0.149     $\chi^2/\text{NDF}$ : 0.0/0  
 In: 0.409+/-0.004     $\chi^2/\text{NDF}$ : 557.8/22  
 Out: 0.414+/-0.004     $\chi^2/\text{NDF}$ : 1268.2/25  
 All: 0.412+/-0.003     $\chi^2/\text{NDF}$ : 1826.9/48

reg\_asym\_sam\_15\_48\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 17.367+/-0.087  $\chi^2/\text{NDF}$ :16337.6/24

Right Out: -2.785+/-1.554  $\chi^2/\text{NDF}$ : 0.0/0

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

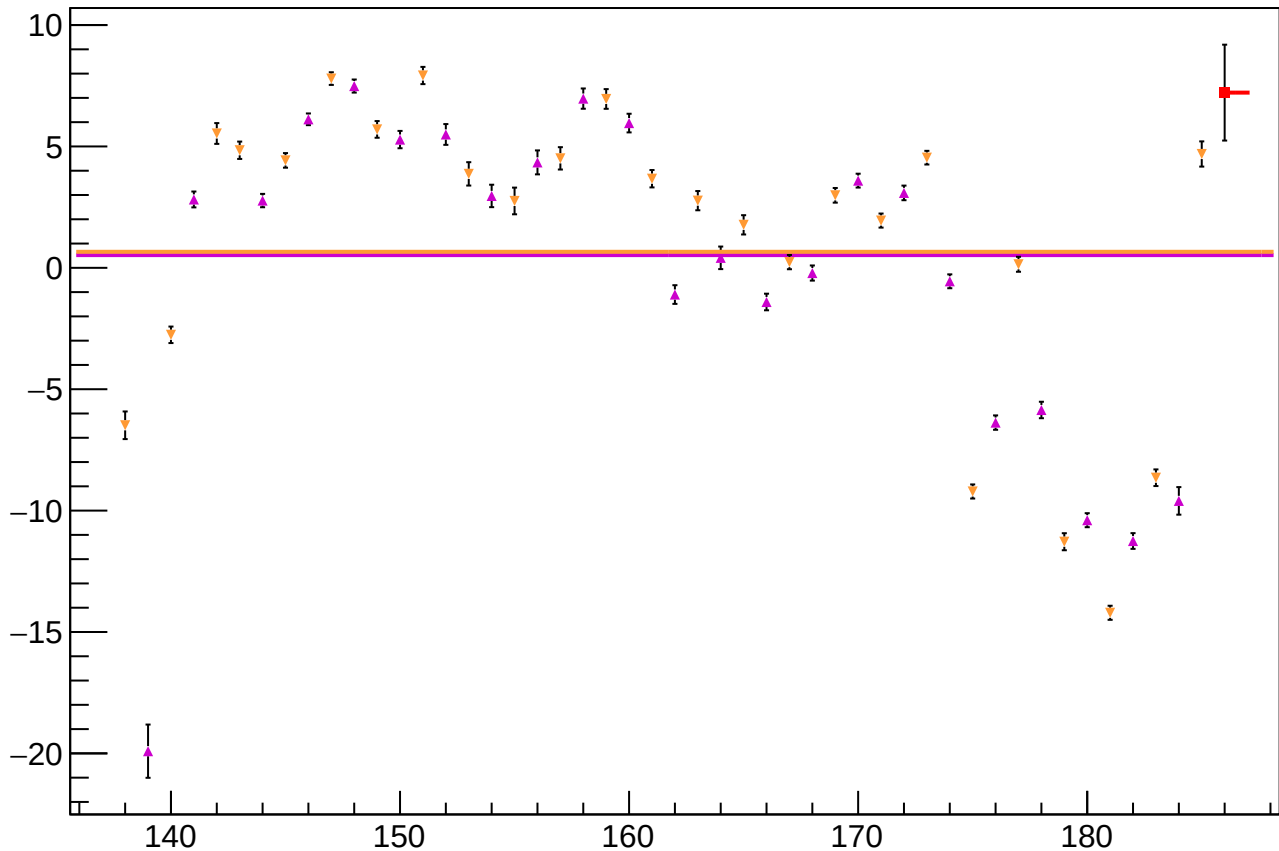
Right: -2.785+/-1.554  $\chi^2/\text{NDF}$ : 0.0/0

In: 17.355+/-0.089  $\chi^2/\text{NDF}$ :12745.1/22

Out: 17.304+/-0.087  $\chi^2/\text{NDF}$ :16505.4/25

All: 17.329+/-0.062  $\chi^2/\text{NDF}$ : 29250.7/48

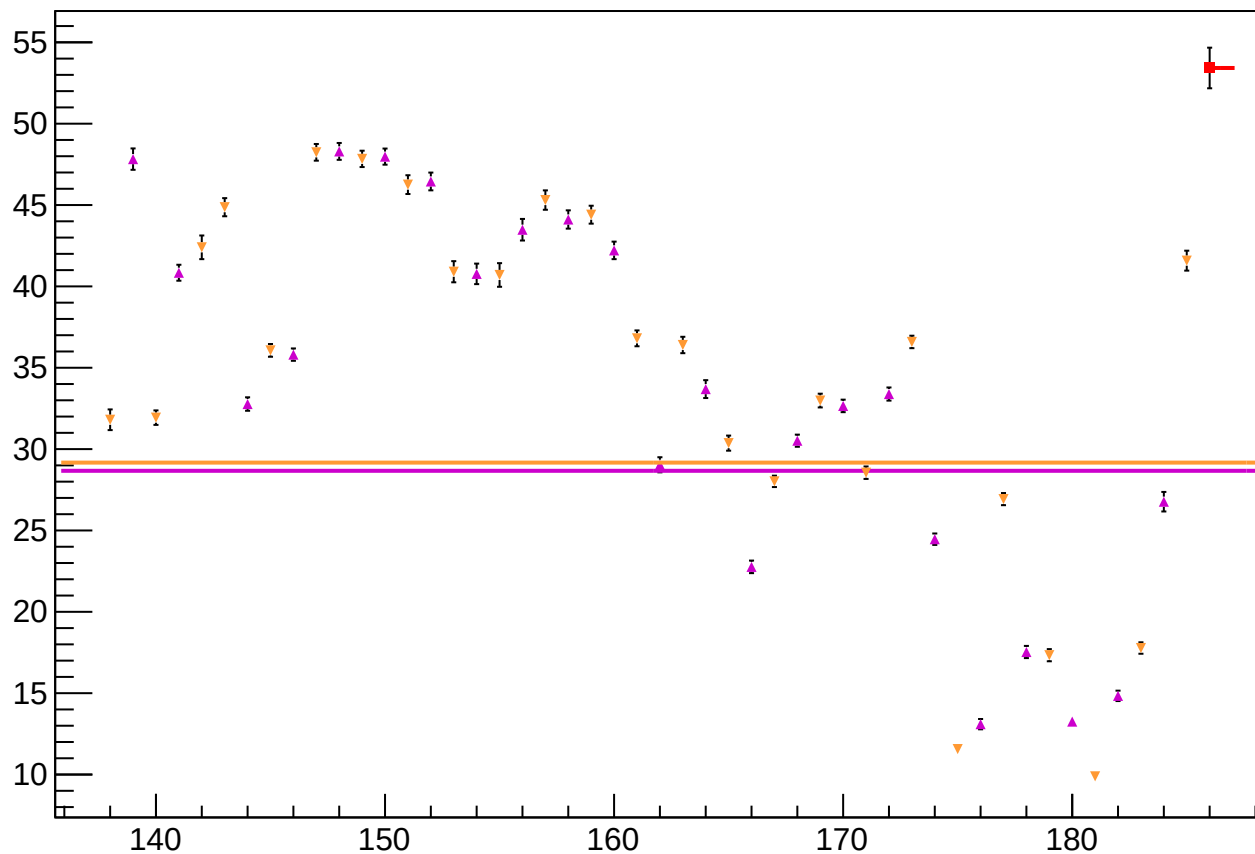
reg\_asym\_sam\_15\_48\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0  
 Left Out: 0.661 $\pm$ 0.069  $\chi^2$ /NDF:8553.9/24  
 Right Out: 7.217 $\pm$ 1.975  $\chi^2$ /NDF: 0.0/0  
 Left In: 0.524 $\pm$ 0.071  $\chi^2$ /NDF:6729.7/22

Left: 0.594 $\pm$ 0.050  $\chi^2$ /NDF: 15285.5/47  
 Right: 7.217 $\pm$ 1.975  $\chi^2$ /NDF: 0.0/0  
 In: 0.524 $\pm$ 0.071  $\chi^2$ /NDF:6729.7/22  
 Out: 0.669 $\pm$ 0.069  $\chi^2$ /NDF:8564.9/25  
 All: 0.598 $\pm$ 0.050  $\chi^2$ /NDF: 15296.7/48

reg\_asym\_sam\_15\_48\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 29.171+/-0.088  $\chi^2/\text{NDF}$ :18974.7/24

Right Out: 53.423+/-1.248  $\chi^2/\text{NDF}$ : 0.0/0

Left In: 28.667+/-0.089  $\chi^2/\text{NDF}$ :16847.2/22

Left: 28.923+/-0.063  $\chi^2/\text{NDF}$ : 35838.1/47

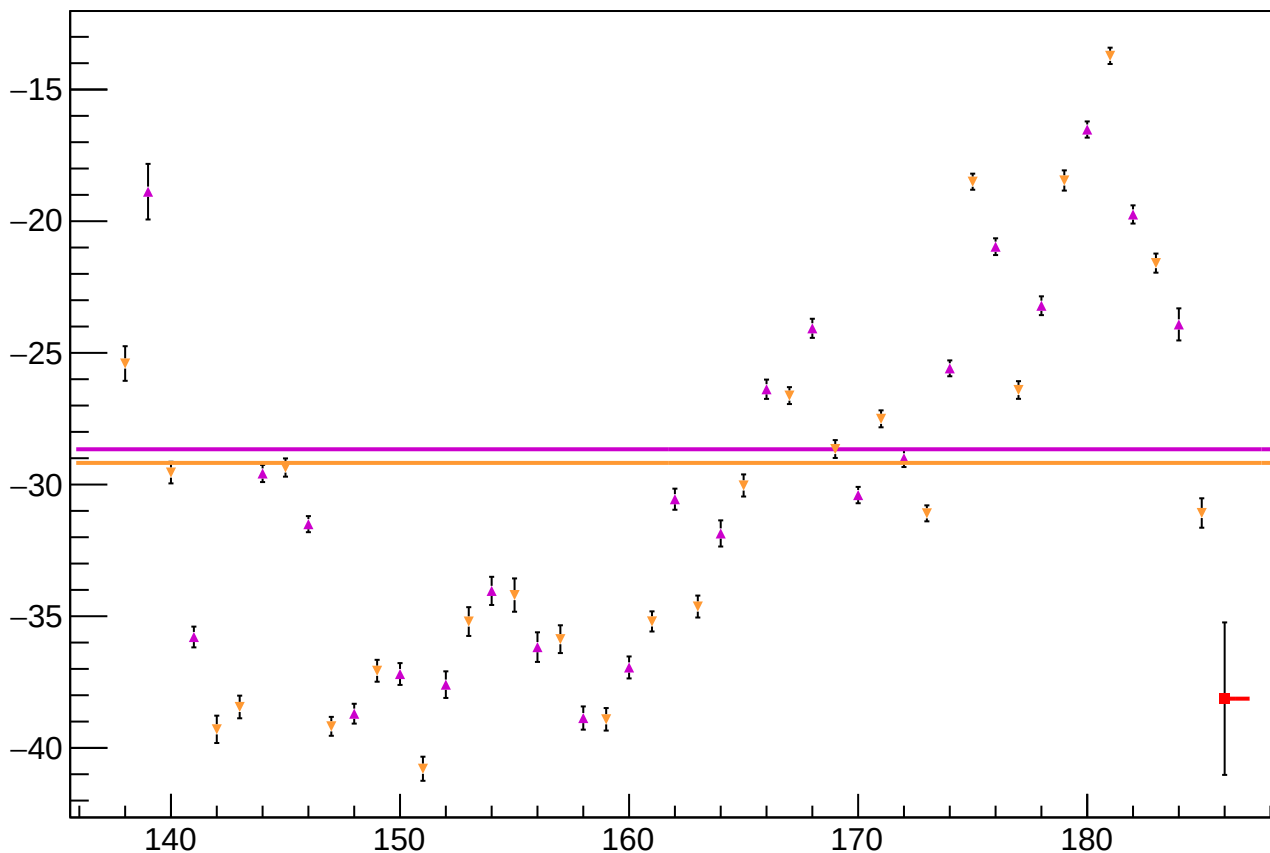
Right: 53.423+/-1.248  $\chi^2/\text{NDF}$ : 0.0/0

In: 28.667+/-0.089  $\chi^2/\text{NDF}$ :16847.2/22

Out: 29.290+/-0.088  $\chi^2/\text{NDF}$ :19350.4/25

All: 28.984+/-0.062  $\chi^2/\text{NDF}$ : 36222.5/48

reg\_asym\_sam\_15\_48\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -29.178+/-0.078  $\chi^2/\text{NDF}$ : 9081.4/24

Right Out: -38.130+/-2.895  $\chi^2/\text{NDF}$ : 0.0/0

Left In: -28.660+/-0.080  $\chi^2/\text{NDF}$ : 6670.1/22

Left: -28.924+/-0.056  $\chi^2/\text{NDF}$ : 15773.0/47

Right: -38.130+/-2.895  $\chi^2/\text{NDF}$ : 0.0/0

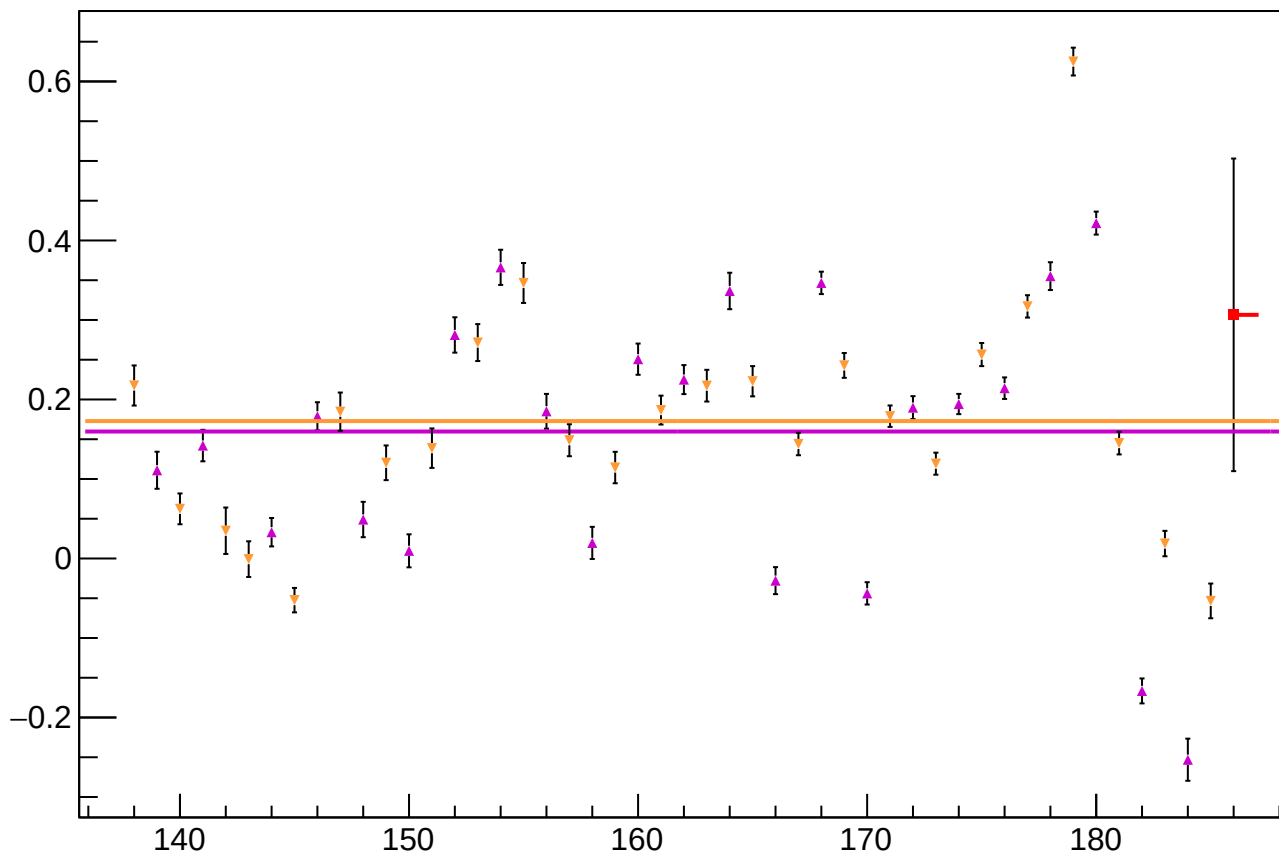
In: -28.660+/-0.080  $\chi^2/\text{NDF}$ : 6670.1/22

Out: -29.184+/-0.078  $\chi^2/\text{NDF}$ : 9090.9/25

All: -28.928+/-0.056  $\chi^2/\text{NDF}$ : 15783.1/48



reg\_asym\_sam\_15\_48\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Left Out: 0.173 $\pm$ 0.004  $\chi^2$ /NDF:1478.5/24

Right Out: 0.306 $\pm$ 0.197  $\chi^2$ /NDF: 0.0/0

Left In: 0.160 $\pm$ 0.004  $\chi^2$ /NDF:2057.9/22

Left: 0.166 $\pm$ 0.003  $\chi^2$ /NDF: 3542.9/47

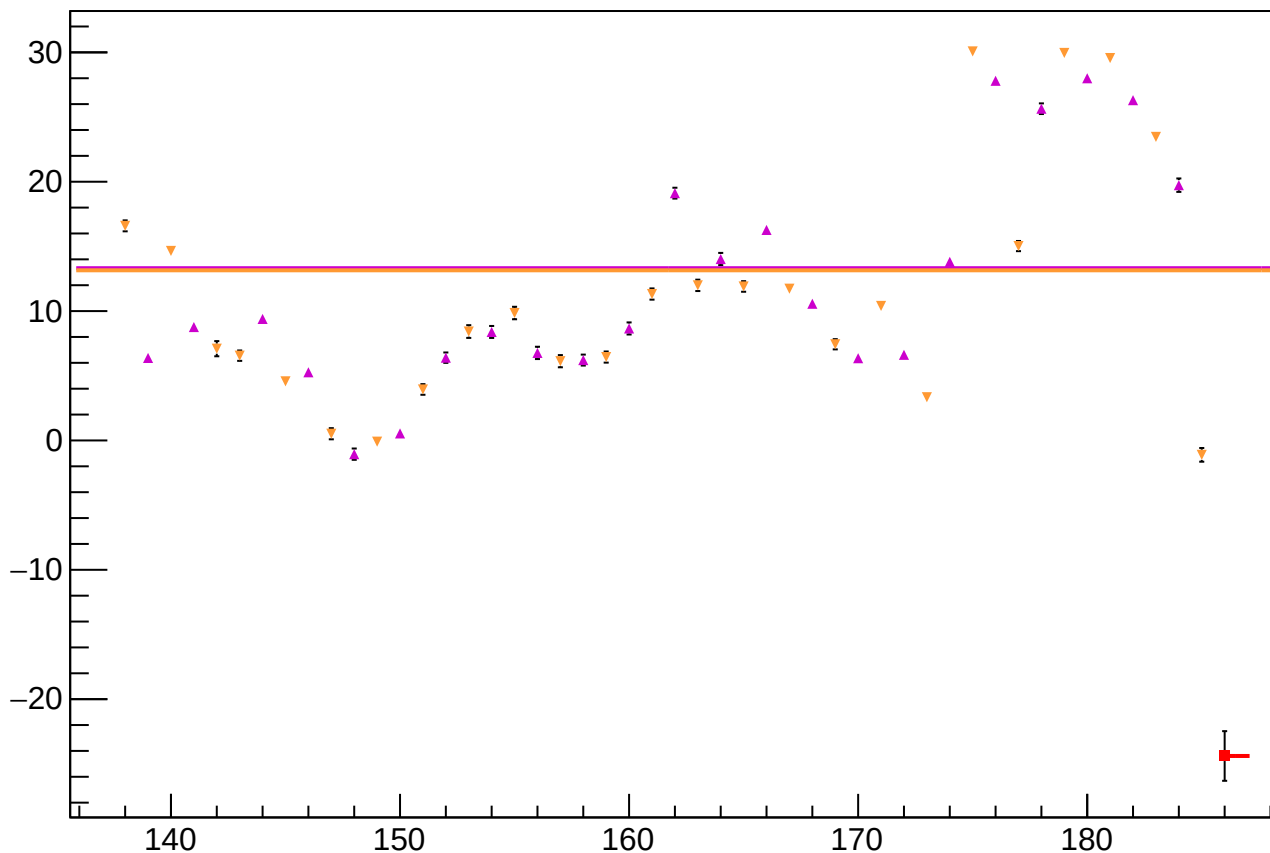
Right: 0.306 $\pm$ 0.197  $\chi^2$ /NDF: 0.0/0

In: 0.160 $\pm$ 0.004  $\chi^2$ /NDF:2057.9/22

Out: 0.173 $\pm$ 0.004  $\chi^2$ /NDF:1478.9/25

All: 0.166 $\pm$ 0.003  $\chi^2$ /NDF: 3543.4/48

reg\_asym\_sam\_37\_48\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 13.153+/-0.075  $\chi^2/\text{NDF}$ :17079.7/24

Right Out: -24.391+/-1.919  $\chi^2/\text{NDF}$ : 0.0/0

Left In: 13.315+/-0.077  $\chi^2/\text{NDF}$ :13977.7/22

Left: 13.232+/-0.054  $\chi^2/\text{NDF}$ : 31059.6/47

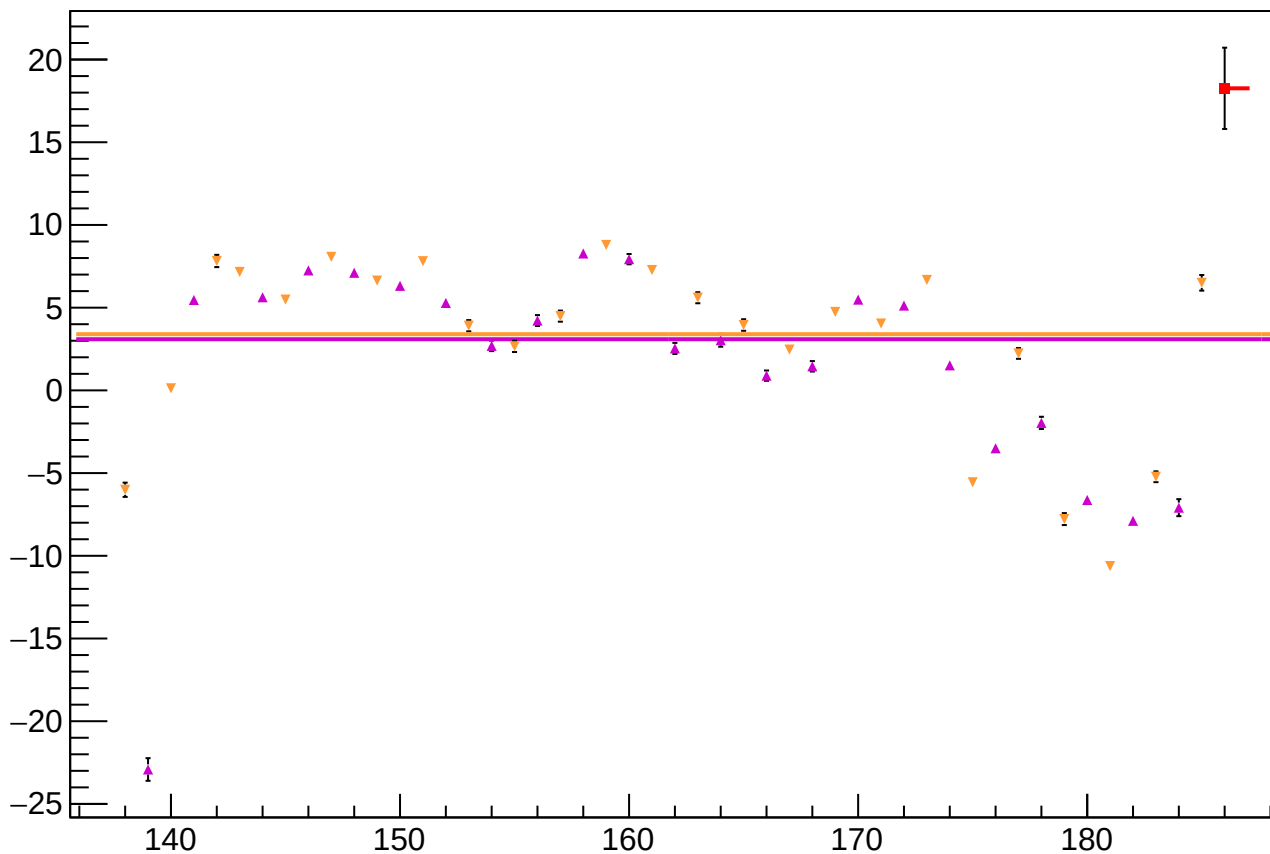
Right: -24.391+/-1.919  $\chi^2/\text{NDF}$ : 0.0/0

In: 13.315+/-0.077  $\chi^2/\text{NDF}$ :13977.7/22

Out: 13.096+/-0.075  $\chi^2/\text{NDF}$ :17461.8/25

All: 13.203+/-0.054  $\chi^2/\text{NDF}$ : 31443.6/48

reg\_asym\_sam\_37\_48\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Left Out: 3.396 $\pm$ 0.058  $\chi^2$ /NDF:8101.5/24

Right Out: 18.260 $\pm$ 2.457  $\chi^2$ /NDF: 0.0/0

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

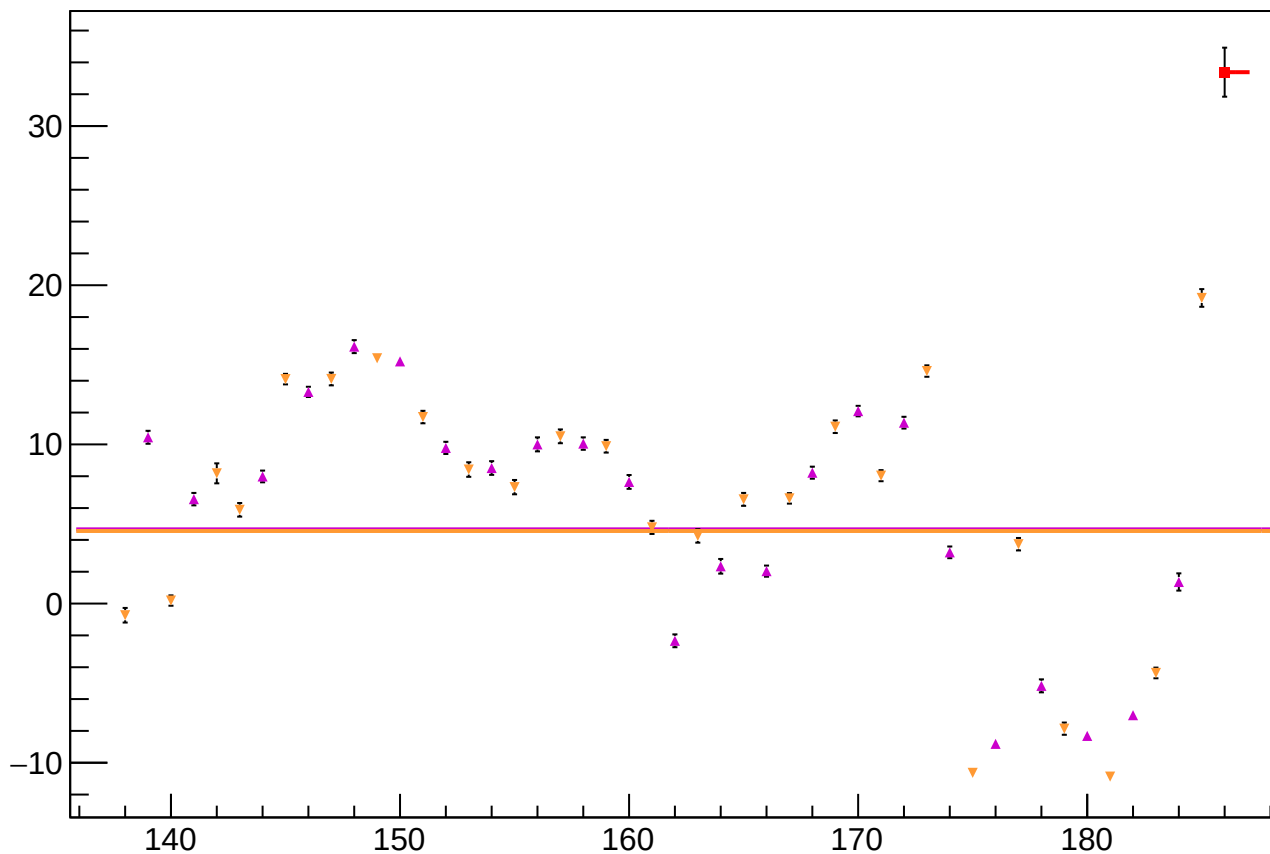
Right: 18.260 $\pm$ 2.457  $\chi^2$ /NDF: 0.0/0

In: 3.092 $\pm$ 0.061  $\chi^2$ /NDF:7104.4/22

Out: 3.404 $\pm$ 0.058  $\chi^2$ /NDF:8138.1/25

All: 3.254 $\pm$ 0.042  $\chi^2$ /NDF: 15256.2/48

reg\_asym\_sam\_37\_48\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 4.561+/-0.075  $\chi^2/\text{NDF}$ :13592.1/24

Right Out: 33.385+/-1.540  $\chi^2/\text{NDF}$ : 0.0/0

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

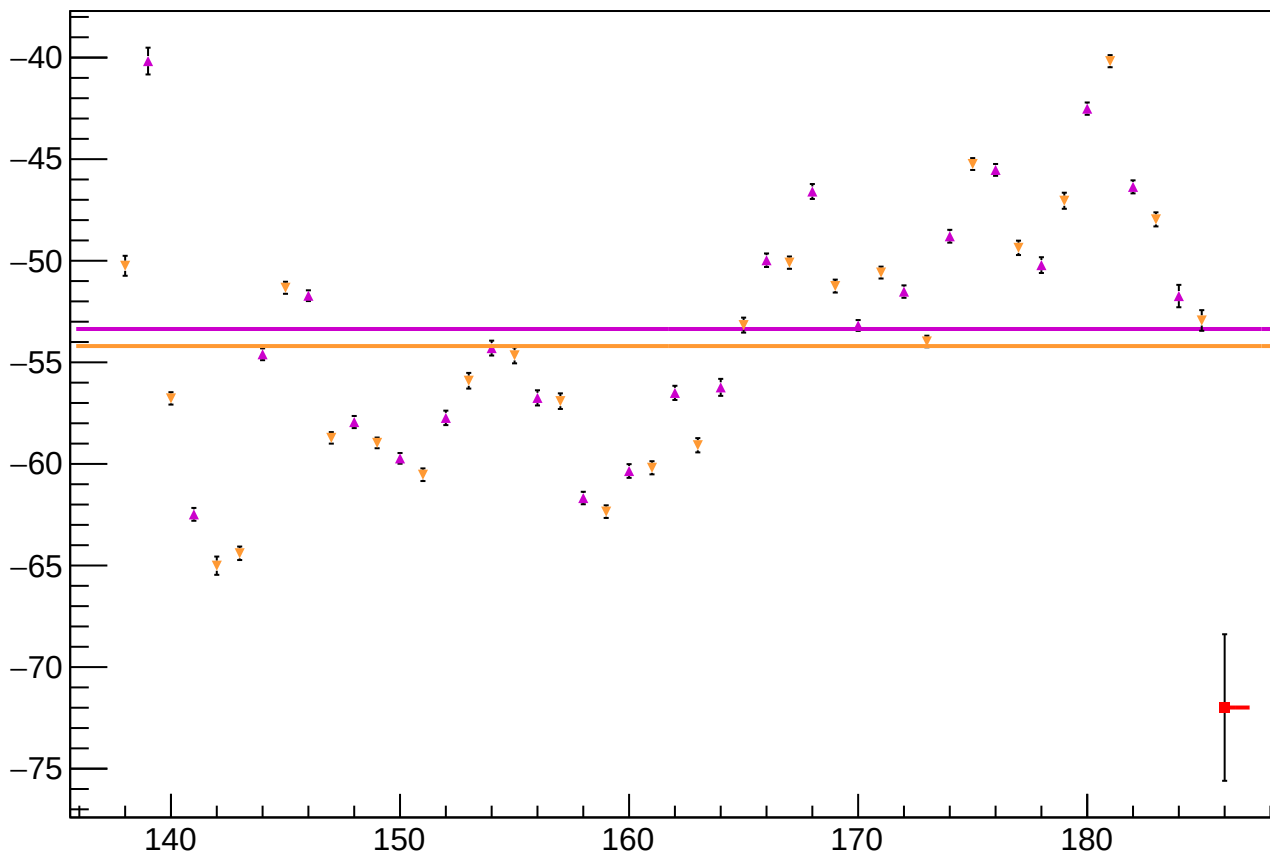
Right: 33.385+/-1.540  $\chi^2/\text{NDF}$ : 0.0/0

In: 4.662+/-0.077  $\chi^2/\text{NDF}$ :11281.5/22

Out: 4.629+/-0.075  $\chi^2/\text{NDF}$ :13941.6/25

All: 4.645+/-0.054  $\chi^2/\text{NDF}$ : 25223.1/48

reg\_asym\_sam\_37\_48\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -54.199+/-0.066  $\chi^2/\text{NDF}$ :8454.7/24

Right Out: -71.990+/-3.606  $\chi^2/\text{NDF}$ : 0.0/0

Left In: -53.359+/-0.068  $\chi^2/\text{NDF}$ :6882.0/22

Left: -53.792+/-0.048  $\chi^2/\text{NDF}$ : 15414.3/47

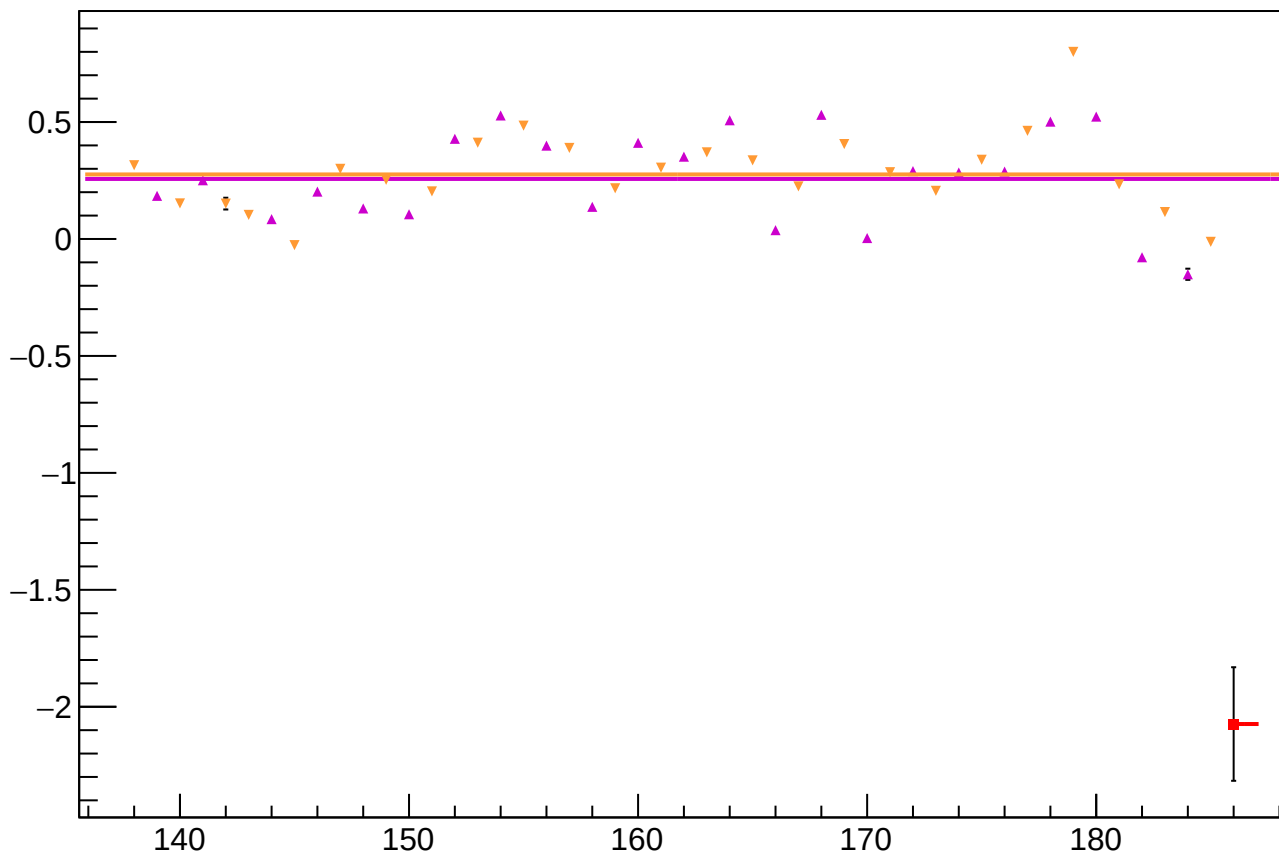
Right: -71.990+/-3.606  $\chi^2/\text{NDF}$ : 0.0/0

In: -53.359+/-0.068  $\chi^2/\text{NDF}$ :6882.0/22

Out: -54.205+/-0.066  $\chi^2/\text{NDF}$ :8479.1/25

All: -53.795+/-0.048  $\chi^2/\text{NDF}$ : 15439.8/48

reg\_asym\_sam\_37\_48\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Left Out: 0.276 $\pm$ 0.003  $\chi^2$ /NDF:2623.6/24

Right Out: -2.074 $\pm$ 0.243  $\chi^2$ /NDF: 0.0/0

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

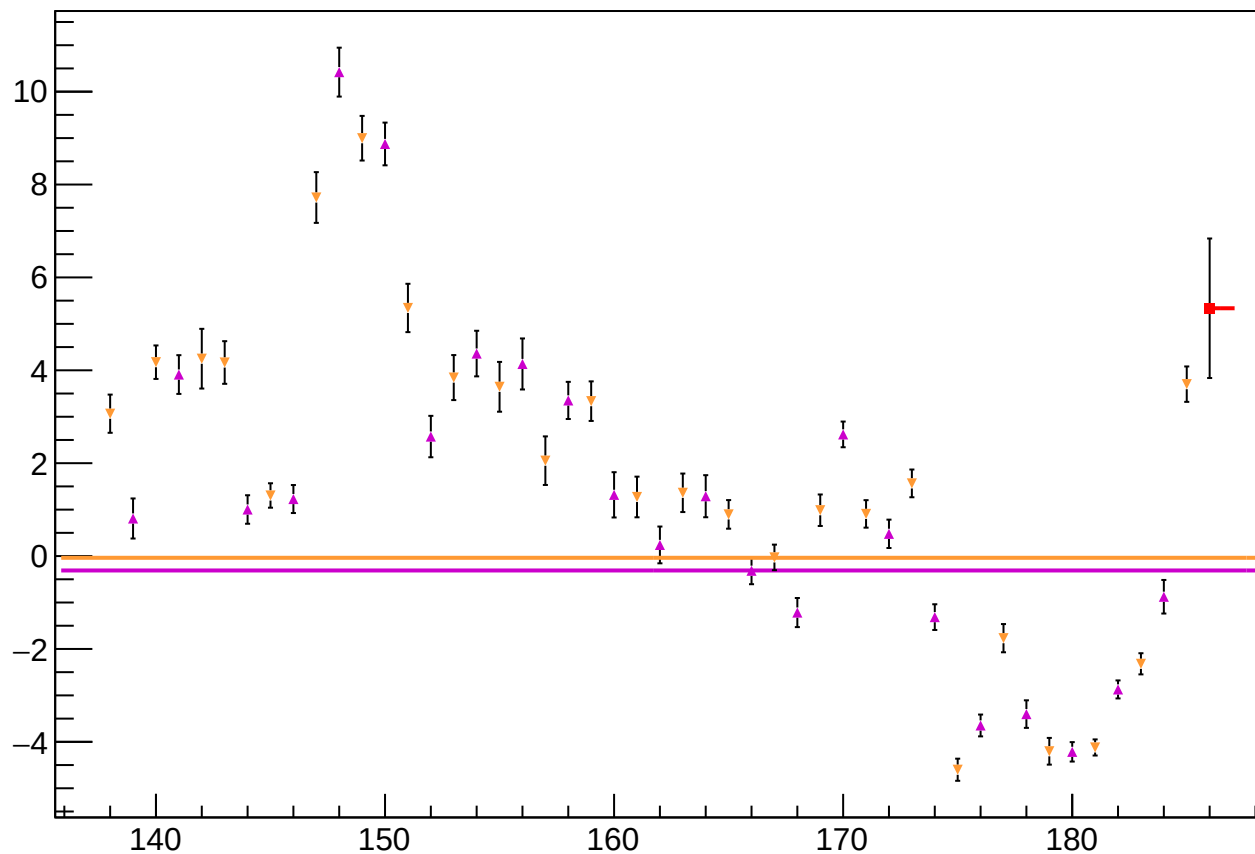
Right: -2.074 $\pm$ 0.243  $\chi^2$ /NDF: 0.0/0

In: 0.257 $\pm$ 0.003  $\chi^2$ /NDF:3623.9/22

Out: 0.276 $\pm$ 0.003  $\chi^2$ /NDF:2717.2/25

All: 0.266 $\pm$ 0.002  $\chi^2$ /NDF: 6359.9/48

reg\_asym\_sam\_15\_26\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0  
 Left Out: -0.037 $\pm$ 0.066  $\chi^2$ /NDF:2637.7/24  
 Right Out: 5.336 $\pm$ 1.502  $\chi^2$ /NDF: 0.0/0  
 Left In: -0.310 $\pm$ 0.067  $\chi^2$ /NDF:2250.5/22

Left: -0.171 $\pm$ 0.047  $\chi^2$ /NDF: 4896.5/47

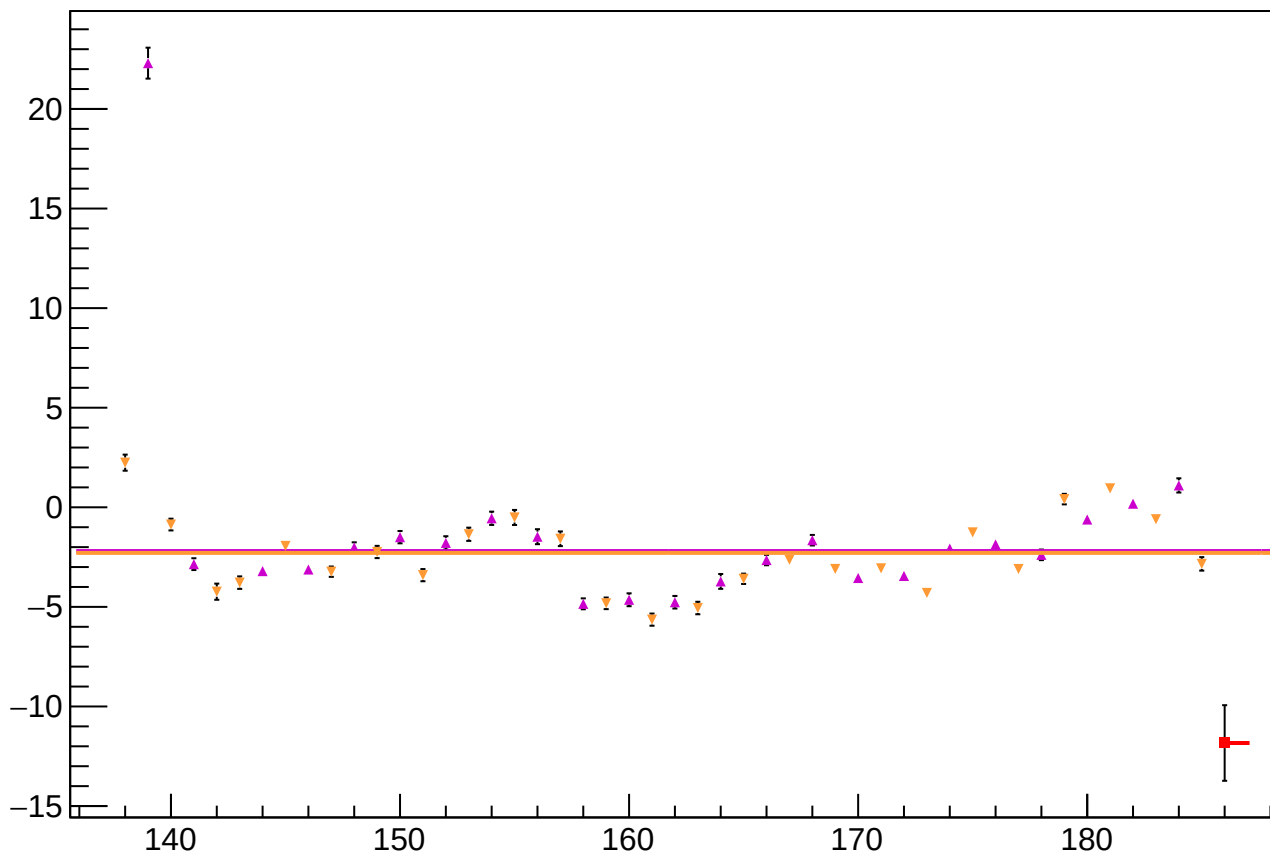
Right: 5.336 $\pm$ 1.502  $\chi^2$ /NDF: 0.0/0

In: -0.310 $\pm$ 0.067  $\chi^2$ /NDF:2250.5/22

Out: -0.027 $\pm$ 0.066  $\chi^2$ /NDF:2650.4/25

All: -0.166 $\pm$ 0.047  $\chi^2$ /NDF: 4909.9/48

reg\_asym\_sam\_15\_26\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 0.0/0$

Left Out:  $-2.288 \pm 0.054$   $\chi^2/\text{NDF}: 1137.7/24$

Right Out:  $-11.834 \pm 1.898$   $\chi^2/\text{NDF}: 0.0/0$

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:  $-11.834 \pm 1.898$   $\chi^2/\text{NDF}: 0.0/0$

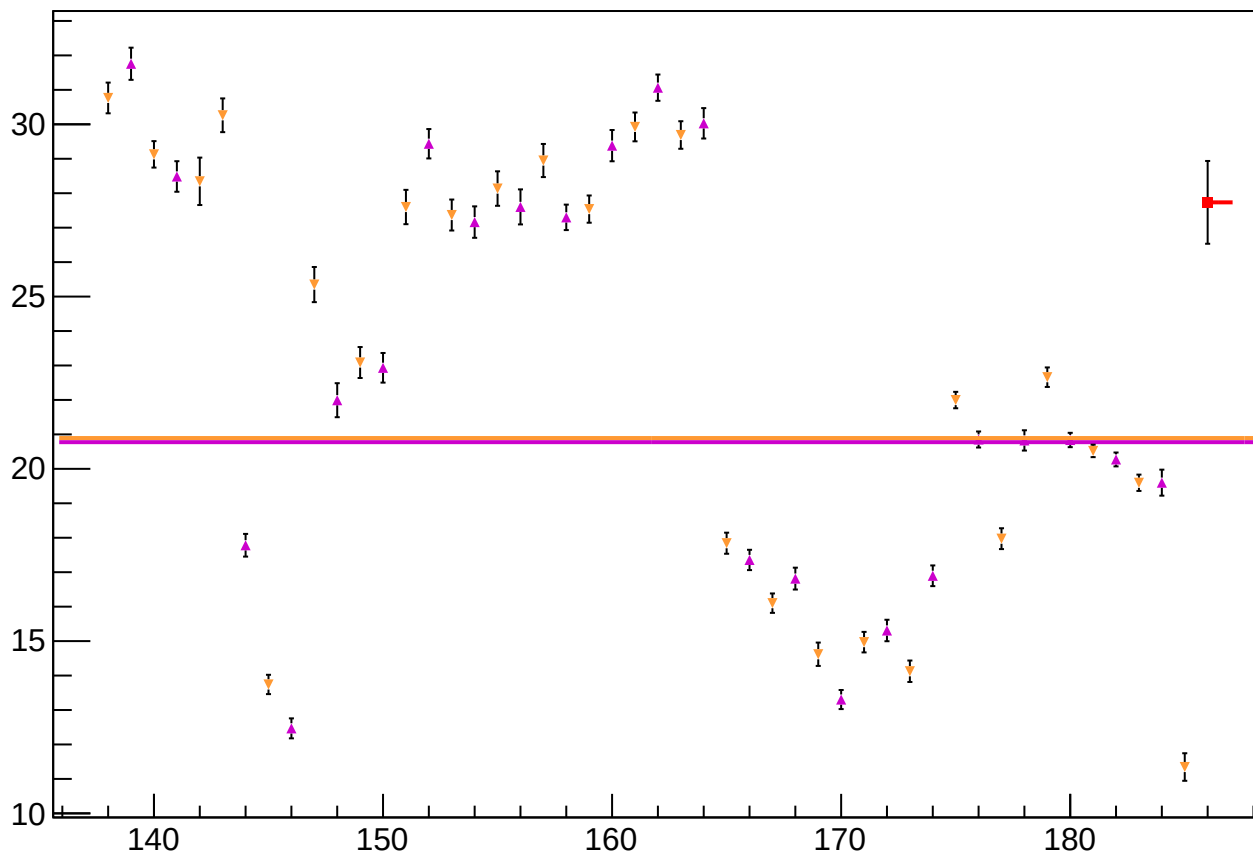
In:  $-2.198 \pm 0.055$   $\chi^2/\text{NDF}: 1673.9/22$

Out:  $-2.296 \pm 0.054$   $\chi^2/\text{NDF}: 1163.0/25$

All:  $-2.248 \pm 0.039$   $\chi^2/\text{NDF}: 2838.5/48$



reg\_asym\_sam\_15\_26\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Left Out: 20.894 $\pm$ 0.067  $\chi^2$ /NDF:6655.4/24

Right Out: 27.735 $\pm$ 1.202  $\chi^2$ /NDF: 0.0/0

Left In: 20.774 $\pm$ 0.068  $\chi^2$ /NDF:5927.9/22

Left: 20.835 $\pm$ 0.047  $\chi^2$ /NDF: 12584.8/47

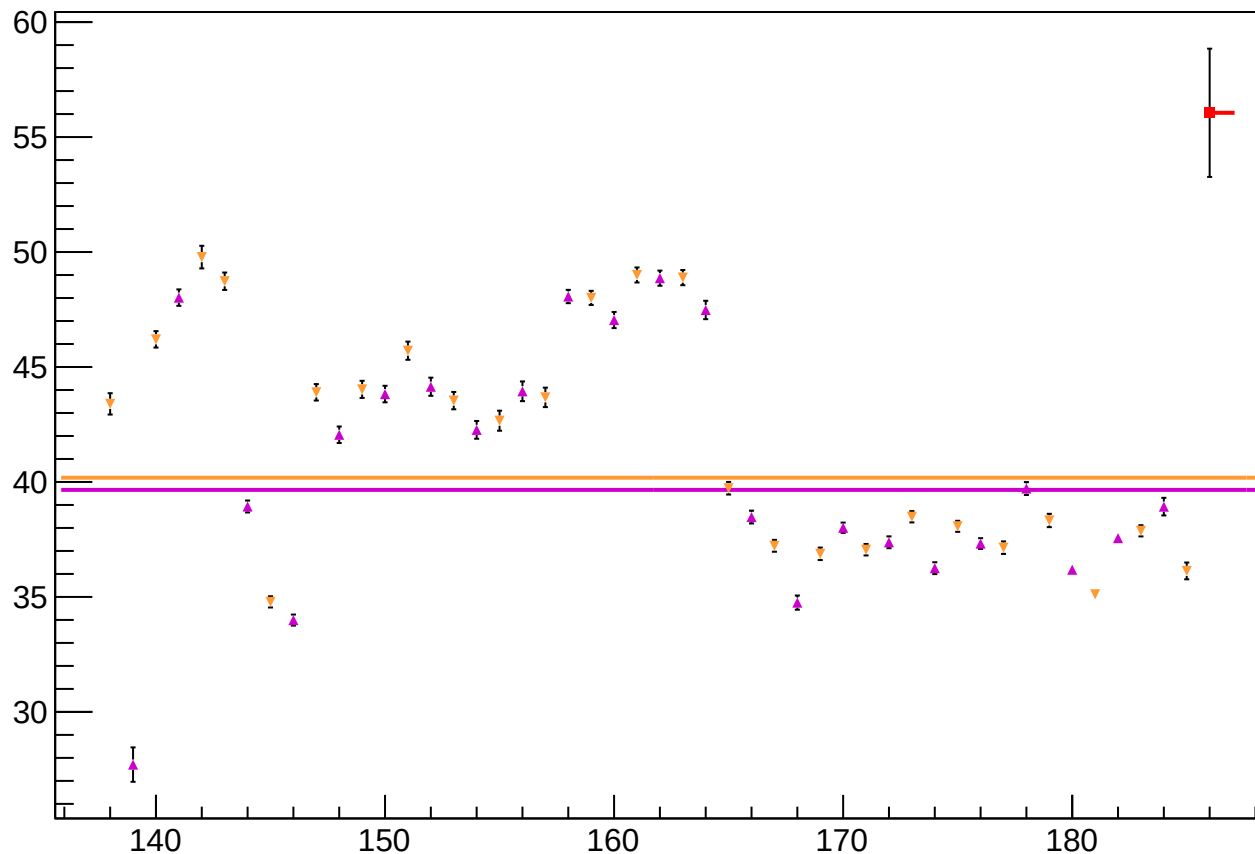
Right: 27.735 $\pm$ 1.202  $\chi^2$ /NDF: 0.0/0

In: 20.774 $\pm$ 0.068  $\chi^2$ /NDF:5927.9/22

Out: 20.915 $\pm$ 0.067  $\chi^2$ /NDF:6687.7/25

All: 20.846 $\pm$ 0.047  $\chi^2$ /NDF: 12617.7/48

reg\_asym\_sam\_15\_26\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Left Out: 40.186 $\pm$ 0.060  $\chi^2$ /NDF:5932.7/24

Right Out: 56.055 $\pm$ 2.789  $\chi^2$ /NDF: 0.0/0

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

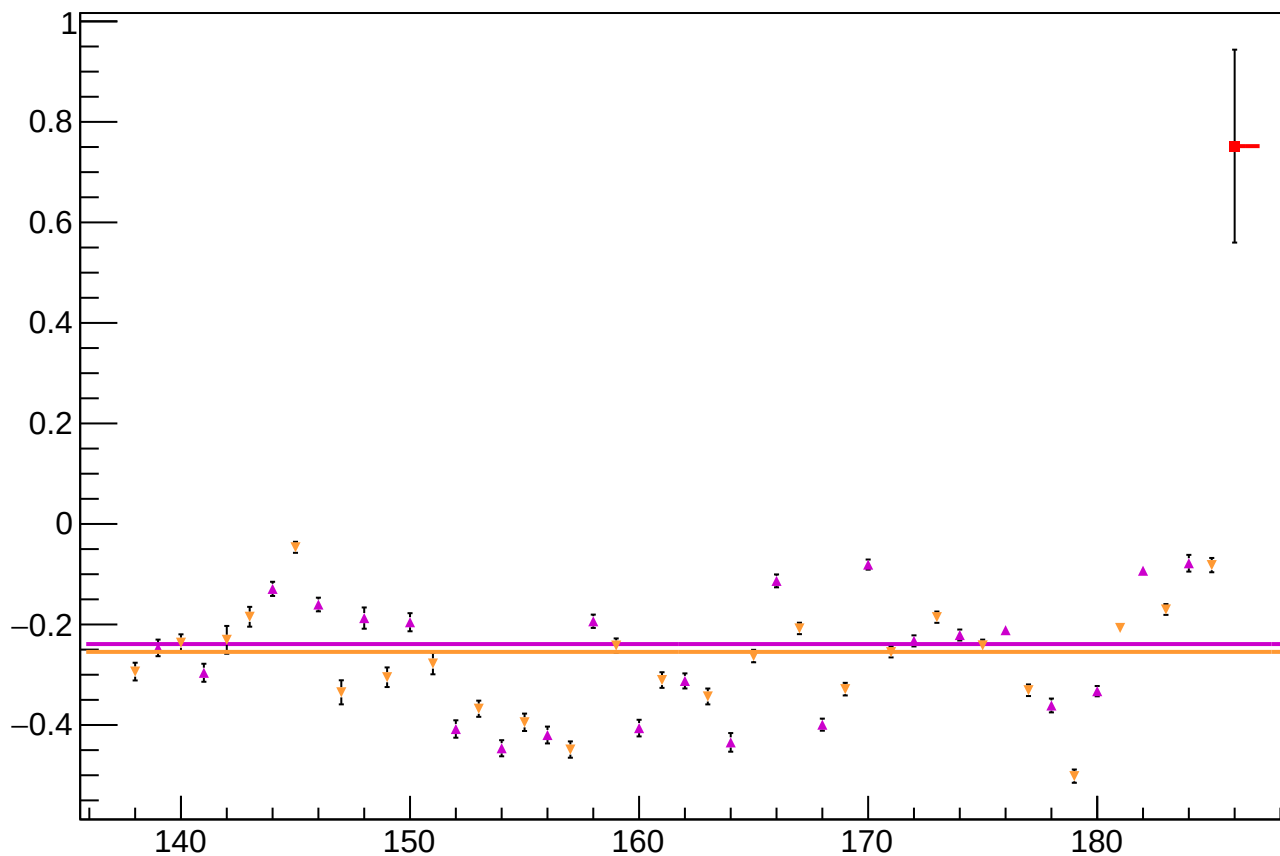
Right: 56.055 $\pm$ 2.789  $\chi^2$ /NDF: 0.0/0

In: 39.655 $\pm$ 0.061  $\chi^2$ /NDF:5298.6/22

Out: 40.194 $\pm$ 0.060  $\chi^2$ /NDF:5965.0/25

All: 39.929 $\pm$ 0.043  $\chi^2$ /NDF: 11302.7/48

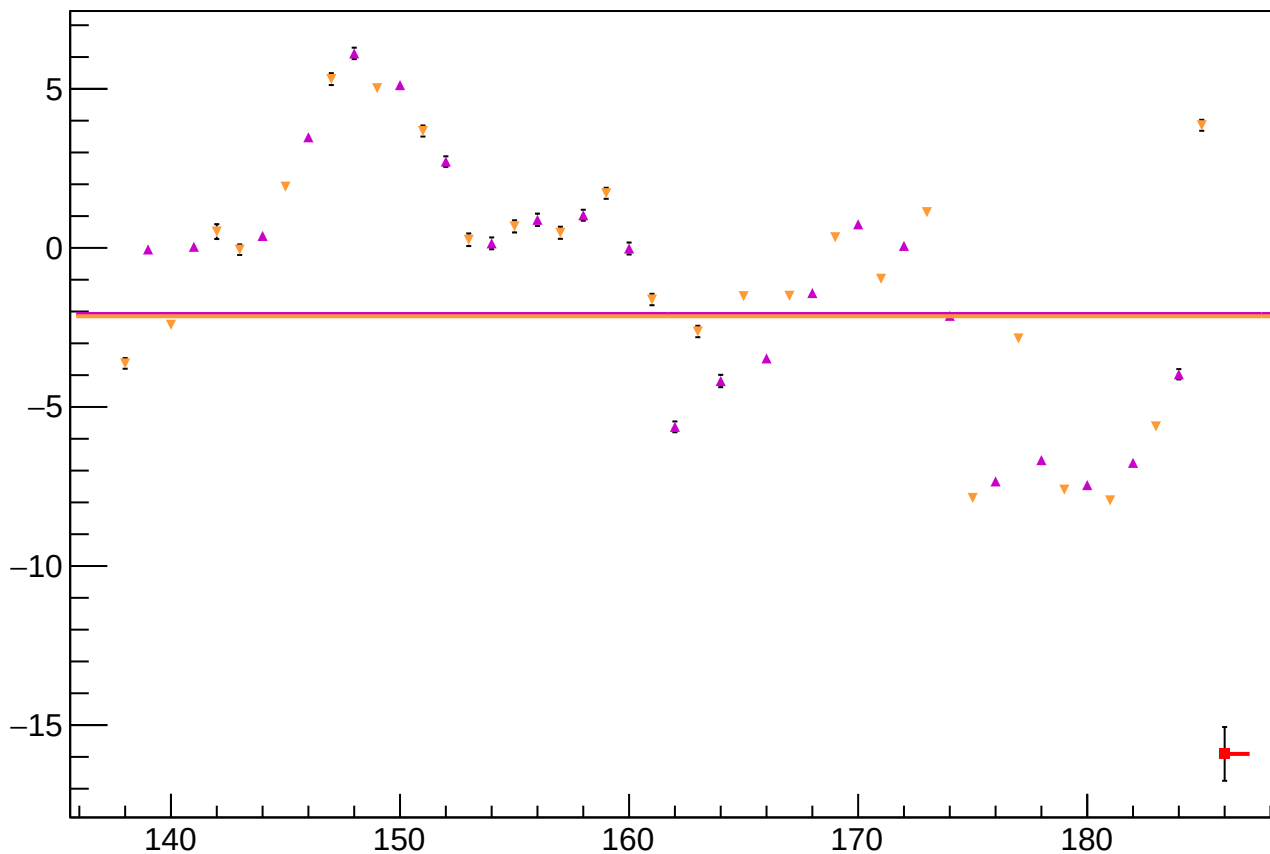
reg\_asym\_sam\_15\_26\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0  
 Left Out: -0.255 $\pm$ 0.003  $\chi^2$ /NDF:1420.4/24  
 Right Out: 0.752 $\pm$ 0.192  $\chi^2$ /NDF: 0.0/0  
 Left In: -0.239 $\pm$ 0.003  $\chi^2$ /NDF:1750.5/22

Left: -0.247 $\pm$ 0.002  $\chi^2$ /NDF: 3186.7/47  
 Right: 0.752 $\pm$ 0.192  $\chi^2$ /NDF: 0.0/0  
 In: -0.239 $\pm$ 0.003  $\chi^2$ /NDF:1750.5/22  
 Out: -0.254 $\pm$ 0.003  $\chi^2$ /NDF:1447.9/25  
 All: -0.247 $\pm$ 0.002  $\chi^2$ /NDF: 3213.8/48

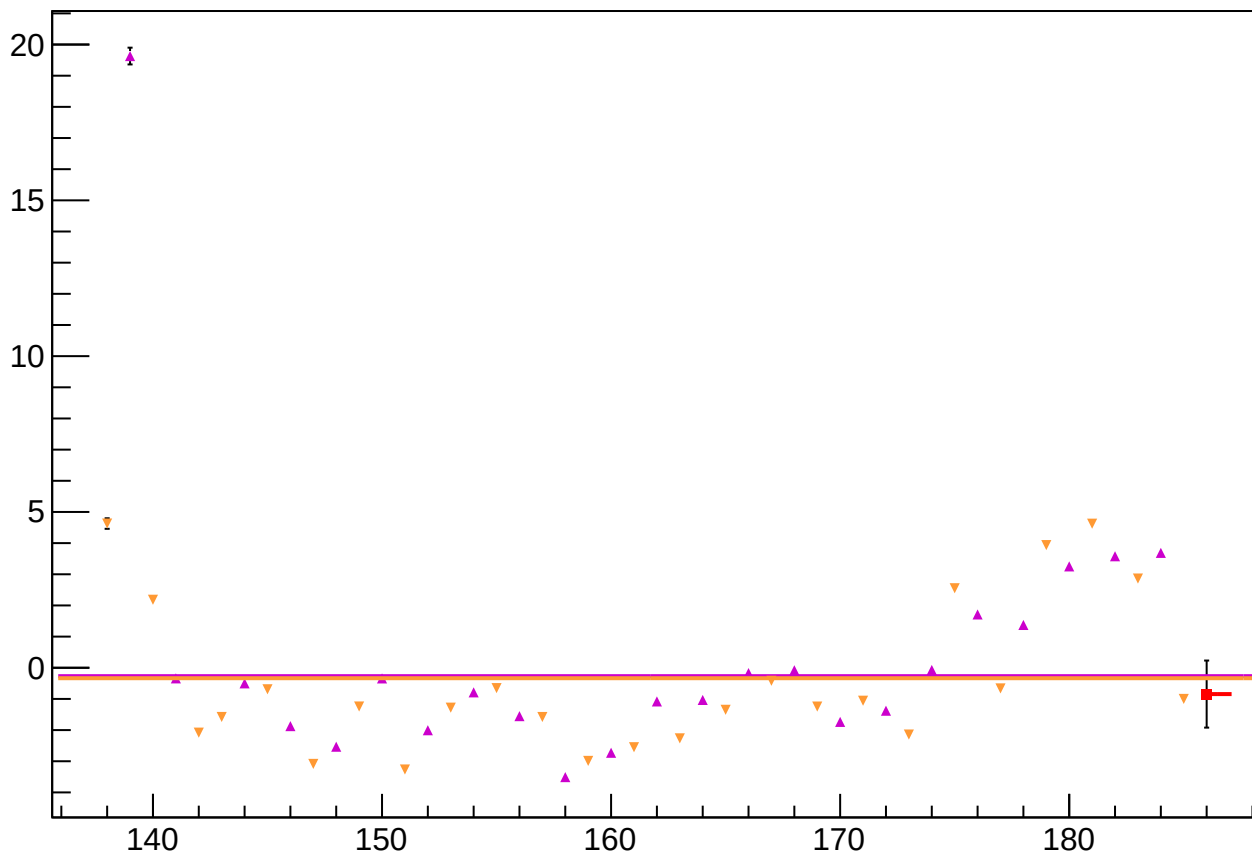
reg\_asym\_sam\_37\_26\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 0.0/0$   
 Left Out:  $-2.149 \pm 0.026$   $\chi^2/\text{NDF}: 24536.3/24$   
 Right Out:  $-15.906 \pm 0.845$   $\chi^2/\text{NDF}: 0.0/0$   
 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:  $-15.906 \pm 0.845$   $\chi^2/\text{NDF}: 0.0/0$   
 In:  $-2.078 \pm 0.026$   $\chi^2/\text{NDF}: 23245.8/22$   
 Out:  $-2.161 \pm 0.026$   $\chi^2/\text{NDF}: 24800.9/25$   
 All:  $-2.120 \pm 0.018$   $\chi^2/\text{NDF}: 48051.9/48$

reg\_asym\_sam\_37\_26\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -0.335+/-0.021  $\chi^2/\text{NDF}$ :12596.1/24

Right Out: -0.845+/-1.076  $\chi^2/\text{NDF}$ : 0.0/0

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

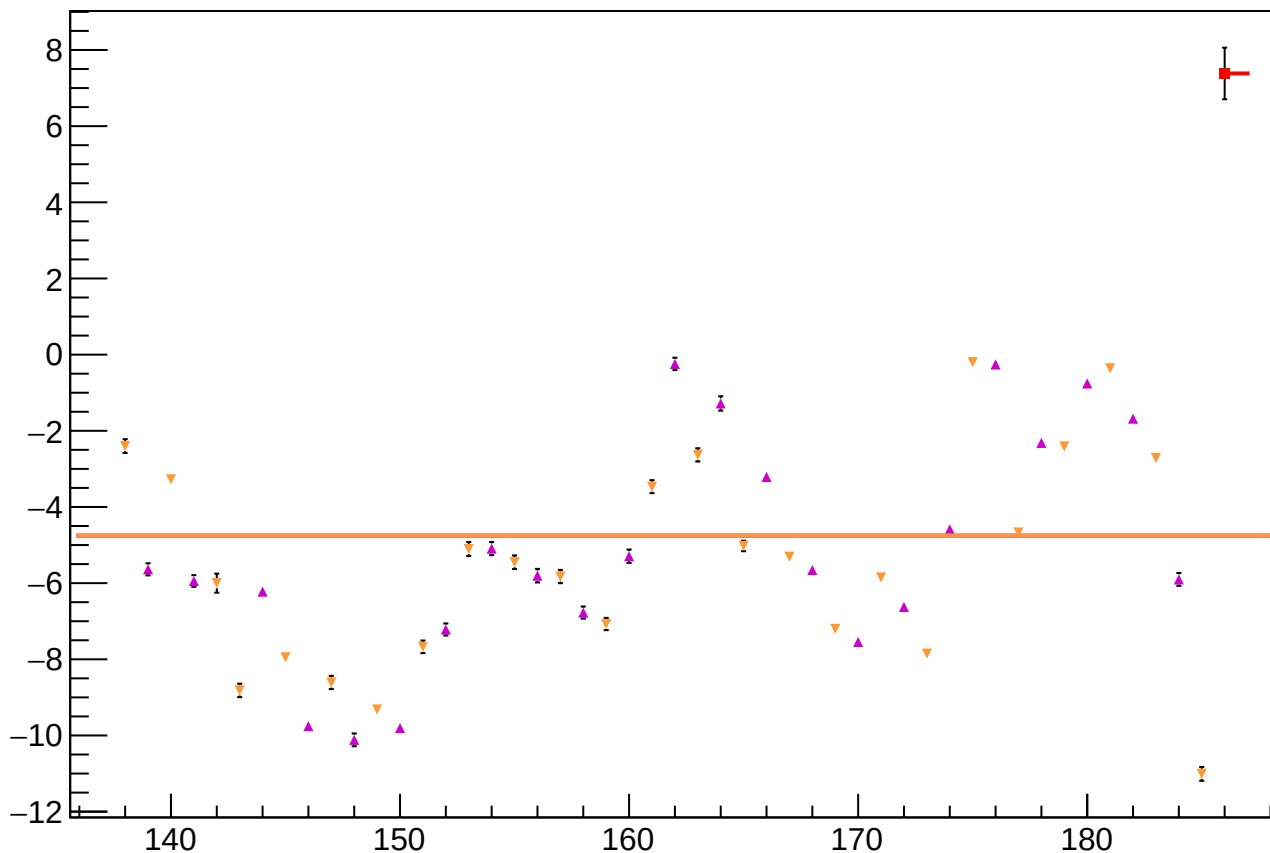
Right: -0.845+/-1.076  $\chi^2/\text{NDF}$ : 0.0/0

In: -0.269+/-0.021  $\chi^2/\text{NDF}$ :13323.1/22

Out: -0.335+/-0.021  $\chi^2/\text{NDF}$ :12596.3/25

All: -0.303+/-0.015  $\chi^2/\text{NDF}$ : 25924.4/48

reg\_asym\_sam\_37\_26\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



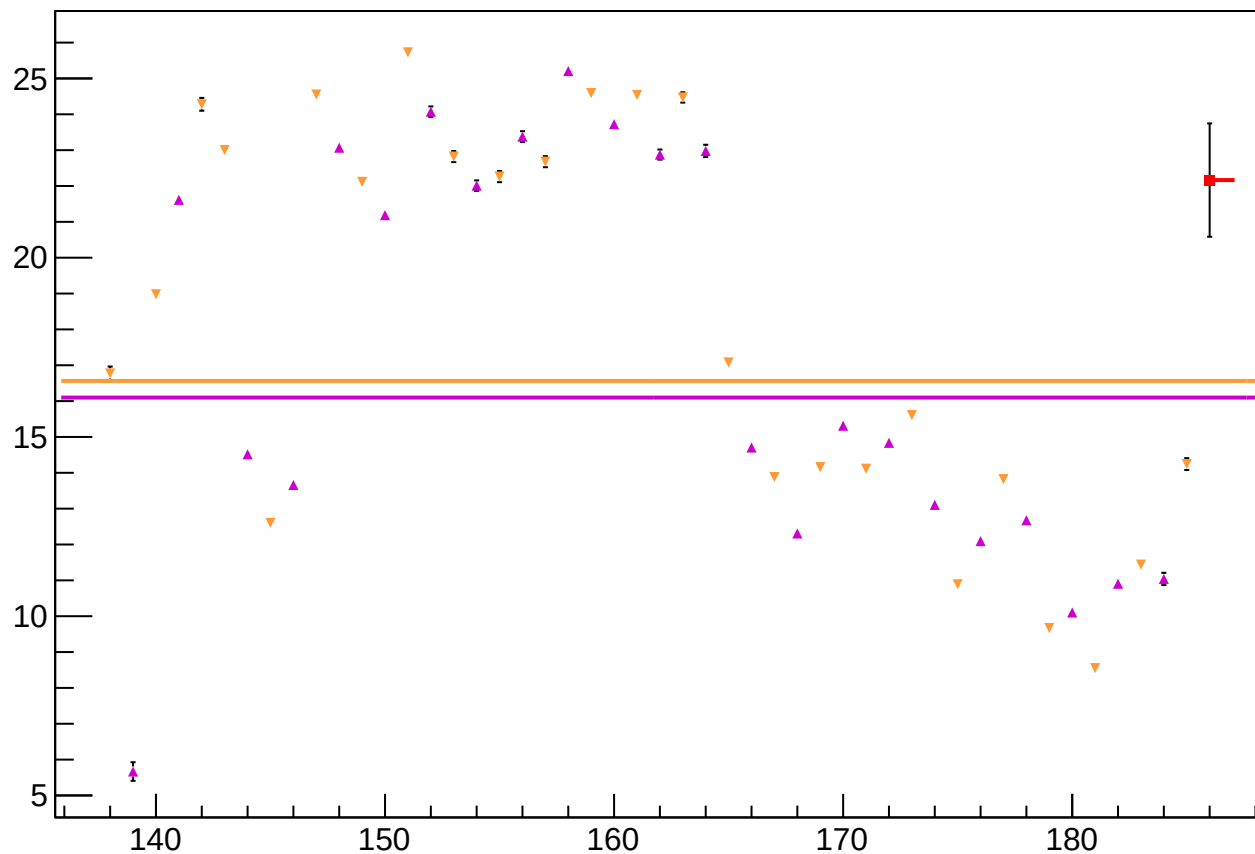
Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0  
 Left Out: -4.748+/-0.026  $\chi^2/\text{NDF}$ :13289.8/24  
 Right Out: 7.383+/-0.677  $\chi^2/\text{NDF}$ : 0.0/0  
 Left In: -4.753+/-0.026  $\chi^2/\text{NDF}$ :14119.2/22

Left: -4.751+/-0.018  $\chi^2/\text{NDF}$ : 27409.0/47  
 Right: 7.383+/-0.677  $\chi^2/\text{NDF}$ : 0.0/0

In: -4.753+/-0.026  $\chi^2/\text{NDF}$ :14119.2/22  
 Out: -4.730+/-0.026  $\chi^2/\text{NDF}$ :13610.1/25

All: -4.742+/-0.018  $\chi^2/\text{NDF}$ : 27729.7/48

reg\_asym\_sam\_37\_26\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Left Out: 16.563 $\pm$ 0.023  $\chi^2$ /NDF:53858.5/24

Right Out: 22.165 $\pm$ 1.581  $\chi^2$ /NDF: 0.0/0

Left In: 16.098 $\pm$ 0.024  $\chi^2$ /NDF:42345.7/22

Left: 16.335 $\pm$ 0.017  $\chi^2$ /NDF: 96401.9/47

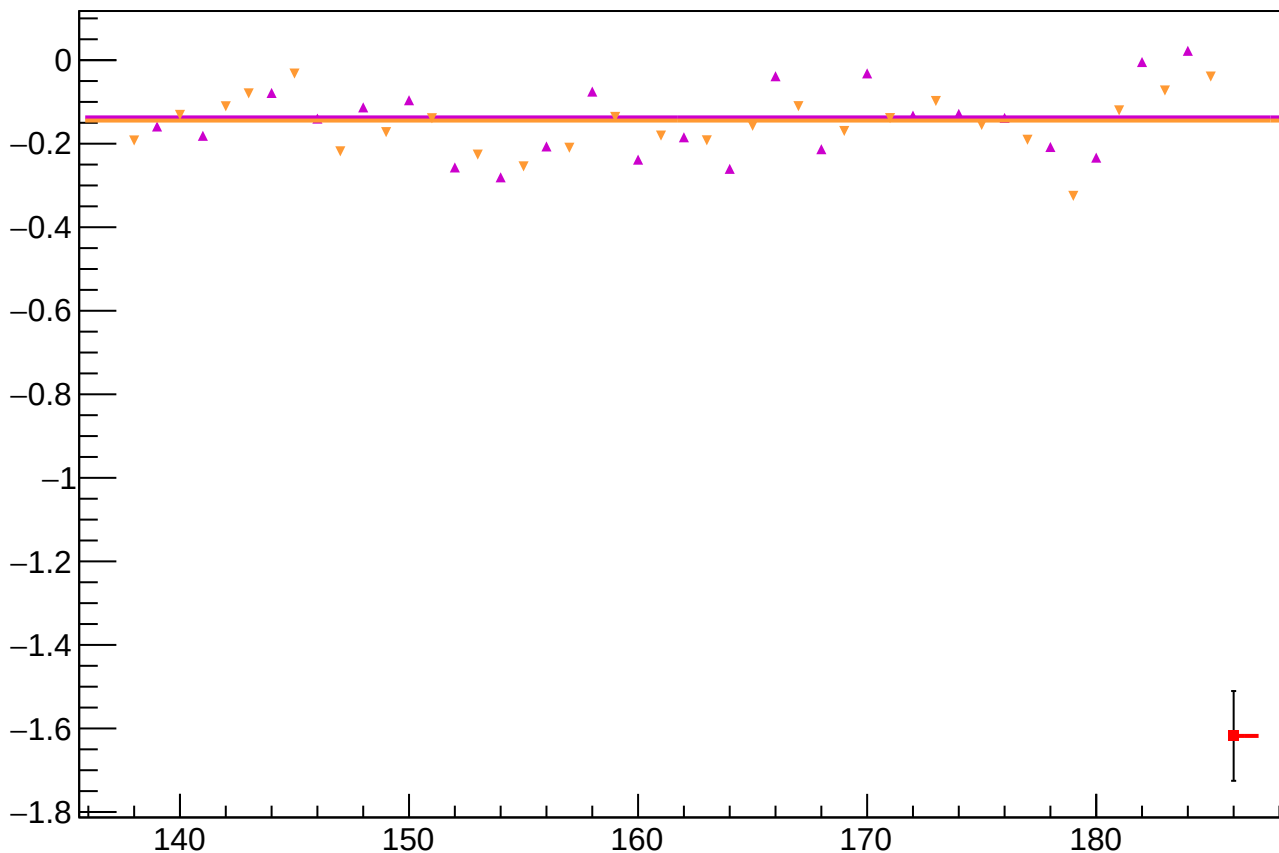
Right: 22.165 $\pm$ 1.581  $\chi^2$ /NDF: 0.0/0

In: 16.098 $\pm$ 0.024  $\chi^2$ /NDF:42345.7/22

Out: 16.564 $\pm$ 0.023  $\chi^2$ /NDF:53871.1/25

All: 16.335 $\pm$ 0.017  $\chi^2$ /NDF: 96415.5/48

reg\_asym\_sam\_37\_26\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Left Out: -0.145 $\pm$ 0.001  $\chi^2$ /NDF:3769.7/24

Right Out: -1.618 $\pm$ 0.107  $\chi^2$ /NDF: 0.0/0

Left In: -0.137 $\pm$ 0.001  $\chi^2$ /NDF:5392.6/22

Left: -0.141 $\pm$ 0.001  $\chi^2$ /NDF: 9187.6/47

Right: -1.618 $\pm$ 0.107  $\chi^2$ /NDF: 0.0/0

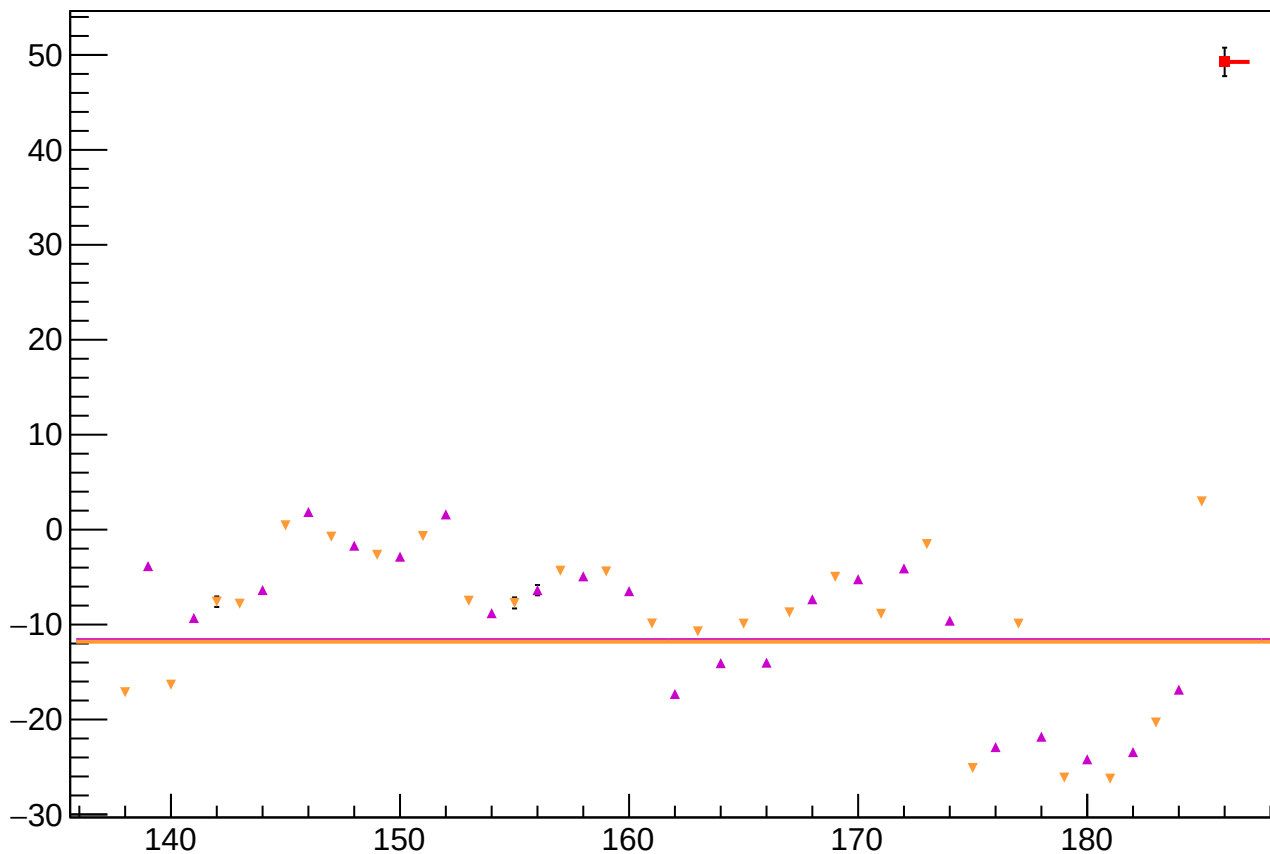
In: -0.137 $\pm$ 0.001  $\chi^2$ /NDF:5392.6/22

Out: -0.145 $\pm$ 0.001  $\chi^2$ /NDF:3957.6/25

All: -0.141 $\pm$ 0.001  $\chi^2$ /NDF: 9376.5/48



reg\_asym\_sam\_1357\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -11.801+/-0.070  $\chi^2/\text{NDF}$ :17308.2/24

Right Out: 49.267+/-1.500  $\chi^2/\text{NDF}$ : 0.0/0

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

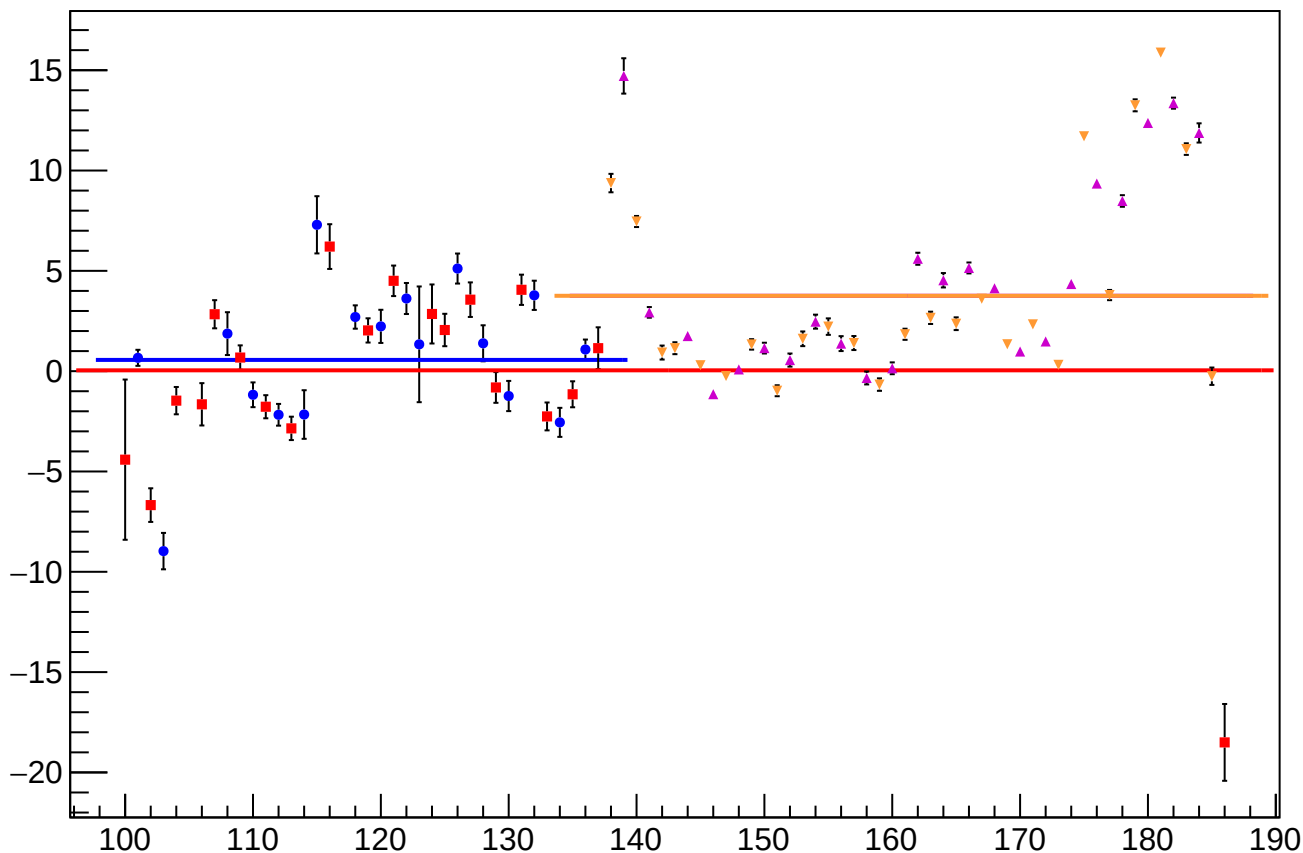
Right: 49.267+/-1.500  $\chi^2/\text{NDF}$ : 0.0/0

In: -11.642+/-0.072  $\chi^2/\text{NDF}$ :14121.2/22

Out: -11.667+/-0.070  $\chi^2/\text{NDF}$ :18962.6/25

All: -11.655+/-0.050  $\chi^2/\text{NDF}$ : 33083.9/48

reg\_asym\_sam\_1357\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 0.561 $\pm$ 0.170  $\chi^2$ /NDF: 288.7/16

Left Out: 3.757 $\pm$ 0.056  $\chi^2$ /NDF:7450.7/24

Right Out: 0.041 $\pm$ 0.174  $\chi^2$ /NDF: 365.8/19

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

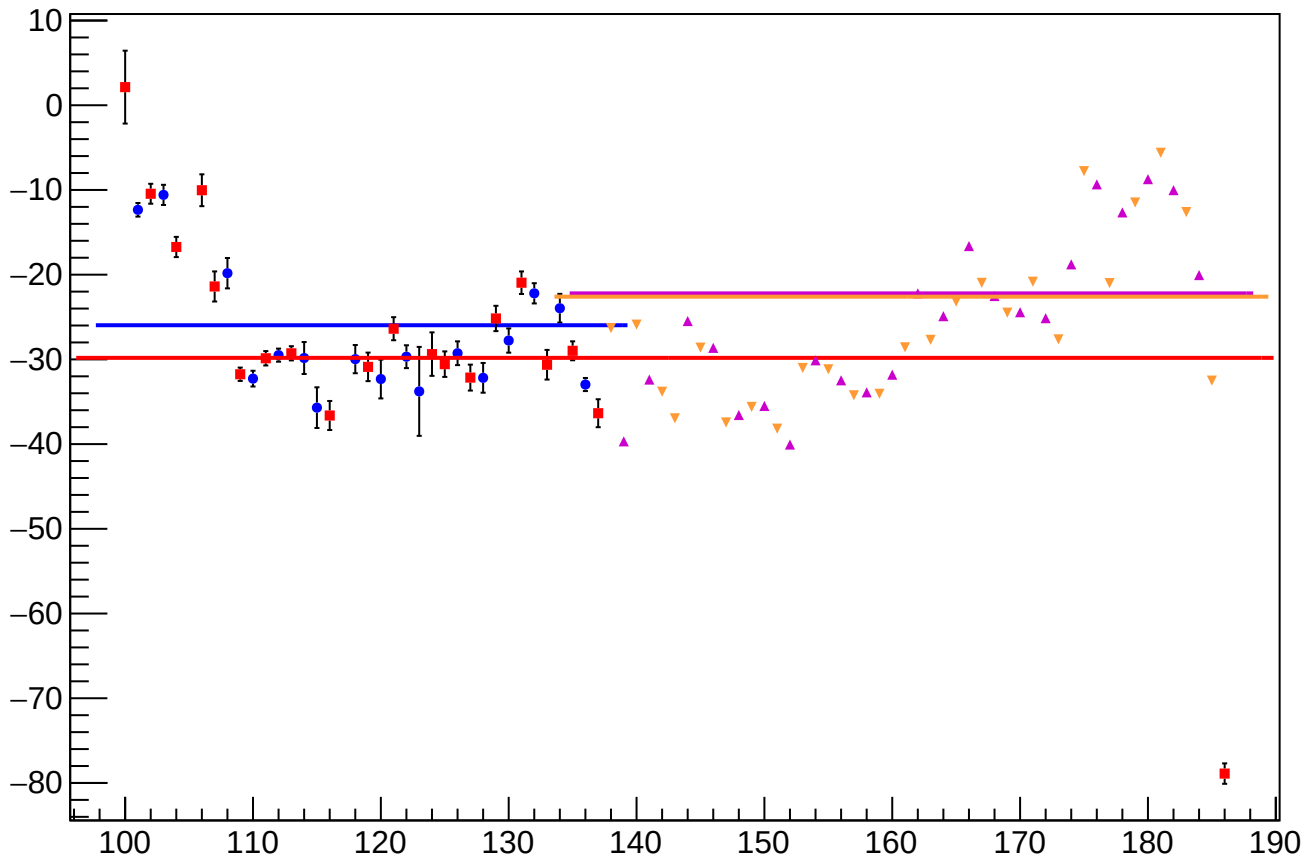
Right: 0.307 $\pm$ 0.122  $\chi^2$ /NDF: 659.0/36

In: 3.439 $\pm$ 0.054  $\chi^2$ /NDF:6234.8/39

Out: 3.414 $\pm$ 0.053  $\chi^2$ /NDF:8229.7/44

All: 3.426 $\pm$ 0.038  $\chi^2$ /NDF: 14464.6/84

reg\_asym\_sam\_1357\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-25.968 \pm 0.301$   $\chi^2/\text{NDF}$ : 691.1/16

Left Out:  $-22.598 \pm 0.071$   $\chi^2/\text{NDF}$ : 19933.4/24

Right Out:  $-29.819 \pm 0.289$   $\chi^2/\text{NDF}$ : 2340.2/19

Left In:  $-22.209 \pm 0.072$   $\chi^2/\text{NDF}$ : 17627.4/22

Left:  $-22.406 \pm 0.050$   $\chi^2/\text{NDF}$ : 37575.6/47

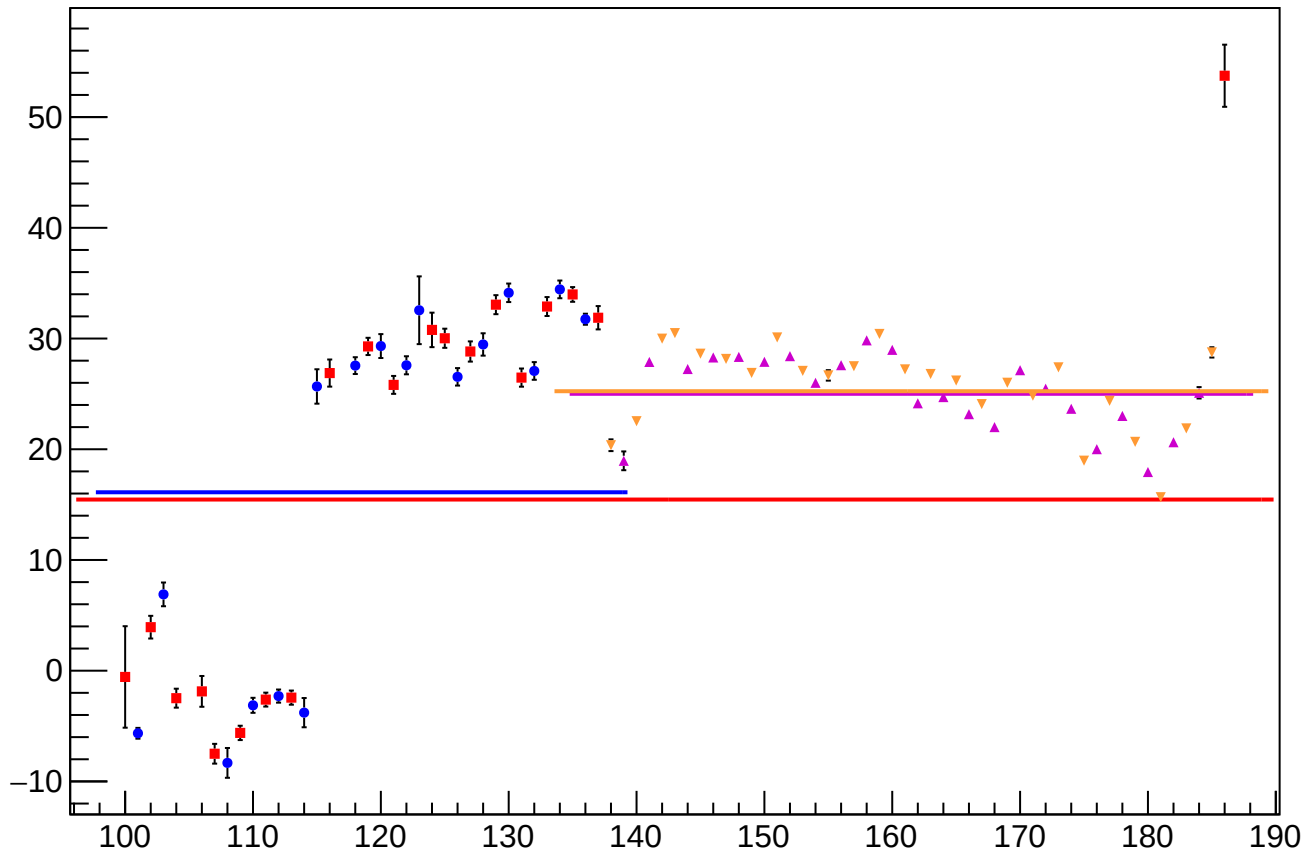
Right:  $-27.969 \pm 0.209$   $\chi^2/\text{NDF}$ : 3116.4/36

In:  $-22.410 \pm 0.070$   $\chi^2/\text{NDF}$ : 18466.1/39

Out:  $-23.004 \pm 0.069$   $\chi^2/\text{NDF}$ : 22861.4/44

All:  $-22.712 \pm 0.049$   $\chi^2/\text{NDF}$ : 41364.4/84

reg\_asym\_sam\_1357\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 16.115 $\pm$ 0.192  $\chi^2$ /NDF: 7542.1/16

Left Out: 25.242 $\pm$ 0.063  $\chi^2$ /NDF:3786.5/24

Right Out: 15.458 $\pm$ 0.197  $\chi^2$ /NDF: 7448.7/19

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

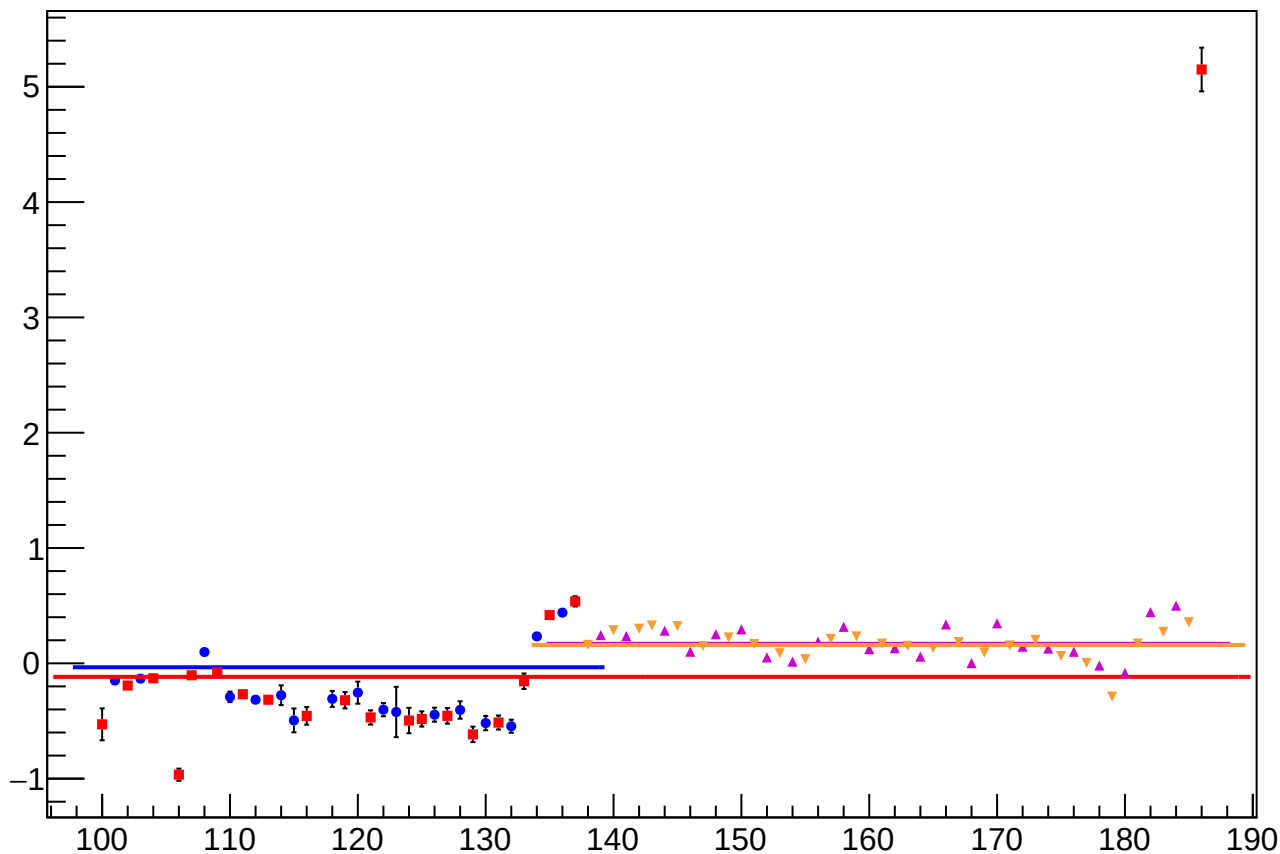
Right: 15.794 $\pm$ 0.138  $\chi^2$ /NDF: 14996.4/36

In: 24.127 $\pm$ 0.061  $\chi^2$ /NDF:12189.0/39

Out: 24.343 $\pm$ 0.060  $\chi^2$ /NDF:13477.8/44

All: 24.237 $\pm$ 0.043  $\chi^2$ /NDF: 25673.3/84

reg\_asym\_sam\_1357\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.034 \pm 0.010$   $\chi^2/\text{NDF}$ : 1011.4/16

Left Out:  $0.159 \pm 0.003$   $\chi^2/\text{NDF}$ : 1864.2/24

Right Out:  $-0.117 \pm 0.010$   $\chi^2/\text{NDF}$ : 1936.1/19

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

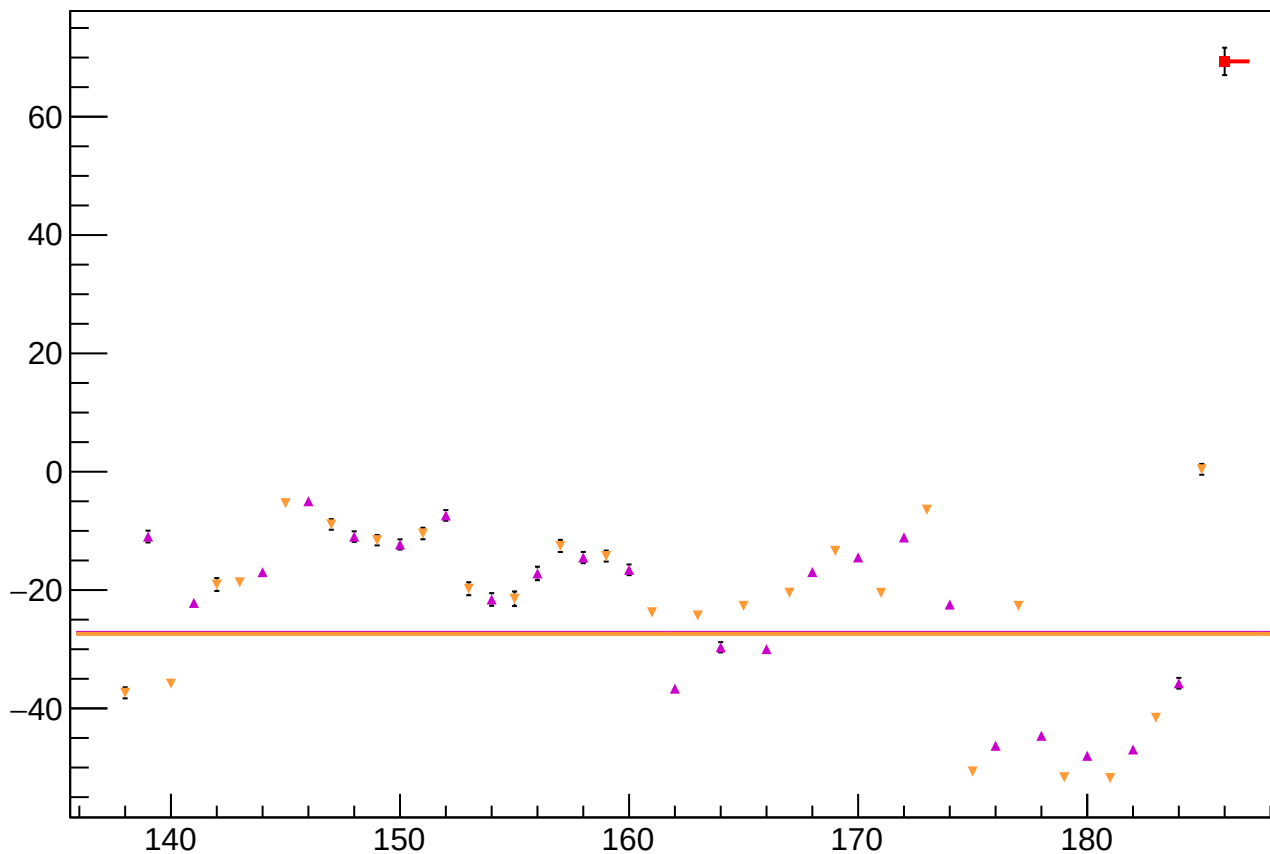
Right:  $-0.076 \pm 0.007$   $\chi^2/\text{NDF}$ : 2979.7/36

In:  $0.154 \pm 0.003$   $\chi^2/\text{NDF}$ : 3787.7/39

Out:  $0.140 \pm 0.003$   $\chi^2/\text{NDF}$ : 4461.7/44

All:  $0.147 \pm 0.002$   $\chi^2/\text{NDF}$ : 8262.5/84

reg\_asym\_sam\_2468\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -27.408+/-0.137  $\chi^2/\text{NDF}$ :14850.5/24

Right Out: 69.353+/-2.317  $\chi^2/\text{NDF}$ : 0.0/0

Left In: -27.243+/-0.139  $\chi^2/\text{NDF}$ :11305.2/22

Left: -27.327+/-0.098  $\chi^2/\text{NDF}$ : 26156.4/47

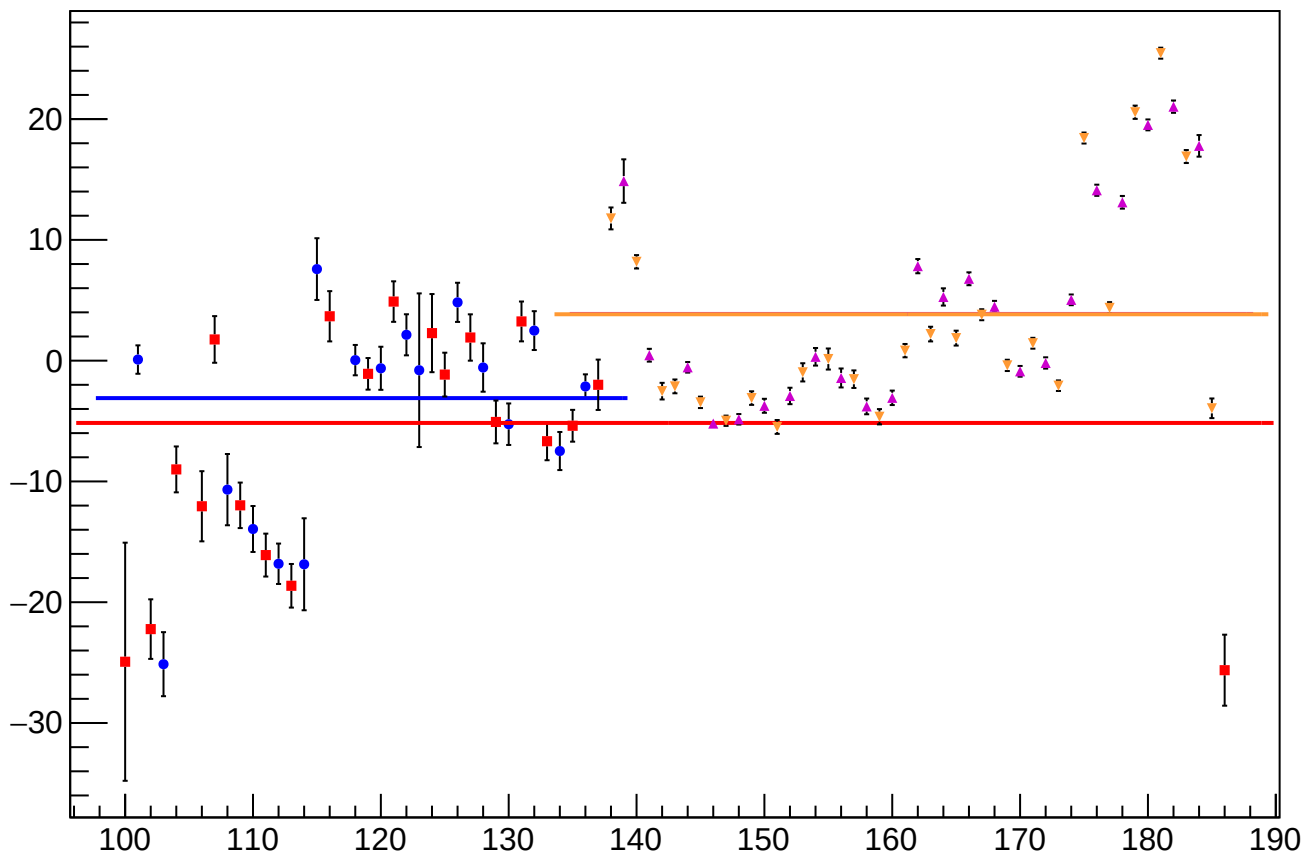
Right: 69.353+/-2.317  $\chi^2/\text{NDF}$ : 0.0/0

In: -27.243+/-0.139  $\chi^2/\text{NDF}$ :11305.2/22

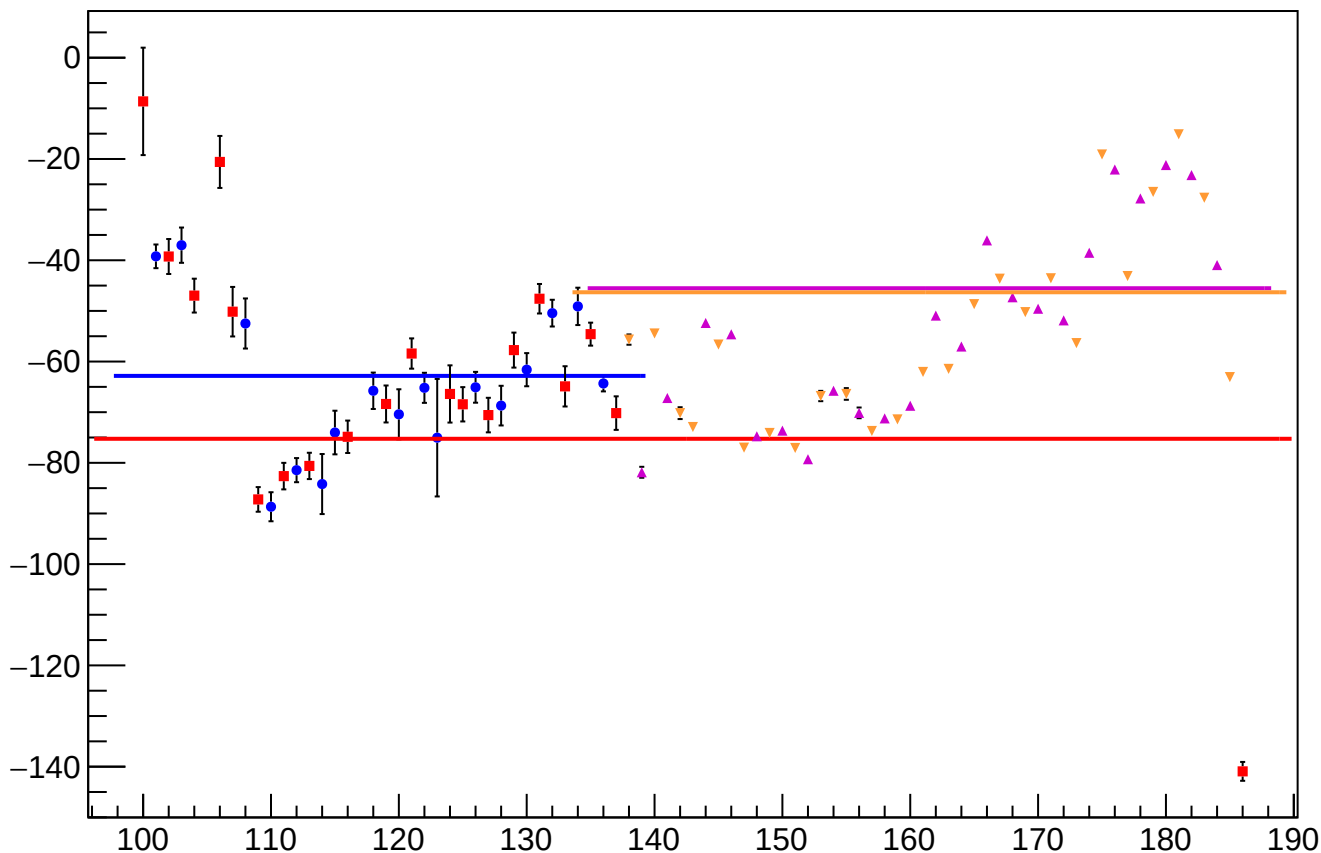
Out: -27.072+/-0.137  $\chi^2/\text{NDF}$ :16587.7/25

All: -27.156+/-0.098  $\chi^2/\text{NDF}$ : 27893.7/48

reg\_asym\_sam\_2468\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



reg\_asym\_sam\_2468\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-62.830 \pm 0.742$   $\chi^2/\text{NDF}$ : 367.7/16

Left Out:  $-46.318 \pm 0.138$   $\chi^2/\text{NDF}$ : 20134.6/24

Right Out:  $-75.251 \pm 0.698$   $\chi^2/\text{NDF}$ : 1890.4/19

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:  $-69.417 \pm 0.508$   $\chi^2/\text{NDF}$ : 2406.8/36

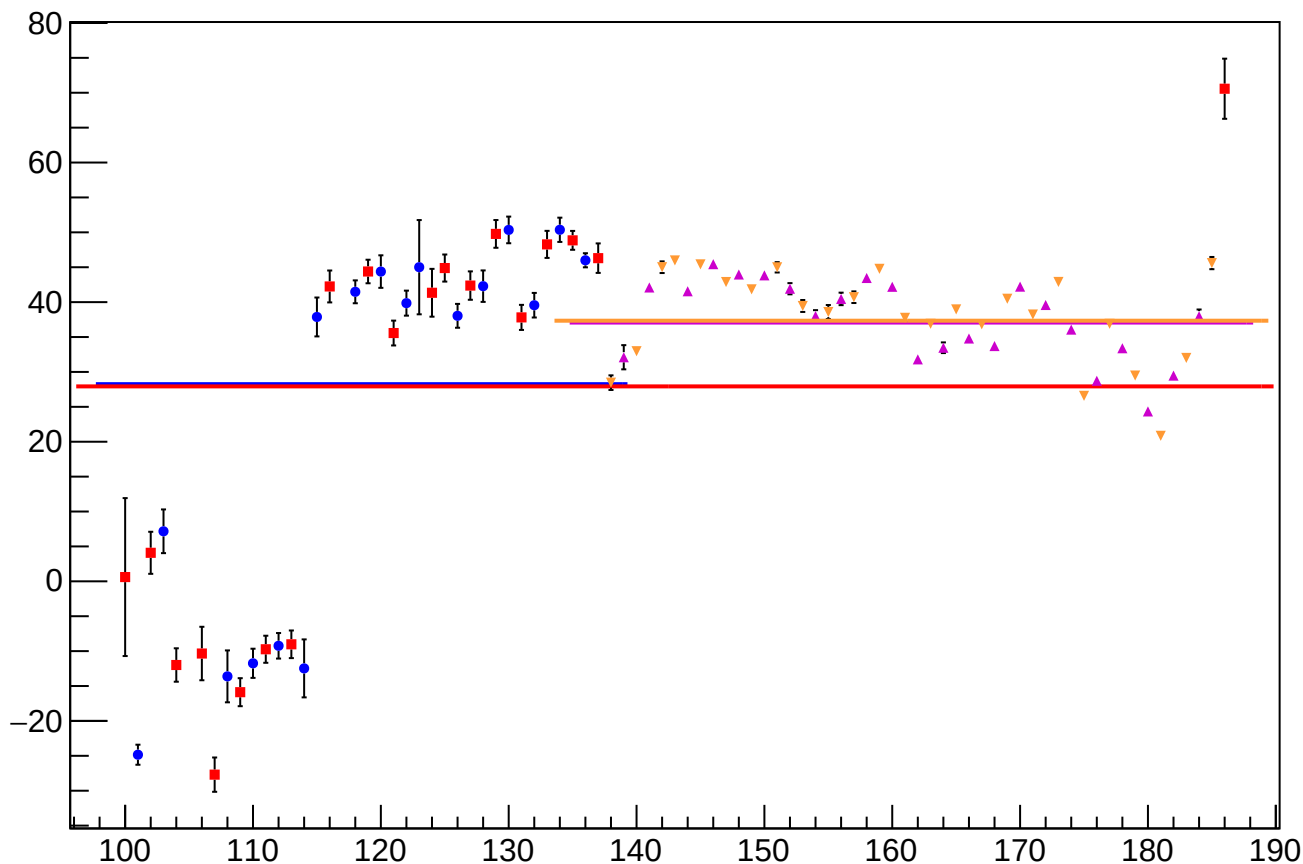
In:  $-46.115 \pm 0.137$   $\chi^2/\text{NDF}$ : 18418.9/39

Out:  $-47.405 \pm 0.135$   $\chi^2/\text{NDF}$ : 23678.2/44

All:  $-46.770 \pm 0.096$   $\chi^2/\text{NDF}$ : 42141.9/84



reg\_asym\_sam\_2468\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $28.247 \pm 0.461$   $\chi^2/\text{NDF}$ : 3310.9/16

Left Out:  $37.340 \pm 0.123$   $\chi^2/\text{NDF}$ : 3149.1/24

Right Out:  $27.928 \pm 0.477$   $\chi^2/\text{NDF}$ : 3130.7/19

Left In:  $37.074 \pm 0.125$   $\chi^2/\text{NDF}$ : 2397.3/22

Left:  $37.209 \pm 0.088$   $\chi^2/\text{NDF}$ : 5548.7/47

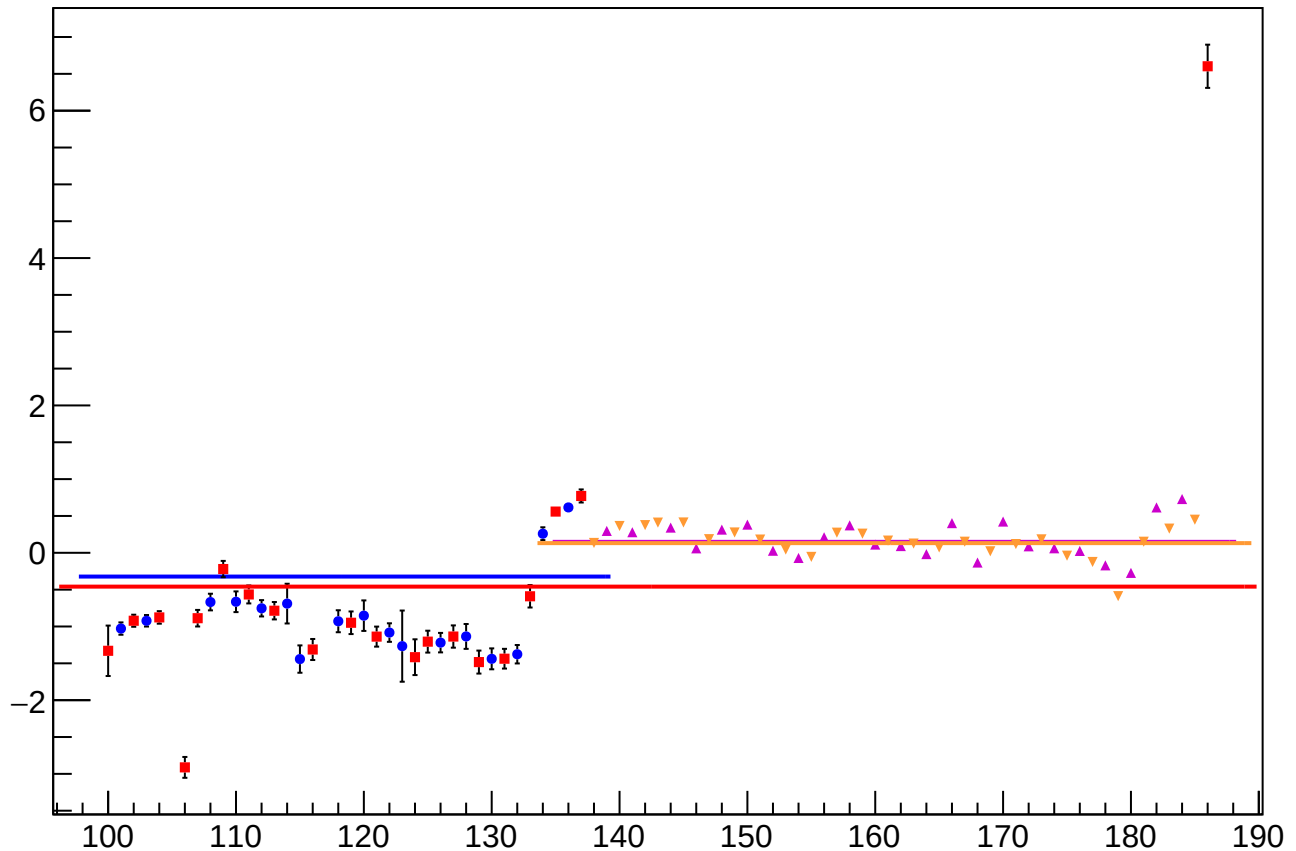
Right:  $28.093 \pm 0.331$   $\chi^2/\text{NDF}$ : 6441.8/36

In:  $36.467 \pm 0.121$   $\chi^2/\text{NDF}$ : 6049.8/39

Out:  $36.754 \pm 0.119$   $\chi^2/\text{NDF}$ : 6645.4/44

All:  $36.613 \pm 0.085$   $\chi^2/\text{NDF}$ : 12698.0/84

reg\_asym\_sam\_2468\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.322 \pm 0.025$   $\chi^2/\text{NDF}$ : 1010.1/16

Left Out:  $0.131 \pm 0.006$   $\chi^2/\text{NDF}$ : 1426.3/24

Right Out:  $-0.459 \pm 0.026$   $\chi^2/\text{NDF}$ : 1743.8/19

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

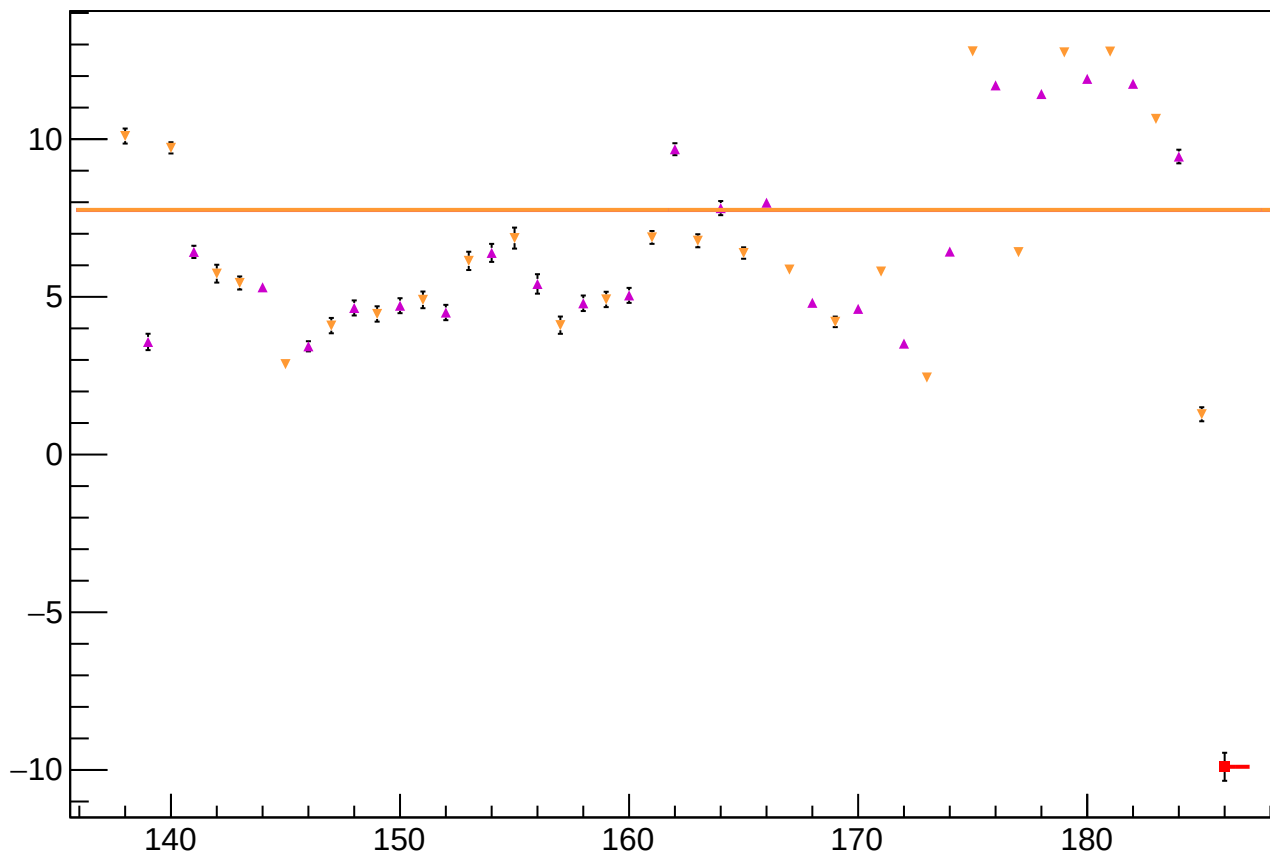
Right:  $-0.389 \pm 0.018$   $\chi^2/\text{NDF}$ : 2768.4/36

In:  $0.125 \pm 0.006$   $\chi^2/\text{NDF}$ : 3151.7/39

Out:  $0.104 \pm 0.006$   $\chi^2/\text{NDF}$ : 3674.0/44

All:  $0.114 \pm 0.004$   $\chi^2/\text{NDF}$ : 6832.8/84

reg\_asym\_sam\_1357\_2468\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 0.0/0$

Left Out:  $7.757 \pm 0.034$   $\chi^2/\text{NDF}: 11728.6/24$

Right Out:  $-9.899 \pm 0.444$   $\chi^2/\text{NDF}: 0.0/0$

Left In:  $7.753 \pm 0.035$   $\chi^2/\text{NDF}: 8345.2/22$

Left:  $7.755 \pm 0.025$   $\chi^2/\text{NDF}: 20073.8/47$

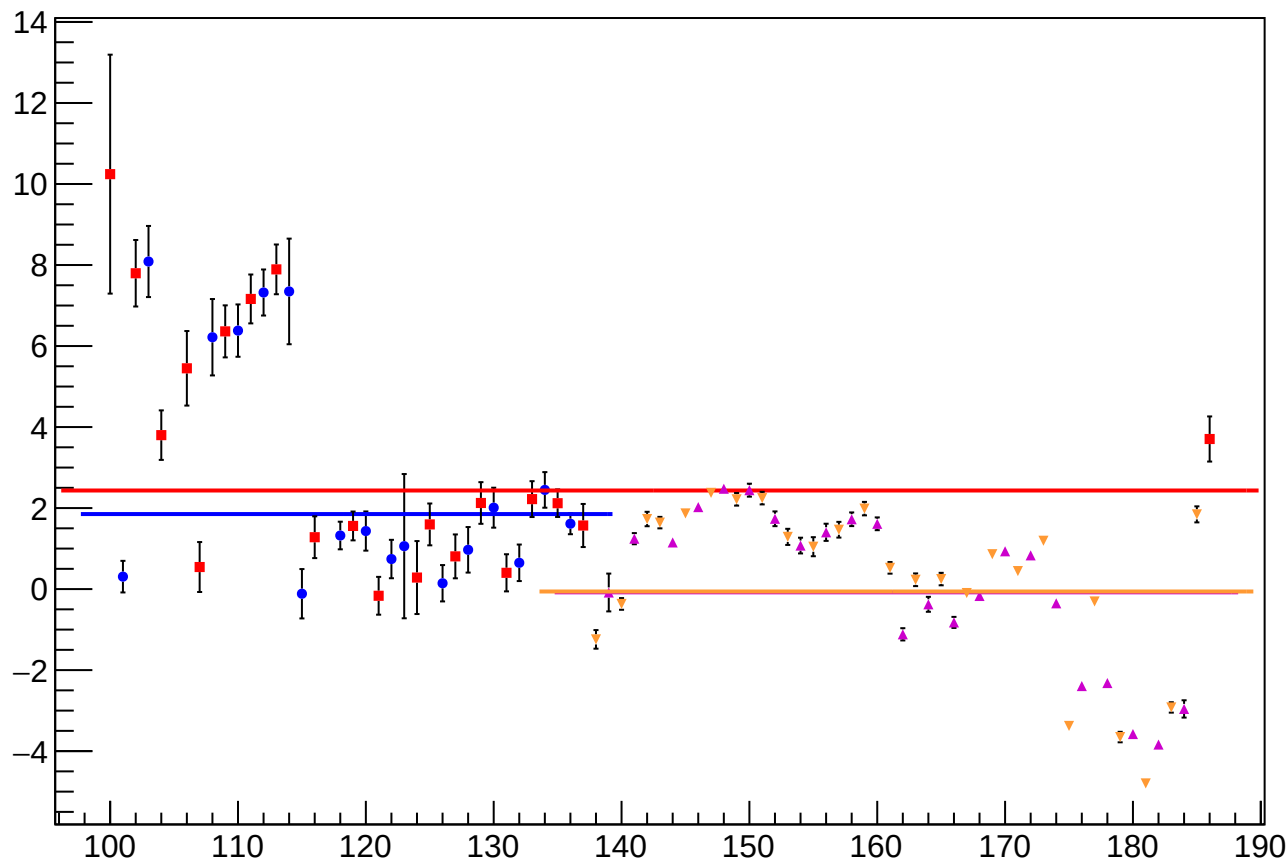
Right:  $-9.899 \pm 0.444$   $\chi^2/\text{NDF}: 0.0/0$

In:  $7.753 \pm 0.035$   $\chi^2/\text{NDF}: 8345.2/22$

Out:  $7.652 \pm 0.034$   $\chi^2/\text{NDF}: 13298.8/25$

All:  $7.701 \pm 0.024$   $\chi^2/\text{NDF}: 21648.2/48$

reg\_asym\_sam\_1357\_2468\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $1.852 \pm 0.117$   $\chi^2/\text{NDF}: 293.2/16$

Left Out:  $-0.059 \pm 0.028$   $\chi^2/\text{NDF}: 6068.8/24$

Right Out:  $2.434 \pm 0.120$   $\chi^2/\text{NDF}: 341.0/19$

Left In:  $-0.080 \pm 0.028$   $\chi^2/\text{NDF}: 4979.5/22$

Left:  $-0.070 \pm 0.020$   $\chi^2/\text{NDF}: 11048.5/47$

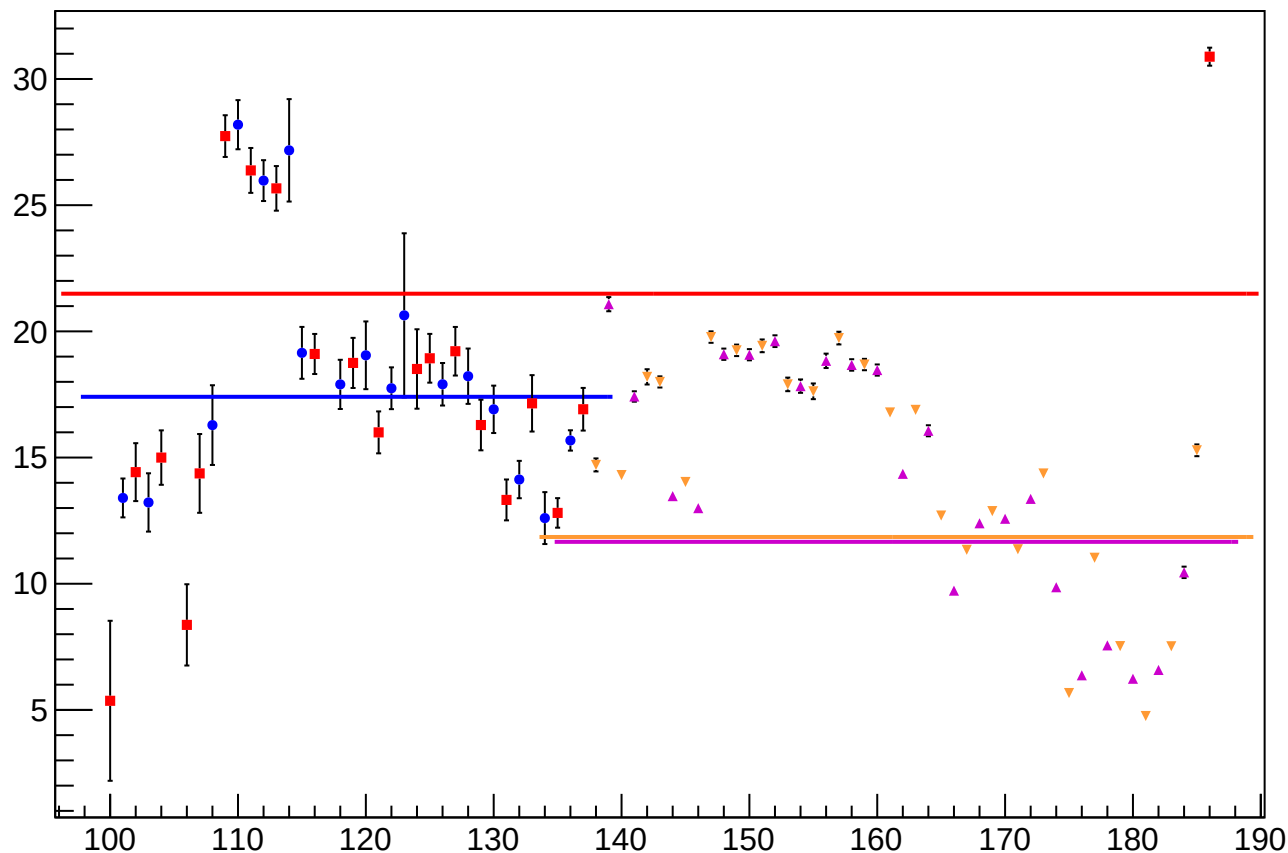
Right:  $2.137 \pm 0.084$   $\chi^2/\text{NDF}: 646.3/36$

In:  $0.026 \pm 0.027$   $\chi^2/\text{NDF}: 5529.2/39$

Out:  $0.068 \pm 0.027$   $\chi^2/\text{NDF}: 6820.4/44$

All:  $0.047 \pm 0.019$   $\chi^2/\text{NDF}: 12350.8/84$

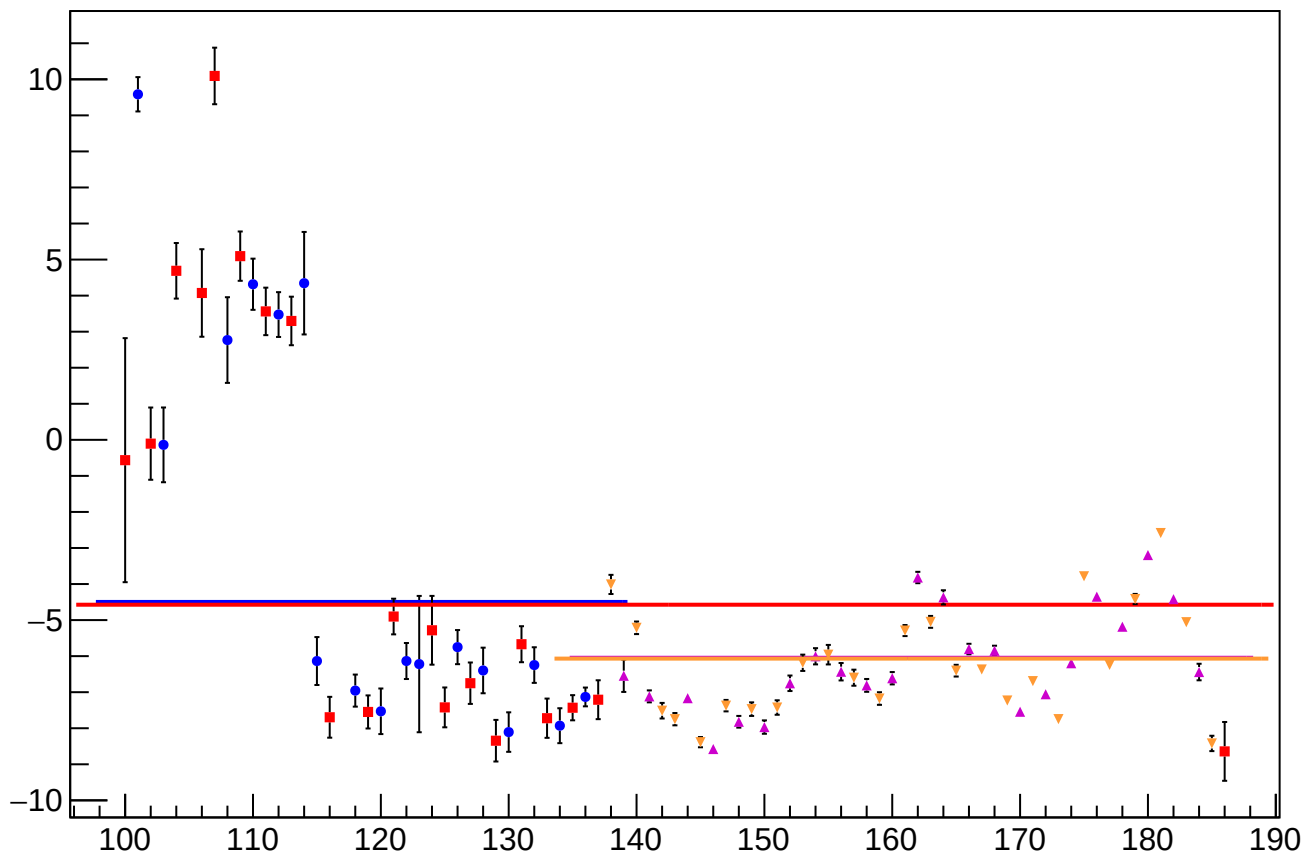
reg\_asym\_sam\_1357\_2468\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $17.407 \pm 0.213$   $\chi^2/\text{NDF}$ : 365.3/16  
 Left Out:  $11.853 \pm 0.035$   $\chi^2/\text{NDF}$ : 19149.4/24  
 Right Out:  $21.492 \pm 0.187$   $\chi^2/\text{NDF}$ : 1459.1/19  
 Left In:  $11.660 \pm 0.035$   $\chi^2/\text{NDF}$ : 16710.2/22

Left:  $11.758 \pm 0.025$   $\chi^2/\text{NDF}$ : 35874.9/47  
 Right:  $19.713 \pm 0.140$   $\chi^2/\text{NDF}$ : 2032.3/36  
 In:  $11.813 \pm 0.035$   $\chi^2/\text{NDF}$ : 17785.1/39  
 Out:  $12.173 \pm 0.034$   $\chi^2/\text{NDF}$ : 23178.6/44  
 All:  $11.996 \pm 0.024$   $\chi^2/\text{NDF}$ : 41018.6/84

reg\_asym\_sam\_1357\_2468\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-4.497 \pm 0.131$   $\chi^2/\text{NDF}$ : 1582.8/16

Left Out:  $-6.068 \pm 0.031$   $\chi^2/\text{NDF}$ : 2671.7/24

Right Out:  $-4.574 \pm 0.135$   $\chi^2/\text{NDF}$ : 1366.1/19

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

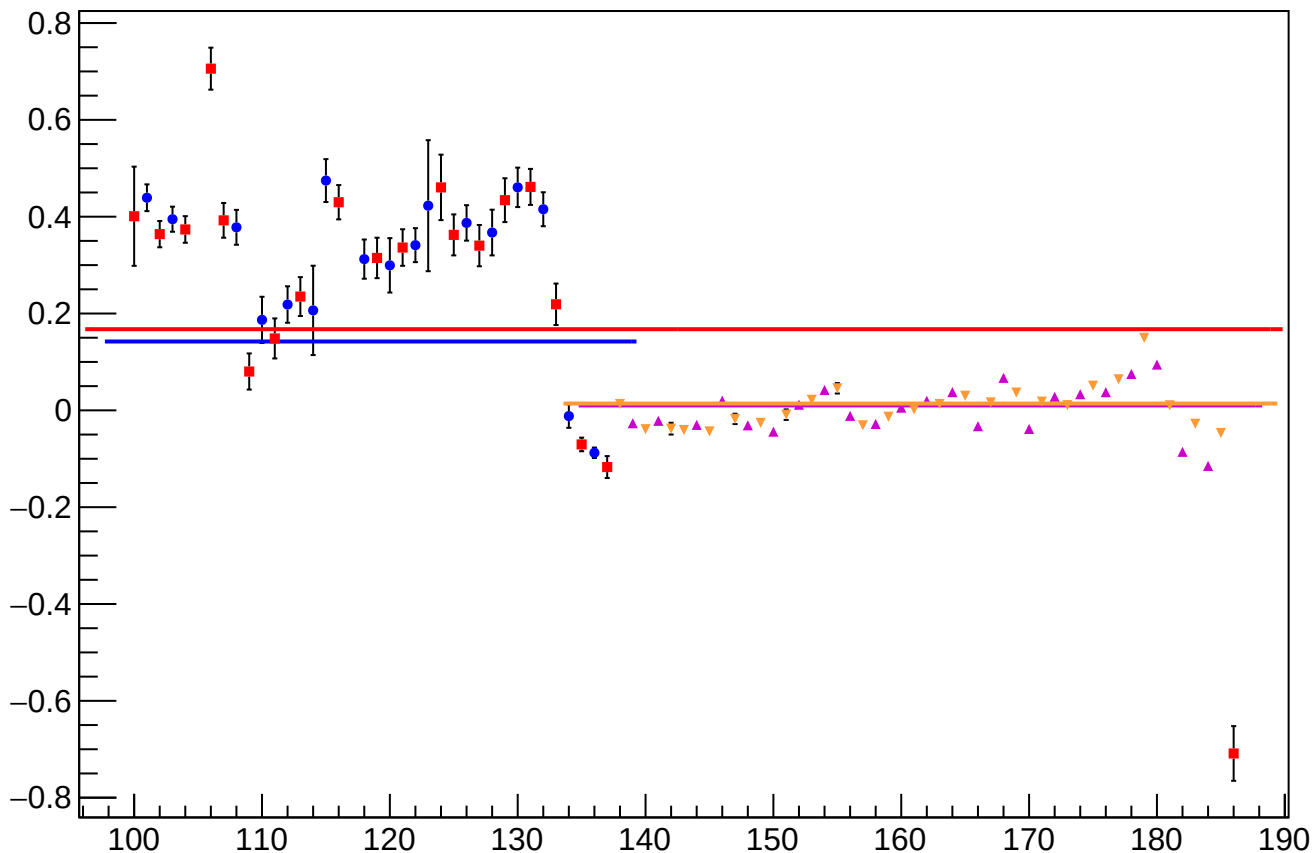
Right:  $-4.534 \pm 0.094$   $\chi^2/\text{NDF}$ : 2949.1/36

In:  $-5.959 \pm 0.031$   $\chi^2/\text{NDF}$ : 4009.3/39

Out:  $-5.993 \pm 0.030$   $\chi^2/\text{NDF}$ : 4153.7/44

All:  $-5.976 \pm 0.022$   $\chi^2/\text{NDF}$ : 8163.7/84

reg\_asym\_sam\_1357\_2468\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.142 $\pm$ 0.007  $\chi^2$ /NDF: 1057.7/16

Left Out: 0.014 $\pm$ 0.001  $\chi^2$ /NDF: 956.2/24

Right Out: 0.168 $\pm$ 0.007  $\chi^2$ /NDF: 1244.0/19

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

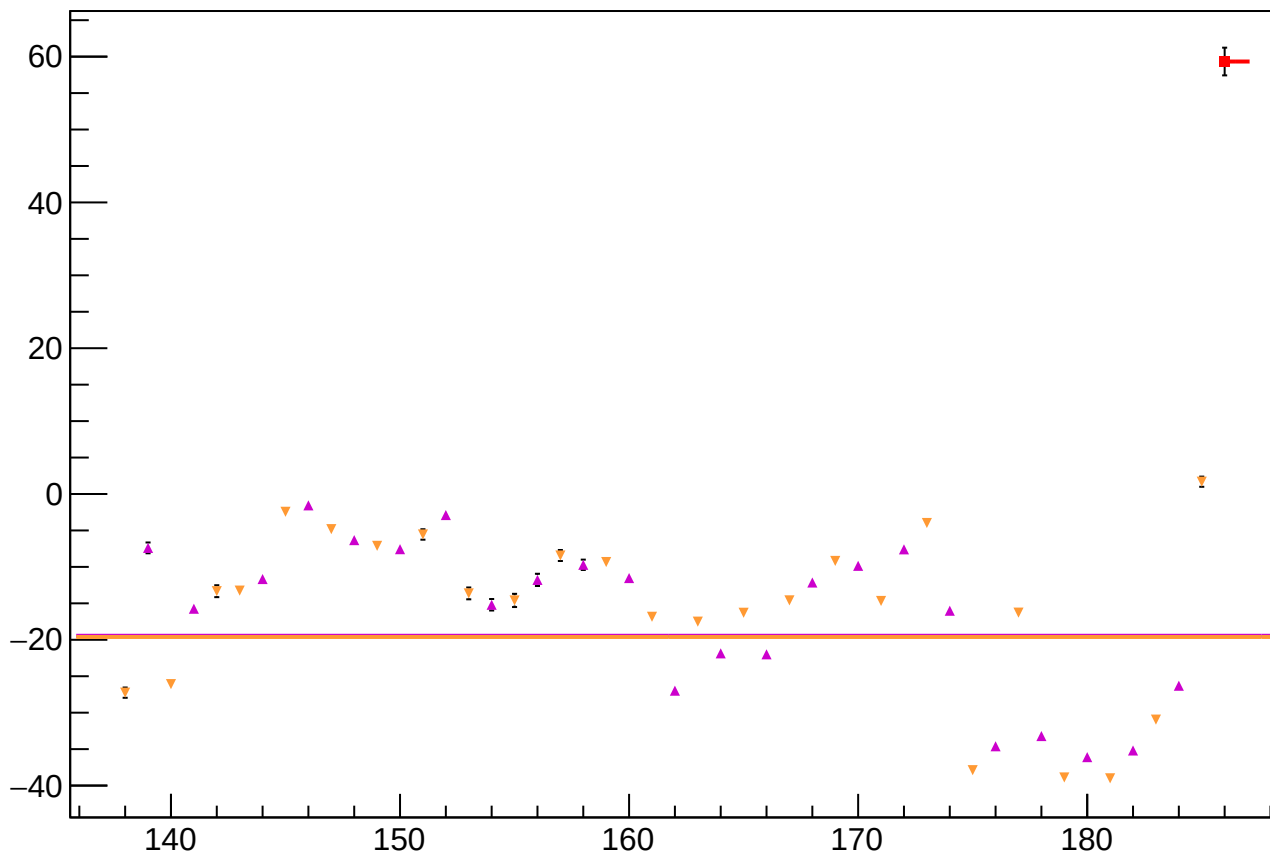
Right: 0.154 $\pm$ 0.005  $\chi^2$ /NDF: 2307.9/36

In: 0.015 $\pm$ 0.001  $\chi^2$ /NDF: 2608.6/39

Out: 0.020 $\pm$ 0.001  $\chi^2$ /NDF: 2620.8/44

All: 0.018 $\pm$ 0.001  $\chi^2$ /NDF: 5233.8/84

reg\_asym\_sam\_12345678\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -19.612+/-0.103  $\chi^2/\text{NDF}$ :15761.3/24

Right Out: 59.330+/-1.901  $\chi^2/\text{NDF}$ : 0.0/0

Left In: -19.450+/-0.105  $\chi^2/\text{NDF}$ :12283.1/22

Left: -19.533+/-0.074  $\chi^2/\text{NDF}$ : 28045.6/47

Right: 59.330+/-1.901  $\chi^2/\text{NDF}$ : 0.0/0

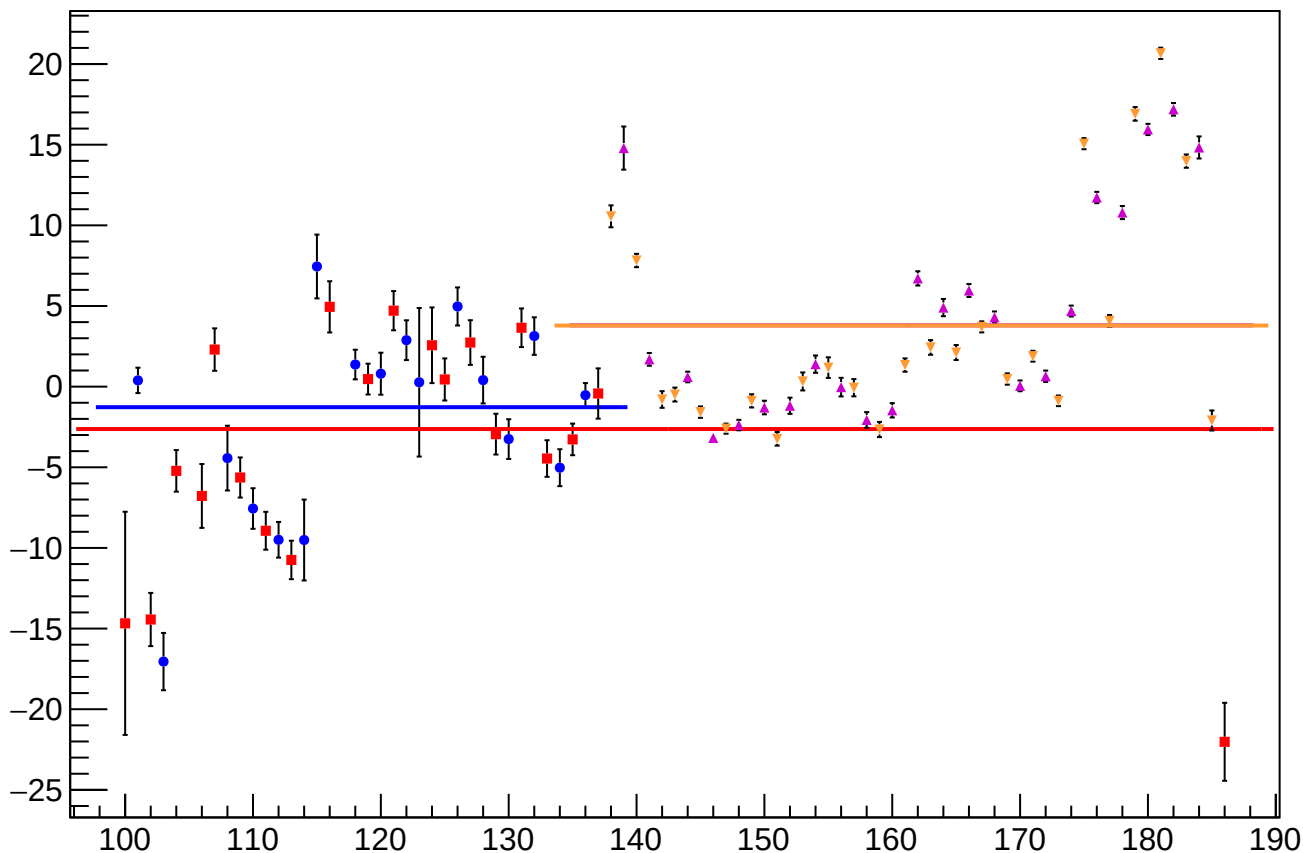
In: -19.450+/-0.105  $\chi^2/\text{NDF}$ :12283.1/22

Out: -19.380+/-0.103  $\chi^2/\text{NDF}$ :17481.3/25

All: -19.415+/-0.074  $\chi^2/\text{NDF}$ : 29764.7/48



reg\_asym\_sam\_12345678\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-1.274 \pm 0.293$   $\chi^2/\text{NDF}$ : 276.5/16

Left Out:  $3.788 \pm 0.082$   $\chi^2/\text{NDF}$ : 7150.5/24

Right Out:  $-2.629 \pm 0.300$   $\chi^2/\text{NDF}$ : 349.8/19

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

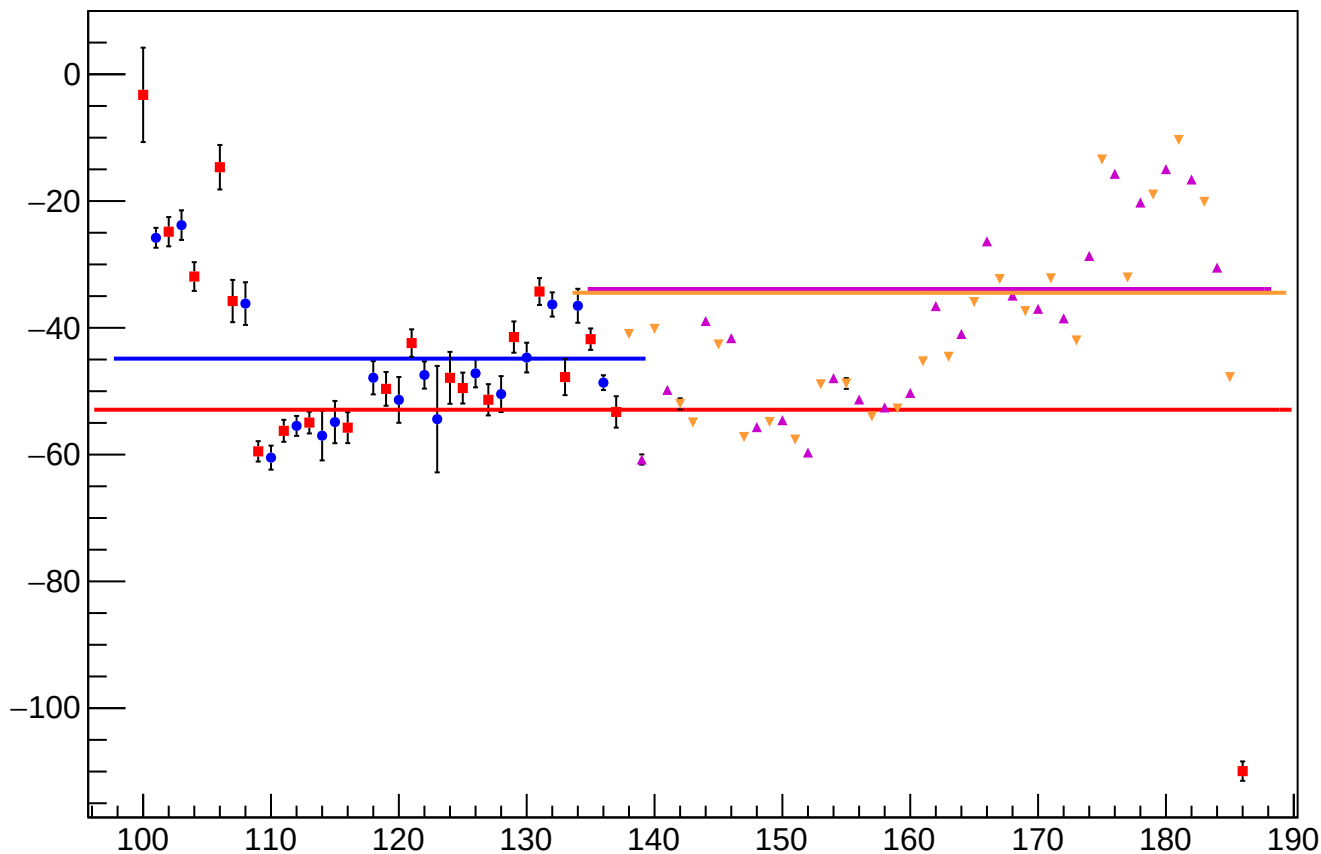
Right:  $-1.934 \pm 0.210$   $\chi^2/\text{NDF}$ : 636.8/36

In:  $3.417 \pm 0.080$   $\chi^2/\text{NDF}$ : 6071.0/39

Out:  $3.342 \pm 0.079$   $\chi^2/\text{NDF}$ : 7924.9/44

All:  $3.379 \pm 0.056$   $\chi^2/\text{NDF}$ : 13996.4/84

reg\_asym\_sam\_12345678\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-44.859 \pm 0.525$   $\chi^2/\text{NDF}$ : 420.2/16

Left Out:  $-34.471 \pm 0.104$   $\chi^2/\text{NDF}$ : 20196.3/24

Right Out:  $-52.921 \pm 0.500$   $\chi^2/\text{NDF}$ : 2014.1/19

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

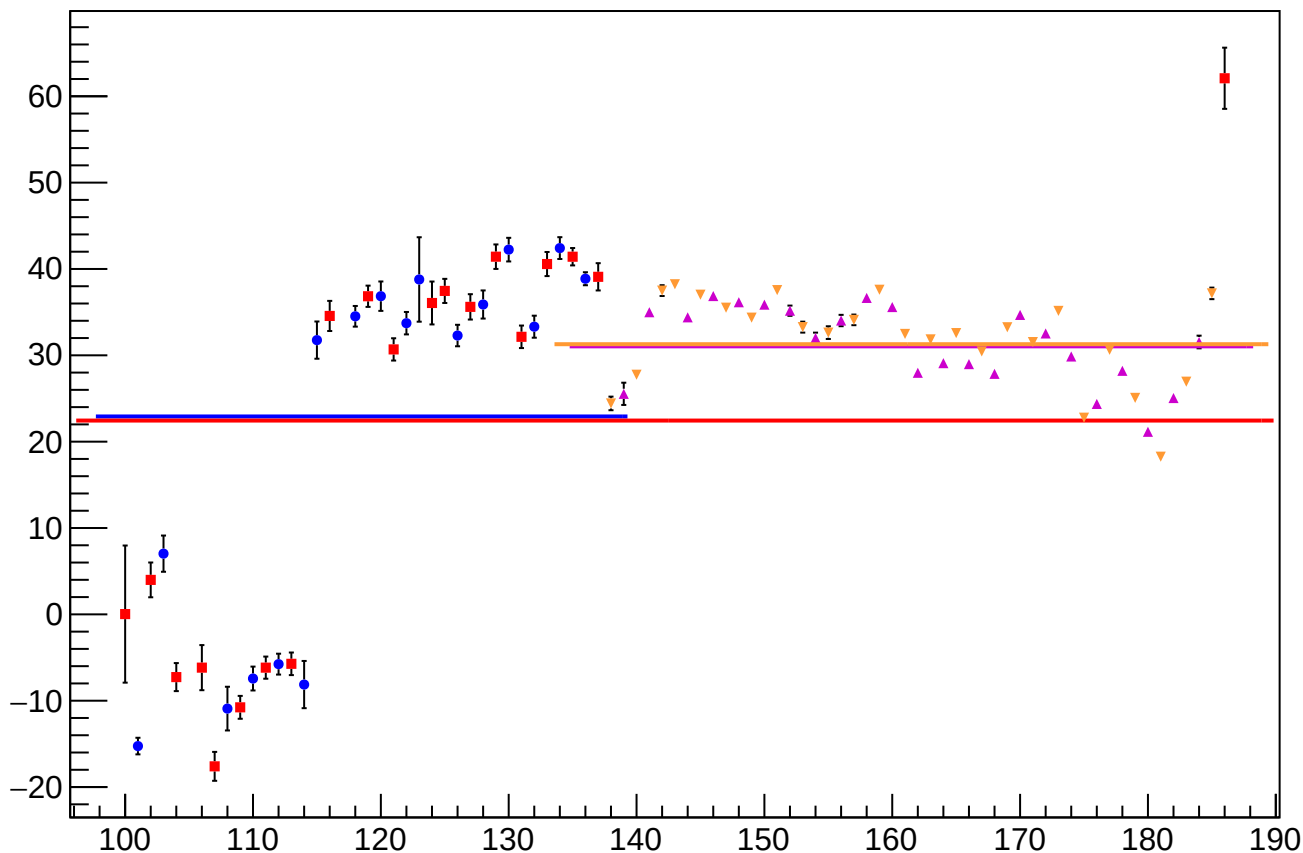
Right:  $-49.086 \pm 0.362$   $\chi^2/\text{NDF}$ : 2557.8/36

In:  $-34.299 \pm 0.103$   $\chi^2/\text{NDF}$ : 18479.5/39

Out:  $-35.235 \pm 0.102$   $\chi^2/\text{NDF}$ : 23514.4/44

All:  $-34.773 \pm 0.072$   $\chi^2/\text{NDF}$ : 42035.5/84

reg\_asym\_sam\_12345678\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 22.917 $\pm$ 0.329  $\chi^2$ /NDF: 4317.2/16

Left Out: 31.286 $\pm$ 0.092  $\chi^2$ /NDF:3345.7/24

Right Out: 22.444 $\pm$ 0.339  $\chi^2$ /NDF: 4156.3/19

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

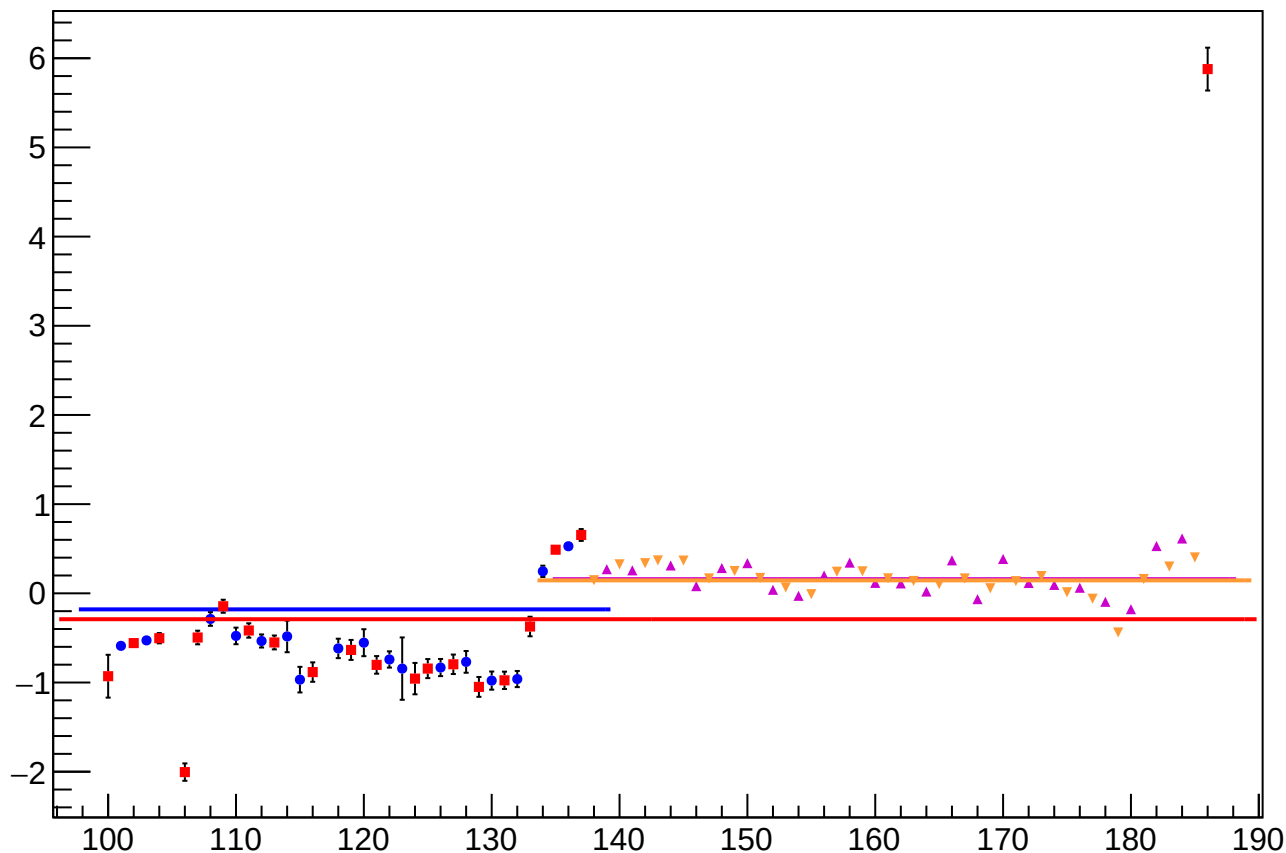
Right: 22.688 $\pm$ 0.236  $\chi^2$ /NDF: 8474.5/36

In: 30.422 $\pm$ 0.091  $\chi^2$ /NDF:7361.6/39

Out: 30.675 $\pm$ 0.089  $\chi^2$ /NDF:8135.3/44

All: 30.551 $\pm$ 0.064  $\chi^2$ /NDF: 15500.8/84

reg\_asym\_sam\_12345678\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-0.180 \pm 0.018$   $\chi^2/\text{NDF}$ : 995.2/16

Left Out:  $0.145 \pm 0.004$   $\chi^2/\text{NDF}$ : 1579.6/24

Right Out:  $-0.290 \pm 0.018$   $\chi^2/\text{NDF}$ : 1836.9/19

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

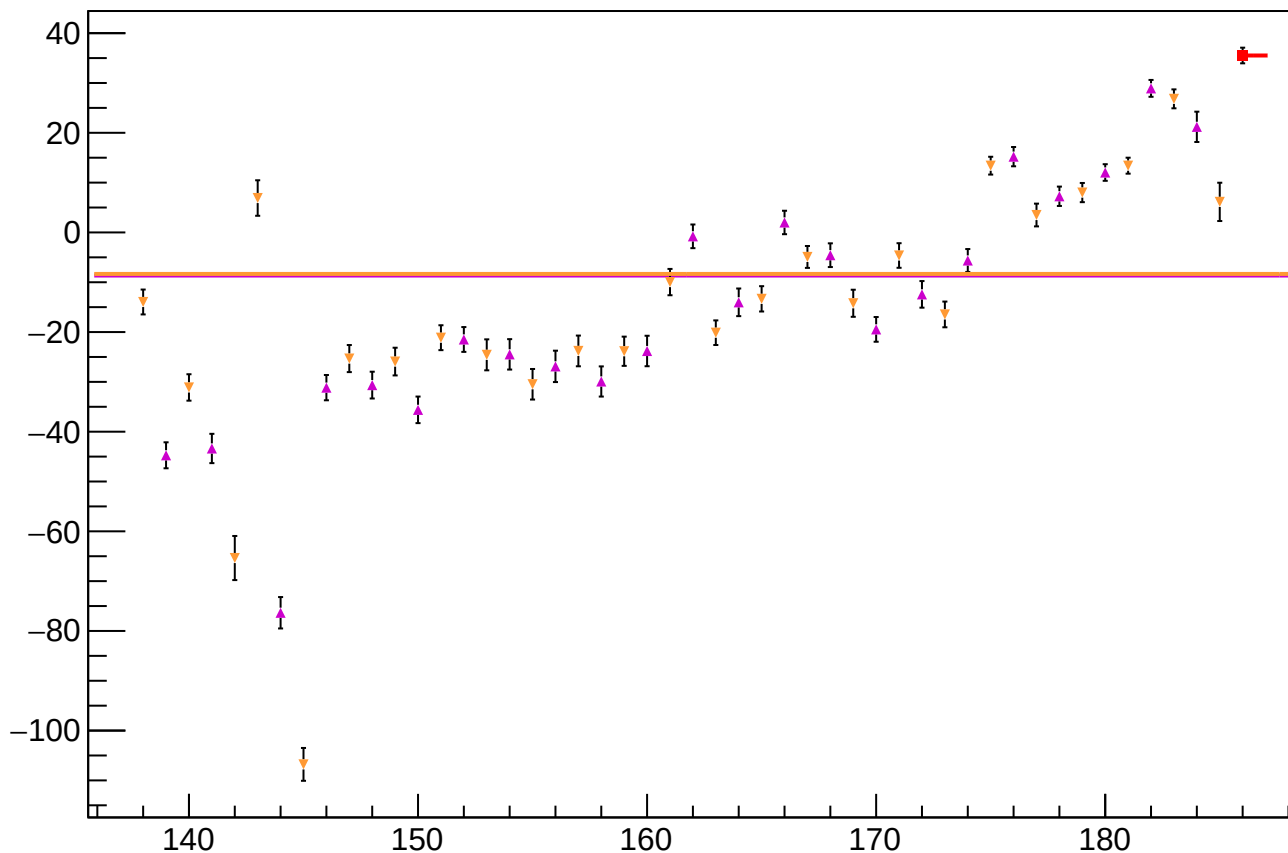
Right:  $-0.234 \pm 0.013$   $\chi^2/\text{NDF}$ : 2851.0/36

In:  $0.140 \pm 0.004$   $\chi^2/\text{NDF}$ : 3347.6/39

Out:  $0.123 \pm 0.004$   $\chi^2/\text{NDF}$ : 3962.3/44

All:  $0.131 \pm 0.003$   $\chi^2/\text{NDF}$ : 7318.3/84

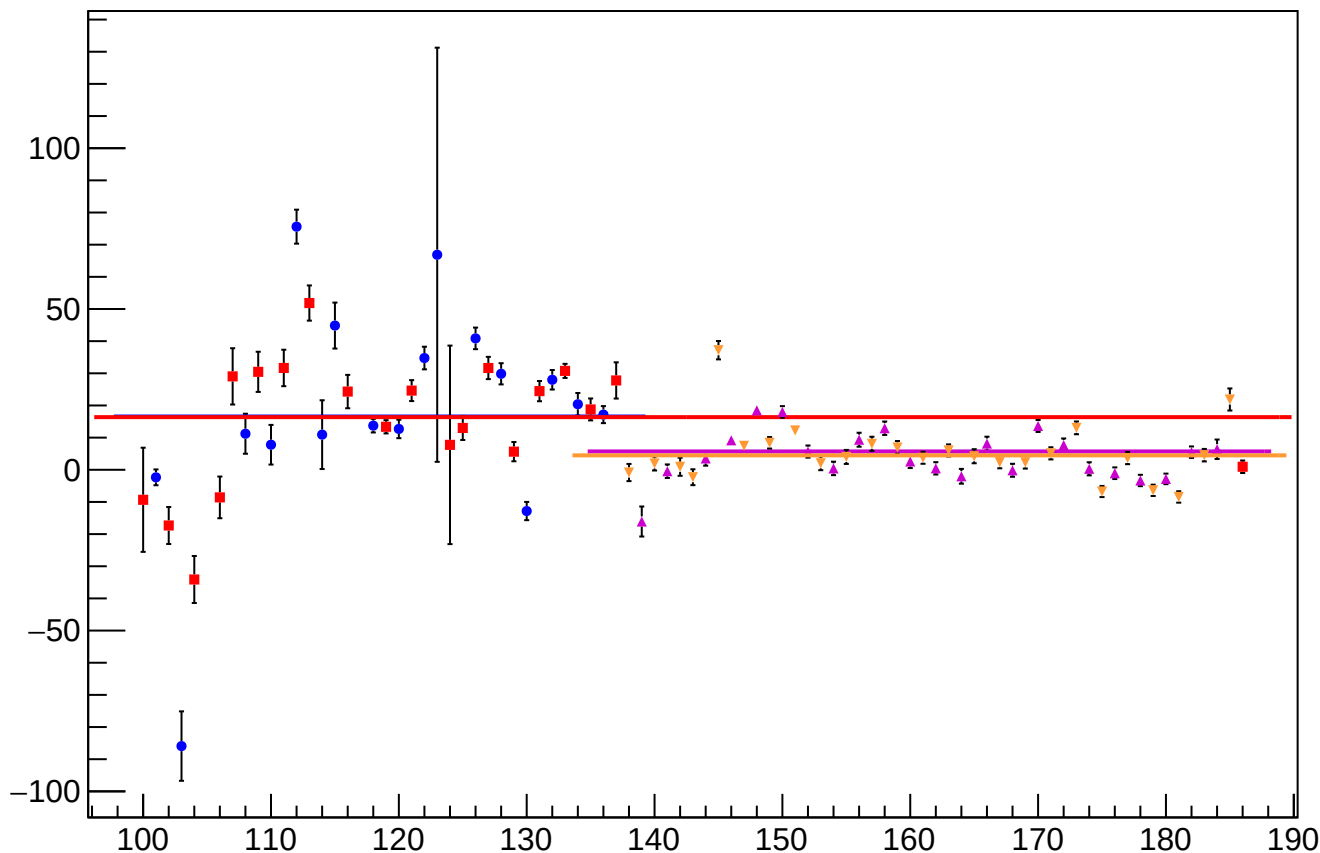
reg\_asym\_atl1\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0  
 Left Out: -8.332 $\pm$ 0.500  $\chi^2$ /NDF:2226.2/24  
 Right Out: 35.518 $\pm$ 1.571  $\chi^2$ /NDF: 0.0/0  
 Left In: -8.652 $\pm$ 0.507  $\chi^2$ /NDF:2223.8/22

Left: -8.490 $\pm$ 0.356  $\chi^2$ /NDF: 4450.2/47  
 Right: 35.518 $\pm$ 1.571  $\chi^2$ /NDF: 0.0/0  
 In: -8.652 $\pm$ 0.507  $\chi^2$ /NDF:2223.8/22  
 Out: -4.307 $\pm$ 0.476  $\chi^2$ /NDF:2933.4/25  
 All: -6.342 $\pm$ 0.347  $\chi^2$ /NDF: 5196.3/48

reg\_asym\_atl1\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 16.559 $\pm$ 0.860  $\chi^2$ /NDF: 514.9/16

Left Out: 4.484 $\pm$ 0.392  $\chi^2$ /NDF: 371.9/24

Right Out: 16.371 $\pm$ 0.815  $\chi^2$ /NDF: 317.5/19

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

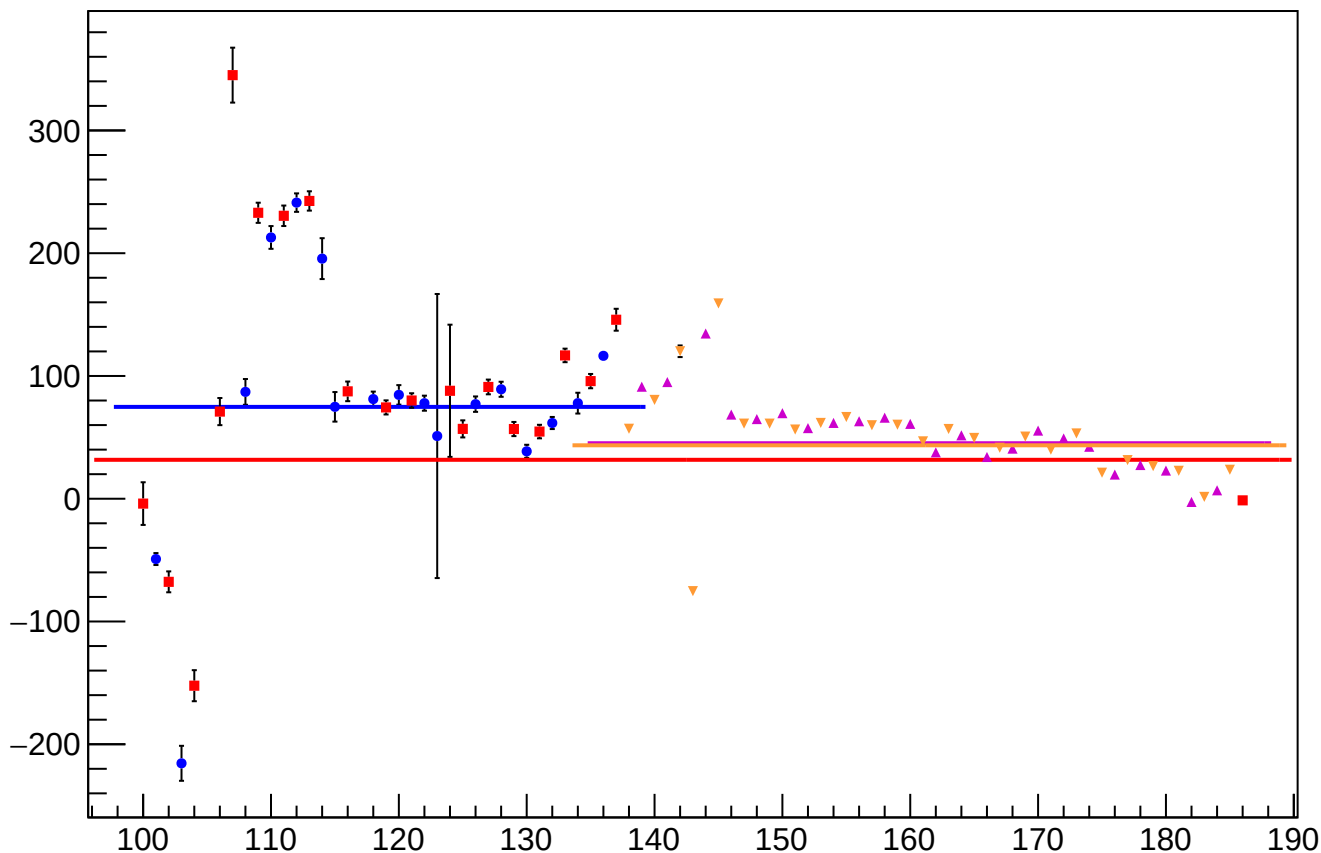
Right: 16.460 $\pm$ 0.591  $\chi^2$ /NDF: 832.4/36

In: 7.669 $\pm$ 0.366  $\chi^2$ /NDF: 969.5/39

Out: 6.720 $\pm$ 0.353  $\chi^2$ /NDF: 862.2/44

All: 7.178 $\pm$ 0.254  $\chi^2$ /NDF: 1835.1/84

reg\_asym\_atl1\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 74.816 $\pm$ 1.649     $\chi^2$ /NDF: 1994.3/16

Left Out: 43.524 $\pm$ 0.498     $\chi^2$ /NDF: 3830.7/24

Right Out: 31.711 $\pm$ 1.014     $\chi^2$ /NDF: 3977.4/19

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

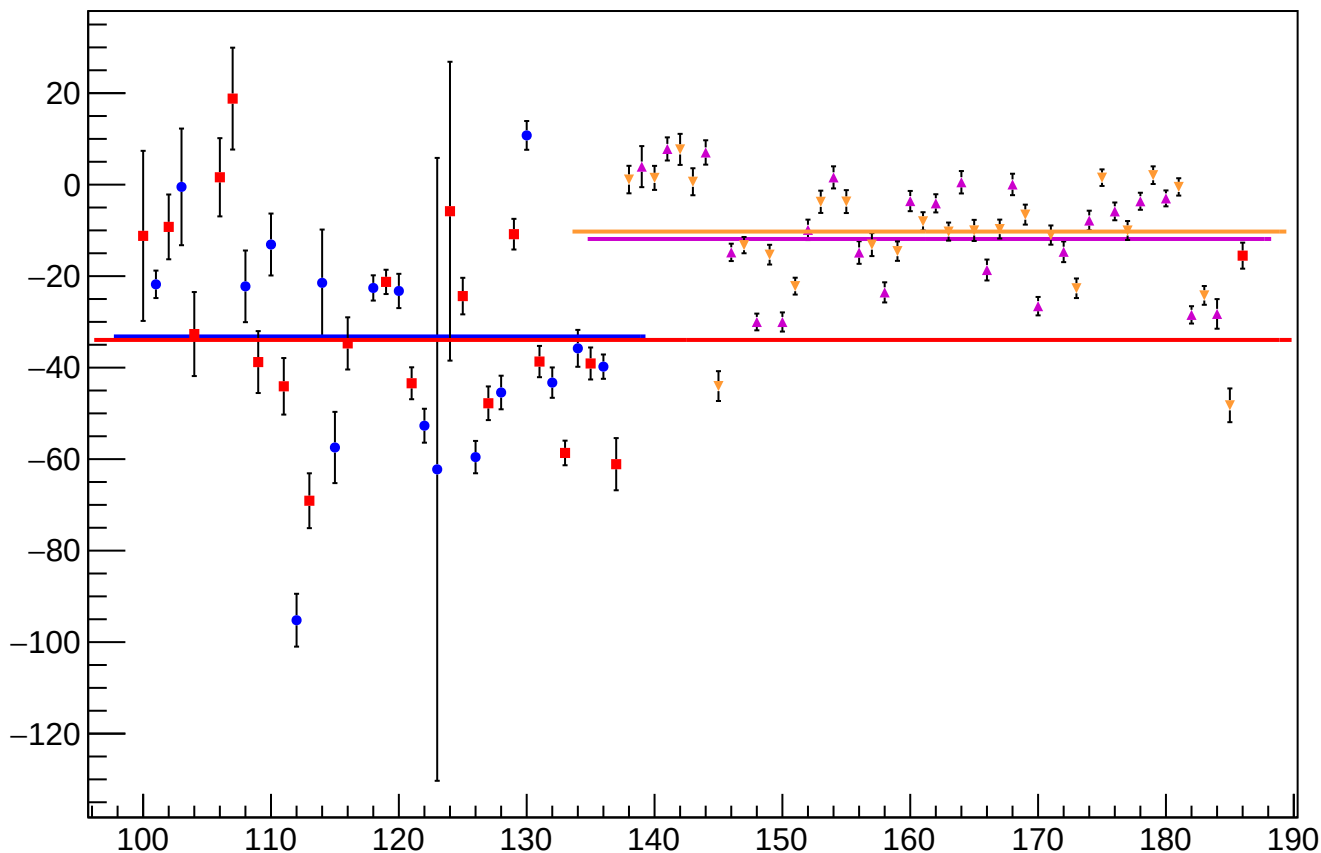
Right: 43.532 $\pm$ 0.864     $\chi^2$ /NDF: 6467.4/36

In: 47.742 $\pm$ 0.482     $\chi^2$ /NDF: 5337.4/39

Out: 41.225 $\pm$ 0.447     $\chi^2$ /NDF: 7917.4/44

All: 44.239 $\pm$ 0.328     $\chi^2$ /NDF: 13353.0/84

reg\_asym\_atl1\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-33.182 \pm 0.984$   $\chi^2/\text{NDF}: 485.4/16$

Left Out:  $-10.257 \pm 0.444$   $\chi^2/\text{NDF}: 552.4/24$

Right Out:  $-33.945 \pm 0.965$   $\chi^2/\text{NDF}: 342.4/19$

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:  $-33.571 \pm 0.689$   $\chi^2/\text{NDF}: 828.2/36$

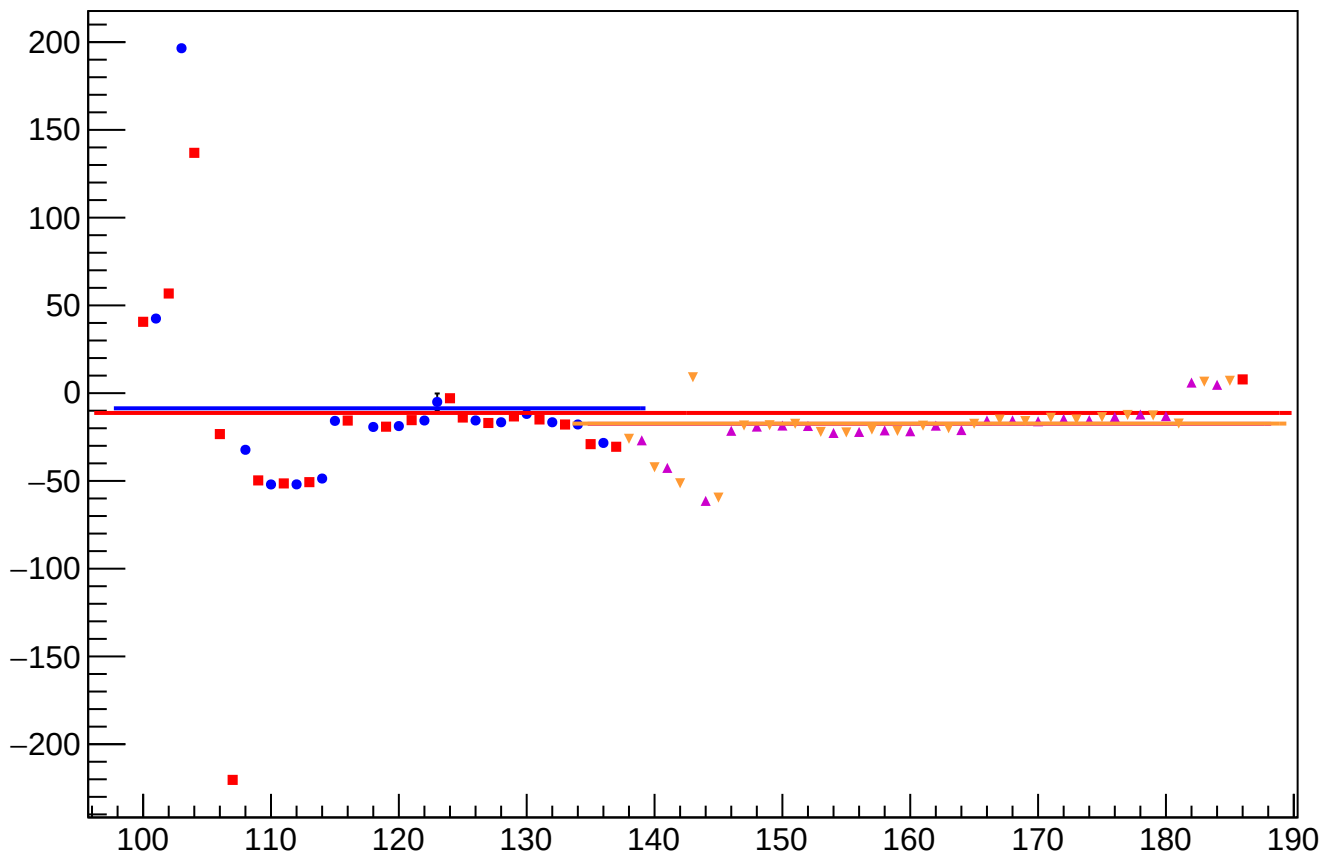
In:  $-15.646 \pm 0.414$   $\chi^2/\text{NDF}: 1537.8/39$

Out:  $-14.397 \pm 0.404$   $\chi^2/\text{NDF}: 1391.8/44$

All:  $-15.006 \pm 0.289$   $\chi^2/\text{NDF}: 2934.3/84$



reg\_asym\_atl1\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-8.630 \pm 0.059$   $\chi^2/\text{NDF}$ : 575559.8/16

Left Out:  $-17.333 \pm 0.020$   $\chi^2/\text{NDF}$ : 325197.2/24

Right Out:  $-11.274 \pm 0.059$   $\chi^2/\text{NDF}$ : 568070.3/19

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

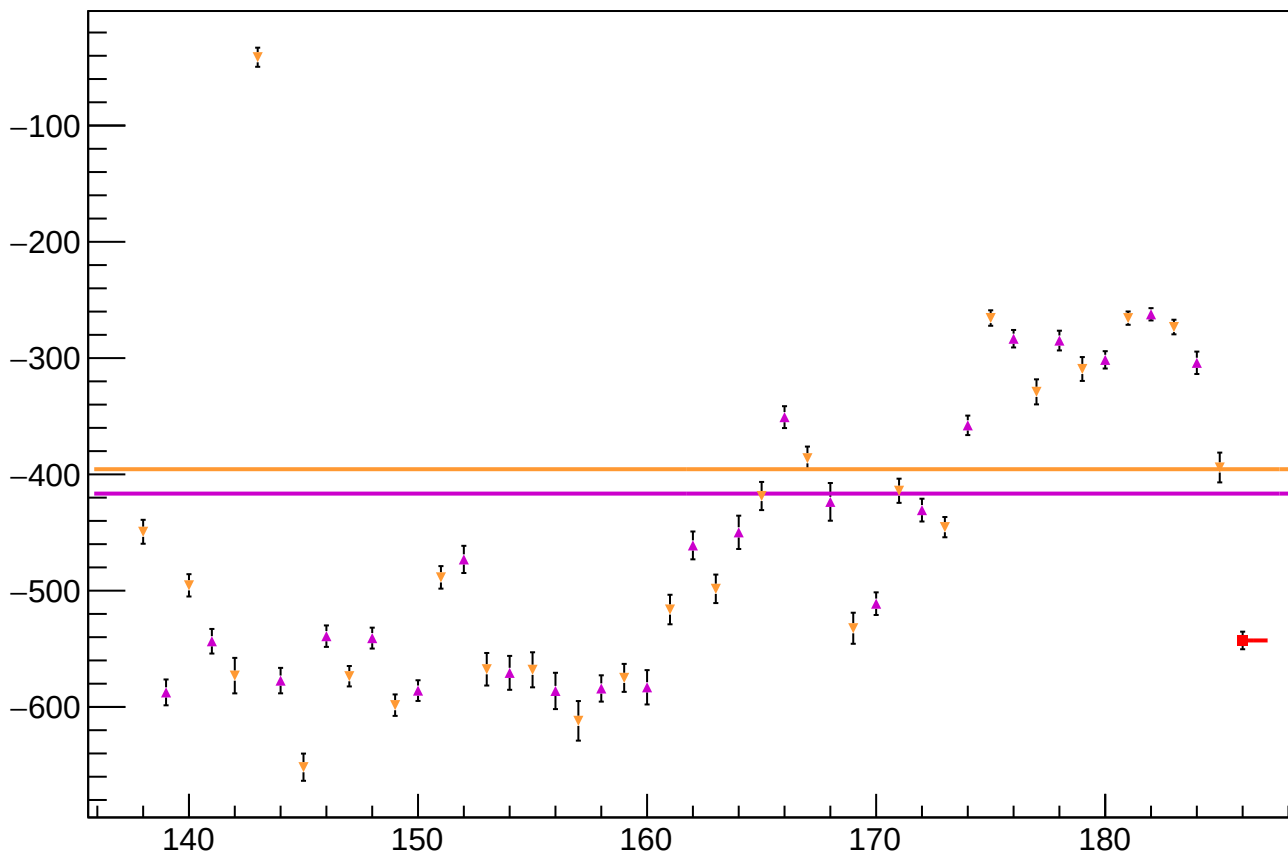
Right:  $-9.950 \pm 0.042$   $\chi^2/\text{NDF}$ : 1144627.9/36

In:  $-16.526 \pm 0.020$   $\chi^2/\text{NDF}$ : 854775.8/39

Out:  $-16.690 \pm 0.019$   $\chi^2/\text{NDF}$ : 902628.5/44

All:  $-16.609 \pm 0.014$   $\chi^2/\text{NDF}$ : 1757439.9/84

reg\_asym\_atl2\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -395.547+/-1.953  $\chi^2/\text{NDF}$ : 5946.5/24

Right Out: -542.818+/-7.555  $\chi^2/\text{NDF}$ : 0.0/0

Left In: -416.521+/-2.005  $\chi^2/\text{NDF}$ : 3917.0/22

Left: -405.762+/-1.399  $\chi^2/\text{NDF}$ : 9919.7/47

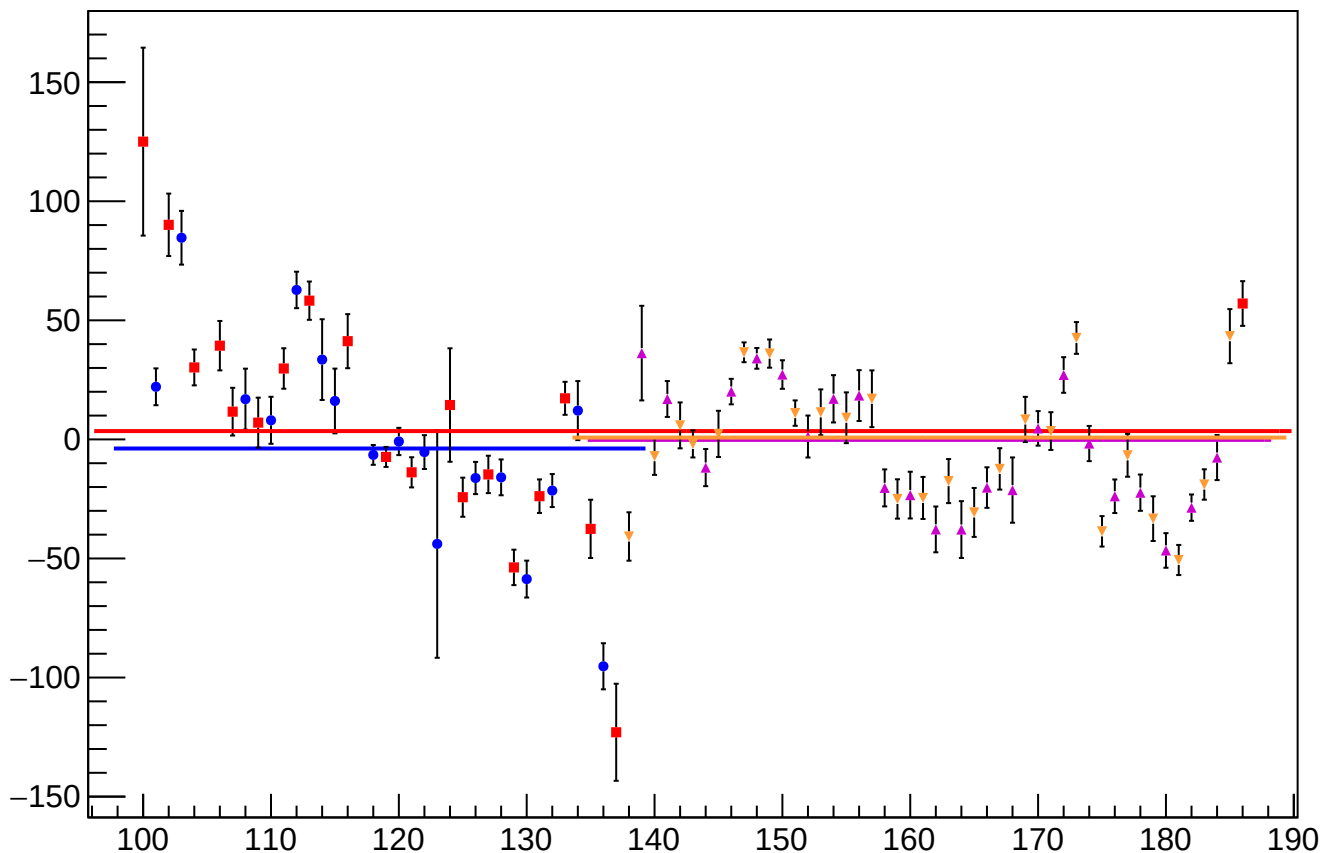
Right: -542.818+/-7.555  $\chi^2/\text{NDF}$ : 0.0/0

In: -416.521+/-2.005  $\chi^2/\text{NDF}$ : 3917.0/22

Out: -404.777+/-1.891  $\chi^2/\text{NDF}$ : 6302.7/25

All: -410.307+/-1.376  $\chi^2/\text{NDF}$ : 10237.9/48

reg\_asym\_atl2\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-3.821 \pm 1.927$   $\chi^2/\text{NDF}$ : 314.4/16

Left Out:  $0.767 \pm 1.503$   $\chi^2/\text{NDF}$ : 350.1/24

Right Out:  $3.488 \pm 1.878$   $\chi^2/\text{NDF}$ : 337.3/19

Left In:  $-0.202 \pm 1.575$   $\chi^2/\text{NDF}$ : 260.8/22

Left:  $0.305 \pm 1.087$   $\chi^2/\text{NDF}$ : 611.1/47

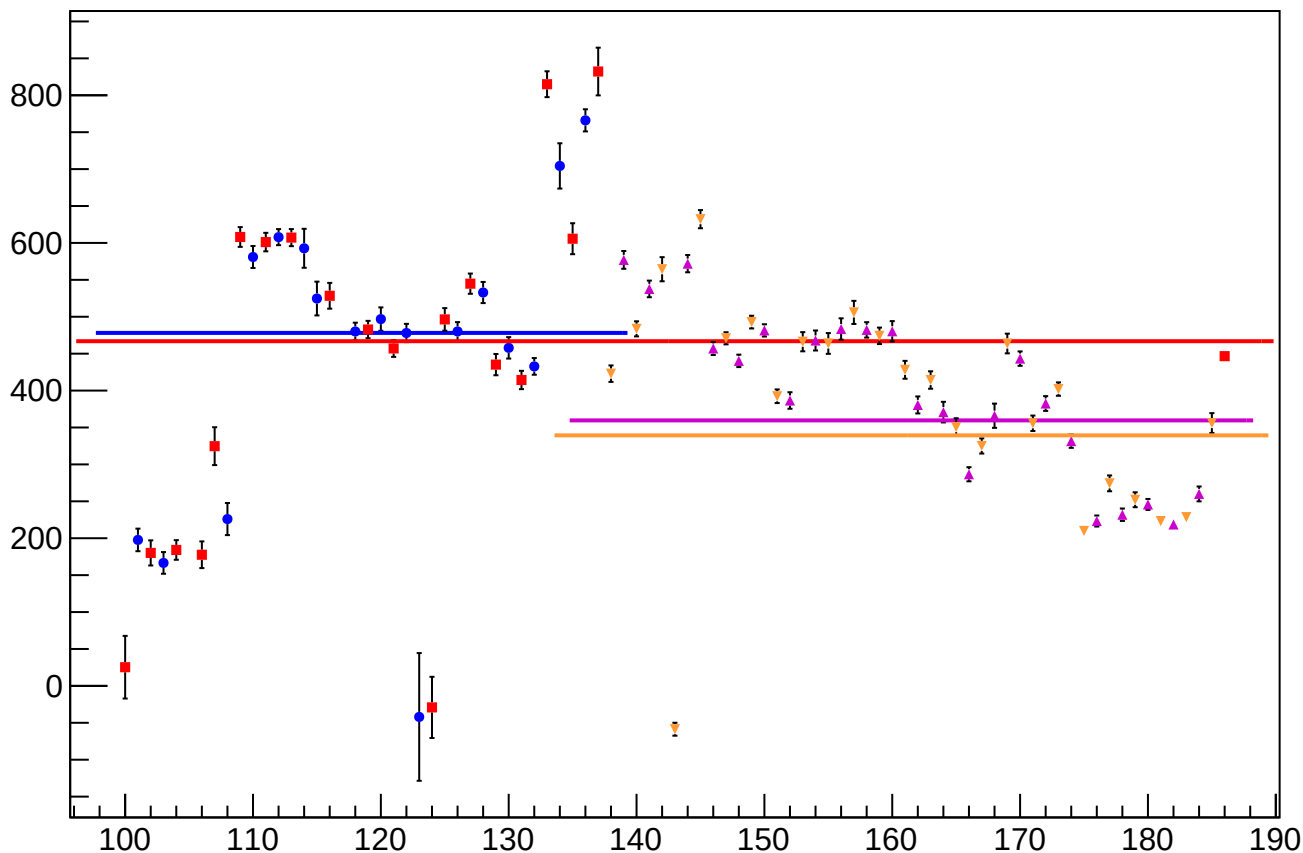
Right:  $-0.074 \pm 1.345$   $\chi^2/\text{NDF}$ : 659.0/36

In:  $-1.652 \pm 1.219$   $\chi^2/\text{NDF}$ : 577.3/39

Out:  $1.829 \pm 1.173$   $\chi^2/\text{NDF}$ : 688.6/44

All:  $0.155 \pm 0.846$   $\chi^2/\text{NDF}$ : 1270.1/84

reg\_asym\_atl2\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 478.121+/-3.670  $\chi^2/\text{NDF}$ : 1627.6/16

Left Out: 339.355+/-1.963  $\chi^2/\text{NDF}$ : 5502.5/24

Right Out: 466.884+/-3.052  $\chi^2/\text{NDF}$ : 2300.7/19

Left In: 359.609+/-2.003  $\chi^2/\text{NDF}$ : 3398.5/22

Left: 349.278+/-1.402  $\chi^2/\text{NDF}$ : 8953.2/47

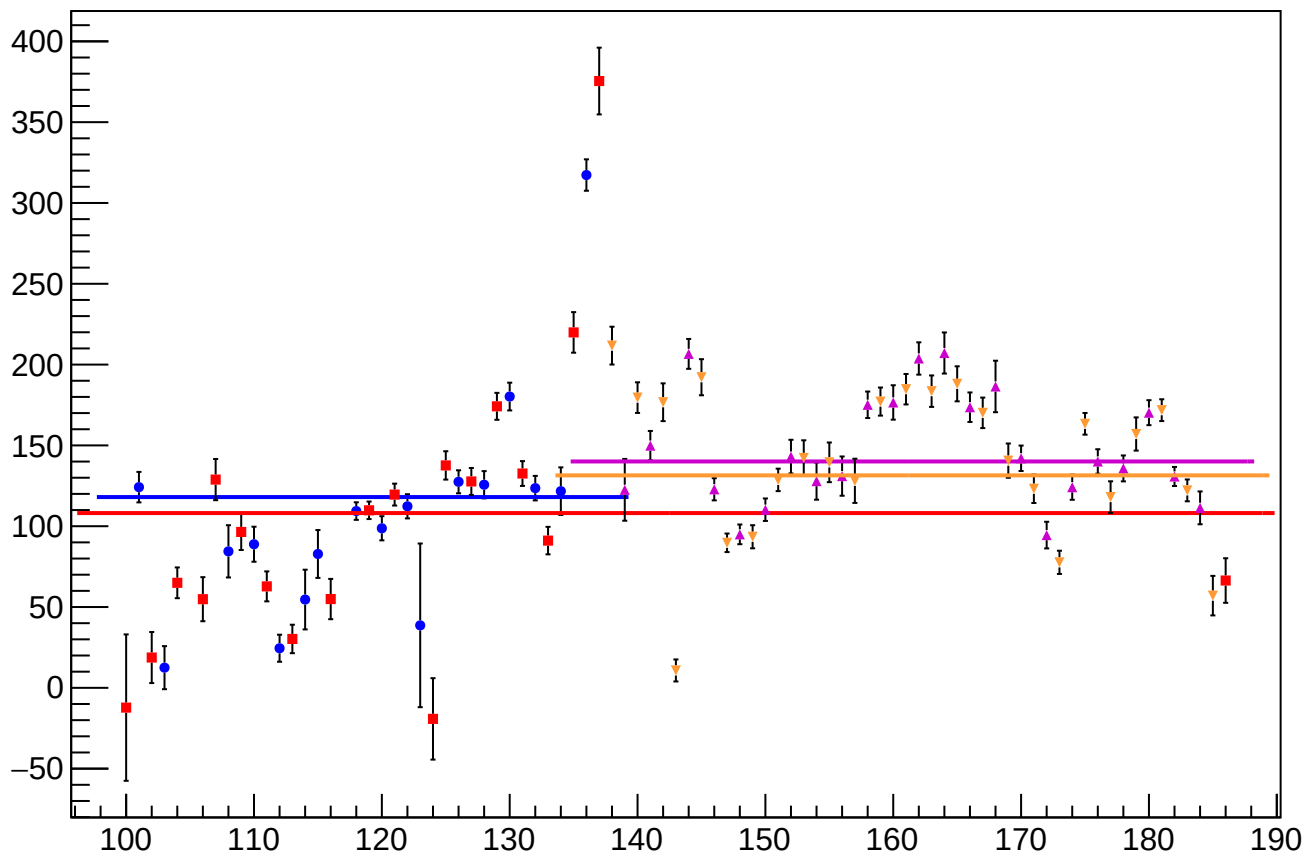
Right: 471.478+/-2.347  $\chi^2/\text{NDF}$ : 3933.8/36

In: 386.796+/-1.758  $\chi^2/\text{NDF}$ : 5829.4/39

Out: 376.660+/-1.651  $\chi^2/\text{NDF}$ : 9038.3/44

All: 381.409+/-1.203  $\chi^2/\text{NDF}$ : 14885.4/84

reg\_asym\_atl2\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 118.036 $\pm$ 2.231  $\chi^2$ /NDF: 705.1/16

Left Out: 131.464 $\pm$ 1.728  $\chi^2$ /NDF: 809.3/24

Right Out: 108.137 $\pm$ 2.181  $\chi^2$ /NDF: 577.5/19

Left In: 140.069 $\pm$ 1.795  $\chi^2$ /NDF: 316.5/22

Left: 135.602 $\pm$ 1.245  $\chi^2$ /NDF: 1137.8/47

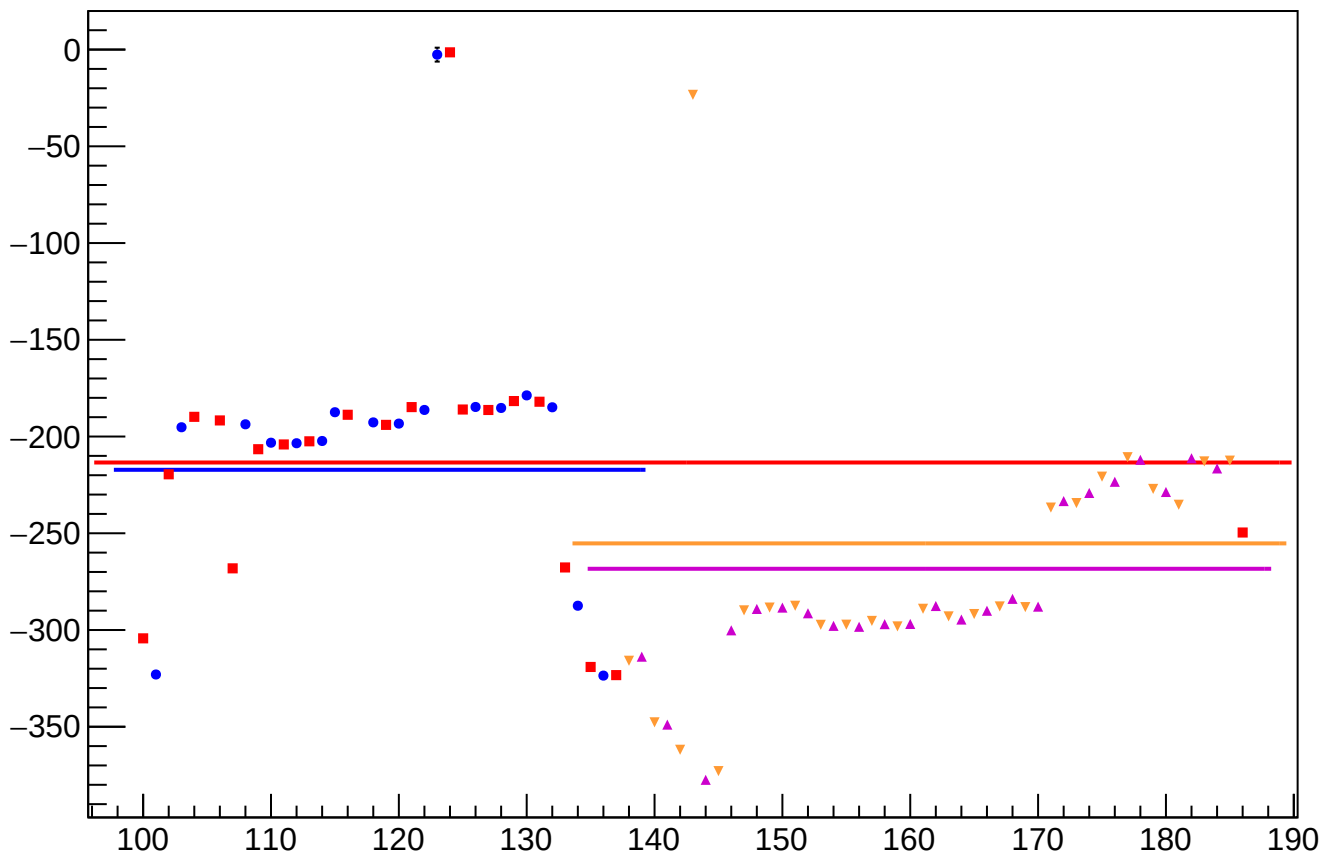
Right: 112.976 $\pm$ 1.560  $\chi^2$ /NDF: 1292.7/36

In: 131.408 $\pm$ 1.398  $\chi^2$ /NDF: 1080.8/39

Out: 122.473 $\pm$ 1.354  $\chi^2$ /NDF: 1457.1/44

All: 126.797 $\pm$ 0.973  $\chi^2$ /NDF: 2559.0/84

reg\_asym\_atl2\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-217.198 \pm 0.137$   $\chi^2/\text{NDF}: 146444.6/16$

Left Out:  $-255.232 \pm 0.082$   $\chi^2/\text{NDF}: 728016.7/24$

Right Out:  $-213.423 \pm 0.129$   $\chi^2/\text{NDF}: 116918.7/19$

Left In:  $-268.353 \pm 0.084$   $\chi^2/\text{NDF}: 262479.3/22$

Left:  $-261.661 \pm 0.059$   $\chi^2/\text{NDF}: 1003051.2/47$

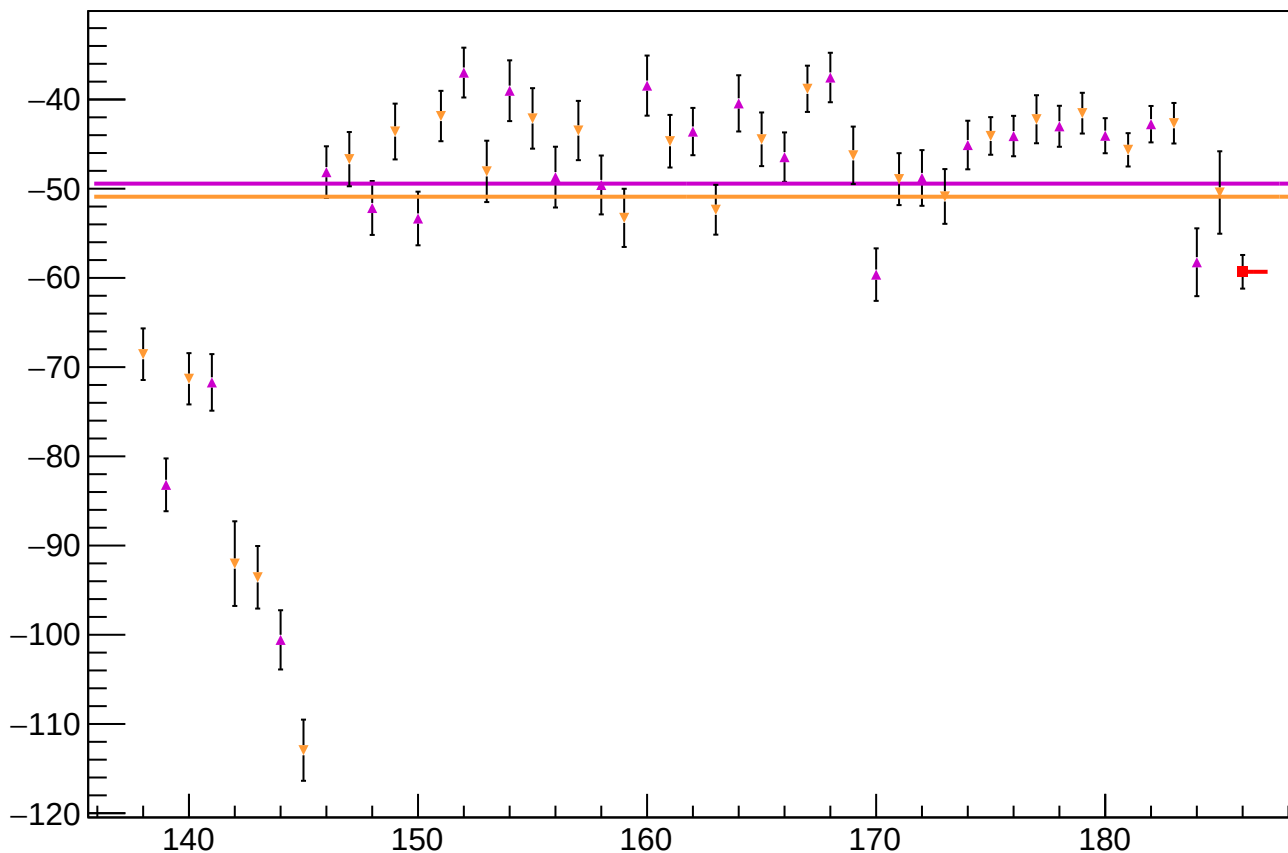
Right:  $-215.203 \pm 0.094$   $\chi^2/\text{NDF}: 263765.8/36$

In:  $-254.437 \pm 0.071$   $\chi^2/\text{NDF}: 510723.9/39$

Out:  $-243.234 \pm 0.069$   $\chi^2/\text{NDF}: 919606.9/44$

All:  $-248.665 \pm 0.050$   $\chi^2/\text{NDF}: 1443033.3/84$

reg\_asym\_atr1\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 0.0/0$

Left Out:  $-50.897 \pm 0.573$   $\chi^2/\text{NDF}: 761.1/24$

Right Out:  $-59.314 \pm 1.886$   $\chi^2/\text{NDF}: 0.0/0$

Left In:  $-49.432 \pm 0.584$   $\chi^2/\text{NDF}: 543.4/22$

Left:  $-50.179 \pm 0.409$   $\chi^2/\text{NDF}: 1307.8/47$

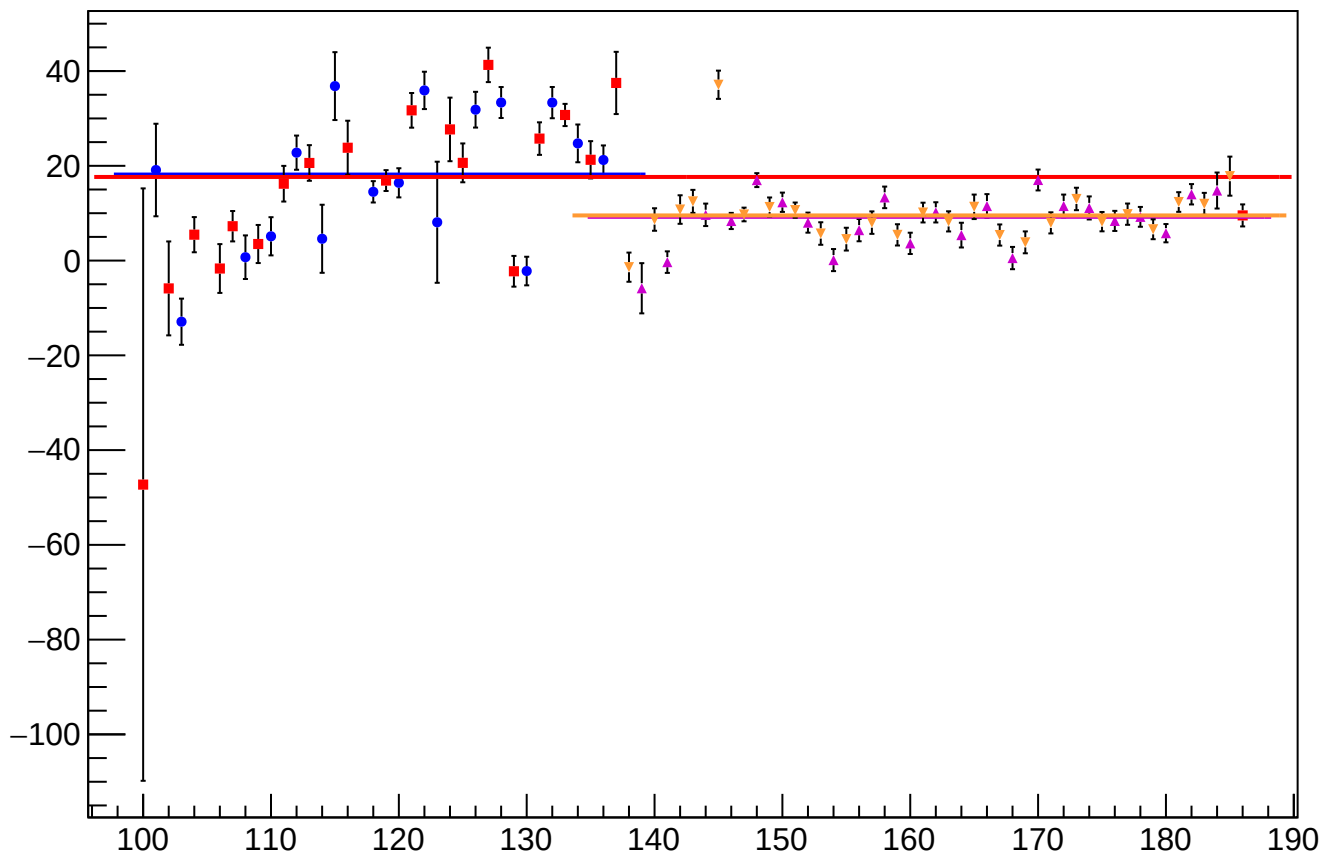
Right:  $-59.314 \pm 1.886$   $\chi^2/\text{NDF}: 0.0/0$

In:  $-49.432 \pm 0.584$   $\chi^2/\text{NDF}: 543.4/22$

Out:  $-51.608 \pm 0.548$   $\chi^2/\text{NDF}: 779.4/25$

All:  $-50.589 \pm 0.400$   $\chi^2/\text{NDF}: 1330.2/48$

reg\_asym\_atr1\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 18.157 $\pm$ 0.919  $\chi^2$ /NDF: 206.6/16

Left Out: 9.530 $\pm$ 0.446  $\chi^2$ /NDF:134.4/24

Right Out: 17.651 $\pm$ 0.810  $\chi^2$ /NDF: 212.9/19

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: 17.872 $\pm$ 0.607  $\chi^2$ /NDF: 419.7/36

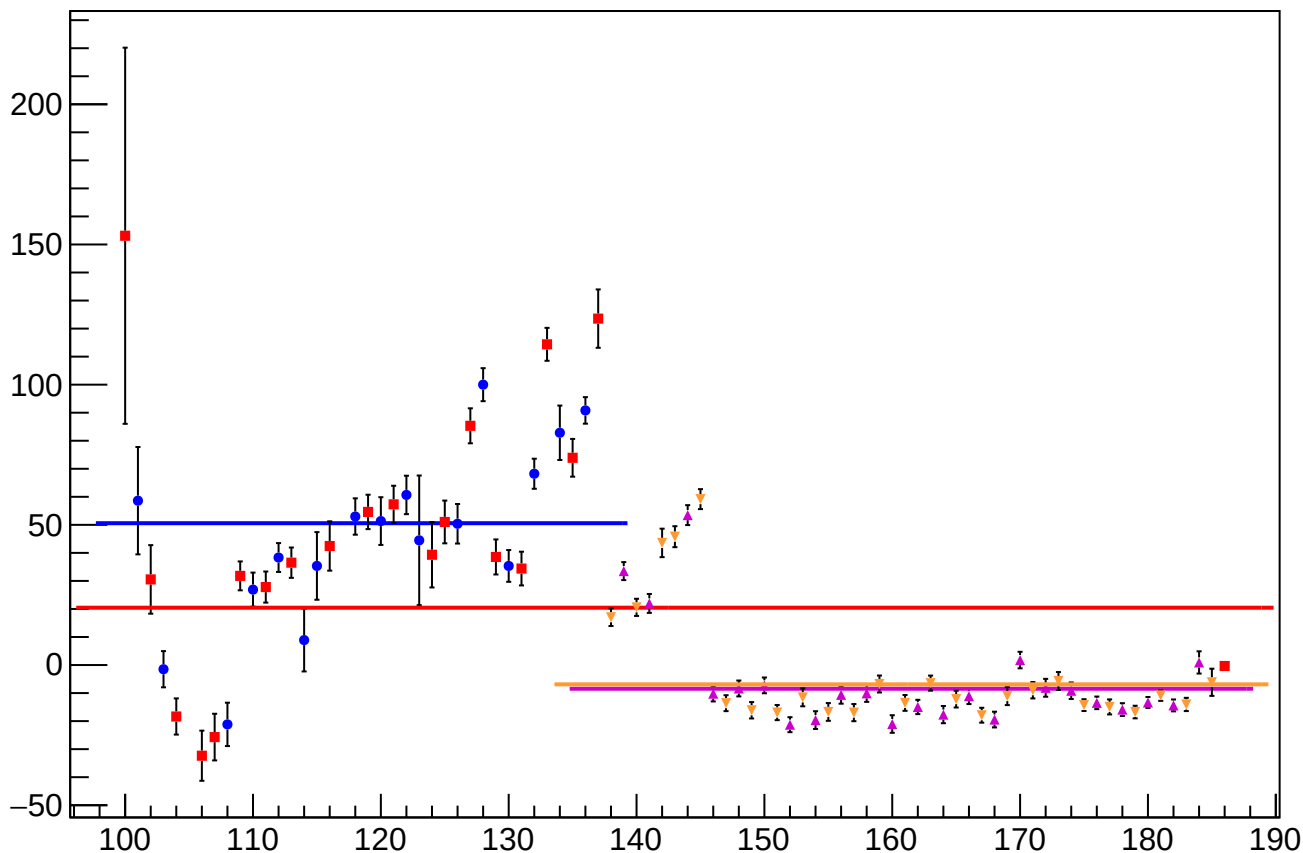
In: 11.031 $\pm$ 0.413  $\chi^2$ /NDF:405.9/39

Out: 11.419 $\pm$ 0.391  $\chi^2$ /NDF:424.4/44

All: 11.236 $\pm$ 0.284  $\chi^2$ /NDF: 830.8/84



reg\_asym\_atr1\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 50.587 $\pm$ 1.681  $\chi^2$ /NDF: 361.7/16

Left Out: -6.888 $\pm$ 0.571  $\chi^2$ /NDF: 914.2/24

Right Out: 20.449 $\pm$ 1.100  $\chi^2$ /NDF: 937.1/19

Left In: -8.451 $\pm$ 0.580  $\chi^2$ /NDF: 688.9/22

Left: -7.658 $\pm$ 0.407  $\chi^2$ /NDF: 1606.8/47

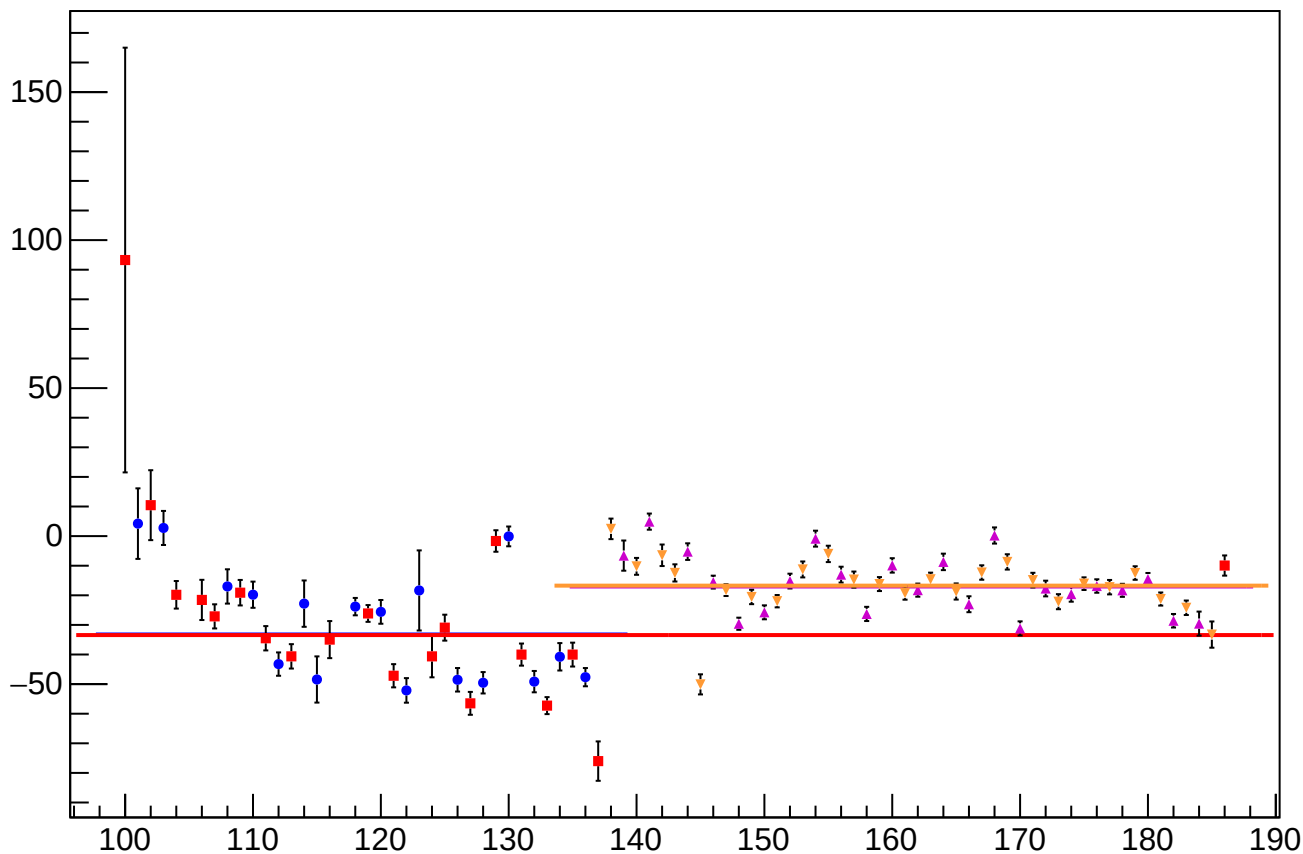
Right: 29.486 $\pm$ 0.920  $\chi^2$ /NDF: 1524.0/36

In: -2.171 $\pm$ 0.548  $\chi^2$ /NDF: 2153.5/39

Out: -1.084 $\pm$ 0.507  $\chi^2$ /NDF: 2338.0/44

All: -1.585 $\pm$ 0.372  $\chi^2$ /NDF: 4493.6/84

reg\_asym\_atr1\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-33.238 \pm 1.045$   $\chi^2/\text{NDF}$ : 291.4/16

Left Out:  $-16.733 \pm 0.507$   $\chi^2/\text{NDF}$ : 223.3/24

Right Out:  $-33.432 \pm 0.953$   $\chi^2/\text{NDF}$ : 340.7/19

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

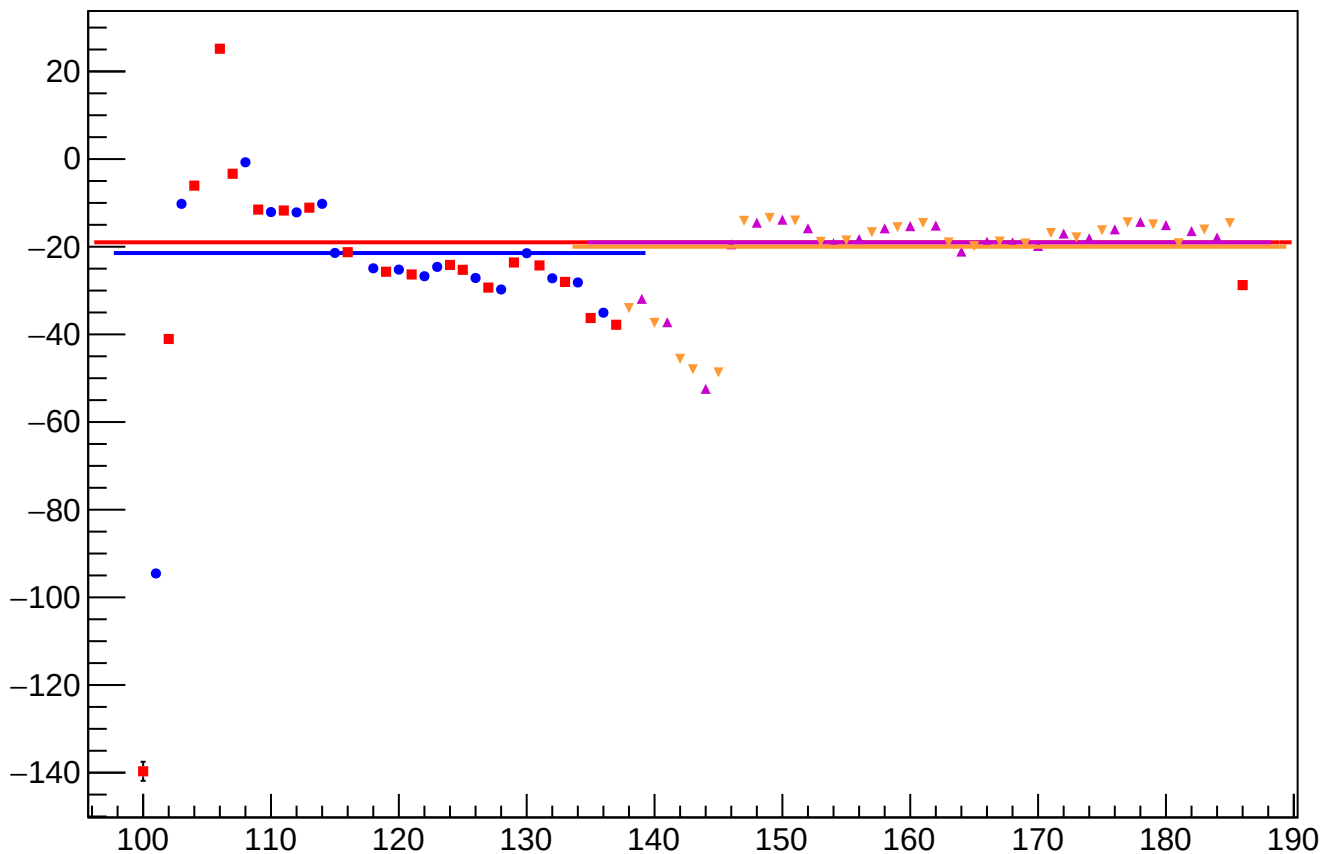
Right:  $-33.344 \pm 0.704$   $\chi^2/\text{NDF}$ : 632.0/36

In:  $-20.258 \pm 0.467$   $\chi^2/\text{NDF}$ : 811.5/39

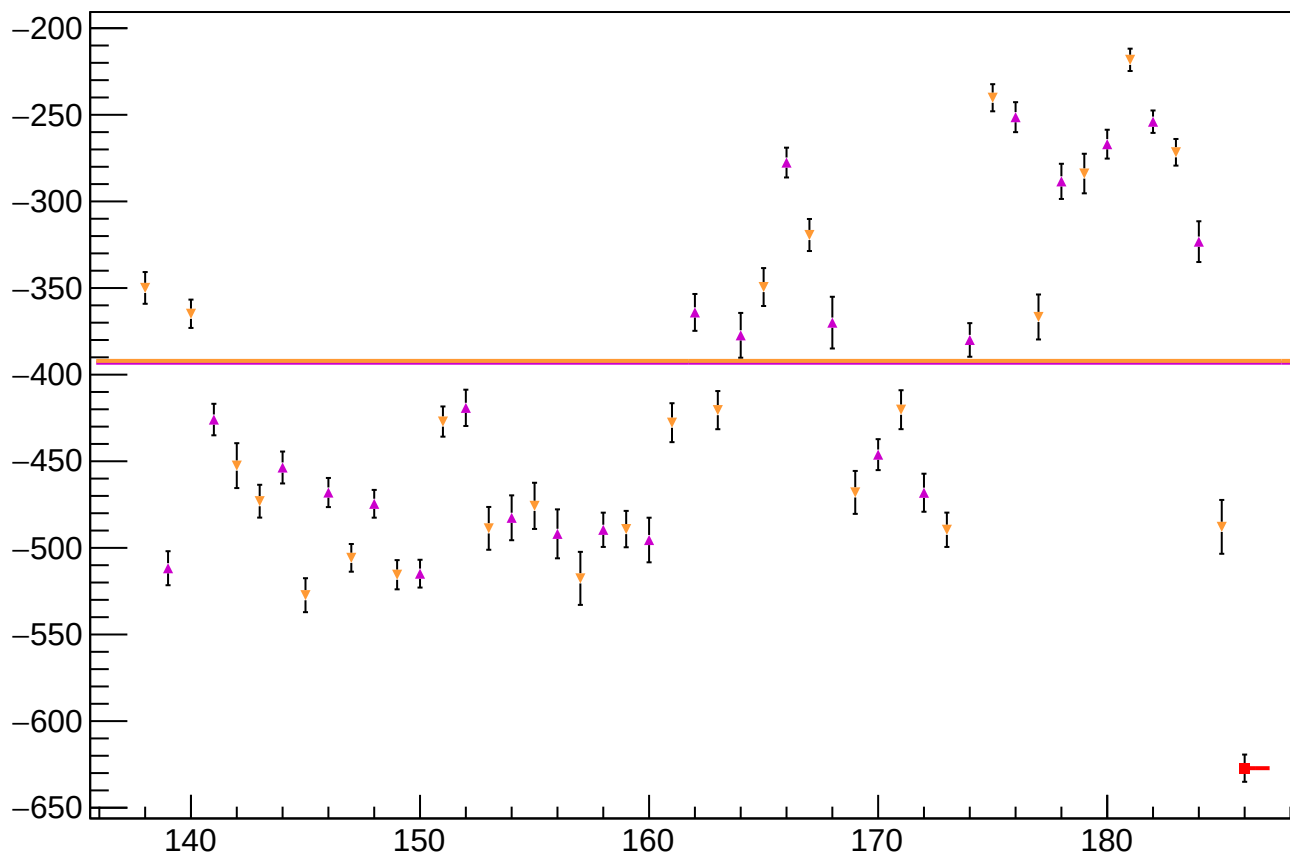
Out:  $-20.410 \pm 0.447$   $\chi^2/\text{NDF}$ : 803.2/44

All:  $-20.337 \pm 0.323$   $\chi^2/\text{NDF}$ : 1614.8/84

reg\_asym\_atr1\_diff\_bpm12X\_slope vs Slug, Sign Corrected



reg\_asym\_atr2\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -392.054+/-1.967  $\chi^2/\text{NDF}$ :2717.2/24

Right Out: -627.170+/-7.862  $\chi^2/\text{NDF}$ : 0.0/0

Left In: -393.113+/-2.006  $\chi^2/\text{NDF}$ :2253.3/22

Left: -392.573+/-1.404  $\chi^2/\text{NDF}$ : 4970.6/47

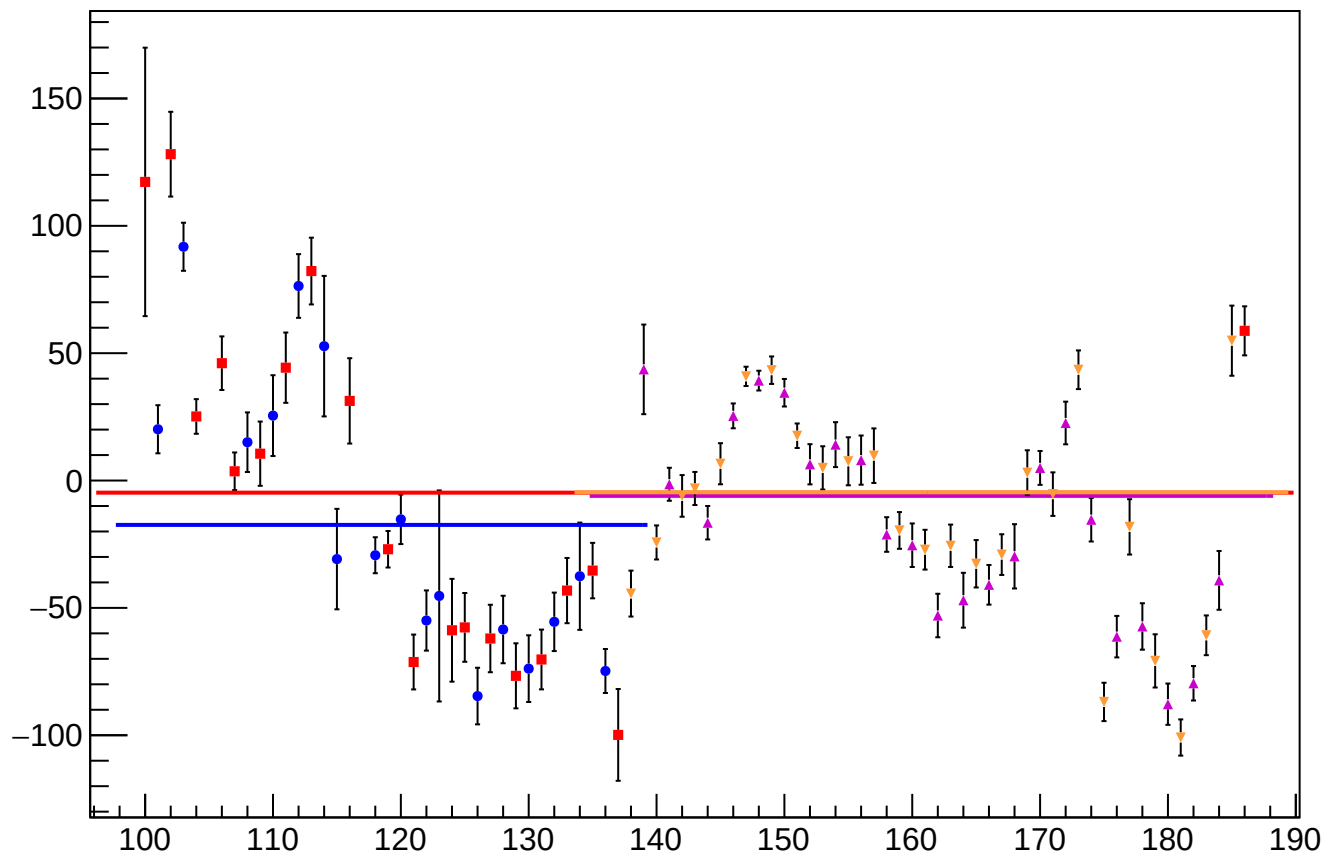
Right: -627.170+/-7.862  $\chi^2/\text{NDF}$ : 0.0/0

In: -393.113+/-2.006  $\chi^2/\text{NDF}$ :2253.3/22

Out: -405.898+/-1.908  $\chi^2/\text{NDF}$ :3558.8/25

All: -399.825+/-1.382  $\chi^2/\text{NDF}$ : 5833.4/48

reg\_asym\_atr2\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-17.419 \pm 2.826$   $\chi^2/\text{NDF}: 362.1/16$

Left Out:  $-4.624 \pm 1.462$   $\chi^2/\text{NDF}: 772.9/24$

Right Out:  $-4.757 \pm 2.520$   $\chi^2/\text{NDF}: 416.0/19$

Left In:  $-6.019 \pm 1.516$   $\chi^2/\text{NDF}: 654.1/22$

Left:  $-5.296 \pm 1.053$   $\chi^2/\text{NDF}: 1427.4/47$

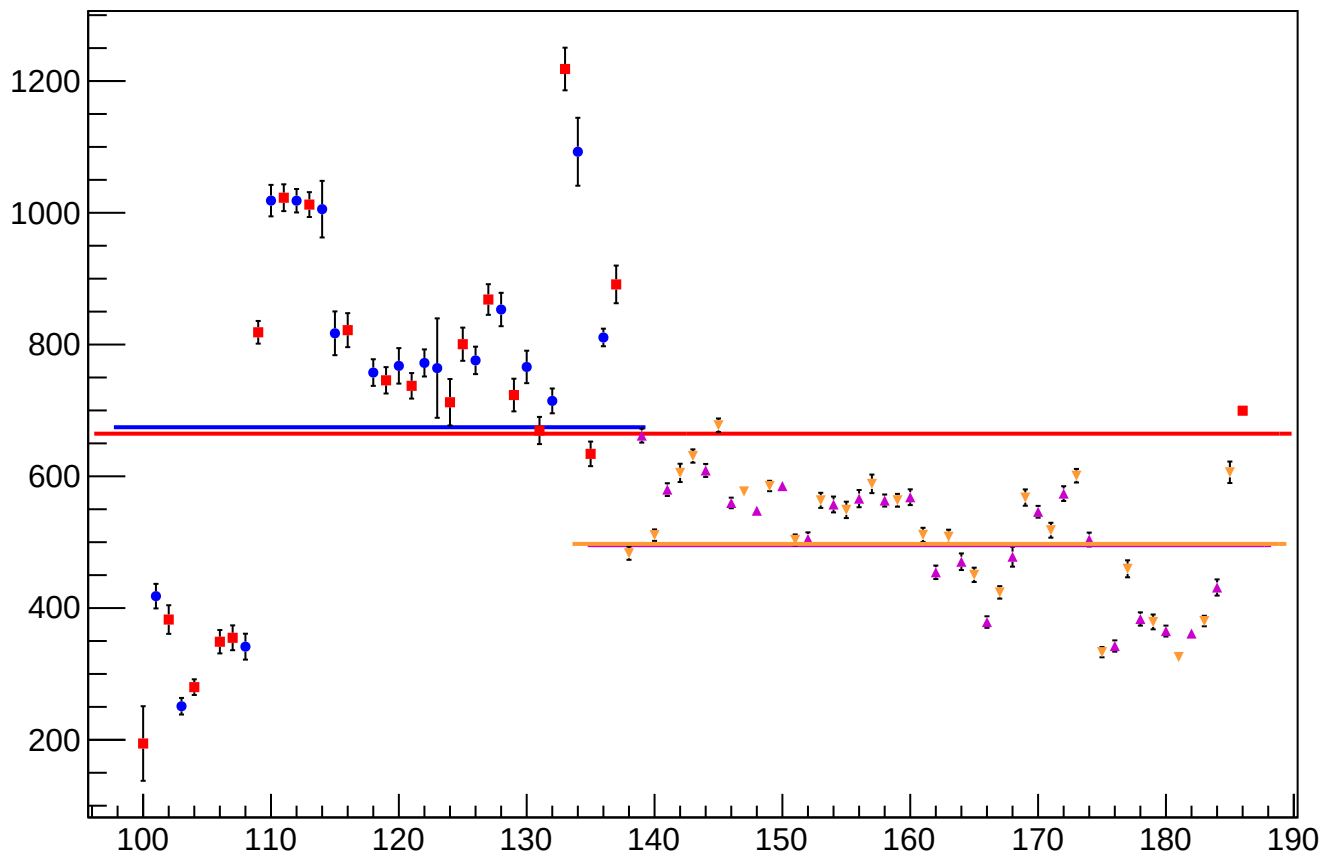
Right:  $-10.368 \pm 1.881$   $\chi^2/\text{NDF}: 789.2/36$

In:  $-8.567 \pm 1.336$   $\chi^2/\text{NDF}: 1028.8/39$

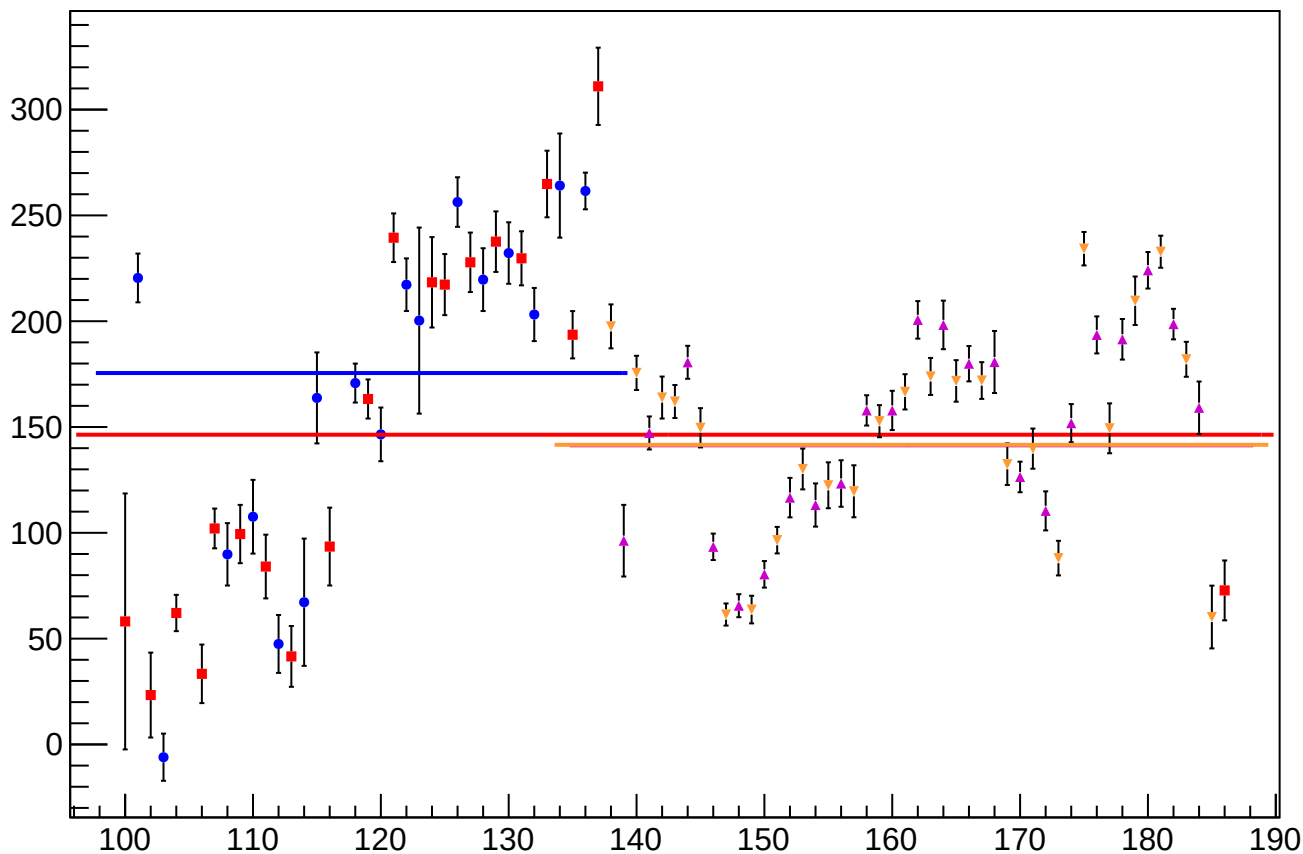
Out:  $-4.658 \pm 1.265$   $\chi^2/\text{NDF}: 1188.9/44$

All:  $-6.506 \pm 0.918$   $\chi^2/\text{NDF}: 2222.2/84$

reg\_asym\_atr2\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



reg\_asym\_atr2\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 175.509 $\pm$ 3.245  $\chi^2$ /NDF: 635.4/16

Left Out: 141.588 $\pm$ 1.698  $\chi^2$ /NDF:959.6/24

Right Out: 146.360 $\pm$ 2.978  $\chi^2$ /NDF: 719.5/19

Left In: 141.360 $\pm$ 1.748  $\chi^2$ /NDF:741.2/22

Left: 141.478 $\pm$ 1.218  $\chi^2$ /NDF: 1700.8/47

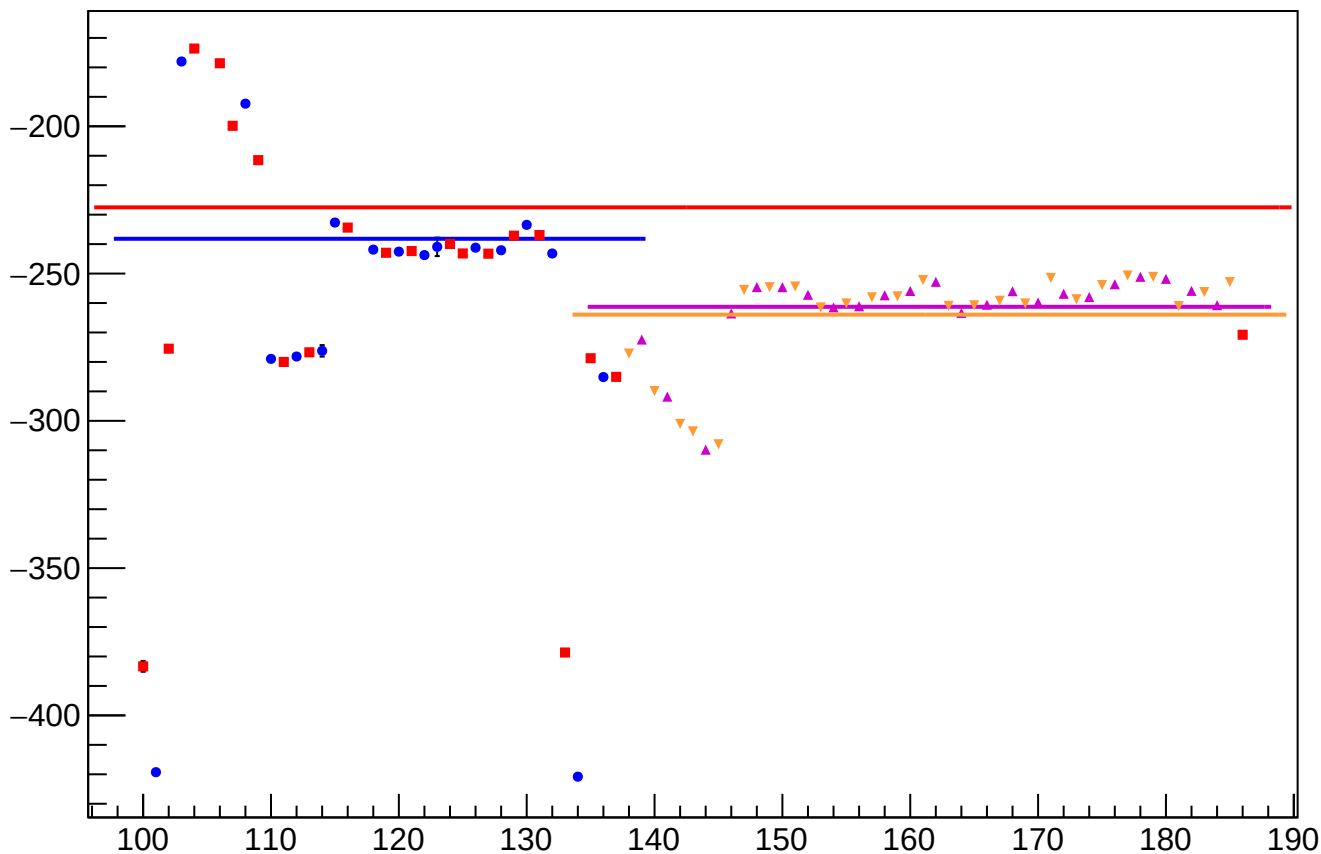
Right: 159.684 $\pm$ 2.194  $\chi^2$ /NDF: 1398.7/36

In: 149.039 $\pm$ 1.539  $\chi^2$ /NDF:1462.5/39

Out: 142.760 $\pm$ 1.475  $\chi^2$ /NDF:1681.0/44

All: 145.767 $\pm$ 1.065  $\chi^2$ /NDF: 3152.2/84

reg\_asym\_atr2\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: -238.191+/-0.161  $\chi^2/\text{NDF}$ : 167088.3/16

Left Out: -263.943+/-0.081  $\chi^2/\text{NDF}$ : 39085.0/24

Right Out: -227.518+/-0.150  $\chi^2/\text{NDF}$ : 104373.9/19

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: -232.479+/-0.110  $\chi^2/\text{NDF}$ : 273825.4/36

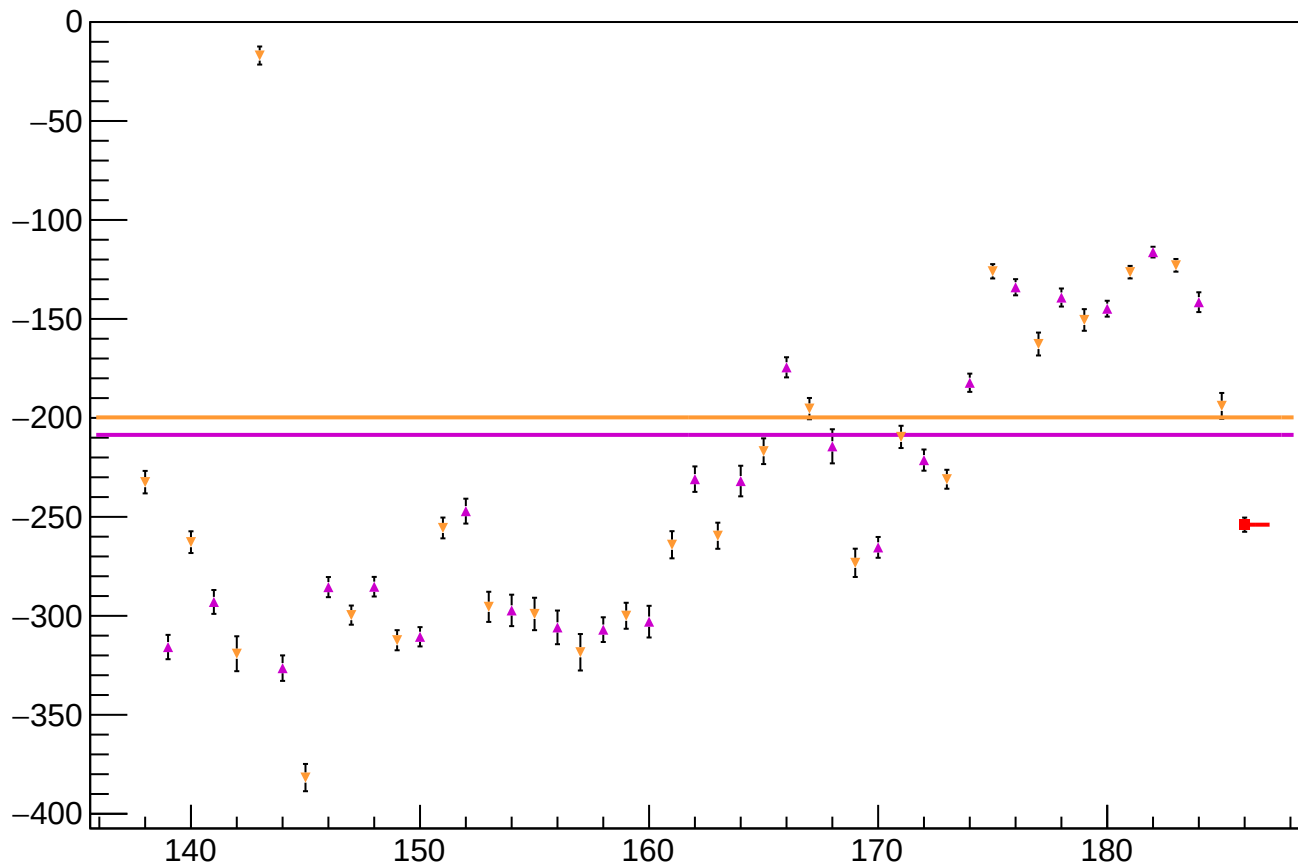
In: -256.513+/-0.073  $\chi^2/\text{NDF}$ : 206842.3/39

Out: -255.654+/-0.071  $\chi^2/\text{NDF}$ : 189197.8/44

All: -256.074+/-0.051  $\chi^2/\text{NDF}$ : 396110.8/84



reg\_asym\_atl\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -199.741+/-1.061  $\chi^2/\text{NDF}$ : 6361.5/24

Right Out: -253.947+/-3.589  $\chi^2/\text{NDF}$ : 0.0/0

Left In: -208.579+/-1.082  $\chi^2/\text{NDF}$ : 4805.1/22

Left: -204.073+/-0.758  $\chi^2/\text{NDF}$ : 11200.6/47

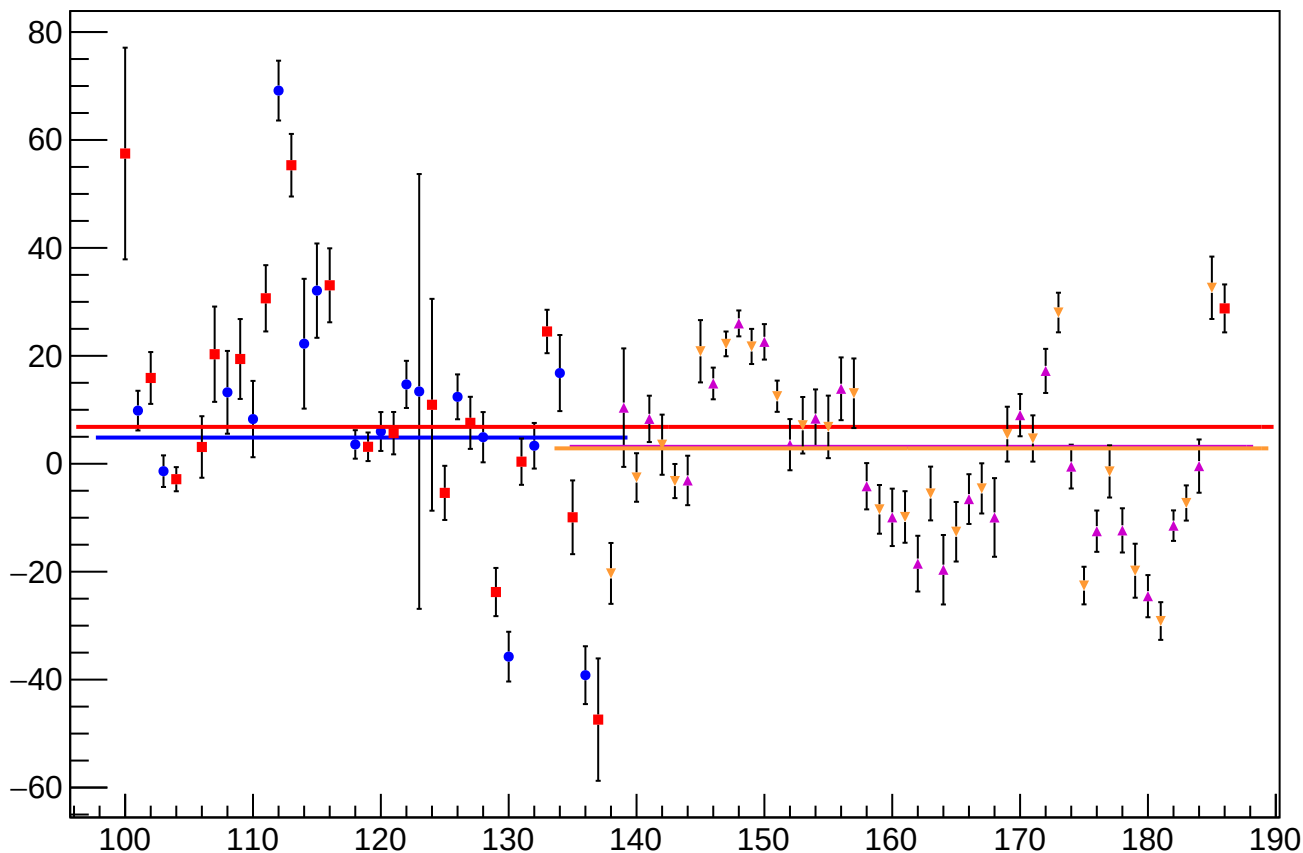
Right: -253.947+/-3.589  $\chi^2/\text{NDF}$ : 0.0/0

In: -208.579+/-1.082  $\chi^2/\text{NDF}$ : 4805.1/22

Out: -204.098+/-1.018  $\chi^2/\text{NDF}$ : 6571.3/25

All: -206.201+/-0.741  $\chi^2/\text{NDF}$ : 11385.5/48

reg\_asym\_atl\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 4.855+/-1.107  $\chi^2/\text{NDF}$ : 310.9/16

Left Out: 2.853+/-0.820  $\chi^2/\text{NDF}$ : 419.8/24

Right Out: 6.834+/-1.040  $\chi^2/\text{NDF}$ : 264.2/19

Left In: 3.136+/-0.857  $\chi^2/\text{NDF}$ : 319.8/22

Left: 2.988+/-0.592  $\chi^2/\text{NDF}$ : 739.7/47

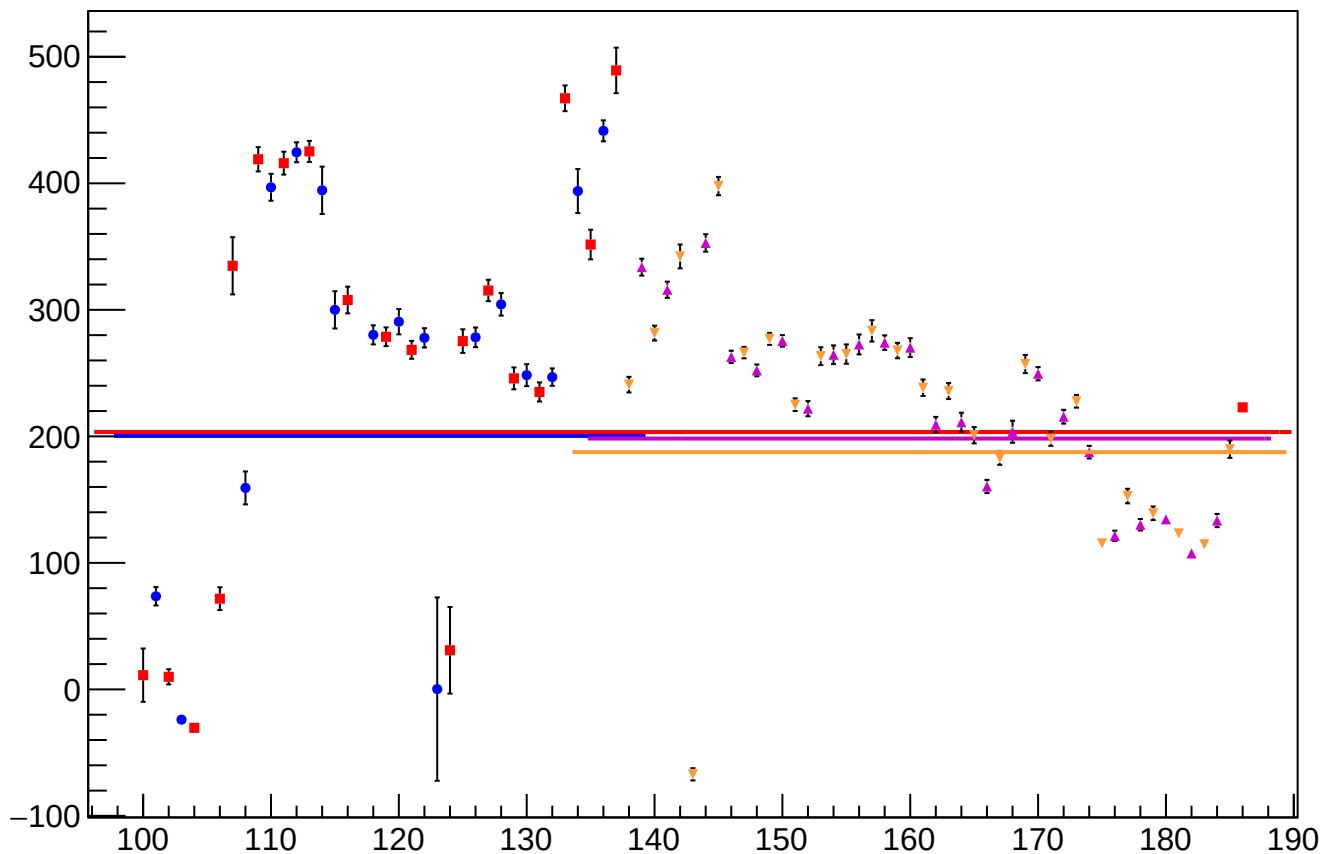
Right: 5.906+/-0.758  $\chi^2/\text{NDF}$ : 576.8/36

In: 3.780+/-0.678  $\chi^2/\text{NDF}$ : 632.2/39

Out: 4.379+/-0.644  $\chi^2/\text{NDF}$ : 693.0/44

All: 4.094+/-0.467  $\chi^2/\text{NDF}$ : 1325.7/84

reg\_asym\_atl\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 200.347 $\pm$ 1.987  $\chi^2$ /NDF: 6717.6/16

Left Out: 187.565 $\pm$ 1.066  $\chi^2$ /NDF: 7082.0/24

Right Out: 203.450 $\pm$ 1.599  $\chi^2$ /NDF: 8309.7/19

Left In: 198.269 $\pm$ 1.082  $\chi^2$ /NDF: 4515.8/22

Left: 192.839 $\pm$ 0.759  $\chi^2$ /NDF: 11647.5/47

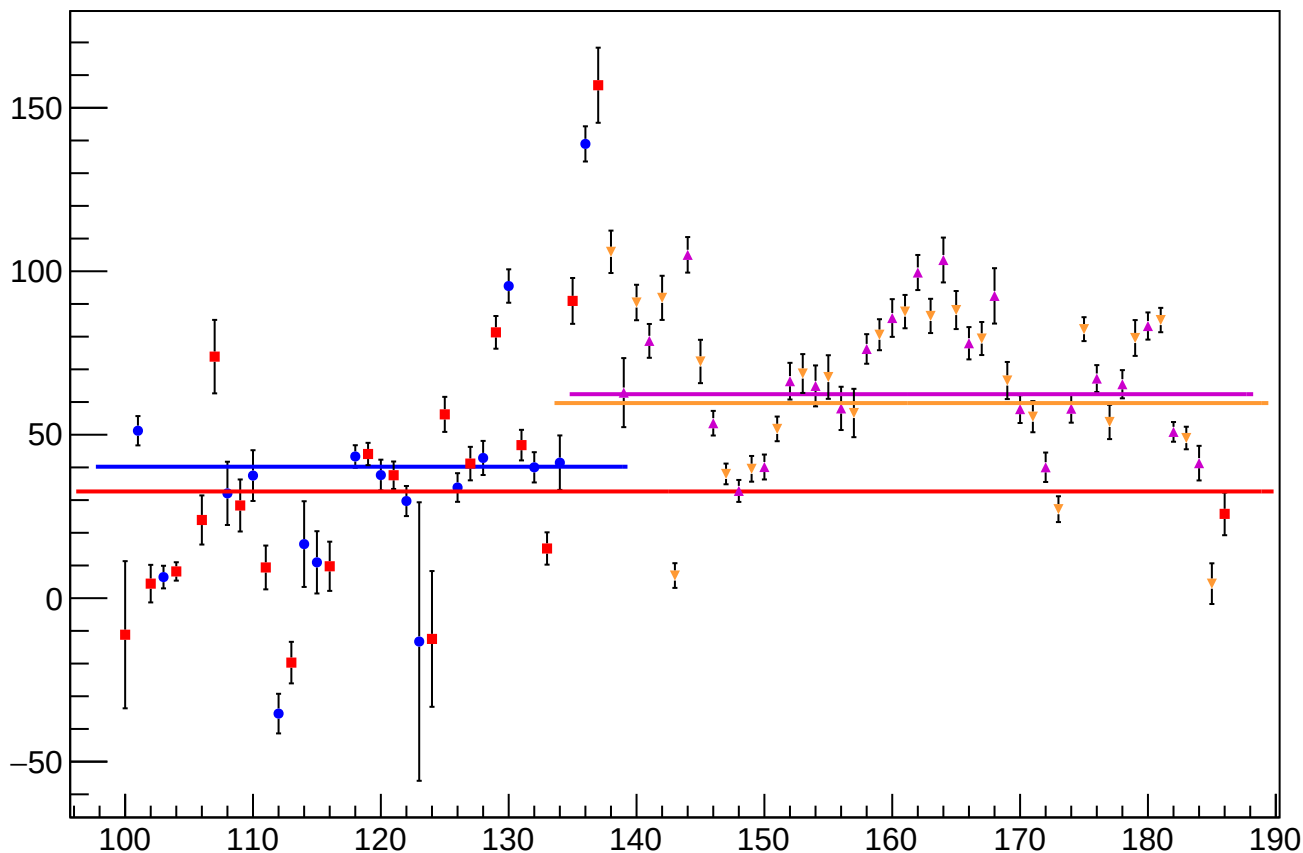
Right: 202.230 $\pm$ 1.246  $\chi^2$ /NDF: 15028.8/36

In: 198.744 $\pm$ 0.950  $\chi^2$ /NDF: 11234.2/39

Out: 192.451 $\pm$ 0.887  $\chi^2$ /NDF: 15460.1/44

All: 195.382 $\pm$ 0.648  $\chi^2$ /NDF: 26717.7/84

reg\_asym\_atl\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 40.214 $\pm$ 1.286  $\chi^2$ /NDF: 733.9/16

Left Out: 59.682 $\pm$ 0.941  $\chi^2$ /NDF: 757.6/24

Right Out: 32.645 $\pm$ 1.230  $\chi^2$ /NDF: 550.9/19

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

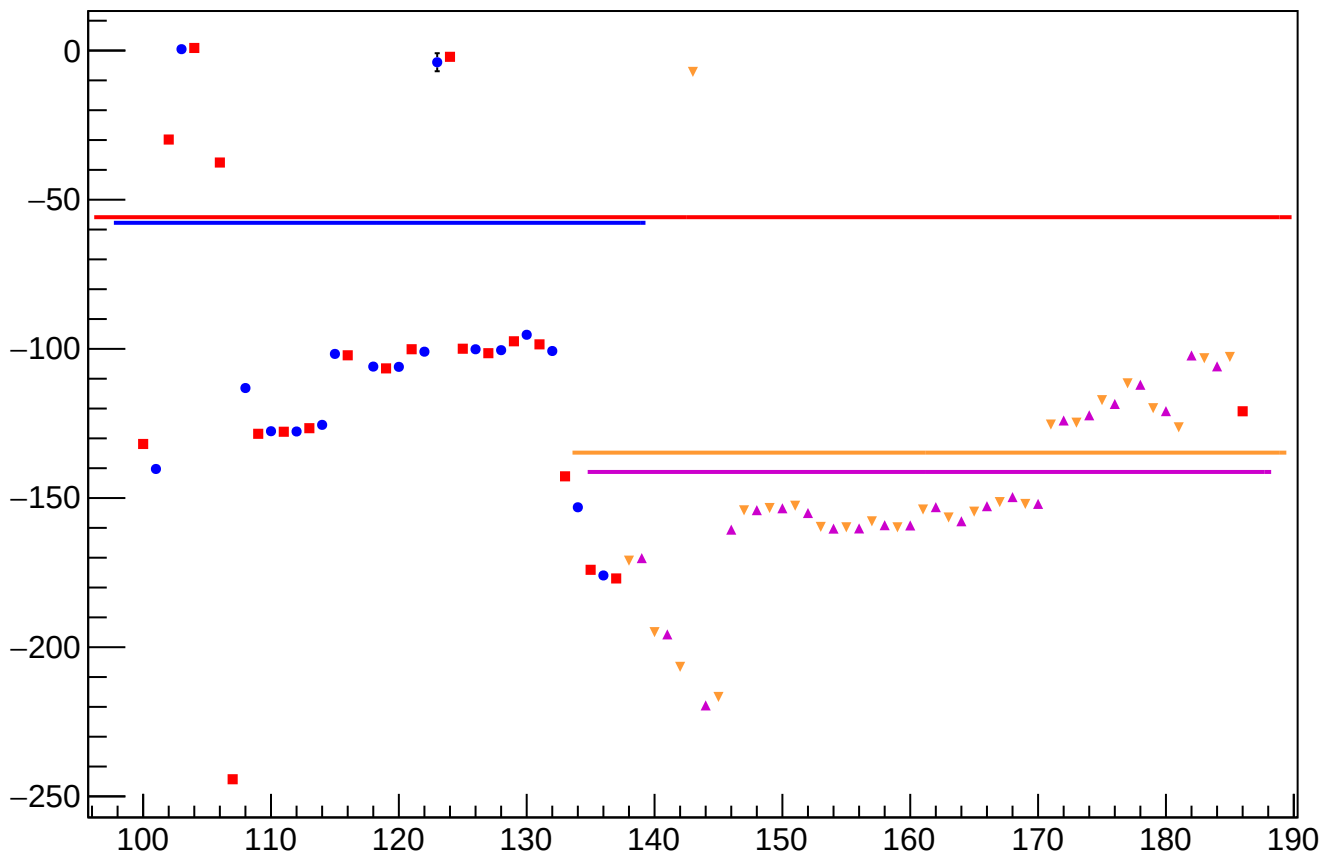
Right: 36.262 $\pm$ 0.889  $\chi^2$ /NDF: 1302.9/36

In: 54.308 $\pm$ 0.776  $\chi^2$ /NDF: 1329.4/39

Out: 49.704 $\pm$ 0.747  $\chi^2$ /NDF: 1613.4/44

All: 51.918 $\pm$ 0.538  $\chi^2$ /NDF: 2961.0/84

reg\_asym\_atl\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: -57.743 $\pm$ 0.062  $\chi^2$ /NDF: 1100251.3/16

Left Out: -134.780 $\pm$ 0.045  $\chi^2$ /NDF:804747.3/24

Right Out: -55.862 $\pm$ 0.060  $\chi^2$ /NDF: 1019833.2/19

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

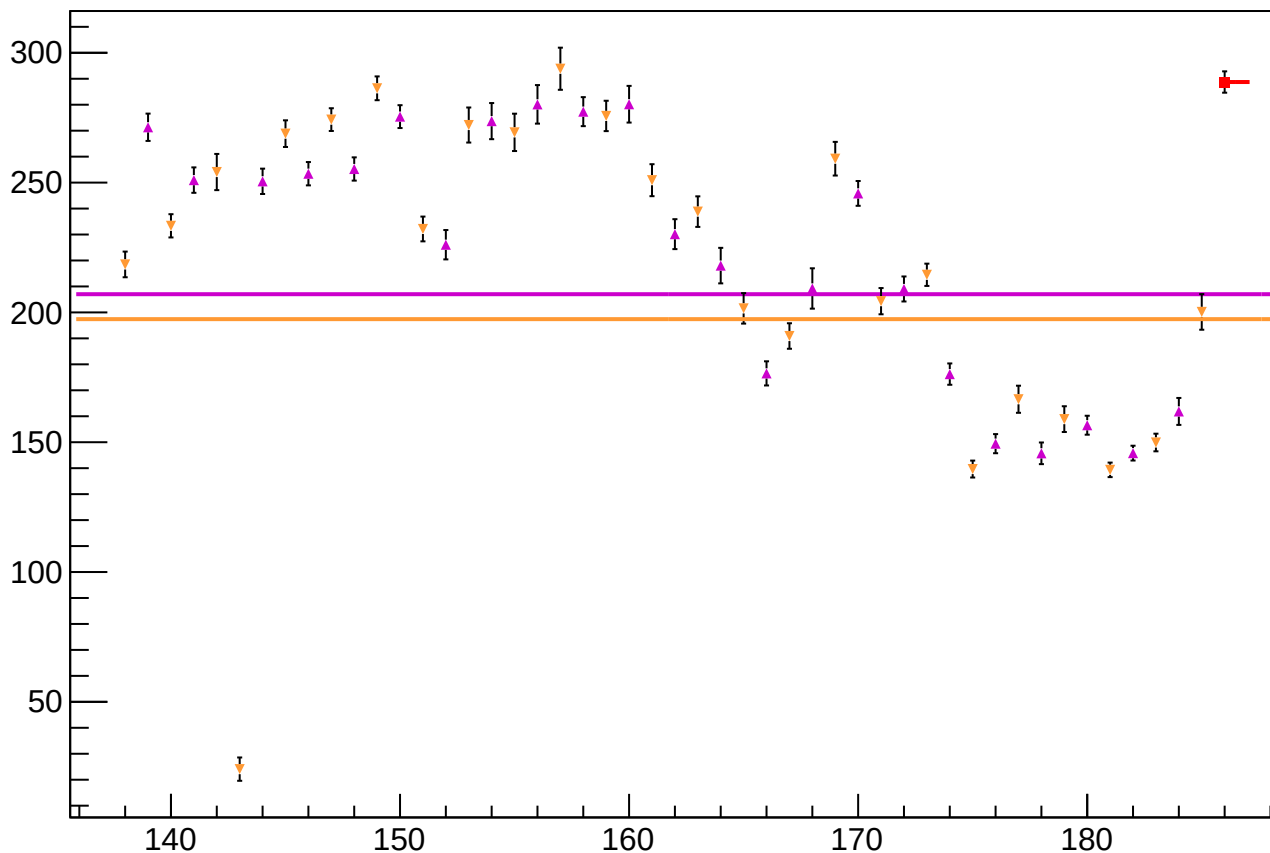
Right: -56.770 $\pm$ 0.043  $\chi^2$ /NDF: 2120562.5/36

In: -112.098 $\pm$ 0.037  $\chi^2$ /NDF:2634569.1/39

Out: -106.635 $\pm$ 0.036  $\chi^2$ /NDF:2946080.2/44

All: -109.303 $\pm$ 0.026  $\chi^2$ /NDF: 5592085.4/84

# reg\_asym\_atl\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 197.408+/-0.963  $\chi^2/\text{NDF}$ :4384.2/24

Right Out: 288.742+/-4.111  $\chi^2/\text{NDF}$ : 0.0/0

Left In: 207.014+/-0.990  $\chi^2/\text{NDF}$ :2611.5/22

Left: 202.077+/-0.690  $\chi^2/\text{NDF}$ : 7044.1/47

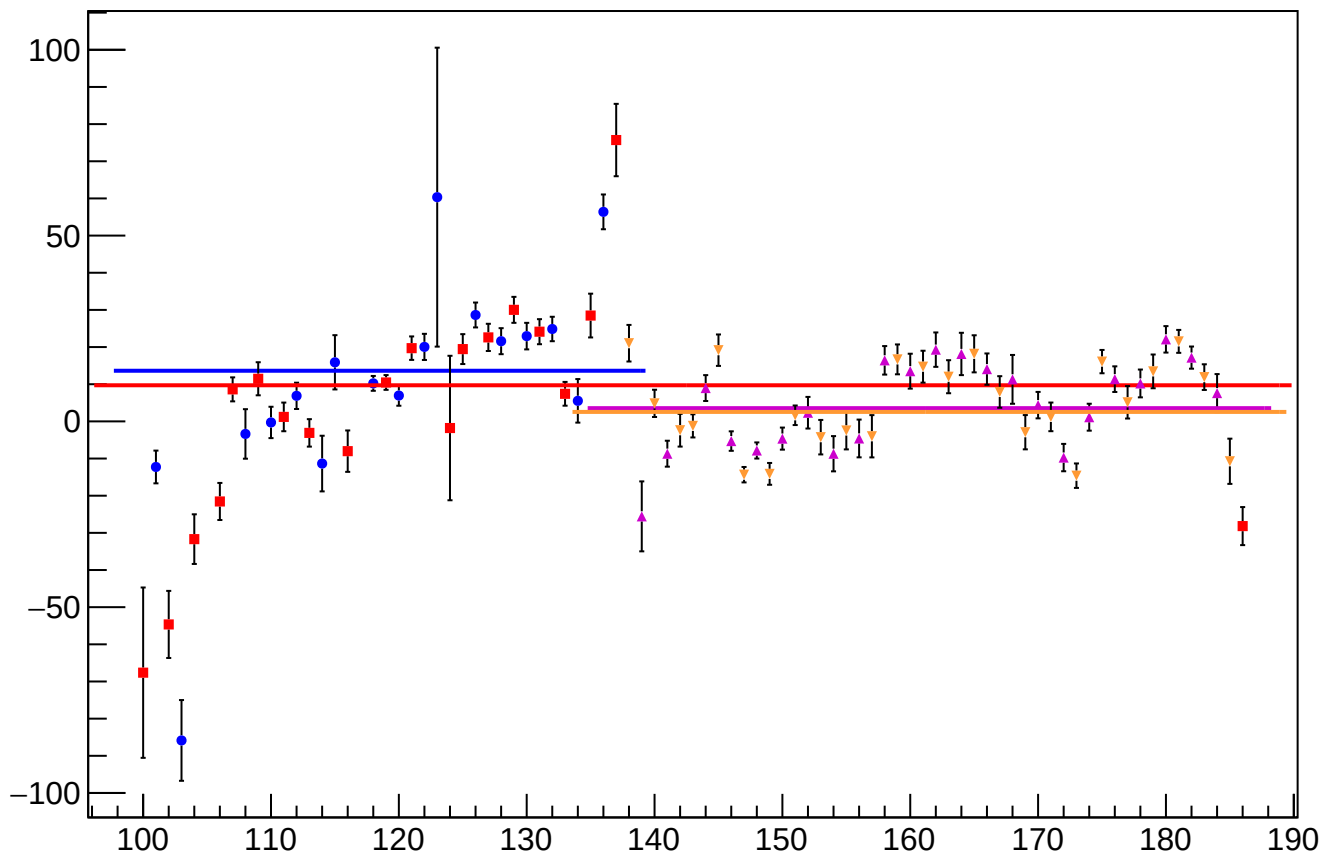
Right: 288.742+/-4.111  $\chi^2/\text{NDF}$ : 0.0/0

In: 207.014+/-0.990  $\chi^2/\text{NDF}$ :2611.5/22

Out: 202.158+/-0.938  $\chi^2/\text{NDF}$ :4852.2/25

All: 204.454+/-0.681  $\chi^2/\text{NDF}$ : 7476.4/48

reg\_asym\_atl\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 13.625+/-0.938  $\chi^2/\text{NDF}$ : 293.3/16

Left Out: 2.548+/-0.741  $\chi^2/\text{NDF}$ : 275.4/24

Right Out: 9.718+/-0.900  $\chi^2/\text{NDF}$ : 359.3/19

Left In: 3.559+/-0.774  $\chi^2/\text{NDF}$ : 192.0/22

Left: 3.031+/-0.535  $\chi^2/\text{NDF}$ : 468.3/47

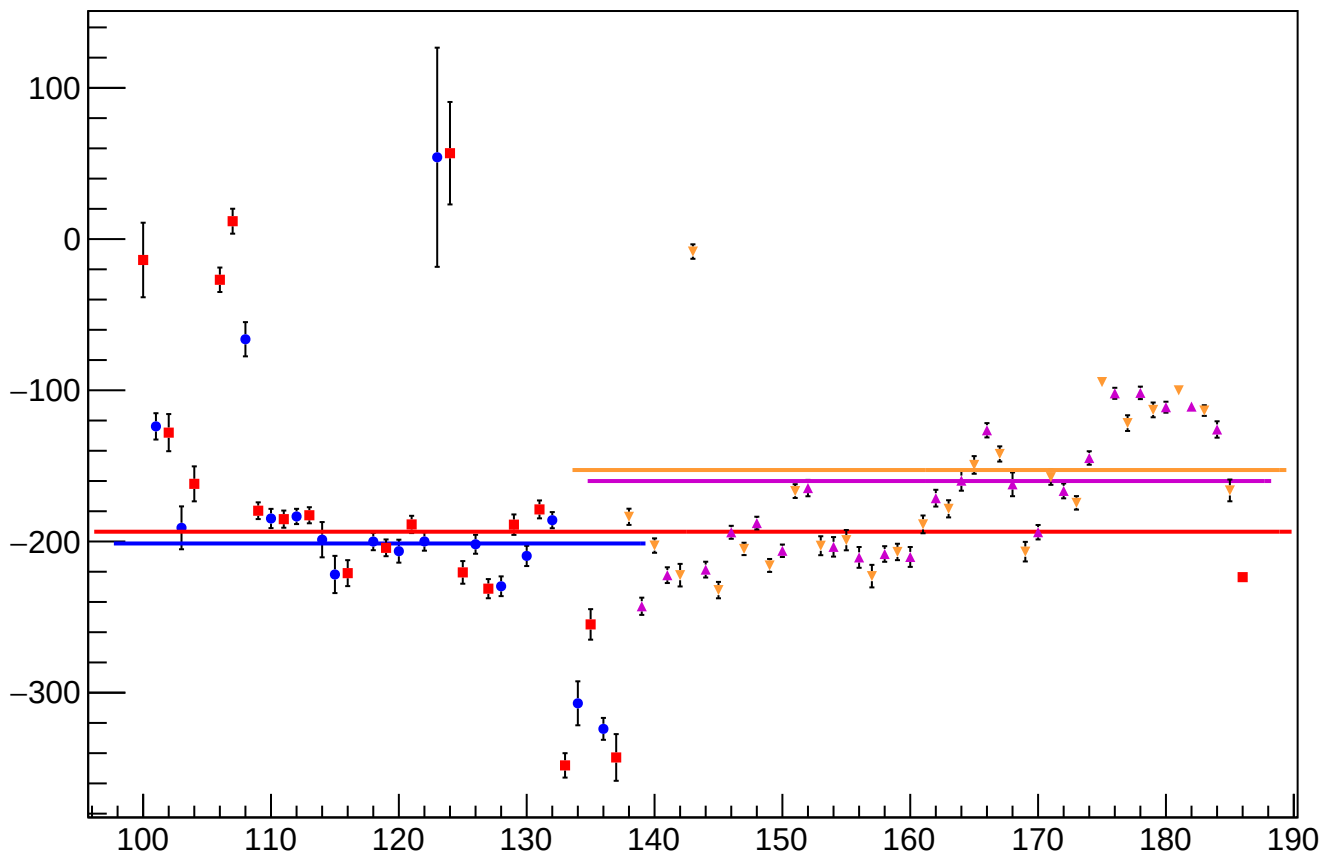
Right: 11.591+/-0.650  $\chi^2/\text{NDF}$ : 661.6/36

In: 7.637+/-0.597  $\chi^2/\text{NDF}$ : 553.7/39

Out: 5.442+/-0.572  $\chi^2/\text{NDF}$ : 672.6/44

All: 6.493+/-0.413  $\chi^2/\text{NDF}$ : 1233.4/84

reg\_asym\_atl\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-201.316 \pm 1.800$   $\chi^2/\text{NDF}: 624.9/16$

Left Out:  $-152.738 \pm 0.967$   $\chi^2/\text{NDF}: 3077.8/24$

Right Out:  $-193.536 \pm 1.512$   $\chi^2/\text{NDF}: 1851.1/19$

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:  $-196.754 \pm 1.158$   $\chi^2/\text{NDF}: 2486.9/36$

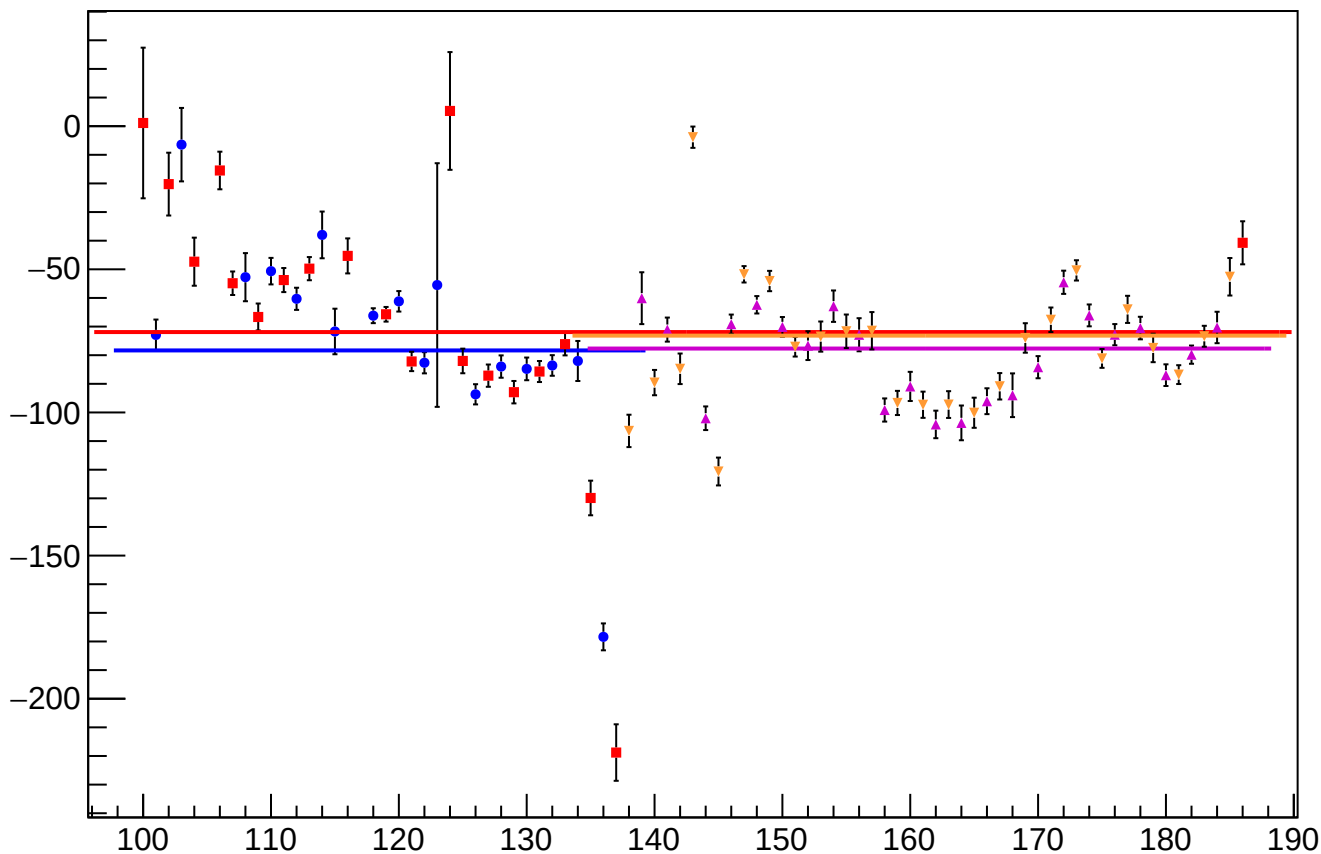
In:  $-169.595 \pm 0.867$   $\chi^2/\text{NDF}: 3053.7/39$

Out:  $-164.583 \pm 0.815$   $\chi^2/\text{NDF}: 5445.7/44$

All:  $-166.934 \pm 0.594$   $\chi^2/\text{NDF}: 8517.2/84$



reg\_asym\_atl\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-78.334 \pm 1.084$   $\chi^2/\text{NDF}: 649.9/16$

Left Out:  $-73.165 \pm 0.851$   $\chi^2/\text{NDF}: 788.6/24$

Right Out:  $-71.919 \pm 1.044$   $\chi^2/\text{NDF}: 623.0/19$

Left In:  $-77.678 \pm 0.883$   $\chi^2/\text{NDF}: 248.3/22$

Left:  $-75.339 \pm 0.613$   $\chi^2/\text{NDF}: 1050.4/47$

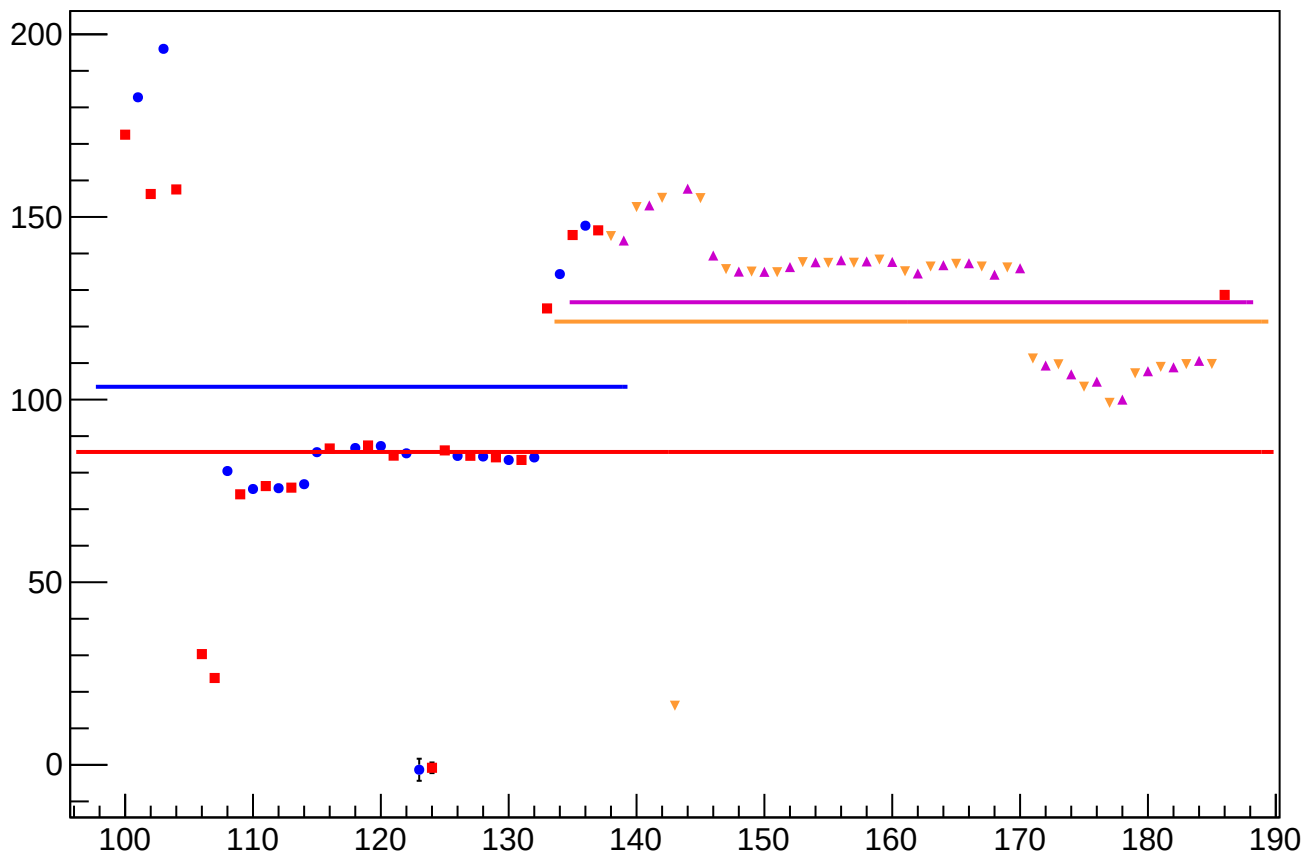
Right:  $-75.005 \pm 0.752$   $\chi^2/\text{NDF}: 1291.0/36$

In:  $-77.939 \pm 0.684$   $\chi^2/\text{NDF}: 898.3/39$

Out:  $-72.667 \pm 0.660$   $\chi^2/\text{NDF}: 1412.4/44$

All:  $-75.206 \pm 0.475$   $\chi^2/\text{NDF}: 2341.5/84$

reg\_asym\_atl\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 103.509 $\pm$ 0.071  $\chi^2$ /NDF: 272499.7/16

Left Out: 121.356 $\pm$ 0.040  $\chi^2$ /NDF: 481977.3/24

Right Out: 85.665 $\pm$ 0.063  $\chi^2$ /NDF: 429072.6/19

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

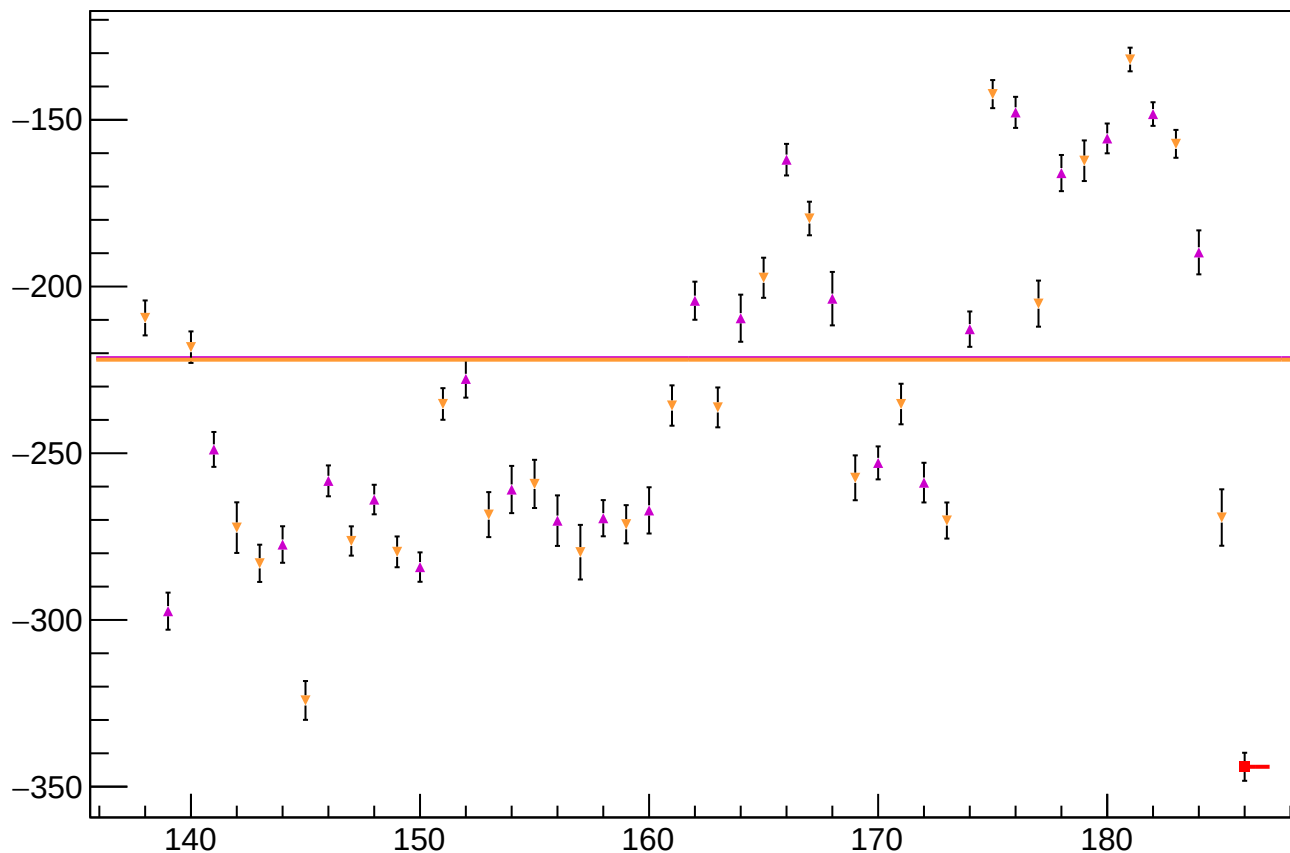
Right: 93.576 $\pm$ 0.047  $\chi^2$ /NDF: 736725.9/36

In: 120.850 $\pm$ 0.036  $\chi^2$ /NDF: 515138.2/39

Out: 111.077 $\pm$ 0.034  $\chi^2$ /NDF: 1136901.3/44

All: 115.746 $\pm$ 0.025  $\chi^2$ /NDF: 1691498.1/84

reg\_asym\_atr\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Left Out: -221.934 $\pm$ 1.084  $\chi^2$ /NDF:2578.4/24

Right Out: -344.039 $\pm$ 4.204  $\chi^2$ /NDF: 0.0/0

Left In: -221.483 $\pm$ 1.102  $\chi^2$ /NDF:2149.8/22

Left: -221.712 $\pm$ 0.773  $\chi^2$ /NDF: 4728.2/47

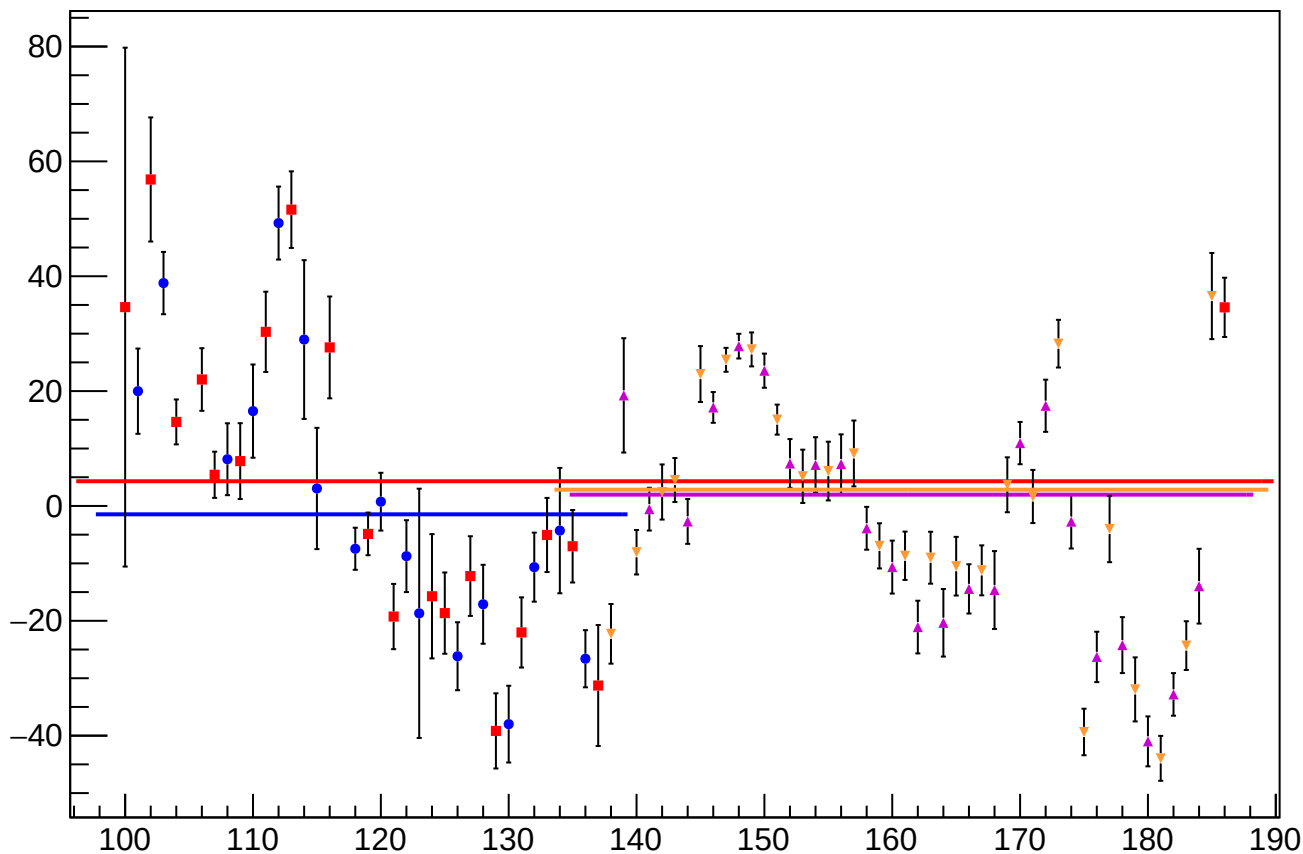
Right: -344.039 $\pm$ 4.204  $\chi^2$ /NDF: 0.0/0

In: -221.483 $\pm$ 1.102  $\chi^2$ /NDF:2149.8/22

Out: -229.553 $\pm$ 1.050  $\chi^2$ /NDF:3369.4/25

All: -225.713 $\pm$ 0.760  $\chi^2$ /NDF: 5547.3/48

reg\_asym\_atr\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-1.459 \pm 1.539$   $\chi^2/\text{NDF}: 224.8/16$

Left Out:  $2.832 \pm 0.807$   $\chi^2/\text{NDF}: 686.9/24$

Right Out:  $4.302 \pm 1.352$   $\chi^2/\text{NDF}: 269.8/19$

Left In:  $1.969 \pm 0.835$   $\chi^2/\text{NDF}: 589.1/22$

Left:  $2.415 \pm 0.580$   $\chi^2/\text{NDF}: 1276.5/47$

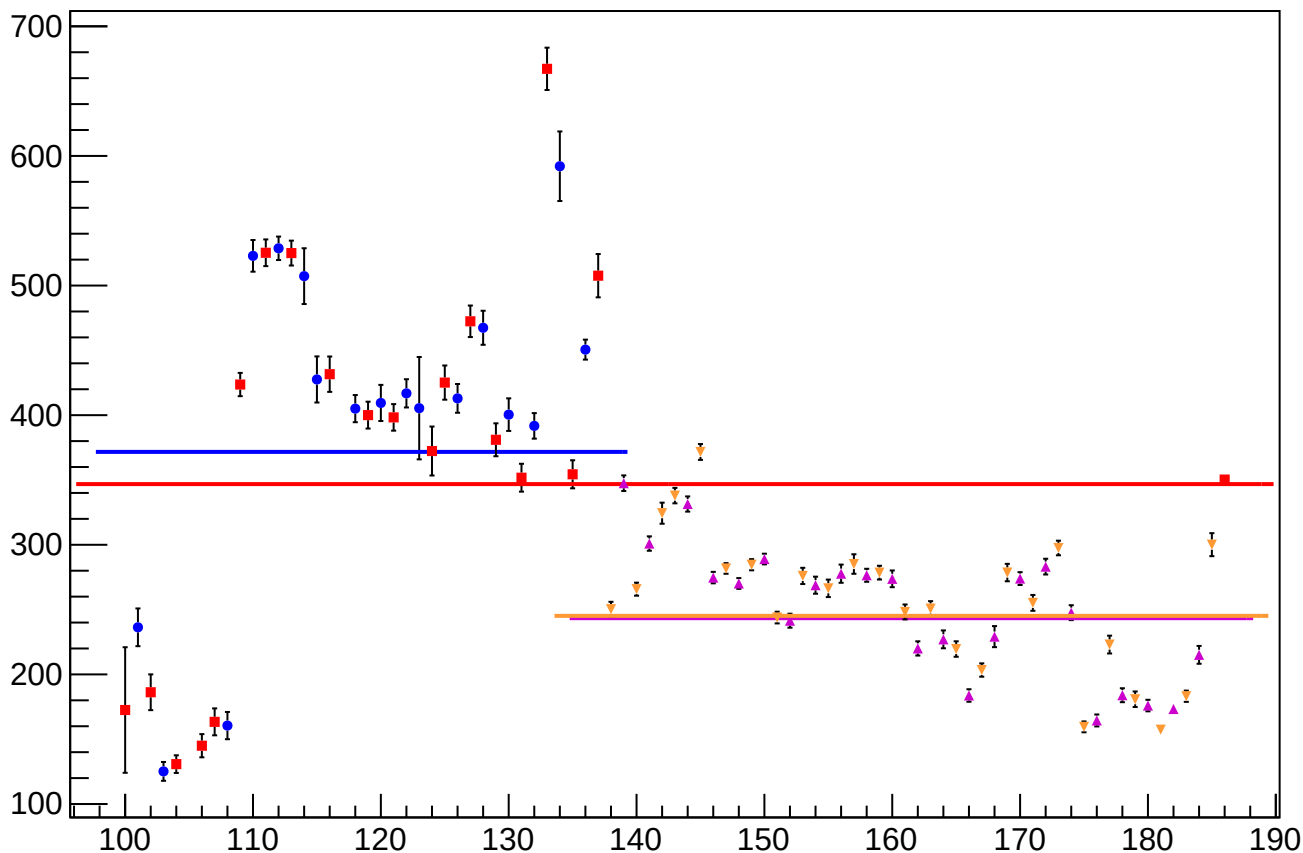
Right:  $1.793 \pm 1.016$   $\chi^2/\text{NDF}: 502.5/36$

In:  $1.190 \pm 0.734$   $\chi^2/\text{NDF}: 817.7/39$

Out:  $3.218 \pm 0.693$   $\chi^2/\text{NDF}: 957.6/44$

All:  $2.262 \pm 0.504$   $\chi^2/\text{NDF}: 1779.3/84$

reg\_asym\_atr\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 371.672 $\pm$ 2.783  $\chi^2$ /NDF: 2430.1/16

Left Out: 245.179 $\pm$ 1.082  $\chi^2$ /NDF:2597.4/24

Right Out: 346.822 $\pm$ 2.037  $\chi^2$ /NDF: 3414.4/19

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

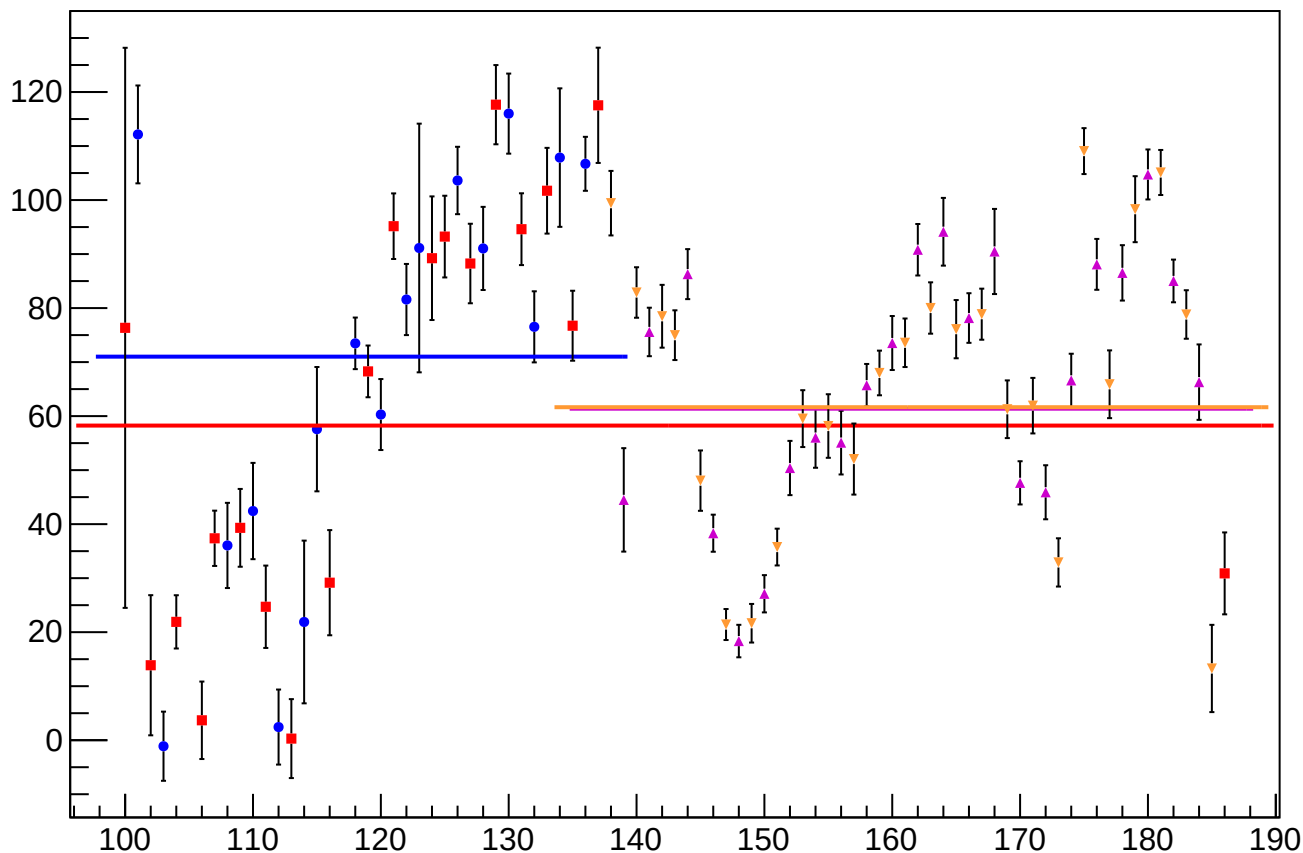
Right: 355.493 $\pm$ 1.644  $\chi^2$ /NDF: 5896.3/36

In: 260.528 $\pm$ 1.018  $\chi^2$ /NDF:6507.8/39

Out: 267.539 $\pm$ 0.956  $\chi^2$ /NDF:7953.0/44

All: 264.254 $\pm$ 0.697  $\chi^2$ /NDF: 14486.0/84

reg\_asym\_atr\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 71.009 $\pm$ 1.768  $\chi^2$ /NDF: 424.1/16

Left Out: 61.647 $\pm$ 0.936  $\chi^2$ /NDF: 871.5/24

Right Out: 58.248 $\pm$ 1.597  $\chi^2$ /NDF: 503.0/19

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

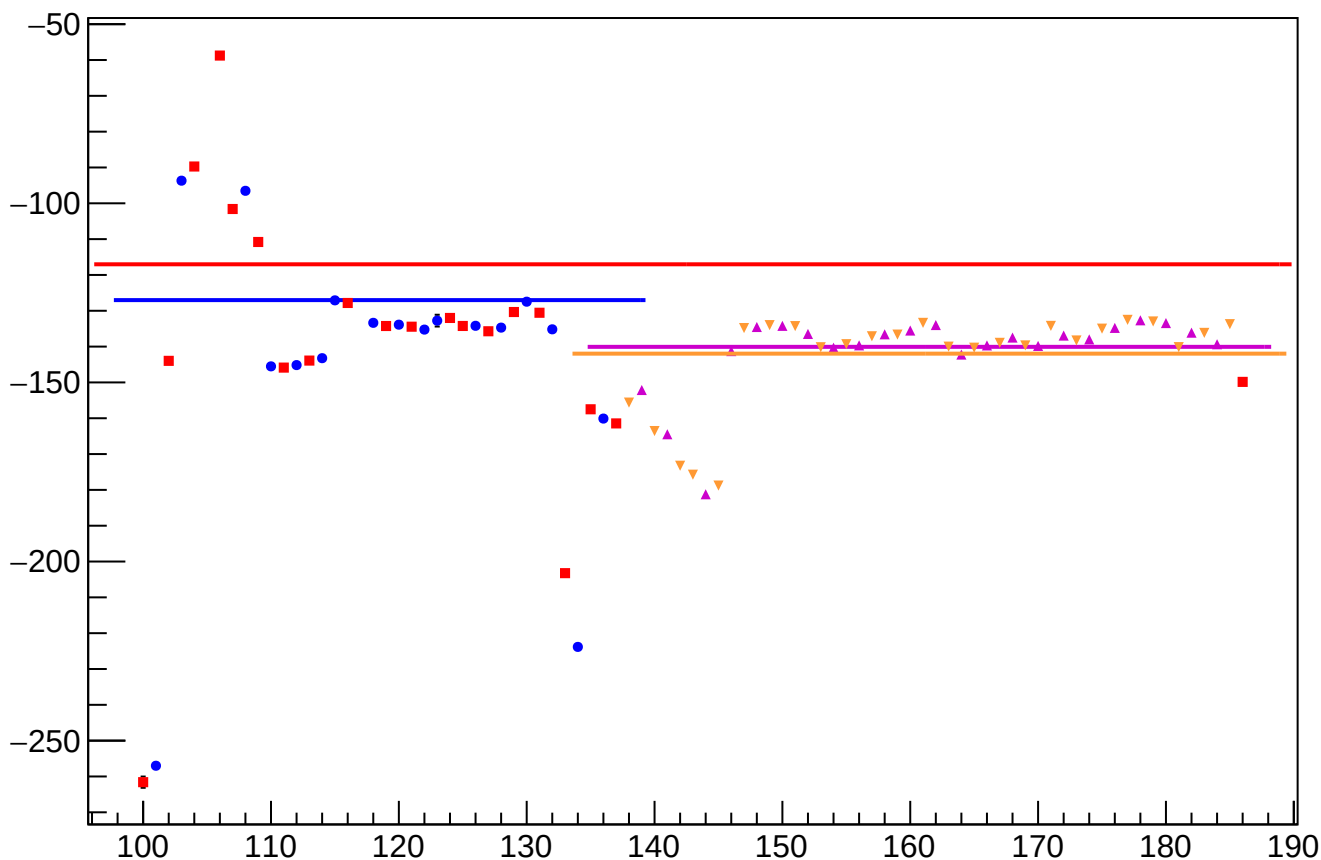
Right: 63.981 $\pm$ 1.185  $\chi^2$ /NDF: 955.8/36

In: 63.573 $\pm$ 0.844  $\chi^2$ /NDF: 1146.7/39

Out: 60.778 $\pm$ 0.808  $\chi^2$ /NDF: 1377.9/44

All: 62.113 $\pm$ 0.584  $\chi^2$ /NDF: 2530.4/84

reg\_asym\_atr\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-127.024 \pm 0.090$   $\chi^2/\text{NDF}: 166974.0/16$

Left Out:  $-141.969 \pm 0.045$   $\chi^2/\text{NDF}: 80252.6/24$

Right Out:  $-117.026 \pm 0.082$   $\chi^2/\text{NDF}: 170731.9/19$

Left In:  $-140.068 \pm 0.045$   $\chi^2/\text{NDF}: 48030.7/22$

Left:  $-141.025 \pm 0.032$   $\chi^2/\text{NDF}: 129181.1/47$

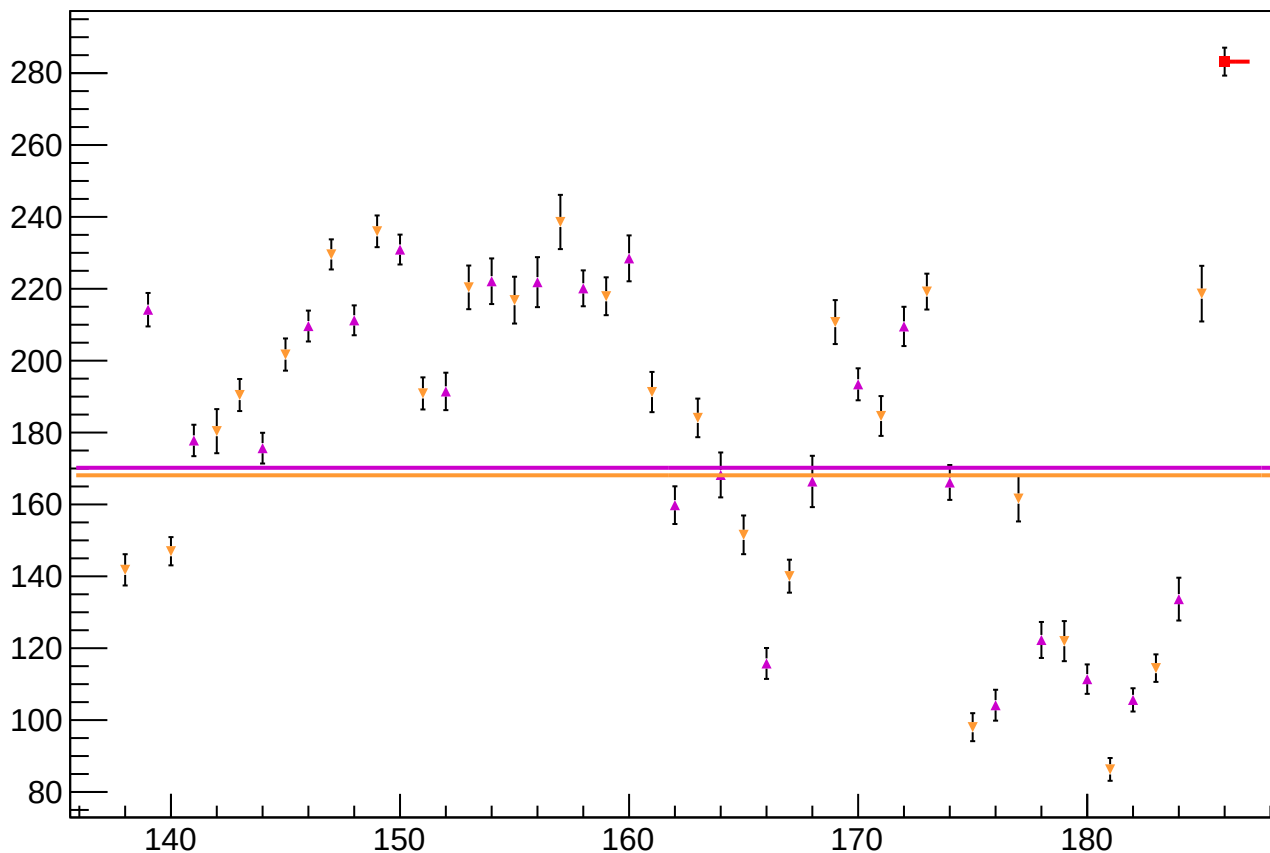
Right:  $-121.574 \pm 0.061$   $\chi^2/\text{NDF}: 344452.6/36$

In:  $-137.453 \pm 0.040$   $\chi^2/\text{NDF}: 231847.1/39$

Out:  $-136.265 \pm 0.039$   $\chi^2/\text{NDF}: 322186.8/44$

All:  $-136.844 \pm 0.028$   $\chi^2/\text{NDF}: 554480.7/84$

reg\_asym\_atr\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Left Out: 168.106 $\pm$ 0.970  $\chi^2$ /NDF:2468.8/24

Right Out: 283.198 $\pm$ 3.886  $\chi^2$ /NDF: 0.0/0

Left In: 170.198 $\pm$ 0.995  $\chi^2$ /NDF:2024.5/22

Left: 169.125 $\pm$ 0.695  $\chi^2$ /NDF: 4495.5/47

Right: 283.198 $\pm$ 3.886  $\chi^2$ /NDF: 0.0/0

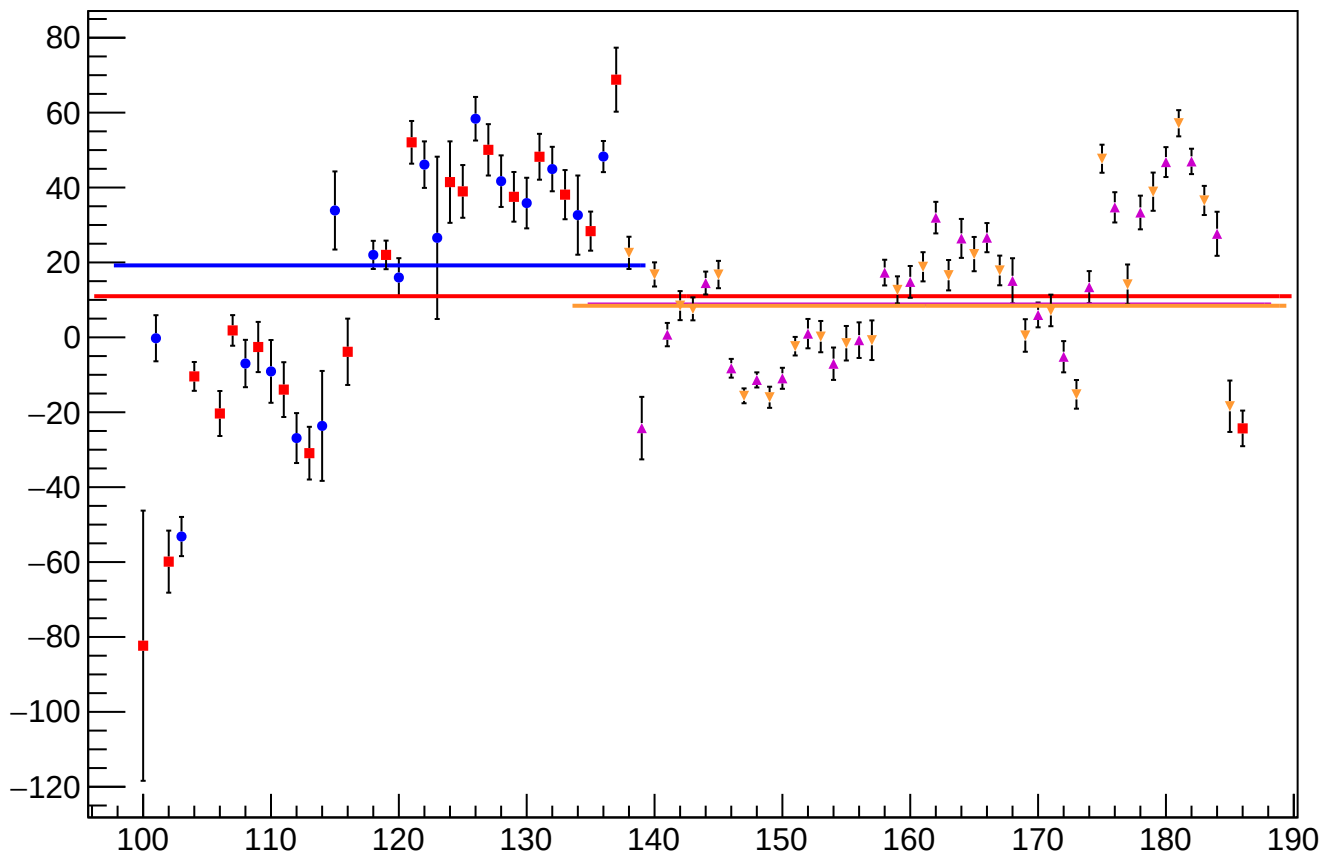
In: 170.198 $\pm$ 0.995  $\chi^2$ /NDF:2024.5/22

Out: 174.859 $\pm$ 0.941  $\chi^2$ /NDF:3294.5/25

All: 172.659 $\pm$ 0.684  $\chi^2$ /NDF: 5330.5/48



reg\_asym\_atr\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $19.211 \pm 1.503$   $\chi^2/\text{NDF}: 439.4/16$

Left Out:  $8.436 \pm 0.728$   $\chi^2/\text{NDF}: 752.0/24$

Right Out:  $10.986 \pm 1.335$   $\chi^2/\text{NDF}: 495.4/19$

Left In:  $8.769 \pm 0.758$   $\chi^2/\text{NDF}: 626.8/22$

Left:  $8.596 \pm 0.525$   $\chi^2/\text{NDF}: 1379.0/47$

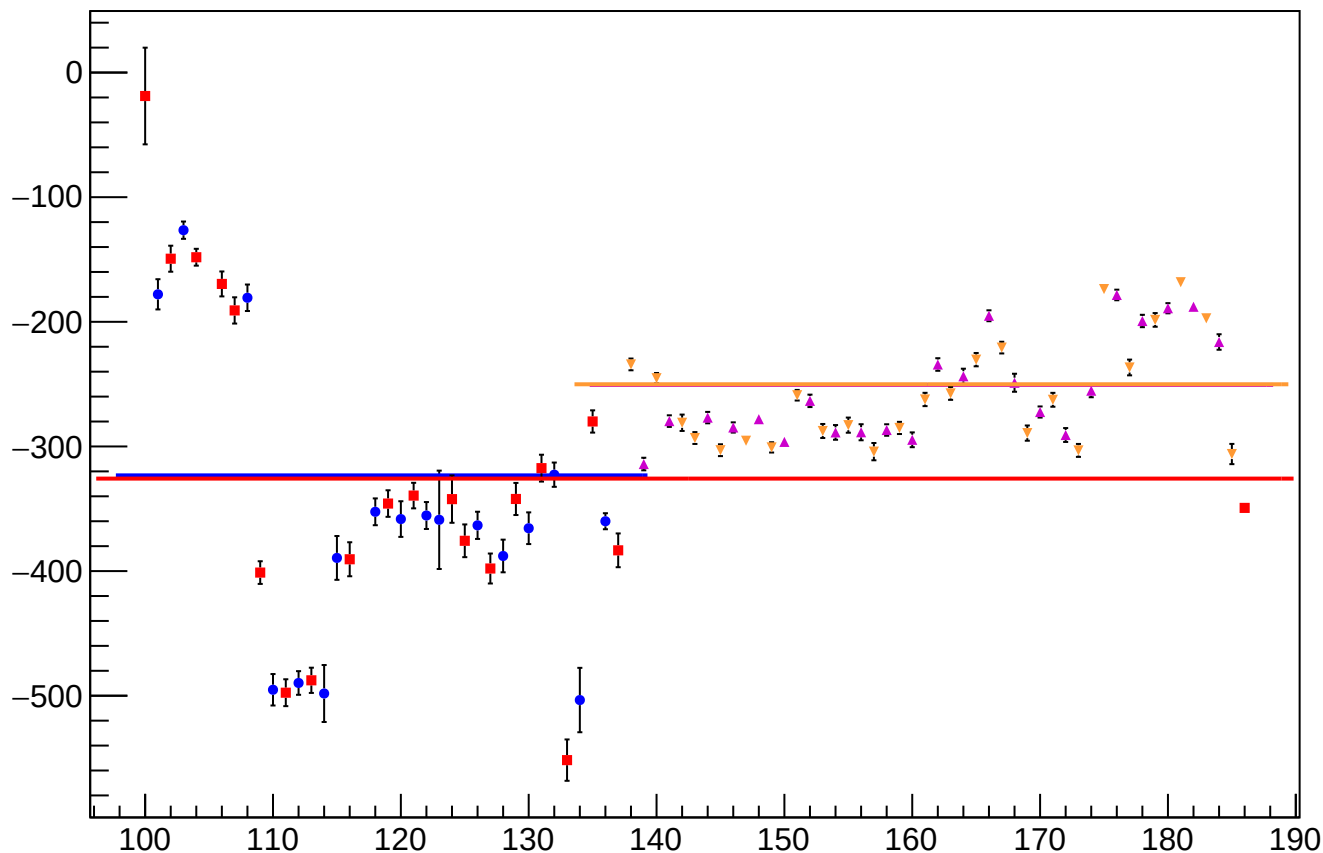
Right:  $14.614 \pm 0.998$   $\chi^2/\text{NDF}: 951.5/36$

In:  $10.887 \pm 0.677$   $\chi^2/\text{NDF}: 1104.7/39$

Out:  $9.020 \pm 0.639$   $\chi^2/\text{NDF}: 1250.2/44$

All:  $9.900 \pm 0.465$   $\chi^2/\text{NDF}: 2359.0/84$

reg\_asym\_atr\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-323.205 \pm 2.689$   $\chi^2/\text{NDF}$ : 1846.8/16

Left Out:  $-250.119 \pm 0.972$   $\chi^2/\text{NDF}$ : 2246.9/24

Right Out:  $-325.790 \pm 1.958$   $\chi^2/\text{NDF}$ : 2393.9/19

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

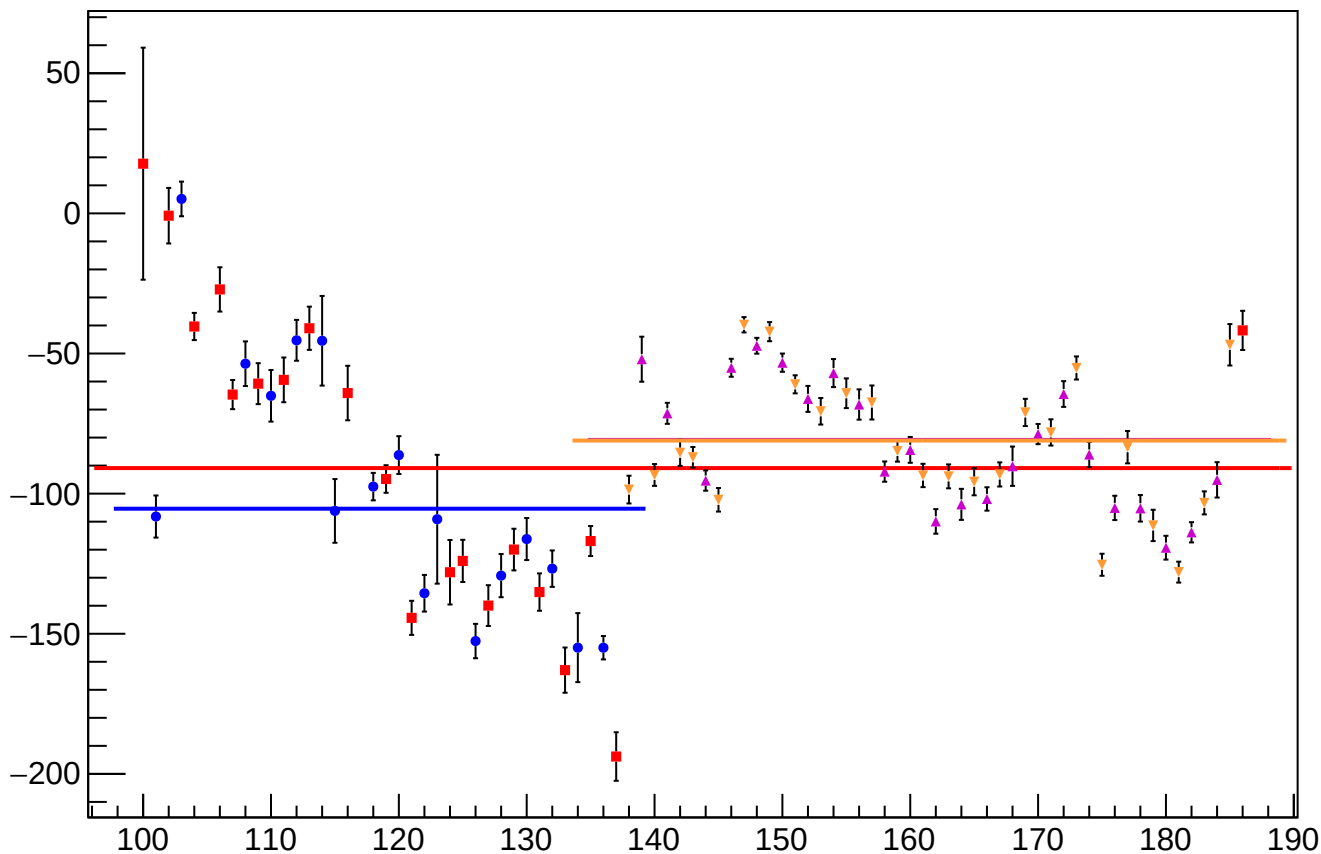
Right:  $-324.894 \pm 1.583$   $\chi^2/\text{NDF}$ : 4241.3/36

In:  $-259.299 \pm 0.929$   $\chi^2/\text{NDF}$ : 4425.5/39

Out:  $-265.087 \pm 0.871$   $\chi^2/\text{NDF}$ : 5839.0/44

All:  $-262.381 \pm 0.635$   $\chi^2/\text{NDF}$ : 10285.2/84

reg\_asym\_atr\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-105.376 \pm 1.716$   $\chi^2/\text{NDF}: 734.7/16$

Left Out:  $-81.057 \pm 0.843$   $\chi^2/\text{NDF}: 913.0/24$

Right Out:  $-90.887 \pm 1.571$   $\chi^2/\text{NDF}: 876.9/19$

Left In:  $-80.834 \pm 0.872$   $\chi^2/\text{NDF}: 693.1/22$

Left:  $-80.949 \pm 0.606$   $\chi^2/\text{NDF}: 1606.2/47$

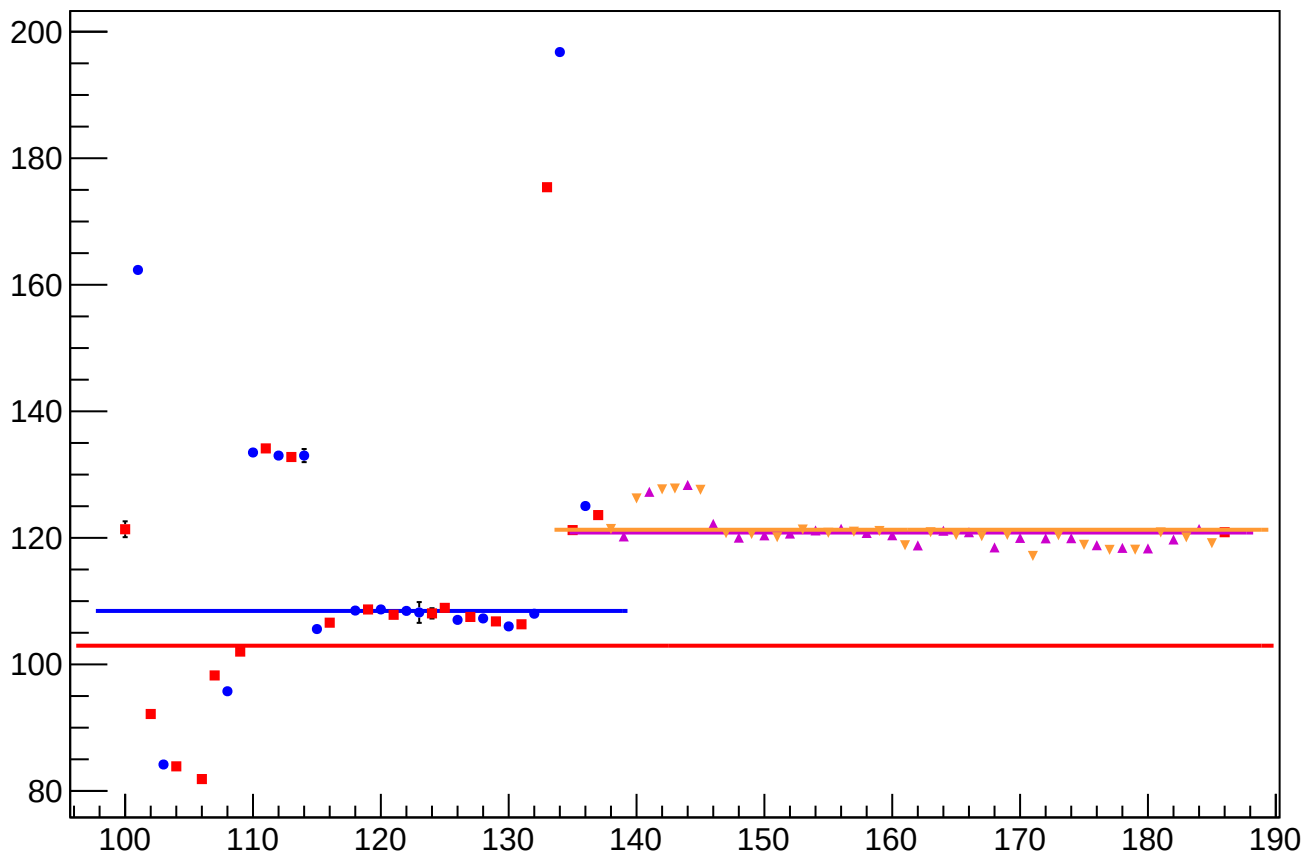
Right:  $-97.496 \pm 1.159$   $\chi^2/\text{NDF}: 1650.4/36$

In:  $-85.871 \pm 0.777$   $\chi^2/\text{NDF}: 1590.5/39$

Out:  $-83.254 \pm 0.743$   $\chi^2/\text{NDF}: 1820.4/44$

All:  $-84.504 \pm 0.537$   $\chi^2/\text{NDF}: 3416.7/84$

reg\_asym\_atr\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 108.450 $\pm$ 0.085  $\chi^2$ /NDF: 73263.0/16

Left Out: 121.283 $\pm$ 0.040  $\chi^2$ /NDF: 4939.3/24

Right Out: 102.956 $\pm$ 0.079  $\chi^2$ /NDF: 54273.5/19

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

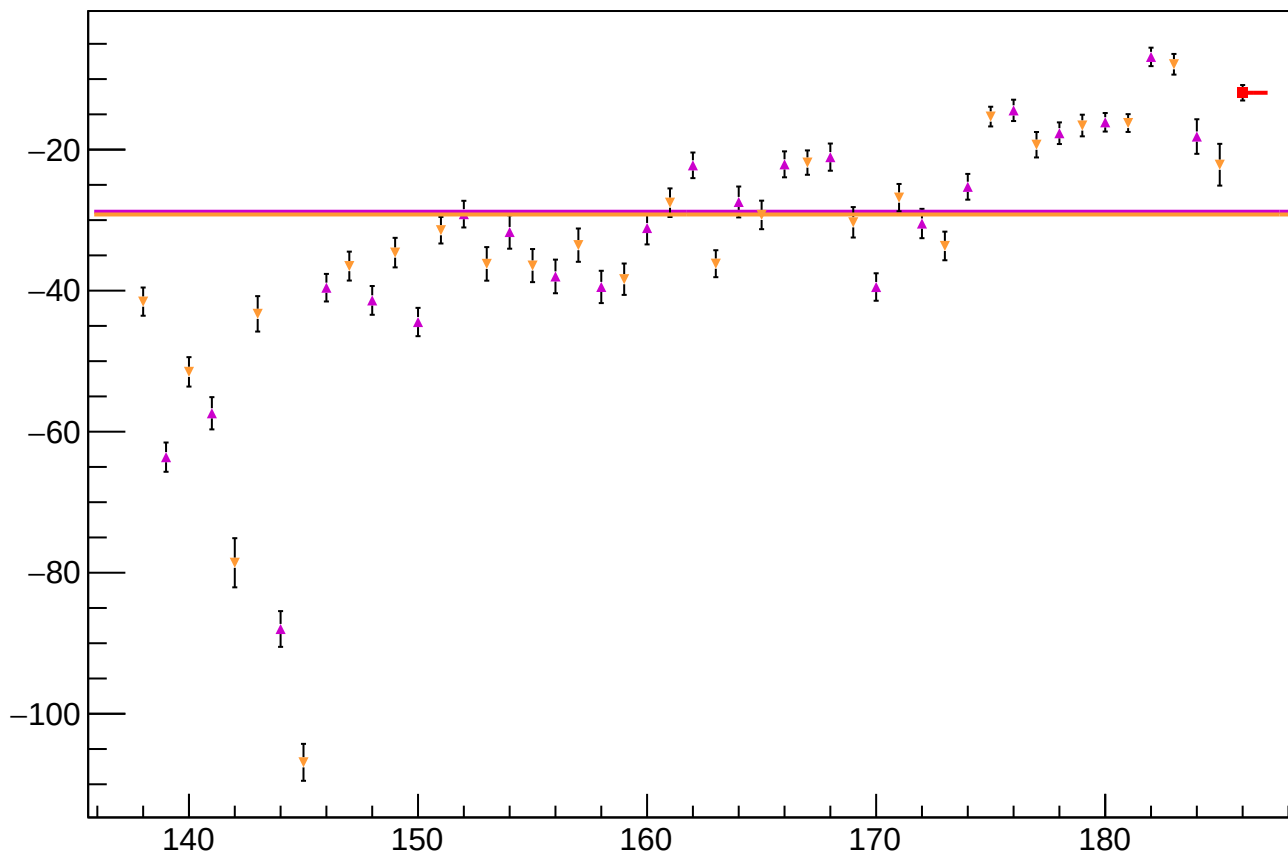
Right: 105.487 $\pm$ 0.058  $\chi^2$ /NDF: 129785.4/36

In: 118.535 $\pm$ 0.037  $\chi^2$ /NDF: 93899.3/39

Out: 117.500 $\pm$ 0.036  $\chi^2$ /NDF: 102323.3/44

All: 118.004 $\pm$ 0.026  $\chi^2$ /NDF: 196631.2/84

reg\_asym\_at1\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -29.199+/-0.389  $\chi^2/\text{NDF}$ :1881.5/24

Right Out: -11.940+/-1.098  $\chi^2/\text{NDF}$ : 0.0/0

Left In: -28.810+/-0.395  $\chi^2/\text{NDF}$ :1763.8/22

Left: -29.008+/-0.277  $\chi^2/\text{NDF}$ : 3645.8/47

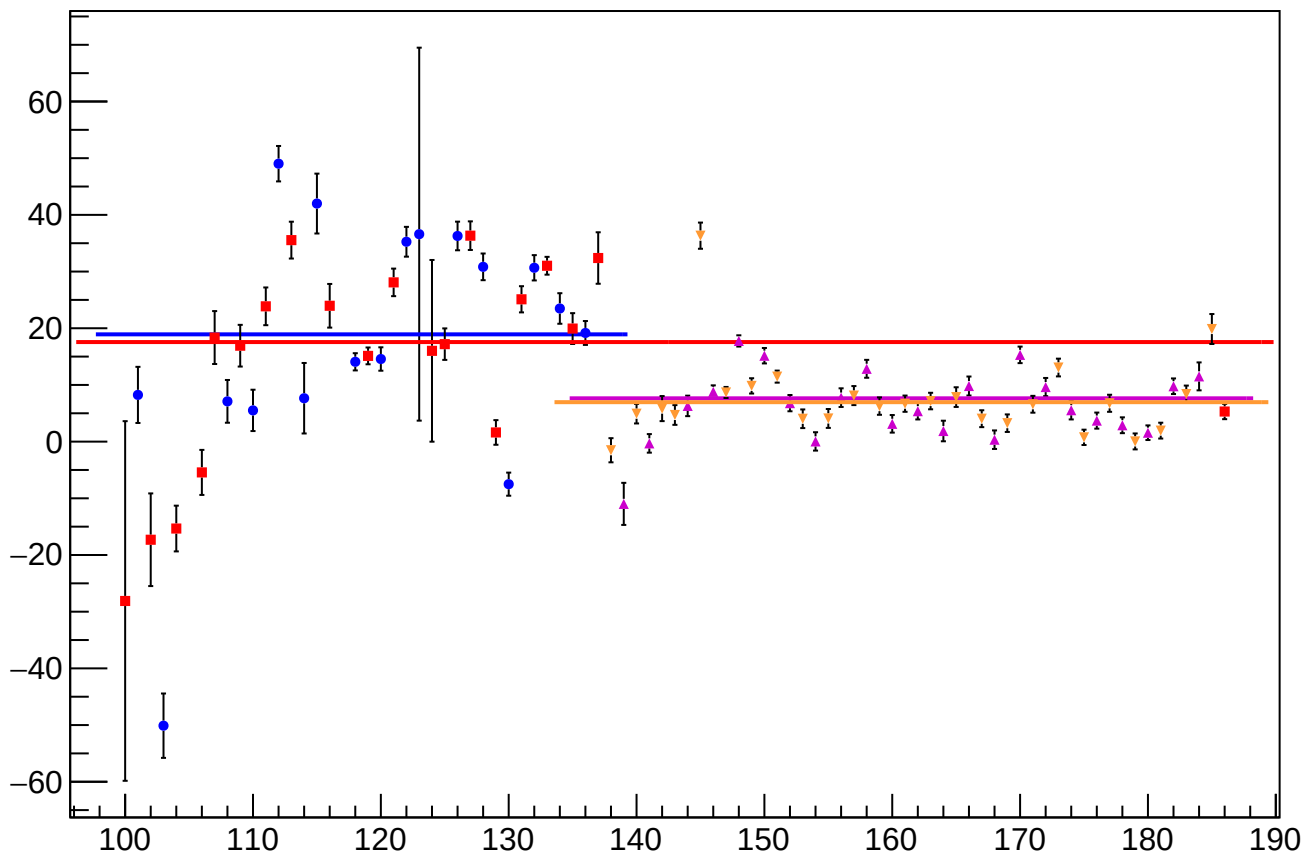
Right: -11.940+/-1.098  $\chi^2/\text{NDF}$ : 0.0/0

In: -28.810+/-0.395  $\chi^2/\text{NDF}$ :1763.8/22

Out: -27.279+/-0.366  $\chi^2/\text{NDF}$ :2101.1/25

All: -27.986+/-0.269  $\chi^2/\text{NDF}$ : 3872.9/48

reg\_asym\_at1\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $18.924 \pm 0.654$   $\chi^2/\text{NDF}$ : 616.2/16

Left Out:  $6.960 \pm 0.303$   $\chi^2/\text{NDF}$ : 321.3/24

Right Out:  $17.564 \pm 0.581$   $\chi^2/\text{NDF}$ : 466.1/19

Left In:  $7.638 \pm 0.313$   $\chi^2/\text{NDF}$ : 337.7/22

Left:  $7.287 \pm 0.218$   $\chi^2/\text{NDF}$ : 661.5/47

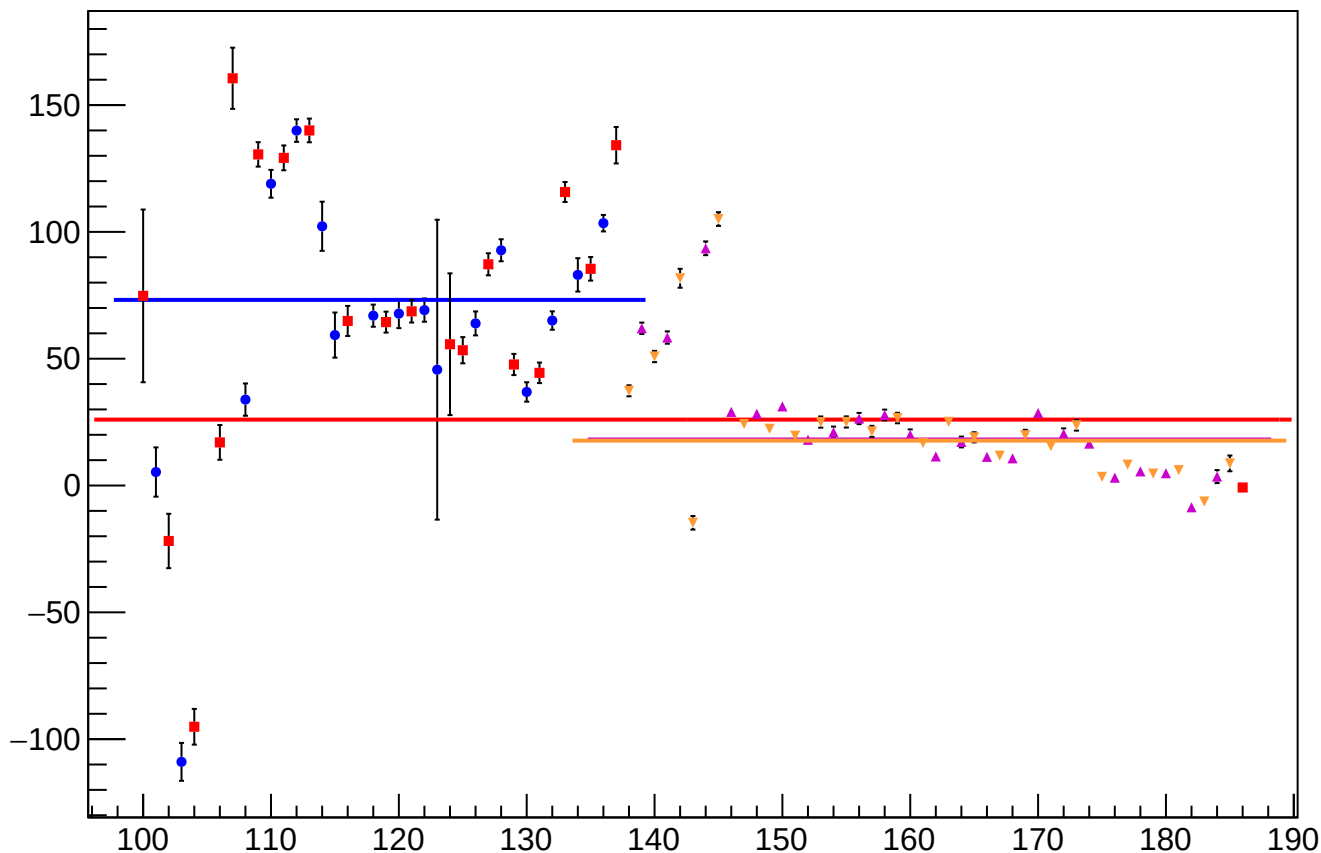
Right:  $18.163 \pm 0.434$   $\chi^2/\text{NDF}$ : 1084.7/36

In:  $9.747 \pm 0.283$   $\chi^2/\text{NDF}$ : 1196.0/39

Out:  $9.230 \pm 0.269$   $\chi^2/\text{NDF}$ : 1049.6/44

All:  $9.475 \pm 0.195$   $\chi^2/\text{NDF}$ : 2247.4/84

reg\_asym\_at1\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 73.189 $\pm$ 1.239  $\chi^2$ /NDF: 1199.7/16

Left Out: 17.705 $\pm$ 0.387  $\chi^2$ /NDF:2432.2/24

Right Out: 25.994 $\pm$ 0.714  $\chi^2$ /NDF: 4287.7/19

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

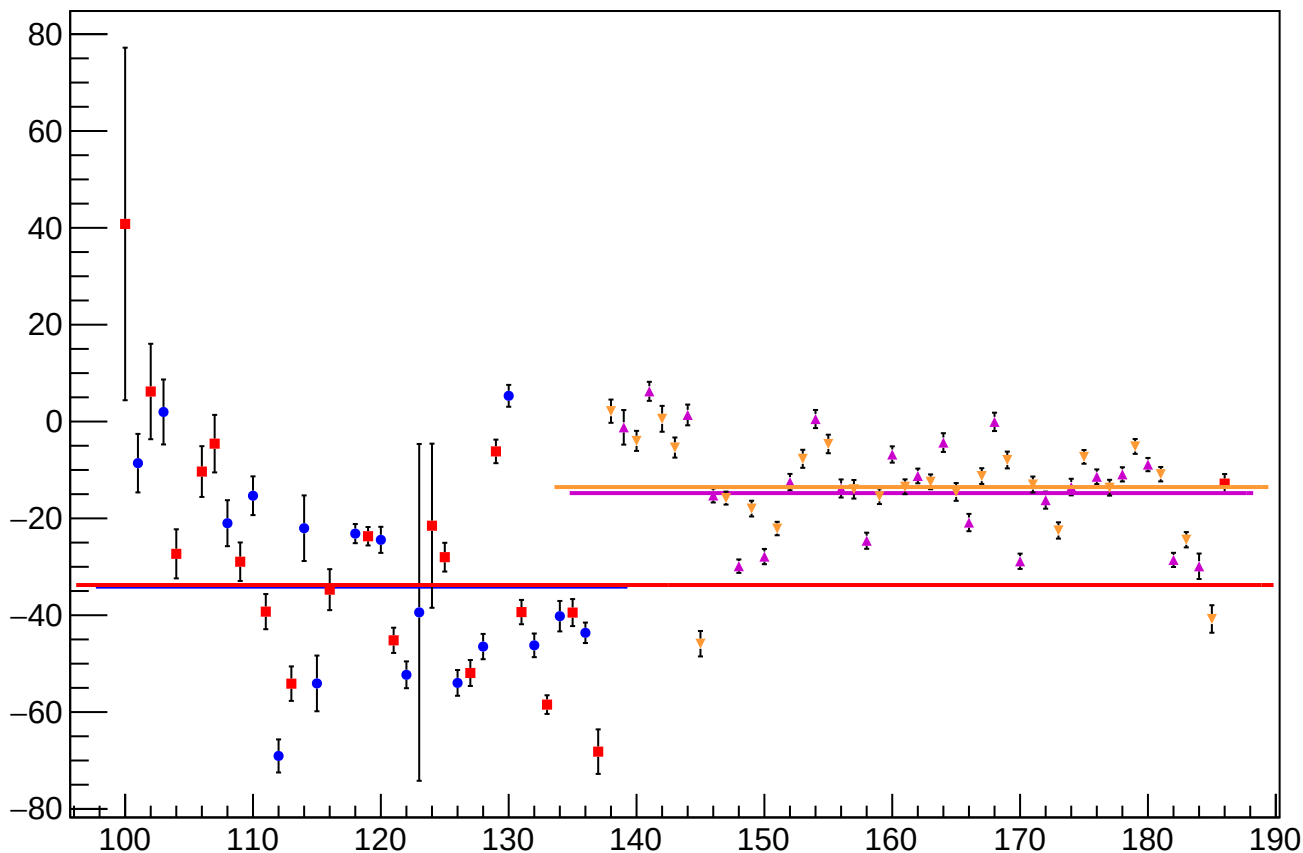
Right: 37.752 $\pm$ 0.618  $\chi^2$ /NDF: 6577.3/36

In: 23.173 $\pm$ 0.374  $\chi^2$ /NDF:5333.0/39

Out: 19.591 $\pm$ 0.340  $\chi^2$ /NDF:6824.1/44

All: 21.212 $\pm$ 0.252  $\chi^2$ /NDF: 12207.3/84

reg\_asym\_at1\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-34.097 \pm 0.746$   $\chi^2/\text{NDF}$ : 714.9/16

Left Out:  $-13.531 \pm 0.344$   $\chi^2/\text{NDF}$ : 572.8/24

Right Out:  $-33.762 \pm 0.691$   $\chi^2/\text{NDF}$ : 670.5/19

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:  $-33.916 \pm 0.507$   $\chi^2/\text{NDF}$ : 1385.4/36

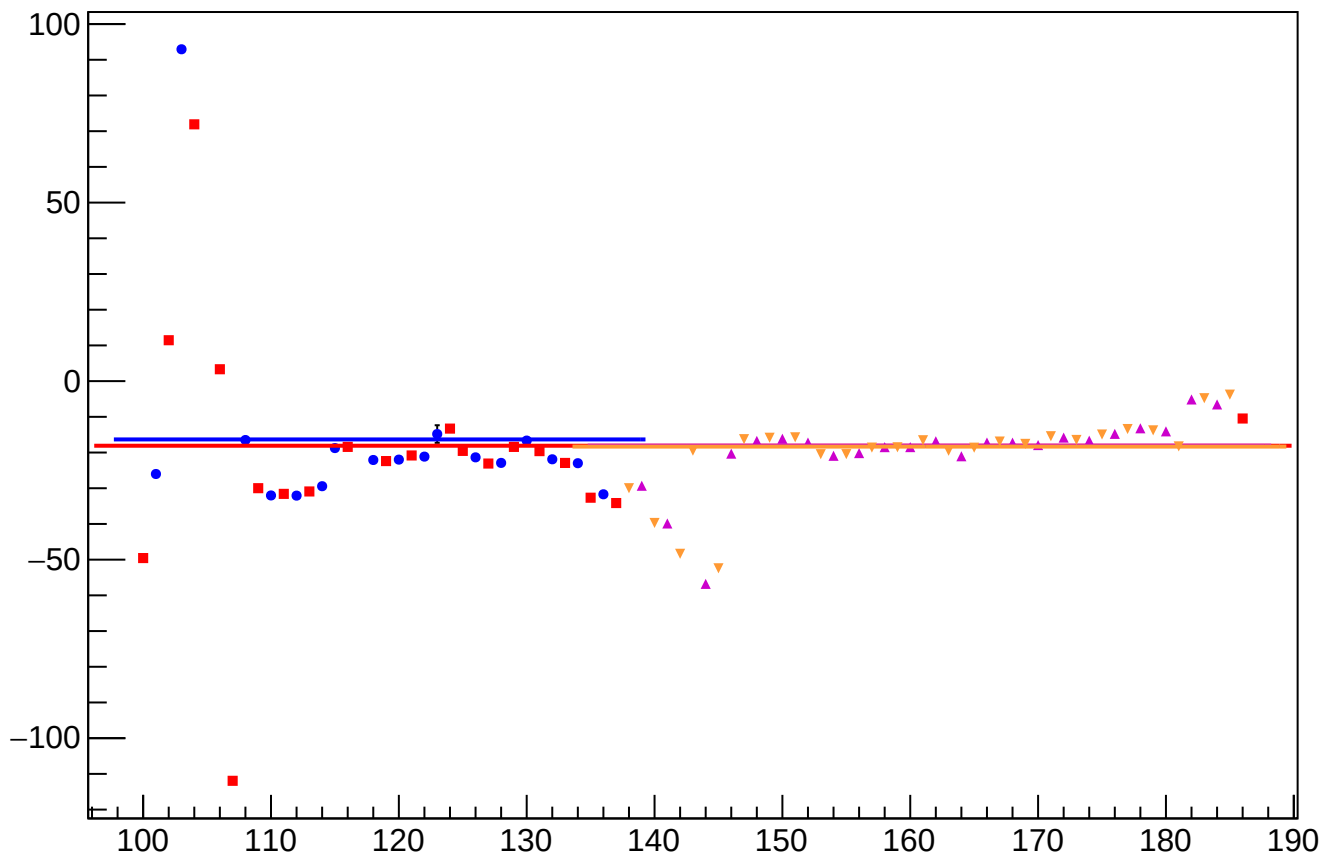
In:  $-18.329 \pm 0.320$   $\chi^2/\text{NDF}$ : 2099.9/39

Out:  $-17.551 \pm 0.308$   $\chi^2/\text{NDF}$ : 1930.4/44

All:  $-17.925 \pm 0.222$   $\chi^2/\text{NDF}$ : 4033.4/84



reg\_asym\_at1\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-16.329 \pm 0.045$   $\chi^2/\text{NDF}: 474104.2/16$

Left Out:  $-18.334 \pm 0.016$   $\chi^2/\text{NDF}: 284152.1/24$

Right Out:  $-18.094 \pm 0.043$   $\chi^2/\text{NDF}: 436979.5/19$

Left In:  $-18.083 \pm 0.016$   $\chi^2/\text{NDF}: 241949.5/22$

Left:  $-18.211 \pm 0.011$   $\chi^2/\text{NDF}: 526224.9/47$

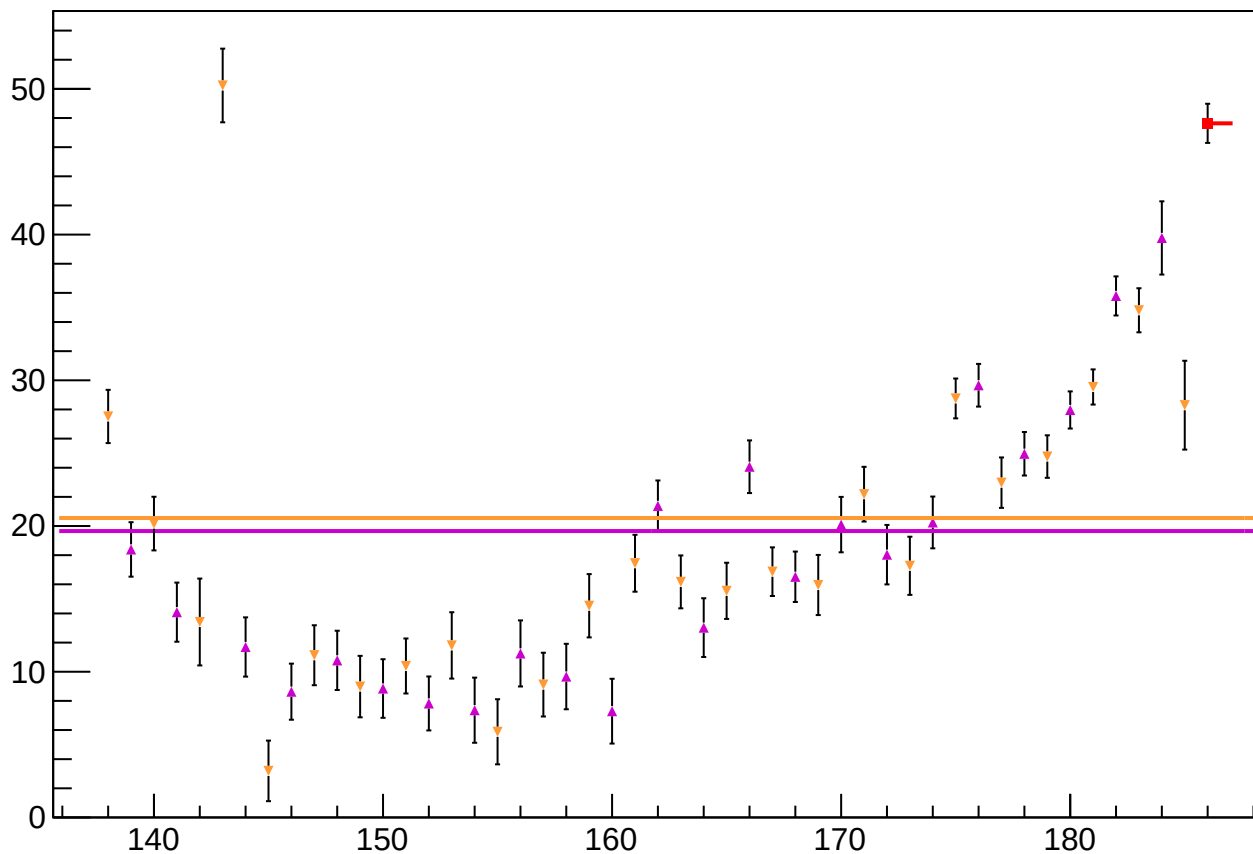
Right:  $-17.242 \pm 0.031$   $\chi^2/\text{NDF}: 911890.0/36$

In:  $-17.882 \pm 0.015$   $\chi^2/\text{NDF}: 717417.2/39$

Out:  $-18.306 \pm 0.015$   $\chi^2/\text{NDF}: 721158.6/44$

All:  $-18.098 \pm 0.011$   $\chi^2/\text{NDF}: 1438974.3/84$

reg\_asym\_at1\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 20.550+/-0.373  $\chi^2/\text{NDF}$ :626.4/24

Right Out: 47.635+/-1.343  $\chi^2/\text{NDF}$ : 0.0/0

Left In: 19.656+/-0.380  $\chi^2/\text{NDF}$ :571.8/22

Left: 20.112+/-0.266  $\chi^2/\text{NDF}$ : 1201.0/47

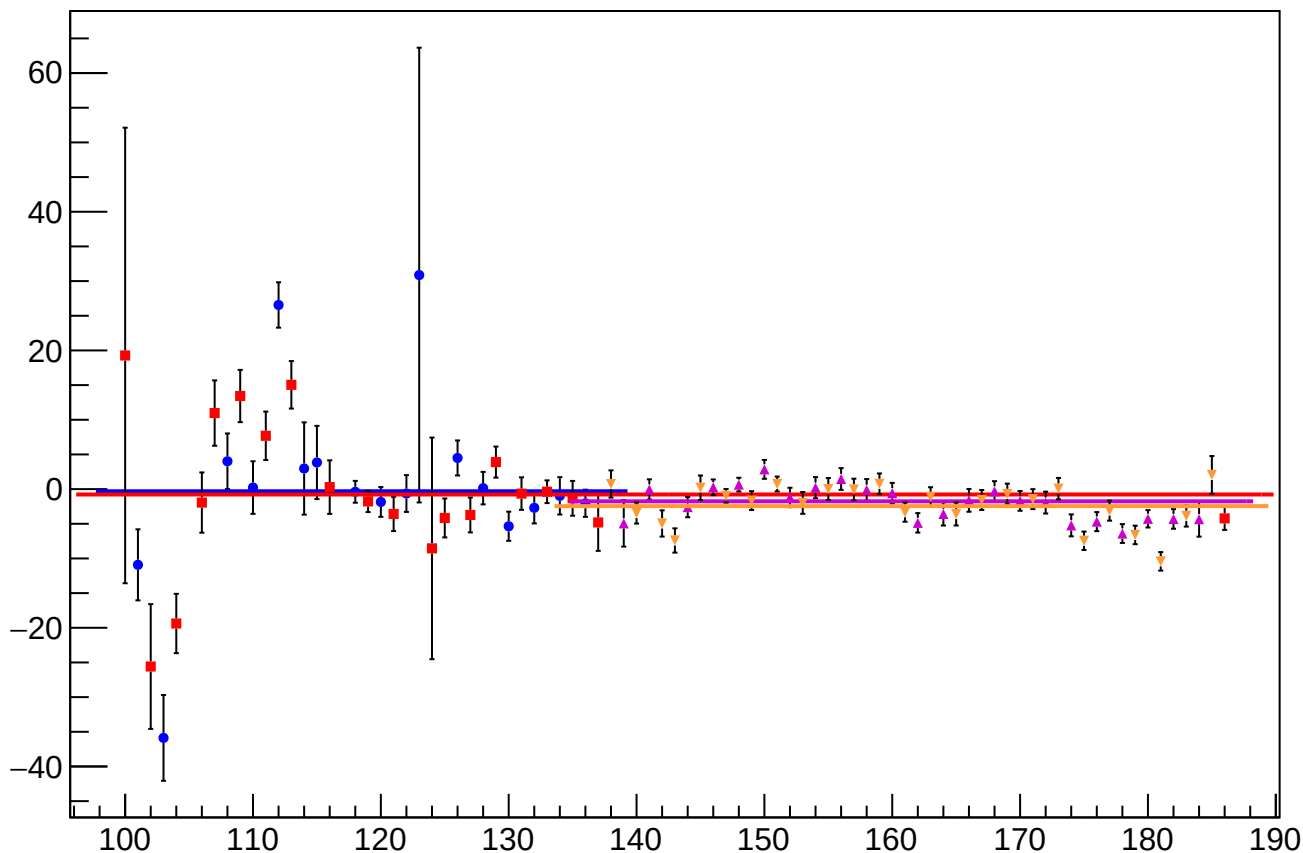
Right: 47.635+/-1.343  $\chi^2/\text{NDF}$ : 0.0/0

In: 19.656+/-0.380  $\chi^2/\text{NDF}$ :571.8/22

Out: 22.489+/-0.359  $\chi^2/\text{NDF}$ :1003.7/25

All: 21.153+/-0.261  $\chi^2/\text{NDF}$ : 1604.9/48

reg\_asym\_at1\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-0.309 \pm 0.663$   $\chi^2/\text{NDF}$ : 119.6/16

Left Out:  $-2.455 \pm 0.292$   $\chi^2/\text{NDF}$ : 106.0/24

Right Out:  $-0.776 \pm 0.611$   $\chi^2/\text{NDF}$ : 89.2/19

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

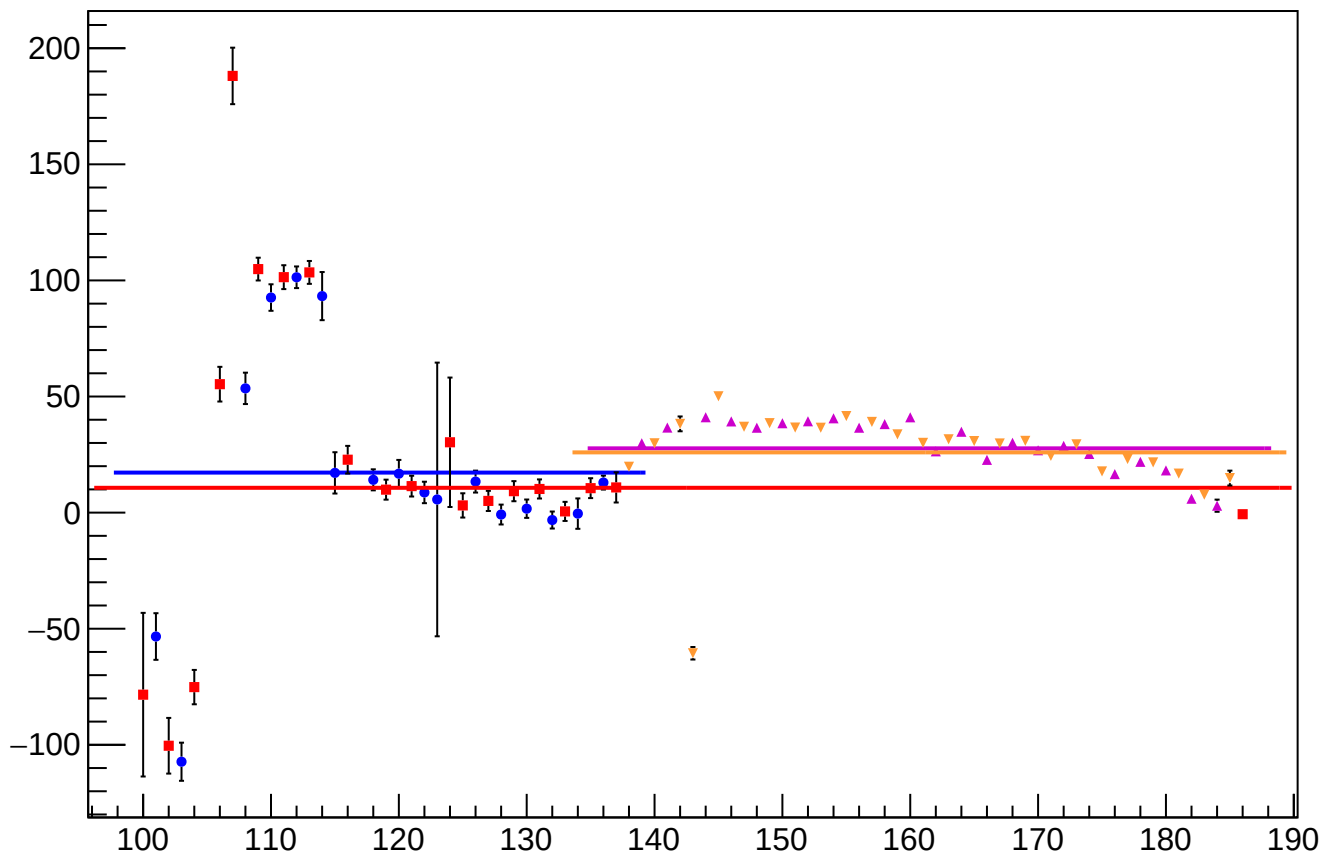
Right:  $-0.561 \pm 0.449$   $\chi^2/\text{NDF}$ : 209.0/36

In:  $-1.509 \pm 0.275$   $\chi^2/\text{NDF}$ : 191.0/39

Out:  $-2.142 \pm 0.264$   $\chi^2/\text{NDF}$ : 201.3/44

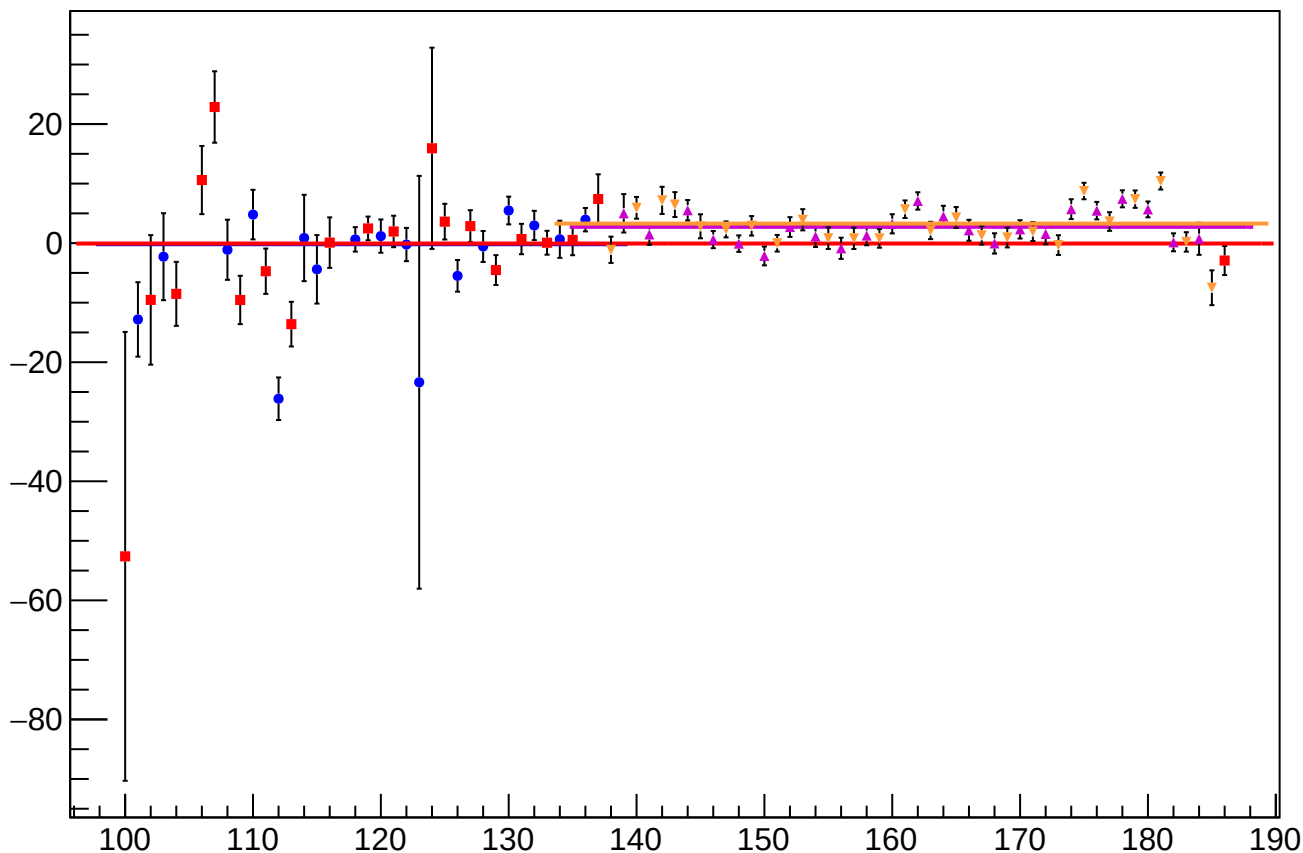
All:  $-1.839 \pm 0.190$   $\chi^2/\text{NDF}$ : 395.0/84

reg\_asym\_at1\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Left:  $26.794 \pm 0.265$   $\chi^2/\text{NDF}: 2526.2/47$   
 Right:  $12.642 \pm 0.682$   $\chi^2/\text{NDF}: 2595.7/36$   
 In:  $26.800 \pm 0.362$   $\chi^2/\text{NDF}: 1808.2/39$   
 Out:  $23.301 \pm 0.339$   $\chi^2/\text{NDF}: 3637.8/44$   
 All:  $24.934 \pm 0.247$   $\chi^2/\text{NDF}: 5495.8/84$

reg\_asym\_at1\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-0.183 \pm 0.753$   $\chi^2/\text{NDF}$ : 75.7/16

Left Out:  $3.283 \pm 0.331$   $\chi^2/\text{NDF}$ : 102.3/24

Right Out:  $-0.069 \pm 0.717$   $\chi^2/\text{NDF}$ : 56.9/19

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

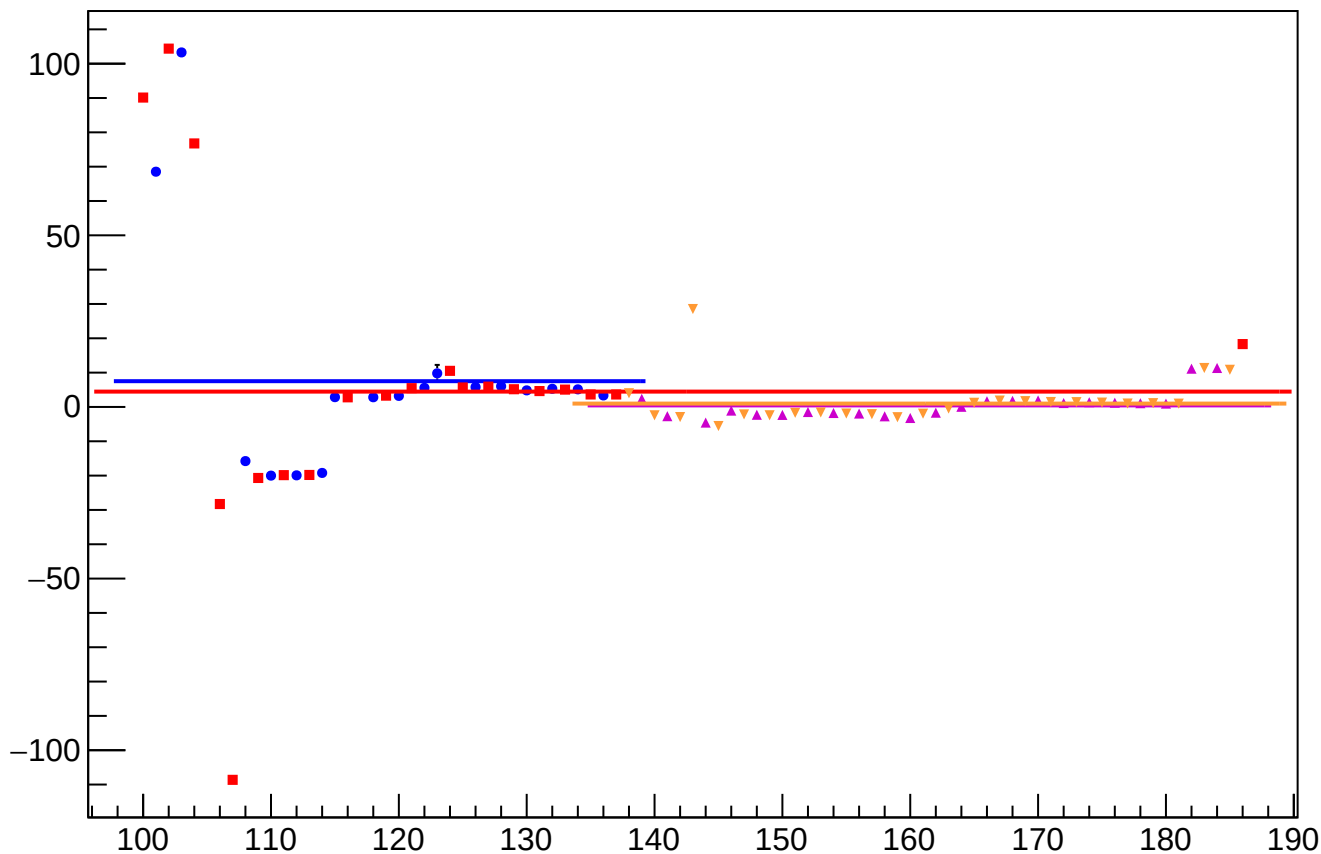
Right:  $-0.123 \pm 0.519$   $\chi^2/\text{NDF}$ : 132.6/36

In:  $2.241 \pm 0.311$   $\chi^2/\text{NDF}$ : 152.6/39

Out:  $2.693 \pm 0.301$   $\chi^2/\text{NDF}$ : 177.2/44

All:  $2.474 \pm 0.216$   $\chi^2/\text{NDF}$ : 330.9/84

reg\_asym\_at1\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 7.507+/-0.045  $\chi^2/\text{NDF}$ : 355810.5/16

Left Out: 0.979+/-0.015  $\chi^2/\text{NDF}$ :117391.3/24

Right Out: 4.471+/-0.044  $\chi^2/\text{NDF}$ : 517478.4/19

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

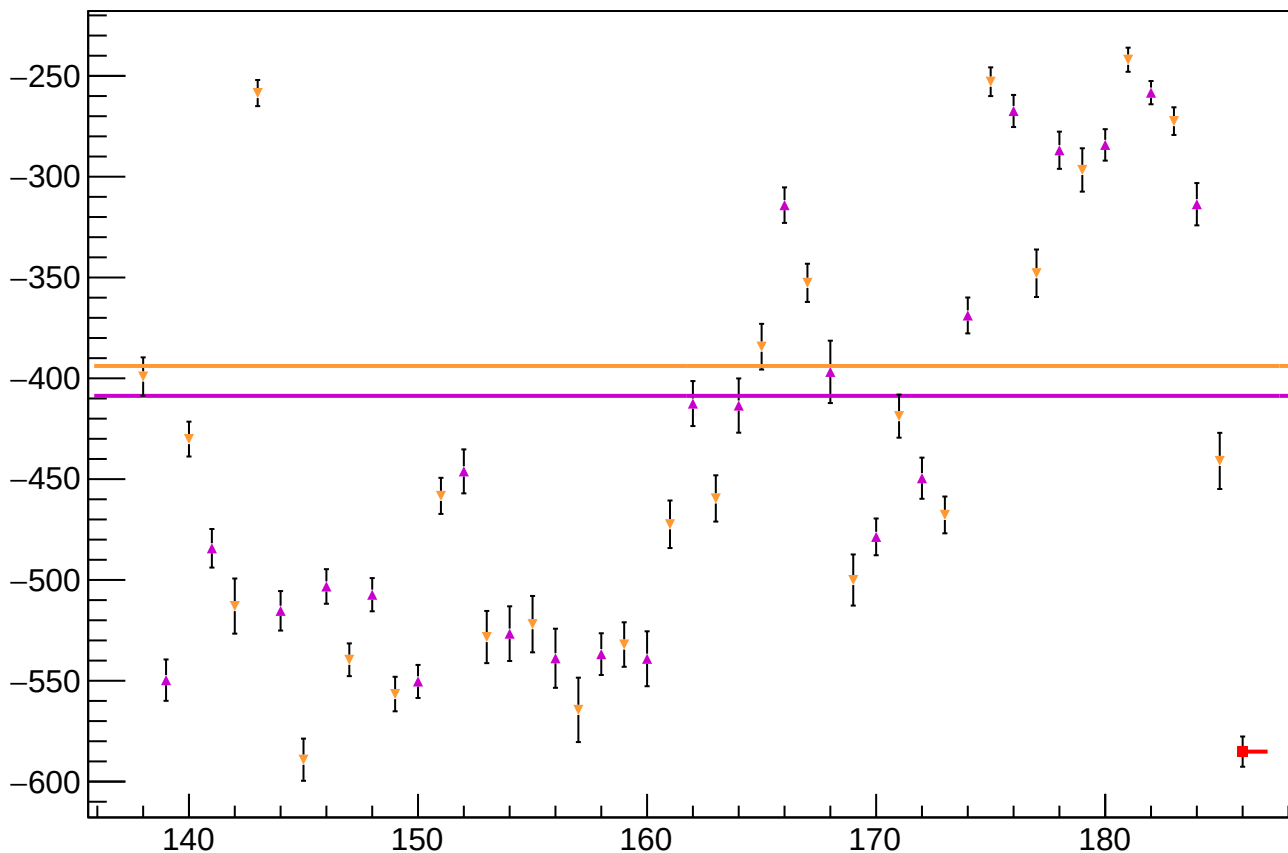
Right: 5.971+/-0.031  $\chi^2/\text{NDF}$ : 875623.5/36

In: 1.203+/-0.015  $\chi^2/\text{NDF}$ :428786.7/39

Out: 1.348+/-0.014  $\chi^2/\text{NDF}$ :640460.1/44

All: 1.277+/-0.010  $\chi^2/\text{NDF}$ : 1069297.3/84

reg\_asym\_at2\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Left Out: -393.871 $\pm$ 1.897  $\chi^2$ /NDF:3772.8/24

Right Out: -585.144 $\pm$ 7.497  $\chi^2$ /NDF: 0.0/0

Left In: -408.696 $\pm$ 1.979  $\chi^2$ /NDF:3062.9/22

Left: -400.970 $\pm$ 1.369  $\chi^2$ /NDF: 6864.9/47

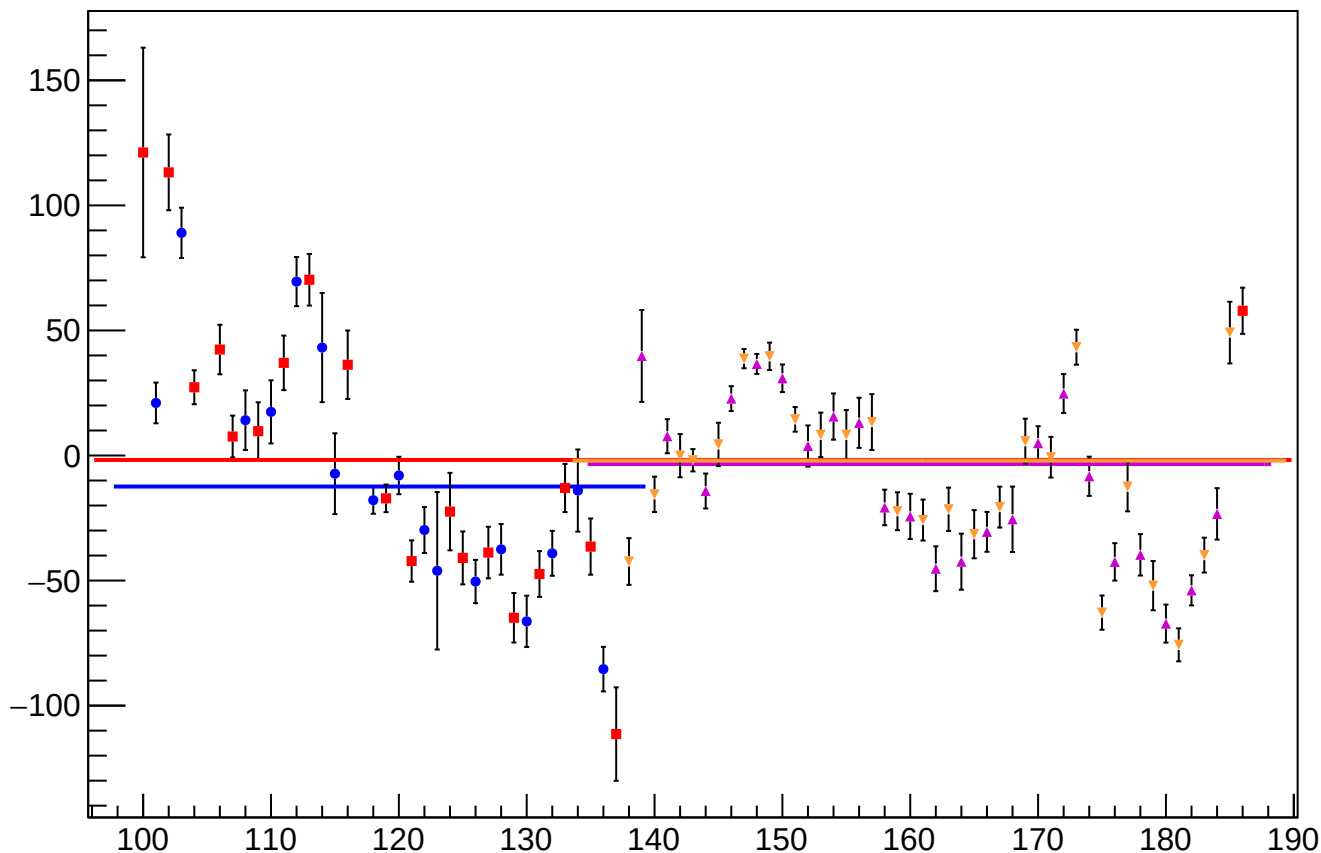
Right: -585.144 $\pm$ 7.497  $\chi^2$ /NDF: 0.0/0

In: -408.696 $\pm$ 1.979  $\chi^2$ /NDF:3062.9/22

Out: -405.382 $\pm$ 1.839  $\chi^2$ /NDF:4384.6/25

All: -406.918 $\pm$ 1.347  $\chi^2$ /NDF: 7449.0/48

reg\_asym\_at2\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: -12.408 $\pm$ 2.353  $\chi^2/\text{NDF}$ : 340.6/16

Left Out: -2.037 $\pm$ 1.424  $\chi^2/\text{NDF}$ : 563.8/24

Right Out: -1.780 $\pm$ 2.197  $\chi^2/\text{NDF}$ : 388.3/19

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: -6.729 $\pm$ 1.606  $\chi^2/\text{NDF}$ : 739.8/36

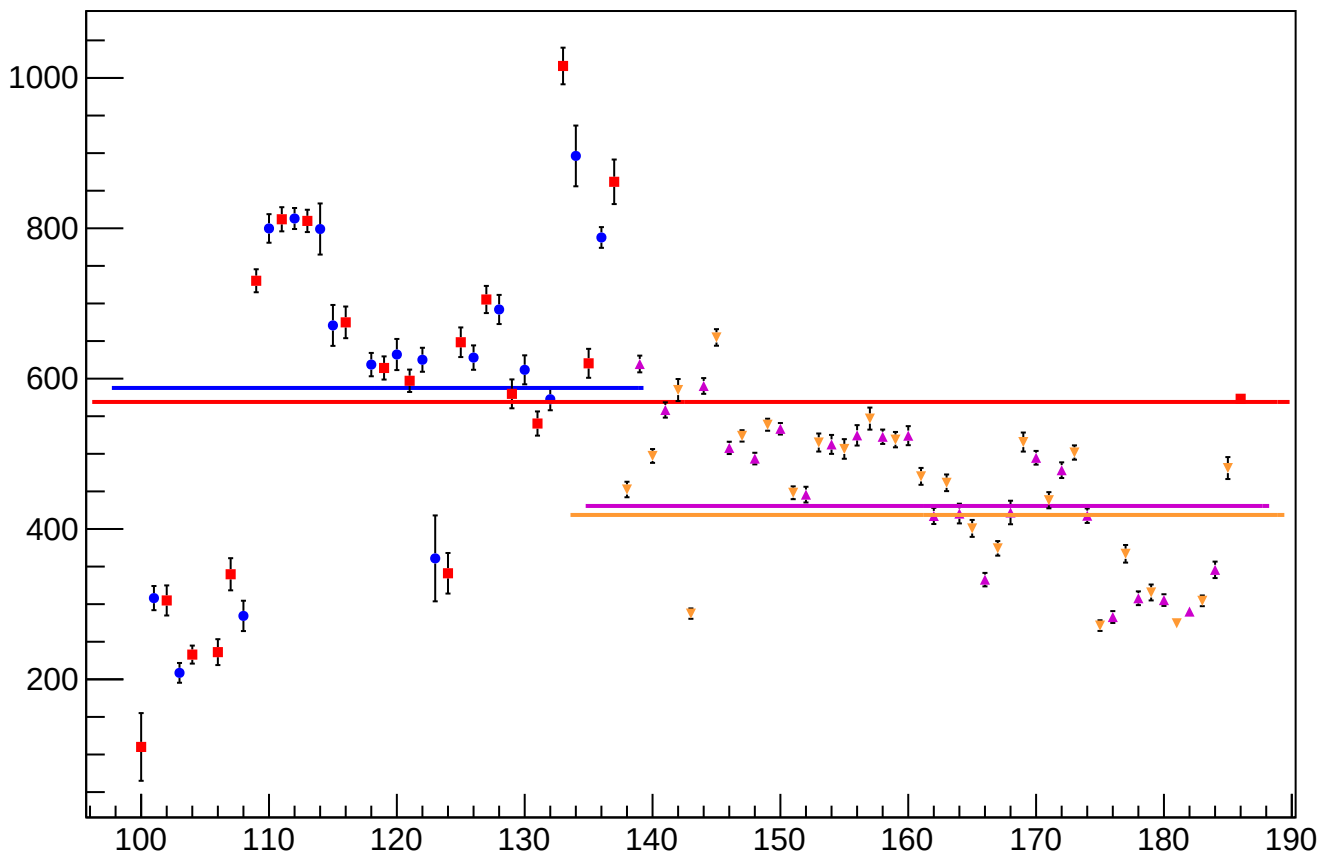
In: -6.066 $\pm$ 1.277  $\chi^2/\text{NDF}$ : 801.9/39

Out: -1.961 $\pm$ 1.195  $\chi^2/\text{NDF}$ : 952.1/44

All: -3.878 $\pm$ 0.872  $\chi^2/\text{NDF}$ : 1759.5/84



reg\_asym\_at2\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 587.620 $\pm$ 4.361  $\chi^2$ /NDF: 2127.1/16

Left Out: 418.680 $\pm$ 1.905  $\chi^2$ /NDF:3296.5/24

Right Out: 568.997 $\pm$ 3.405  $\chi^2$ /NDF: 2783.4/19

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

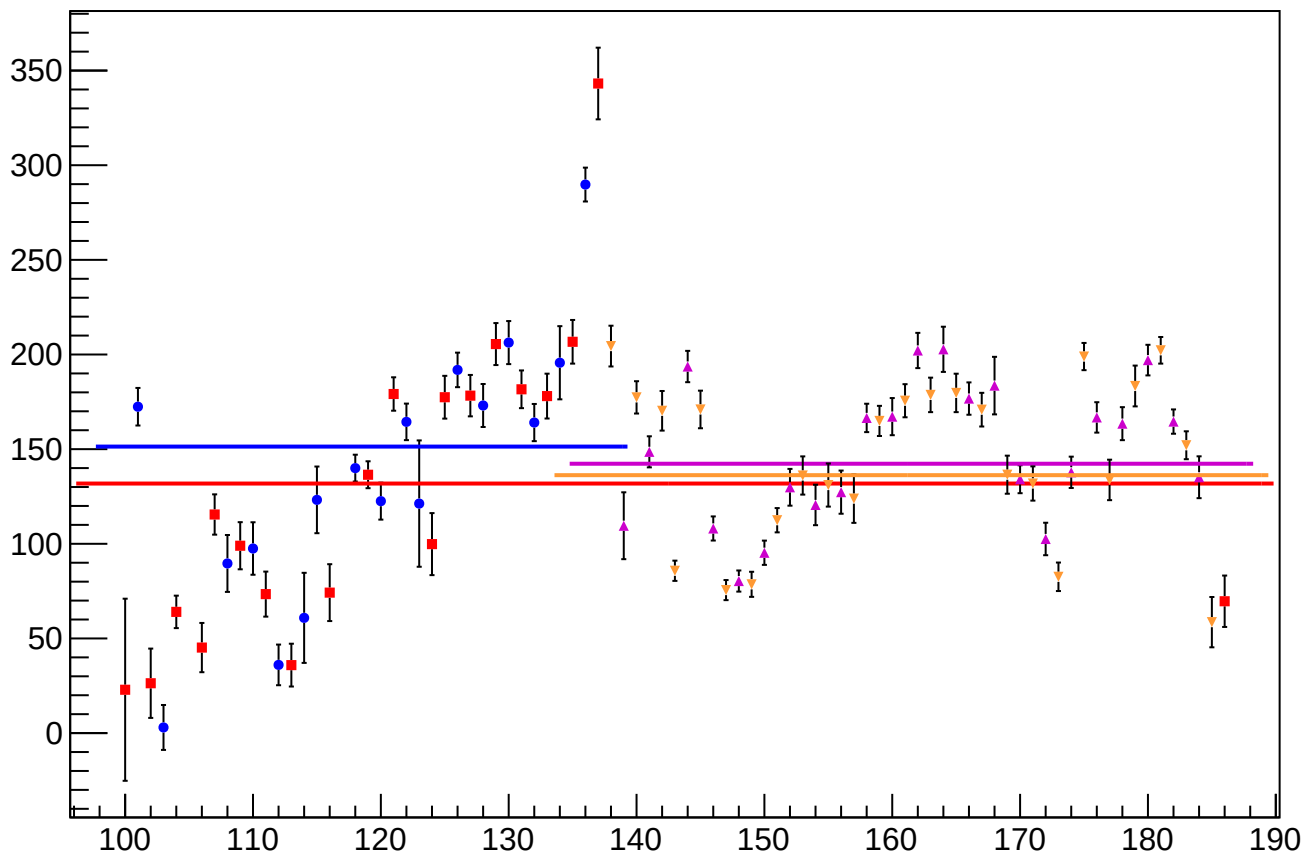
Right: 576.050 $\pm$ 2.684  $\chi^2$ /NDF: 4921.9/36

In: 457.255 $\pm$ 1.796  $\chi^2$ /NDF:6053.5/39

Out: 454.508 $\pm$ 1.662  $\chi^2$ /NDF:7564.1/44

All: 455.776 $\pm$ 1.220  $\chi^2$ /NDF: 13618.9/84

reg\_asym\_at2\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $151.359 \pm 2.715$   $\chi^2/\text{NDF}: 632.2/16$

Left Out:  $136.258 \pm 1.651$   $\chi^2/\text{NDF}: 758.3/24$

Right Out:  $131.832 \pm 2.572$   $\chi^2/\text{NDF}: 604.7/19$

Left In:  $142.296 \pm 1.745$   $\chi^2/\text{NDF}: 459.8/22$

Left:  $139.111 \pm 1.199$   $\chi^2/\text{NDF}: 1224.4/47$

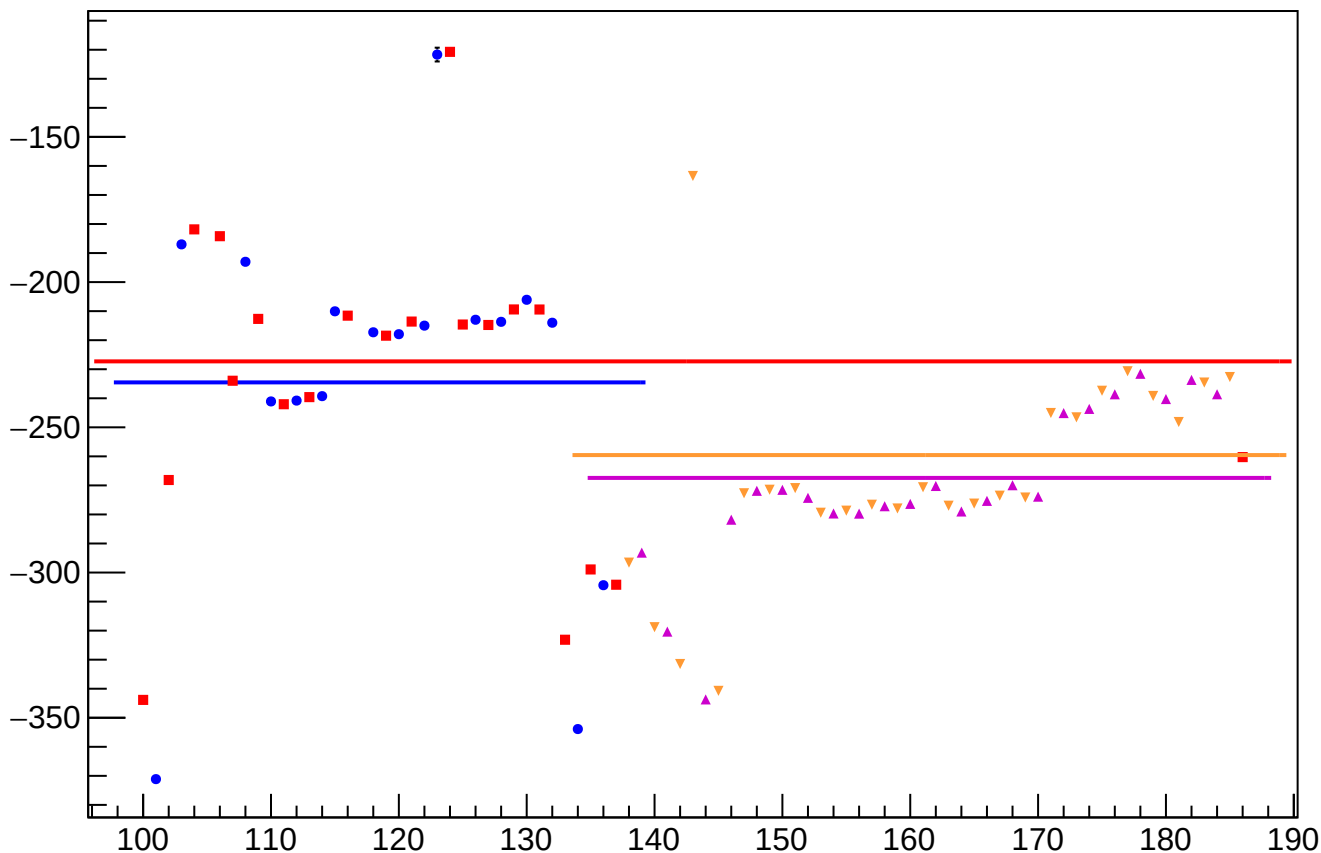
Right:  $141.068 \pm 1.867$   $\chi^2/\text{NDF}: 1264.1/36$

In:  $144.945 \pm 1.468$   $\chi^2/\text{NDF}: 1099.9/39$

Out:  $134.967 \pm 1.389$   $\chi^2/\text{NDF}: 1365.1/44$

All:  $139.682 \pm 1.009$   $\chi^2/\text{NDF}: 2489.3/84$

reg\_asym\_at2\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: -234.530+/-0.149  $\chi^2/\text{NDF}$ : 145014.5/16

Left Out: -259.557+/-0.079  $\chi^2/\text{NDF}$ :238235.2/24

Right Out: -227.294+/-0.140  $\chi^2/\text{NDF}$ : 100152.6/19

Left In: -267.417+/-0.082  $\chi^2/\text{NDF}$ :98035.5/22

Left: -263.361+/-0.057  $\chi^2/\text{NDF}$ : 341051.4/47

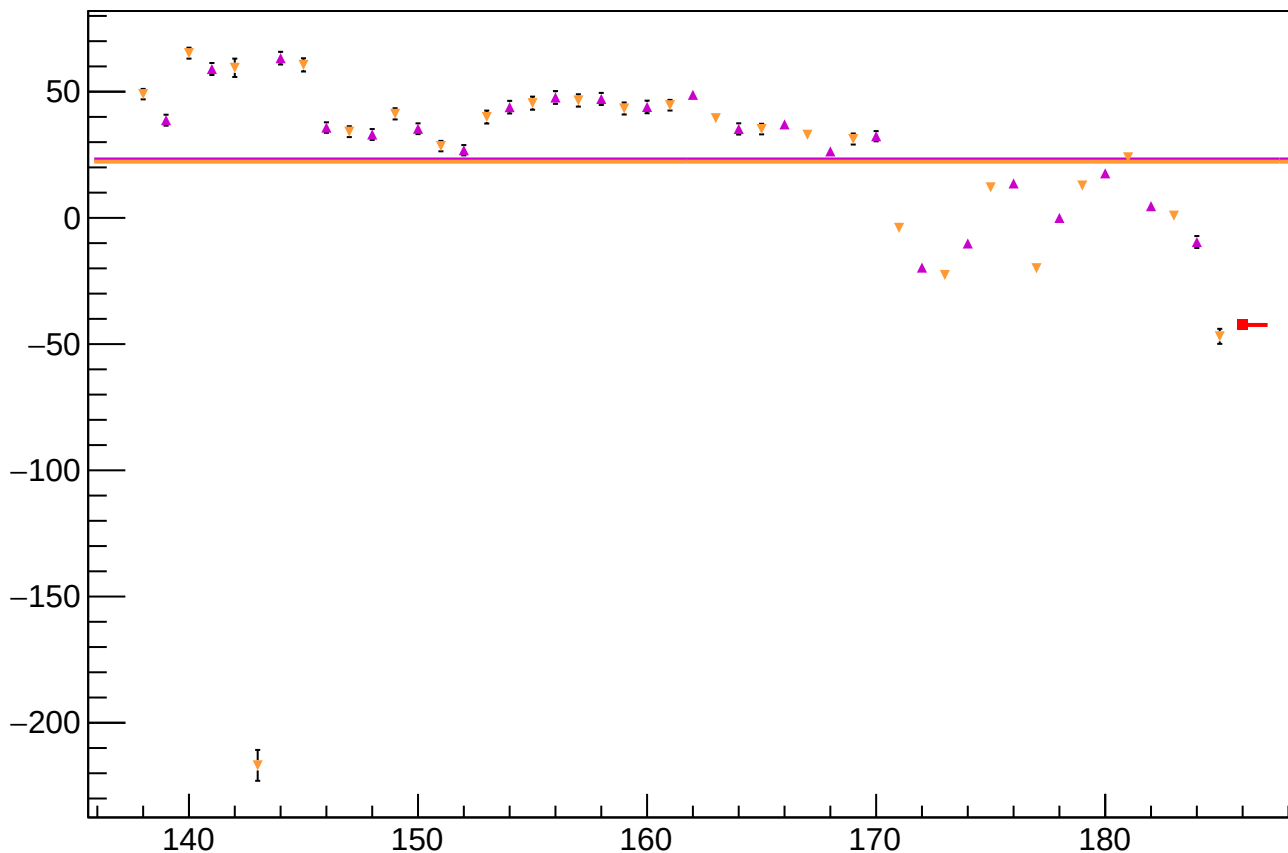
Right: -230.684+/-0.102  $\chi^2/\text{NDF}$ : 246417.4/36

In: -259.835+/-0.072  $\chi^2/\text{NDF}$ :280430.2/39

Out: -251.756+/-0.069  $\chi^2/\text{NDF}$ :378620.9/44

All: -255.636+/-0.050  $\chi^2/\text{NDF}$ : 665660.7/84

reg\_asym\_at2\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Left Out: 22.279 $\pm$ 0.399  $\chi^2$ /NDF:5171.0/24

Right Out: -42.407 $\pm$ 1.746  $\chi^2$ /NDF: 0.0/0

Left In: 23.136 $\pm$ 0.401  $\chi^2$ /NDF:2744.7/22

Left: 22.705 $\pm$ 0.283  $\chi^2$ /NDF: 7918.0/47

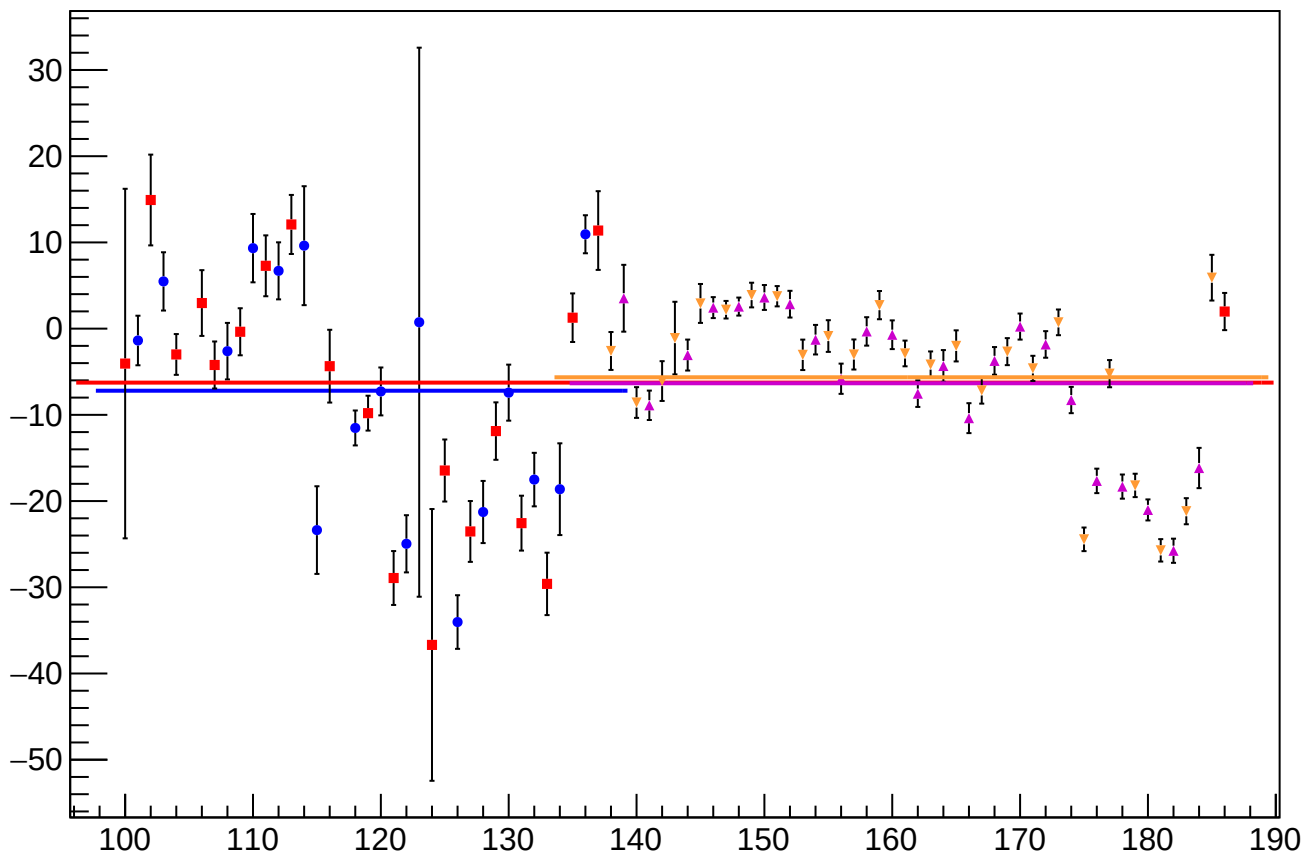
Right: -42.407 $\pm$ 1.746  $\chi^2$ /NDF: 0.0/0

In: 23.136 $\pm$ 0.401  $\chi^2$ /NDF:2744.7/22

Out: 19.072 $\pm$ 0.389  $\chi^2$ /NDF:6475.6/25

All: 21.039 $\pm$ 0.279  $\chi^2$ /NDF: 9273.1/48

reg\_asym\_at2\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-7.201 \pm 0.790$   $\chi^2/\text{NDF}: 277.5/16$

Left Out:  $-5.642 \pm 0.316$   $\chi^2/\text{NDF}: 893.7/24$

Right Out:  $-6.261 \pm 0.718$   $\chi^2/\text{NDF}: 271.4/19$

Left In:  $-6.337 \pm 0.321$   $\chi^2/\text{NDF}: 783.0/22$

Left:  $-5.983 \pm 0.225$   $\chi^2/\text{NDF}: 1679.1/47$

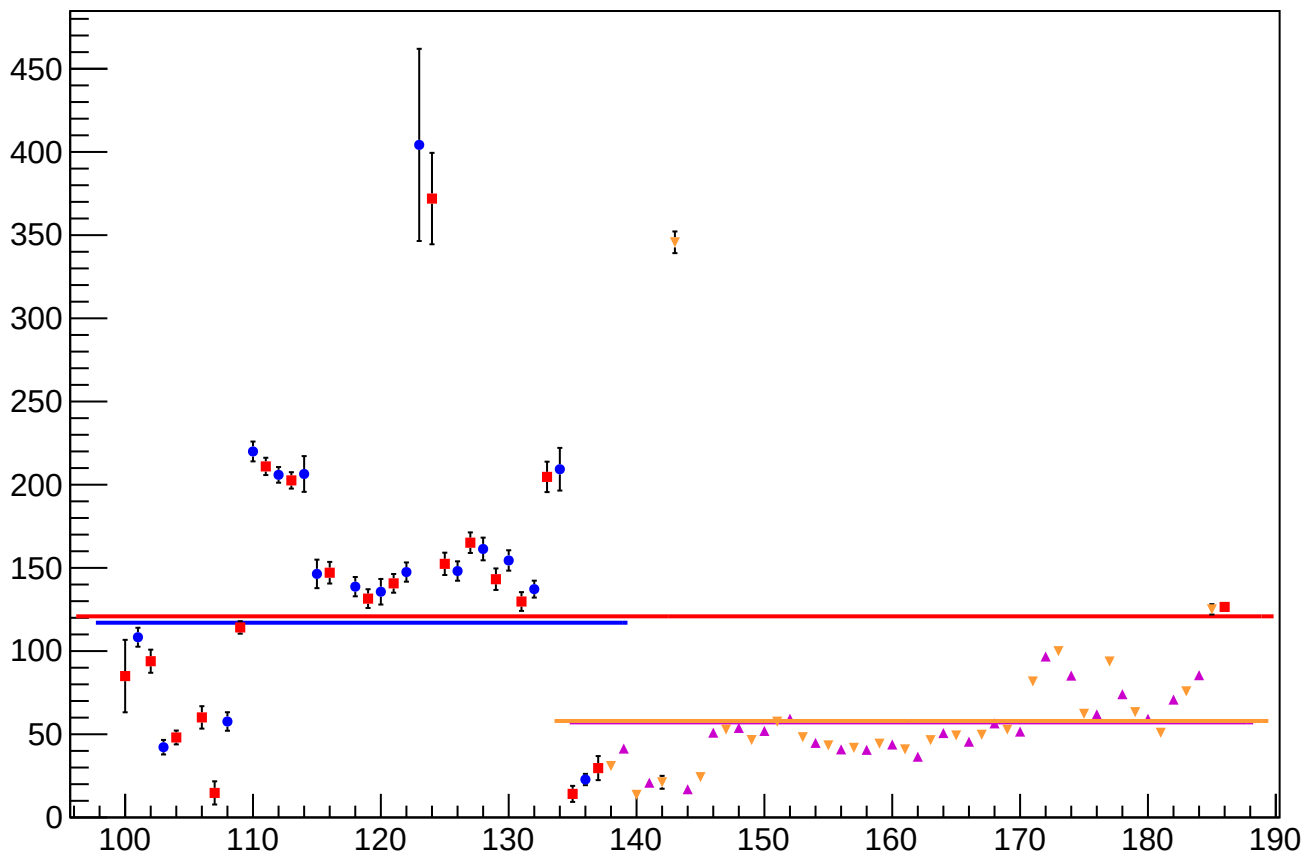
Right:  $-6.686 \pm 0.532$   $\chi^2/\text{NDF}: 549.7/36$

In:  $-6.459 \pm 0.298$   $\chi^2/\text{NDF}: 1061.5/39$

Out:  $-5.742 \pm 0.289$   $\chi^2/\text{NDF}: 1165.8/44$

All:  $-6.090 \pm 0.207$   $\chi^2/\text{NDF}: 2230.2/84$

reg\_asym\_at2\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 117.046 $\pm$ 1.419  $\chi^2$ /NDF: 2159.0/16

Left Out: 57.990 $\pm$ 0.398  $\chi^2$ /NDF: 4635.7/24

Right Out: 120.885 $\pm$ 0.977  $\chi^2$ /NDF: 2167.3/19

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

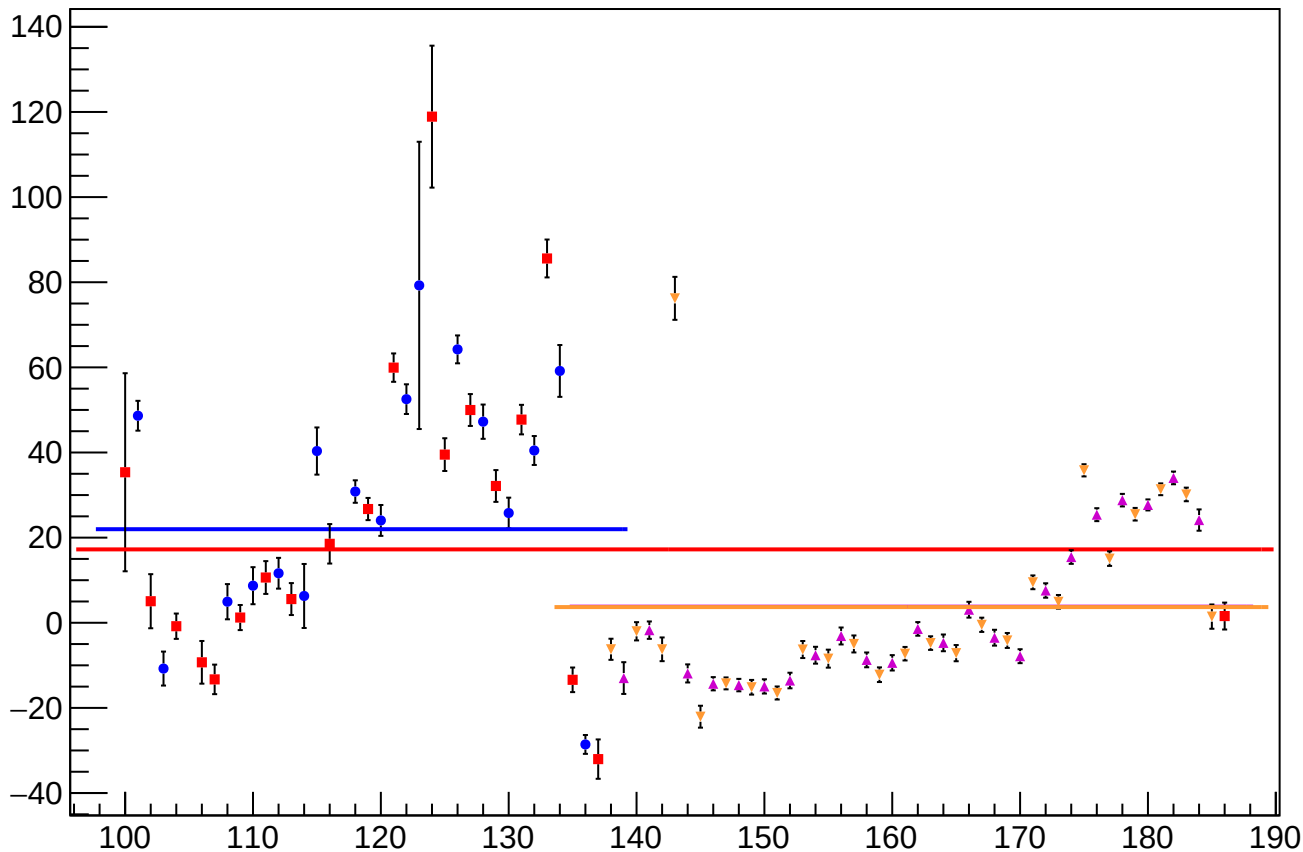
Right: 119.651 $\pm$ 0.805  $\chi^2$ /NDF: 4331.3/36

In: 61.539 $\pm$ 0.385  $\chi^2$ /NDF: 5613.3/39

Out: 66.943 $\pm$ 0.369  $\chi^2$ /NDF: 10358.7/44

All: 64.356 $\pm$ 0.266  $\chi^2$ /NDF: 16075.0/84

reg\_asym\_at2\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 21.981+/-0.900  $\chi^2/\text{NDF}$ : 1061.2/16

Left Out: 3.684+/-0.357  $\chi^2/\text{NDF}$ : 2541.7/24

Right Out: 17.237+/-0.841  $\chi^2/\text{NDF}$ : 1092.4/19

Left In: 3.786+/-0.362  $\chi^2/\text{NDF}$ : 2198.8/22

Left: 3.734+/-0.254  $\chi^2/\text{NDF}$ : 4740.5/47

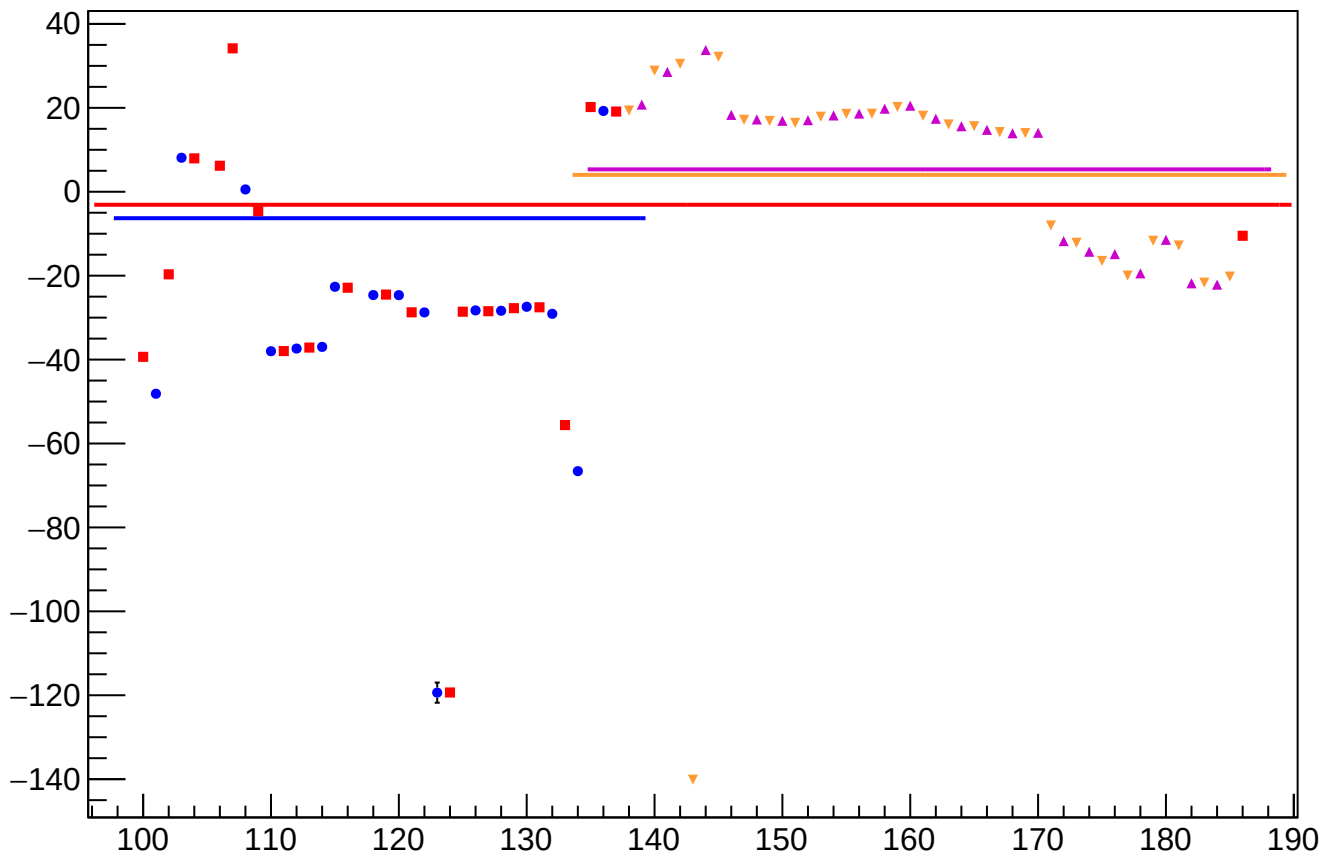
Right: 19.448+/-0.615  $\chi^2/\text{NDF}$ : 2168.5/36

In: 6.315+/-0.336  $\chi^2/\text{NDF}$ : 3611.7/39

Out: 5.751+/-0.328  $\chi^2/\text{NDF}$ : 3854.2/44

All: 6.027+/-0.235  $\chi^2/\text{NDF}$ : 7467.3/84

reg\_asym\_at2\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-6.304 \pm 0.046$   $\chi^2/\text{NDF}$ : 264097.6/16

Left Out:  $4.026 \pm 0.016$   $\chi^2/\text{NDF}$ : 1383143.9/24

Right Out:  $-3.103 \pm 0.045$   $\chi^2/\text{NDF}$ : 266158.9/19

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:  $-4.650 \pm 0.032$   $\chi^2/\text{NDF}$ : 532719.8/36

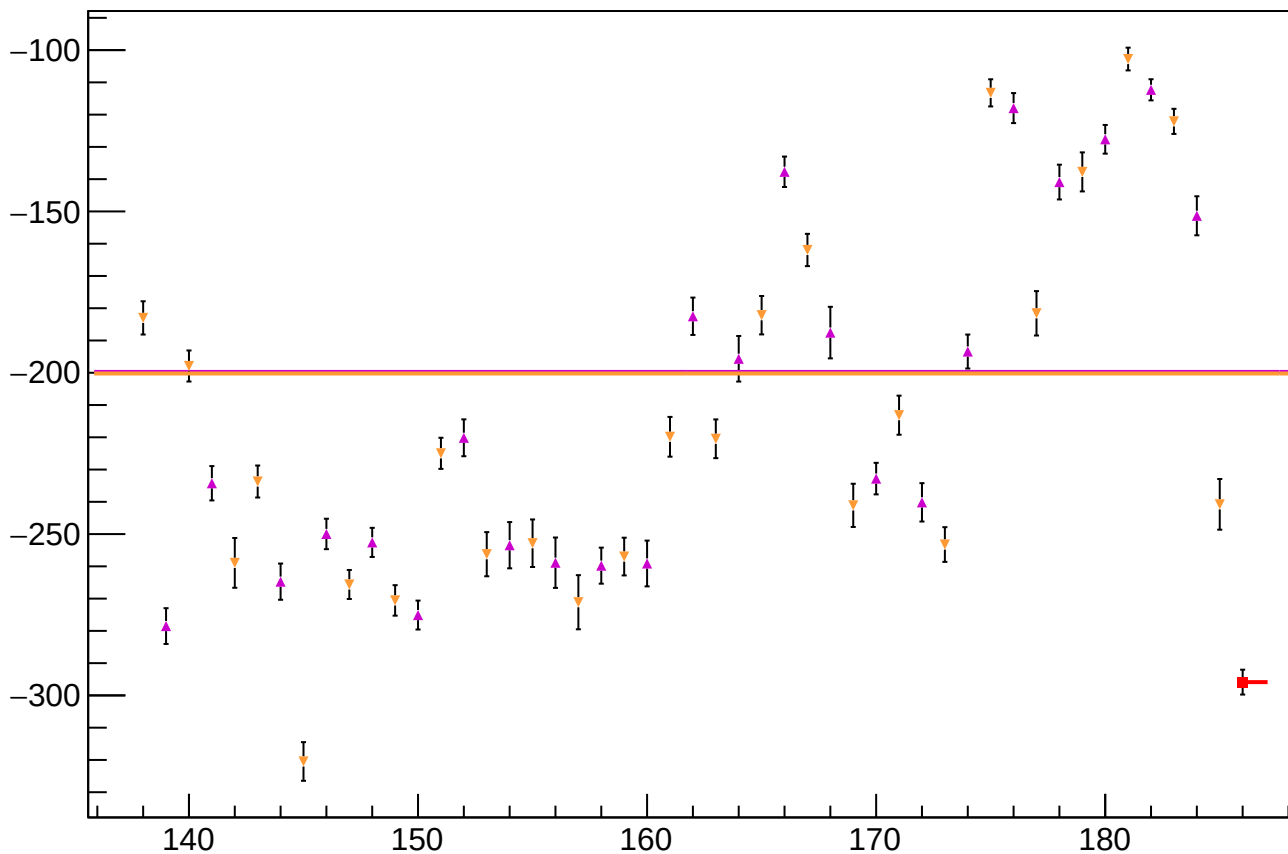
In:  $4.038 \pm 0.015$   $\chi^2/\text{NDF}$ : 1397910.0/39

Out:  $3.188 \pm 0.015$   $\chi^2/\text{NDF}$ : 1671590.2/44

All:  $3.610 \pm 0.011$   $\chi^2/\text{NDF}$ : 3071015.2/84



reg\_asym\_atl1r2\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -200.228+/-1.078  $\chi^2/\text{NDF}$ : 3225.0/24

Right Out: -295.882+/-3.855  $\chi^2/\text{NDF}$ : 0.0/0

Left In: -199.739+/-1.097  $\chi^2/\text{NDF}$ : 2968.0/22

Left: -199.988+/-0.769  $\chi^2/\text{NDF}$ : 6193.2/47

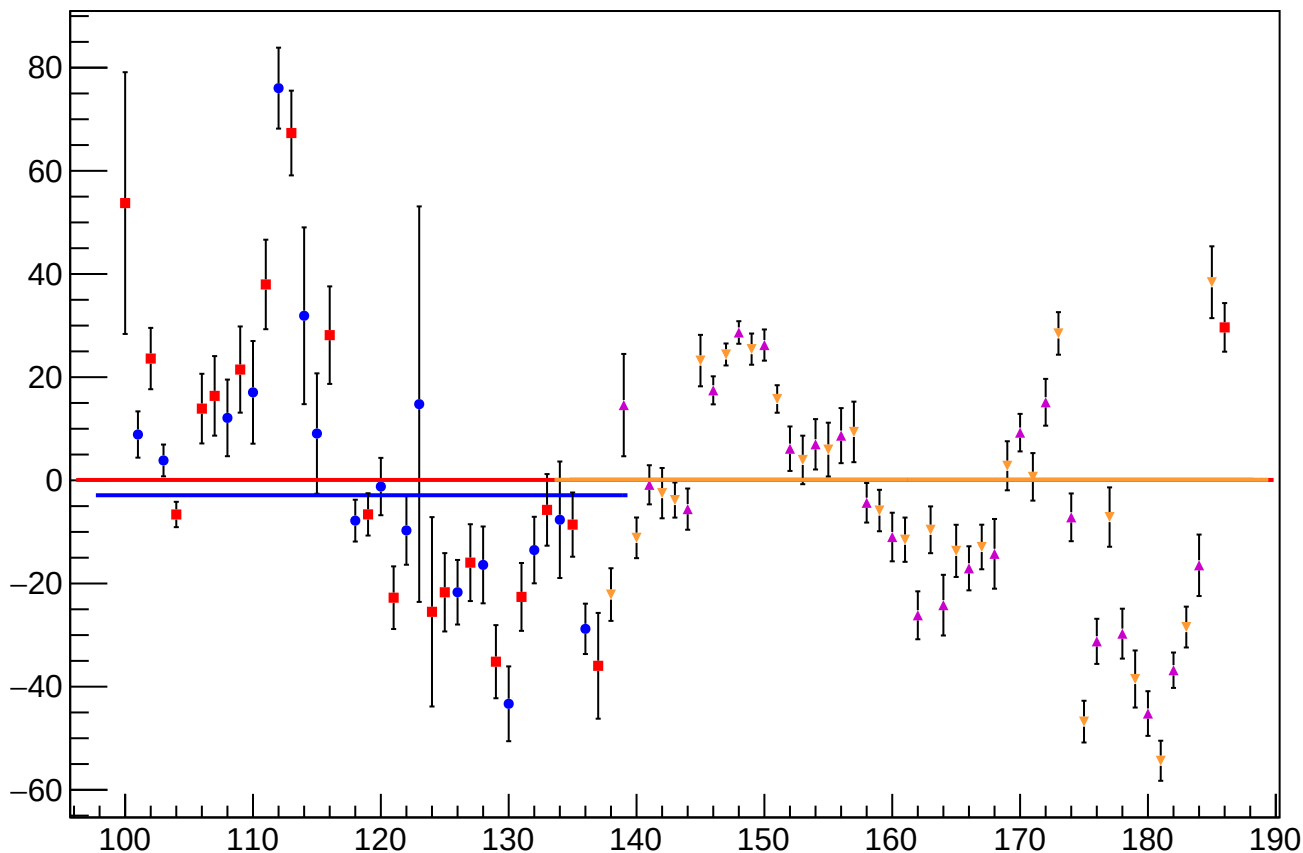
Right: -295.882+/-3.855  $\chi^2/\text{NDF}$ : 0.0/0

In: -199.739+/-1.097  $\chi^2/\text{NDF}$ : 2968.0/22

Out: -207.162+/-1.038  $\chi^2/\text{NDF}$ : 3796.0/25

All: -203.657+/-0.754  $\chi^2/\text{NDF}$ : 6788.2/48

reg\_asym\_atl1r2\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-2.891 \pm 1.469$   $\chi^2/\text{NDF}$ : 203.4/16

Left Out:  $0.109 \pm 0.807$   $\chi^2/\text{NDF}$ : 831.2/24

Right Out:  $0.076 \pm 1.340$   $\chi^2/\text{NDF}$ : 260.3/19

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

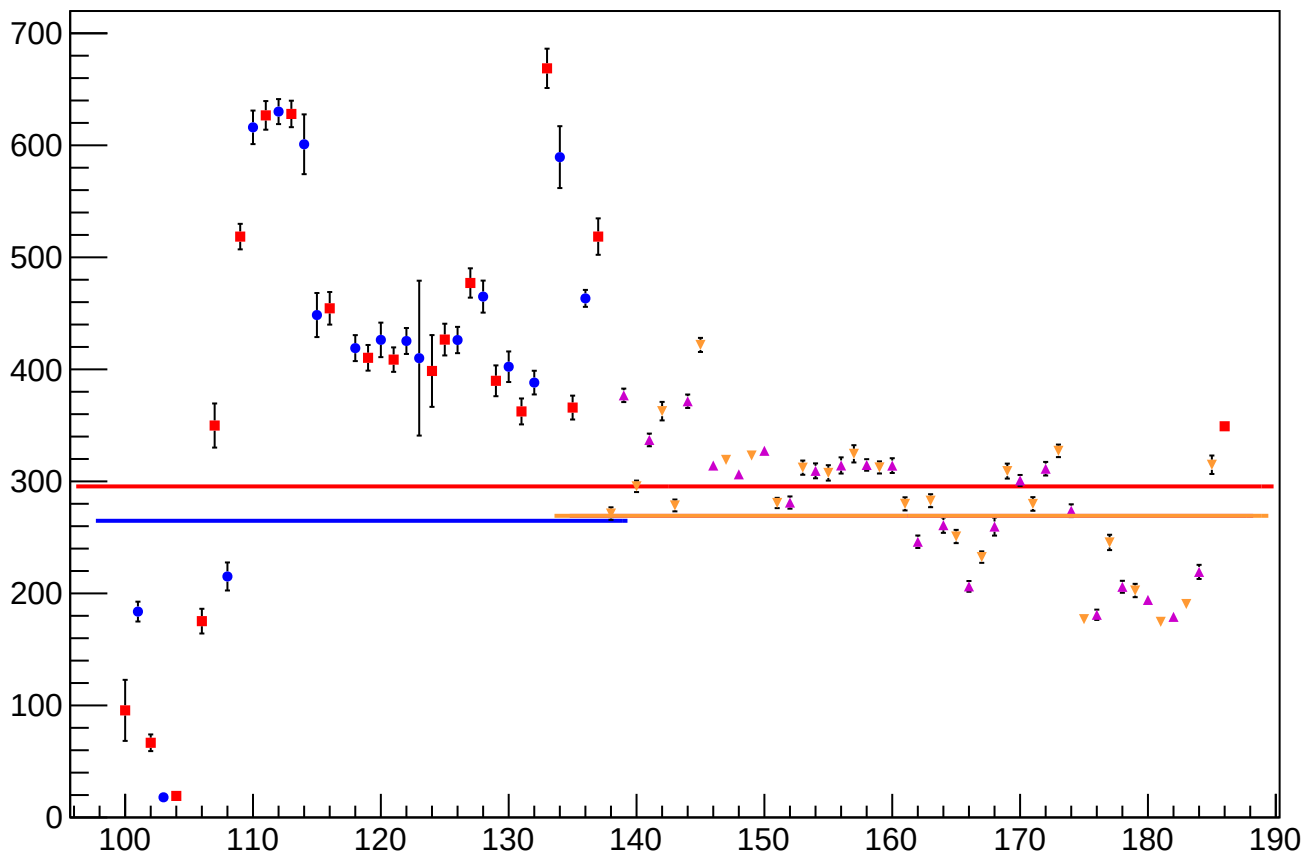
Right:  $-1.271 \pm 0.990$   $\chi^2/\text{NDF}$ : 465.9/36

In:  $-0.636 \pm 0.728$   $\chi^2/\text{NDF}$ : 922.0/39

Out:  $0.100 \pm 0.691$   $\chi^2/\text{NDF}$ : 1091.5/44

All:  $-0.249 \pm 0.501$   $\chi^2/\text{NDF}$ : 2014.1/84

reg\_asym\_atl1r2\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 264.819 $\pm$ 2.491  $\chi^2$ /NDF: 7613.2/16

Left Out: 269.278 $\pm$ 1.078  $\chi^2$ /NDF:3146.7/24

Right Out: 295.507 $\pm$ 1.921  $\chi^2$ /NDF: 8695.6/19

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

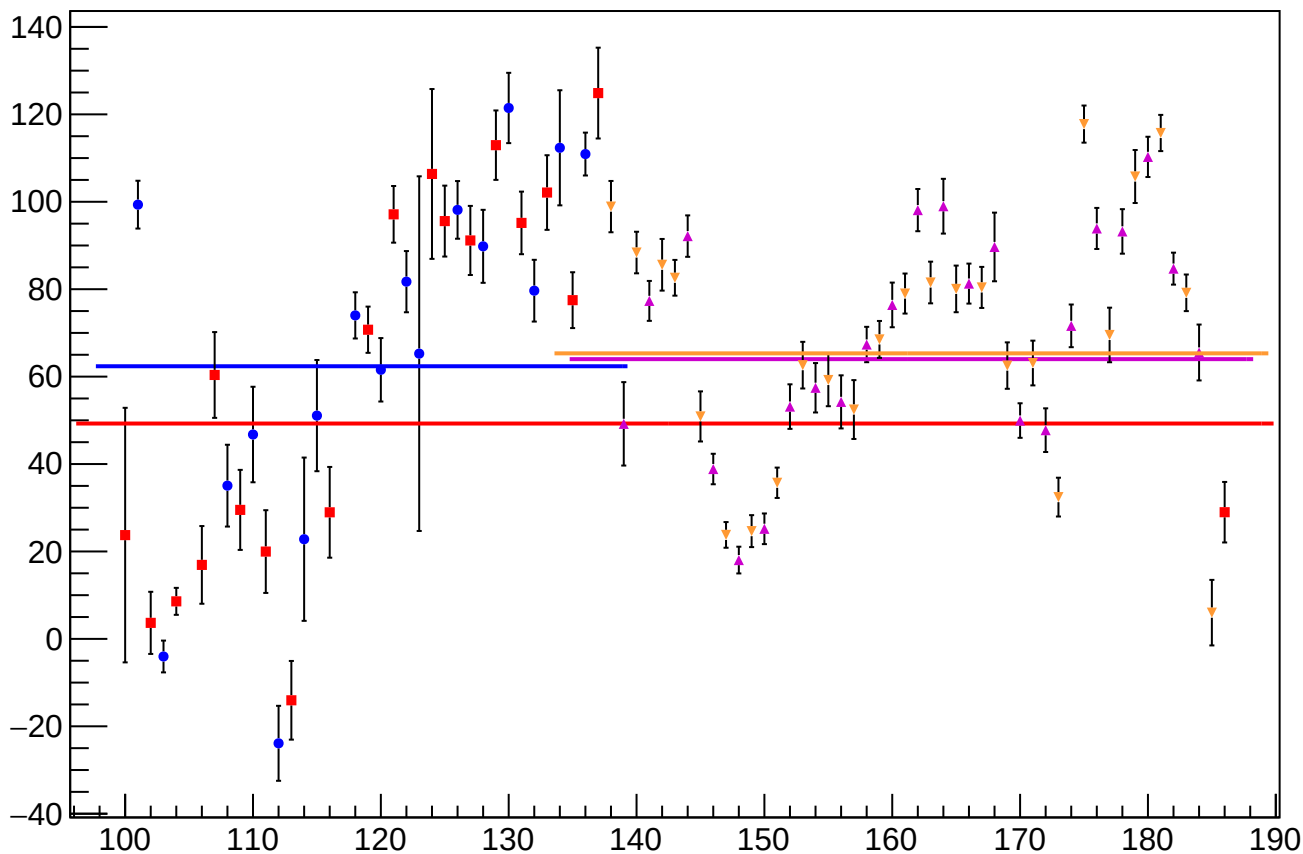
Right: 284.063 $\pm$ 1.521  $\chi^2$ /NDF: 16404.0/36

In: 268.488 $\pm$ 0.999  $\chi^2$ /NDF:10786.0/39

Out: 275.556 $\pm$ 0.940  $\chi^2$ /NDF:11984.1/44

All: 272.237 $\pm$ 0.685  $\chi^2$ /NDF: 22796.6/84

reg\_asym\_atl1r2\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $62.373 \pm 1.697$   $\chi^2/\text{NDF}: 720.9/16$

Left Out:  $65.323 \pm 0.935$   $\chi^2/\text{NDF}: 1007.1/24$

Right Out:  $49.269 \pm 1.600$   $\chi^2/\text{NDF}: 662.9/19$

Left In:  $63.999 \pm 0.963$   $\chi^2/\text{NDF}: 799.5/22$

Left:  $64.681 \pm 0.671$   $\chi^2/\text{NDF}: 1807.5/47$

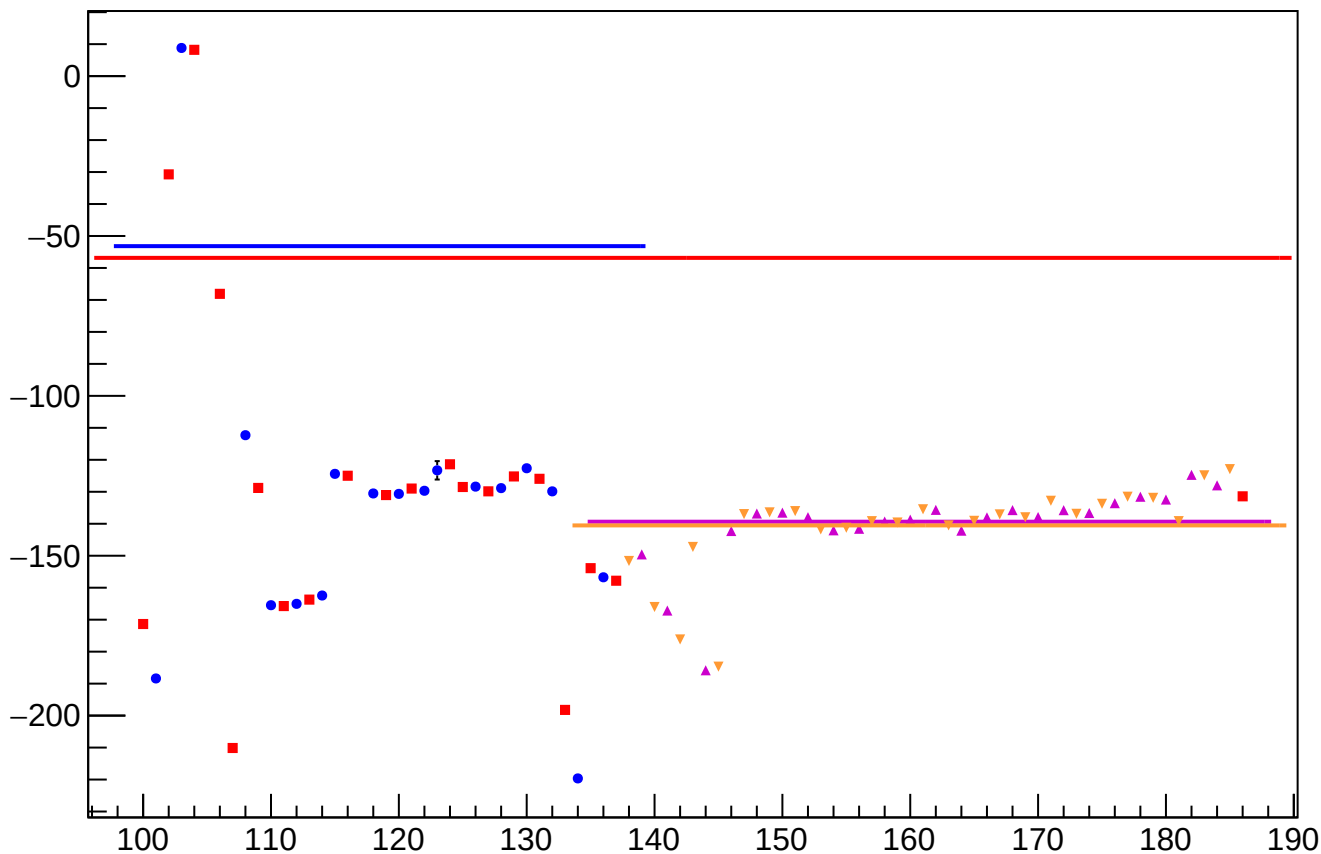
Right:  $55.435 \pm 1.164$   $\chi^2/\text{NDF}: 1415.3/36$

In:  $63.603 \pm 0.837$   $\chi^2/\text{NDF}: 1521.0/39$

Out:  $61.237 \pm 0.807$   $\chi^2/\text{NDF}: 1745.1/44$

All:  $62.376 \pm 0.581$   $\chi^2/\text{NDF}: 3270.3/84$

reg\_asym\_atl1r2\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-53.177 \pm 0.070$   $\chi^2/\text{NDF}: 1223993.8/16$

Left Out:  $-140.519 \pm 0.045$   $\chi^2/\text{NDF}: 77489.0/24$

Right Out:  $-56.842 \pm 0.071$   $\chi^2/\text{NDF}: 988595.4/19$

Left In:  $-139.360 \pm 0.045$   $\chi^2/\text{NDF}: 62449.0/22$

Left:  $-139.945 \pm 0.032$   $\chi^2/\text{NDF}: 140272.6/47$

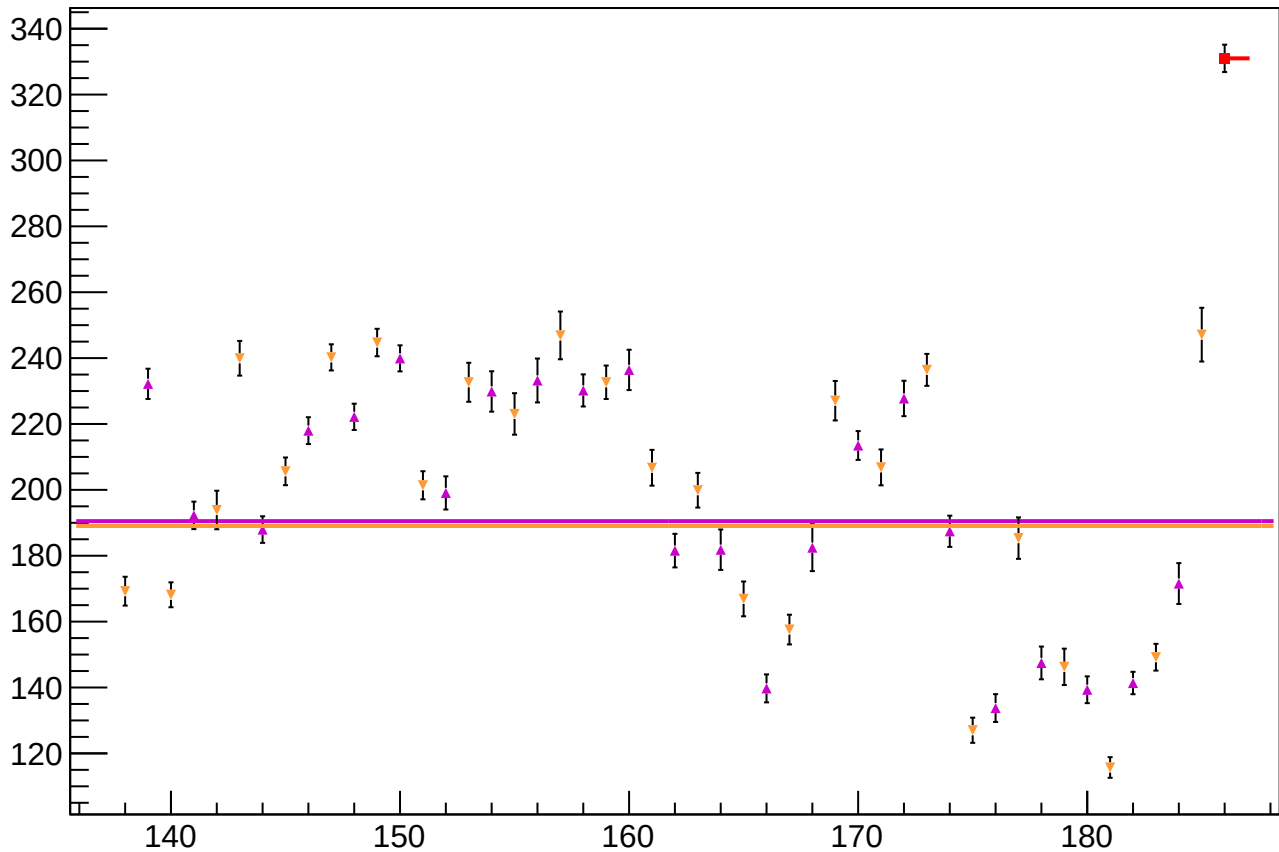
Right:  $-54.989 \pm 0.050$   $\chi^2/\text{NDF}: 2213927.5/36$

In:  $-114.378 \pm 0.038$   $\chi^2/\text{NDF}: 2349211.4/39$

Out:  $-116.998 \pm 0.038$   $\chi^2/\text{NDF}: 2057595.3/44$

All:  $-115.693 \pm 0.027$   $\chi^2/\text{NDF}: 4409202.6/84$

reg\_asym\_atl1r2\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Left Out: 189.030 $\pm$ 0.956  $\chi^2$ /NDF:1980.9/24

Right Out: 330.994 $\pm$ 4.156  $\chi^2$ /NDF: 0.0/0

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

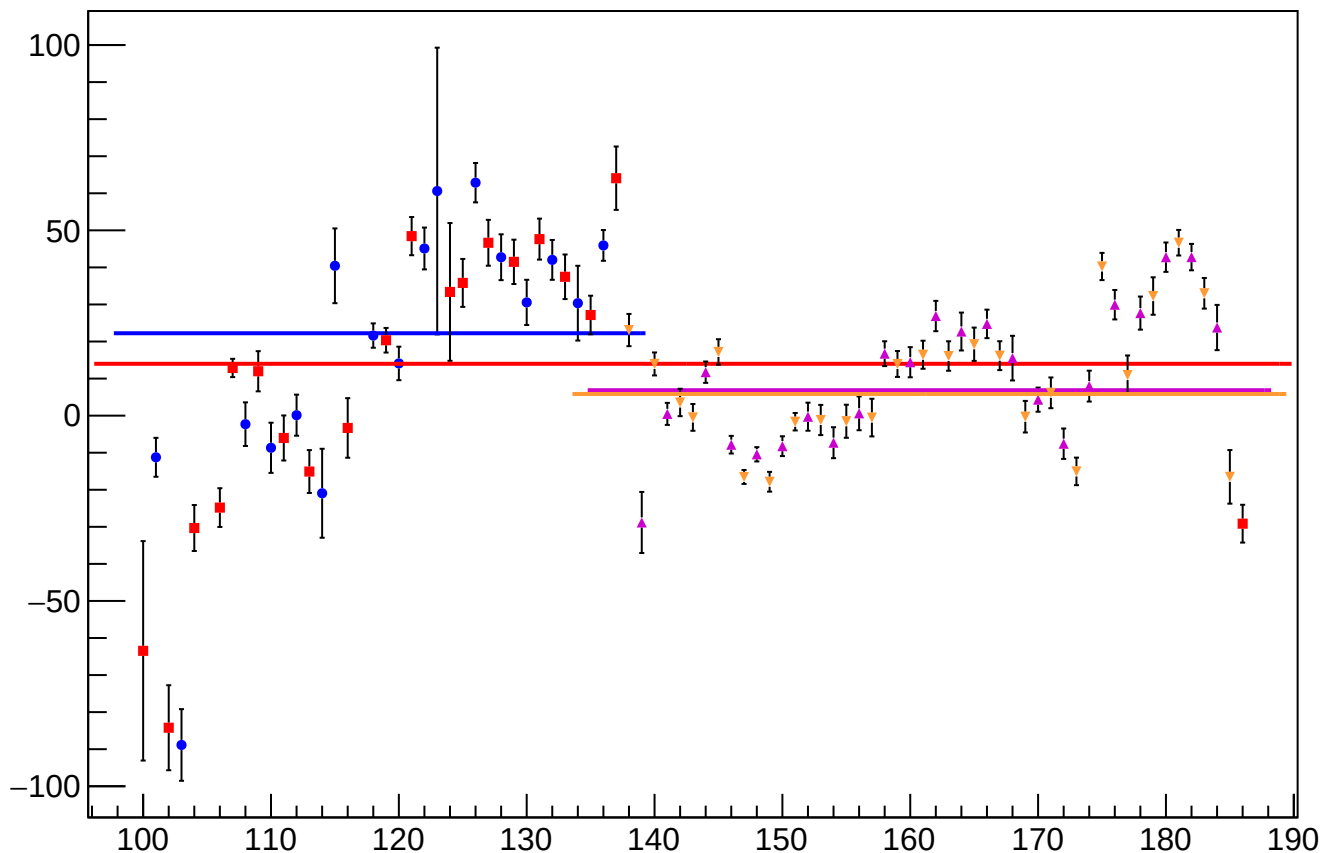
Right: 330.994 $\pm$ 4.156  $\chi^2$ /NDF: 0.0/0

In: 190.506 $\pm$ 0.975  $\chi^2$ /NDF:1412.7/22

Out: 196.162 $\pm$ 0.932  $\chi^2$ /NDF:3089.1/25

All: 193.463 $\pm$ 0.674  $\chi^2$ /NDF: 4519.5/48

reg\_asym\_atl1r2\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 22.234 $\pm$ 1.398  $\chi^2$ /NDF: 382.0/16

Left Out: 5.834 $\pm$ 0.712  $\chi^2$ /NDF: 652.2/24

Right Out: 13.990 $\pm$ 1.194  $\chi^2$ /NDF: 501.7/19

Left In: 6.862 $\pm$ 0.736  $\chi^2$ /NDF: 522.7/22

Left: 6.331 $\pm$ 0.512  $\chi^2$ /NDF: 1176.0/47

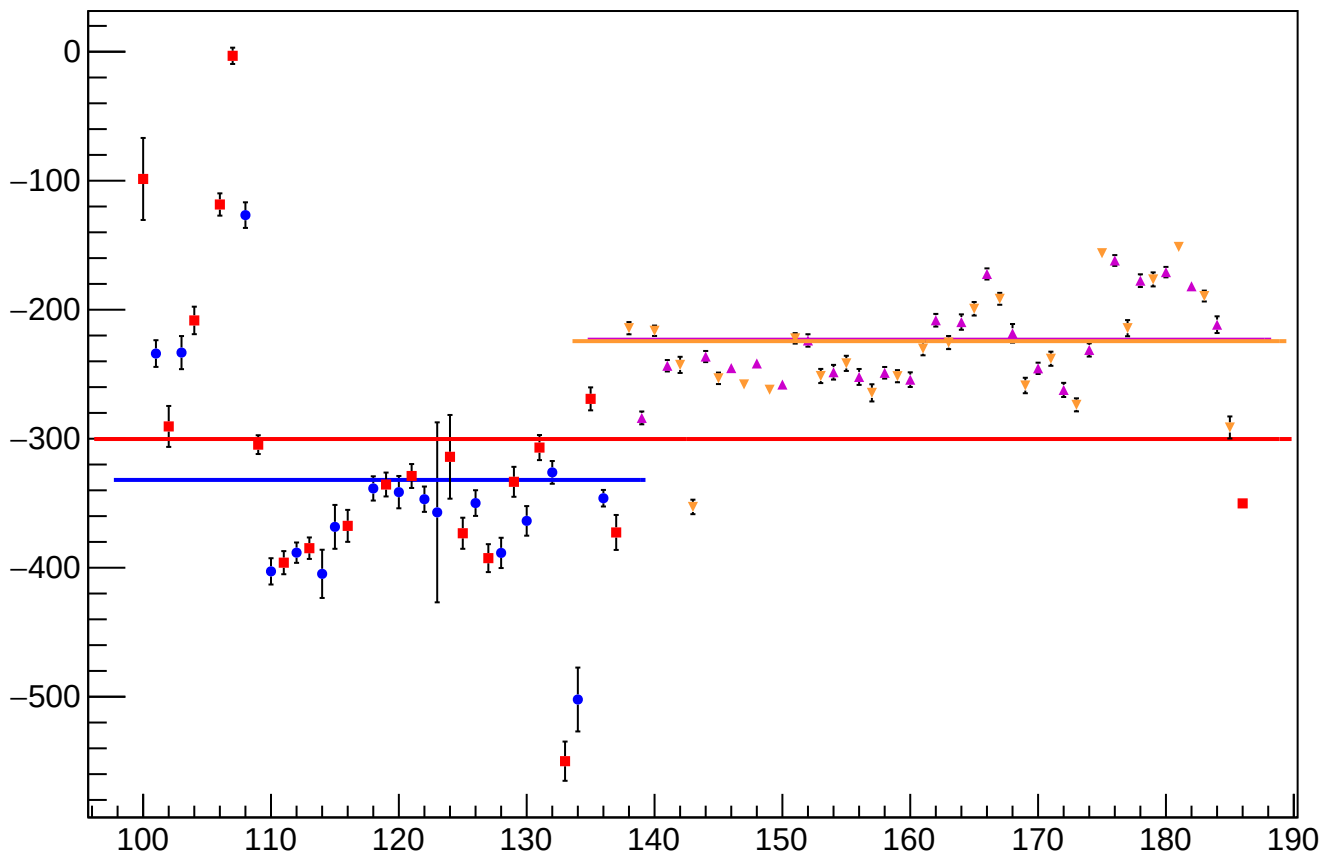
Right: 17.468 $\pm$ 0.908  $\chi^2$ /NDF: 903.8/36

In: 10.199 $\pm$ 0.651  $\chi^2$ /NDF: 999.4/39

Out: 7.975 $\pm$ 0.612  $\chi^2$ /NDF: 1188.3/44

All: 9.017 $\pm$ 0.446  $\chi^2$ /NDF: 2193.9/84

reg\_asym\_atl1r2\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: -331.943+/-2.586  $\chi^2/\text{NDF}$ : 785.9/16

Left Out: -224.364+/-0.956  $\chi^2/\text{NDF}$ :2103.2/24

Right Out: -300.232+/-1.905  $\chi^2/\text{NDF}$ : 3697.0/19

Left In: -223.223+/-0.969  $\chi^2/\text{NDF}$ :1269.3/22

Left: -223.801+/-0.681  $\chi^2/\text{NDF}$ : 3373.2/47

Right: -311.386+/-1.534  $\chi^2/\text{NDF}$ : 4580.4/36

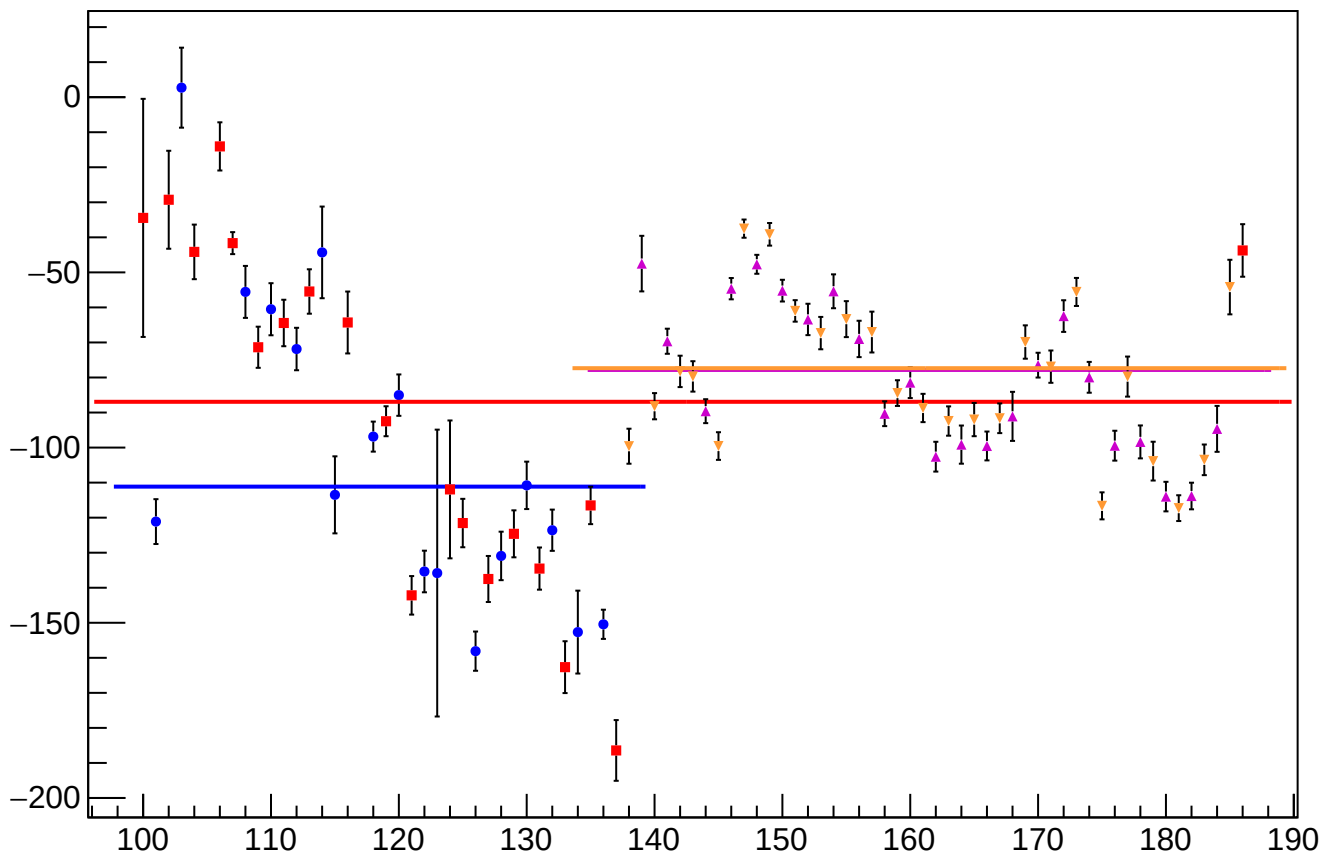
In: -236.616+/-0.908  $\chi^2/\text{NDF}$ :3605.3/39

Out: -239.632+/-0.854  $\chi^2/\text{NDF}$ :7067.7/44

All: -238.215+/-0.622  $\chi^2/\text{NDF}$ : 10678.9/84



reg\_asym\_atl1r2\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-111.144 \pm 1.601$   $\chi^2/\text{NDF}$ : 504.6/16

Left Out:  $-77.343 \pm 0.827$   $\chi^2/\text{NDF}$ : 846.2/24

Right Out:  $-86.935 \pm 1.409$   $\chi^2/\text{NDF}$ : 1003.1/19

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

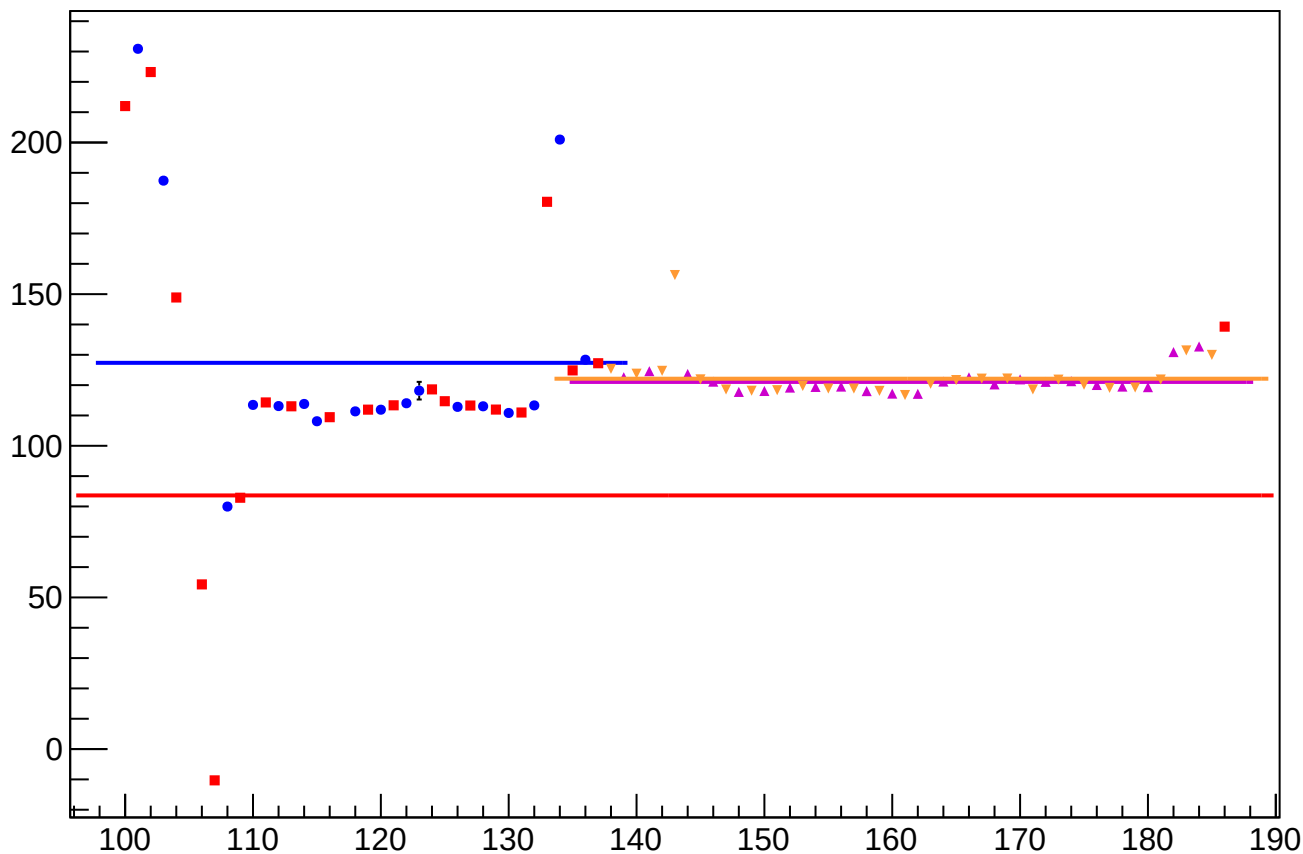
Right:  $-97.506 \pm 1.058$   $\chi^2/\text{NDF}$ : 1636.5/36

In:  $-85.146 \pm 0.750$   $\chi^2/\text{NDF}$ : 1465.3/39

Out:  $-79.798 \pm 0.713$   $\chi^2/\text{NDF}$ : 1883.8/44

All:  $-82.338 \pm 0.517$   $\chi^2/\text{NDF}$ : 3375.7/84

reg\_asym\_atl1r2\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 127.355+/-0.090  $\chi^2/\text{NDF}$ : 187728.6/16

Left Out: 122.119+/-0.039  $\chi^2/\text{NDF}$ : 30480.7/24

Right Out: 83.635+/-0.075  $\chi^2/\text{NDF}$ : 775599.3/19

Left In: 121.055+/-0.040  $\chi^2/\text{NDF}$ : 7931.6/22

Left: 121.591+/-0.028  $\chi^2/\text{NDF}$ : 38773.7/47

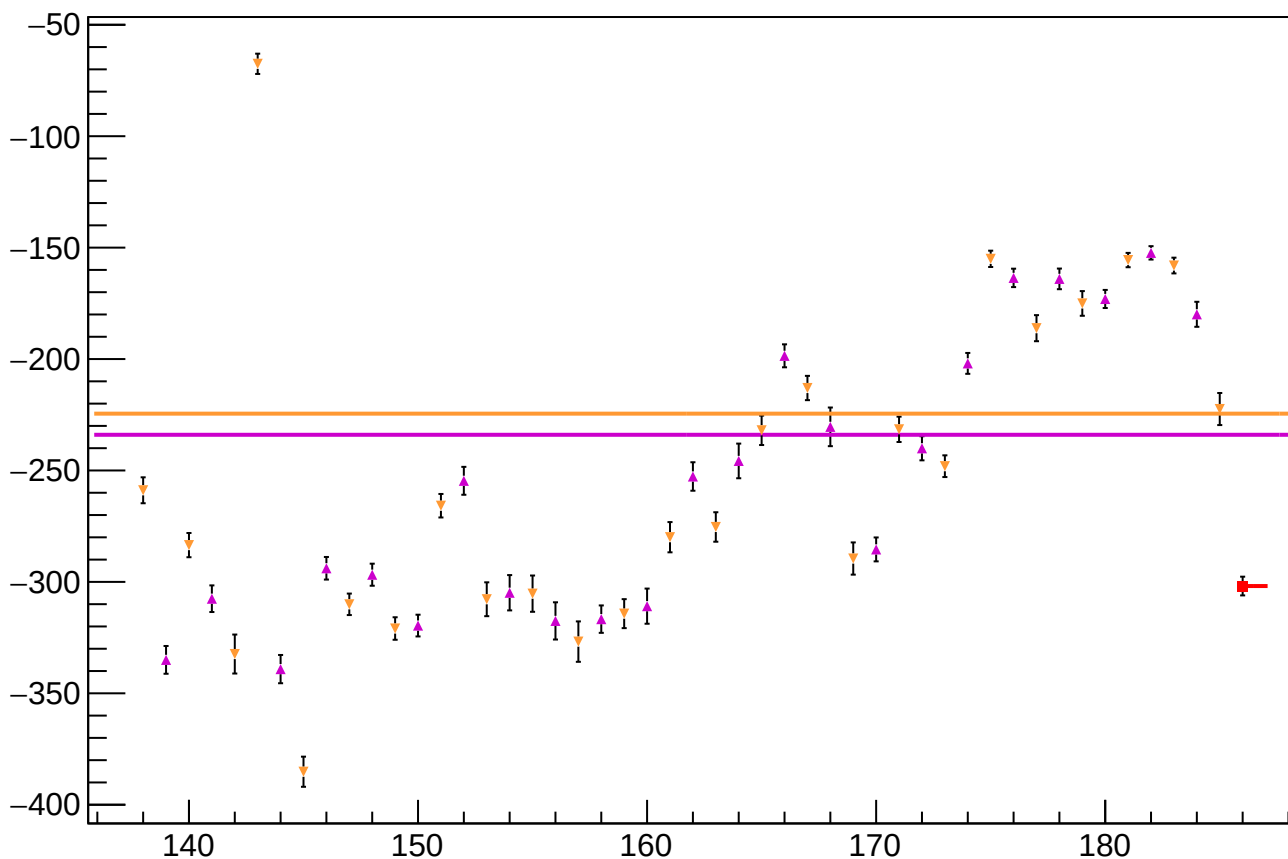
Right: 101.572+/-0.057  $\chi^2/\text{NDF}$ : 1103858.2/36

In: 122.091+/-0.036  $\chi^2/\text{NDF}$ : 199794.5/39

Out: 113.739+/-0.035  $\chi^2/\text{NDF}$ : 1013684.9/44

All: 117.744+/-0.025  $\chi^2/\text{NDF}$ : 1241003.4/84

reg\_asym\_atr1l2\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -224.501+/-1.079  $\chi^2/\text{NDF}$ : 4870.6/24

Right Out: -301.864+/-4.204  $\chi^2/\text{NDF}$ : 0.0/0

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

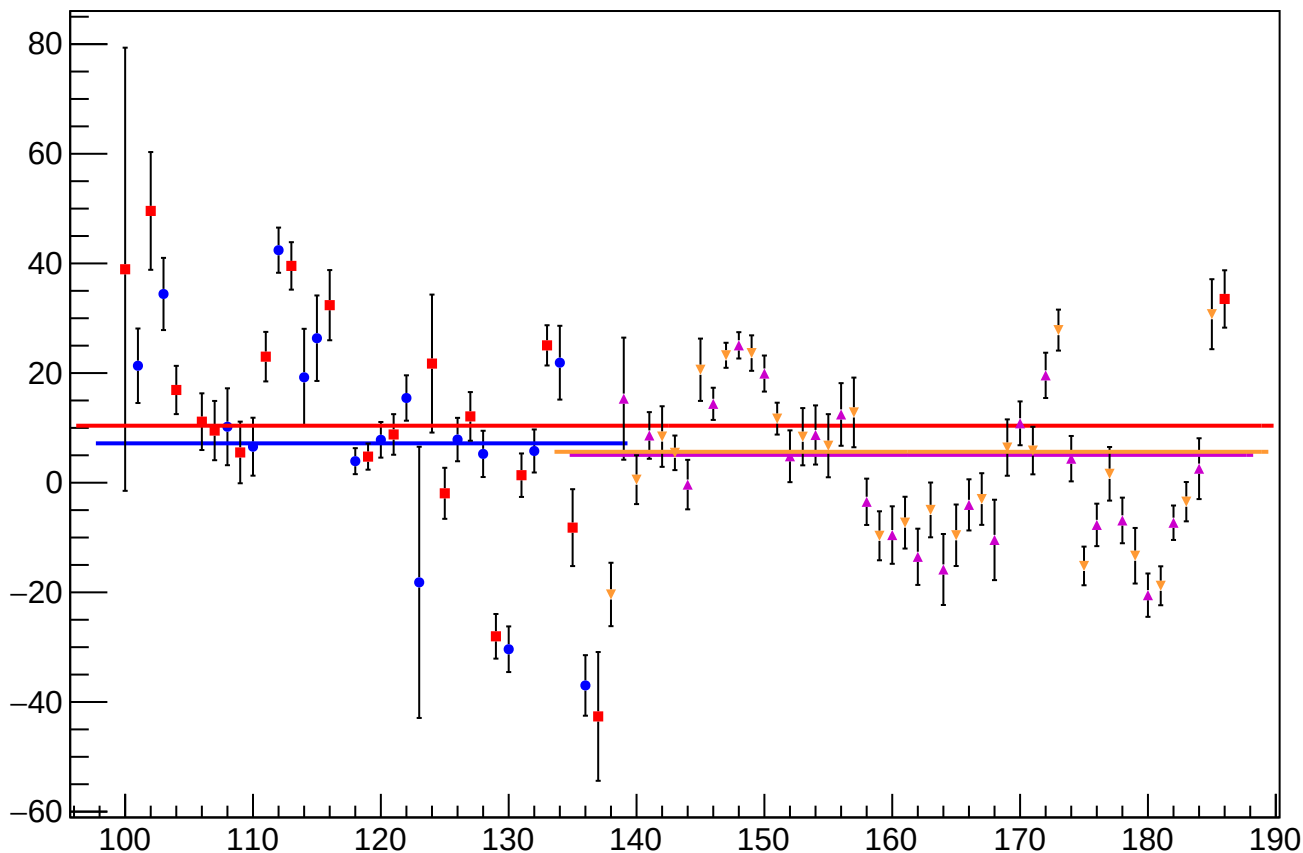
Right: -301.864+/-4.204  $\chi^2/\text{NDF}$ : 0.0/0

In: -233.988+/-1.109  $\chi^2/\text{NDF}$ : 3538.4/22

Out: -229.283+/-1.045  $\chi^2/\text{NDF}$ : 5188.3/25

All: -231.497+/-0.760  $\chi^2/\text{NDF}$ : 8736.3/48

reg\_asym\_atr1l2\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $7.181 \pm 1.105$   $\chi^2/\text{NDF}: 260.1/16$

Left Out:  $5.638 \pm 0.828$   $\chi^2/\text{NDF}: 313.6/24$

Right Out:  $10.399 \pm 1.051$   $\chi^2/\text{NDF}: 252.6/19$

Left In:  $5.077 \pm 0.869$   $\chi^2/\text{NDF}: 239.7/22$

Left:  $5.371 \pm 0.599$   $\chi^2/\text{NDF}: 553.6/47$

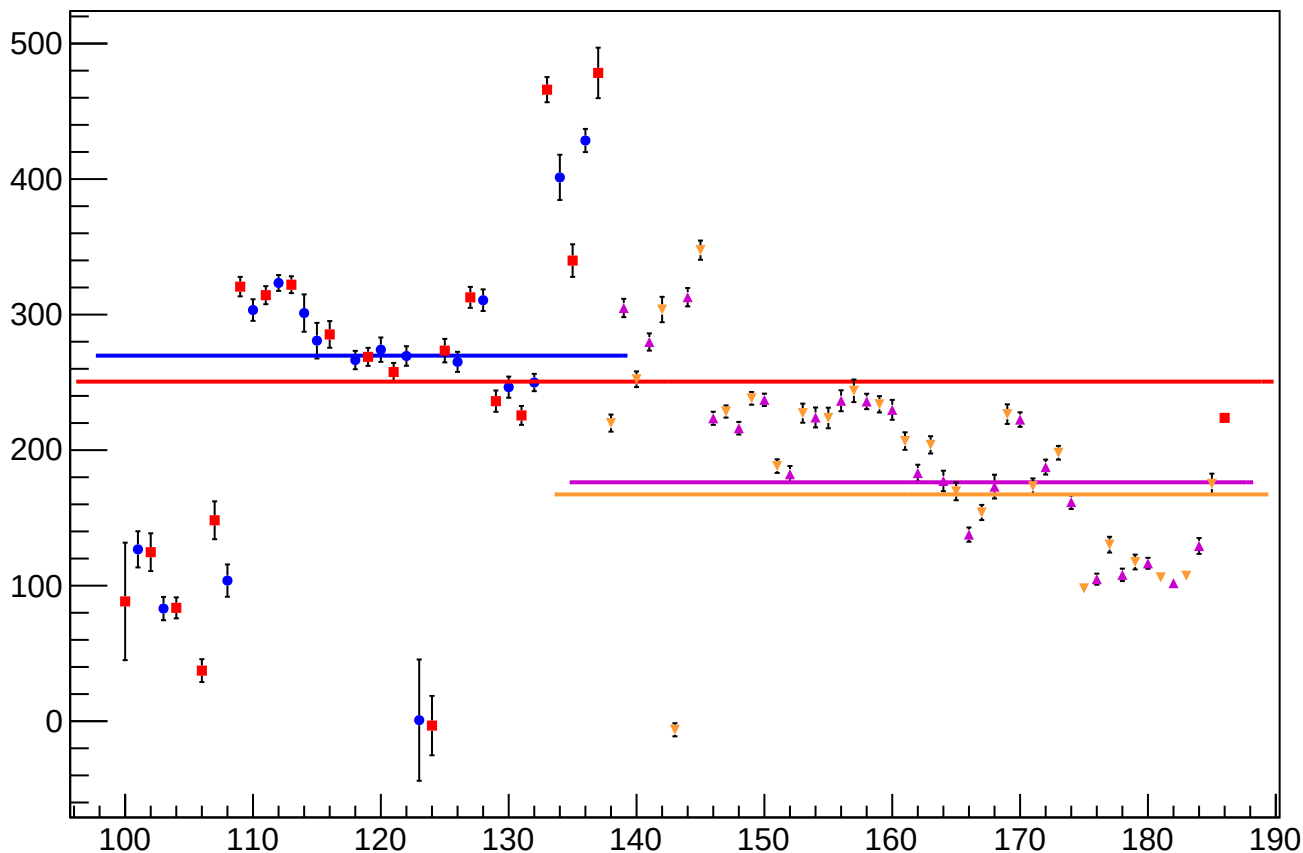
Right:  $8.871 \pm 0.762$   $\chi^2/\text{NDF}: 517.2/36$

In:  $5.881 \pm 0.683$   $\chi^2/\text{NDF}: 502.0/39$

Out:  $7.461 \pm 0.650$   $\chi^2/\text{NDF}: 578.9/44$

All:  $6.710 \pm 0.471$   $\chi^2/\text{NDF}: 1083.8/84$

reg\_asym\_atr1l2\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 269.720 $\pm$ 2.094  $\chi^2$ /NDF: 1375.9/16

Left Out: 167.327 $\pm$ 1.082  $\chi^2$ /NDF:4454.5/24

Right Out: 250.559 $\pm$ 1.707  $\chi^2$ /NDF: 2625.7/19

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

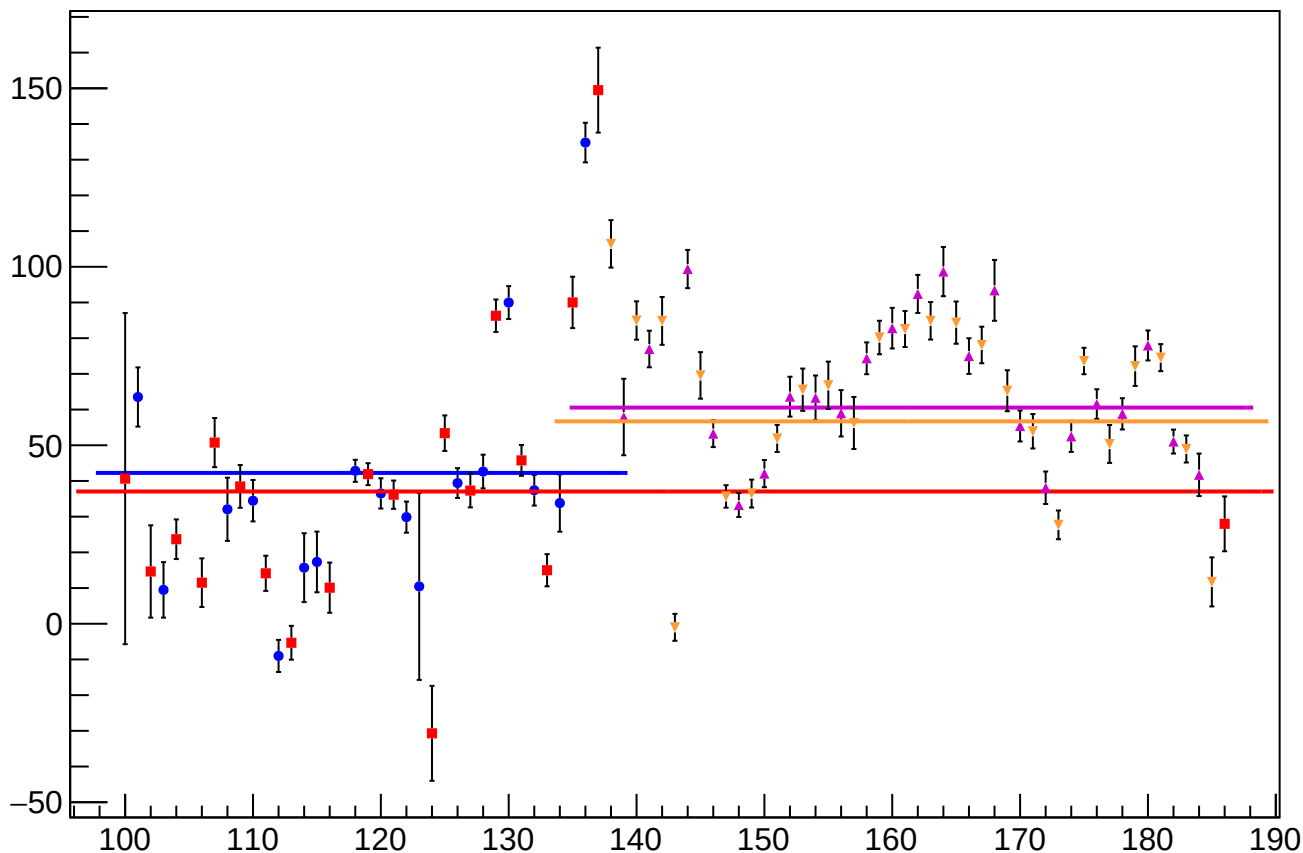
Right: 258.206 $\pm$ 1.323  $\chi^2$ /NDF: 4051.9/36

In: 196.646 $\pm$ 0.978  $\chi^2$ /NDF:6102.7/39

Out: 191.208 $\pm$ 0.914  $\chi^2$ /NDF:8776.5/44

All: 193.745 $\pm$ 0.668  $\chi^2$ /NDF: 14895.7/84

reg\_asym\_atr1l2\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 42.255 $\pm$ 1.277  $\chi^2$ /NDF: 573.1/16

Left Out: 56.695 $\pm$ 0.952  $\chi^2$ /NDF:690.4/24

Right Out: 37.053 $\pm$ 1.221  $\chi^2$ /NDF: 472.0/19

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

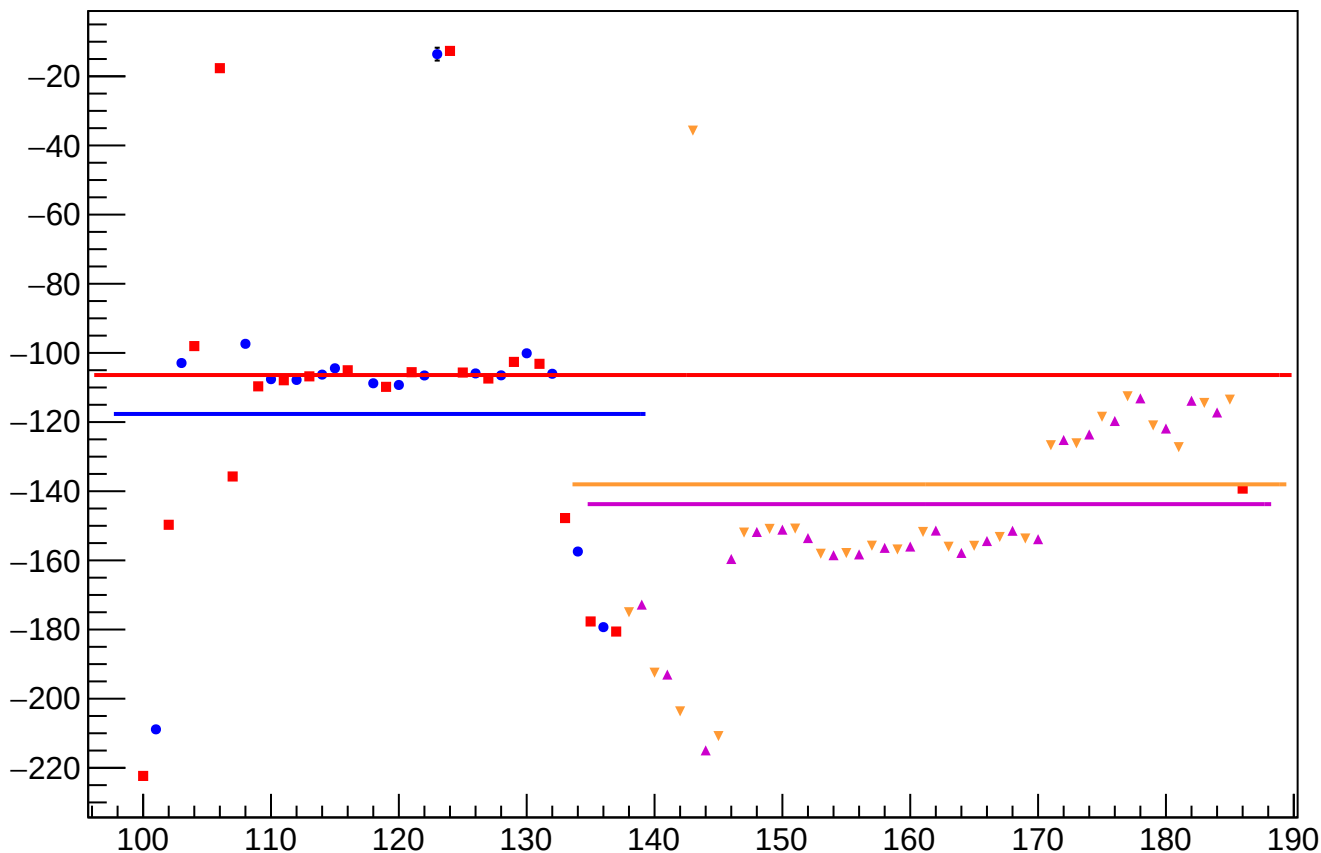
Right: 39.539 $\pm$ 0.882  $\chi^2$ /NDF: 1053.7/36

In: 53.681 $\pm$ 0.782  $\chi^2$ /NDF:1037.0/39

Out: 49.273 $\pm$ 0.751  $\chi^2$ /NDF:1323.3/44

All: 51.386 $\pm$ 0.542  $\chi^2$ /NDF: 2376.9/84

reg\_asym\_atr1l2\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: -117.654+/-0.079  $\chi^2/\text{NDF}$ : 141832.7/16

Left Out: -138.008+/-0.045  $\chi^2/\text{NDF}$ : 565767.2/24

Right Out: -106.397+/-0.072  $\chi^2/\text{NDF}$ : 326894.5/19

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

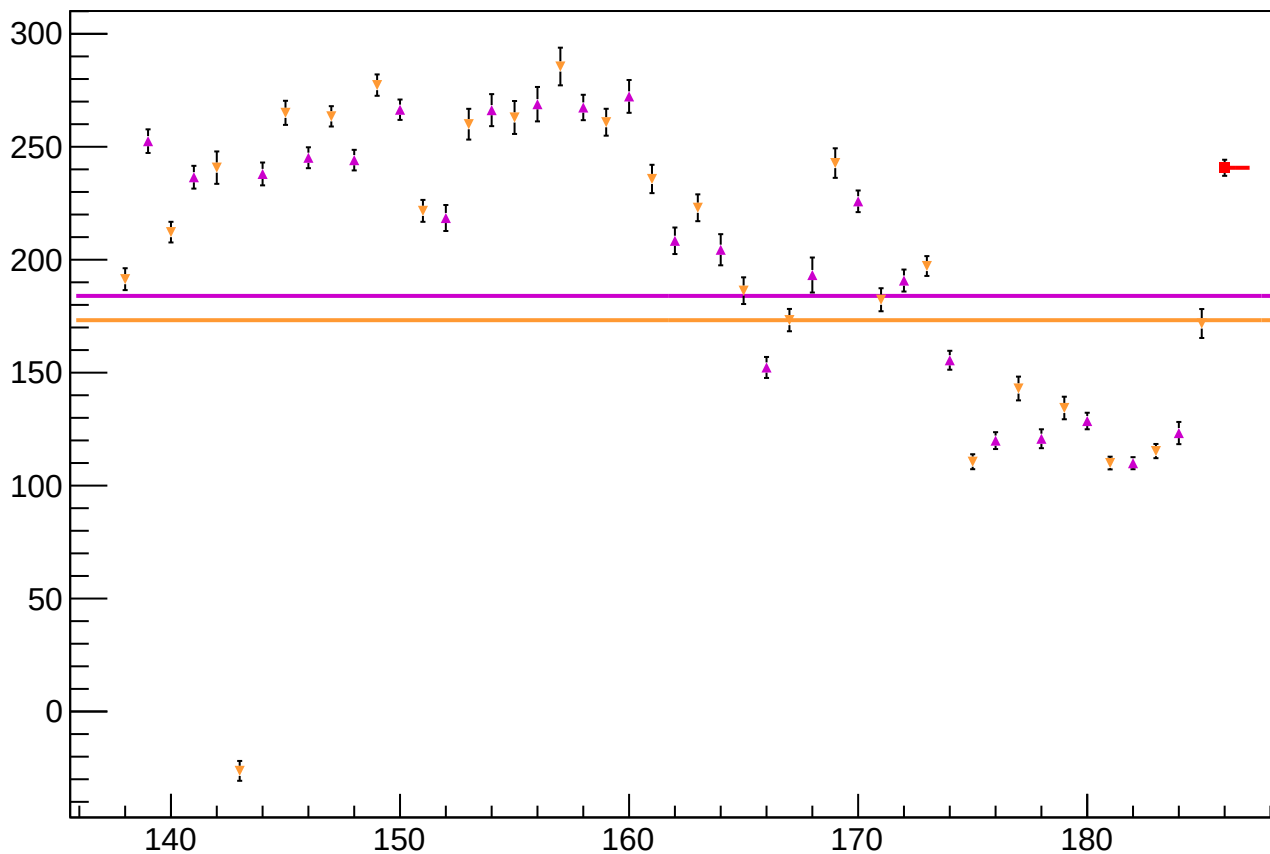
Right: -111.549+/-0.053  $\chi^2/\text{NDF}$ : 479836.8/36

In: -137.067+/-0.040  $\chi^2/\text{NDF}$ : 482073.9/39

Out: -129.137+/-0.038  $\chi^2/\text{NDF}$ : 1030360.1/44

All: -132.950+/-0.028  $\chi^2/\text{NDF}$ : 1533075.0/84

reg\_asym\_atr1l2\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 173.229+/-0.966  $\chi^2/\text{NDF}$ :5846.0/24

Right Out: 240.702+/-3.560  $\chi^2/\text{NDF}$ : 0.0/0

Left In: 183.984+/-0.991  $\chi^2/\text{NDF}$ :3613.7/22

Left: 178.467+/-0.692  $\chi^2/\text{NDF}$ : 9520.1/47

Right: 240.702+/-3.560  $\chi^2/\text{NDF}$ : 0.0/0

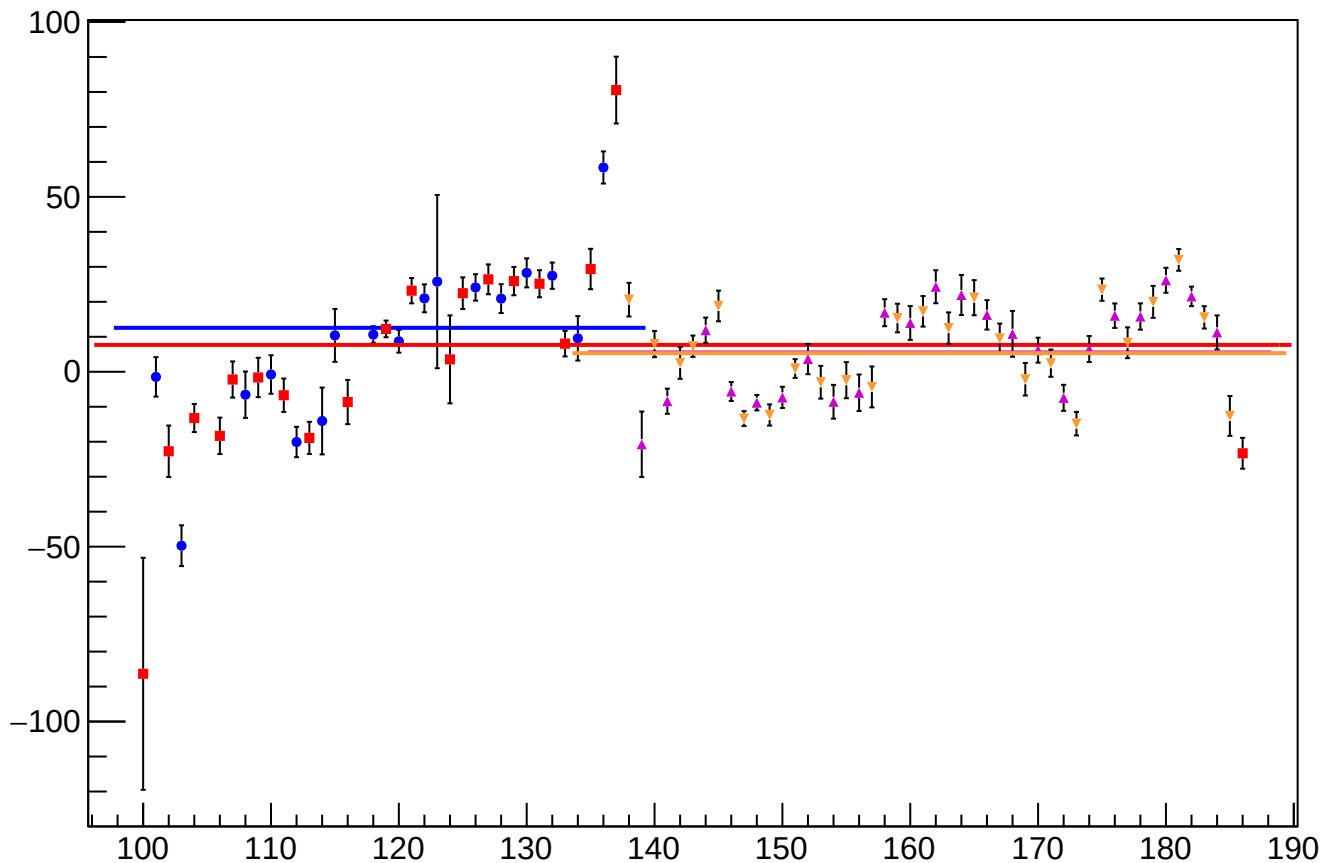
In: 183.984+/-0.991  $\chi^2/\text{NDF}$ :3613.7/22

Out: 177.853+/-0.932  $\chi^2/\text{NDF}$ :6180.6/25

All: 180.731+/-0.679  $\chi^2/\text{NDF}$ : 9814.6/48



reg\_asym\_atr1l2\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 12.569+/-1.076  $\chi^2/\text{NDF}$ : 348.8/16

Left Out: 5.321+/-0.747  $\chi^2/\text{NDF}$ : 345.5/24

Right Out: 7.686+/-1.021  $\chi^2/\text{NDF}$ : 347.0/19

Left In: 5.527+/-0.781  $\chi^2/\text{NDF}$ : 256.3/22

Left: 5.420+/-0.540  $\chi^2/\text{NDF}$ : 601.9/47

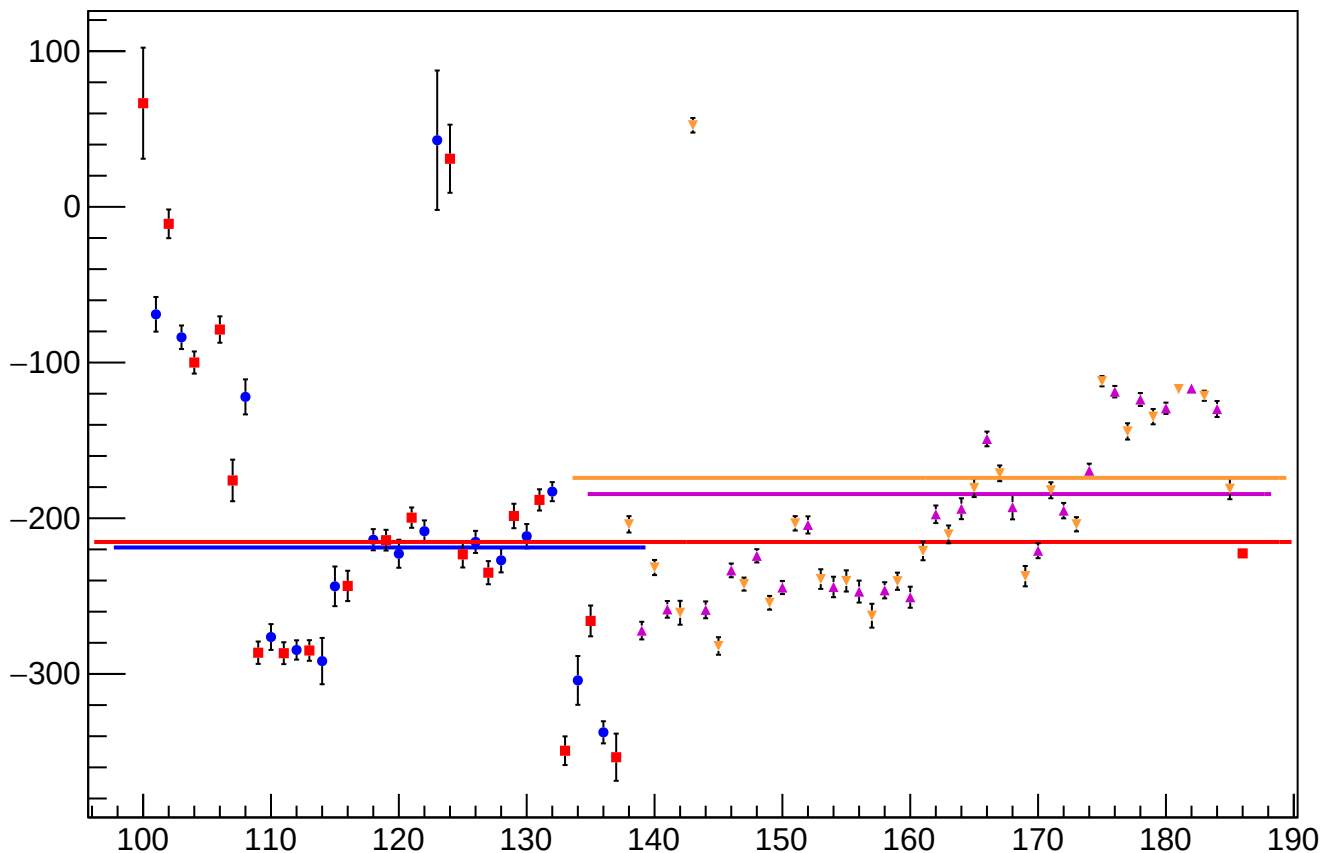
Right: 9.998+/-0.740  $\chi^2/\text{NDF}$ : 706.7/36

In: 7.957+/-0.632  $\chi^2/\text{NDF}$ : 633.2/39

Out: 6.147+/-0.603  $\chi^2/\text{NDF}$ : 696.0/44

All: 7.009+/-0.436  $\chi^2/\text{NDF}$ : 1333.6/84

reg\_asym\_atr1l2\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-218.764 \pm 2.027$   $\chi^2/\text{NDF}$ : 1144.2/16

Left Out:  $-174.061 \pm 0.971$   $\chi^2/\text{NDF}$ : 5443.3/24

Right Out:  $-215.230 \pm 1.595$   $\chi^2/\text{NDF}$ : 1894.4/19

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

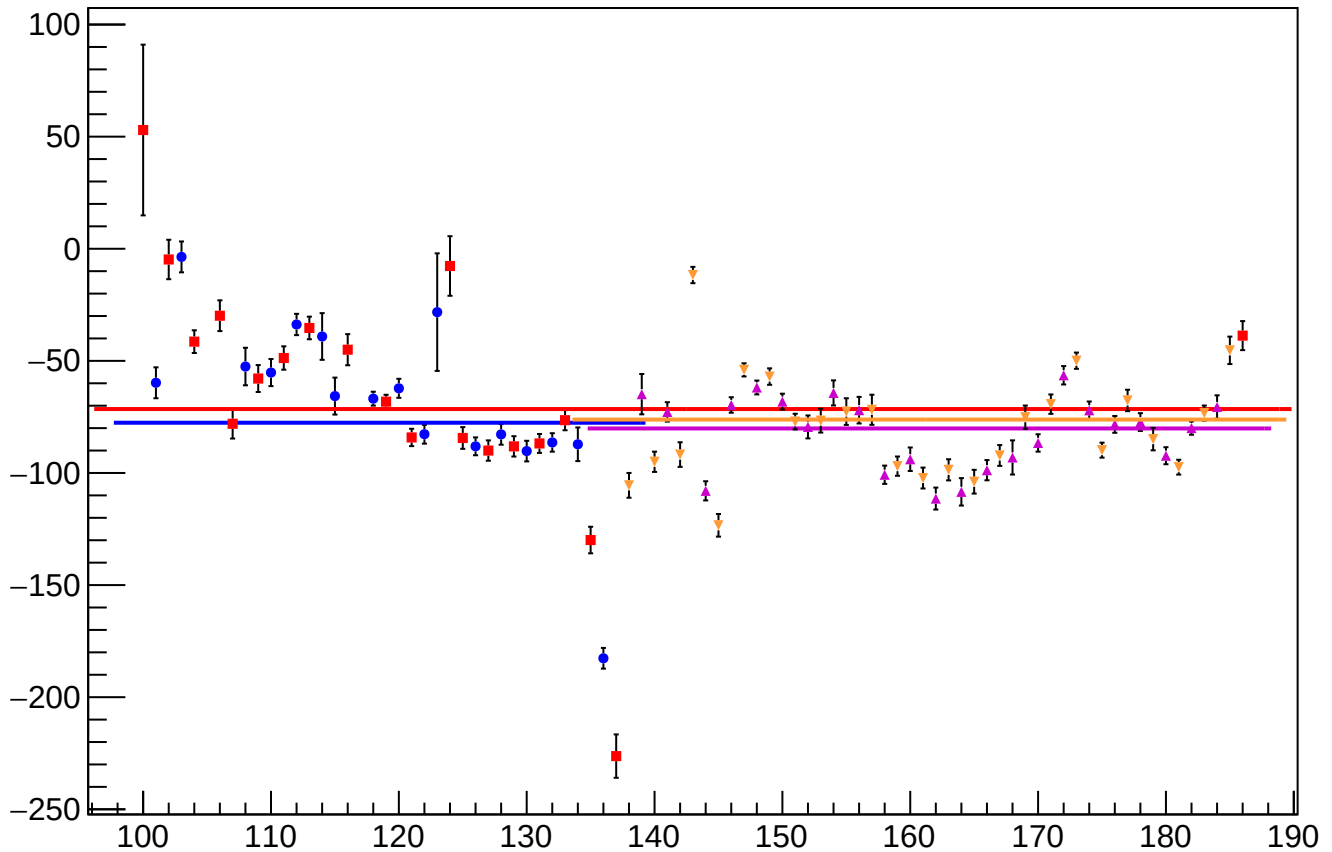
Right:  $-216.582 \pm 1.253$   $\chi^2/\text{NDF}$ : 3040.5/36

In:  $-191.071 \pm 0.890$   $\chi^2/\text{NDF}$ : 4427.1/39

Out:  $-185.189 \pm 0.829$   $\chi^2/\text{NDF}$ : 7823.7/44

All:  $-187.922 \pm 0.607$   $\chi^2/\text{NDF}$ : 12274.2/84

reg\_asym\_atr1l2\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-77.591 \pm 1.239$   $\chi^2/\text{NDF}: 816.4/16$

Left Out:  $-76.182 \pm 0.857$   $\chi^2/\text{NDF}: 801.0/24$

Right Out:  $-71.489 \pm 1.188$   $\chi^2/\text{NDF}: 696.7/19$

Left In:  $-80.149 \pm 0.889$   $\chi^2/\text{NDF}: 283.3/22$

Left:  $-78.094 \pm 0.617$   $\chi^2/\text{NDF}: 1094.6/47$

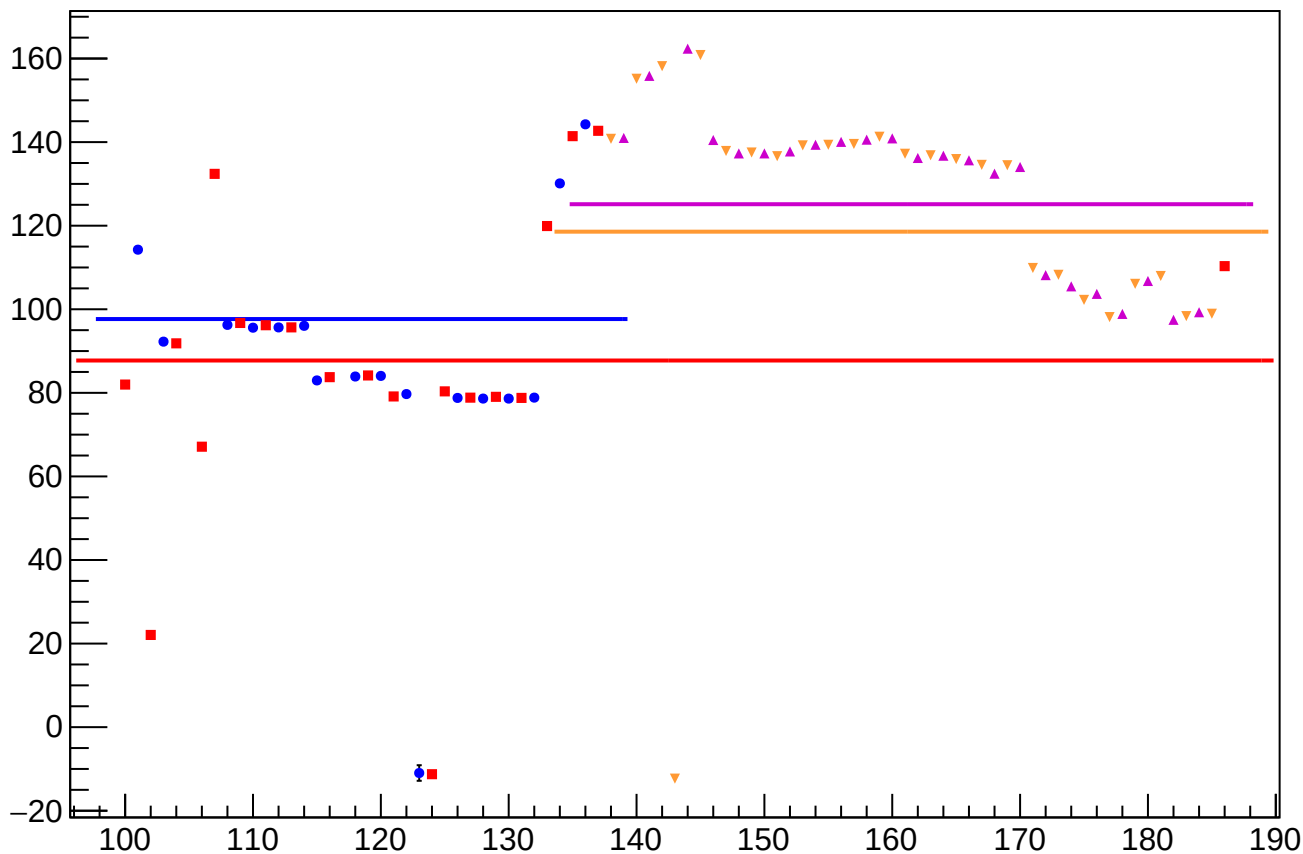
Right:  $-74.411 \pm 0.858$   $\chi^2/\text{NDF}: 1525.7/36$

In:  $-79.280 \pm 0.722$   $\chi^2/\text{NDF}: 1102.5/39$

Out:  $-74.575 \pm 0.695$   $\chi^2/\text{NDF}: 1507.9/44$

All:  $-76.837 \pm 0.501$   $\chi^2/\text{NDF}: 2632.4/84$

reg\_asym\_atr1l2\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 97.659 $\pm$ 0.074  $\chi^2$ /NDF: 93912.8/16

Left Out: 118.569 $\pm$ 0.040  $\chi^2$ /NDF: 728689.7/24

Right Out: 87.739 $\pm$ 0.068  $\chi^2$ /NDF: 223310.6/19

Left In: 125.139 $\pm$ 0.041  $\chi^2$ /NDF: 220927.1/22

Left: 121.790 $\pm$ 0.029  $\chi^2$ /NDF: 962526.8/47

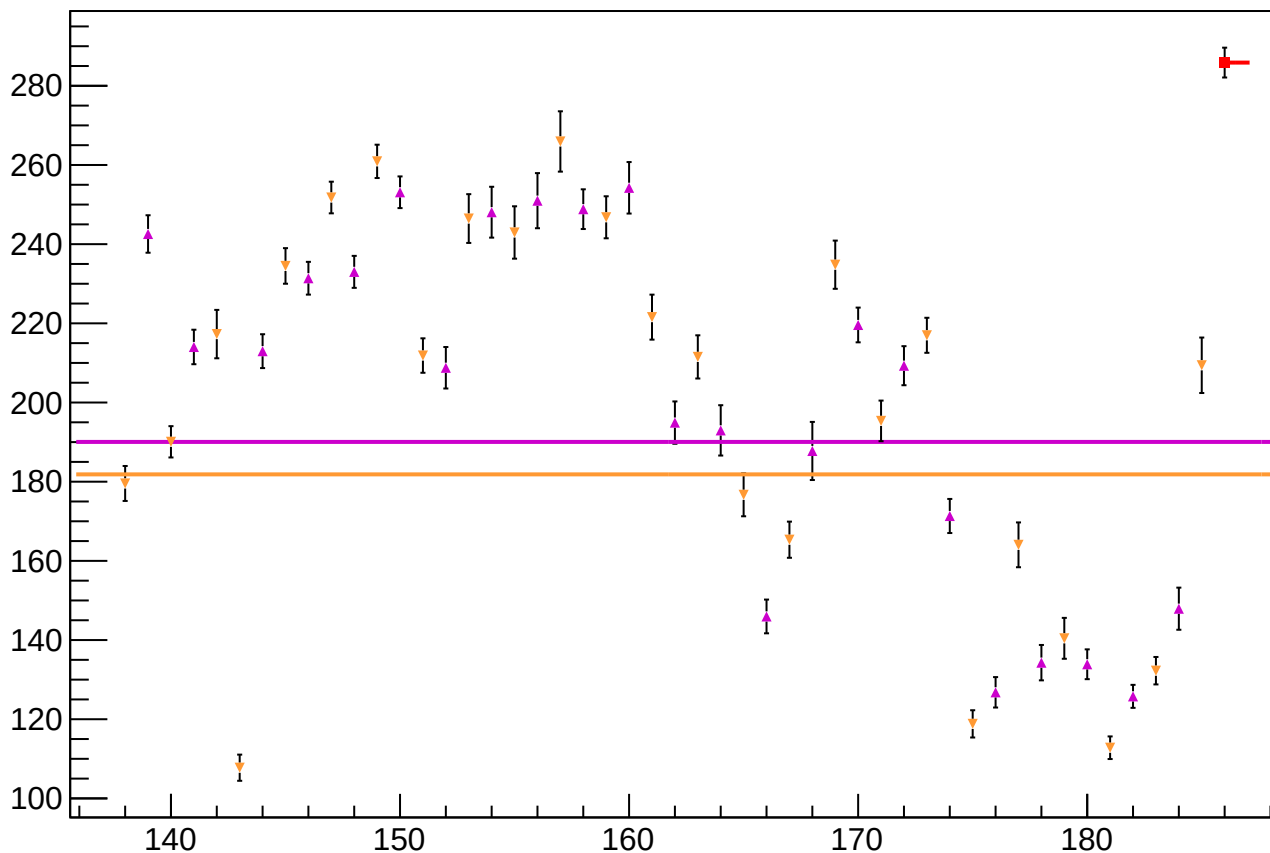
Right: 92.264 $\pm$ 0.050  $\chi^2$ /NDF: 327046.4/36

In: 118.592 $\pm$ 0.036  $\chi^2$ /NDF: 420405.5/39

Out: 110.429 $\pm$ 0.035  $\chi^2$ /NDF: 1105047.5/44

All: 114.362 $\pm$ 0.025  $\chi^2$ /NDF: 1552052.0/84

reg\_asym\_atl\_dd\_atr\_dd\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: 181.850+/-0.913  $\chi^2/\text{NDF}$ :3303.4/24

Right Out: 285.865+/-3.768  $\chi^2/\text{NDF}$ : 0.0/0

Left In: 190.048+/-0.953  $\chi^2/\text{NDF}$ :2438.4/22

Left: 185.775+/-0.659  $\chi^2/\text{NDF}$ : 5780.3/47

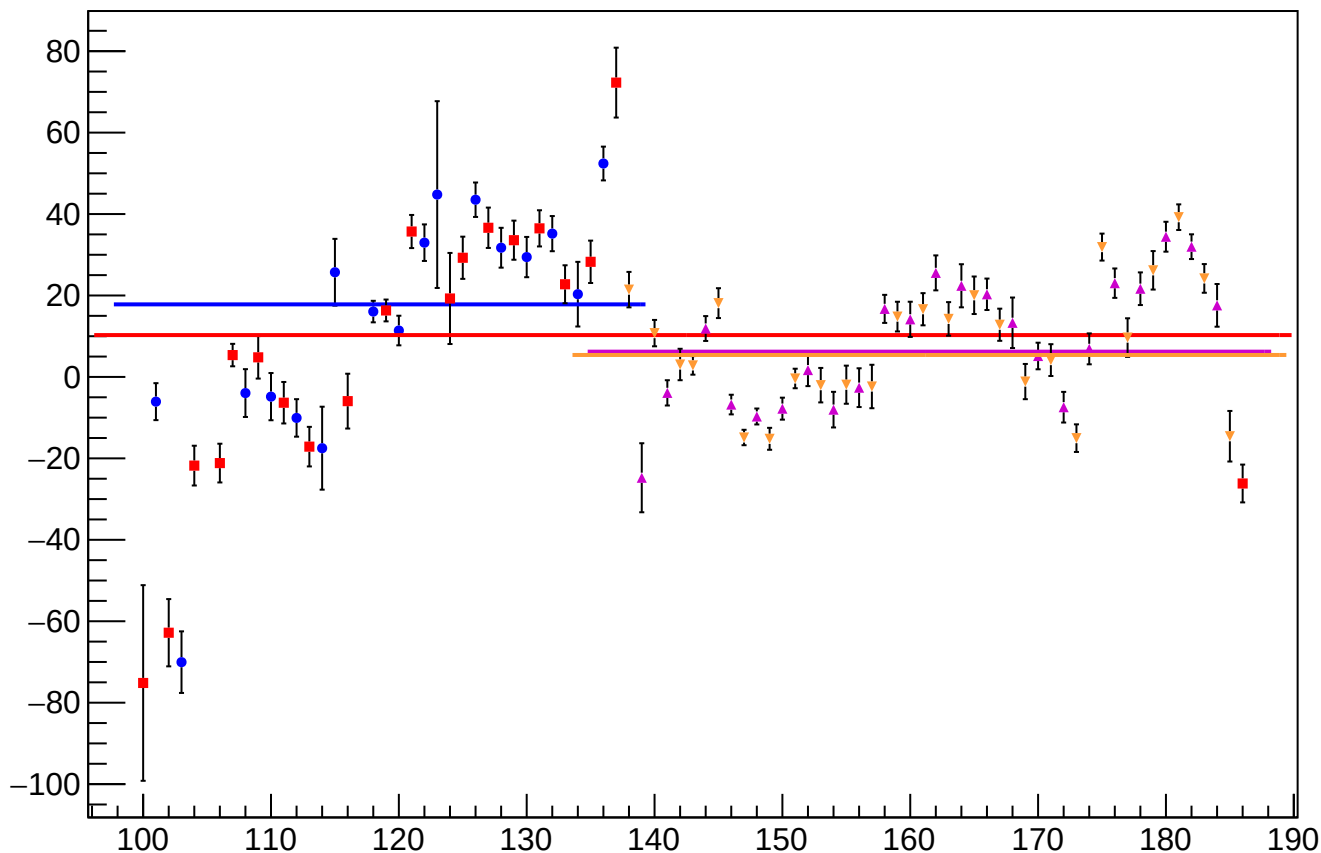
Right: 285.865+/-3.768  $\chi^2/\text{NDF}$ : 0.0/0

In: 190.048+/-0.953  $\chi^2/\text{NDF}$ :2438.4/22

Out: 187.623+/-0.888  $\chi^2/\text{NDF}$ :4023.2/25

All: 188.749+/-0.649  $\chi^2/\text{NDF}$ : 6465.0/48

reg\_asym\_atl\_dd\_atr\_dd\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 17.818+/-1.168  $\chi^2/\text{NDF}$ : 394.0/16

Left Out: 5.394+/-0.688  $\chi^2/\text{NDF}$ : 526.5/24

Right Out: 10.277+/-1.056  $\chi^2/\text{NDF}$ : 508.0/19

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

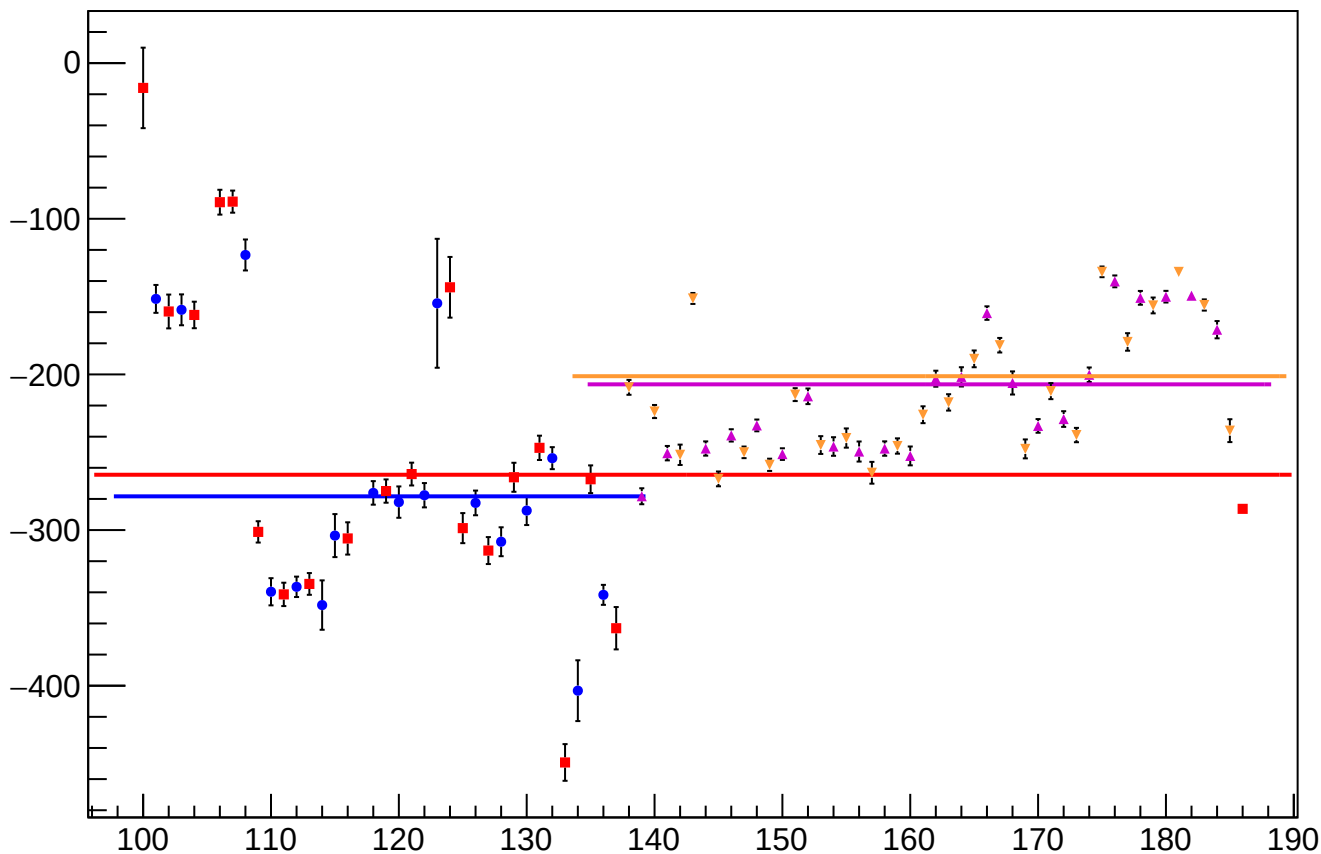
Right: 13.669+/-0.783  $\chi^2/\text{NDF}$ : 925.0/36

In: 9.478+/-0.620  $\chi^2/\text{NDF}$ : 872.5/39

Out: 6.848+/-0.576  $\chi^2/\text{NDF}$ : 1049.6/44

All: 8.068+/-0.422  $\chi^2/\text{NDF}$ : 1931.7/84

reg\_asym\_atl\_dd\_atr\_dd\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-278.336 \pm 2.190$   $\chi^2/\text{NDF}$ : 910.1/16

Left Out:  $-201.144 \pm 0.918$   $\chi^2/\text{NDF}$ : 2488.8/24

Right Out:  $-264.458 \pm 1.678$   $\chi^2/\text{NDF}$ : 2113.9/19

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

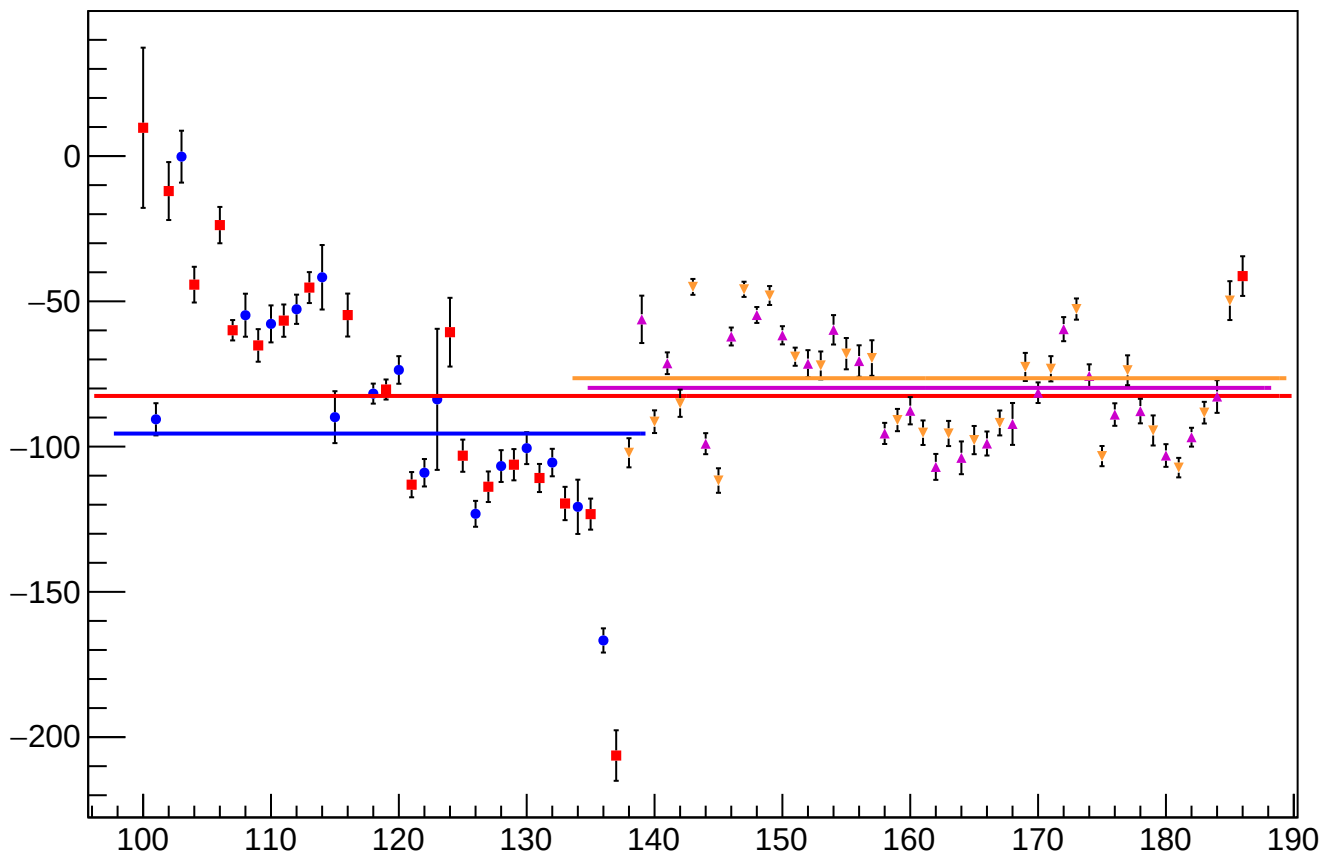
Right:  $-269.593 \pm 1.332$   $\chi^2/\text{NDF}$ : 3049.3/36

In:  $-217.771 \pm 0.871$   $\chi^2/\text{NDF}$ : 3930.7/39

Out:  $-215.723 \pm 0.805$   $\chi^2/\text{NDF}$ : 5698.4/44

All:  $-216.666 \pm 0.591$   $\chi^2/\text{NDF}$ : 9632.1/84

reg\_asym\_atl\_dd\_atr\_dd\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-95.515 \pm 1.344$   $\chi^2/\text{NDF}$ : 669.2/16

Left Out:  $-76.460 \pm 0.797$   $\chi^2/\text{NDF}$ : 781.3/24

Right Out:  $-82.567 \pm 1.238$   $\chi^2/\text{NDF}$ : 819.3/19

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:  $-88.512 \pm 0.910$   $\chi^2/\text{NDF}$ : 1538.7/36

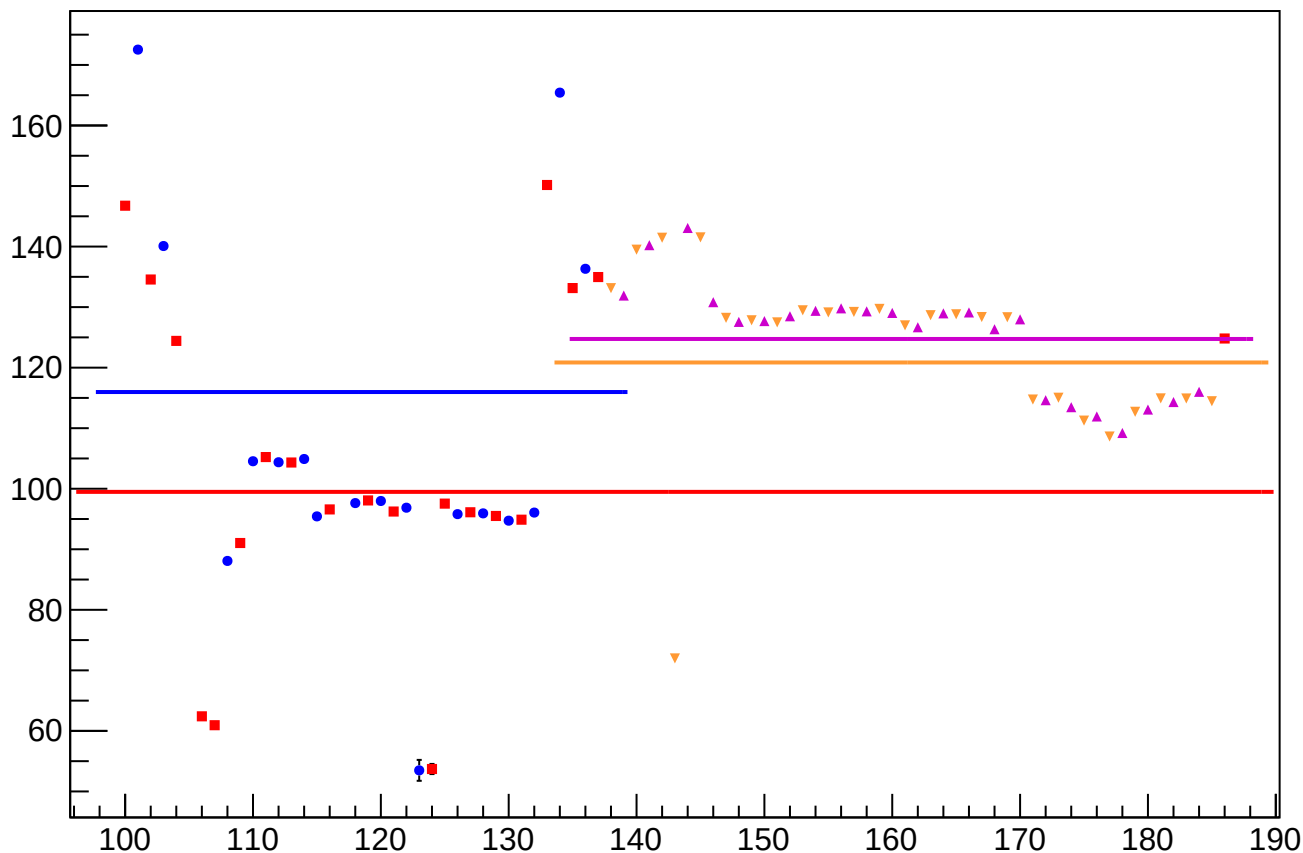
In:  $-84.209 \pm 0.712$   $\chi^2/\text{NDF}$ : 1179.9/39

Out:  $-78.248 \pm 0.670$   $\chi^2/\text{NDF}$ : 1617.8/44

All:  $-81.047 \pm 0.488$   $\chi^2/\text{NDF}$ : 2835.0/84



reg\_asym\_atl\_dd\_atr\_dd\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 115.974 +/- 0.079  $\chi^2/\text{NDF}$ : 105656.7/16

Left Out: 120.855 +/- 0.038  $\chi^2/\text{NDF}$ : 182759.1/24

Right Out: 99.482 +/- 0.068  $\chi^2/\text{NDF}$ : 175727.6/19

Left In: 124.738 +/- 0.039  $\chi^2/\text{NDF}$ : 51298.3/22

Left: 122.737 +/- 0.027  $\chi^2/\text{NDF}$ : 239101.1/47

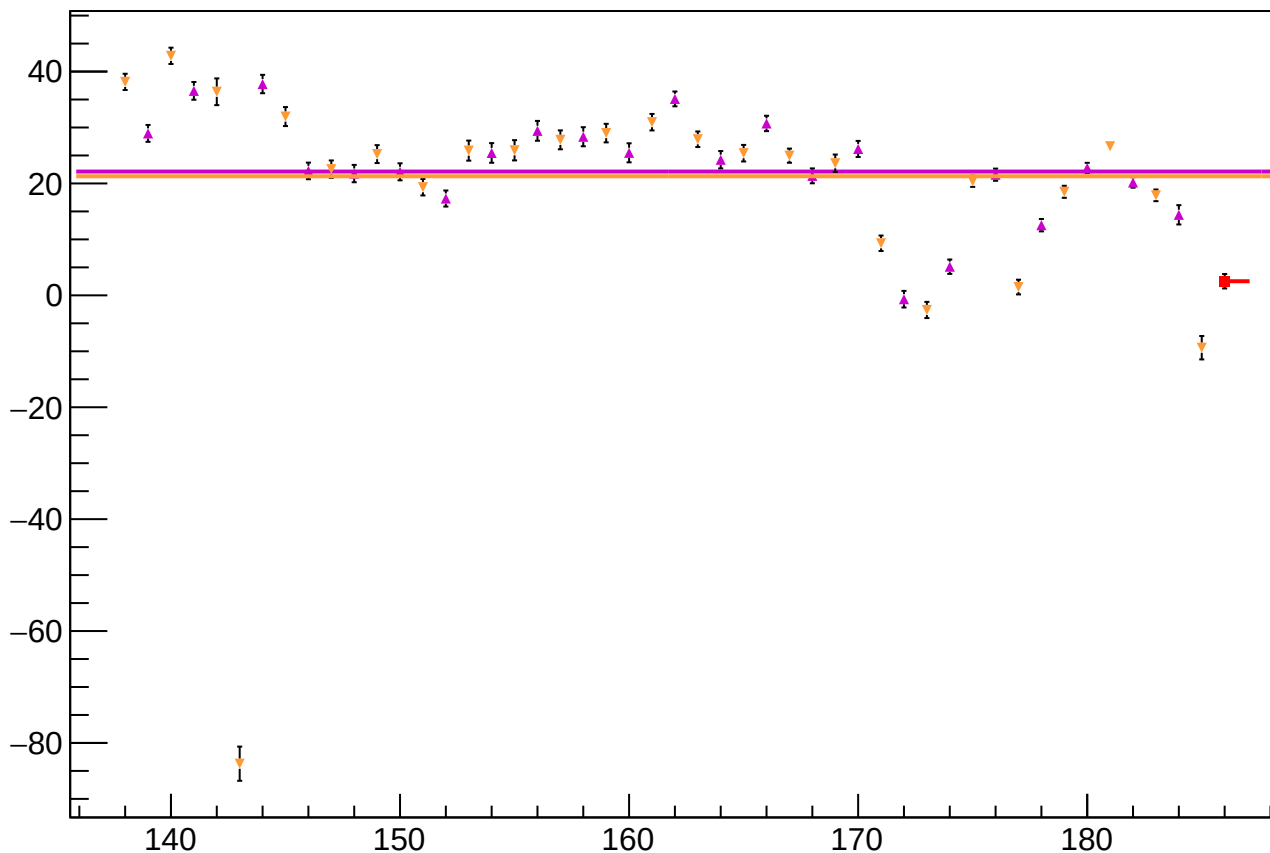
Right: 106.542 +/- 0.051  $\chi^2/\text{NDF}$ : 306602.7/36

In: 122.986 +/- 0.035  $\chi^2/\text{NDF}$ : 166919.8/39

Out: 115.752 +/- 0.033  $\chi^2/\text{NDF}$ : 433805.5/44

All: 119.167 +/- 0.024  $\chi^2/\text{NDF}$ : 623141.1/84

reg\_asym\_atl\_dd\_atr\_dd\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Left Out: 21.282 $\pm$ 0.282  $\chi^2$ /NDF:2600.5/24

Right Out: 2.522 $\pm$ 1.295  $\chi^2$ /NDF: 0.0/0

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

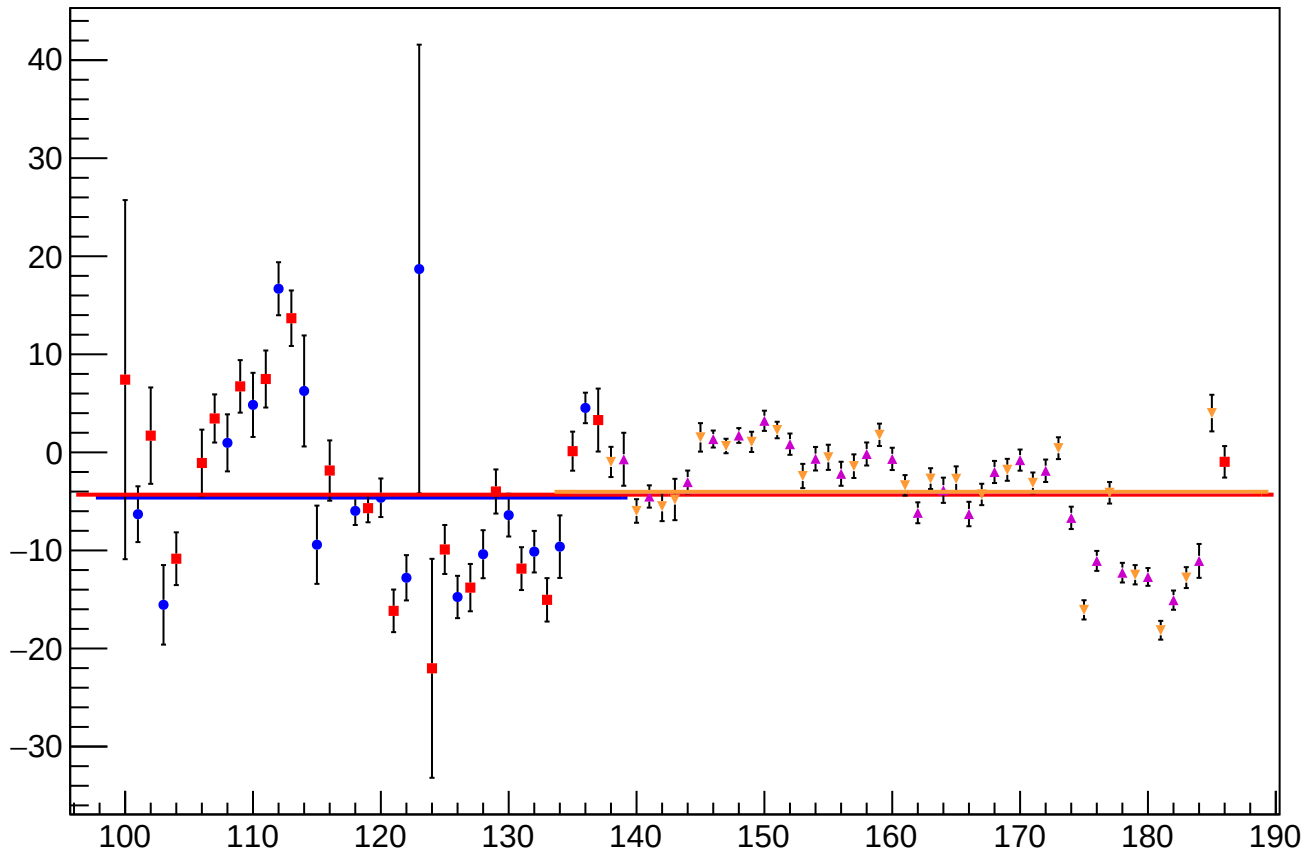
Right: 2.522 $\pm$ 1.295  $\chi^2$ /NDF: 0.0/0

In: 22.127 $\pm$ 0.285  $\chi^2$ /NDF:900.2/22

Out: 20.430 $\pm$ 0.276  $\chi^2$ /NDF:2800.8/25

All: 21.249 $\pm$ 0.198  $\chi^2$ /NDF: 3719.3/48

reg\_asym\_atl\_dd\_atr\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $-4.606 \pm 0.589$   $\chi^2/\text{NDF}: 173.4/16$

Left Out:  $-4.022 \pm 0.223$   $\chi^2/\text{NDF}: 734.1/24$

Right Out:  $-4.313 \pm 0.550$   $\chi^2/\text{NDF}: 197.2/19$

Left In:  $-4.059 \pm 0.228$   $\chi^2/\text{NDF}: 577.2/22$

Left:  $-4.040 \pm 0.159$   $\chi^2/\text{NDF}: 1311.4/47$

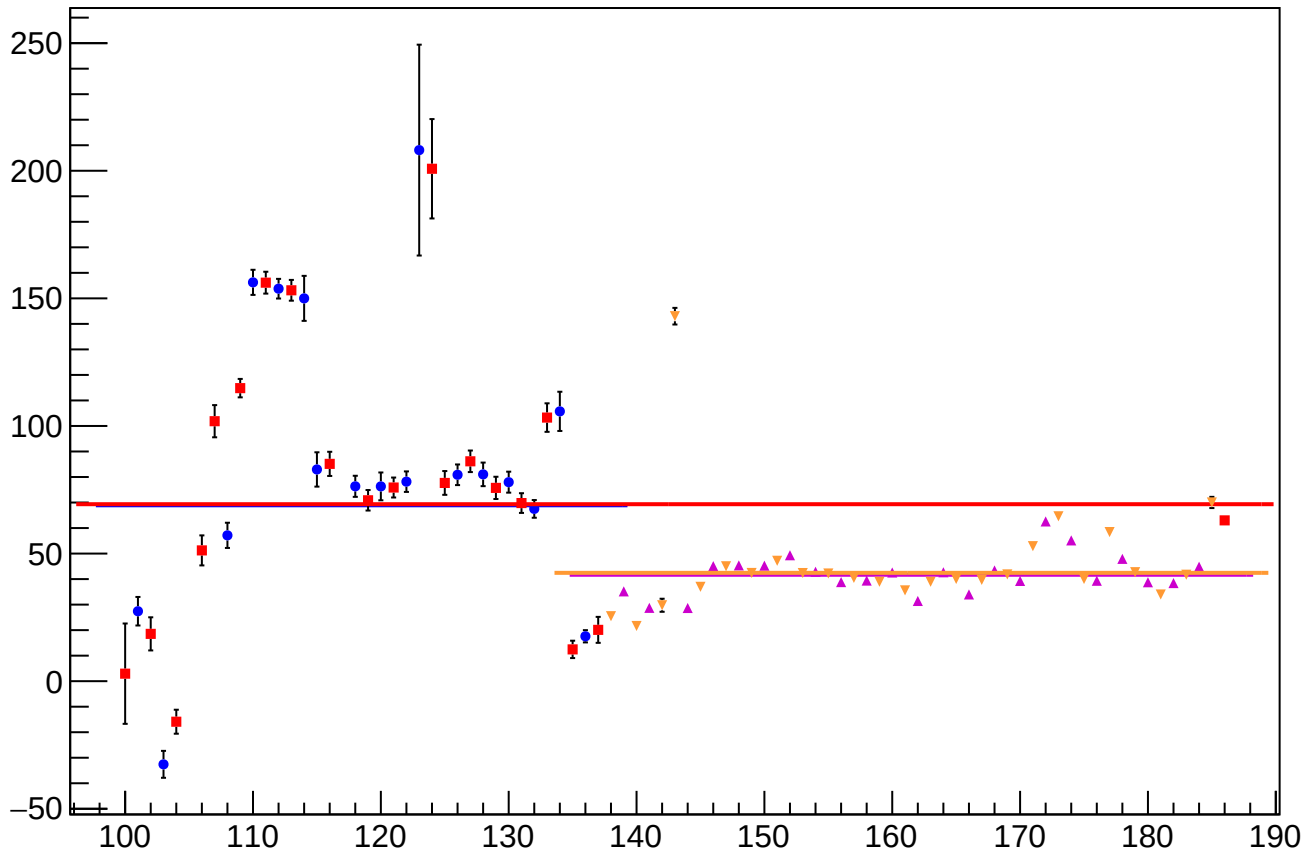
Right:  $-4.450 \pm 0.402$   $\chi^2/\text{NDF}: 370.7/36$

In:  $-4.130 \pm 0.213$   $\chi^2/\text{NDF}: 751.4/39$

Out:  $-4.063 \pm 0.207$   $\chi^2/\text{NDF}: 931.6/44$

All:  $-4.096 \pm 0.148$   $\chi^2/\text{NDF}: 1683.0/84$

reg\_asym\_atl\_dd\_atr\_dd\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 68.921 +/- 1.086  $\chi^2/\text{NDF}$ : 1844.0/16

Left Out: 42.452 +/- 0.282  $\chi^2/\text{NDF}$ : 2016.0/24

Right Out: 69.346 +/- 0.746  $\chi^2/\text{NDF}$ : 1958.4/19

Left In: 41.695 +/- 0.284  $\chi^2/\text{NDF}$ : 630.2/22

Left: 42.077 +/- 0.200  $\chi^2/\text{NDF}$ : 2649.8/47

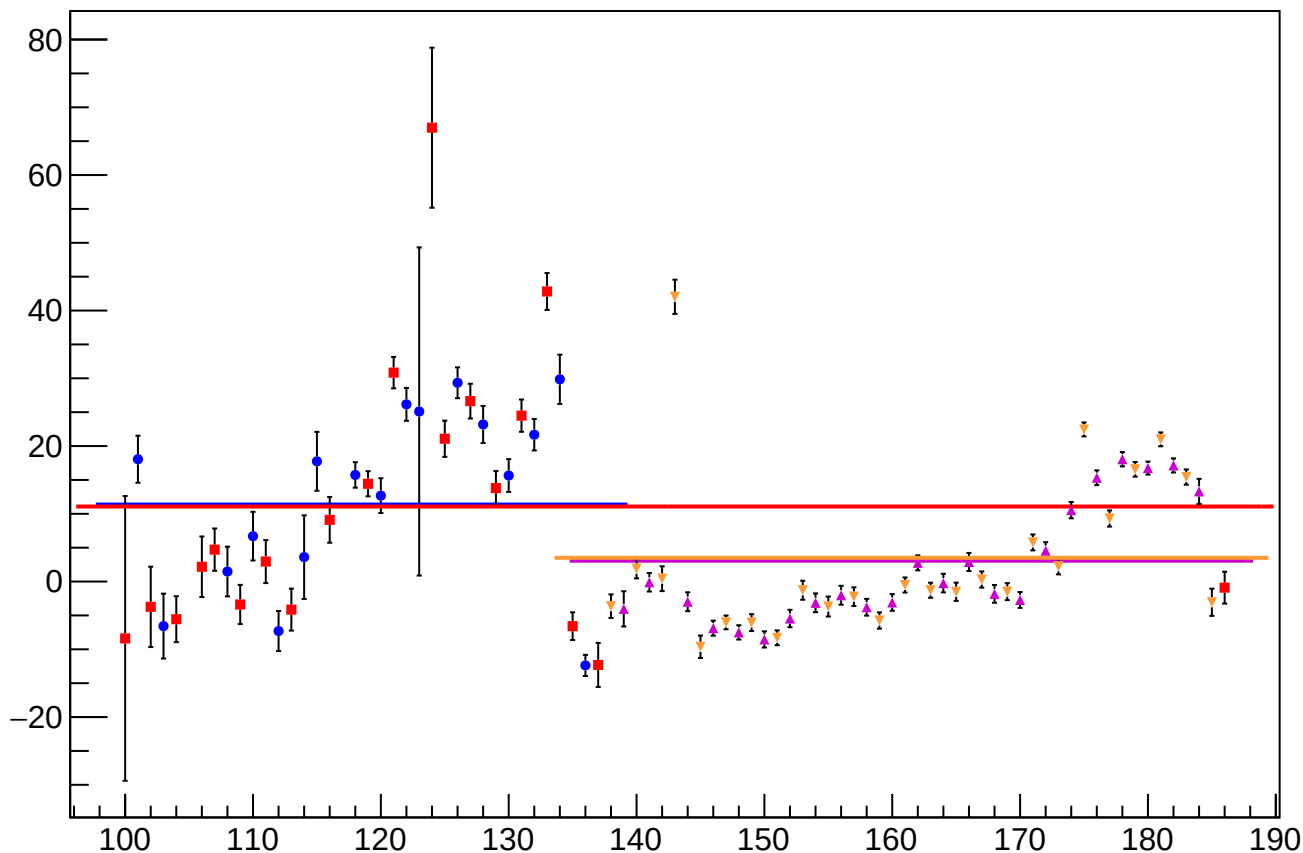
Right: 69.210 +/- 0.615  $\chi^2/\text{NDF}$ : 3802.5/36

In: 43.440 +/- 0.275  $\chi^2/\text{NDF}$ : 3062.7/39

Out: 45.812 +/- 0.264  $\chi^2/\text{NDF}$ : 5111.3/44

All: 44.675 +/- 0.190  $\chi^2/\text{NDF}$ : 8212.8/84

reg\_asym\_atl\_dd\_atr\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 11.369 $\pm$ 0.667  $\chi^2$ /NDF: 474.4/16

Left Out: 3.505 $\pm$ 0.252  $\chi^2$ /NDF:1691.3/24

Right Out: 11.077 $\pm$ 0.640  $\chi^2$ /NDF: 565.7/19

Left In: 3.081 $\pm$ 0.257  $\chi^2$ /NDF:1265.7/22

Left: 3.297 $\pm$ 0.180  $\chi^2$ /NDF: 2958.4/47

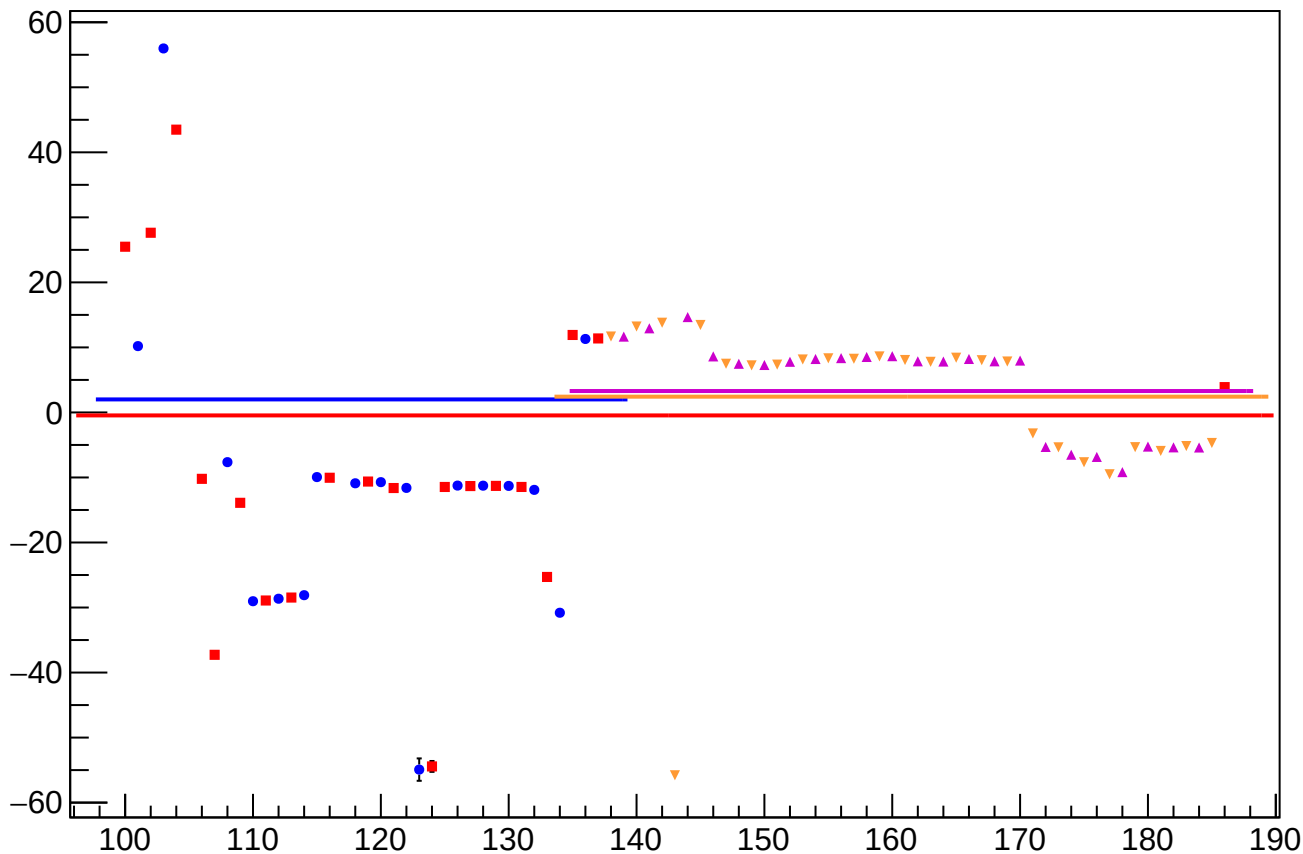
Right: 11.217 $\pm$ 0.462  $\chi^2$ /NDF: 1040.2/36

In: 4.153 $\pm$ 0.240  $\chi^2$ /NDF:1874.5/39

Out: 4.523 $\pm$ 0.235  $\chi^2$ /NDF:2378.1/44

All: 4.342 $\pm$ 0.168  $\chi^2$ /NDF: 4253.8/84

reg\_asym\_atl\_dd\_atr\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 2.002 $\pm$ 0.037  $\chi^2$ /NDF: 357872.4/16

Left Out: 2.425 $\pm$ 0.012  $\chi^2$ /NDF:616382.5/24

Right Out: -0.459 $\pm$ 0.036  $\chi^2$ /NDF: 361683.1/19

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

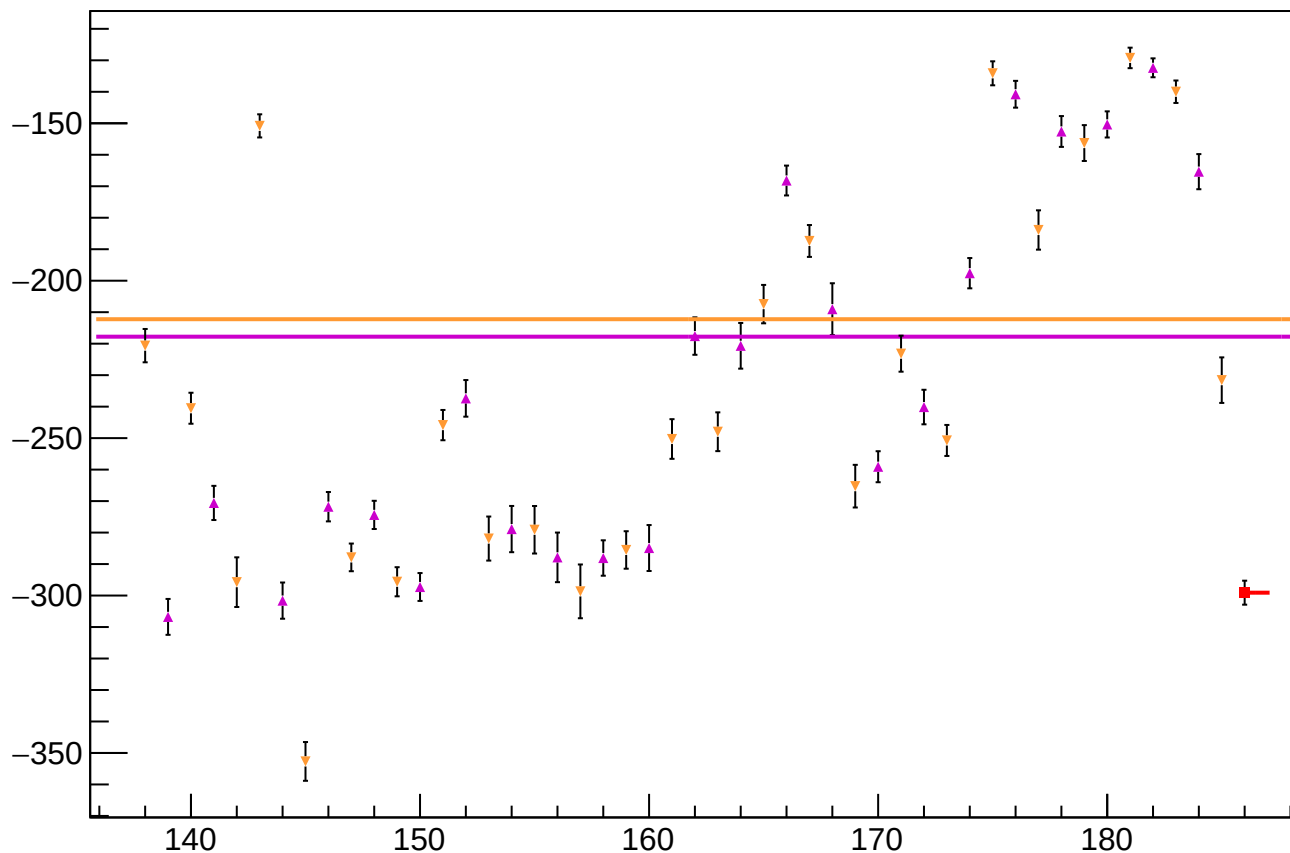
Right: 0.740 $\pm$ 0.026  $\chi^2$ /NDF: 721799.5/36

In: 3.177 $\pm$ 0.011  $\chi^2$ /NDF:763291.7/39

Out: 2.159 $\pm$ 0.011  $\chi^2$ /NDF:983806.1/44

All: 2.663 $\pm$ 0.008  $\chi^2$ /NDF: 1751327.4/84

reg\_asym\_atl\_avg\_atr\_avg\_avg\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -212.231+/-1.029  $\chi^2/\text{NDF}$ :3875.4/24

Right Out: -299.089+/-3.810  $\chi^2/\text{NDF}$ : 0.0/0

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

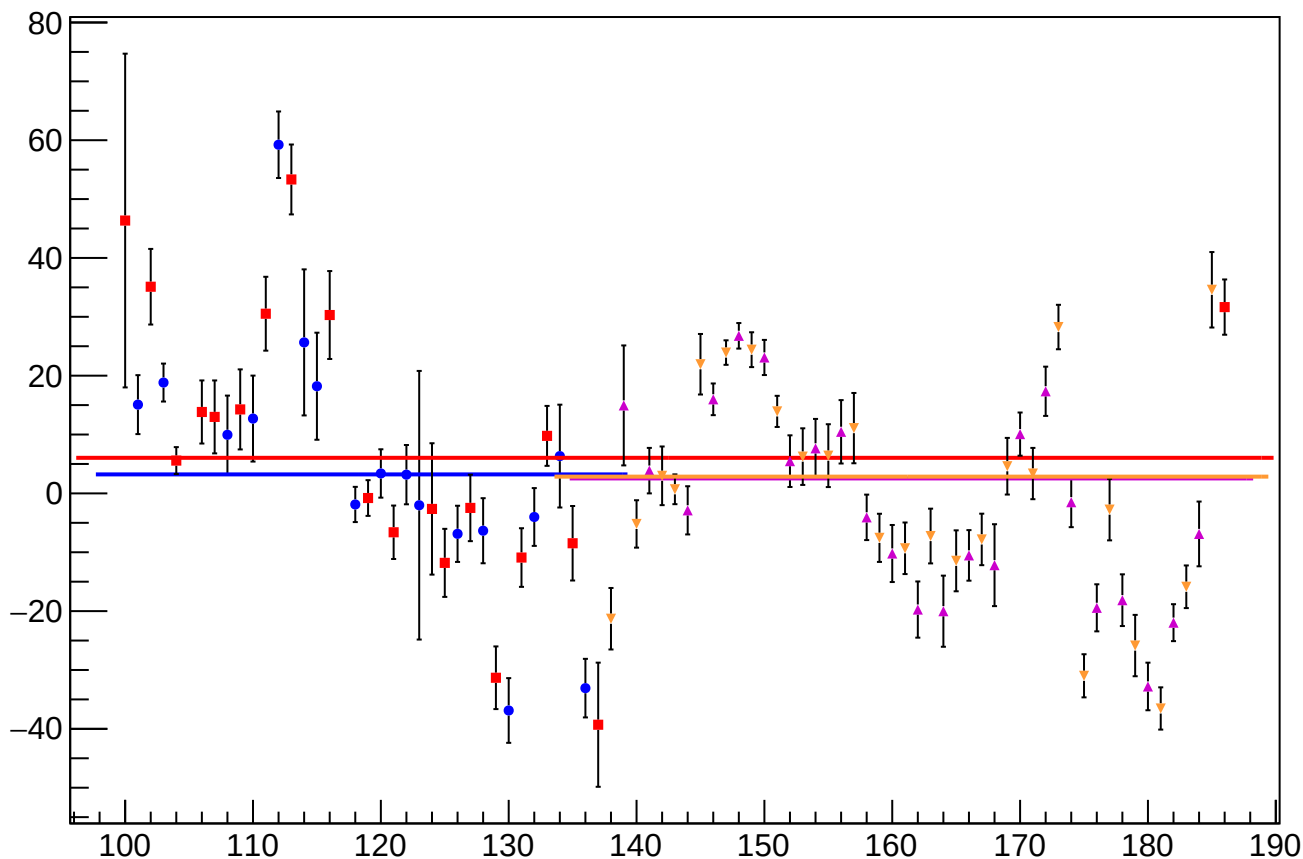
Right: -299.089+/-3.810  $\chi^2/\text{NDF}$ : 0.0/0

In: -217.779+/-1.067  $\chi^2/\text{NDF}$ :3448.9/22

Out: -218.141+/-0.994  $\chi^2/\text{NDF}$ :4359.7/25

All: -217.973+/-0.727  $\chi^2/\text{NDF}$ : 7808.7/48

reg\_asym\_atl\_avg\_atr\_avg\_avg\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $3.227 \pm 1.246$   $\chi^2/\text{NDF}$ : 255.1/16

Left Out:  $2.848 \pm 0.775$   $\chi^2/\text{NDF}$ : 582.1/24

Right Out:  $6.044 \pm 1.125$   $\chi^2/\text{NDF}$ : 256.7/19

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:  $4.779 \pm 0.835$   $\chi^2/\text{NDF}$ : 514.6/36

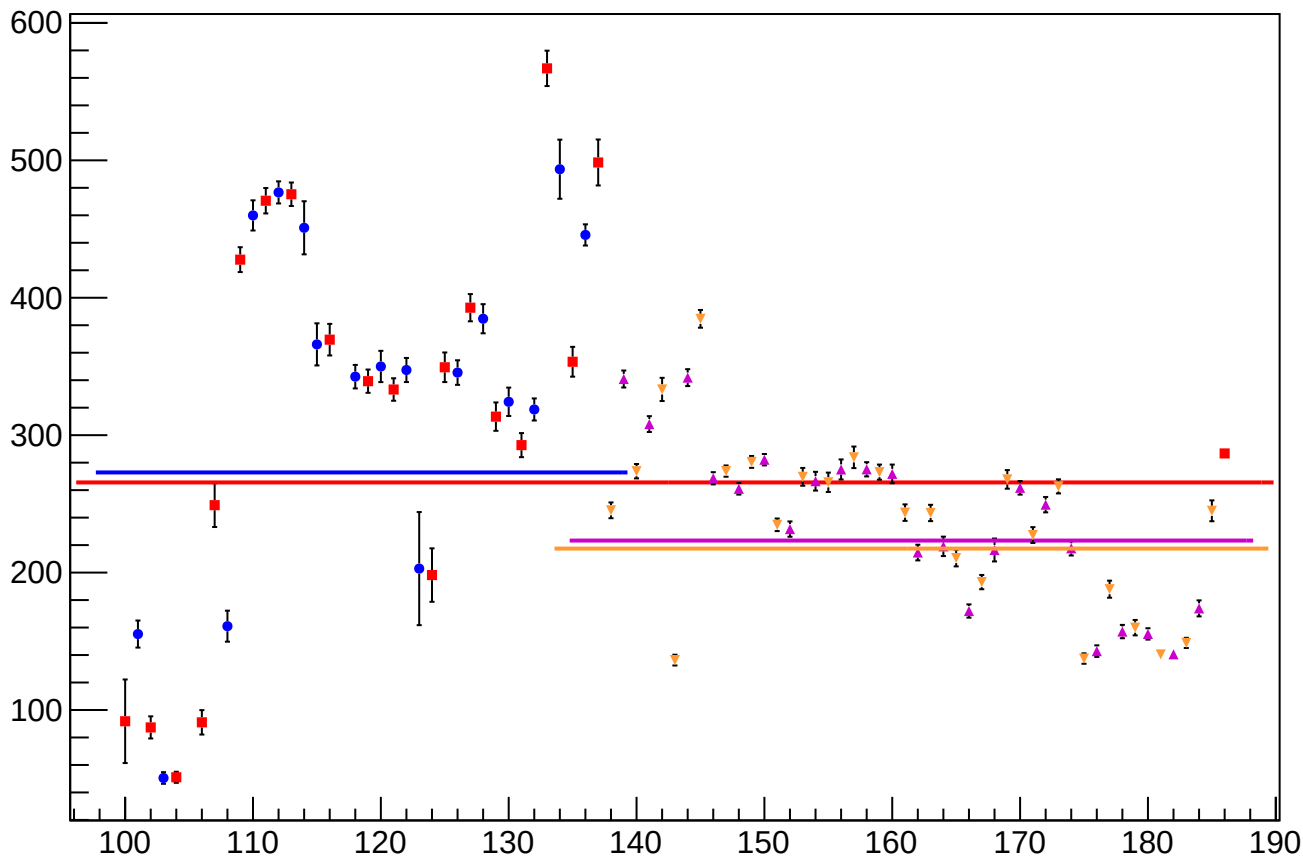
In:  $2.749 \pm 0.686$   $\chi^2/\text{NDF}$ : 728.9/39

Out:  $3.876 \pm 0.638$   $\chi^2/\text{NDF}$ : 844.3/44

All:  $3.354 \pm 0.467$   $\chi^2/\text{NDF}$ : 1574.7/84



reg\_asym\_atl\_avg\_atr\_avg\_avg\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In: 272.880 $\pm$ 2.208  $\chi^2$ /NDF: 5091.5/16

Left Out: 217.484 $\pm$ 1.032  $\chi^2$ /NDF: 3769.5/24

Right Out: 265.609 $\pm$ 1.718  $\chi^2$ /NDF: 6503.9/19

Left In: 223.309 $\pm$ 1.062  $\chi^2$ /NDF: 3378.0/22

Left: 220.314 $\pm$ 0.740  $\chi^2$ /NDF: 7163.0/47

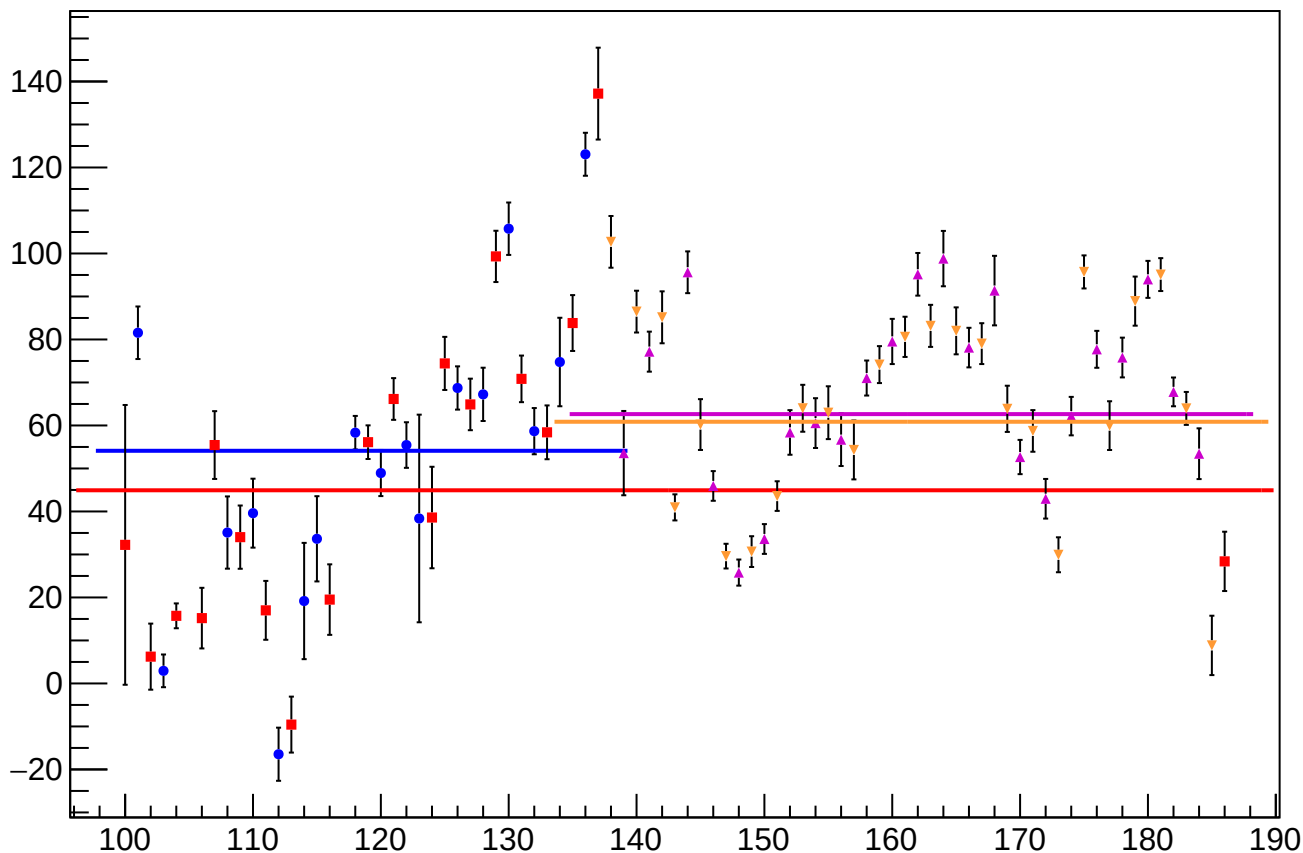
Right: 268.351 $\pm$ 1.356  $\chi^2$ /NDF: 11602.1/36

In: 232.618 $\pm$ 0.957  $\chi^2$ /NDF: 8878.7/39

Out: 230.250 $\pm$ 0.885  $\chi^2$ /NDF: 10849.9/44

All: 231.342 $\pm$ 0.650  $\chi^2$ /NDF: 19731.9/84

reg\_asym\_atl\_avg\_atr\_avg\_avg\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In: 54.110 $\pm$ 1.441  $\chi^2$ /NDF: 633.3/16

Left Out: 60.863 $\pm$ 0.897  $\chi^2$ /NDF:731.6/24

Right Out: 44.924 $\pm$ 1.333  $\chi^2$ /NDF: 534.2/19

Left In: 62.640 $\pm$ 0.943  $\chi^2$ /NDF:515.4/22

Left: 61.707 $\pm$ 0.650  $\chi^2$ /NDF: 1248.9/47

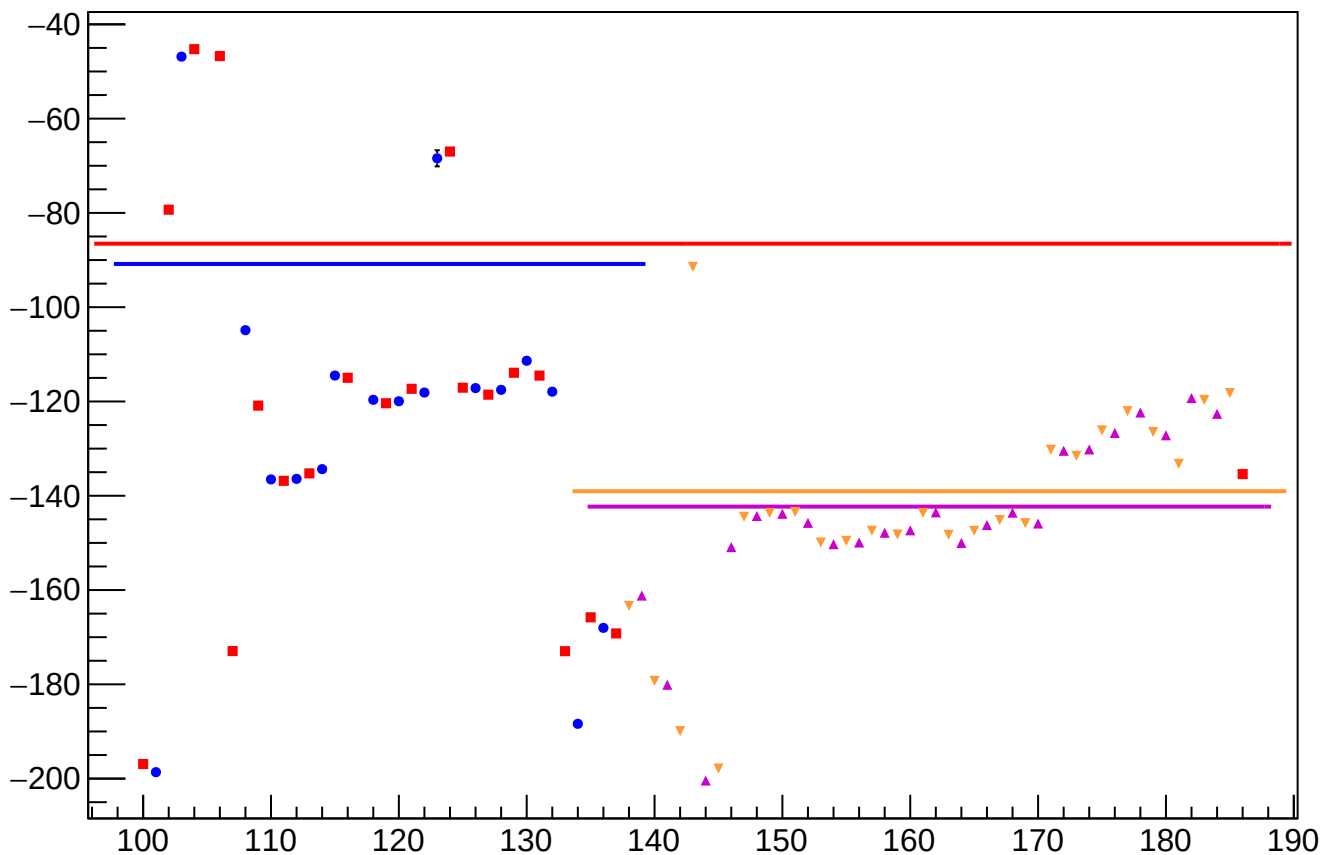
Right: 49.162 $\pm$ 0.979  $\chi^2$ /NDF: 1189.4/36

In: 60.083 $\pm$ 0.789  $\chi^2$ /NDF:1173.2/39

Out: 55.900 $\pm$ 0.744  $\chi^2$ /NDF:1364.2/44

All: 57.869 $\pm$ 0.541  $\chi^2$ /NDF: 2552.3/84

reg\_asym\_atl\_avg\_atr\_avg\_avg\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $-90.830 \pm 0.068$   $\chi^2/\text{NDF}: 533047.0/16$

Left Out:  $-139.040 \pm 0.043$   $\chi^2/\text{NDF}: 258113.4/24$

Right Out:  $-86.528 \pm 0.065$   $\chi^2/\text{NDF}: 503812.6/19$

Left In:  $-142.305 \pm 0.044$   $\chi^2/\text{NDF}: 143351.8/22$

Left:  $-140.627 \pm 0.031$   $\chi^2/\text{NDF}: 404285.9/47$

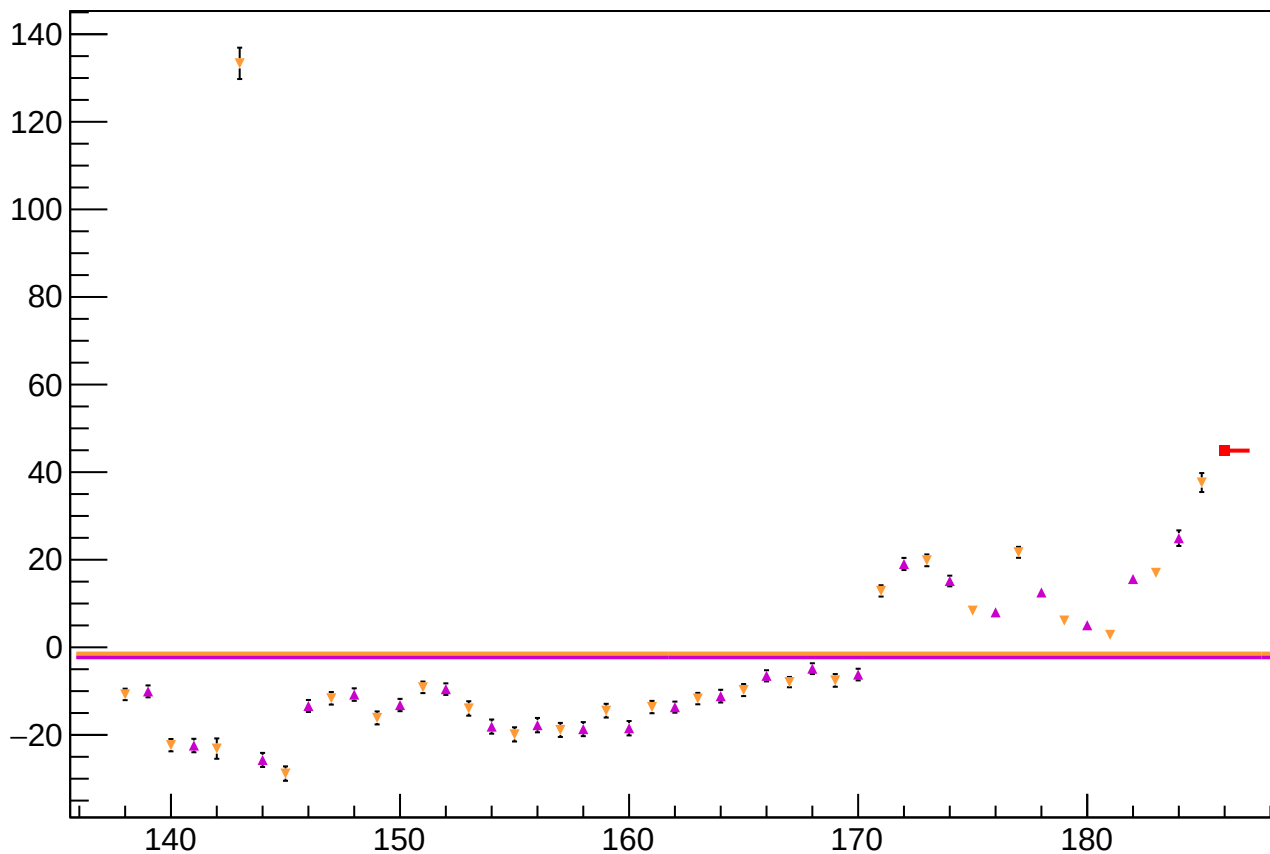
Right:  $-88.573 \pm 0.047$   $\chi^2/\text{NDF}: 1038970.9/36$

In:  $-127.015 \pm 0.037$   $\chi^2/\text{NDF}: 1081507.7/39$

Out:  $-122.967 \pm 0.036$   $\chi^2/\text{NDF}: 1221186.1/44$

All:  $-124.922 \pm 0.026$   $\chi^2/\text{NDF}: 2308897.9/84$

reg\_asym\_atl\_avg\_atr\_avg\_dd\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -1.427+/-0.268  $\chi^2/\text{NDF}$ : 4339.0/24

Right Out: 44.920+/-0.865  $\chi^2/\text{NDF}$ : 0.0/0

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

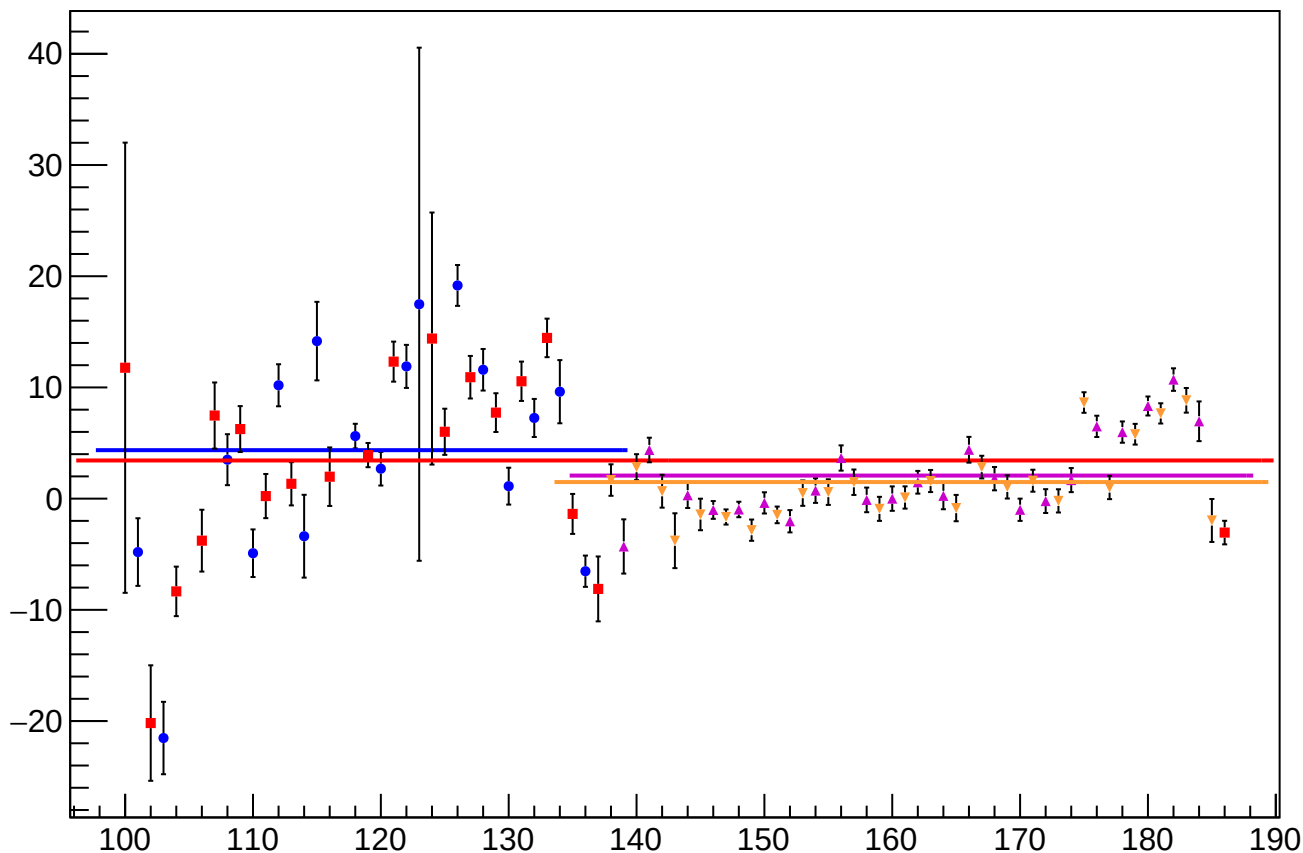
Right: 44.920+/-0.865  $\chi^2/\text{NDF}$ : 0.0/0

In: -2.270+/-0.271  $\chi^2/\text{NDF}$ : 2521.6/22

Out: 2.624+/-0.256  $\chi^2/\text{NDF}$ : 6960.6/25

All: 0.317+/-0.186  $\chi^2/\text{NDF}$ : 9655.0/48

reg\_asym\_atl\_avg\_atr\_avg\_dd\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 4.358 $\pm$ 0.472  $\chi^2$ /NDF: 280.7/16

Left Out: 1.491 $\pm$ 0.210  $\chi^2$ /NDF:259.1/24

Right Out: 3.432 $\pm$ 0.433  $\chi^2$ /NDF: 228.7/19

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

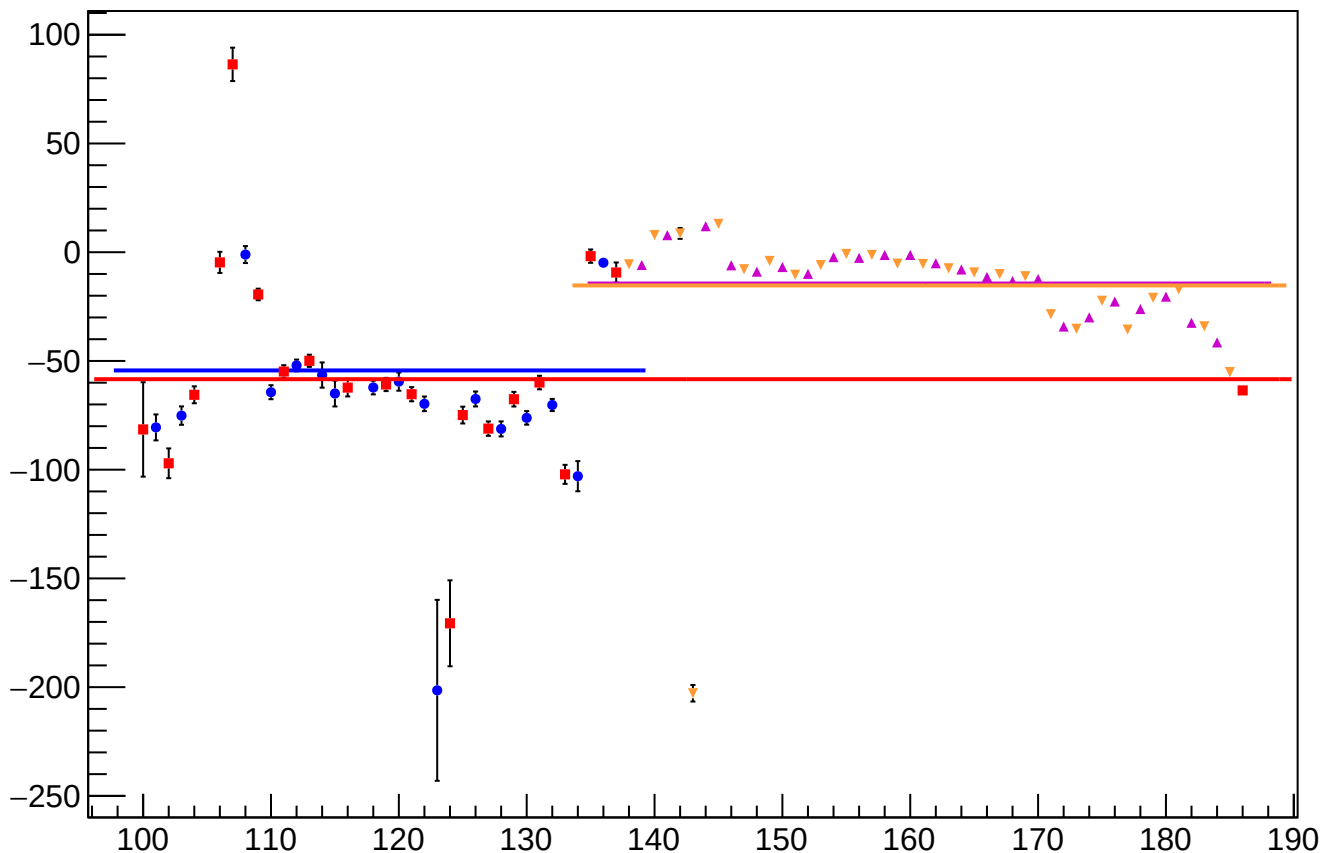
Right: 3.855 $\pm$ 0.319  $\chi^2$ /NDF: 511.6/36

In: 2.468 $\pm$ 0.196  $\chi^2$ /NDF:574.7/39

Out: 1.862 $\pm$ 0.189  $\chi^2$ /NDF:504.1/44

All: 2.154 $\pm$ 0.136  $\chi^2$ /NDF: 1083.7/84

reg\_asym\_atl\_avg\_atr\_avg\_dd\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-54.358 \pm 0.870$   $\chi^2/\text{NDF}: 1014.3/16$

Left Out:  $-15.279 \pm 0.267$   $\chi^2/\text{NDF}: 4820.1/24$

Right Out:  $-58.390 \pm 0.539$   $\chi^2/\text{NDF}: 1458.4/19$

Left In:  $-14.406 \pm 0.269$   $\chi^2/\text{NDF}: 2032.4/22$

Left:  $-14.846 \pm 0.189$   $\chi^2/\text{NDF}: 6857.8/47$

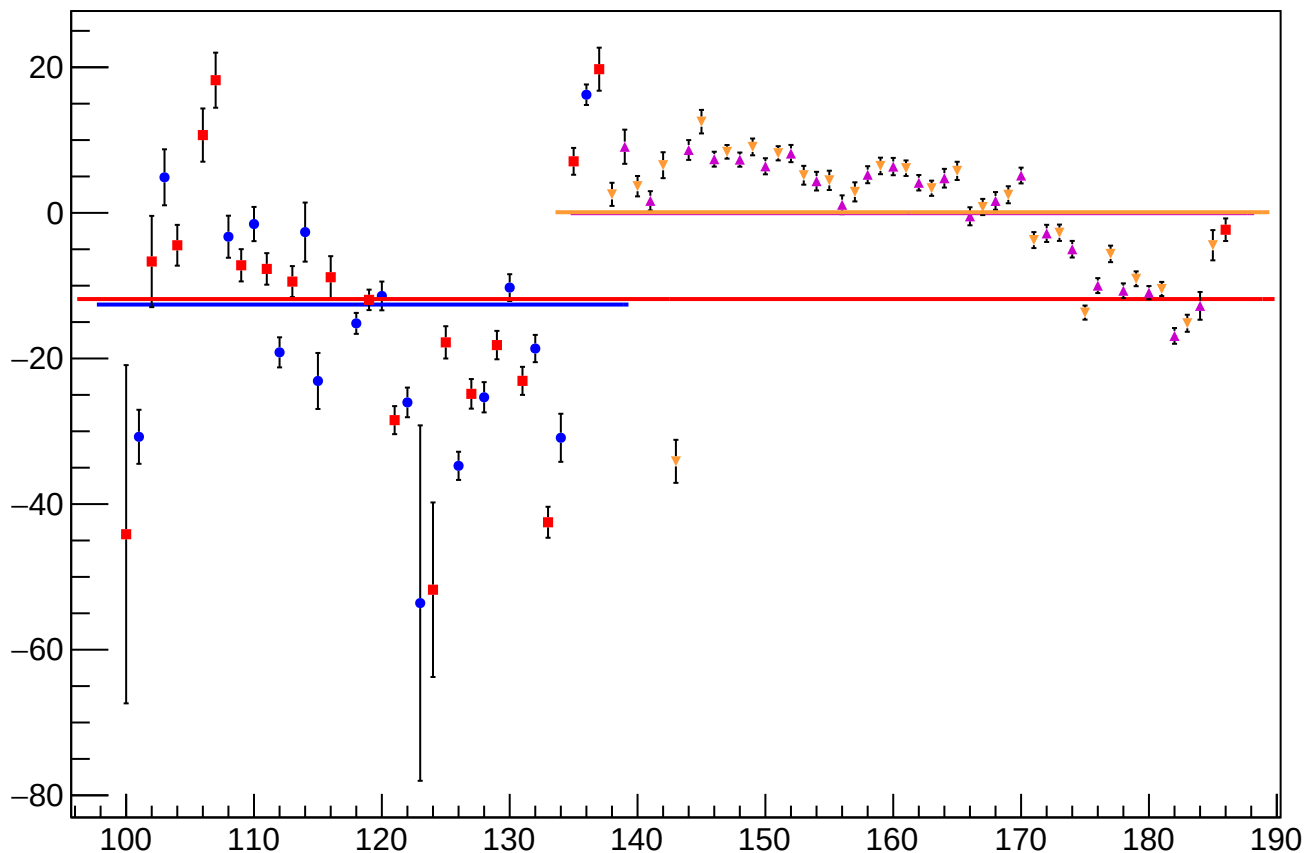
Right:  $-57.273 \pm 0.458$   $\chi^2/\text{NDF}: 2488.2/36$

In:  $-17.893 \pm 0.257$   $\chi^2/\text{NDF}: 4970.5/39$

Out:  $-23.770 \pm 0.239$   $\chi^2/\text{NDF}: 11421.0/44$

All:  $-21.044 \pm 0.175$   $\chi^2/\text{NDF}: 16671.7/84$

reg\_asym\_atl\_avg\_atr\_avg\_dd\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-12.592 \pm 0.538$   $\chi^2/\text{NDF}$ : 779.7/16

Left Out:  $0.087 \pm 0.238$   $\chi^2/\text{NDF}$ : 1172.3/24

Right Out:  $-11.837 \pm 0.509$   $\chi^2/\text{NDF}$ : 763.9/19

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

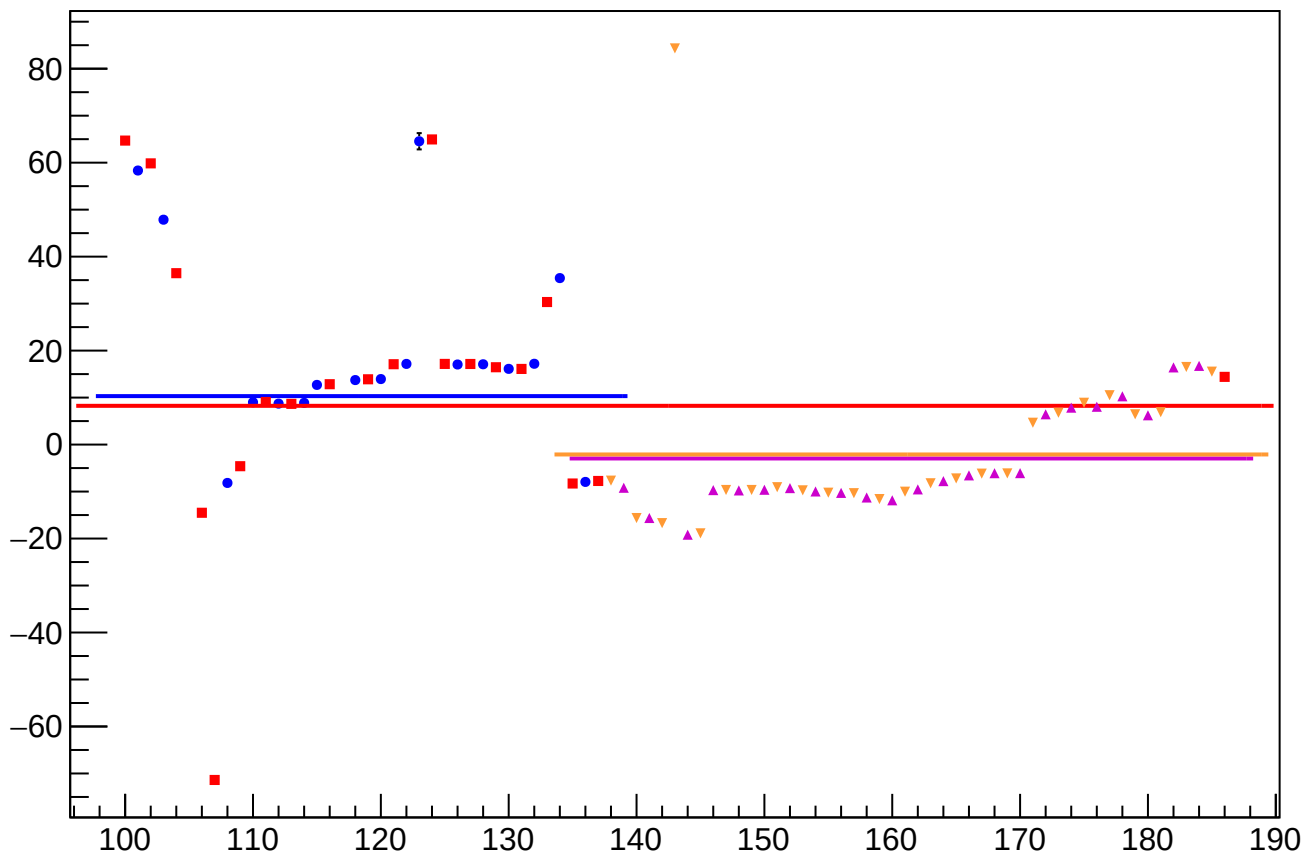
Right:  $-12.194 \pm 0.370$   $\chi^2/\text{NDF}$ : 1544.7/36

In:  $-2.173 \pm 0.221$   $\chi^2/\text{NDF}$ : 2260.2/39

Out:  $-2.057 \pm 0.216$   $\chi^2/\text{NDF}$ : 2386.6/44

All:  $-2.114 \pm 0.155$   $\chi^2/\text{NDF}$ : 4647.0/84

reg\_asym\_atl\_avg\_atr\_avg\_dd\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In:  $10.315 \pm 0.031$   $\chi^2/\text{NDF}: 380737.7/16$

Left Out:  $-2.105 \pm 0.011$   $\chi^2/\text{NDF}: 1093120.2/24$

Right Out:  $8.248 \pm 0.030$   $\chi^2/\text{NDF}: 547179.2/19$

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:  $9.263 \pm 0.022$   $\chi^2/\text{NDF}: 930220.0/36$

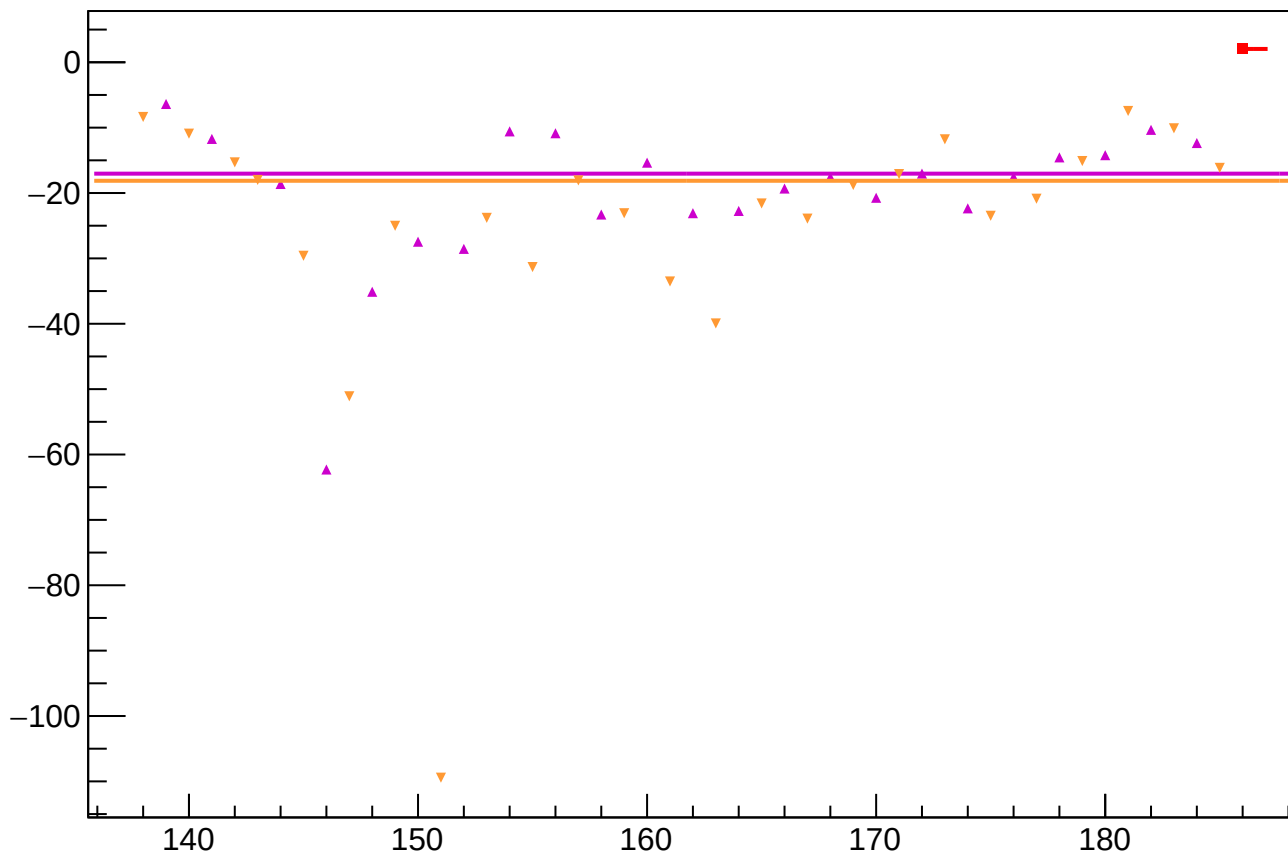
In:  $-1.450 \pm 0.010$   $\chi^2/\text{NDF}: 1309185.8/39$

Out:  $-0.906 \pm 0.010$   $\chi^2/\text{NDF}: 1744347.2/44$

All:  $-1.176 \pm 0.007$   $\chi^2/\text{NDF}: 3054925.6/84$



reg\_asym\_bcm\_an\_ds3\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Left Out: -18.128 $\pm$ 0.039  $\chi^2$ /NDF:88551.6/24

Right Out: 2.038 $\pm$ 0.194  $\chi^2$ /NDF: 0.0/0

Left In: -17.038 $\pm$ 0.038  $\chi^2$ /NDF:44141.1/22

Left: -17.572 $\pm$ 0.027  $\chi^2$ /NDF: 133092.4/47

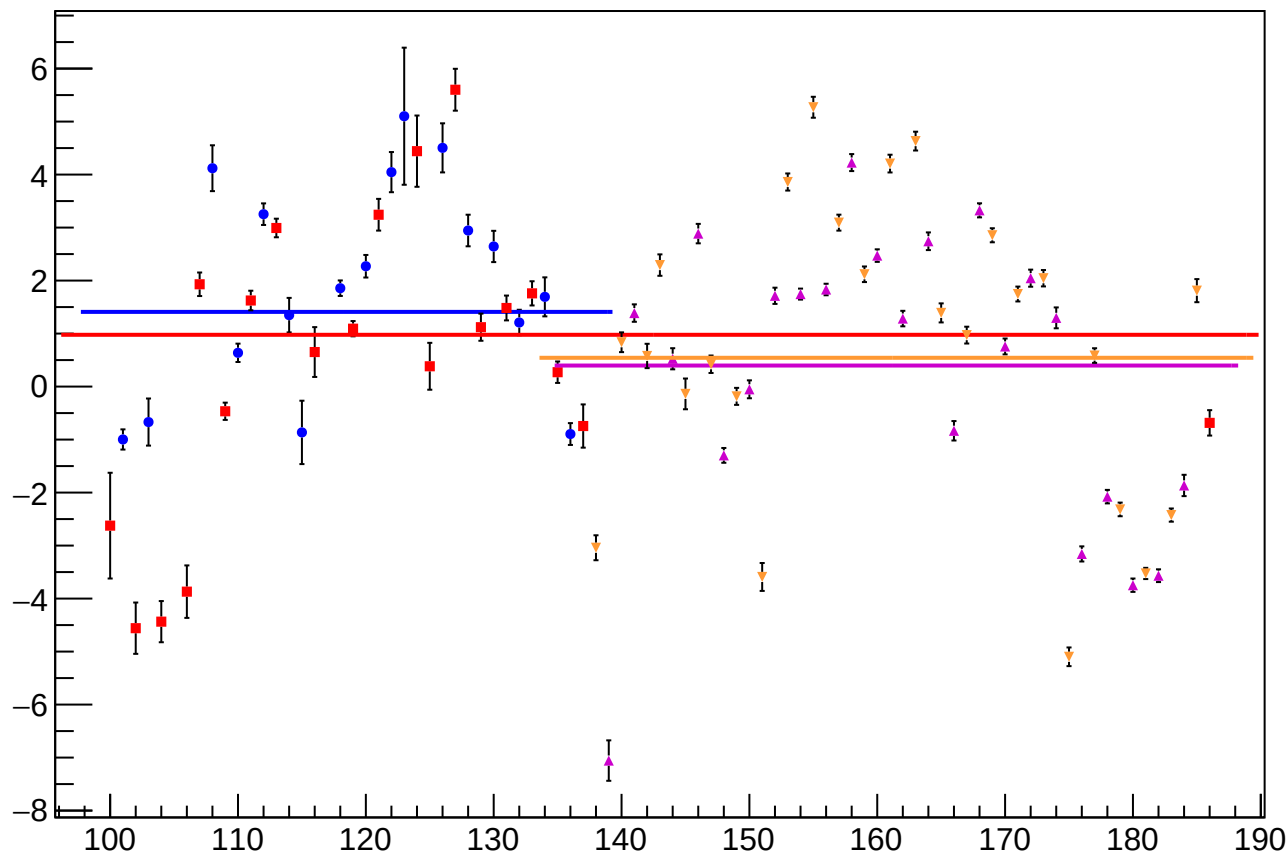
Right: 2.038 $\pm$ 0.194  $\chi^2$ /NDF: 0.0/0

In: -17.038 $\pm$ 0.038  $\chi^2$ /NDF:44141.1/22

Out: -17.351 $\pm$ 0.038  $\chi^2$ /NDF:98896.5/25

All: -17.195 $\pm$ 0.027  $\chi^2$ /NDF: 143071.2/48

reg\_asym\_bcm\_an\_ds3\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $1.409 \pm 0.062$   $\chi^2/\text{NDF}: 634.6/16$

Left Out:  $0.543 \pm 0.032$   $\chi^2/\text{NDF}: 7085.3/24$

Right Out:  $0.977 \pm 0.056$   $\chi^2/\text{NDF}: 993.4/19$

Left In:  $0.397 \pm 0.031$   $\chi^2/\text{NDF}: 6235.6/22$

Left:  $0.466 \pm 0.022$   $\chi^2/\text{NDF}: 13331.6/47$

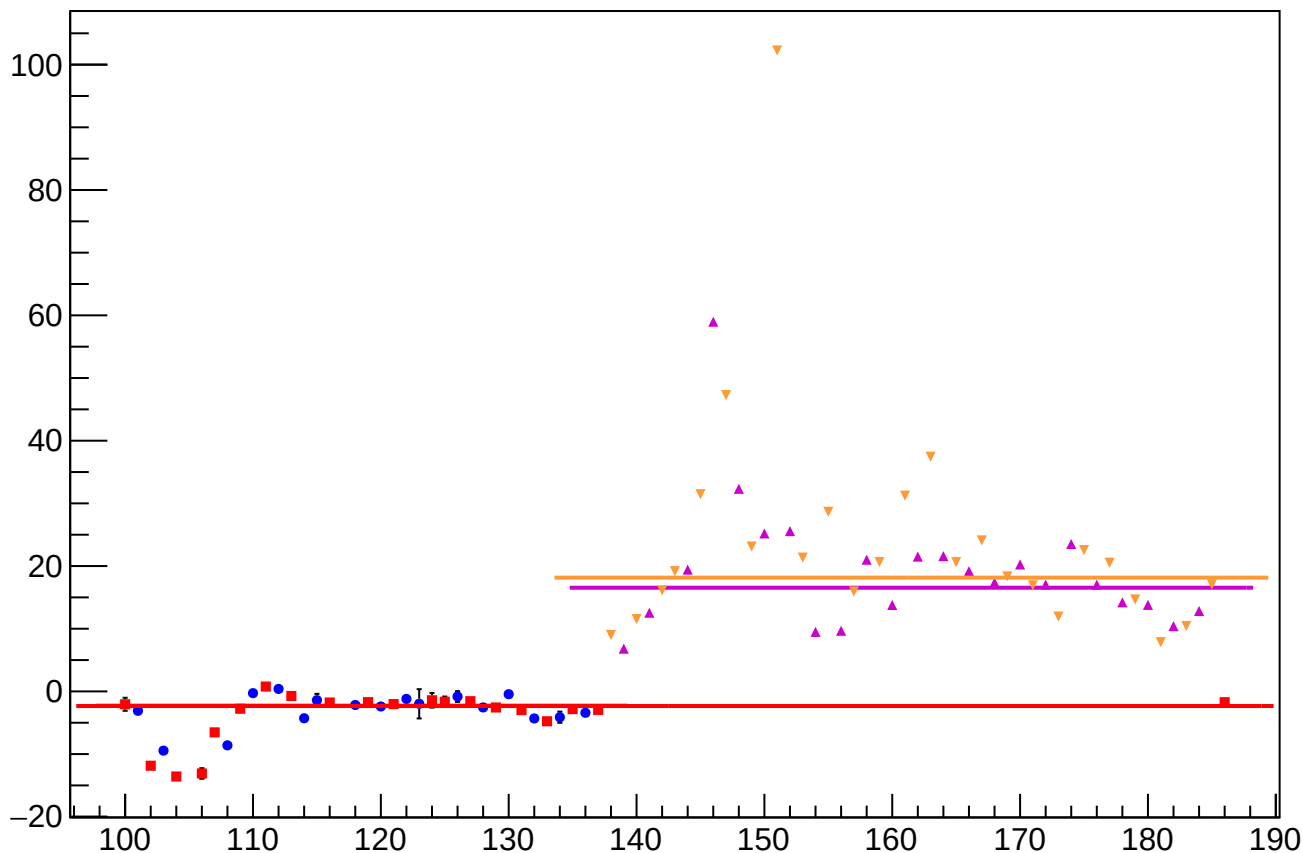
Right:  $1.173 \pm 0.042$   $\chi^2/\text{NDF}: 1654.5/36$

In:  $0.596 \pm 0.028$   $\chi^2/\text{NDF}: 7083.9/39$

Out:  $0.651 \pm 0.028$   $\chi^2/\text{NDF}: 8123.1/44$

All:  $0.623 \pm 0.020$   $\chi^2/\text{NDF}: 15208.9/84$

reg\_asym\_bcm\_an\_ds3\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-2.289 \pm 0.112$   $\chi^2/\text{NDF}$ : 447.6/16

Left Out:  $18.150 \pm 0.039$   $\chi^2/\text{NDF}$ : 77847.8/24

Right Out:  $-2.332 \pm 0.083$   $\chi^2/\text{NDF}$ : 913.1/19

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

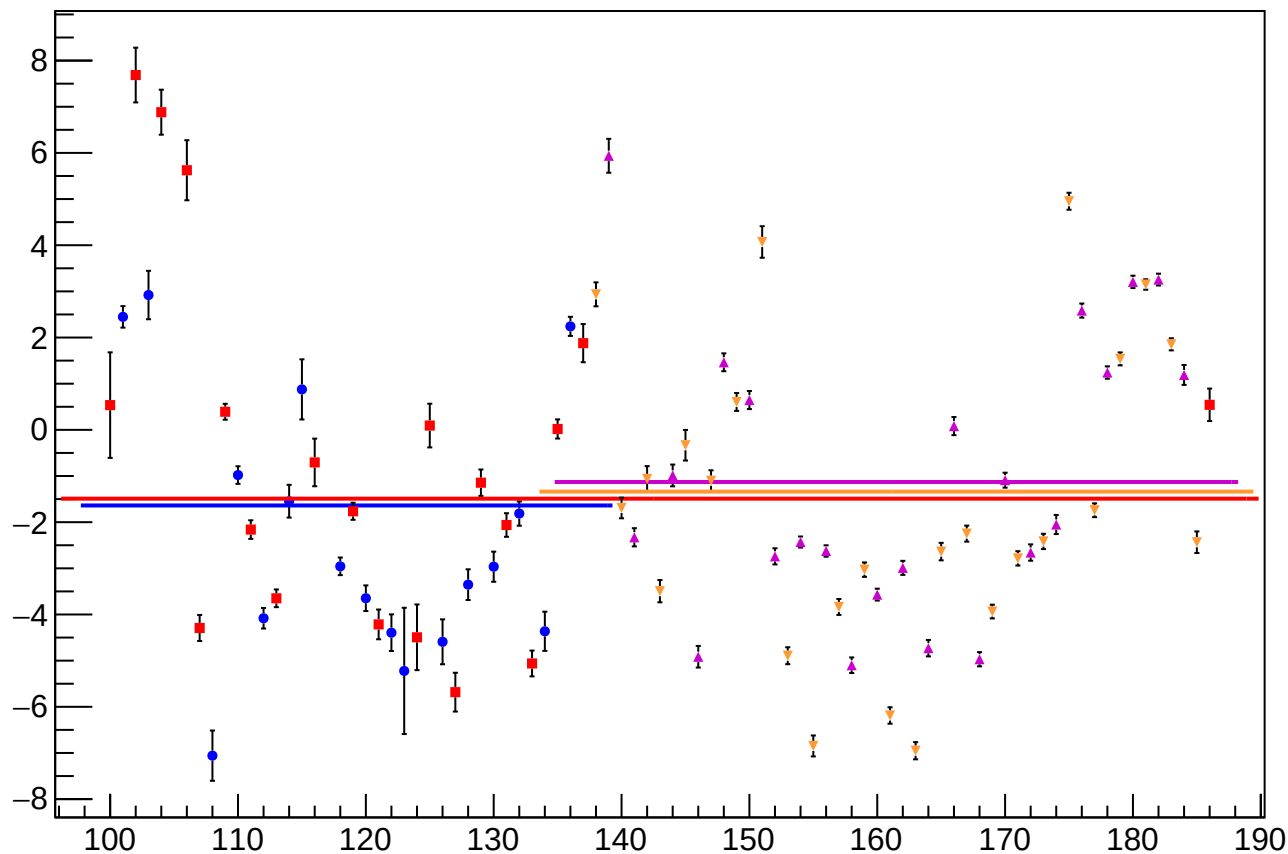
Right:  $-2.317 \pm 0.067$   $\chi^2/\text{NDF}$ : 1360.8/36

In:  $14.606 \pm 0.036$   $\chi^2/\text{NDF}$ : 66880.1/39

Out:  $14.466 \pm 0.035$   $\chi^2/\text{NDF}$ : 128134.2/44

All:  $14.535 \pm 0.025$   $\chi^2/\text{NDF}$ : 195022.0/84

reg\_asym\_bcm\_an\_ds3\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



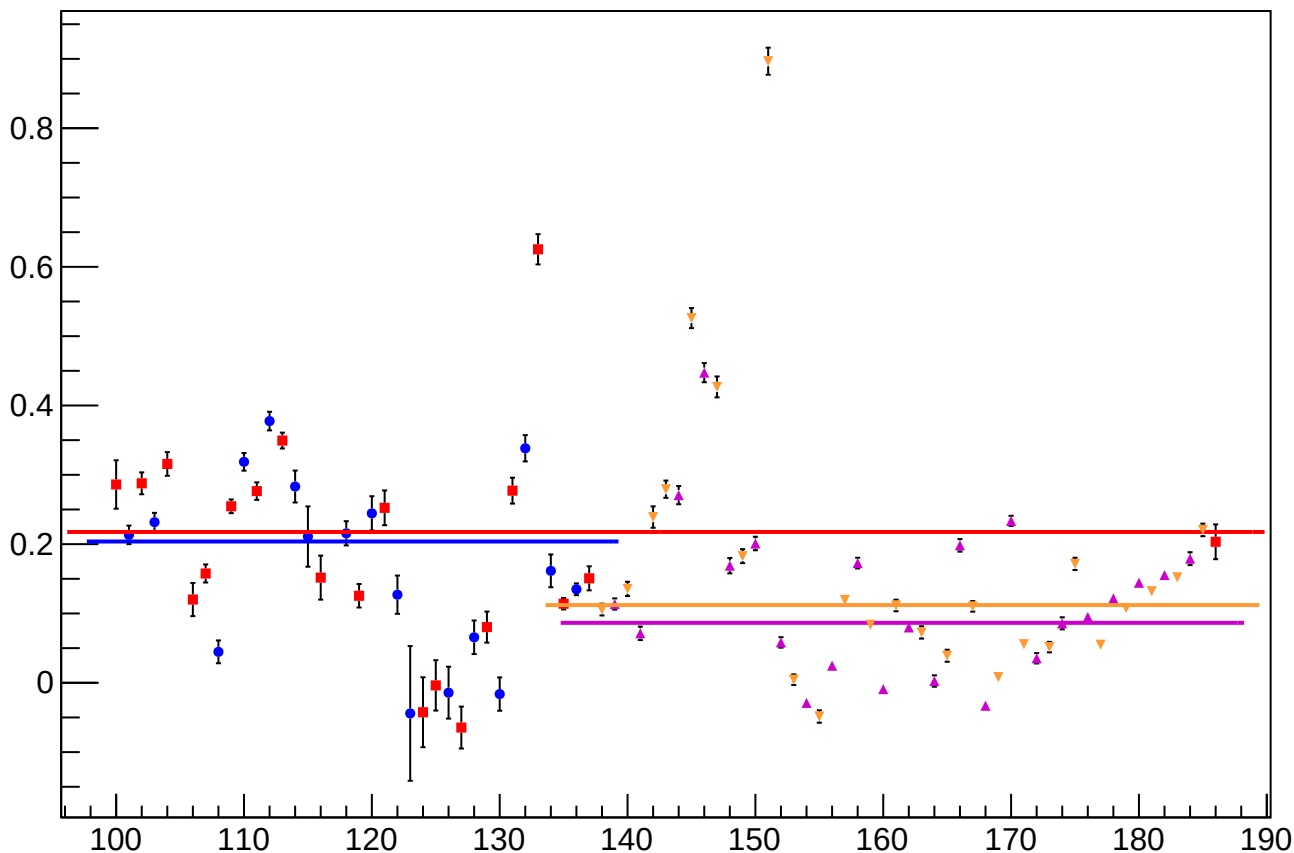
Right In:  $-1.638 \pm 0.071$   $\chi^2/\text{NDF}: 1258.5/16$   
 Left Out:  $-1.338 \pm 0.036$   $\chi^2/\text{NDF}: 7943.1/24$   
 Right Out:  $-1.491 \pm 0.065$   $\chi^2/\text{NDF}: 1538.4/19$   
 Left In:  $-1.129 \pm 0.034$   $\chi^2/\text{NDF}: 6740.3/22$

Left:  $-1.228 \pm 0.025$   $\chi^2/\text{NDF}: 14701.0/47$   
 Right:  $-1.557 \pm 0.048$   $\chi^2/\text{NDF}: 2799.2/36$

In:  $-1.224 \pm 0.031$   $\chi^2/\text{NDF}: 8040.2/39$   
 Out:  $-1.374 \pm 0.031$   $\chi^2/\text{NDF}: 9485.7/44$

All:  $-1.298 \pm 0.022$   $\chi^2/\text{NDF}: 17537.5/84$

reg\_asym\_bcm\_an\_ds3\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.204 $\pm$ 0.004  $\chi^2$ /NDF: 645.6/16

Left Out: 0.112 $\pm$ 0.002  $\chi^2$ /NDF:4503.9/24

Right Out: 0.218 $\pm$ 0.004  $\chi^2$ /NDF: 1016.4/19

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

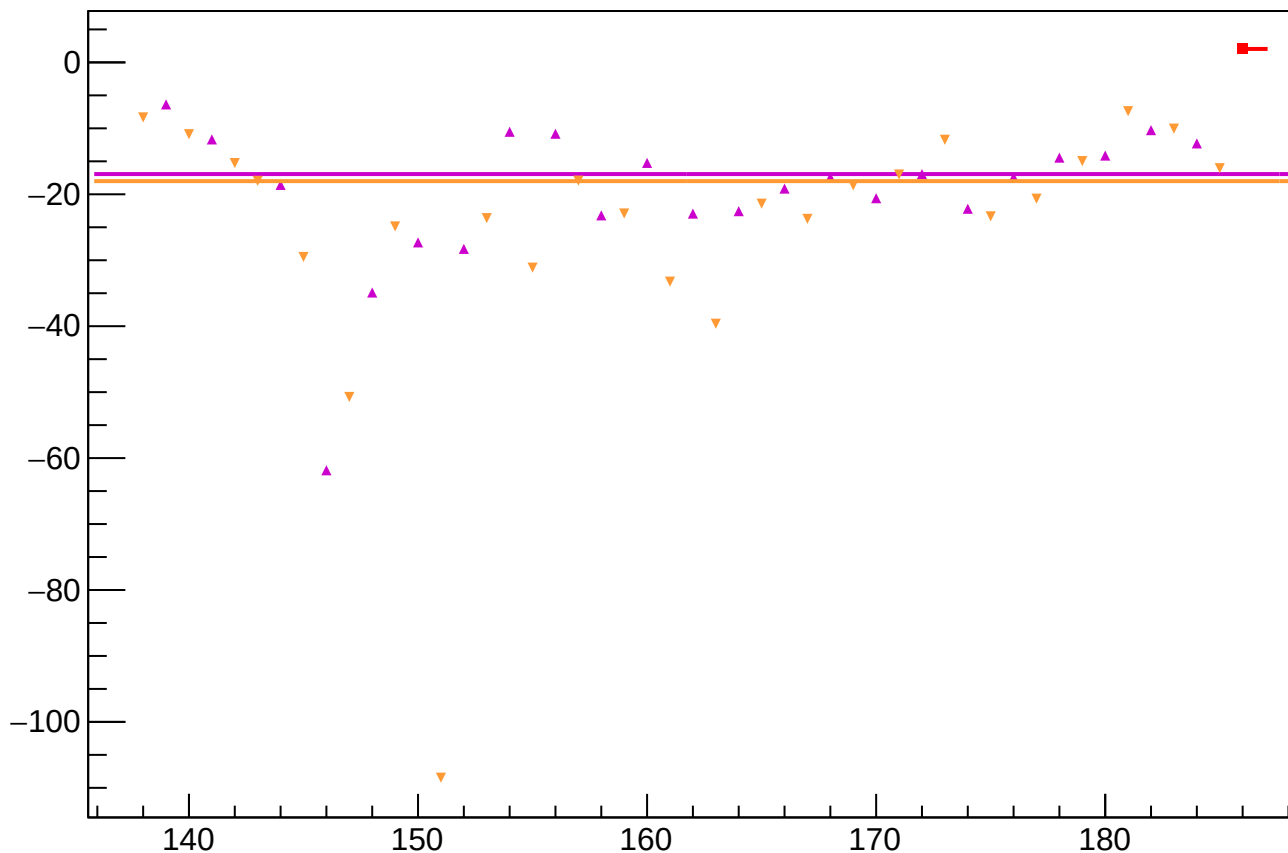
Right: 0.212 $\pm$ 0.003  $\chi^2$ /NDF: 1668.2/36

In: 0.100 $\pm$ 0.001  $\chi^2$ /NDF:5005.0/39

Out: 0.129 $\pm$ 0.001  $\chi^2$ /NDF:6217.1/44

All: 0.114 $\pm$ 0.001  $\chi^2$ /NDF: 11425.7/84

reg\_asym\_bcm\_an\_ds\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -18.005+/-0.039  $\chi^2/\text{NDF}$ : 88391.0/24

Right Out: 2.041+/-0.192  $\chi^2/\text{NDF}$ : 0.0/0

Left In: -16.934+/-0.038  $\chi^2/\text{NDF}$ : 44060.6/22

Left: -17.459+/-0.027  $\chi^2/\text{NDF}$ : 132843.0/47

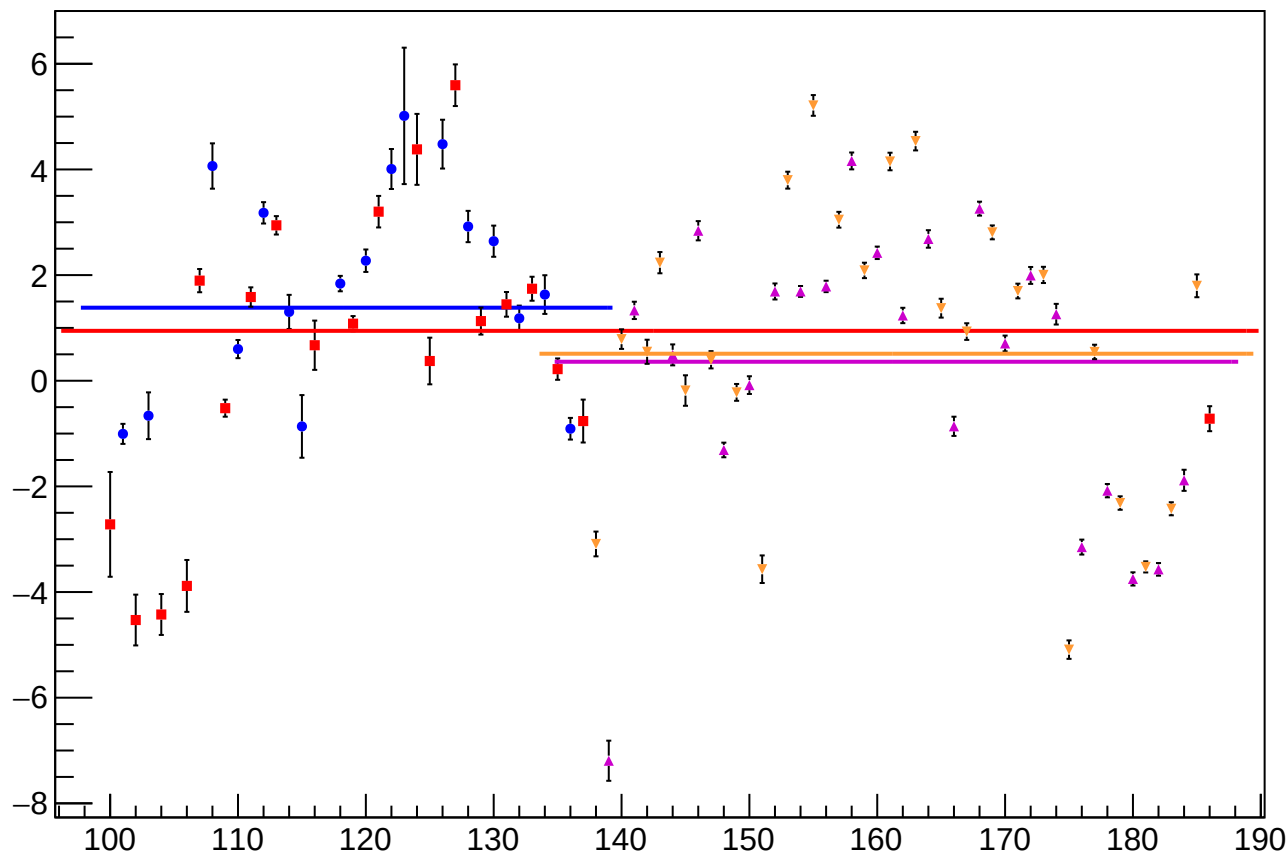
Right: 2.041+/-0.192  $\chi^2/\text{NDF}$ : 0.0/0

In: -16.934+/-0.038  $\chi^2/\text{NDF}$ : 44060.6/22

Out: -17.223+/-0.038  $\chi^2/\text{NDF}$ : 98884.2/25

All: -17.079+/-0.027  $\chi^2/\text{NDF}$ : 142973.9/48

reg\_asym\_bcm\_an\_ds\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $1.383 \pm 0.062$   $\chi^2/\text{NDF}: 632.3/16$

Left Out:  $0.511 \pm 0.032$   $\chi^2/\text{NDF}: 7070.4/24$

Right Out:  $0.945 \pm 0.056$   $\chi^2/\text{NDF}: 999.4/19$

Left In:  $0.360 \pm 0.031$   $\chi^2/\text{NDF}: 6221.1/22$

Left:  $0.432 \pm 0.022$   $\chi^2/\text{NDF}: 13303.2/47$

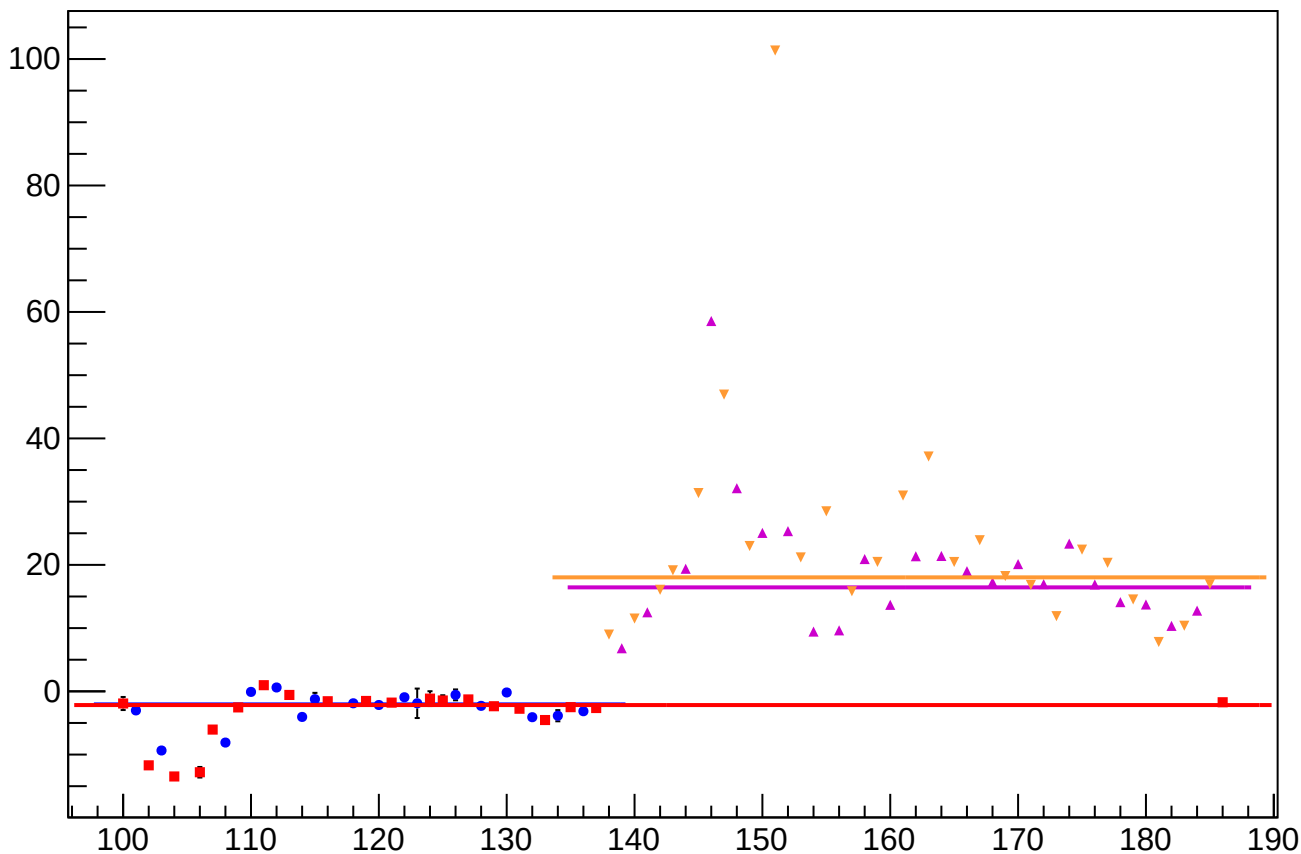
Right:  $1.143 \pm 0.042$   $\chi^2/\text{NDF}: 1659.2/36$

In:  $0.560 \pm 0.027$   $\chi^2/\text{NDF}: 7073.9/39$

Out:  $0.618 \pm 0.028$   $\chi^2/\text{NDF}: 8114.6/44$

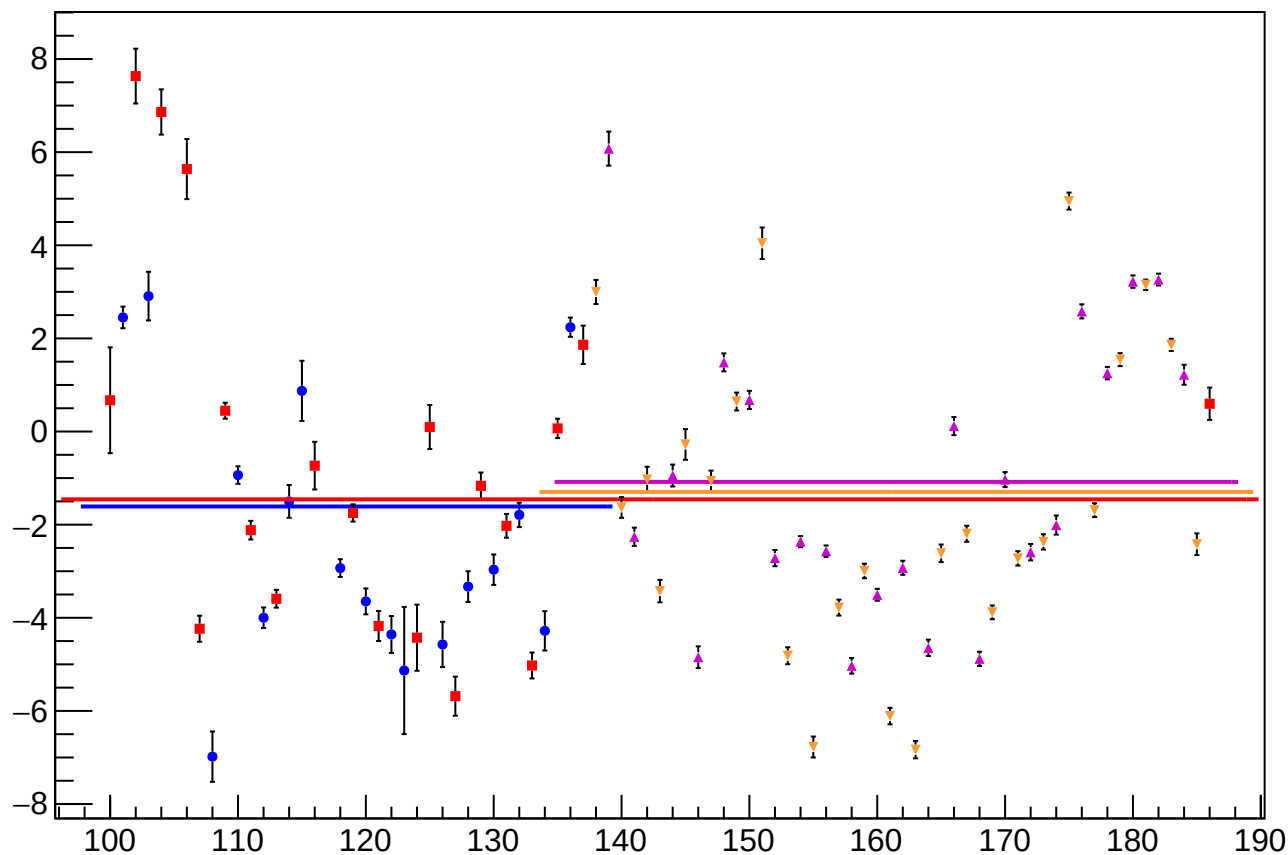
All:  $0.589 \pm 0.020$   $\chi^2/\text{NDF}: 15190.7/84$

reg\_asym\_bcm\_an\_ds\_diff\_bpm4eX\_slope vs Slug, Sign Corrected





reg\_asym\_bcm\_an\_ds\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



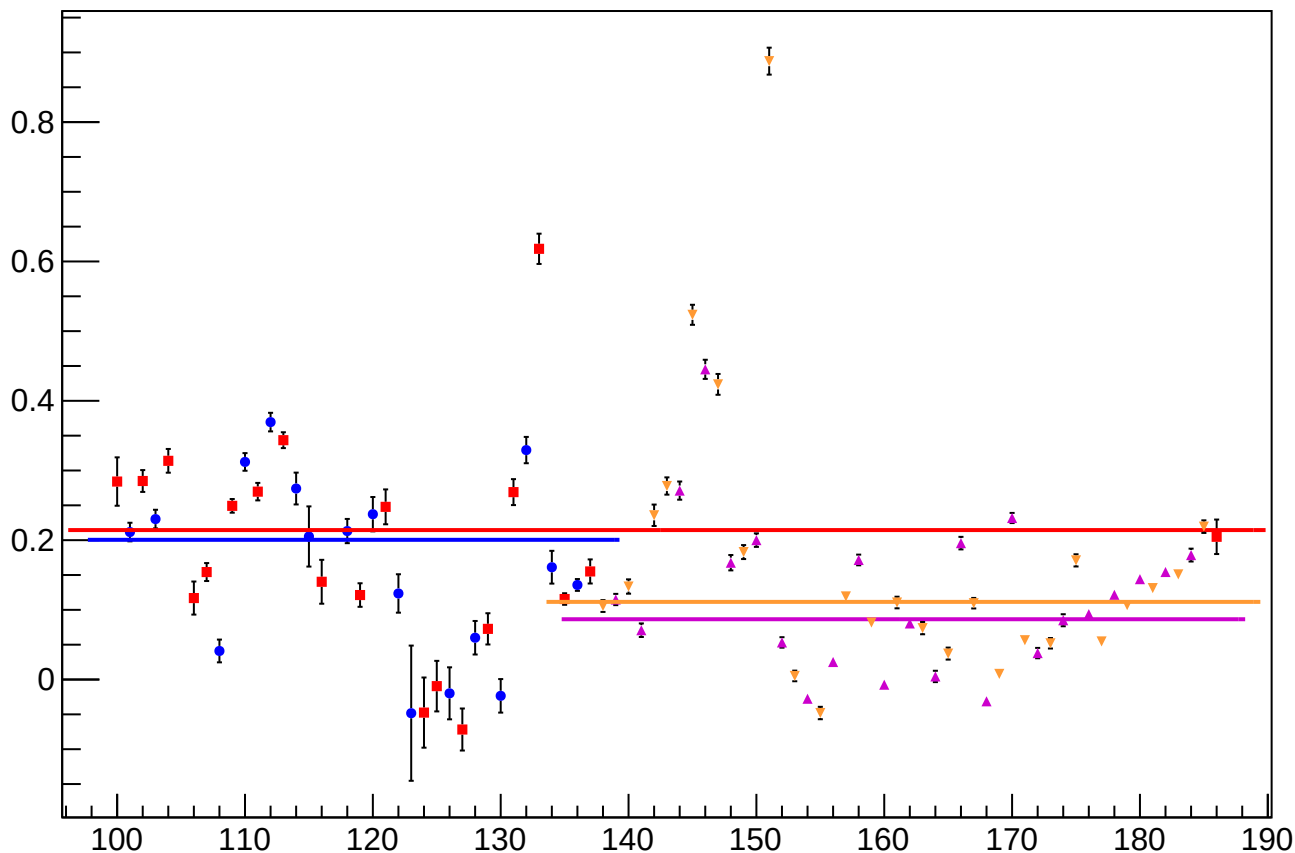
Right In:  $-1.610 \pm 0.071$   $\chi^2/\text{NDF}: 1253.3/16$   
 Left Out:  $-1.297 \pm 0.036$   $\chi^2/\text{NDF}: 7925.1/24$   
 Right Out:  $-1.456 \pm 0.064$   $\chi^2/\text{NDF}: 1544.1/19$   
 Left In:  $-1.082 \pm 0.034$   $\chi^2/\text{NDF}: 6724.1/22$

Left:  $-1.184 \pm 0.025$   $\chi^2/\text{NDF}: 14668.4/47$   
 Right:  $-1.525 \pm 0.048$   $\chi^2/\text{NDF}: 2800.0/36$

In:  $-1.180 \pm 0.031$   $\chi^2/\text{NDF}: 8022.4/39$   
 Out:  $-1.335 \pm 0.031$   $\chi^2/\text{NDF}: 9474.0/44$

All:  $-1.256 \pm 0.022$   $\chi^2/\text{NDF}: 17508.9/84$

reg\_asym\_bcm\_an\_ds\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.201 $\pm$ 0.004  $\chi^2$ /NDF: 630.5/16

Left Out: 0.111 $\pm$ 0.002  $\chi^2$ /NDF:4496.0/24

Right Out: 0.214 $\pm$ 0.004  $\chi^2$ /NDF: 999.1/19

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

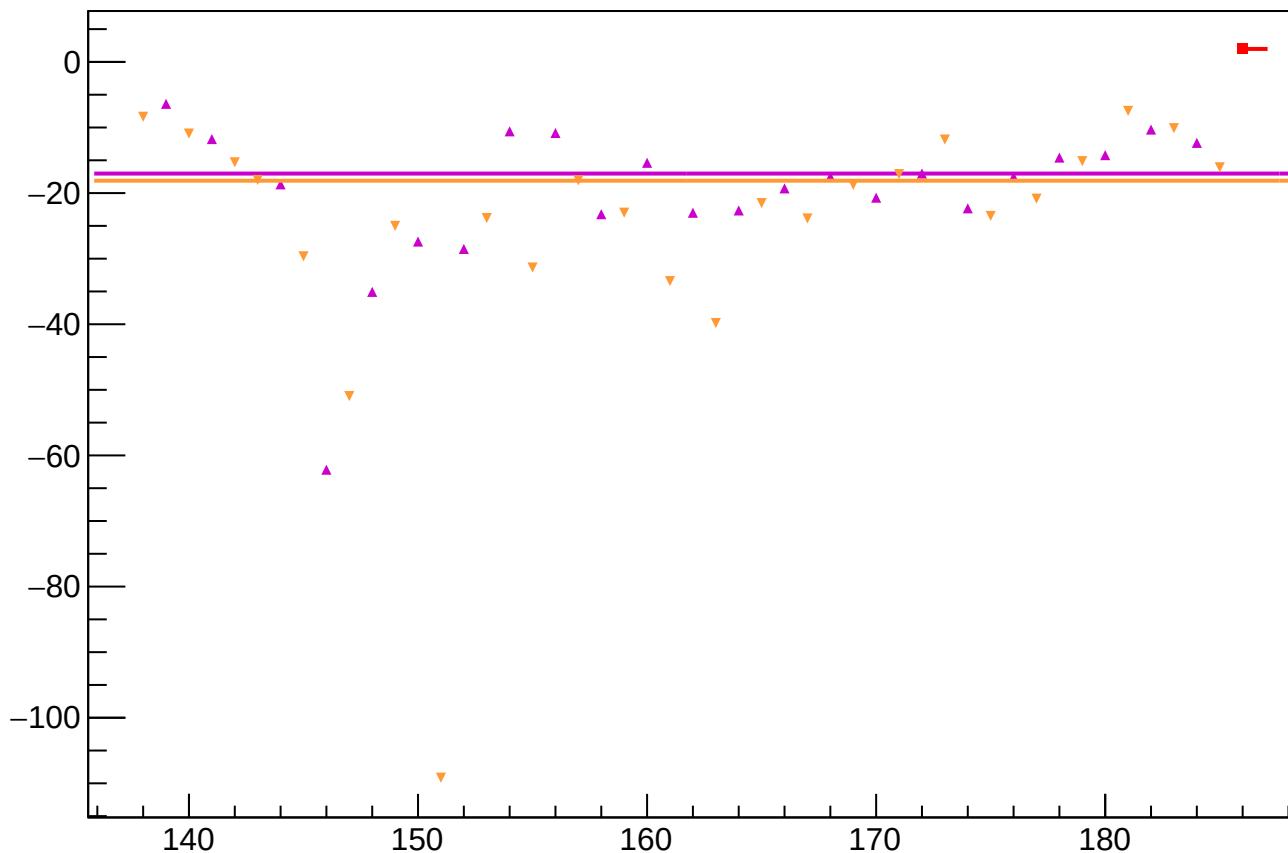
Right: 0.208 $\pm$ 0.003  $\chi^2$ /NDF: 1636.0/36

In: 0.100 $\pm$ 0.001  $\chi^2$ /NDF:4927.2/39

Out: 0.128 $\pm$ 0.001  $\chi^2$ /NDF:6168.1/44

All: 0.113 $\pm$ 0.001  $\chi^2$ /NDF: 11291.5/84

reg\_asym\_bcm\_an\_us\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -18.112+/-0.039  $\chi^2/\text{NDF}$ : 88529.7/24

Right Out: 1.982+/-0.192  $\chi^2/\text{NDF}$ : 0.0/0

Left In: -17.024+/-0.038  $\chi^2/\text{NDF}$ : 44141.8/22

Left: -17.557+/-0.027  $\chi^2/\text{NDF}$ : 133072.9/47

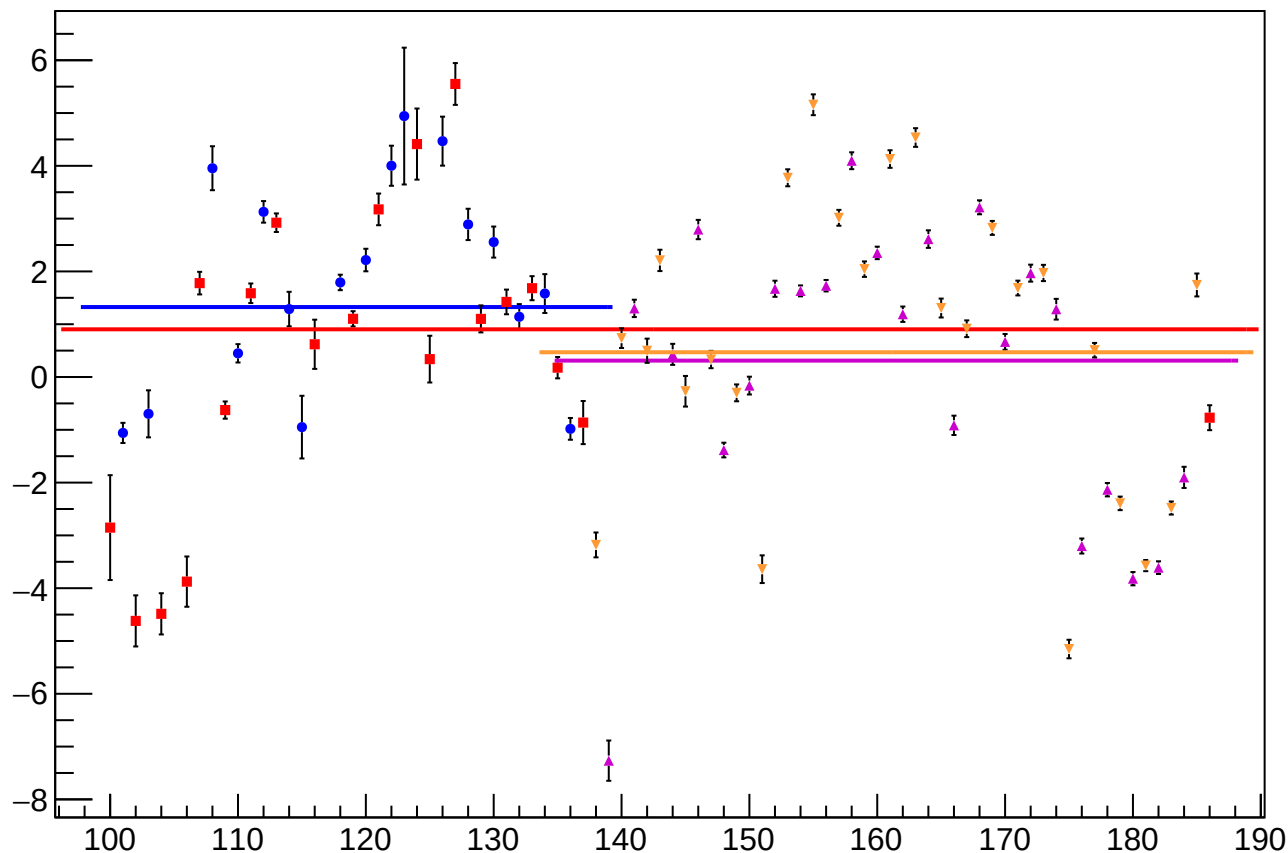
Right: 1.982+/-0.192  $\chi^2/\text{NDF}$ : 0.0/0

In: -17.024+/-0.038  $\chi^2/\text{NDF}$ : 44141.8/22

Out: -17.320+/-0.038  $\chi^2/\text{NDF}$ : 99102.8/25

All: -17.172+/-0.027  $\chi^2/\text{NDF}$ : 143275.0/48

reg\_asym\_bcm\_an\_us\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 1.325 $\pm$ 0.062  $\chi^2$ /NDF: 637.1/16

Left Out: 0.469 $\pm$ 0.032  $\chi^2$ /NDF: 7093.0/24

Right Out: 0.903 $\pm$ 0.056  $\chi^2$ /NDF: 1011.0/19

Left In: 0.311 $\pm$ 0.031  $\chi^2$ /NDF: 6183.1/22

Left: 0.386 $\pm$ 0.022  $\chi^2$ /NDF: 13288.8/47

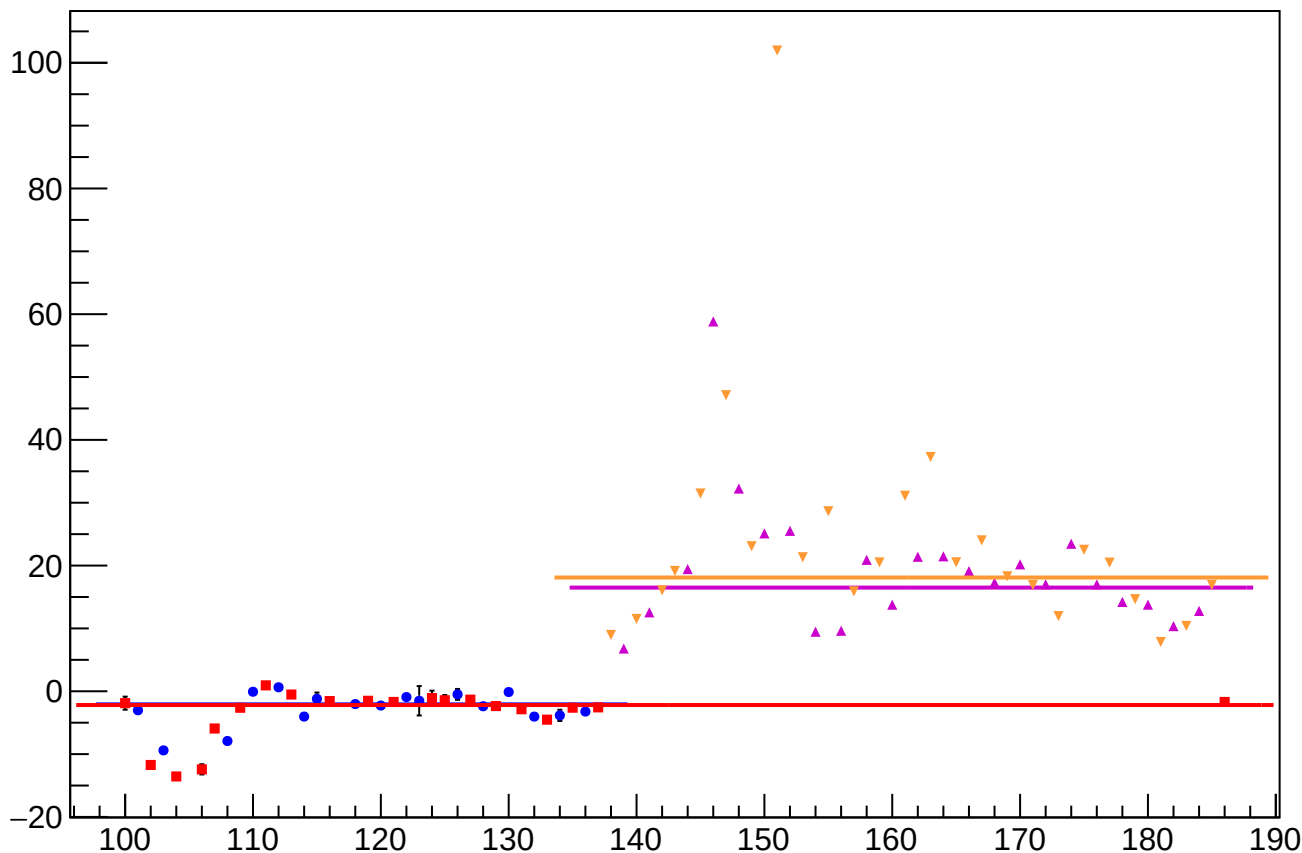
Right: 1.094 $\pm$ 0.042  $\chi^2$ /NDF: 1673.5/36

In: 0.509 $\pm$ 0.027  $\chi^2$ /NDF: 7035.1/39

Out: 0.577 $\pm$ 0.028  $\chi^2$ /NDF: 8148.9/44

All: 0.542 $\pm$ 0.020  $\chi^2$ /NDF: 15186.9/84

reg\_asym\_bcm\_an\_us\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-2.090 \pm 0.112$   $\chi^2/\text{NDF}$ : 449.1/16

Left Out:  $18.101 \pm 0.039$   $\chi^2/\text{NDF}$ : 77839.7/24

Right Out:  $-2.190 \pm 0.083$   $\chi^2/\text{NDF}$ : 903.6/19

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

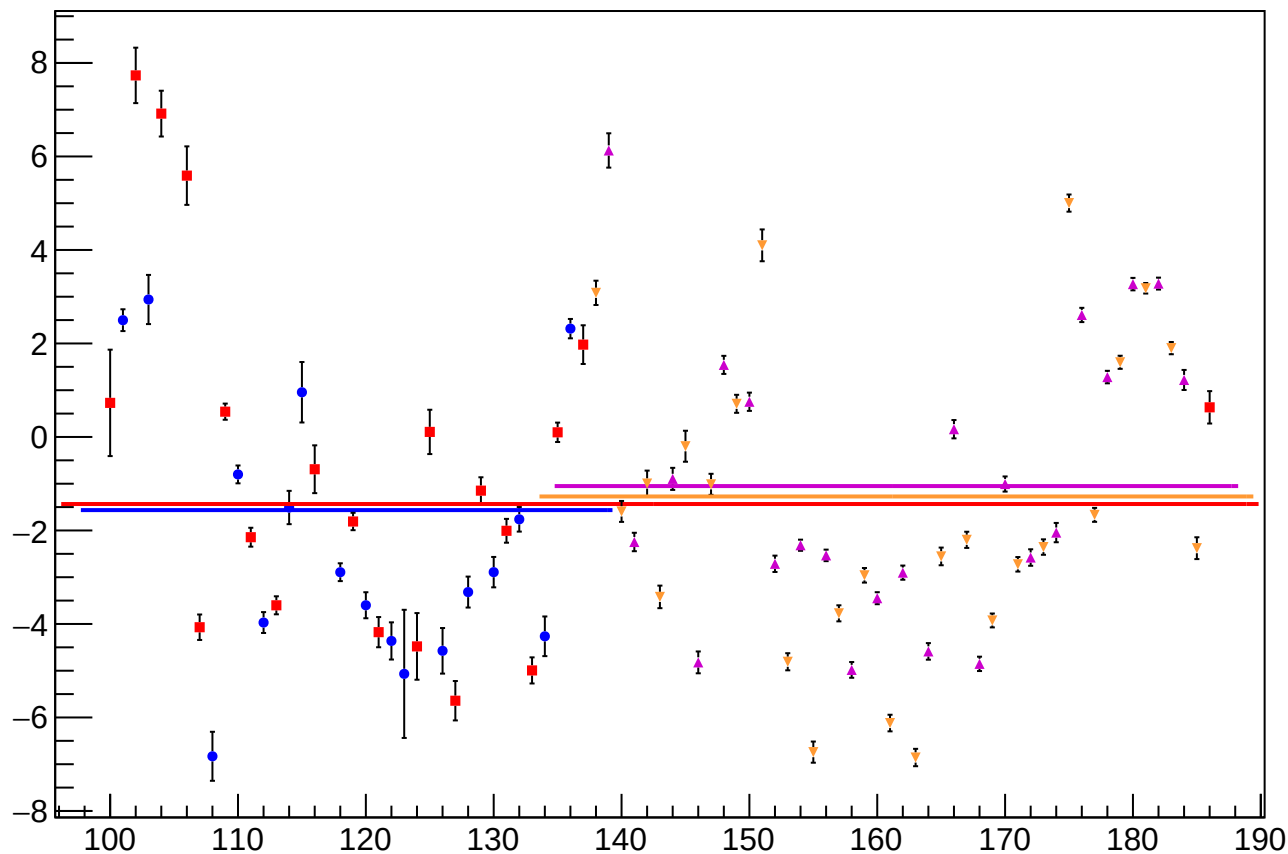
Right:  $-2.154 \pm 0.067$   $\chi^2/\text{NDF}$ : 1353.2/36

In:  $14.595 \pm 0.036$   $\chi^2/\text{NDF}$ : 66228.5/39

Out:  $14.440 \pm 0.035$   $\chi^2/\text{NDF}$ : 127616.7/44

All:  $14.517 \pm 0.025$   $\chi^2/\text{NDF}$ : 193854.8/84

reg\_asym\_bcm\_an\_us\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



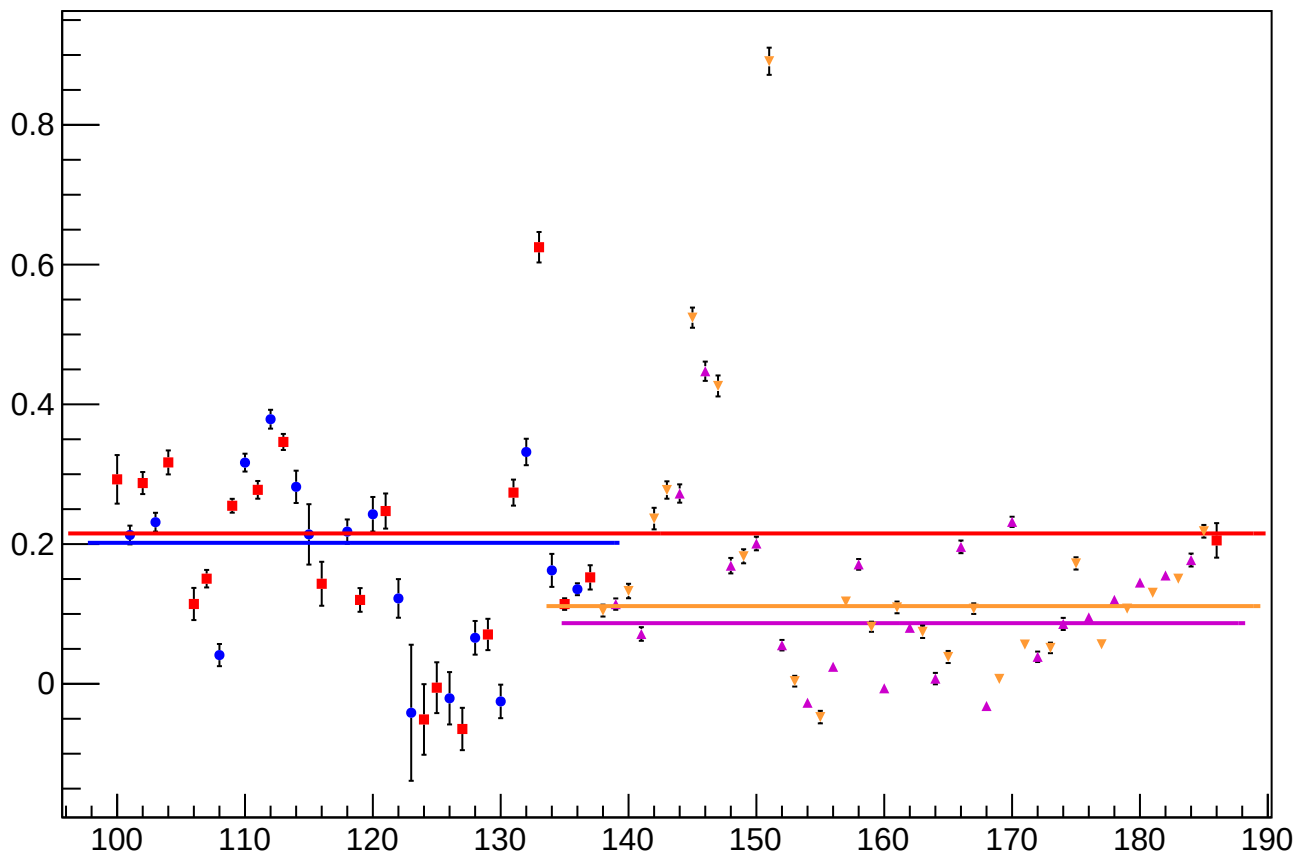
Right In:  $-1.565 \pm 0.071$   $\chi^2/\text{NDF}: 1258.1/16$   
 Left Out:  $-1.273 \pm 0.036$   $\chi^2/\text{NDF}: 7951.6/24$   
 Right Out:  $-1.434 \pm 0.064$   $\chi^2/\text{NDF}: 1555.7/19$   
 Left In:  $-1.050 \pm 0.034$   $\chi^2/\text{NDF}: 6673.4/22$

Left:  $-1.156 \pm 0.025$   $\chi^2/\text{NDF}: 14645.3/47$   
 Right:  $-1.493 \pm 0.048$   $\chi^2/\text{NDF}: 2815.7/36$

In:  $-1.146 \pm 0.031$   $\chi^2/\text{NDF}: 7973.9/39$   
 Out:  $-1.311 \pm 0.031$   $\chi^2/\text{NDF}: 9512.1/44$

All:  $-1.227 \pm 0.022$   $\chi^2/\text{NDF}: 17500.2/84$

reg\_asym\_bcm\_an\_us\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.202 $\pm$ 0.004  $\chi^2$ /NDF: 658.6/16

Left Out: 0.111 $\pm$ 0.002  $\chi^2$ /NDF:4474.5/24

Right Out: 0.215 $\pm$ 0.004  $\chi^2$ /NDF: 1031.6/19

Left In: 0.087 $\pm$ 0.001  $\chi^2$ /NDF:3598.5/22

Left: 0.098 $\pm$ 0.001  $\chi^2$ /NDF: 8197.1/47

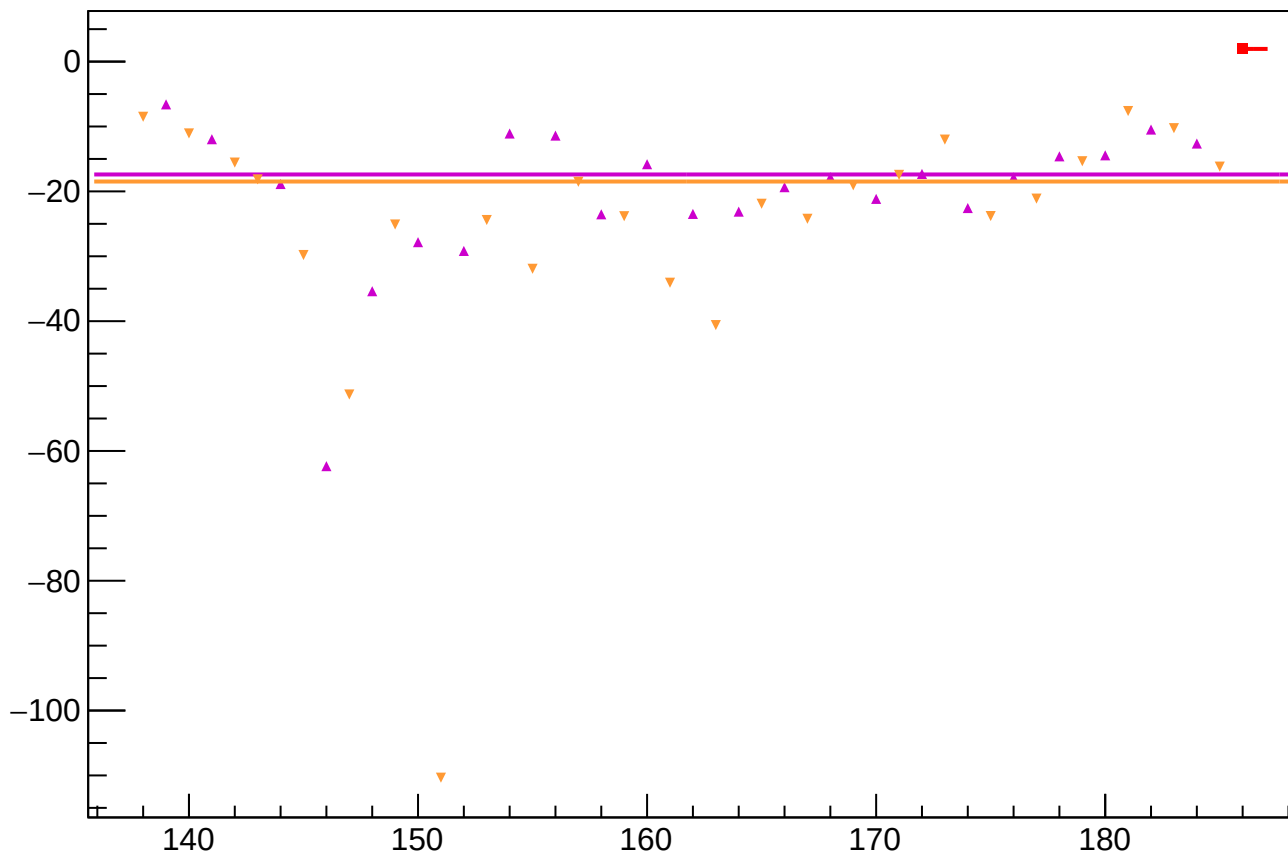
Right: 0.209 $\pm$ 0.003  $\chi^2$ /NDF: 1696.1/36

In: 0.100 $\pm$ 0.001  $\chi^2$ /NDF:4935.2/39

Out: 0.128 $\pm$ 0.001  $\chi^2$ /NDF:6188.4/44

All: 0.114 $\pm$ 0.001  $\chi^2$ /NDF: 11312.8/84

reg\_asym\_bcm\_dg\_ds\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Left Out: -18.479 $\pm$ 0.040  $\chi^2$ /NDF:87883.4/24

Right Out: 1.954 $\pm$ 0.192  $\chi^2$ /NDF: 0.0/0

Left In: -17.393 $\pm$ 0.039  $\chi^2$ /NDF:43178.9/22

Left: -17.926 $\pm$ 0.028  $\chi^2$ /NDF: 131443.9/47

Right: 1.954 $\pm$ 0.192  $\chi^2$ /NDF: 0.0/0

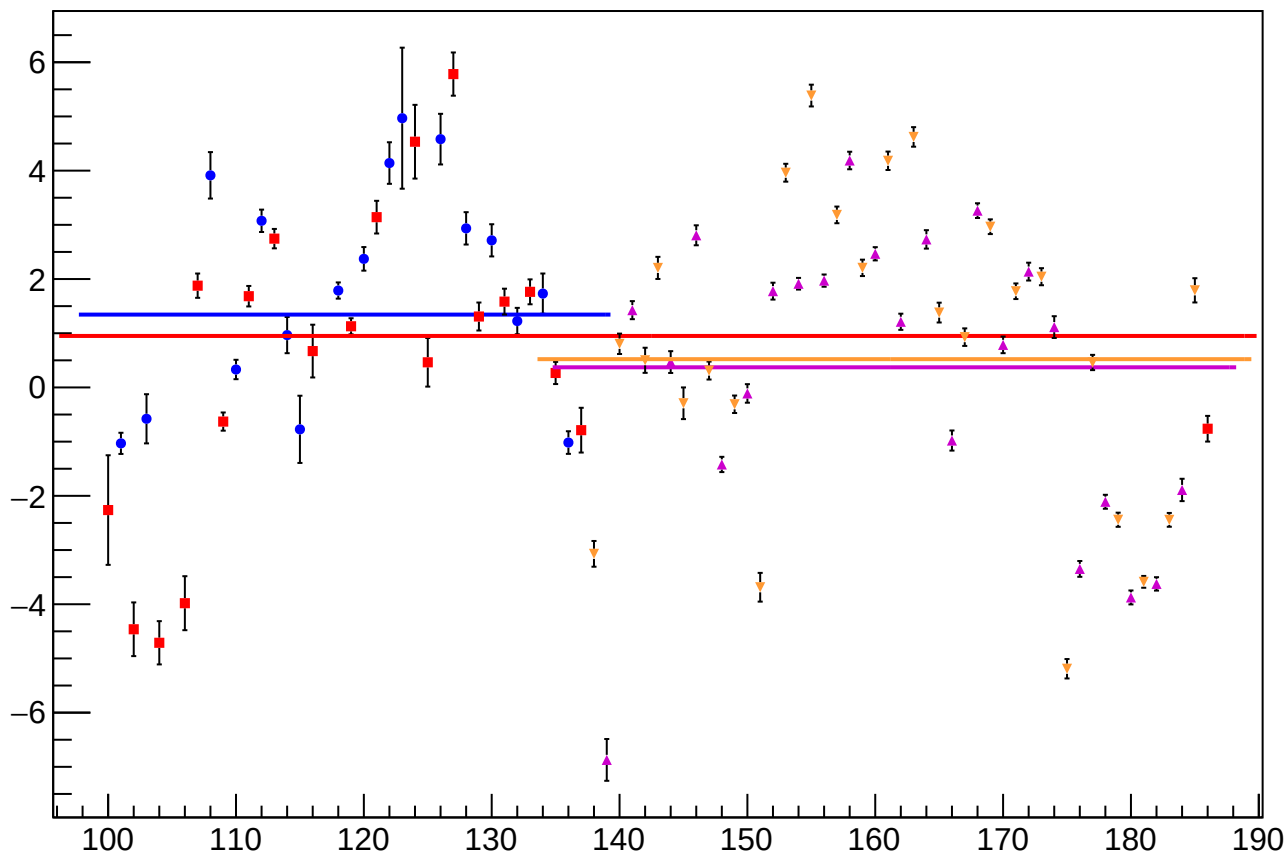
In: -17.393 $\pm$ 0.039  $\chi^2$ /NDF:43178.9/22

Out: -17.645 $\pm$ 0.039  $\chi^2$ /NDF:98705.3/25

All: -17.519 $\pm$ 0.028  $\chi^2$ /NDF: 141905.2/48



reg\_asym\_bcm\_dg\_ds\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In:  $1.344 \pm 0.063$   $\chi^2/\text{NDF}$ : 636.3/16

Left Out:  $0.522 \pm 0.033$   $\chi^2/\text{NDF}$ : 7055.1/24

Right Out:  $0.950 \pm 0.057$   $\chi^2/\text{NDF}$ : 982.9/19

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

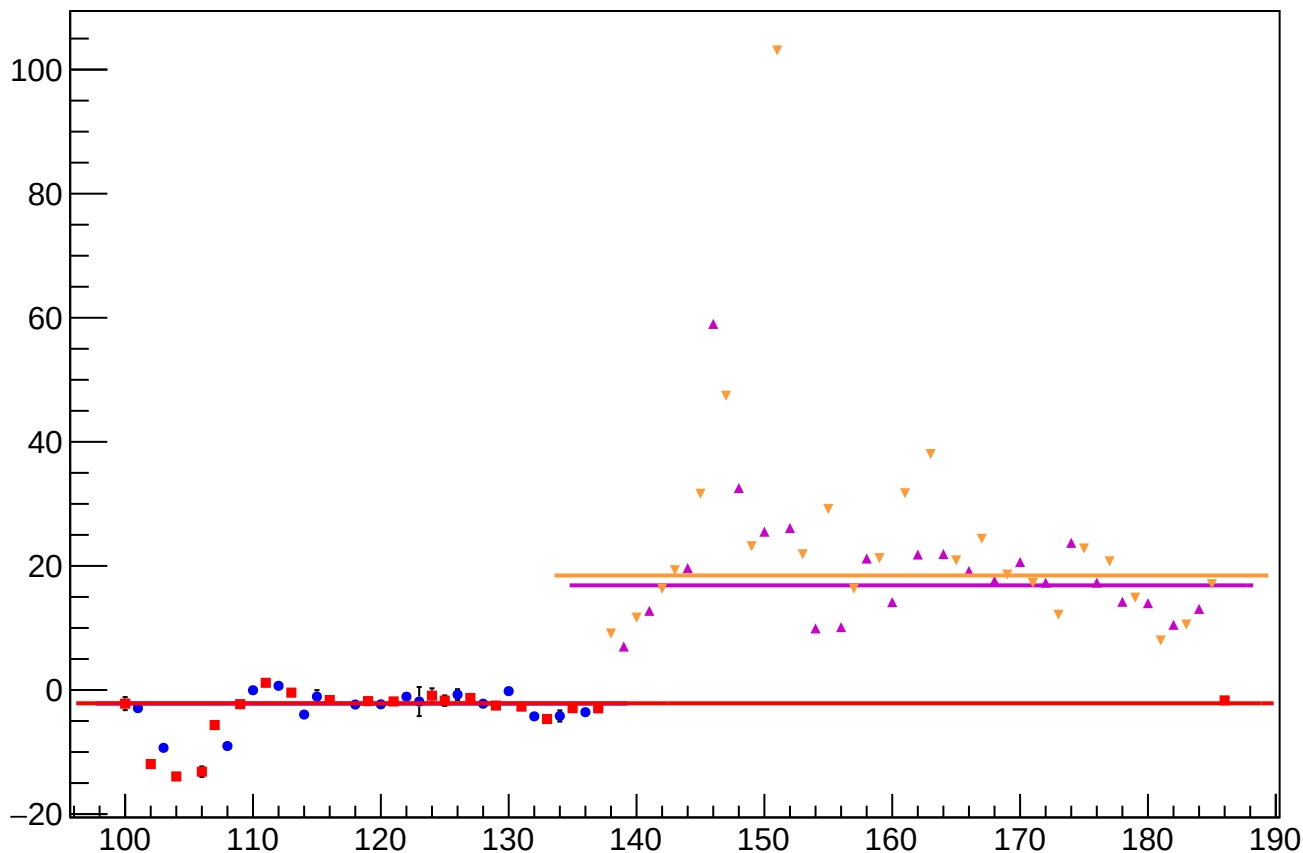
Right:  $1.128 \pm 0.043$   $\chi^2/\text{NDF}$ : 1640.5/36

In:  $0.564 \pm 0.028$   $\chi^2/\text{NDF}$ : 7043.7/39

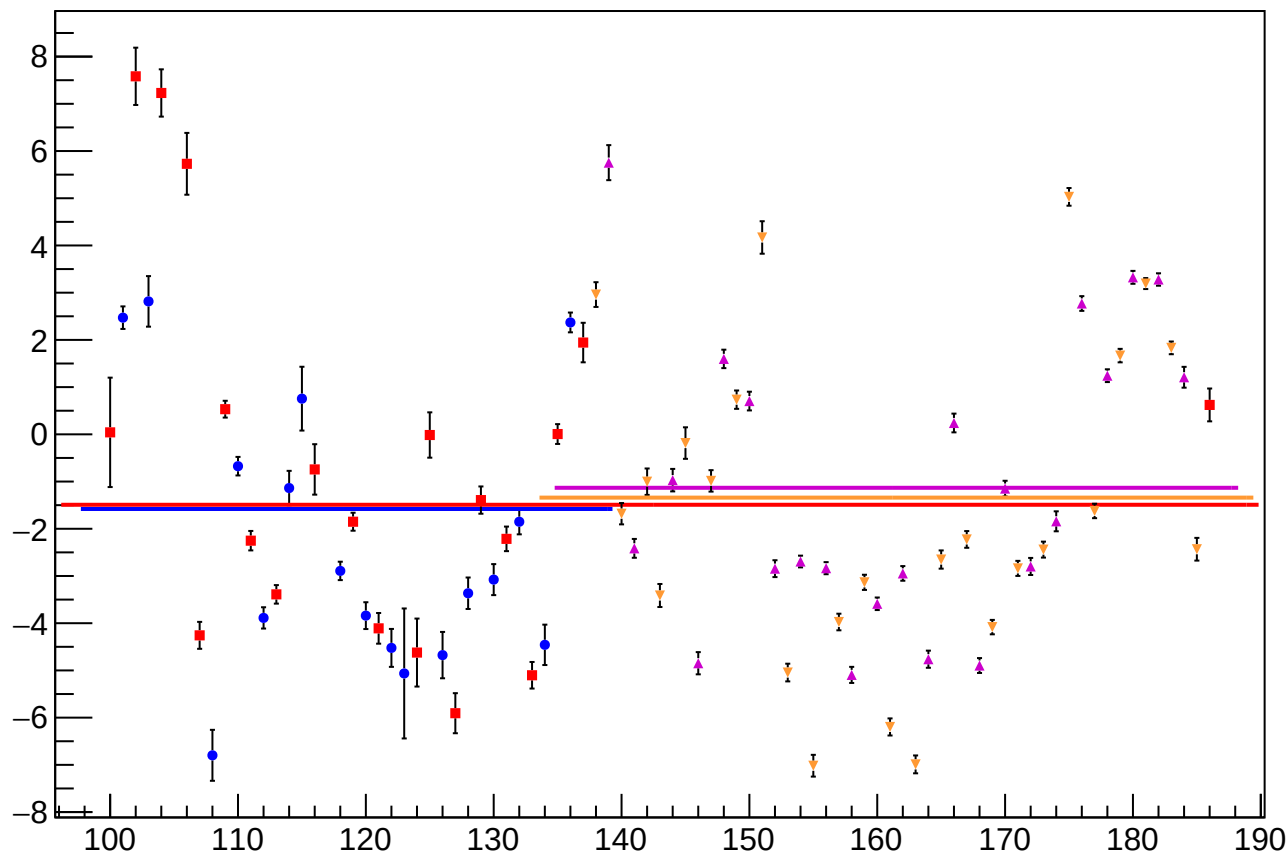
Out:  $0.628 \pm 0.029$   $\chi^2/\text{NDF}$ : 8079.9/44

All:  $0.595 \pm 0.020$   $\chi^2/\text{NDF}$ : 15126.1/84

reg\_asym\_bcm\_dg\_ds\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



reg\_asym\_bcm\_dg\_ds\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-1.581 \pm 0.073$   $\chi^2/\text{NDF}$ : 1247.7/16

Left Out:  $-1.340 \pm 0.037$   $\chi^2/\text{NDF}$ : 7907.4/24

Right Out:  $-1.492 \pm 0.066$   $\chi^2/\text{NDF}$ : 1515.9/19

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

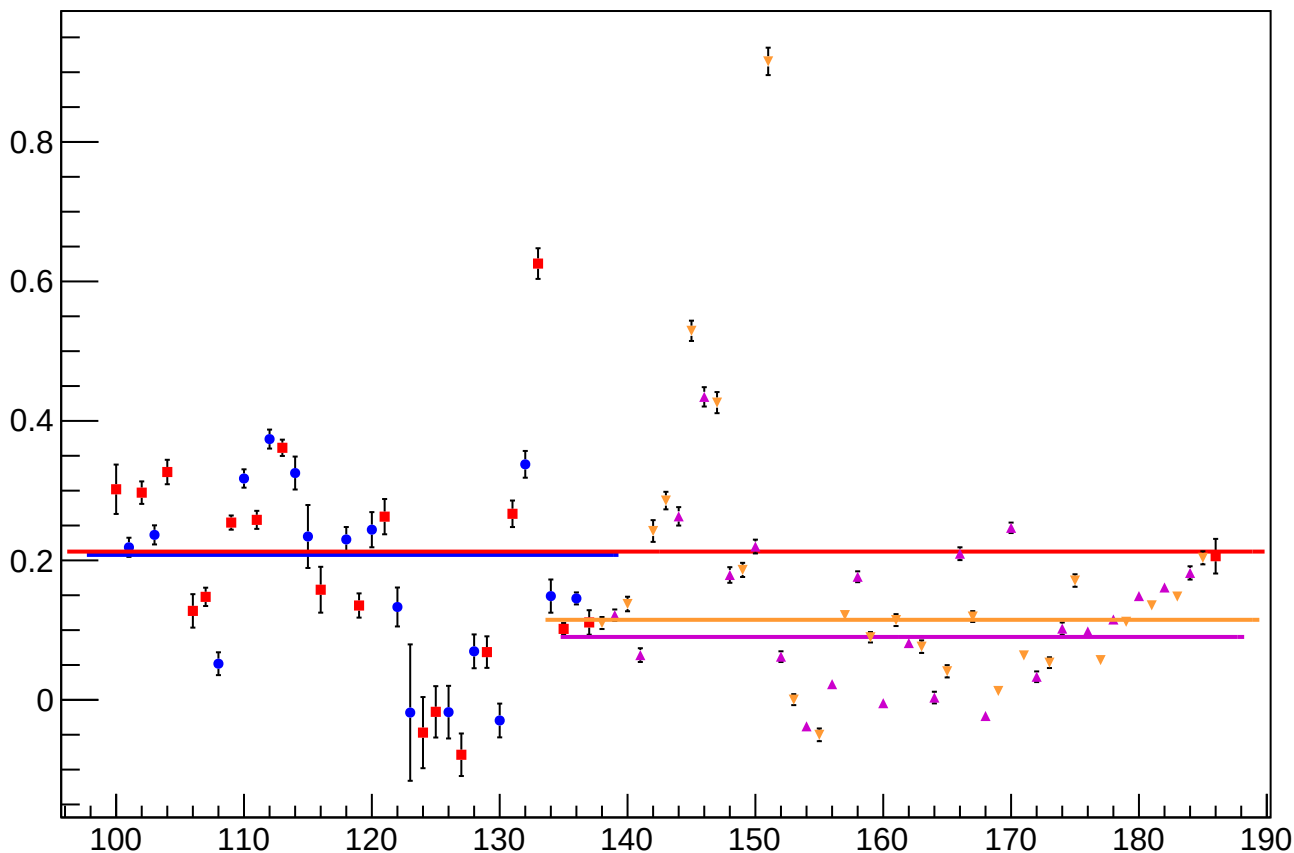
Right:  $-1.532 \pm 0.049$   $\chi^2/\text{NDF}$ : 2764.4/36

In:  $-1.216 \pm 0.031$   $\chi^2/\text{NDF}$ : 7987.3/39

Out:  $-1.376 \pm 0.032$   $\chi^2/\text{NDF}$ : 9427.3/44

All:  $-1.295 \pm 0.022$   $\chi^2/\text{NDF}$ : 17427.4/84

reg\_asym\_bcm\_dg\_ds\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.208 $\pm$ 0.004  $\chi^2$ /NDF: 624.0/16

Left Out: 0.115 $\pm$ 0.002  $\chi^2$ /NDF:4431.9/24

Right Out: 0.213 $\pm$ 0.004  $\chi^2$ /NDF: 1097.2/19

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

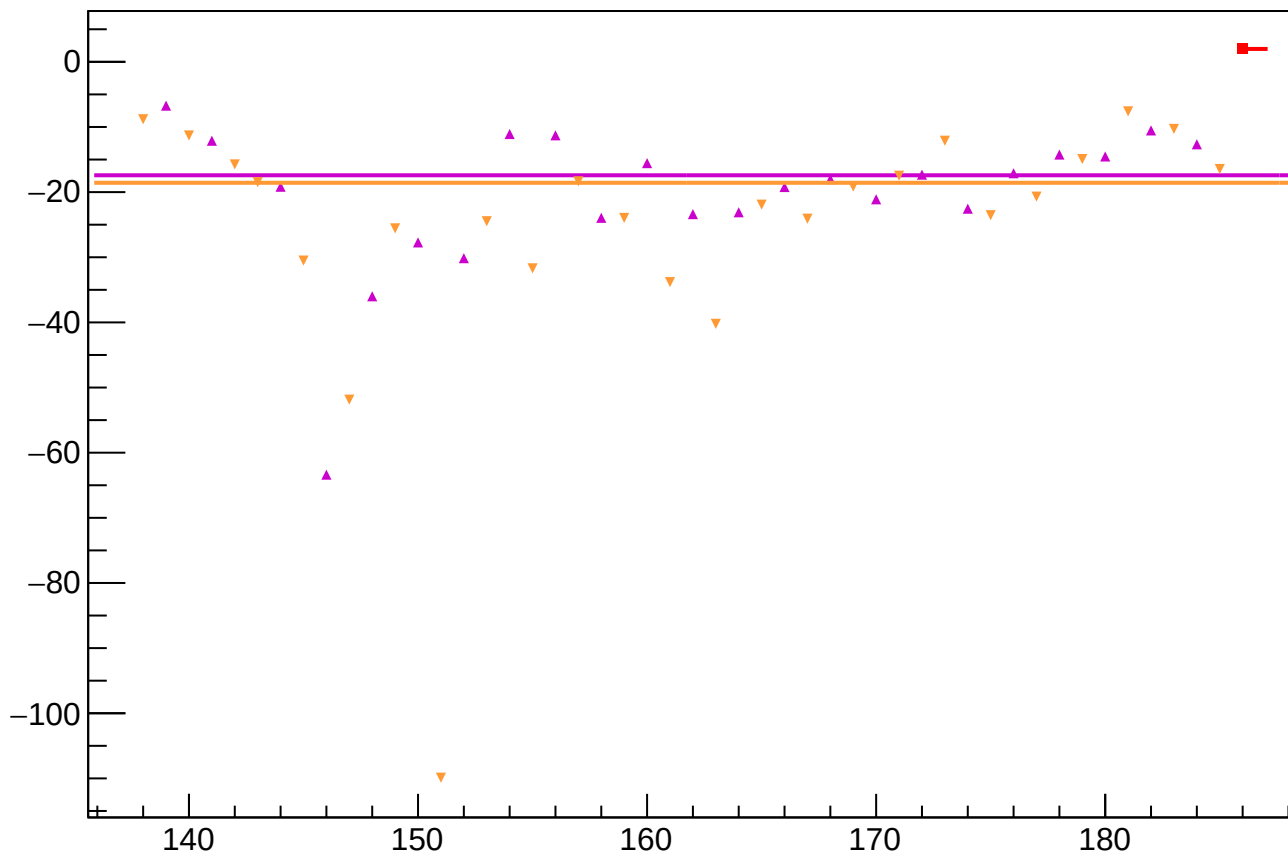
Right: 0.211 $\pm$ 0.003  $\chi^2$ /NDF: 1722.0/36

In: 0.104 $\pm$ 0.001  $\chi^2$ /NDF:4984.7/39

Out: 0.131 $\pm$ 0.001  $\chi^2$ /NDF:6108.7/44

All: 0.117 $\pm$ 0.001  $\chi^2$ /NDF: 11257.9/84

reg\_asym\_bcm\_dg\_us\_diff\_bpm1X\_slope vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0

Left Out: -18.566+/-0.040  $\chi^2/\text{NDF}$ : 86389.6/24

Right Out: 1.981+/-0.193  $\chi^2/\text{NDF}$ : 0.0/0

Left In: -17.414+/-0.039  $\chi^2/\text{NDF}$ : 43504.1/22

Left: -17.979+/-0.028  $\chi^2/\text{NDF}$ : 130314.7/47

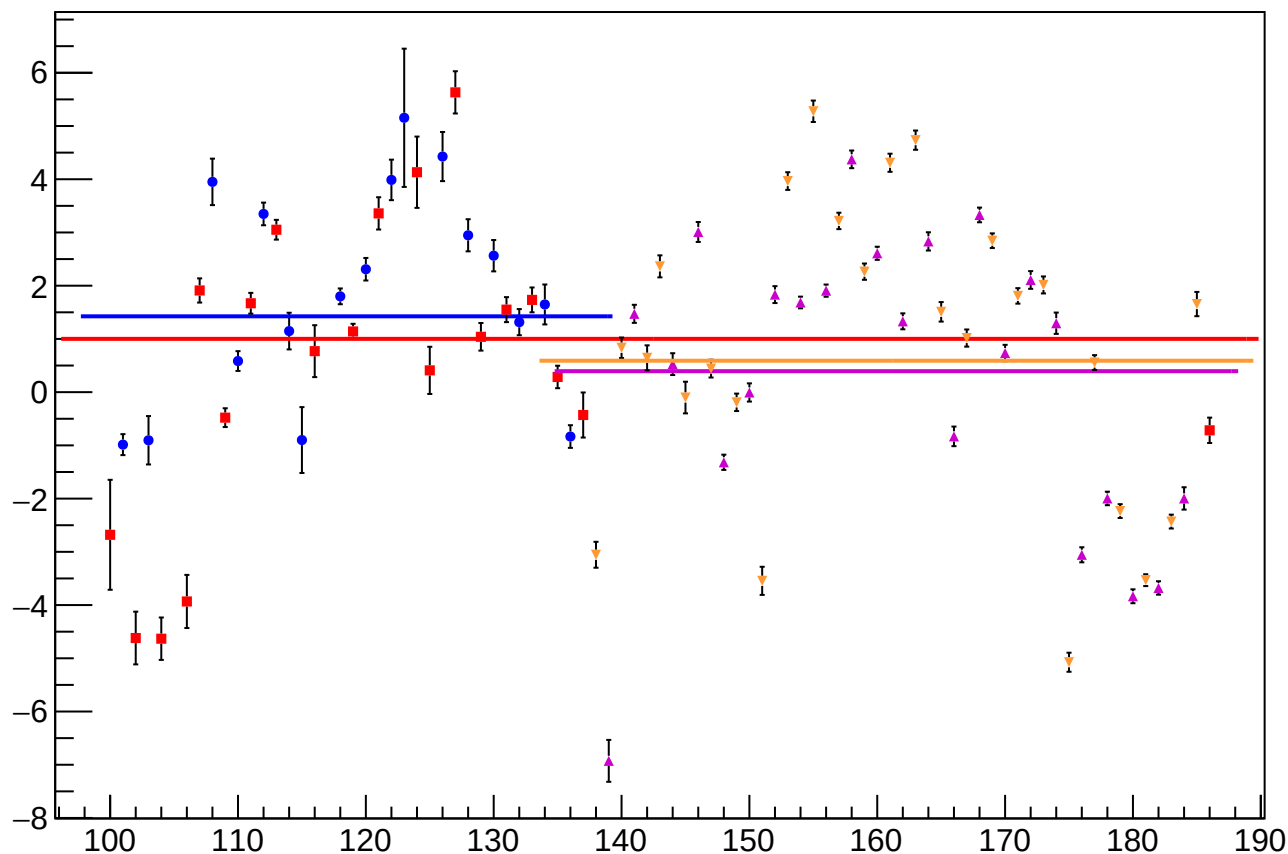
Right: 1.981+/-0.193  $\chi^2/\text{NDF}$ : 0.0/0

In: -17.414+/-0.039  $\chi^2/\text{NDF}$ : 43504.1/22

Out: -17.719+/-0.039  $\chi^2/\text{NDF}$ : 97217.7/25

All: -17.567+/-0.028  $\chi^2/\text{NDF}$ : 140751.9/48

reg\_asym\_bcm\_dg\_us\_diff\_bpm4aY\_slope vs Slug, Sign Corrected



Right In: 1.425 $\pm$ 0.064  $\chi^2$ /NDF: 599.8/16

Left Out: 0.591 $\pm$ 0.033  $\chi^2$ /NDF: 6796.5/24

Right Out: 1.001 $\pm$ 0.058  $\chi^2$ /NDF: 970.9/19

Left In: 0.394 $\pm$ 0.032  $\chi^2$ /NDF: 6059.8/22

Left: 0.488 $\pm$ 0.023  $\chi^2$ /NDF: 12874.6/47

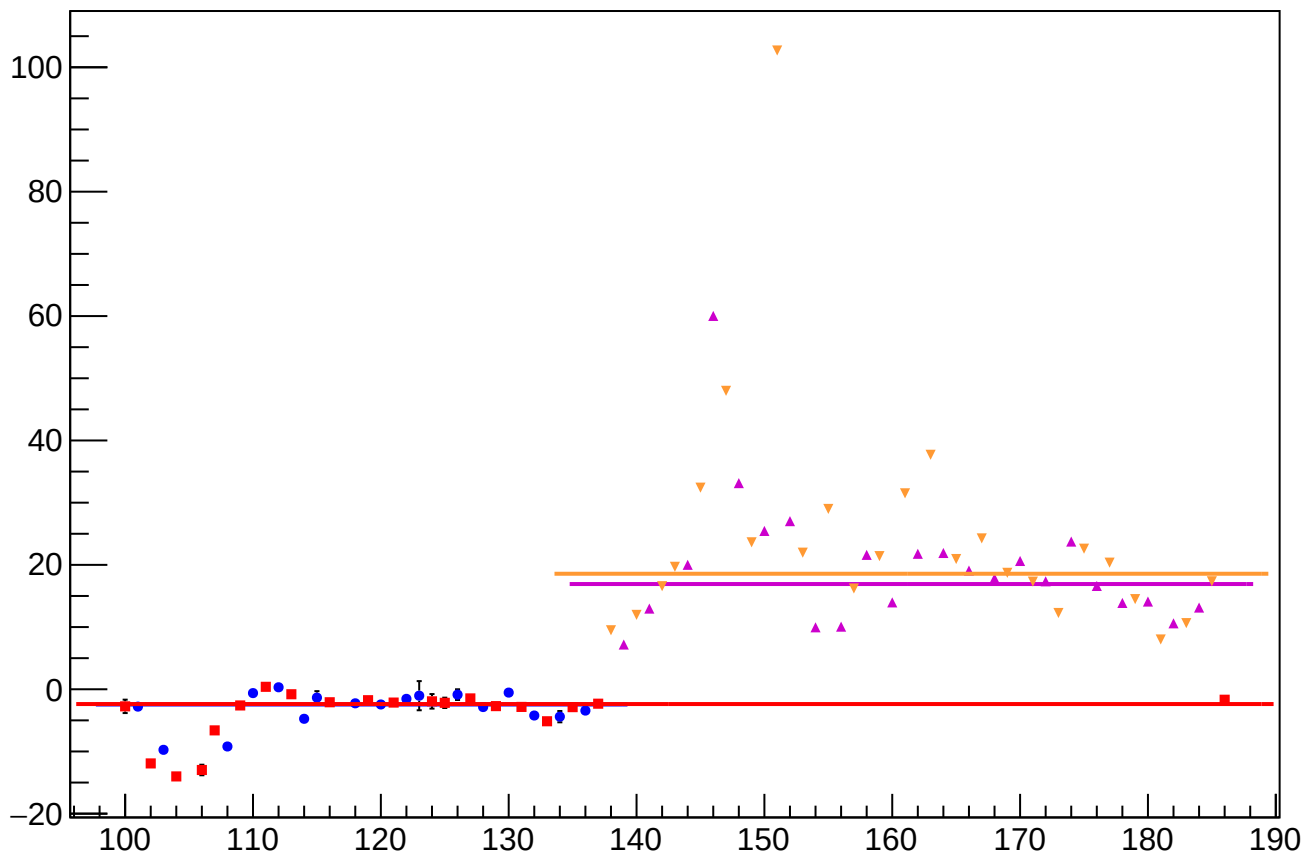
Right: 1.193 $\pm$ 0.043  $\chi^2$ /NDF: 1594.8/36

In: 0.598 $\pm$ 0.028  $\chi^2$ /NDF: 6869.3/39

Out: 0.692 $\pm$ 0.029  $\chi^2$ /NDF: 7805.0/44

All: 0.644 $\pm$ 0.020  $\chi^2$ /NDF: 14679.6/84

reg\_asym\_bcm\_dg\_us\_diff\_bpm4eX\_slope vs Slug, Sign Corrected



Right In:  $-2.446 \pm 0.115$   $\chi^2/\text{NDF}$ : 426.7/16

Left Out:  $18.573 \pm 0.040$   $\chi^2/\text{NDF}$ : 76029.9/24

Right Out:  $-2.376 \pm 0.086$   $\chi^2/\text{NDF}$ : 860.6/19

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

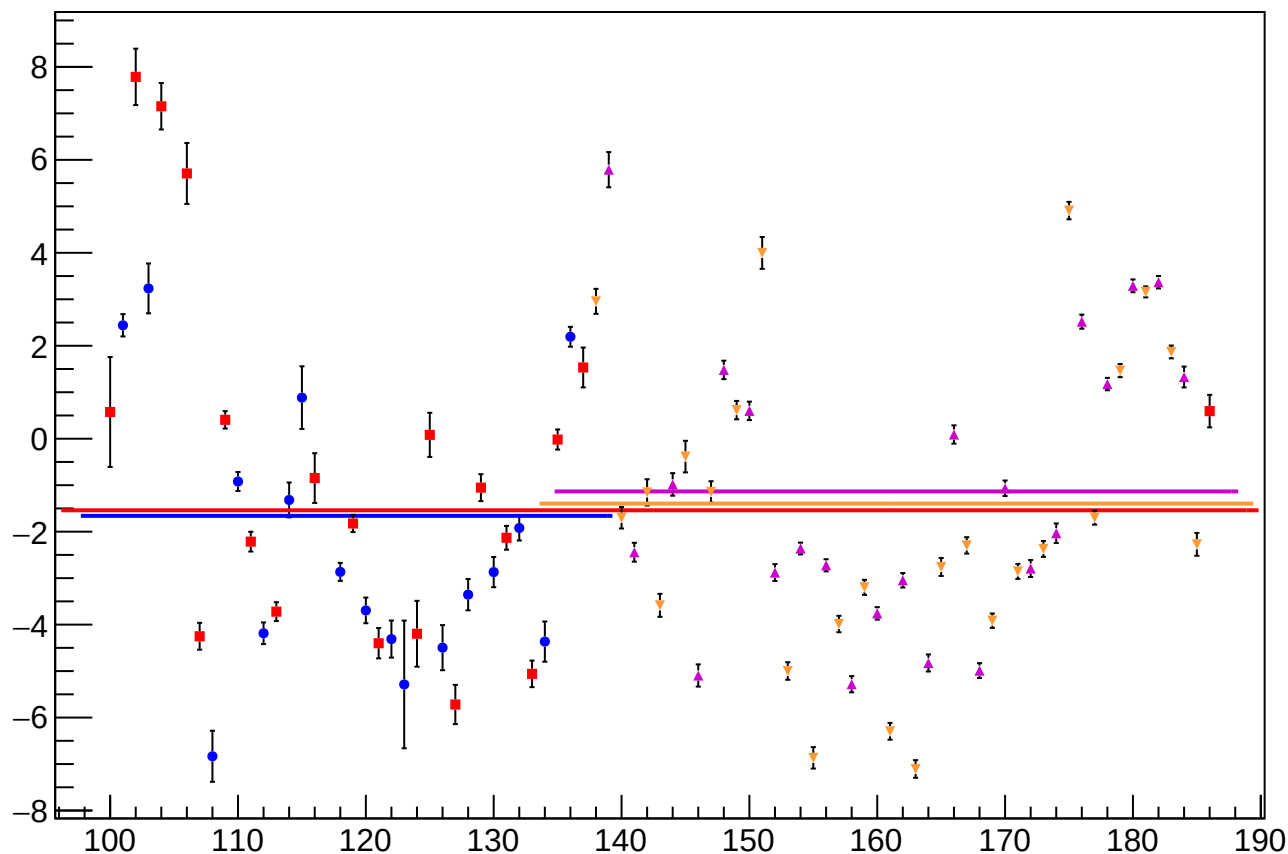
Right:  $-2.401 \pm 0.069$   $\chi^2/\text{NDF}$ : 1287.5/36

In:  $14.939 \pm 0.037$   $\chi^2/\text{NDF}$ : 65904.0/39

Out:  $14.797 \pm 0.036$   $\chi^2/\text{NDF}$ : 125700.3/44

All:  $14.867 \pm 0.026$   $\chi^2/\text{NDF}$ : 191611.9/84

reg\_asym\_bcm\_dg\_us\_diff\_bpm4eY\_slope vs Slug, Sign Corrected



Right In:  $-1.659 \pm 0.073$   $\chi^2/\text{NDF}: 1190.9/16$

Left Out:  $-1.396 \pm 0.037$   $\chi^2/\text{NDF}: 7651.5/24$

Right Out:  $-1.540 \pm 0.067$   $\chi^2/\text{NDF}: 1487.4/19$

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:  $-1.594 \pm 0.049$   $\chi^2/\text{NDF}: 2679.7/36$

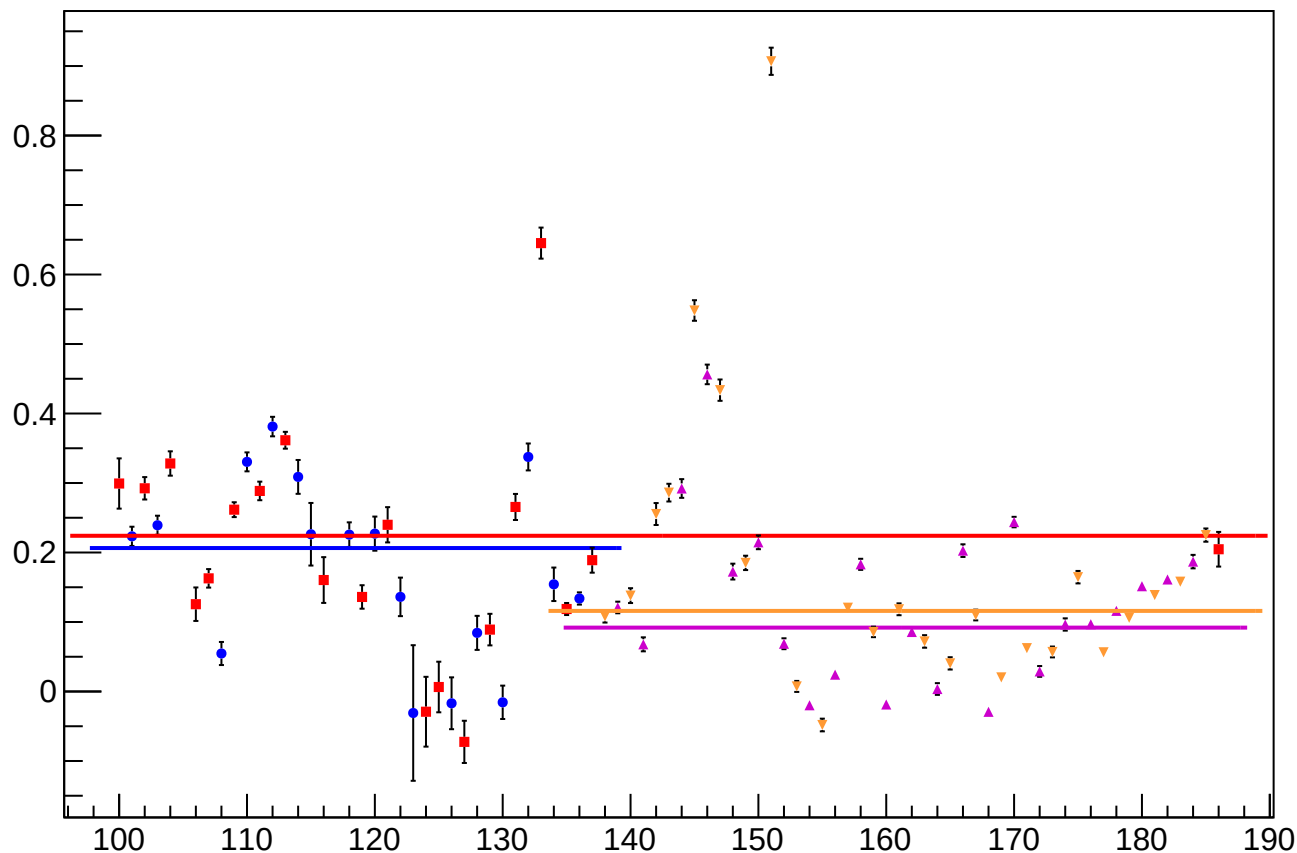
In:  $-1.233 \pm 0.032$   $\chi^2/\text{NDF}: 7830.2/39$

Out:  $-1.430 \pm 0.032$   $\chi^2/\text{NDF}: 9142.5/44$

All:  $-1.330 \pm 0.023$   $\chi^2/\text{NDF}: 16991.7/84$



reg\_asym\_bcm\_dg\_us\_diff\_bpm12X\_slope vs Slug, Sign Corrected



Right In: 0.206 $\pm$ 0.004  $\chi^2$ /NDF: 625.2/16

Left Out: 0.116 $\pm$ 0.002  $\chi^2$ /NDF:4463.0/24

Right Out: 0.224 $\pm$ 0.004  $\chi^2$ /NDF: 995.6/19

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

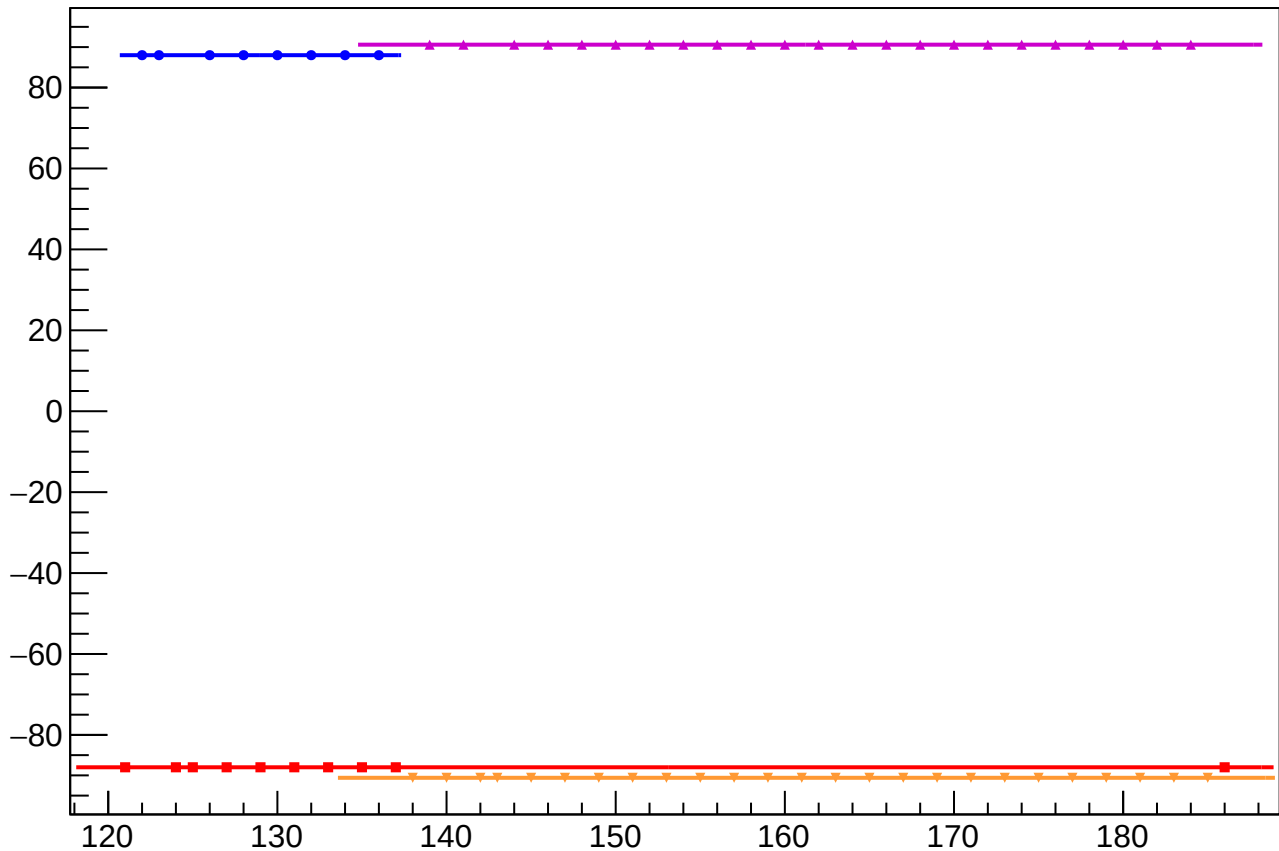
Right: 0.216 $\pm$ 0.003  $\chi^2$ /NDF: 1630.3/36

In: 0.105 $\pm$ 0.001  $\chi^2$ /NDF:4888.4/39

Out: 0.133 $\pm$ 0.002  $\chi^2$ /NDF:6141.1/44

All: 0.119 $\pm$ 0.001  $\chi^2$ /NDF: 11206.6/84

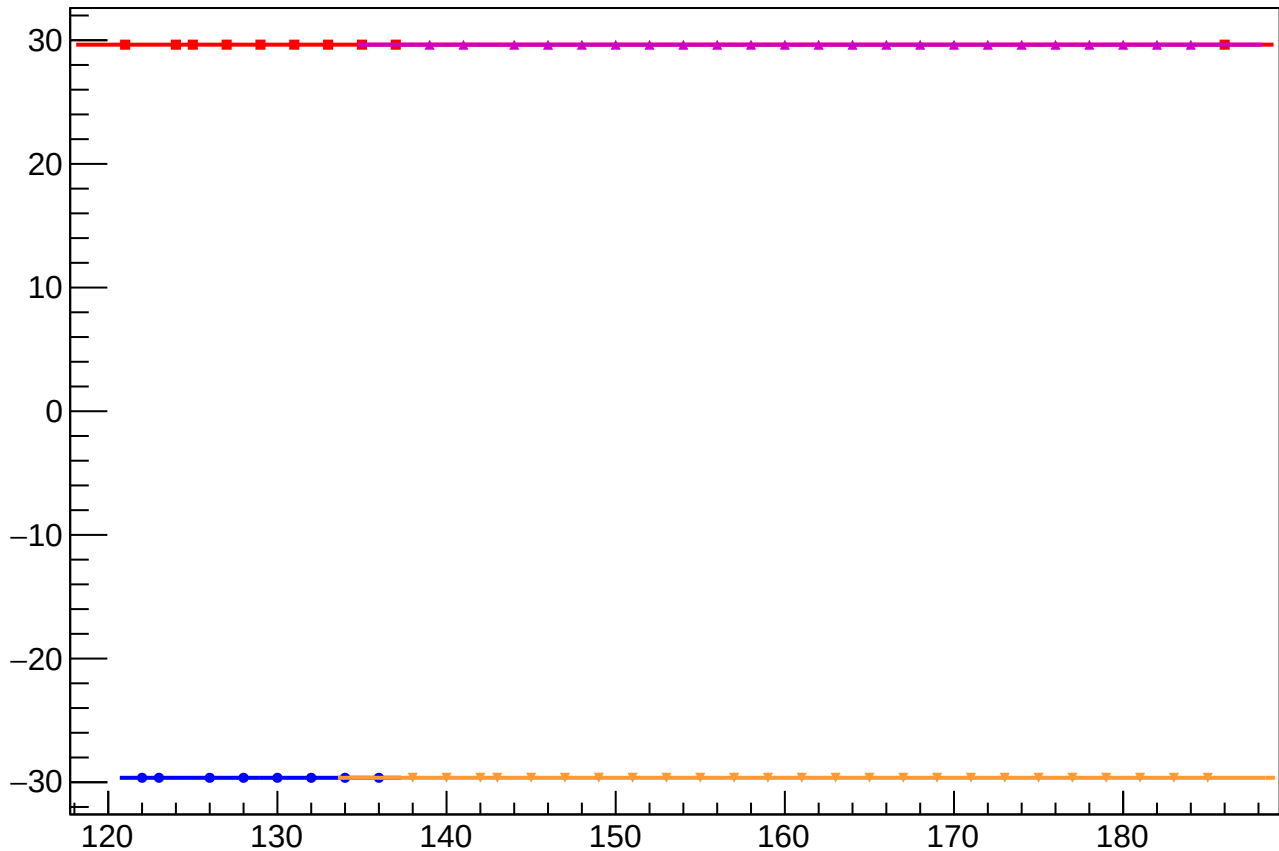
# VWienAngle\_mean vs Slug, Sign Corrected



Right In: 88.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 922500.3/7  
Left Out: -90.599 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 6053403.0/24  
Right Out: -88.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 137123.0/9  
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: -2.029 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 5371565260825633  
In: 90.190 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 192821948756065979  
Out: -90.192 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2021483929467831  
All: -2.350 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 3589286369682

# HWienAngle\_mean vs Slug, Sign Corrected



Right In: -29.641 $\pm$ 0.000  $\chi^2$ /NDF: 433709.4/7

Left Out: -29.641 $\pm$ 0.000  $\chi^2$ /NDF: 654199.2/24

Right Out: 29.641 $\pm$ 0.000  $\chi^2$ /NDF: 29774.8/9

Left In: 29.641 $\pm$ 0.000  $\chi^2$ /NDF: 511825.6/22

Left: -0.789 $\pm$ 0.000  $\chi^2$ /NDF: 32668496095314519

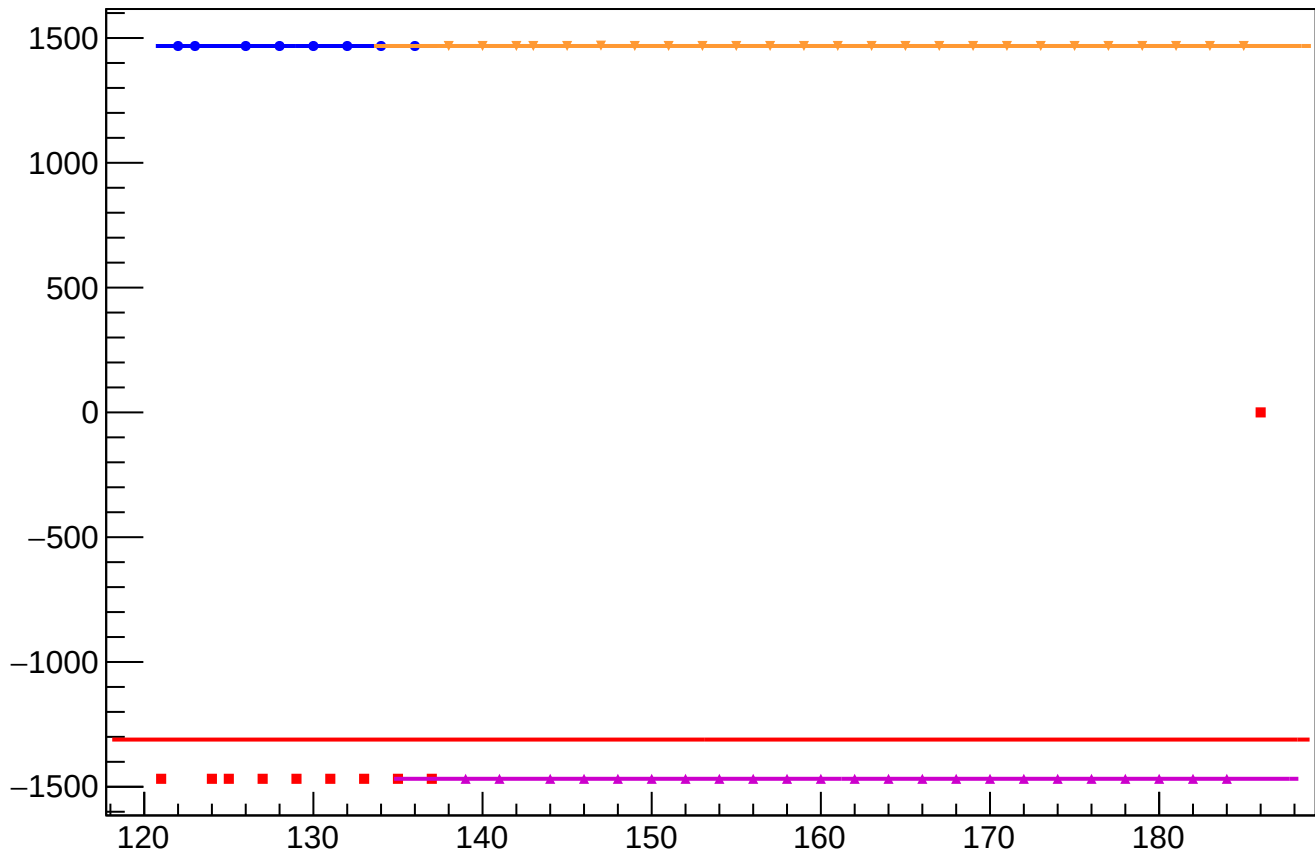
Right: 0.683 $\pm$ 0.000  $\chi^2$ /NDF: 60940438559958416

In: 20.294 $\pm$ 0.000  $\chi^2$ /NDF: 100349839707915681

Out: -20.349 $\pm$ 0.000  $\chi^2$ /NDF: 1052035774987688

All: -0.557 $\pm$ 0.000  $\chi^2$ /NDF: 3877521319306

# psub\_pl\_pos\_mean vs Slug, Sign Corrected



Right In: 1467.979+/-0.000

$\chi^2/\text{NDF}$ : 426876894.9/7

Left: 39.085+/-0.000  $\chi^2/\text{NDF}$ : 80133946076775322

Right: 46.535+/-0.000  $\chi^2/\text{NDF}$ : 1412153017881315

Left Out: 1468.048+/-0.000

$\chi^2/\text{NDF}$ : 127960980922965975039069502046208.0/24

In: -1005.066+/-0.000  $\chi^2/\text{NDF}$ : 246140911797744

Right Out: -1310.844+/-0.000

$\chi^2/\text{NDF}$ : 73122127718779489374121349928022179840.0/9

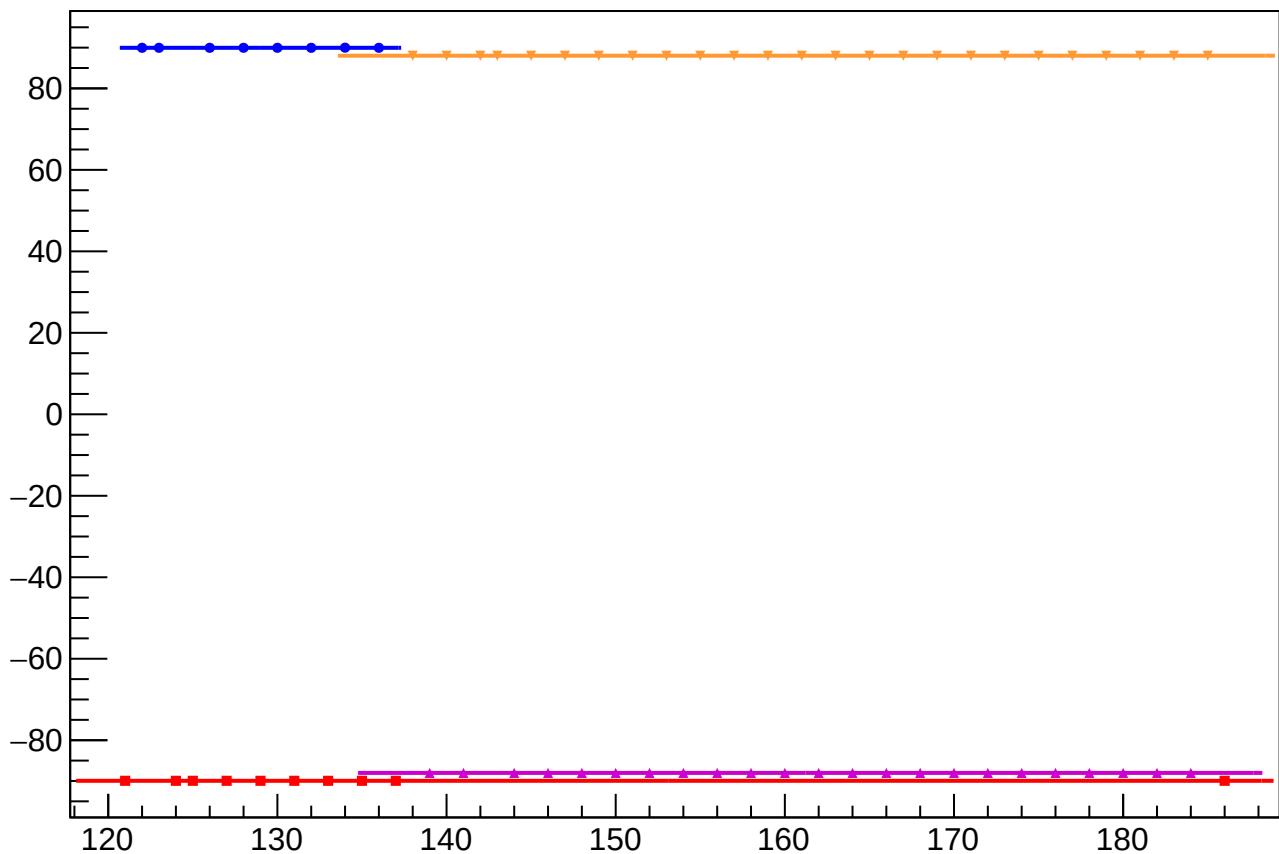
Out: 1032.504+/-0.000  $\chi^2/\text{NDF}$ : 238485132006446

Left In: -1467.994+/-0.000

$\chi^2/\text{NDF}$ : 145848702340275035310993178624.0/22

All: 40.256+/-0.000  $\chi^2/\text{NDF}$ : 9425580089705

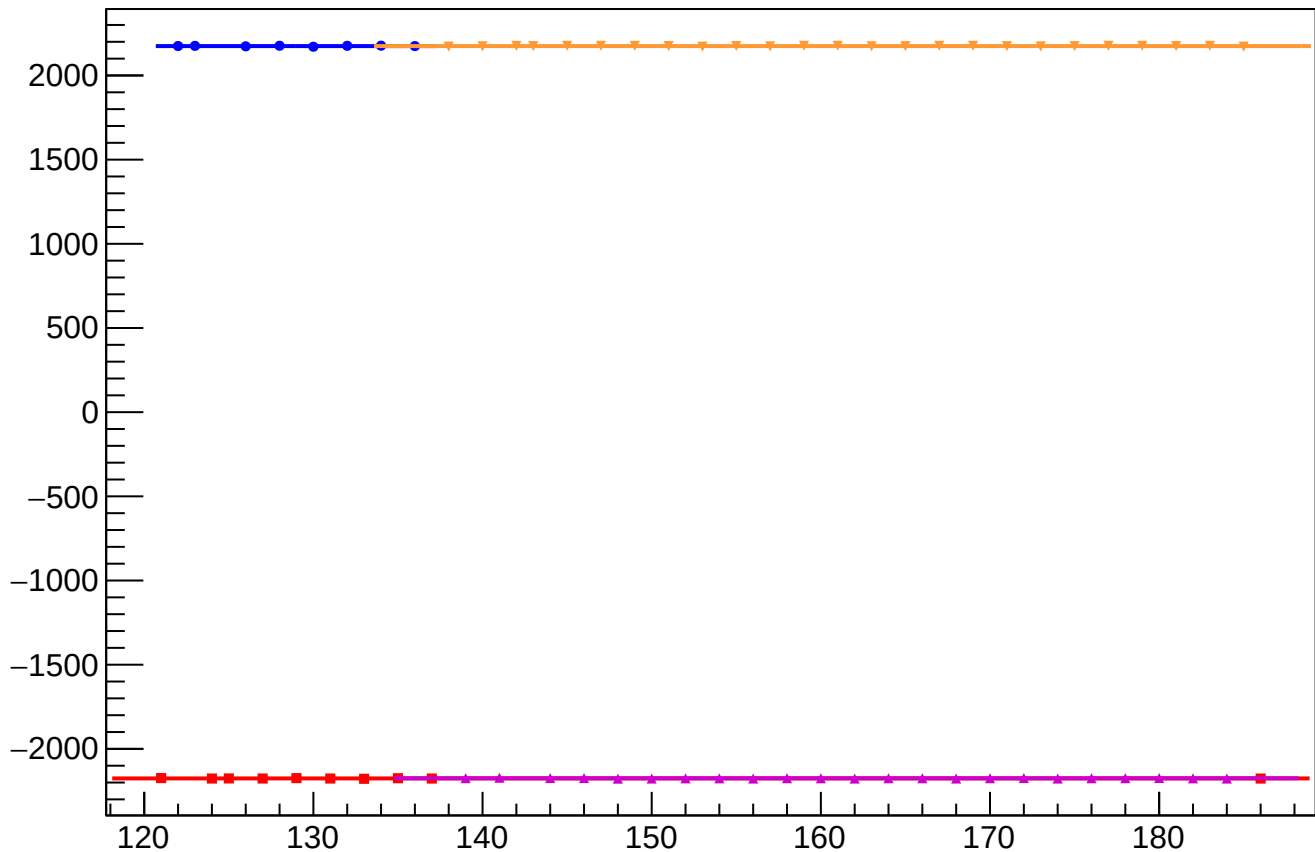
# Phi\_FG\_mean vs Slug, Sign Corrected



Right In: 89.961 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 21516176742595877338351665152.0/7  
 Left Out: 88.021 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 5326388.8/24  
 Right Out: -89.959 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 440449.4/9  
 Left In: -88.021 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 6084099.2/22

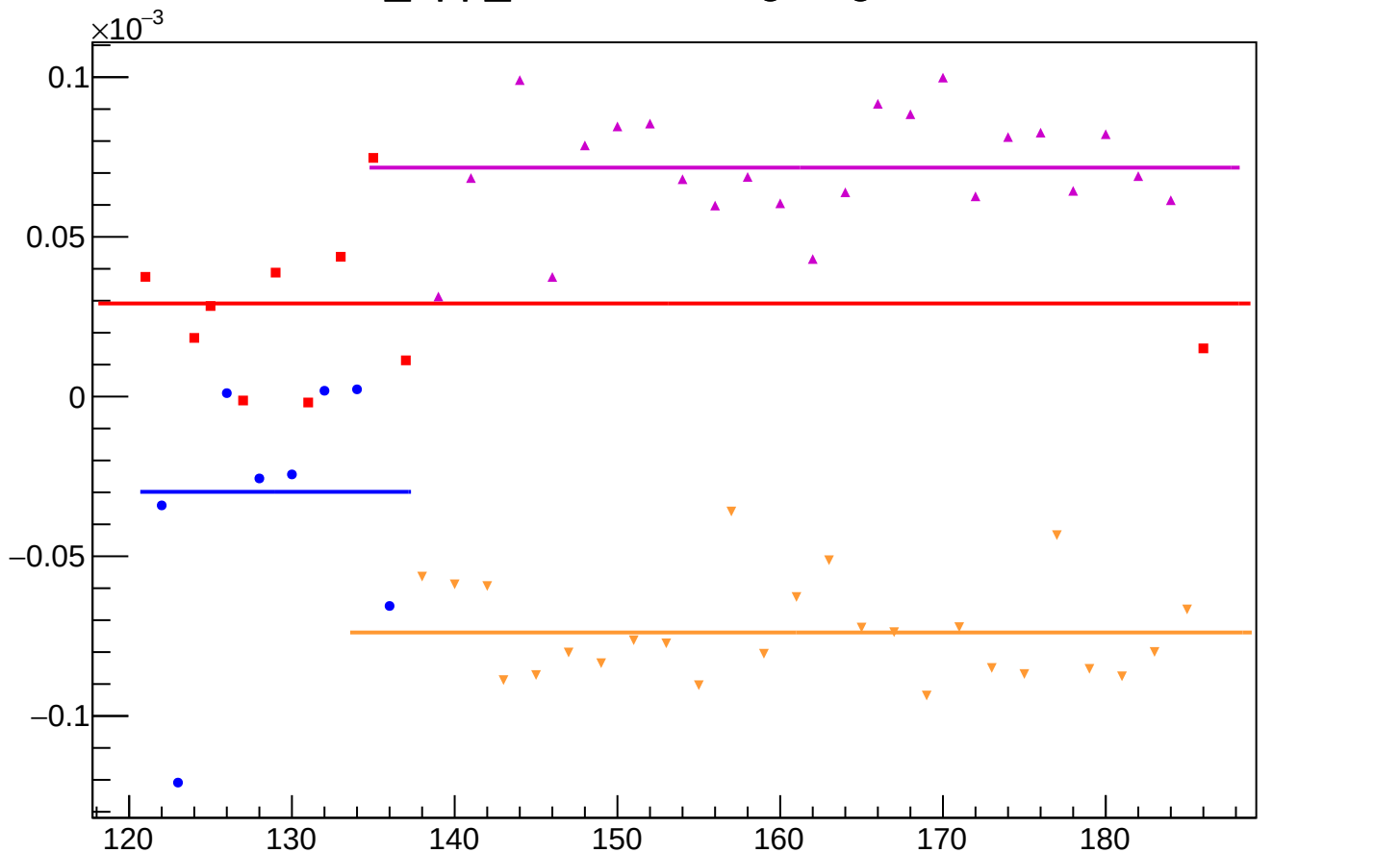
Left: 2.342 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 288085769312401978  
 Right: -2.073 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 5613459091172975  
 In: -59.957 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 90454897479750275  
 Out: 60.125 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 94827853223929180  
 All: 1.648 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 34433436410498

# HALLA\_p\_mean vs Slug, Sign Corrected



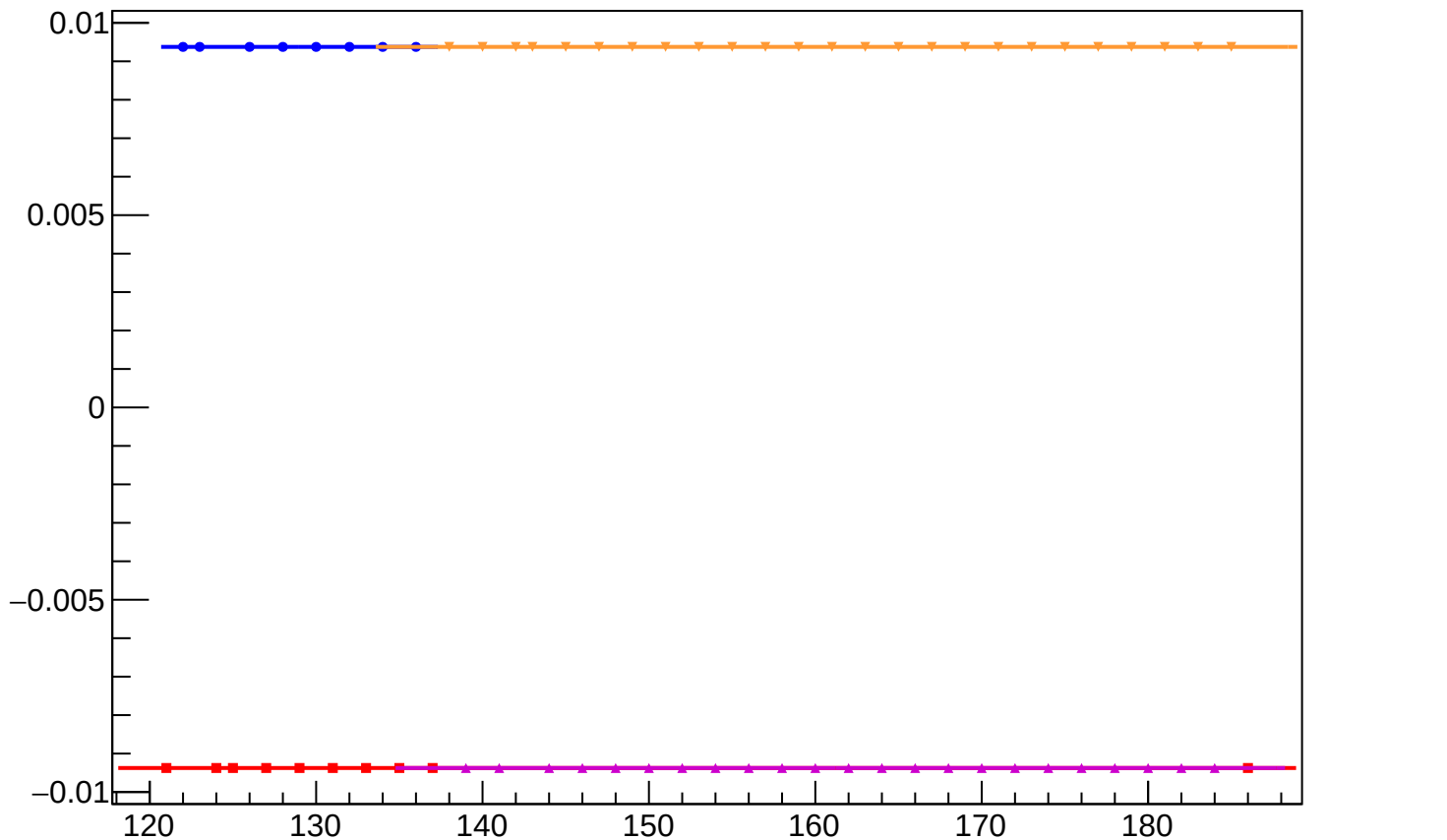
Right In: 2174.508 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1288672467722248839202216695824384.0/7  
 Left Out: 2174.622 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 5110578135476093110874911595823104.0/24  
 Right Out: -2175.530 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 635454900926319334322921220866048.0/9  
 Left In: -2174.539 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 3400742562425168967494665391570944.0/22  
 All: 40.834 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2087167927351

# HALLA\_dpp\_mean vs Slug, Sign Corrected



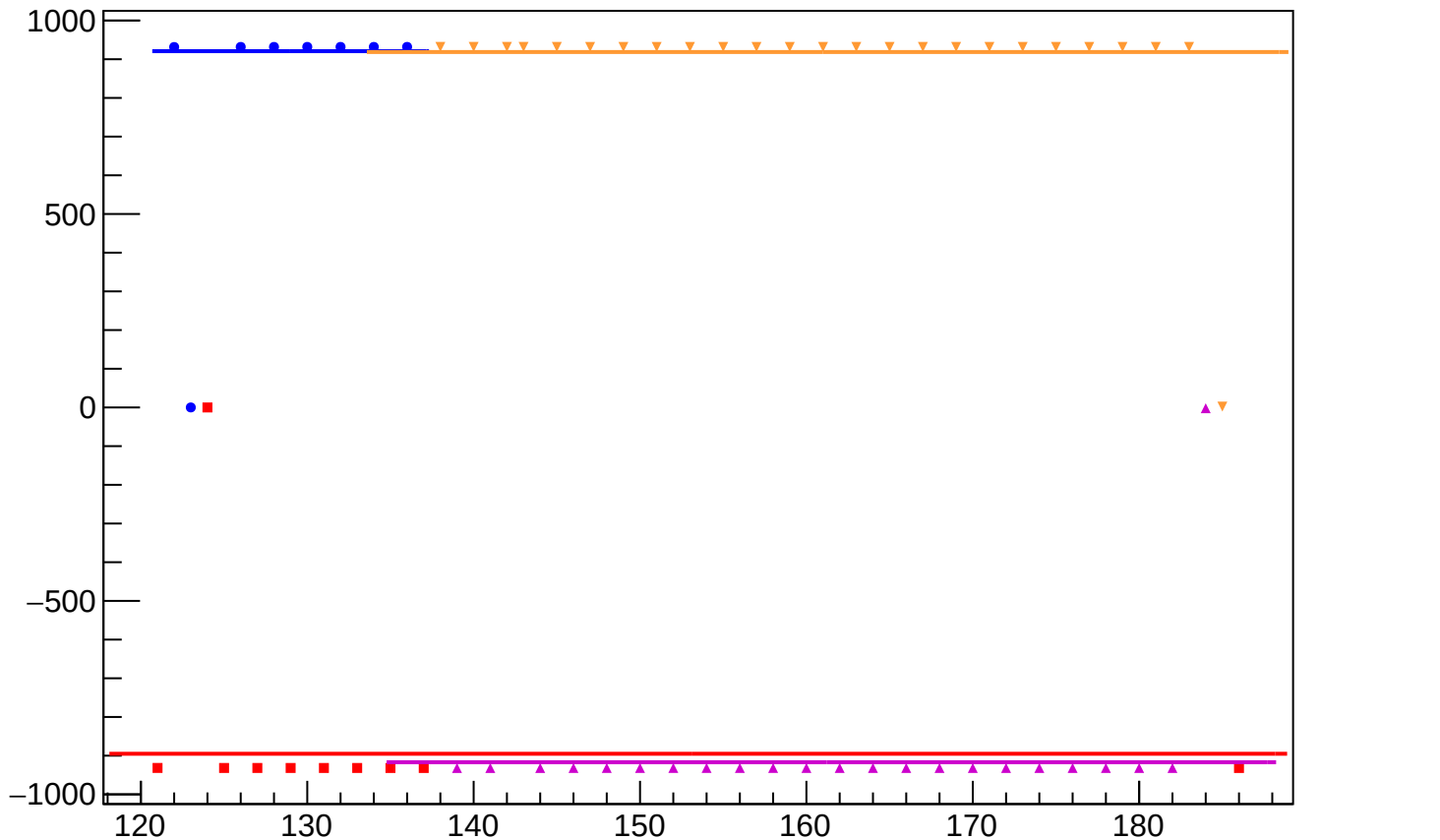
|                          |                                                     |                      |                                           |
|--------------------------|-----------------------------------------------------|----------------------|-------------------------------------------|
| Right In: -0.000+/-0.000 | $\chi^2/\text{NDF}$ : 248631969637472403456000.0/7  | Left: -0.000+/-0.000 | $\chi^2/\text{NDF}$ : 20702696564433151   |
| Left Out: -0.000+/-0.000 | $\chi^2/\text{NDF}$ : 450400934180541069000704.0/24 | Right: 0.000+/-0.000 | $\chi^2/\text{NDF}$ : 10555337956268607   |
| Right Out: 0.000+/-0.000 | $\chi^2/\text{NDF}$ : 203905439167963289616384.0/9  | In: 0.000+/-0.000    | $\chi^2/\text{NDF}$ : 3752793172434458706 |
| Left In: 0.000+/-0.000   | $\chi^2/\text{NDF}$ : 562166279020739416817664.0/22 | Out: -0.000+/-0.000  | $\chi^2/\text{NDF}$ : 38304606982676688   |
|                          |                                                     | All: -0.000+/-0.000  | $\chi^2/\text{NDF}$ : 2176485763707       |

# MQ171LM\_mean vs Slug, Sign Corrected



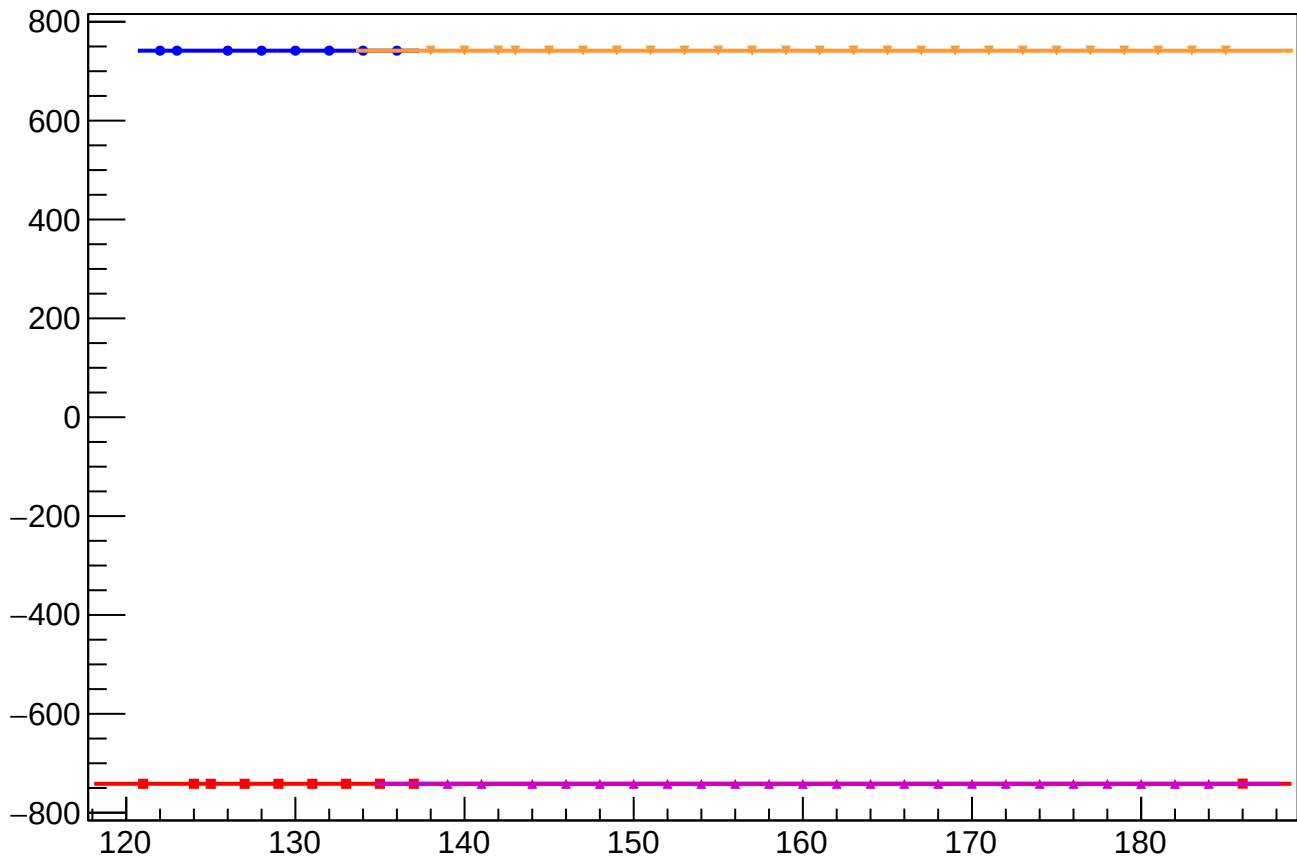


# HacL\_Q2\_HP3458A\_IOUT\_mean vs Slug, Sign Corrected



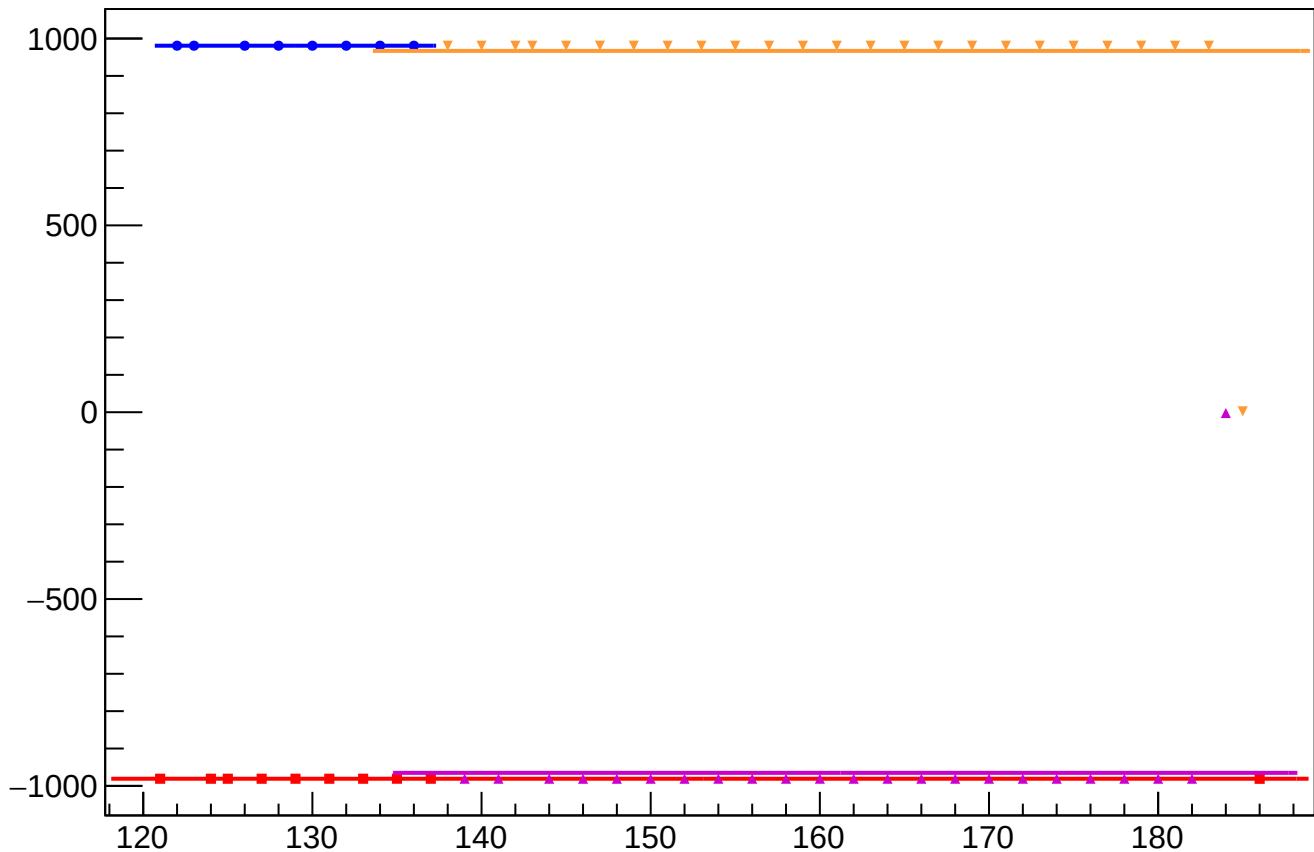
Right In: 920.801+/-0.000  $\chi^2/\text{NDF}$ : 3431767977579138653856652958525030400.0/7  
 Left Out: 918.645+/-0.000  $\chi^2/\text{NDF}$ : 23003498704056084939752432521336324096.0/24  
 Right Out: -895.076+/-0.000  $\chi^2/\text{NDF}$ : 11675926731367361880524807293248733184.0/9  
 Left In: -916.890+/-0.000  $\chi^2/\text{NDF}$ : 2466789491747623125028694438888133632.0/22  
 All: 20.051+/-0.000  $\chi^2/\text{NDF}$ : 3767194206788.0/1

# HacL\_D1\_HP3458A\_IOUT\_mean vs Slug, Sign Corrected



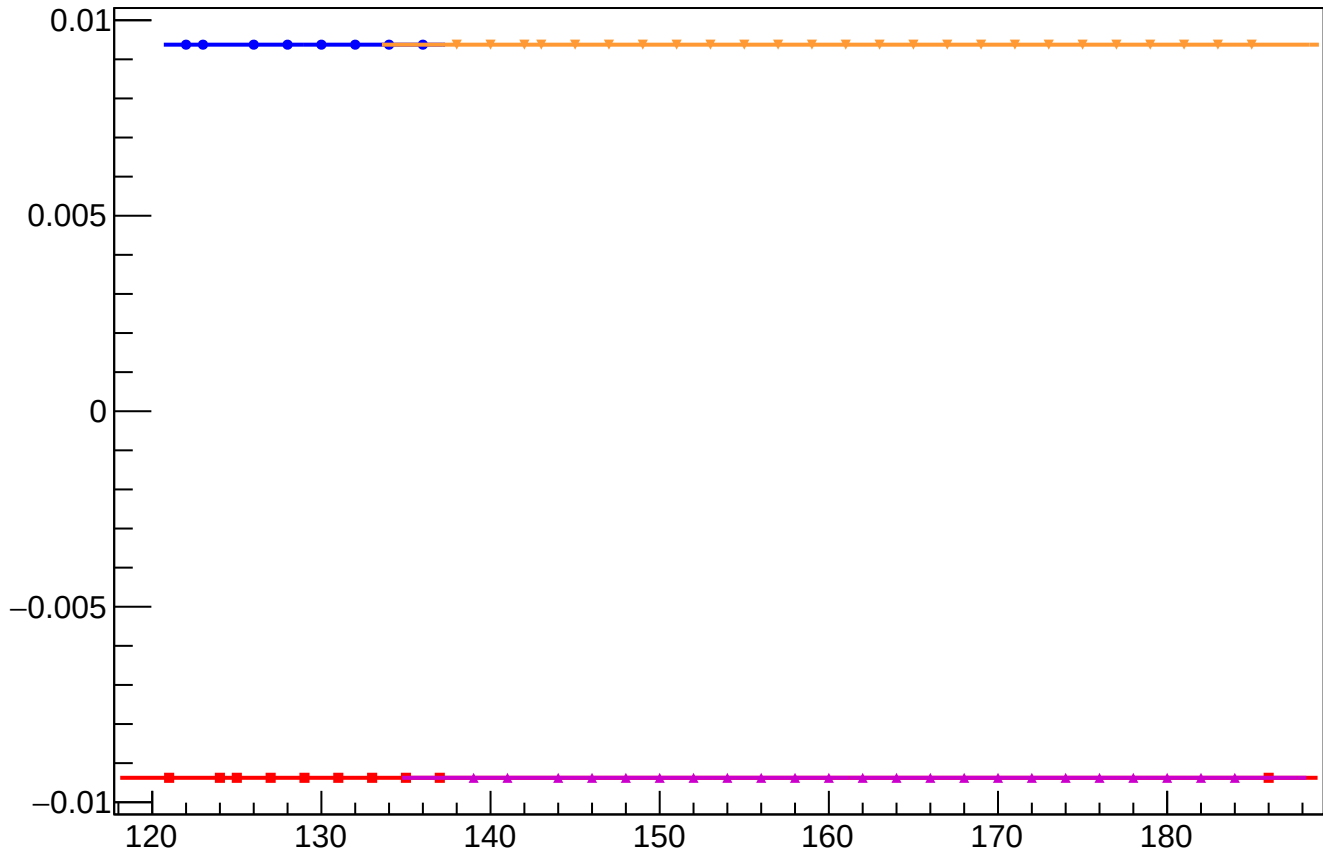
|                             |                                                           |                        |                                         |
|-----------------------------|-----------------------------------------------------------|------------------------|-----------------------------------------|
| Right In: 741.528+/-0.000   | $\chi^2/\text{NDF}$ : 18410222451199973732634329088.0/7   | Left: 19.729+/-0.000   | $\chi^2/\text{NDF}$ : 20445098666994125 |
| Left Out: 741.513+/-0.000   | $\chi^2/\text{NDF}$ : 244782737401533731539808944128.0/24 | Right: -17.076+/-0.000 | $\chi^2/\text{NDF}$ : 381382912111404   |
| Right Out: -741.490+/-0.000 | $\chi^2/\text{NDF}$ : 4408129519430321010793282273280.0/9 | In: -507.675+/-0.000   | $\chi^2/\text{NDF}$ : 6280372588053630  |
| Left In: -741.512+/-0.000   | $\chi^2/\text{NDF}$ : 215375309108434607405602439168.0/22 | Out: 509.078+/-0.000   | $\chi^2/\text{NDF}$ : 6583813258067591  |
|                             | All: 13.943+/-0.000                                       |                        | $\chi^2/\text{NDF}$ : 2426685112251     |

# HacL\_Q3\_HP3458A\_IOUT\_mean vs Slug, Sign Corrected



Right In: 980.825+/-0.000  $\chi^2/\text{NDF}$ : 159096869175585744562040078336.0/7  
 Left Out: 966.936+/-0.000  $\chi^2/\text{NDF}$ : 25485578616543458629432284645183979520.0/24  
 Right Out: -980.840+/-0.000  $\chi^2/\text{NDF}$ : 1545733700353009628695192666112.0/9  
 Left In: -965.102+/-0.000  $\chi^2/\text{NDF}$ : 27330319430012441419356351914146004992.0/22  
 All: 18.879+/-0.000  $\chi^2/\text{NDF}$ : 4191482255149

# MQ172RM\_mean vs Slug, Sign Corrected



Right In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 0.0/7

Left Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ :0.1/24

Right Out: -0.009+/-0.000  $\chi^2/\text{NDF}$ : 0.0/9

Left In: -0.009+/-0.000  $\chi^2/\text{NDF}$ :0.1/22

Left: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 326809514411447718

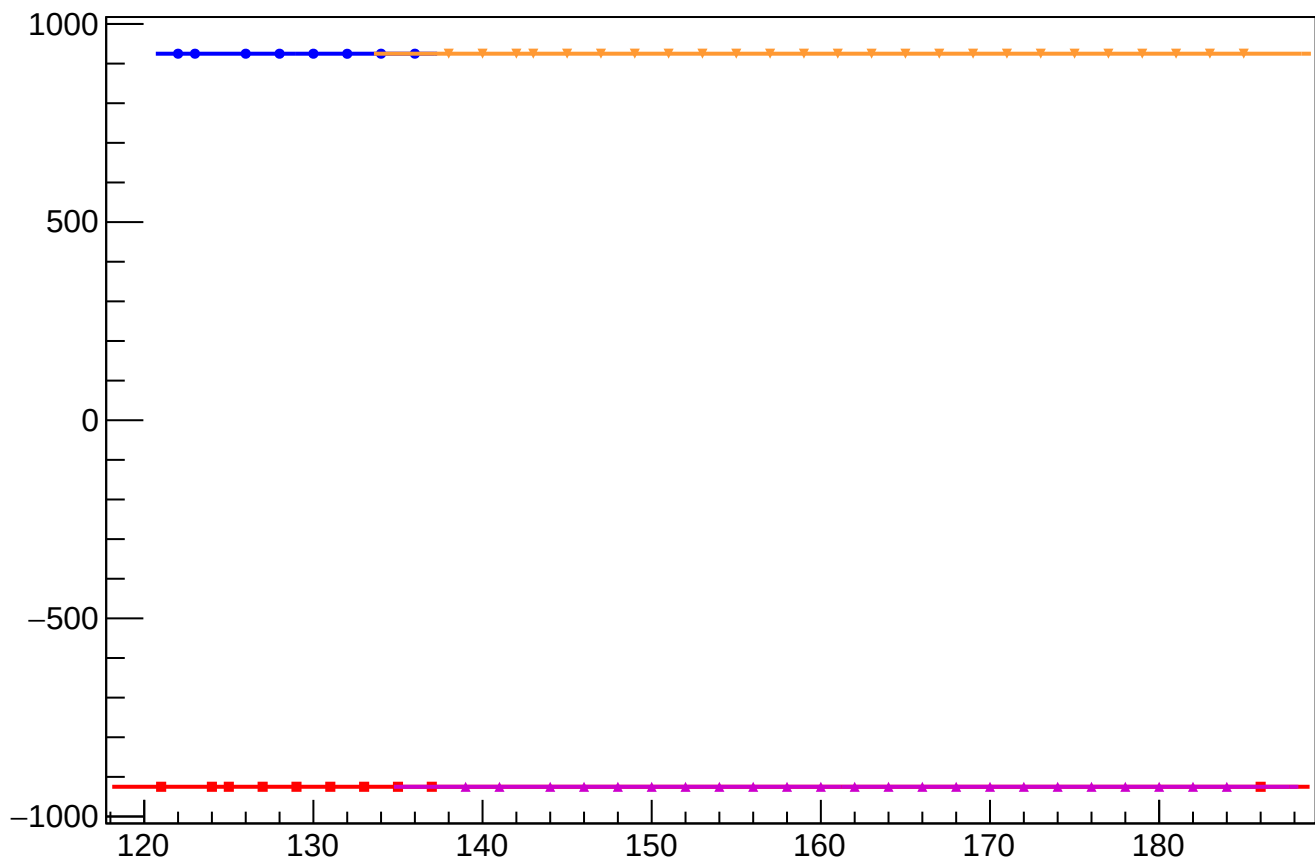
Right: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 6096367300072039

In: -0.006+/-0.000  $\chi^2/\text{NDF}$ :100388099563953231

Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ :105243687913907058

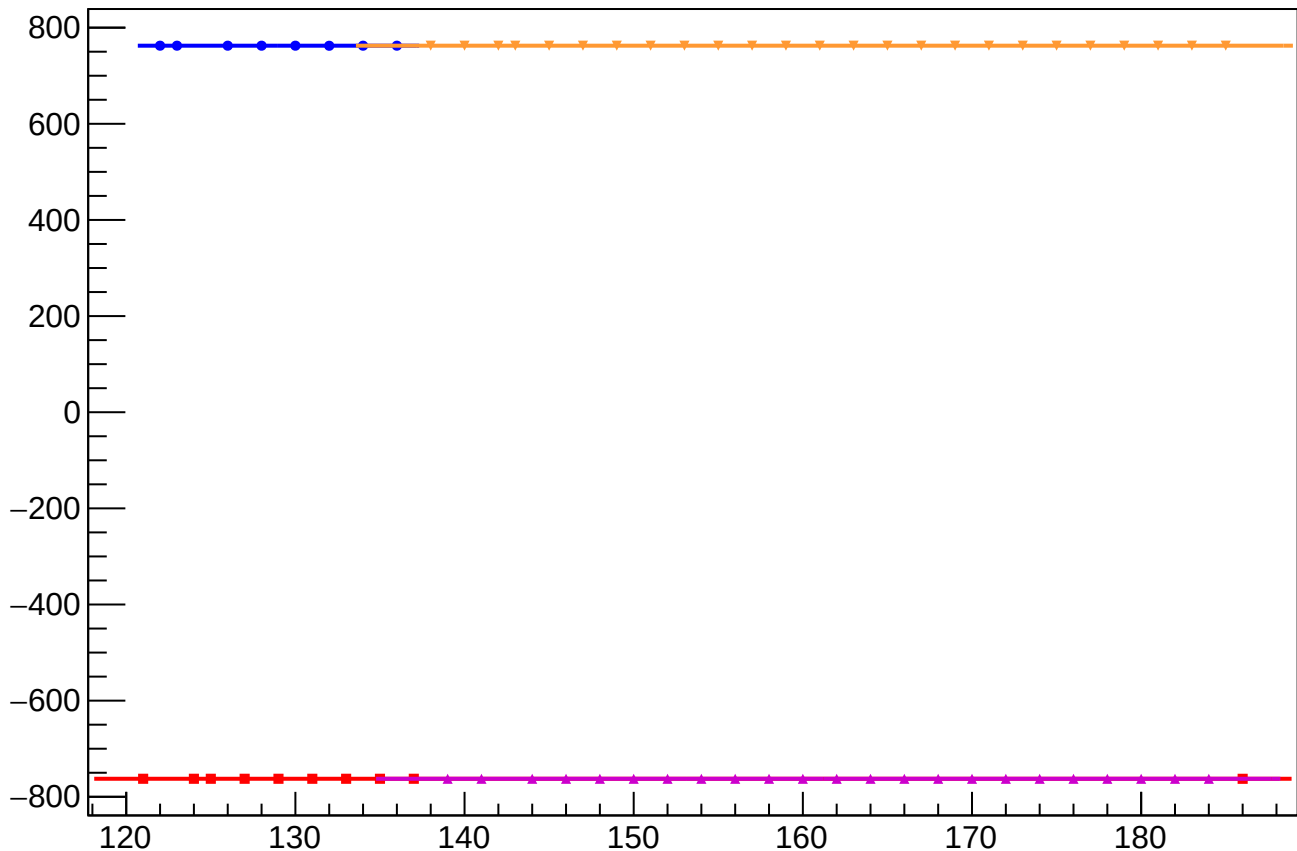
All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 38789996814835

# HacR\_Q2\_HP3458A\_IOUT\_mean vs Slug, Sign Corrected



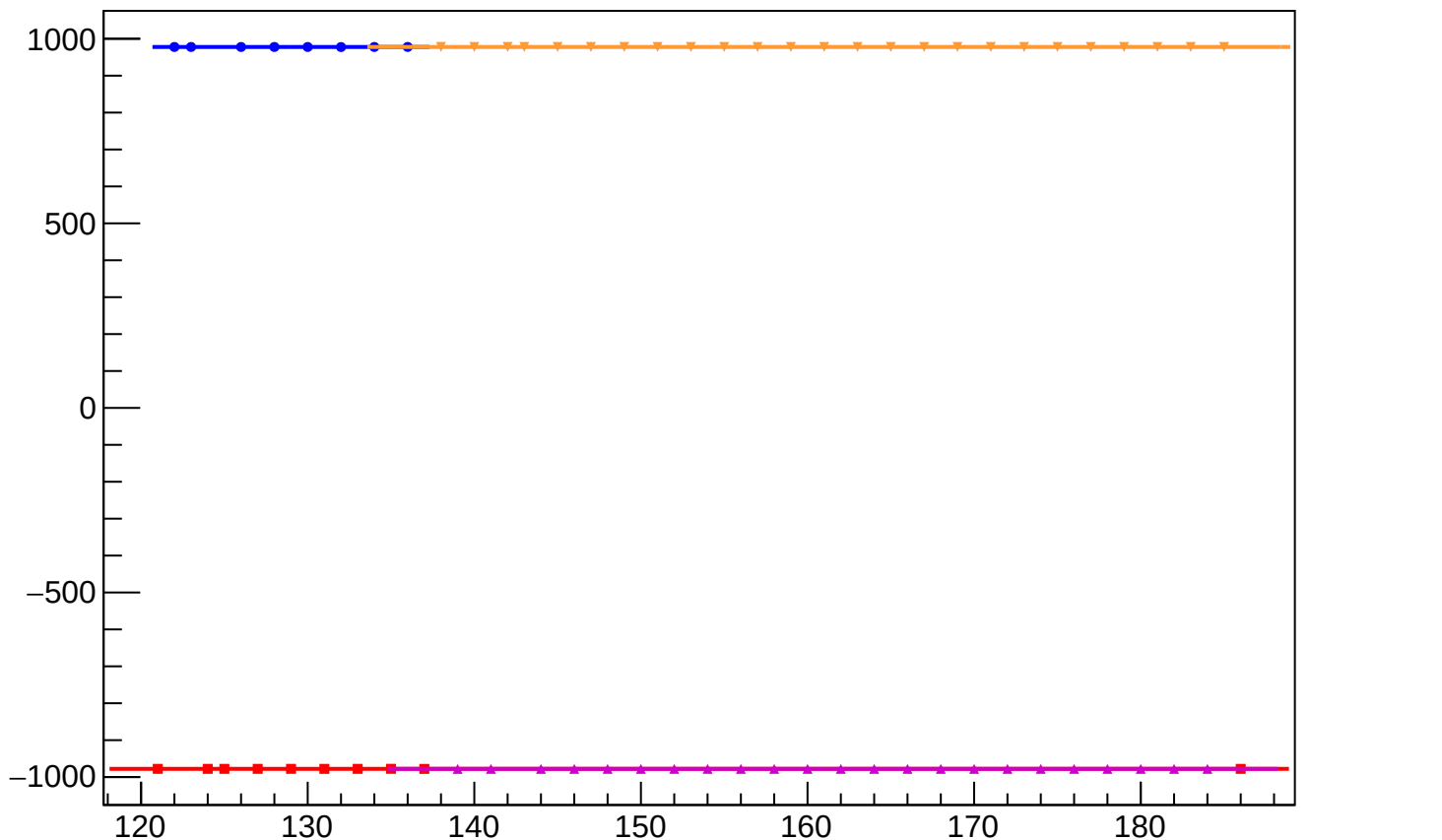
Right In: 924.939 +/- 0.000  $\chi^2/\text{NDF}$ : 1401388477255469733232112566272.0/7  
 Left Out: 924.983 +/- 0.000  $\chi^2/\text{NDF}$ : 1041831865443970524066476982272.0/24  
 Right Out: -924.964 +/- 0.000  $\chi^2/\text{NDF}$ : 209678956766401229883231436800.0/9  
 Left In: -924.983 +/- 0.000  $\chi^2/\text{NDF}$ : 888539224321534960792212865024.0/22  
 All: 17.387 +/- 0.000  $\chi^2/\text{NDF}$ : 3776069186976

# HacR\_D1\_HP3458A\_IOUT\_mean vs Slug, Sign Corrected



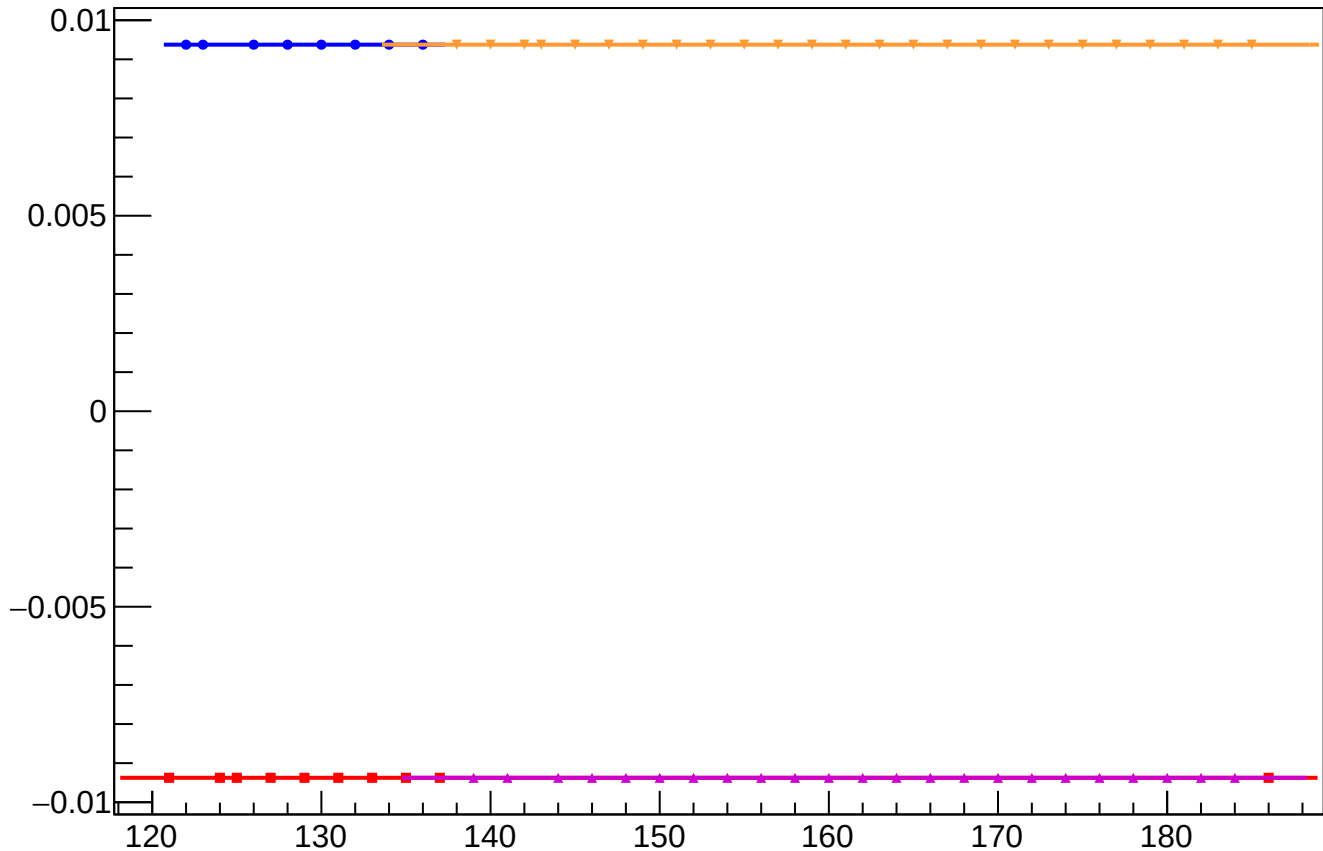
Right In: 762.483 +/- 0.000  $\chi^2/\text{NDF}$ : 783456713793632421311688998912.0/7  
 Left Out: 762.518 +/- 0.000  $\chi^2/\text{NDF}$ : 731741258759628909874415403008.0/24  
 Right Out: -762.509 +/- 0.000  $\chi^2/\text{NDF}$ : 178678150568968810217189933056.0/9  
 Left In: -762.519 +/- 0.000  $\chi^2/\text{NDF}$ : 629058355419214408155297480704.0/22  
 All: 14.333 +/- 0.000  $\chi^2/\text{NDF}$ : 2566104087743

# HacR\_Q3\_HP3458A\_IOUT\_mean vs Slug, Sign Corrected



|                             |                                                            |                        |                                         |
|-----------------------------|------------------------------------------------------------|------------------------|-----------------------------------------|
| Right In: 977.741+/-0.000   | $\chi^2/\text{NDF}$ : 1738037233029946574744730992640.0/7  | Left: 26.015+/-0.000   | $\chi^2/\text{NDF}$ : 35546397150663117 |
| Left Out: 977.738+/-0.000   | $\chi^2/\text{NDF}$ : 1154150409979077132991401558016.0/24 | Right: -22.543+/-0.000 | $\chi^2/\text{NDF}$ : 663097000057619   |
| Right Out: -977.743+/-0.000 | $\chi^2/\text{NDF}$ : 883493859282777767537323016192.0/9   | In: -669.406+/-0.000   | $\chi^2/\text{NDF}$ : 1091904183916938  |
| Left In: -977.735+/-0.000   | $\chi^2/\text{NDF}$ : 976503887937607318263199432704.0/22  | Out: 671.250+/-0.000   | $\chi^2/\text{NDF}$ : 1144723493151680  |
|                             | All: 18.382+/-0.000                                        |                        | $\chi^2/\text{NDF}$ : 4219115833758     |

# hesDipole\_current\_mean vs Slug, Sign Corrected



Right In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 0.0/7

Left Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 0.1/24

Right Out: -0.009+/-0.000  $\chi^2/\text{NDF}$ : 0.0/9

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  $\chi^2/\text{NDF}$ : 6096367300072039

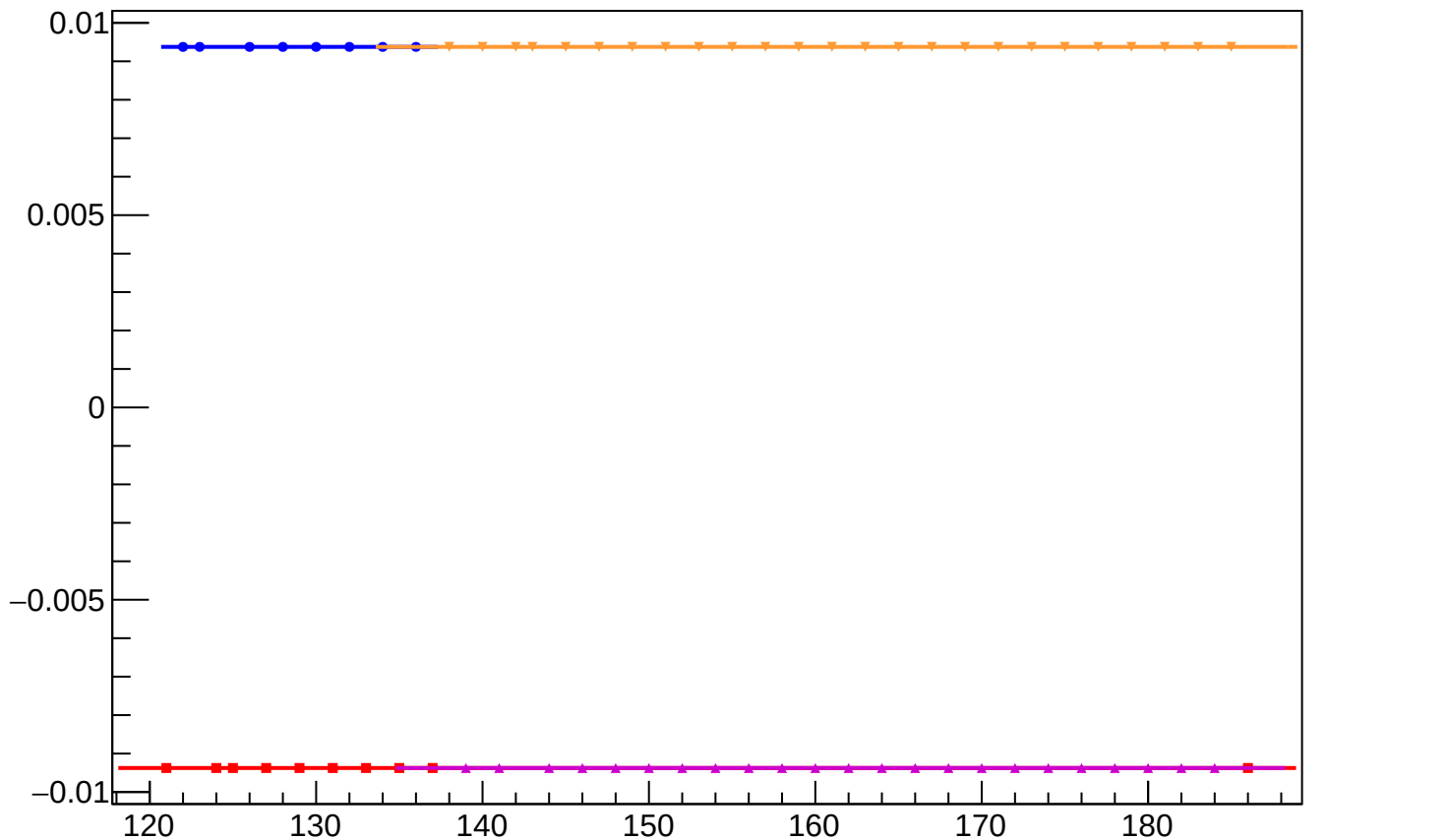
In: -0.006+/-0.000  $\chi^2/\text{NDF}$ : 100388099563953231

Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 105243687913907058

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 38789996814835



MSUPERBIGBITereadcalc\_mean vs Slug, Sign Corrected



Right In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 0.0/7

Left Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 0.1/24

Right Out: -0.009+/-0.000  $\chi^2/\text{NDF}$ : 0.0/9

Left In: -0.009+/-0.000  $\chi^2/\text{NDF}$ : 0.1/22

Left: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 326809514411447718

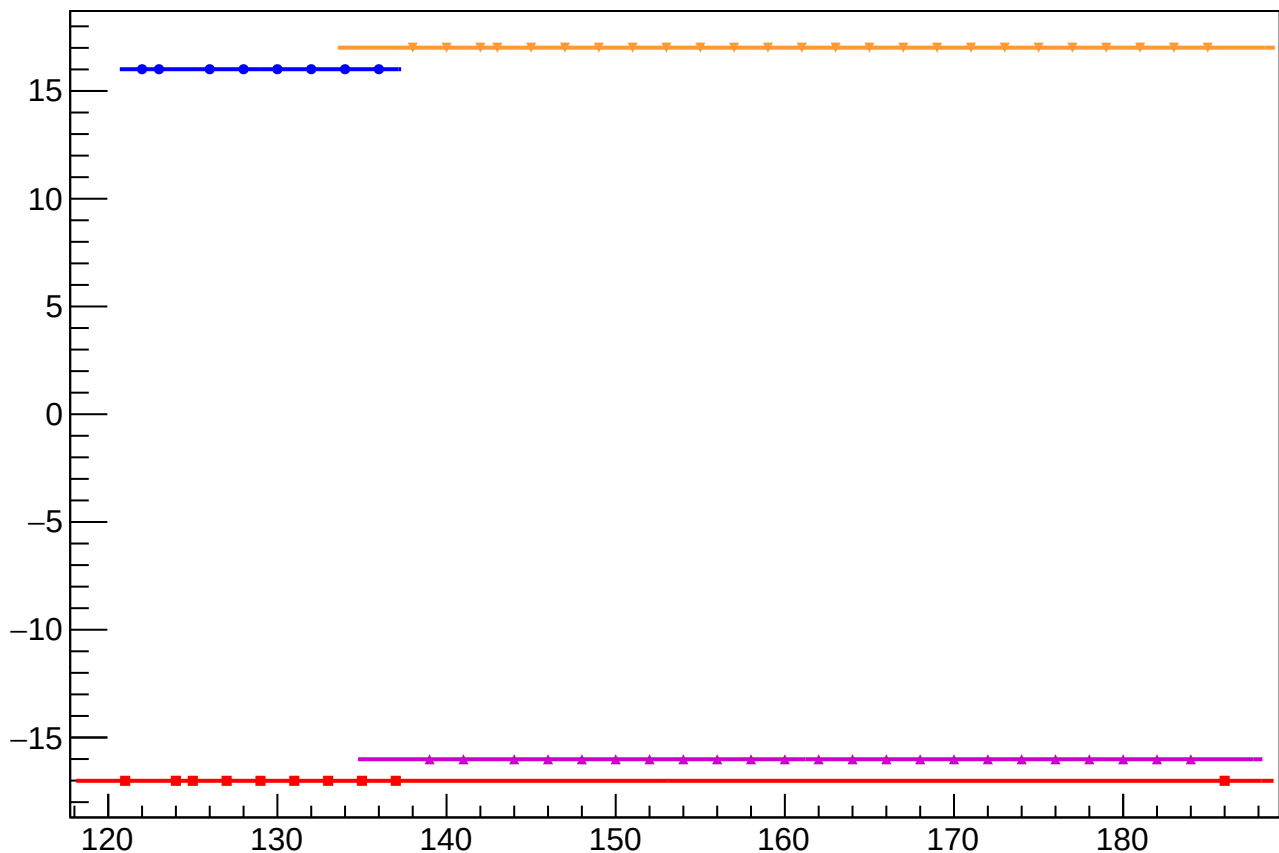
Right: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 6096367300072039

In: -0.006+/-0.000  $\chi^2/\text{NDF}$ : 100388099563953231

Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 105243687913907058

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 38789996814835

# IGL1I00DI24\_24M\_mean vs Slug, Sign Corrected



Right In: 16.009+/-0.000  $\chi^2/\text{NDF}$ : 27843.6/7

Left Out: 17.009+/-0.000  $\chi^2/\text{NDF}$ : 26284444608576238643052544.0/24

Right Out: -17.009+/-0.000  $\chi^2/\text{NDF}$ : 8483717668631655053524992.0/9

Left In: -16.009+/-0.000  $\chi^2/\text{NDF}$ : 127973174512756677672960.0/22

Left: 0.939+/-0.000  $\chi^2/\text{NDF}$ : 941837157361130802

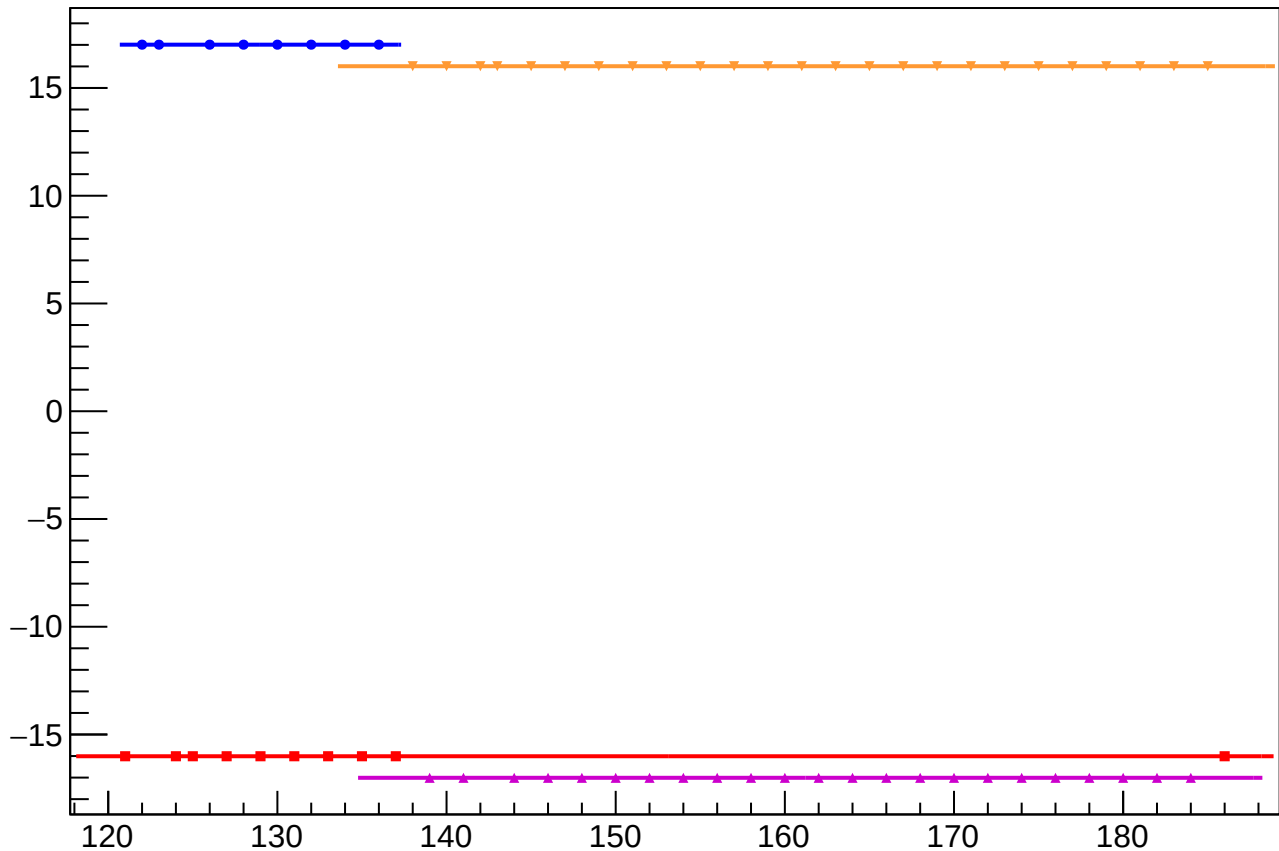
Right: -1.158+/-0.000  $\chi^2/\text{NDF}$ : 1774246419218248

In: -10.988+/-0.000  $\chi^2/\text{NDF}$ : 27056811290547119

Out: 11.554+/-0.000  $\chi^2/\text{NDF}$ : 32939980729056301

All: 0.606+/-0.000  $\chi^2/\text{NDF}$ : 11216751173821

# IGL1I00OD16\_16\_mean vs Slug, Sign Corrected



Right In: 17.009 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 82003.7/7

Left Out: 16.009 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 89740.8/24

Right Out: -16.009 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 18276.3/9

Left In: -17.009 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 115033.4/22

Left: 0.042 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 994312337700629058

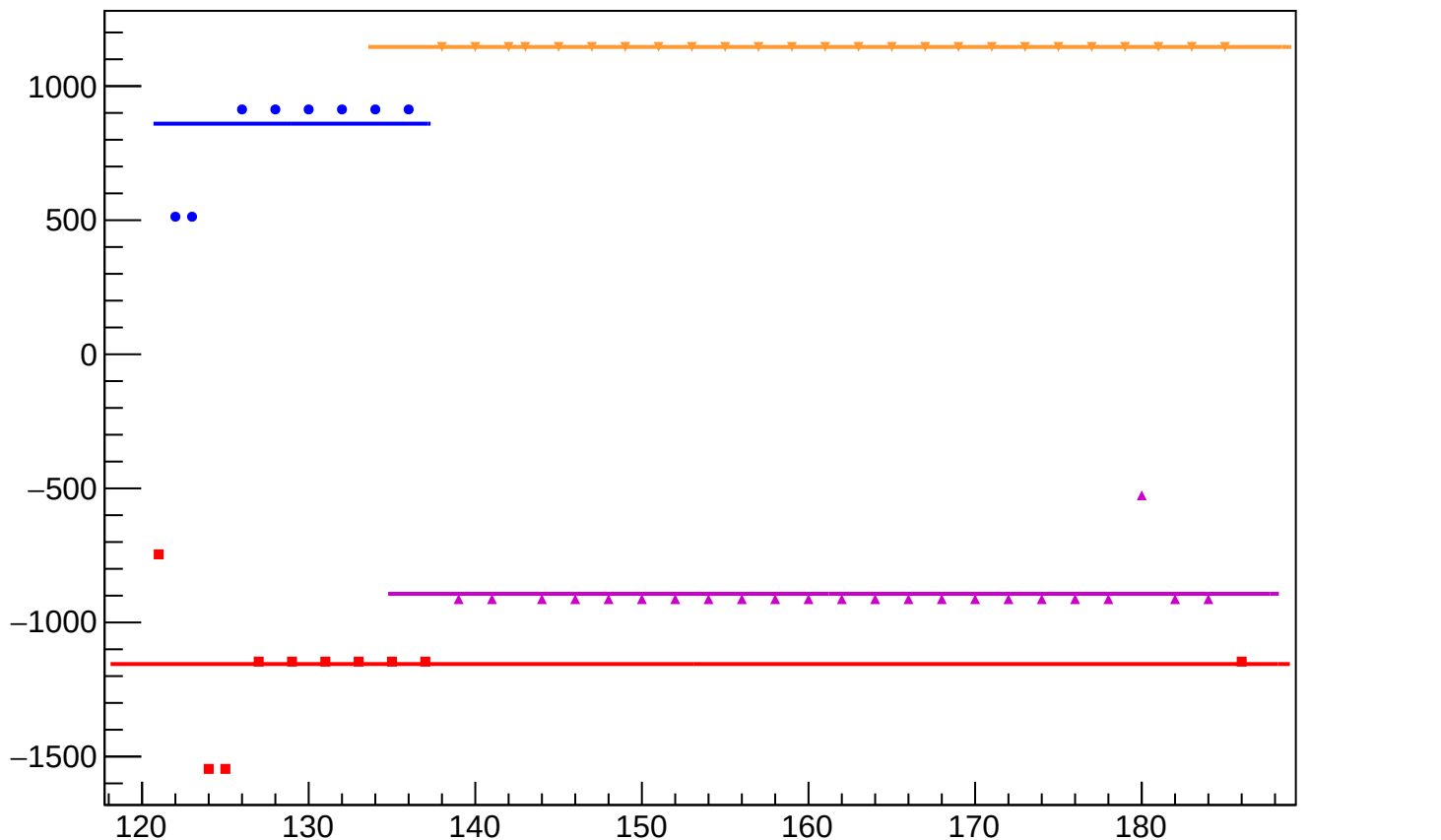
Right: 0.119 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 18905572657966743

In: -11.531 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 32913567303769346

Out: 10.937 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 30629290110738132

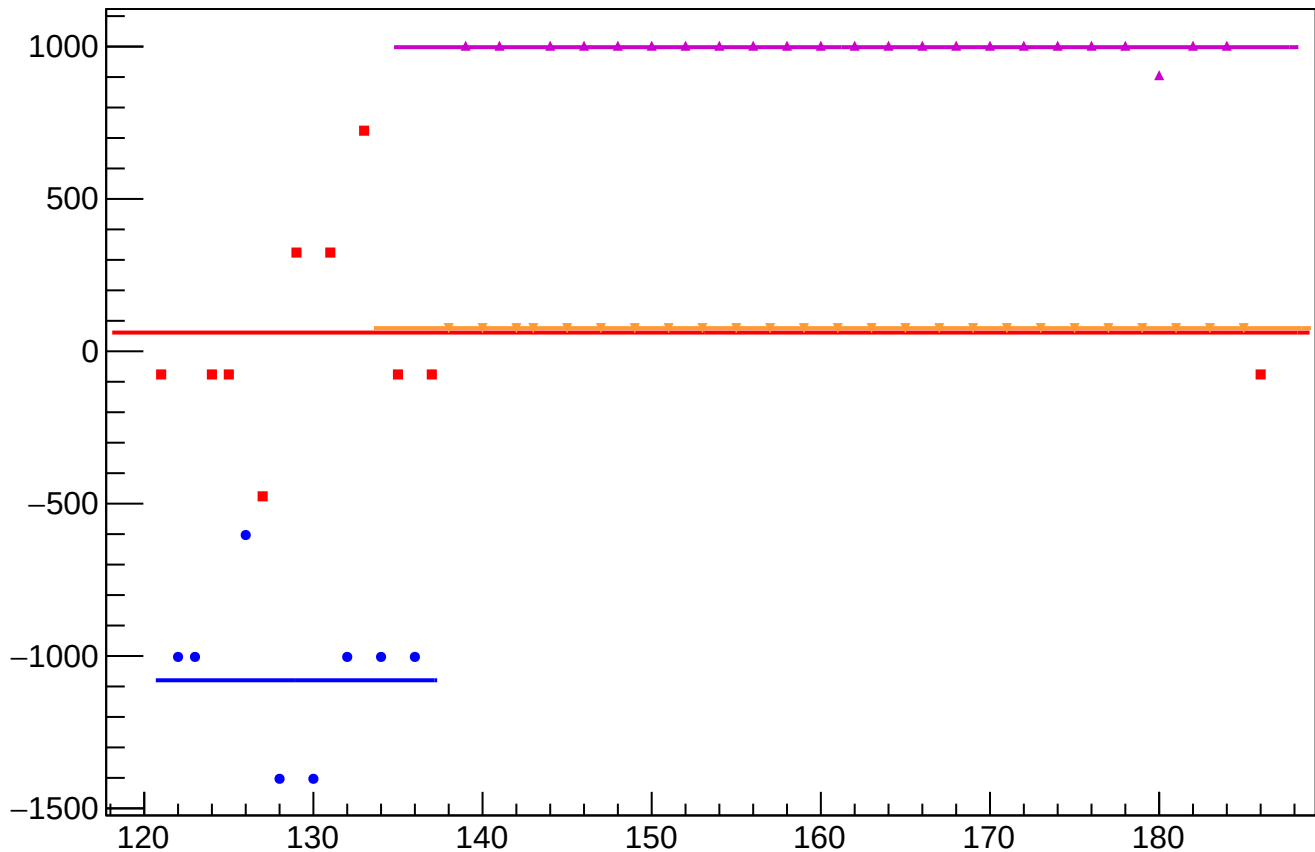
All: 0.055 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 11833715132158

# RTPAPOSUCNT\_mean vs Slug, Sign Corrected



Left: 153.574+/-0.000  $\chi^2/\text{NDF}$ : 3878499194076111  
 Right In: 859.895+/-0.000  $\chi^2/\text{NDF}$ : 6244310211396691746388505873258381312.0/7  
 Left Out: 1146.011+/-0.000  $\chi^2/\text{NDF}$ : 8041760976861450519237885952.0/24  
 Right Out: -1155.024+/-0.000  $\chi^2/\text{NDF}$ : 13731821965068823961882039392053231616.0/9  
 Left In: -893.116+/-0.000  $\chi^2/\text{NDF}$ : 13219826761707982974212661987208331264.0/22  
 All: 102.586+/-0.000  $\chi^2/\text{NDF}$ : 466403301119

# RTPAPOSVCNT\_mean vs Slug, Sign Corrected



Right In: -1079.685+/-0.000

$\chi^2/\text{NDF}$ : 21205581541739378673536668219320827904.0/7

Left Out: 76.011+/-0.000

$\chi^2/\text{NDF}$ : 11003263624957134120836661248.0/24

Right Out: 61.455+/-0.000

$\chi^2/\text{NDF}$ : 40331405056708569824943484777946677248.0/9

Left In: 998.020+/-0.000

$\chi^2/\text{NDF}$ : 826231736084035689068445378231140352.0/22

All: 364.303+/-0.000  $\chi^2/\text{NDF}$ : 168780971539