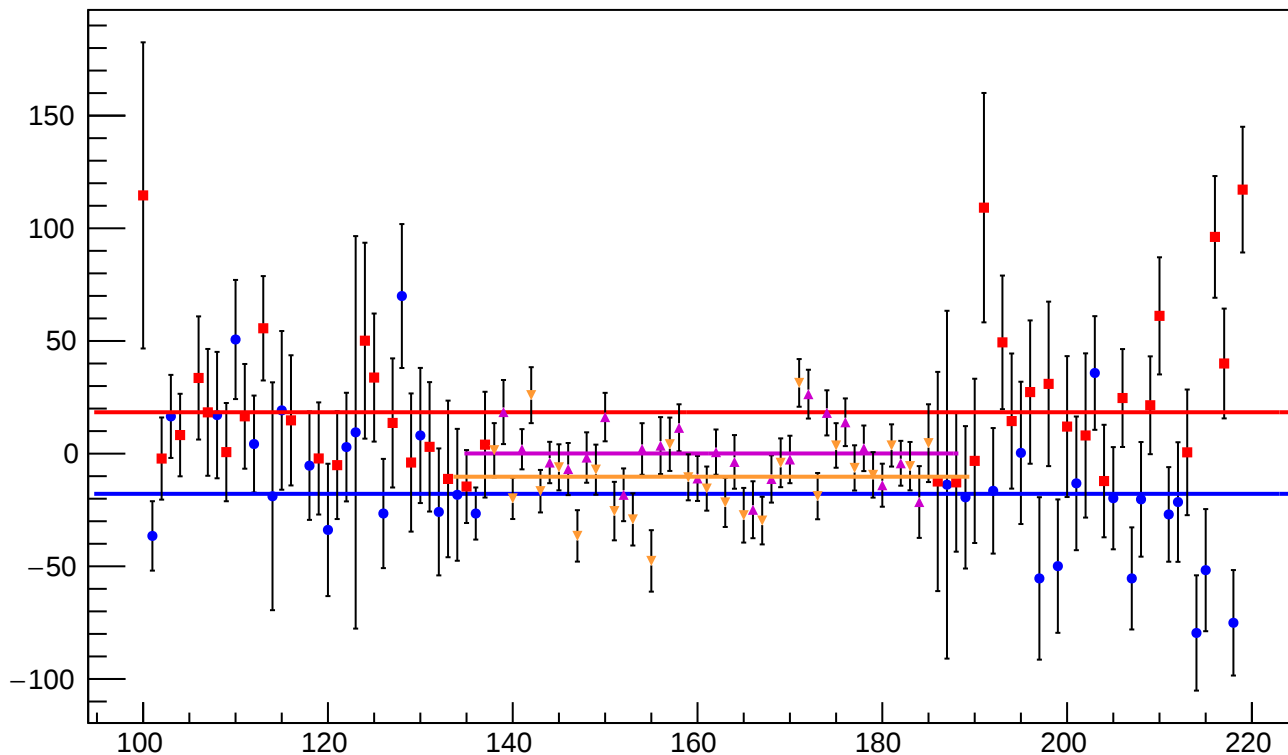


# diff\_bpm4aX\_mean vs Slug, Sign Corrected



Right In:  $-17.835 \pm 4.320$

$\chi^2/\text{NDF}: 49.3/32$

Left Out:  $-10.238 \pm 2.170$

$\chi^2/\text{NDF}: 58.1/24$

Right Out:  $18.372 \pm 4.375$

$\chi^2/\text{NDF}: 48.5/36$

Left In:  $0.080 \pm 2.251$

$\chi^2/\text{NDF}: 29.9/22$

Left:  $-5.266 \pm 1.562$

$\chi^2/\text{NDF}: 98.9/47$

Right:  $0.040 \pm 3.074$

$\chi^2/\text{NDF}: 132.5/69$

In:  $-3.744 \pm 1.996$

$\chi^2/\text{NDF}: 92.7/55$

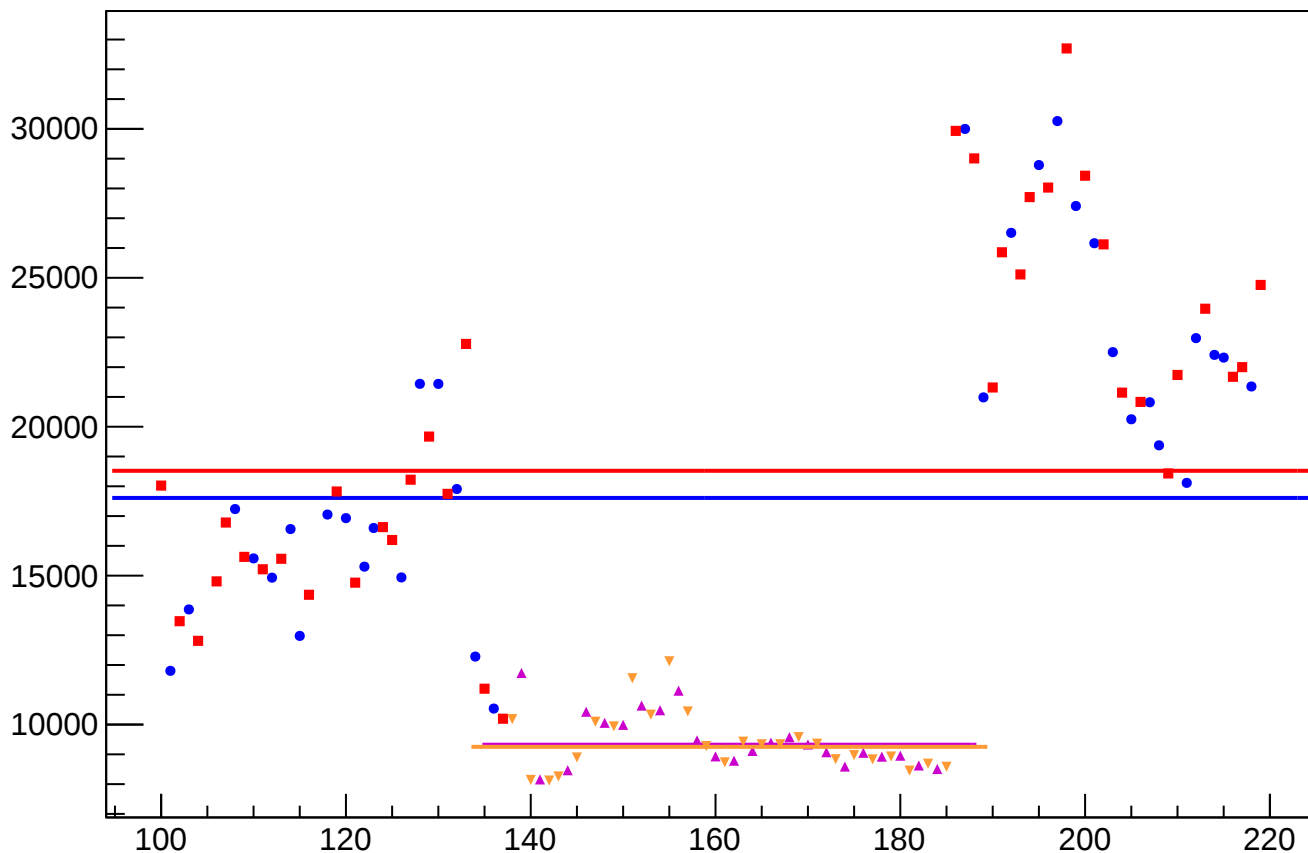
Out:  $-4.588 \pm 1.944$

$\chi^2/\text{NDF}: 140.9/61$

All:  $-4.177 \pm 1.393$

$\chi^2/\text{NDF}: 233.7/117$

# diff\_bpm4aX\_rms vs Slug, Sign Corrected



Right In: 17609.230 $\pm$ 3.055  $\chi^2/\text{NDF}$ : 2944988.0/32

Left Out: 9251.811 $\pm$ 1.535  $\chi^2/\text{NDF}$ :332323.3/24

Right Out: 18520.431 $\pm$ 3.093  $\chi^2/\text{NDF}$ : 3076549.0/36

Left In: 9323.983 $\pm$ 1.591  $\chi^2/\text{NDF}$ :275717.0/22

Left: 9286.587 $\pm$ -1.105  $\chi^2/\text{NDF}$ : 609106.1/47

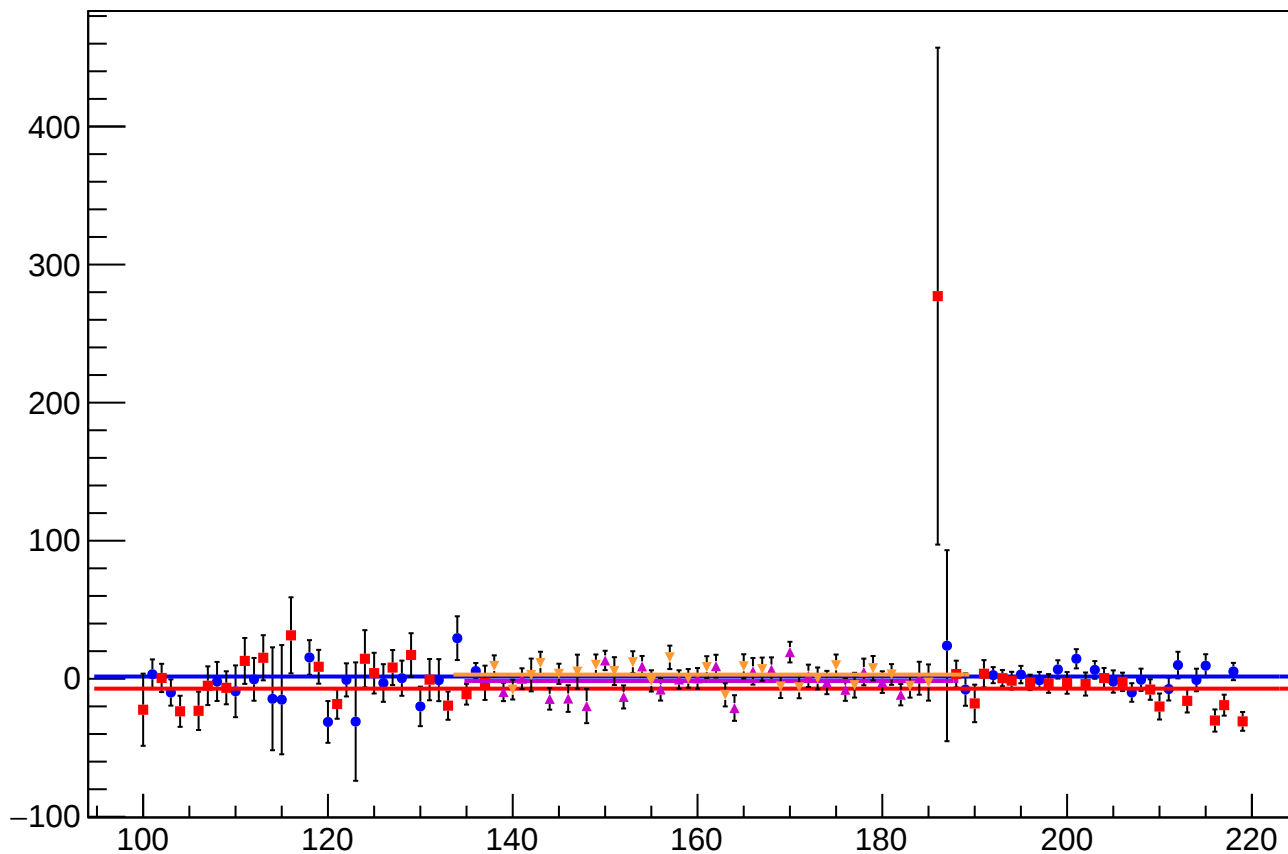
Right: 18059.075 $\pm$ -2.173  $\chi^2/\text{NDF}$ : 6065470.4/69

In: 11092.764 $\pm$ -1.411  $\chi^2/\text{NDF}$ :9007471.0/55

Out: 11082.383 $\pm$ -1.375  $\chi^2/\text{NDF}$ :10613606.6/61

All: 11087.437 $\pm$ -0.985  $\chi^2/\text{NDF}$ : 19621105.4

# diff\_bpm4aY\_mean vs Slug, Sign Corrected



Right In: 1.634 $\pm$ 1.588     $\chi^2/\text{NDF}$ : 27.0/32

Left Out: 3.027 $\pm$ 1.661     $\chi^2/\text{NDF}$ : 18.6/24

Right Out: -7.136 $\pm$ 1.546     $\chi^2/\text{NDF}$ : 56.9/36

Left In: -1.588 $\pm$ 1.703     $\chi^2/\text{NDF}$ : 35.5/22

Left: 0.777 $\pm$ 1.189     $\chi^2/\text{NDF}$ : 57.8/47

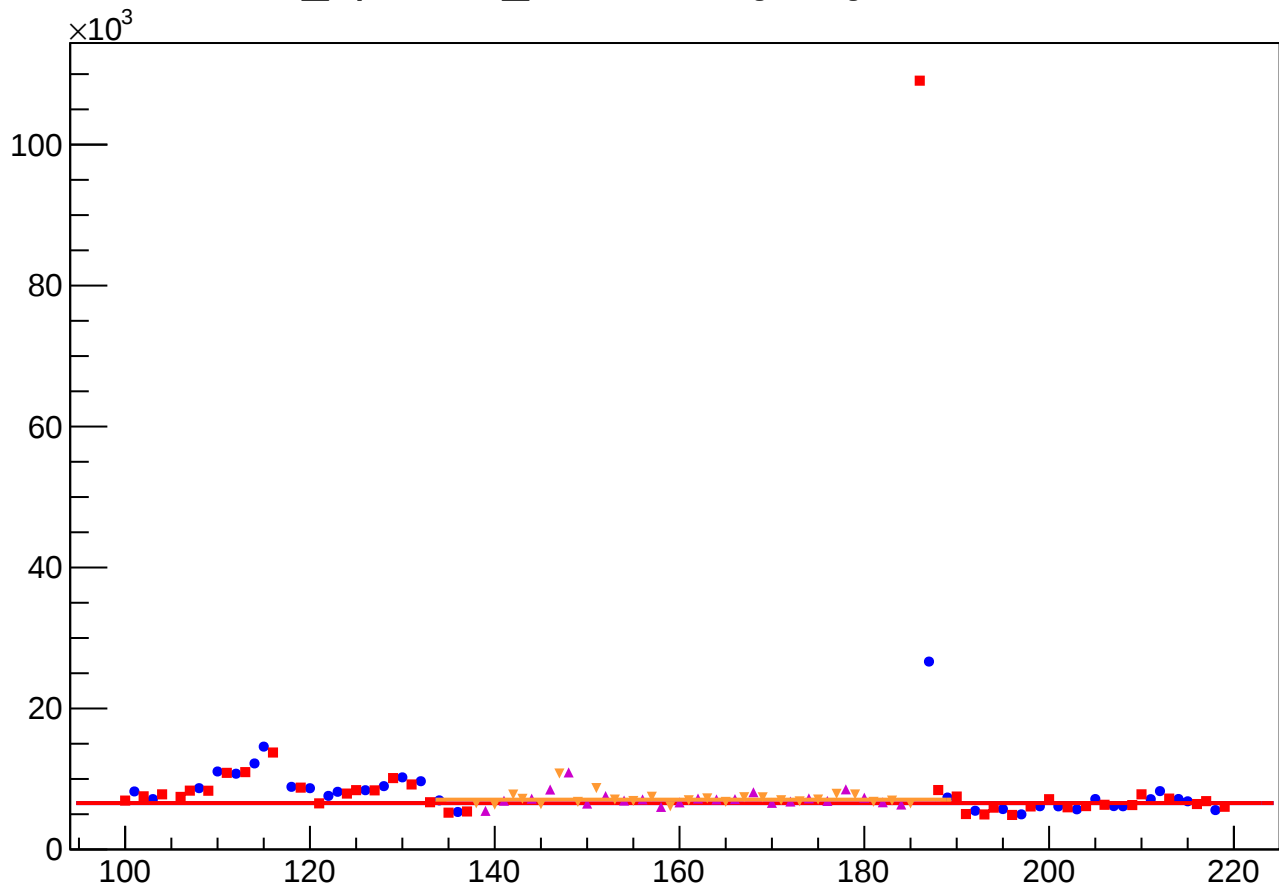
Right: -2.869 $\pm$ 1.107     $\chi^2/\text{NDF}$ : 99.5/69

In: 0.135 $\pm$ 1.161     $\chi^2/\text{NDF}$ : 64.4/55

Out: -2.419 $\pm$ 1.131     $\chi^2/\text{NDF}$ : 95.6/61

All: -1.175 $\pm$ 0.810     $\chi^2/\text{NDF}$ : 162.4/117

# diff\_bpm4aY\_rms vs Slug, Sign Corrected



Right In:  $6575.810 \pm 1.123$   $\chi^2/\text{NDF}: 1665929.6/32$

Left Out:  $7064.457 \pm 1.174$   $\chi^2/\text{NDF}: 386814.9/24$

Right Out:  $6580.824 \pm 1.093$   $\chi^2/\text{NDF}: 2166703.9/36$

Left In:  $7014.572 \pm 1.204$   $\chi^2/\text{NDF}: 525313.7/22$

Left:  $7040.137 \pm 0.841$   $\chi^2/\text{NDF}: 913008.5/47$

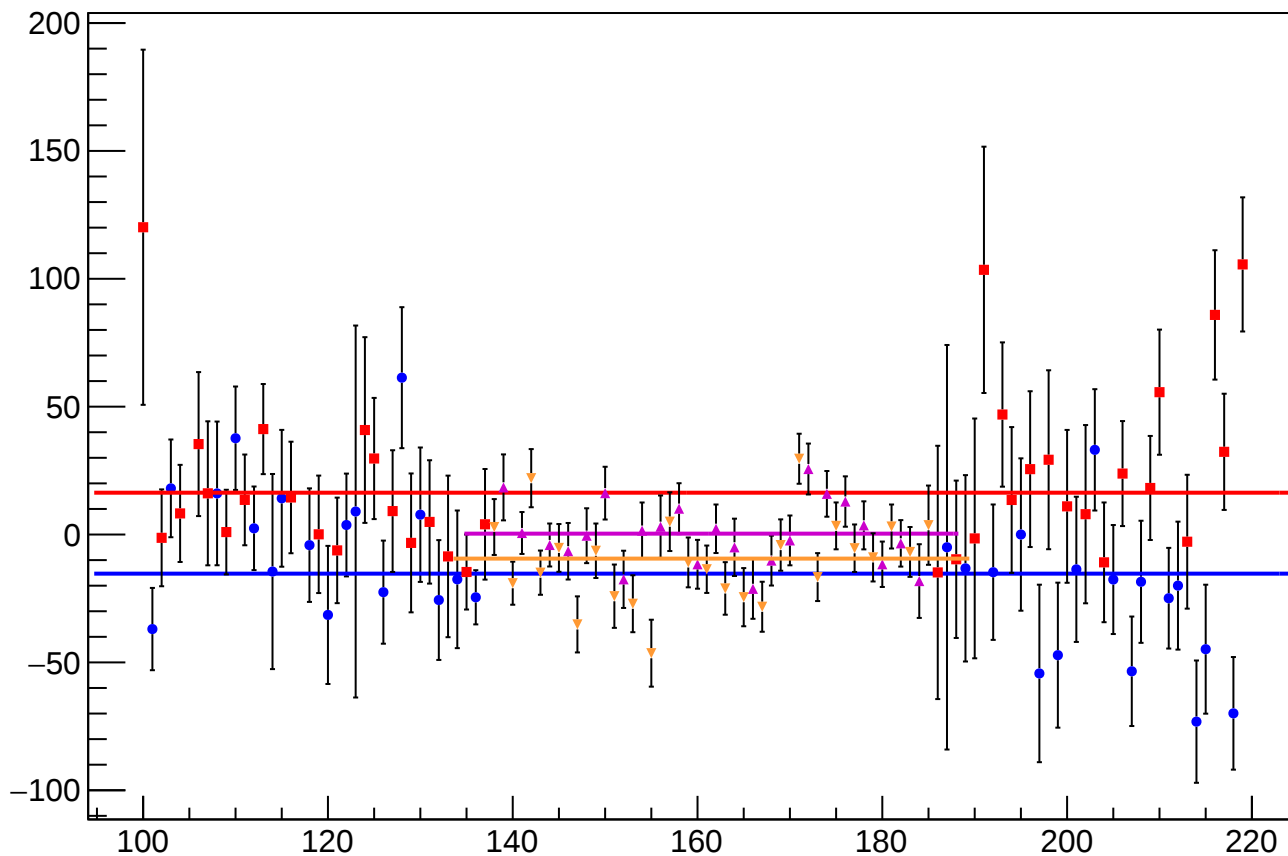
Right:  $6578.384 \pm 0.783$   $\chi^2/\text{NDF}: 3832643.8/69$

In:  $6779.874 \pm 0.821$   $\chi^2/\text{NDF}: 2262291.2/55$

Out:  $6805.306 \pm 0.800$   $\chi^2/\text{NDF}: 2644422.3/61$

All:  $6792.920 \pm 0.573$   $\chi^2/\text{NDF}: 4907205.6/11$

# diff\_bpm4eX\_mean vs Slug, Sign Corrected



Right In: -15.295 $\pm$ 3.959  $\chi^2/\text{NDF}$ : 50.4/32

Left Out: -9.411 $\pm$ 2.021  $\chi^2/\text{NDF}$ : 58.8/24

Right Out: 16.357 $\pm$ 3.977  $\chi^2/\text{NDF}$ : 45.6/36

Left In: 0.344 $\pm$ 2.100  $\chi^2/\text{NDF}$ : 29.9/22

Left: -4.722 $\pm$ 1.456  $\chi^2/\text{NDF}$ : 99.9/47

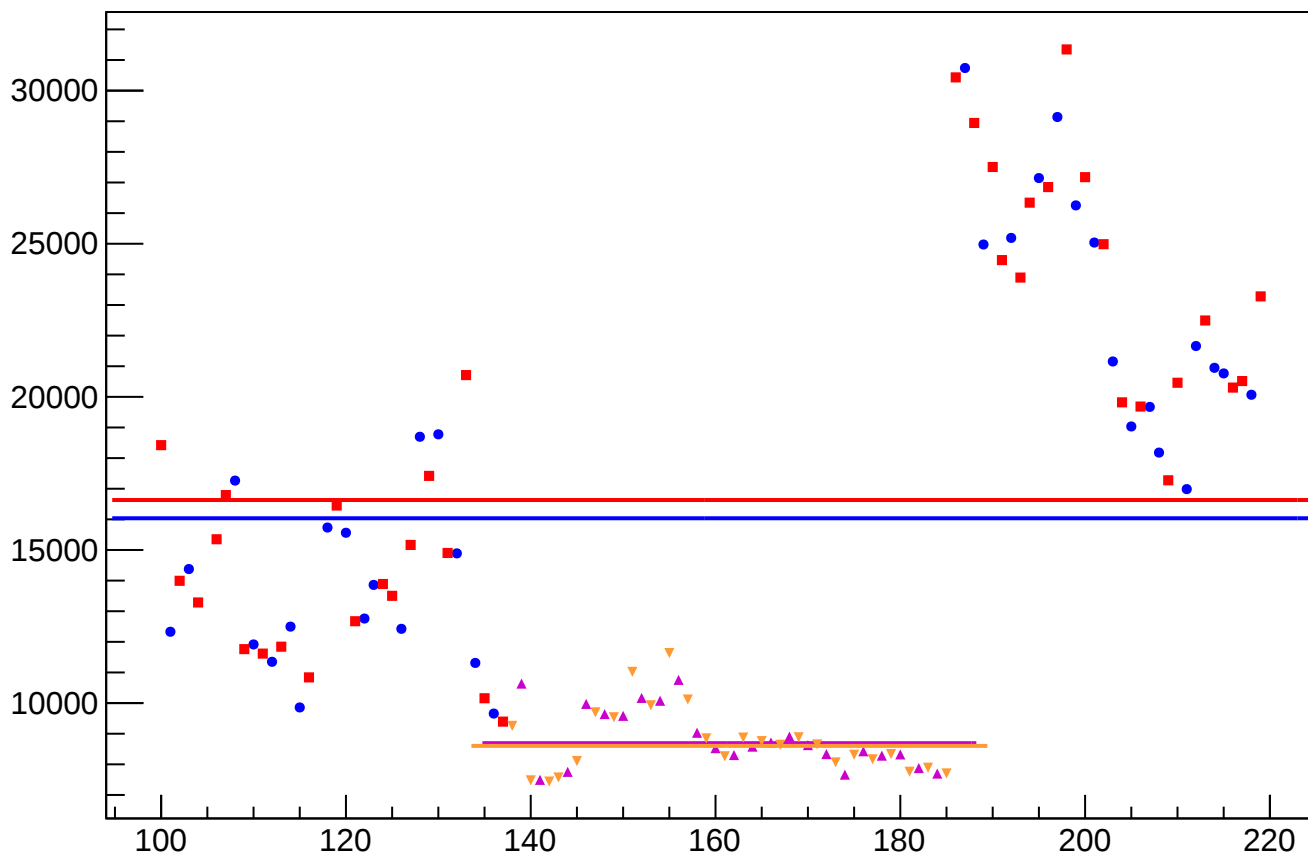
Right: 0.459 $\pm$ 2.806  $\chi^2/\text{NDF}$ : 127.9/69

In: -3.092 $\pm$ 1.855  $\chi^2/\text{NDF}$ : 92.5/55

Out: -4.122 $\pm$ 1.802  $\chi^2/\text{NDF}$ : 137.8/61

All: -3.622 $\pm$ 1.293  $\chi^2/\text{NDF}$ : 230.4/117

# diff\_bpm4eX\_rms vs Slug, Sign Corrected



Right In:  $16035.462 \pm 2.799$   $\chi^2/\text{NDF}: 3435500.8/32$

Left Out:  $8602.220 \pm 1.429$   $\chi^2/\text{NDF}: 438805.2/24$

Right Out:  $16631.594 \pm 2.812$   $\chi^2/\text{NDF}: 3920033.3/36$

Left In:  $8691.203 \pm 1.485$   $\chi^2/\text{NDF}: 365254.6/22$

Left:  $8644.996 \pm 1.030$   $\chi^2/\text{NDF}: 805923.5/47$

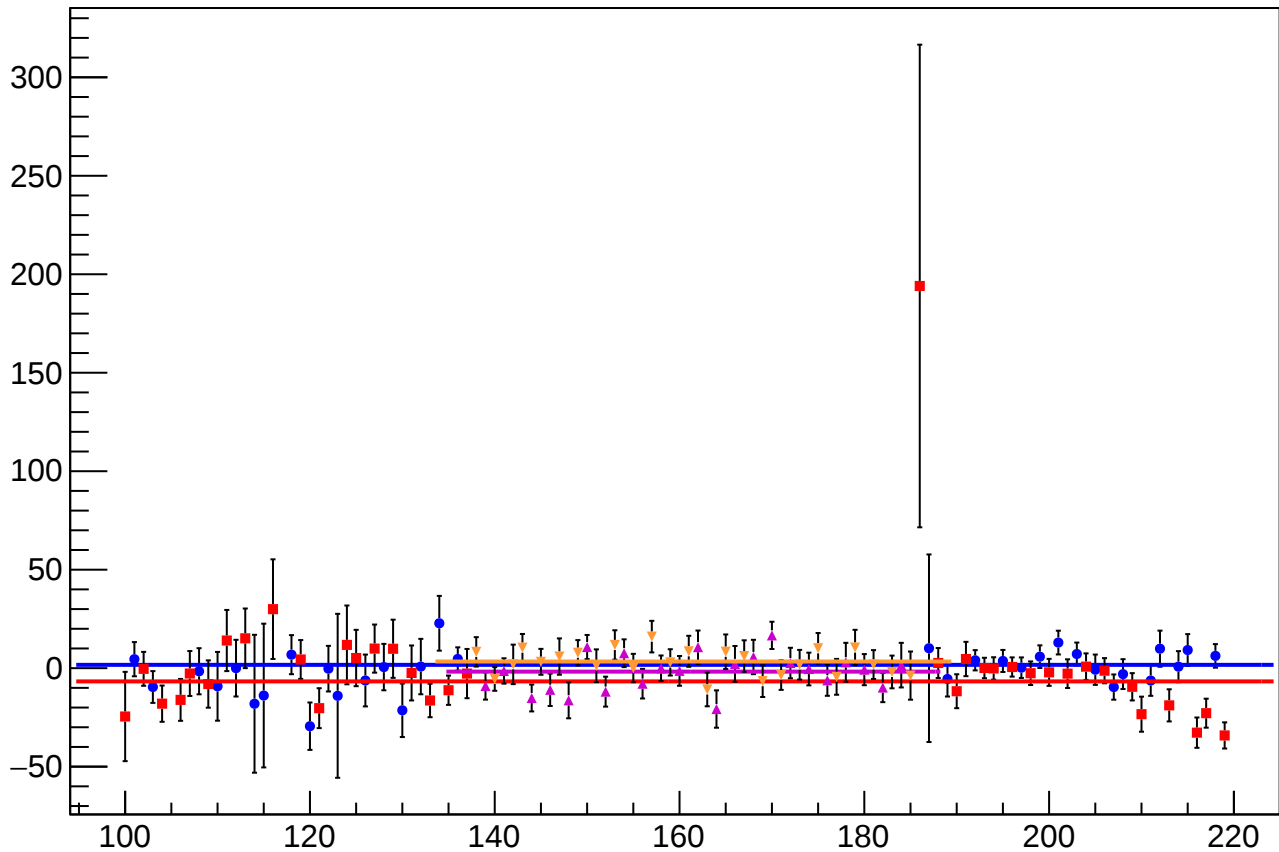
Right:  $16332.178 \pm 1.984$   $\chi^2/\text{NDF}: 7378107.4/69$

In:  $10304.616 \pm 1.312$   $\chi^2/\text{NDF}: 9172063.1/55$

Out:  $10250.327 \pm 1.274$   $\chi^2/\text{NDF}: 10838721.3/61$

All:  $10276.673 \pm 0.914$   $\chi^2/\text{NDF}: 20011665.6$

# diff\_bpm4eY\_mean vs Slug, Sign Corrected



Right In: 1.688 $\pm$ 1.441  $\chi^2/\text{NDF}$ : 28.9/32

Left Out: 3.374 $\pm$ 1.552  $\chi^2/\text{NDF}$ : 17.2/24

Right Out: -6.719 $\pm$ 1.389  $\chi^2/\text{NDF}$ : 73.1/36

Left In: -1.756 $\pm$ 1.607  $\chi^2/\text{NDF}$ : 33.5/22

Left: 0.899 $\pm$ 1.116  $\chi^2/\text{NDF}$ : 56.0/47

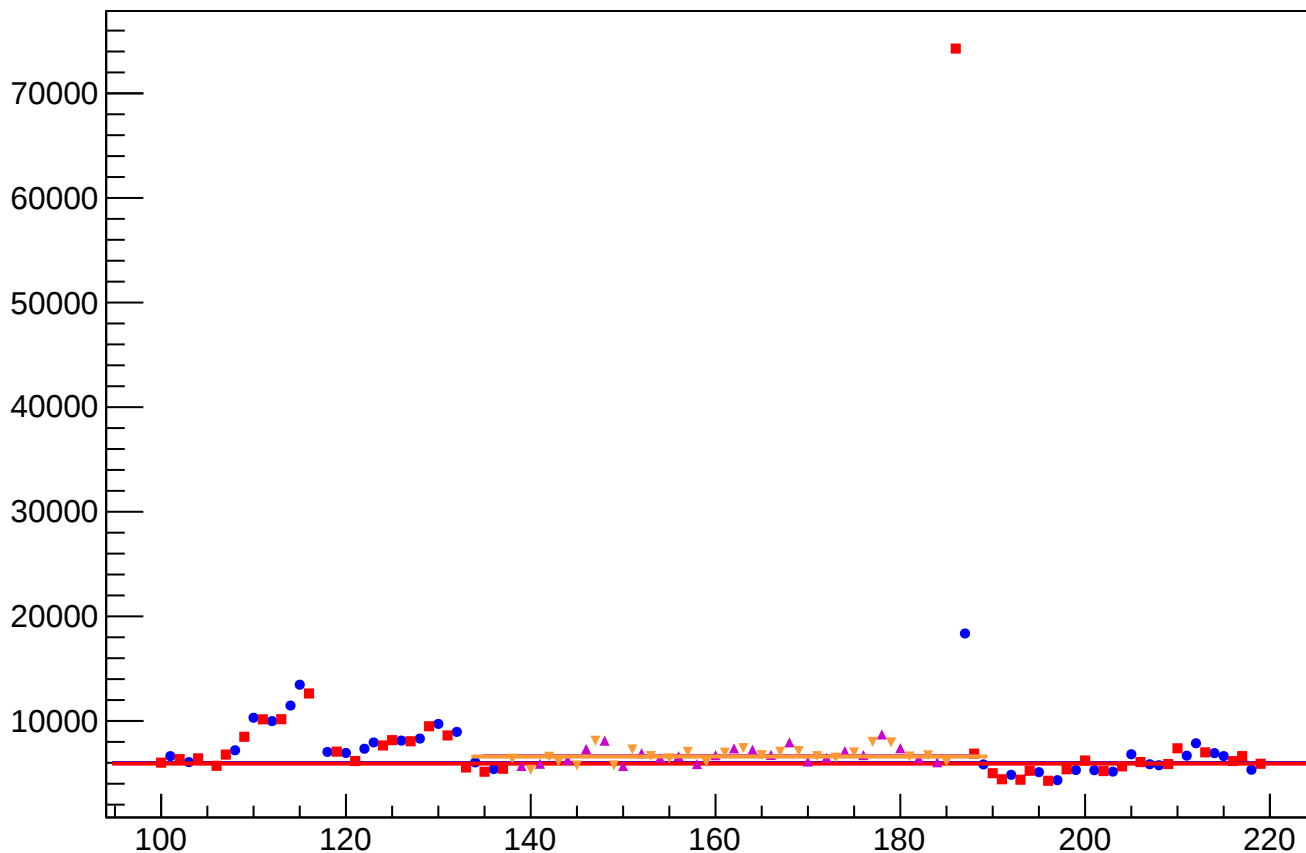
Right: -2.671 $\pm$ 1.000  $\chi^2/\text{NDF}$ : 119.7/69

In: 0.153 $\pm$ 1.073  $\chi^2/\text{NDF}$ : 65.0/55

Out: -2.230 $\pm$ 1.035  $\chi^2/\text{NDF}$ : 113.8/61

All: -1.081 $\pm$ 0.745  $\chi^2/\text{NDF}$ : 181.3/117

# diff\_bpm4eY\_rms vs Slug, Sign Corrected



Right In: 5976.296+/-1.019

$\chi^2/\text{NDF}$ : 1668930.0/32

Left Out: 6603.953+/-1.097

$\chi^2/\text{NDF}$ : 395247.5/24

Right Out: 5925.465+/-0.982

$\chi^2/\text{NDF}$ : 2254605.7/36

Left In: 6637.155+/-1.136

$\chi^2/\text{NDF}$ : 415547.5/22

Left: 6619.974+/-0.789  $\chi^2/\text{NDF}$ : 811236.9/47

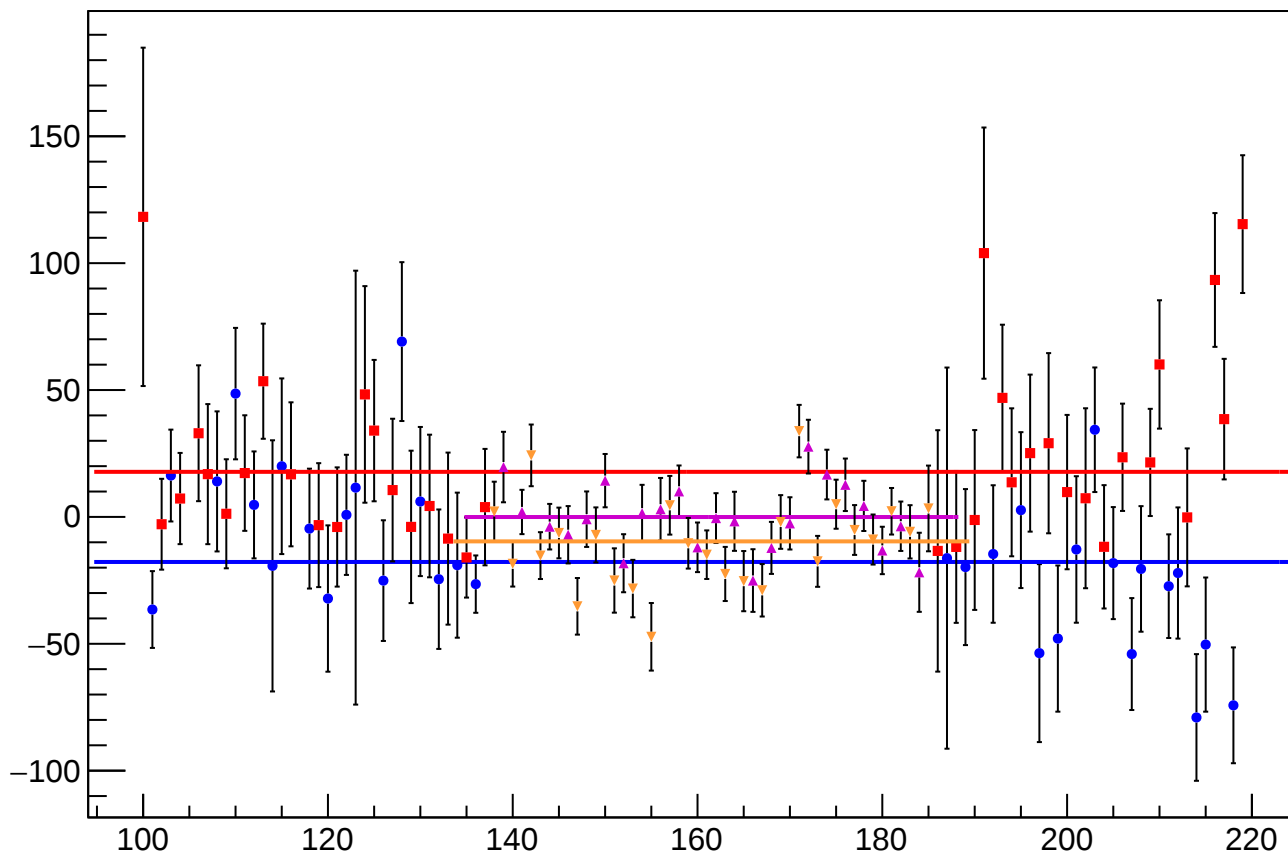
Right: 5949.940+/-0.707  $\chi^2/\text{NDF}$ : 3924825.2/69

In: 6270.946+/-0.759  $\chi^2/\text{NDF}$ : 2271907.0/55

Out: 6227.272+/-0.732  $\chi^2/\text{NDF}$ : 2862115.9/61

All: 6248.320+/-0.527  $\chi^2/\text{NDF}$ : 5135739.3/11

# diff\_bpm4acX\_mean vs Slug, Sign Corrected



Right In: -17.755 $\pm$ 4.222  $\chi^2/\text{NDF}$ : 49.5/32

Left Out: -9.640 $\pm$ 2.122  $\chi^2/\text{NDF}$ : 59.9/24

Right Out: 17.763 $\pm$ 4.277  $\chi^2/\text{NDF}$ : 48.9/36

Left In: -0.042 $\pm$ 2.200  $\chi^2/\text{NDF}$ : 30.8/22

Left: -5.015 $\pm$ 1.527  $\chi^2/\text{NDF}$ : 100.5/47

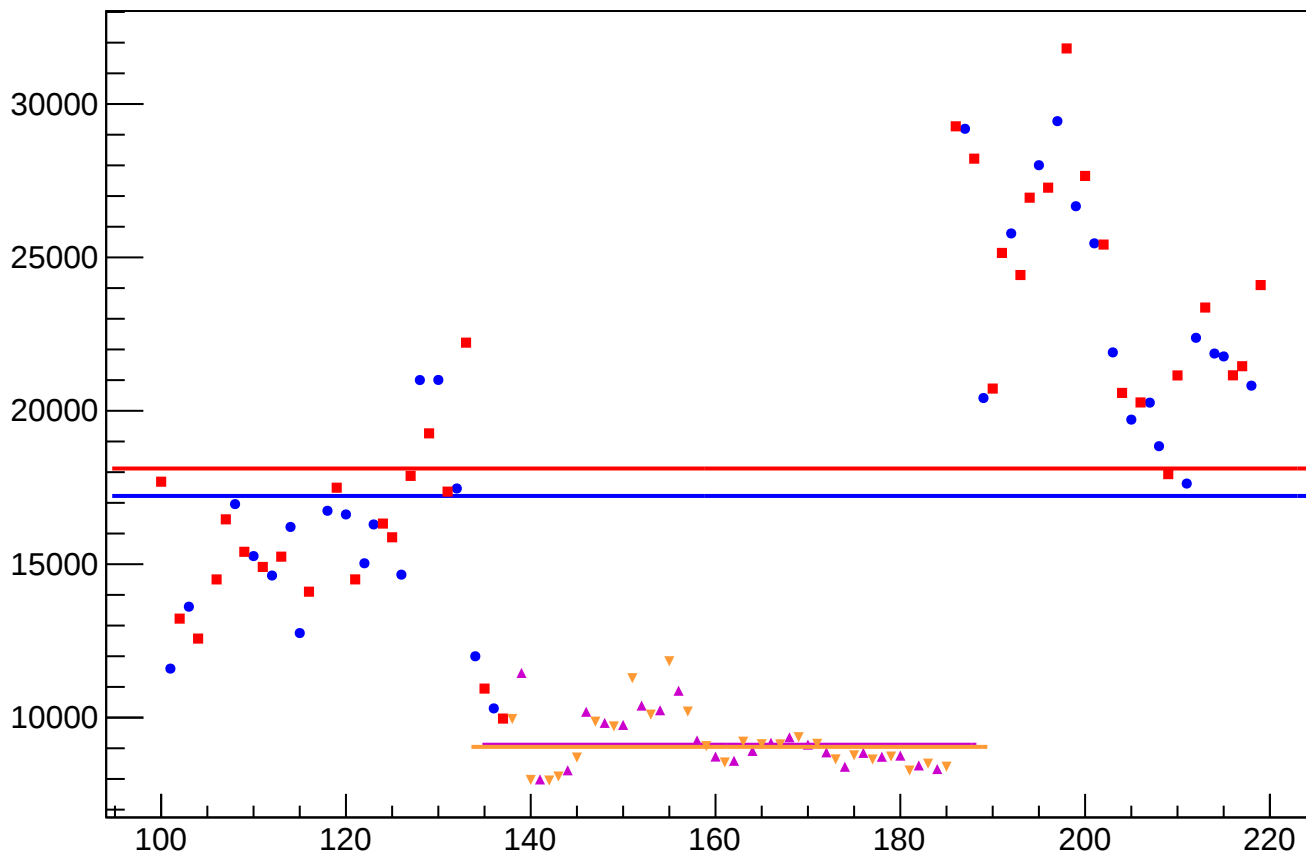
Right: -0.223 $\pm$ 3.005  $\chi^2/\text{NDF}$ : 133.3/69

In: -3.825 $\pm$ 1.951  $\chi^2/\text{NDF}$ : 94.1/55

Out: -4.227 $\pm$ 1.901  $\chi^2/\text{NDF}$ : 141.8/61

All: -4.031 $\pm$ 1.361  $\chi^2/\text{NDF}$ : 235.9/117

# diff\_bpm4acX\_rms vs Slug, Sign Corrected



Right In: 17224.933+/-2.986  $\chi^2/\text{NDF}$ : 2896816.6/32

Left Out: 9045.871+/-1.500  $\chi^2/\text{NDF}$ : 328508.5/24

Right Out: 18119.570+/-3.024  $\chi^2/\text{NDF}$ : 3019779.8/36

Left In: 9115.817+/-1.556  $\chi^2/\text{NDF}$ : 272471.8/22

Left: 9079.576+/-1.080  $\chi^2/\text{NDF}$ : 602027.6/47

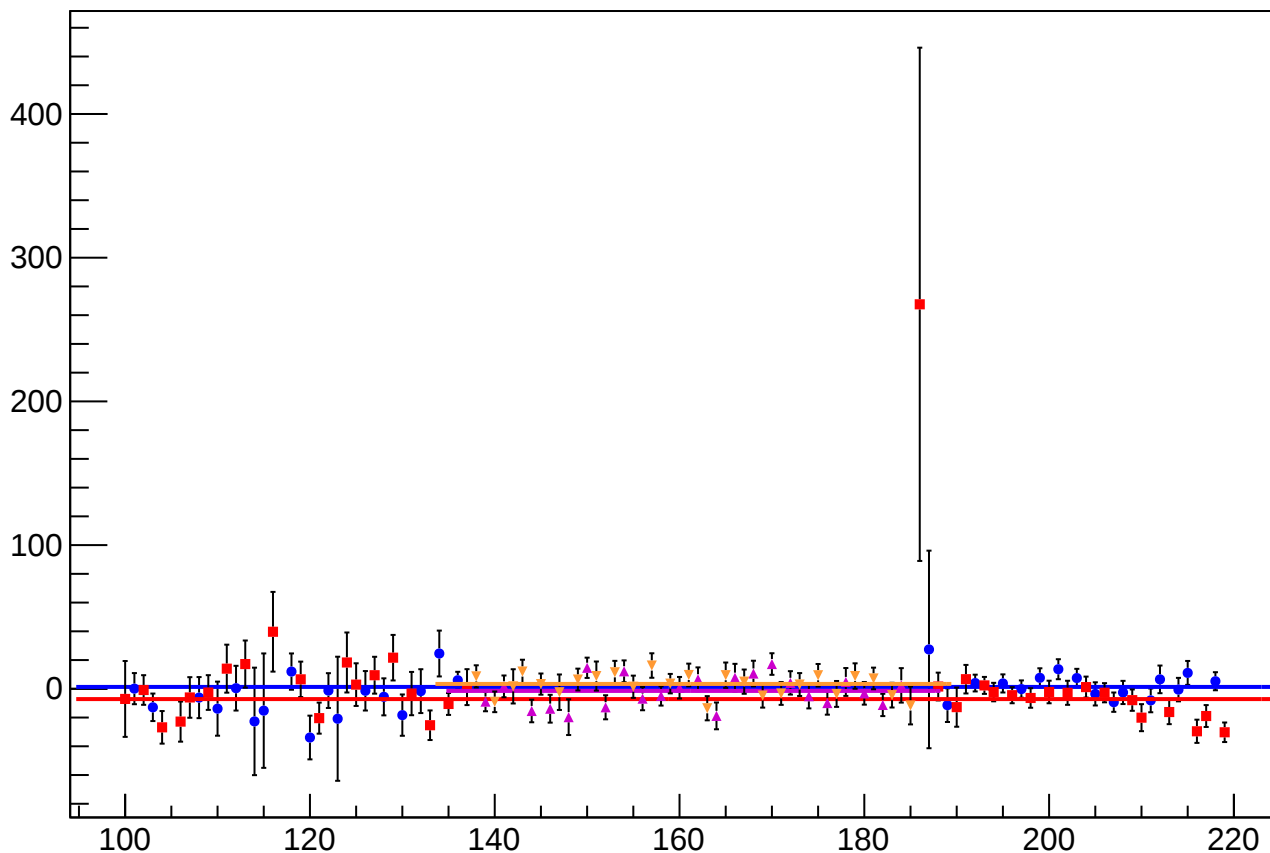
Right: 17666.549+/-2.125  $\chi^2/\text{NDF}$ : 5960917.4/69

In: 10847.394+/-1.380  $\chi^2/\text{NDF}$ : 8970834.5/55

Out: 10838.175+/-1.344  $\chi^2/\text{NDF}$ : 10573362.8/61

All: 10842.664+/-0.963  $\chi^2/\text{NDF}$ : 19544220.2

# diff\_bpm4acY\_mean vs Slug, Sign Corrected



Right In:  $1.307 \pm 1.593$   $\chi^2/\text{NDF}: 28.3/32$

Left Out:  $3.387 \pm 1.668$   $\chi^2/\text{NDF}: 19.4/24$

Right Out:  $-7.155 \pm 1.551$   $\chi^2/\text{NDF}: 60.8/36$

Left In:  $-1.479 \pm 1.710$   $\chi^2/\text{NDF}: 36.7/22$

Left:  $1.015 \pm 1.194$   $\chi^2/\text{NDF}: 60.3/47$

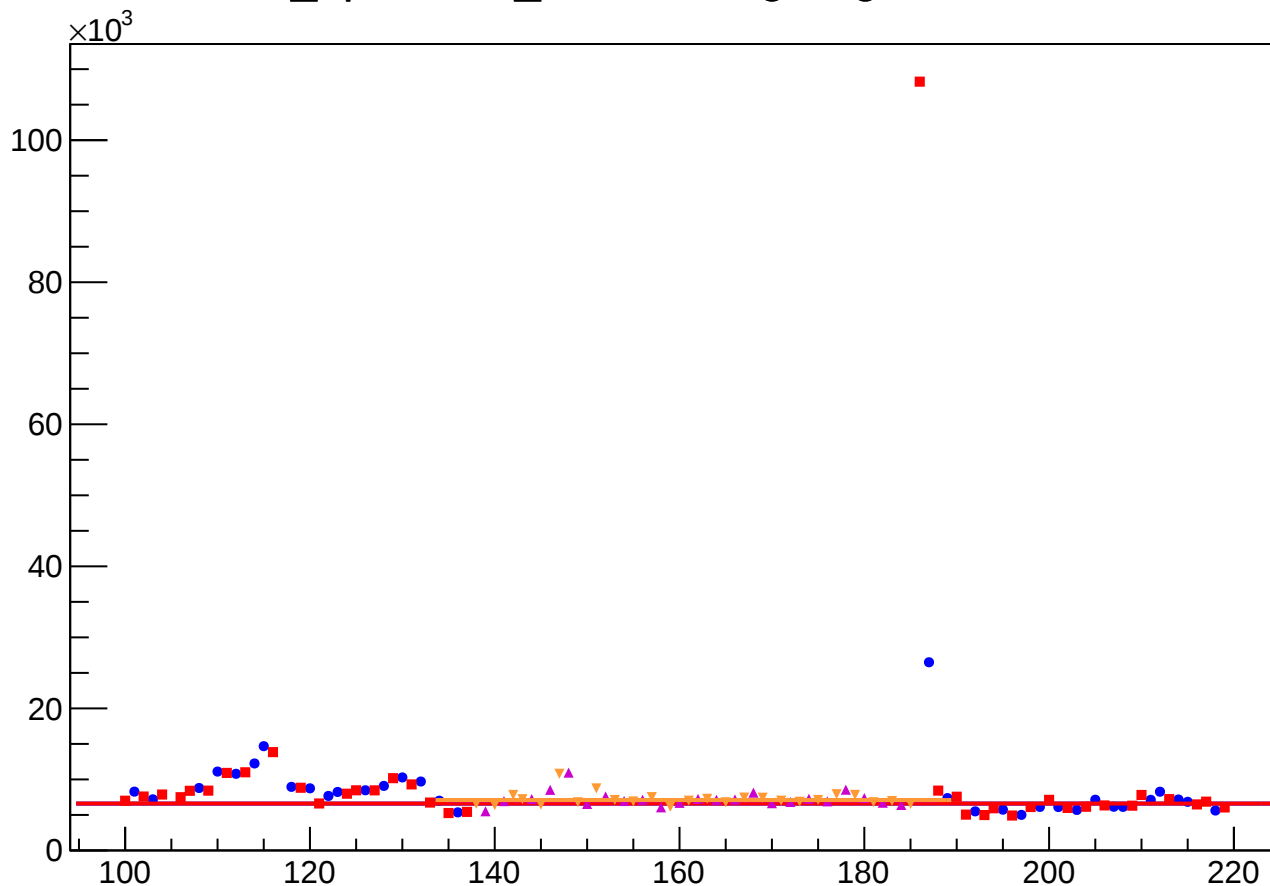
Right:  $-3.037 \pm 1.111$   $\chi^2/\text{NDF}: 103.5/69$

In:  $0.013 \pm 1.166$   $\chi^2/\text{NDF}: 66.4/55$

Out:  $-2.267 \pm 1.136$   $\chi^2/\text{NDF}: 101.6/61$

All:  $-1.157 \pm 0.813$   $\chi^2/\text{NDF}: 170.0/117$

# diff\_bpm4acY\_rms vs Slug, Sign Corrected



Right In: 6597.401 $\pm$ 1.126  $\chi^2/\text{NDF}$ : 1669882.2/32

Left Out: 7096.350 $\pm$ 1.179  $\chi^2/\text{NDF}$ : 381942.1/24

Right Out: 6603.997 $\pm$ 1.097  $\chi^2/\text{NDF}$ : 2171130.2/36

Left In: 7047.269 $\pm$ 1.209  $\chi^2/\text{NDF}$ : 517433.5/22

Left: 7072.425 $\pm$ 0.844  $\chi^2/\text{NDF}$ : 900219.9/47

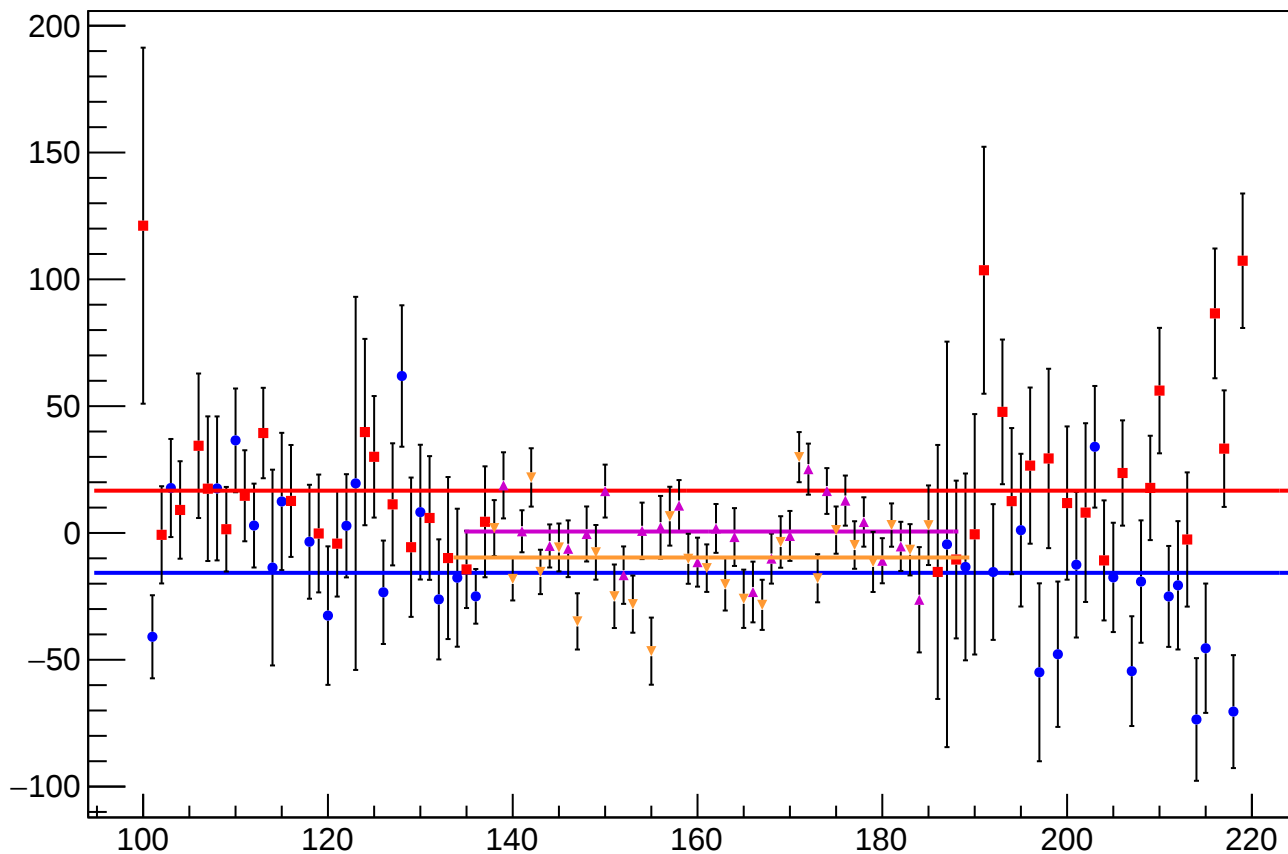
Right: 6600.787 $\pm$ 0.786  $\chi^2/\text{NDF}$ : 3841030.0/69

In: 6806.339 $\pm$ 0.824  $\chi^2/\text{NDF}$ : 2261429.6/55

Out: 6832.286 $\pm$ 0.803  $\chi^2/\text{NDF}$ : 2646549.9/61

All: 6819.649 $\pm$ 0.575  $\chi^2/\text{NDF}$ : 4908488.0/11

# diff\_bpm4ecX\_mean vs Slug, Sign Corrected



Right In: -15.722 $\pm$ 4.008  $\chi^2/\text{NDF}$ : 50.7/32

Left Out: -9.670 $\pm$ 2.061  $\chi^2/\text{NDF}$ : 57.9/24

Right Out: 16.677 $\pm$ 4.029  $\chi^2/\text{NDF}$ : 44.6/36

Left In: 0.564 $\pm$ 2.144  $\chi^2/\text{NDF}$ : 29.7/22

Left: -4.755 $\pm$ 1.486  $\chi^2/\text{NDF}$ : 99.5/47

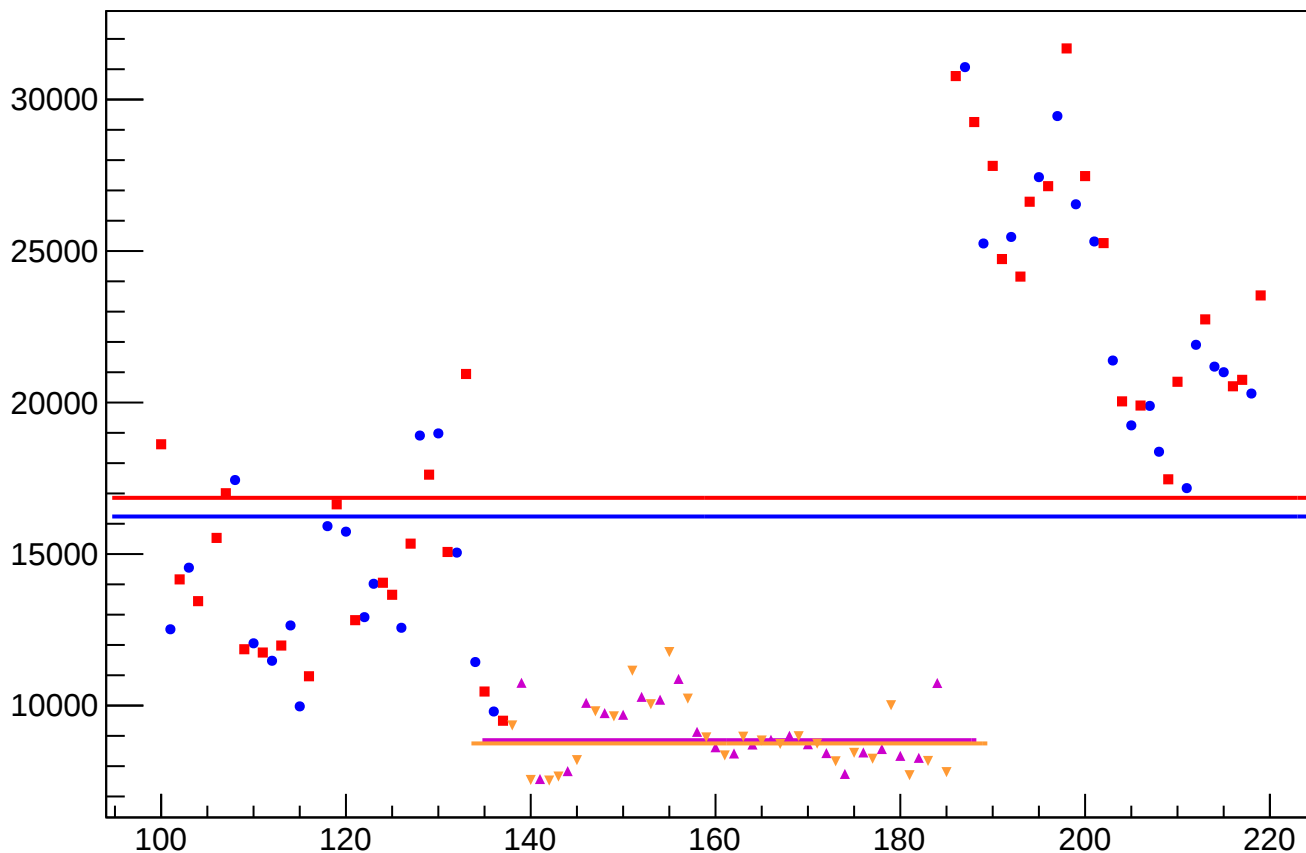
Right: 0.396 $\pm$ 2.841  $\chi^2/\text{NDF}$ : 127.9/69

In: -3.058 $\pm$ 1.890  $\chi^2/\text{NDF}$ : 93.3/55

Out: -4.206 $\pm$ 1.835  $\chi^2/\text{NDF}$ : 136.4/61

All: -3.649 $\pm$ 1.317  $\chi^2/\text{NDF}$ : 230.0/117

# diff\_bpm4ecX\_rms vs Slug, Sign Corrected



Right In: 16239.288 $\pm$ 2.834  $\chi^2$ /NDF: 3410897.2/32

Left Out: 8750.420 $\pm$ 1.457  $\chi^2$ /NDF: 463880.1/24

Right Out: 16855.652 $\pm$ 2.849  $\chi^2$ /NDF: 3878071.4/36

Left In: 8857.329 $\pm$ 1.516  $\chi^2$ /NDF: 361778.8/22

Left: 8801.764 $\pm$ 1.050  $\chi^2$ /NDF: 828244.3/47

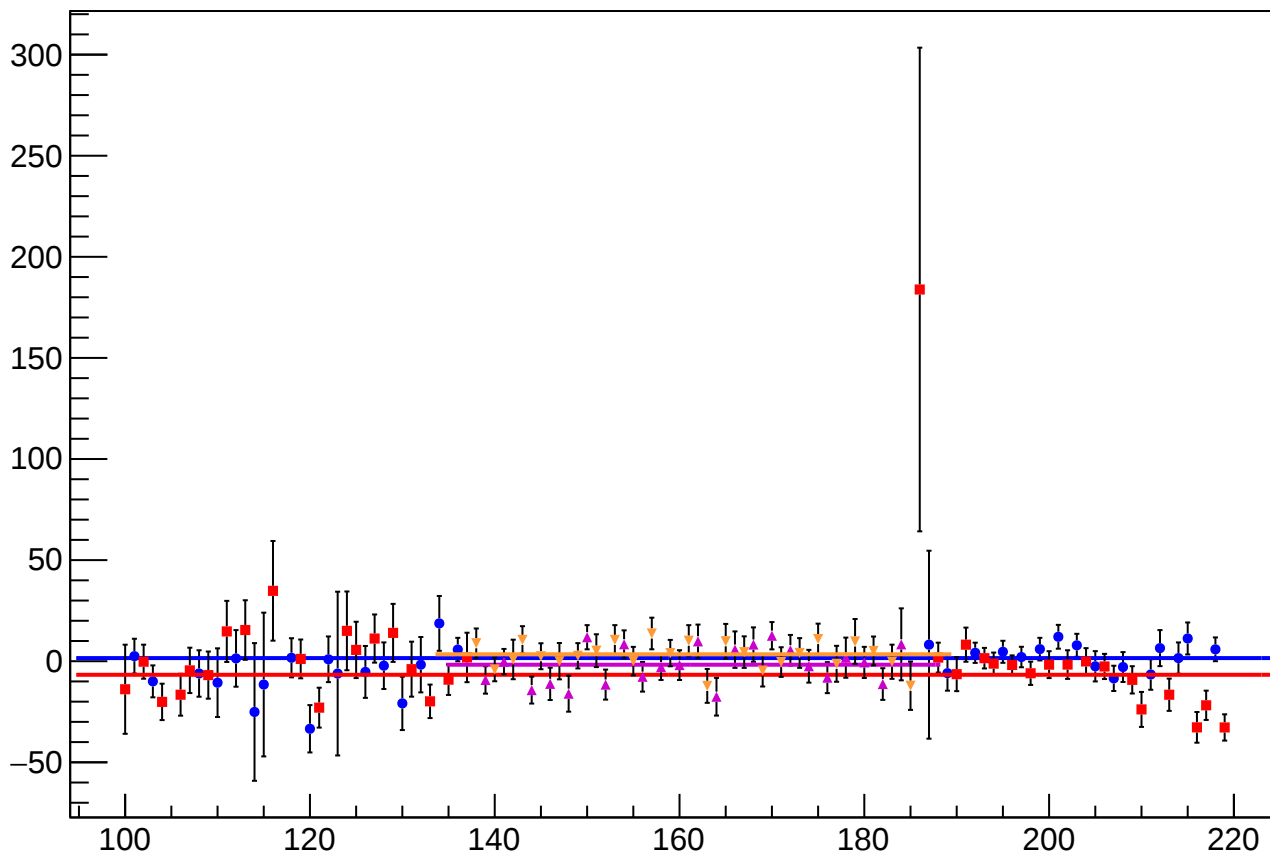
Right: 16545.915 $\pm$ 2.009  $\chi^2$ /NDF: 7312494.3/69

In: 10499.089 $\pm$ 1.337  $\chi^2$ /NDF: 9047349.7/55

Out: 10431.230 $\pm$ 1.297  $\chi^2$ /NDF: 10758689.9/61

All: 10464.144 $\pm$ 0.931  $\chi^2$ /NDF: 19807366.9/122

# diff\_bpm4ecY\_mean vs Slug, Sign Corrected



Right In:  $1.546 \pm 1.407$   $\chi^2/\text{NDF}$ : 31.4/32

Left Out:  $3.433 \pm 1.526$   $\chi^2/\text{NDF}$ : 16.2/24

Right Out:  $-6.709 \pm 1.355$   $\chi^2/\text{NDF}$ : 75.8/36

Left In:  $-1.734 \pm 1.586$   $\chi^2/\text{NDF}$ : 33.6/22

Left:  $0.949 \pm 1.099$   $\chi^2/\text{NDF}$ : 55.3/47

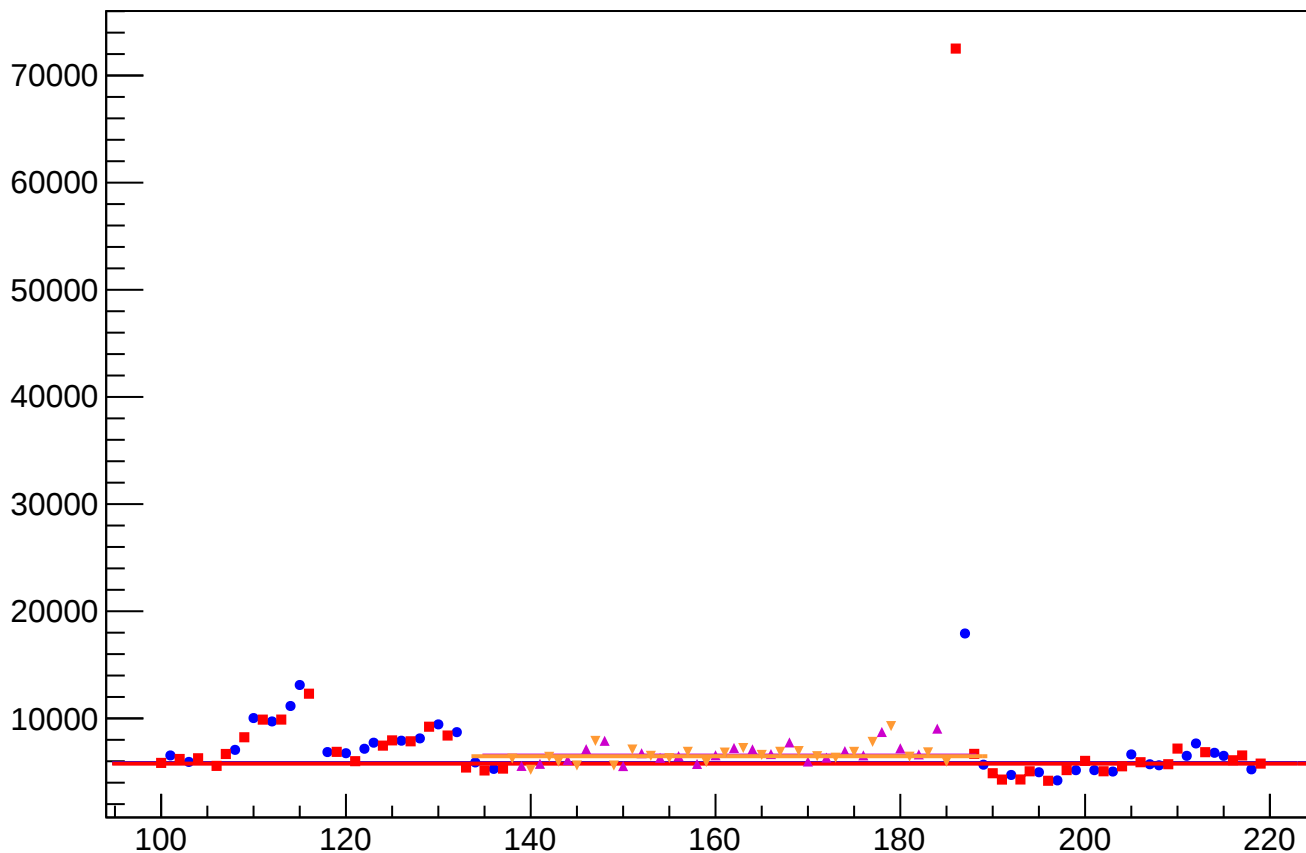
Right:  $-2.736 \pm 0.976$   $\chi^2/\text{NDF}$ : 125.0/69

In:  $0.101 \pm 1.052$   $\chi^2/\text{NDF}$ : 67.4/55

Out:  $-2.236 \pm 1.013$   $\chi^2/\text{NDF}$ : 116.7/61

All:  $-1.112 \pm 0.730$   $\chi^2/\text{NDF}$ : 186.6/117

# diff\_bpm4ecY\_rms vs Slug, Sign Corrected



Right In: 5831.219+/-0.995  $\chi^2/\text{NDF}$ : 1673704.1/32

Left Out: 6468.872+/-1.079  $\chi^2/\text{NDF}$ : 487187.3/24

Right Out: 5780.041+/-0.958  $\chi^2/\text{NDF}$ : 2250842.2/36

Left In: 6530.954+/-1.121  $\chi^2/\text{NDF}$ : 464668.6/22

Left: 6498.713+/-0.777  $\chi^2/\text{NDF}$ : 953447.7/47

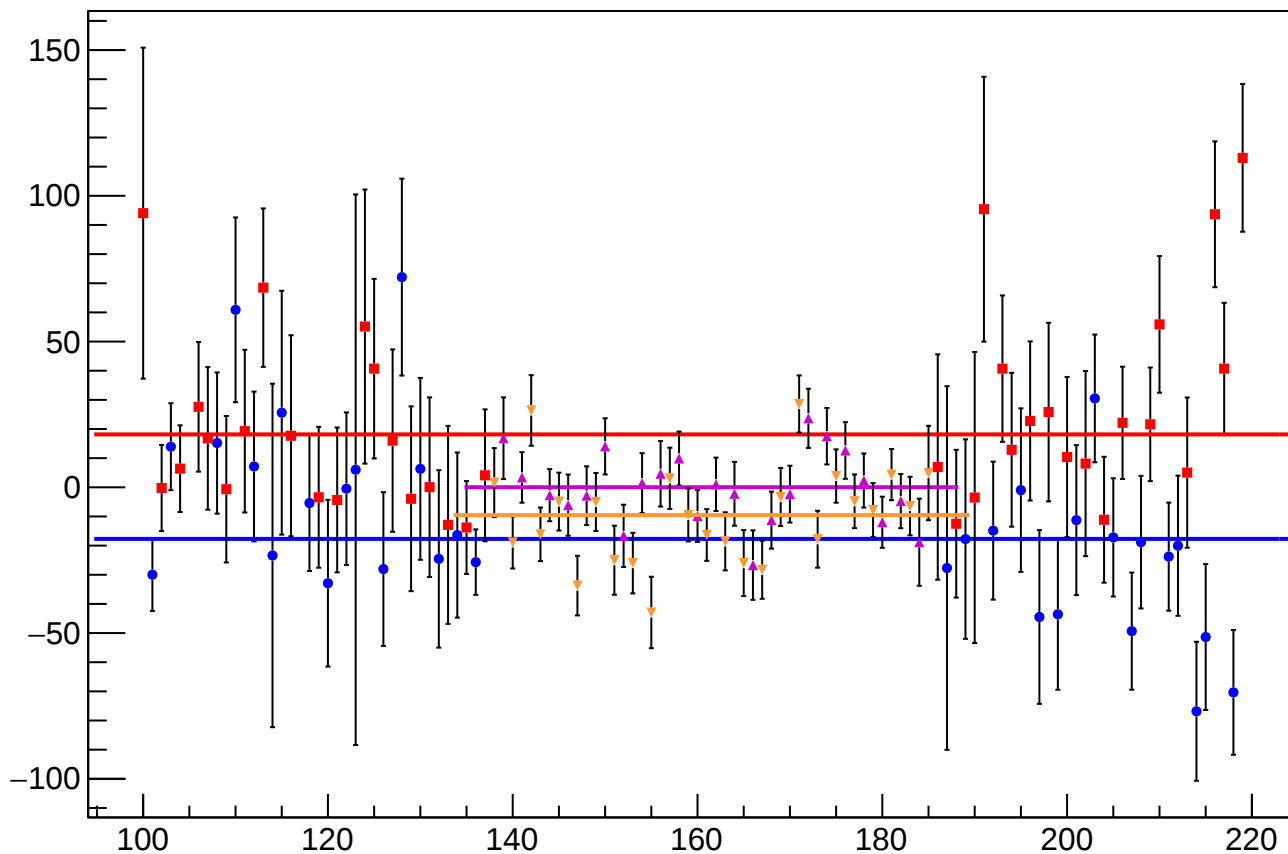
Right: 5804.674+/-0.690  $\chi^2/\text{NDF}$ : 3925918.8/69

In: 6139.423+/-0.744  $\chi^2/\text{NDF}$ : 2356251.4/55

Out: 6083.893+/-0.716  $\chi^2/\text{NDF}$ : 2965890.3/61

All: 6110.605+/-0.516  $\chi^2/\text{NDF}$ : 5325031.0/111

# diff\_bpm1X\_mean vs Slug, Sign Corrected



Right In: -17.694 $\pm$ 4.027  $\chi^2/\text{NDF}$ : 48.6/32

Left Out: -9.528 $\pm$ 2.015  $\chi^2/\text{NDF}$ : 59.6/24

Right Out: 18.156 $\pm$ 4.095  $\chi^2/\text{NDF}$ : 51.6/36

Left In: 0.027 $\pm$ 2.080  $\chi^2/\text{NDF}$ : 29.9/22

Left: -4.902 $\pm$ 1.447  $\chi^2/\text{NDF}$ : 100.3/47

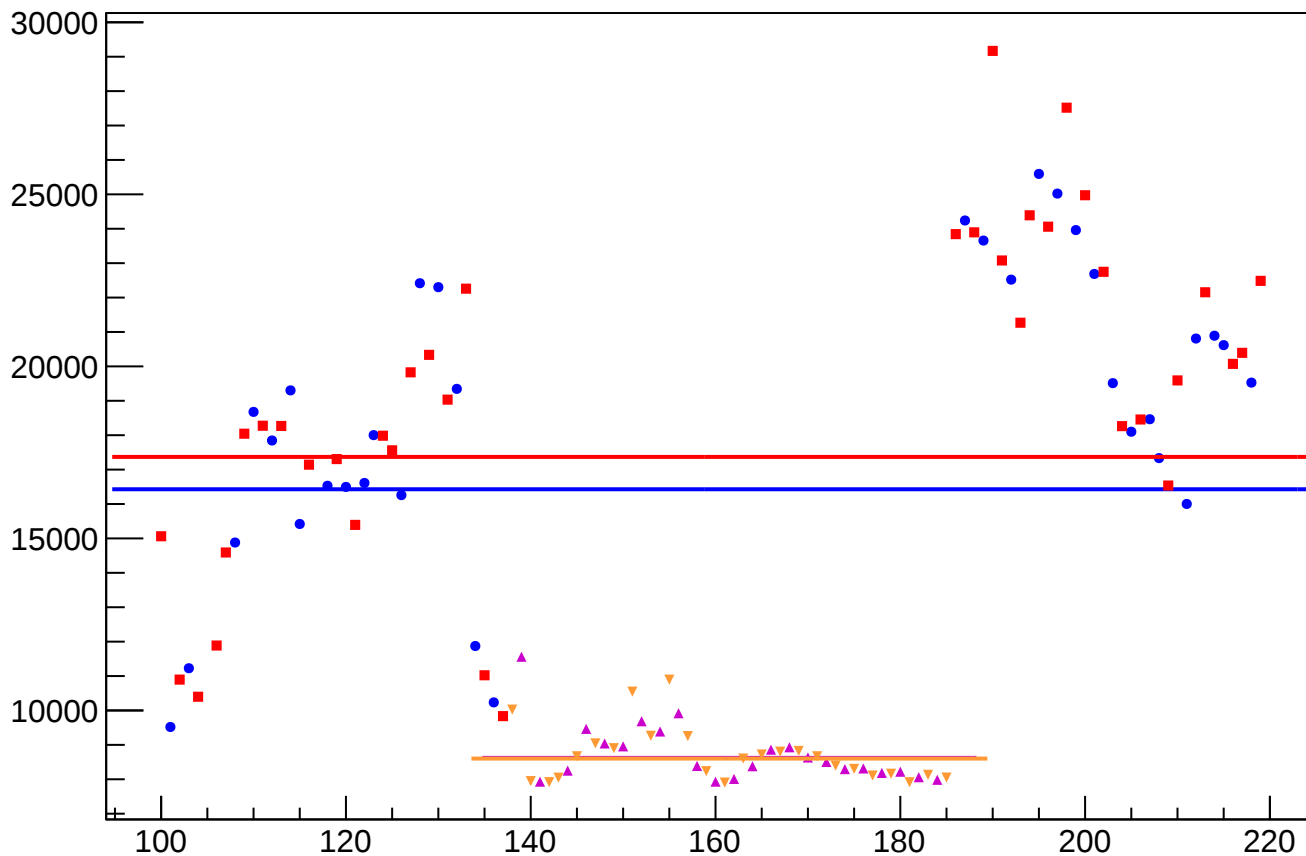
Right: -0.069 $\pm$ 2.871  $\chi^2/\text{NDF}$ : 139.2/69

In: -3.706 $\pm$ 1.848  $\chi^2/\text{NDF}$ : 93.8/55

Out: -4.130 $\pm$ 1.808  $\chi^2/\text{NDF}$ : 148.0/61

All: -3.922 $\pm$ 1.292  $\chi^2/\text{NDF}$ : 241.8/117

# diff\_bpm1X\_rms vs Slug, Sign Corrected



Right In: 16428.553+/-2.847  $\chi^2/\text{NDF}$ : 2938153.2/32

Left Out: 8601.926+/-1.425  $\chi^2/\text{NDF}$ : 248903.5/24

Right Out: 17369.350+/-2.895  $\chi^2/\text{NDF}$ : 2924609.5/36

Left In: 8621.975+/-1.471  $\chi^2/\text{NDF}$ : 230824.4/22

Left: 8611.634+/-1.023  $\chi^2/\text{NDF}$ : 479823.8/47

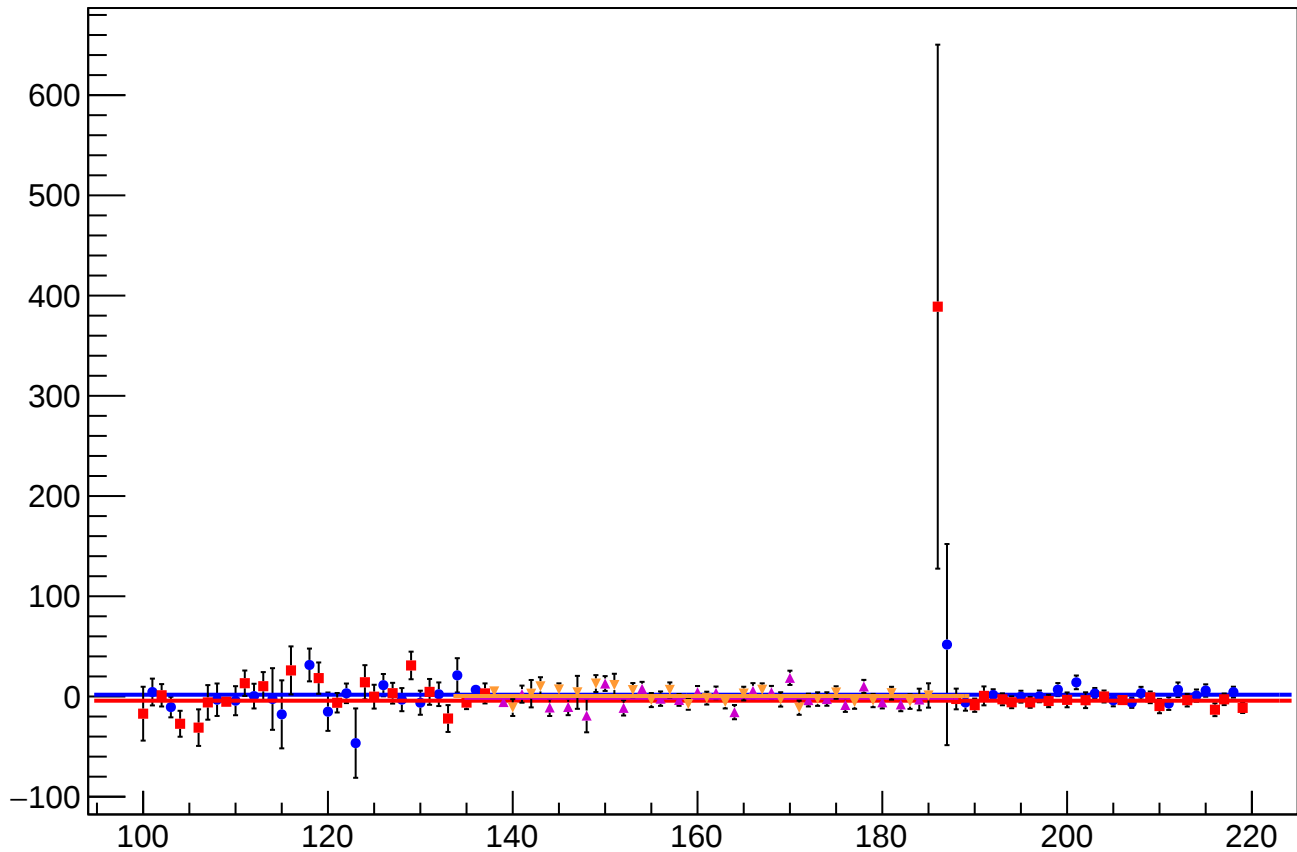
Right: 16891.081+/-2.030  $\chi^2/\text{NDF}$ : 5916439.1/69

In: 10266.114+/-1.307  $\chi^2/\text{NDF}$ : 9103198.0/55

Out: 10311.564+/-1.279  $\chi^2/\text{NDF}$ : 10555208.7/61

All: 10289.334+/-0.914  $\chi^2/\text{NDF}$ : 19659024.8

# diff\_bpm1Y\_mean vs Slug, Sign Corrected



Right In:  $1.768 \pm 1.370$   $\chi^2/\text{NDF}: 23.4/32$

Left Out:  $0.481 \pm 1.419$   $\chi^2/\text{NDF}: 19.6/24$

Right Out:  $-4.195 \pm 1.292$   $\chi^2/\text{NDF}: 32.4/36$

Left In:  $-1.298 \pm 1.406$   $\chi^2/\text{NDF}: 33.0/22$

Left:  $-0.417 \pm 0.999$   $\chi^2/\text{NDF}: 53.4/47$

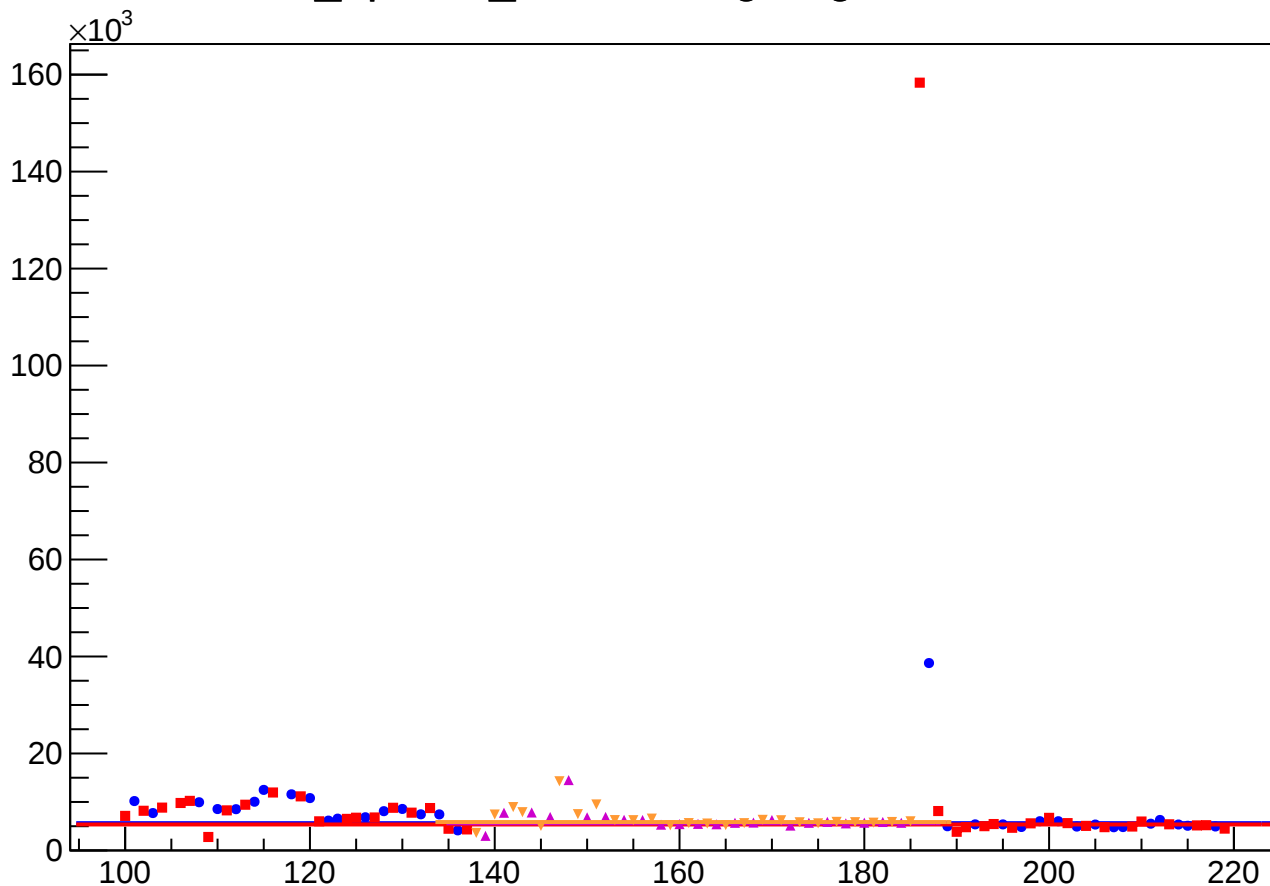
Right:  $-1.388 \pm 0.940$   $\chi^2/\text{NDF}: 65.8/69$

In:  $0.274 \pm 0.981$   $\chi^2/\text{NDF}: 58.9/55$

Out:  $-2.076 \pm 0.956$   $\chi^2/\text{NDF}: 57.9/61$

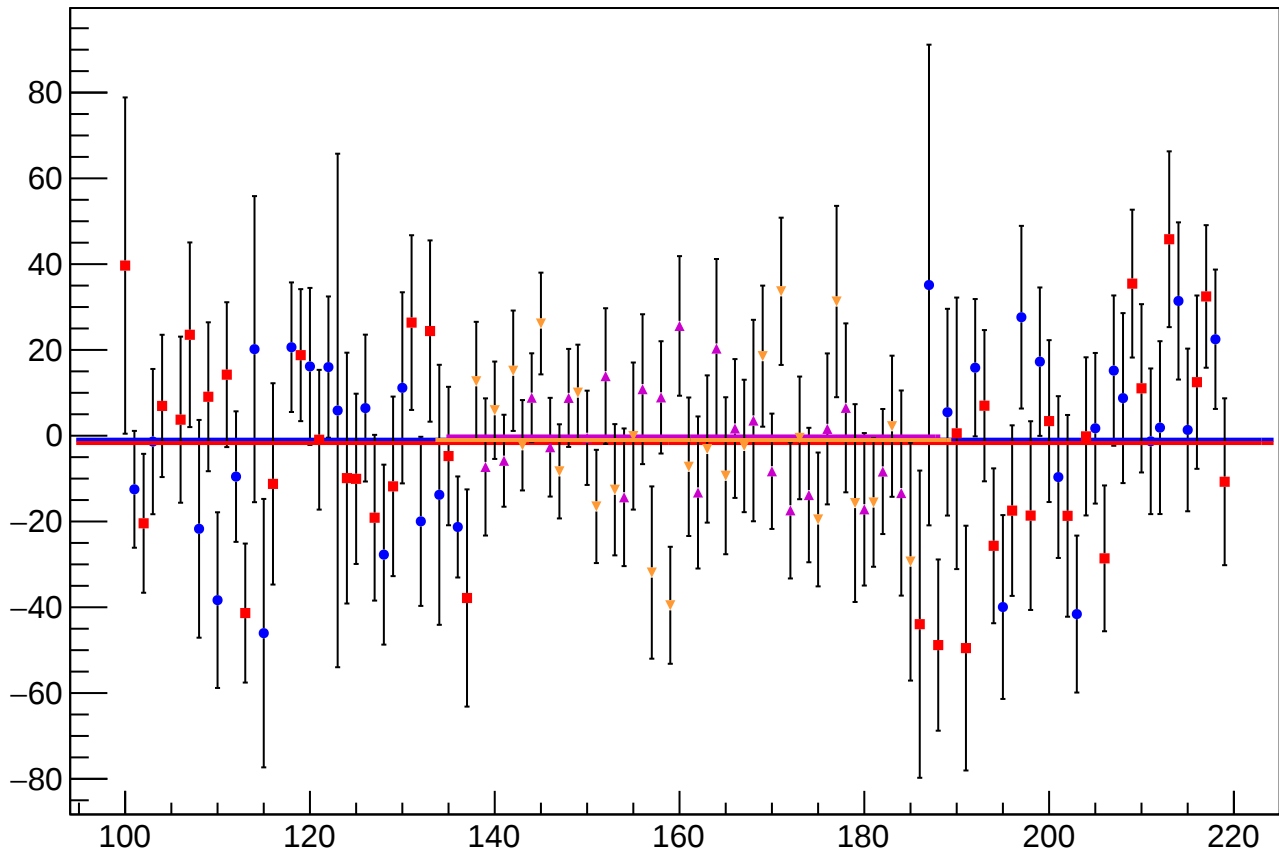
All:  $-0.932 \pm 0.685$   $\chi^2/\text{NDF}: 119.7/117$

# diff\_bpm1Y\_rms vs Slug, Sign Corrected



|                                 |                                    |                             |                                    |
|---------------------------------|------------------------------------|-----------------------------|------------------------------------|
| Right In: 5629.834 $\pm$ 0.969  | $\chi^2/\text{NDF}$ : 2184057.1/32 | Left: 5726.555 $\pm$ 0.706  | $\chi^2/\text{NDF}$ : 3815425.5/47 |
| Left Out: 5858.642 $\pm$ 1.004  | $\chi^2/\text{NDF}$ : 1691344.1/24 | Right: 5486.541 $\pm$ 0.665 | $\chi^2/\text{NDF}$ : 5752162.5/69 |
| Right Out: 5359.080 $\pm$ 0.914 | $\chi^2/\text{NDF}$ : 3526777.9/36 | In: 5613.784 $\pm$ 0.694    | $\chi^2/\text{NDF}$ : 4274370.6/55 |
| Left In: 5596.879 $\pm$ 0.994   | $\chi^2/\text{NDF}$ : 2089750.1/22 | Out: 5585.532 $\pm$ 0.676   | $\chi^2/\text{NDF}$ : 5353594.1/61 |
|                                 |                                    | All: 5599.281 $\pm$ 0.484   | $\chi^2/\text{NDF}$ : 9628815.6/11 |

# diff\_bpm11X\_mean vs Slug, Sign Corrected



Right In: -0.924 $\pm$ 3.282  $\chi^2/\text{NDF}$ : 36.9/32

Left Out: -1.007 $\pm$ 2.942  $\chi^2/\text{NDF}$ : 33.5/24

Right Out: -1.709 $\pm$ 3.218  $\chi^2/\text{NDF}$ : 51.7/36

Left In: -0.172 $\pm$ 3.067  $\chi^2/\text{NDF}$ : 12.4/22

Left: -0.607 $\pm$ 2.123  $\chi^2/\text{NDF}$ : 45.9/47

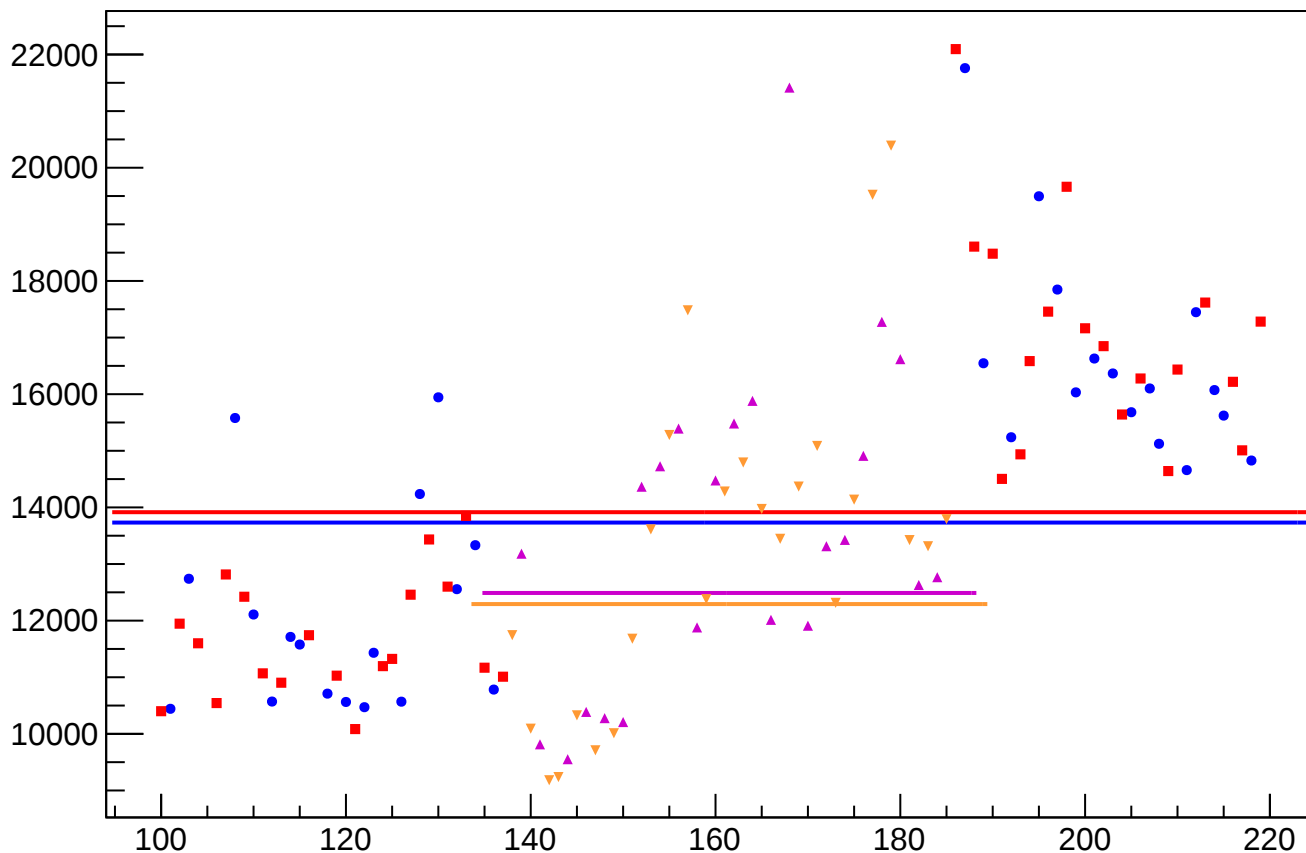
Right: -1.324 $\pm$ 2.298  $\chi^2/\text{NDF}$ : 88.6/69

In: -0.523 $\pm$ 2.241  $\chi^2/\text{NDF}$ : 49.3/55

Out: -1.327 $\pm$ 2.171  $\chi^2/\text{NDF}$ : 85.2/61

All: -0.937 $\pm$ 1.559  $\chi^2/\text{NDF}$ : 134.6/117

# diff\_bpm11X\_rms vs Slug, Sign Corrected



Right In: 13732.281+/-2.321

$\chi^2/\text{NDF}$ : 1328272.0/32

Left: 12386.599+/-1.501

$\chi^2/\text{NDF}$ : 2861298.1/47

Left Out: 12292.583+/-2.080

$\chi^2/\text{NDF}$ : 1502548.3/24

Right: 13825.659+/-1.625

$\chi^2/\text{NDF}$ : 2827843.9/69

Right Out: 13915.429+/-2.276

$\chi^2/\text{NDF}$ : 1496396.9/36

In: 13068.507+/-1.585

$\chi^2/\text{NDF}$ : 2835991.3/55

Out: 13031.278+/-1.535

$\chi^2/\text{NDF}$ : 3276033.1/61

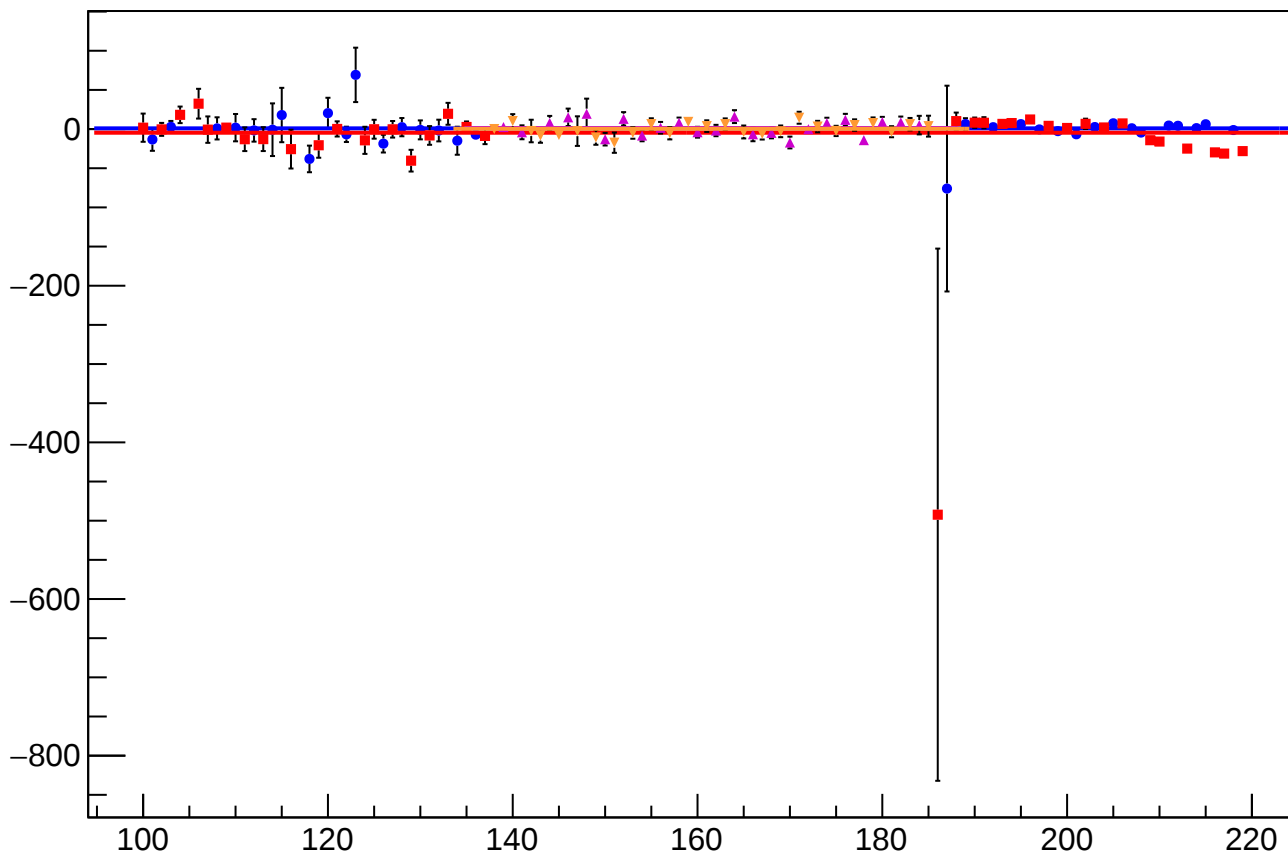
Left In: 12488.821+/-2.169

$\chi^2/\text{NDF}$ : 1354485.4/22

All: 13049.304+/-1.103

$\chi^2/\text{NDF}$ : 6112309.2/100

# diff\_bpm11Y\_mean vs Slug, Sign Corrected



Right In:  $0.915 \pm 1.128$   $\chi^2/\text{NDF}: 30.0/32$

Left Out:  $0.410 \pm 1.435$   $\chi^2/\text{NDF}: 19.3/24$

Right Out:  $-4.659 \pm 1.109$   $\chi^2/\text{NDF}: 177.2/36$

Left In:  $1.278 \pm 1.386$   $\chi^2/\text{NDF}: 34.0/22$

Left:  $0.859 \pm 0.997$   $\chi^2/\text{NDF}: 53.5/47$

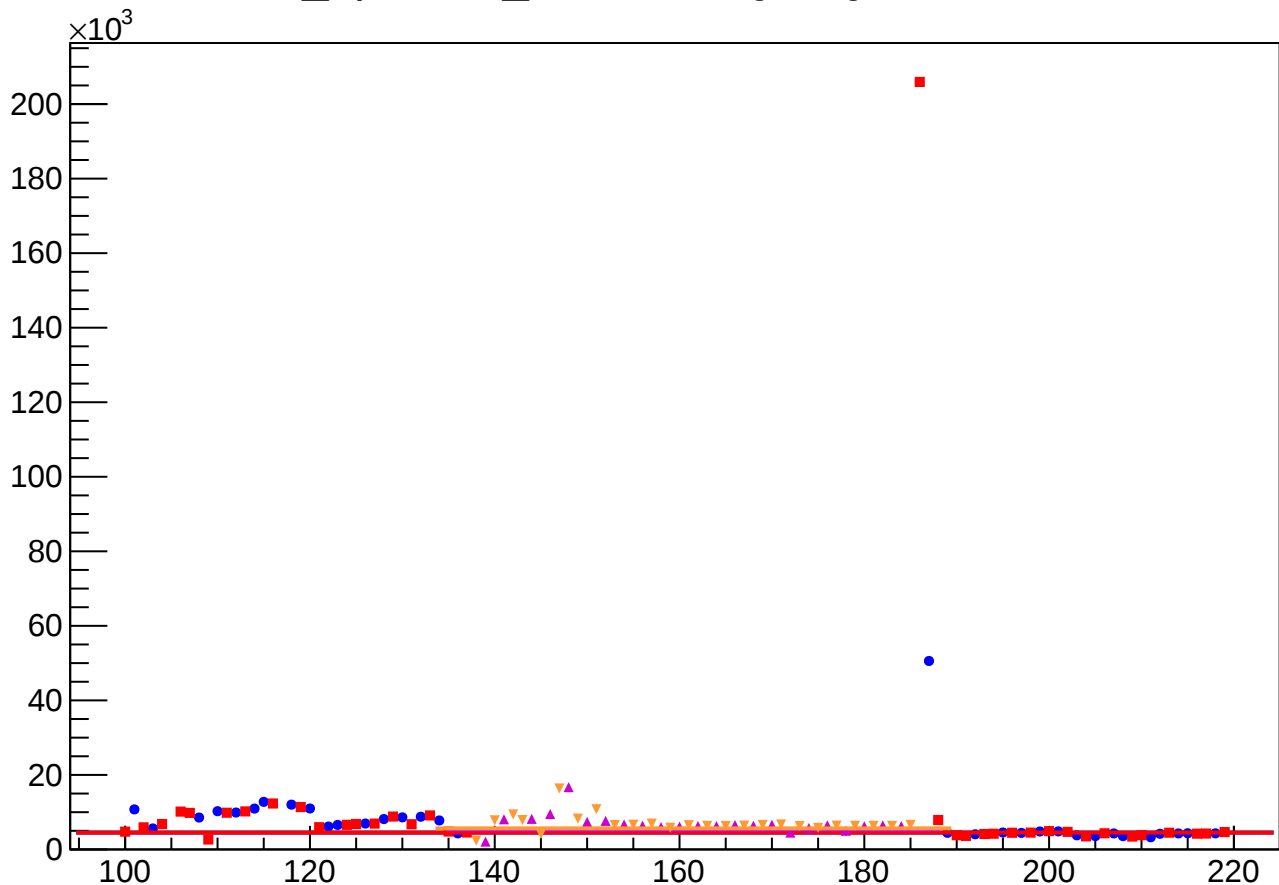
Right:  $-1.920 \pm 0.791$   $\chi^2/\text{NDF}: 219.7/69$

In:  $1.060 \pm 0.875$   $\chi^2/\text{NDF}: 64.0/55$

Out:  $-2.764 \pm 0.877$   $\chi^2/\text{NDF}: 204.4/61$

All:  $-0.847 \pm 0.619$   $\chi^2/\text{NDF}: 277.9/117$

# diff\_bpm11Y\_rms vs Slug, Sign Corrected



Right In: 4532.167+/-0.798  $\chi^2/\text{NDF}$ : 3472126.9/32

Left Out: 5655.639+/-1.014  $\chi^2/\text{NDF}$ : 4124124.3/24

Right Out: 4531.384+/-0.784  $\chi^2/\text{NDF}$ : 3969008.5/36

Left In: 5180.743+/-0.980  $\chi^2/\text{NDF}$ : 5350053.6/22

Left: 5409.966+/-0.705  $\chi^2/\text{NDF}$ : 9587556.1/47

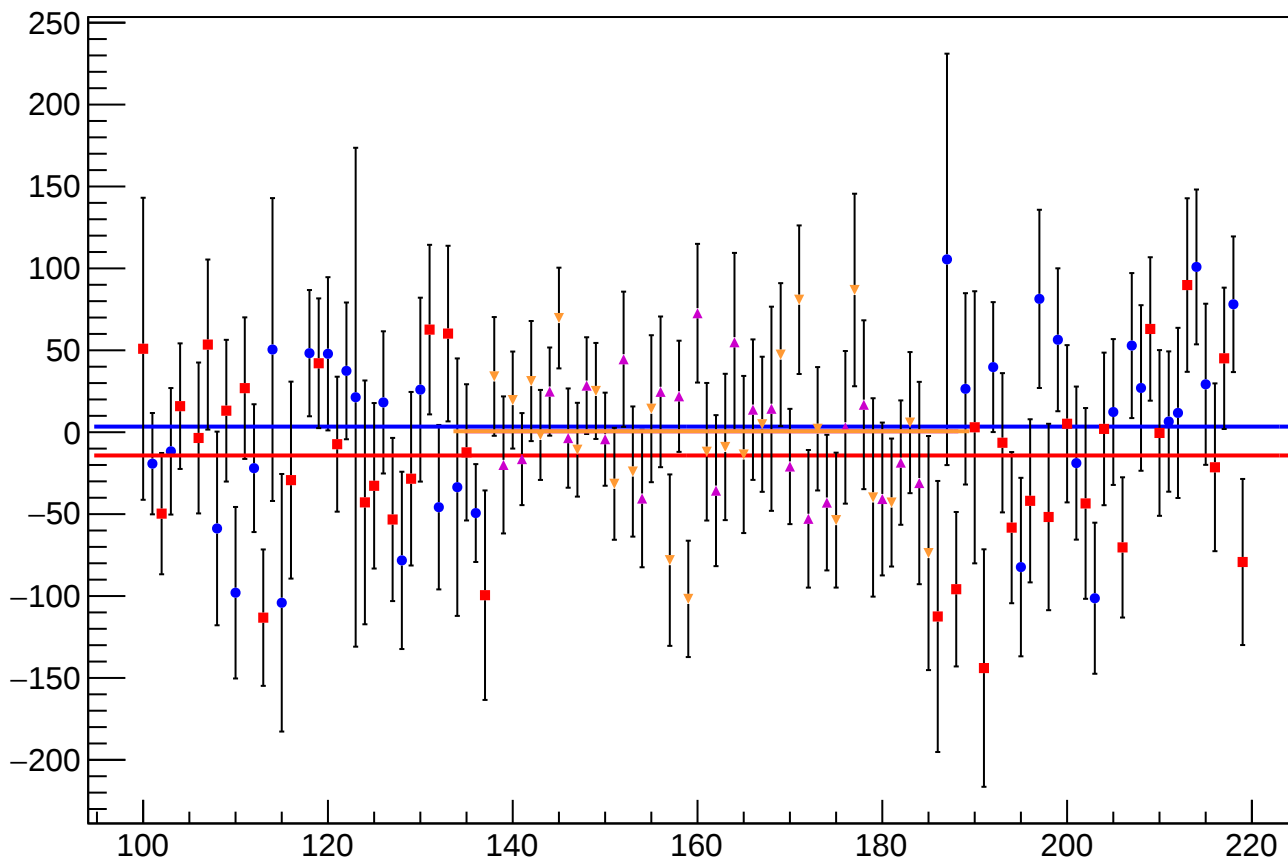
Right: 4531.768+/-0.559  $\chi^2/\text{NDF}$ : 7441135.9/69

In: 4790.665+/-0.619  $\chi^2/\text{NDF}$ : 9085684.1/55

Out: 4951.685+/-0.620  $\chi^2/\text{NDF}$ : 8862231.6/61

All: 4870.962+/-0.438  $\chi^2/\text{NDF}$ : 17981703.2/100

# diff\_bpm12X\_mean vs Slug, Sign Corrected



Right In: 3.426 $\pm$ 8.218     $\chi^2/\text{NDF}$ : 40.3/32

Left Out: 0.580 $\pm$ 7.691     $\chi^2/\text{NDF}$ : 31.0/24

Right Out: -14.194 $\pm$ 8.064     $\chi^2/\text{NDF}$ : 41.9/36

Left In: 0.565 $\pm$ 8.015     $\chi^2/\text{NDF}$ : 14.3/22

Left: 0.572 $\pm$ 5.549     $\chi^2/\text{NDF}$ : 45.3/47

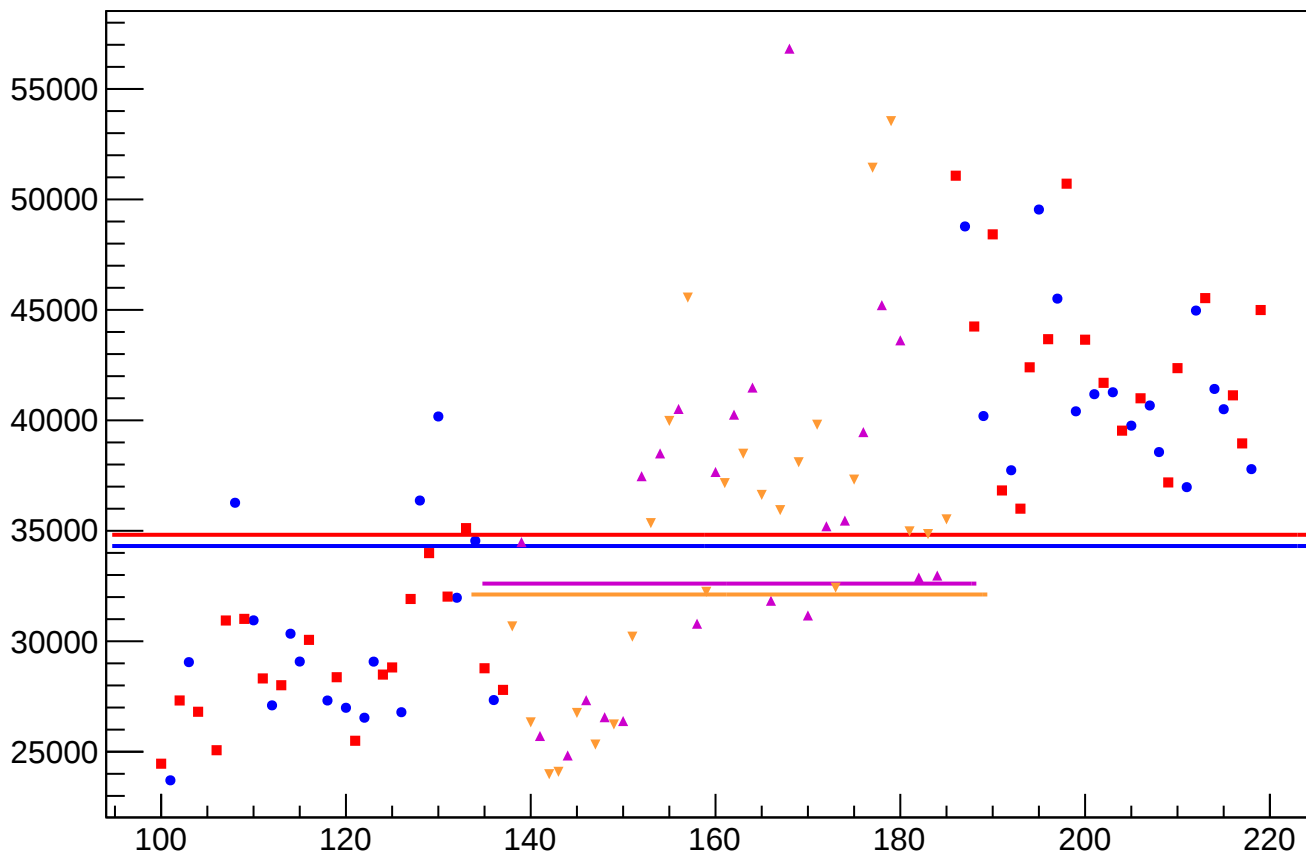
Right: -5.550 $\pm$ 5.756     $\chi^2/\text{NDF}$ : 84.5/69

In: 1.960 $\pm$ 5.738     $\chi^2/\text{NDF}$ : 54.6/55

Out: -6.457 $\pm$ 5.565     $\chi^2/\text{NDF}$ : 74.7/61

All: -2.377 $\pm$ 3.995     $\chi^2/\text{NDF}$ : 130.4/117

# diff\_bpm12X\_rms vs Slug, Sign Corrected



Right In:  $34311.468 \pm 5.811$   $\chi^2/\text{NDF}: 1447554.1/32$

Left Out:  $32117.184 \pm 5.438$   $\chi^2/\text{NDF}: 1536740.0/24$

Right Out:  $34819.587 \pm 5.702$   $\chi^2/\text{NDF}: 1606479.9/36$

Left In:  $32610.108 \pm 5.667$   $\chi^2/\text{NDF}: 1398475.8/22$

Left:  $32353.483 \pm 3.924$   $\chi^2/\text{NDF}: 2939154.5/47$

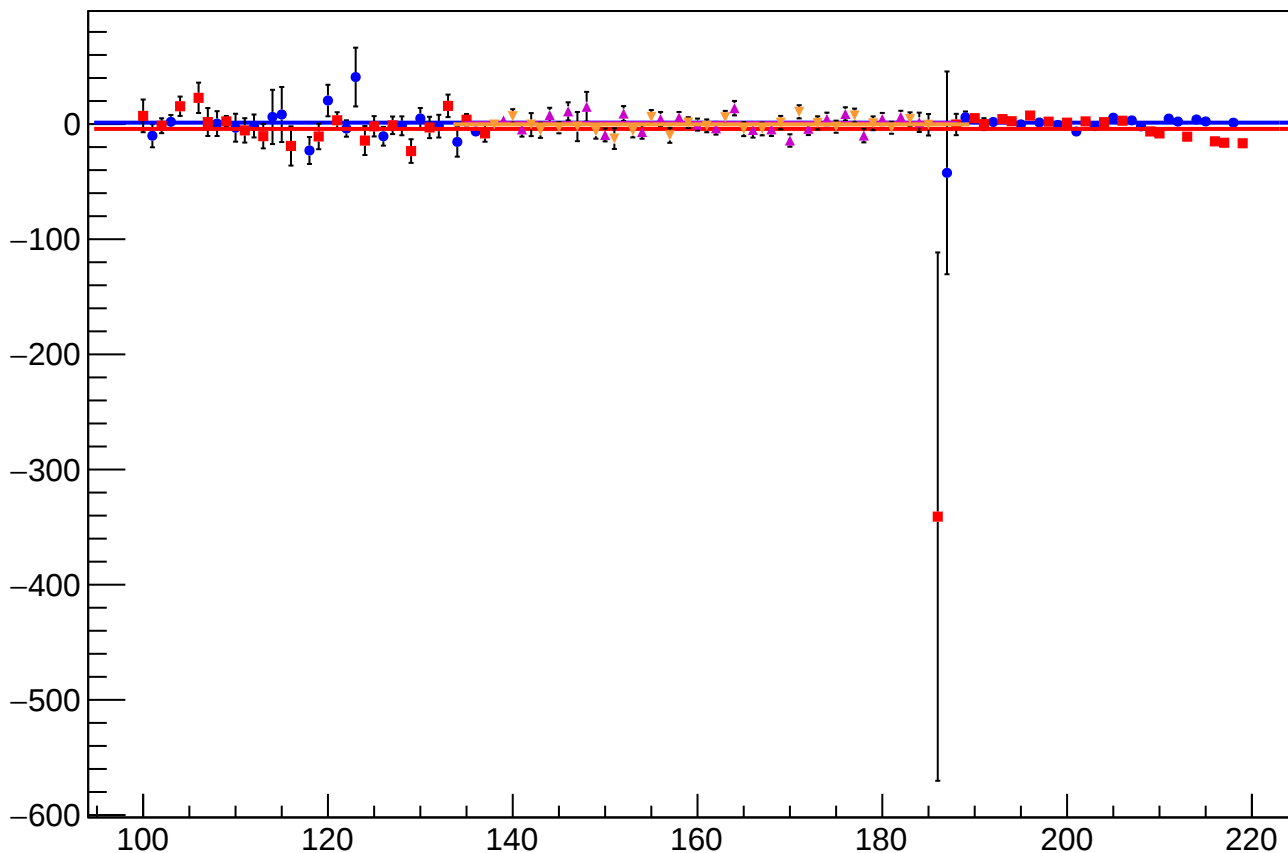
Right:  $34570.315 \pm 4.070$   $\chi^2/\text{NDF}: 3057929.2/69$

In:  $33439.491 \pm 4.057$   $\chi^2/\text{NDF}: 2889966.6/55$

Out:  $33404.317 \pm 3.935$   $\chi^2/\text{NDF}: 3260841.4/61$

All:  $33421.368 \pm 2.825$   $\chi^2/\text{NDF}: 6150846.7/111$

# diff\_bpm12Y\_mean vs Slug, Sign Corrected



Right In:  $1.217 \pm 0.650$   $\chi^2/\text{NDF}: 38.8/32$

Left Out:  $-0.255 \pm 1.173$   $\chi^2/\text{NDF}: 18.0/24$

Right Out:  $-4.223 \pm 0.656$   $\chi^2/\text{NDF}: 167.8/36$

Left In:  $0.925 \pm 1.154$   $\chi^2/\text{NDF}: 36.1/22$

Left:  $0.345 \pm 0.822$   $\chi^2/\text{NDF}: 54.7/47$

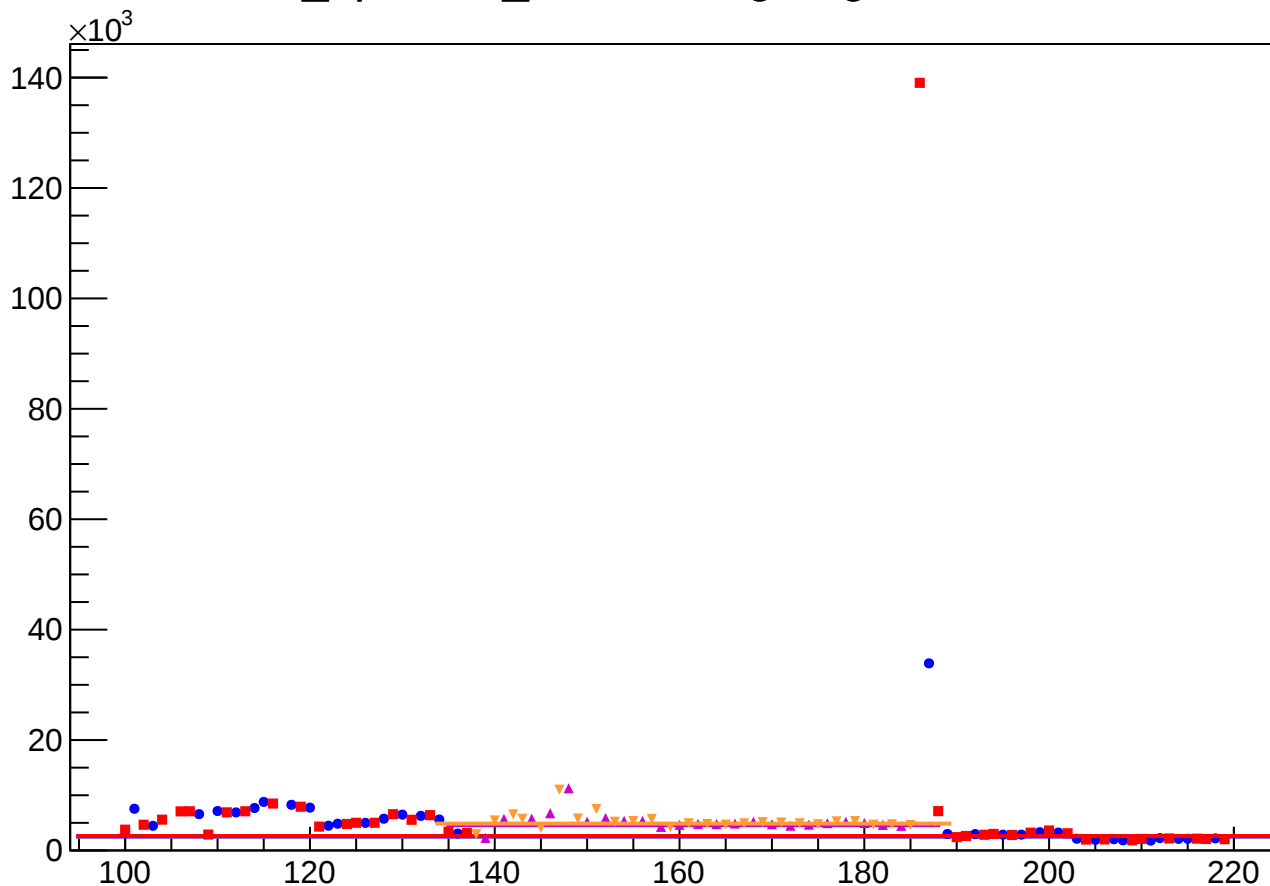
Right:  $-1.479 \pm 0.462$   $\chi^2/\text{NDF}: 241.3/69$

In:  $1.147 \pm 0.566$   $\chi^2/\text{NDF}: 75.0/55$

Out:  $-3.278 \pm 0.573$   $\chi^2/\text{NDF}: 194.5/61$

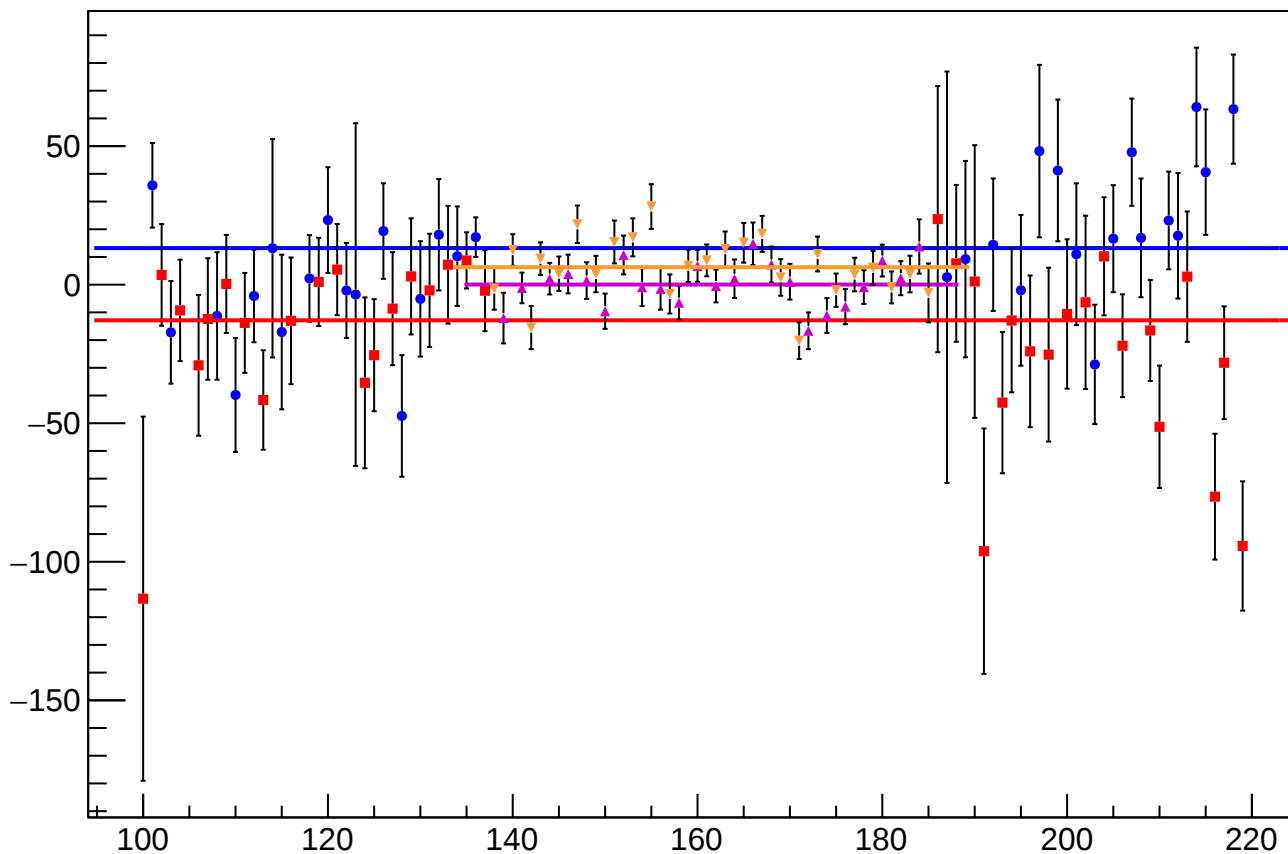
All:  $-1.042 \pm 0.403$   $\chi^2/\text{NDF}: 299.7/117$

# diff\_bpm12Y\_rms vs Slug, Sign Corrected



|                             |                                    |                         |                                      |
|-----------------------------|------------------------------------|-------------------------|--------------------------------------|
| Right In: 2526.250+/-0.460  | $\chi^2/\text{NDF}$ : 5598499.4/32 | Left: 4722.017+/-0.582  | $\chi^2/\text{NDF}$ : 4049906.1/47   |
| Left Out: 4866.528+/-0.829  | $\chi^2/\text{NDF}$ : 1511486.2/24 | Right: 2566.566+/-0.327 | $\chi^2/\text{NDF}$ : 11813434.6/69  |
| Right Out: 2607.600+/-0.464 | $\chi^2/\text{NDF}$ : 6199419.2/36 | In: 3021.840+/-0.401    | $\chi^2/\text{NDF}$ : 12897531.5/55  |
| Left In: 4582.193+/-0.816   | $\chi^2/\text{NDF}$ : 2478681.0/22 | Out: 3145.809+/-0.405   | $\chi^2/\text{NDF}$ : 13362087.3/61  |
|                             |                                    | All: 3083.164+/-0.285   | $\chi^2/\text{NDF}$ : 26307007.6/131 |

# diff\_bpm16X\_mean vs Slug, Sign Corrected



Right In:  $13.208 \pm 3.333$   $\chi^2/\text{NDF}: 49.3/32$

Left Out:  $6.302 \pm 1.313$   $\chi^2/\text{NDF}: 56.7/24$

Right Out:  $-12.856 \pm 3.440$   $\chi^2/\text{NDF}: 48.5/36$

Left In:  $0.044 \pm 1.358$   $\chi^2/\text{NDF}: 30.0/22$

Left:  $3.279 \pm 0.944$   $\chi^2/\text{NDF}: 97.7/47$

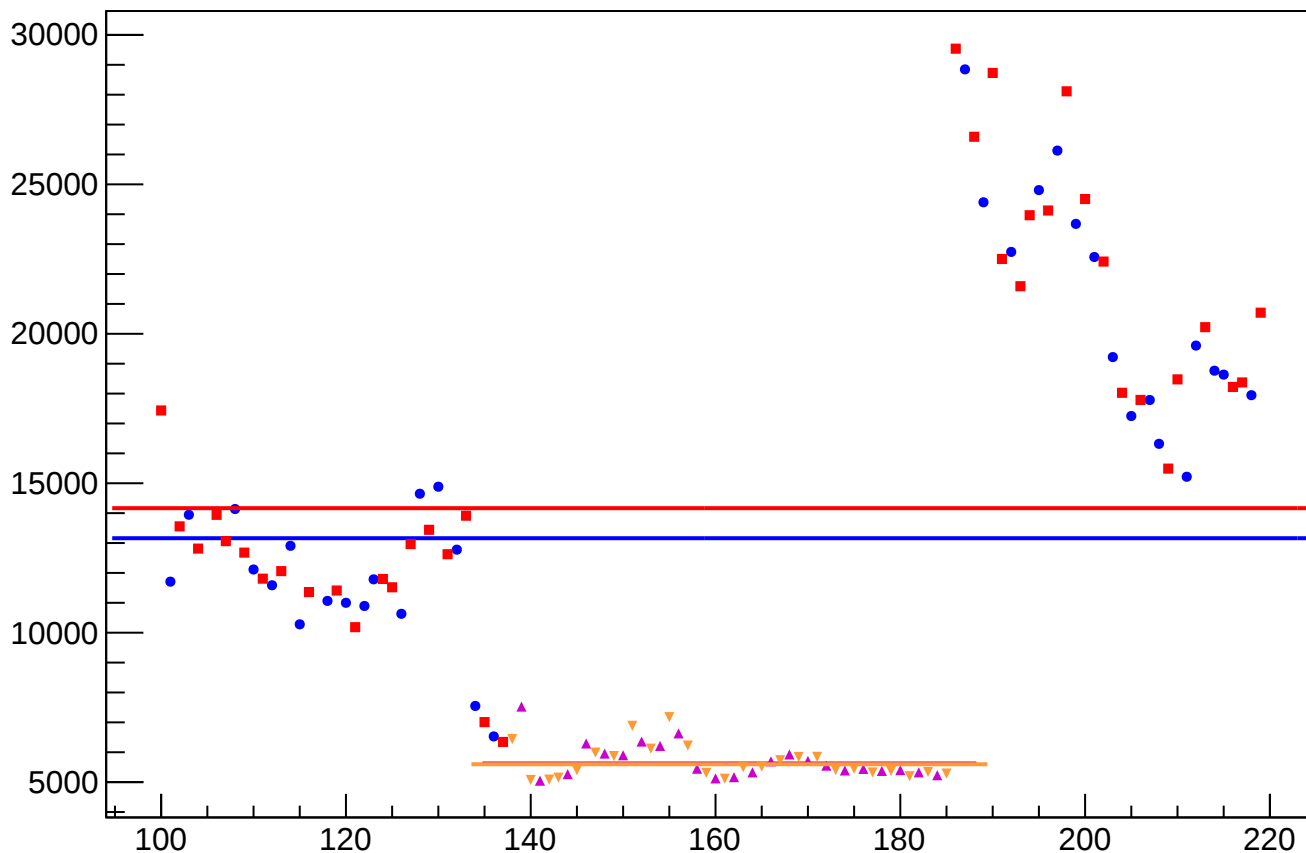
Right:  $0.588 \pm 2.394$   $\chi^2/\text{NDF}: 127.4/69$

In:  $1.918 \pm 1.257$   $\chi^2/\text{NDF}: 92.7/55$

Out:  $3.867 \pm 1.226$   $\chi^2/\text{NDF}: 132.3/61$

All:  $2.917 \pm 0.878$   $\chi^2/\text{NDF}: 226.2/117$

# diff\_bpm16X\_rms vs Slug, Sign Corrected



Right In: 13161.041+/-2.357

$\chi^2/\text{NDF}$ : 5045338.8/32

Left Out: 5598.786+/-0.928

$\chi^2/\text{NDF}$ : 283253.4/24

Right Out: 14166.133+/-2.432

$\chi^2/\text{NDF}$ : 4998866.9/36

Left In: 5625.163+/-0.960

$\chi^2/\text{NDF}$ : 272563.5/22

Left: 5611.528+/-0.667  $\chi^2/\text{NDF}$ : 556207.1/47

Right: 13647.693+/-1.693

$\chi^2/\text{NDF}$ : 10132279.7/69

In: 6697.840+/-0.889

$\chi^2/\text{NDF}$ : 14088013.3/55

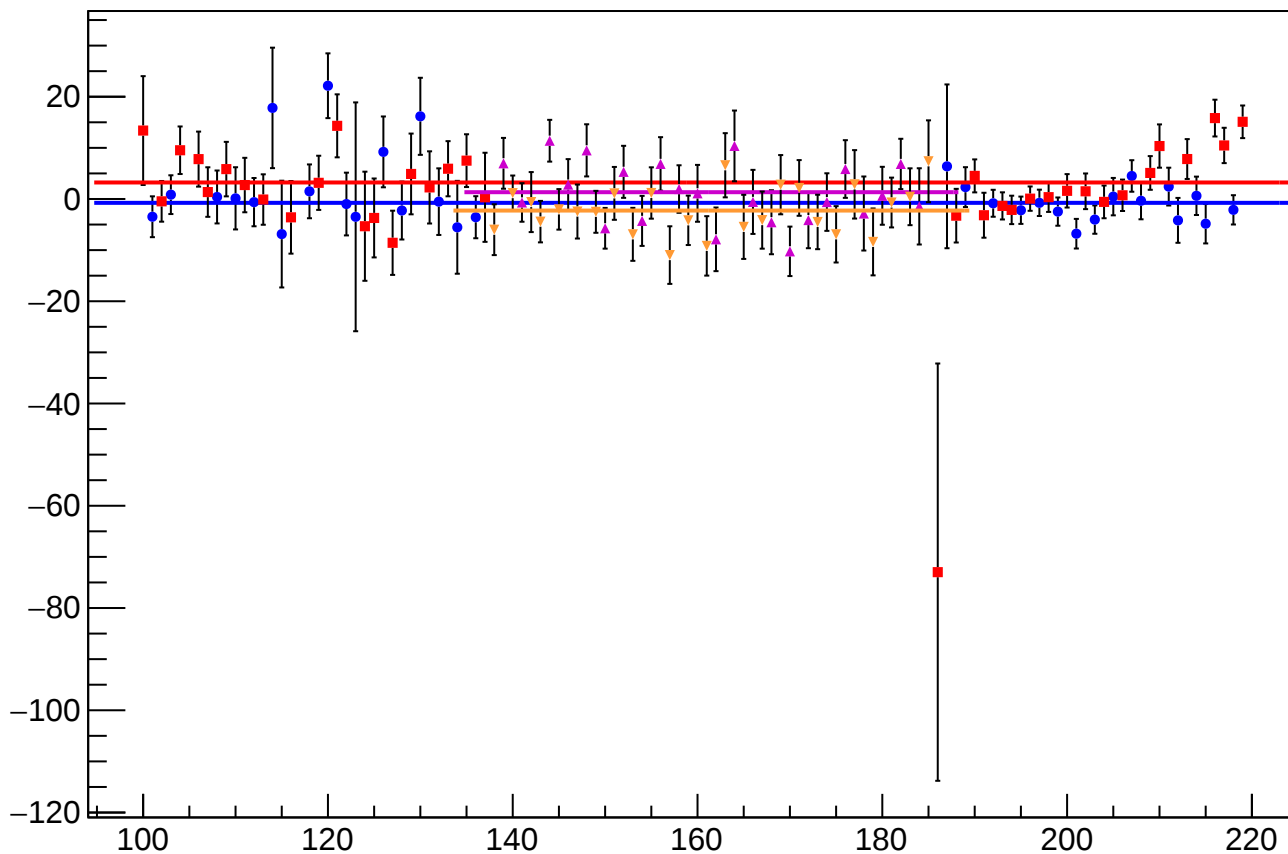
Out: 6687.623+/-0.867

$\chi^2/\text{NDF}$ : 16111539.3/61

All: 6692.604+/-0.621

$\chi^2/\text{NDF}$ : 30199620.2/1

# diff\_bpm16Y\_mean vs Slug, Sign Corrected



Right In: -0.754 $\pm$ 0.700  $\chi^2/\text{NDF}$ : 37.8/32

Left Out: -2.262 $\pm$ 1.030  $\chi^2/\text{NDF}$ :15.5/24

Right Out: 3.229 $\pm$ 0.679  $\chi^2/\text{NDF}$ : 69.8/36

Left In: 1.328 $\pm$ 1.082  $\chi^2/\text{NDF}$ :30.6/22

Left: -0.555 $\pm$ 0.746  $\chi^2/\text{NDF}$ : 51.9/47

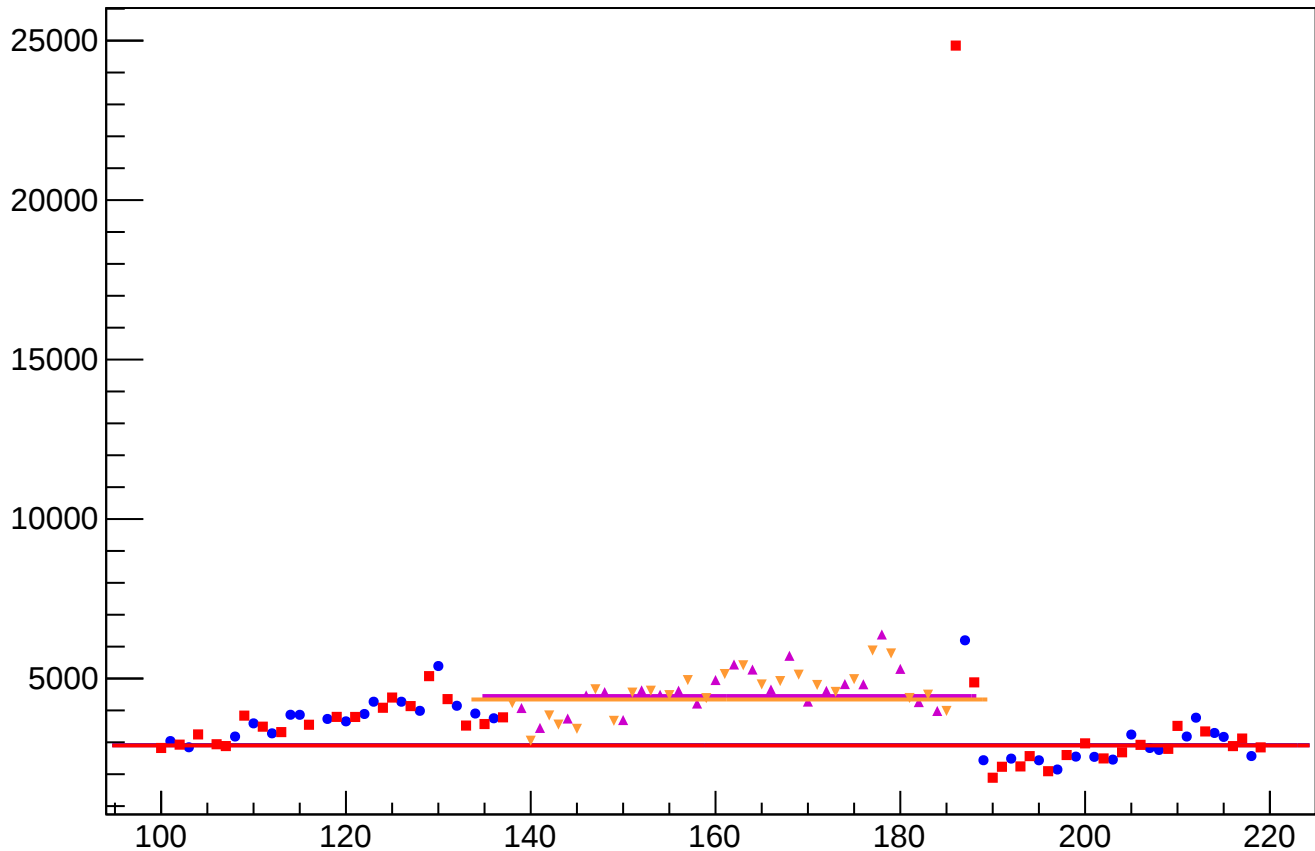
Right: 1.298 $\pm$ 0.488  $\chi^2/\text{NDF}$ : 124.3/69

In: -0.139 $\pm$ 0.588  $\chi^2/\text{NDF}$ :71.1/55

Out: 1.564 $\pm$ 0.567  $\chi^2/\text{NDF}$ :105.1/61

All: 0.743 $\pm$ 0.408  $\chi^2/\text{NDF}$ : 180.5/117

# diff\_bpm16Y\_rms vs Slug, Sign Corrected



Right In: 2910.184+/-0.495  $\chi^2/\text{NDF}$ : 1446455.1/32

Left Out: 4342.635+/-0.728  $\chi^2/\text{NDF}$ : 993035.5/24

Right Out: 2902.143+/-0.480  $\chi^2/\text{NDF}$ : 2346922.4/36

Left In: 4450.007+/-0.765  $\chi^2/\text{NDF}$ : 693229.8/22

Left: 4393.686+/-0.528  $\chi^2/\text{NDF}$ : 1696596.0/47

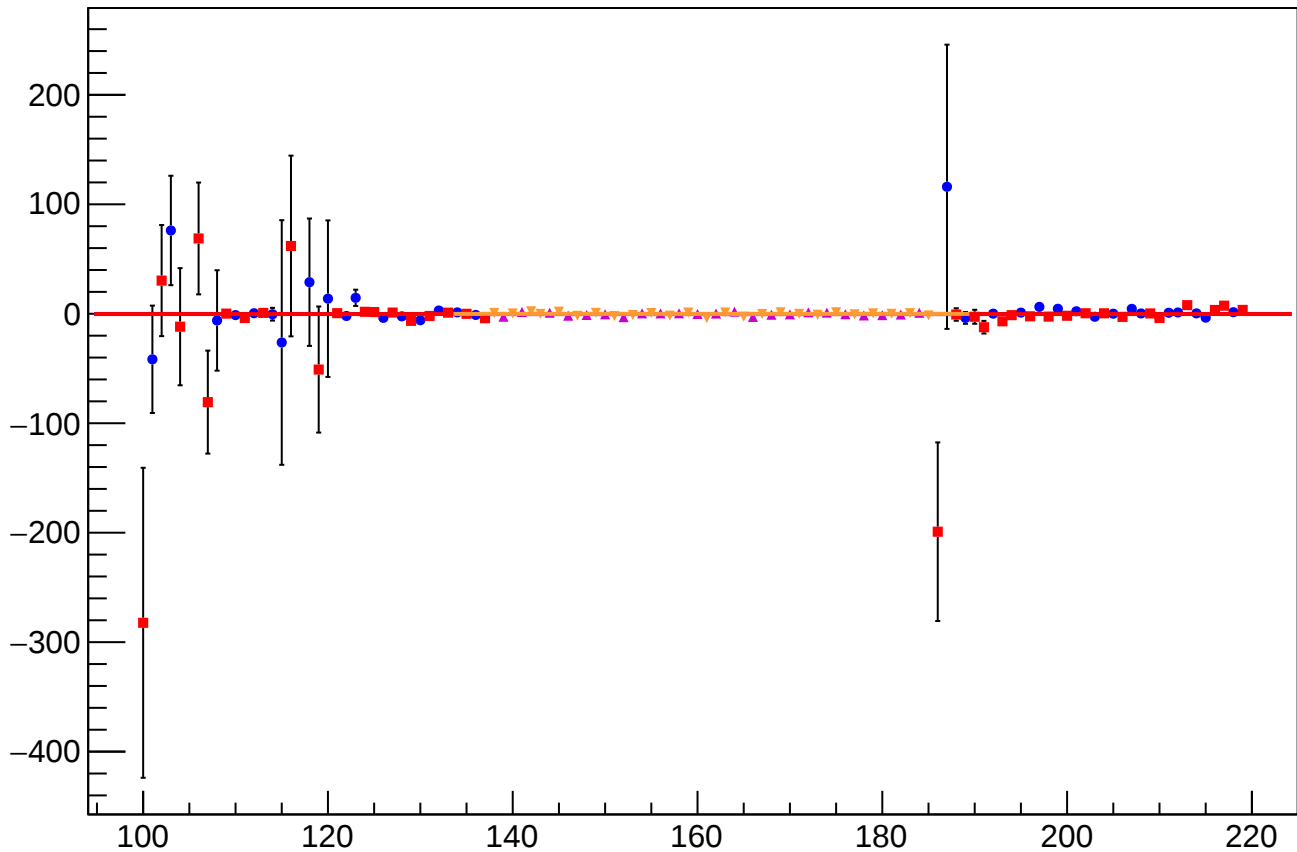
Right: 2906.042+/-0.345  $\chi^2/\text{NDF}$ : 3793513.2/69

In: 3364.884+/-0.416  $\chi^2/\text{NDF}$ : 4994107.9/55

Out: 3338.826+/-0.401  $\chi^2/\text{NDF}$ : 6065142.3/61

All: 3351.386+/-0.289  $\chi^2/\text{NDF}$ : 11061284.8/117

# diff\_bpm1p02bX\_mean vs Slug, Sign Corrected



Right In:  $-0.176 \pm 0.516$   $\chi^2/\text{NDF}: 34.4/32$

Left Out:  $-0.092 \pm 0.249$   $\chi^2/\text{NDF}: 34.4/24$

Right Out:  $-0.269 \pm 0.513$   $\chi^2/\text{NDF}: 62.0/36$

Left In:  $-0.259 \pm 0.257$   $\chi^2/\text{NDF}: 27.2/22$

Left:  $-0.173 \pm 0.179$   $\chi^2/\text{NDF}: 61.9/47$

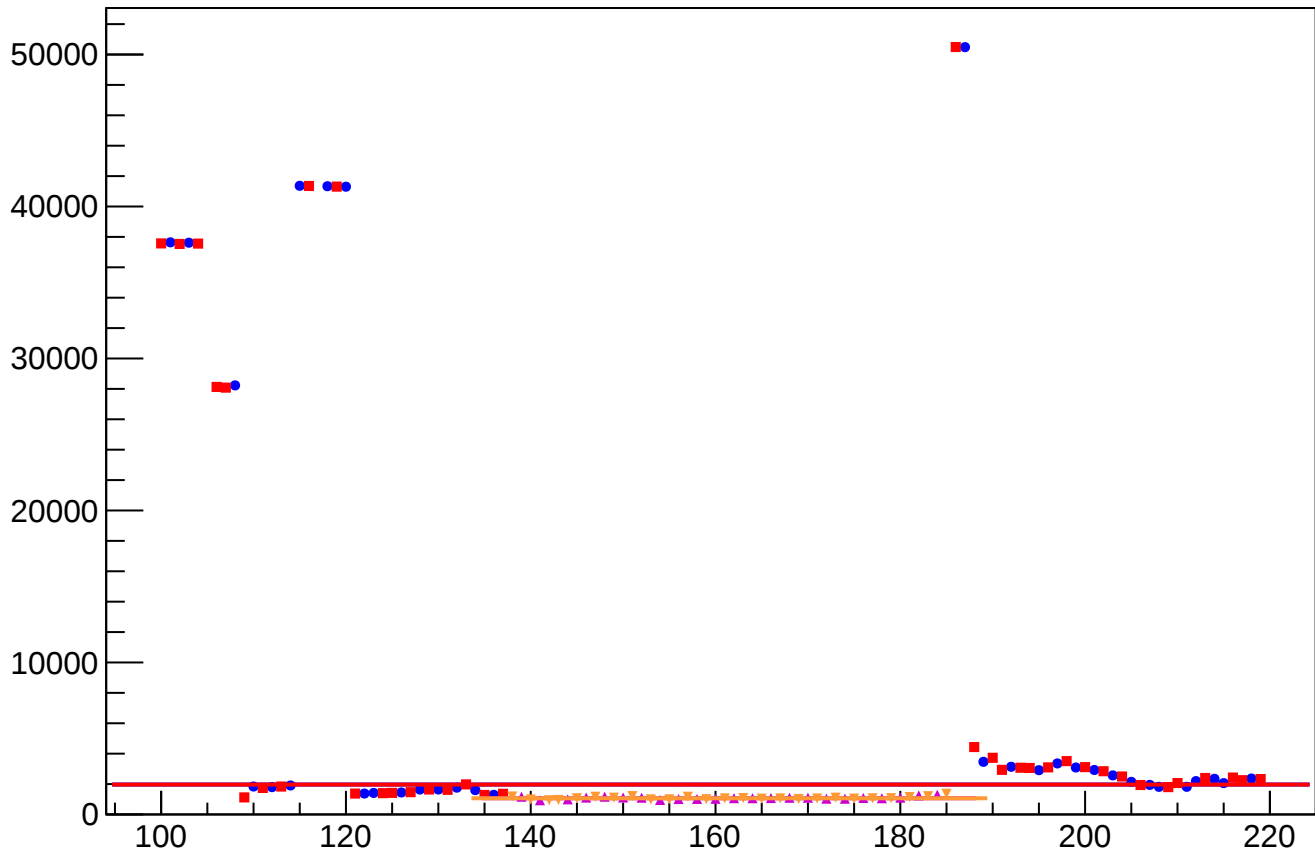
Right:  $-0.223 \pm 0.364$   $\chi^2/\text{NDF}: 96.4/69$

In:  $-0.243 \pm 0.230$   $\chi^2/\text{NDF}: 61.6/55$

Out:  $-0.125 \pm 0.224$   $\chi^2/\text{NDF}: 96.6/61$

All:  $-0.183 \pm 0.160$   $\chi^2/\text{NDF}: 158.3/117$

# diff\_bpm1p02bX\_rms vs Slug, Sign Corrected



Right In: 1968.268+/-0.365

$\chi^2/\text{NDF}$ : 7049596.5/32

Left Out: 1064.701+/-0.176

$\chi^2/\text{NDF}$ : 186511.5/24

Right Out: 1965.921+/-0.362

$\chi^2/\text{NDF}$ : 8539140.4/36

Left In: 1066.255+/-0.182

$\chi^2/\text{NDF}$ : 164232.1/22

Left: 1065.454+/-0.126

$\chi^2/\text{NDF}$ : 350781.3/47

Right: 1967.087+/-0.257

$\chi^2/\text{NDF}$ : 15588757.7/69

In: 1245.518+/-0.163

$\chi^2/\text{NDF}$ : 12111471.5/55

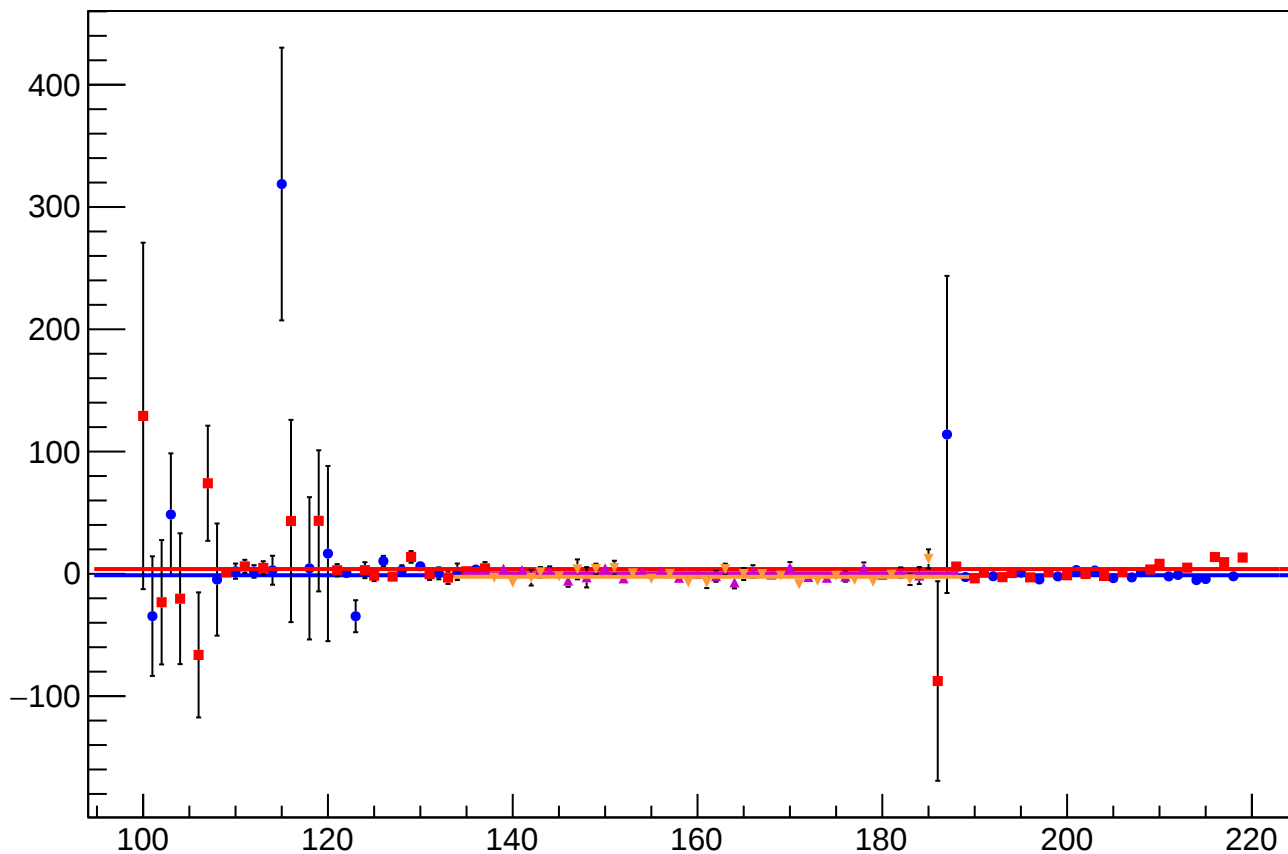
Out: 1236.823+/-0.158

$\chi^2/\text{NDF}$ : 13727682.9/61

All: 1241.056+/-0.113

$\chi^2/\text{NDF}$ : 25840621.2/100

# diff\_bpm1p02bY\_mean vs Slug, Sign Corrected



Right In:  $-1.148 \pm 0.439$   $\chi^2/\text{NDF}$ : 61.6/32

Left Out:  $-2.422 \pm 0.811$   $\chi^2/\text{NDF}$ : 21.2/24

Right Out:  $3.937 \pm 0.446$   $\chi^2/\text{NDF}$ : 148.6/36

Left In:  $0.468 \pm 0.843$   $\chi^2/\text{NDF}$ : 15.5/22

Left:  $-1.033 \pm 0.584$   $\chi^2/\text{NDF}$ : 42.8/47

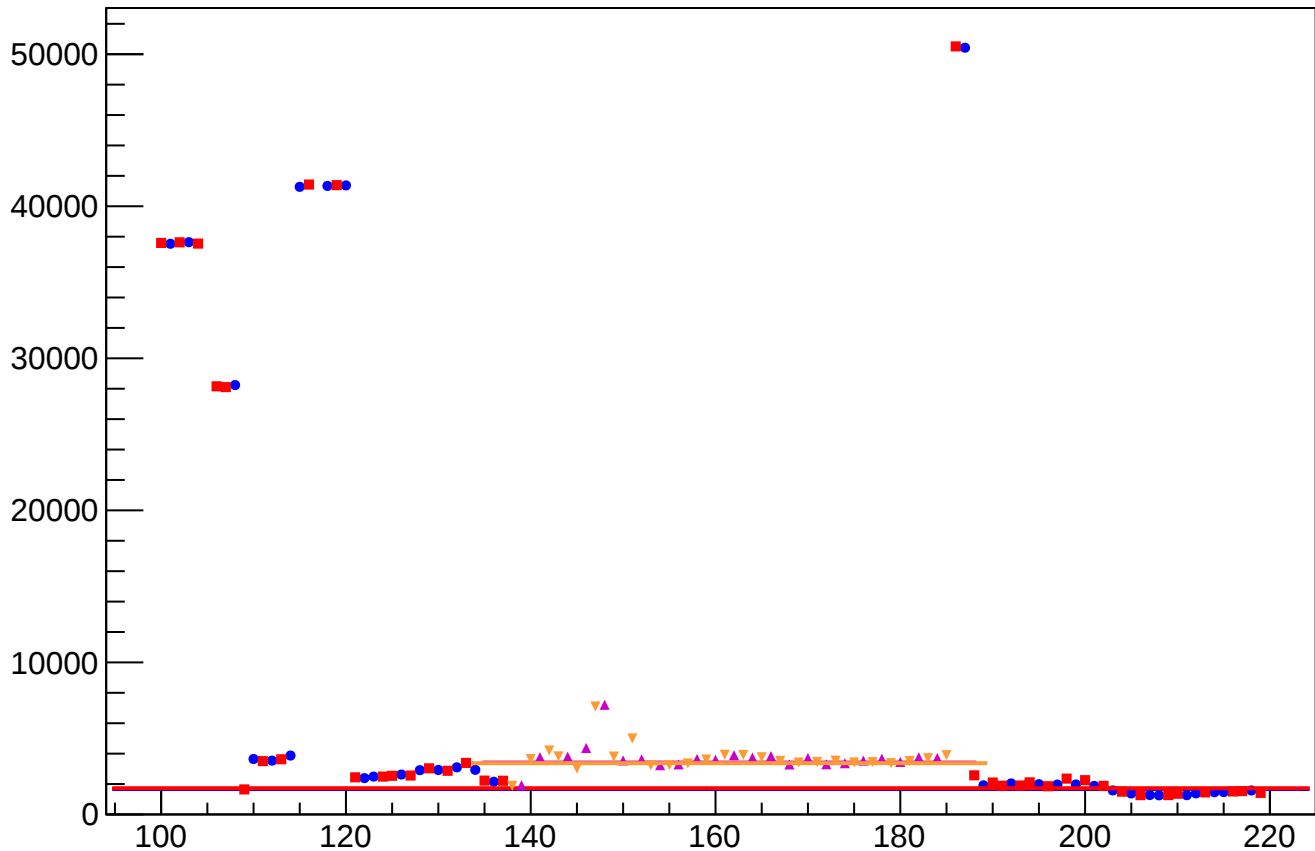
Right:  $1.355 \pm 0.313$   $\chi^2/\text{NDF}$ : 276.2/69

In:  $-0.803 \pm 0.389$   $\chi^2/\text{NDF}$ : 80.0/55

Out:  $2.460 \pm 0.391$   $\chi^2/\text{NDF}$ : 217.1/61

All:  $0.823 \pm 0.276$   $\chi^2/\text{NDF}$ : 332.0/117

# diff\_bpm1p02bY\_rms vs Slug, Sign Corrected



Right In: 1670.105+/-0.310  $\chi^2/\text{NDF}$ : 7110714.8/32

Left Out: 3372.958+/-0.573  $\chi^2/\text{NDF}$ : 1656864.7/24

Right Out: 1725.312+/-0.315  $\chi^2/\text{NDF}$ : 7696120.8/36

Left In: 3411.924+/-0.596  $\chi^2/\text{NDF}$ : 1434523.7/22

Left: 3391.680+/-0.413  $\chi^2/\text{NDF}$ : 3093609.1/47

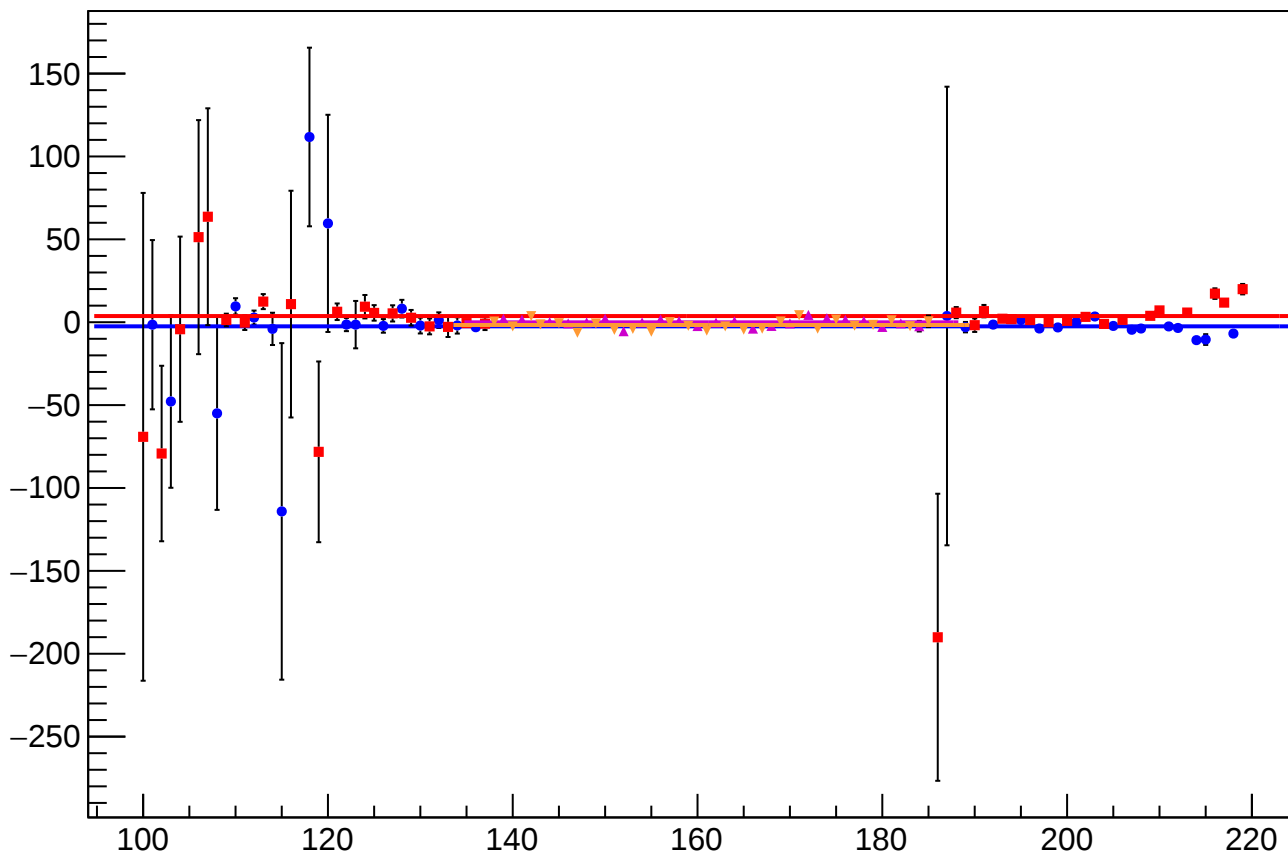
Right: 1697.279+/-0.221  $\chi^2/\text{NDF}$ : 14822405.3/69

In: 2041.778+/-0.275  $\chi^2/\text{NDF}$ : 15264104.8/55

Out: 2108.056+/-0.276  $\chi^2/\text{NDF}$ : 15697501.7/61

All: 2074.805+/-0.195  $\chi^2/\text{NDF}$ : 30990487.2/32

# diff\_bpm1p03aX\_mean vs Slug, Sign Corrected



Right In:  $-2.483 \pm 0.554$   $\chi^2/\text{NDF}: 51.2/32$

Left Out:  $-1.672 \pm 0.388$   $\chi^2/\text{NDF}: 45.7/24$

Right Out:  $3.721 \pm 0.567$   $\chi^2/\text{NDF}: 92.3/36$

Left In:  $-0.072 \pm 0.401$   $\chi^2/\text{NDF}: 28.2/22$

Left:  $-0.898 \pm 0.279$   $\chi^2/\text{NDF}: 82.1/47$

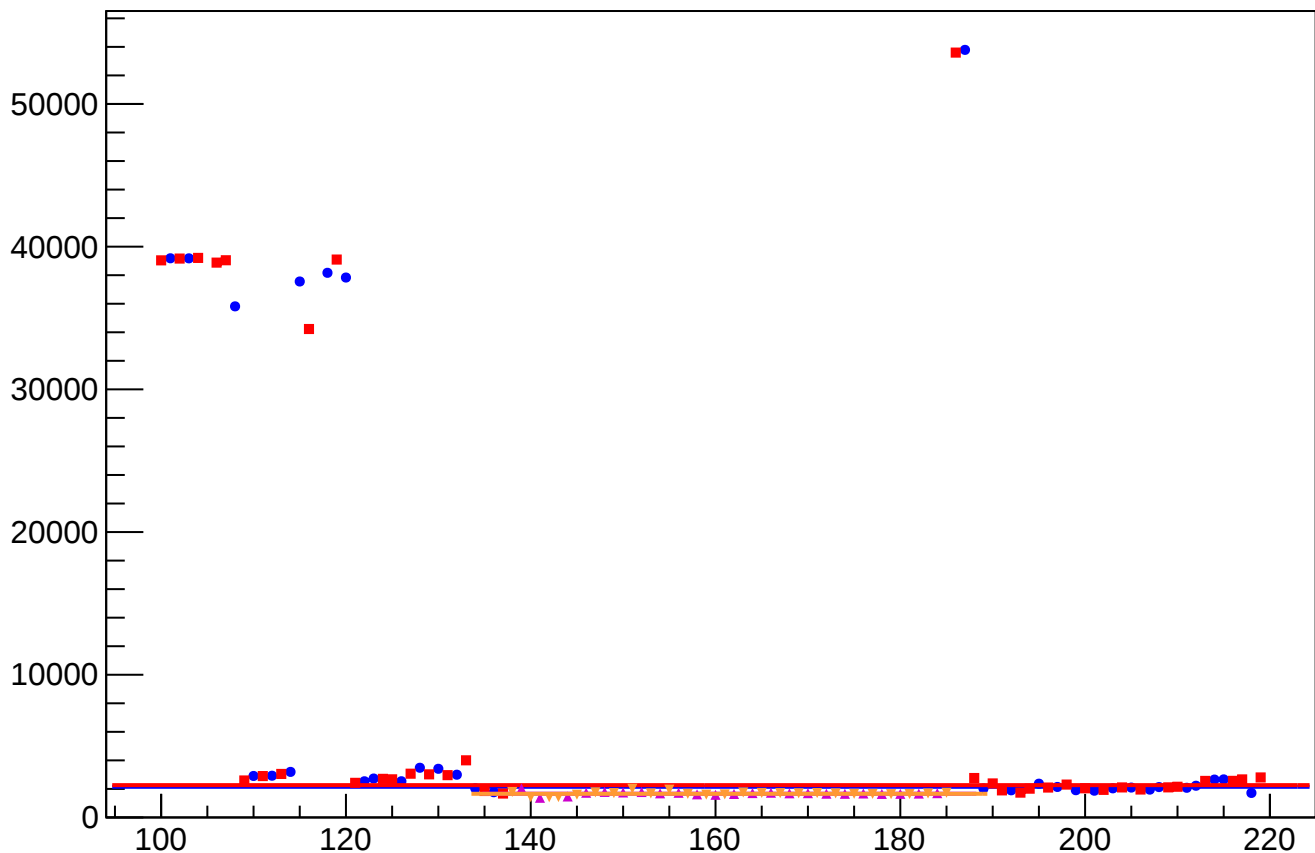
Right:  $0.543 \pm 0.396$   $\chi^2/\text{NDF}: 204.6/69$

In:  $-0.901 \pm 0.325$   $\chi^2/\text{NDF}: 91.8/55$

Out:  $0.046 \pm 0.320$   $\chi^2/\text{NDF}: 199.5/61$

All:  $-0.421 \pm 0.228$   $\chi^2/\text{NDF}: 295.6/117$

# diff\_bpm1p03aX\_rms vs Slug, Sign Corrected



Right In: 2148.800+/-0.392  $\chi^2/\text{NDF}$ : 5657820.8/32

Left Out: 1657.770+/-0.274  $\chi^2/\text{NDF}$ : 223465.3/24

Right Out: 2265.082+/-0.401  $\chi^2/\text{NDF}$ : 6219201.2/36

Left In: 1663.620+/-0.284  $\chi^2/\text{NDF}$ : 178858.2/22

Left: 1660.599+/-0.197  $\chi^2/\text{NDF}$ : 402543.2/47

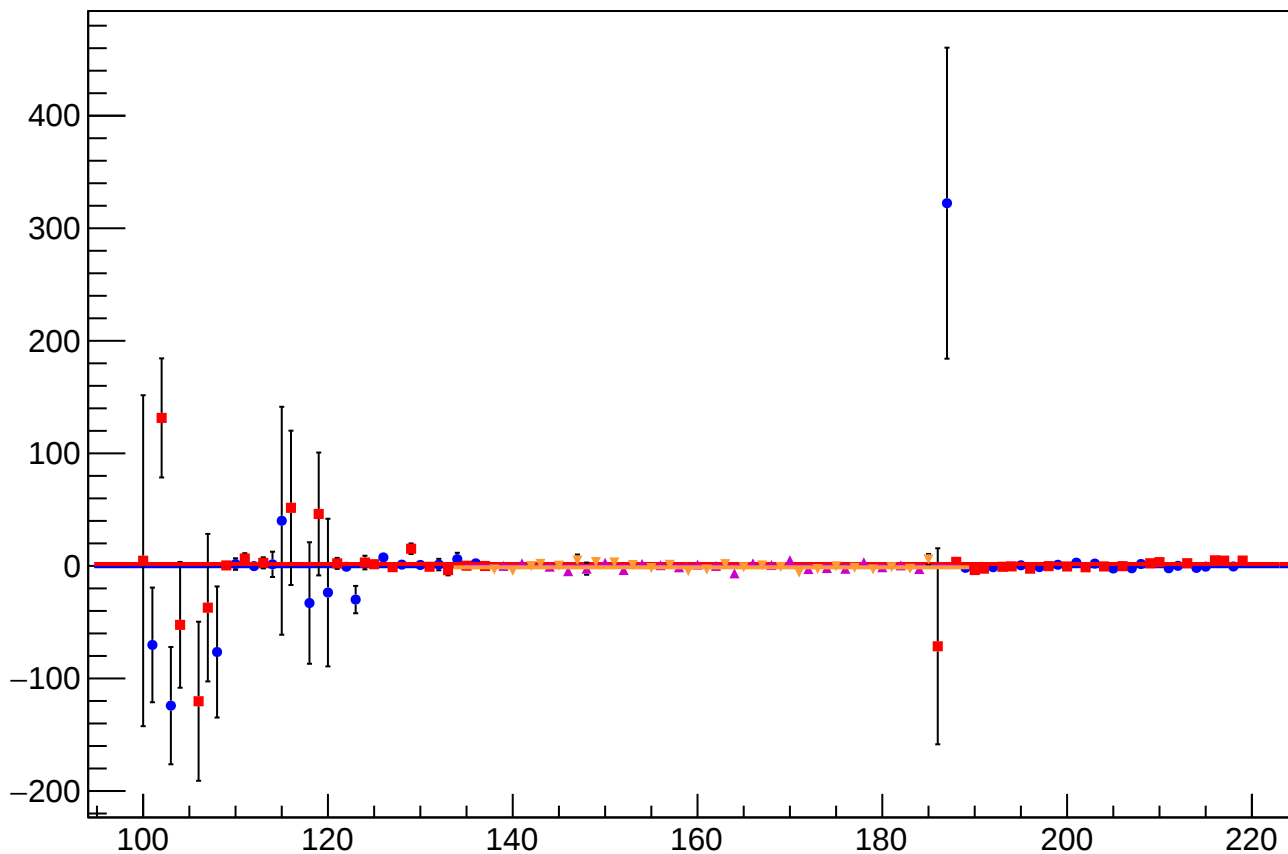
Right: 2205.518+/-0.280  $\chi^2/\text{NDF}$ : 11920045.1/69

In: 1830.566+/-0.230  $\chi^2/\text{NDF}$ : 6843863.9/55

Out: 1851.309+/-0.227  $\chi^2/\text{NDF}$ : 8003581.0/61

All: 1841.081+/-0.161  $\chi^2/\text{NDF}$ : 14851580.1/111

# diff\_bpm1p03aY\_mean vs Slug, Sign Corrected



Right In:  $-0.281 \pm 0.370$   $\chi^2/\text{NDF}: 45.1/32$

Left Out:  $-1.251 \pm 0.535$   $\chi^2/\text{NDF}: 21.7/24$

Right Out:  $1.705 \pm 0.361$   $\chi^2/\text{NDF}: 71.2/36$

Left In:  $-0.098 \pm 0.541$   $\chi^2/\text{NDF}: 19.3/22$

Left:  $-0.681 \pm 0.380$   $\chi^2/\text{NDF}: 43.3/47$

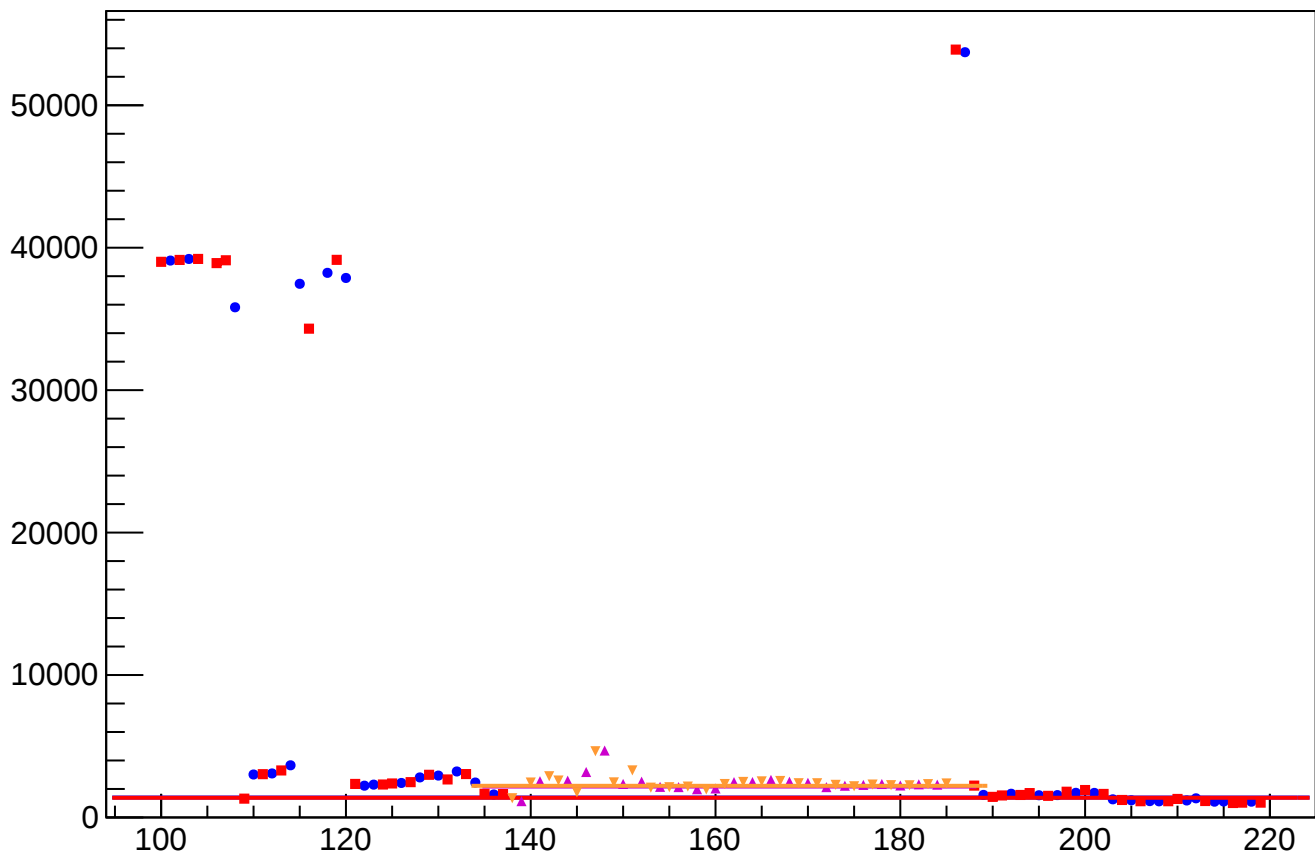
Right:  $0.736 \pm 0.258$   $\chi^2/\text{NDF}: 131.1/69$

In:  $-0.222 \pm 0.305$   $\chi^2/\text{NDF}: 64.5/55$

Out:  $0.780 \pm 0.299$   $\chi^2/\text{NDF}: 113.9/61$

All:  $0.288 \pm 0.214$   $\chi^2/\text{NDF}: 183.9/117$

# diff\_bpm1p03aY\_rms vs Slug, Sign Corrected



Right In: 1399.268 $\pm$ 0.262  $\chi^2$ /NDF: 7407104.6/32

Left Out: 2222.081 $\pm$ 0.378  $\chi^2$ /NDF:1422440.9/24

Right Out: 1382.509 $\pm$ 0.255  $\chi^2$ /NDF: 8360163.7/36

Left In: 2169.443 $\pm$ 0.383  $\chi^2$ /NDF:1974869.8/22

Left: 2196.064 $\pm$ 0.269  $\chi^2$ /NDF: 3406878.6/47

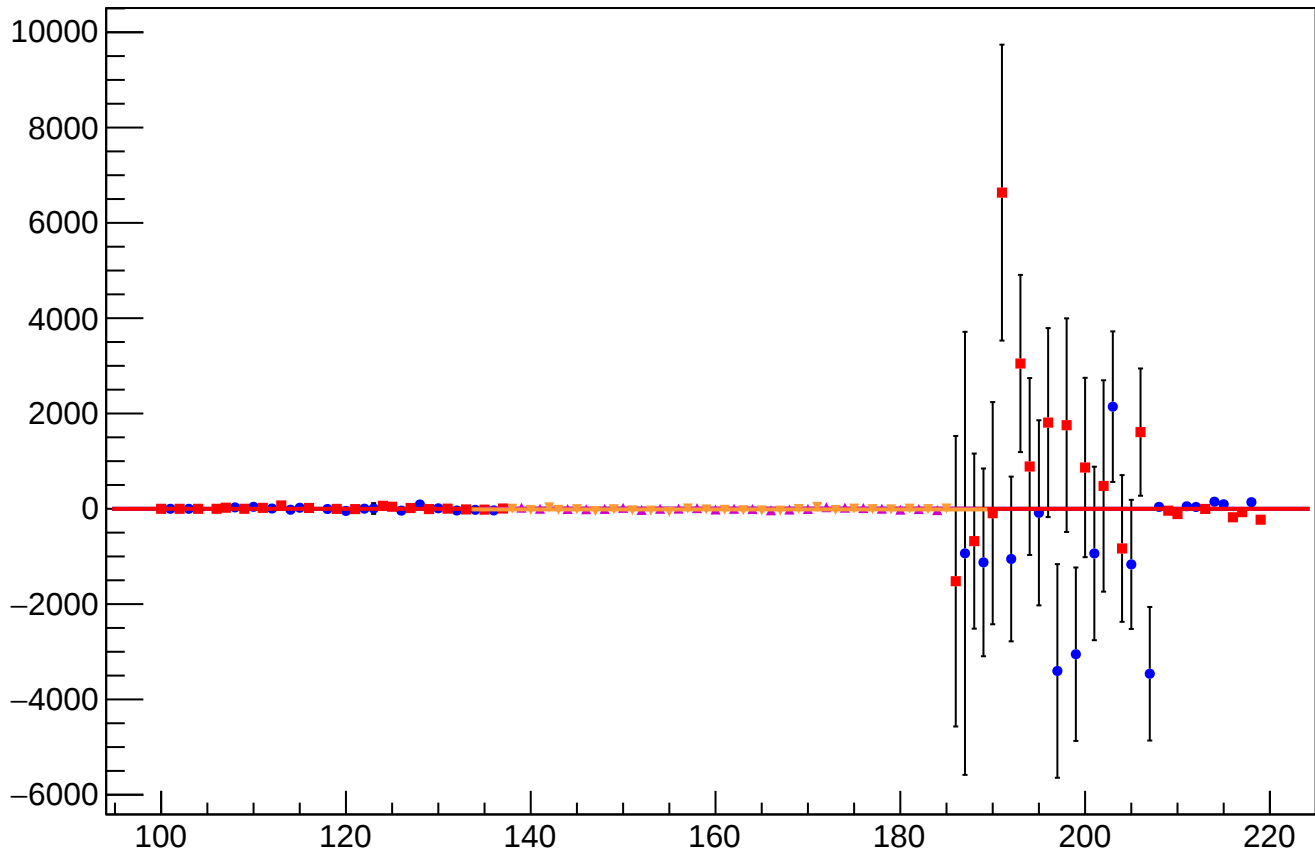
Right: 1390.692 $\pm$ 0.183  $\chi^2$ /NDF: 15769370.0/69

In: 1644.415 $\pm$ 0.216  $\chi^2$ /NDF:12142906.9/55

Out: 1645.424 $\pm$ 0.212  $\chi^2$ /NDF:13165059.6/61

All: 1644.929 $\pm$ 0.151  $\chi^2$ /NDF: 25307977.7/1

# diff\_cav4bX\_mean vs Slug, Sign Corrected



Right In: 0.013 $\pm$ 0.017  $\chi^2$ /NDF: 57.3/32

Left Out: -13.484 $\pm$ 2.800  $\chi^2$ /NDF:58.7/24

Right Out: -0.003 $\pm$ 0.016  $\chi^2$ /NDF: 66.0/36

Left In: 0.459 $\pm$ 2.917  $\chi^2$ /NDF:29.0/22

Left: -6.796 $\pm$ 2.020  $\chi^2$ /NDF: 99.5/47

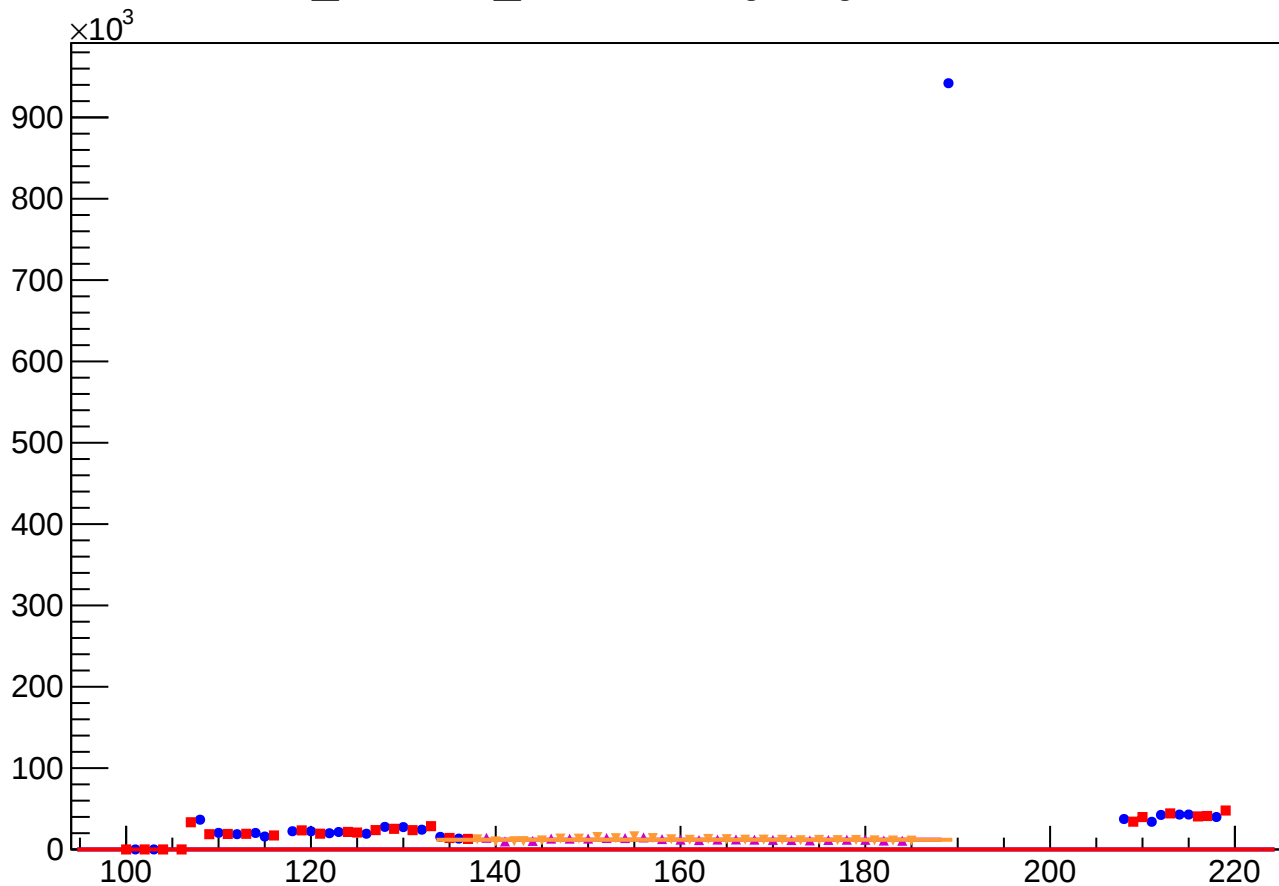
Right: 0.004 $\pm$ 0.012  $\chi^2$ /NDF: 123.8/69

In: 0.013 $\pm$ 0.017  $\chi^2$ /NDF:86.3/55

Out: -0.004 $\pm$ 0.016  $\chi^2$ /NDF:147.8/61

All: 0.004 $\pm$ 0.012  $\chi^2$ /NDF: 234.7/117

# diff\_cav4bX\_rms vs Slug, Sign Corrected



Right In: 18.674+/-0.012  $\chi^2/\text{NDF}$ : 19820873.6/23

Left Out: 11910.325+/-1.980  $\chi^2/\text{NDF}$ : 476504.3/24

Right Out: 18.339+/-0.011  $\chi^2/\text{NDF}$ : 19870002.7/24

Left In: 12064.761+/-2.062  $\chi^2/\text{NDF}$ : 368452.5/22

Left: 11984.403+/-1.428  $\chi^2/\text{NDF}$ : 847874.4/47

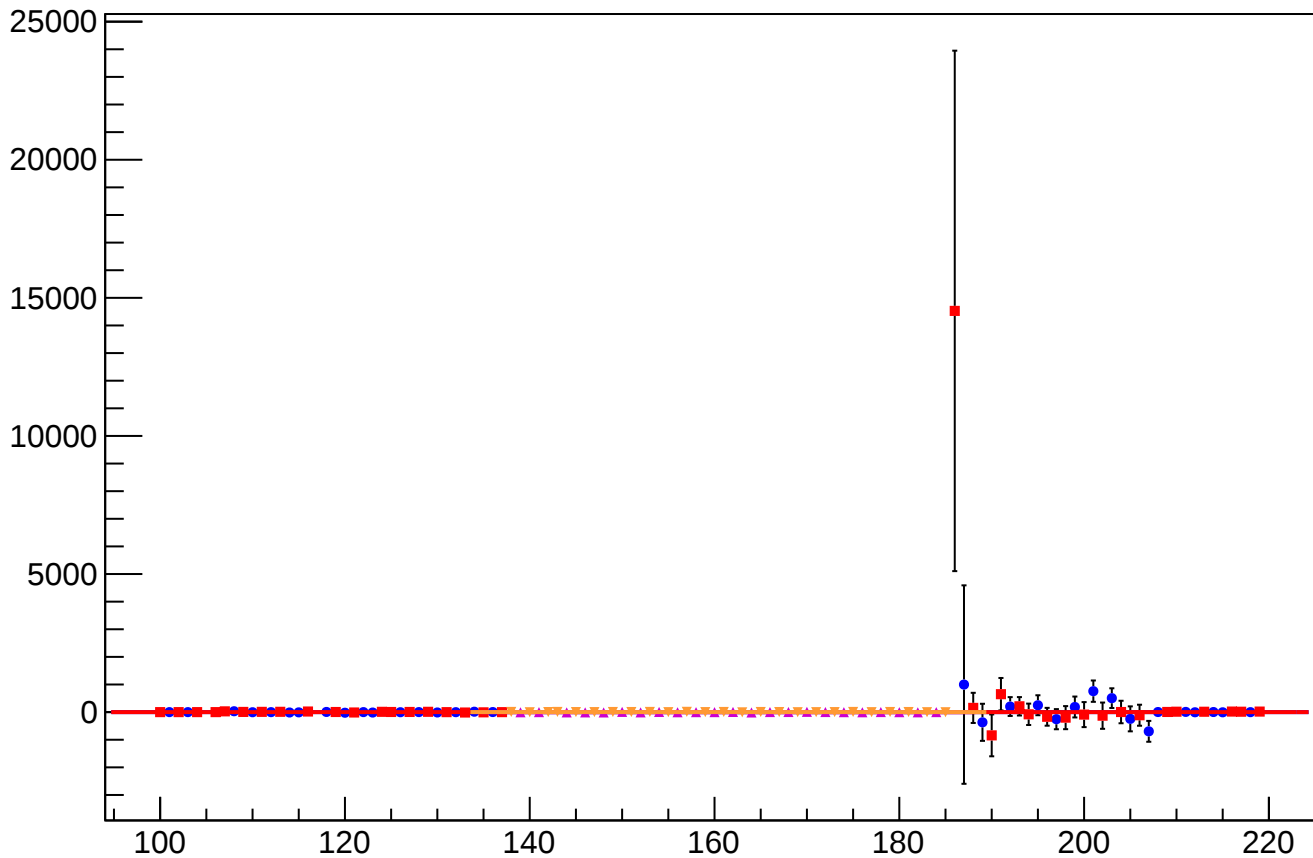
Right: 18.494+/-0.008  $\chi^2/\text{NDF}$ : 39691278.8/48

In: 19.100+/-0.012  $\chi^2/\text{NDF}$ : 54303005.6/46

Out: 18.731+/-0.011  $\chi^2/\text{NDF}$ : 56411680.2/49

All: 18.901+/-0.008  $\chi^2/\text{NDF}$ : 110715173.3/96

# diff\_cav4bY\_mean vs Slug, Sign Corrected



Right In: 0.001 $\pm$ 0.009  $\chi^2$ /NDF: 27.6/32

Left Out: 1.649 $\pm$ 1.022  $\chi^2$ /NDF:18.4/24

Right Out: -0.014 $\pm$ 0.009  $\chi^2$ /NDF: 60.9/36

Left In: -0.939 $\pm$ 1.049  $\chi^2$ /NDF:35.6/22

Left: 0.388 $\pm$ 0.732  $\chi^2$ /NDF: 57.1/47

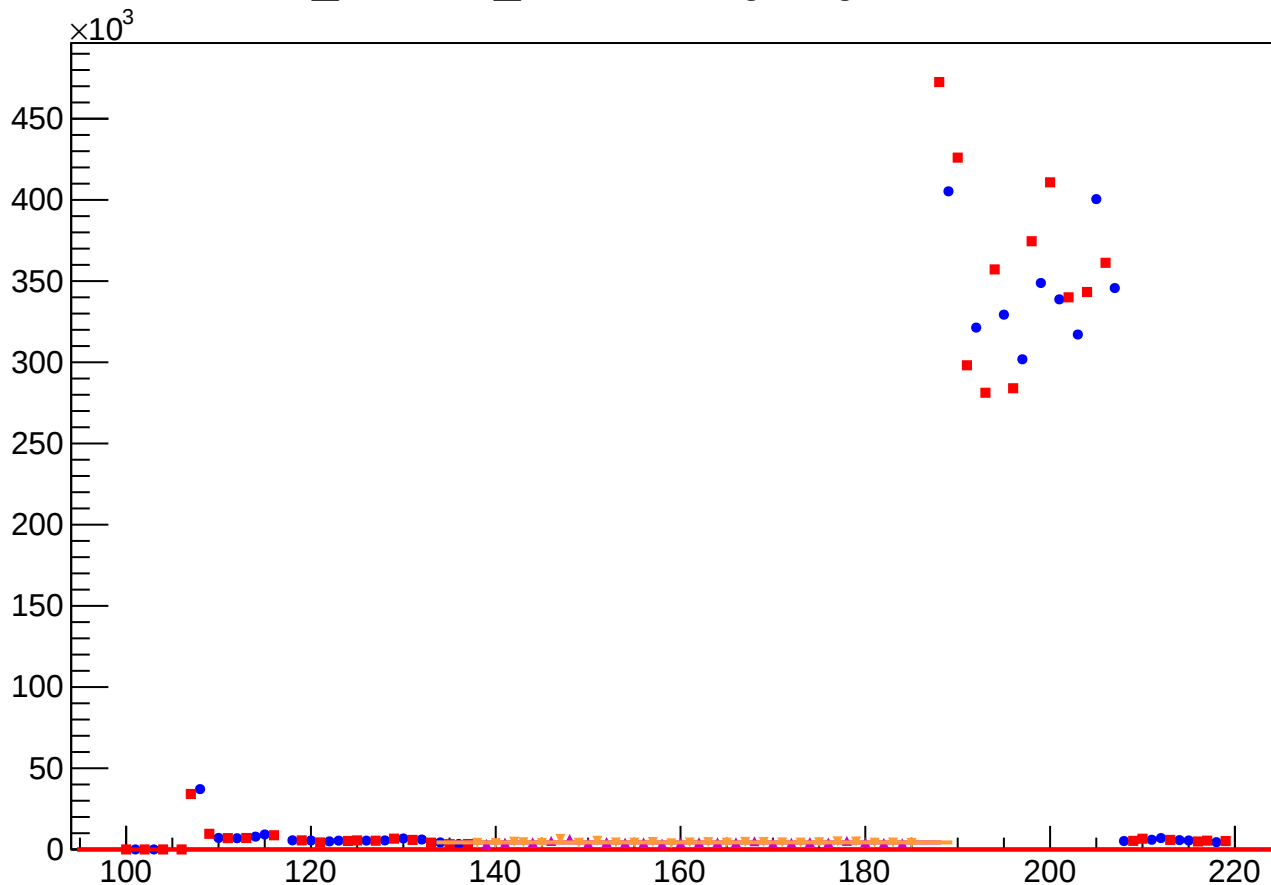
Right: -0.007 $\pm$ 0.006  $\chi^2$ /NDF: 89.9/69

In: 0.001 $\pm$ 0.009  $\chi^2$ /NDF:64.0/55

Out: -0.014 $\pm$ 0.009  $\chi^2$ /NDF:81.9/61

All: -0.007 $\pm$ 0.006  $\chi^2$ /NDF: 147.3/117

# diff\_cav4bY\_rms vs Slug, Sign Corrected



Right In:  $10.006 \pm 0.007$   $\chi^2/\text{NDF}: 33224042.6/31$

Left Out:  $4349.005 \pm 0.723$   $\chi^2/\text{NDF}: 383895.7/24$

Right Out:  $9.915 \pm 0.006$   $\chi^2/\text{NDF}: 34640091.4/35$

Left In:  $4321.572 \pm 0.741$   $\chi^2/\text{NDF}: 514603.2/22$

Left:  $4335.639 \pm 0.518$   $\chi^2/\text{NDF}: 899200.9/47$

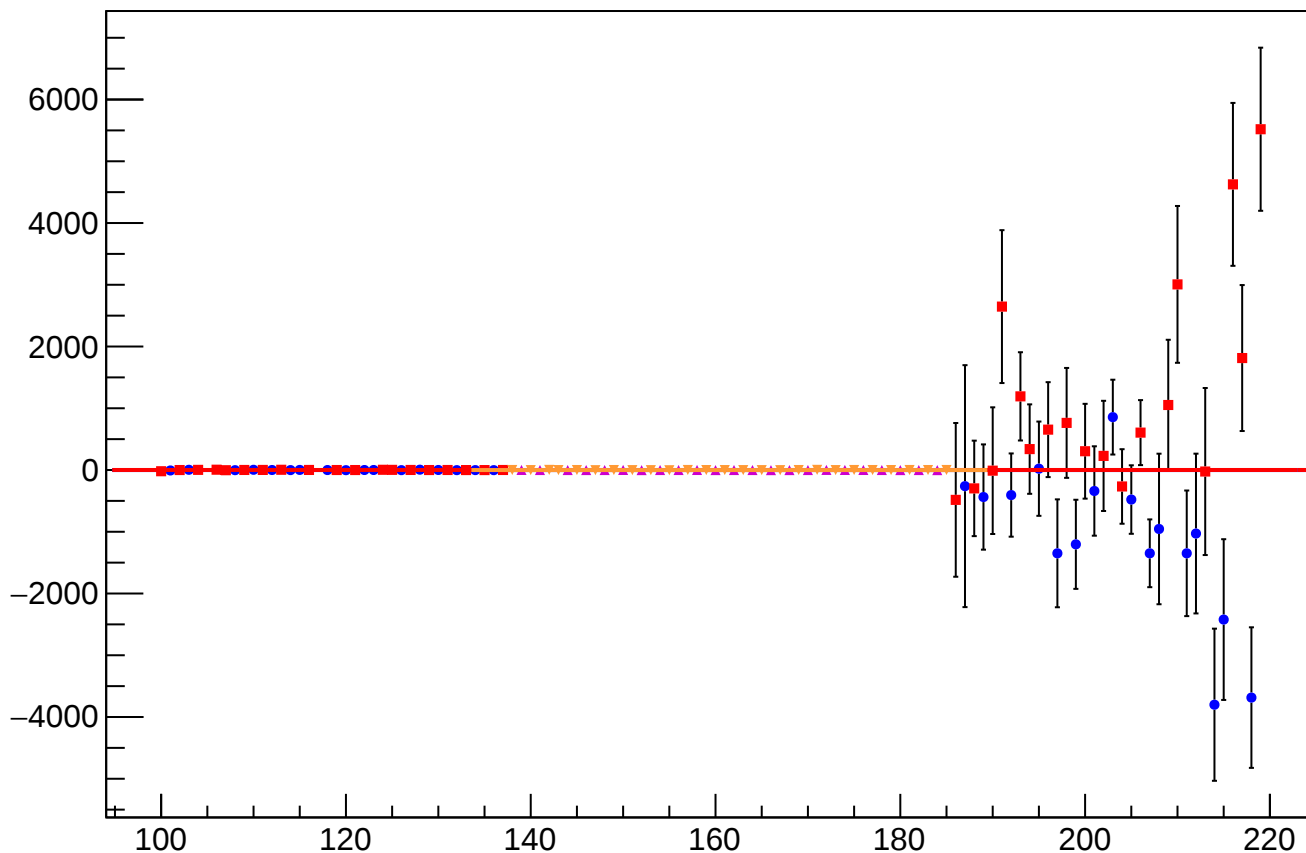
Right:  $9.958 \pm 0.004$   $\chi^2/\text{NDF}: 67864237.3/67$

In:  $10.338 \pm 0.007$   $\chi^2/\text{NDF}: 67554736.5/54$

Out:  $10.226 \pm 0.006$   $\chi^2/\text{NDF}: 71068251.1/60$

All:  $10.278 \pm 0.004$   $\chi^2/\text{NDF}: 138623145.0/131$

# diff\_cav4cX\_mean vs Slug, Sign Corrected



Right In:  $-0.718 \pm 0.483$   $\chi^2/\text{NDF}$ : 64.0/32

Left Out:  $-0.775 \pm 0.165$   $\chi^2/\text{NDF}$ : 58.5/24

Right Out:  $0.642 \pm 0.501$   $\chi^2/\text{NDF}$ : 62.8/36

Left In:  $0.018 \pm 0.171$   $\chi^2/\text{NDF}$ : 29.4/22

Left:  $-0.393 \pm 0.119$   $\chi^2/\text{NDF}$ : 99.1/47

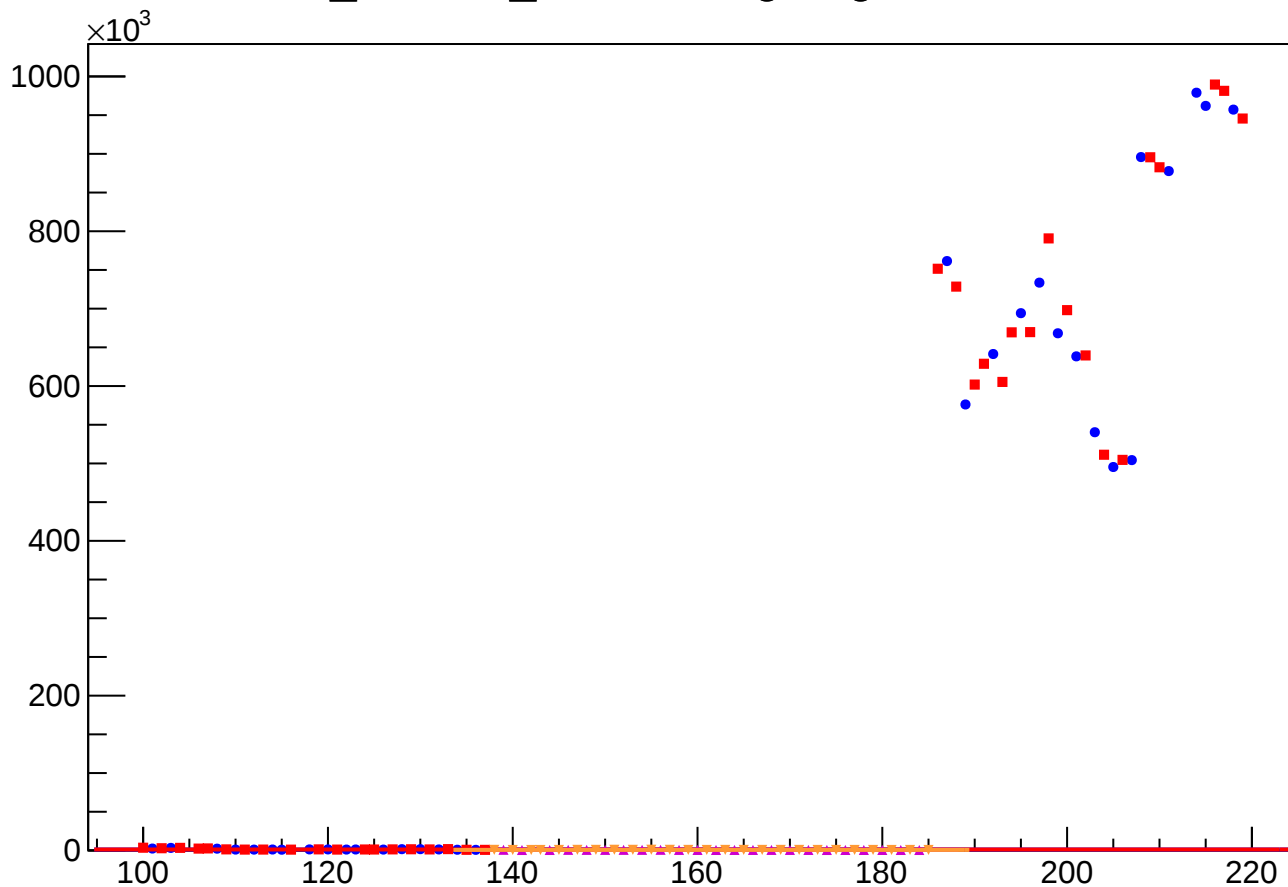
Right:  $-0.063 \pm 0.348$   $\chi^2/\text{NDF}$ : 130.6/69

In:  $-0.063 \pm 0.161$   $\chi^2/\text{NDF}$ : 95.5/55

Out:  $-0.637 \pm 0.156$   $\chi^2/\text{NDF}$ : 128.5/61

All:  $-0.359 \pm 0.112$   $\chi^2/\text{NDF}$ : 230.5/117

# diff\_cav4cX\_rms vs Slug, Sign Corrected



Right In: 1170.295 $\pm$ 0.342  $\chi^2/\text{NDF}$ : 19030163.2/31

Left Out: 700.984 $\pm$ 0.116  $\chi^2/\text{NDF}$ : 392855.4/24

Right Out: 1251.310 $\pm$ 0.355  $\chi^2/\text{NDF}$ : 19395338.9/35

Left In: 706.971 $\pm$ 0.121  $\chi^2/\text{NDF}$ : 332011.4/22

Left: 703.867 $\pm$ 0.084  $\chi^2/\text{NDF}$ : 726141.0/47

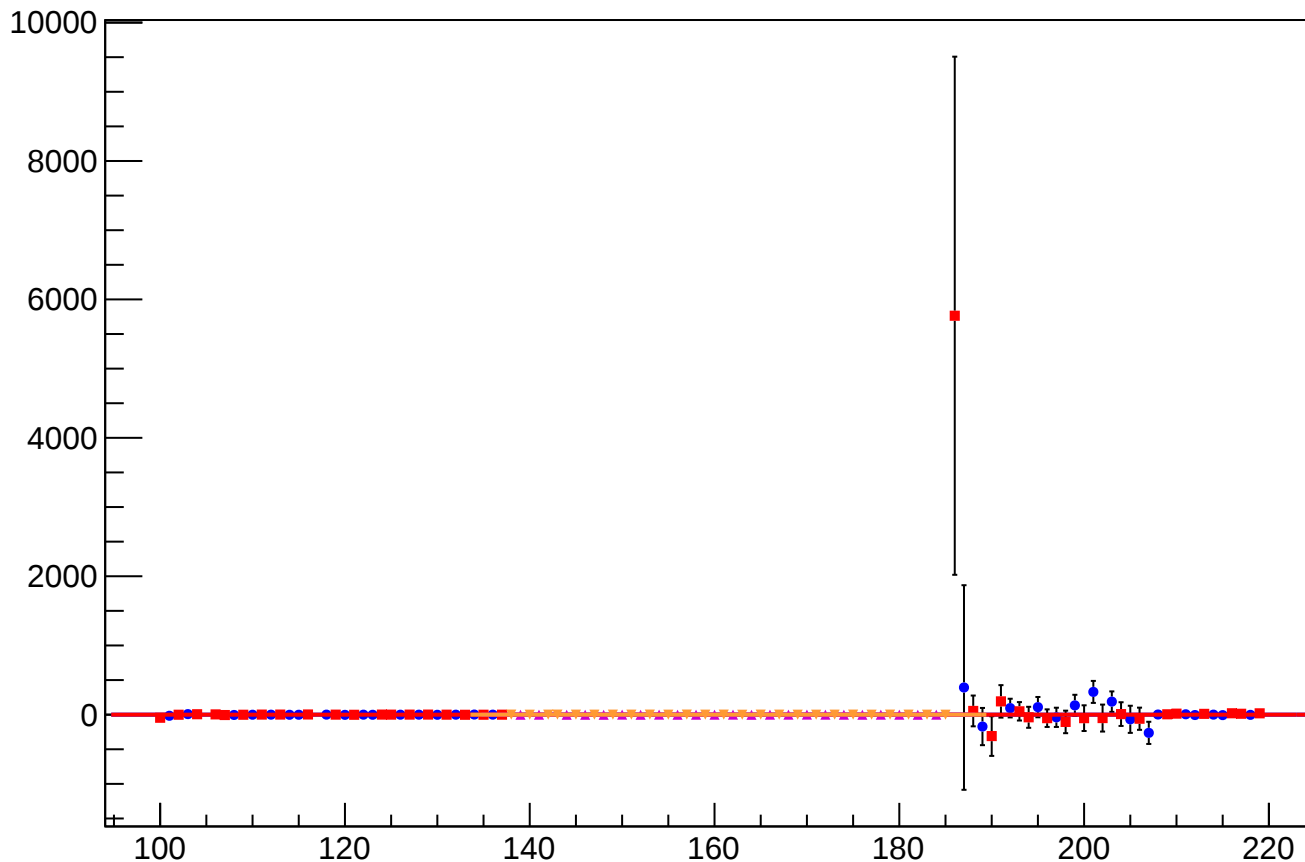
Right: 1209.293 $\pm$ 0.246  $\chi^2/\text{NDF}$ : 38452574.8/67

In: 758.435 $\pm$ 0.114  $\chi^2/\text{NDF}$ : 20997302.8/54

Out: 754.493 $\pm$ 0.111  $\chi^2/\text{NDF}$ : 21962620.8/60

All: 756.406 $\pm$ 0.079  $\chi^2/\text{NDF}$ : 42960540.5/11

# diff\_cav4cY\_mean vs Slug, Sign Corrected



Right In:  $-0.072 \pm 0.267$   $\chi^2/\text{NDF}$ : 33.8/32

Left Out:  $0.233 \pm 0.123$   $\chi^2/\text{NDF}$ : 18.0/24

Right Out:  $-0.059 \pm 0.262$   $\chi^2/\text{NDF}$ : 78.0/36

Left In:  $-0.126 \pm 0.126$   $\chi^2/\text{NDF}$ : 35.0/22

Left:  $0.059 \pm 0.088$   $\chi^2/\text{NDF}$ : 57.1/47

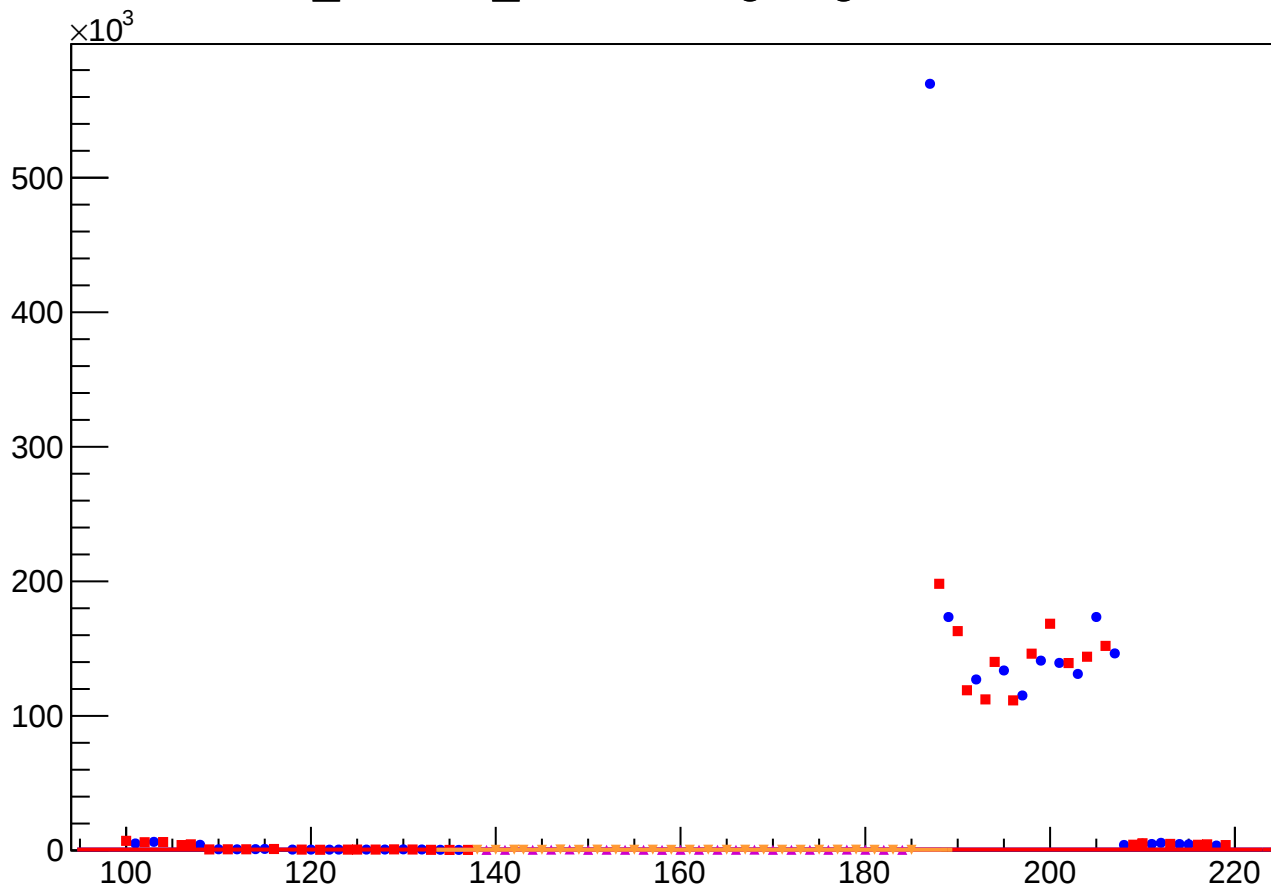
Right:  $-0.065 \pm 0.187$   $\chi^2/\text{NDF}$ : 111.8/69

In:  $-0.116 \pm 0.114$   $\chi^2/\text{NDF}$ : 68.8/55

Out:  $0.181 \pm 0.111$   $\chi^2/\text{NDF}$ : 97.0/61

All:  $0.036 \pm 0.080$   $\chi^2/\text{NDF}$ : 169.2/117

# diff\_cav4cY\_rms vs Slug, Sign Corrected



Right In: 671.503+/-0.189  $\chi^2/\text{NDF}$ : 23324666.8/32

Left Out: 522.220+/-0.087  $\chi^2/\text{NDF}$ :330405.3/24

Right Out: 660.662+/-0.186  $\chi^2/\text{NDF}$ : 24822247.2/35

Left In: 520.700+/-0.089  $\chi^2/\text{NDF}$ :427720.5/22

Left: 521.481+/-0.062  $\chi^2/\text{NDF}$ : 758275.0/47

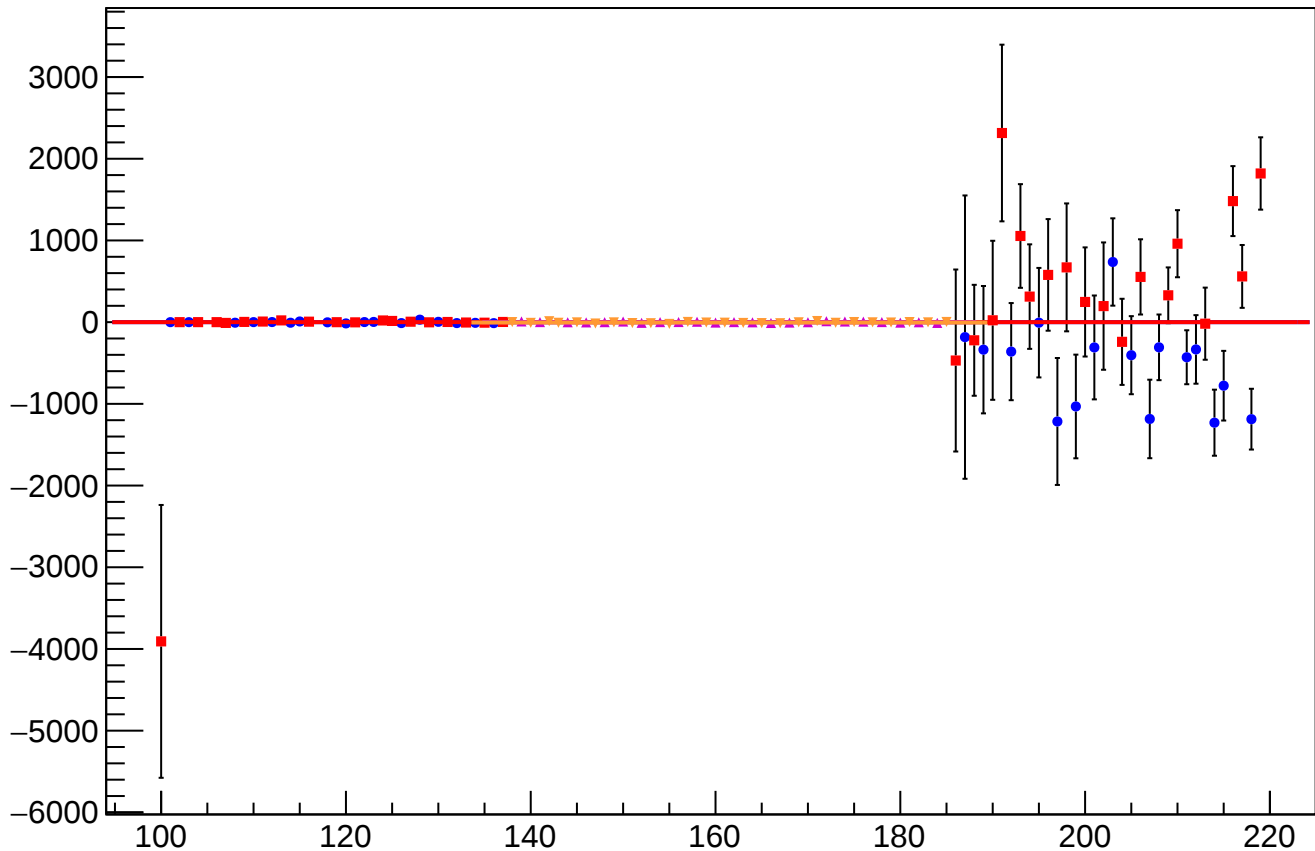
Right: 665.990+/-0.132  $\chi^2/\text{NDF}$ : 48148591.9/68

In: 548.233+/-0.081  $\chi^2/\text{NDF}$ :24274249.4/55

Out: 547.027+/-0.079  $\chi^2/\text{NDF}$ :25609589.1/60

All: 547.614+/-0.056  $\chi^2/\text{NDF}$ : 49883953.2/11

# diff\_cav4dX\_mean vs Slug, Sign Corrected



Right In:  $-0.022 \pm 0.021$   $\chi^2/\text{NDF}$ : 56.3/32

Left Out:  $-4.480 \pm 0.957$   $\chi^2/\text{NDF}$ : 58.4/24

Right Out:  $0.027 \pm 0.020$   $\chi^2/\text{NDF}$ : 66.0/36

Left In:  $0.183 \pm 0.994$   $\chi^2/\text{NDF}$ : 29.5/22

Left:  $-2.236 \pm 0.689$   $\chi^2/\text{NDF}$ : 99.3/47

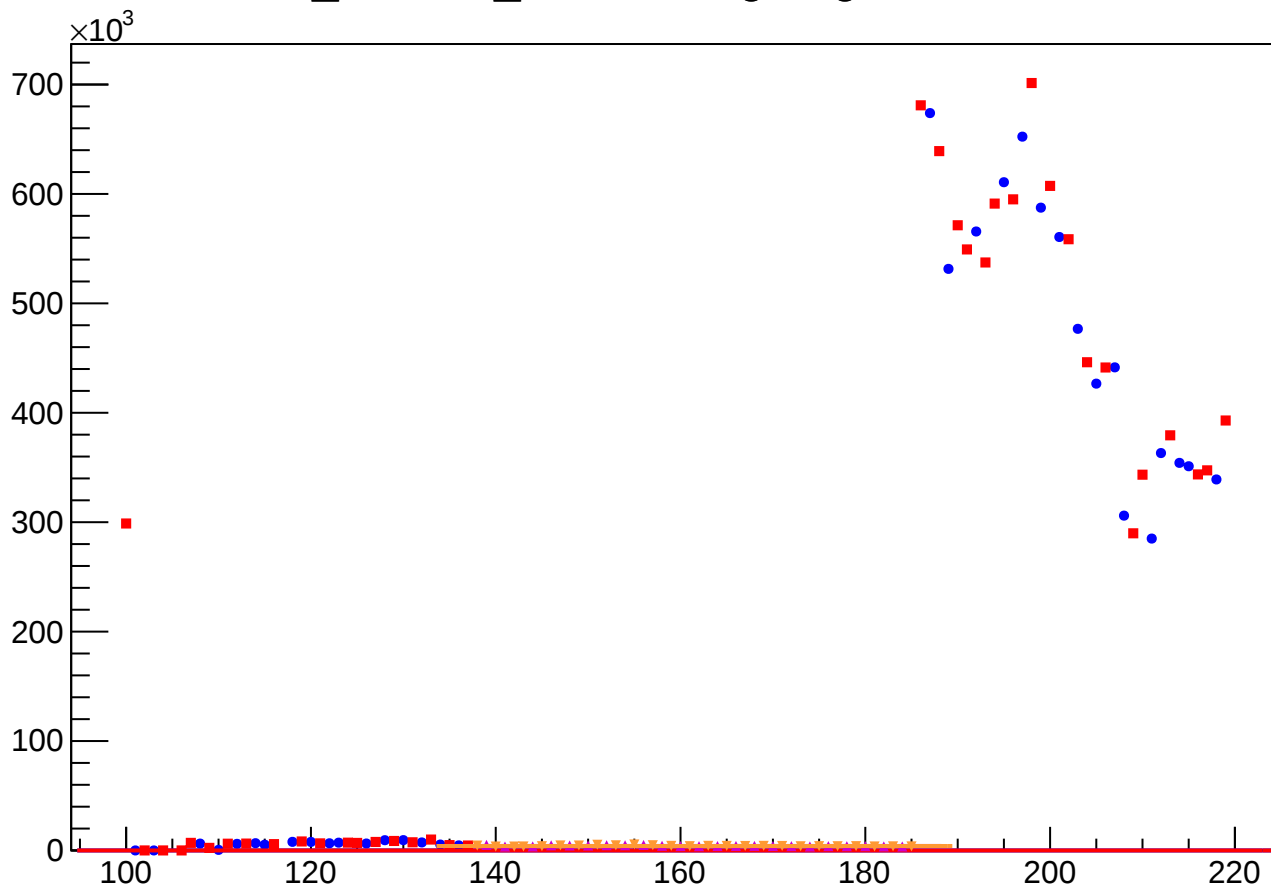
Right:  $0.004 \pm 0.014$   $\chi^2/\text{NDF}$ : 125.1/69

In:  $-0.022 \pm 0.021$   $\chi^2/\text{NDF}$ : 85.8/55

Out:  $0.025 \pm 0.020$   $\chi^2/\text{NDF}$ : 146.6/61

All:  $0.003 \pm 0.014$   $\chi^2/\text{NDF}$ : 235.0/117

# diff\_cav4dX\_rms vs Slug, Sign Corrected



Right In: 17.351+/-0.015  $\chi^2/\text{NDF}$ : 33419460.6/32

Left Out: 4075.147+/-0.677  $\chi^2/\text{NDF}$ :417511.0/24

Right Out: 17.278+/-0.014  $\chi^2/\text{NDF}$ : 35504248.8/36

Left In: 4113.993+/-0.703  $\chi^2/\text{NDF}$ :349160.6/22

Left: 4093.835+/-0.488  $\chi^2/\text{NDF}$ : 768256.5/47

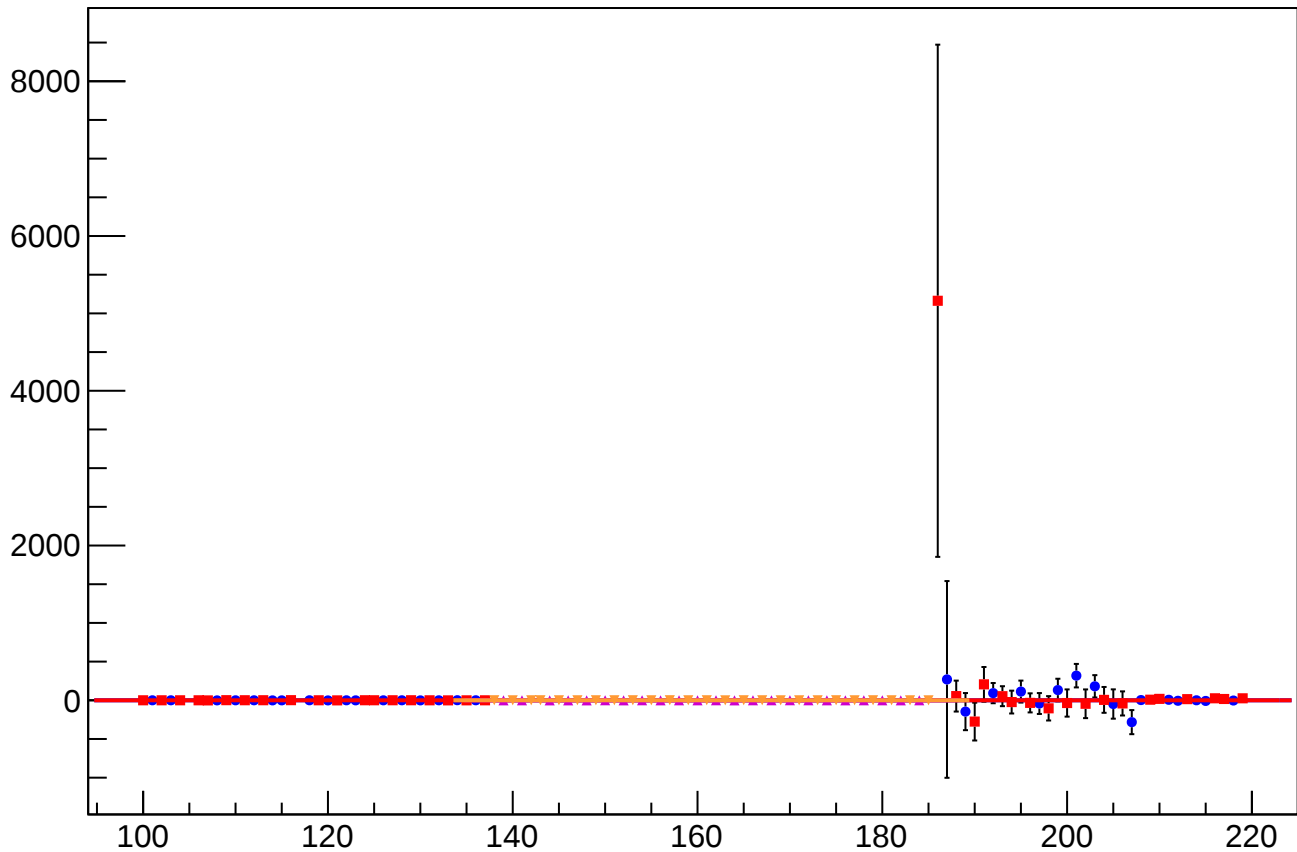
Right: 17.312+/-0.010  $\chi^2/\text{NDF}$ : 68923722.2/69

In: 19.143+/-0.015  $\chi^2/\text{NDF}$ :67721807.0/55

Out: 19.010+/-0.014  $\chi^2/\text{NDF}$ :71857121.1/61

All: 19.073+/-0.010  $\chi^2/\text{NDF}$ : 139578970.9/11

# diff\_cav4dY\_mean vs Slug, Sign Corrected



Right In: 0.000 $\pm$ 0.002  $\chi^2$ /NDF: 29.0/32

Left Out: 0.148 $\pm$ 0.076  $\chi^2$ /NDF:17.3/24

Right Out: -0.001 $\pm$ 0.002  $\chi^2$ /NDF: 80.1/36

Left In: -0.080 $\pm$ 0.079  $\chi^2$ /NDF:34.6/22

Left: 0.038 $\pm$ 0.055  $\chi^2$ /NDF: 56.3/47

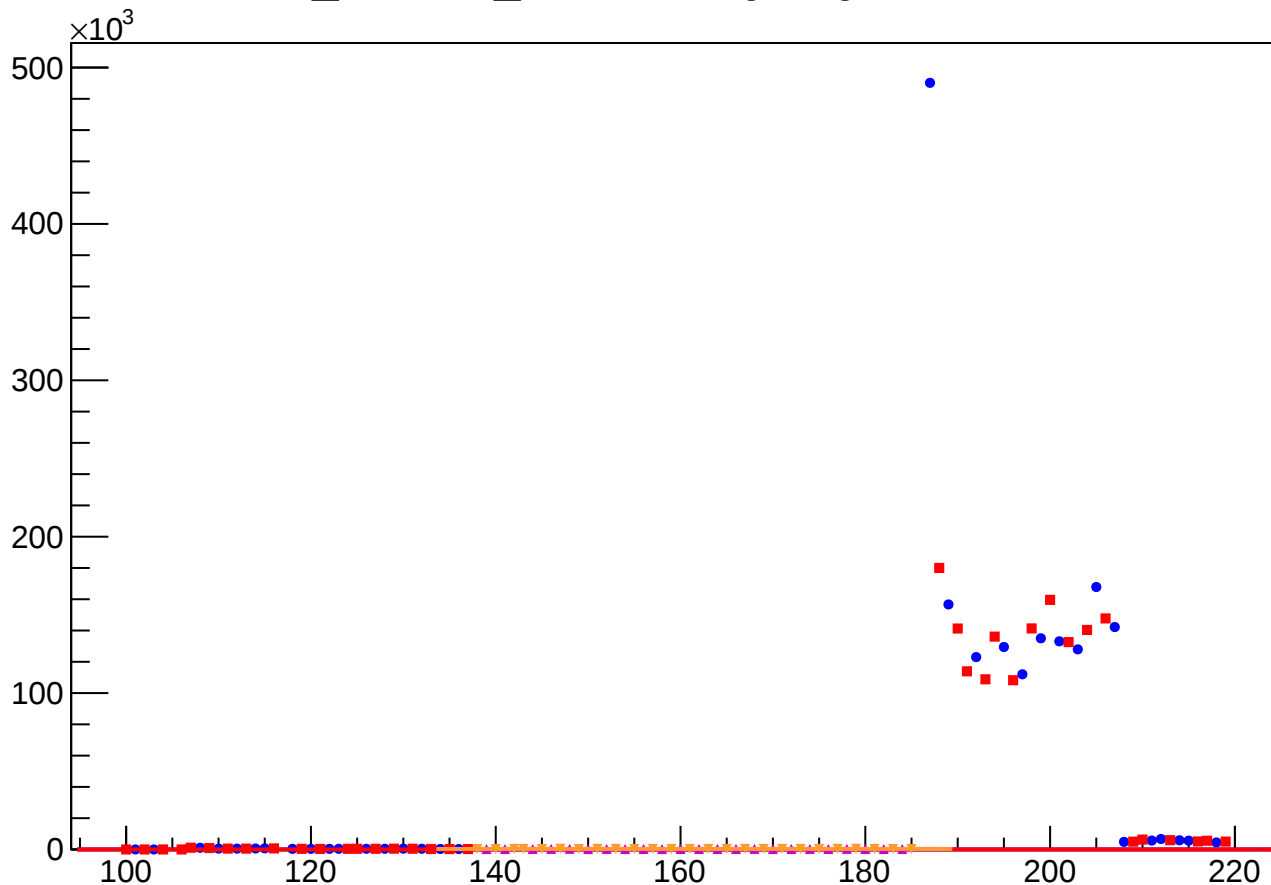
Right: -0.000 $\pm$ 0.001  $\chi^2$ /NDF: 109.2/69

In: 0.000 $\pm$ 0.002  $\chi^2$ /NDF:64.7/55

Out: -0.001 $\pm$ 0.002  $\chi^2$ /NDF:101.2/61

All: -0.000 $\pm$ 0.001  $\chi^2$ /NDF: 166.0/117

# diff\_cav4dY\_rms vs Slug, Sign Corrected



Right In:  $1.702 \pm 0.001$   $\chi^2/\text{NDF}: 33617984.4/32$

Left Out:  $325.326 \pm 0.054$   $\chi^2/\text{NDF}: 347705.2/24$

Right Out:  $1.731 \pm 0.001$   $\chi^2/\text{NDF}: 34441973.2/35$

Left In:  $325.626 \pm 0.056$   $\chi^2/\text{NDF}: 413350.0/22$

Left:  $325.471 \pm 0.039$   $\chi^2/\text{NDF}: 761070.2/47$

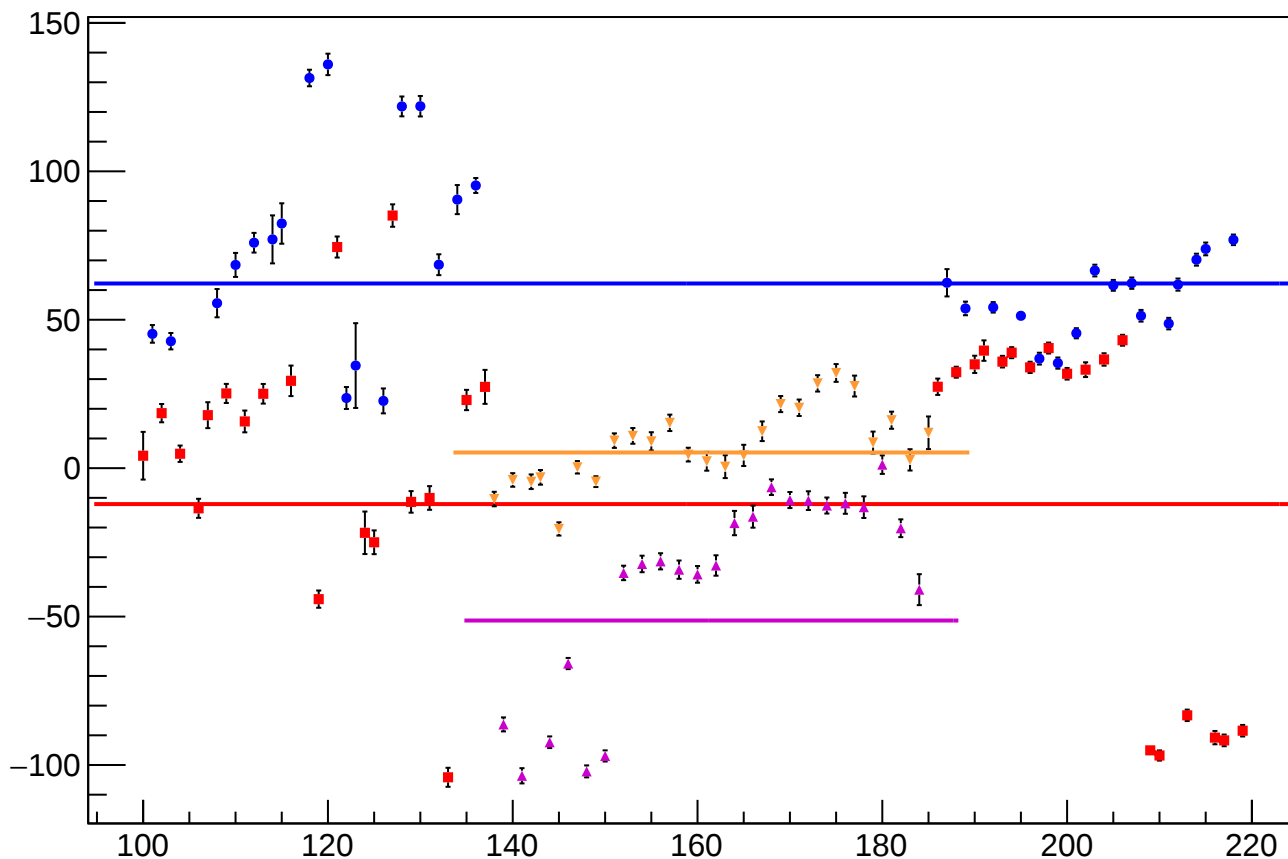
Right:  $1.718 \pm 0.001$   $\chi^2/\text{NDF}: 68060171.5/68$

In:  $1.916 \pm 0.001$   $\chi^2/\text{NDF}: 67759427.1/55$

Out:  $1.940 \pm 0.001$   $\chi^2/\text{NDF}: 70648792.5/60$

All:  $1.928 \pm 0.001$   $\chi^2/\text{NDF}: 138408363.5/116$

# diff\_bpm0i01X\_mean vs Slug, Sign Corrected



Right In:  $62.218 \pm 0.429$   $\chi^2/\text{NDF}: 2908.7/32$

Left Out:  $5.276 \pm 0.544$   $\chi^2/\text{NDF}: 556.2/24$

Right Out:  $-12.102 \pm 0.408$   $\chi^2/\text{NDF}: 21415.0/36$

Left In:  $-51.328 \pm 0.558$   $\chi^2/\text{NDF}: 4257.8/22$

Left:  $-22.298 \pm 0.390$   $\chi^2/\text{NDF}: 10084.6/47$

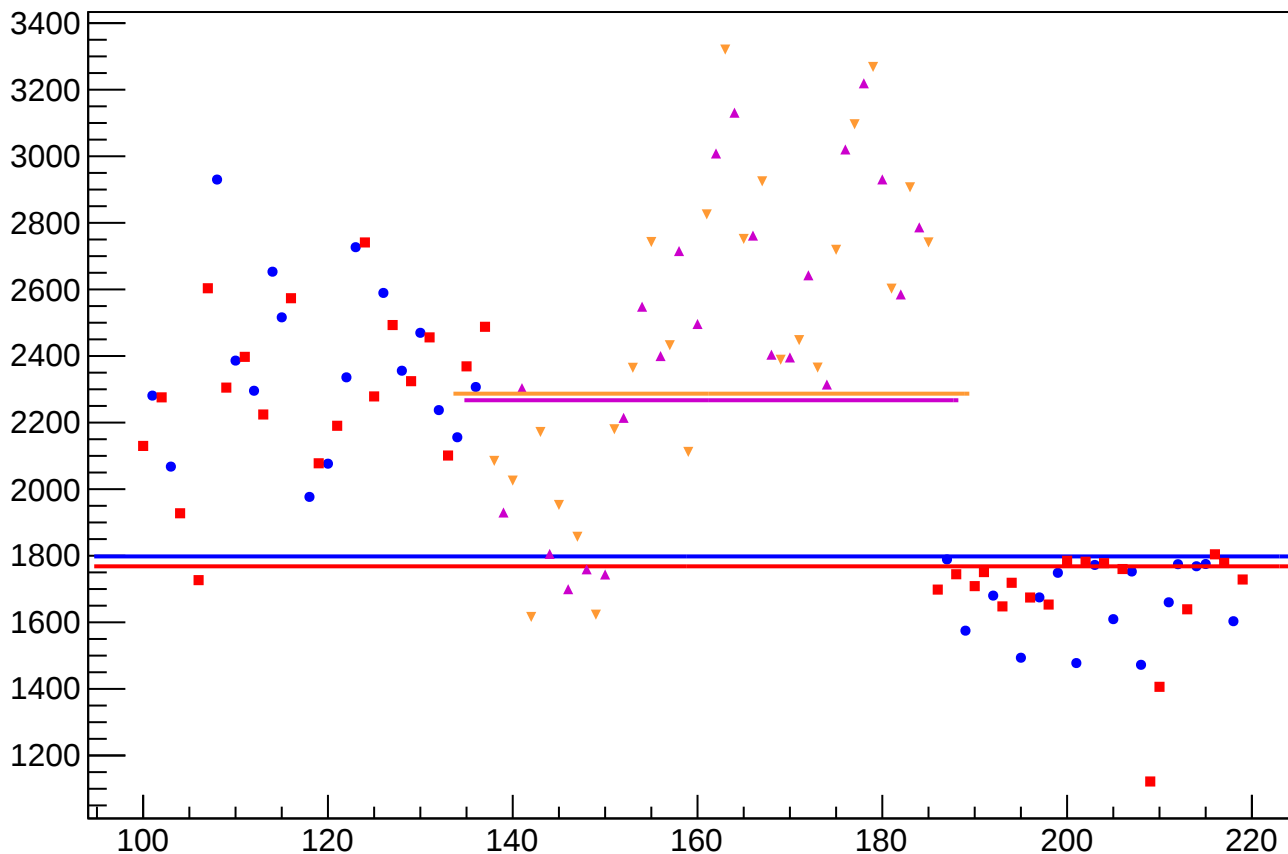
Right:  $23.190 \pm 0.296$   $\chi^2/\text{NDF}: 40078.9/69$

In:  $20.061 \pm 0.340$   $\chi^2/\text{NDF}: 33167.1/55$

Out:  $-5.848 \pm 0.326$   $\chi^2/\text{NDF}: 22624.0/61$

All:  $6.572 \pm 0.236$   $\chi^2/\text{NDF}: 58810.7/117$

# diff\_bpm0i01X\_rms vs Slug, Sign Corrected



Right In:  $1797.990 \pm 0.303$

$\chi^2/\text{NDF}$ : 999828.4/32

Left:  $2277.239 \pm 0.276$   $\chi^2/\text{NDF}$ : 2675141.7/47

Right:  $1782.347 \pm 0.209$   $\chi^2/\text{NDF}$ : 2363506.8/69

Left Out:  $2286.871 \pm 0.385$

$\chi^2/\text{NDF}$ : 1360490.8/24

In:  $1972.157 \pm 0.241$   $\chi^2/\text{NDF}$ : 3200795.3/55

Right Out:  $1768.202 \pm 0.289$

$\chi^2/\text{NDF}$ : 1358616.3/36

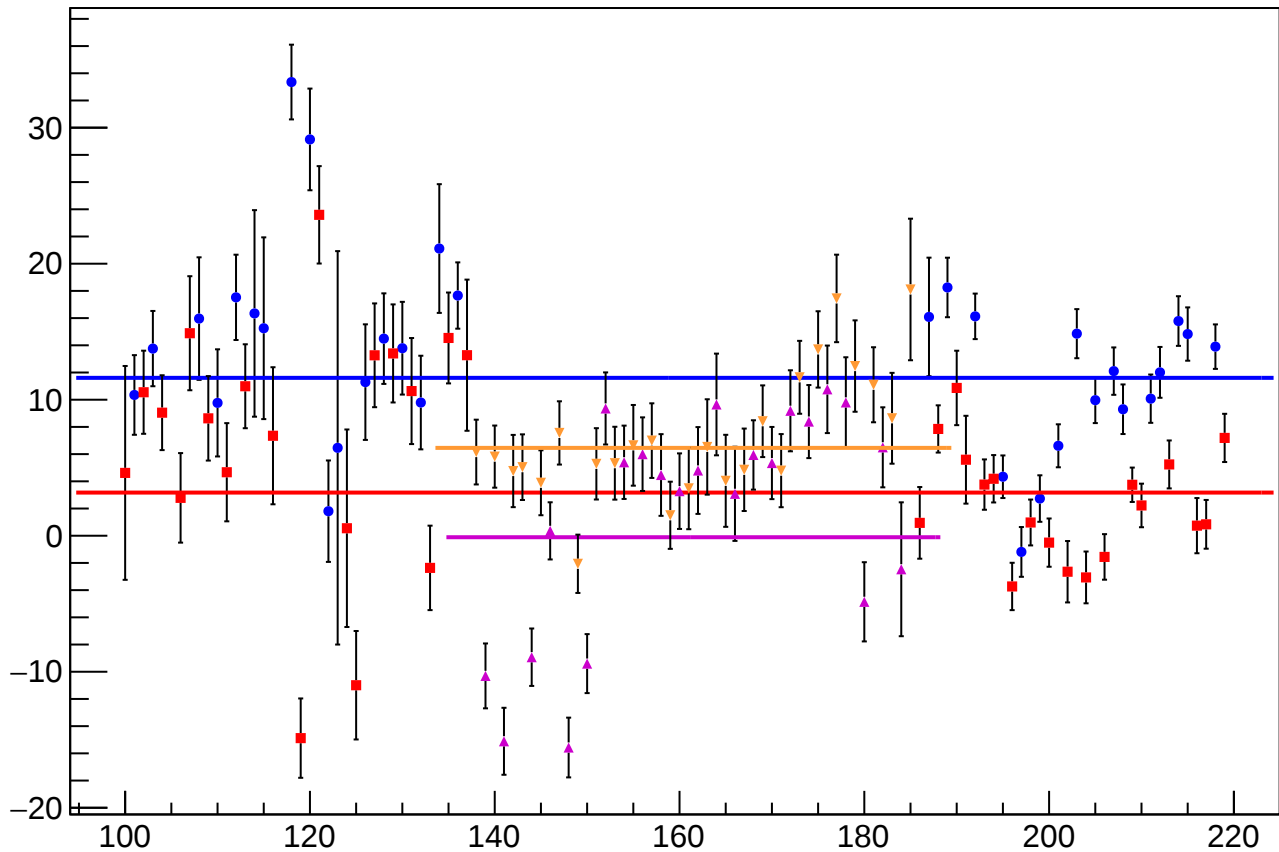
Out:  $1954.856 \pm 0.231$   $\chi^2/\text{NDF}$ : 3882161.0/61

Left In:  $2267.097 \pm 0.395$

$\chi^2/\text{NDF}$ : 1313364.4/22

All:  $1963.150 \pm 0.167$   $\chi^2/\text{NDF}$ : 7085648.9/11

# diff\_bpm0i01Y\_mean vs Slug, Sign Corrected



Right In: 11.608 $\pm$ 0.401  $\chi^2/\text{NDF}$ : 251.1/32

Left Out: 6.458 $\pm$ 0.548  $\chi^2/\text{NDF}$ : 58.7/24

Right Out: 3.173 $\pm$ 0.383  $\chi^2/\text{NDF}$ : 223.1/36

Left In: -0.110 $\pm$ 0.565  $\chi^2/\text{NDF}$ : 234.6/22

Left: 3.278 $\pm$ 0.393  $\chi^2/\text{NDF}$ : 363.0/47

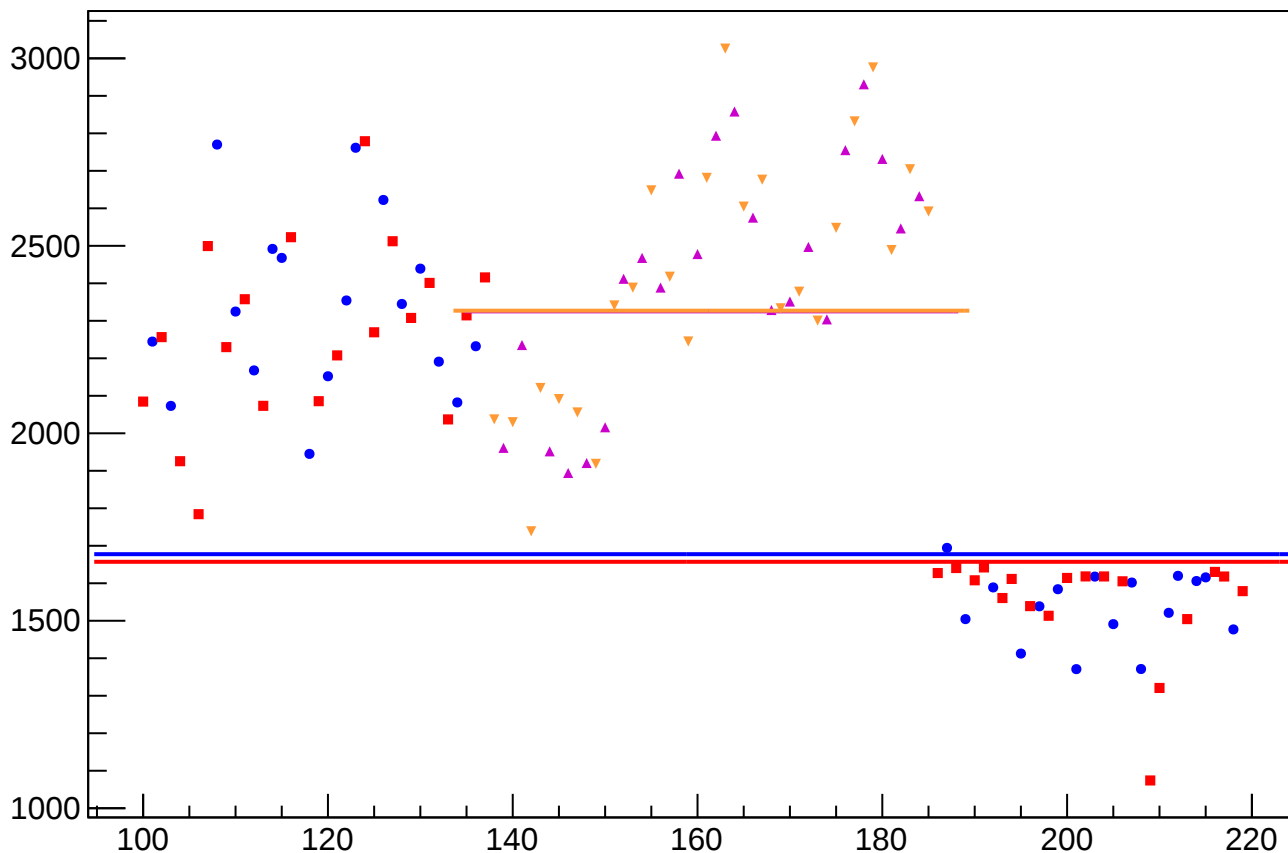
Right: 7.195 $\pm$ 0.277  $\chi^2/\text{NDF}$ : 705.3/69

In: 7.679 $\pm$ 0.327  $\chi^2/\text{NDF}$ : 771.4/55

Out: 4.253 $\pm$ 0.314  $\chi^2/\text{NDF}$ : 306.1/61

All: 5.895 $\pm$ 0.227  $\chi^2/\text{NDF}$ : 1134.6/117

# diff\_bpm0i01Y\_rms vs Slug, Sign Corrected



Right In:  $1677.595 \pm 0.284$   $\chi^2/\text{NDF}: 1265181.6/32$

Left Out:  $2327.044 \pm 0.387$   $\chi^2/\text{NDF}: 646706.7/24$

Right Out:  $1657.283 \pm 0.271$   $\chi^2/\text{NDF}: 1563136.8/36$

Left In:  $2325.175 \pm 0.400$   $\chi^2/\text{NDF}: 610729.2/22$

Left:  $2326.139 \pm 0.278$   $\chi^2/\text{NDF}: 1257447.2/47$

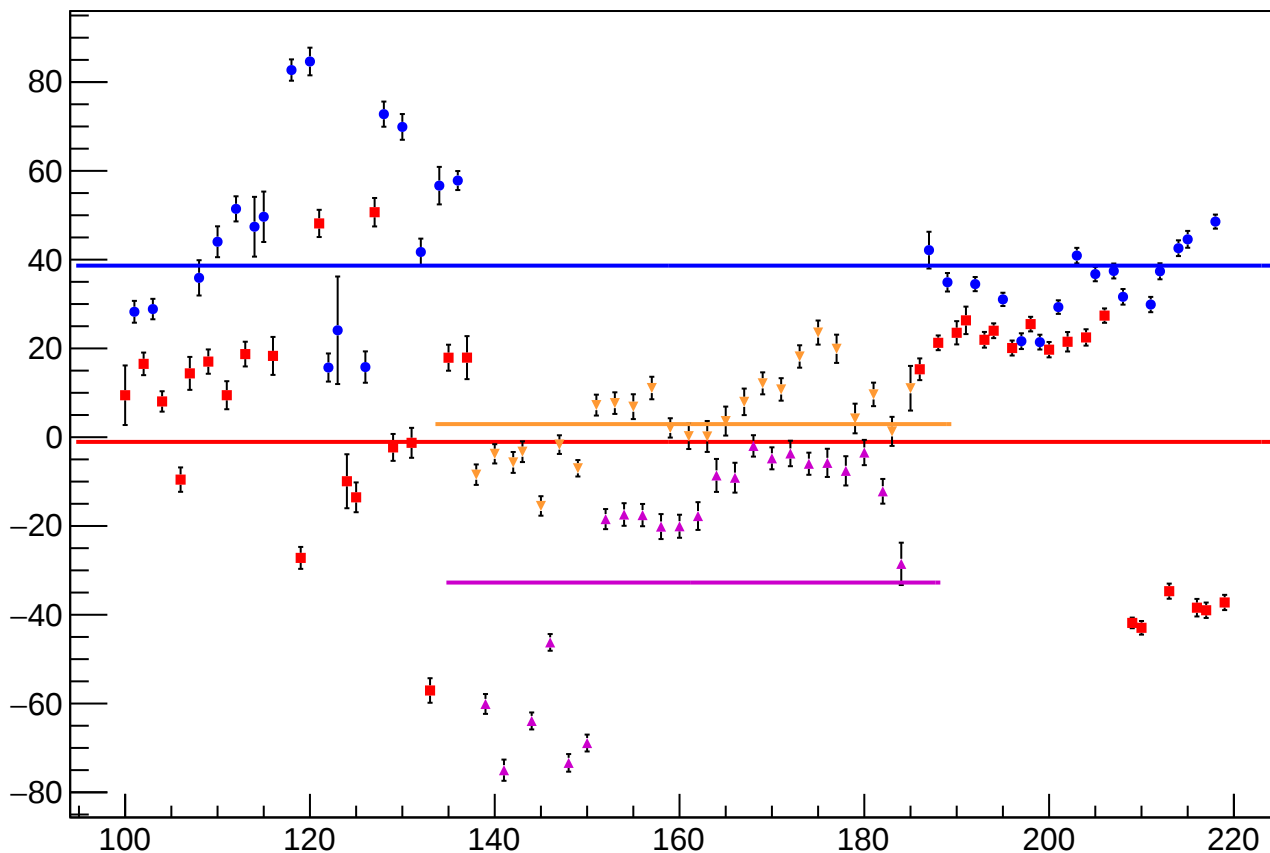
Right:  $1666.969 \pm 0.196$   $\chi^2/\text{NDF}: 2830997.7/69$

In:  $1894.729 \pm 0.231$   $\chi^2/\text{NDF}: 3621351.8/55$

Out:  $1877.477 \pm 0.222$   $\chi^2/\text{NDF}: 4218386.0/61$

All:  $1885.746 \pm 0.160$   $\chi^2/\text{NDF}: 7842632.1/11$

# diff\_bpm0i01aX\_mean vs Slug, Sign Corrected



Right In:  $38.653 \pm 0.377$   $\chi^2/\text{NDF}: 1446.5/32$

Left Out:  $2.952 \pm 0.512$   $\chi^2/\text{NDF}: 337.8/24$

Right Out:  $-1.058 \pm 0.359$   $\chi^2/\text{NDF}: 6829.4/36$

Left In:  $-32.745 \pm 0.526$   $\chi^2/\text{NDF}: 2632.5/22$

Left:  $-14.409 \pm 0.367$   $\chi^2/\text{NDF}: 5335.1/47$

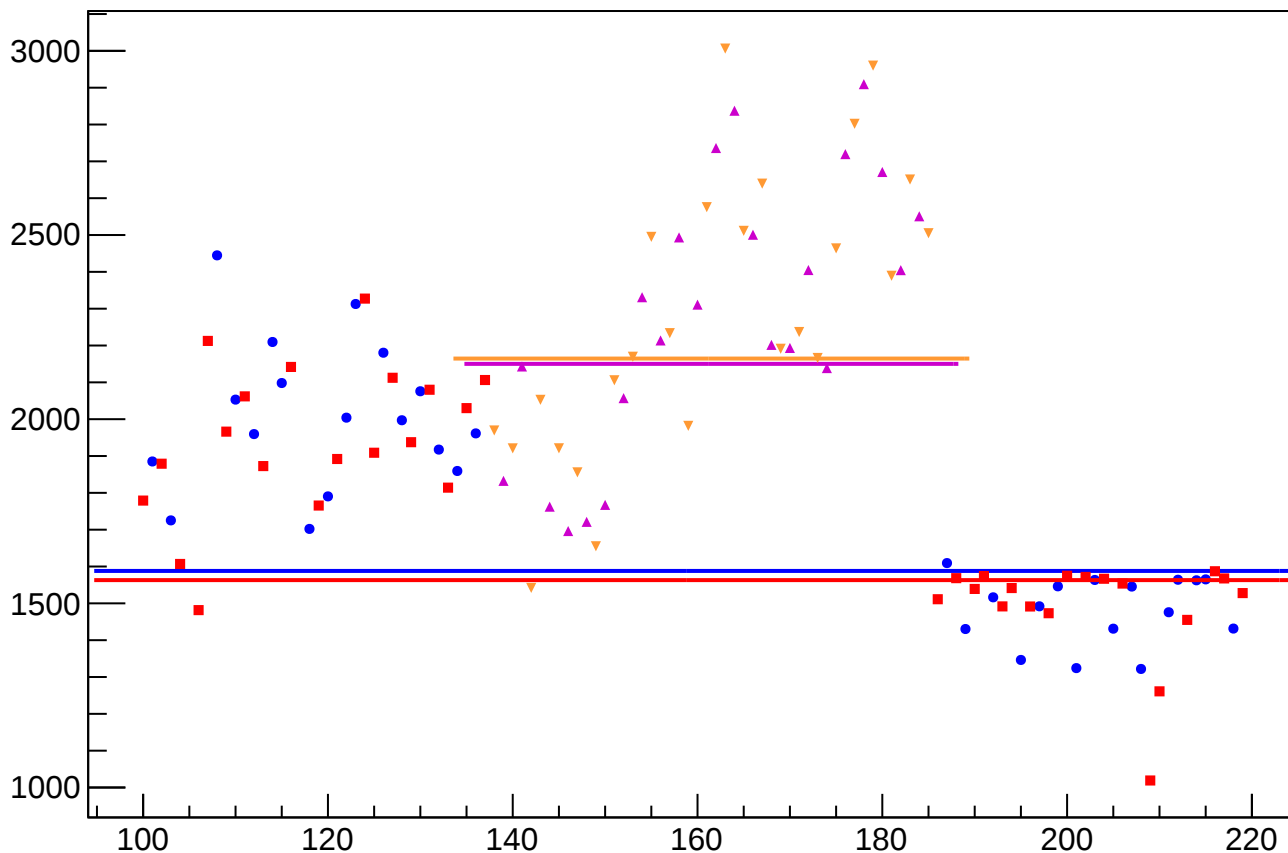
Right:  $17.819 \pm 0.260$   $\chi^2/\text{NDF}: 14084.8/69$

In:  $14.397 \pm 0.307$   $\chi^2/\text{NDF}: 16238.8/55$

Out:  $0.265 \pm 0.294$   $\chi^2/\text{NDF}: 7208.3/61$

All:  $7.035 \pm 0.212$   $\chi^2/\text{NDF}: 24553.4/117$

# diff\_bpm0i01aX\_rms vs Slug, Sign Corrected



Right In: 1588.006 $\pm$ 0.267  $\chi^2$ /NDF: 764170.0/32

Left Out: 2164.573 $\pm$ 0.362  $\chi^2$ /NDF: 965603.5/24

Right Out: 1563.073 $\pm$ 0.254  $\chi^2$ /NDF: 1081993.7/36

Left In: 2150.190 $\pm$ 0.372  $\chi^2$ /NDF: 911849.7/22

Left: 2157.578 $\pm$ 0.259  $\chi^2$ /NDF: 1878220.9/47

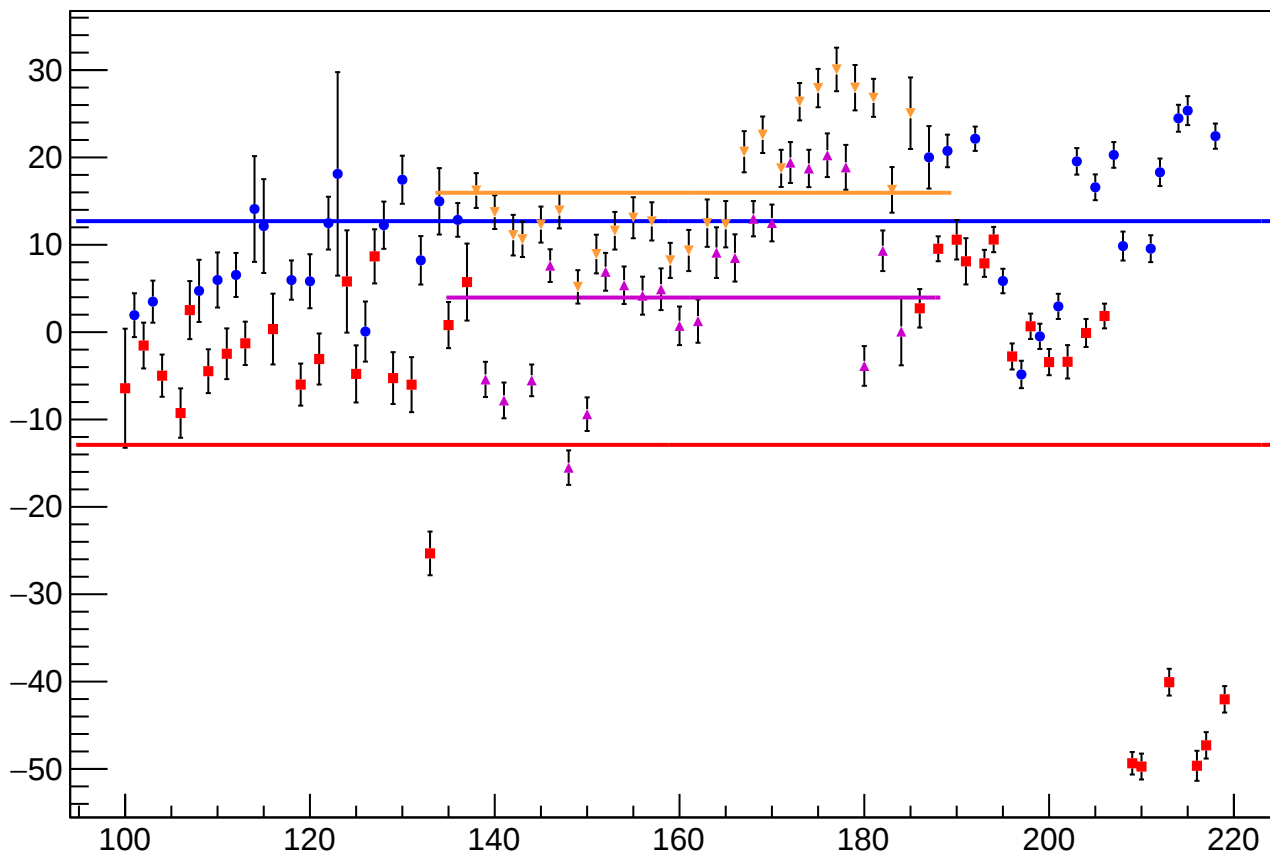
Right: 1574.925 $\pm$ 0.184  $\chi^2$ /NDF: 1850743.6/69

In: 1778.995 $\pm$ 0.217  $\chi^2$ /NDF: 3183799.9/55

Out: 1761.535 $\pm$ 0.208  $\chi^2$ /NDF: 3897711.9/61

All: 1769.899 $\pm$ 0.150  $\chi^2$ /NDF: 7084889.7/11

# diff\_bpm0i01aY\_mean vs Slug, Sign Corrected



Right In: 12.708 $\pm$ 0.342  $\chi^2$ /NDF: 664.5/32

Left Out: 15.956 $\pm$ 0.447  $\chi^2$ /NDF:245.2/24

Right Out: -12.903 $\pm$ 0.328  $\chi^2$ /NDF: 4636.0/36

Left In: 3.960 $\pm$ 0.463  $\chi^2$ /NDF:464.9/22

Left: 10.161 $\pm$ 0.322  $\chi^2$ /NDF: 1057.3/47

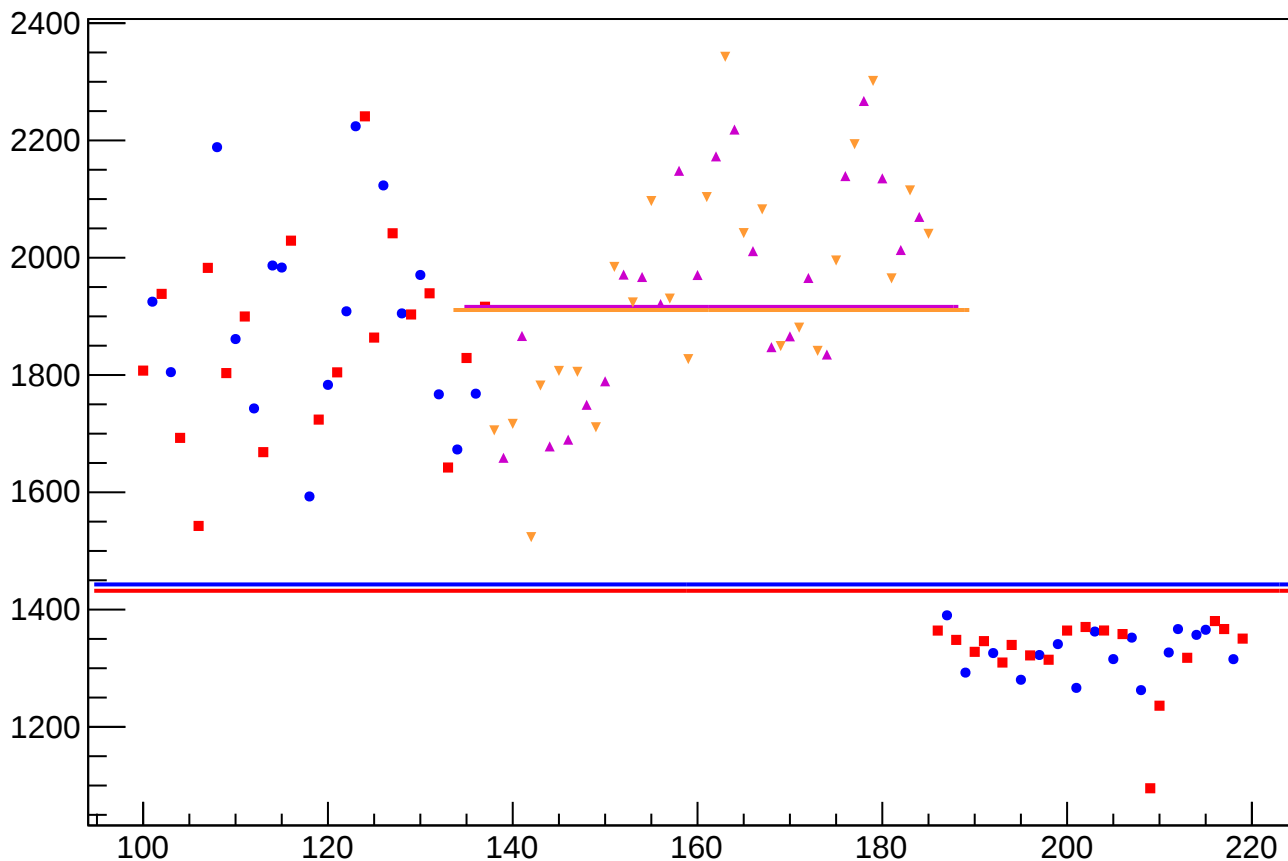
Right: -0.645 $\pm$ 0.237  $\chi^2$ /NDF: 8218.4/69

In: 9.614 $\pm$ 0.275  $\chi^2$ /NDF:1360.3/55

Out: -2.814 $\pm$ 0.265  $\chi^2$ /NDF:7587.3/61

All: 3.154 $\pm$ 0.191  $\chi^2$ /NDF: 10007.5/117

# diff\_bpm0i01aY\_rms vs Slug, Sign Corrected



Right In: 1442.902 $\pm$ 0.242  $\chi^2$ /NDF: 897893.7/32

Left Out: 1910.859 $\pm$ 0.316  $\chi^2$ /NDF: 328970.6/24

Right Out: 1432.077 $\pm$ 0.232  $\chi^2$ /NDF: 986041.3/36

Left In: 1916.159 $\pm$ 0.327  $\chi^2$ /NDF: 274285.3/22

Left: 1913.419 $\pm$ 0.227  $\chi^2$ /NDF: 603391.5/47

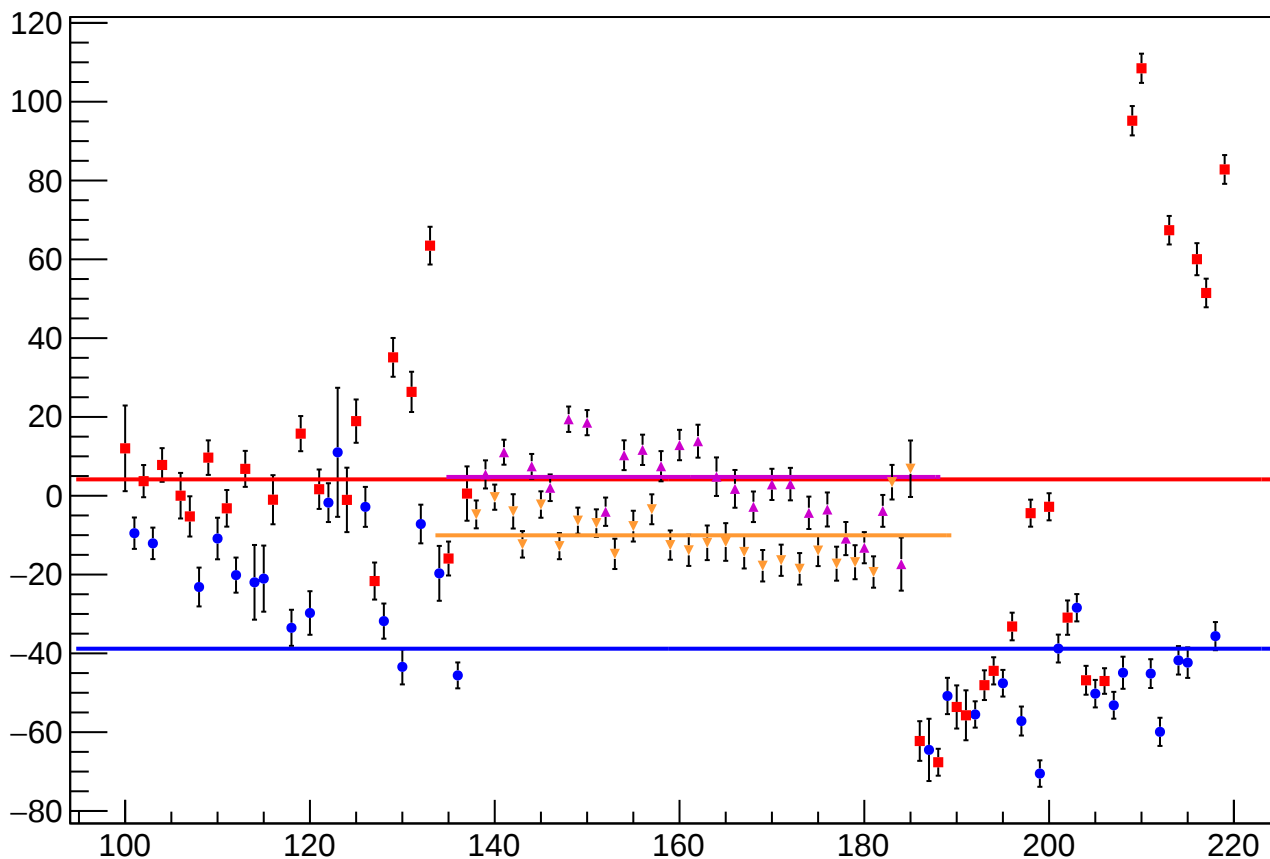
Right: 1437.258 $\pm$ 0.167  $\chi^2$ /NDF: 1884977.7/69

In: 1610.263 $\pm$ 0.195  $\chi^2$ /NDF: 2523823.6/55

Out: 1599.453 $\pm$ 0.187  $\chi^2$ /NDF: 2804686.6/61

All: 1604.644 $\pm$ 0.135  $\chi^2$ /NDF: 5330114.1/111

# diff\_bpm0l01X\_mean vs Slug, Sign Corrected



Right In:  $-38.817 \pm 0.732$   $\chi^2/\text{NDF}: 582.4/32$

Left Out:  $-10.042 \pm 0.776$   $\chi^2/\text{NDF}: 67.1/24$

Right Out:  $4.155 \pm 0.709$   $\chi^2/\text{NDF}: 4642.2/36$

Left In:  $4.774 \pm 0.800$   $\chi^2/\text{NDF}: 128.5/22$

Left:  $-2.861 \pm 0.557$   $\chi^2/\text{NDF}: 372.2/47$

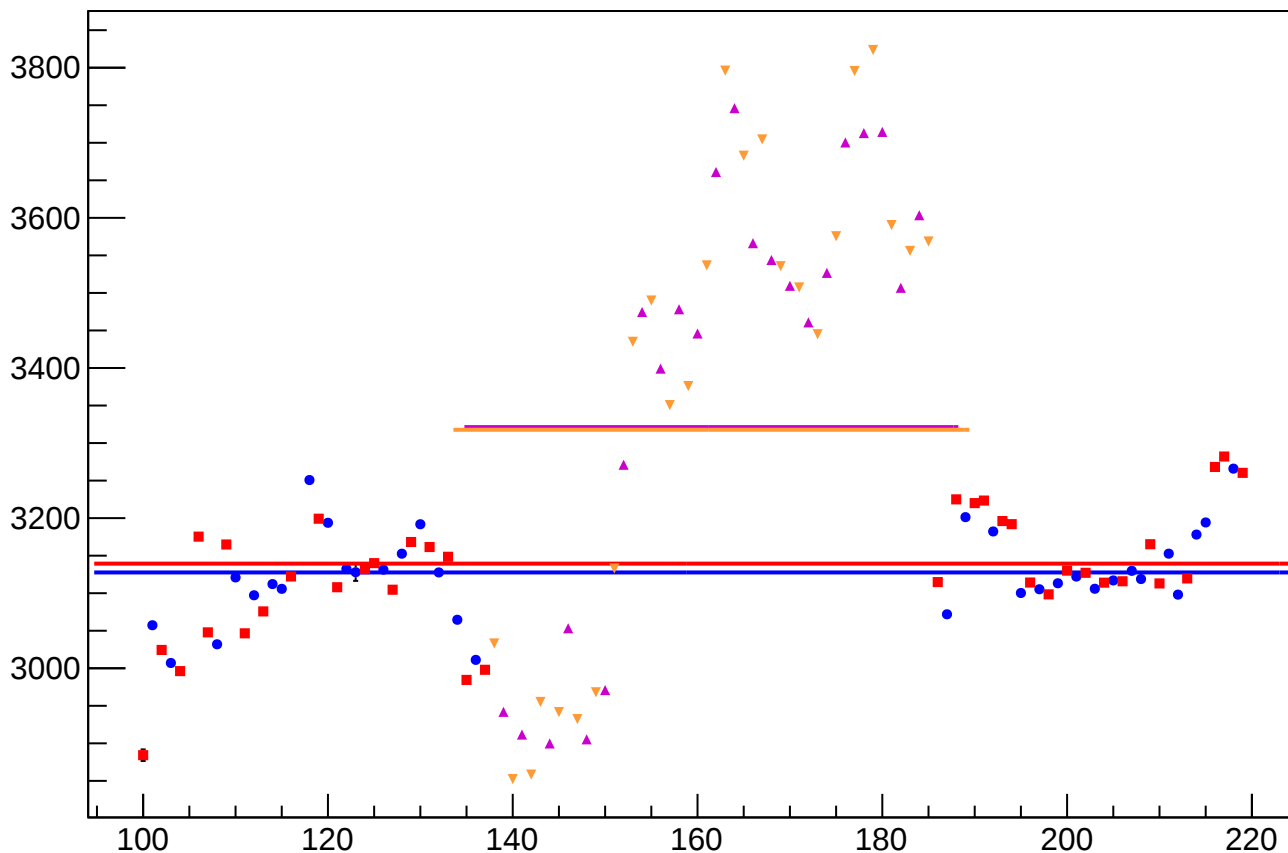
Right:  $-16.660 \pm 0.509$   $\chi^2/\text{NDF}: 7003.0/69$

In:  $-18.974 \pm 0.540$   $\chi^2/\text{NDF}: 2326.5/55$

Out:  $-2.303 \pm 0.524$   $\chi^2/\text{NDF}: 4891.6/61$

All:  $-10.381 \pm 0.376$   $\chi^2/\text{NDF}: 7709.3/117$

# diff\_bpm0l01X\_rms vs Slug, Sign Corrected



Right In: 3127.648 $\pm$ 0.517  $\chi^2$ /NDF: 13911.5/32

Left Out: 3317.699 $\pm$ 0.549  $\chi^2$ /NDF:336877.2/24

Right Out: 3139.387 $\pm$ 0.501  $\chi^2$ /NDF: 22184.1/36

Left In: 3321.275 $\pm$ 0.566  $\chi^2$ /NDF:284334.2/22

Left: 3319.432 $\pm$ 0.394  $\chi^2$ /NDF: 621232.0/47

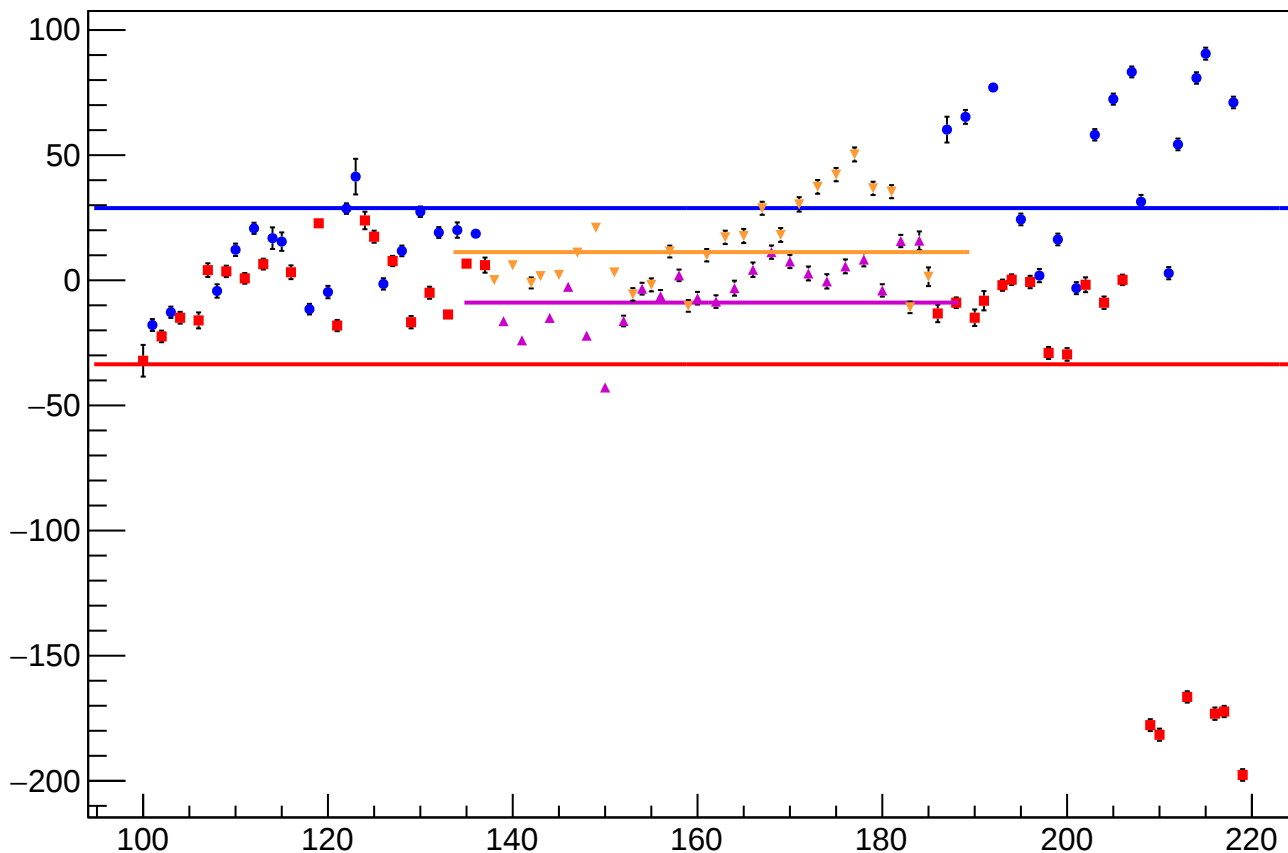
Right: 3133.701 $\pm$ 0.360  $\chi^2$ /NDF: 36361.0/69

In: 3215.788 $\pm$ 0.382  $\chi^2$ /NDF:361998.4/55

Out: 3220.499 $\pm$ 0.370  $\chi^2$ /NDF:416574.8/61

All: 3218.217 $\pm$ 0.266  $\chi^2$ /NDF: 778651.6/117

# diff\_bpm0l01Y\_mean vs Slug, Sign Corrected



Right In:  $28.847 \pm 0.411$   $\chi^2/\text{NDF}$ : 5862.2/32

Left Out:  $11.268 \pm 0.454$   $\chi^2/\text{NDF}$ : 1141.8/24

Right Out:  $-33.563 \pm 0.398$   $\chi^2/\text{NDF}$ : 28456.5/36

Left In:  $-8.905 \pm 0.478$   $\chi^2/\text{NDF}$ : 936.3/22

Left:  $1.682 \pm 0.329$   $\chi^2/\text{NDF}$ : 3014.7/47

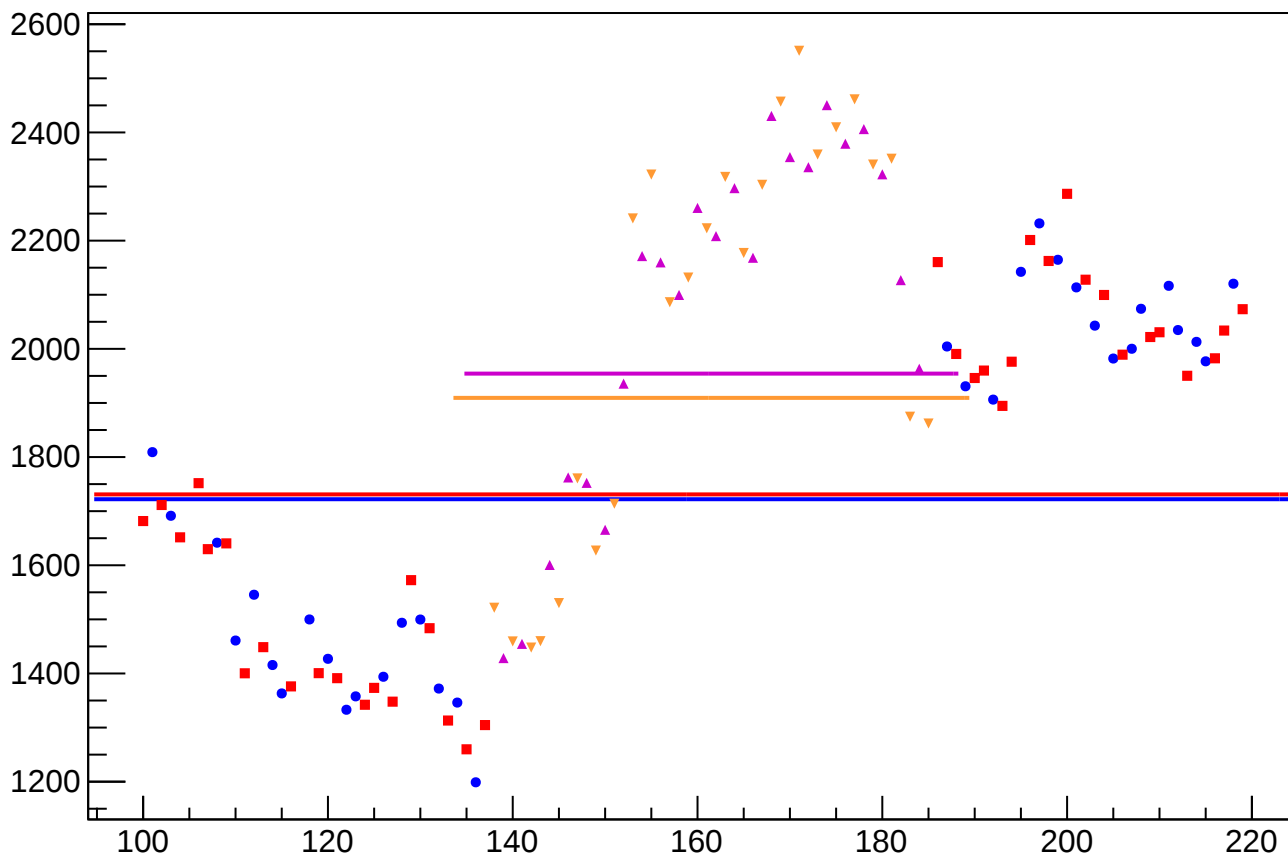
Right:  $-3.341 \pm 0.286$   $\chi^2/\text{NDF}$ : 46214.0/69

In:  $12.784 \pm 0.311$   $\chi^2/\text{NDF}$ : 10389.3/55

Out:  $-14.088 \pm 0.299$   $\chi^2/\text{NDF}$ : 35104.5/61

All:  $-1.180 \pm 0.216$   $\chi^2/\text{NDF}$ : 49361.5/117

# diff\_bpm0l01Y\_rms vs Slug, Sign Corrected



Right In:  $1722.074 \pm 0.291$   $\chi^2/\text{NDF}: 1312481.1/32$

Left Out:  $1909.387 \pm 0.321$   $\chi^2/\text{NDF}: 1398498.0/24$

Right Out:  $1730.983 \pm 0.282$   $\chi^2/\text{NDF}: 1292740.7/36$

Left In:  $1954.236 \pm 0.338$   $\chi^2/\text{NDF}: 1044826.7/22$

Left:  $1930.697 \pm 0.233$   $\chi^2/\text{NDF}: 2452584.2/47$

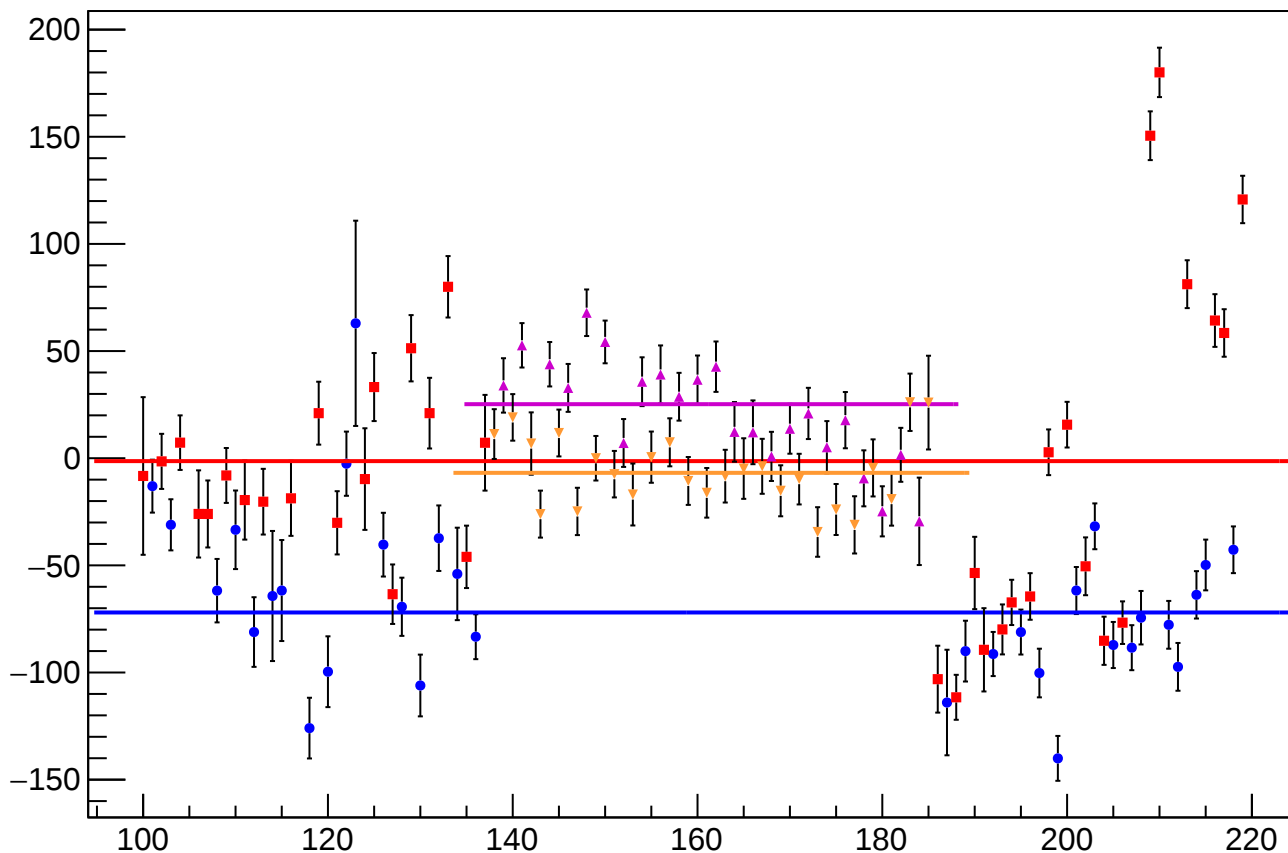
Right:  $1726.668 \pm 0.202$   $\chi^2/\text{NDF}: 2605706.6/69$

In:  $1820.855 \pm 0.220$   $\chi^2/\text{NDF}: 2628908.5/55$

Out:  $1808.484 \pm 0.212$   $\chi^2/\text{NDF}: 2865634.1/61$

All:  $1814.426 \pm 0.153$   $\chi^2/\text{NDF}: 5496182.1/11$

# diff\_bpm0l02X\_mean vs Slug, Sign Corrected



Right In:  $-71.988 \pm 2.266$   $\chi^2/\text{NDF}$ : 197.4/32

Left Out:  $-6.825 \pm 2.423$   $\chi^2/\text{NDF}$ : 42.3/24

Right Out:  $-1.357 \pm 2.198$   $\chi^2/\text{NDF}$ : 1184.2/36

Left In:  $25.215 \pm 2.487$   $\chi^2/\text{NDF}$ : 89.3/22

Left:  $8.777 \pm 1.735$   $\chi^2/\text{NDF}$ : 216.8/47

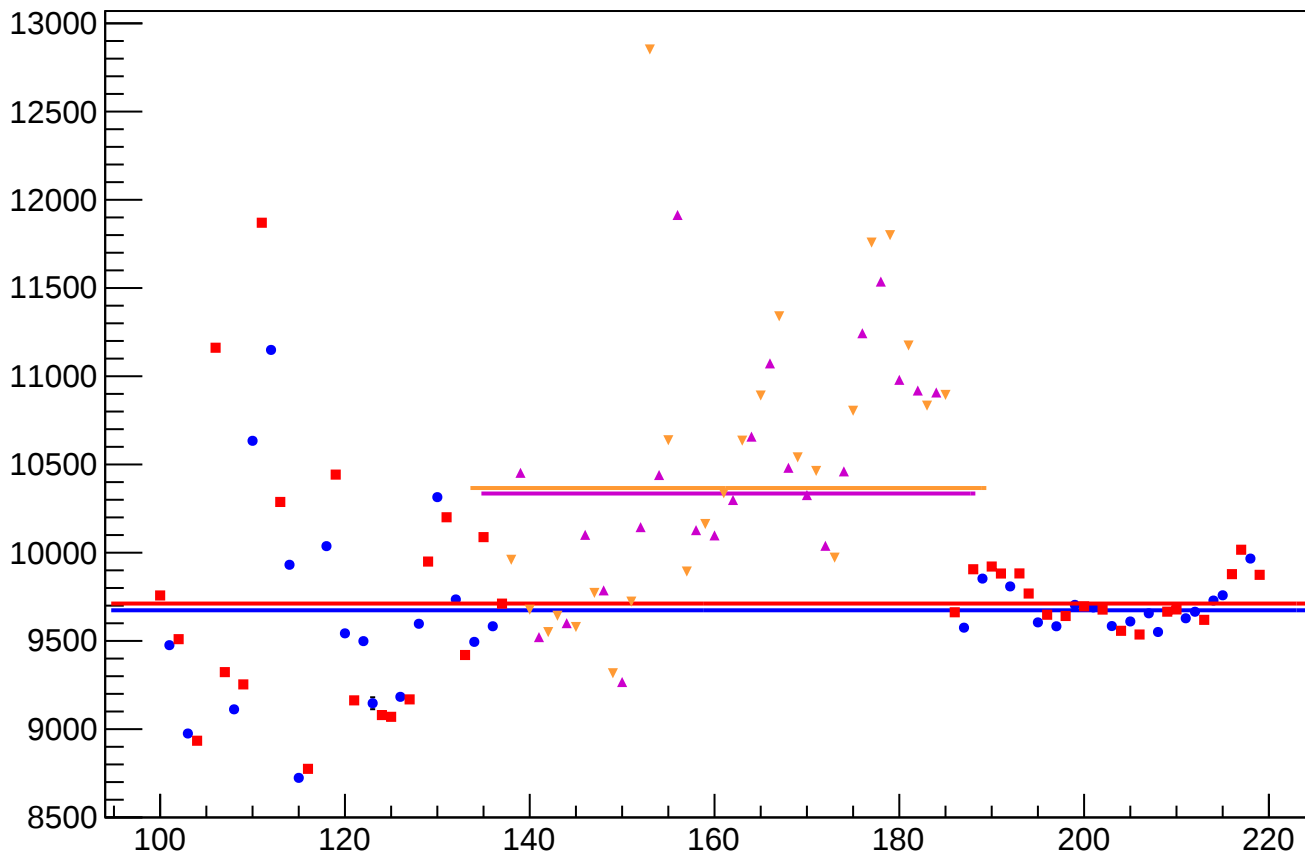
Right:  $-35.582 \pm 1.578$   $\chi^2/\text{NDF}$ : 1882.3/69

In:  $-27.880 \pm 1.675$   $\chi^2/\text{NDF}$ : 1121.4/55

Out:  $-3.825 \pm 1.628$   $\chi^2/\text{NDF}$ : 1229.4/61

All:  $-15.507 \pm 1.167$   $\chi^2/\text{NDF}$ : 2456.8/117

# diff\_bpm0l02X\_rms vs Slug, Sign Corrected



Right In: 9673.608 $\pm$ 1.603  $\chi^2/\text{NDF}$ : 47073.3/32

Left Out: 10366.534 $\pm$ 1.713  $\chi^2/\text{NDF}$ : 211402.8/24

Right Out: 9711.794 $\pm$ 1.554  $\chi^2/\text{NDF}$ : 82999.7/36

Left In: 10335.399 $\pm$ 1.758  $\chi^2/\text{NDF}$ : 127173.0/22

Left: 10351.373 $\pm$ 1.227  $\chi^2/\text{NDF}$ : 338736.7/47

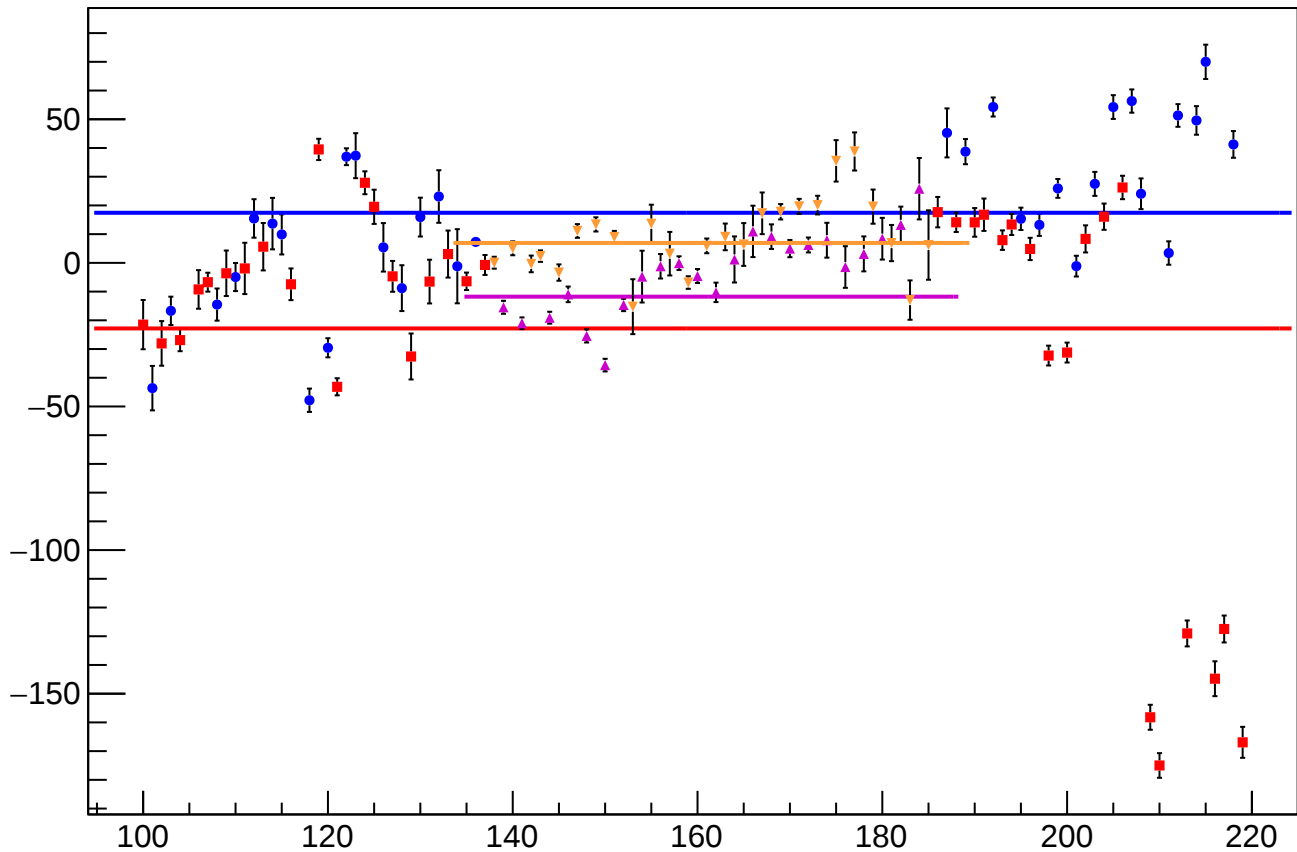
Right: 9693.291 $\pm$ 1.116  $\chi^2/\text{NDF}$ : 130365.7/69

In: 9973.915 $\pm$ 1.184  $\chi^2/\text{NDF}$ : 251626.5/55

Out: 10007.349 $\pm$ 1.151  $\chi^2/\text{NDF}$ : 374547.7/61

All: 9991.112 $\pm$ 0.825  $\chi^2/\text{NDF}$ : 626584.0/117

# diff\_bpm0l02Y\_mean vs Slug, Sign Corrected



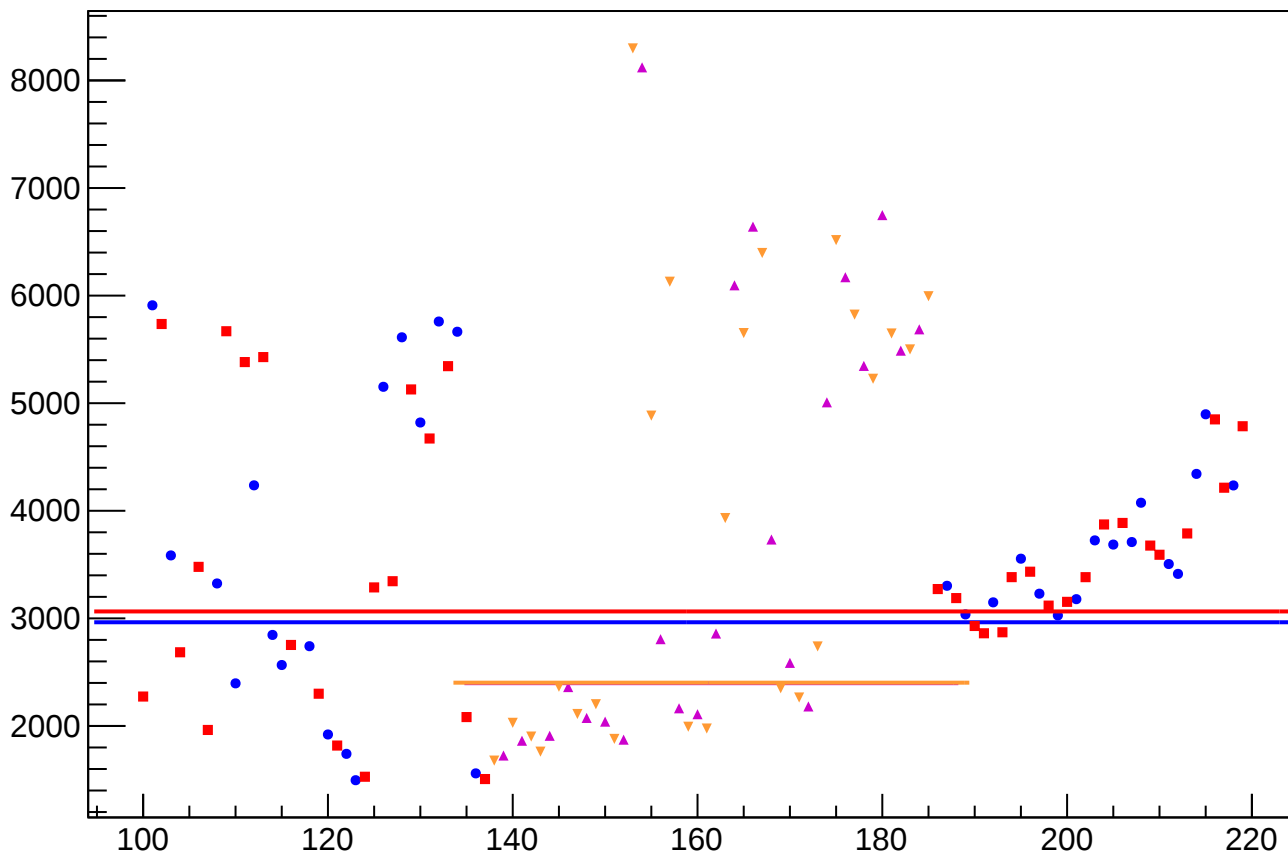
Left:  $-2.274 \pm 0.455$   $\chi^2/\text{NDF}: 1021.3/47$   
 Right:  $-2.990 \pm 0.525$   $\chi^2/\text{NDF}: 8678.5/69$

Right In:  $17.444 \pm 0.747$   $\chi^2/\text{NDF}: 1325.6/32$   
 Left Out:  $6.939 \pm 0.639$   $\chi^2/\text{NDF}: 203.8/24$   
 Right Out:  $-22.834 \pm 0.737$   $\chi^2/\text{NDF}: 5879.5/36$   
 Left In:  $-11.766 \pm 0.648$   $\chi^2/\text{NDF}: 395.1/22$

In:  $0.776 \pm 0.490$   $\chi^2/\text{NDF}: 2592.3/55$   
 Out:  $-5.841 \pm 0.483$   $\chi^2/\text{NDF}: 7016.0/61$

All:  $-2.581 \pm 0.344$   $\chi^2/\text{NDF}: 9700.8/117$

# diff\_bpm0l02Y\_rms vs Slug, Sign Corrected



Right In:  $2963.871 \pm 0.529$   $\chi^2/\text{NDF}$ : 4098972.8/32

Left Out:  $2402.359 \pm 0.452$   $\chi^2/\text{NDF}$ : 6345982.8/24

Right Out:  $3064.468 \pm 0.521$   $\chi^2/\text{NDF}$ : 3579237.2/36

Left In:  $2397.701 \pm 0.458$   $\chi^2/\text{NDF}$ : 5398920.1/22

Left:  $2400.065 \pm 0.322$   $\chi^2/\text{NDF}$ : 11744955.3/47

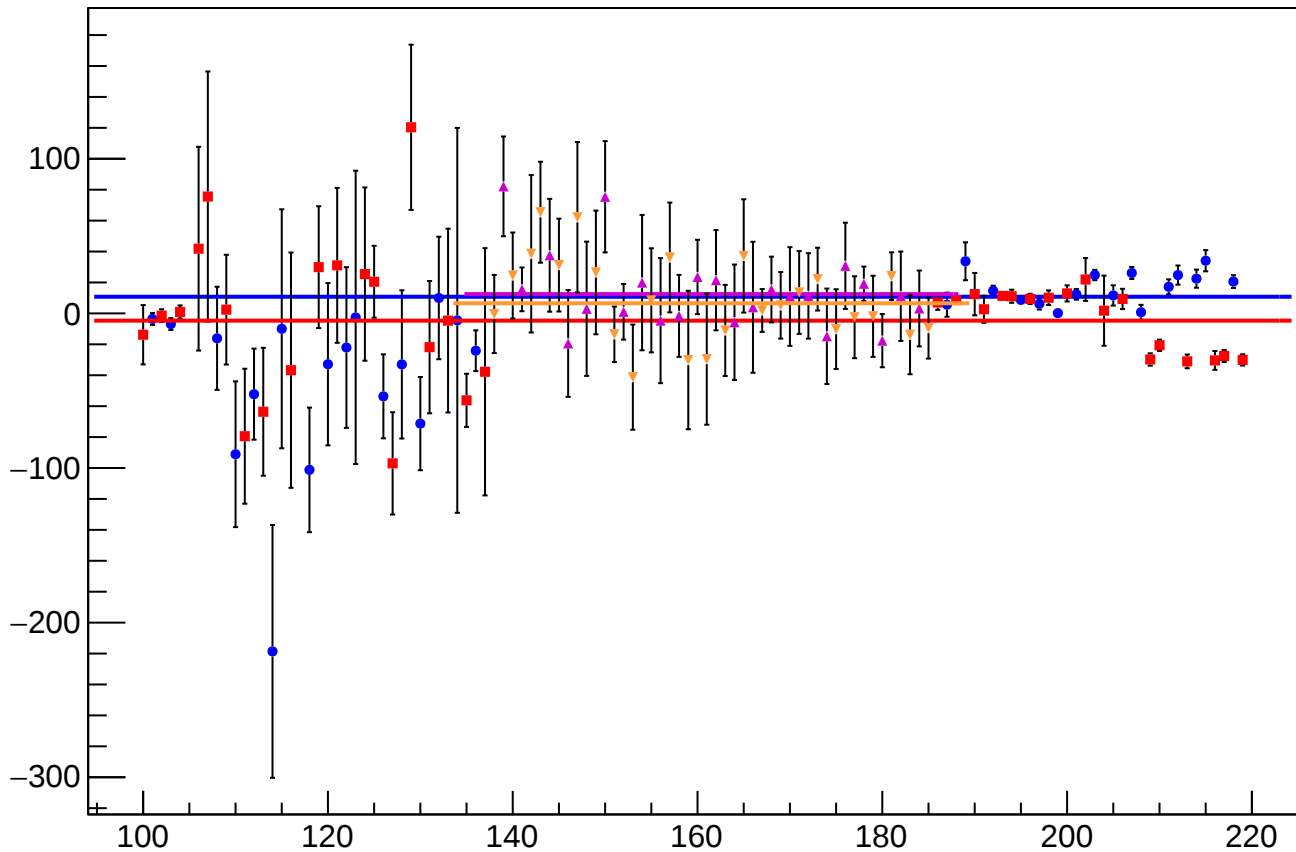
Right:  $3014.905 \pm 0.371$   $\chi^2/\text{NDF}$ : 7696589.6/69

In:  $2640.800 \pm 0.346$   $\chi^2/\text{NDF}$ : 10152737.8/55

Out:  $2686.557 \pm 0.341$   $\chi^2/\text{NDF}$ : 10847617.8/61

All:  $2664.017 \pm 0.243$   $\chi^2/\text{NDF}$ : 21009213.2/100

# diff\_bpm0l03X\_mean vs Slug, Sign Corrected



Right In: 10.765 $\pm$ 0.990  $\chi^2/\text{NDF}$ : 167.4/32

Left Out: 6.560 $\pm$ 5.077  $\chi^2/\text{NDF}$ : 16.8/24

Right Out: -4.697 $\pm$ 0.984  $\chi^2/\text{NDF}$ : 348.6/36

Left In: 12.469 $\pm$ 5.025  $\chi^2/\text{NDF}$ : 15.4/22

Left: 9.545 $\pm$ 3.572  $\chi^2/\text{NDF}$ : 32.8/47

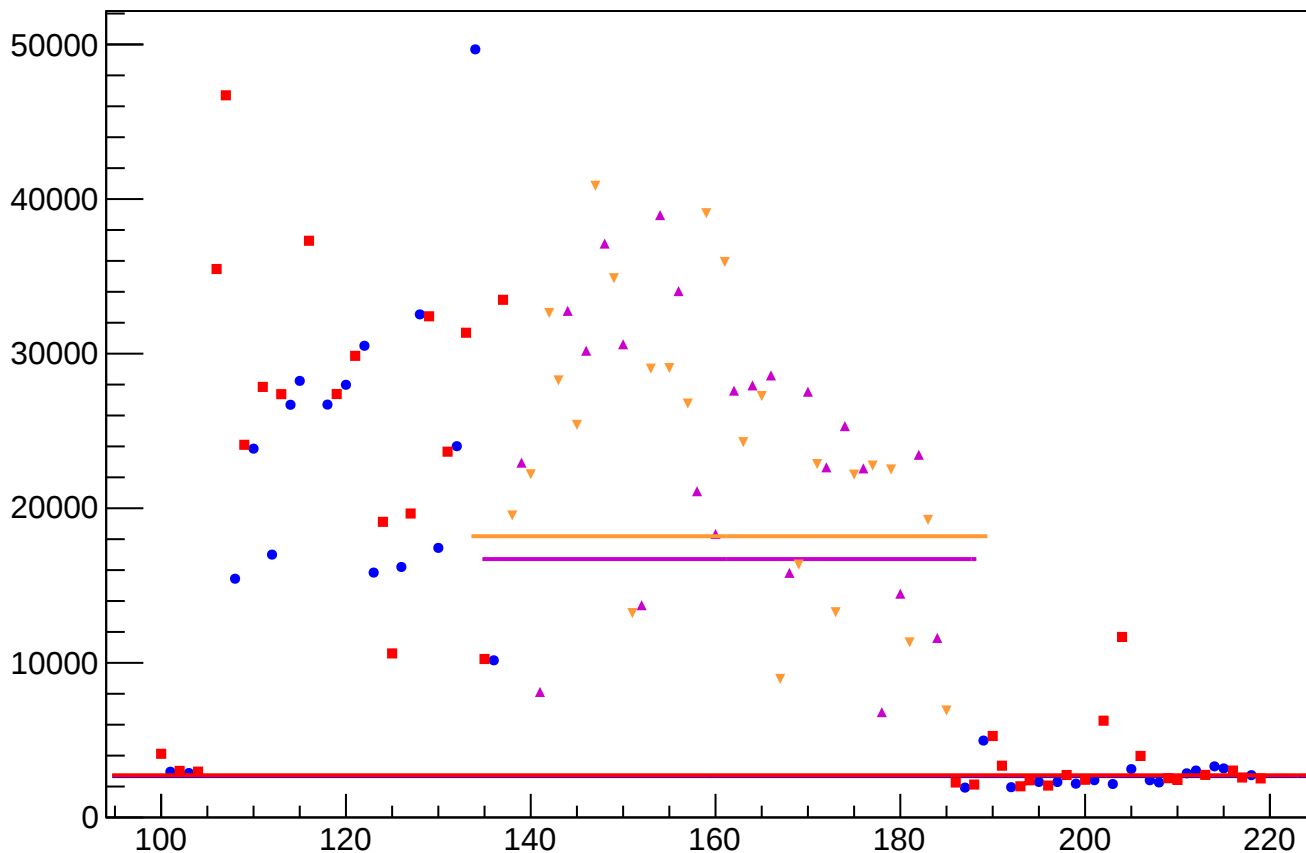
Right: 2.988 $\pm$ 0.698  $\chi^2/\text{NDF}$ : 638.8/69

In: 10.828 $\pm$ 0.971  $\chi^2/\text{NDF}$ : 182.9/55

Out: -4.290 $\pm$ 0.966  $\chi^2/\text{NDF}$ : 370.1/61

All: 3.229 $\pm$ 0.685  $\chi^2/\text{NDF}$ : 674.9/117

# diff\_bpm0l03X\_rms vs Slug, Sign Corrected



Right In:  $2674.764 \pm 0.700$   $\chi^2/\text{NDF}: 7047216.0/32$

Left Out:  $18190.387 \pm 3.590$   $\chi^2/\text{NDF}: 5261328.5/24$

Right Out:  $2727.697 \pm 0.696$   $\chi^2/\text{NDF}: 9094363.6/36$

Left In:  $16713.653 \pm 3.553$   $\chi^2/\text{NDF}: 6194178.8/22$

Left:  $17444.397 \pm 2.526$   $\chi^2/\text{NDF}: 11540970.2/47$

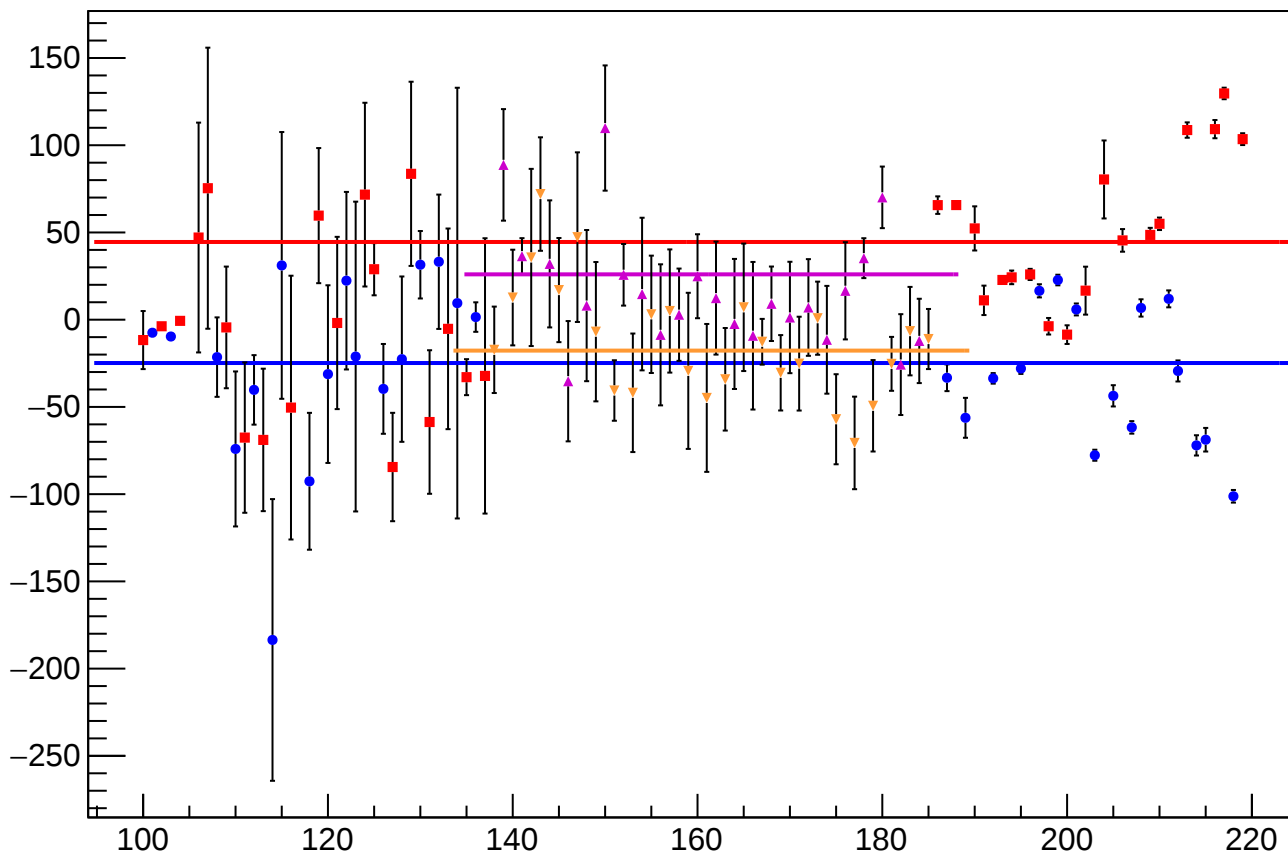
Right:  $2701.388 \pm 0.493$   $\chi^2/\text{NDF}: 16144458.1/69$

In:  $3198.801 \pm 0.687$   $\chi^2/\text{NDF}: 28267757.3/55$

Out:  $3287.057 \pm 0.683$   $\chi^2/\text{NDF}: 32233346.0/61$

All:  $3243.165 \pm 0.484$   $\chi^2/\text{NDF}: 60509410.7/121$

# diff\_bpm0l03Y\_mean vs Slug, Sign Corrected



Right In:  $-24.831 \pm 0.890$   $\chi^2/\text{NDF}: 1618.3/32$

Left Out:  $-17.717 \pm 4.974$   $\chi^2/\text{NDF}: 27.2/24$

Right Out:  $44.545 \pm 0.884$   $\chi^2/\text{NDF}: 2422.8/36$

Left In:  $25.991 \pm 4.789$   $\chi^2/\text{NDF}: 32.6/22$

Left:  $4.967 \pm 3.450$   $\chi^2/\text{NDF}: 99.8/47$

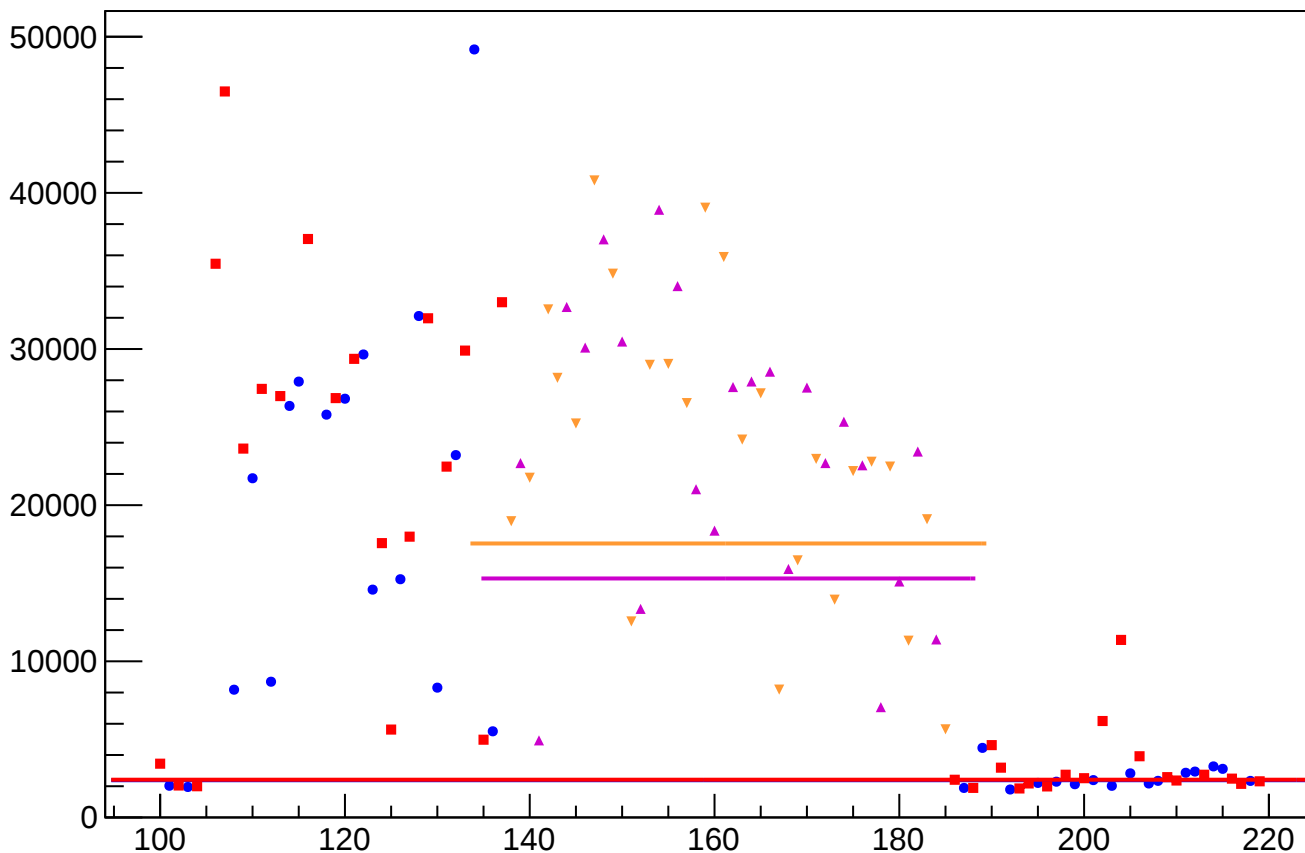
Right:  $10.083 \pm 0.627$   $\chi^2/\text{NDF}: 7097.8/69$

In:  $-23.134 \pm 0.875$   $\chi^2/\text{NDF}: 1759.8/55$

Out:  $42.637 \pm 0.871$   $\chi^2/\text{NDF}: 2601.8/61$

All:  $9.919 \pm 0.617$   $\chi^2/\text{NDF}: 7199.8/117$

# diff\_bpm0l03Y\_rms vs Slug, Sign Corrected



Right In:  $2384.361 \pm 0.629$   $\chi^2/\text{NDF}: 5928903.6/32$

Left Out:  $17546.173 \pm 3.517$   $\chi^2/\text{NDF}: 5902620.4/24$

Right Out:  $2417.266 \pm 0.625$   $\chi^2/\text{NDF}: 8776493.5/36$

Left In:  $15305.311 \pm 3.386$   $\chi^2/\text{NDF}: 7721177.0/22$

Left:  $16383.216 \pm 2.439$   $\chi^2/\text{NDF}: 13834445.4/47$

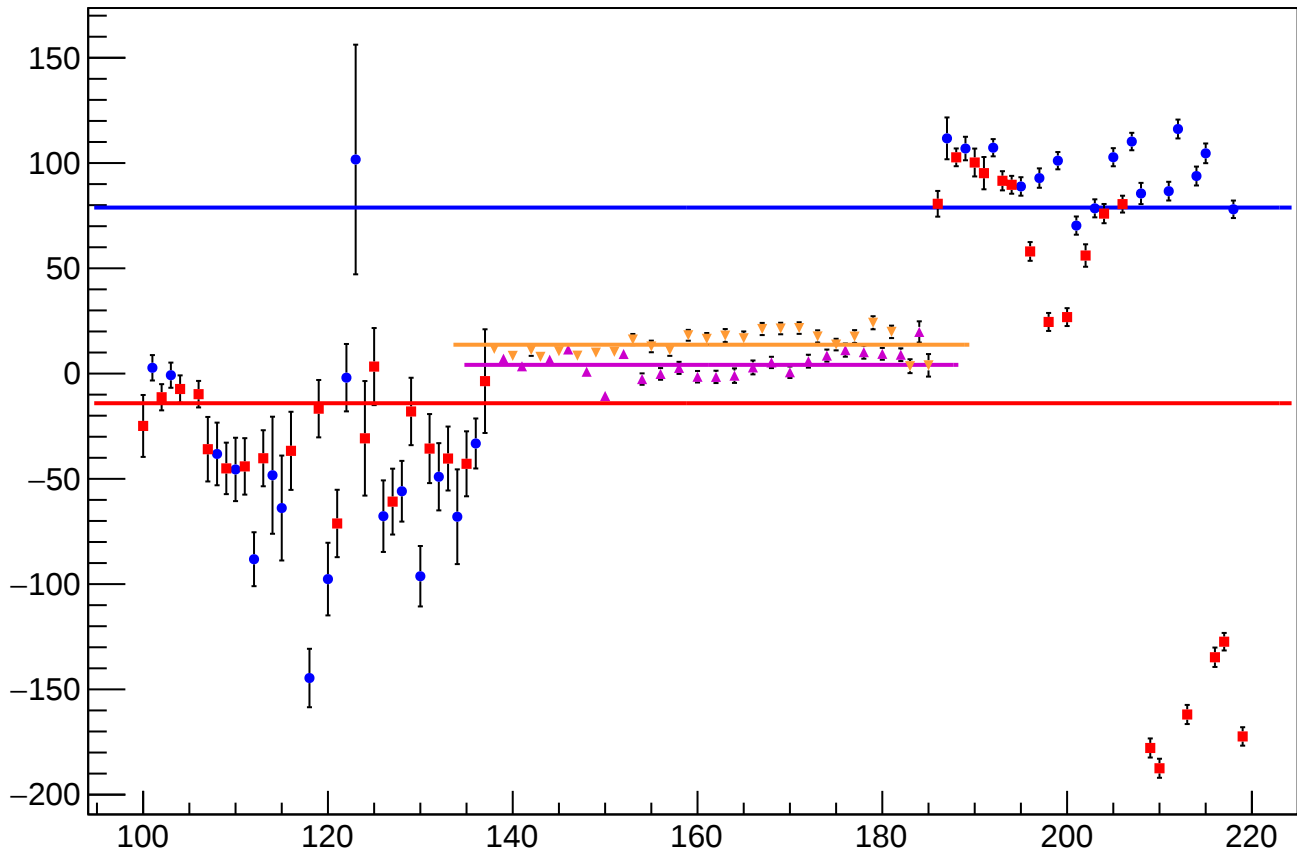
Right:  $2400.921 \pm 0.444$   $\chi^2/\text{NDF}: 14706772.5/69$

In:  $2815.898 \pm 0.619$   $\chi^2/\text{NDF}: 27723459.8/55$

Out:  $2880.859 \pm 0.616$   $\chi^2/\text{NDF}: 32613128.0/61$

All:  $2848.544 \pm 0.436$   $\chi^2/\text{NDF}: 60342125.2/100$

# diff\_bpm0l04X\_mean vs Slug, Sign Corrected



Right In: 78.854 $\pm$ 1.062  $\chi^2$ /NDF: 1921.9/32

Left Out: 13.710 $\pm$ 0.535  $\chi^2$ /NDF:89.9/24

Right Out: -14.082 $\pm$ 1.012  $\chi^2$ /NDF: 10816.3/36

Left In: 4.141 $\pm$ 0.555  $\chi^2$ /NDF:111.7/22

Left: 9.097 $\pm$ 0.385  $\chi^2$ /NDF: 355.6/47

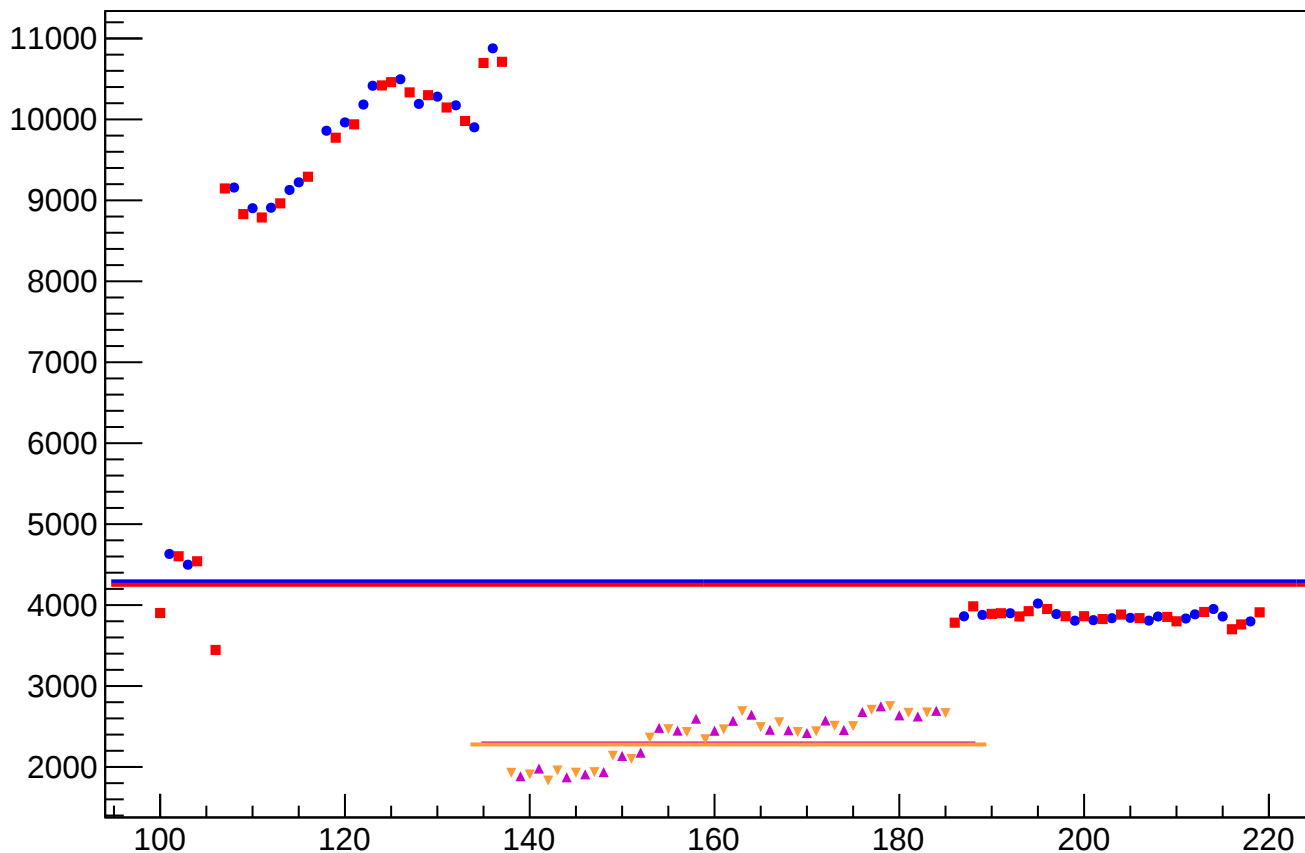
Right: 30.143 $\pm$ 0.733  $\chi^2$ /NDF: 16749.0/69

In: 20.150 $\pm$ 0.492  $\chi^2$ /NDF:5919.5/55

Out: 7.638 $\pm$ 0.473  $\chi^2$ /NDF:11495.2/61

All: 13.652 $\pm$ 0.341  $\chi^2$ /NDF: 17750.8/117

# diff\_bpm0l04X\_rms vs Slug, Sign Corrected



Right In: 4293.119+/-0.751  $\chi^2/\text{NDF}$ : 3892994.4/32

Left Out: 2278.115+/-0.378  $\chi^2/\text{NDF}$ : 607109.4/24

Right Out: 4250.361+/-0.716  $\chi^2/\text{NDF}$ : 3948145.7/36

Left In: 2290.461+/-0.392  $\chi^2/\text{NDF}$ : 590272.1/22

Left: 2284.067+/-0.272  $\chi^2/\text{NDF}$ : 1197894.4/47

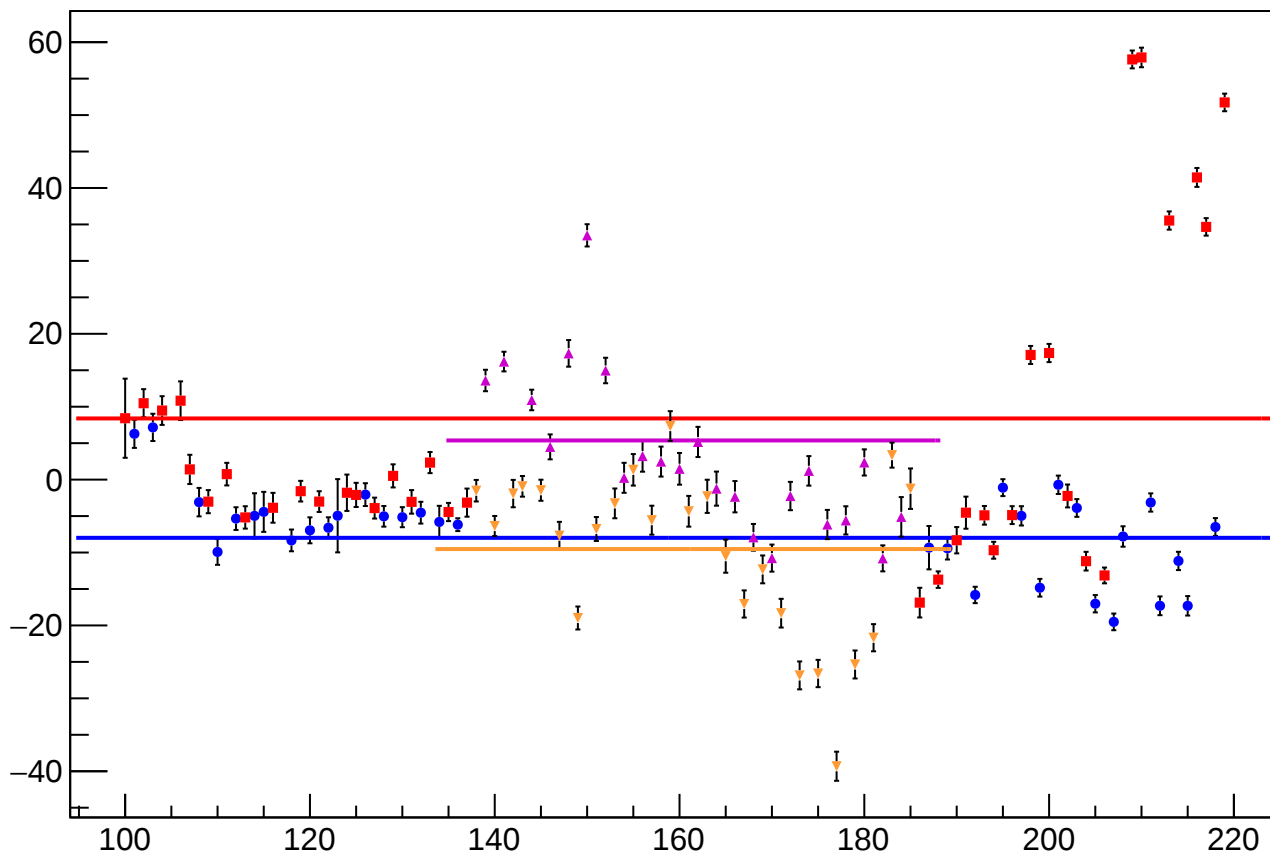
Right: 4270.708+/-0.518  $\chi^2/\text{NDF}$ : 7842838.1/69

In: 2719.580+/-0.348  $\chi^2/\text{NDF}$ : 10067190.6/55

Out: 2709.027+/-0.335  $\chi^2/\text{NDF}$ : 10488129.8/61

All: 2714.100+/-0.241  $\chi^2/\text{NDF}$ : 20555798.7/111

# diff\_bpm0l04Y\_mean vs Slug, Sign Corrected



Right In:  $-7.984 \pm 0.249$   $\chi^2/\text{NDF}$ : 618.8/32

Left Out:  $-9.524 \pm 0.365$   $\chi^2/\text{NDF}$ : 884.1/24

Right Out:  $8.391 \pm 0.241$   $\chi^2/\text{NDF}$ : 8454.4/36

Left In:  $5.372 \pm 0.383$   $\chi^2/\text{NDF}$ : 869.8/22

Left:  $-2.437 \pm 0.264$   $\chi^2/\text{NDF}$ : 2547.3/47

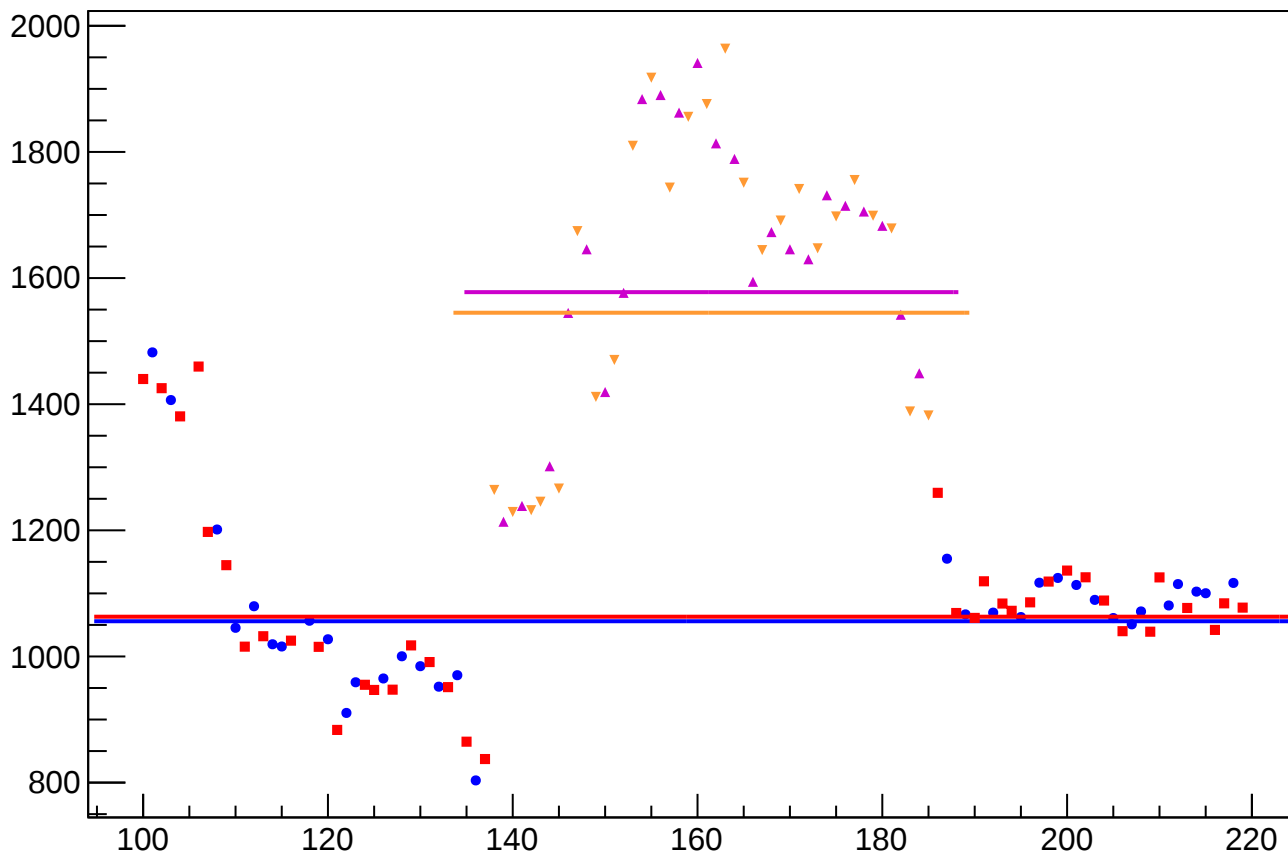
Right:  $0.441 \pm 0.173$   $\chi^2/\text{NDF}$ : 11306.6/69

In:  $-4.025 \pm 0.208$   $\chi^2/\text{NDF}$ : 2344.7/55

Out:  $2.934 \pm 0.201$   $\chi^2/\text{NDF}$ : 11015.8/61

All:  $-0.424 \pm 0.145$   $\chi^2/\text{NDF}$ : 13937.0/117

# diff\_bpm0l04Y\_rms vs Slug, Sign Corrected



Right In: 1055.848 $\pm$ 0.176  $\chi^2$ /NDF: 429408.7/32

Left Out: 1545.053 $\pm$ 0.258  $\chi^2$ /NDF: 842722.3/24

Right Out: 1063.046 $\pm$ 0.171  $\chi^2$ /NDF: 394596.1/36

Left In: 1577.685 $\pm$ 0.271  $\chi^2$ /NDF: 625406.2/22

Left: 1560.578 $\pm$ 0.187  $\chi^2$ /NDF: 1475743.3/47

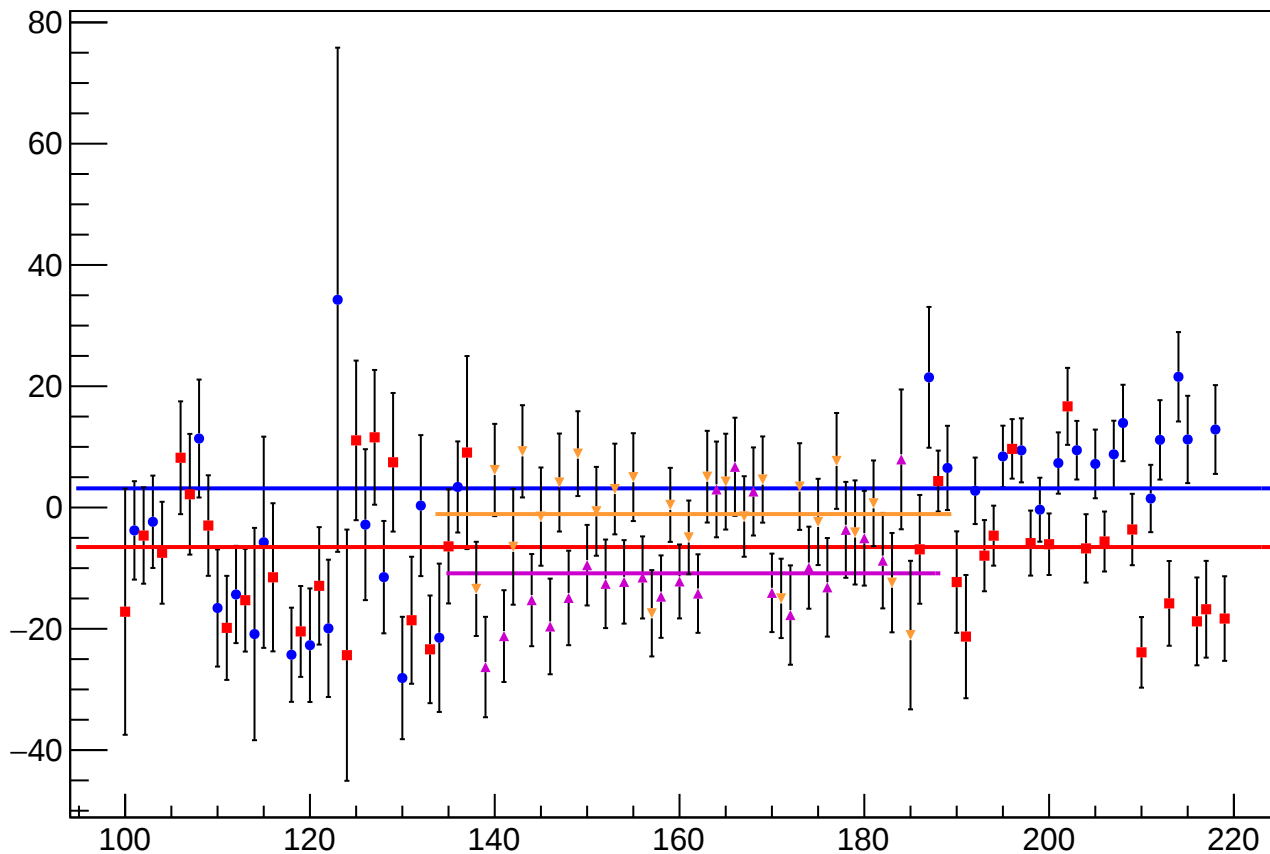
Right: 1059.552 $\pm$ 0.122  $\chi^2$ /NDF: 824867.9/69

In: 1210.544 $\pm$ 0.147  $\chi^2$ /NDF: 3668312.4/55

Out: 1209.865 $\pm$ 0.142  $\chi^2$ /NDF: 3665724.9/61

All: 1210.193 $\pm$ 0.102  $\chi^2$ /NDF: 7334048.3/11

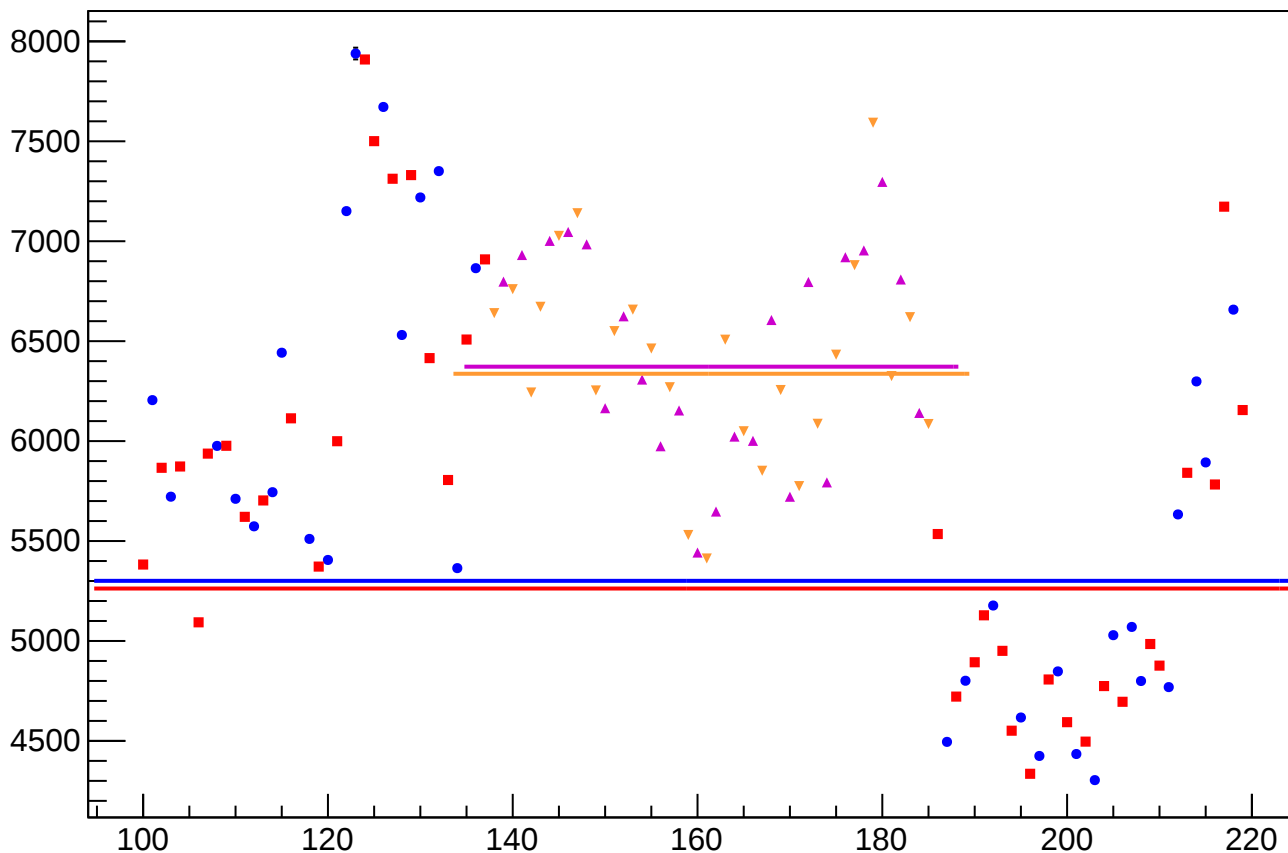
# diff\_bpm0l05X\_mean vs Slug, Sign Corrected



Right In:  $3.160 \pm 1.263$   $\chi^2/\text{NDF}: 77.7/32$   
Left Out:  $-1.083 \pm 1.487$   $\chi^2/\text{NDF}: 27.5/24$   
Right Out:  $-6.518 \pm 1.209$   $\chi^2/\text{NDF}: 74.0/36$   
Left In:  $-10.851 \pm 1.542$   $\chi^2/\text{NDF}: 24.4/22$

Left:  $-5.792 \pm 1.070$   $\chi^2/\text{NDF}: 72.7/47$   
Right:  $-1.892 \pm 0.873$   $\chi^2/\text{NDF}: 182.3/69$   
In:  $-2.466 \pm 0.977$   $\chi^2/\text{NDF}: 151.5/55$   
Out:  $-4.357 \pm 0.938$   $\chi^2/\text{NDF}: 109.6/61$   
All:  $-3.450 \pm 0.677$   $\chi^2/\text{NDF}: 263.0/117$

# diff\_bpm0l05X\_rms vs Slug, Sign Corrected



Right In: 5300.842 $\pm$ 0.893  $\chi^2/\text{NDF}$ : 882803.0/32

Left Out: 6336.876 $\pm$ 1.052  $\chi^2/\text{NDF}$ : 222912.5/24

Right Out: 5262.372 $\pm$ 0.855  $\chi^2/\text{NDF}$ : 841843.9/36

Left In: 6372.349 $\pm$ 1.090  $\chi^2/\text{NDF}$ : 247257.0/22

Left: 6353.974 $\pm$ 0.757  $\chi^2/\text{NDF}$ : 470718.0/47

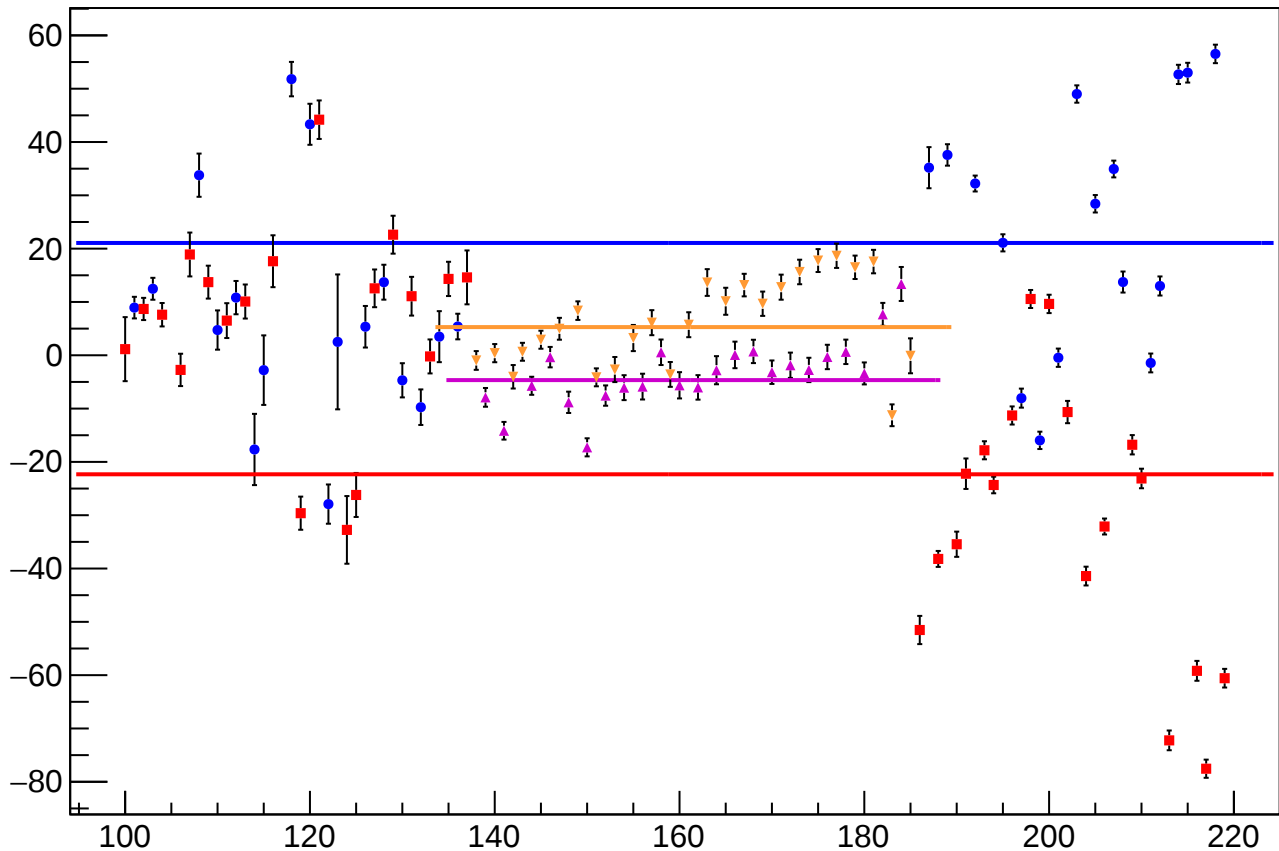
Right: 5280.761 $\pm$ 0.617  $\chi^2/\text{NDF}$ : 1725615.7/69

In: 5731.128 $\pm$ 0.691  $\chi^2/\text{NDF}$ : 1708248.5/55

Out: 5689.731 $\pm$ 0.663  $\chi^2/\text{NDF}$ : 1693579.5/61

All: 5709.586 $\pm$ 0.478  $\chi^2/\text{NDF}$ : 3403696.9/111

# diff\_bpm0l05Y\_mean vs Slug, Sign Corrected



Right In: 21.067 $\pm$ 0.385  $\chi^2$ /NDF: 3361.6/32

Left Out: 5.284 $\pm$ 0.421  $\chi^2$ /NDF:366.1/24

Right Out: -22.324 $\pm$ 0.372  $\chi^2$ /NDF: 5756.5/36

Left In: -4.657 $\pm$ 0.443  $\chi^2$ /NDF:196.5/22

Left: 0.574 $\pm$ 0.305  $\chi^2$ /NDF: 827.2/47

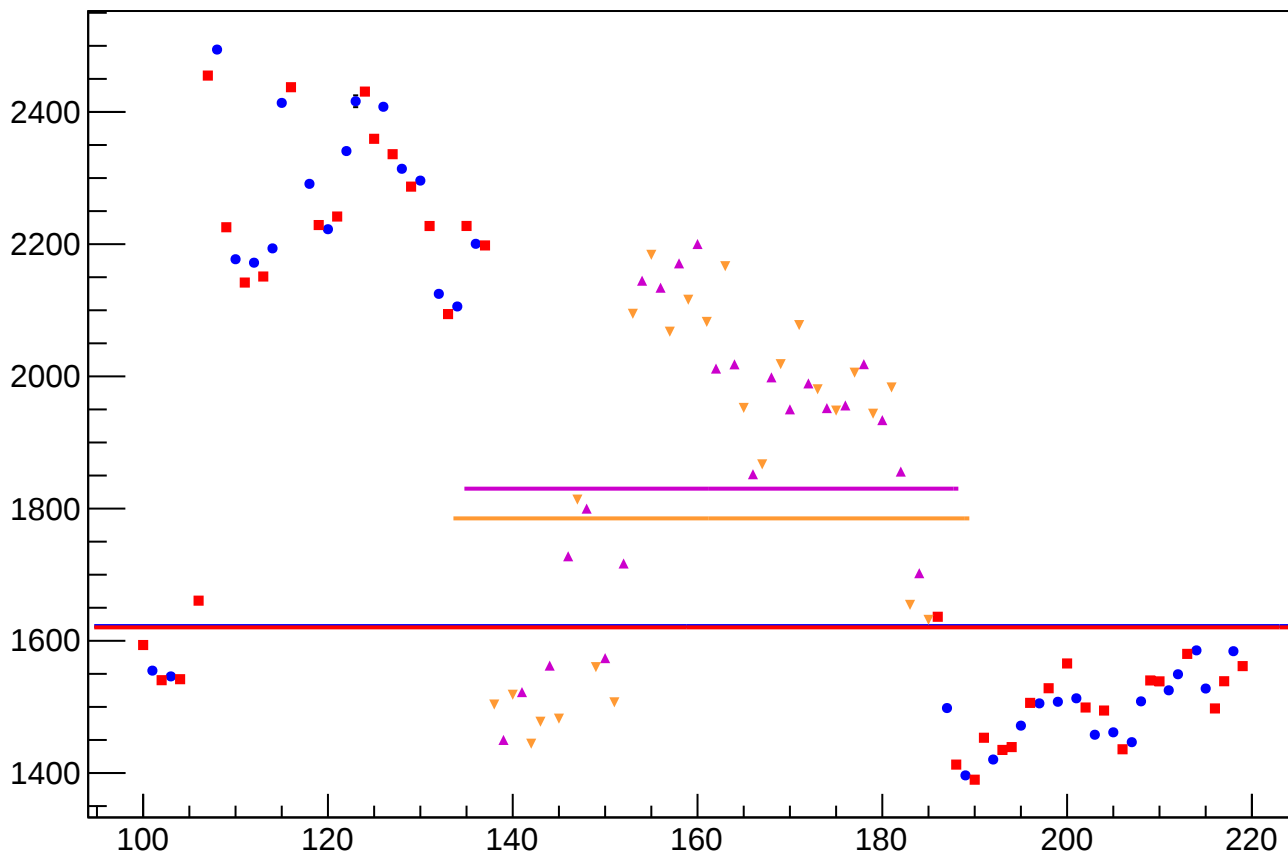
Right: -1.422 $\pm$ 0.268  $\chi^2$ /NDF: 15686.6/69

In: 9.993 $\pm$ 0.291  $\chi^2$ /NDF:5475.6/55

Out: -10.224 $\pm$ 0.279  $\chi^2$ /NDF:8541.9/61

All: -0.555 $\pm$ 0.201  $\chi^2$ /NDF: 16538.0/117

# diff\_bpm0l05Y\_rms vs Slug, Sign Corrected



Right In:  $1622.314 \pm 0.273$   $\chi^2/\text{NDF}$ : 1104121.4/32

Left Out:  $1785.179 \pm 0.297$   $\chi^2/\text{NDF}$ : 750628.1/24

Right Out:  $1620.326 \pm 0.263$   $\chi^2/\text{NDF}$ : 1114233.0/36

Left In:  $1830.160 \pm 0.313$   $\chi^2/\text{NDF}$ : 508391.9/22

Left:  $1806.491 \pm 0.216$   $\chi^2/\text{NDF}$ : 1269853.4/47

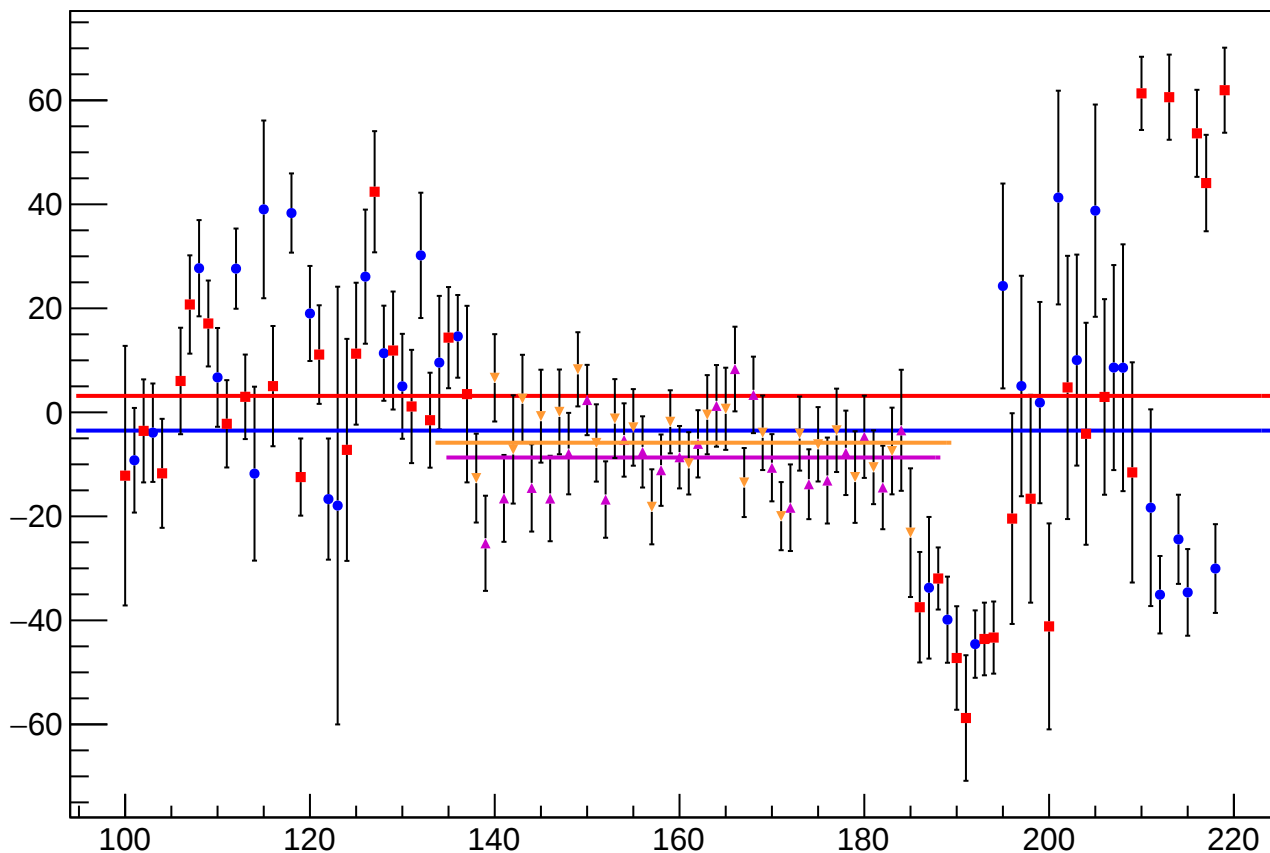
Right:  $1621.284 \pm 0.189$   $\chi^2/\text{NDF}$ : 2218382.1/69

In:  $1711.788 \pm 0.206$   $\chi^2/\text{NDF}$ : 1862866.3/55

Out:  $1692.577 \pm 0.197$   $\chi^2/\text{NDF}$ : 2037379.1/61

All:  $1701.765 \pm 0.142$   $\chi^2/\text{NDF}$ : 3904796.9/11

# diff\_bpm0l06X\_mean vs Slug, Sign Corrected



Right In:  $-3.509 \pm 1.868$   $\chi^2/\text{NDF}: 220.8/32$

Left Out:  $-5.840 \pm 1.518$   $\chi^2/\text{NDF}: 23.3/24$

Right Out:  $3.164 \pm 1.651$   $\chi^2/\text{NDF}: 452.8/36$

Left In:  $-8.683 \pm 1.571$   $\chi^2/\text{NDF}: 21.9/22$

Left:  $-7.214 \pm 1.092$   $\chi^2/\text{NDF}: 47.0/47$

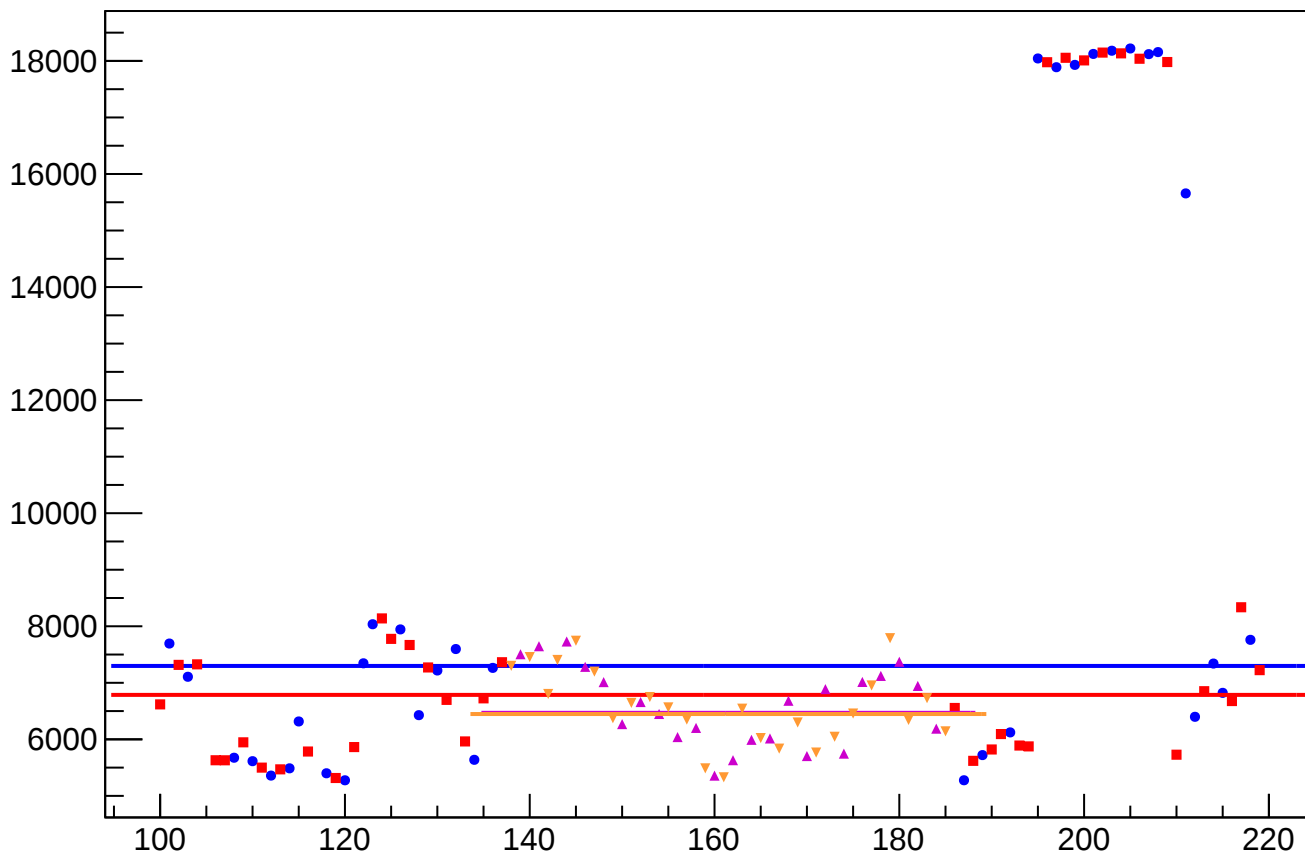
Right:  $0.238 \pm 1.237$   $\chi^2/\text{NDF}: 680.7/69$

In:  $-6.540 \pm 1.202$   $\chi^2/\text{NDF}: 247.2/55$

Out:  $-1.714 \pm 1.117$   $\chi^2/\text{NDF}: 492.3/61$

All:  $-3.951 \pm 0.818$   $\chi^2/\text{NDF}: 748.1/117$

# diff\_bpm0l06X\_rms vs Slug, Sign Corrected



Right In:  $7298.446 \pm 1.321$   $\chi^2/\text{NDF}: 5603270.5/32$

Left Out:  $6447.712 \pm 1.074$   $\chi^2/\text{NDF}: 371671.1/24$

Right Out:  $6786.334 \pm 1.167$   $\chi^2/\text{NDF}: 4761415.5/36$

Left In:  $6468.902 \pm 1.111$   $\chi^2/\text{NDF}: 383325.4/22$

Left:  $6457.948 \pm 0.772$   $\chi^2/\text{NDF}: 755184.7/47$

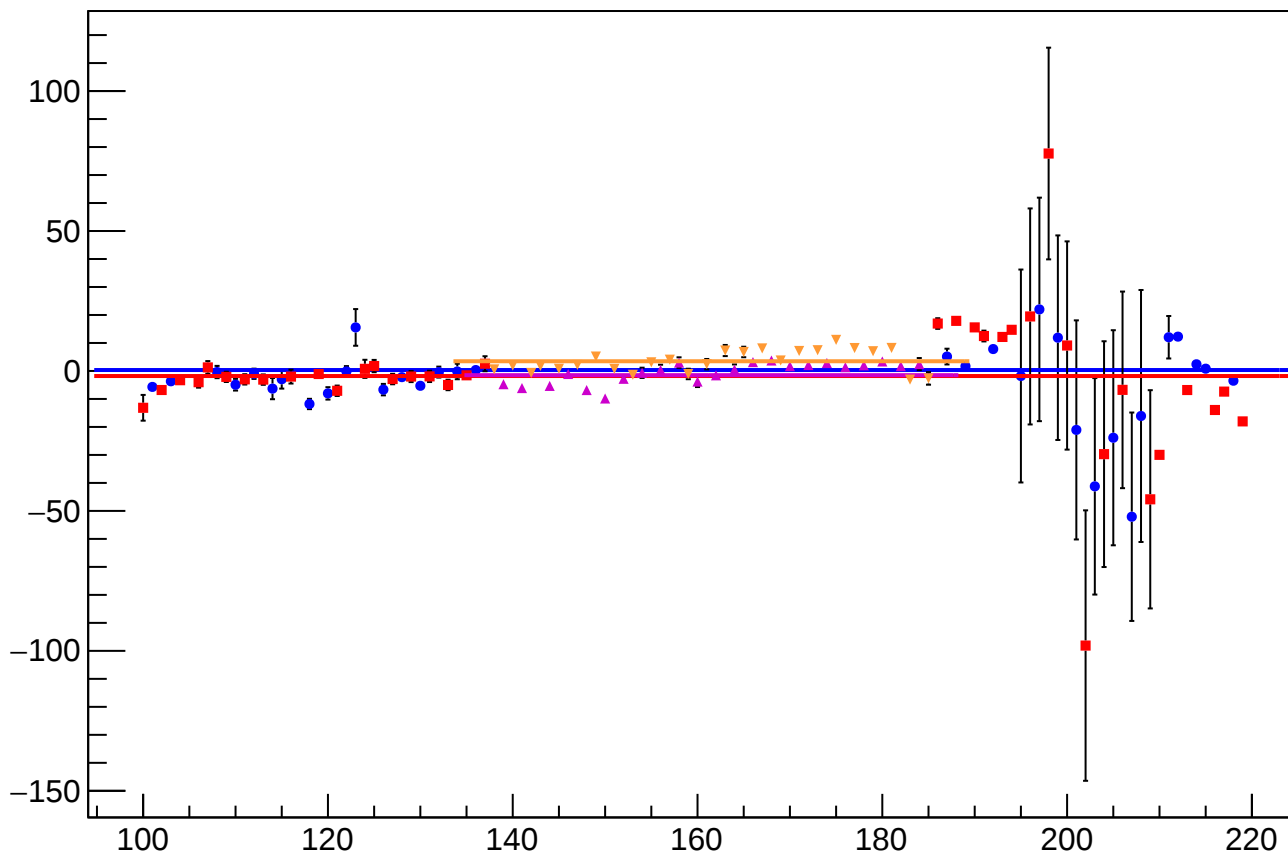
Right:  $7010.945 \pm 0.875$   $\chi^2/\text{NDF}: 10449112.3/69$

In:  $6812.546 \pm 0.850$   $\chi^2/\text{NDF}: 6217728.3/55$

Out:  $6602.898 \pm 0.790$   $\chi^2/\text{NDF}: 5178678.0/61$

All:  $6700.091 \pm 0.579$   $\chi^2/\text{NDF}: 11429040.7/131$

# diff\_bpm0l06Y\_mean vs Slug, Sign Corrected



Right In:  $0.333 \pm 0.329$   $\chi^2/\text{NDF}$ : 306.5/32

Left Out:  $3.470 \pm 0.276$   $\chi^2/\text{NDF}$ : 176.0/24

Right Out:  $-1.811 \pm 0.290$   $\chi^2/\text{NDF}$ : 1817.5/36

Left In:  $-1.502 \pm 0.291$   $\chi^2/\text{NDF}$ : 202.7/22

Left:  $1.109 \pm 0.200$   $\chi^2/\text{NDF}$ : 532.4/47

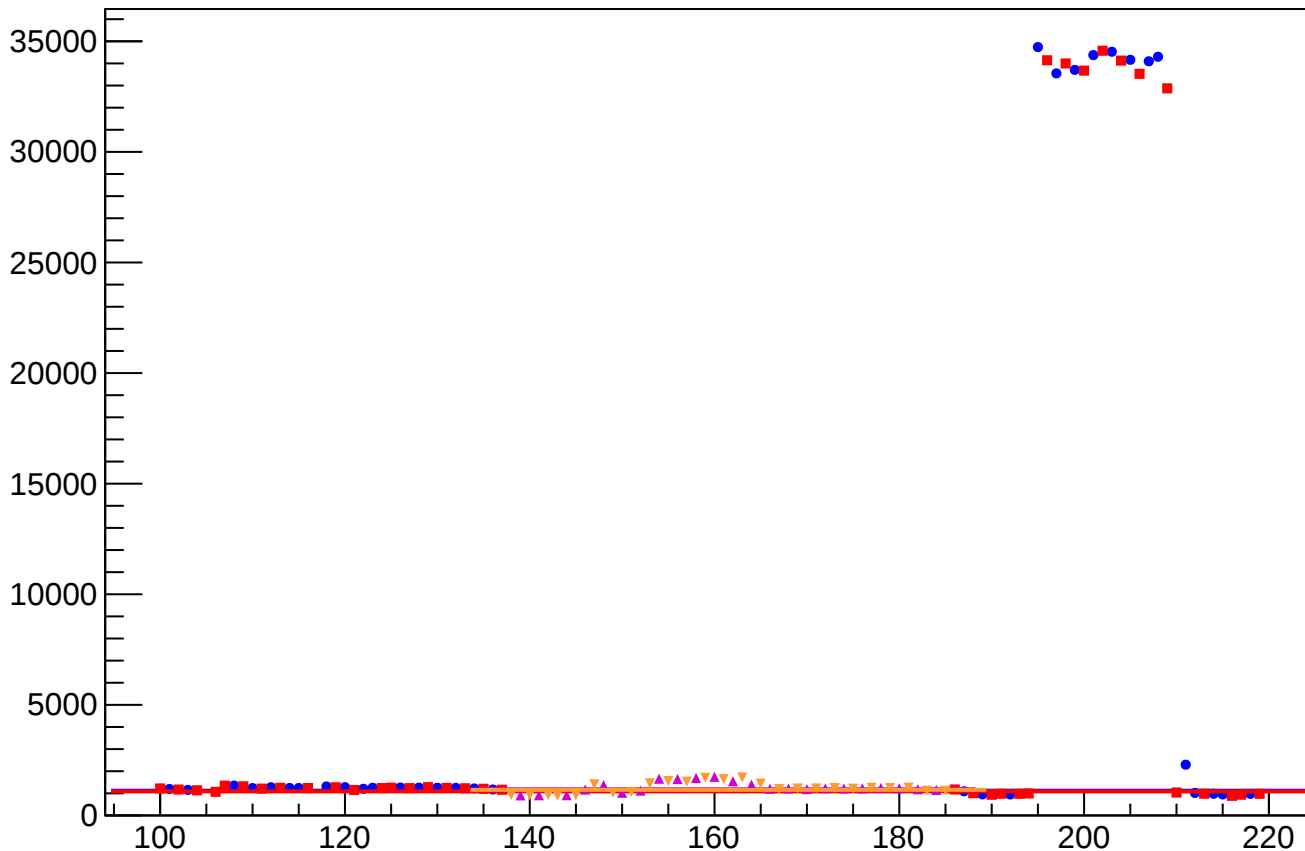
Right:  $-0.872 \pm 0.218$   $\chi^2/\text{NDF}$ : 2148.0/69

In:  $-0.697 \pm 0.218$   $\chi^2/\text{NDF}$ : 526.7/55

Out:  $0.959 \pm 0.200$   $\chi^2/\text{NDF}$ : 2167.1/61

All:  $0.201 \pm 0.147$   $\chi^2/\text{NDF}$ : 2725.2/117

# diff\_bpm0l06Y\_rms vs Slug, Sign Corrected



Right In: 1118.799+/-0.232

$\chi^2/\text{NDF}$ : 11948210.2/32

Left: 1171.274+/-0.142

$\chi^2/\text{NDF}$ : 2609306.9/47

Left Out: 1158.894+/-0.195

$\chi^2/\text{NDF}$ : 1410423.6/24

Right: 1101.652+/-0.154

$\chi^2/\text{NDF}$ : 22232680.3/69

Right Out: 1088.279+/-0.205

$\chi^2/\text{NDF}$ : 10274780.2/36

In: 1155.930+/-0.154

$\chi^2/\text{NDF}$ : 13184129.6/55

Out: 1125.315+/-0.142

$\chi^2/\text{NDF}$ : 11747292.5/61

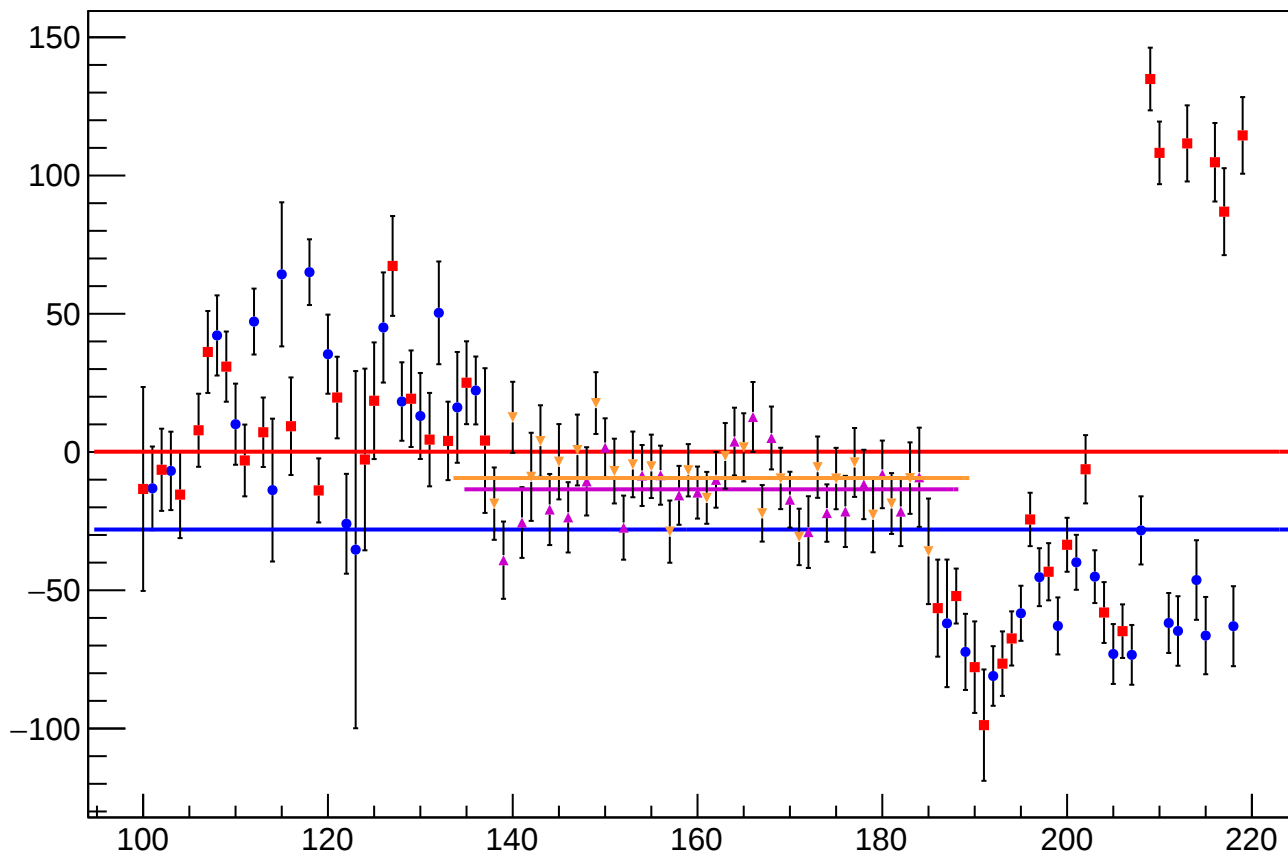
Left In: 1184.966+/-0.206

$\chi^2/\text{NDF}$ : 1190431.5/22

All: 1139.337+/-0.104

$\chi^2/\text{NDF}$ : 24952854.5/100

# diff\_bpm0l07X\_mean vs Slug, Sign Corrected



Right In:  $-28.029 \pm 2.316$   $\chi^2/\text{NDF}$ : 370.3/32

Left Out:  $-9.398 \pm 2.358$   $\chi^2/\text{NDF}$ : 26.3/24

Right Out:  $0.120 \pm 2.205$   $\chi^2/\text{NDF}$ : 771.2/36

Left In:  $-13.485 \pm 2.443$   $\chi^2/\text{NDF}$ : 21.6/22

Left:  $-11.369 \pm 1.697$   $\chi^2/\text{NDF}$ : 49.3/47

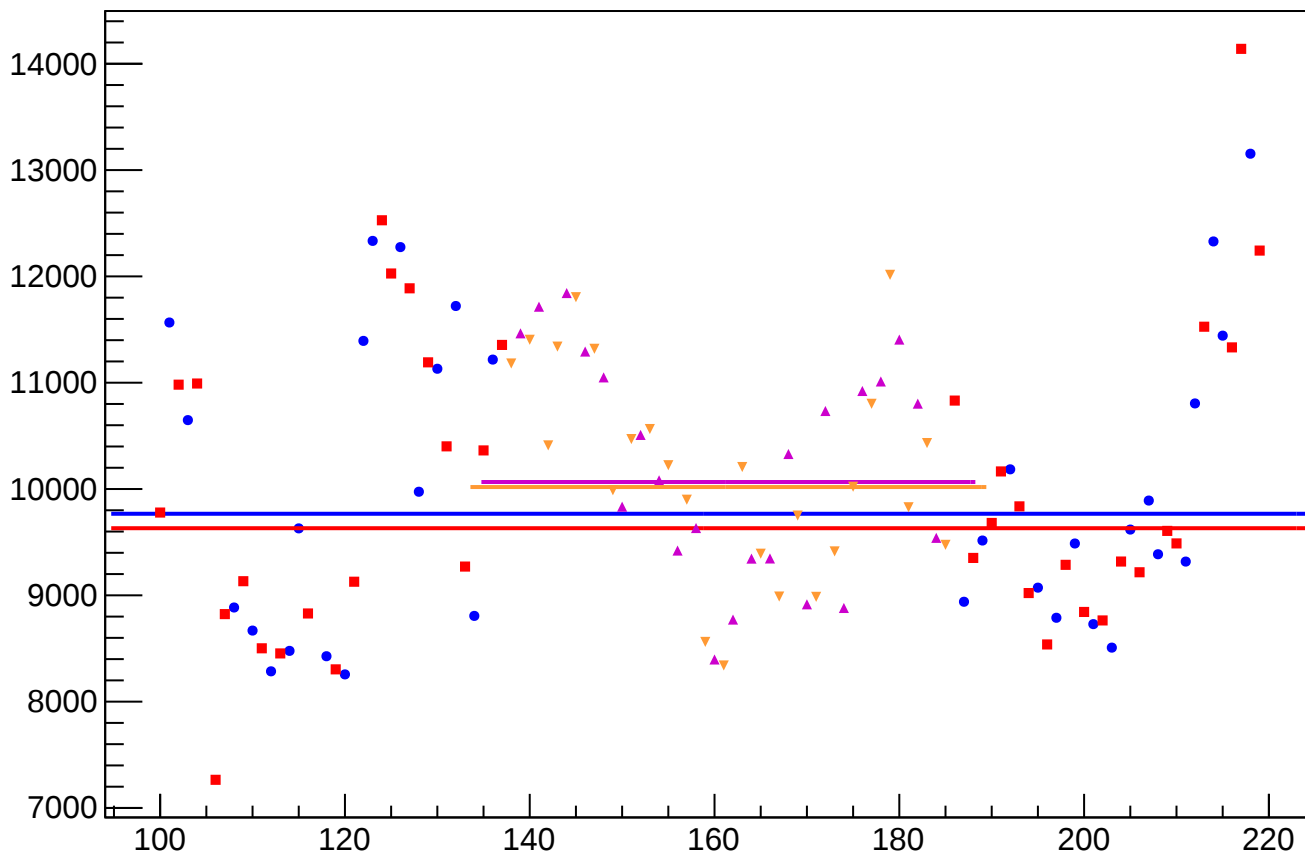
Right:  $-13.263 \pm 1.597$   $\chi^2/\text{NDF}$ : 1218.9/69

In:  $-21.143 \pm 1.681$   $\chi^2/\text{NDF}$ : 410.5/55

Out:  $-4.320 \pm 1.611$   $\chi^2/\text{NDF}$ : 806.1/61

All:  $-12.373 \pm 1.163$   $\chi^2/\text{NDF}$ : 1268.9/117

# diff\_bpm0l07X\_rms vs Slug, Sign Corrected



Right In:  $9767.233 \pm 1.638$   $\chi^2/\text{NDF}: 572729.0/32$

Left Out:  $10018.563 \pm 1.668$   $\chi^2/\text{NDF}: 344534.6/24$

Right Out:  $9631.342 \pm 1.559$   $\chi^2/\text{NDF}: 656735.9/36$

Left In:  $10065.909 \pm 1.727$   $\chi^2/\text{NDF}: 357868.9/22$

Left:  $10041.404 \pm 1.200$   $\chi^2/\text{NDF}: 702792.3/47$

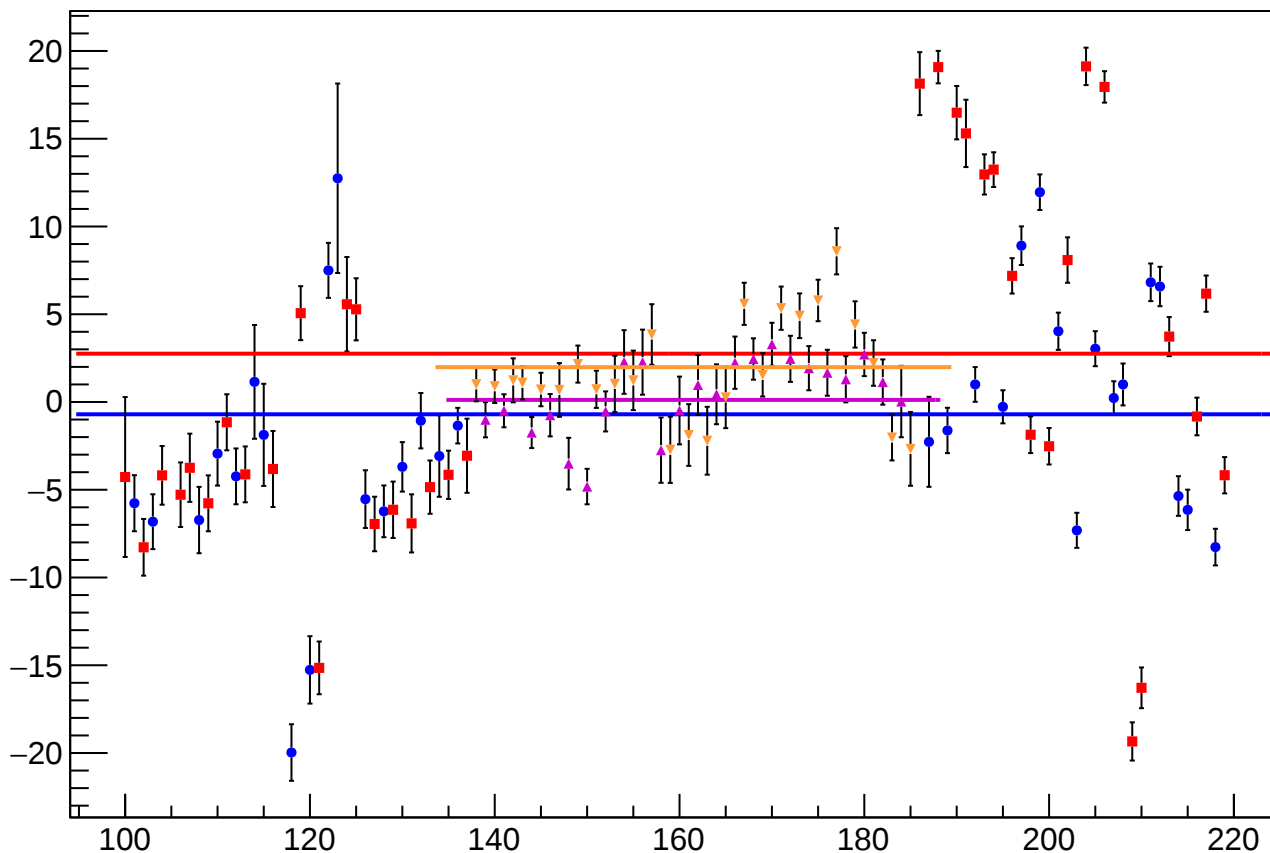
Right:  $9695.950 \pm 1.129$   $\chi^2/\text{NDF}: 1233075.3/69$

In:  $9908.648 \pm 1.189$   $\chi^2/\text{NDF}: 946340.2/55$

Out:  $9811.976 \pm 1.139$   $\chi^2/\text{NDF}: 1030033.1/61$

All:  $9858.256 \pm 0.822$   $\chi^2/\text{NDF}: 1979821.8/11$

# diff\_bpm0l07Y\_mean vs Slug, Sign Corrected



Right In:  $-0.700 \pm 0.226$   $\chi^2/\text{NDF}: 805.3/32$

Left Out:  $1.985 \pm 0.255$   $\chi^2/\text{NDF}: 101.2/24$

Right Out:  $2.753 \pm 0.218$   $\chi^2/\text{NDF}: 2525.5/36$

Left In:  $0.120 \pm 0.269$   $\chi^2/\text{NDF}: 67.6/22$

Left:  $1.102 \pm 0.185$   $\chi^2/\text{NDF}: 194.2/47$

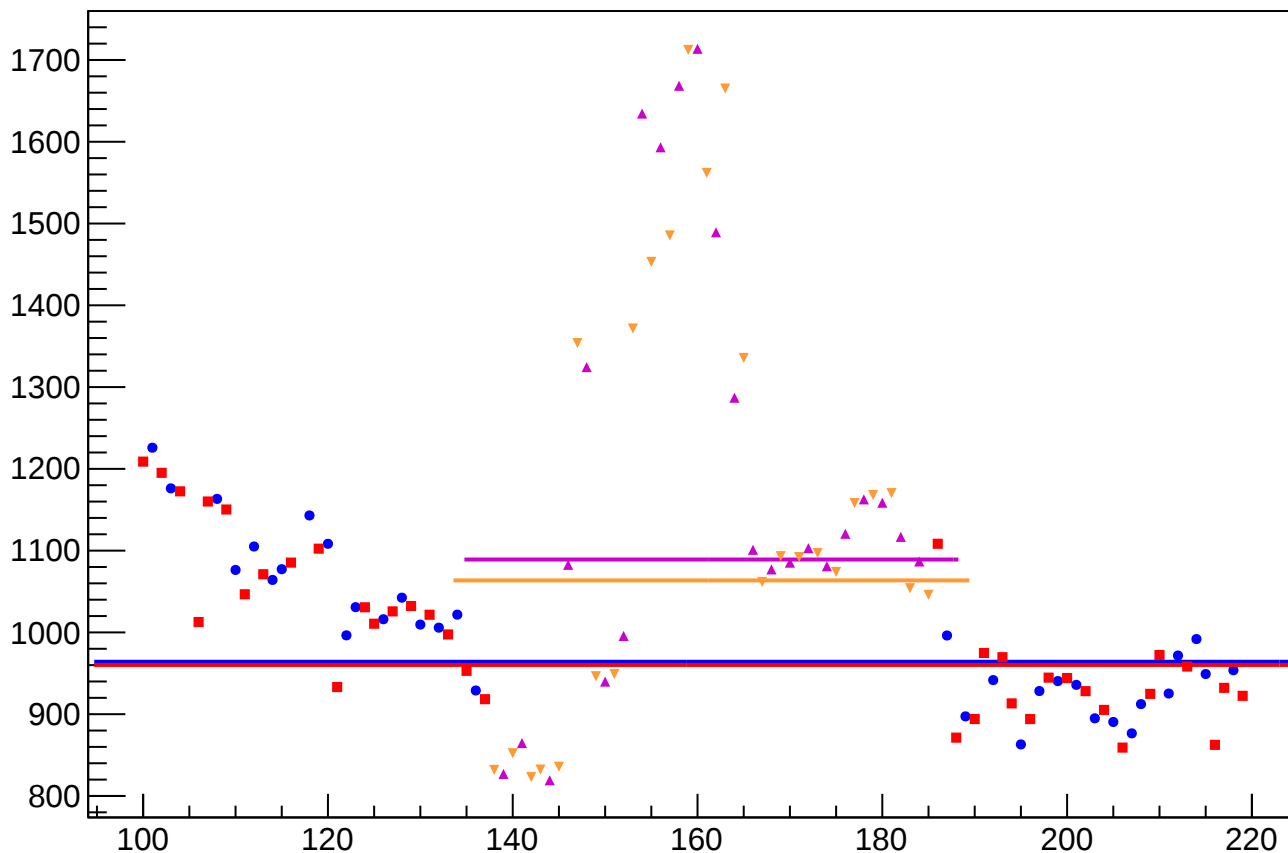
Right:  $1.094 \pm 0.157$   $\chi^2/\text{NDF}: 3451.6/69$

In:  $-0.360 \pm 0.173$   $\chi^2/\text{NDF}: 878.3/55$

Out:  $2.429 \pm 0.166$   $\chi^2/\text{NDF}: 2631.9/61$

All:  $1.097 \pm 0.120$   $\chi^2/\text{NDF}: 3645.8/117$

# diff\_bpm0l07Y\_rms vs Slug, Sign Corrected



Right In:  $964.113 \pm 0.160$   $\chi^2/\text{NDF}$ : 272758.9/32

Left Out:  $1063.600 \pm 0.180$   $\chi^2/\text{NDF}$ : 1617376.3/24

Right Out:  $960.236 \pm 0.154$   $\chi^2/\text{NDF}$ : 292531.3/36

Left In:  $1089.154 \pm 0.190$   $\chi^2/\text{NDF}$ : 1430478.5/22

Left:  $1075.700 \pm 0.131$   $\chi^2/\text{NDF}$ : 3057378.7/47

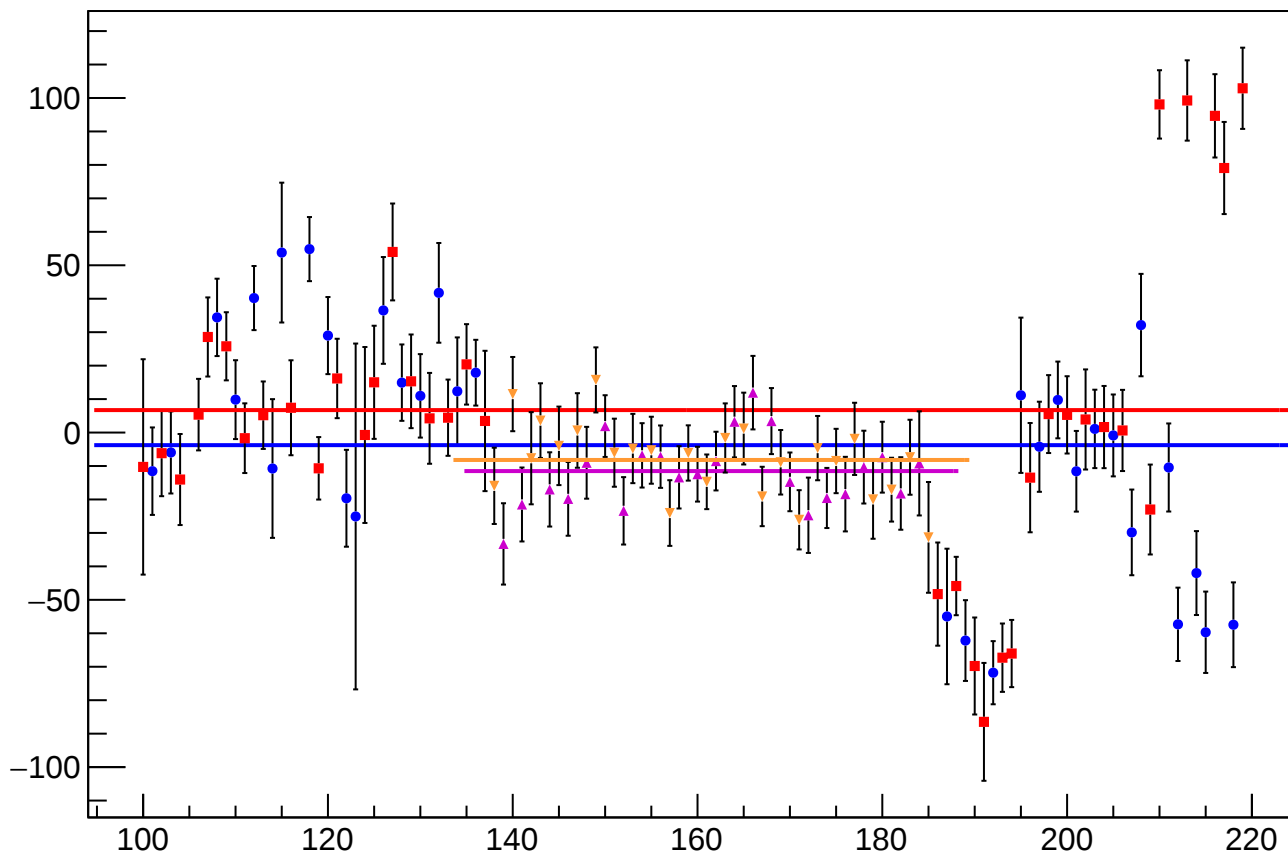
Right:  $962.099 \pm 0.111$   $\chi^2/\text{NDF}$ : 565594.8/69

In:  $1016.046 \pm 0.122$   $\chi^2/\text{NDF}$ : 1956481.9/55

Out:  $1003.870 \pm 0.117$   $\chi^2/\text{NDF}$ : 2100083.2/61

All:  $1009.685 \pm 0.085$   $\chi^2/\text{NDF}$ : 4061730.8/11

# diff\_bpm0l08X\_mean vs Slug, Sign Corrected



Right In:  $-3.765 \pm 2.219$   $\chi^2/\text{NDF}: 280.2/32$

Left Out:  $-8.195 \pm 2.049$   $\chi^2/\text{NDF}: 26.2/24$

Right Out:  $6.713 \pm 2.043$   $\chi^2/\text{NDF}: 524.5/36$

Left In:  $-11.515 \pm 2.122$   $\chi^2/\text{NDF}: 21.0/22$

Left:  $-9.796 \pm 1.474$   $\chi^2/\text{NDF}: 48.5/47$

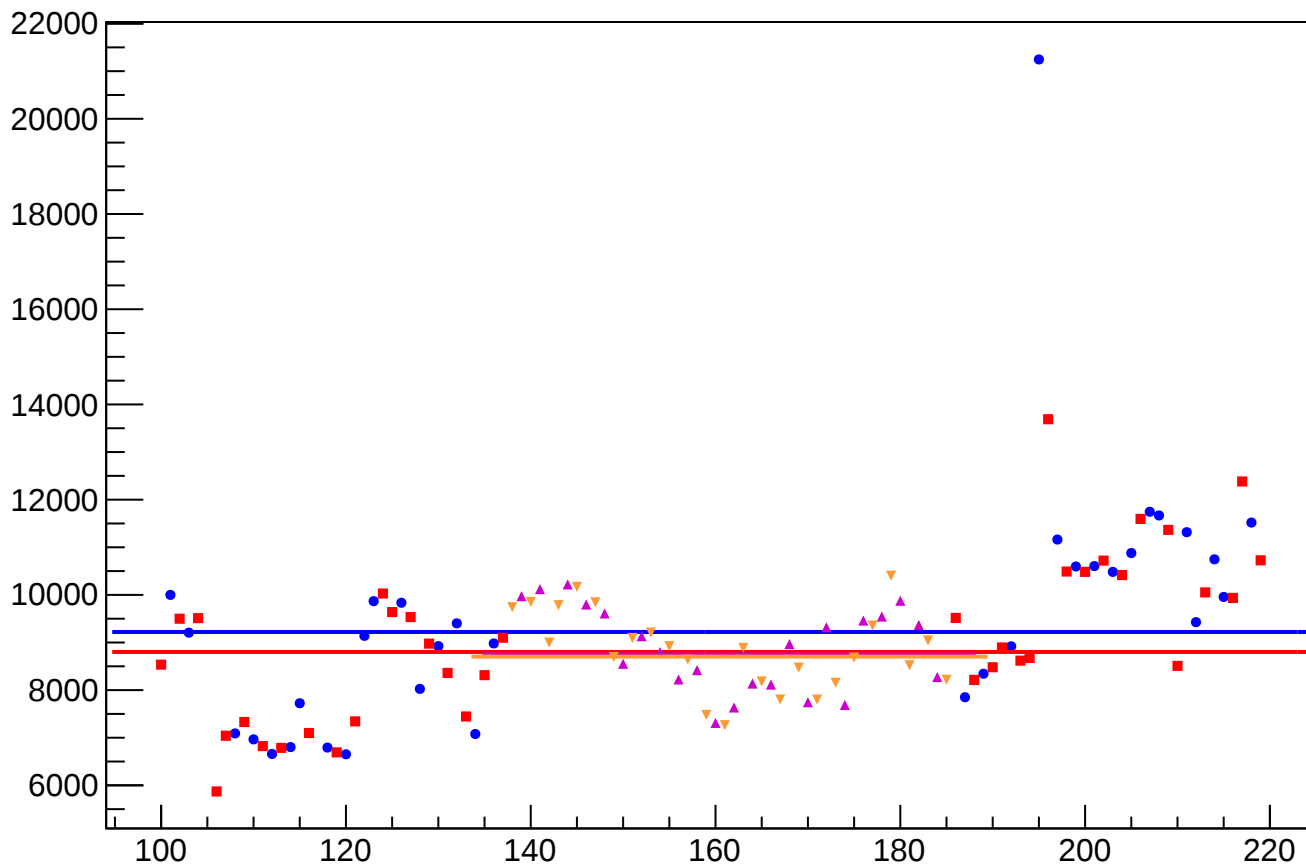
Right:  $1.905 \pm 1.503$   $\chi^2/\text{NDF}: 816.8/69$

In:  $-7.812 \pm 1.534$   $\chi^2/\text{NDF}: 307.7/55$

Out:  $-0.720 \pm 1.447$   $\chi^2/\text{NDF}: 577.2/61$

All:  $-4.059 \pm 1.052$   $\chi^2/\text{NDF}: 896.2/117$

# diff\_bpm0l08X\_rms vs Slug, Sign Corrected



Right In: 9220.811+/-1.569  $\chi^2/\text{NDF}$ : 1618303.4/32

Left Out: 8704.193+/-1.449  $\chi^2/\text{NDF}$ : 332364.3/24

Right Out: 8801.301+/-1.445  $\chi^2/\text{NDF}$ : 1360346.2/36

Left In: 8747.415+/-1.501  $\chi^2/\text{NDF}$ : 347110.4/22

Left: 8725.041+/-1.042  $\chi^2/\text{NDF}$ : 679904.0/47

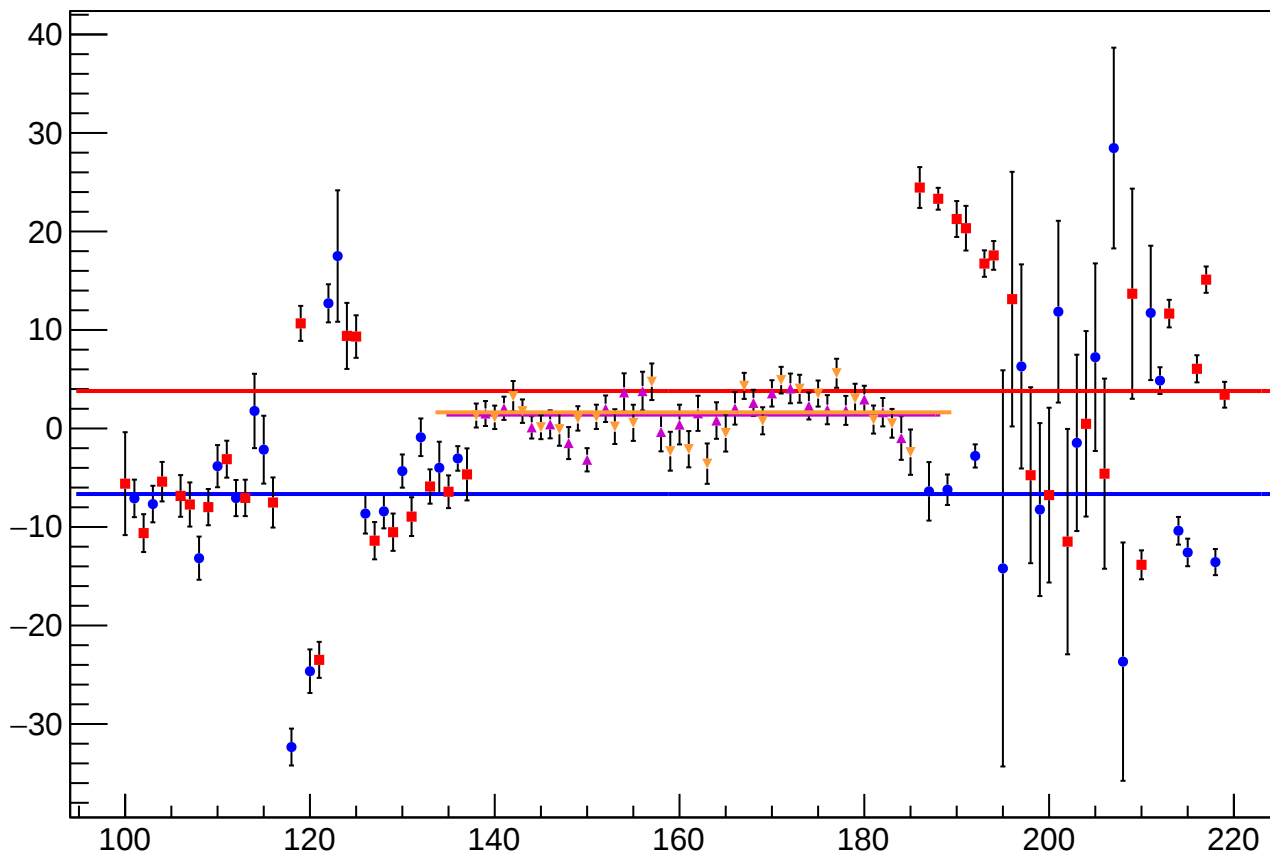
Right: 8993.801+/-1.063  $\chi^2/\text{NDF}$ : 3017344.1/69

In: 8973.619+/-1.084  $\chi^2/\text{NDF}$ : 2012960.5/55

Out: 8752.880+/-1.023  $\chi^2/\text{NDF}$ : 1694963.5/61

All: 8856.811+/-0.744  $\chi^2/\text{NDF}$ : 3729848.9/11

# diff\_bpm0l08Y\_mean vs Slug, Sign Corrected



Right In: -6.655 $\pm$ 0.360  $\chi^2/\text{NDF}$ : 572.4/32

Left Out: 1.639 $\pm$ 0.294  $\chi^2/\text{NDF}$ : 51.3/24

Right Out: 3.804 $\pm$ 0.319  $\chi^2/\text{NDF}$ : 1723.4/36

Left In: 1.404 $\pm$ 0.309  $\chi^2/\text{NDF}$ : 34.1/22

Left: 1.528 $\pm$ 0.213  $\chi^2/\text{NDF}$ : 85.8/47

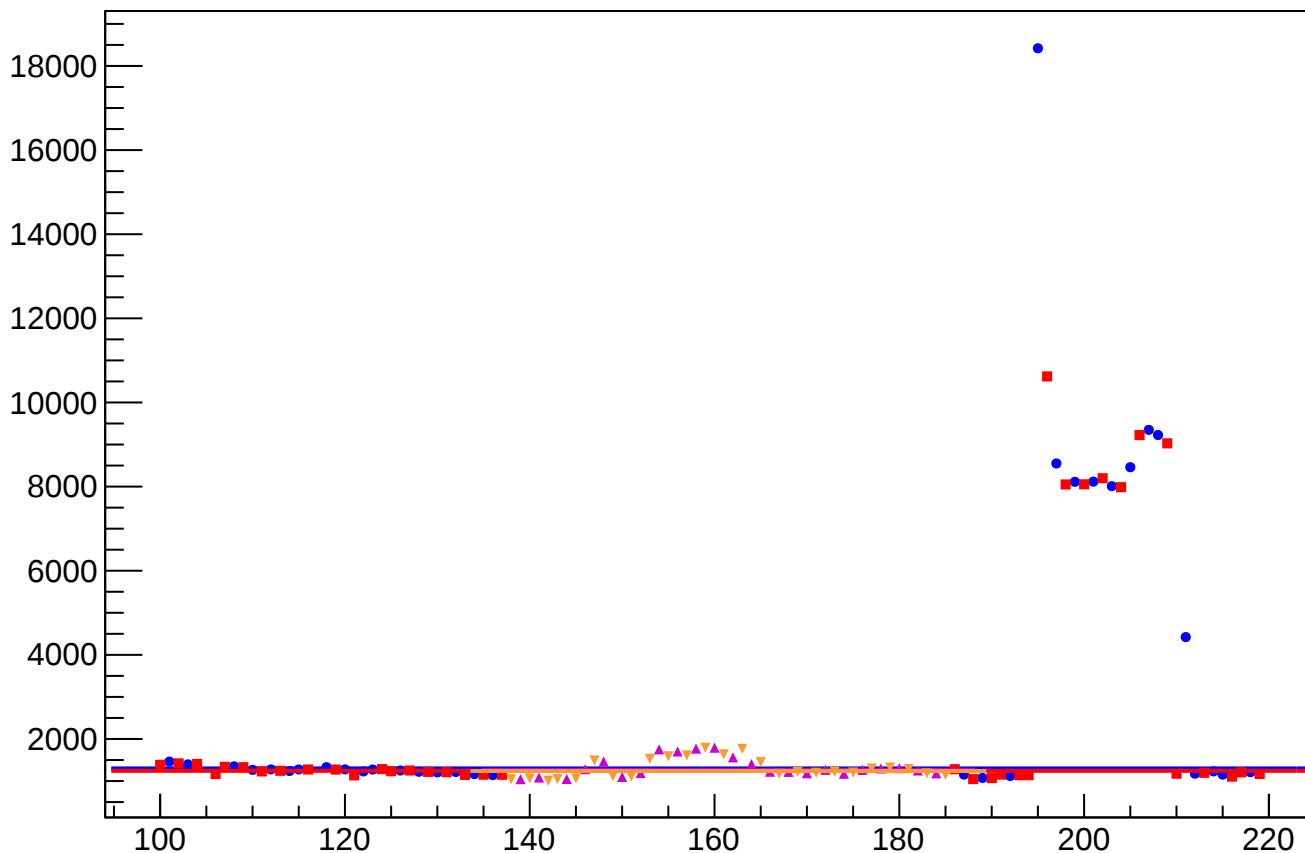
Right: -0.782 $\pm$ 0.239  $\chi^2/\text{NDF}$ : 2768.4/69

In: -2.009 $\pm$ 0.235  $\chi^2/\text{NDF}$ : 894.6/55

Out: 2.634 $\pm$ 0.216  $\chi^2/\text{NDF}$ : 1799.7/61

All: 0.505 $\pm$ 0.159  $\chi^2/\text{NDF}$ : 2906.4/117

# diff\_bpm0l08Y\_rms vs Slug, Sign Corrected



Right In: 1299.938 $\pm$ 0.255  $\chi^2$ /NDF: 9731632.7/32

Left Out: 1238.437 $\pm$ 0.208  $\chi^2$ /NDF: 965173.0/24

Right Out: 1243.159 $\pm$ 0.225  $\chi^2$ /NDF: 7800544.2/36

Left In: 1265.673 $\pm$ 0.218  $\chi^2$ /NDF: 845157.0/22

Left: 1251.361 $\pm$ 0.151  $\chi^2$ /NDF: 1818496.6/47

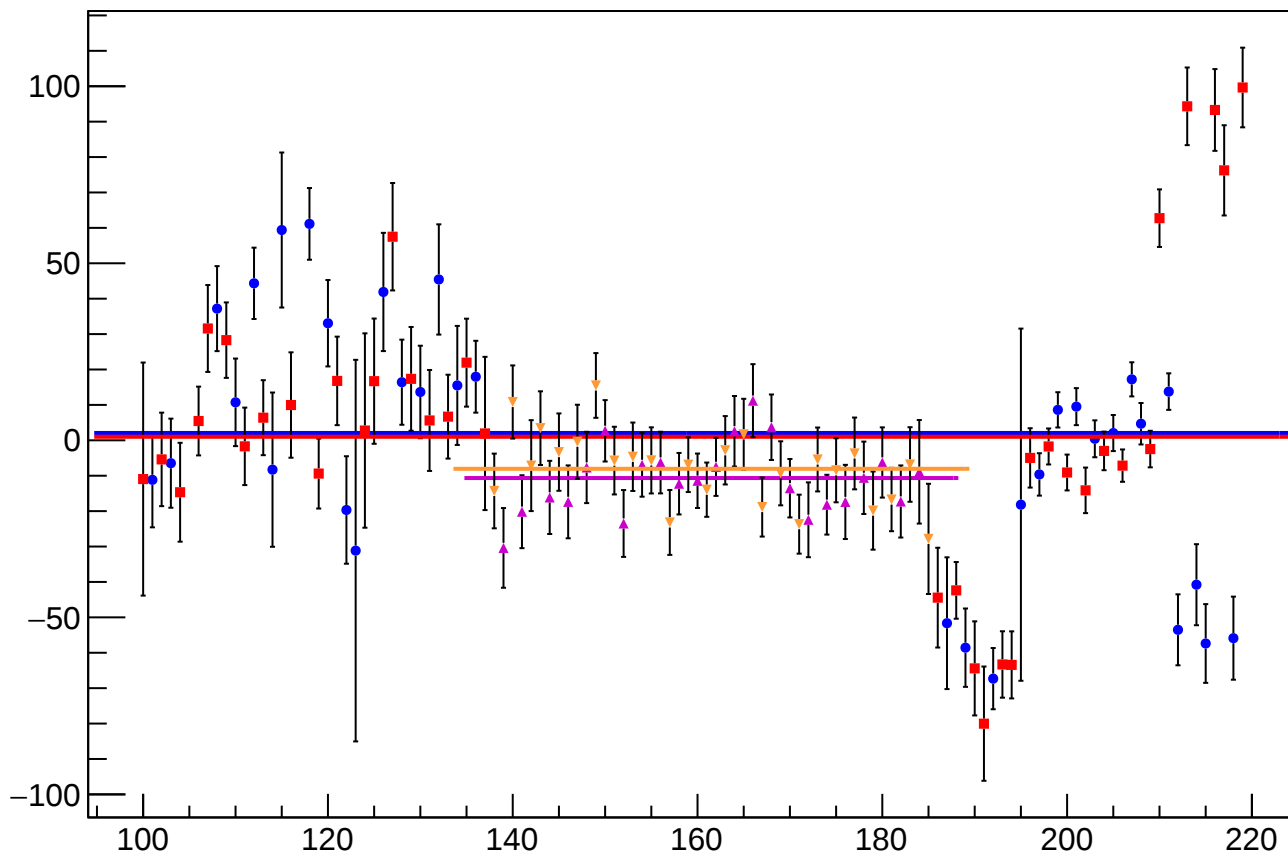
Right: 1268.058 $\pm$ 0.169  $\chi^2$ /NDF: 17560034.4/69

In: 1280.185 $\pm$ 0.166  $\chi^2$ /NDF: 10587206.1/55

Out: 1240.606 $\pm$ 0.153  $\chi^2$ /NDF: 8765954.8/61

All: 1258.755 $\pm$ 0.112  $\chi^2$ /NDF: 19383982.2/100

# diff\_bpm0l09X\_mean vs Slug, Sign Corrected



Right In:  $2.077 \pm 1.504$   $\chi^2/\text{NDF}$ : 320.4/32

Left Out:  $-8.042 \pm 1.918$   $\chi^2/\text{NDF}$ : 26.3/24

Right Out:  $1.002 \pm 1.502$   $\chi^2/\text{NDF}$ : 539.9/36

Left In:  $-10.653 \pm 1.988$   $\chi^2/\text{NDF}$ : 21.4/22

Left:  $-9.301 \pm 1.380$   $\chi^2/\text{NDF}$ : 48.6/47

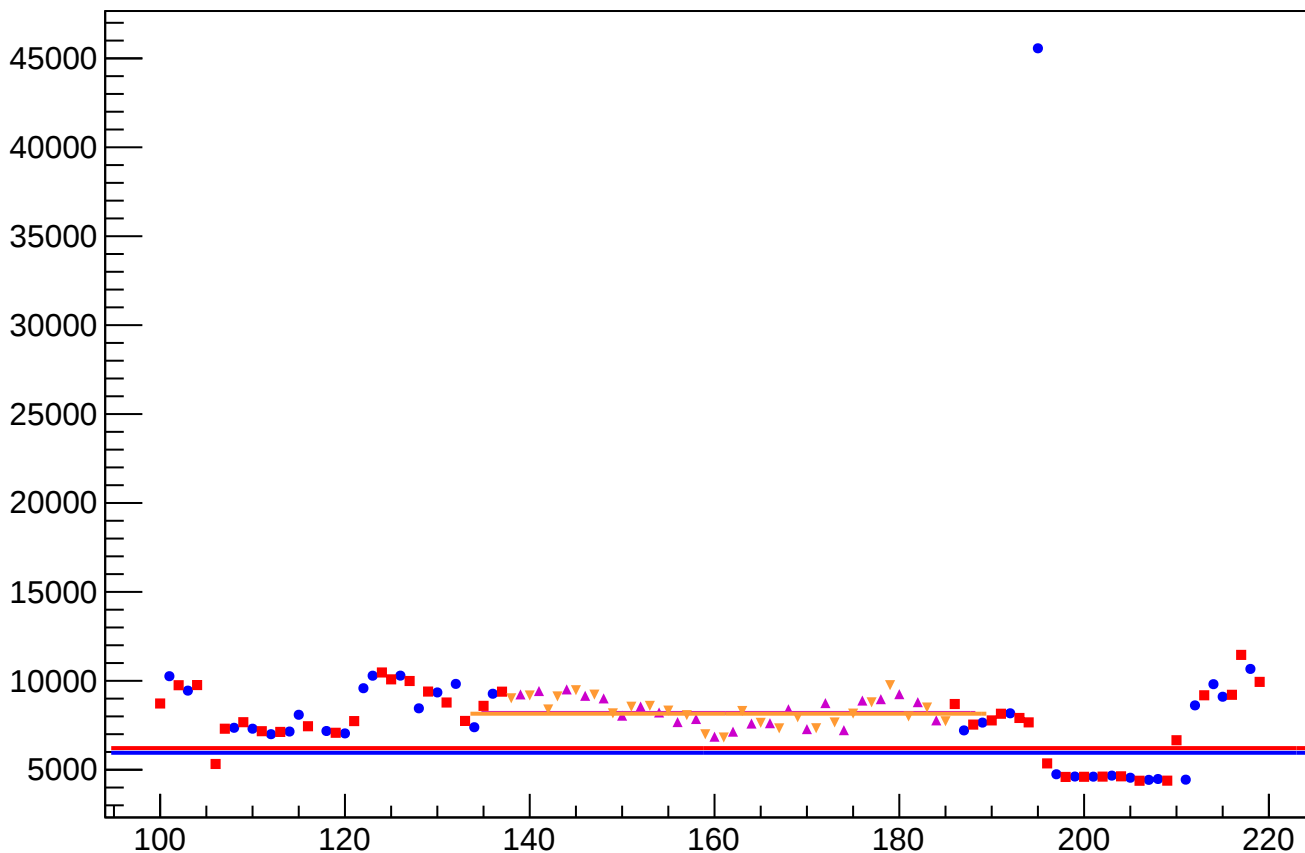
Right:  $1.539 \pm 1.063$   $\chi^2/\text{NDF}$ : 860.5/69

In:  $-2.559 \pm 1.199$   $\chi^2/\text{NDF}$ : 367.9/55

Out:  $-2.435 \pm 1.182$   $\chi^2/\text{NDF}$ : 579.9/61

All:  $-2.496 \pm 0.842$   $\chi^2/\text{NDF}$ : 947.8/117

# diff\_bpm0l09X\_rms vs Slug, Sign Corrected



Right In: 5954.752+/-1.064

$\chi^2/\text{NDF}$ : 4776900.8/32

Left: 8171.814+/-0.976  $\chi^2/\text{NDF}$ : 660646.6/47

Left Out: 8151.489+/-1.356

$\chi^2/\text{NDF}$ : 321803.3/24

Right: 6086.200+/-0.751  $\chi^2/\text{NDF}$ : 8250694.0/69

Right Out: 6217.218+/-1.062

$\chi^2/\text{NDF}$ : 3443295.2/36

In: 6770.060+/-0.848  $\chi^2/\text{NDF}$ : 6728885.6/55

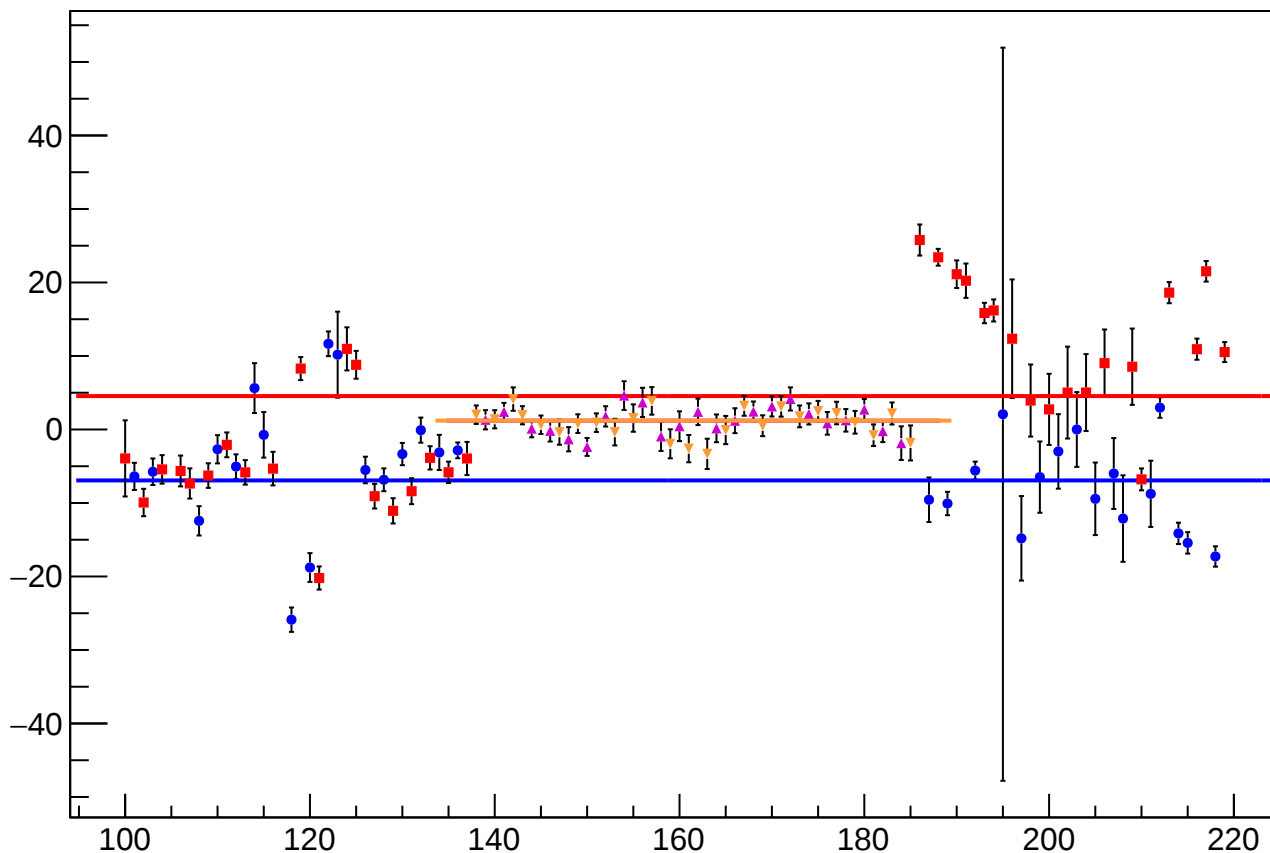
Out: 6952.248+/-0.836  $\chi^2/\text{NDF}$ : 5026018.1/61

Left In: 8193.636+/-1.405

$\chi^2/\text{NDF}$ : 338377.6/22

All: 6862.452+/-0.595  $\chi^2/\text{NDF}$ : 11778305.6/1

# diff\_bpm0l09Y\_mean vs Slug, Sign Corrected



Right In:  $-6.932 \pm 0.339$   $\chi^2/\text{NDF}$ : 546.1/32

Left Out:  $1.203 \pm 0.302$   $\chi^2/\text{NDF}$ : 29.9/24

Right Out:  $4.542 \pm 0.305$   $\chi^2/\text{NDF}$ : 1785.3/36

Left In:  $1.198 \pm 0.318$   $\chi^2/\text{NDF}$ : 31.2/22

Left:  $1.201 \pm 0.219$   $\chi^2/\text{NDF}$ : 61.1/47

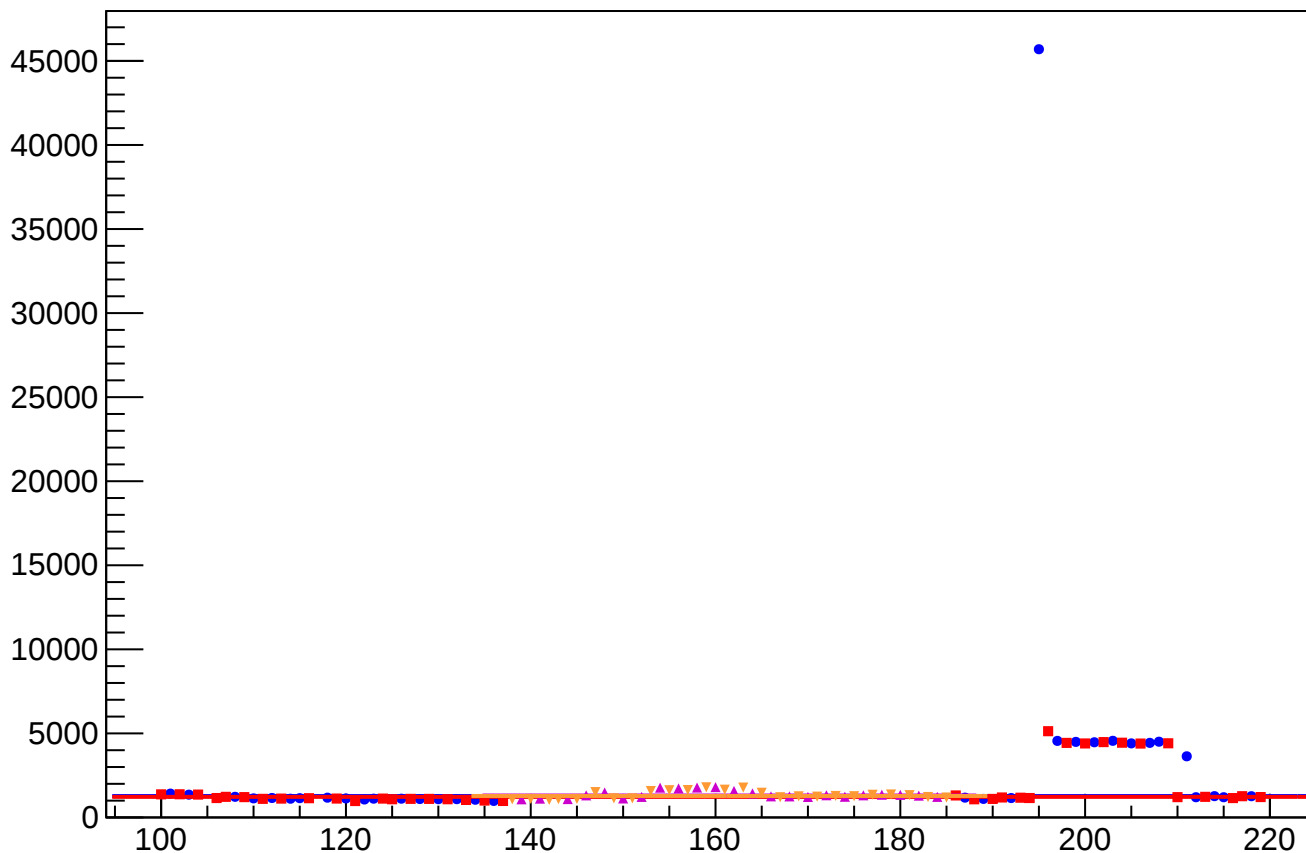
Right:  $-0.594 \pm 0.227$   $\chi^2/\text{NDF}$ : 2964.2/69

In:  $-2.610 \pm 0.232$   $\chi^2/\text{NDF}$ : 883.1/55

Out:  $2.858 \pm 0.215$   $\chi^2/\text{NDF}$ : 1875.6/61

All:  $0.334 \pm 0.158$   $\chi^2/\text{NDF}$ : 3057.7/117

# diff\_bpm0l09Y\_rms vs Slug, Sign Corrected



Right In: 1272.305+/-0.240  $\chi^2/\text{NDF}$ : 7977578.0/32

Left Out: 1277.916+/-0.214  $\chi^2/\text{NDF}$ : 878127.9/24

Right Out: 1225.419+/-0.216  $\chi^2/\text{NDF}$ : 5508138.9/36

Left In: 1305.541+/-0.225  $\chi^2/\text{NDF}$ : 760450.8/22

Left: 1291.030+/-0.155  $\chi^2/\text{NDF}$ : 1646499.4/47

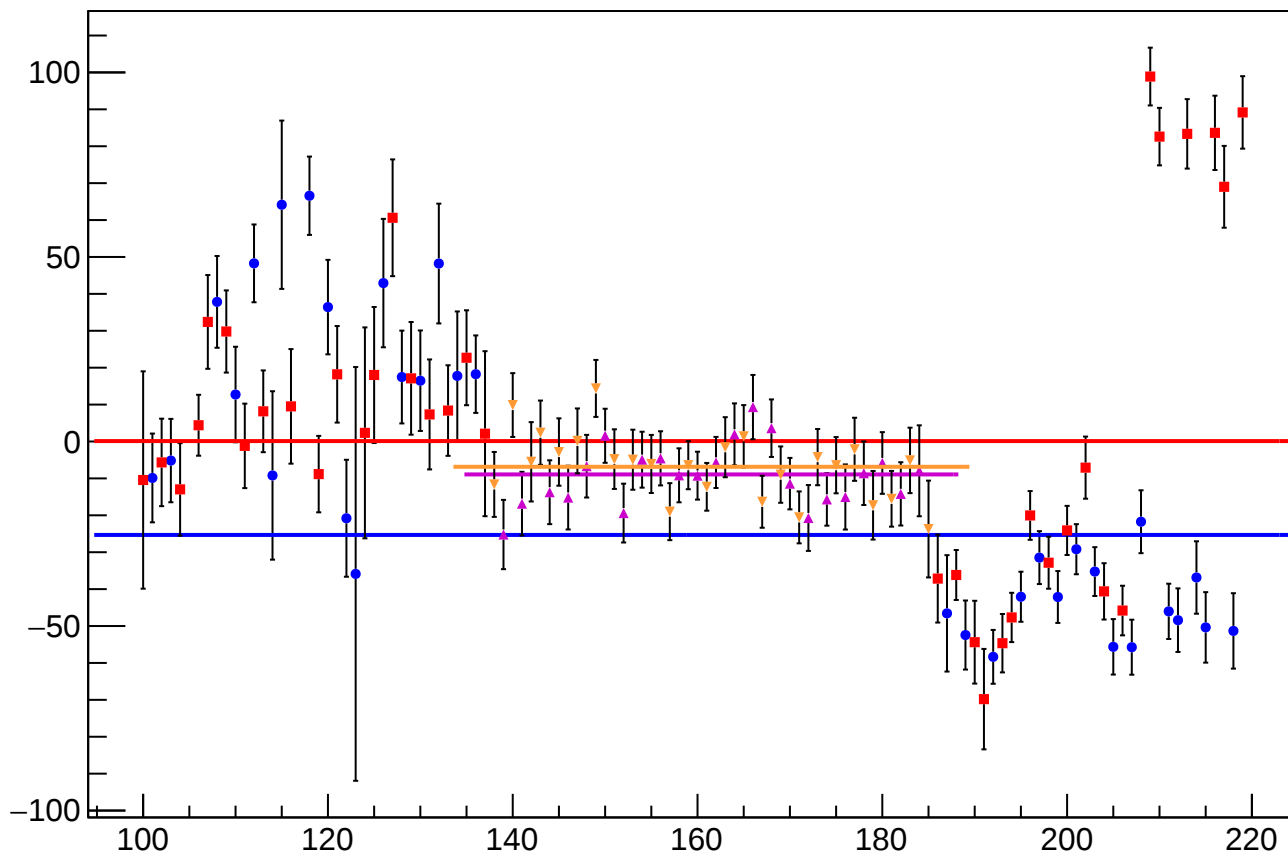
Right: 1246.406+/-0.160  $\chi^2/\text{NDF}$ : 13506849.6/69

In: 1289.976+/-0.164  $\chi^2/\text{NDF}$ : 8748250.3/55

Out: 1251.903+/-0.152  $\chi^2/\text{NDF}$ : 6416126.1/61

All: 1269.478+/-0.111  $\chi^2/\text{NDF}$ : 15193379.3/1

# diff\_bpm0l10X\_mean vs Slug, Sign Corrected



Right In: -25.317 $\pm$ 1.709  $\chi^2/\text{NDF}$ : 391.1/32

Left Out: -6.854 $\pm$ 1.616  $\chi^2/\text{NDF}$ : 28.7/24

Right Out: 0.113 $\pm$ 1.617  $\chi^2/\text{NDF}$ : 886.7/36

Left In: -8.923 $\pm$ 1.674  $\chi^2/\text{NDF}$ : 21.8/22

Left: -7.852 $\pm$ 1.163  $\chi^2/\text{NDF}$ : 51.3/47

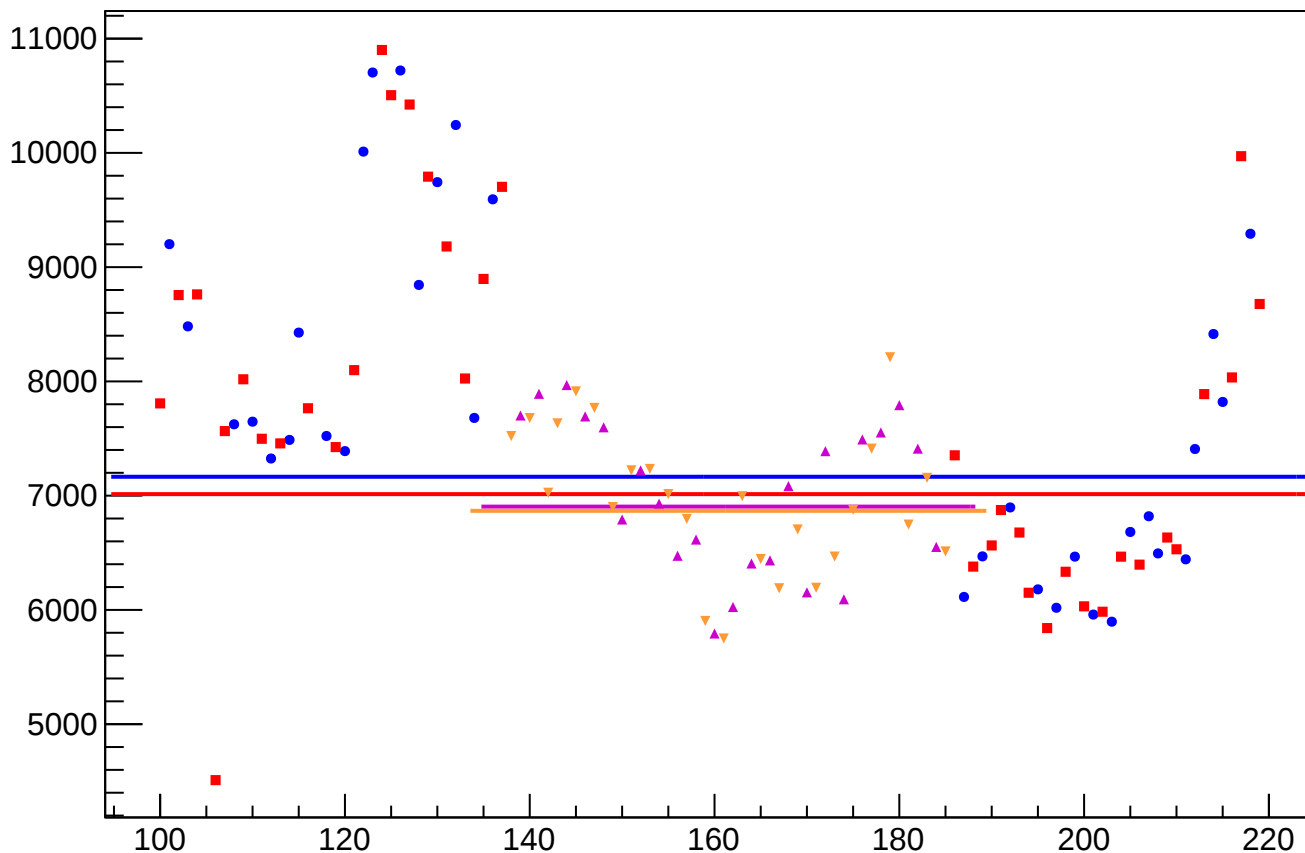
Right: -11.902 $\pm$ 1.174  $\chi^2/\text{NDF}$ : 1394.7/69

In: -16.954 $\pm$ 1.196  $\chi^2/\text{NDF}$ : 459.9/55

Out: -3.374 $\pm$ 1.143  $\chi^2/\text{NDF}$ : 924.7/61

All: -9.856 $\pm$ 0.826  $\chi^2/\text{NDF}$ : 1452.0/117

# diff\_bpm0l10X\_rms vs Slug, Sign Corrected



Right In: 7165.444+/-1.208  $\chi^2/\text{NDF}$ : 990420.6/32

Left Out: 6867.371+/-1.142  $\chi^2/\text{NDF}$ : 306895.0/24

Right Out: 7013.436+/-1.143  $\chi^2/\text{NDF}$ : 1203857.6/36

Left In: 6904.117+/-1.184  $\chi^2/\text{NDF}$ : 325912.6/22

Left: 6885.088+/-0.822  $\chi^2/\text{NDF}$ : 633306.5/47

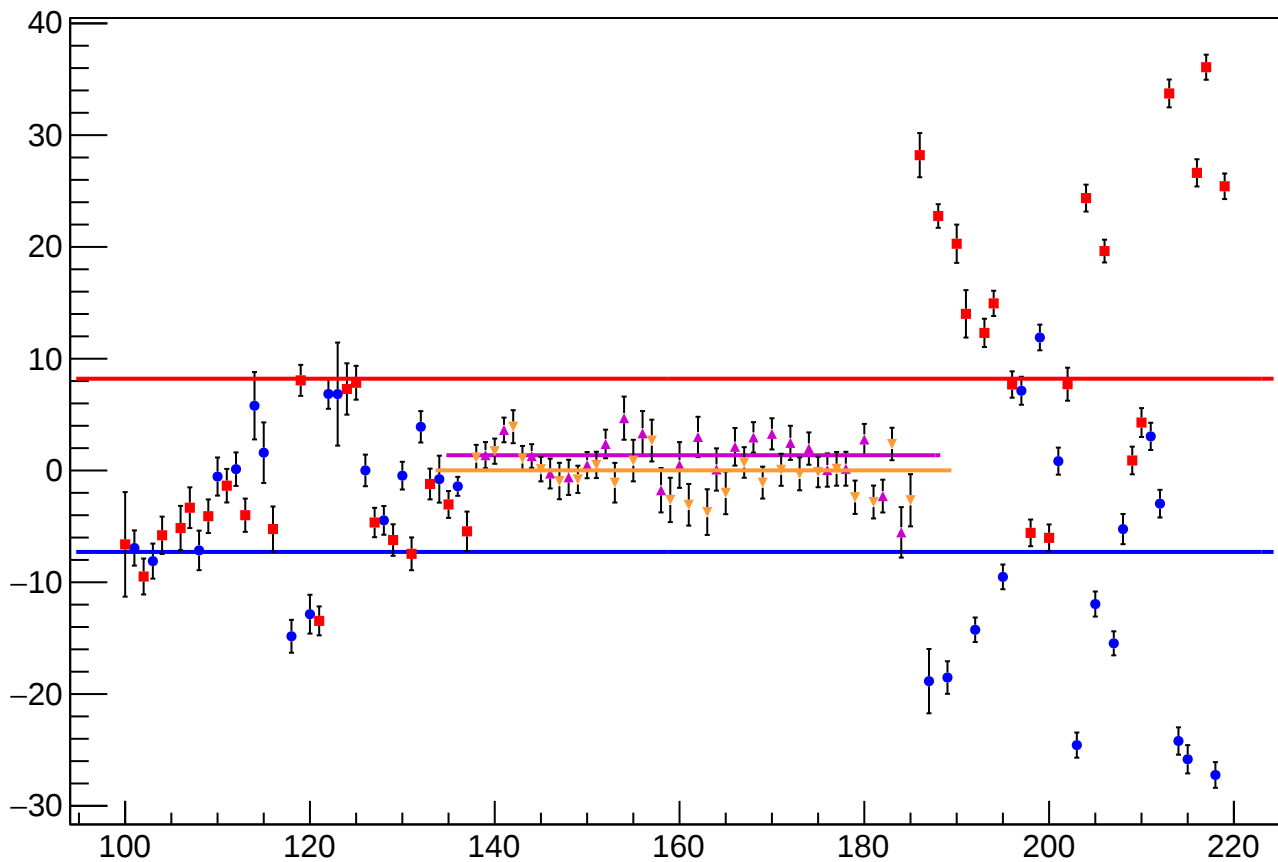
Right: 7085.252+/-0.830  $\chi^2/\text{NDF}$ : 2202629.0/69

In: 7032.130+/-0.846  $\chi^2/\text{NDF}$ : 1340199.9/55

Out: 6940.340+/-0.808  $\chi^2/\text{NDF}$ : 1518919.8/61

All: 6984.155+/-0.584  $\chi^2/\text{NDF}$ : 2865278.2/11

# diff\_bpm0l10Y\_mean vs Slug, Sign Corrected



Right In:  $-7.284 \pm 0.235$   $\chi^2/\text{NDF}: 2094.9/32$

Left Out:  $0.014 \pm 0.290$   $\chi^2/\text{NDF}: 35.0/24$

Right Out:  $8.212 \pm 0.228$   $\chi^2/\text{NDF}: 3810.0/36$

Left In:  $1.365 \pm 0.306$   $\chi^2/\text{NDF}: 38.5/22$

Left:  $0.654 \pm 0.210$   $\chi^2/\text{NDF}: 83.8/47$

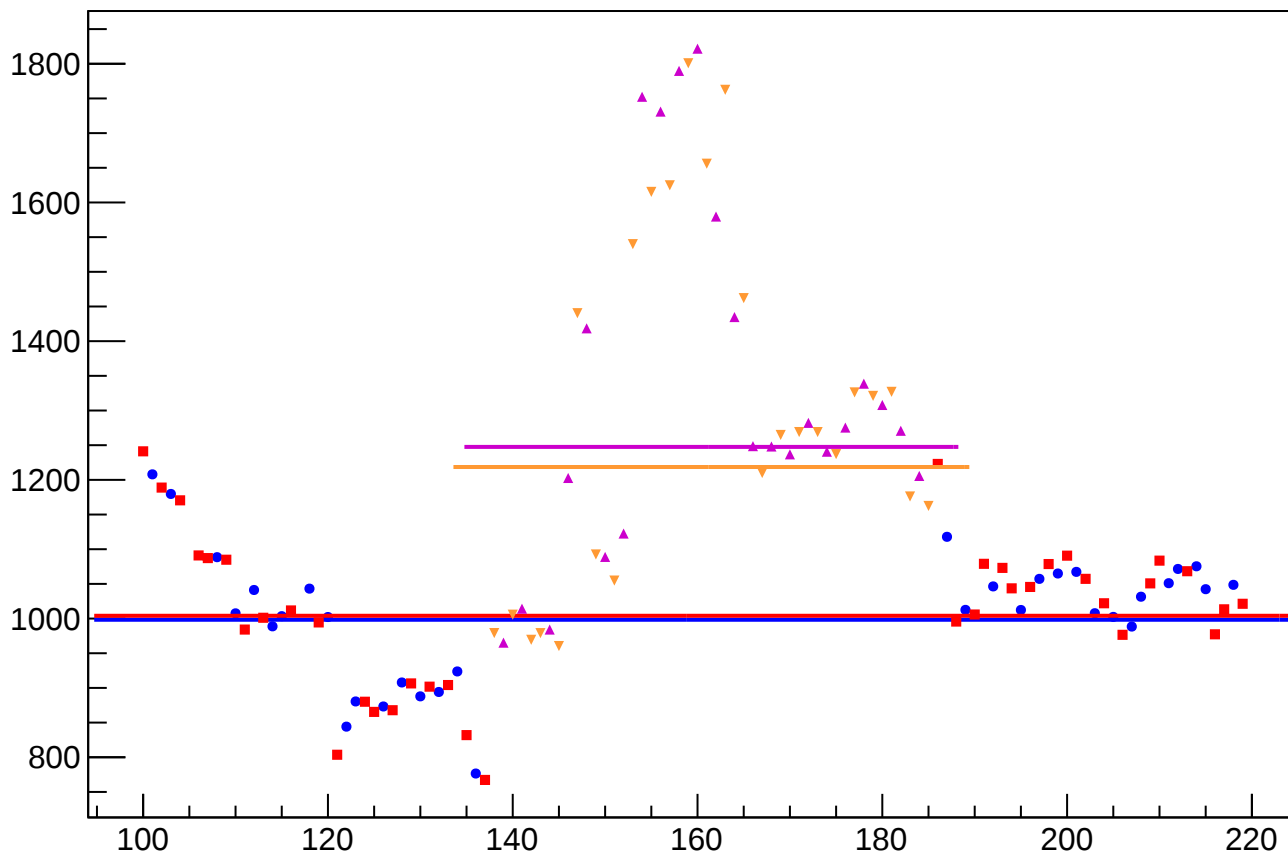
Right:  $0.692 \pm 0.163$   $\chi^2/\text{NDF}: 8148.9/69$

In:  $-4.074 \pm 0.186$   $\chi^2/\text{NDF}: 2637.5/55$

Out:  $5.081 \pm 0.179$   $\chi^2/\text{NDF}: 4339.3/61$

All:  $0.678 \pm 0.129$   $\chi^2/\text{NDF}: 8232.7/117$

# diff\_bpm0l10Y\_rms vs Slug, Sign Corrected



Right In:  $998.284 \pm 0.166$   $\chi^2/\text{NDF}$ : 343136.4/32

Left Out:  $1218.543 \pm 0.205$   $\chi^2/\text{NDF}$ : 1265847.5/24

Right Out:  $1004.033 \pm 0.161$   $\chi^2/\text{NDF}$ : 342836.8/36

Left In:  $1247.538 \pm 0.216$   $\chi^2/\text{NDF}$ : 1073390.3/22

Left:  $1232.283 \pm 0.149$   $\chi^2/\text{NDF}$ : 2348717.2/47

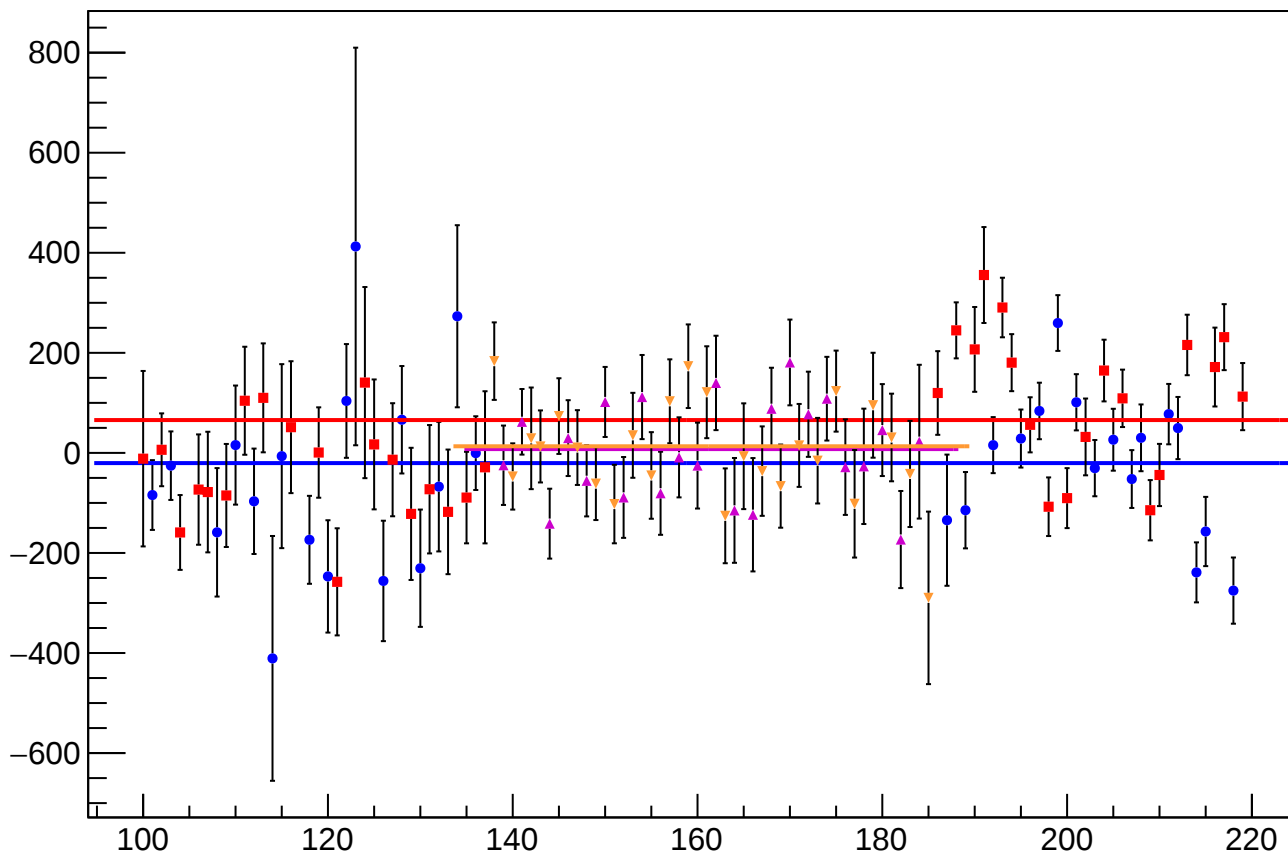
Right:  $1001.243 \pm 0.116$   $\chi^2/\text{NDF}$ : 686591.0/69

In:  $1090.794 \pm 0.132$   $\chi^2/\text{NDF}$ : 2253752.3/55

Out:  $1085.952 \pm 0.127$   $\chi^2/\text{NDF}$ : 2285424.4/61

All:  $1088.281 \pm 0.091$   $\chi^2/\text{NDF}$ : 4539879.4/11

# diff\_bpm0r03X\_mean vs Slug, Sign Corrected



Right In:  $-20.385 \pm 13.327$   $\chi^2/\text{NDF}$ : 99.3/32

Left Out:  $13.207 \pm 17.146$   $\chi^2/\text{NDF}$ : 26.8/24

Right Out:  $65.631 \pm 12.964$   $\chi^2/\text{NDF}$ : 121.0/36

Left In:  $7.618 \pm 17.672$   $\chi^2/\text{NDF}$ : 28.1/22

Left:  $10.497 \pm 12.306$   $\chi^2/\text{NDF}$ : 55.0/47

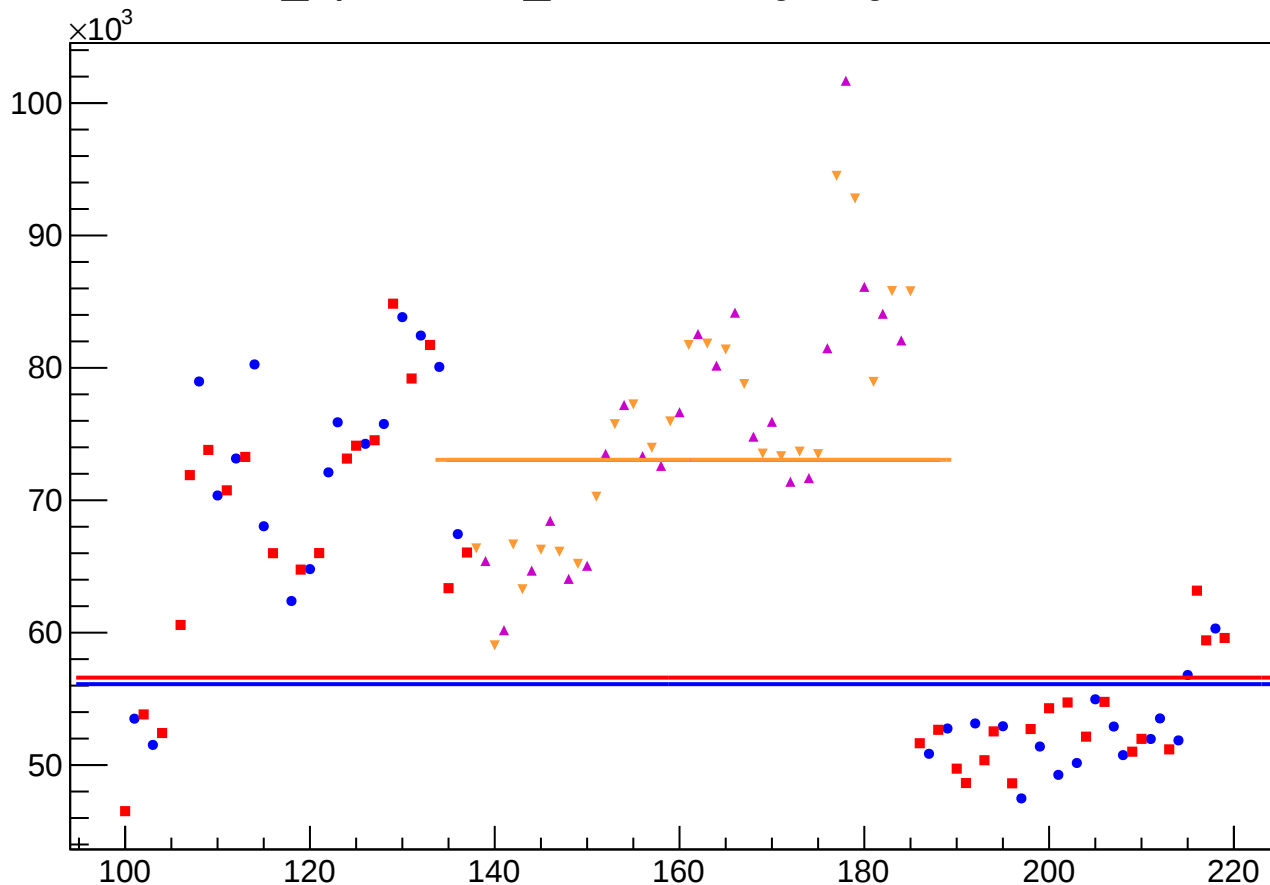
Right:  $23.811 \pm 9.293$   $\chi^2/\text{NDF}$ : 241.7/69

In:  $-10.232 \pm 10.640$   $\chi^2/\text{NDF}$ : 129.0/55

Out:  $46.563 \pm 10.341$   $\chi^2/\text{NDF}$ : 153.8/61

All:  $18.976 \pm 7.416$   $\chi^2/\text{NDF}$ : 297.4/117

# diff\_bpm0r03X\_rms vs Slug, Sign Corrected



Right In:  $56110.184 \pm 9.424$   $\chi^2/\text{NDF}: 822644.8/32$

Left Out:  $73054.401 \pm 12.124$   $\chi^2/\text{NDF}: 473050.9/24$

Right Out:  $56603.921 \pm 9.167$   $\chi^2/\text{NDF}: 794146.1/36$

Left In:  $73045.500 \pm 12.496$   $\chi^2/\text{NDF}: 463525.5/22$

Left:  $73050.085 \pm 8.701$   $\chi^2/\text{NDF}: 936576.6/47$

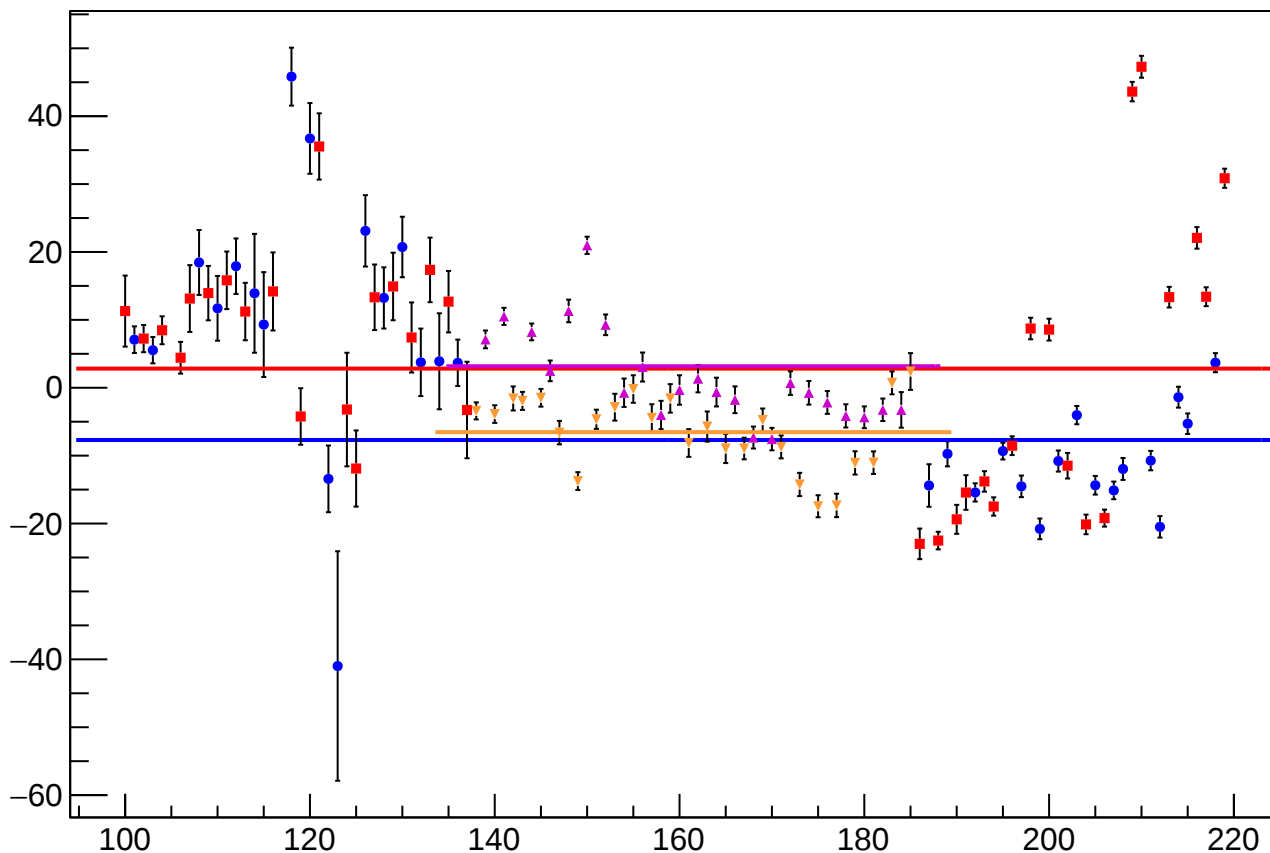
Right:  $56363.870 \pm 6.571$   $\chi^2/\text{NDF}: 1618201.3/69$

In:  $62250.138 \pm 7.524$   $\chi^2/\text{NDF}: 2457041.0/55$

Out:  $62587.585 \pm 7.312$   $\chi^2/\text{NDF}: 2438555.4/61$

All:  $62423.678 \pm 5.244$   $\chi^2/\text{NDF}: 4896630.9/117$

# diff\_bpm0r03Y\_mean vs Slug, Sign Corrected



Right In: -7.696 $\pm$ 0.348  $\chi^2/\text{NDF}$ : 912.9/32

Left Out: -6.537 $\pm$ 0.332  $\chi^2/\text{NDF}$ : 252.7/24

Right Out: 2.822 $\pm$ 0.335  $\chi^2/\text{NDF}$ : 4078.7/36

Left In: 3.171 $\pm$ 0.346  $\chi^2/\text{NDF}$ : 487.3/22

Left: -1.892 $\pm$ 0.240  $\chi^2/\text{NDF}$ : 1149.5/47

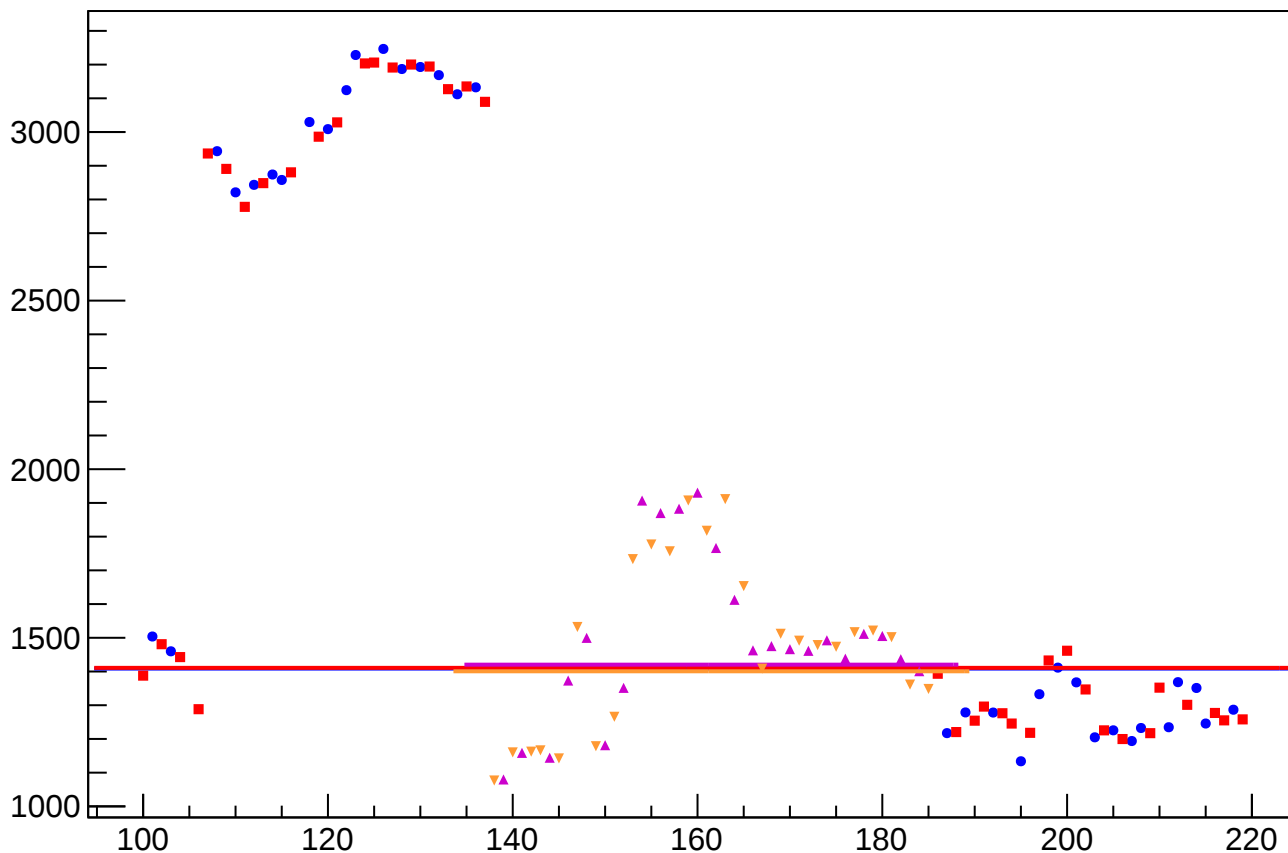
Right: -2.241 $\pm$ 0.241  $\chi^2/\text{NDF}$ : 5466.4/69

In: -2.245 $\pm$ 0.245  $\chi^2/\text{NDF}$ : 1890.4/55

Out: -1.901 $\pm$ 0.236  $\chi^2/\text{NDF}$ : 4725.5/61

All: -2.066 $\pm$ 0.170  $\chi^2/\text{NDF}$ : 6617.0/117

# diff\_bpm0r03Y\_rms vs Slug, Sign Corrected



Right In: 1408.767 $\pm$ 0.246  $\chi^2$ /NDF: 3628312.3/32

Left Out: 1400.637 $\pm$ 0.235  $\chi^2$ /NDF: 1037921.6/24

Right Out: 1410.806 $\pm$ 0.237  $\chi^2$ /NDF: 3628459.6/36

Left In: 1420.285 $\pm$ 0.245  $\chi^2$ /NDF: 905186.2/22

Left: 1410.037 $\pm$ 0.169  $\chi^2$ /NDF: 1946462.8/47

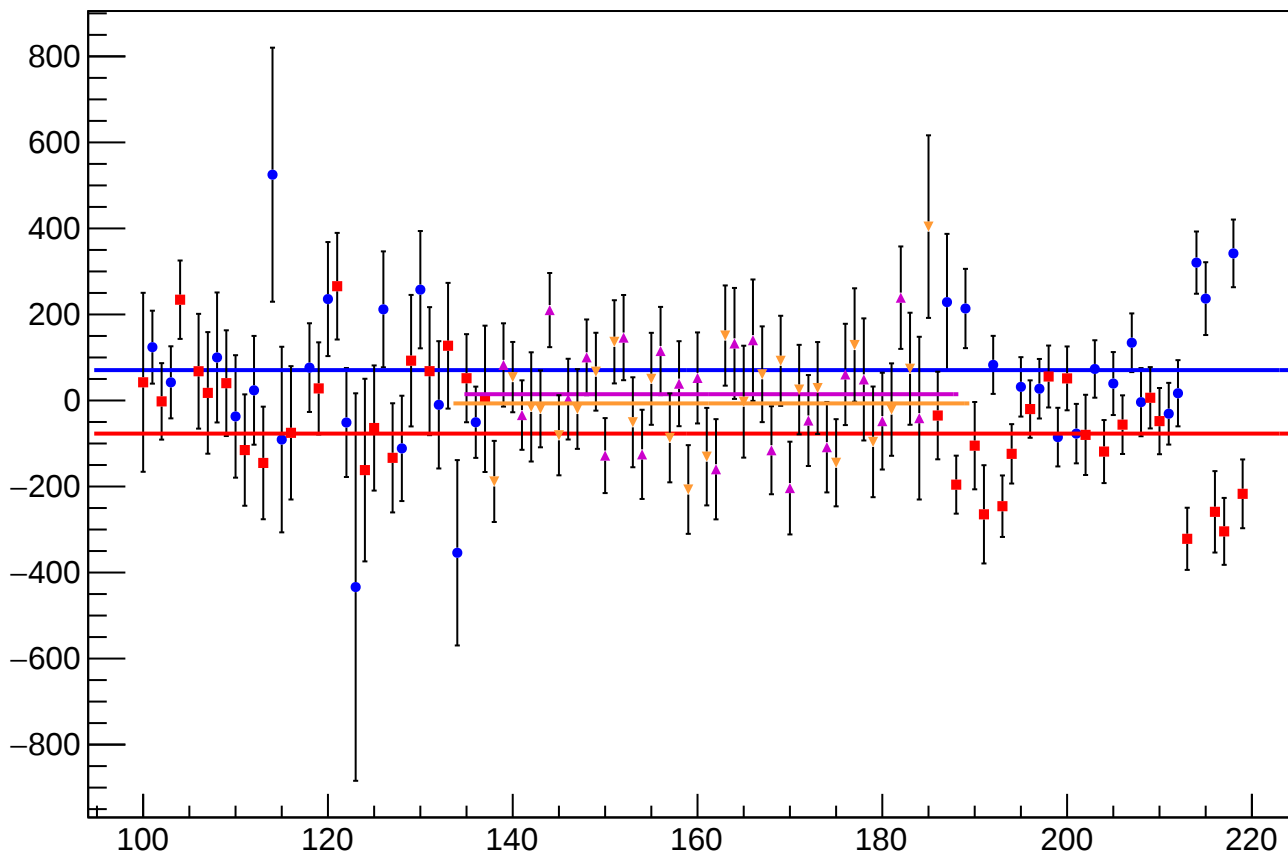
Right: 1409.825 $\pm$ 0.171  $\chi^2$ /NDF: 7256807.6/69

In: 1414.545 $\pm$ 0.174  $\chi^2$ /NDF: 4534600.1/55

Out: 1405.674 $\pm$ 0.167  $\chi^2$ /NDF: 4667311.7/61

All: 1409.931 $\pm$ 0.120  $\chi^2$ /NDF: 9203271.2/111

# diff\_bpm0r05X\_mean vs Slug, Sign Corrected



Right In: 70.615 $\pm$ 15.937  $\chi^2$ /NDF: 65.5/32

Left Out: -6.789 $\pm$ 21.213  $\chi^2$ /NDF:24.7/24

Right Out: -76.981 $\pm$ 15.520  $\chi^2$ /NDF: 78.4/36

Left In: 14.611 $\pm$ 21.846  $\chi^2$ /NDF:29.8/22

Left: 3.596 $\pm$ 15.219  $\chi^2$ /NDF: 55.0/47

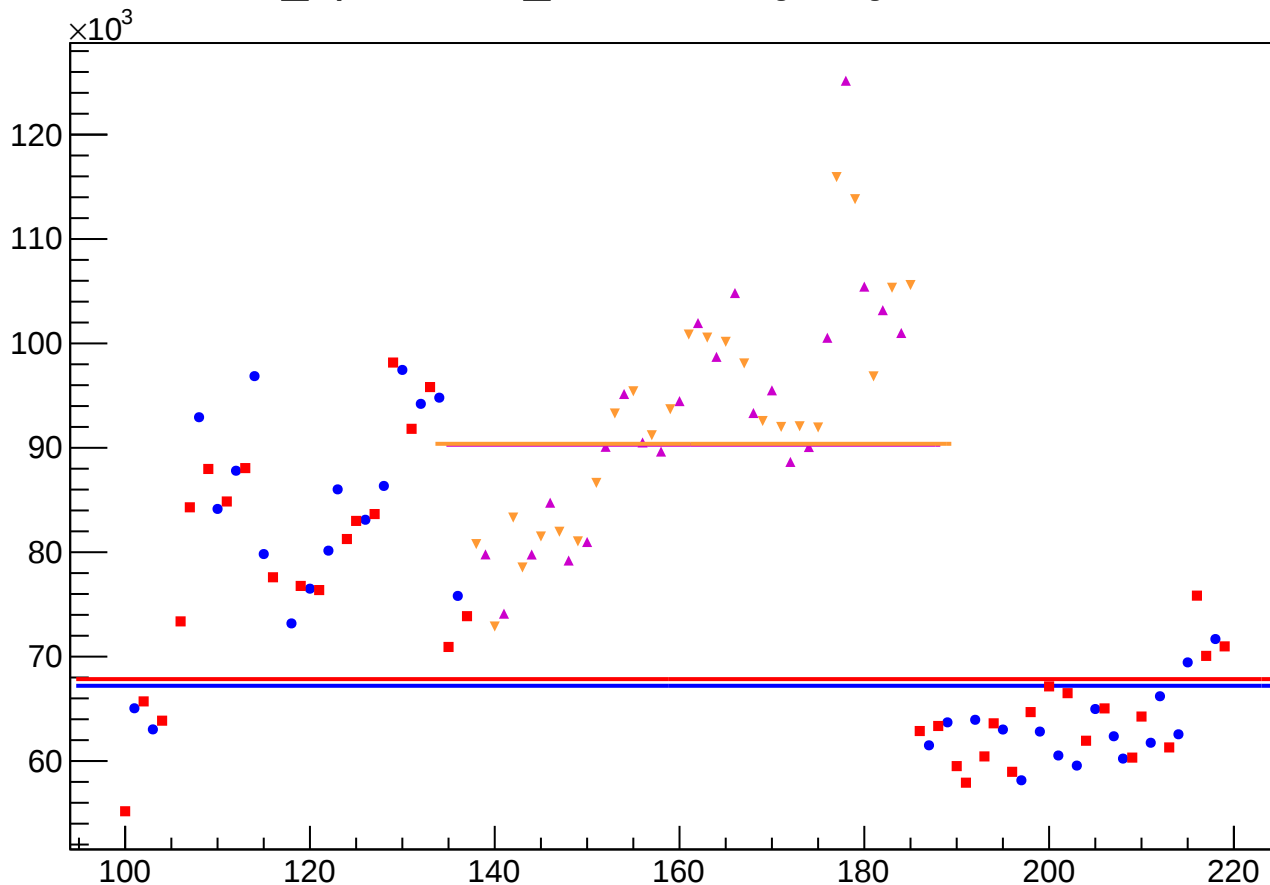
Right: -5.141 $\pm$ 11.119  $\chi^2$ /NDF: 187.9/69

In: 51.163 $\pm$ 12.875  $\chi^2$ /NDF:99.6/55

Out: -52.509 $\pm$ 12.525  $\chi^2$ /NDF:110.2/61

All: -2.100 $\pm$ 8.978  $\chi^2$ /NDF: 243.1/117

# diff\_bpm0r05X\_rms vs Slug, Sign Corrected



Right In:  $67206.388 \pm 11.269$

$\chi^2/\text{NDF}: 670030.3/32$

Left Out:  $90384.853 \pm 15.000$

$\chi^2/\text{NDF}: 461648.2/24$

Right Out:  $67845.982 \pm 10.974$

$\chi^2/\text{NDF}: 668308.2/36$

Left In:  $90293.591 \pm 15.448$

$\chi^2/\text{NDF}: 461337.5/22$

Left:  $90340.563 \pm 10.761$

$\chi^2/\text{NDF}: 923003.7/47$

Right:  $67534.668 \pm 7.862$

$\chi^2/\text{NDF}: 1339991.9/69$

In:  $75225.475 \pm 9.104$

$\chi^2/\text{NDF}: 2589213.2/55$

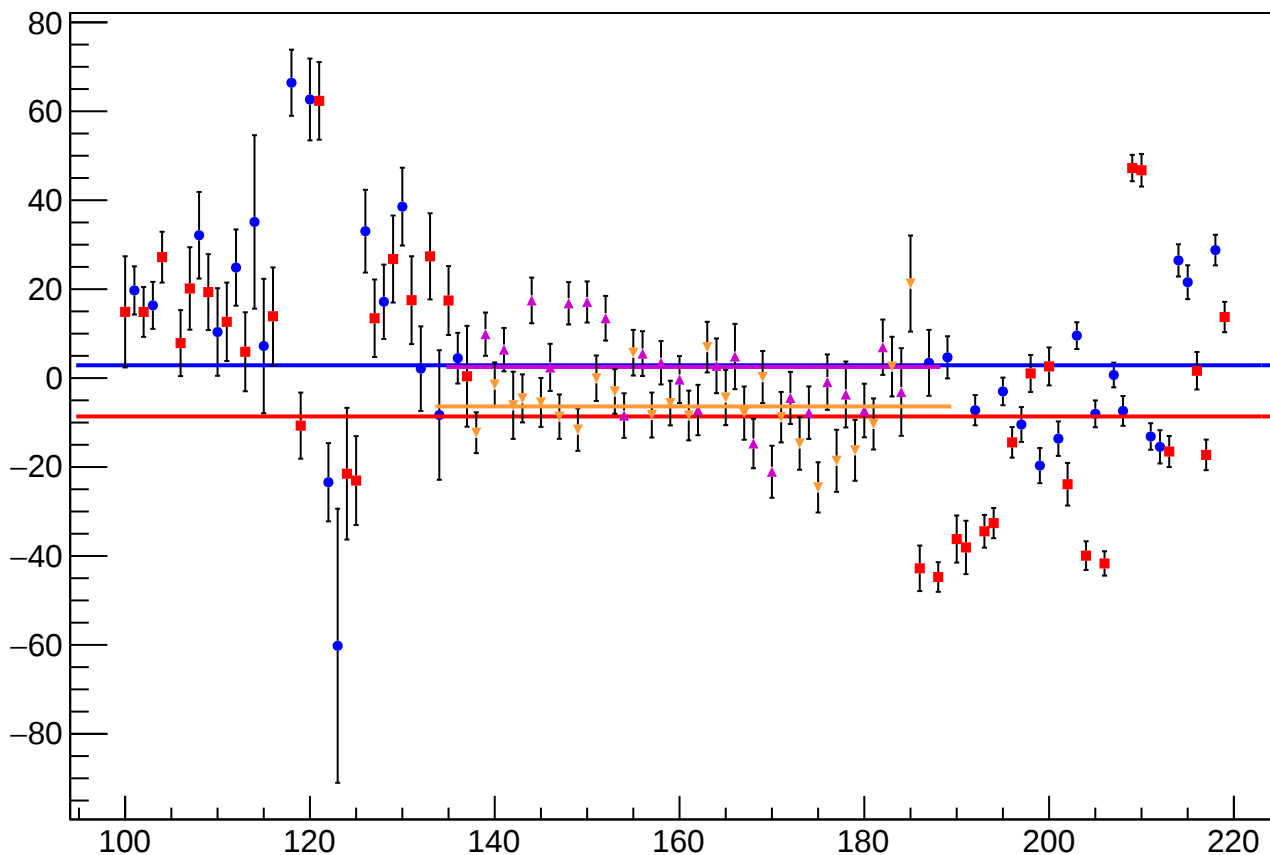
Out:  $75703.970 \pm 8.857$

$\chi^2/\text{NDF}: 2600591.2/61$

All:  $75471.307 \pm 6.348$

$\chi^2/\text{NDF}: 5191223.6/100$

# diff\_bpm0r05Y\_mean vs Slug, Sign Corrected



Right In:  $2.883 \pm 0.805$   $\chi^2/\text{NDF}: 472.9/32$

Left Out:  $-6.370 \pm 1.124$   $\chi^2/\text{NDF}: 45.5/24$

Right Out:  $-8.624 \pm 0.795$   $\chi^2/\text{NDF}: 1440.6/36$

Left In:  $2.501 \pm 1.156$   $\chi^2/\text{NDF}: 78.4/22$

Left:  $-2.059 \pm 0.806$   $\chi^2/\text{NDF}: 154.1/47$

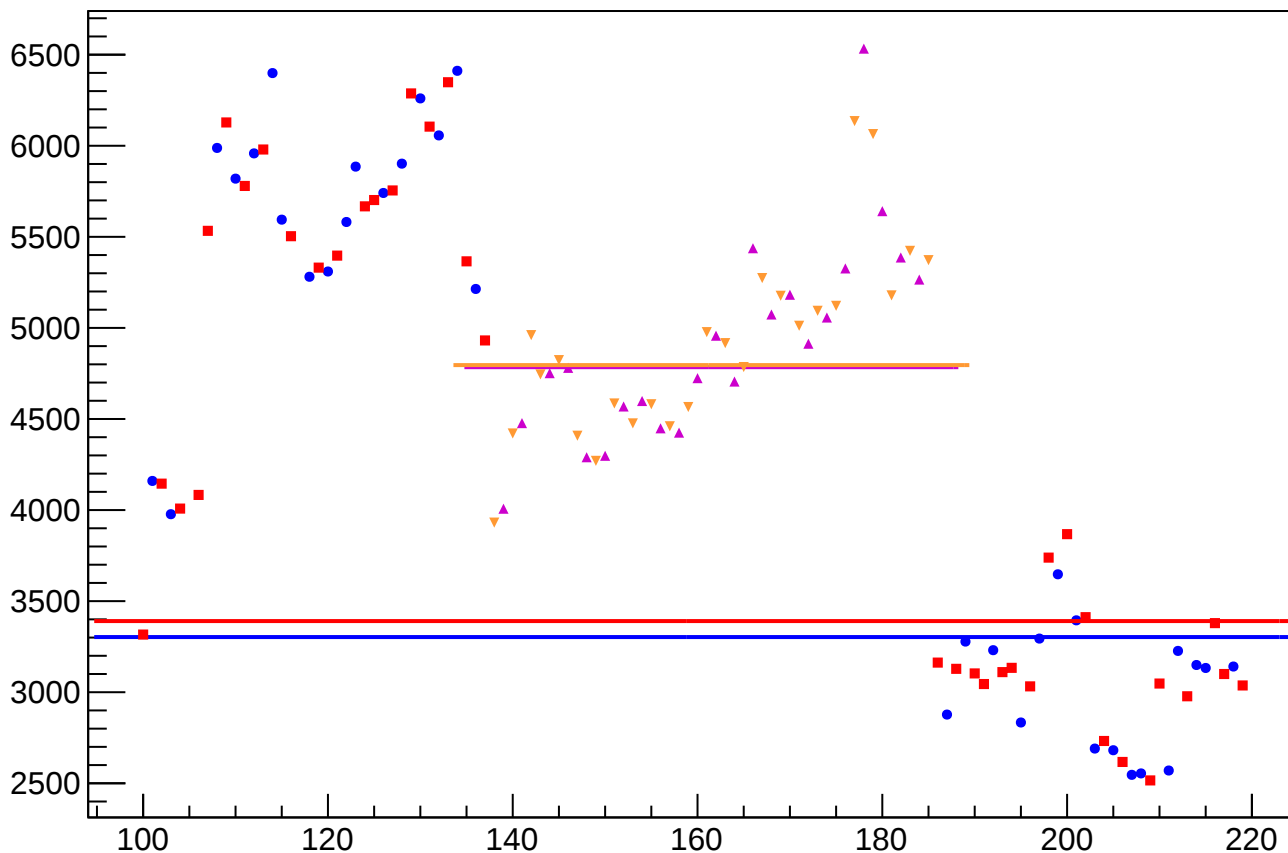
Right:  $-2.943 \pm 0.566$   $\chi^2/\text{NDF}: 2016.8/69$

In:  $2.758 \pm 0.661$   $\chi^2/\text{NDF}: 551.4/55$

Out:  $-7.872 \pm 0.649$   $\chi^2/\text{NDF}: 1488.7/61$

All:  $-2.651 \pm 0.463$   $\chi^2/\text{NDF}: 2171.8/117$

# diff\_bpm0r05Y\_rms vs Slug, Sign Corrected



Right In: 3302.824 $\pm$ 0.570  $\chi^2$ /NDF: 2699990.5/32

Left Out: 4795.847 $\pm$ 0.795  $\chi^2$ /NDF: 361249.7/24

Right Out: 3390.578 $\pm$ 0.562  $\chi^2$ /NDF: 2614843.9/36

Left In: 4784.434 $\pm$ 0.817  $\chi^2$ /NDF: 357507.2/22

Left: 4790.301 $\pm$ 0.570  $\chi^2$ /NDF: 718857.1/47

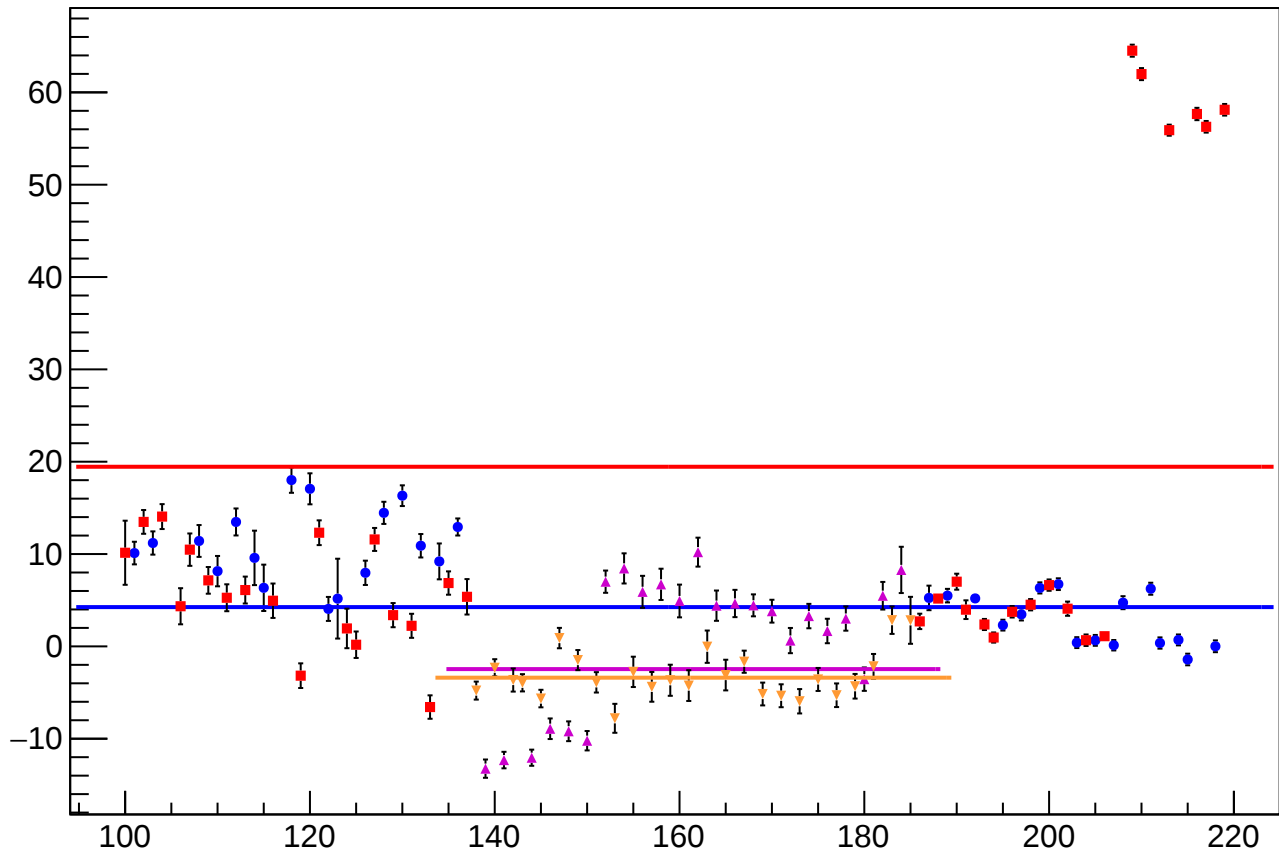
Right: 3347.256 $\pm$ 0.400  $\chi^2$ /NDF: 5326853.2/69

In: 3787.115 $\pm$ 0.467  $\chi^2$ /NDF: 5269287.0/55

Out: 3859.526 $\pm$ 0.459  $\chi^2$ /NDF: 5059544.4/61

All: 3823.964 $\pm$ 0.327  $\chi^2$ /NDF: 10341050.1/122

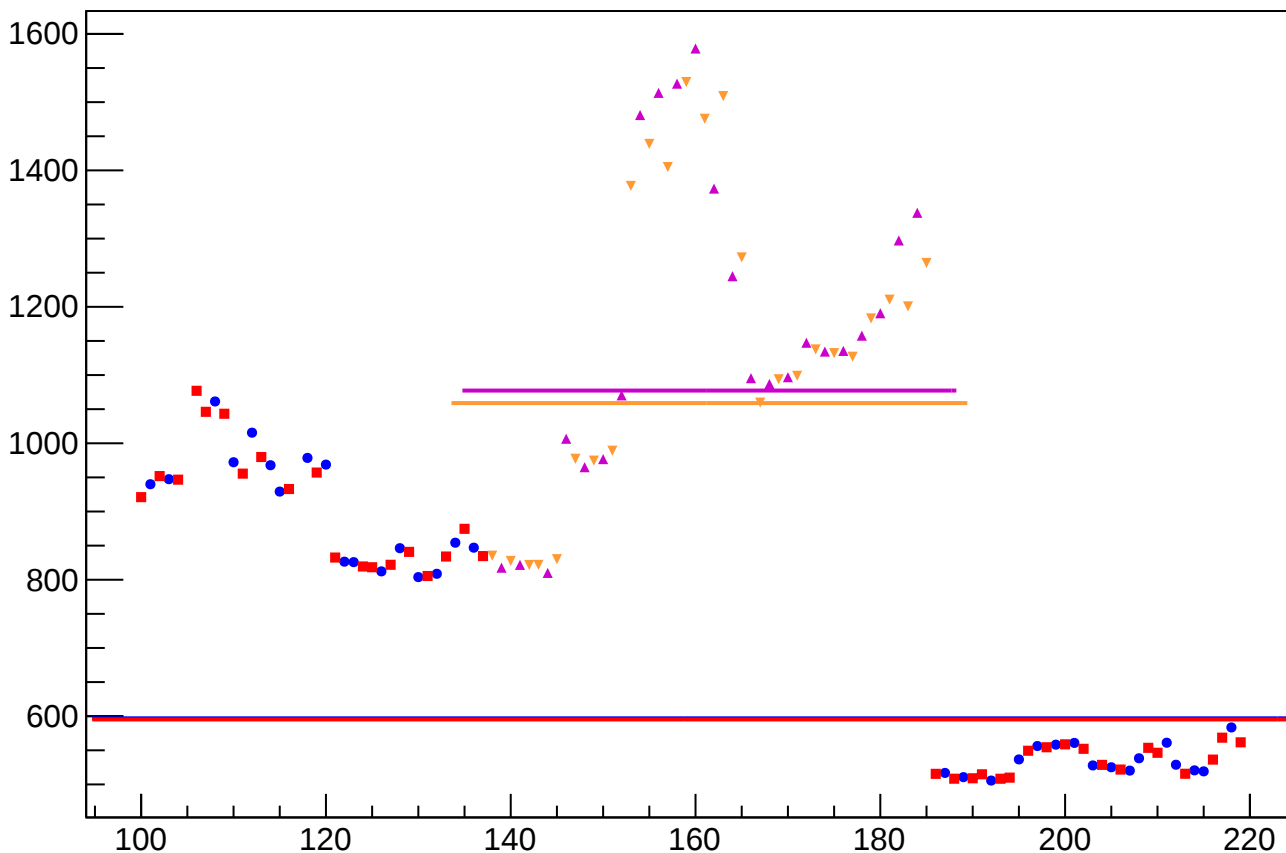
# diff\_bpm2i01X\_mean vs Slug, Sign Corrected



Right In:  $4.254 \pm 0.143$   $\chi^2/\text{NDF}: 987.1/32$   
 Left Out:  $-3.390 \pm 0.252$   $\chi^2/\text{NDF}: 77.7/24$   
 Right Out:  $19.453 \pm 0.138$   $\chi^2/\text{NDF}: 32775.5/36$   
 Left In:  $-2.461 \pm 0.264$   $\chi^2/\text{NDF}: 928.0/22$

Left:  $-2.947 \pm 0.183$   $\chi^2/\text{NDF}: 1012.2/47$   
 Right:  $12.134 \pm 0.100$   $\chi^2/\text{NDF}: 39584.7/69$   
 In:  $2.727 \pm 0.126$   $\chi^2/\text{NDF}: 2413.6/55$   
 Out:  $14.178 \pm 0.121$   $\chi^2/\text{NDF}: 39160.0/61$   
 All:  $8.677 \pm 0.087$   $\chi^2/\text{NDF}: 45860.1/117$

# diff\_bpm2i01X\_rms vs Slug, Sign Corrected



Right In: 596.885 $\pm$ 0.101  $\chi^2$ /NDF: 1896930.5/32

Left Out: 1058.941 $\pm$ 0.178  $\chi^2$ /NDF: 1403222.2/24

Right Out: 595.214 $\pm$ 0.098  $\chi^2$ /NDF: 2114119.3/36

Left In: 1077.284 $\pm$ 0.187  $\chi^2$ /NDF: 1280349.9/22

Left: 1067.683 $\pm$ 0.129  $\chi^2$ /NDF: 2688612.0/47

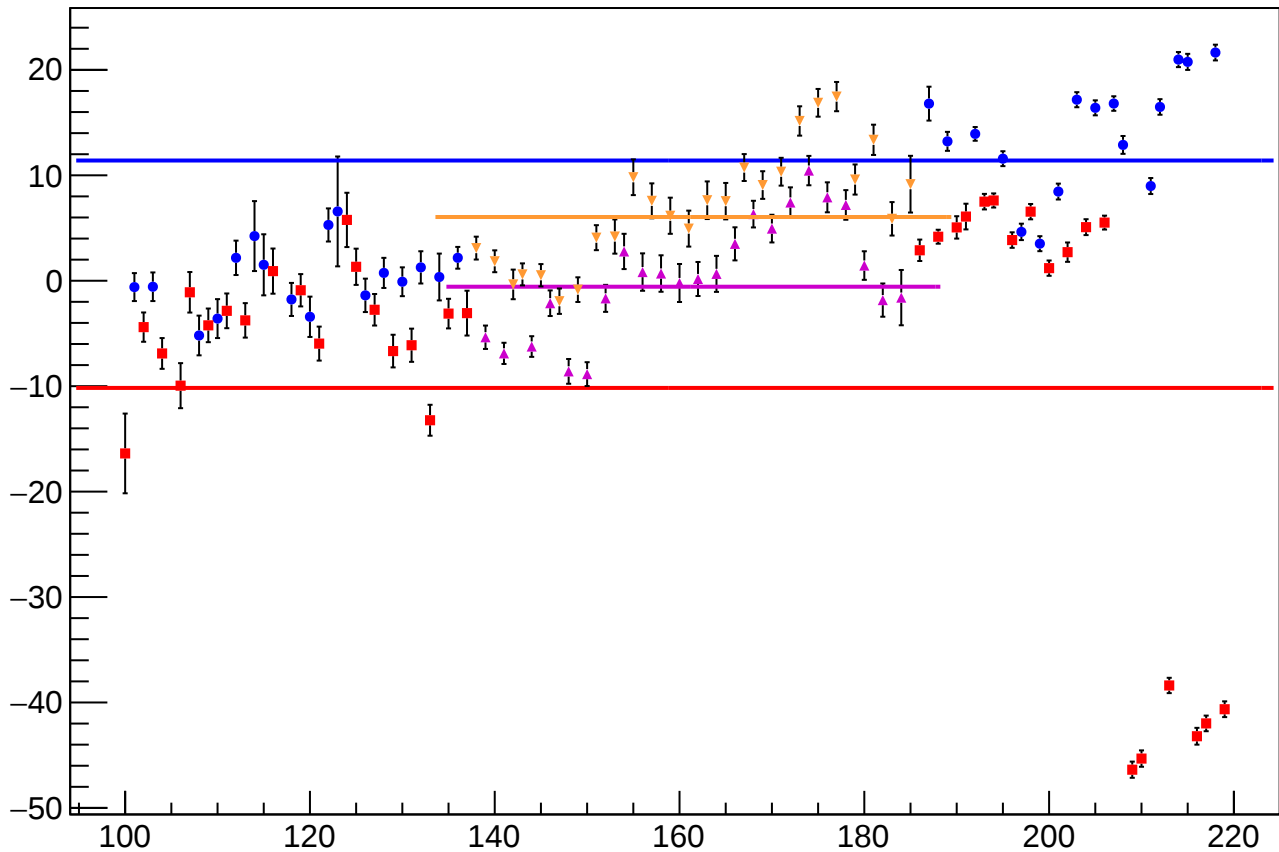
Right: 596.019 $\pm$ 0.070  $\chi^2$ /NDF: 4011190.6/69

In: 706.134 $\pm$ 0.089  $\chi^2$ /NDF: 8279666.9/55

Out: 702.308 $\pm$ 0.086  $\chi^2$ /NDF: 8715366.0/61

All: 704.146 $\pm$ 0.062  $\chi^2$ /NDF: 16995990.0/117

# diff\_bpm2i01Y\_mean vs Slug, Sign Corrected



Right In:  $11.403 \pm 0.171$   $\chi^2/\text{NDF}: 1836.4/32$

Left Out:  $6.045 \pm 0.272$   $\chi^2/\text{NDF}: 430.8/24$

Right Out:  $-10.165 \pm 0.165$   $\chi^2/\text{NDF}: 15936.6/36$

Left In:  $-0.566 \pm 0.284$   $\chi^2/\text{NDF}: 417.0/22$

Left:  $2.888 \pm 0.196$   $\chi^2/\text{NDF}: 1130.7/47$

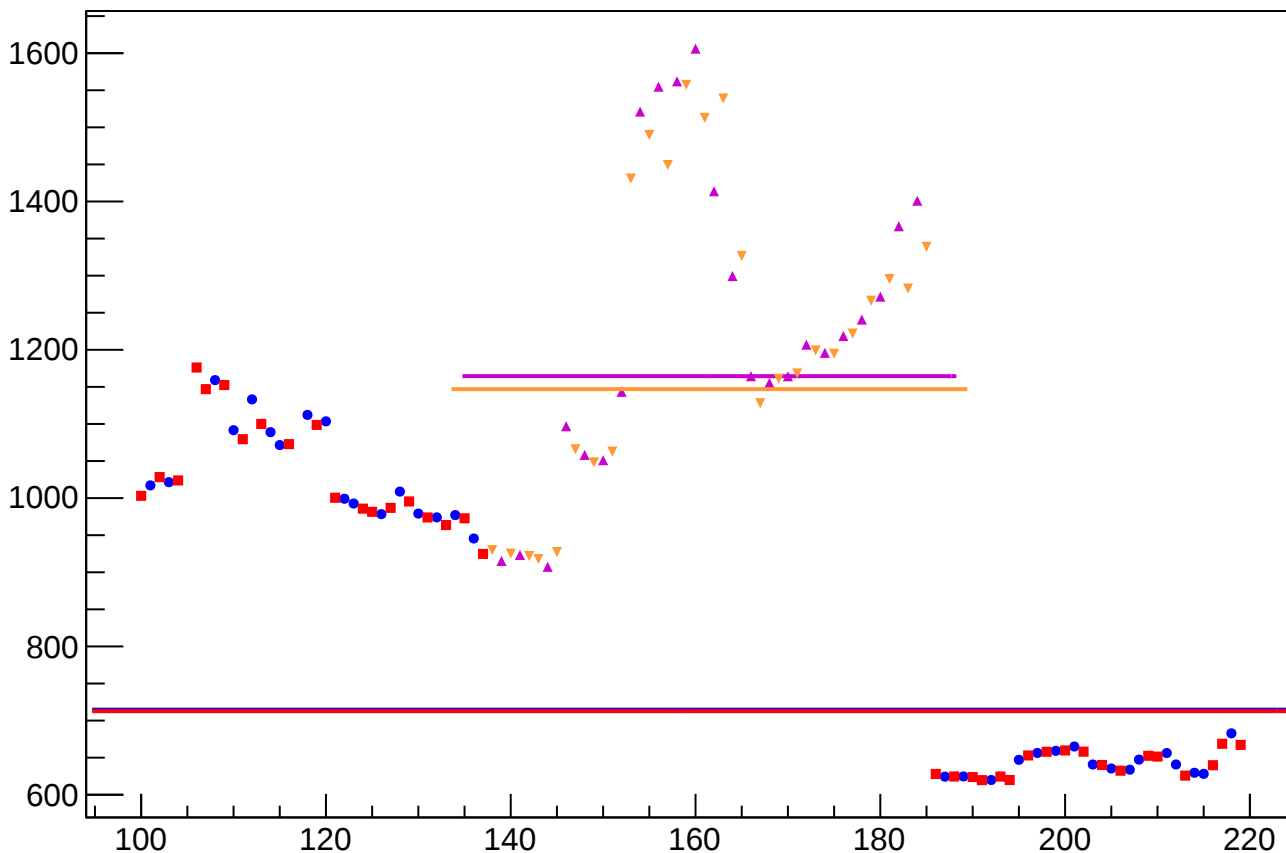
Right:  $0.217 \pm 0.119$   $\chi^2/\text{NDF}: 26027.6/69$

In:  $8.222 \pm 0.146$   $\chi^2/\text{NDF}: 3556.4/55$

Out:  $-5.808 \pm 0.141$   $\chi^2/\text{NDF}: 18970.9/61$

All:  $0.931 \pm 0.102$   $\chi^2/\text{NDF}: 27293.8/117$

# diff\_bpm2i01Y\_rms vs Slug, Sign Corrected



Right In: 714.732 $\pm$ 0.121  $\chi^2$ /NDF: 1566549.4/32

Left Out: 1146.960 $\pm$ 0.192  $\chi^2$ /NDF:1045761.4/24

Right Out: 712.688 $\pm$ 0.116  $\chi^2$ /NDF: 1737170.0/36

Left In: 1164.432 $\pm$ 0.201  $\chi^2$ /NDF:944112.0/22

Left: 1155.305 $\pm$ 0.139  $\chi^2$ /NDF: 1993824.0/47

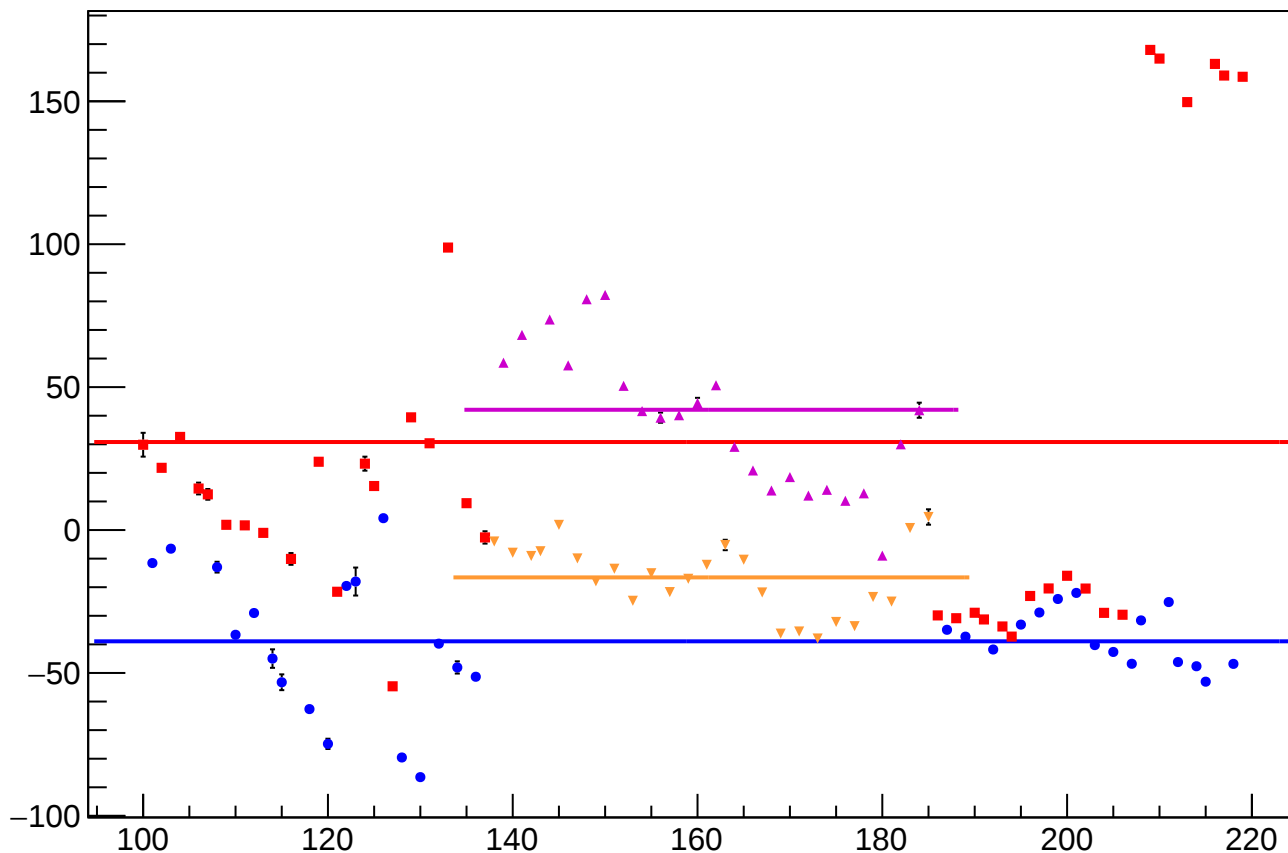
Right: 713.672 $\pm$ 0.084  $\chi^2$ /NDF: 3303867.7/69

In: 834.275 $\pm$ 0.104  $\chi^2$ /NDF:6189096.7/55

Out: 829.410 $\pm$ 0.100  $\chi^2$ /NDF:6519854.9/61

All: 831.747 $\pm$ 0.072  $\chi^2$ /NDF: 12710097.8/117

# diff\_bpm2i02X\_mean vs Slug, Sign Corrected



Right In:  $-38.929 \pm 0.169$   $\chi^2/\text{NDF}: 7620.7/32$

Left Out:  $-16.567 \pm 0.275$   $\chi^2/\text{NDF}: 1931.2/24$

Right Out:  $30.793 \pm 0.163$   $\chi^2/\text{NDF}: 250919.9/36$

Left In:  $42.077 \pm 0.289$   $\chi^2/\text{NDF}: 8332.3/22$

Left:  $11.318 \pm 0.199$   $\chi^2/\text{NDF}: 31846.5/47$

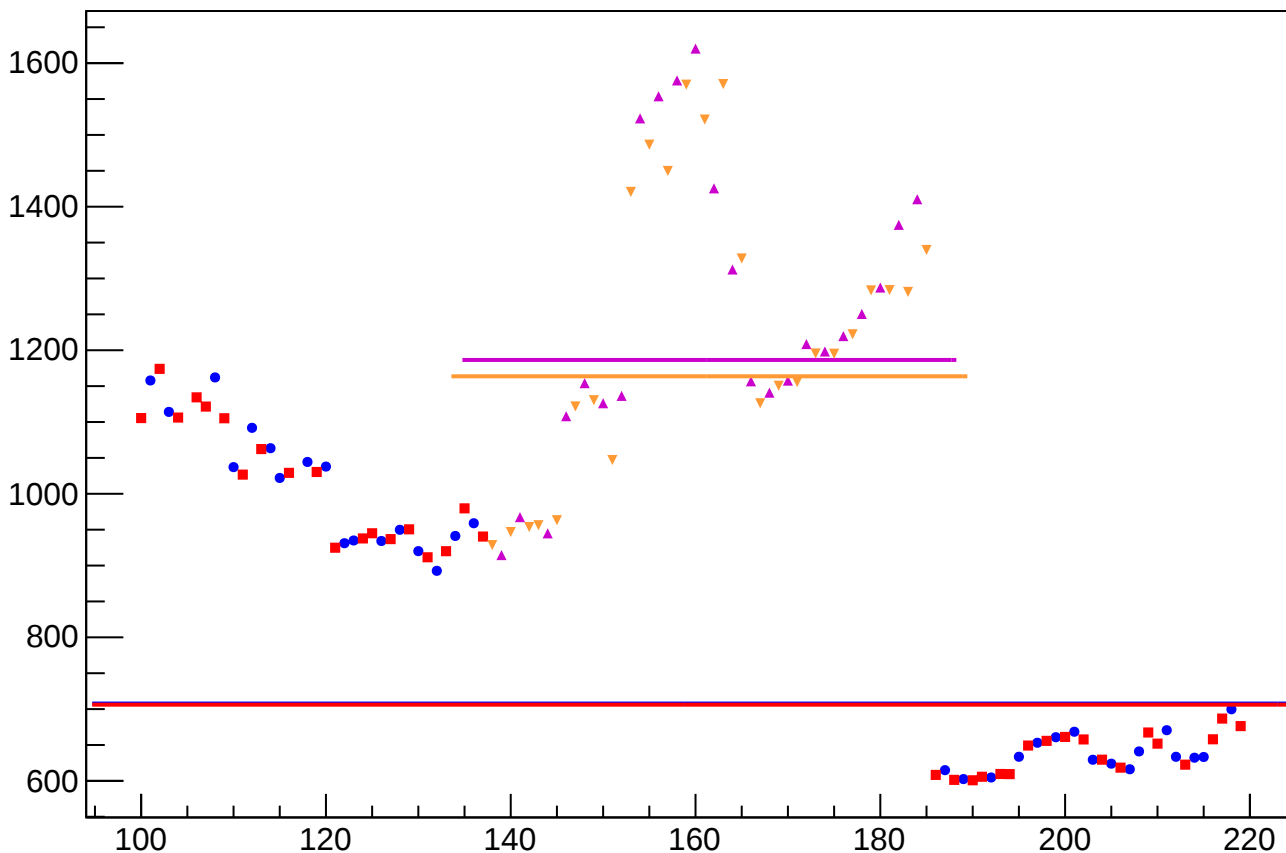
Right:  $-2.785 \pm 0.117$   $\chi^2/\text{NDF}: 346551.4/69$

In:  $-18.258 \pm 0.146$   $\chi^2/\text{NDF}: 74433.0/55$

Out:  $18.487 \pm 0.140$   $\chi^2/\text{NDF}: 274762.0/61$

All:  $0.848 \pm 0.101$   $\chi^2/\text{NDF}: 382113.6/117$

# diff\_bpm2i02X\_rms vs Slug, Sign Corrected



Right In: 707.739 $\pm$ 0.120  $\chi^2$ /NDF: 1551279.1/32

Left Out: 1163.691 $\pm$ 0.195  $\chi^2$ /NDF:936079.1/24

Right Out: 706.171 $\pm$ 0.115  $\chi^2$ /NDF: 1706613.1/36

Left In: 1186.476 $\pm$ 0.204  $\chi^2$ /NDF:833420.3/22

Left: 1174.525 $\pm$ 0.141  $\chi^2$ /NDF: 1776015.7/47

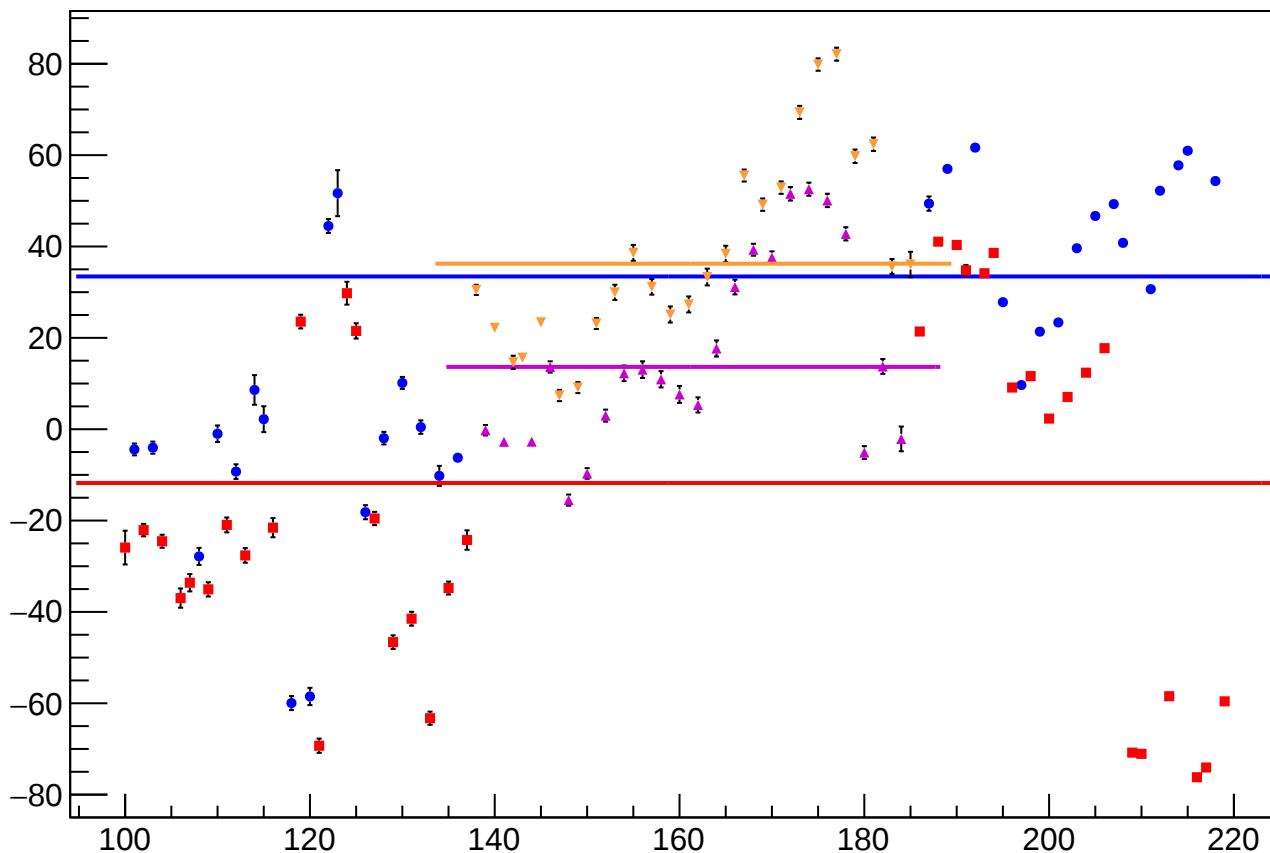
Right: 706.926 $\pm$ 0.083  $\chi^2$ /NDF: 3257981.3/69

In: 829.903 $\pm$ 0.103  $\chi^2$ /NDF:6469790.2/55

Out: 825.057 $\pm$ 0.099  $\chi^2$ /NDF:6732312.0/61

All: 827.384 $\pm$ 0.072  $\chi^2$ /NDF: 13203247.5/131

# diff\_bpm2i02Y\_mean vs Slug, Sign Corrected



Right In:  $33.439 \pm 0.167$   $\chi^2/\text{NDF}: 24031.6/32$

Left Out:  $36.234 \pm 0.280$   $\chi^2/\text{NDF}: 5794.2/24$

Right Out:  $-11.773 \pm 0.161$   $\chi^2/\text{NDF}: 69179.4/36$

Left In:  $13.640 \pm 0.293$   $\chi^2/\text{NDF}: 5178.0/22$

Left:  $25.447 \pm 0.202$   $\chi^2/\text{NDF}: 14084.0/47$

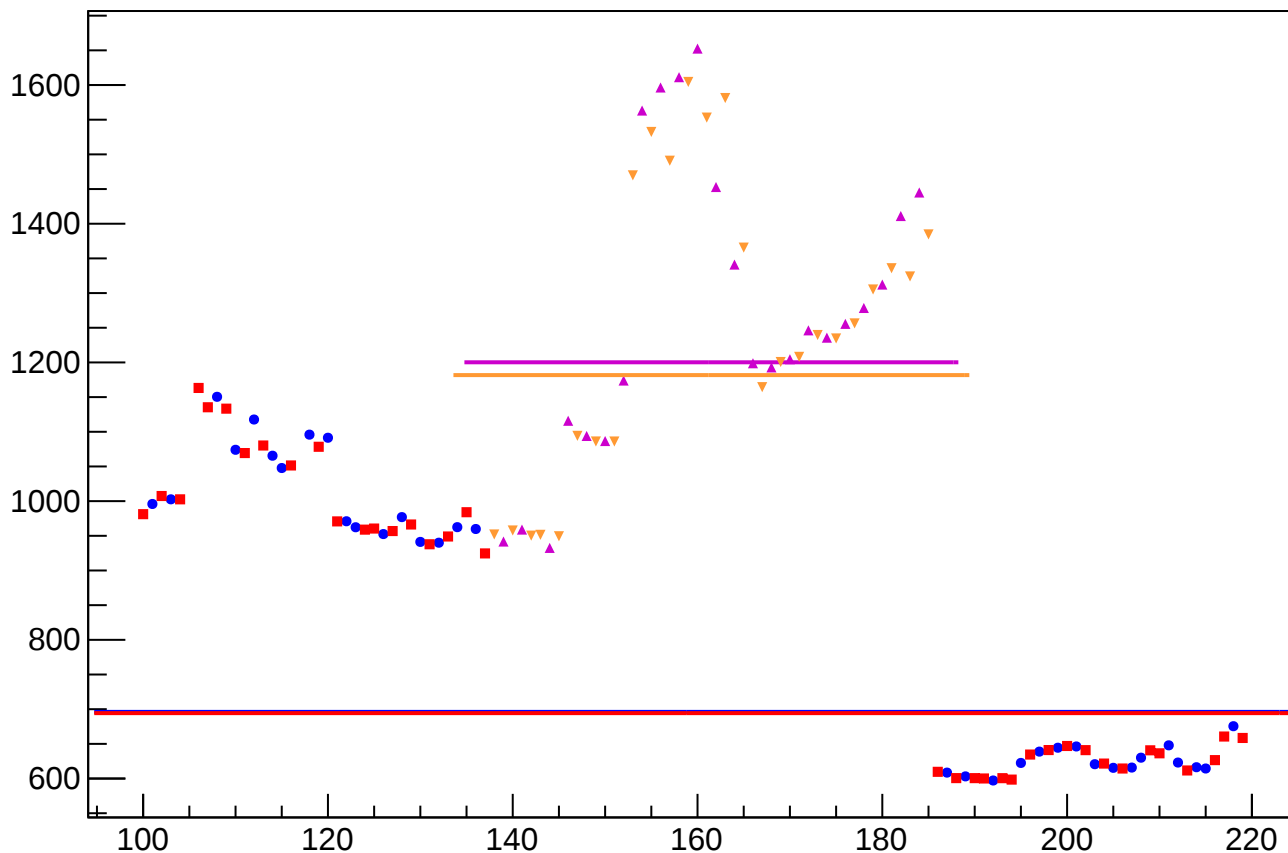
Right:  $9.996 \pm 0.116$   $\chi^2/\text{NDF}: 131392.2/69$

In:  $28.596 \pm 0.145$   $\chi^2/\text{NDF}: 32663.6/55$

Out:  $0.114 \pm 0.139$   $\chi^2/\text{NDF}: 97111.6/61$

All:  $13.799 \pm 0.100$   $\chi^2/\text{NDF}: 149872.7/117$

# diff\_bpm2i02Y\_rms vs Slug, Sign Corrected



Right In: 696.109+/-0.118  $\chi^2/\text{NDF}$ : 1628865.7/32

Left Out: 1181.732+/-0.198  $\chi^2/\text{NDF}$ : 1043520.8/24

Right Out: 694.315+/-0.114  $\chi^2/\text{NDF}$ : 1801500.5/36

Left In: 1200.198+/-0.207  $\chi^2/\text{NDF}$ : 938224.7/22

Left: 1190.549+/-0.143  $\chi^2/\text{NDF}$ : 1985902.3/47

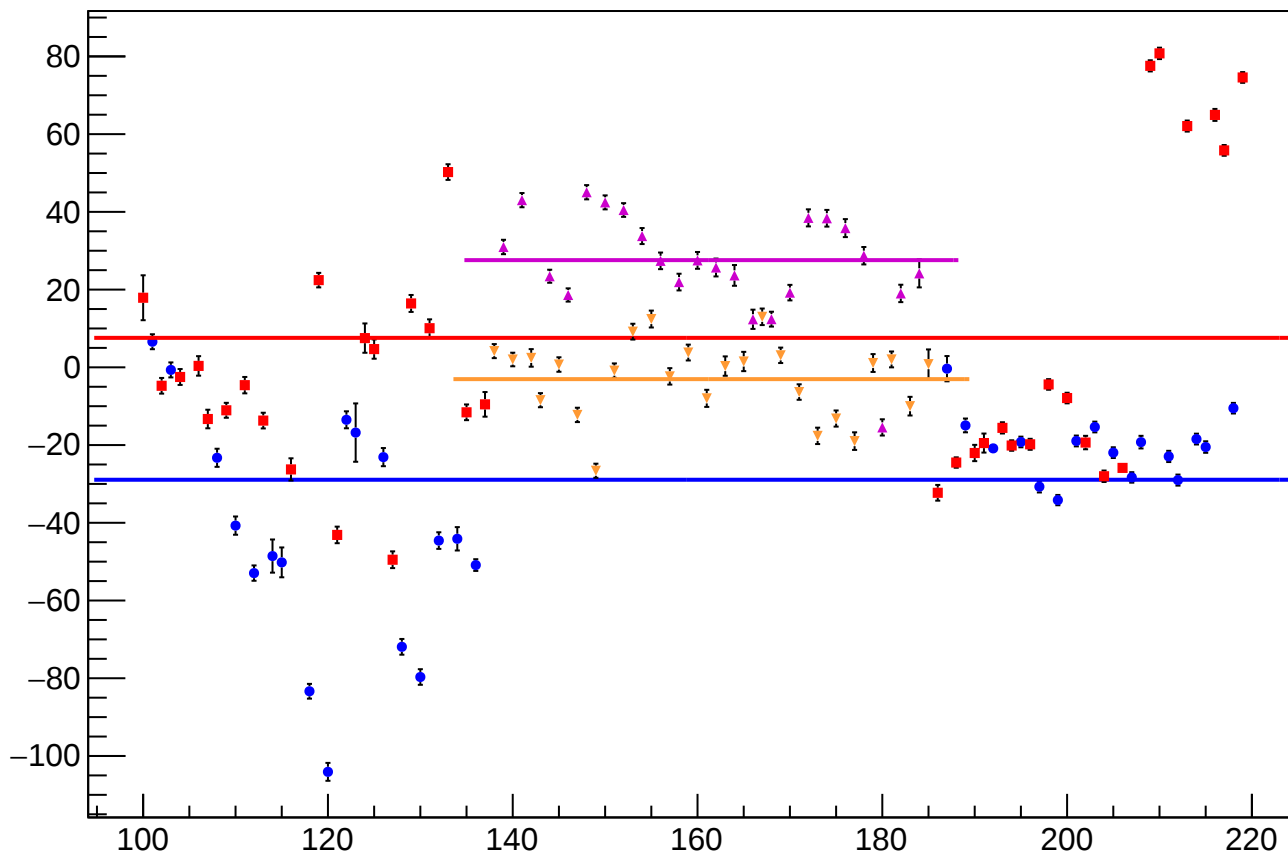
Right: 695.178+/-0.082  $\chi^2/\text{NDF}$ : 3430486.4/69

In: 819.410+/-0.102  $\chi^2/\text{NDF}$ : 7045247.2/55

Out: 815.002+/-0.098  $\chi^2/\text{NDF}$ : 7409104.9/61

All: 817.120+/-0.071  $\chi^2/\text{NDF}$ : 14455315.0/11

# diff\_bpm0i02X\_mean vs Slug, Sign Corrected



Right In: -28.926 $\pm$ 0.302  $\chi^2/\text{NDF}$ : 4854.1/32

Left Out: -3.037 $\pm$ 0.415  $\chi^2/\text{NDF}$ : 555.6/24

Right Out: 7.584 $\pm$ 0.292  $\chi^2/\text{NDF}$ : 17778.4/36

Left In: 27.583 $\pm$ 0.429  $\chi^2/\text{NDF}$ : 960.1/22

Left: 11.767 $\pm$ 0.298  $\chi^2/\text{NDF}$ : 4146.6/47

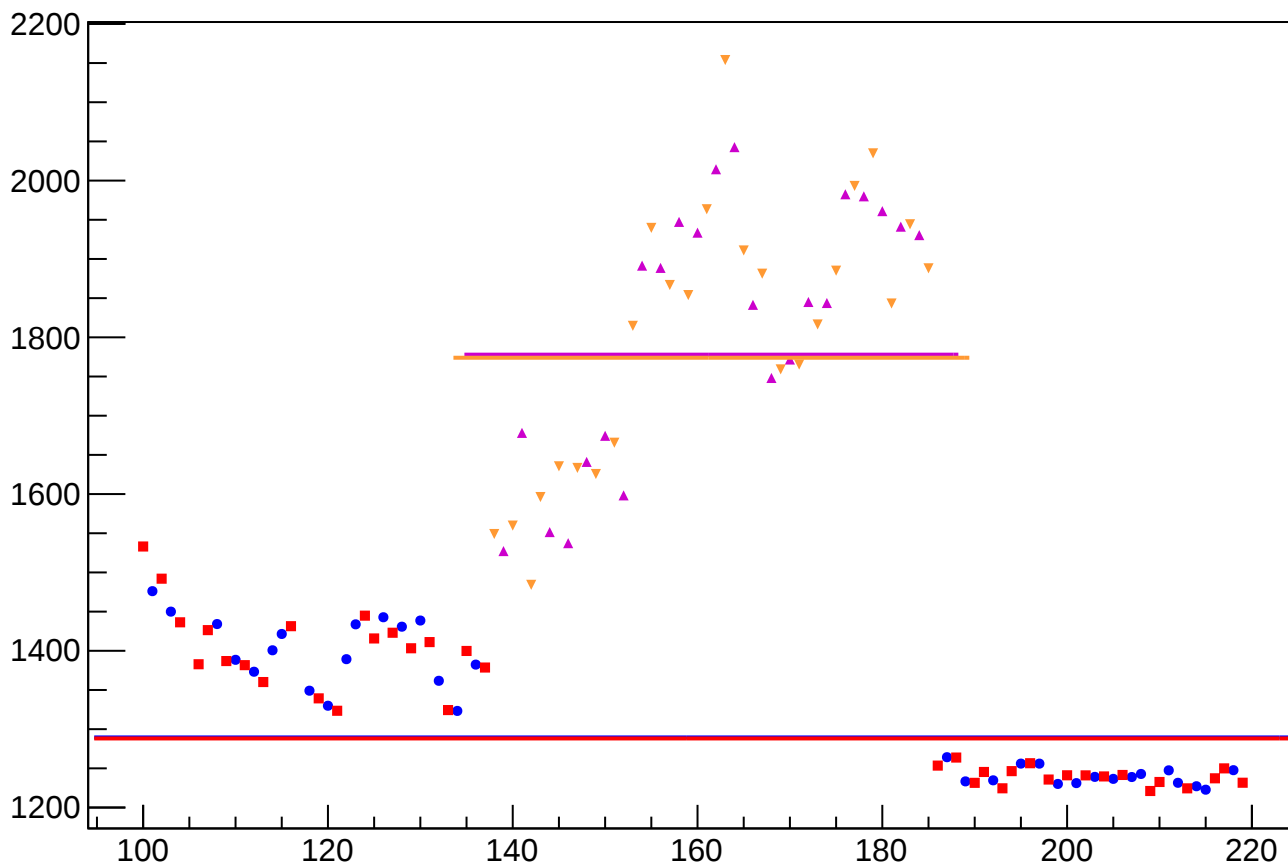
Right: -10.016 $\pm$ 0.210  $\chi^2/\text{NDF}$ : 30193.5/69

In: -10.188 $\pm$ 0.247  $\chi^2/\text{NDF}$ : 17410.2/55

Out: 4.076 $\pm$ 0.239  $\chi^2/\text{NDF}$ : 18772.5/61

All: -2.807 $\pm$ 0.172  $\chi^2/\text{NDF}$ : 37907.7/117

# diff\_bpm0i02X\_rms vs Slug, Sign Corrected



Right In: 1289.466 $\pm$ 0.214  $\chi^2$ /NDF: 138661.7/32

Left Out: 1773.965 $\pm$ 0.294  $\chi^2$ /NDF: 313031.1/24

Right Out: 1288.151 $\pm$ 0.206  $\chi^2$ /NDF: 139229.1/36

Left In: 1777.884 $\pm$ 0.303  $\chi^2$ /NDF: 299514.0/22

Left: 1775.860 $\pm$ 0.211  $\chi^2$ /NDF: 612631.3/47

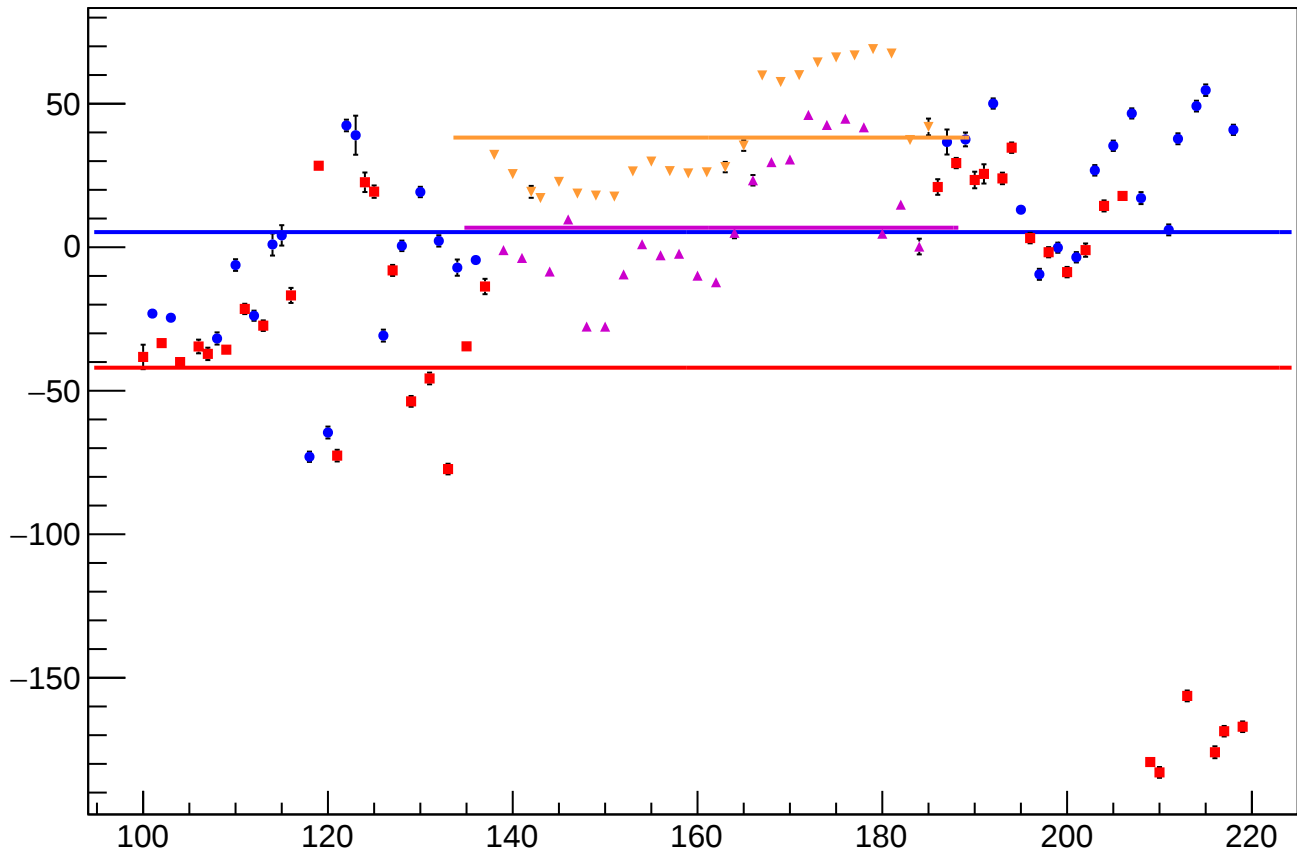
Right: 1288.785 $\pm$ 0.148  $\chi^2$ /NDF: 277910.4/69

In: 1451.423 $\pm$ 0.175  $\chi^2$ /NDF: 2170734.8/55

Out: 1448.626 $\pm$ 0.169  $\chi^2$ /NDF: 2286954.1/61

All: 1449.976 $\pm$ 0.121  $\chi^2$ /NDF: 4457821.5/111

# diff\_bpm0i02Y\_mean vs Slug, Sign Corrected



Right In:  $5.275 \pm 0.337$   $\chi^2/\text{NDF}: 9043.1/32$

Left Out:  $38.206 \pm 0.323$   $\chi^2/\text{NDF}: 3514.2/24$

Right Out:  $-41.964 \pm 0.325$   $\chi^2/\text{NDF}: 43223.6/36$

Left In:  $6.808 \pm 0.333$   $\chi^2/\text{NDF}: 4494.5/22$

Left:  $22.967 \pm 0.232$   $\chi^2/\text{NDF}: 12584.4/47$

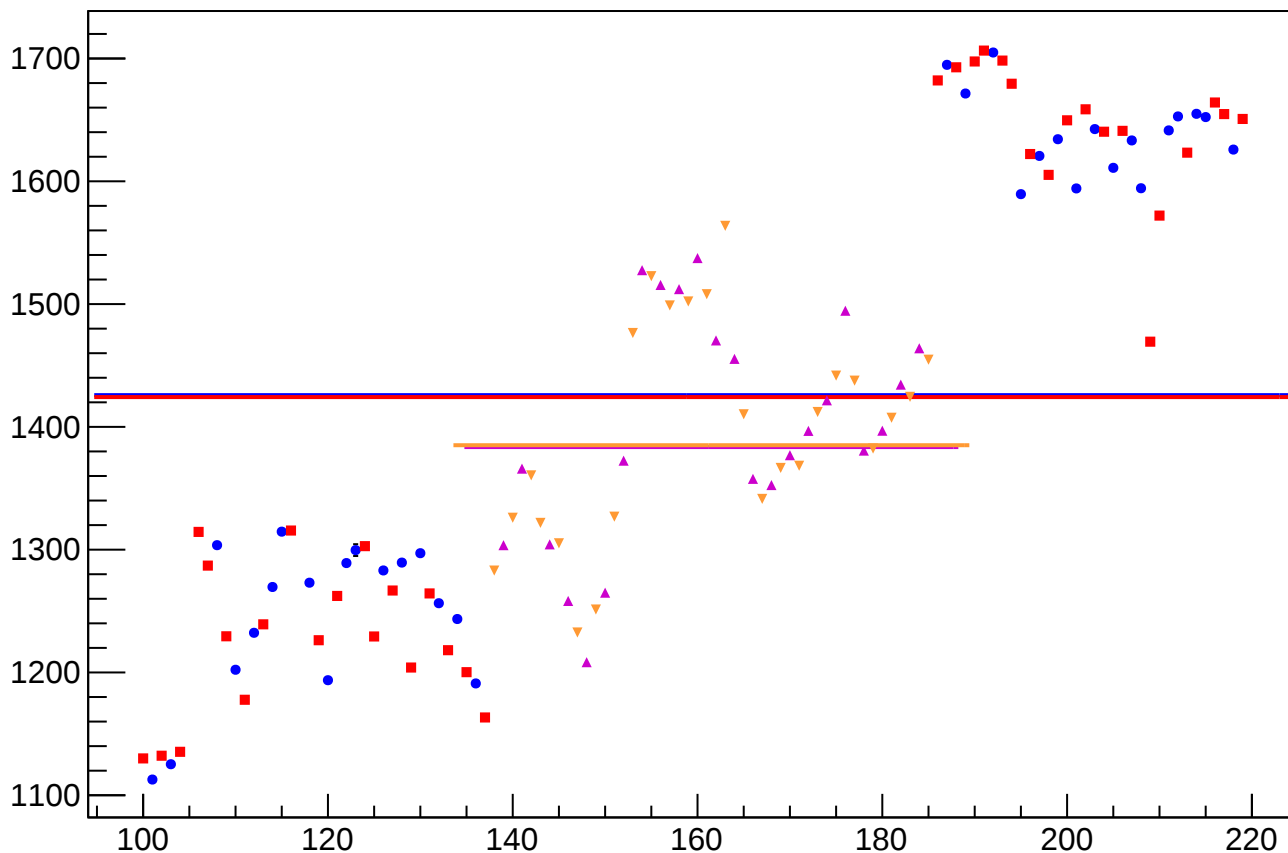
Right:  $-19.187 \pm 0.234$   $\chi^2/\text{NDF}: 62424.7/69$

In:  $6.051 \pm 0.237$   $\chi^2/\text{NDF}: 13548.1/55$

Out:  $-1.621 \pm 0.229$   $\chi^2/\text{NDF}: 77272.0/61$

All:  $2.091 \pm 0.165$   $\chi^2/\text{NDF}: 91361.3/117$

# diff\_bpm0i02Y\_rms vs Slug, Sign Corrected



Right In: 1425.848 $\pm$ 0.238  $\chi^2$ /NDF: 786985.7/32

Left Out: 1385.063 $\pm$ 0.229  $\chi^2$ /NDF:146001.5/24

Right Out: 1424.270 $\pm$ 0.230  $\chi^2$ /NDF: 884047.1/36

Left In: 1383.558 $\pm$ 0.235  $\chi^2$ /NDF:154696.0/22

Left: 1384.333 $\pm$ 0.164  $\chi^2$ /NDF: 300718.5/47

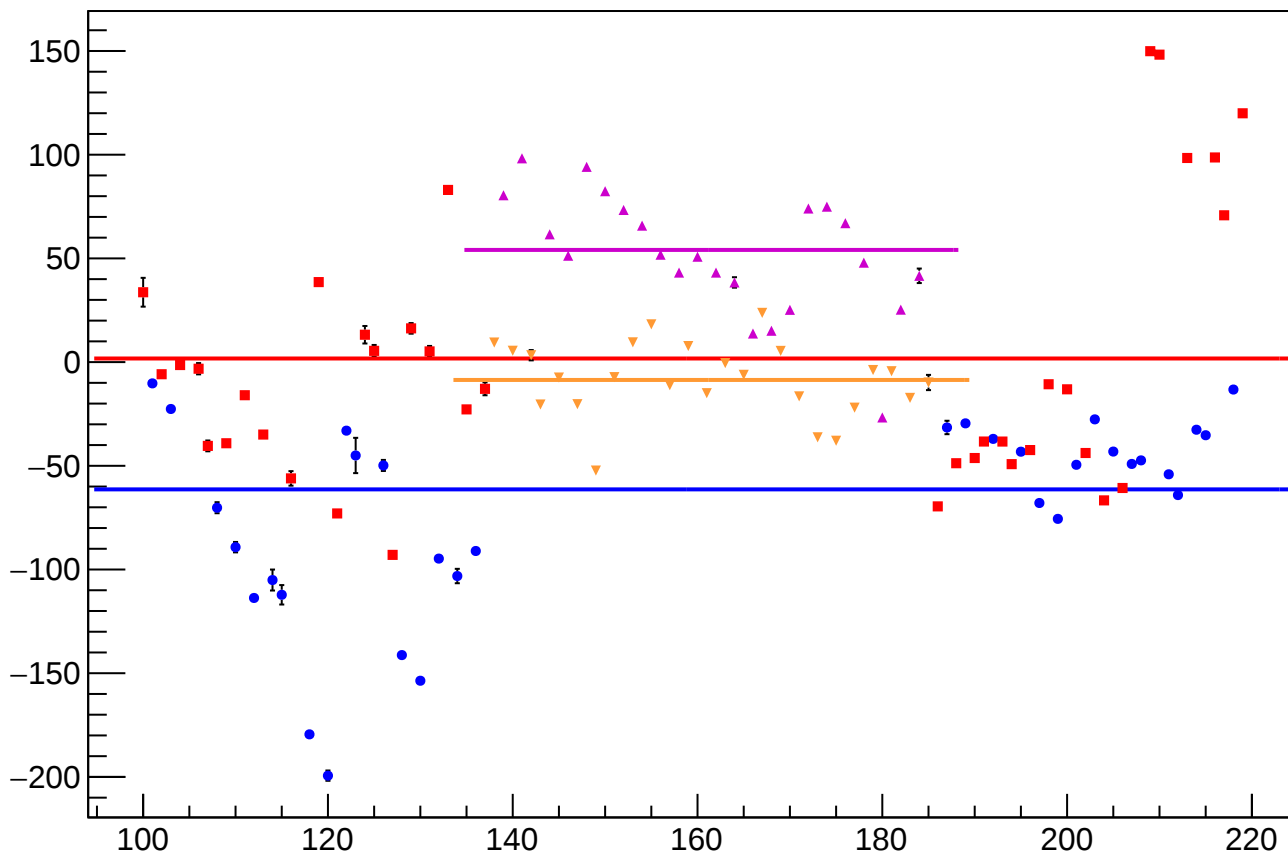
Right: 1425.031 $\pm$ 0.166  $\chi^2$ /NDF: 1671055.5/69

In: 1404.432 $\pm$ 0.168  $\chi^2$ /NDF:957604.9/55

Out: 1404.540 $\pm$ 0.162  $\chi^2$ /NDF:1044653.5/61

All: 1404.488 $\pm$ 0.117  $\chi^2$ /NDF: 2002258.6/117

# diff\_bpm0i02aX\_mean vs Slug, Sign Corrected



Right In:  $-61.365 \pm 0.341$   $\chi^2/\text{NDF}: 14748.4/32$

Left Out:  $-8.606 \pm 0.410$   $\chi^2/\text{NDF}: 1930.5/24$

Right Out:  $1.739 \pm 0.326$   $\chi^2/\text{NDF}: 44142.3/36$

Left In:  $54.089 \pm 0.426$   $\chi^2/\text{NDF}: 4721.6/22$

Left:  $21.586 \pm 0.295$   $\chi^2/\text{NDF}: 17900.0/47$

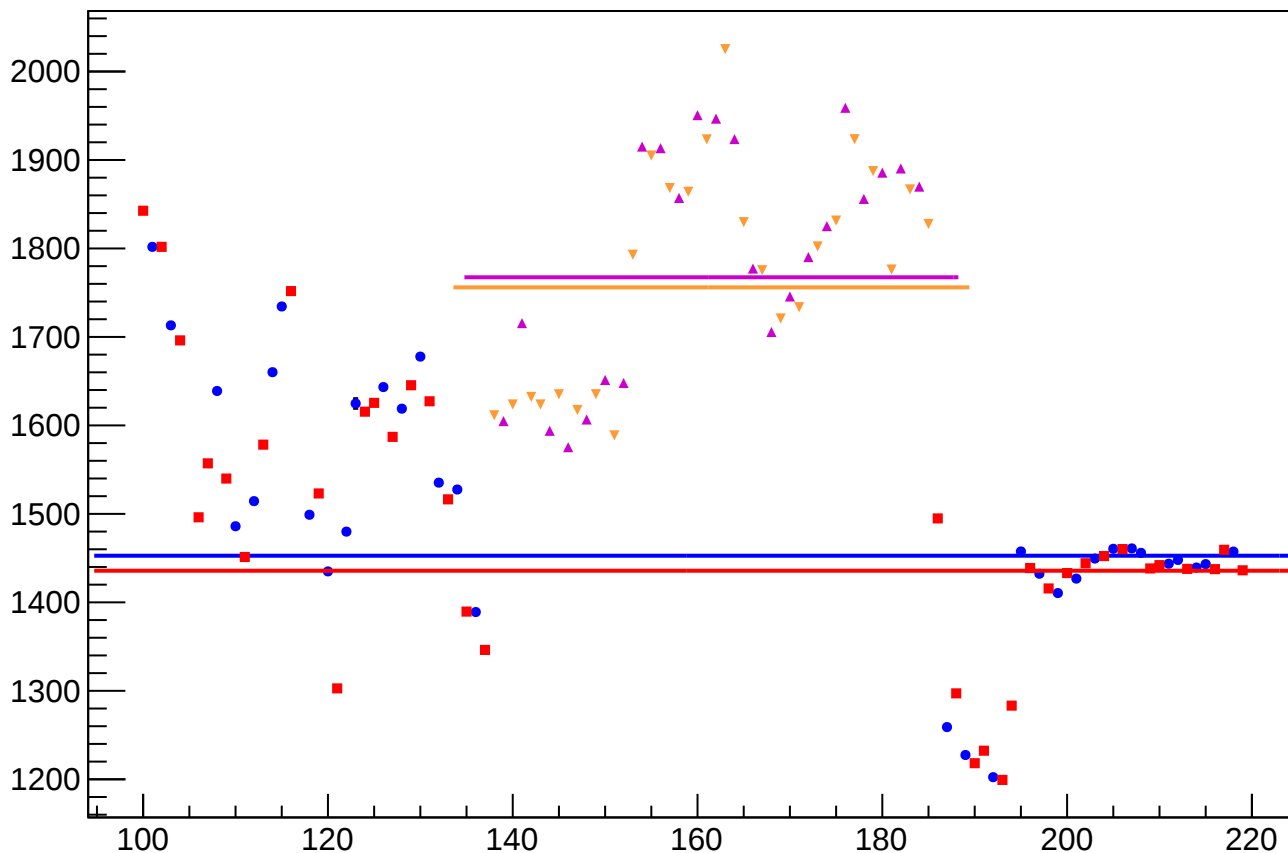
Right:  $-28.351 \pm 0.236$   $\chi^2/\text{NDF}: 76800.2/69$

In:  $-16.221 \pm 0.266$   $\chi^2/\text{NDF}: 64276.3/55$

Out:  $-2.259 \pm 0.255$   $\chi^2/\text{NDF}: 46463.0/61$

All:  $-8.942 \pm 0.184$   $\chi^2/\text{NDF}: 112173.9/117$

# diff\_bpm0i02aX\_rms vs Slug, Sign Corrected



Right In: 1452.709 $\pm$ 0.241  $\chi^2/\text{NDF}$ : 261893.5/32

Left Out: 1756.034 $\pm$ 0.290  $\chi^2/\text{NDF}$ : 175762.3/24

Right Out: 1435.738 $\pm$ 0.230  $\chi^2/\text{NDF}$ : 309256.4/36

Left In: 1767.410 $\pm$ 0.301  $\chi^2/\text{NDF}$ : 187958.2/22

Left: 1761.512 $\pm$ 0.209  $\chi^2/\text{NDF}$ : 364461.2/47

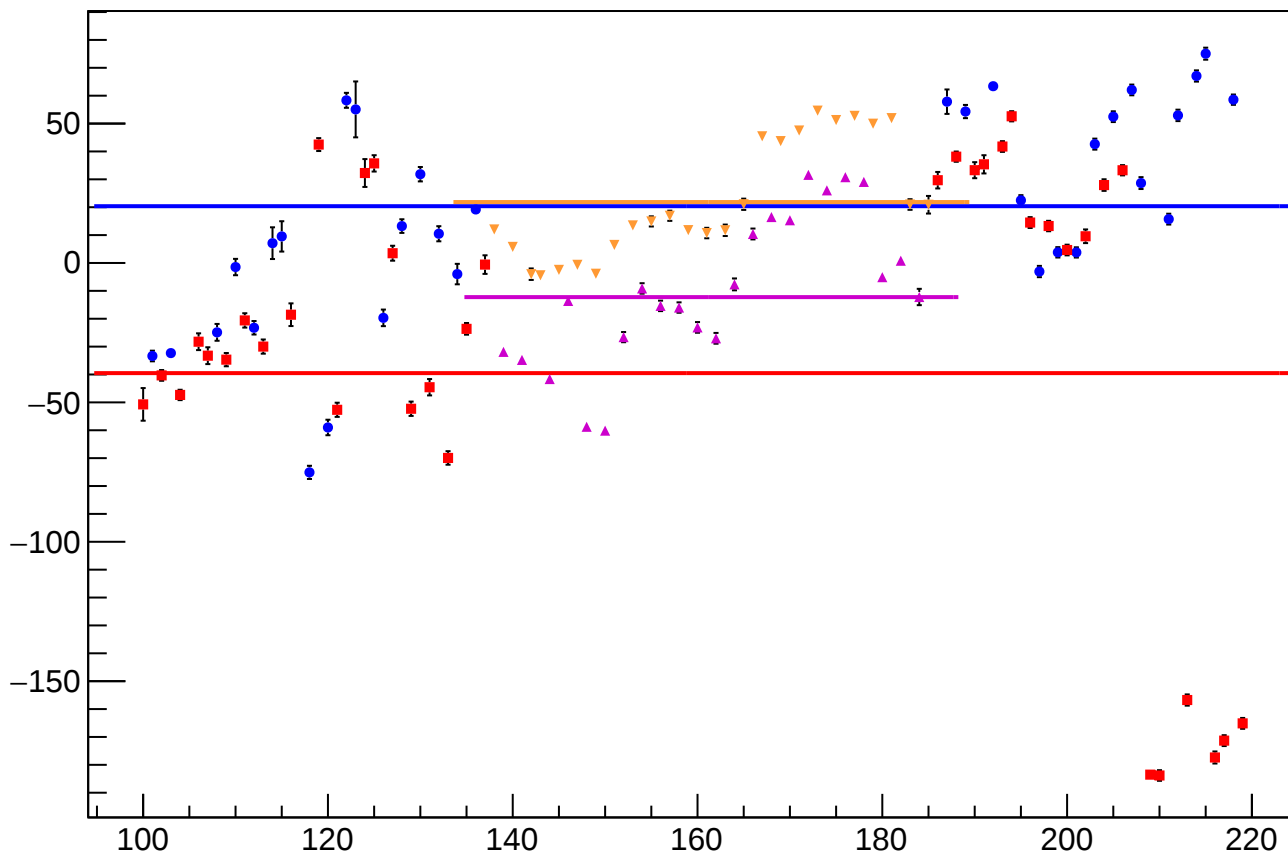
Right: 1443.830 $\pm$ 0.167  $\chi^2/\text{NDF}$ : 573740.5/69

In: 1575.762 $\pm$ 0.188  $\chi^2/\text{NDF}$ : 1115665.2/55

Out: 1559.539 $\pm$ 0.180  $\chi^2/\text{NDF}$ : 1233015.5/61

All: 1567.304 $\pm$ 0.130  $\chi^2/\text{NDF}$ : 2352554.5/11

# diff\_bpm0i02aY\_mean vs Slug, Sign Corrected



Right In: 20.363+/-0.392  $\chi^2/\text{NDF}$ : 9123.6/32

Left Out: 21.856+/-0.335  $\chi^2/\text{NDF}$ : 4110.5/24

Right Out: -39.505+/-0.376  $\chi^2/\text{NDF}$ : 45427.2/36

Left In: -12.246+/-0.347  $\chi^2/\text{NDF}$ : 6781.6/22

Left: 5.391+/-0.241  $\chi^2/\text{NDF}$ : 15885.7/47

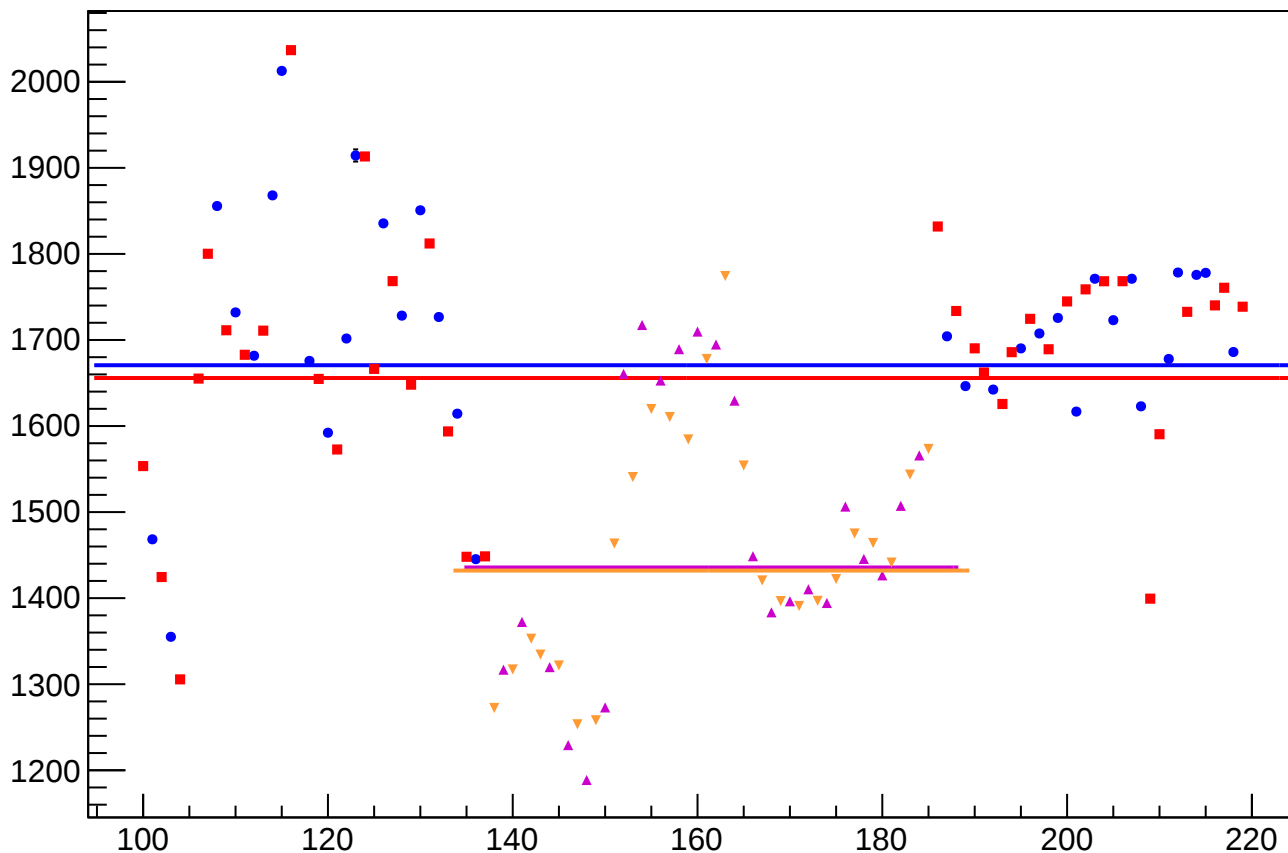
Right: -10.877+/-0.271  $\chi^2/\text{NDF}$ : 66695.3/69

In: 2.065+/-0.260  $\chi^2/\text{NDF}$ : 19779.7/55

Out: -5.353+/-0.250  $\chi^2/\text{NDF}$ : 64386.4/61

All: -1.787+/-0.180  $\chi^2/\text{NDF}$ : 84589.0/117

# diff\_bpm0i02aY\_rms vs Slug, Sign Corrected



Right In: 1670.659 $\pm$ 0.277  $\chi^2/\text{NDF}$ : 198928.0/32

Left Out: 1432.060 $\pm$ 0.237  $\chi^2/\text{NDF}$ : 297360.3/24

Right Out: 1655.797 $\pm$ 0.266  $\chi^2/\text{NDF}$ : 272586.5/36

Left In: 1435.645 $\pm$ 0.245  $\chi^2/\text{NDF}$ : 420835.0/22

Left: 1433.791 $\pm$ 0.171  $\chi^2/\text{NDF}$ : 718305.7/47

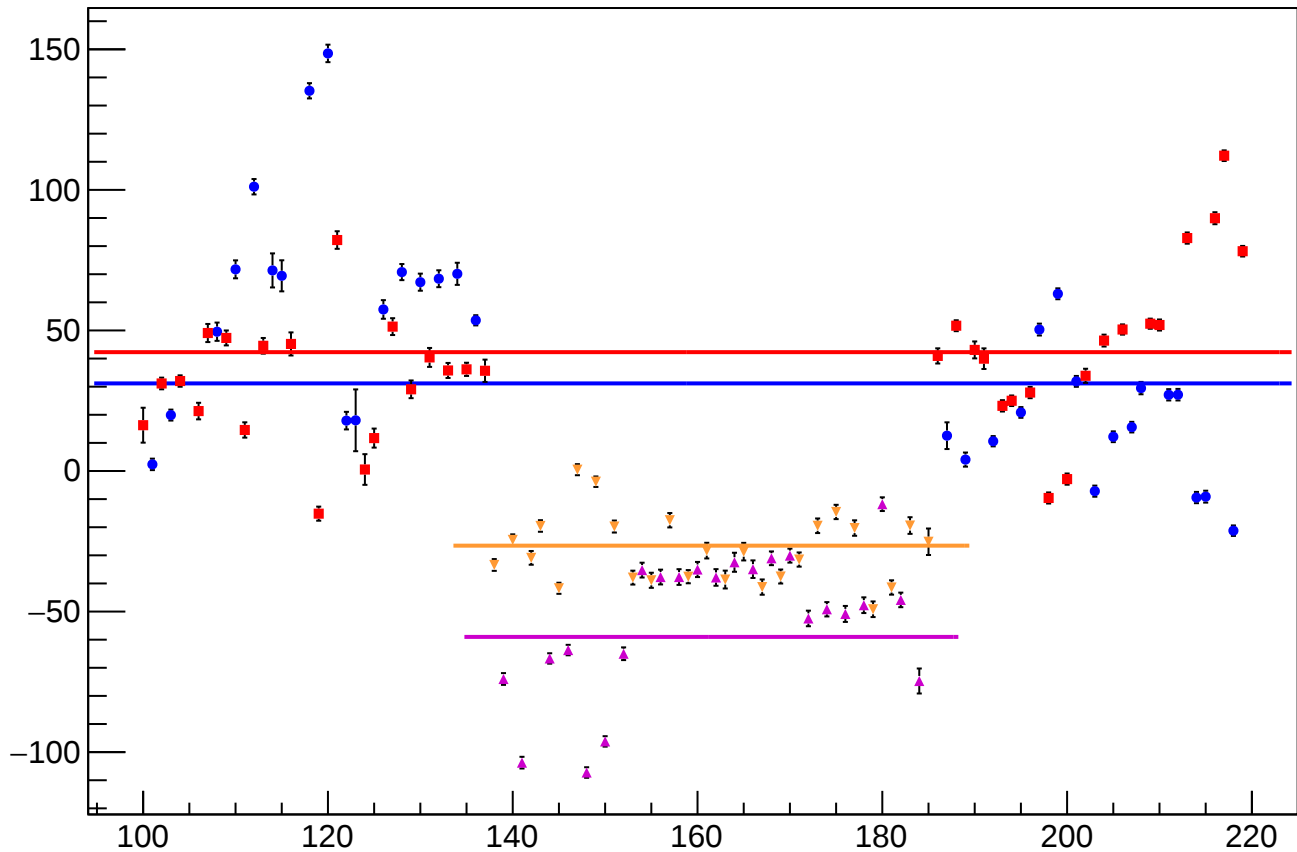
Right: 1662.904 $\pm$ 0.192  $\chi^2/\text{NDF}$ : 473011.1/69

In: 1538.784 $\pm$ 0.184  $\chi^2/\text{NDF}$ : 1022250.6/55

Out: 1531.270 $\pm$ 0.177  $\chi^2/\text{NDF}$ : 964777.1/61

All: 1534.882 $\pm$ 0.127  $\chi^2/\text{NDF}$ : 1987895.2/11

# diff\_bpm0i05X\_mean vs Slug, Sign Corrected



Right In:  $31.161 \pm 0.414$   $\chi^2/\text{NDF}: 7625.8/32$

Left Out:  $-26.554 \pm 0.488$   $\chi^2/\text{NDF}: 717.5/24$

Right Out:  $42.278 \pm 0.395$   $\chi^2/\text{NDF}: 5285.3/36$

Left In:  $-59.014 \pm 0.506$   $\chi^2/\text{NDF}: 2783.8/22$

Left:  $-42.178 \pm 0.351$   $\chi^2/\text{NDF}: 5632.2/47$

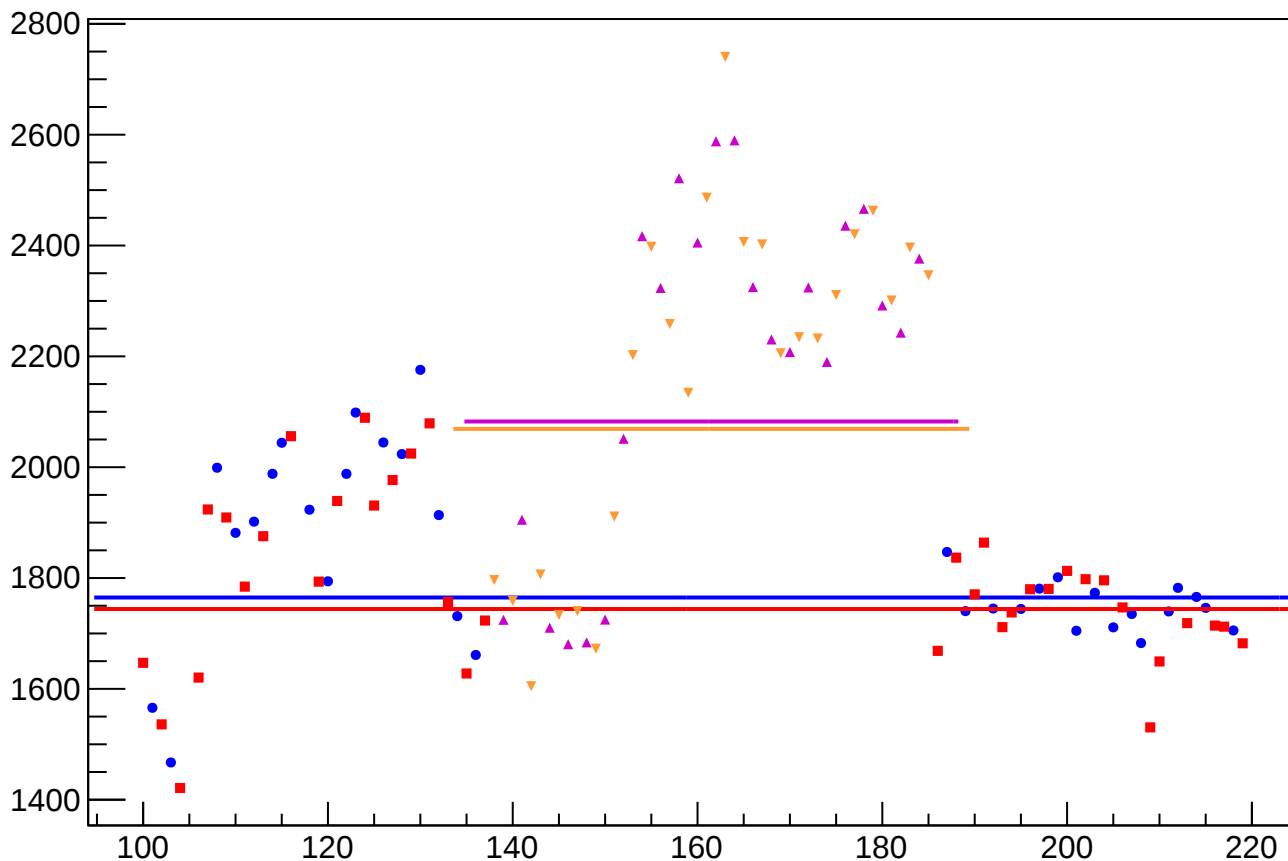
Right:  $36.980 \pm 0.286$   $\chi^2/\text{NDF}: 13287.9/69$

In:  $-4.999 \pm 0.321$   $\chi^2/\text{NDF}: 29401.7/55$

Out:  $14.993 \pm 0.307$   $\chi^2/\text{NDF}: 18018.2/61$

All:  $5.427 \pm 0.222$   $\chi^2/\text{NDF}: 49446.7/117$

# diff\_bpm0i05X\_rms vs Slug, Sign Corrected



Right In: 1764.884 $\pm$ 0.293  $\chi^2/\text{NDF}$ : 200689.7/32

Left Out: 2069.146 $\pm$ 0.345  $\chi^2/\text{NDF}$ : 799037.9/24

Right Out: 1744.116 $\pm$ 0.280  $\chi^2/\text{NDF}$ : 231587.2/36

Left In: 2082.497 $\pm$ 0.358  $\chi^2/\text{NDF}$ : 785304.0/22

Left: 2075.572 $\pm$ 0.248  $\chi^2/\text{NDF}$ : 1585062.9/47

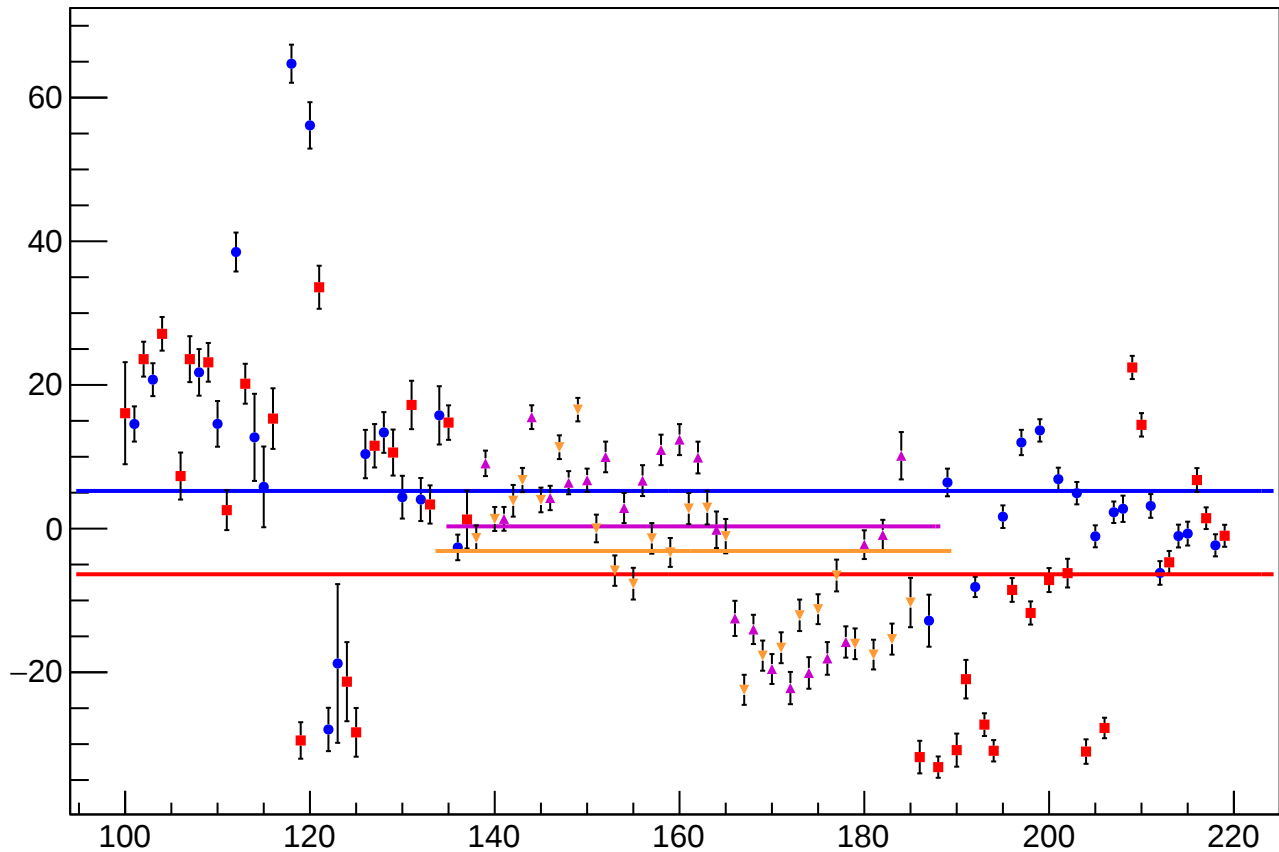
Right: 1754.013 $\pm$ 0.202  $\chi^2/\text{NDF}$ : 434906.9/69

In: 1892.246 $\pm$ 0.227  $\chi^2/\text{NDF}$ : 1457220.3/55

Out: 1872.959 $\pm$ 0.217  $\chi^2/\text{NDF}$ : 1566457.9/61

All: 1882.188 $\pm$ 0.157  $\chi^2/\text{NDF}$ : 3027451.1/11

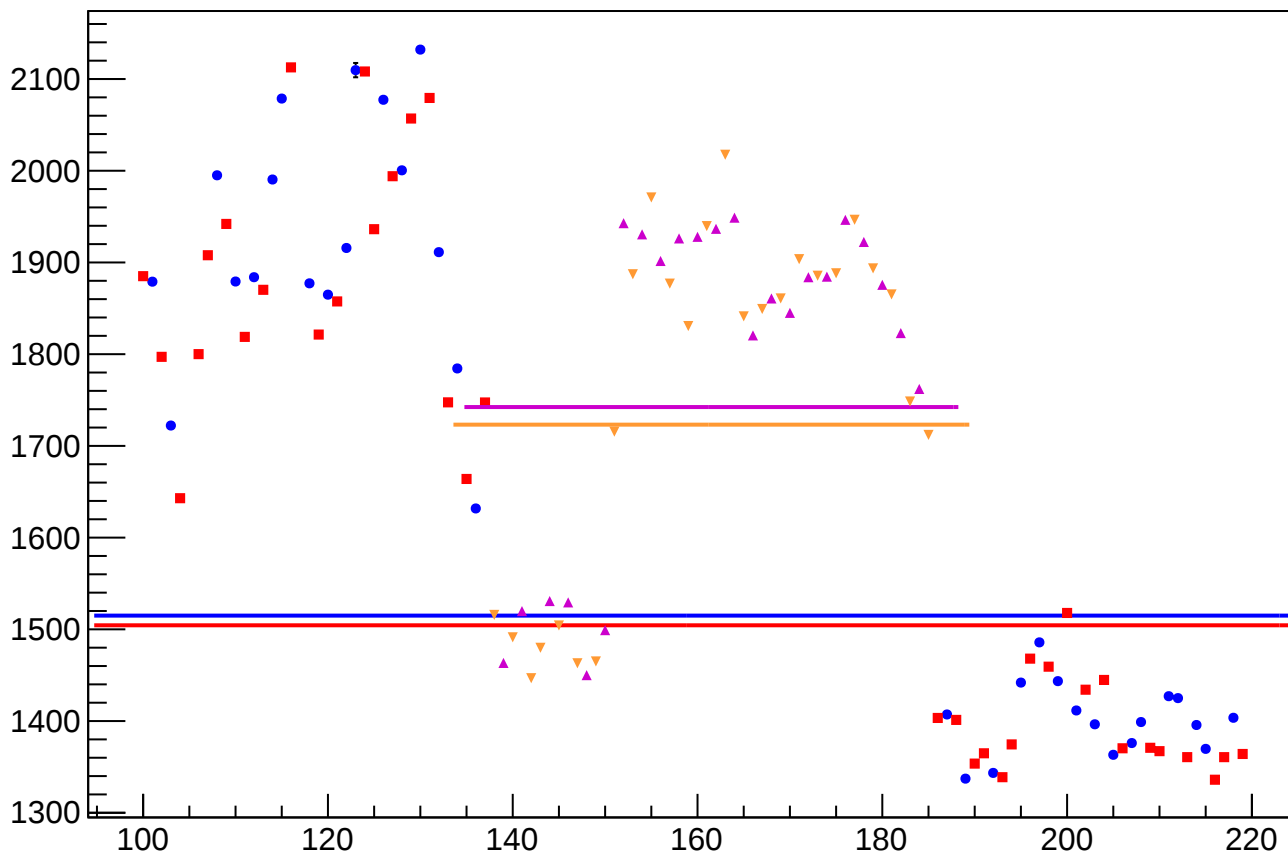
# diff\_bpm0i05Y\_mean vs Slug, Sign Corrected



Right In: 5.244+/-0.358  $\chi^2/\text{NDF}$ : 1450.8/32  
 Left Out: -3.112+/-0.404  $\chi^2/\text{NDF}$ : 643.7/24  
 Right Out: -6.358+/-0.343  $\chi^2/\text{NDF}$ : 3309.8/36  
 Left In: 0.312+/-0.421  $\chi^2/\text{NDF}$ : 736.5/22

Left: -1.470+/-0.292  $\chi^2/\text{NDF}$ : 1414.7/47  
 Right: -0.802+/-0.248  $\chi^2/\text{NDF}$ : 5307.3/69  
 In: 3.173+/-0.273  $\chi^2/\text{NDF}$ : 2266.9/55  
 Out: -4.997+/-0.262  $\chi^2/\text{NDF}$ : 3991.0/61  
 All: -1.082+/-0.189  $\chi^2/\text{NDF}$ : 6725.0/117

# diff\_bpm0i05Y\_rms vs Slug, Sign Corrected



Right In: 1514.964 $\pm$ 0.253  $\chi^2/\text{NDF}$ : 725813.1/32

Left Out: 1723.168 $\pm$ 0.286  $\chi^2/\text{NDF}$ : 477441.1/24

Right Out: 1504.401 $\pm$ 0.243  $\chi^2/\text{NDF}$ : 753087.4/36

Left In: 1742.354 $\pm$ 0.298  $\chi^2/\text{NDF}$ : 435841.5/22

Left: 1732.370 $\pm$ 0.206  $\chi^2/\text{NDF}$ : 915443.3/47

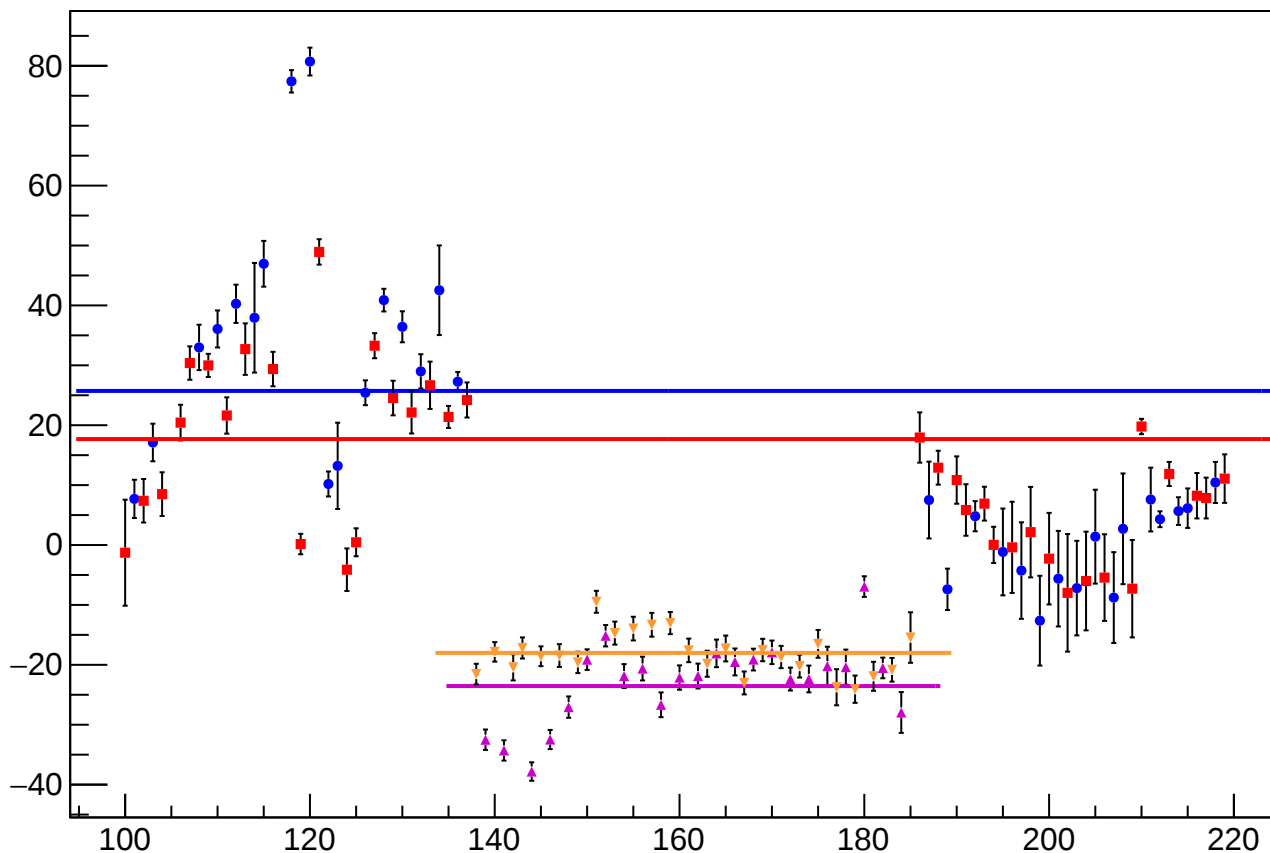
Right: 1509.459 $\pm$ 0.175  $\chi^2/\text{NDF}$ : 1479806.9/69

In: 1610.435 $\pm$ 0.193  $\chi^2/\text{NDF}$ : 1500016.2/55

Out: 1596.088 $\pm$ 0.185  $\chi^2/\text{NDF}$ : 1570789.5/61

All: 1602.962 $\pm$ 0.134  $\chi^2/\text{NDF}$ : 3073685.8/11

# diff\_bpm0i07X\_mean vs Slug, Sign Corrected



Right In: 25.725 $\pm$ 0.512     $\chi^2/\text{NDF}$ : 2275.5/32

Left Out: -18.007 $\pm$ 0.397     $\chi^2/\text{NDF}$ : 73.8/24

Right Out: 17.692 $\pm$ 0.476     $\chi^2/\text{NDF}$ : 744.8/36

Left In: -23.544 $\pm$ 0.406     $\chi^2/\text{NDF}$ : 346.7/22

Left: -20.714 $\pm$ 0.284     $\chi^2/\text{NDF}$ : 515.7/47

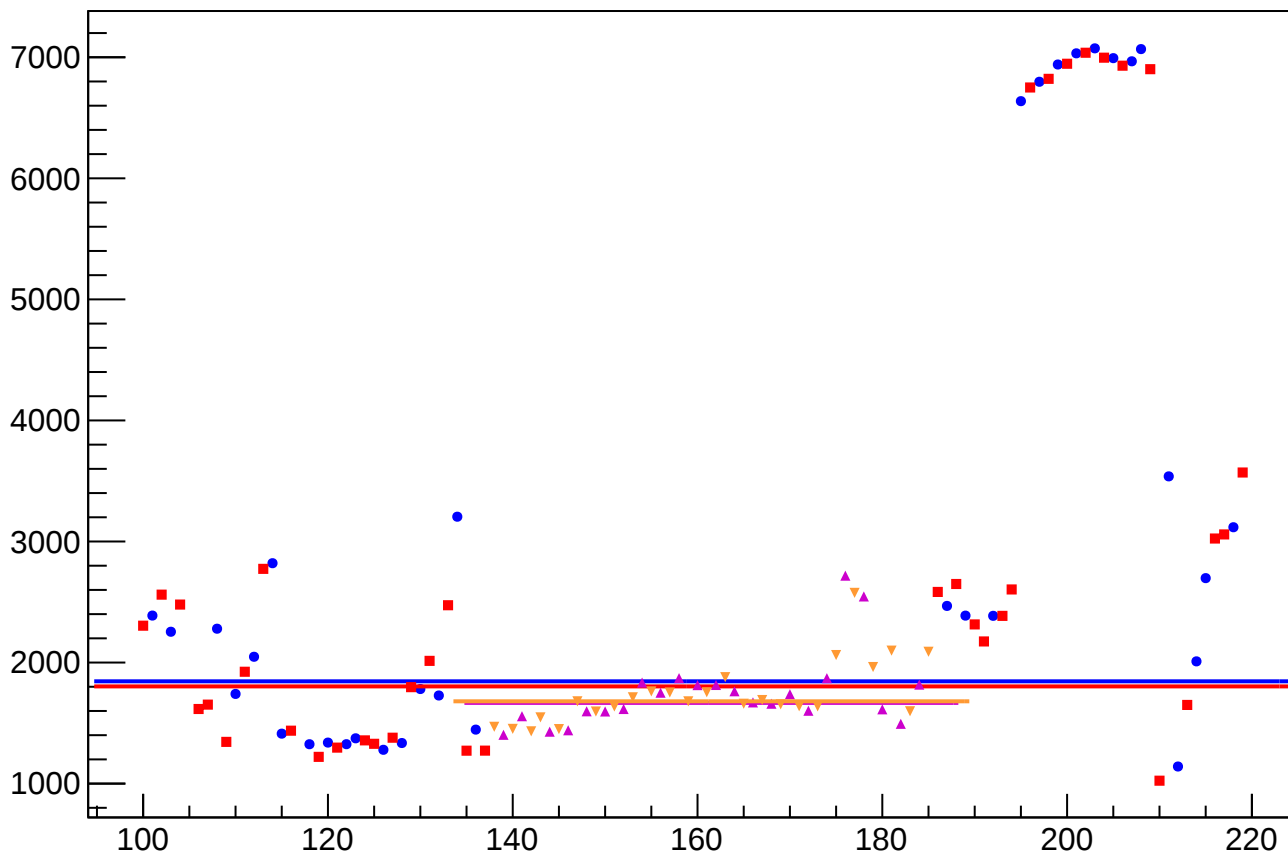
Right: 21.417 $\pm$ 0.349     $\chi^2/\text{NDF}$ : 3152.4/69

In: -4.538 $\pm$ 0.318     $\chi^2/\text{NDF}$ : 8313.0/55

Out: -3.376 $\pm$ 0.305     $\chi^2/\text{NDF}$ : 4137.9/61

All: -3.932 $\pm$ 0.220     $\chi^2/\text{NDF}$ : 12457.8/117

# diff\_bpm0i07X\_rms vs Slug, Sign Corrected



Right In:  $1845.010 \pm 0.362$   $\chi^2/\text{NDF}: 9084376.5/32$

Left Out:  $1679.814 \pm 0.281$   $\chi^2/\text{NDF}: 522795.6/24$

Right Out:  $1802.958 \pm 0.337$   $\chi^2/\text{NDF}: 9192090.9/36$

Left In:  $1666.819 \pm 0.287$   $\chi^2/\text{NDF}: 650990.8/22$

Left:  $1673.462 \pm 0.201$   $\chi^2/\text{NDF}: 1174835.7/47$

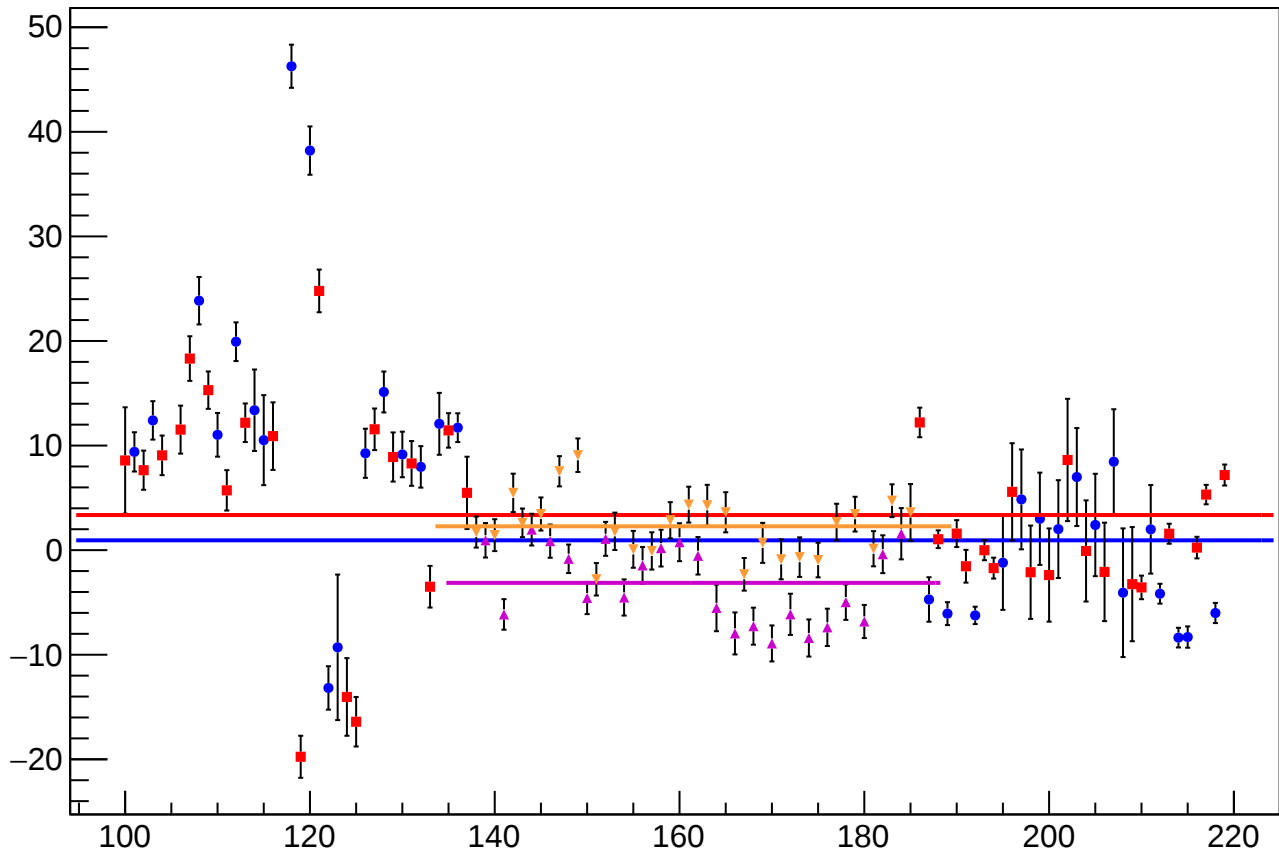
Right:  $1822.460 \pm 0.246$   $\chi^2/\text{NDF}: 18283705.8/69$

In:  $1735.560 \pm 0.225$   $\chi^2/\text{NDF}: 9884239.9/55$

Out:  $1730.285 \pm 0.215$   $\chi^2/\text{NDF}: 9793878.2/61$

All:  $1732.811 \pm 0.156$   $\chi^2/\text{NDF}: 19678405.0/121$

# diff\_bpm0i07Y\_mean vs Slug, Sign Corrected



Right In: 0.938 $\pm$ 0.304  $\chi^2/\text{NDF}$ : 1653.8/32

Left Out: 2.280 $\pm$ 0.338  $\chi^2/\text{NDF}$ : 75.6/24

Right Out: 3.356 $\pm$ 0.264  $\chi^2/\text{NDF}$ : 723.3/36

Left In: -3.129 $\pm$ 0.358  $\chi^2/\text{NDF}$ : 103.4/22

Left: -0.274 $\pm$ 0.246  $\chi^2/\text{NDF}$ : 299.7/47

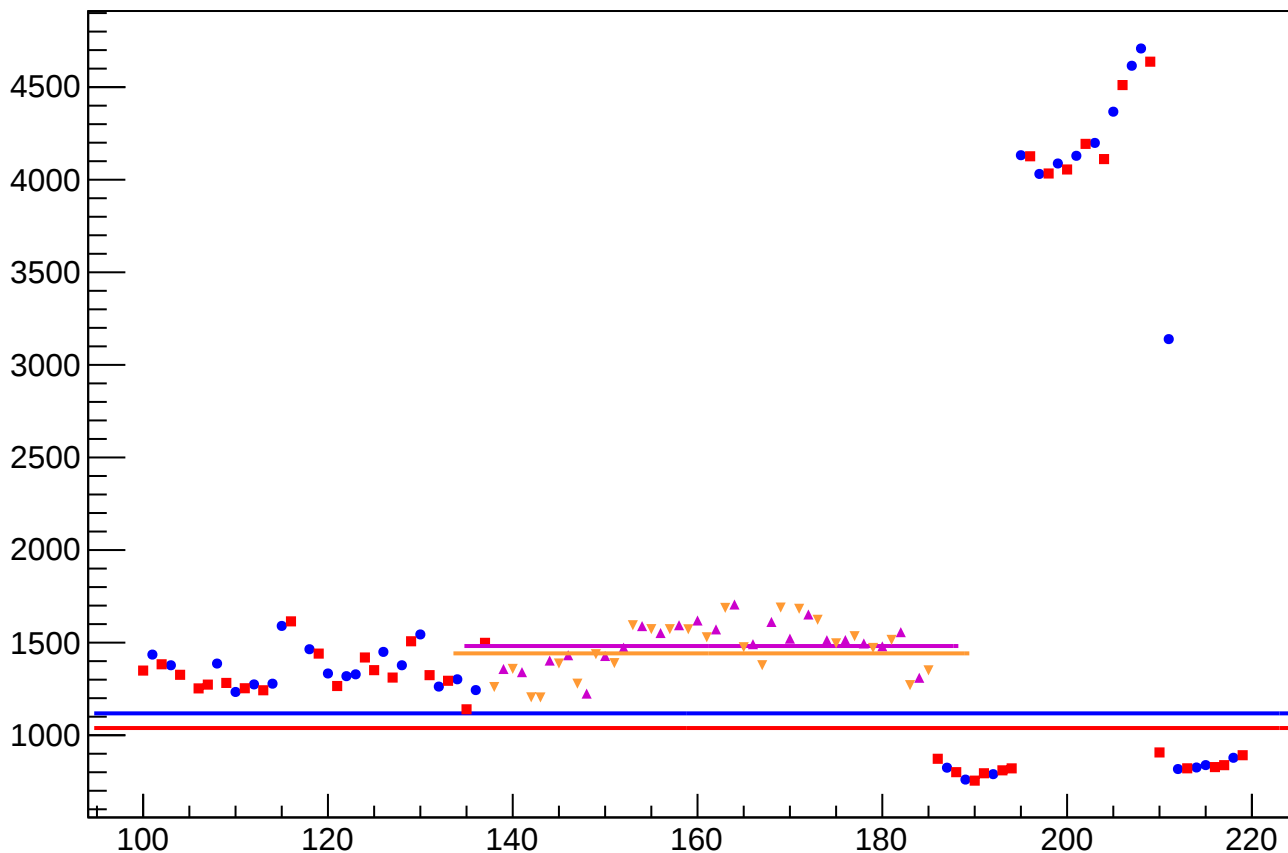
Right: 2.316 $\pm$ 0.199  $\chi^2/\text{NDF}$ : 2413.2/69

In: -0.767 $\pm$ 0.232  $\chi^2/\text{NDF}$ : 1832.2/55

Out: 2.949 $\pm$ 0.208  $\chi^2/\text{NDF}$ : 805.2/61

All: 1.288 $\pm$ 0.155  $\chi^2/\text{NDF}$ : 2779.8/117

# diff\_bpm0i07Y\_rms vs Slug, Sign Corrected



Right In:  $1118.005 \pm 0.215$   $\chi^2/\text{NDF}: 8913234.1/32$

Left Out:  $1441.951 \pm 0.239$   $\chi^2/\text{NDF}: 370617.4/24$

Right Out:  $1038.790 \pm 0.187$   $\chi^2/\text{NDF}: 7639112.4/36$

Left In:  $1481.695 \pm 0.253$   $\chi^2/\text{NDF}: 208470.6/22$

Left:  $1460.716 \pm 0.174$   $\chi^2/\text{NDF}: 592125.7/47$

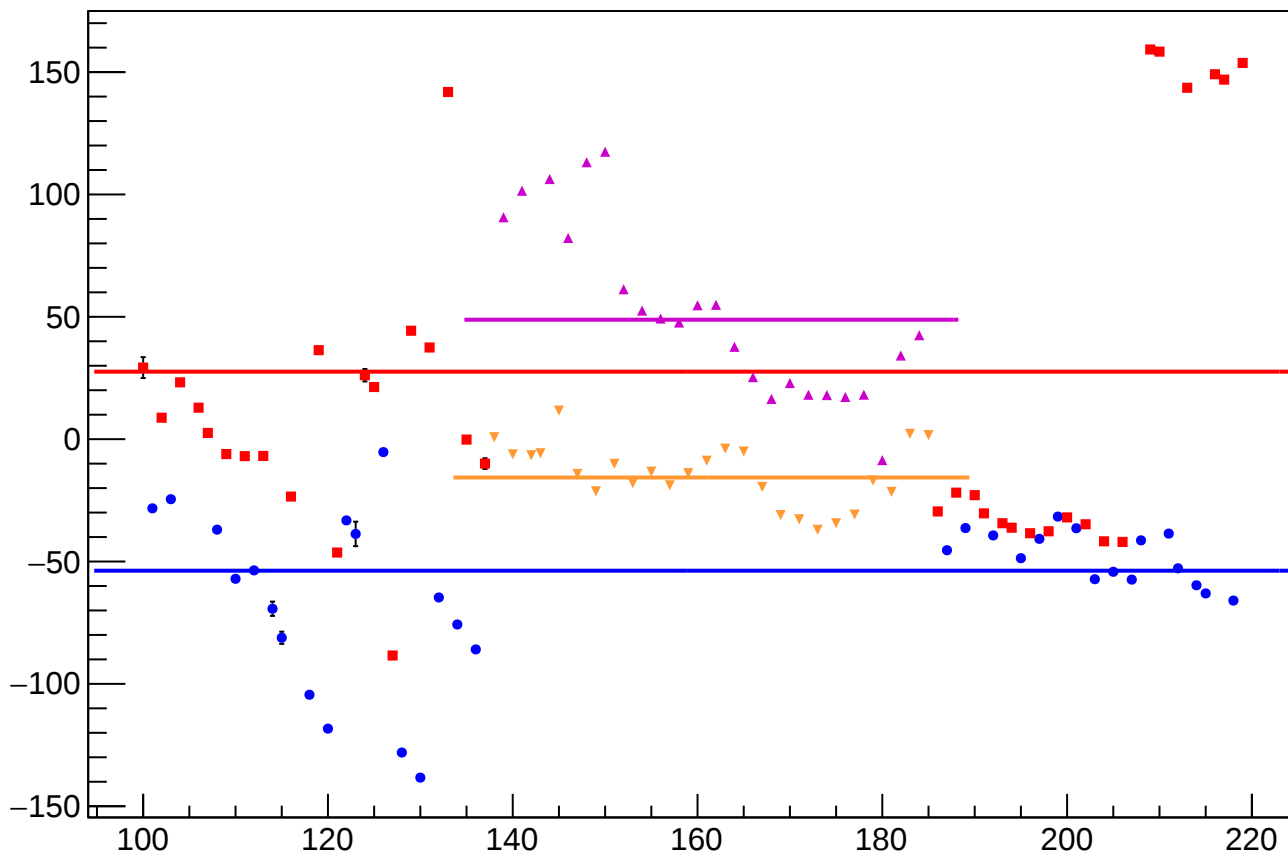
Right:  $1072.866 \pm 0.141$   $\chi^2/\text{NDF}: 16629772.4/69$

In:  $1270.511 \pm 0.164$   $\chi^2/\text{NDF}: 10322690.5/55$

Out:  $1191.455 \pm 0.147$   $\chi^2/\text{NDF}: 9775154.2/61$

All:  $1226.780 \pm 0.109$   $\chi^2/\text{NDF}: 20226764.2/111$

# diff\_bpm1i02X\_mean vs Slug, Sign Corrected



Right In:  $-53.753 \pm 0.167$   $\chi^2/\text{NDF}: 18214.0/32$

Left Out:  $-15.666 \pm 0.212$   $\chi^2/\text{NDF}: 3518.1/24$

Right Out:  $27.591 \pm 0.161$   $\chi^2/\text{NDF}: 264968.9/36$

Left In:  $48.812 \pm 0.220$   $\chi^2/\text{NDF}: 25260.8/22$

Left:  $15.324 \pm 0.152$   $\chi^2/\text{NDF}: 73443.2/47$

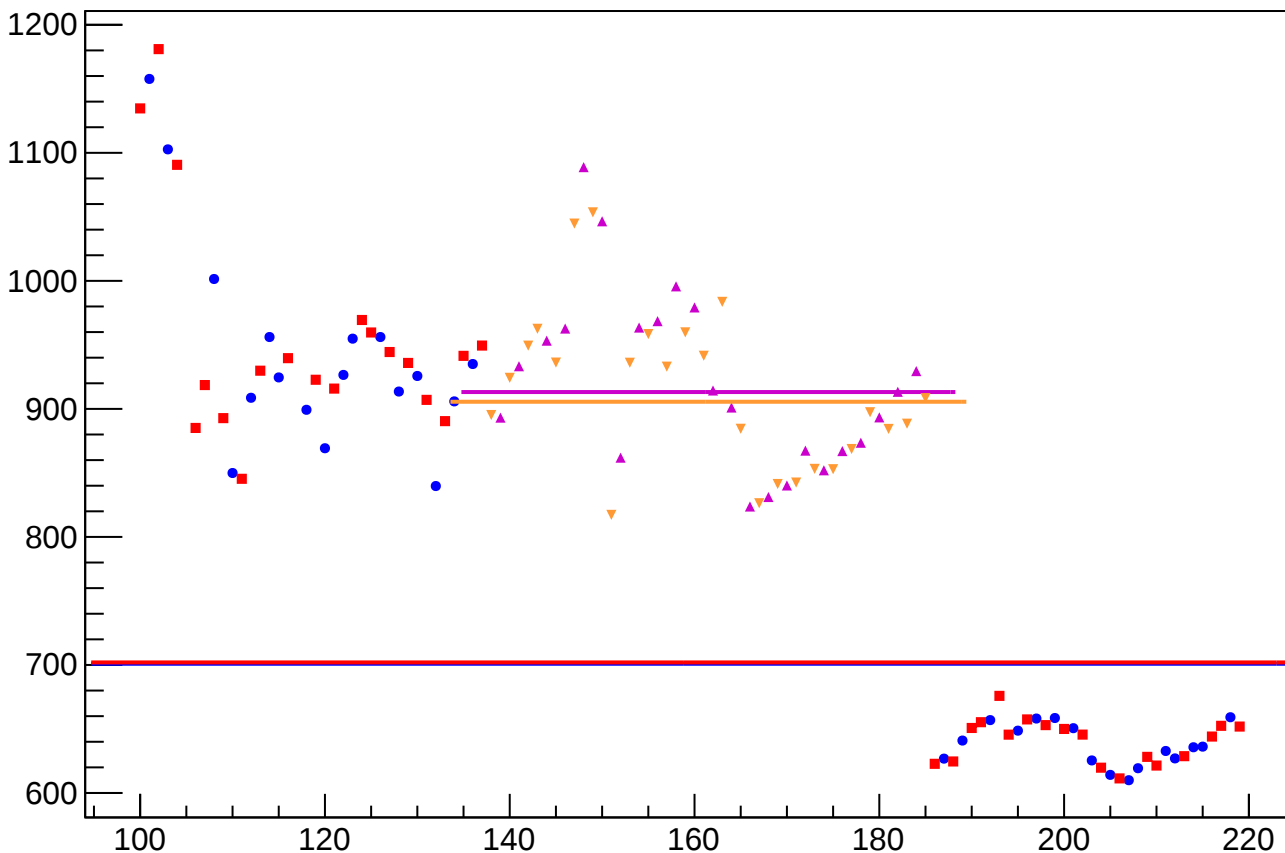
Right:  $-11.699 \pm 0.116$   $\chi^2/\text{NDF}: 406255.7/69$

In:  $-16.311 \pm 0.133$   $\chi^2/\text{NDF}: 181637.9/55$

Out:  $11.704 \pm 0.128$   $\chi^2/\text{NDF}: 294950.6/61$

All:  $-1.803 \pm 0.092$   $\chi^2/\text{NDF}: 499617.7/117$

# diff\_bpm1i02X\_rms vs Slug, Sign Corrected



Right In: 700.941 $\pm$ 0.118  $\chi^2$ /NDF: 1190572.4/32

Left Out: 905.578 $\pm$ 0.150  $\chi^2$ /NDF: 162073.5/24

Right Out: 701.979 $\pm$ 0.114  $\chi^2$ /NDF: 1250092.0/36

Left In: 913.165 $\pm$ 0.155  $\chi^2$ /NDF: 174438.8/22

Left: 909.225 $\pm$ 0.108  $\chi^2$ /NDF: 337749.0/47

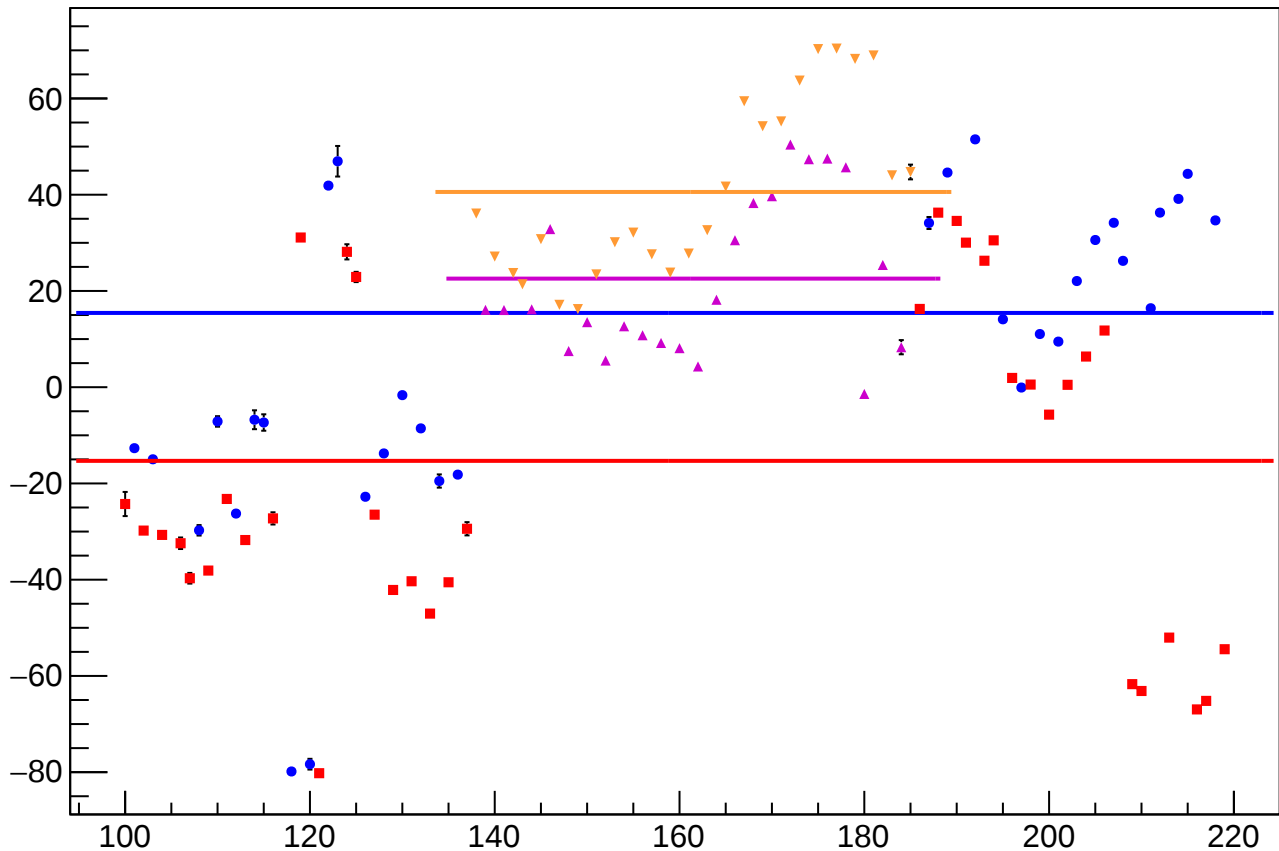
Right: 701.478 $\pm$ 0.082  $\chi^2$ /NDF: 2440704.5/69

In: 778.415 $\pm$ 0.094  $\chi^2$ /NDF: 2548067.8/55

Out: 776.755 $\pm$ 0.091  $\chi^2$ /NDF: 2584694.5/61

All: 777.555 $\pm$ 0.065  $\chi^2$ /NDF: 5132924.0/117

# diff\_bpm1i02Y\_mean vs Slug, Sign Corrected



Right In: 15.434 $\pm$ 0.125  $\chi^2$ /NDF: 49845.6/32

Left Out: 40.573 $\pm$ 0.168  $\chi^2$ /NDF:12079.0/24

Right Out: -15.307 $\pm$ 0.120  $\chi^2$ /NDF: 89953.7/36

Left In: 22.565 $\pm$ 0.175  $\chi^2$ /NDF:8167.7/22

Left: 31.959 $\pm$ 0.121  $\chi^2$ /NDF: 25752.7/47

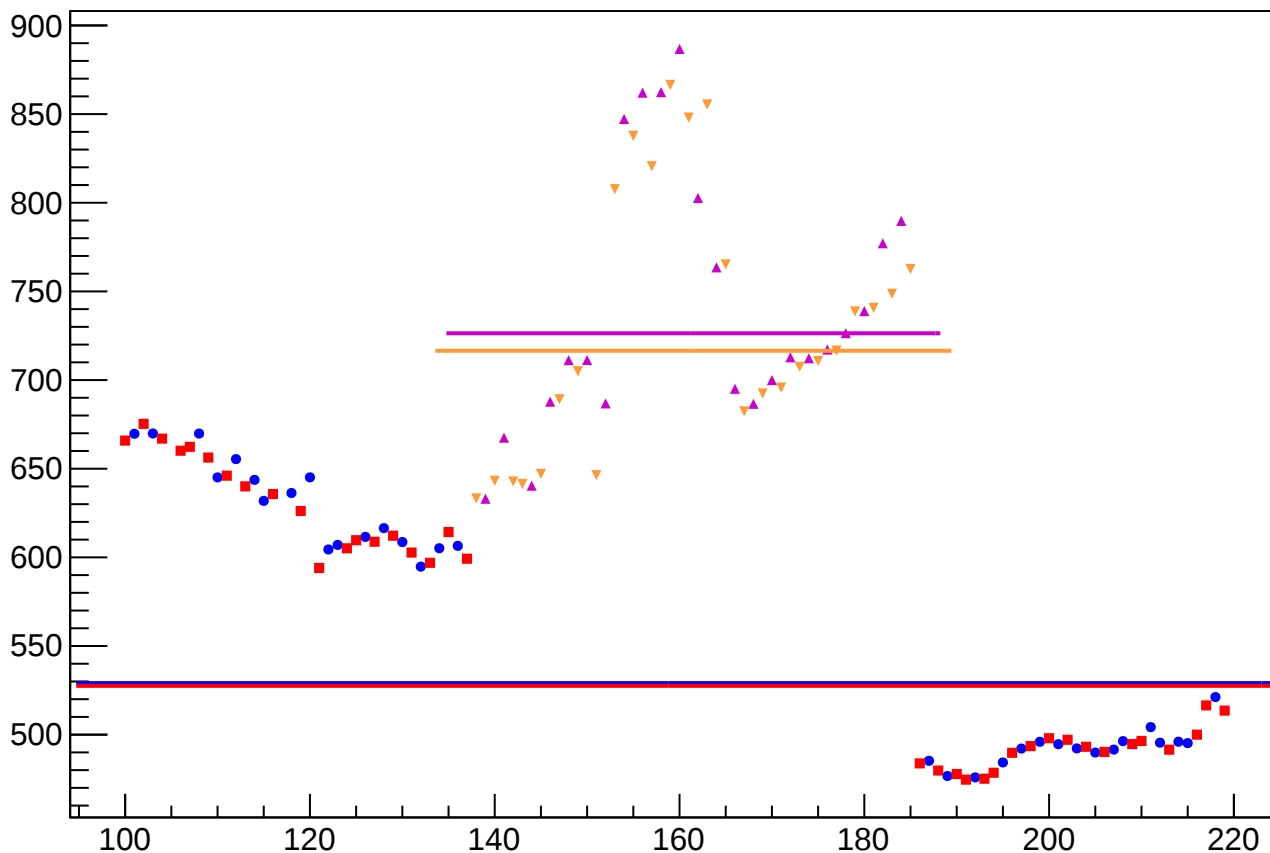
Right: -0.520 $\pm$ 0.086  $\chi^2$ /NDF: 171384.5/69

In: 17.828 $\pm$ 0.102  $\chi^2$ /NDF:59112.9/55

Out: 3.588 $\pm$ 0.098  $\chi^2$ /NDF:175398.1/61

All: 10.425 $\pm$ 0.070  $\chi^2$ /NDF: 244731.9/117

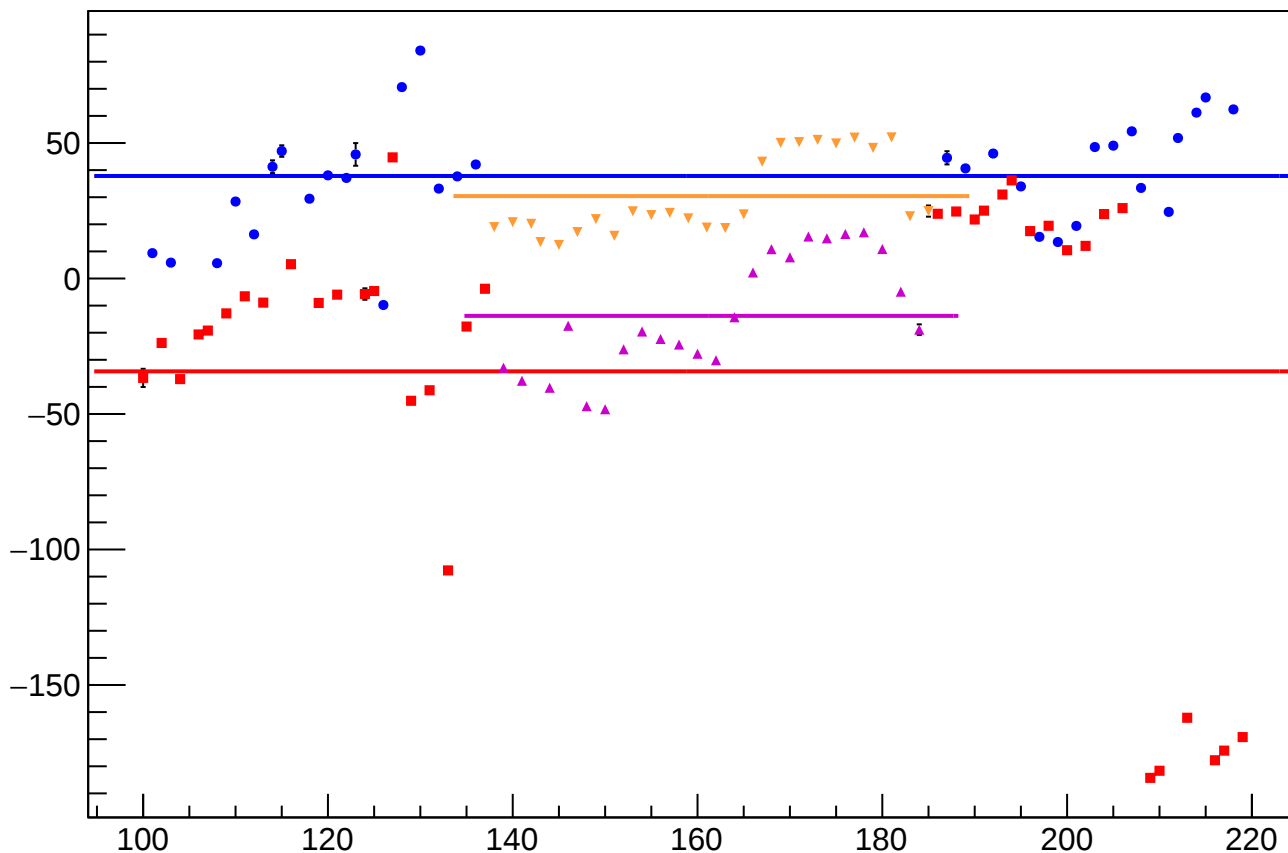
# diff\_bpm1i02Y\_rms vs Slug, Sign Corrected



Right In:  $529.071 \pm 0.088$   $\chi^2/\text{NDF}: 499580.7/32$   
 Left Out:  $716.515 \pm 0.119$   $\chi^2/\text{NDF}: 342740.2/24$   
 Right Out:  $527.529 \pm 0.085$   $\chi^2/\text{NDF}: 542091.0/36$   
 Left In:  $726.390 \pm 0.124$   $\chi^2/\text{NDF}: 289788.8/22$

Left:  $721.238 \pm 0.086$   $\chi^2/\text{NDF}: 635840.6/47$   
 Right:  $528.270 \pm 0.061$   $\chi^2/\text{NDF}: 1041830.7/69$   
 In:  $595.314 \pm 0.072$   $\chi^2/\text{NDF}: 2473007.0/55$   
 Out:  $591.431 \pm 0.069$   $\chi^2/\text{NDF}: 2563160.2/61$   
 All:  $593.295 \pm 0.050$   $\chi^2/\text{NDF}: 5037687.2/117$

# diff\_bpm1i04X\_mean vs Slug, Sign Corrected



Right In:  $37.834 \pm 0.204$   $\chi^2/\text{NDF}: 10411.5/32$

Left Out:  $30.408 \pm 0.237$   $\chi^2/\text{NDF}: 3808.0/24$

Right Out:  $-34.261 \pm 0.198$   $\chi^2/\text{NDF}: 140299.8/36$

Left In:  $-13.787 \pm 0.246$   $\chi^2/\text{NDF}: 7979.7/22$

Left:  $9.082 \pm 0.171$   $\chi^2/\text{NDF}: 28511.9/47$

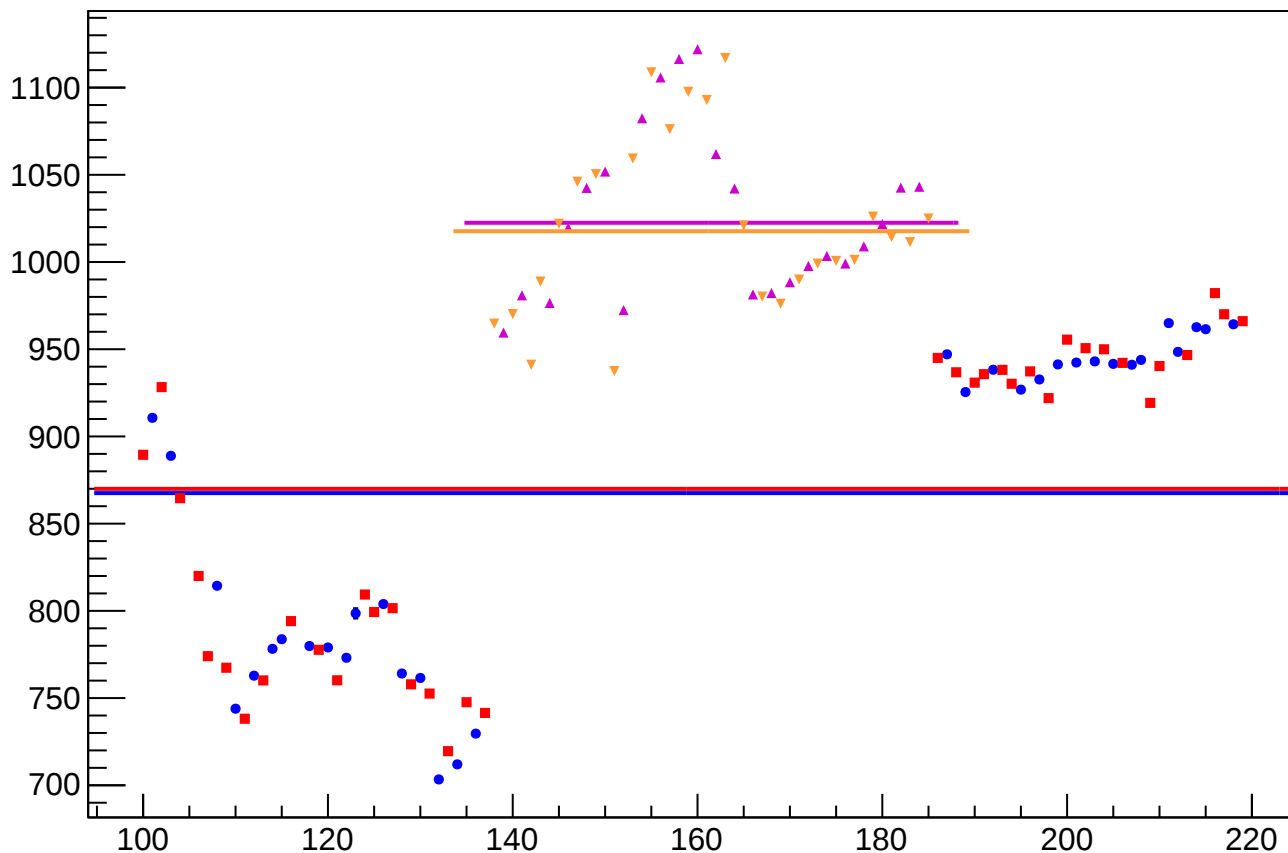
Right:  $0.604 \pm 0.142$   $\chi^2/\text{NDF}: 215151.4/69$

In:  $16.771 \pm 0.157$   $\chi^2/\text{NDF}: 44494.3/55$

Out:  $-7.810 \pm 0.152$   $\chi^2/\text{NDF}: 187962.2/61$

All:  $4.067 \pm 0.109$   $\chi^2/\text{NDF}: 245121.0/117$

# diff\_bpm1i04X\_rms vs Slug, Sign Corrected



Right In: 867.512 $\pm$ 0.144  $\chi^2$ /NDF: 409284.3/32

Left Out: 1017.653 $\pm$ 0.168  $\chi^2$ /NDF:83612.5/24

Right Out: 869.965 $\pm$ 0.140  $\chi^2$ /NDF: 403422.9/36

Left In: 1022.511 $\pm$ 0.174  $\chi^2$ /NDF:69635.5/22

Left: 1019.997 $\pm$ 0.121  $\chi^2$ /NDF: 153652.2/47

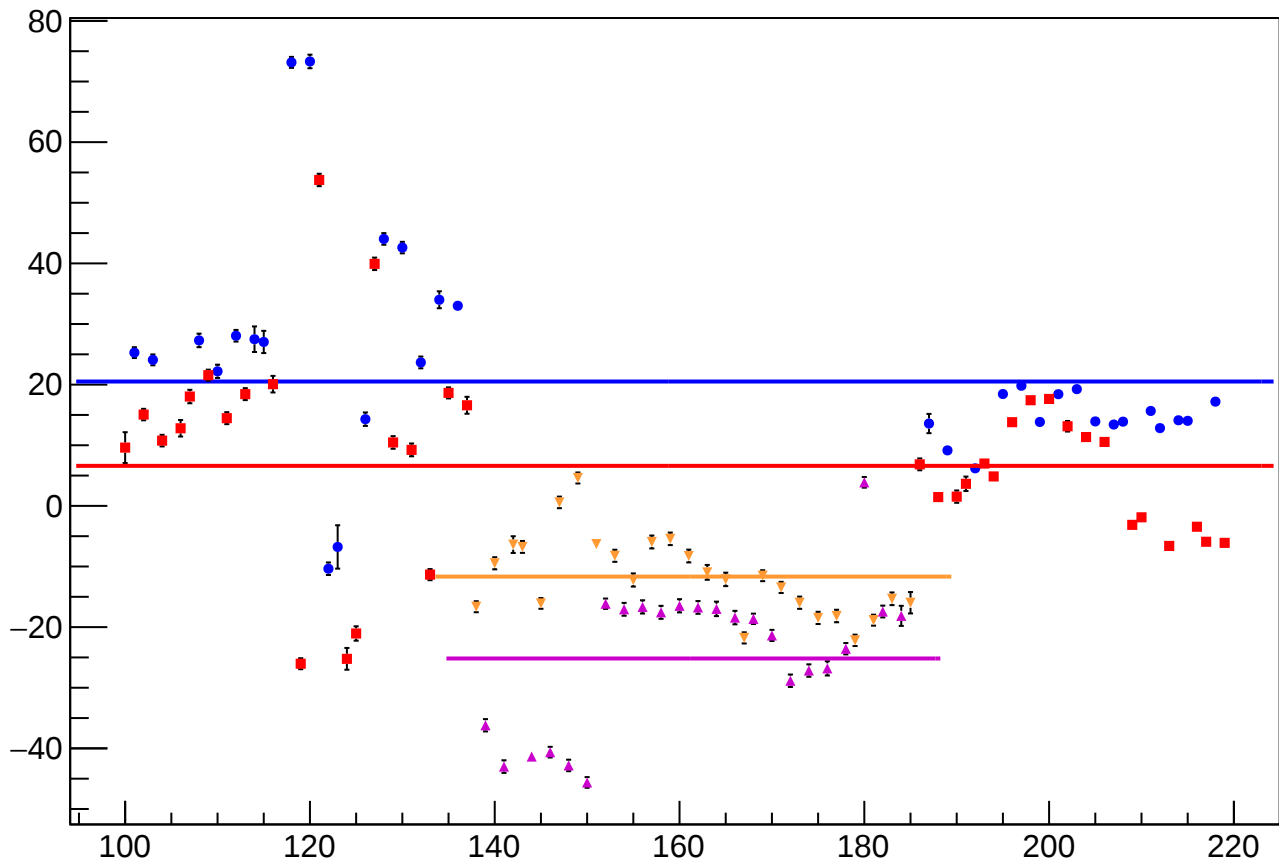
Right: 868.779 $\pm$ 0.100  $\chi^2$ /NDF: 812856.4/69

In: 930.756 $\pm$ 0.111  $\chi^2$ /NDF:949597.7/55

Out: 930.374 $\pm$ 0.107  $\chi^2$ /NDF:944470.2/61

All: 930.559 $\pm$ 0.077  $\chi^2$ /NDF: 1894074.0/117

# diff\_bpm1i04Y\_mean vs Slug, Sign Corrected



Right In: 20.515+/-0.144  $\chi^2/\text{NDF}$ : 9848.7/32

Left Out: -11.664+/-0.200  $\chi^2/\text{NDF}$ : 1147.4/24

Right Out: 6.603+/-0.138  $\chi^2/\text{NDF}$ : 9346.5/36

Left In: -25.174+/-0.207  $\chi^2/\text{NDF}$ : 3747.1/22

Left: -18.184+/-0.144  $\chi^2/\text{NDF}$ : 7090.4/47

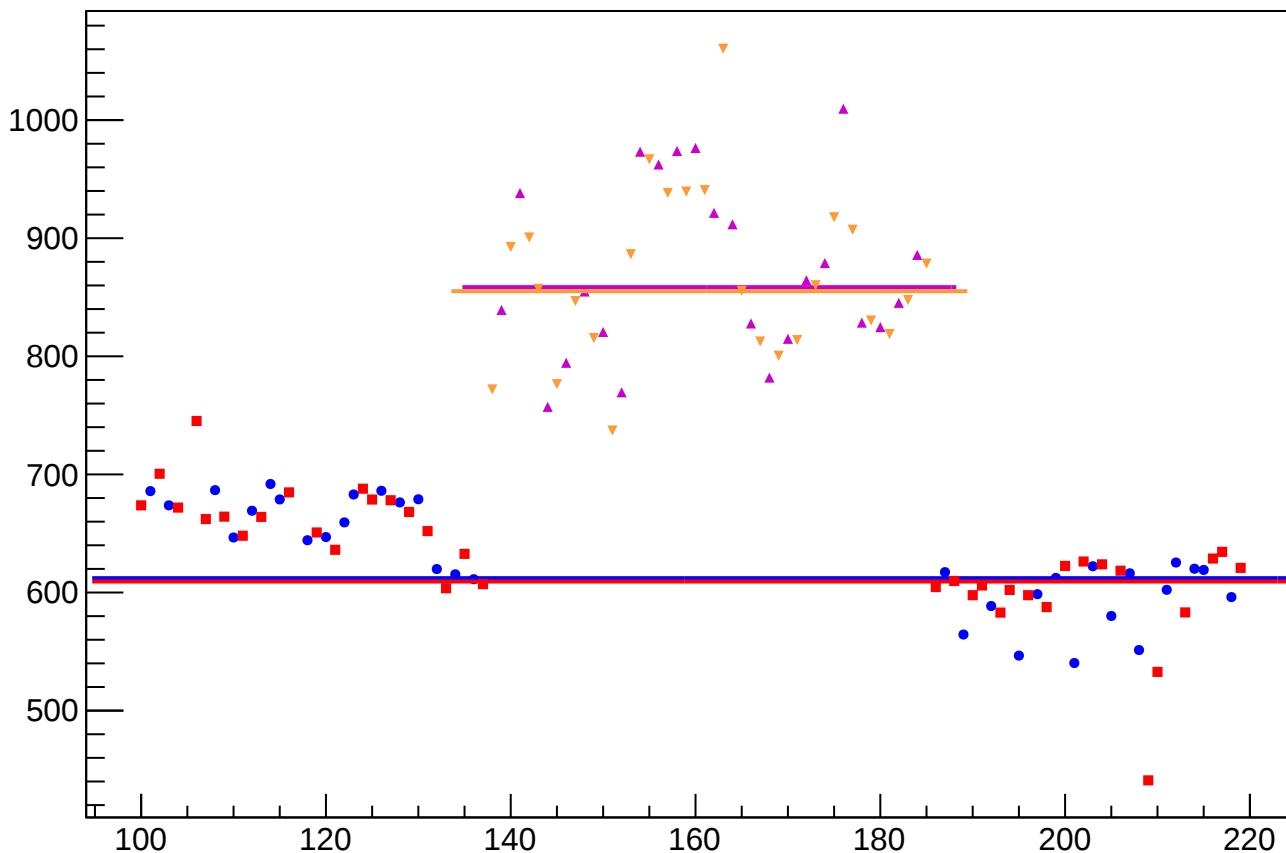
Right: 13.289+/-0.100  $\chi^2/\text{NDF}$ : 24046.9/69

In: 5.658+/-0.118  $\chi^2/\text{NDF}$ : 46352.6/55

Out: 0.695+/-0.114  $\chi^2/\text{NDF}$ : 16121.8/61

All: 3.084+/-0.082  $\chi^2/\text{NDF}$ : 63388.1/117

# diff\_bpm1i04Y\_rms vs Slug, Sign Corrected



Right In: 612.157+/-0.102  $\chi^2/\text{NDF}$ : 166522.2/32

Left Out: 855.131+/-0.142  $\chi^2/\text{NDF}$ : 233746.7/24

Right Out: 609.305+/-0.098  $\chi^2/\text{NDF}$ : 366855.9/36

Left In: 858.563+/-0.147  $\chi^2/\text{NDF}$ : 239019.8/22

Left: 856.788+/-0.102  $\chi^2/\text{NDF}$ : 473049.9/47

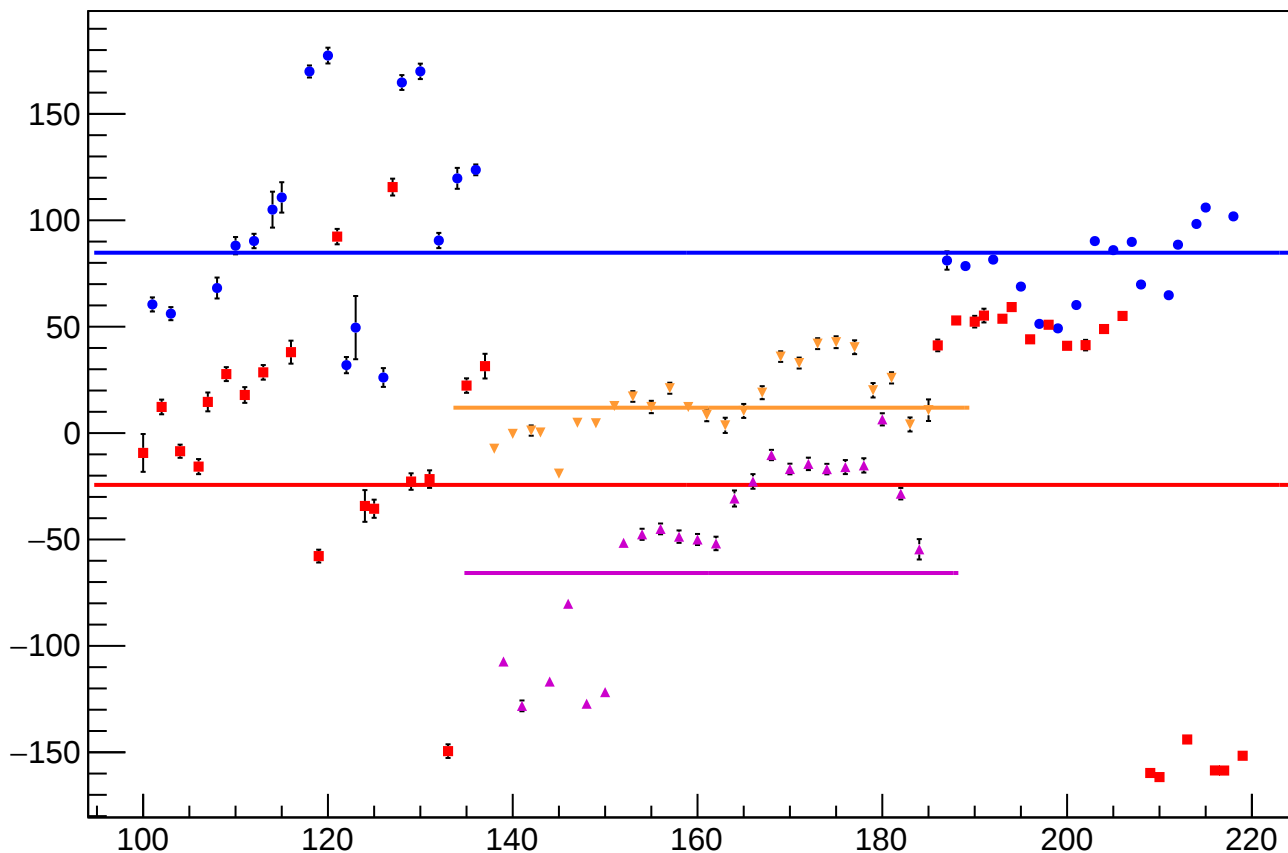
Right: 610.676+/-0.071  $\chi^2/\text{NDF}$ : 533786.1/69

In: 692.283+/-0.084  $\chi^2/\text{NDF}$ : 2311060.0/55

Out: 688.803+/-0.081  $\chi^2/\text{NDF}$ : 2639219.3/61

All: 690.478+/-0.058  $\chi^2/\text{NDF}$ : 4951177.8/117

# diff\_bpm1i06X\_mean vs Slug, Sign Corrected



Right In:  $84.766 \pm 0.431$   $\chi^2/\text{NDF}: 4804.0/32$

Left Out:  $11.938 \pm 0.505$   $\chi^2/\text{NDF}: 976.6/24$

Right Out:  $-24.348 \pm 0.410$   $\chi^2/\text{NDF}: 53060.4/36$

Left In:  $-65.752 \pm 0.518$   $\chi^2/\text{NDF}: 7335.8/22$

Left:  $-25.968 \pm 0.362$   $\chi^2/\text{NDF}: 19845.5/47$

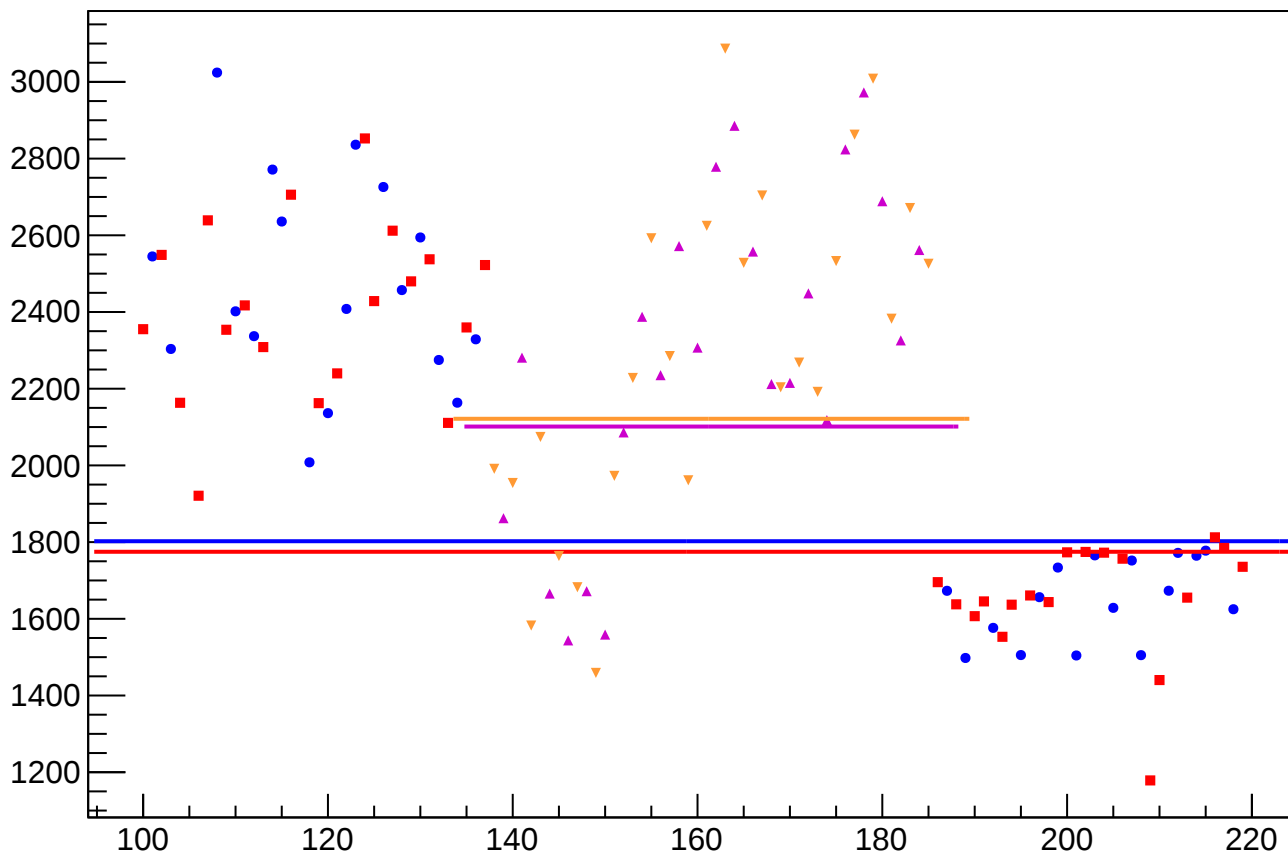
Right:  $27.486 \pm 0.297$   $\chi^2/\text{NDF}: 91525.3/69$

In:  $23.163 \pm 0.331$   $\chi^2/\text{NDF}: 62078.4/55$

Out:  $-9.947 \pm 0.318$   $\chi^2/\text{NDF}: 57147.0/61$

All:  $5.954 \pm 0.230$   $\chi^2/\text{NDF}: 124420.5/117$

# diff\_bpm1i06X\_rms vs Slug, Sign Corrected



Right In:  $1802.304 \pm 0.305$

$\chi^2/\text{NDF}$ : 1202526.8/32

Left Out:  $2121.567 \pm 0.357$

$\chi^2/\text{NDF}$ : 1387847.6/24

Right Out:  $1774.814 \pm 0.290$

$\chi^2/\text{NDF}$ : 1478851.4/36

Left In:  $2101.325 \pm 0.366$

$\chi^2/\text{NDF}$ : 1360518.3/22

Left:  $2111.691 \pm 0.256$   $\chi^2/\text{NDF}$ : 2749931.8/47

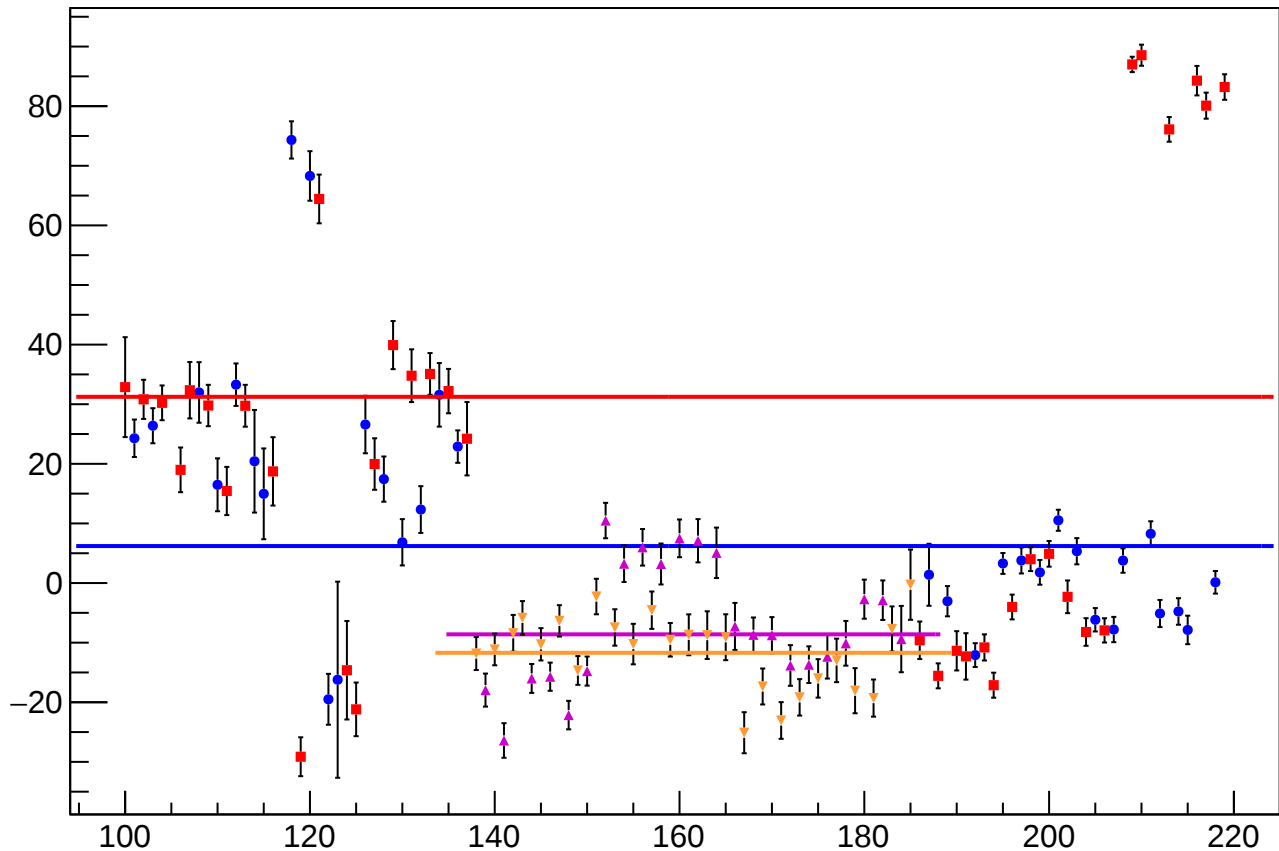
Right:  $1787.873 \pm 0.210$   $\chi^2/\text{NDF}$ : 2685651.3/69

In:  $1924.685 \pm 0.234$   $\chi^2/\text{NDF}$ : 2957227.7/55

Out:  $1912.430 \pm 0.225$   $\chi^2/\text{NDF}$ : 3434703.1/61

All:  $1918.315 \pm 0.162$   $\chi^2/\text{NDF}$ : 6393354.1/11

# diff\_bpm1i06Y\_mean vs Slug, Sign Corrected



Right In:  $6.205 \pm 0.467$   $\chi^2/\text{NDF}$ : 1291.3/32

Left Out:  $-11.700 \pm 0.625$   $\chi^2/\text{NDF}$ : 85.0/24

Right Out:  $31.244 \pm 0.443$   $\chi^2/\text{NDF}$ : 8854.8/36

Left In:  $-8.606 \pm 0.642$   $\chi^2/\text{NDF}$ : 264.2/22

Left:  $-10.193 \pm 0.448$   $\chi^2/\text{NDF}$ : 361.1/47

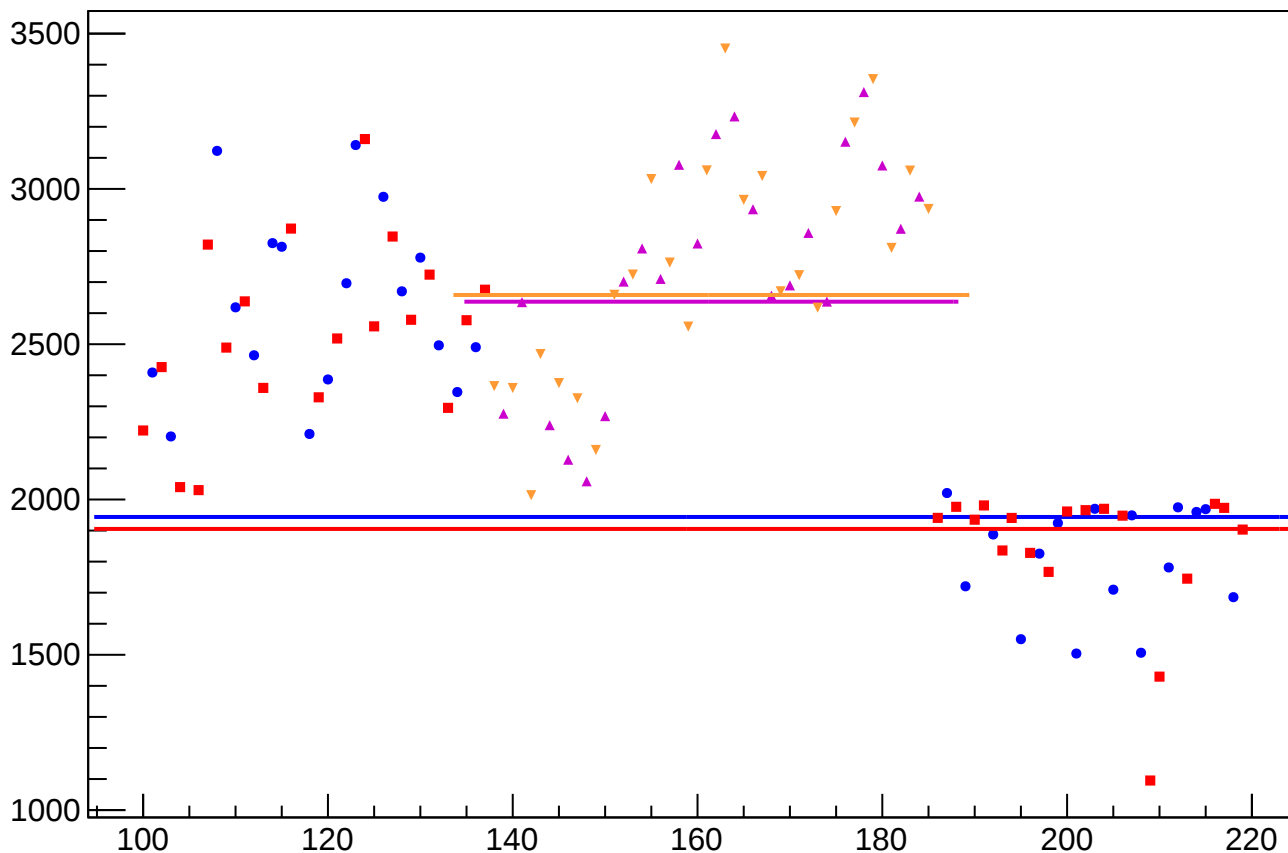
Right:  $19.379 \pm 0.322$   $\chi^2/\text{NDF}$ : 11657.9/69

In:  $1.077 \pm 0.378$   $\chi^2/\text{NDF}$ : 1903.6/55

Out:  $16.884 \pm 0.362$   $\chi^2/\text{NDF}$ : 12077.7/61

All:  $9.323 \pm 0.261$   $\chi^2/\text{NDF}$ : 14895.0/117

# diff\_bpm1i06Y\_rms vs Slug, Sign Corrected



Right In: 1943.745 $\pm$ 0.330  $\chi^2/\text{NDF}$ : 1220659.7/32

Left Out: 2658.486 $\pm$ 0.442  $\chi^2/\text{NDF}$ : 618133.8/24

Right Out: 1905.259 $\pm$ 0.313  $\chi^2/\text{NDF}$ : 1828247.8/36

Left In: 2636.885 $\pm$ 0.454  $\chi^2/\text{NDF}$ : 652894.5/22

Left: 2647.967 $\pm$ 0.317  $\chi^2/\text{NDF}$ : 1272190.1/47

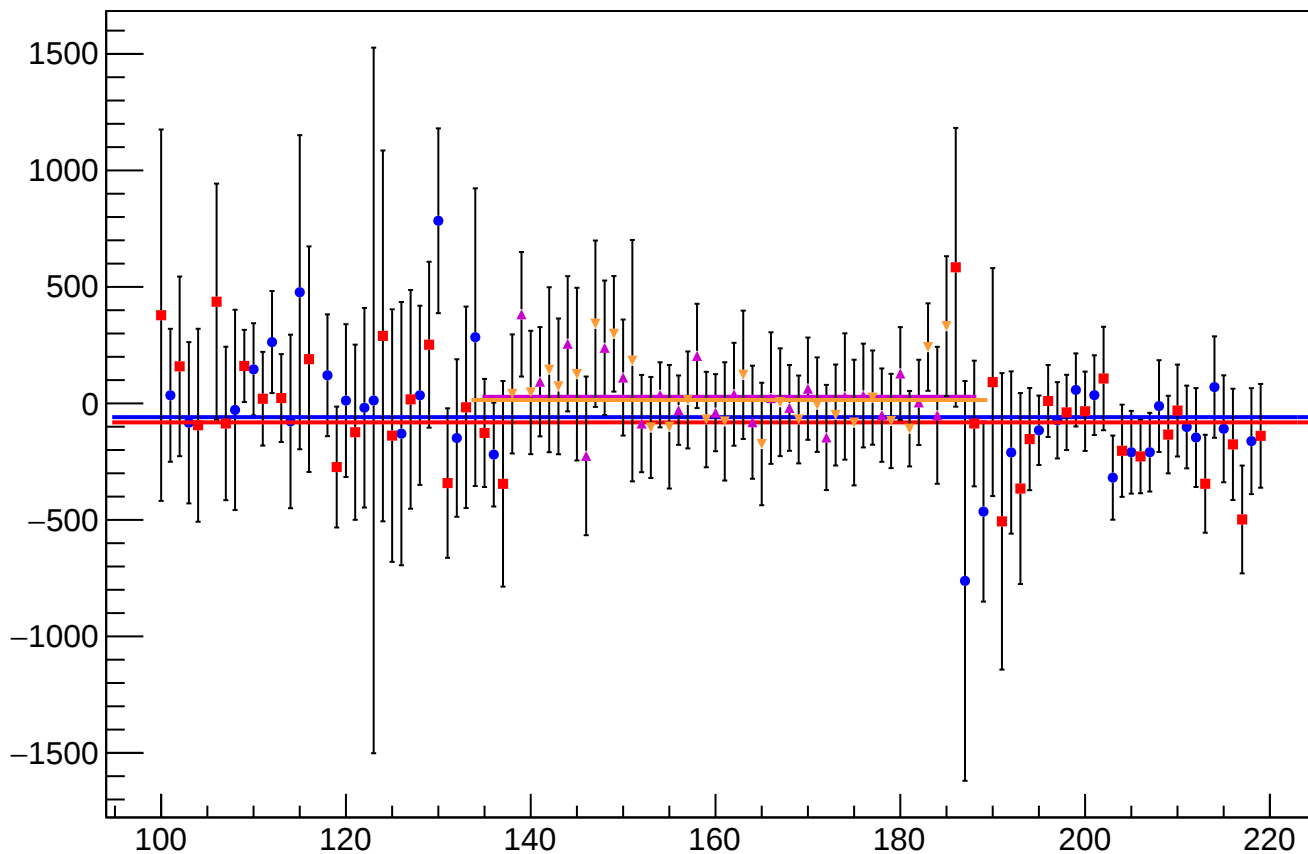
Right: 1923.497 $\pm$ 0.227  $\chi^2/\text{NDF}$ : 3056050.6/69

In: 2183.709 $\pm$ 0.267  $\chi^2/\text{NDF}$ : 3398120.4/55

Out: 2157.133 $\pm$ 0.256  $\chi^2/\text{NDF}$ : 4377119.1/61

All: 2169.845 $\pm$ 0.185  $\chi^2/\text{NDF}$ : 7780404.8/11

asym\_bcm\_an\_us\_bcm\_an\_ds\_agg\_avg\_mean vs Slug, Sign Corrected



Right In:  $-59.019 \pm 41.913$   $\chi^2/\text{NDF}: 17.4/32$

Left Out:  $14.520 \pm 47.528$   $\chi^2/\text{NDF}: 7.8/24$

Right Out:  $-81.445 \pm 40.982$   $\chi^2/\text{NDF}: 17.9/36$

Left In:  $28.310 \pm 44.638$   $\chi^2/\text{NDF}: 6.3/22$

Left:  $21.847 \pm 32.538$   $\chi^2/\text{NDF}: 14.1/47$

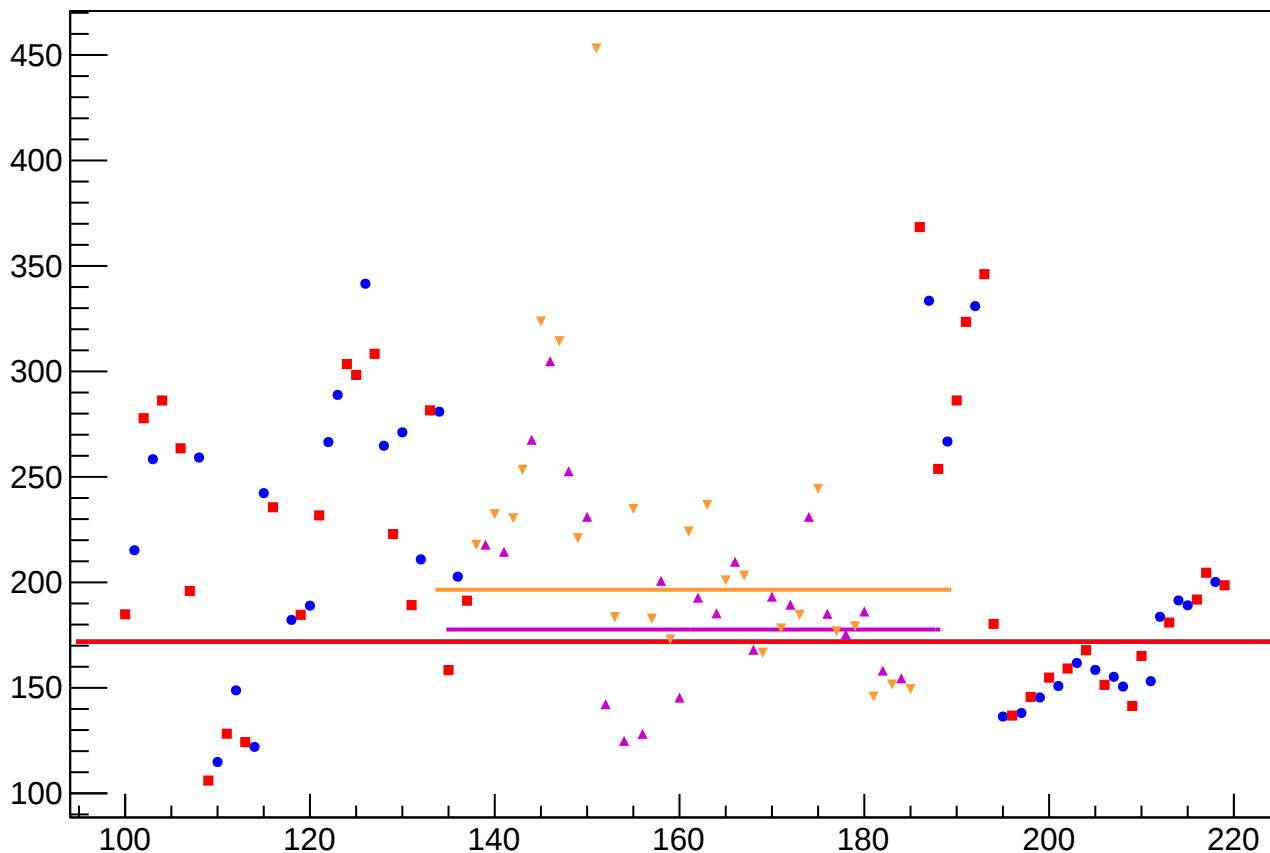
Right:  $-70.484 \pm 29.302$   $\chi^2/\text{NDF}: 35.5/69$

In:  $-18.102 \pm 30.555$   $\chi^2/\text{NDF}: 25.7/55$

Out:  $-40.523 \pm 31.037$   $\chi^2/\text{NDF}: 28.0/61$

All:  $-29.137 \pm 21.774$   $\chi^2/\text{NDF}: 54.1/117$

asym\_bcm\_an\_us\_bcm\_an\_ds\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 172.040 $\pm$ 0.030  $\chi^2$ /NDF: 2205085.5/32

Left Out: 196.514 $\pm$ 0.034  $\chi^2$ /NDF:1789504.4/24

Right Out: 171.729 $\pm$ 0.029  $\chi^2$ /NDF: 2930600.8/36

Left In: 177.643 $\pm$ 0.032  $\chi^2$ /NDF:1630664.5/22

Left: 186.488 $\pm$ 0.023  $\chi^2$ /NDF: 3587689.7/47

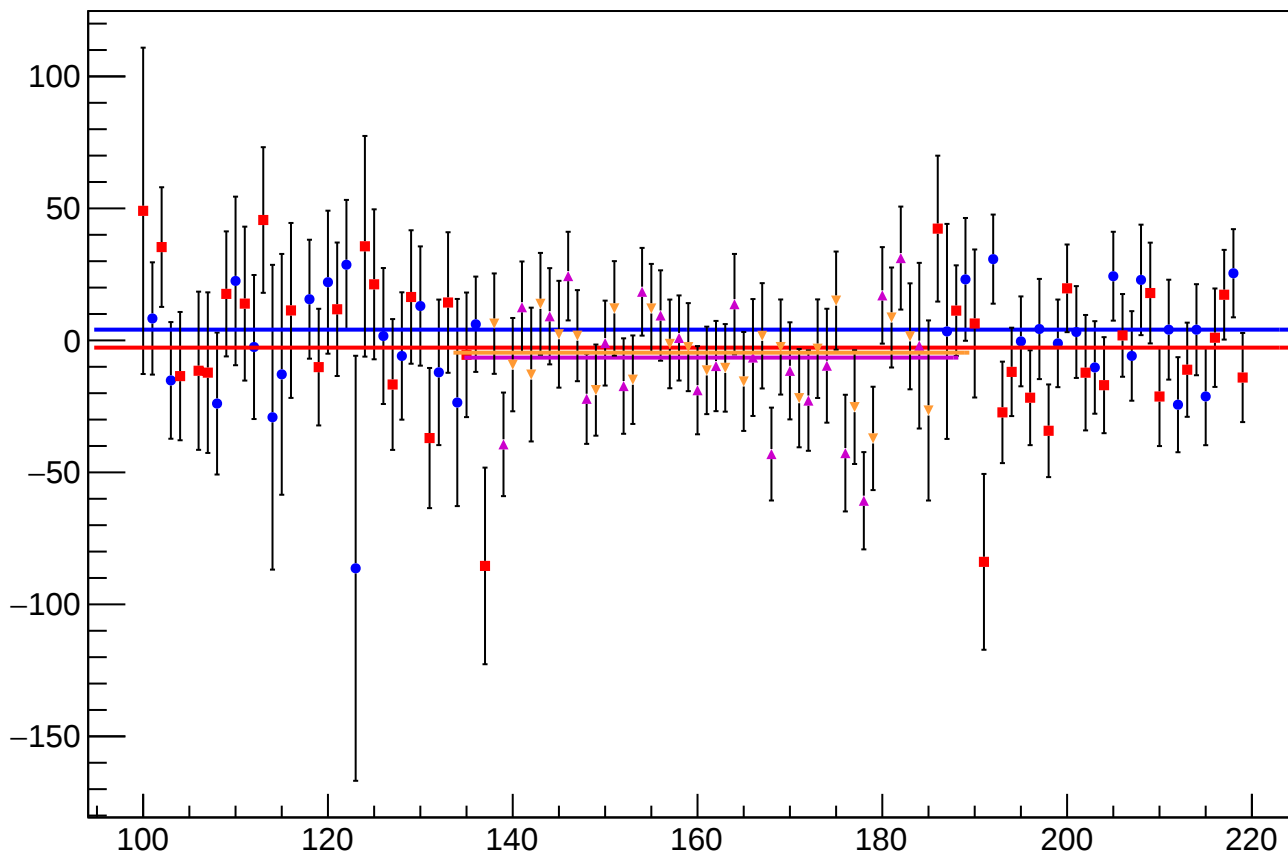
Right: 171.881 $\pm$ 0.021  $\chi^2$ /NDF: 5135742.7/69

In: 174.666 $\pm$ 0.022  $\chi^2$ /NDF:3852495.3/55

Out: 182.298 $\pm$ 0.022  $\chi^2$ /NDF:5032054.6/61

All: 178.422 $\pm$ 0.015  $\chi^2$ /NDF: 8945974.8/117

asym\_bcm\_an\_avg\_bcm\_dg\_ds\_agg\_dd\_mean vs Slug, Sign Corrected



Right In:  $4.074 \pm 3.739$   $\chi^2/\text{NDF}: 19.5/32$

Left Out:  $-4.646 \pm 3.728$   $\chi^2/\text{NDF}: 12.1/24$

Right Out:  $-2.740 \pm 3.624$   $\chi^2/\text{NDF}: 40.7/36$

Left In:  $-6.526 \pm 3.828$   $\chi^2/\text{NDF}: 36.4/22$

Left:  $-5.561 \pm 2.670$   $\chi^2/\text{NDF}: 48.6/47$

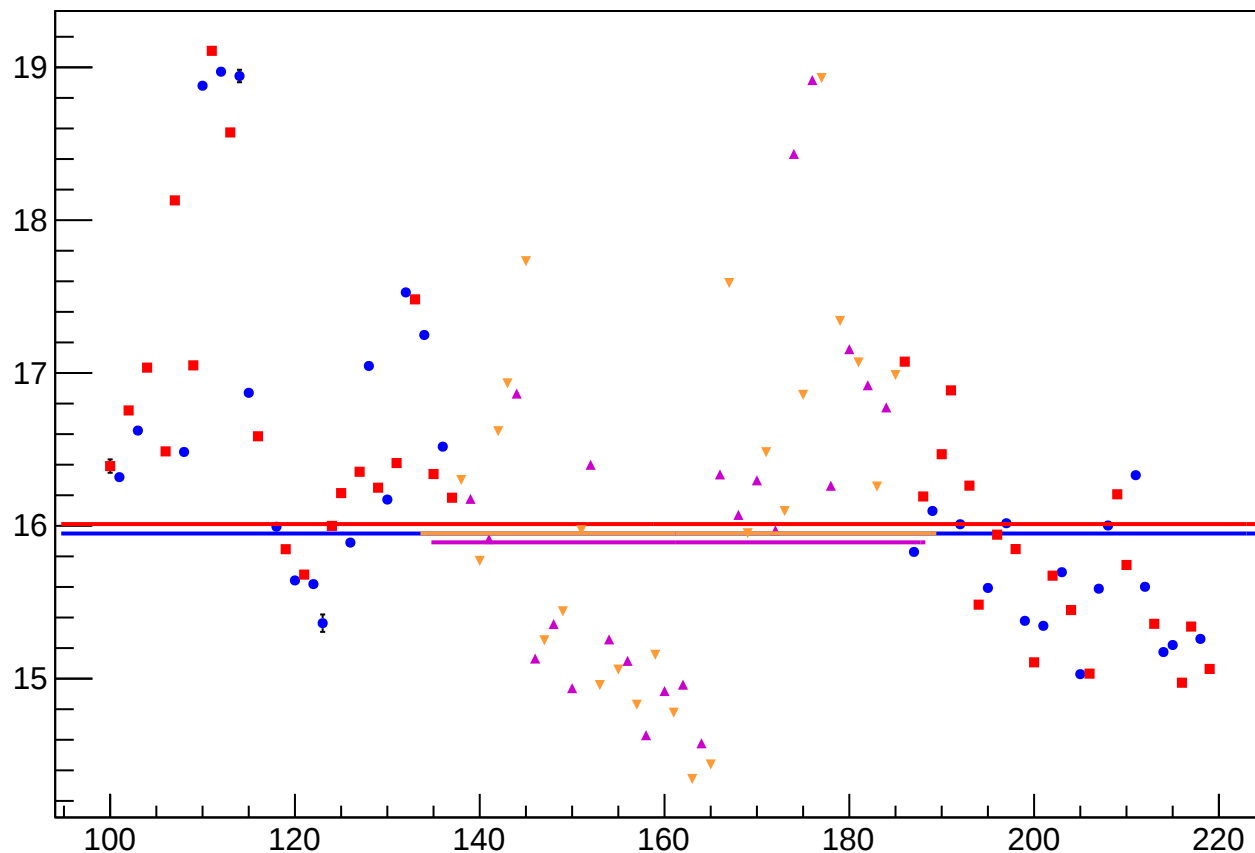
Right:  $0.561 \pm 2.602$   $\chi^2/\text{NDF}: 62.0/69$

In:  $-1.102 \pm 2.675$   $\chi^2/\text{NDF}: 59.8/55$

Out:  $-3.666 \pm 2.599$   $\chi^2/\text{NDF}: 52.9/61$

All:  $-2.421 \pm 1.864$   $\chi^2/\text{NDF}: 113.2/117$

asym\_bcm\_an\_avg\_bcm\_dg\_ds\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 15.950 $\pm$ 0.003  $\chi^2$ /NDF: 91875.3/32

Left Out: 15.951 $\pm$ 0.003  $\chi^2$ /NDF:173458.5/24

Right Out: 16.011 $\pm$ 0.003  $\chi^2$ /NDF: 110997.1/36

Left In: 15.892 $\pm$ 0.003  $\chi^2$ /NDF:147093.3/22

Left: 15.922 $\pm$ 0.002  $\chi^2$ /NDF: 320794.5/47

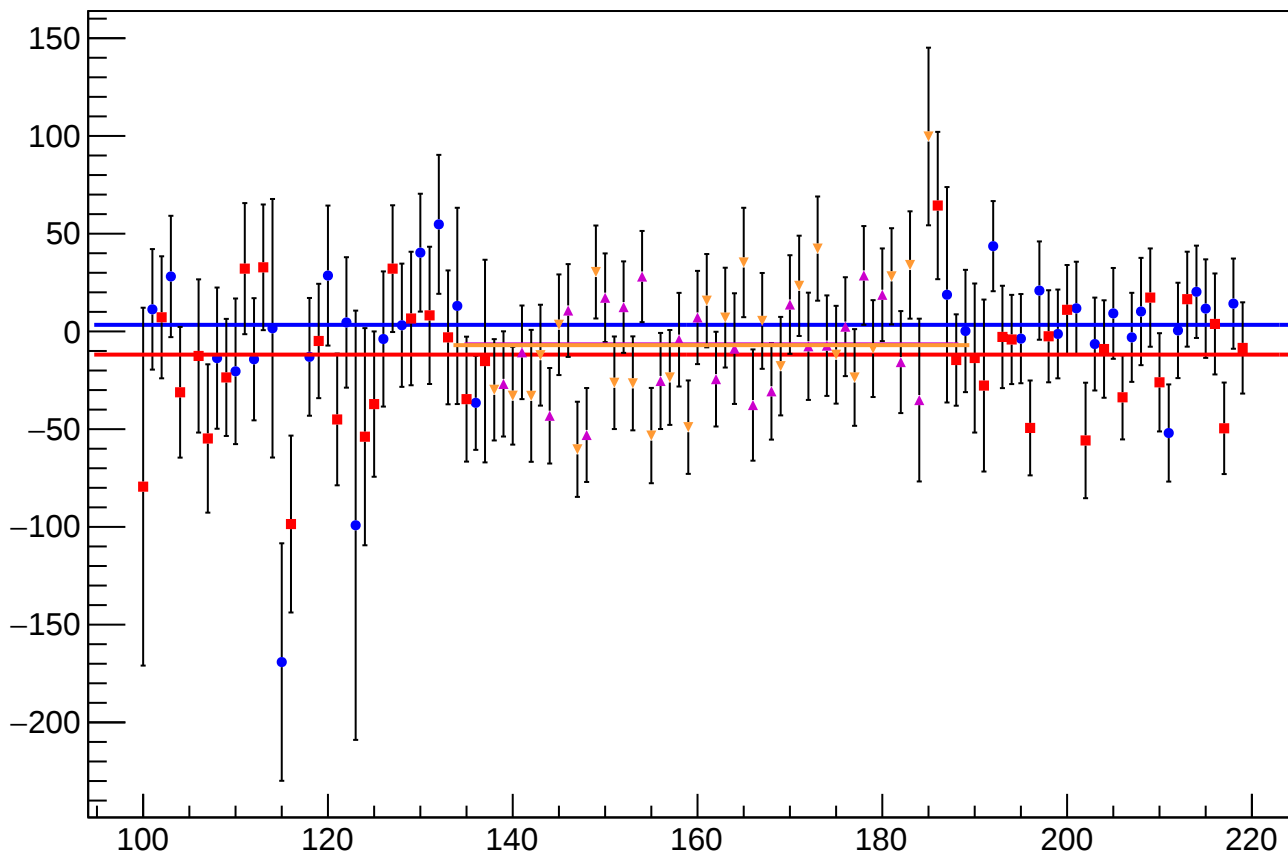
Right: 15.982 $\pm$ 0.002  $\chi^2$ /NDF: 203154.2/69

In: 15.921 $\pm$ 0.002  $\chi^2$ /NDF:239201.9/55

Out: 15.982 $\pm$ 0.002  $\chi^2$ /NDF:284728.8/61

All: 15.953 $\pm$ 0.001  $\chi^2$ /NDF: 524457.4/117

asym\_bcm\_an\_avg\_bcm\_dg\_us\_agg\_dd\_mean vs Slug, Sign Corrected



Right In:  $3.369 \pm 5.020$   $\chi^2/\text{NDF}: 27.9/32$

Left Out:  $-7.017 \pm 5.121$   $\chi^2/\text{NDF}: 37.4/24$

Right Out:  $-11.860 \pm 4.867$   $\chi^2/\text{NDF}: 32.4/36$

Left In:  $-6.611 \pm 5.251$   $\chi^2/\text{NDF}: 19.1/22$

Left:  $-6.820 \pm 3.666$   $\chi^2/\text{NDF}: 56.6/47$

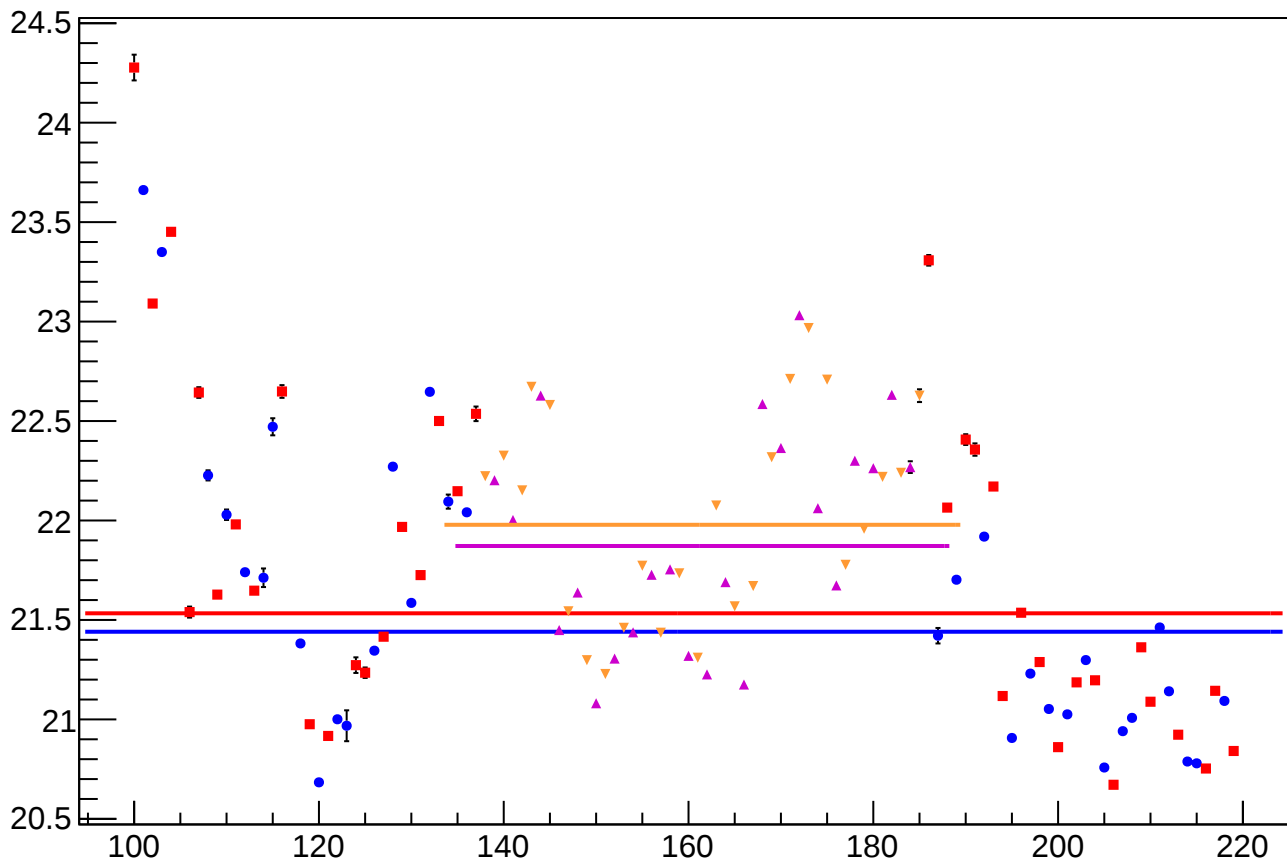
Right:  $-4.482 \pm 3.494$   $\chi^2/\text{NDF}: 65.0/69$

In:  $-1.397 \pm 3.629$   $\chi^2/\text{NDF}: 48.9/55$

Out:  $-9.562 \pm 3.528$   $\chi^2/\text{NDF}: 70.3/61$

All:  $-5.594 \pm 2.529$   $\chi^2/\text{NDF}: 121.8/117$

asym\_bcm\_an\_avg\_bcm\_dg\_us\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 21.441+/-0.004  $\chi^2/\text{NDF}$ : 37150.6/32

Left Out: 21.978+/-0.004  $\chi^2/\text{NDF}$ :19430.2/24

Right Out: 21.533+/-0.003  $\chi^2/\text{NDF}$ : 42720.7/36

Left In: 21.872+/-0.004  $\chi^2/\text{NDF}$ :20524.9/22

Left: 21.926+/-0.003  $\chi^2/\text{NDF}$ : 40377.5/47

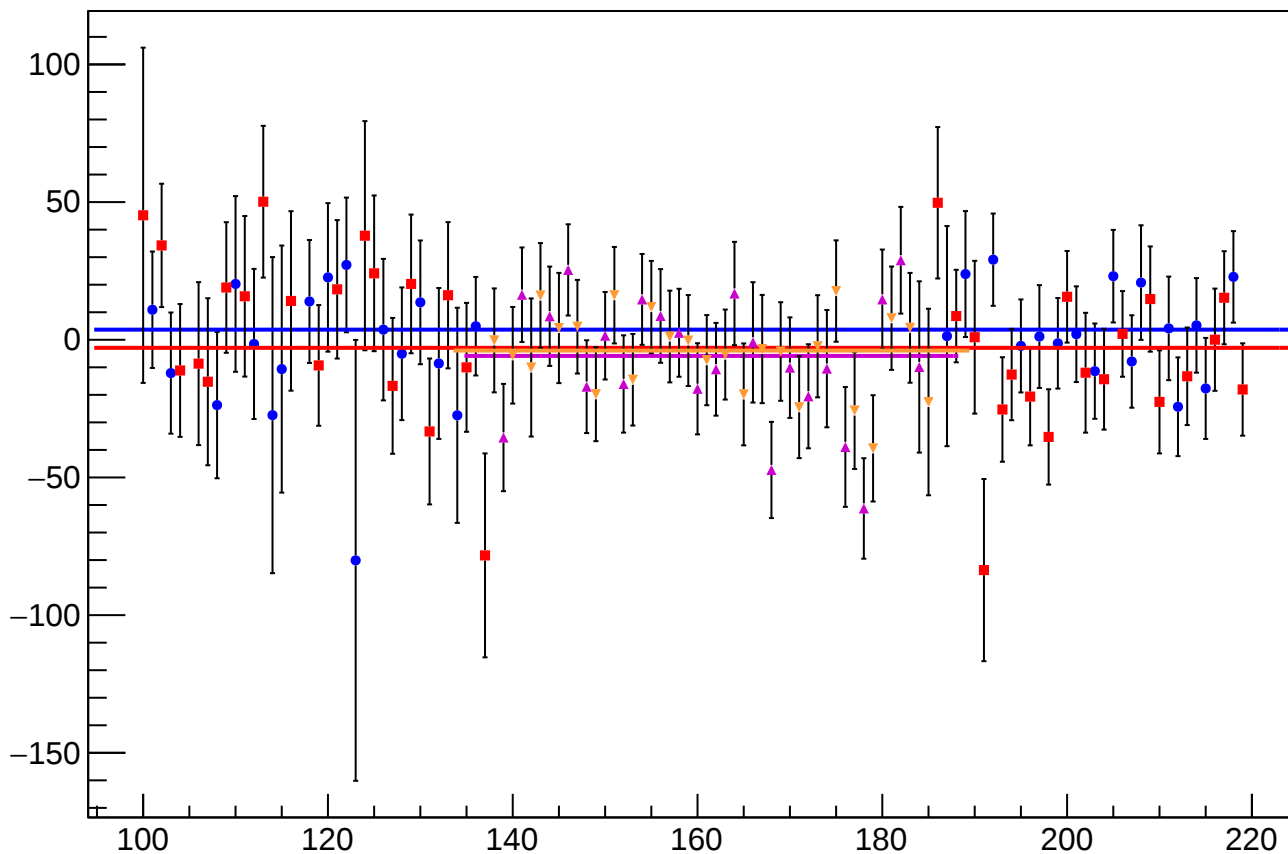
Right: 21.488+/-0.002  $\chi^2/\text{NDF}$ : 80222.9/69

In: 21.647+/-0.003  $\chi^2/\text{NDF}$ :64717.8/55

Out: 21.745+/-0.002  $\chi^2/\text{NDF}$ :70086.1/61

All: 21.697+/-0.002  $\chi^2/\text{NDF}$ : 135554.1/117

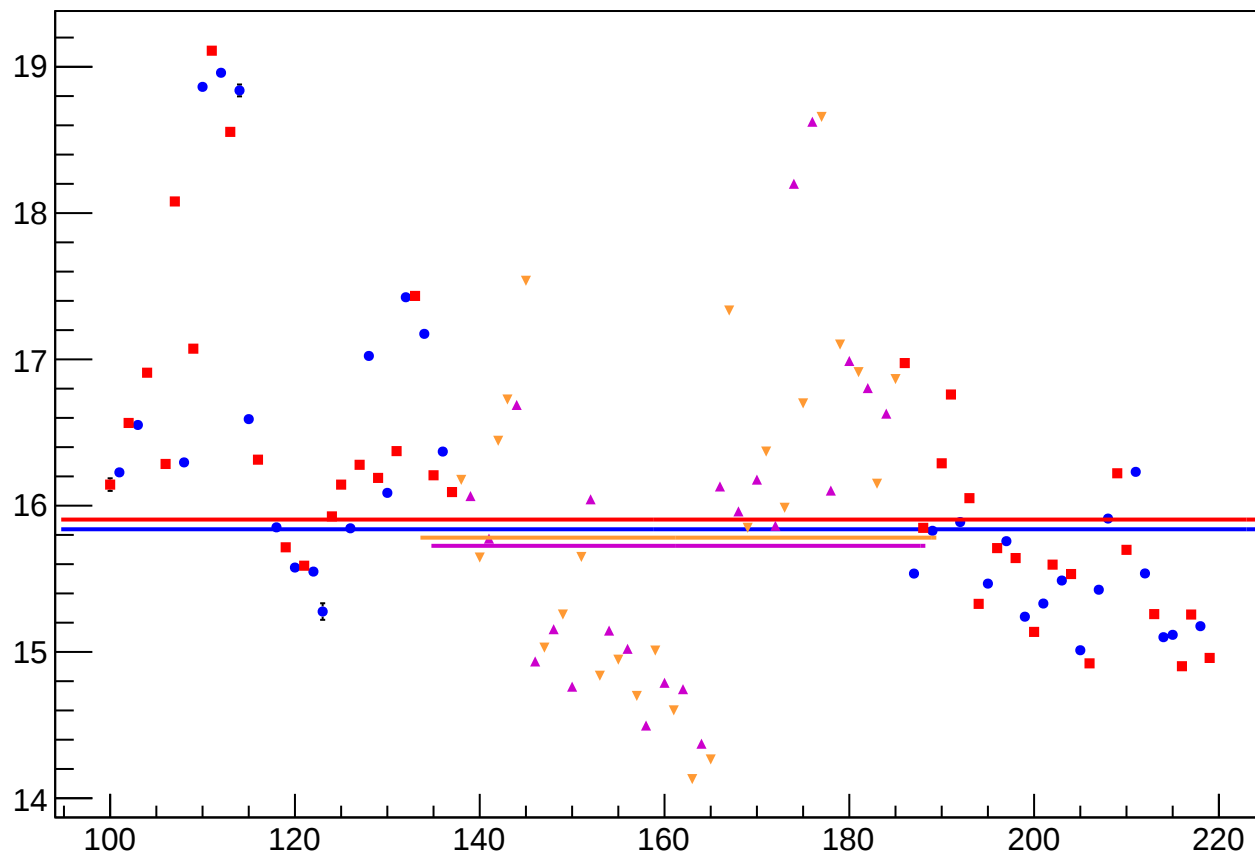
asym\_bcm\_an\_us\_ds3\_avg\_bcm\_dg\_ds\_agg\_dd\_mean vs Slug, Sign Corrected



Right In:  $3.684 \pm 3.713$   $\chi^2/\text{NDF}: 18.0/32$   
 Left Out:  $-3.927 \pm 3.688$   $\chi^2/\text{NDF}: 14.0/24$   
 Right Out:  $-2.922 \pm 3.600$   $\chi^2/\text{NDF}: 41.4/36$   
 Left In:  $-5.861 \pm 3.787$   $\chi^2/\text{NDF}: 36.2/22$

Left:  $-4.869 \pm 2.642$   $\chi^2/\text{NDF}: 50.3/47$   
 Right:  $0.279 \pm 2.585$   $\chi^2/\text{NDF}: 61.0/69$   
 In:  $-0.995 \pm 2.651$   $\chi^2/\text{NDF}: 57.4/55$   
 Out:  $-3.413 \pm 2.576$   $\chi^2/\text{NDF}: 55.4/61$   
 All:  $-2.238 \pm 1.848$   $\chi^2/\text{NDF}: 113.3/117$

asym\_bcm\_an\_us\_ds3\_avg\_bcm\_dg\_ds\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 15.839 $\pm$ 0.003  $\chi^2$ /NDF: 93819.6/32

Left Out: 15.781 $\pm$ 0.003  $\chi^2$ /NDF:172894.3/24

Right Out: 15.905 $\pm$ 0.003  $\chi^2$ /NDF: 112742.4/36

Left In: 15.725 $\pm$ 0.003  $\chi^2$ /NDF:145830.9/22

Left: 15.754 $\pm$ 0.002  $\chi^2$ /NDF: 318948.8/47

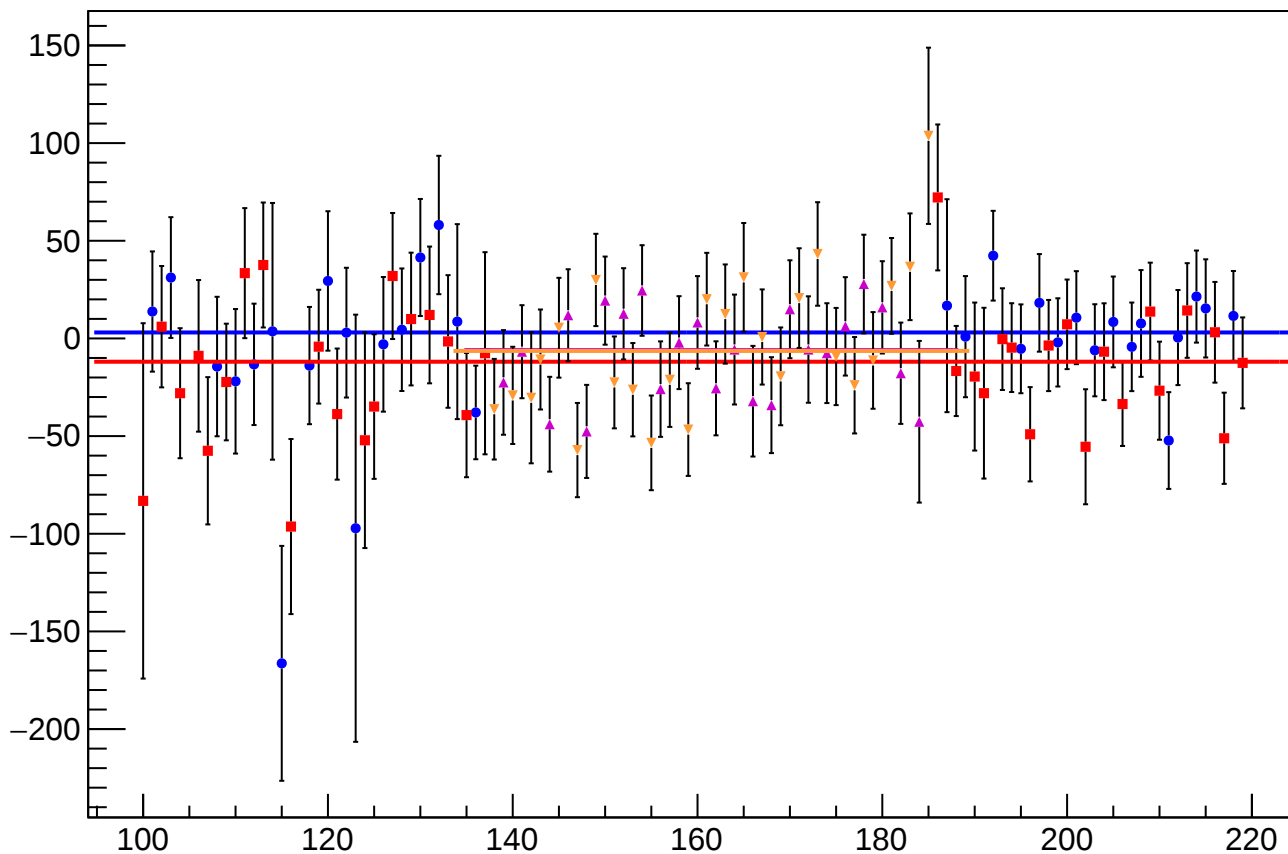
Right: 15.873 $\pm$ 0.002  $\chi^2$ /NDF: 206891.9/69

In: 15.783 $\pm$ 0.002  $\chi^2$ /NDF:240560.7/55

Out: 15.845 $\pm$ 0.002  $\chi^2$ /NDF:286788.3/61

All: 15.815 $\pm$ 0.001  $\chi^2$ /NDF: 527903.1/117

asym\_bcm\_an\_us\_ds3\_avg\_bcm\_dg\_us\_agg\_dd\_mean vs Slug, Sign Corrected



Right In:  $3.058 \pm 4.999$   $\chi^2/\text{NDF}: 28.5/32$

Left Out:  $-6.404 \pm 5.091$   $\chi^2/\text{NDF}: 37.4/24$

Right Out:  $-11.925 \pm 4.844$   $\chi^2/\text{NDF}: 33.5/36$

Left In:  $-5.978 \pm 5.222$   $\chi^2/\text{NDF}: 18.5/22$

Left:  $-6.196 \pm 3.646$   $\chi^2/\text{NDF}: 55.9/47$

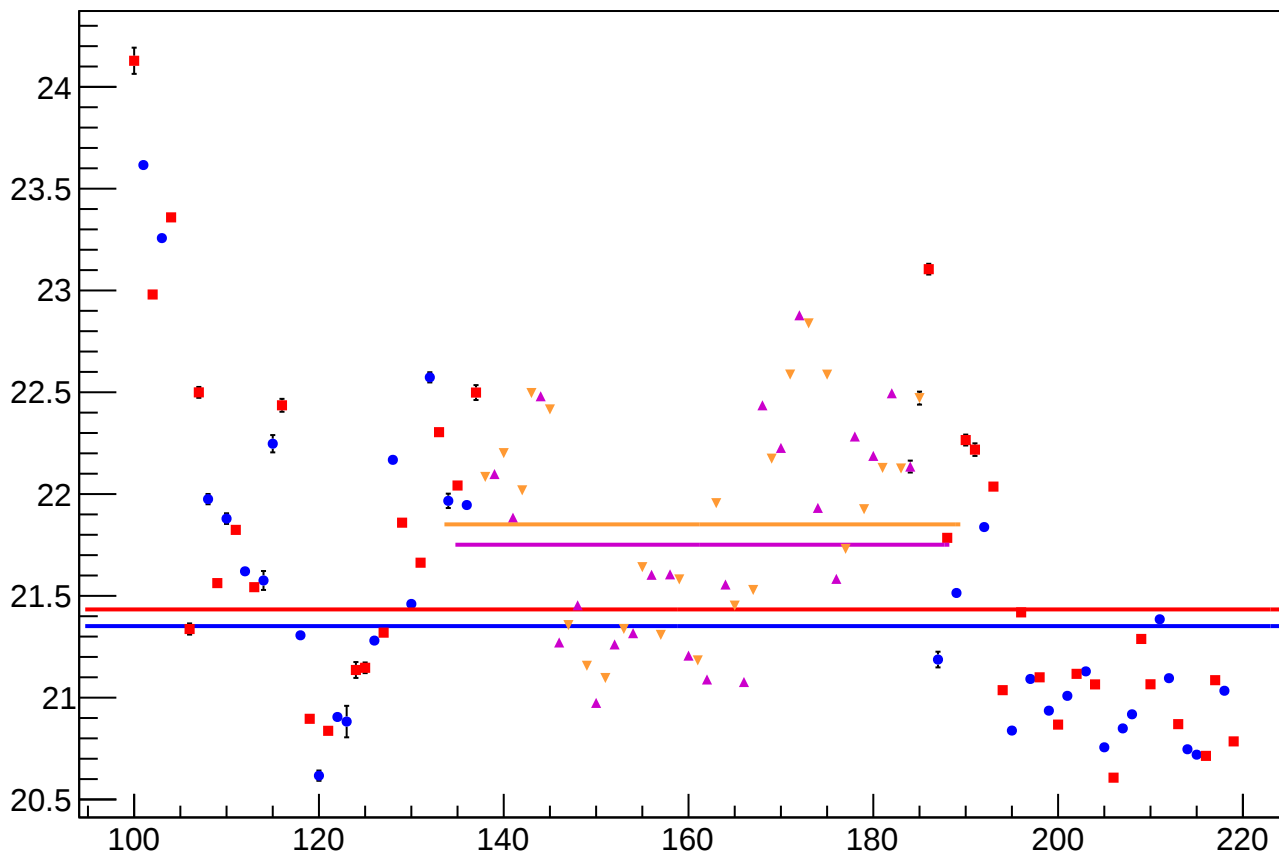
Right:  $-4.670 \pm 3.479$   $\chi^2/\text{NDF}: 66.7/69$

In:  $-1.263 \pm 3.611$   $\chi^2/\text{NDF}: 48.7/55$

Out:  $-9.302 \pm 3.509$   $\chi^2/\text{NDF}: 71.5/61$

All:  $-5.397 \pm 2.517$   $\chi^2/\text{NDF}: 122.7/117$

asym\_bcm\_an\_us\_ds3\_avg\_bcm\_dg\_us\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 21.351 $\pm$ 0.004  $\chi^2$ /NDF: 36077.2/32

Left Out: 21.851 $\pm$ 0.004  $\chi^2$ /NDF:19631.8/24

Right Out: 21.433 $\pm$ 0.003  $\chi^2$ /NDF: 39313.4/36

Left In: 21.751 $\pm$ 0.004  $\chi^2$ /NDF:20516.3/22

Left: 21.802 $\pm$ 0.003  $\chi^2$ /NDF: 40523.6/47

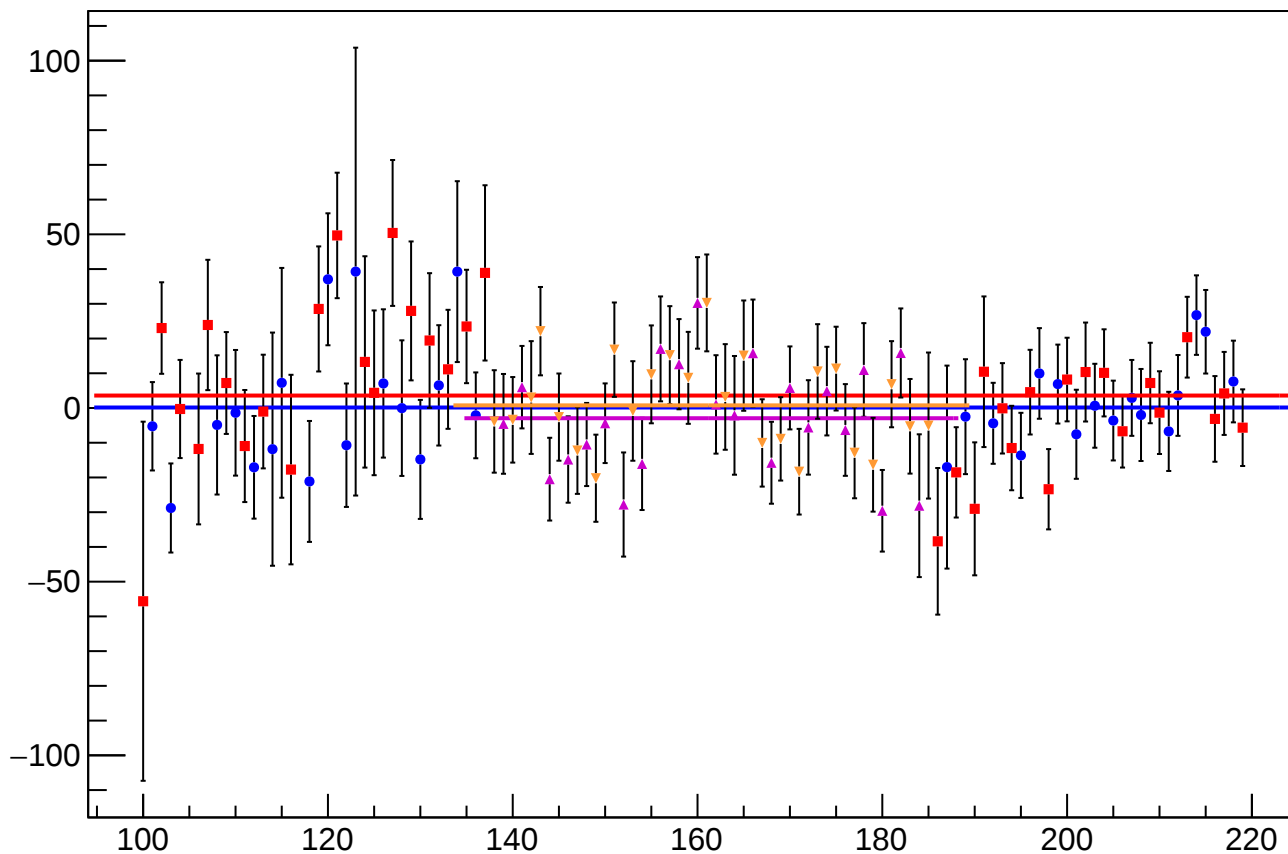
Right: 21.394 $\pm$ 0.002  $\chi^2$ /NDF: 75667.4/69

In: 21.543 $\pm$ 0.003  $\chi^2$ /NDF:62707.8/55

Out: 21.632 $\pm$ 0.002  $\chi^2$ /NDF:66013.3/61

All: 21.588 $\pm$ 0.002  $\chi^2$ /NDF: 129349.1/117

asym\_bcm\_an\_us\_bcm\_an\_ds\_agg\_dd\_mean vs Slug, Sign Corrected



Right In:  $0.143 \pm 2.523$   $\chi^2/\text{NDF}: 29.0/32$

Left Out:  $0.759 \pm 2.698$   $\chi^2/\text{NDF}: 23.8/24$

Right Out:  $3.586 \pm 2.456$   $\chi^2/\text{NDF}: 48.0/36$

Left In:  $-2.944 \pm 2.757$   $\chi^2/\text{NDF}: 30.9/22$

Left:  $-1.053 \pm 1.929$   $\chi^2/\text{NDF}: 55.7/47$

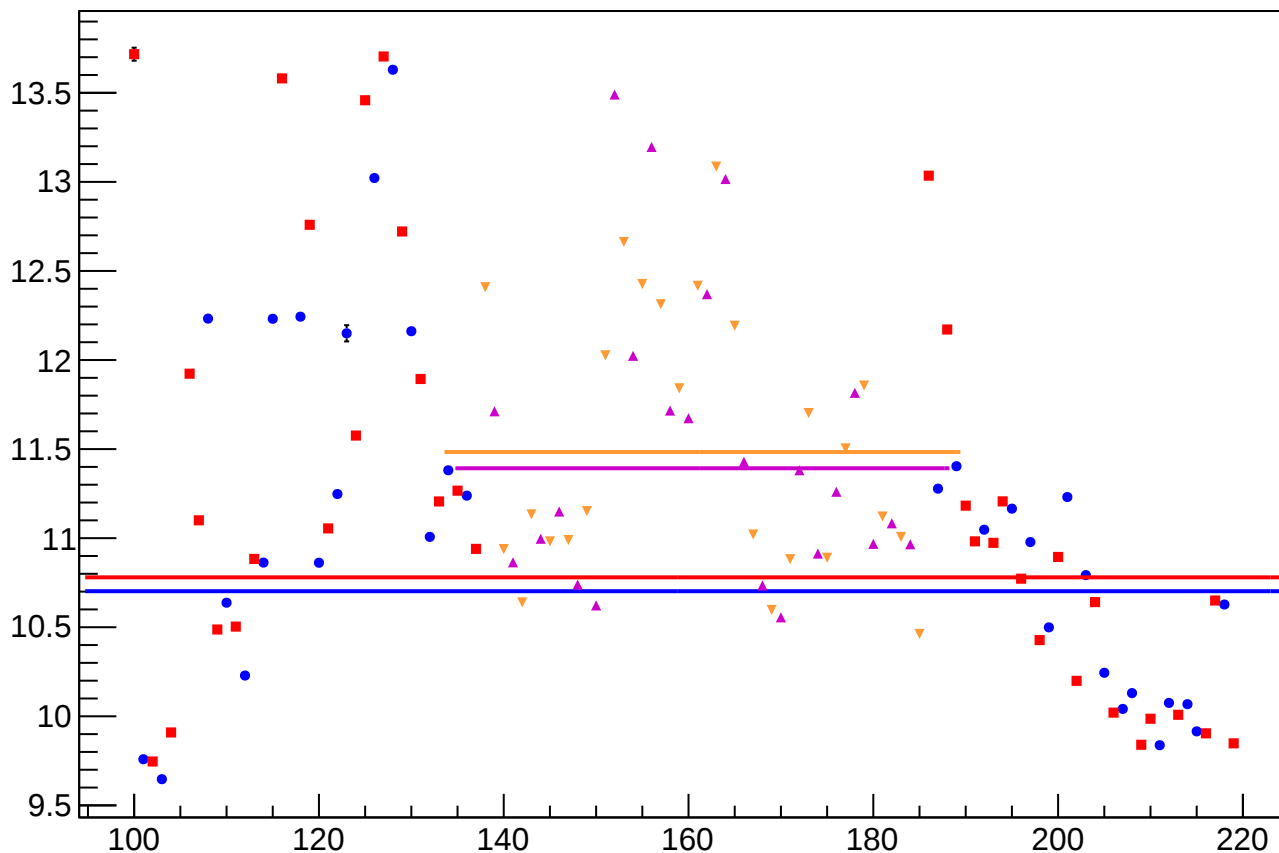
Right:  $1.910 \pm 1.760$   $\chi^2/\text{NDF}: 77.9/69$

In:  $-1.263 \pm 1.861$   $\chi^2/\text{NDF}: 60.6/55$

Out:  $2.305 \pm 1.816$   $\chi^2/\text{NDF}: 72.4/61$

All:  $0.564 \pm 1.300$   $\chi^2/\text{NDF}: 134.9/117$

asym\_bcm\_an\_us\_bcm\_an\_ds\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 10.702 $\pm$ 0.002  $\chi^2$ /NDF: 210498.4/32

Left Out: 11.484 $\pm$ 0.002  $\chi^2$ /NDF:129805.4/24

Right Out: 10.780 $\pm$ 0.002  $\chi^2$ /NDF: 295131.0/36

Left In: 11.392 $\pm$ 0.002  $\chi^2$ /NDF:150493.3/22

Left: 11.439 $\pm$ 0.001  $\chi^2$ /NDF: 281419.2/47

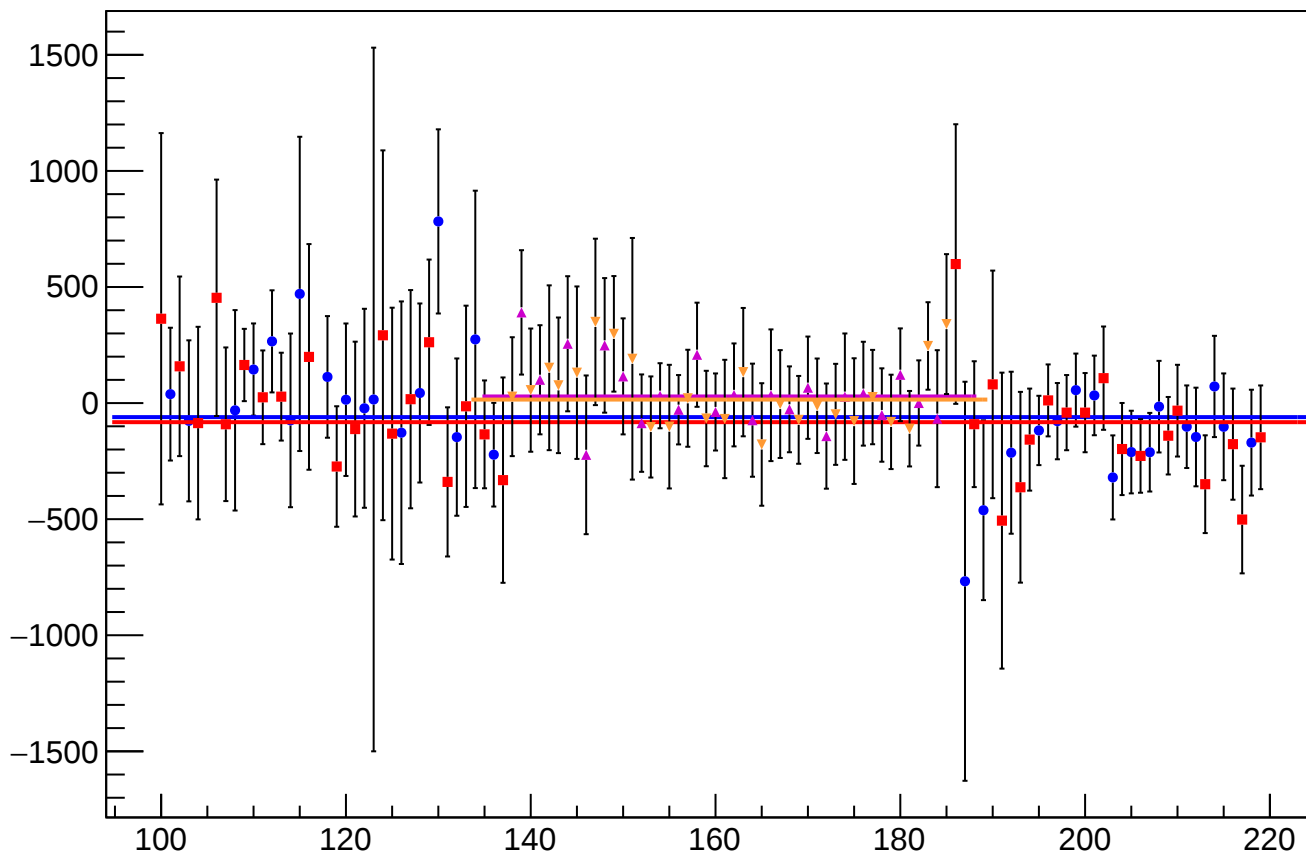
Right: 10.742 $\pm$ 0.001  $\chi^2$ /NDF: 506606.7/69

In: 11.017 $\pm$ 0.001  $\chi^2$ /NDF:429193.1/55

Out: 11.099 $\pm$ 0.001  $\chi^2$ /NDF:499312.3/61

All: 11.059 $\pm$ 0.001  $\chi^2$ /NDF: 930505.2/117

asym\_bcm\_an\_us\_bcm\_an\_ds3\_agg\_avg\_mean vs Slug, Sign Corrected



Right In:  $-60.441 \pm 42.013$   $\chi^2/\text{NDF}: 17.4/32$

Left Out:  $15.130 \pm 47.705$   $\chi^2/\text{NDF}: 8.0/24$

Right Out:  $-82.211 \pm 41.087$   $\chi^2/\text{NDF}: 18.2/36$

Left In:  $28.500 \pm 44.797$   $\chi^2/\text{NDF}: 6.4/22$

Left:  $22.235 \pm 32.656$   $\chi^2/\text{NDF}: 14.4/47$

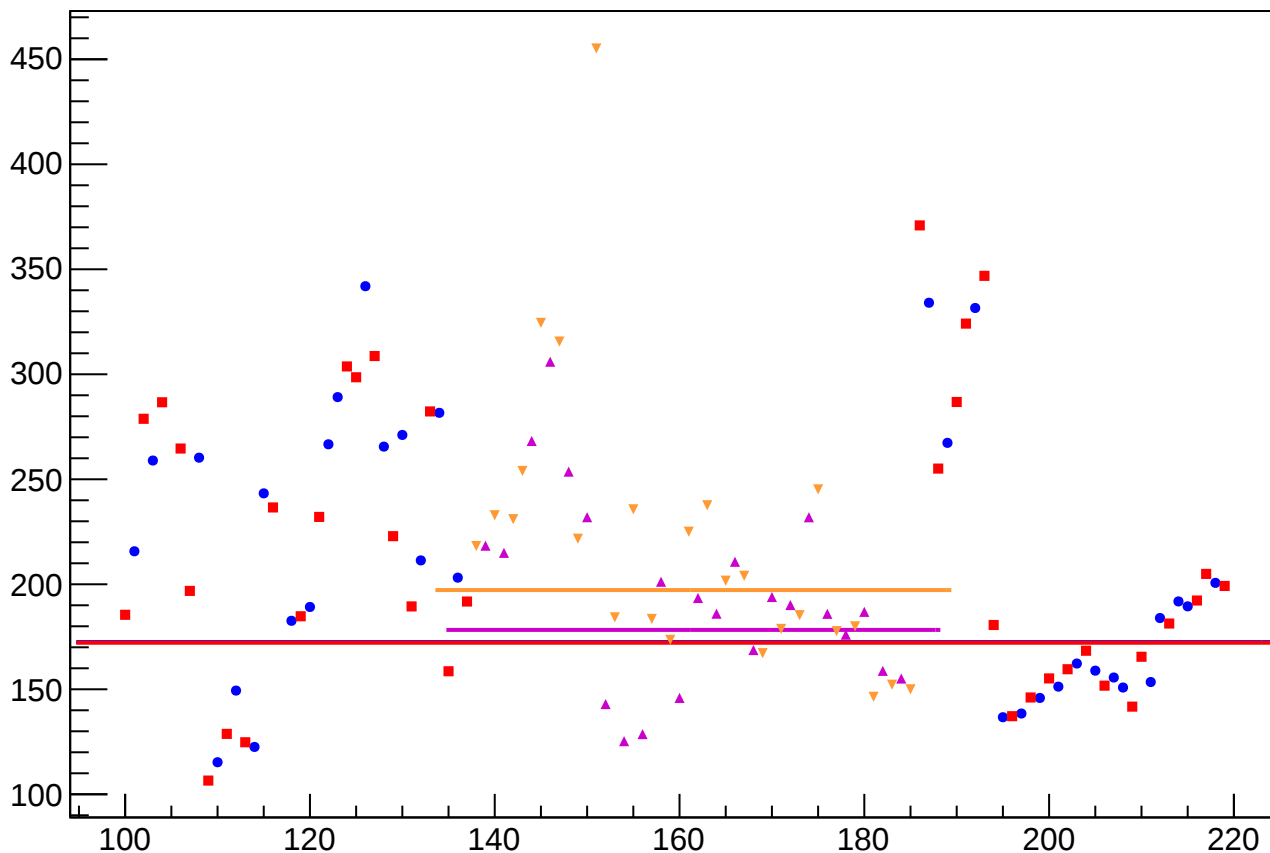
Right:  $-71.569 \pm 29.375$   $\chi^2/\text{NDF}: 35.7/69$

In:  $-18.819 \pm 30.645$   $\chi^2/\text{NDF}: 25.9/55$

Out:  $-40.755 \pm 31.132$   $\chi^2/\text{NDF}: 28.6/61$

All:  $-29.614 \pm 21.839$   $\chi^2/\text{NDF}: 54.7/117$

asym\_bcm\_an\_us\_bcm\_an\_ds3\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 172.465 $\pm$ 0.030  $\chi^2$ /NDF: 2200060.3/32

Left Out: 197.249 $\pm$ 0.034  $\chi^2$ /NDF:1786808.1/24

Right Out: 172.182 $\pm$ 0.029  $\chi^2$ /NDF: 2926822.5/36

Left In: 178.277 $\pm$ 0.032  $\chi^2$ /NDF:1628916.6/22

Left: 187.167 $\pm$ 0.023  $\chi^2$ /NDF: 3583826.5/47

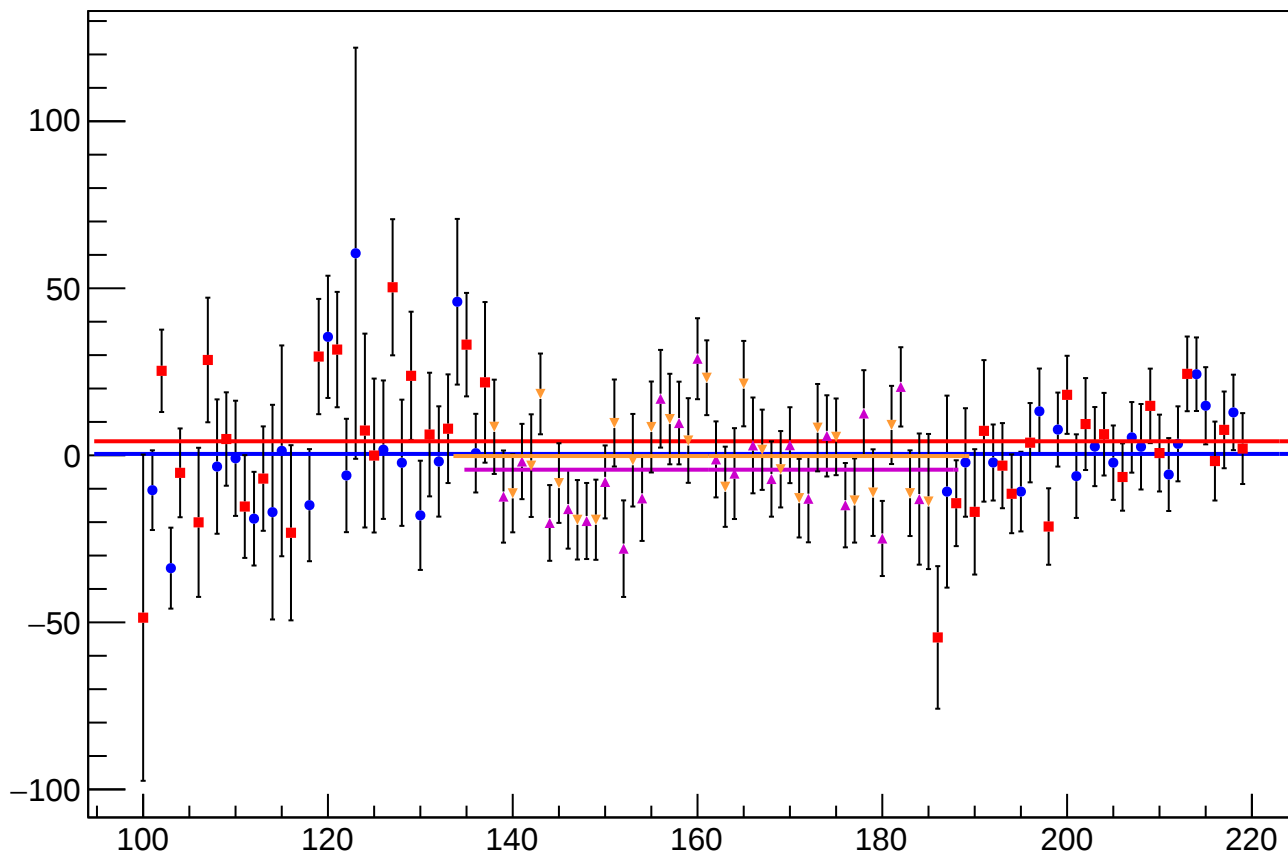
Right: 172.320 $\pm$ 0.021  $\chi^2$ /NDF: 5126929.2/69

In: 175.185 $\pm$ 0.022  $\chi^2$ /NDF:3846888.9/55

Out: 182.858 $\pm$ 0.022  $\chi^2$ /NDF:5030674.8/61

All: 178.961 $\pm$ 0.015  $\chi^2$ /NDF: 8939267.9/117

asym\_bcm\_an\_us\_bcm\_an\_ds3\_agg\_dd\_mean vs Slug, Sign Corrected



Right In:  $0.420 \pm 2.433$   $\chi^2/\text{NDF}: 32.4/32$

Left Out:  $-0.211 \pm 2.523$   $\chi^2/\text{NDF}: 24.5/24$

Right Out:  $4.209 \pm 2.373$   $\chi^2/\text{NDF}: 51.1/36$

Left In:  $-4.298 \pm 2.589$   $\chi^2/\text{NDF}: 31.6/22$

Left:  $-2.202 \pm 1.807$   $\chi^2/\text{NDF}: 57.4/47$

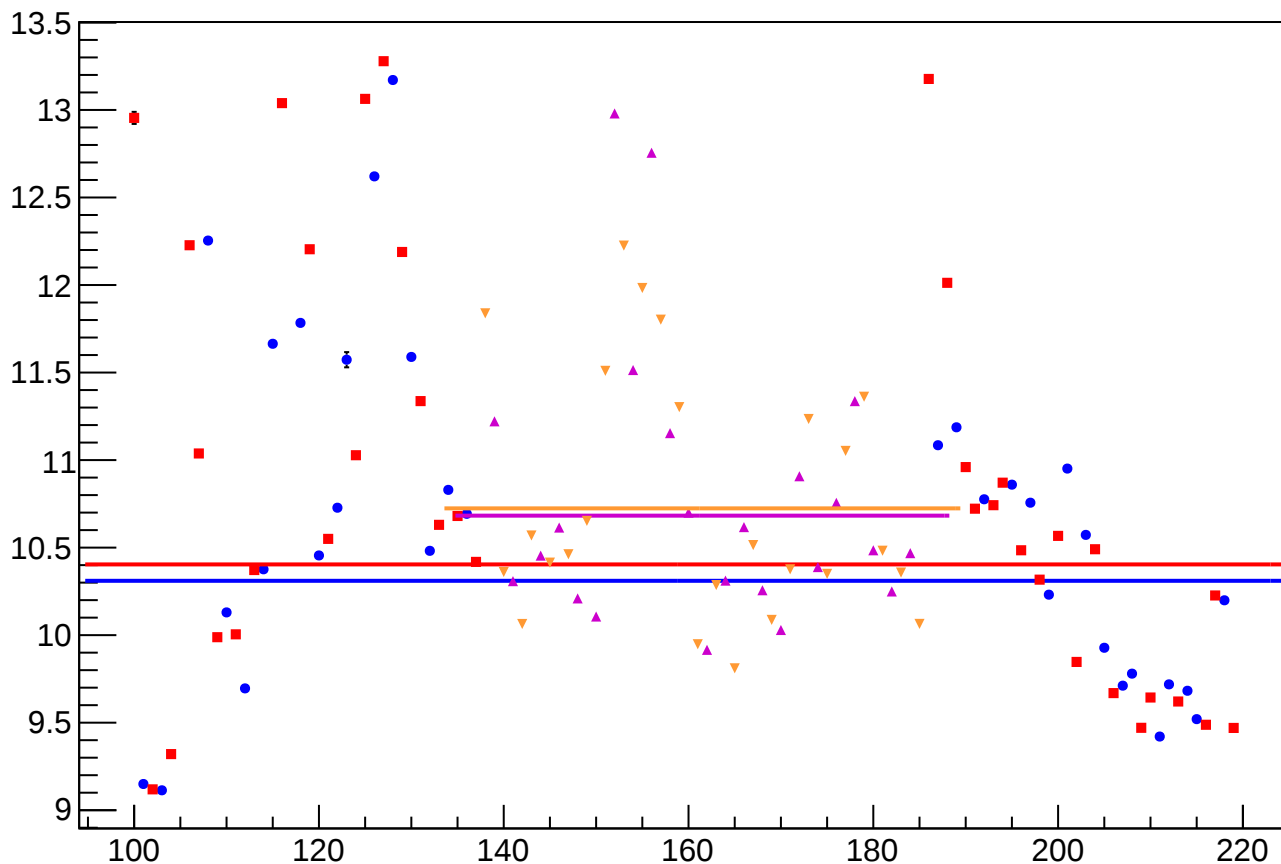
Right:  $2.361 \pm 1.699$   $\chi^2/\text{NDF}: 84.6/69$

In:  $-1.792 \pm 1.773$   $\chi^2/\text{NDF}: 65.7/55$

Out:  $2.134 \pm 1.729$   $\chi^2/\text{NDF}: 77.2/61$

All:  $0.221 \pm 1.238$   $\chi^2/\text{NDF}: 145.4/117$

asym\_bcm\_an\_us\_bcm\_an\_ds3\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 10.310 $\pm$ 0.002  $\chi^2$ /NDF: 239408.8/32

Left Out: 10.724 $\pm$ 0.002  $\chi^2$ /NDF:132558.9/24

Right Out: 10.404 $\pm$ 0.002  $\chi^2$ /NDF: 339194.2/36

Left In: 10.683 $\pm$ 0.002  $\chi^2$ /NDF:147835.6/22

Left: 10.704 $\pm$ 0.001  $\chi^2$ /NDF: 280658.8/47

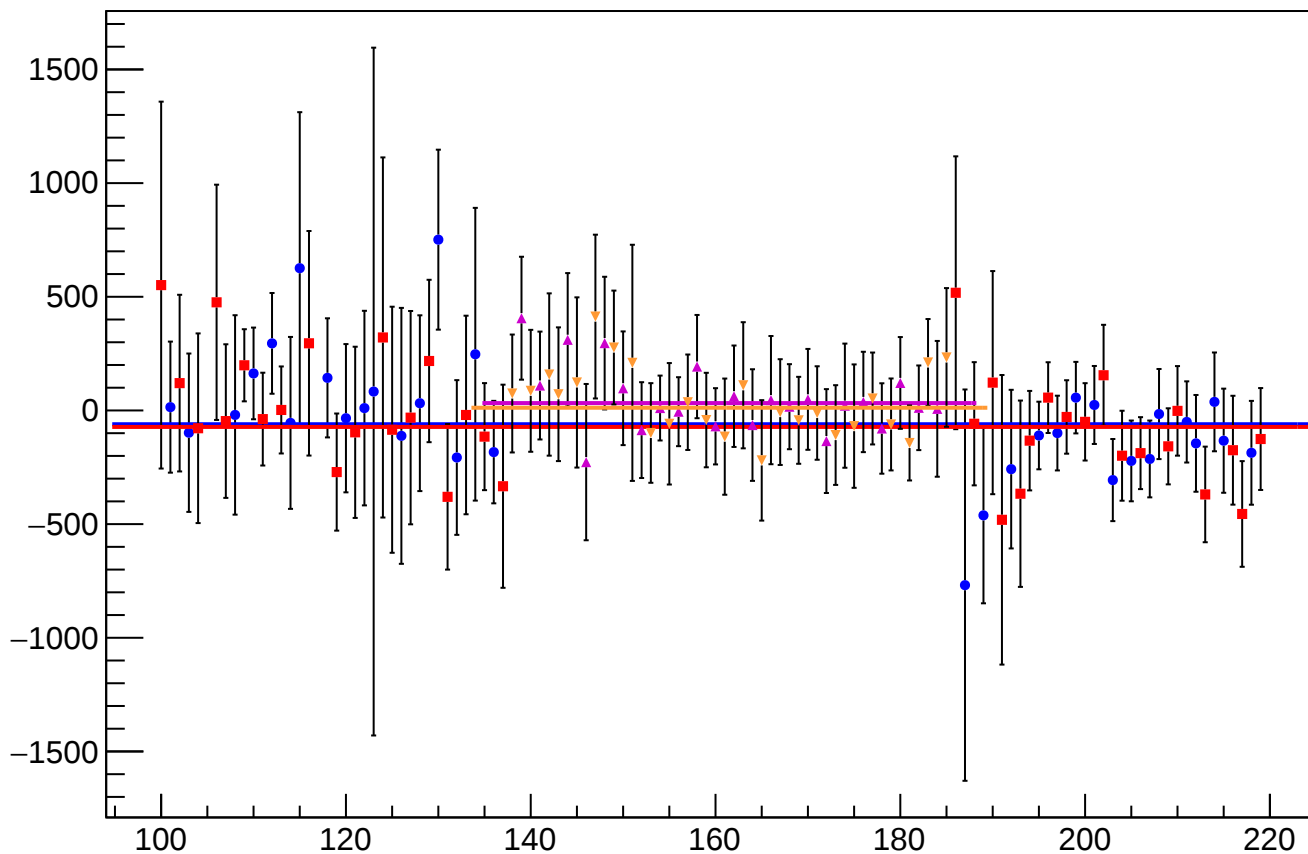
Right: 10.358 $\pm$ 0.001  $\chi^2$ /NDF: 580121.0/69

In: 10.485 $\pm$ 0.001  $\chi^2$ /NDF:409199.5/55

Out: 10.554 $\pm$ 0.001  $\chi^2$ /NDF:488836.0/61

All: 10.520 $\pm$ 0.001  $\chi^2$ /NDF: 899605.0/117

asym\_bcm\_dg\_us\_bcm\_an\_ds\_agg\_avg\_mean vs Slug, Sign Corrected



Right In:  $-60.629 \pm 42.073$   $\chi^2/\text{NDF}: 17.9/32$

Left Out:  $11.891 \pm 48.022$   $\chi^2/\text{NDF}: 7.6/24$

Right Out:  $-72.482 \pm 41.207$   $\chi^2/\text{NDF}: 18.7/36$

Left In:  $32.413 \pm 45.155$   $\chi^2/\text{NDF}: 6.9/22$

Left:  $22.783 \pm 32.896$   $\chi^2/\text{NDF}: 14.6/47$

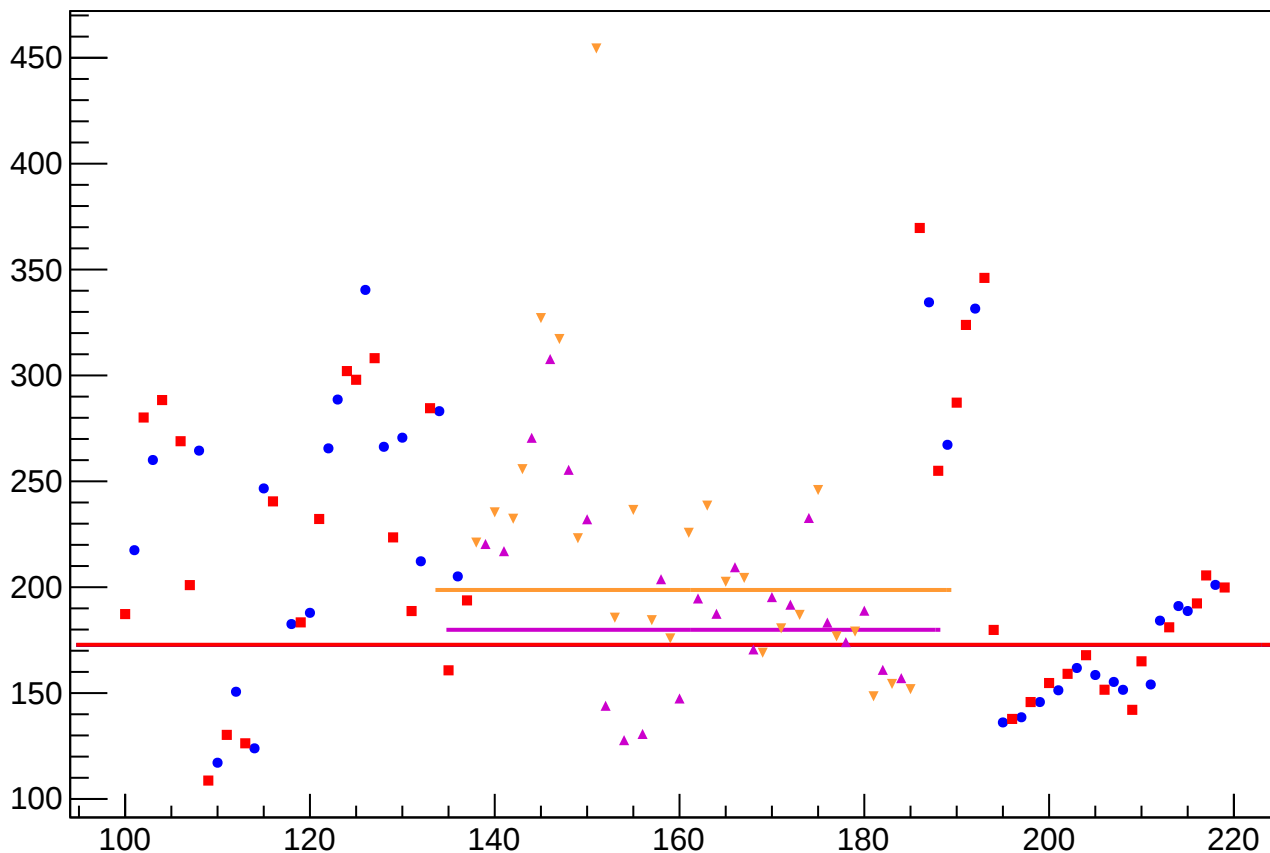
Right:  $-66.679 \pm 29.439$   $\chi^2/\text{NDF}: 36.6/69$

In:  $-17.391 \pm 30.782$   $\chi^2/\text{NDF}: 27.0/55$

Out:  $-36.702 \pm 31.272$   $\chi^2/\text{NDF}: 28.1/61$

All:  $-26.894 \pm 21.937$   $\chi^2/\text{NDF}: 55.3/117$

asym\_bcm\_dg\_us\_bcm\_an\_ds\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 172.720 $\pm$ 0.030  $\chi^2$ /NDF: 2195423.9/32

Left Out: 198.695 $\pm$ 0.034  $\chi^2$ /NDF:1759311.9/24

Right Out: 172.810 $\pm$ 0.029  $\chi^2$ /NDF: 2884644.5/36

Left In: 179.886 $\pm$ 0.032  $\chi^2$ /NDF:1580636.4/22

Left: 188.712 $\pm$ 0.023  $\chi^2$ /NDF: 3502782.6/47

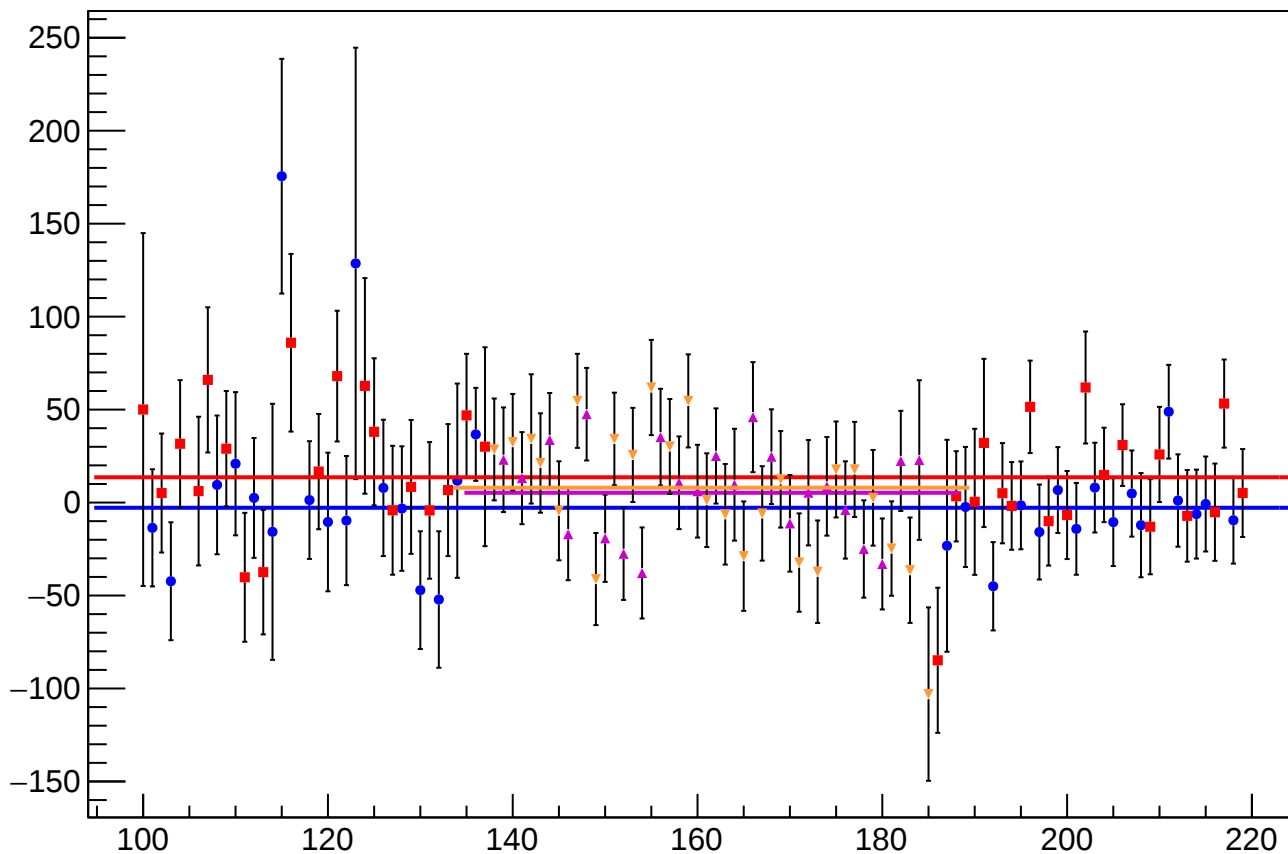
Right: 172.766 $\pm$ 0.021  $\chi^2$ /NDF: 5080073.1/69

In: 176.050 $\pm$ 0.022  $\chi^2$ /NDF:3803026.7/55

Out: 183.787 $\pm$ 0.022  $\chi^2$ /NDF:4978614.1/61

All: 179.858 $\pm$ 0.016  $\chi^2$ /NDF: 8843818.0/117

asym\_bcm\_dg\_us\_bcm\_an\_ds\_agg\_dd\_mean vs Slug, Sign Corrected



Right In:  $-2.795 \pm 5.156$   $\chi^2/\text{NDF}: 26.8/32$

Left Out:  $8.004 \pm 5.334$   $\chi^2/\text{NDF}: 37.4/24$

Right Out:  $13.601 \pm 5.007$   $\chi^2/\text{NDF}: 34.8/36$

Left In:  $5.261 \pm 5.465$   $\chi^2/\text{NDF}: 20.8/22$

Left:  $6.665 \pm 3.817$   $\chi^2/\text{NDF}: 58.3/47$

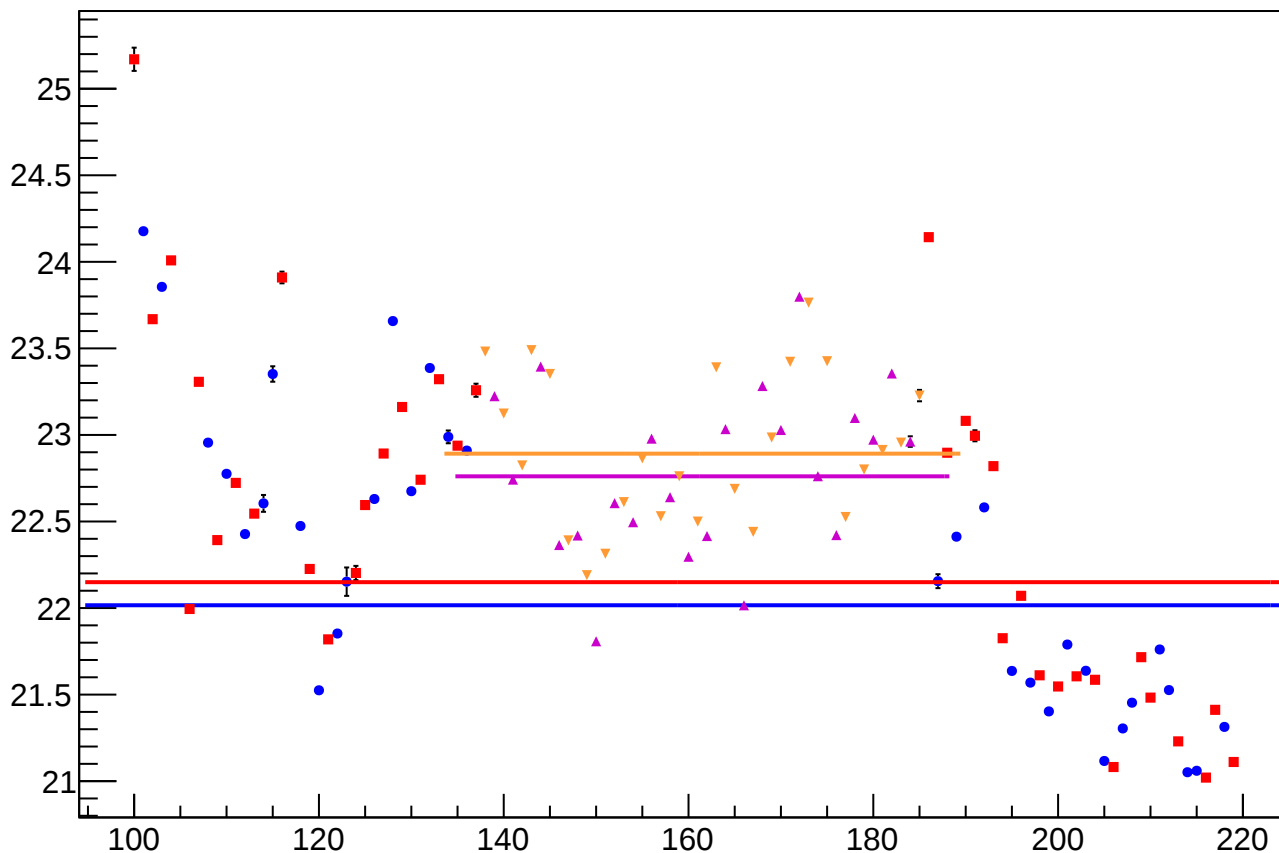
Right:  $5.643 \pm 3.592$   $\chi^2/\text{NDF}: 66.8/69$

In:  $0.999 \pm 3.750$   $\chi^2/\text{NDF}: 48.7/55$

Out:  $10.979 \pm 3.651$   $\chi^2/\text{NDF}: 72.8/61$

All:  $6.123 \pm 2.616$   $\chi^2/\text{NDF}: 125.2/117$

asym\_bcm\_dg\_us\_bcm\_an\_ds\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 22.016+/-0.004  $\chi^2/\text{NDF}$ : 51721.3/32

Left Out: 22.892+/-0.004  $\chi^2/\text{NDF}$ :12995.5/24

Right Out: 22.149+/-0.004  $\chi^2/\text{NDF}$ : 59011.5/36

Left In: 22.761+/-0.004  $\chi^2/\text{NDF}$ :14550.0/22

Left: 22.828+/-0.003  $\chi^2/\text{NDF}$ : 28133.9/47

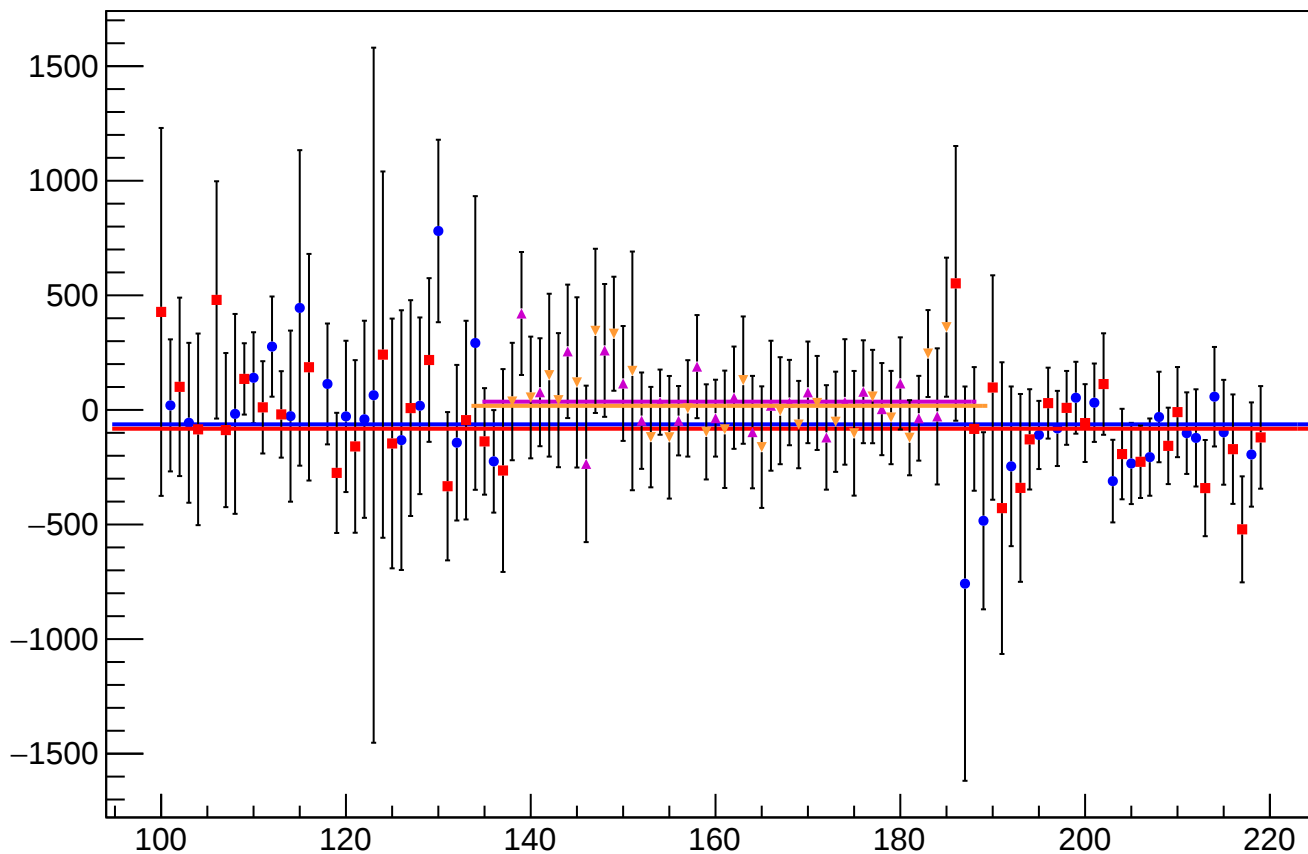
Right: 22.085+/-0.003  $\chi^2/\text{NDF}$ : 111421.2/69

In: 22.367+/-0.003  $\chi^2/\text{NDF}$ :85925.7/55

Out: 22.497+/-0.003  $\chi^2/\text{NDF}$ :92603.5/61

All: 22.434+/-0.002  $\chi^2/\text{NDF}$ : 179770.0/117

asym\_bcm\_dg\_ds\_bcm\_an\_ds\_agg\_avg\_mean vs Slug, Sign Corrected



Right In:  $-63.007 \pm 41.955$   $\chi^2/\text{NDF}: 17.4/32$

Left Out:  $17.777 \pm 47.941$   $\chi^2/\text{NDF}: 8.5/24$

Right Out:  $-82.100 \pm 41.039$   $\chi^2/\text{NDF}: 17.1/36$

Left In:  $35.879 \pm 45.087$   $\chi^2/\text{NDF}: 6.3/22$

Left:  $27.383 \pm 32.844$   $\chi^2/\text{NDF}: 14.9/47$

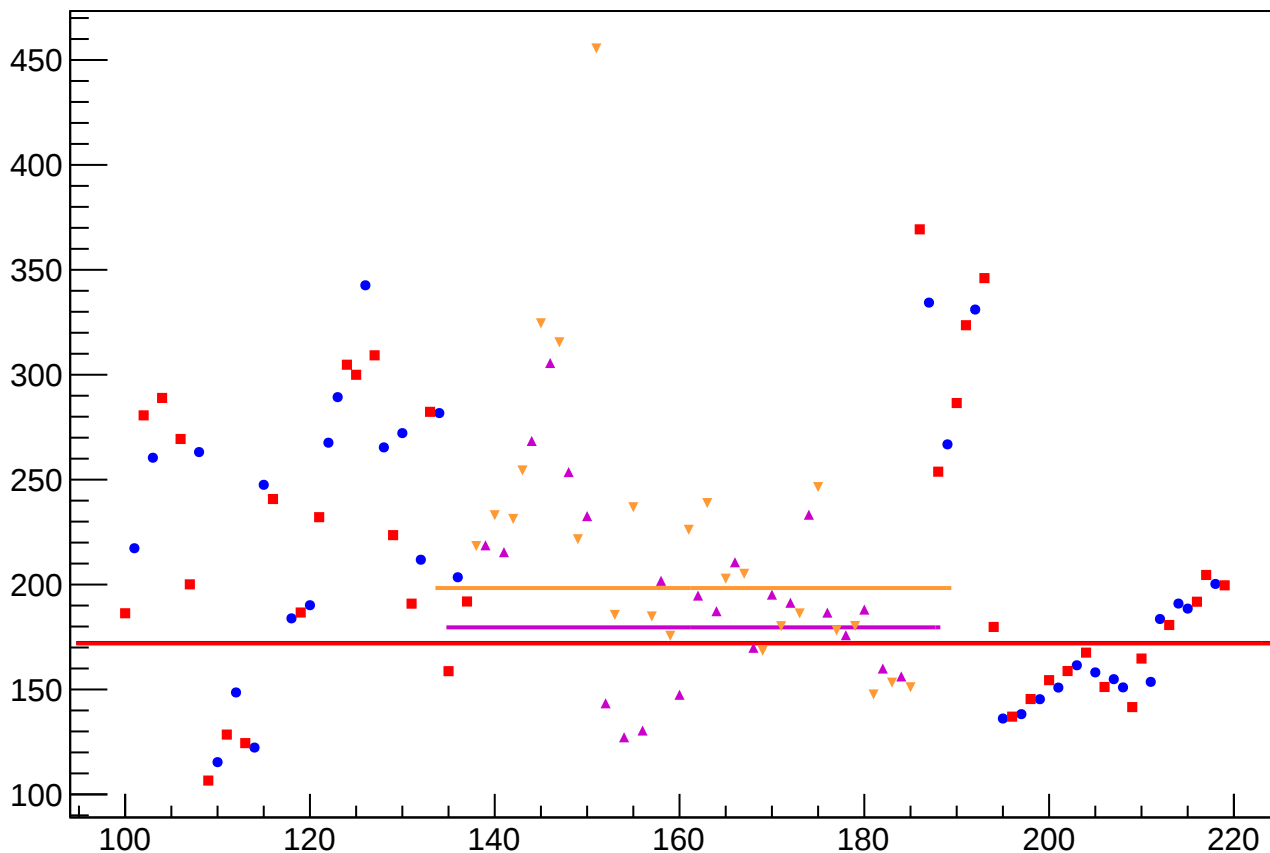
Right:  $-72.764 \pm 29.337$   $\chi^2/\text{NDF}: 34.7/69$

In:  $-17.118 \pm 30.714$   $\chi^2/\text{NDF}: 26.3/55$

Out:  $-39.863 \pm 31.176$   $\chi^2/\text{NDF}: 28.2/61$

All:  $-28.321 \pm 21.880$   $\chi^2/\text{NDF}: 54.8/117$

asym\_bcm\_dg\_ds\_bcm\_an\_ds\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 172.166+/-0.030  $\chi^2/\text{NDF}$ : 2226350.7/32

Left Out: 198.344+/-0.034  $\chi^2/\text{NDF}$ : 1757450.6/24

Right Out: 171.926+/-0.029  $\chi^2/\text{NDF}$ : 2955175.1/36

Left In: 179.605+/-0.032  $\chi^2/\text{NDF}$ : 1575744.0/22

Left: 188.400+/-0.023  $\chi^2/\text{NDF}$ : 3495336.8/47

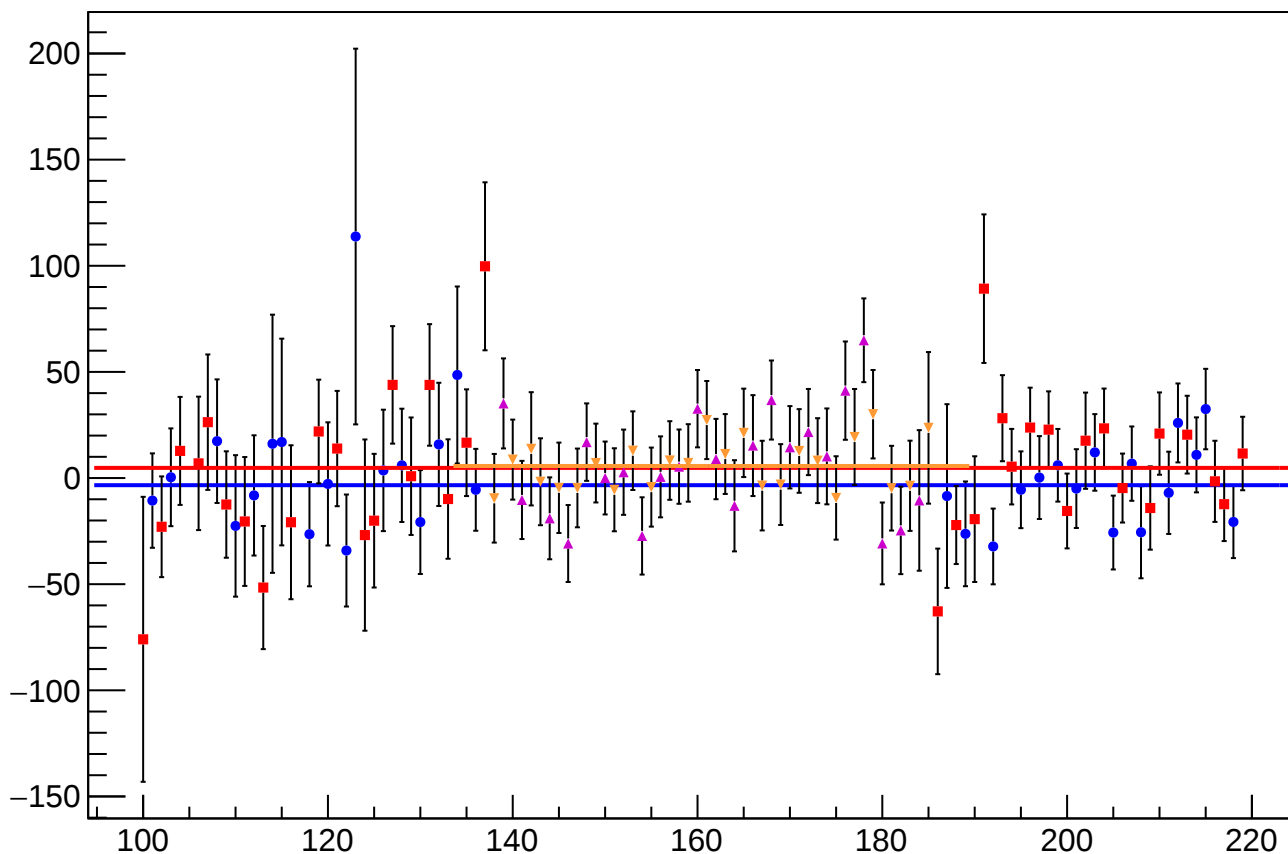
Right: 172.043+/-0.021  $\chi^2/\text{NDF}$ : 5181559.3/69

In: 175.618+/-0.022  $\chi^2/\text{NDF}$ : 3831272.1/55

Out: 183.098+/-0.022  $\chi^2/\text{NDF}$ : 5063099.0/61

All: 179.302+/-0.015  $\chi^2/\text{NDF}$ : 8952789.0/117

asym\_bcm\_dg\_ds\_bcm\_an\_ds\_agg\_dd\_mean vs Slug, Sign Corrected



Right In:  $-3.366 \pm 3.918$   $\chi^2/\text{NDF}: 23.4/32$

Left Out:  $5.680 \pm 4.024$   $\chi^2/\text{NDF}: 7.7/24$

Right Out:  $4.783 \pm 3.807$   $\chi^2/\text{NDF}: 44.4/36$

Left In:  $5.595 \pm 4.121$   $\chi^2/\text{NDF}: 36.4/22$

Left:  $5.639 \pm 2.879$   $\chi^2/\text{NDF}: 44.1/47$

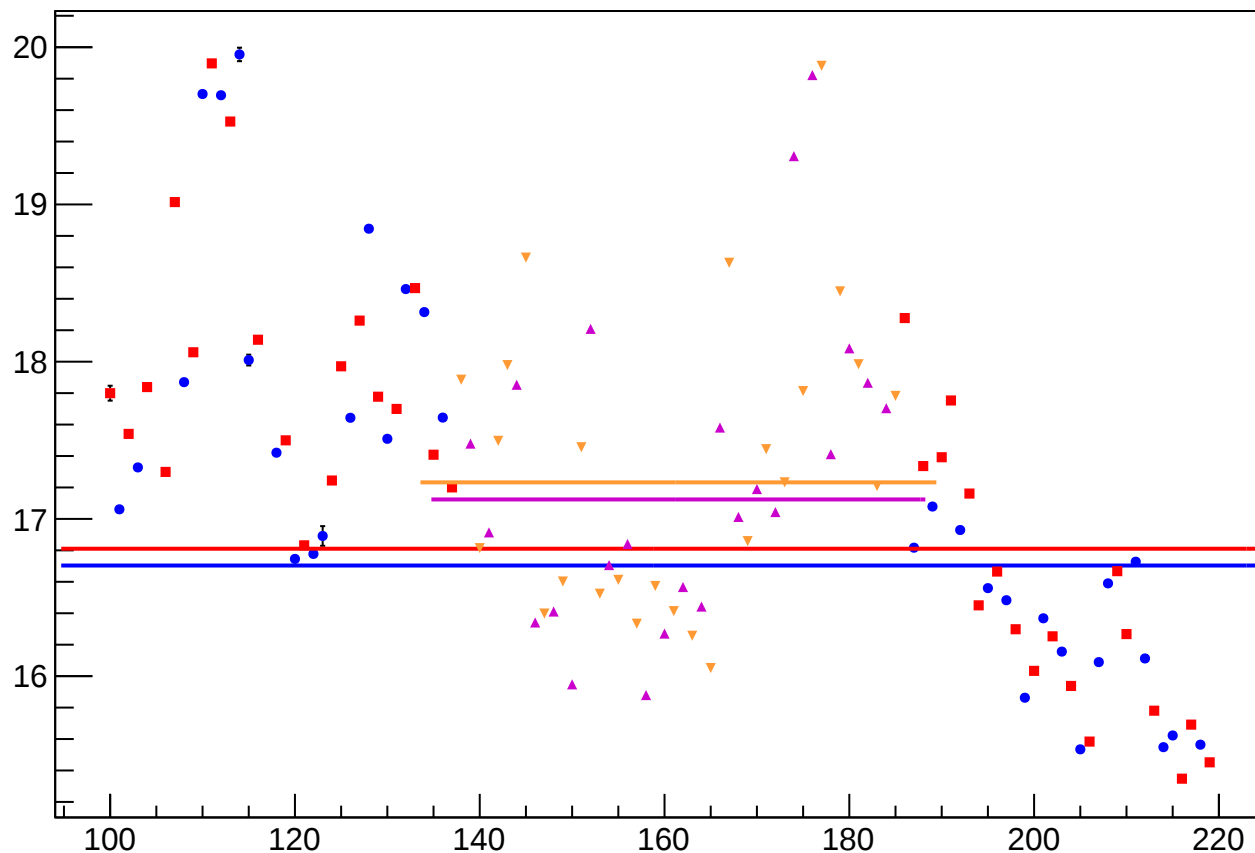
Right:  $0.825 \pm 2.730$   $\chi^2/\text{NDF}: 70.0/69$

In:  $0.888 \pm 2.839$   $\chi^2/\text{NDF}: 62.2/55$

Out:  $5.207 \pm 2.765$   $\chi^2/\text{NDF}: 52.2/61$

All:  $3.104 \pm 1.981$   $\chi^2/\text{NDF}: 115.6/117$

asym\_bcm\_dg\_ds\_bcm\_an\_ds\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 16.704 $\pm$ 0.003  $\chi^2$ /NDF: 130986.2/32

Left Out: 17.232 $\pm$ 0.003  $\chi^2$ /NDF:98701.0/24

Right Out: 16.810 $\pm$ 0.003  $\chi^2$ /NDF: 157207.6/36

Left In: 17.124 $\pm$ 0.003  $\chi^2$ /NDF:100747.0/22

Left: 17.179 $\pm$ 0.002  $\chi^2$ /NDF: 200160.6/47

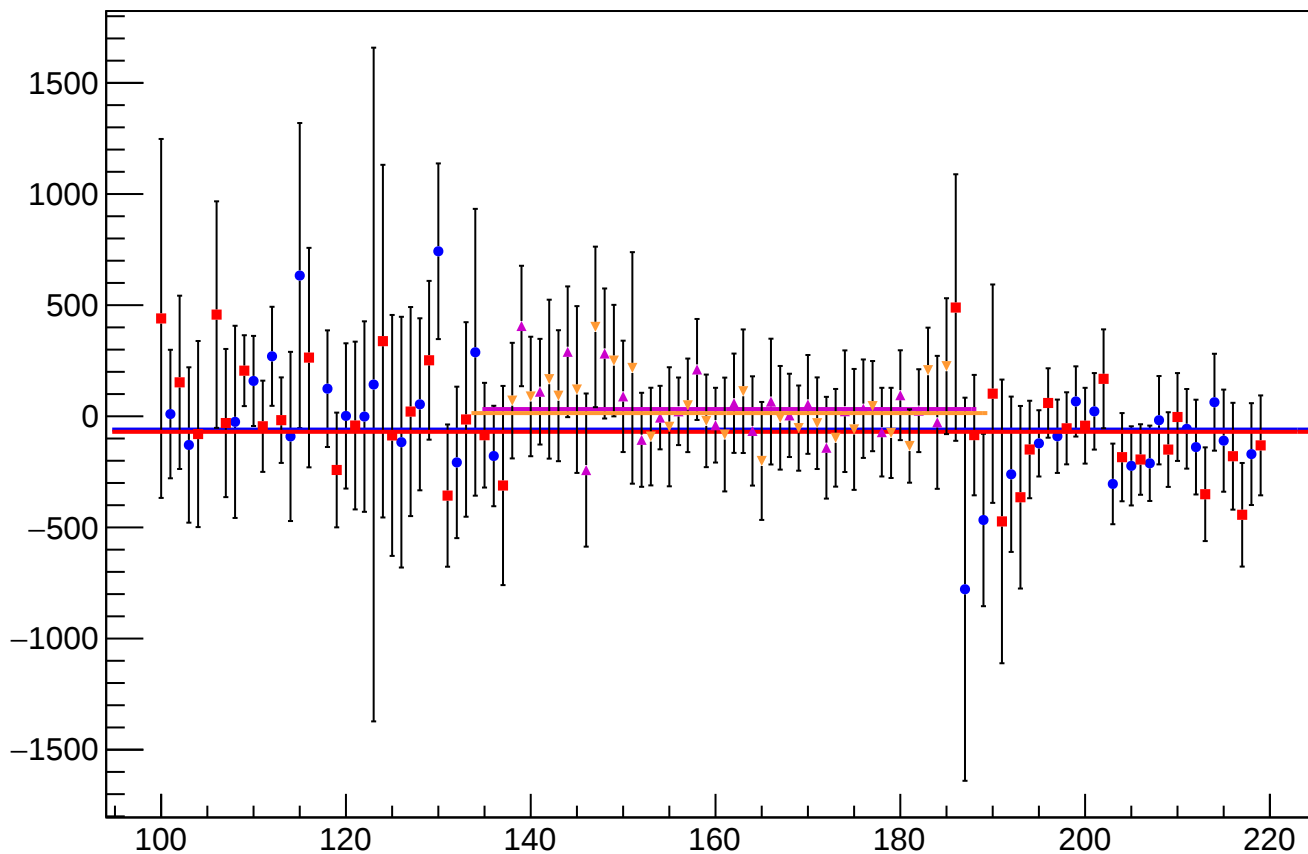
Right: 16.758 $\pm$ 0.002  $\chi^2$ /NDF: 288958.1/69

In: 16.903 $\pm$ 0.002  $\chi^2$ /NDF:242654.6/55

Out: 17.010 $\pm$ 0.002  $\chi^2$ /NDF:267522.7/61

All: 16.958 $\pm$ 0.001  $\chi^2$ /NDF: 511628.1/117

asym\_bcm\_dg\_us\_bcm\_an\_us\_agg\_avg\_mean vs Slug, Sign Corrected



Right In:  $-59.695 \pm 42.199$   $\chi^2/\text{NDF}: 17.5/32$

Left Out:  $14.362 \pm 48.130$   $\chi^2/\text{NDF}: 6.9/24$

Right Out:  $-69.798 \pm 41.318$   $\chi^2/\text{NDF}: 17.8/36$

Left In:  $32.571 \pm 45.248$   $\chi^2/\text{NDF}: 6.7/22$

Left:  $24.028 \pm 32.967$   $\chi^2/\text{NDF}: 13.7/47$

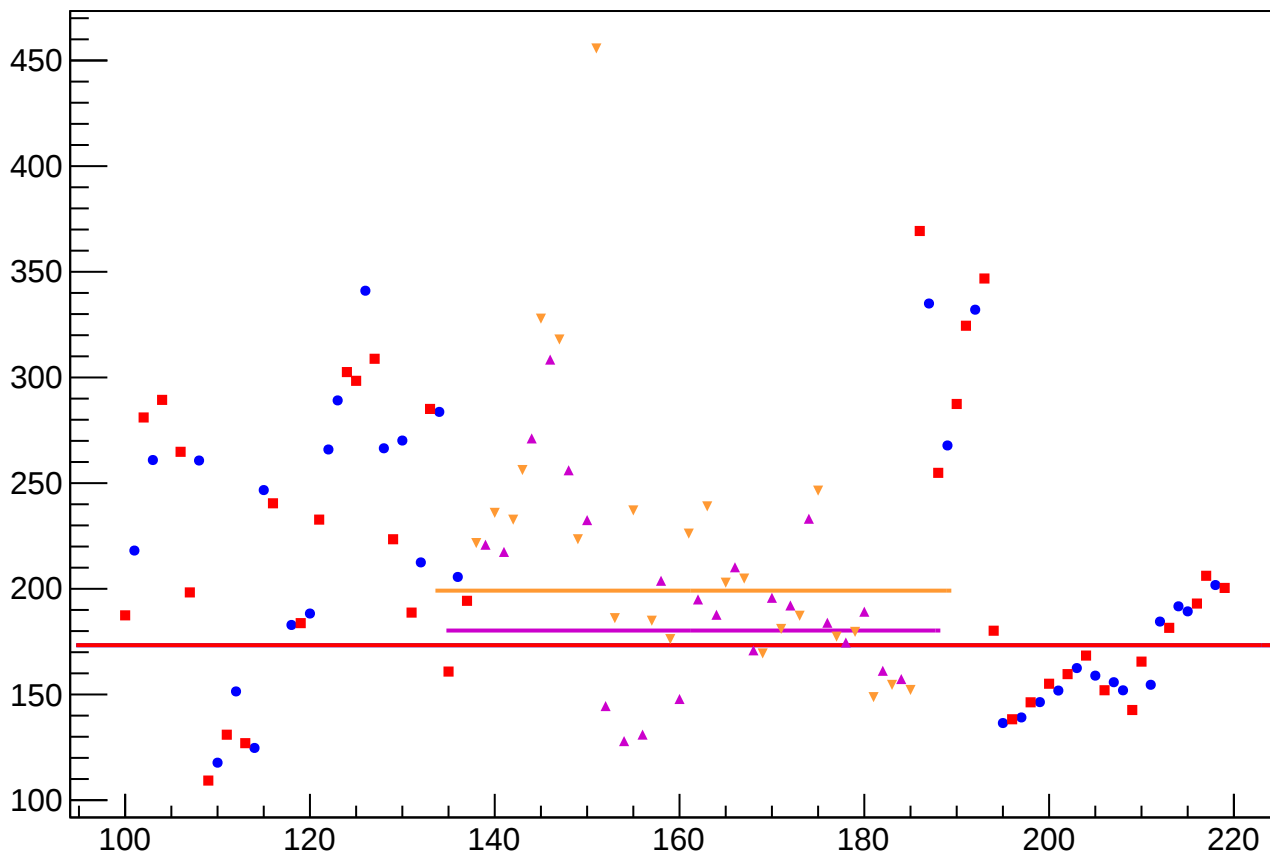
Right:  $-64.853 \pm 29.522$   $\chi^2/\text{NDF}: 35.3/69$

In:  $-16.775 \pm 30.861$   $\chi^2/\text{NDF}: 26.4/55$

Out:  $-34.091 \pm 31.350$   $\chi^2/\text{NDF}: 26.5/61$

All:  $-25.297 \pm 21.993$   $\chi^2/\text{NDF}: 53.1/117$

asym\_bcm\_dg\_us\_bcm\_an\_us\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 173.283 $\pm$ 0.030  $\chi^2$ /NDF: 2177174.4/32

Left Out: 199.136 $\pm$ 0.034  $\chi^2$ /NDF:1760298.1/24

Right Out: 173.331 $\pm$ 0.029  $\chi^2$ /NDF: 2859971.7/36

Left In: 180.256 $\pm$ 0.032  $\chi^2$ /NDF:1580553.5/22

Left: 189.114 $\pm$ 0.023  $\chi^2$ /NDF: 3504211.1/47

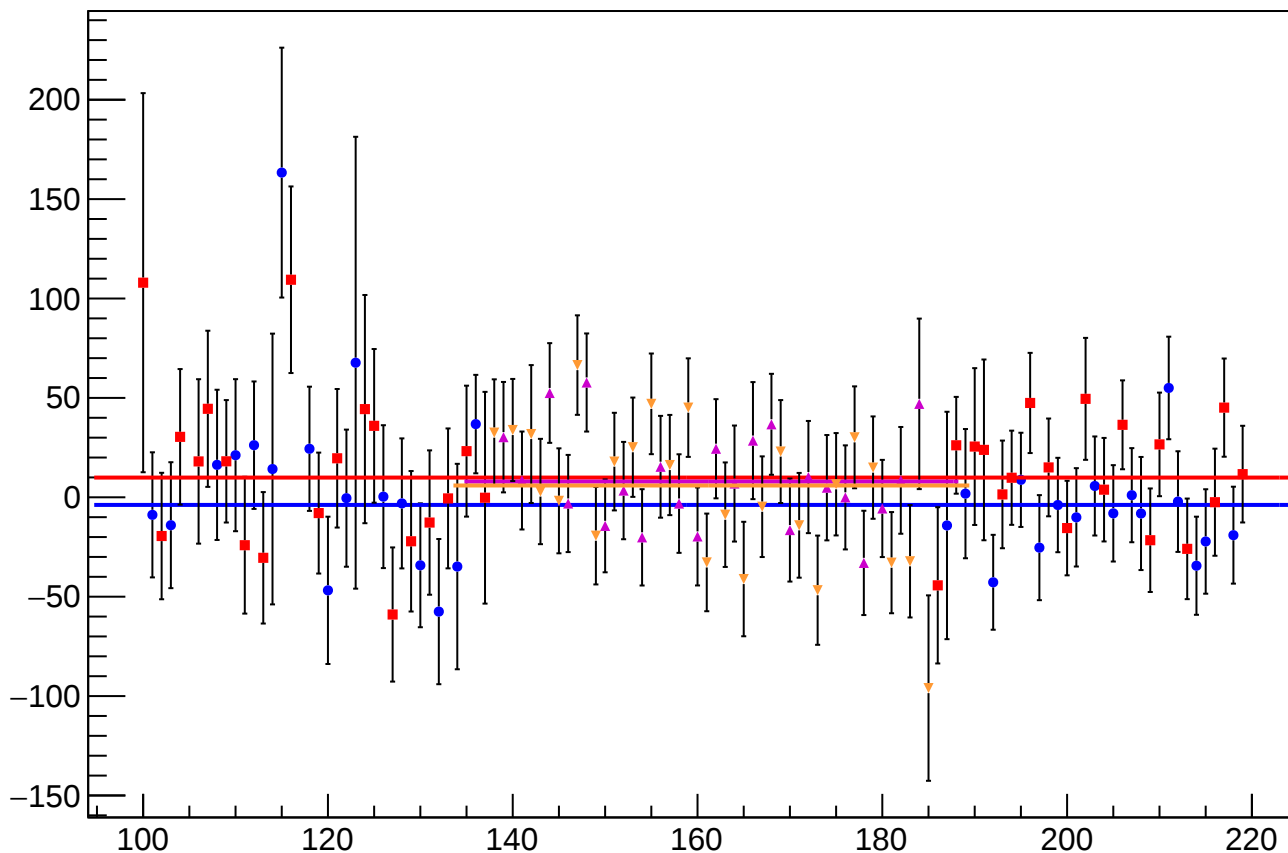
Right: 173.307 $\pm$ 0.021  $\chi^2$ /NDF: 5037147.5/69

In: 176.527 $\pm$ 0.022  $\chi^2$ /NDF:3783136.2/55

Out: 184.279 $\pm$ 0.022  $\chi^2$ /NDF:4951260.2/61

All: 180.342 $\pm$ 0.016  $\chi^2$ /NDF: 8796516.0/117

asym\_bcm\_dg\_us\_bcm\_an\_us\_agg\_dd\_mean vs Slug, Sign Corrected



Right In:  $-3.834 \pm 5.213$   $\chi^2/\text{NDF}$ : 29.2/32

Left Out:  $5.937 \pm 5.285$   $\chi^2/\text{NDF}$ : 36.1/24

Right Out:  $9.921 \pm 5.050$   $\chi^2/\text{NDF}$ : 32.4/36

Left In:  $7.915 \pm 5.422$   $\chi^2/\text{NDF}$ : 18.7/22

Left:  $6.901 \pm 3.784$   $\chi^2/\text{NDF}$ : 54.9/47

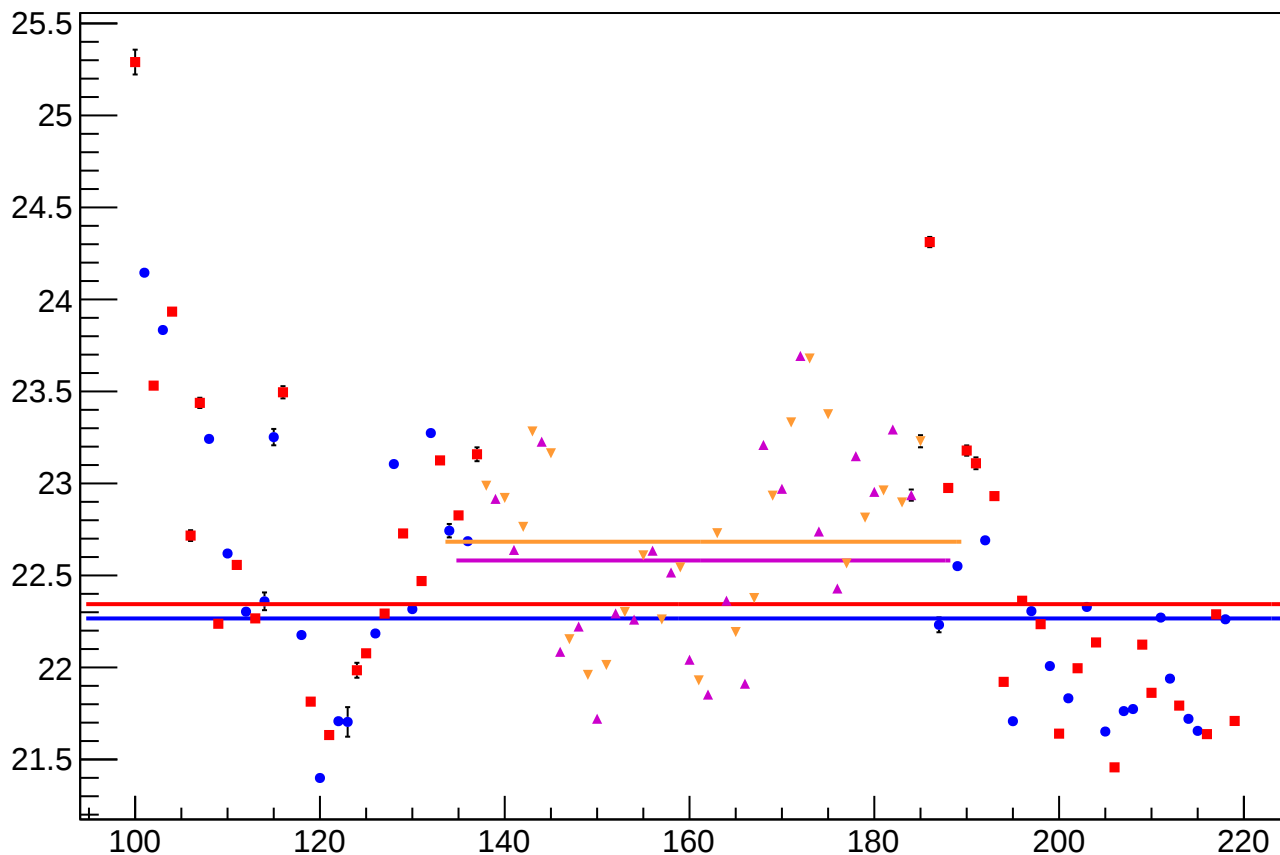
Right:  $3.262 \pm 3.627$   $\chi^2/\text{NDF}$ : 65.2/69

In:  $1.811 \pm 3.758$   $\chi^2/\text{NDF}$ : 50.3/55

Out:  $8.020 \pm 3.651$   $\chi^2/\text{NDF}$ : 68.8/61

All:  $5.005 \pm 2.619$   $\chi^2/\text{NDF}$ : 120.6/117

asym\_bcm\_dg\_us\_bcm\_an\_us\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 22.266+/-0.004  $\chi^2/\text{NDF}$ : 27265.4/32

Left Out: 22.683+/-0.004  $\chi^2/\text{NDF}$ : 16320.2/24

Right Out: 22.344+/-0.004  $\chi^2/\text{NDF}$ : 35078.7/36

Left In: 22.581+/-0.004  $\chi^2/\text{NDF}$ : 17904.5/22

Left: 22.634+/-0.003  $\chi^2/\text{NDF}$ : 34586.9/47

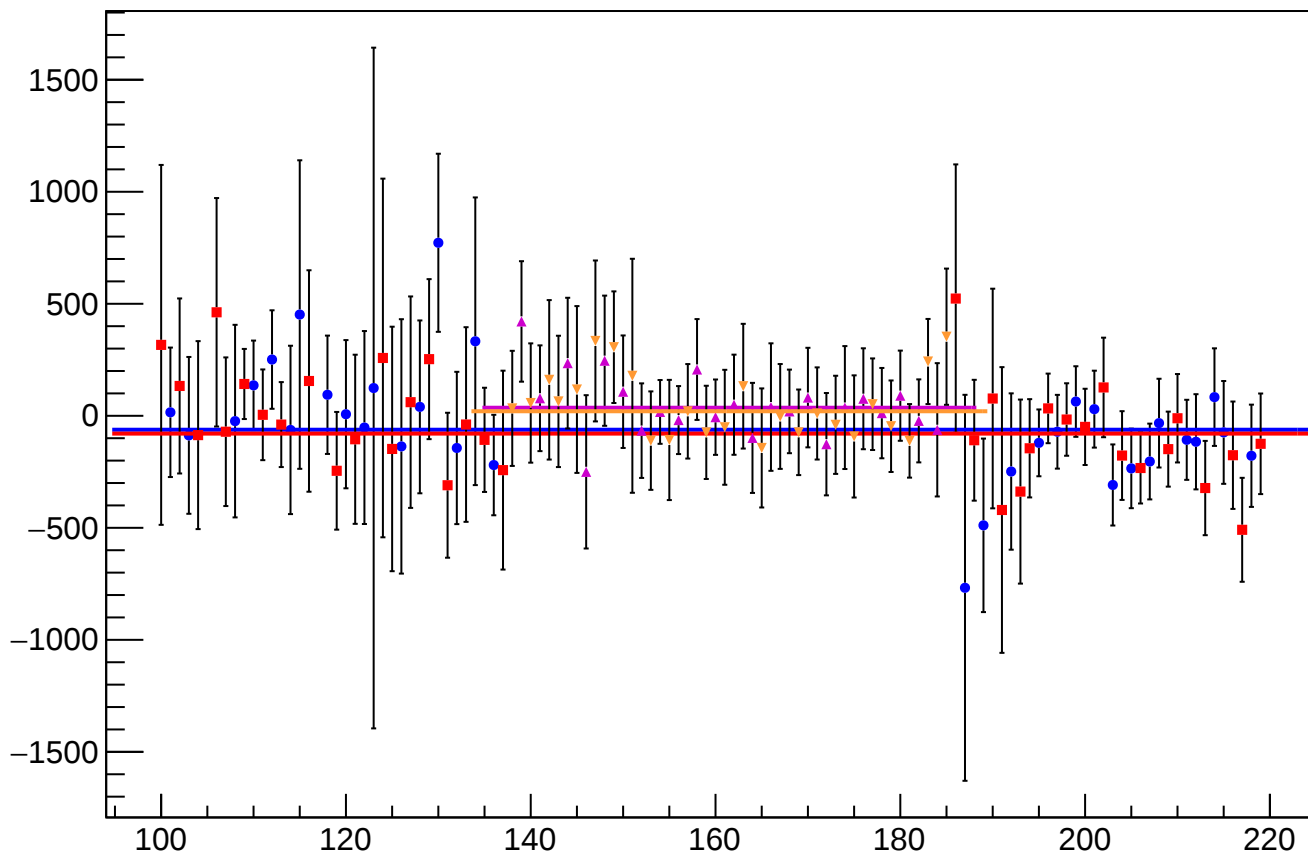
Right: 22.306+/-0.003  $\chi^2/\text{NDF}$ : 62573.5/69

In: 22.418+/-0.003  $\chi^2/\text{NDF}$ : 48678.5/55

Out: 22.506+/-0.003  $\chi^2/\text{NDF}$ : 55705.1/61

All: 22.463+/-0.002  $\chi^2/\text{NDF}$ : 104951.0/117

asym\_bcm\_dg\_ds\_bcm\_an\_us\_agg\_avg\_mean vs Slug, Sign Corrected



Right In:  $-62.144 \pm 42.081$   $\chi^2/\text{NDF}: 17.1/32$

Left Out:  $20.306 \pm 48.049$   $\chi^2/\text{NDF}: 7.7/24$

Right Out:  $-79.458 \pm 41.150$   $\chi^2/\text{NDF}: 16.2/36$

Left In:  $35.996 \pm 45.180$   $\chi^2/\text{NDF}: 6.1/22$

Left:  $28.633 \pm 32.915$   $\chi^2/\text{NDF}: 13.8/47$

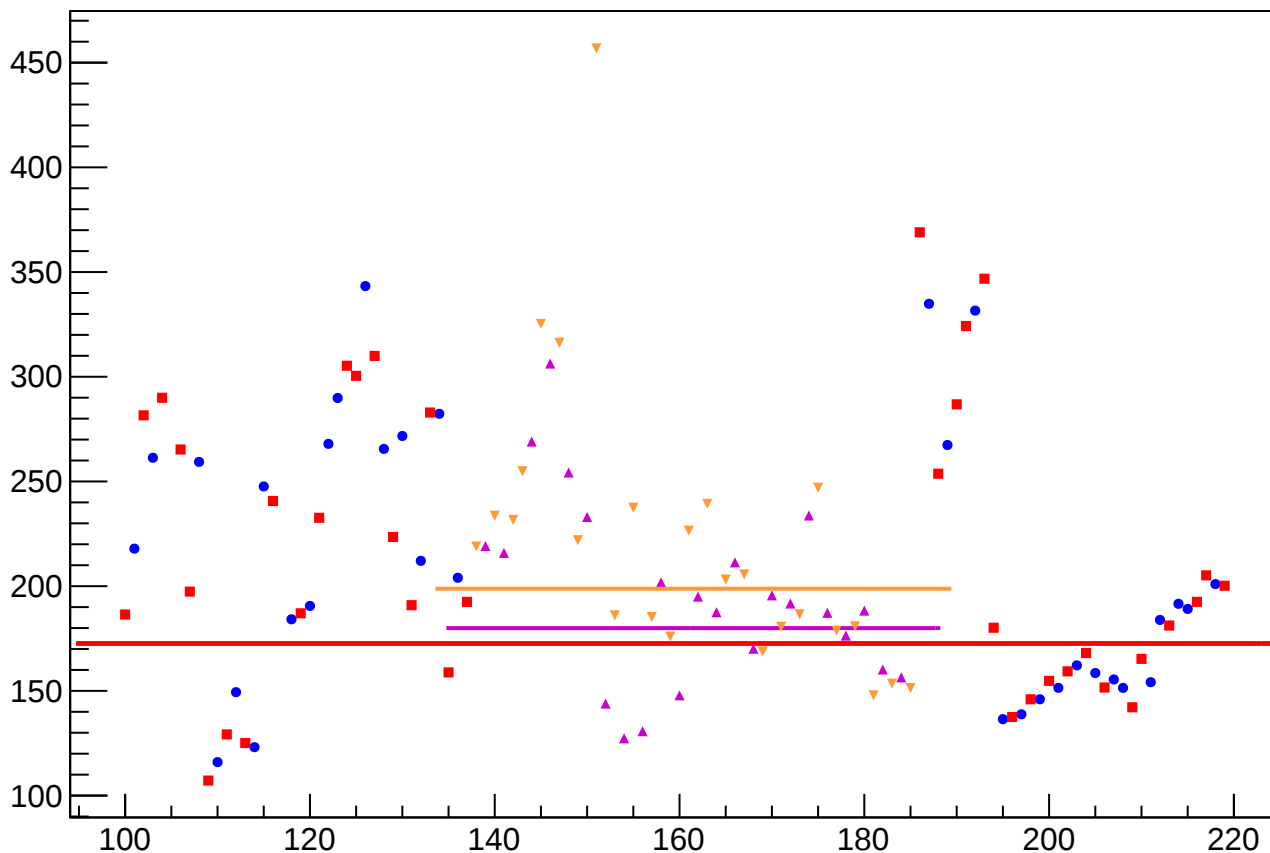
Right:  $-70.995 \pm 29.421$   $\chi^2/\text{NDF}: 33.4/69$

In:  $-16.554 \pm 30.793$   $\chi^2/\text{NDF}: 25.7/55$

Out:  $-37.246 \pm 31.255$   $\chi^2/\text{NDF}: 26.4/61$

All:  $-26.746 \pm 21.935$   $\chi^2/\text{NDF}: 52.3/117$

asym\_bcm\_dg\_ds\_bcm\_an\_us\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 172.734+/-0.030  $\chi^2/\text{NDF}$ : 2207499.6/32

Left Out: 198.784+/-0.034  $\chi^2/\text{NDF}$ : 1758481.8/24

Right Out: 172.453+/-0.029  $\chi^2/\text{NDF}$ : 2929551.6/36

Left In: 179.972+/-0.032  $\chi^2/\text{NDF}$ : 1575888.3/22

Left: 188.800+/-0.023  $\chi^2/\text{NDF}$ : 3497081.8/47

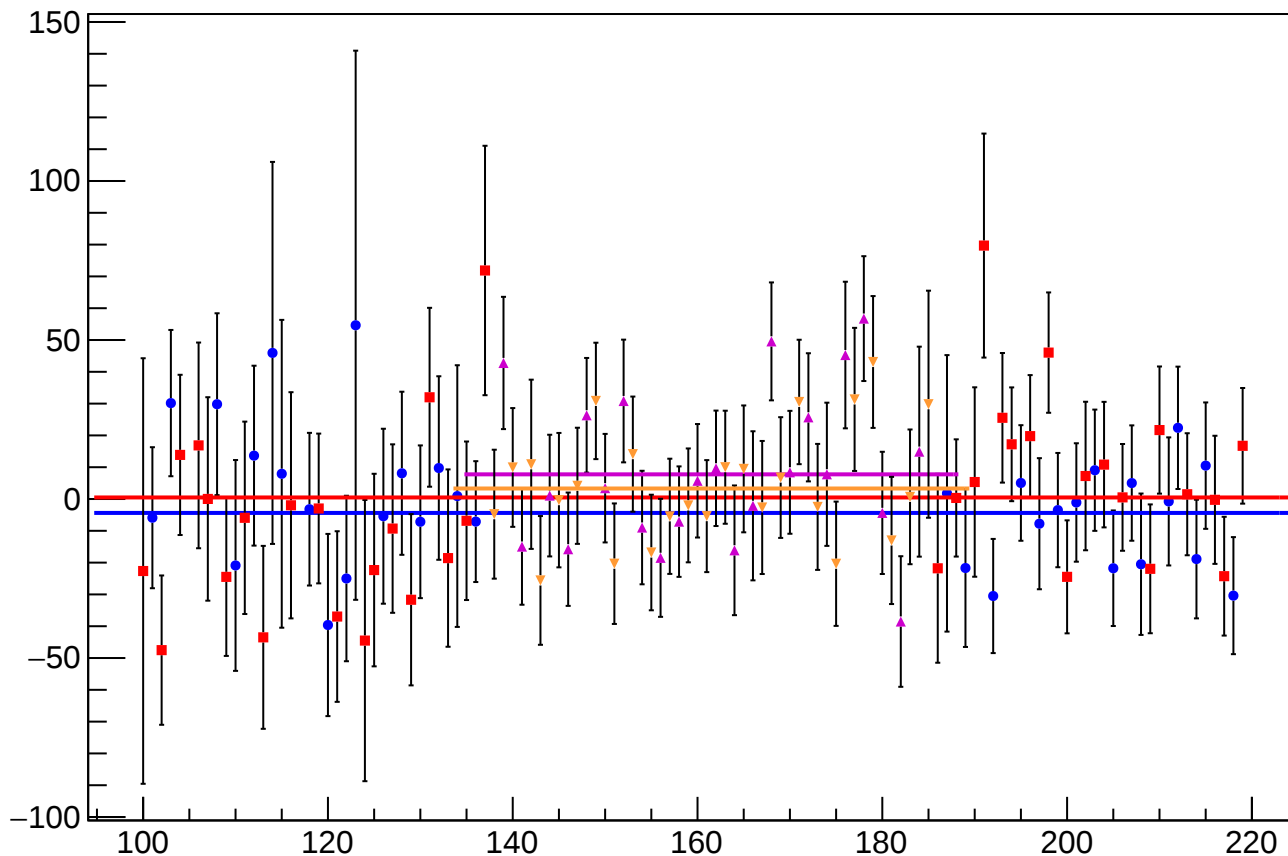
Right: 172.590+/-0.021  $\chi^2/\text{NDF}$ : 5137096.8/69

In: 176.096+/-0.022  $\chi^2/\text{NDF}$ : 3810878.9/55

Out: 183.594+/-0.022  $\chi^2/\text{NDF}$ : 5034537.6/61

All: 179.789+/-0.016  $\chi^2/\text{NDF}$ : 8903820.8/117

asym\_bcm\_dg\_ds\_bcm\_an\_us\_agg\_dd\_mean vs Slug, Sign Corrected



Right In:  $-4.374 \pm 3.994$   $\chi^2/\text{NDF}: 18.5/32$

Left Out:  $3.307 \pm 3.954$   $\chi^2/\text{NDF}: 18.7/24$

Right Out:  $0.489 \pm 3.868$   $\chi^2/\text{NDF}: 40.6/36$

Left In:  $7.756 \pm 4.061$   $\chi^2/\text{NDF}: 34.3/22$

Left:  $5.472 \pm 2.833$   $\chi^2/\text{NDF}: 53.6/47$

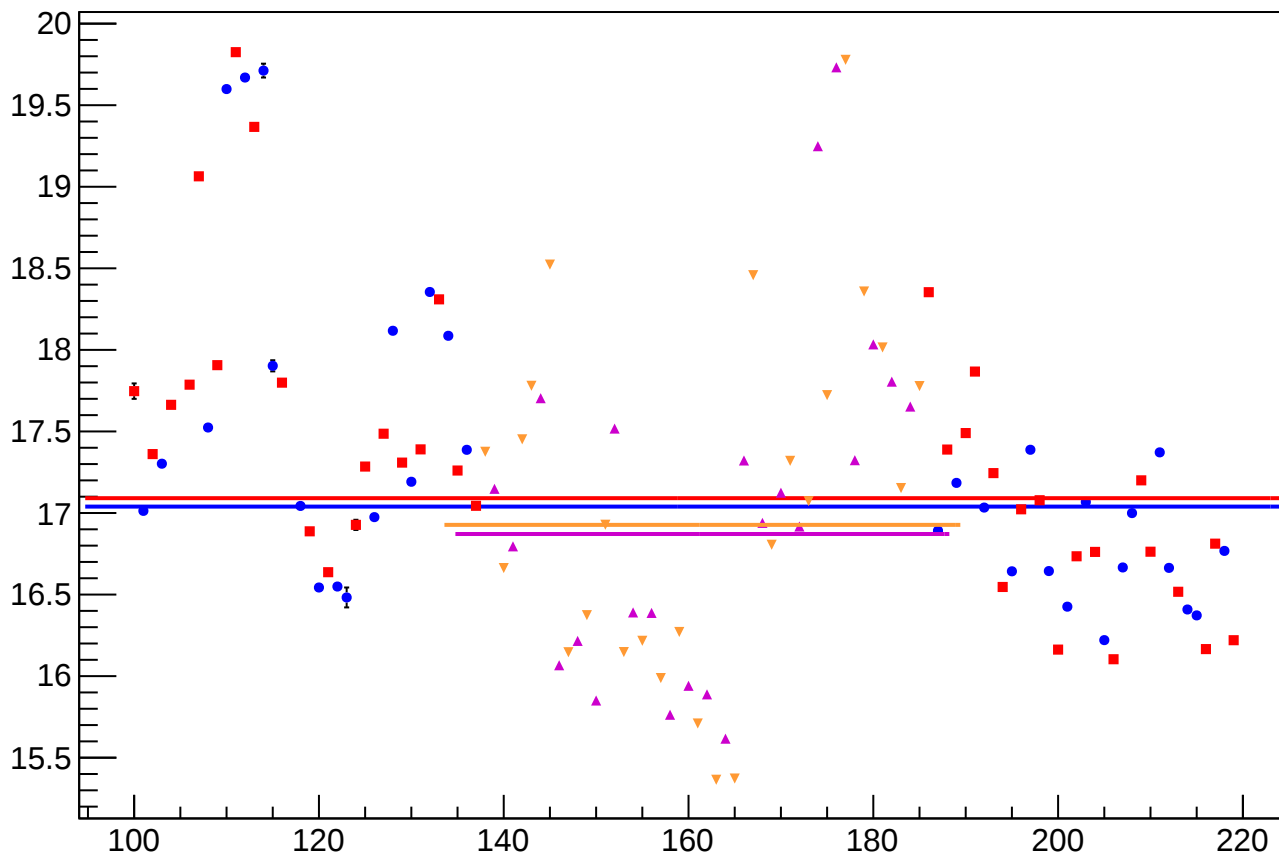
Right:  $-1.865 \pm 2.778$   $\chi^2/\text{NDF}: 59.9/69$

In:  $1.590 \pm 2.847$   $\chi^2/\text{NDF}: 57.3/55$

Out:  $1.867 \pm 2.765$   $\chi^2/\text{NDF}: 59.5/61$

All:  $1.732 \pm 1.984$   $\chi^2/\text{NDF}: 116.9/117$

asym\_bcm\_dg\_ds\_bcm\_an\_us\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 17.039 $\pm$ 0.003  $\chi^2$ /NDF: 61751.1/32

Left Out: 16.927 $\pm$ 0.003  $\chi^2$ /NDF:138533.2/24

Right Out: 17.091 $\pm$ 0.003  $\chi^2$ /NDF: 79880.5/36

Left In: 16.871 $\pm$ 0.003  $\chi^2$ /NDF:117993.8/22

Left: 16.900 $\pm$ 0.002  $\chi^2$ /NDF: 256722.4/47

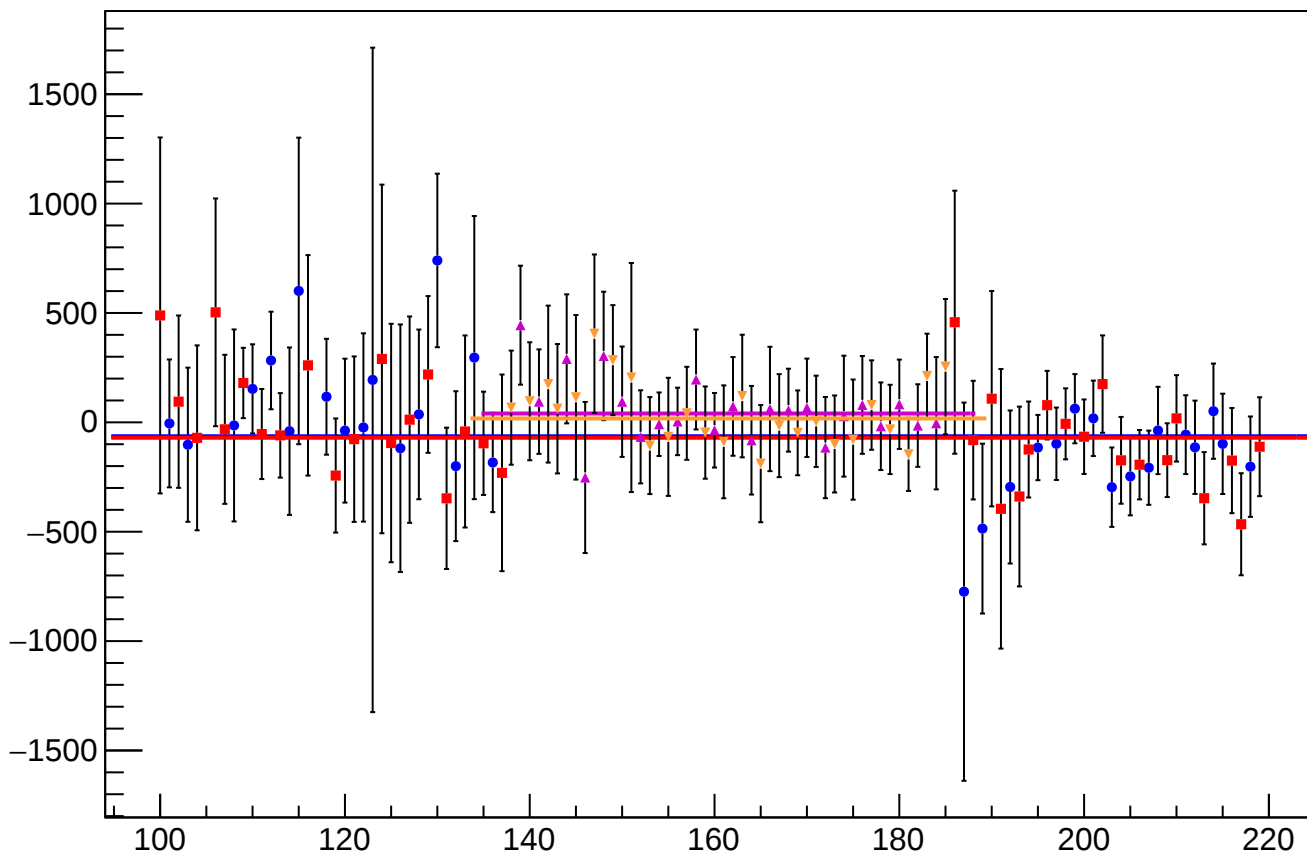
Right: 17.066 $\pm$ 0.002  $\chi^2$ /NDF: 141803.8/69

In: 16.957 $\pm$ 0.002  $\chi^2$ /NDF:181485.9/55

Out: 17.011 $\pm$ 0.002  $\chi^2$ /NDF:220164.0/61

All: 16.985 $\pm$ 0.001  $\chi^2$ /NDF: 402022.7/117

asym\_bcm\_dg\_us\_bcm\_dg\_ds\_agg\_avg\_mean vs Slug, Sign Corrected



Right In:  $-63.572 \pm 42.307$   $\chi^2/\text{NDF}: 17.4/32$

Left Out:  $17.828 \pm 48.547$   $\chi^2/\text{NDF}: 7.5/24$

Right Out:  $-70.383 \pm 41.447$   $\chi^2/\text{NDF}: 17.1/36$

Left In:  $40.355 \pm 45.689$   $\chi^2/\text{NDF}: 6.6/22$

Left:  $29.774 \pm 33.271$   $\chi^2/\text{NDF}: 14.2/47$

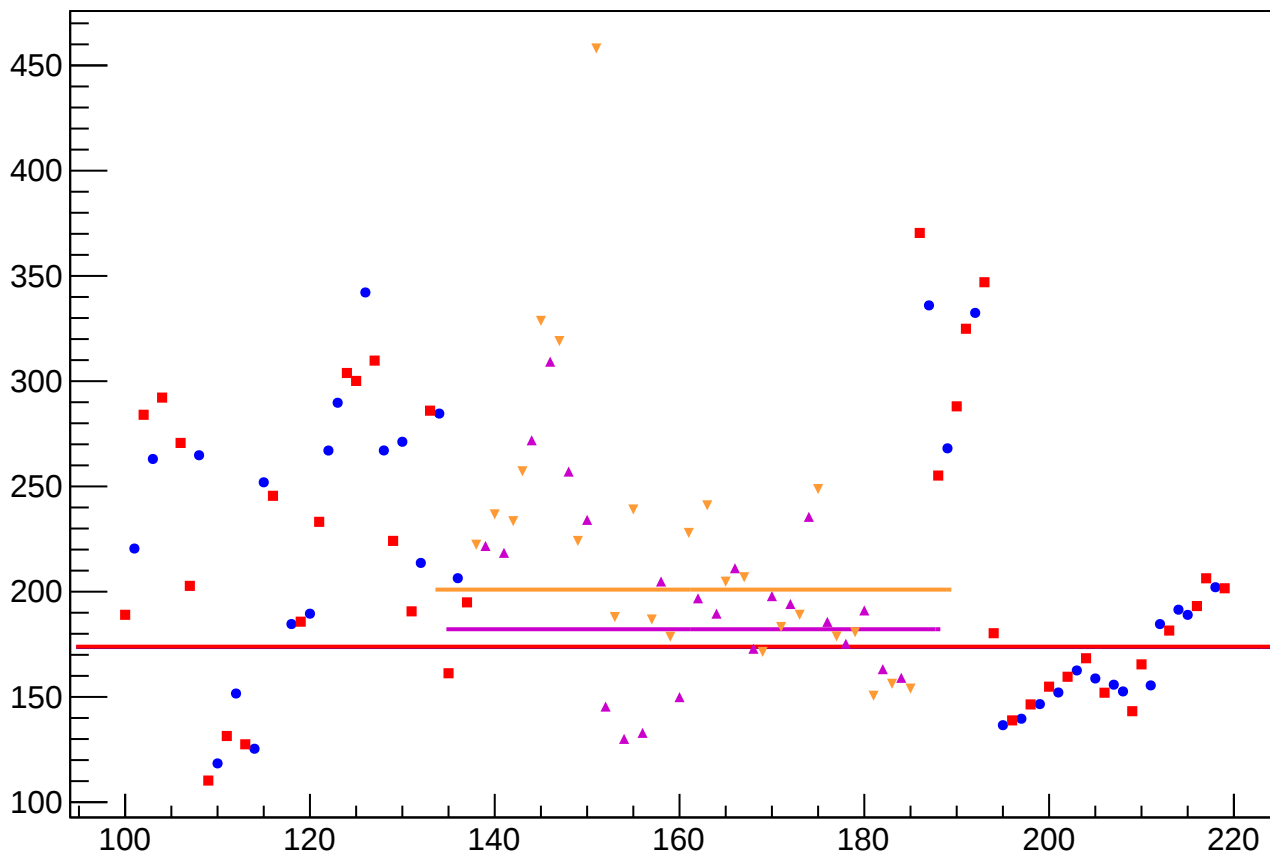
Right:  $-67.047 \pm 29.607$   $\chi^2/\text{NDF}: 34.6/69$

In:  $-15.597 \pm 31.042$   $\chi^2/\text{NDF}: 26.9/55$

Out:  $-33.194 \pm 31.522$   $\chi^2/\text{NDF}: 26.5/61$

All:  $-24.261 \pm 22.118$   $\chi^2/\text{NDF}: 53.5/117$

asym\_bcm\_dg\_us\_bcm\_dg\_ds\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 173.708 $\pm$ 0.030  $\chi^2$ /NDF: 2188909.3/32

Left Out: 200.985 $\pm$ 0.034  $\chi^2$ /NDF: 1727291.4/24

Right Out: 173.875 $\pm$ 0.029  $\chi^2$ /NDF: 2869762.0/36

Left In: 182.158 $\pm$ 0.032  $\chi^2$ /NDF: 1535922.8/22

Left: 191.001 $\pm$ 0.024  $\chi^2$ /NDF: 3422724.8/47

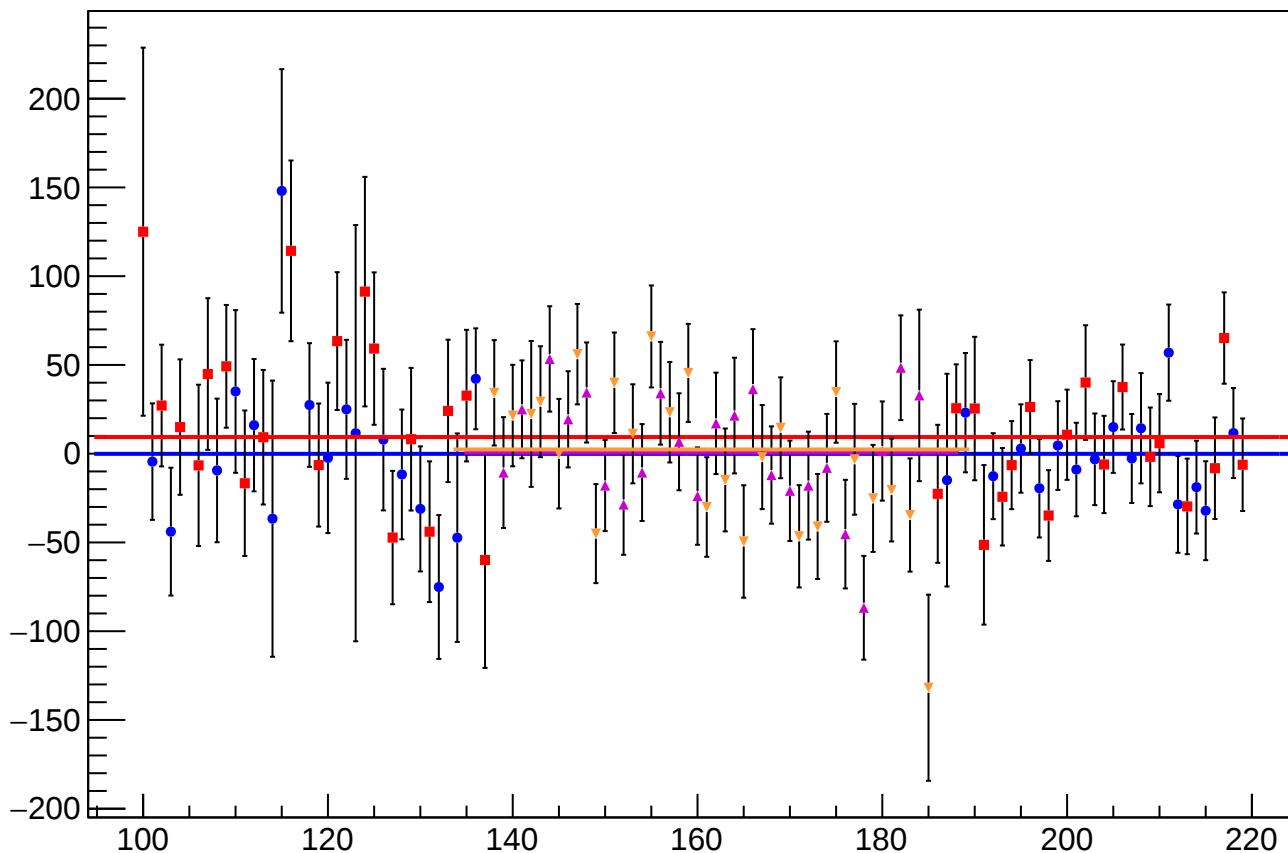
Right: 173.793 $\pm$ 0.021  $\chi^2$ /NDF: 5058687.4/69

In: 177.609 $\pm$ 0.022  $\chi^2$ /NDF: 3761666.0/55

Out: 185.305 $\pm$ 0.022  $\chi^2$ /NDF: 4957787.0/61

All: 181.398 $\pm$ 0.016  $\chi^2$ /NDF: 8779975.8/117

asym\_bcm\_dg\_us\_bcm\_dg\_ds\_agg\_dd\_mean vs Slug, Sign Corrected



Right In:  $-0.081 \pm 5.608$   $\chi^2/\text{NDF}: 25.1/32$

Left Out:  $2.390 \pm 5.980$   $\chi^2/\text{NDF}: 39.1/24$

Right Out:  $9.382 \pm 5.413$   $\chi^2/\text{NDF}: 38.1/36$

Left In:  $0.641 \pm 6.091$   $\chi^2/\text{NDF}: 27.3/22$

Left:  $1.531 \pm 4.267$   $\chi^2/\text{NDF}: 66.5/47$

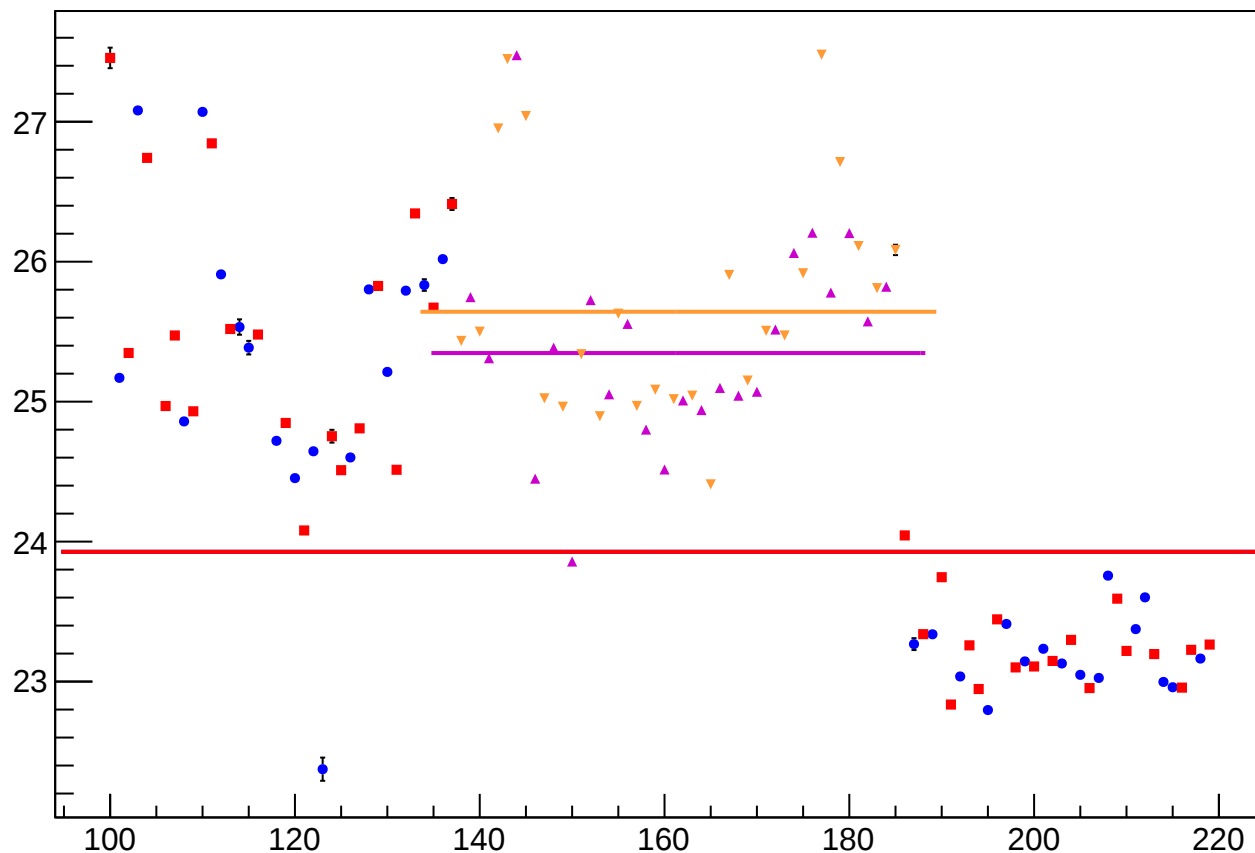
Right:  $4.818 \pm 3.895$   $\chi^2/\text{NDF}: 64.6/69$

In:  $0.250 \pm 4.126$   $\chi^2/\text{NDF}: 52.4/55$

Out:  $6.233 \pm 4.013$   $\chi^2/\text{NDF}: 77.9/61$

All:  $3.325 \pm 2.877$   $\chi^2/\text{NDF}: 131.4/117$

asym\_bcm\_dg\_us\_bcm\_dg\_ds\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 23.927 $\pm$ 0.004  $\chi^2$ /NDF: 90616.8/32

Left Out: 25.642 $\pm$ 0.004  $\chi^2$ /NDF:34802.2/24

Right Out: 23.927 $\pm$ 0.004  $\chi^2$ /NDF: 85905.9/36

Left In: 25.347 $\pm$ 0.004  $\chi^2$ /NDF:29389.5/22

Left: 25.498 $\pm$ 0.003  $\chi^2$ /NDF: 66578.5/47

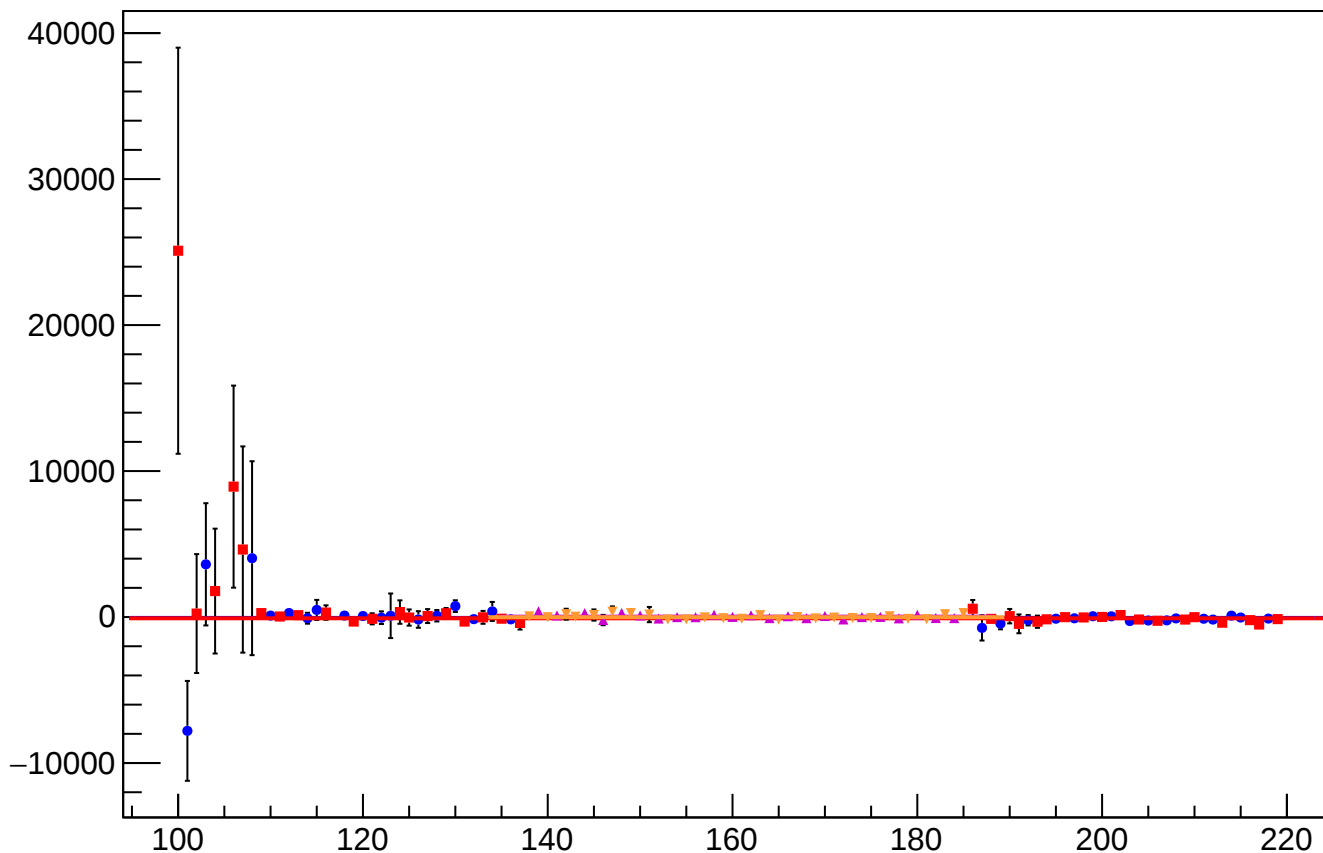
Right: 23.927 $\pm$ 0.003  $\chi^2$ /NDF: 176522.7/69

In: 24.579 $\pm$ 0.003  $\chi^2$ /NDF:178831.4/55

Out: 24.699 $\pm$ 0.003  $\chi^2$ /NDF:211162.1/61

All: 24.641 $\pm$ 0.002  $\chi^2$ /NDF: 390870.9/117

asym\_bcm\_cav4cQ\_bcm\_an\_us\_agg\_avg\_mean vs Slug, Sign Corrected



Right In: -59.613 $\pm$ 44.093  $\chi^2$ /NDF: 22.3/32

Left Out: -11.432 $\pm$ 48.263  $\chi^2$ /NDF:8.0/24

Right Out: -85.352 $\pm$ 43.780  $\chi^2$ /NDF: 24.5/36

Left In: 27.098 $\pm$ 45.999  $\chi^2$ /NDF:7.2/22

Left: 8.758 $\pm$ 33.298  $\chi^2$ /NDF: 15.5/47

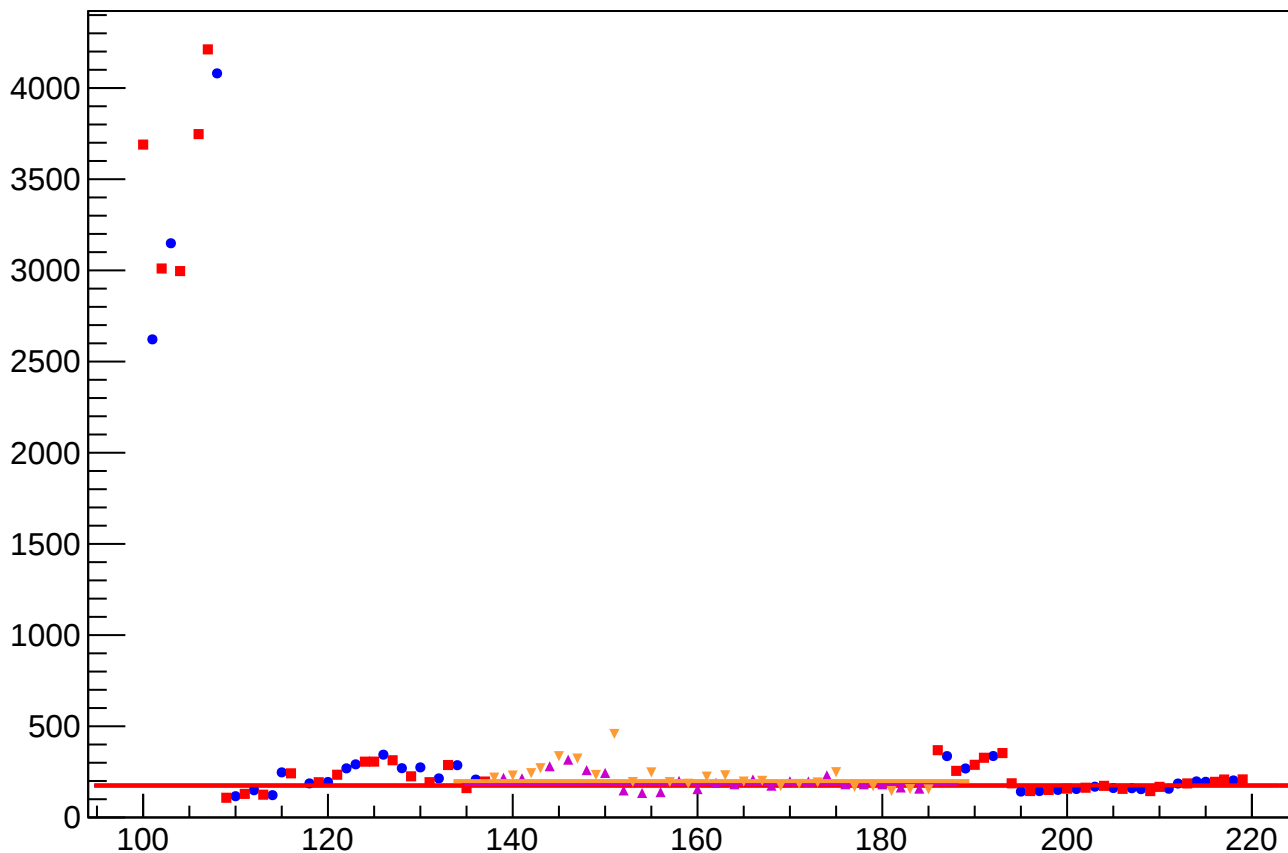
Right: -72.574 $\pm$ 31.067  $\chi^2$ /NDF: 47.0/69

In: -18.091 $\pm$ 31.831  $\chi^2$ /NDF:31.4/55

Out: -51.984 $\pm$ 32.426  $\chi^2$ /NDF:33.8/61

All: -34.723 $\pm$ 22.715  $\chi^2$ /NDF: 65.7/117

asym\_bcm\_cav4cQ\_bcm\_an\_us\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 174.678+/-0.031  $\chi^2/\text{NDF}$ : 4600755.8/32

Left Out: 199.438+/-0.034  $\chi^2/\text{NDF}$ : 1877848.7/24

Right Out: 175.933+/-0.031  $\chi^2/\text{NDF}$ : 5500992.1/36

Left In: 183.805+/-0.033  $\chi^2/\text{NDF}$ : 1412869.6/22

Left: 191.246+/-0.024  $\chi^2/\text{NDF}$ : 3400676.1/47

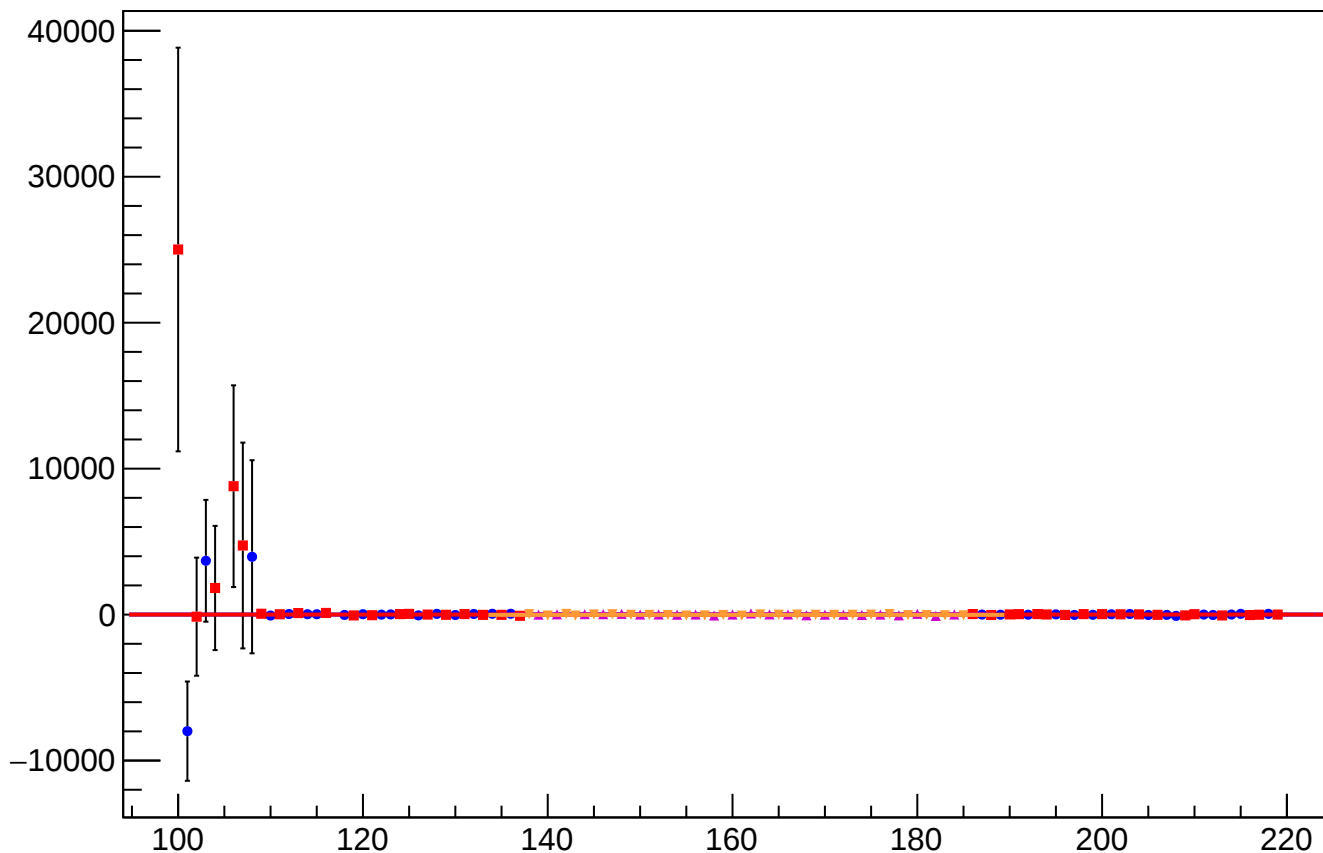
Right: 175.310+/-0.022  $\chi^2/\text{NDF}$ : 10102563.5/69

In: 179.049+/-0.023  $\chi^2/\text{NDF}$ : 6054657.1/55

Out: 186.543+/-0.023  $\chi^2/\text{NDF}$ : 7639077.7/61

All: 182.727+/-0.016  $\chi^2/\text{NDF}$ : 13748145.9/137

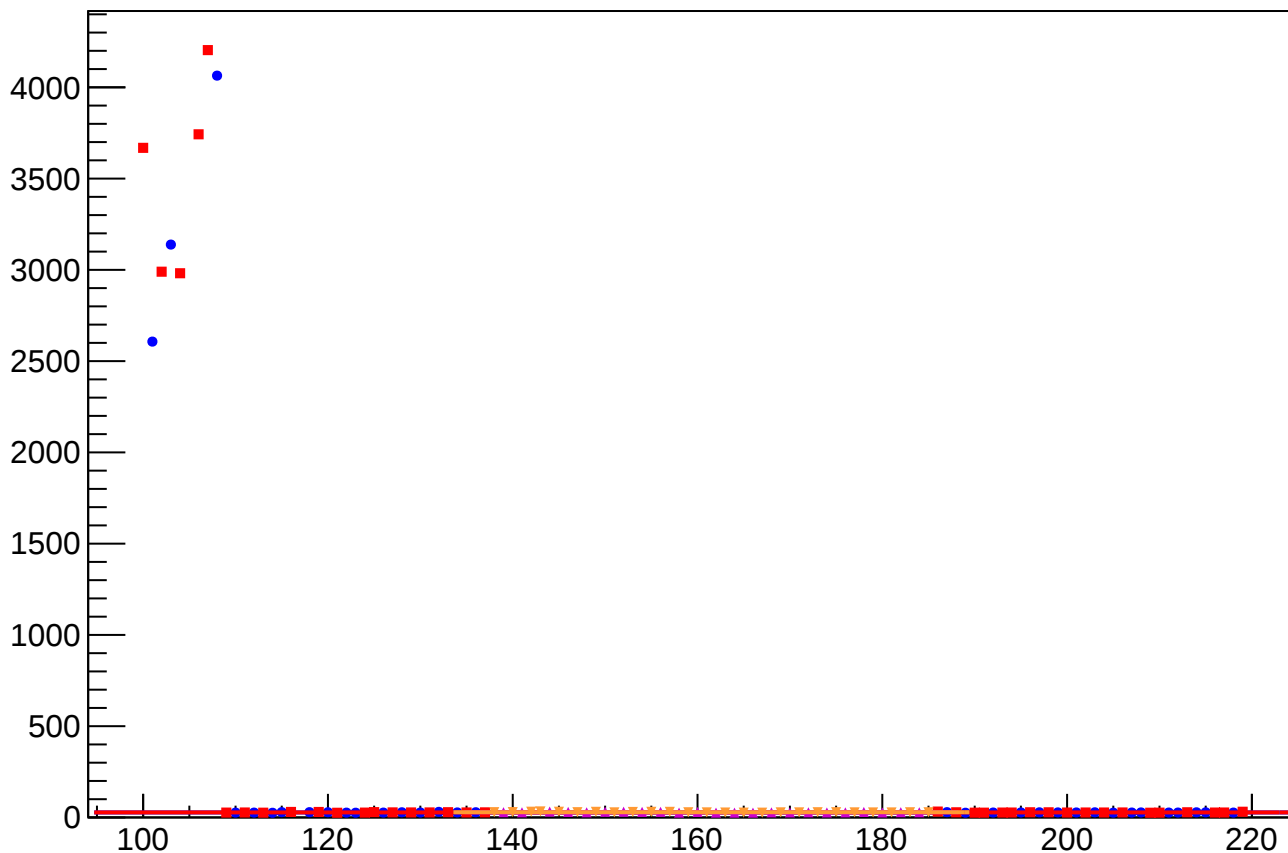
asym\_bcm\_cav4cQ\_bcm\_an\_us\_agg\_dd\_mean vs Slug, Sign Corrected



Right In: 3.561+/-6.715  $\chi^2/\text{NDF}$ : 35.3/32  
 Left Out: -18.118+/-6.704  $\chi^2/\text{NDF}$ : 21.7/24  
 Right Out: 3.403+/-6.590  $\chi^2/\text{NDF}$ : 39.3/36  
 Left In: 1.267+/-6.908  $\chi^2/\text{NDF}$ : 32.0/22

Left: -8.716+/-4.811  $\chi^2/\text{NDF}$ : 57.8/47  
 Right: 3.480+/-4.703  $\chi^2/\text{NDF}$ : 74.7/69  
 In: 2.447+/-4.815  $\chi^2/\text{NDF}$ : 67.4/55  
 Out: -7.173+/-4.699  $\chi^2/\text{NDF}$ : 66.3/61  
 All: -2.480+/-3.363  $\chi^2/\text{NDF}$ : 135.8/117

asym\_bcm\_cav4cQ\_bcm\_an\_us\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 27.452 $\pm$ 0.005  $\chi^2$ /NDF: 3045216.4/32

Left Out: 28.694 $\pm$ 0.005  $\chi^2$ /NDF: 110466.9/24

Right Out: 27.564 $\pm$ 0.005  $\chi^2$ /NDF: 3537749.1/36

Left In: 28.677 $\pm$ 0.005  $\chi^2$ /NDF: 123814.4/22

Left: 28.685 $\pm$ 0.003  $\chi^2$ /NDF: 234287.5/47

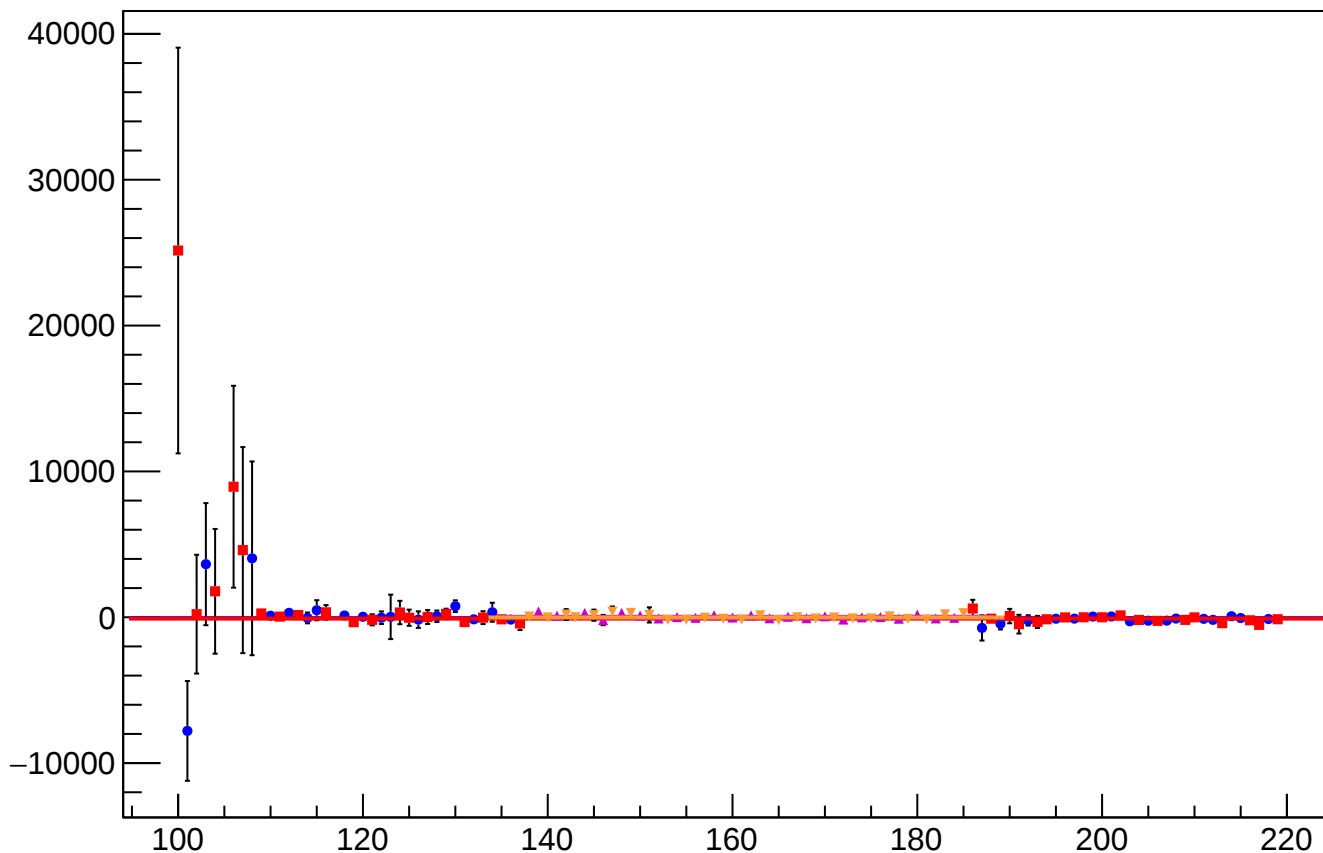
Right: 27.509 $\pm$ 0.003  $\chi^2$ /NDF: 6583248.0/69

In: 28.047 $\pm$ 0.003  $\chi^2$ /NDF: 3201344.3/55

Out: 28.119 $\pm$ 0.003  $\chi^2$ /NDF: 3677100.4/61

All: 28.084 $\pm$ 0.002  $\chi^2$ /NDF: 6878674.1/117

asym\_bcm\_cav4cQ\_bcm\_an\_ds\_agg\_avg\_mean vs Slug, Sign Corrected



Right In:  $-60.882 \pm 43.958$   $\chi^2/\text{NDF}$ : 22.5/32

Left Out:  $-13.878 \pm 48.155$   $\chi^2/\text{NDF}$ : 8.8/24

Right Out:  $-87.682 \pm 43.653$   $\chi^2/\text{NDF}$ : 25.5/36

Left In:  $27.286 \pm 45.907$   $\chi^2/\text{NDF}$ : 7.5/22

Left:  $7.688 \pm 33.228$   $\chi^2/\text{NDF}$ : 16.7/47

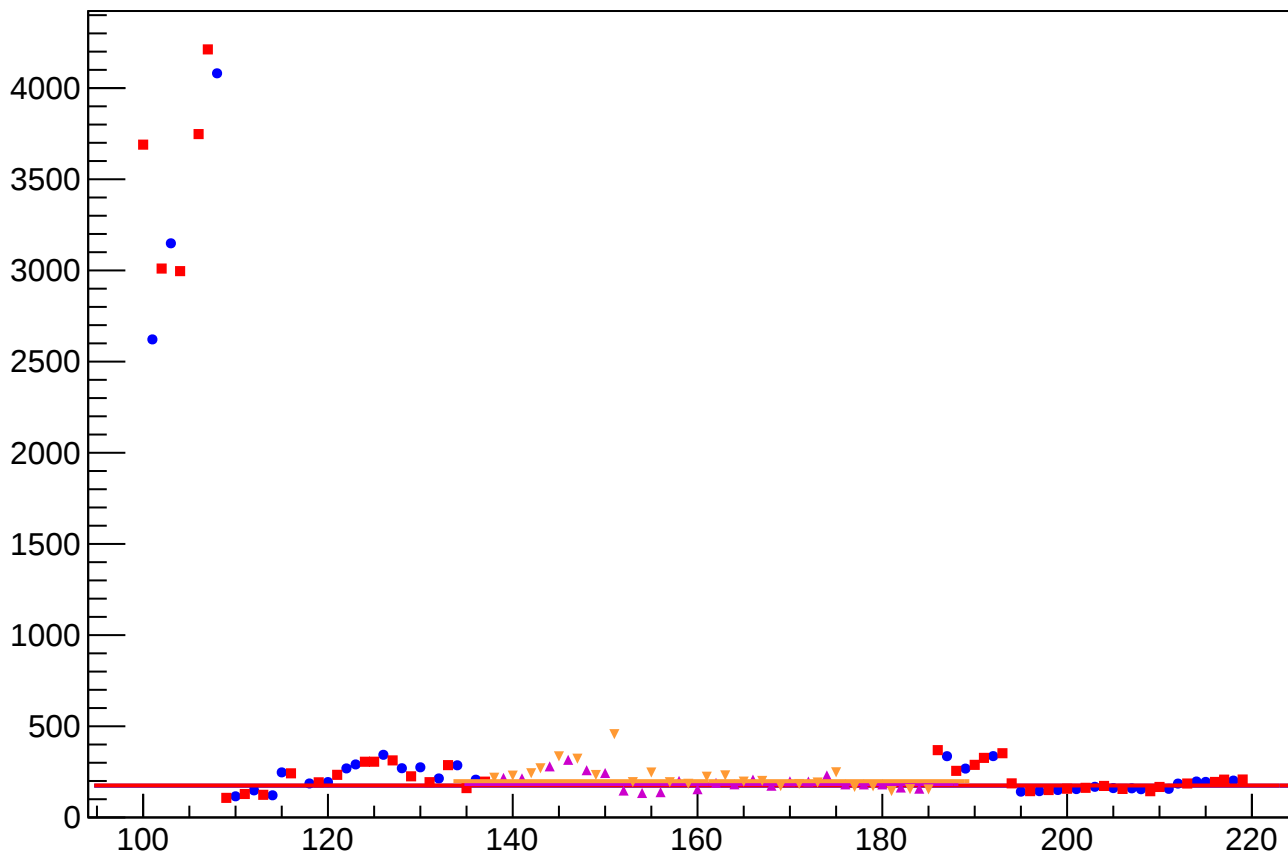
Right:  $-74.376 \pm 30.975$   $\chi^2/\text{NDF}$ : 48.2/69

In:  $-18.709 \pm 31.750$   $\chi^2/\text{NDF}$ : 31.9/55

Out:  $-54.391 \pm 32.342$   $\chi^2/\text{NDF}$ : 35.6/61

All:  $-36.220 \pm 22.657$   $\chi^2/\text{NDF}$ : 68.2/117

asym\_bcm\_cav4cQ\_bcm\_an\_ds\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 174.109+/-0.031  $\chi^2/\text{NDF}$ : 4614203.8/32

Left Out: 198.997+/-0.034  $\chi^2/\text{NDF}$ : 1877636.0/24

Right Out: 175.376+/-0.031  $\chi^2/\text{NDF}$ : 5519132.3/36

Left In: 183.442+/-0.032  $\chi^2/\text{NDF}$ : 1412341.8/22

Left: 190.847+/-0.023  $\chi^2/\text{NDF}$ : 3399302.2/47

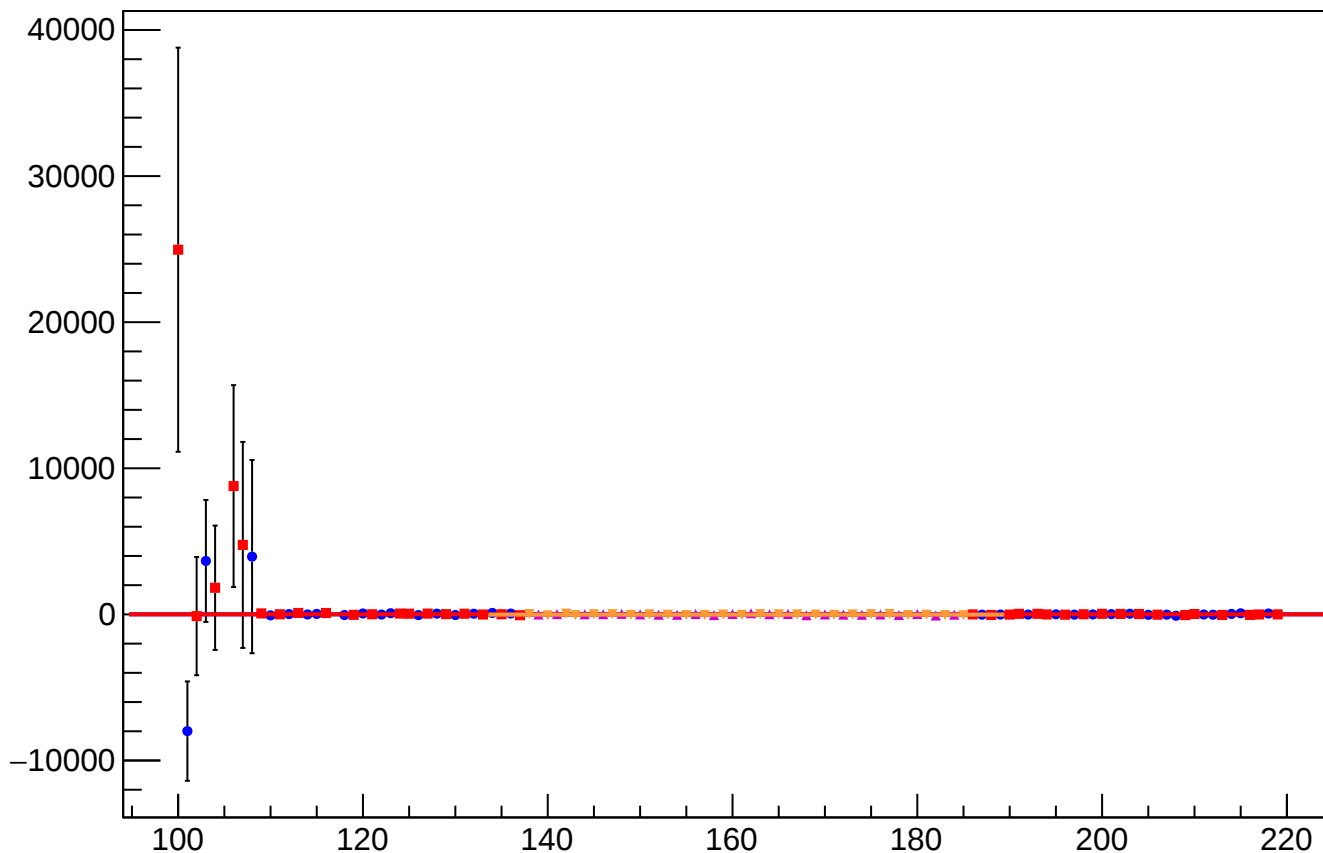
Right: 174.747+/-0.022  $\chi^2/\text{NDF}$ : 10134173.5/69

In: 178.573+/-0.022  $\chi^2/\text{NDF}$ : 6069667.7/55

Out: 186.031+/-0.023  $\chi^2/\text{NDF}$ : 7660899.3/61

All: 182.233+/-0.016  $\chi^2/\text{NDF}$ : 13784723.9/11

asym\_bcm\_cav4cQ\_bcm\_an\_ds\_agg\_dd\_mean vs Slug, Sign Corrected



Right In: 4.897+/-6.670  $\chi^2/\text{NDF}$ : 44.8/32

Left Out: -15.829+/-6.733  $\chi^2/\text{NDF}$ : 16.5/24

Right Out: 6.393+/-6.554  $\chi^2/\text{NDF}$ : 34.5/36

Left In: -0.498+/-6.937  $\chi^2/\text{NDF}$ : 26.1/22

Left: -8.392+/-4.831  $\chi^2/\text{NDF}$ : 45.1/47

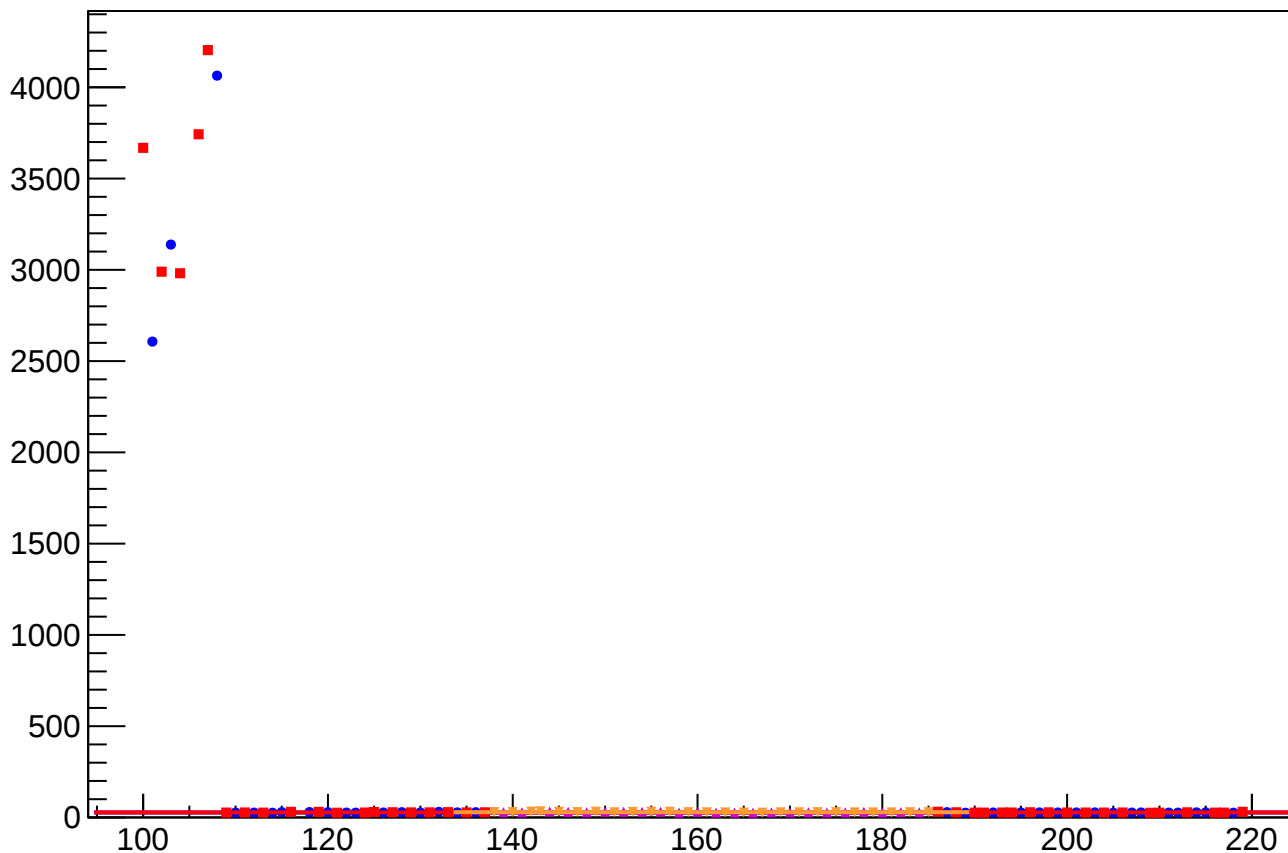
Right: 5.658+/-4.675  $\chi^2/\text{NDF}$ : 79.3/69

In: 2.305+/-4.808  $\chi^2/\text{NDF}$ : 71.2/55

Out: -4.418+/-4.696  $\chi^2/\text{NDF}$ : 56.6/61

All: -1.135+/-3.360  $\chi^2/\text{NDF}$ : 128.8/117

asym\_bcm\_cav4cQ\_bcm\_an\_ds\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 27.265+/-0.005  $\chi^2/\text{NDF}$ : 3055610.8/32

Left Out: 28.814+/-0.005  $\chi^2/\text{NDF}$ :122153.6/24

Right Out: 27.412+/-0.005  $\chi^2/\text{NDF}$ : 3541232.8/36

Left In: 28.797+/-0.005  $\chi^2/\text{NDF}$ :128279.2/22

Left: 28.806+/-0.003  $\chi^2/\text{NDF}$ : 250439.0/47

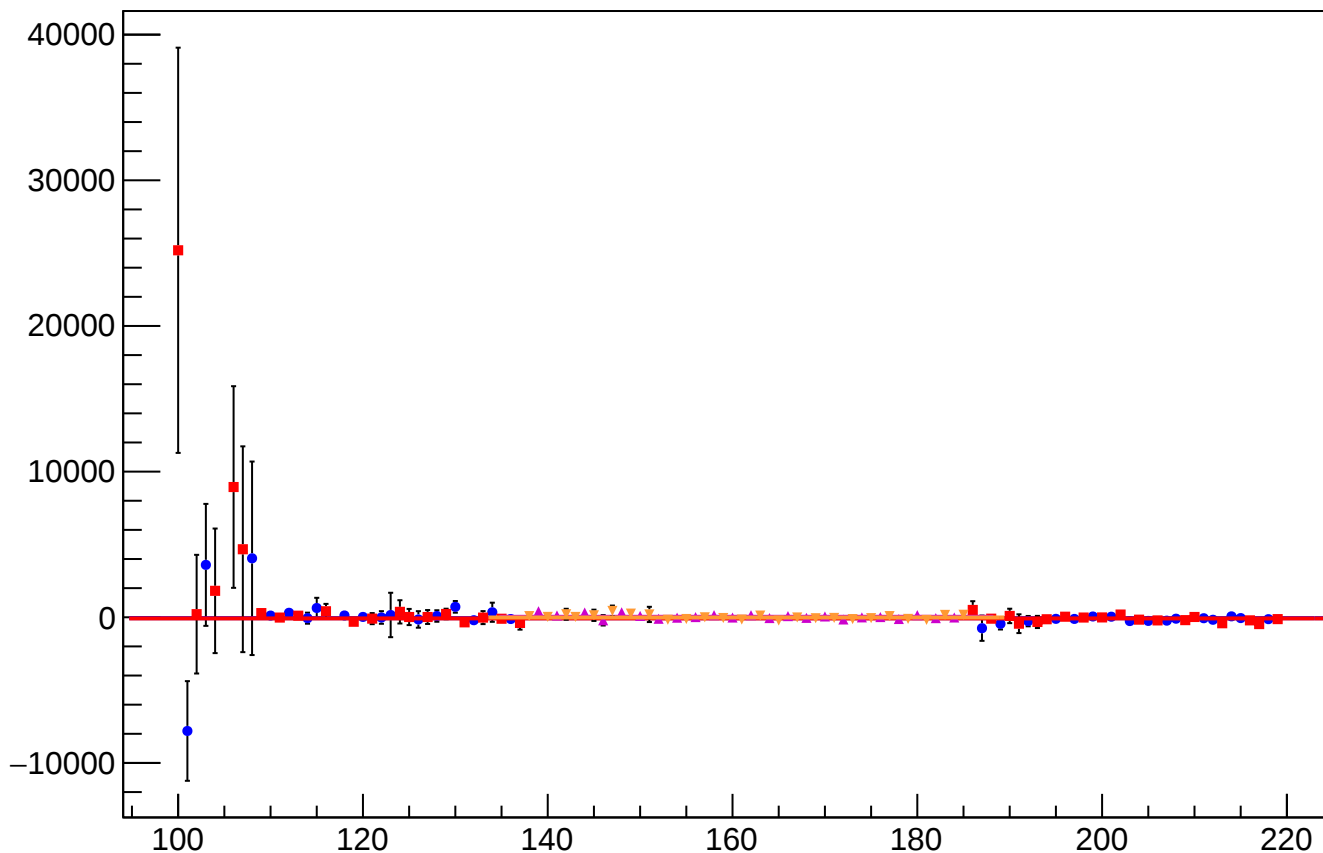
Right: 27.340+/-0.003  $\chi^2/\text{NDF}$ : 6597339.2/69

In: 28.001+/-0.003  $\chi^2/\text{NDF}$ :3234607.8/55

Out: 28.094+/-0.003  $\chi^2/\text{NDF}$ :3707928.1/61

All: 28.049+/-0.002  $\chi^2/\text{NDF}$ : 6942920.6/117

asym\_bcm\_cav4cQ\_bcm\_dg\_us\_agg\_avg\_mean vs Slug, Sign Corrected



Right In:  $-60.159 \pm 44.248$   $\chi^2/\text{NDF}$ : 22.7/32

Left Out:  $-13.966 \pm 48.735$   $\chi^2/\text{NDF}$ : 8.1/24

Right Out:  $-78.947 \pm 43.969$   $\chi^2/\text{NDF}$ : 24.3/36

Left In:  $31.477 \pm 46.483$   $\chi^2/\text{NDF}$ : 7.8/22

Left:  $9.830 \pm 33.637$   $\chi^2/\text{NDF}$ : 16.4/47

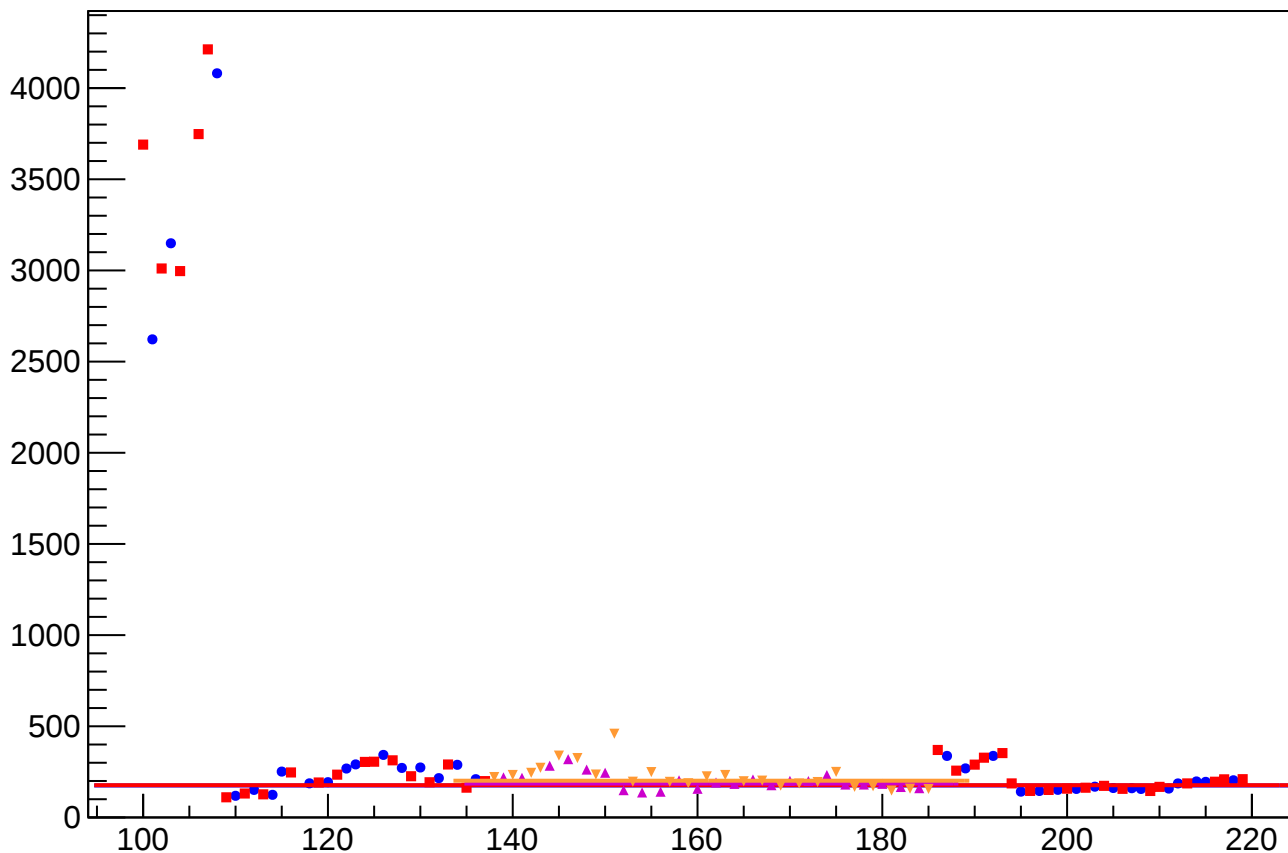
Right:  $-69.612 \pm 31.189$   $\chi^2/\text{NDF}$ : 47.1/69

In:  $-16.597 \pm 32.049$   $\chi^2/\text{NDF}$ : 32.6/55

Out:  $-49.788 \pm 32.646$   $\chi^2/\text{NDF}$ : 33.4/61

All:  $-32.886 \pm 22.870$   $\chi^2/\text{NDF}$ : 66.5/117

asym\_bcm\_cav4cQ\_bcm\_dg\_us\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 175.351+/-0.031  $\chi^2/\text{NDF}$ : 4578989.9/32

Left Out: 201.503+/-0.034  $\chi^2/\text{NDF}$ : 1854905.1/24

Right Out: 176.827+/-0.031  $\chi^2/\text{NDF}$ : 5459015.1/36

Left In: 185.878+/-0.033  $\chi^2/\text{NDF}$ : 1380877.6/22

Left: 193.321+/-0.024  $\chi^2/\text{NDF}$ : 3343425.2/47

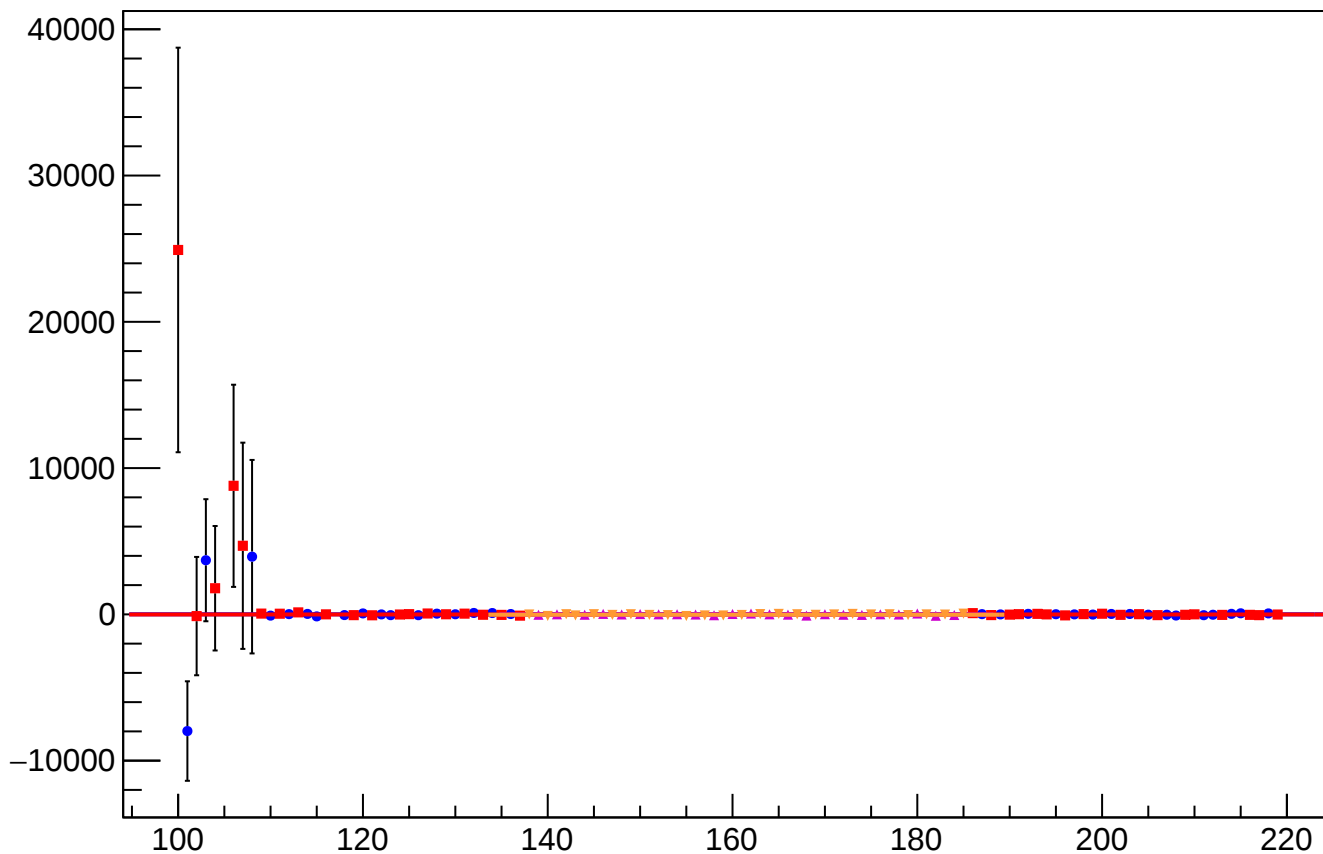
Right: 176.094+/-0.022  $\chi^2/\text{NDF}$ : 10039125.2/69

In: 180.356+/-0.023  $\chi^2/\text{NDF}$ : 6013685.2/55

Out: 187.900+/-0.023  $\chi^2/\text{NDF}$ : 7596565.6/61

All: 184.058+/-0.016  $\chi^2/\text{NDF}$ : 13664639.7/11

asym\_bcm\_cav4cQ\_bcm\_dg\_us\_agg\_dd\_mean vs Slug, Sign Corrected



Right In:  $5.844 \pm 8.139$   $\chi^2/\text{NDF}$ : 36.7/32

Left Out:  $-24.144 \pm 8.076$   $\chi^2/\text{NDF}$ : 24.9/24

Right Out:  $-6.441 \pm 7.983$   $\chi^2/\text{NDF}$ : 37.9/36

Left In:  $-5.924 \pm 8.340$   $\chi^2/\text{NDF}$ : 21.0/22

Left:  $-15.326 \pm 5.802$   $\chi^2/\text{NDF}$ : 48.4/47

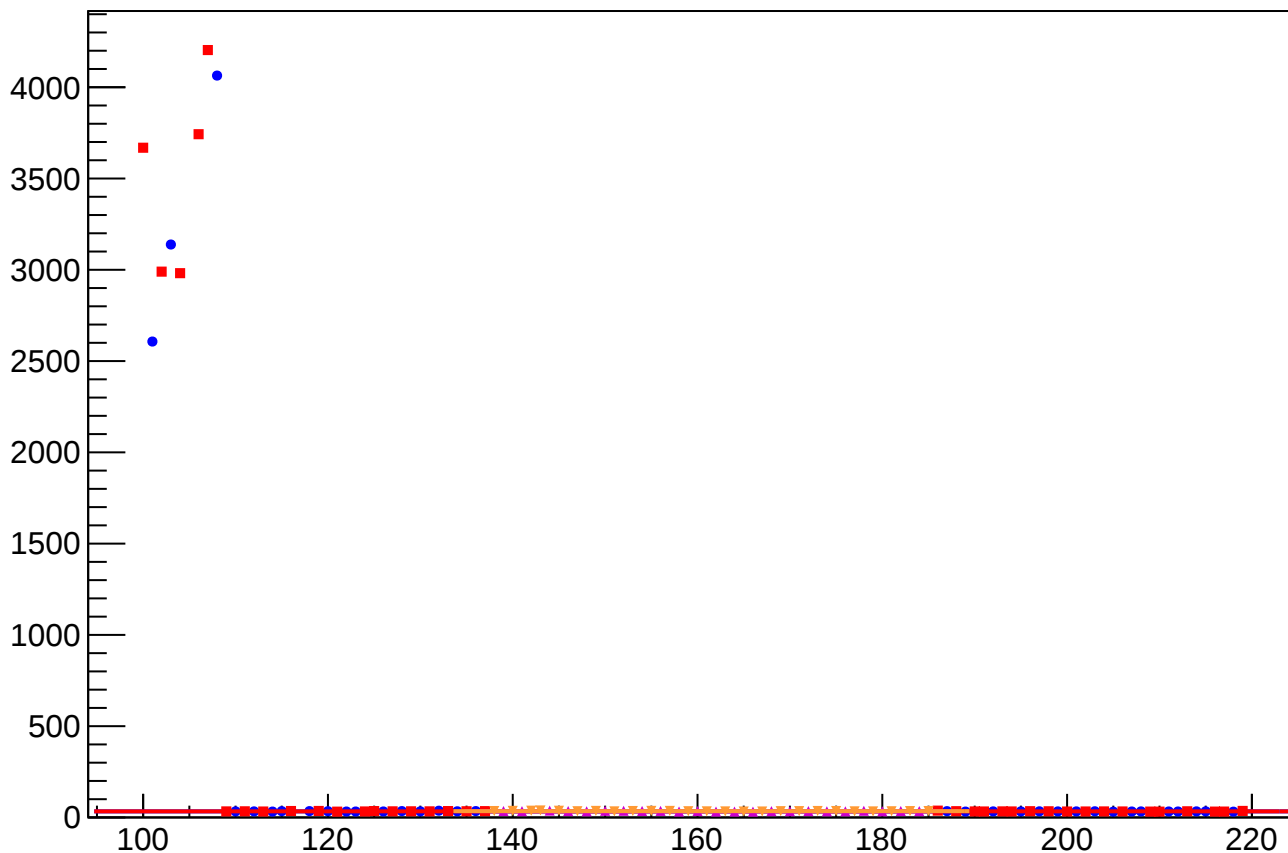
Right:  $-0.417 \pm 5.699$   $\chi^2/\text{NDF}$ : 75.8/69

In:  $0.103 \pm 5.825$   $\chi^2/\text{NDF}$ : 58.7/55

Out:  $-15.189 \pm 5.678$   $\chi^2/\text{NDF}$ : 65.3/61

All:  $-7.739 \pm 4.066$   $\chi^2/\text{NDF}$ : 127.5/117

asym\_bcm\_cav4cQ\_bcm\_dg\_us\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 33.291+/-0.006  $\chi^2/\text{NDF}$ : 3024428.9/32

Left Out: 34.617+/-0.006  $\chi^2/\text{NDF}$ : 57868.4/24

Right Out: 33.442+/-0.006  $\chi^2/\text{NDF}$ : 3485496.4/36

Left In: 34.682+/-0.006  $\chi^2/\text{NDF}$ : 59834.3/22

Left: 34.649+/-0.004  $\chi^2/\text{NDF}$ : 117764.0/47

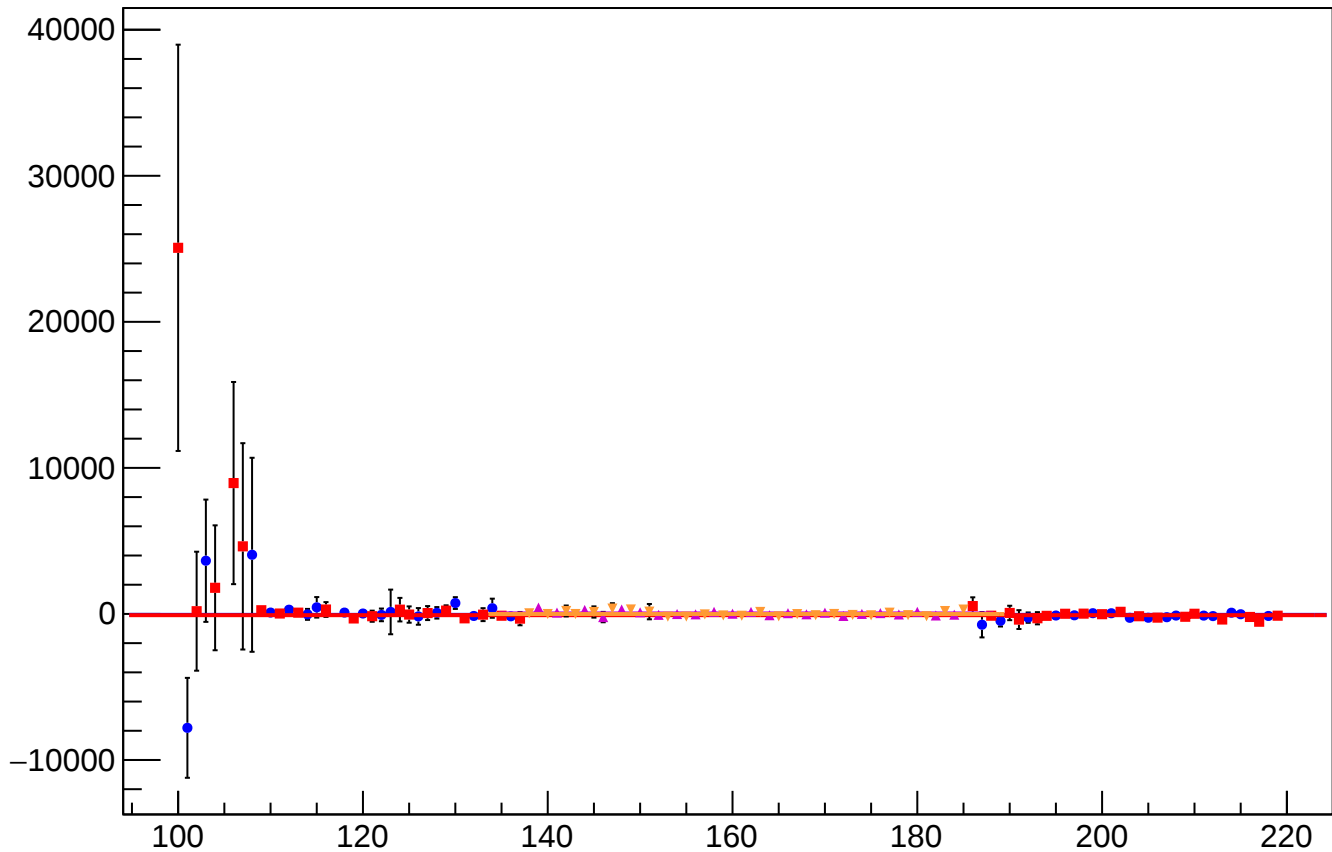
Right: 33.368+/-0.004  $\chi^2/\text{NDF}$ : 6510275.4/69

In: 33.969+/-0.004  $\chi^2/\text{NDF}$ : 3112764.3/55

Out: 34.023+/-0.004  $\chi^2/\text{NDF}$ : 3564813.5/61

All: 33.997+/-0.003  $\chi^2/\text{NDF}$ : 6677664.0/117

asym\_bcm\_cav4cQ\_bcm\_dg\_ds\_agg\_avg\_mean vs Slug, Sign Corrected



Right In:  $-63.837 \pm 44.123$   $\chi^2/\text{NDF}$ : 22.4/32

Left Out:  $-7.558 \pm 48.662$   $\chi^2/\text{NDF}$ : 8.8/24

Right Out:  $-84.807 \pm 43.812$   $\chi^2/\text{NDF}$ : 23.6/36

Left In:  $34.977 \pm 46.421$   $\chi^2/\text{NDF}$ : 7.1/22

Left:  $14.712 \pm 33.589$   $\chi^2/\text{NDF}$ : 16.3/47

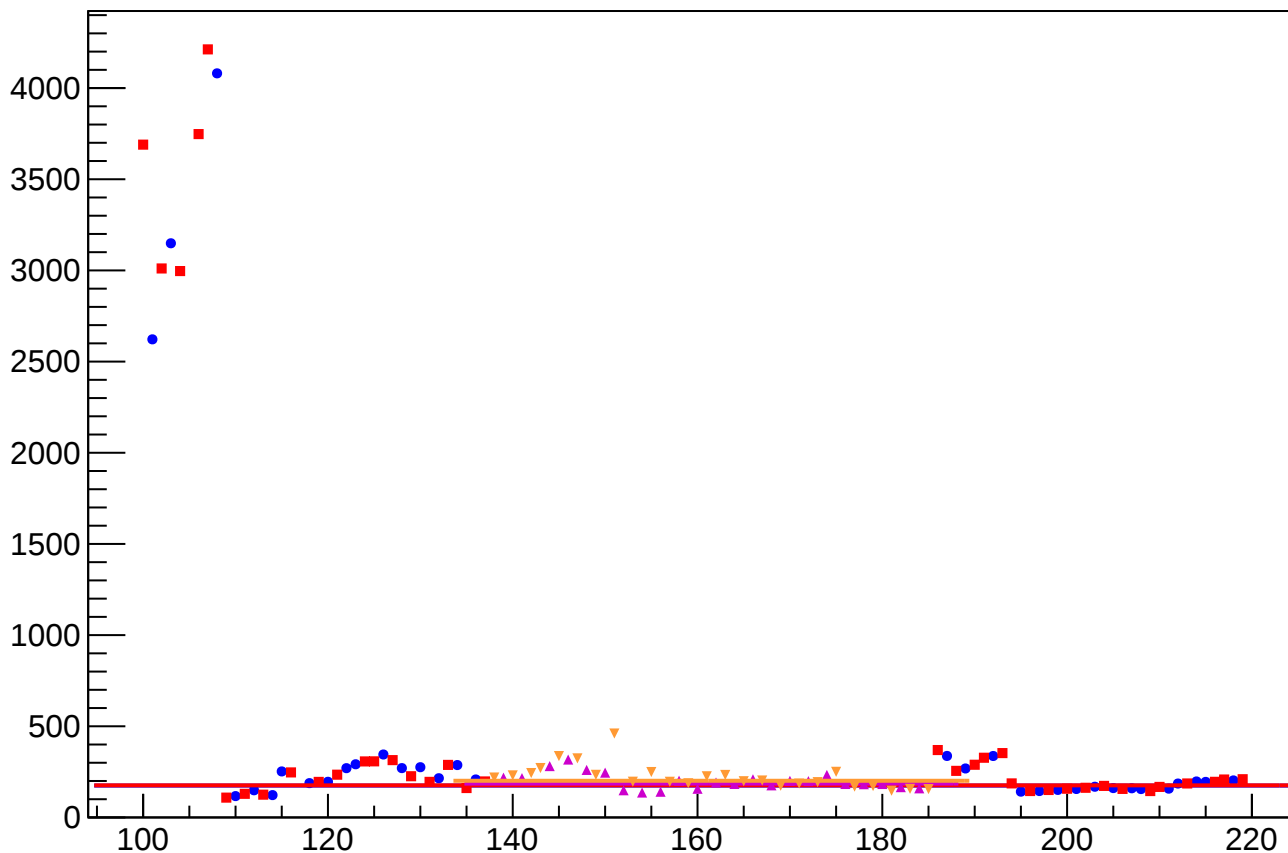
Right:  $-74.396 \pm 31.089$   $\chi^2/\text{NDF}$ : 46.1/69

In:  $-16.936 \pm 31.981$   $\chi^2/\text{NDF}$ : 31.9/55

Out:  $-50.223 \pm 32.560$   $\chi^2/\text{NDF}$ : 33.7/61

All:  $-33.281 \pm 22.816$   $\chi^2/\text{NDF}$ : 66.2/117

asym\_bcm\_cav4cQ\_bcm\_dg\_ds\_agg\_avg\_rms vs Slug, Sign Corrected



Right In: 174.780+/-0.031  $\chi^2/\text{NDF}$ : 4608734.3/32

Left Out: 201.198+/-0.034  $\chi^2/\text{NDF}$ : 1848437.4/24

Right Out: 176.053+/-0.031  $\chi^2/\text{NDF}$ : 5508919.1/36

Left In: 185.627+/-0.033  $\chi^2/\text{NDF}$ : 1371411.2/22

Left: 193.046+/-0.024  $\chi^2/\text{NDF}$ : 3327061.1/47

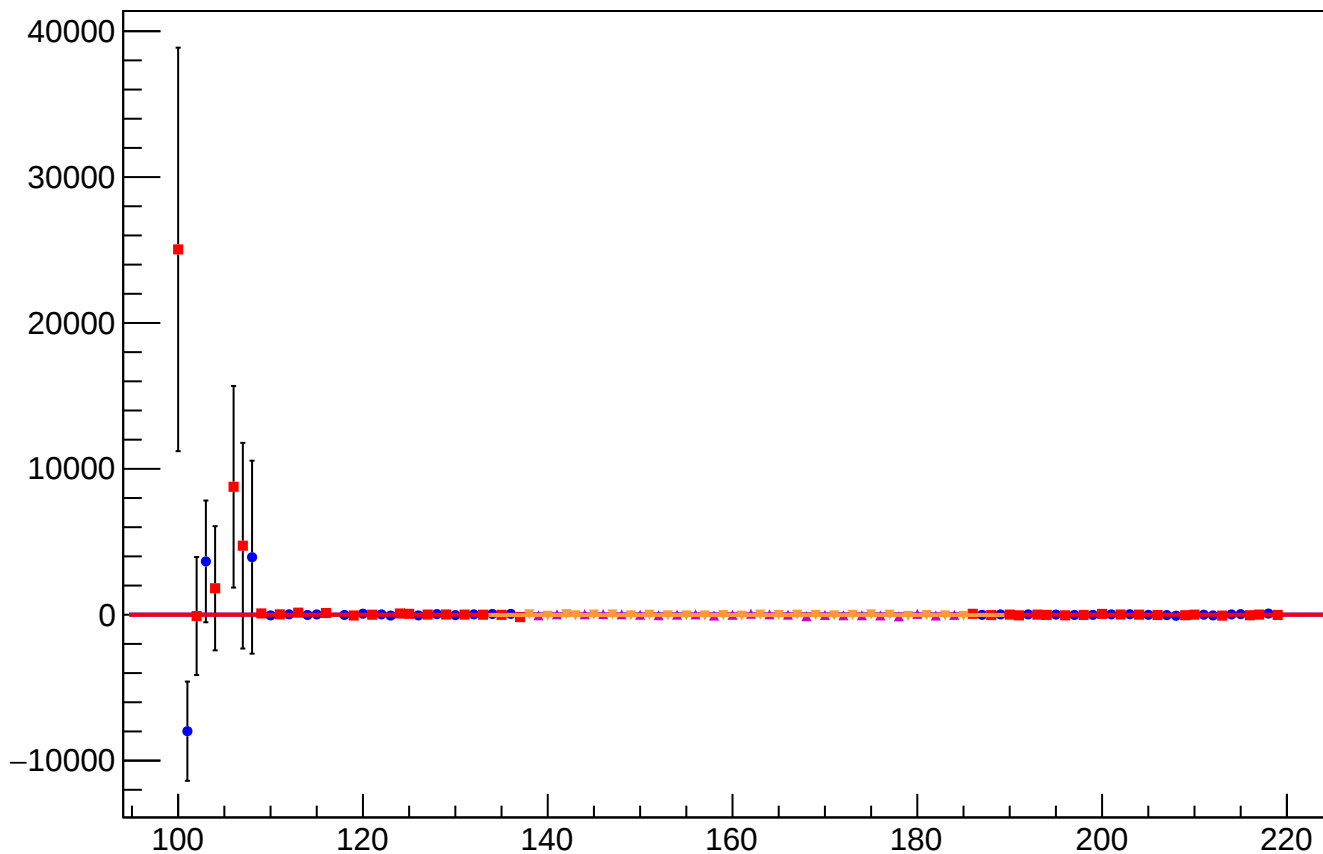
Right: 175.421+/-0.022  $\chi^2/\text{NDF}$ : 10118491.0/69

In: 179.929+/-0.023  $\chi^2/\text{NDF}$ : 6037515.8/55

Out: 187.310+/-0.023  $\chi^2/\text{NDF}$ : 7652304.2/61

All: 183.553+/-0.016  $\chi^2/\text{NDF}$ : 13742139.3/137

asym\_bcm\_cav4cQ\_bcm\_dg\_ds\_agg\_dd\_mean vs Slug, Sign Corrected



Right In: 8.831+/-7.360  $\chi^2/\text{NDF}$ : 30.8/32

Left Out: -23.320+/-7.352  $\chi^2/\text{NDF}$ :18.3/24

Right Out: 0.531+/-7.223  $\chi^2/\text{NDF}$ : 42.7/36

Left In: -6.386+/-7.577  $\chi^2/\text{NDF}$ :38.7/22

Left: -15.108+/-5.276  $\chi^2/\text{NDF}$ : 59.6/47

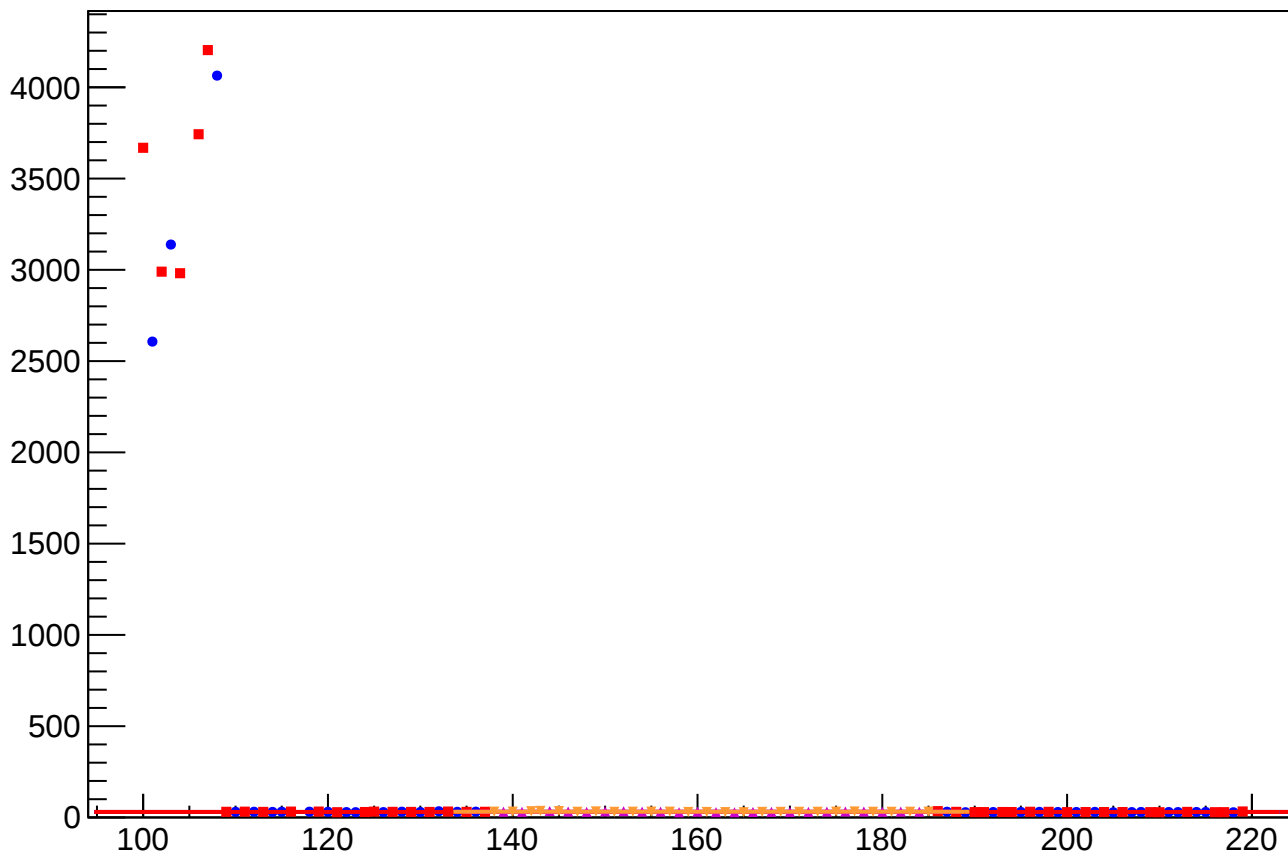
Right: 4.603+/-5.155  $\chi^2/\text{NDF}$ : 74.2/69

In: 1.444+/-5.279  $\chi^2/\text{NDF}$ :71.6/55

Out: -11.184+/-5.152  $\chi^2/\text{NDF}$ :66.4/61

All: -5.024+/-3.687  $\chi^2/\text{NDF}$ : 140.9/117

asym\_bcm\_cav4cQ\_bcm\_dg\_ds\_agg\_dd\_rms vs Slug, Sign Corrected



Right In: 30.093 $\pm$ 0.005  $\chi^2$ /NDF: 3044985.2/32

Left Out: 31.488 $\pm$ 0.005  $\chi^2$ /NDF:81938.2/24

Right Out: 30.233 $\pm$ 0.005  $\chi^2$ /NDF: 3508498.8/36

Left In: 31.475 $\pm$ 0.005  $\chi^2$ /NDF:87797.5/22

Left: 31.482 $\pm$ 0.004  $\chi^2$ /NDF: 169738.8/47

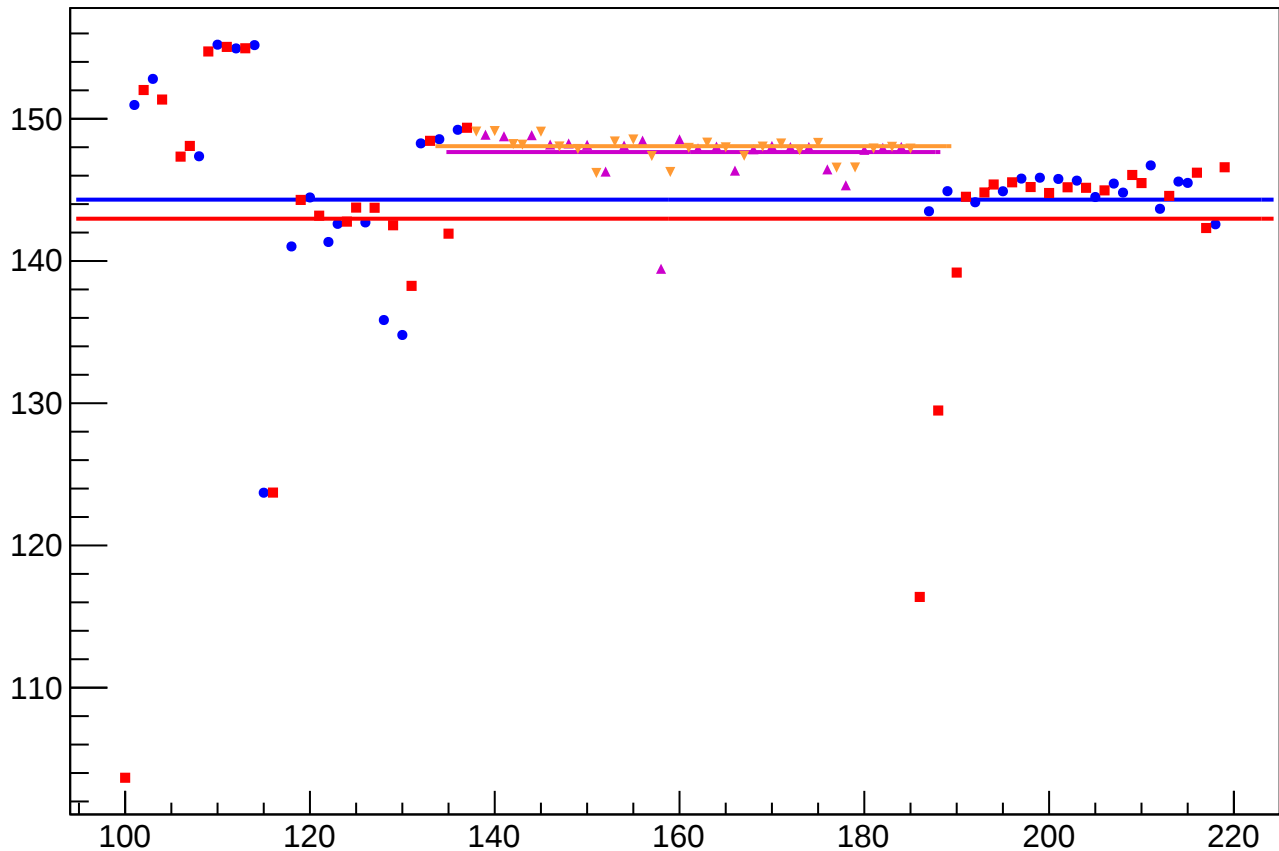
Right: 30.164 $\pm$ 0.004  $\chi^2$ /NDF: 6553853.0/69

In: 30.764 $\pm$ 0.004  $\chi^2$ /NDF:3167034.6/55

Out: 30.850 $\pm$ 0.004  $\chi^2$ /NDF:3620106.8/61

All: 30.808 $\pm$ 0.003  $\chi^2$ /NDF: 6787410.6/117

# yield\_bcm\_an\_ds\_mean vs Slug, Sign Corrected



Right In: 144.315+/-0.000  $\chi^2/\text{NDF}$ : 3512298998.4/32

Left Out: 148.074+/-0.000  $\chi^2/\text{NDF}$ : 65673678.9/24

Right Out: 142.975+/-0.000  $\chi^2/\text{NDF}$ : 7492795511.5/36

Left In: 147.660+/-0.000  $\chi^2/\text{NDF}$ : 343892338.9/22

Left: 147.875+/-0.000  $\chi^2/\text{NDF}$ : 417177881.5/47

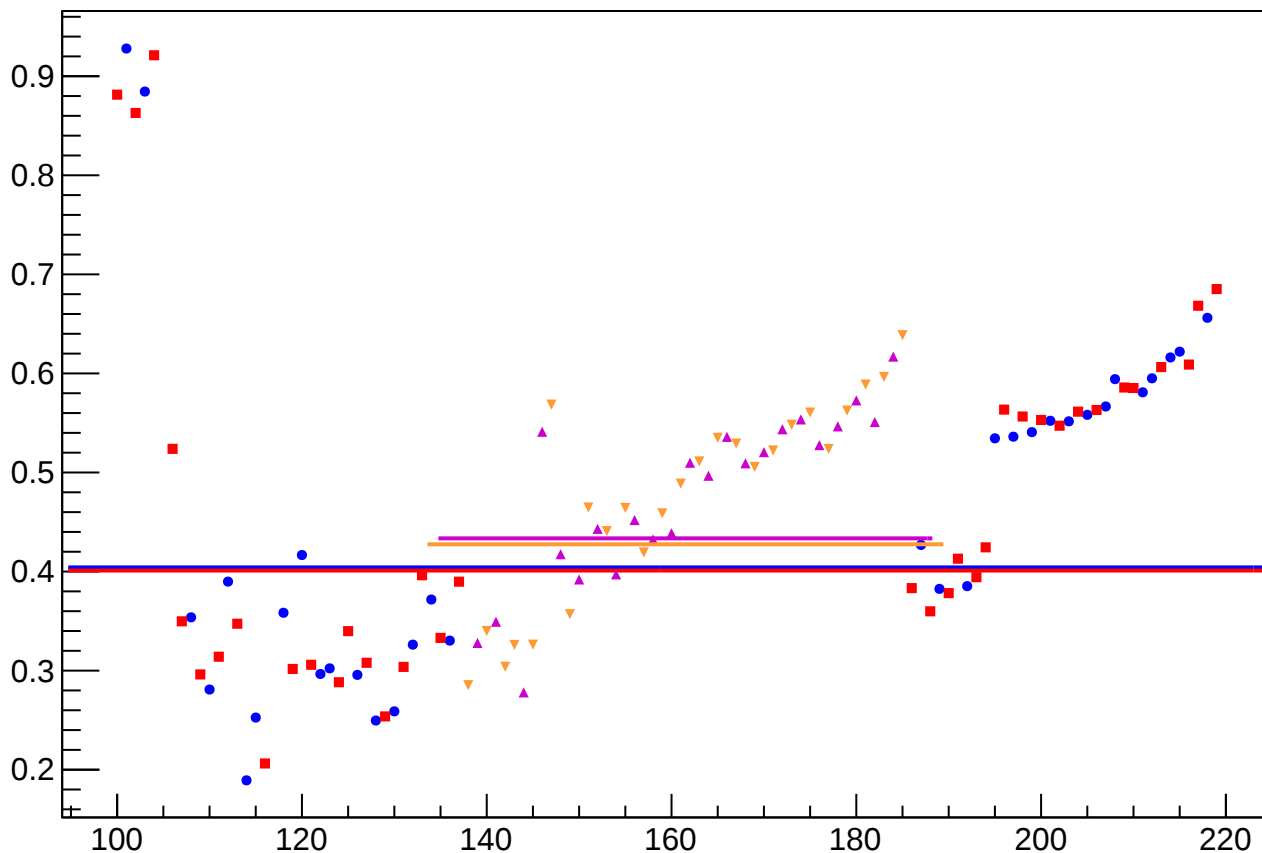
Right: 143.612+/-0.000  $\chi^2/\text{NDF}$ : 11094057131.5/69

In: 145.908+/-0.000  $\chi^2/\text{NDF}$ : 4359606185.7/55

Out: 145.376+/-0.000  $\chi^2/\text{NDF}$ : 8832625029.4/61

All: 145.630+/-0.000  $\chi^2/\text{NDF}$ : 13218870737.0

# yield\_bcm\_an\_ds\_rms vs Slug, Sign Corrected



Right In: 0.404 $\pm$ 0.000  $\chi^2$ /NDF: 3851238.8/32

Left Out: 0.428 $\pm$ 0.000  $\chi^2$ /NDF:1892802.8/24

Right Out: 0.401 $\pm$ 0.000  $\chi^2$ /NDF: 3788881.4/36

Left In: 0.434 $\pm$ 0.000  $\chi^2$ /NDF:1479367.0/22

Left: 0.430 $\pm$ 0.000  $\chi^2$ /NDF: 3375366.2/47

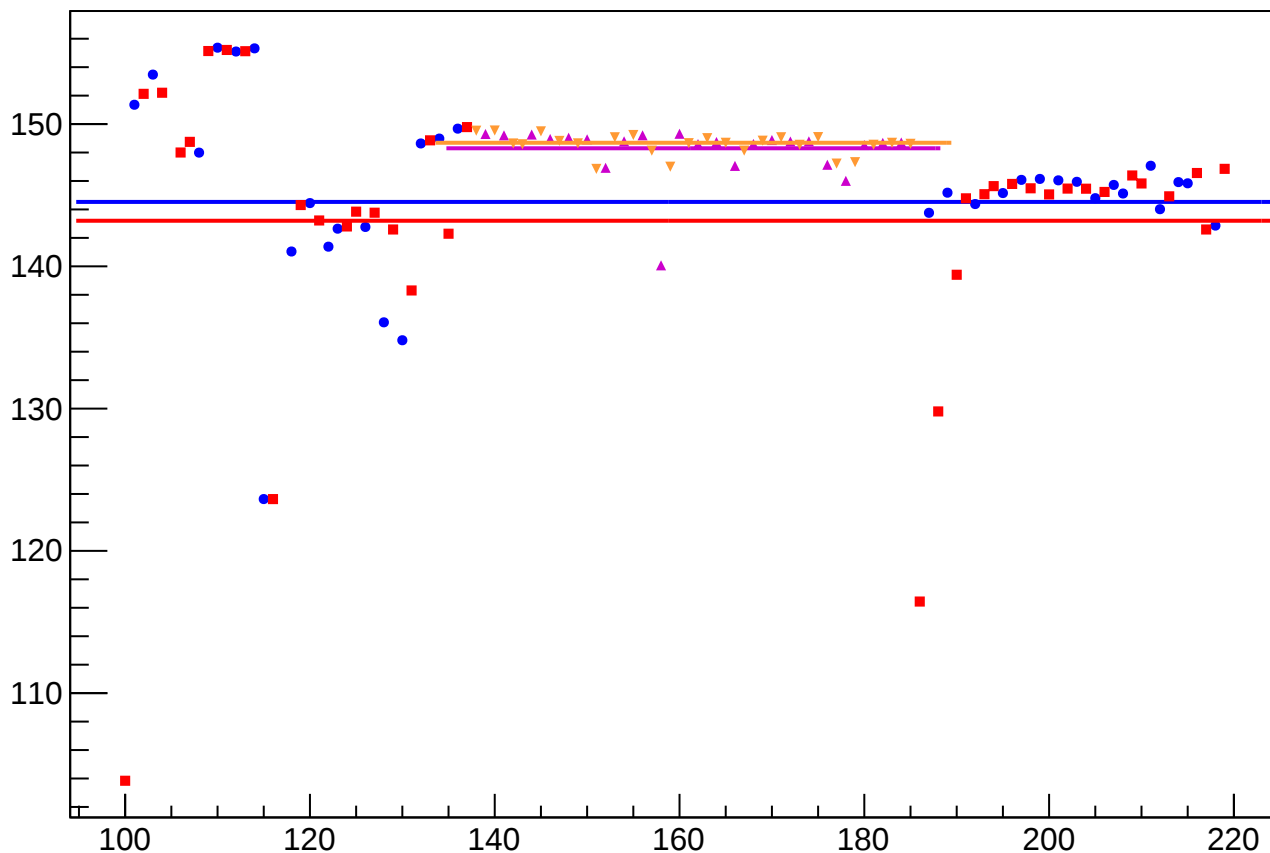
Right: 0.403 $\pm$ 0.000  $\chi^2$ /NDF: 7641094.9/69

In: 0.418 $\pm$ 0.000  $\chi^2$ /NDF:5407963.6/55

Out: 0.414 $\pm$ 0.000  $\chi^2$ /NDF:5750366.0/61

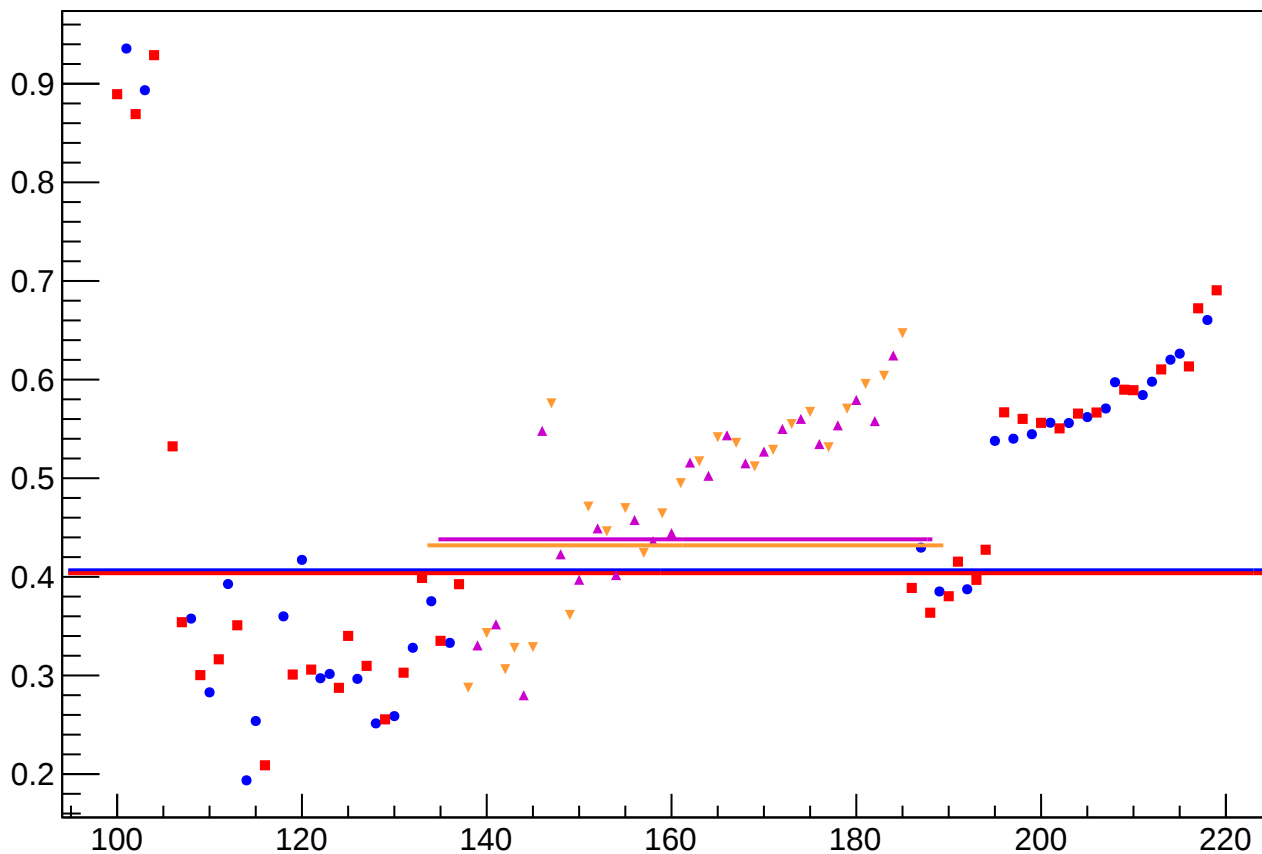
All: 0.416 $\pm$ 0.000  $\chi^2$ /NDF: 11162370.3/117

# yield\_bcm\_an\_ds3\_mean vs Slug, Sign Corrected



|                            |                                       |                        |                                        |
|----------------------------|---------------------------------------|------------------------|----------------------------------------|
| Right In: 144.528+/-0.000  | $\chi^2/\text{NDF}$ : 3562830038.0/32 | Left: 148.500+/-0.000  | $\chi^2/\text{NDF}$ : 391414535.1/47   |
| Left Out: 148.687+/-0.000  | $\chi^2/\text{NDF}$ : 52285197.5/24   | Right: 143.835+/-0.000 | $\chi^2/\text{NDF}$ : 11094020191.8/69 |
| Right Out: 143.205+/-0.000 | $\chi^2/\text{NDF}$ : 7445560257.7/36 | In: 146.314+/-0.000    | $\chi^2/\text{NDF}$ : 4523575911.7/55  |
| Left In: 148.298+/-0.000   | $\chi^2/\text{NDF}$ : 332527463.6/22  | Out: 145.775+/-0.000   | $\chi^2/\text{NDF}$ : 8944729215.6/61  |
|                            |                                       | All: 146.033+/-0.000   | $\chi^2/\text{NDF}$ : 13495161690.0    |

# yield\_bcm\_an\_ds3\_rms vs Slug, Sign Corrected



Right In: 0.407 $\pm$ 0.000  $\chi^2$ /NDF: 3859553.2/32

Left Out: 0.432 $\pm$ 0.000  $\chi^2$ /NDF:1924979.0/24

Right Out: 0.404 $\pm$ 0.000  $\chi^2$ /NDF: 3793867.0/36

Left In: 0.438 $\pm$ 0.000  $\chi^2$ /NDF:1504635.6/22

Left: 0.435 $\pm$ 0.000  $\chi^2$ /NDF: 3432903.3/47

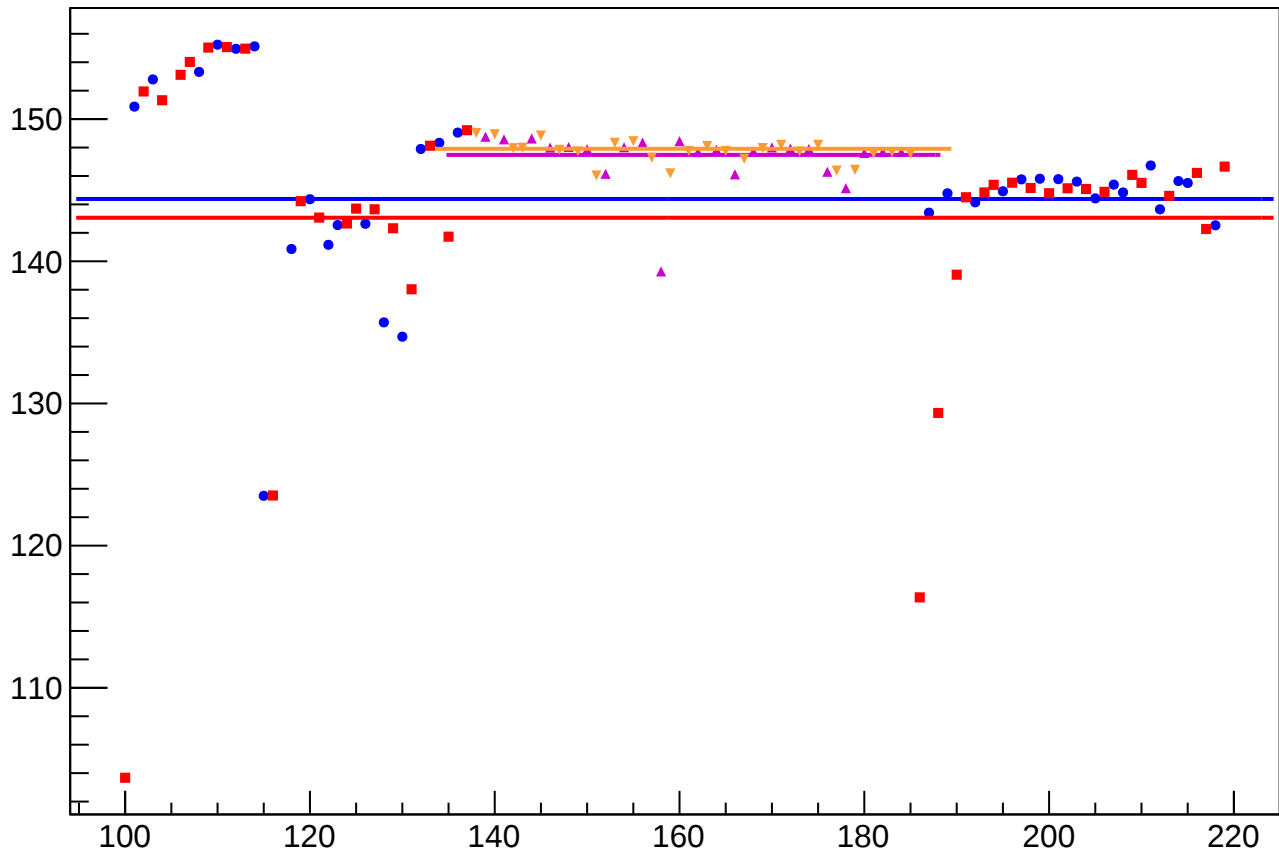
Right: 0.405 $\pm$ 0.000  $\chi^2$ /NDF: 7654238.3/69

In: 0.422 $\pm$ 0.000  $\chi^2$ /NDF:5451676.3/55

Out: 0.417 $\pm$ 0.000  $\chi^2$ /NDF:5795453.0/61

All: 0.419 $\pm$ 0.000  $\chi^2$ /NDF: 11250991.5/117

# yield\_bcm\_an\_us\_mean vs Slug, Sign Corrected



Right In: 144.383+/-0.000  $\chi^2/\text{NDF}$ : 3718132315.8/32

Left Out: 147.912+/-0.000  $\chi^2/\text{NDF}$ : 64463426.1/24

Right Out: 143.063+/-0.000  $\chi^2/\text{NDF}$ : 7865922053.7/36

Left In: 147.483+/-0.000  $\chi^2/\text{NDF}$ : 342674720.4/22

Left: 147.706+/-0.000  $\chi^2/\text{NDF}$ : 415263003.2/47

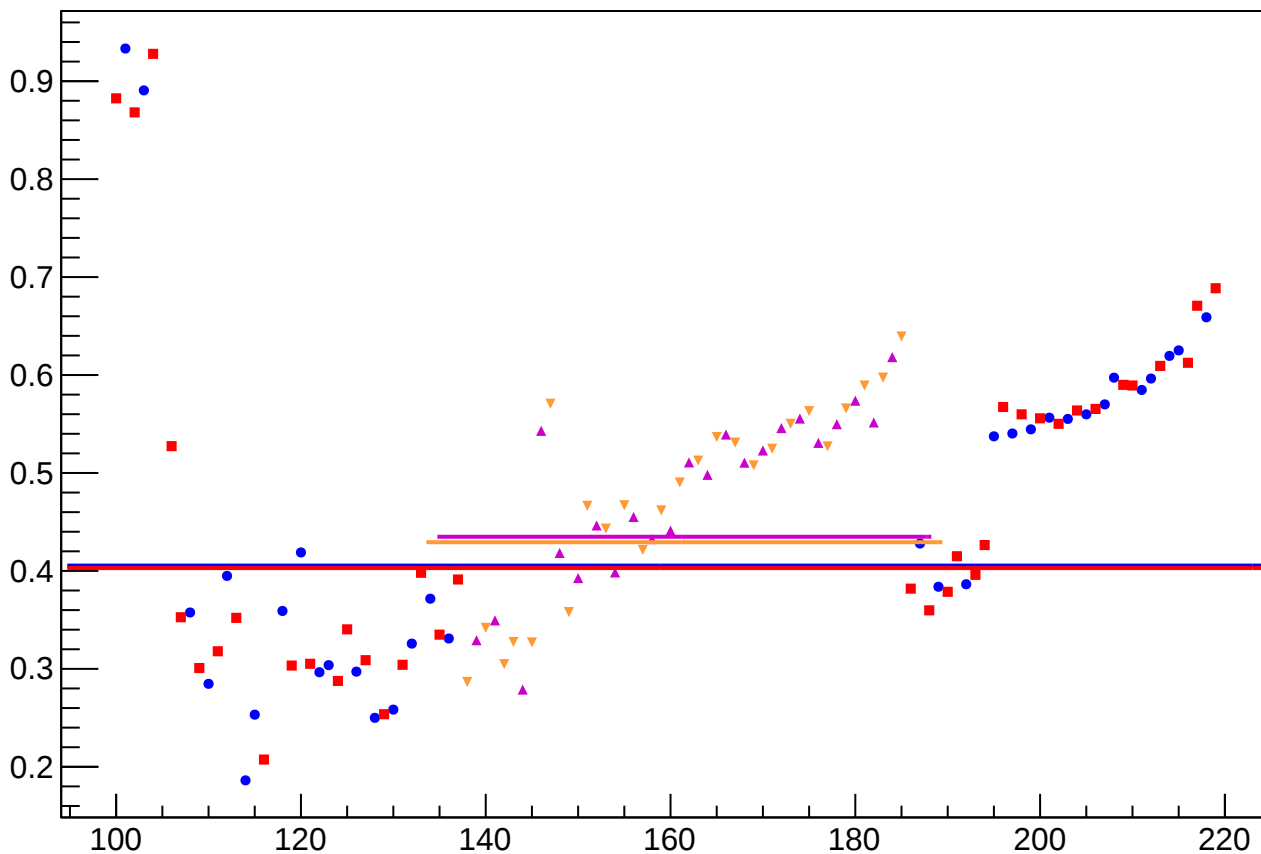
Right: 143.692+/-0.000  $\chi^2/\text{NDF}$ : 11669641694.1/69

In: 145.860+/-0.000  $\chi^2/\text{NDF}$ : 4490073004.4/55

Out: 145.347+/-0.000  $\chi^2/\text{NDF}$ : 9072485942.7/61

All: 145.593+/-0.000  $\chi^2/\text{NDF}$ : 13587101926.0

# yield\_bcm\_an\_us\_rms vs Slug, Sign Corrected



Right In: 0.405 $\pm$ 0.000  $\chi^2$ /NDF: 3891102.2/32

Left Out: 0.429 $\pm$ 0.000  $\chi^2$ /NDF:1891709.3/24

Right Out: 0.403 $\pm$ 0.000  $\chi^2$ /NDF: 3797216.6/36

Left In: 0.435 $\pm$ 0.000  $\chi^2$ /NDF:1485915.1/22

Left: 0.432 $\pm$ 0.000  $\chi^2$ /NDF: 3380372.0/47

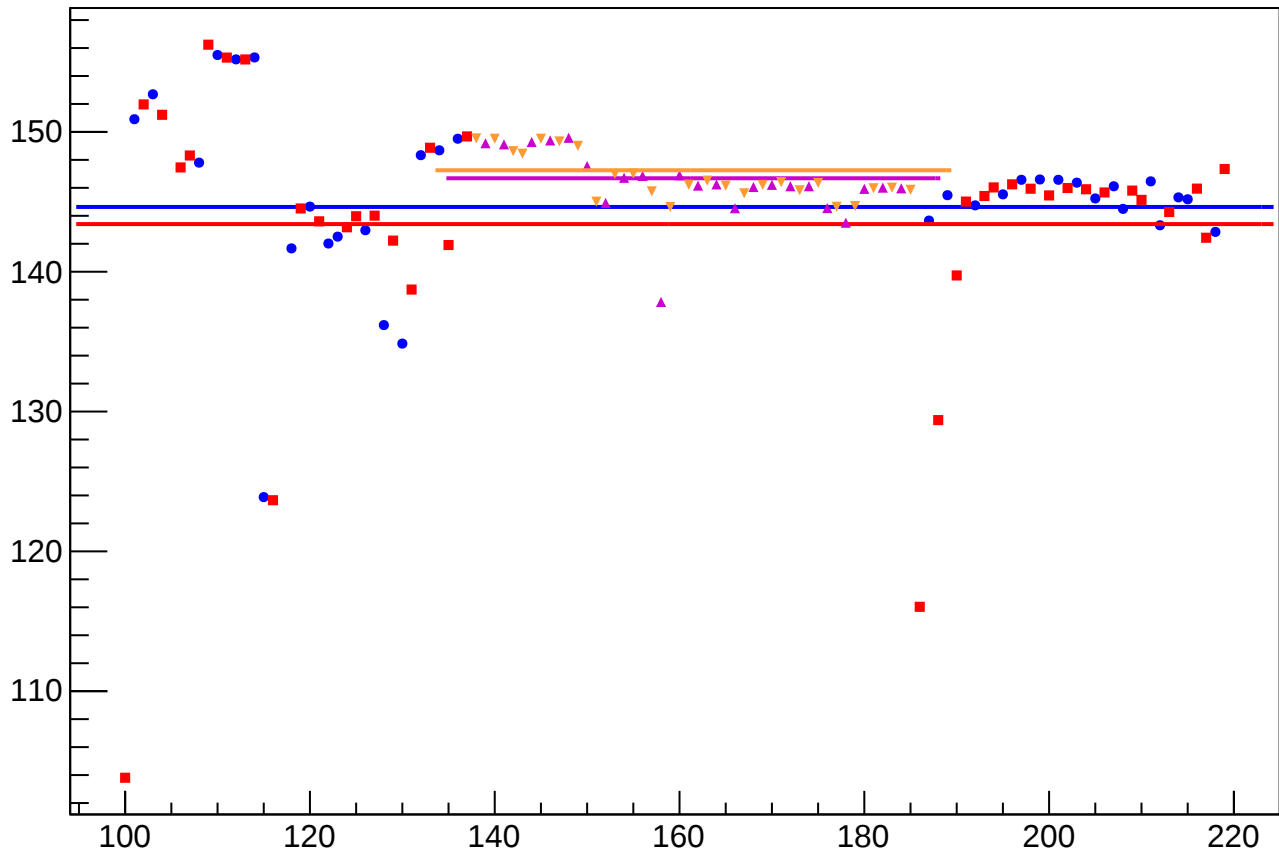
Right: 0.404 $\pm$ 0.000  $\chi^2$ /NDF: 7688964.5/69

In: 0.419 $\pm$ 0.000  $\chi^2$ /NDF:5454417.3/55

Out: 0.415 $\pm$ 0.000  $\chi^2$ /NDF:5756769.9/61

All: 0.417 $\pm$ 0.000  $\chi^2$ /NDF: 11214383.9/117

# yield\_bcm\_dg\_us\_mean vs Slug, Sign Corrected



Right In: 144.634 $\pm$ 0.000  $\chi^2$ /NDF: 3236551260.1/32

Left Out: 147.257 $\pm$ 0.000  $\chi^2$ /NDF: 261906278.3/24

Right Out: 143.408 $\pm$ 0.000  $\chi^2$ /NDF: 7181441337.0/36

Left In: 146.685 $\pm$ 0.000  $\chi^2$ /NDF: 554922388.0/22

Left: 146.981 $\pm$ 0.000  $\chi^2$ /NDF: 830580031.2/47

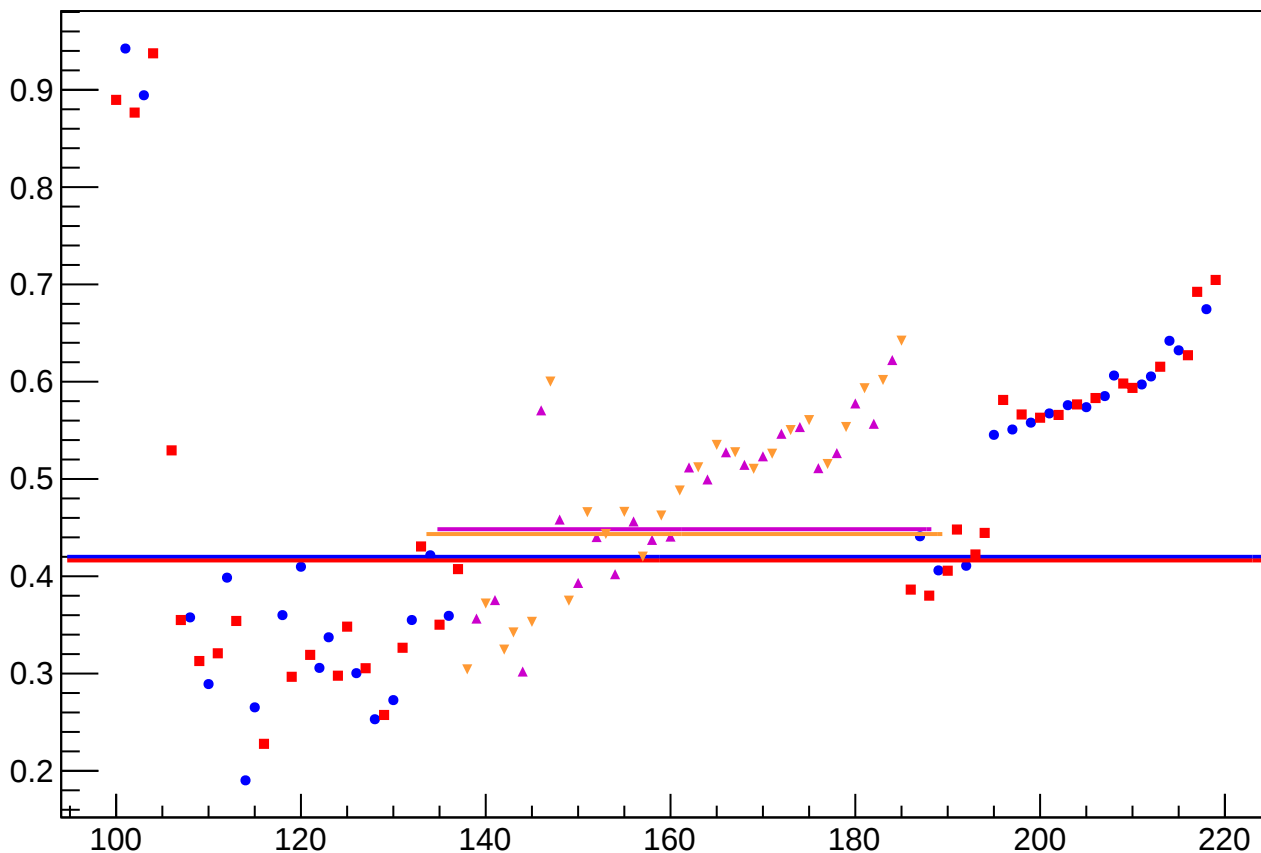
Right: 143.990 $\pm$ 0.000  $\chi^2$ /NDF: 10487028921.3/69

In: 145.621 $\pm$ 0.000  $\chi^2$ /NDF: 3968430440.5/55

Out: 145.231 $\pm$ 0.000  $\chi^2$ /NDF: 8121449387.4/61

All: 145.418 $\pm$ 0.000  $\chi^2$ /NDF: 12103202736.0/118

# yield\_bcm\_dg\_us\_rms vs Slug, Sign Corrected



Right In: 0.420+/-0.000  $\chi^2/\text{NDF}$ : 3760230.1/32

Left Out: 0.443+/-0.000  $\chi^2/\text{NDF}$ :1480479.3/24

Right Out: 0.416+/-0.000  $\chi^2/\text{NDF}$ : 3674580.8/36

Left In: 0.448+/-0.000  $\chi^2/\text{NDF}$ :1120261.8/22

Left: 0.446+/-0.000  $\chi^2/\text{NDF}$ : 2602838.0/47

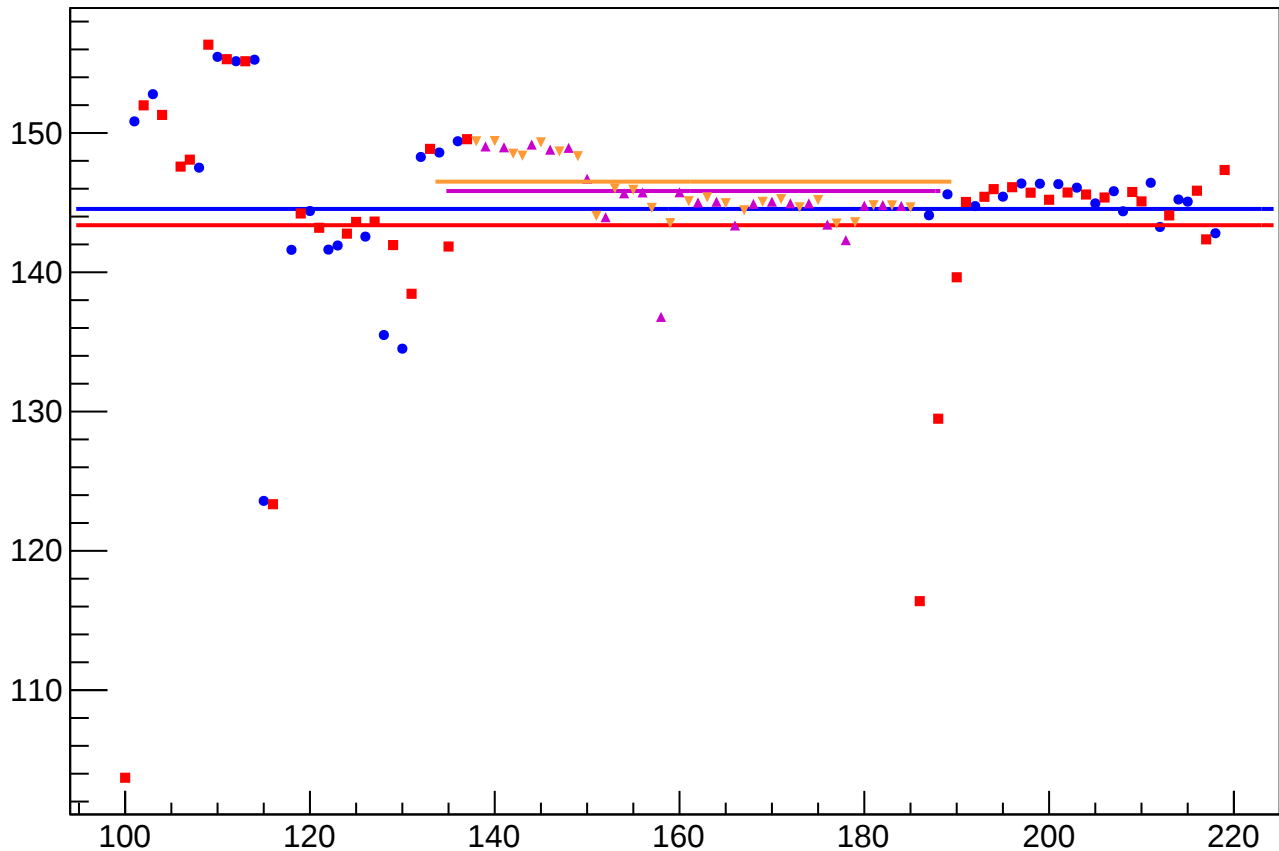
Right: 0.418+/-0.000  $\chi^2/\text{NDF}$ : 7436079.6/69

In: 0.434+/-0.000  $\chi^2/\text{NDF}$ :4948378.2/55

Out: 0.429+/-0.000  $\chi^2/\text{NDF}$ :5222372.2/61

All: 0.431+/-0.000  $\chi^2/\text{NDF}$ : 10174362.7/117

# yield\_bcm\_dg\_ds\_mean vs Slug, Sign Corrected



Right In: 144.548 $\pm$ 0.000  $\chi^2$ /NDF: 3346043335.9/32

Left Out: 146.508 $\pm$ 0.000  $\chi^2$ /NDF: 401248837.9/24

Right Out: 143.379 $\pm$ 0.000  $\chi^2$ /NDF: 7133174690.9/36

Left In: 145.834 $\pm$ 0.000  $\chi^2$ /NDF: 690172810.0/22

Left: 146.184 $\pm$ 0.000  $\chi^2$ /NDF: 1110403123.5/47

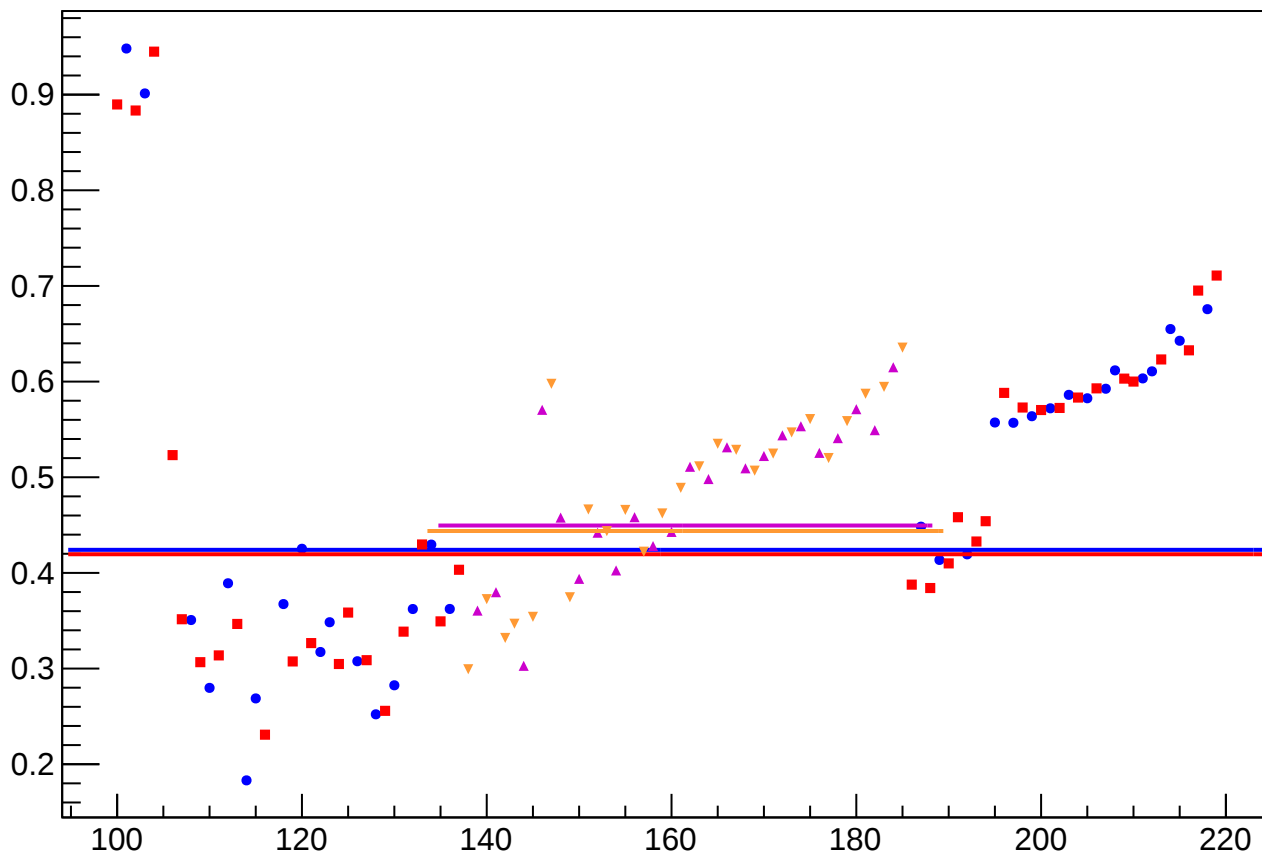
Right: 143.933 $\pm$ 0.000  $\chi^2$ /NDF: 10540580538.4/69

In: 145.173 $\pm$ 0.000  $\chi^2$ /NDF: 4104887110.4/55

Out: 144.874 $\pm$ 0.000  $\chi^2$ /NDF: 7977890963.5/61

All: 145.017 $\pm$ 0.000  $\chi^2$ /NDF: 12090489955.0/100

# yield\_bcm\_dg\_ds\_rms vs Slug, Sign Corrected



Right In: 0.424+/-0.000  $\chi^2/\text{NDF}$ : 3812797.6/32

Left Out: 0.444+/-0.000  $\chi^2/\text{NDF}$ :1460383.7/24

Right Out: 0.419+/-0.000  $\chi^2/\text{NDF}$ : 3710204.2/36

Left In: 0.450+/-0.000  $\chi^2/\text{NDF}$ :1092776.5/22

Left: 0.447+/-0.000  $\chi^2/\text{NDF}$ : 2555905.8/47

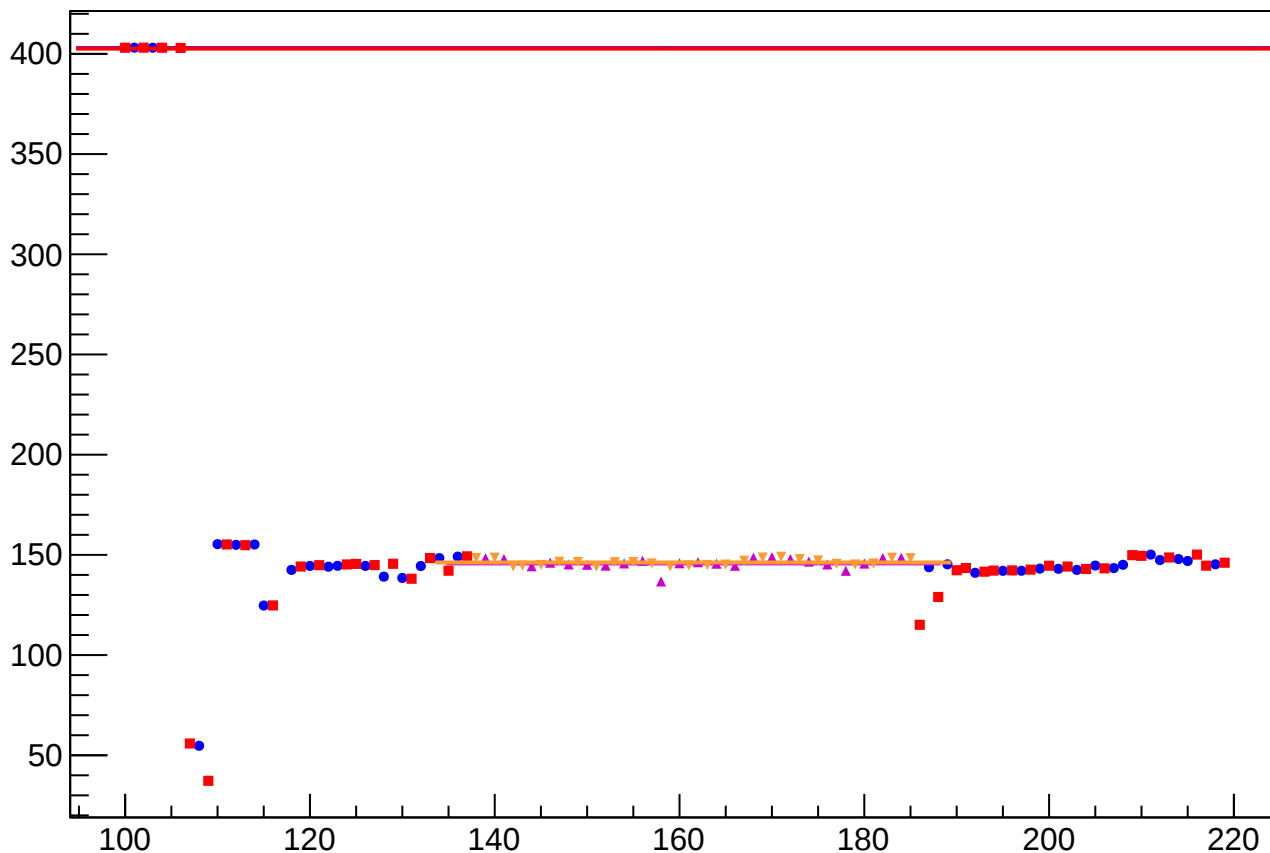
Right: 0.422+/-0.000  $\chi^2/\text{NDF}$ : 7524926.9/69

In: 0.436+/-0.000  $\chi^2/\text{NDF}$ :4959149.7/55

Out: 0.431+/-0.000  $\chi^2/\text{NDF}$ :5224109.7/61

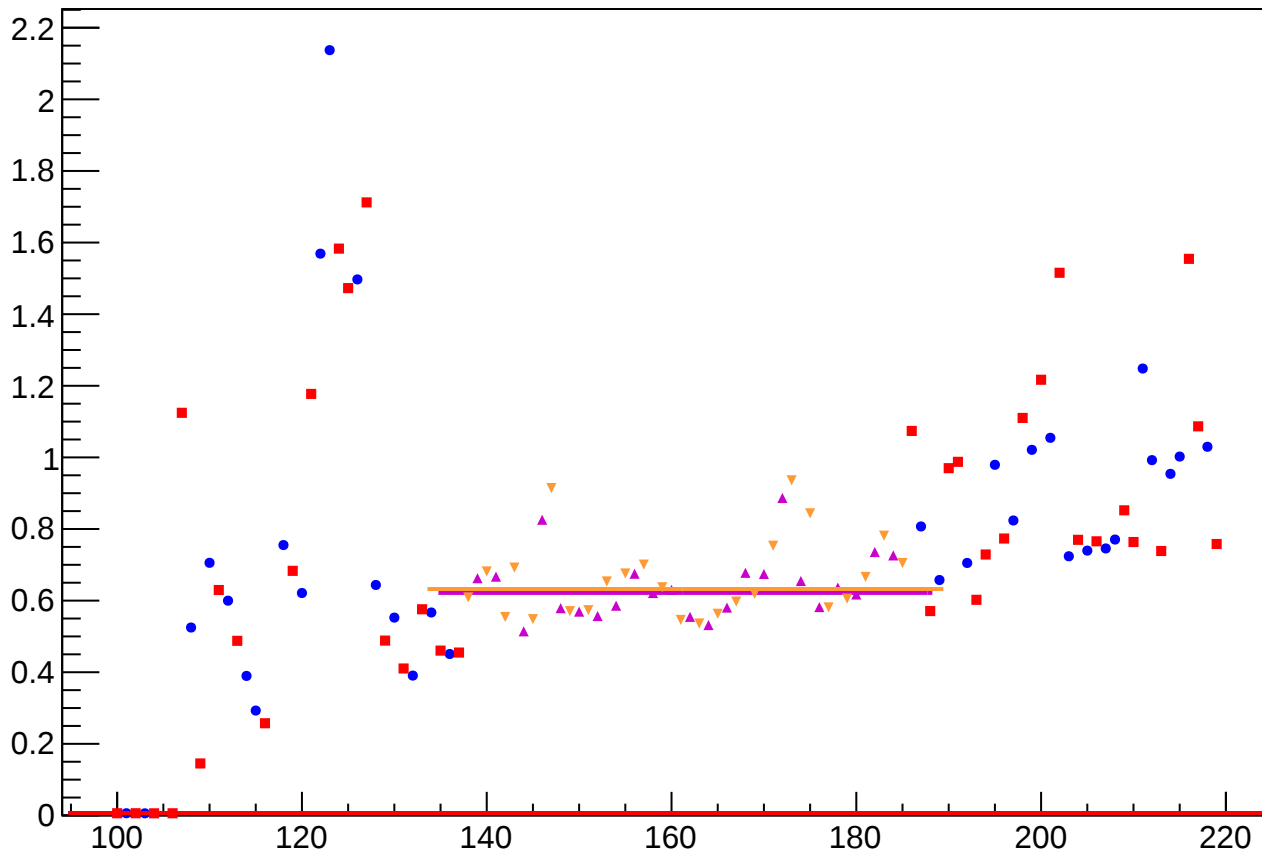
All: 0.434+/-0.000  $\chi^2/\text{NDF}$ : 10188229.0/117

# yield\_cav4bQ\_mean vs Slug, Sign Corrected



|                            |                                          |                        |                                          |
|----------------------------|------------------------------------------|------------------------|------------------------------------------|
| Right In: 402.852+/-0.000  | $\chi^2/\text{NDF}$ : 1942262763544.2/32 | Left: 145.987+/-0.000  | $\chi^2/\text{NDF}$ : 295994641.0/47     |
| Left Out: 146.216+/-0.000  | $\chi^2/\text{NDF}$ : 86042286.3/24      | Right: 402.760+/-0.000 | $\chi^2/\text{NDF}$ : 6156729730198.0    |
| Right Out: 402.678+/-0.000 | $\chi^2/\text{NDF}$ : 4213963413229.5/36 | In: 402.562+/-0.000    | $\chi^2/\text{NDF}$ : 4272632397593.4/55 |
| Left In: 145.755+/-0.000   | $\chi^2/\text{NDF}$ : 206171532.0/22     | Out: 402.418+/-0.000   | $\chi^2/\text{NDF}$ : 6570440262627.8/60 |
|                            |                                          | All: 402.485+/-0.000   | $\chi^2/\text{NDF}$ : 108434164149.0     |

# yield\_cav4bQ\_rms vs Slug, Sign Corrected



Right In: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 27461451.7/32

Left Out: 0.632 $\pm$ 0.000  $\chi^2$ /NDF:613604.5/24

Right Out: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 30491909.0/36

Left In: 0.622 $\pm$ 0.000  $\chi^2$ /NDF:399965.3/22

Left: 0.627 $\pm$ 0.000  $\chi^2$ /NDF: 1017722.4/47

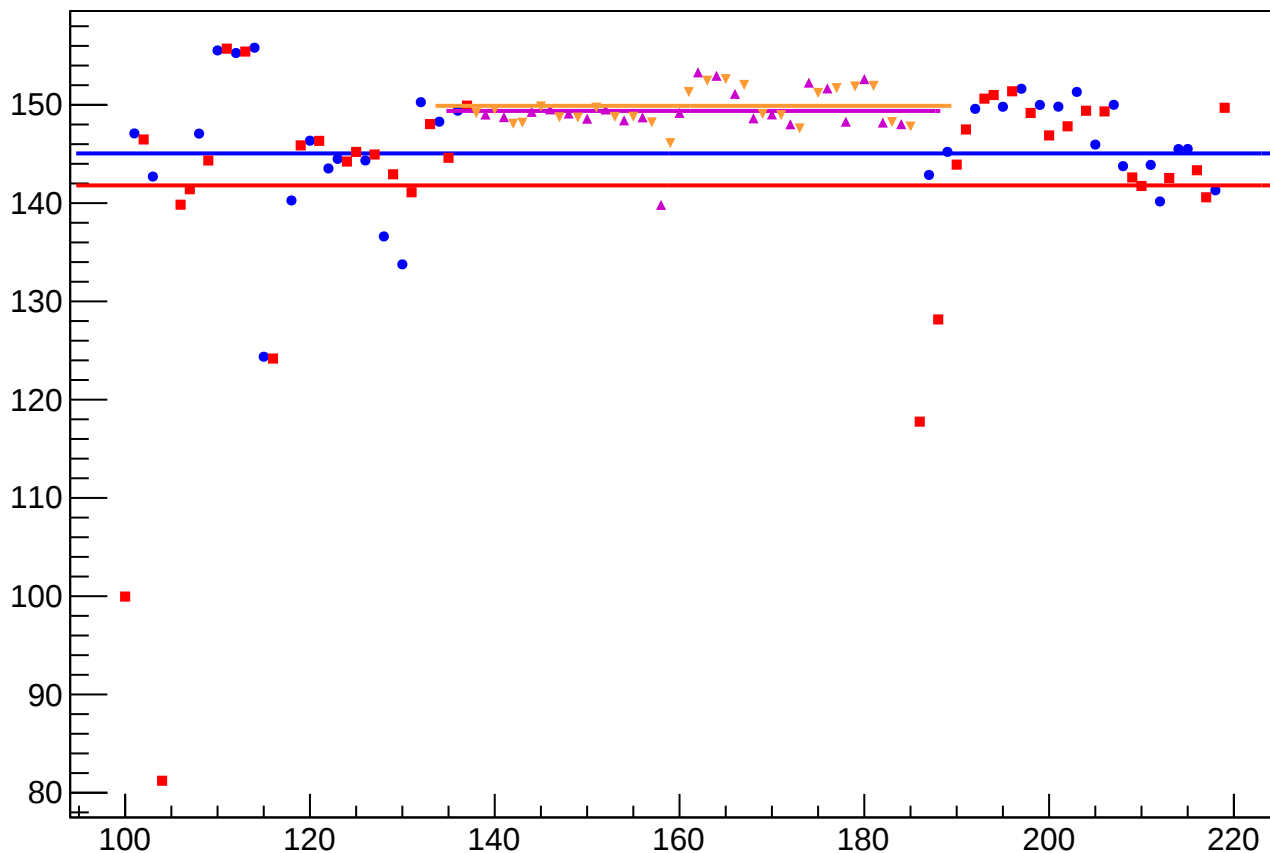
Right: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 57953364.6/69

In: 0.007 $\pm$ 0.000  $\chi^2$ /NDF:54521792.0/55

Out: 0.007 $\pm$ 0.000  $\chi^2$ /NDF:59159196.2/61

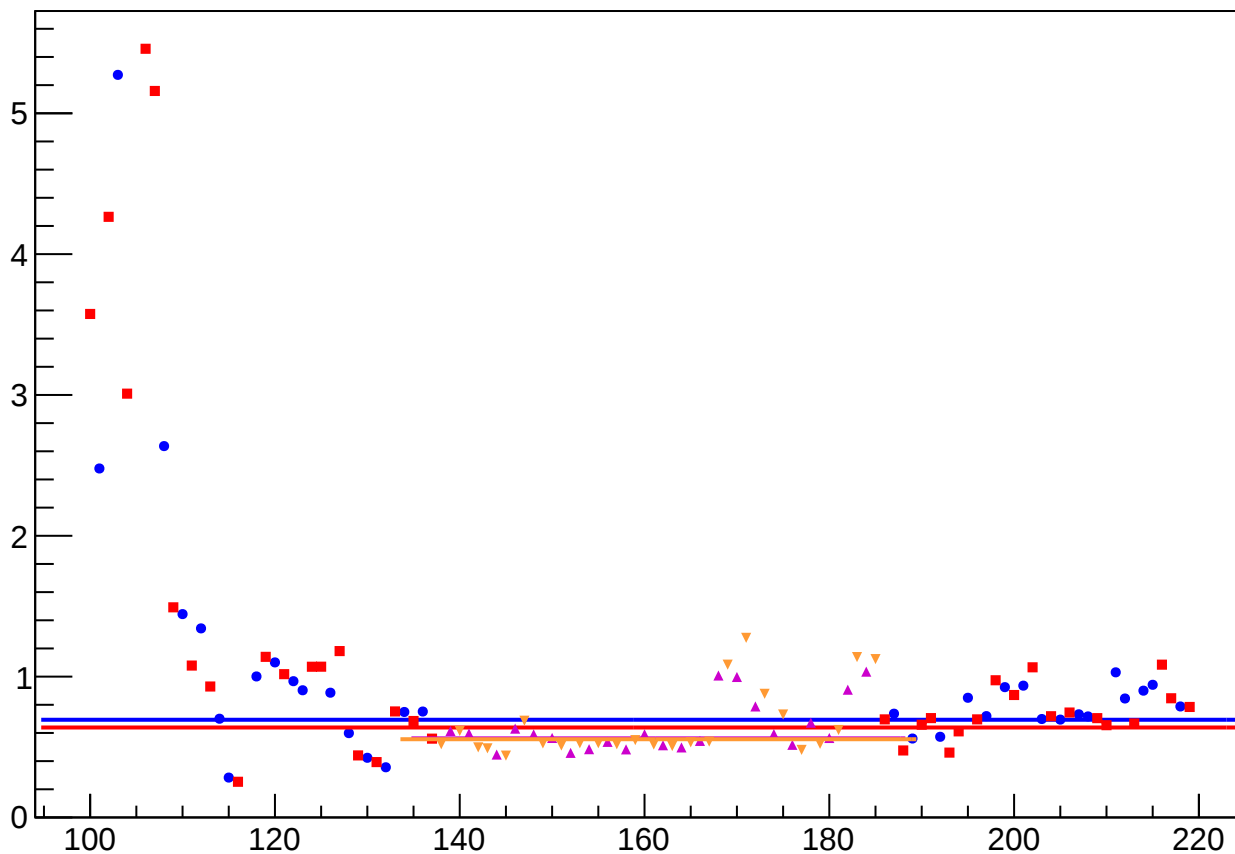
All: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 113681068.7/117

# yield\_cav4cQ\_mean vs Slug, Sign Corrected



|                                |                                |                            |                                |
|--------------------------------|--------------------------------|----------------------------|--------------------------------|
| Right In: 145.058 $\pm$ 0.000  | $\chi^2$ /NDF: 1378949416.9/32 | Left: 149.650 $\pm$ 0.000  | $\chi^2$ /NDF: 604081739.6/47  |
| Left Out: 149.900 $\pm$ 0.000  | $\chi^2$ /NDF: 162845622.6/24  | Right: 143.244 $\pm$ 0.000 | $\chi^2$ /NDF: 4874664502.9/69 |
| Right Out: 141.803 $\pm$ 0.000 | $\chi^2$ /NDF: 3337466648.6/36 | In: 147.817 $\pm$ 0.000    | $\chi^2$ /NDF: 2133482043.4/55 |
| Left In: 149.382 $\pm$ 0.000   | $\chi^2$ /NDF: 434657827.5/22  | Out: 146.666 $\pm$ 0.000   | $\chi^2$ /NDF: 4829109251.4/61 |
|                                |                                | All: 147.204 $\pm$ 0.000   | $\chi^2$ /NDF: 7014921352.2    |

# yield\_cav4cQ\_rms vs Slug, Sign Corrected



Right In:  $0.694 \pm 0.000$   $\chi^2/\text{NDF}$ : 4415753.7/32

Left Out:  $0.555 \pm 0.000$   $\chi^2/\text{NDF}$ : 1773688.1/24

Right Out:  $0.639 \pm 0.000$   $\chi^2/\text{NDF}$ : 5959216.2/36

Left In:  $0.562 \pm 0.000$   $\chi^2/\text{NDF}$ : 1305573.4/22

Left:  $0.559 \pm 0.000$   $\chi^2/\text{NDF}$ : 3081194.0/47

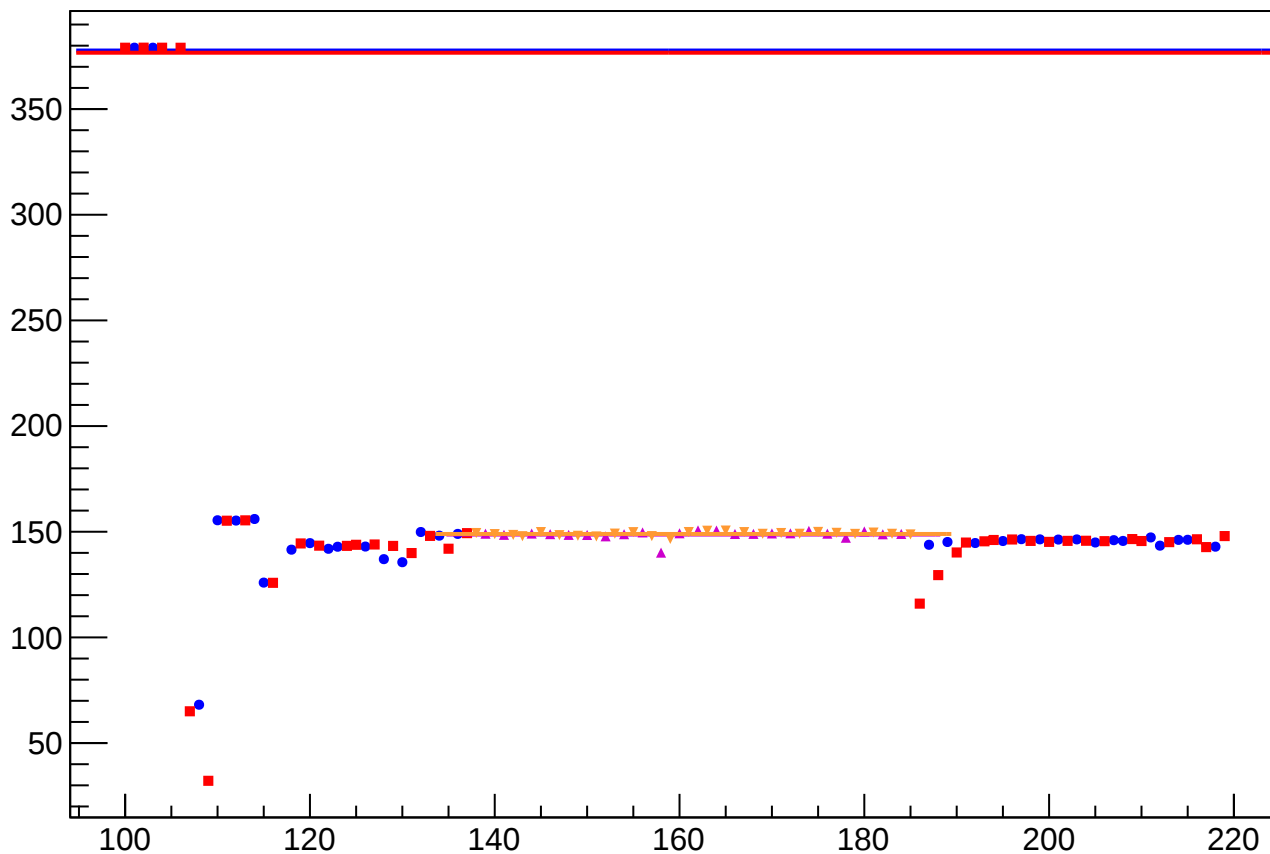
Right:  $0.663 \pm 0.000$   $\chi^2/\text{NDF}$ : 10465218.6/69

In:  $0.610 \pm 0.000$   $\chi^2/\text{NDF}$ : 6317182.2/55

Out:  $0.589 \pm 0.000$   $\chi^2/\text{NDF}$ : 8014119.1/61

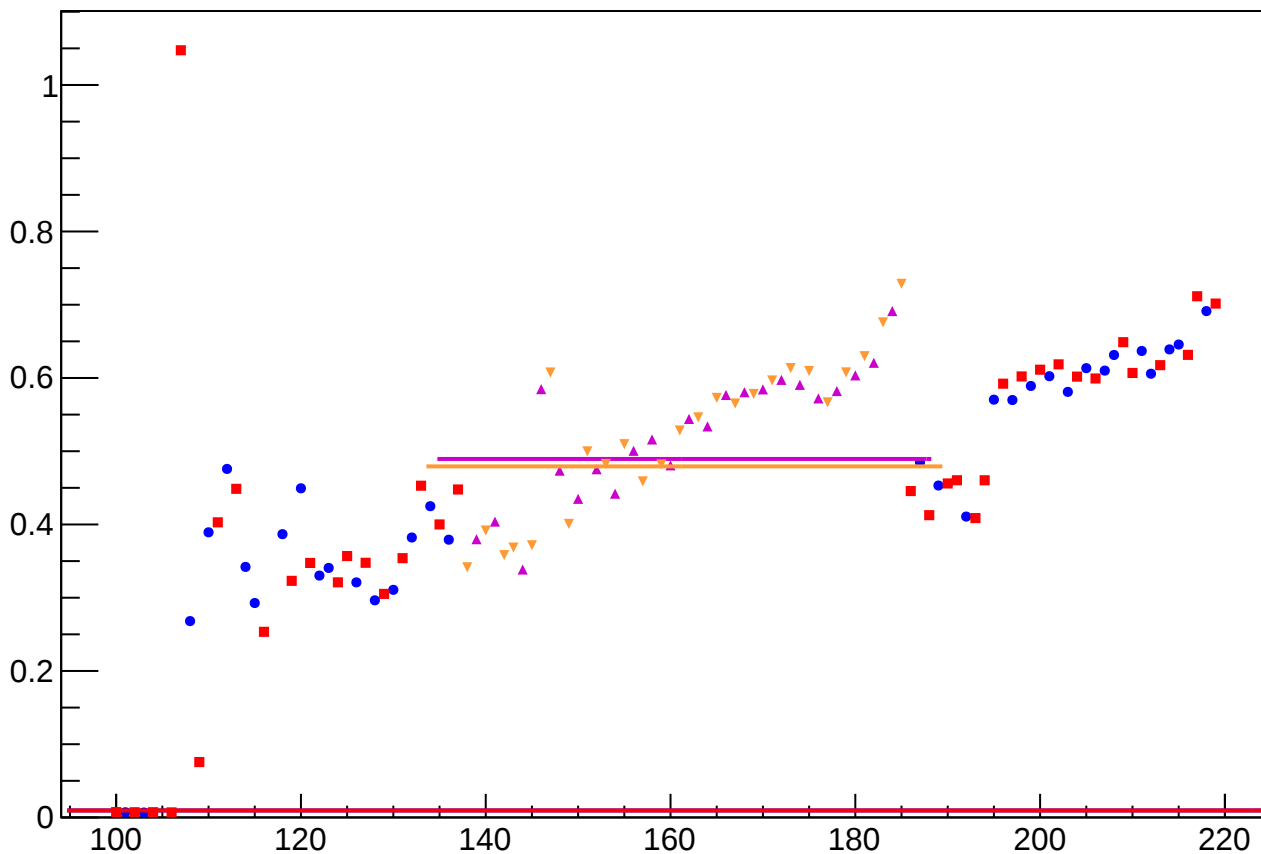
All:  $0.598 \pm 0.000$   $\chi^2/\text{NDF}$ : 14365333.1/117

# yield\_cav4dQ\_mean vs Slug, Sign Corrected



|                                |                                    |                            |                                   |
|--------------------------------|------------------------------------|----------------------------|-----------------------------------|
| Right In: 377.698 $\pm$ 0.000  | $\chi^2$ /NDF: 4320903241147.4/32  | Left: 148.814 $\pm$ 0.000  | $\chi^2$ /NDF: 319467494.9/47     |
| Left Out: 148.944 $\pm$ 0.000  | $\chi^2$ /NDF: 63976941.3/24       | Right: 377.149 $\pm$ 0.000 | $\chi^2$ /NDF: 14826407011565.0   |
| Right Out: 376.669 $\pm$ 0.000 | $\chi^2$ /NDF: 10497970761509.3/36 | In: 376.530 $\pm$ 0.000    | $\chi^2$ /NDF: 7890435154880.8/50 |
| Left In: 148.672 $\pm$ 0.000   | $\chi^2$ /NDF: 252846428.3/22      | Out: 375.556 $\pm$ 0.000   | $\chi^2$ /NDF: 14353061547229.9   |
|                                |                                    | All: 376.012 $\pm$ 0.000   | $\chi^2$ /NDF: 222502748133.0     |

# yield\_cav4dQ\_rms vs Slug, Sign Corrected



Right In: 0.010 $\pm$ 0.000  $\chi^2$ /NDF: 31428949.3/32

Left Out: 0.479 $\pm$ 0.000  $\chi^2$ /NDF:1516566.1/24

Right Out: 0.010 $\pm$ 0.000  $\chi^2$ /NDF: 33032933.1/36

Left In: 0.489 $\pm$ 0.000  $\chi^2$ /NDF:1076134.2/22

Left: 0.484 $\pm$ 0.000  $\chi^2$ /NDF: 2600075.4/47

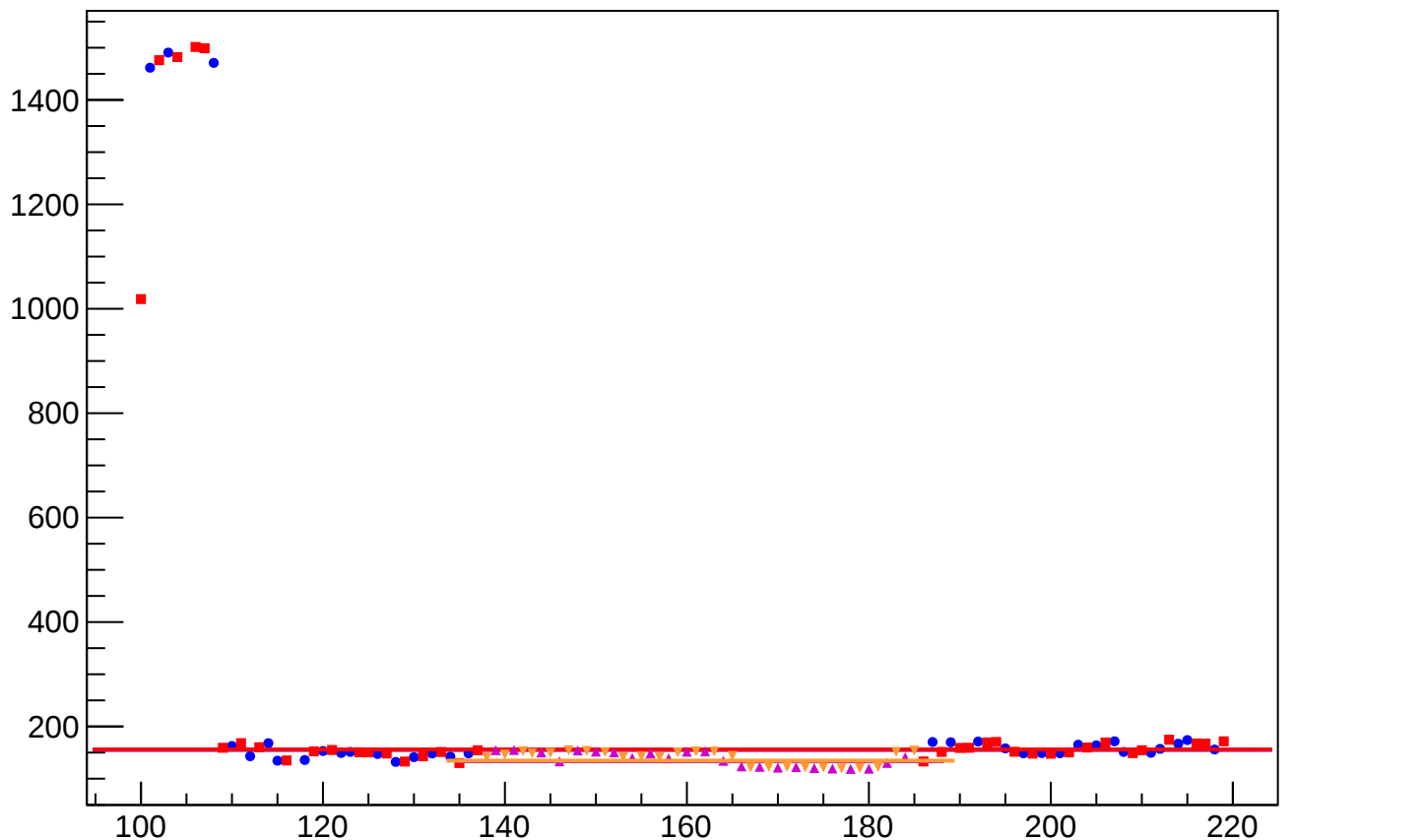
Right: 0.010 $\pm$ 0.000  $\chi^2$ /NDF: 64461884.6/69

In: 0.012 $\pm$ 0.000  $\chi^2$ /NDF:63852123.9/55

Out: 0.012 $\pm$ 0.000  $\chi^2$ /NDF:67357499.6/61

All: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 131209903.8/117

# yield\_bcm0l02\_mean vs Slug, Sign Corrected



Right In: 155.282+/-0.000  $\chi^2/\text{NDF}$ : 26182129662.6/32

Left Out: 134.554+/-0.000  $\chi^2/\text{NDF}$ : 4376966869.3/24

Right Out: 155.858+/-0.000  $\chi^2/\text{NDF}$ : 35434373341.9/36

Left In: 133.337+/-0.000  $\chi^2/\text{NDF}$ : 4303812119.2/22

Left: 133.958+/-0.000  $\chi^2/\text{NDF}$ : 8697951676.8/47

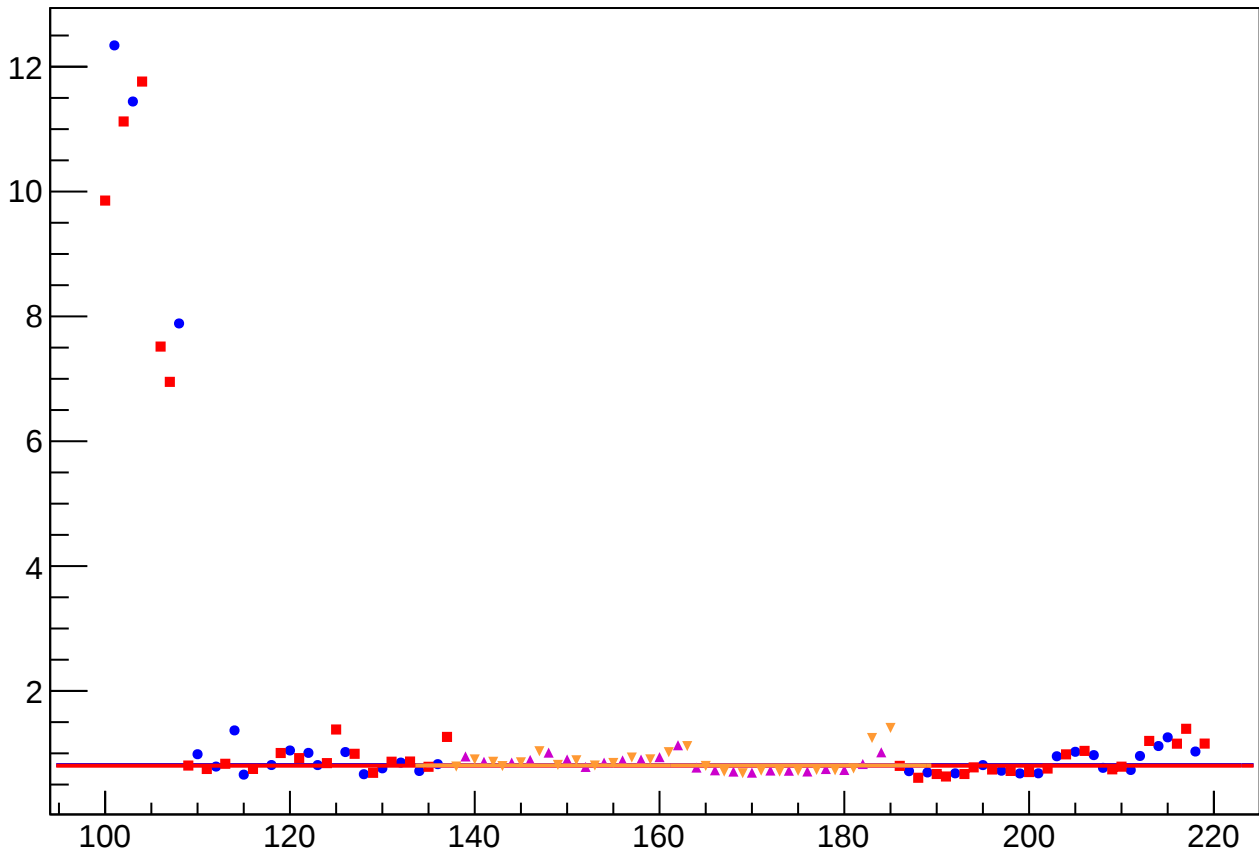
Right: 155.583+/-0.000  $\chi^2/\text{NDF}$ : 61620024875.0/69

In: 143.679+/-0.000  $\chi^2/\text{NDF}$ : 35646798045.3/55

Out: 144.845+/-0.000  $\chi^2/\text{NDF}$ : 45010545272.5/61

All: 144.281+/-0.000  $\chi^2/\text{NDF}$ : 80687527289.

# yield\_bcm0l02\_rms vs Slug, Sign Corrected



Right In: 0.813 $\pm$ 0.000  $\chi^2$ /NDF: 3362231.7/32

Left Out: 0.806 $\pm$ 0.000  $\chi^2$ /NDF:690578.5/24

Right Out: 0.802 $\pm$ 0.000  $\chi^2$ /NDF: 3925262.7/36

Left In: 0.805 $\pm$ 0.000  $\chi^2$ /NDF:480510.8/22

Left: 0.805 $\pm$ 0.000  $\chi^2$ /NDF: 1171131.4/47

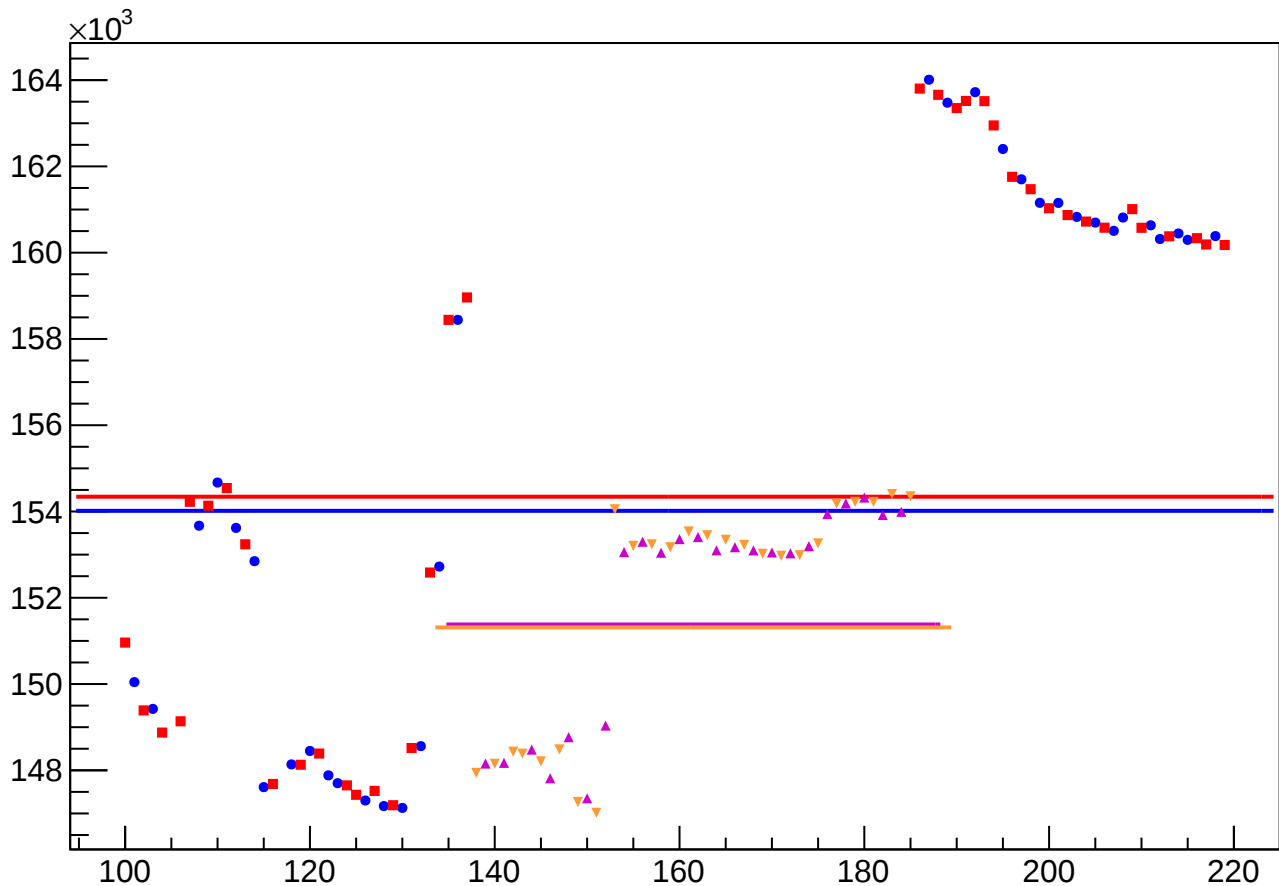
Right: 0.807 $\pm$ 0.000  $\chi^2$ /NDF: 7289620.5/69

In: 0.808 $\pm$ 0.000  $\chi^2$ /NDF:3844026.7/55

Out: 0.804 $\pm$ 0.000  $\chi^2$ /NDF:4616142.7/61

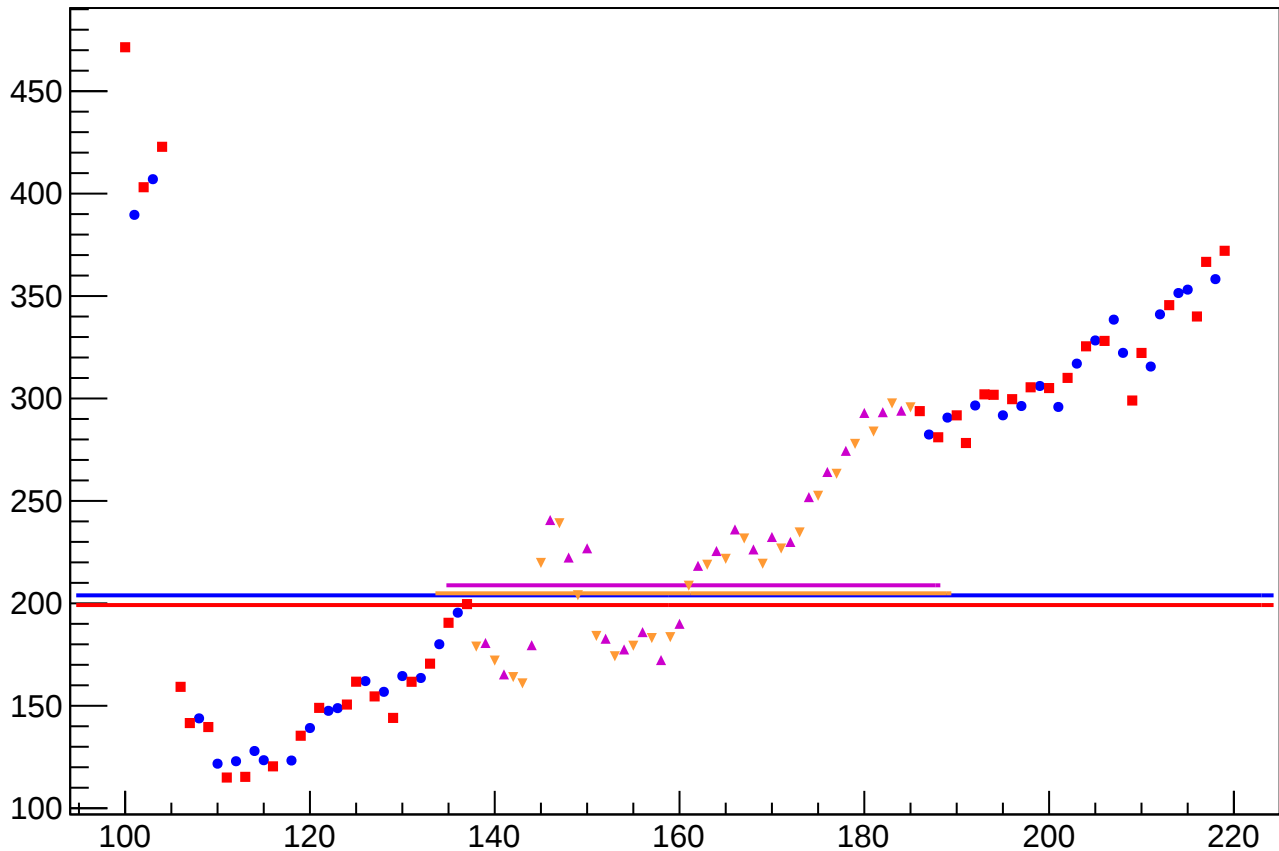
All: 0.806 $\pm$ 0.000  $\chi^2$ /NDF: 8460898.7/117

yield\_bpm0i01WS\_mean vs Slug, Sign Corrected



|                                   |                                 |                               |                                |
|-----------------------------------|---------------------------------|-------------------------------|--------------------------------|
| Right In: 154015.391 $\pm$ 0.052  | $\chi^2$ /NDF: 12401926442.8/32 | Left: 151345.082 $\pm$ 0.035  | $\chi^2$ /NDF: 5518562148.3/4  |
| Left Out: 151313.284 $\pm$ 0.049  | $\chi^2$ /NDF: 3153768134.8/24  | Right: 154187.672 $\pm$ 0.036 | $\chi^2$ /NDF: 25587140911.1   |
| Right Out: 154342.773 $\pm$ 0.050 | $\chi^2$ /NDF: 13164636782.8/36 | In: 152668.180 $\pm$ 0.037    | $\chi^2$ /NDF: 16061046985.2/5 |
| Left In: 151380.236 $\pm$ 0.051   | $\chi^2$ /NDF: 2363895785.3/22  | Out: 152797.516 $\pm$ 0.035   | $\chi^2$ /NDF: 18215535265.3   |
|                                   |                                 | All: 152736.164 $\pm$ 0.025   | $\chi^2$ /NDF: 342831458       |

# yield\_bpm0i01WS\_rms vs Slug, Sign Corrected



Right In: 203.906 $\pm$ 0.037  $\chi^2$ /NDF: 5464587.6/32

Left Out: 204.900 $\pm$ 0.034  $\chi^2$ /NDF:1056380.8/24

Right Out: 199.168 $\pm$ 0.035  $\chi^2$ /NDF: 6064589.8/36

Left In: 208.813 $\pm$ 0.036  $\chi^2$ /NDF:1001936.6/22

Left: 206.758 $\pm$ 0.025  $\chi^2$ /NDF: 2064453.9/47

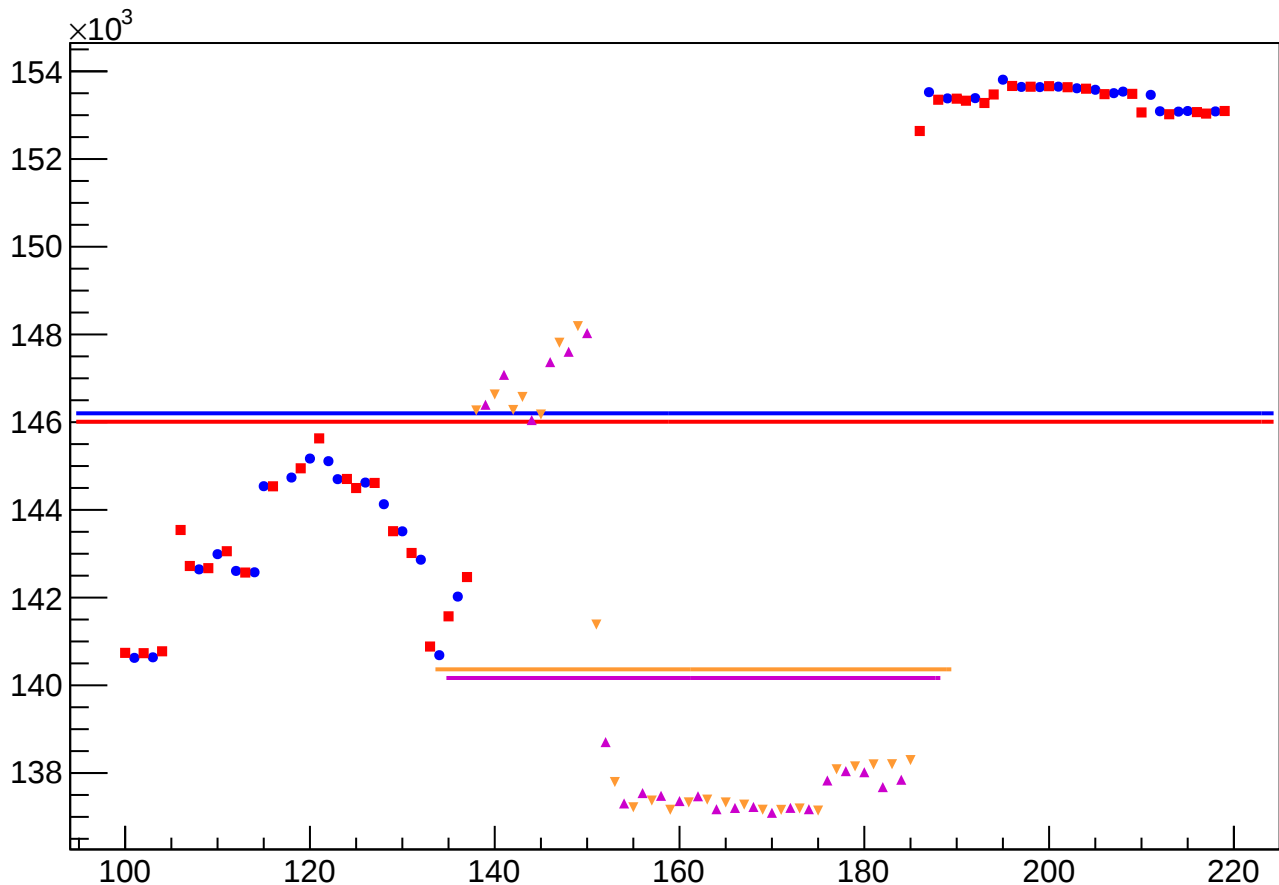
Right: 201.412 $\pm$ 0.025  $\chi^2$ /NDF: 11537798.4/69

In: 206.414 $\pm$ 0.026  $\chi^2$ /NDF:6475505.5/55

Out: 202.091 $\pm$ 0.025  $\chi^2$ /NDF:7134553.2/61

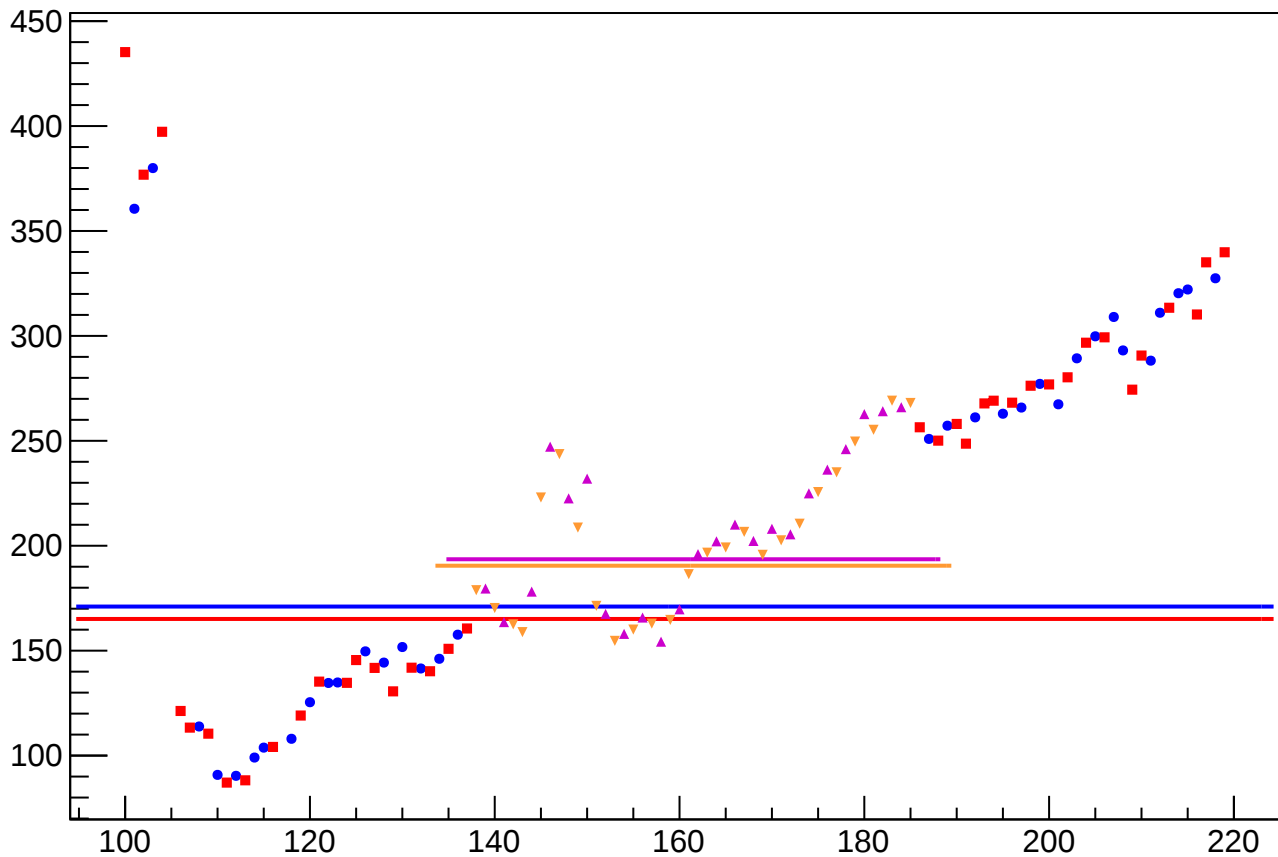
All: 204.142 $\pm$ 0.018  $\chi^2$ /NDF: 13624725.2/136

yield\_bpm0i01aWS\_mean vs Slug, Sign Corrected



|                                   |                                 |                               |                                |
|-----------------------------------|---------------------------------|-------------------------------|--------------------------------|
| Right In: 146201.996 $\pm$ 0.045  | $\chi^2$ /NDF: 10716856782.0/32 | Left: 140270.460 $\pm$ 0.033  | $\chi^2$ /NDF: 16714620354.4   |
| Left Out: 140364.444 $\pm$ 0.045  | $\chi^2$ /NDF: 8677078677.7/24  | Right: 146099.594 $\pm$ 0.031 | $\chi^2$ /NDF: 22739424757.4   |
| Right Out: 146009.881 $\pm$ 0.042 | $\chi^2$ /NDF: 12012774559.3/36 | In: 143356.344 $\pm$ 0.033    | $\chi^2$ /NDF: 27294471500.7/5 |
| Left In: 140166.971 $\pm$ 0.047   | $\chi^2$ /NDF: 8028464654.6/22  | Out: 143398.456 $\pm$ 0.031   | $\chi^2$ /NDF: 29066916574.1   |
|                                   |                                 | All: 143378.615 $\pm$ 0.022   | $\chi^2$ /NDF: 563622714       |

# yield\_bpm0i01aWS\_rms vs Slug, Sign Corrected



Right In: 171.021+/-0.032  $\chi^2/\text{NDF}$ : 6699791.6/32

Left Out: 190.486+/-0.032  $\chi^2/\text{NDF}$ : 950233.2/24

Right Out: 165.108+/-0.030  $\chi^2/\text{NDF}$ : 7445100.3/36

Left In: 193.558+/-0.034  $\chi^2/\text{NDF}$ : 963675.0/22

Left: 191.948+/-0.023  $\chi^2/\text{NDF}$ : 1918302.4/47

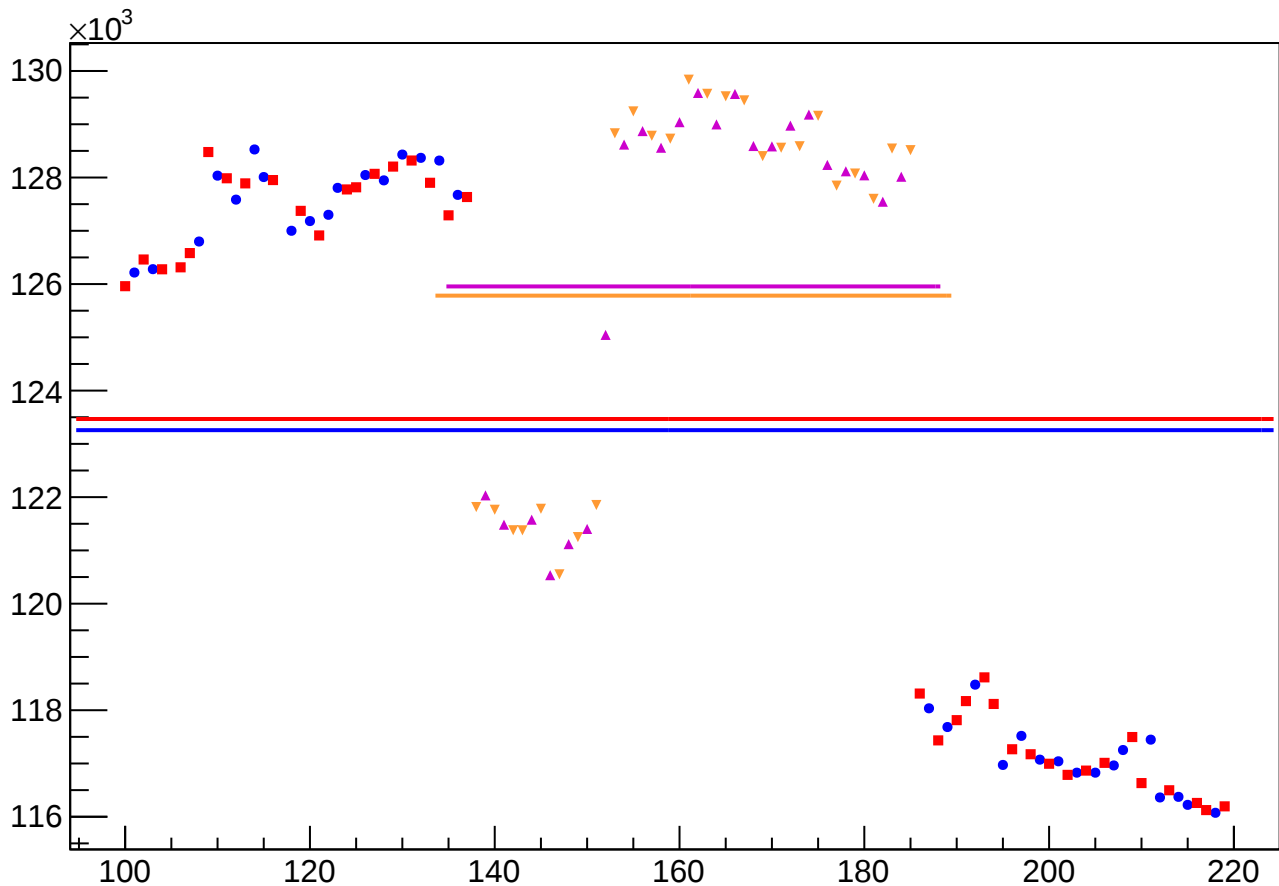
Right: 167.870+/-0.022  $\chi^2/\text{NDF}$ : 14163446.5/69

In: 181.648+/-0.023  $\chi^2/\text{NDF}$ : 7901909.5/55

Out: 176.847+/-0.022  $\chi^2/\text{NDF}$ : 8733887.3/61

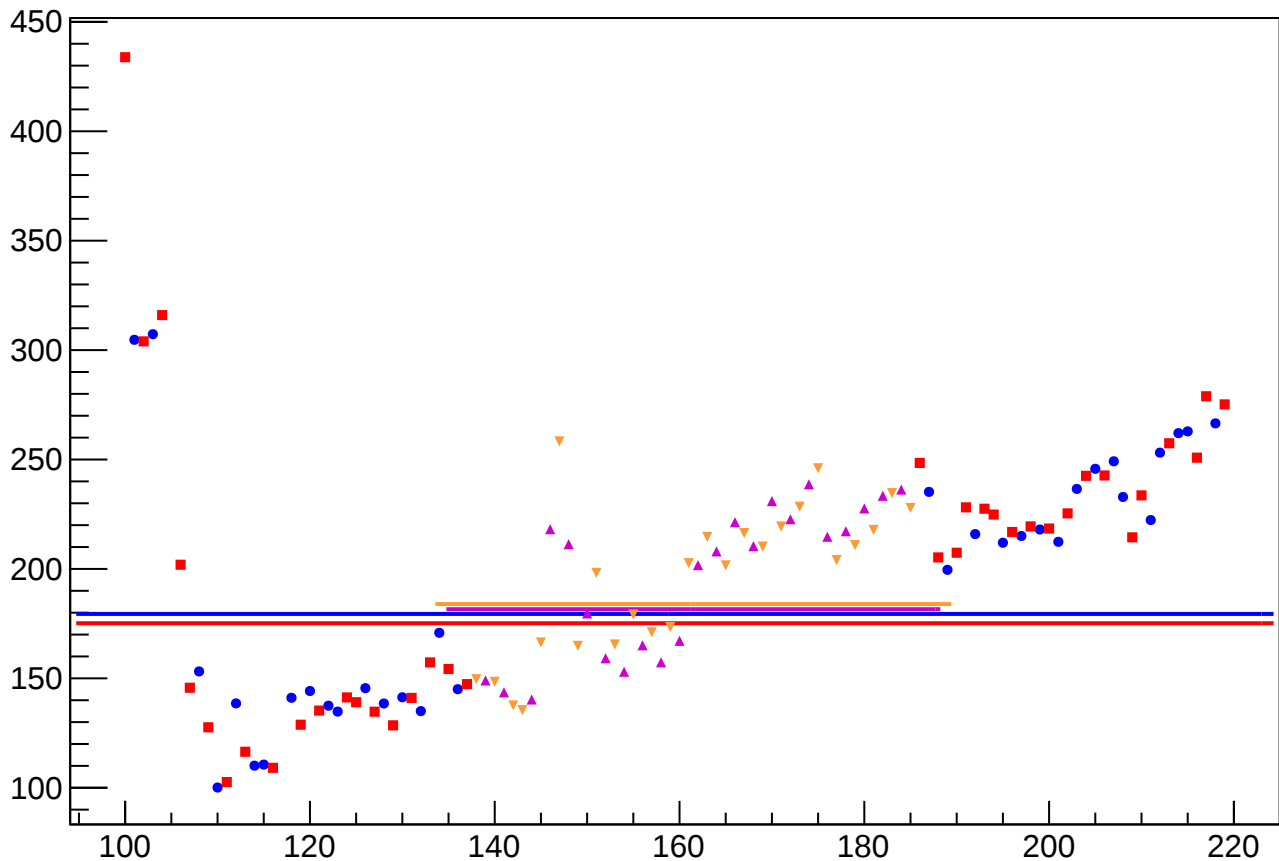
All: 179.109+/-0.016  $\chi^2/\text{NDF}$ : 16658758.0/122

yield\_bpm0l01WS\_mean vs Slug, Sign Corrected



|                                   |                                 |                               |                                 |
|-----------------------------------|---------------------------------|-------------------------------|---------------------------------|
| Right In: 123257.432 $\pm$ 0.044  | $\chi^2$ /NDF: 14115283428.4/32 | Left: 125867.639 $\pm$ 0.031  | $\chi^2$ /NDF: 12541428458.9/32 |
| Left Out: 125782.764 $\pm$ 0.044  | $\chi^2$ /NDF: 6729761889.8/24  | Right: 123367.597 $\pm$ 0.031 | $\chi^2$ /NDF: 29397228625.2/24 |
| Right Out: 123466.907 $\pm$ 0.042 | $\chi^2$ /NDF: 15270202829.3/36 | In: 124592.179 $\pm$ 0.032    | $\chi^2$ /NDF: 21751900256.0/36 |
| Left In: 125955.637 $\pm$ 0.045   | $\chi^2$ /NDF: 5804088930.1/22  | Out: 124573.410 $\pm$ 0.030   | $\chi^2$ /NDF: 23446378965.4/22 |
|                                   |                                 | All: 124582.462 $\pm$ 0.022   | $\chi^2$ /NDF: 451984628.0/22   |

# yield\_bpm0l01WS\_rms vs Slug, Sign Corrected



Right In: 179.442 $\pm$ 0.031  $\chi^2$ /NDF: 2927249.5/32

Left Out: 183.947 $\pm$ 0.031  $\chi^2$ /NDF: 1123194.0/24

Right Out: 175.187 $\pm$ 0.030  $\chi^2$ /NDF: 3558772.1/36

Left In: 181.596 $\pm$ 0.032  $\chi^2$ /NDF: 1103524.3/22

Left: 182.792 $\pm$ 0.022  $\chi^2$ /NDF: 2229521.2/47

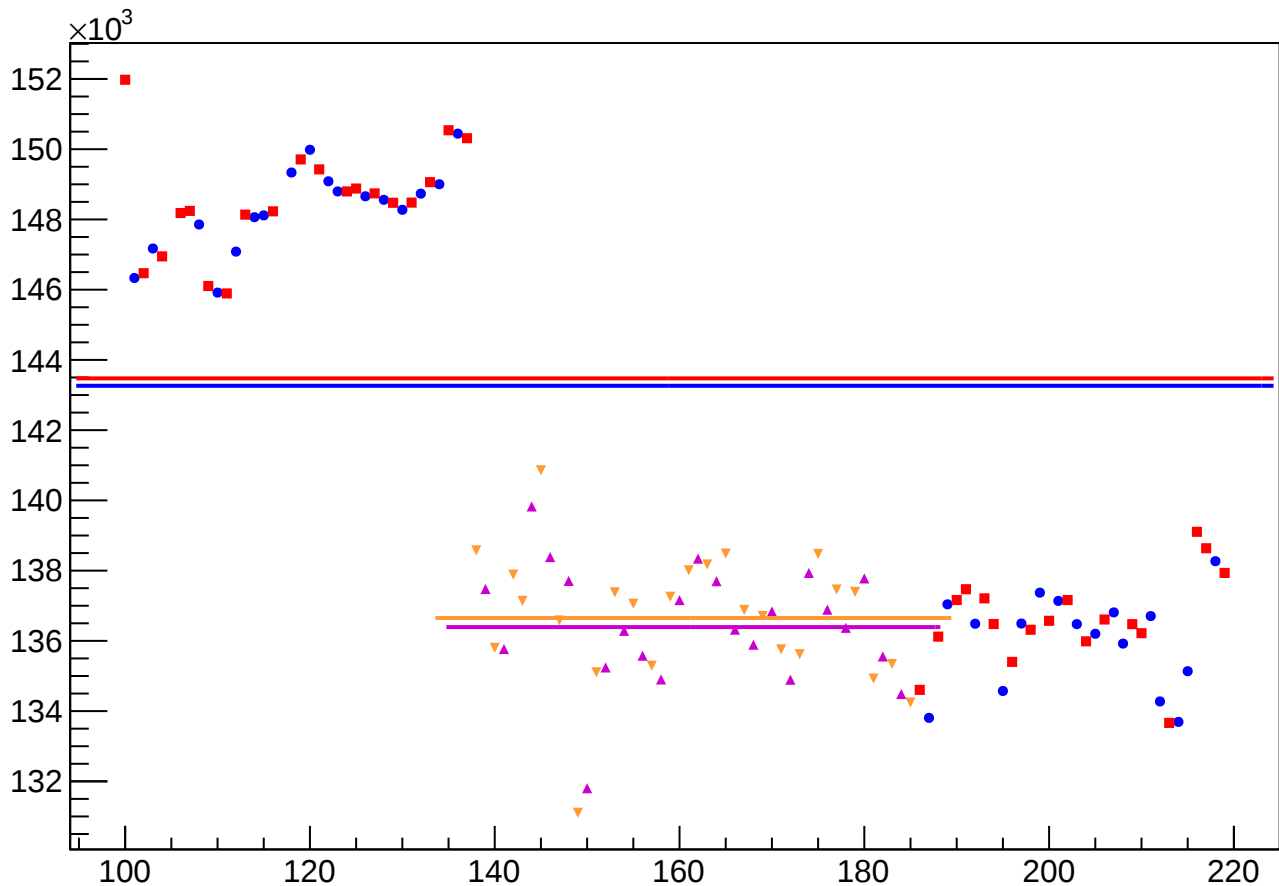
Right: 177.204 $\pm$ 0.022  $\chi^2$ /NDF: 6495712.6/69

In: 180.508 $\pm$ 0.022  $\chi^2$ /NDF: 4033108.2/55

Out: 179.372 $\pm$ 0.022  $\chi^2$ /NDF: 4723353.3/61

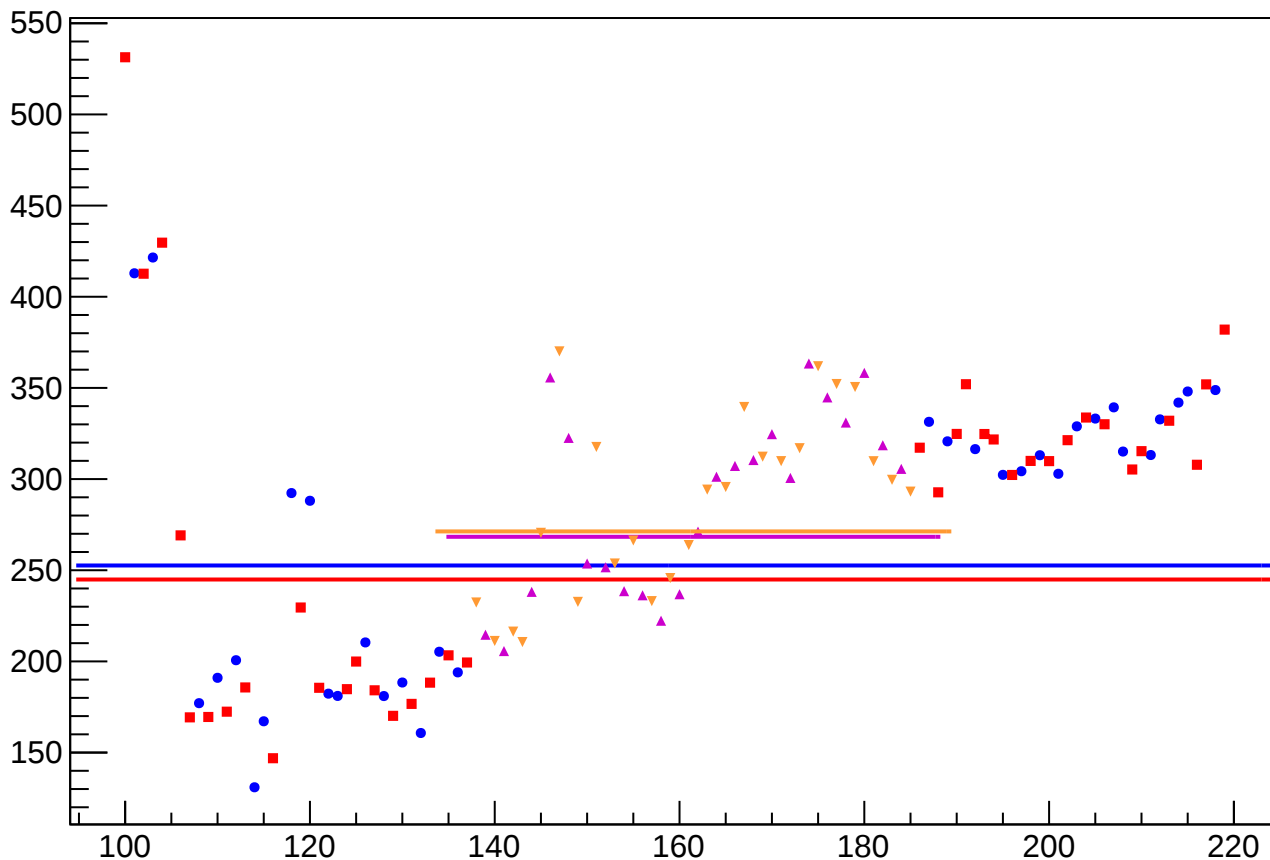
All: 179.920 $\pm$ 0.015  $\chi^2$ /NDF: 8757805.1/117

# yield\_bpm0l02WS\_mean vs Slug, Sign Corrected



|                                   |                                 |                               |                                |
|-----------------------------------|---------------------------------|-------------------------------|--------------------------------|
| Right In: 143263.429 $\pm$ 0.062  | $\chi^2$ /NDF: 9989191718.1/32  | Left: 136524.219 $\pm$ 0.046  | $\chi^2$ /NDF: 1640486942.5/4  |
| Left Out: 136650.935 $\pm$ 0.065  | $\chi^2$ /NDF: 930649595.5/24   | Right: 143375.187 $\pm$ 0.043 | $\chi^2$ /NDF: 20155276536.8   |
| Right Out: 143474.234 $\pm$ 0.059 | $\chi^2$ /NDF: 10160020445.9/36 | In: 140022.525 $\pm$ 0.045    | $\chi^2$ /NDF: 16423473376.1/5 |
| Left In: 136392.188 $\pm$ 0.066   | $\chi^2$ /NDF: 701986841.4/22   | Out: 140391.021 $\pm$ 0.043   | $\chi^2$ /NDF: 17200982994.8   |
|                                   |                                 | All: 140214.503 $\pm$ 0.031   | $\chi^2$ /NDF: 336589231       |

# yield\_bpm0l02WS\_rms vs Slug, Sign Corrected



Right In: 252.608 $\pm$ 0.044  $\chi^2$ /NDF: 2865080.1/32

Left Out: 271.295 $\pm$ 0.046  $\chi^2$ /NDF:1064485.7/24

Right Out: 244.919 $\pm$ 0.041  $\chi^2$ /NDF: 3269637.2/36

Left In: 268.344 $\pm$ 0.047  $\chi^2$ /NDF:1077364.0/22

Left: 269.850 $\pm$ 0.033  $\chi^2$ /NDF: 2143892.9/47

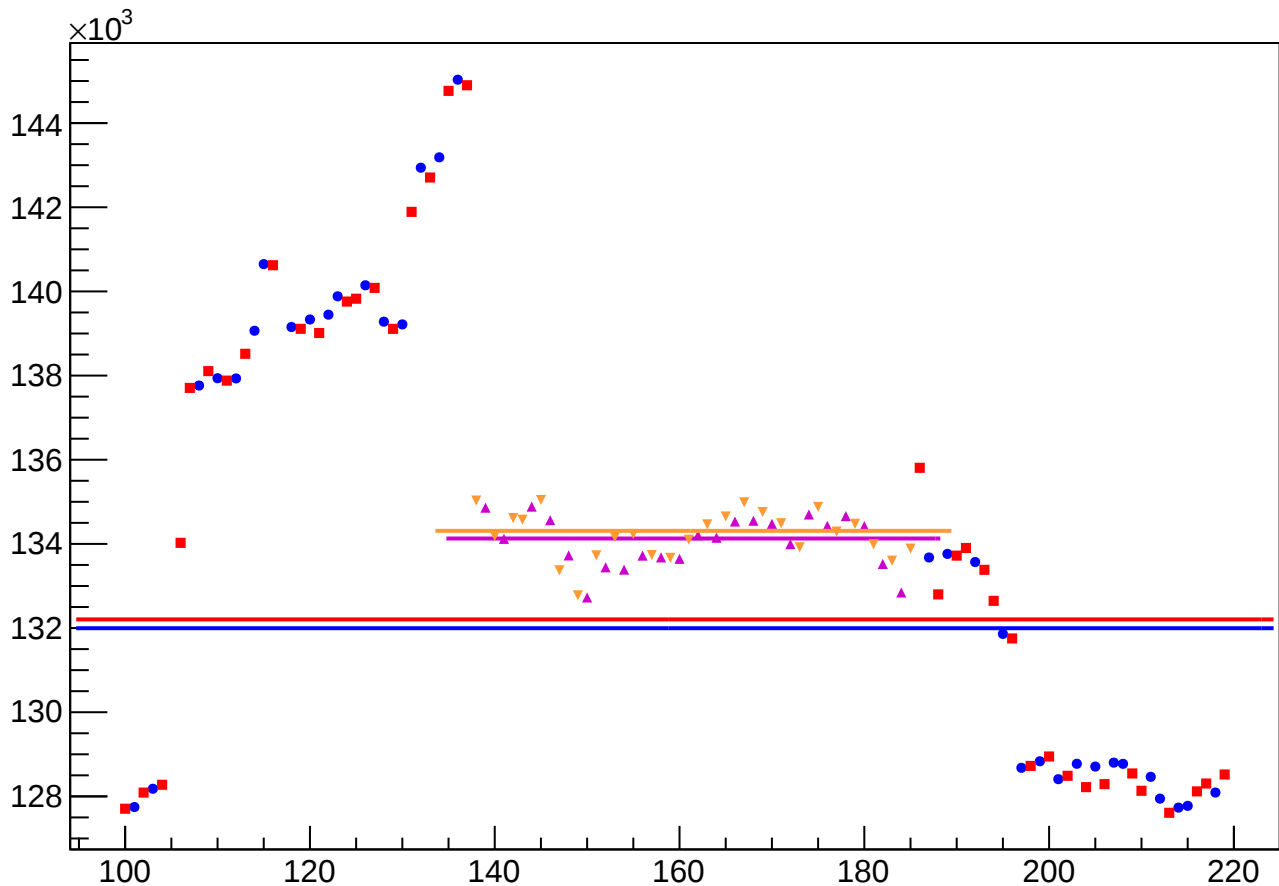
Right: 248.532 $\pm$ 0.030  $\chi^2$ /NDF: 6150852.3/69

In: 260.030 $\pm$ 0.032  $\chi^2$ /NDF:4002568.5/55

Out: 256.838 $\pm$ 0.031  $\chi^2$ /NDF:4516731.0/61

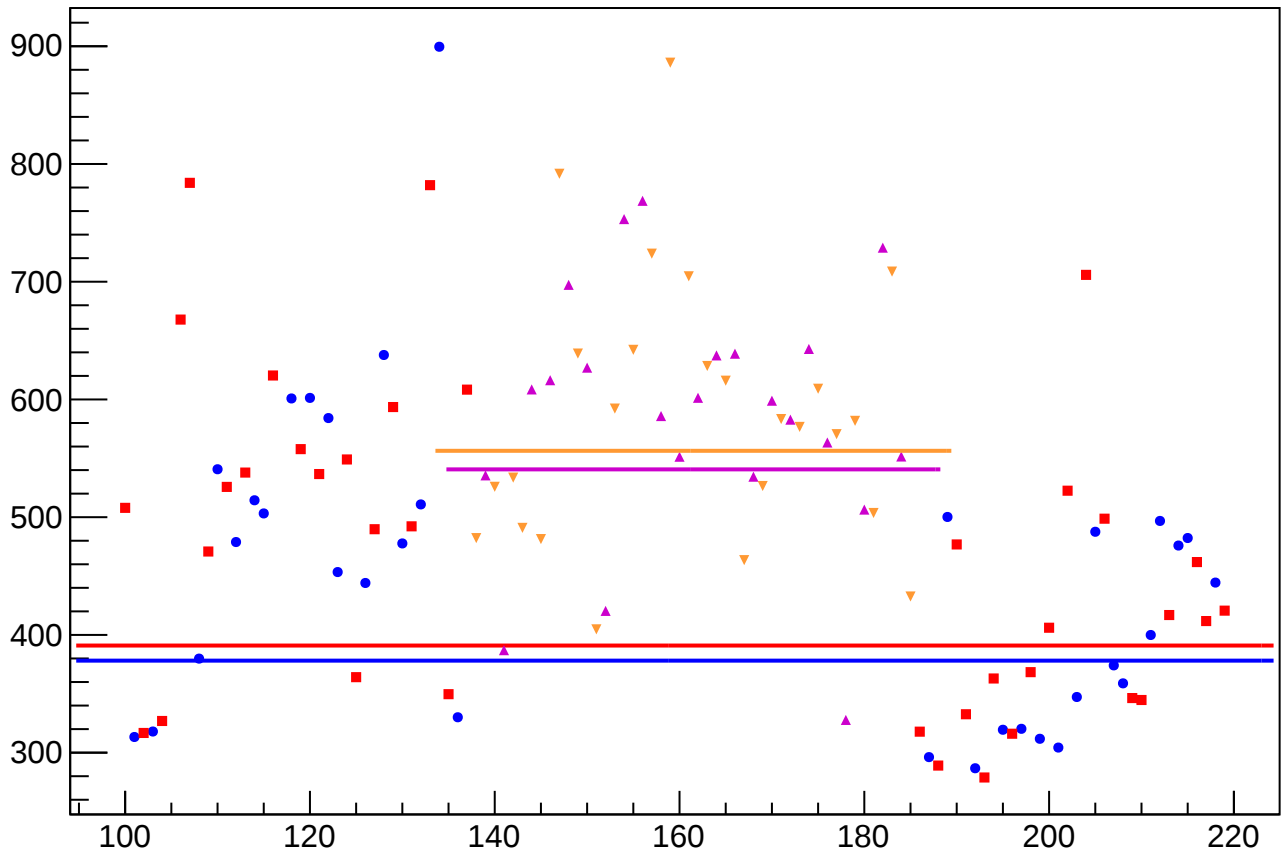
All: 258.367 $\pm$ 0.022  $\chi^2$ /NDF: 8524472.7/117

yield\_bpm0l03WS\_mean vs Slug, Sign Corrected



|                                   |                                |                               |                               |
|-----------------------------------|--------------------------------|-------------------------------|-------------------------------|
| Right In: 131995.990 $\pm$ 0.100  | $\chi^2$ /NDF: 2840730542.1/32 | Left: 134221.438 $\pm$ 0.099  | $\chi^2$ /NDF: 31894688.0/47  |
| Left Out: 134310.250 $\pm$ 0.139  | $\chi^2$ /NDF: 15518632.9/24   | Right: 132100.123 $\pm$ 0.071 | $\chi^2$ /NDF: 4952055536.9/  |
| Right Out: 132206.126 $\pm$ 0.101 | $\chi^2$ /NDF: 2109145899.7/36 | In: 132704.910 $\pm$ 0.082    | $\chi^2$ /NDF: 3006789131.3/5 |
| Left In: 134128.172 $\pm$ 0.142   | $\chi^2$ /NDF: 15533736.2/22   | Out: 132937.222 $\pm$ 0.082   | $\chi^2$ /NDF: 2275151294.6/  |
|                                   |                                | All: 132821.349 $\pm$ 0.058   | $\chi^2$ /NDF: 528597594      |

# yield\_bpm0l03WS\_rms vs Slug, Sign Corrected



Right In:  $378.163 \pm 0.071$   $\chi^2/\text{NDF}: 1573135.0/32$

Left Out:  $556.381 \pm 0.098$   $\chi^2/\text{NDF}: 1002064.0/24$

Right Out:  $390.981 \pm 0.071$   $\chi^2/\text{NDF}: 1978262.2/36$

Left In:  $540.607 \pm 0.100$   $\chi^2/\text{NDF}: 1409015.2/22$

Left:  $548.687 \pm 0.070$   $\chi^2/\text{NDF}: 2423723.9/47$

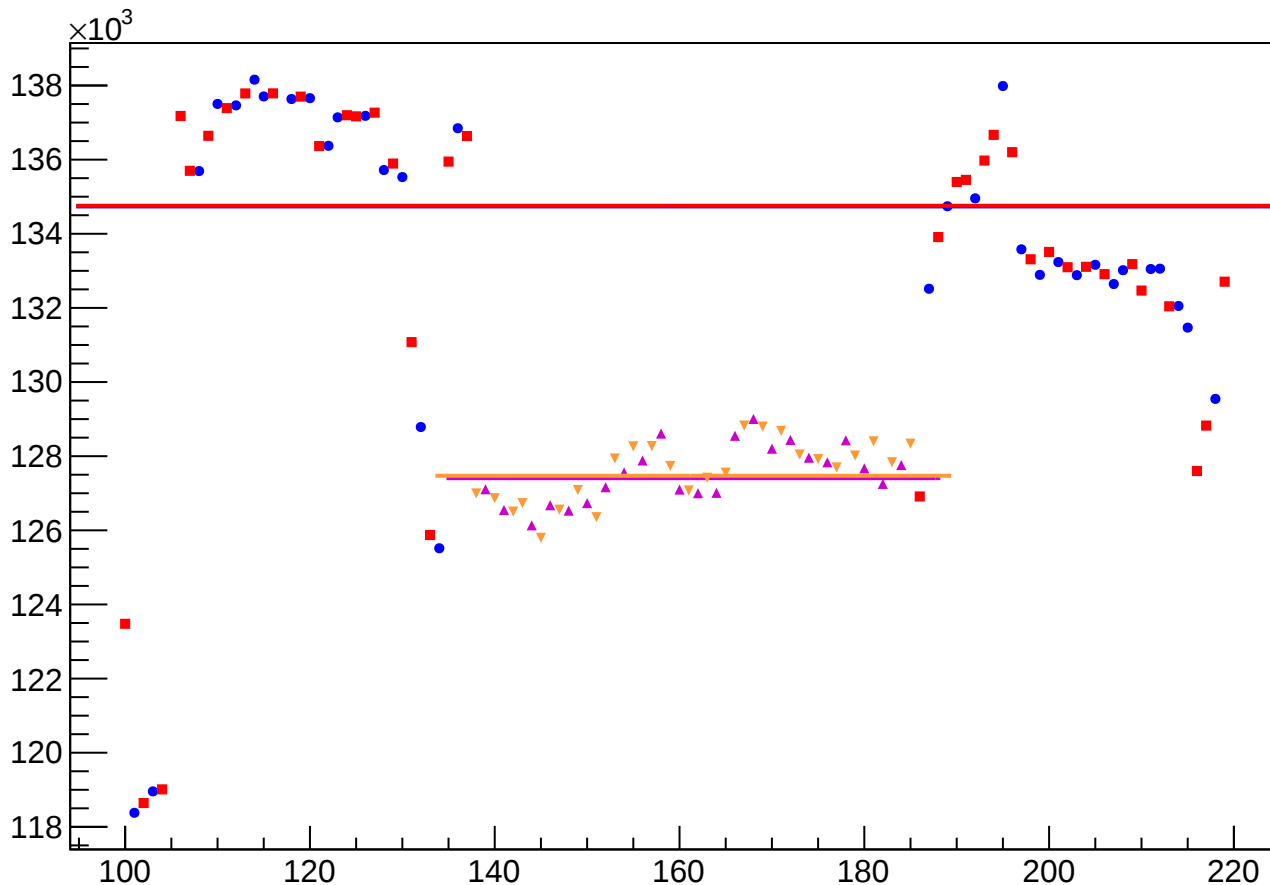
Right:  $384.515 \pm 0.050$   $\chi^2/\text{NDF}: 3567612.1/69$

In:  $432.174 \pm 0.058$   $\chi^2/\text{NDF}: 4729558.6/55$

Out:  $448.451 \pm 0.058$   $\chi^2/\text{NDF}: 4840097.8/61$

All:  $440.332 \pm 0.041$   $\chi^2/\text{NDF}: 9609279.4/117$

yield\_bpm0l04WS\_mean vs Slug, Sign Corrected



Left: 127440.757 $\pm$ 0.034  $\chi^2$ /NDF: 574486725.7/47

Right: 134747.401 $\pm$ 0.039  $\chi^2$ /NDF: 11078863930.1/32

In: 130514.493 $\pm$ 0.037  $\chi^2$ /NDF: 15187096707.7/54

Out: 130652.440 $\pm$ 0.035  $\chi^2$ /NDF: 16754374668.1/36

All: 130586.420 $\pm$ 0.025  $\chi^2$ /NDF: 319488344.1/22

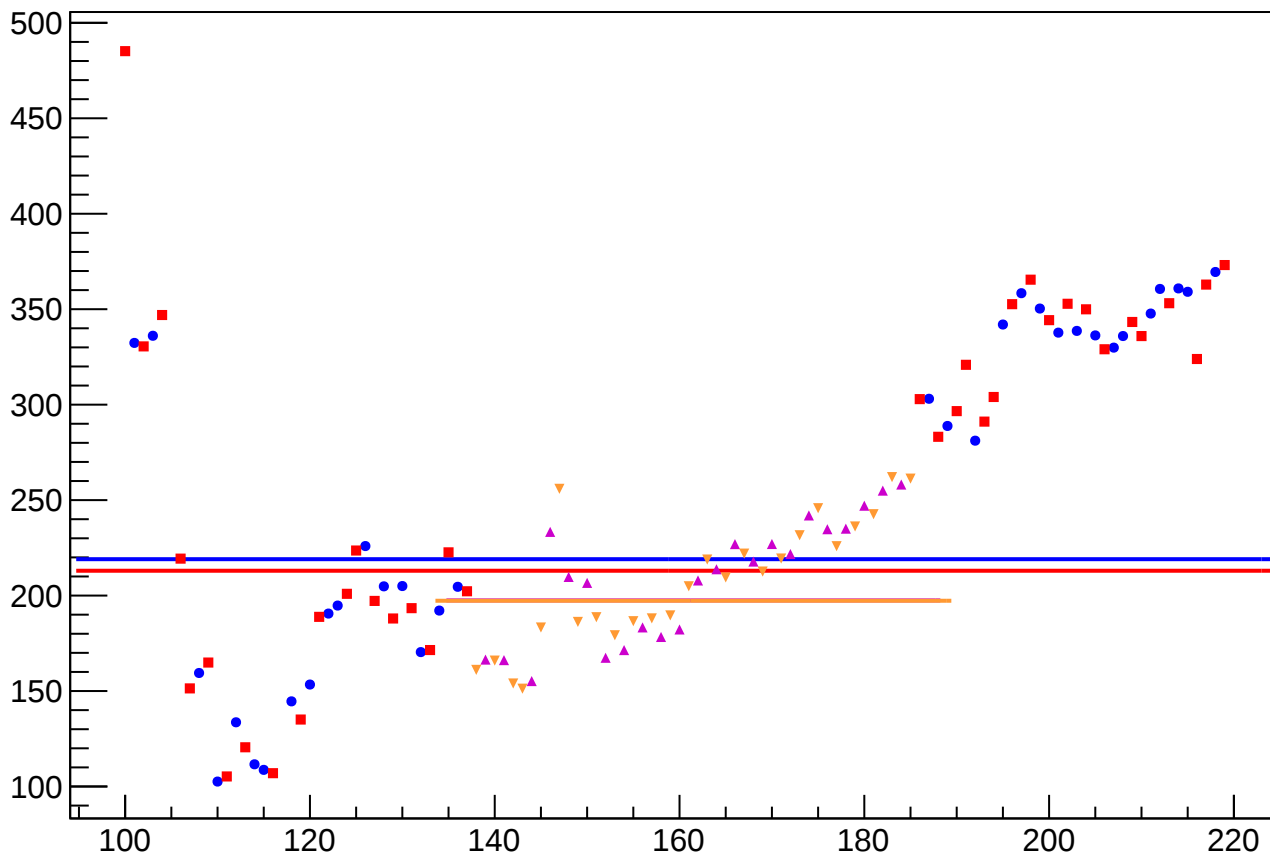
Right In: 134738.211 $\pm$ 0.056  $\chi^2$ /NDF: 5176860874.4/32

Left Out: 127472.525 $\pm$ 0.047  $\chi^2$ /NDF: 303609315.6/24

Right Out: 134755.591 $\pm$ 0.053  $\chi^2$ /NDF: 5901952812.3/36

Left In: 127406.911 $\pm$ 0.048  $\chi^2$ /NDF: 269927988.0/22

# yield\_bpm0l04WS\_rms vs Slug, Sign Corrected



Right In: 219.061+/-0.040  $\chi^2/\text{NDF}$ : 5392752.2/32

Left Out: 197.289+/-0.033  $\chi^2/\text{NDF}$ : 852024.1/24

Right Out: 213.008+/-0.038  $\chi^2/\text{NDF}$ : 6025719.6/36

Left In: 197.471+/-0.034  $\chi^2/\text{NDF}$ : 791577.5/22

Left: 197.377+/-0.024  $\chi^2/\text{NDF}$ : 1643616.2/47

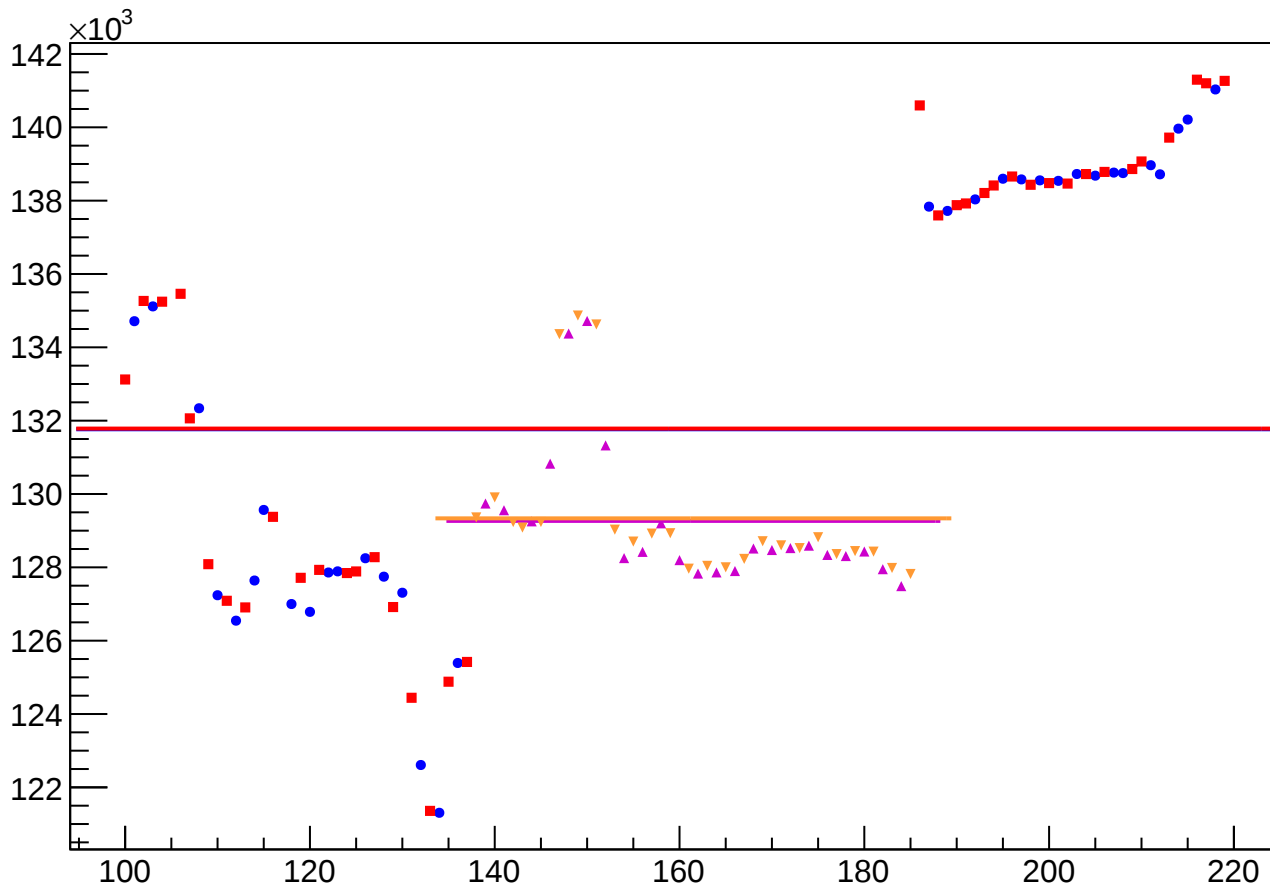
Right: 215.861+/-0.027  $\chi^2/\text{NDF}$ : 11430660.8/69

In: 206.623+/-0.026  $\chi^2/\text{NDF}$ : 6353282.6/55

Out: 204.153+/-0.025  $\chi^2/\text{NDF}$ : 6976022.7/61

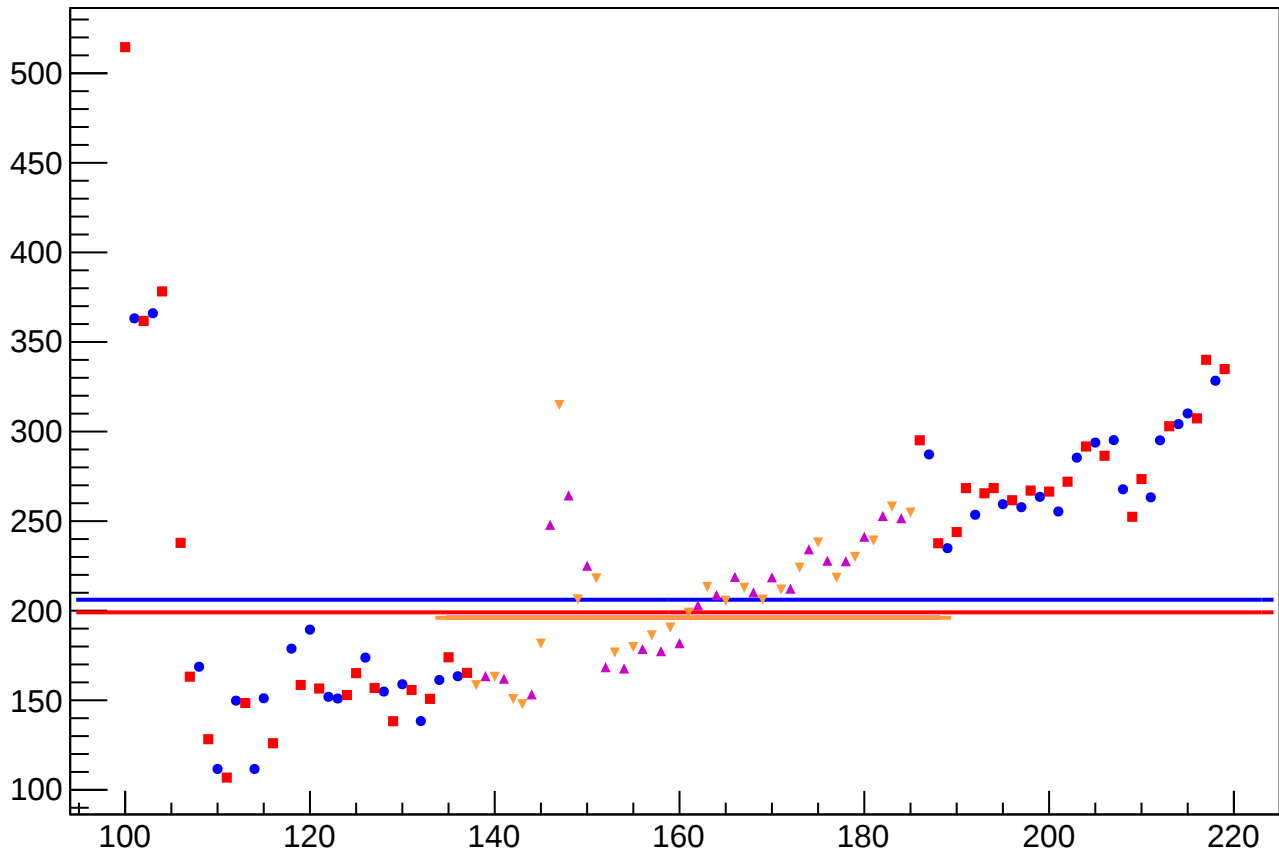
All: 205.335+/-0.018  $\chi^2/\text{NDF}$ : 13334027.5/131

yield\_bpm0l05WS\_mean vs Slug, Sign Corrected



|                                   |                                 |                               |                                |
|-----------------------------------|---------------------------------|-------------------------------|--------------------------------|
| Right In: 131765.336 $\pm$ 0.052  | $\chi^2$ /NDF: 14222928232.4/32 | Left: 129302.466 $\pm$ 0.034  | $\chi^2$ /NDF: 2665755007.2/4  |
| Left Out: 129335.946 $\pm$ 0.047  | $\chi^2$ /NDF: 1450933621.0/24  | Right: 131775.263 $\pm$ 0.035 | $\chi^2$ /NDF: 29669404711.0/5 |
| Right Out: 131784.076 $\pm$ 0.049 | $\chi^2$ /NDF: 15446406356.5/36 | In: 130432.217 $\pm$ 0.035    | $\chi^2$ /NDF: 16692238618.9/5 |
| Left In: 129266.909 $\pm$ 0.048   | $\chi^2$ /NDF: 1213762773.1/22  | Out: 130513.729 $\pm$ 0.034   | $\chi^2$ /NDF: 18217915138.7/5 |
|                                   |                                 | All: 130474.767 $\pm$ 0.024   | $\chi^2$ /NDF: 349129560.0/5   |

# yield\_bpm0l05WS\_rms vs Slug, Sign Corrected



Right In: 206.123+/-0.036  $\chi^2/\text{NDF}$ : 3463766.7/32

Left Out: 196.077+/-0.033  $\chi^2/\text{NDF}$ : 975710.9/24

Right Out: 199.091+/-0.034  $\chi^2/\text{NDF}$ : 4337355.3/36

Left In: 196.186+/-0.034  $\chi^2/\text{NDF}$ : 898058.0/22

Left: 196.130+/-0.024  $\chi^2/\text{NDF}$ : 1873774.2/47

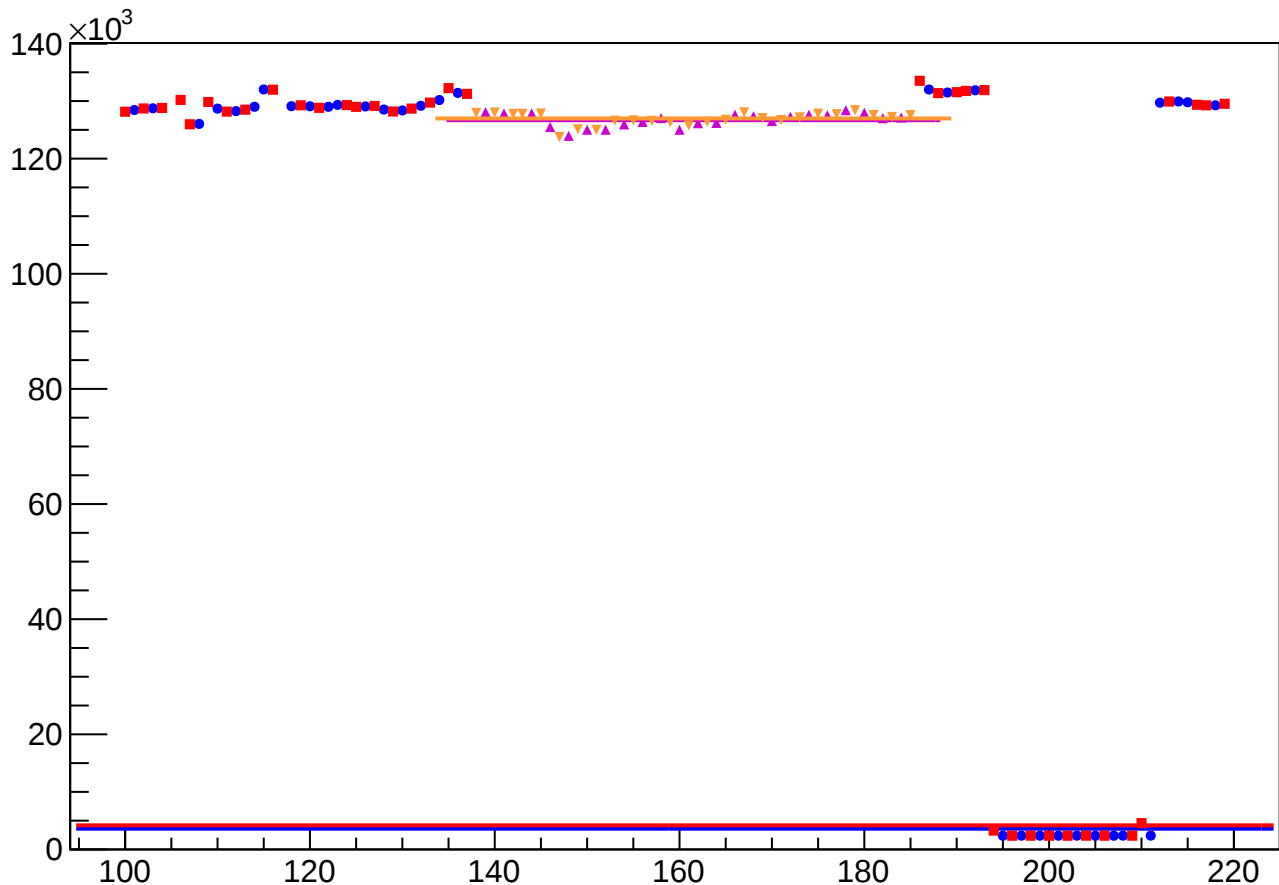
Right: 202.398+/-0.025  $\chi^2/\text{NDF}$ : 7820873.3/69

In: 200.821+/-0.025  $\chi^2/\text{NDF}$ : 4401547.1/55

Out: 197.527+/-0.024  $\chi^2/\text{NDF}$ : 5317067.5/61

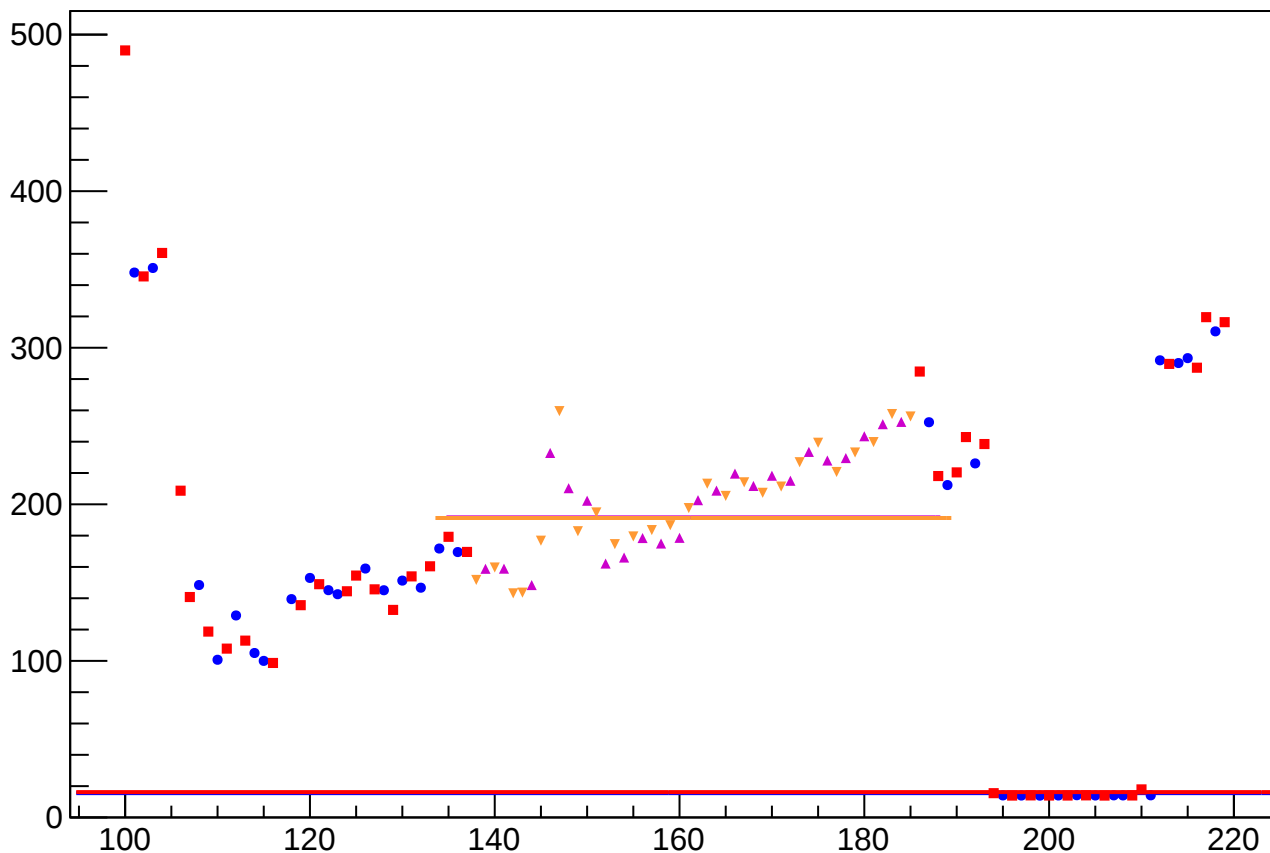
All: 199.101+/-0.017  $\chi^2/\text{NDF}$ : 9727769.1/117

# yield\_bpm0l06WS\_mean vs Slug, Sign Corrected



|                              |                                          |                          |                                        |
|------------------------------|------------------------------------------|--------------------------|----------------------------------------|
| Right In: 3608.019+/-0.005   | $\chi^2/\text{NDF}$ : 5425441127516.6/32 | Left: 126836.943+/-0.033 | $\chi^2/\text{NDF}$ : 1211882944.2/4   |
| Left Out: 126981.724+/-0.046 | $\chi^2/\text{NDF}$ : 530573115.8/24     | Right: 3871.717+/-0.004  | $\chi^2/\text{NDF}$ : 11749026040695   |
| Right Out: 4191.175+/-0.006  | $\chi^2/\text{NDF}$ : 6318132932848.7/36 | In: 5160.166+/-0.005     | $\chi^2/\text{NDF}$ : 12198815360715.2 |
| Left In: 126682.659+/-0.047  | $\chi^2/\text{NDF}$ : 660415880.0/22     | Out: 6183.009+/-0.006    | $\chi^2/\text{NDF}$ : 13476351853025   |
|                              |                                          | All: 5623.615+/-0.004    | $\chi^2/\text{NDF}$ : 25692188187      |

# yield\_bpm0l06WS\_rms vs Slug, Sign Corrected



Right In: 15.536 $\pm$ 0.004  $\chi^2$ /NDF: 18629649.7/32

Left Out: 191.263 $\pm$ 0.032  $\chi^2$ /NDF: 992566.2/24

Right Out: 16.193 $\pm$ 0.004  $\chi^2$ /NDF: 20906074.0/36

Left In: 191.683 $\pm$ 0.033  $\chi^2$ /NDF: 864384.9/22

Left: 191.466 $\pm$ 0.023  $\chi^2$ /NDF: 1857033.4/47

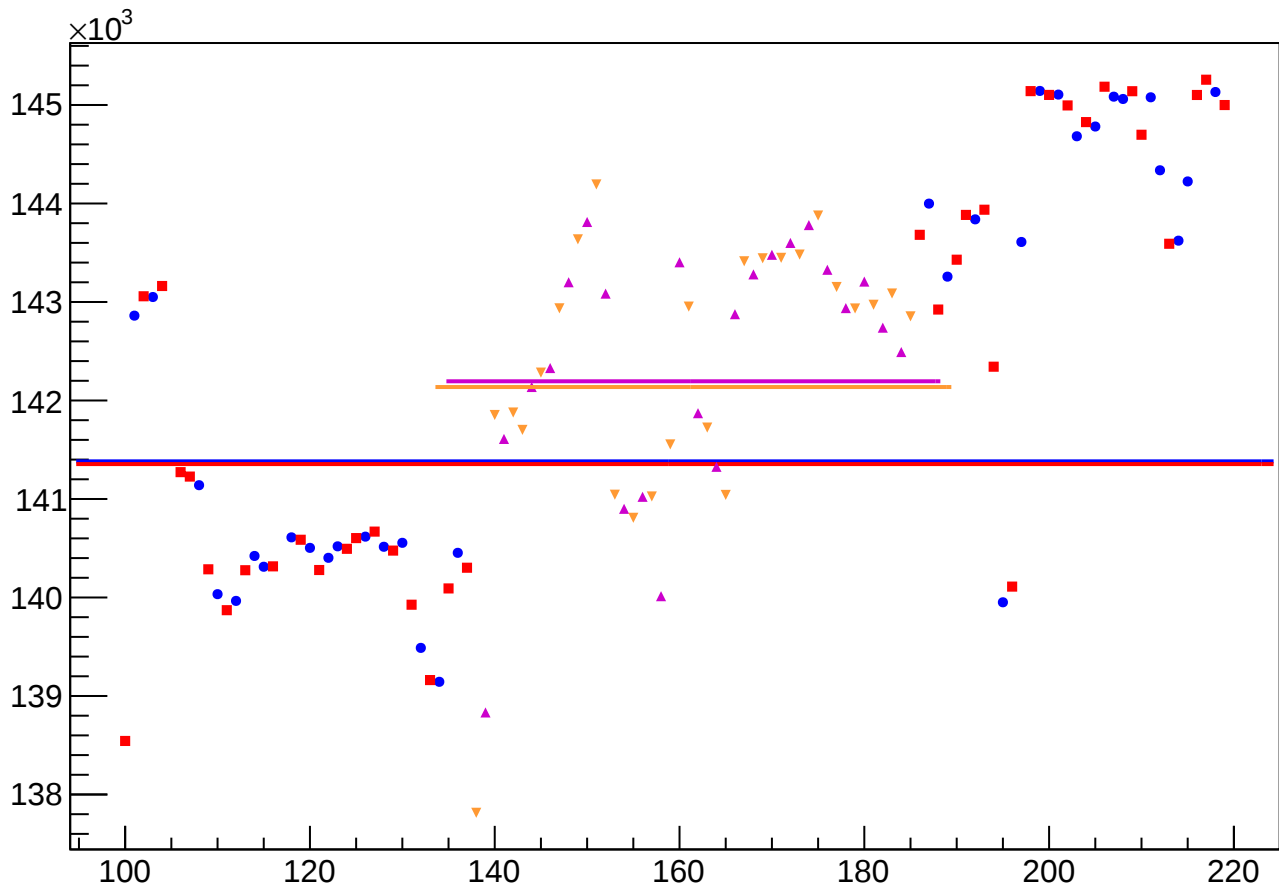
Right: 15.833 $\pm$ 0.003  $\chi^2$ /NDF: 39549533.2/69

In: 17.758 $\pm$ 0.004  $\chi^2$ /NDF: 47240111.5/55

Out: 19.033 $\pm$ 0.004  $\chi^2$ /NDF: 50998975.3/61

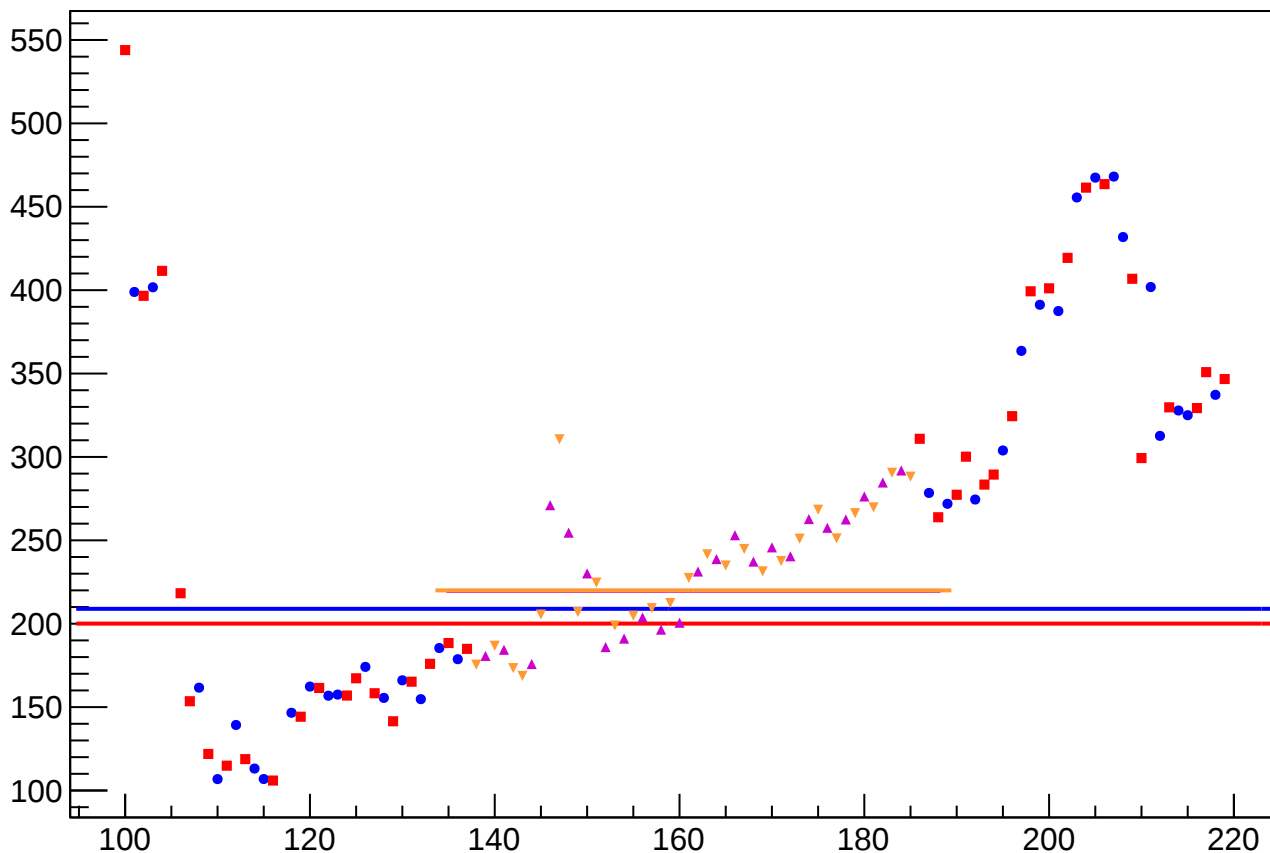
All: 18.335 $\pm$ 0.003  $\chi^2$ /NDF: 98291957.3/117

yield\_bpm0l07WS\_mean vs Slug, Sign Corrected



|                                   |                                       |                               |                                      |
|-----------------------------------|---------------------------------------|-------------------------------|--------------------------------------|
| Right In: 141382.063 $\pm$ 0.055  | $\chi^2/\text{NDF}$ : 1115471743.1/32 | Left: 142164.953 $\pm$ 0.038  | $\chi^2/\text{NDF}$ : 1460209902.9/4 |
| Left Out: 142136.579 $\pm$ 0.052  | $\chi^2/\text{NDF}$ : 815573343.0/24  | Right: 141367.161 $\pm$ 0.037 | $\chi^2/\text{NDF}$ : 2387719607.6/  |
| Right Out: 141354.339 $\pm$ 0.051 | $\chi^2/\text{NDF}$ : 1272110316.7/36 | In: 141795.589 $\pm$ 0.038    | $\chi^2/\text{NDF}$ : 1871430365.2/5 |
| Left In: 142195.020 $\pm$ 0.054   | $\chi^2/\text{NDF}$ : 644030906.9/22  | Out: 141734.186 $\pm$ 0.036   | $\chi^2/\text{NDF}$ : 2202648786.3/6 |
|                                   |                                       | All: 141763.287 $\pm$ 0.026   | $\chi^2/\text{NDF}$ : 407542317      |

# yield\_bpm0l07WS\_rms vs Slug, Sign Corrected



Right In: 208.932 $\pm$ 0.039  $\chi^2$ /NDF: 6653638.1/32

Left Out: 219.969 $\pm$ 0.037  $\chi^2$ /NDF: 866616.3/24

Right Out: 200.072 $\pm$ 0.036  $\chi^2$ /NDF: 7256394.3/36

Left In: 219.685 $\pm$ 0.038  $\chi^2$ /NDF: 812745.1/22

Left: 219.831 $\pm$ 0.027  $\chi^2$ /NDF: 1679390.1/47

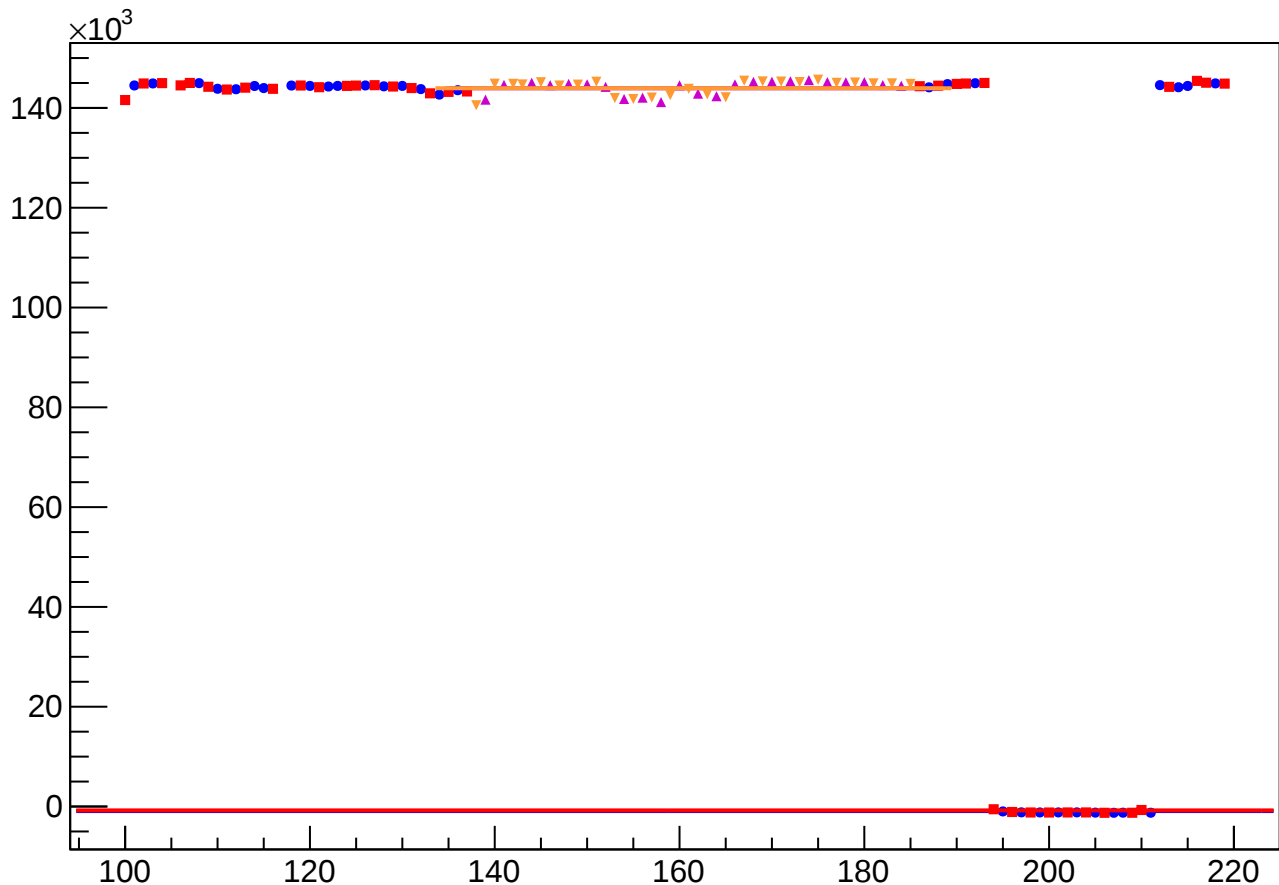
Right: 204.170 $\pm$ 0.026  $\chi^2$ /NDF: 13938132.2/69

In: 214.402 $\pm$ 0.027  $\chi^2$ /NDF: 7505541.8/55

Out: 209.734 $\pm$ 0.026  $\chi^2$ /NDF: 8271779.0/61

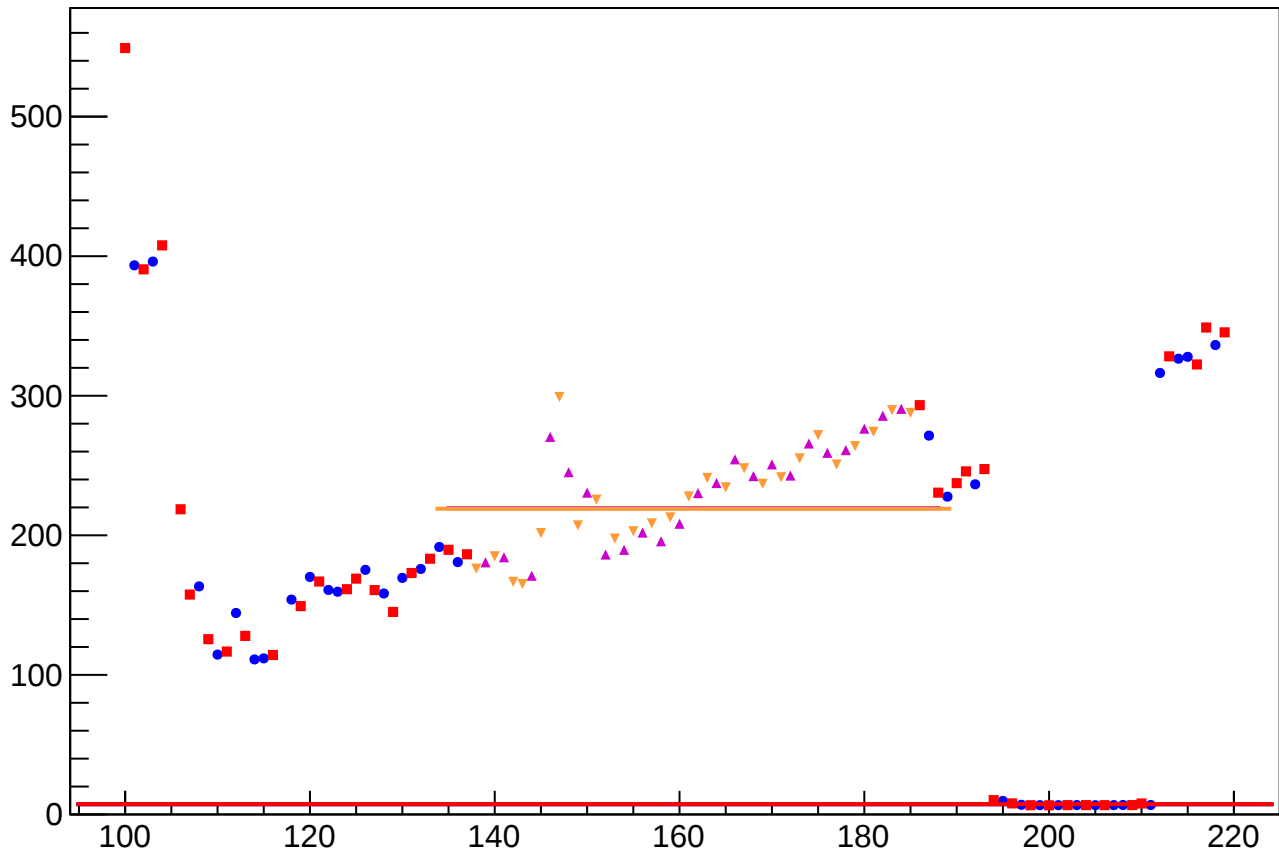
All: 211.946 $\pm$ 0.019  $\chi^2$ /NDF: 15792856.2/11

# yield\_bpm0l08WS\_mean vs Slug, Sign Corrected



Right In:  $-912.607 \pm 0.003$   $\chi^2/\text{NDF}: 5886682935094.5/32$   
 Left Out:  $143951.284 \pm 0.052$   $\chi^2/\text{NDF}: 864679545.2/24$   
 Right Out:  $-776.371 \pm 0.003$   $\chi^2/\text{NDF}: 6957198955886.6/36$   
 Left In:  $143938.288 \pm 0.054$   $\chi^2/\text{NDF}: 719814685.6/22$   
 Left:  $143944.995 \pm 0.037$   $\chi^2/\text{NDF}: 1584524299.4/32$   
 Right:  $-850.838 \pm 0.002$   $\chi^2/\text{NDF}: 12845093198799.5/24$   
 In:  $-566.302 \pm 0.003$   $\chi^2/\text{NDF}: 13108004737059.5/36$   
 Out:  $-331.795 \pm 0.003$   $\chi^2/\text{NDF}: 14640463281847.8/24$   
 All:  $-459.937 \pm 0.002$   $\chi^2/\text{NDF}: 27752067029.5/32$

# yield\_bpm0l08WS\_rms vs Slug, Sign Corrected



Right In:  $7.254 \pm 0.002$   $\chi^2/\text{NDF}: 20597693.6/32$

Left Out:  $219.050 \pm 0.037$   $\chi^2/\text{NDF}: 934417.6/24$

Right Out:  $7.375 \pm 0.002$   $\chi^2/\text{NDF}: 23134895.2/36$

Left In:  $219.426 \pm 0.038$   $\chi^2/\text{NDF}: 850089.5/22$

Left:  $219.232 \pm 0.026$   $\chi^2/\text{NDF}: 1784557.4/47$

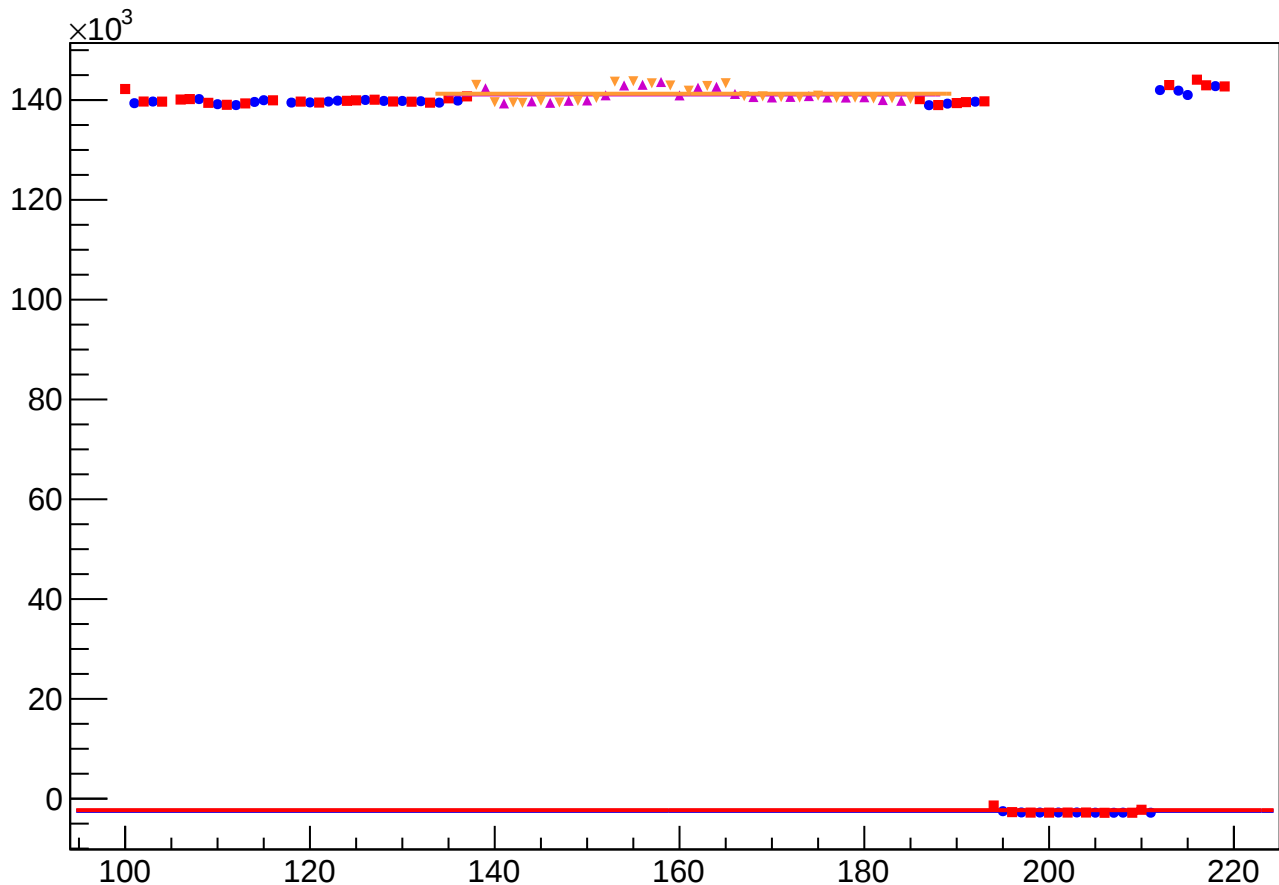
Right:  $7.308 \pm 0.001$   $\chi^2/\text{NDF}: 43734501.1/69$

In:  $7.761 \pm 0.002$   $\chi^2/\text{NDF}: 52431828.4/55$

Out:  $8.025 \pm 0.002$   $\chi^2/\text{NDF}: 56936573.1/61$

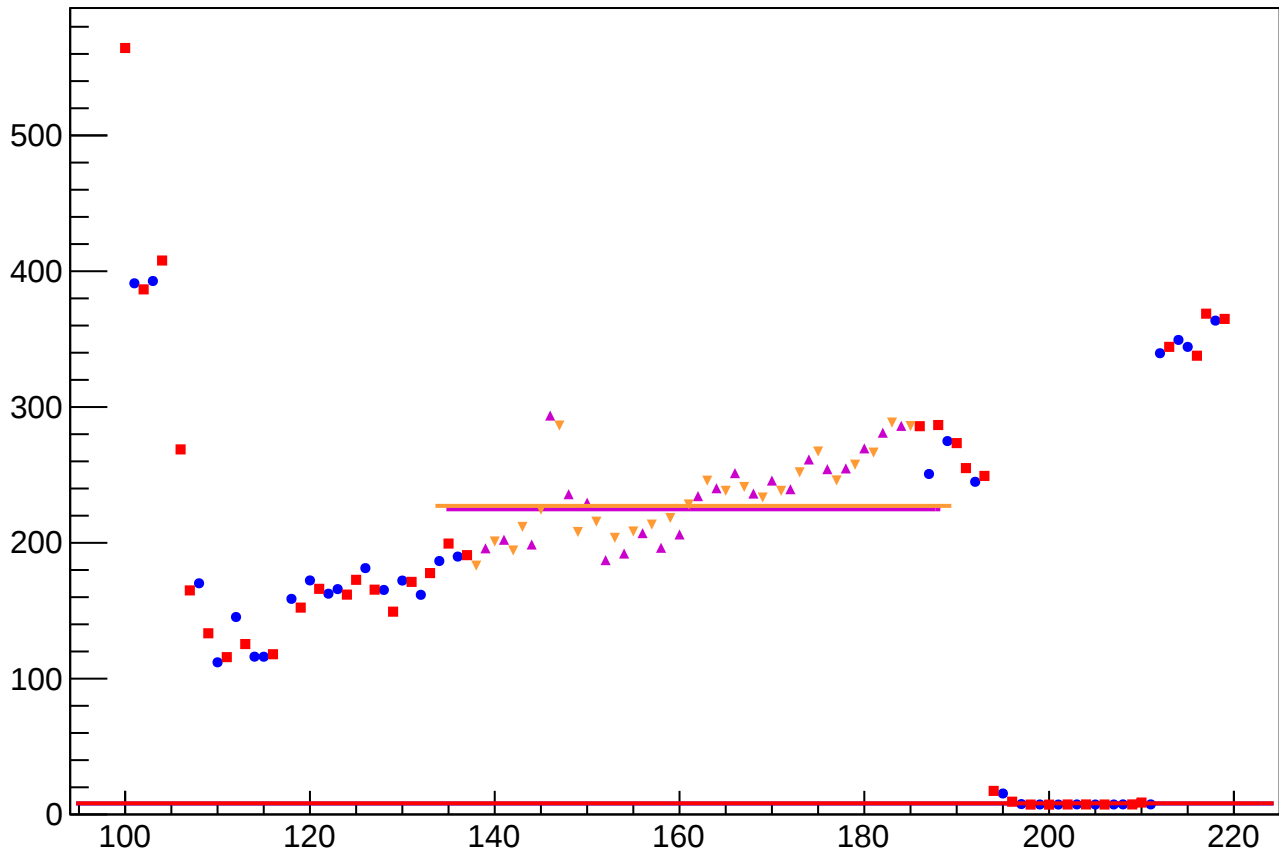
All:  $7.881 \pm 0.001$   $\chi^2/\text{NDF}: 109377524.4/117$

# yield\_bpm0l09WS\_mean vs Slug, Sign Corrected



|                              |                                          |                          |                                        |
|------------------------------|------------------------------------------|--------------------------|----------------------------------------|
| Right In: -2451.307+/-0.003  | $\chi^2/\text{NDF}$ : 5372698604811.0/32 | Left: 141195.809+/-0.038 | $\chi^2/\text{NDF}$ : 1365080862.2/4   |
| Left Out: 141268.791+/-0.054 | $\chi^2/\text{NDF}$ : 795989244.2/24     | Right: -2383.027+/-0.002 | $\chi^2/\text{NDF}$ : 1166406866704    |
| Right Out: -2300.665+/-0.003 | $\chi^2/\text{NDF}$ : 6290187735953.1/36 | In: -2038.319+/-0.003    | $\chi^2/\text{NDF}$ : 12188791659370.5 |
| Left In: 141119.484+/-0.055  | $\chi^2/\text{NDF}$ : 565312728.1/22     | Out: -1780.087+/-0.003   | $\chi^2/\text{NDF}$ : 13413188647138   |
|                              |                                          | All: -1921.224+/-0.002   | $\chi^2/\text{NDF}$ : 2560546607       |

# yield\_bpm0l09WS\_rms vs Slug, Sign Corrected



Right In:  $8.053 \pm 0.002$   $\chi^2/\text{NDF}$ : 20732047.0/32

Left Out:  $227.224 \pm 0.038$   $\chi^2/\text{NDF}$ : 484955.3/24

Right Out:  $8.208 \pm 0.002$   $\chi^2/\text{NDF}$ : 23156399.9/36

Left In:  $224.686 \pm 0.039$   $\chi^2/\text{NDF}$ : 578366.0/22

Left:  $225.984 \pm 0.027$   $\chi^2/\text{NDF}$ : 1065504.5/47

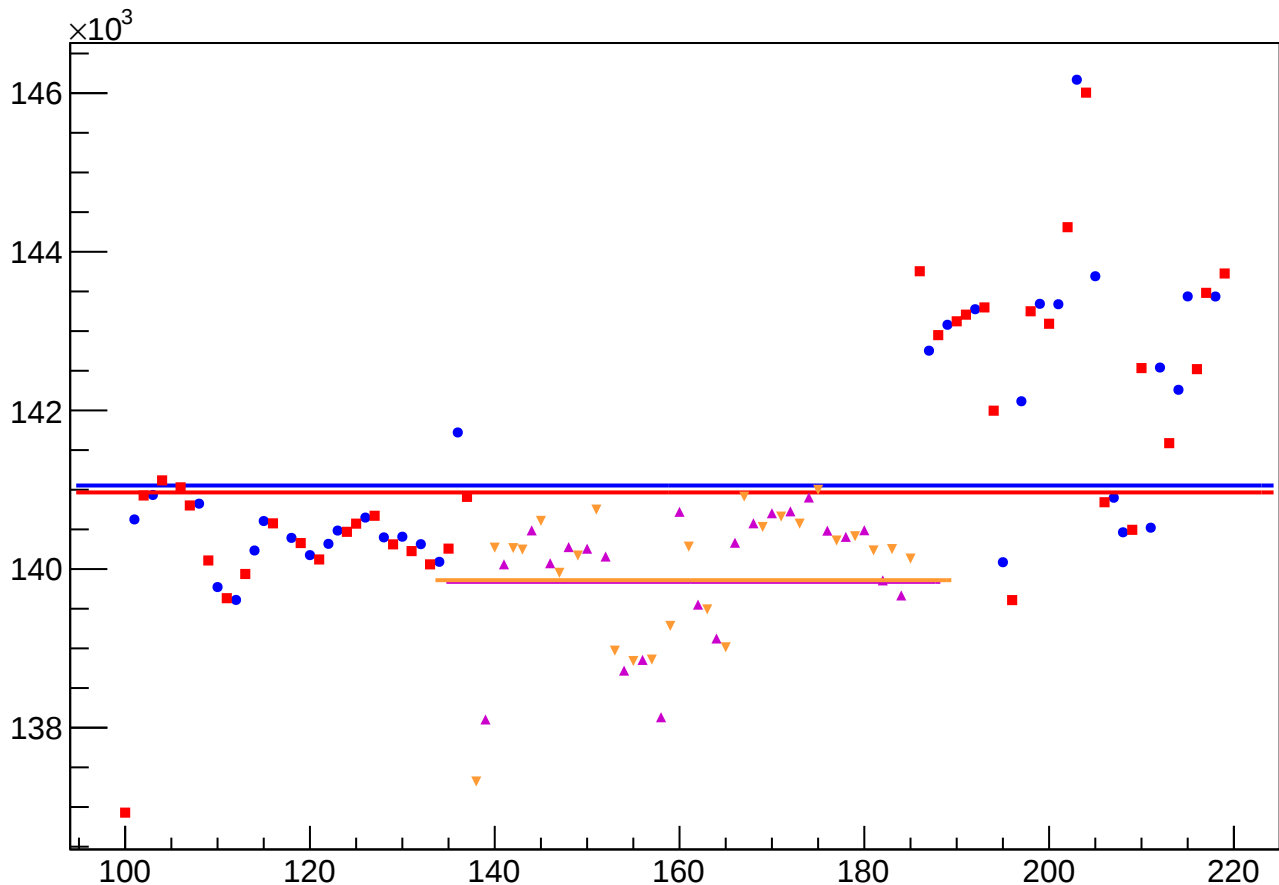
Right:  $8.123 \pm 0.002$   $\chi^2/\text{NDF}$ : 43890954.1/69

In:  $8.676 \pm 0.002$   $\chi^2/\text{NDF}$ : 52345136.0/55

Out:  $9.002 \pm 0.002$   $\chi^2/\text{NDF}$ : 56790439.8/61

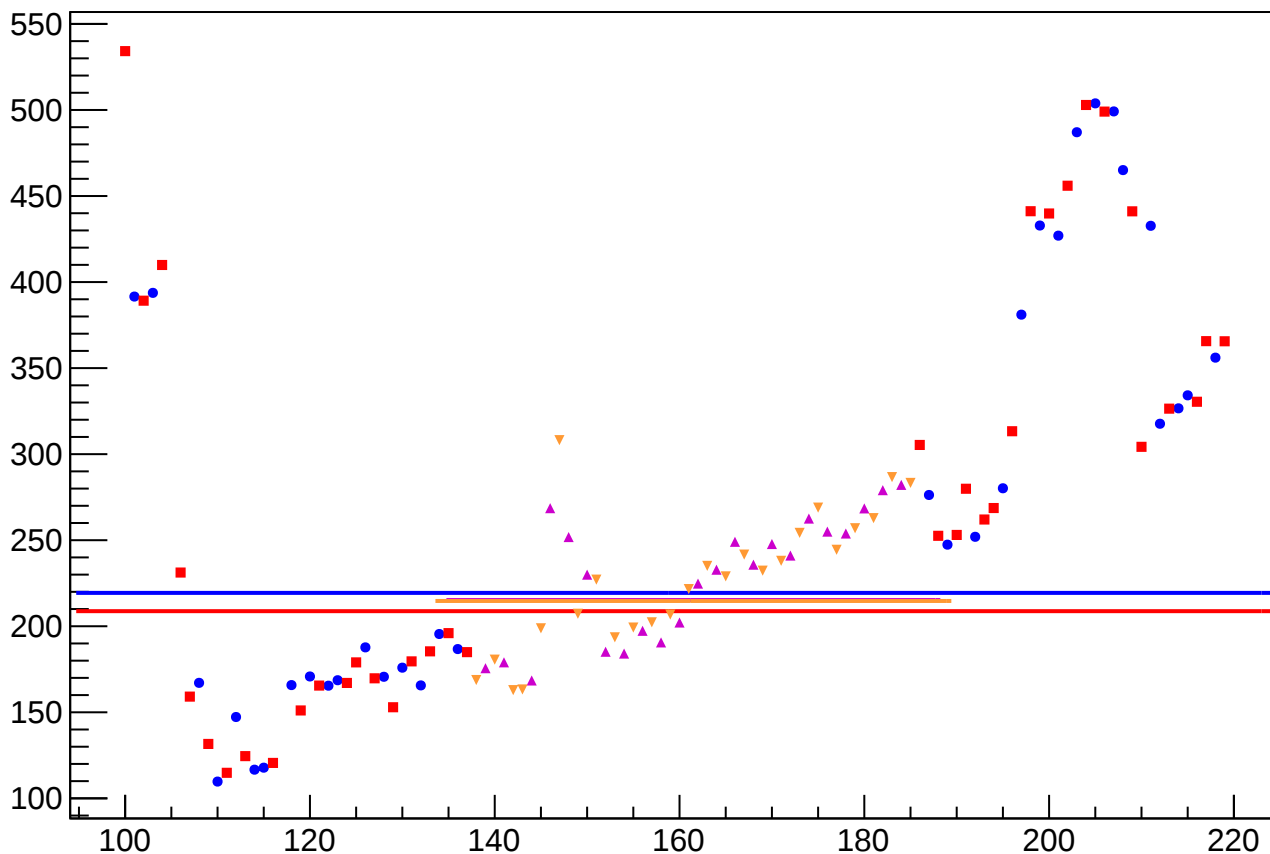
All:  $8.824 \pm 0.002$   $\chi^2/\text{NDF}$ : 109146693.8/117

yield\_bpm0l10WS\_mean vs Slug, Sign Corrected



|                                   |                                      |                               |                                       |
|-----------------------------------|--------------------------------------|-------------------------------|---------------------------------------|
| Right In: 141053.403 $\pm$ 0.057  | $\chi^2/\text{NDF}$ : 534227064.4/32 | Left: 139849.553 $\pm$ 0.037  | $\chi^2/\text{NDF}$ : 609773442.9/41  |
| Left Out: 139859.696 $\pm$ 0.051  | $\chi^2/\text{NDF}$ : 330118281.5/24 | Right: 141006.088 $\pm$ 0.039 | $\chi^2/\text{NDF}$ : 1166805020.4/41 |
| Right Out: 140966.034 $\pm$ 0.053 | $\chi^2/\text{NDF}$ : 631320388.6/36 | In: 140396.131 $\pm$ 0.039    | $\chi^2/\text{NDF}$ : 1056678502.4/50 |
| Left In: 139838.724 $\pm$ 0.053   | $\chi^2/\text{NDF}$ : 279573689.3/22 | Out: 140395.238 $\pm$ 0.037   | $\chi^2/\text{NDF}$ : 1188367850.1/60 |
|                                   |                                      | All: 140395.659 $\pm$ 0.027   | $\chi^2/\text{NDF}$ : 224504663.0/117 |

# yield\_bpm0l10WS\_rms vs Slug, Sign Corrected



Right In: 219.390 $\pm$ 0.041  $\chi^2$ /NDF: 6338073.4/32

Left Out: 214.693 $\pm$ 0.036  $\chi^2$ /NDF: 981105.5/24

Right Out: 208.764 $\pm$ 0.037  $\chi^2$ /NDF: 6839937.7/36

Left In: 215.222 $\pm$ 0.037  $\chi^2$ /NDF: 881945.0/22

Left: 214.949 $\pm$ 0.026  $\chi^2$ /NDF: 1863154.2/47

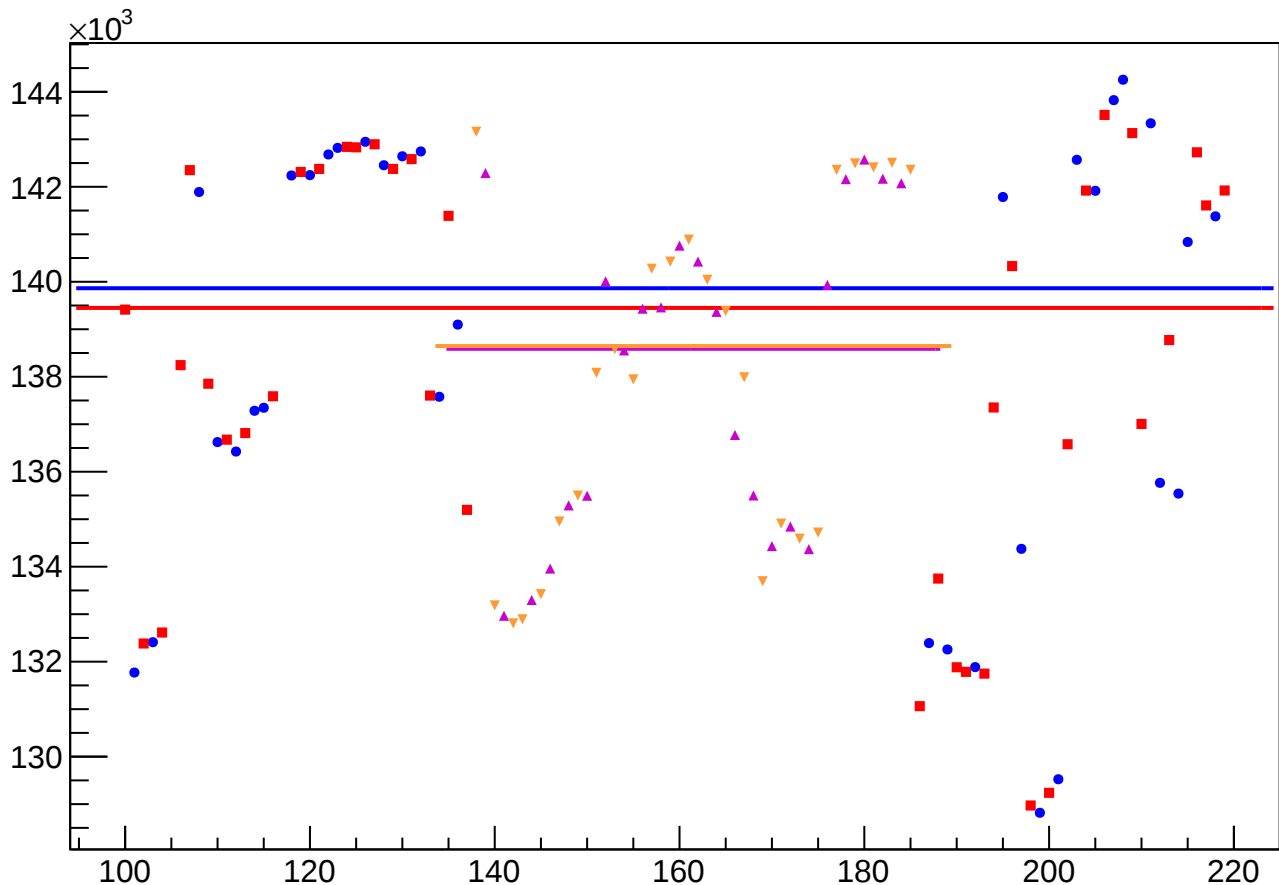
Right: 213.635 $\pm$ 0.027  $\chi^2$ /NDF: 13215217.6/69

In: 217.135 $\pm$ 0.027  $\chi^2$ /NDF: 7225738.6/55

Out: 211.823 $\pm$ 0.026  $\chi^2$ /NDF: 7834078.4/61

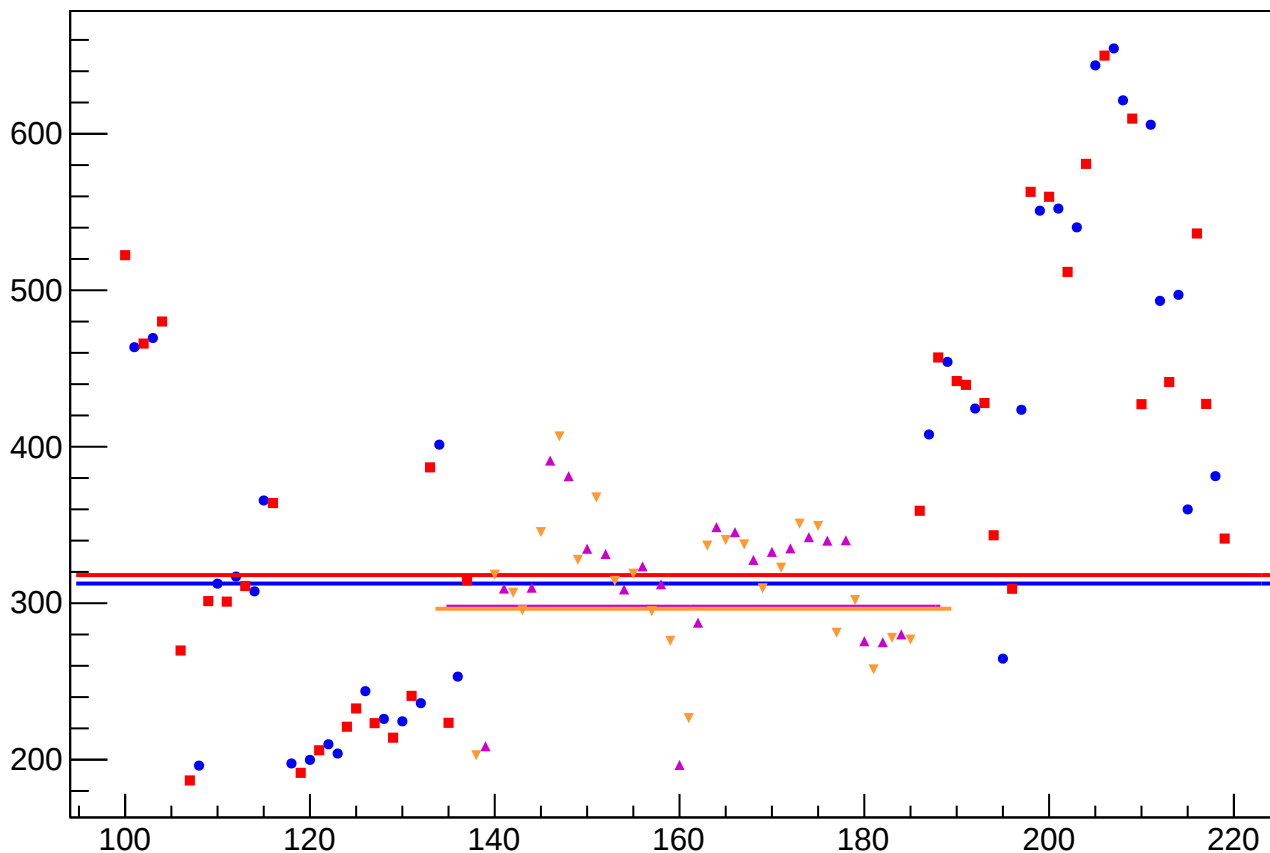
All: 214.328 $\pm$ 0.019  $\chi^2$ /NDF: 15079579.8/11

# yield\_bpm0r03WS\_mean vs Slug, Sign Corrected



|                                   |                                |                               |                               |
|-----------------------------------|--------------------------------|-------------------------------|-------------------------------|
| Right In: 139864.078 $\pm$ 0.080  | $\chi^2$ /NDF: 2404750059.7/32 | Left: 138618.660 $\pm$ 0.051  | $\chi^2$ /NDF: 4497021019.3/4 |
| Left Out: 138646.366 $\pm$ 0.071  | $\chi^2$ /NDF: 2548637600.4/24 | Right: 139650.897 $\pm$ 0.056 | $\chi^2$ /NDF: 4946107116.5/  |
| Right Out: 139449.438 $\pm$ 0.078 | $\chi^2$ /NDF: 2527691371.9/36 | In: 139170.525 $\pm$ 0.054    | $\chi^2$ /NDF: 4489565180.9/5 |
| Left In: 138588.711 $\pm$ 0.074   | $\chi^2$ /NDF: 1948065195.1/22 | Out: 139008.486 $\pm$ 0.053   | $\chi^2$ /NDF: 5134261631.4/6 |
|                                   |                                | All: 139086.744 $\pm$ 0.038   | $\chi^2$ /NDF: 962842758      |

# yield\_bpm0r03WS\_rms vs Slug, Sign Corrected



Right In: 312.562 $\pm$ 0.057  $\chi^2$ /NDF: 5016930.2/32

Left Out: 296.464 $\pm$ 0.050  $\chi^2$ /NDF:893579.7/24

Right Out: 317.973 $\pm$ 0.055  $\chi^2$ /NDF: 4722456.0/36

Left In: 297.774 $\pm$ 0.052  $\chi^2$ /NDF:1061489.5/22

Left: 297.094 $\pm$ 0.036  $\chi^2$ /NDF: 1955397.8/47

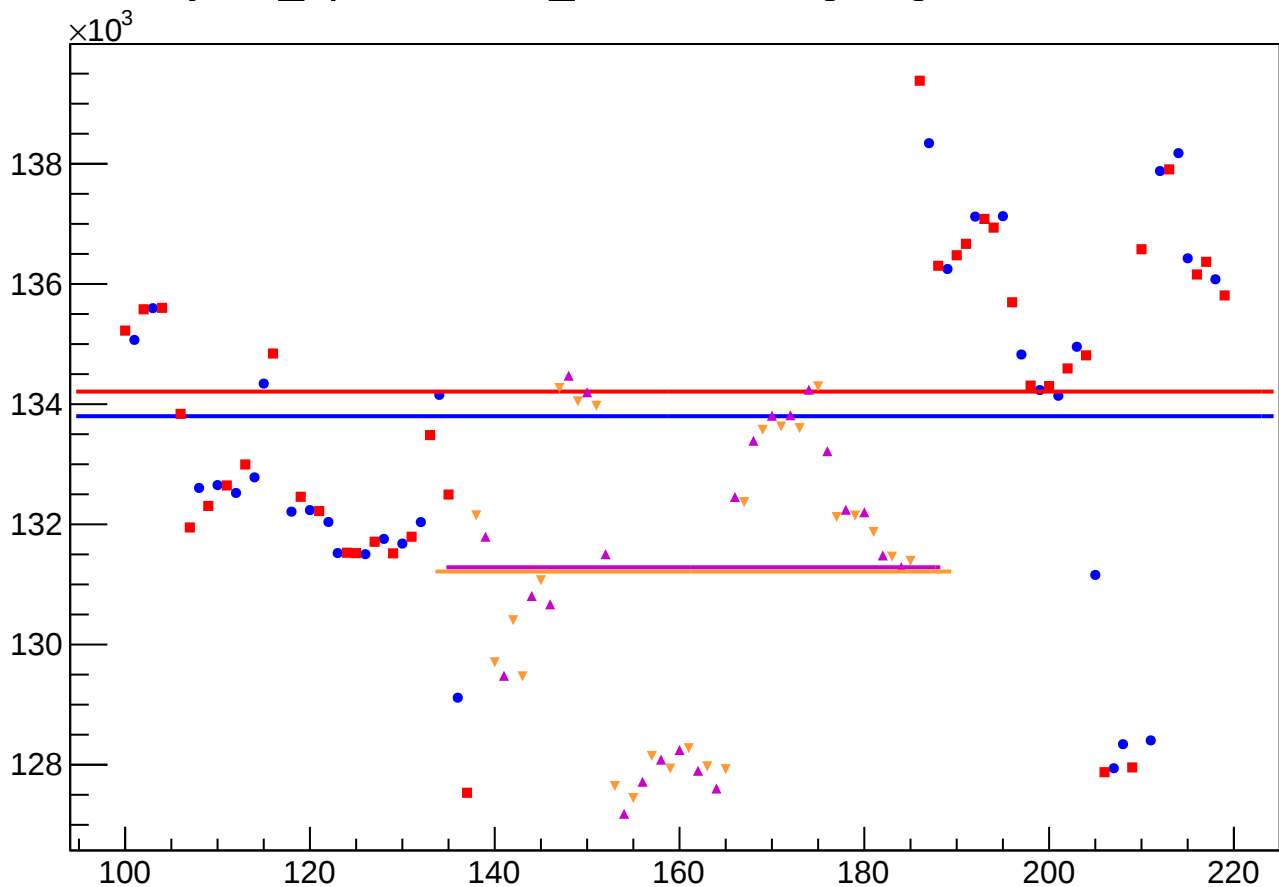
Right: 315.344 $\pm$ 0.040  $\chi^2$ /NDF: 9744039.5/69

In: 304.521 $\pm$ 0.038  $\chi^2$ /NDF:6115190.2/55

Out: 306.163 $\pm$ 0.037  $\chi^2$ /NDF:5699144.4/61

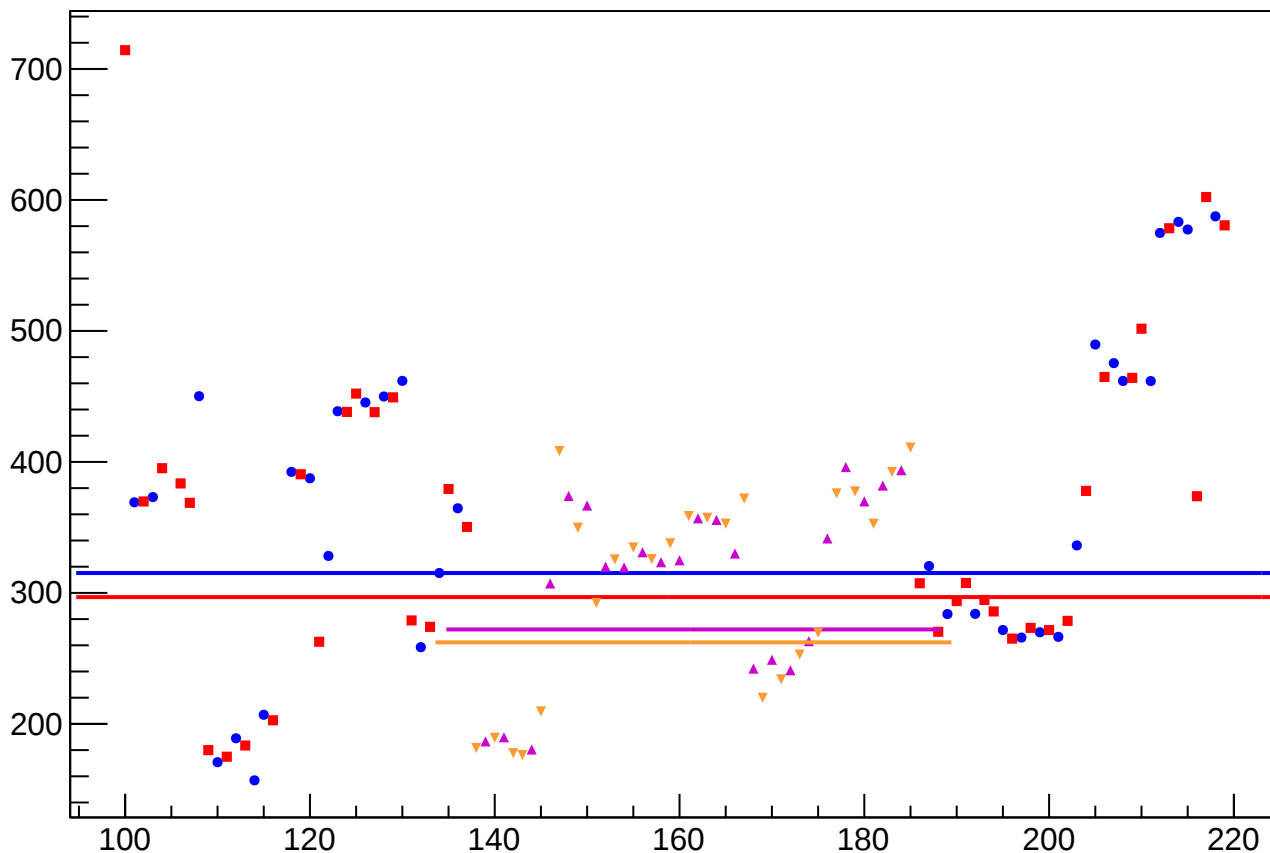
All: 305.370 $\pm$ 0.027  $\chi^2$ /NDF: 11815279.8/121

# yield\_bpm0r05WS\_mean vs Slug, Sign Corrected



|                                   |                                       |                               |                                      |
|-----------------------------------|---------------------------------------|-------------------------------|--------------------------------------|
| Right In: 133800.088 $\pm$ 0.079  | $\chi^2/\text{NDF}$ : 1046183829.4/32 | Left: 131248.166 $\pm$ 0.047  | $\chi^2/\text{NDF}$ : 2230223308.9/4 |
| Left Out: 131214.985 $\pm$ 0.064  | $\chi^2/\text{NDF}$ : 1173424494.6/24 | Right: 134023.611 $\pm$ 0.053 | $\chi^2/\text{NDF}$ : 2120063028.8/6 |
| Right Out: 134209.430 $\pm$ 0.072 | $\chi^2/\text{NDF}$ : 1059136433.6/36 | In: 132365.234 $\pm$ 0.052    | $\chi^2/\text{NDF}$ : 2683747588.6/5 |
| Left In: 131285.623 $\pm$ 0.068   | $\chi^2/\text{NDF}$ : 1056232192.1/22 | Out: 132547.465 $\pm$ 0.048   | $\chi^2/\text{NDF}$ : 3197144976.0/6 |
|                                   |                                       | All: 132463.125 $\pm$ 0.035   | $\chi^2/\text{NDF}$ : 588758703.0/1  |

# yield\_bpm0r05WS\_rms vs Slug, Sign Corrected



Right In: 315.181+/-0.056  $\chi^2/\text{NDF}$ : 3773320.7/32

Left Out: 262.260+/-0.045  $\chi^2/\text{NDF}$ :2818169.1/24

Right Out: 296.807+/-0.051  $\chi^2/\text{NDF}$ : 3814569.8/36

Left In: 272.115+/-0.048  $\chi^2/\text{NDF}$ :2221925.0/22

Left: 266.889+/-0.033  $\chi^2/\text{NDF}$ : 5062151.8/47

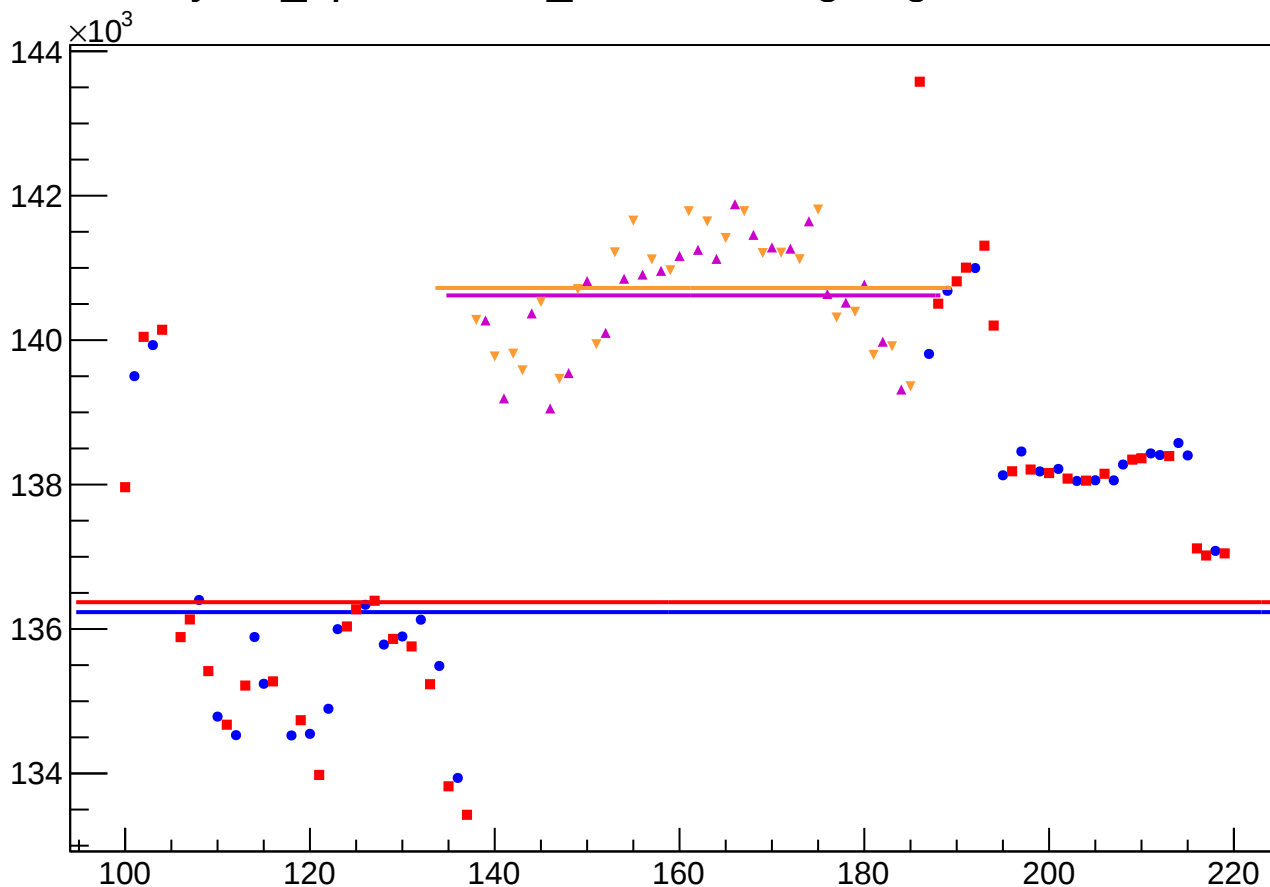
Right: 305.148+/-0.038  $\chi^2/\text{NDF}$ : 7647294.5/69

In: 290.606+/-0.037  $\chi^2/\text{NDF}$ :6336308.7/55

Out: 277.633+/-0.034  $\chi^2/\text{NDF}$ :6889528.8/61

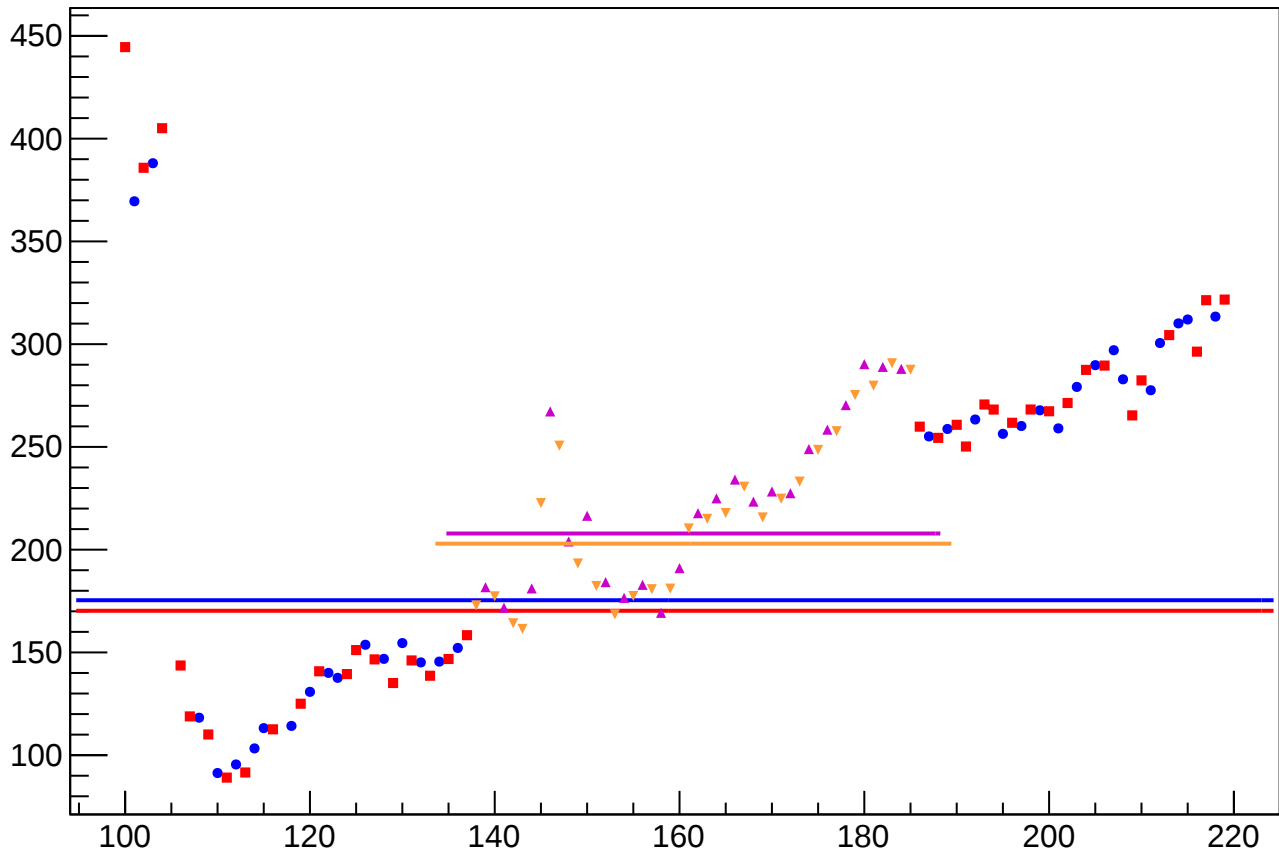
All: 283.637+/-0.025  $\chi^2/\text{NDF}$ : 13293689.5/13

yield\_bpm0i02WS\_mean vs Slug, Sign Corrected



|                                   |                                |                               |                               |
|-----------------------------------|--------------------------------|-------------------------------|-------------------------------|
| Right In: 136233.811 $\pm$ 0.045  | $\chi^2$ /NDF: 1671054208.5/32 | Left: 140673.196 $\pm$ 0.035  | $\chi^2$ /NDF: 449761004.9/47 |
| Left Out: 140721.823 $\pm$ 0.048  | $\chi^2$ /NDF: 247257762.8/24  | Right: 136306.508 $\pm$ 0.031 | $\chi^2$ /NDF: 3898130701.0/7 |
| Right Out: 136371.451 $\pm$ 0.043 | $\chi^2$ /NDF: 222232346.1/36  | In: 138171.227 $\pm$ 0.034    | $\chi^2$ /NDF: 5984580454.0/5 |
| Left In: 140619.038 $\pm$ 0.051   | $\chi^2$ /NDF: 200370178.0/22  | Out: 138288.057 $\pm$ 0.032   | $\chi^2$ /NDF: 6988016917.0/6 |
|                                   |                                | All: 138232.868 $\pm$ 0.023   | $\chi^2$ /NDF: 129788433      |

# yield\_bpm0i02WS\_rms vs Slug, Sign Corrected



Right In: 175.397 $\pm$ 0.032  $\chi^2$ /NDF: 5984097.7/32

Left Out: 202.934 $\pm$ 0.034  $\chi^2$ /NDF:1052283.6/24

Right Out: 170.275 $\pm$ 0.030  $\chi^2$ /NDF: 6734020.3/36

Left In: 207.872 $\pm$ 0.036  $\chi^2$ /NDF:949200.3/22

Left: 205.270 $\pm$ 0.025  $\chi^2$ /NDF: 2011329.4/47

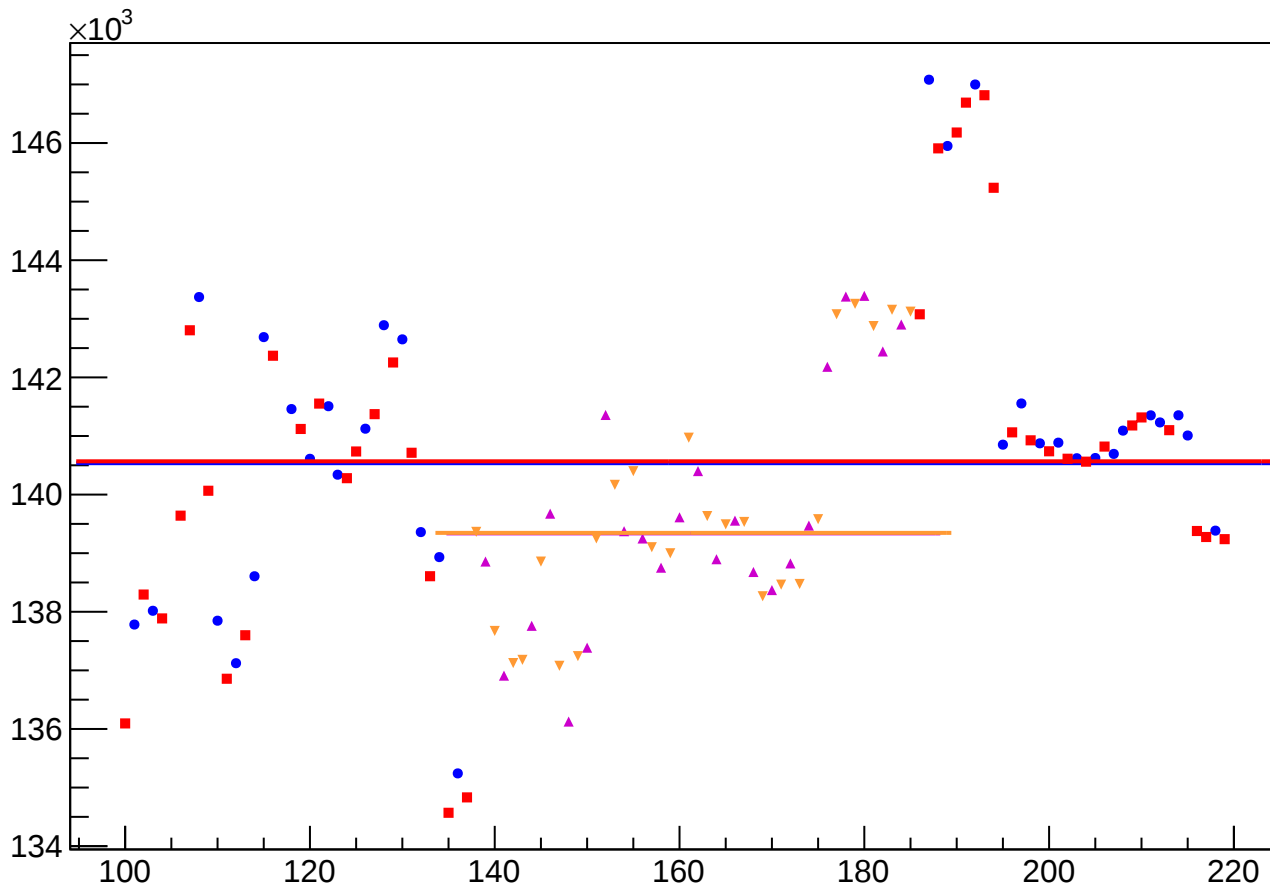
Right: 172.692 $\pm$ 0.022  $\chi^2$ /NDF: 12731533.7/69

In: 189.745 $\pm$ 0.024  $\chi^2$ /NDF:7384443.9/55

Out: 184.663 $\pm$ 0.023  $\chi^2$ /NDF:8295609.6/61

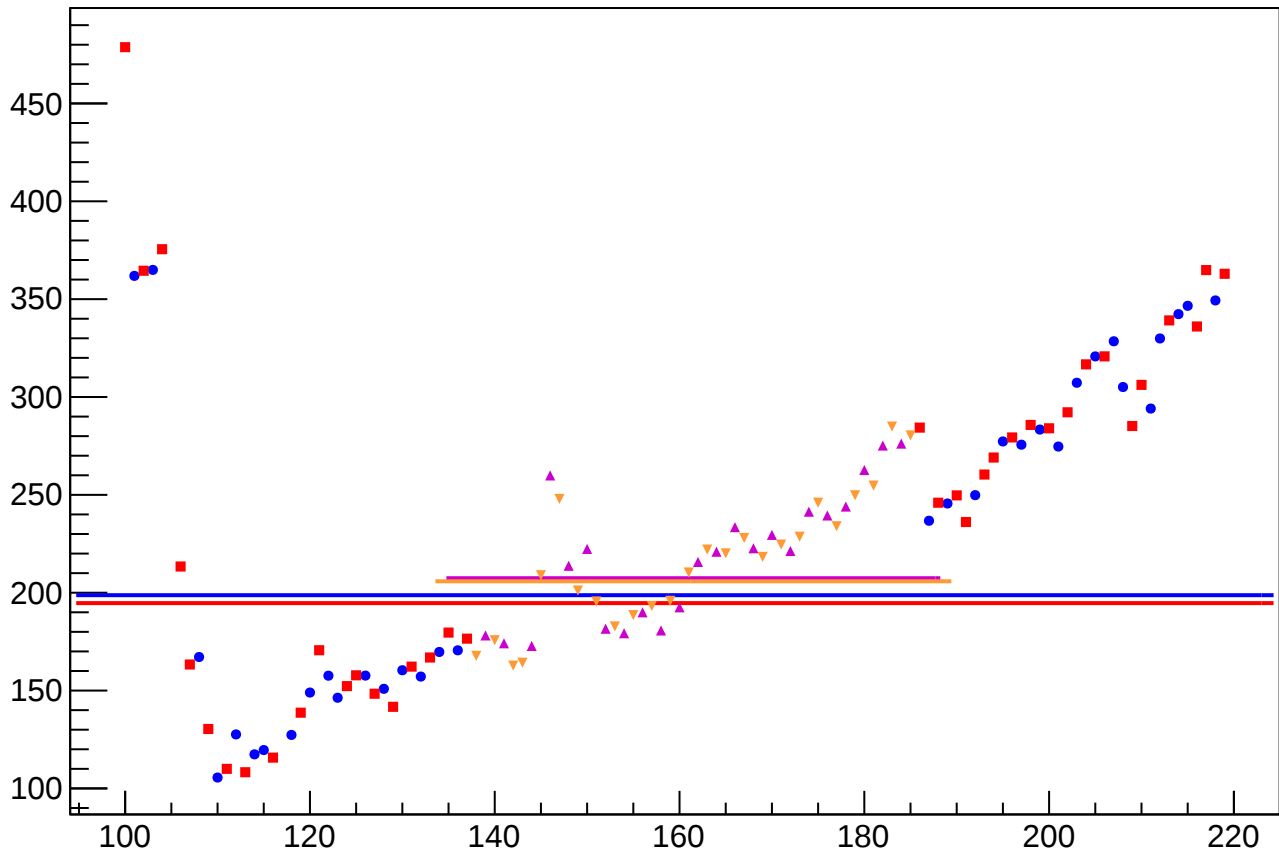
All: 187.064 $\pm$ 0.017  $\chi^2$ /NDF: 15703682.3/11

yield\_bpm0i02aWS\_mean vs Slug, Sign Corrected



|                                   |                                |                               |                               |
|-----------------------------------|--------------------------------|-------------------------------|-------------------------------|
| Right In: 140535.992 $\pm$ 0.051  | $\chi^2$ /NDF: 2797334035.5/32 | Left: 139342.403 $\pm$ 0.035  | $\chi^2$ /NDF: 2564192227.9/4 |
| Left Out: 139346.604 $\pm$ 0.049  | $\chi^2$ /NDF: 1271172976.7/24 | Right: 140552.832 $\pm$ 0.035 | $\chi^2$ /NDF: 6047332152.4/  |
| Right Out: 140568.100 $\pm$ 0.048 | $\chi^2$ /NDF: 3249787221.8/36 | In: 139939.349 $\pm$ 0.036    | $\chi^2$ /NDF: 4369160087.6/5 |
| Left In: 139337.874 $\pm$ 0.051   | $\chi^2$ /NDF: 1293003954.9/22 | Out: 139966.792 $\pm$ 0.034   | $\chi^2$ /NDF: 4836927121.8/6 |
|                                   |                                | All: 139953.665 $\pm$ 0.025   | $\chi^2$ /NDF: 92063924       |

# yield\_bpm0i02aWS\_rms vs Slug, Sign Corrected



Right In: 198.740 $\pm$ 0.036  $\chi^2$ /NDF: 4912161.5/32

Left Out: 205.833 $\pm$ 0.035  $\chi^2$ /NDF: 738666.4/24

Right Out: 194.691 $\pm$ 0.034  $\chi^2$ /NDF: 5536176.3/36

Left In: 207.416 $\pm$ 0.036  $\chi^2$ /NDF: 701955.3/22

Left: 206.595 $\pm$ 0.025  $\chi^2$ /NDF: 1441628.2/47

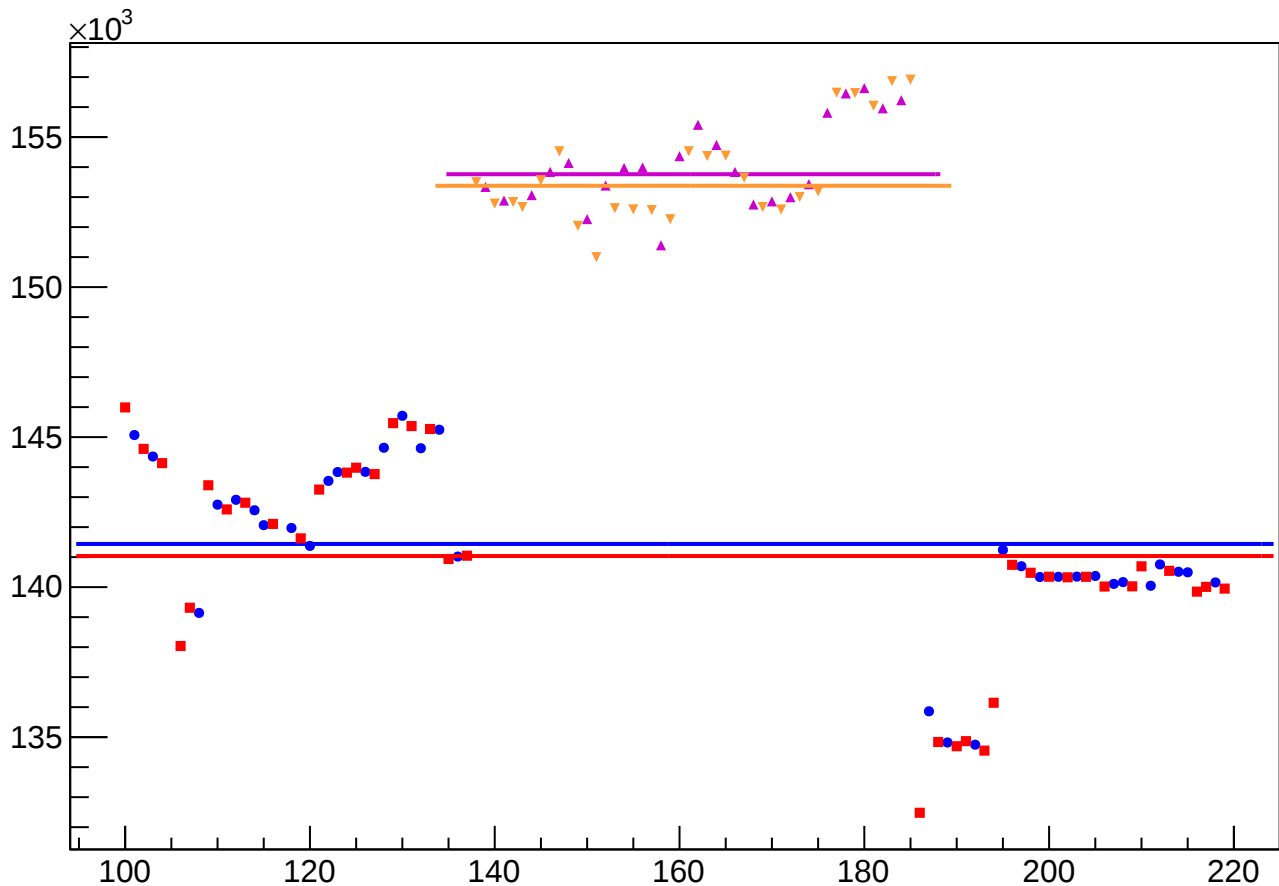
Right: 196.617 $\pm$ 0.025  $\chi^2$ /NDF: 10455045.3/69

In: 203.061 $\pm$ 0.025  $\chi^2$ /NDF: 5643357.7/55

Out: 200.176 $\pm$ 0.024  $\chi^2$ /NDF: 6327417.1/61

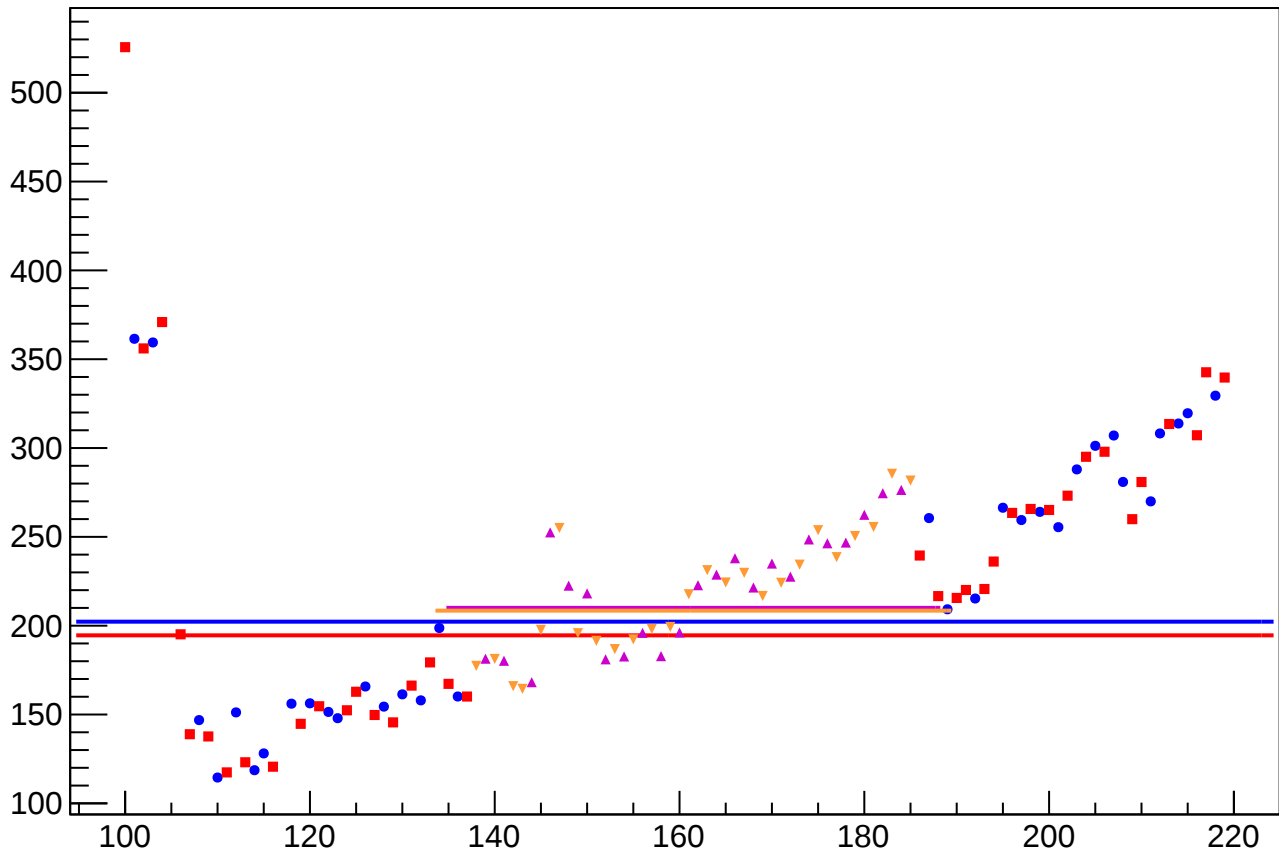
All: 201.556 $\pm$ 0.018  $\chi^2$ /NDF: 11977520.7/11

# yield\_bpm0i05WS\_mean vs Slug, Sign Corrected



|                                   |                                |                               |                                |
|-----------------------------------|--------------------------------|-------------------------------|--------------------------------|
| Right In: 141439.052 $\pm$ 0.051  | $\chi^2$ /NDF: 2761552469.1/32 | Left: 153562.262 $\pm$ 0.036  | $\chi^2$ /NDF: 1468093411.3/4  |
| Left Out: 153376.698 $\pm$ 0.050  | $\chi^2$ /NDF: 803848095.1/24  | Right: 141224.260 $\pm$ 0.035 | $\chi^2$ /NDF: 7268004622.9/   |
| Right Out: 141036.559 $\pm$ 0.047 | $\chi^2$ /NDF: 4472594423.0/36 | In: 147490.133 $\pm$ 0.036    | $\chi^2$ /NDF: 32600719717.4/5 |
| Left In: 153762.419 $\pm$ 0.051   | $\chi^2$ /NDF: 635075685.0/22  | Out: 146913.674 $\pm$ 0.034   | $\chi^2$ /NDF: 37779012845.8   |
|                                   |                                | All: 147186.609 $\pm$ 0.025   | $\chi^2$ /NDF: 705143636       |

# yield\_bpm0i05WS\_rms vs Slug, Sign Corrected



Right In: 202.266+/-0.036  $\chi^2/\text{NDF}$ : 3635296.5/32

Left Out: 208.466+/-0.035  $\chi^2/\text{NDF}$ : 720894.7/24

Right Out: 194.568+/-0.033  $\chi^2/\text{NDF}$ : 4171349.8/36

Left In: 210.038+/-0.036  $\chi^2/\text{NDF}$ : 702369.5/22

Left: 209.222+/-0.025  $\chi^2/\text{NDF}$ : 1424233.1/47

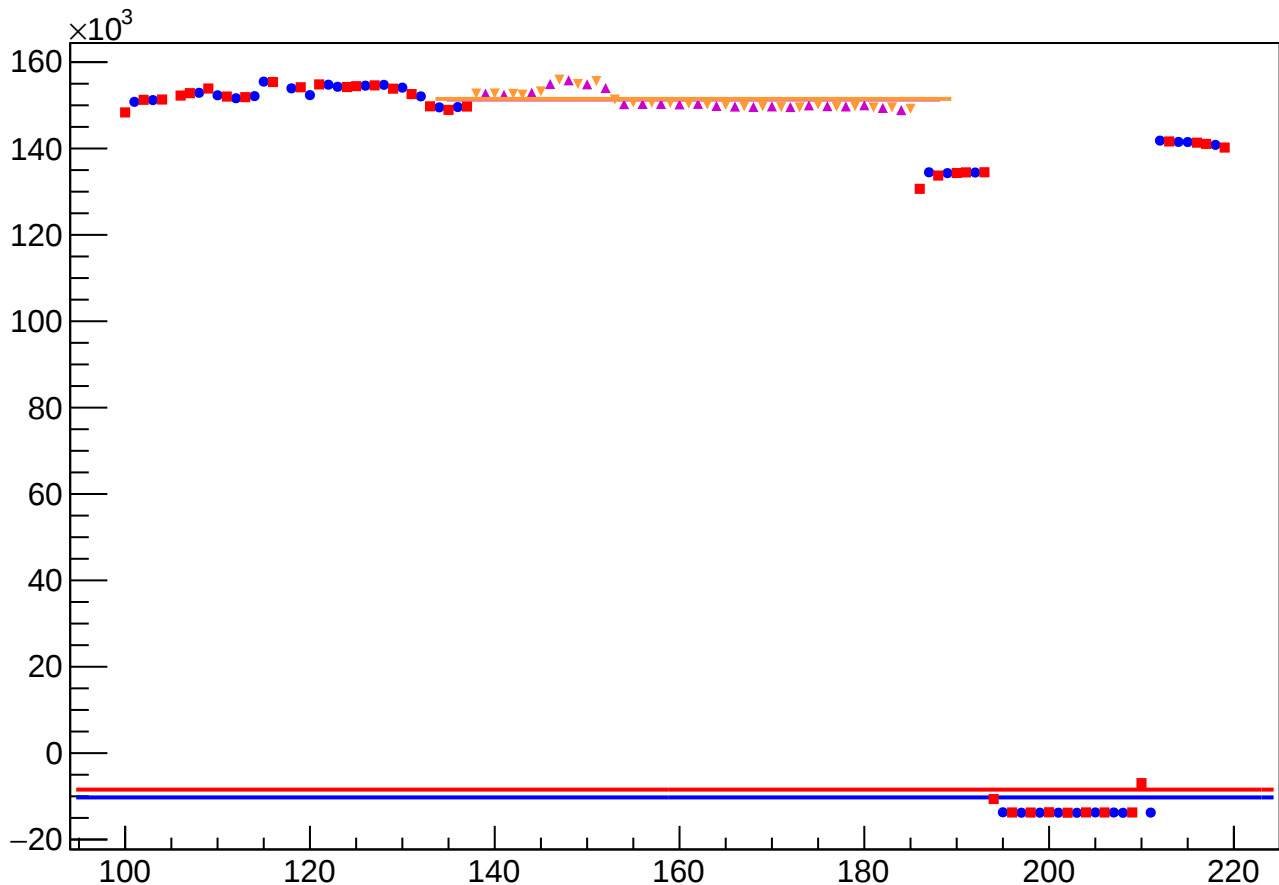
Right: 198.158+/-0.024  $\chi^2/\text{NDF}$ : 7831414.7/69

In: 206.082+/-0.025  $\chi^2/\text{NDF}$ : 4360897.9/55

Out: 201.187+/-0.024  $\chi^2/\text{NDF}$ : 4974696.6/61

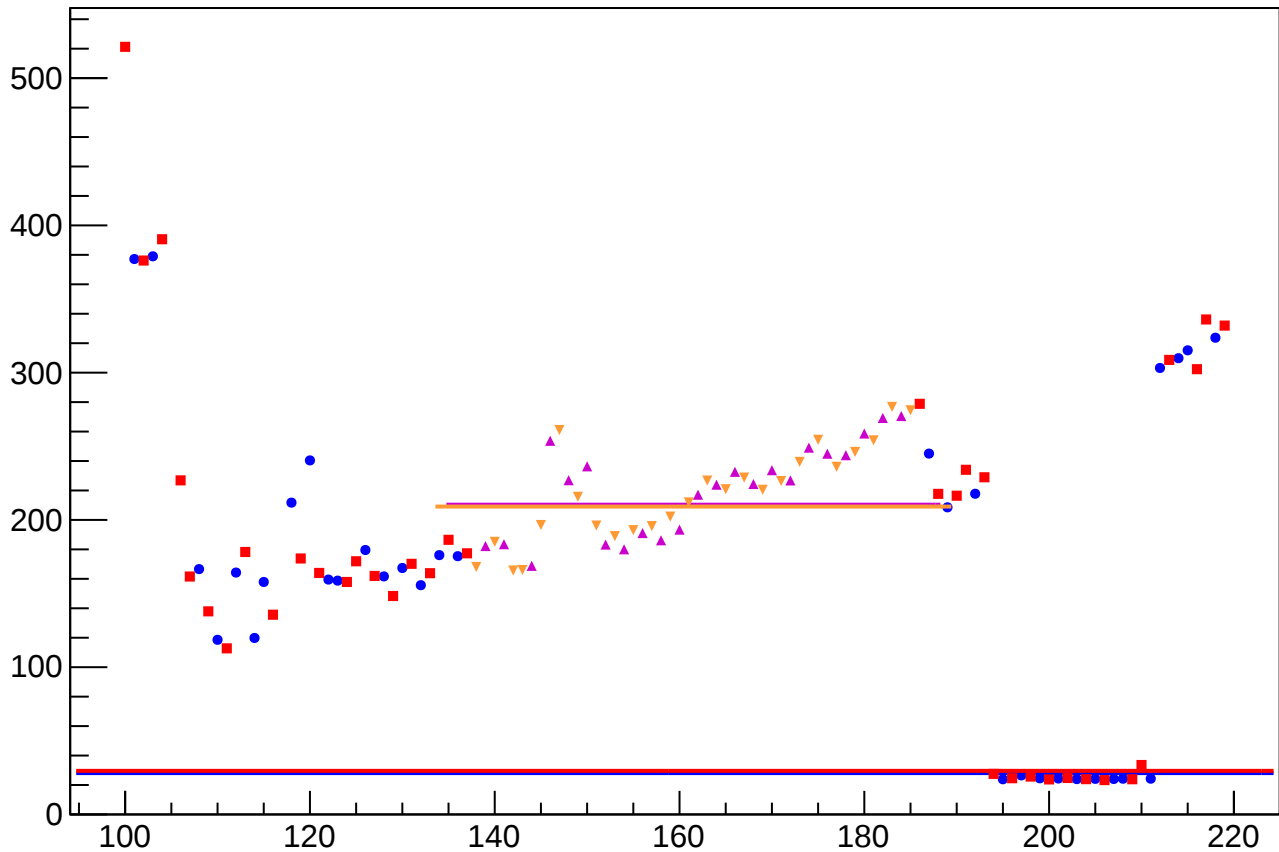
All: 203.505+/-0.018  $\chi^2/\text{NDF}$ : 9355009.9/117

# yield\_bpm0i07WS\_mean vs Slug, Sign Corrected



|                                  |                                   |                              |                                    |
|----------------------------------|-----------------------------------|------------------------------|------------------------------------|
| Right In: -10253.992 $\pm$ 0.009 | $\chi^2$ /NDF: 6598032552485.0/32 | Left: 151425.512 $\pm$ 0.036 | $\chi^2$ /NDF: 2906409079.9/4      |
| Left Out: 151483.385 $\pm$ 0.050 | $\chi^2$ /NDF: 1481910066.9/24    | Right: -9428.299 $\pm$ 0.007 | $\chi^2$ /NDF: 1443306752620.0/24  |
| Right Out: -8447.150 $\pm$ 0.010 | $\chi^2$ /NDF: 7817457720857.8/36 | In: -5223.629 $\pm$ 0.009    | $\chi^2$ /NDF: 16177980211778.7/36 |
| Left In: 151363.165 $\pm$ 0.051  | $\chi^2$ /NDF: 1421662089.0/22    | Out: -2129.891 $\pm$ 0.010   | $\chi^2$ /NDF: 17836366611168.0/22 |
|                                  |                                   | All: -3803.180 $\pm$ 0.007   | $\chi^2$ /NDF: 3406778522.0/22     |

# yield\_bpm0i07WS\_rms vs Slug, Sign Corrected



Right In:  $28.087 \pm 0.007$   $\chi^2/\text{NDF}: 16518480.4/32$

Left Out:  $209.076 \pm 0.035$   $\chi^2/\text{NDF}: 708260.3/24$

Right Out:  $29.610 \pm 0.007$   $\chi^2/\text{NDF}: 18443496.1/36$

Left In:  $210.345 \pm 0.036$   $\chi^2/\text{NDF}: 677747.7/22$

Left:  $209.687 \pm 0.025$   $\chi^2/\text{NDF}: 1386640.1/47$

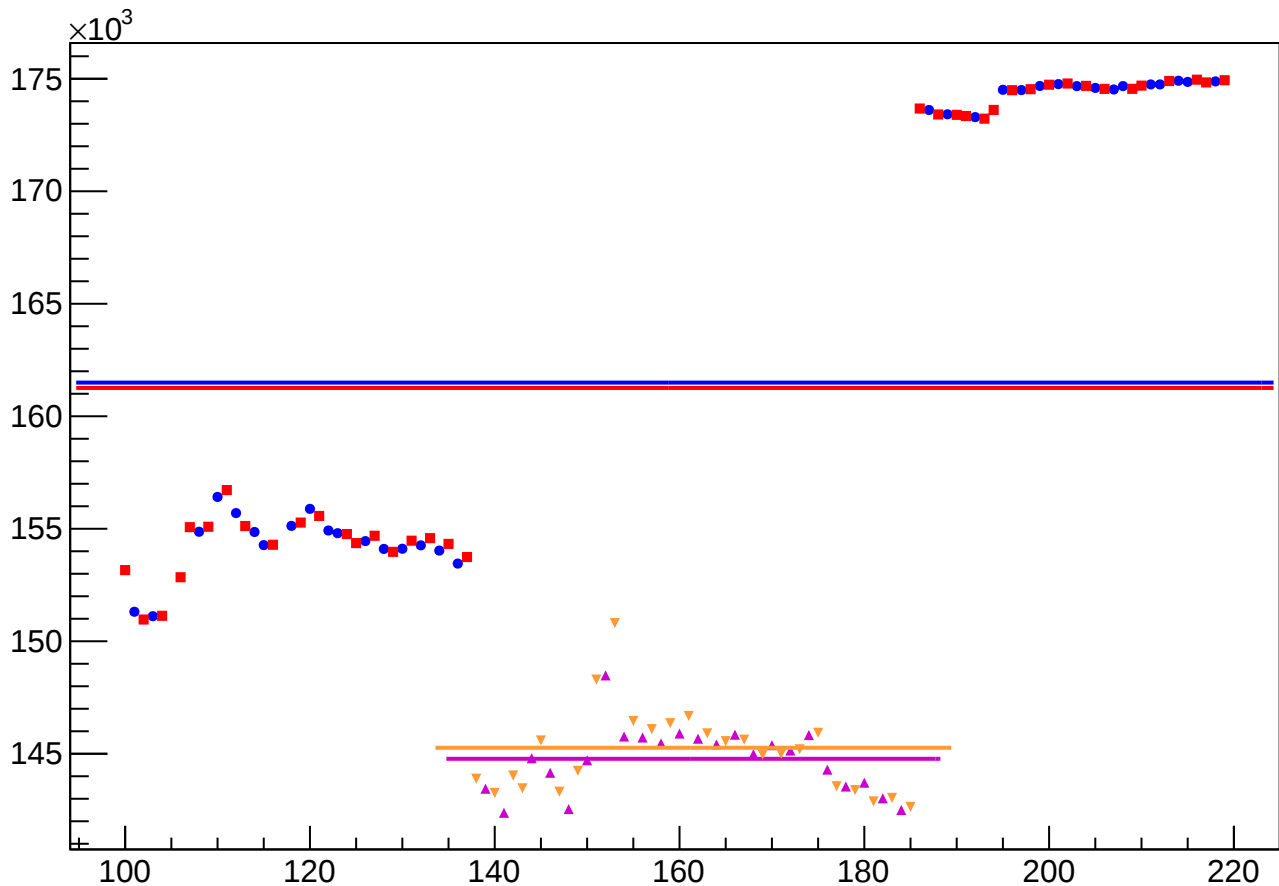
Right:  $28.783 \pm 0.005$   $\chi^2/\text{NDF}: 34986965.2/69$

In:  $33.759 \pm 0.006$   $\chi^2/\text{NDF}: 41559080.9/55$

Out:  $36.699 \pm 0.007$   $\chi^2/\text{NDF}: 44380048.1/61$

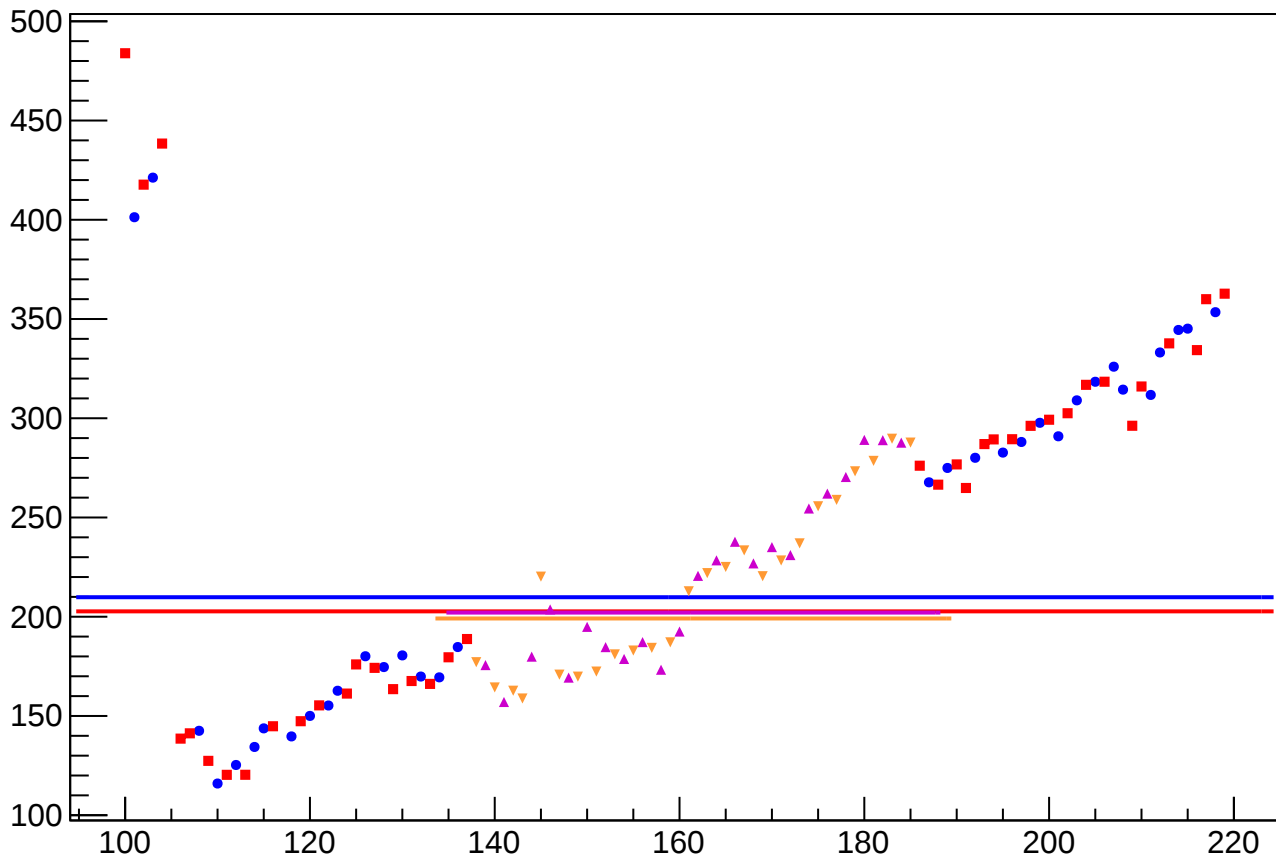
All:  $35.109 \pm 0.005$   $\chi^2/\text{NDF}: 86035611.3/117$

# yield\_bpm1i02WS\_mean vs Slug, Sign Corrected



|                                   |                                 |                               |                                |
|-----------------------------------|---------------------------------|-------------------------------|--------------------------------|
| Right In: 161496.414 $\pm$ 0.053  | $\chi^2$ /NDF: 31108042127.1/32 | Left: 145032.324 $\pm$ 0.034  | $\chi^2$ /NDF: 2687033506.0/4  |
| Left Out: 145266.717 $\pm$ 0.047  | $\chi^2$ /NDF: 1717707352.7/24  | Right: 161370.173 $\pm$ 0.036 | $\chi^2$ /NDF: 65232475031.1   |
| Right Out: 161259.257 $\pm$ 0.050 | $\chi^2$ /NDF: 34113834623.9/36 | In: 152552.530 $\pm$ 0.036    | $\chi^2$ /NDF: 84964832163.9/5 |
| Left In: 144776.016 $\pm$ 0.050   | $\chi^2$ /NDF: 918120275.4/22   | Out: 152864.198 $\pm$ 0.034   | $\chi^2$ /NDF: 89925152464.9   |
|                                   |                                 | All: 152716.787 $\pm$ 0.025   | $\chi^2$ /NDF: 174928949       |

# yield\_bpm1i02WS\_rms vs Slug, Sign Corrected



Right In: 209.830 $\pm$ 0.038  $\chi^2$ /NDF: 4743928.0/32

Left Out: 199.118 $\pm$ 0.034  $\chi^2$ /NDF: 1152231.0/24

Right Out: 202.704 $\pm$ 0.035  $\chi^2$ /NDF: 5393103.9/36

Left In: 202.090 $\pm$ 0.035  $\chi^2$ /NDF: 1057833.2/22

Left: 200.538 $\pm$ 0.024  $\chi^2$ /NDF: 2213821.5/47

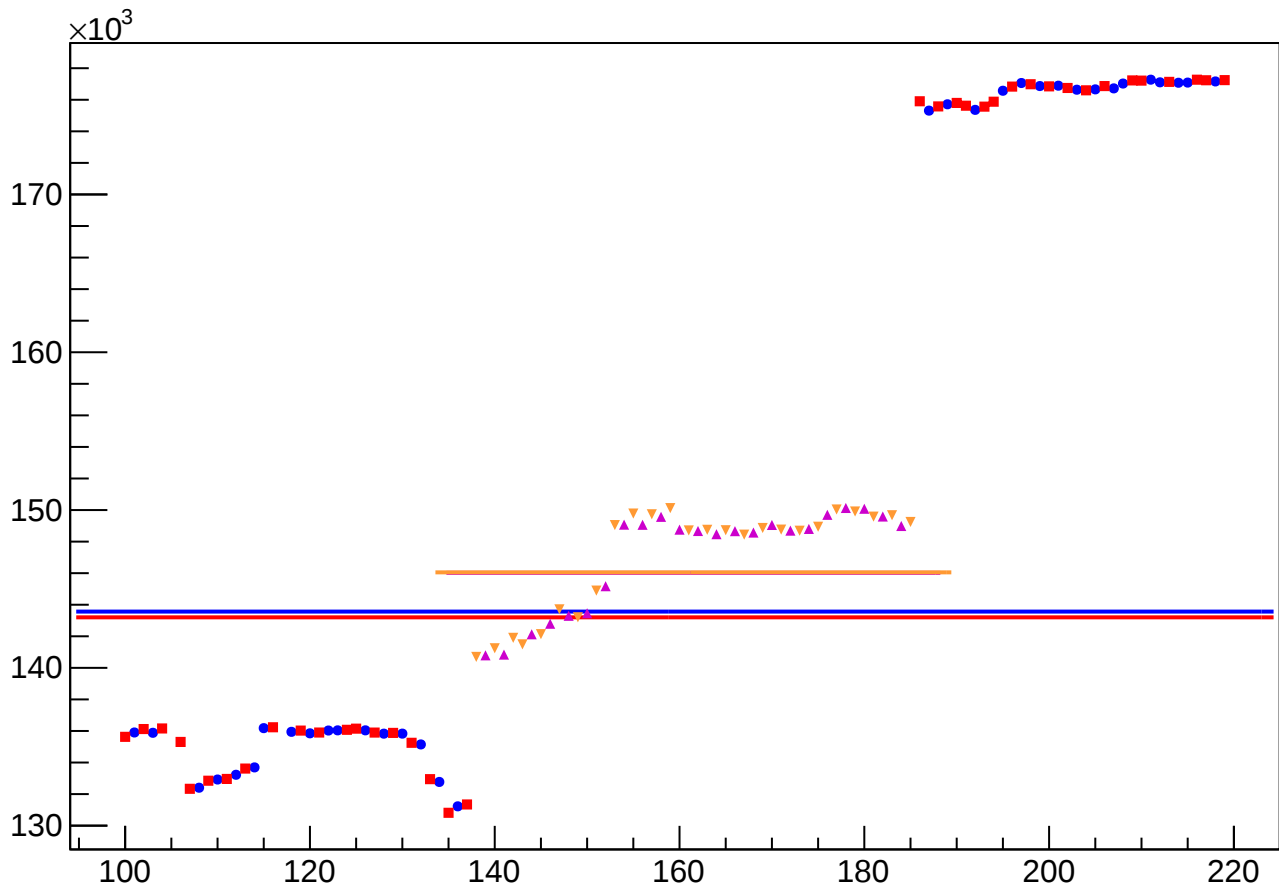
Right: 206.037 $\pm$ 0.026  $\chi^2$ /NDF: 10156169.8/69

In: 205.690 $\pm$ 0.026  $\chi^2$ /NDF: 5824448.7/55

Out: 200.822 $\pm$ 0.024  $\chi^2$ /NDF: 6550774.5/61

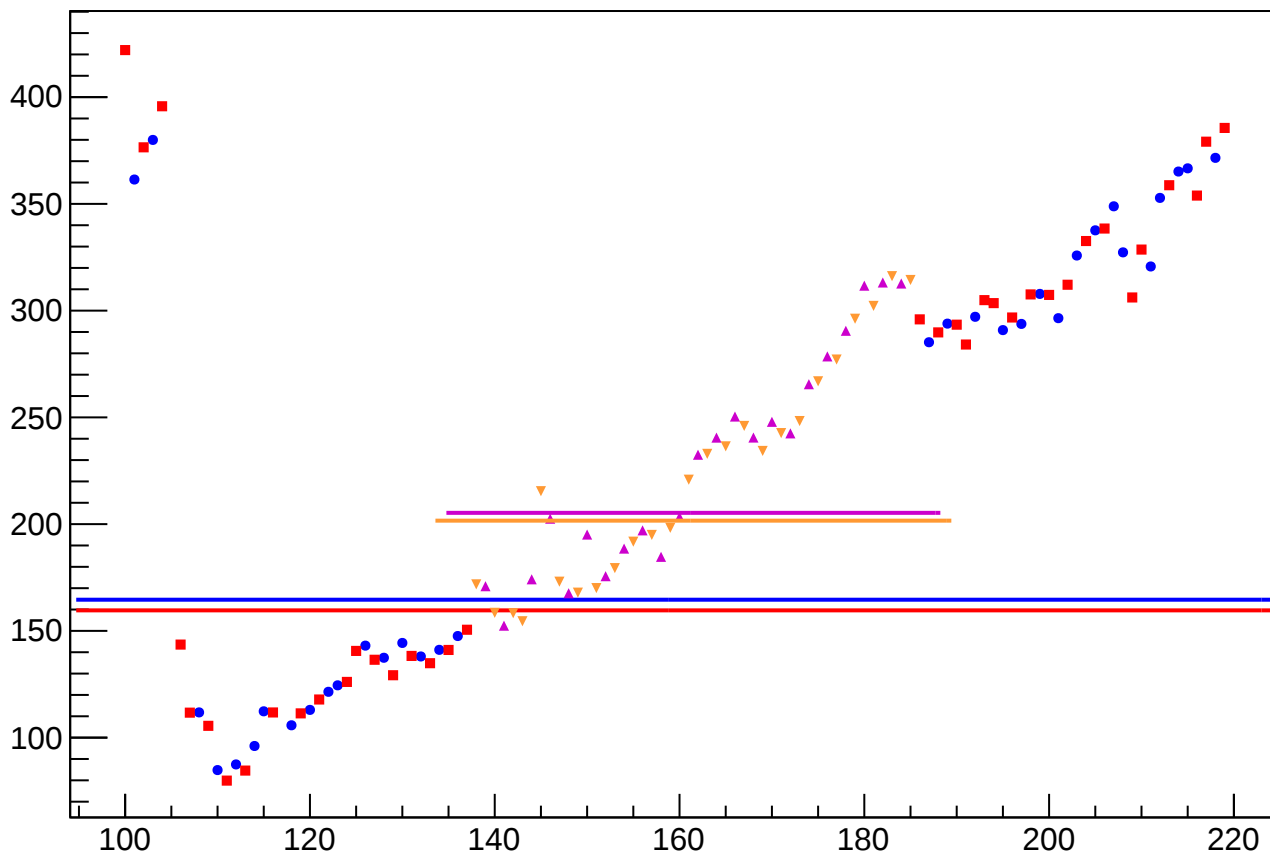
All: 203.124 $\pm$ 0.018  $\chi^2$ /NDF: 12394237.9/111

# yield\_bpm1i04WS\_mean vs Slug, Sign Corrected



|                                   |                                         |                               |                                      |
|-----------------------------------|-----------------------------------------|-------------------------------|--------------------------------------|
| Right In: 143566.107 $\pm$ 0.045  | $\chi^2/\text{NDF}$ : 155855096136.0/32 | Left: 146036.626 $\pm$ 0.035  | $\chi^2/\text{NDF}$ : 9994930852.8/4 |
| Left Out: 146051.733 $\pm$ 0.048  | $\chi^2/\text{NDF}$ : 5403300123.1/24   | Right: 143372.931 $\pm$ 0.031 | $\chi^2/\text{NDF}$ : 327731973209   |
| Right Out: 143200.788 $\pm$ 0.042 | $\chi^2/\text{NDF}$ : 171841314748.0/36 | In: 144636.324 $\pm$ 0.033    | $\chi^2/\text{NDF}$ : 161769925803.2 |
| Left In: 146020.015 $\pm$ 0.051   | $\chi^2/\text{NDF}$ : 4591425371.4/22   | Out: 144429.927 $\pm$ 0.032   | $\chi^2/\text{NDF}$ : 179226222540.  |
|                                   |                                         | All: 144527.638 $\pm$ 0.023   | $\chi^2/\text{NDF}$ : 341016195      |

# yield\_bpm1i04WS\_rms vs Slug, Sign Corrected



Right In: 164.602 $\pm$ 0.031  $\chi^2$ /NDF: 8556934.5/32

Left Out: 201.632 $\pm$ 0.034  $\chi^2$ /NDF:1589564.0/24

Right Out: 159.610 $\pm$ 0.030  $\chi^2$ /NDF: 9504739.1/36

Left In: 205.286 $\pm$ 0.036  $\chi^2$ /NDF:1425292.7/22

Left: 203.372 $\pm$ 0.025  $\chi^2$ /NDF: 3020309.5/47

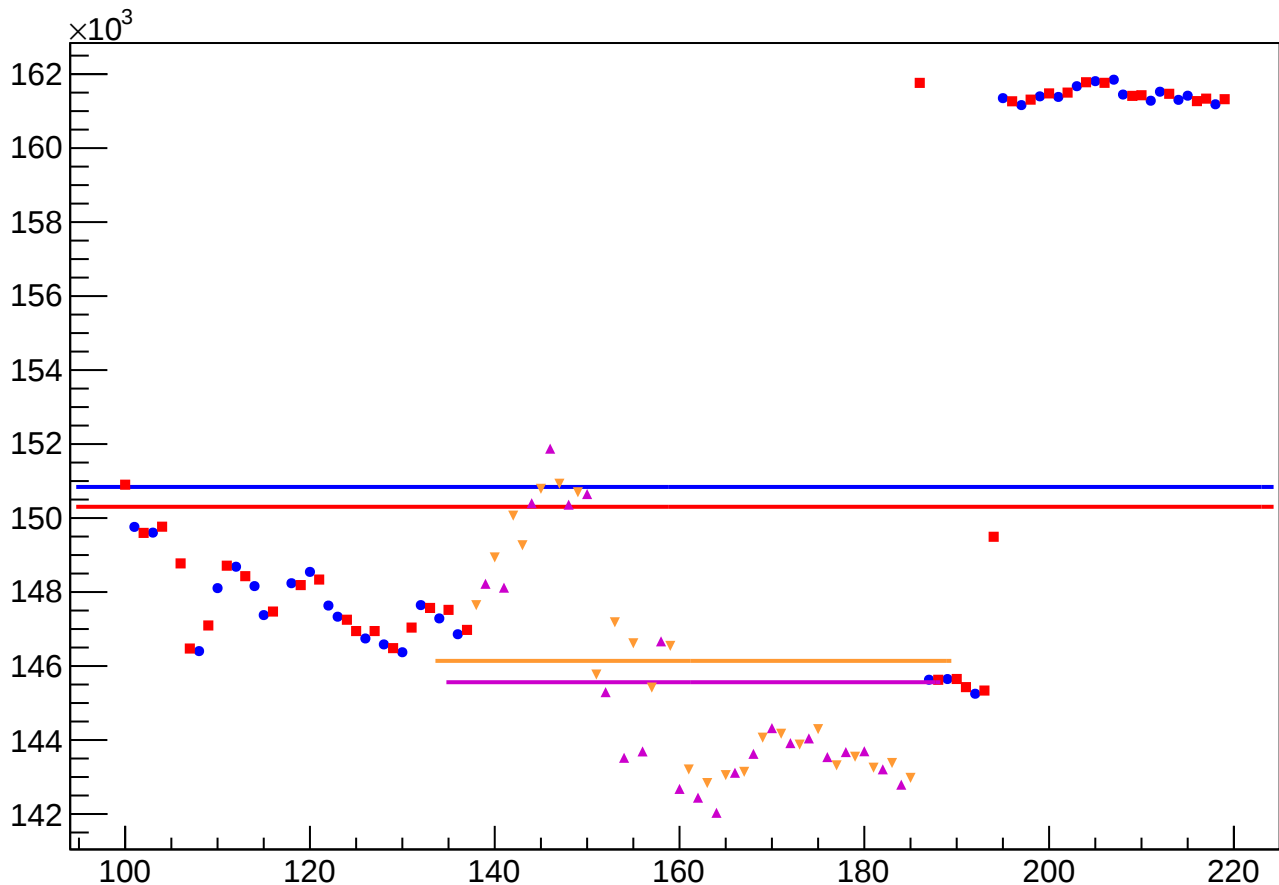
Right: 161.962 $\pm$ 0.022  $\chi^2$ /NDF: 18074953.2/69

In: 182.345 $\pm$ 0.024  $\chi^2$ /NDF:10709779.2/55

Out: 177.727 $\pm$ 0.022  $\chi^2$ /NDF:11955326.2/61

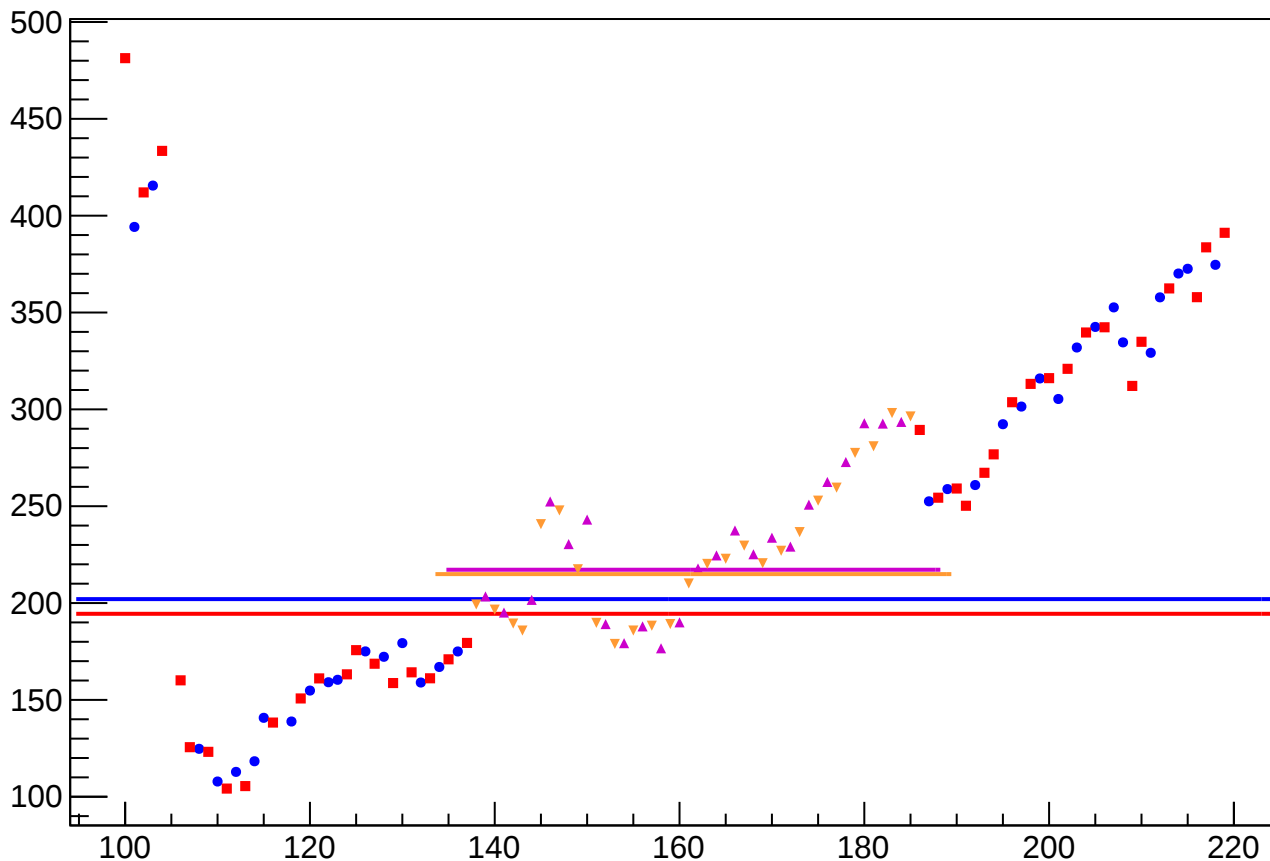
All: 179.913 $\pm$ 0.016  $\chi^2$ /NDF: 22685181.6/11

yield\_bpm1i06WS\_mean vs Slug, Sign Corrected



Right In: 150840.952 $\pm$ 0.052  $\chi^2$ /NDF: 13559800639.4/32  
 Left Out: 146139.326 $\pm$ 0.051  $\chi^2$ /NDF: 2699546907.6/24  
 Right Out: 150304.398 $\pm$ 0.049  $\chi^2$ /NDF: 13296023397.9/36  
 Left In: 145562.386 $\pm$ 0.053  $\chi^2$ /NDF: 3054641996.0/22  
 Left: 145862.850 $\pm$ 0.037  $\chi^2$ /NDF: 5815743509.5/4  
 Right: 150554.495 $\pm$ 0.036  $\chi^2$ /NDF: 26912287774.9/4  
 In: 148246.512 $\pm$ 0.037  $\chi^2$ /NDF: 21645459364.8/5  
 Out: 148311.899 $\pm$ 0.035  $\chi^2$ /NDF: 19487518902.7/4  
 All: 148281.006 $\pm$ 0.026  $\chi^2$ /NDF: 411346077.1/3

# yield\_bpm1i06WS\_rms vs Slug, Sign Corrected



Right In: 202.034 $\pm$ 0.037  $\chi^2$ /NDF: 5880408.3/32

Left Out: 214.945 $\pm$ 0.036  $\chi^2$ /NDF: 728515.5/24

Right Out: 194.451 $\pm$ 0.034  $\chi^2$ /NDF: 6580476.2/36

Left In: 217.203 $\pm$ 0.038  $\chi^2$ /NDF: 764798.3/22

Left: 216.027 $\pm$ 0.026  $\chi^2$ /NDF: 1495200.1/47

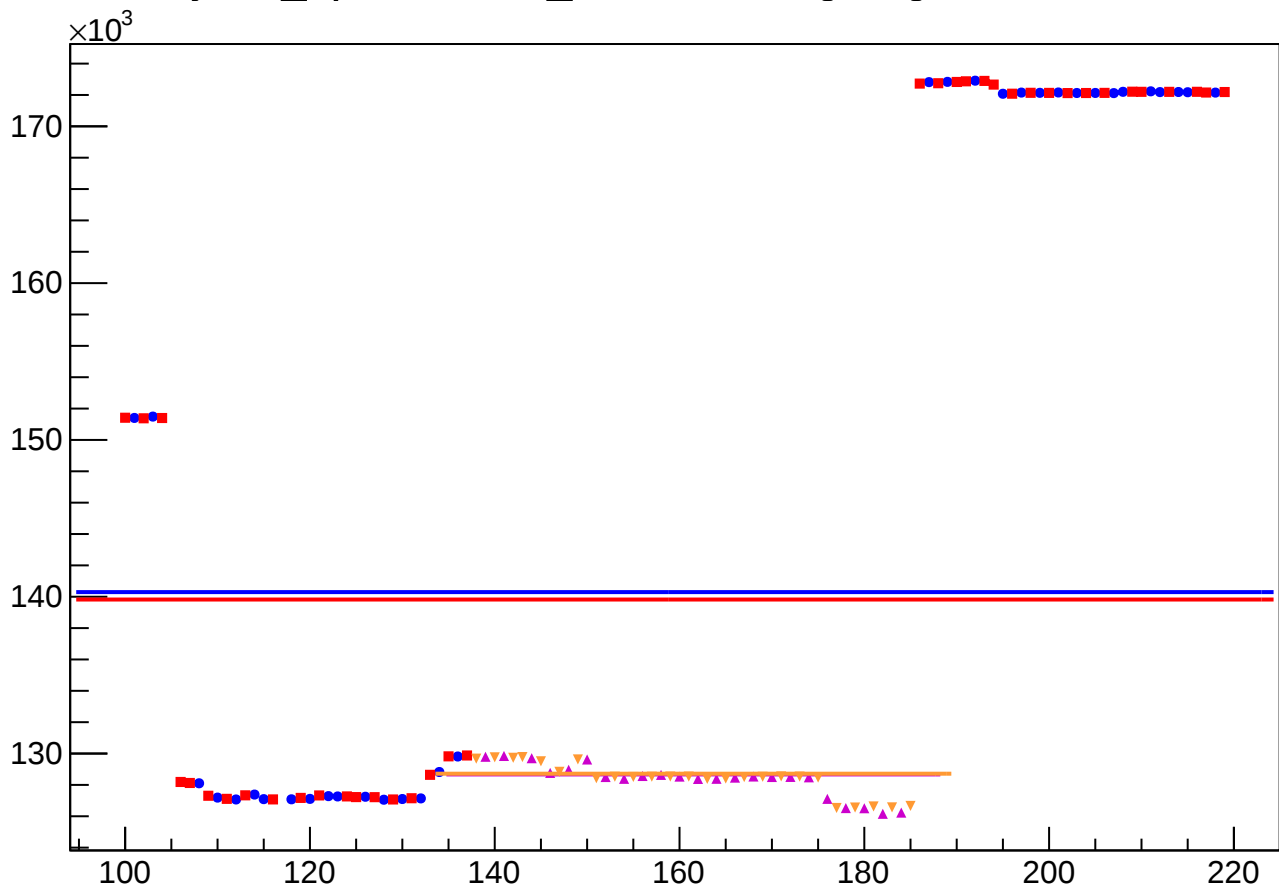
Right: 197.985 $\pm$ 0.025  $\chi^2$ /NDF: 12483444.2/69

In: 209.490 $\pm$ 0.026  $\chi^2$ /NDF: 6728302.1/55

Out: 204.255 $\pm$ 0.025  $\chi^2$ /NDF: 7478085.0/61

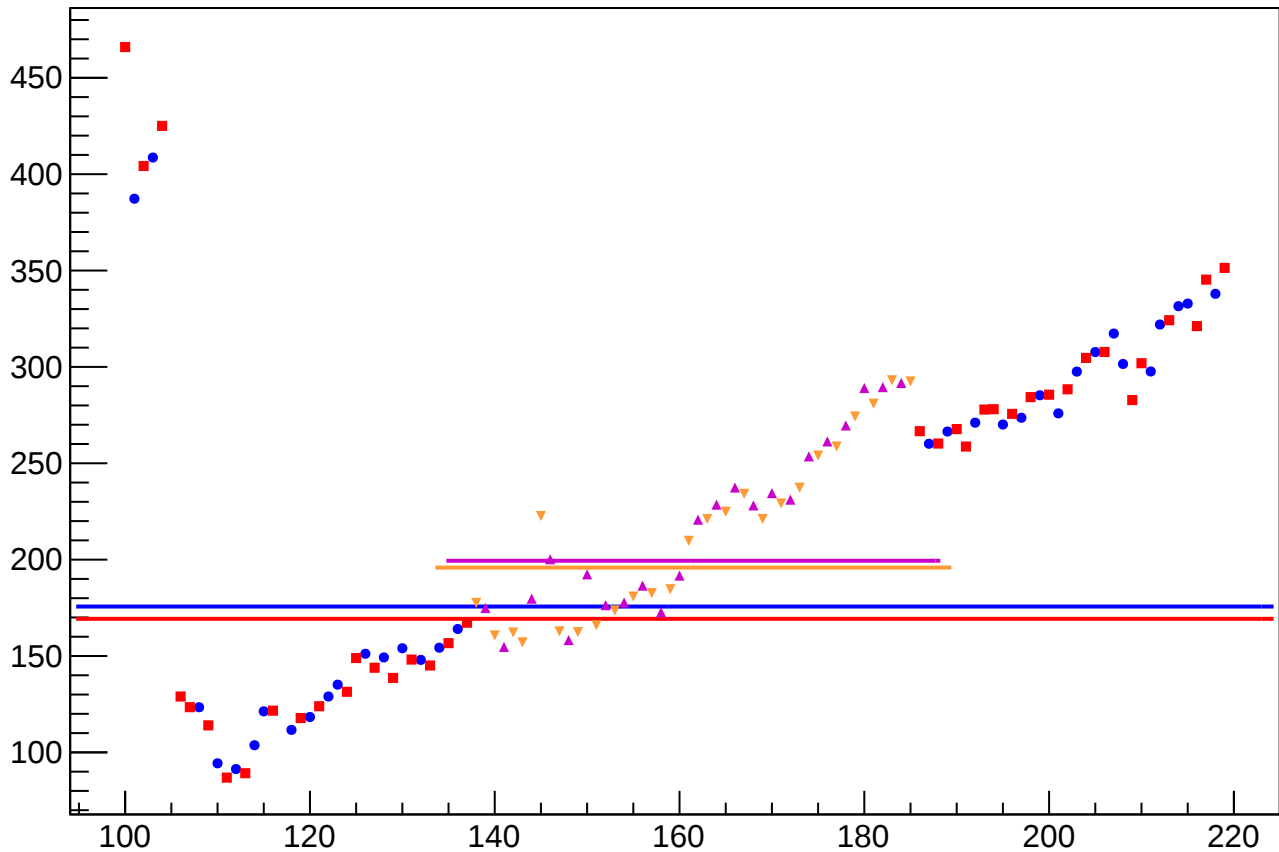
All: 206.728 $\pm$ 0.018  $\chi^2$ /NDF: 14227278.0/13

yield\_bpm2i01WS\_mean vs Slug, Sign Corrected



|                                   |                                  |                               |                               |
|-----------------------------------|----------------------------------|-------------------------------|-------------------------------|
| Right In: 140295.818 $\pm$ 0.046  | $\chi^2$ /NDF: 189339301874.5/32 | Left: 128691.898 $\pm$ 0.034  | $\chi^2$ /NDF: 681729975.4/47 |
| Left Out: 128714.507 $\pm$ 0.047  | $\chi^2$ /NDF: 348178101.1/24    | Right: 140043.391 $\pm$ 0.031 | $\chi^2$ /NDF: 401225864508   |
| Right Out: 139822.313 $\pm$ 0.043 | $\chi^2$ /NDF: 211830270618.2/36 | In: 134837.395 $\pm$ 0.034    | $\chi^2$ /NDF: 219566659703.2 |
| Left In: 128667.013 $\pm$ 0.049   | $\chi^2$ /NDF: 333059477.6/22    | Out: 134709.784 $\pm$ 0.032   | $\chi^2$ /NDF: 242716383683   |
|                                   |                                  | All: 134769.907 $\pm$ 0.023   | $\chi^2$ /NDF: 462290687      |

# yield\_bpm2i01WS\_rms vs Slug, Sign Corrected



Right In:  $175.661 \pm 0.033$   $\chi^2/\text{NDF}: 6793331.2/32$

Left Out:  $195.883 \pm 0.033$   $\chi^2/\text{NDF}: 1313361.5/24$

Right Out:  $169.292 \pm 0.030$   $\chi^2/\text{NDF}: 7617094.6/36$

Left In:  $199.413 \pm 0.035$   $\chi^2/\text{NDF}: 1165698.7/22$

Left:  $197.564 \pm 0.024$   $\chi^2/\text{NDF}: 2484502.8/47$

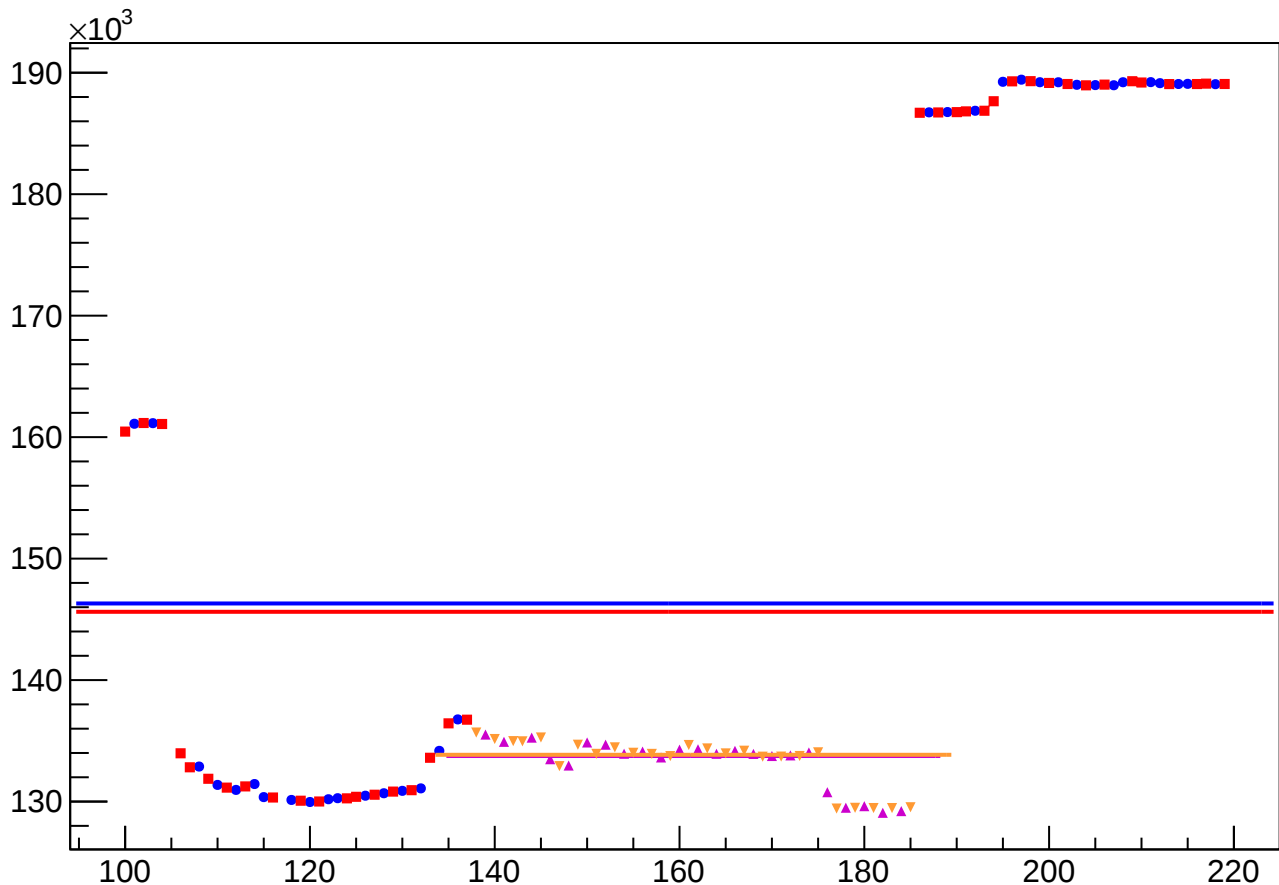
Right:  $172.266 \pm 0.022$   $\chi^2/\text{NDF}: 14430799.2/69$

In:  $186.810 \pm 0.024$   $\chi^2/\text{NDF}: 8208461.7/55$

Out:  $181.531 \pm 0.022$   $\chi^2/\text{NDF}: 9280468.1/61$

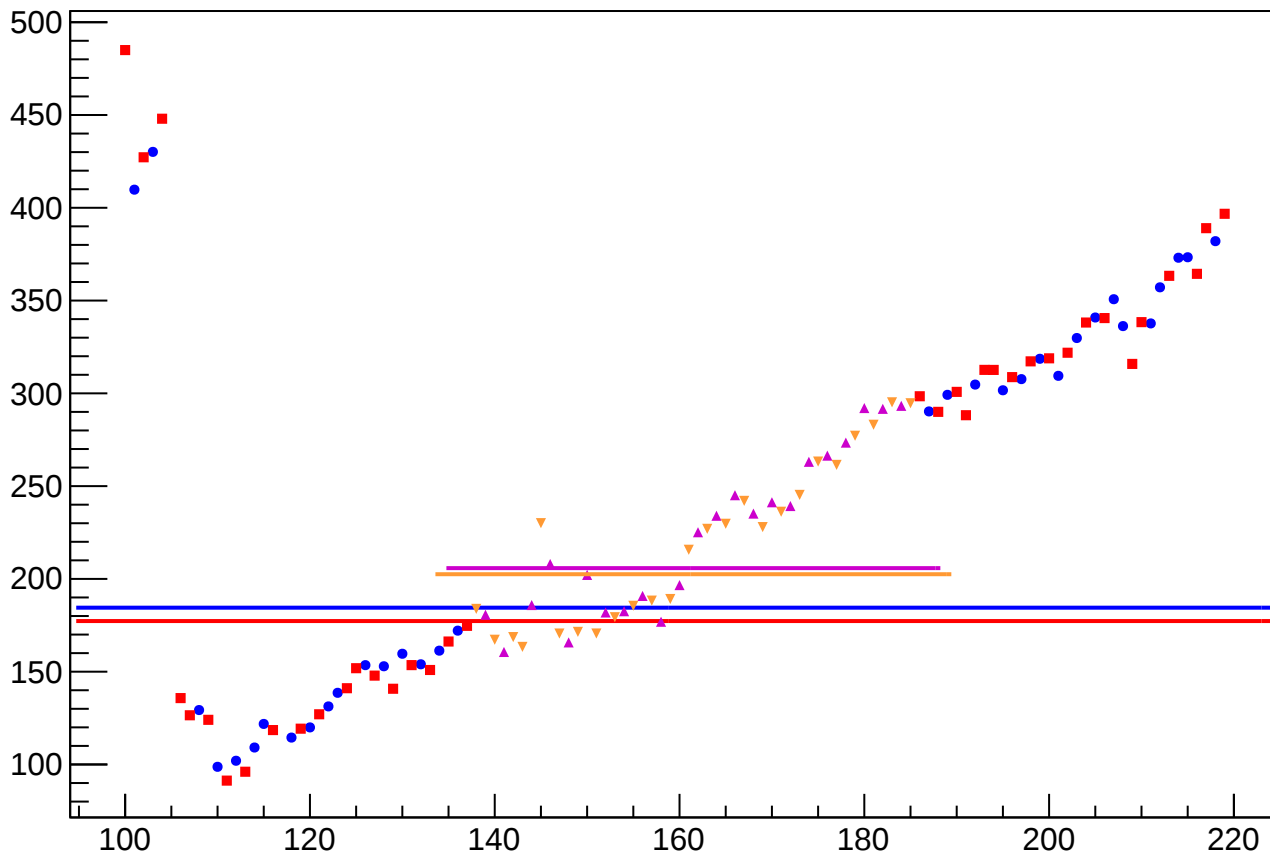
All:  $184.018 \pm 0.016$   $\chi^2/\text{NDF}: 17515099.6/11$

# yield\_bpm2i02WS\_mean vs Slug, Sign Corrected



|                               |                                         |                           |                                      |
|-------------------------------|-----------------------------------------|---------------------------|--------------------------------------|
| Right In: 146307.769+/-0.049  | $\chi^2/\text{NDF}$ : 258292341575.5/32 | Left: 133802.452+/-0.035  | $\chi^2/\text{NDF}$ : 2036267179.3/4 |
| Left Out: 133850.586+/-0.048  | $\chi^2/\text{NDF}$ : 1080107831.1/24   | Right: 145941.751+/-0.033 | $\chi^2/\text{NDF}$ : 541956919810   |
| Right Out: 145622.311+/-0.046 | $\chi^2/\text{NDF}$ : 283560081089.5/36 | In: 140219.846+/-0.035    | $\chi^2/\text{NDF}$ : 291089538156.8 |
| Left In: 133749.630+/-0.051   | $\chi^2/\text{NDF}$ : 954069486.7/22    | Out: 140042.487+/-0.033   | $\chi^2/\text{NDF}$ : 315987057766.  |
|                               |                                         | All: 140126.055+/-0.024   | $\chi^2/\text{NDF}$ : 607090043      |

# yield\_bpm2i02WS\_rms vs Slug, Sign Corrected



Right In: 184.499 $\pm$ 0.035  $\chi^2/\text{NDF}$ : 7505222.5/32

Left Out: 202.527 $\pm$ 0.034  $\chi^2/\text{NDF}$ :1211991.5/24

Right Out: 177.290 $\pm$ 0.032  $\chi^2/\text{NDF}$ : 8441727.5/36

Left In: 205.808 $\pm$ 0.036  $\chi^2/\text{NDF}$ :1094330.7/22

Left: 204.091 $\pm$ 0.025  $\chi^2/\text{NDF}$ : 2310735.8/47

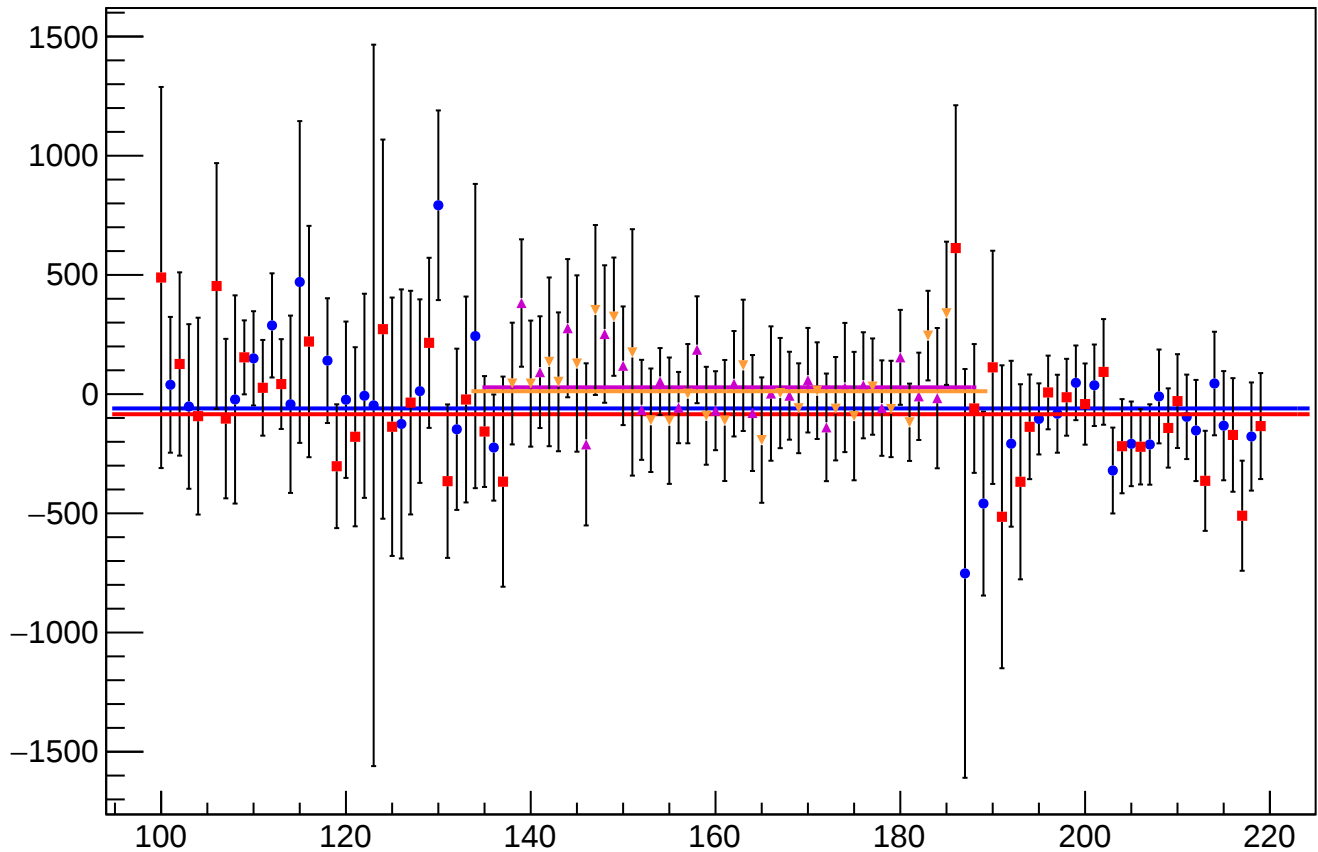
Right: 180.649 $\pm$ 0.024  $\chi^2/\text{NDF}$ : 15970065.5/69

In: 194.829 $\pm$ 0.025  $\chi^2/\text{NDF}$ :8782924.6/55

Out: 189.252 $\pm$ 0.023  $\chi^2/\text{NDF}$ :9941880.5/61

All: 191.880 $\pm$ 0.017  $\chi^2/\text{NDF}$ : 18751393.2/11

asym\_bcm\_an\_ds\_mean vs Slug, Sign Corrected



Right In:  $-59.995 \pm 41.874$   $\chi^2/\text{NDF}$ : 17.8/32

Left Out:  $12.180 \pm 47.531$   $\chi^2/\text{NDF}$ : 8.6/24

Right Out:  $-84.366 \pm 40.971$   $\chi^2/\text{NDF}$ : 18.9/36

Left In:  $28.452 \pm 44.688$   $\chi^2/\text{NDF}$ : 6.7/22

Left:  $20.817 \pm 32.558$   $\chi^2/\text{NDF}$ : 15.3/47

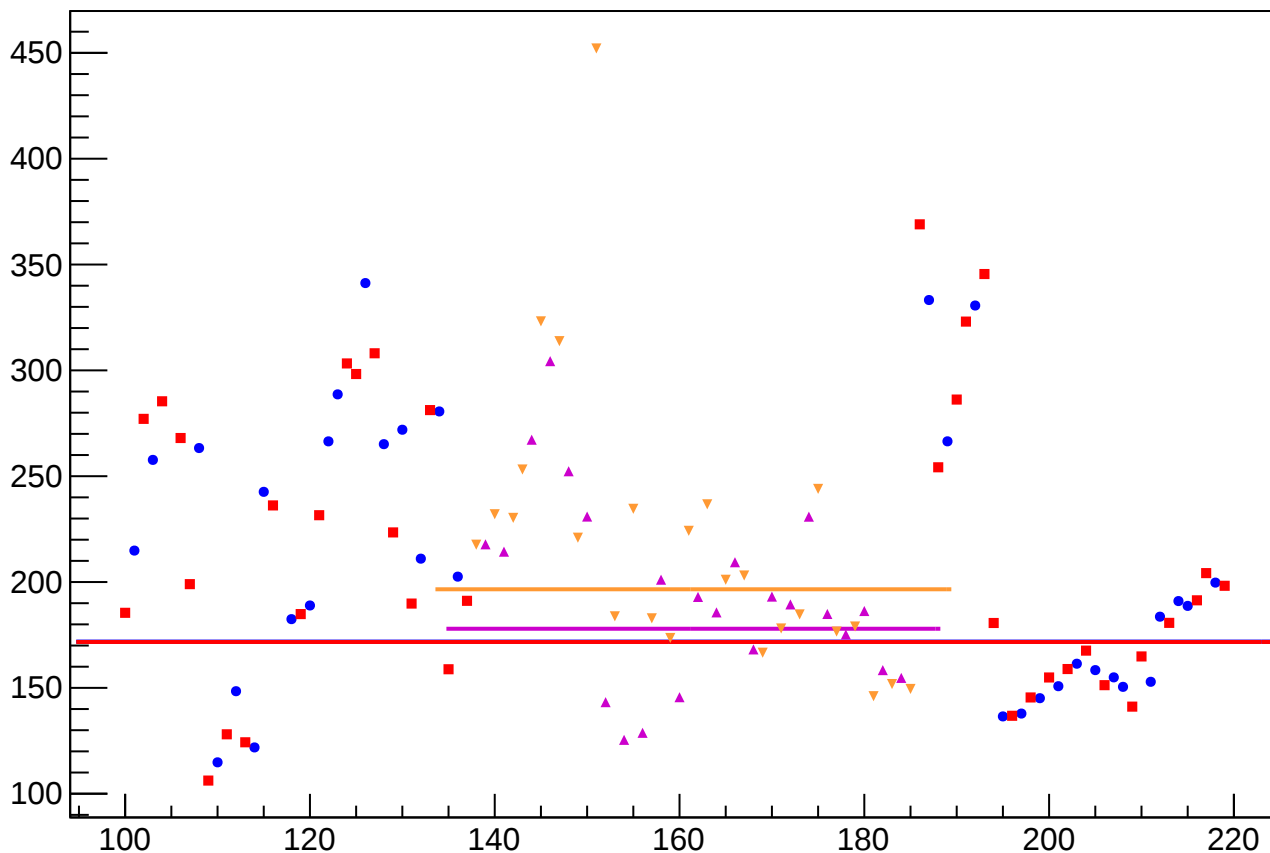
Right:  $-72.446 \pm 29.285$   $\chi^2/\text{NDF}$ : 36.9/69

In:  $-18.644 \pm 30.556$   $\chi^2/\text{NDF}$ : 26.5/55

Out:  $-43.210 \pm 31.033$   $\chi^2/\text{NDF}$ : 29.9/61

All:  $-30.737 \pm 21.773$   $\chi^2/\text{NDF}$ : 56.7/117

# asym\_bcm\_an\_ds\_rms vs Slug, Sign Corrected



Right In:  $171.867 \pm 0.030$   $\chi^2/\text{NDF}: 2212579.4/32$

Left Out:  $196.576 \pm 0.034$   $\chi^2/\text{NDF}: 1778719.0/24$

Right Out:  $171.688 \pm 0.029$   $\chi^2/\text{NDF}: 2935986.0/36$

Left In:  $177.933 \pm 0.032$   $\chi^2/\text{NDF}: 1605780.8/22$

Left:  $186.680 \pm 0.023$   $\chi^2/\text{NDF}: 3547823.4/47$

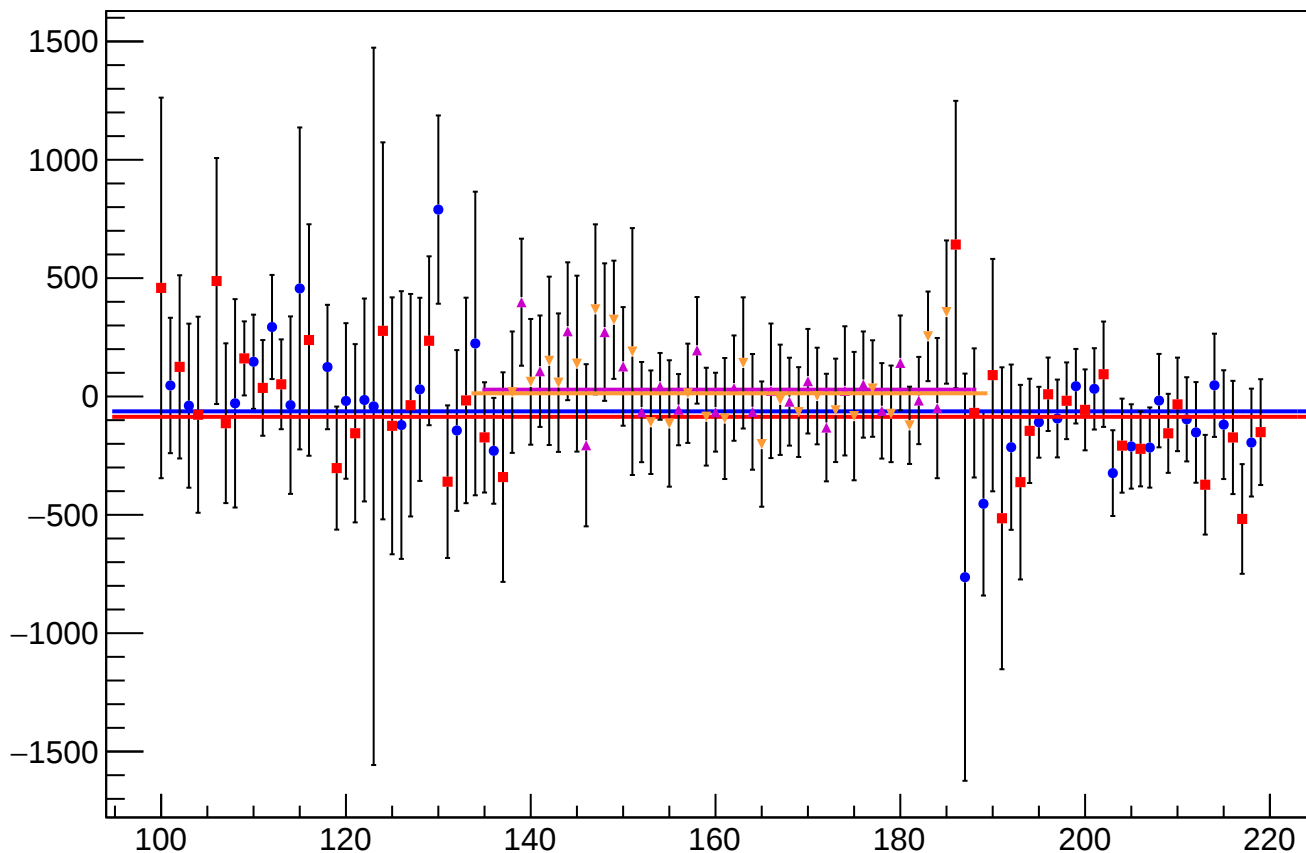
Right:  $171.776 \pm 0.021$   $\chi^2/\text{NDF}: 5148584.0/69$

In:  $174.703 \pm 0.022$   $\chi^2/\text{NDF}: 3837981.2/55$

Out:  $182.297 \pm 0.022$   $\chi^2/\text{NDF}: 5029304.2/61$

All:  $178.441 \pm 0.015$   $\chi^2/\text{NDF}: 8928102.4/117$

# asym\_bcm\_an\_ds3\_mean vs Slug, Sign Corrected



Right In:  $-62.813 \pm 42.062$   $\chi^2/\text{NDF}: 17.7/32$

Left Out:  $13.395 \pm 47.862$   $\chi^2/\text{NDF}: 9.0/24$

Right Out:  $-85.913 \pm 41.168$   $\chi^2/\text{NDF}: 19.5/36$

Left In:  $28.806 \pm 44.980$   $\chi^2/\text{NDF}: 6.8/22$

Left:  $21.578 \pm 32.777$   $\chi^2/\text{NDF}: 15.9/47$

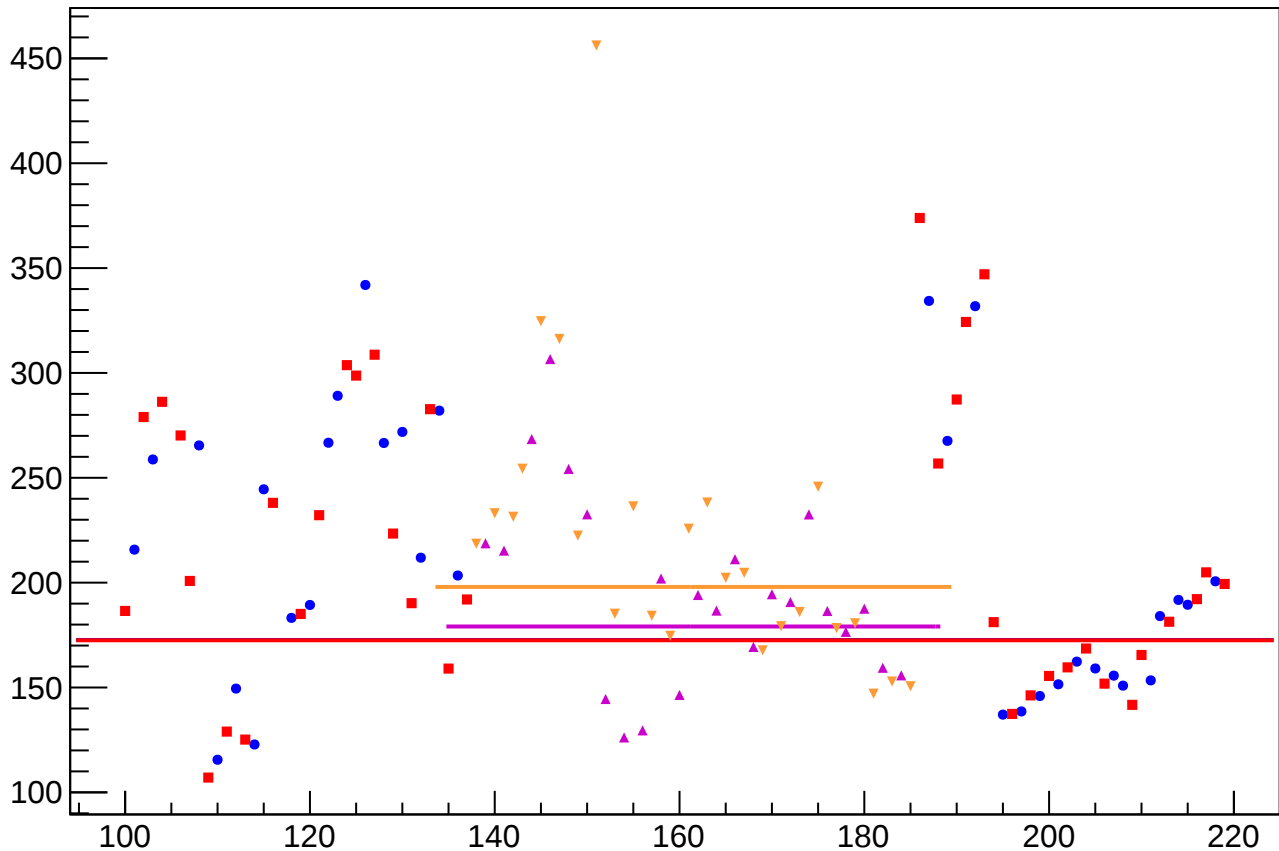
Right:  $-74.611 \pm 29.421$   $\chi^2/\text{NDF}: 37.3/69$

In:  $-20.071 \pm 30.722$   $\chi^2/\text{NDF}: 26.8/55$

Out:  $-43.684 \pm 31.211$   $\chi^2/\text{NDF}: 30.9/61$

All:  $-31.691 \pm 21.895$   $\chi^2/\text{NDF}: 58.0/117$

# asym\_bcm\_an\_ds3\_rms vs Slug, Sign Corrected



Right In: 172.662 $\pm$ 0.030  $\chi^2$ /NDF: 2203857.8/32

Left Out: 197.953 $\pm$ 0.034  $\chi^2$ /NDF:1774524.3/24

Right Out: 172.525 $\pm$ 0.029  $\chi^2$ /NDF: 2931309.5/36

Left In: 179.090 $\pm$ 0.032  $\chi^2$ /NDF:1605113.3/22

Left: 187.936 $\pm$ 0.023  $\chi^2$ /NDF: 3544595.8/47

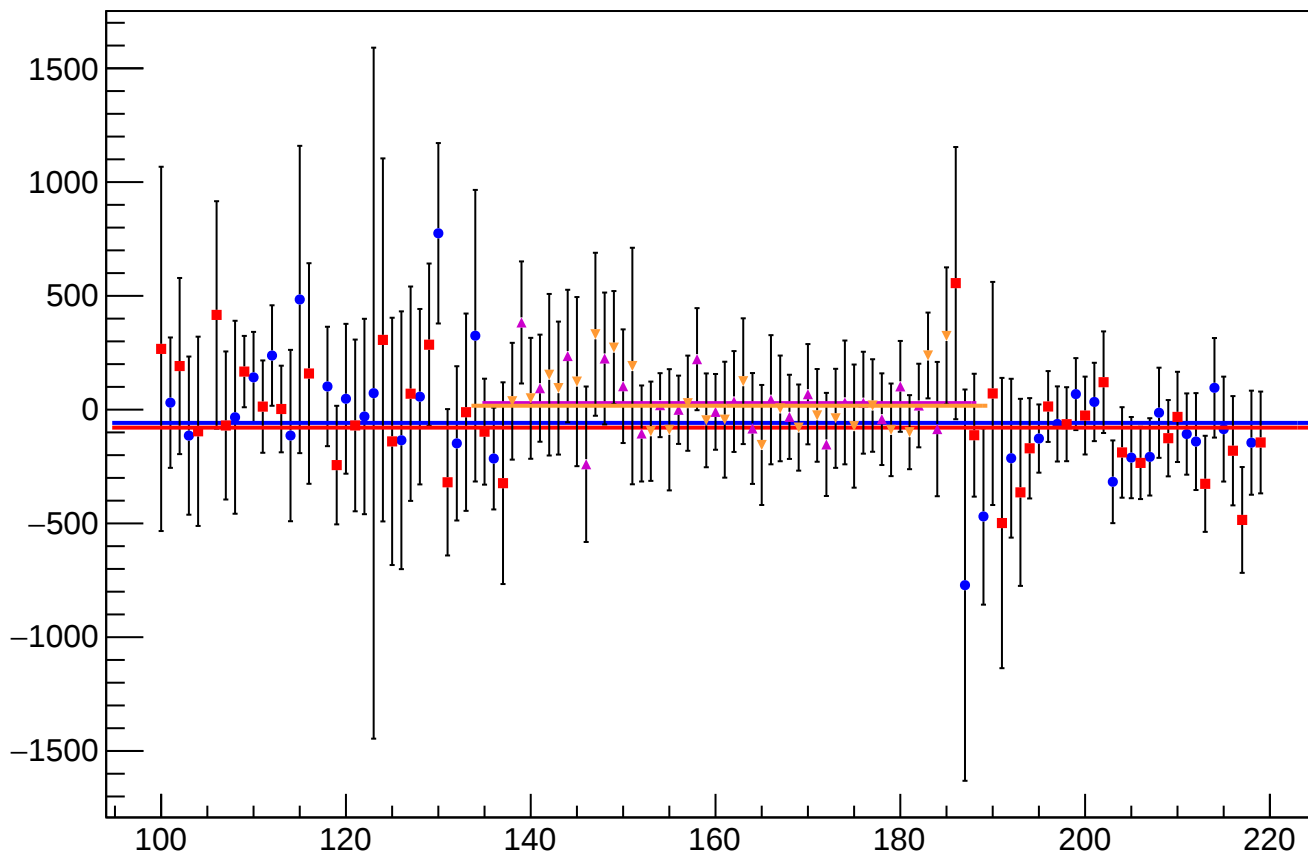
Right: 172.592 $\pm$ 0.021  $\chi^2$ /NDF: 5135178.1/69

In: 175.661 $\pm$ 0.022  $\chi^2$ /NDF:3830760.4/55

Out: 183.338 $\pm$ 0.022  $\chi^2$ /NDF:5030275.9/61

All: 179.439 $\pm$ 0.015  $\chi^2$ /NDF: 8922498.8/117

# asym\_bcm\_an\_us\_mean vs Slug, Sign Corrected



Right In:  $-58.222 \pm 42.149$   $\chi^2/\text{NDF}: 17.1/32$

Left Out:  $17.142 \pm 47.738$   $\chi^2/\text{NDF}: 7.1/24$

Right Out:  $-78.985 \pm 41.205$   $\chi^2/\text{NDF}: 17.1/36$

Left In:  $28.655 \pm 44.859$   $\chi^2/\text{NDF}: 6.1/22$

Left:  $23.256 \pm 32.690$   $\chi^2/\text{NDF}: 13.2/47$

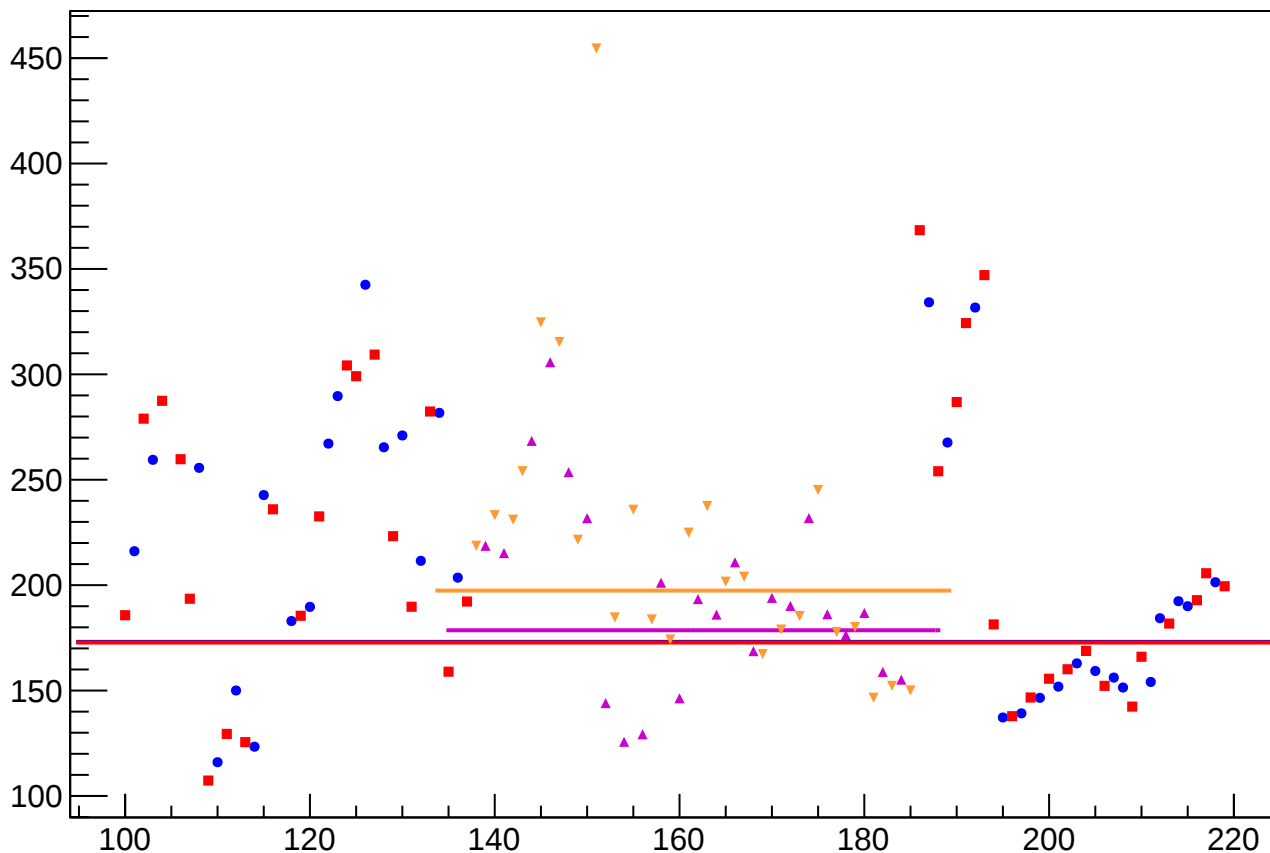
Right:  $-68.839 \pm 29.464$   $\chi^2/\text{NDF}: 34.3/69$

In:  $-17.487 \pm 30.717$   $\chi^2/\text{NDF}: 25.3/55$

Out:  $-37.944 \pm 31.192$   $\chi^2/\text{NDF}: 26.5/61$

All:  $-27.559 \pm 21.886$   $\chi^2/\text{NDF}: 52.0/117$

# asym\_bcm\_an\_us\_rms vs Slug, Sign Corrected



Right In: 173.098 $\pm$ 0.030  $\chi^2$ /NDF: 2171976.5/32

Left Out: 197.422 $\pm$ 0.034  $\chi^2$ /NDF:1780261.9/24

Right Out: 172.788 $\pm$ 0.029  $\chi^2$ /NDF: 2884904.6/36

Left In: 178.601 $\pm$ 0.032  $\chi^2$ /NDF:1608998.1/22

Left: 187.427 $\pm$ 0.023  $\chi^2$ /NDF: 3554344.1/47

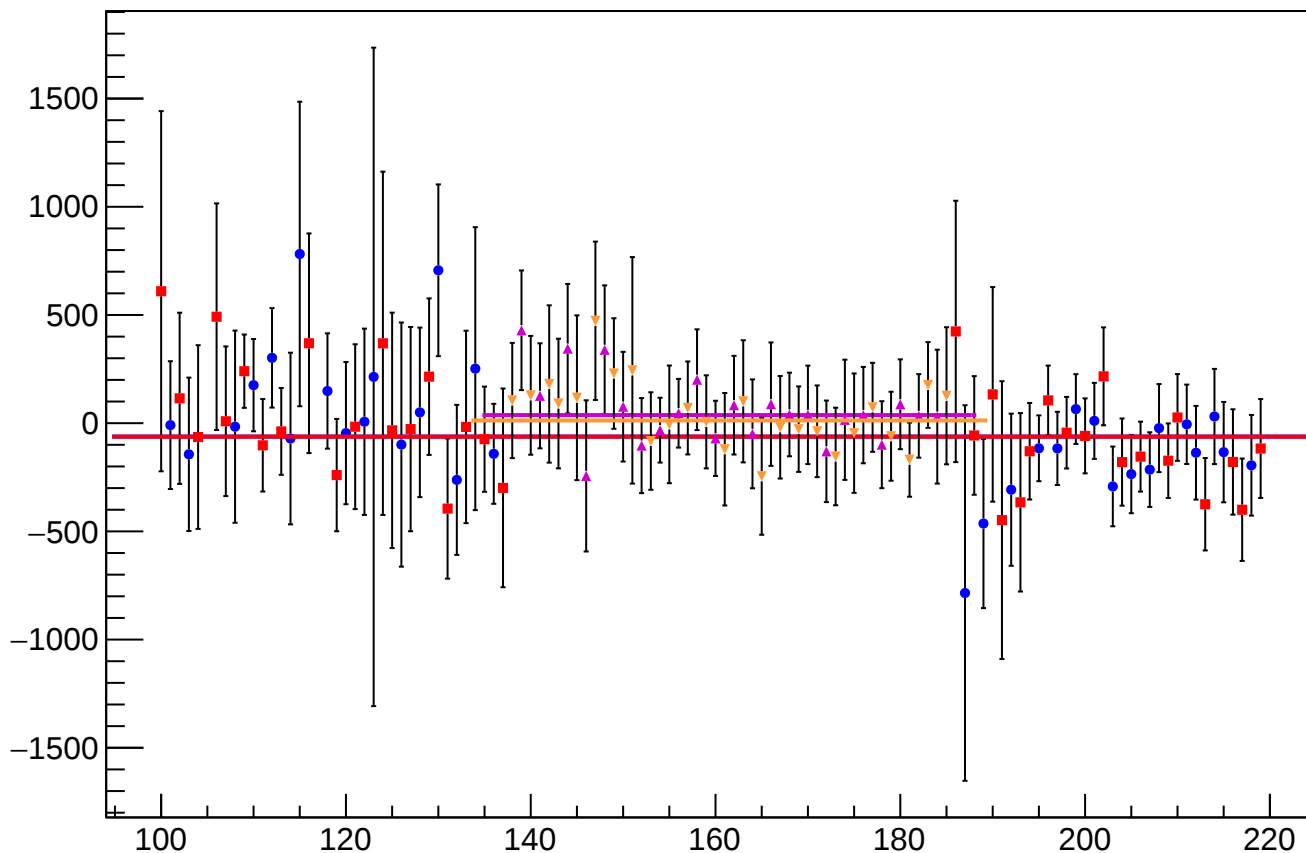
Right: 172.939 $\pm$ 0.021  $\chi^2$ /NDF: 5056936.1/69

In: 175.678 $\pm$ 0.022  $\chi^2$ /NDF:3796964.2/55

Out: 183.305 $\pm$ 0.022  $\chi^2$ /NDF:4970345.9/61

All: 179.433 $\pm$ 0.015  $\chi^2$ /NDF: 8828019.1/117

# asym\_bcm\_dg\_us\_mean vs Slug, Sign Corrected



Right In:  $-61.940 \pm 43.036$   $\chi^2/\text{NDF}: 17.9/32$

Left Out:  $12.632 \pm 49.242$   $\chi^2/\text{NDF}: 7.5/24$

Right Out:  $-62.037 \pm 42.258$   $\chi^2/\text{NDF}: 18.8/36$

Left In:  $37.460 \pm 46.479$   $\chi^2/\text{NDF}: 7.6/22$

Left:  $25.762 \pm 33.800$   $\chi^2/\text{NDF}: 15.3/47$

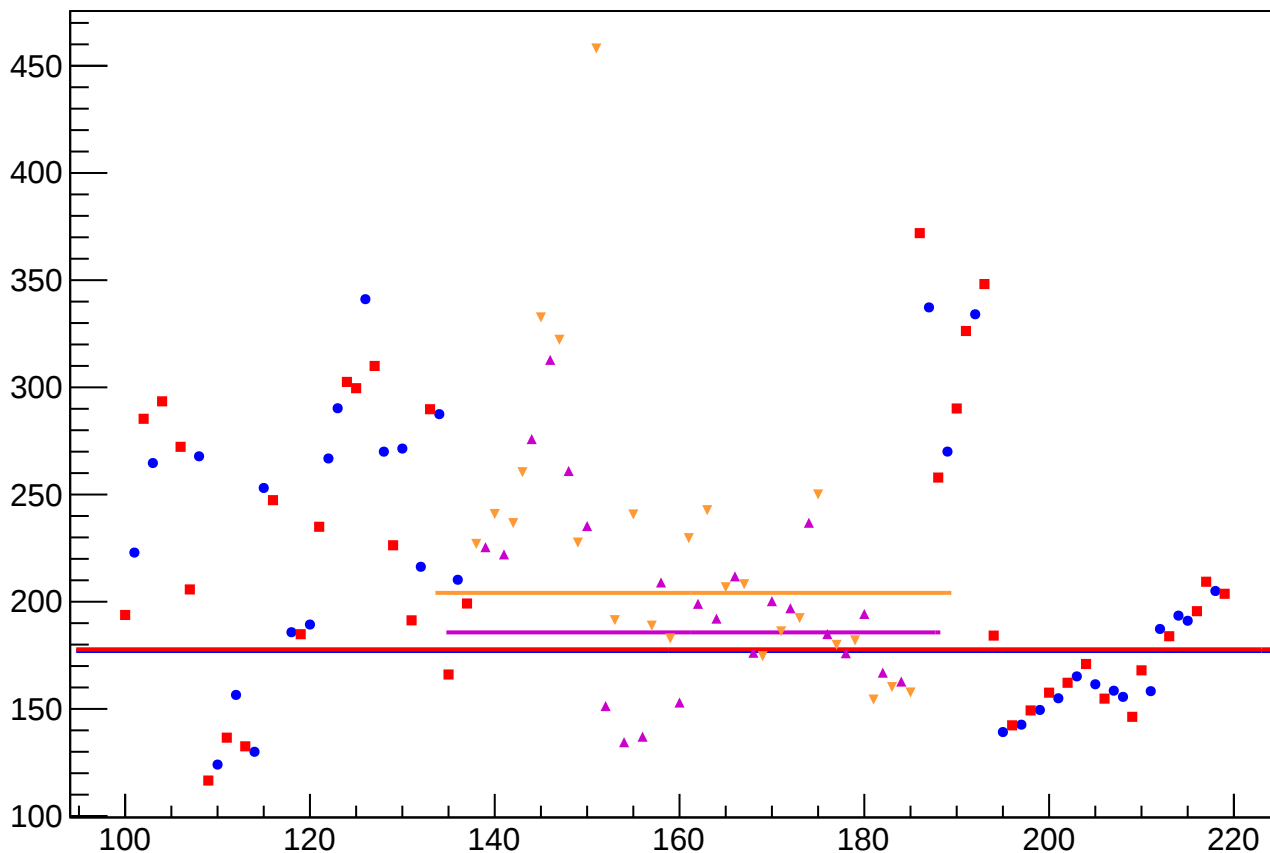
Right:  $-61.990 \pm 30.152$   $\chi^2/\text{NDF}: 36.7/69$

In:  $-16.057 \pm 31.578$   $\chi^2/\text{NDF}: 28.0/55$

Out:  $-30.369 \pm 32.068$   $\chi^2/\text{NDF}: 27.7/61$

All:  $-23.103 \pm 22.500$   $\chi^2/\text{NDF}: 55.8/117$

# asym\_bcm\_dg\_us\_rms vs Slug, Sign Corrected



Right In: 177.006 $\pm$ 0.030  $\chi^2$ /NDF: 2085536.1/32

Left Out: 204.132 $\pm$ 0.035  $\chi^2$ /NDF:1672287.6/24

Right Out: 177.808 $\pm$ 0.030  $\chi^2$ /NDF: 2691075.2/36

Left In: 185.694 $\pm$ 0.033  $\chi^2$ /NDF:1447767.0/22

Left: 194.381 $\pm$ 0.024  $\chi^2$ /NDF: 3268347.9/47

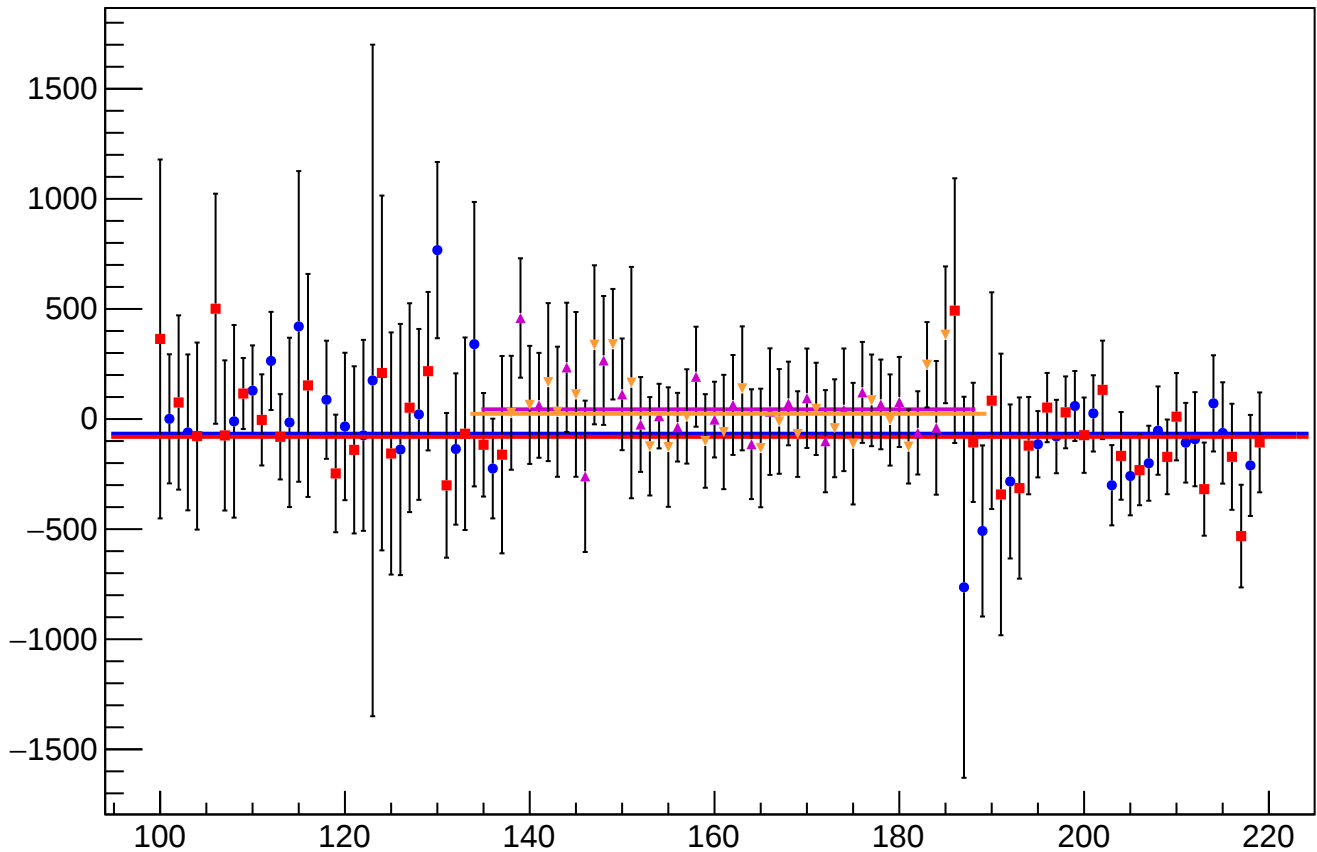
Right: 177.415 $\pm$ 0.021  $\chi^2$ /NDF: 4776965.0/69

In: 181.016 $\pm$ 0.022  $\chi^2$ /NDF:3570920.6/55

Out: 188.972 $\pm$ 0.023  $\chi^2$ /NDF:4692501.5/61

All: 184.933 $\pm$ 0.016  $\chi^2$ /NDF: 8325921.1/117

# asym\_bcm\_dg\_ds\_mean vs Slug, Sign Corrected



Right In: -66.524 $\pm$ 42.508  $\chi^2/\text{NDF}$ : 17.0/32

Left Out: 23.843 $\pm$ 48.783  $\chi^2/\text{NDF}$ : 8.5/24

Right Out: -80.774 $\pm$ 41.627  $\chi^2/\text{NDF}$ : 15.7/36

Left In: 43.978 $\pm$ 45.981  $\chi^2/\text{NDF}$ : 6.5/22

Left: 34.506 $\pm$ 33.460  $\chi^2/\text{NDF}$ : 15.1/47

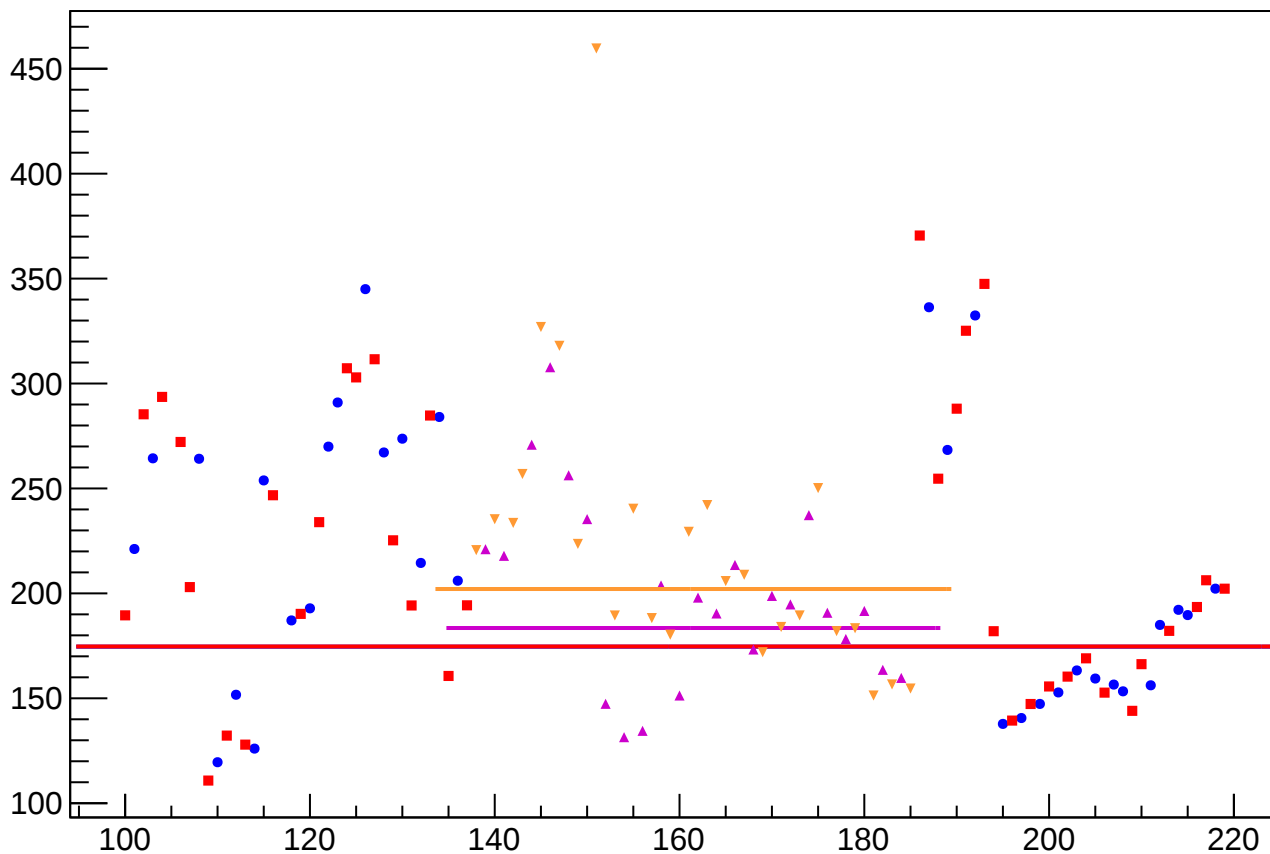
Right: -73.799 $\pm$ 29.741  $\chi^2/\text{NDF}$ : 32.8/69

In: -15.603 $\pm$ 31.213  $\chi^2/\text{NDF}$ : 26.6/55

Out: -36.695 $\pm$ 31.665  $\chi^2/\text{NDF}$ : 26.9/61

All: -25.998 $\pm$ 22.229  $\chi^2/\text{NDF}$ : 53.7/117

# asym\_bcm\_dg\_ds\_rms vs Slug, Sign Corrected



Right In: 174.610 $\pm$ 0.030  $\chi^2$ /NDF: 2170448.7/32

Left Out: 202.081 $\pm$ 0.034  $\chi^2$ /NDF:1692787.9/24

Right Out: 174.690 $\pm$ 0.029  $\chi^2$ /NDF: 2859143.0/36

Left In: 183.498 $\pm$ 0.033  $\chi^2$ /NDF:1483383.4/22

Left: 192.240 $\pm$ 0.024  $\chi^2$ /NDF: 3329846.6/47

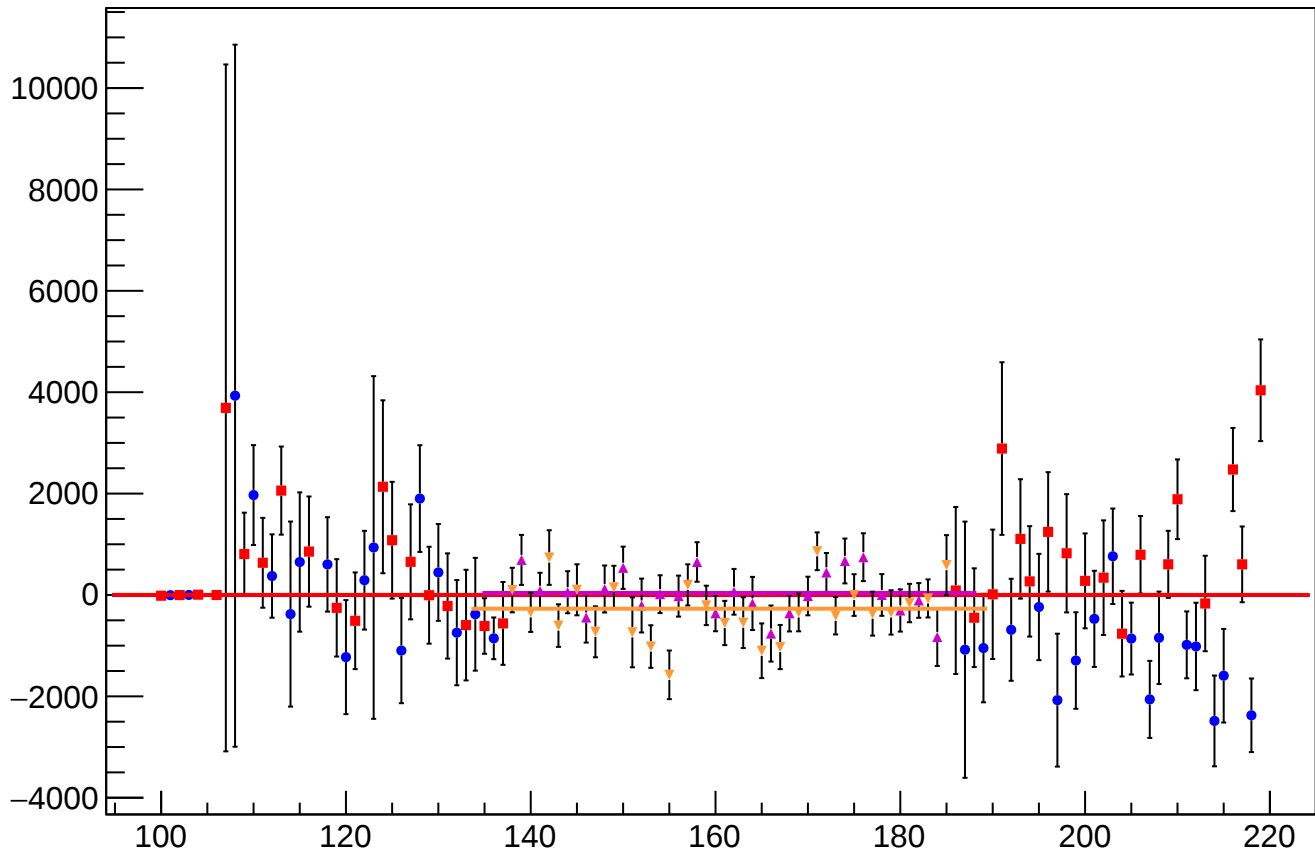
Right: 174.651 $\pm$ 0.021  $\chi^2$ /NDF: 5029595.4/69

In: 178.706 $\pm$ 0.022  $\chi^2$ /NDF:3694129.9/55

Out: 186.231 $\pm$ 0.022  $\chi^2$ /NDF:4916779.1/61

All: 182.414 $\pm$ 0.016  $\chi^2$ /NDF: 8668201.3/117

# asym\_cav4bQ\_mean vs Slug, Sign Corrected



Right In:  $-1.649 \pm 2.251$   $\chi^2/\text{NDF}: 58.9/32$

Left Out:  $-270.969 \pm 86.967$   $\chi^2/\text{NDF}: 38.1/24$

Right Out:  $0.801 \pm 2.111$   $\chi^2/\text{NDF}: 59.4/36$

Left In:  $39.078 \pm 87.769$   $\chi^2/\text{NDF}: 20.3/22$

Left:  $-117.369 \pm 61.777$   $\chi^2/\text{NDF}: 64.7/47$

Right:  $-0.345 \pm 1.540$   $\chi^2/\text{NDF}: 119.0/69$

In:  $-1.623 \pm 2.251$   $\chi^2/\text{NDF}: 79.4/55$

Out:  $0.641 \pm 2.110$   $\chi^2/\text{NDF}: 107.3/61$

All:  $-0.418 \pm 1.539$   $\chi^2/\text{NDF}: 187.2/117$

# asym\_cav4bQ\_rms vs Slug, Sign Corrected



Right In: 2.531+/-0.002  $\chi^2/\text{NDF}$ : 33448481.1/32

Left Out: 368.397+/-0.061  $\chi^2/\text{NDF}$ : 622466.1/24

Right Out: 2.505+/-0.001  $\chi^2/\text{NDF}$ : 35585748.3/36

Left In: 360.408+/-0.062  $\chi^2/\text{NDF}$ : 417739.4/22

Left: 364.439+/-0.044  $\chi^2/\text{NDF}$ : 1048566.0/47

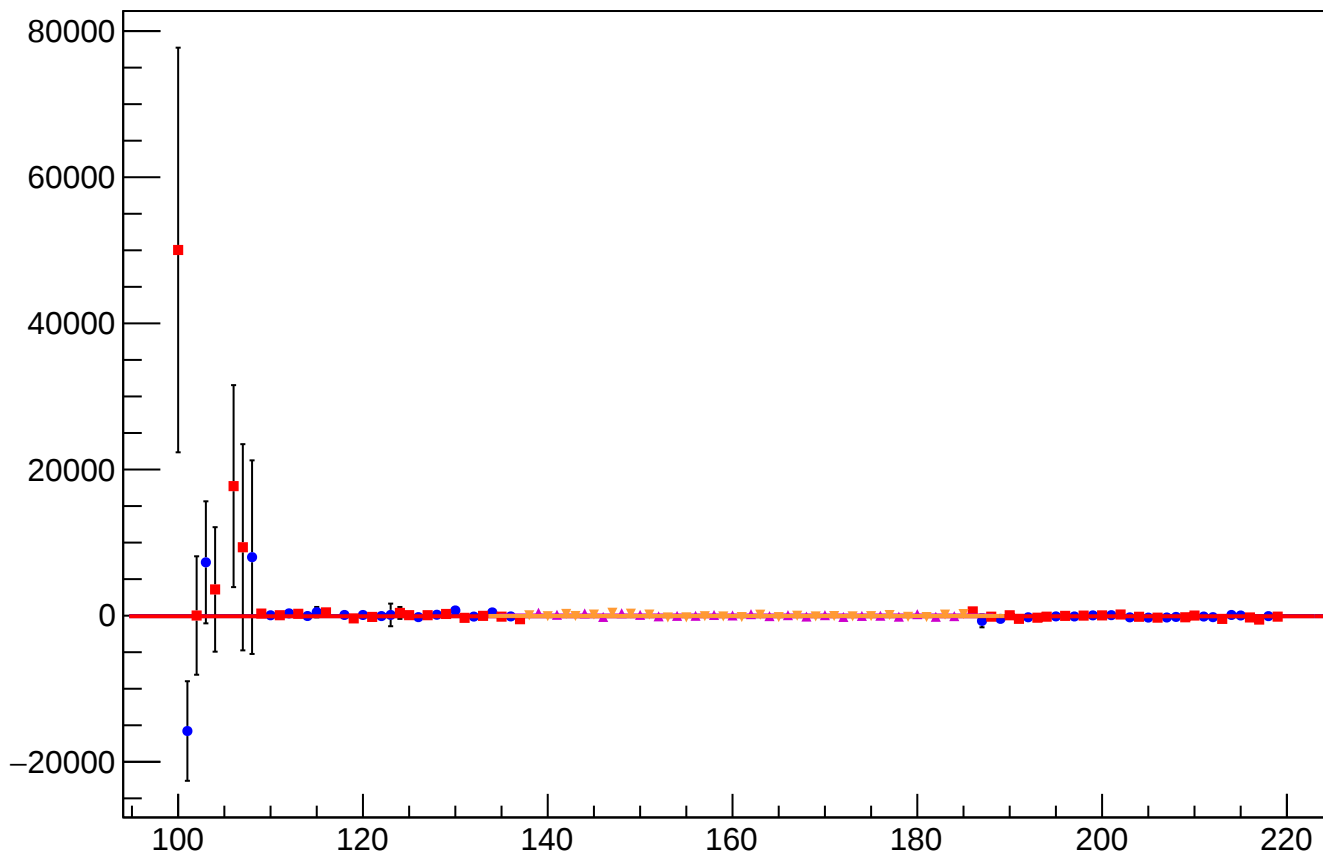
Right: 2.517+/-0.001  $\chi^2/\text{NDF}$ : 69034376.2/69

In: 2.766+/-0.002  $\chi^2/\text{NDF}$ : 67095837.7/55

Out: 2.720+/-0.001  $\chi^2/\text{NDF}$ : 71589107.0/61

All: 2.742+/-0.001  $\chi^2/\text{NDF}$ : 138685394.9/117

# asym\_cav4cQ\_mean vs Slug, Sign Corrected



Right In:  $-58.757 \pm 46.190$   $\chi^2/\text{NDF}$ : 22.0/32

Left Out:  $-38.013 \pm 49.628$   $\chi^2/\text{NDF}$ : 9.3/24

Right Out:  $-82.086 \pm 45.849$   $\chi^2/\text{NDF}$ : 28.4/36

Left In:  $28.205 \pm 48.167$   $\chi^2/\text{NDF}$ : 9.2/22

Left:  $-3.915 \pm 34.564$   $\chi^2/\text{NDF}$ : 19.4/47

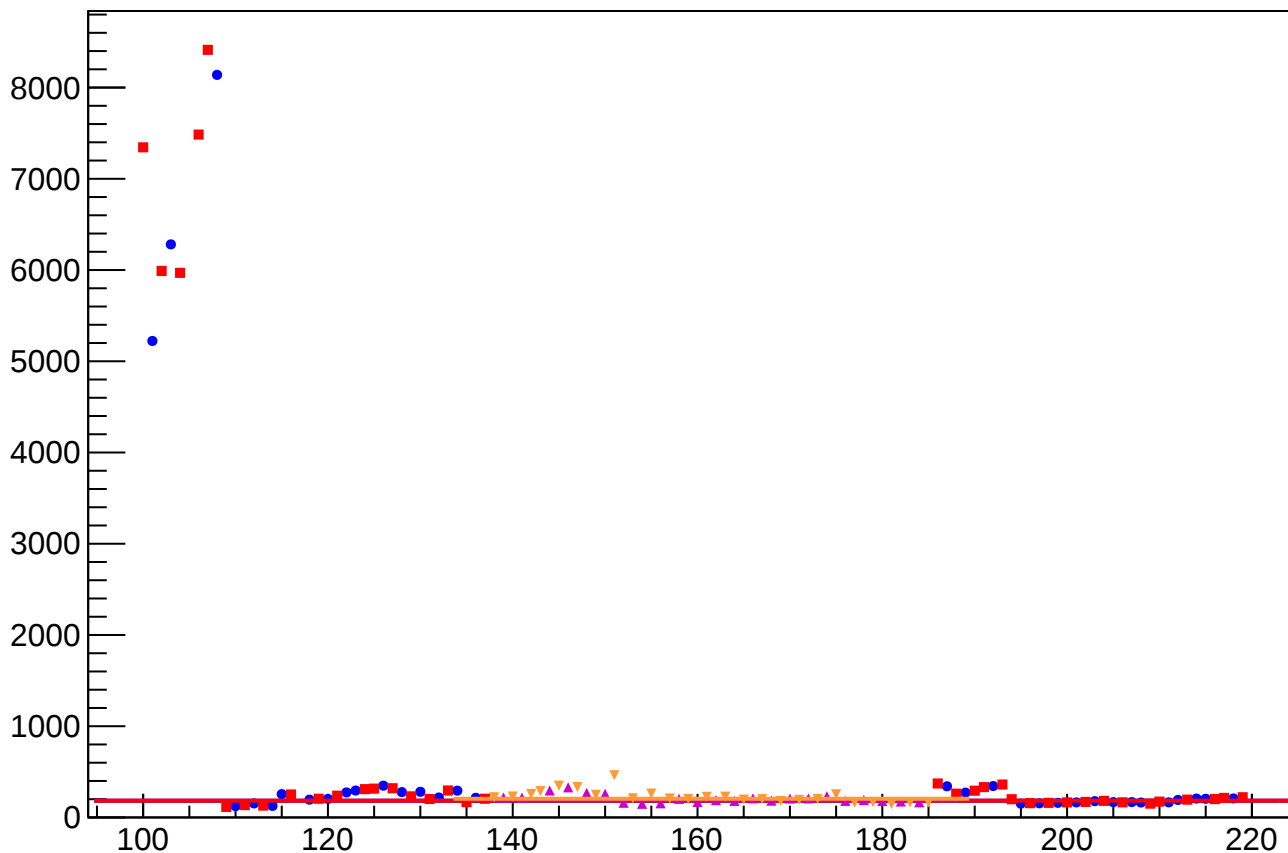
Right:  $-70.508 \pm 32.540$   $\chi^2/\text{NDF}$ : 50.5/69

In:  $-17.098 \pm 33.338$   $\chi^2/\text{NDF}$ : 32.9/55

Out:  $-61.791 \pm 33.677$   $\chi^2/\text{NDF}$ : 38.1/61

All:  $-39.218 \pm 23.693$   $\chi^2/\text{NDF}$ : 71.9/117

# asym\_cav4cQ\_rms vs Slug, Sign Corrected



Right In: 183.013 $\pm$ 0.033  $\chi^2$ /NDF: 4604747.7/32

Left Out: 205.027 $\pm$ 0.035  $\chi^2$ /NDF:1956045.1/24

Right Out: 184.311 $\pm$ 0.032  $\chi^2$ /NDF: 5519081.4/36

Left In: 193.405 $\pm$ 0.034  $\chi^2$ /NDF:1172169.3/22

Left: 199.042 $\pm$ 0.024  $\chi^2$ /NDF: 3184695.4/47

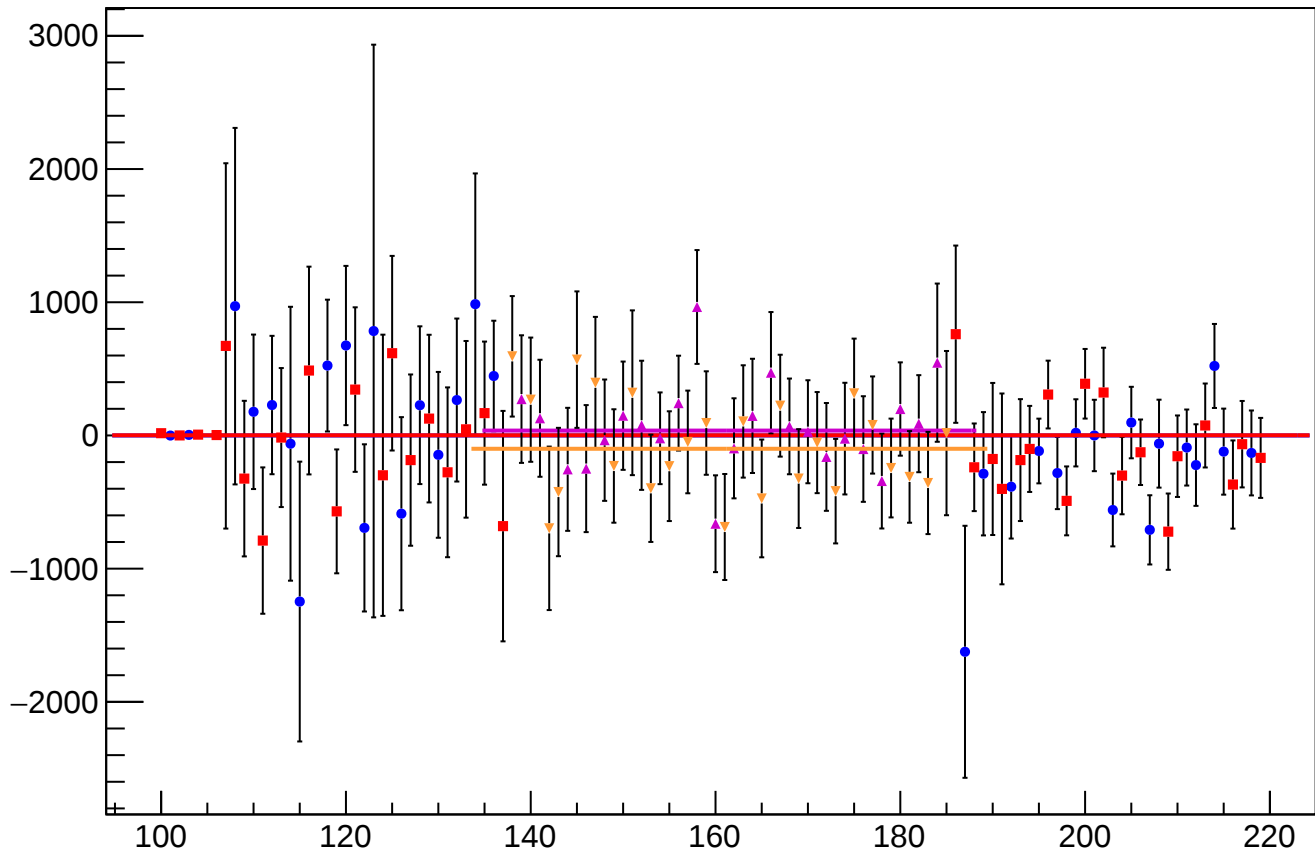
Right: 183.667 $\pm$ 0.023  $\chi^2$ /NDF: 10124624.6/69

In: 187.991 $\pm$ 0.024  $\chi^2$ /NDF:5825410.4/55

Out: 193.850 $\pm$ 0.024  $\chi^2$ /NDF:7663135.5/61

All: 190.891 $\pm$ 0.017  $\chi^2$ /NDF: 13519121.3/13

# asym\_cav4dQ\_mean vs Slug, Sign Corrected



Right In:  $-0.227 \pm 1.736$   $\chi^2/\text{NDF}$ : 31.1/32

Left Out:  $-100.058 \pm 84.190$   $\chi^2/\text{NDF}$ : 15.7/24

Right Out:  $1.272 \pm 1.622$   $\chi^2/\text{NDF}$ : 29.7/36

Left In:  $36.497 \pm 84.675$   $\chi^2/\text{NDF}$ : 13.5/22

Left:  $-32.173 \pm 59.702$   $\chi^2/\text{NDF}$ : 30.5/47

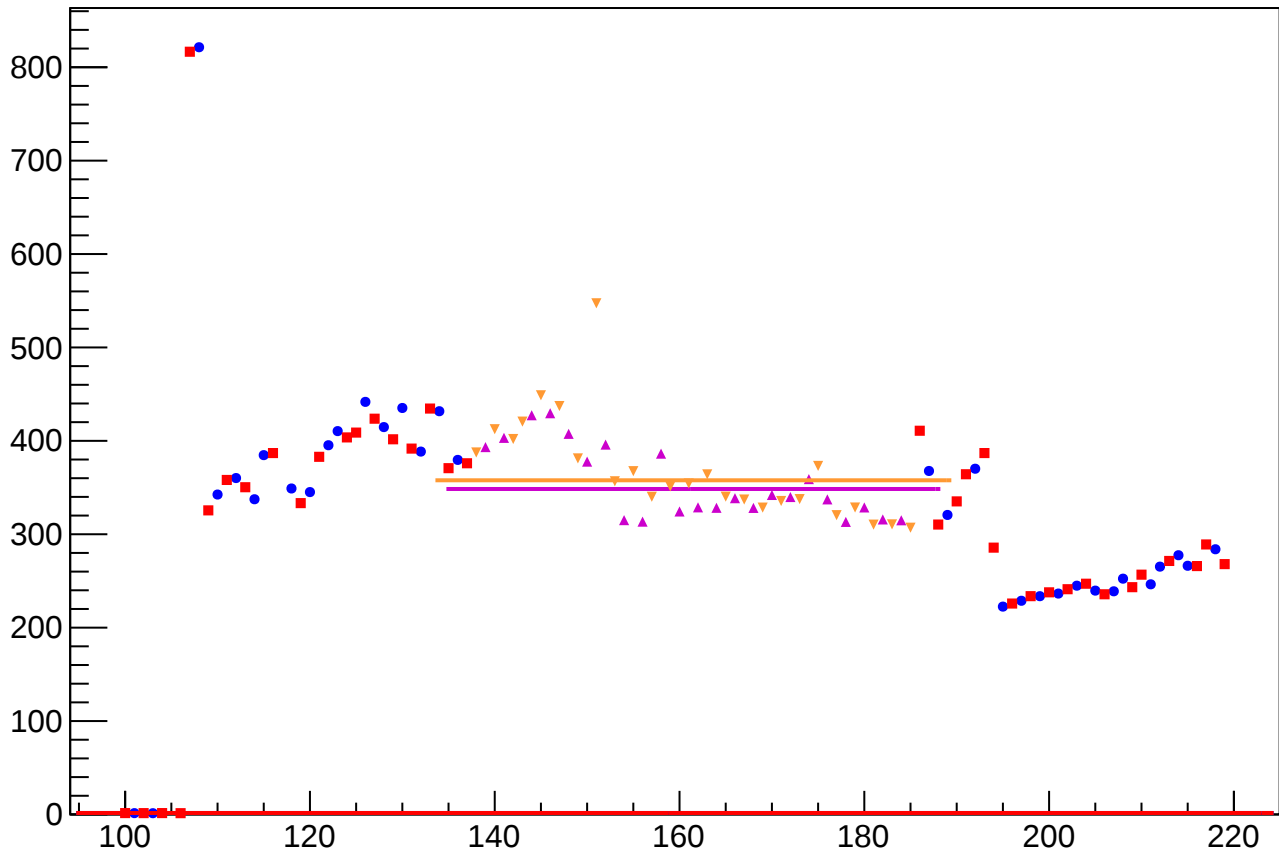
Right:  $0.573 \pm 1.185$   $\chi^2/\text{NDF}$ : 61.3/69

In:  $-0.212 \pm 1.736$   $\chi^2/\text{NDF}$ : 44.8/55

Out:  $1.234 \pm 1.622$   $\chi^2/\text{NDF}$ : 46.9/61

All:  $0.560 \pm 1.185$   $\chi^2/\text{NDF}$ : 92.1/117

# asym\_cav4dQ\_rms vs Slug, Sign Corrected



Right In: 1.586 $\pm$ 0.001  $\chi^2/\text{NDF}$ : 33646555.4/32

Left Out: 357.771 $\pm$ 0.060  $\chi^2/\text{NDF}$ : 547124.8/24

Right Out: 1.572 $\pm$ 0.001  $\chi^2/\text{NDF}$ : 35287544.7/36

Left In: 348.464 $\pm$ 0.060  $\chi^2/\text{NDF}$ : 360425.7/22

Left: 353.145 $\pm$ 0.042  $\chi^2/\text{NDF}$ : 919701.2/47

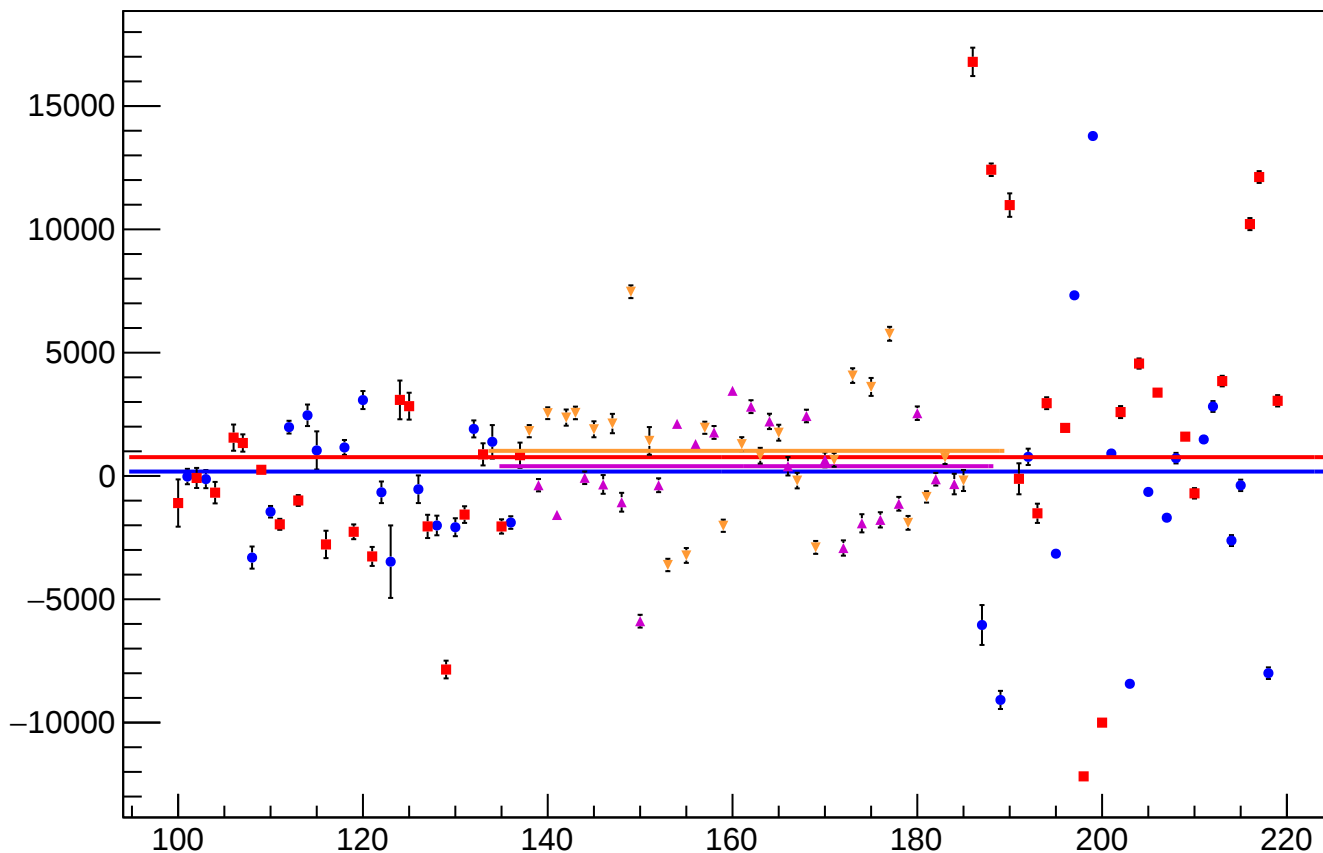
Right: 1.579 $\pm$ 0.001  $\chi^2/\text{NDF}$ : 68934178.0/69

In: 1.732 $\pm$ 0.001  $\chi^2/\text{NDF}$ : 67556524.9/55

Out: 1.704 $\pm$ 0.001  $\chi^2/\text{NDF}$ : 71622622.6/61

All: 1.717 $\pm$ 0.001  $\chi^2/\text{NDF}$ : 139179433.5/117

# asym\_bcm0l02\_mean vs Slug, Sign Corrected



Right In: 178.988+/-45.739  $\chi^2/\text{NDF}$ : 12424.0/32

Left Out: 1018.965+/-57.402  $\chi^2/\text{NDF}$ : 2310.1/24

Right Out: 763.132+/-44.580  $\chi^2/\text{NDF}$ : 17903.7/36

Left In: 396.609+/-55.090  $\chi^2/\text{NDF}$ : 1581.0/22

Left: 695.002+/-39.747  $\chi^2/\text{NDF}$ : 3952.3/47

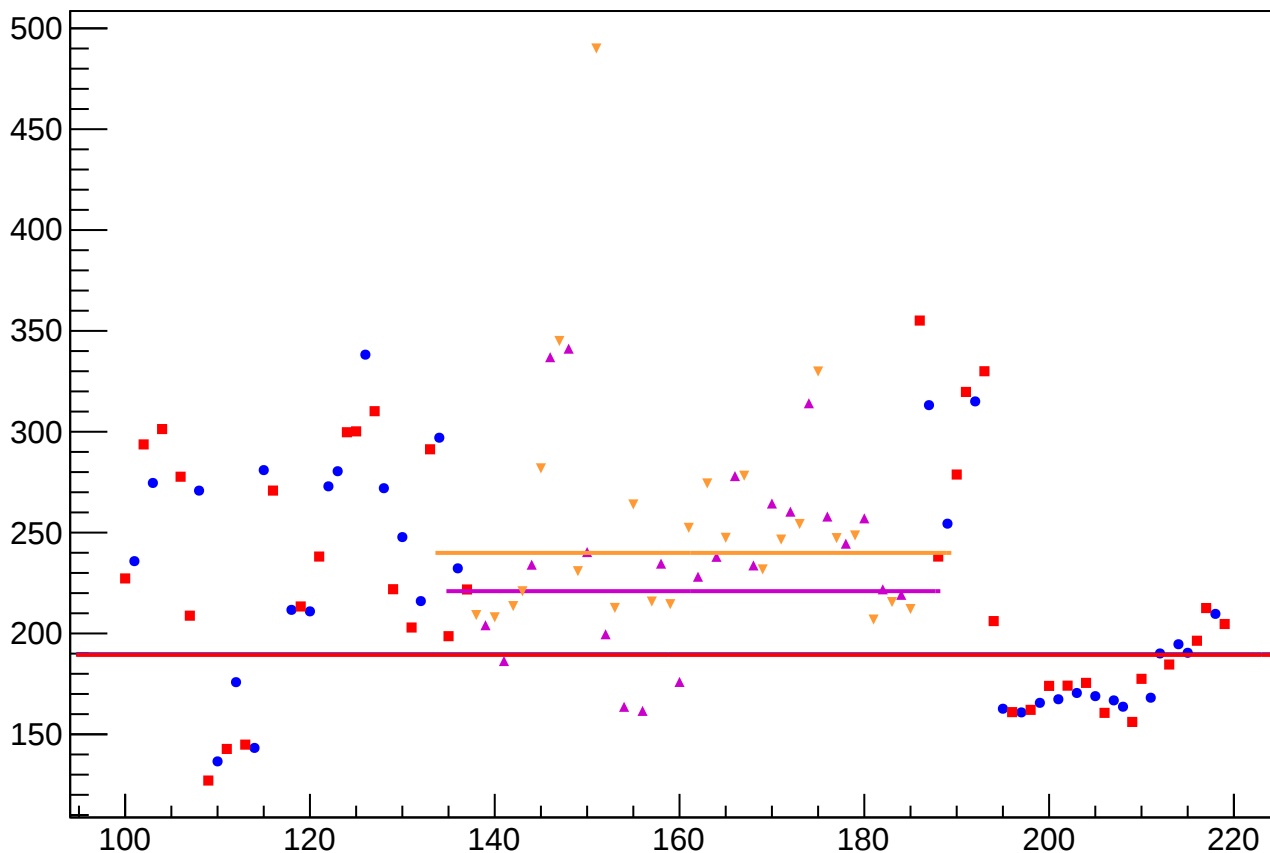
Right: 478.554+/-31.925  $\chi^2/\text{NDF}$ : 30411.3/69

In: 267.788+/-35.191  $\chi^2/\text{NDF}$ : 14014.3/55

Out: 859.384+/-35.209  $\chi^2/\text{NDF}$ : 20226.2/61

All: 563.433+/-24.890  $\chi^2/\text{NDF}$ : 34381.7/117

# asym\_bcm0l02\_rms vs Slug, Sign Corrected



Right In: 189.656 $\pm$ 0.032  $\chi^2$ /NDF: 1562244.1/32

Left Out: 239.942 $\pm$ 0.041  $\chi^2$ /NDF:1000770.0/24

Right Out: 189.387 $\pm$ 0.032  $\chi^2$ /NDF: 2154007.4/36

Left In: 220.972 $\pm$ 0.039  $\chi^2$ /NDF:1327680.6/22

Left: 230.067 $\pm$ 0.028  $\chi^2$ /NDF: 2442154.9/47

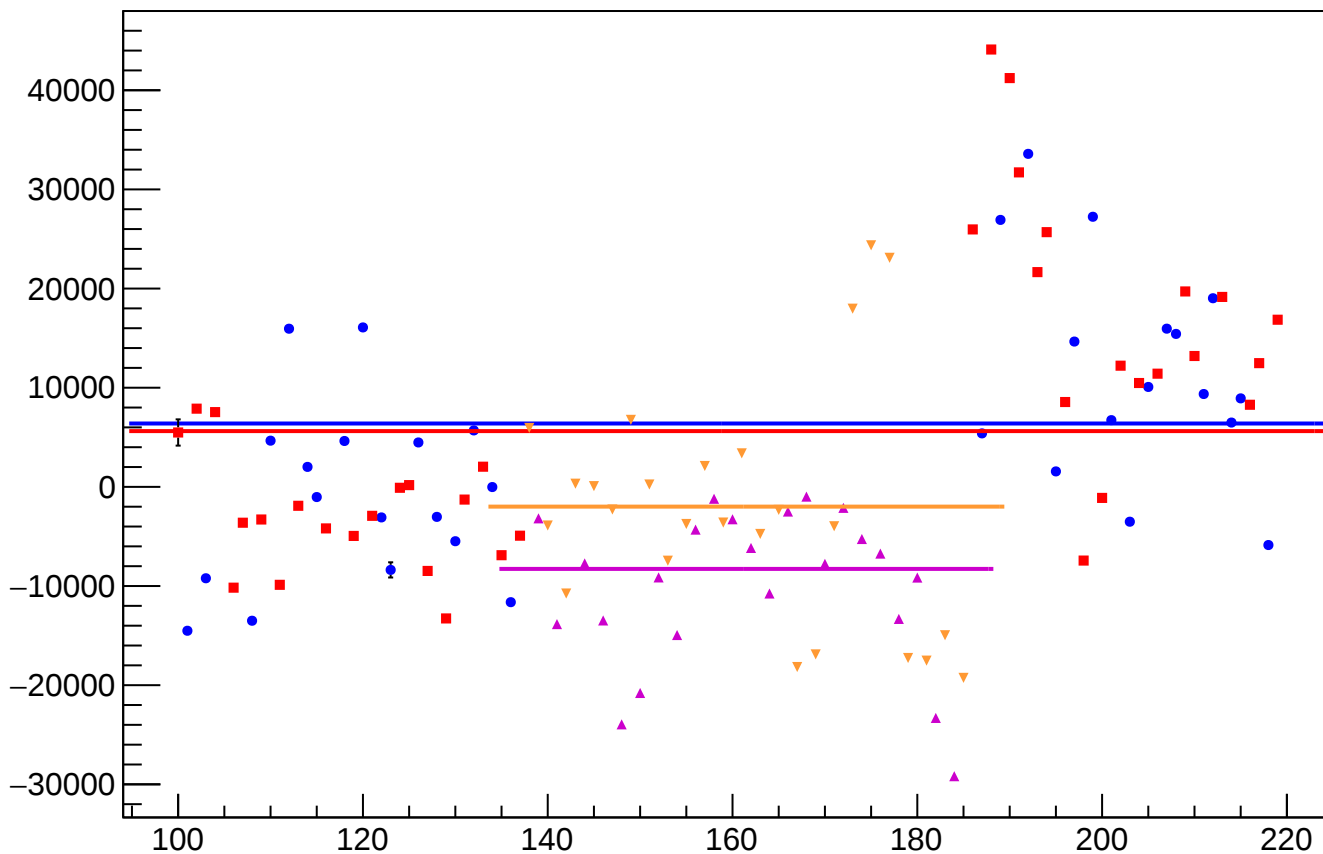
Right: 189.518 $\pm$ 0.023  $\chi^2$ /NDF: 3716287.2/69

In: 202.435 $\pm$ 0.025  $\chi^2$ /NDF:3272463.6/55

Out: 208.407 $\pm$ 0.025  $\chi^2$ /NDF:4122453.9/61

All: 205.419 $\pm$ 0.018  $\chi^2$ /NDF: 7423706.4/117

asym\_bpm0i02WS\_mean vs Slug, Sign Corrected



Right In: 6390.764+/-39.206  $\chi^2/\text{NDF}$ : 96018.3/32

Left Out: -1991.788+/-42.427  $\chi^2/\text{NDF}$ : 63766.6/24

Right Out: 5624.144+/-37.551  $\chi^2/\text{NDF}$ : 146871.1/36

Left In: -8273.228+/-44.301  $\chi^2/\text{NDF}$ : 22870.2/22

Left: -4996.810+/-30.641  $\chi^2/\text{NDF}$ : 97123.2/47

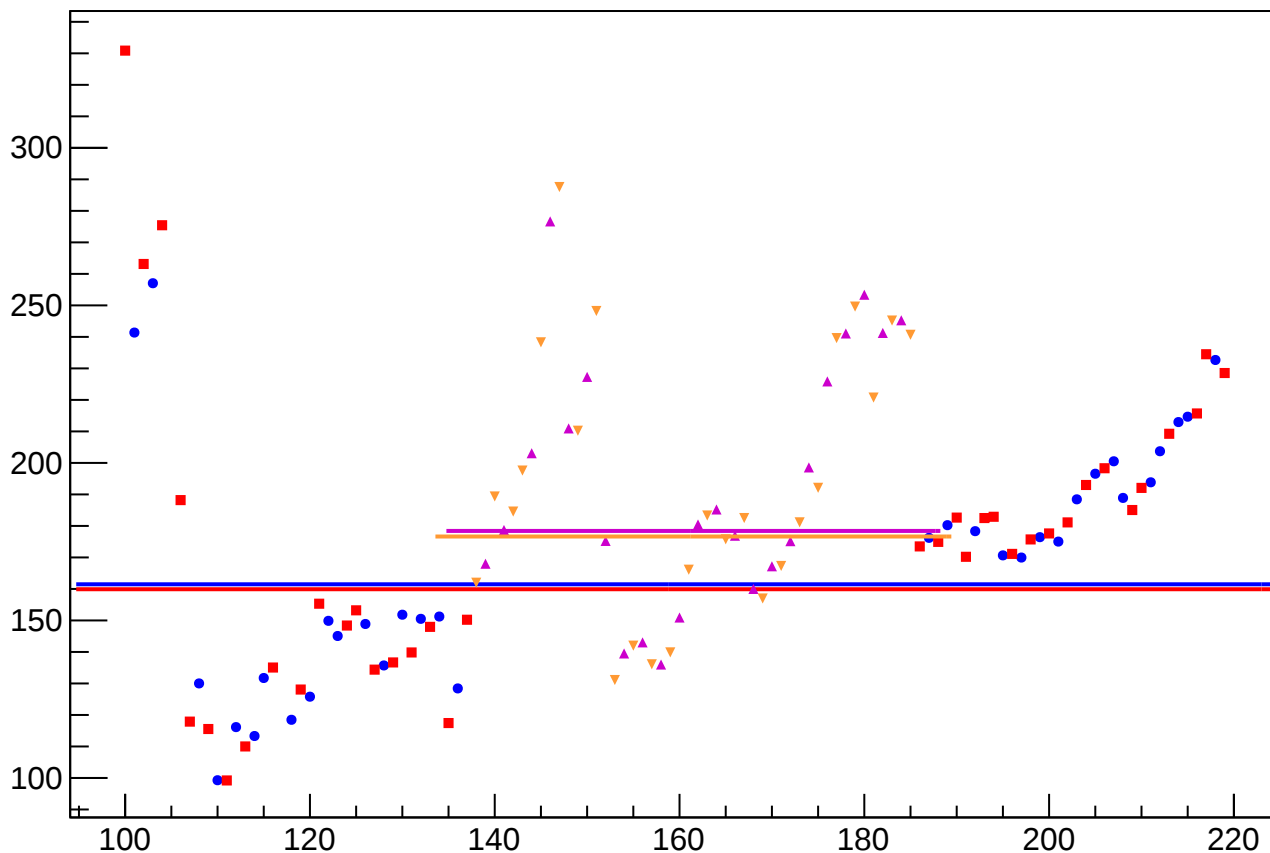
Right: 5990.933+/-27.119  $\chi^2/\text{NDF}$ : 243088.8/69

In: -49.896+/-29.360  $\chi^2/\text{NDF}$ : 180331.0/55

Out: 2278.712+/-28.119  $\chi^2/\text{NDF}$ : 228706.2/61

All: 1164.644+/-20.308  $\chi^2/\text{NDF}$ : 412318.2/11

# asym\_bpm0i02WS\_rms vs Slug, Sign Corrected



Right In: 161.476+/-0.028  $\chi^2/\text{NDF}$ : 1777563.0/32

Left Out: 176.641+/-0.030  $\chi^2/\text{NDF}$ :1551048.8/24

Right Out: 159.906+/-0.027  $\chi^2/\text{NDF}$ : 2145050.8/36

Left In: 178.413+/-0.031  $\chi^2/\text{NDF}$ :1293736.2/22

Left: 177.489+/-0.022  $\chi^2/\text{NDF}$ : 2846455.0/47

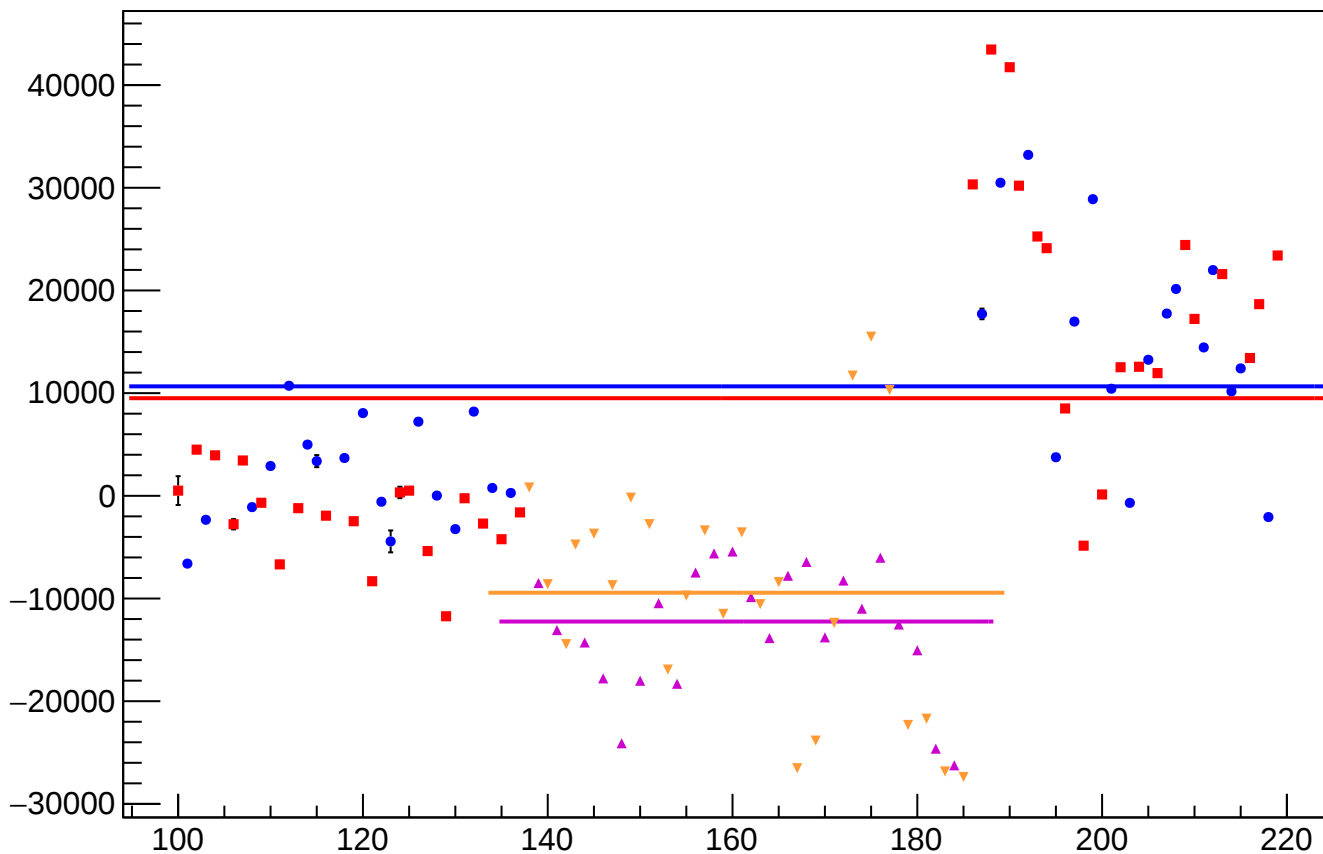
Right: 160.657+/-0.019  $\chi^2/\text{NDF}$ : 3924287.0/69

In: 168.915+/-0.021  $\chi^2/\text{NDF}$ :3235237.2/55

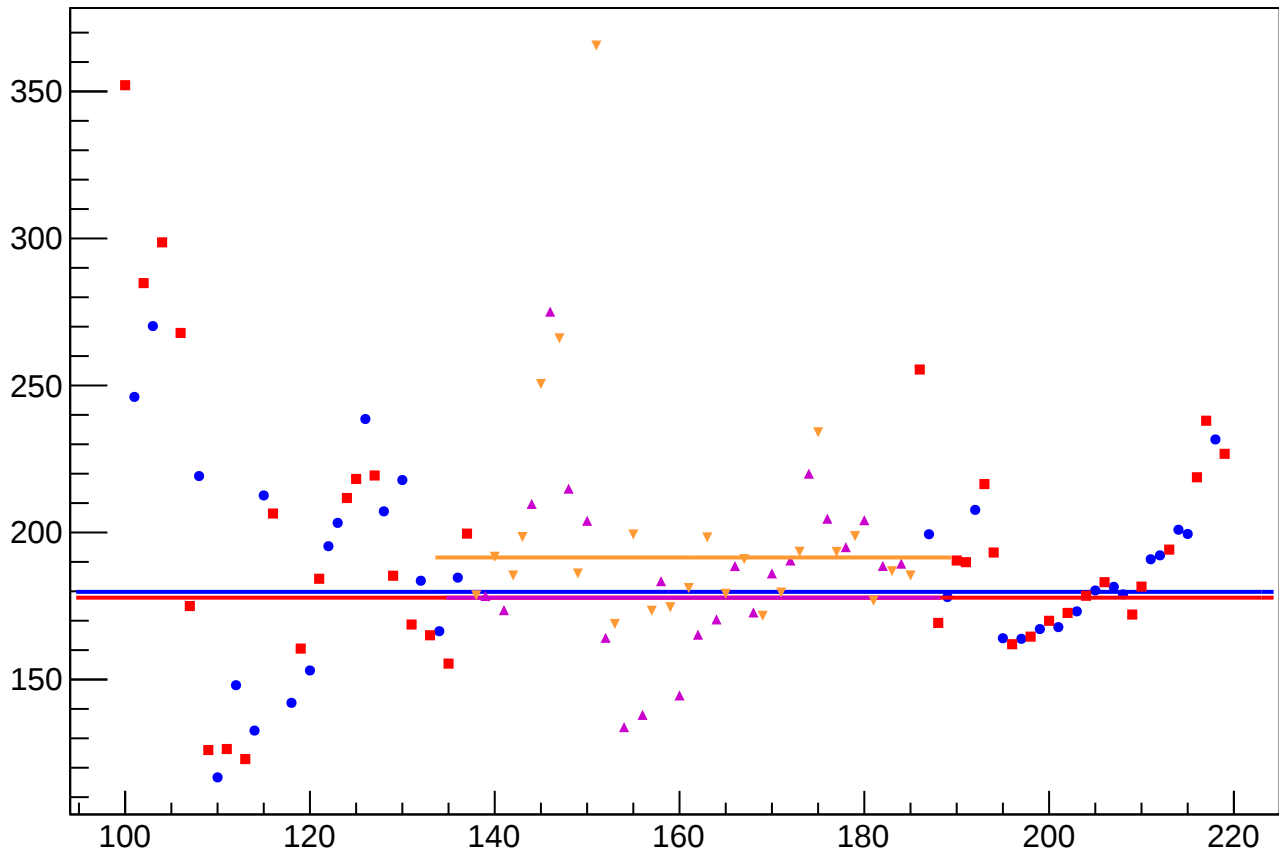
Out: 167.257+/-0.020  $\chi^2/\text{NDF}$ :3870582.1/61

All: 168.050+/-0.014  $\chi^2/\text{NDF}$ : 7109146.8/117

# asym\_bpm0i02aWS\_mean vs Slug, Sign Corrected



# asym\_bpm0i02aWS\_rms vs Slug, Sign Corrected



Right In: 179.813+/-0.030  $\chi^2/\text{NDF}$ : 900735.9/32

Left Out: 191.507+/-0.032  $\chi^2/\text{NDF}$ : 727251.6/24

Right Out: 177.840+/-0.029  $\chi^2/\text{NDF}$ : 1388827.0/36

Left In: 177.821+/-0.031  $\chi^2/\text{NDF}$ : 862494.4/22

Left: 184.421+/-0.022  $\chi^2/\text{NDF}$ : 1683284.8/47

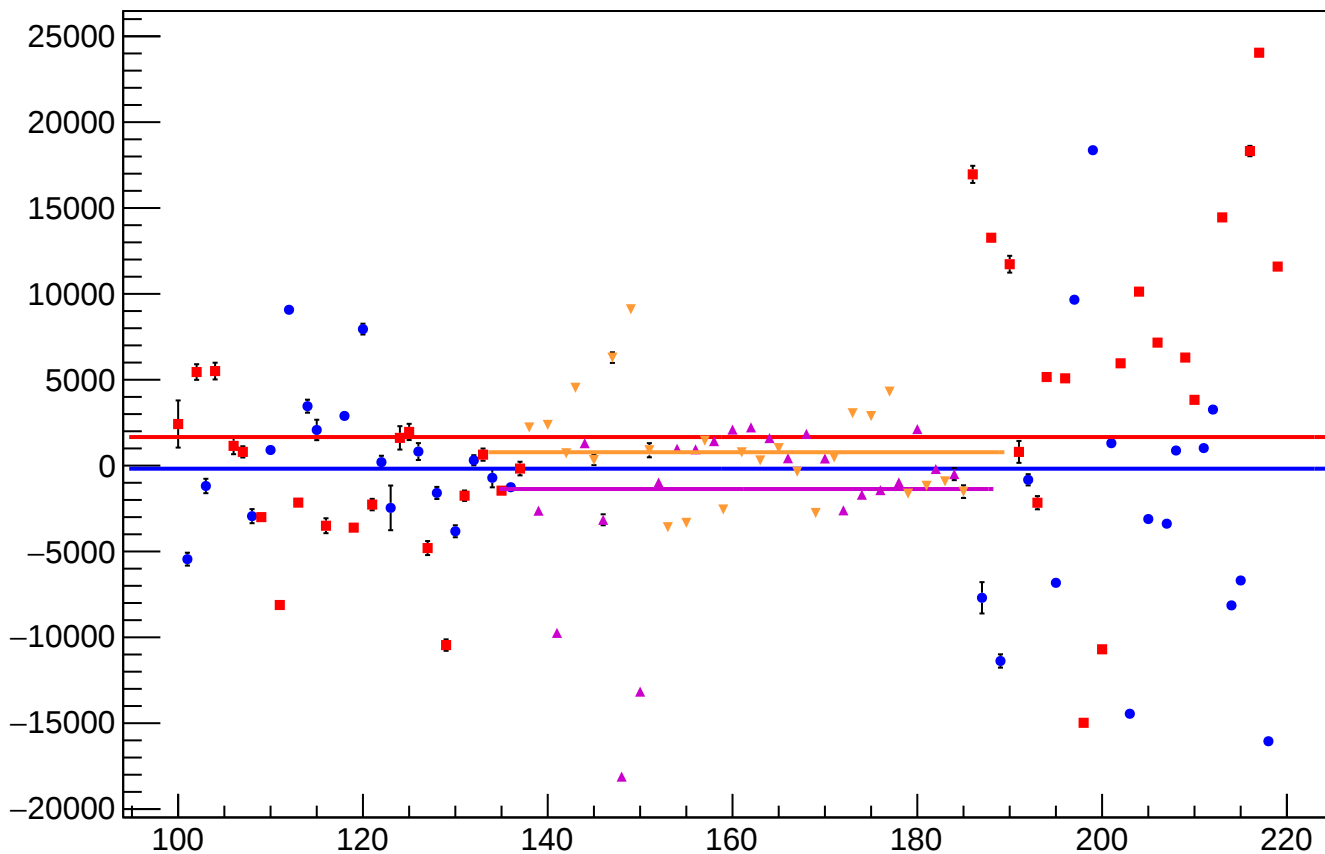
Right: 178.787+/-0.021  $\chi^2/\text{NDF}$ : 2291754.5/69

In: 178.839+/-0.022  $\chi^2/\text{NDF}$ : 1765329.9/55

Out: 184.006+/-0.022  $\chi^2/\text{NDF}$ : 2214960.5/61

All: 181.435+/-0.015  $\chi^2/\text{NDF}$ : 4008694.0/117

asym\_bpm0i05WS\_mean vs Slug, Sign Corrected



Right In:  $-179.708 \pm 48.117$   $\chi^2/\text{NDF}: 25497.0/32$

Left Out:  $779.983 \pm 47.457$   $\chi^2/\text{NDF}: 4260.8/24$

Right Out:  $1663.290 \pm 46.406$   $\chi^2/\text{NDF}: 35770.8/36$

Left In:  $-1363.043 \pm 45.807$   $\chi^2/\text{NDF}: 11632.9/22$

Left:  $-329.448 \pm 32.958$   $\chi^2/\text{NDF}: 16949.3/47$

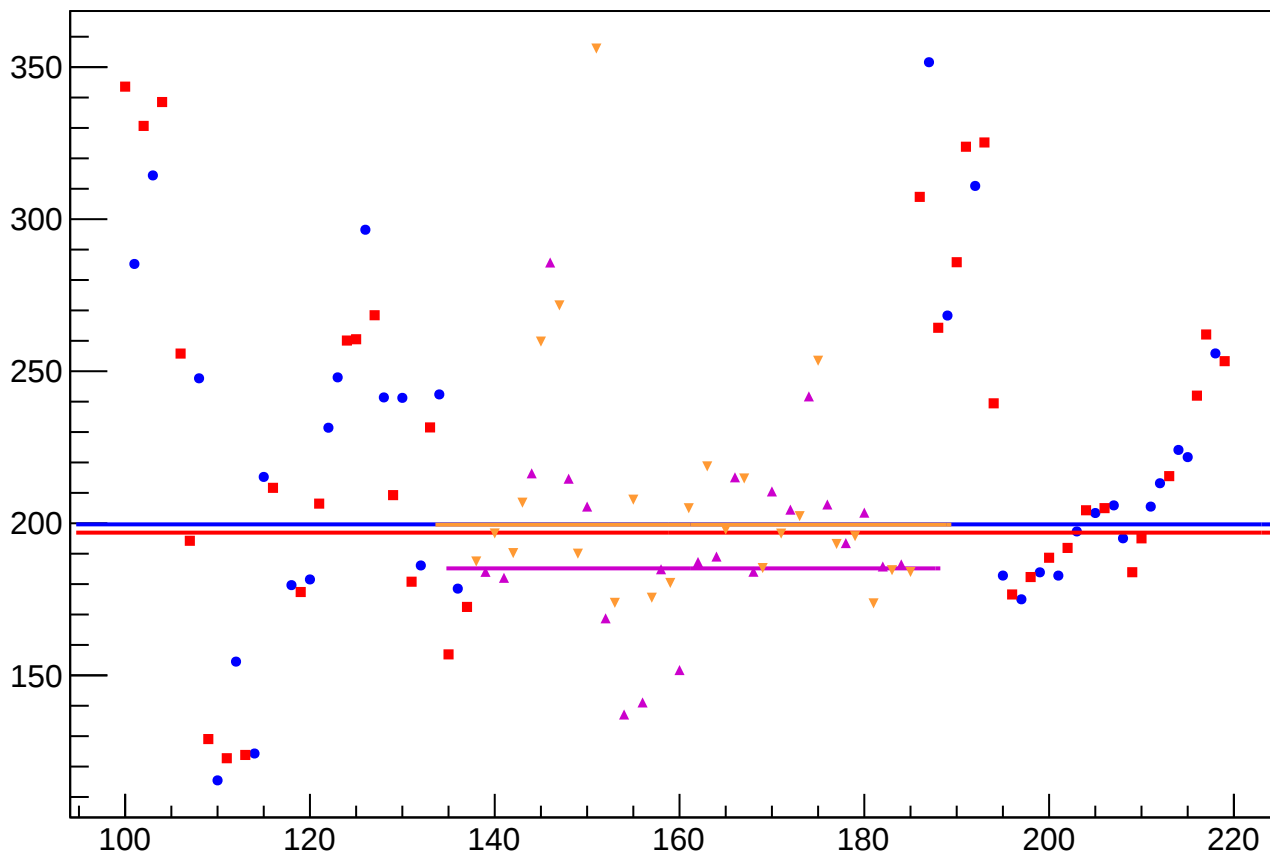
Right:  $775.146 \pm 33.402$   $\chi^2/\text{NDF}: 62027.9/69$

In:  $-800.468 \pm 33.177$   $\chi^2/\text{NDF}: 37447.2/55$

Out:  $1231.530 \pm 33.179$   $\chi^2/\text{NDF}: 40208.6/61$

All:  $215.455 \pm 23.460$   $\chi^2/\text{NDF}: 79531.3/117$

# asym\_bpm0i05WS\_rms vs Slug, Sign Corrected



Right In:  $199.645 \pm 0.034$   $\chi^2/\text{NDF}: 1547842.9/32$

Left Out:  $199.547 \pm 0.034$   $\chi^2/\text{NDF}: 729356.3/24$

Right Out:  $196.925 \pm 0.033$   $\chi^2/\text{NDF}: 2402441.1/36$

Left In:  $185.171 \pm 0.032$   $\chi^2/\text{NDF}: 882752.2/22$

Left:  $192.104 \pm 0.023$   $\chi^2/\text{NDF}: 1707122.0/47$

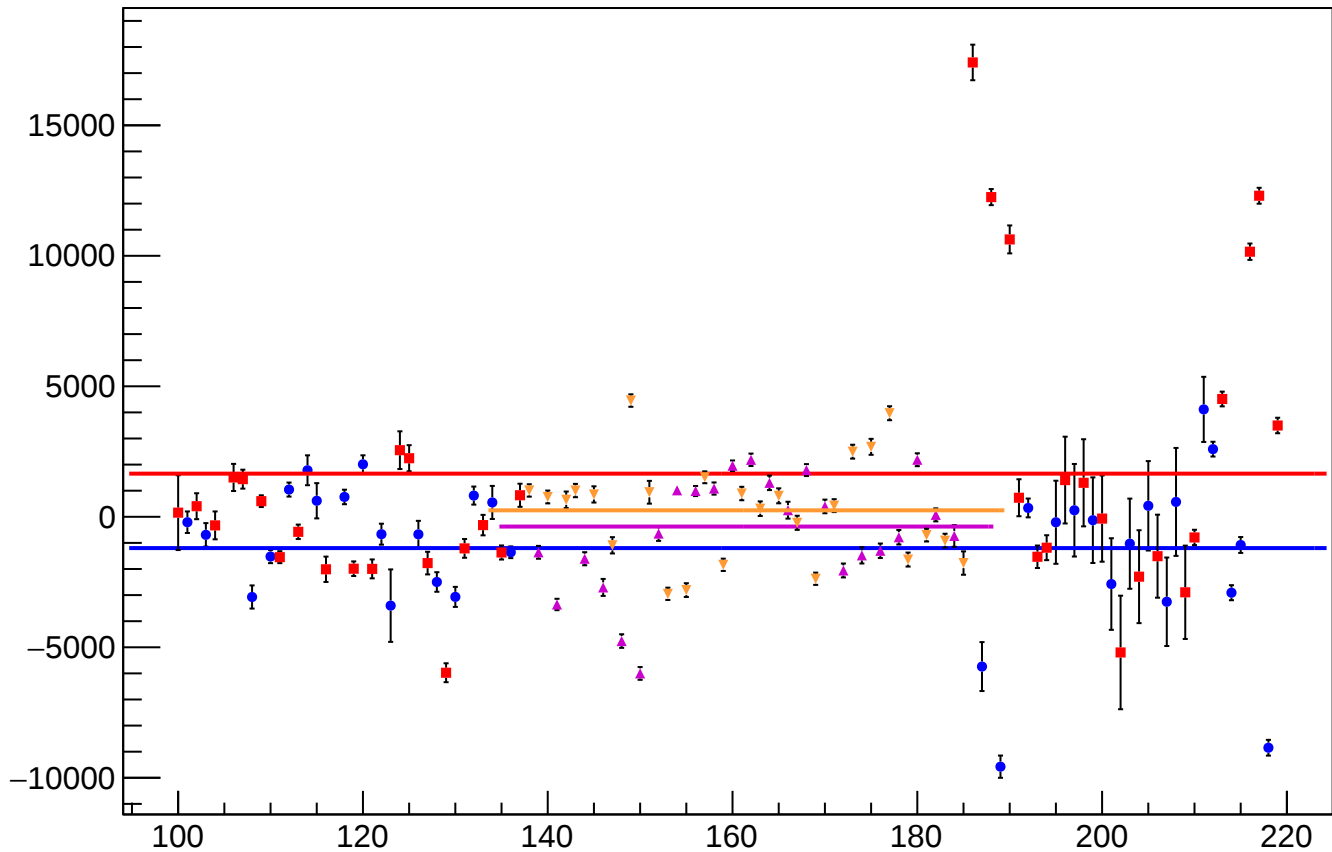
Right:  $198.236 \pm 0.024$   $\chi^2/\text{NDF}: 3953594.5/69$

In:  $192.052 \pm 0.023$   $\chi^2/\text{NDF}: 2525537.6/55$

Out:  $198.207 \pm 0.023$   $\chi^2/\text{NDF}: 3134916.7/61$

All:  $195.129 \pm 0.017$   $\chi^2/\text{NDF}: 5694866.7/117$

# asym\_bpm0i07WS\_mean vs Slug, Sign Corrected



Right In:  $-1198.997 \pm 72.398$   $\chi^2/\text{NDF}: 1656.7/32$

Left Out:  $247.844 \pm 53.555$   $\chi^2/\text{NDF}: 1355.1/24$

Right Out:  $1653.608 \pm 65.299$   $\chi^2/\text{NDF}: 5640.1/36$

Left In:  $-374.122 \pm 52.049$   $\chi^2/\text{NDF}: 1801.0/22$

Left:  $-72.006 \pm 37.325$   $\chi^2/\text{NDF}: 3225.5/47$

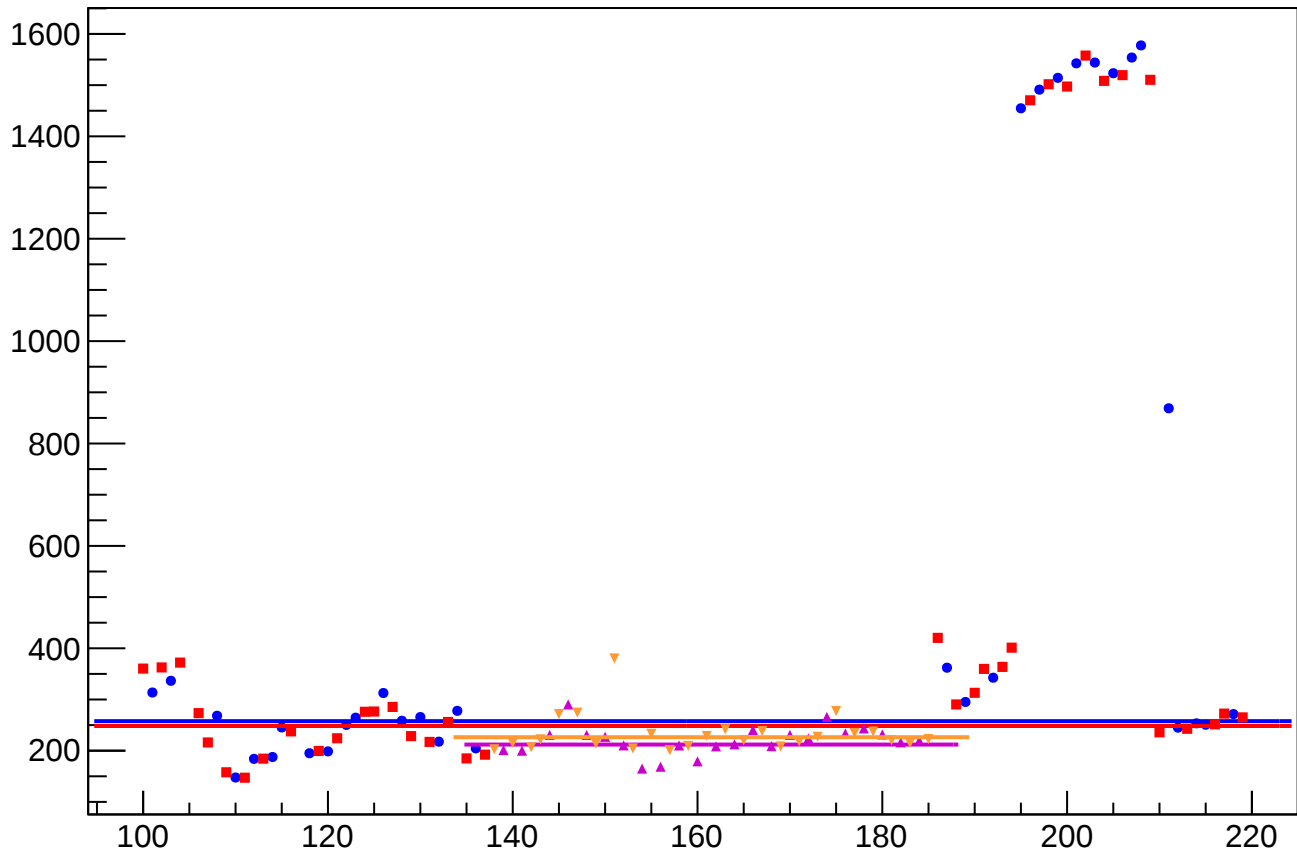
Right:  $373.989 \pm 48.489$   $\chi^2/\text{NDF}: 8152.8/69$

In:  $-655.192 \pm 42.261$   $\chi^2/\text{NDF}: 3543.3/55$

Out:  $813.167 \pm 41.409$   $\chi^2/\text{NDF}: 7272.3/61$

All:  $93.935 \pm 29.577$   $\chi^2/\text{NDF}: 11431.4/117$

# asym\_bpm0i07WS\_rms vs Slug, Sign Corrected



Right In: 257.675+/-0.051  $\chi^2/\text{NDF}$ : 10151378.9/32

Left Out: 226.322+/-0.038  $\chi^2/\text{NDF}$ : 521041.8/24

Right Out: 248.287+/-0.046  $\chi^2/\text{NDF}$ : 9294733.7/36

Left In: 211.970+/-0.037  $\chi^2/\text{NDF}$ : 584344.5/22

Left: 218.941+/-0.026  $\chi^2/\text{NDF}$ : 1179246.7/47

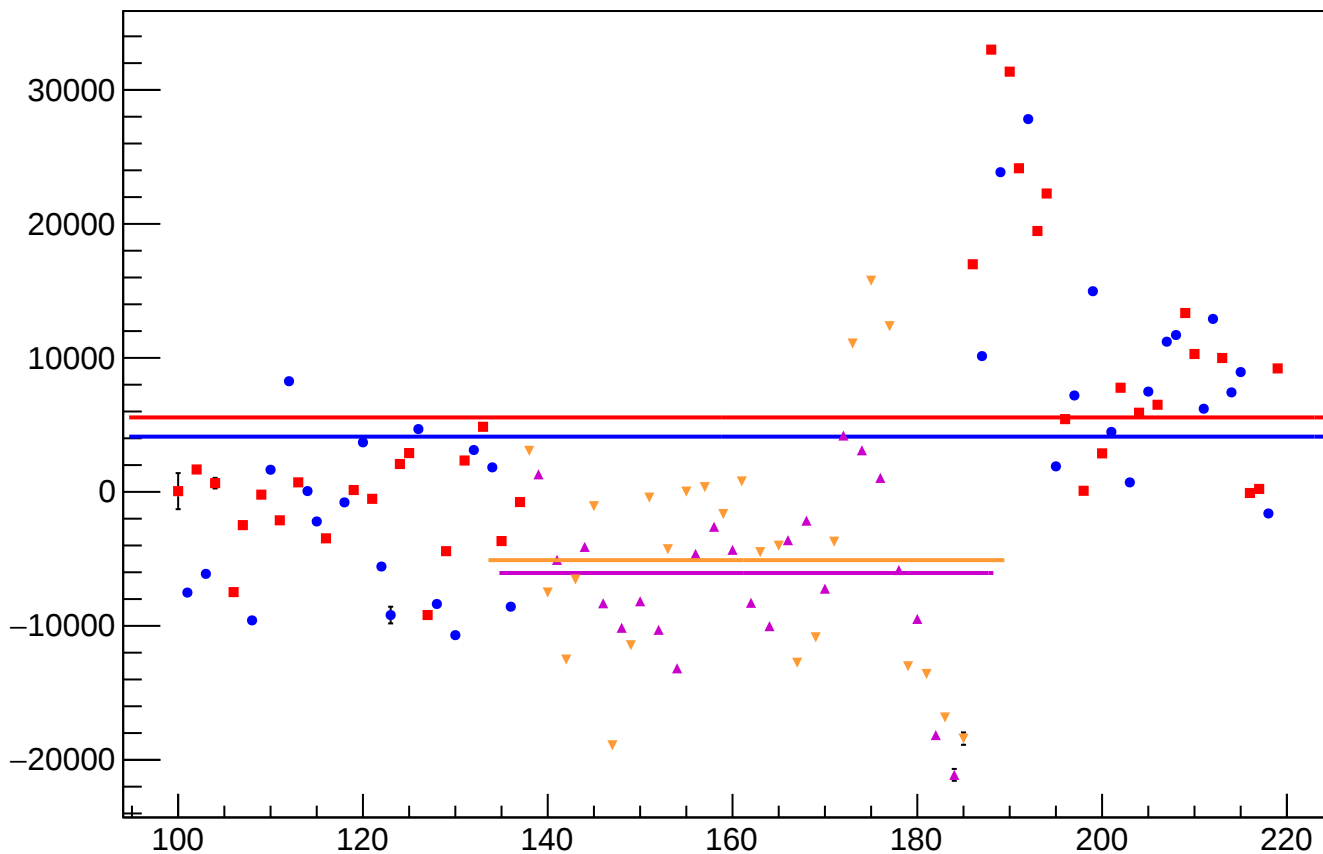
Right: 252.498+/-0.034  $\chi^2/\text{NDF}$ : 19464659.1/69

In: 227.544+/-0.030  $\chi^2/\text{NDF}$ : 11261206.0/55

Out: 235.155+/-0.029  $\chi^2/\text{NDF}$ : 9951066.5/61

All: 231.427+/-0.021  $\chi^2/\text{NDF}$ : 21245367.1/111

# asym\_bpm1i02WS\_mean vs Slug, Sign Corrected



Right In: 4122.799 $\pm$ 33.343

$\chi^2/\text{NDF}$ : 80792.0/32

Left: -5556.386 $\pm$ 24.277  $\chi^2/\text{NDF}$ : 72374.6/47

Right: 4875.889 $\pm$ 22.980  $\chi^2/\text{NDF}$ : 187129.1/69

Left Out: -5095.305 $\pm$ 33.703

$\chi^2/\text{NDF}$ : 54395.4/24

In: -719.032 $\pm$ 24.141  $\chi^2/\text{NDF}$ : 142702.5/55

Right Out: 5557.266 $\pm$ 31.715

$\chi^2/\text{NDF}$ : 105365.4/36

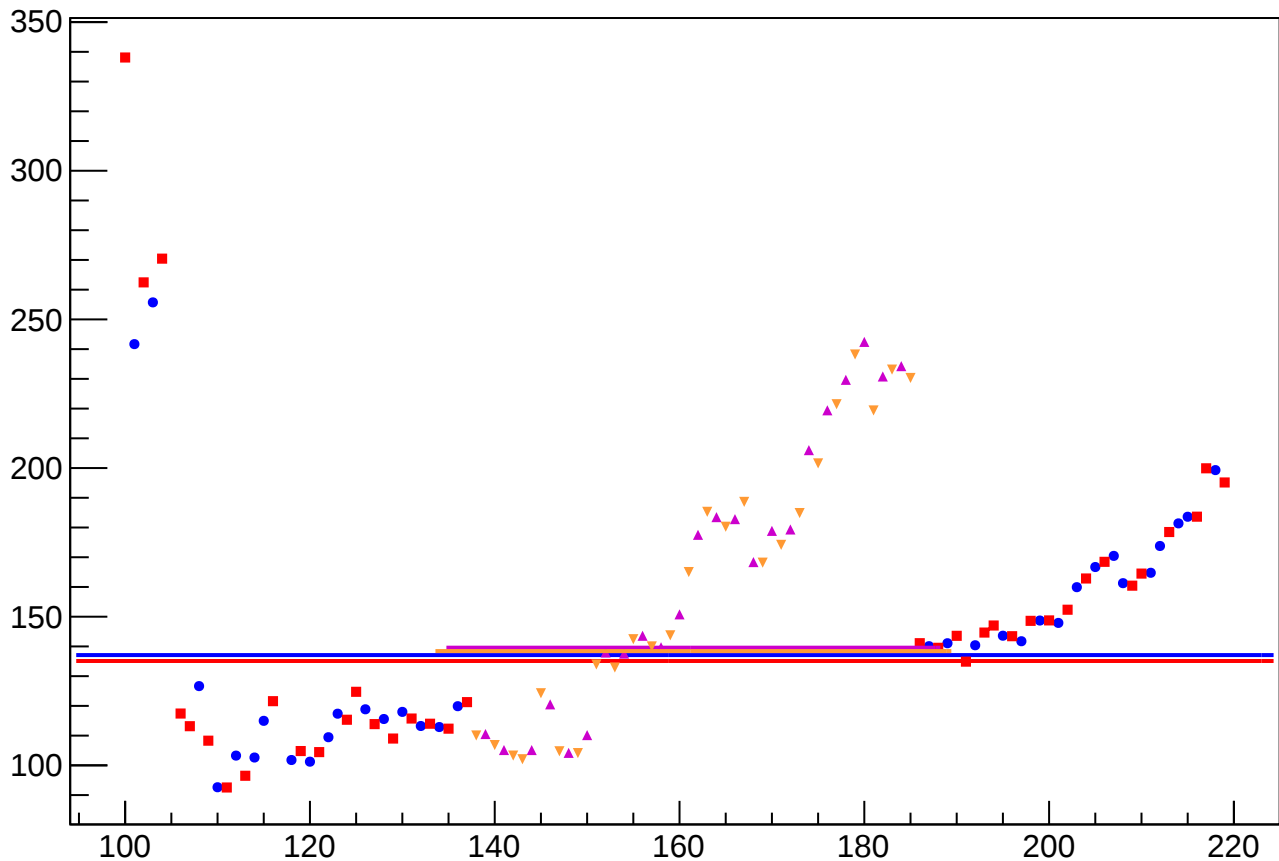
Out: 554.408 $\pm$ 23.097  $\chi^2/\text{NDF}$ : 212743.2/61

Left In: -6053.569 $\pm$ 34.998

$\chi^2/\text{NDF}$ : 17590.3/22

All: -54.187 $\pm$ 16.689  $\chi^2/\text{NDF}$ : 356898.5/117

# asym\_bpm1i02WS\_rms vs Slug, Sign Corrected



Right In: 137.090 $\pm$ 0.024  $\chi^2$ /NDF: 1789469.3/32

Left Out: 138.436 $\pm$ 0.024  $\chi^2$ /NDF:2549435.8/24

Right Out: 135.104 $\pm$ 0.022  $\chi^2$ /NDF: 2016763.8/36

Left In: 139.578 $\pm$ 0.025  $\chi^2$ /NDF:2413658.9/22

Left: 138.985 $\pm$ 0.017  $\chi^2$ /NDF: 4964199.7/47

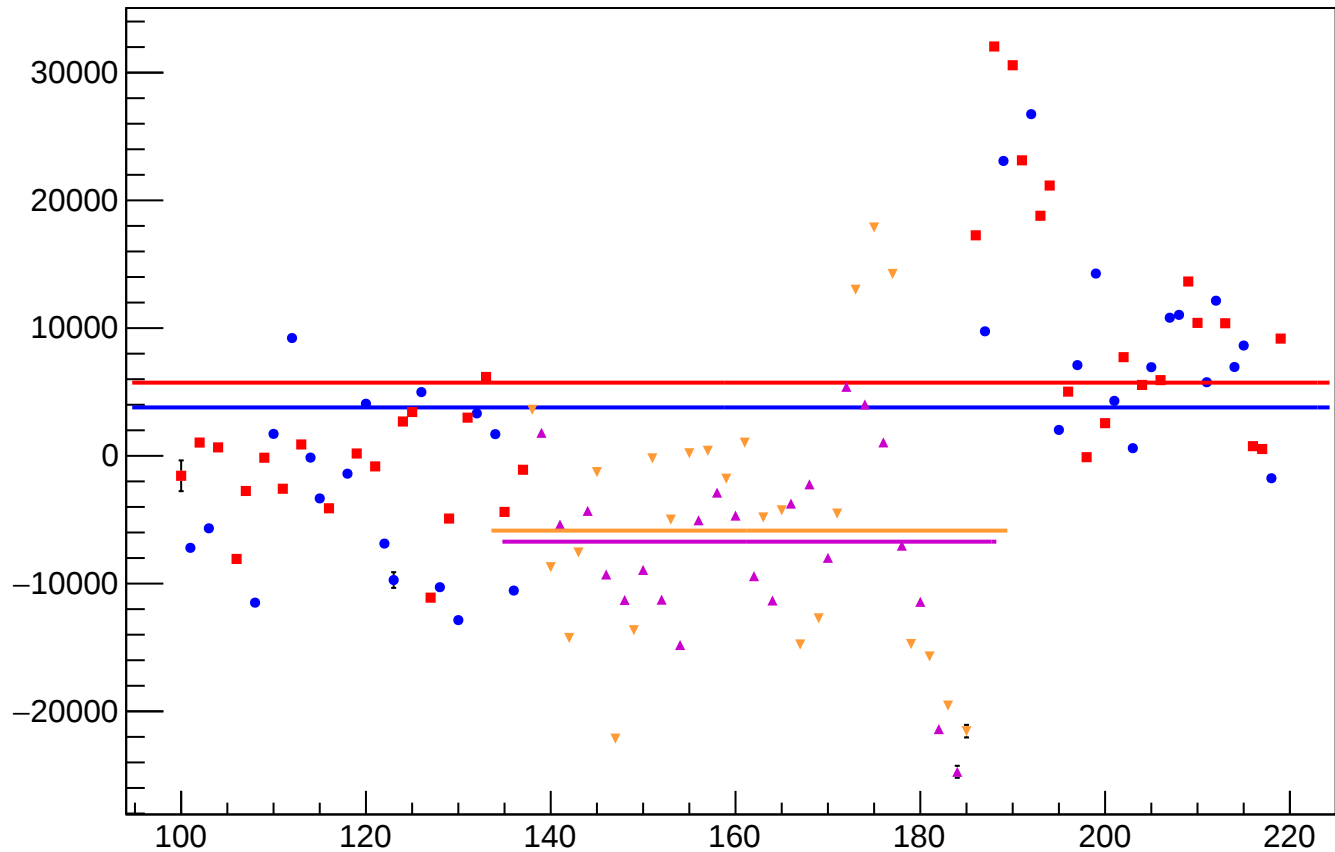
Right: 136.048 $\pm$ 0.016  $\chi^2$ /NDF: 3809959.3/69

In: 138.274 $\pm$ 0.017  $\chi^2$ /NDF:4208423.8/55

Out: 136.669 $\pm$ 0.016  $\chi^2$ /NDF:4576563.9/61

All: 137.436 $\pm$ 0.012  $\chi^2$ /NDF: 8789603.9/117

asym\_bpm2i01WS\_mean vs Slug, Sign Corrected



Right In: 3790.927+/-33.247  $\chi^2/\text{NDF}$ : 85928.0/32

Left Out: -5852.544+/-35.880  $\chi^2/\text{NDF}$ : 63411.4/24

Right Out: 5730.892+/-31.750  $\chi^2/\text{NDF}$ : 106042.0/36

Left In: -6718.475+/-37.276  $\chi^2/\text{NDF}$ : 20934.3/22

Left: -6268.993+/-25.850  $\chi^2/\text{NDF}$ : 84625.8/47

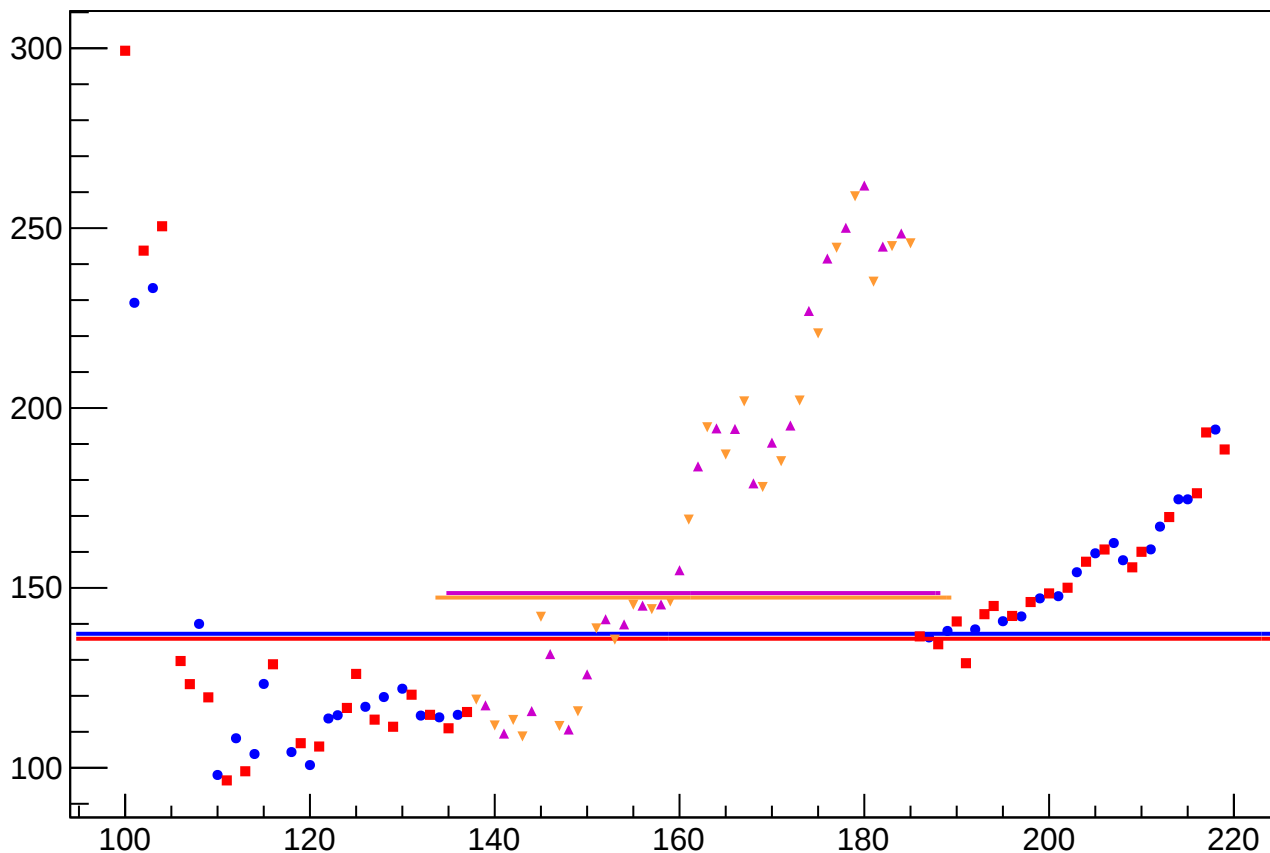
Right: 4805.563+/-22.962  $\chi^2/\text{NDF}$ : 193750.7/69

In: -865.420+/-24.812  $\chi^2/\text{NDF}$ : 151132.5/55

Out: 643.816+/-23.777  $\chi^2/\text{NDF}$ : 227906.6/61

All: -78.688+/-17.167  $\chi^2/\text{NDF}$ : 380967.9/117

# asym\_bpm2i01WS\_rms vs Slug, Sign Corrected



Right In: 137.252+/-0.024  $\chi^2/\text{NDF}$ : 1424163.8/32

Left Out: 147.317+/-0.025  $\chi^2/\text{NDF}$ : 2511679.9/24

Right Out: 135.872+/-0.022  $\chi^2/\text{NDF}$ : 1581863.9/36

Left In: 148.569+/-0.026  $\chi^2/\text{NDF}$ : 2393185.0/22

Left: 147.919+/-0.018  $\chi^2/\text{NDF}$ : 4906034.9/47

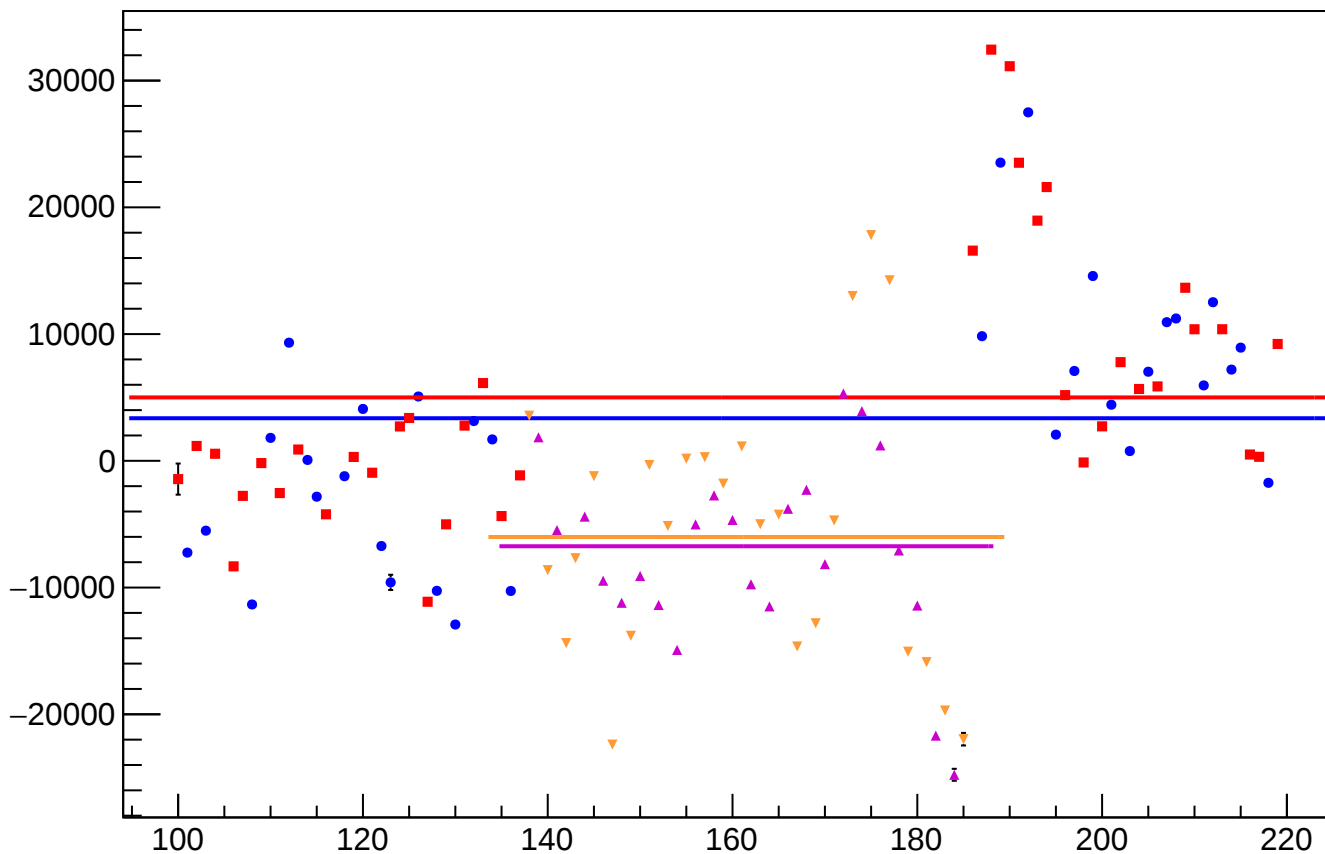
Right: 136.530+/-0.016  $\chi^2/\text{NDF}$ : 3007828.4/69

In: 142.266+/-0.018  $\chi^2/\text{NDF}$ : 3920020.4/55

Out: 140.898+/-0.017  $\chi^2/\text{NDF}$ : 4207674.7/61

All: 141.553+/-0.012  $\chi^2/\text{NDF}$ : 8130861.1/117

asym\_bpm2i02WS\_mean vs Slug, Sign Corrected



Right In: 3360.156 $\pm$ 33.379

$\chi^2/\text{NDF}$ : 85598.3/32

Left: -6362.031 $\pm$ 25.253

$\chi^2/\text{NDF}$ : 90133.1/47

Left Out: -6009.913 $\pm$ 35.082

$\chi^2/\text{NDF}$ : 67852.2/24

Right: 4217.659 $\pm$ 23.070

$\chi^2/\text{NDF}$ : 187704.0/69

Right Out: 5001.975 $\pm$ 31.923

$\chi^2/\text{NDF}$ : 100842.1/36

In: -1256.597 $\pm$ 24.595

$\chi^2/\text{NDF}$ : 149525.2/55

Out: 14.146 $\pm$ 23.611

$\chi^2/\text{NDF}$ : 222592.4/61

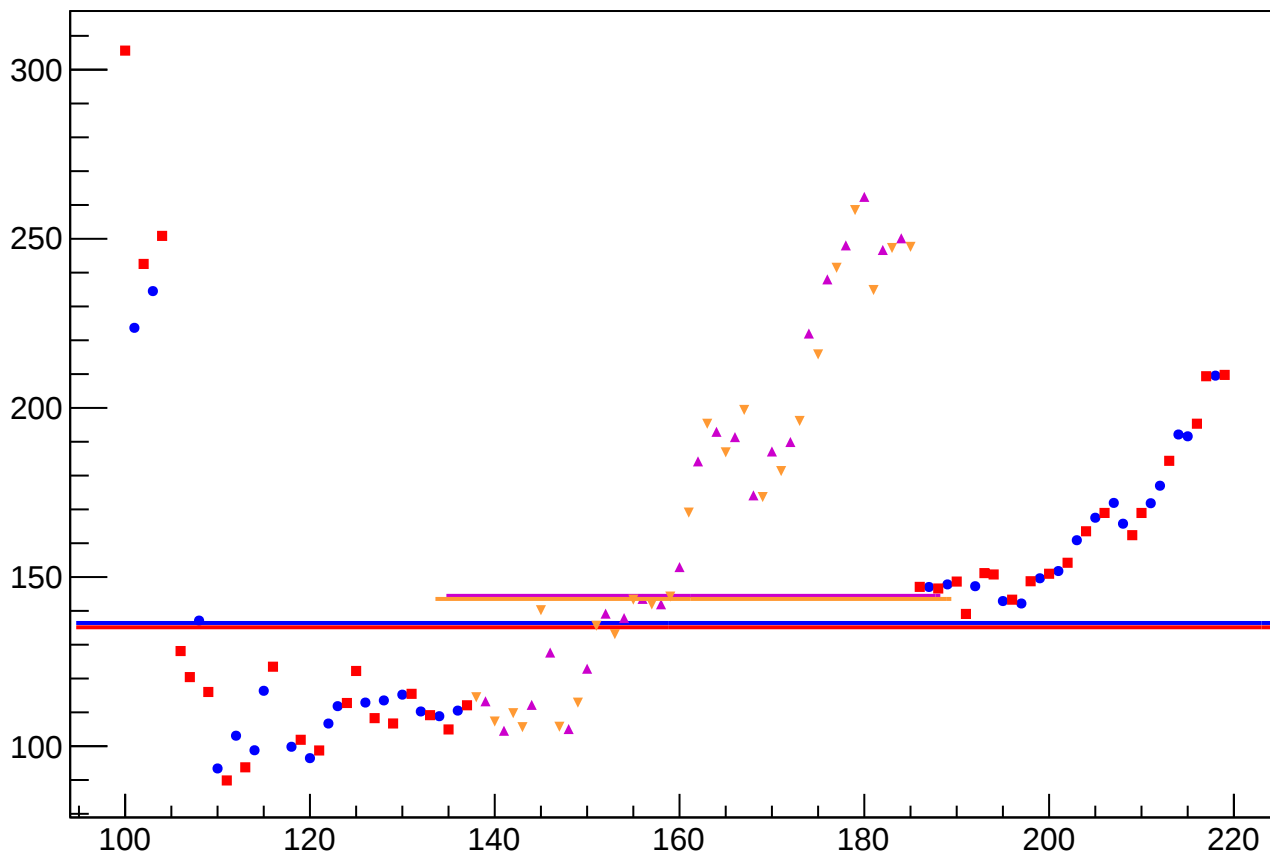
Left In: -6740.666 $\pm$ 36.379

$\chi^2/\text{NDF}$ : 22071.8/22

All: -595.299 $\pm$ 17.033

$\chi^2/\text{NDF}$ : 373506.9/111

# asym\_bpm2i02WS\_rms vs Slug, Sign Corrected



Right In:  $136.425 \pm 0.024$   $\chi^2/\text{NDF}: 2021426.3/32$

Left Out:  $143.531 \pm 0.025$   $\chi^2/\text{NDF}: 2704790.3/24$

Right Out:  $135.147 \pm 0.023$   $\chi^2/\text{NDF}: 2282027.3/36$

Left In:  $144.440 \pm 0.026$   $\chi^2/\text{NDF}: 2586926.1/22$

Left:  $143.969 \pm 0.018$   $\chi^2/\text{NDF}: 5292363.3/47$

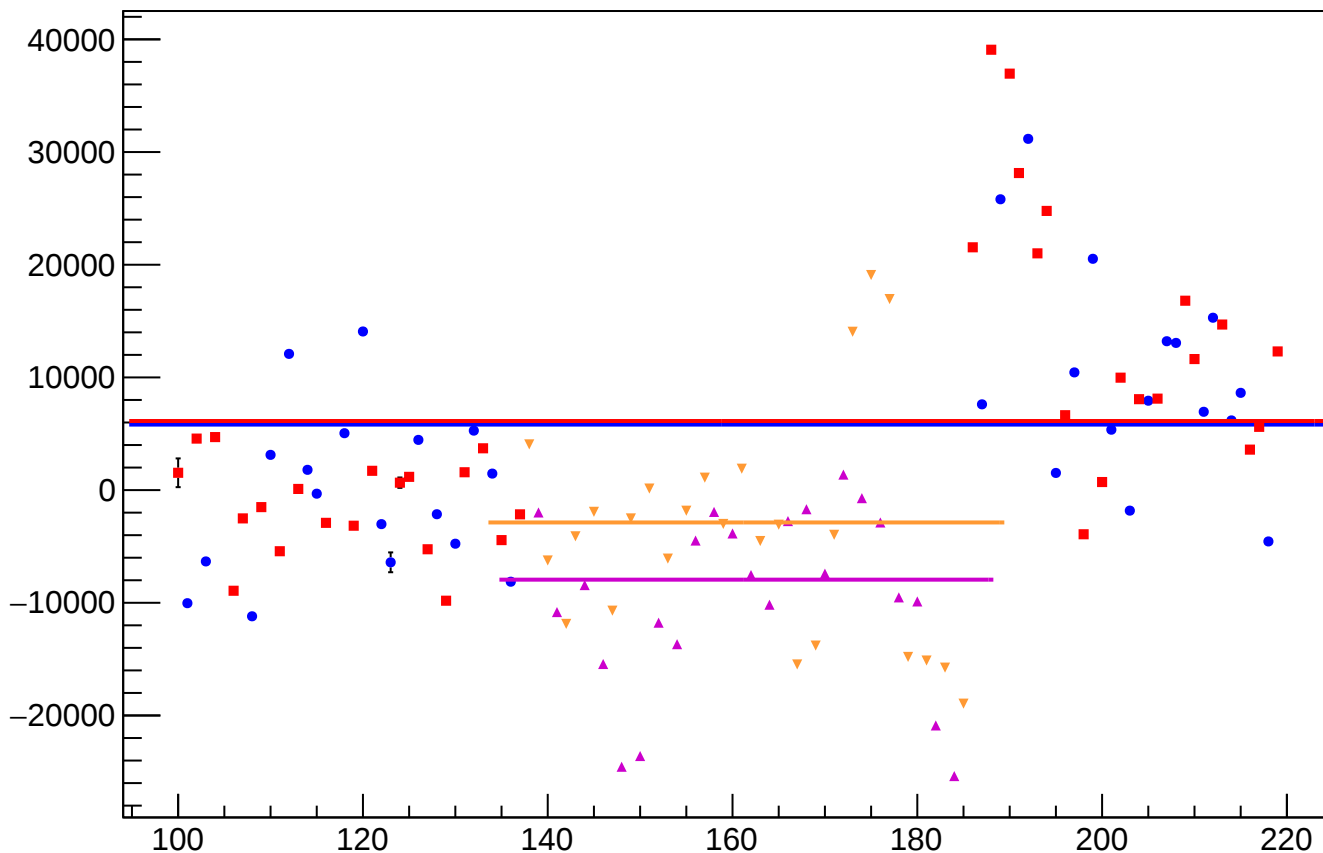
Right:  $135.757 \pm 0.016$   $\chi^2/\text{NDF}: 4304983.2/69$

In:  $140.088 \pm 0.017$   $\chi^2/\text{NDF}: 4661060.6/55$

Out:  $138.945 \pm 0.017$   $\chi^2/\text{NDF}: 5049294.4/61$

All:  $139.493 \pm 0.012$   $\chi^2/\text{NDF}: 9712604.8/117$

# asym\_bpm0i01WS\_mean vs Slug, Sign Corrected



Right In: 5814.528+/-40.146  $\chi^2/\text{NDF}$ : 65117.1/32

Left Out: -2870.473+/-39.482  $\chi^2/\text{NDF}$ : 46420.3/24

Right Out: 6131.506+/-38.395  $\chi^2/\text{NDF}$ : 100504.3/36

Left In: -7947.160+/-41.726  $\chi^2/\text{NDF}$ : 23874.5/22

Left: -5268.670+/-28.678  $\chi^2/\text{NDF}$ : 78105.0/47

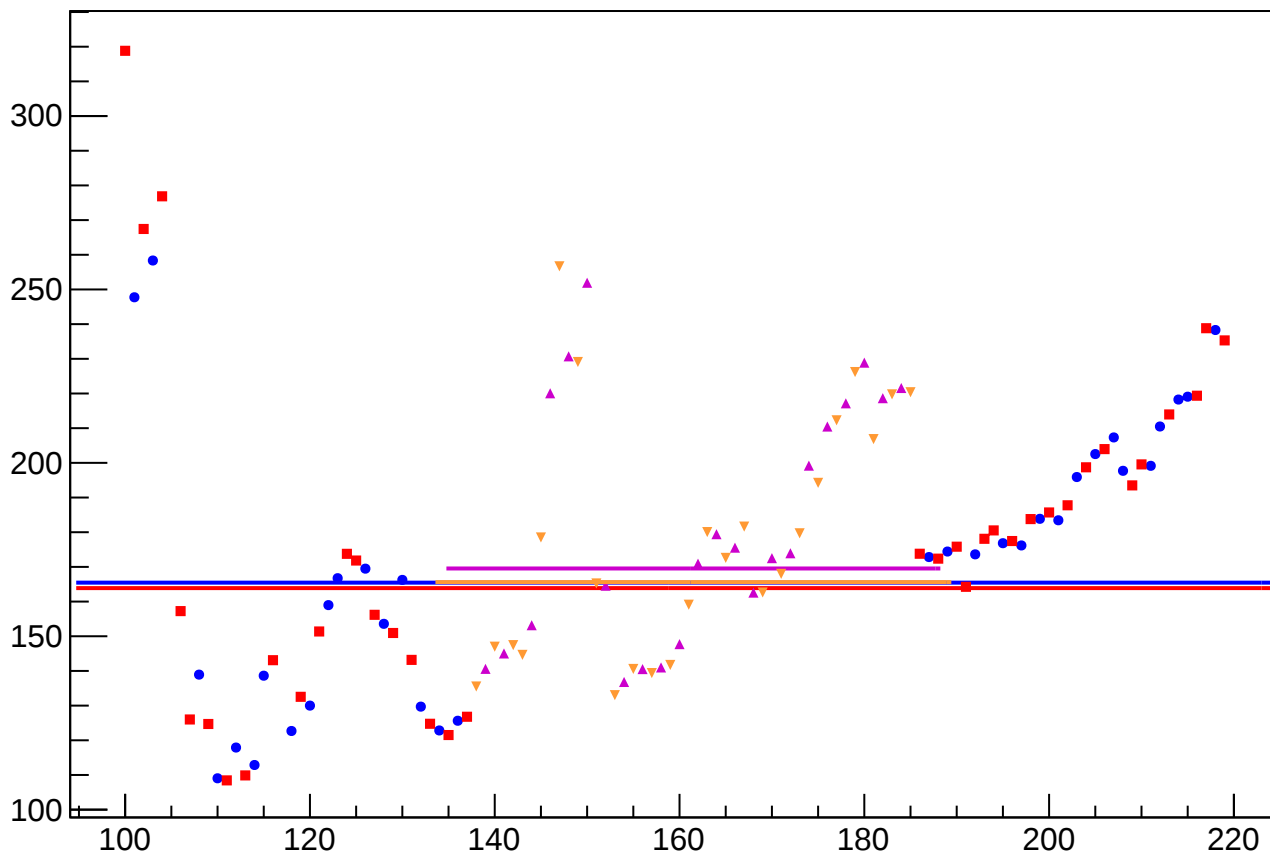
Right: 5980.080+/-27.748  $\chi^2/\text{NDF}$ : 165653.9/69

In: -800.932+/-28.930  $\chi^2/\text{NDF}$ : 145477.6/55

Out: 1756.123+/-27.526  $\chi^2/\text{NDF}$ : 173642.1/61

All: 541.154+/-19.942  $\chi^2/\text{NDF}$ : 323220.1/117

# asym\_bpm0i01WS\_rms vs Slug, Sign Corrected



Right In: 165.460 $\pm$ 0.028  $\chi^2$ /NDF: 1801407.5/32

Left Out: 165.616 $\pm$ 0.028  $\chi^2$ /NDF:1144779.3/24

Right Out: 163.881 $\pm$ 0.027  $\chi^2$ /NDF: 2012846.2/36

Left In: 169.542 $\pm$ 0.030  $\chi^2$ /NDF:1159241.9/22

Left: 167.471 $\pm$ 0.020  $\chi^2$ /NDF: 2313359.6/47

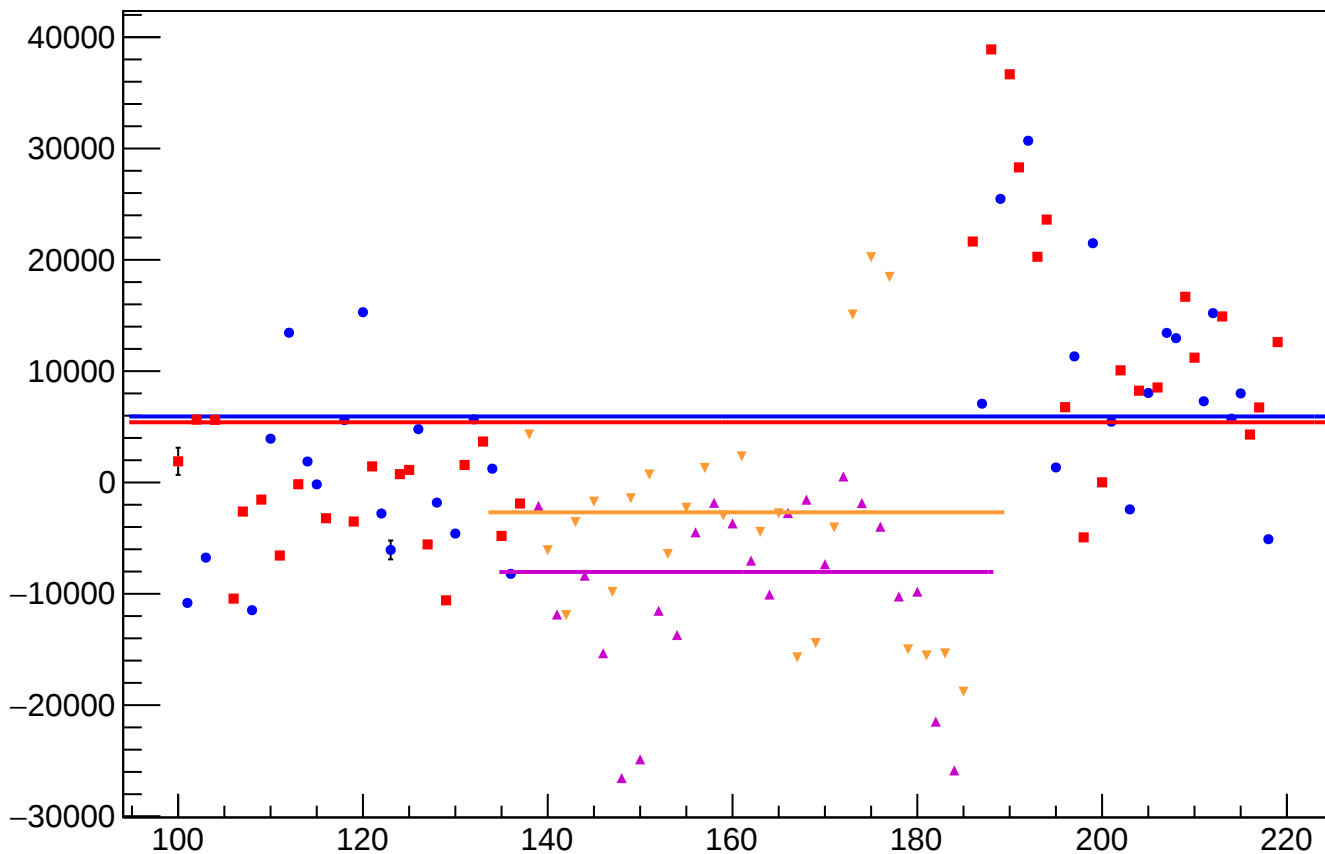
Right: 164.636 $\pm$ 0.020  $\chi^2$ /NDF: 3815868.7/69

In: 167.422 $\pm$ 0.020  $\chi^2$ /NDF:2970587.0/55

Out: 164.725 $\pm$ 0.019  $\chi^2$ /NDF:3159610.2/61

All: 166.006 $\pm$ 0.014  $\chi^2$ /NDF: 6139323.1/117

asym\_bpm0i01aWS\_mean vs Slug, Sign Corrected



Right In: 5930.405 $\pm$ 34.087

$\chi^2$ /NDF: 91132.6/32

Left: -5201.473 $\pm$ 26.019

$\chi^2$ /NDF: 96642.3/47

Left Out: -2680.012 $\pm$ 35.764

$\chi^2$ /NDF: 56820.4/24

Right: 5655.978 $\pm$ 23.488

$\chi^2$ /NDF: 231979.5/69

Right Out: 5407.887 $\pm$ 32.410

$\chi^2$ /NDF: 140723.5/36

In: -310.979 $\pm$ 25.352

$\chi^2$ /NDF: 195421.5/55

Out: 1760.844 $\pm$ 24.016

$\chi^2$ /NDF: 225625.4/61

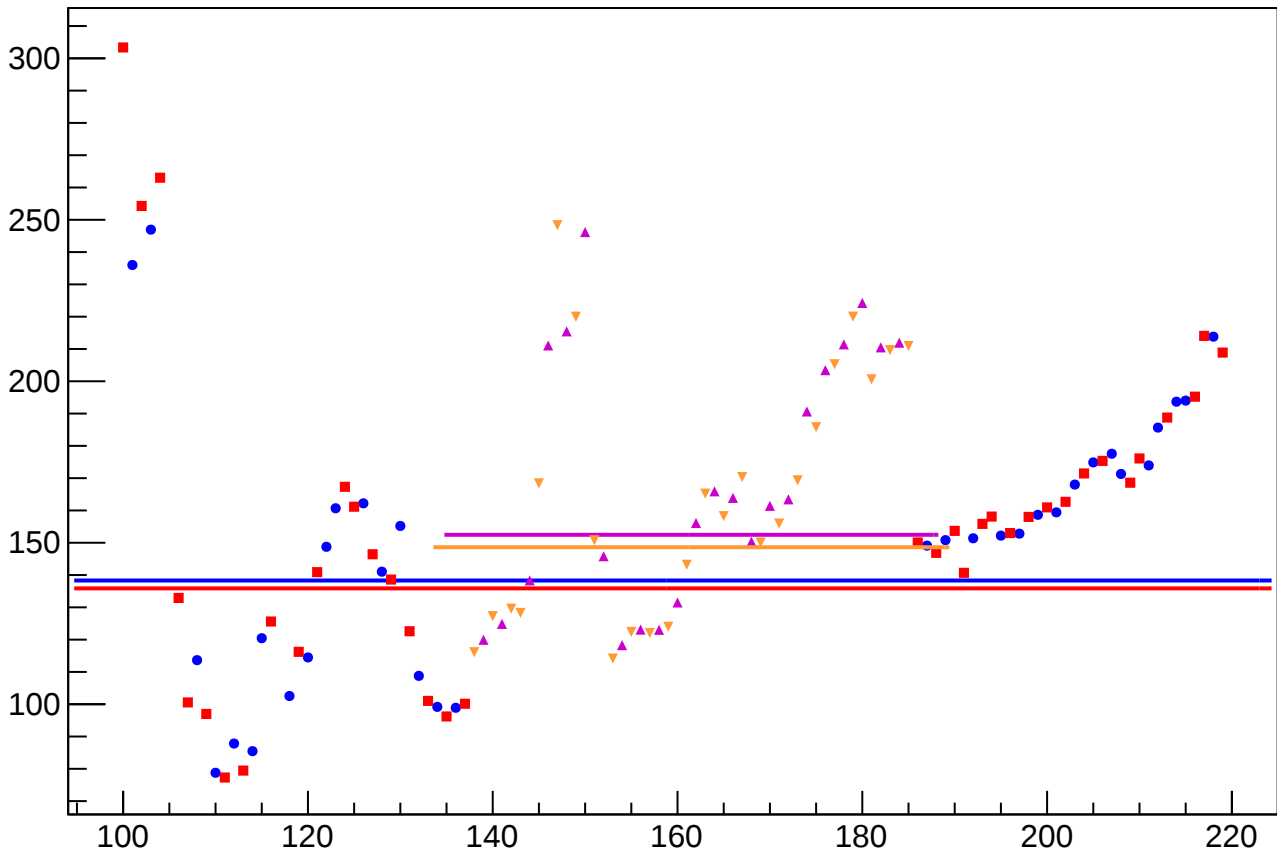
Left In: -8036.826 $\pm$ 37.924

$\chi^2$ /NDF: 29261.6/22

All: 780.956 $\pm$ 17.435

$\chi^2$ /NDF: 424566.9/117

# asym\_bpm0i01aWS\_rms vs Slug, Sign Corrected



Right In: 138.309 $\pm$ 0.024  $\chi^2/\text{NDF}$ : 2691691.9/32

Left Out: 148.611 $\pm$ 0.025  $\chi^2/\text{NDF}$ :1685424.1/24

Right Out: 135.864 $\pm$ 0.023  $\chi^2/\text{NDF}$ : 3105473.6/36

Left In: 152.463 $\pm$ 0.027  $\chi^2/\text{NDF}$ :1691517.7/22

Left: 150.424 $\pm$ 0.018  $\chi^2/\text{NDF}$ : 3387867.0/47

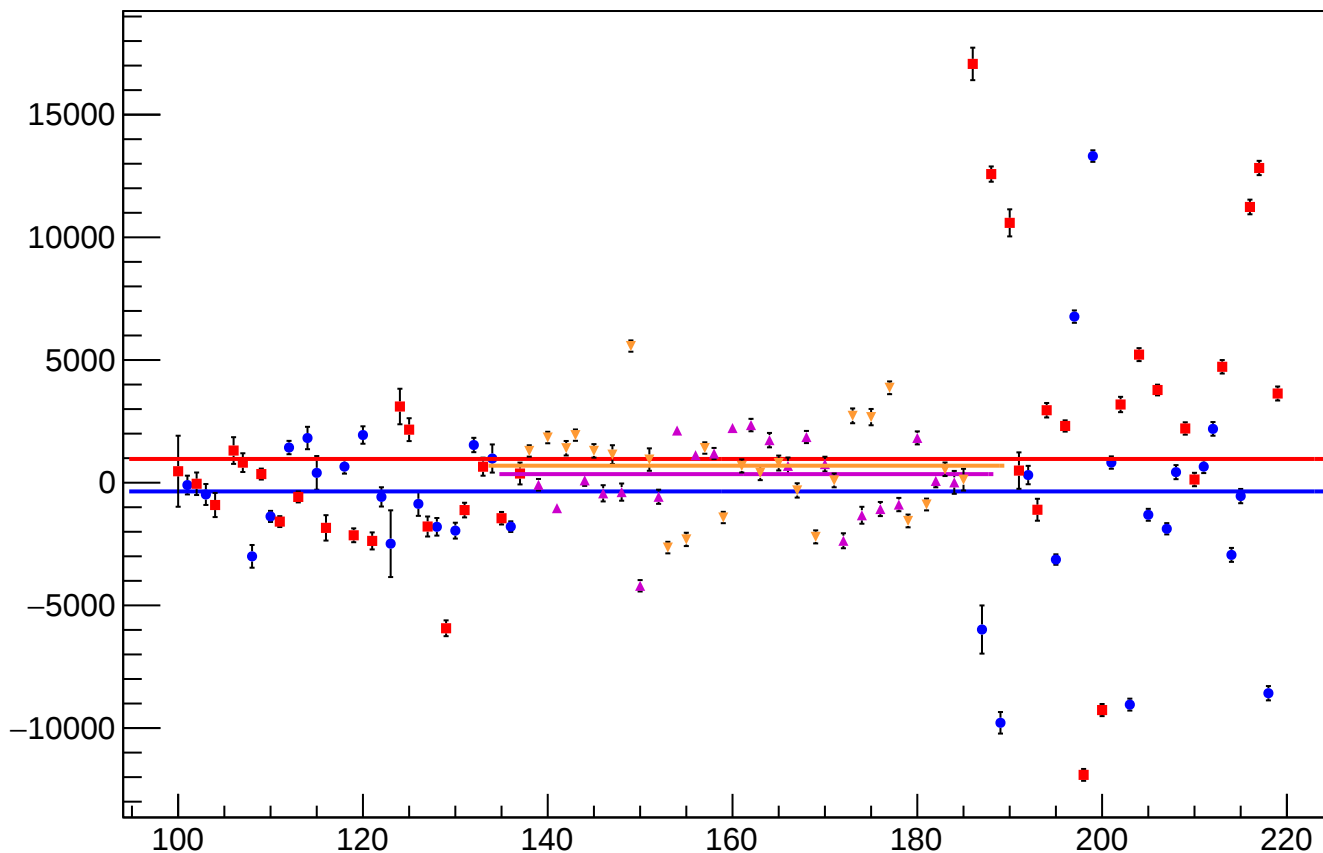
Right: 137.025 $\pm$ 0.017  $\chi^2/\text{NDF}$ : 5802566.6/69

In: 144.634 $\pm$ 0.018  $\chi^2/\text{NDF}$ :4537320.4/55

Out: 141.612 $\pm$ 0.017  $\chi^2/\text{NDF}$ :4930389.3/61

All: 143.041 $\pm$ 0.012  $\chi^2/\text{NDF}$ : 9482686.0/117

# asym\_bpm0l01WS\_mean vs Slug, Sign Corrected



Right In:  $-355.401 \pm 53.100$   $\chi^2/\text{NDF}: 7486.0/32$

Left Out:  $692.998 \pm 54.303$   $\chi^2/\text{NDF}: 1422.0/24$

Right Out:  $967.604 \pm 51.593$   $\chi^2/\text{NDF}: 11674.5/36$

Left In:  $349.623 \pm 53.094$   $\chi^2/\text{NDF}: 981.0/22$

Left:  $517.444 \pm 37.963$   $\chi^2/\text{NDF}: 2423.4/47$

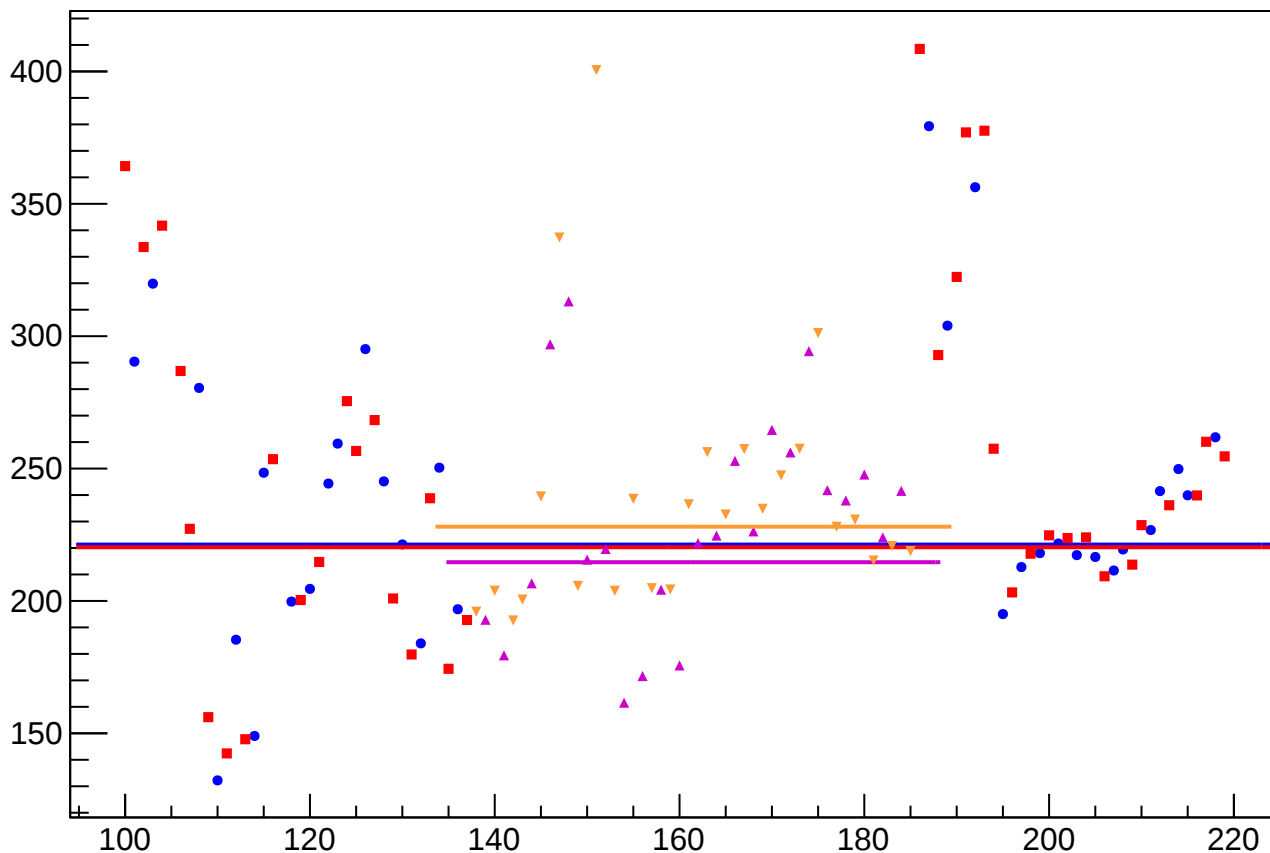
Right:  $325.142 \pm 37.003$   $\chi^2/\text{NDF}: 19479.8/69$

In:  $-2.846 \pm 37.545$   $\chi^2/\text{NDF}: 8555.1/55$

Out:  $837.324 \pm 37.403$   $\chi^2/\text{NDF}: 13109.9/61$

All:  $418.830 \pm 26.498$   $\chi^2/\text{NDF}: 21916.4/117$

# asym\_bpm0l01WS\_rms vs Slug, Sign Corrected



Right In: 221.293+/-0.038  $\chi^2/\text{NDF}$ : 1242291.0/32

Left Out: 228.061+/-0.038  $\chi^2/\text{NDF}$ : 826343.8/24

Right Out: 220.285+/-0.036  $\chi^2/\text{NDF}$ : 1919195.7/36

Left In: 214.627+/-0.038  $\chi^2/\text{NDF}$ : 1025683.3/22

Left: 221.193+/-0.027  $\chi^2/\text{NDF}$ : 1914604.4/47

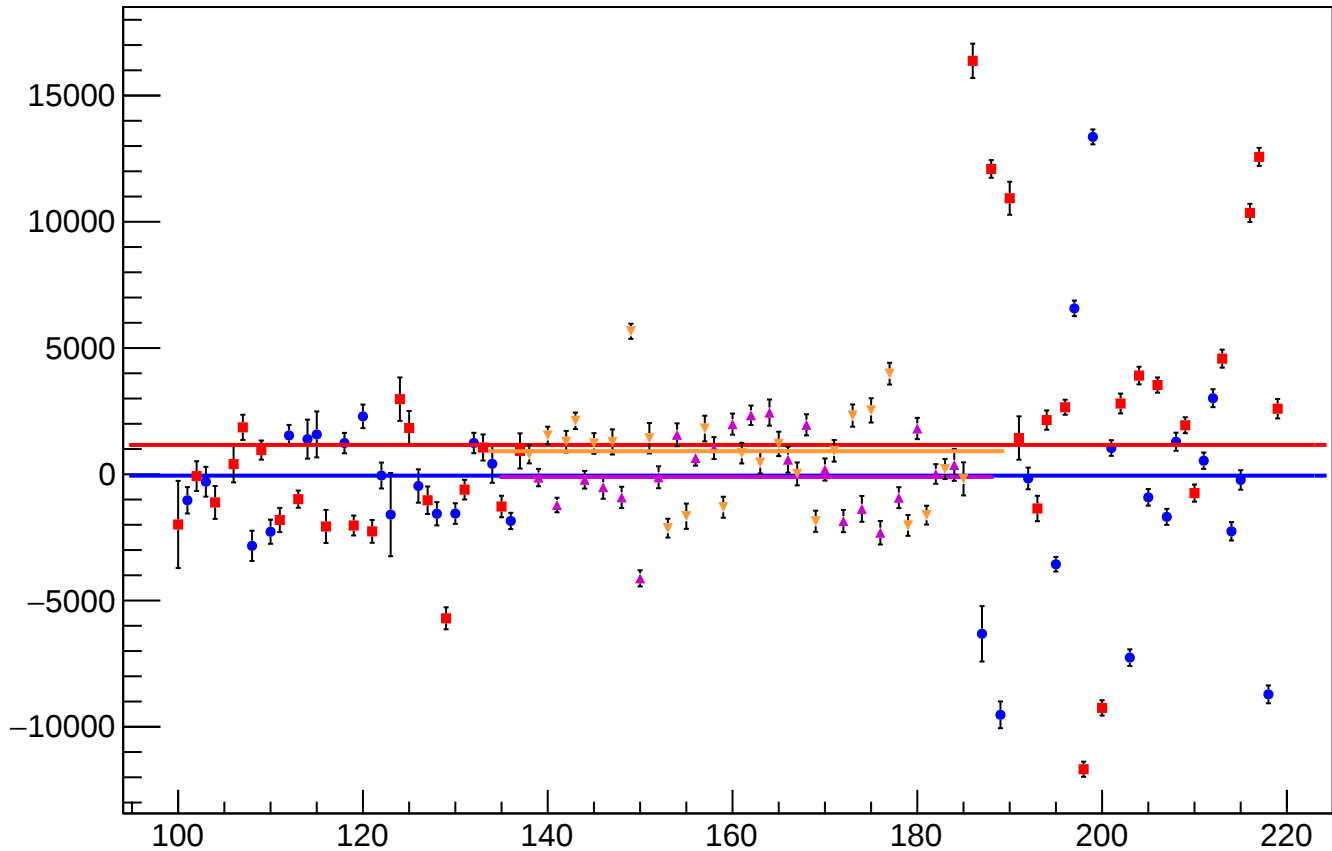
Right: 220.774+/-0.026  $\chi^2/\text{NDF}$ : 3161857.5/69

In: 217.960+/-0.027  $\chi^2/\text{NDF}$ : 2283735.1/55

Out: 223.974+/-0.026  $\chi^2/\text{NDF}$ : 2767093.3/61

All: 220.978+/-0.019  $\chi^2/\text{NDF}$ : 5076586.4/117

# asym\_bpm0l02WS\_mean vs Slug, Sign Corrected



Right In: -52.997±/-71.170  $\chi^2/\text{NDF}$ : 4438.3/32

Left Out: 915.968±/-83.398  $\chi^2/\text{NDF}$ :618.3/24

Right Out: 1162.705±/-69.372  $\chi^2/\text{NDF}$ : 7294.7/36

Left In: -106.116±/-84.393  $\chi^2/\text{NDF}$ :390.3/22

Left: 410.985±/-59.320  $\chi^2/\text{NDF}$ : 1082.8/47

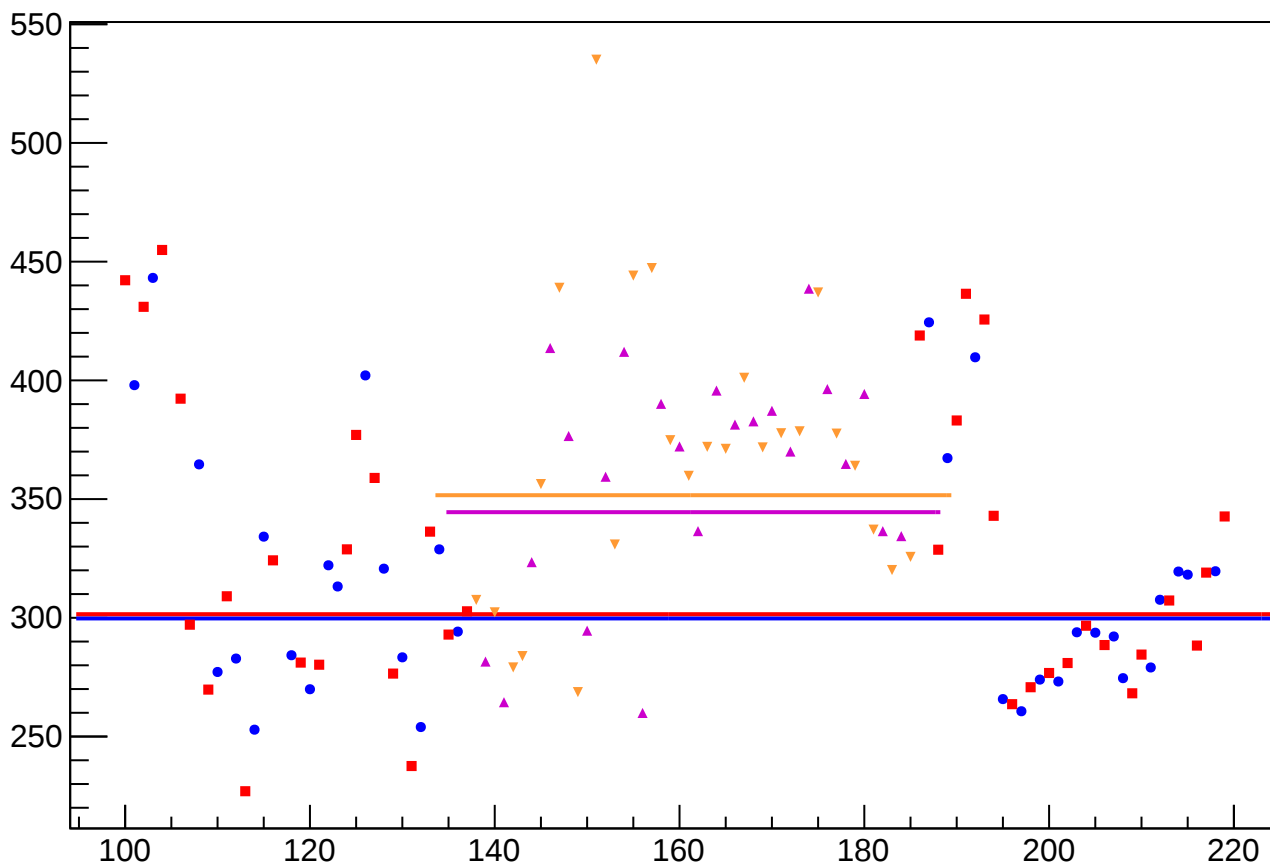
Right: 570.408±/-49.677  $\chi^2/\text{NDF}$ : 11882.6/69

In: -75.074±/-54.406  $\chi^2/\text{NDF}$ :4828.8/55

Out: 1061.801±/-53.333  $\chi^2/\text{NDF}$ :7918.1/61

All: 504.691±/-38.086  $\chi^2/\text{NDF}$ : 12969.7/117

# asym\_bpm0l02WS\_rms vs Slug, Sign Corrected



Right In: 299.735 $\pm$ 0.050  $\chi^2$ /NDF: 645715.6/32

Left Out: 351.633 $\pm$ 0.059  $\chi^2$ /NDF: 907849.3/24

Right Out: 301.523 $\pm$ 0.049  $\chi^2$ /NDF: 925806.5/36

Left In: 344.491 $\pm$ 0.060  $\chi^2$ /NDF: 768885.4/22

Left: 348.104 $\pm$ 0.042  $\chi^2$ /NDF: 1683981.7/47

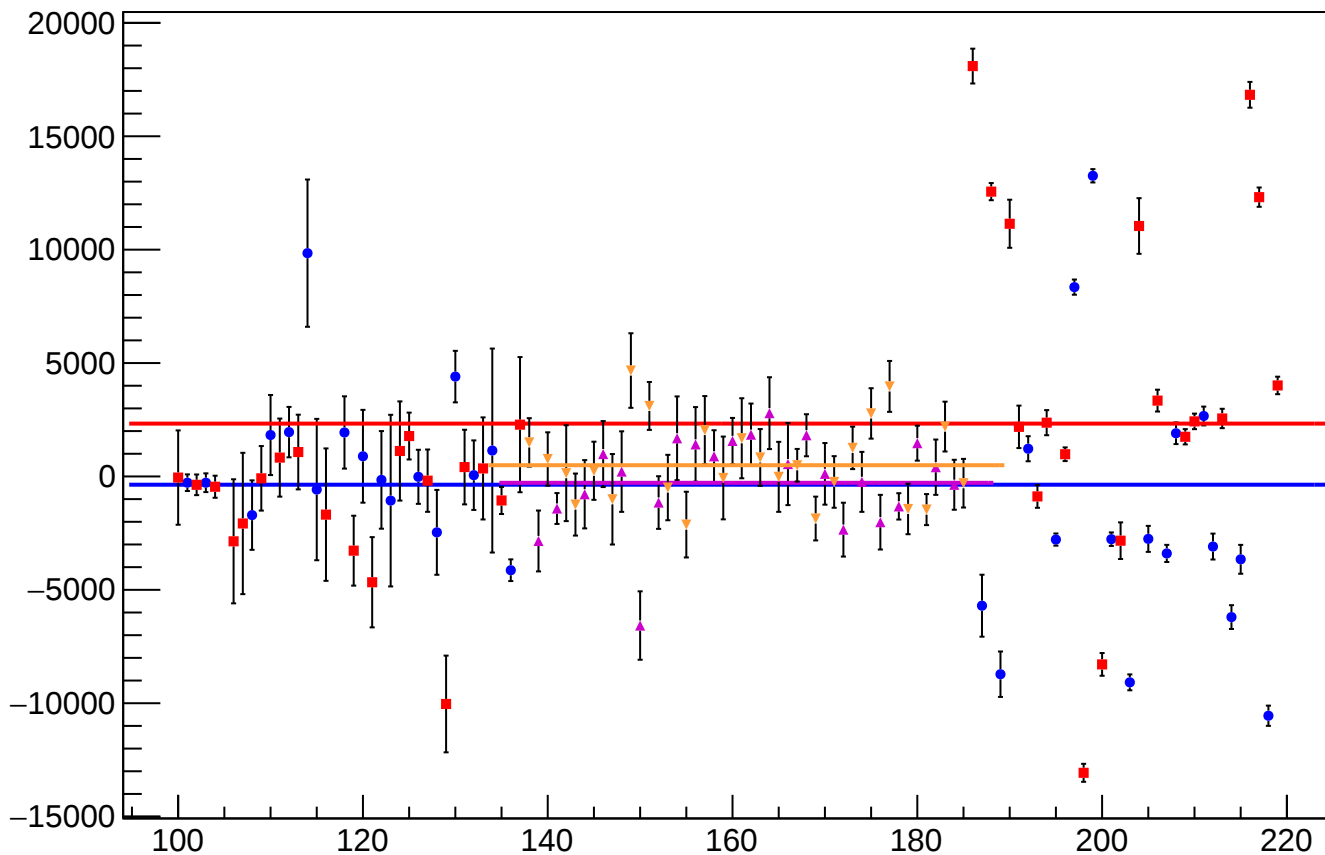
Right: 300.652 $\pm$ 0.035  $\chi^2$ /NDF: 1572169.7/69

In: 318.336 $\pm$ 0.038  $\chi^2$ /NDF: 1743312.3/55

Out: 322.016 $\pm$ 0.038  $\chi^2$ /NDF: 2260408.0/61

All: 320.213 $\pm$ 0.027  $\chi^2$ /NDF: 4008386.2/117

# asym\_bpm0l03WS\_mean vs Slug, Sign Corrected



Right In: -364.404 $\pm$ 92.987  $\chi^2$ /NDF: 4635.4/32

Left Out: 495.014 $\pm$ 231.058  $\chi^2$ /NDF:56.2/24

Right Out: 2329.712 $\pm$ 99.588  $\chi^2$ /NDF: 4736.5/36

Left In: -280.692 $\pm$ 232.048  $\chi^2$ /NDF:57.2/22

Left: 108.818 $\pm$ 163.732  $\chi^2$ /NDF: 119.1/47

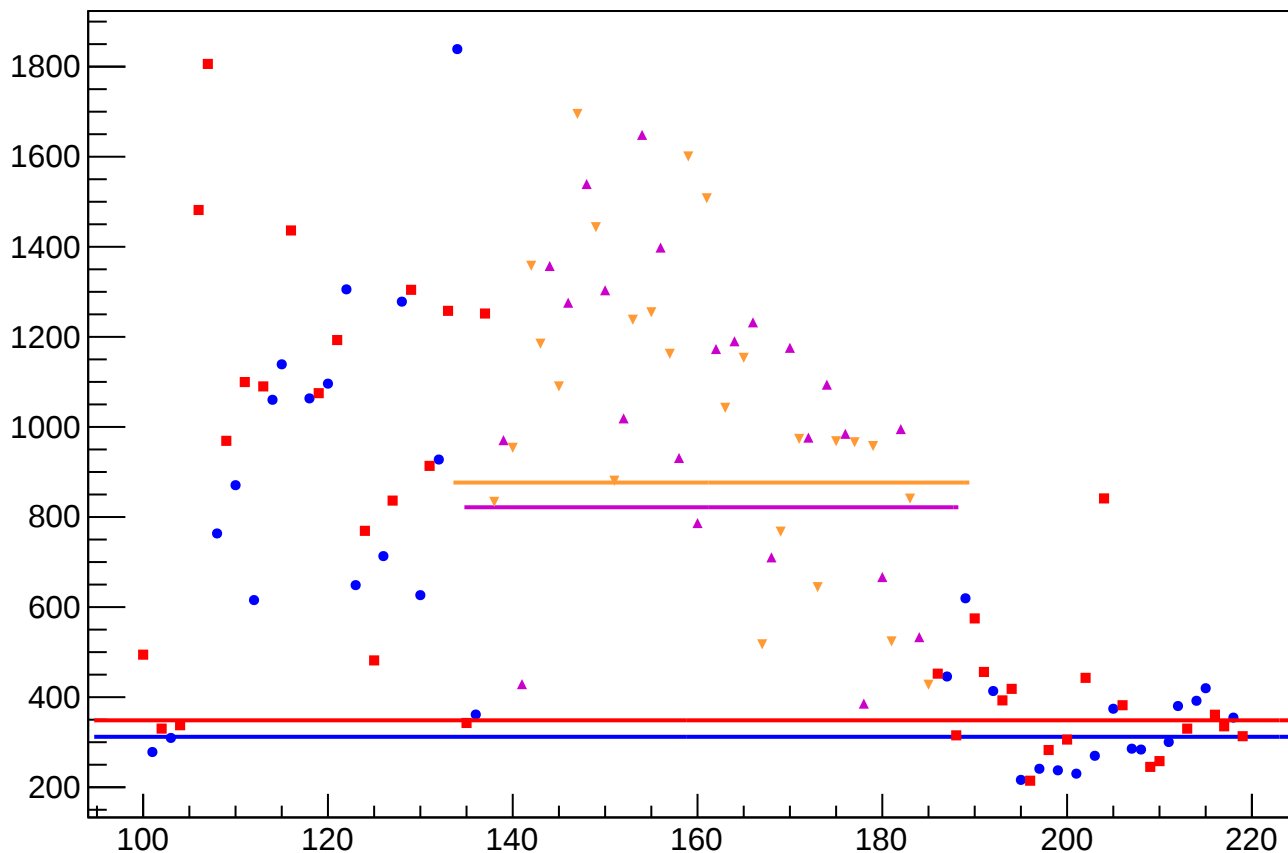
Right: 890.425 $\pm$ 67.966  $\chi^2$ /NDF: 9762.9/69

In: -352.822 $\pm$ 86.315  $\chi^2$ /NDF:4692.7/55

Out: 2042.282 $\pm$ 91.455  $\chi^2$ /NDF:4845.9/61

All: 775.541 $\pm$ 62.772  $\chi^2$ /NDF: 9901.4/117

# asym\_bpm0l03WS\_rms vs Slug, Sign Corrected



Right In: 311.988+/-0.066  $\chi^2/\text{NDF}$ : 4576110.7/32

Left Out: 876.560+/-0.163  $\chi^2/\text{NDF}$ :3434698.7/24

Right Out: 348.605+/-0.070  $\chi^2/\text{NDF}$ : 5944167.5/36

Left In: 821.657+/-0.164  $\chi^2/\text{NDF}$ :4443094.2/22

Left: 849.226+/-0.116  $\chi^2/\text{NDF}$ : 7934012.4/47

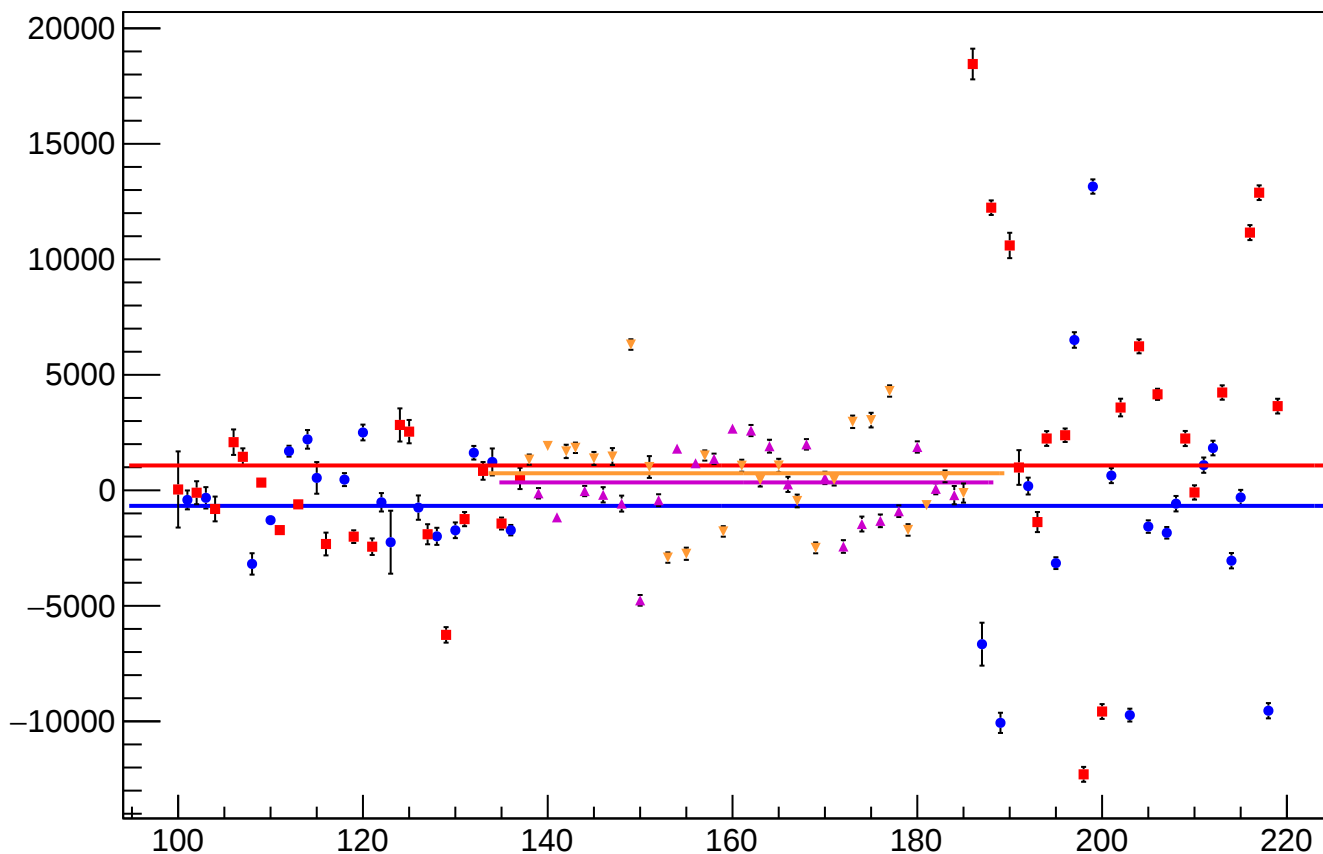
Right: 329.043+/-0.048  $\chi^2/\text{NDF}$ : 10664725.9/69

In: 382.507+/-0.061  $\chi^2/\text{NDF}$ :17332584.9/55

Out: 431.316+/-0.065  $\chi^2/\text{NDF}$ :18184946.2/61

All: 405.502+/-0.044  $\chi^2/\text{NDF}$ : 35818820.5/11

# asym\_bpm0l04WS\_mean vs Slug, Sign Corrected



Right In:  $-672.819 \pm 57.504$   $\chi^2/\text{NDF}: 5418.2/32$

Left Out:  $738.847 \pm 51.649$   $\chi^2/\text{NDF}: 1935.2/24$

Right Out:  $1076.284 \pm 54.643$   $\chi^2/\text{NDF}: 9422.4/36$

Left In:  $342.465 \pm 50.044$   $\chi^2/\text{NDF}: 1254.9/22$

Left:  $534.403 \pm 35.941$   $\chi^2/\text{NDF}: 3220.5/47$

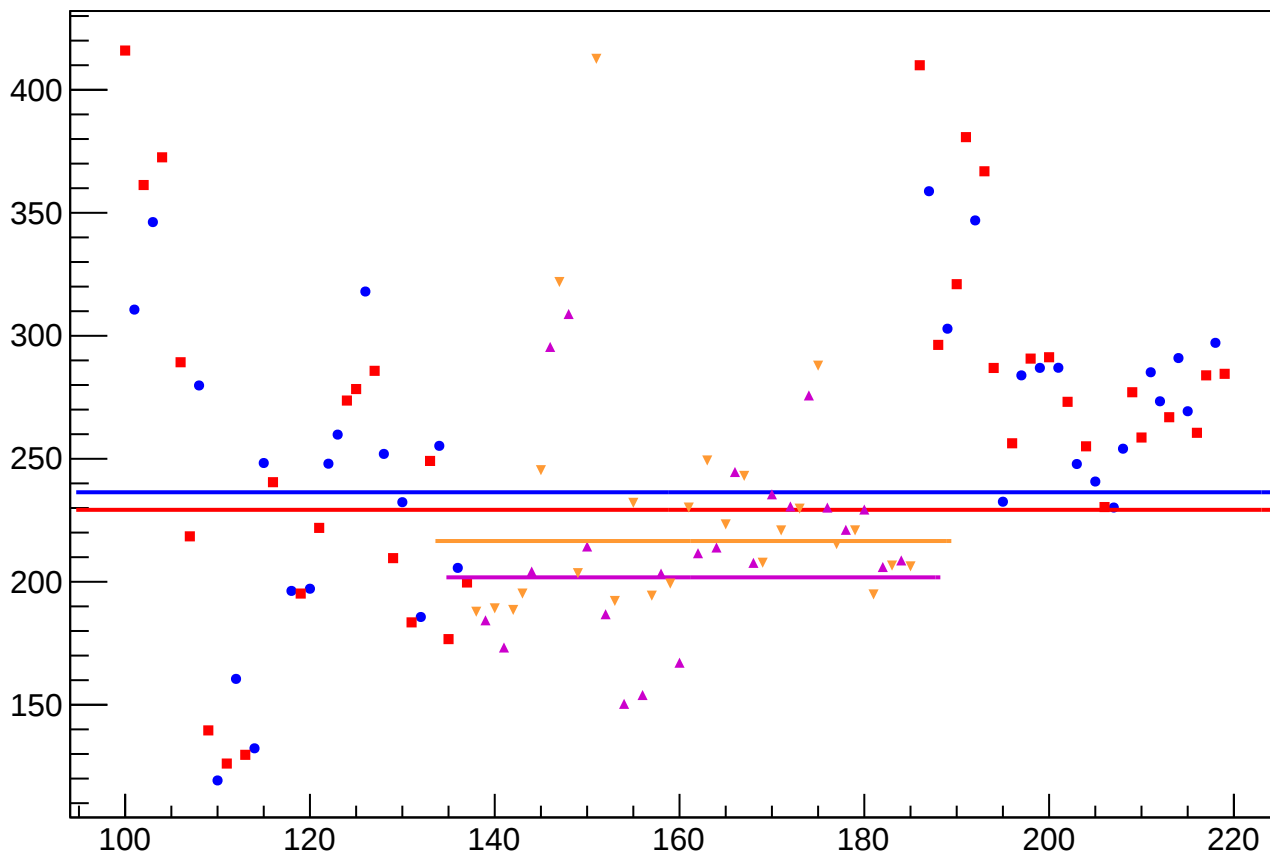
Right:  $246.311 \pm 39.611$   $\chi^2/\text{NDF}: 15326.8/69$

In:  $-95.097 \pm 37.750$   $\chi^2/\text{NDF}: 6850.5/55$

Out:  $898.067 \pm 37.535$   $\chi^2/\text{NDF}: 11377.8/61$

All:  $404.321 \pm 26.617$   $\chi^2/\text{NDF}: 18576.3/117$

# asym\_bpm0l04WS\_rms vs Slug, Sign Corrected



Right In: 236.394 $\pm$ 0.041  $\chi^2$ /NDF: 2036456.1/32

Left Out: 216.574 $\pm$ 0.037  $\chi^2$ /NDF:886214.1/24

Right Out: 229.253 $\pm$ 0.039  $\chi^2$ /NDF: 3109627.4/36

Left In: 201.805 $\pm$ 0.035  $\chi^2$ /NDF:1087243.4/22

Left: 208.957 $\pm$ 0.025  $\chi^2$ /NDF: 2057801.5/47

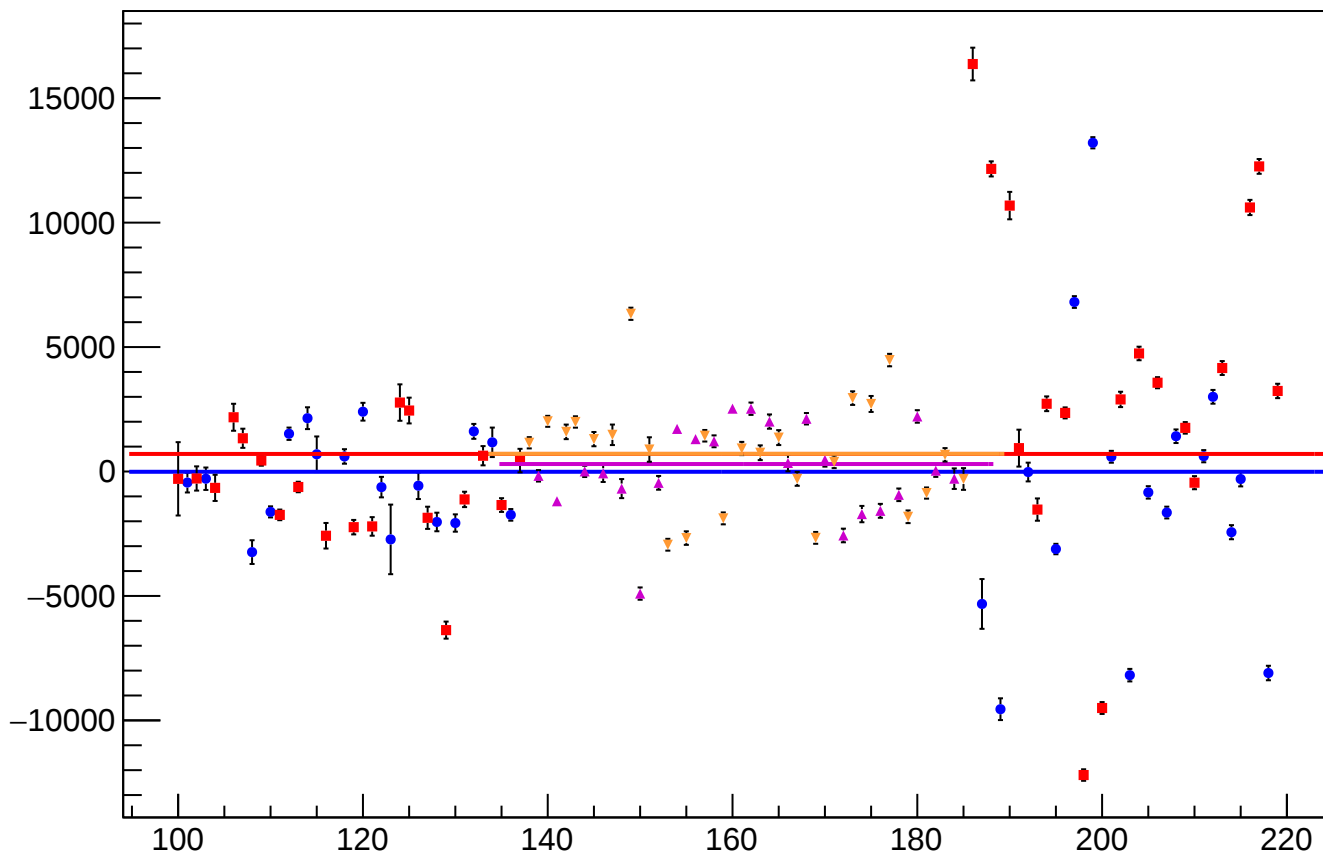
Right: 232.642 $\pm$ 0.028  $\chi^2$ /NDF: 5162291.5/69

In: 216.712 $\pm$ 0.027  $\chi^2$ /NDF:3535463.1/55

Out: 222.557 $\pm$ 0.027  $\chi^2$ /NDF:4052712.7/61

All: 219.651 $\pm$ 0.019  $\chi^2$ /NDF: 7612281.4/117

# asym\_bpm0l05WS\_mean vs Slug, Sign Corrected



Right In:  $-11.059 \pm 53.007$   $\chi^2/\text{NDF}: 7479.0/32$

Left Out:  $711.174 \pm 53.245$   $\chi^2/\text{NDF}: 1835.3/24$

Right Out:  $705.689 \pm 51.444$   $\chi^2/\text{NDF}: 11616.2/36$

Left In:  $300.516 \pm 51.984$   $\chi^2/\text{NDF}: 1208.6/22$

Left:  $500.925 \pm 37.196$   $\chi^2/\text{NDF}: 3074.4/47$

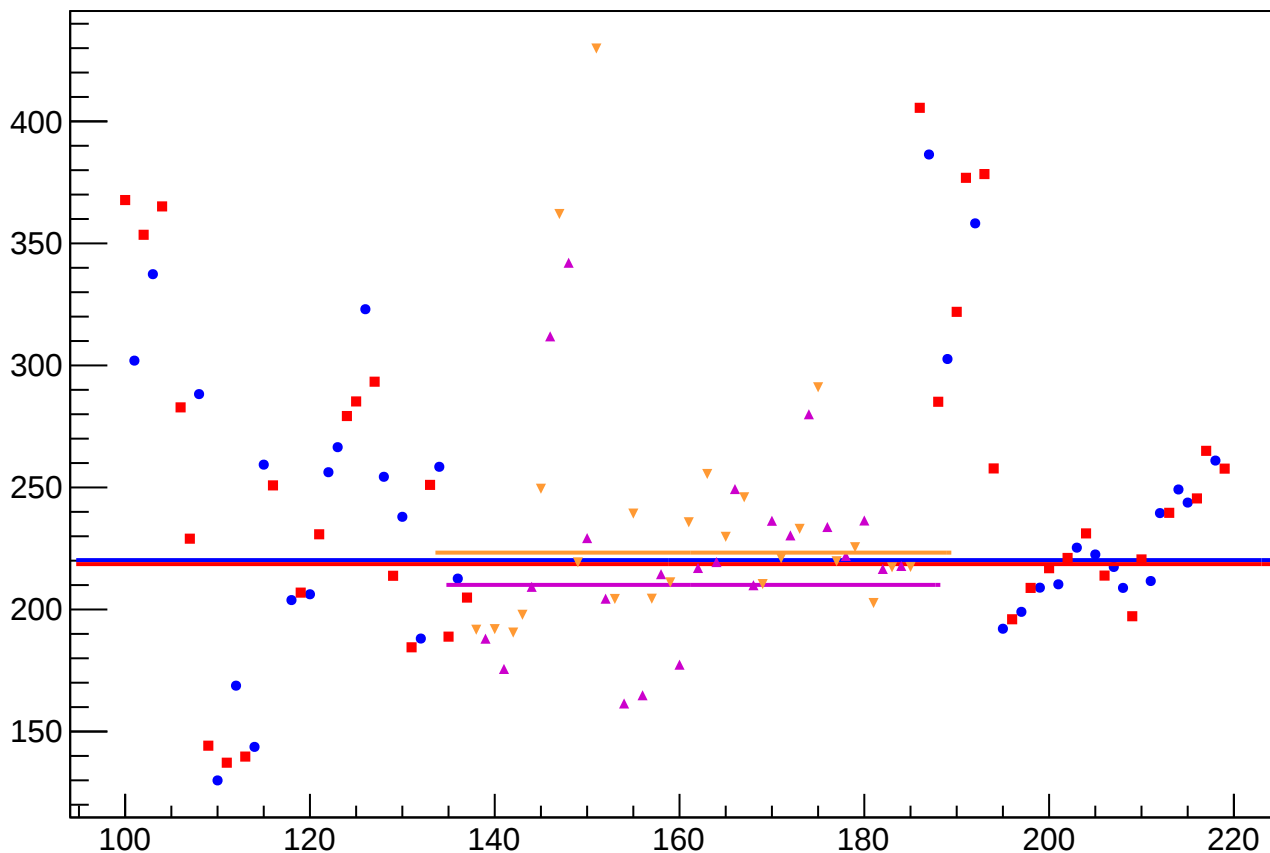
Right:  $358.039 \pm 36.917$   $\chi^2/\text{NDF}: 19189.4/69$

In:  $147.765 \pm 37.115$   $\chi^2/\text{NDF}: 8705.2/55$

Out:  $708.337 \pm 36.997$   $\chi^2/\text{NDF}: 13451.6/61$

All:  $428.943 \pm 26.202$   $\chi^2/\text{NDF}: 22271.2/117$

# asym\_bpm0l05WS\_rms vs Slug, Sign Corrected



Right In:  $220.233 \pm 0.037$   $\chi^2/\text{NDF}: 1441933.6/32$

Left Out:  $223.296 \pm 0.038$   $\chi^2/\text{NDF}: 922768.4/24$

Right Out:  $218.589 \pm 0.036$   $\chi^2/\text{NDF}: 2232364.7/36$

Left In:  $210.080 \pm 0.037$   $\chi^2/\text{NDF}: 1015274.5/22$

Left:  $216.530 \pm 0.026$   $\chi^2/\text{NDF}: 2001132.1/47$

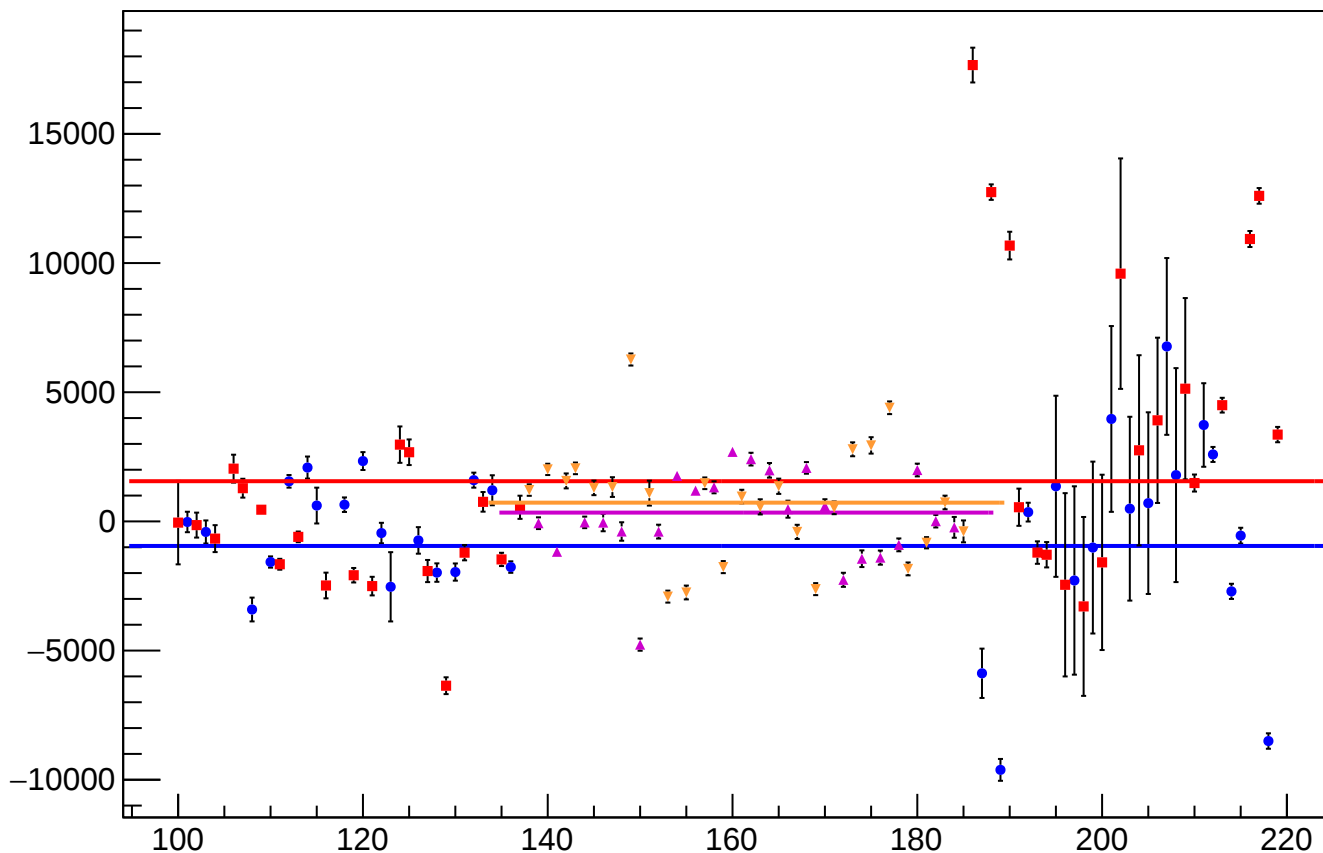
Right:  $219.386 \pm 0.026$   $\chi^2/\text{NDF}: 3675288.6/69$

In:  $215.057 \pm 0.026$   $\chi^2/\text{NDF}: 2494610.7/55$

Out:  $220.862 \pm 0.026$   $\chi^2/\text{NDF}: 3163217.3/61$

All:  $217.969 \pm 0.019$   $\chi^2/\text{NDF}: 5682363.6/117$

asym\_bpm0l06WS\_mean vs Slug, Sign Corrected



Right In:  $-950.232 \pm 69.711$   $\chi^2/\text{NDF}: 1750.9/32$

Left Out:  $725.866 \pm 52.158$   $\chi^2/\text{NDF}: 1912.7/24$

Right Out:  $1556.132 \pm 62.218$   $\chi^2/\text{NDF}: 6392.8/36$

Left In:  $340.502 \pm 50.802$   $\chi^2/\text{NDF}: 1201.8/22$

Left:  $528.110 \pm 36.393$   $\chi^2/\text{NDF}: 3142.6/47$

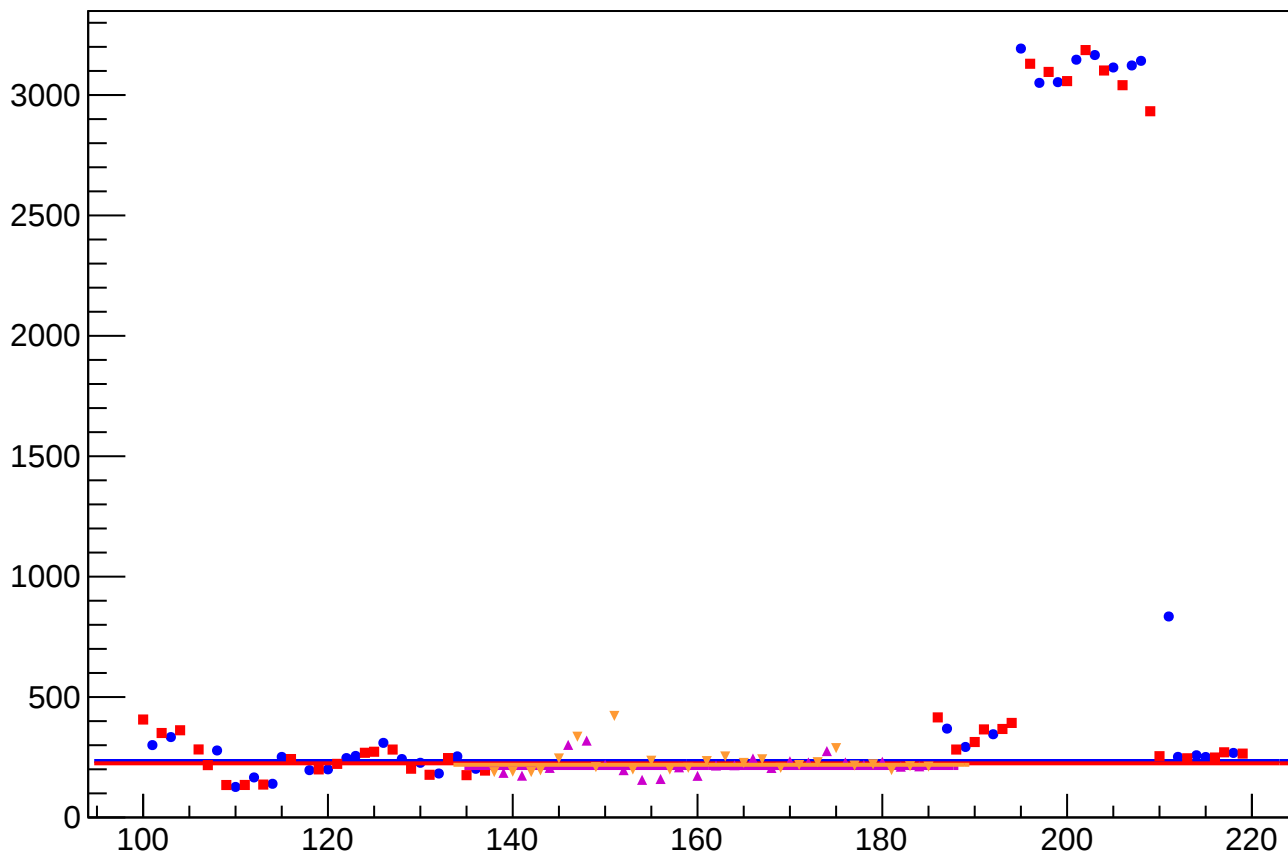
Right:  $444.852 \pm 46.418$   $\chi^2/\text{NDF}: 8863.3/69$

In:  $-107.214 \pm 41.057$   $\chi^2/\text{NDF}: 3176.7/55$

Out:  $1068.539 \pm 39.971$   $\chi^2/\text{NDF}: 8410.1/61$

All:  $496.415 \pm 28.640$   $\chi^2/\text{NDF}: 12007.8/117$

# asym\_bpm0l06WS\_rms vs Slug, Sign Corrected



Right In: 234.446+/-0.049  $\chi^2/\text{NDF}$ : 12199261.0/32

Left Out: 218.768+/-0.037  $\chi^2/\text{NDF}$ : 896914.5/24

Right Out: 224.793+/-0.044  $\chi^2/\text{NDF}$ : 11602787.2/36

Left In: 205.249+/-0.036  $\chi^2/\text{NDF}$ : 997168.8/22

Left: 211.831+/-0.026  $\chi^2/\text{NDF}$ : 1963037.5/47

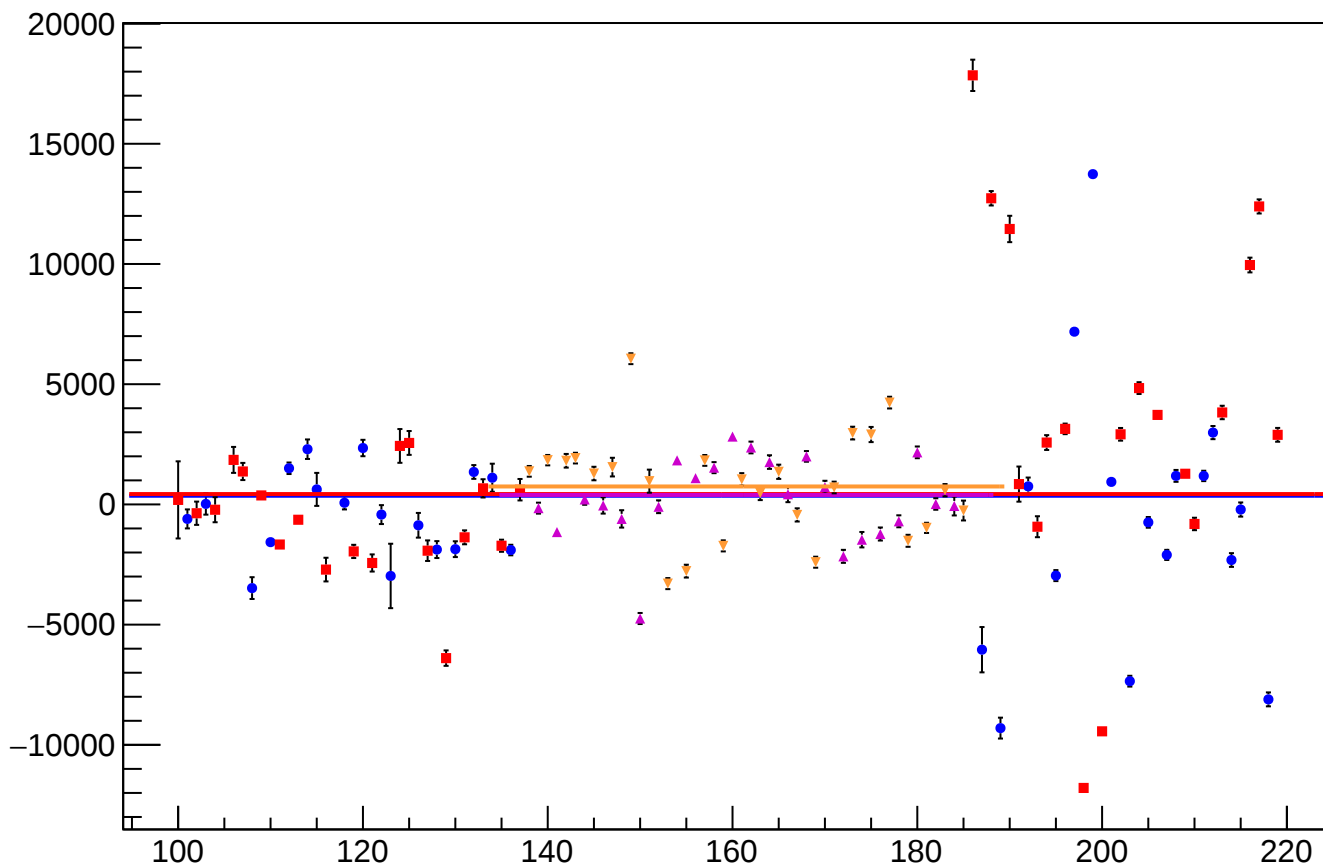
Right: 229.073+/-0.033  $\chi^2/\text{NDF}$ : 23823396.7/69

In: 215.377+/-0.029  $\chi^2/\text{NDF}$ : 13425579.1/55

Out: 221.255+/-0.028  $\chi^2/\text{NDF}$ : 12510713.8/61

All: 218.395+/-0.020  $\chi^2/\text{NDF}$ : 25957340.4/11

# asym\_bpm0l07WS\_mean vs Slug, Sign Corrected



Right In: 361.086+/-49.644  $\chi^2/\text{NDF}$ : 9527.6/32

Left Out: 746.405+/-51.592  $\chi^2/\text{NDF}$ :1942.1/24

Right Out: 430.657+/-48.407  $\chi^2/\text{NDF}$ : 13473.0/36

Left In: 394.379+/-50.311  $\chi^2/\text{NDF}$ :1236.4/22

Left: 565.969+/-36.020  $\chi^2/\text{NDF}$ : 3202.4/47

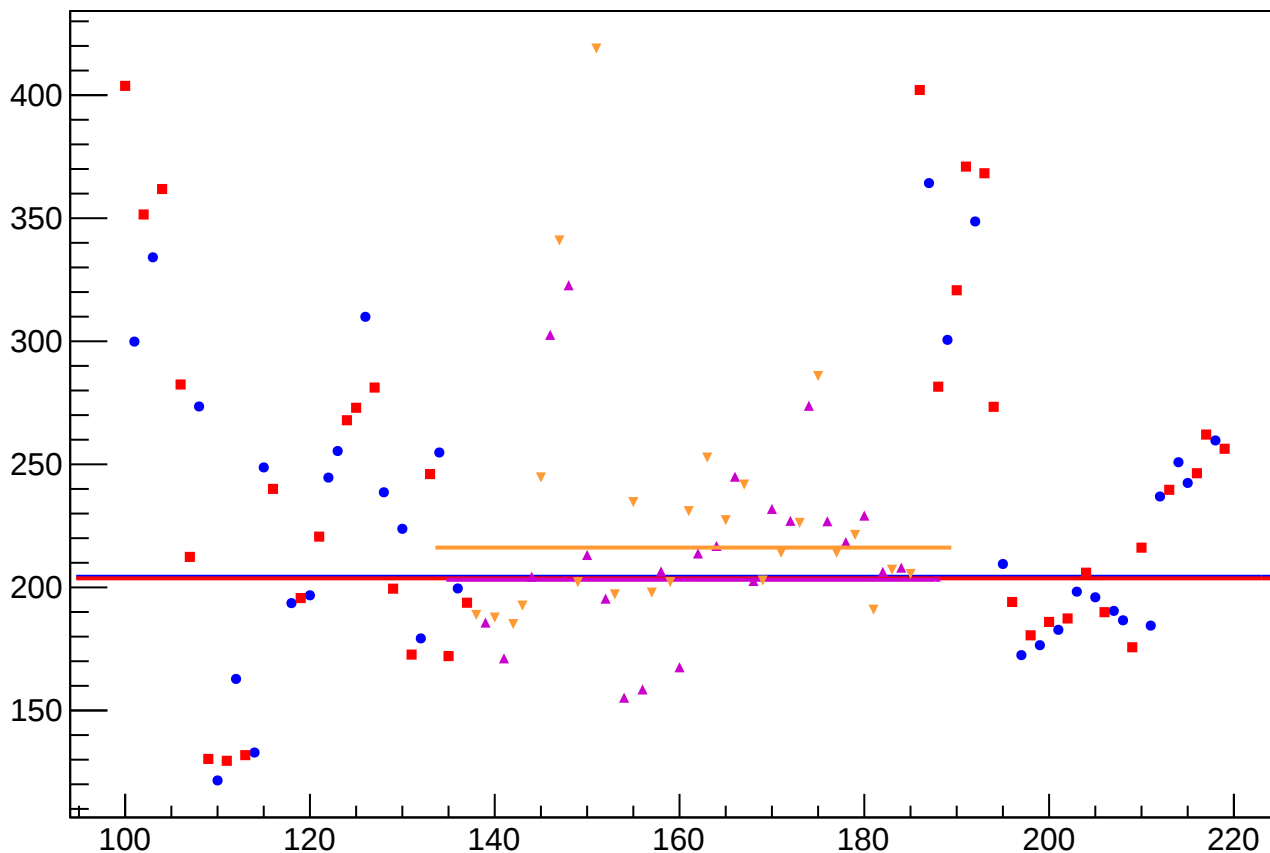
Right: 396.749+/-34.658  $\chi^2/\text{NDF}$ : 23001.6/69

In: 377.510+/-35.337  $\chi^2/\text{NDF}$ :10764.2/55

Out: 578.487+/-35.301  $\chi^2/\text{NDF}$ :15435.1/61

All: 478.101+/-24.974  $\chi^2/\text{NDF}$ : 26215.5/117

# asym\_bpm0l07WS\_rms vs Slug, Sign Corrected



Right In: 204.320 $\pm$ 0.035  $\chi^2$ /NDF: 1751339.8/32

Left Out: 216.178 $\pm$ 0.036  $\chi^2$ /NDF: 946050.8/24

Right Out: 203.676 $\pm$ 0.034  $\chi^2$ /NDF: 2718964.8/36

Left In: 203.101 $\pm$ 0.036  $\chi^2$ /NDF: 1038013.0/22

Left: 209.475 $\pm$ 0.025  $\chi^2$ /NDF: 2049926.5/47

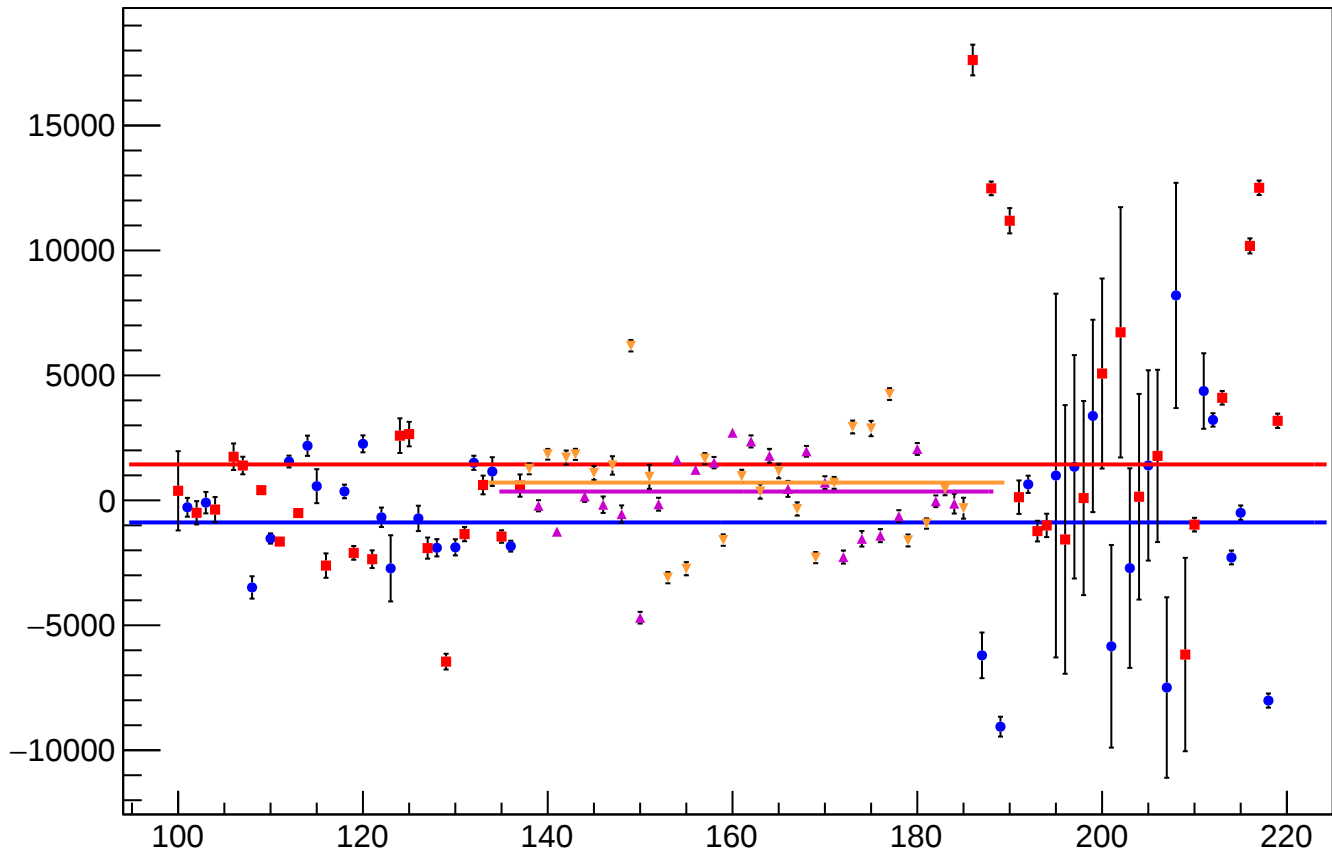
Right: 203.990 $\pm$ 0.025  $\chi^2$ /NDF: 4470477.3/69

In: 203.719 $\pm$ 0.025  $\chi^2$ /NDF: 2789948.0/55

Out: 209.529 $\pm$ 0.025  $\chi^2$ /NDF: 3727473.9/61

All: 206.627 $\pm$ 0.018  $\chi^2$ /NDF: 6544487.1/117

# asym\_bpm0l08WS\_mean vs Slug, Sign Corrected



Right In:  $-883.802 \pm 67.036$   $\chi^2/\text{NDF}: 1841.6/32$

Left Out:  $710.238 \pm 50.750$   $\chi^2/\text{NDF}: 1932.3/24$

Right Out:  $1437.629 \pm 59.367$   $\chi^2/\text{NDF}: 6953.8/36$

Left In:  $352.432 \pm 49.316$   $\chi^2/\text{NDF}: 1233.1/22$

Left:  $526.207 \pm 35.368$   $\chi^2/\text{NDF}: 3190.9/47$

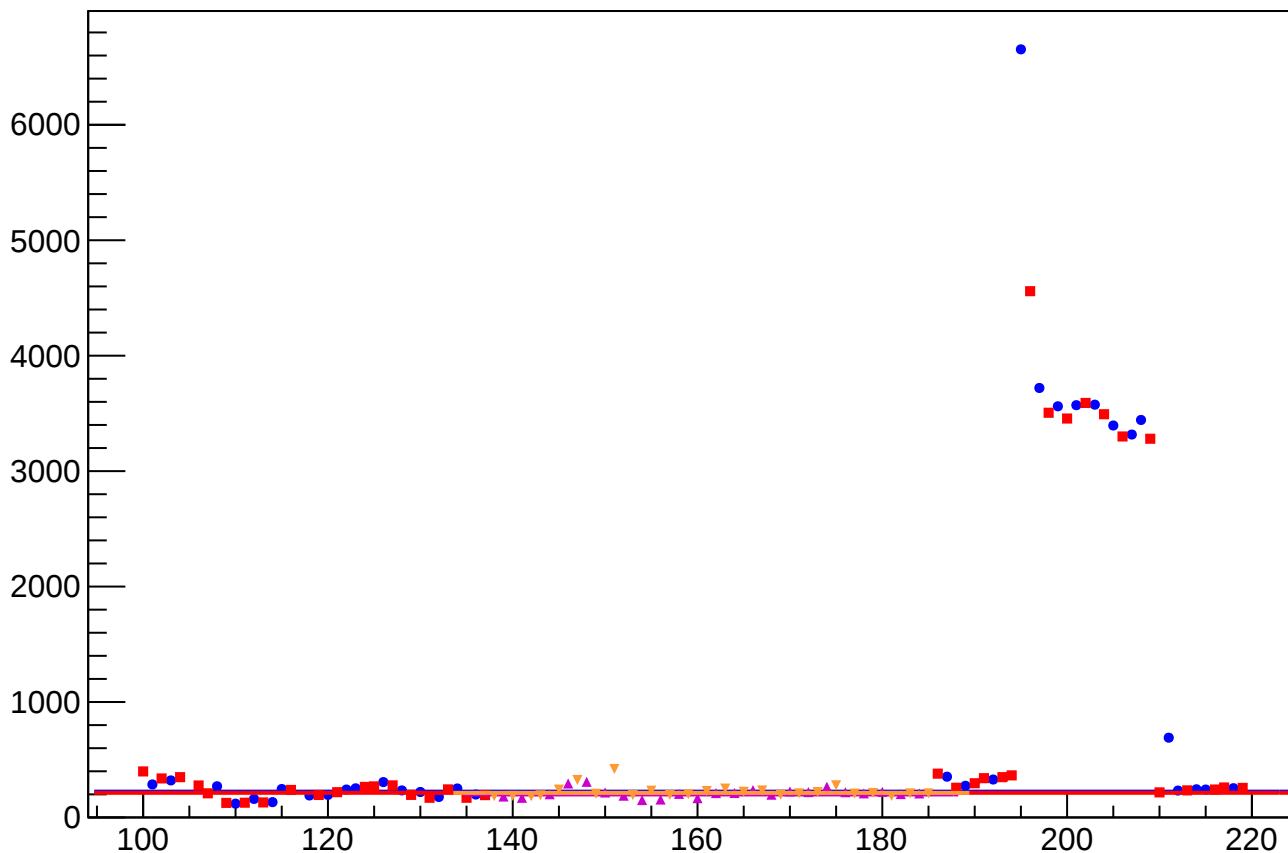
Right:  $417.229 \pm 44.444$   $\chi^2/\text{NDF}: 9467.6/69$

In:  $-81.683 \pm 39.724$   $\chi^2/\text{NDF}: 3295.3/55$

Out:  $1017.361 \pm 38.576$   $\chi^2/\text{NDF}: 8972.9/61$

All:  $483.952 \pm 27.674$   $\chi^2/\text{NDF}: 12662.1/117$

# asym\_bpm0l08WS\_rms vs Slug, Sign Corrected



Right In: 223.578+/-0.047  $\chi^2/\text{NDF}$ : 12554739.5/32

Left Out: 212.718+/-0.036  $\chi^2/\text{NDF}$ : 916225.9/24

Right Out: 213.450+/-0.042  $\chi^2/\text{NDF}$ : 11857655.0/36

Left In: 199.142+/-0.035  $\chi^2/\text{NDF}$ : 985932.4/22

Left: 205.736+/-0.025  $\chi^2/\text{NDF}$ : 1975772.3/47

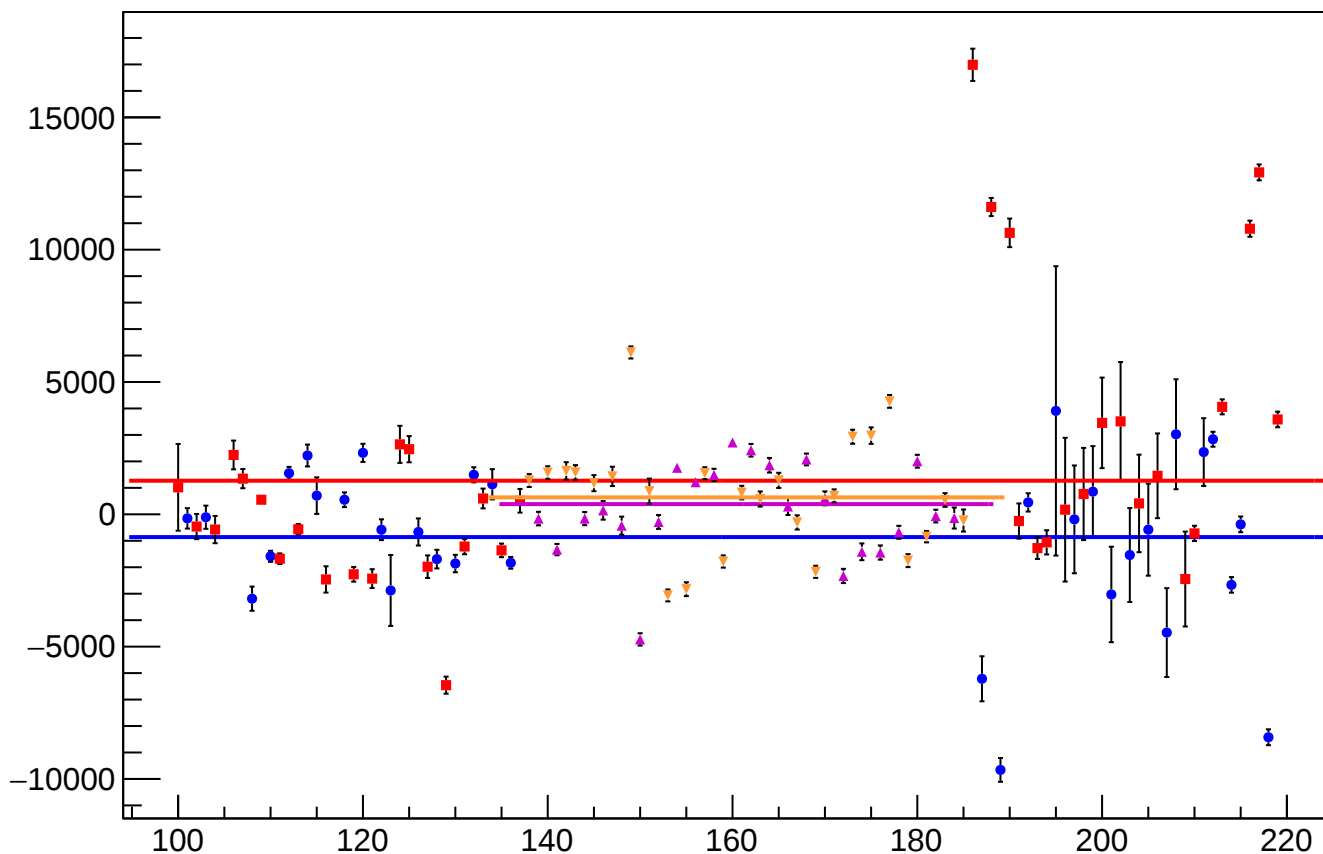
Right: 217.902+/-0.031  $\chi^2/\text{NDF}$ : 24437979.6/69

In: 207.723+/-0.028  $\chi^2/\text{NDF}$ : 13713104.2/55

Out: 213.027+/-0.027  $\chi^2/\text{NDF}$ : 12774056.5/61

All: 210.453+/-0.020  $\chi^2/\text{NDF}$ : 26505514.0/11

# asym\_bpm0l09WS\_mean vs Slug, Sign Corrected



Right In:  $-860.385 \pm 68.327$   $\chi^2/\text{NDF}: 1736.3/32$

Left Out:  $639.995 \pm 52.708$   $\chi^2/\text{NDF}: 1859.2/24$

Right Out:  $1270.029 \pm 60.947$   $\chi^2/\text{NDF}: 6133.6/36$

Left In:  $386.248 \pm 50.994$   $\chi^2/\text{NDF}: 1238.0/22$

Left:  $508.926 \pm 36.649$   $\chi^2/\text{NDF}: 3109.2/47$

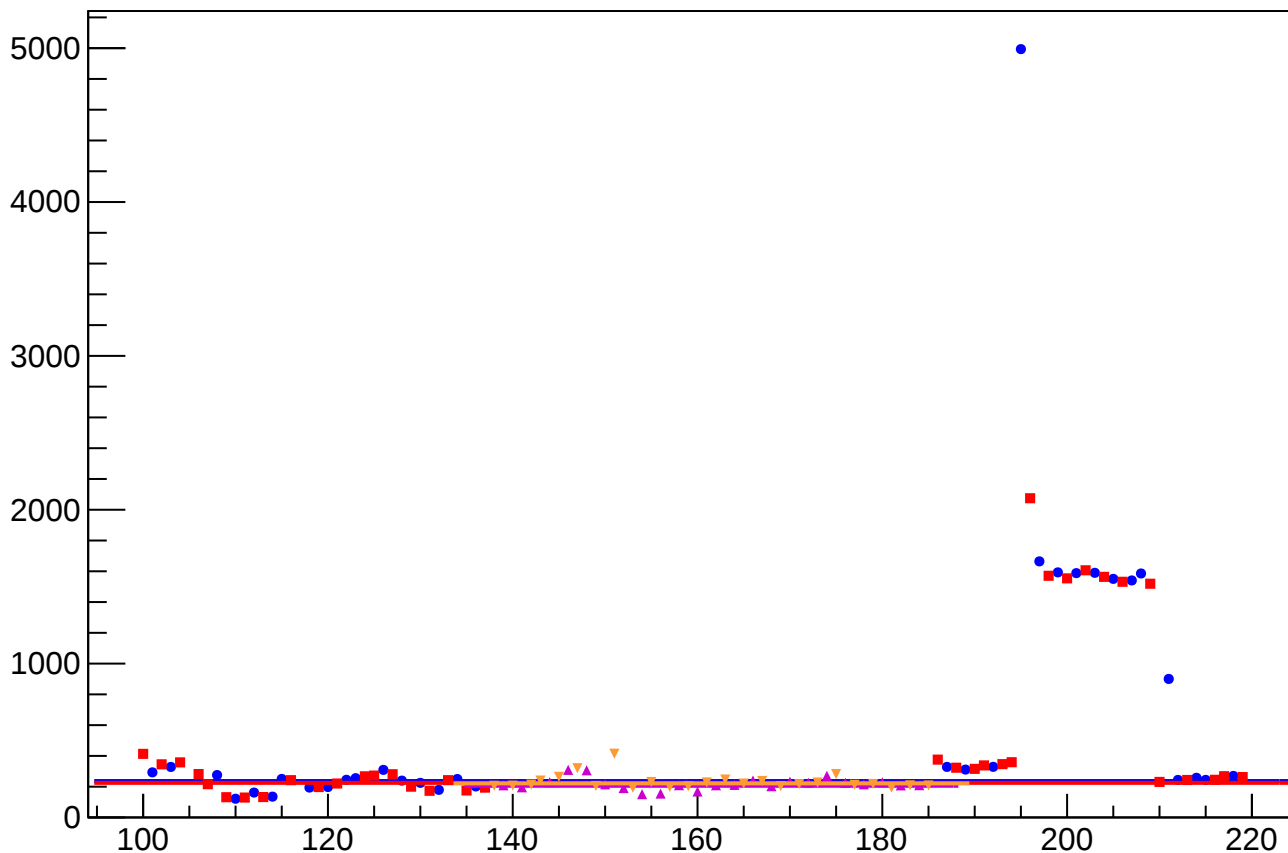
Right:  $326.045 \pm 45.482$   $\chi^2/\text{NDF}: 8411.3/69$

In:  $-59.715 \pm 40.867$   $\chi^2/\text{NDF}: 3188.1/55$

Out:  $909.580 \pm 39.868$   $\chi^2/\text{NDF}: 8053.9/61$

All:  $436.930 \pm 28.537$   $\chi^2/\text{NDF}: 11530.3/117$

# asym\_bpm0l09WS\_rms vs Slug, Sign Corrected



Right In:  $236.688 \pm 0.048$   $\chi^2/\text{NDF}: 11320975.8/32$

Left Out:  $221.398 \pm 0.037$   $\chi^2/\text{NDF}: 777833.8/24$

Right Out:  $224.879 \pm 0.043$   $\chi^2/\text{NDF}: 10268960.9/36$

Left In:  $205.803 \pm 0.036$   $\chi^2/\text{NDF}: 994903.5/22$

Left:  $213.343 \pm 0.026$   $\chi^2/\text{NDF}: 1863169.5/47$

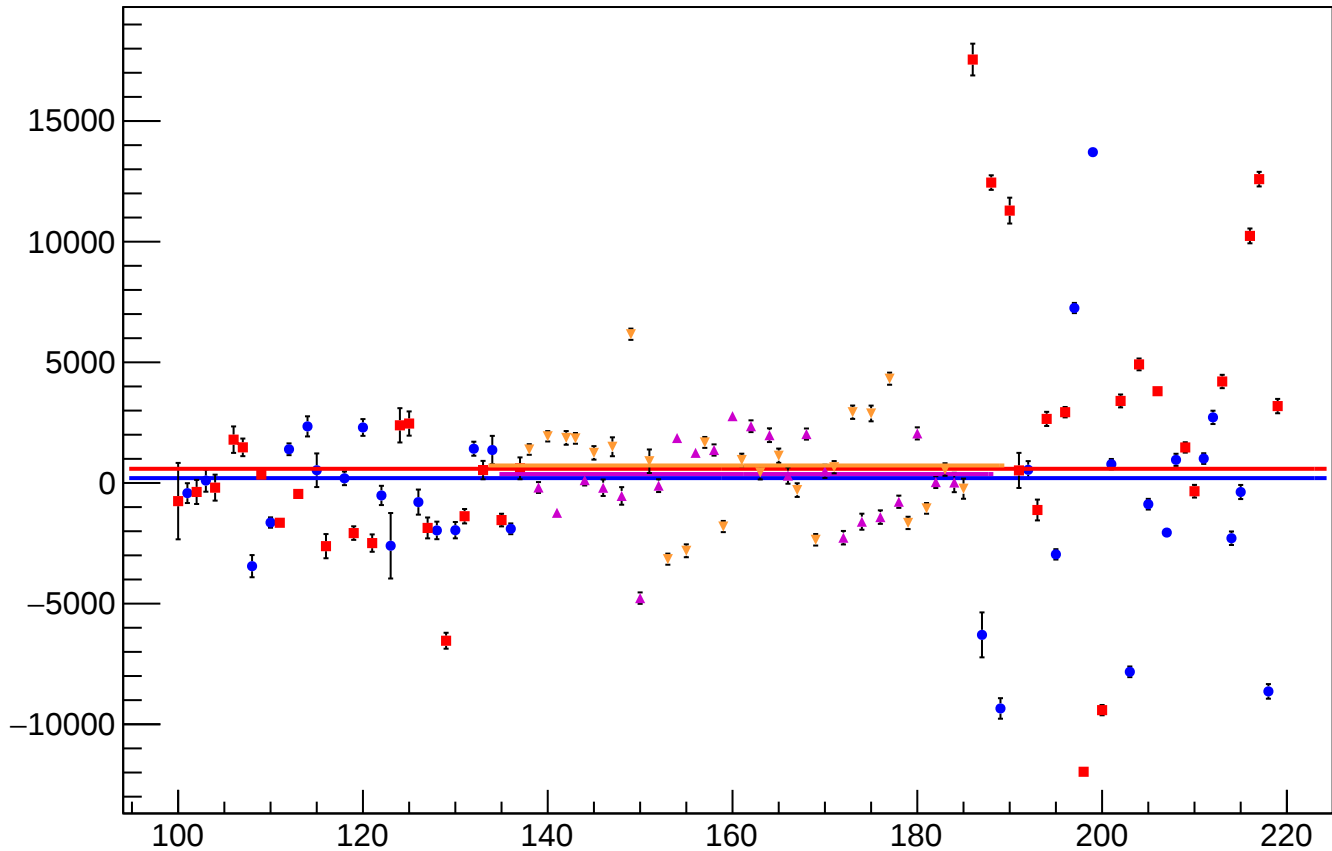
Right:  $230.111 \pm 0.032$   $\chi^2/\text{NDF}: 21623208.4/69$

In:  $216.852 \pm 0.029$   $\chi^2/\text{NDF}: 12578327.4/55$

Out:  $222.887 \pm 0.028$   $\chi^2/\text{NDF}: 11050526.2/61$

All:  $219.944 \pm 0.020$   $\chi^2/\text{NDF}: 23651205.0/11$

# asym\_bpm0l10WS\_mean vs Slug, Sign Corrected



Right In: 201.299+/-50.125  $\chi^2/\text{NDF}$ : 9493.4/32

Left Out: 725.250+/-52.307  $\chi^2/\text{NDF}$ :1883.1/24

Right Out: 587.790+/-49.148  $\chi^2/\text{NDF}$ : 13114.1/36

Left In: 370.408+/-50.884  $\chi^2/\text{NDF}$ :1223.2/22

Left: 542.938+/-36.473  $\chi^2/\text{NDF}$ : 3129.9/47

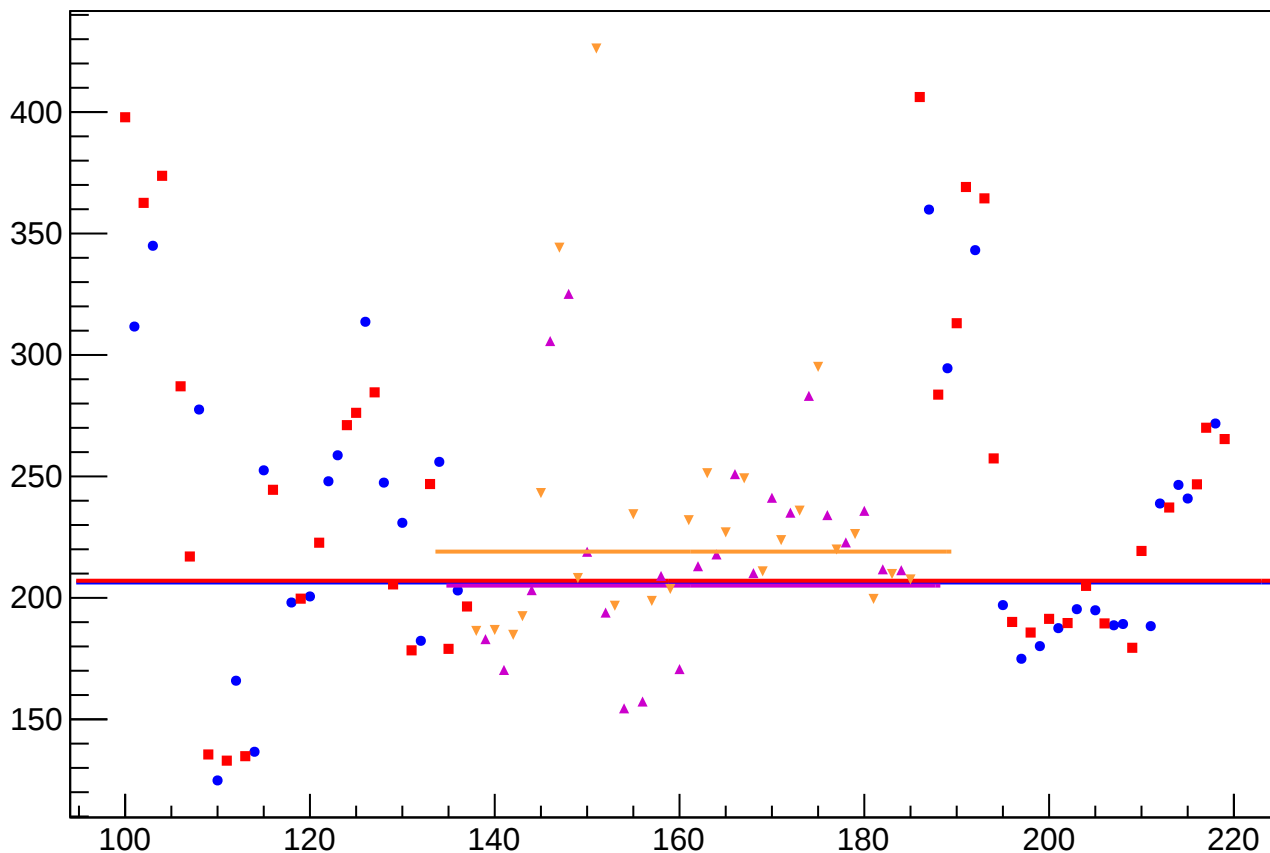
Right: 398.346+/-35.093  $\chi^2/\text{NDF}$ : 22637.9/69

In: 284.582+/-35.709  $\chi^2/\text{NDF}$ :10722.2/55

Out: 652.244+/-35.818  $\chi^2/\text{NDF}$ :15000.9/61

All: 467.855+/-25.289  $\chi^2/\text{NDF}$ : 25776.0/117

# asym\_bpm0l10WS\_rms vs Slug, Sign Corrected



Right In:  $206.335 \pm 0.035$   $\chi^2/\text{NDF}$ : 1708858.5/32

Left Out:  $219.049 \pm 0.037$   $\chi^2/\text{NDF}$ : 975564.4/24

Right Out:  $207.061 \pm 0.035$   $\chi^2/\text{NDF}$ : 2571435.5/36

Left In:  $205.046 \pm 0.036$   $\chi^2/\text{NDF}$ : 1144197.1/22

Left:  $211.855 \pm 0.026$   $\chi^2/\text{NDF}$ : 2193394.9/47

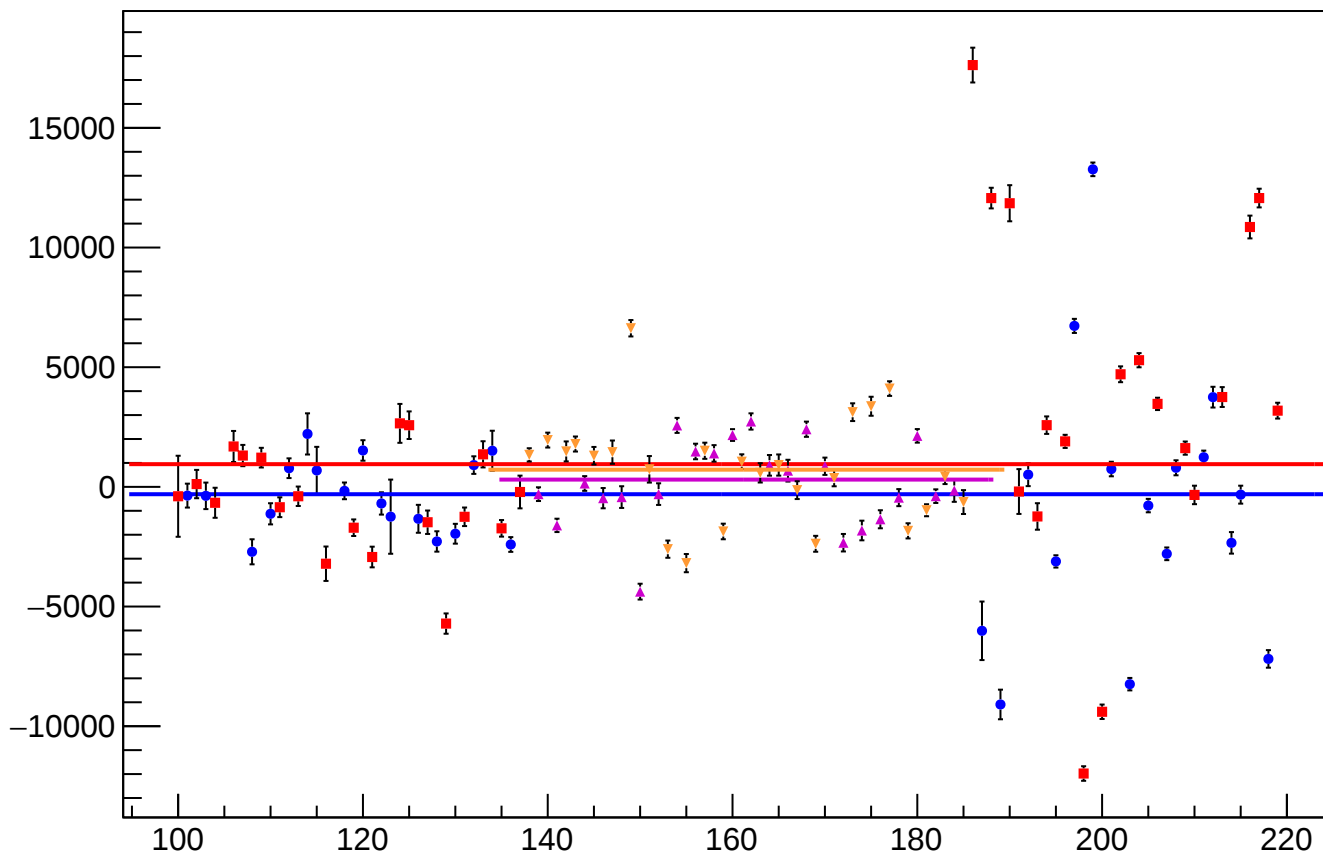
Right:  $206.705 \pm 0.025$   $\chi^2/\text{NDF}$ : 4280508.0/69

In:  $205.700 \pm 0.025$   $\chi^2/\text{NDF}$ : 2853706.4/55

Out:  $212.682 \pm 0.025$   $\chi^2/\text{NDF}$ : 3602789.9/61

All:  $209.181 \pm 0.018$   $\chi^2/\text{NDF}$ : 6494604.3/117

# asym\_bpm0r03WS\_mean vs Slug, Sign Corrected



Right In:  $-306.894 \pm 66.837$   $\chi^2/\text{NDF}: 4892.0/32$

Left Out:  $718.705 \pm 69.601$   $\chi^2/\text{NDF}: 1018.5/24$

Right Out:  $948.954 \pm 67.622$   $\chi^2/\text{NDF}: 6811.8/36$

Left In:  $304.161 \pm 70.958$   $\chi^2/\text{NDF}: 643.5/22$

Left:  $515.435 \pm 49.688$   $\chi^2/\text{NDF}: 1679.4/47$

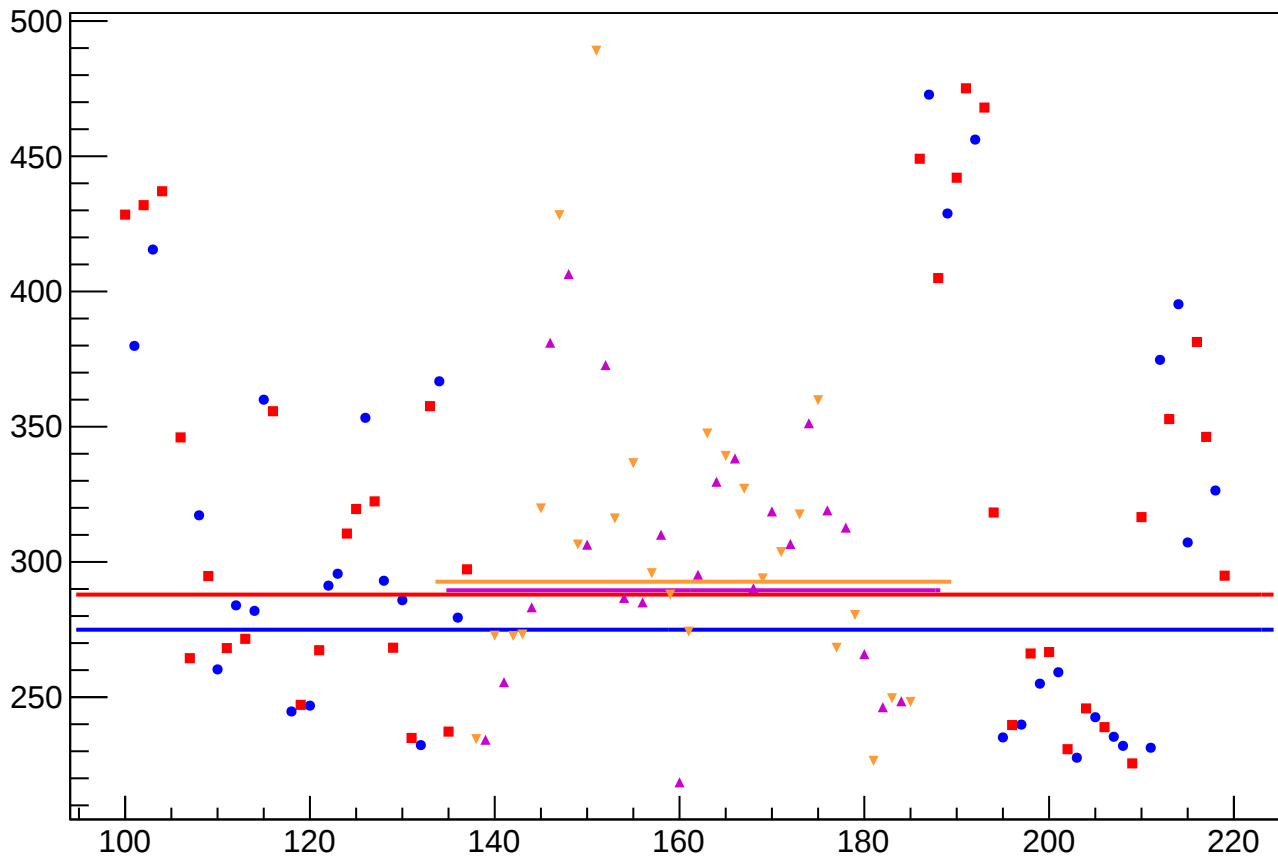
Right:  $313.705 \pm 47.536$   $\chi^2/\text{NDF}: 11878.3/69$

In:  $-19.622 \pm 48.653$   $\chi^2/\text{NDF}: 5574.8/55$

Out:  $837.149 \pm 48.500$   $\chi^2/\text{NDF}: 7835.9/61$

All:  $410.107 \pm 34.349$   $\chi^2/\text{NDF}: 13566.3/117$

# asym\_bpm0r03WS\_rms vs Slug, Sign Corrected



Right In: 274.946 $\pm$ 0.047  $\chi^2$ /NDF: 1447910.0/32

Left Out: 292.686 $\pm$ 0.049  $\chi^2$ /NDF: 925193.6/24

Right Out: 287.928 $\pm$ 0.048  $\chi^2$ /NDF: 1633570.4/36

Left In: 289.522 $\pm$ 0.050  $\chi^2$ /NDF: 777901.0/22

Left: 291.134 $\pm$ 0.035  $\chi^2$ /NDF: 1705121.5/47

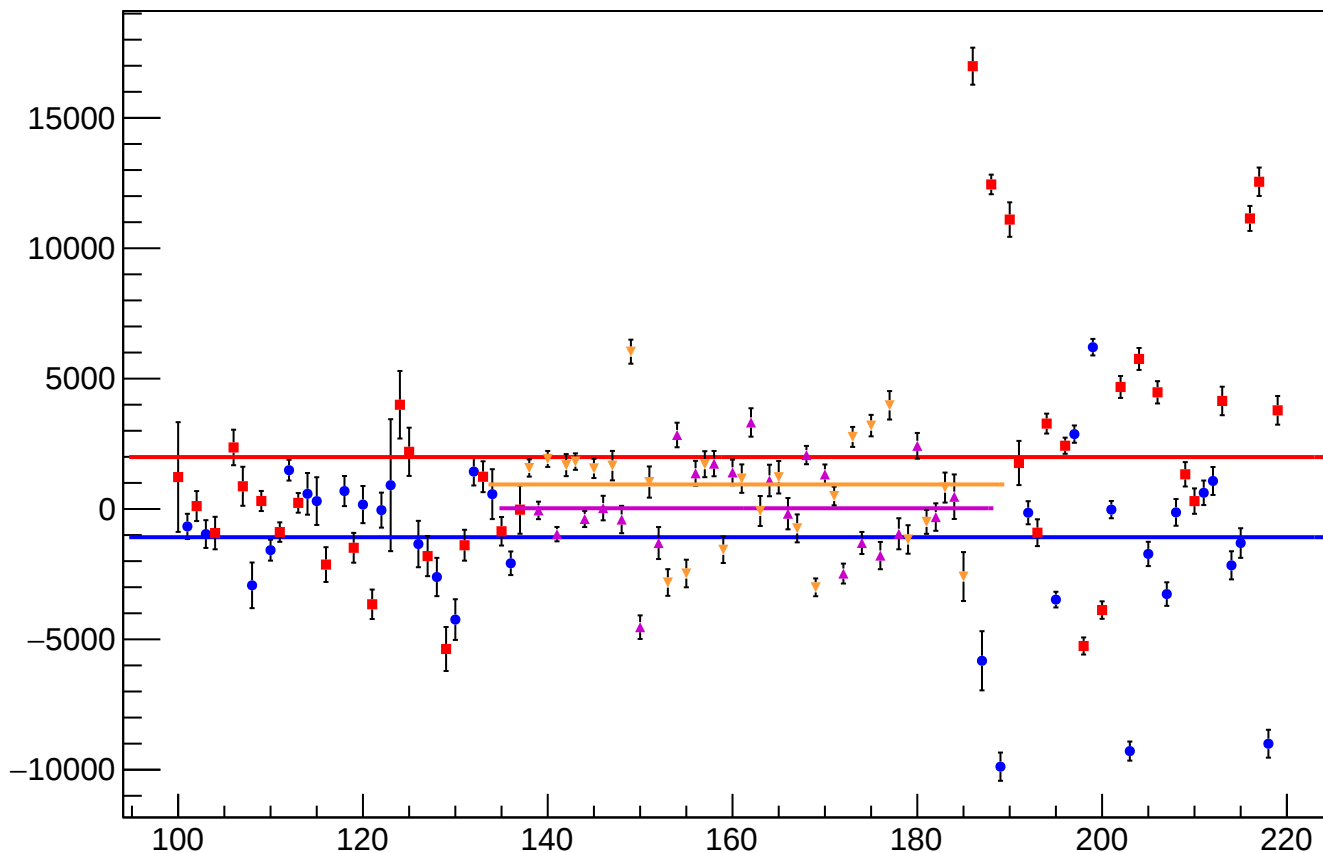
Right: 281.362 $\pm$ 0.034  $\chi^2$ /NDF: 3118766.5/69

In: 281.799 $\pm$ 0.034  $\chi^2$ /NDF: 2270524.9/55

Out: 290.238 $\pm$ 0.034  $\chi^2$ /NDF: 2563571.1/61

All: 286.032 $\pm$ 0.024  $\chi^2$ /NDF: 4864283.6/117

# asym\_bpm0r05WS\_mean vs Slug, Sign Corrected



Right In:  $-1082.422 \pm 86.635$   $\chi^2/\text{NDF}: 1935.5/32$

Left Out:  $941.598 \pm 89.119$   $\chi^2/\text{NDF}: 544.6/24$

Right Out:  $1991.200 \pm 82.690$   $\chi^2/\text{NDF}: 3664.0/36$

Left In:  $27.763 \pm 92.331$   $\chi^2/\text{NDF}: 362.5/22$

Left:  $500.853 \pm 64.122$   $\chi^2/\text{NDF}: 957.8/47$

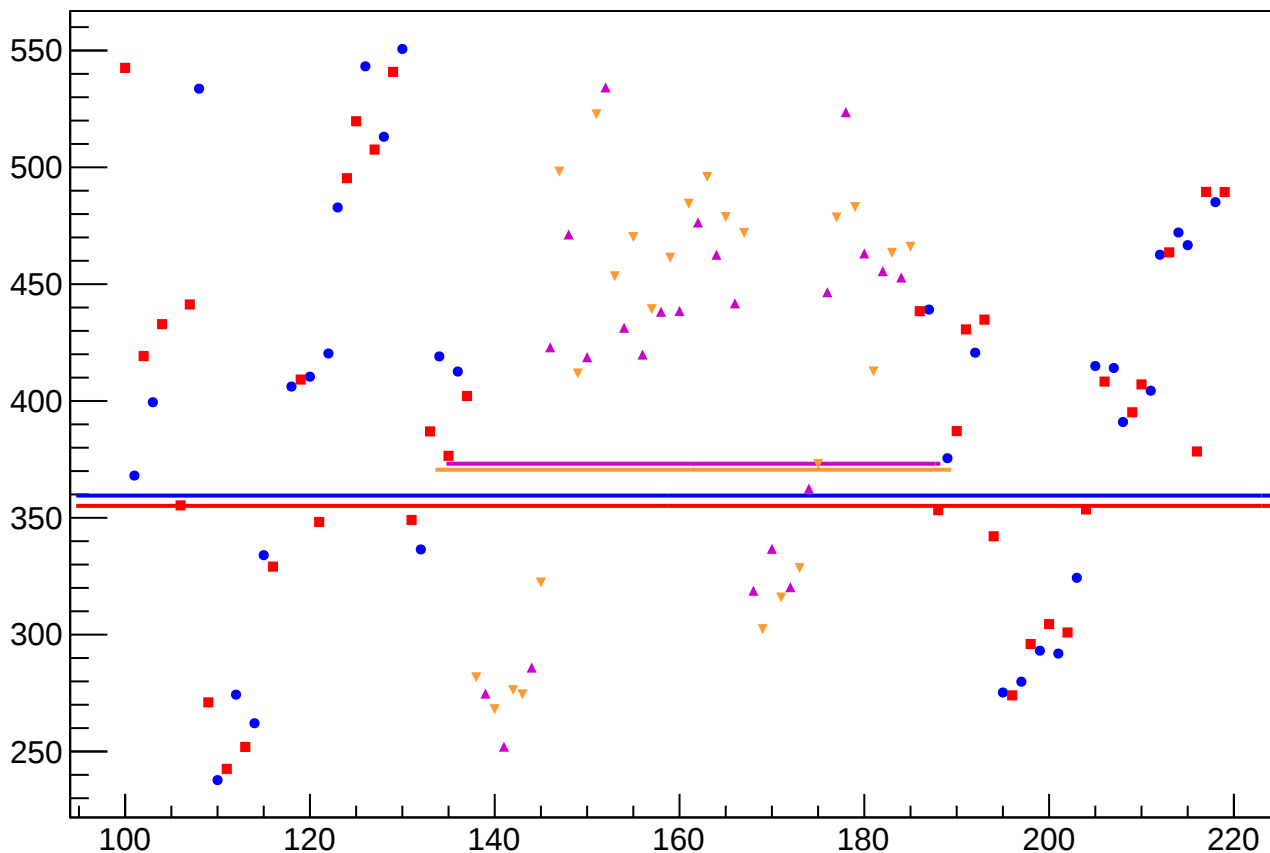
Right:  $525.949 \pm 59.817$   $\chi^2/\text{NDF}: 6258.2/69$

In:  $-562.630 \pm 63.178$   $\chi^2/\text{NDF}: 2375.0/55$

Out:  $1505.617 \pm 60.616$   $\chi^2/\text{NDF}: 4283.1/61$

All:  $514.272 \pm 43.740$   $\chi^2/\text{NDF}: 7216.1/117$

# asym\_bpm0r05WS\_rms vs Slug, Sign Corrected



Right In:  $359.516 \pm 0.061$   $\chi^2/\text{NDF}: 1710145.5/32$

Left Out:  $370.580 \pm 0.063$   $\chi^2/\text{NDF}: 1878118.9/24$

Right Out:  $355.128 \pm 0.058$   $\chi^2/\text{NDF}: 1595935.0/36$

Left In:  $373.161 \pm 0.065$   $\chi^2/\text{NDF}: 1636244.2/22$

Left:  $371.824 \pm 0.045$   $\chi^2/\text{NDF}: 3515172.3/47$

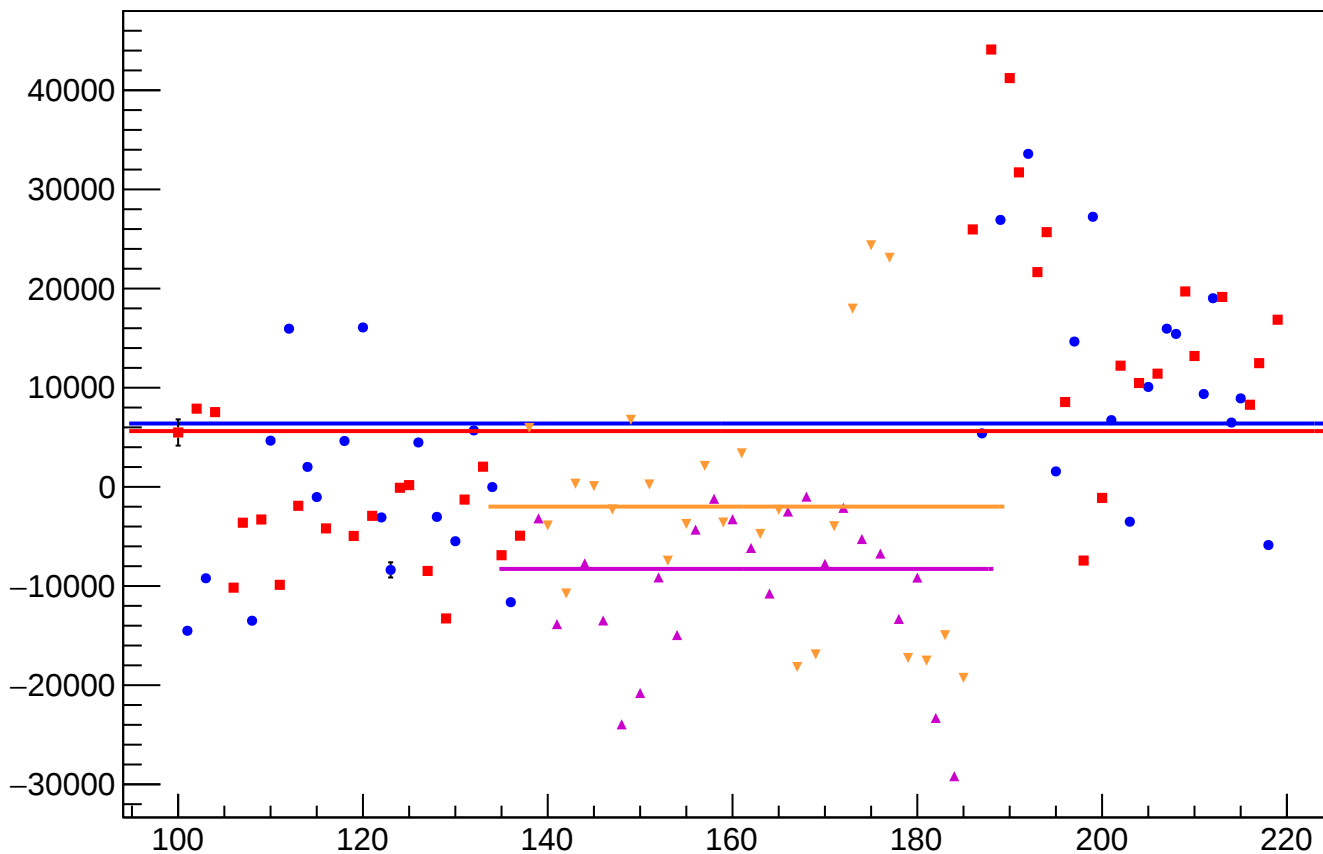
Right:  $357.220 \pm 0.042$   $\chi^2/\text{NDF}: 3308765.1/69$

In:  $365.905 \pm 0.045$   $\chi^2/\text{NDF}: 3369617.1/55$

Out:  $362.277 \pm 0.043$   $\chi^2/\text{NDF}: 3506360.7/61$

All:  $364.016 \pm 0.031$   $\chi^2/\text{NDF}: 6879411.8/117$

asym\_bpm0i02WS\_mean vs Slug, Sign Corrected



Right In: 6390.764+/-39.206  $\chi^2/\text{NDF}$ : 96018.3/32

Left Out: -1991.788+/-42.427  $\chi^2/\text{NDF}$ : 63766.6/24

Right Out: 5624.144+/-37.551  $\chi^2/\text{NDF}$ : 146871.1/36

Left In: -8273.228+/-44.301  $\chi^2/\text{NDF}$ : 22870.2/22

Left: -4996.810+/-30.641  $\chi^2/\text{NDF}$ : 97123.2/47

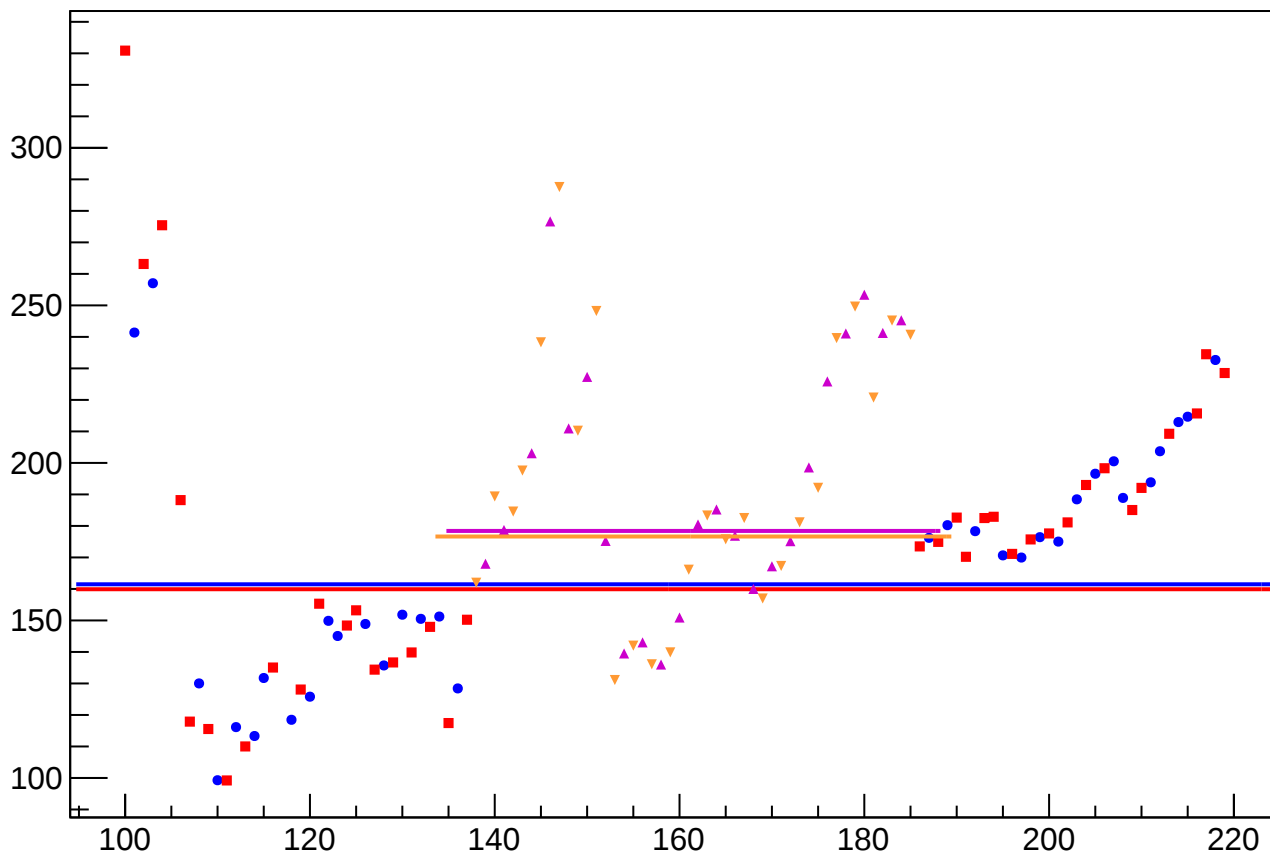
Right: 5990.933+/-27.119  $\chi^2/\text{NDF}$ : 243088.8/69

In: -49.896+/-29.360  $\chi^2/\text{NDF}$ : 180331.0/55

Out: 2278.712+/-28.119  $\chi^2/\text{NDF}$ : 228706.2/61

All: 1164.644+/-20.308  $\chi^2/\text{NDF}$ : 412318.2/11

# asym\_bpm0i02WS\_rms vs Slug, Sign Corrected



Right In: 161.476+/-0.028  $\chi^2/\text{NDF}$ : 1777563.0/32

Left Out: 176.641+/-0.030  $\chi^2/\text{NDF}$ :1551048.8/24

Right Out: 159.906+/-0.027  $\chi^2/\text{NDF}$ : 2145050.8/36

Left In: 178.413+/-0.031  $\chi^2/\text{NDF}$ :1293736.2/22

Left: 177.489+/-0.022  $\chi^2/\text{NDF}$ : 2846455.0/47

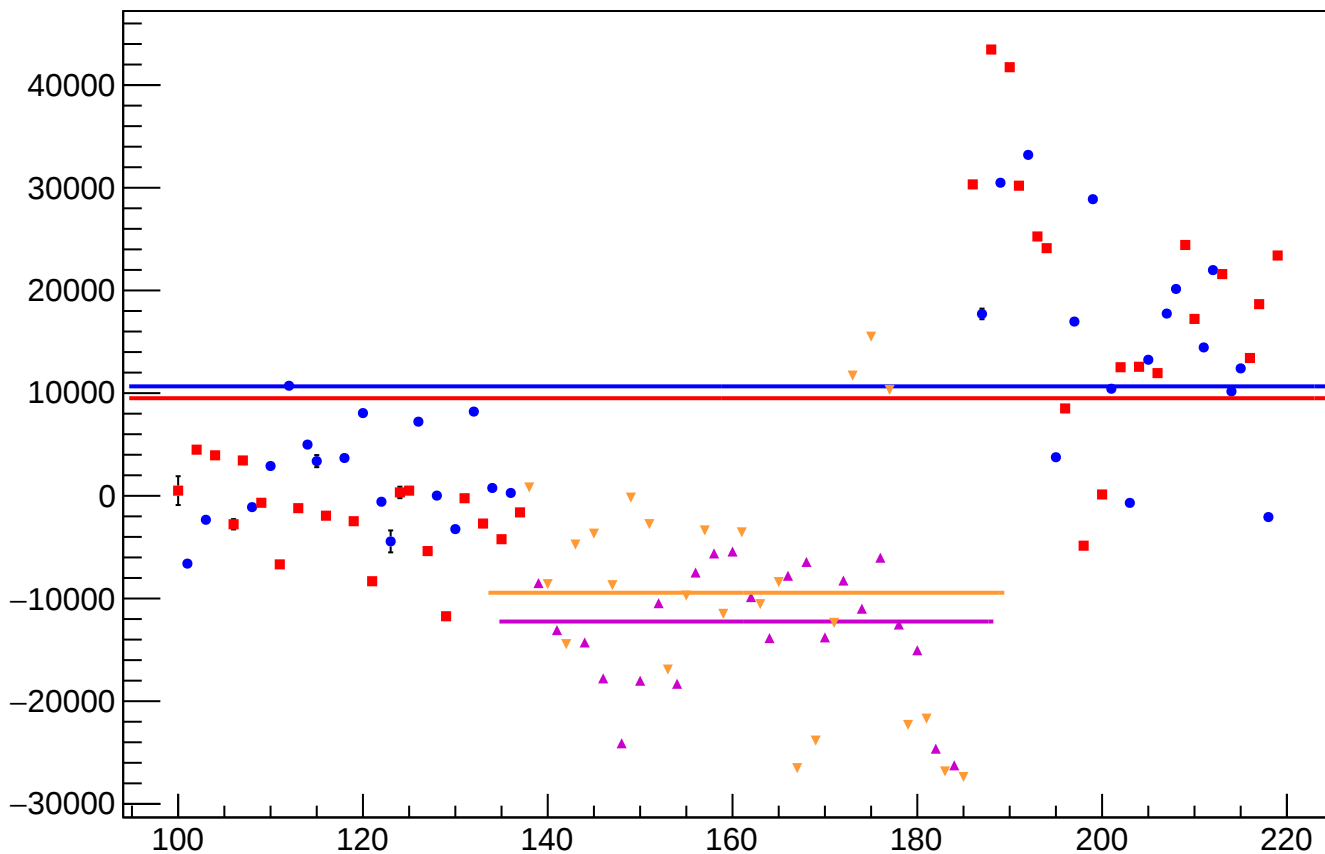
Right: 160.657+/-0.019  $\chi^2/\text{NDF}$ : 3924287.0/69

In: 168.915+/-0.021  $\chi^2/\text{NDF}$ :3235237.2/55

Out: 167.257+/-0.020  $\chi^2/\text{NDF}$ :3870582.1/61

All: 168.050+/-0.014  $\chi^2/\text{NDF}$ : 7109146.8/117

# asym\_bpm0i02aWS\_mean vs Slug, Sign Corrected



Right In: 10660.821 $\pm$ 42.981  $\chi^2/\text{NDF}$ : 57632.3/32

Left Out: -9437.408 $\pm$ 45.534  $\chi^2/\text{NDF}$ : 62220.4/24

Right Out: 9506.011 $\pm$ 41.283  $\chi^2/\text{NDF}$ : 120349.6/36

Left In: -12242.226 $\pm$ 43.944  $\chi^2/\text{NDF}$ : 16615.8/22

Left: -10889.638 $\pm$ 31.621  $\chi^2/\text{NDF}$ : 80800.7/47

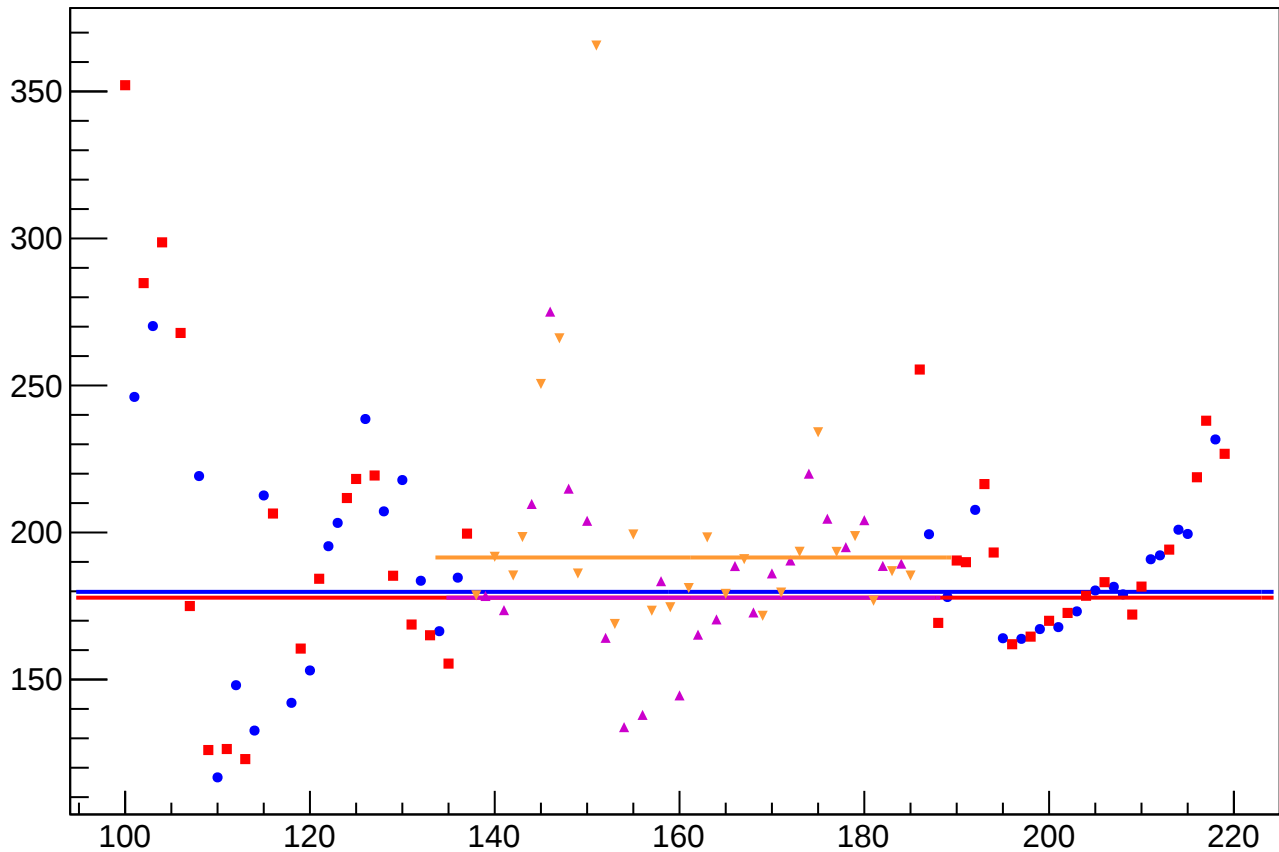
Right: 10060.153 $\pm$ 29.774  $\chi^2/\text{NDF}$ : 178357.4/69

In: -536.886 $\pm$ 30.727  $\chi^2/\text{NDF}$ : 213073.7/55

Out: 959.746 $\pm$ 30.584  $\chi^2/\text{NDF}$ : 277563.7/61

All: 214.917 $\pm$ 21.677  $\chi^2/\text{NDF}$ : 491829.1/117

asym\_bpm0i02aWS\_rms vs Slug, Sign Corrected



Right In: 179.813+/-0.030  $\chi^2/\text{NDF}$ : 900735.9/32

Left Out: 191.507+/-0.032  $\chi^2/\text{NDF}$ : 727251.6/24

Right Out: 177.840+/-0.029  $\chi^2/\text{NDF}$ : 1388827.0/36

Left In: 177.821+/-0.031  $\chi^2/\text{NDF}$ : 862494.4/22

Left: 184.421+/-0.022  $\chi^2/\text{NDF}$ : 1683284.8/47

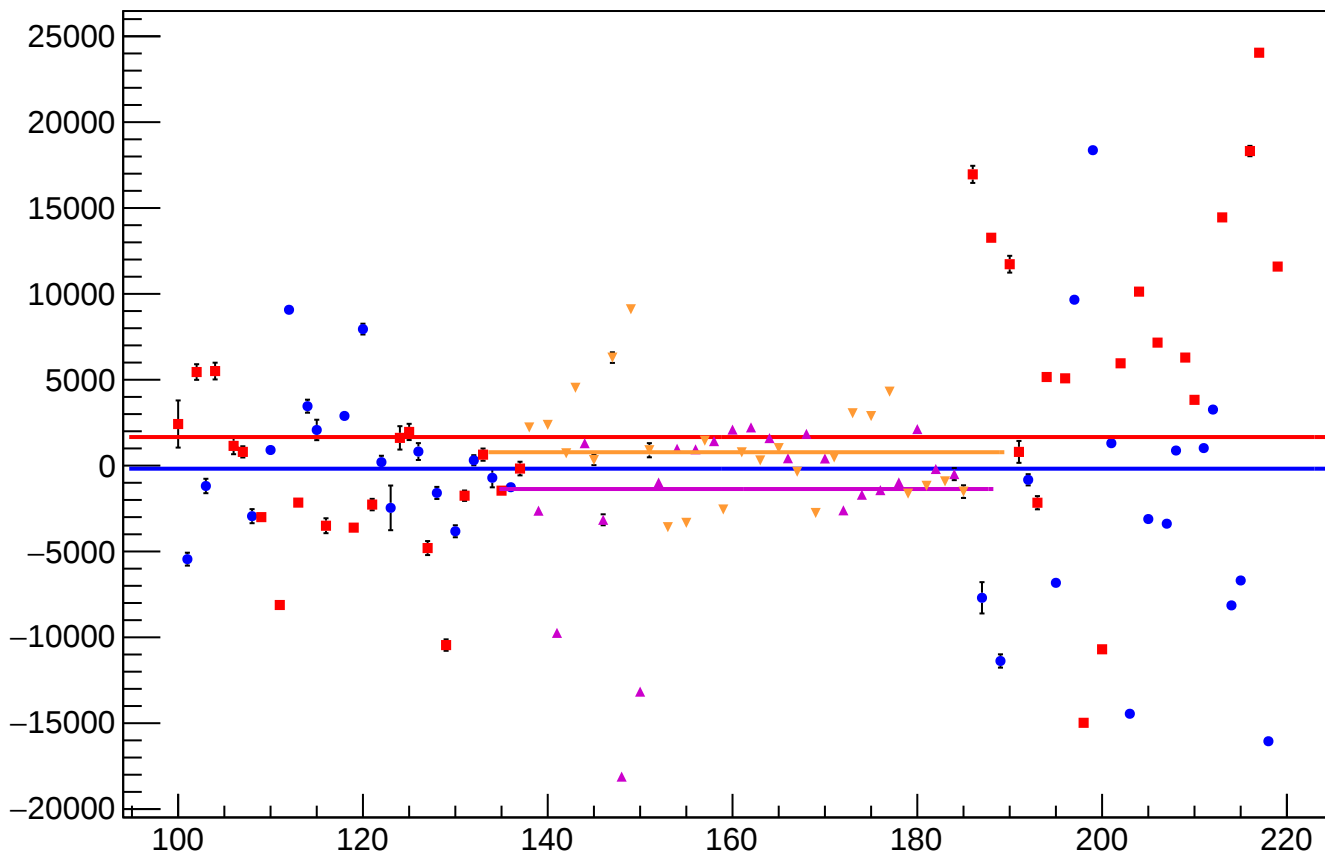
Right: 178.787+/-0.021  $\chi^2/\text{NDF}$ : 2291754.5/69

In: 178.839+/-0.022  $\chi^2/\text{NDF}$ : 1765329.9/55

Out: 184.006+/-0.022  $\chi^2/\text{NDF}$ : 2214960.5/61

All: 181.435+/-0.015  $\chi^2/\text{NDF}$ : 4008694.0/117

asym\_bpm0i05WS\_mean vs Slug, Sign Corrected



Right In:  $-179.708 \pm 48.117$   $\chi^2/\text{NDF}: 25497.0/32$

Left Out:  $779.983 \pm 47.457$   $\chi^2/\text{NDF}: 4260.8/24$

Right Out:  $1663.290 \pm 46.406$   $\chi^2/\text{NDF}: 35770.8/36$

Left In:  $-1363.043 \pm 45.807$   $\chi^2/\text{NDF}: 11632.9/22$

Left:  $-329.448 \pm 32.958$   $\chi^2/\text{NDF}: 16949.3/47$

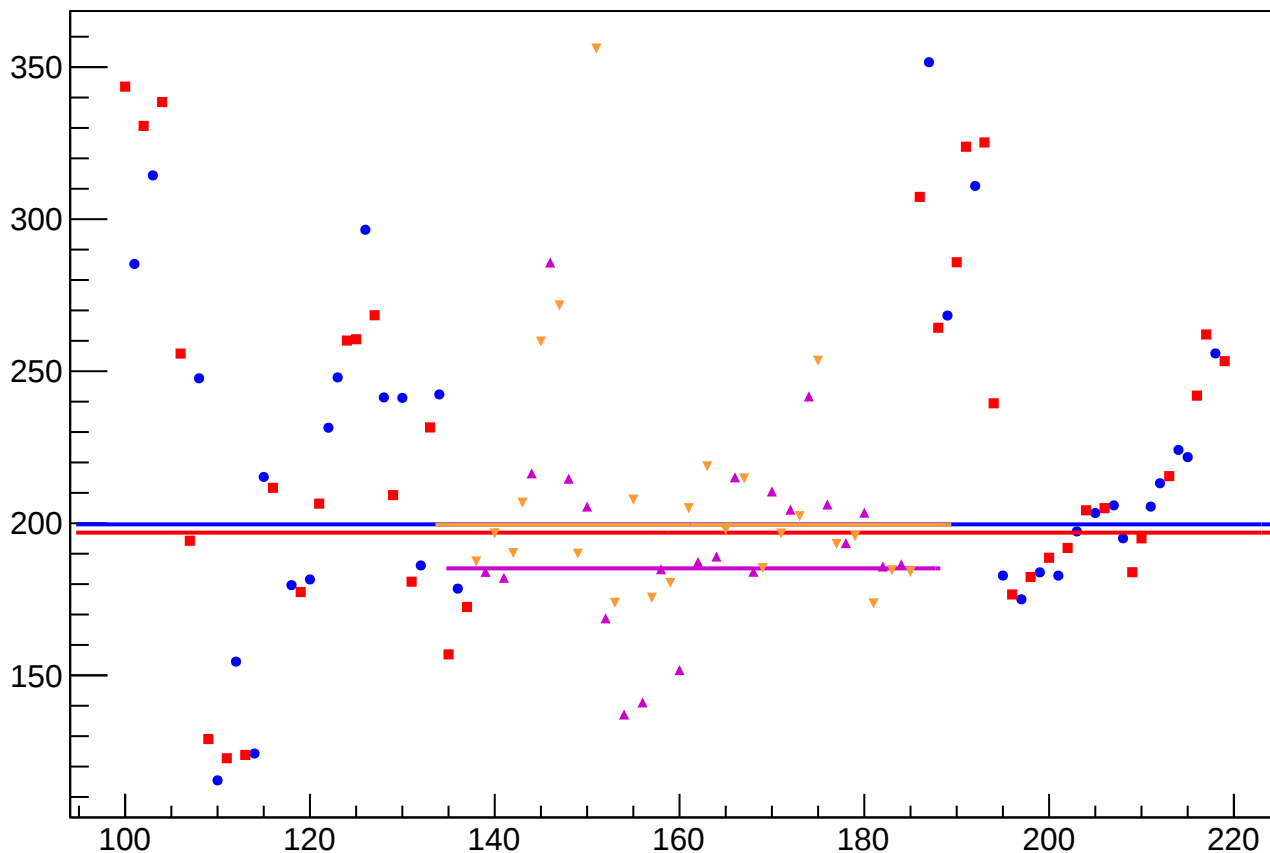
Right:  $775.146 \pm 33.402$   $\chi^2/\text{NDF}: 62027.9/69$

In:  $-800.468 \pm 33.177$   $\chi^2/\text{NDF}: 37447.2/55$

Out:  $1231.530 \pm 33.179$   $\chi^2/\text{NDF}: 40208.6/61$

All:  $215.455 \pm 23.460$   $\chi^2/\text{NDF}: 79531.3/117$

# asym\_bpm0i05WS\_rms vs Slug, Sign Corrected



Right In:  $199.645 \pm 0.034$   $\chi^2/\text{NDF}: 1547842.9/32$

Left Out:  $199.547 \pm 0.034$   $\chi^2/\text{NDF}: 729356.3/24$

Right Out:  $196.925 \pm 0.033$   $\chi^2/\text{NDF}: 2402441.1/36$

Left In:  $185.171 \pm 0.032$   $\chi^2/\text{NDF}: 882752.2/22$

Left:  $192.104 \pm 0.023$   $\chi^2/\text{NDF}: 1707122.0/47$

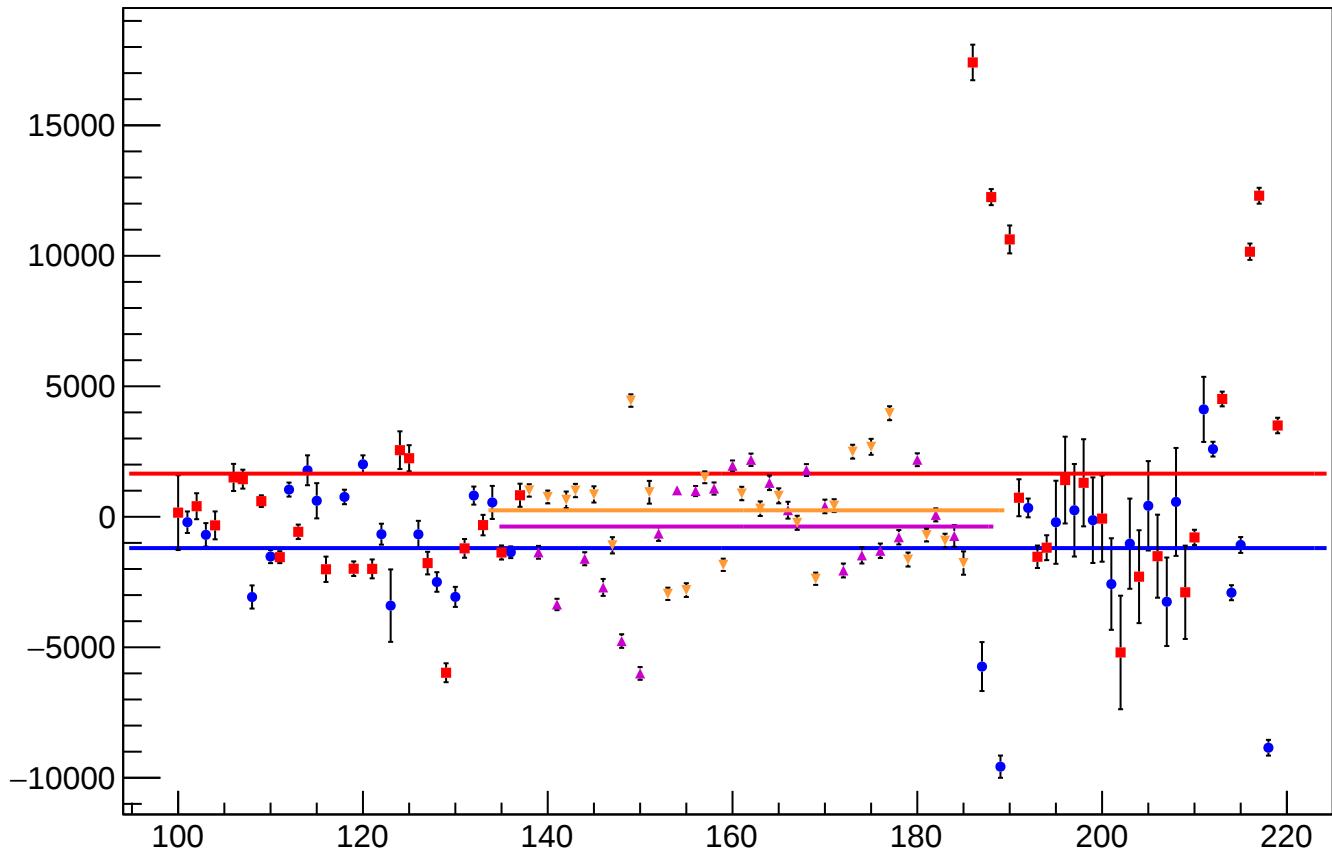
Right:  $198.236 \pm 0.024$   $\chi^2/\text{NDF}: 3953594.5/69$

In:  $192.052 \pm 0.023$   $\chi^2/\text{NDF}: 2525537.6/55$

Out:  $198.207 \pm 0.023$   $\chi^2/\text{NDF}: 3134916.7/61$

All:  $195.129 \pm 0.017$   $\chi^2/\text{NDF}: 5694866.7/117$

# asym\_bpm0i07WS\_mean vs Slug, Sign Corrected



Right In:  $-1198.997 \pm 72.398$   $\chi^2/\text{NDF}: 1656.7/32$

Left Out:  $247.844 \pm 53.555$   $\chi^2/\text{NDF}: 1355.1/24$

Right Out:  $1653.608 \pm 65.299$   $\chi^2/\text{NDF}: 5640.1/36$

Left In:  $-374.122 \pm 52.049$   $\chi^2/\text{NDF}: 1801.0/22$

Left:  $-72.006 \pm 37.325$   $\chi^2/\text{NDF}: 3225.5/47$

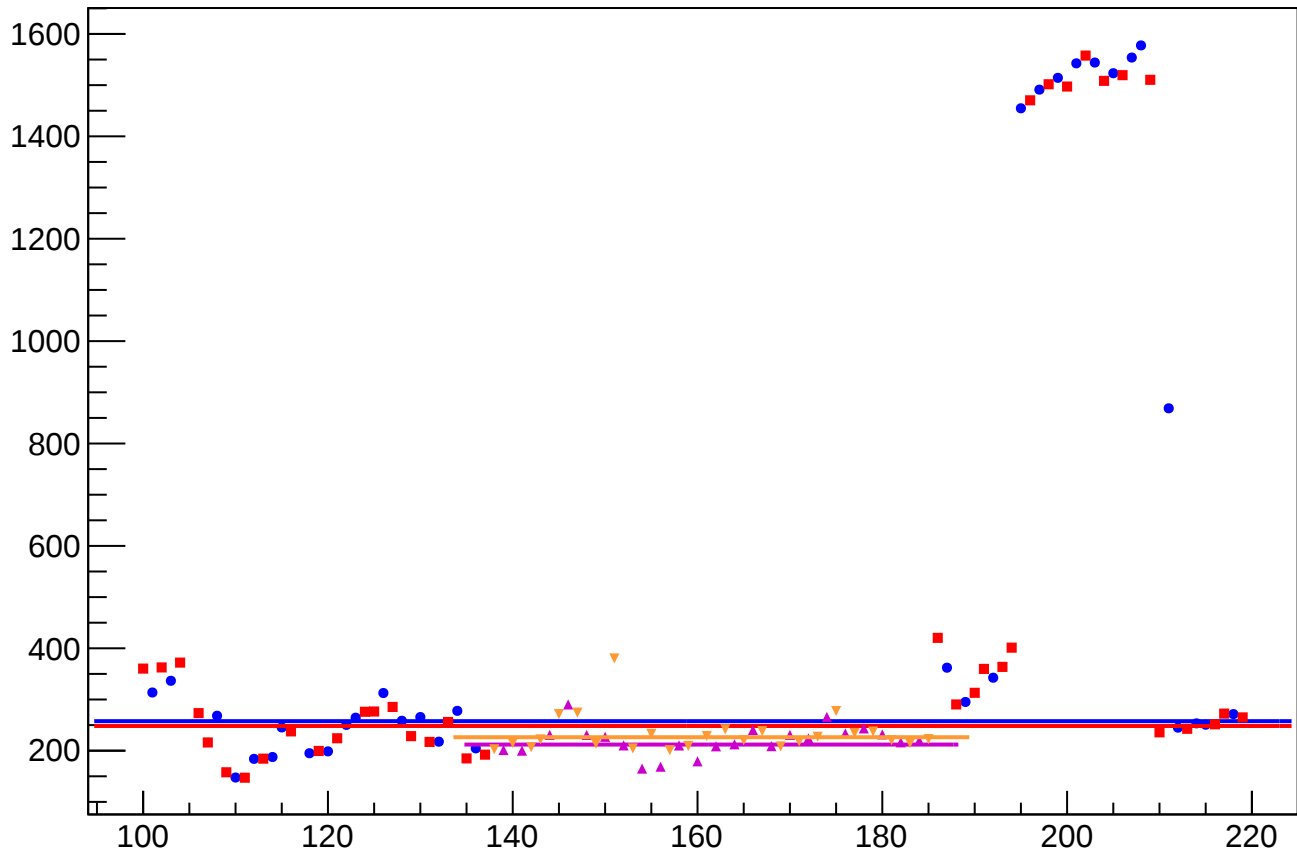
Right:  $373.989 \pm 48.489$   $\chi^2/\text{NDF}: 8152.8/69$

In:  $-655.192 \pm 42.261$   $\chi^2/\text{NDF}: 3543.3/55$

Out:  $813.167 \pm 41.409$   $\chi^2/\text{NDF}: 7272.3/61$

All:  $93.935 \pm 29.577$   $\chi^2/\text{NDF}: 11431.4/117$

# asym\_bpm0i07WS\_rms vs Slug, Sign Corrected



Right In: 257.675 $\pm$ 0.051  $\chi^2/\text{NDF}$ : 10151378.9/32

Left Out: 226.322 $\pm$ 0.038  $\chi^2/\text{NDF}$ : 521041.8/24

Right Out: 248.287 $\pm$ 0.046  $\chi^2/\text{NDF}$ : 9294733.7/36

Left In: 211.970 $\pm$ 0.037  $\chi^2/\text{NDF}$ : 584344.5/22

Left: 218.941 $\pm$ 0.026  $\chi^2/\text{NDF}$ : 1179246.7/47

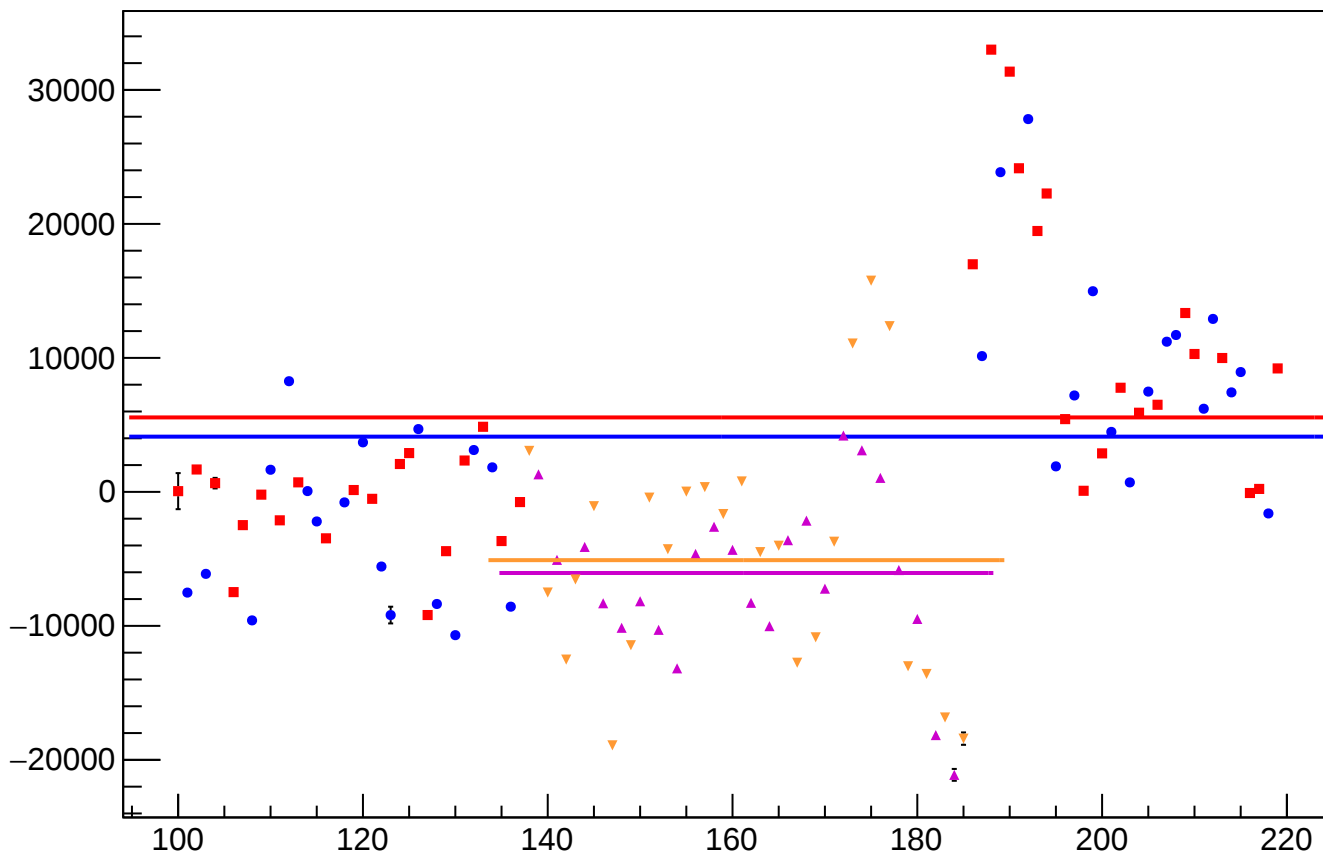
Right: 252.498 $\pm$ 0.034  $\chi^2/\text{NDF}$ : 19464659.1/69

In: 227.544 $\pm$ 0.030  $\chi^2/\text{NDF}$ : 11261206.0/55

Out: 235.155 $\pm$ 0.029  $\chi^2/\text{NDF}$ : 9951066.5/61

All: 231.427 $\pm$ 0.021  $\chi^2/\text{NDF}$ : 21245367.1/111

asym\_bpm1i02WS\_mean vs Slug, Sign Corrected



Right In: 4122.799+/-33.343

$\chi^2/\text{NDF}$ : 80792.0/32

Left: -5556.386+/-24.277  $\chi^2/\text{NDF}$ : 72374.6/47

Right: 4875.889+/-22.980  $\chi^2/\text{NDF}$ : 187129.1/69

Left Out: -5095.305+/-33.703

$\chi^2/\text{NDF}$ : 54395.4/24

In: -719.032+/-24.141  $\chi^2/\text{NDF}$ : 142702.5/55

Right Out: 5557.266+/-31.715

$\chi^2/\text{NDF}$ : 105365.4/36

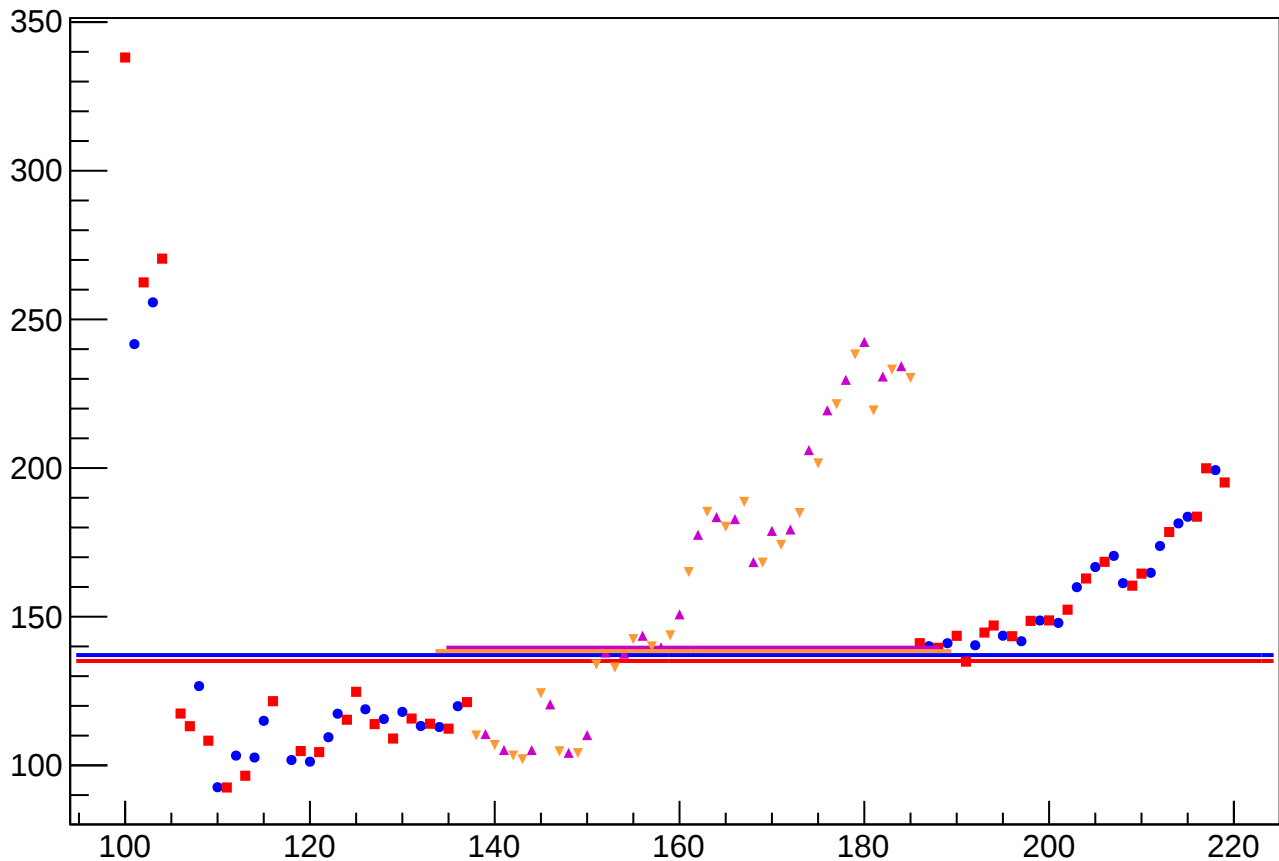
Out: 554.408+/-23.097  $\chi^2/\text{NDF}$ : 212743.2/61

Left In: -6053.569+/-34.998

$\chi^2/\text{NDF}$ : 17590.3/22

All: -54.187+/-16.689  $\chi^2/\text{NDF}$ : 356898.5/117

# asym\_bpm1i02WS\_rms vs Slug, Sign Corrected



Right In: 137.090 $\pm$ 0.024  $\chi^2$ /NDF: 1789469.3/32

Left Out: 138.436 $\pm$ 0.024  $\chi^2$ /NDF:2549435.8/24

Right Out: 135.104 $\pm$ 0.022  $\chi^2$ /NDF: 2016763.8/36

Left In: 139.578 $\pm$ 0.025  $\chi^2$ /NDF:2413658.9/22

Left: 138.985 $\pm$ 0.017  $\chi^2$ /NDF: 4964199.7/47

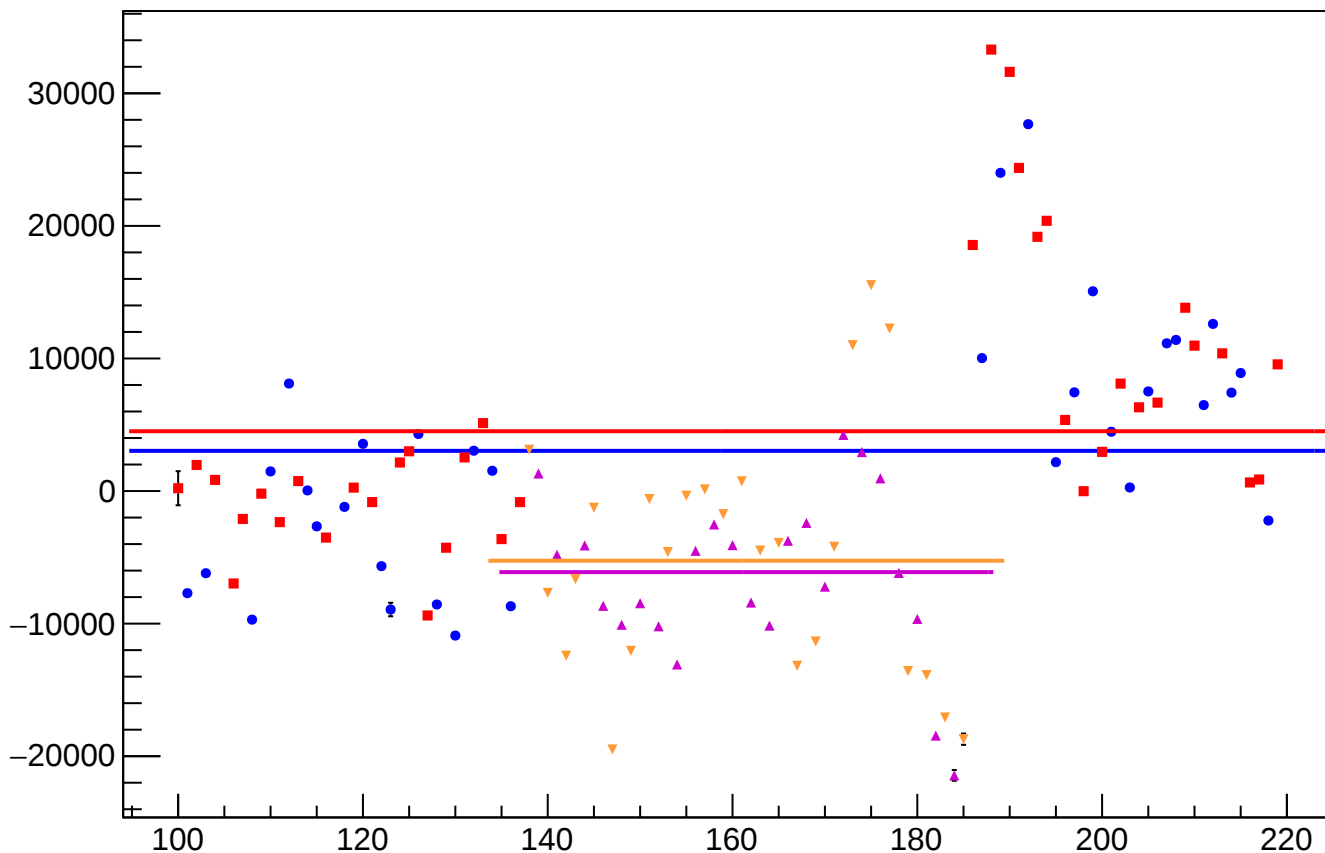
Right: 136.048 $\pm$ 0.016  $\chi^2$ /NDF: 3809959.3/69

In: 138.274 $\pm$ 0.017  $\chi^2$ /NDF:4208423.8/55

Out: 136.669 $\pm$ 0.016  $\chi^2$ /NDF:4576563.9/61

All: 137.436 $\pm$ 0.012  $\chi^2$ /NDF: 8789603.9/117

asym\_bpm1i04WS\_mean vs Slug, Sign Corrected



Right In: 3032.053+/-29.970

$\chi^2/\text{NDF}$ : 91689.8/32

Left Out: -5255.652+/-30.622

$\chi^2/\text{NDF}$ : 64324.6/24

Right Out: 4510.865+/-28.609

$\chi^2/\text{NDF}$ : 114998.4/36

Left In: -6114.901+/-32.126

$\chi^2/\text{NDF}$ : 21260.9/22

Left: -5664.697+/-22.166

$\chi^2/\text{NDF}$ : 85960.3/47

Right: 3805.781+/-20.694

$\chi^2/\text{NDF}$ : 207962.1/69

In: -1224.215+/-21.914

$\chi^2/\text{NDF}$ : 156296.1/55

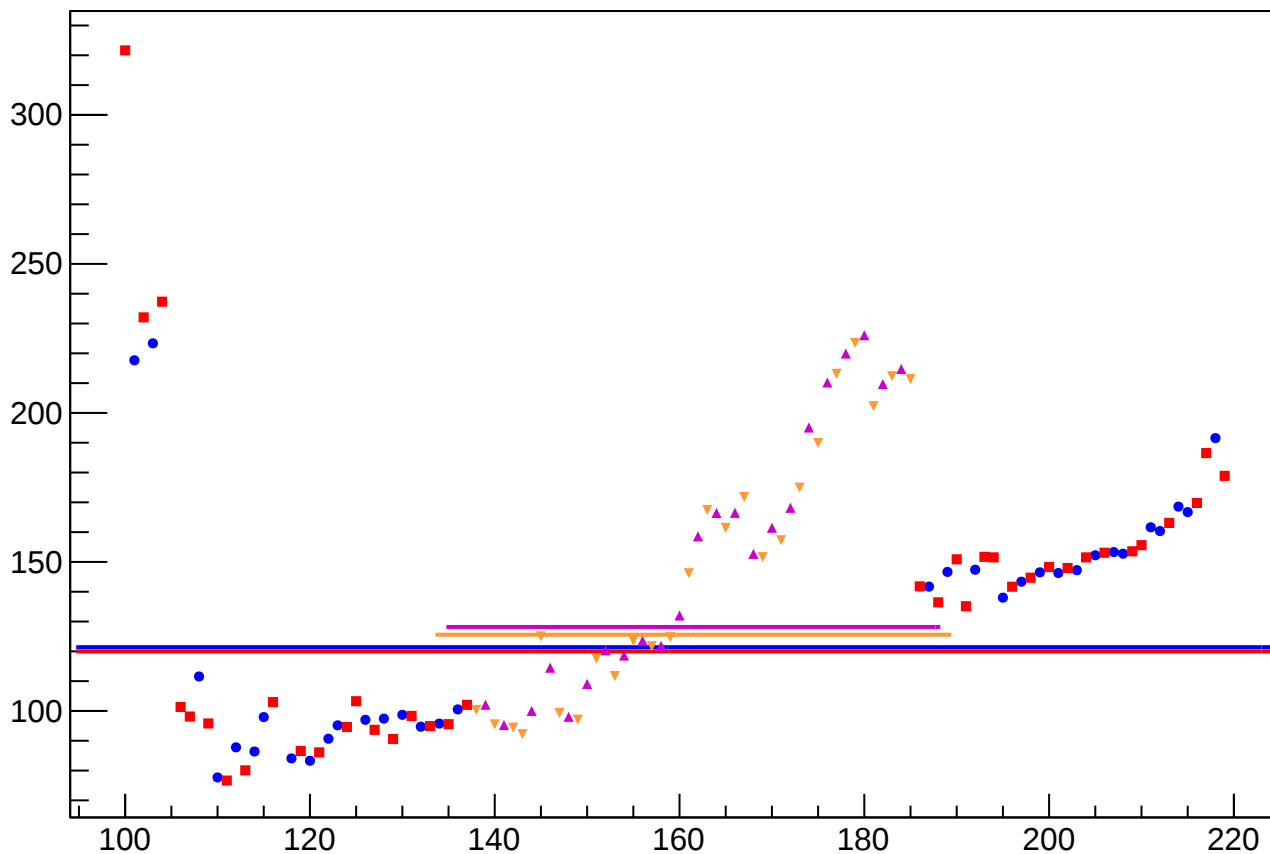
Out: -40.914+/-20.905

$\chi^2/\text{NDF}$ : 233636.3/61

All: -604.693+/-15.126

$\chi^2/\text{NDF}$ : 391459.0/11

# asym\_bpm1i04WS\_rms vs Slug, Sign Corrected



Right In: 121.396+/-0.021  $\chi^2/\text{NDF}$ : 2660957.6/32

Left Out: 125.577+/-0.022  $\chi^2/\text{NDF}$ : 2595752.6/24

Right Out: 119.974+/-0.020  $\chi^2/\text{NDF}$ : 2985874.4/36

Left In: 128.184+/-0.023  $\chi^2/\text{NDF}$ : 2332977.5/22

Left: 126.818+/-0.016  $\chi^2/\text{NDF}$ : 4935627.6/47

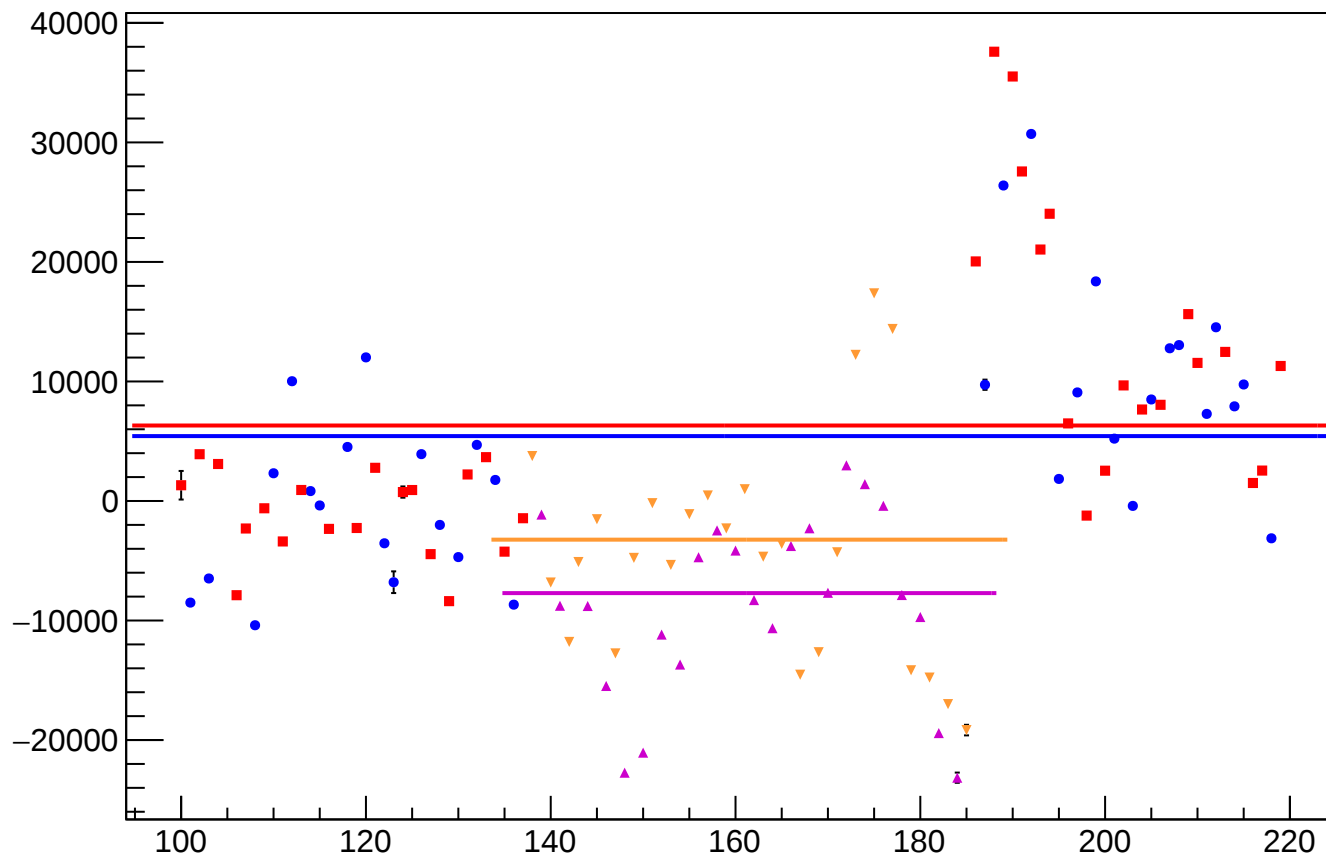
Right: 120.652+/-0.015  $\chi^2/\text{NDF}$ : 5649188.4/69

In: 124.554+/-0.015  $\chi^2/\text{NDF}$ : 5041675.6/55

Out: 122.585+/-0.015  $\chi^2/\text{NDF}$ : 5617387.3/61

All: 123.523+/-0.011  $\chi^2/\text{NDF}$ : 10667516.9/111

asym\_bpm1i06WS\_mean vs Slug, Sign Corrected



Right In: 5428.865+/-39.546  $\chi^2/\text{NDF}$ : 63936.4/32

Left Out: -3234.922+/-40.583  $\chi^2/\text{NDF}$ :36739.9/24

Right Out: 6314.758+/-37.663  $\chi^2/\text{NDF}$ : 94346.0/36

Left In: -7707.068+/-42.990  $\chi^2/\text{NDF}$ :21268.3/22

Left: -5342.284+/-29.511  $\chi^2/\text{NDF}$ : 63730.6/47

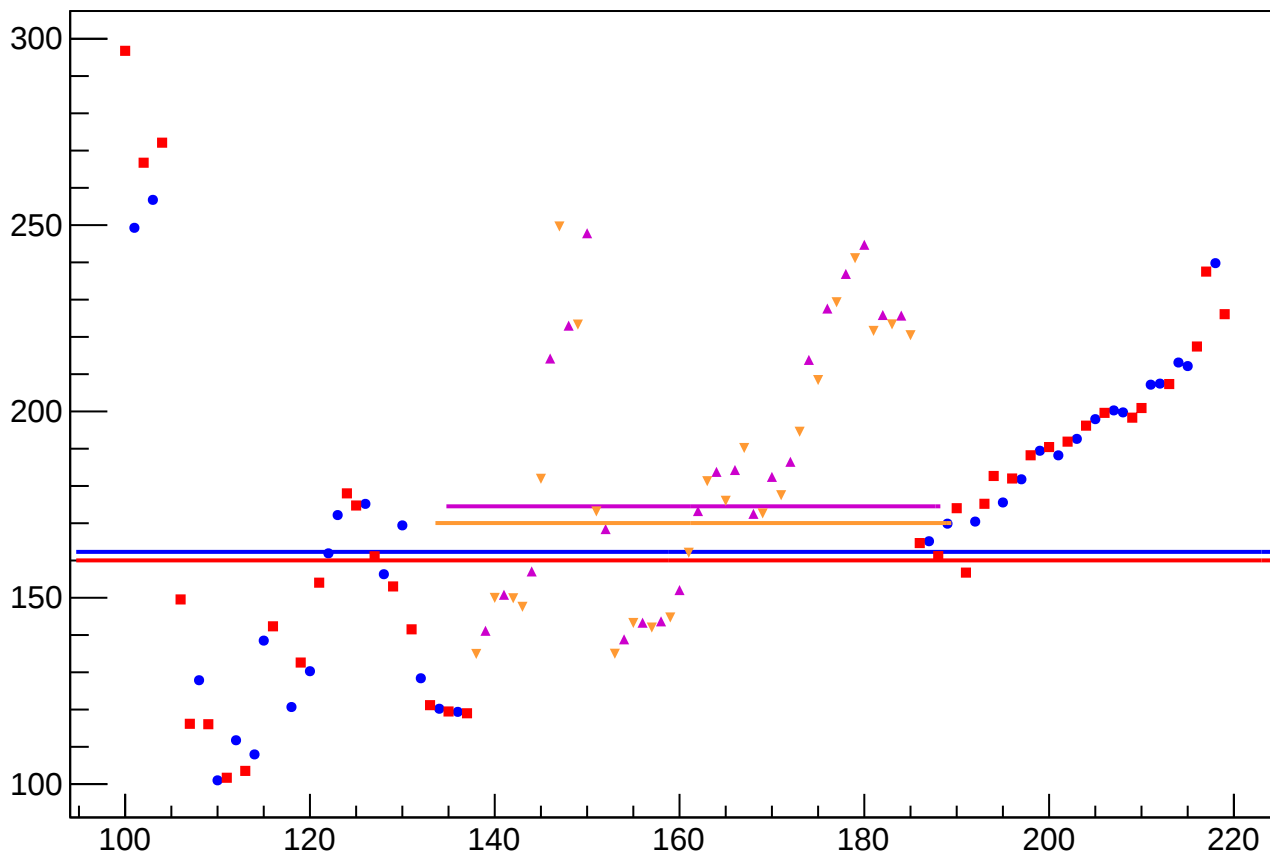
Right: 5893.412+/-27.273  $\chi^2/\text{NDF}$ : 158545.5/69

In: -591.982+/-29.105  $\chi^2/\text{NDF}$ :135776.5/55

Out: 1895.814+/-27.606  $\chi^2/\text{NDF}$ :160836.0/61

All: 717.615+/-20.029  $\chi^2/\text{NDF}$ : 300458.6/117

# asym\_bpm1i06WS\_rms vs Slug, Sign Corrected



Right In: 162.315 $\pm$ 0.028  $\chi^2/\text{NDF}$ : 2071223.9/32

Left Out: 170.050 $\pm$ 0.029  $\chi^2/\text{NDF}$ :1240866.9/24

Right Out: 160.027 $\pm$ 0.027  $\chi^2/\text{NDF}$ : 2307812.7/36

Left In: 174.539 $\pm$ 0.030  $\chi^2/\text{NDF}$ :1210071.2/22

Left: 172.165 $\pm$ 0.021  $\chi^2/\text{NDF}$ : 2462472.2/47

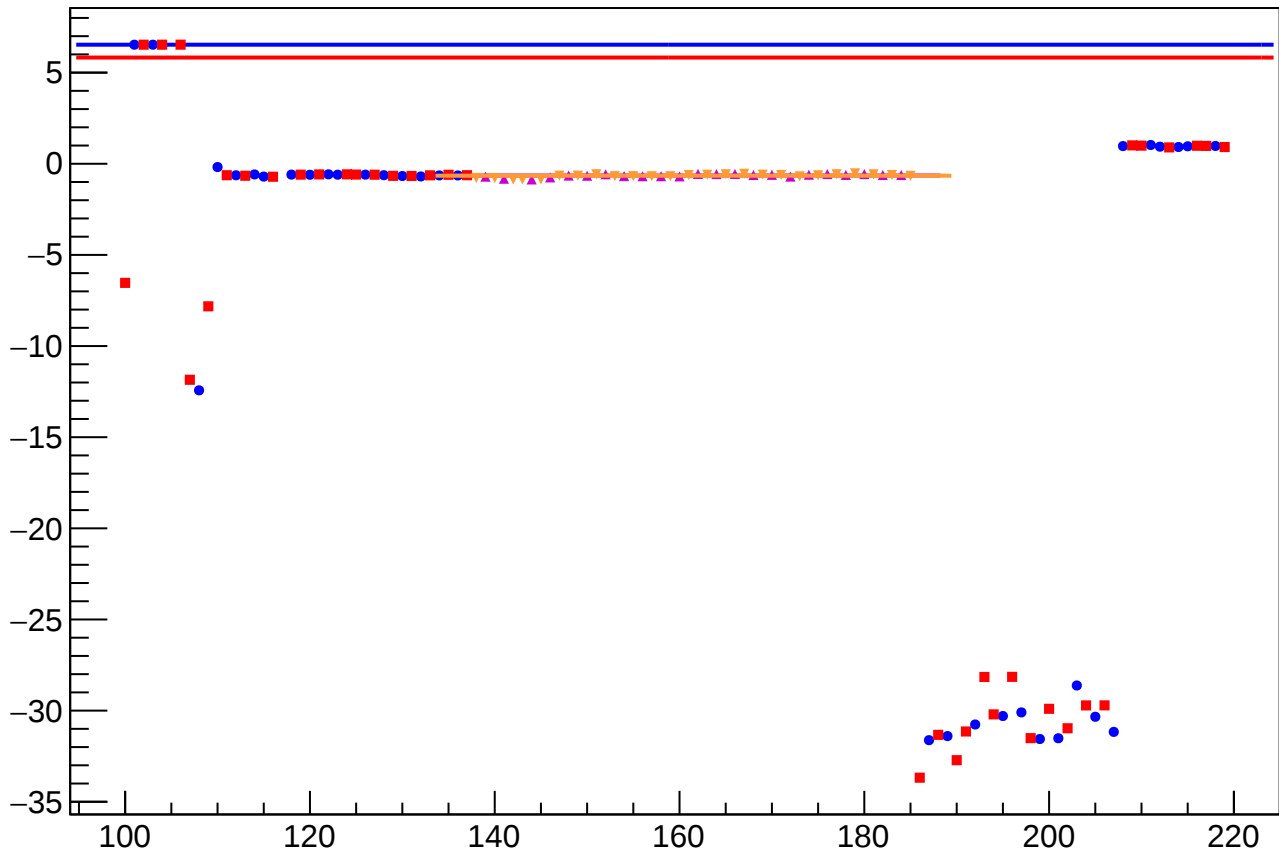
Right: 161.115 $\pm$ 0.019  $\chi^2/\text{NDF}$ : 4382545.6/69

In: 167.918 $\pm$ 0.021  $\chi^2/\text{NDF}$ :3368888.0/55

Out: 164.665 $\pm$ 0.020  $\chi^2/\text{NDF}$ :3614214.3/61

All: 166.205 $\pm$ 0.014  $\chi^2/\text{NDF}$ : 6996253.3/117

# yield\_cav4bX\_mean vs Slug, Sign Corrected



Right In: 6.532+/-0.000  $\chi^2/\text{NDF}$ : 138682048180.6/32

Left Out: -0.654+/-0.000  $\chi^2/\text{NDF}$ : 179109810.4/24

Right Out: 5.827+/-0.000  $\chi^2/\text{NDF}$ : 755956015700050.8/36

Left In: -0.644+/-0.000  $\chi^2/\text{NDF}$ : 122913584.0/22

Left: -0.649+/-0.000  $\chi^2/\text{NDF}$ : 302910331.9/47

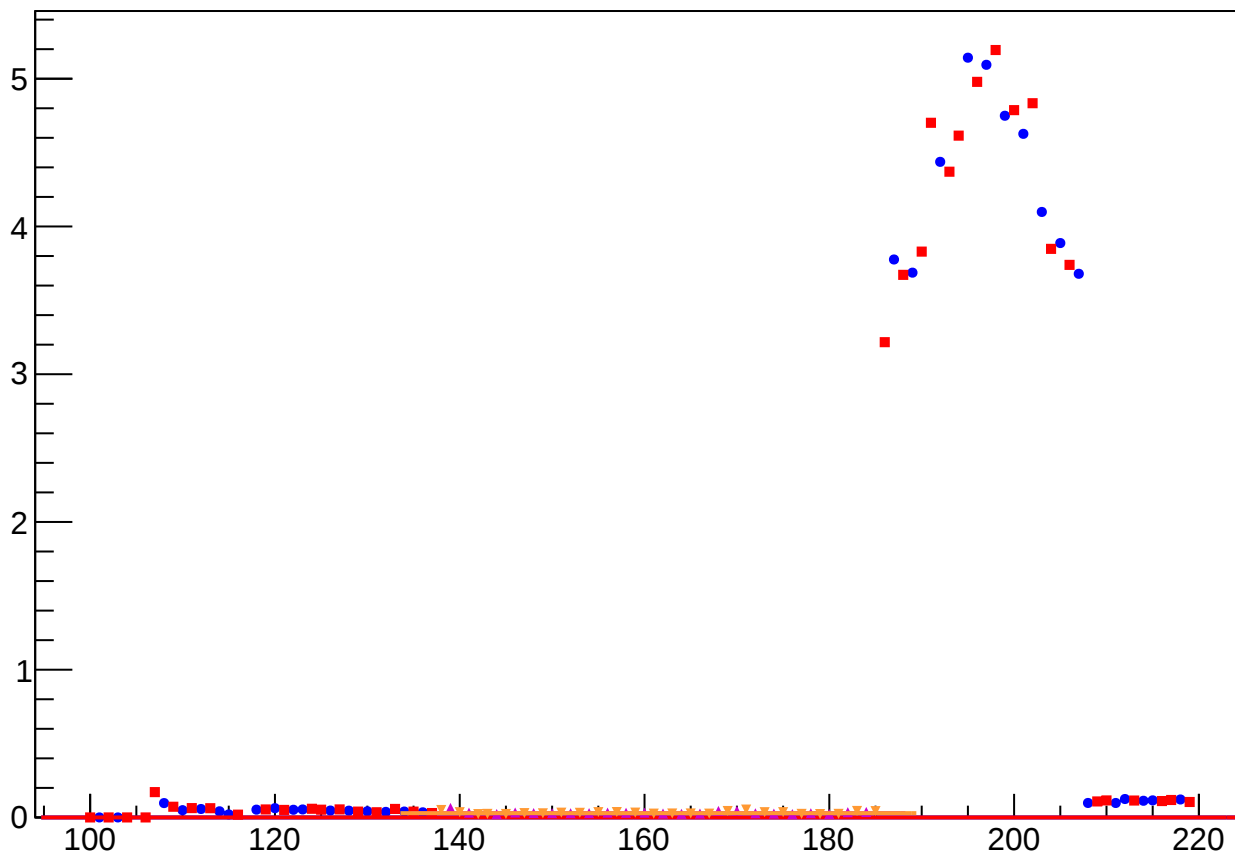
Right: 6.155+/-0.000  $\chi^2/\text{NDF}$ : 776097607557497.9/50

In: 6.530+/-0.000  $\chi^2/\text{NDF}$ : 964023611635.8/55

Out: 5.826+/-0.000  $\chi^2/\text{NDF}$ : 756665040131713.9/60

All: 6.153+/-0.000  $\chi^2/\text{NDF}$ : 77762096746876.0/100

# yield\_cav4bX\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 31385310.6/32

Left Out: 0.029+/-0.000  $\chi^2/\text{NDF}$ :1487017.7/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 33479010.5/36

Left In: 0.029+/-0.000  $\chi^2/\text{NDF}$ :1164030.9/22

Left: 0.029+/-0.000  $\chi^2/\text{NDF}$ : 2651180.7/47

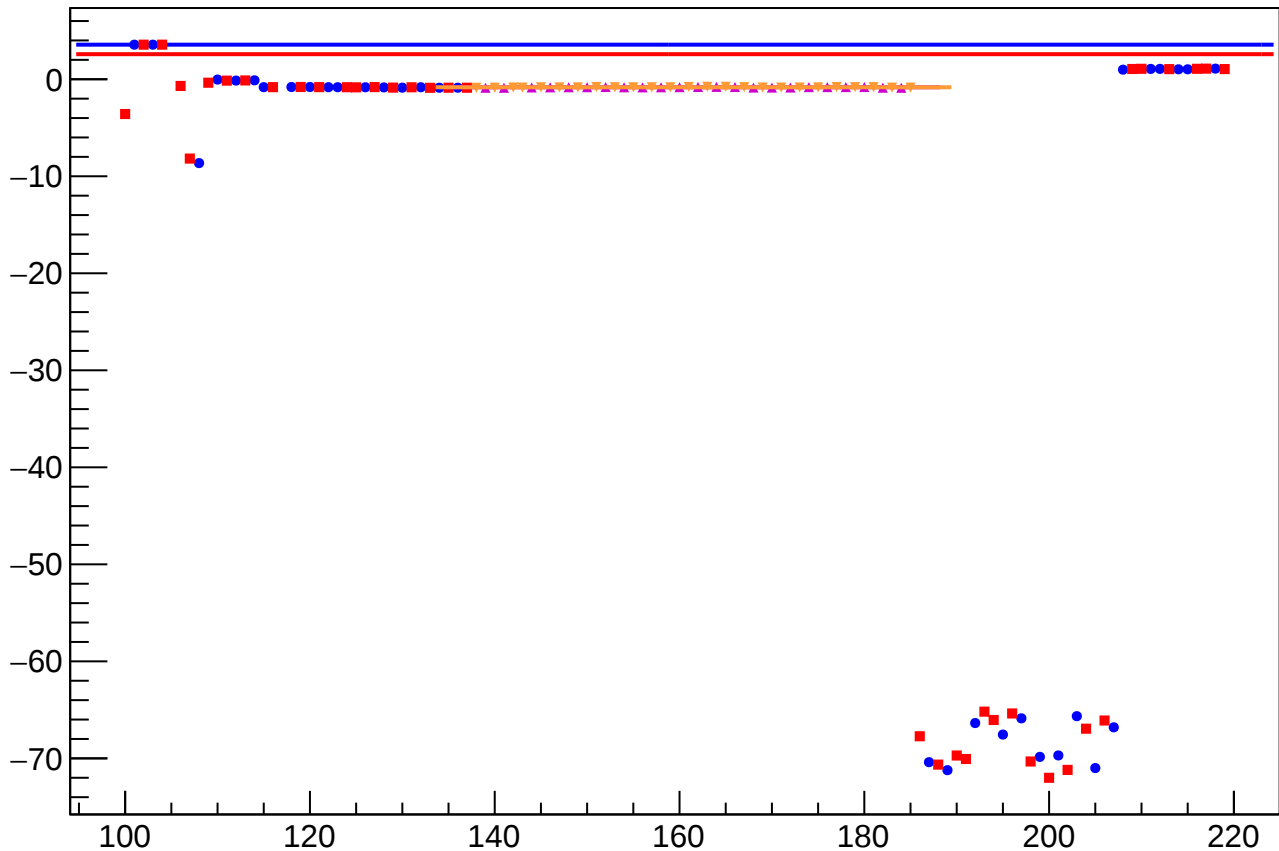
Right: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 64864589.1/69

In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :59346046.6/55

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :63353808.5/61

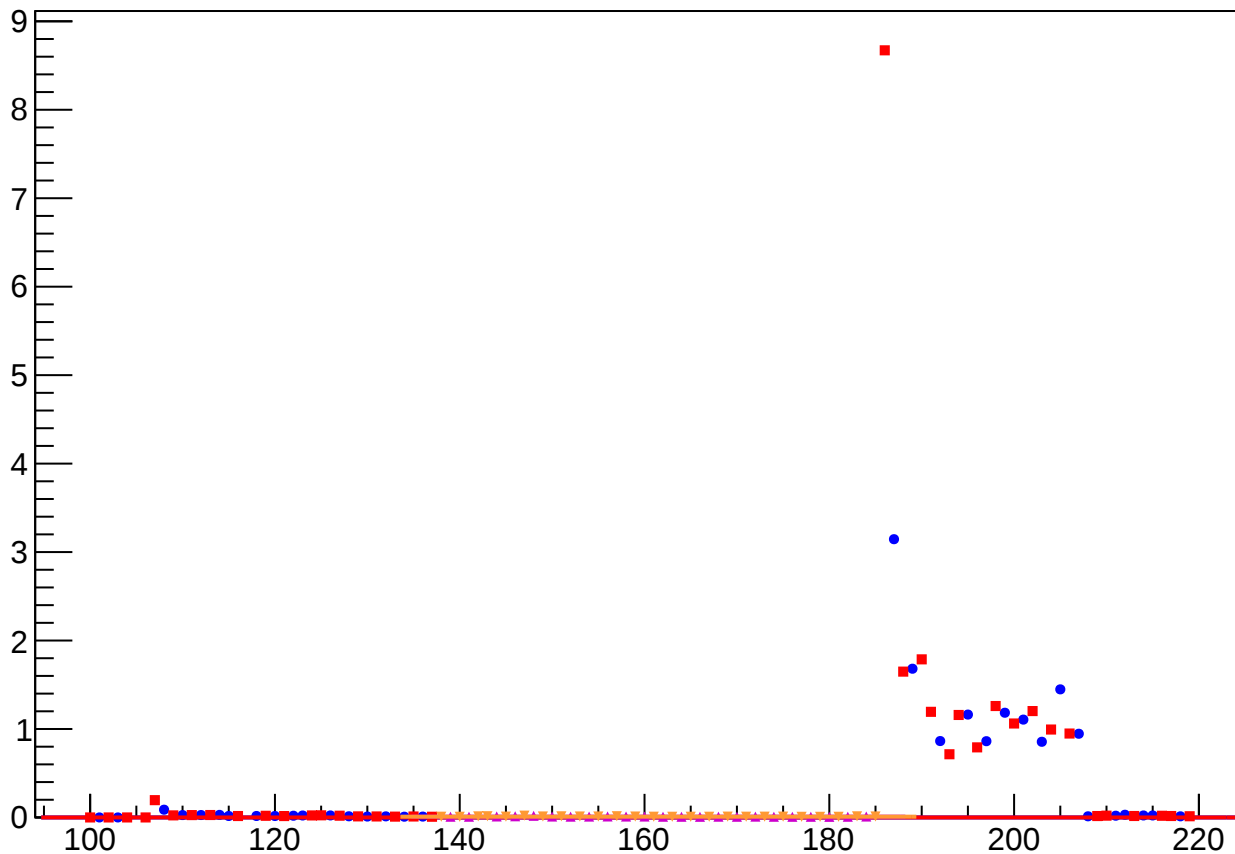
All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 122700293.9/117

# yield\_cav4bY\_mean vs Slug, Sign Corrected



|                          |                                             |                      |                                          |
|--------------------------|---------------------------------------------|----------------------|------------------------------------------|
| Right In: 3.563+/-0.000  | $\chi^2/\text{NDF}$ : 586890710496.4/32     | Left: -0.827+/-0.000 | $\chi^2/\text{NDF}$ : 340927693.4/47     |
| Left Out: -0.828+/-0.000 | $\chi^2/\text{NDF}$ : 168178464.8/24        | Right: 3.040+/-0.000 | $\chi^2/\text{NDF}$ : 1382422546093856.1 |
| Right Out: 2.583+/-0.000 | $\chi^2/\text{NDF}$ : 1253568542000589.8/36 | In: 3.560+/-0.000    | $\chi^2/\text{NDF}$ : 4232442797292.2/55 |
| Left In: -0.827+/-0.000  | $\chi^2/\text{NDF}$ : 172640246.1/22        | Out: 2.581+/-0.000   | $\chi^2/\text{NDF}$ : 1255790768799342.0 |
|                          |                                             | All: 3.038+/-0.000   | $\chi^2/\text{NDF}$ : 13881087246493.1   |

# yield\_cav4bY\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 28592581.5/32

Left Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ :1454710.9/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 31060939.3/36

Left In: 0.009+/-0.000  $\chi^2/\text{NDF}$ :1041524.9/22

Left: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 2502231.5/47

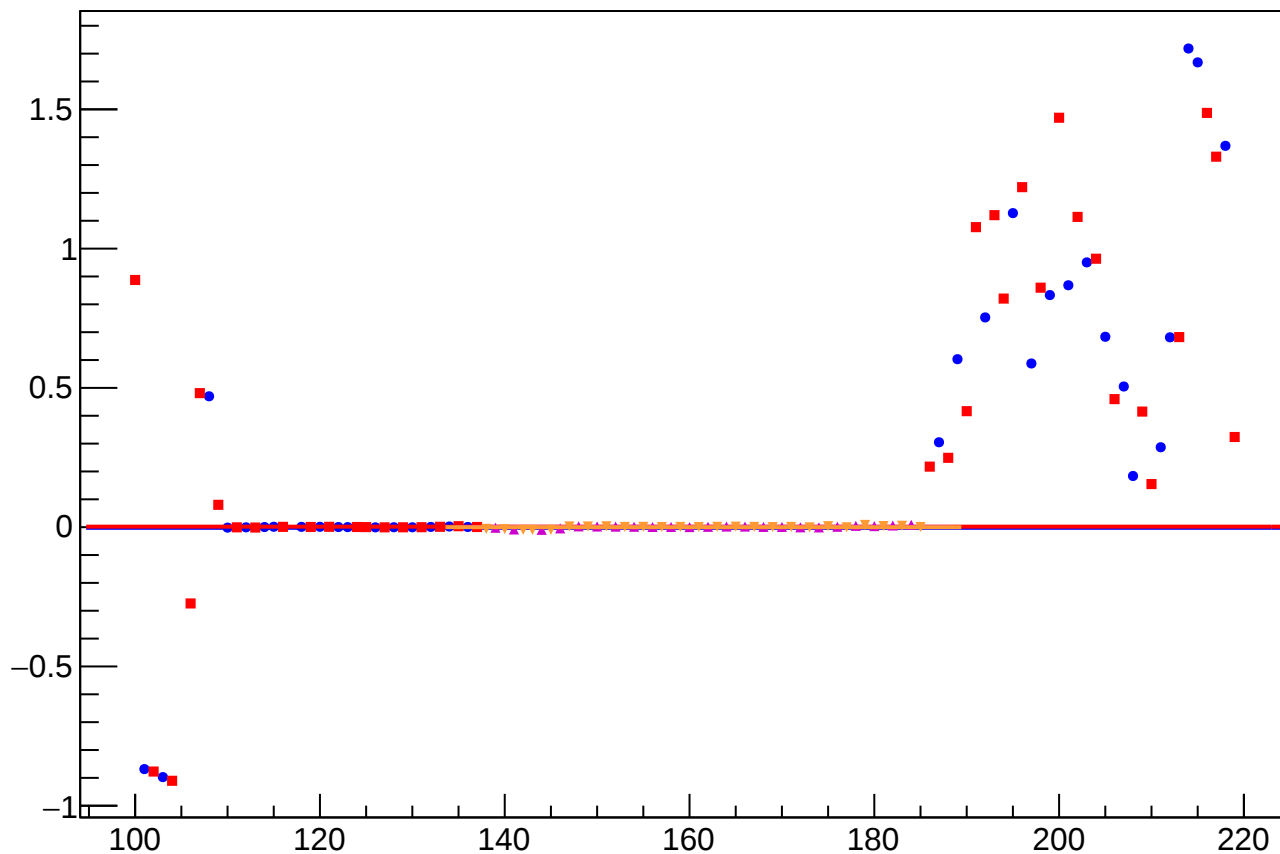
Right: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 59653771.5/69

In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :58123401.8/55

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :62473772.0/61

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 120597877.8/117

# yield\_cav4cX\_mean vs Slug, Sign Corrected



Right In:  $-0.002 \pm 0.000$

$\chi^2/\text{NDF}$ : 9798024172.8/32

Left:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 254436385.6/47

Left Out:  $-0.000 \pm 0.000$

$\chi^2/\text{NDF}$ : 151482851.1/24

Right:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 12856027595.2/69

Right Out:  $0.002 \pm 0.000$

$\chi^2/\text{NDF}$ : 3044234546.8/36

In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 9910471158.4/55

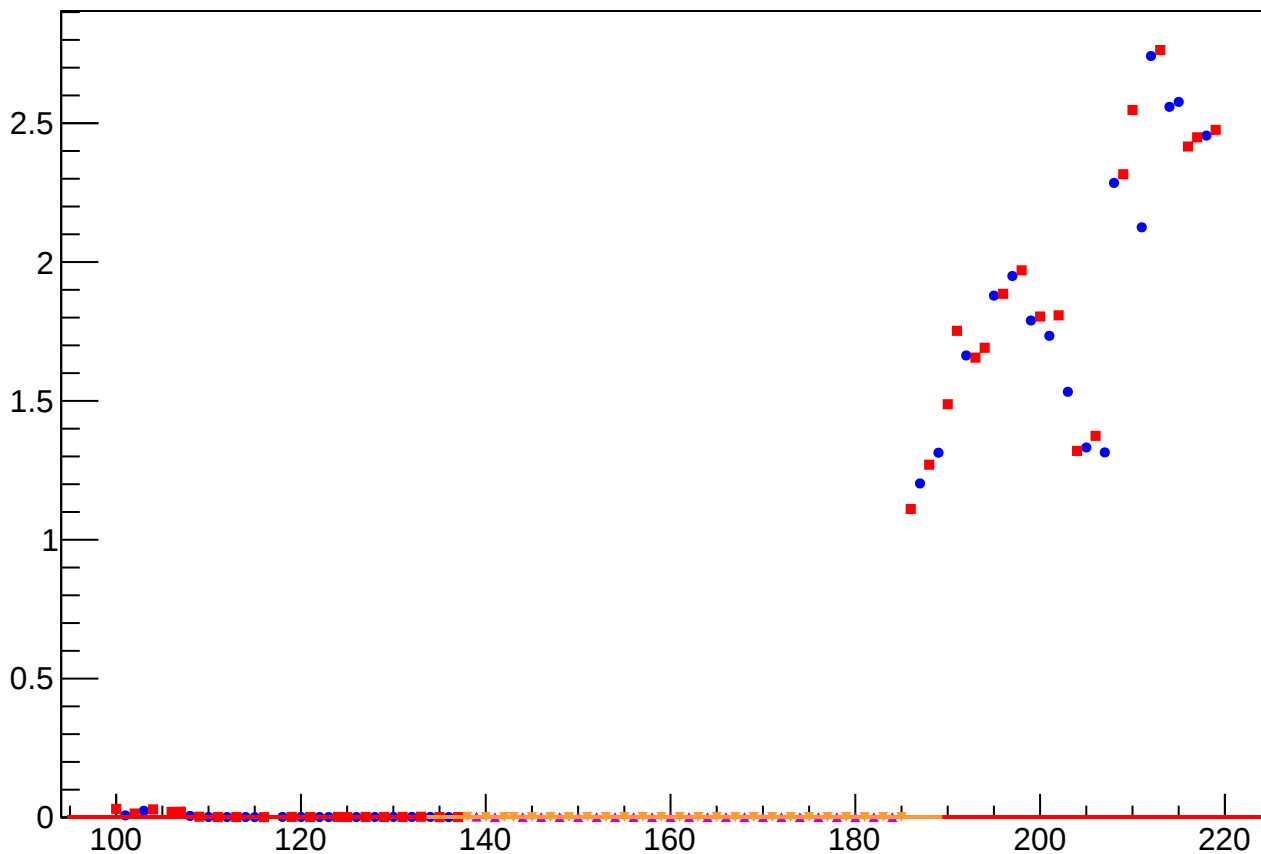
Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 3200453026.5/61

Left In:  $0.001 \pm 0.000$

$\chi^2/\text{NDF}$ : 101439617.3/22

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 13111261156.2/131

# yield\_cav4cX\_rms vs Slug, Sign Corrected



Right In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 24267669.8/32

Left Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ :539817.3/24

Right Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 27127696.3/36

Left In: 0.001+/-0.000  $\chi^2/\text{NDF}$ :626044.8/22

Left: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 1169603.9/47

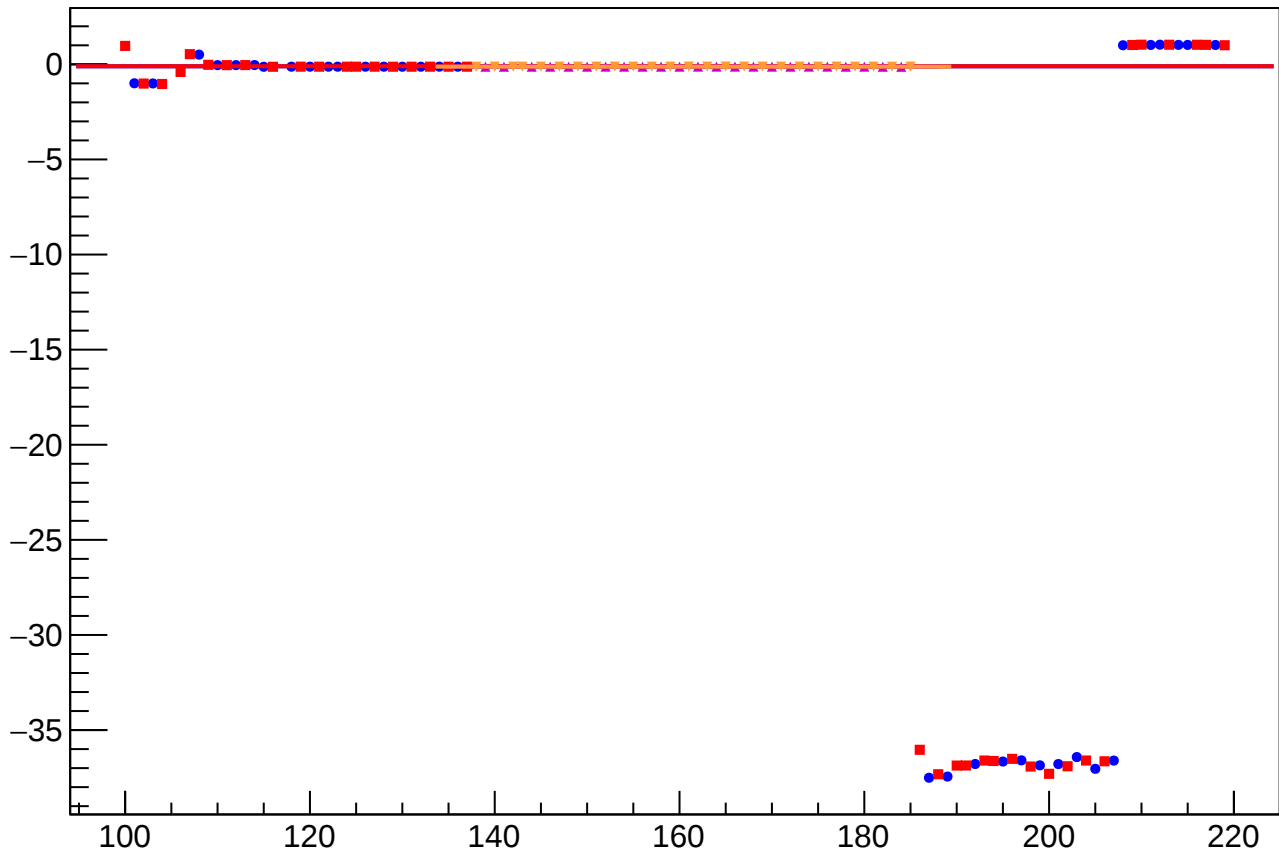
Right: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 51403912.9/69

In: 0.002+/-0.000  $\chi^2/\text{NDF}$ :24946289.4/55

Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ :27808091.1/61

All: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 52755294.0/117

# yield\_cav4cY\_mean vs Slug, Sign Corrected



Right In: -0.104+/-0.000  $\chi^2/\text{NDF}: 102054775901.4/32$

Left Out: -0.121+/-0.000  $\chi^2/\text{NDF}: 58120109.3/24$

Right Out: -0.099+/-0.000  $\chi^2/\text{NDF}: 106352518452.6/36$

Left In: -0.121+/-0.000  $\chi^2/\text{NDF}: 52113932.9/22$

Left: -0.121+/-0.000  $\chi^2/\text{NDF}: 110482905.6/47$

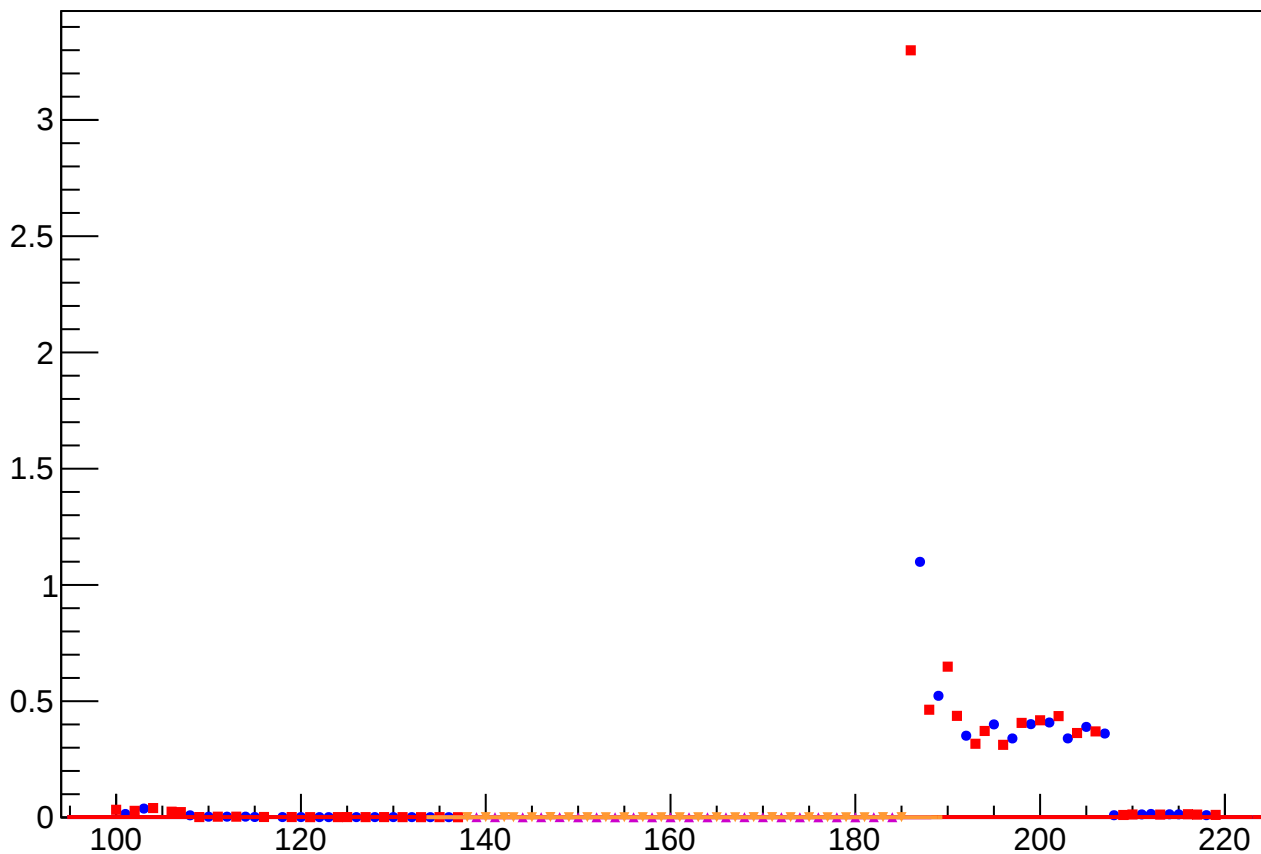
Right: -0.102+/-0.000  $\chi^2/\text{NDF}: 208437407634.6/69$

In: -0.119+/-0.000  $\chi^2/\text{NDF}: 102580637696.0/55$

Out: -0.119+/-0.000  $\chi^2/\text{NDF}: 107276516158.6/61$

All: -0.119+/-0.000  $\chi^2/\text{NDF}: 209857924959.8$

# yield\_cav4cY\_rms vs Slug, Sign Corrected



Right In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 22302551.0/32

Left Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ :1363316.8/24

Right Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 24862143.0/36

Left In: 0.001+/-0.000  $\chi^2/\text{NDF}$ :970801.8/22

Left: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 2335161.7/47

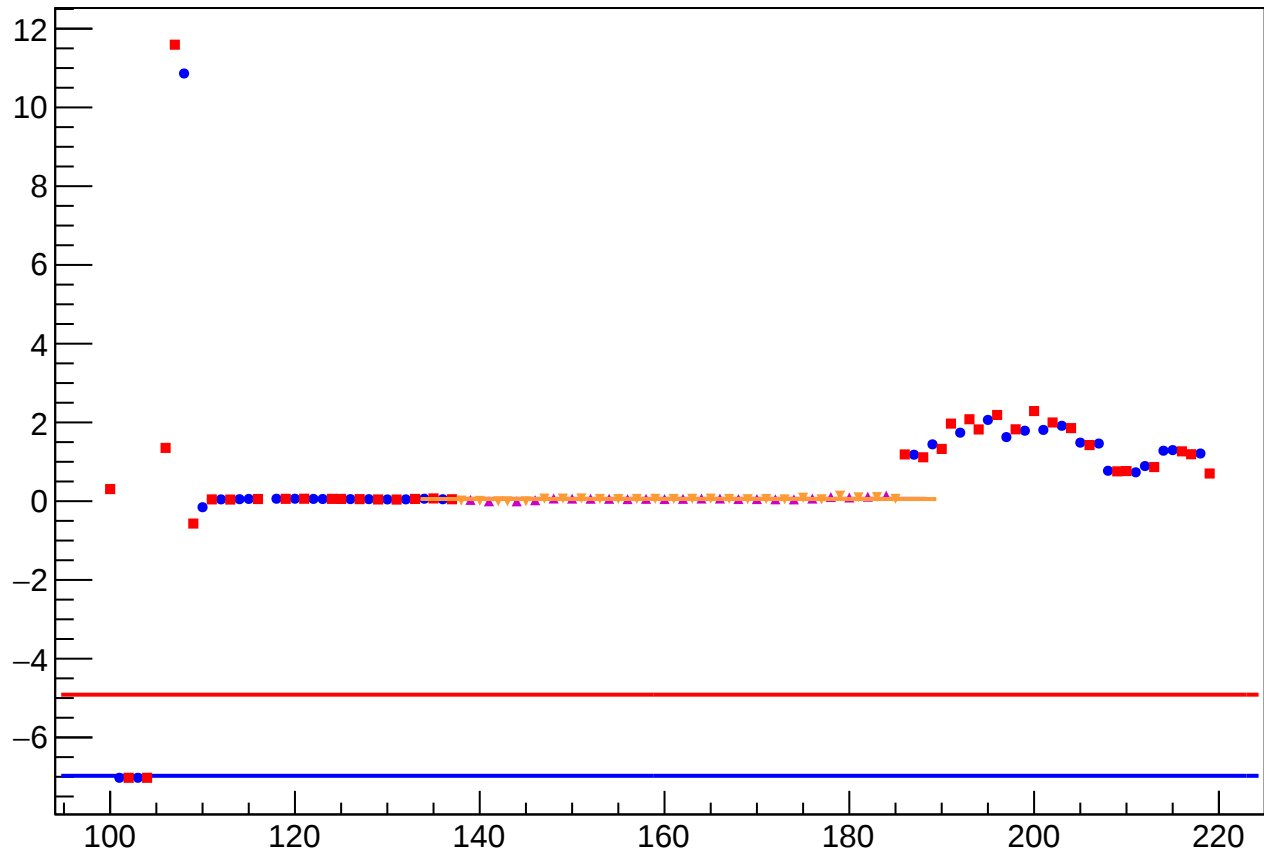
Right: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 47164695.1/69

In: 0.001+/-0.000  $\chi^2/\text{NDF}$ :25160024.7/55

Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ :28167517.7/61

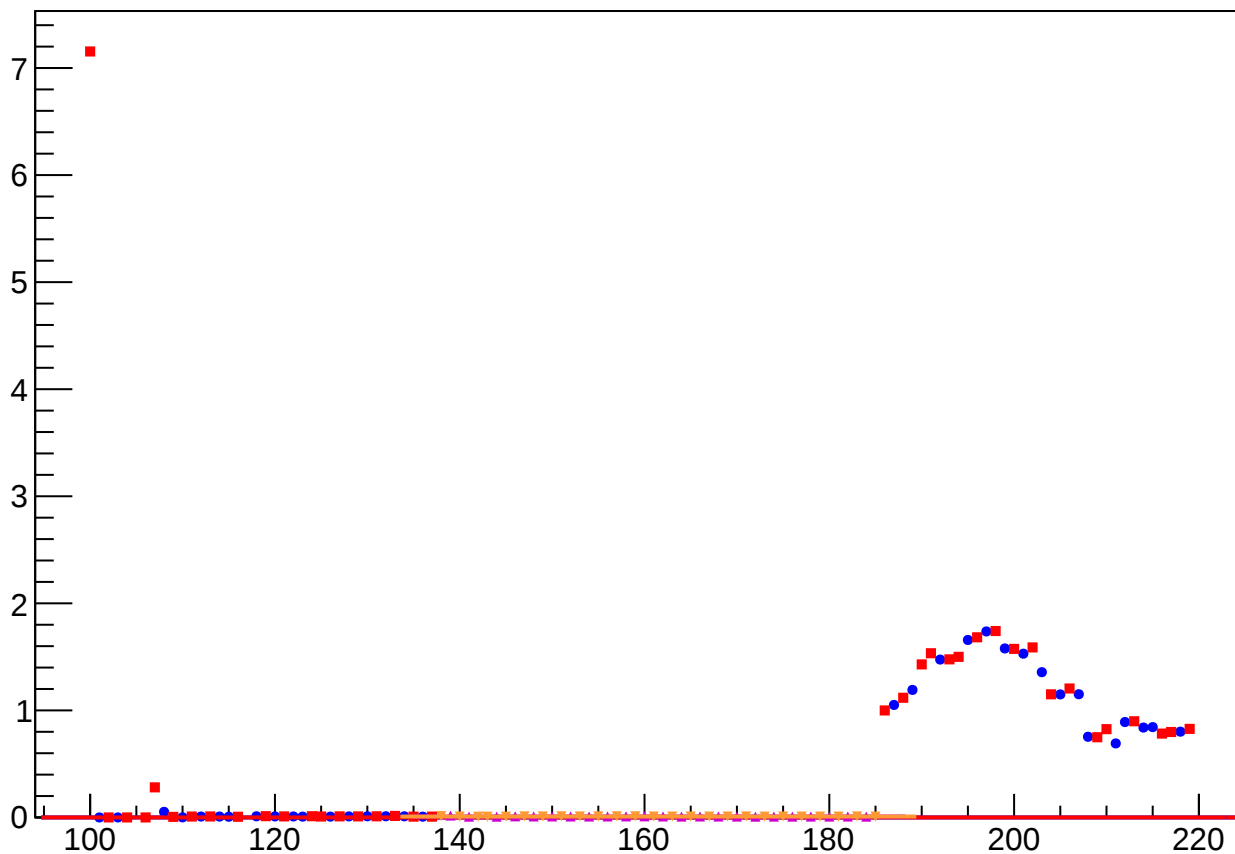
All: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 53330172.1/117

# yield\_cav4dX\_mean vs Slug, Sign Corrected



Right In:  $-6.975 \pm 0.000$   $\chi^2/\text{NDF}: 8798057409850.7/32$  Left:  $0.057 \pm 0.000$   $\chi^2/\text{NDF}: 423736513.4/47$   
 Left Out:  $0.055 \pm 0.000$   $\chi^2/\text{NDF}: 243682351.4/24$  Right:  $-5.900 \pm 0.000$   $\chi^2/\text{NDF}: 430334340724273.4$   
 Right Out:  $-4.914 \pm 0.000$   $\chi^2/\text{NDF}: 365353061829329.8/36$  In:  $-6.926 \pm 0.000$   $\chi^2/\text{NDF}: 17553569545233.9/55$   
 Left In:  $0.059 \pm 0.000$   $\chi^2/\text{NDF}: 178541521.9/22$  Out:  $-4.879 \pm 0.000$   $\chi^2/\text{NDF}: 370165621987531.8/36$   
 All:  $-5.858 \pm 0.000$   $\chi^2/\text{NDF}: 4435296226694$

# yield\_cav4dX\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 30720869.7/32

Left Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ :514432.8/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 32919688.9/36

Left In: 0.009+/-0.000  $\chi^2/\text{NDF}$ :602517.2/22

Left: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 1122225.0/47

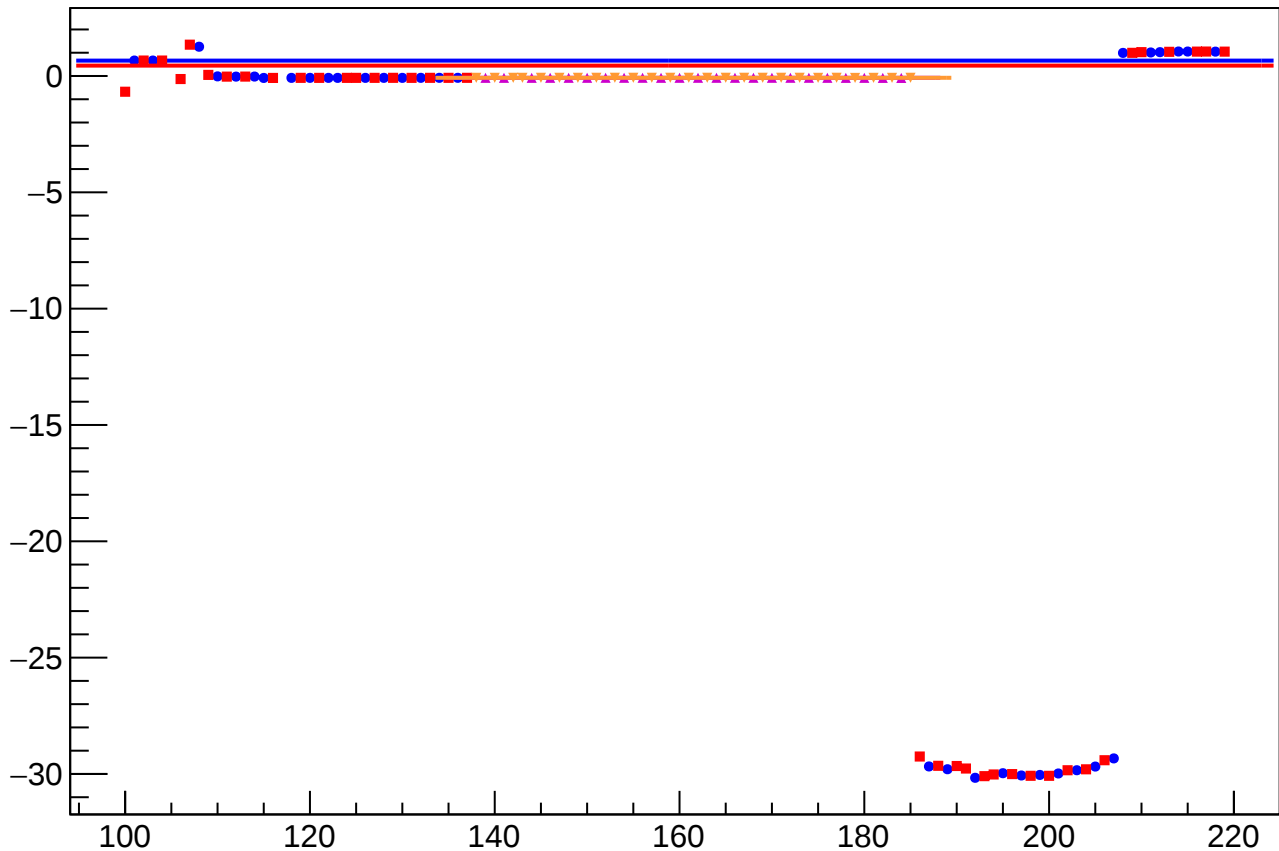
Right: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 63640911.6/69

In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :58137348.4/55

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :61862367.4/61

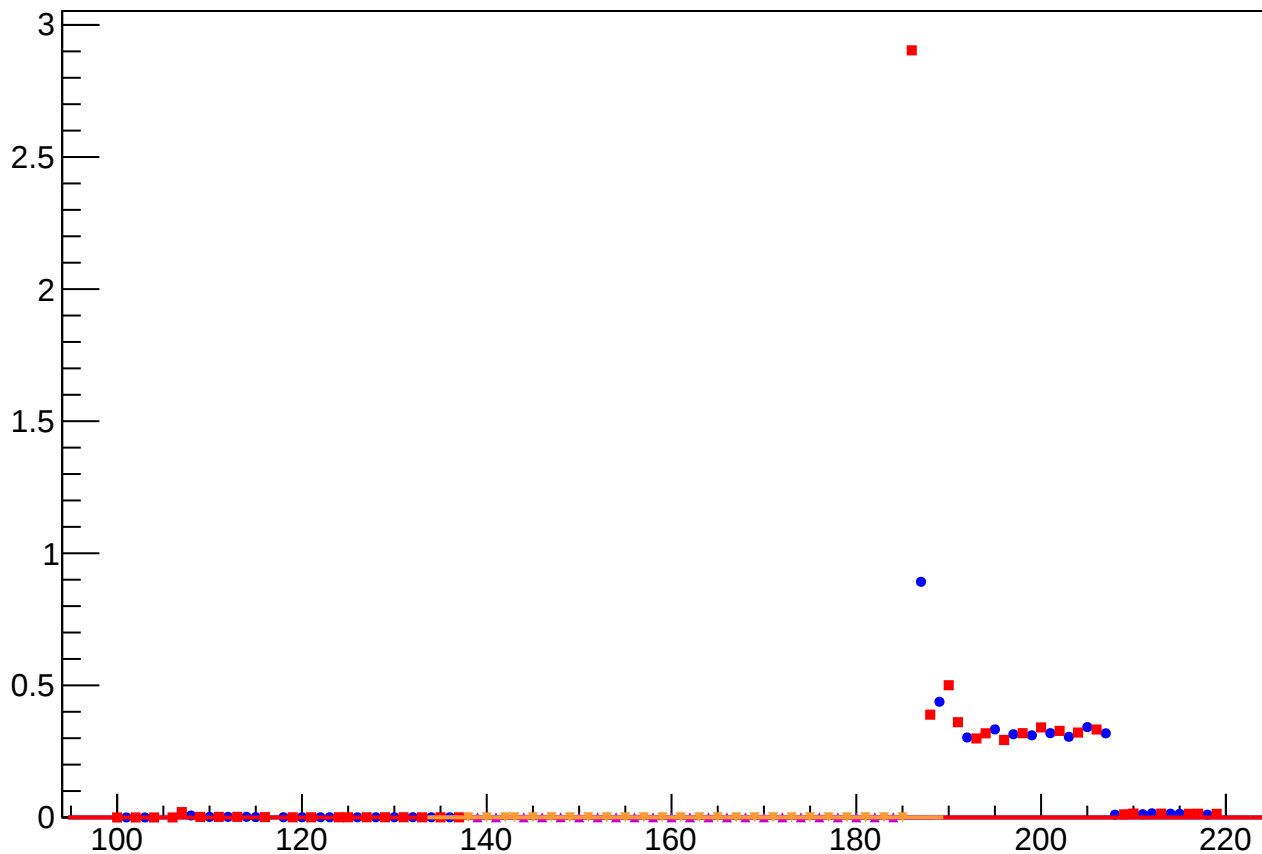
All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 120000186.5/117

# yield\_cav4dY\_mean vs Slug, Sign Corrected



|                          |                                            |                      |                                           |
|--------------------------|--------------------------------------------|----------------------|-------------------------------------------|
| Right In: 0.661+/-0.000  | $\chi^2/\text{NDF}$ : 5722771761786.8/32   | Left: -0.078+/-0.000 | $\chi^2/\text{NDF}$ : 267206251.1/47      |
| Left Out: -0.078+/-0.000 | $\chi^2/\text{NDF}$ : 156404795.7/24       | Right: 0.549+/-0.000 | $\chi^2/\text{NDF}$ : 474134414309759.6   |
| Right Out: 0.446+/-0.000 | $\chi^2/\text{NDF}$ : 405498407383097.8/36 | In: 0.647+/-0.000    | $\chi^2/\text{NDF}$ : 33763735451952.7/55 |
| Left In: -0.077+/-0.000  | $\chi^2/\text{NDF}$ : 110762924.1/22       | Out: 0.436+/-0.000   | $\chi^2/\text{NDF}$ : 420659760606579.2/6 |
|                          |                                            | All: 0.537+/-0.000   | $\chi^2/\text{NDF}$ : 5159793856056       |

# yield\_cav4dY\_rms vs Slug, Sign Corrected



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 31936366.9/32

Left Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 465981.8/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 33424073.6/36

Left In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 355509.7/22

Left: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 822503.5/47

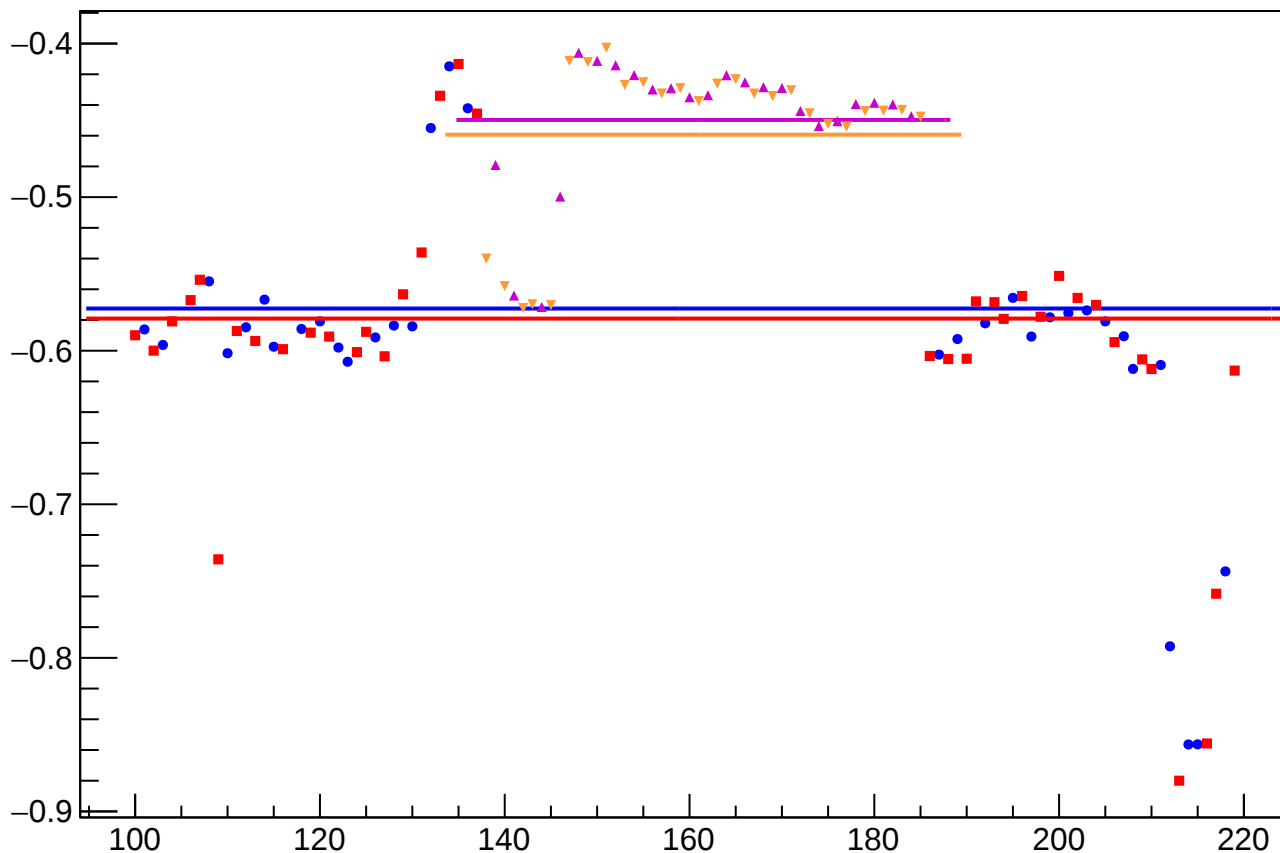
Right: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 65360463.1/69

In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 62654679.8/55

Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 66032122.1/61

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 128687167.4/117

# yield\_bpm4aX\_mean vs Slug, Sign Corrected



Right In: -0.573+/-0.000  $\chi^2/\text{NDF}$ : 114473760.8/32

Left Out: -0.459+/-0.000  $\chi^2/\text{NDF}$ : 113602161.0/24

Right Out: -0.579+/-0.000  $\chi^2/\text{NDF}$ : 120116739.0/36

Left In: -0.450+/-0.000  $\chi^2/\text{NDF}$ : 76117957.8/22

Left: -0.455+/-0.000  $\chi^2/\text{NDF}$ : 191493218.8/47

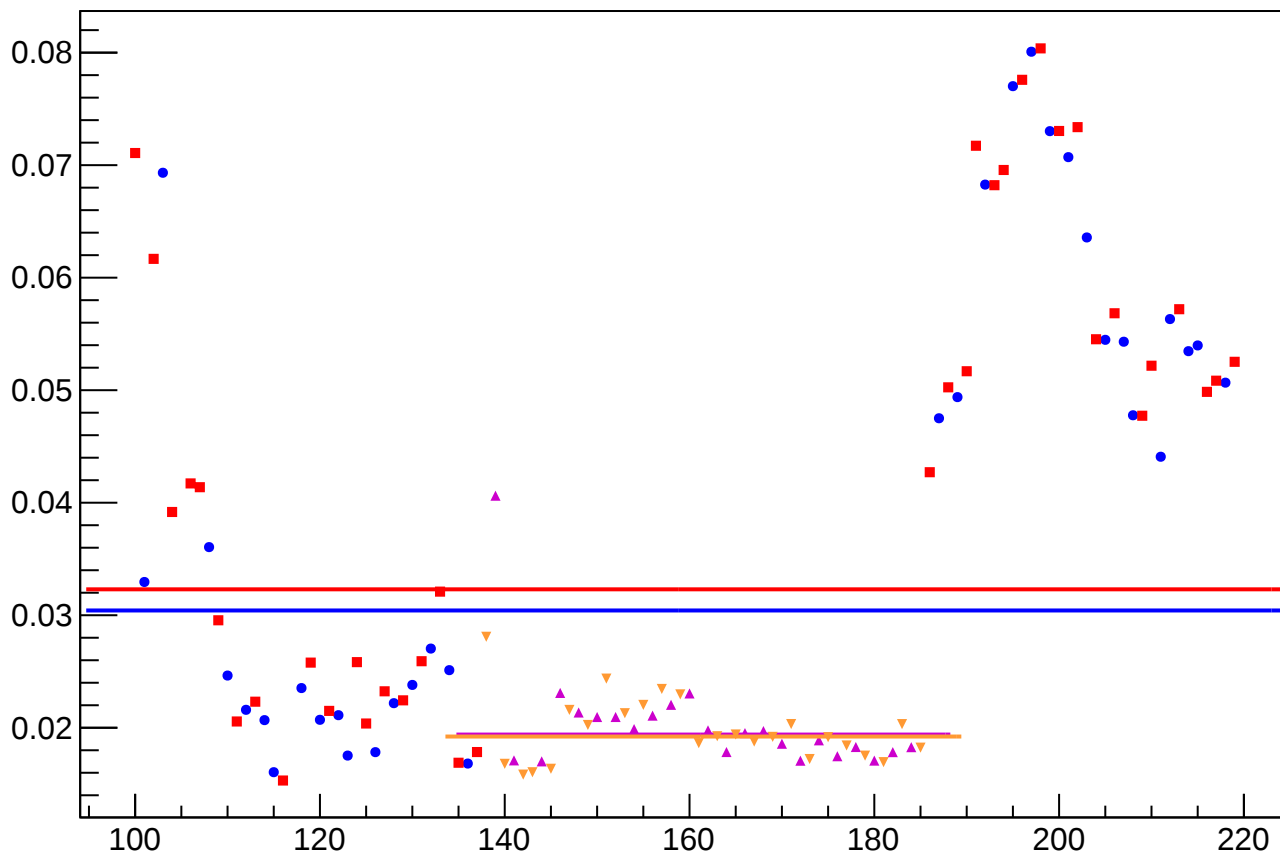
Right: -0.576+/-0.000  $\chi^2/\text{NDF}$ : 234883187.8/69

In: -0.483+/-0.000  $\chi^2/\text{NDF}$ : 343189870.4/55

Out: -0.489+/-0.000  $\chi^2/\text{NDF}$ : 378408322.5/61

All: -0.486+/-0.000  $\chi^2/\text{NDF}$ : 722592927.0/11

# yield\_bpm4aX\_rms vs Slug, Sign Corrected



Right In: 0.030 $\pm$ 0.000  $\chi^2$ /NDF: 7788090.8/32

Left Out: 0.019 $\pm$ 0.000  $\chi^2$ /NDF:501711.6/24

Right Out: 0.032 $\pm$ 0.000  $\chi^2$ /NDF: 7821173.0/36

Left In: 0.019 $\pm$ 0.000  $\chi^2$ /NDF:626443.5/22

Left: 0.019 $\pm$ 0.000  $\chi^2$ /NDF: 1129330.7/47

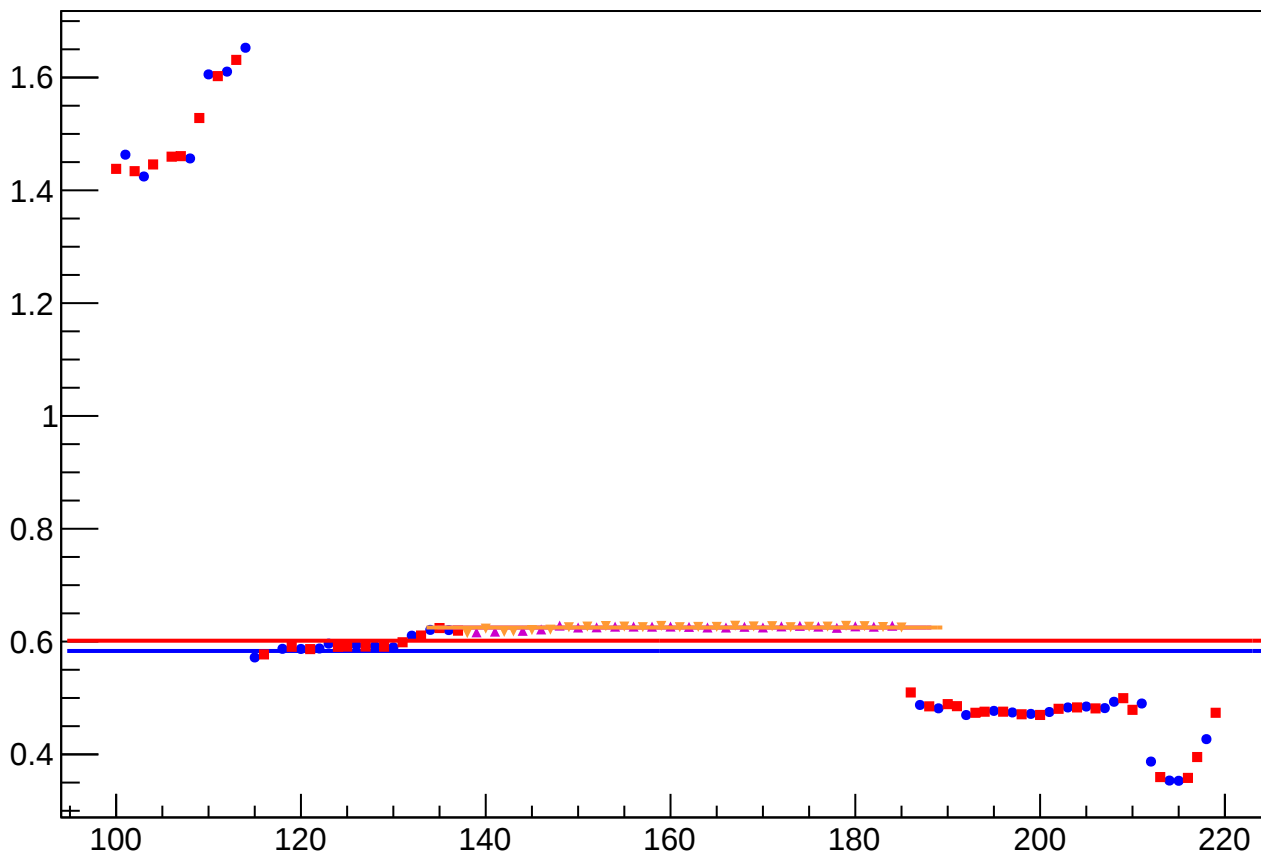
Right: 0.031 $\pm$ 0.000  $\chi^2$ /NDF: 15657601.3/69

In: 0.022 $\pm$ 0.000  $\chi^2$ /NDF:10876025.3/55

Out: 0.023 $\pm$ 0.000  $\chi^2$ /NDF:11776362.6/61

All: 0.022 $\pm$ 0.000  $\chi^2$ /NDF: 22652941.8/117

# yield\_bpm4aY\_mean vs Slug, Sign Corrected



Right In: 0.583+/-0.000  $\chi^2/\text{NDF}$ : 5586823035.9/32

Left Out: 0.625+/-0.000  $\chi^2/\text{NDF}$ :1445169.1/24

Right Out: 0.602+/-0.000  $\chi^2/\text{NDF}$ : 6625391227.3/36

Left In: 0.625+/-0.000  $\chi^2/\text{NDF}$ :1143954.1/22

Left: 0.625+/-0.000  $\chi^2/\text{NDF}$ : 2589565.7/47

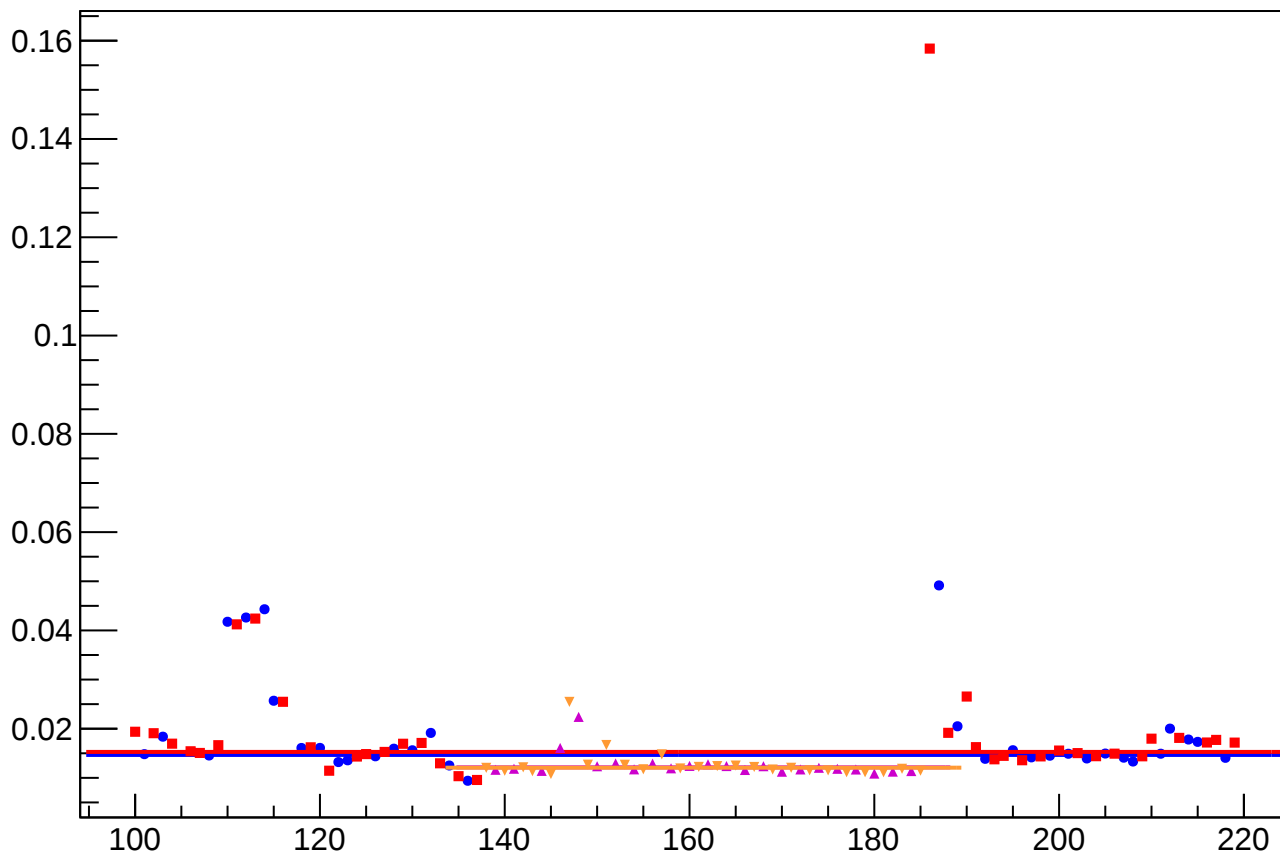
Right: 0.592+/-0.000  $\chi^2/\text{NDF}$ : 12224734992.8/69

In: 0.608+/-0.000  $\chi^2/\text{NDF}$ :5666524698.5/55

Out: 0.616+/-0.000  $\chi^2/\text{NDF}$ :6652115320.5/61

All: 0.612+/-0.000  $\chi^2/\text{NDF}$ : 12324600687.9/131

# yield\_bpm4aY\_rms vs Slug, Sign Corrected



Right In:  $0.015 \pm 0.000$   $\chi^2/\text{NDF}: 1845486.2/32$

Left Out:  $0.012 \pm 0.000$   $\chi^2/\text{NDF}: 657199.9/24$

Right Out:  $0.015 \pm 0.000$   $\chi^2/\text{NDF}: 2234188.2/36$

Left In:  $0.012 \pm 0.000$   $\chi^2/\text{NDF}: 488363.6/22$

Left:  $0.012 \pm 0.000$   $\chi^2/\text{NDF}: 1146061.0/47$

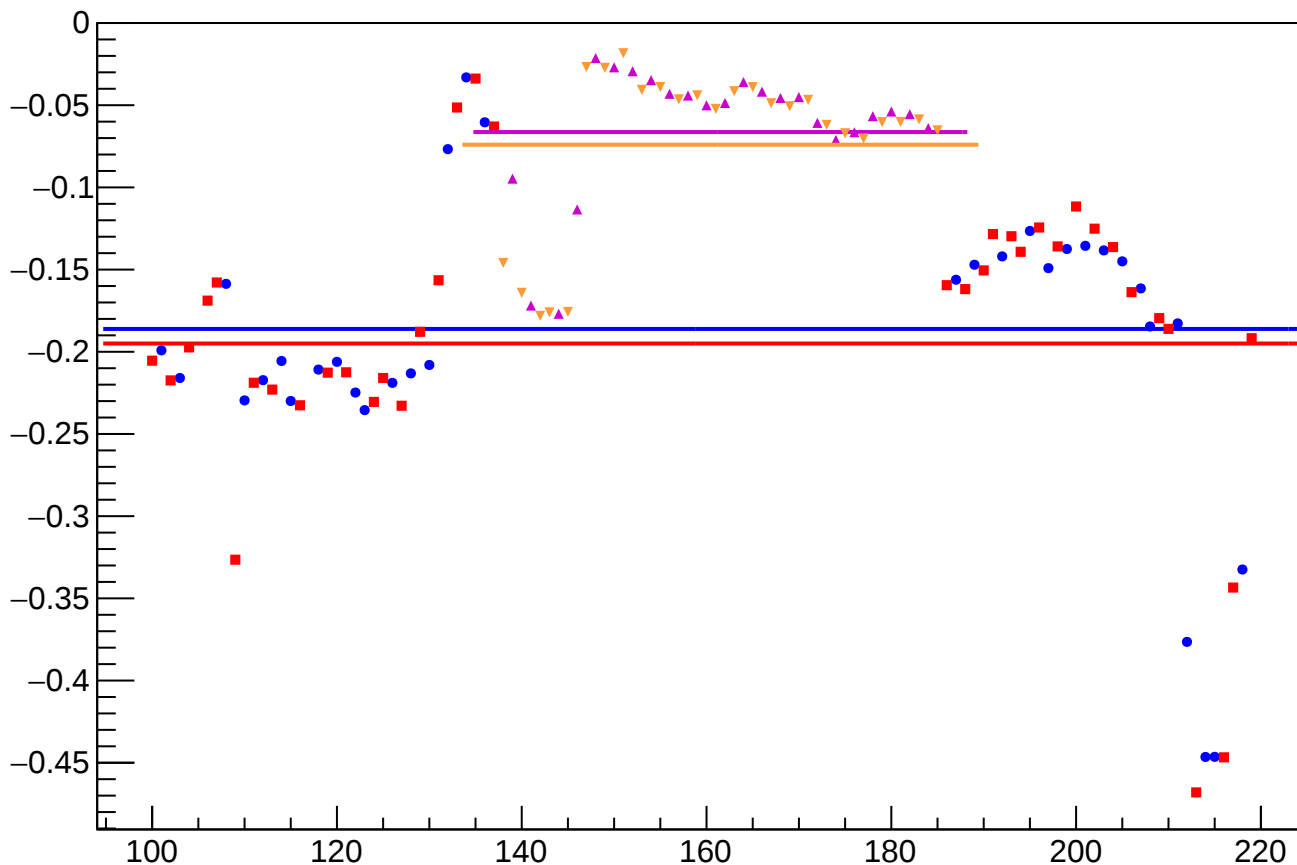
Right:  $0.015 \pm 0.000$   $\chi^2/\text{NDF}: 4108097.6/69$

In:  $0.013 \pm 0.000$   $\chi^2/\text{NDF}: 2918324.8/55$

Out:  $0.013 \pm 0.000$   $\chi^2/\text{NDF}: 3843728.2/61$

All:  $0.013 \pm 0.000$   $\chi^2/\text{NDF}: 6765924.6/117$

# yield\_bpm4eX\_mean vs Slug, Sign Corrected



Right In: -0.186+/-0.000  $\chi^2/\text{NDF}$ : 127699386.1/32

Left Out: -0.074+/-0.000  $\chi^2/\text{NDF}$ : 107676601.9/24

Right Out: -0.195+/-0.000  $\chi^2/\text{NDF}$ : 134432015.8/36

Left In: -0.066+/-0.000  $\chi^2/\text{NDF}$ : 76243051.8/22

Left: -0.070+/-0.000  $\chi^2/\text{NDF}$ : 185076997.5/47

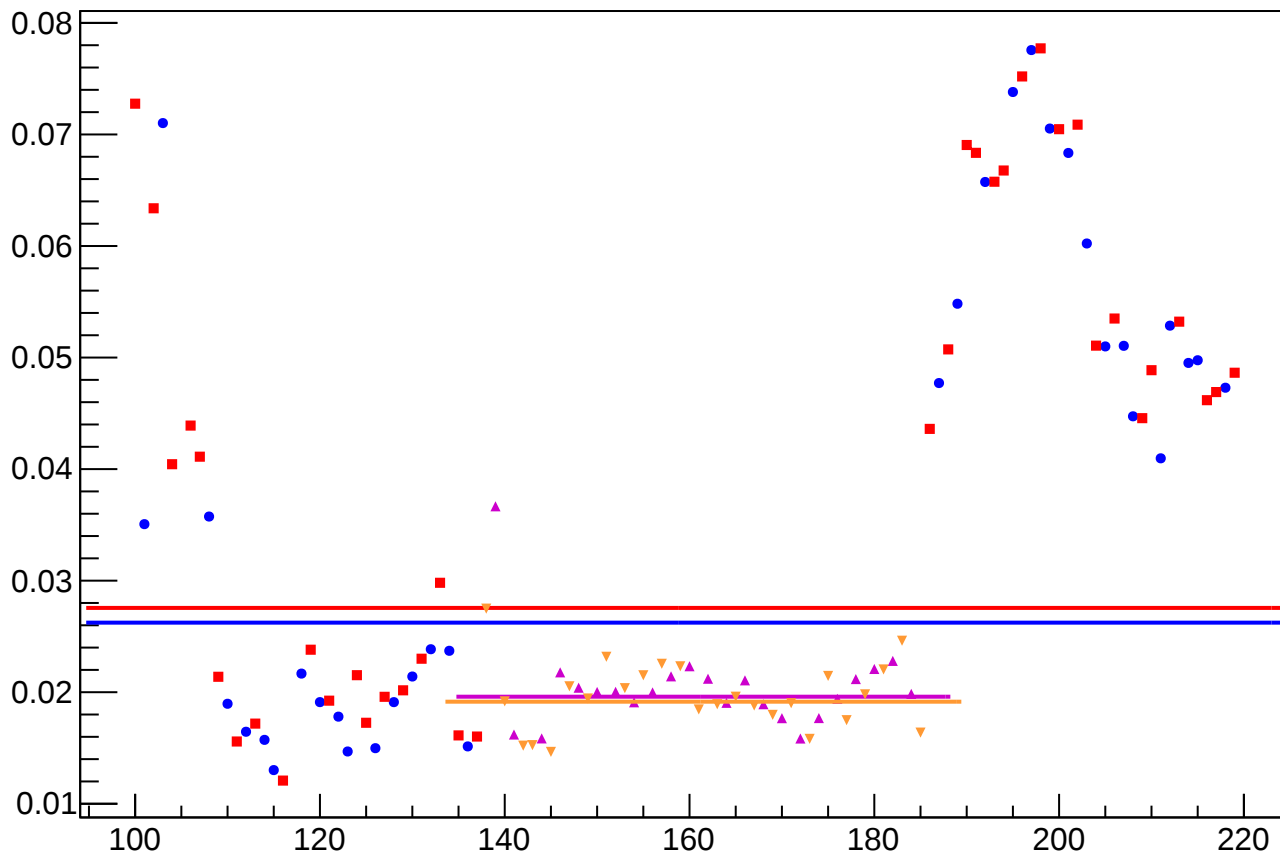
Right: -0.190+/-0.000  $\chi^2/\text{NDF}$ : 262821194.2/69

In: -0.105+/-0.000  $\chi^2/\text{NDF}$ : 376251609.8/55

Out: -0.110+/-0.000  $\chi^2/\text{NDF}$ : 420683340.1/61

All: -0.108+/-0.000  $\chi^2/\text{NDF}$ : 797603766.5/111

# yield\_bpm4eX\_rms vs Slug, Sign Corrected



Right In: 0.026 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 9130494.8/32

Left Out: 0.019 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 641277.0/24

Right Out: 0.028 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 9581688.9/36

Left In: 0.020 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 623148.2/22

Left: 0.019 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1272240.9/47

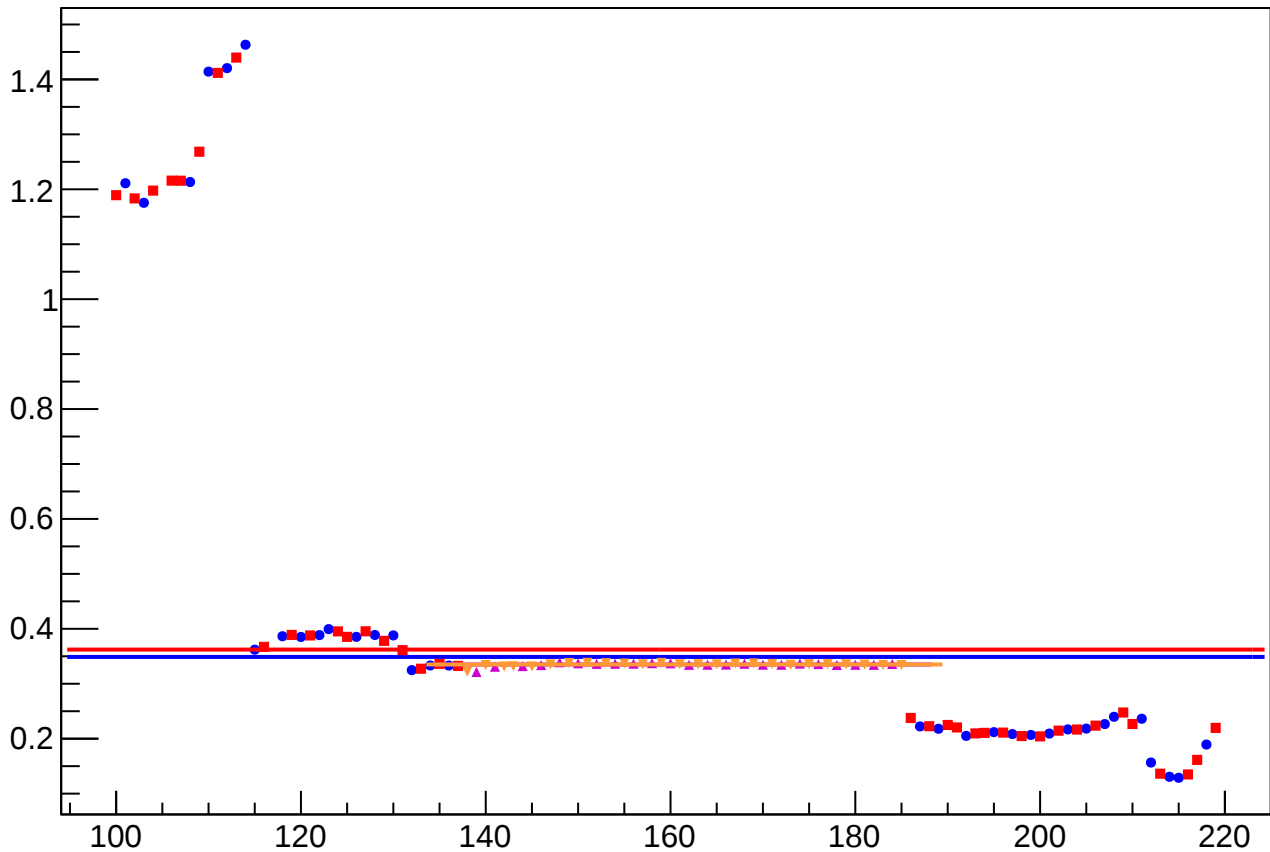
Right: 0.027 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 18742794.1/69

In: 0.022 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 10812440.8/55

Out: 0.022 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 11948830.4/61

All: 0.022 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 22761828.7/117

# yield\_bpm4eY\_mean vs Slug, Sign Corrected



Right In: 0.349+/-0.000  $\chi^2/\text{NDF}$ : 8045769490.3/32

Left Out: 0.335+/-0.000  $\chi^2/\text{NDF}$ : 1154310.3/24

Right Out: 0.362+/-0.000  $\chi^2/\text{NDF}$ : 9132859124.2/36

Left In: 0.335+/-0.000  $\chi^2/\text{NDF}$ : 1202194.8/22

Left: 0.335+/-0.000  $\chi^2/\text{NDF}$ : 2356931.1/47

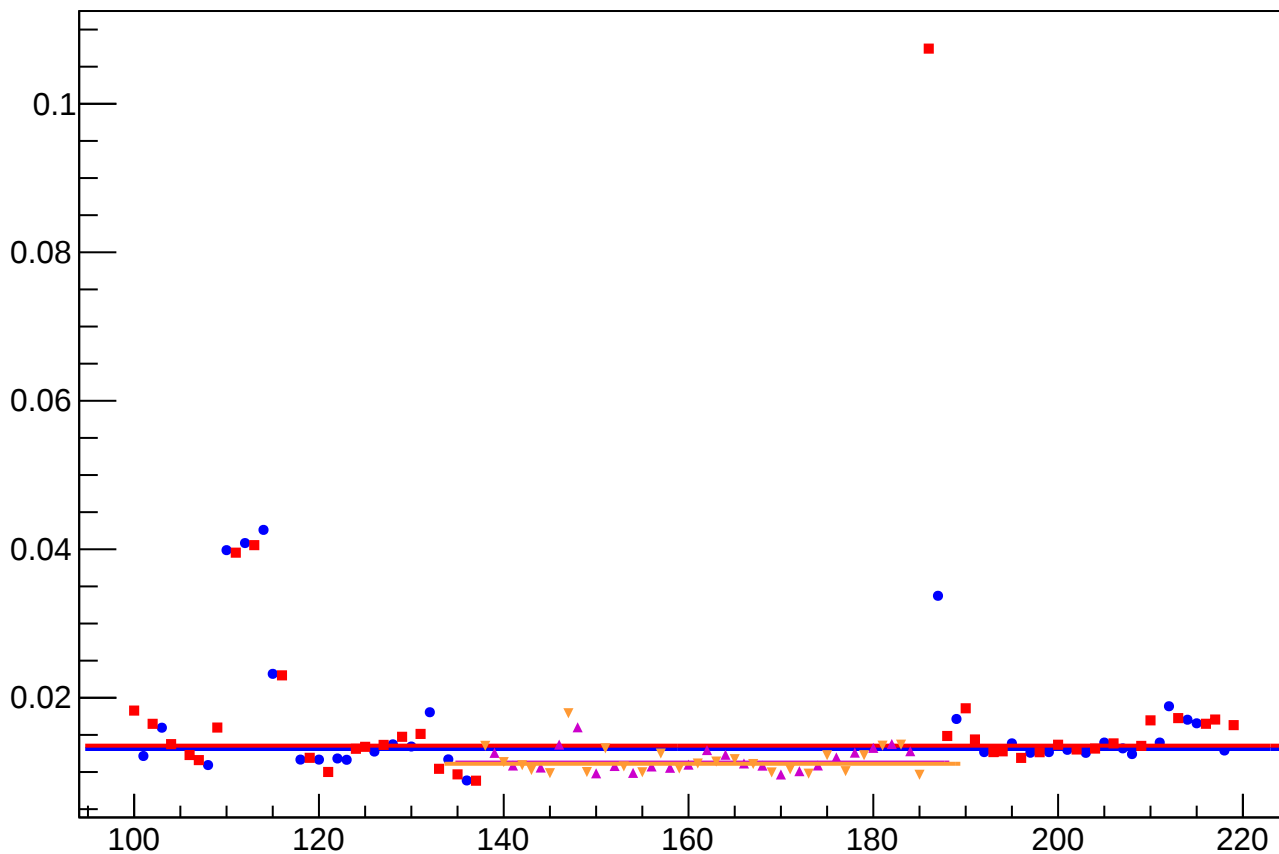
Right: 0.355+/-0.000  $\chi^2/\text{NDF}$ : 17187164071.8/69

In: 0.341+/-0.000  $\chi^2/\text{NDF}$ : 8057442786.7/55

Out: 0.346+/-0.000  $\chi^2/\text{NDF}$ : 9175678142.4/61

All: 0.343+/-0.000  $\chi^2/\text{NDF}$ : 17236114854.0/131

# yield\_bpm4eY\_rms vs Slug, Sign Corrected



Right In: 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 1827546.3/32

Left Out: 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 607532.0/24

Right Out: 0.014 $\pm$ 0.000  $\chi^2$ /NDF: 2259849.5/36

Left In: 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 502455.5/22

Left: 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 1113465.5/47

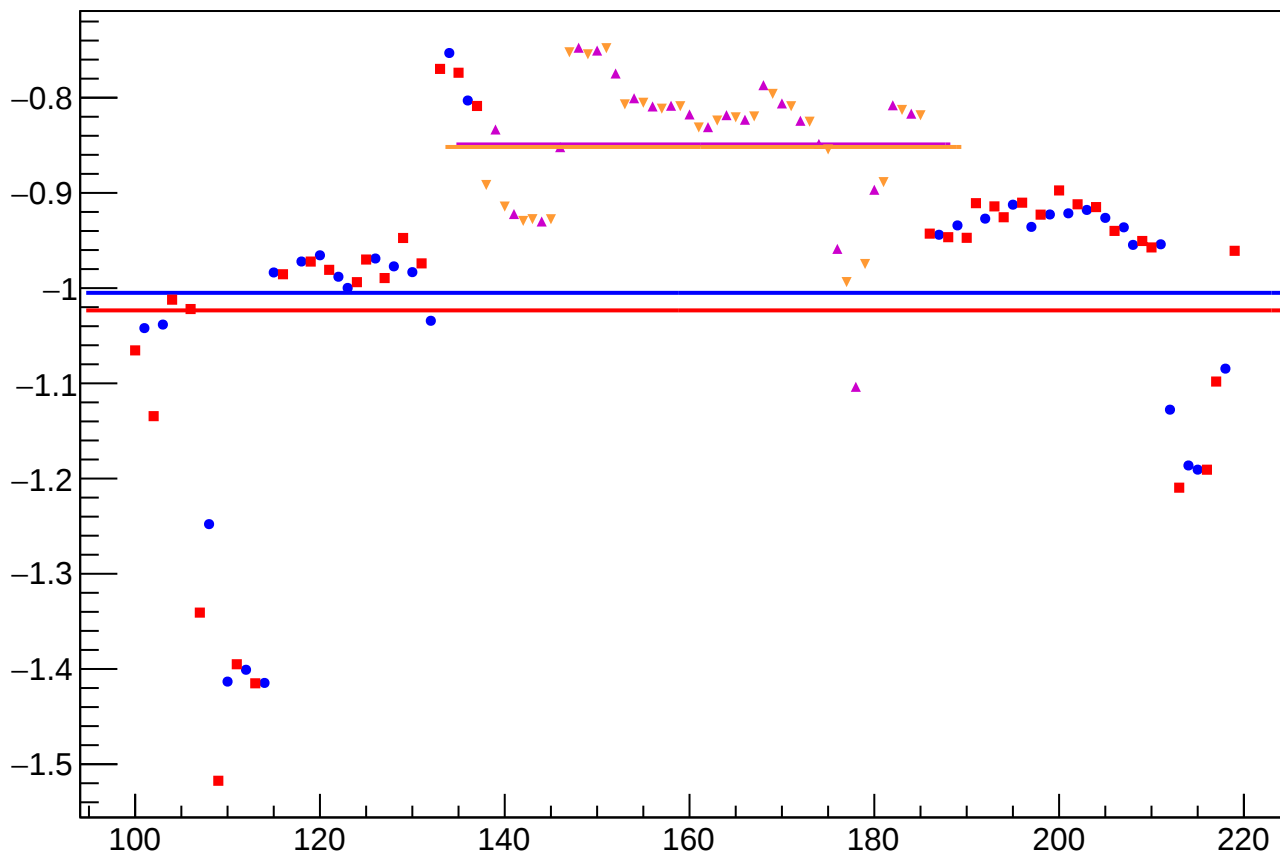
Right: 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 4106576.1/69

In: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 2698515.6/55

Out: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 3541760.7/61

All: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 6240669.3/117

# yield\_bpm4acX\_mean vs Slug, Sign Corrected



Right In:  $-1.005 \pm 0.000$   $\chi^2/\text{NDF}: 429220680.3/32$

Left Out:  $-0.852 \pm 0.000$   $\chi^2/\text{NDF}: 189103962.4/24$

Right Out:  $-1.023 \pm 0.000$   $\chi^2/\text{NDF}: 579307531.4/36$

Left In:  $-0.849 \pm 0.000$   $\chi^2/\text{NDF}: 256391274.4/22$

Left:  $-0.850 \pm 0.000$   $\chi^2/\text{NDF}: 445636655.2/47$

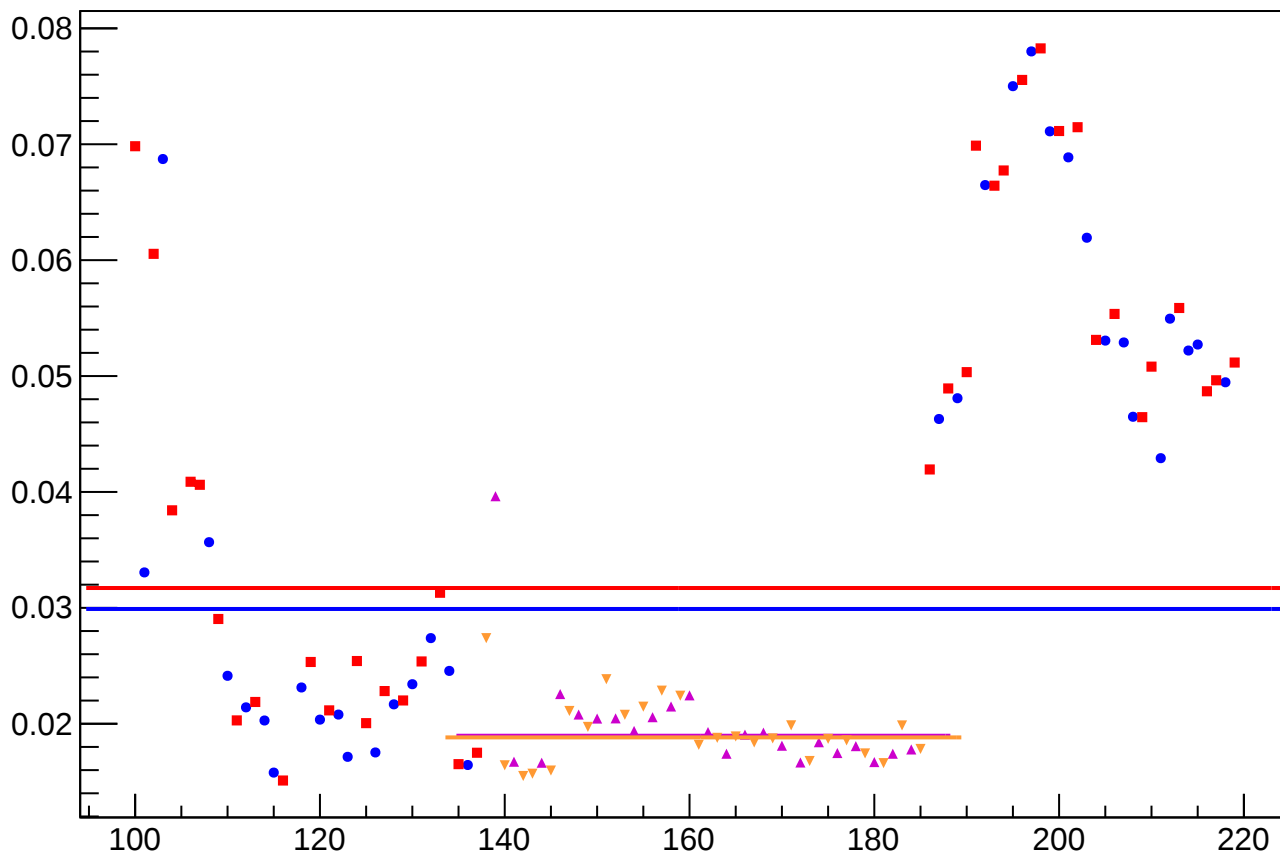
Right:  $-1.014 \pm 0.000$   $\chi^2/\text{NDF}: 1010946365.7/69$

In:  $-0.891 \pm 0.000$   $\chi^2/\text{NDF}: 941281842.8/55$

Out:  $-0.895 \pm 0.000$   $\chi^2/\text{NDF}: 1077640234.3/61$

All:  $-0.893 \pm 0.000$   $\chi^2/\text{NDF}: 2019242682.8/117$

# yield\_bpm4acX\_rms vs Slug, Sign Corrected



Right In: 0.030 $\pm$ 0.000  $\chi^2$ /NDF: 7718273.6/32

Left Out: 0.019 $\pm$ 0.000  $\chi^2$ /NDF:490509.4/24

Right Out: 0.032 $\pm$ 0.000  $\chi^2$ /NDF: 7729471.3/36

Left In: 0.019 $\pm$ 0.000  $\chi^2$ /NDF:615173.8/22

Left: 0.019 $\pm$ 0.000  $\chi^2$ /NDF: 1106521.0/47

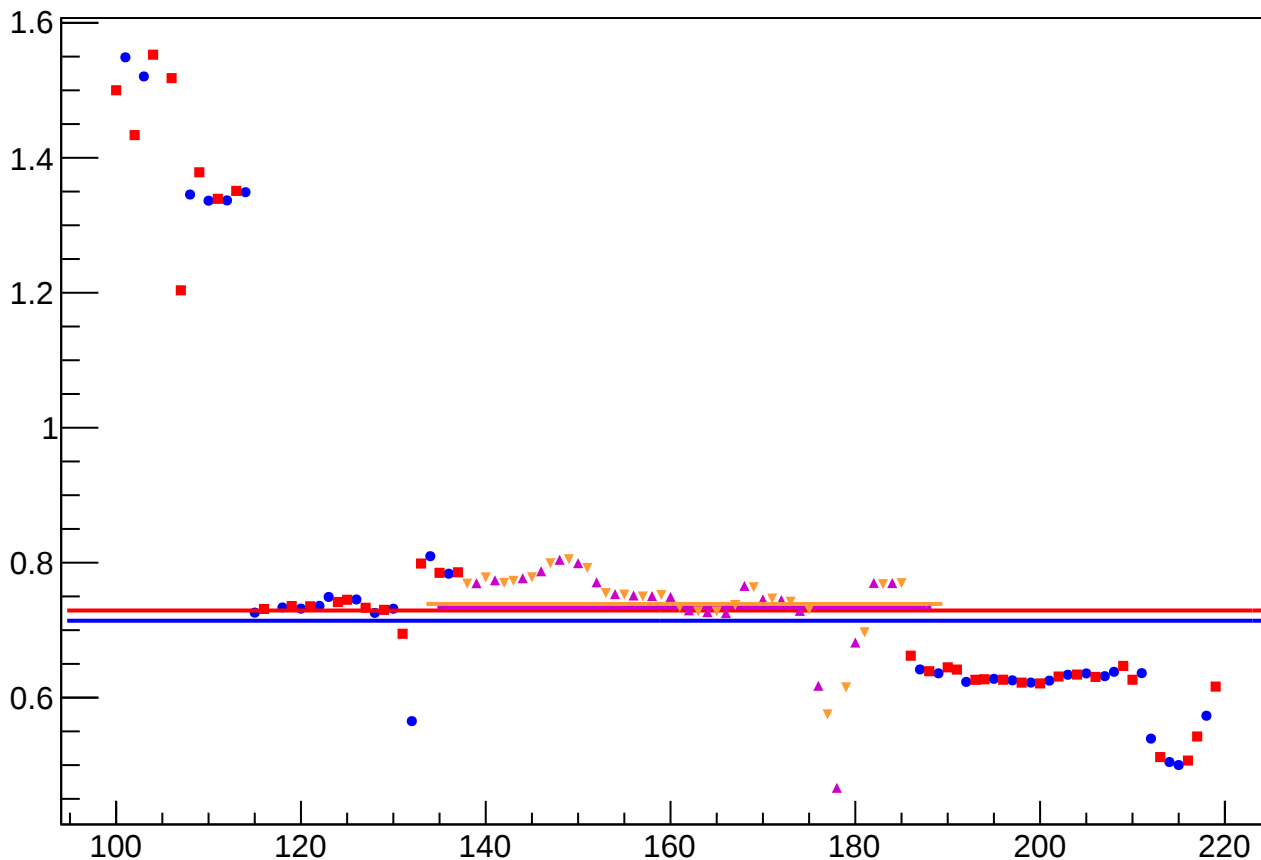
Right: 0.031 $\pm$ 0.000  $\chi^2$ /NDF: 15494286.2/69

In: 0.022 $\pm$ 0.000  $\chi^2$ /NDF:10851325.4/55

Out: 0.022 $\pm$ 0.000  $\chi^2$ /NDF:11707707.0/61

All: 0.022 $\pm$ 0.000  $\chi^2$ /NDF: 22559849.9/117

# yield\_bpm4acY\_mean vs Slug, Sign Corrected



Right In: 0.714 $\pm$ 0.000  $\chi^2$ /NDF: 3901389468.2/32

Left Out: 0.739 $\pm$ 0.000  $\chi^2$ /NDF:333013236.5/24

Right Out: 0.729 $\pm$ 0.000  $\chi^2$ /NDF: 4219427503.1/36

Left In: 0.733 $\pm$ 0.000  $\chi^2$ /NDF:569611347.7/22

Left: 0.736 $\pm$ 0.000  $\chi^2$ /NDF: 904456968.5/47

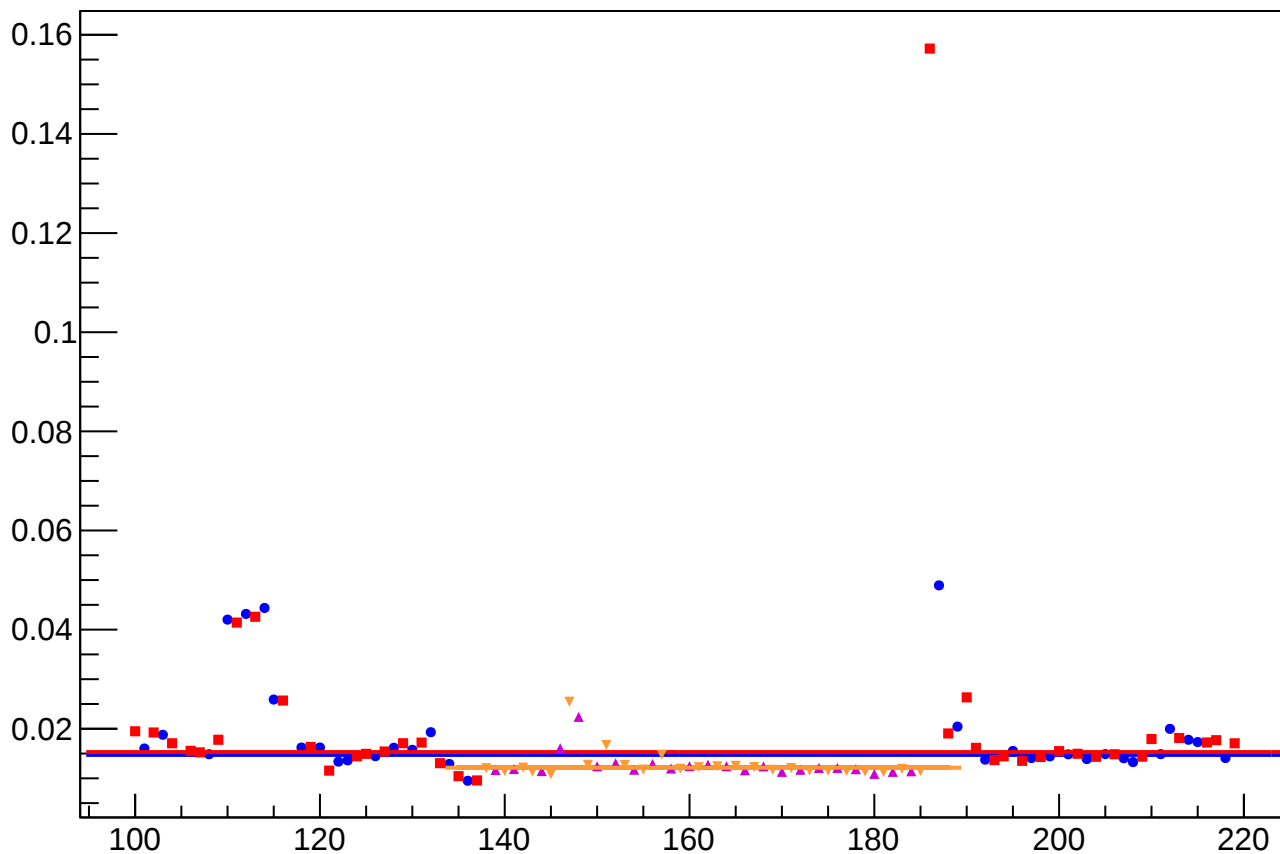
Right: 0.721 $\pm$ 0.000  $\chi^2$ /NDF: 8129460551.4/69

In: 0.725 $\pm$ 0.000  $\chi^2$ /NDF:4487773296.4/55

Out: 0.735 $\pm$ 0.000  $\chi^2$ /NDF:4556781739.4/61

All: 0.730 $\pm$ 0.000  $\chi^2$ /NDF: 9053445509.4/11

# yield\_bpm4acY\_rms vs Slug, Sign Corrected



Right In: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 1840097.6/32

Left Out: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 637986.2/24

Right Out: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 2232824.3/36

Left In: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 481830.1/22

Left: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 1120125.6/47

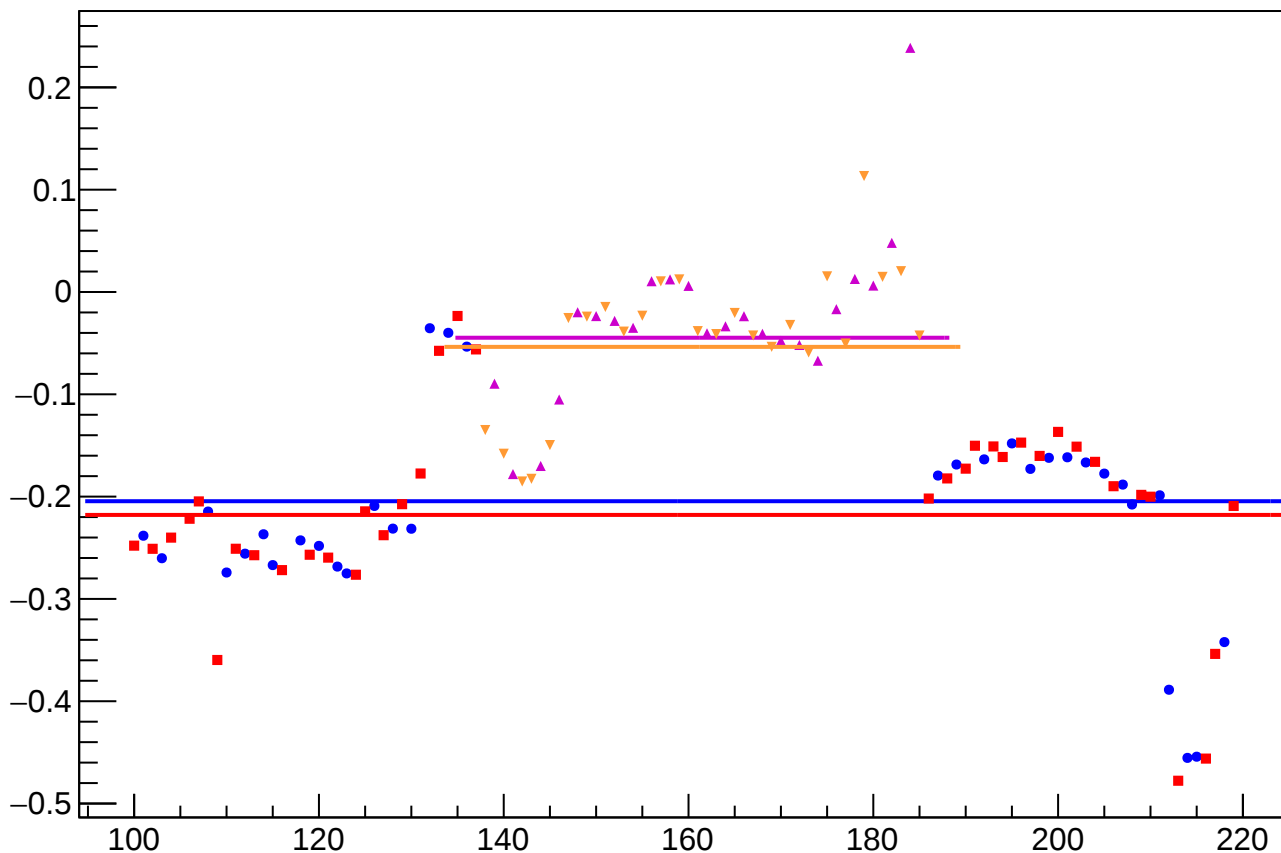
Right: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 4097661.6/69

In: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 2902785.9/55

Out: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 3787798.0/61

All: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 6694439.5/117

# yield\_bpm4ecX\_mean vs Slug, Sign Corrected



Right In:  $-0.204 \pm 0.000$   $\chi^2/\text{NDF}: 160407795.0/32$

Left Out:  $-0.054 \pm 0.000$   $\chi^2/\text{NDF}: 167834173.6/24$

Right Out:  $-0.218 \pm 0.000$   $\chi^2/\text{NDF}: 156272040.9/36$

Left In:  $-0.045 \pm 0.000$   $\chi^2/\text{NDF}: 127192425.2/22$

Left:  $-0.049 \pm 0.000$   $\chi^2/\text{NDF}: 296566503.6/47$

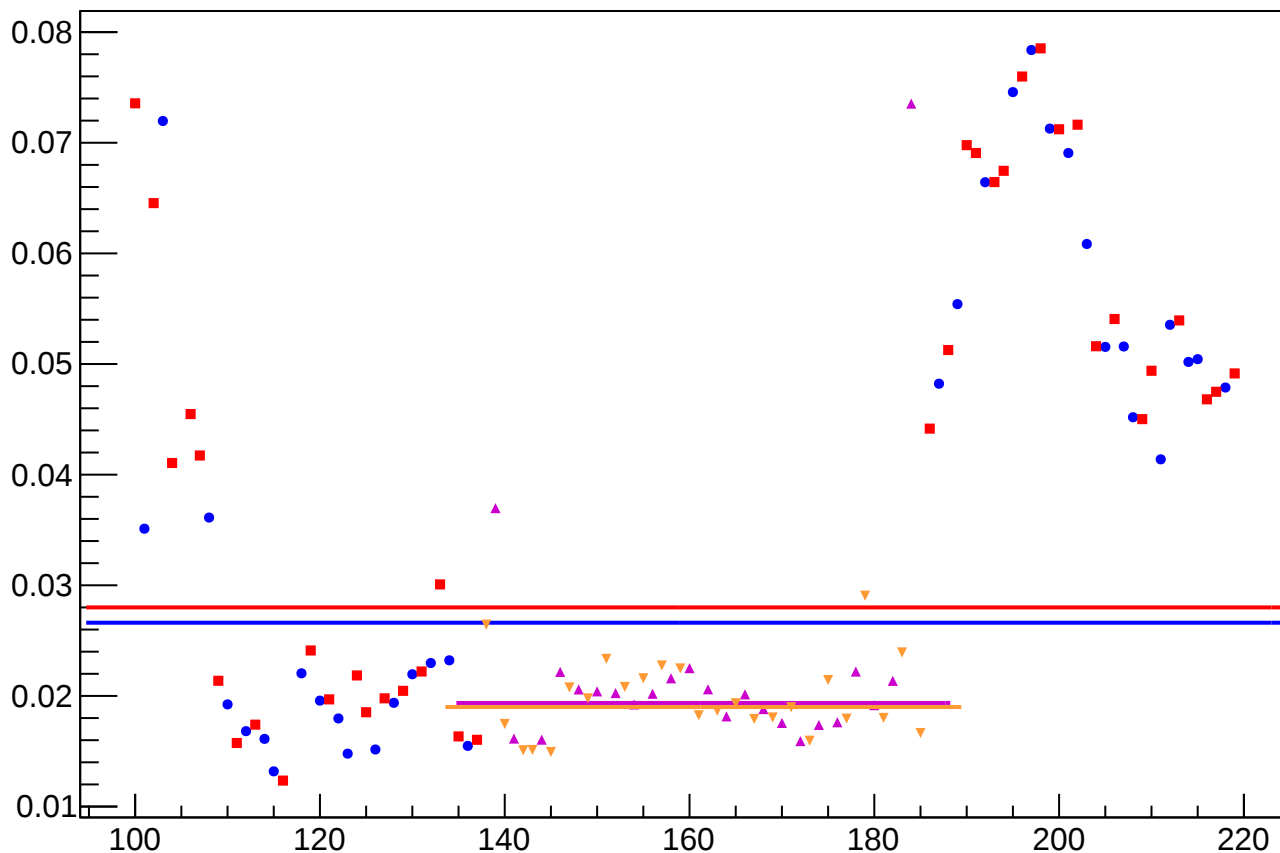
Right:  $-0.211 \pm 0.000$   $\chi^2/\text{NDF}: 318212351.6/69$

In:  $-0.096 \pm 0.000$   $\chi^2/\text{NDF}: 588220518.9/55$

Out:  $-0.102 \pm 0.000$   $\chi^2/\text{NDF}: 645012741.8/61$

All:  $-0.099 \pm 0.000$   $\chi^2/\text{NDF}: 1234325874.1/11$

# yield\_bpm4ecX\_rms vs Slug, Sign Corrected



Right In: 0.027 $\pm$ 0.000  $\chi^2$ /NDF: 9065116.9/32

Left Out: 0.019 $\pm$ 0.000  $\chi^2$ /NDF:700229.7/24

Right Out: 0.028 $\pm$ 0.000  $\chi^2$ /NDF: 9516091.1/36

Left In: 0.019 $\pm$ 0.000  $\chi^2$ /NDF:858216.8/22

Left: 0.019 $\pm$ 0.000  $\chi^2$ /NDF: 1563699.1/47

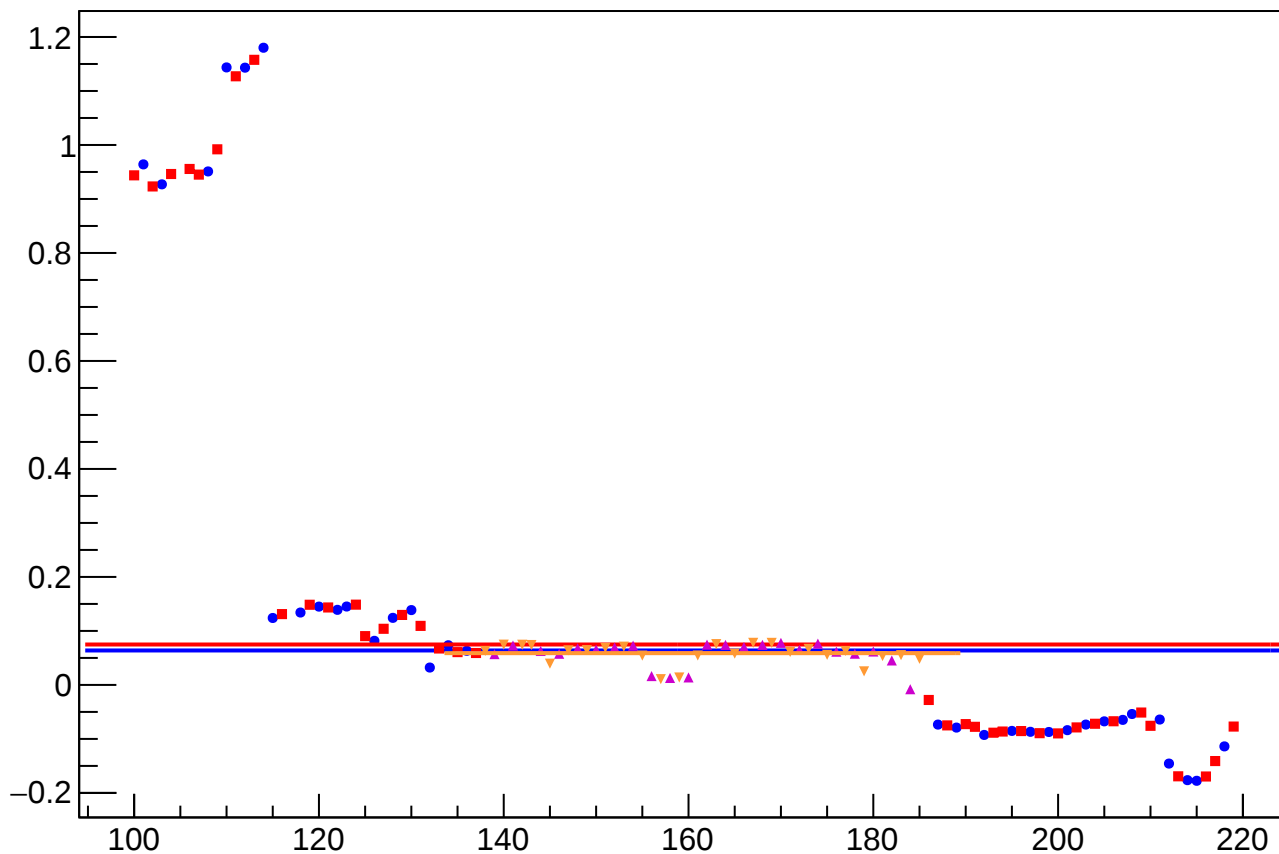
Right: 0.027 $\pm$ 0.000  $\chi^2$ /NDF: 18613823.8/69

In: 0.022 $\pm$ 0.000  $\chi^2$ /NDF:11162416.9/55

Out: 0.022 $\pm$ 0.000  $\chi^2$ /NDF:12145356.7/61

All: 0.022 $\pm$ 0.000  $\chi^2$ /NDF: 23307841.1/117

# yield\_bpm4ecY\_mean vs Slug, Sign Corrected



Right In: 0.064 $\pm$ 0.000  $\chi^2$ /NDF: 8792643596.7/32

Left Out: 0.059 $\pm$ 0.000  $\chi^2$ /NDF: 46821236.8/24

Right Out: 0.075 $\pm$ 0.000  $\chi^2$ /NDF: 9717241125.4/36

Left In: 0.059 $\pm$ 0.000  $\chi^2$ /NDF: 58518655.0/22

Left: 0.059 $\pm$ 0.000  $\chi^2$ /NDF: 105343775.2/47

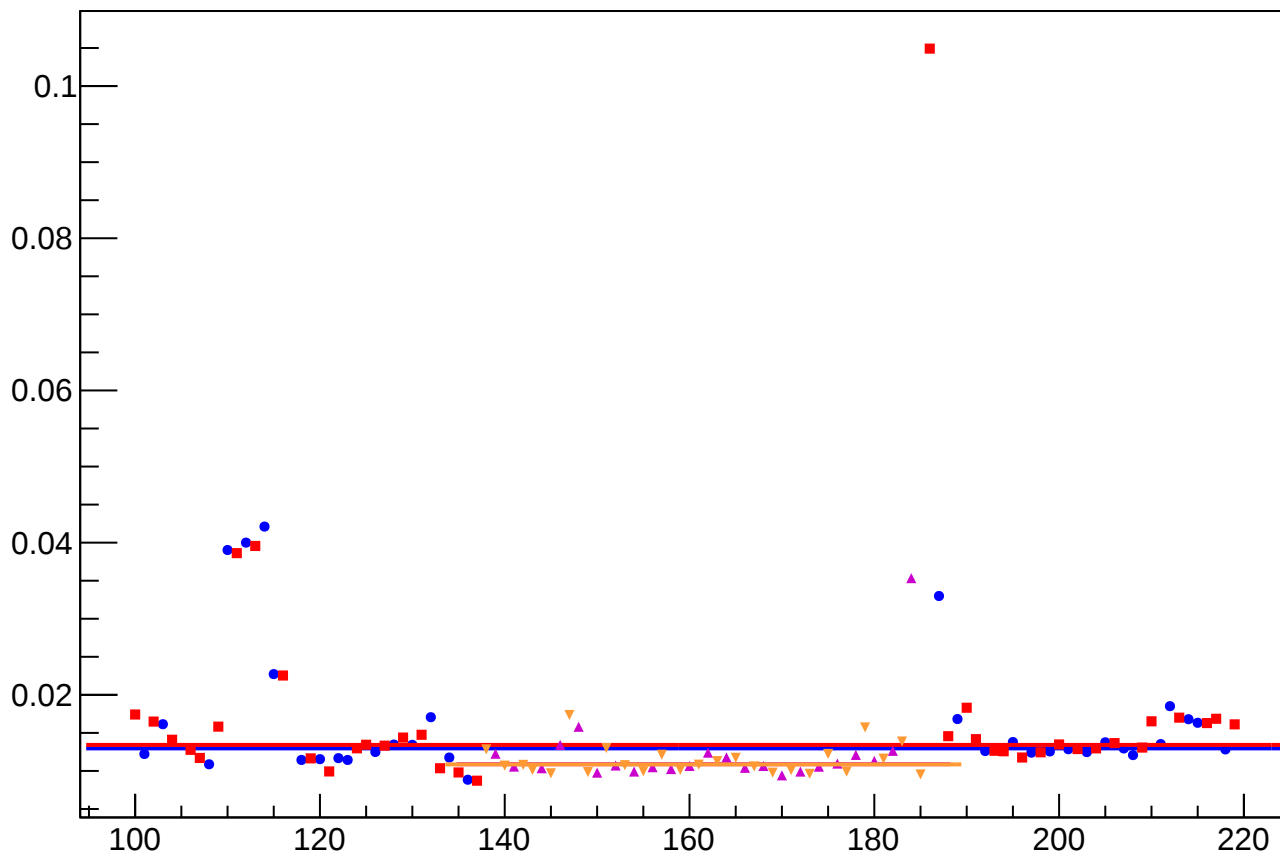
Right: 0.069 $\pm$ 0.000  $\chi^2$ /NDF: 18515811546.8/69

In: 0.061 $\pm$ 0.000  $\chi^2$ /NDF: 8852426969.3/55

Out: 0.065 $\pm$ 0.000  $\chi^2$ /NDF: 9778853400.3/61

All: 0.063 $\pm$ 0.000  $\chi^2$ /NDF: 18633383262.1/131

# yield\_bpm4ecY\_rms vs Slug, Sign Corrected



Right In: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 1779830.8/32

Left Out: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 604787.9/24

Right Out: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 2197634.8/36

Left In: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 530077.5/22

Left: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 1134994.9/47

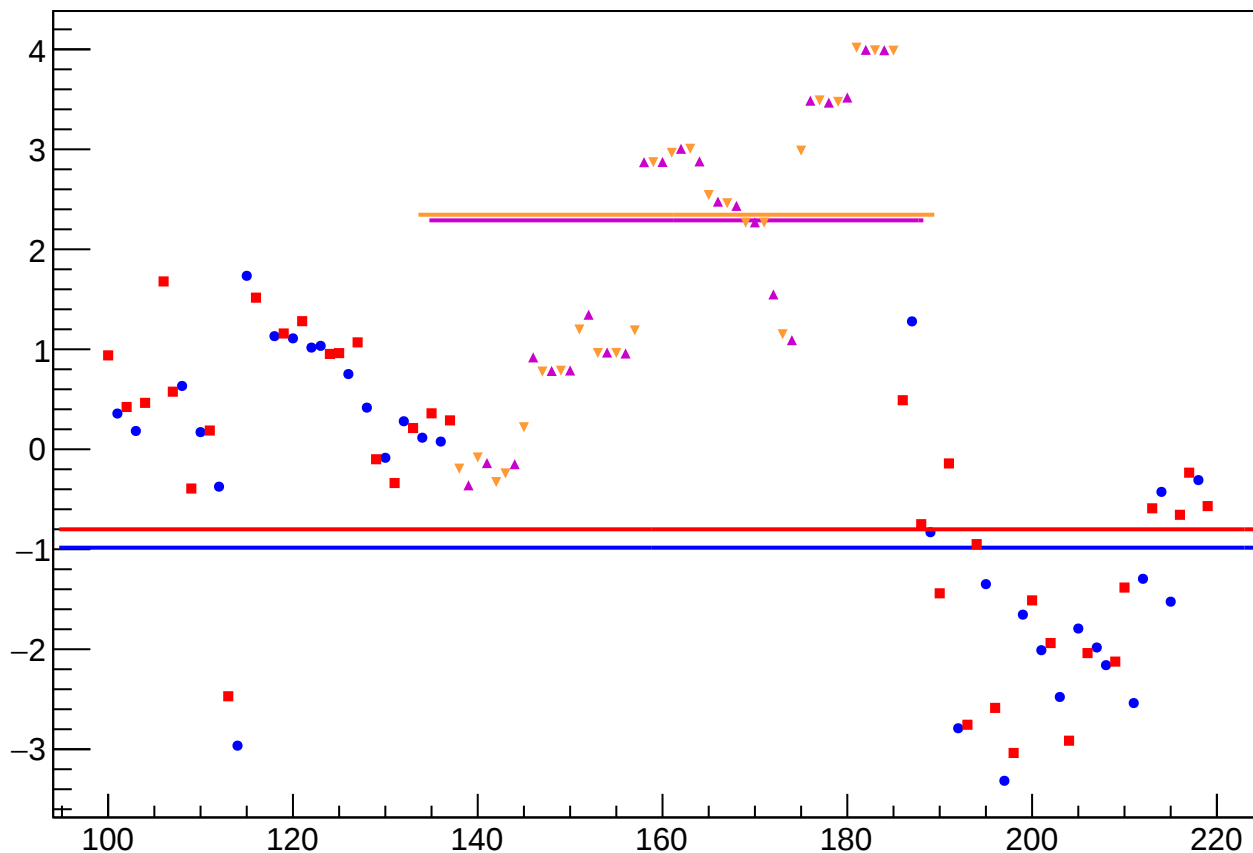
Right: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 3997775.1/69

In: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 2798560.1/55

Out: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 3560227.3/61

All: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 6362795.7/117

# yield\_bpm1X\_mean vs Slug, Sign Corrected



Right In:  $-0.984 \pm 0.000$   $\chi^2/\text{NDF}$ : 7958406930.5/32

Left Out:  $2.346 \pm 0.000$   $\chi^2/\text{NDF}$ : 63481331015.4/24

Right Out:  $-0.800 \pm 0.000$   $\chi^2/\text{NDF}$ : 8309160244.9/36

Left In:  $2.290 \pm 0.000$   $\chi^2/\text{NDF}$ : 60875537647.3/22

Left:  $2.318 \pm 0.000$   $\chi^2/\text{NDF}$ : 124438674298.4/47

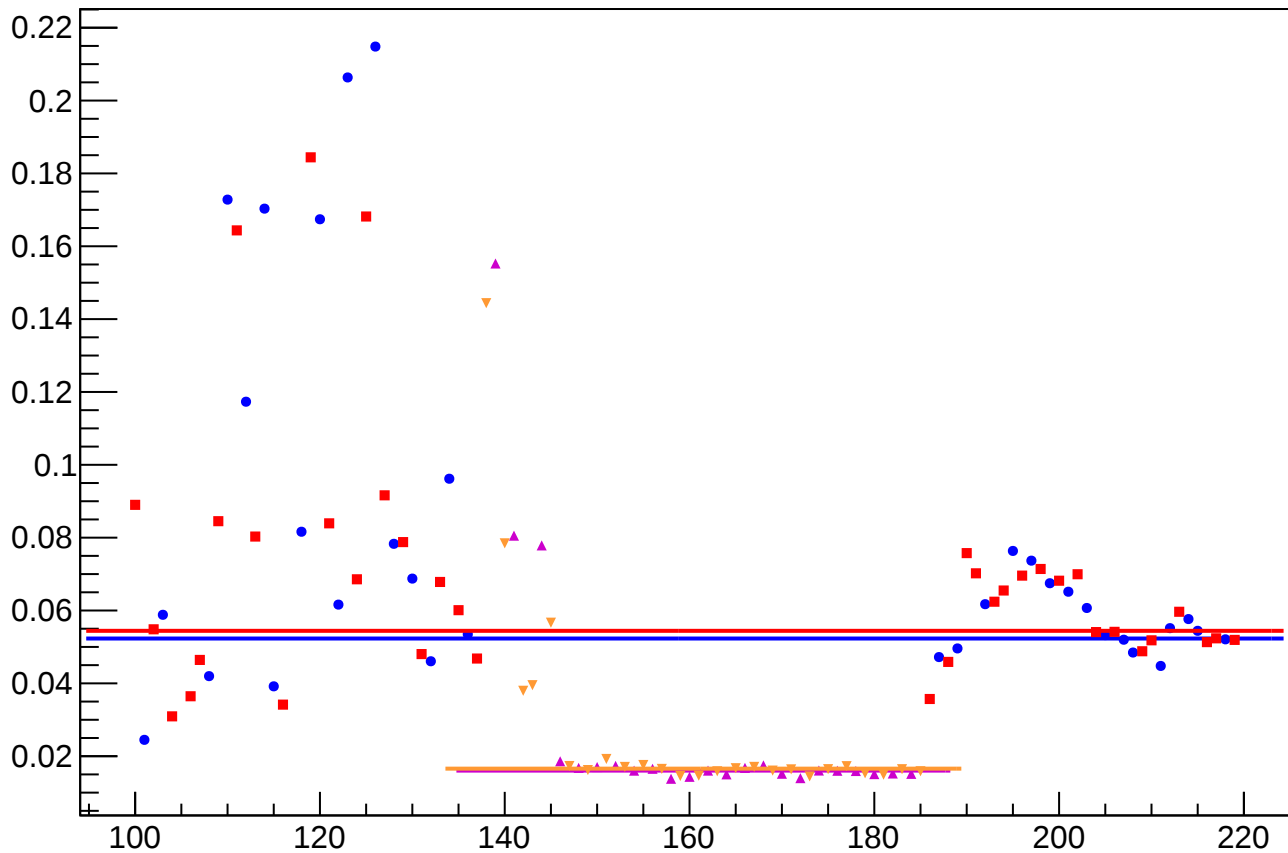
Right:  $-0.891 \pm 0.000$   $\chi^2/\text{NDF}$ : 16355378358.8/69

In:  $1.993 \pm 0.000$   $\chi^2/\text{NDF}$ : 119076618212.8/55

Out:  $2.052 \pm 0.000$   $\chi^2/\text{NDF}$ : 118923311389.6/61

All:  $2.022 \pm 0.000$   $\chi^2/\text{NDF}$ : 238096564107.4

# yield\_bpm1X\_rms vs Slug, Sign Corrected



Right In: 0.052 $\pm$ 0.000  $\chi^2$ /NDF: 3567004.0/32

Left Out: 0.017 $\pm$ 0.000  $\chi^2$ /NDF:2621162.1/24

Right Out: 0.054 $\pm$ 0.000  $\chi^2$ /NDF: 2885579.8/36

Left In: 0.016 $\pm$ 0.000  $\chi^2$ /NDF:2394376.5/22

Left: 0.016 $\pm$ 0.000  $\chi^2$ /NDF: 5030430.5/47

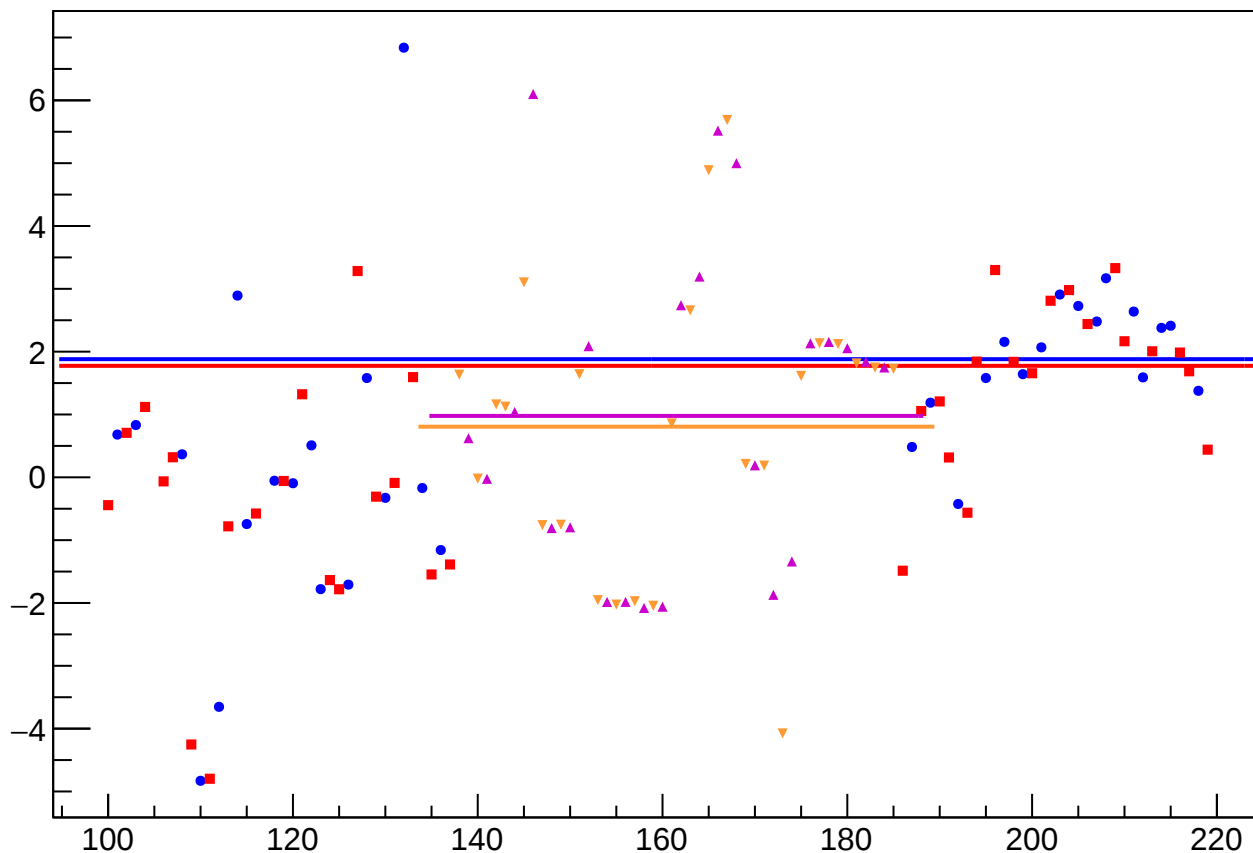
Right: 0.053 $\pm$ 0.000  $\chi^2$ /NDF: 6475787.3/69

In: 0.019 $\pm$ 0.000  $\chi^2$ /NDF:18290292.0/55

Out: 0.020 $\pm$ 0.000  $\chi^2$ /NDF:19137200.9/61

All: 0.020 $\pm$ 0.000  $\chi^2$ /NDF: 37463256.7/117

# yield\_bpm1Y\_mean vs Slug, Sign Corrected



Right In: 1.881+/-0.000

$\chi^2/\text{NDF}$ : 40073748447.9/32

Left: 0.892+/-0.000

$\chi^2/\text{NDF}$ : 1077036497291.8/47

Left Out: 0.806+/-0.000

$\chi^2/\text{NDF}$ : 507578952196.2/24

Right: 1.827+/-0.000

$\chi^2/\text{NDF}$ : 84208627668.6/69

Right Out: 1.774+/-0.000

$\chi^2/\text{NDF}$ : 43944550116.7/36

In: 1.233+/-0.000

$\chi^2/\text{NDF}$ : 627913644271.8/55

Out: 1.082+/-0.000

$\chi^2/\text{NDF}$ : 574216526763.3/61

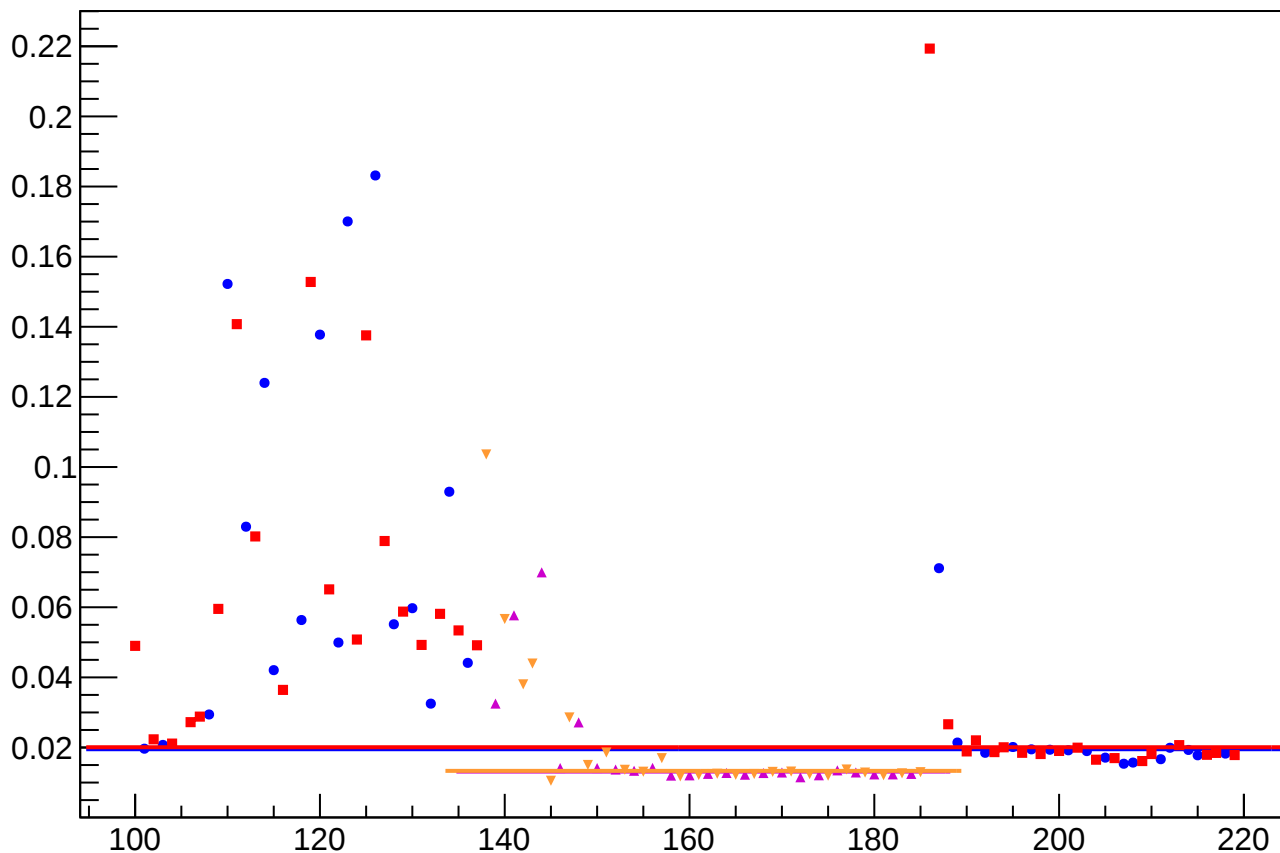
Left In: 0.977+/-0.000

$\chi^2/\text{NDF}$ : 568209676597.4/22

All: 1.158+/-0.000

$\chi^2/\text{NDF}$ : 1203477511775.

# yield\_bpm1Y\_rms vs Slug, Sign Corrected



Right In: 0.020+/-0.000  $\chi^2/\text{NDF}$ : 4216989.7/32

Left Out: 0.013+/-0.000  $\chi^2/\text{NDF}$ :2829753.9/24

Right Out: 0.020+/-0.000  $\chi^2/\text{NDF}$ : 5227698.8/36

Left In: 0.013+/-0.000  $\chi^2/\text{NDF}$ :1946693.6/22

Left: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 4779900.3/47

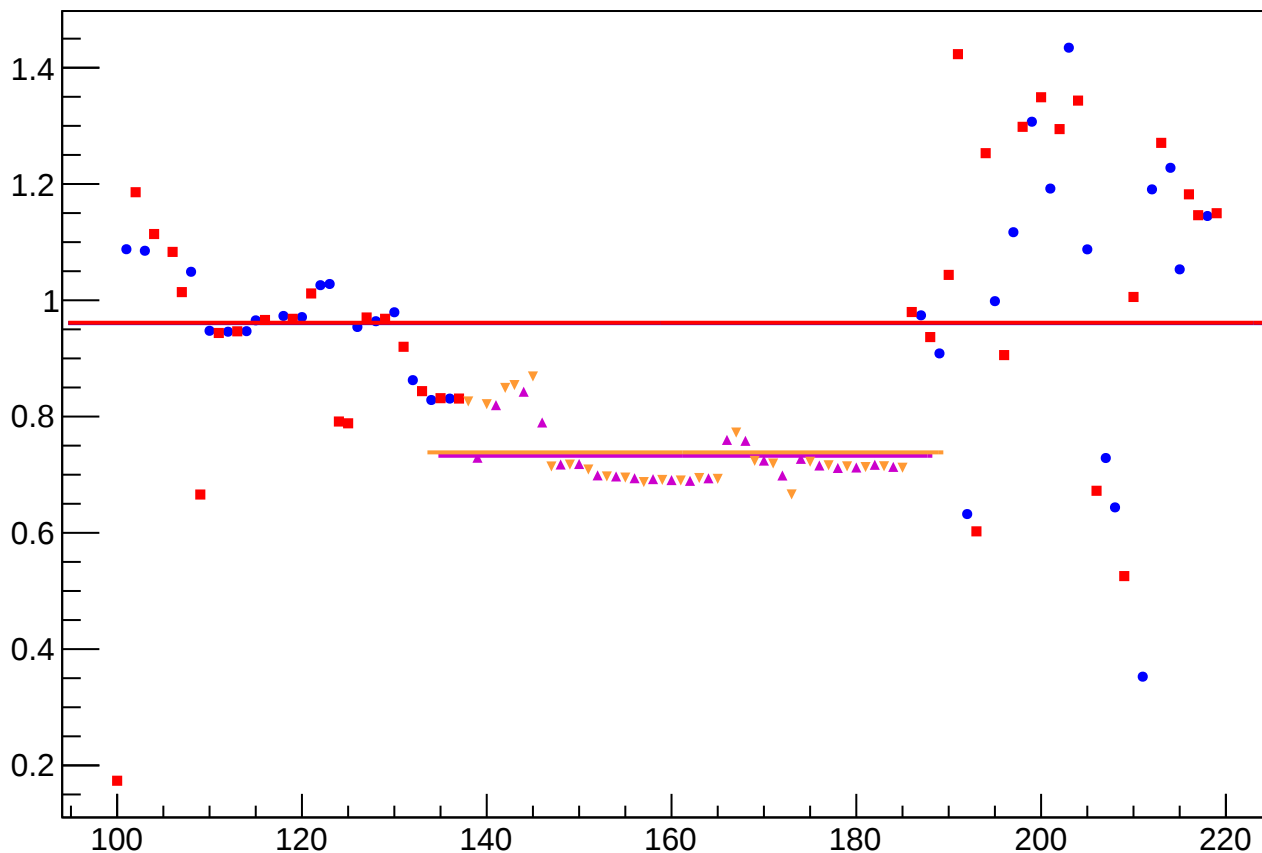
Right: 0.020+/-0.000  $\chi^2/\text{NDF}$ : 9455483.9/69

In: 0.015+/-0.000  $\chi^2/\text{NDF}$ :8118712.1/55

Out: 0.015+/-0.000  $\chi^2/\text{NDF}$ :10254921.5/61

All: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 18385824.6/117

# yield\_bpm11X\_mean vs Slug, Sign Corrected



Right In: 0.961+/-0.000  $\chi^2/\text{NDF}$ : 1014414036.4/32

Left Out: 0.738+/-0.000  $\chi^2/\text{NDF}$ : 310195180.4/24

Right Out: 0.961+/-0.000  $\chi^2/\text{NDF}$ : 1319585988.8/36

Left In: 0.733+/-0.000  $\chi^2/\text{NDF}$ : 170102394.7/22

Left: 0.736+/-0.000  $\chi^2/\text{NDF}$ : 481708989.2/47

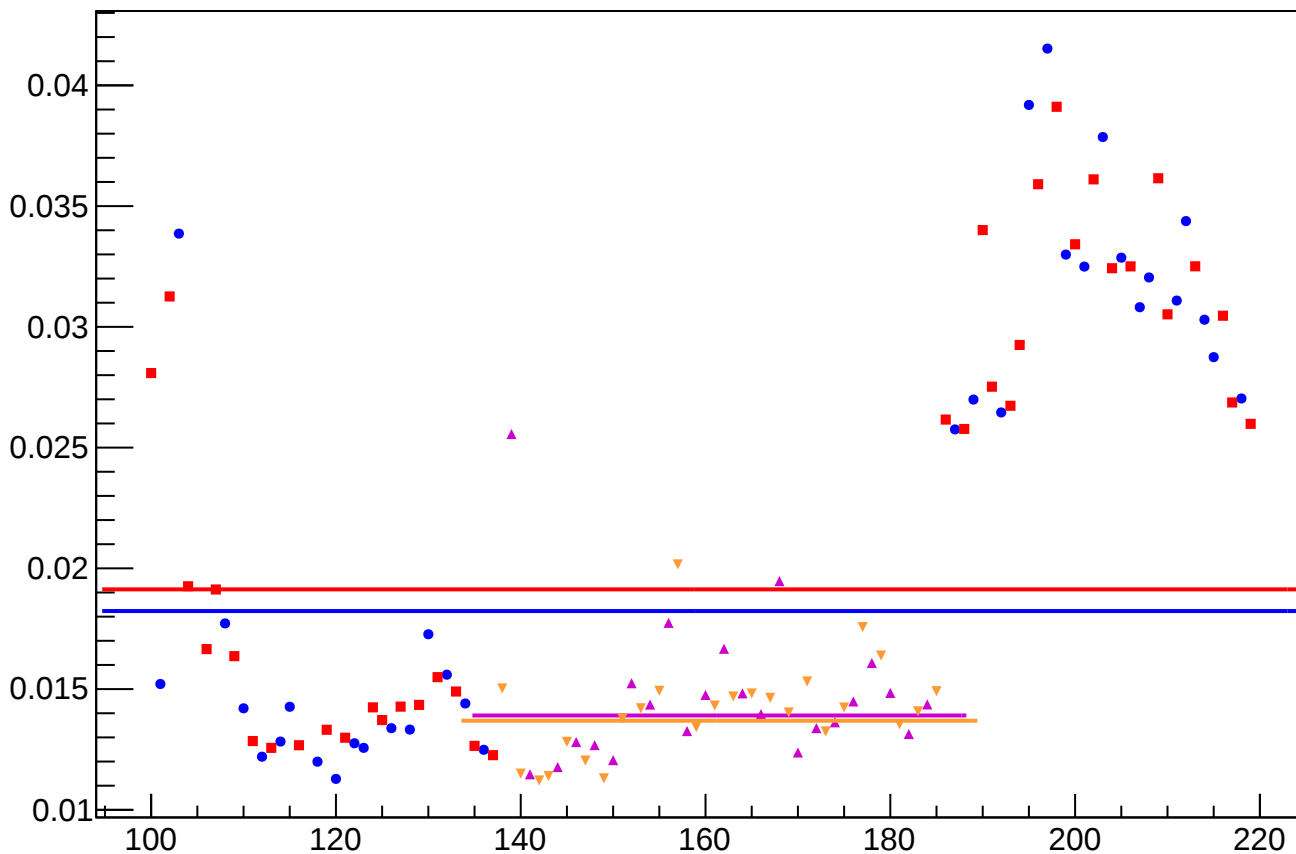
Right: 0.961+/-0.000  $\chi^2/\text{NDF}$ : 2334009342.4/69

In: 0.811+/-0.000  $\chi^2/\text{NDF}$ : 2607949278.4/55

Out: 0.811+/-0.000  $\chi^2/\text{NDF}$ : 3029159800.1/61

All: 0.811+/-0.000  $\chi^2/\text{NDF}$ : 5637118798.0/111

# yield\_bpm11X\_rms vs Slug, Sign Corrected



Right In: 0.018 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 5755768.3/32

Left Out: 0.014 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 528480.6/24

Right Out: 0.019 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 5227084.3/36

Left In: 0.014 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 768161.9/22

Left: 0.014 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1300553.4/47

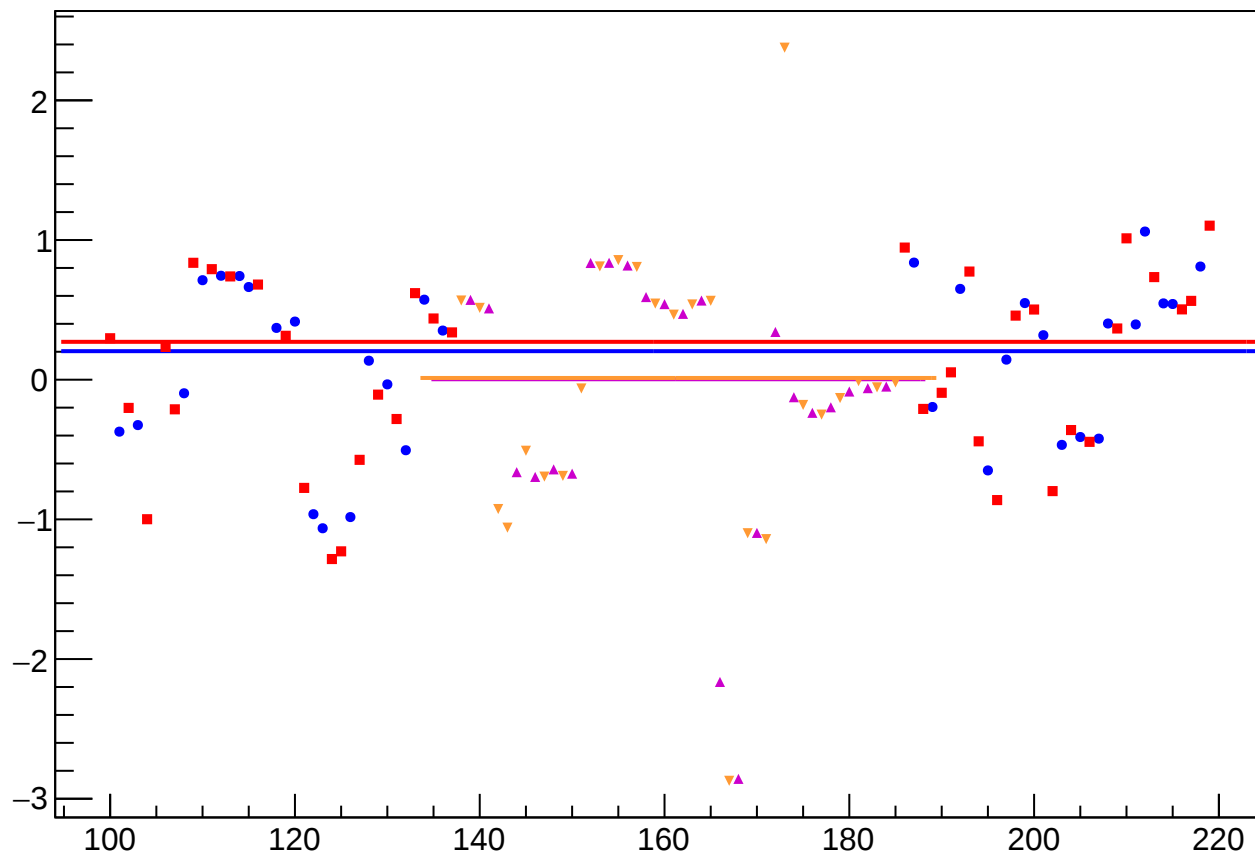
Right: 0.019 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 11016429.1/69

In: 0.015 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7547222.6/55

Out: 0.015 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7421453.1/61

All: 0.015 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 14969379.9/117

# yield\_bpm11Y\_mean vs Slug, Sign Corrected



Right In: 0.204+/-0.000

$\chi^2/\text{NDF}$ : 34028340894.8/32

Left: 0.008+/-0.000

$\chi^2/\text{NDF}$ : 175214894006.3/47

Left Out: 0.012+/-0.000

$\chi^2/\text{NDF}$ : 96383858927.1/24

Right: 0.239+/-0.000

$\chi^2/\text{NDF}$ : 84602246642.4/69

Right Out: 0.271+/-0.000

$\chi^2/\text{NDF}$ : 50298322884.8/36

In: 0.111+/-0.000

$\chi^2/\text{NDF}$ : 115114915504.9/55

Out: 0.151+/-0.000

$\chi^2/\text{NDF}$ : 150609137315.1/61

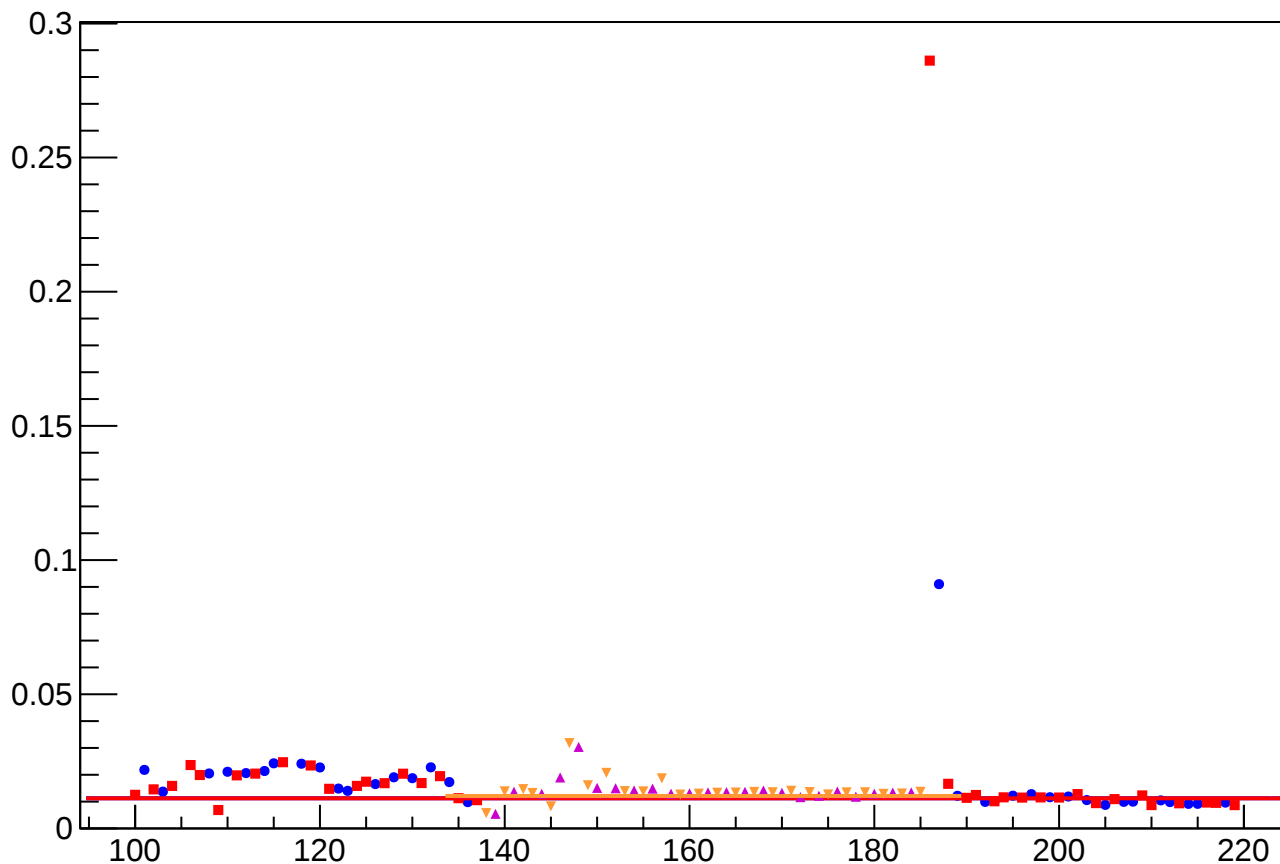
Left In: 0.003+/-0.000

$\chi^2/\text{NDF}$ : 78826489573.0/22

All: 0.132+/-0.000

$\chi^2/\text{NDF}$ : 265915083089.5

# yield\_bpm11Y\_rms vs Slug, Sign Corrected



Right In: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 2660710.2/32

Left Out: 0.012+/-0.000  $\chi^2/\text{NDF}$ :3105238.9/24

Right Out: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 3226961.1/36

Left In: 0.012+/-0.000  $\chi^2/\text{NDF}$ :3003502.9/22

Left: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 6110012.2/47

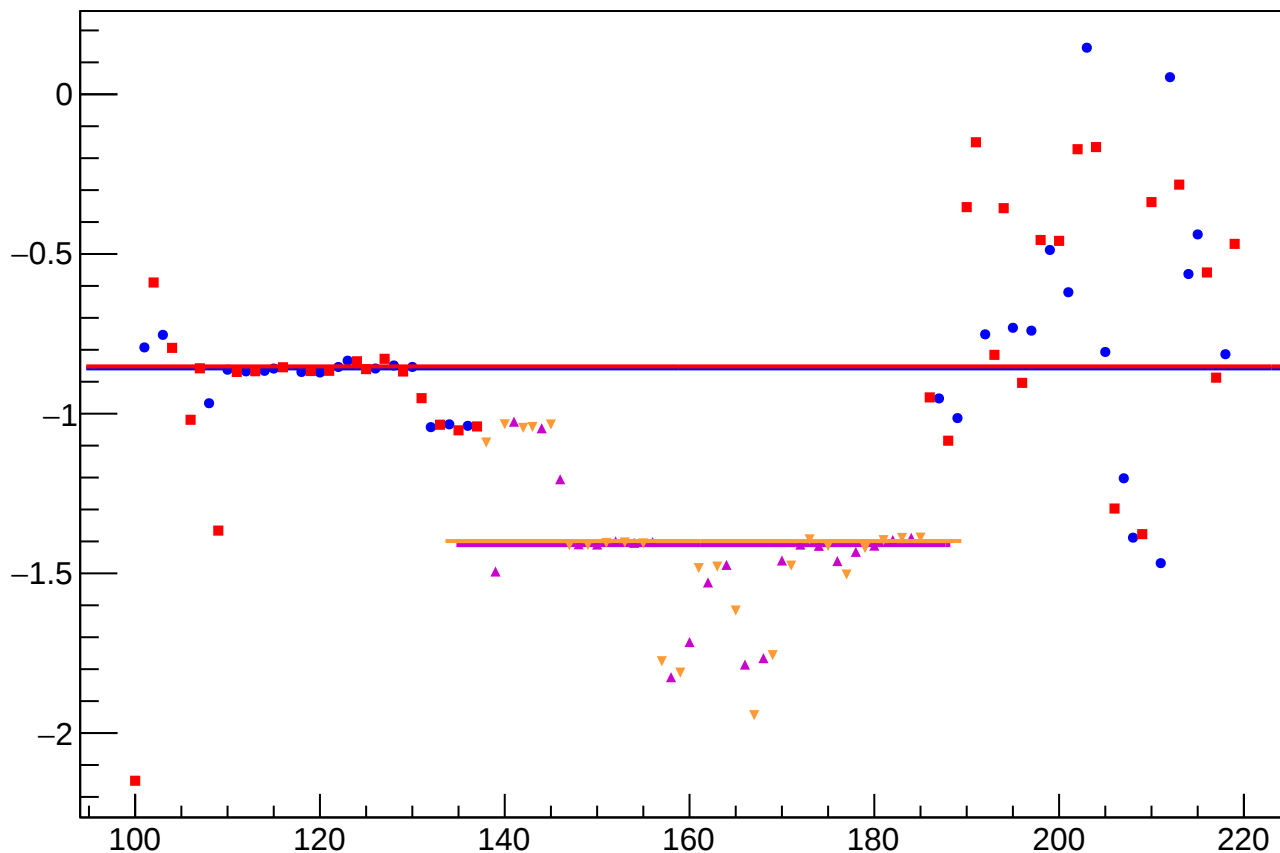
Right: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 5887706.6/69

In: 0.012+/-0.000  $\chi^2/\text{NDF}$ :5726917.2/55

Out: 0.012+/-0.000  $\chi^2/\text{NDF}$ :6422023.7/61

All: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 12149296.2/117

# yield\_bpm12X\_mean vs Slug, Sign Corrected



Right In:  $-0.858 \pm 0.000$   $\chi^2/\text{NDF}: 373132757.0/32$

Left Out:  $-1.399 \pm 0.000$   $\chi^2/\text{NDF}: 738251911.1/24$

Right Out:  $-0.852 \pm 0.000$   $\chi^2/\text{NDF}: 517874996.1/36$

Left In:  $-1.411 \pm 0.000$   $\chi^2/\text{NDF}: 512547995.0/22$

Left:  $-1.405 \pm 0.000$   $\chi^2/\text{NDF}: 1251791467.1/47$

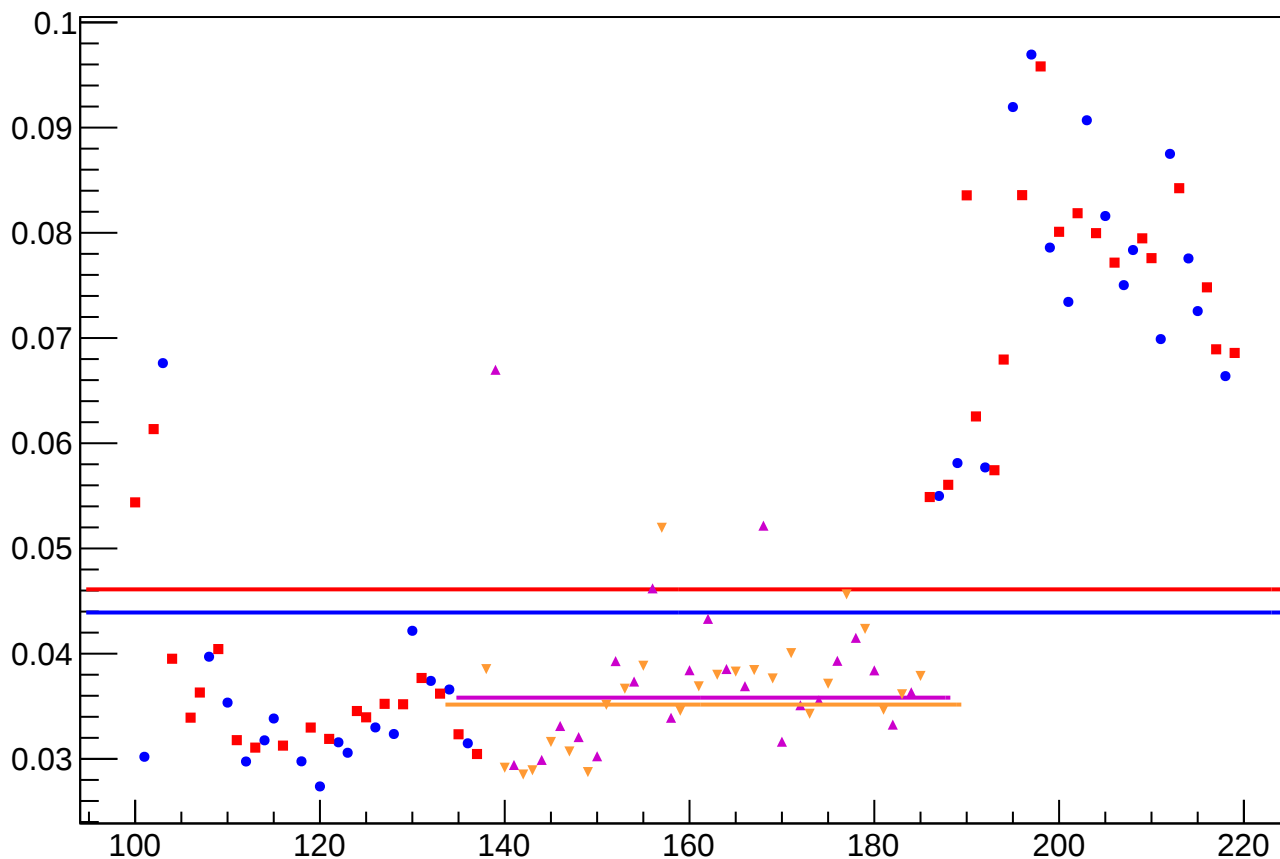
Right:  $-0.855 \pm 0.000$   $\chi^2/\text{NDF}: 891153092.6/69$

In:  $-1.201 \pm 0.000$   $\chi^2/\text{NDF}: 2271622857.4/55$

Out:  $-1.202 \pm 0.000$   $\chi^2/\text{NDF}: 2651536497.0/61$

All:  $-1.201 \pm 0.000$   $\chi^2/\text{NDF}: 4923169458.3/1$

# yield\_bpm12X\_rms vs Slug, Sign Corrected



Right In: 0.044+/-0.000  $\chi^2/\text{NDF}$ : 5577965.9/32

Left Out: 0.035+/-0.000  $\chi^2/\text{NDF}$ : 595219.5/24

Right Out: 0.046+/-0.000  $\chi^2/\text{NDF}$ : 4905955.3/36

Left In: 0.036+/-0.000  $\chi^2/\text{NDF}$ : 864147.6/22

Left: 0.035+/-0.000  $\chi^2/\text{NDF}$ : 1464751.5/47

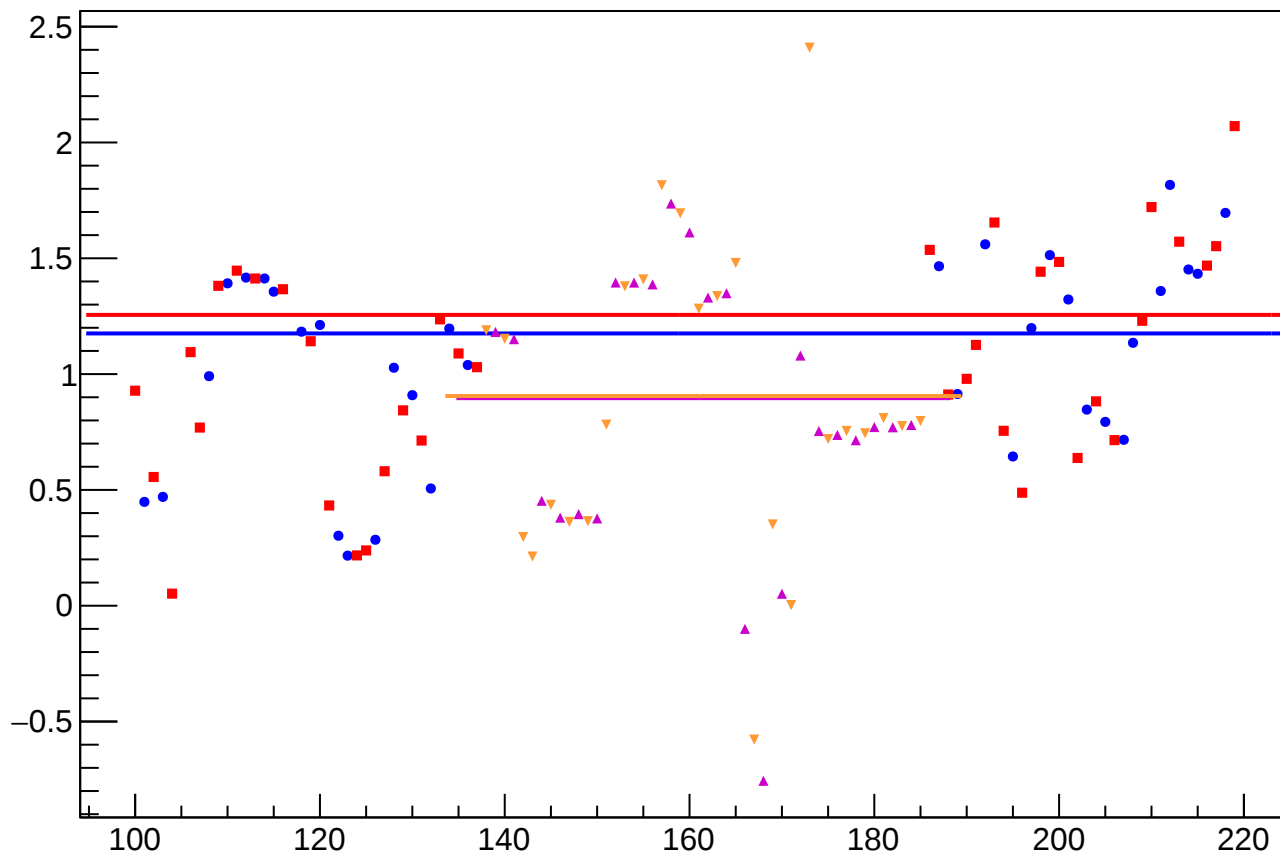
Right: 0.045+/-0.000  $\chi^2/\text{NDF}$ : 10519218.5/69

In: 0.039+/-0.000  $\chi^2/\text{NDF}$ : 7035212.2/55

Out: 0.039+/-0.000  $\chi^2/\text{NDF}$ : 6620009.0/61

All: 0.039+/-0.000  $\chi^2/\text{NDF}$ : 13656037.5/117

# yield\_bpm12Y\_mean vs Slug, Sign Corrected



Right In: 1.176+/-0.000

$\chi^2/\text{NDF}$ : 49838495791.4/32

Left: 0.901+/-0.000

$\chi^2/\text{NDF}$ : 150868618084.6/47

Left Out: 0.905+/-0.000

$\chi^2/\text{NDF}$ : 84265726513.8/24

Right: 1.215+/-0.000

$\chi^2/\text{NDF}$ : 122508608985.7/69

Right Out: 1.256+/-0.000

$\chi^2/\text{NDF}$ : 71624433534.9/36

In: 1.069+/-0.000

$\chi^2/\text{NDF}$ : 126321261812.2/55

Out: 1.114+/-0.000

$\chi^2/\text{NDF}$ : 171850934873.0/61

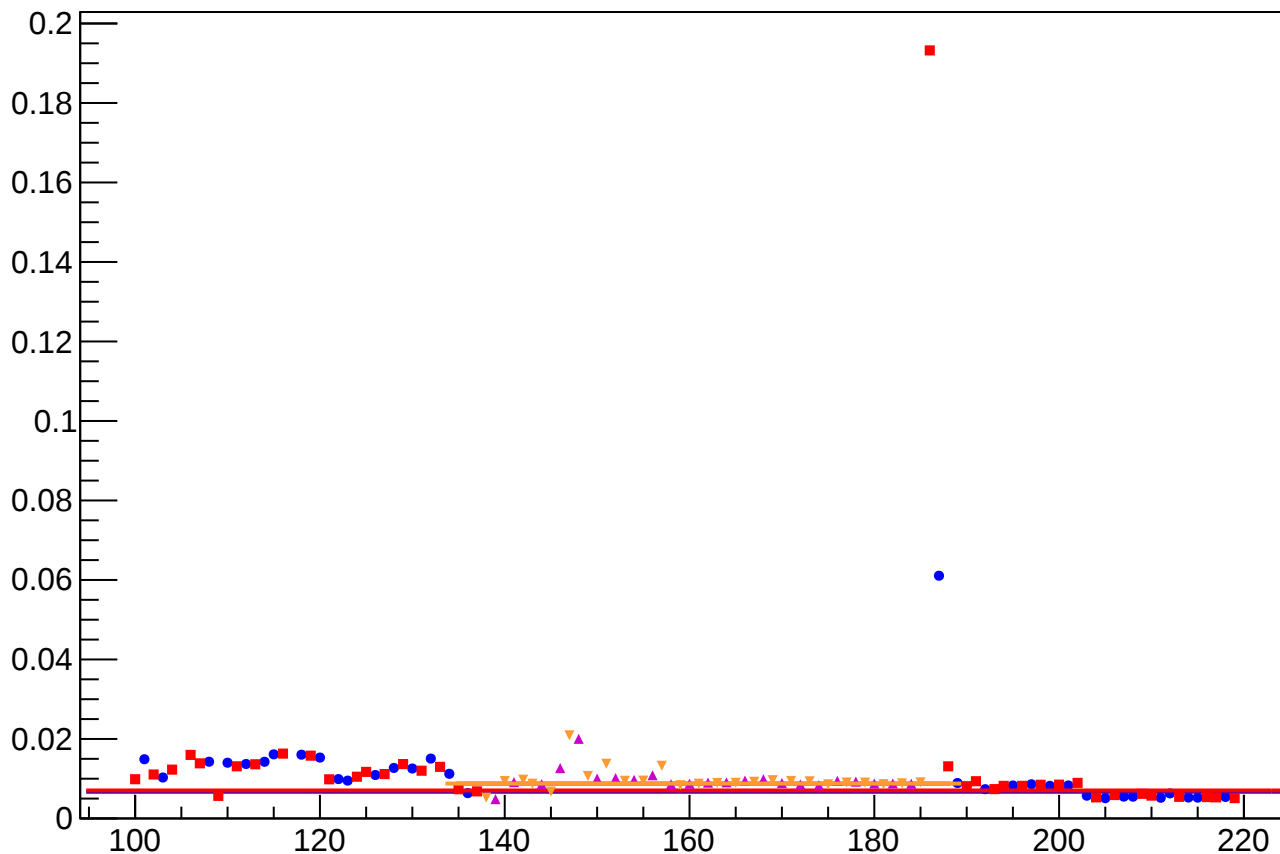
Left In: 0.896+/-0.000

$\chi^2/\text{NDF}$ : 66594200889.6/22

All: 1.091+/-0.000

$\chi^2/\text{NDF}$ : 298703981275.6

# yield\_bpm12Y\_rms vs Slug, Sign Corrected



Right In: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 3850435.8/32

Left Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ :1697568.1/24

Right Out: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 4325200.1/36

Left In: 0.009+/-0.000  $\chi^2/\text{NDF}$ :1607939.0/22

Left: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 3305514.2/47

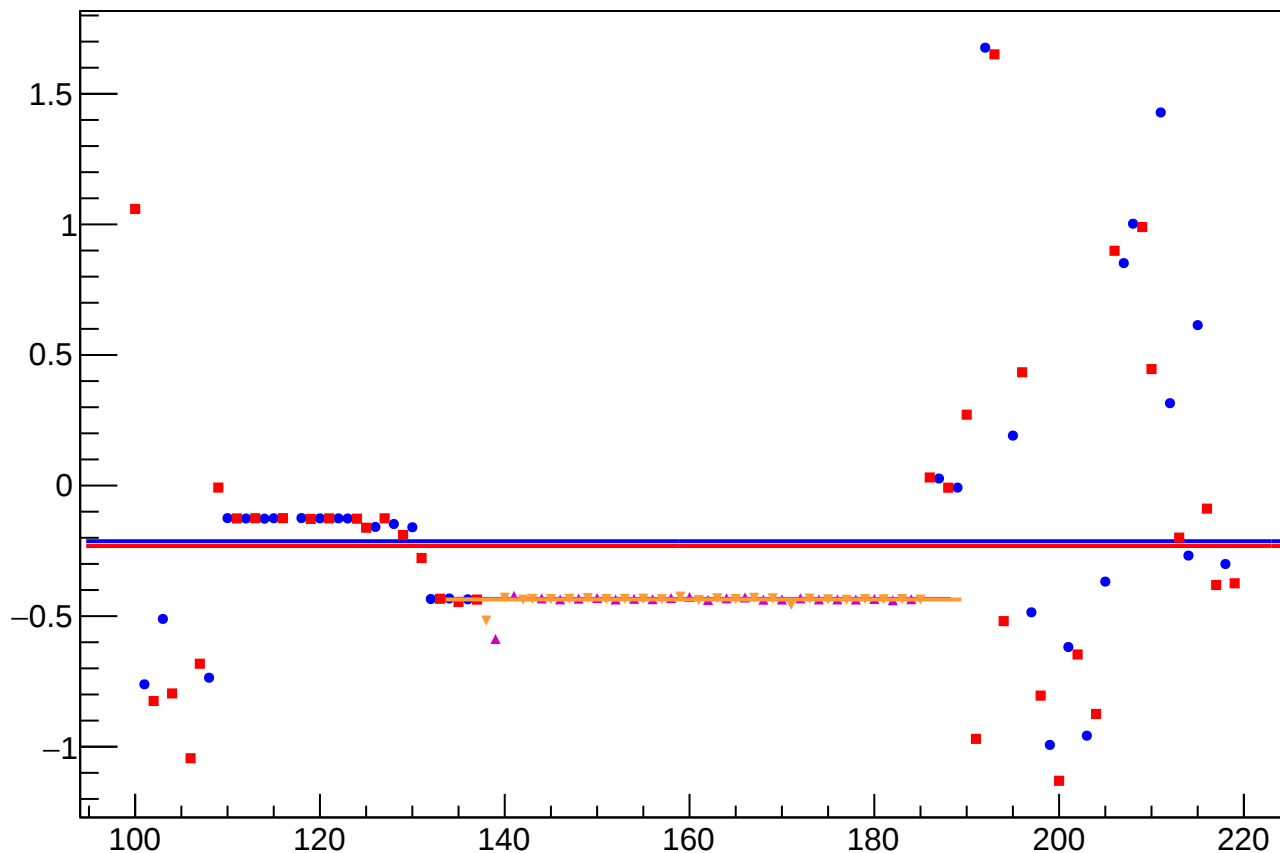
Right: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 8206958.2/69

In: 0.008+/-0.000  $\chi^2/\text{NDF}$ :6517844.1/55

Out: 0.008+/-0.000  $\chi^2/\text{NDF}$ :6810840.6/61

All: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 13358745.6/117

# yield\_bpm16X\_mean vs Slug, Sign Corrected



Right In: -0.213+/-0.000  $\chi^2/\text{NDF}$ : 4983992941.3/32

Left Out: -0.436+/-0.000  $\chi^2/\text{NDF}$ : 28774660.0/24

Right Out: -0.232+/-0.000  $\chi^2/\text{NDF}$ : 3442822640.7/36

Left In: -0.434+/-0.000  $\chi^2/\text{NDF}$ : 23984173.0/22

Left: -0.435+/-0.000  $\chi^2/\text{NDF}$ : 53122221.7/47

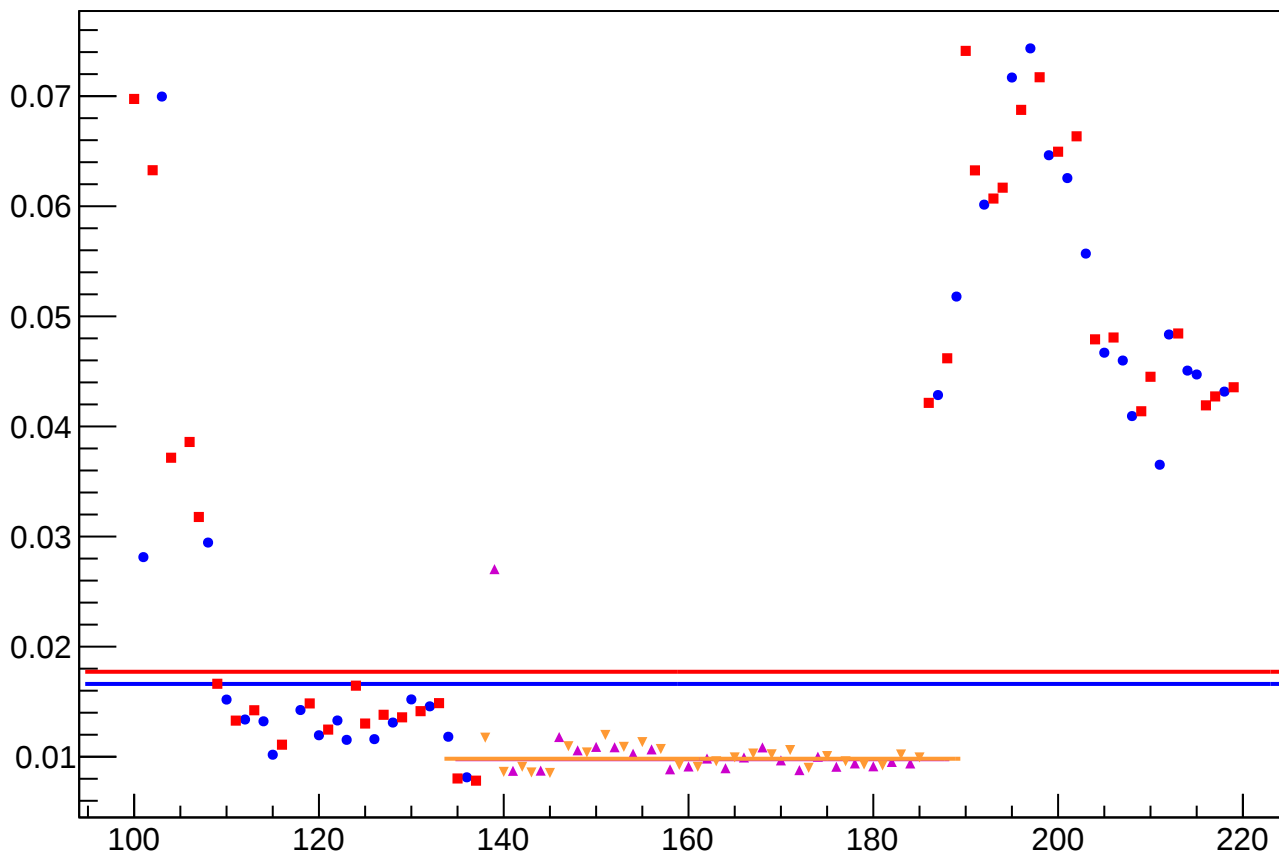
Right: -0.222+/-0.000  $\chi^2/\text{NDF}$ : 8432779572.4/69

In: -0.391+/-0.000  $\chi^2/\text{NDF}$ : 6442135989.4/55

Out: -0.400+/-0.000  $\chi^2/\text{NDF}$ : 4661569008.9/61

All: -0.396+/-0.000  $\chi^2/\text{NDF}$ : 11111347230.8/117

# yield\_bpm16X\_rms vs Slug, Sign Corrected



Right In: 0.017+/-0.000  $\chi^2/\text{NDF}$ : 13122509.3/32

Left Out: 0.010+/-0.000  $\chi^2/\text{NDF}$ :269242.6/24

Right Out: 0.018+/-0.000  $\chi^2/\text{NDF}$ : 13827454.5/36

Left In: 0.010+/-0.000  $\chi^2/\text{NDF}$ :747550.0/22

Left: 0.010+/-0.000  $\chi^2/\text{NDF}$ : 1017115.3/47

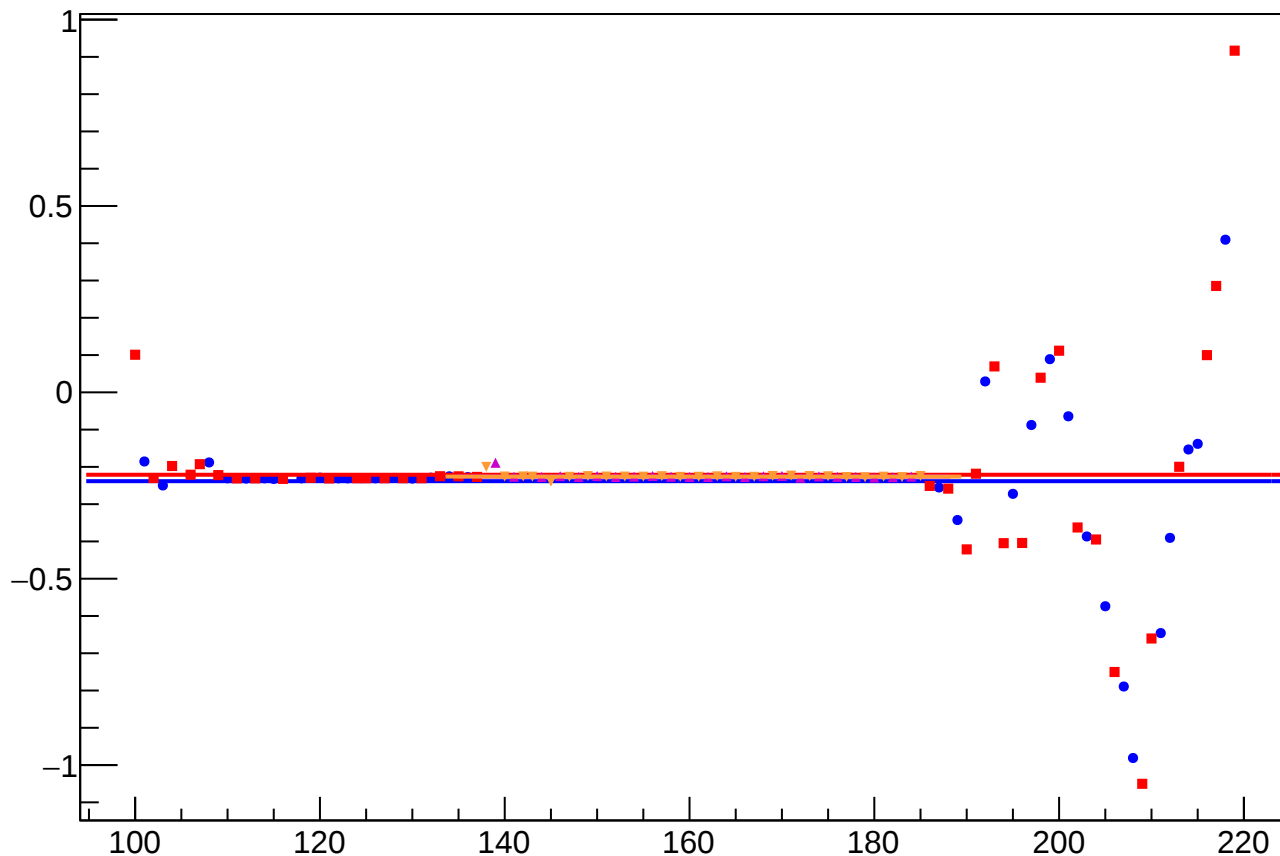
Right: 0.017+/-0.000  $\chi^2/\text{NDF}$ : 26993245.9/69

In: 0.011+/-0.000  $\chi^2/\text{NDF}$ :16619019.4/55

Out: 0.011+/-0.000  $\chi^2/\text{NDF}$ :17640518.1/61

All: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 34261866.5/117

# yield\_bpm16Y\_mean vs Slug, Sign Corrected



Right In:  $-0.238 \pm 0.000$   $\chi^2/\text{NDF}: 33462238199.8/32$

Left Out:  $-0.226 \pm 0.000$   $\chi^2/\text{NDF}: 21205667.4/24$

Right Out:  $-0.221 \pm 0.000$   $\chi^2/\text{NDF}: 46853369475.5/36$

Left In:  $-0.226 \pm 0.000$   $\chi^2/\text{NDF}: 15245251.1/22$

Left:  $-0.226 \pm 0.000$   $\chi^2/\text{NDF}: 36480793.2/47$

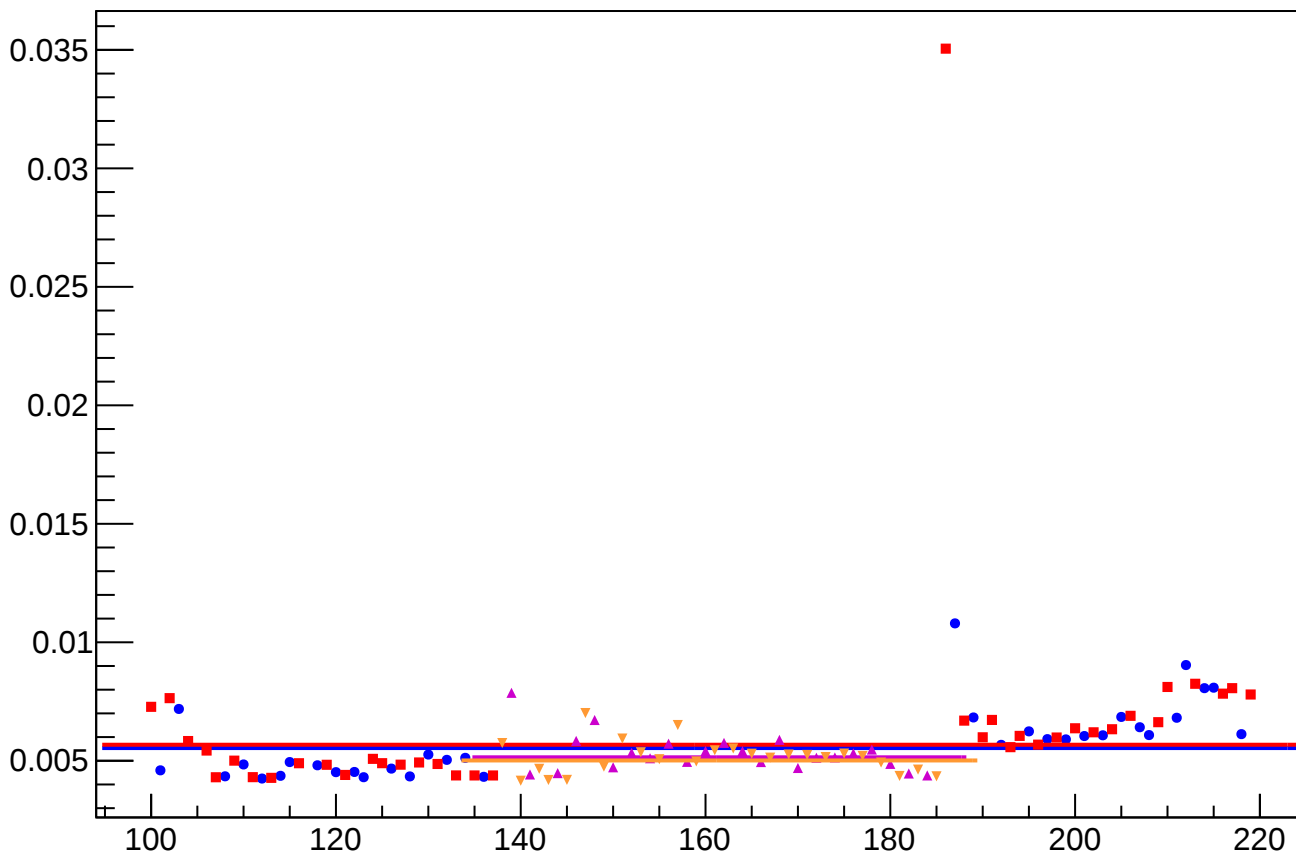
Right:  $-0.230 \pm 0.000$   $\chi^2/\text{NDF}: 80395101582.3/69$

In:  $-0.232 \pm 0.000$   $\chi^2/\text{NDF}: 33522788125.2/55$

Out:  $-0.224 \pm 0.000$   $\chi^2/\text{NDF}: 46881896843.9/61$

All:  $-0.228 \pm 0.000$   $\chi^2/\text{NDF}: 80439920319.7/100$

# yield\_bpm16Y\_rms vs Slug, Sign Corrected



Right In: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 1379863.4/32

Left Out: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 530632.6/24

Right Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 1975295.1/36

Left In: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 493107.7/22

Left: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 1035156.6/47

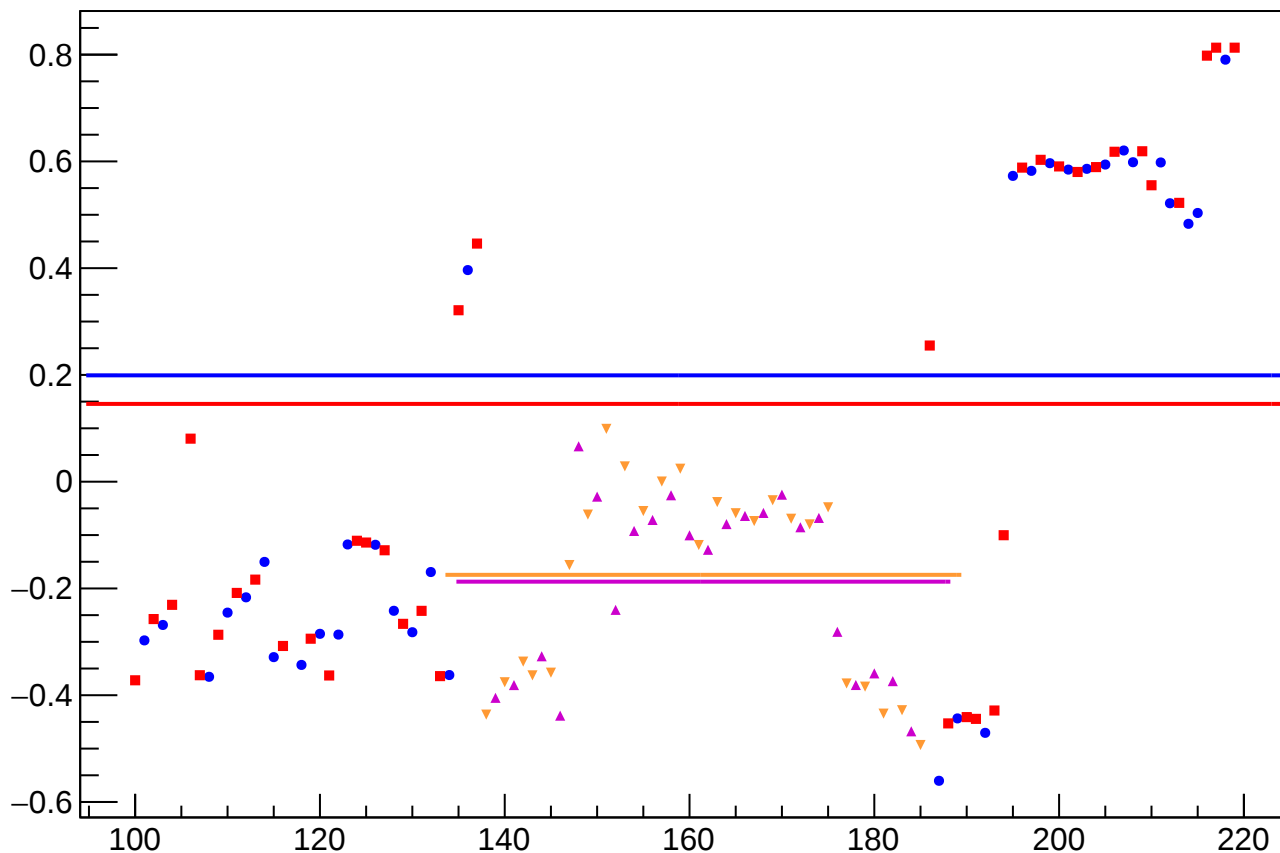
Right: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 3365752.7/69

In: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 1959745.7/55

Out: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 2771678.6/61

All: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 4731960.1/117

# yield\_bpm0i02X\_mean vs Slug, Sign Corrected



Right In: 0.199+/-0.000

$\chi^2/\text{NDF}$ : 74199261236.7/32

Left: -0.181+/-0.000

$\chi^2/\text{NDF}$ : 30888184231.6/47

Left Out: -0.174+/-0.000

$\chi^2/\text{NDF}$ : 18025533236.1/24

Right: 0.171+/-0.000

$\chi^2/\text{NDF}$ : 160604602409.0/69

Right Out: 0.146+/-0.000

$\chi^2/\text{NDF}$ : 85853759926.3/36

In: -0.031+/-0.000

$\chi^2/\text{NDF}$ : 120052826321.9/55

Left In: -0.187+/-0.000

$\chi^2/\text{NDF}$ : 12816646575.4/22

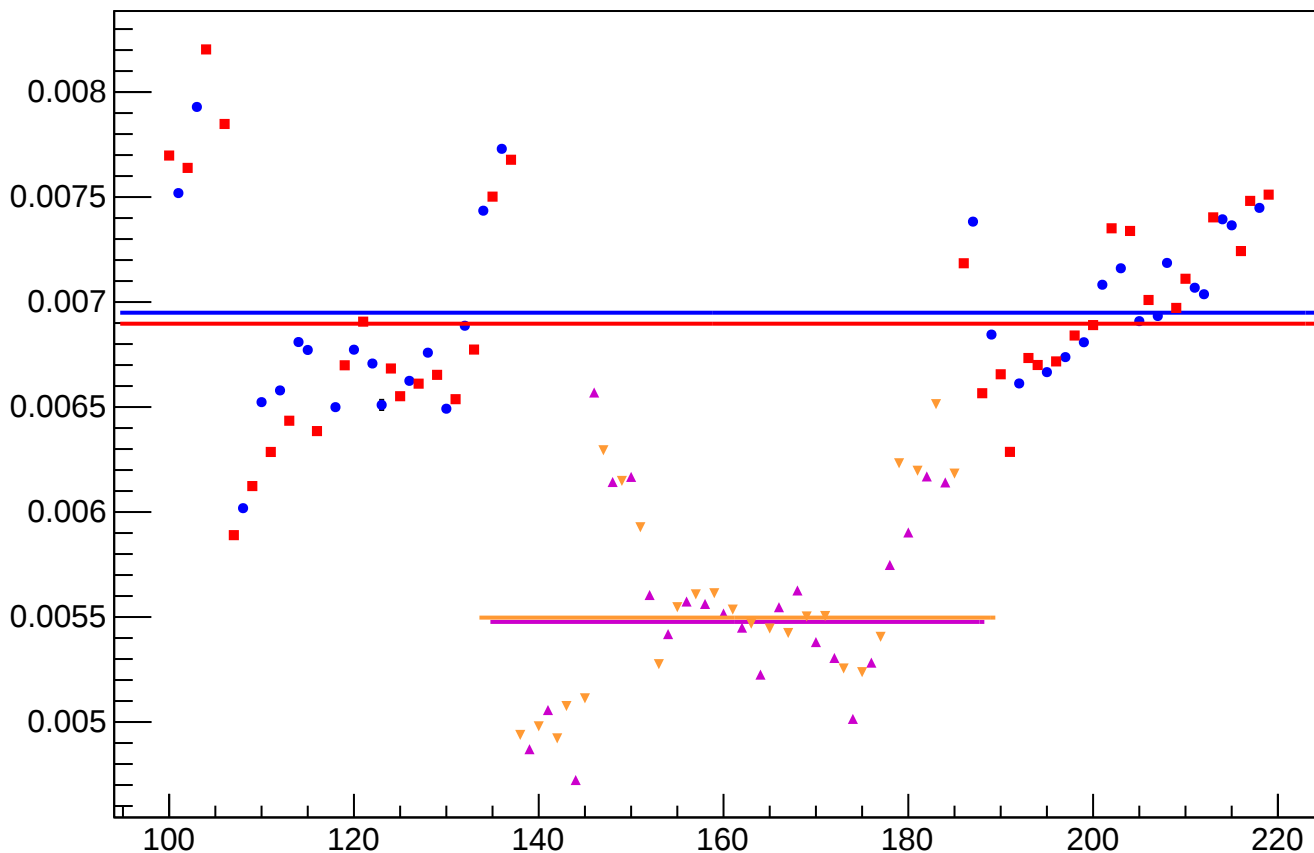
Out: -0.043+/-0.000

$\chi^2/\text{NDF}$ : 128155290784.7/61

All: -0.037+/-0.000

$\chi^2/\text{NDF}$ : 248278965332.5

# yield\_bpm0i02X\_rms vs Slug, Sign Corrected



Right In: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 112331.6/32

Left Out: 0.005+/-0.000  $\chi^2/\text{NDF}$ :198746.4/24

Right Out: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 167655.0/36

Left In: 0.005+/-0.000  $\chi^2/\text{NDF}$ :202181.4/22

Left: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 401165.3/47

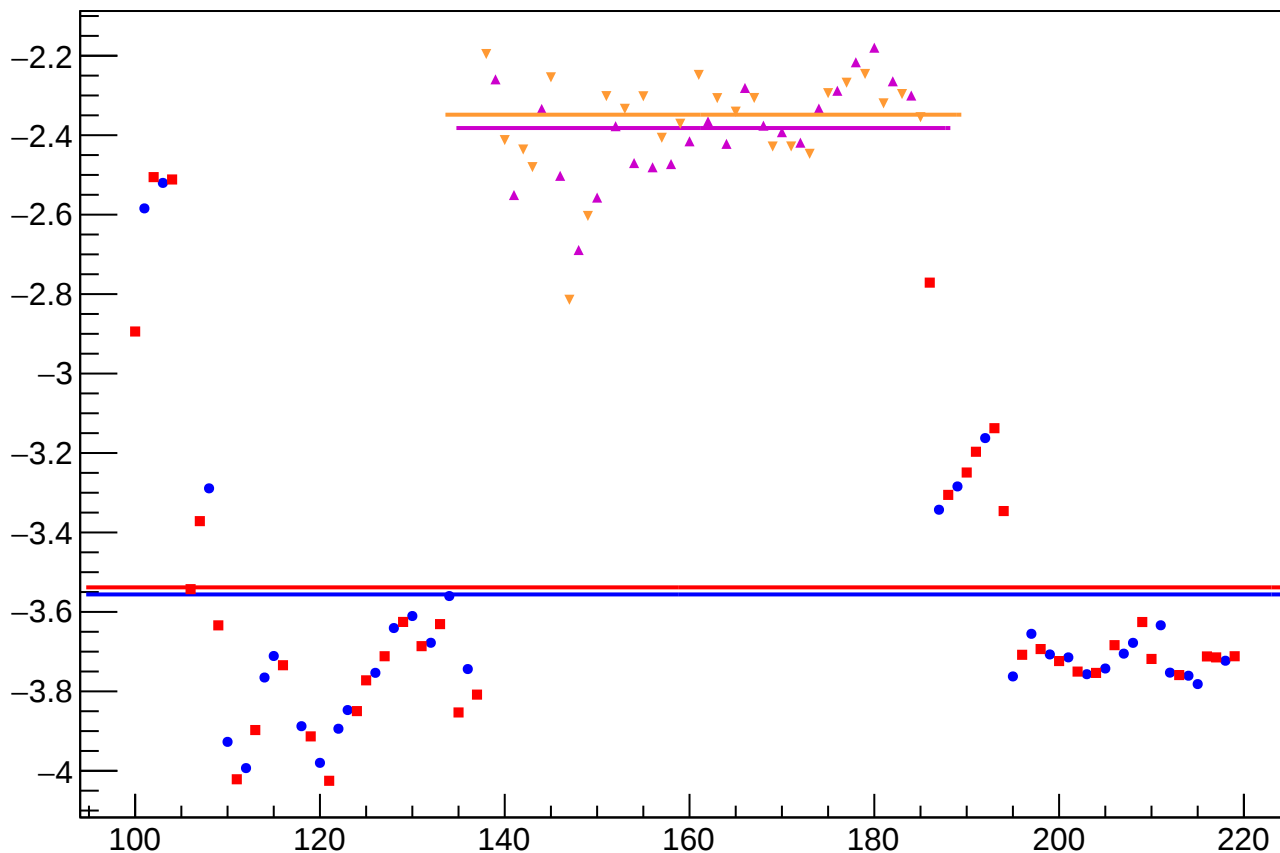
Right: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 281043.1/69

In: 0.006+/-0.000  $\chi^2/\text{NDF}$ :1273687.9/55

Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ :1294054.6/61

All: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 2567743.8/117

# yield\_bpm0i02Y\_mean vs Slug, Sign Corrected



Right In: -3.556+/-0.000  $\chi^2/\text{NDF}$ : 30851035294.6/32

Left Out: -2.348+/-0.000  $\chi^2/\text{NDF}$ : 2158686333.4/24

Right Out: -3.538+/-0.000  $\chi^2/\text{NDF}$ : 31752007967.8/36

Left In: -2.382+/-0.000  $\chi^2/\text{NDF}$ : 2318395228.4/22

Left: -2.365+/-0.000  $\chi^2/\text{NDF}$ : 4600738143.2/47

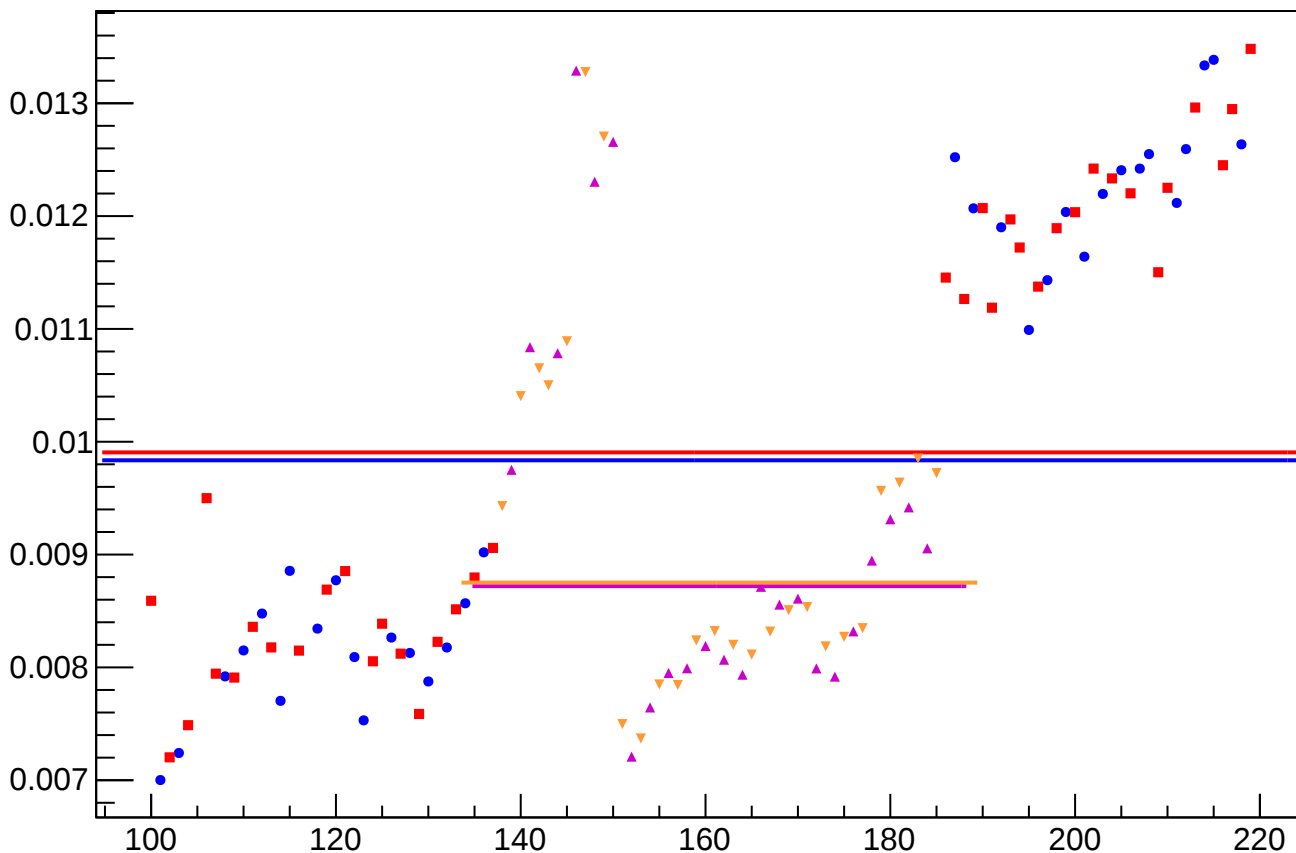
Right: -3.547+/-0.000  $\chi^2/\text{NDF}$ : 62631807875.4/69

In: -2.913+/-0.000  $\chi^2/\text{NDF}$ : 166310802726.0/55

Out: -2.887+/-0.000  $\chi^2/\text{NDF}$ : 178109682358.0/61

All: -2.900+/-0.000  $\chi^2/\text{NDF}$ : 344558850511.9

# yield\_bpm0i02Y\_rms vs Slug, Sign Corrected



Right In: 0.010+/-0.000  $\chi^2/\text{NDF}$ : 1606081.4/32

Left Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 663672.8/24

Right Out: 0.010+/-0.000  $\chi^2/\text{NDF}$ : 1547031.4/36

Left In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 747867.0/22

Left: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 1411749.0/47

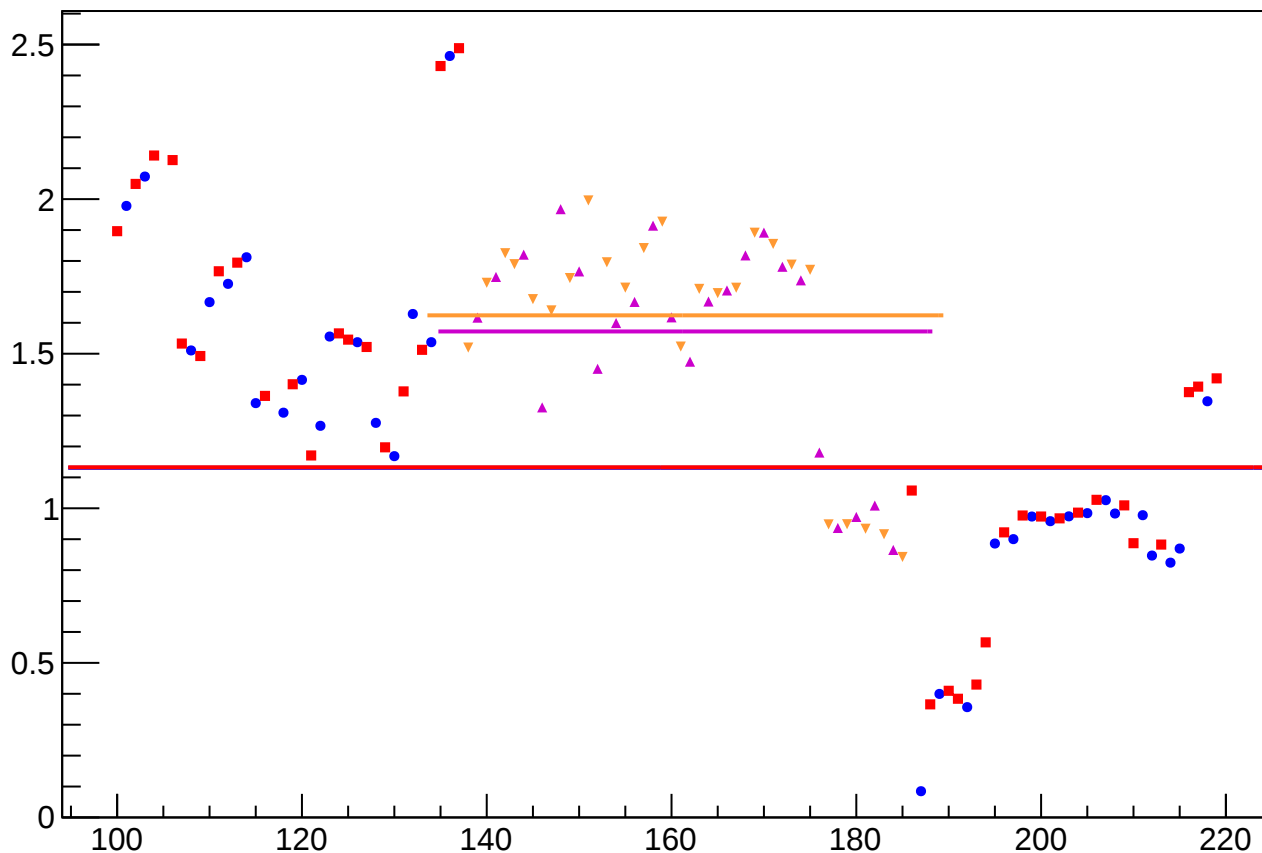
Right: 0.010+/-0.000  $\chi^2/\text{NDF}$ : 3154002.2/69

In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 2594121.9/55

Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 2482065.6/61

All: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 5077140.2/117

# yield\_bpm0i02aX\_mean vs Slug, Sign Corrected



Right In: 1.131+/-0.000  $\chi^2/\text{NDF}$ : 29059728930.0/32

Left Out: 1.624+/-0.000  $\chi^2/\text{NDF}$ : 16631112386.4/24

Right Out: 1.133+/-0.000  $\chi^2/\text{NDF}$ : 34094940967.6/36

Left In: 1.572+/-0.000  $\chi^2/\text{NDF}$ : 14230484809.4/22

Left: 1.599+/-0.000  $\chi^2/\text{NDF}$ : 31067753064.6/47

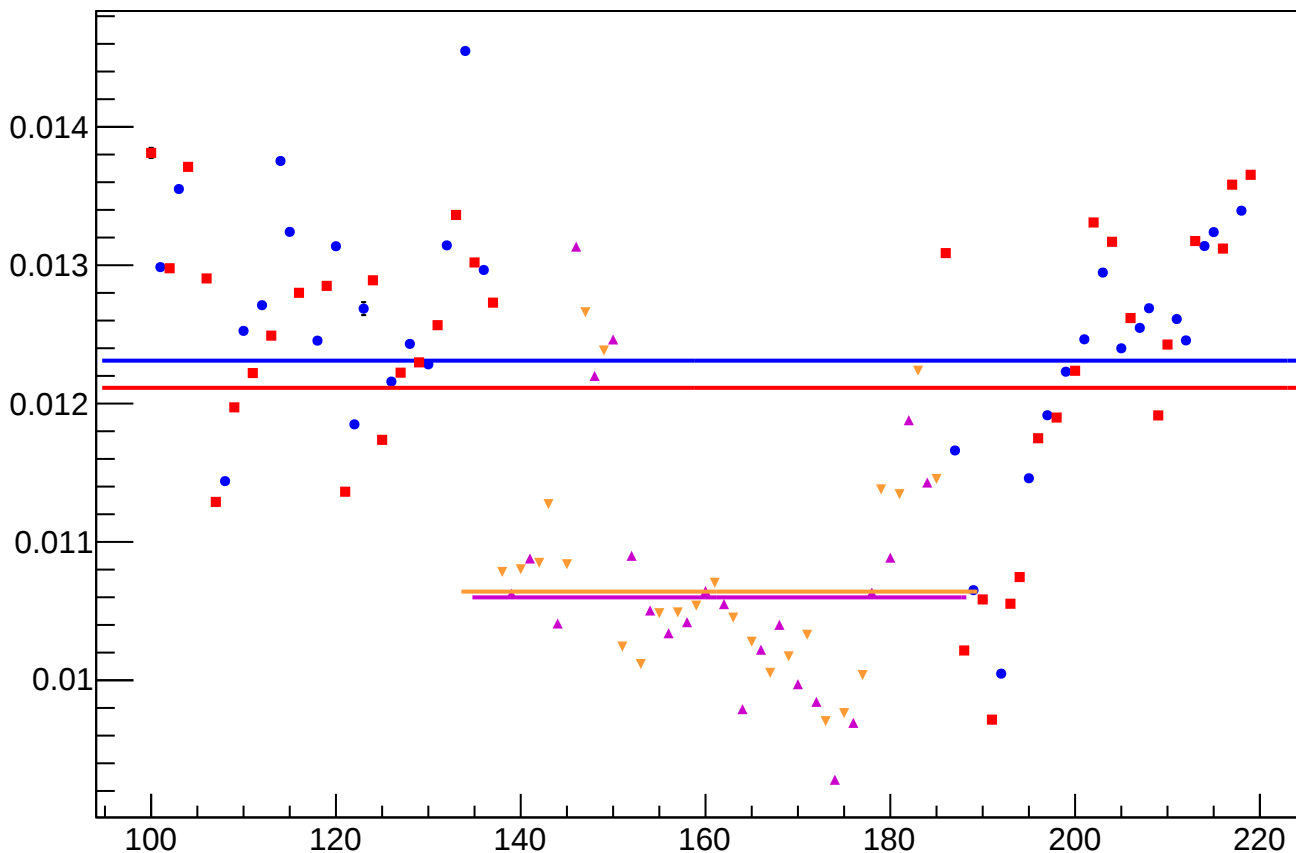
Right: 1.132+/-0.000  $\chi^2/\text{NDF}$ : 63154838617.5/69

In: 1.377+/-0.000  $\chi^2/\text{NDF}$ : 56009622936.1/55

Out: 1.402+/-0.000  $\chi^2/\text{NDF}$ : 67769451574.6/61

All: 1.390+/-0.000  $\chi^2/\text{NDF}$ : 123865467148.8

# yield\_bpm0i02aX\_rms vs Slug, Sign Corrected



Right In: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 197326.8/32

Left Out: 0.011+/-0.000  $\chi^2/\text{NDF}$ :159760.9/24

Right Out: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 295616.5/36

Left In: 0.011+/-0.000  $\chi^2/\text{NDF}$ :204531.5/22

Left: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 364556.9/47

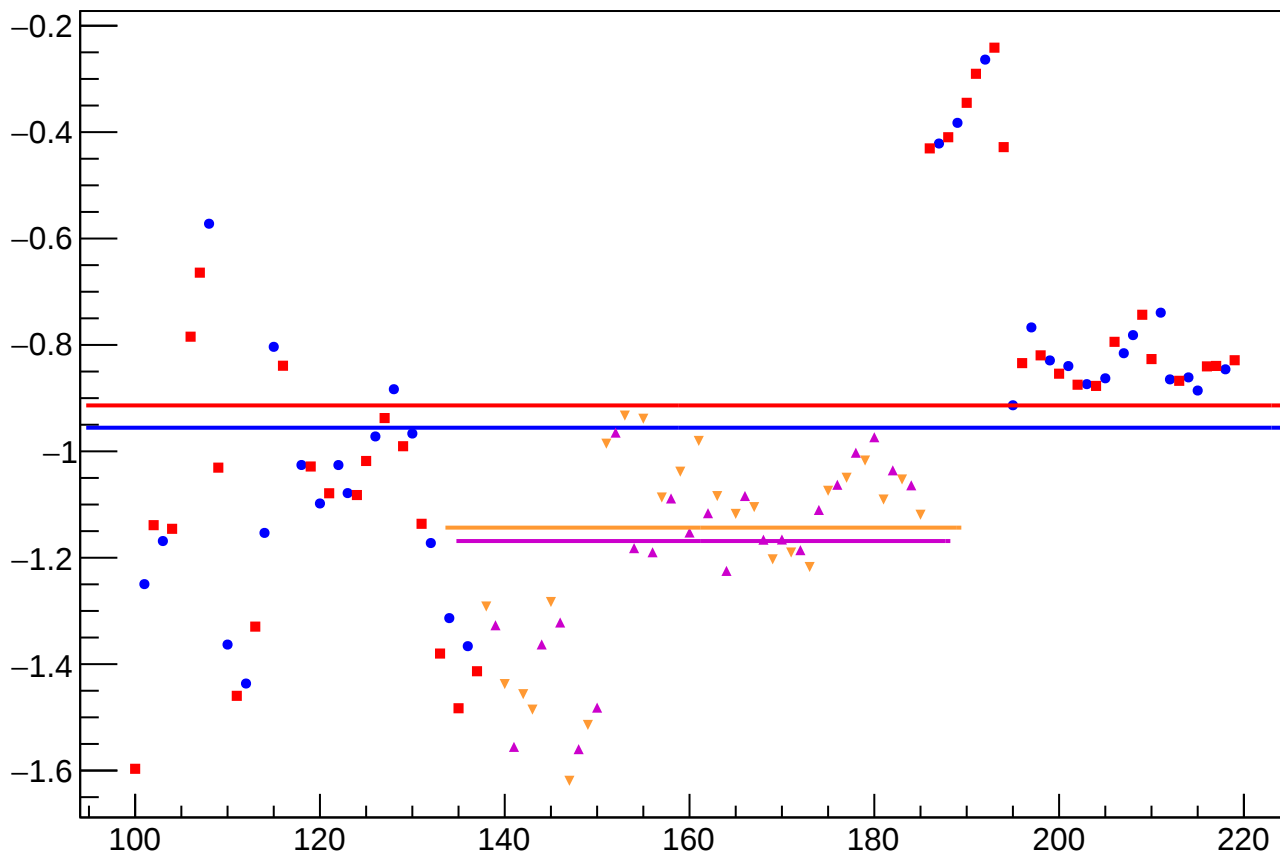
Right: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 497680.5/69

In: 0.011+/-0.000  $\chi^2/\text{NDF}$ :784778.6/55

Out: 0.011+/-0.000  $\chi^2/\text{NDF}$ :761514.1/61

All: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 1546968.1/117

# yield\_bpm0i02aY\_mean vs Slug, Sign Corrected



Right In: -0.956+/-0.000  $\chi^2/\text{NDF}$ : 11544832475.1/32

Left Out: -1.143+/-0.000  $\chi^2/\text{NDF}$ : 7976364534.0/24

Right Out: -0.914+/-0.000  $\chi^2/\text{NDF}$ : 16168541873.8/36

Left In: -1.169+/-0.000  $\chi^2/\text{NDF}$ : 6362643368.6/22

Left: -1.156+/-0.000  $\chi^2/\text{NDF}$ : 14424995220.9/47

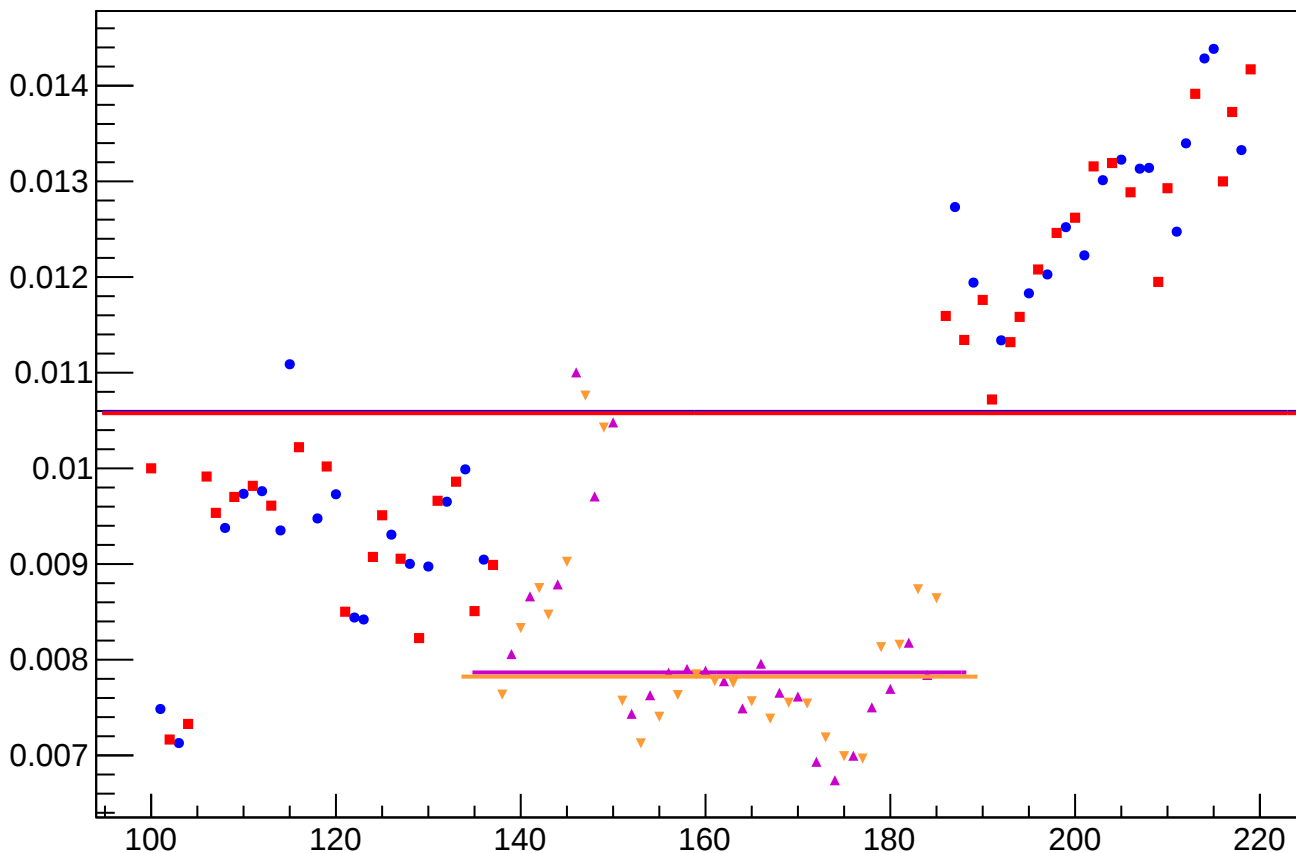
Right: -0.934+/-0.000  $\chi^2/\text{NDF}$ : 27851173203.9/69

In: -1.090+/-0.000  $\chi^2/\text{NDF}$ : 22267292039.9/55

Out: -1.059+/-0.000  $\chi^2/\text{NDF}$ : 29573042022.8/61

All: -1.074+/-0.000  $\chi^2/\text{NDF}$ : 52052684894.6/100

# yield\_bpm0i02aY\_rms vs Slug, Sign Corrected



Right In: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 1393604.5/32

Left Out: 0.008+/-0.000  $\chi^2/\text{NDF}$ :336387.6/24

Right Out: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 1348177.3/36

Left In: 0.008+/-0.000  $\chi^2/\text{NDF}$ :379901.3/22

Left: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 716803.8/47

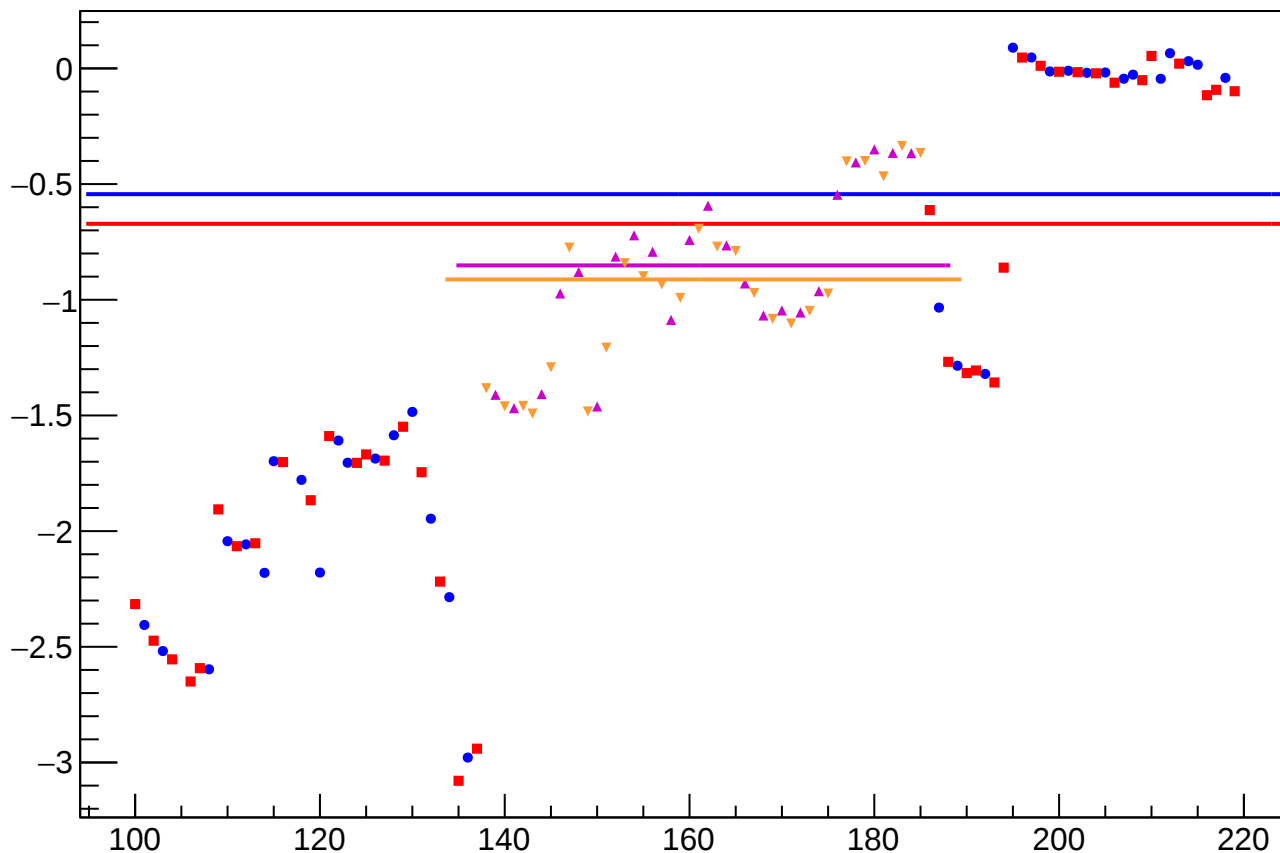
Right: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 2741810.6/69

In: 0.009+/-0.000  $\chi^2/\text{NDF}$ :3199050.5/55

Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ :3244748.2/61

All: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 6444193.1/117

# yield\_bpm0i05X\_mean vs Slug, Sign Corrected



Right In: -0.544 $\pm$ 0.000

$\chi^2$ /NDF: 412488208471.2/32

Left: -0.882 $\pm$ 0.000

$\chi^2$ /NDF: 96285672564.6/47

Left Out: -0.912 $\pm$ 0.000

$\chi^2$ /NDF: 49039425818.1/24

Right: -0.612 $\pm$ 0.000

$\chi^2$ /NDF: 862425954599.8/69

Right Out: -0.672 $\pm$ 0.000

$\chi^2$ /NDF: 445701793992.8/36

In: -0.689 $\pm$ 0.000

$\chi^2$ /NDF: 480647729772.7/55

Out: -0.779 $\pm$ 0.000

$\chi^2$ /NDF: 509003351128.6/61

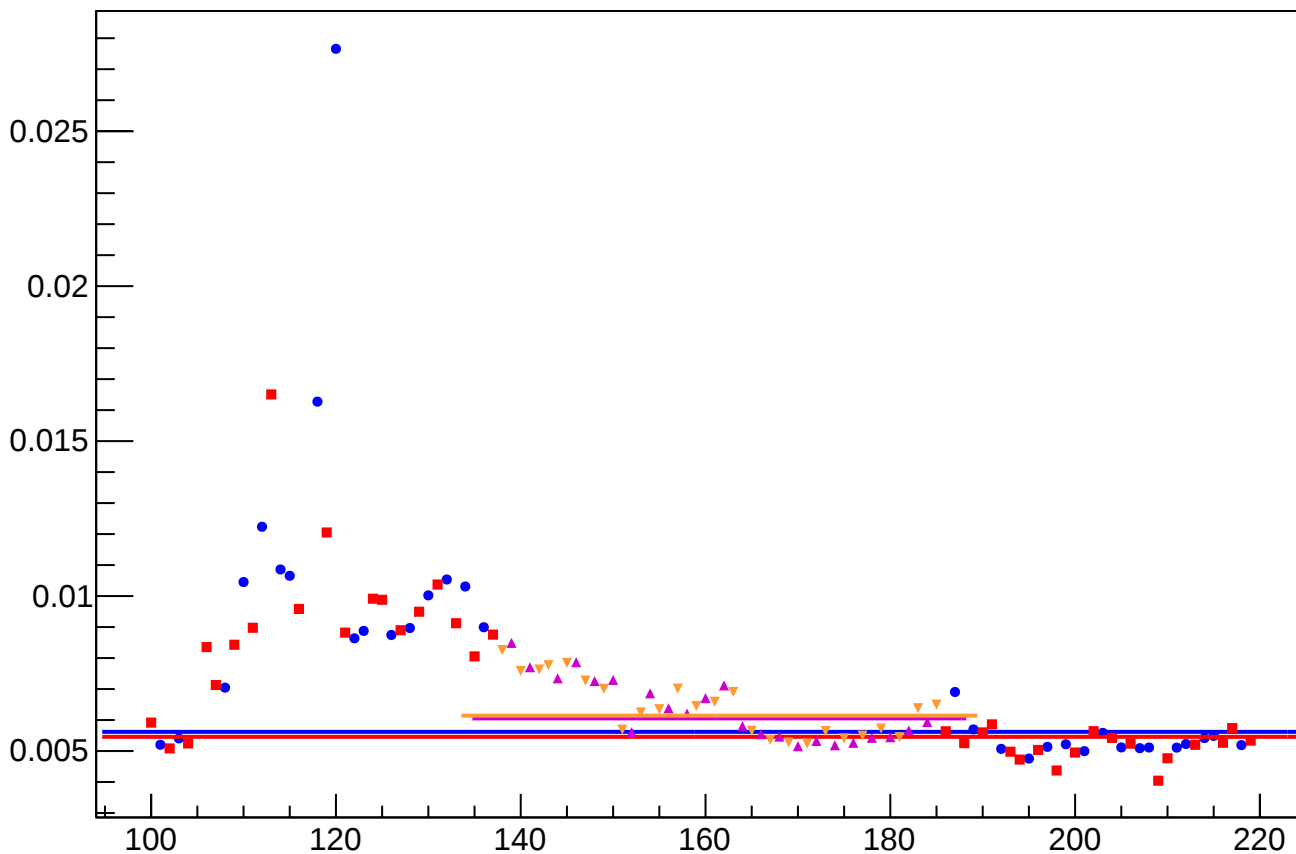
Left In: -0.851 $\pm$ 0.000

$\chi^2$ /NDF: 46438446008.2/22

All: -0.736 $\pm$ 0.000

$\chi^2$ /NDF: 993489461490.2

# yield\_bpm0i05X\_rms vs Slug, Sign Corrected



Right In: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 2071330.6/32

Left Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ :637765.4/24

Right Out: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 2135887.9/36

Left In: 0.006+/-0.000  $\chi^2/\text{NDF}$ :697577.8/22

Left: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 1338871.2/47

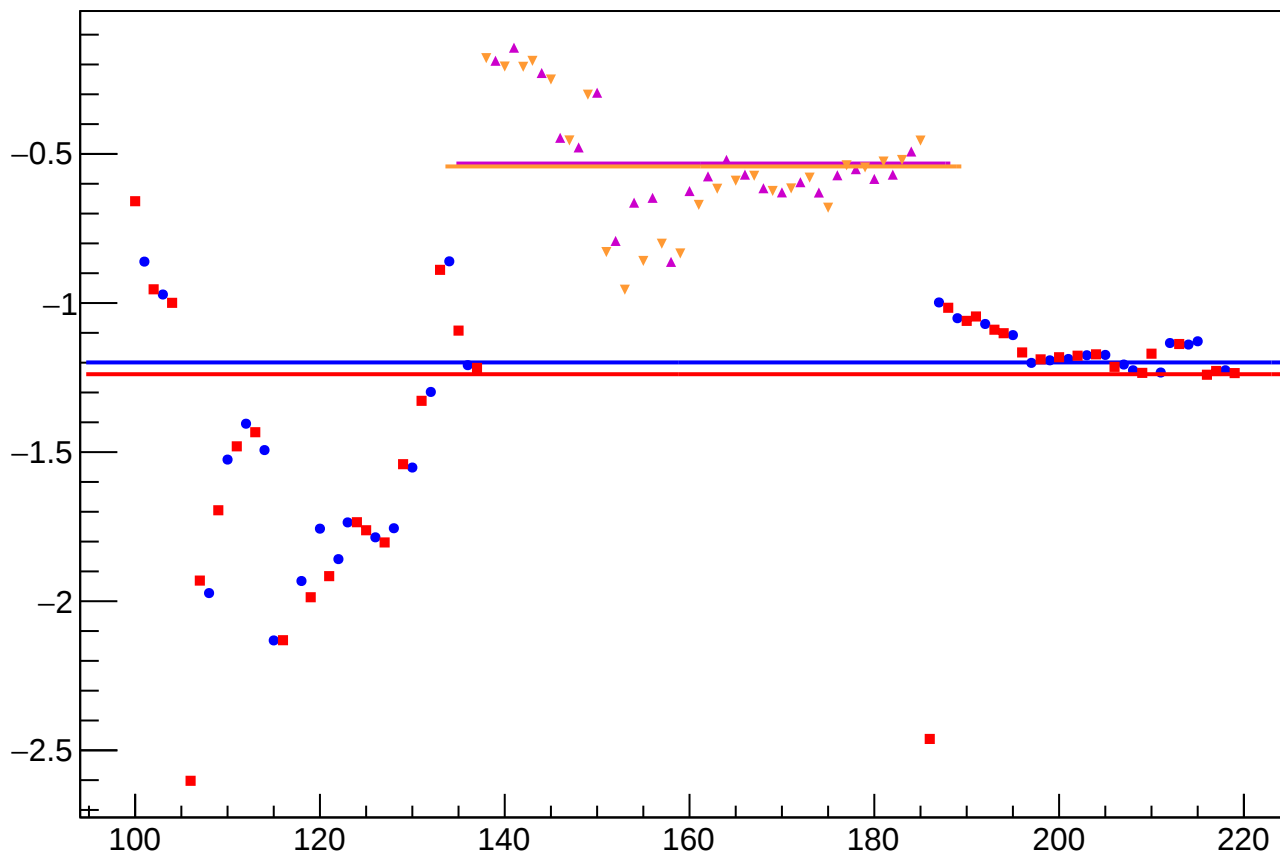
Right: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 4220529.1/69

In: 0.006+/-0.000  $\chi^2/\text{NDF}$ :2855296.0/55

Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ :3004662.5/61

All: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 5863516.8/117

# yield\_bpm0i05Y\_mean vs Slug, Sign Corrected



Right In: -1.199 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 26945770728.2/32

Left Out: -0.542 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 47268284910.3/24

Right Out: -1.239 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 79547115749.9/36

Left In: -0.532 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 30715235426.8/22

Left: -0.537 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 78028833870.1/47

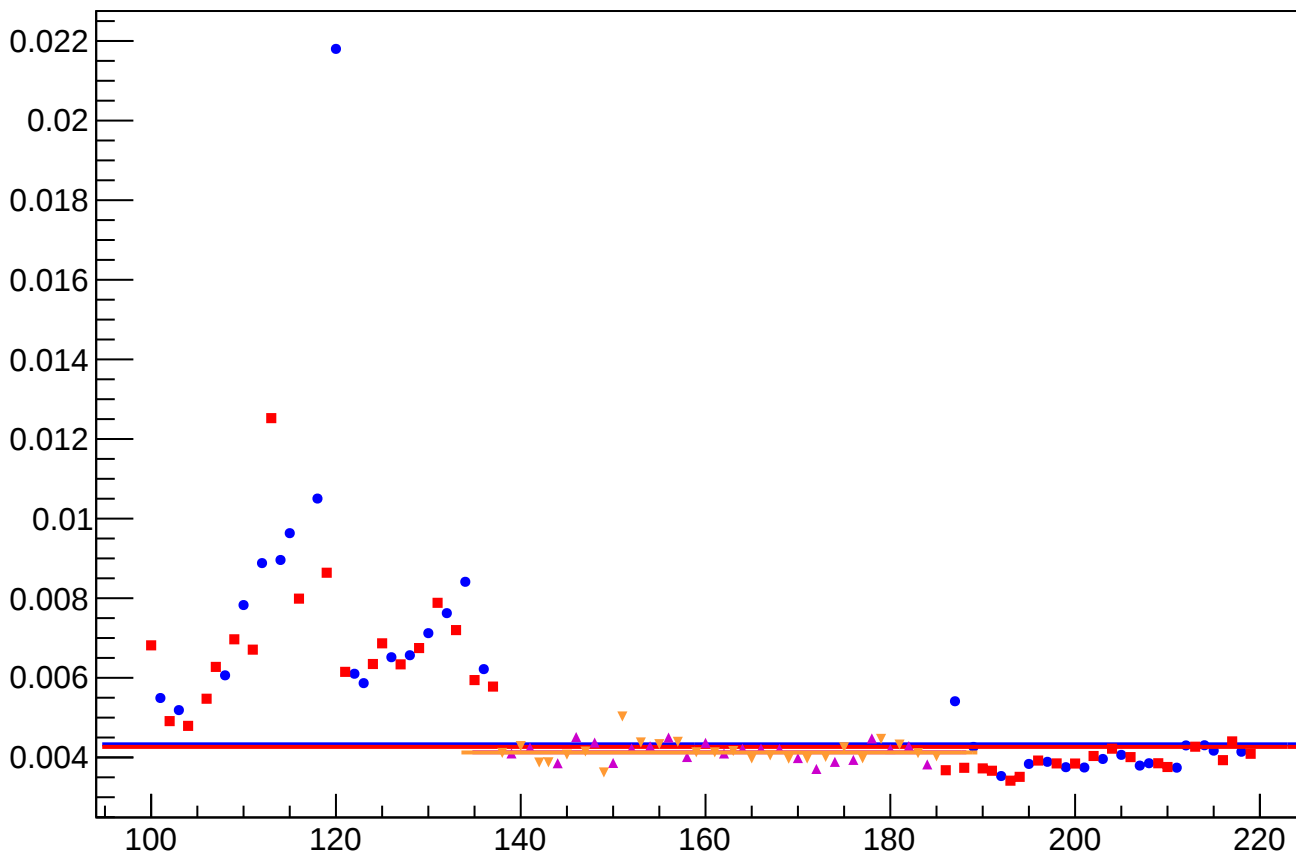
Right: -1.220 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 107161312022.6/69

In: -0.842 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 251454280184.3/55

Out: -0.874 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 356460081230.4/61

All: -0.859 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 608831069179.8

# yield\_bpm0i05Y\_rms vs Slug, Sign Corrected



Right In: 0.004+/-0.000  $\chi^2/\text{NDF}$ : 2075199.3/32

Left Out: 0.004+/-0.000  $\chi^2/\text{NDF}$ :113033.9/24

Right Out: 0.004+/-0.000  $\chi^2/\text{NDF}$ : 1902350.3/36

Left In: 0.004+/-0.000  $\chi^2/\text{NDF}$ :93111.2/22

Left: 0.004+/-0.000  $\chi^2/\text{NDF}$ : 206172.1/47

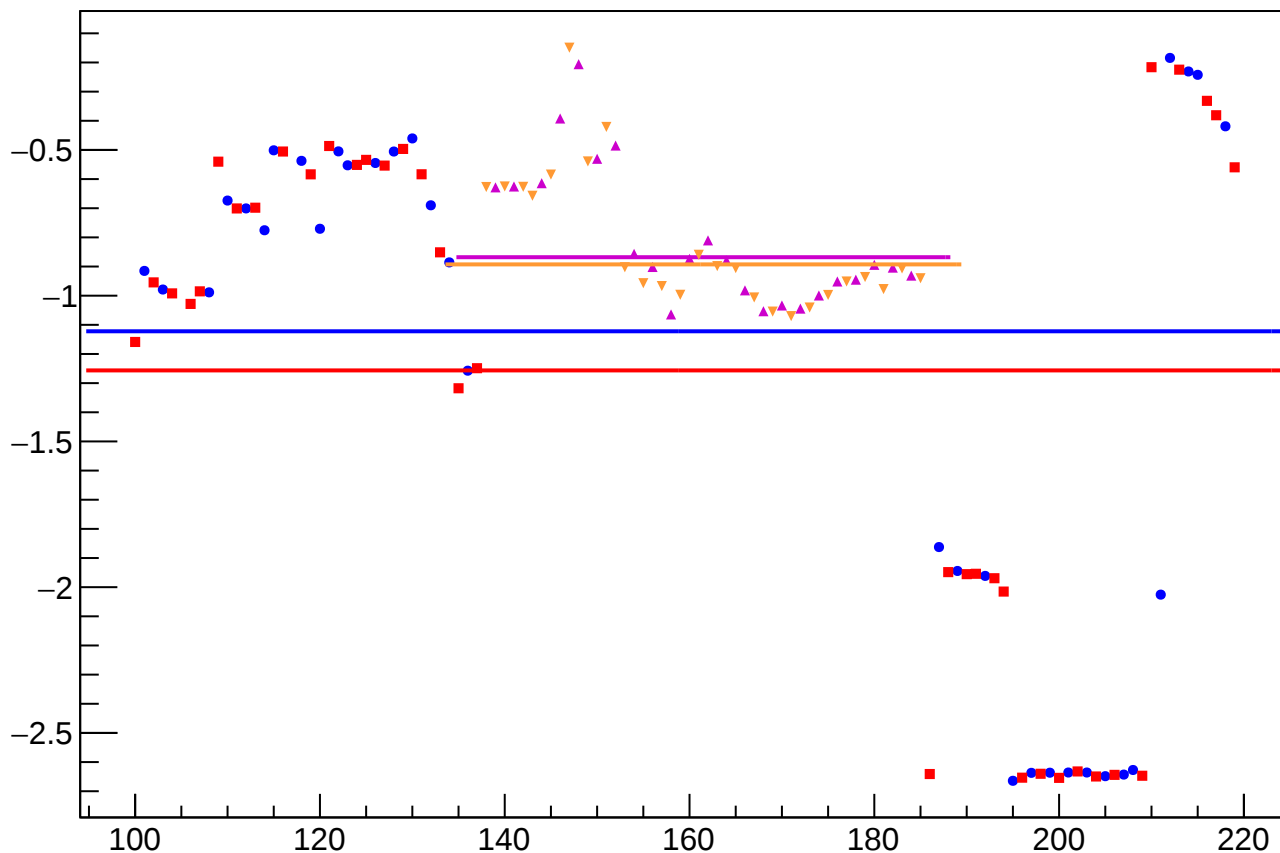
Right: 0.004+/-0.000  $\chi^2/\text{NDF}$ : 3981091.1/69

In: 0.004+/-0.000  $\chi^2/\text{NDF}$ :2202877.4/55

Out: 0.004+/-0.000  $\chi^2/\text{NDF}$ :2033979.6/61

All: 0.004+/-0.000  $\chi^2/\text{NDF}$ : 4238617.1/117

# yield\_bpm0i07X\_mean vs Slug, Sign Corrected



Right In: -1.122+/-0.000  $\chi^2/\text{NDF}$ : 569234434250.7/32

Left Out: -0.893+/-0.000  $\chi^2/\text{NDF}$ : 40787012603.8/24

Right Out: -1.256+/-0.000  $\chi^2/\text{NDF}$ : 700344763819.6/36

Left In: -0.868+/-0.000  $\chi^2/\text{NDF}$ : 43853190177.2/22

Left: -0.880+/-0.000  $\chi^2/\text{NDF}$ : 84980637247.0/47

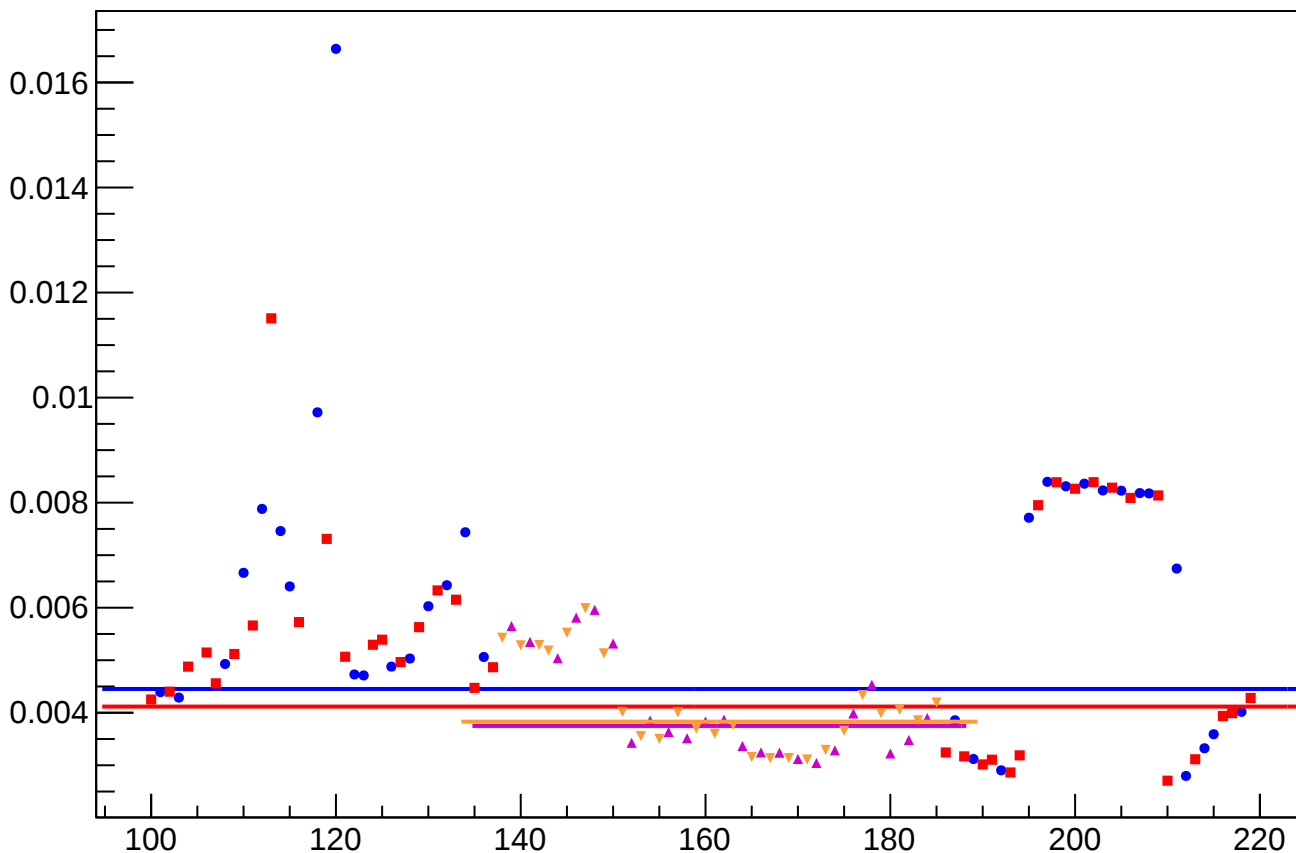
Right: -1.198+/-0.000  $\chi^2/\text{NDF}$ : 1276947820869.1/6

In: -0.968+/-0.000  $\chi^2/\text{NDF}$ : 641517111418.1/55

Out: -1.058+/-0.000  $\chi^2/\text{NDF}$ : 808686648770.4/61

All: -1.015+/-0.000  $\chi^2/\text{NDF}$ : 1457983158189

# yield\_bpm0i07X\_rms vs Slug, Sign Corrected



Right In: 0.004+/-0.000  $\chi^2/\text{NDF}$ : 5081575.4/32

Left Out: 0.004+/-0.000  $\chi^2/\text{NDF}$ :1179801.7/24

Right Out: 0.004+/-0.000  $\chi^2/\text{NDF}$ : 4719416.0/36

Left In: 0.004+/-0.000  $\chi^2/\text{NDF}$ :1288490.4/22

Left: 0.004+/-0.000  $\chi^2/\text{NDF}$ : 2475792.1/47

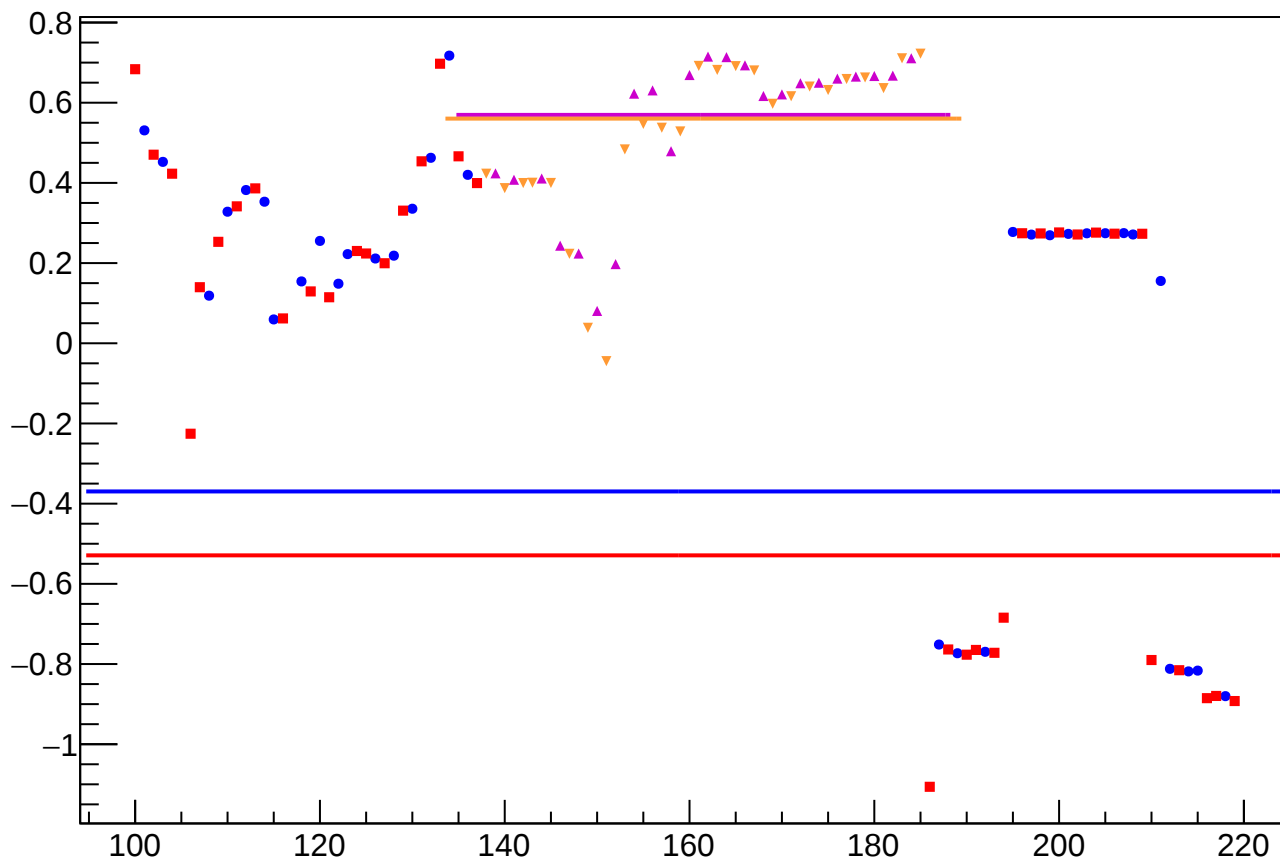
Right: 0.004+/-0.000  $\chi^2/\text{NDF}$ : 9892925.4/69

In: 0.004+/-0.000  $\chi^2/\text{NDF}$ :6806090.3/55

Out: 0.004+/-0.000  $\chi^2/\text{NDF}$ :5983136.8/61

All: 0.004+/-0.000  $\chi^2/\text{NDF}$ : 12797629.6/117

# yield\_bpm0i07Y\_mean vs Slug, Sign Corrected



Right In:  $-0.370 \pm 0.000$   $\chi^2/\text{NDF}: 511949684576.3/32$

Left Out:  $0.560 \pm 0.000$   $\chi^2/\text{NDF}: 45205806387.2/24$

Right Out:  $-0.529 \pm 0.000$   $\chi^2/\text{NDF}: 627124633821.1/36$

Left In:  $0.570 \pm 0.000$   $\chi^2/\text{NDF}: 42104067973.0/22$

Left:  $0.565 \pm 0.000$   $\chi^2/\text{NDF}: 87378176036.1/47$

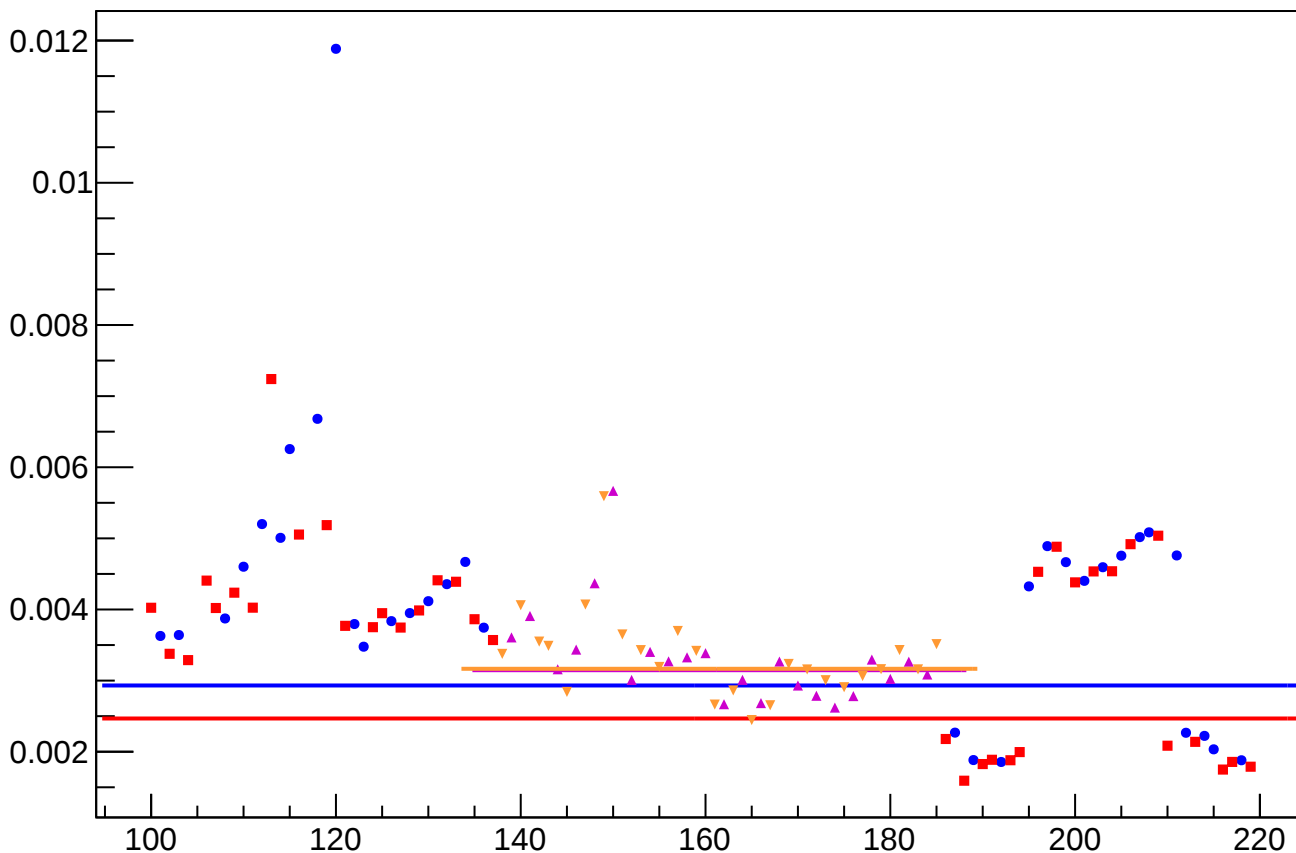
Right:  $-0.464 \pm 0.000$   $\chi^2/\text{NDF}: 1164337575492.6/6$

In:  $0.084 \pm 0.000$   $\chi^2/\text{NDF}: 1264766080084.5/55$

Out:  $-0.096 \pm 0.000$   $\chi^2/\text{NDF}: 1830547220877.5/61$

All:  $-0.017 \pm 0.000$   $\chi^2/\text{NDF}: 3153925428472$

# yield\_bpm0i07Y\_rms vs Slug, Sign Corrected



Right In: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 5082495.5/32

Left Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 744886.7/24

Right Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 5804421.3/36

Left In: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 716402.8/22

Left: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 1461906.1/47

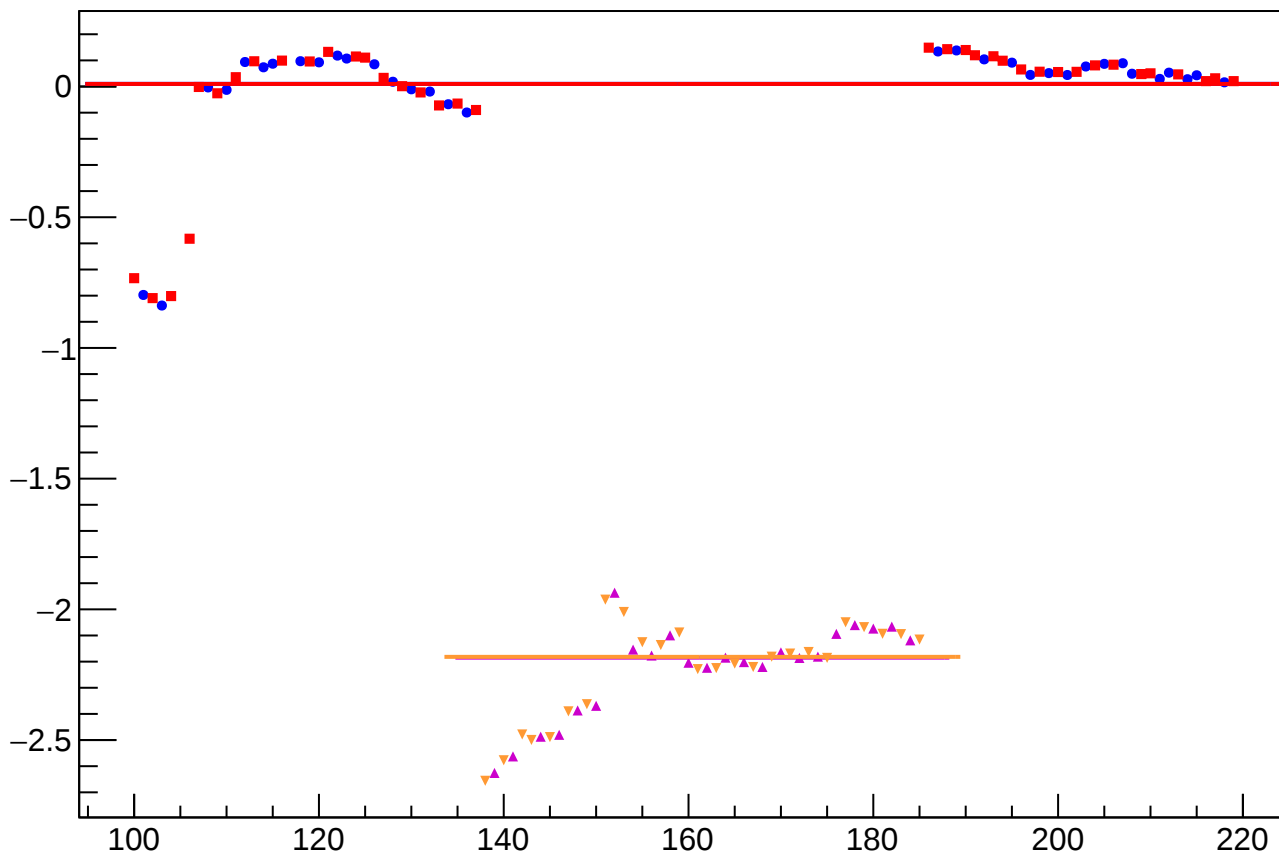
Right: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 11315409.2/69

In: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 5873355.0/55

Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 7502874.7/61

All: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 13680345.9/117

# yield\_bpm1i02X\_mean vs Slug, Sign Corrected



Right In: 0.010+/-0.000

$\chi^2/\text{NDF}$ : 5917680447.7/32

Left: -2.183+/-0.000

$\chi^2/\text{NDF}$ : 7382310821.5/47

Left Out: -2.182+/-0.000

$\chi^2/\text{NDF}$ : 4008829567.0/24

Right: 0.010+/-0.000

$\chi^2/\text{NDF}$ : 12905355027.9/69

Right Out: 0.010+/-0.000

$\chi^2/\text{NDF}$ : 6987668240.9/36

In: -1.099+/-0.000

$\chi^2/\text{NDF}$ : 384476514648.1/55

Out: -1.084+/-0.000

$\chi^2/\text{NDF}$ : 414609821277.3/61

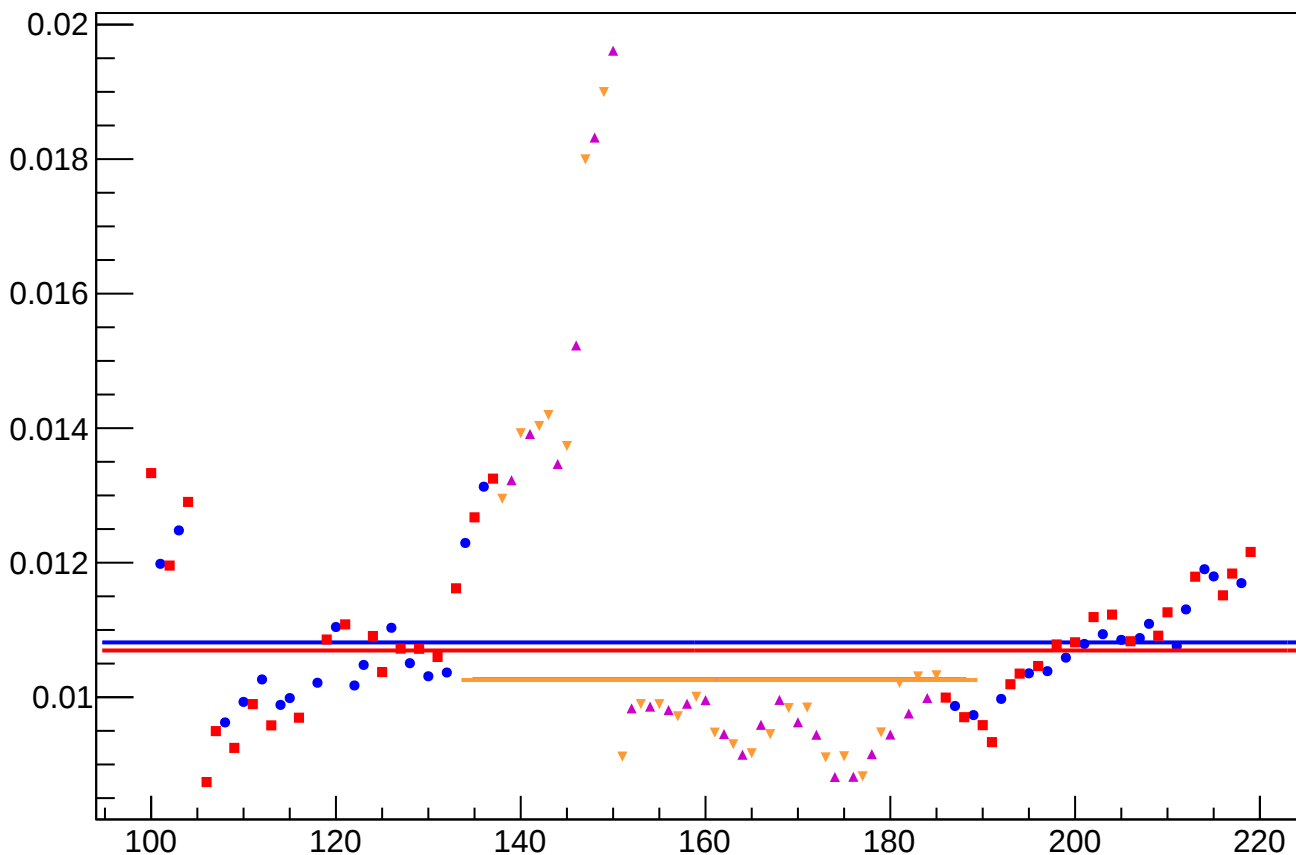
Left In: -2.185+/-0.000

$\chi^2/\text{NDF}$ : 3372742534.3/22

All: -1.091+/-0.000

$\chi^2/\text{NDF}$ : 799121494499.3

# yield\_bpm1i02X\_rms vs Slug, Sign Corrected



Right In: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 193204.1/32

Left Out: 0.010+/-0.000  $\chi^2/\text{NDF}$ :1270617.6/24

Right Out: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 295901.9/36

Left In: 0.010+/-0.000  $\chi^2/\text{NDF}$ :1340264.2/22

Left: 0.010+/-0.000  $\chi^2/\text{NDF}$ : 2610893.2/47

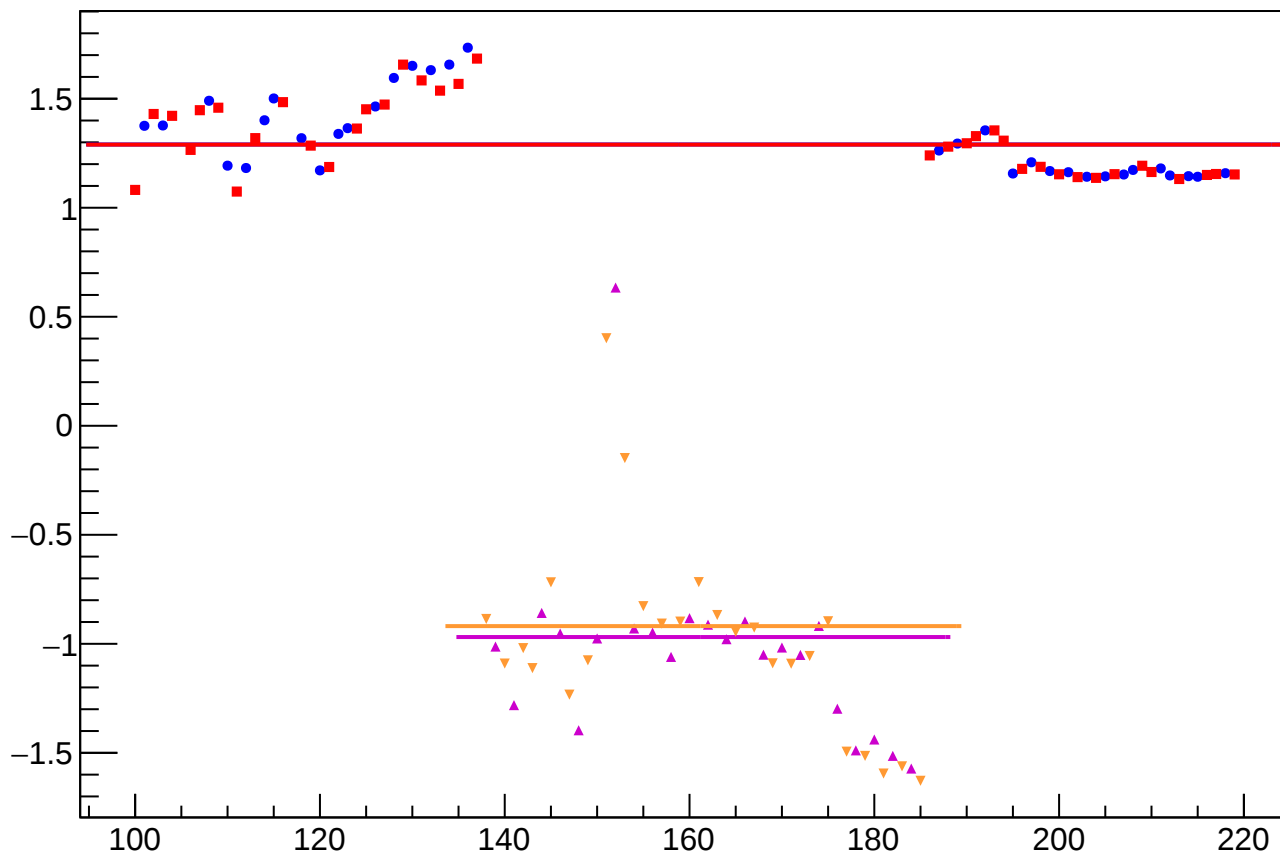
Right: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 491410.0/69

In: 0.011+/-0.000  $\chi^2/\text{NDF}$ :1580647.1/55

Out: 0.010+/-0.000  $\chi^2/\text{NDF}$ :1598920.3/61

All: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 3180760.8/117

# yield\_bpm1i02Y\_mean vs Slug, Sign Corrected



Right In: 1.290+/-0.000

$\chi^2/\text{NDF}$ : 8773170576.0/32

Left: -0.943+/-0.000

$\chi^2/\text{NDF}$ : 110825900215.1/47

Left Out: -0.919+/-0.000

$\chi^2/\text{NDF}$ : 55622252895.8/24

Right: 1.290+/-0.000

$\chi^2/\text{NDF}$ : 15881340749.1/69

Right Out: 1.290+/-0.000

$\chi^2/\text{NDF}$ : 7108127082.9/36

In: 0.283+/-0.000

$\chi^2/\text{NDF}$ : 740741986075.2/55

Out: 0.324+/-0.000

$\chi^2/\text{NDF}$ : 754766418946.0/61

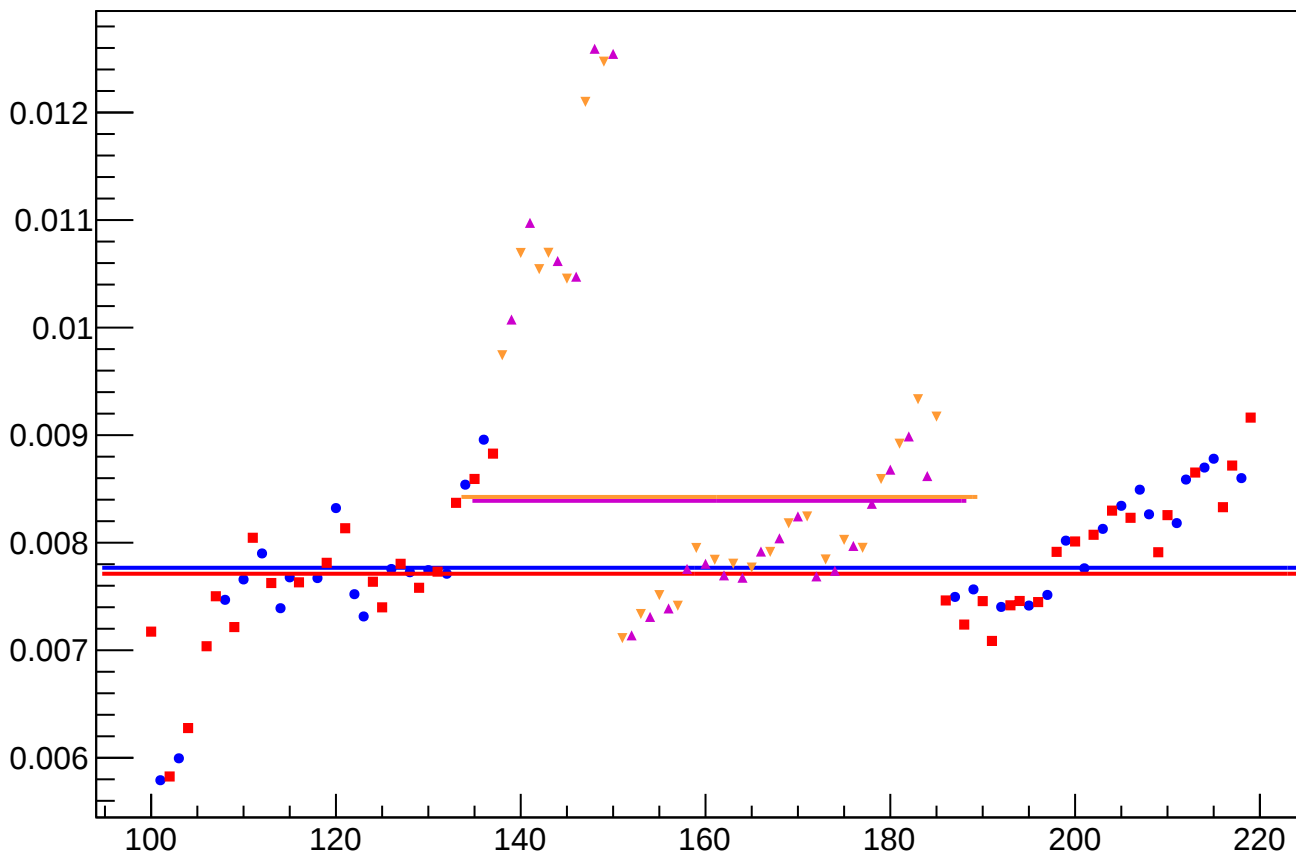
Left In: -0.969+/-0.000

$\chi^2/\text{NDF}$ : 54895002535.8/22

All: 0.304+/-0.000

$\chi^2/\text{NDF}$ : 1495982712992.

# yield\_bpm1i02Y\_rms vs Slug, Sign Corrected



Right In: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 379548.7/32

Left Out: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 792337.0/24

Right Out: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 334916.0/36

Left In: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 839880.4/22

Left: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 1632536.0/47

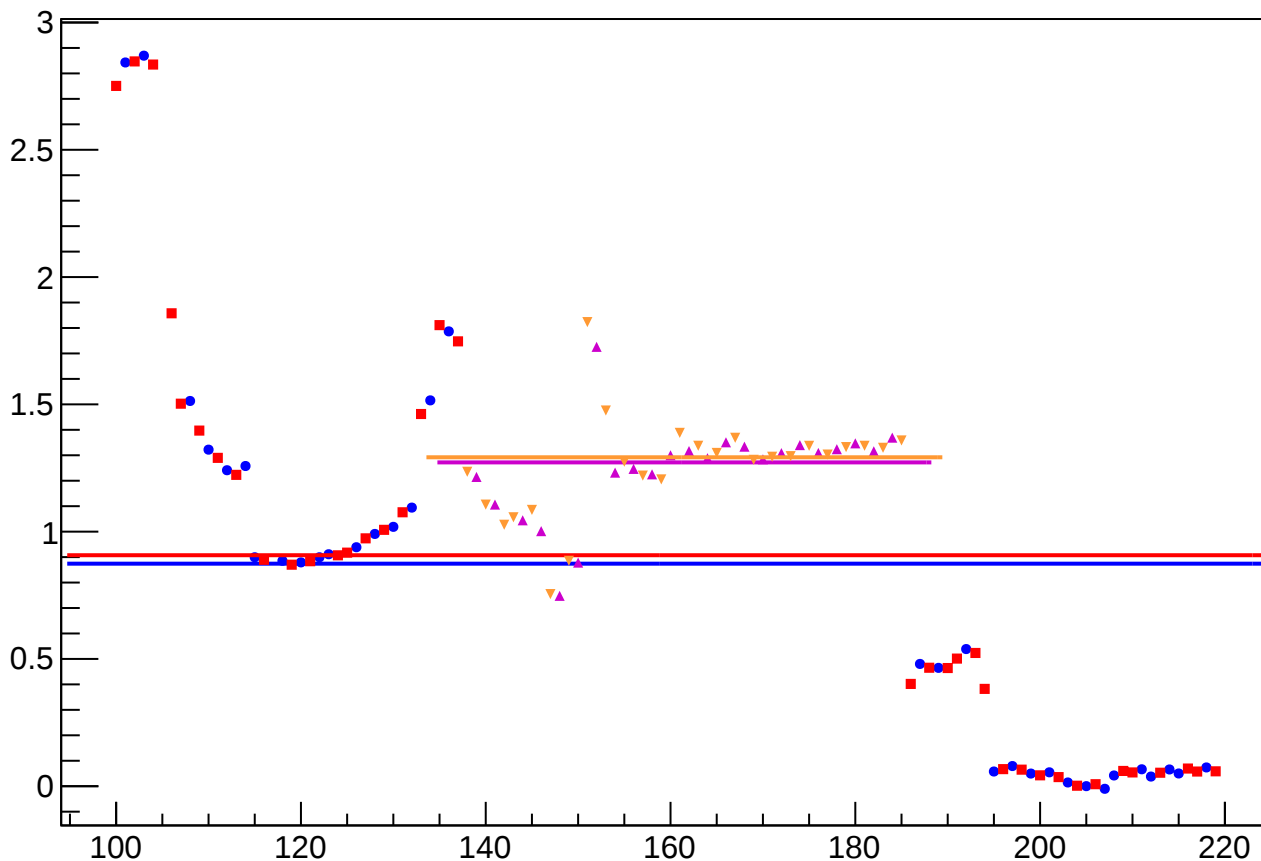
Right: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 715420.8/69

In: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 1322297.3/55

Out: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 1271991.6/61

All: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 2594532.0/117

# yield\_bpm1i04X\_mean vs Slug, Sign Corrected



Right In: 0.874 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 146325066783.1/32

Left Out: 1.292 $\pm$ 0.000  $\chi^2/\text{NDF}$ :9305298695.5/24

Right Out: 0.907 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 143885391023.8/36

Left In: 1.272 $\pm$ 0.000  $\chi^2/\text{NDF}$ :7573930981.2/22

Left: 1.282 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 16930321584.4/47

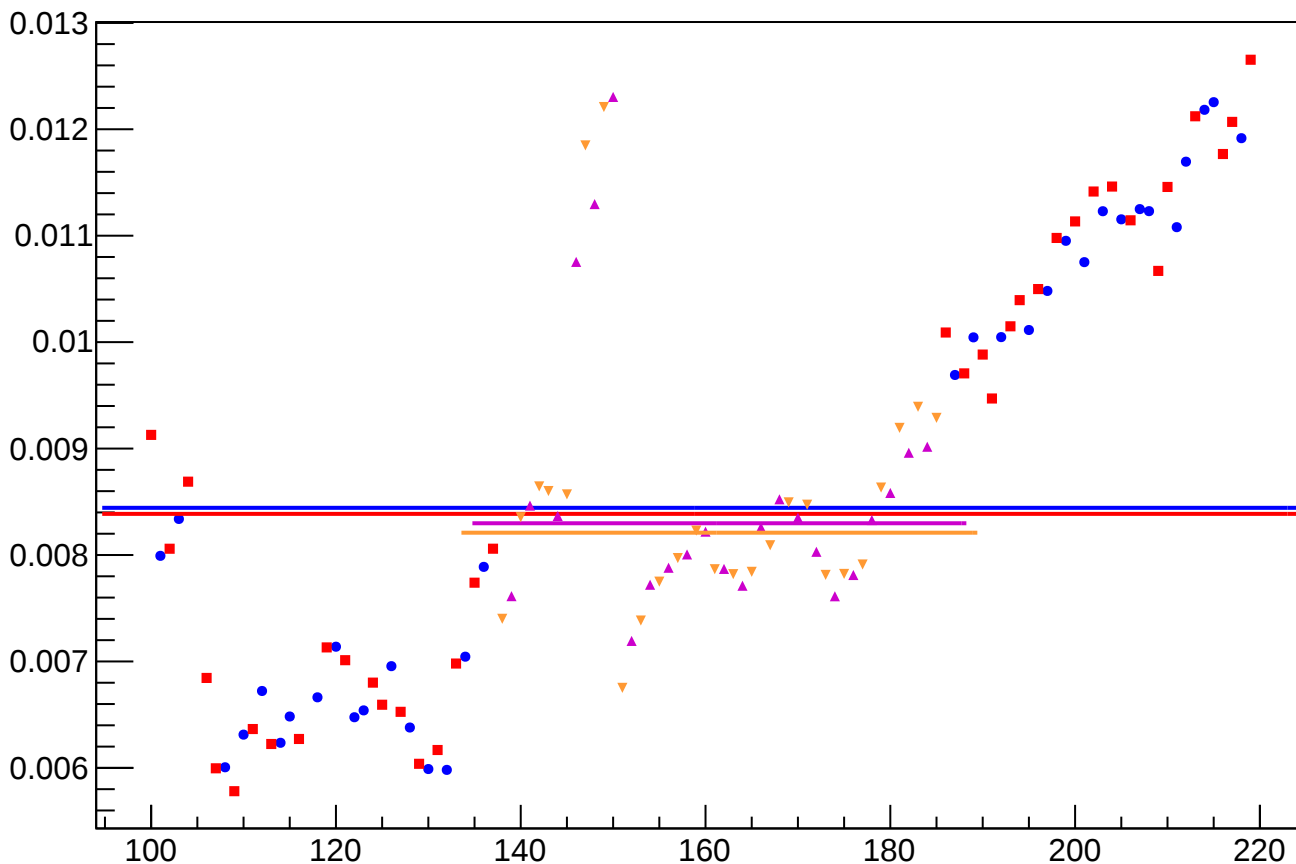
Right: 0.891 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 290347175321.0/69

In: 1.075 $\pm$ 0.000  $\chi^2/\text{NDF}$ :172965696599.3/55

Out: 1.101 $\pm$ 0.000  $\chi^2/\text{NDF}$ :172474039625.8/61

All: 1.089 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 345611842595.5

# yield\_bpm1i04X\_rms vs Slug, Sign Corrected



Right In: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 2281395.8/32

Left Out: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 478864.9/24

Right Out: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 2528779.4/36

Left In: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 462022.1/22

Left: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 942877.3/47

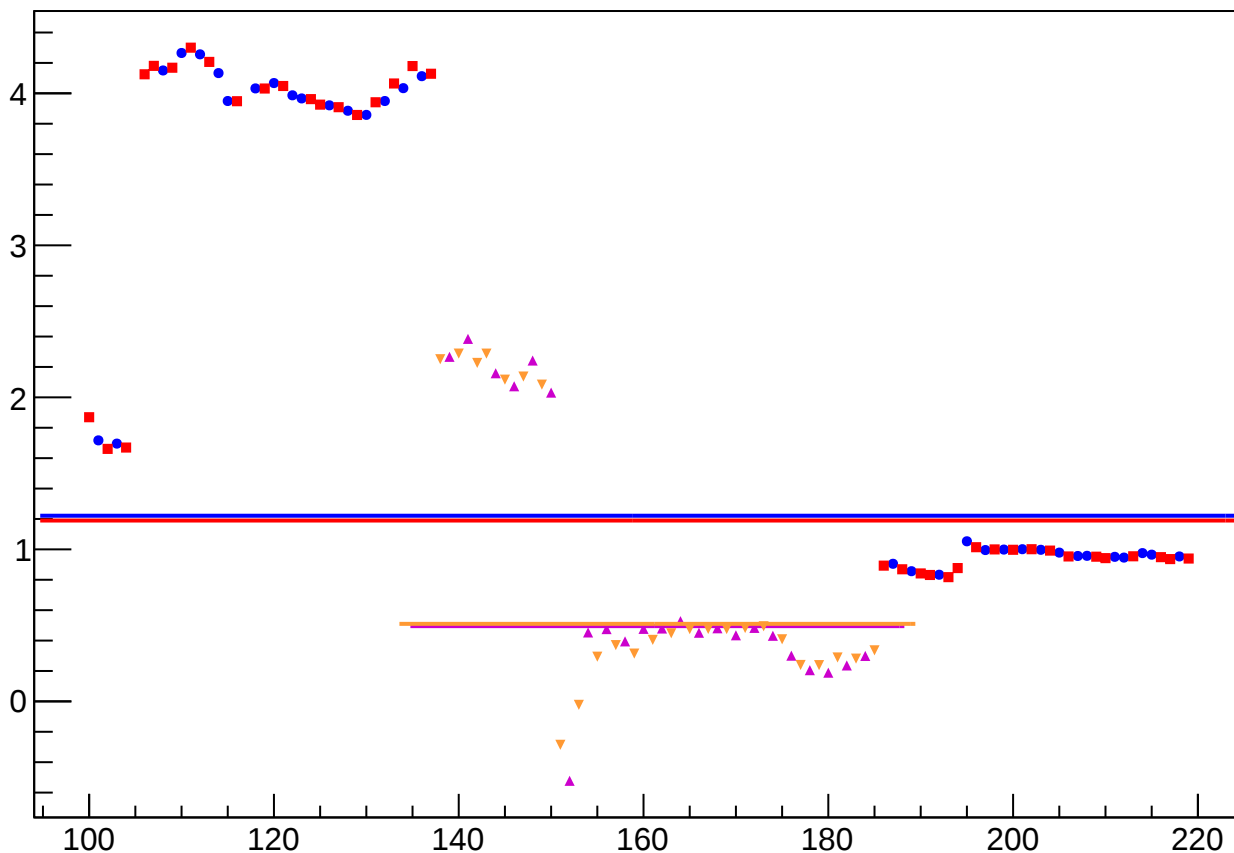
Right: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 4810977.6/69

In: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 2748487.1/55

Out: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 3015798.2/61

All: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 5766939.8/117

# yield\_bpm1i04Y\_mean vs Slug, Sign Corrected



Right In: 1.221+/-0.000

$\chi^2/\text{NDF}$ : 1542519421436.2/32

Left Out: 0.510+/-0.000

$\chi^2/\text{NDF}$ : 274818814912.4/24

Right Out: 1.190+/-0.000

$\chi^2/\text{NDF}$ : 1740677528416.0/36

Left In: 0.495+/-0.000

$\chi^2/\text{NDF}$ : 268863202792.4/22

Left: 0.503+/-0.000

$\chi^2/\text{NDF}$ : 543767842878.3/47

Right: 1.205+/-0.000

$\chi^2/\text{NDF}$ : 3284342676991.9/69

In: 1.034+/-0.000

$\chi^2/\text{NDF}$ : 2107924274824.3/55

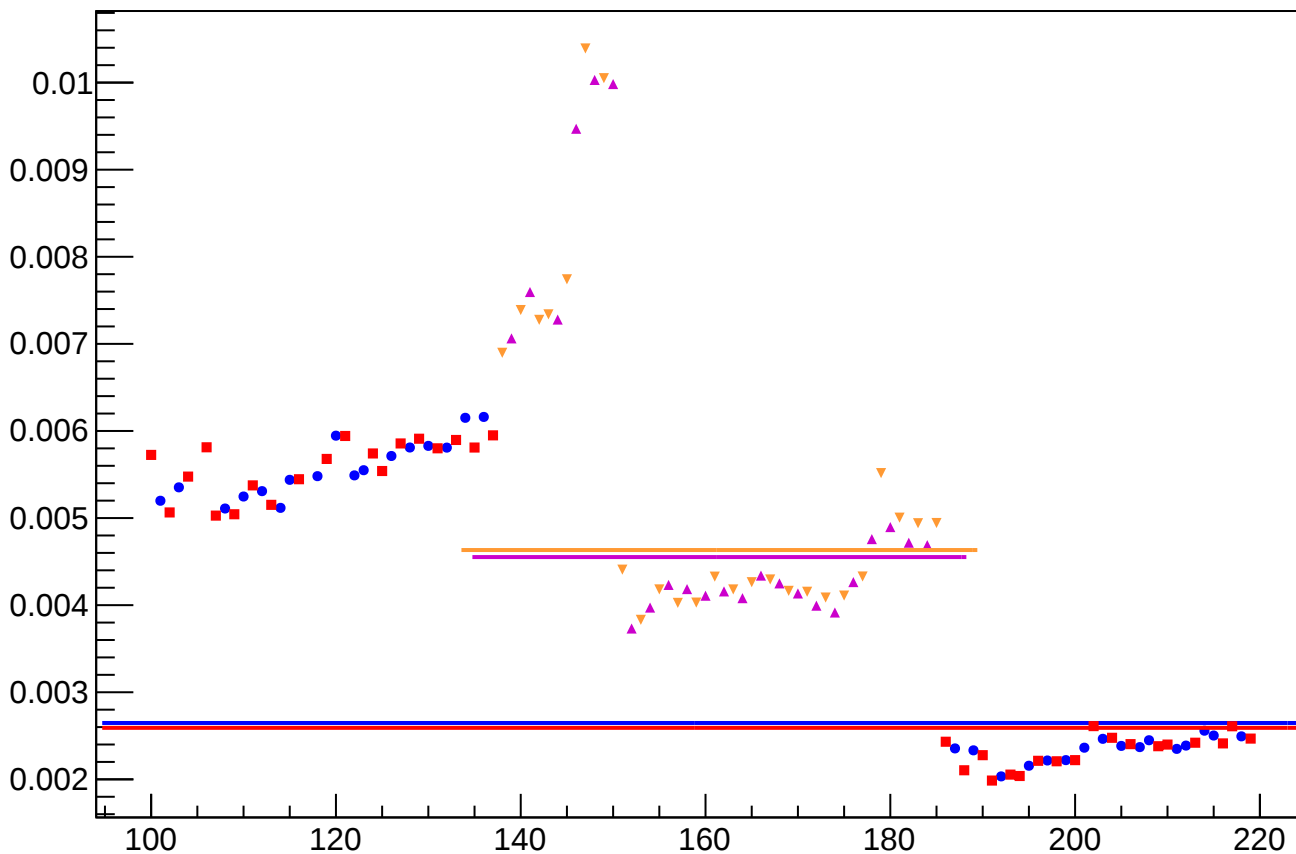
Out: 1.025+/-0.000

$\chi^2/\text{NDF}$ : 2287344090755.5/61

All: 1.029+/-0.000

$\chi^2/\text{NDF}$ : 4395388197633.0/100

# yield\_bpm1i04Y\_rms vs Slug, Sign Corrected



Right In: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 4197147.8/32

Left Out: 0.005 $\pm$ 0.000  $\chi^2$ /NDF:2114007.7/24

Right Out: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 4485704.3/36

Left In: 0.005 $\pm$ 0.000  $\chi^2$ /NDF:2237666.9/22

Left: 0.005 $\pm$ 0.000  $\chi^2$ /NDF: 4356682.7/47

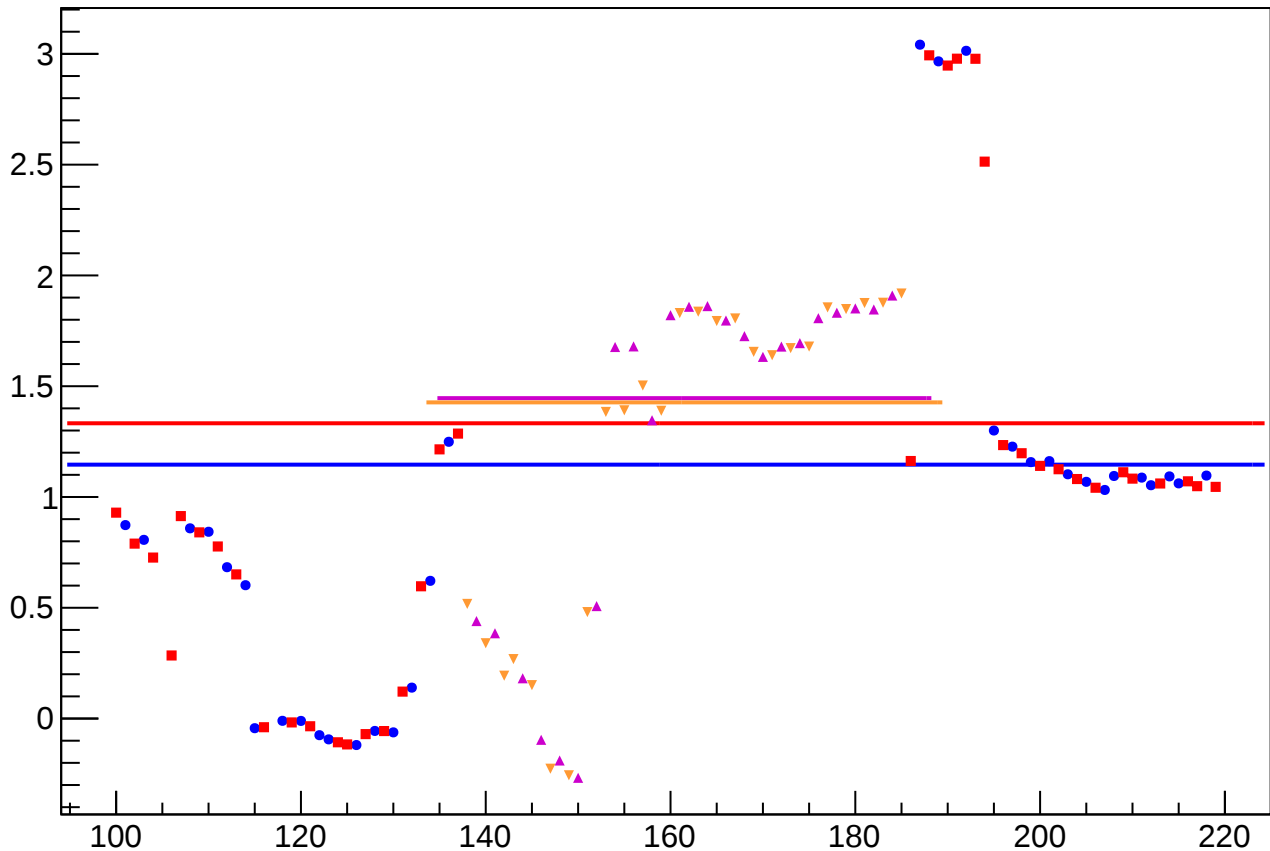
Right: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 8689976.3/69

In: 0.003 $\pm$ 0.000  $\chi^2$ /NDF:10514708.3/55

Out: 0.003 $\pm$ 0.000  $\chi^2$ /NDF:11503619.1/61

All: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 22026833.3/117

# yield\_bpm1i06X\_mean vs Slug, Sign Corrected



Right In: 1.146+/-0.000  $\chi^2/\text{NDF}$ : 72912361043.7/32

Left Out: 1.427+/-0.000  $\chi^2/\text{NDF}$ : 49990787038.3/24

Right Out: 1.333+/-0.000  $\chi^2/\text{NDF}$ : 102152121825.7/36

Left In: 1.446+/-0.000  $\chi^2/\text{NDF}$ : 53752493130.3/22

Left: 1.436+/-0.000  $\chi^2/\text{NDF}$ : 103768857952.7/47

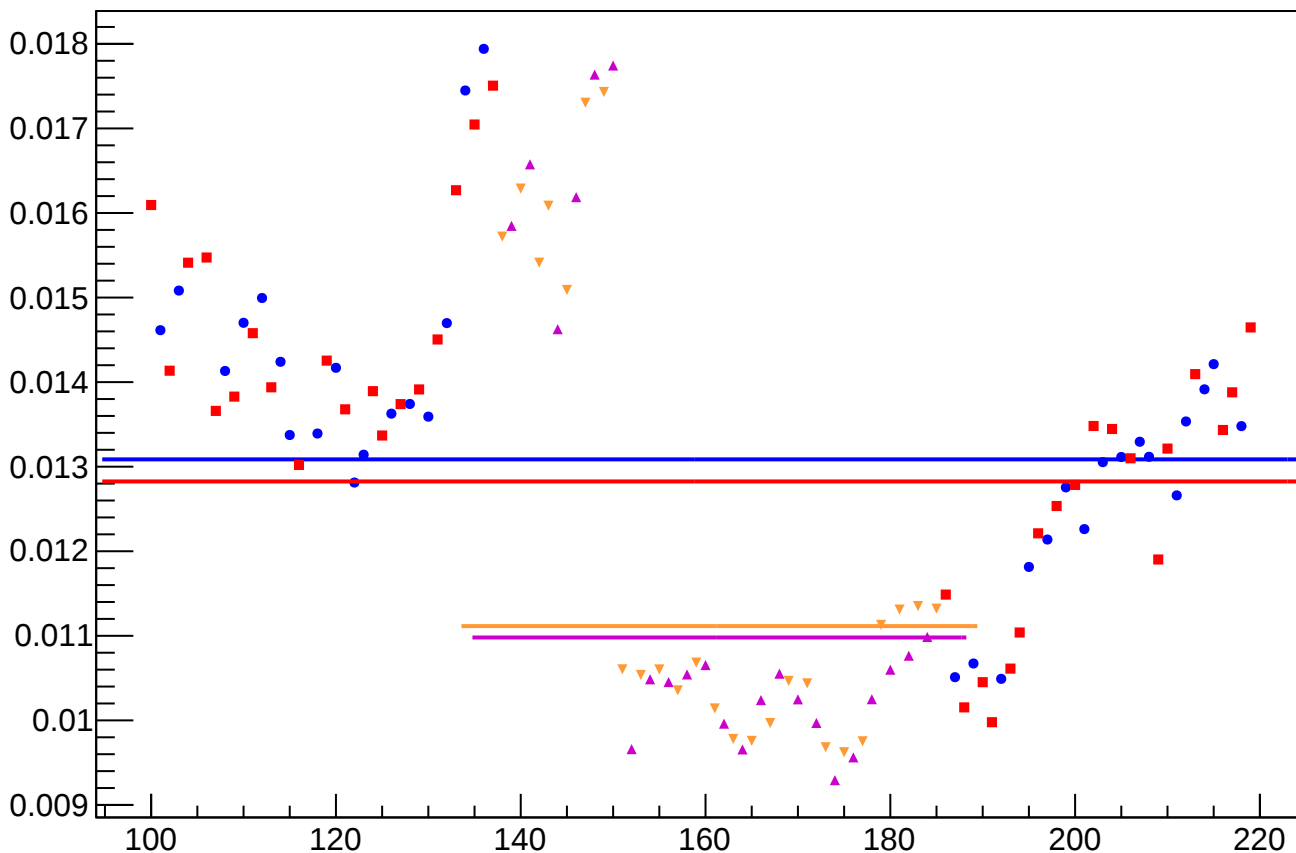
Right: 1.244+/-0.000  $\chi^2/\text{NDF}$ : 176967979648.5/69

In: 1.317+/-0.000  $\chi^2/\text{NDF}$ : 131995805231.9/55

Out: 1.385+/-0.000  $\chi^2/\text{NDF}$ : 152708161951.4/61

All: 1.352+/-0.000  $\chi^2/\text{NDF}$ : 285279968045.9

# yield\_bpm1i06X\_rms vs Slug, Sign Corrected



Right In: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 456322.8/32

Left Out: 0.011+/-0.000  $\chi^2/\text{NDF}$ :1227493.2/24

Right Out: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 622861.6/36

Left In: 0.011+/-0.000  $\chi^2/\text{NDF}$ :1264827.0/22

Left: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 2494847.1/47

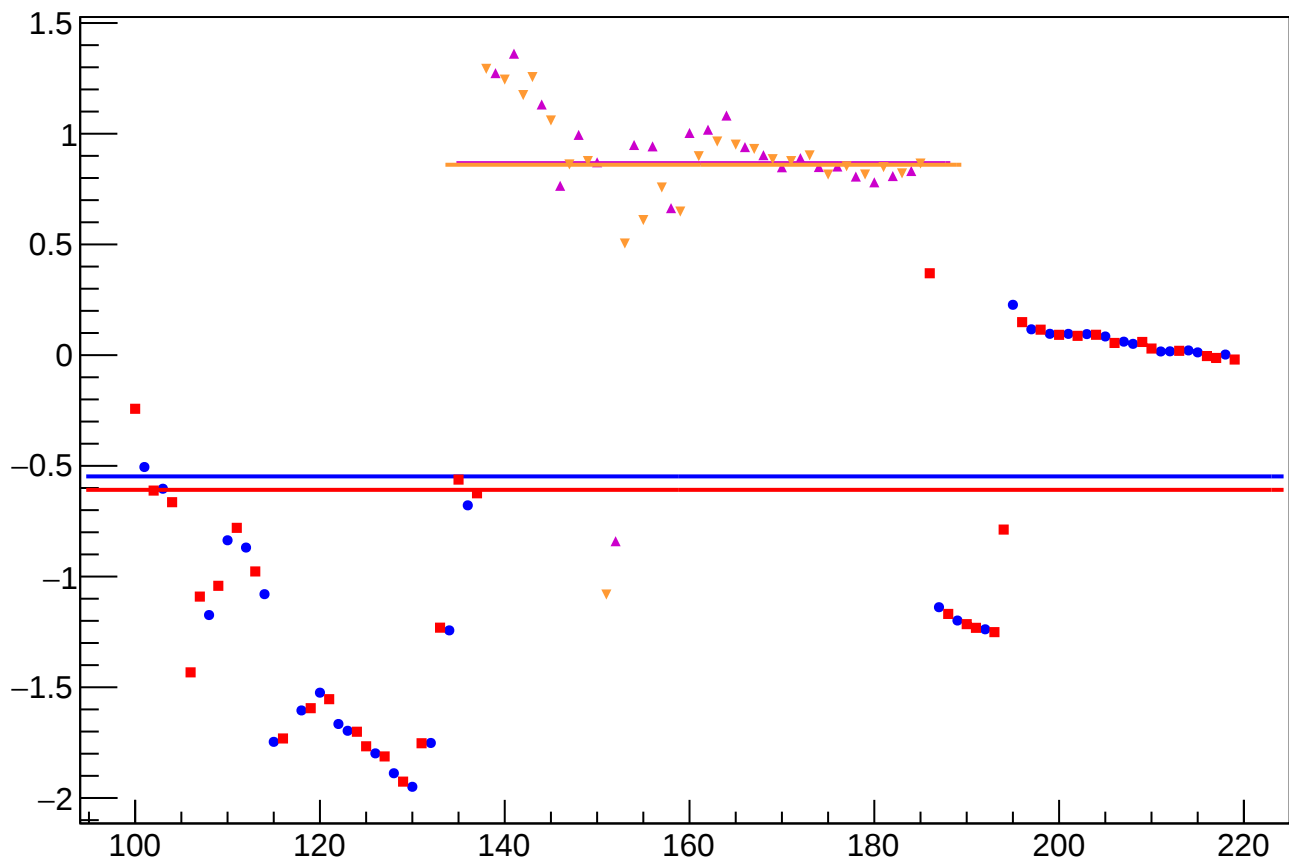
Right: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 1086628.3/69

In: 0.012+/-0.000  $\chi^2/\text{NDF}$ :2246192.0/55

Out: 0.012+/-0.000  $\chi^2/\text{NDF}$ :2222442.3/61

All: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 4468650.6/117

# yield\_bpm1i06Y\_mean vs Slug, Sign Corrected



Right In: -0.548+/-0.000  $\chi^2/\text{NDF}$ : 203932267464.2/32

Left Out: 0.860+/-0.000  $\chi^2/\text{NDF}$ : 126335891175.4/24

Right Out: -0.608+/-0.000  $\chi^2/\text{NDF}$ : 195383007382.3/36

Left In: 0.867+/-0.000  $\chi^2/\text{NDF}$ : 147039402944.6/22

Left: 0.863+/-0.000  $\chi^2/\text{NDF}$ : 273407894621.9/47

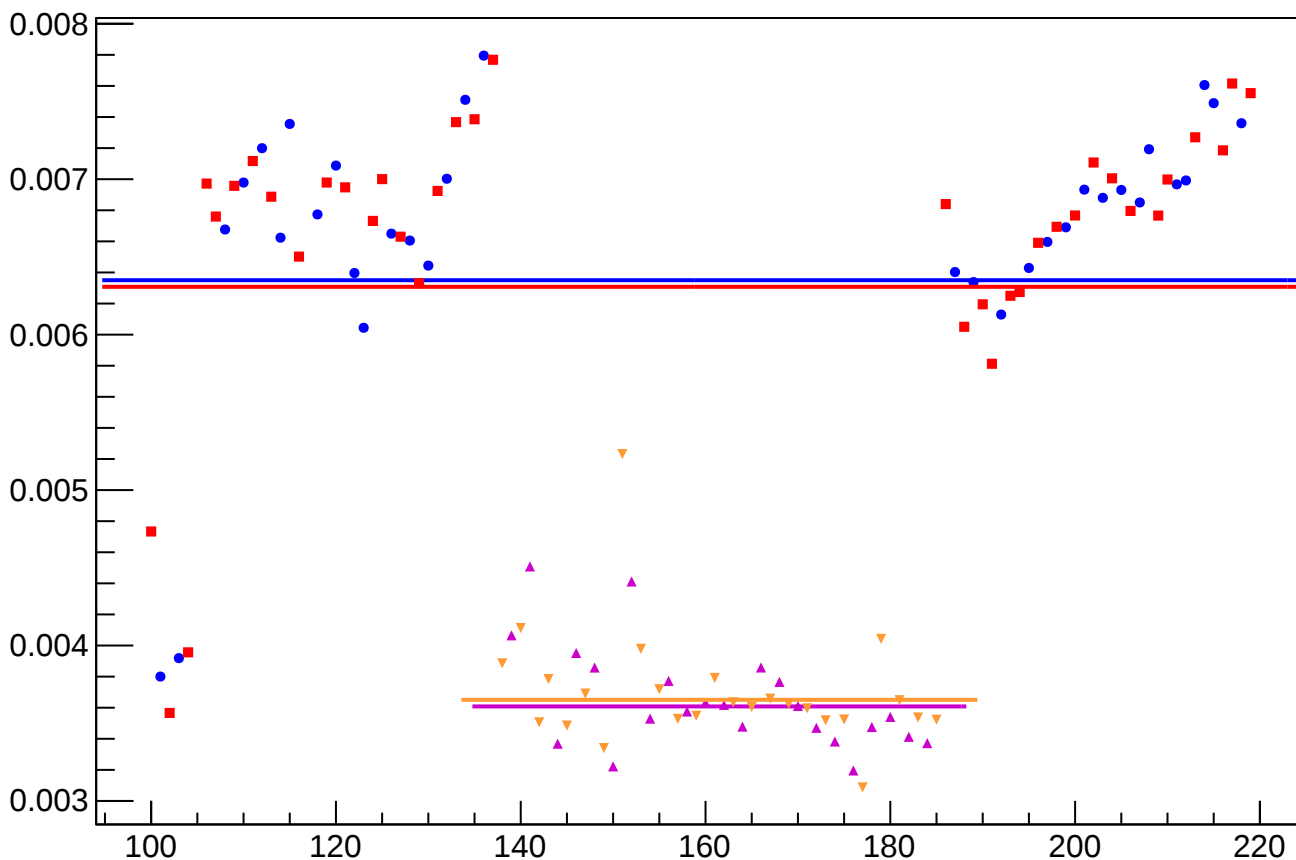
Right: -0.579+/-0.000  $\chi^2/\text{NDF}$ : 400116636102.3/69

In: 0.503+/-0.000  $\chi^2/\text{NDF}$ : 972384239329.5/55

Out: 0.470+/-0.000  $\chi^2/\text{NDF}$ : 1038359523787.3/61

All: 0.486+/-0.000  $\chi^2/\text{NDF}$ : 2011640924807.3

# yield\_bpm1i06Y\_rms vs Slug, Sign Corrected



Right In: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 1171288.0/32

Left Out: 0.004+/-0.000  $\chi^2/\text{NDF}$ : 237262.6/24

Right Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 1271155.4/36

Left In: 0.004+/-0.000  $\chi^2/\text{NDF}$ : 227861.4/22

Left: 0.004+/-0.000  $\chi^2/\text{NDF}$ : 467360.2/47

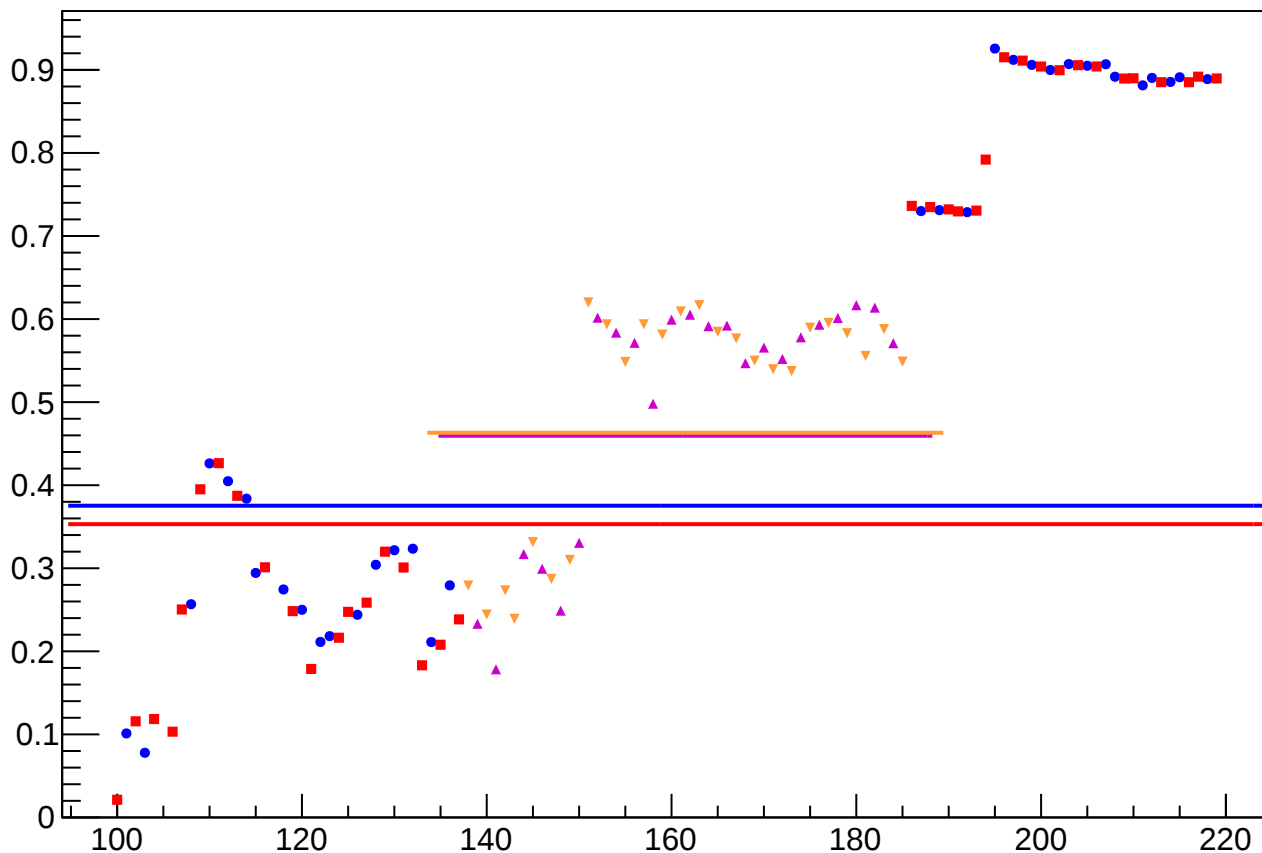
Right: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 2443220.8/69

In: 0.004+/-0.000  $\chi^2/\text{NDF}$ : 6067146.1/55

Out: 0.004+/-0.000  $\chi^2/\text{NDF}$ : 6202030.1/61

All: 0.004+/-0.000  $\chi^2/\text{NDF}$ : 12272134.2/117

# yield\_bpm2i01X\_mean vs Slug, Sign Corrected



Right In: 0.375+/-0.000  $\chi^2/\text{NDF}$ : 203834050871.9/32

Left Out: 0.463+/-0.000  $\chi^2/\text{NDF}$ : 102506270538.7/24

Right Out: 0.353+/-0.000  $\chi^2/\text{NDF}$ : 221247279862.7/36

Left In: 0.460+/-0.000  $\chi^2/\text{NDF}$ : 104559088628.4/22

Left: 0.461+/-0.000  $\chi^2/\text{NDF}$ : 207093695005.5/47

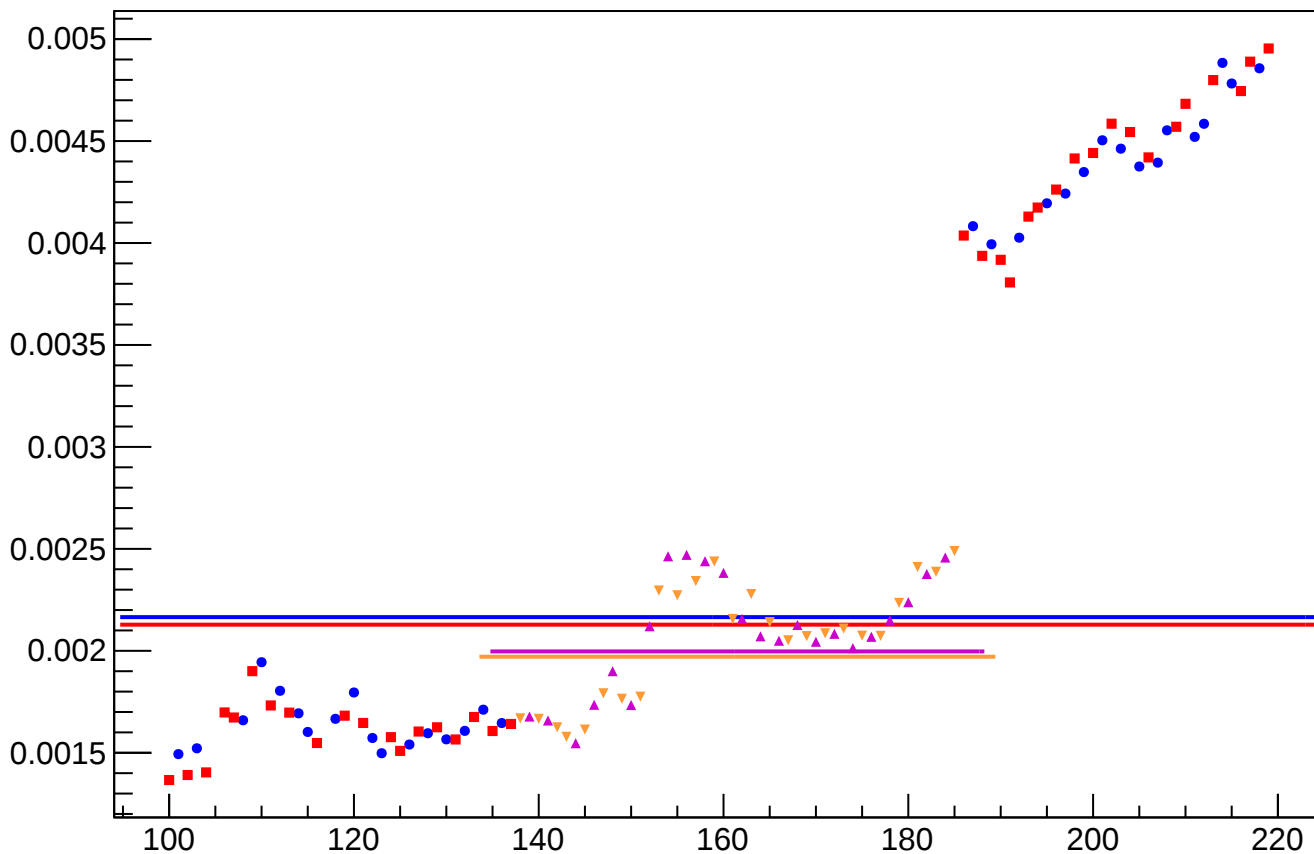
Right: 0.364+/-0.000  $\chi^2/\text{NDF}$ : 425864046702.2/69

In: 0.424+/-0.000  $\chi^2/\text{NDF}$ : 320871414739.9/55

Out: 0.417+/-0.000  $\chi^2/\text{NDF}$ : 347219512293.5/61

All: 0.420+/-0.000  $\chi^2/\text{NDF}$ : 668307517749.1

# yield\_bpm2i01X\_rms vs Slug, Sign Corrected



Right In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 7486262.3/32

Left Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ :730203.8/24

Right Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 8287830.4/36

Left In: 0.002+/-0.000  $\chi^2/\text{NDF}$ :666404.2/22

Left: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 1399578.1/47

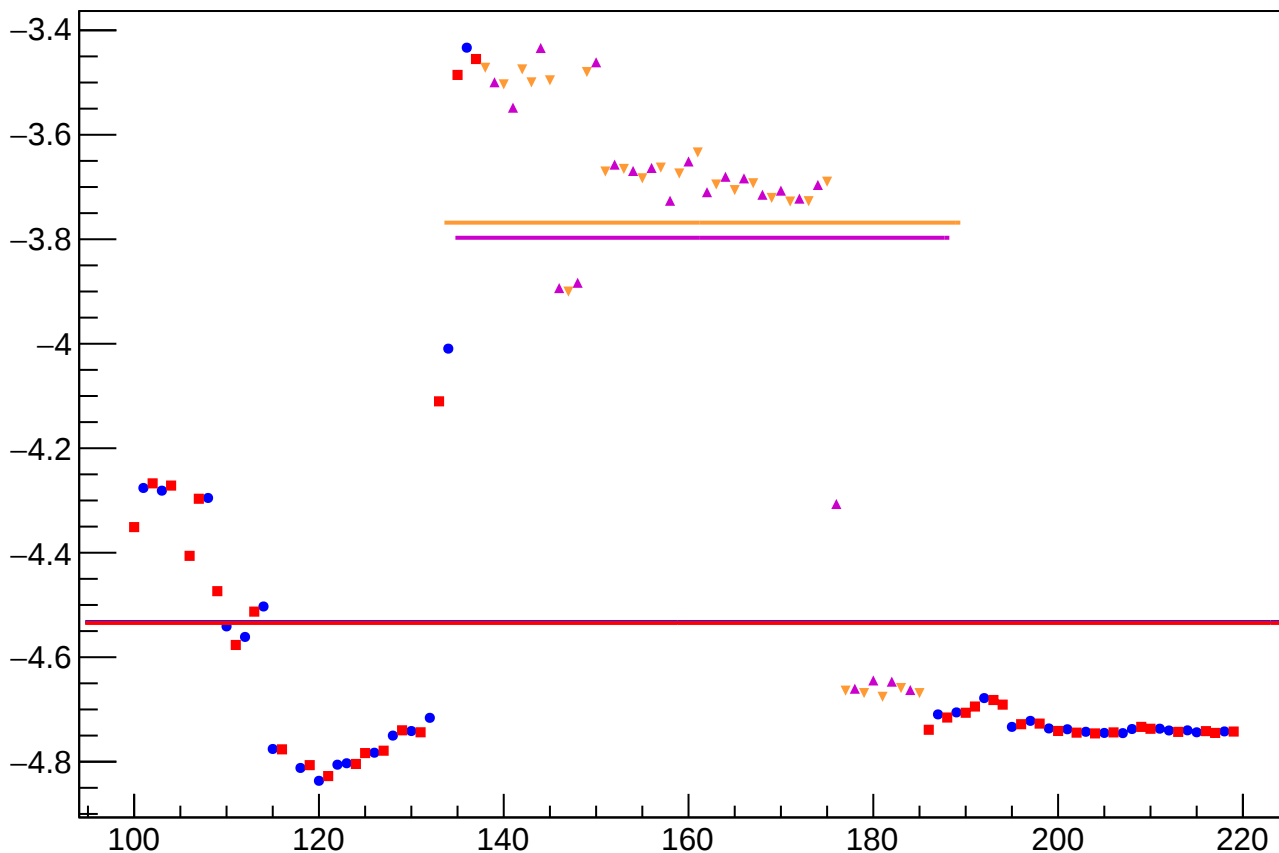
Right: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 15778412.9/69

In: 0.002+/-0.000  $\chi^2/\text{NDF}$ :8252078.0/55

Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ :9113898.2/61

All: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 17372794.2/117

# yield\_bpm2i01Y\_mean vs Slug, Sign Corrected



Right In: -4.533+/-0.000  $\chi^2/\text{NDF}$ : 449503034363.4/32

Left Out: -3.768+/-0.000  $\chi^2/\text{NDF}$ : 516780173940.8/24

Right Out: -4.534+/-0.000  $\chi^2/\text{NDF}$ : 386338333367.4/36

Left In: -3.797+/-0.000  $\chi^2/\text{NDF}$ : 444886272608.9/22

Left: -3.782+/-0.000  $\chi^2/\text{NDF}$ : 963205684454.6/47

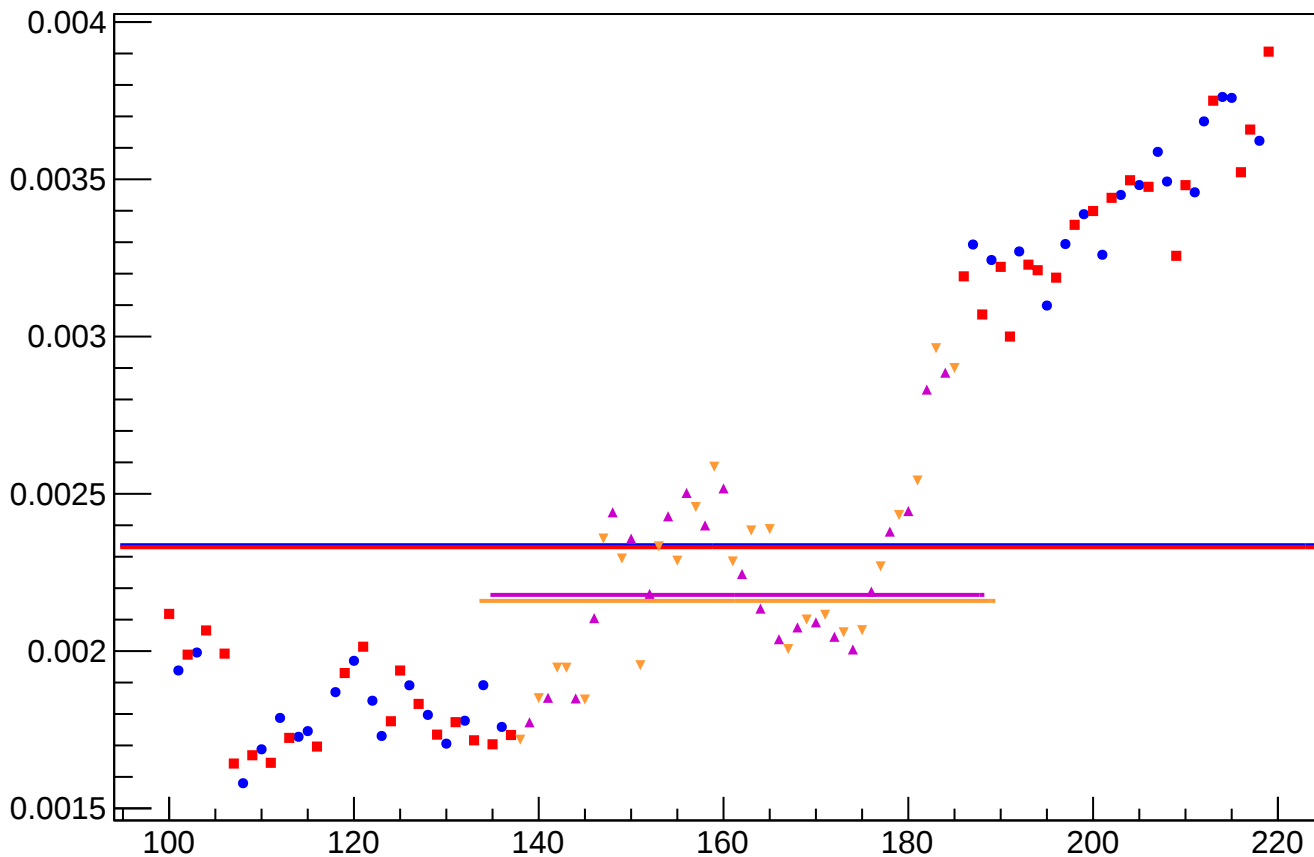
Right: -4.534+/-0.000  $\chi^2/\text{NDF}$ : 835845299476.7/69

In: -4.132+/-0.000  $\chi^2/\text{NDF}$ : 1767983359641.0/55

Out: -4.118+/-0.000  $\chi^2/\text{NDF}$ : 1925207597585.9/61

All: -4.125+/-0.000  $\chi^2/\text{NDF}$ : 3693812379655

# yield\_bpm2i01Y\_rms vs Slug, Sign Corrected



Right In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 3579000.4/32

Left Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ :547831.5/24

Right Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 3752885.7/36

Left In: 0.002+/-0.000  $\chi^2/\text{NDF}$ :463279.7/22

Left: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 1012449.5/47

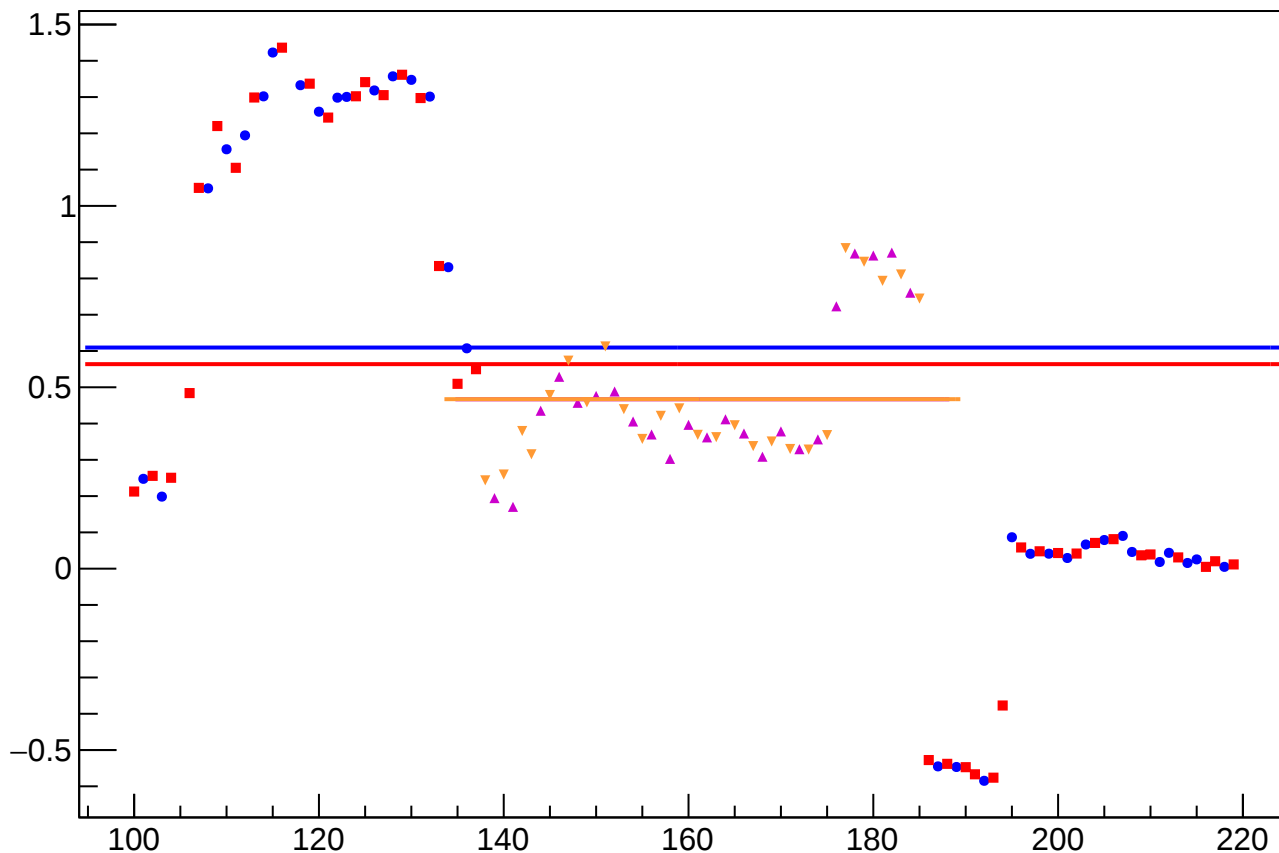
Right: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 7332015.8/69

In: 0.002+/-0.000  $\chi^2/\text{NDF}$ :4122820.8/55

Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ :4401985.2/61

All: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 8525951.7/117

# yield\_bpm2i02X\_mean vs Slug, Sign Corrected



Right In: 0.610 $\pm$ 0.000

$\chi^2/\text{NDF}$ : 86917746220.2/32

Left: 0.467 $\pm$ 0.000

$\chi^2/\text{NDF}$ : 15396100488.4/47

Left Out: 0.467 $\pm$ 0.000

$\chi^2/\text{NDF}$ : 7359344143.3/24

Right: 0.585 $\pm$ 0.000

$\chi^2/\text{NDF}$ : 192407122398.5/69

Right Out: 0.564 $\pm$ 0.000

$\chi^2/\text{NDF}$ : 105259930034.6/36

In: 0.541 $\pm$ 0.000

$\chi^2/\text{NDF}$ : 97000510040.6/55

Out: 0.518 $\pm$ 0.000

$\chi^2/\text{NDF}$ : 113642179148.2/61

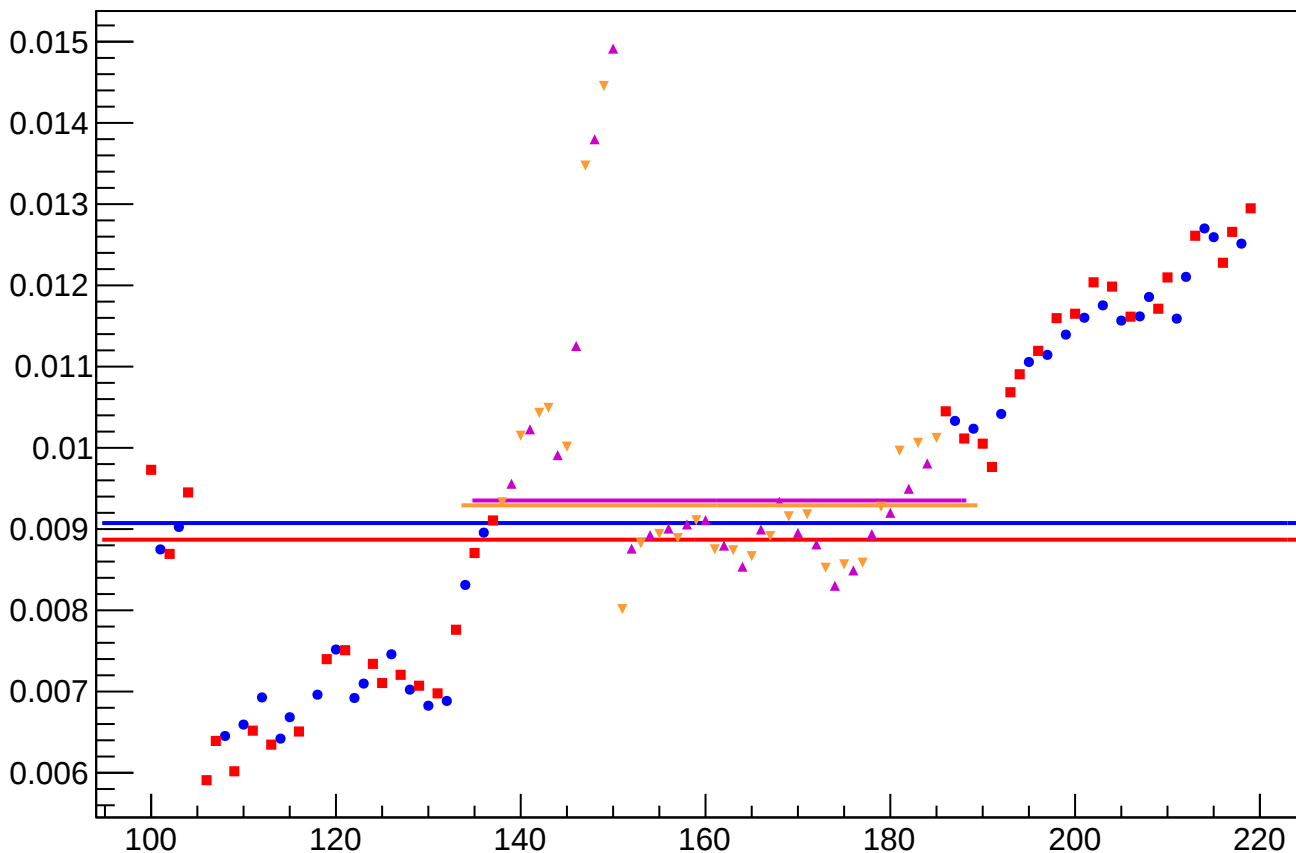
Left In: 0.467 $\pm$ 0.000

$\chi^2/\text{NDF}$ : 8036741308.0/22

All: 0.529 $\pm$ 0.000

$\chi^2/\text{NDF}$ : 210751049588.0

# yield\_bpm2i02X\_rms vs Slug, Sign Corrected



Right In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 2016885.3/32

Left Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 528279.5/24

Right Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 2491405.4/36

Left In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 557555.2/22

Left: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 1086539.3/47

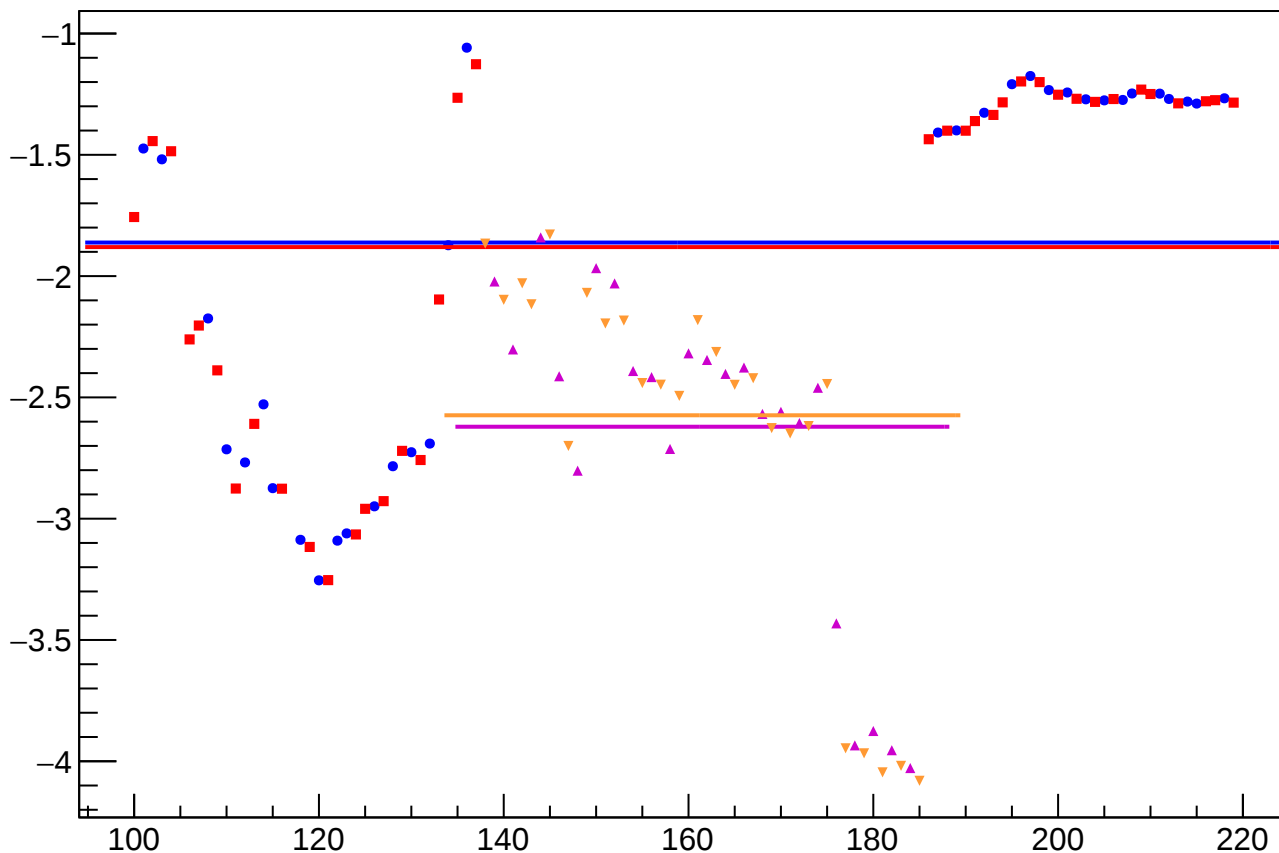
Right: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 4517483.4/69

In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 2589930.4/55

Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 3059034.8/61

All: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 5656961.8/117

# yield\_bpm2i02Y\_mean vs Slug, Sign Corrected



Right In: -1.862+/-0.000

$\chi^2/\text{NDF}$ : 138980460449.8/32

Left: -2.597+/-0.000

$\chi^2/\text{NDF}$ : 180296288698.4/47

Left Out: -2.574+/-0.000

$\chi^2/\text{NDF}$ : 99176112704.9/24

Right: -1.871+/-0.000

$\chi^2/\text{NDF}$ : 276597047838.9/69

Right Out: -1.880+/-0.000

$\chi^2/\text{NDF}$ : 137571010018.7/36

In: -2.221+/-0.000

$\chi^2/\text{NDF}$ : 287883090465.6/55

Out: -2.206+/-0.000

$\chi^2/\text{NDF}$ : 297835462773.1/61

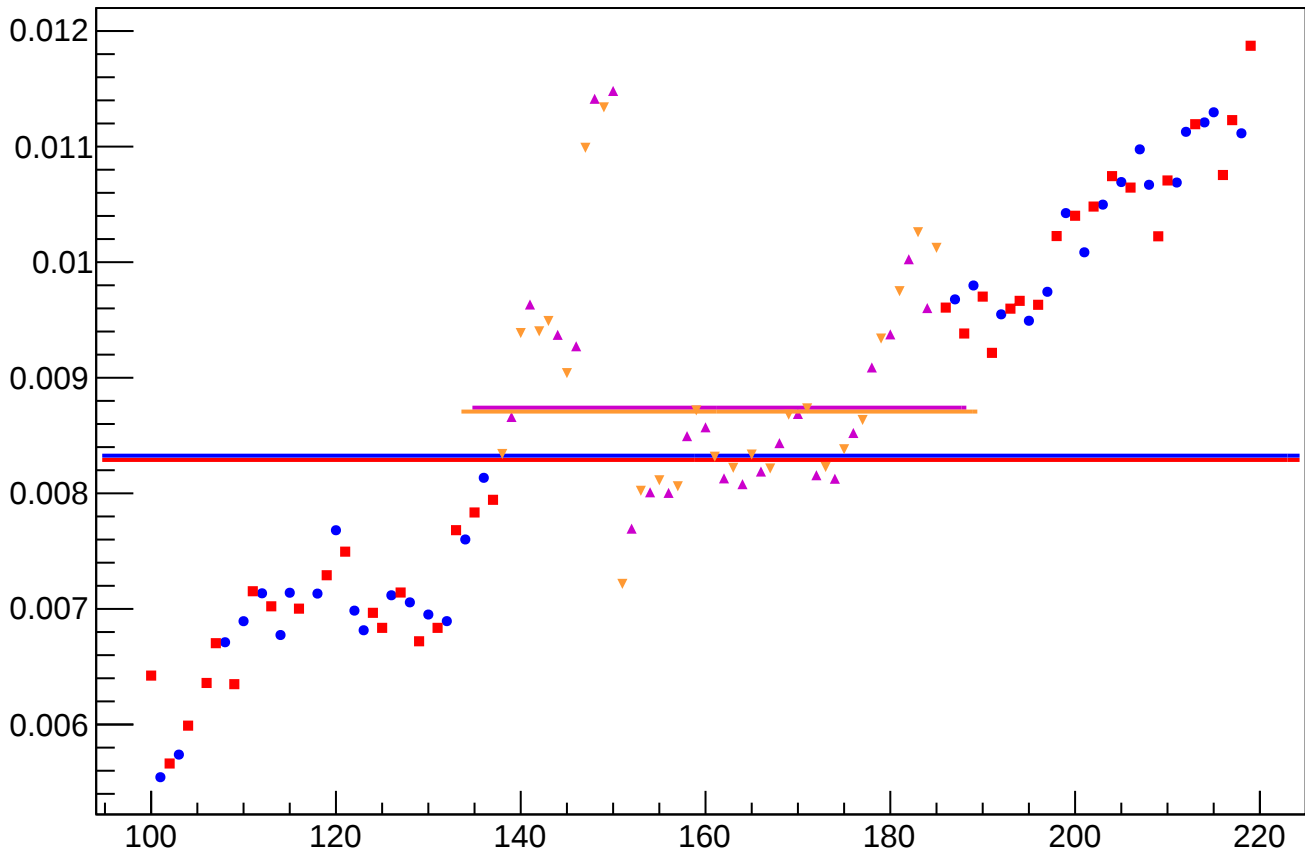
Left In: -2.621+/-0.000

$\chi^2/\text{NDF}$ : 80862402796.4/22

All: -2.213+/-0.000

$\chi^2/\text{NDF}$ : 585776217815.2/100

# yield\_bpm2i02Y\_rms vs Slug, Sign Corrected



Right In: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 1839943.4/32

Left Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ :369376.5/24

Right Out: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 1862571.2/36

Left In: 0.009+/-0.000  $\chi^2/\text{NDF}$ :353750.0/22

Left: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 723390.7/47

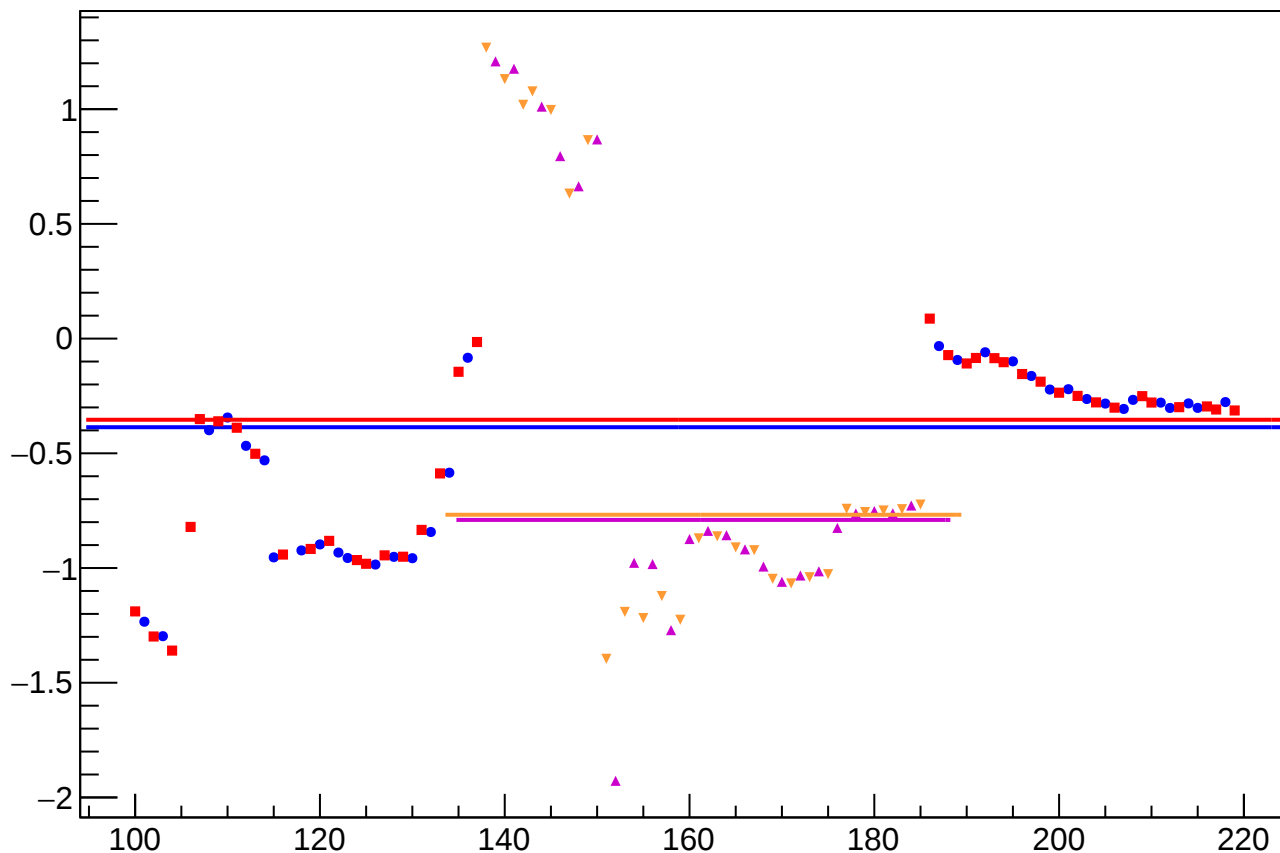
Right: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 3702868.6/69

In: 0.009+/-0.000  $\chi^2/\text{NDF}$ :2234406.7/55

Out: 0.008+/-0.000  $\chi^2/\text{NDF}$ :2276453.4/61

All: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 4511538.0/117

# yield\_bpm0i01X\_mean vs Slug, Sign Corrected



Right In:  $-0.386 \pm 0.000$   $\chi^2/\text{NDF}: 23178342191.1/32$

Left Out:  $-0.768 \pm 0.000$   $\chi^2/\text{NDF}: 120774855982.9/24$

Right Out:  $-0.354 \pm 0.000$   $\chi^2/\text{NDF}: 25379506405.3/36$

Left In:  $-0.790 \pm 0.000$   $\chi^2/\text{NDF}: 123452478408.2/22$

Left:  $-0.779 \pm 0.000$   $\chi^2/\text{NDF}: 244297726249.8/47$

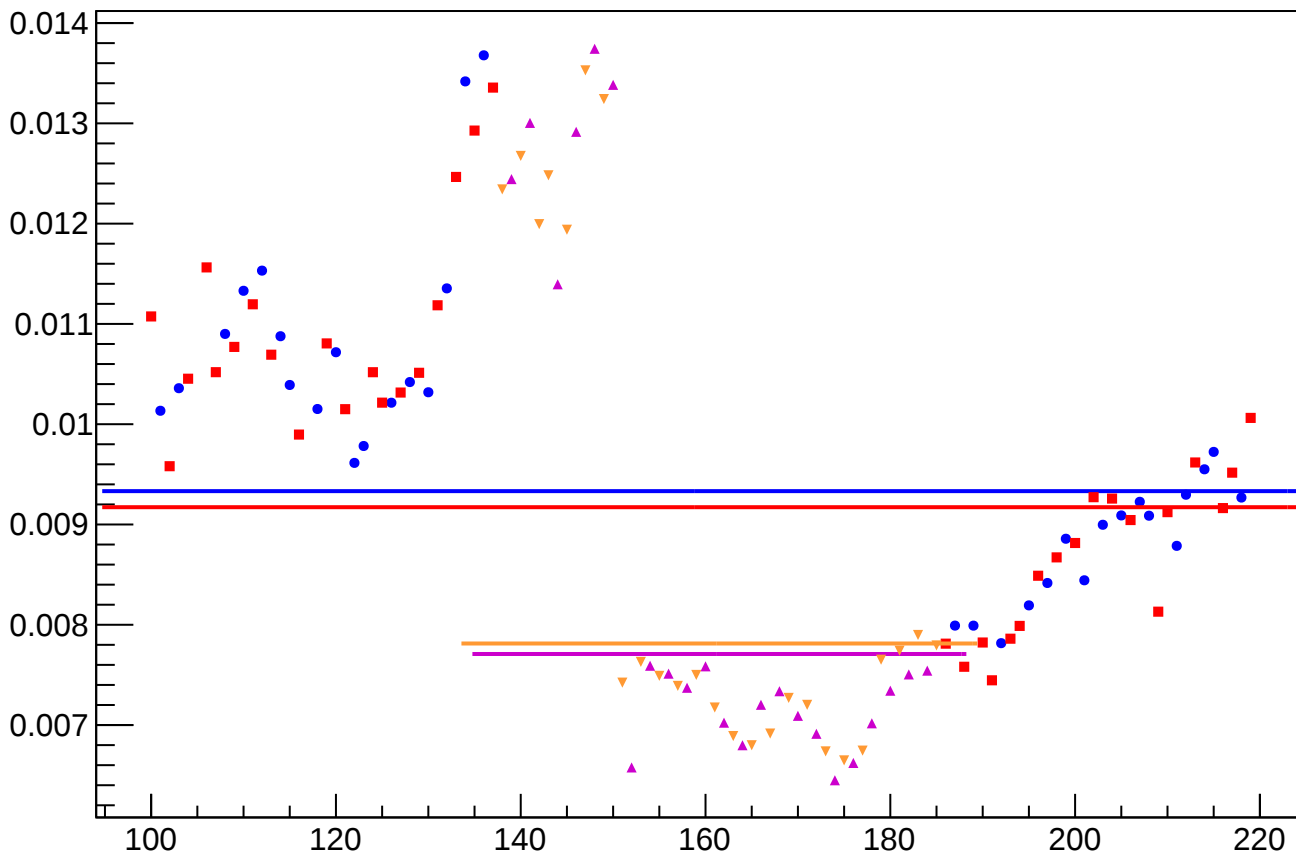
Right:  $-0.369 \pm 0.000$   $\chi^2/\text{NDF}: 48670515266.6/69$

In:  $-0.618 \pm 0.000$   $\chi^2/\text{NDF}: 165609947836.9/55$

Out:  $-0.585 \pm 0.000$   $\chi^2/\text{NDF}: 167540909740.0/61$

All:  $-0.601 \pm 0.000$   $\chi^2/\text{NDF}: 333421861144.2$

# yield\_bpm0i01X\_rms vs Slug, Sign Corrected



Right In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 550762.3/32

Left Out: 0.008+/-0.000  $\chi^2/\text{NDF}$ :1705997.6/24

Right Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 669731.0/36

Left In: 0.008+/-0.000  $\chi^2/\text{NDF}$ :1746653.6/22

Left: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 3455681.9/47

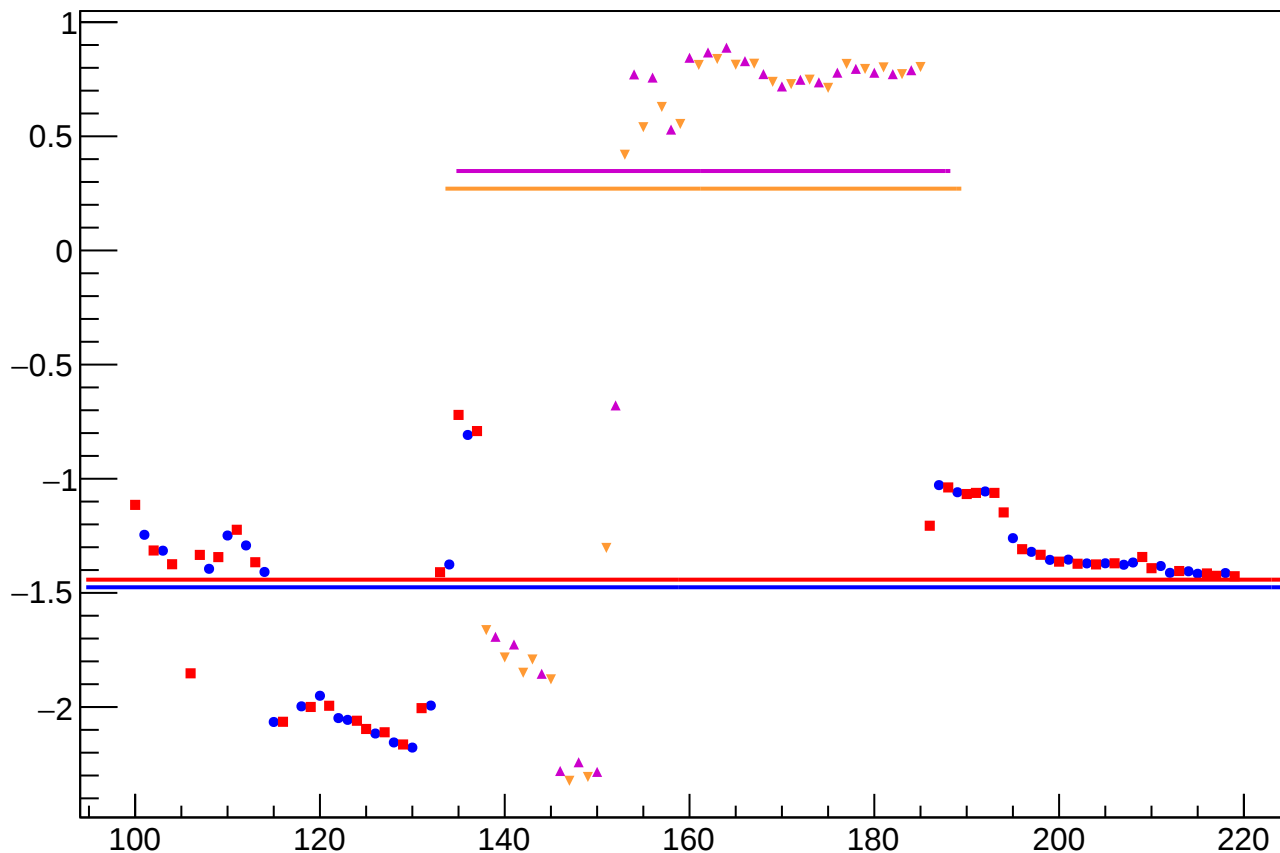
Right: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 1225955.9/69

In: 0.008+/-0.000  $\chi^2/\text{NDF}$ :2910474.6/55

Out: 0.008+/-0.000  $\chi^2/\text{NDF}$ :2836534.5/61

All: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 5747087.9/117

# yield\_bpm0i01Y\_mean vs Slug, Sign Corrected



Right In:  $-1.475 \pm 0.000$   $\chi^2/\text{NDF}: 175317048117.8/32$

Left Out:  $0.271 \pm 0.000$   $\chi^2/\text{NDF}: 2583233987355.9/24$

Right Out:  $-1.442 \pm 0.000$   $\chi^2/\text{NDF}: 164581722207.8/36$

Left In:  $0.348 \pm 0.000$   $\chi^2/\text{NDF}: 2274004426513.8/22$

Left:  $0.308 \pm 0.000$   $\chi^2/\text{NDF}: 4864843200778.2/47$

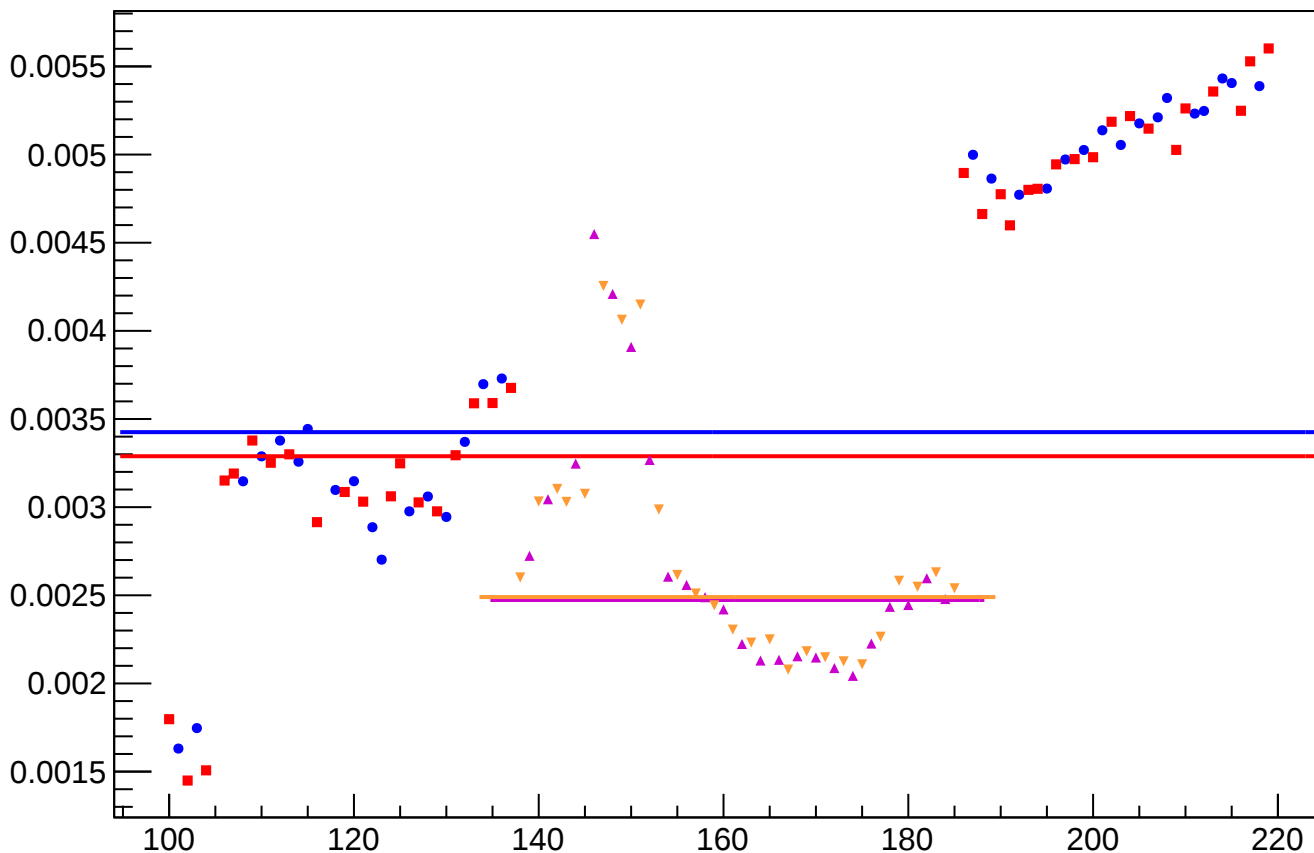
Right:  $-1.458 \pm 0.000$   $\chi^2/\text{NDF}: 340651402766.5/69$

In:  $-0.272 \pm 0.000$   $\chi^2/\text{NDF}: 5253998415547.3/55$

Out:  $-0.336 \pm 0.000$   $\chi^2/\text{NDF}: 5474216256394.0/61$

All:  $-0.305 \pm 0.000$   $\chi^2/\text{NDF}: 1073638556828$

# yield\_bpm0i01Y\_rms vs Slug, Sign Corrected



Right In: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 4727055.5/32

Left Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ :1070282.7/24

Right Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 5963002.0/36

Left In: 0.002+/-0.000  $\chi^2/\text{NDF}$ :1135279.8/22

Left: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 2206266.8/47

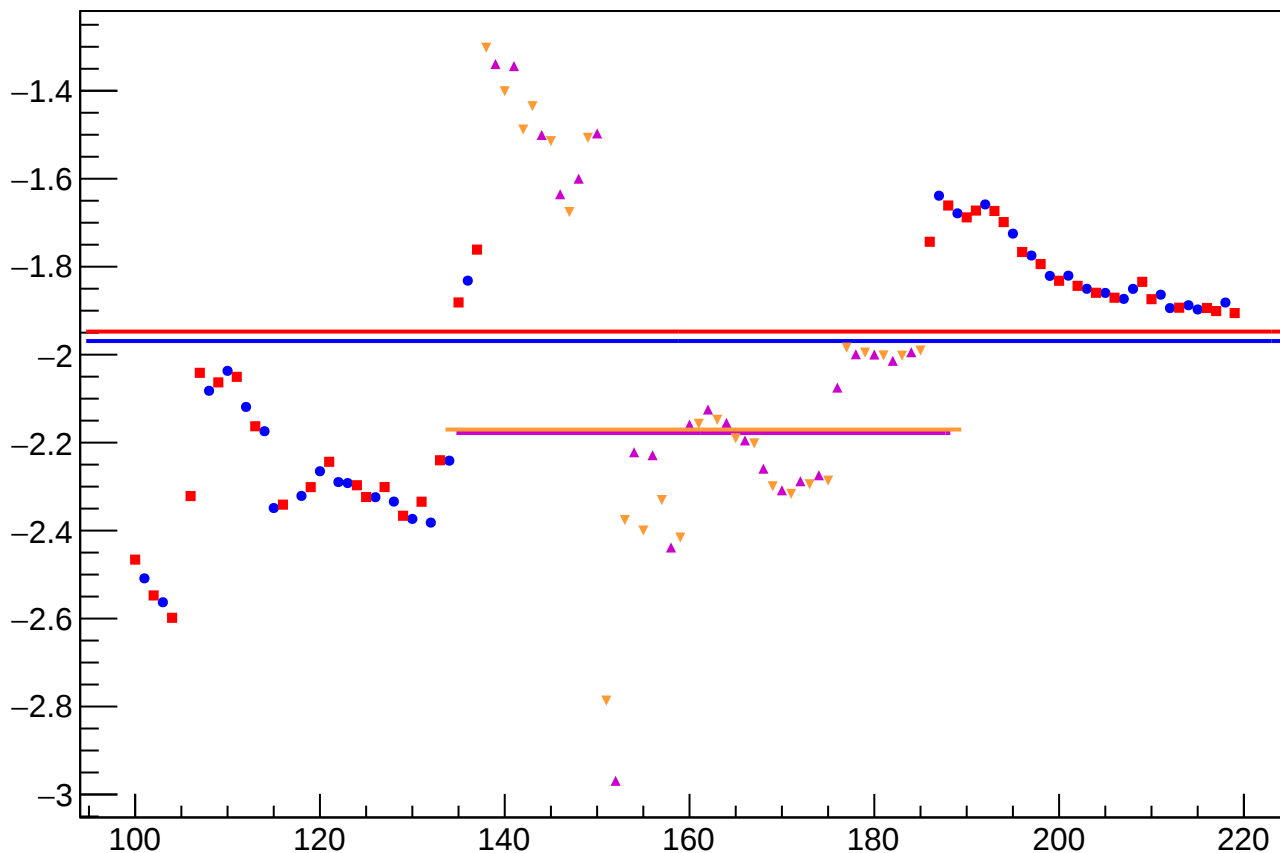
Right: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 10715322.1/69

In: 0.003+/-0.000  $\chi^2/\text{NDF}$ :7391773.1/55

Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ :8219513.9/61

All: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 15613493.7/117

# yield\_bpm0i01aX\_mean vs Slug, Sign Corrected



Right In: -1.969+/-0.000  $\chi^2/\text{NDF}$ : 31706337087.8/32

Left Out: -2.170+/-0.000  $\chi^2/\text{NDF}$ : 59967315241.9/24

Right Out: -1.947+/-0.000  $\chi^2/\text{NDF}$ : 35464956965.8/36

Left In: -2.178+/-0.000  $\chi^2/\text{NDF}$ : 73402051113.3/22

Left: -2.174+/-0.000  $\chi^2/\text{NDF}$ : 133392029481.5/47

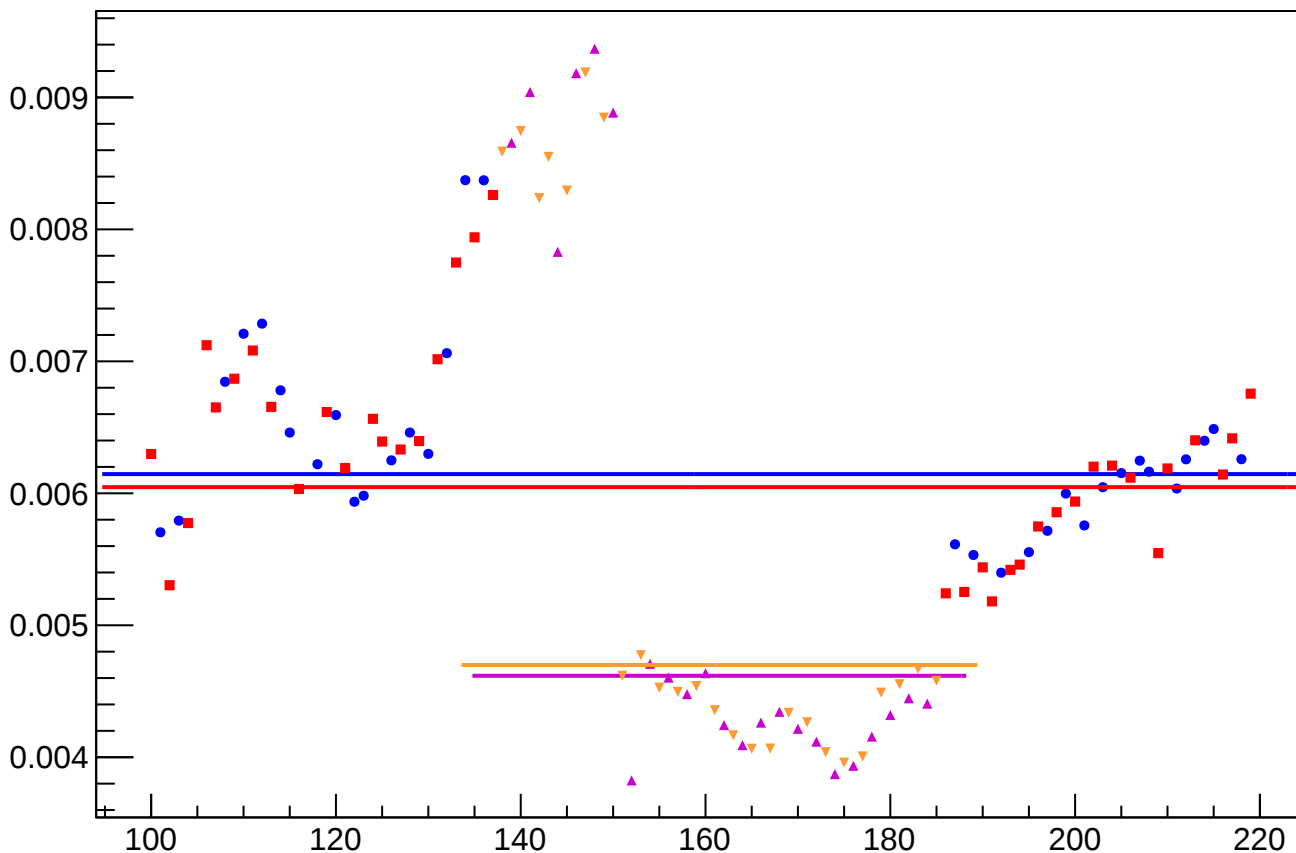
Right: -1.958+/-0.000  $\chi^2/\text{NDF}$ : 67285021538.0/69

In: -2.097+/-0.000  $\chi^2/\text{NDF}$ : 117576988106.4/55

Out: -2.080+/-0.000  $\chi^2/\text{NDF}$ : 110637038851.7/61

All: -2.088+/-0.000  $\chi^2/\text{NDF}$ : 228387538698.8

# yield\_bpm0i01aX\_rms vs Slug, Sign Corrected



Right In: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 311182.3/32

Left Out: 0.005+/-0.000  $\chi^2/\text{NDF}$ :2319588.7/24

Right Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 394915.4/36

Left In: 0.005+/-0.000  $\chi^2/\text{NDF}$ :2367440.9/22

Left: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 4691984.4/47

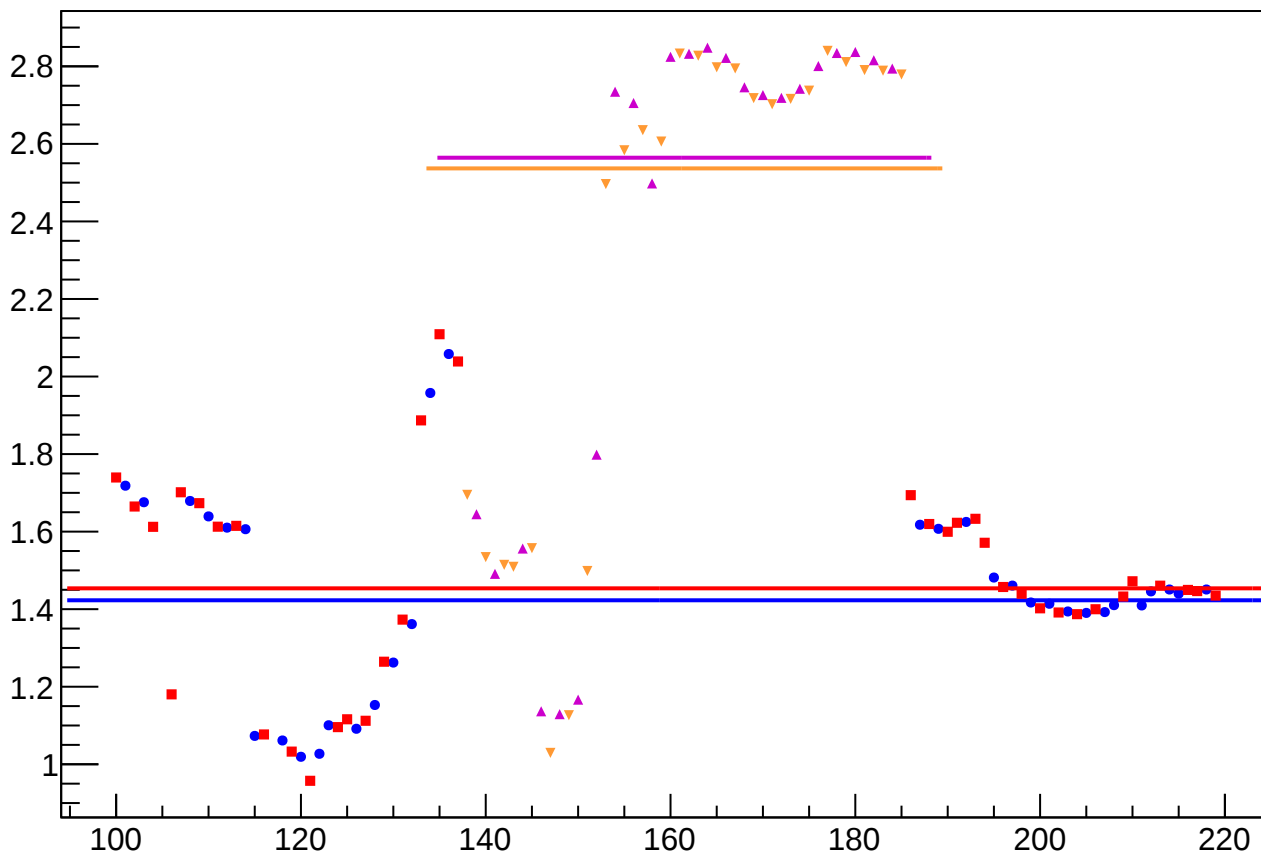
Right: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 710893.3/69

In: 0.005+/-0.000  $\chi^2/\text{NDF}$ :4011551.9/55

Out: 0.005+/-0.000  $\chi^2/\text{NDF}$ :3827678.0/61

All: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 7840583.2/117

# yield\_bpm0i01aY\_mean vs Slug, Sign Corrected



Right In: 1.423+/-0.000  $\chi^2/\text{NDF}$ : 174214784569.8/32

Left Out: 2.537+/-0.000  $\chi^2/\text{NDF}$ : 269554948115.3/24

Right Out: 1.454+/-0.000  $\chi^2/\text{NDF}$ : 177008991644.1/36

Left In: 2.564+/-0.000  $\chi^2/\text{NDF}$ : 260287937727.8/22

Left: 2.550+/-0.000  $\chi^2/\text{NDF}$ : 530319507083.6/47

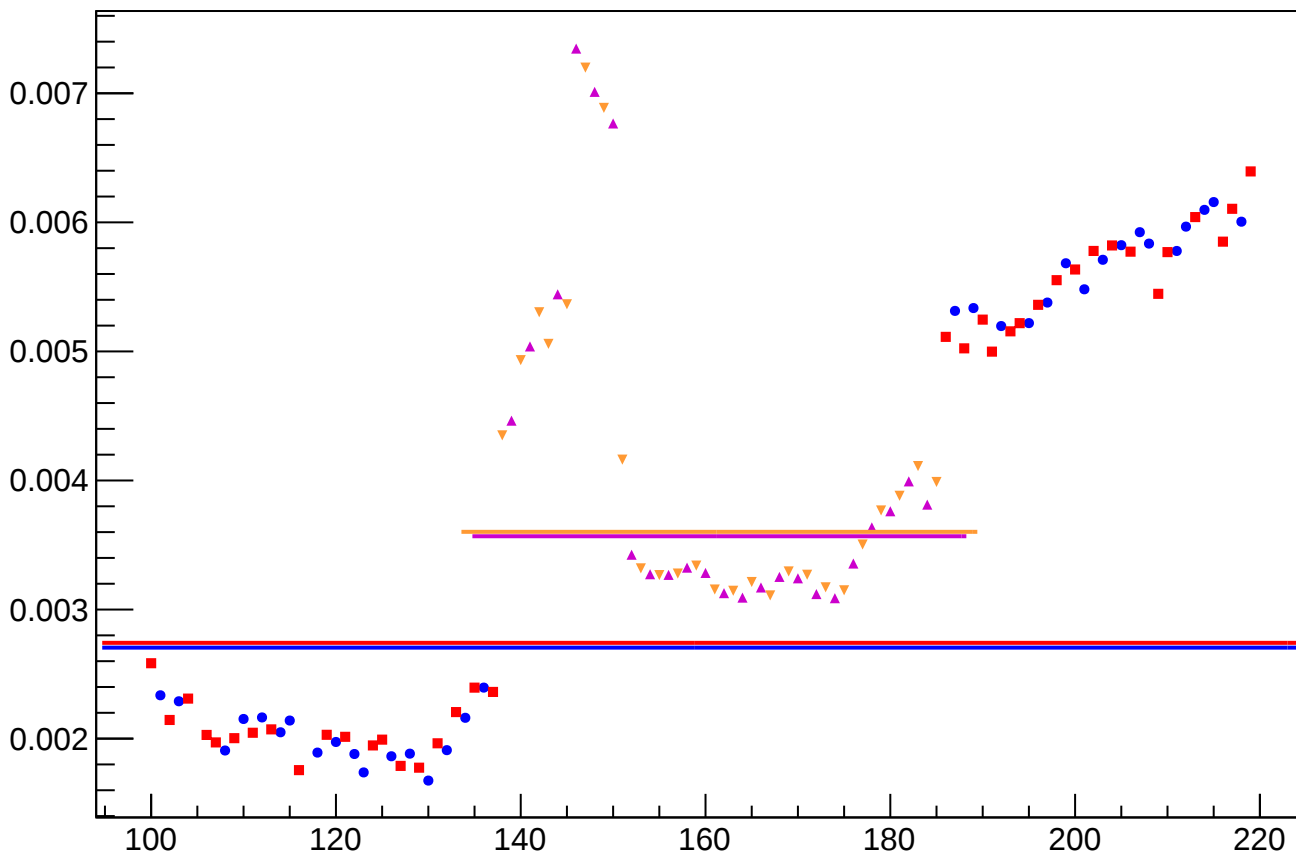
Right: 1.439+/-0.000  $\chi^2/\text{NDF}$ : 352134630855.1/69

In: 1.875+/-0.000  $\chi^2/\text{NDF}$ : 1399640720363.0/55

Out: 1.882+/-0.000  $\chi^2/\text{NDF}$ : 1360262940695.4/61

All: 1.878+/-0.000  $\chi^2/\text{NDF}$ : 2759985671476.

# yield\_bpm0i01aY\_rms vs Slug, Sign Corrected



Right In: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 7895856.0/32

Left Out: 0.004+/-0.000  $\chi^2/\text{NDF}$ :1410717.8/24

Right Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 8141774.3/36

Left In: 0.004+/-0.000  $\chi^2/\text{NDF}$ :1563028.0/22

Left: 0.004+/-0.000  $\chi^2/\text{NDF}$ : 2975225.3/47

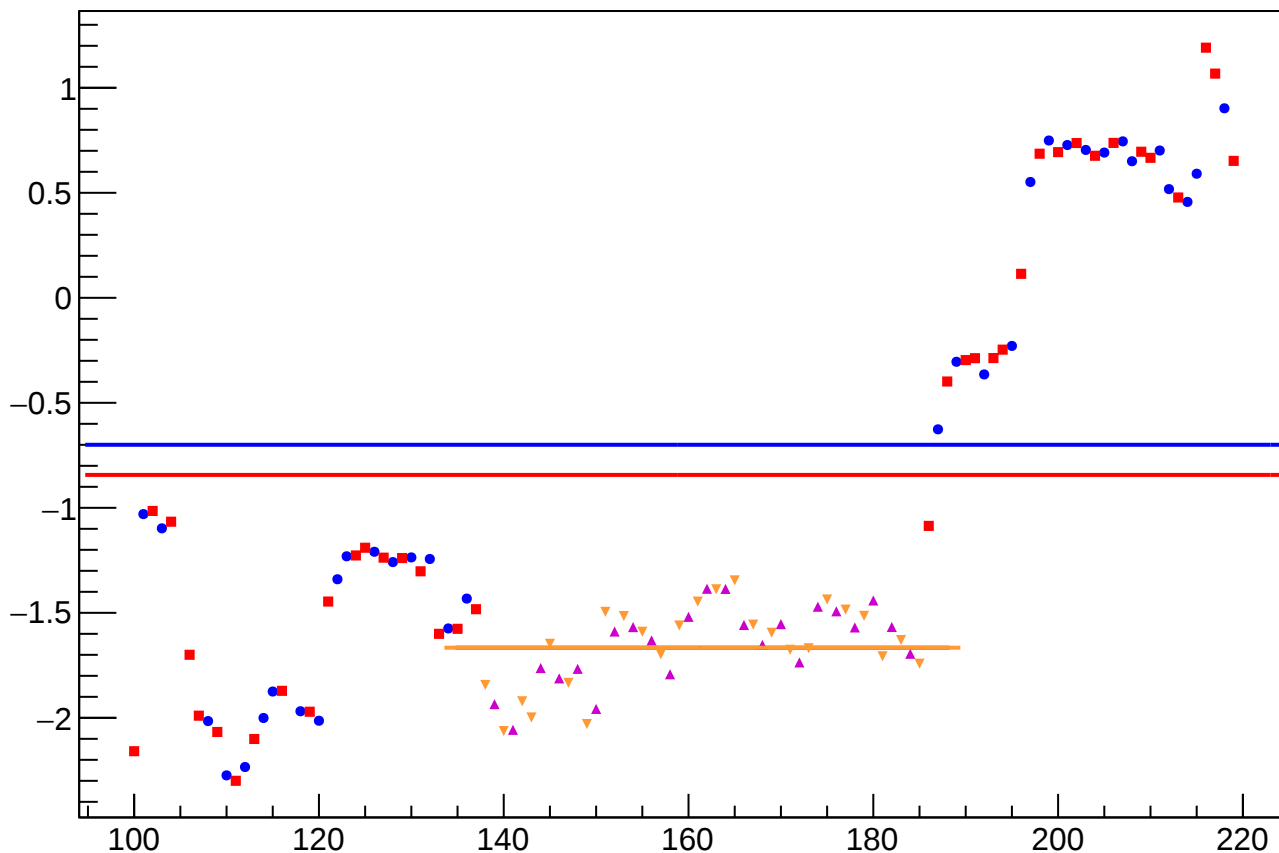
Right: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 16040266.1/69

In: 0.003+/-0.000  $\chi^2/\text{NDF}$ :10562070.6/55

Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ :10705102.8/61

All: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 21271188.2/117

# yield\_bpm0l01X\_mean vs Slug, Sign Corrected



Right In: -0.700+/-0.000

$\chi^2/\text{NDF}$ : 253734039205.2/32

Left: -1.666+/-0.000

$\chi^2/\text{NDF}$ : 32617732948.1/47

Left Out: -1.666+/-0.000

$\chi^2/\text{NDF}$ : 18325162131.2/24

Right: -0.776+/-0.000

$\chi^2/\text{NDF}$ : 558112494397.3/69

Right Out: -0.843+/-0.000

$\chi^2/\text{NDF}$ : 301797006016.5/36

In: -1.314+/-0.000

$\chi^2/\text{NDF}$ : 407477216379.2/55

Out: -1.354+/-0.000

$\chi^2/\text{NDF}$ : 433187101695.9/61

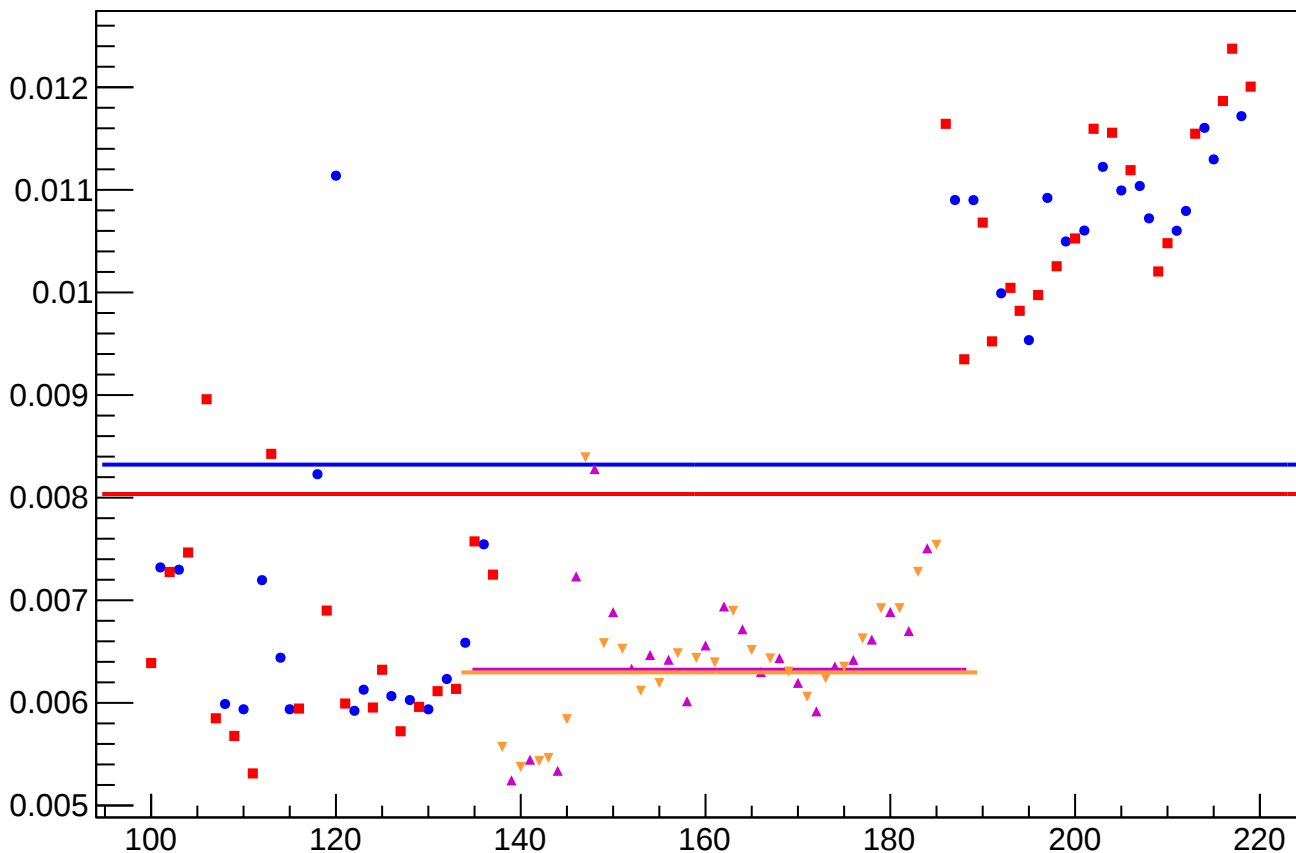
Left In: -1.666+/-0.000

$\chi^2/\text{NDF}$ : 14292570816.9/22

All: -1.335+/-0.000

$\chi^2/\text{NDF}$ : 841212067965.5

# yield\_bpm0l01X\_rms vs Slug, Sign Corrected



Right In: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 2231343.0/32

Left Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 310757.0/24

Right Out: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 2768855.3/36

Left In: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 330859.7/22

Left: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 641901.9/47

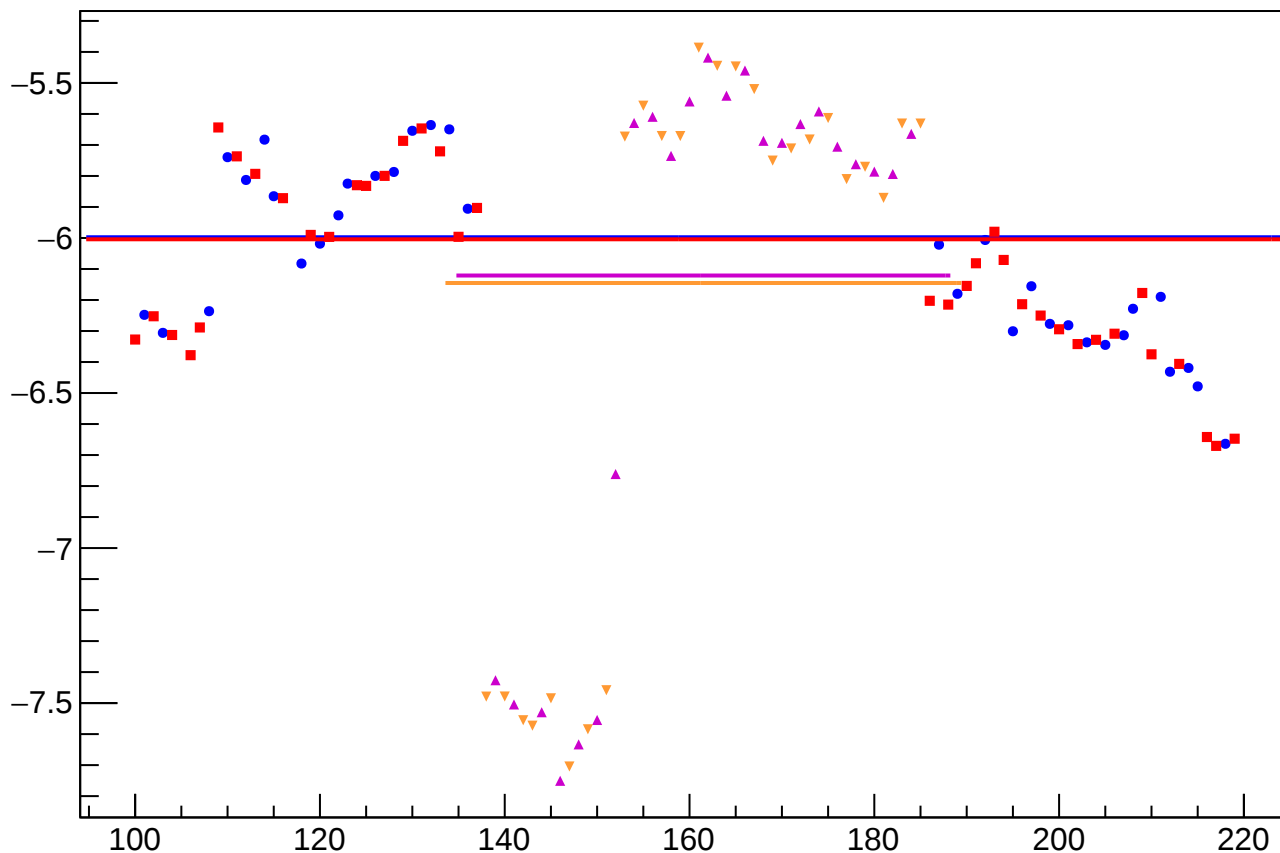
Right: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 5020774.7/69

In: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 3755582.7/55

Out: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 4088872.5/61

All: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 7850612.7/117

# yield\_bpm0l01Y\_mean vs Slug, Sign Corrected



Right In: -5.998+/-0.000  $\chi^2/\text{NDF}$ : 19270675155.2/32

Left Out: -6.145+/-0.000  $\chi^2/\text{NDF}$ : 185364150237.7/24

Right Out: -6.004+/-0.000  $\chi^2/\text{NDF}$ : 22148621423.9/36

Left In: -6.121+/-0.000  $\chi^2/\text{NDF}$ : 158315913062.3/22

Left: -6.133+/-0.000  $\chi^2/\text{NDF}$ : 343753122832.9/47

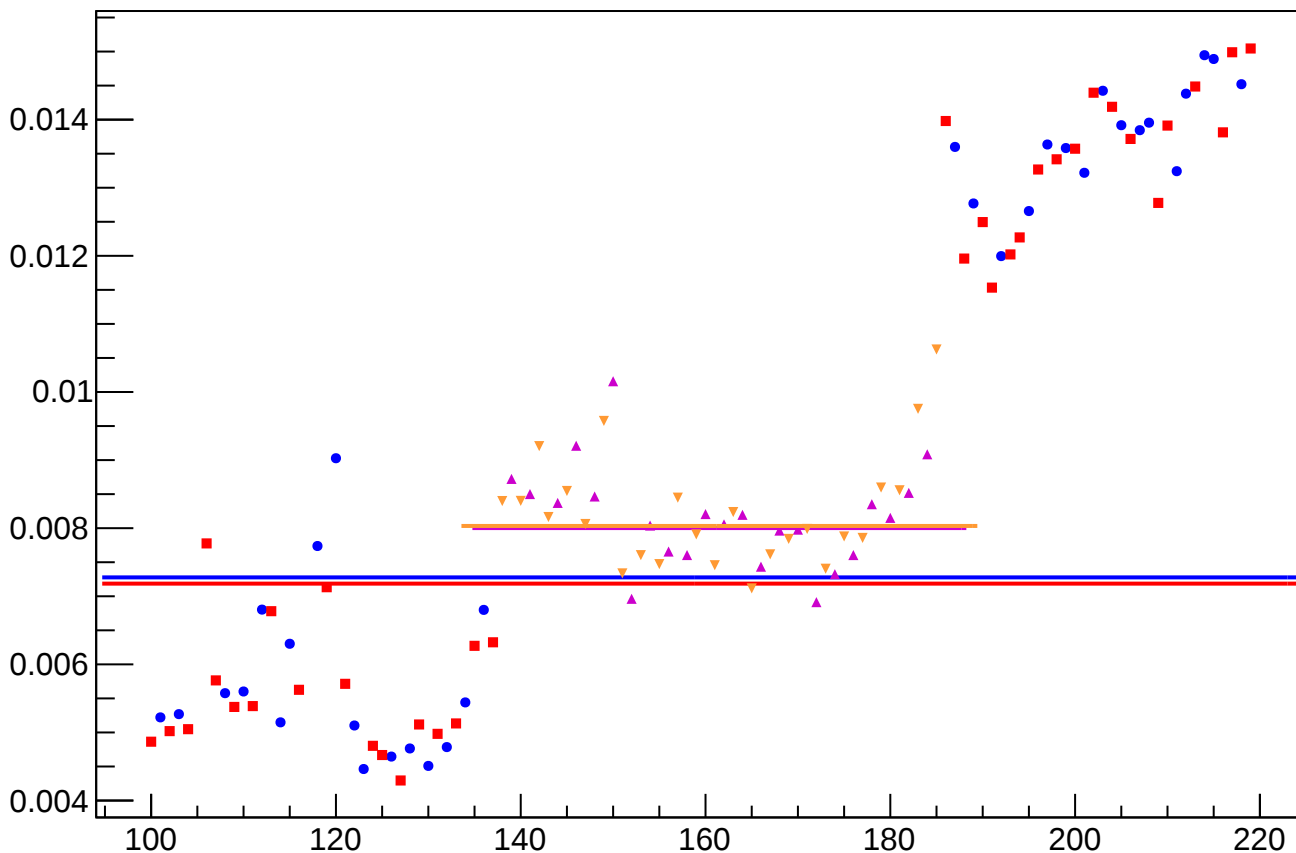
Right: -6.001+/-0.000  $\chi^2/\text{NDF}$ : 41425239017.8/69

In: -6.057+/-0.000  $\chi^2/\text{NDF}$ : 179520072730.3/55

Out: -6.070+/-0.000  $\chi^2/\text{NDF}$ : 210216785506.2/61

All: -6.064+/-0.000  $\chi^2/\text{NDF}$ : 389781311858.7

# yield\_bpm0l01Y\_rms vs Slug, Sign Corrected



Right In: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 6687367.8/32

Left Out: 0.008+/-0.000  $\chi^2/\text{NDF}$ :205762.2/24

Right Out: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 6969575.6/36

Left In: 0.008+/-0.000  $\chi^2/\text{NDF}$ :220756.1/22

Left: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 426763.2/47

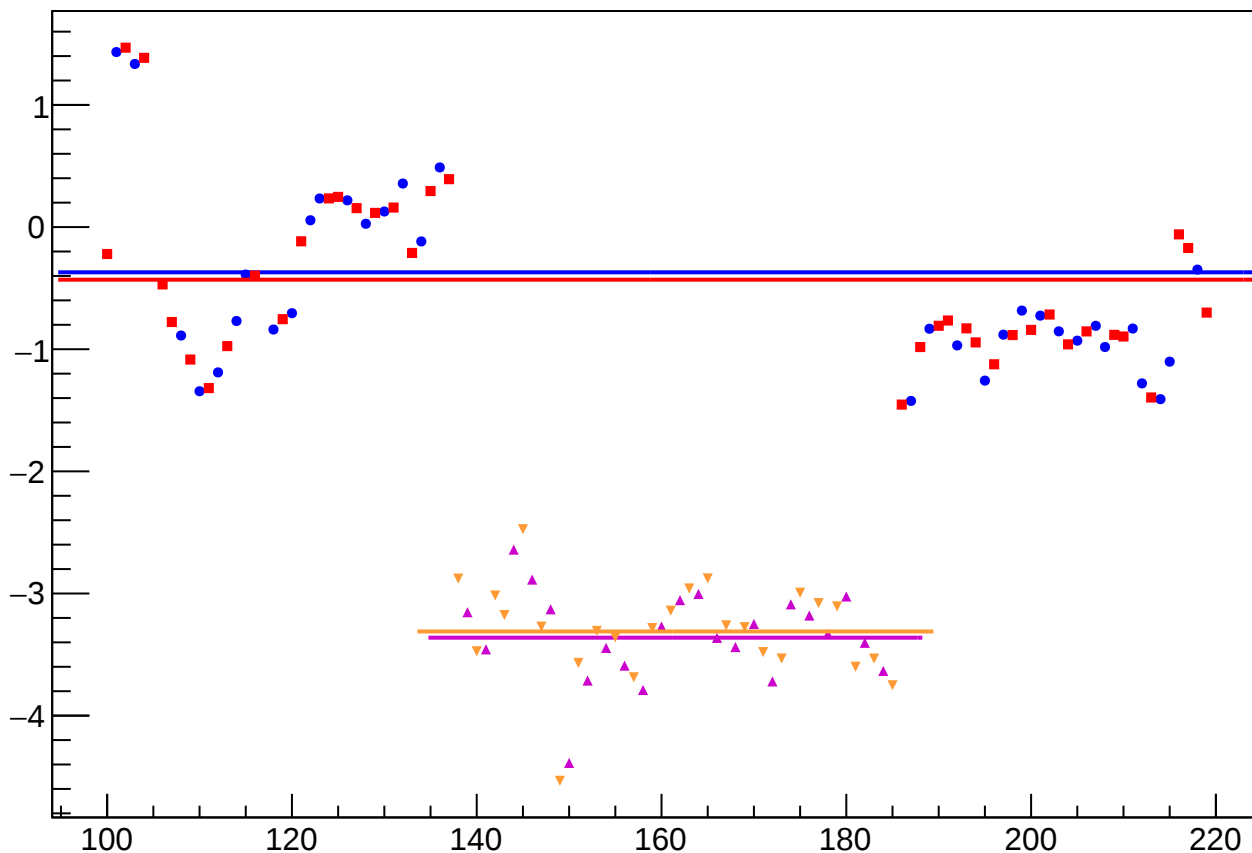
Right: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 13659251.4/69

In: 0.008+/-0.000  $\chi^2/\text{NDF}$ :7041289.5/55

Out: 0.008+/-0.000  $\chi^2/\text{NDF}$ :7370683.8/61

All: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 14413019.1/117

# yield\_bpm0l02X\_mean vs Slug, Sign Corrected



Right In:  $-0.370 \pm 0.000$   $\chi^2/\text{NDF}: 36477846597.5/32$

Left Out:  $-3.311 \pm 0.000$   $\chi^2/\text{NDF}: 9354397456.2/24$

Right Out:  $-0.431 \pm 0.000$   $\chi^2/\text{NDF}: 35296308280.2/36$

Left In:  $-3.362 \pm 0.000$   $\chi^2/\text{NDF}: 8171803777.4/22$

Left:  $-3.336 \pm 0.000$   $\chi^2/\text{NDF}: 17613895190.9/47$

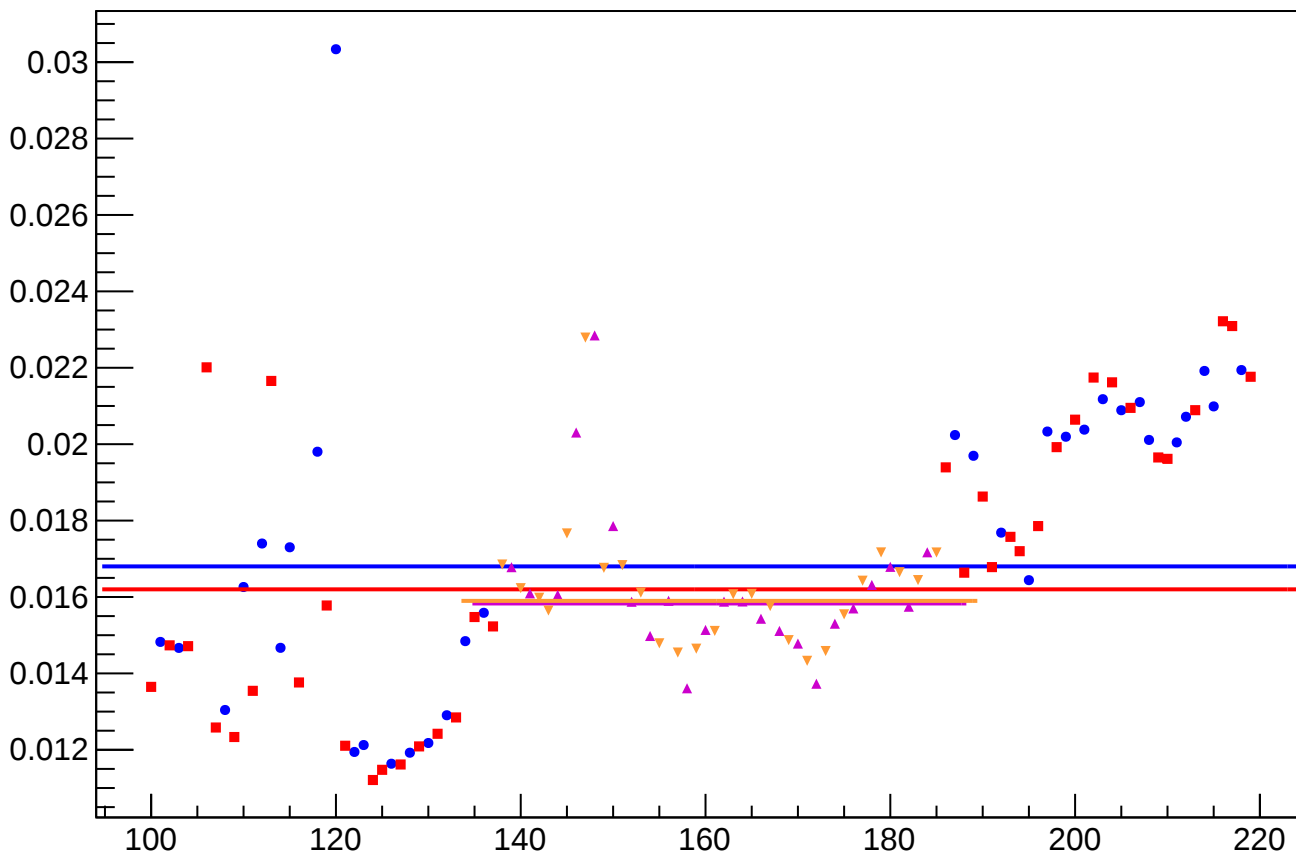
Right:  $-0.403 \pm 0.000$   $\chi^2/\text{NDF}: 71889065886.8/69$

In:  $-1.956 \pm 0.000$   $\chi^2/\text{NDF}: 323172416301.7/55$

Out:  $-1.891 \pm 0.000$   $\chi^2/\text{NDF}: 330656860230.5/61$

All:  $-1.922 \pm 0.000$   $\chi^2/\text{NDF}: 654110295450.0$

# yield\_bpm0l02X\_rms vs Slug, Sign Corrected



Right In: 0.017+/-0.000  $\chi^2/\text{NDF}$ : 1631492.0/32

Left Out: 0.016+/-0.000  $\chi^2/\text{NDF}$ :251912.7/24

Right Out: 0.016+/-0.000  $\chi^2/\text{NDF}$ : 1862712.5/36

Left In: 0.016+/-0.000  $\chi^2/\text{NDF}$ :339542.1/22

Left: 0.016+/-0.000  $\chi^2/\text{NDF}$ : 591766.7/47

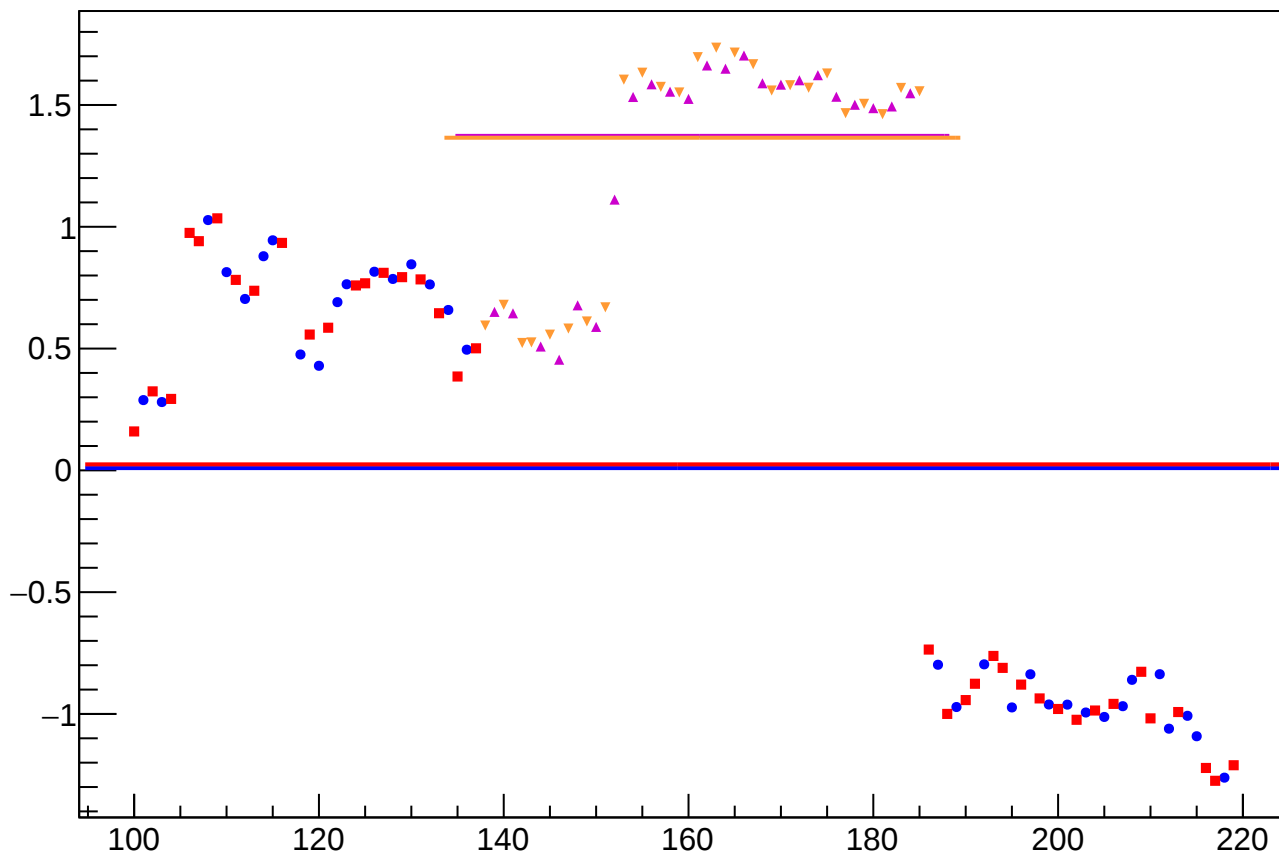
Right: 0.016+/-0.000  $\chi^2/\text{NDF}$ : 3516917.6/69

In: 0.016+/-0.000  $\chi^2/\text{NDF}$ :2029625.6/55

Out: 0.016+/-0.000  $\chi^2/\text{NDF}$ :2120916.1/61

All: 0.016+/-0.000  $\chi^2/\text{NDF}$ : 4158039.0/117

# yield\_bpm0l02Y\_mean vs Slug, Sign Corrected



Right In: 0.009+/-0.000

$\chi^2/\text{NDF}$ : 97181845604.4/32

Left: 1.369+/-0.000  $\chi^2/\text{NDF}$ : 138167468300.7/47

Right: 0.017+/-0.000  $\chi^2/\text{NDF}$ : 208178198840.5/69

Left Out: 1.366+/-0.000

$\chi^2/\text{NDF}$ : 74741956067.9/24

In: 1.010+/-0.000  $\chi^2/\text{NDF}$ : 372012972158.0/55

Out: 0.974+/-0.000  $\chi^2/\text{NDF}$ : 409208219326.9/61

Right Out: 0.025+/-0.000

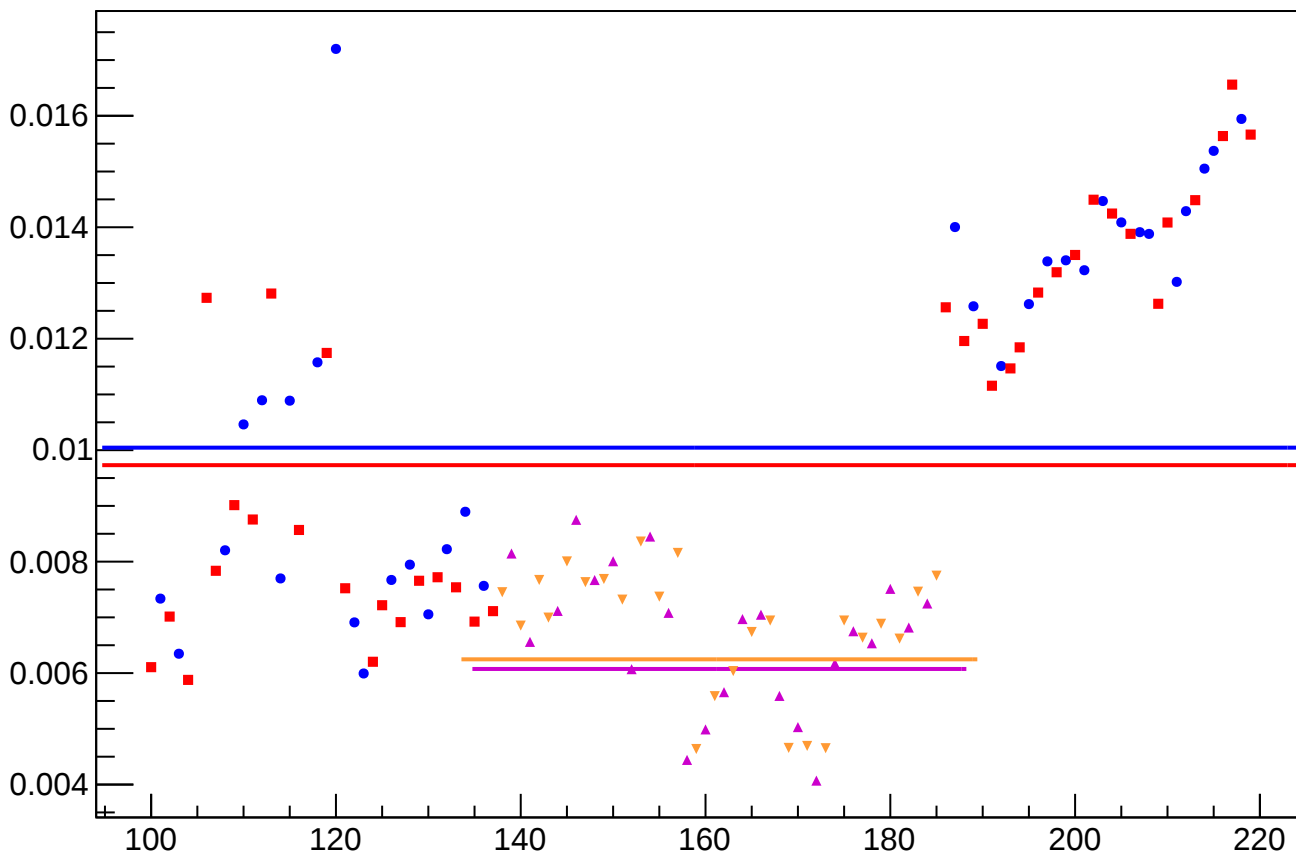
$\chi^2/\text{NDF}$ : 110976857417.5/36

Left In: 1.373+/-0.000

$\chi^2/\text{NDF}$ : 63413151416.3/22

All: 0.992+/-0.000  $\chi^2/\text{NDF}$ : 781608566456.5

# yield\_bpm0l02Y\_rms vs Slug, Sign Corrected



Right In: 0.010+/-0.000  $\chi^2/\text{NDF}$ : 3076265.2/32

Left Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ :1330867.5/24

Right Out: 0.010+/-0.000  $\chi^2/\text{NDF}$ : 3438442.5/36

Left In: 0.006+/-0.000  $\chi^2/\text{NDF}$ :1431986.5/22

Left: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 2775615.7/47

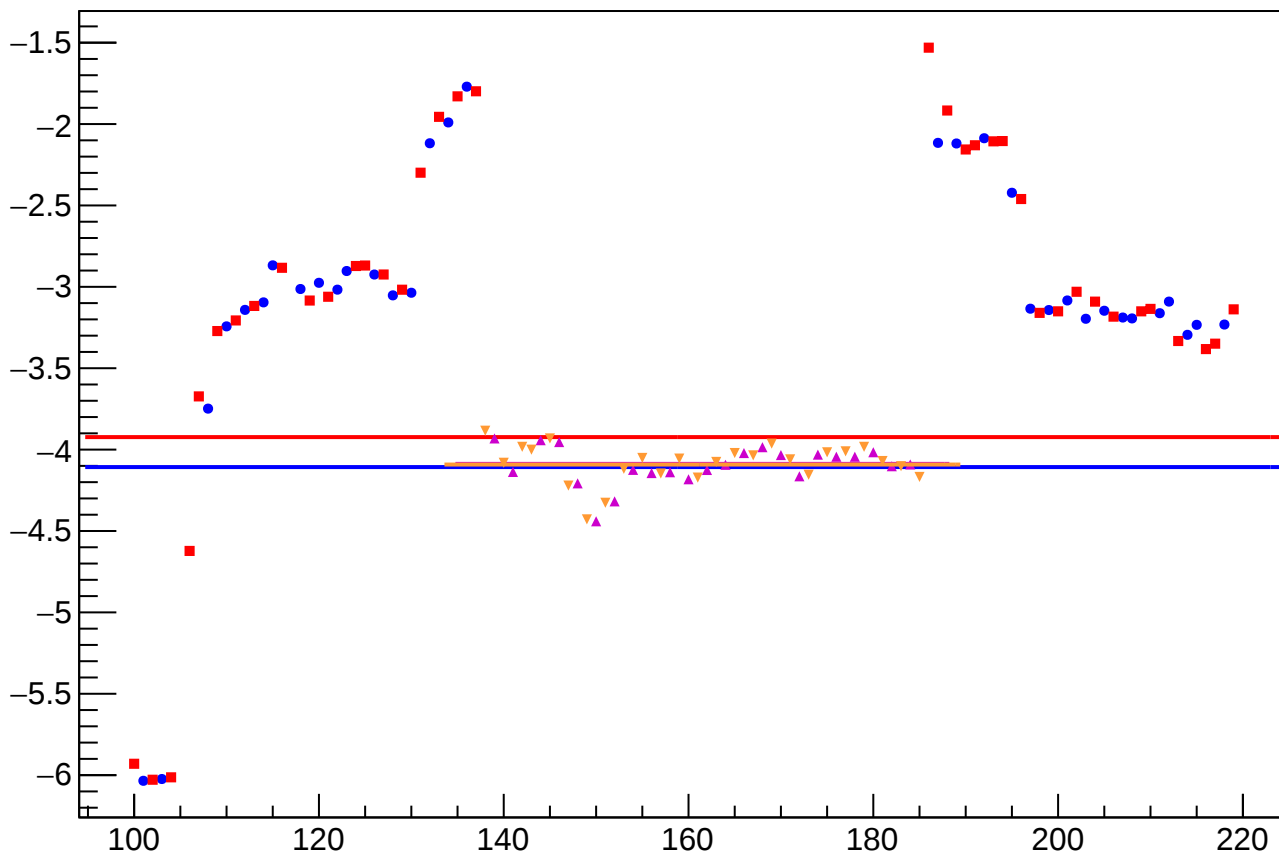
Right: 0.010+/-0.000  $\chi^2/\text{NDF}$ : 6530954.7/69

In: 0.007+/-0.000  $\chi^2/\text{NDF}$ :8092819.0/55

Out: 0.007+/-0.000  $\chi^2/\text{NDF}$ :7786753.5/61

All: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 15890118.9/117

# yield\_bpm0l03X\_mean vs Slug, Sign Corrected



Right In: -4.107+/-0.000

$\chi^2/\text{NDF}$ : 287843463208.8/32

Left Out: -4.092+/-0.000

$\chi^2/\text{NDF}$ : 39806766.7/24

Right Out: -3.923+/-0.000

$\chi^2/\text{NDF}$ : 280221495630.4/36

Left In: -4.088+/-0.000

$\chi^2/\text{NDF}$ : 34412880.7/22

Left: -4.089+/-0.000

$\chi^2/\text{NDF}$ : 74248792.8/47

Right: -4.025+/-0.000

$\chi^2/\text{NDF}$ : 569910183841.0/69

In: -4.107+/-0.000

$\chi^2/\text{NDF}$ : 287879458184.1/55

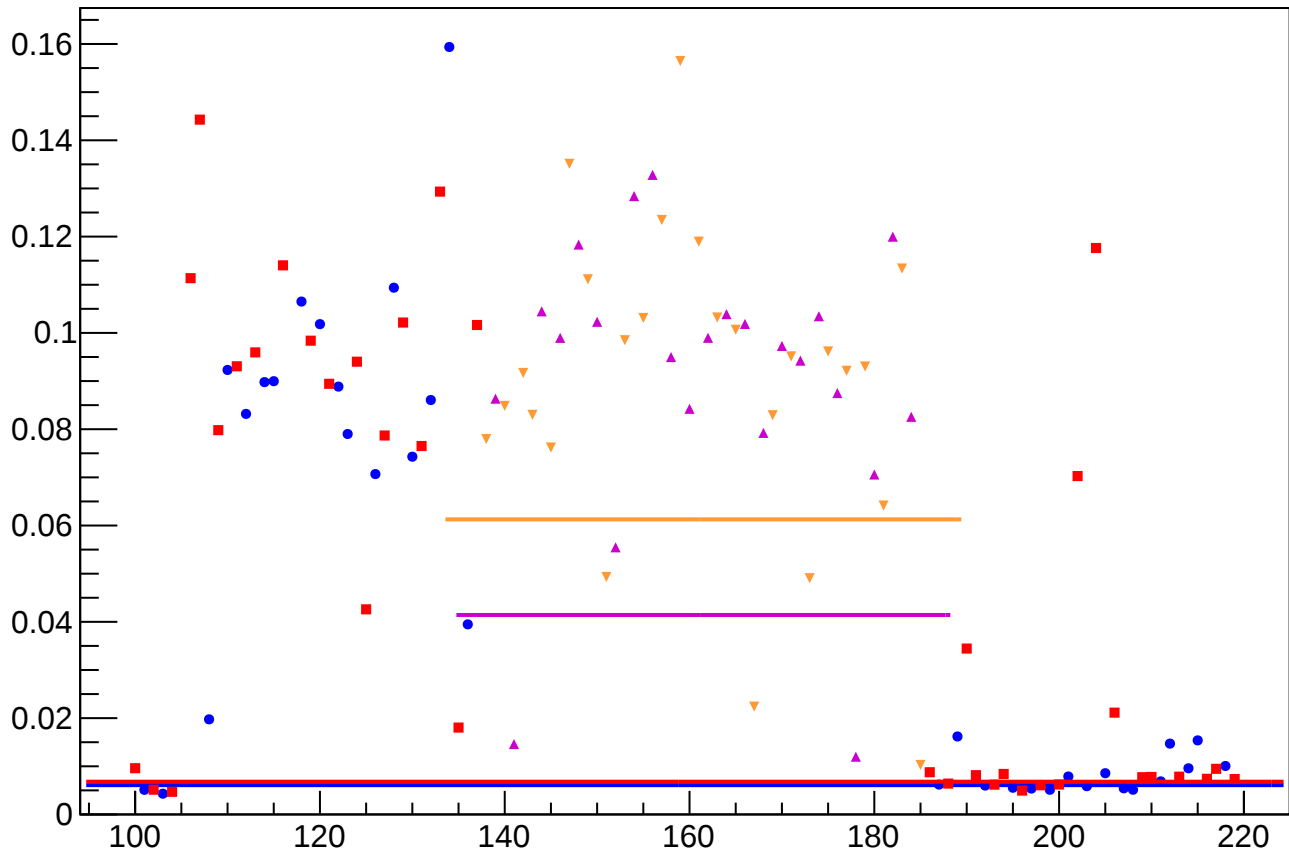
Out: -3.928+/-0.000

$\chi^2/\text{NDF}$ : 280342824080.7/61

All: -4.027+/-0.000

$\chi^2/\text{NDF}$ : 570013292933.9

# yield\_bpm0l03X\_rms vs Slug, Sign Corrected



Right In: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 8426105.9/32

Left Out: 0.061+/-0.000  $\chi^2/\text{NDF}$ :8355266.0/24

Right Out: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 10412871.3/36

Left In: 0.041+/-0.000  $\chi^2/\text{NDF}$ :13124468.7/22

Left: 0.050+/-0.000  $\chi^2/\text{NDF}$ : 22855159.2/47

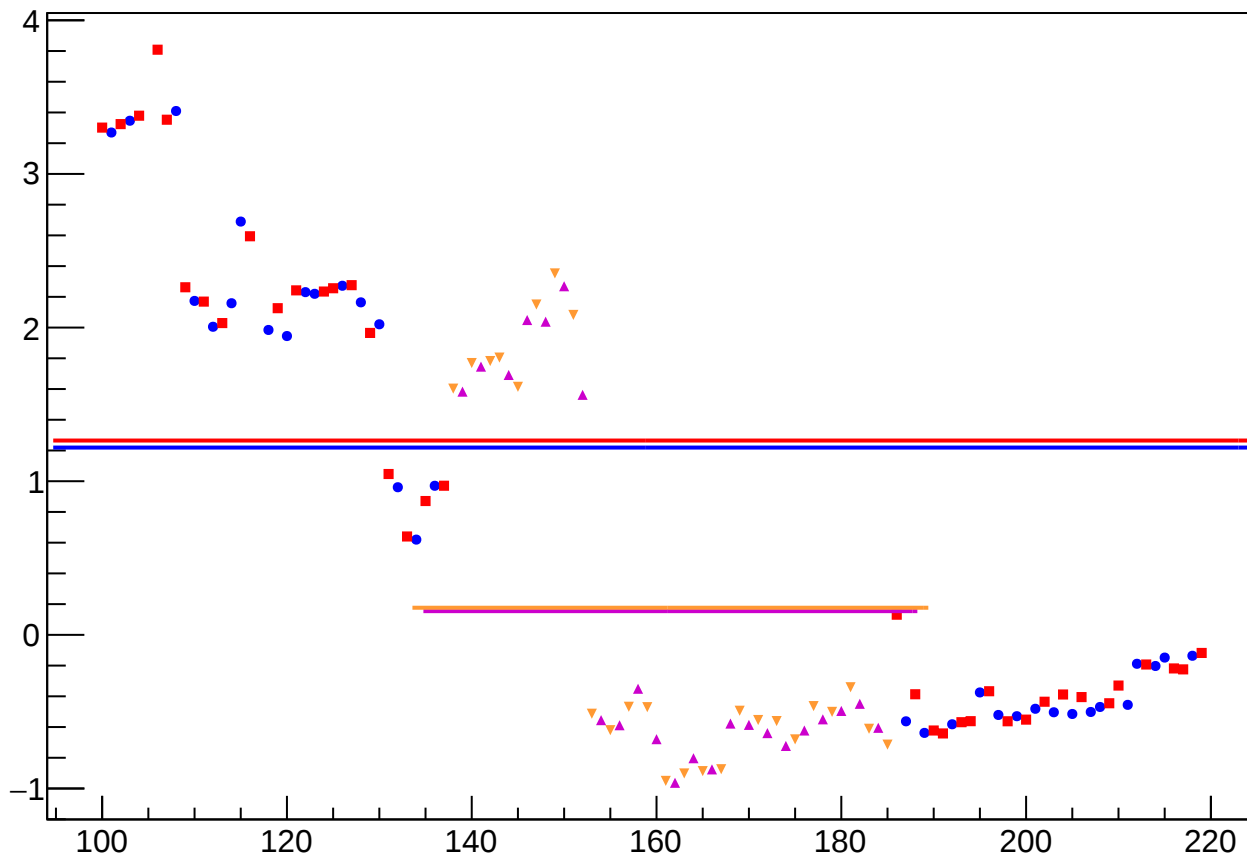
Right: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 18894787.6/69

In: 0.007+/-0.000  $\chi^2/\text{NDF}$ :31840512.2/55

Out: 0.008+/-0.000  $\chi^2/\text{NDF}$ :35780408.6/61

All: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 67759527.4/117

# yield\_bpm0l03Y\_mean vs Slug, Sign Corrected



Right In: 1.219+/-0.000  $\chi^2/\text{NDF}$ : 222348960406.5/32

Left Out: 0.177+/-0.000  $\chi^2/\text{NDF}$ : 3275313367.7/24

Right Out: 1.265+/-0.000  $\chi^2/\text{NDF}$ : 201017998628.2/36

Left In: 0.154+/-0.000  $\chi^2/\text{NDF}$ : 3163553595.0/22

Left: 0.165+/-0.000  $\chi^2/\text{NDF}$ : 6439465655.5/47

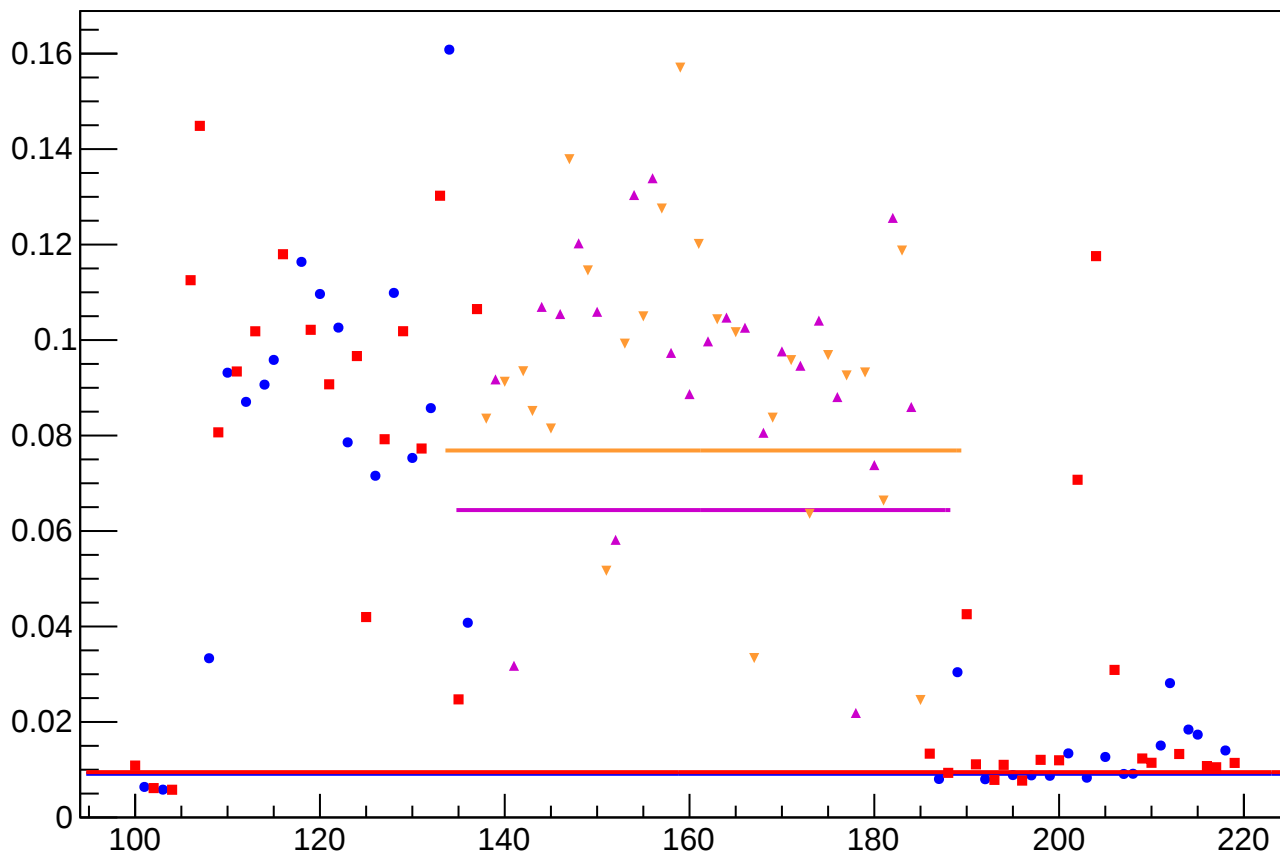
Right: 1.241+/-0.000  $\chi^2/\text{NDF}$ : 423431061960.4/69

In: 1.177+/-0.000  $\chi^2/\text{NDF}$ : 228322499007.3/55

Out: 1.225+/-0.000  $\chi^2/\text{NDF}$ : 206878885093.4/61

All: 1.200+/-0.000  $\chi^2/\text{NDF}$ : 435271949966.9

# yield\_bpm0l03Y\_rms vs Slug, Sign Corrected



Right In: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 8639260.3/32

Left Out: 0.077 $\pm$ 0.000  $\chi^2$ /NDF:4217954.3/24

Right Out: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 10412652.0/36

Left In: 0.064 $\pm$ 0.000  $\chi^2$ /NDF:6990231.5/22

Left: 0.070 $\pm$ 0.000  $\chi^2$ /NDF: 11584112.3/47

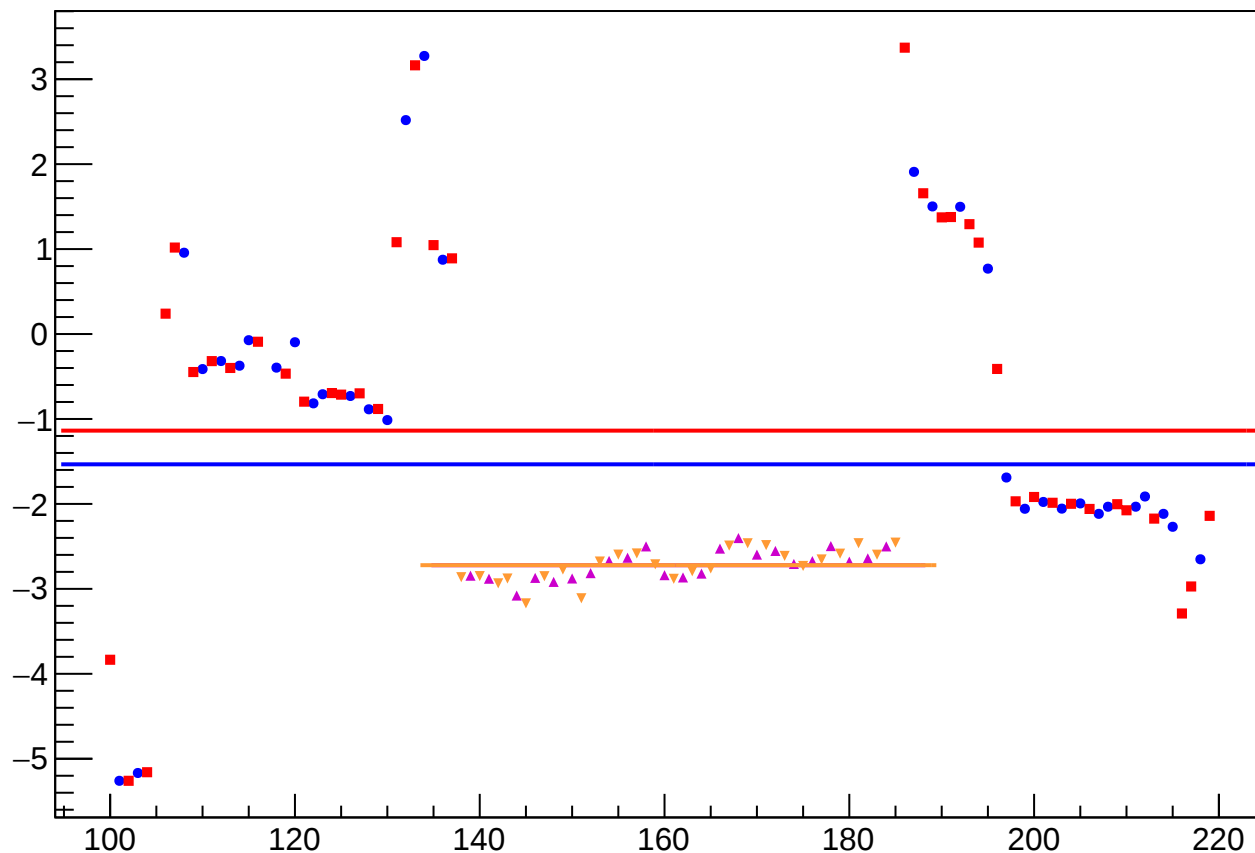
Right: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 19059321.3/69

In: 0.011 $\pm$ 0.000  $\chi^2$ /NDF:30758674.0/55

Out: 0.012 $\pm$ 0.000  $\chi^2$ /NDF:34453754.0/61

All: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 65242041.5/117

# yield\_bpm0l04X\_mean vs Slug, Sign Corrected



Right In: -1.534+/-0.000  $\chi^2/\text{NDF}$ : 209981828984.2/32

Left Out: -2.721+/-0.000  $\chi^2/\text{NDF}$ : 10397156971.6/24

Right Out: -1.137+/-0.000  $\chi^2/\text{NDF}$ : 251703816617.8/36

Left In: -2.722+/-0.000  $\chi^2/\text{NDF}$ : 8146484592.1/22

Left: -2.722+/-0.000  $\chi^2/\text{NDF}$ : 18543711860.5/47

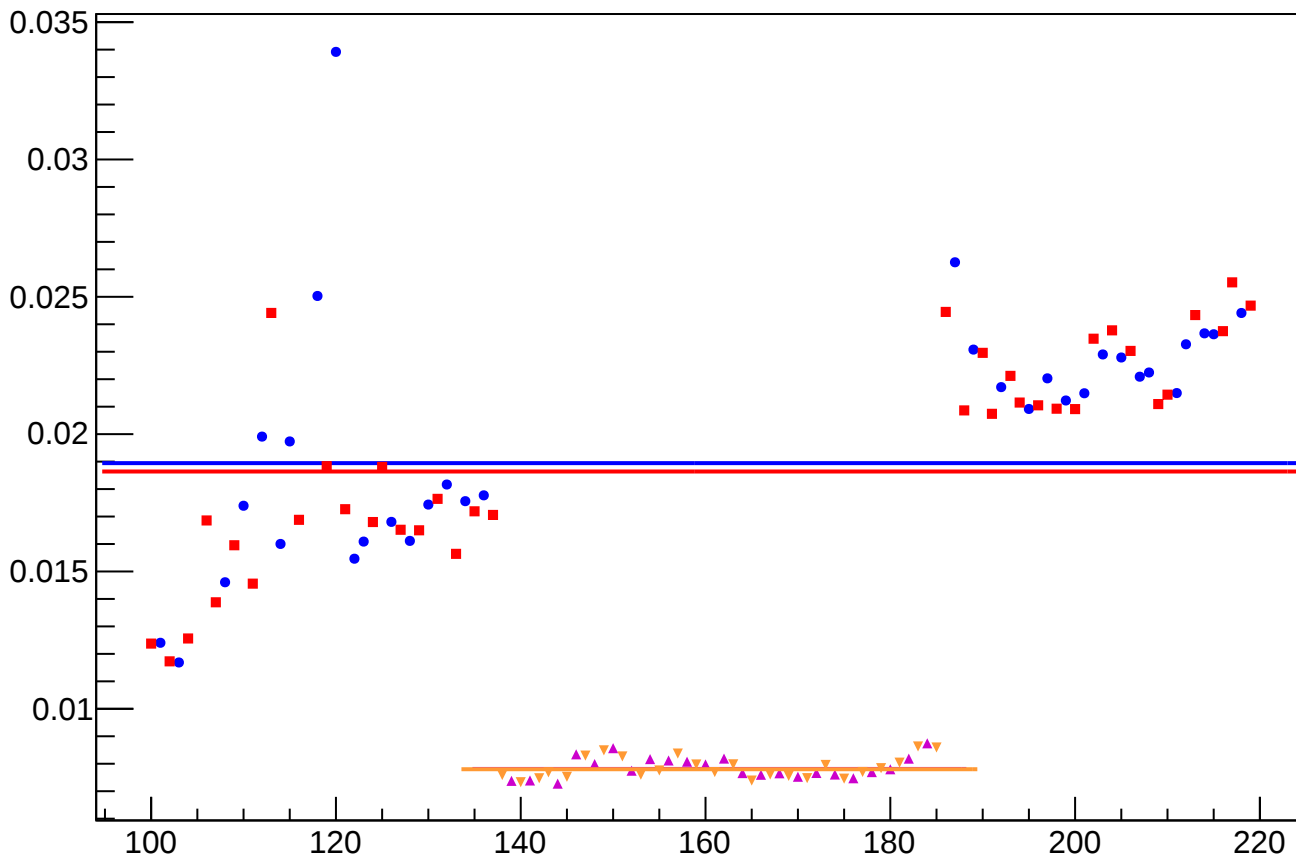
Right: -1.325+/-0.000  $\chi^2/\text{NDF}$ : 465427620598.2/69

In: -2.554+/-0.000  $\chi^2/\text{NDF}$ : 272822093590.3/55

Out: -2.488+/-0.000  $\chi^2/\text{NDF}$ : 369647004405.2/61

All: -2.520+/-0.000  $\chi^2/\text{NDF}$ : 643184165153.5

# yield\_bpm0l04X\_rms vs Slug, Sign Corrected



Right In: 0.019+/-0.000  $\chi^2/\text{NDF}$ : 1648768.5/32

Left Out: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 71164.4/24

Right Out: 0.019+/-0.000  $\chi^2/\text{NDF}$ : 1672178.8/36

Left In: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 67610.2/22

Left: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 138804.4/47

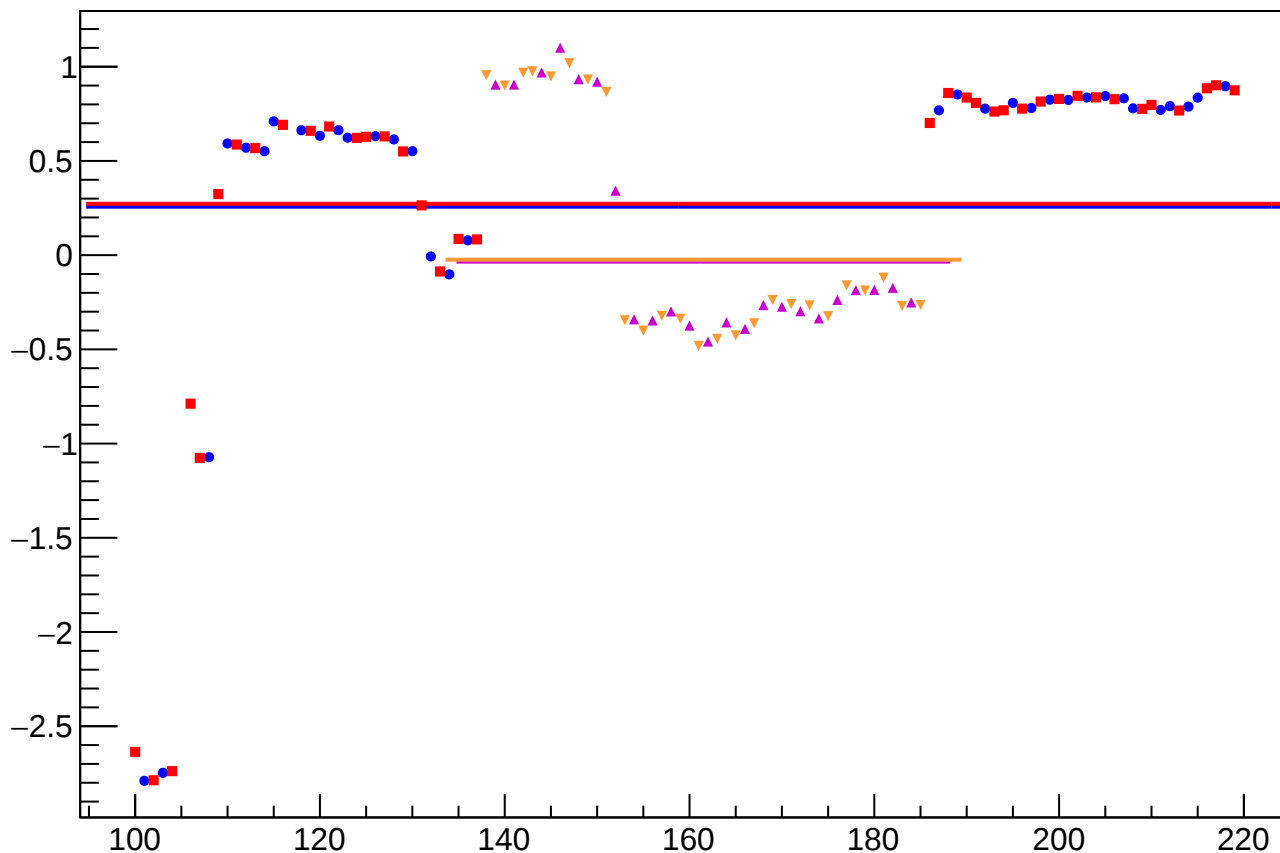
Right: 0.019+/-0.000  $\chi^2/\text{NDF}$ : 3325370.8/69

In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 11323532.2/55

Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 11815179.9/61

All: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 23138747.3/117

# yield\_bpm0l04Y\_mean vs Slug, Sign Corrected



Right In: 0.257+/-0.000

$\chi^2/\text{NDF}$ : 908613330150.8/32

Left: -0.029+/-0.000

$\chi^2/\text{NDF}$ : 249405201350.6/47

Left Out: -0.024+/-0.000

$\chi^2/\text{NDF}$ : 135451649275.0/24

Right: 0.265+/-0.000

$\chi^2/\text{NDF}$ : 1879854554780.0/69

Right Out: 0.272+/-0.000

$\chi^2/\text{NDF}$ : 971136065703.0/36

In: 0.156+/-0.000

$\chi^2/\text{NDF}$ : 1048412632180.9/55

Out: 0.174+/-0.000

$\chi^2/\text{NDF}$ : 1134955775140.9/61

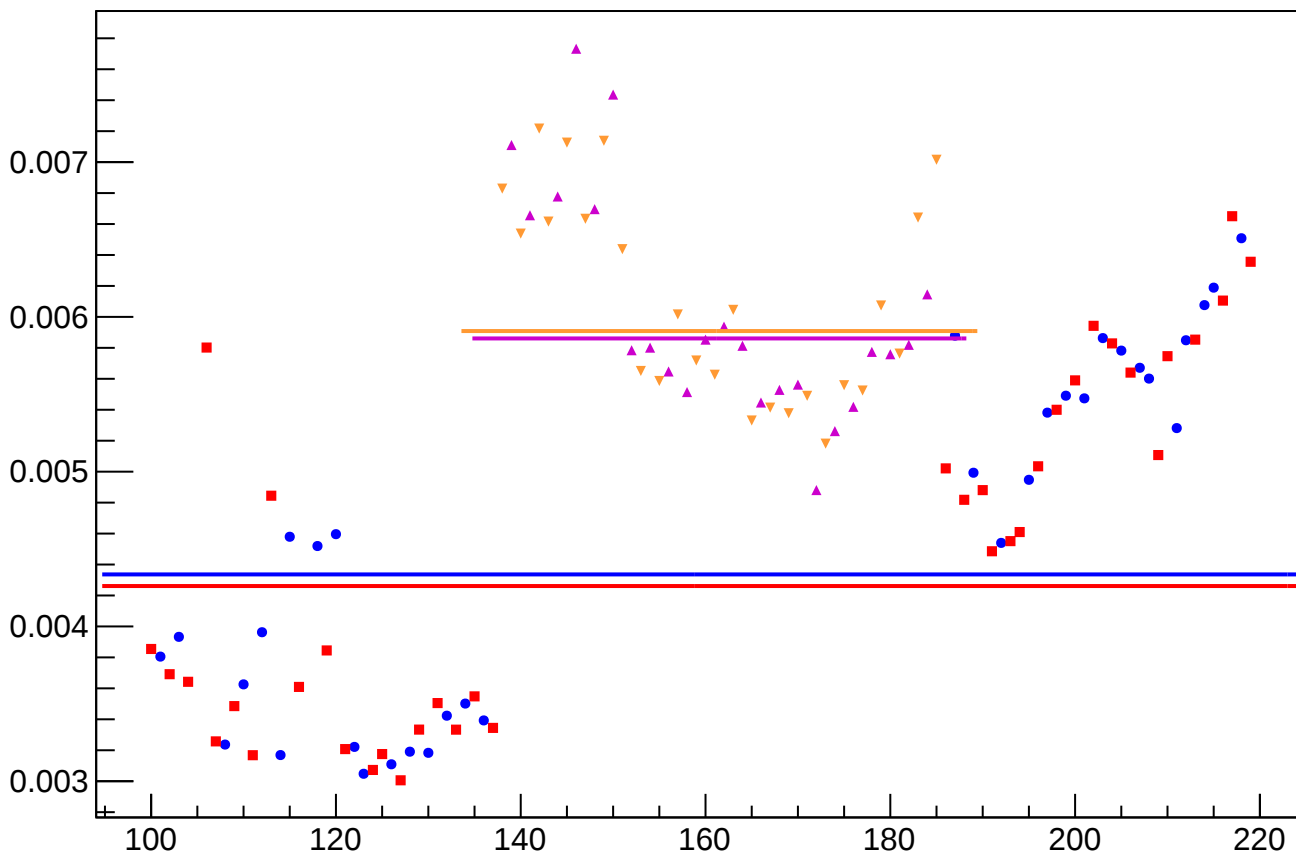
Left In: -0.034+/-0.000

$\chi^2/\text{NDF}$ : 113929060918.1/22

All: 0.165+/-0.000

$\chi^2/\text{NDF}$ : 2183588907712.0/100

# yield\_bpm0l04Y\_rms vs Slug, Sign Corrected



Right In: 0.004+/-0.000  $\chi^2/\text{NDF}$ : 2032940.6/32

Left Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ :314309.7/24

Right Out: 0.004+/-0.000  $\chi^2/\text{NDF}$ : 2184143.5/36

Left In: 0.006+/-0.000  $\chi^2/\text{NDF}$ :364512.1/22

Left: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 679905.3/47

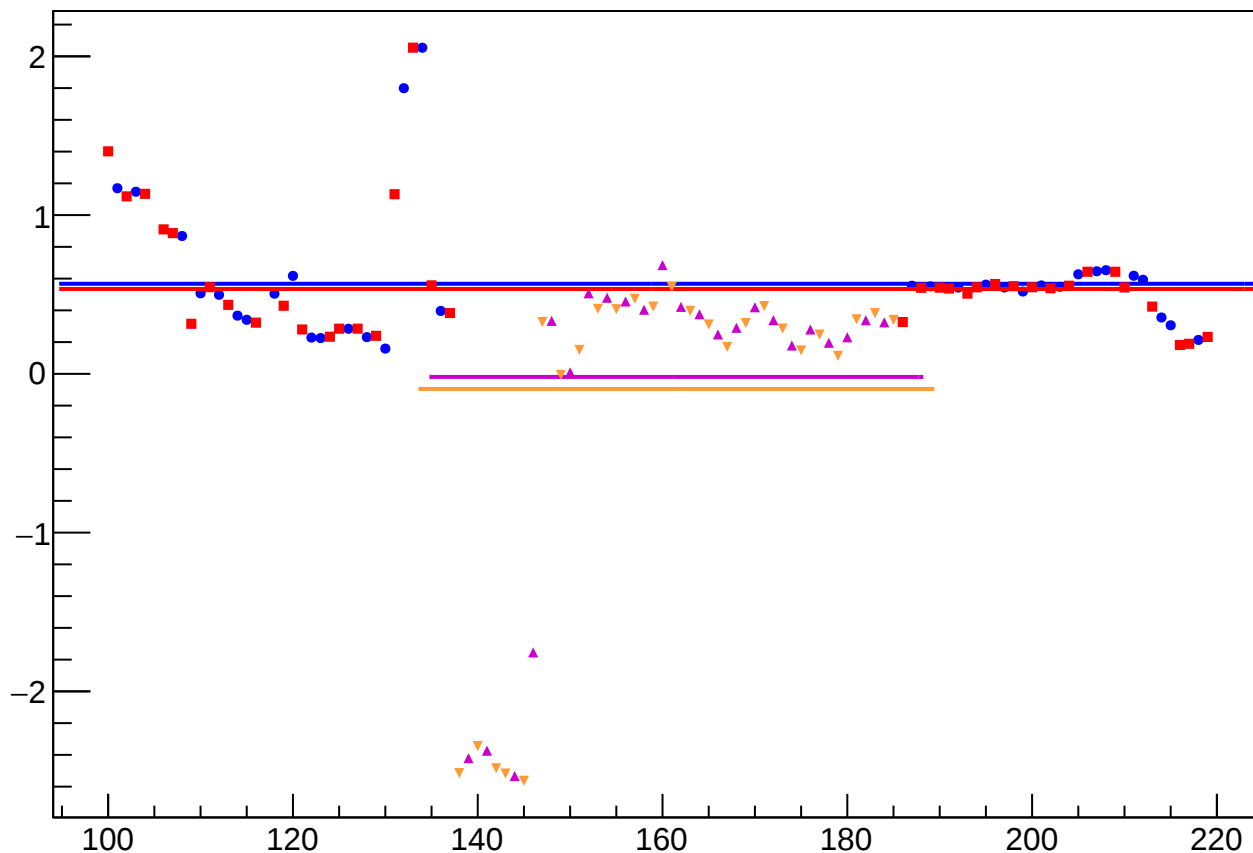
Right: 0.004+/-0.000  $\chi^2/\text{NDF}$ : 4222281.9/69

In: 0.005+/-0.000  $\chi^2/\text{NDF}$ :3811823.8/55

Out: 0.005+/-0.000  $\chi^2/\text{NDF}$ :4249628.7/61

All: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 8065958.1/117

# yield\_bpm0l05X\_mean vs Slug, Sign Corrected



Right In: 0.567+/-0.000  $\chi^2/\text{NDF}$ : 55590145575.9/32

Left Out: -0.095+/-0.000  $\chi^2/\text{NDF}$ : 505606573631.9/24

Right Out: 0.535+/-0.000  $\chi^2/\text{NDF}$ : 68828861695.2/36

Left In: -0.019+/-0.000  $\chi^2/\text{NDF}$ : 417104863944.5/22

Left: -0.058+/-0.000  $\chi^2/\text{NDF}$ : 924153662333.7/47

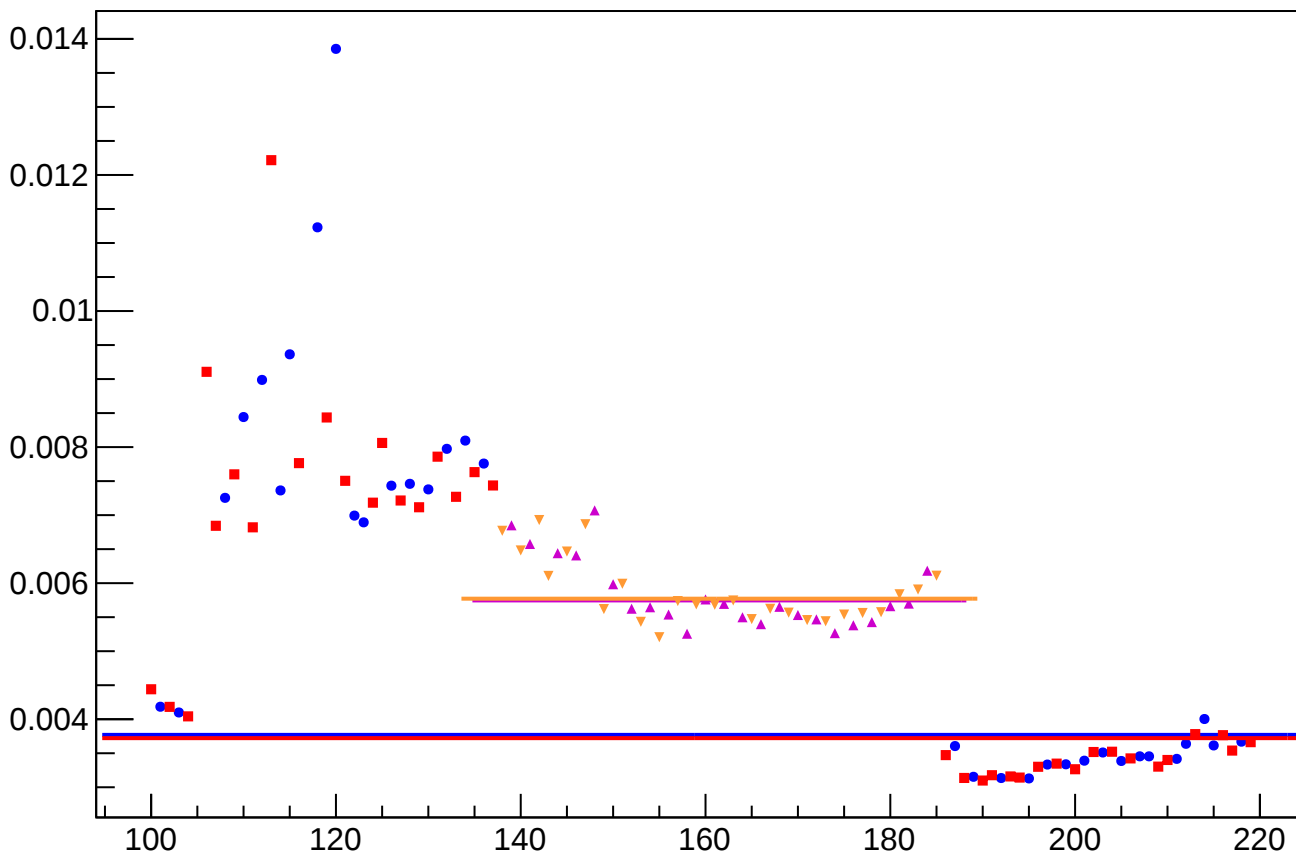
Right: 0.550+/-0.000  $\chi^2/\text{NDF}$ : 125034907009.8/69

In: 0.384+/-0.000  $\chi^2/\text{NDF}$ : 589482090111.6/55

Out: 0.347+/-0.000  $\chi^2/\text{NDF}$ : 717764836319.6/61

All: 0.365+/-0.000  $\chi^2/\text{NDF}$ : 1308388096148.7

# yield\_bpm0l05X\_rms vs Slug, Sign Corrected



Right In: 0.004+/-0.000  $\chi^2/\text{NDF}$ : 3153988.8/32

Left Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ :177680.7/24

Right Out: 0.004+/-0.000  $\chi^2/\text{NDF}$ : 3198605.2/36

Left In: 0.006+/-0.000  $\chi^2/\text{NDF}$ :204066.4/22

Left: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 382076.8/47

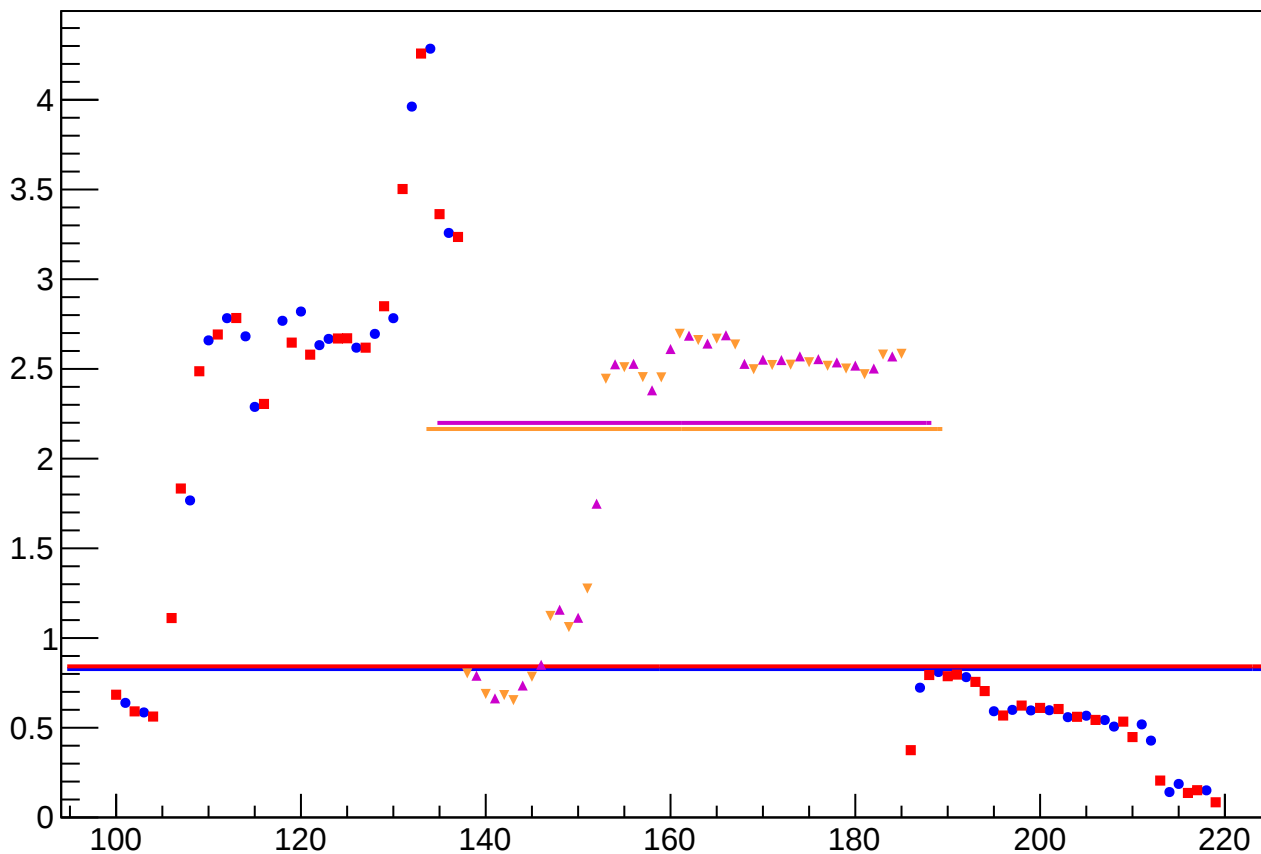
Right: 0.004+/-0.000  $\chi^2/\text{NDF}$ : 6355253.9/69

In: 0.004+/-0.000  $\chi^2/\text{NDF}$ :6008438.1/55

Out: 0.004+/-0.000  $\chi^2/\text{NDF}$ :6416150.7/61

All: 0.004+/-0.000  $\chi^2/\text{NDF}$ : 12429475.1/117

# yield\_bpm0l05Y\_mean vs Slug, Sign Corrected



Right In: 0.827+/-0.000  $\chi^2/\text{NDF}$ : 338245761990.0/32

Left Out: 2.165+/-0.000  $\chi^2/\text{NDF}$ : 292800056899.6/24

Right Out: 0.842+/-0.000  $\chi^2/\text{NDF}$ : 400196831622.0/36

Left In: 2.199+/-0.000  $\chi^2/\text{NDF}$ : 253166239065.4/22

Left: 2.182+/-0.000  $\chi^2/\text{NDF}$ : 546302258971.9/47

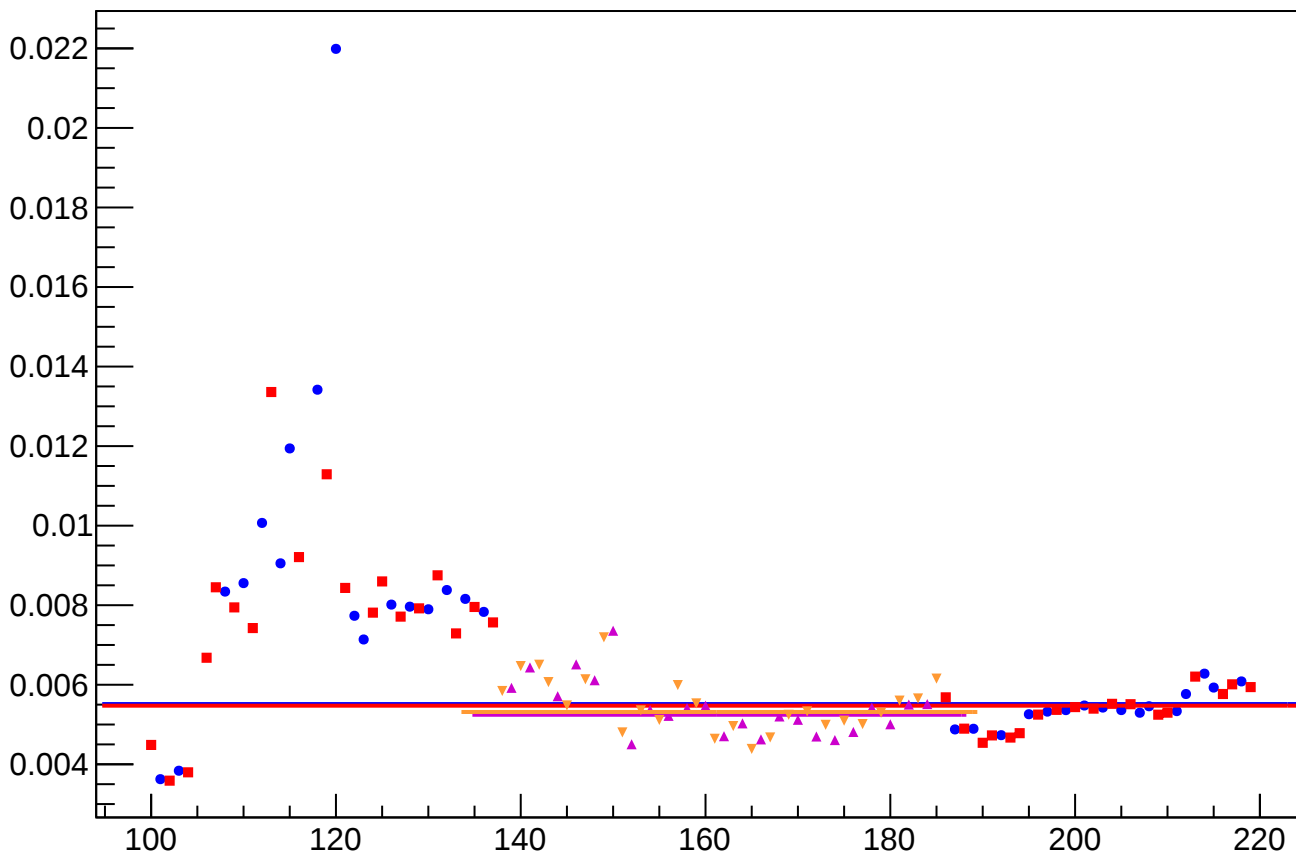
Right: 0.835+/-0.000  $\chi^2/\text{NDF}$ : 738504359809.8/69

In: 1.544+/-0.000  $\chi^2/\text{NDF}$ : 1106078801351.7/55

Out: 1.509+/-0.000  $\chi^2/\text{NDF}$ : 1202869697378.7/61

All: 1.526+/-0.000  $\chi^2/\text{NDF}$ : 2309635219079.

# yield\_bpm0l05Y\_rms vs Slug, Sign Corrected



Right In: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 2059872.7/32

Left Out: 0.005+/-0.000  $\chi^2/\text{NDF}$ :398795.0/24

Right Out: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 1931944.5/36

Left In: 0.005+/-0.000  $\chi^2/\text{NDF}$ :425864.8/22

Left: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 827475.4/47

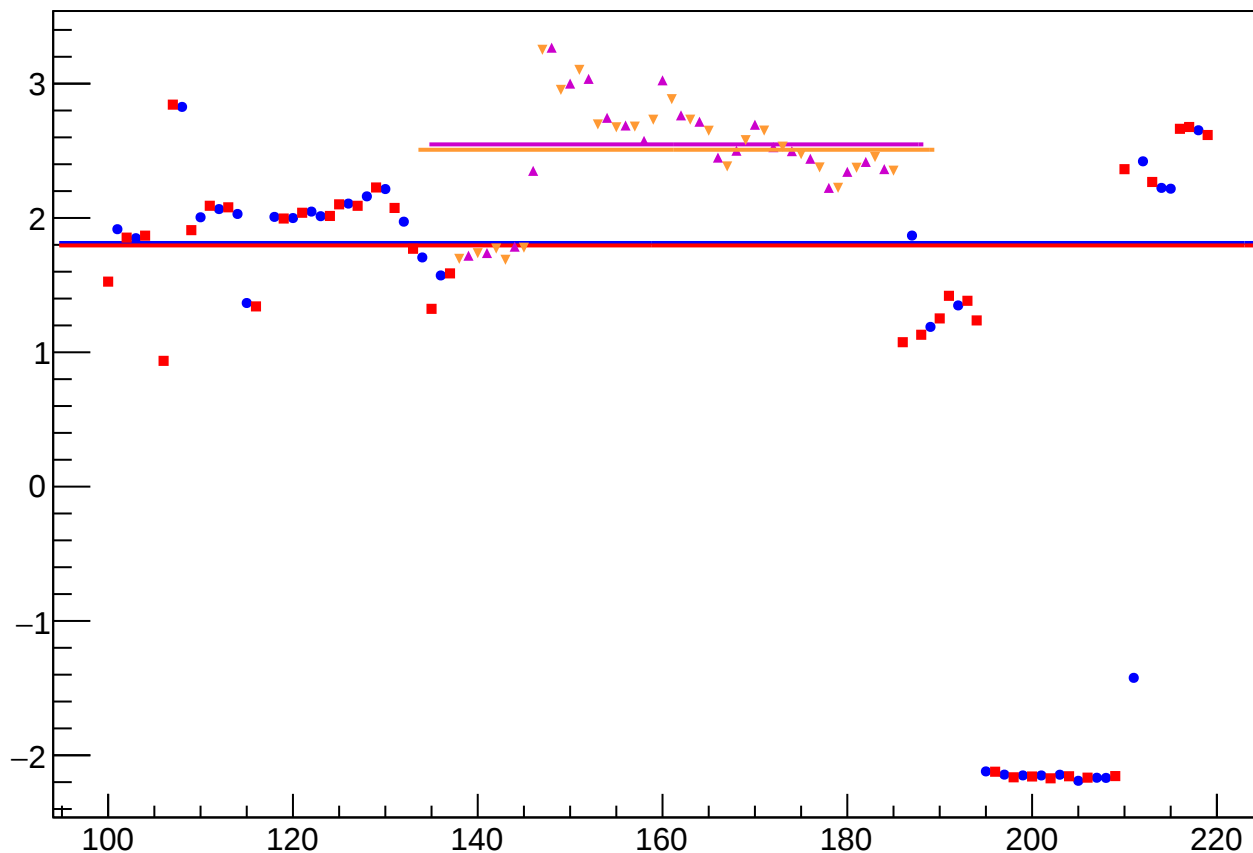
Right: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 3992717.6/69

In: 0.005+/-0.000  $\chi^2/\text{NDF}$ :2525238.9/55

Out: 0.005+/-0.000  $\chi^2/\text{NDF}$ :2345395.2/61

All: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 4871084.7/117

# yield\_bpm0l06X\_mean vs Slug, Sign Corrected



Right In: 1.814 $\pm$ 0.000  $\chi^2$ /NDF: 168380596340.6/32

Left Out: 2.508 $\pm$ 0.000  $\chi^2$ /NDF: 52355332406.0/24

Right Out: 1.795 $\pm$ 0.000  $\chi^2$ /NDF: 159693221864.9/36

Left In: 2.548 $\pm$ 0.000  $\chi^2$ /NDF: 45350336058.7/22

Left: 2.527 $\pm$ 0.000  $\chi^2$ /NDF: 97963993742.3/47

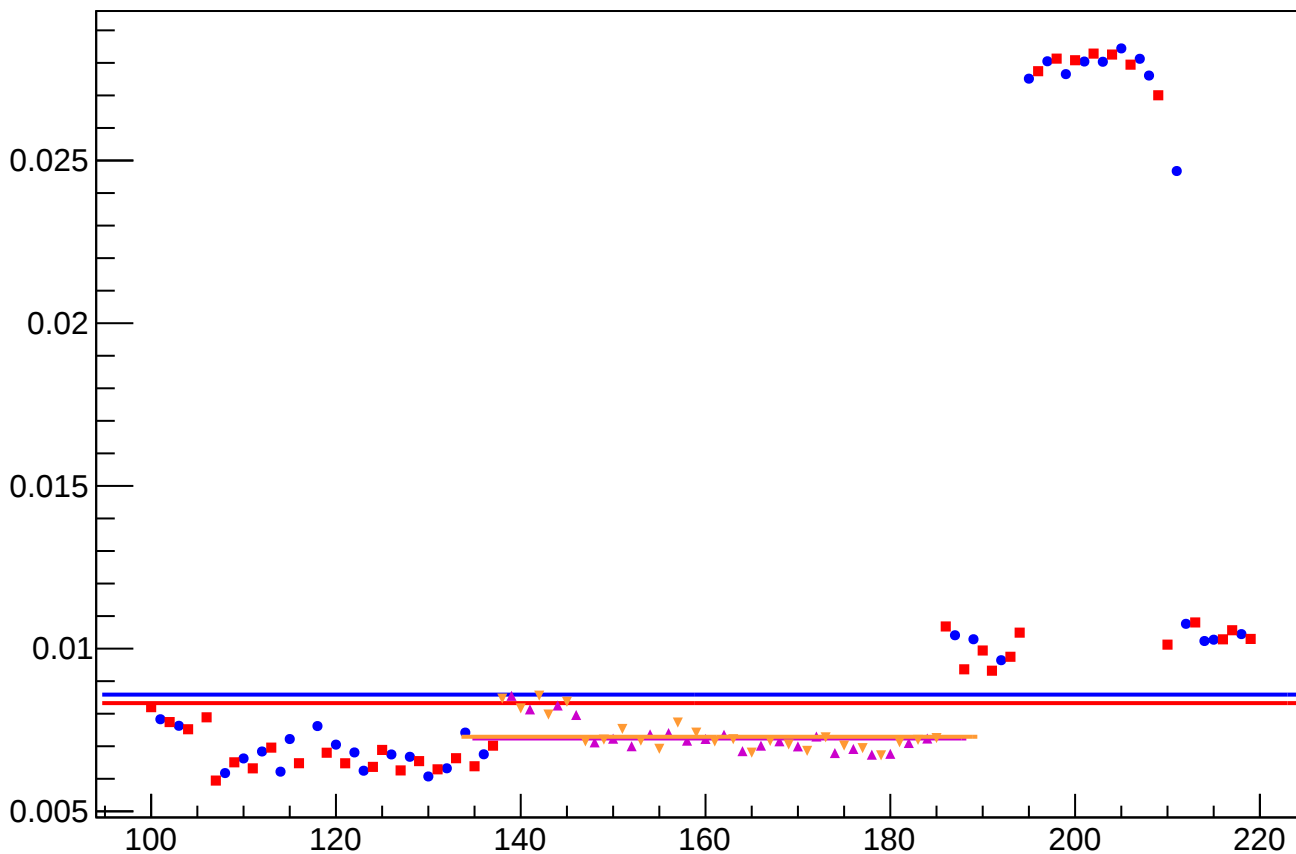
Right: 1.804 $\pm$ 0.000  $\chi^2$ /NDF: 328108061256.2/69

In: 2.275 $\pm$ 0.000  $\chi^2$ /NDF: 277098112012.3/55

Out: 2.219 $\pm$ 0.000  $\chi^2$ /NDF: 279577557511.7/61

All: 2.246 $\pm$ 0.000  $\chi^2$ /NDF: 557507394232.4

# yield\_bpm0l06X\_rms vs Slug, Sign Corrected



Right In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 7723463.4/32

Left Out: 0.007+/-0.000  $\chi^2/\text{NDF}$ :140788.4/24

Right Out: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 6582819.3/36

Left In: 0.007+/-0.000  $\chi^2/\text{NDF}$ :125233.2/22

Left: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 266945.6/47

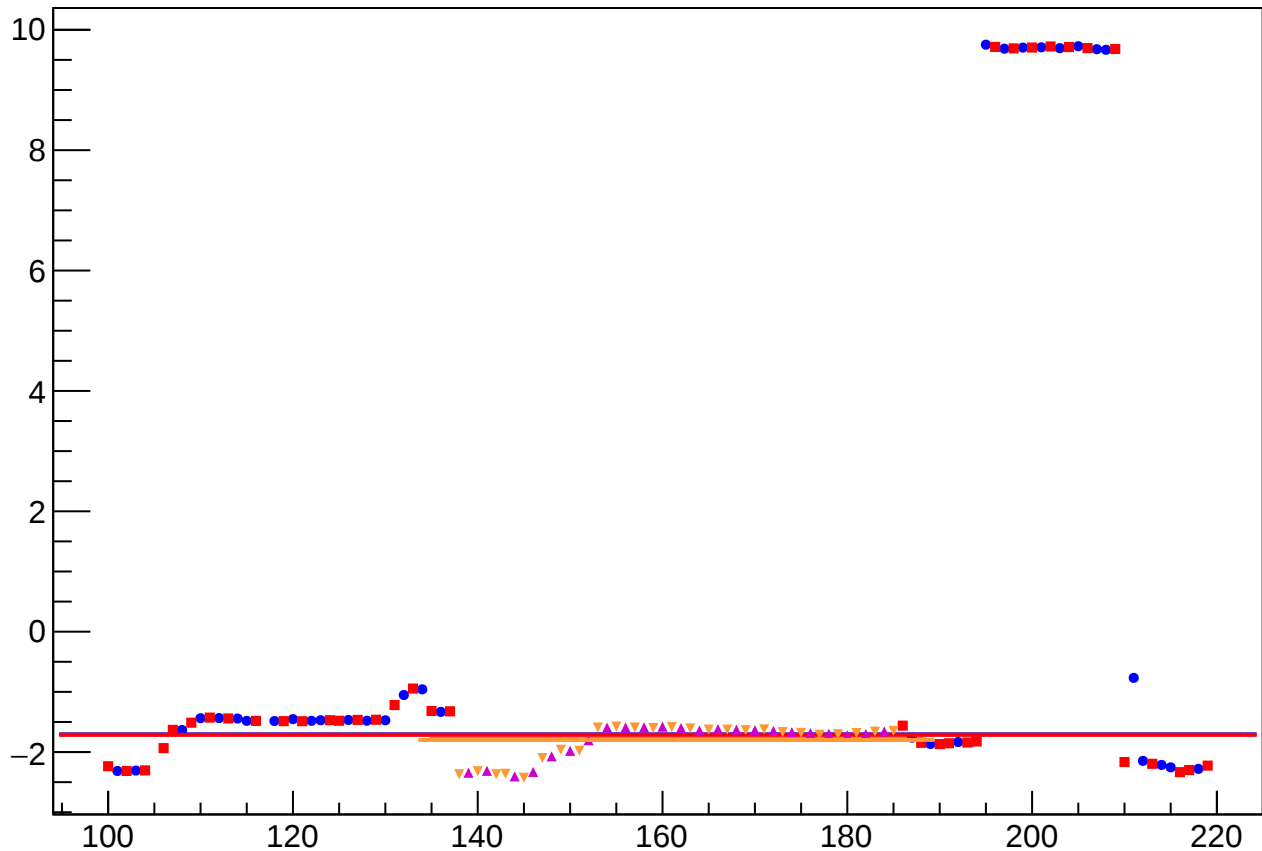
Right: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 14320197.0/69

In: 0.008+/-0.000  $\chi^2/\text{NDF}$ :8276542.7/55

Out: 0.008+/-0.000  $\chi^2/\text{NDF}$ :7008088.6/61

All: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 15285050.7/117

# yield\_bpm0l06Y\_mean vs Slug, Sign Corrected



Right In: -1.706+/-0.000  $\chi^2/\text{NDF}$ : 418041813767.4/32

Left Out: -1.799+/-0.000  $\chi^2/\text{NDF}$ : 185362087438.8/24

Right Out: -1.714+/-0.000  $\chi^2/\text{NDF}$ : 410213697314.9/36

Left In: -1.790+/-0.000  $\chi^2/\text{NDF}$ : 159648935510.8/22

Left: -1.795+/-0.000  $\chi^2/\text{NDF}$ : 345099435201.4/47

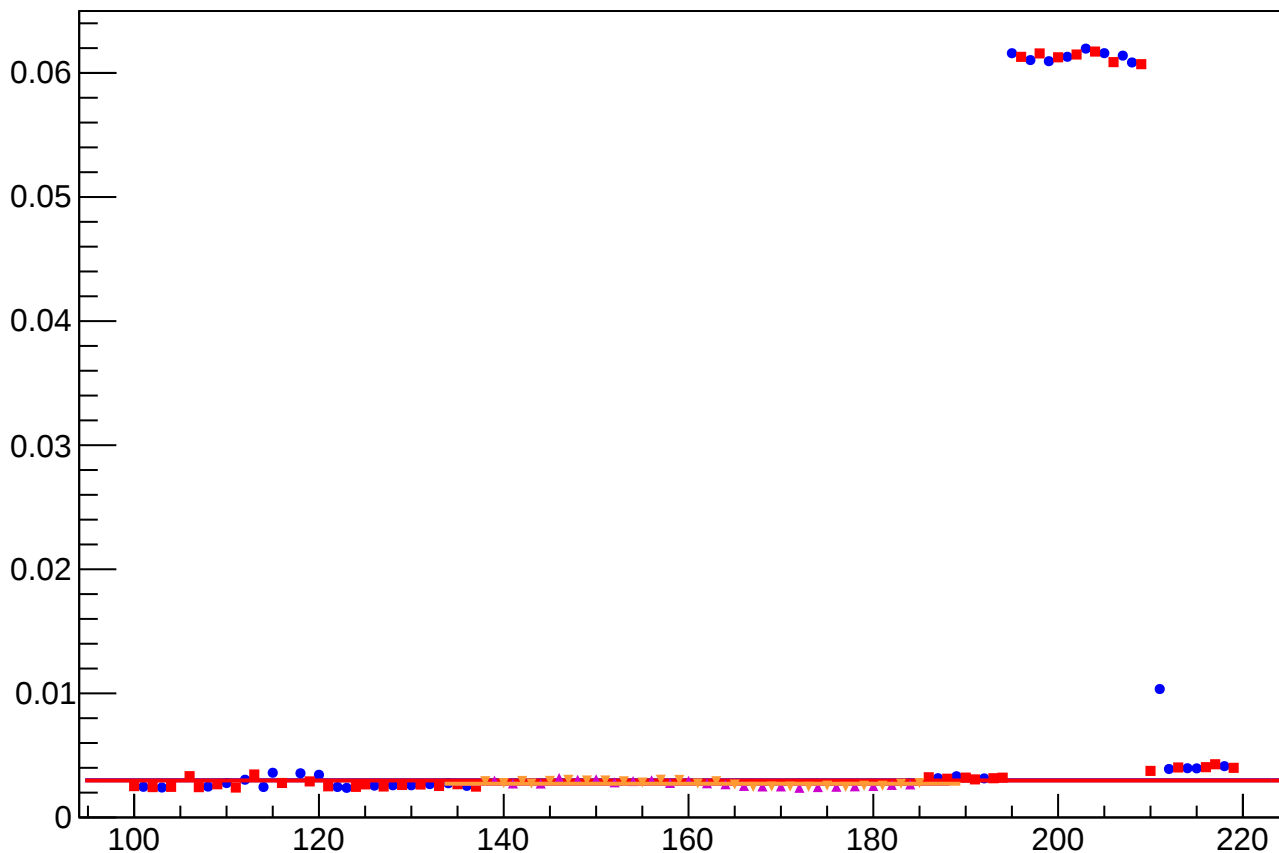
Right: -1.710+/-0.000  $\chi^2/\text{NDF}$ : 828298334325.3/69

In: -1.761+/-0.000  $\chi^2/\text{NDF}$ : 583383510223.5/55

Out: -1.766+/-0.000  $\chi^2/\text{NDF}$ : 602265471405.1/61

All: -1.763+/-0.000  $\chi^2/\text{NDF}$ : 1185699459629

# yield\_bpm0l06Y\_rms vs Slug, Sign Corrected



Right In: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 12183761.6/32

Left Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ :199695.2/24

Right Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 10478092.9/36

Left In: 0.003+/-0.000  $\chi^2/\text{NDF}$ :220327.9/22

Left: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 420716.9/47

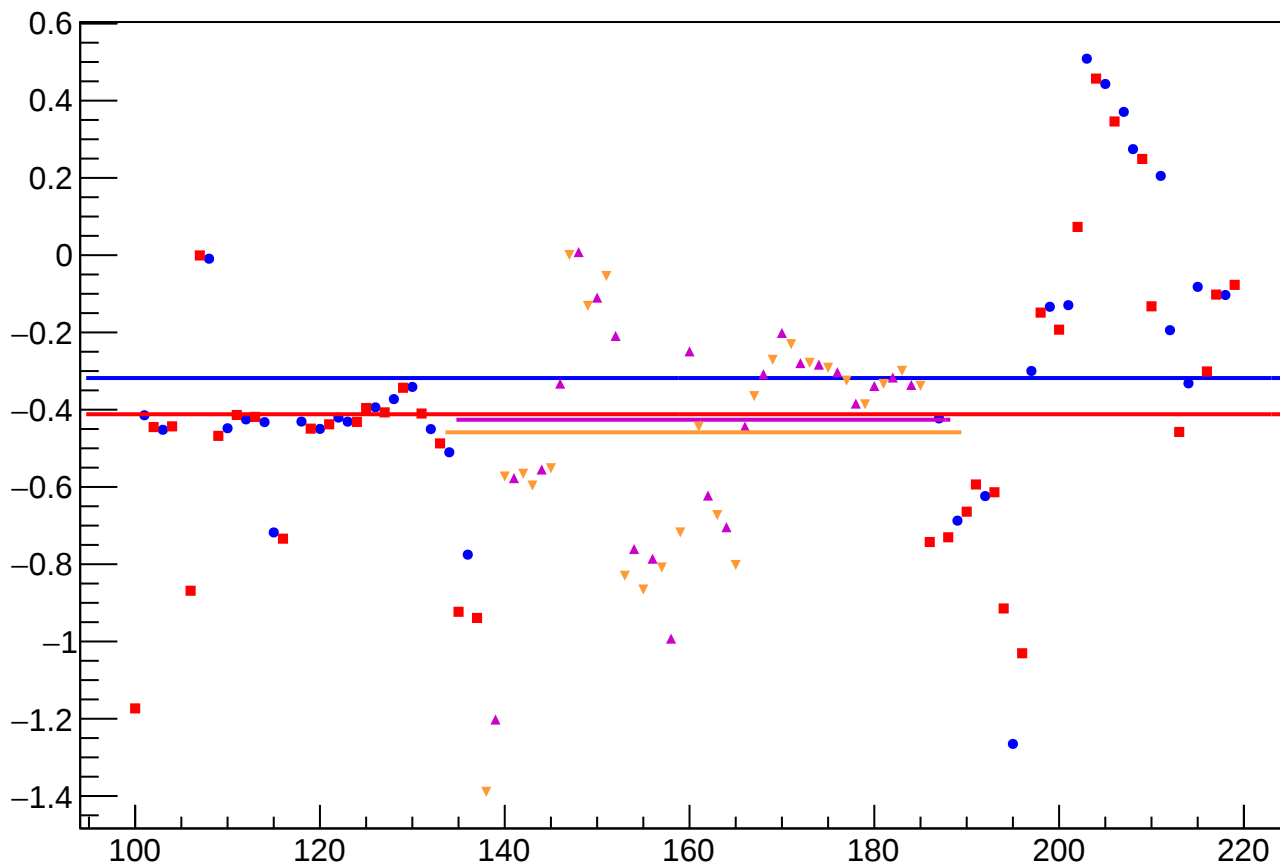
Right: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 22662285.4/69

In: 0.003+/-0.000  $\chi^2/\text{NDF}$ :12544826.8/55

Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ :10804012.4/61

All: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 23349650.5/117

# yield\_bpm0l07X\_mean vs Slug, Sign Corrected



Right In: -0.318+/-0.000

$\chi^2/\text{NDF}$ : 11025559611.5/32

Left: -0.443+/-0.000

$\chi^2/\text{NDF}$ : 18401926676.9/47

Left Out: -0.459+/-0.000

$\chi^2/\text{NDF}$ : 9916462814.9/24

Right: -0.368+/-0.000

$\chi^2/\text{NDF}$ : 22068559699.3/69

Right Out: -0.412+/-0.000

$\chi^2/\text{NDF}$ : 10650195659.7/36

In: -0.380+/-0.000

$\chi^2/\text{NDF}$ : 20014613293.3/55

Out: -0.438+/-0.000

$\chi^2/\text{NDF}$ : 20681308560.9/61

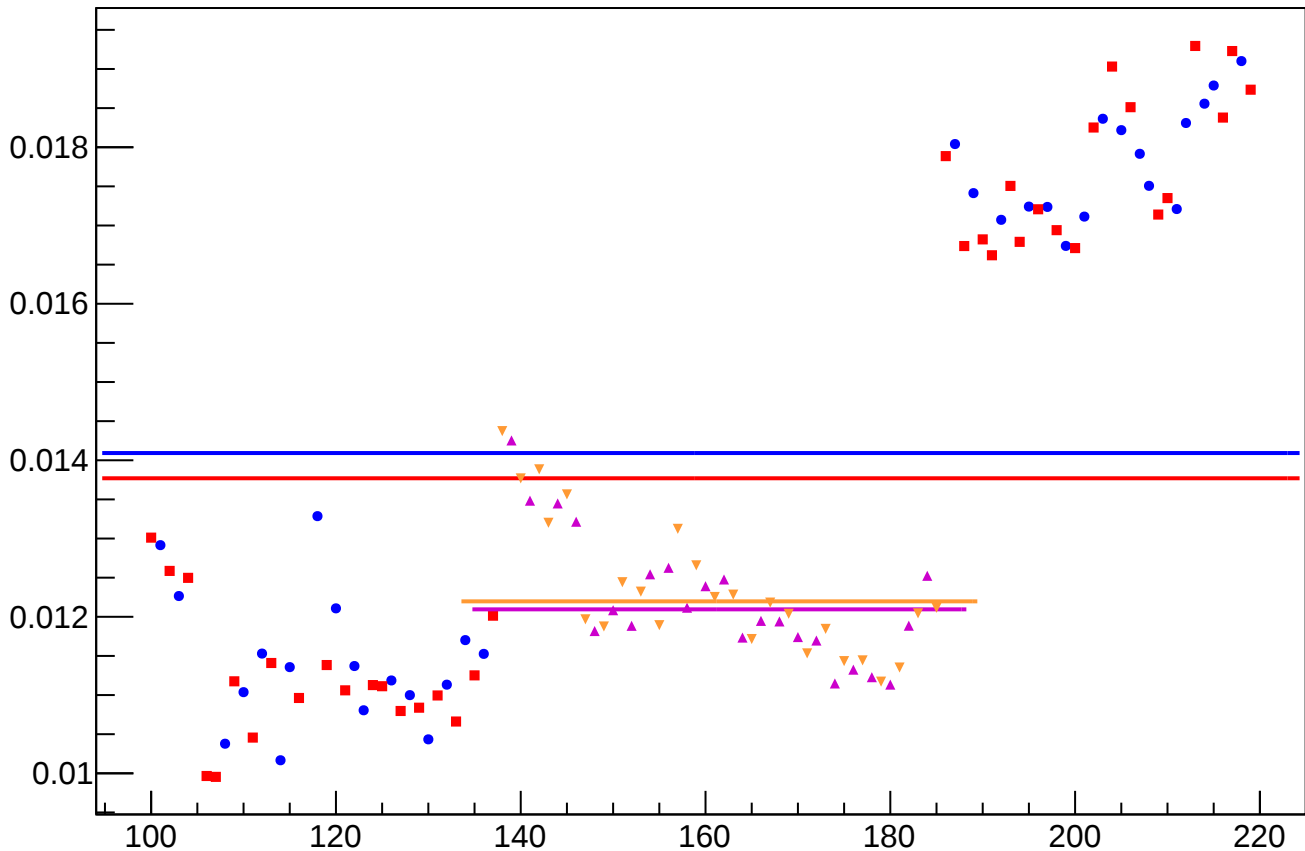
Left In: -0.426+/-0.000

$\chi^2/\text{NDF}$ : 8424222576.0/22

All: -0.410+/-0.000

$\chi^2/\text{NDF}$ : 41039853120.5/100

# yield\_bpm0l07X\_rms vs Slug, Sign Corrected



Right In: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 1718447.5/32

Left Out: 0.012+/-0.000  $\chi^2/\text{NDF}$ :141850.9/24

Right Out: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 2084896.5/36

Left In: 0.012+/-0.000  $\chi^2/\text{NDF}$ :127308.3/22

Left: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 270367.5/47

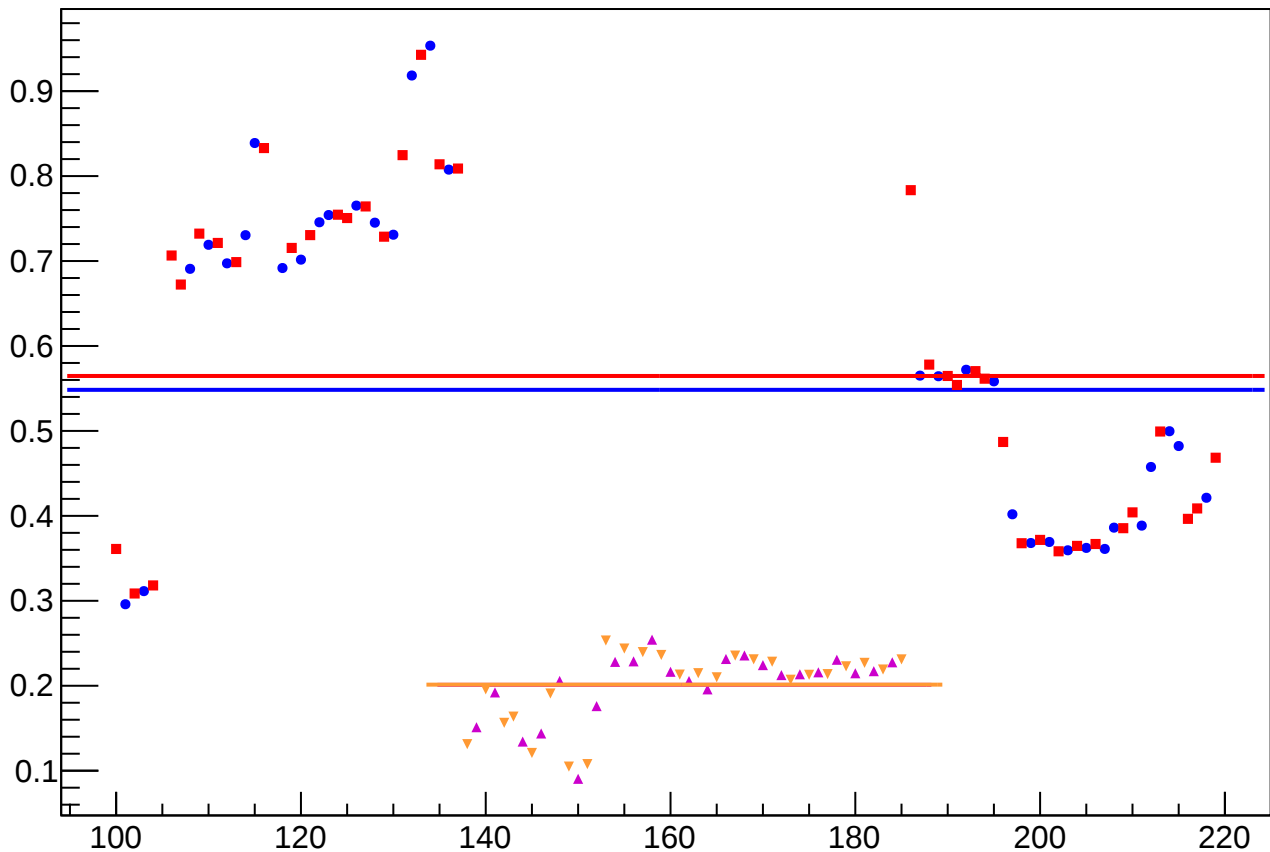
Right: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 3812640.9/69

In: 0.013+/-0.000  $\chi^2/\text{NDF}$ :2232776.6/55

Out: 0.013+/-0.000  $\chi^2/\text{NDF}$ :2486651.5/61

All: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 4719988.6/117

# yield\_bpm0l07Y\_mean vs Slug, Sign Corrected



Right In: 0.548 $\pm$ 0.000  $\chi^2$ /NDF: 77705715717.2/32

Left Out: 0.201 $\pm$ 0.000  $\chi^2$ /NDF: 7090760823.7/24

Right Out: 0.565 $\pm$ 0.000  $\chi^2$ /NDF: 77723971742.5/36

Left In: 0.201 $\pm$ 0.000  $\chi^2$ /NDF: 5671770181.2/22

Left: 0.201 $\pm$ 0.000  $\chi^2$ /NDF: 12762673178.0/47

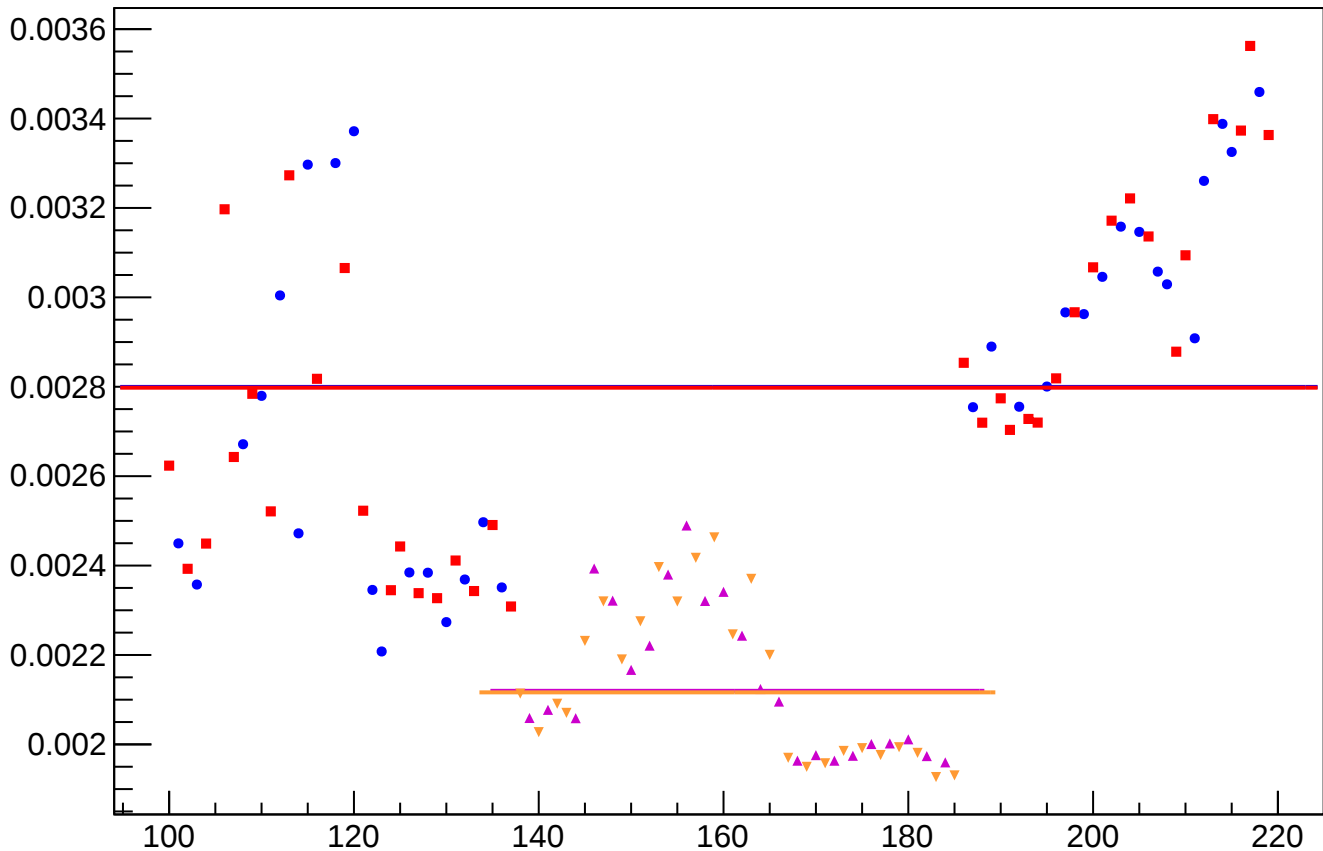
Right: 0.557 $\pm$ 0.000  $\chi^2$ /NDF: 155735123442.1/69

In: 0.329 $\pm$ 0.000  $\chi^2$ /NDF: 252566382471.7/55

Out: 0.336 $\pm$ 0.000  $\chi^2$ /NDF: 282281170945.1/61

All: 0.332 $\pm$ 0.000  $\chi^2$ /NDF: 534985798288.6

# yield\_bpm0l07Y\_rms vs Slug, Sign Corrected



Right In: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 593831.8/32

Left Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ :224498.3/24

Right Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 565959.4/36

Left In: 0.002+/-0.000  $\chi^2/\text{NDF}$ :189228.6/22

Left: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 413772.2/47

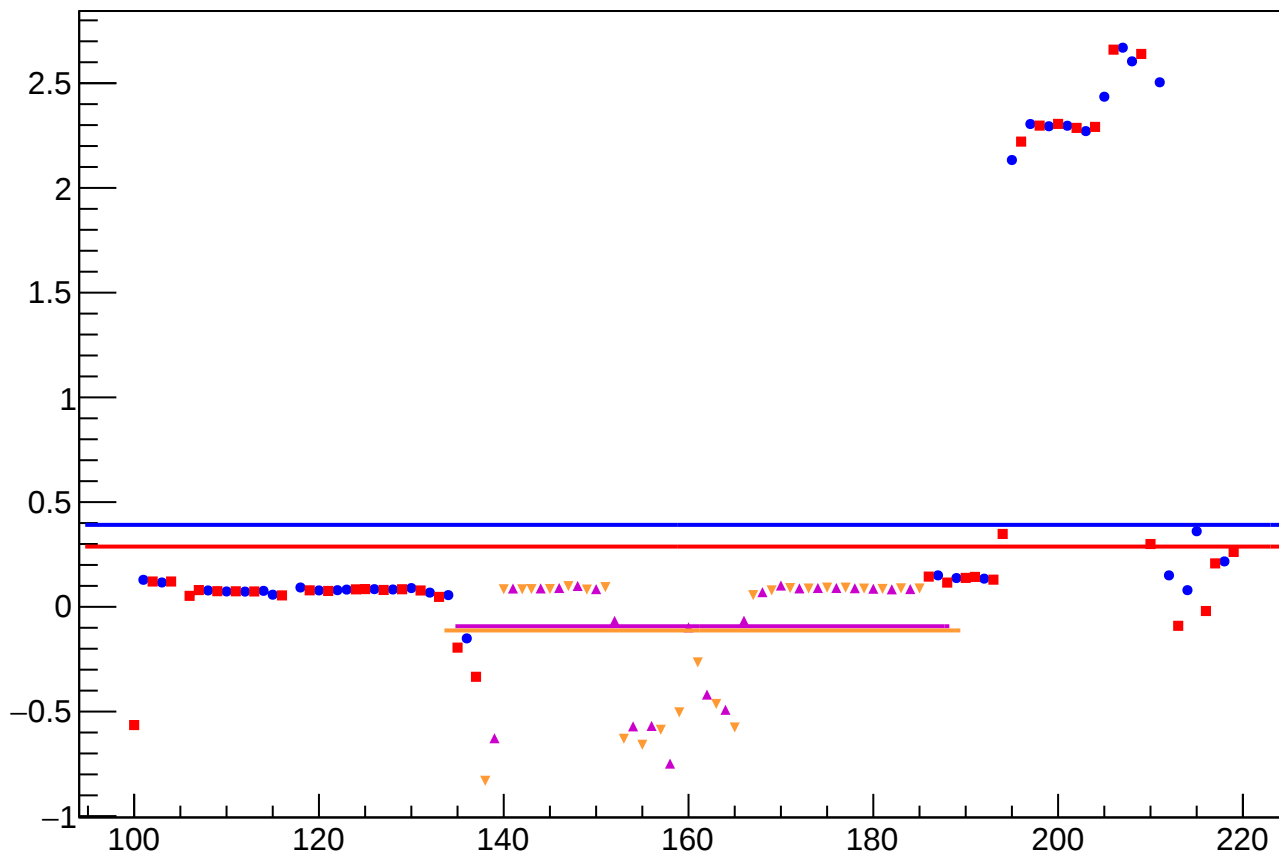
Right: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 1159797.7/69

In: 0.002+/-0.000  $\chi^2/\text{NDF}$ :2079503.6/55

Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ :2179799.5/61

All: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 4259324.3/117

# yield\_bpm0l08X\_mean vs Slug, Sign Corrected



Right In: 0.391+/-0.000

$\chi^2/\text{NDF}$ : 61460459170.6/32

Left: -0.103+/-0.000

$\chi^2/\text{NDF}$ : 24747894543.0/47

Left Out: -0.113+/-0.000

$\chi^2/\text{NDF}$ : 13667354077.1/24

Right: 0.335+/-0.000

$\chi^2/\text{NDF}$ : 114444755269.8/69

Right Out: 0.288+/-0.000

$\chi^2/\text{NDF}$ : 52423515713.0/36

In: 0.106+/-0.000

$\chi^2/\text{NDF}$ : 85864906665.7/55

Out: 0.063+/-0.000

$\chi^2/\text{NDF}$ : 76283057495.9/61

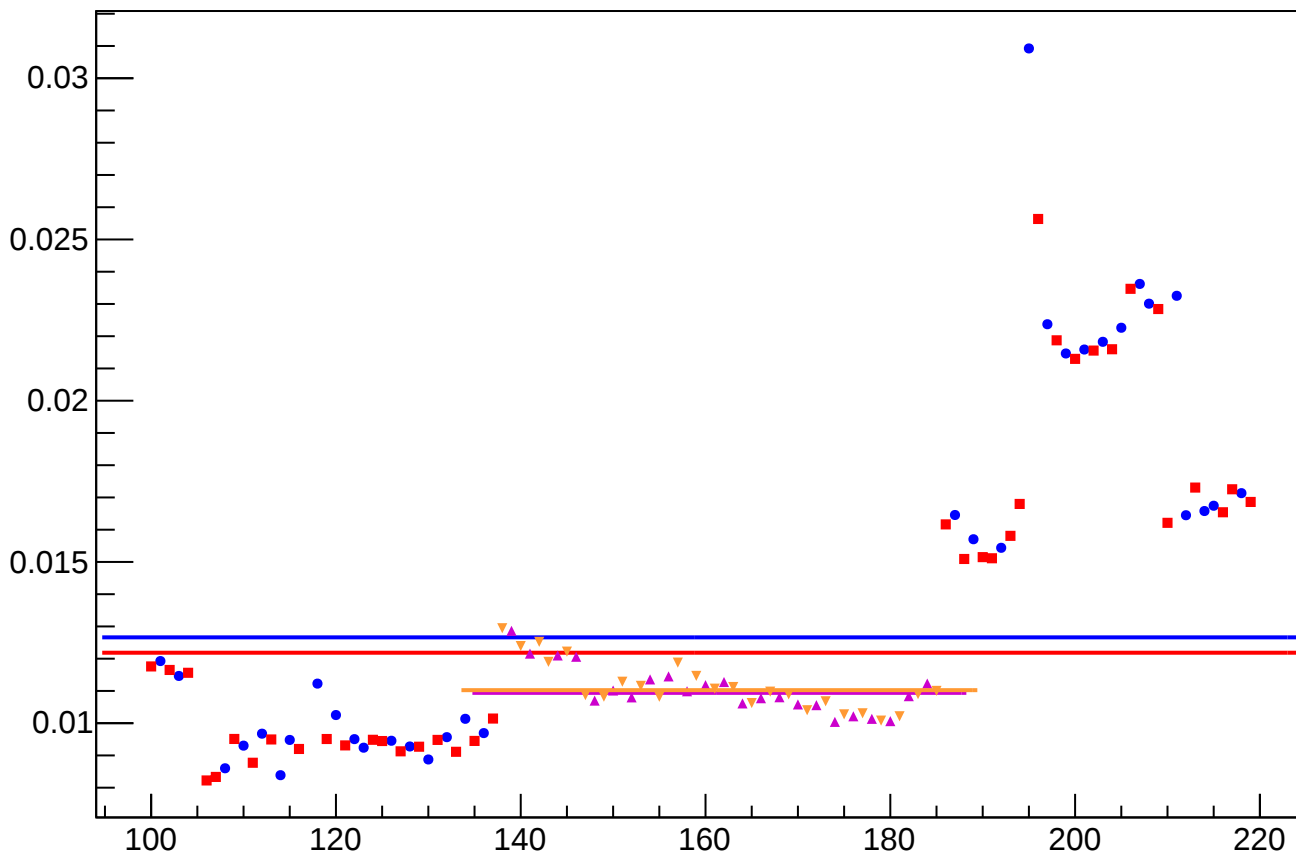
Left In: -0.093+/-0.000

$\chi^2/\text{NDF}$ : 11051944893.7/22

All: 0.084+/-0.000

$\chi^2/\text{NDF}$ : 162377973431.4

# yield\_bpm0l08X\_rms vs Slug, Sign Corrected



Right In: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 4576142.8/32

Left Out: 0.011+/-0.000  $\chi^2/\text{NDF}$ :141501.7/24

Right Out: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 4404792.0/36

Left In: 0.011+/-0.000  $\chi^2/\text{NDF}$ :128914.2/22

Left: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 271400.1/47

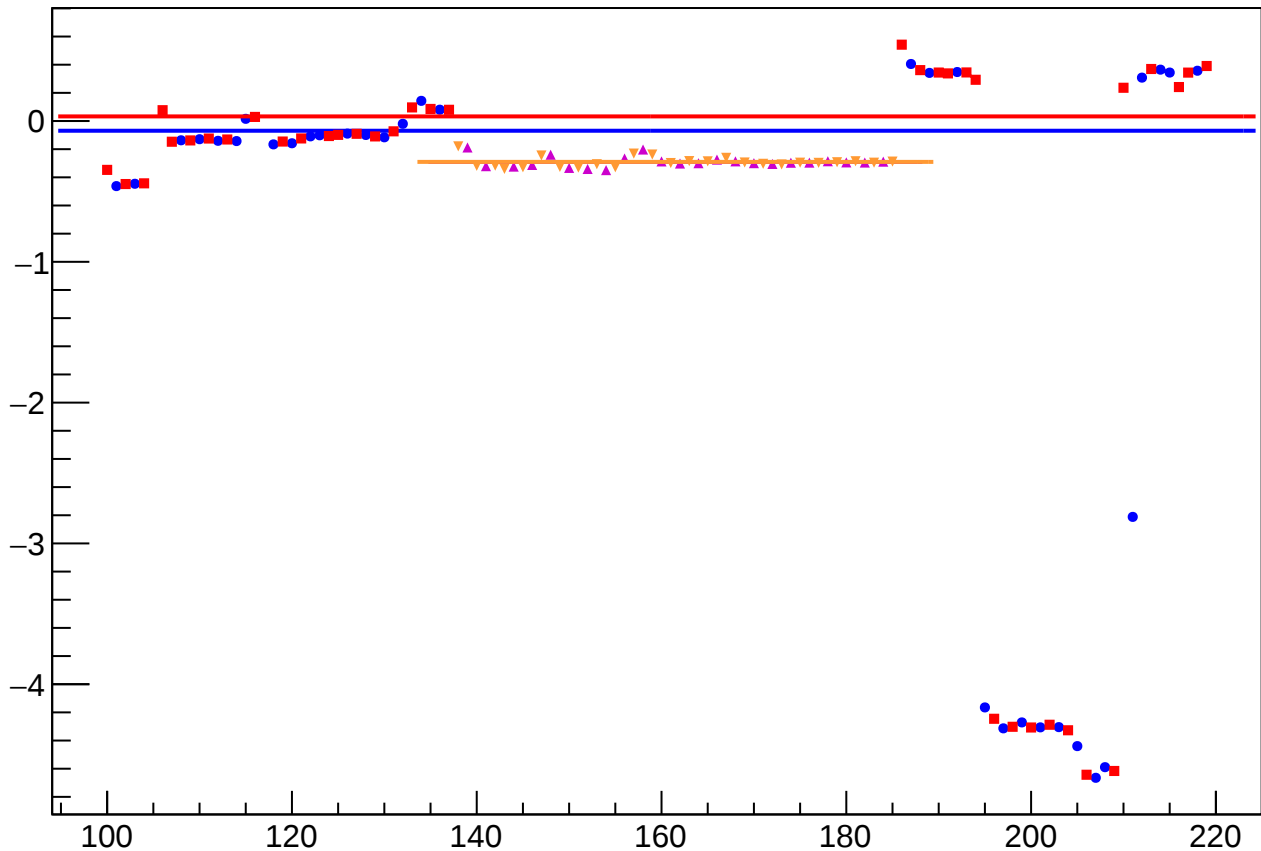
Right: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 9004637.2/69

In: 0.012+/-0.000  $\chi^2/\text{NDF}$ :5042674.8/55

Out: 0.012+/-0.000  $\chi^2/\text{NDF}$ :4717668.1/61

All: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 9763555.6/117

# yield\_bpm0l08Y\_mean vs Slug, Sign Corrected



Right In: -0.069+/-0.000

$\chi^2/\text{NDF}$ : 396893610802.1/32

Left: -0.291+/-0.000

$\chi^2/\text{NDF}$ : 6003615293.4/47

Left Out: -0.290+/-0.000

$\chi^2/\text{NDF}$ : 2877519093.0/24

Right: -0.013+/-0.000

$\chi^2/\text{NDF}$ : 757155266330.1/69

Right Out: 0.033+/-0.000

$\chi^2/\text{NDF}$ : 356864128232.7/36

In: -0.244+/-0.000

$\chi^2/\text{NDF}$ : 423188193843.8/55

Out: -0.214+/-0.000

$\chi^2/\text{NDF}$ : 417724477329.1/61

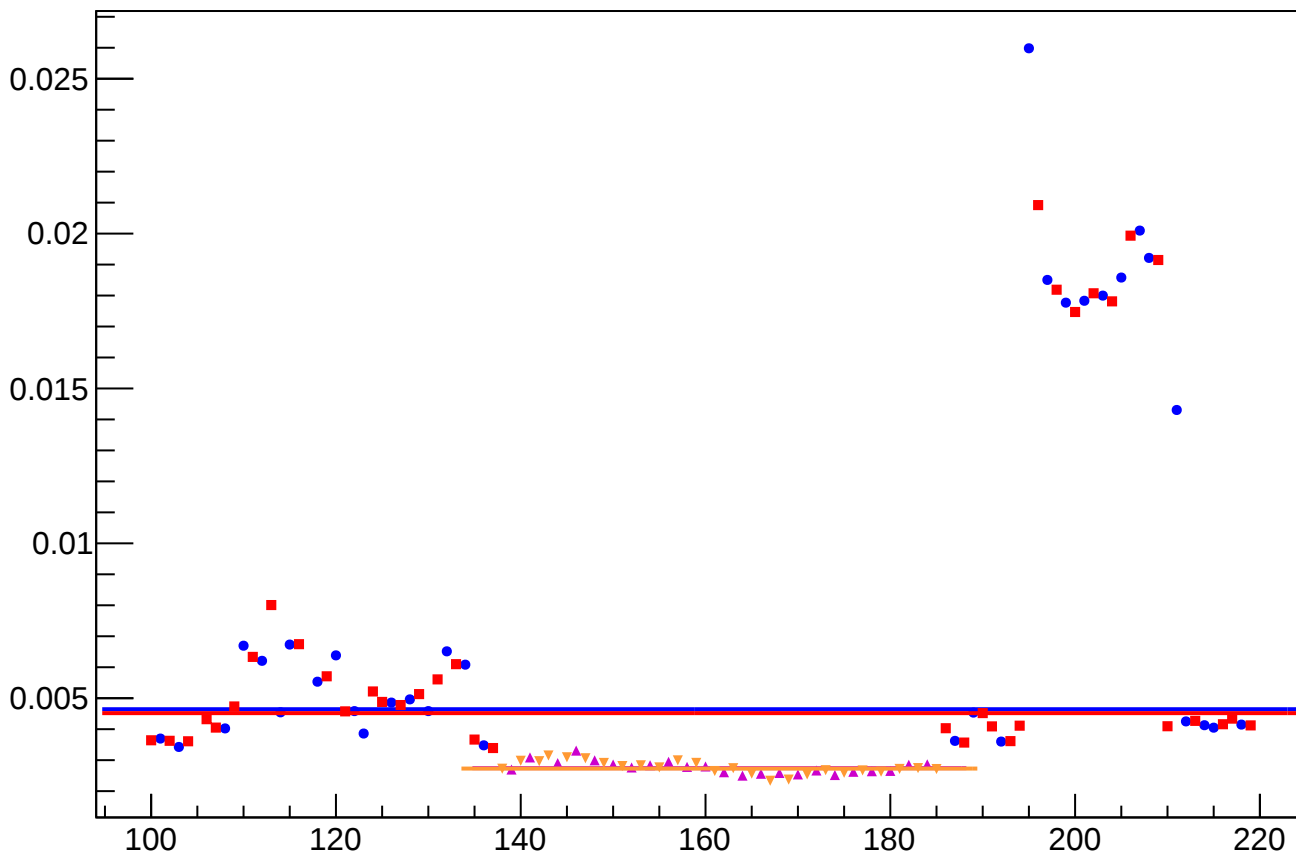
Left In: -0.291+/-0.000

$\chi^2/\text{NDF}$ : 3125402243.3/22

All: -0.228+/-0.000

$\chi^2/\text{NDF}$ : 842179283755.8

# yield\_bpm0l08Y\_rms vs Slug, Sign Corrected



Right In: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 8606418.6/32

Left Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ :206527.1/24

Right Out: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 6993907.2/36

Left In: 0.003+/-0.000  $\chi^2/\text{NDF}$ :147778.8/22

Left: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 354733.7/47

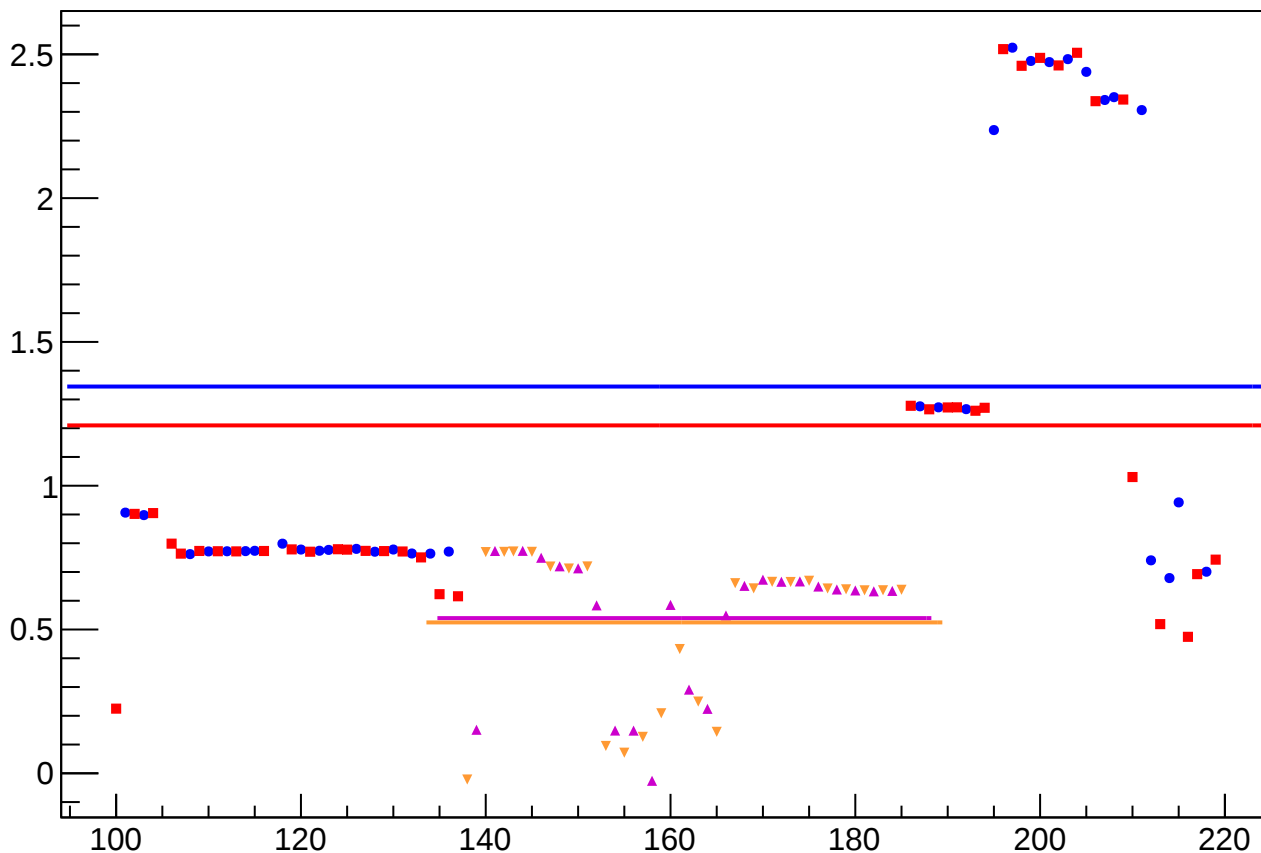
Right: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 15610860.7/69

In: 0.003+/-0.000  $\chi^2/\text{NDF}$ :12157208.0/55

Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ :10759936.7/61

All: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 22917147.8/117

# yield\_bpm0l09X\_mean vs Slug, Sign Corrected



Right In: 1.345+/-0.000

$\chi^2/\text{NDF}$ : 60520474862.6/32

Left: 0.532+/-0.000

$\chi^2/\text{NDF}$ : 17500739852.2/47

Left Out: 0.525+/-0.000

$\chi^2/\text{NDF}$ : 9623503169.9/24

Right: 1.274+/-0.000

$\chi^2/\text{NDF}$ : 119089815587.7/69

Right Out: 1.210+/-0.000

$\chi^2/\text{NDF}$ : 57548000355.3/36

In: 0.878+/-0.000

$\chi^2/\text{NDF}$ : 108197061570.9/55

Out: 0.824+/-0.000

$\chi^2/\text{NDF}$ : 98447308325.4/61

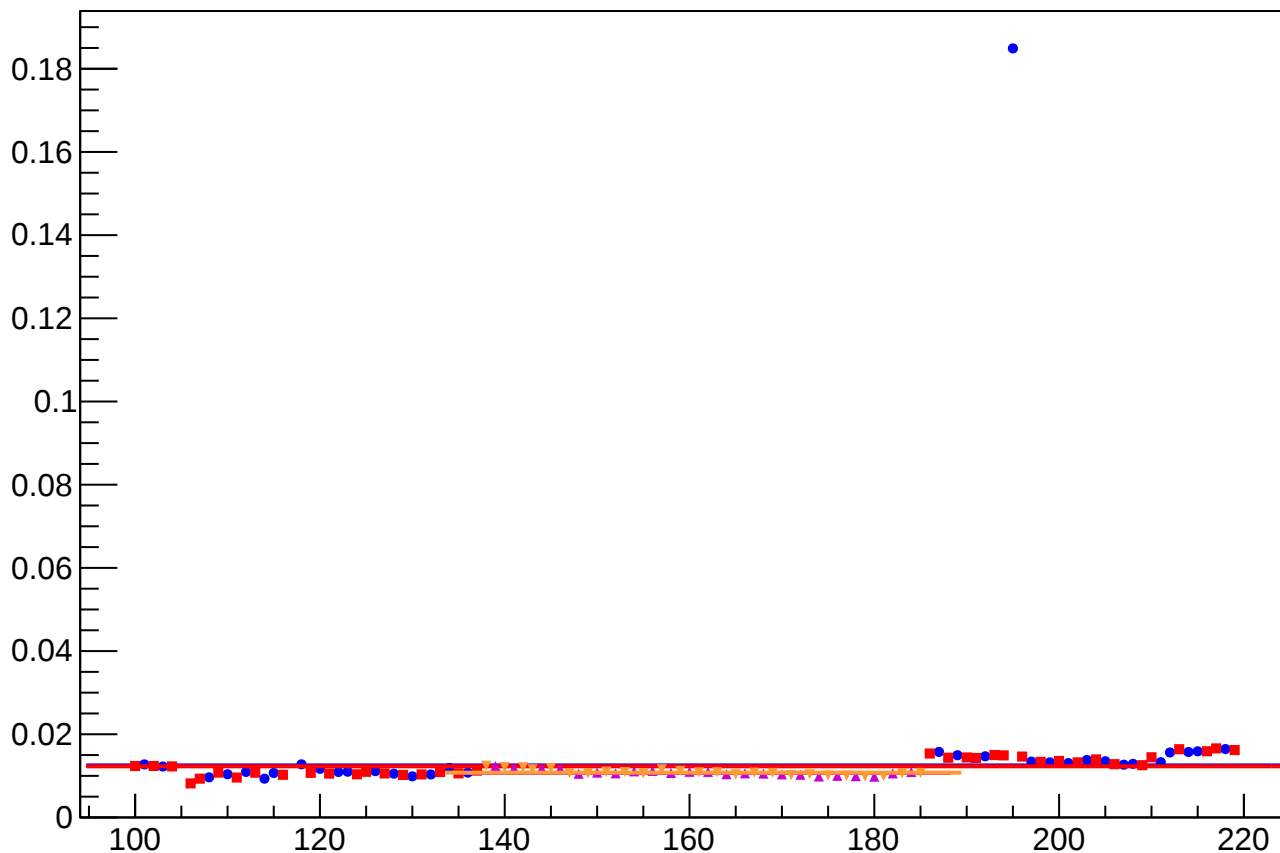
Left In: 0.540+/-0.000

$\chi^2/\text{NDF}$ : 7860539135.5/22

All: 0.850+/-0.000

$\chi^2/\text{NDF}$ : 207030399760.2

# yield\_bpm0l09X\_rms vs Slug, Sign Corrected



Right In: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 2207147.4/32

Left Out: 0.011+/-0.000  $\chi^2/\text{NDF}$ :131630.9/24

Right Out: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 1145263.0/36

Left In: 0.011+/-0.000  $\chi^2/\text{NDF}$ :119273.2/22

Left: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 251802.6/47

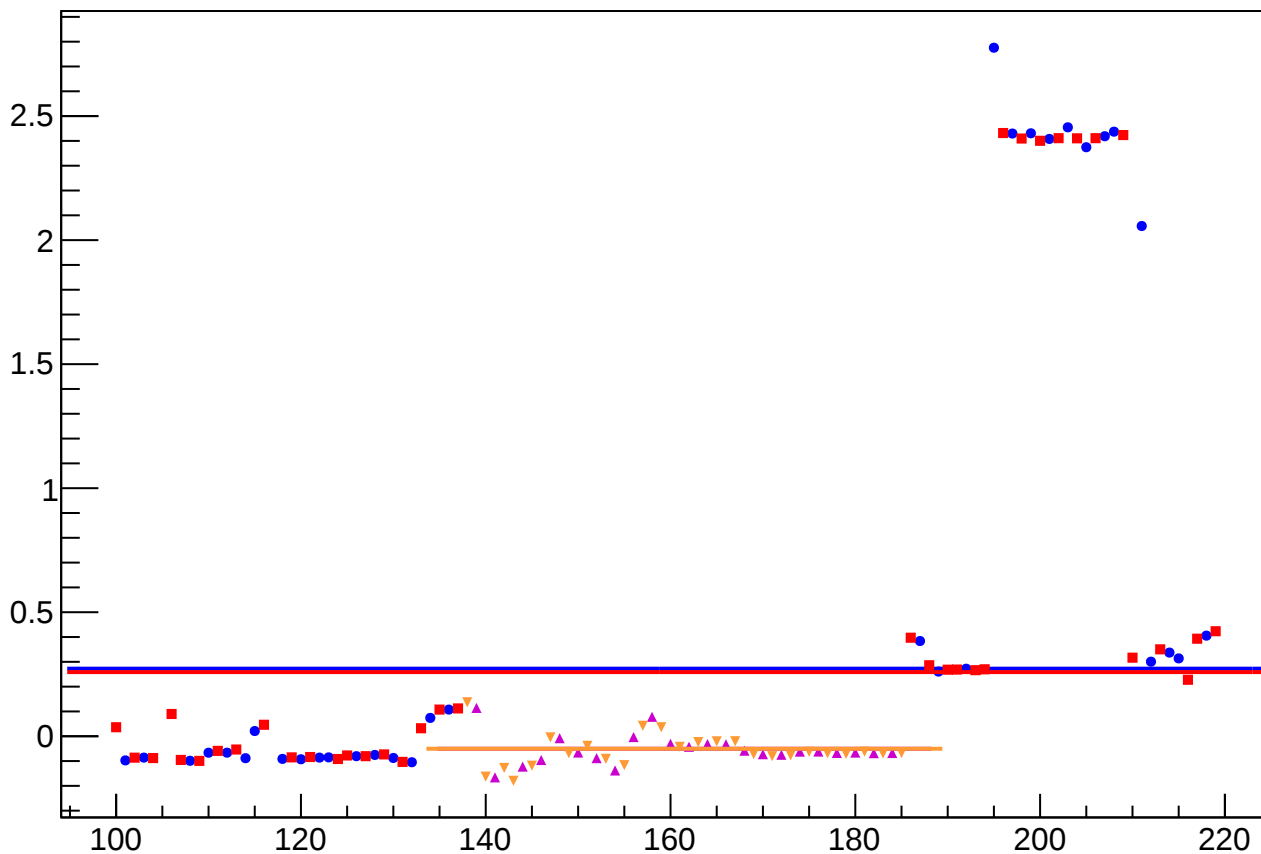
Right: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 3357845.2/69

In: 0.011+/-0.000  $\chi^2/\text{NDF}$ :2732013.4/55

Out: 0.011+/-0.000  $\chi^2/\text{NDF}$ :1584534.2/61

All: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 4316686.6/117

# yield\_bpm0l09Y\_mean vs Slug, Sign Corrected



Right In: 0.272 $\pm$ 0.000  $\chi^2$ /NDF: 196896371474.2/32

Left Out: -0.050 $\pm$ 0.000  $\chi^2$ /NDF: 7271496478.6/24

Right Out: 0.259 $\pm$ 0.000  $\chi^2$ /NDF: 162517921756.7/36

Left In: -0.051 $\pm$ 0.000  $\chi^2$ /NDF: 6128769990.8/22

Left: -0.050 $\pm$ 0.000  $\chi^2$ /NDF: 13400329490.2/47

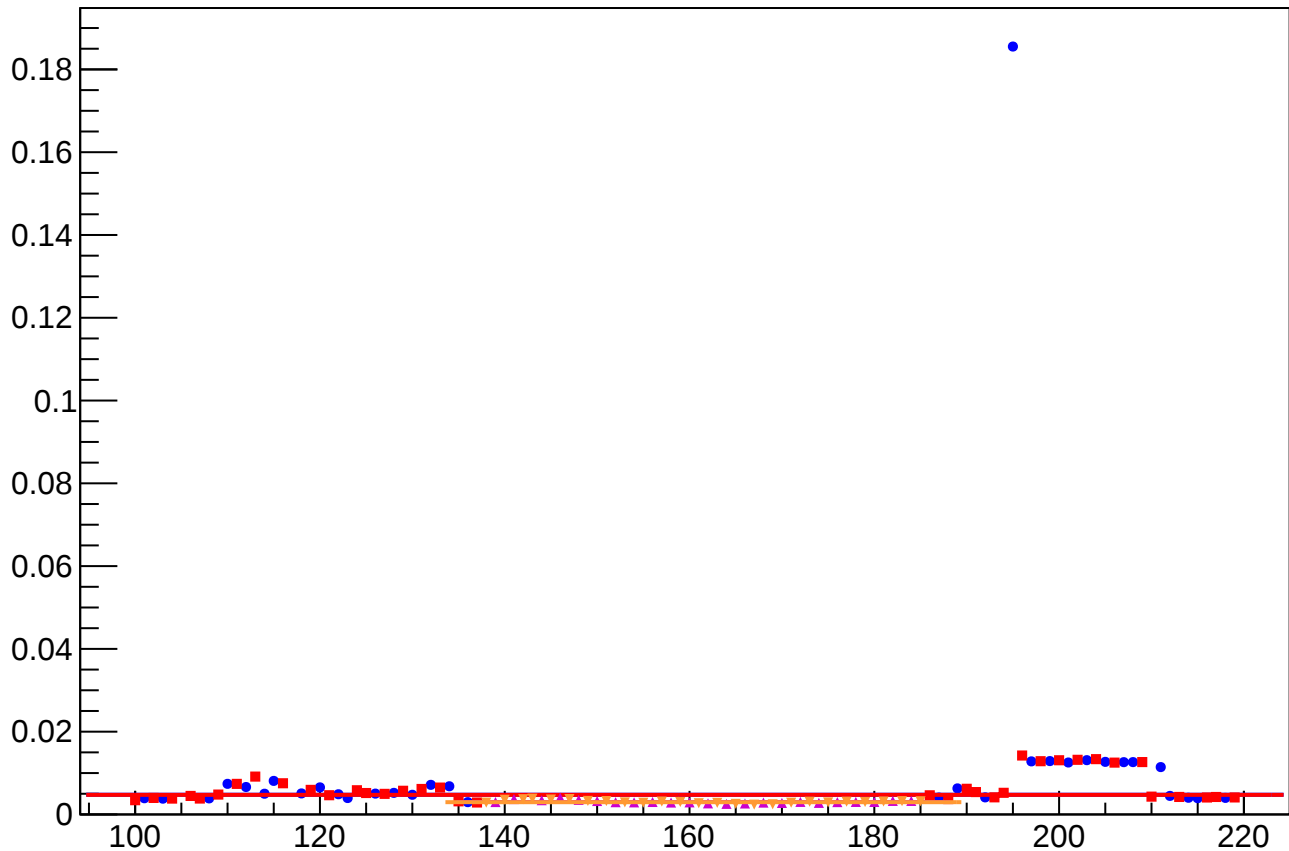
Right: 0.265 $\pm$ 0.000  $\chi^2$ /NDF: 359472932356.7/69

In: 0.029 $\pm$ 0.000  $\chi^2$ /NDF: 248766432951.0/55

Out: 0.028 $\pm$ 0.000  $\chi^2$ /NDF: 217032477356.1/61

All: 0.029 $\pm$ 0.000  $\chi^2$ /NDF: 465799211163.1

# yield\_bpm0l09Y\_rms vs Slug, Sign Corrected



Right In: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 7511553.8/32

Left Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 499039.1/24

Right Out: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 5261990.6/36

Left In: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 329068.1/22

Left: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 831077.6/47

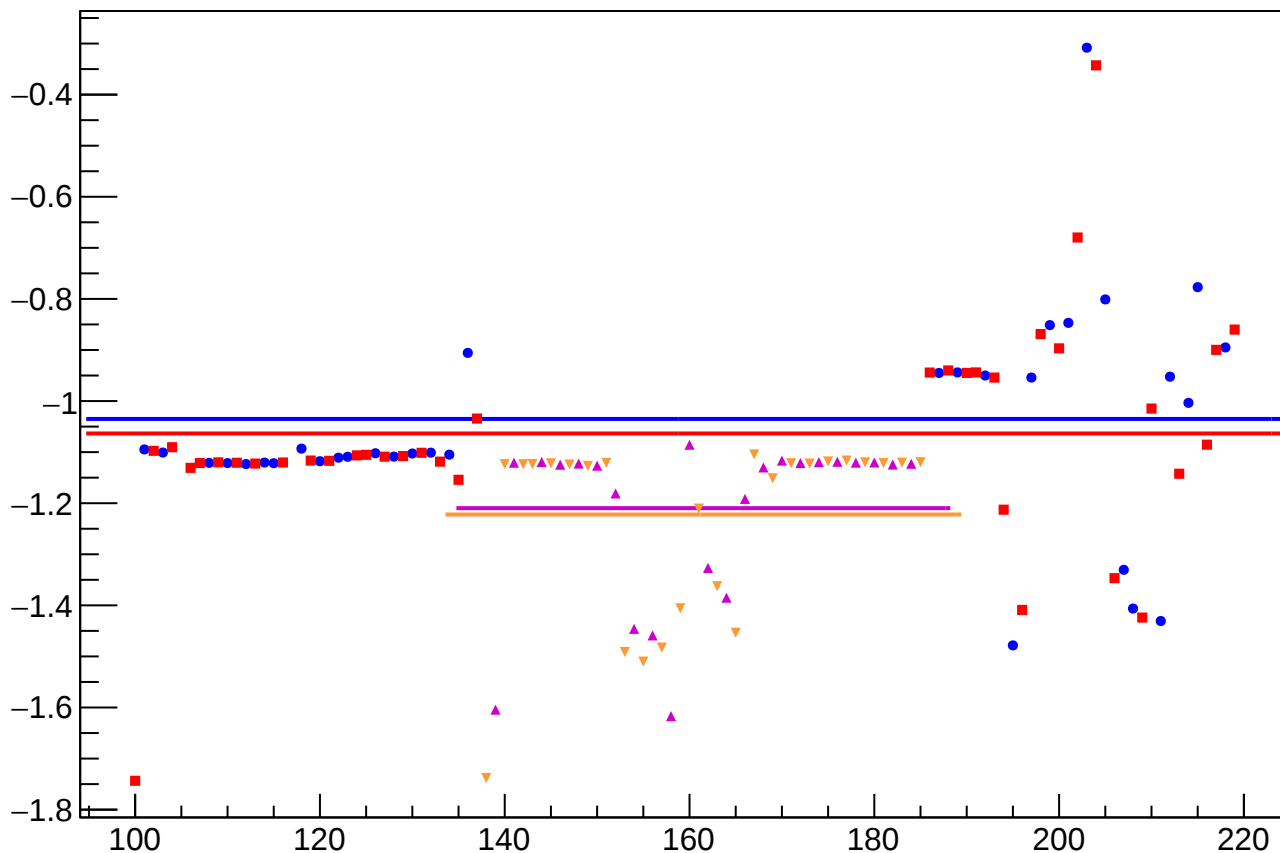
Right: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 12774095.6/69

In: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 10552643.7/55

Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 8857441.3/61

All: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 19411289.2/117

# yield\_bpm0l10X\_mean vs Slug, Sign Corrected



Right In:  $-1.035 \pm 0.000$   $\chi^2/\text{NDF}: 5944587734.1/32$

Left Out:  $-1.222 \pm 0.000$   $\chi^2/\text{NDF}: 5279548861.3/24$

Right Out:  $-1.063 \pm 0.000$   $\chi^2/\text{NDF}: 4915432608.4/36$

Left In:  $-1.210 \pm 0.000$   $\chi^2/\text{NDF}: 4502367902.8/22$

Left:  $-1.216 \pm 0.000$   $\chi^2/\text{NDF}: 9796254294.5/47$

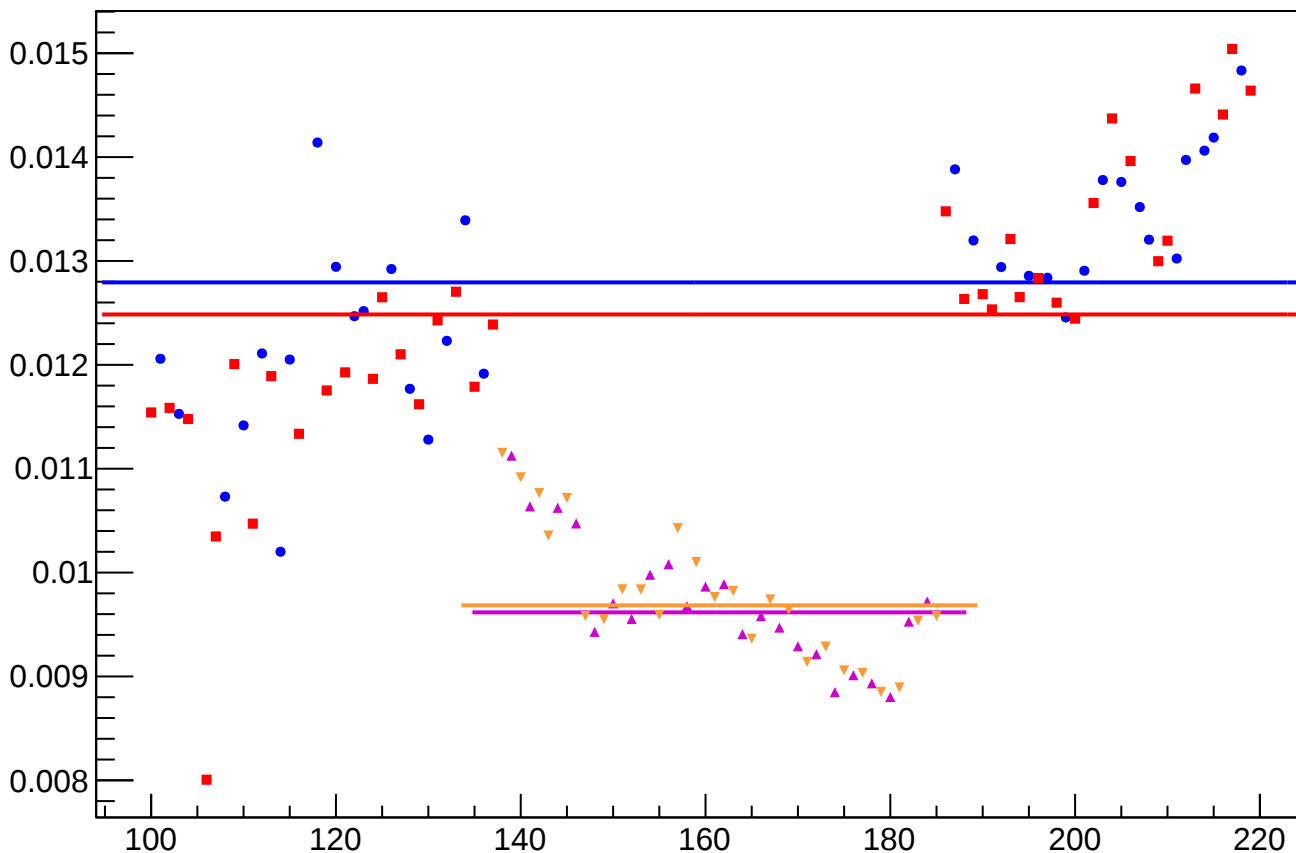
Right:  $-1.050 \pm 0.000$   $\chi^2/\text{NDF}: 10905897816.2/69$

In:  $-1.145 \pm 0.000$   $\chi^2/\text{NDF}: 12503093141.5/55$

Out:  $-1.161 \pm 0.000$   $\chi^2/\text{NDF}: 12045315431.5/61$

All:  $-1.153 \pm 0.000$   $\chi^2/\text{NDF}: 24585754395.6/100$

# yield\_bpm0l10X\_rms vs Slug, Sign Corrected



Right In: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 208108.2/32

Left Out: 0.010+/-0.000  $\chi^2/\text{NDF}$ :134863.6/24

Right Out: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 478546.3/36

Left In: 0.010+/-0.000  $\chi^2/\text{NDF}$ :119823.1/22

Left: 0.010+/-0.000  $\chi^2/\text{NDF}$ : 255532.7/47

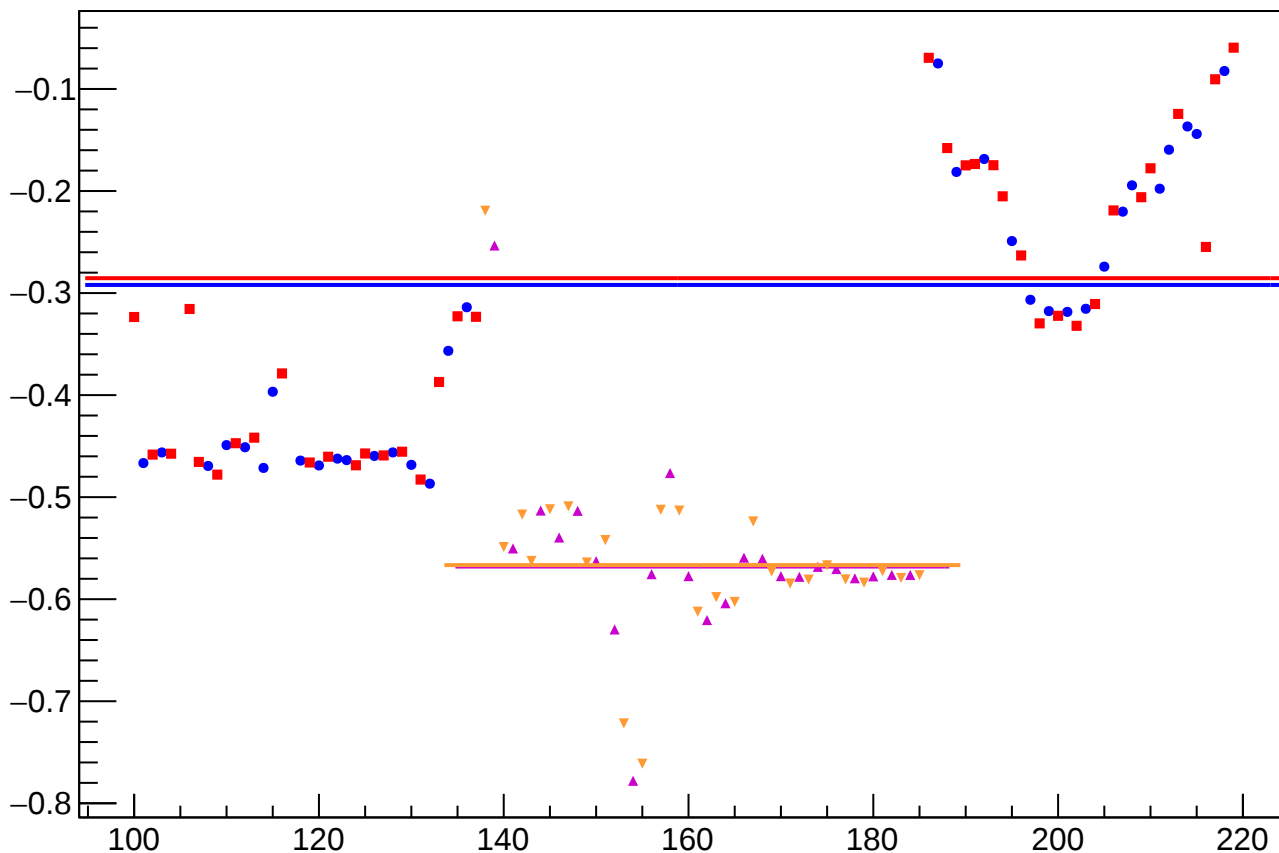
Right: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 697450.8/69

In: 0.011+/-0.000  $\chi^2/\text{NDF}$ :1687989.0/55

Out: 0.011+/-0.000  $\chi^2/\text{NDF}$ :1766293.5/61

All: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 3454496.2/117

# yield\_bpm0l10Y\_mean vs Slug, Sign Corrected



Right In: -0.292+/-0.000

$\chi^2/\text{NDF}$ : 17023551396.9/32

Left: -0.567+/-0.000

$\chi^2/\text{NDF}$ : 23829000396.4/47

Left Out: -0.567+/-0.000

$\chi^2/\text{NDF}$ : 13368458519.3/24

Right: -0.289+/-0.000

$\chi^2/\text{NDF}$ : 36291832144.9/69

Right Out: -0.285+/-0.000

$\chi^2/\text{NDF}$ : 19240969677.3/36

In: -0.442+/-0.000

$\chi^2/\text{NDF}$ : 78993332718.7/55

Out: -0.444+/-0.000

$\chi^2/\text{NDF}$ : 87950645423.9/61

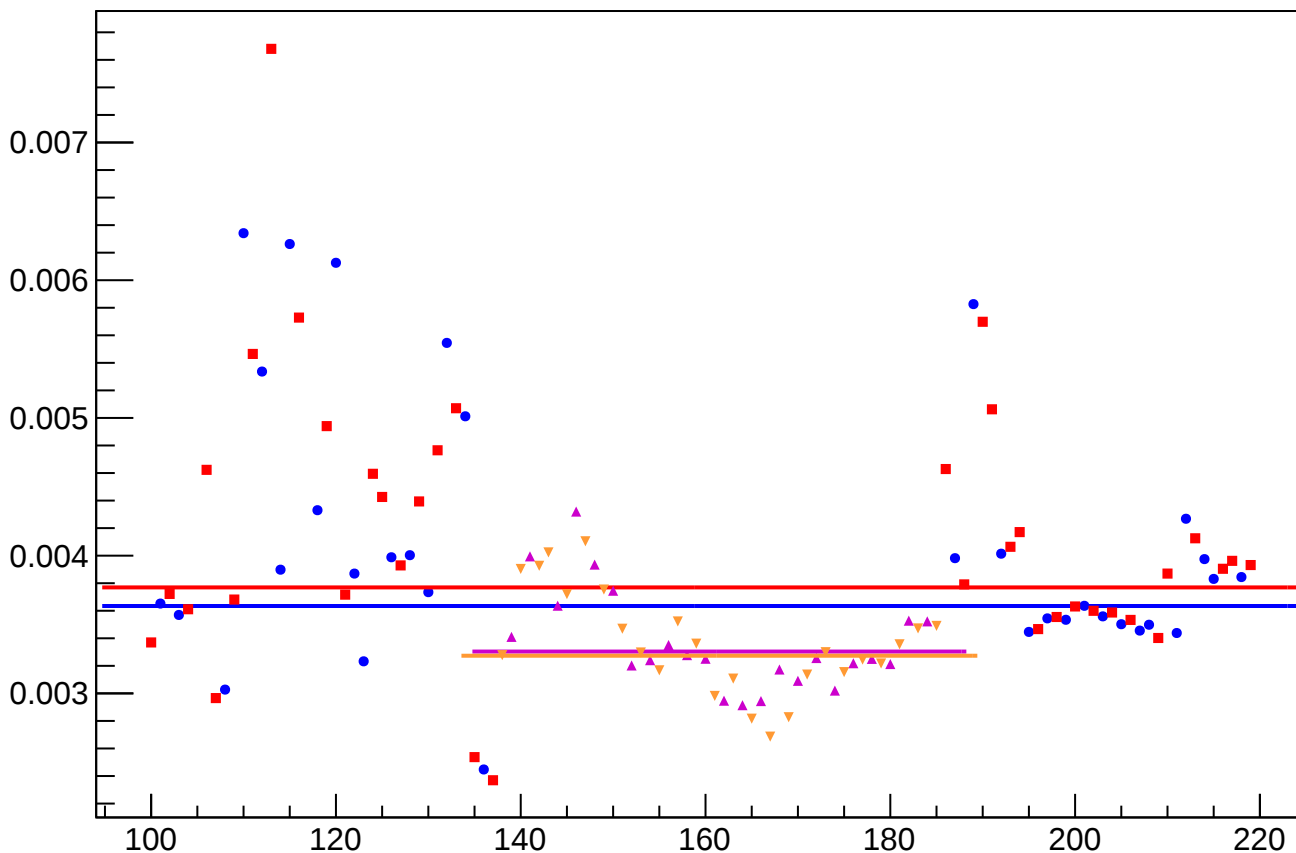
Left In: -0.568+/-0.000

$\chi^2/\text{NDF}$ : 10458990019.9/22

All: -0.443+/-0.000

$\chi^2/\text{NDF}$ : 166949194350.0

# yield\_bpm0l10Y\_rms vs Slug, Sign Corrected



Right In: 0.004+/-0.000  $\chi^2/\text{NDF}$ : 1057215.9/32

Left Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ :394865.4/24

Right Out: 0.004+/-0.000  $\chi^2/\text{NDF}$ : 1107898.0/36

Left In: 0.003+/-0.000  $\chi^2/\text{NDF}$ :286064.1/22

Left: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 682340.4/47

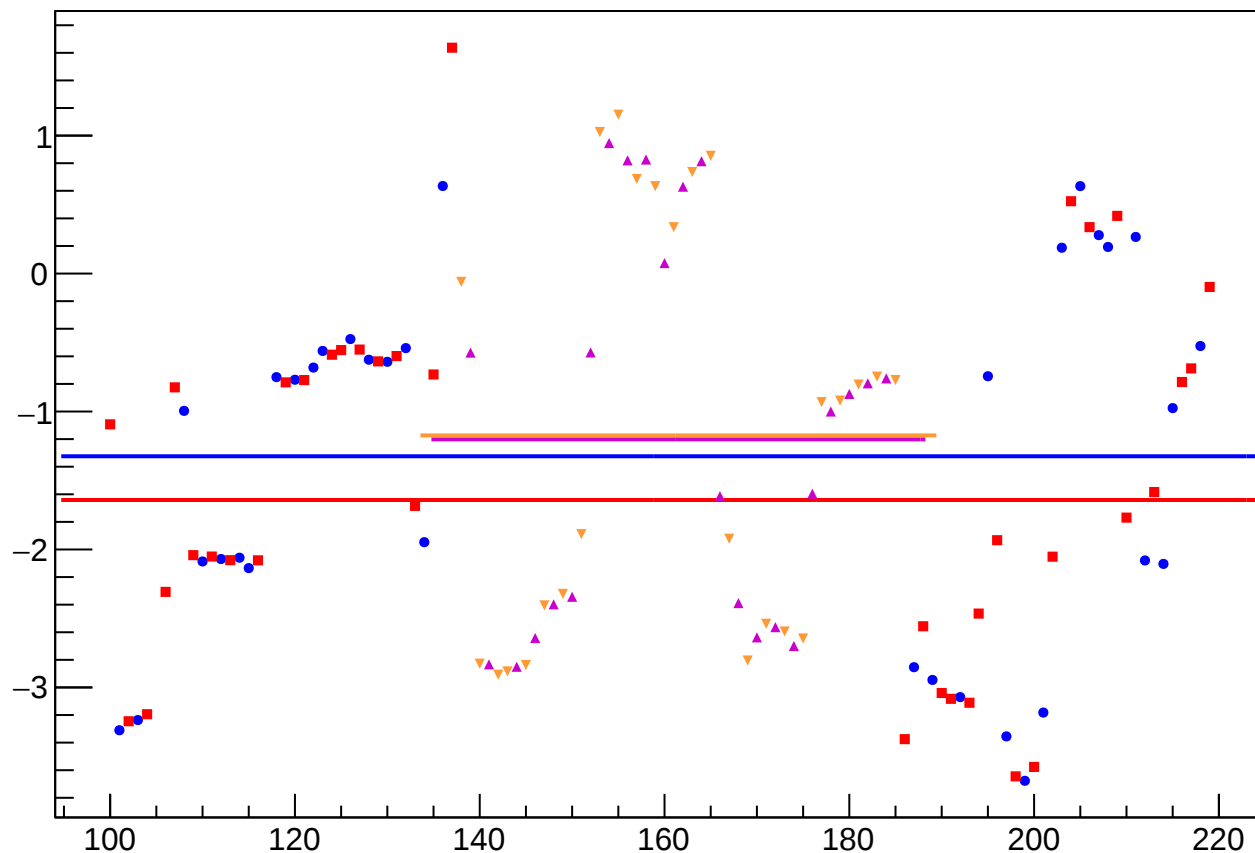
Right: 0.004+/-0.000  $\chi^2/\text{NDF}$ : 2187802.9/69

In: 0.003+/-0.000  $\chi^2/\text{NDF}$ :1491274.0/55

Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ :1847251.7/61

All: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 3341975.8/117

# yield\_bpm0r03X\_mean vs Slug, Sign Corrected



Right In:  $-1.324 \pm 0.000$

$\chi^2/\text{NDF}$ : 6311616573.5/32

Left:  $-1.187 \pm 0.000$

$\chi^2/\text{NDF}$ : 12490828303.3/47

Left Out:  $-1.173 \pm 0.000$

$\chi^2/\text{NDF}$ : 6882684653.2/24

Right:  $-1.487 \pm 0.000$

$\chi^2/\text{NDF}$ : 12146615265.3/69

Right Out:  $-1.641 \pm 0.000$

$\chi^2/\text{NDF}$ : 5673259406.2/36

In:  $-1.263 \pm 0.000$

$\chi^2/\text{NDF}$ : 11942156449.0/55

Out:  $-1.402 \pm 0.000$

$\chi^2/\text{NDF}$ : 12926663269.7/61

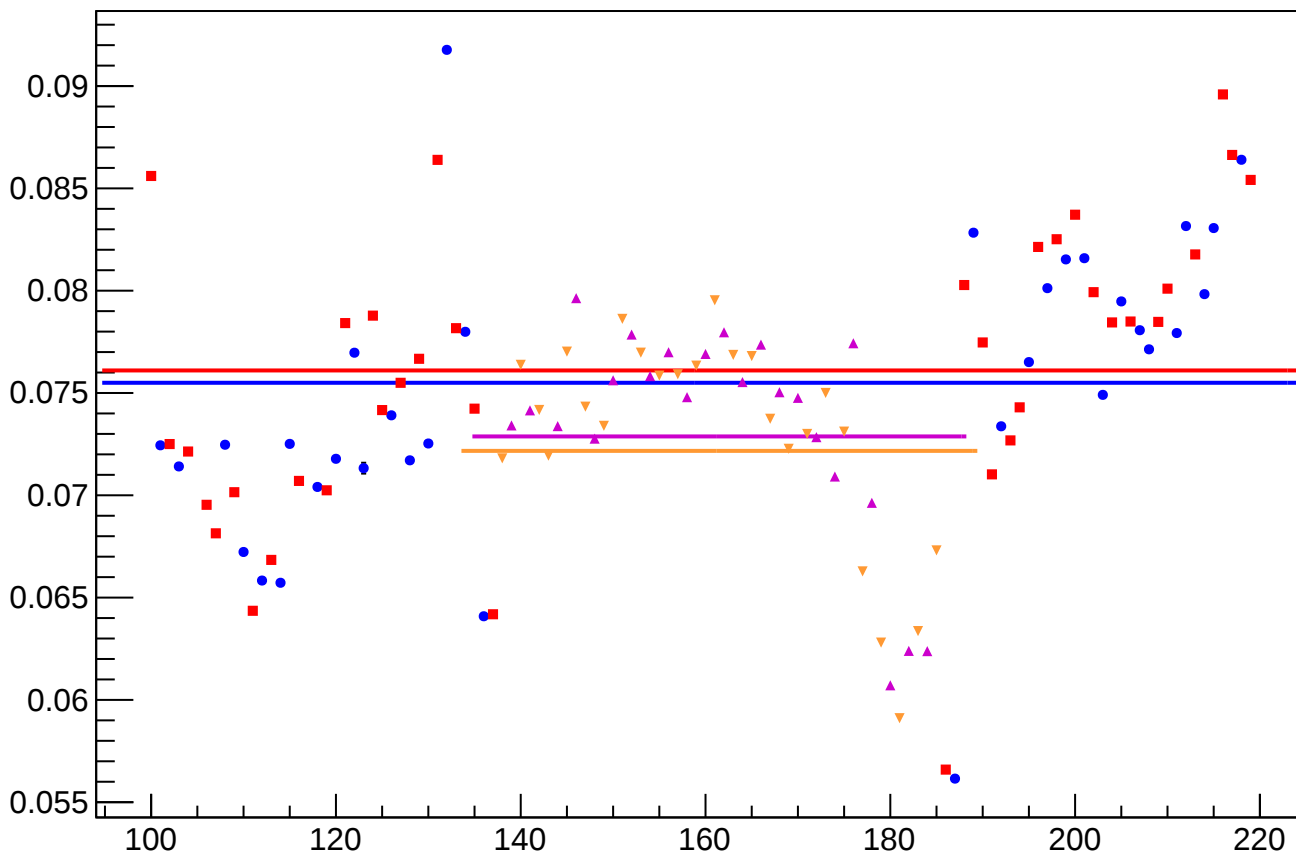
Left In:  $-1.202 \pm 0.000$

$\chi^2/\text{NDF}$ : 5606782515.9/22

All:  $-1.335 \pm 0.000$

$\chi^2/\text{NDF}$ : 24932471125.1/100

# yield\_bpm0r03X\_rms vs Slug, Sign Corrected



Right In: 0.075+/-0.000  $\chi^2/\text{NDF}$ : 258198.2/32

Left Out: 0.072+/-0.000  $\chi^2/\text{NDF}$ :222263.8/24

Right Out: 0.076+/-0.000  $\chi^2/\text{NDF}$ : 330237.6/36

Left In: 0.073+/-0.000  $\chi^2/\text{NDF}$ :183503.0/22

Left: 0.073+/-0.000  $\chi^2/\text{NDF}$ : 407423.5/47

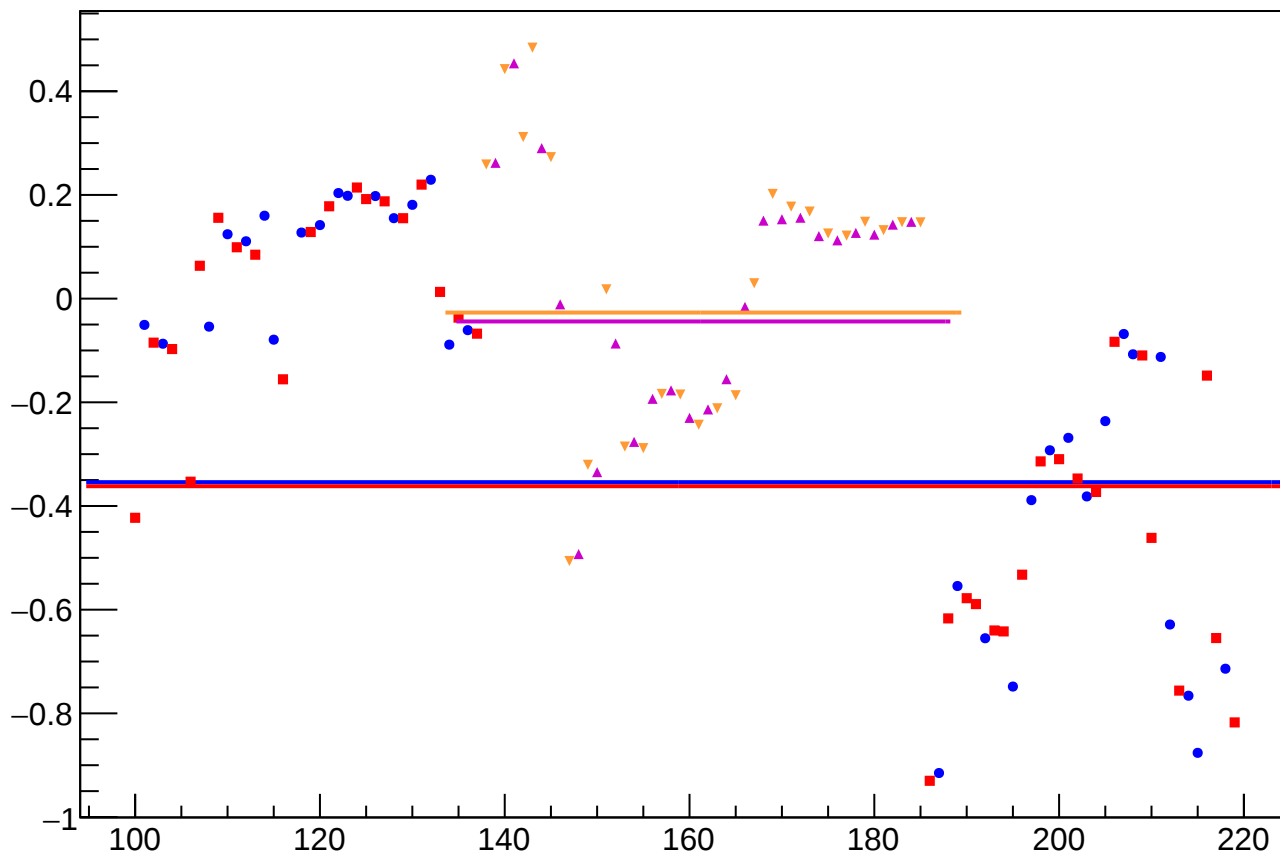
Right: 0.076+/-0.000  $\chi^2/\text{NDF}$ : 589605.4/69

In: 0.074+/-0.000  $\chi^2/\text{NDF}$ :463455.9/55

Out: 0.074+/-0.000  $\chi^2/\text{NDF}$ :604793.8/61

All: 0.074+/-0.000  $\chi^2/\text{NDF}$ : 1068295.6/117

# yield\_bpm0r03Y\_mean vs Slug, Sign Corrected



Right In: -0.354+/-0.000  $\chi^2/\text{NDF}$ : 24937338746.9/32

Left Out: -0.027+/-0.000  $\chi^2/\text{NDF}$ : 20376761328.6/24

Right Out: -0.362+/-0.000  $\chi^2/\text{NDF}$ : 20006823162.2/36

Left In: -0.044+/-0.000  $\chi^2/\text{NDF}$ : 15718556282.1/22

Left: -0.035+/-0.000  $\chi^2/\text{NDF}$ : 36148383394.4/47

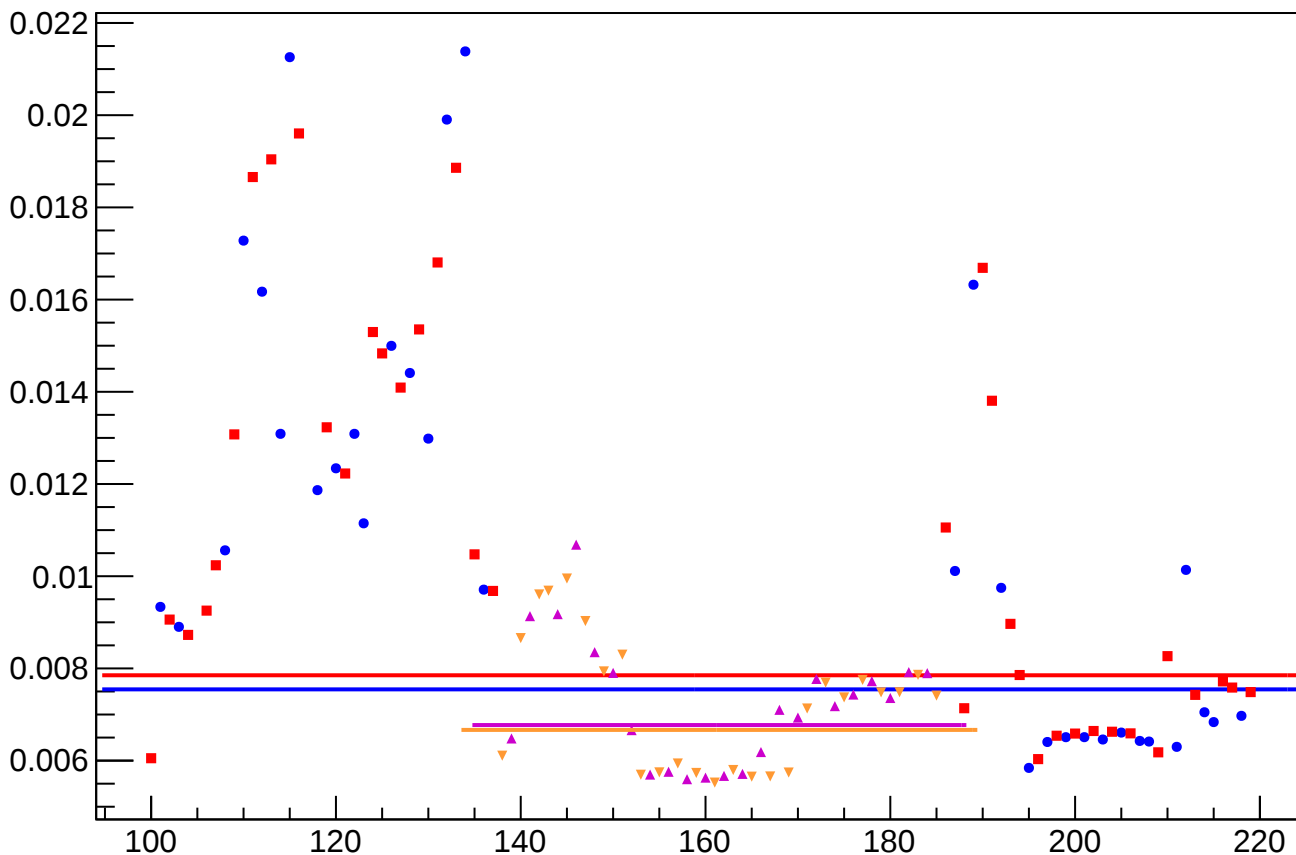
Right: -0.358+/-0.000  $\chi^2/\text{NDF}$ : 44952437605.1/69

In: -0.182+/-0.000  $\chi^2/\text{NDF}$ : 55397545402.2/55

Out: -0.165+/-0.000  $\chi^2/\text{NDF}$ : 57921653984.9/61

All: -0.174+/-0.000  $\chi^2/\text{NDF}$ : 113404522269.1

# yield\_bpm0r03Y\_rms vs Slug, Sign Corrected



Right In: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 2974844.1/32

Left Out: 0.007+/-0.000  $\chi^2/\text{NDF}$ :1143768.6/24

Right Out: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 3086266.1/36

Left In: 0.007+/-0.000  $\chi^2/\text{NDF}$ :934050.3/22

Left: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 2081836.1/47

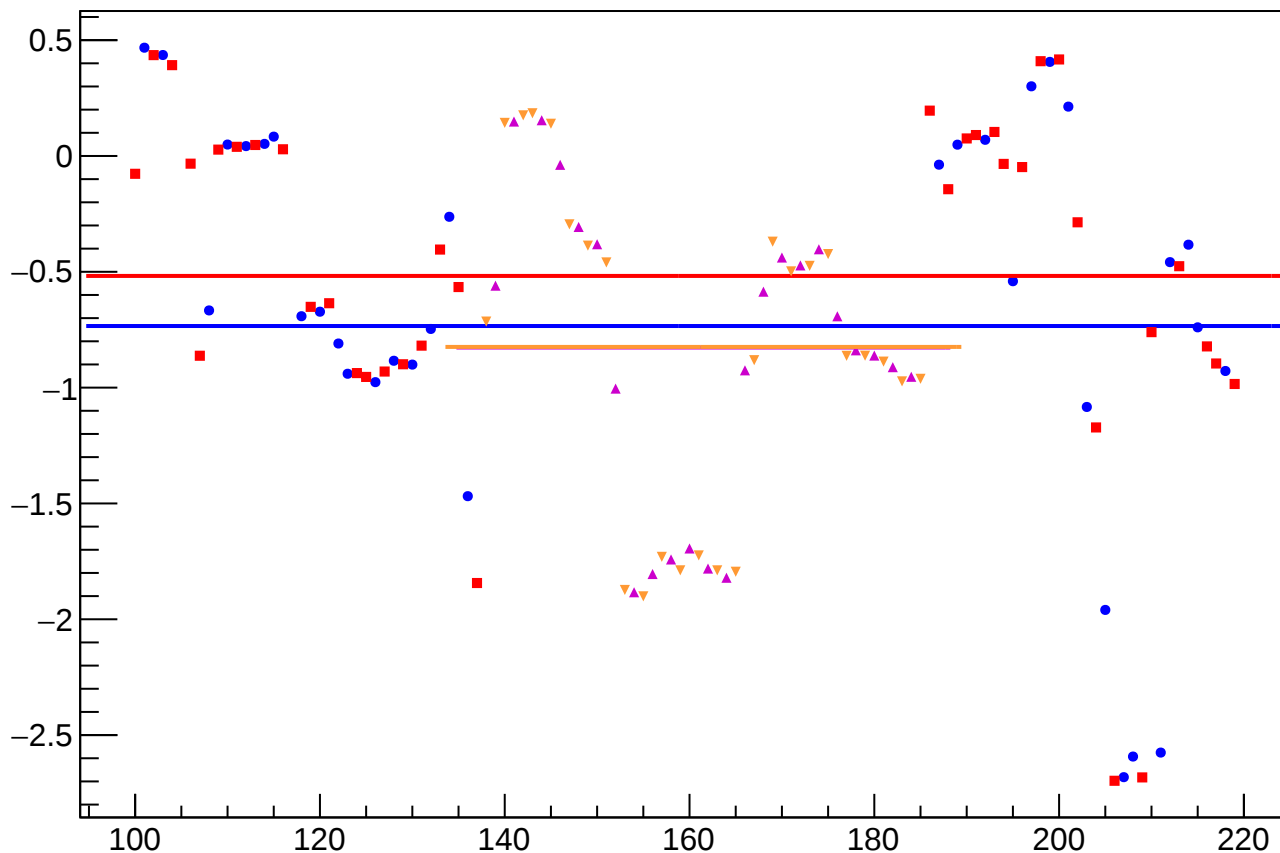
Right: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 6086477.6/69

In: 0.007+/-0.000  $\chi^2/\text{NDF}$ :4092631.9/55

Out: 0.007+/-0.000  $\chi^2/\text{NDF}$ :4669163.9/61

All: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 8762841.2/117

# yield\_bpm0r05X\_mean vs Slug, Sign Corrected



Right In:  $-0.734 \pm 0.000$   $\chi^2/\text{NDF}: 1769838544.4/32$

Left Out:  $-0.824 \pm 0.000$   $\chi^2/\text{NDF}: 1103610806.5/24$

Right Out:  $-0.518 \pm 0.000$   $\chi^2/\text{NDF}: 1510294641.3/36$

Left In:  $-0.827 \pm 0.000$   $\chi^2/\text{NDF}: 921651117.3/22$

Left:  $-0.826 \pm 0.000$   $\chi^2/\text{NDF}: 2025270716.0/47$

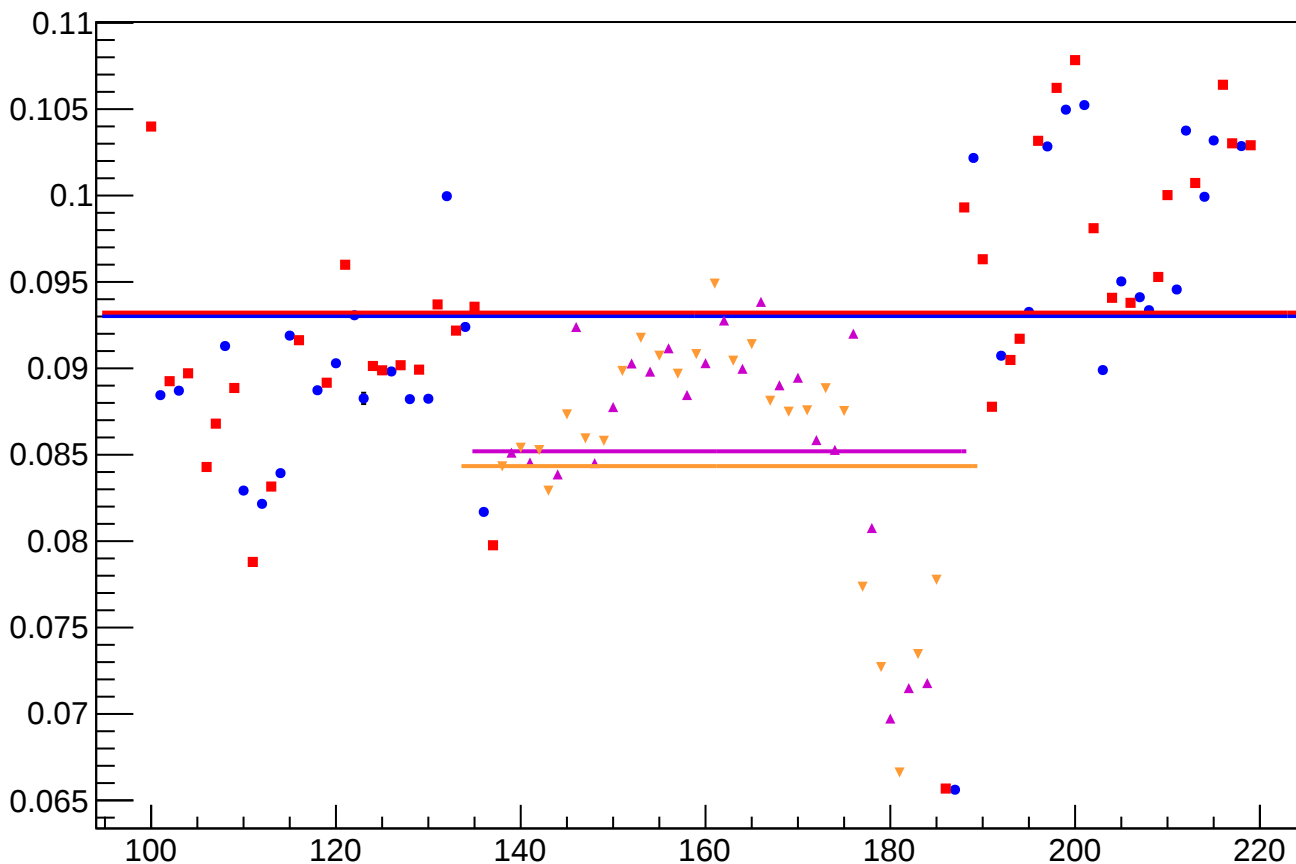
Right:  $-0.622 \pm 0.000$   $\chi^2/\text{NDF}: 3330448125.1/69$

In:  $-0.783 \pm 0.000$   $\chi^2/\text{NDF}: 2701040342.7/55$

Out:  $-0.682 \pm 0.000$   $\chi^2/\text{NDF}: 2725541769.3/61$

All:  $-0.731 \pm 0.000$   $\chi^2/\text{NDF}: 5450398093.2/1$

# yield\_bpm0r05X\_rms vs Slug, Sign Corrected



Right In: 0.093 $\pm$ 0.000  $\chi^2$ /NDF: 252861.7/32

Left Out: 0.084 $\pm$ 0.000  $\chi^2$ /NDF:288312.6/24

Right Out: 0.093 $\pm$ 0.000  $\chi^2$ /NDF: 358092.0/36

Left In: 0.085 $\pm$ 0.000  $\chi^2$ /NDF:238313.9/22

Left: 0.085 $\pm$ 0.000  $\chi^2$ /NDF: 528427.1/47

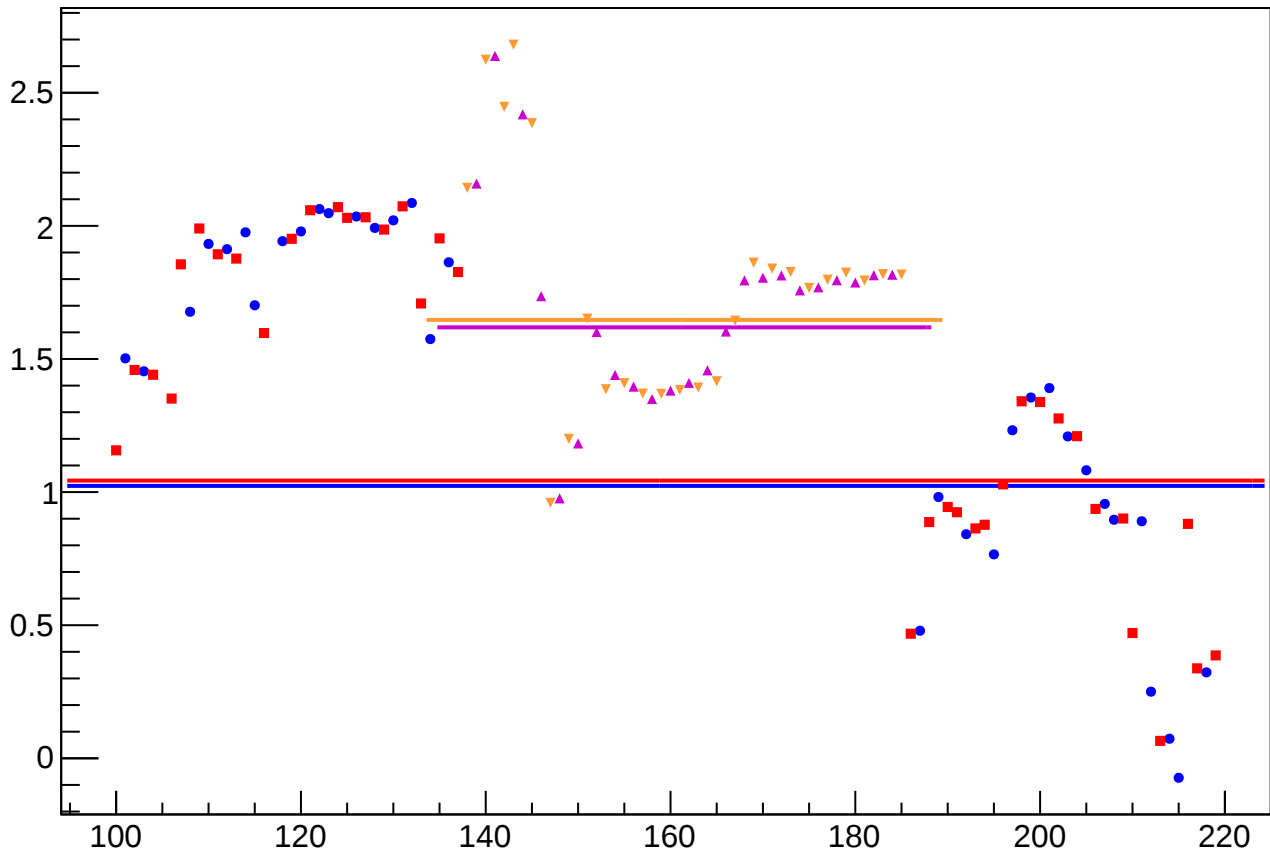
Right: 0.093 $\pm$ 0.000  $\chi^2$ /NDF: 611040.4/69

In: 0.089 $\pm$ 0.000  $\chi^2$ /NDF:626746.6/55

Out: 0.088 $\pm$ 0.000  $\chi^2$ /NDF:834062.1/61

All: 0.089 $\pm$ 0.000  $\chi^2$ /NDF: 1461527.6/117

# yield\_bpm0r05Y\_mean vs Slug, Sign Corrected



Right In: 1.023+/-0.000  $\chi^2/\text{NDF}$ : 40978318543.6/32

Left Out: 1.647+/-0.000  $\chi^2/\text{NDF}$ : 26535241545.7/24

Right Out: 1.043+/-0.000  $\chi^2/\text{NDF}$ : 30991728567.5/36

Left In: 1.619+/-0.000  $\chi^2/\text{NDF}$ : 20618198188.1/22

Left: 1.633+/-0.000  $\chi^2/\text{NDF}$ : 47231460201.8/47

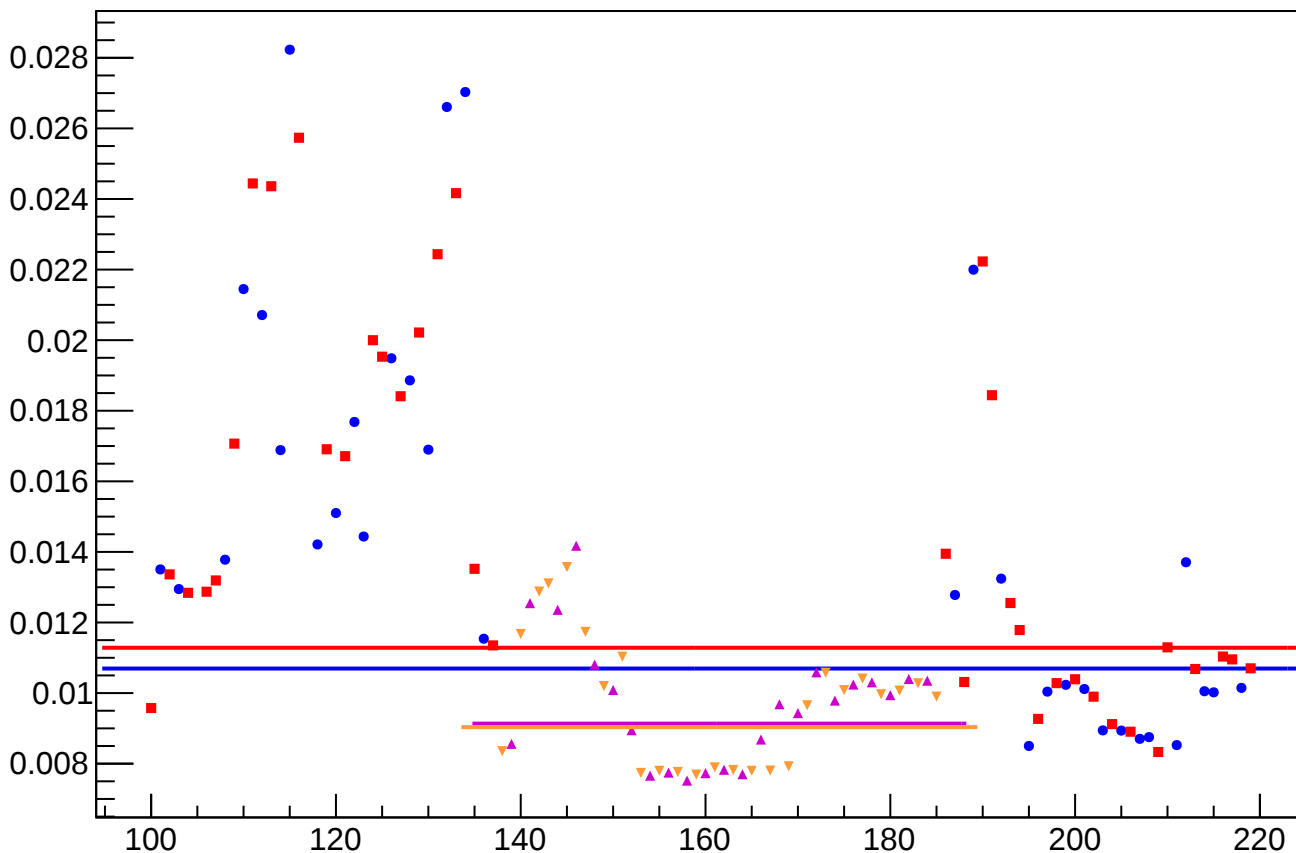
Right: 1.033+/-0.000  $\chi^2/\text{NDF}$ : 71996849674.4/69

In: 1.368+/-0.000  $\chi^2/\text{NDF}$ : 90250565751.4/55

Out: 1.413+/-0.000  $\chi^2/\text{NDF}$ : 86927425036.8/61

All: 1.390+/-0.000  $\chi^2/\text{NDF}$ : 177521571809.1

# yield\_bpm0r05Y\_rms vs Slug, Sign Corrected



Right In: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 2432042.2/32

Left Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ :1042871.8/24

Right Out: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 2537173.1/36

Left In: 0.009+/-0.000  $\chi^2/\text{NDF}$ :878356.2/22

Left: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 1923188.0/47

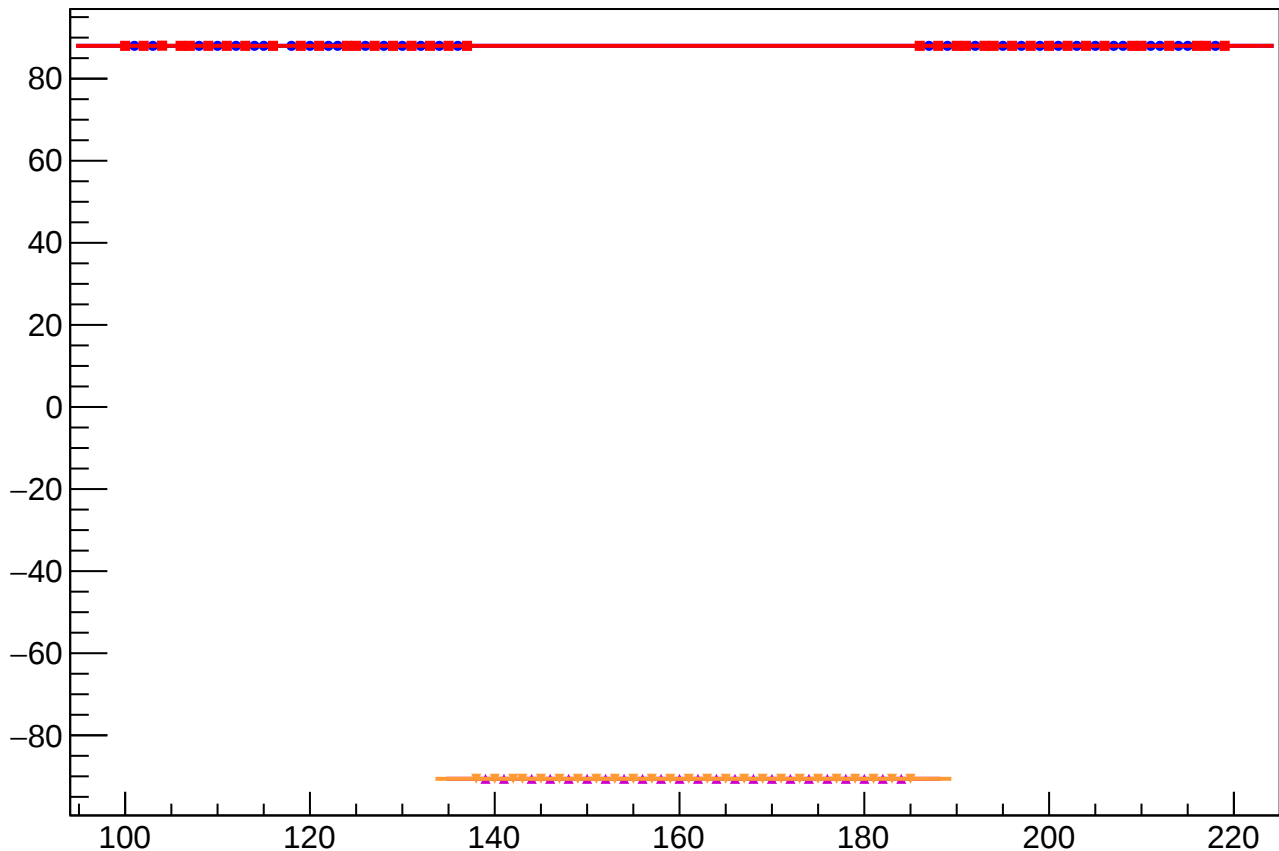
Right: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 5016310.7/69

In: 0.010+/-0.000  $\chi^2/\text{NDF}$ :3704026.3/55

Out: 0.010+/-0.000  $\chi^2/\text{NDF}$ :4396378.8/61

All: 0.010+/-0.000  $\chi^2/\text{NDF}$ : 8104781.4/117

# epics\_VWienAngles\_mean vs Slug, Sign Corrected



Right In: 88.001+/-0.000  $\chi^2/\text{NDF}$ : 6632389.1/32

Left Out: -90.599+/-0.000  $\chi^2/\text{NDF}$ : 5785821.4/24

Right Out: 88.002+/-0.000  $\chi^2/\text{NDF}$ : 81314252579523800915834306560.0/36

Left In: -90.599+/-0.000  $\chi^2/\text{NDF}$ : 7134230.8/22

Left: -90.599+/-0.000  $\chi^2/\text{NDF}$ : 11903242.1/47

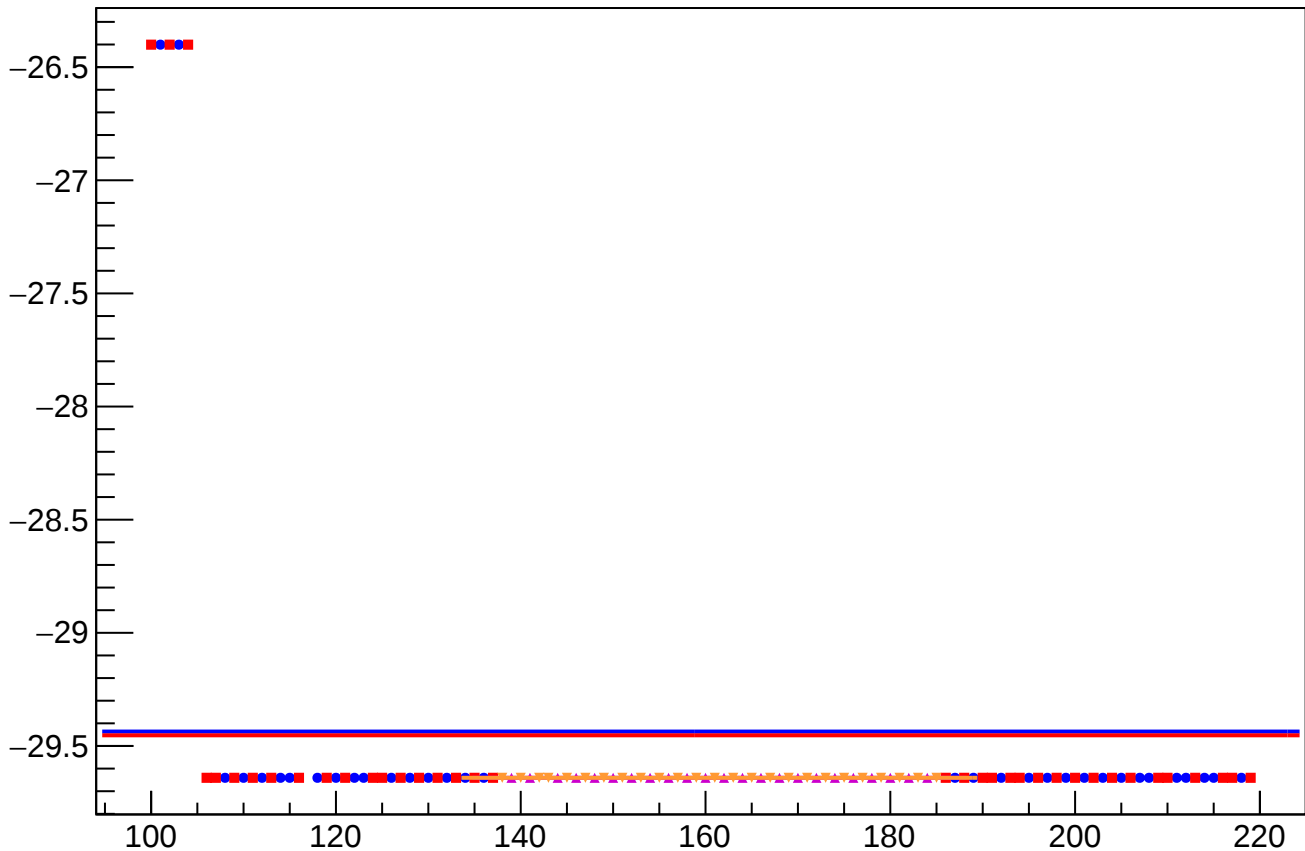
Right: 88.001+/-0.000  $\chi^2/\text{NDF}$ : 8234109989404912

In: 0.527+/-0.000  $\chi^2/\text{NDF}$ : 2923022234943002818

Out: 0.918+/-0.000  $\chi^2/\text{NDF}$ : 311374872951459046

All: 0.729+/-0.000  $\chi^2/\text{NDF}$ : 60367999093075

# epics\_HWienAngles\_mean vs Slug, Sign Corrected



Right In: -29.436+/-0.000

$\chi^2/\text{NDF}$ : 1160593559807579693386674196185088.0/32

Left: -29.641+/-0.000  $\chi^2/\text{NDF}$ : 741150.6/47

Right: -29.445+/-0.000  $\chi^2/\text{NDF}$ : 230802461595659

Left Out: -29.641+/-0.000

$\chi^2/\text{NDF}$ : 530354.3/24

In: -29.536+/-0.000  $\chi^2/\text{NDF}$ : 11988562648486332

Right Out: -29.453+/-0.000

$\chi^2/\text{NDF}$ : 1147164304495487252752307914276864.0/36

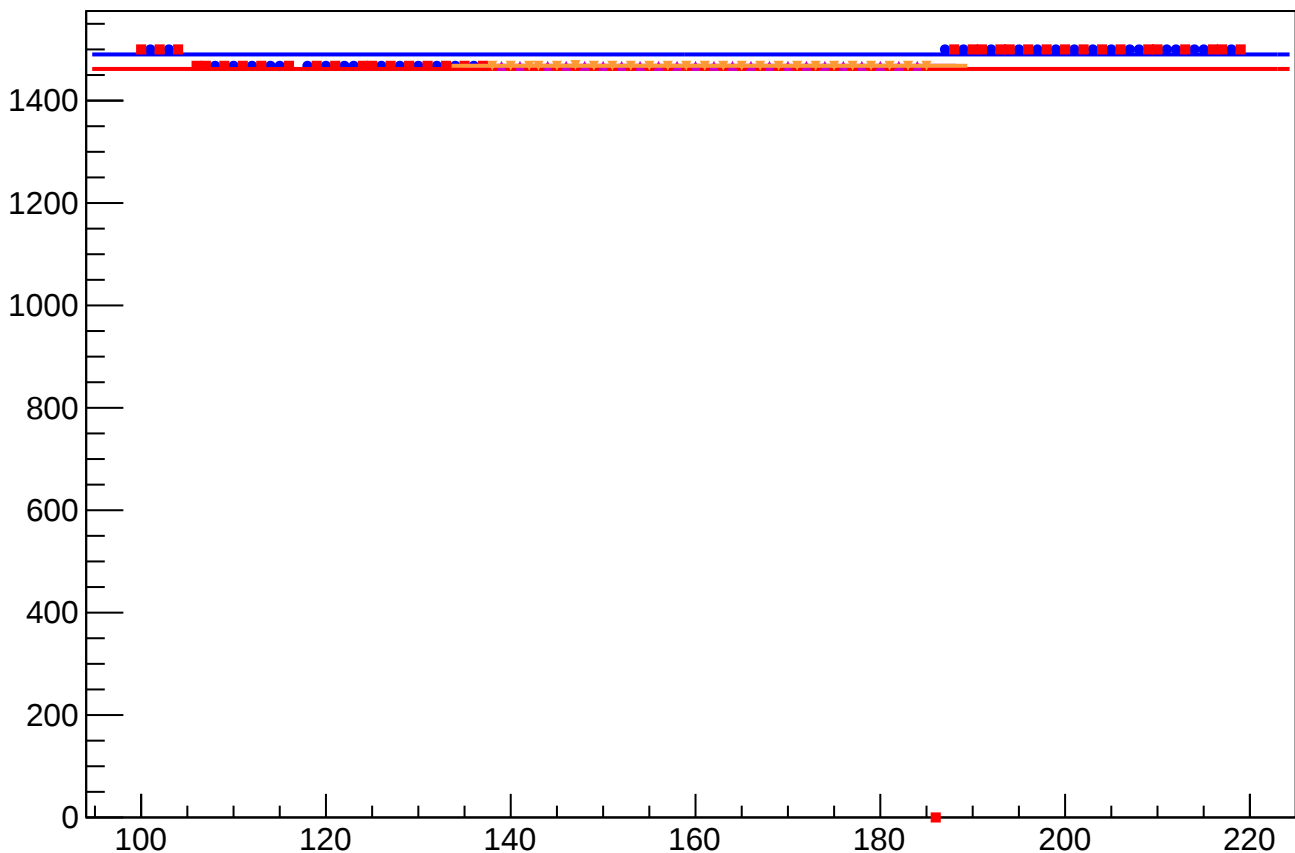
Out: -29.545+/-0.000  $\chi^2/\text{NDF}$ : 1181567081034013

Left In: -29.641+/-0.000

$\chi^2/\text{NDF}$ : 382603.8/22

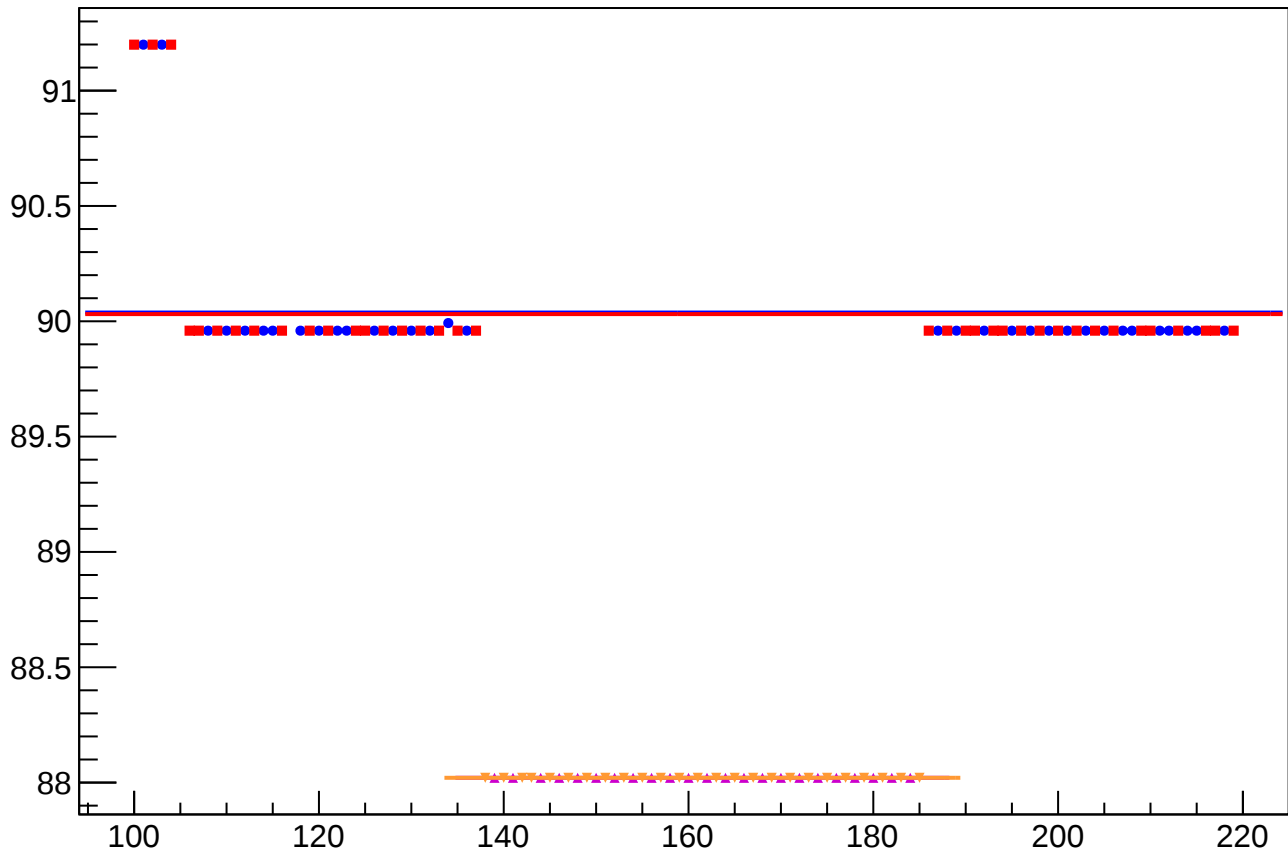
All: -29.541+/-0.000  $\chi^2/\text{NDF}$ : 238054632373

epics\_psub\_pl\_pos\_mean vs Slug, Sign Corrected



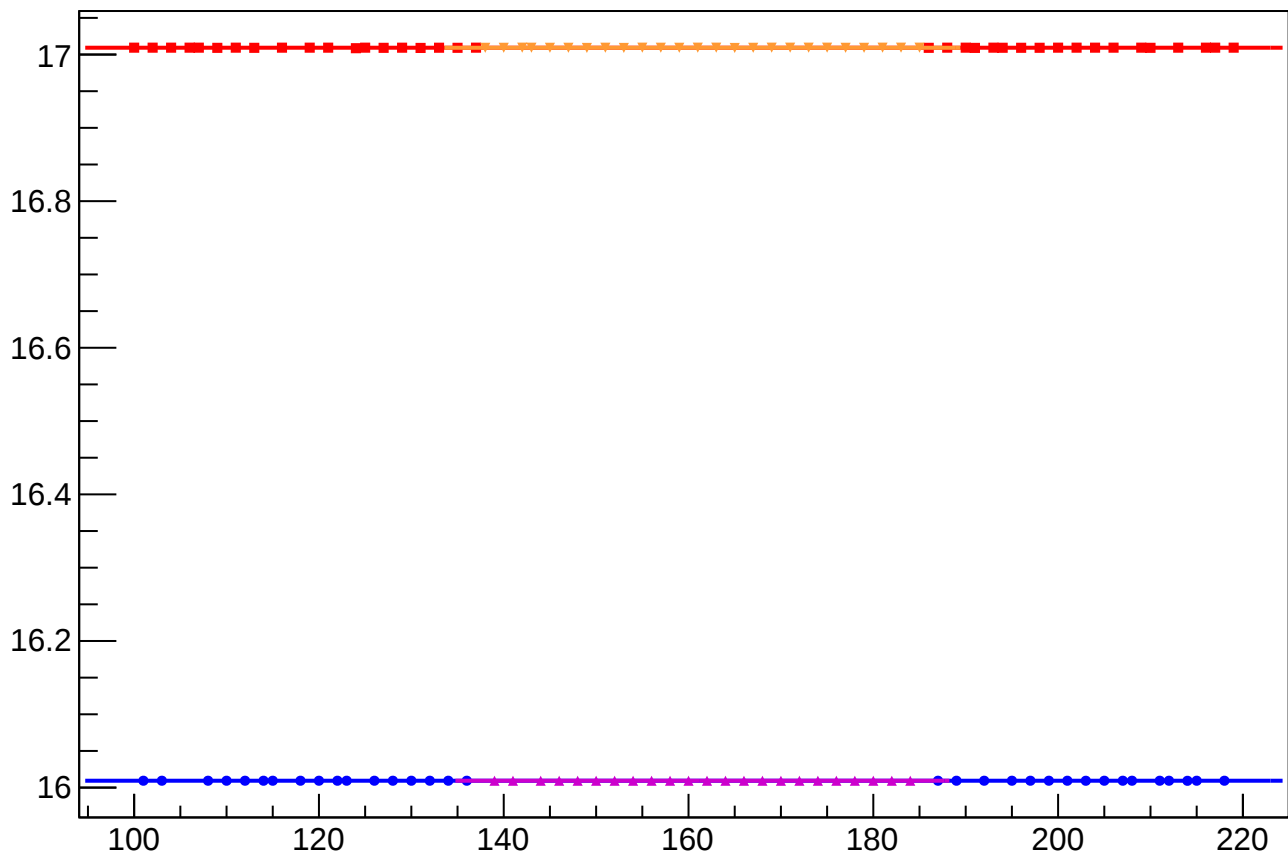
|                             |                                                                   |                         |                                       |
|-----------------------------|-------------------------------------------------------------------|-------------------------|---------------------------------------|
| Right In: 1490.194+/-0.000  | $\chi^2/\text{NDF}$ : 407610350175248982661682126838038528.0/32   | Left: 1468.022+/-0.000  | $\chi^2/\text{NDF}$ : 130807817753460 |
| Left Out: 1468.048+/-0.000  | $\chi^2/\text{NDF}$ : 127949199501977668488138456039424.0/24      | Right: 1475.552+/-0.000 | $\chi^2/\text{NDF}$ : 84390886981210  |
| Right Out: 1461.868+/-0.000 | $\chi^2/\text{NDF}$ : 83207287377380146473779228178542231552.0/36 | In: 1479.321+/-0.000    | $\chi^2/\text{NDF}$ : 859254928001834 |
| Left In: 1467.994+/-0.000   | $\chi^2/\text{NDF}$ : 144497772795444989723550941184.0/22         | Out: 1464.881+/-0.000   | $\chi^2/\text{NDF}$ : 832446903224191 |
|                             | All: 1471.872+/-0.000                                             |                         | $\chi^2/\text{NDF}$ : 84498345483     |

# epics\_Phi\_FGs\_mean vs Slug, Sign Corrected



|                               |                                                       |                           |                                   |
|-------------------------------|-------------------------------------------------------|---------------------------|-----------------------------------|
| Right In: 90.038 $\pm$ 0.000  | $\chi^2$ /NDF: 169908093479848571479601073618944.0/32 | Left: 88.021 $\pm$ 0.000  | $\chi^2$ /NDF: 13134723.4/47      |
| Left Out: 88.021 $\pm$ 0.000  | $\chi^2$ /NDF: 5679798.5/24                           | Right: 90.034 $\pm$ 0.000 | $\chi^2$ /NDF: 3379788204041002   |
| Right Out: 90.031 $\pm$ 0.000 | $\chi^2$ /NDF: 168026961838208649723816120942592.0/36 | In: 89.050 $\pm$ 0.000    | $\chi^2$ /NDF: 389857613174555741 |
| Left In: 88.021 $\pm$ 0.000   | $\chi^2$ /NDF: 6257169.0/22                           | Out: 89.051 $\pm$ 0.000   | $\chi^2$ /NDF: 41134965167638665  |
|                               |                                                       | All: 89.050 $\pm$ 0.000   | $\chi^2$ /NDF: 8012074410434      |

epics\_IGL1I00DI24\_24Ms\_mean vs Slug, Sign Corrected



Right In: 16.009+/-0.000

$\chi^2/\text{NDF}$ : 848176574808054814474240.0/32

Left: 16.524+/-0.000

$\chi^2/\text{NDF}$ : 85855870772921272

Right: 16.522+/-0.000

$\chi^2/\text{NDF}$ : 9427789282353066

Left Out: 17.009+/-0.000

$\chi^2/\text{NDF}$ : 26194929080144976634970112.0/24

In: 16.009+/-0.000

$\chi^2/\text{NDF}$ : 990614984066325911

Right Out: 17.009+/-0.000

$\chi^2/\text{NDF}$ : 21619728953174294383296512.0/36

Out: 17.009+/-0.000

$\chi^2/\text{NDF}$ : 49675279434938121

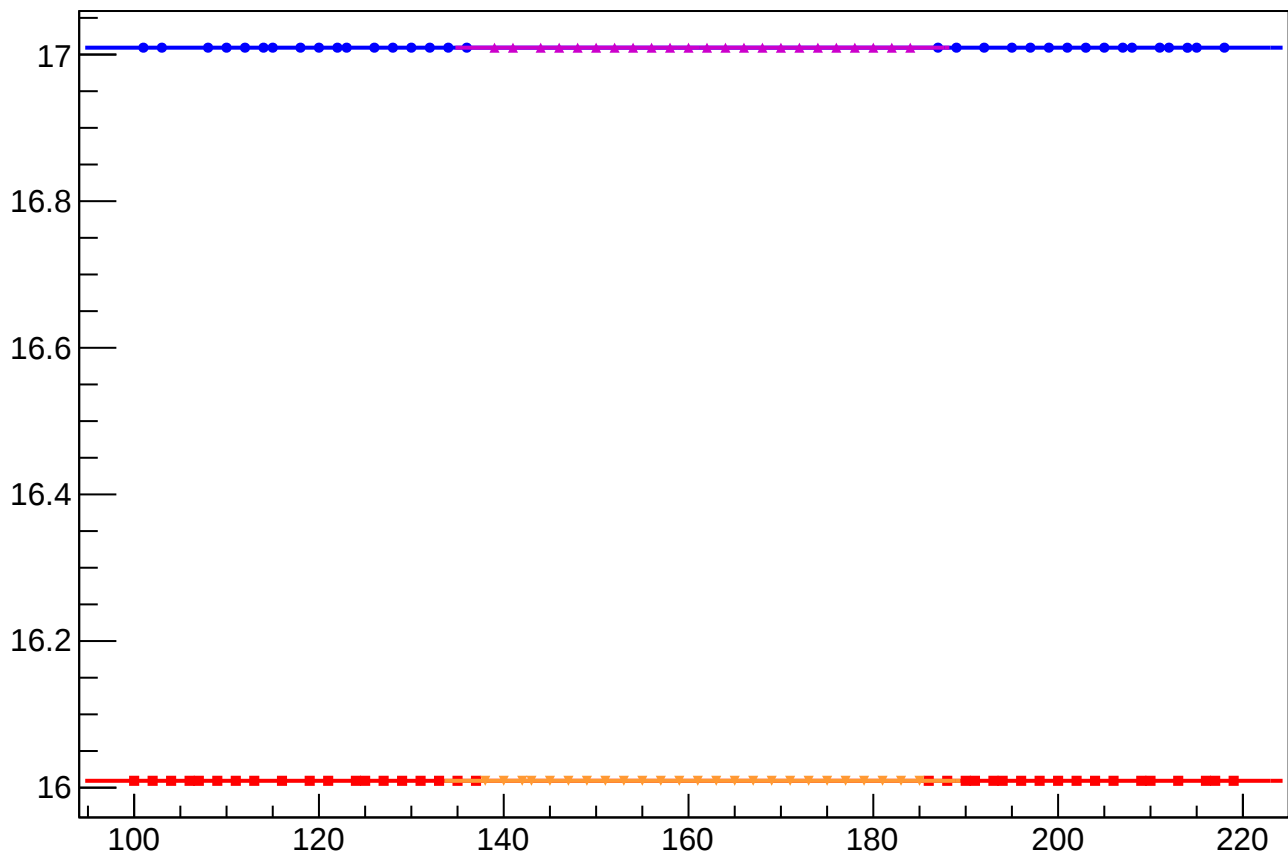
Left In: 16.009+/-0.000

$\chi^2/\text{NDF}$ : 127920993667935400624128.0/22

All: 16.523+/-0.000

$\chi^2/\text{NDF}$ : 1801345527376

epics\_IGL1I00OD16\_16s\_mean vs Slug, Sign Corrected



Right In: 17.009+/-0.000

$\chi^2/\text{NDF}$ : 848176574944934214238208.0/32

Left: 16.491+/-0.000

$\chi^2/\text{NDF}$ : 90683349233974458

Right: 16.489+/-0.000

$\chi^2/\text{NDF}$ : 9569017638905885

Left Out: 16.009+/-0.000

$\chi^2/\text{NDF}$ : 61253.5/24

In: 17.009+/-0.000

$\chi^2/\text{NDF}$ : 978706256711824667

Right Out: 16.009+/-0.000

$\chi^2/\text{NDF}$ : 318194.9/36

Out: 16.009+/-0.000

$\chi^2/\text{NDF}$ : 574770.4/61

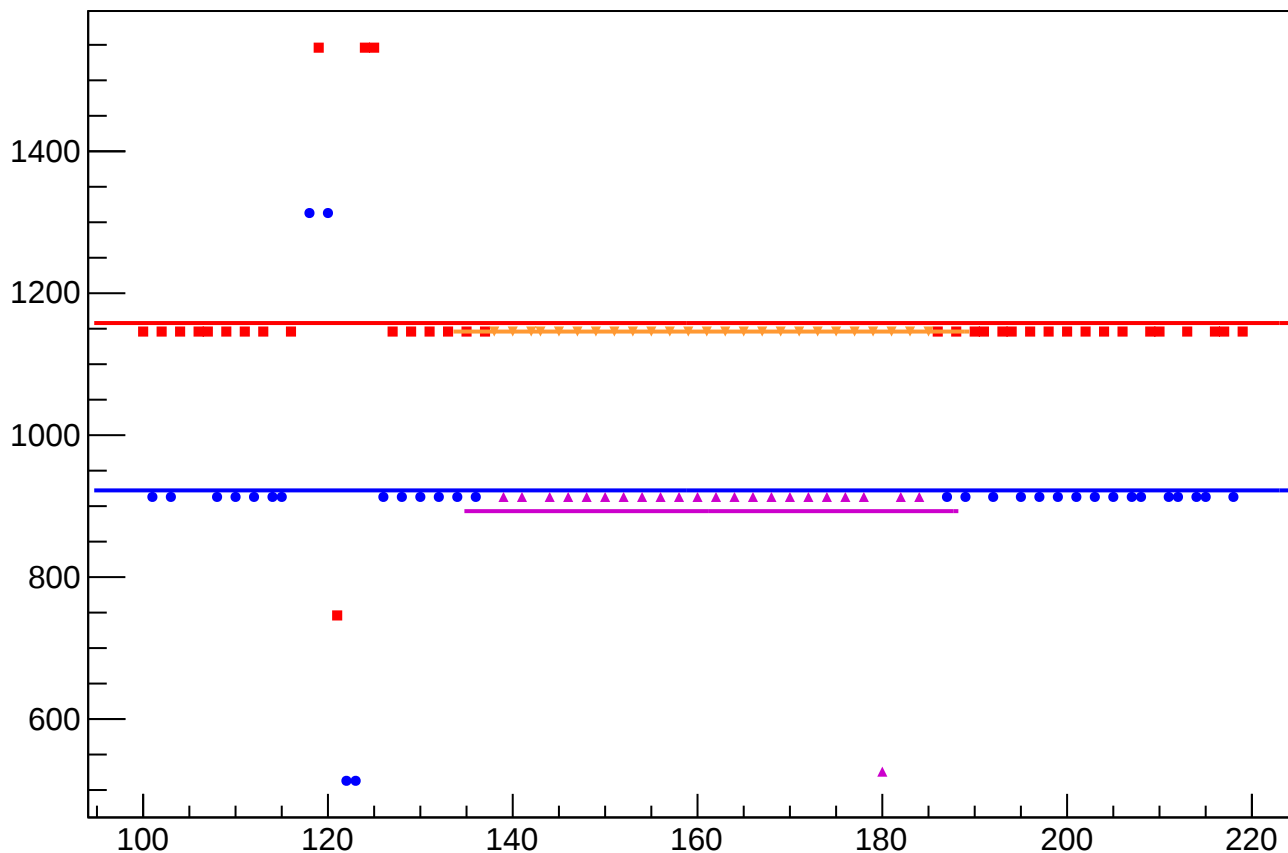
Left In: 17.009+/-0.000

$\chi^2/\text{NDF}$ : 114986101427233622065152.0/22

All: 16.490+/-0.000

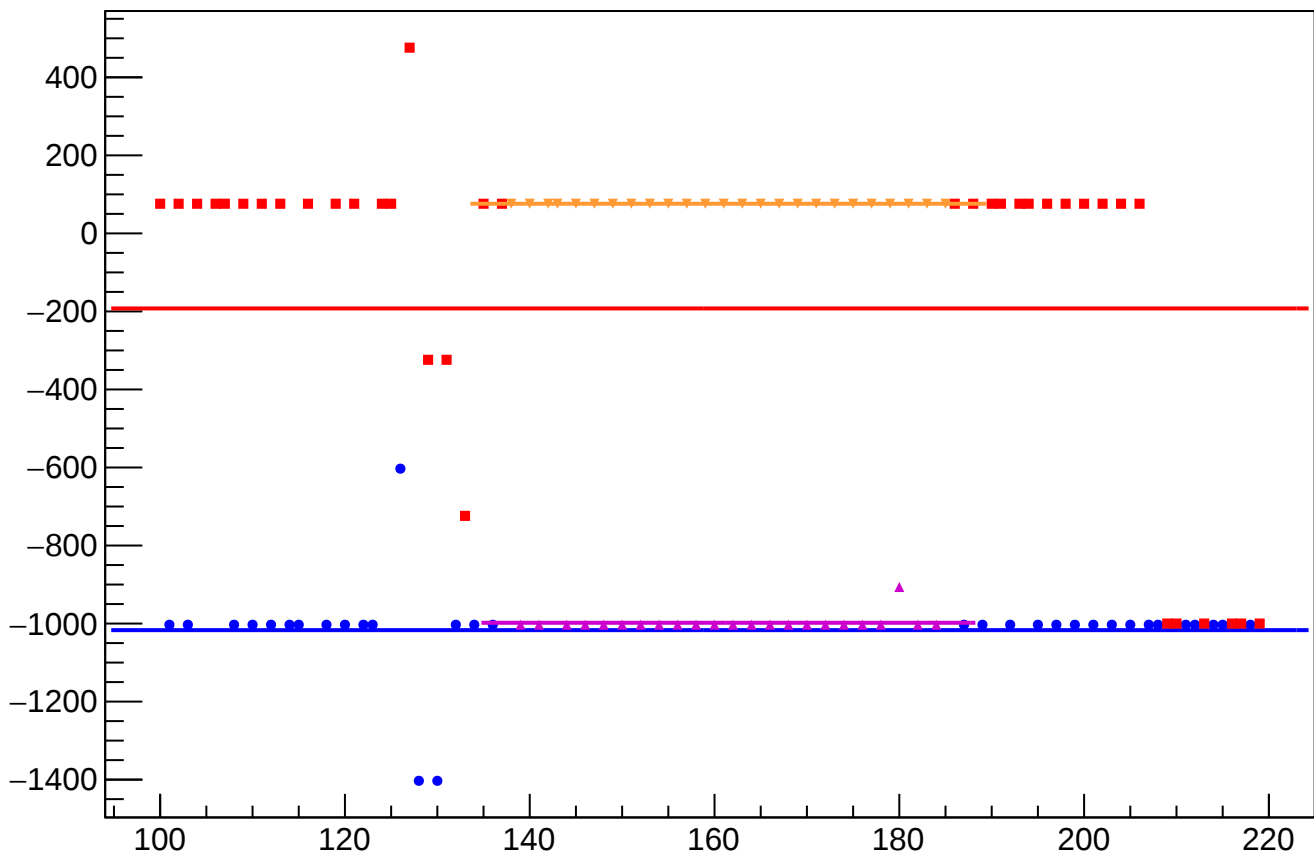
$\chi^2/\text{NDF}$ : 1863746449908

epics\_RTPAPOSUCNTs\_mean vs Slug, Sign Corrected



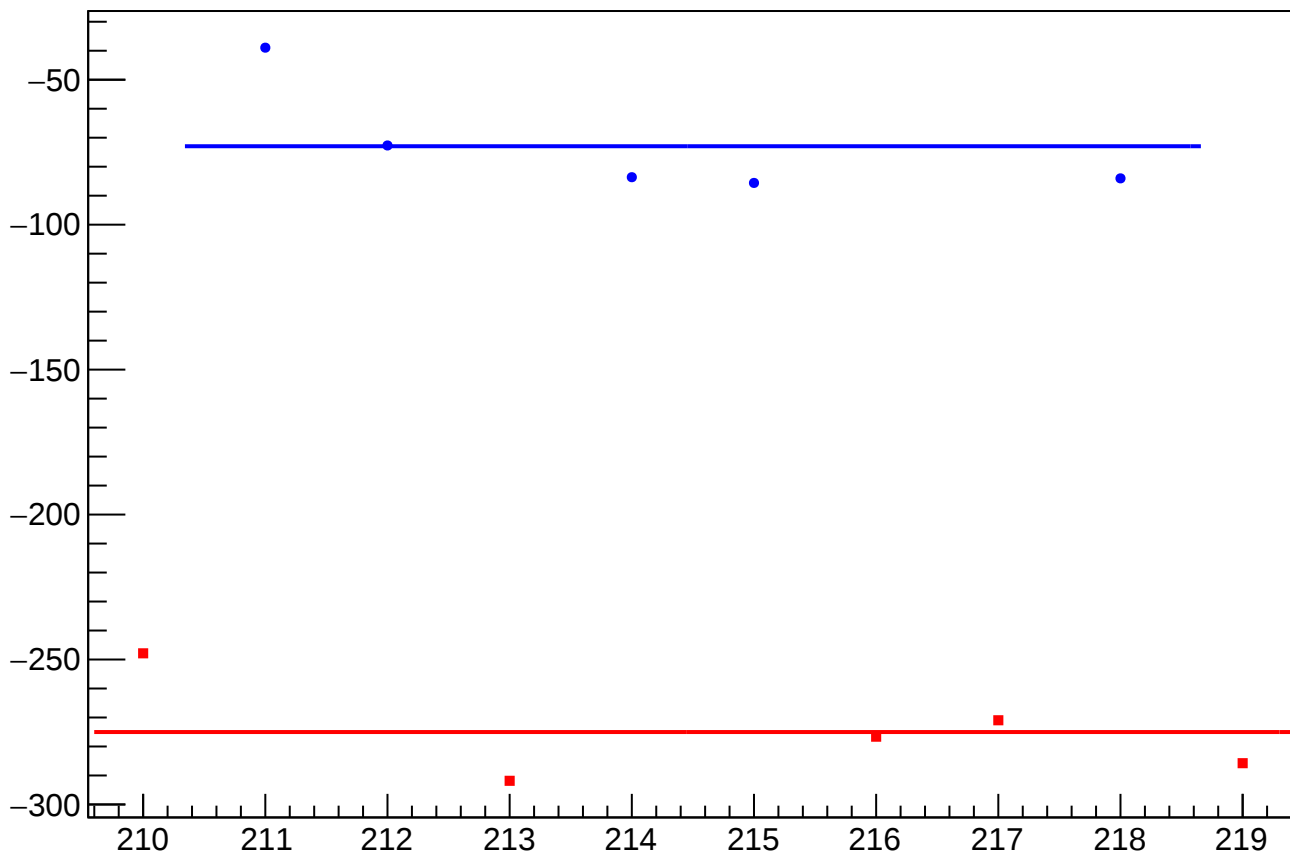
Left: 1023.207+/-0.000  $\chi^2/\text{NDF}$ : 724152114185977  
 Right: 1044.081+/-0.000  $\chi^2/\text{NDF}$ : 96695725311835  
 Right In: 922.187+/-0.000  $\chi^2/\text{NDF}$ : 21123242808677882740647052429353811968.0/32  
 Left Out: 1146.011+/-0.000  $\chi^2/\text{NDF}$ : 8056834670270133849999540224.0/24  
 Right Out: 1157.998+/-0.000  $\chi^2/\text{NDF}$ : 21793008718154891906057466122181017600.0/36  
 Left In: 892.950+/-0.000  $\chi^2/\text{NDF}$ : 13213852485930520518972295012897783808.0/22  
 All: 1033.881+/-0.000  $\chi^2/\text{NDF}$ : 16993550637

epics\_RTPAPOSVCNTs\_mean vs Slug, Sign Corrected



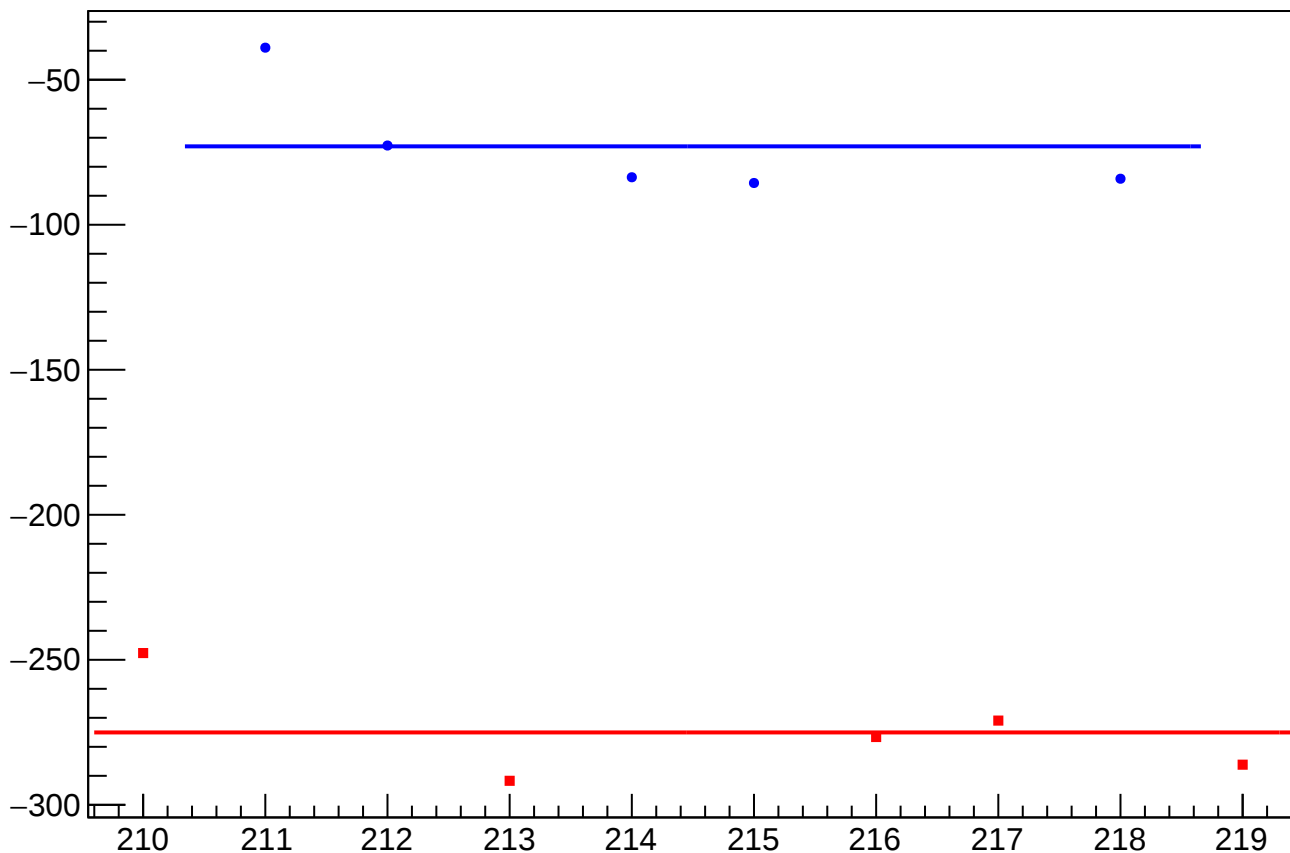
Left: -445.169+/-0.000  $\chi^2/\text{NDF}$ : 106713327806479  
 Right In: -1016.885+/-0.000  $\chi^2/\text{NDF}$ : 22838384514434722542388335364941021184.0/32  
 Left Out: 76.011+/-0.000  $\chi^2/\text{NDF}$ : 11479003589933272170007363584.0/24  
 Right Out: -192.373+/-0.000  $\chi^2/\text{NDF}$ : 428465475545596953372918387855499198464.0/36  
 In: -1007.625+/-0.000  $\chi^2/\text{NDF}$ : 239917977494154  
 Out: -61.512+/-0.000  $\chi^2/\text{NDF}$ : 4987771845623181  
 Left In: -997.979+/-0.000  $\chi^2/\text{NDF}$ : 825858066518991041870194619245920256.0/22  
 All: -519.579+/-0.000  $\chi^2/\text{NDF}$ : 22159945573

epics\_RTPPITA1CNTs\_mean vs Slug, Sign Corrected



Right In: -72.945+/-0.000  $\chi^2/\text{NDF}$ : 119284685234098125759576533062647808.0/4  
 Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0  
 Right Out: -275.016+/-0.000  $\chi^2/\text{NDF}$ : 86022314037366847399450558125309952.0/4  
 Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0  
 All: -173.582+/-0.000  $\chi^2/\text{NDF}$ : 79735917086694

epics\_RTPPITA2CNTs\_mean vs Slug, Sign Corrected



Right In: -72.969+/-0.000  $\chi^2/\text{NDF}$ : 119488906189493343156944358768377856.0/4  
 Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0  
 Right Out: -275.040+/-0.000  $\chi^2/\text{NDF}$ : 87170037078998934606037616422813696.0/4  
 Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 0.0/0  
 All: -173.606+/-0.000  $\chi^2/\text{NDF}$ : 79749510421402