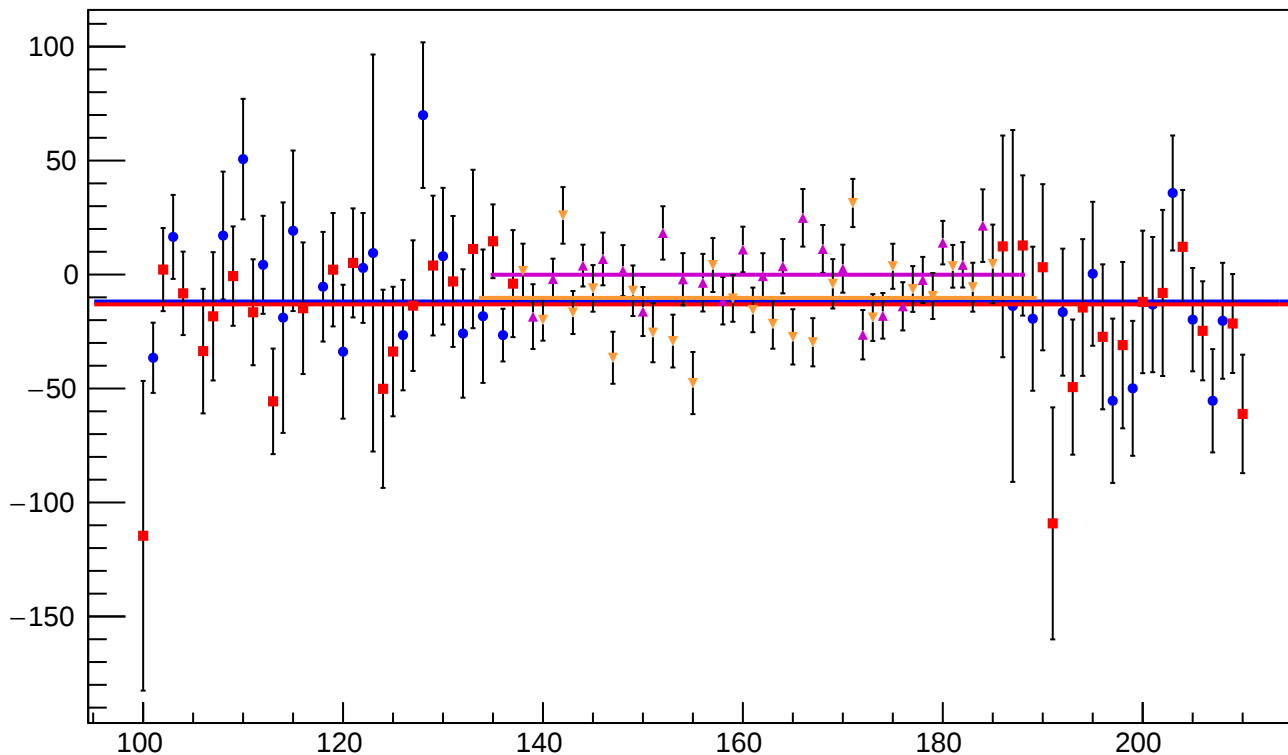


diff\_bpm4aX\_mean vs Slug



Right In:  $-11.841 \pm 4.704$

$\chi^2/\text{NDF}$ : 34.1/27

Left Out:  $-10.238 \pm 2.170$

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

Right Out:  $-13.071 \pm 4.631$

$\chi^2/\text{NDF}$ : 25.1/32

Left In:  $-0.080 \pm 2.251$

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

+ sign  $-10.520 \pm 1.971$

$\chi^2/\text{NDF}$ : 92.4/52

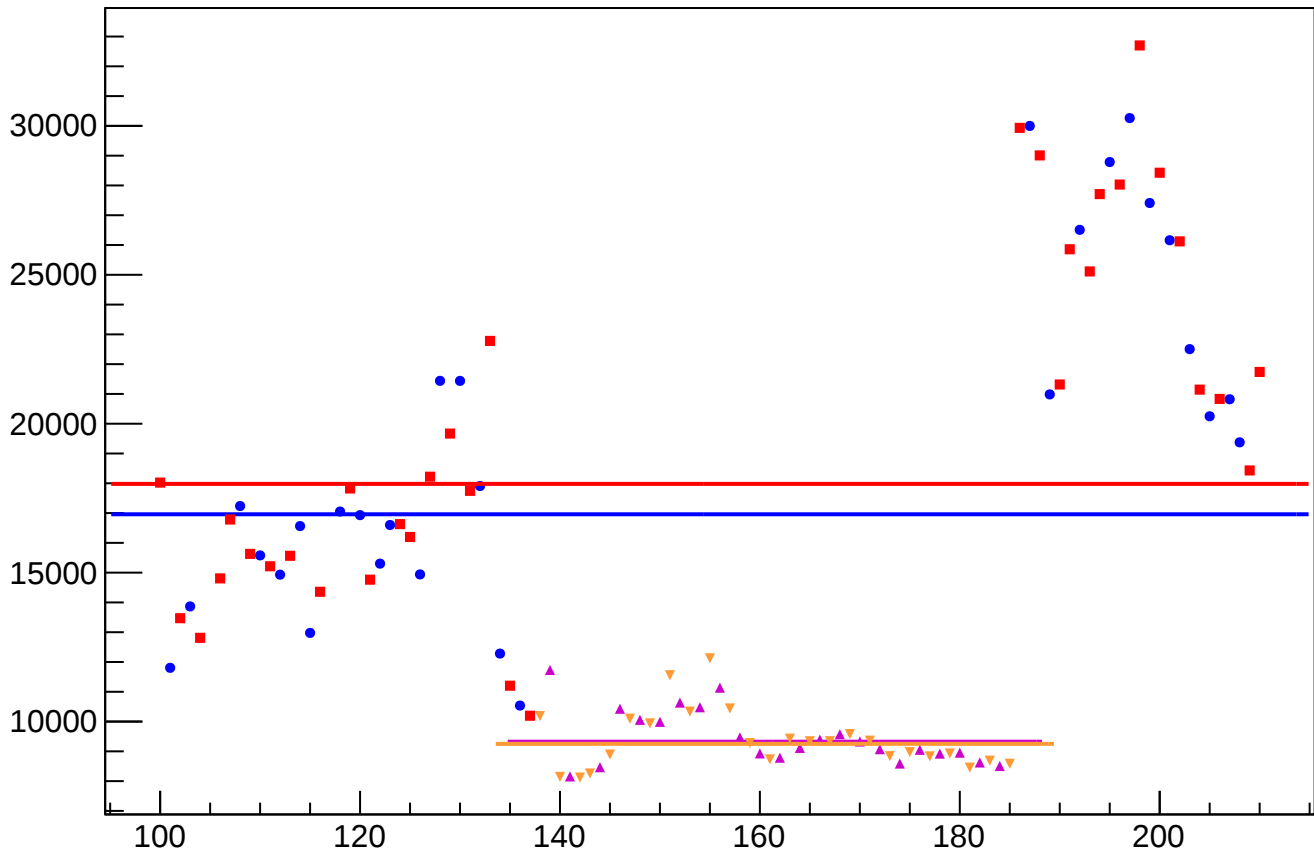
All:  $-6.647 \pm 1.412$

$\chi^2/\text{NDF}$ : 161.6/108

- sign  $-2.562 \pm 2.024$

$\chi^2/\text{NDF}$ : 61.3/55

# diff\_bpm4aX\_rms vs Slug



Right In: 16959.681+/-3.326  $\chi^2/\text{NDF}$ : 2641891.5/27

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

+ sign 10604.367+/-1.393  $\chi^2/\text{NDF}$ : 7401175.4/52

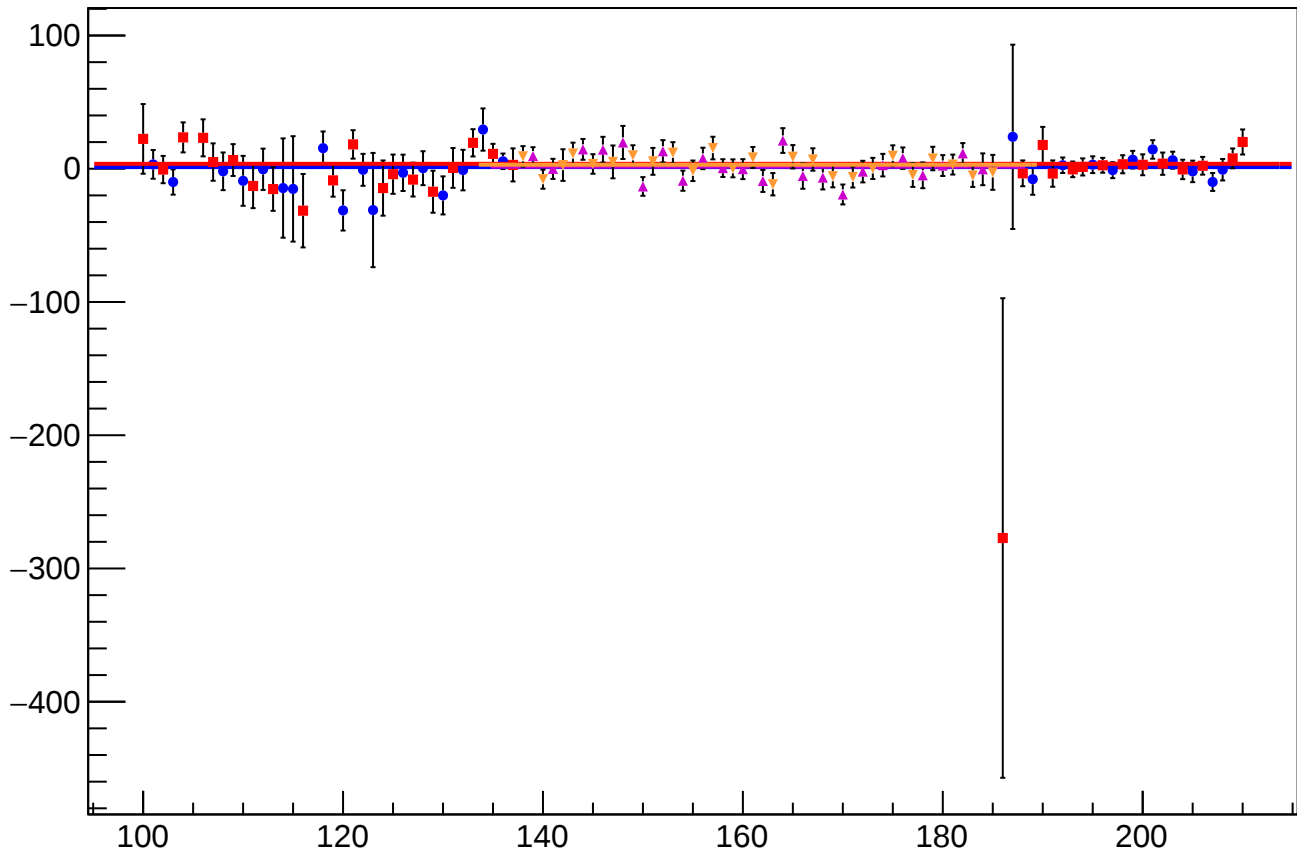
Right Out: 17979.706+/-3.275  $\chi^2/\text{NDF}$ : 2804864.6/32

All: 10785.972+/-0.998  $\chi^2/\text{NDF}$ : 16168492.3

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

- sign 10977.579+/-1.431  $\chi^2/\text{NDF}$ : 8732411.2/55

# diff\_bpm4aY\_mean vs Slug



Right In:  $1.233 \pm 1.778$   $\chi^2/\text{NDF}$ : 23.6/27

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

Right Out:  $3.701 \pm 1.690$   $\chi^2/\text{NDF}$ : 28.8/32

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

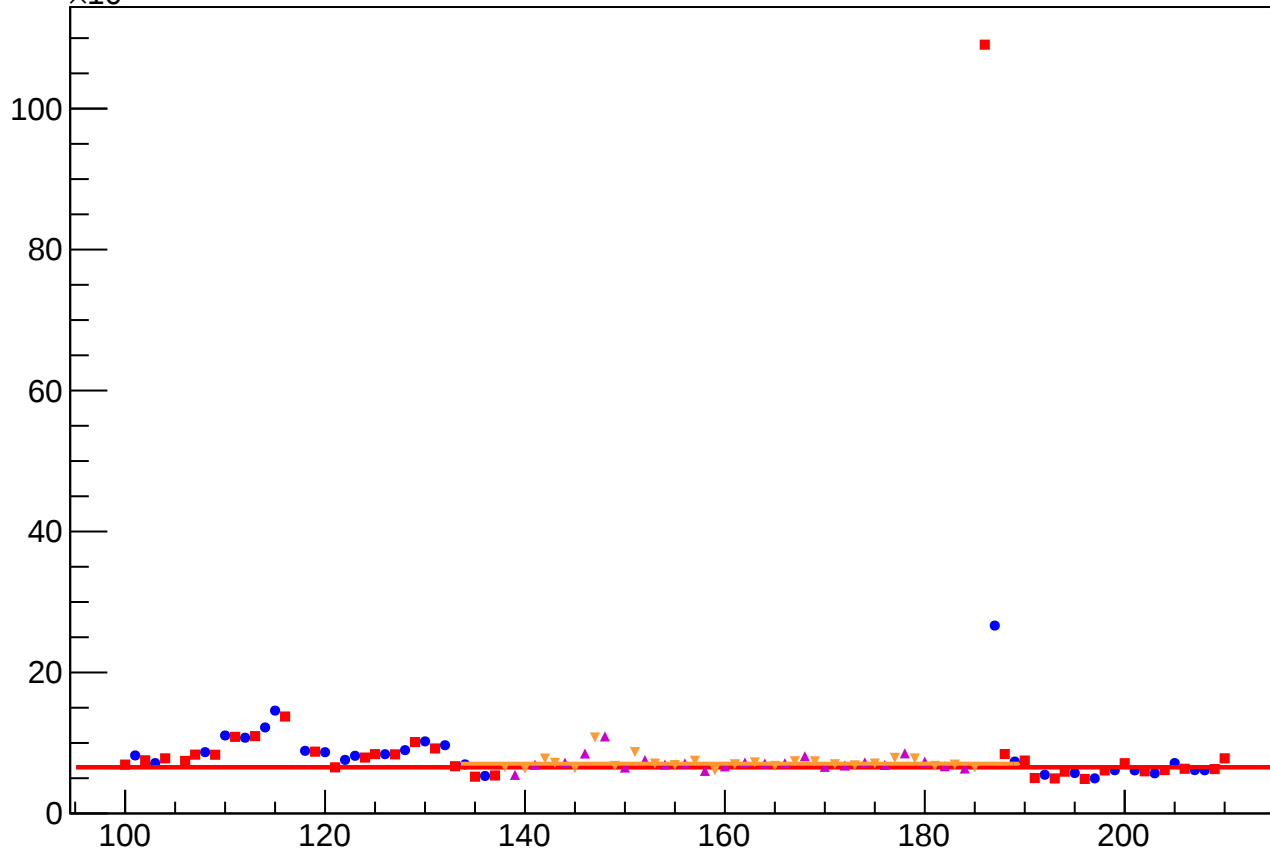
+ sign  $2.191 \pm 1.214$   $\chi^2/\text{NDF}$ : 42.8/52

All:  $2.425 \pm 0.853$   $\chi^2/\text{NDF}$ : 107.9/108

- sign  $2.652 \pm 1.199$   $\chi^2/\text{NDF}$ : 65.1/55

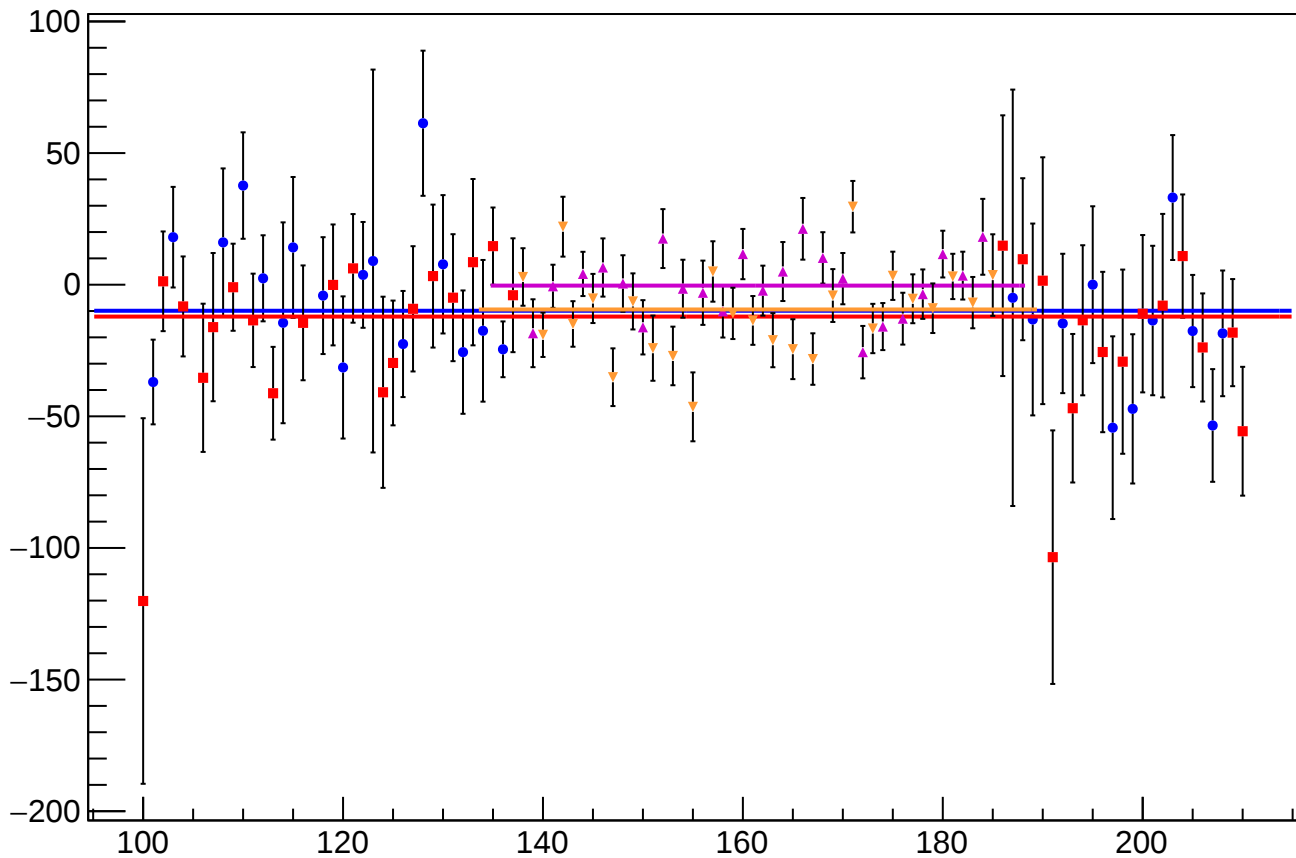
# diff\_bpm4aY\_rms vs Slug

$\times 10^3$



Right In:  $6532.727 \pm 1.257$   $\chi^2/\text{NDF}: 1530801.8/27$  + sign  $6816.730 \pm 0.858$   $\chi^2/\text{NDF}: 2013154.8/52$   
 Left Out:  $7064.457 \pm 1.174$   $\chi^2/\text{NDF}: 386814.9/24$  All:  $6806.056 \pm 0.603$   $\chi^2/\text{NDF}: 4744692.4/10$   
 Right Out:  $6579.908 \pm 1.195$   $\chi^2/\text{NDF}: 2140258.8/32$  - sign  $6795.630 \pm 0.848$   $\chi^2/\text{NDF}: 2731231.8/55$   
 Left In:  $7014.572 \pm 1.204$   $\chi^2/\text{NDF}: 525313.7/22$

# diff\_bpm4eX\_mean vs Slug



Right In:  $-9.900 \pm 4.294$   $\chi^2/\text{NDF}$ : 35.2/27

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

Right Out:  $-12.108 \pm 4.195$   $\chi^2/\text{NDF}$ : 24.4/32

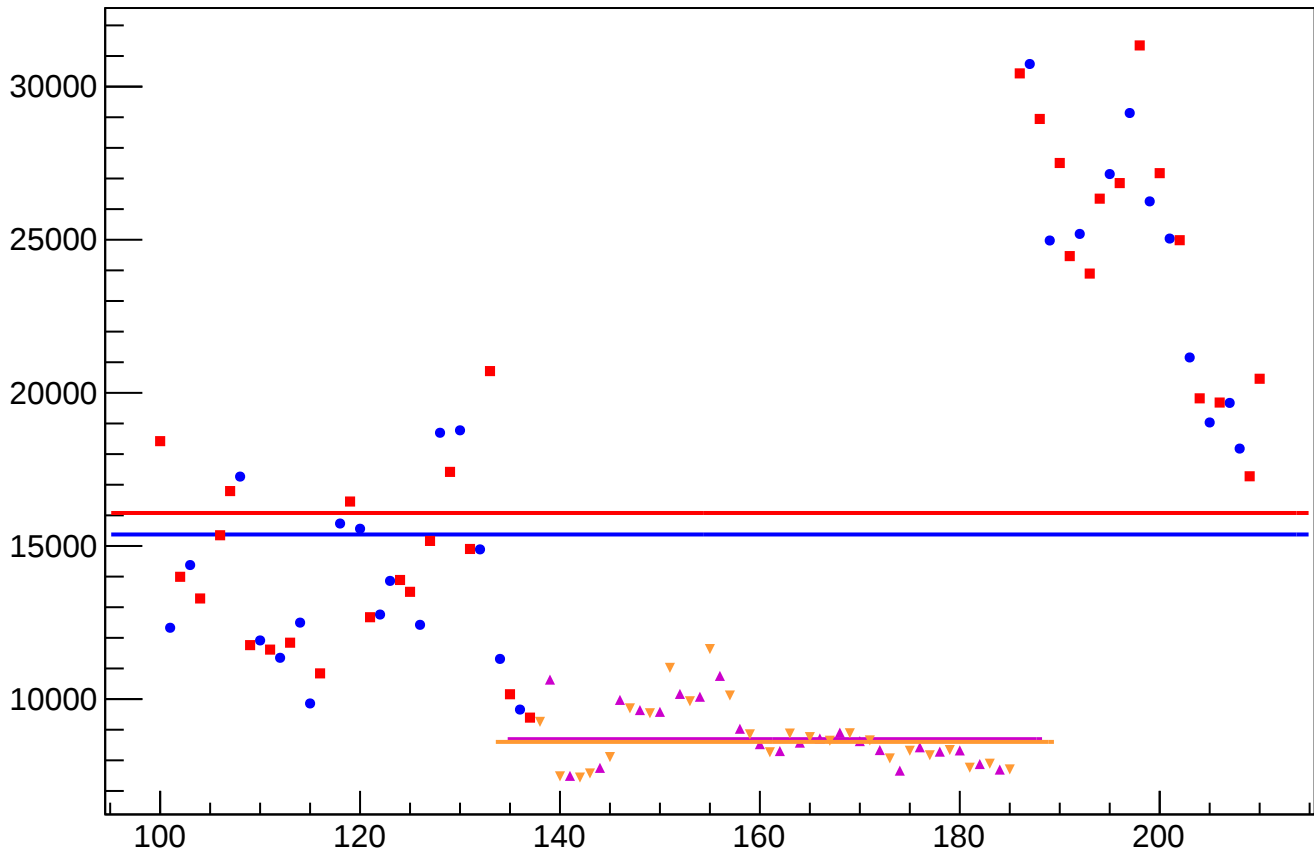
Left In:  $-0.344 \pm 2.100$   $\chi^2/\text{NDF}$ : 29.9/22

+ sign  $-9.500 \pm 1.829$   $\chi^2/\text{NDF}$ : 94.0/52

All:  $-6.192 \pm 1.310$   $\chi^2/\text{NDF}$ : 161.3/108

- sign  $-2.702 \pm 1.878$   $\chi^2/\text{NDF}$ : 60.6/55

# diff\_bpm4eX\_rms vs Slug



Right In:  $15375.542 \pm 3.036$   $\chi^2/\text{NDF}$ : 3060522.4/27

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

Right Out:  $16077.399 \pm 2.966$   $\chi^2/\text{NDF}$ : 3555622.0/32

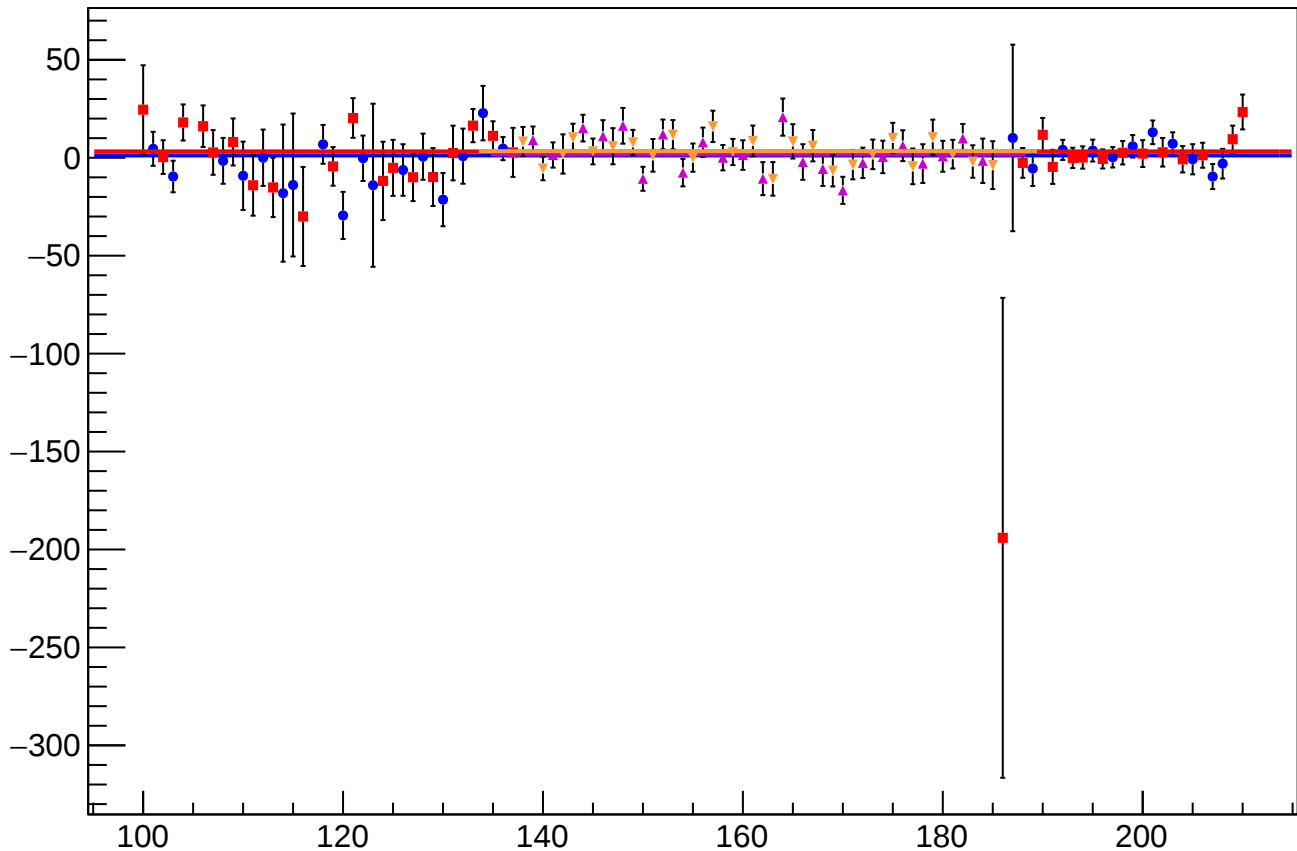
Left In:  $8691.203 \pm 1.485$   $\chi^2/\text{NDF}$ : 365254.6/22

+ sign  $9830.733 \pm 1.293$   $\chi^2/\text{NDF}$ : 7573892.5/52

All:  $9996.658 \pm 0.926$   $\chi^2/\text{NDF}$ : 16485629.5/100

- sign  $10171.719 \pm 1.328$   $\chi^2/\text{NDF}$ : 8877894.3/55

# diff\_bpm4eY\_mean vs Slug



Right In:  $1.197 \pm 1.594$   $\chi^2/\text{NDF}$ : 25.5/27

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

Right Out:  $3.254 \pm 1.499$   $\chi^2/\text{NDF}$ : 32.2/32

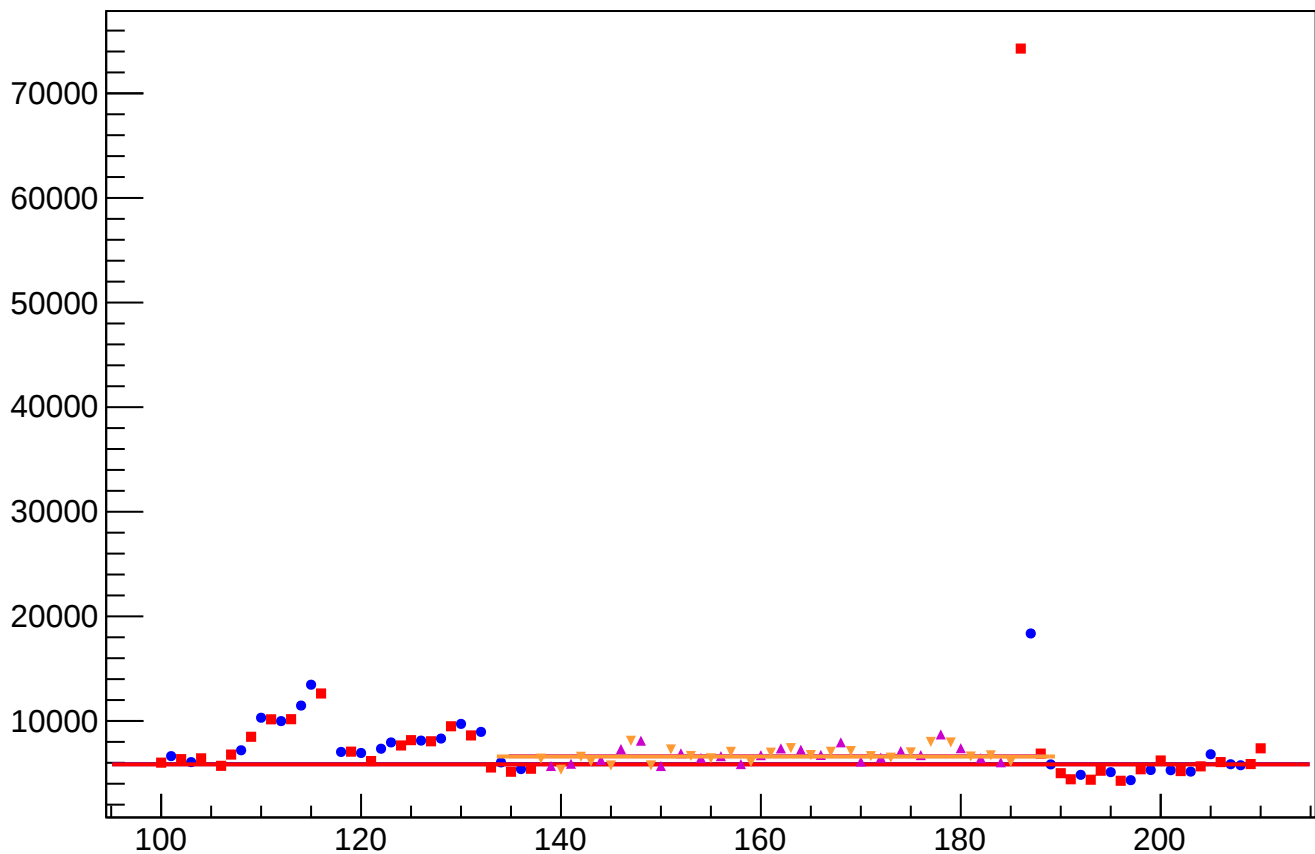
Left In:  $1.756 \pm 1.607$   $\chi^2/\text{NDF}$ : 33.5/22

+ sign  $2.315 \pm 1.112$   $\chi^2/\text{NDF}$ : 43.6/52

All:  $2.438 \pm 0.781$   $\chi^2/\text{NDF}$ : 109.9/108

- sign  $2.557 \pm 1.096$   $\chi^2/\text{NDF}$ : 66.2/55

# diff\_bpm4eY\_rms vs Slug



Right In:  $5870.070 \pm 1.127$   $\chi^2/\text{NDF}$ : 1492674.8/27

Left Out:  $6603.953 \pm 1.097$   $\chi^2/\text{NDF}$ : 395247.5/24

Right Out:  $5851.273 \pm 1.060$   $\chi^2/\text{NDF}$ : 2194328.4/32

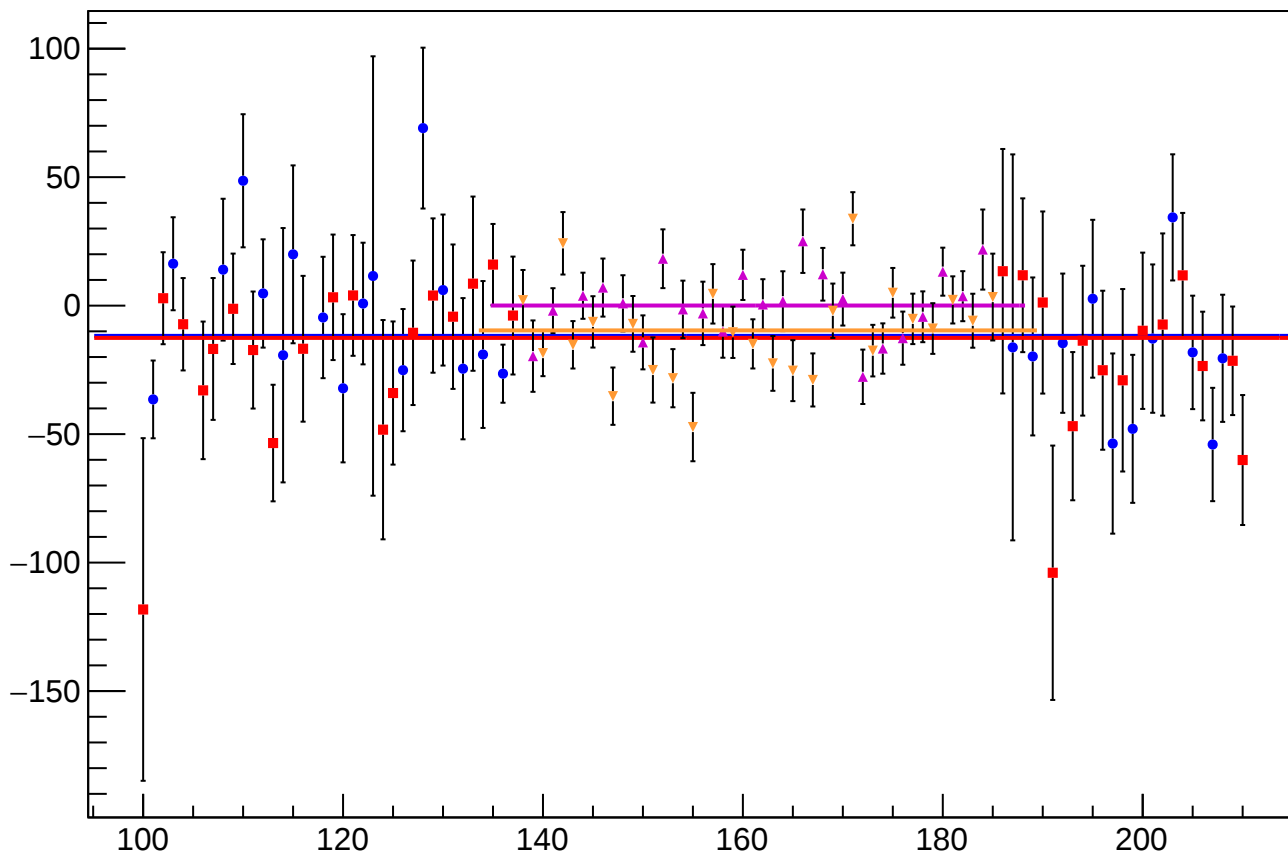
Left In:  $6637.155 \pm 1.136$   $\chi^2/\text{NDF}$ : 415547.5/22

+ sign  $6246.921 \pm 0.786$   $\chi^2/\text{NDF}$ : 2105538.9/52

All:  $6231.664 \pm 0.552$   $\chi^2/\text{NDF}$ : 4971973.2/10

- sign  $6216.843 \pm 0.775$   $\chi^2/\text{NDF}$ : 2865692.2/55

# diff\_bpm4acX\_mean vs Slug



Right In:  $-11.769 \pm 4.601$   $\chi^2/\text{NDF}$ : 33.9/27

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

Right Out:  $-12.558 \pm 4.529$   $\chi^2/\text{NDF}$ : 25.3/32

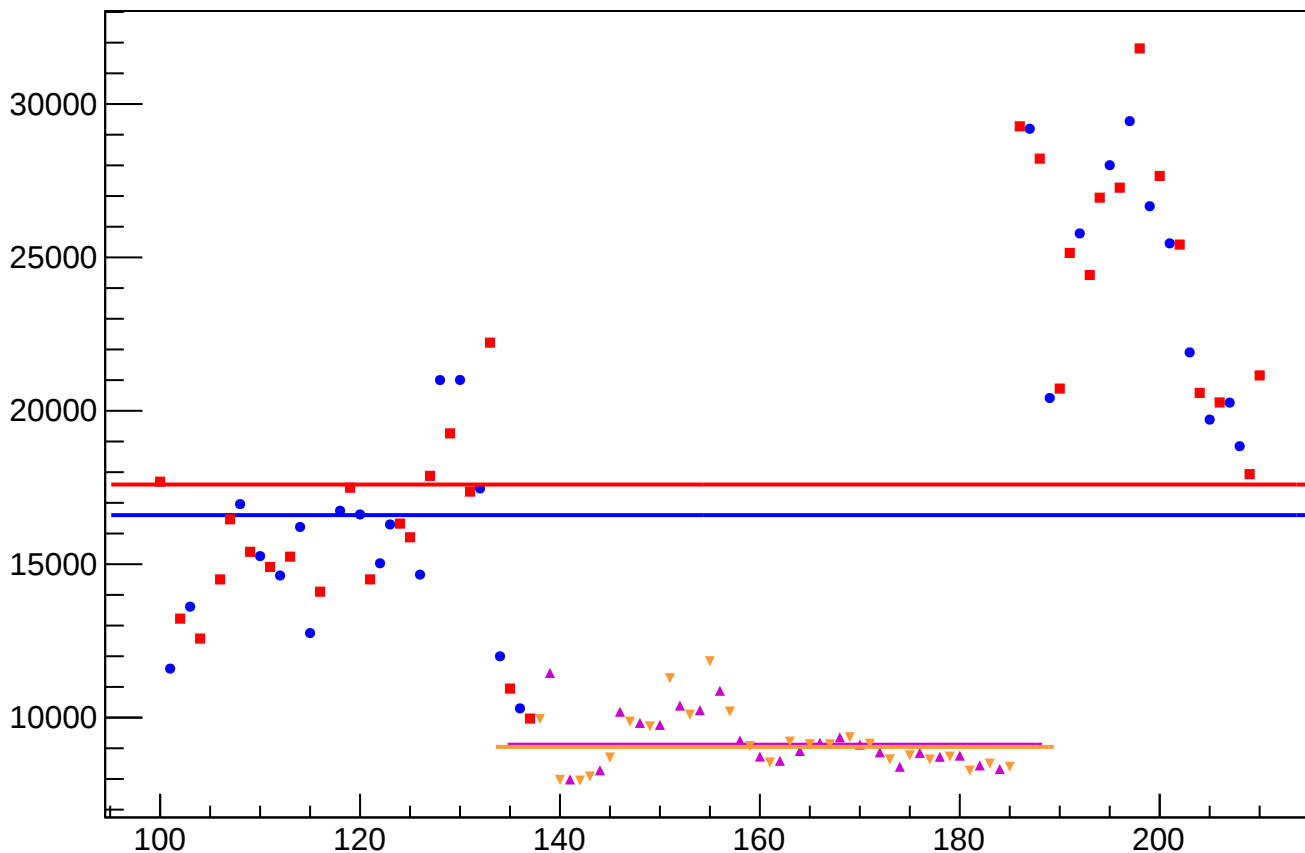
Left In:  $0.042 \pm 2.200$   $\chi^2/\text{NDF}$ : 30.8/22

+ sign  $-10.013 \pm 1.927$   $\chi^2/\text{NDF}$ : 93.9/52

All:  $-6.291 \pm 1.381$   $\chi^2/\text{NDF}$ : 163.9/108

- sign  $-2.364 \pm 1.979$   $\chi^2/\text{NDF}$ : 62.3/55

diff\_bpm4acX\_rms vs Slug



Right In: 16599.616+/-3.253  $\chi^2/\text{NDF}$ : 2601595.0/27

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

Right Out: 17596.751+/-3.202  $\chi^2/\text{NDF}$ : 2755669.6/32

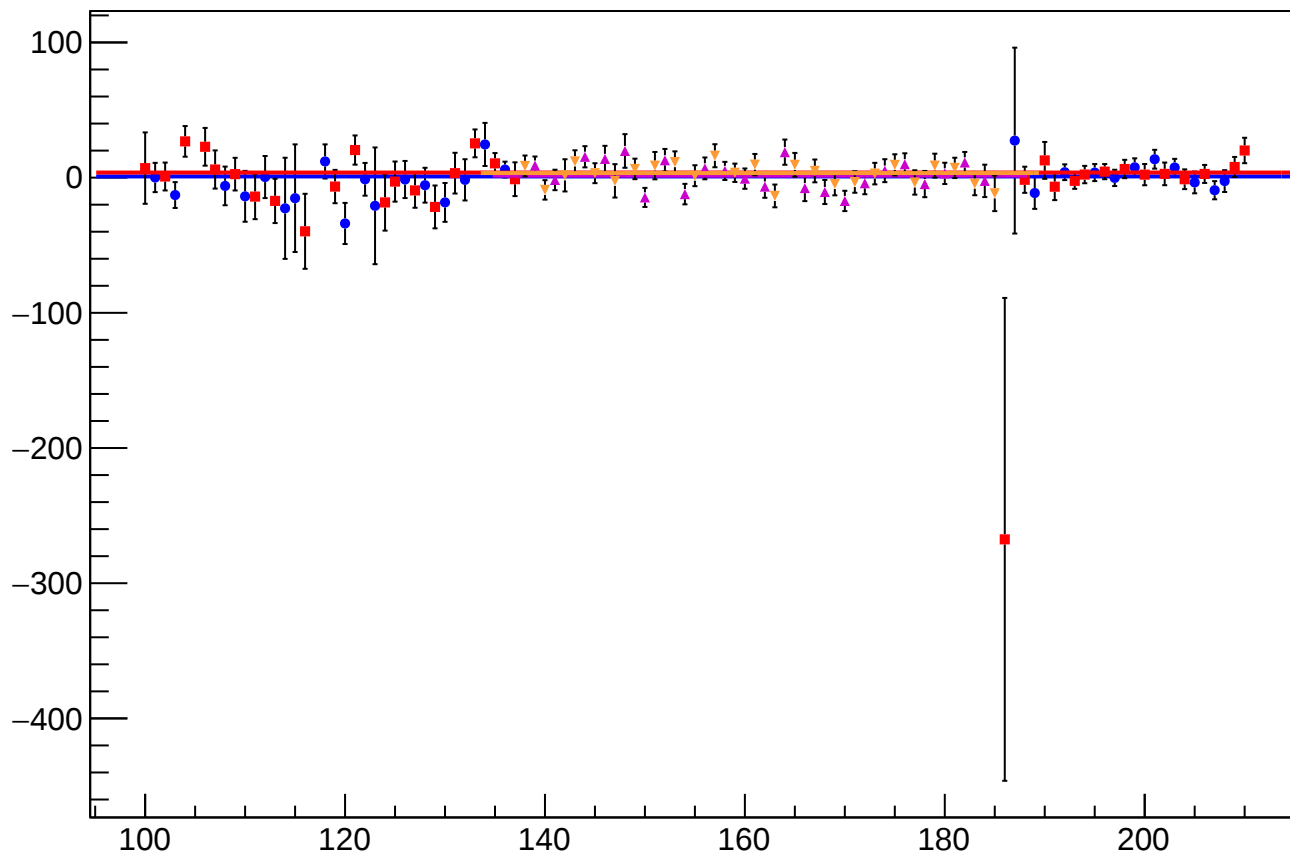
Left In: 9115.817+/-1.556  $\chi^2/\text{NDF}$ : 272471.8/22

+ sign 10370.586+/-1.362  $\chi^2/\text{NDF}$ : 7375709.4/52

All: 10548.034+/-0.976  $\chi^2/\text{NDF}$ : 16113256.2

- sign 10735.235+/-1.399  $\chi^2/\text{NDF}$ : 8702686.3/55

# diff\_bpm4acY\_mean vs Slug



Right In:  $0.882 \pm 1.784$   $\chi^2/\text{NDF}$ : 24.8/27

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

Right Out:  $3.780 \pm 1.696$   $\chi^2/\text{NDF}$ : 34.0/32

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

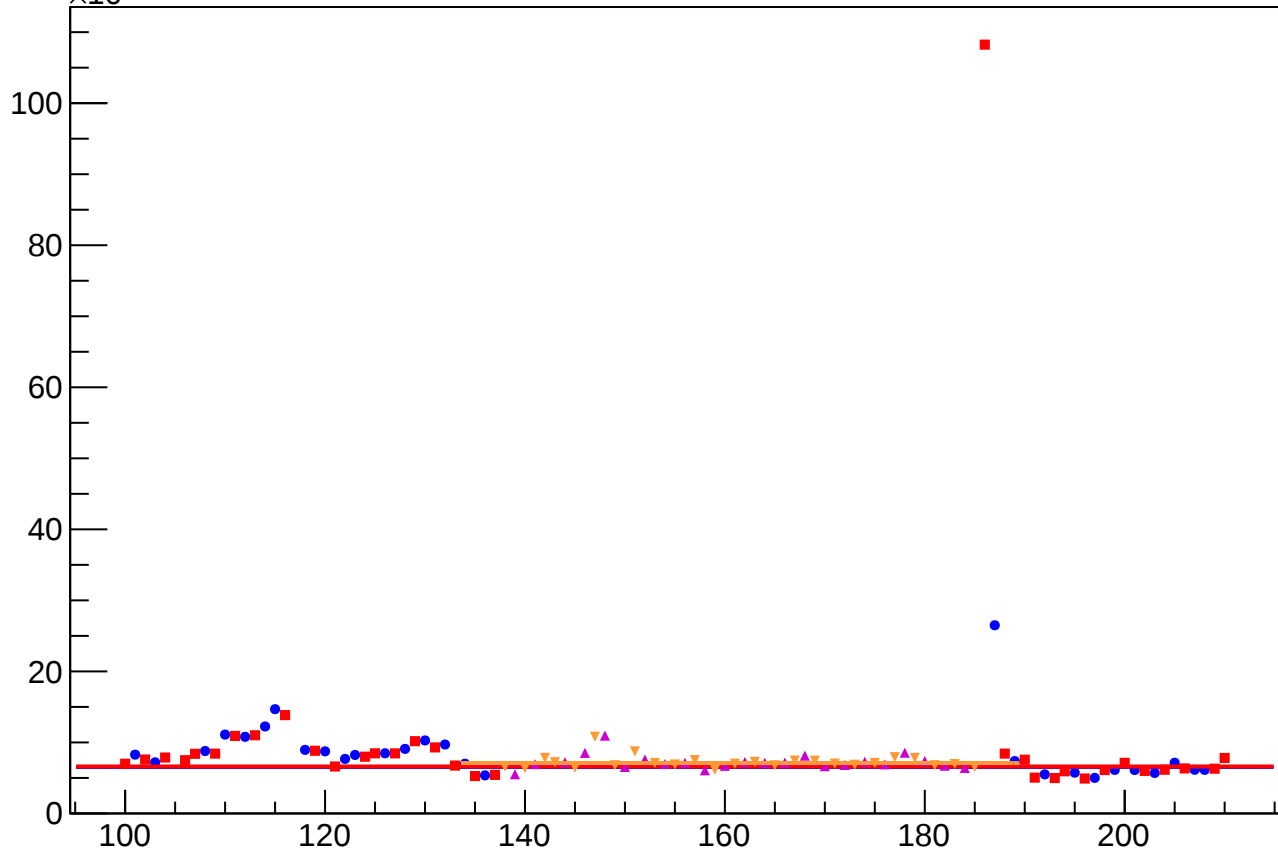
+ sign  $2.219 \pm 1.218$   $\chi^2/\text{NDF}$ : 45.2/52

All:  $2.431 \pm 0.857$   $\chi^2/\text{NDF}$ : 117.0/108

- sign  $2.639 \pm 1.204$   $\chi^2/\text{NDF}$ : 71.7/55

# diff\_bpm4acY\_rms vs Slug

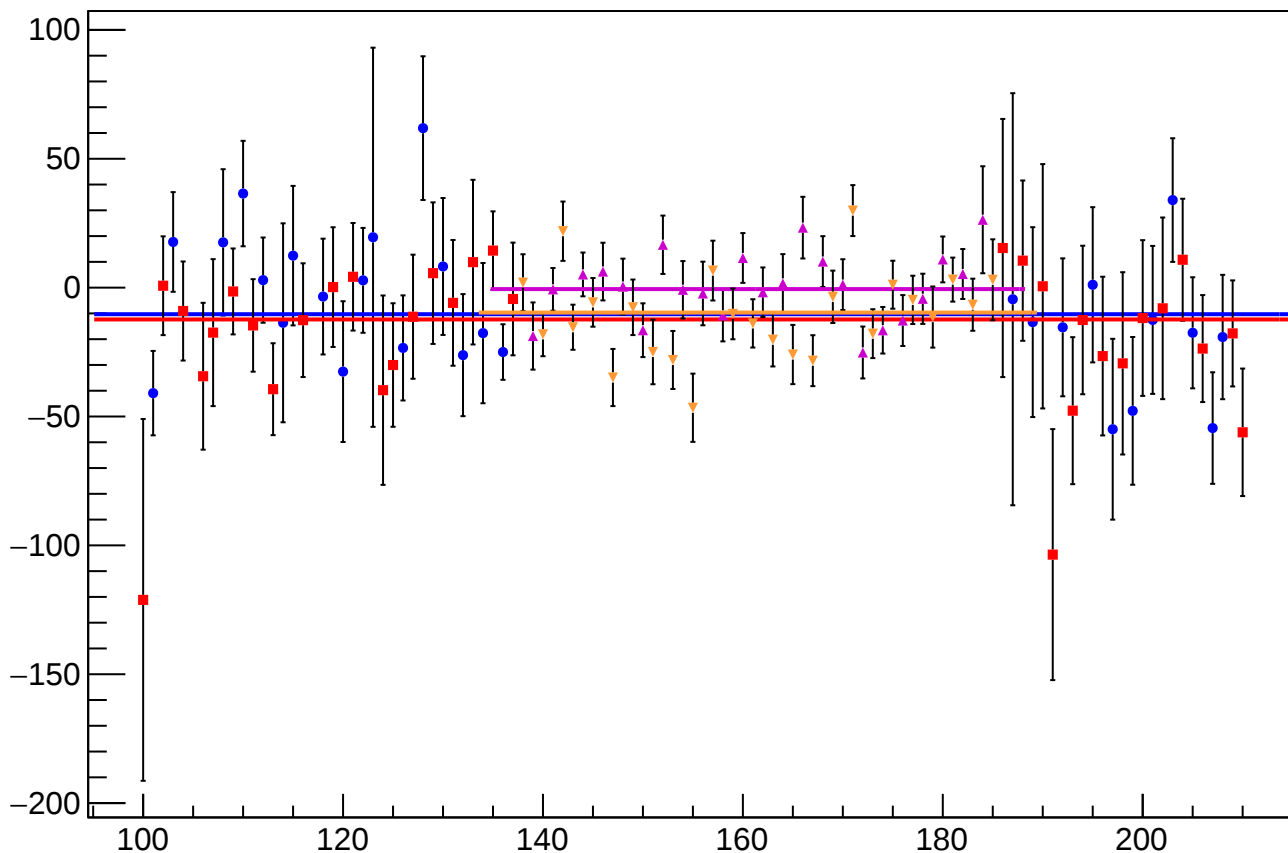
$\times 10^3$



Right In: 6554.873 $\pm$ 1.262  $\chi^2$ /NDF: 1540259.1/27  
 Left Out: 7096.350 $\pm$ 1.179  $\chi^2$ /NDF: 381942.1/24  
 Right Out: 6605.030 $\pm$ 1.199  $\chi^2$ /NDF: 2144233.3/32  
 Left In: 7047.269 $\pm$ 1.209  $\chi^2$ /NDF: 517433.5/22

+ sign 6843.826 $\pm$ 0.862  $\chi^2$ /NDF: 2020512.6/52  
 All: 6833.967 $\pm$ 0.606  $\chi^2$ /NDF: 4749854.0/10  
 - sign 6824.333 $\pm$ 0.852  $\chi^2$ /NDF: 2729082.4/55

# diff\_bpm4ecX\_mean vs Slug



Right In:  $-10.312 \pm 4.348$   $\chi^2/\text{NDF}$ : 35.8/27

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

Right Out:  $-12.348 \pm 4.251$   $\chi^2/\text{NDF}$ : 23.4/32

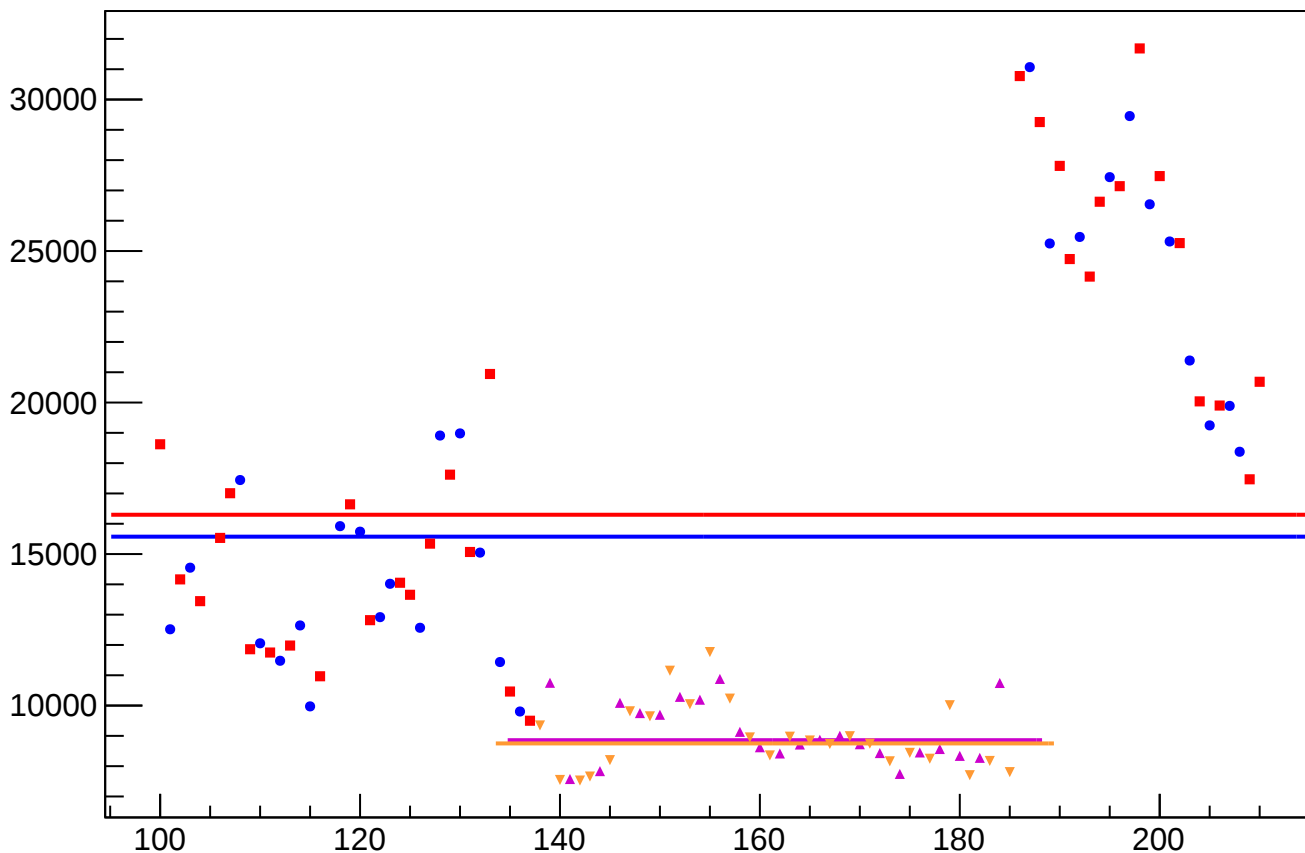
Left In:  $-0.564 \pm 2.144$   $\chi^2/\text{NDF}$ : 29.7/22

+ sign  $-9.788 \pm 1.862$   $\chi^2/\text{NDF}$ : 93.8/52

All:  $-6.464 \pm 1.335$   $\chi^2/\text{NDF}$ : 159.6/108

- sign  $-2.953 \pm 1.914$   $\chi^2/\text{NDF}$ : 59.3/55

# diff\_bpm4ecX\_rms vs Slug



Right In: 15574.069+/-3.075  $\chi^2/\text{NDF}$ : 3039521.2/27

Left Out: 8750.420+/-1.457  $\chi^2/\text{NDF}$ : 463880.1/24

Right Out: 16297.168+/-3.006  $\chi^2/\text{NDF}$ : 3518769.4/32

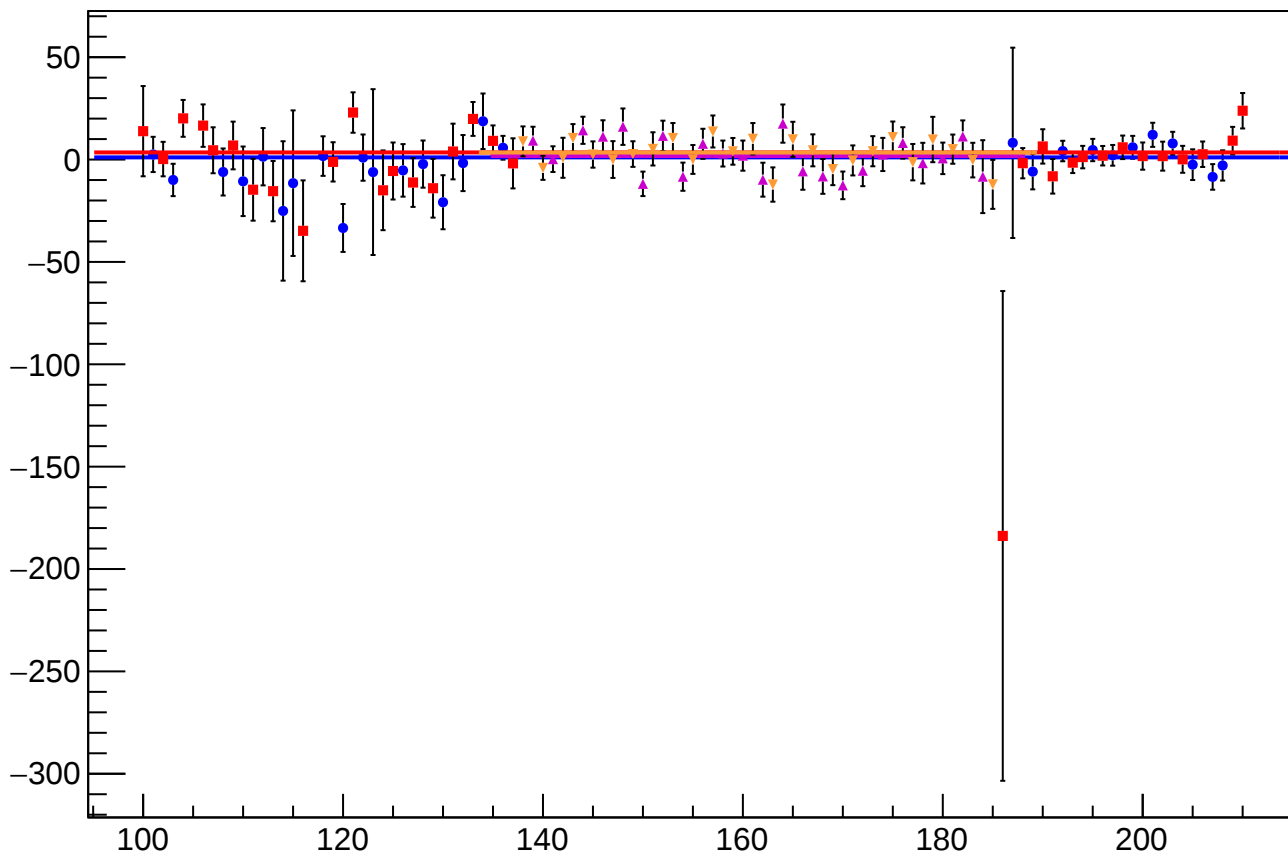
Left In: 8857.329+/-1.516  $\chi^2/\text{NDF}$ : 361778.8/22

+ sign 10001.795+/-1.317  $\chi^2/\text{NDF}$ : 7525329.2/52

All: 10178.783+/-0.944  $\chi^2/\text{NDF}$ : 16327412.7

- sign 10365.781+/-1.353  $\chi^2/\text{NDF}$ : 8764926.2/55

# diff\_bpm4ecY\_mean vs Slug



Right In:  $1.060 \pm 1.555$   $\chi^2/\text{NDF}$ : 27.8/27

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

Right Out:  $3.485 \pm 1.461$   $\chi^2/\text{NDF}$ : 37.2/32

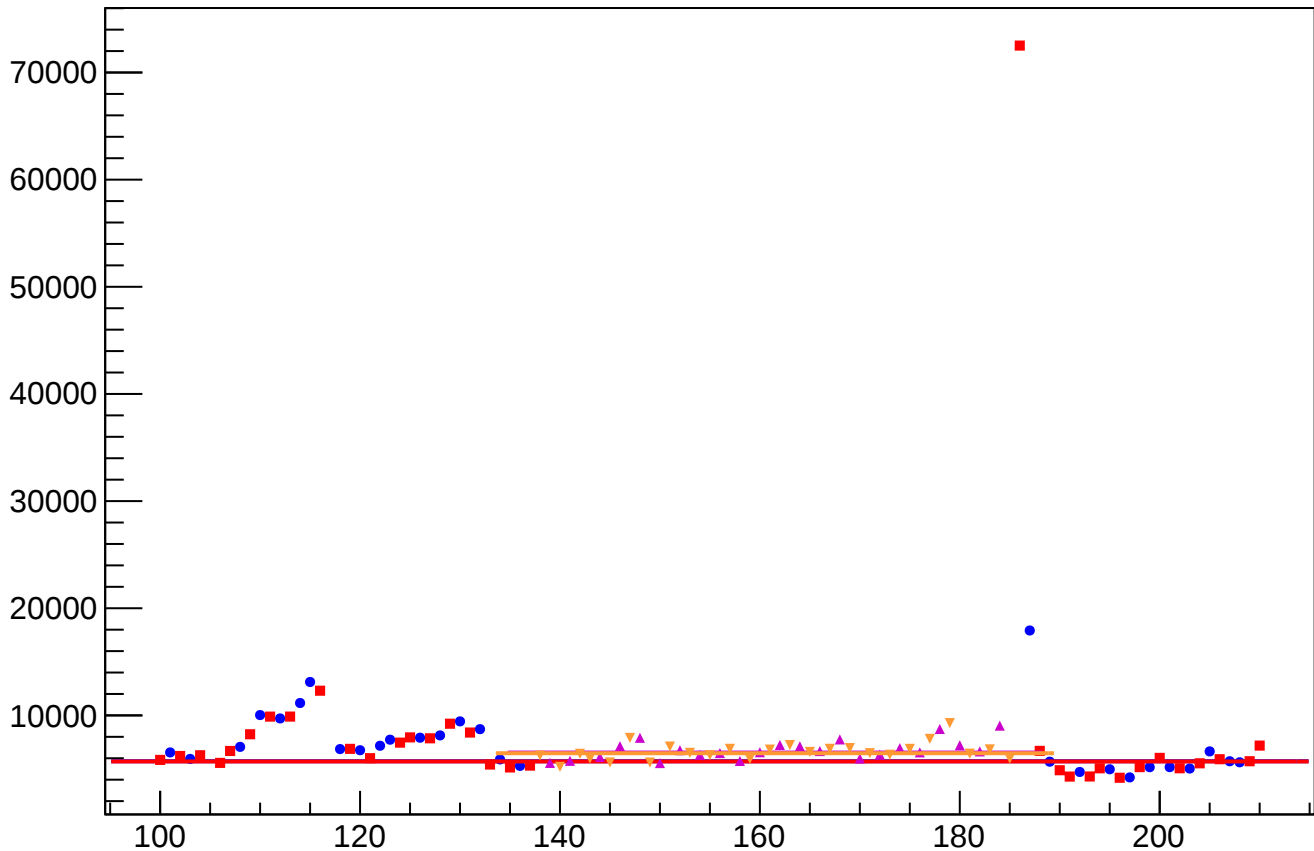
Left In:  $1.734 \pm 1.586$   $\chi^2/\text{NDF}$ : 33.6/22

+ sign  $2.269 \pm 1.089$   $\chi^2/\text{NDF}$ : 45.2/52

All:  $2.478 \pm 0.765$   $\chi^2/\text{NDF}$ : 116.8/108

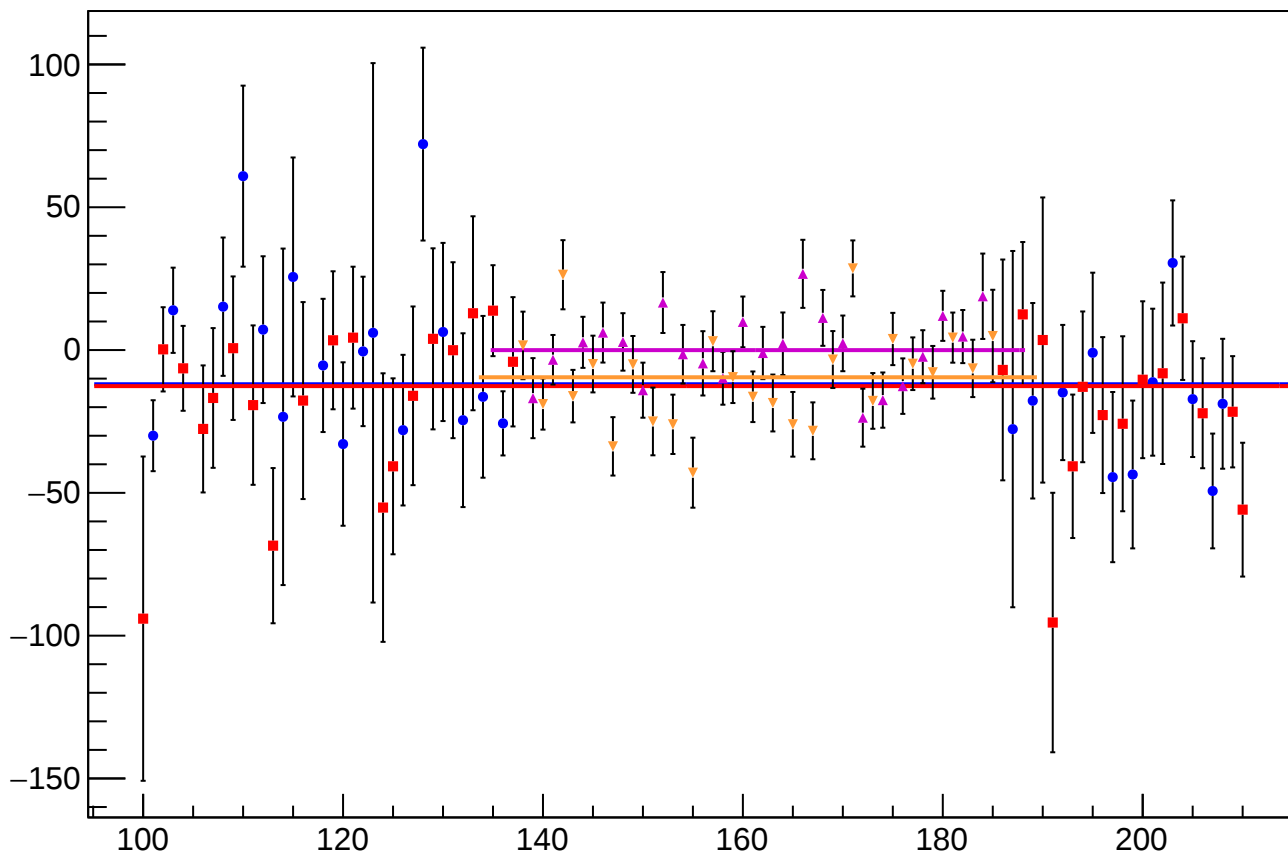
- sign  $2.681 \pm 1.074$   $\chi^2/\text{NDF}$ : 71.5/55

# diff\_bpm4ecY\_rms vs Slug



|                             |                                    |                         |                                    |
|-----------------------------|------------------------------------|-------------------------|------------------------------------|
| Right In: 5723.193+/-1.100  | $\chi^2/\text{NDF}$ : 1498841.1/27 | + sign 6103.176+/-0.770 | $\chi^2/\text{NDF}$ : 2220339.0/52 |
| Left Out: 6468.872+/-1.079  | $\chi^2/\text{NDF}$ : 487187.3/24  | All: 6092.674+/-0.541   | $\chi^2/\text{NDF}$ : 5165169.6/10 |
| Right Out: 5701.825+/-1.033 | $\chi^2/\text{NDF}$ : 2184060.5/32 | - sign 6082.452+/-0.760 | $\chi^2/\text{NDF}$ : 2944463.6/55 |
| Left In: 6530.954+/-1.121   | $\chi^2/\text{NDF}$ : 464668.6/22  |                         |                                    |

# diff\_bpm1X\_mean vs Slug



Right In:  $-11.975 \pm 4.407$   $\chi^2/\text{NDF}$ : 32.8/27

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

Right Out:  $-12.631 \pm 4.343$   $\chi^2/\text{NDF}$ : 25.6/32

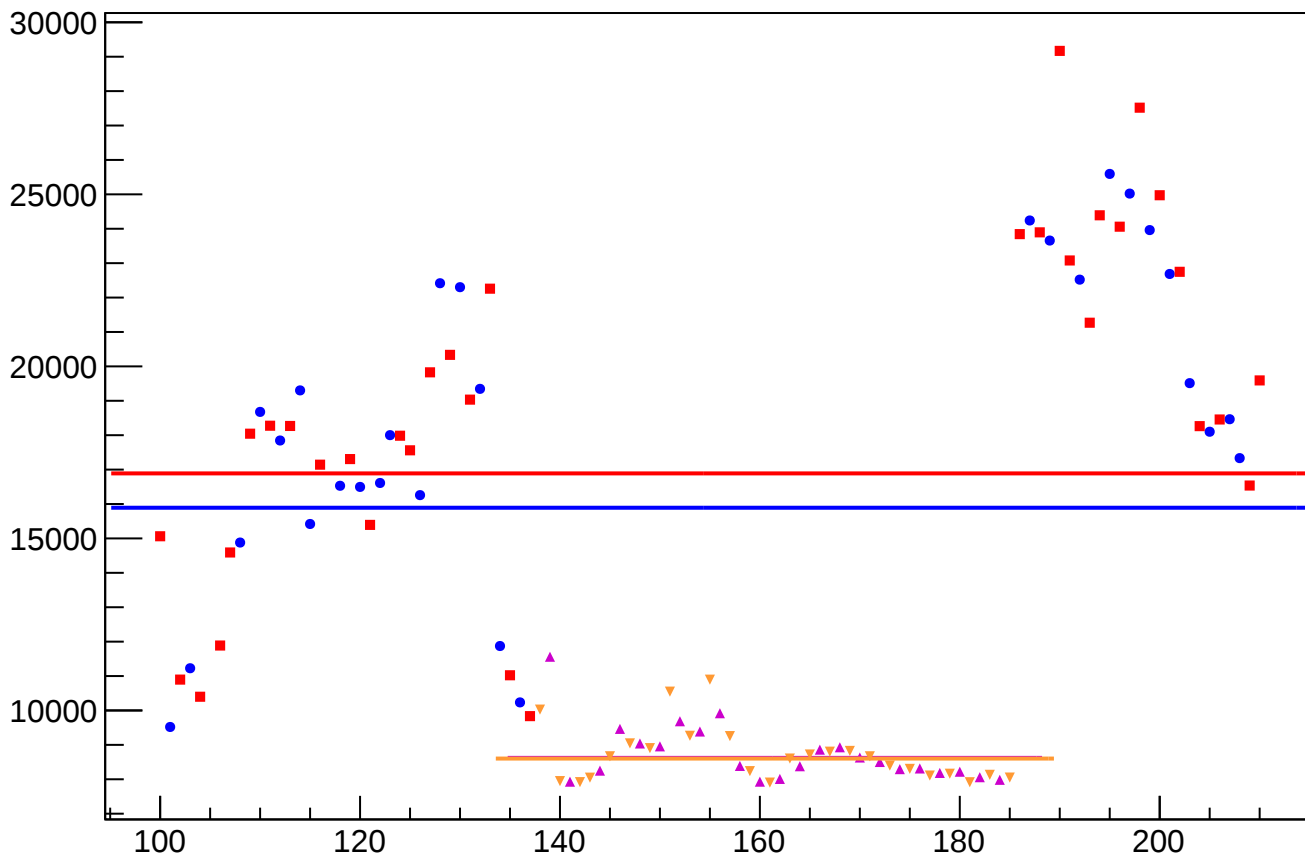
Left In:  $-0.027 \pm 2.080$   $\chi^2/\text{NDF}$ : 29.9/22

+ sign  $-9.952 \pm 1.833$   $\chi^2/\text{NDF}$ : 92.6/52

All:  $-6.253 \pm 1.311$   $\chi^2/\text{NDF}$ : 163.3/108

- sign  $-2.378 \pm 1.876$   $\chi^2/\text{NDF}$ : 62.4/55

# diff\_bpm1X\_rms vs Slug



Right In: 15891.788+/-3.116  $\chi^2/\text{NDF}$ : 2672987.0/27

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

Right Out: 16889.779+/-3.071  $\chi^2/\text{NDF}$ : 2690463.9/32

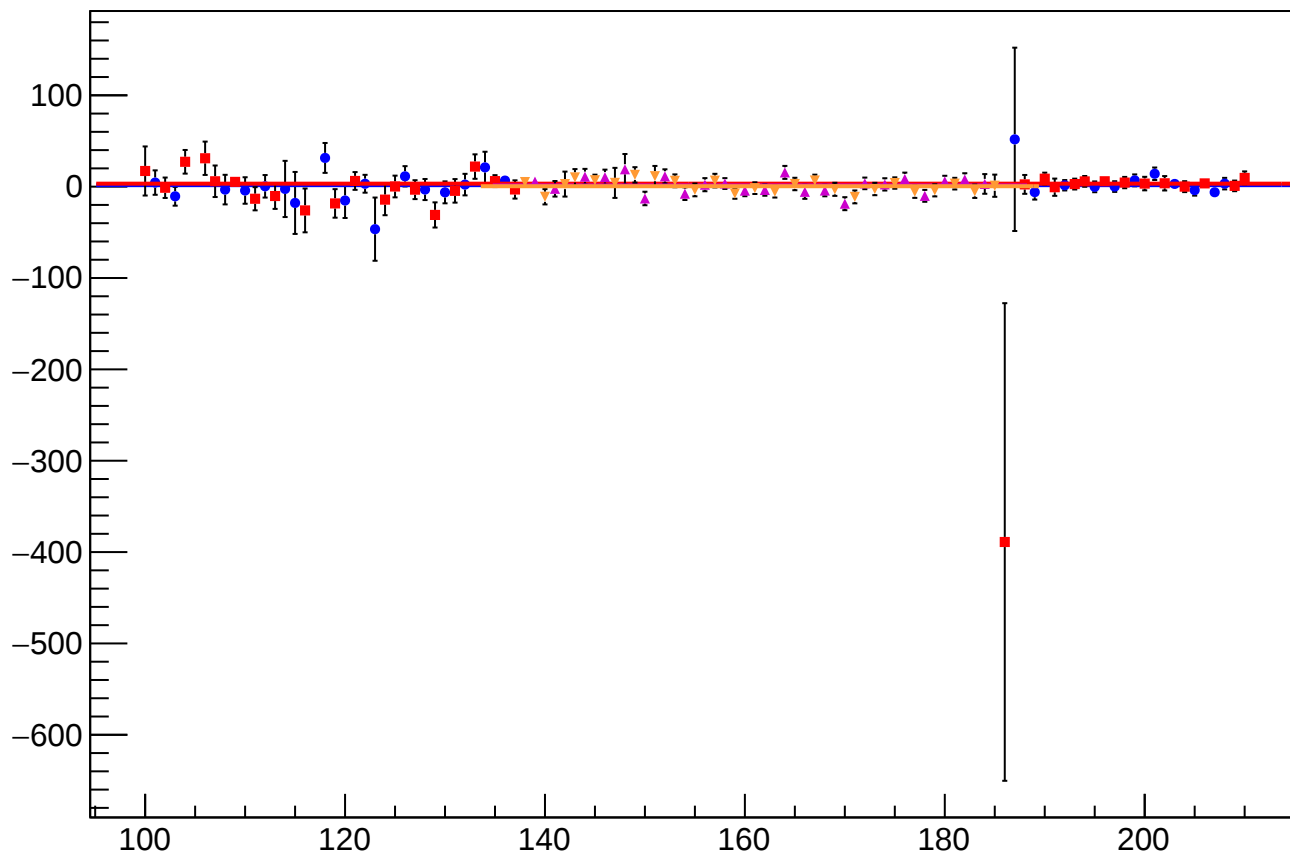
Left In: 8621.975+/-1.471  $\chi^2/\text{NDF}$ : 230824.4/22

+ sign 9862.845+/-1.296  $\chi^2/\text{NDF}$ : 7448640.6/52

All: 10010.179+/-0.927  $\chi^2/\text{NDF}$ : 16292916.8

- sign 10164.532+/-1.326  $\chi^2/\text{NDF}$ : 8817808.5/55

# diff\_bpm1Y\_mean vs Slug



Right In:  $1.635 \pm 1.577$   $\chi^2/\text{NDF}$ : 20.4/27

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

Right Out:  $3.271 \pm 1.443$   $\chi^2/\text{NDF}$ : 27.9/32

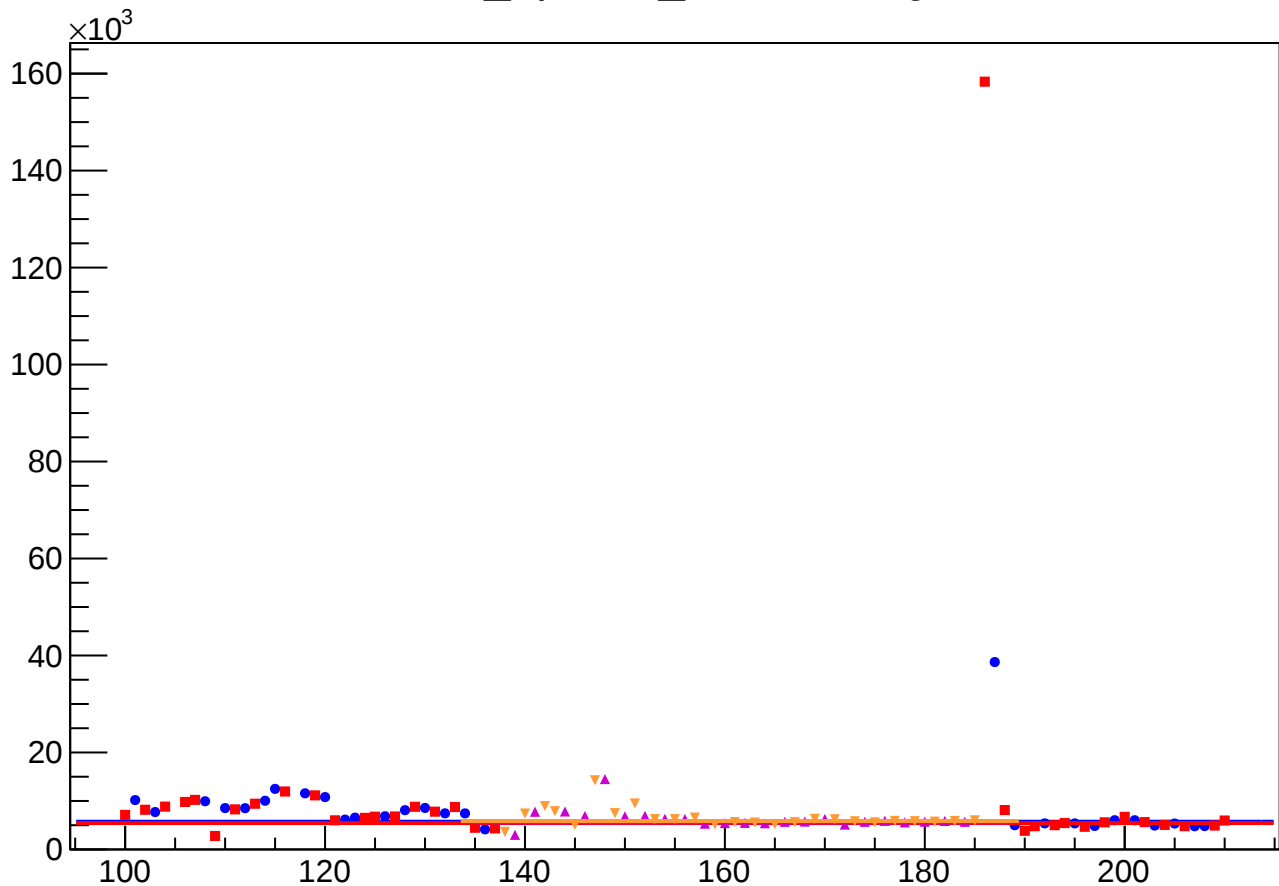
Left In:  $1.298 \pm 1.406$   $\chi^2/\text{NDF}$ : 33.0/22

+ sign  $0.997 \pm 1.055$   $\chi^2/\text{NDF}$ : 40.2/52

All:  $1.657 \pm 0.728$   $\chi^2/\text{NDF}$ : 102.9/108

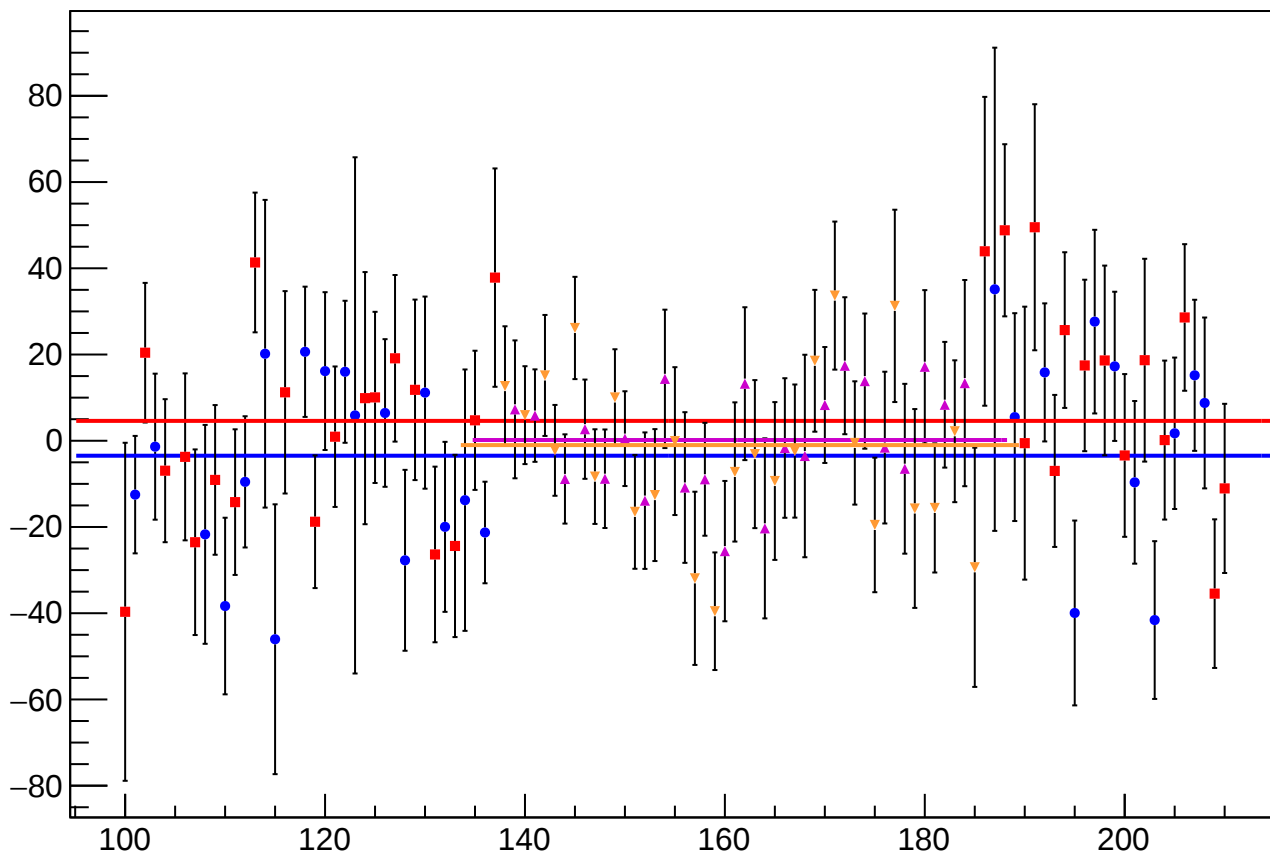
- sign  $2.259 \pm 1.007$   $\chi^2/\text{NDF}$ : 61.9/55

# diff\_bpm1Y\_rms vs Slug



|                             |                                    |                         |                                    |
|-----------------------------|------------------------------------|-------------------------|------------------------------------|
| Right In: 5717.465+/-1.115  | $\chi^2/\text{NDF}$ : 2109510.1/27 | + sign 5795.451+/-0.746 | $\chi^2/\text{NDF}$ : 3809712.4/52 |
| Left Out: 5858.642+/-1.004  | $\chi^2/\text{NDF}$ : 1691344.1/24 | All: 5653.162+/-0.515   | $\chi^2/\text{NDF}$ : 9439507.3/10 |
| Right Out: 5446.077+/-1.021 | $\chi^2/\text{NDF}$ : 3459271.2/32 | - sign 5523.436+/-0.712 | $\chi^2/\text{NDF}$ : 5560222.7/55 |
| Left In: 5596.879+/-0.994   | $\chi^2/\text{NDF}$ : 2089750.1/22 |                         |                                    |

# diff\_bpm11X\_mean vs Slug



Right In:  $-3.470 \pm 3.596$   $\chi^2/\text{NDF}: 31.2/27$

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

Right Out:  $4.608 \pm 3.421$   $\chi^2/\text{NDF}: 40.6/32$

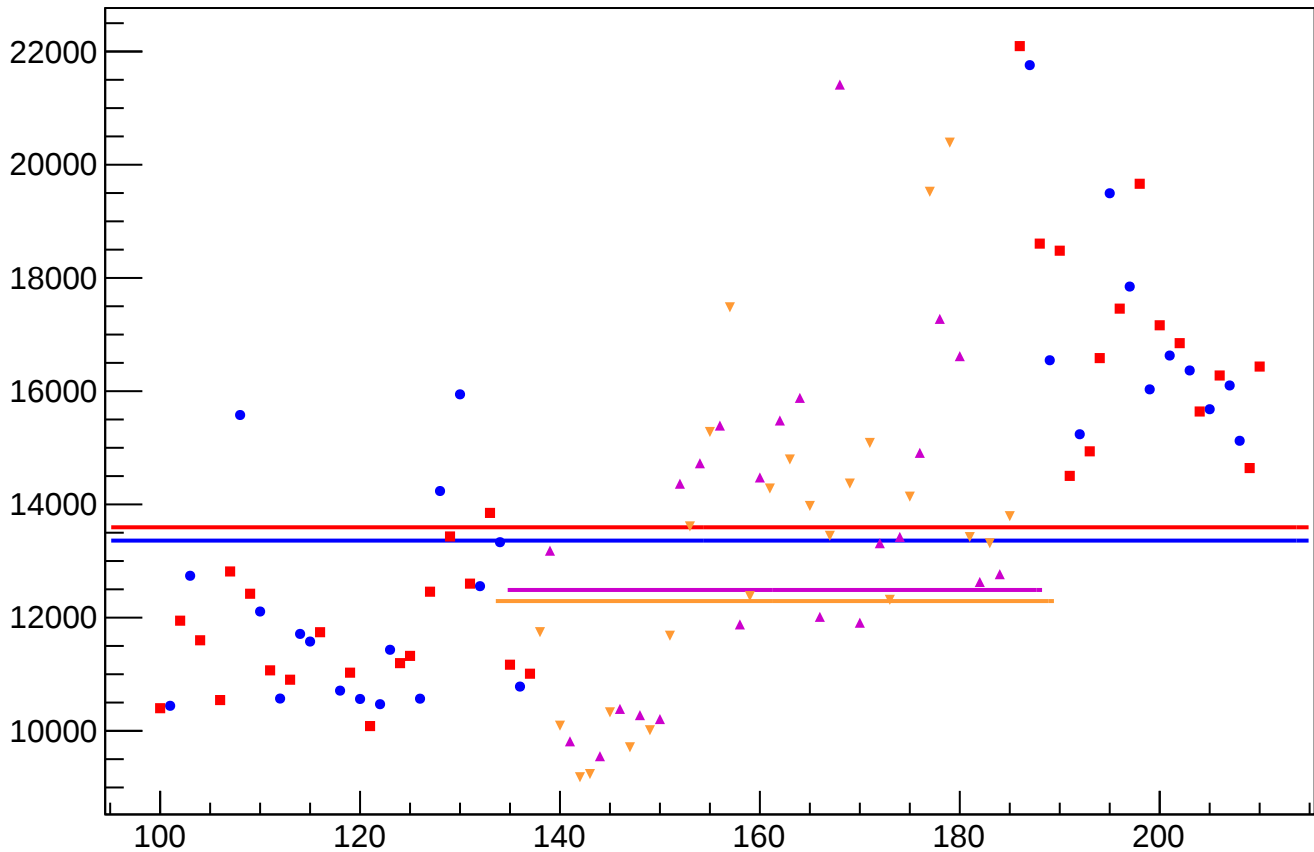
Left In:  $0.172 \pm 3.067$   $\chi^2/\text{NDF}: 12.4/22$

+ sign  $-1.994 \pm 2.277$   $\chi^2/\text{NDF}: 65.0/52$

All:  $0.071 \pm 1.612$   $\chi^2/\text{NDF}: 120.6/108$

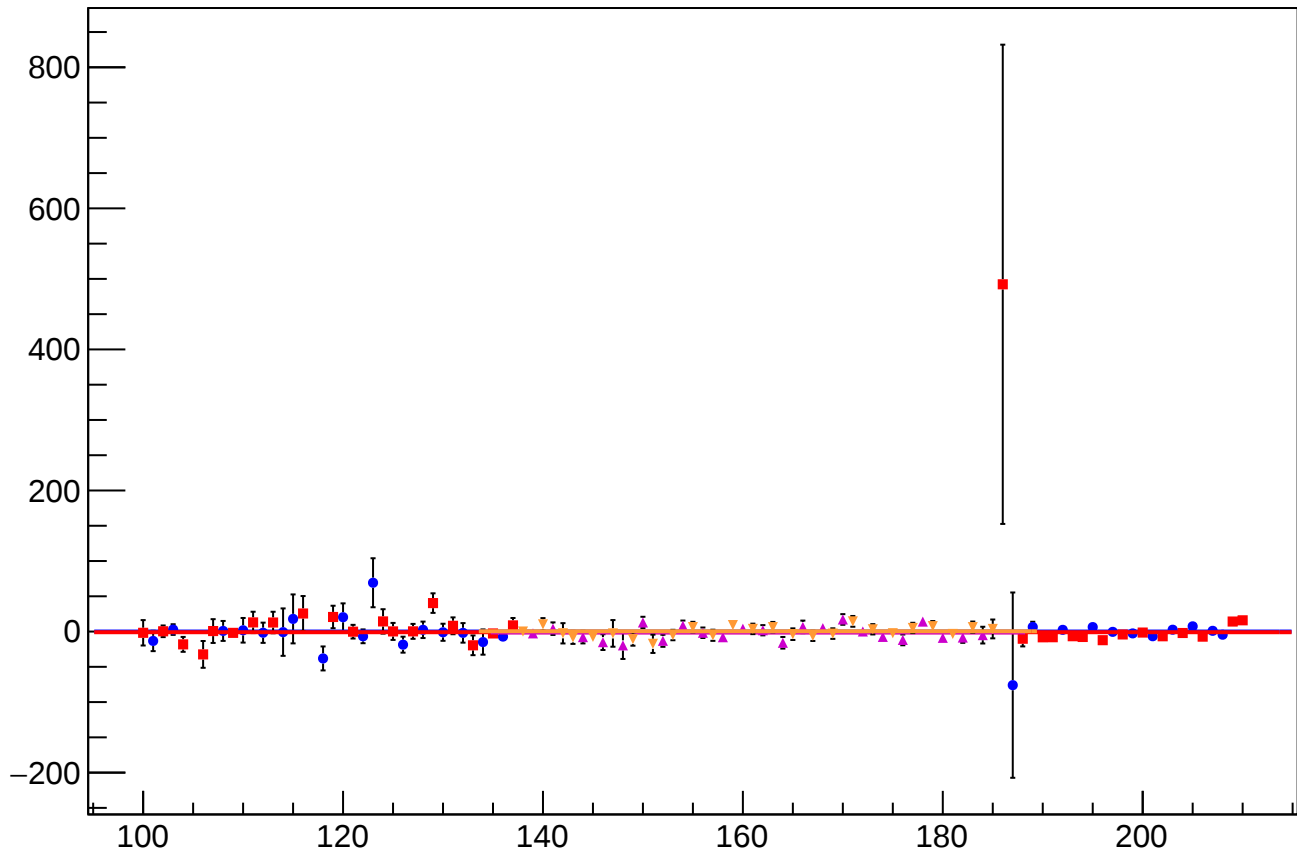
- sign  $2.149 \pm 2.284$   $\chi^2/\text{NDF}: 53.9/55$

# diff\_bpm11X\_rms vs Slug



|                              |                                    |                          |                                     |
|------------------------------|------------------------------------|--------------------------|-------------------------------------|
| Right In: 13360.713+/-2.542  | $\chi^2/\text{NDF}$ : 1171367.3/27 | + sign 12720.839+/-1.610 | $\chi^2/\text{NDF}$ : 2779646.7/52  |
| Left Out: 12292.583+/-2.080  | $\chi^2/\text{NDF}$ : 1502548.3/24 | All: 12851.133+/-1.140   | $\chi^2/\text{NDF}$ : 5582496.4/100 |
| Right Out: 13595.862+/-2.419 | $\chi^2/\text{NDF}$ : 1319108.5/32 | - sign 12982.218+/-1.615 | $\chi^2/\text{NDF}$ : 2789709.5/55  |
| Left In: 12488.821+/-2.169   | $\chi^2/\text{NDF}$ : 1354485.4/22 |                          |                                     |

# diff\_bpm11Y\_mean vs Slug



Right In:  $0.015 \pm 1.344$   $\chi^2/\text{NDF}: 27.0/27$

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

Right Out:  $-0.938 \pm 1.231$   $\chi^2/\text{NDF}: 67.0/32$

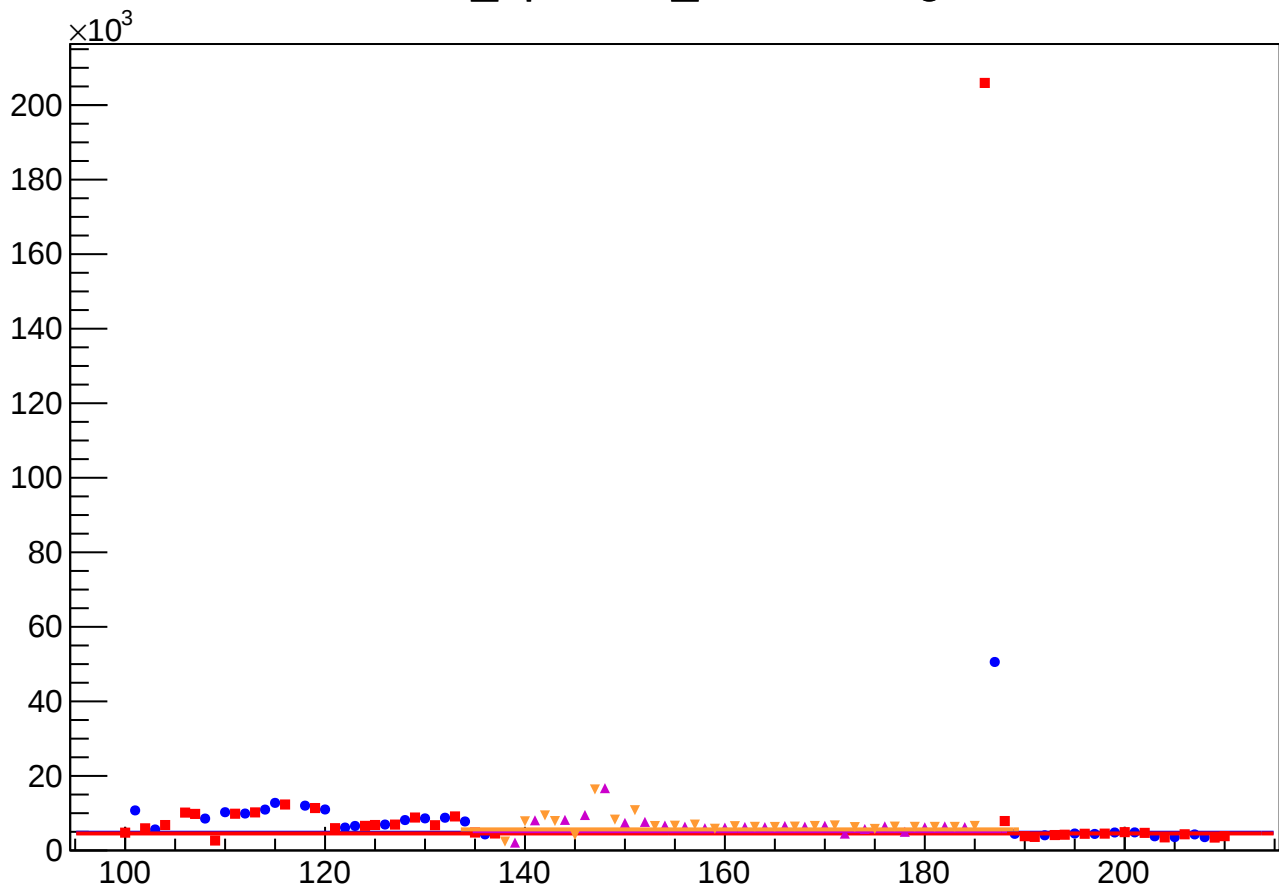
Left In:  $-1.278 \pm 1.386$   $\chi^2/\text{NDF}: 34.0/22$

+ sign  $0.200 \pm 0.981$   $\chi^2/\text{NDF}: 46.3/52$

All:  $-0.485 \pm 0.671$   $\chi^2/\text{NDF}: 148.3/108$

- sign  $-1.088 \pm 0.920$   $\chi^2/\text{NDF}: 101.1/55$

# diff\_bpm11Y\_rms vs Slug



Right In: 4760.076 $\pm$ 0.951  $\chi^2/\text{NDF}$ : 3177195.7/27

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

Right Out: 4560.235 $\pm$ 0.870  $\chi^2/\text{NDF}$ : 3954032.8/32

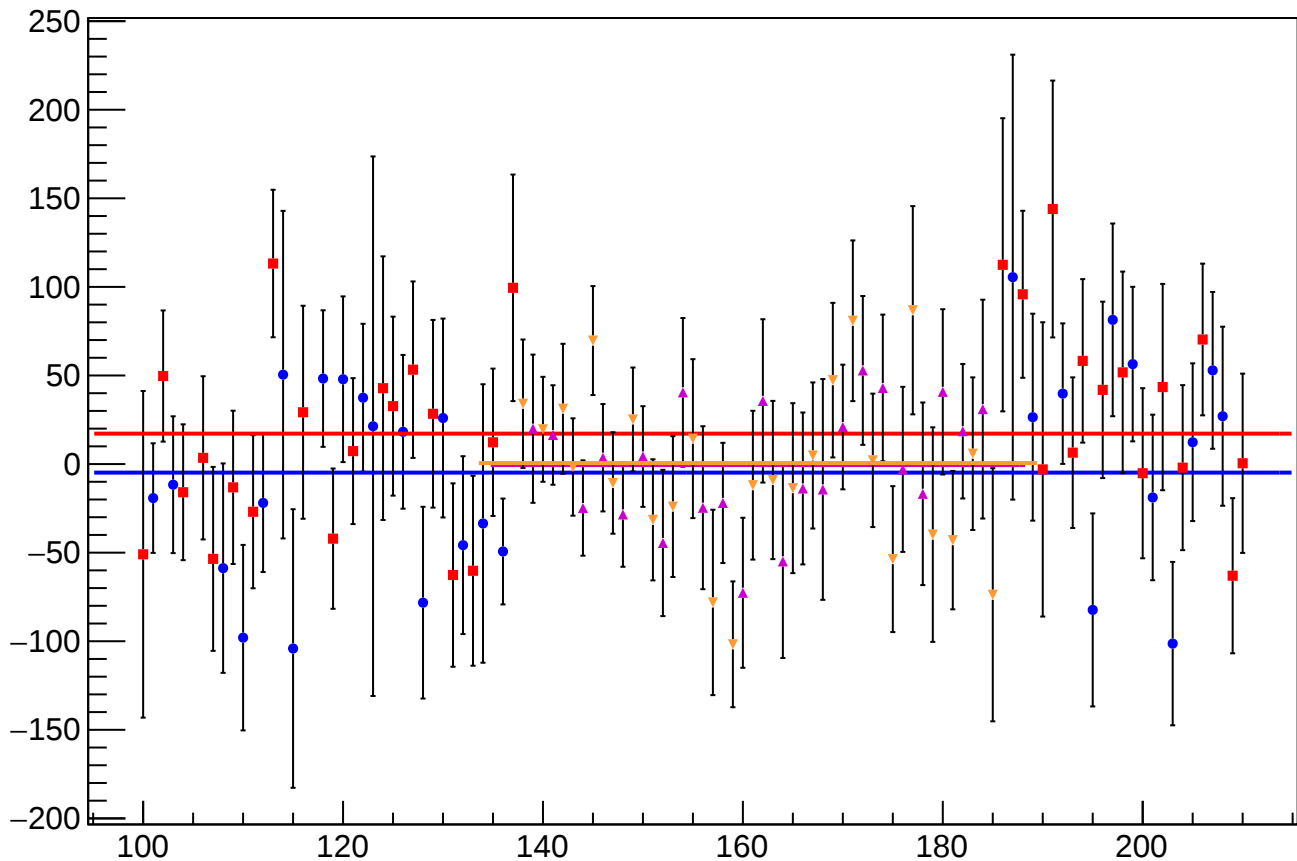
Left In: 5180.743 $\pm$ 0.980  $\chi^2/\text{NDF}$ : 5350053.6/22

+ sign 5178.819 $\pm$ 0.694  $\chi^2/\text{NDF}$ : 7716296.5/52

All: 4995.372 $\pm$ 0.475  $\chi^2/\text{NDF}$ : 17376031.6/100

- sign 4833.916 $\pm$ 0.651  $\chi^2/\text{NDF}$ : 9528234.2/55

# diff\_bpm12X\_mean vs Slug



Right In:  $-4.823 \pm 8.963$   $\chi^2/\text{NDF}$ : 31.6/27

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

Right Out:  $17.175 \pm 8.540$   $\chi^2/\text{NDF}$ : 34.4/32

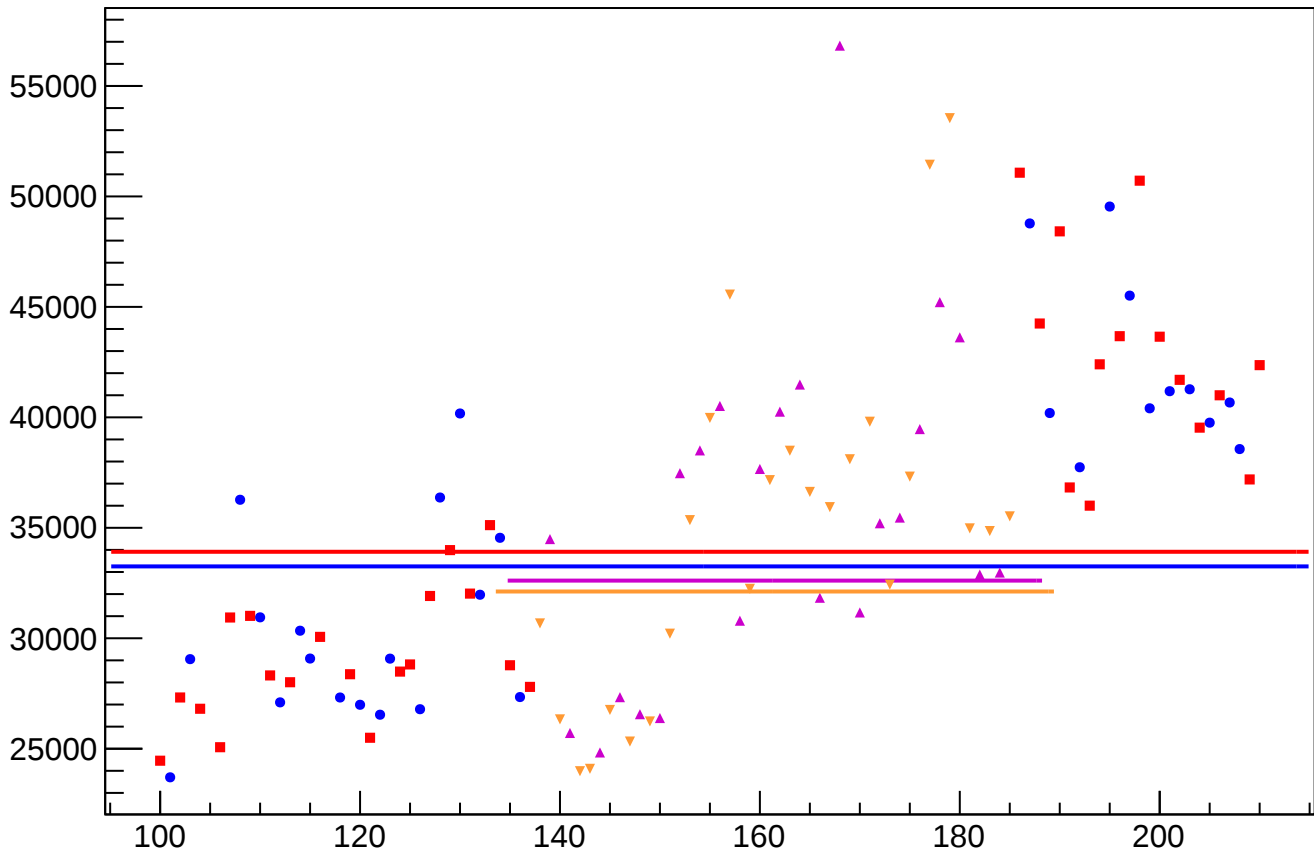
Left In:  $-0.565 \pm 8.015$   $\chi^2/\text{NDF}$ : 14.3/22

+ sign  $-1.711 \pm 5.837$   $\chi^2/\text{NDF}$ : 62.8/52

All:  $3.010 \pm 4.130$   $\chi^2/\text{NDF}$ : 115.1/108

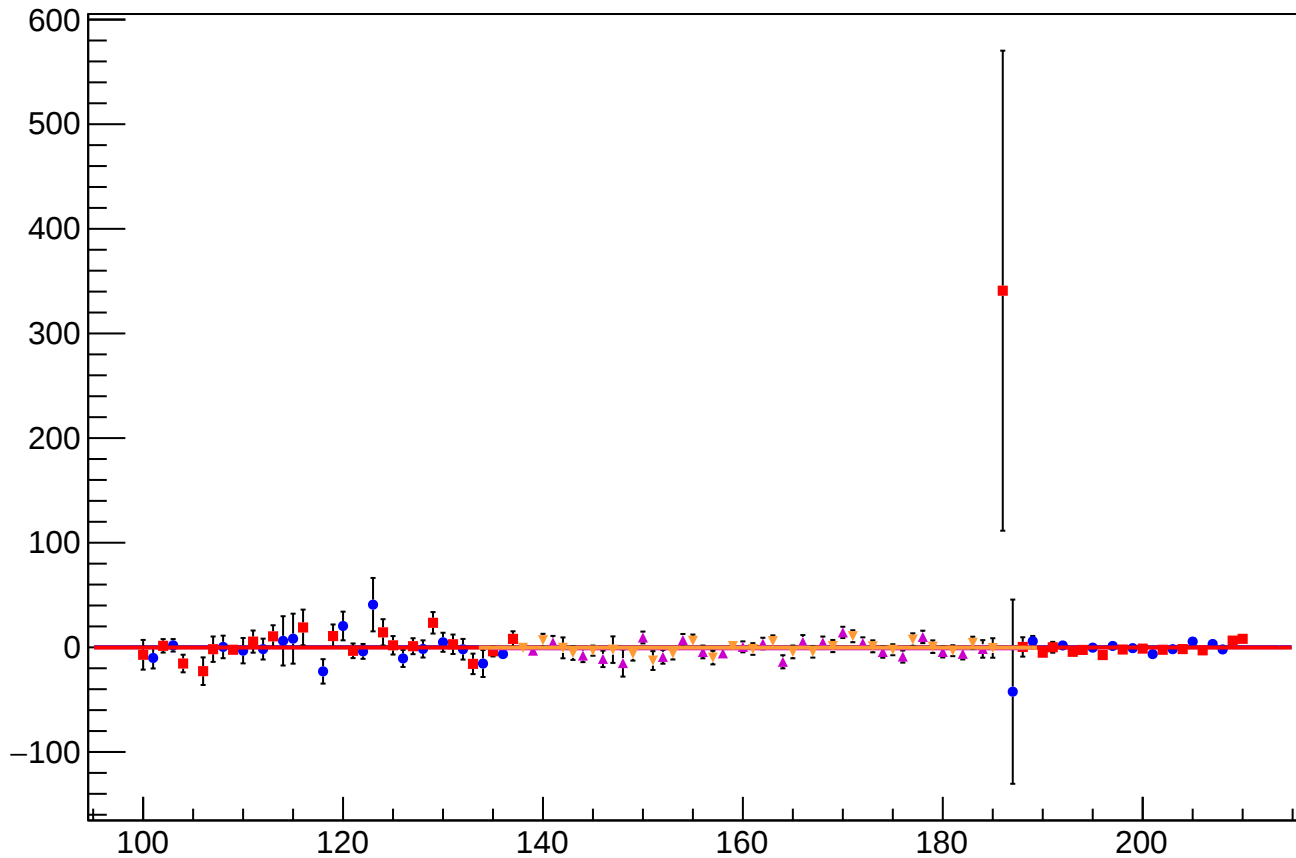
- sign  $7.743 \pm 5.844$   $\chi^2/\text{NDF}$ : 51.0/55

# diff\_bpm12X\_rms vs Slug



|                              |                                    |                          |                                    |
|------------------------------|------------------------------------|--------------------------|------------------------------------|
| Right In: 33252.798+/-6.338  | $\chi^2/\text{NDF}$ : 1236586.6/27 | + sign 32598.721+/-4.127 | $\chi^2/\text{NDF}$ : 2791818.2/52 |
| Left Out: 32117.184+/-5.438  | $\chi^2/\text{NDF}$ : 1536740.0/24 | All: 32909.546+/-2.920   | $\chi^2/\text{NDF}$ : 5599377.7/1  |
| Right Out: 33914.892+/-6.038 | $\chi^2/\text{NDF}$ : 1372900.1/32 | - sign 33221.156+/-4.132 | $\chi^2/\text{NDF}$ : 2796200.9/55 |
| Left In: 32610.108+/-5.667   | $\chi^2/\text{NDF}$ : 1398475.8/22 |                          |                                    |

# diff\_bpm12Y\_mean vs Slug



Right In:  $0.143 \pm 0.820$   $\chi^2/\text{NDF}$ : 32.6/27

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

Right Out:  $-0.171 \pm 0.779$   $\chi^2/\text{NDF}$ : 55.5/32

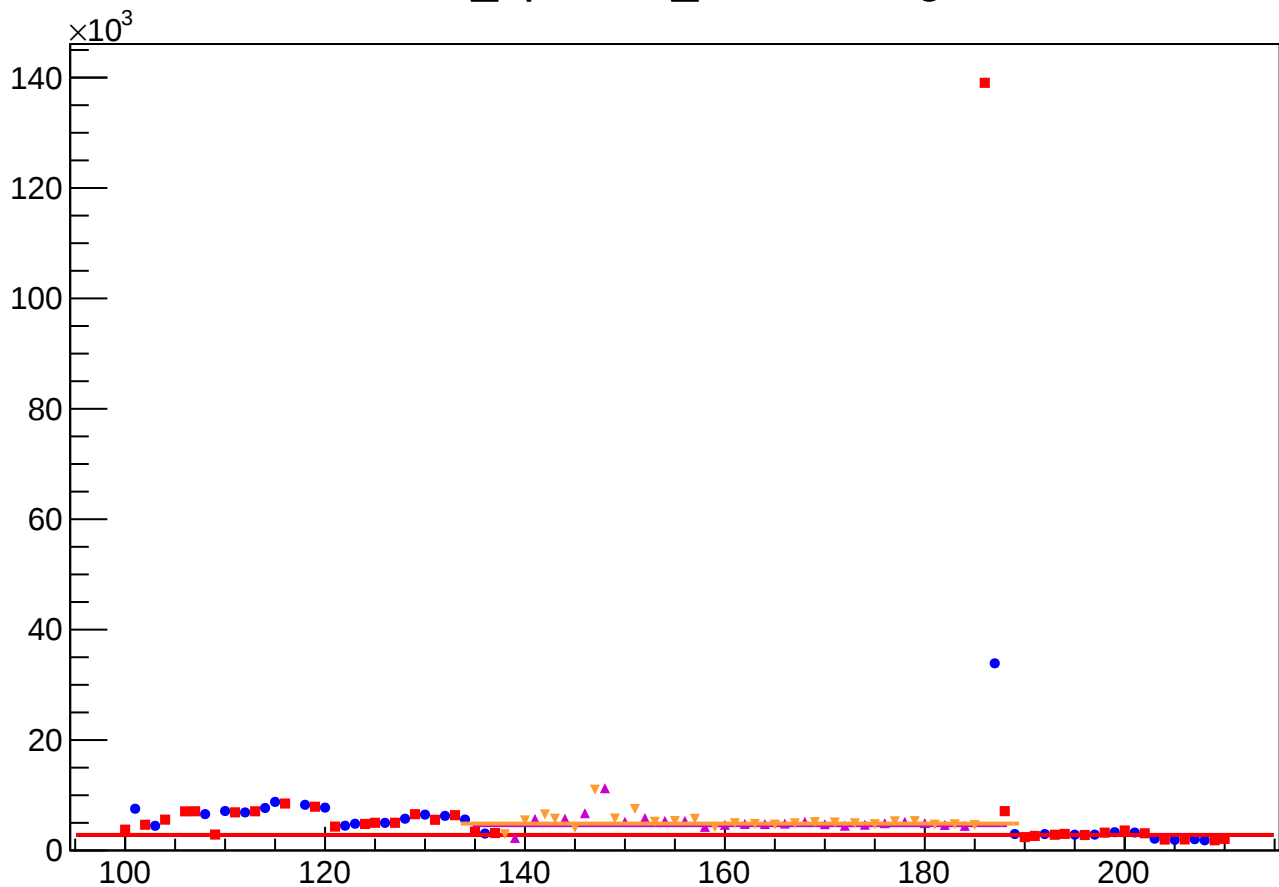
Left In:  $-0.925 \pm 1.154$   $\chi^2/\text{NDF}$ : 36.1/22

+ sign  $0.012 \pm 0.672$   $\chi^2/\text{NDF}$ : 50.7/52

All:  $-0.206 \pm 0.466$   $\chi^2/\text{NDF}$ : 142.8/108

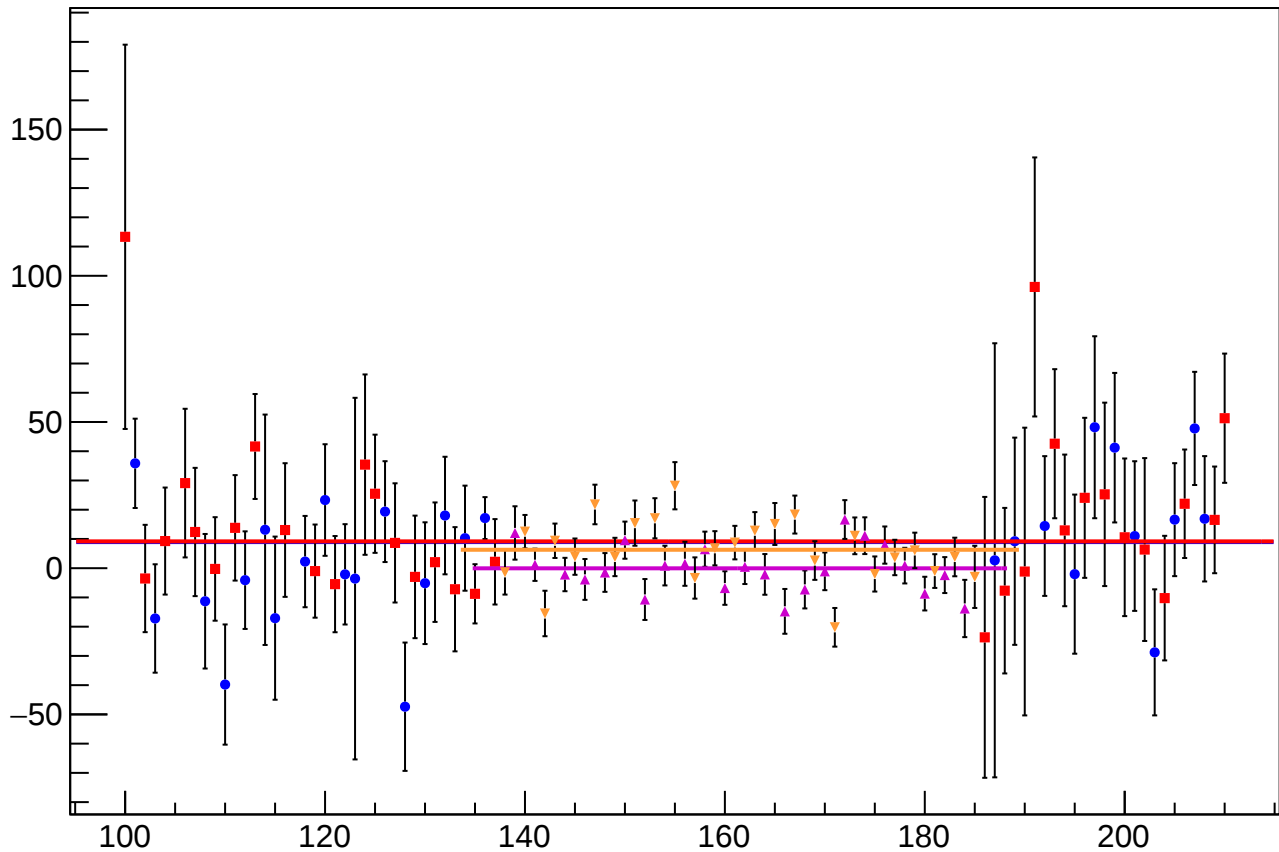
- sign  $-0.407 \pm 0.646$   $\chi^2/\text{NDF}$ : 91.9/55

# diff\_bpm12Y\_rms vs Slug



Right In:  $2801.507 \pm 0.580$   $\chi^2/\text{NDF}: 4939657.0/27$  + sign  $3479.497 \pm 0.475$   $\chi^2/\text{NDF}: 10615400.2/52$   
 Left Out:  $4866.528 \pm 0.829$   $\chi^2/\text{NDF}: 1511486.2/24$  All:  $3422.253 \pm 0.329$   $\chi^2/\text{NDF}: 22047951.2/100$   
 Right Out:  $2815.778 \pm 0.551$   $\chi^2/\text{NDF}: 5706881.8/32$  - sign  $3369.381 \pm 0.457$   $\chi^2/\text{NDF}: 11404637.7/55$   
 Left In:  $4582.193 \pm 0.816$   $\chi^2/\text{NDF}: 2478681.0/22$

# diff\_bpm16X\_mean vs Slug



Right In:  $8.929 \pm 3.577$   $\chi^2/\text{NDF}$ : 33.9/27

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

Right Out:  $9.174 \pm 3.615$   $\chi^2/\text{NDF}$ : 26.4/32

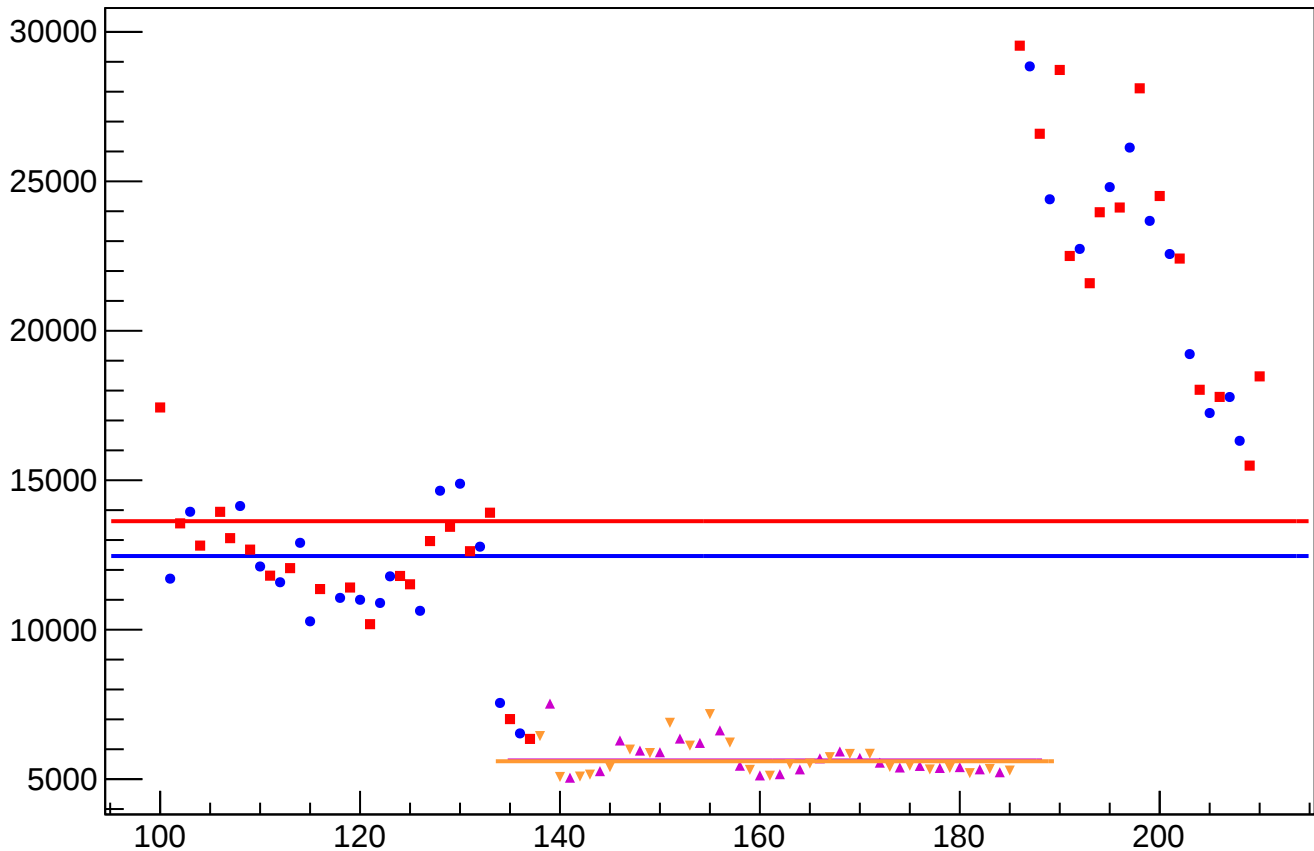
Left In:  $-0.044 \pm 1.358$   $\chi^2/\text{NDF}$ : 30.0/22

+ sign  $6.614 \pm 1.232$   $\chi^2/\text{NDF}$ : 91.1/52

All:  $3.940 \pm 0.885$   $\chi^2/\text{NDF}$ : 162.9/108

- sign  $1.095 \pm 1.271$   $\chi^2/\text{NDF}$ : 62.1/55

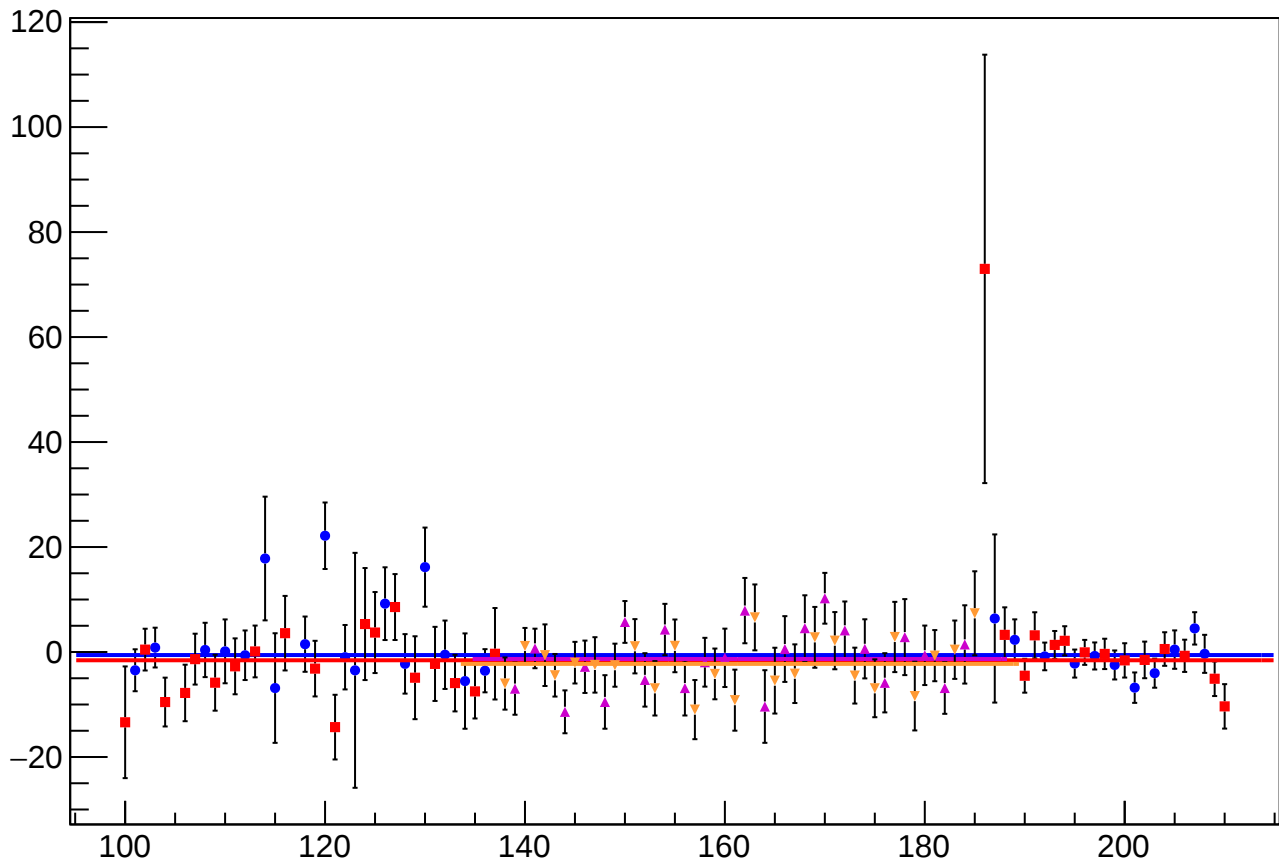
# diff\_bpm16X\_rms vs Slug



Right In: 12464.555 $\pm$ 2.529  $\chi^2$ /NDF: 4408218.4/27  
 Left Out: 5598.786 $\pm$ 0.928  $\chi^2$ /NDF:283253.4/24  
 Right Out: 13630.412 $\pm$ 2.556  $\chi^2$ /NDF: 4515938.9/32  
 Left In: 5625.163 $\pm$ 0.960  $\chi^2$ /NDF:272563.5/22

+ sign 6413.504 $\pm$ 0.871  $\chi^2$ /NDF: 11185175.3/52  
 All: 6510.974 $\pm$ 0.626  $\chi^2$ /NDF: 24593643.0/100  
 - sign 6614.684 $\pm$ 0.899  $\chi^2$ /NDF: 13382638.4/55

# diff\_bpm16Y\_mean vs Slug



Right In:  $-0.578 \pm 0.778$   $\chi^2/\text{NDF}$ : 35.0/27

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

Right Out:  $-1.573 \pm 0.737$   $\chi^2/\text{NDF}$ : 32.9/32

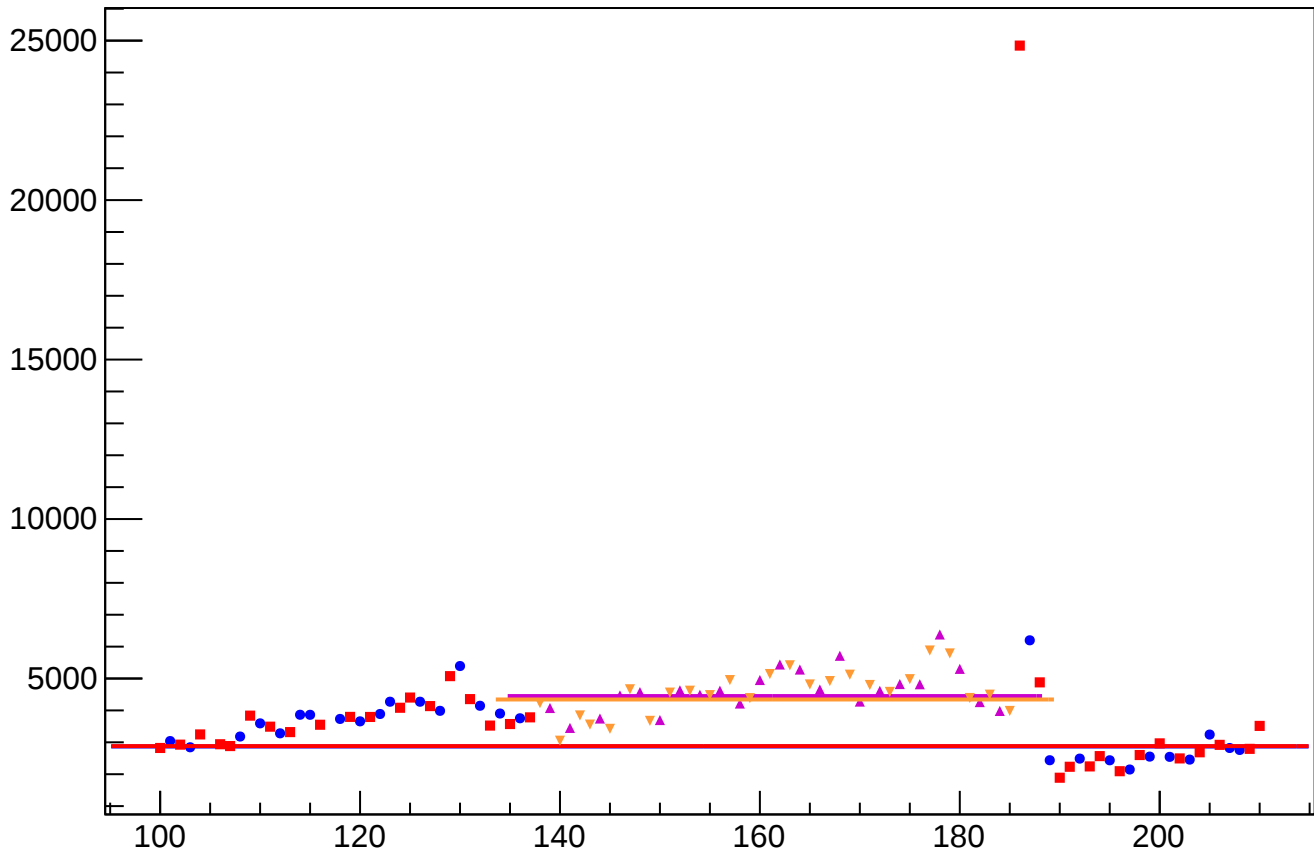
Left In:  $-1.328 \pm 1.082$   $\chi^2/\text{NDF}$ : 30.6/22

+ sign  $-1.189 \pm 0.621$   $\chi^2/\text{NDF}$ : 52.2/52

All:  $-1.345 \pm 0.435$   $\chi^2/\text{NDF}$ : 115.8/108

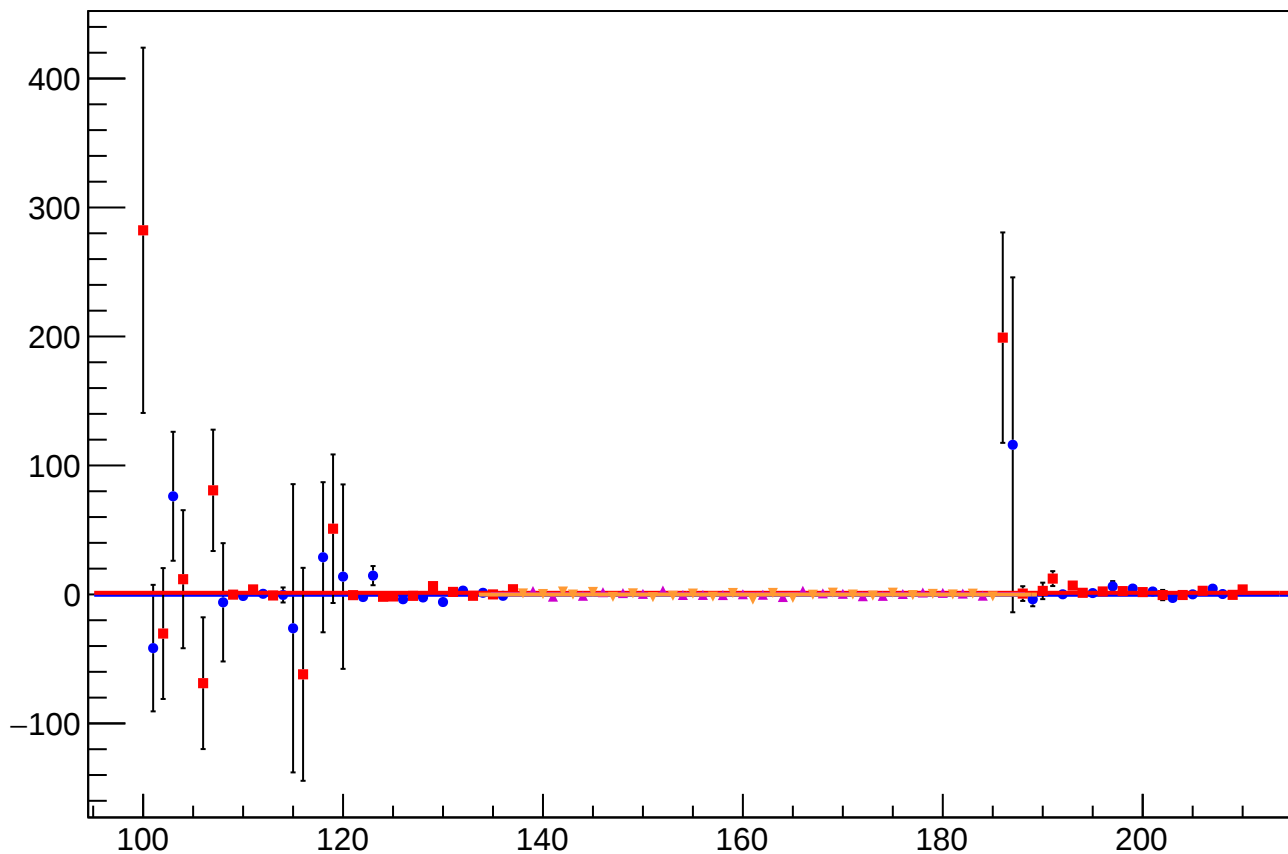
- sign  $-1.495 \pm 0.609$   $\chi^2/\text{NDF}$ : 63.5/55

# diff\_bpm16Y\_rms vs Slug



Right In:  $2869.257 \pm 0.550$   $\chi^2/\text{NDF}: 1294948.2/27$  + sign  $3404.172 \pm 0.439$   $\chi^2/\text{NDF}: 4893931.7/52$   
 Left Out:  $4342.635 \pm 0.728$   $\chi^2/\text{NDF}: 993035.5/24$  All:  $3390.890 \pm 0.307$   $\chi^2/\text{NDF}: 10773789.9/1$   
 Right Out:  $2880.769 \pm 0.521$   $\chi^2/\text{NDF}: 2311305.6/32$  - sign  $3378.098 \pm 0.431$   $\chi^2/\text{NDF}: 5878060.5/55$   
 Left In:  $4450.007 \pm 0.765$   $\chi^2/\text{NDF}: 693229.8/22$

# diff\_bpm1p02bX\_mean vs Slug



Right In:  $-0.257 \pm 0.584$   $\chi^2/\text{NDF}$ : 31.6/27

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

Right Out:  $1.263 \pm 0.554$   $\chi^2/\text{NDF}$ : 37.2/32

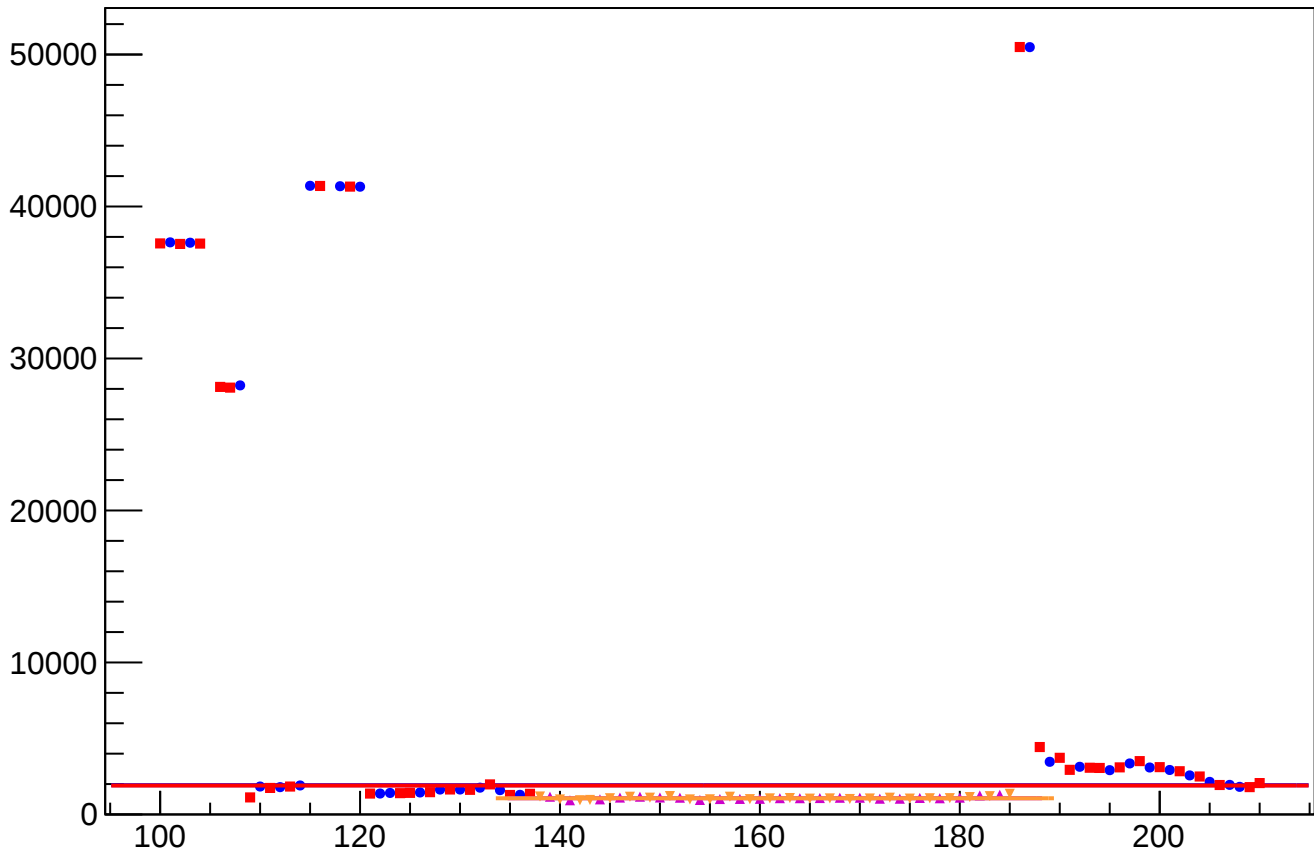
Left In:  $0.259 \pm 0.257$   $\chi^2/\text{NDF}$ : 27.2/22

+ sign  $-0.117 \pm 0.229$   $\chi^2/\text{NDF}$ : 66.1/52

All:  $0.155 \pm 0.163$   $\chi^2/\text{NDF}$ : 136.1/108

- sign  $0.437 \pm 0.233$   $\chi^2/\text{NDF}$ : 67.1/55

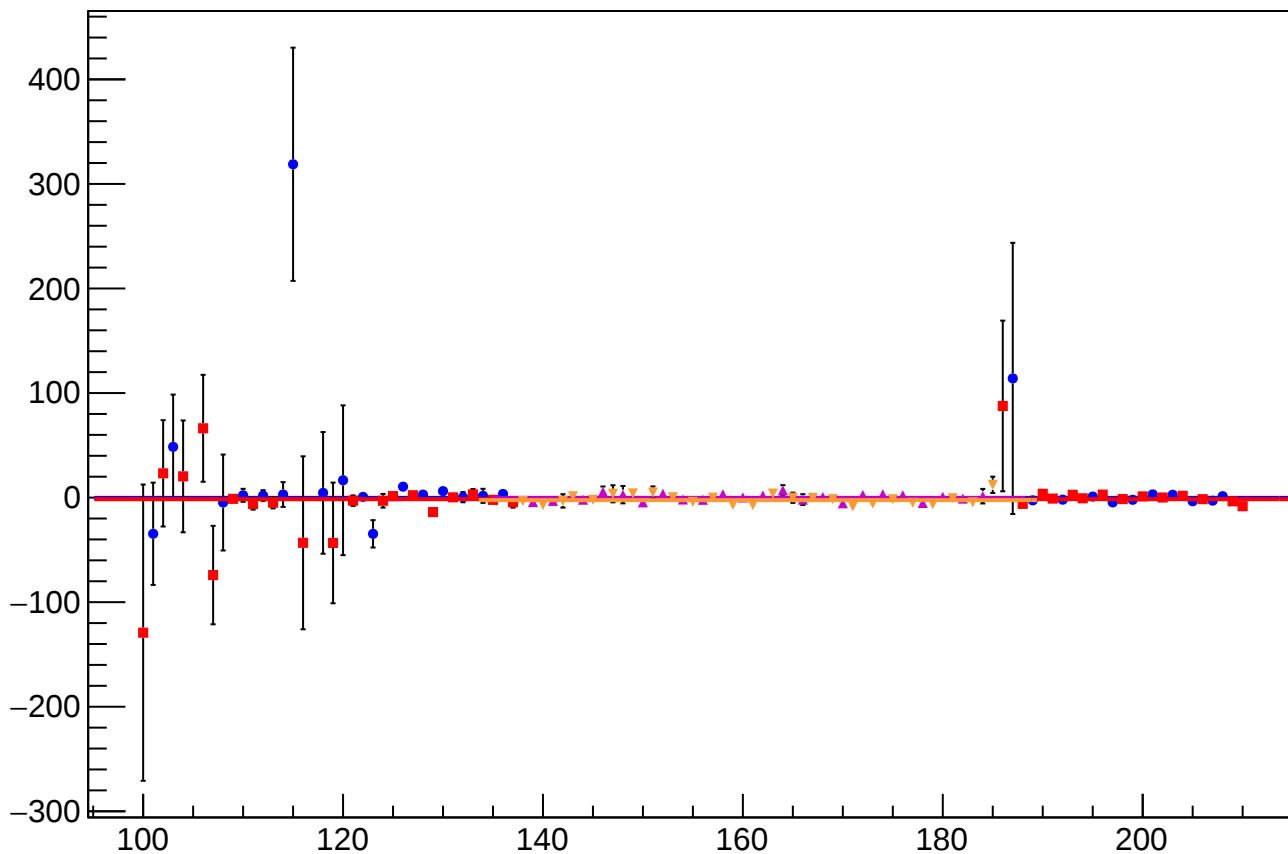
# diff\_bpm1p02bX\_rms vs Slug



Right In:  $1924.943 \pm 0.413$   $\chi^2/\text{NDF}$ : 6924302.3/27  
 Left Out:  $1064.701 \pm 0.176$   $\chi^2/\text{NDF}$ : 186511.5/24  
 Right Out:  $1903.036 \pm 0.392$   $\chi^2/\text{NDF}$ : 8353769.7/32  
 Left In:  $1066.255 \pm 0.182$   $\chi^2/\text{NDF}$ : 164232.1/22

+ sign  $1197.011 \pm 0.162$   $\chi^2/\text{NDF}$ : 10781030.1/52  
 All:  $1205.631 \pm 0.116$   $\chi^2/\text{NDF}$ : 23063453.1/100  
 - sign  $1214.554 \pm 0.165$   $\chi^2/\text{NDF}$ : 12276660.6/55

# diff\_bpm1p02bY\_mean vs Slug



Right In:  $-0.247 \pm 0.548$   $\chi^2/\text{NDF}$ : 49.6/27

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

Right Out:  $-1.516 \pm 0.523$   $\chi^2/\text{NDF}$ : 53.4/32

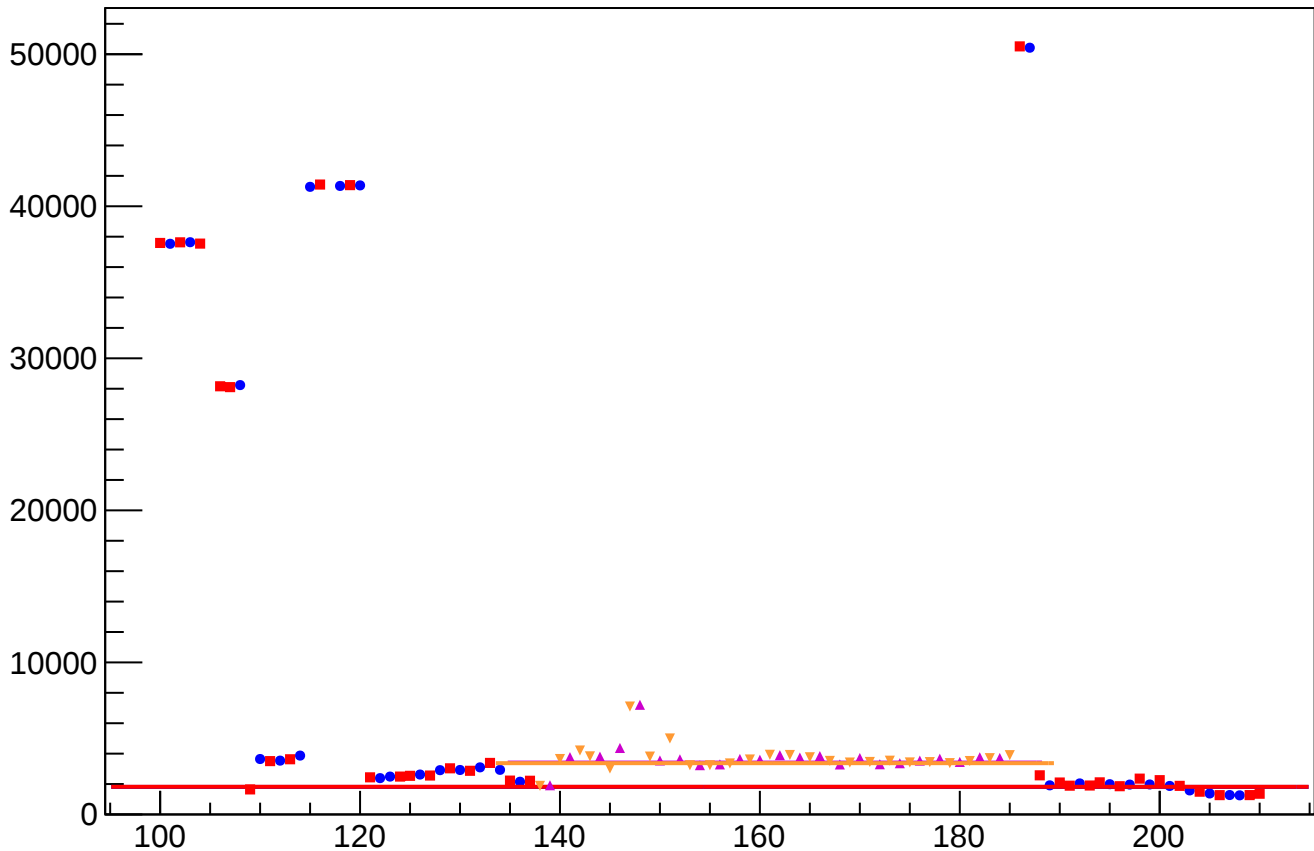
Left In:  $-0.468 \pm 0.843$   $\chi^2/\text{NDF}$ : 15.5/22

+ sign  $-0.930 \pm 0.454$   $\chi^2/\text{NDF}$ : 75.8/52

All:  $-1.080 \pm 0.318$   $\chi^2/\text{NDF}$ : 146.0/108

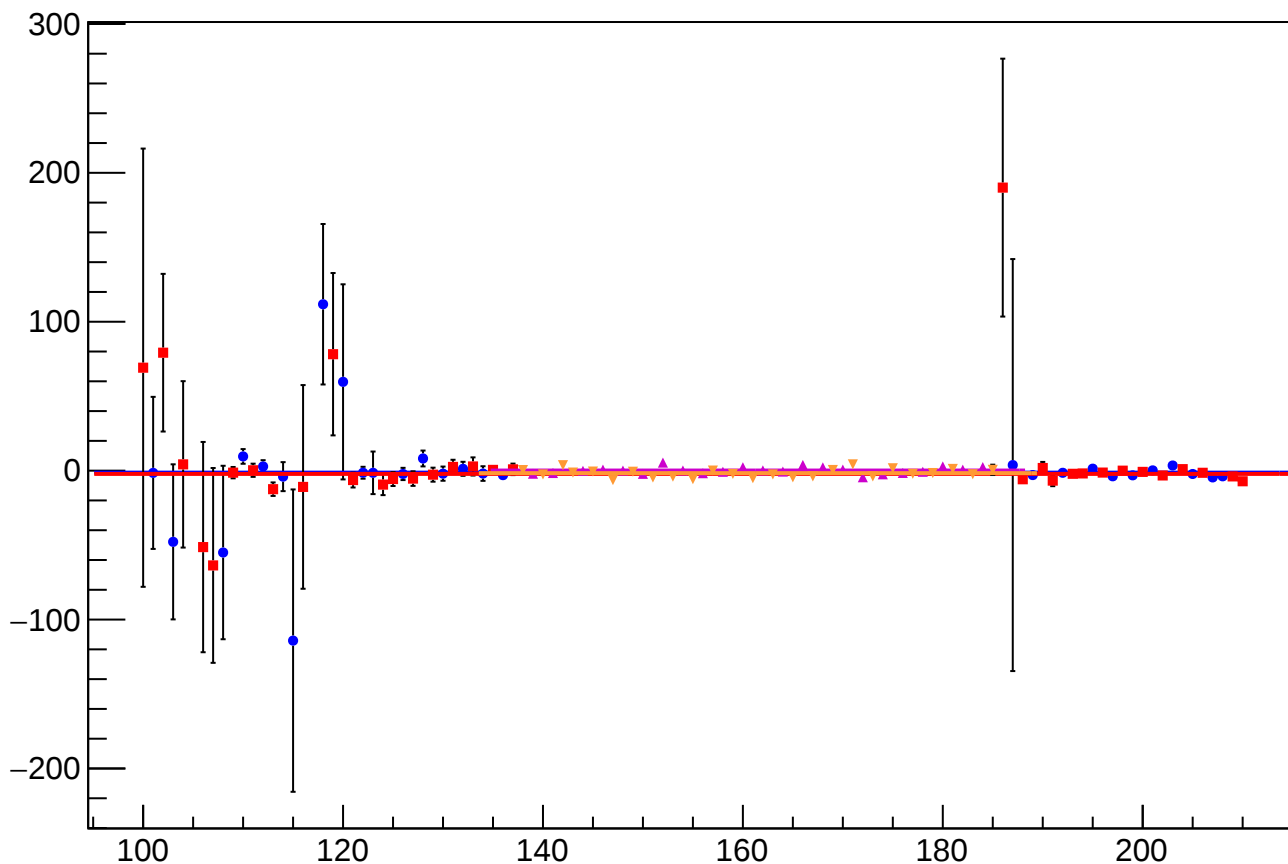
- sign  $-1.225 \pm 0.444$   $\chi^2/\text{NDF}$ : 70.0/55

# diff\_bpm1p02bY\_rms vs Slug



Right In:  $1809.973 \pm 0.388$   $\chi^2/\text{NDF}: 6705560.7/27$  + sign  $2300.519 \pm 0.321$   $\chi^2/\text{NDF}: 13465189.1/52$   
 Left Out:  $3372.958 \pm 0.573$   $\chi^2/\text{NDF}: 1656864.7/24$  All:  $2281.046 \pm 0.225$   $\chi^2/\text{NDF}: 27513643.8/100$   
 Right Out:  $1819.504 \pm 0.370$   $\chi^2/\text{NDF}: 7453175.7/32$  - sign  $2262.387 \pm 0.314$   $\chi^2/\text{NDF}: 14041252.4/55$   
 Left In:  $3411.924 \pm 0.596$   $\chi^2/\text{NDF}: 1434523.7/22$

# diff\_bpm1p03aX\_mean vs Slug



Right In:  $-1.331 \pm 0.633$   $\chi^2/\text{NDF}$ : 29.5/27

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

Right Out:  $-2.181 \pm 0.611$   $\chi^2/\text{NDF}$ : 33.4/32

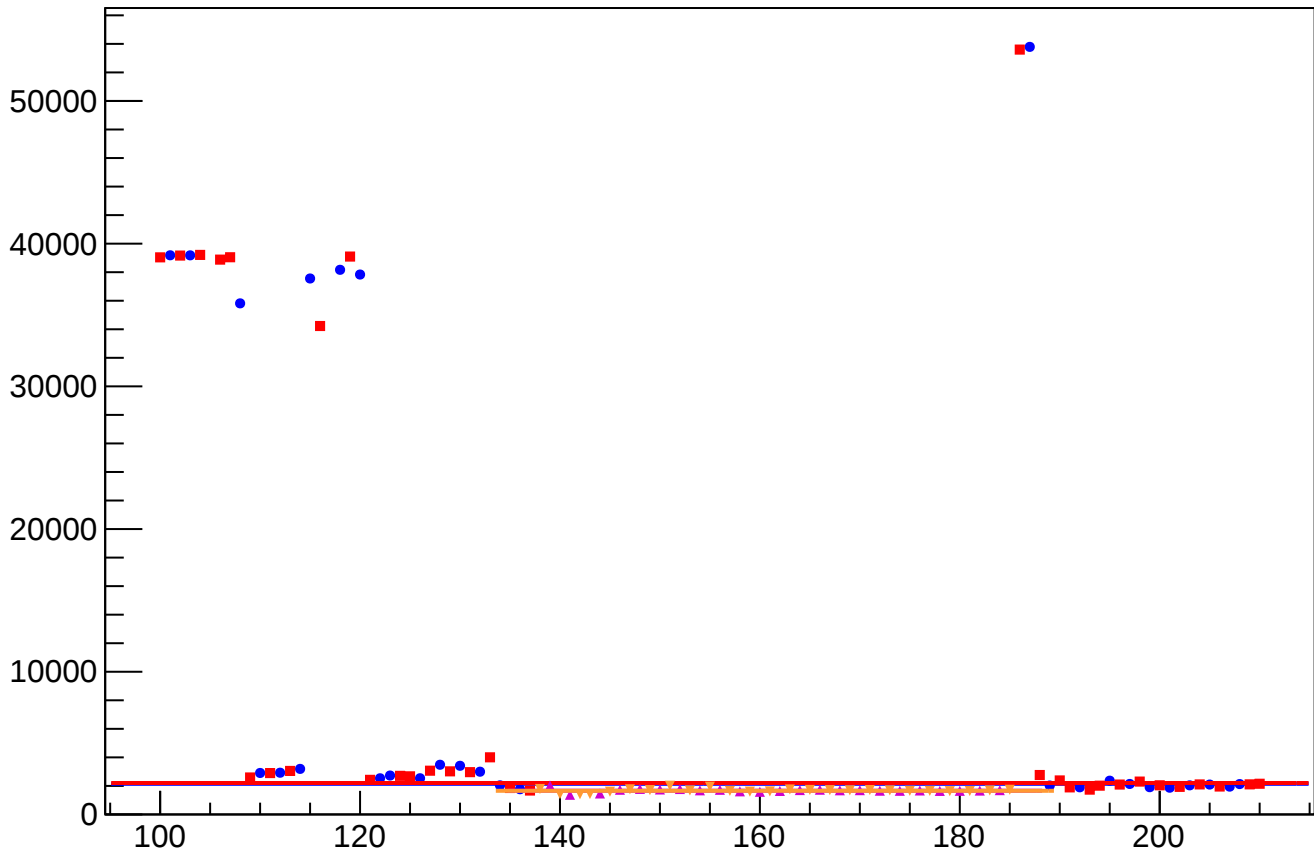
Left In:  $0.072 \pm 0.401$   $\chi^2/\text{NDF}$ : 28.2/22

+ sign  $-1.579 \pm 0.331$   $\chi^2/\text{NDF}$ : 75.4/52

All:  $-1.099 \pm 0.235$   $\chi^2/\text{NDF}$ : 150.8/108

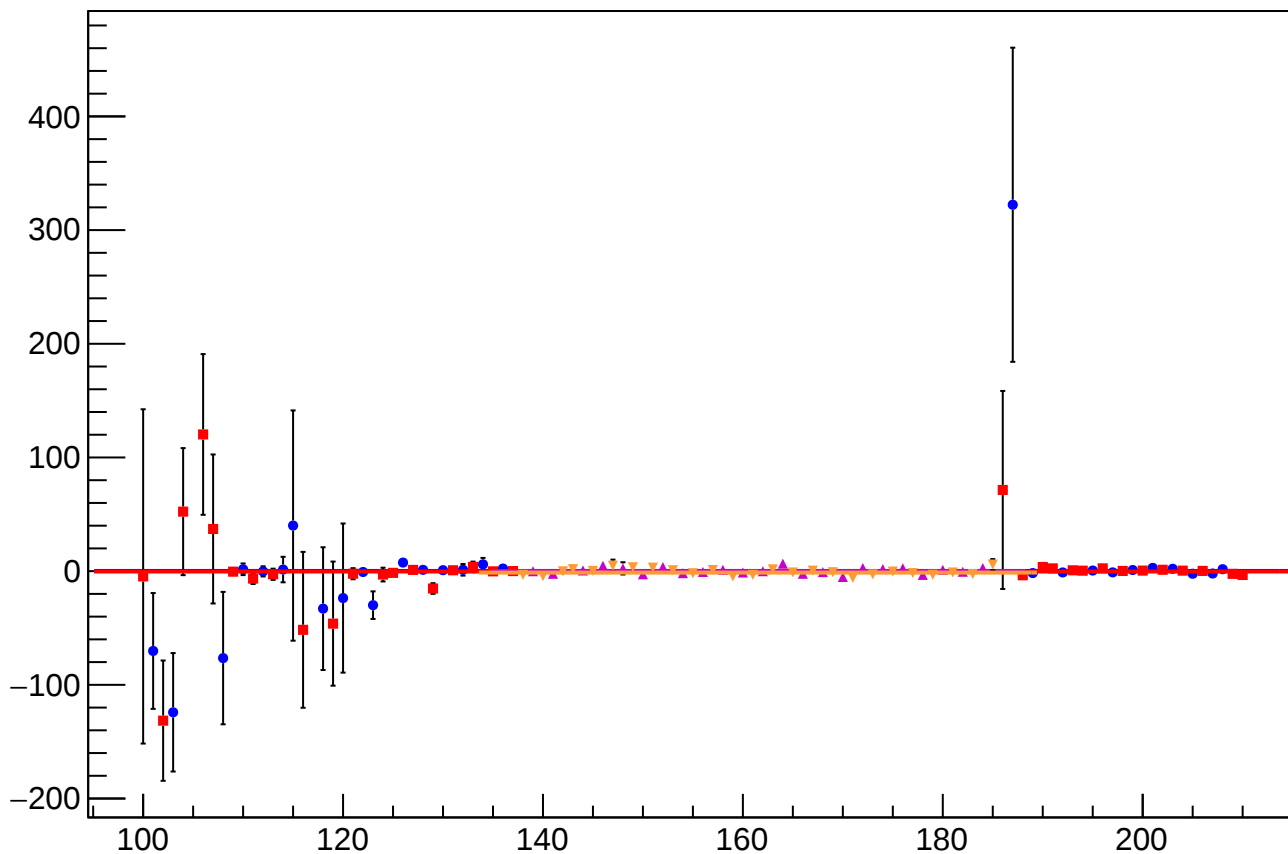
- sign  $-0.607 \pm 0.335$   $\chi^2/\text{NDF}$ : 71.2/55

# diff\_bpm1p03aX\_rms vs Slug



|                             |                                    |                         |                                      |
|-----------------------------|------------------------------------|-------------------------|--------------------------------------|
| Right In: 2148.525+/-0.448  | $\chi^2/\text{NDF}$ : 5458594.8/27 | + sign 1791.761+/-0.234 | $\chi^2/\text{NDF}$ : 6555311.3/52   |
| Left Out: 1657.770+/-0.274  | $\chi^2/\text{NDF}$ : 223465.3/24  | All: 1808.902+/-0.167   | $\chi^2/\text{NDF}$ : 13906990.5/100 |
| Right Out: 2204.331+/-0.432 | $\chi^2/\text{NDF}$ : 6066833.9/32 | - sign 1826.497+/-0.237 | $\chi^2/\text{NDF}$ : 7340802.7/55   |
| Left In: 1663.620+/-0.284   | $\chi^2/\text{NDF}$ : 178858.2/22  |                         |                                      |

# diff\_bpm1p03aY\_mean vs Slug



Right In:  $0.177 \pm 0.470$   $\chi^2/\text{NDF}$ : 41.0/27

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

Right Out:  $-0.306 \pm 0.448$   $\chi^2/\text{NDF}$ : 40.7/32

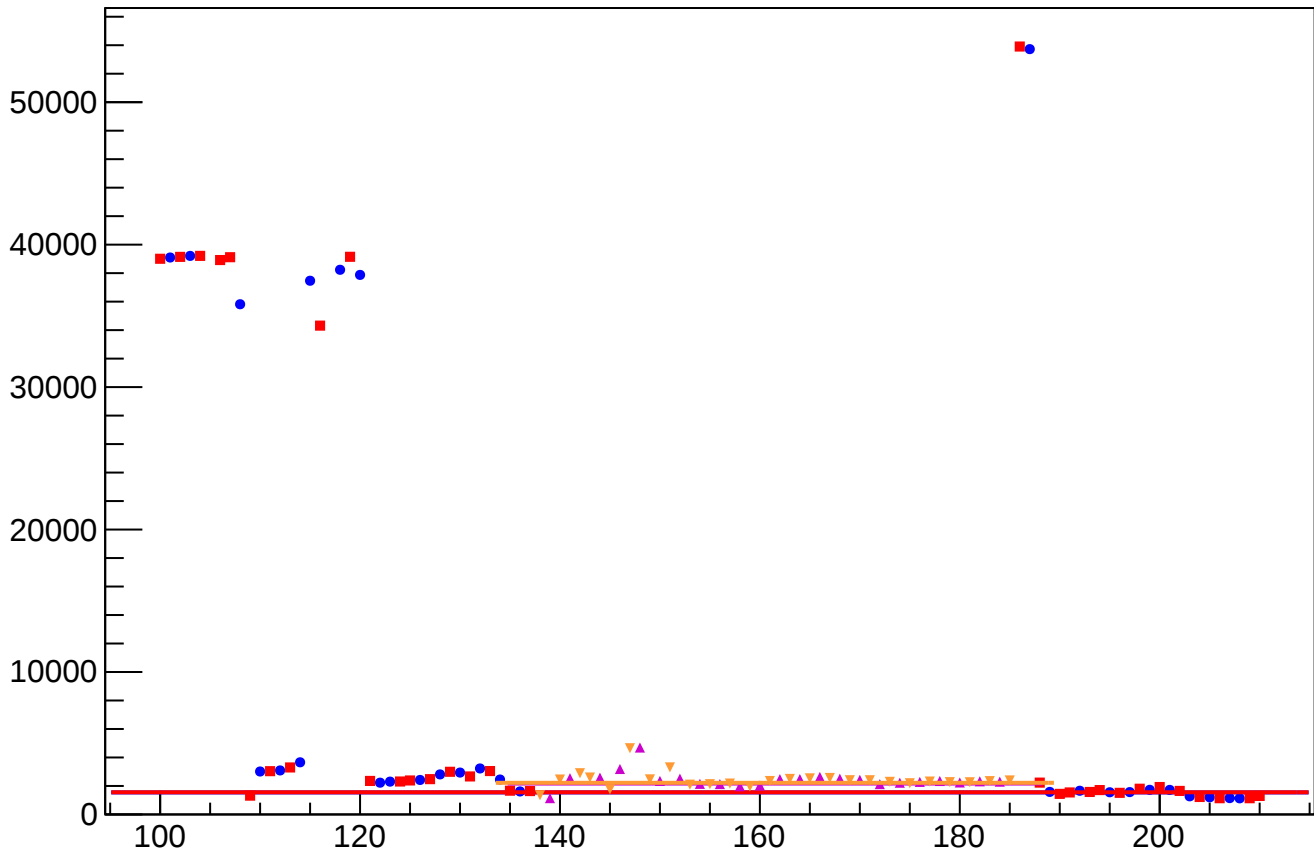
Left In:  $0.098 \pm 0.541$   $\chi^2/\text{NDF}$ : 19.3/22

+ sign  $-0.444 \pm 0.353$   $\chi^2/\text{NDF}$ : 66.7/52

All:  $-0.290 \pm 0.247$   $\chi^2/\text{NDF}$ : 127.5/108

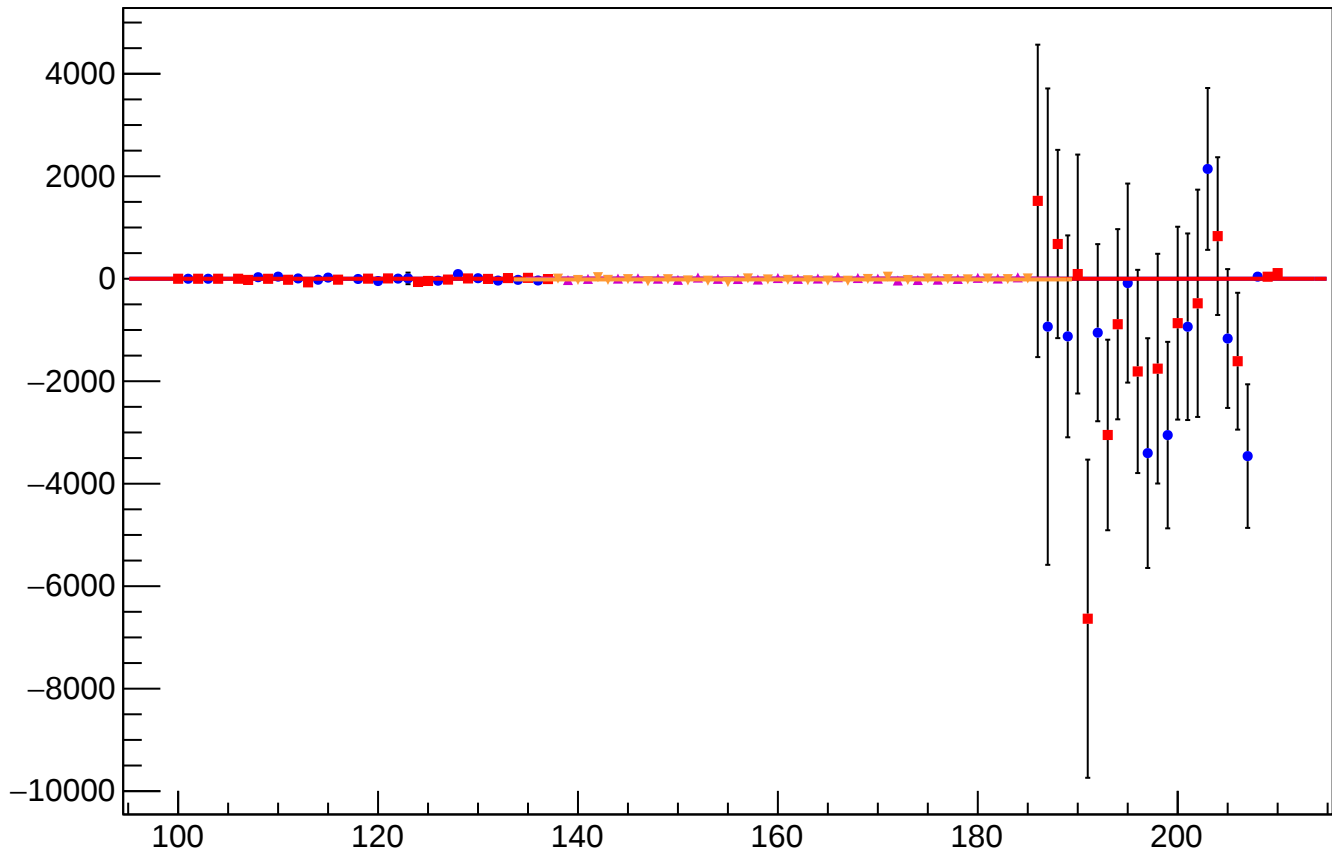
- sign  $-0.142 \pm 0.345$   $\chi^2/\text{NDF}$ : 60.3/55

# diff\_bpm1p03aY\_rms vs Slug



|                             |                                    |                         |                                      |
|-----------------------------|------------------------------------|-------------------------|--------------------------------------|
| Right In: 1545.094+/-0.332  | $\chi^2/\text{NDF}$ : 6861958.6/27 | + sign 1839.735+/-0.250 | $\chi^2/\text{NDF}$ : 10092792.3/52  |
| Left Out: 2222.081+/-0.378  | $\chi^2/\text{NDF}$ : 1422440.9/24 | All: 1822.390+/-0.174   | $\chi^2/\text{NDF}$ : 21074857.8/100 |
| Right Out: 1556.924+/-0.317 | $\chi^2/\text{NDF}$ : 7477013.5/32 | - sign 1805.820+/-0.244 | $\chi^2/\text{NDF}$ : 10972622.8/55  |
| Left In: 2169.443+/-0.383   | $\chi^2/\text{NDF}$ : 1974869.8/22 |                         |                                      |

# diff\_cav4bX\_mean vs Slug



Right In: 0.013+/-0.017  $\chi^2/\text{NDF}$ : 32.1/27

Left Out: -13.484+/-2.800  $\chi^2/\text{NDF}$ : 58.7/24

Right Out: 0.003+/-0.016  $\chi^2/\text{NDF}$ : 33.2/32

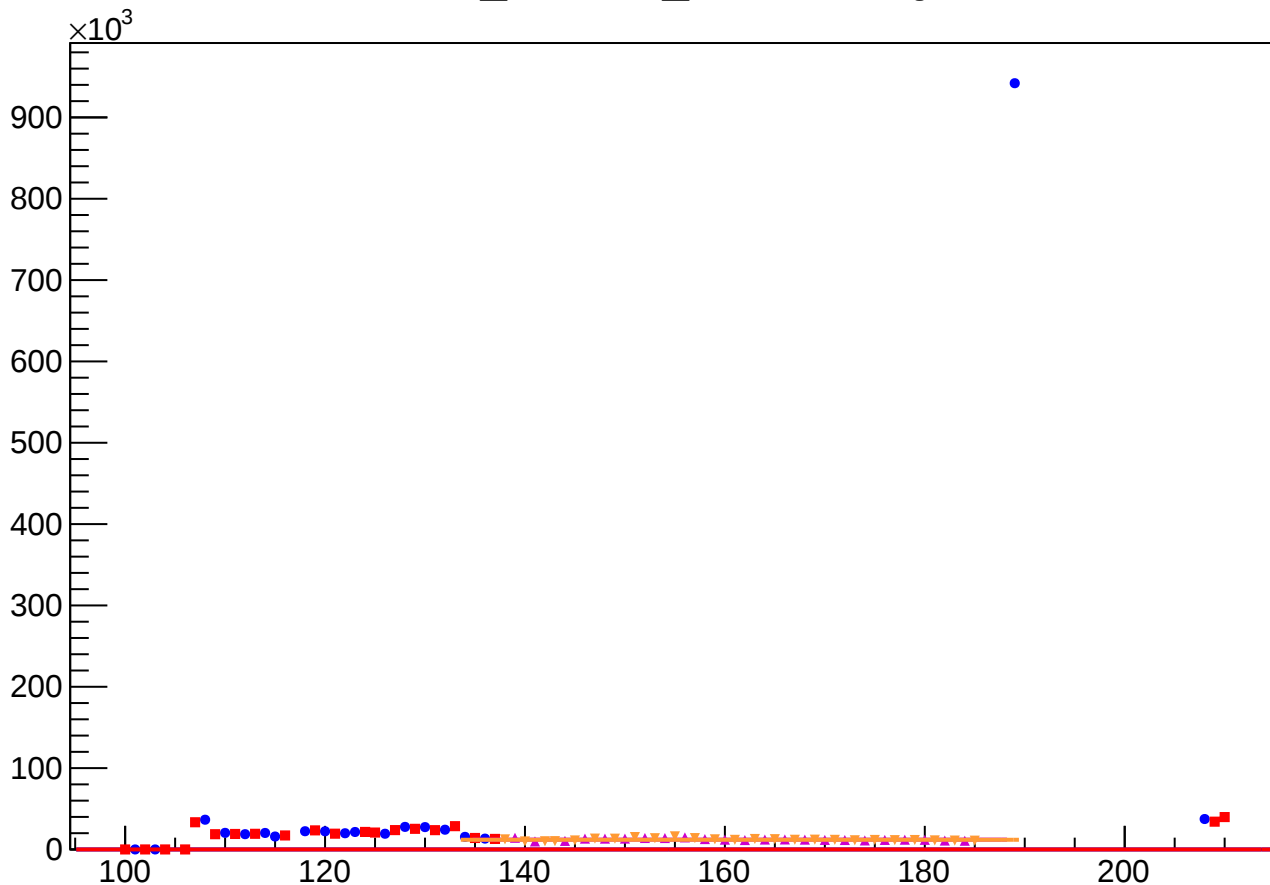
Left In: -0.459+/-2.917  $\chi^2/\text{NDF}$ : 29.0/22

+ sign 0.013+/-0.017  $\chi^2/\text{NDF}$ : 114.0/52

All: 0.008+/-0.012  $\chi^2/\text{NDF}$ : 176.3/108

- sign 0.003+/-0.016  $\chi^2/\text{NDF}$ : 62.2/55

# diff\_cav4bX\_rms vs Slug



Right In:  $18.646 \pm 0.012$   $\chi^2/\text{NDF}$ : 12285558.7/18

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

Right Out:  $18.321 \pm 0.011$   $\chi^2/\text{NDF}$ : 13902290.1/20

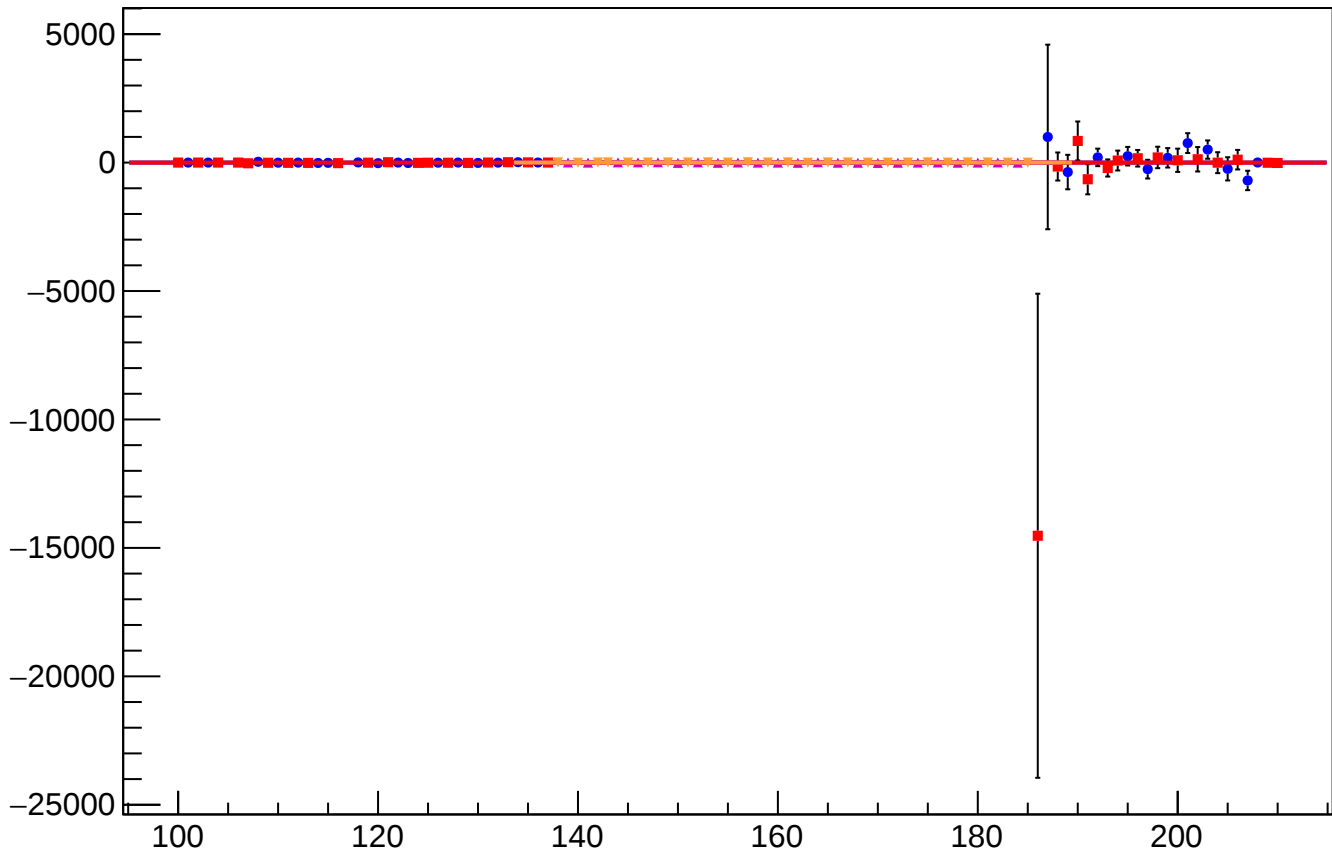
Left In:  $12064.761 \pm 2.062$   $\chi^2/\text{NDF}$ : 368452.5/22

+ sign  $19.102 \pm 0.012$   $\chi^2/\text{NDF}$ : 48825179.8/43

All:  $18.879 \pm 0.008$   $\chi^2/\text{NDF}$ : 97212386.3/87

- sign  $18.687 \pm 0.011$   $\chi^2/\text{NDF}$ : 48386591.0/43

# diff\_cav4bY\_mean vs Slug



Right In: 0.001 $\pm$ 0.009  $\chi^2$ /NDF: 24.6/27

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

Right Out: 0.014 $\pm$ 0.009  $\chi^2$ /NDF: 29.3/32

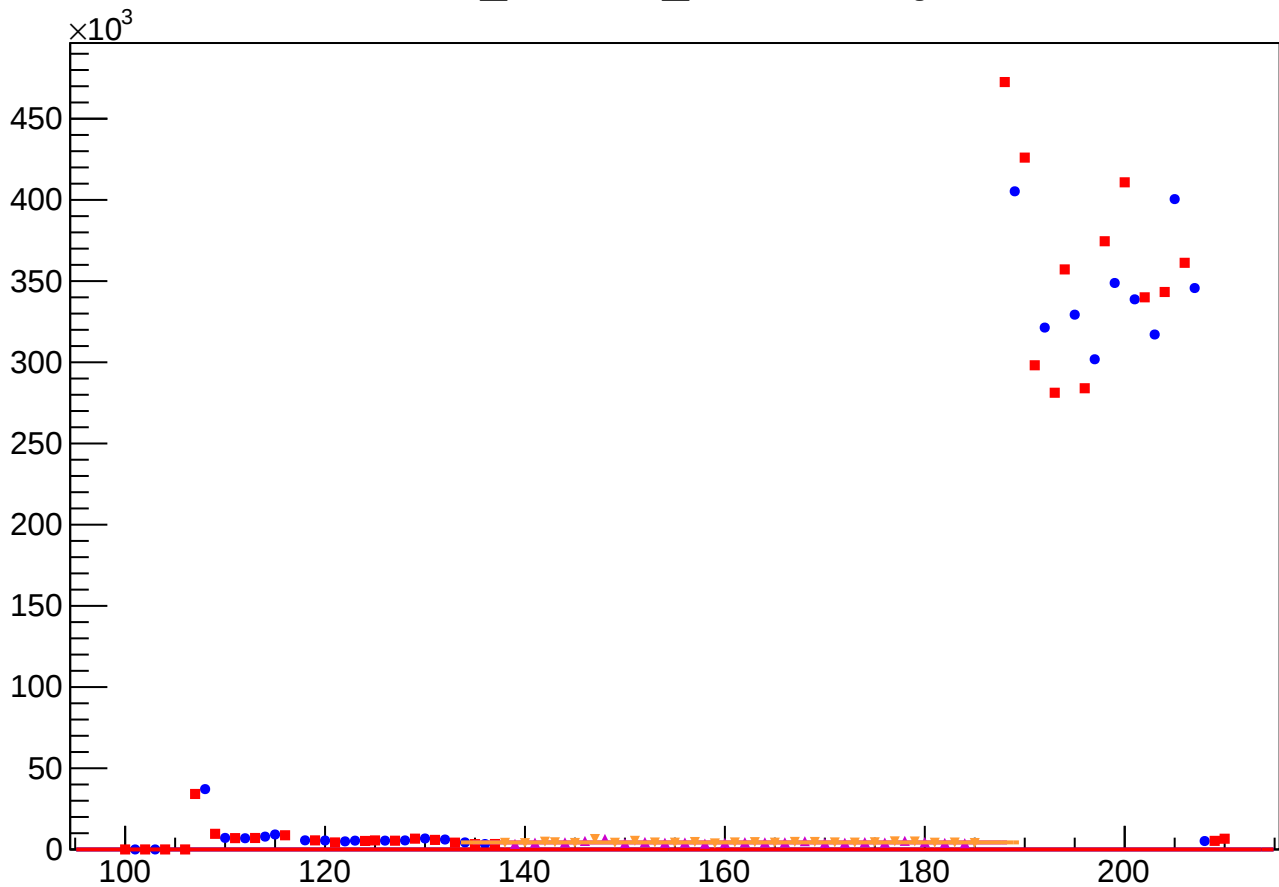
Left In: 0.939 $\pm$ 1.049  $\chi^2$ /NDF:35.6/22

+ sign 0.001 $\pm$ 0.009  $\chi^2$ /NDF: 45.6/52

All: 0.008 $\pm$ 0.006  $\chi^2$ /NDF: 112.4/108

- sign 0.014 $\pm$ 0.009  $\chi^2$ /NDF: 65.7/55

# diff\_cav4bY\_rms vs Slug



Right In: 9.950 $\pm$ 0.007  $\chi^2$ /NDF: 25796458.8/26

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

Right Out: 9.874 $\pm$ 0.006  $\chi^2$ /NDF: 28712157.3/31

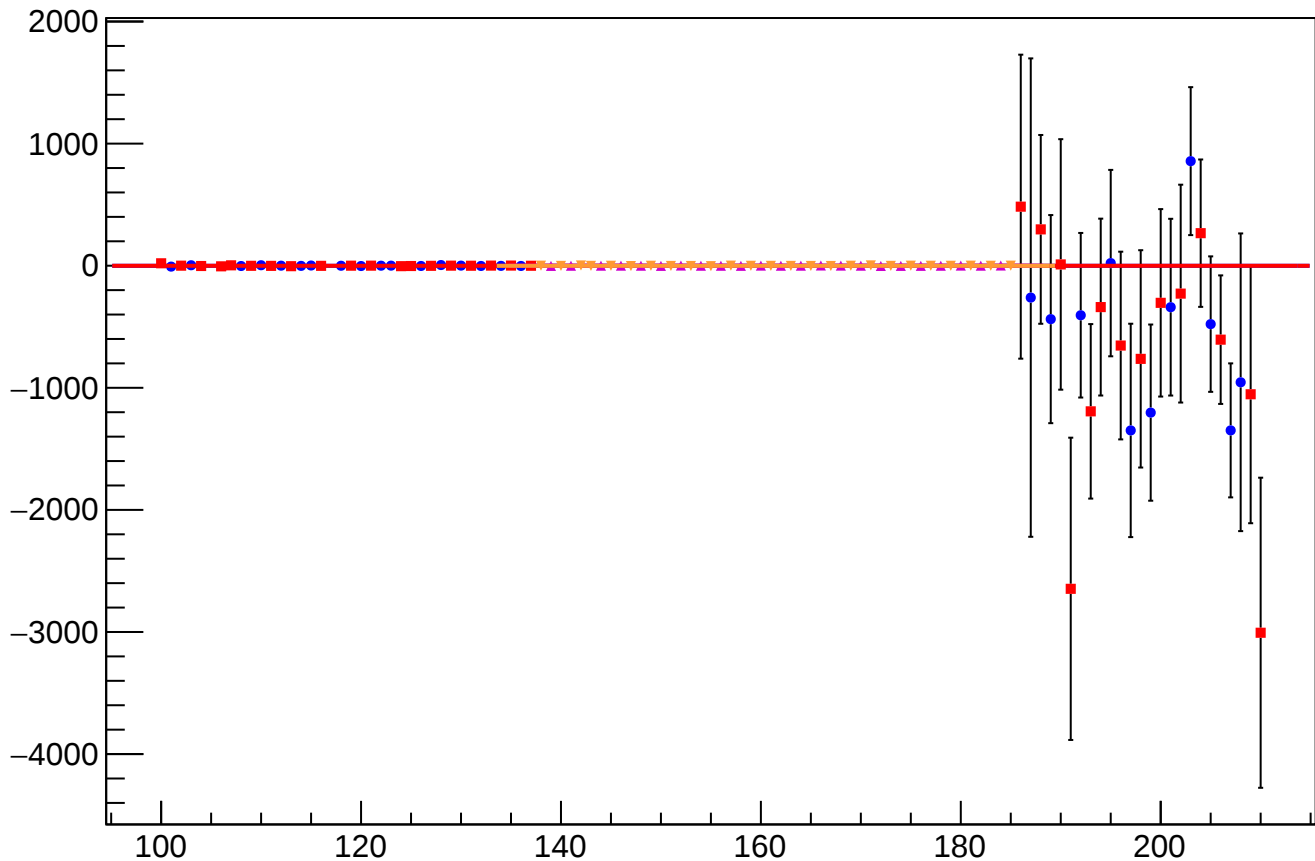
Left In: 4321.572 $\pm$ 0.741  $\chi^2$ /NDF: 514603.2/22

+ sign 10.301 $\pm$ 0.007  $\chi^2$ /NDF: 62223703.6/51

All: 10.230 $\pm$ 0.004  $\chi^2$ /NDF: 125269161.1/10

- sign 10.167 $\pm$ 0.006  $\chi^2$ /NDF: 63045230.8/54

# diff\_cav4cX\_mean vs Slug



Right In:  $-0.716 \pm 0.483$   $\chi^2/\text{NDF}$ : 38.1/27

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

Right Out:  $-0.641 \pm 0.501$   $\chi^2/\text{NDF}$ : 30.7/32

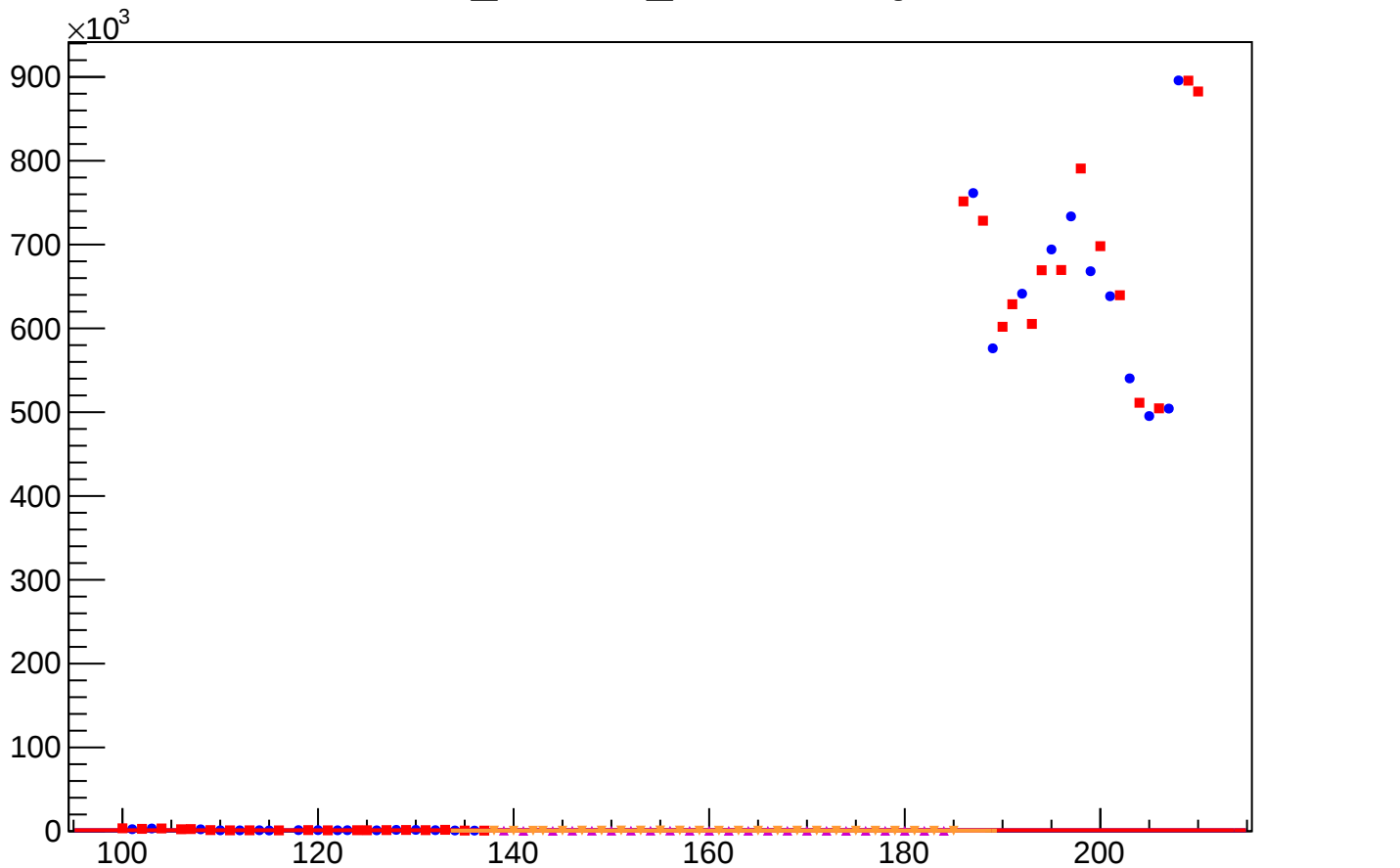
Left In:  $-0.018 \pm 0.171$   $\chi^2/\text{NDF}$ : 29.4/22

+ sign  $-0.769 \pm 0.156$   $\chi^2/\text{NDF}$ : 96.6/52

All:  $-0.439 \pm 0.112$   $\chi^2/\text{NDF}$ : 167.5/108

- sign  $-0.083 \pm 0.162$   $\chi^2/\text{NDF}$ : 61.5/55

# diff\_cav4cX\_rms vs Slug



Right In:  $1169.991 \pm 0.342$   $\chi^2/\text{NDF}: 16670575.5/27$

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

Right Out:  $1251.257 \pm 0.355$   $\chi^2/\text{NDF}: 18985888.9/32$

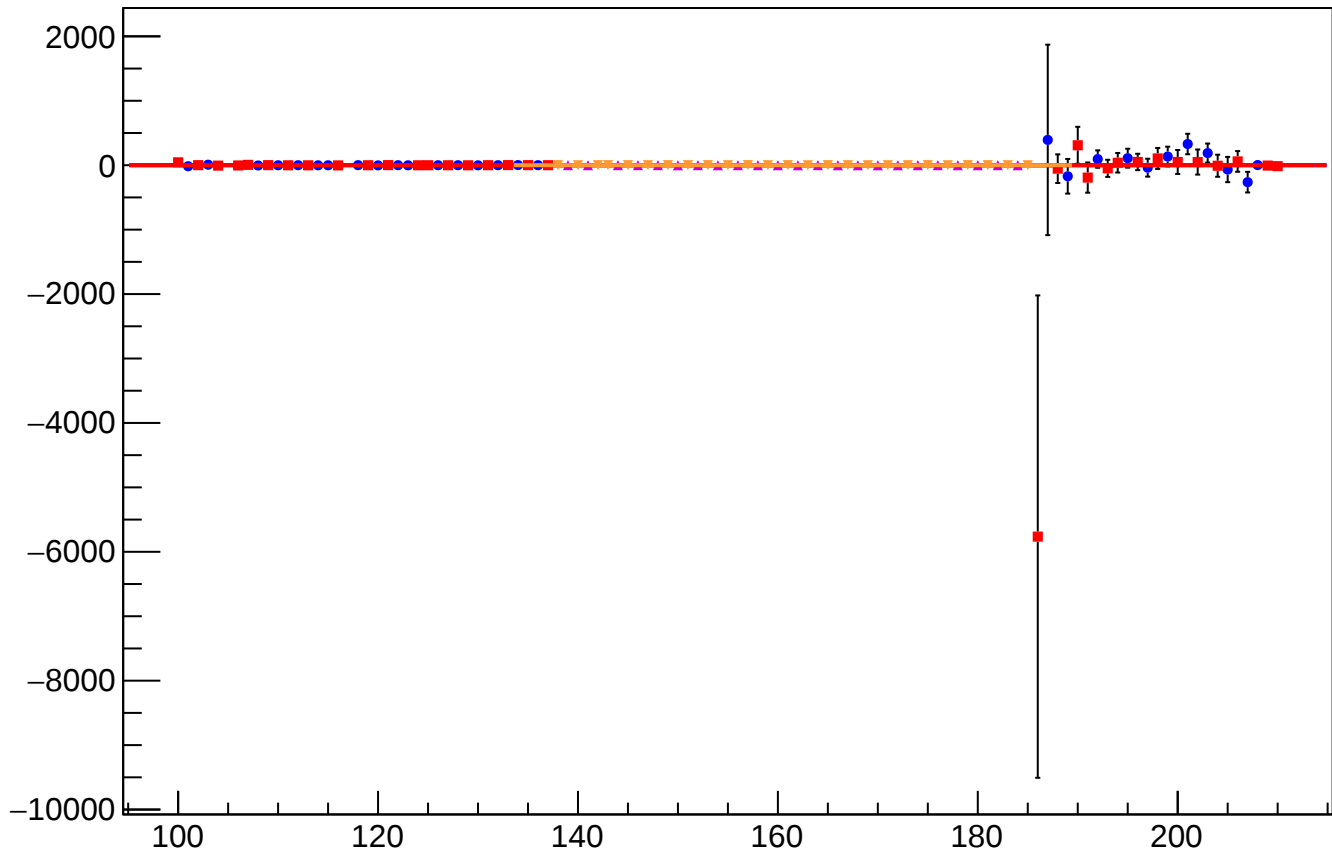
Left In:  $706.971 \pm 0.121$   $\chi^2/\text{NDF}: 332011.4/22$

+ sign  $749.750 \pm 0.110$   $\chi^2/\text{NDF}: 18752295.4/52$

All:  $756.387 \pm 0.079$   $\chi^2/\text{NDF}: 40188930.8/10$

- sign  $763.535 \pm 0.114$   $\chi^2/\text{NDF}: 21429095.7/55$

# diff\_cav4cY\_mean vs Slug



Right In:  $-0.052 \pm 0.269$   $\chi^2/\text{NDF}$ : 30.4/27

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

Right Out:  $0.239 \pm 0.264$   $\chi^2/\text{NDF}$ : 32.6/32

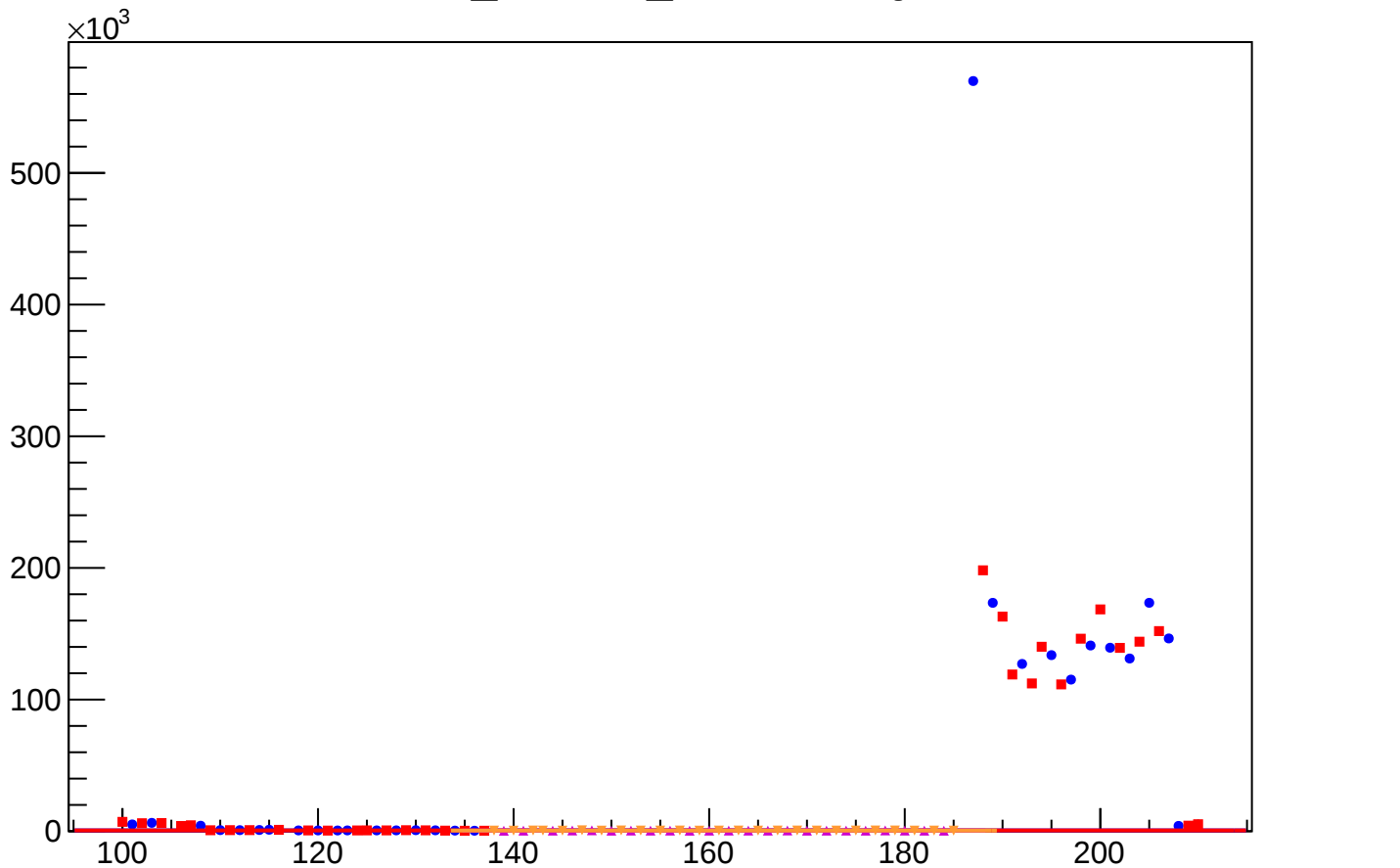
Left In:  $0.126 \pm 0.126$   $\chi^2/\text{NDF}$ : 35.0/22

+ sign  $0.184 \pm 0.112$   $\chi^2/\text{NDF}$ : 49.3/52

All:  $0.166 \pm 0.080$   $\chi^2/\text{NDF}$ : 117.1/108

- sign  $0.147 \pm 0.114$   $\chi^2/\text{NDF}$ : 67.7/55

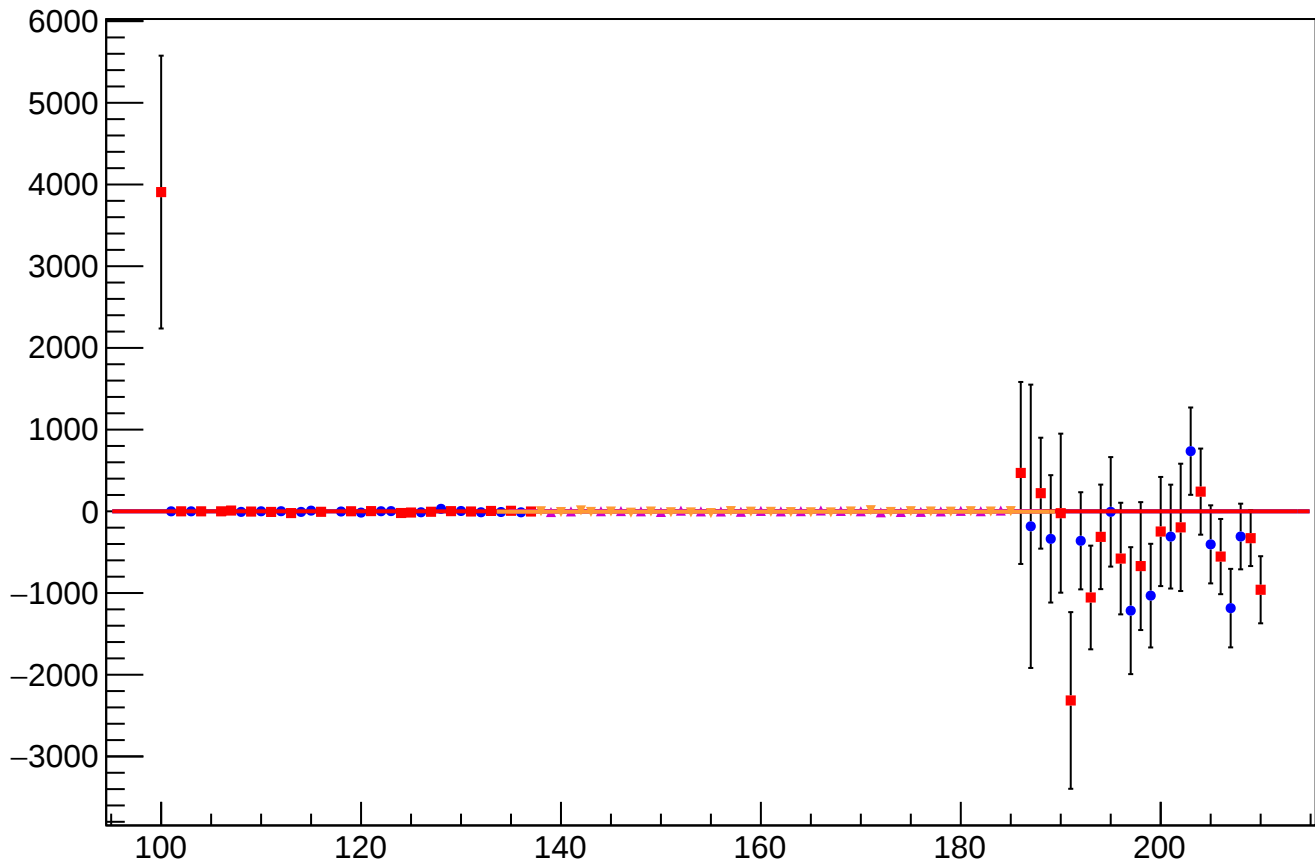
# diff\_cav4cY\_rms vs Slug



Right In:  $621.651 \pm 0.190$   $\chi^2/\text{NDF}$ : 17838727.4/27  
 Left Out:  $522.220 \pm 0.087$   $\chi^2/\text{NDF}$ : 330405.3/24  
 Right Out:  $620.493 \pm 0.187$   $\chi^2/\text{NDF}$ : 20477060.8/31  
 Left In:  $520.700 \pm 0.089$   $\chi^2/\text{NDF}$ : 427720.5/22

+ sign  $539.358 \pm 0.079$   $\chi^2/\text{NDF}$ : 18395865.4/52  
 All:  $539.314 \pm 0.056$   $\chi^2/\text{NDF}$ : 39533546.4/10  
 - sign  $539.268 \pm 0.080$   $\chi^2/\text{NDF}$ : 21137680.3/54

# diff\_cav4dX\_mean vs Slug



Right In: -0.022 $\pm$ 0.021  $\chi^2$ /NDF: 31.2/27

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

Right Out: -0.027 $\pm$ 0.020  $\chi^2$ /NDF: 35.0/32

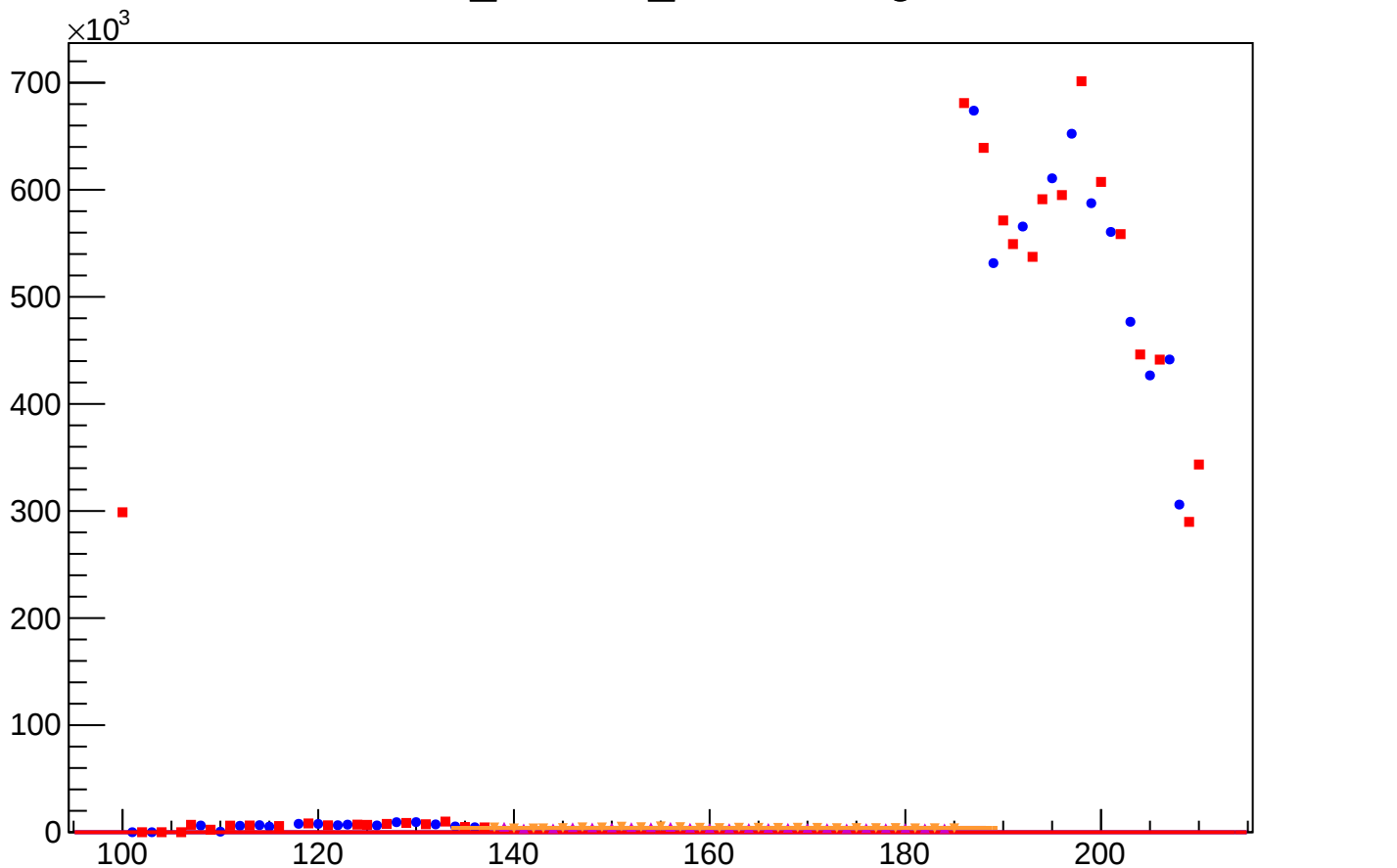
Left In: -0.183 $\pm$ 0.994  $\chi^2$ /NDF: 29.5/22

+ sign -0.024 $\pm$ 0.021  $\chi^2$ /NDF: 111.3/52

All: -0.025 $\pm$ 0.014  $\chi^2$ /NDF: 175.8/108

- sign -0.027 $\pm$ 0.020  $\chi^2$ /NDF: 64.5/55

# diff\_cav4dX\_rms vs Slug



Right In:  $17.346 \pm 0.015$   $\chi^2/\text{NDF}$ : 25876768.5/27

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

Right Out:  $17.275 \pm 0.014$   $\chi^2/\text{NDF}$ : 29531305.3/32

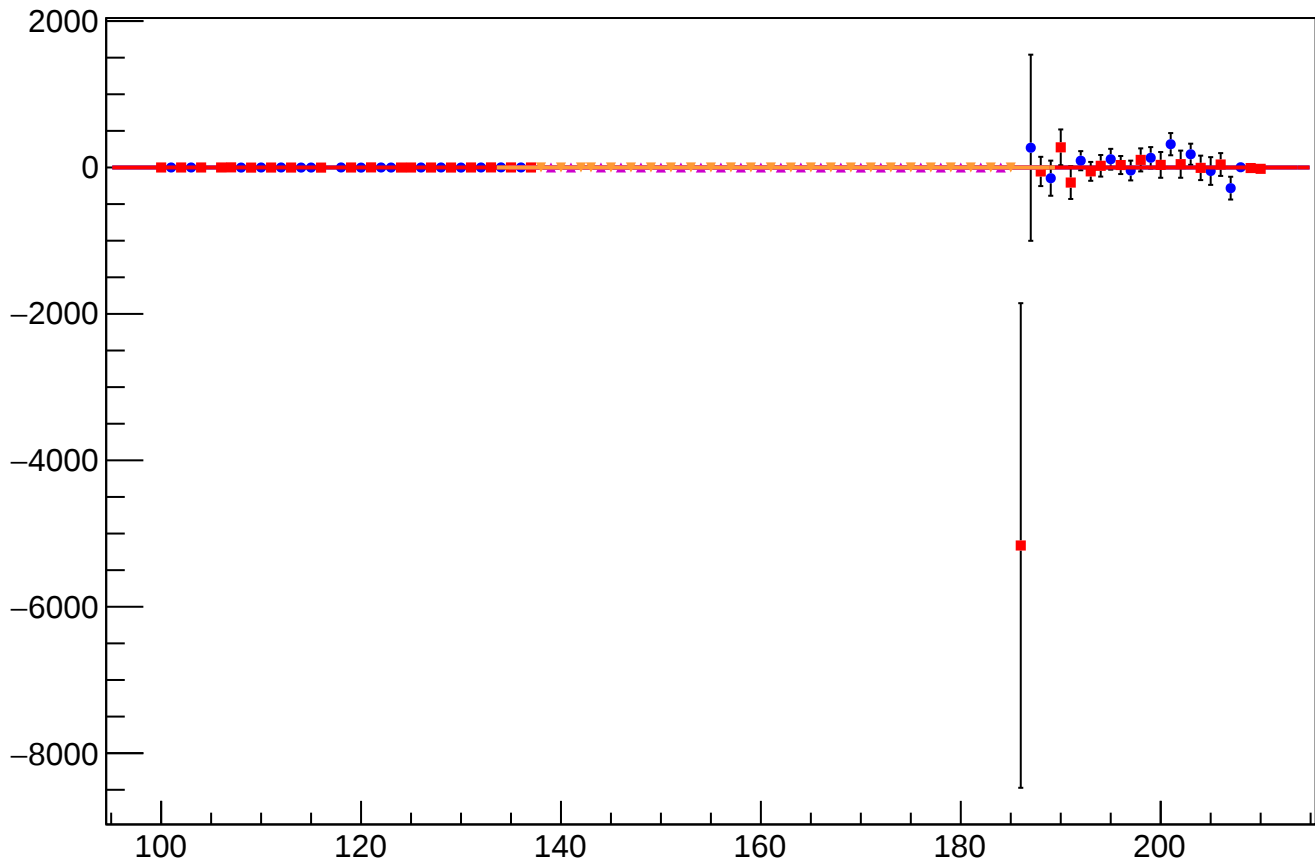
Left In:  $4113.993 \pm 0.703$   $\chi^2/\text{NDF}$ : 349160.6/22

+ sign  $19.260 \pm 0.015$   $\chi^2/\text{NDF}$ : 62226819.9/52

All:  $19.069 \pm 0.010$   $\chi^2/\text{NDF}$ : 126063471.4/10

- sign  $18.896 \pm 0.014$   $\chi^2/\text{NDF}$ : 63836328.3/55

# diff\_cav4dY\_mean vs Slug



Right In:  $0.000 \pm 0.002$   $\chi^2/\text{NDF}$ : 25.6/27

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

Right Out:  $0.001 \pm 0.002$   $\chi^2/\text{NDF}$ : 31.2/32

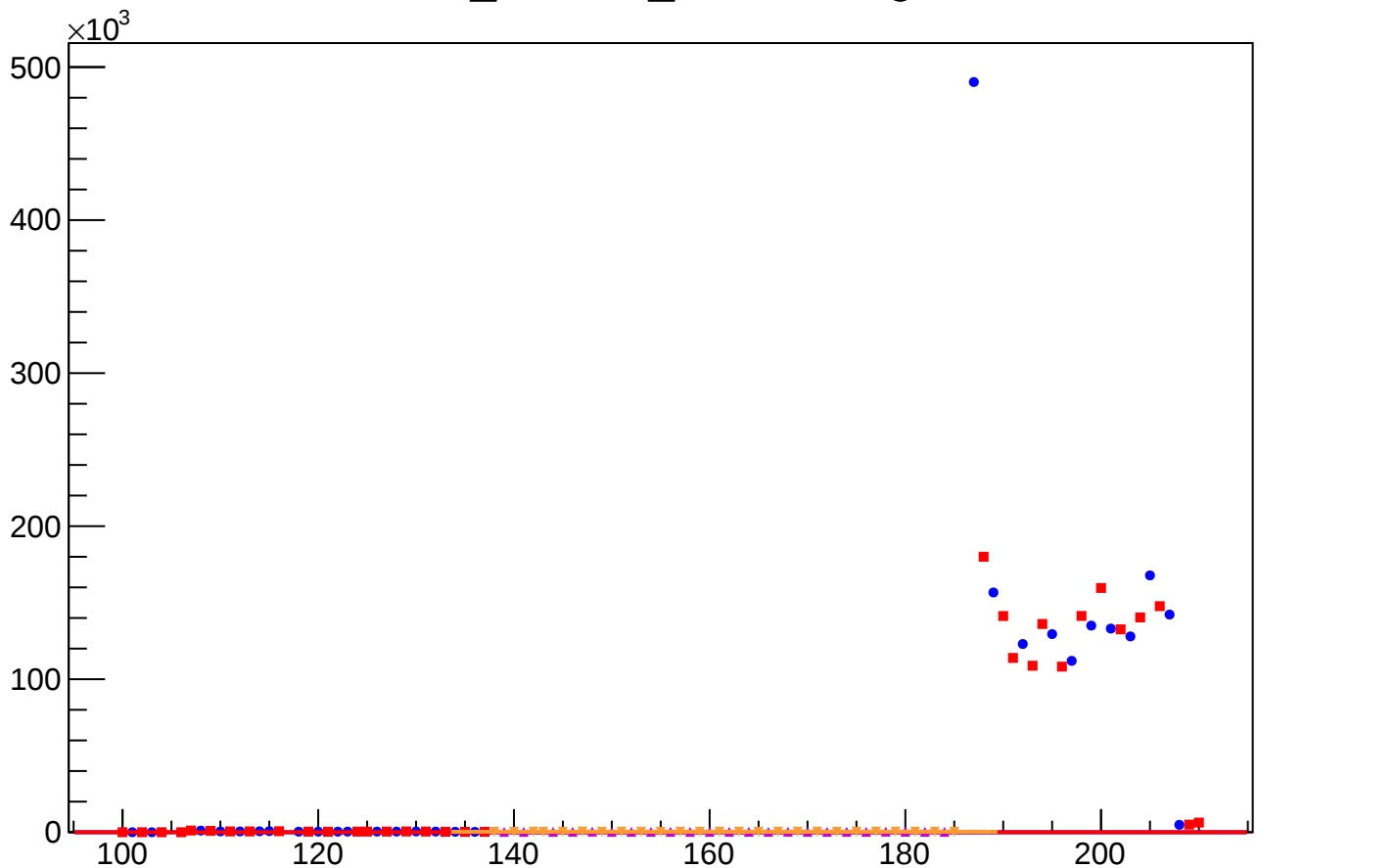
Left In:  $0.080 \pm 0.079$   $\chi^2/\text{NDF}$ : 34.6/22

+ sign  $0.000 \pm 0.002$   $\chi^2/\text{NDF}$ : 46.7/52

All:  $0.001 \pm 0.001$   $\chi^2/\text{NDF}$ : 113.6/108

- sign  $0.001 \pm 0.002$   $\chi^2/\text{NDF}$ : 66.9/55

# diff\_cav4dY\_rms vs Slug



Right In:  $1.700 \pm 0.001$   $\chi^2/\text{NDF}$ : 26180565.0/27

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

Right Out:  $1.729 \pm 0.001$   $\chi^2/\text{NDF}$ : 28482166.4/31

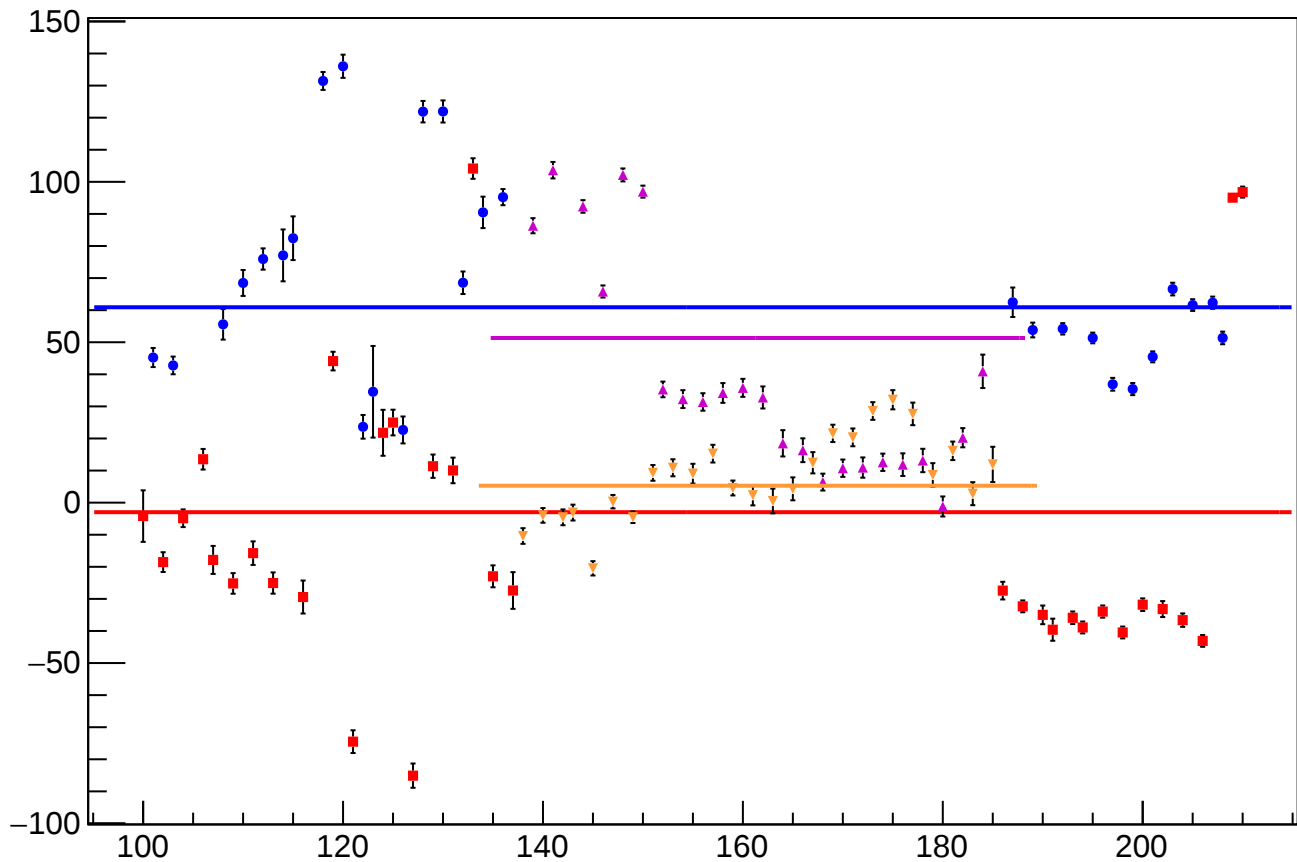
Left In:  $325.626 \pm 0.056$   $\chi^2/\text{NDF}$ : 413350.0/22

+ sign  $1.927 \pm 0.001$   $\chi^2/\text{NDF}$ : 62392318.2/52

All:  $1.926 \pm 0.001$   $\chi^2/\text{NDF}$ : 125012176.7/107

- sign  $1.925 \pm 0.001$   $\chi^2/\text{NDF}$ : 62619857.6/54

# diff\_bpm0i01X\_mean vs Slug



Right In:  $60.903 \pm 0.491$   $\chi^2/\text{NDF}$ : 2739.8/27

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

Right Out:  $-2.976 \pm 0.447$   $\chi^2/\text{NDF}$ : 14498.6/32

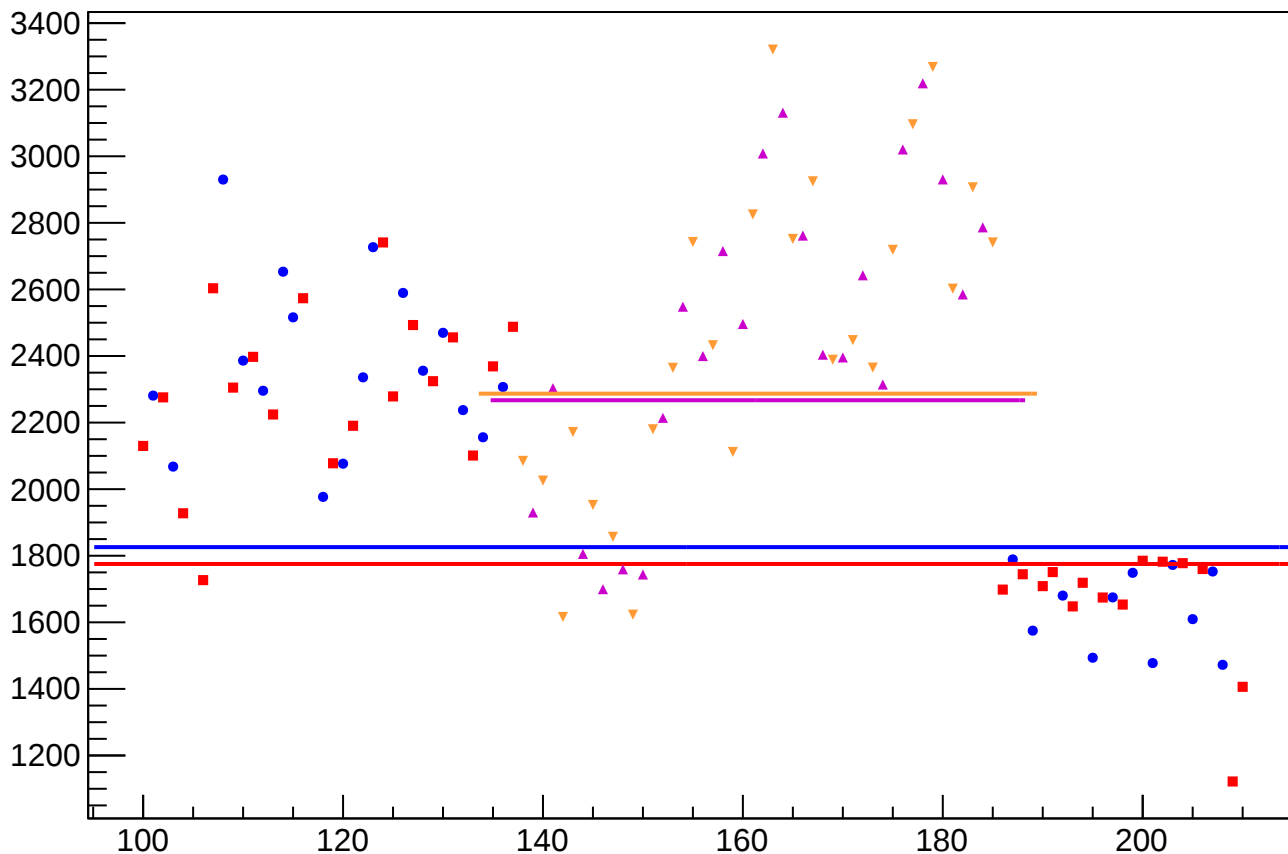
Left In:  $51.328 \pm 0.558$   $\chi^2/\text{NDF}$ : 4257.8/22

+ sign  $35.946 \pm 0.364$   $\chi^2/\text{NDF}$ : 9057.4/52

All:  $26.685 \pm 0.252$   $\chi^2/\text{NDF}$ : 34819.2/108

- sign  $18.208 \pm 0.349$   $\chi^2/\text{NDF}$ : 24525.3/55

# diff\_bpm0i01X\_rms vs Slug



Right In: 1825.861+/-0.347  $\chi^2/\text{NDF}$ : 958522.2/27

Left Out: 2286.871+/-0.385  $\chi^2/\text{NDF}$ : 1360490.8/24

Right Out: 1775.300+/-0.316  $\chi^2/\text{NDF}$ : 1347696.9/32

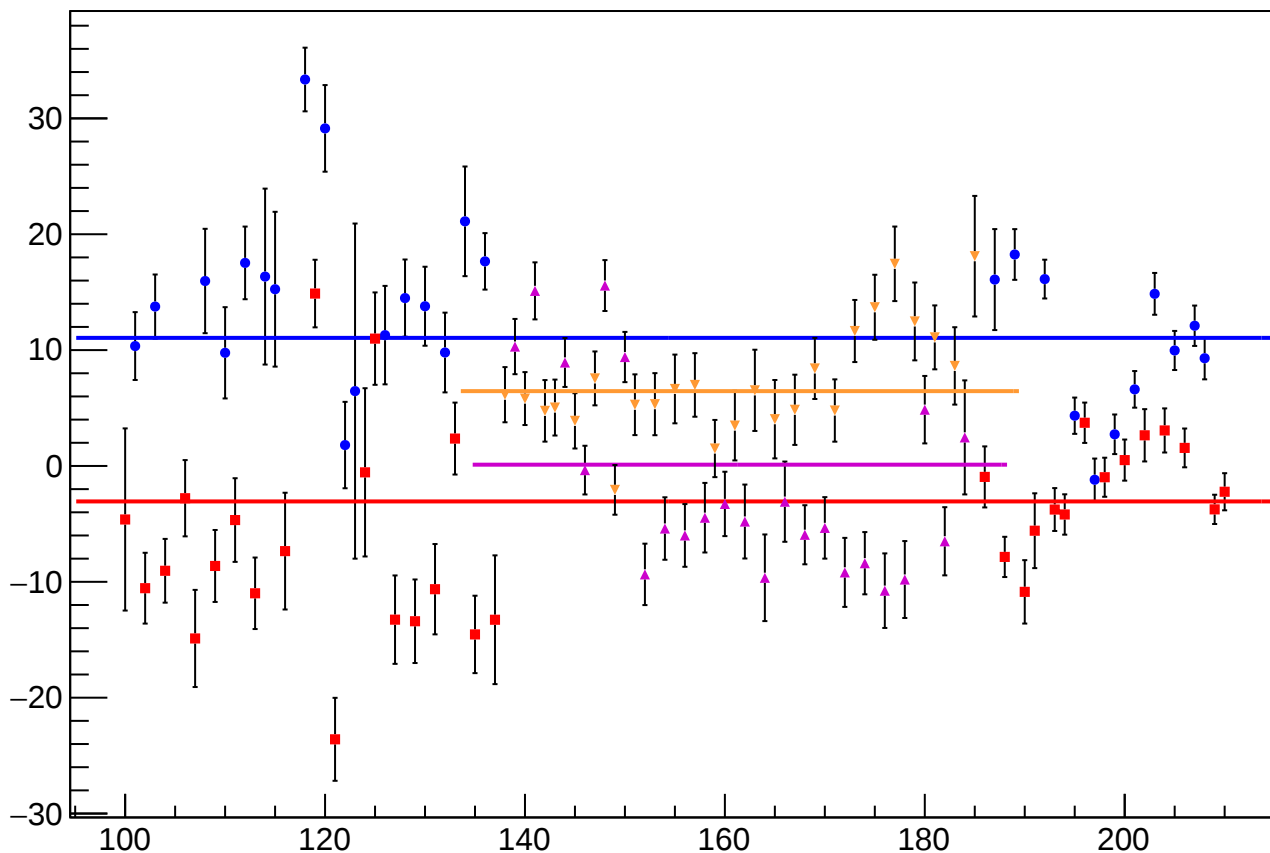
Left In: 2267.097+/-0.395  $\chi^2/\text{NDF}$ : 1313364.4/22

+ sign 2032.690+/-0.258  $\chi^2/\text{NDF}$ : 3110431.4/52

All: 1998.471+/-0.178  $\chi^2/\text{NDF}$ : 6751591.1/10

- sign 1967.148+/-0.247  $\chi^2/\text{NDF}$ : 3607397.7/55

# diff\_bpm0i01Y\_mean vs Slug



Right In:  $11.056 \pm 0.463$   $\chi^2/\text{NDF}$ : 239.0/27

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

Right Out:  $-3.061 \pm 0.422$   $\chi^2/\text{NDF}$ : 213.4/32

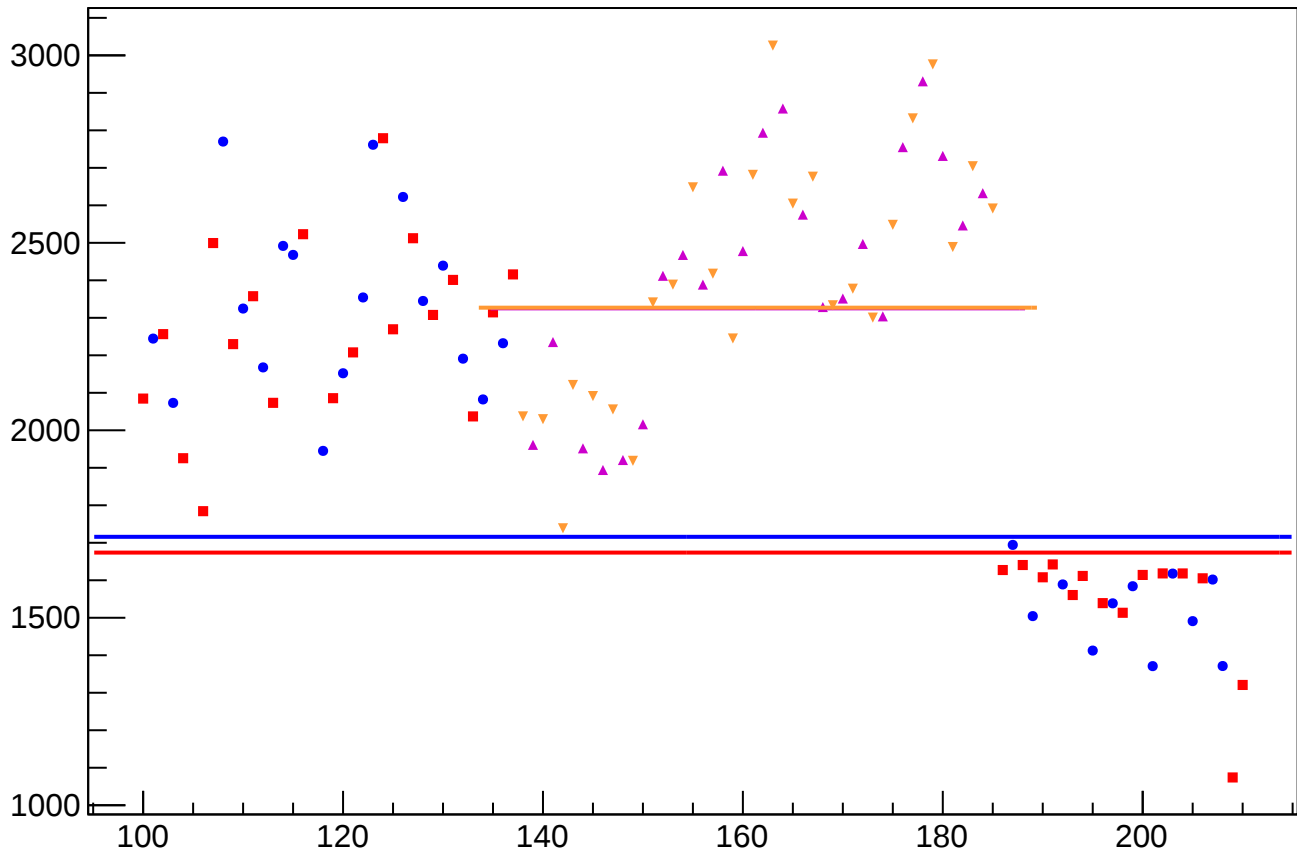
Left In:  $0.110 \pm 0.565$   $\chi^2/\text{NDF}$ : 234.6/22

+ sign  $9.140 \pm 0.353$   $\chi^2/\text{NDF}$ : 338.8/52

All:  $3.362 \pm 0.244$   $\chi^2/\text{NDF}$ : 1318.8/108

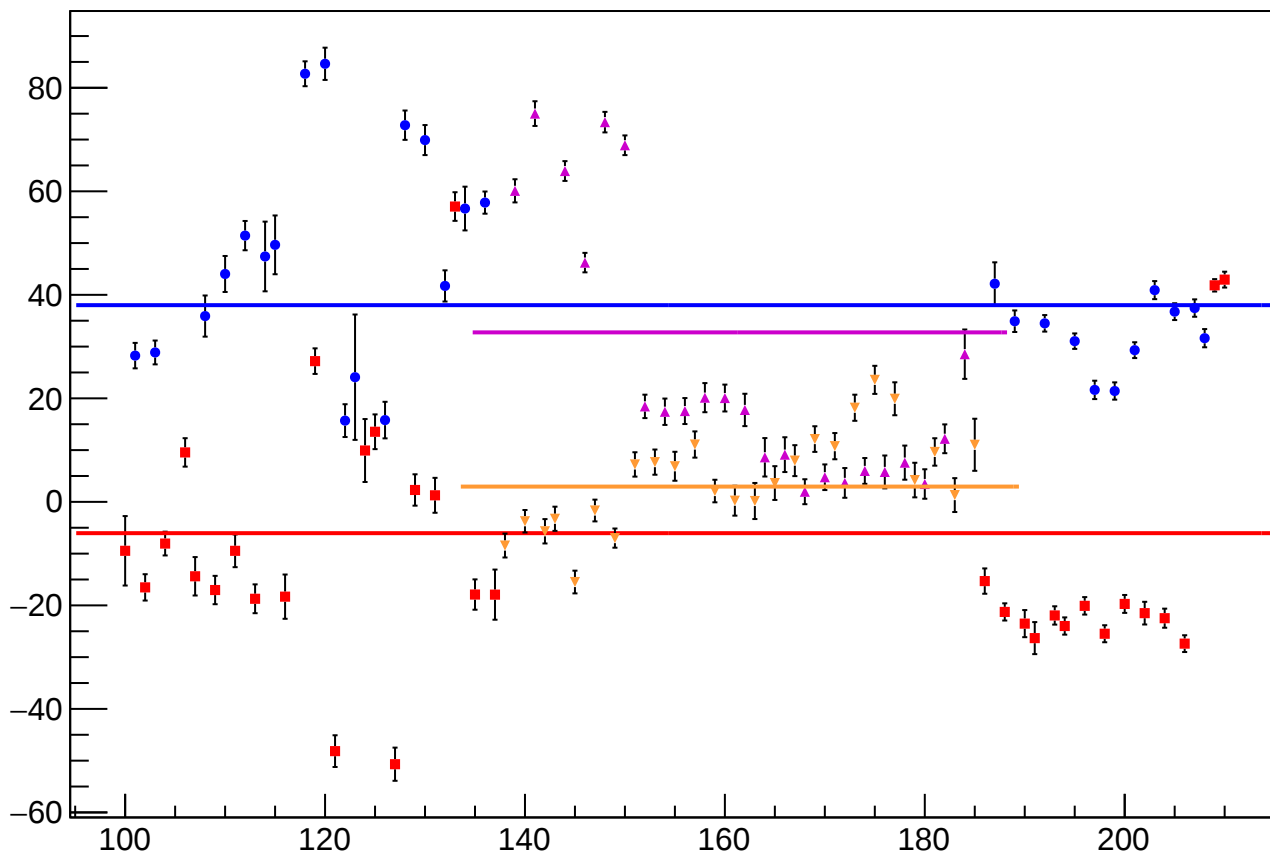
- sign  $-1.926 \pm 0.338$   $\chi^2/\text{NDF}$ : 468.2/55

# diff\_bpm0i01Y\_rms vs Slug



|                             |                                    |                         |                                    |
|-----------------------------|------------------------------------|-------------------------|------------------------------------|
| Right In: 1715.893+/-0.327  | $\chi^2/\text{NDF}$ : 1198871.8/27 | + sign 1970.564+/-0.250 | $\chi^2/\text{NDF}$ : 3298863.3/52 |
| Left Out: 2327.044+/-0.387  | $\chi^2/\text{NDF}$ : 646706.7/24  | All: 1937.372+/-0.173   | $\chi^2/\text{NDF}$ : 7188733.7/10 |
| Right Out: 1673.830+/-0.298 | $\chi^2/\text{NDF}$ : 1539801.6/32 | - sign 1906.995+/-0.239 | $\chi^2/\text{NDF}$ : 3856093.3/55 |
| Left In: 2325.175+/-0.400   | $\chi^2/\text{NDF}$ : 610729.2/22  |                         |                                    |

# diff\_bpm0i01aX\_mean vs Slug



Right In:  $38.006 \pm 0.431$   $\chi^2/\text{NDF}: 1364.2/27$

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

Right Out:  $-6.047 \pm 0.393$   $\chi^2/\text{NDF}: 4834.0/32$

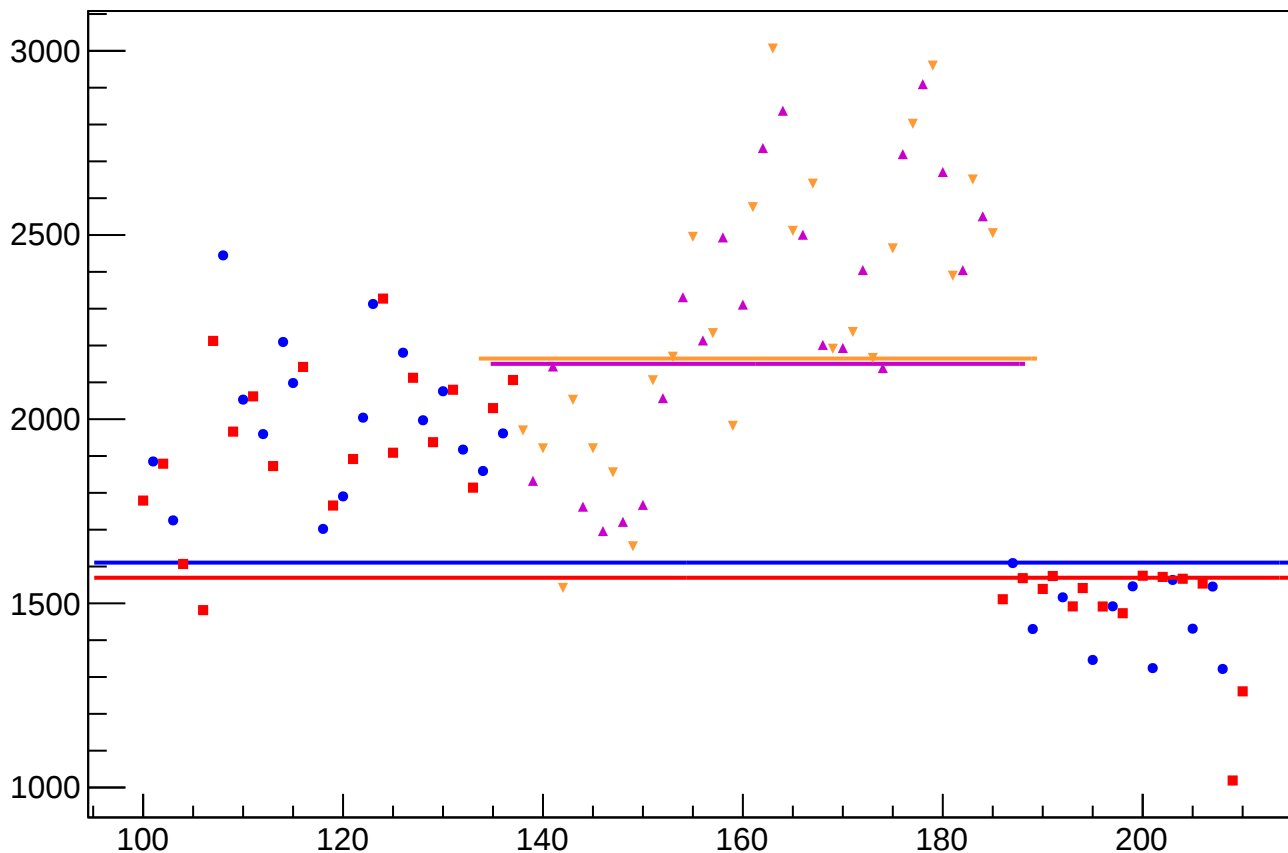
Left In:  $32.745 \pm 0.526$   $\chi^2/\text{NDF}: 2632.5/22$

+ sign  $23.470 \pm 0.330$   $\chi^2/\text{NDF}: 4446.4/52$

All:  $15.297 \pm 0.228$   $\chi^2/\text{NDF}: 16578.1/108$

- sign  $7.843 \pm 0.315$   $\chi^2/\text{NDF}: 10956.4/55$

# diff\_bpm0i01aX\_rms vs Slug



Right In: 1610.595 $\pm$ 0.305  $\chi^2$ /NDF: 729703.8/27

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

Right Out: 1569.471 $\pm$ 0.278  $\chi^2$ /NDF: 1072285.6/32

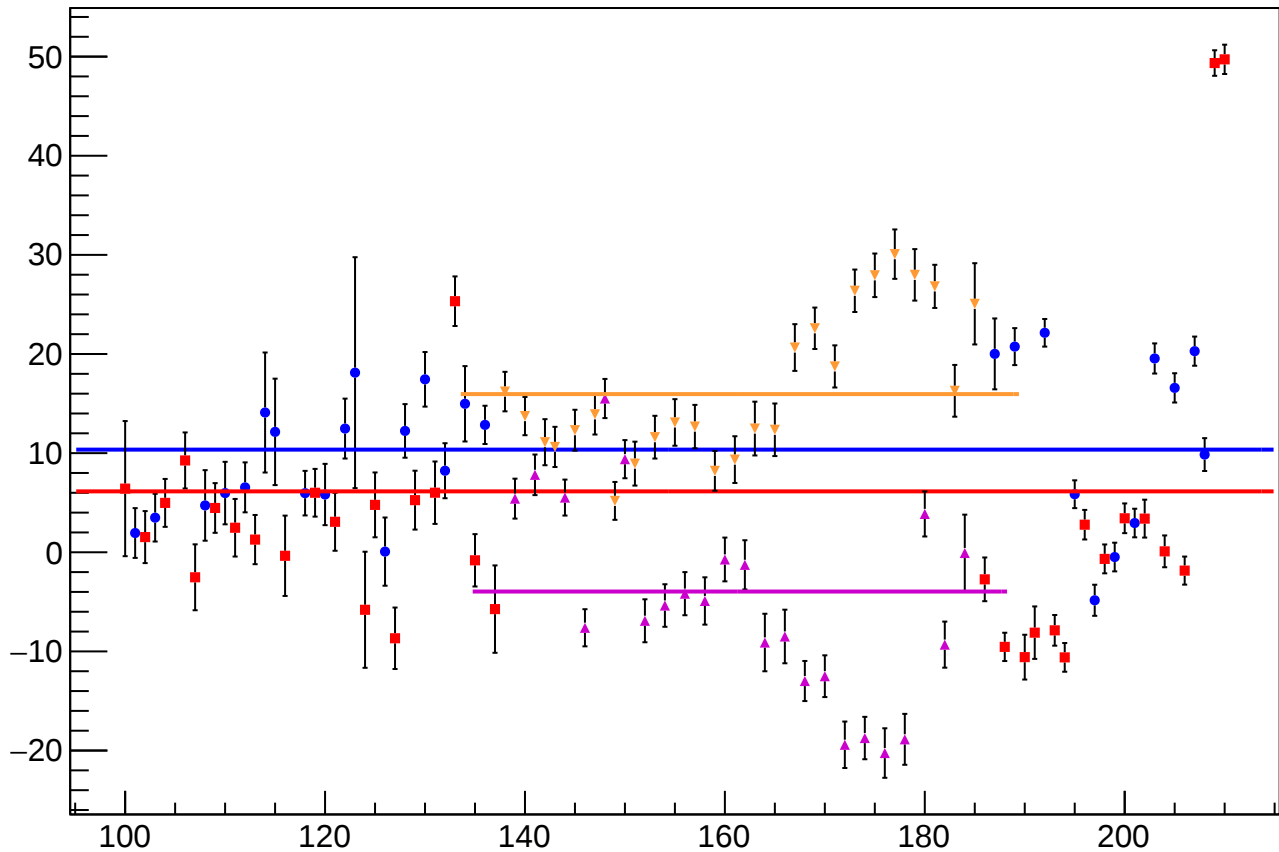
Left In: 2150.190 $\pm$ 0.372  $\chi^2$ /NDF: 911849.7/22

+ sign 1840.317 $\pm$ 0.233  $\chi^2$ /NDF: 3066180.4/52

All: 1807.409 $\pm$ 0.161  $\chi^2$ /NDF: 6652626.0/10

- sign 1777.396 $\pm$ 0.223  $\chi^2$ /NDF: 3548338.0/55

# diff\_bpm0i01aY\_mean vs Slug



Right In:  $10.355 \pm 0.394$   $\chi^2/\text{NDF}$ : 449.9/27

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

Right Out:  $6.144 \pm 0.361$   $\chi^2/\text{NDF}$ : 2627.6/32

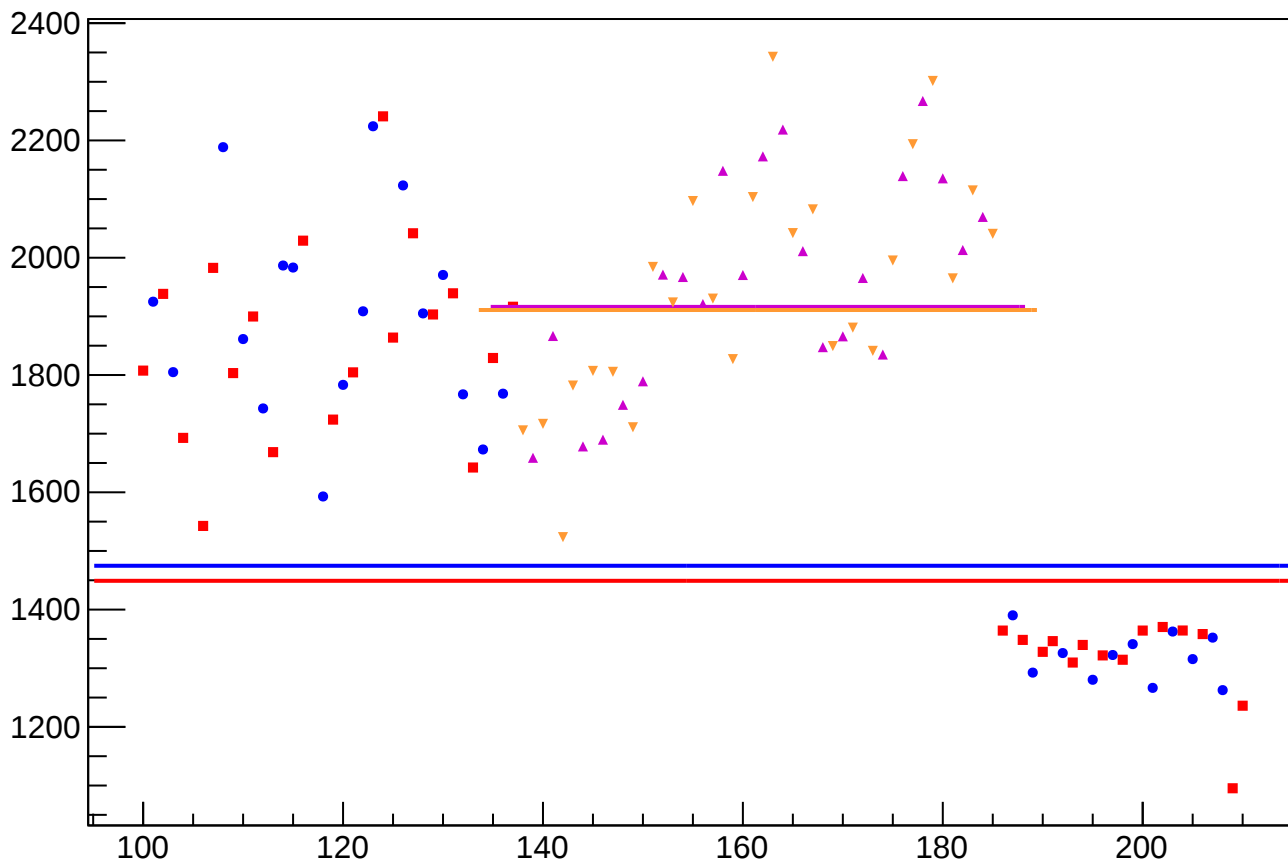
Left In:  $-3.960 \pm 0.463$   $\chi^2/\text{NDF}$ : 464.9/22

+ sign  $12.801 \pm 0.296$   $\chi^2/\text{NDF}$ : 783.4/52

All:  $7.363 \pm 0.205$   $\chi^2/\text{NDF}$ : 4824.1/108

- sign  $2.317 \pm 0.285$   $\chi^2/\text{NDF}$ : 3388.6/55

# diff\_bpm0i01aY\_rms vs Slug



Right In: 1474.737 $\pm$ 0.279  $\chi^2$ /NDF: 842640.5/27

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

Right Out: 1449.087 $\pm$ 0.256  $\chi^2$ /NDF: 959160.7/32

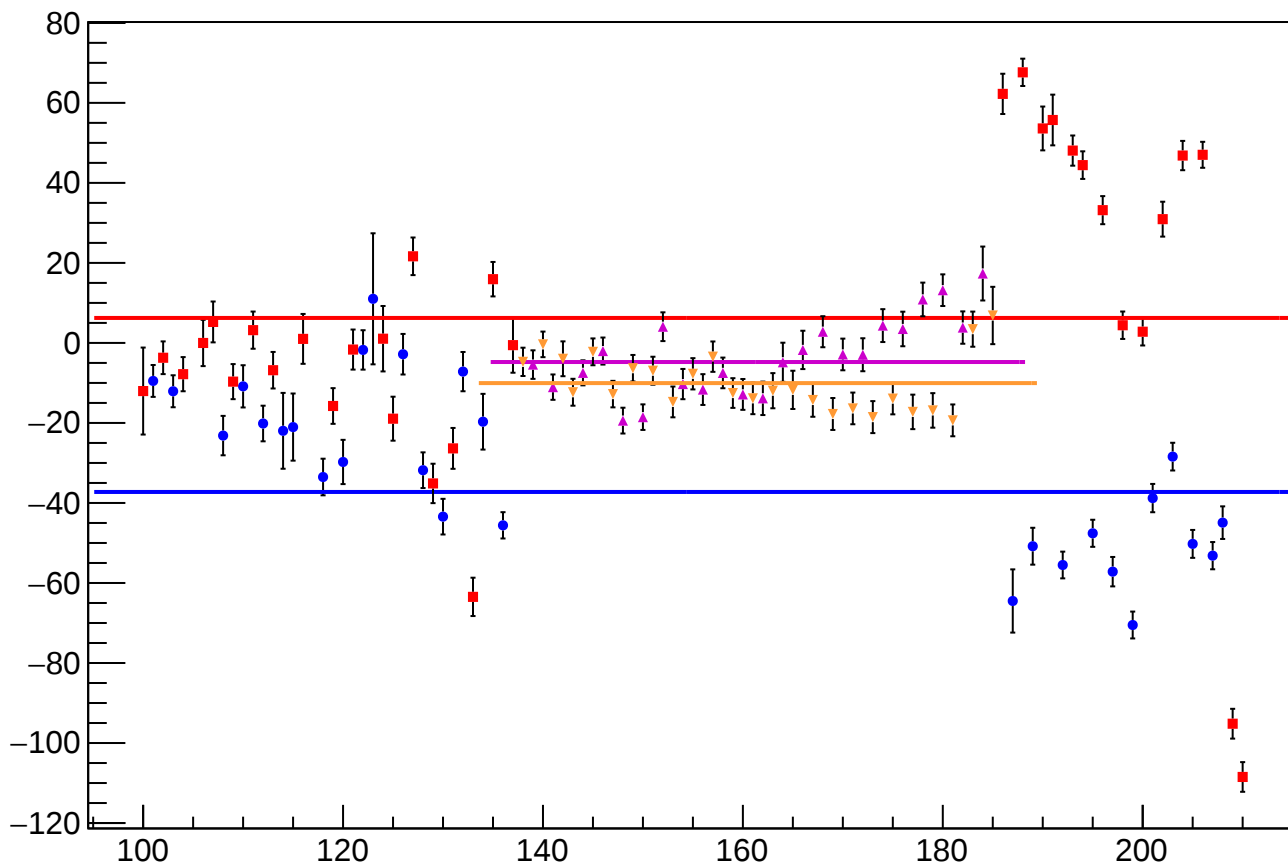
Left In: 1916.159 $\pm$ 0.327  $\chi^2$ /NDF: 274285.3/22

+ sign 1665.208 $\pm$ 0.209  $\chi^2$ /NDF: 2242025.7/52

All: 1644.873 $\pm$ 0.145  $\chi^2$ /NDF: 4759065.9/10

- sign 1626.000 $\pm$ 0.201  $\chi^2$ /NDF: 2498799.9/55

# diff\_bpm0l01X\_mean vs Slug



Right In:  $-37.250 \pm 0.818$   $\chi^2/\text{NDF}$ : 538.6/27

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

Right Out:  $6.243 \pm 0.767$   $\chi^2/\text{NDF}$ : 3331.1/32

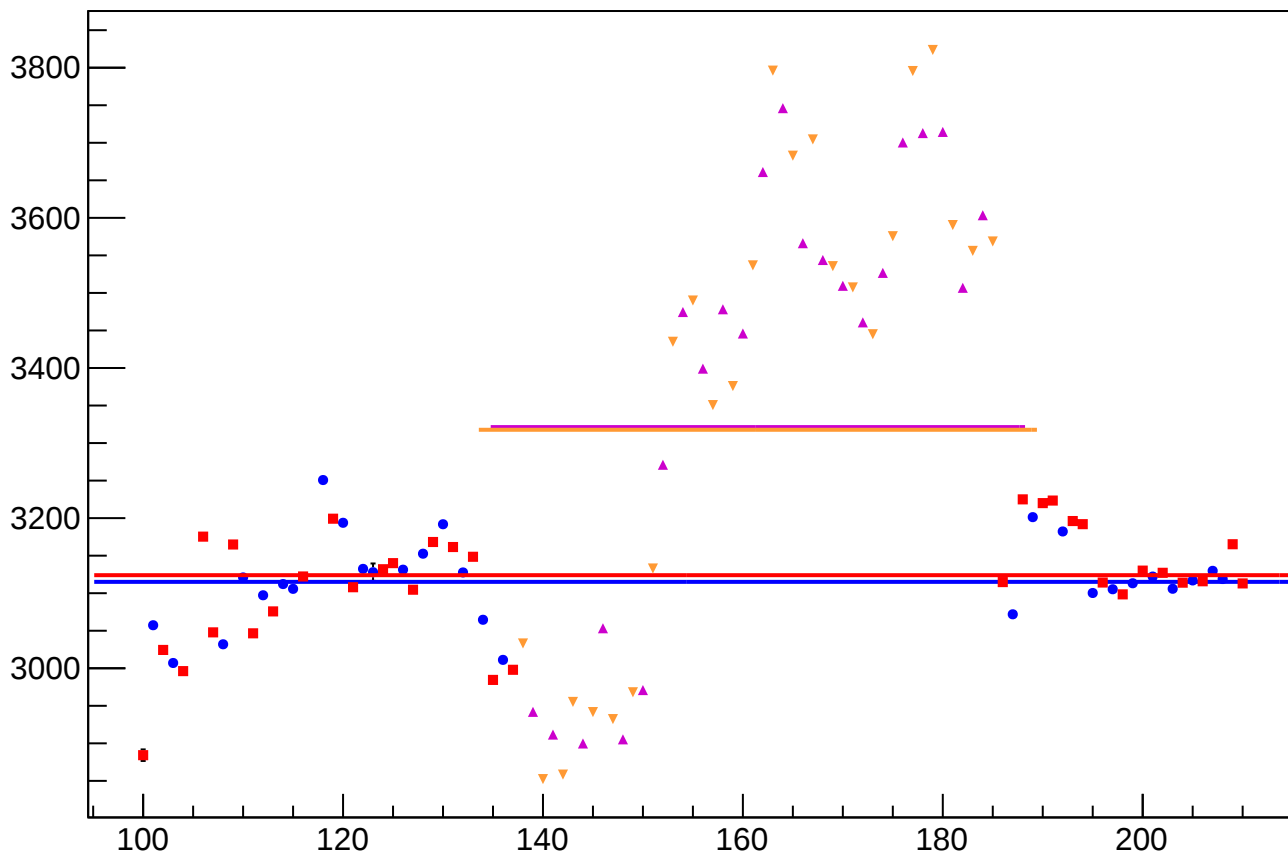
Left In:  $-4.774 \pm 0.800$   $\chi^2/\text{NDF}$ : 128.5/22

+ sign  $-22.928 \pm 0.563$   $\chi^2/\text{NDF}$ : 1187.5/52

All:  $-10.774 \pm 0.395$   $\chi^2/\text{NDF}$ : 5661.4/108

- sign  $0.971 \pm 0.554$   $\chi^2/\text{NDF}$ : 3558.4/55

# diff\_bpm0l01X\_rms vs Slug



Right In: 3115.115 $\pm$ 0.579  $\chi^2$ /NDF: 9233.1/27

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

Right Out: 3124.004 $\pm$ 0.542  $\chi^2$ /NDF: 14035.4/32

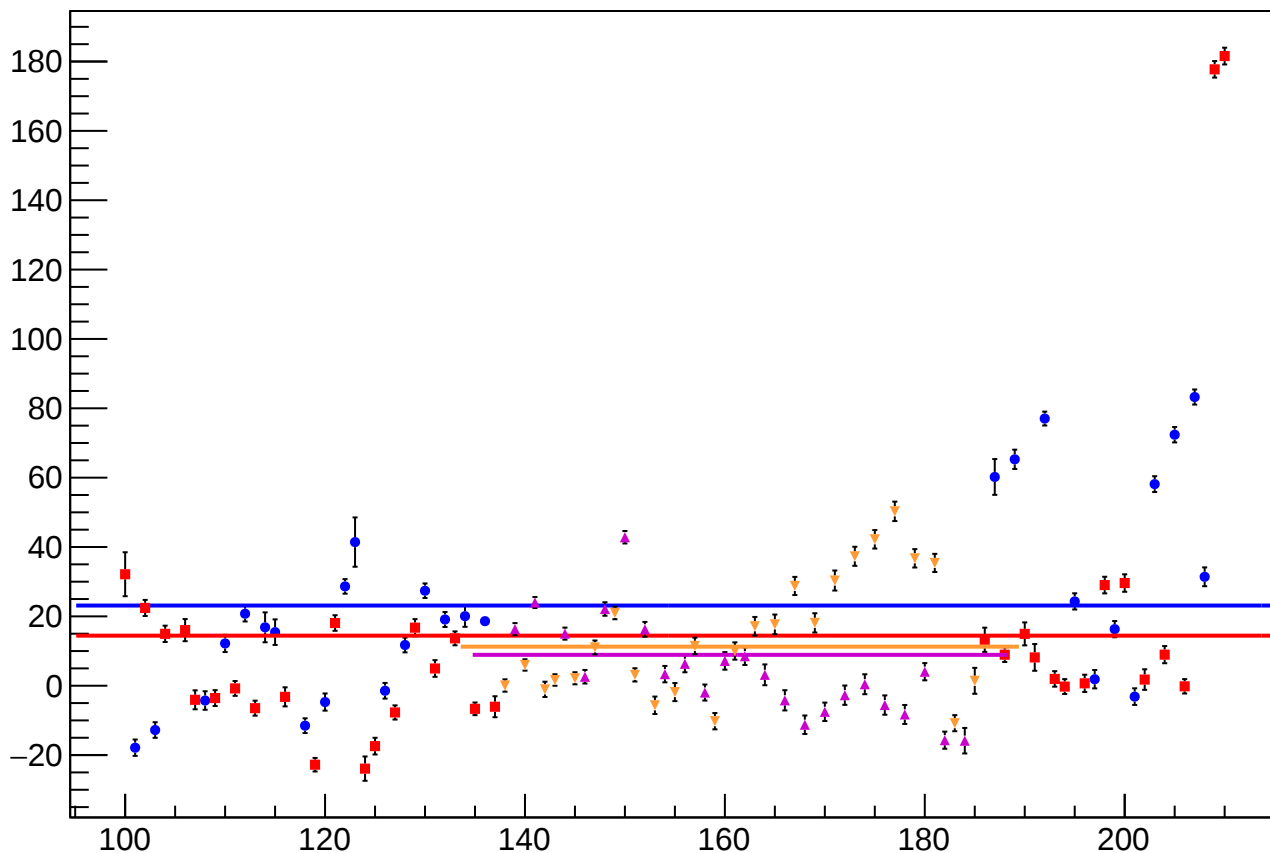
Left In: 3321.275 $\pm$ 0.566  $\chi^2$ /NDF:284334.2/22

+ sign 3221.754 $\pm$ 0.398  $\chi^2$ /NDF: 410609.3/52

All: 3220.050 $\pm$ 0.279  $\chi^2$ /NDF: 772357.9/108

- sign 3218.402 $\pm$ 0.392  $\chi^2$ /NDF: 361712.6/55

# diff\_bpm0l01Y\_mean vs Slug



Right In: 23.124 $\pm$ 0.446  $\chi^2$ /NDF: 3960.0/27

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

Right Out: 14.440 $\pm$ 0.424  $\chi^2$ /NDF: 11016.0/32

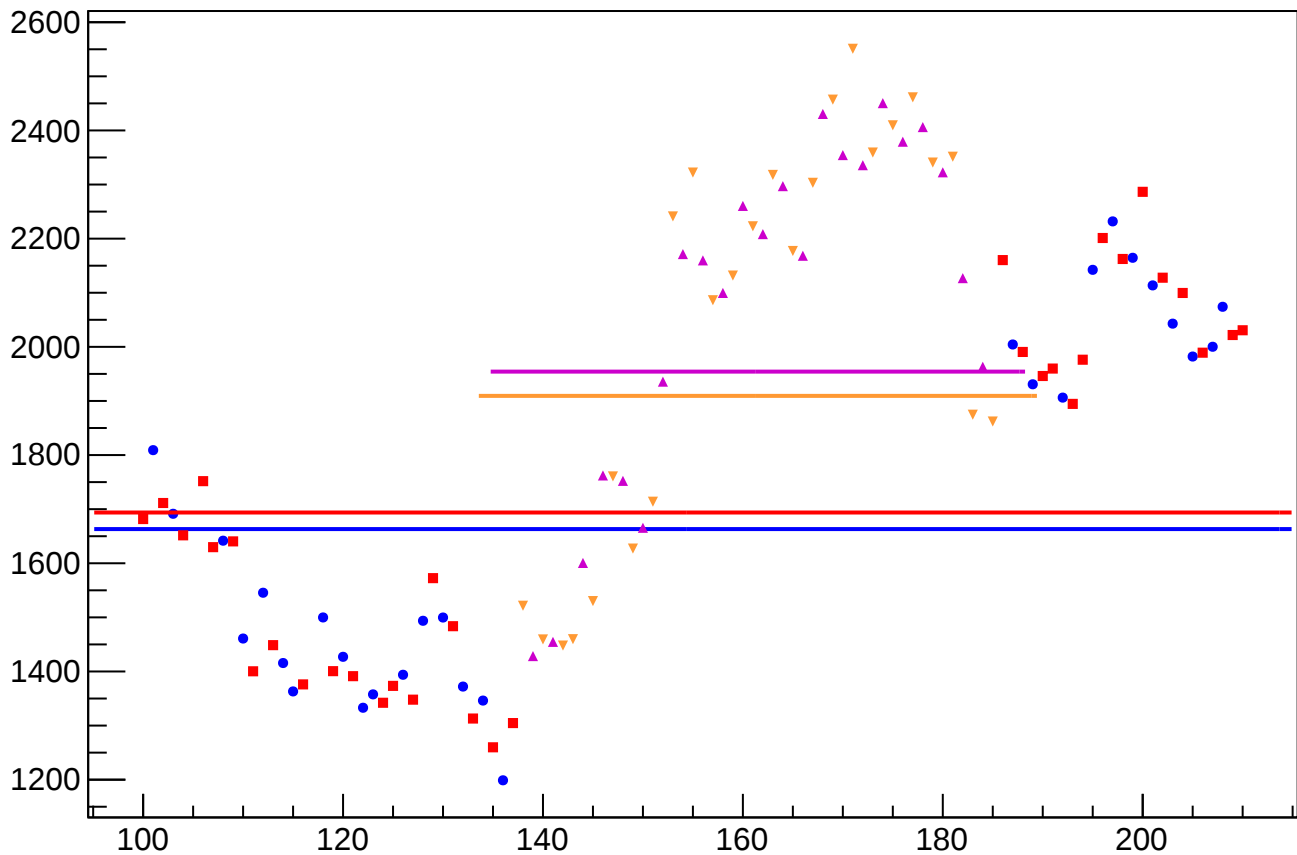
Left In: 8.905 $\pm$ 0.478  $\chi^2$ /NDF: 936.3/22

+ sign 17.304 $\pm$ 0.318  $\chi^2$ /NDF: 5448.5/52

All: 14.641 $\pm$ 0.225  $\chi^2$ /NDF: 17615.2/108

- sign 12.001 $\pm$ 0.317  $\chi^2$ /NDF: 12027.4/55

# diff\_bpm0l01Y\_rms vs Slug



Right In: 1663.198 $\pm$ 0.315  $\chi^2$ /NDF: 1076865.8/27

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

+ sign 1784.044 $\pm$ 0.225  $\chi^2$ /NDF: 2774311.5/52

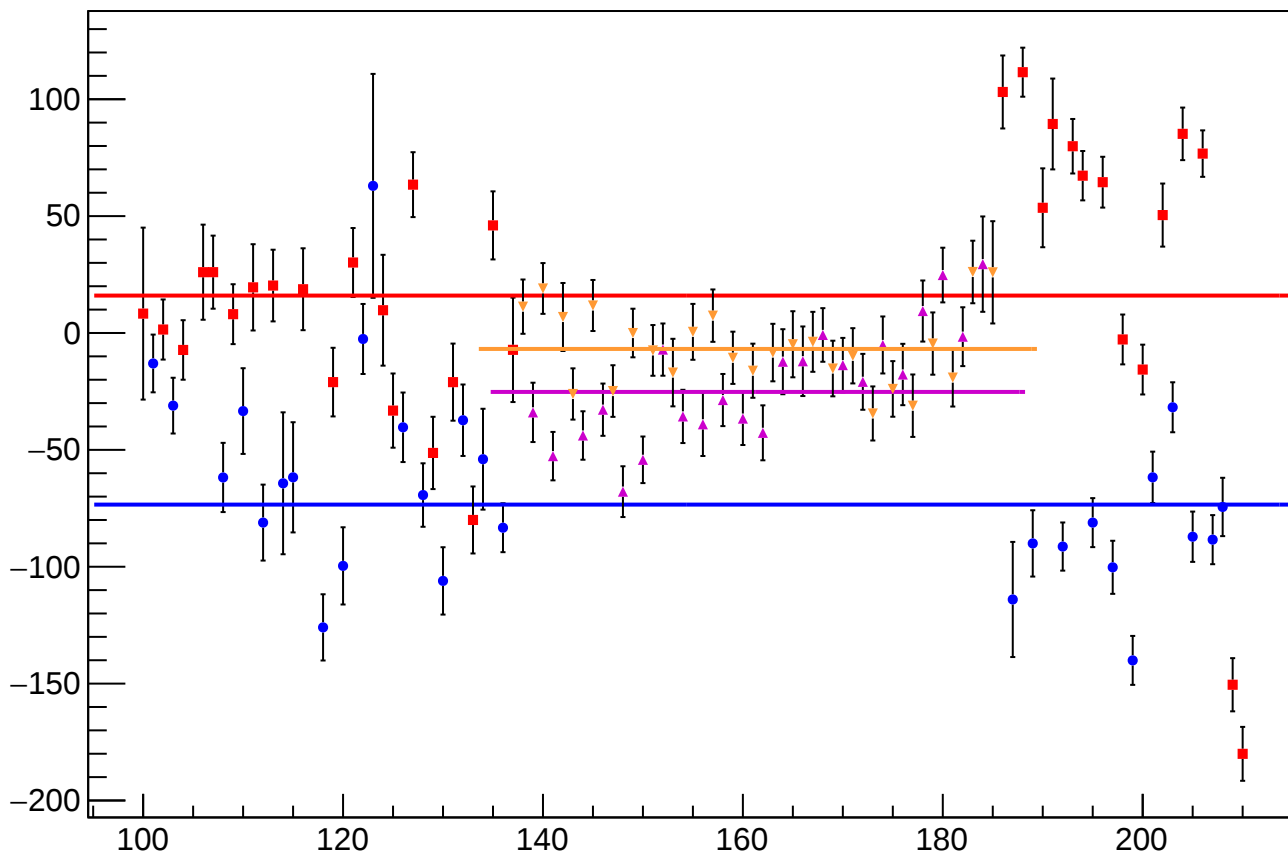
Right Out: 1693.816 $\pm$ 0.300  $\chi^2$ /NDF: 1158453.1/32

All: 1796.363 $\pm$ 0.159  $\chi^2$ /NDF: 5316253.8/10

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

- sign 1808.580 $\pm$ 0.224  $\chi^2$ /NDF: 2535976.5/55

# diff\_bpm0l02X\_mean vs Slug



Right In:  $-73.418 \pm 2.541$   $\chi^2/\text{NDF}: 180.4/27$

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

Right Out:  $16.006 \pm 2.383$   $\chi^2/\text{NDF}: 912.4/32$

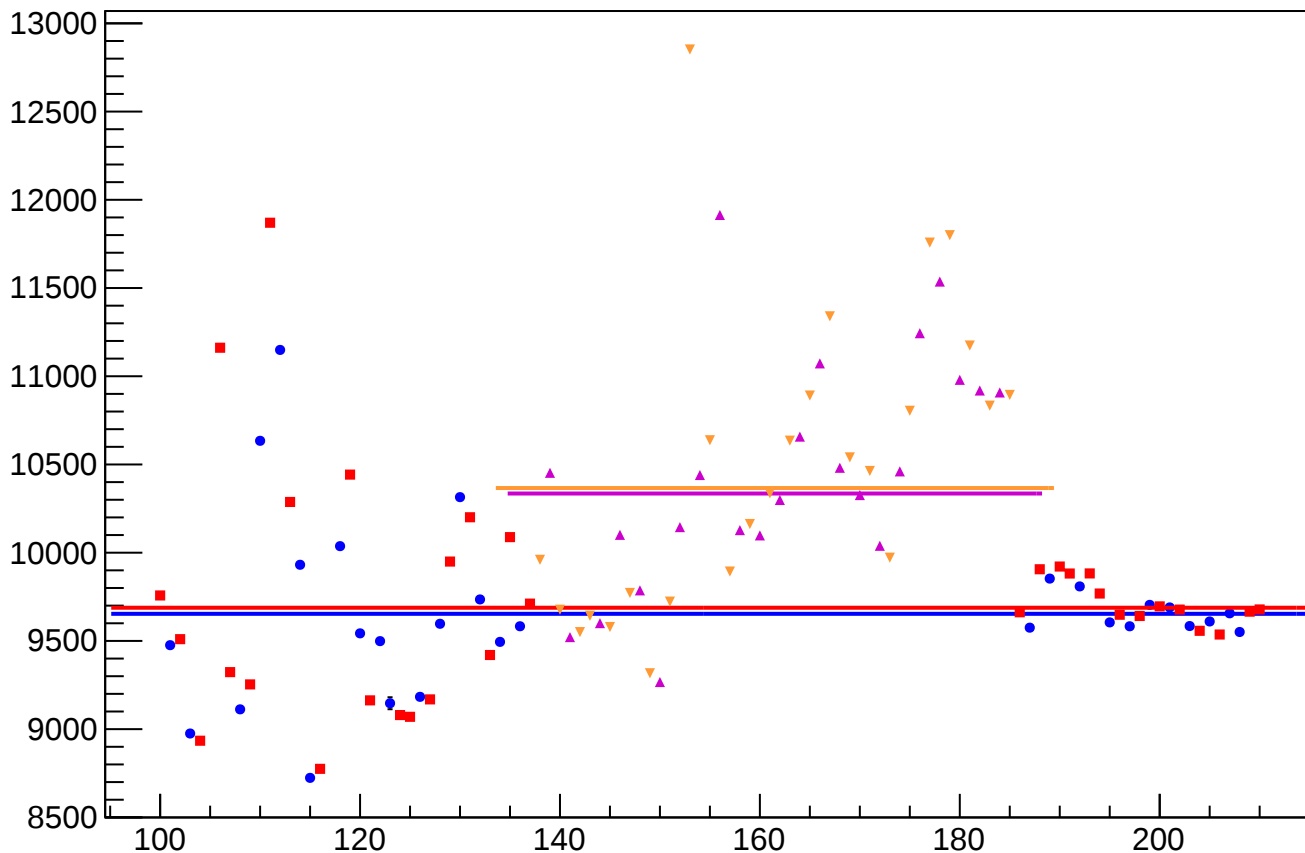
Left In:  $-25.215 \pm 2.487$   $\chi^2/\text{NDF}: 89.3/22$

+ sign  $-38.531 \pm 1.753$   $\chi^2/\text{NDF}: 582.5/52$

All:  $-20.797 \pm 1.228$   $\chi^2/\text{NDF}: 1928.2/108$

- sign  $-3.726 \pm 1.720$   $\chi^2/\text{NDF}: 1144.9/55$

# diff\_bpm0l02X\_rms vs Slug



Right In: 9653.626+/-1.797     $\chi^2/\text{NDF}$ : 45316.6/27

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

Right Out: 9688.101+/-1.685     $\chi^2/\text{NDF}$ : 80350.9/32

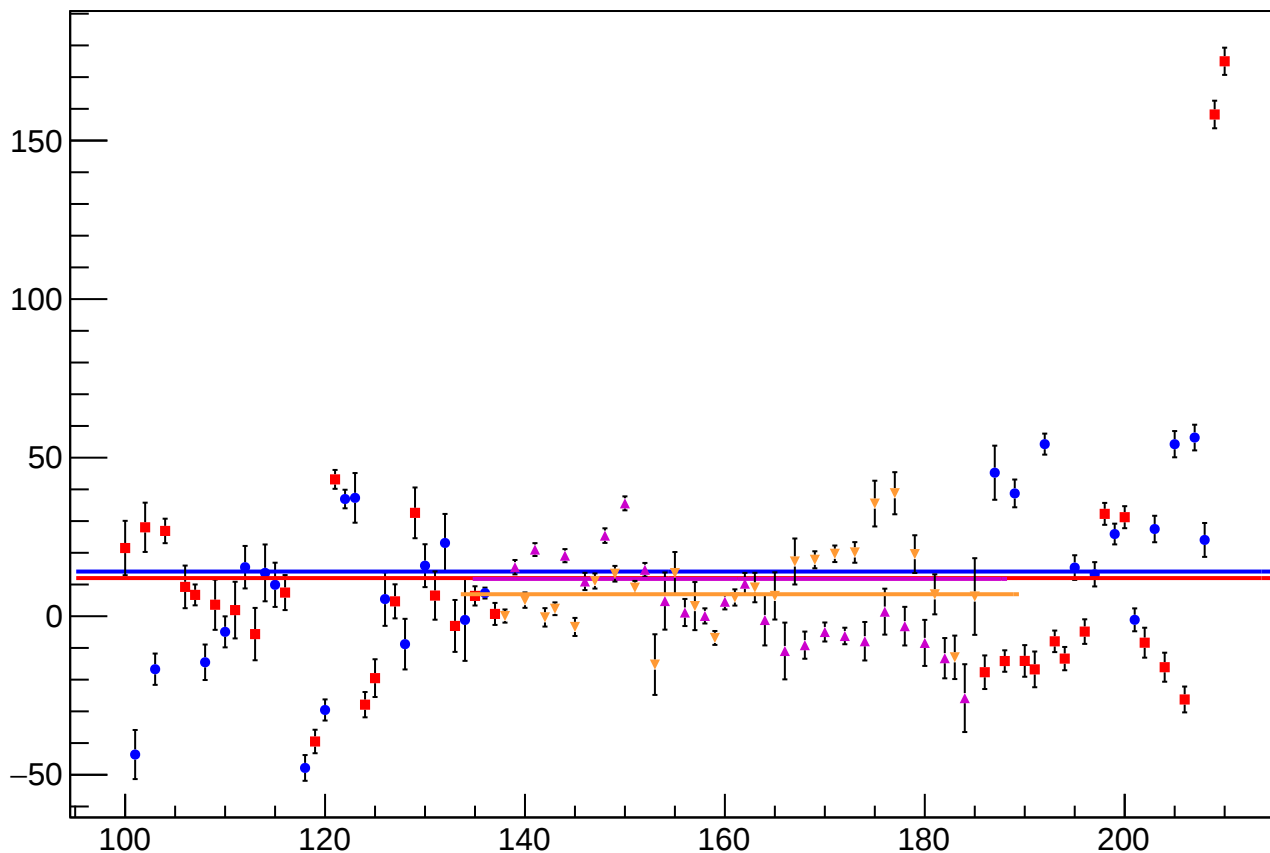
Left In: 10335.399+/-1.758     $\chi^2/\text{NDF}$ : 127173.0/22

+ sign 10027.105+/-1.240     $\chi^2/\text{NDF}$ : 339184.9/52

All: 10012.248+/-0.868     $\chi^2/\text{NDF}$ : 617644.7/10

- sign 9997.946+/-1.216     $\chi^2/\text{NDF}$ : 278178.0/55

# diff\_bpm0l02Y\_mean vs Slug



Right In:  $14.090 \pm 0.803$   $\chi^2/\text{NDF}$ : 1077.3/27

Left Out:  $6.939 \pm 0.639$   $\chi^2/\text{NDF}$ : 203.8/24

Right Out:  $12.026 \pm 0.770$   $\chi^2/\text{NDF}$ : 3513.5/32

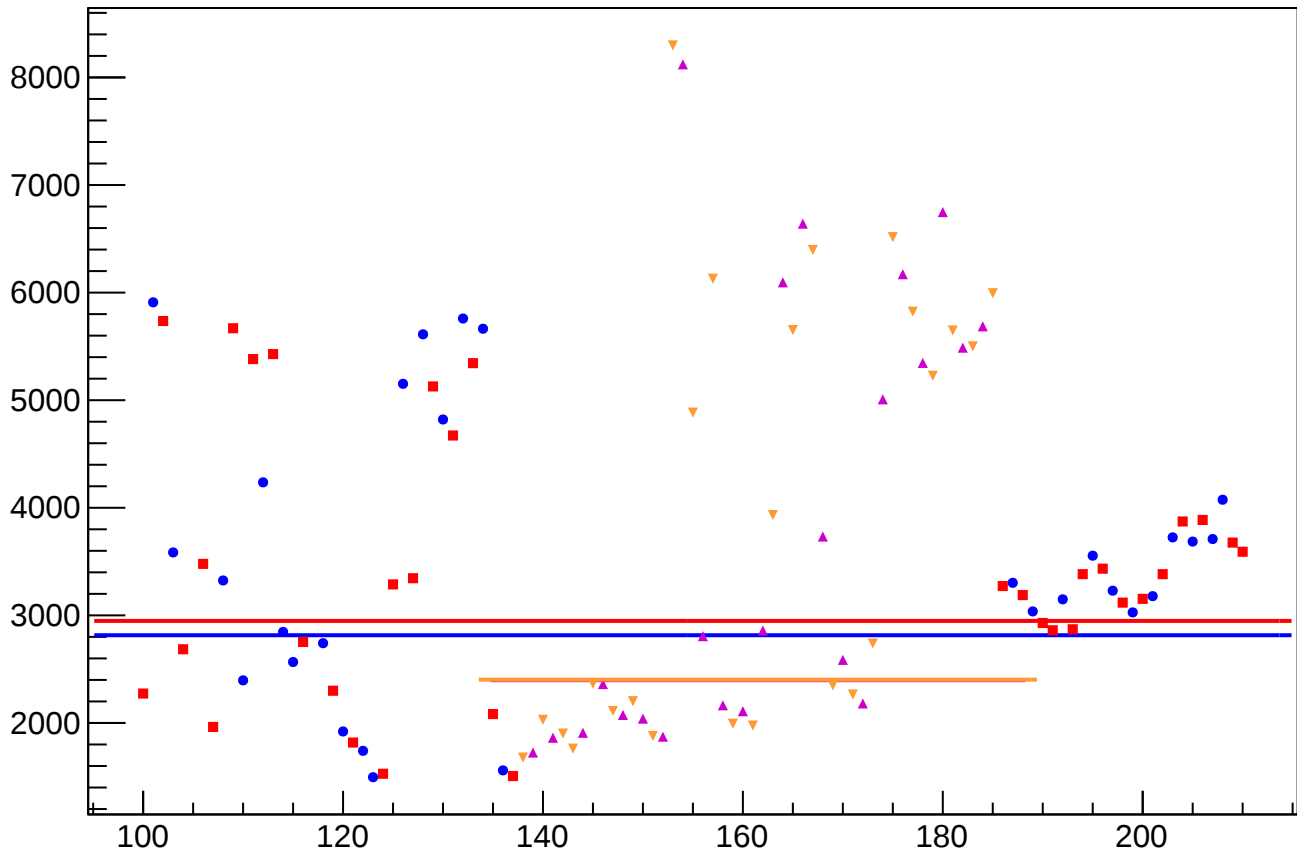
Left In:  $11.766 \pm 0.648$   $\chi^2/\text{NDF}$ : 395.1/22

+ sign  $9.710 \pm 0.500$   $\chi^2/\text{NDF}$ : 1329.7/52

All:  $10.801 \pm 0.352$   $\chi^2/\text{NDF}$ : 5247.8/108

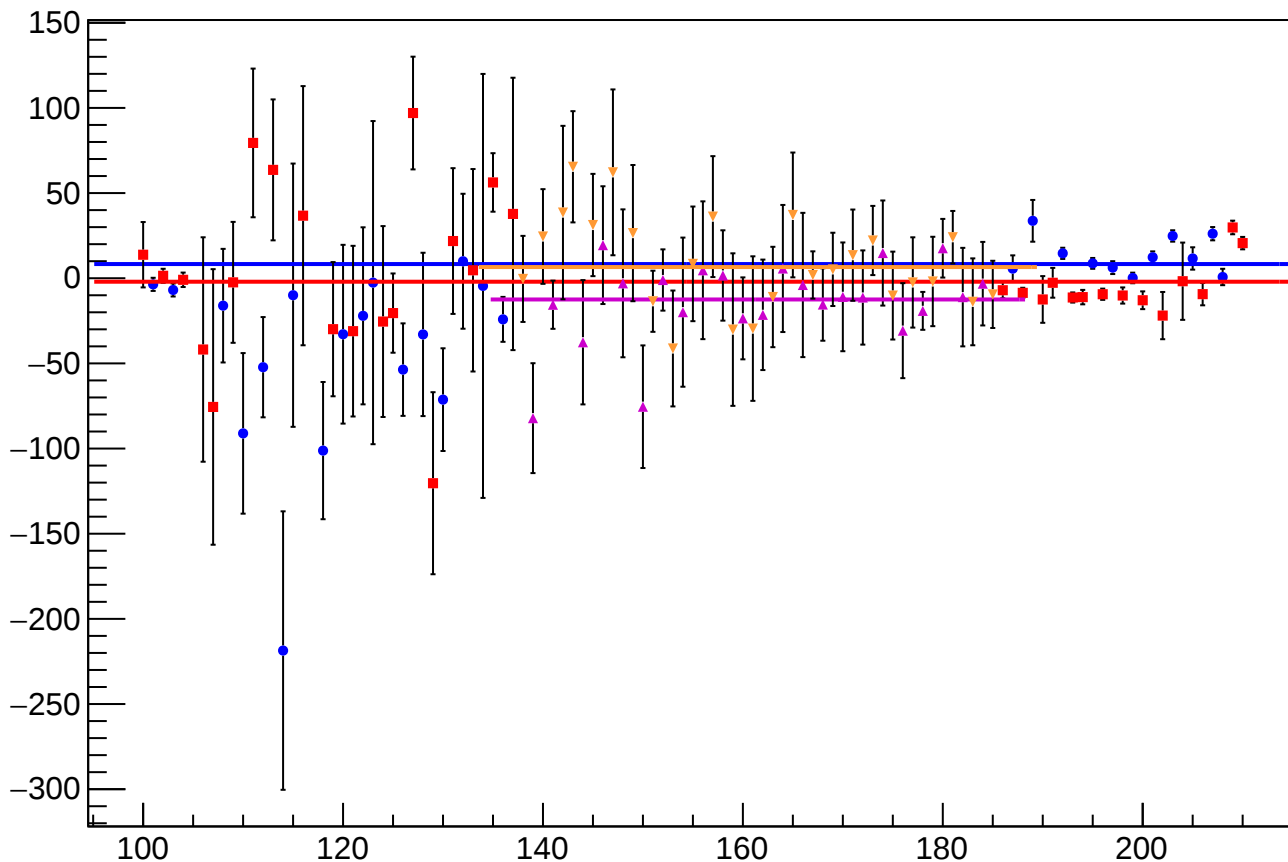
- sign  $11.874 \pm 0.496$   $\chi^2/\text{NDF}$ : 3908.7/55

# diff\_bpm0l02Y\_rms vs Slug



|                             |                                    |                         |                                     |
|-----------------------------|------------------------------------|-------------------------|-------------------------------------|
| Right In: 2815.475+/-0.568  | $\chi^2/\text{NDF}$ : 3456751.0/27 | + sign 2562.461+/-0.353 | $\chi^2/\text{NDF}$ : 10126951.5/52 |
| Left Out: 2402.359+/-0.452  | $\chi^2/\text{NDF}$ : 6345982.8/24 | All: 2594.626+/-0.249   | $\chi^2/\text{NDF}$ : 19126939.1/1  |
| Right Out: 2948.599+/-0.544 | $\chi^2/\text{NDF}$ : 2985504.7/32 | - sign 2626.284+/-0.351 | $\chi^2/\text{NDF}$ : 8983557.0/55  |
| Left In: 2397.701+/-0.458   | $\chi^2/\text{NDF}$ : 5398920.1/22 |                         |                                     |

# diff\_bpm0l03X\_mean vs Slug



Right In:  $8.325 \pm 1.089$   $\chi^2/\text{NDF}$ : 134.3/27

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

Right Out:  $-2.046 \pm 1.109$   $\chi^2/\text{NDF}$ : 174.9/32

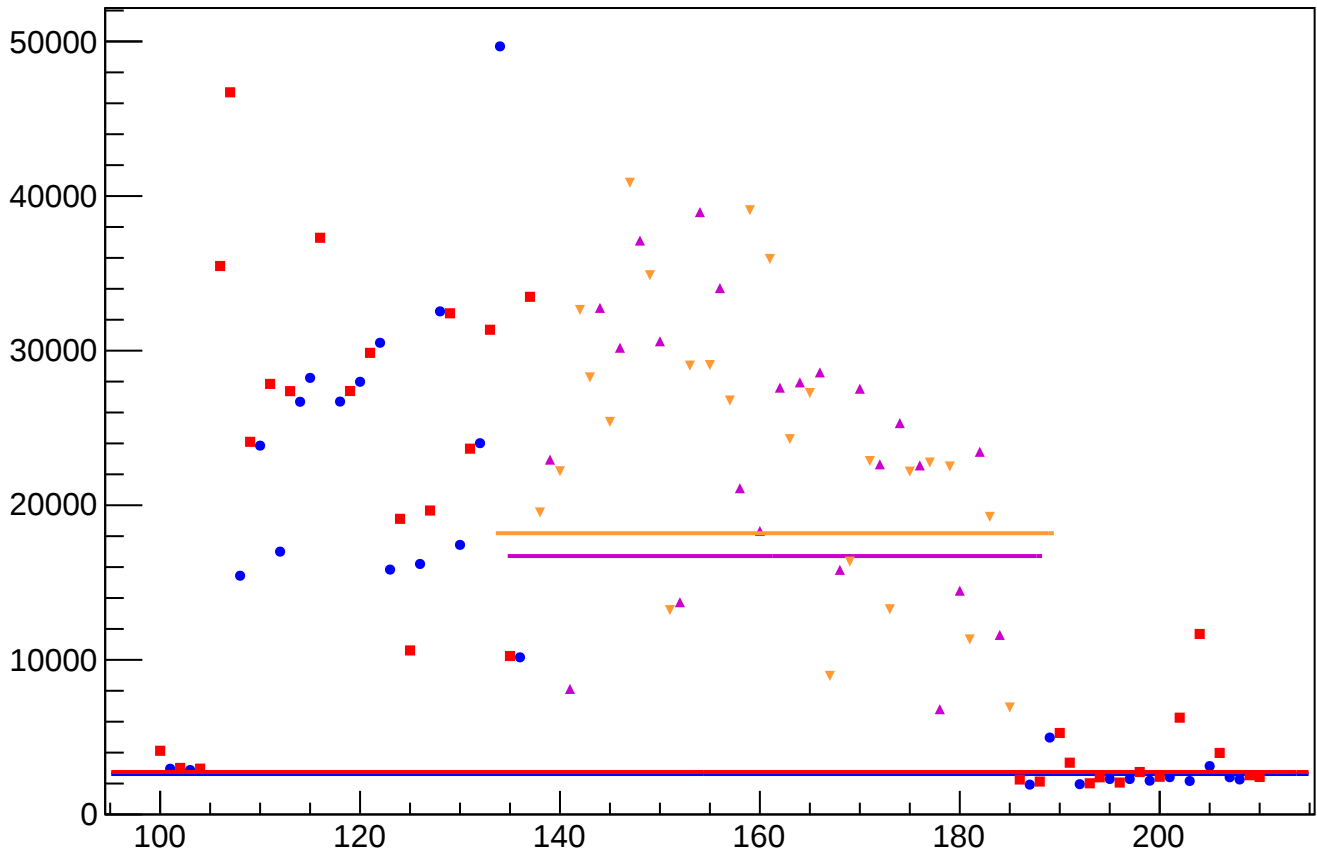
Left In:  $-12.469 \pm 5.025$   $\chi^2/\text{NDF}$ : 15.4/22

+ sign  $8.247 \pm 1.065$   $\chi^2/\text{NDF}$ : 151.2/52

All:  $2.949 \pm 0.759$   $\chi^2/\text{NDF}$ : 395.9/108

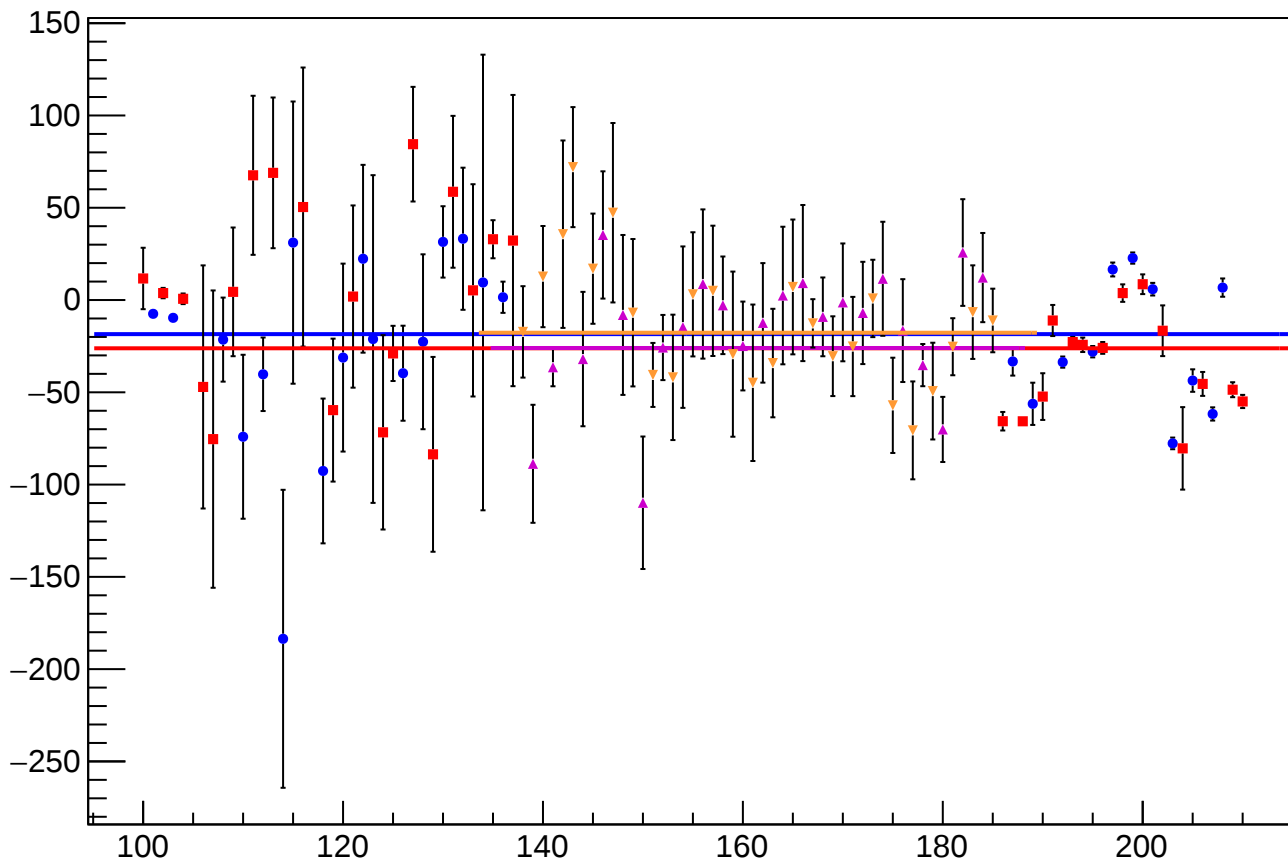
- sign  $-2.531 \pm 1.083$   $\chi^2/\text{NDF}$ : 194.4/55

# diff\_bpm0l03X\_rms vs Slug



|                             |                                    |                         |                                     |
|-----------------------------|------------------------------------|-------------------------|-------------------------------------|
| Right In: 2615.933+/-0.770  | $\chi^2/\text{NDF}$ : 6997786.7/27 | + sign 3301.092+/-0.753 | $\chi^2/\text{NDF}$ : 30249031.7/52 |
| Left Out: 18190.387+/-3.590 | $\chi^2/\text{NDF}$ : 5261328.5/24 | All: 3347.430+/-0.537   | $\chi^2/\text{NDF}$ : 60262600.2/1  |
| Right Out: 2746.649+/-0.784 | $\chi^2/\text{NDF}$ : 9079680.7/32 | - sign 3395.352+/-0.766 | $\chi^2/\text{NDF}$ : 30005866.1/55 |
| Left In: 16713.653+/-3.553  | $\chi^2/\text{NDF}$ : 6194178.8/22 |                         |                                     |

# diff\_bpm0l03Y\_mean vs Slug



Right In:  $-18.478 \pm 0.969$   $\chi^2/\text{NDF}$ : 963.4/27

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

Right Out:  $-26.154 \pm 0.994$   $\chi^2/\text{NDF}$ : 749.4/32

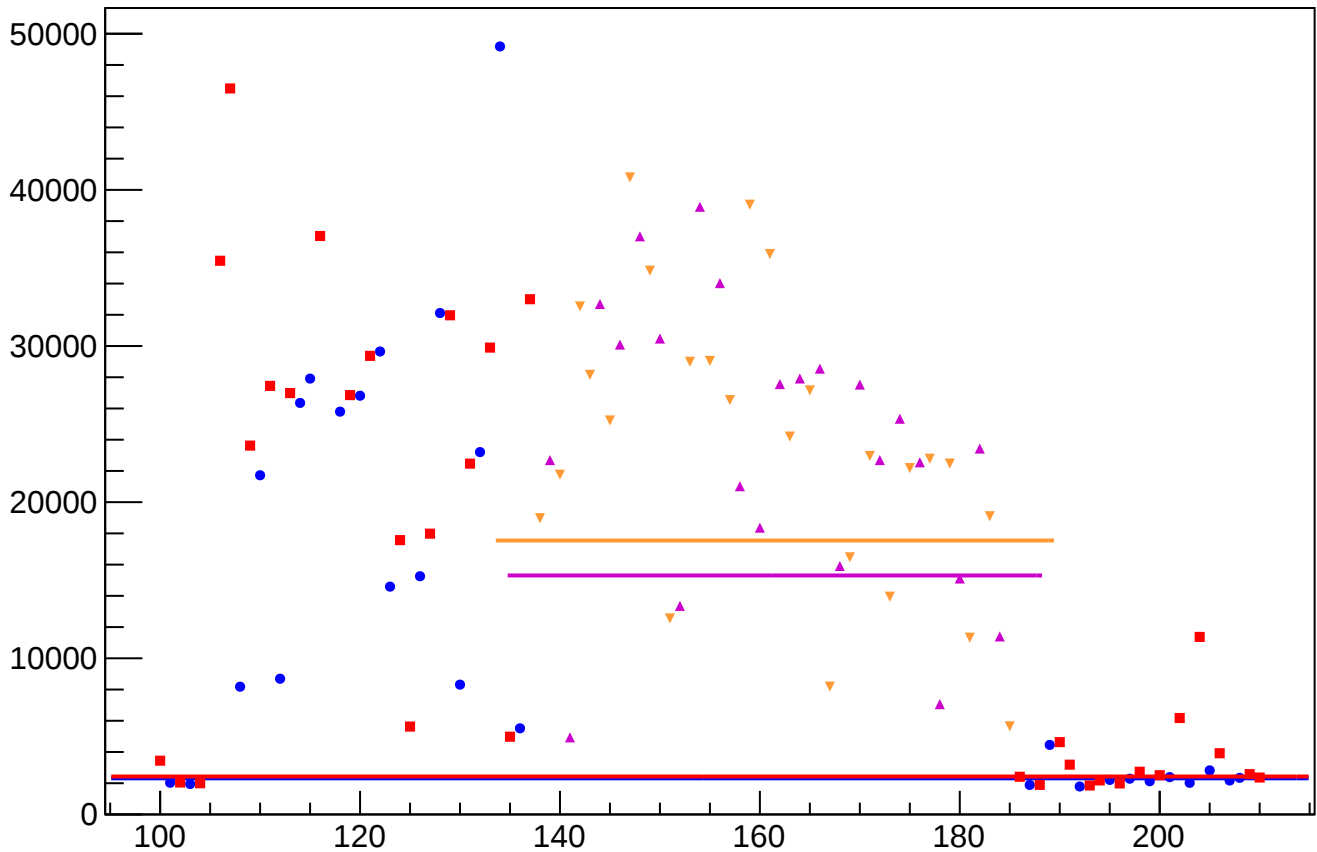
Left In:  $-25.991 \pm 4.789$   $\chi^2/\text{NDF}$ : 32.6/22

+ sign  $-18.450 \pm 0.951$   $\chi^2/\text{NDF}$ : 990.6/52

All:  $-22.211 \pm 0.680$   $\chi^2/\text{NDF}$ : 1804.6/108

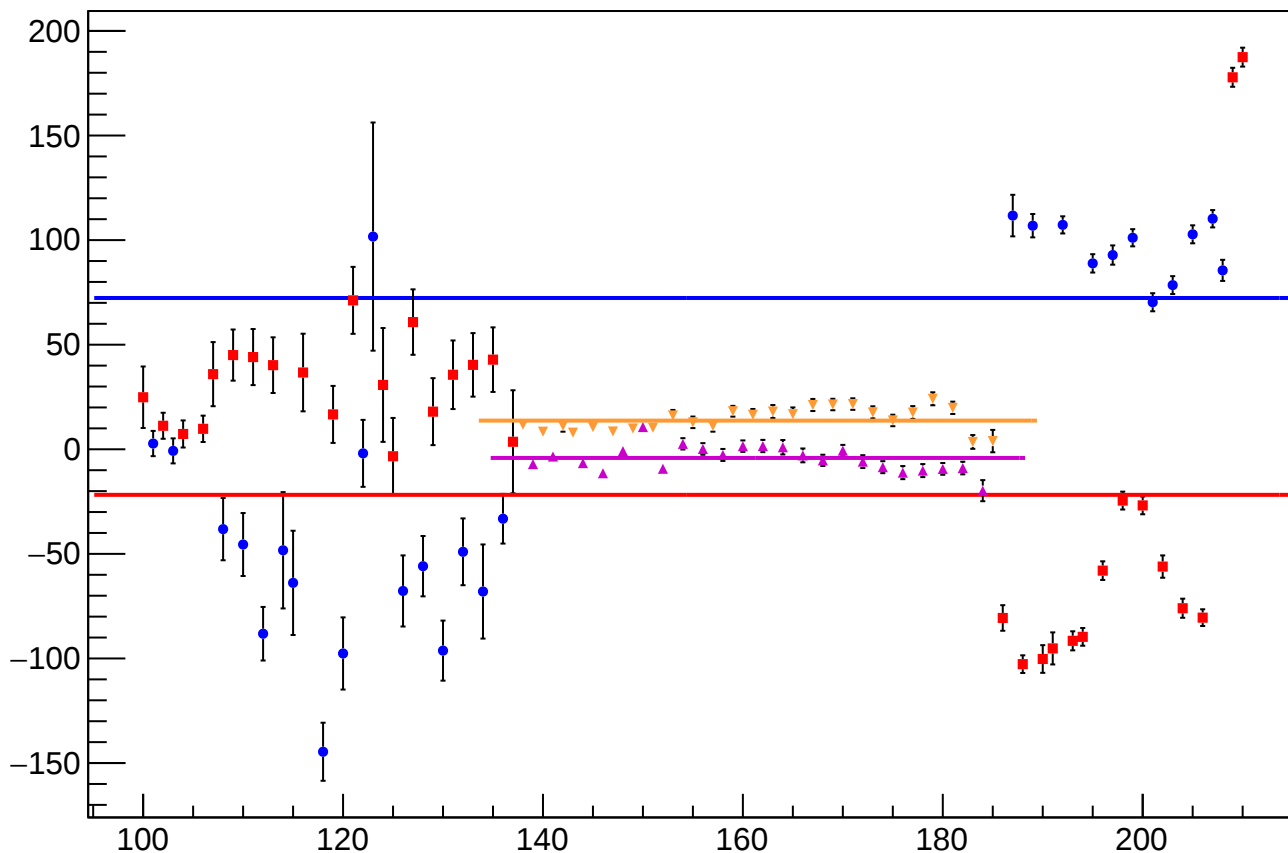
- sign  $-26.147 \pm 0.973$   $\chi^2/\text{NDF}$ : 782.0/55

# diff\_bpm0l03Y\_rms vs Slug



|                             |                                    |                         |                                     |
|-----------------------------|------------------------------------|-------------------------|-------------------------------------|
| Right In: 2314.517+/-0.685  | $\chi^2/\text{NDF}$ : 5812391.2/27 | + sign 2871.793+/-0.673 | $\chi^2/\text{NDF}$ : 29781988.9/52 |
| Left Out: 17546.173+/-3.517 | $\chi^2/\text{NDF}$ : 5902620.4/24 | All: 2916.507+/-0.481   | $\chi^2/\text{NDF}$ : 60119560.2/1  |
| Right Out: 2431.321+/-0.703 | $\chi^2/\text{NDF}$ : 8750632.4/32 | - sign 2963.316+/-0.688 | $\chi^2/\text{NDF}$ : 30328529.9/55 |
| Left In: 15305.311+/-3.386  | $\chi^2/\text{NDF}$ : 7721177.0/22 |                         |                                     |

# diff\_bpm0l04X\_mean vs Slug



Right In:  $72.333 \pm 1.258$   $\chi^2/\text{NDF}: 1781.2/27$

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

Right Out:  $-21.778 \pm 1.139$   $\chi^2/\text{NDF}: 6035.2/32$

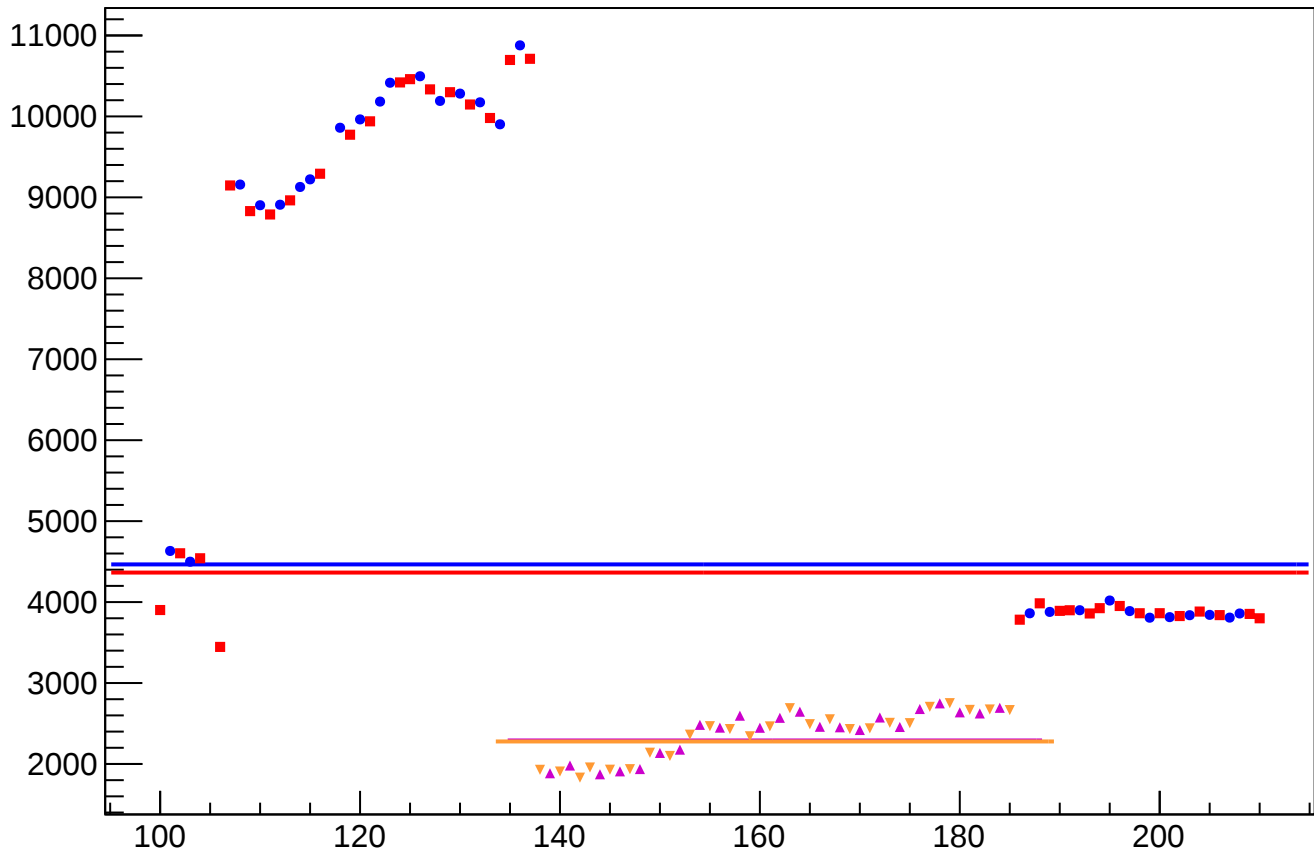
Left In:  $-4.141 \pm 0.555$   $\chi^2/\text{NDF}: 111.7/22$

+ sign  $22.701 \pm 0.492$   $\chi^2/\text{NDF}: 3710.9/52$

All:  $7.782 \pm 0.350$   $\chi^2/\text{NDF}: 11910.4/108$

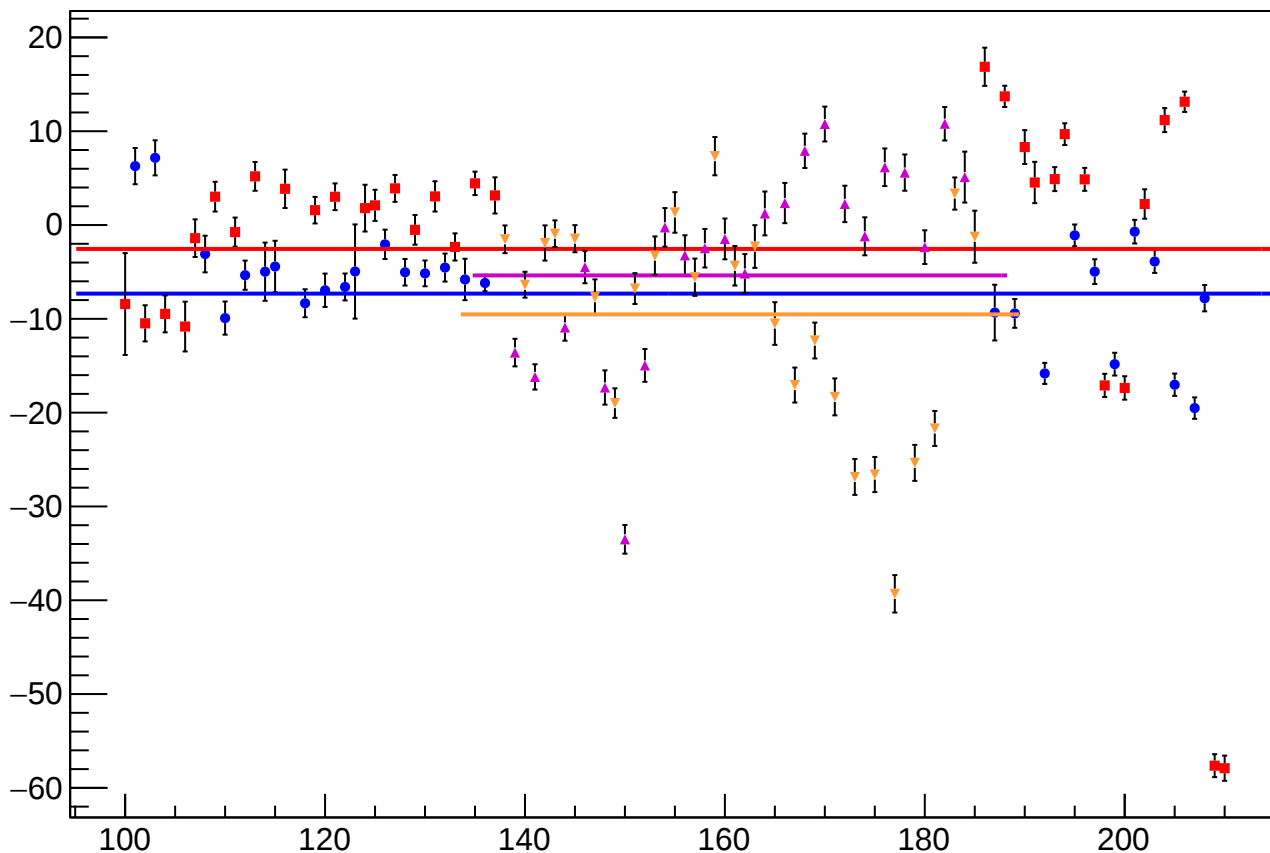
- sign  $-7.522 \pm 0.499$   $\chi^2/\text{NDF}: 6340.6/55$

# diff\_bpm0l04X\_rms vs Slug



Right In:  $4465.482 \pm 0.889$   $\chi^2/\text{NDF}: 3760371.5/27$  + sign  $2613.588 \pm 0.348$   $\chi^2/\text{NDF}: 9490135.5/52$   
 Left Out:  $2278.115 \pm 0.378$   $\chi^2/\text{NDF}: 607109.4/24$  All:  $2650.355 \pm 0.248$   $\chi^2/\text{NDF}: 19310709.6/1$   
 Right Out:  $4364.637 \pm 0.806$   $\chi^2/\text{NDF}: 3849064.3/32$  - sign  $2688.069 \pm 0.353$   $\chi^2/\text{NDF}: 9797993.9/55$   
 Left In:  $2290.461 \pm 0.392$   $\chi^2/\text{NDF}: 590272.1/22$

# diff\_bpm0l04Y\_mean vs Slug



Right In:  $-7.311 \pm 0.277$   $\chi^2/\text{NDF}: 488.6/27$

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

Right Out:  $-2.546 \pm 0.262$   $\chi^2/\text{NDF}: 5068.1/32$

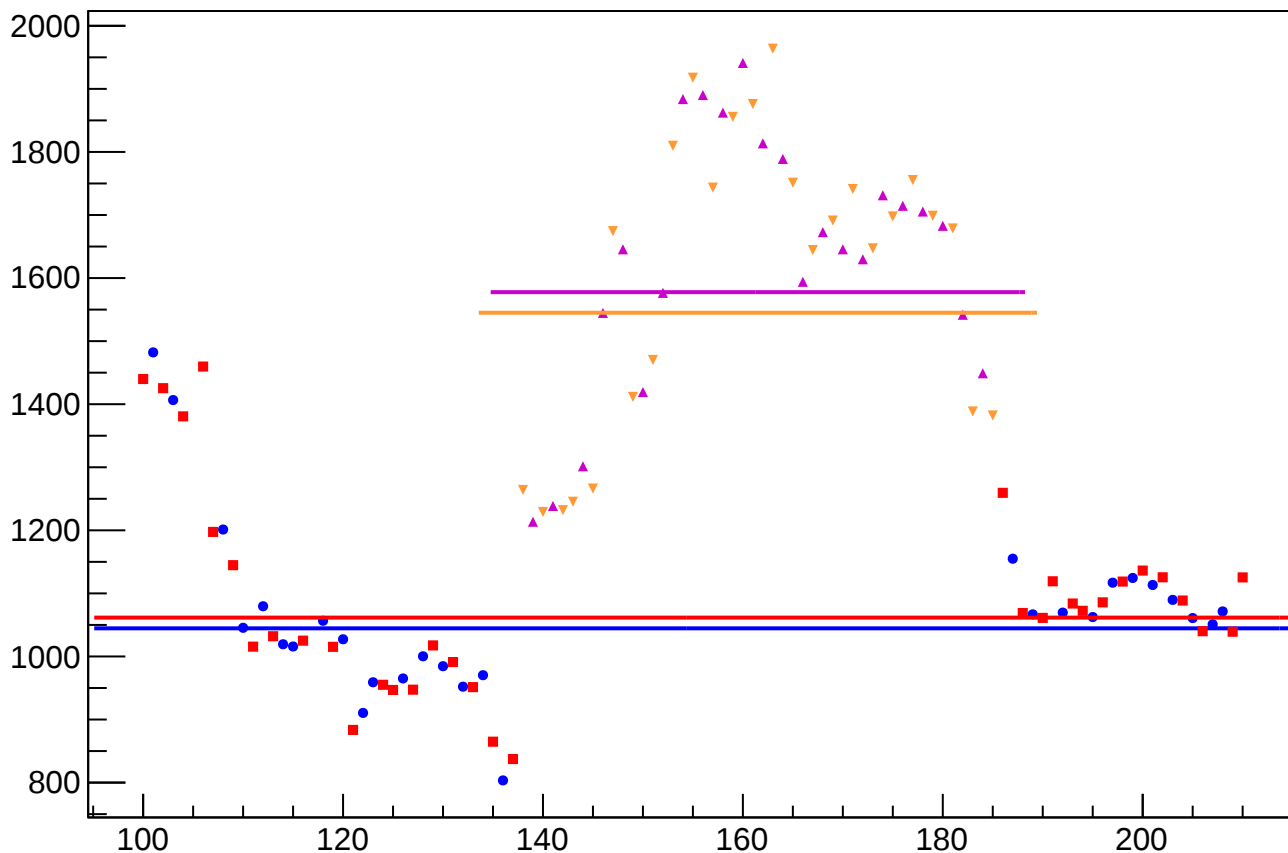
Left In:  $-5.372 \pm 0.383$   $\chi^2/\text{NDF}: 869.8/22$

+ sign  $-8.119 \pm 0.220$   $\chi^2/\text{NDF}: 1396.1/52$

All:  $-5.741 \pm 0.154$   $\chi^2/\text{NDF}: 7599.8/108$

- sign  $-3.448 \pm 0.216$   $\chi^2/\text{NDF}: 5975.0/55$

# diff\_bpm0l04Y\_rms vs Slug



Right In: 1044.595 $\pm$ 0.196  $\chi^2$ /NDF: 411128.4/27

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

Right Out: 1061.603 $\pm$ 0.185  $\chi^2$ /NDF: 392861.4/32

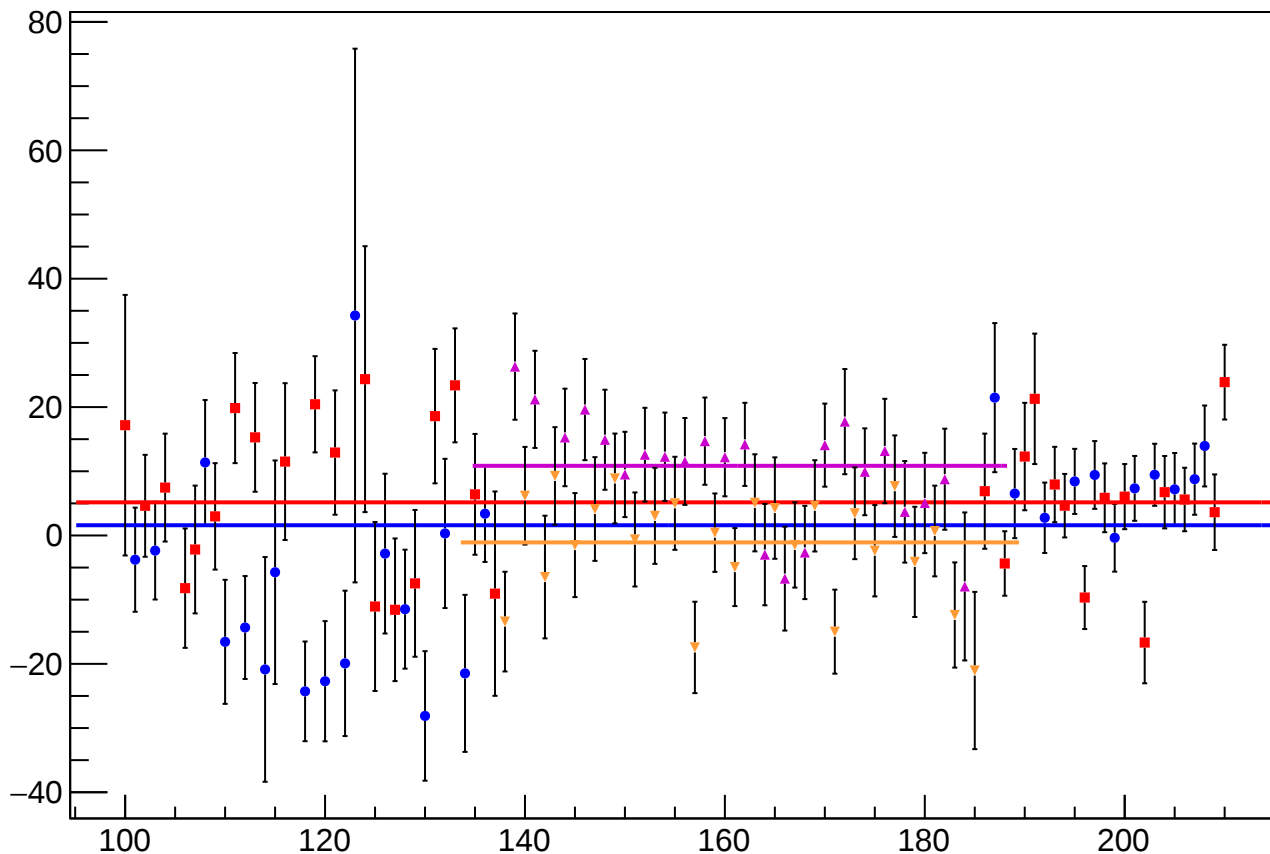
Left In: 1577.685 $\pm$ 0.271  $\chi^2$ /NDF: 625406.2/22

+ sign 1227.247 $\pm$ 0.156  $\chi^2$ /NDF: 3644459.0/52

All: 1226.800 $\pm$ 0.109  $\chi^2$ /NDF: 7136018.2/10

- sign 1226.368 $\pm$ 0.153  $\chi^2$ /NDF: 3491543.0/55

# diff\_bpm0l05X\_mean vs Slug



Right In:  $1.593 \pm 1.394$   $\chi^2/\text{NDF}: 65.6/27$

Left Out:  $-1.083 \pm 1.487$   $\chi^2/\text{NDF}: 27.5/24$

Right Out:  $5.159 \pm 1.282$   $\chi^2/\text{NDF}: 63.7/32$

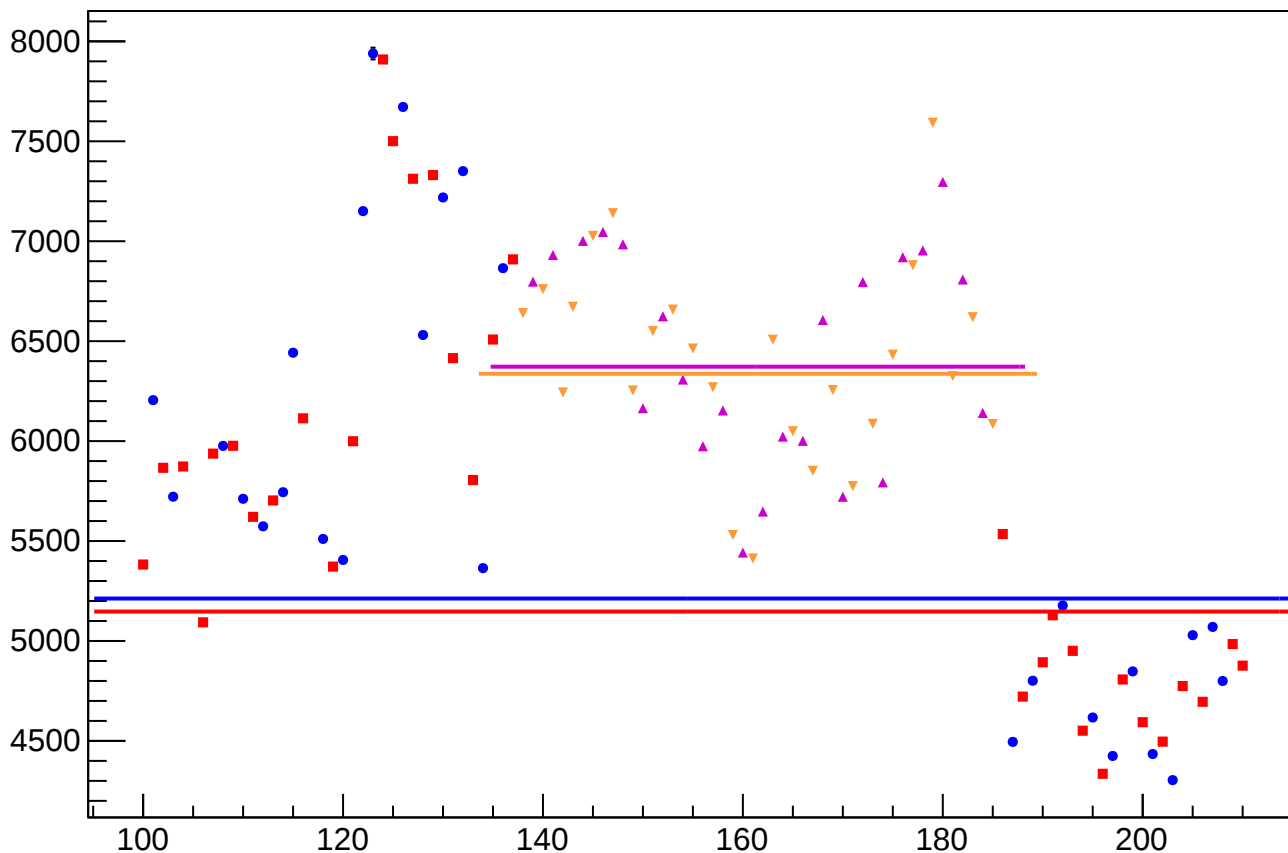
Left In:  $10.851 \pm 1.542$   $\chi^2/\text{NDF}: 24.4/22$

+ sign  $0.342 \pm 1.017$   $\chi^2/\text{NDF}: 94.8/52$

All:  $4.025 \pm 0.708$   $\chi^2/\text{NDF}: 216.4/108$

- sign  $7.485 \pm 0.985$   $\chi^2/\text{NDF}: 96.2/55$

# diff\_bpm0l05X\_rms vs Slug



Right In: 5212.298+/-0.985  $\chi^2/\text{NDF}$ : 732386.4/27

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

Right Out: 5147.141+/-0.906  $\chi^2/\text{NDF}$ : 654094.0/32

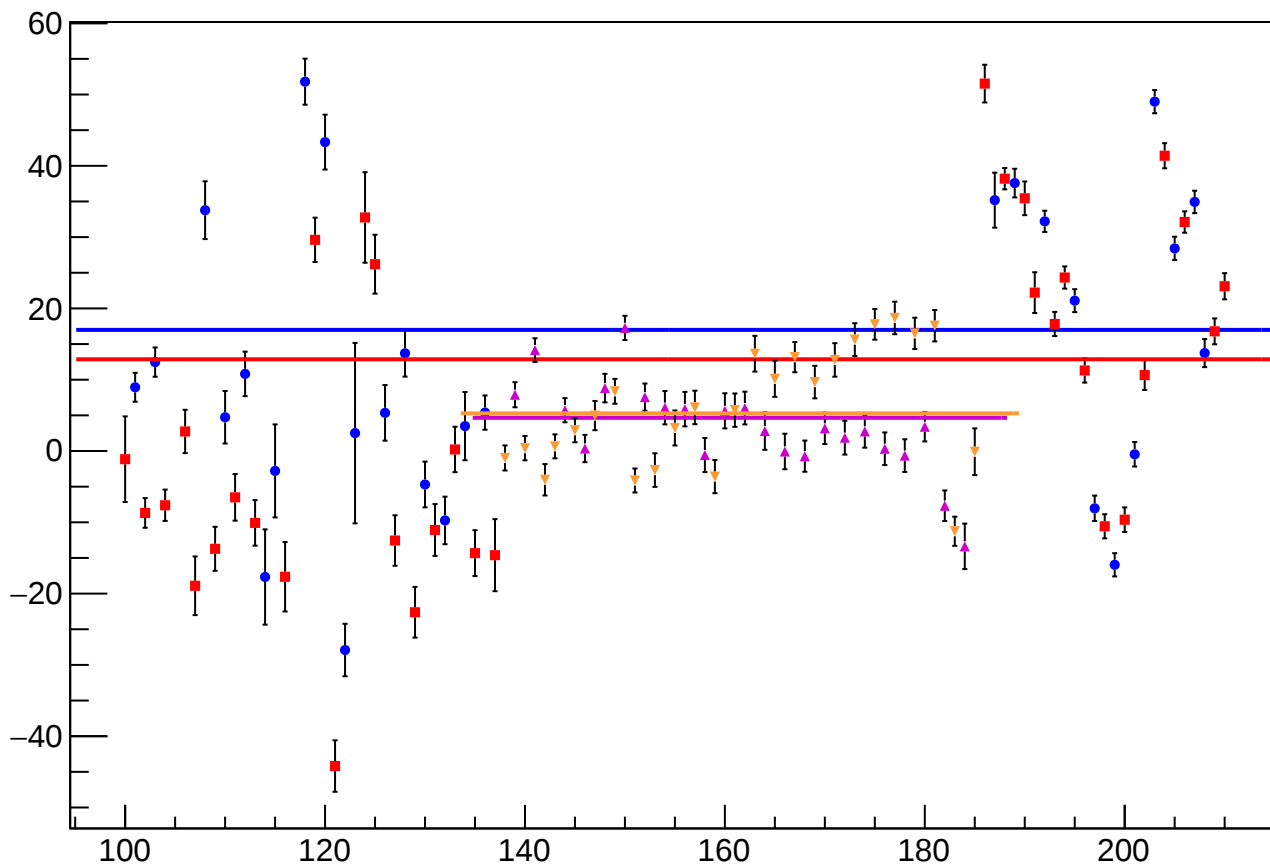
Left In: 6372.349+/-1.090  $\chi^2/\text{NDF}$ : 247257.0/22

+ sign 5738.084+/-0.719  $\chi^2/\text{NDF}$ : 1564253.0/52

All: 5691.537+/-0.500  $\chi^2/\text{NDF}$ : 3220752.7/10

- sign 5647.818+/-0.697  $\chi^2/\text{NDF}$ : 1648373.1/55

# diff\_bpm0l05Y\_mean vs Slug



Right In:  $16.990 \pm 0.440$   $\chi^2/\text{NDF}$ : 2070.8/27

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

Right Out:  $12.866 \pm 0.409$   $\chi^2/\text{NDF}$ : 2574.8/32

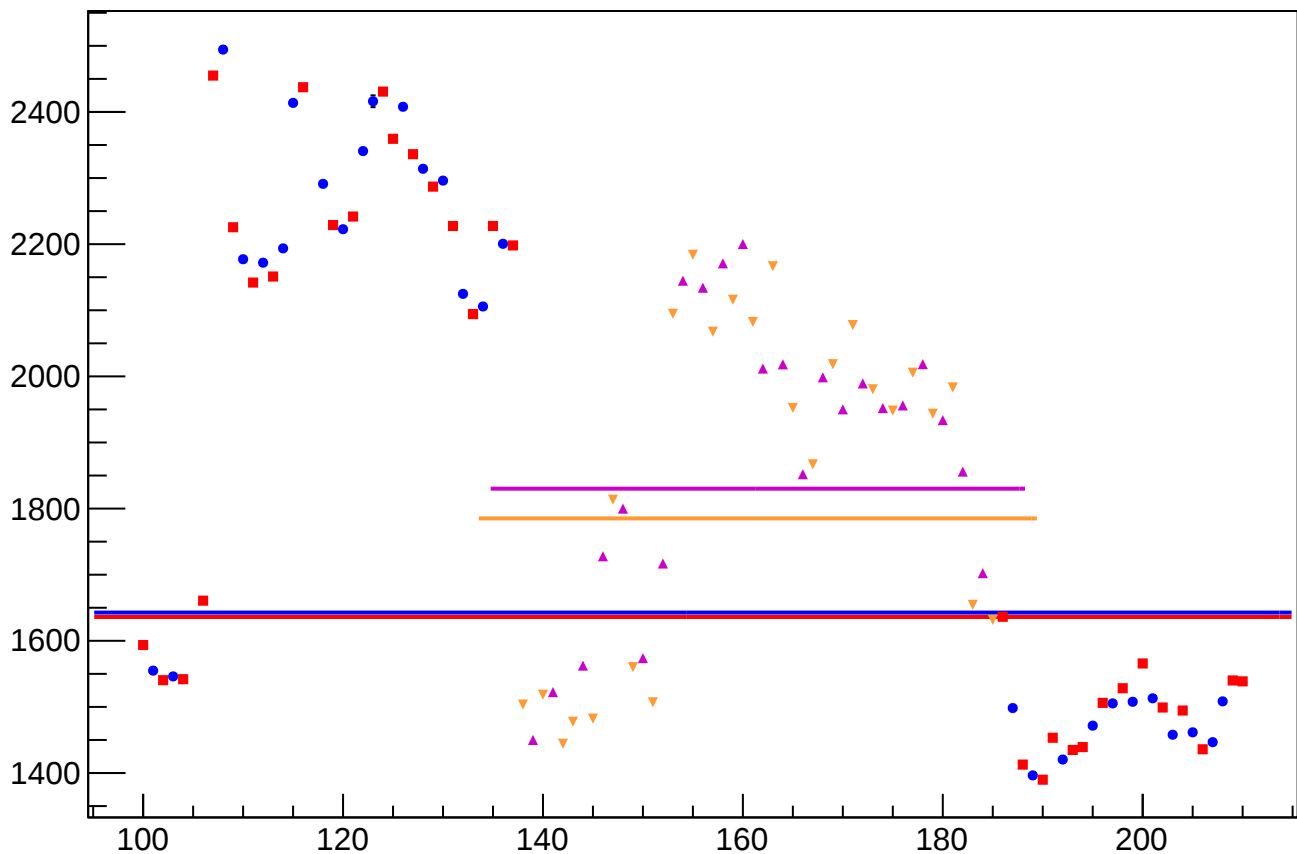
Left In:  $4.657 \pm 0.443$   $\chi^2/\text{NDF}$ : 196.5/22

+ sign  $10.875 \pm 0.304$   $\chi^2/\text{NDF}$ : 2806.6/52

All:  $9.975 \pm 0.214$   $\chi^2/\text{NDF}$ : 5780.7/108

- sign  $9.096 \pm 0.300$   $\chi^2/\text{NDF}$ : 2956.7/55

# diff\_bpm0l05Y\_rms vs Slug



Right In: 1642.714+/-0.311  $\chi^2/\text{NDF}$ : 1083449.2/27

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

Right Out: 1636.046+/-0.289  $\chi^2/\text{NDF}$ : 1094861.3/32

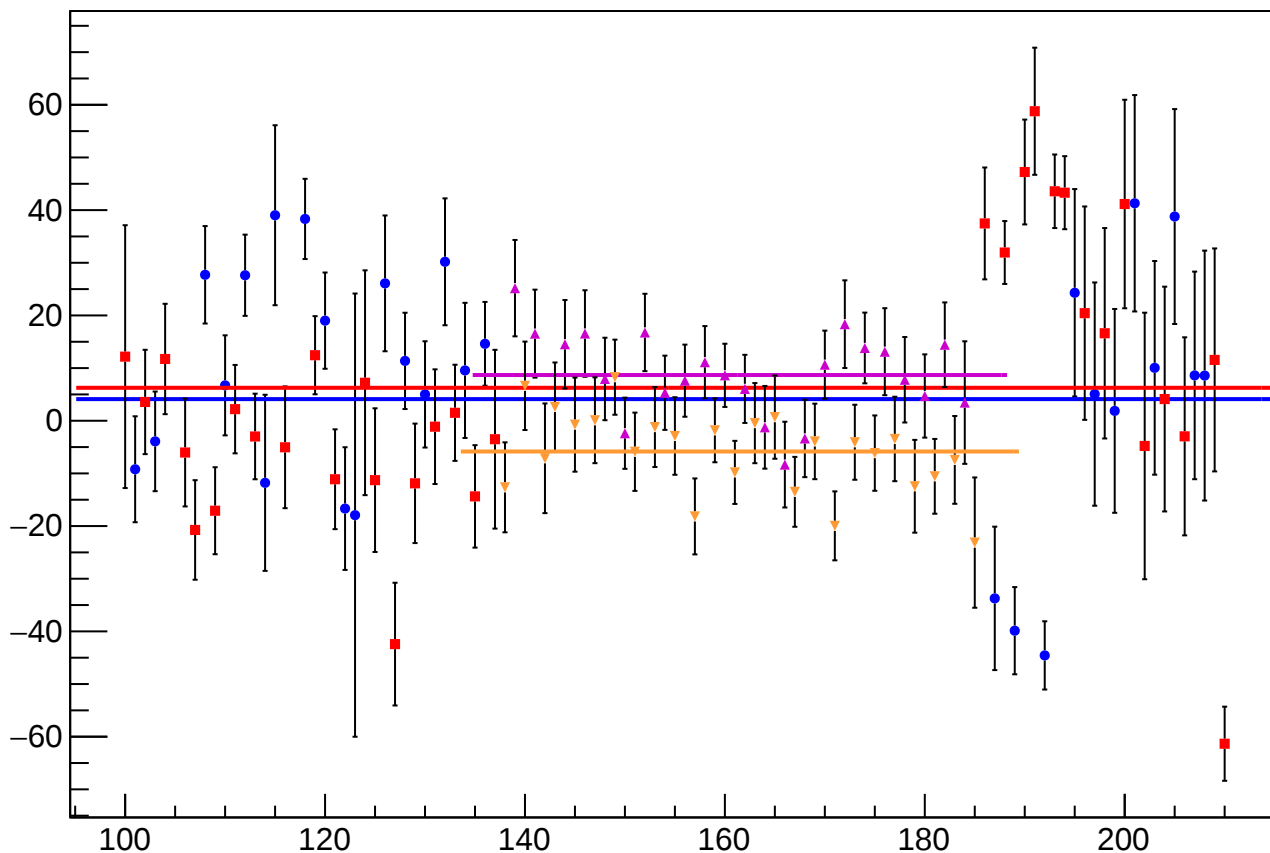
Left In: 1830.160+/-0.313  $\chi^2/\text{NDF}$ : 508391.9/22

+ sign 1717.131+/-0.215  $\chi^2/\text{NDF}$ : 1943635.8/52

All: 1721.206+/-0.151  $\chi^2/\text{NDF}$ : 3754949.5/10

- sign 1725.186+/-0.212  $\chi^2/\text{NDF}$ : 1810603.4/55

# diff\_bpm0l06X\_mean vs Slug



Right In:  $4.110 \pm 2.112$   $\chi^2/\text{NDF}$ : 159.6/27

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

Right Out:  $6.259 \pm 1.793$   $\chi^2/\text{NDF}$ : 268.4/32

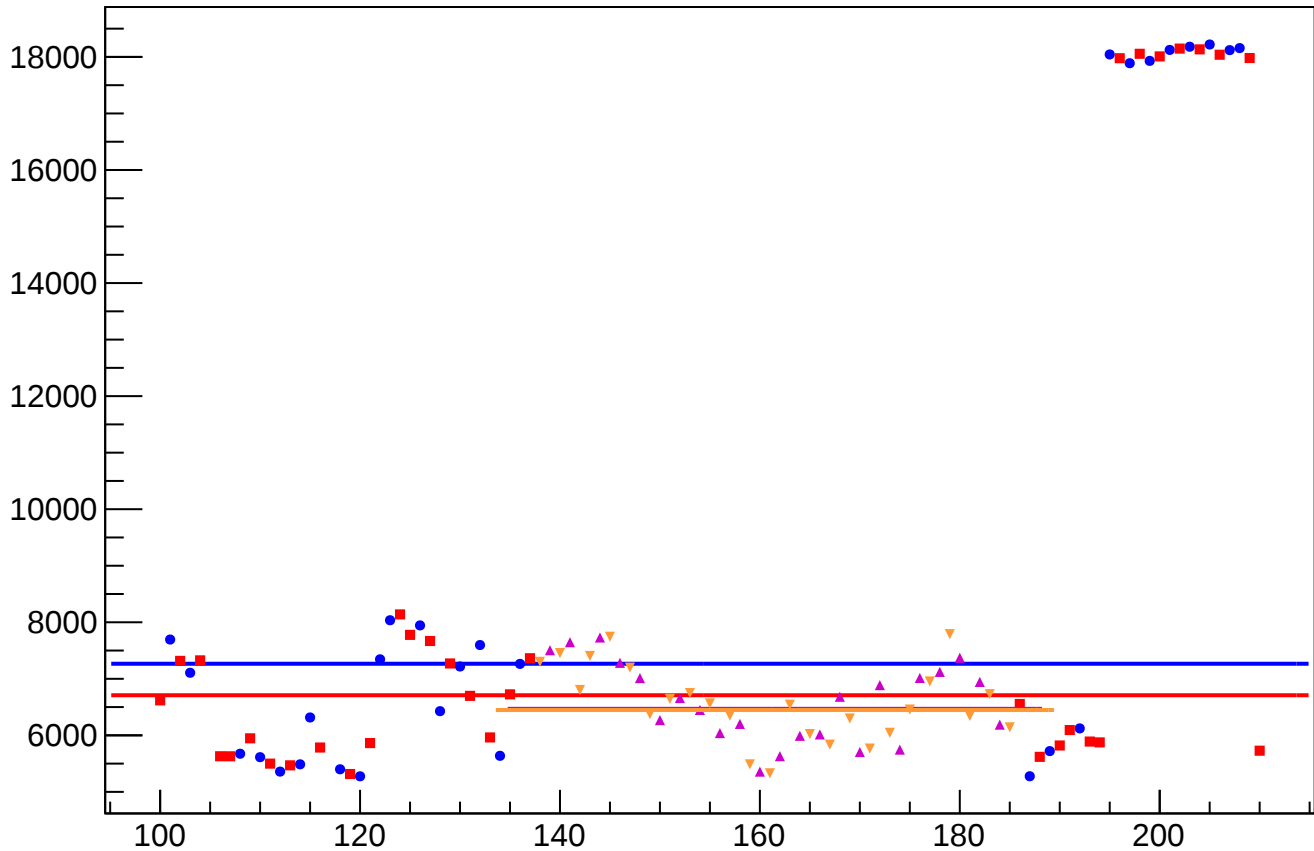
Left In:  $8.683 \pm 1.571$   $\chi^2/\text{NDF}$ : 21.9/22

+ sign  $-2.451 \pm 1.233$   $\chi^2/\text{NDF}$ : 197.6/52

All:  $2.805 \pm 0.853$   $\chi^2/\text{NDF}$ : 523.8/108

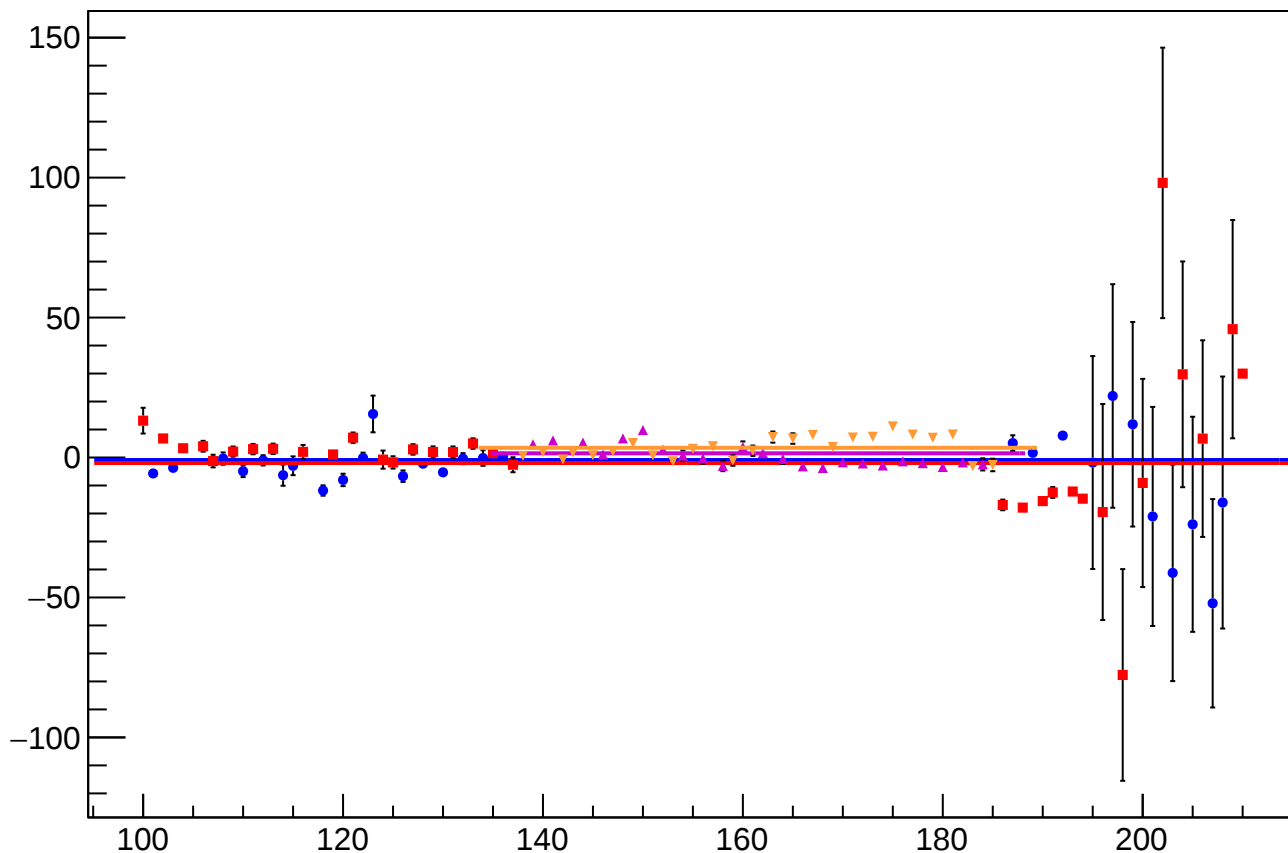
- sign  $7.630 \pm 1.181$   $\chi^2/\text{NDF}$ : 291.4/55

# diff\_bpm0l06X\_rms vs Slug



|                             |                                    |                         |                                      |
|-----------------------------|------------------------------------|-------------------------|--------------------------------------|
| Right In: 7266.349+/-1.494  | $\chi^2/\text{NDF}$ : 5170580.3/27 | + sign 6726.595+/-0.872 | $\chi^2/\text{NDF}$ : 5740326.0/52   |
| Left Out: 6447.712+/-1.074  | $\chi^2/\text{NDF}$ : 371671.1/24  | All: 6646.664+/-0.603   | $\chi^2/\text{NDF}$ : 10855747.1/100 |
| Right Out: 6709.246+/-1.268 | $\chi^2/\text{NDF}$ : 4695630.3/32 | - sign 6573.278+/-0.835 | $\chi^2/\text{NDF}$ : 5099295.7/55   |
| Left In: 6468.902+/-1.111   | $\chi^2/\text{NDF}$ : 383325.4/22  |                         |                                      |

# diff\_bpm0l06Y\_mean vs Slug



Right In:  $-0.903 \pm 0.406$   $\chi^2/\text{NDF}$ : 175.5/27

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

Right Out:  $-1.979 \pm 0.342$   $\chi^2/\text{NDF}$ : 1308.4/32

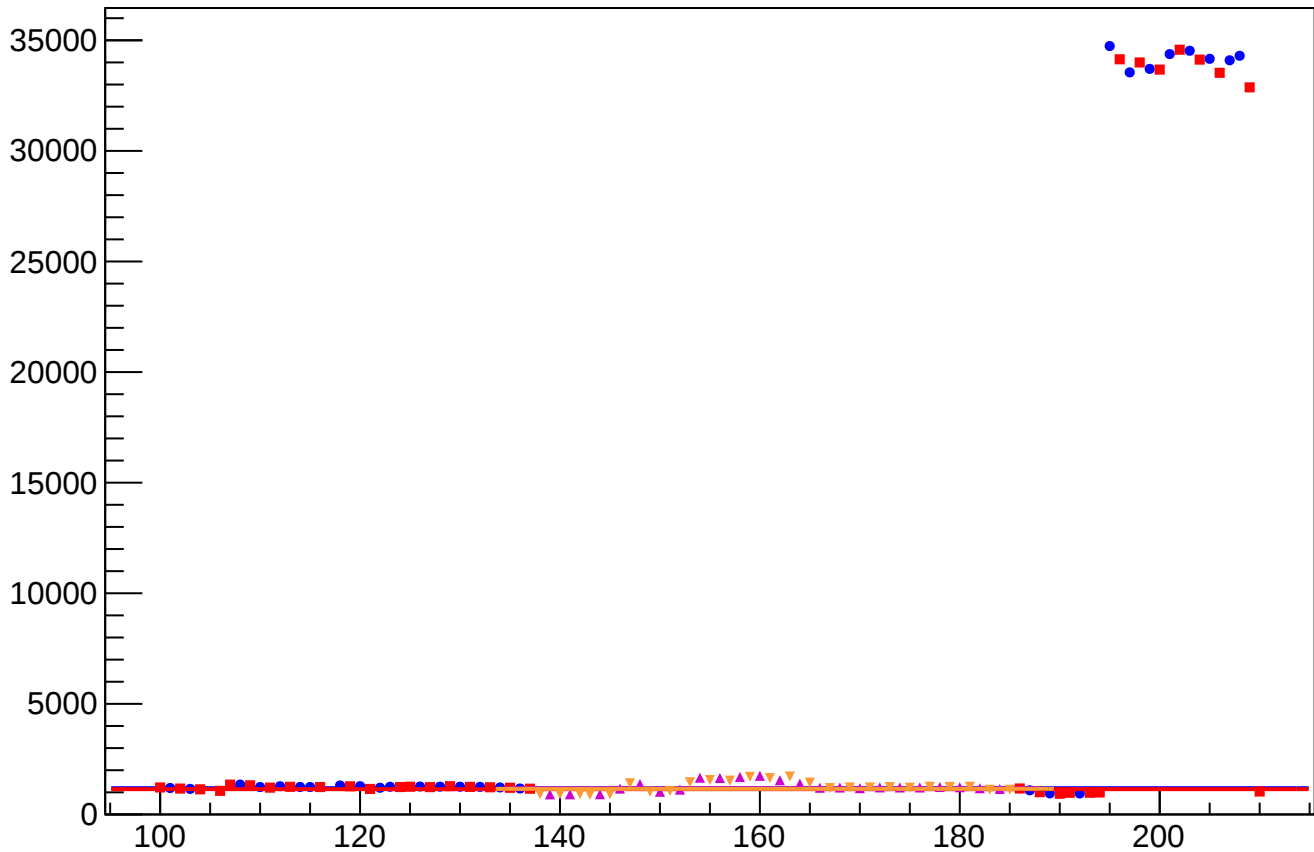
Left In:  $1.502 \pm 0.291$   $\chi^2/\text{NDF}$ : 202.7/22

+ sign  $2.084 \pm 0.228$   $\chi^2/\text{NDF}$ : 430.8/52

All:  $1.033 \pm 0.159$   $\chi^2/\text{NDF}$ : 2043.2/108

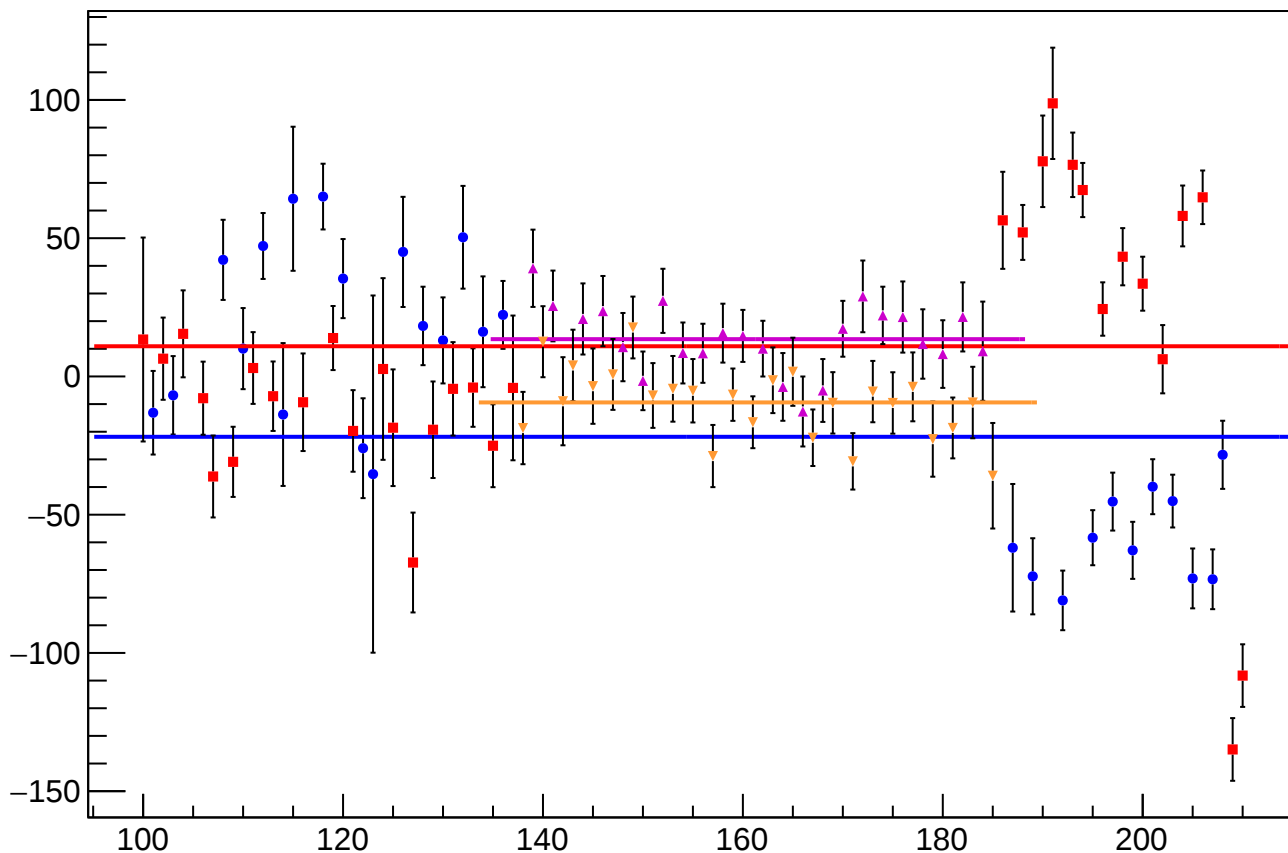
- sign  $0.044 \pm 0.222$   $\chi^2/\text{NDF}$ : 1571.3/55

# diff\_bpm0l06Y\_rms vs Slug



Right In: 1187.720+/-0.287     $\chi^2/\text{NDF}$ : 11716655.3/27    + sign 1168.034+/-0.161     $\chi^2/\text{NDF}$ : 13133977.4/52  
 Left Out: 1158.894+/-0.195     $\chi^2/\text{NDF}$ : 1410423.6/24    All: 1167.840+/-0.112     $\chi^2/\text{NDF}$ : 24419798.5/1  
 Right Out: 1143.654+/-0.242     $\chi^2/\text{NDF}$ : 10078456.6/32    - sign 1167.657+/-0.157     $\chi^2/\text{NDF}$ : 11285818.3/55  
 Left In: 1184.966+/-0.206     $\chi^2/\text{NDF}$ : 1190431.5/22

# diff\_bpm0l07X\_mean vs Slug



Right In:  $-21.831 \pm 2.525$   $\chi^2/\text{NDF}$ : 331.0/27

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

Right Out:  $10.917 \pm 2.318$   $\chi^2/\text{NDF}$ : 529.9/32

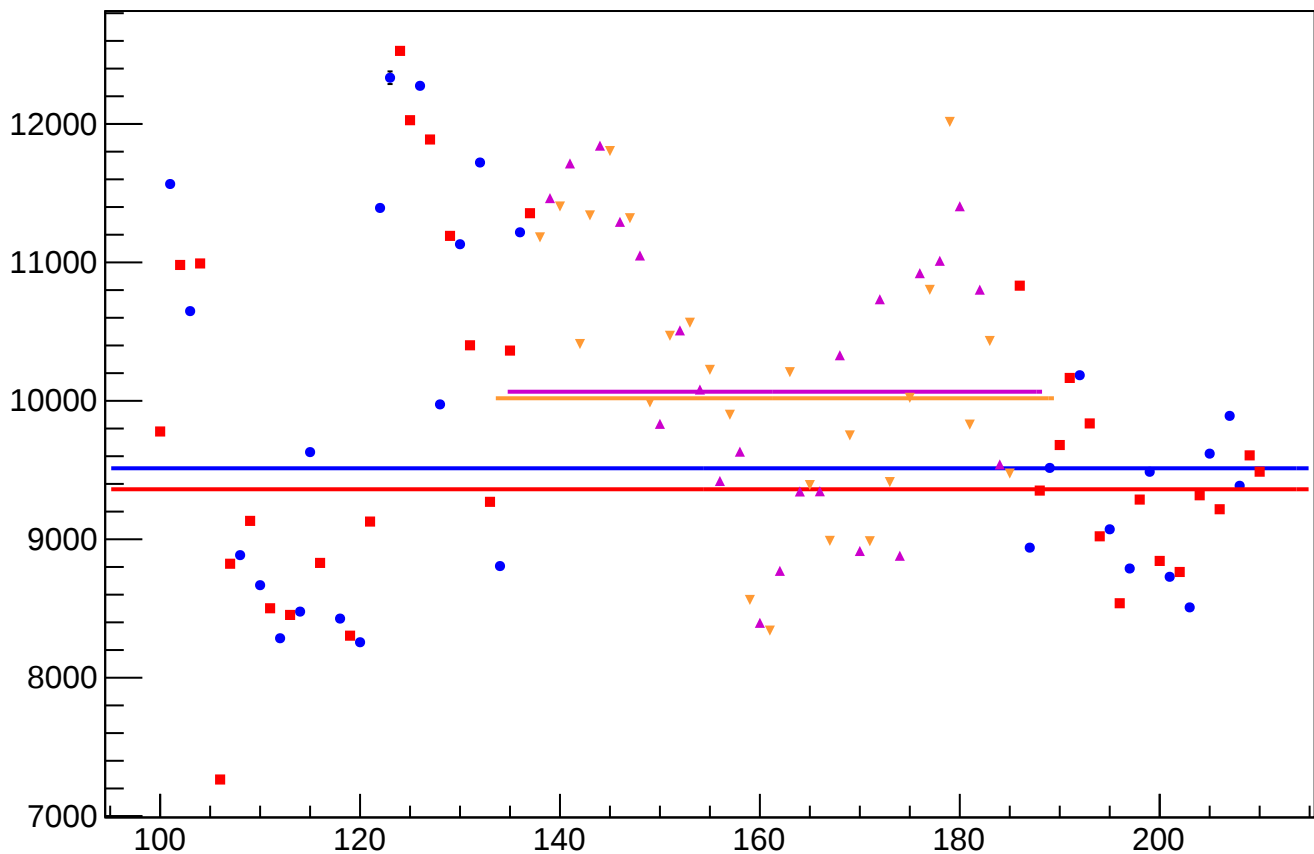
Left In:  $13.485 \pm 2.443$   $\chi^2/\text{NDF}$ : 21.6/22

+ sign  $-15.190 \pm 1.724$   $\chi^2/\text{NDF}$ : 370.3/52

All:  $-1.189 \pm 1.204$   $\chi^2/\text{NDF}$ : 1051.1/108

- sign  $12.133 \pm 1.681$   $\chi^2/\text{NDF}$ : 552.1/55

# diff\_bpm0l07X\_rms vs Slug



Right In: 9512.896 $\pm$ 1.786  $\chi^2$ /NDF: 333610.5/27

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

Right Out: 9361.273 $\pm$ 1.639  $\chi^2$ /NDF: 327547.0/32

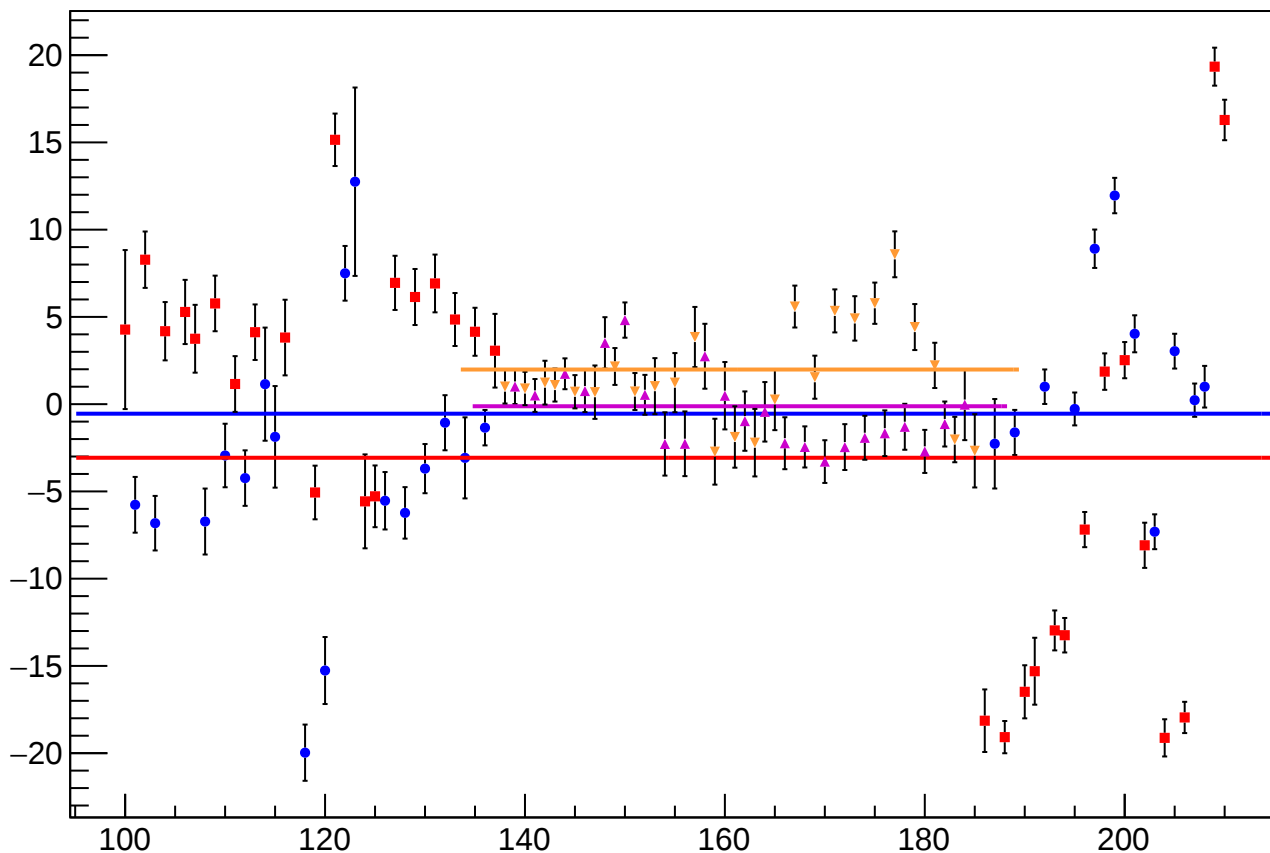
Left In: 10065.909 $\pm$ 1.727  $\chi^2$ /NDF: 357868.9/22

+ sign 9783.000 $\pm$ 1.219  $\chi^2$ /NDF: 720974.0/52

All: 9737.969 $\pm$ 0.851  $\chi^2$ /NDF: 1496620.4/10

- sign 9695.120 $\pm$ 1.189  $\chi^2$ /NDF: 772982.7/55

# diff\_bpm0l07Y\_mean vs Slug



Right In:  $-0.546 \pm 0.255$   $\chi^2/\text{NDF}$ : 621.6/27

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

Right Out:  $-3.072 \pm 0.239$   $\chi^2/\text{NDF}$ : 2456.0/32

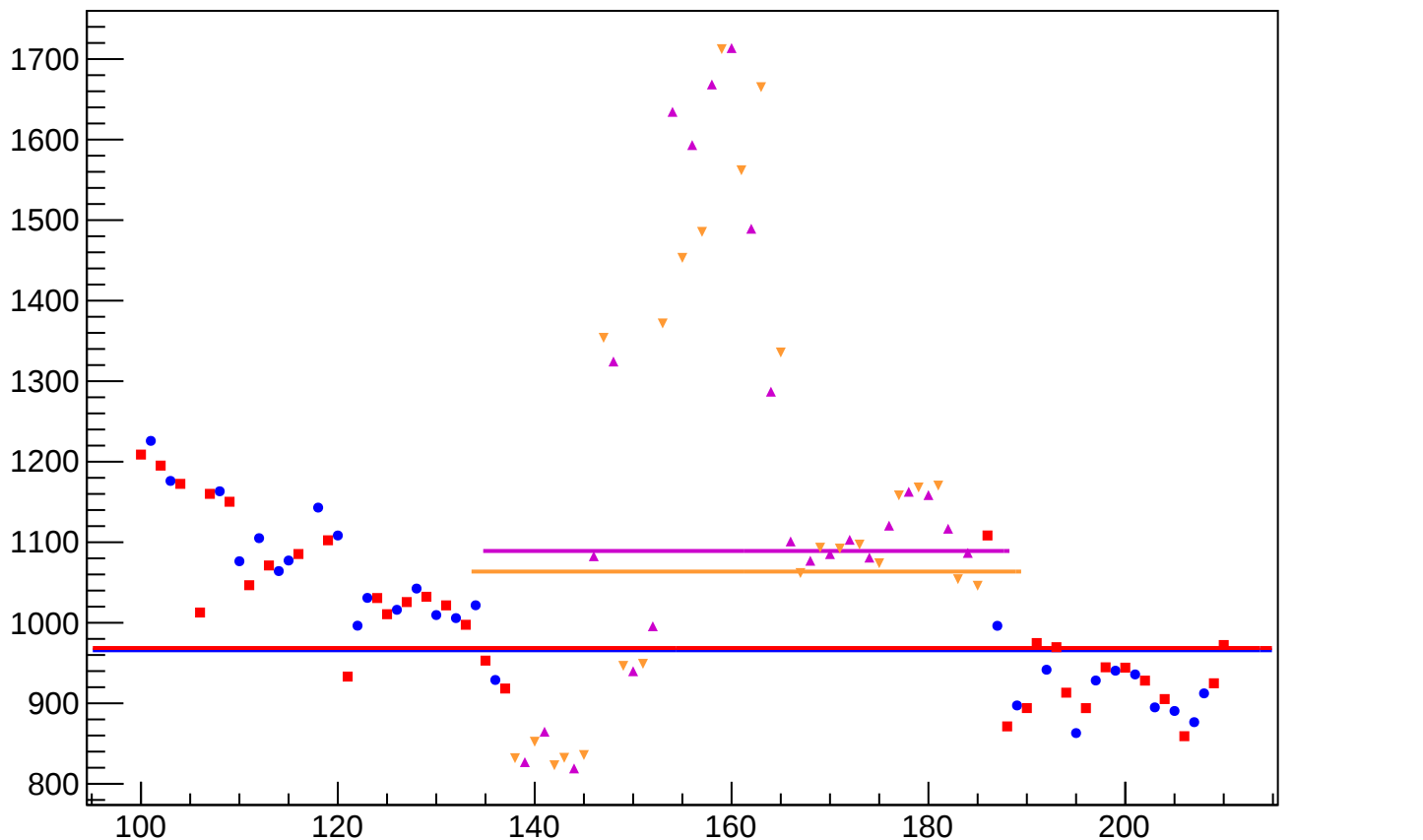
Left In:  $-0.120 \pm 0.269$   $\chi^2/\text{NDF}$ : 67.6/22

+ sign  $0.720 \pm 0.180$   $\chi^2/\text{NDF}$ : 772.1/52

All:  $-0.536 \pm 0.127$   $\chi^2/\text{NDF}$ : 3459.5/108

- sign  $-1.769 \pm 0.178$   $\chi^2/\text{NDF}$ : 2591.0/55

# diff\_bpm0l07Y\_rms vs Slug



Right In: 965.861+/-0.180  $\chi^2/\text{NDF}$ : 268197.0/27

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

Right Out: 968.676+/-0.169  $\chi^2/\text{NDF}$ : 269308.3/32

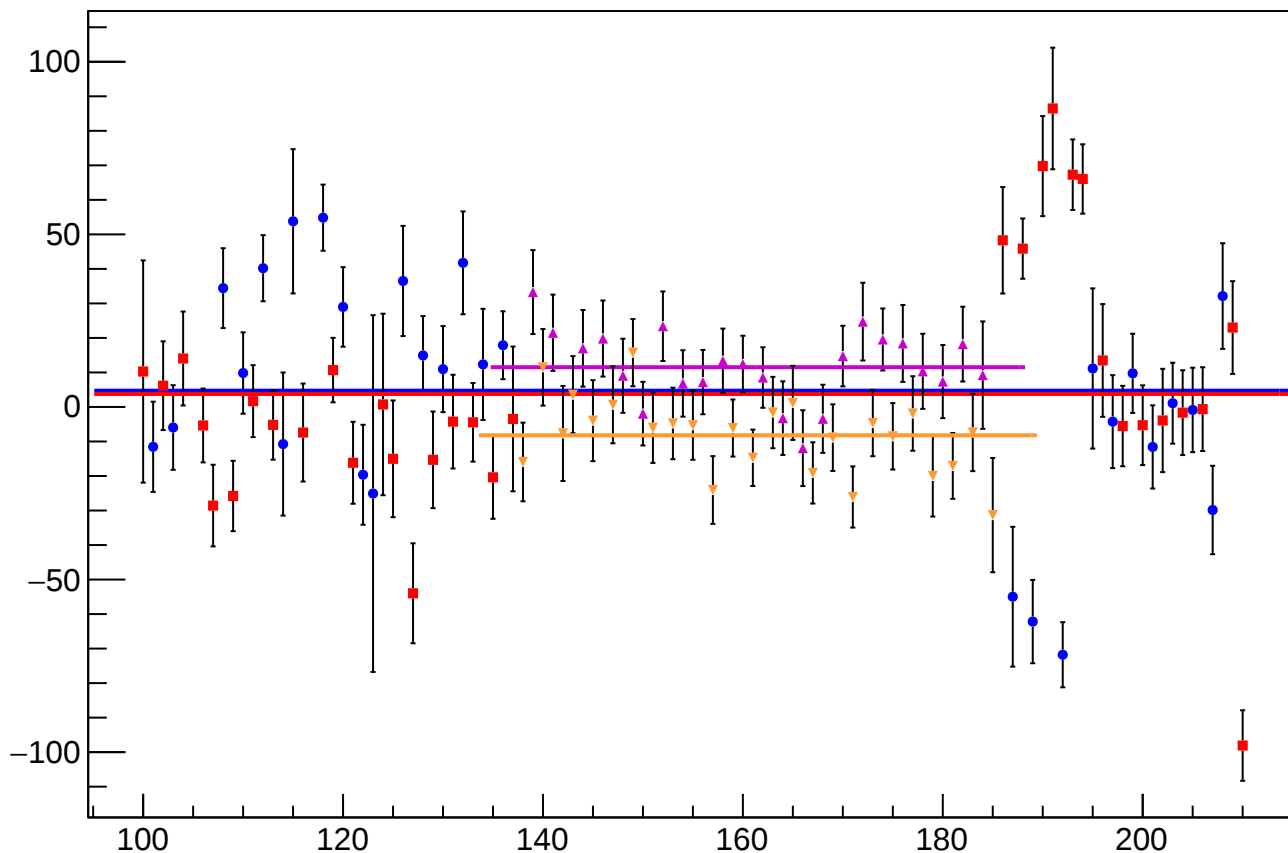
Left In: 1089.154+/-0.190  $\chi^2/\text{NDF}$ :1430478.5/22

+ sign 1014.767+/-0.127  $\chi^2/\text{NDF}$ : 2032592.9/52

All: 1018.341+/-0.090  $\chi^2/\text{NDF}$ : 3958585.8/10

- sign 1021.845+/-0.126  $\chi^2/\text{NDF}$ : 1924436.0/55

# diff\_bpm0l08X\_mean vs Slug



Right In:  $4.720 \pm 2.427$   $\chi^2/\text{NDF}$ : 195.5/27

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

Right Out:  $3.766 \pm 2.161$   $\chi^2/\text{NDF}$ : 301.2/32

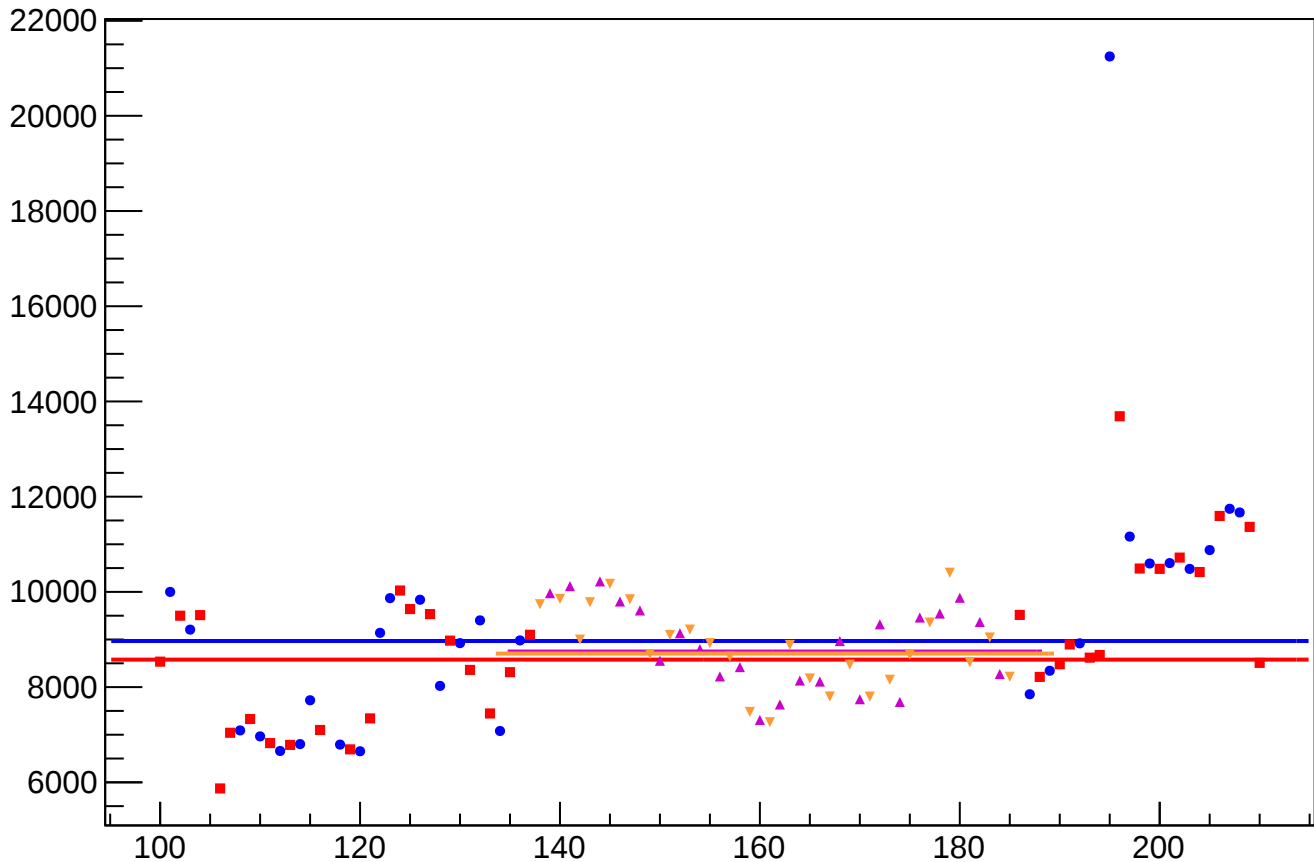
Left In:  $11.515 \pm 2.122$   $\chi^2/\text{NDF}$ : 21.0/22

+ sign  $-2.823 \pm 1.566$   $\chi^2/\text{NDF}$ : 238.2/52

All:  $2.620 \pm 1.088$   $\chi^2/\text{NDF}$ : 590.4/108

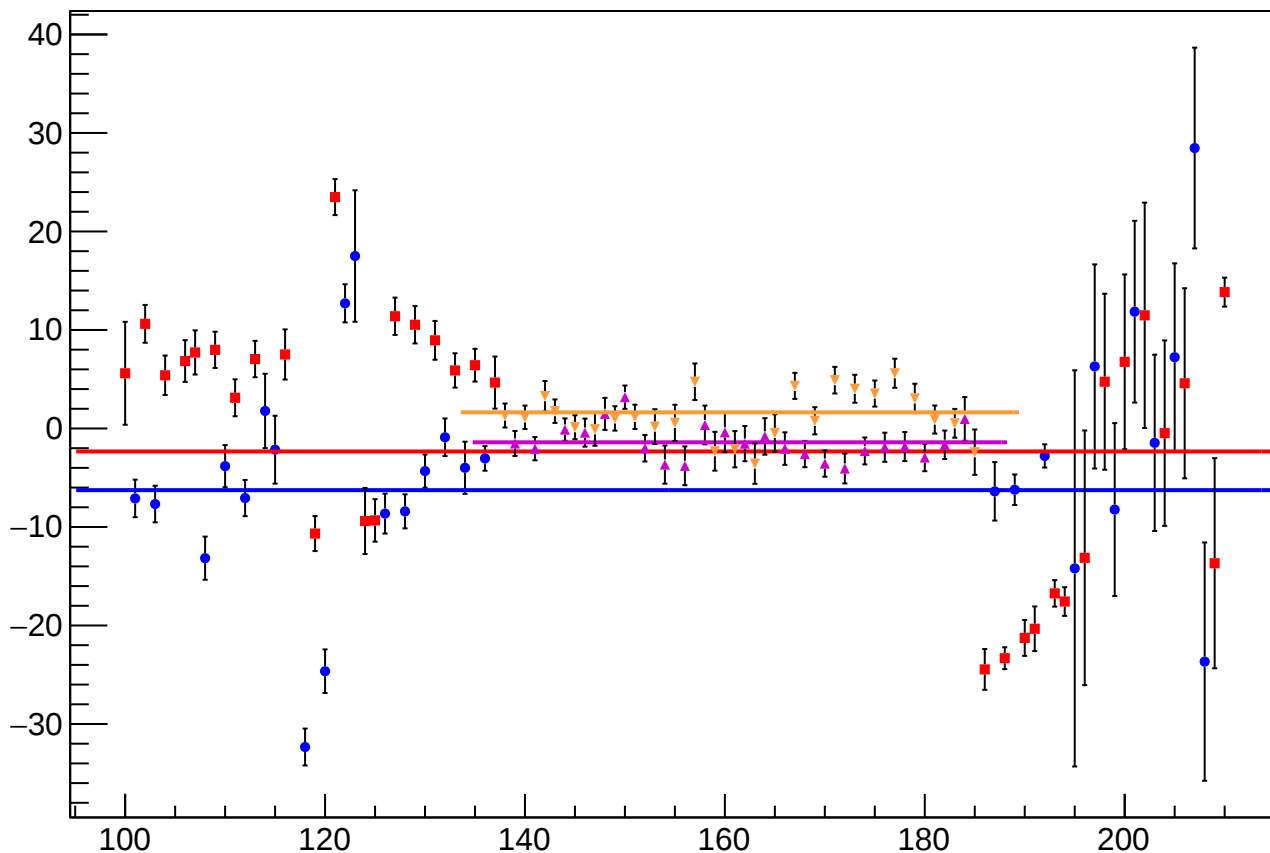
- sign  $7.711 \pm 1.514$   $\chi^2/\text{NDF}$ : 328.8/55

# diff\_bpm0l08X\_rms vs Slug



|                             |                                    |                         |                                    |
|-----------------------------|------------------------------------|-------------------------|------------------------------------|
| Right In: 8968.482+/-1.716  | $\chi^2/\text{NDF}$ : 1442452.8/27 | + sign 8814.132+/-1.107 | $\chi^2/\text{NDF}$ : 1788663.1/52 |
| Left Out: 8704.193+/-1.449  | $\chi^2/\text{NDF}$ : 332364.3/24  | All: 8736.529+/-0.770   | $\chi^2/\text{NDF}$ : 3266605.5/10 |
| Right Out: 8577.382+/-1.528 | $\chi^2/\text{NDF}$ : 1115018.8/32 | - sign 8663.935+/-1.071 | $\chi^2/\text{NDF}$ : 1468431.7/55 |
| Left In: 8747.415+/-1.501   | $\chi^2/\text{NDF}$ : 347110.4/22  |                         |                                    |

# diff\_bpm0l08Y\_mean vs Slug



Right In:  $-6.260 \pm 0.425$   $\chi^2/\text{NDF}: 439.9/27$

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

Right Out:  $-2.332 \pm 0.361$   $\chi^2/\text{NDF}: 1601.0/32$

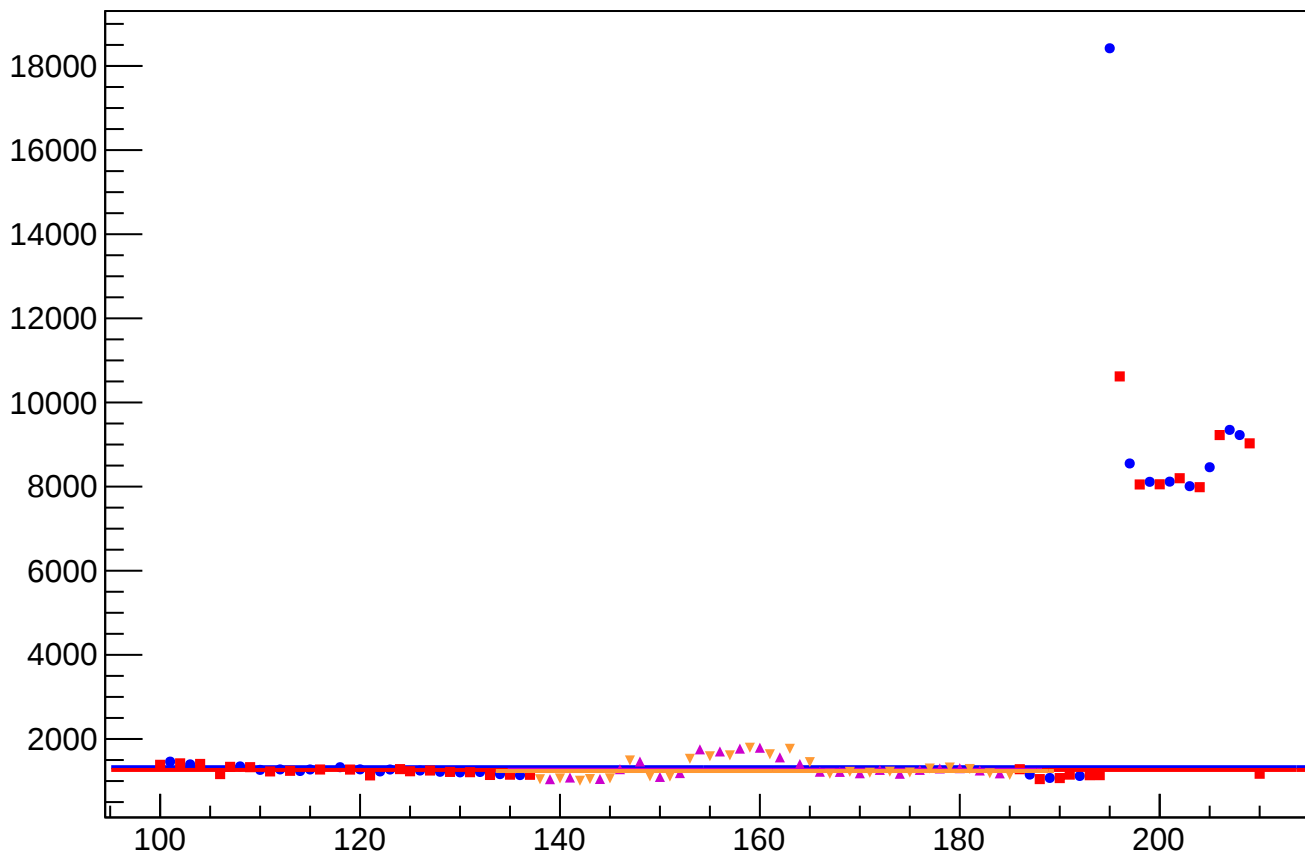
Left In:  $-1.404 \pm 0.309$   $\chi^2/\text{NDF}: 34.1/22$

+ sign  $-0.915 \pm 0.242$   $\chi^2/\text{NDF}: 725.3/52$

All:  $-1.368 \pm 0.168$   $\chi^2/\text{NDF}: 2371.2/108$

- sign  $-1.797 \pm 0.235$   $\chi^2/\text{NDF}: 1639.0/55$

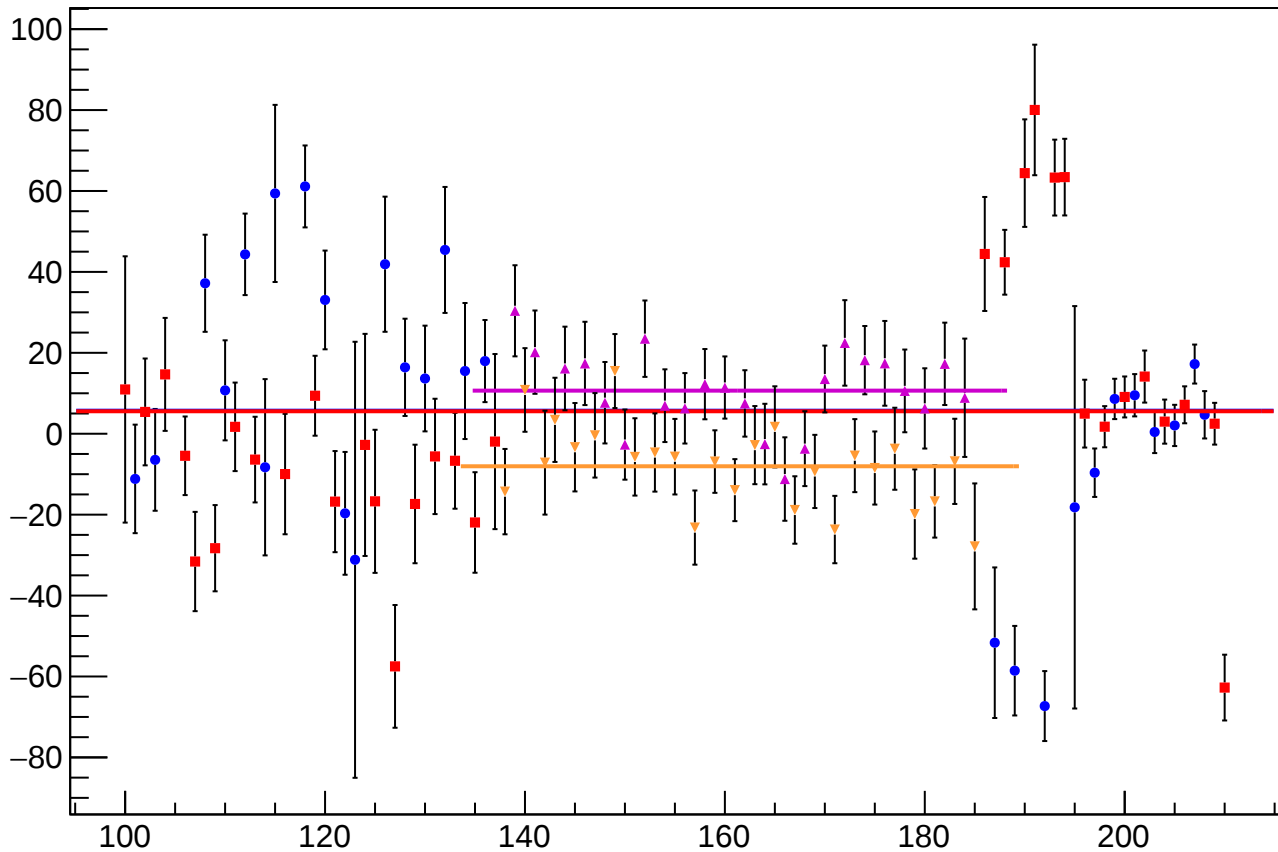
# diff\_bpm0l08Y\_rms vs Slug



Right In: 1329.276 $\pm$ 0.300  $\chi^2$ /NDF: 9249761.8/27  
 Left Out: 1238.437 $\pm$ 0.208  $\chi^2$ /NDF: 965173.0/24  
 Right Out: 1264.087 $\pm$ 0.255  $\chi^2$ /NDF: 7763541.3/32  
 Left In: 1265.673 $\pm$ 0.218  $\chi^2$ /NDF: 845157.0/22

+ sign 1267.813 $\pm$ 0.171  $\chi^2$ /NDF: 10276844.7/52  
 All: 1266.368 $\pm$ 0.119  $\chi^2$ /NDF: 18885704.4/100  
 - sign 1265.003 $\pm$ 0.166  $\chi^2$ /NDF: 8608720.5/55

# diff\_bpm0l09X\_mean vs Slug



Right In:  $5.695 \pm 1.641$   $\chi^2/\text{NDF}$ : 212.6/27

Left Out:  $-8.042 \pm 1.918$   $\chi^2/\text{NDF}$ : 26.3/24

Right Out:  $5.555 \pm 1.555$   $\chi^2/\text{NDF}$ : 274.0/32

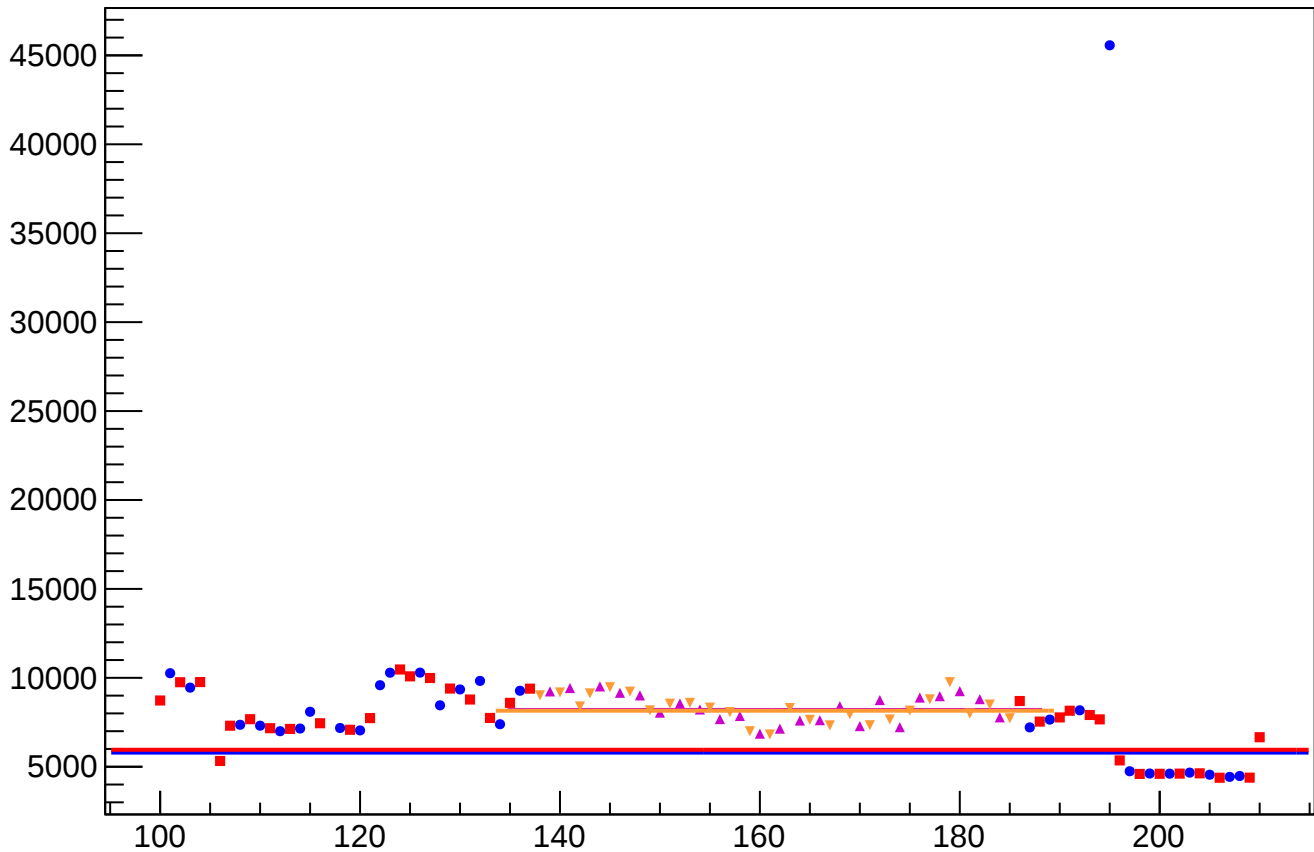
Left In:  $10.653 \pm 1.988$   $\chi^2/\text{NDF}$ : 21.4/22

+ sign  $-0.109 \pm 1.247$   $\chi^2/\text{NDF}$ : 268.5/52

All:  $3.758 \pm 0.874$   $\chi^2/\text{NDF}$ : 586.9/108

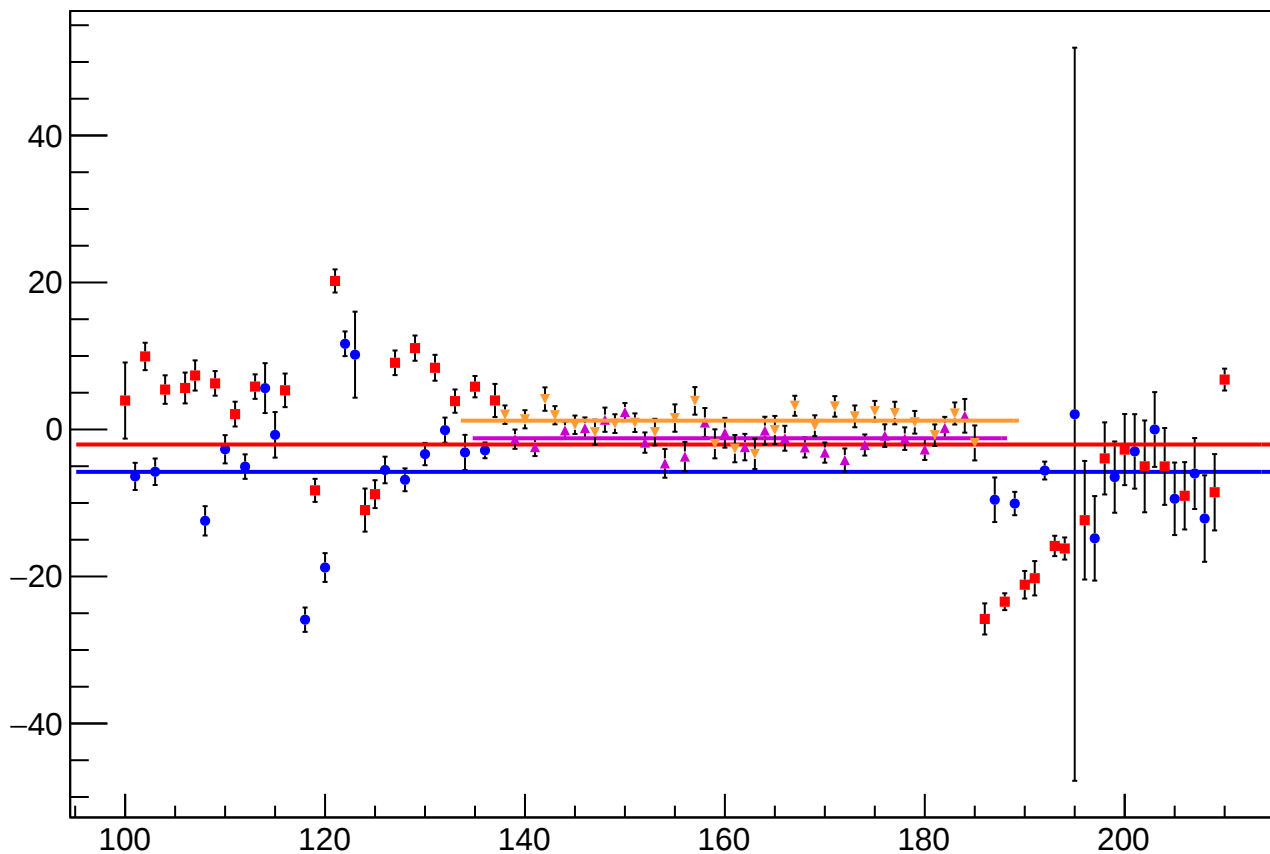
- sign  $7.490 \pm 1.225$   $\chi^2/\text{NDF}$ : 299.5/55

# diff\_bpm0l09X\_rms vs Slug



|                             |                                    |                         |                                    |
|-----------------------------|------------------------------------|-------------------------|------------------------------------|
| Right In: 5796.088+/-1.160  | $\chi^2/\text{NDF}$ : 3734290.9/27 | + sign 6791.271+/-0.882 | $\chi^2/\text{NDF}$ : 5797648.8/52 |
| Left Out: 8151.489+/-1.356  | $\chi^2/\text{NDF}$ : 321803.3/24  | All: 6797.903+/-0.618   | $\chi^2/\text{NDF}$ : 10258360.9/1 |
| Right Out: 5953.902+/-1.100 | $\chi^2/\text{NDF}$ : 2546830.9/32 | - sign 6804.302+/-0.866 | $\chi^2/\text{NDF}$ : 4460600.8/55 |
| Left In: 8193.636+/-1.405   | $\chi^2/\text{NDF}$ : 338377.6/22  |                         |                                    |

# diff\_bpm0l09Y\_mean vs Slug



Right In:  $-5.767 \pm 0.387$   $\chi^2/\text{NDF}$ : 371.6/27

Left Out:  $1.203 \pm 0.302$   $\chi^2/\text{NDF}$ : 29.9/24

Right Out:  $-2.044 \pm 0.339$   $\chi^2/\text{NDF}$ : 1449.1/32

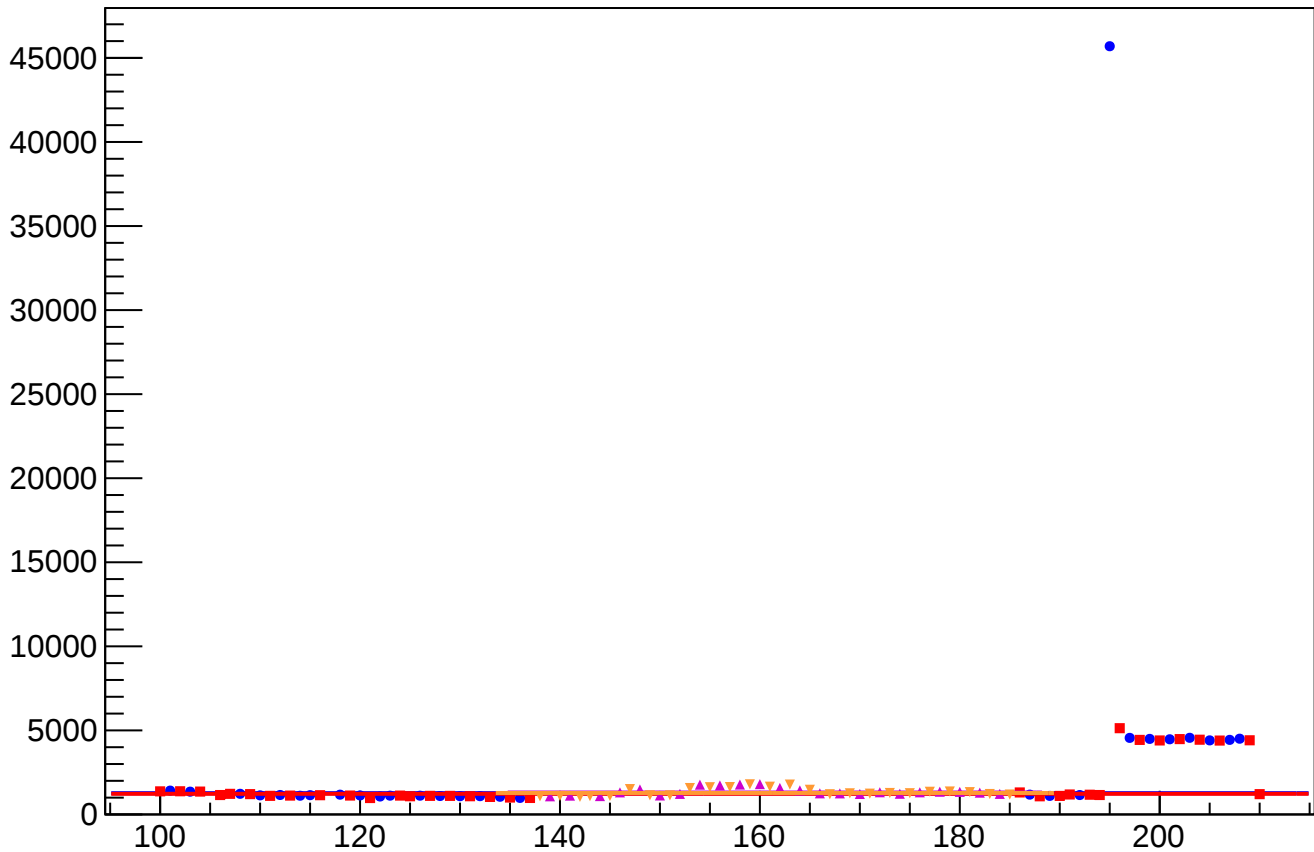
Left In:  $-1.198 \pm 0.318$   $\chi^2/\text{NDF}$ : 31.2/22

+ sign  $-1.437 \pm 0.238$   $\chi^2/\text{NDF}$ : 602.8/52

All:  $-1.518 \pm 0.166$   $\chi^2/\text{NDF}$ : 2086.6/108

- sign  $-1.595 \pm 0.232$   $\chi^2/\text{NDF}$ : 1483.6/55

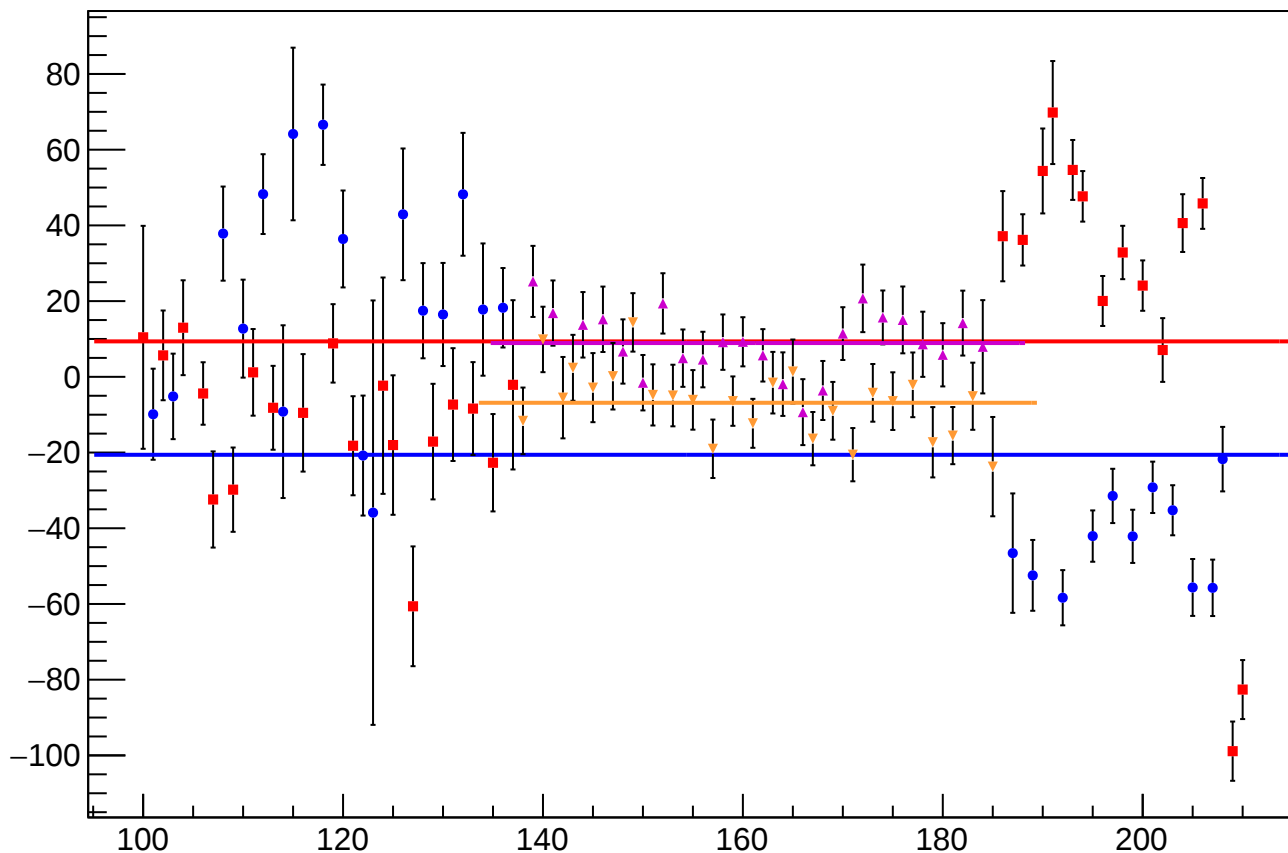
# diff\_bpm0l09Y\_rms vs Slug



Right In: 1266.041 $\pm$ 0.274  $\chi^2$ /NDF: 7416844.2/27  
 Left Out: 1277.916 $\pm$ 0.214  $\chi^2$ /NDF: 878127.9/24  
 Right Out: 1227.965 $\pm$ 0.239  $\chi^2$ /NDF: 5501142.9/32  
 Left In: 1305.541 $\pm$ 0.225  $\chi^2$ /NDF: 760450.8/22

+ sign 1273.417 $\pm$ 0.169  $\chi^2$ /NDF: 8296140.4/52  
 All: 1271.235 $\pm$ 0.118  $\chi^2$ /NDF: 14613811.4/100  
 - sign 1269.170 $\pm$ 0.164  $\chi^2$ /NDF: 6317344.8/55

# diff\_bpm0l10X\_mean vs Slug



Right In:  $-20.594 \pm 1.889$   $\chi^2/\text{NDF}$ : 355.3/27

Left Out:  $-6.854 \pm 1.616$   $\chi^2/\text{NDF}$ : 28.7/24

Right Out:  $9.364 \pm 1.708$   $\chi^2/\text{NDF}$ : 588.0/32

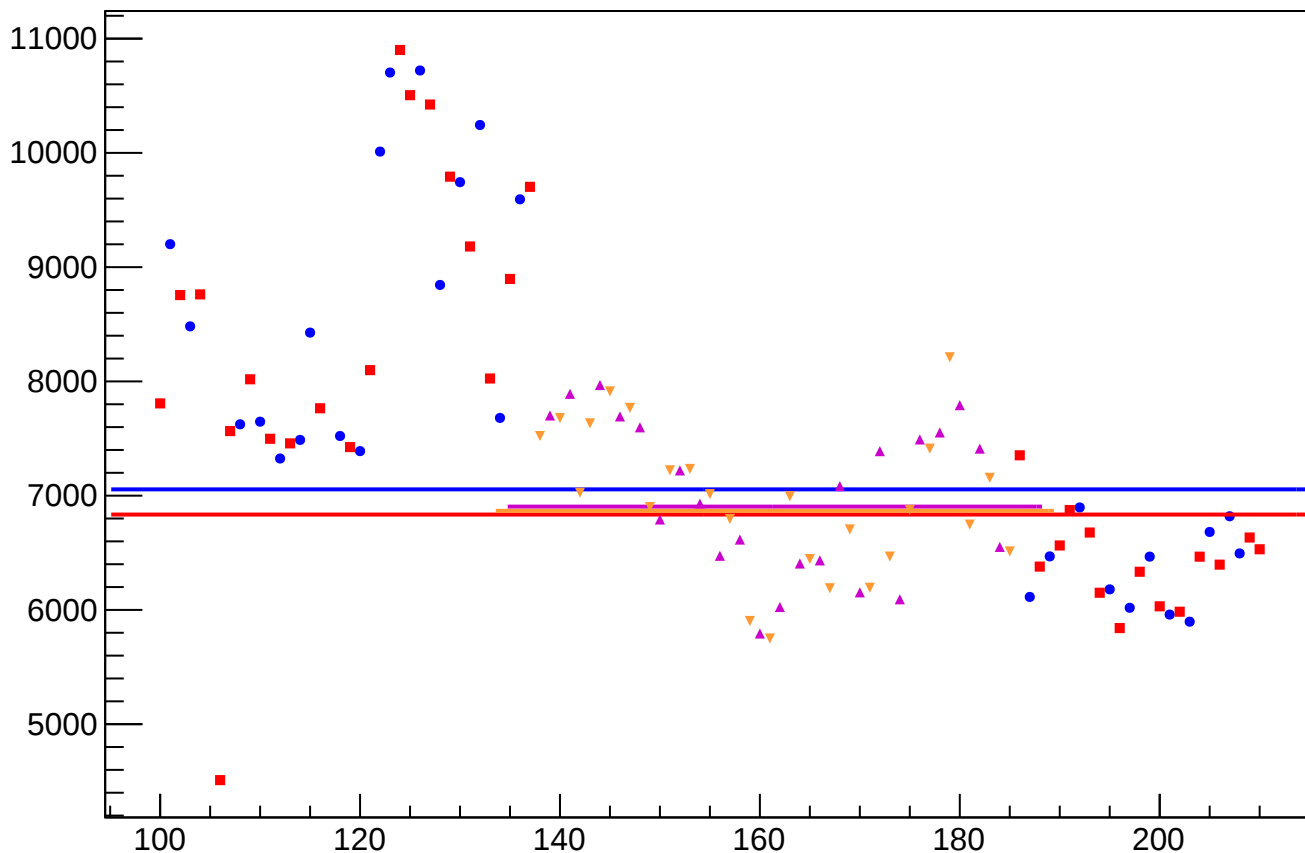
Left In:  $8.923 \pm 1.674$   $\chi^2/\text{NDF}$ : 21.8/22

+ sign  $-12.659 \pm 1.228$   $\chi^2/\text{NDF}$ : 414.5/52

All:  $-1.472 \pm 0.857$   $\chi^2/\text{NDF}$ : 1186.2/108

- sign  $9.139 \pm 1.196$   $\chi^2/\text{NDF}$ : 609.8/55

# diff\_bpm0l10X\_rms vs Slug



Right In: 7055.057 $\pm$ 1.336  $\chi^2$ /NDF: 834869.8/27

Left Out: 6867.371 $\pm$ 1.142  $\chi^2$ /NDF:306895.0/24

Right Out: 6834.640 $\pm$ 1.208  $\chi^2$ /NDF: 944240.9/32

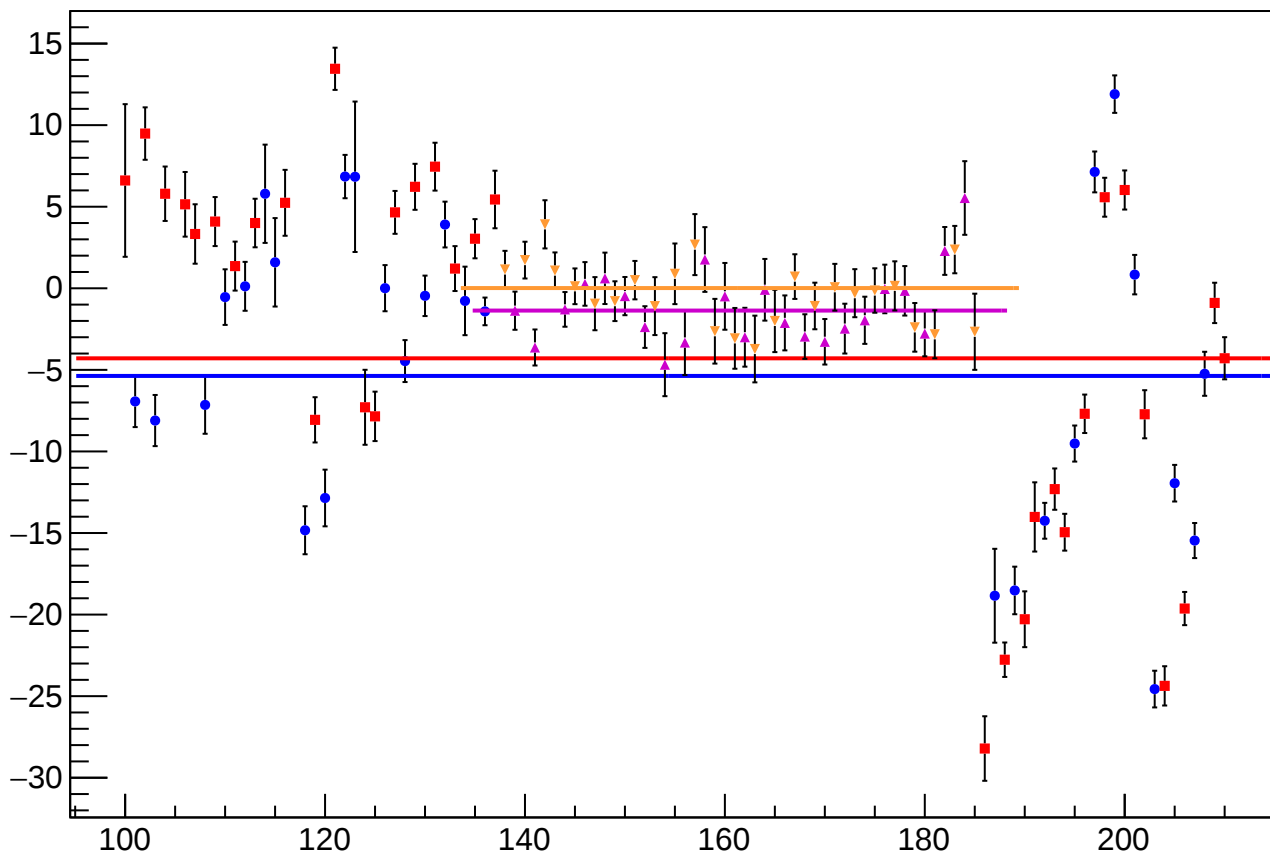
Left In: 6904.117 $\pm$ 1.184  $\chi^2$ /NDF:325912.6/22

+ sign 6946.666 $\pm$ 0.868  $\chi^2$ /NDF: 1153169.2/52

All: 6907.354 $\pm$ 0.606  $\chi^2$ /NDF: 2429005.9/10

- sign 6870.069 $\pm$ 0.845  $\chi^2$ /NDF: 1271841.1/55

# diff\_bpm0l10Y\_mean vs Slug



Right In:  $-5.372 \pm 0.260$   $\chi^2/\text{NDF}$ : 1247.8/27

Left Out:  $0.014 \pm 0.290$   $\chi^2/\text{NDF}$ : 35.0/24

Right Out:  $-4.293 \pm 0.247$   $\chi^2/\text{NDF}$ : 2066.1/32

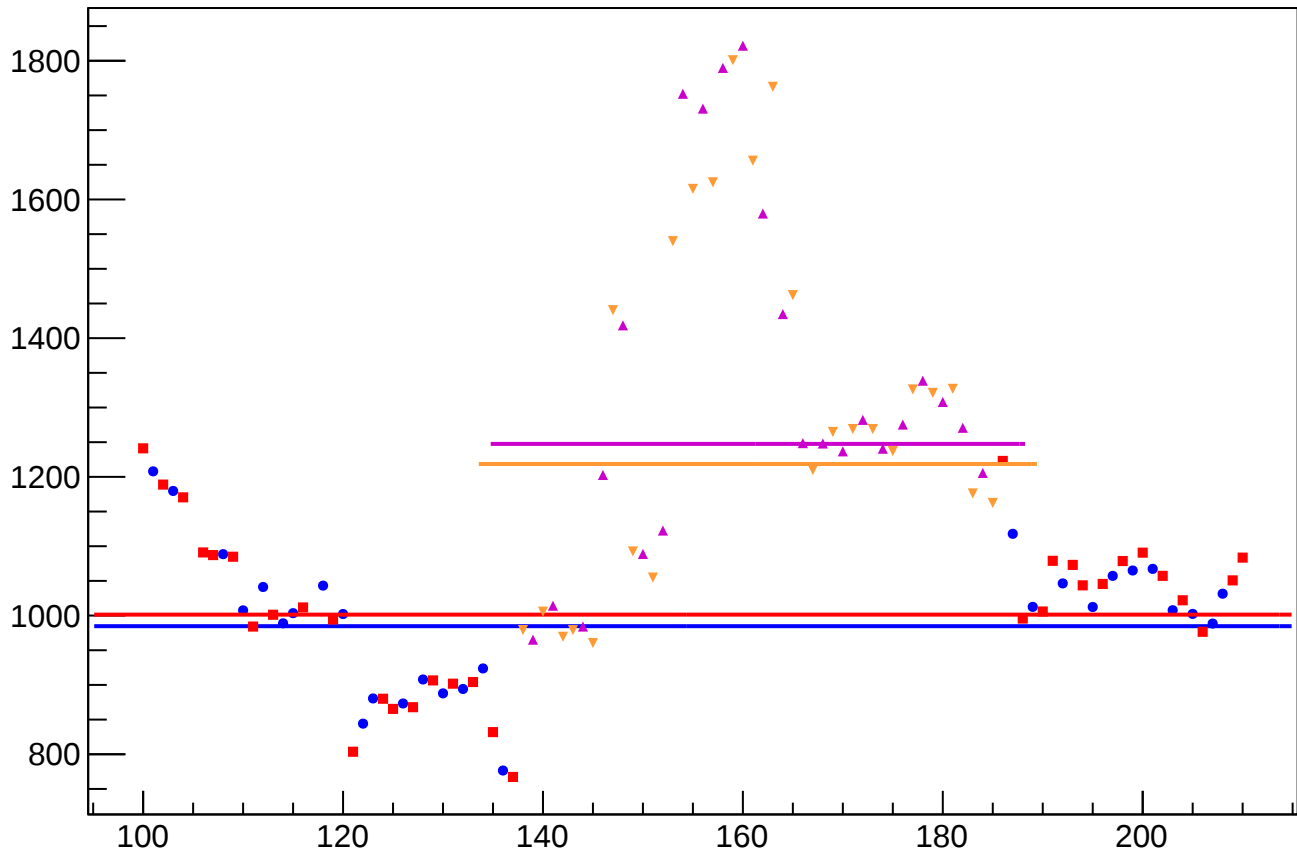
Left In:  $-1.365 \pm 0.306$   $\chi^2/\text{NDF}$ : 38.5/22

+ sign  $-2.969 \pm 0.194$   $\chi^2/\text{NDF}$ : 1474.0/52

All:  $-3.053 \pm 0.136$   $\chi^2/\text{NDF}$ : 3634.4/108

- sign  $-3.135 \pm 0.192$   $\chi^2/\text{NDF}$ : 2160.1/55

# diff\_bpm0l10Y\_rms vs Slug



Right In: 984.692+/-0.184  $\chi^2/\text{NDF}$ : 312681.5/27

Left Out: 1218.543+/-0.205  $\chi^2/\text{NDF}$ : 1265847.5/24

Right Out: 1001.348+/-0.175  $\chi^2/\text{NDF}$ : 335715.4/32

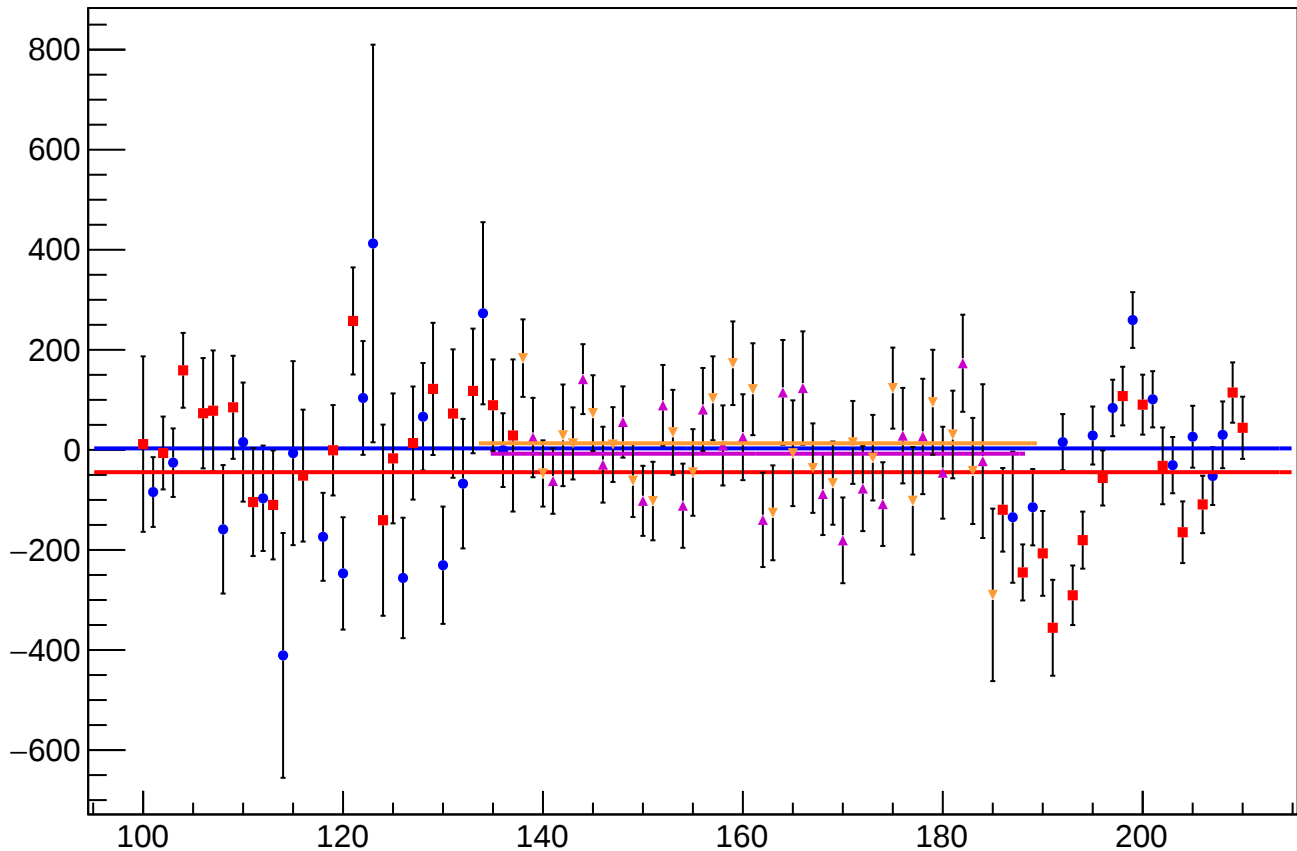
Left In: 1247.538+/-0.216  $\chi^2/\text{NDF}$ : 1073390.3/22

+ sign 1089.007+/-0.137  $\chi^2/\text{NDF}$ : 2299285.2/52

All: 1093.899+/-0.096  $\chi^2/\text{NDF}$ : 4496064.6/10

- sign 1098.716+/-0.136  $\chi^2/\text{NDF}$ : 2194246.0/55

# diff\_bpm0r03X\_mean vs Slug



Right In:  $3.012 \pm 15.107$   $\chi^2/\text{NDF}$ : 61.0/27

Left Out:  $13.207 \pm 17.146$   $\chi^2/\text{NDF}$ : 26.8/24

Right Out:  $-44.570 \pm 14.053$   $\chi^2/\text{NDF}$ : 104.0/32

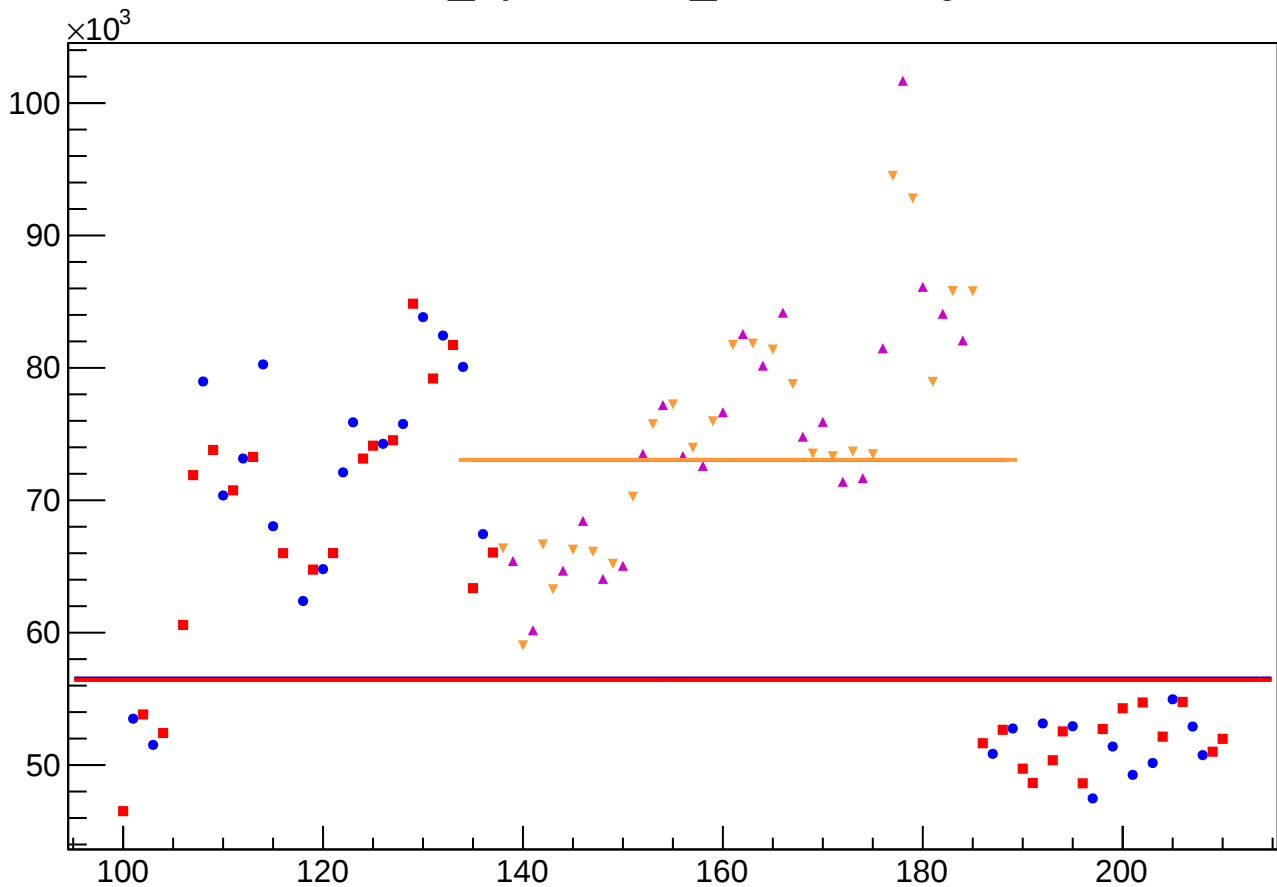
Left In:  $-7.618 \pm 17.672$   $\chi^2/\text{NDF}$ : 28.1/22

+ sign  $7.467 \pm 11.335$   $\chi^2/\text{NDF}$ : 88.0/52

All:  $-11.961 \pm 7.894$   $\chi^2/\text{NDF}$ : 228.5/108

- sign  $-30.255 \pm 10.999$   $\chi^2/\text{NDF}$ : 134.8/55

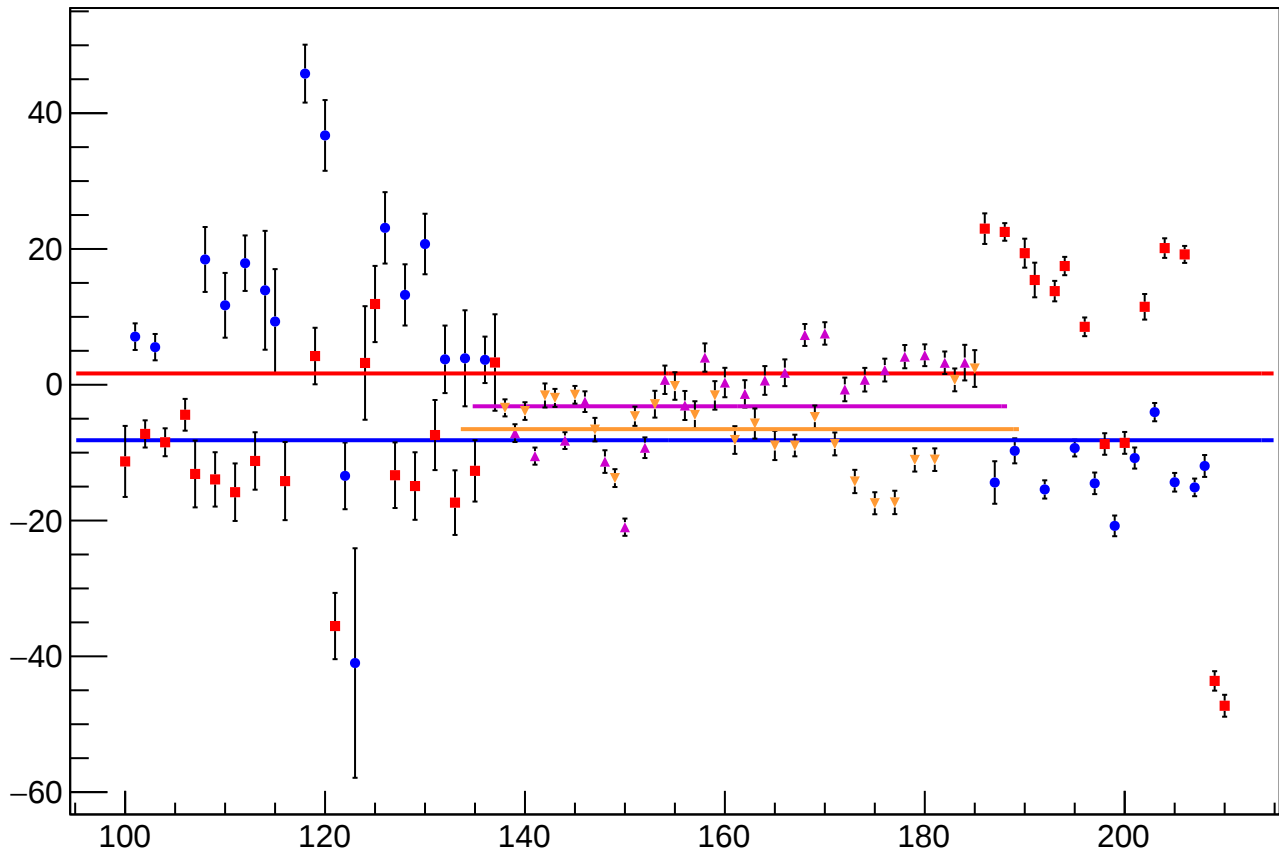
# diff\_bpm0r03X\_rms vs Slug



Right In:  $56539.772 \pm 10.682$   $\chi^2/\text{NDF}: 789840.5/27$   
 Left Out:  $73054.401 \pm 12.124$   $\chi^2/\text{NDF}: 473050.9/24$   
 Right Out:  $56428.689 \pm 9.937$   $\chi^2/\text{NDF}: 756254.7/32$   
 Left In:  $73045.500 \pm 12.496$   $\chi^2/\text{NDF}: 463525.5/22$

+ sign  $63757.197 \pm 8.015$   $\chi^2/\text{NDF}: 2307413.9/52$   
 All:  $63298.339 \pm 5.582$   $\chi^2/\text{NDF}: 4616839.0/1$   
 - sign  $62866.265 \pm 7.778$   $\chi^2/\text{NDF}: 2303061.4/55$

# diff\_bpm0r03Y\_mean vs Slug



Right In:  $-8.170 \pm 0.407$   $\chi^2/\text{NDF}$ : 756.8/27

Left Out:  $-6.537 \pm 0.332$   $\chi^2/\text{NDF}$ : 252.7/24

Right Out:  $1.666 \pm 0.376$   $\chi^2/\text{NDF}$ : 3289.0/32

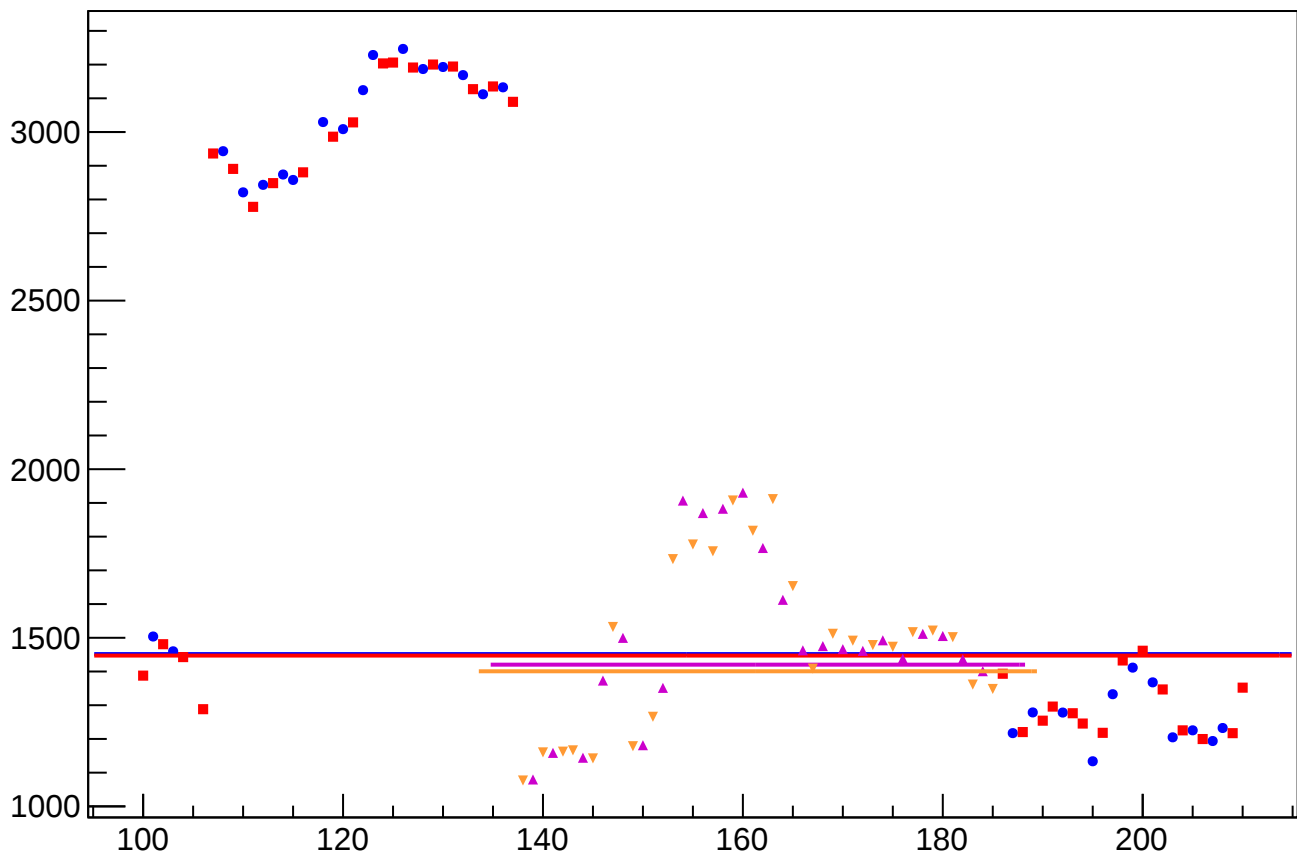
Left In:  $-3.171 \pm 0.346$   $\chi^2/\text{NDF}$ : 487.3/22

+ sign  $-7.188 \pm 0.257$   $\chi^2/\text{NDF}$ : 1019.2/52

All:  $-4.040 \pm 0.181$   $\chi^2/\text{NDF}$ : 5181.6/108

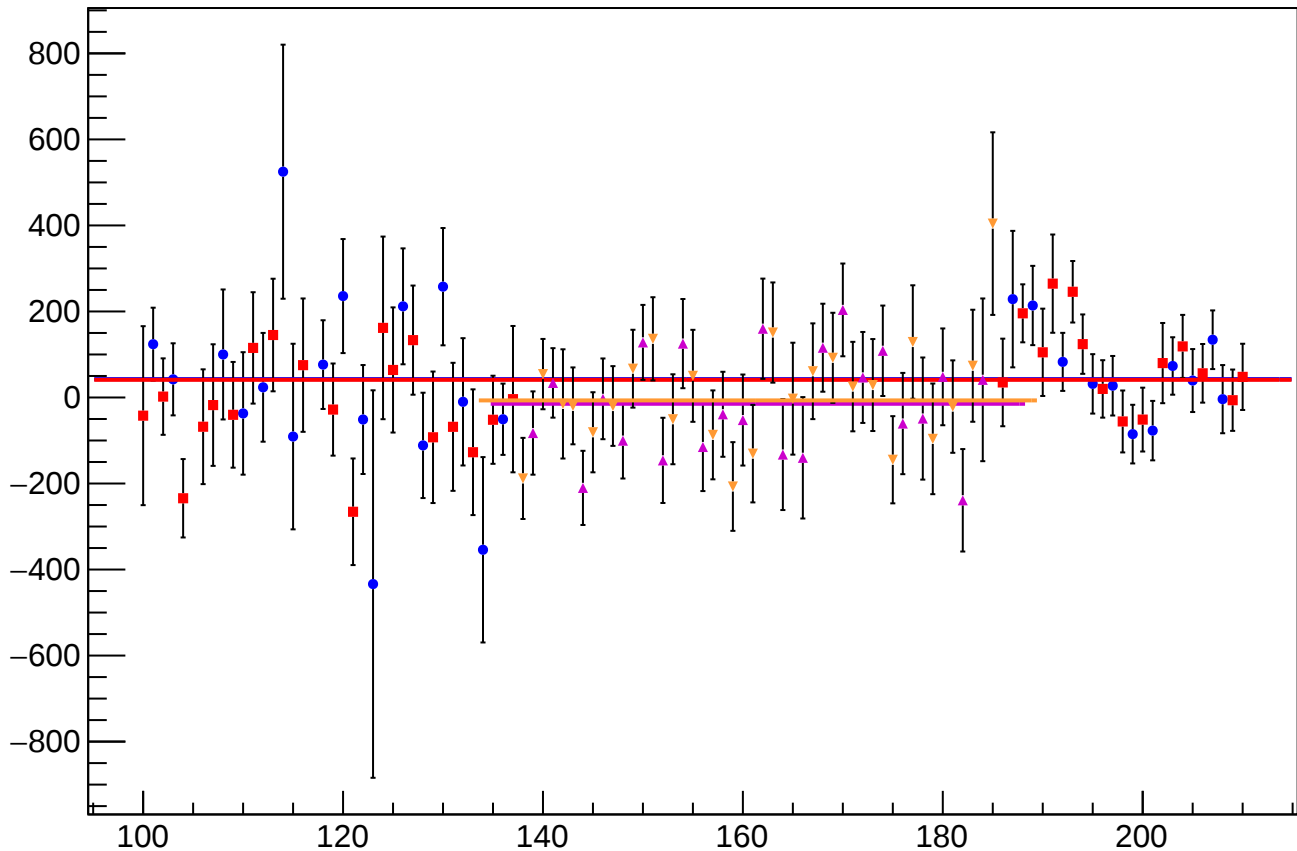
- sign  $-0.951 \pm 0.255$   $\chi^2/\text{NDF}$ : 3865.8/55

# diff\_bpm0r03Y\_rms vs Slug



|                                 |                             |                             |                             |
|---------------------------------|-----------------------------|-----------------------------|-----------------------------|
| Right In: 1451.657 $\pm$ 0.288  | $\chi^2$ /NDF: 3534153.5/27 | + sign 1420.982 $\pm$ 0.182 | $\chi^2$ /NDF: 4590930.9/52 |
| Left Out: 1400.637 $\pm$ 0.235  | $\chi^2$ /NDF: 1037921.6/24 | All: 1426.877 $\pm$ 0.128   | $\chi^2$ /NDF: 9040360.8/10 |
| Right Out: 1447.250 $\pm$ 0.266 | $\chi^2$ /NDF: 3536603.0/32 | - sign 1432.661 $\pm$ 0.180 | $\chi^2$ /NDF: 4447349.6/55 |
| Left In: 1420.285 $\pm$ 0.245   | $\chi^2$ /NDF: 905186.2/22  |                             |                             |

# diff\_bpm0r05X\_mean vs Slug



Right In: 42.707 $\pm$ 18.013  $\chi^2$ /NDF: 32.9/27

Left Out: -6.789 $\pm$ 21.213  $\chi^2$ /NDF: 24.7/24

Right Out: 41.085 $\pm$ 16.838  $\chi^2$ /NDF: 47.1/32

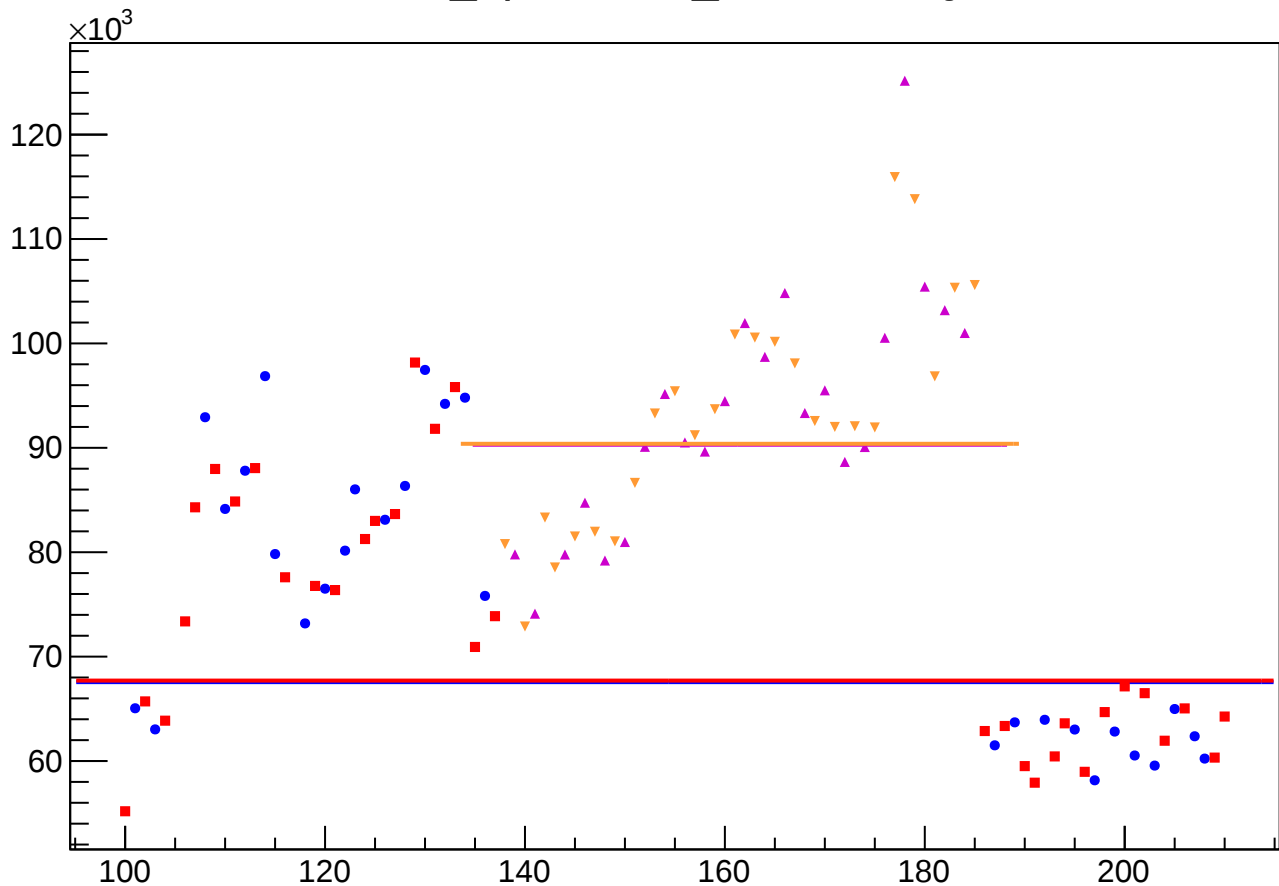
Left In: -14.611 $\pm$ 21.846  $\chi^2$ /NDF: 29.8/22

+ sign 21.970 $\pm$ 13.731  $\chi^2$ /NDF: 60.7/52

All: 21.125 $\pm$ 9.567  $\chi^2$ /NDF: 141.8/108

- sign 20.329 $\pm$ 13.337  $\chi^2$ /NDF: 81.0/55

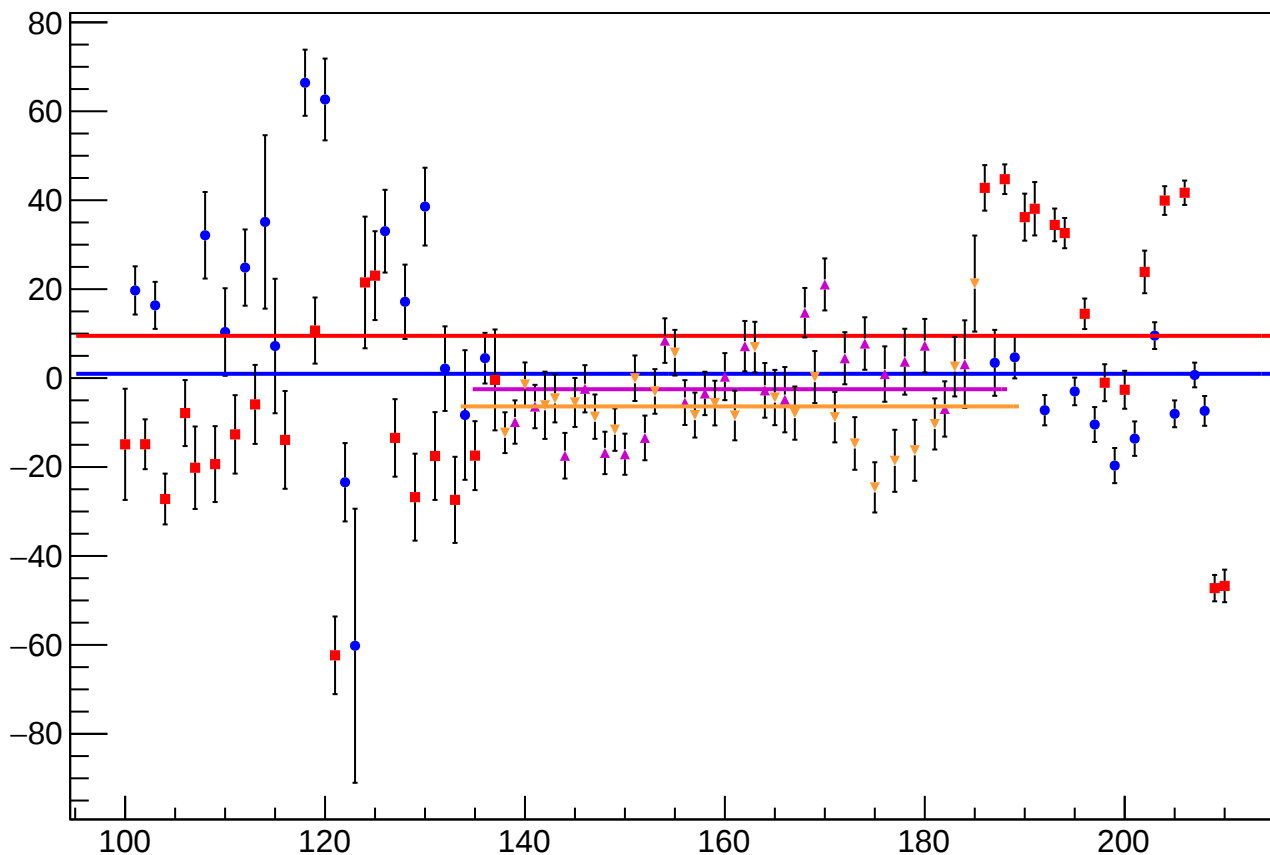
# diff\_bpm0r05X\_rms vs Slug



Right In:  $67556.635 \pm 12.737$   $\chi^2/\text{NDF}: 641246.3/27$   
 Left Out:  $90384.853 \pm 15.000$   $\chi^2/\text{NDF}: 461648.2/24$   
 Right Out:  $67705.096 \pm 11.906$   $\chi^2/\text{NDF}: 632792.3/32$   
 Left In:  $90293.591 \pm 15.448$   $\chi^2/\text{NDF}: 461337.5/22$

+ sign  $77120.906 \pm 9.709$   $\chi^2/\text{NDF}: 2448647.3/52$   
 - sign  $76123.355 \pm 9.430$   $\chi^2/\text{NDF}: 2435490.5/55$   
 All:  $76607.603 \pm 6.765$   $\chi^2/\text{NDF}: 4889569.6/100$

# diff\_bpm0r05Y\_mean vs Slug



Right In:  $0.967 \pm 0.942$   $\chi^2/\text{NDF}$ : 292.8/27

Left Out:  $-6.370 \pm 1.124$   $\chi^2/\text{NDF}$ : 45.5/24

Right Out:  $9.503 \pm 0.887$   $\chi^2/\text{NDF}$ : 1379.4/32

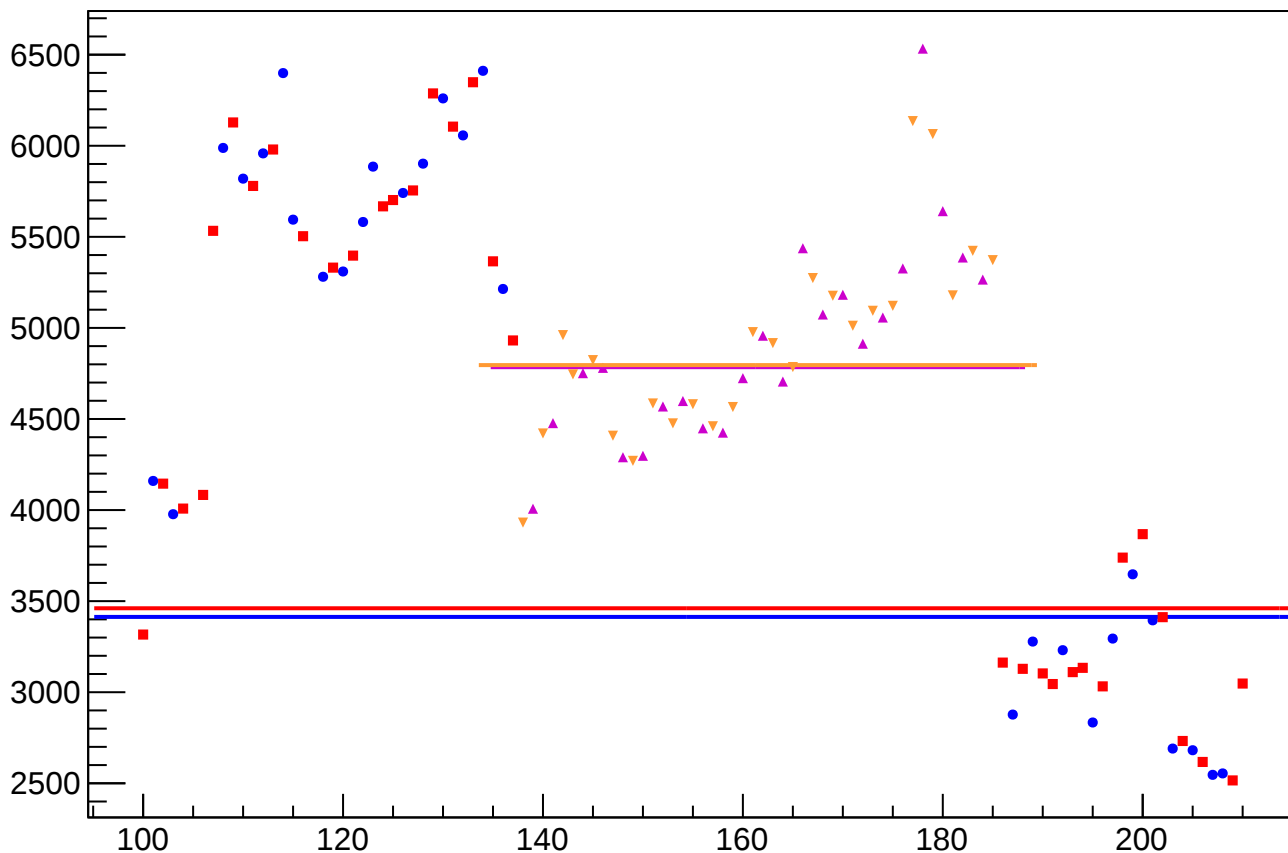
Left In:  $-2.501 \pm 1.156$   $\chi^2/\text{NDF}$ : 78.4/22

+ sign  $-2.059 \pm 0.722$   $\chi^2/\text{NDF}$ : 363.3/52

All:  $1.590 \pm 0.504$   $\chi^2/\text{NDF}$ : 1938.8/108

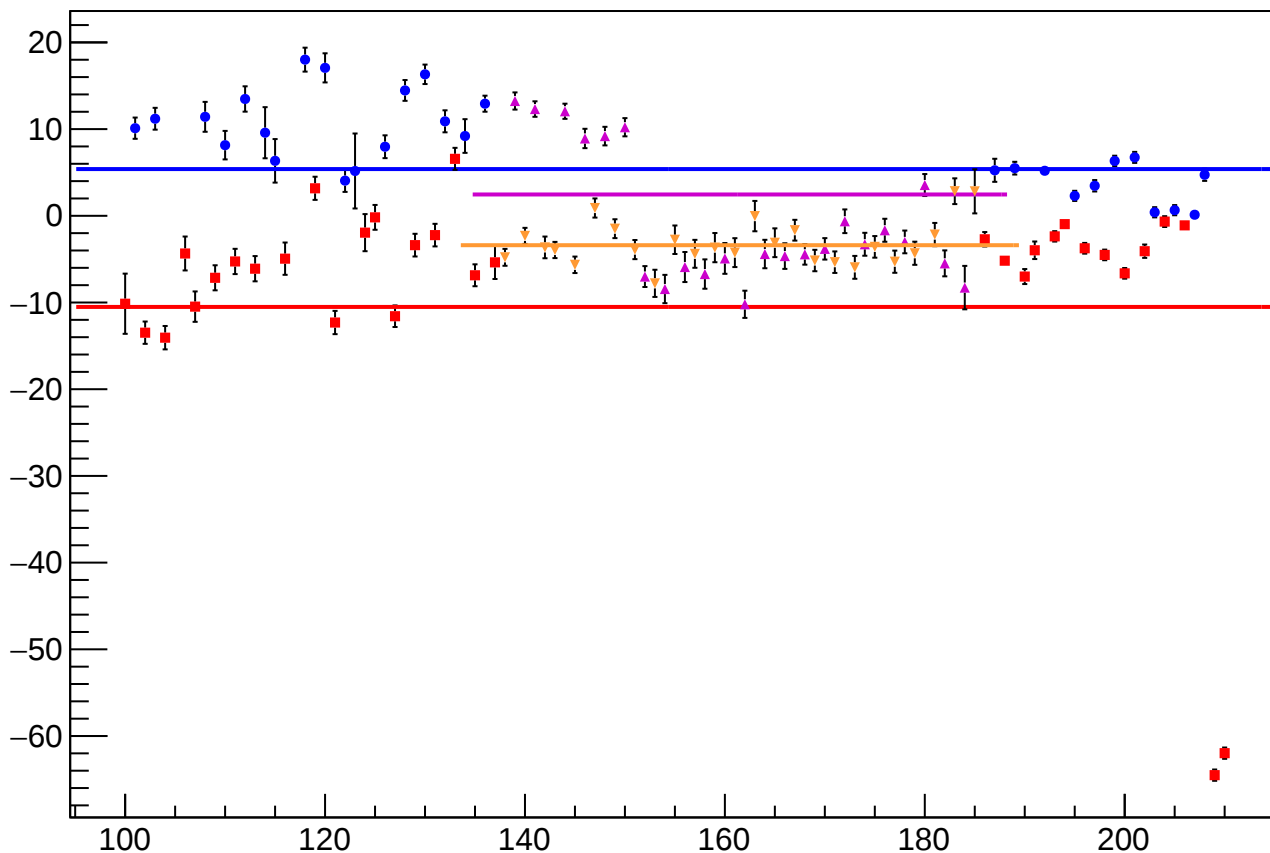
- sign  $5.056 \pm 0.704$   $\chi^2/\text{NDF}$ : 1525.7/55

# diff\_bpm0r05Y\_rms vs Slug



|                             |                                    |                         |                                    |
|-----------------------------|------------------------------------|-------------------------|------------------------------------|
| Right In: 3413.410+/-0.666  | $\chi^2/\text{NDF}$ : 2539041.7/27 | + sign 3983.541+/-0.510 | $\chi^2/\text{NDF}$ : 4678424.7/52 |
| Left Out: 4795.847+/-0.795  | $\chi^2/\text{NDF}$ : 361249.7/24  |                         |                                    |
| Right Out: 3460.873+/-0.627 | $\chi^2/\text{NDF}$ : 2538559.7/32 | All: 3966.927+/-0.356   | $\chi^2/\text{NDF}$ : 9227444.1/10 |
| Left In: 4784.434+/-0.817   | $\chi^2/\text{NDF}$ : 357507.2/22  | - sign 3951.142+/-0.497 | $\chi^2/\text{NDF}$ : 4546952.8/55 |

# diff\_bpm2i01X\_mean vs Slug



Right In:  $5.391 \pm 0.167$   $\chi^2/\text{NDF}: 729.5/27$

Left Out:  $-3.390 \pm 0.252$   $\chi^2/\text{NDF}: 77.7/24$

Right Out:  $-10.510 \pm 0.154$   $\chi^2/\text{NDF}: 15220.9/32$

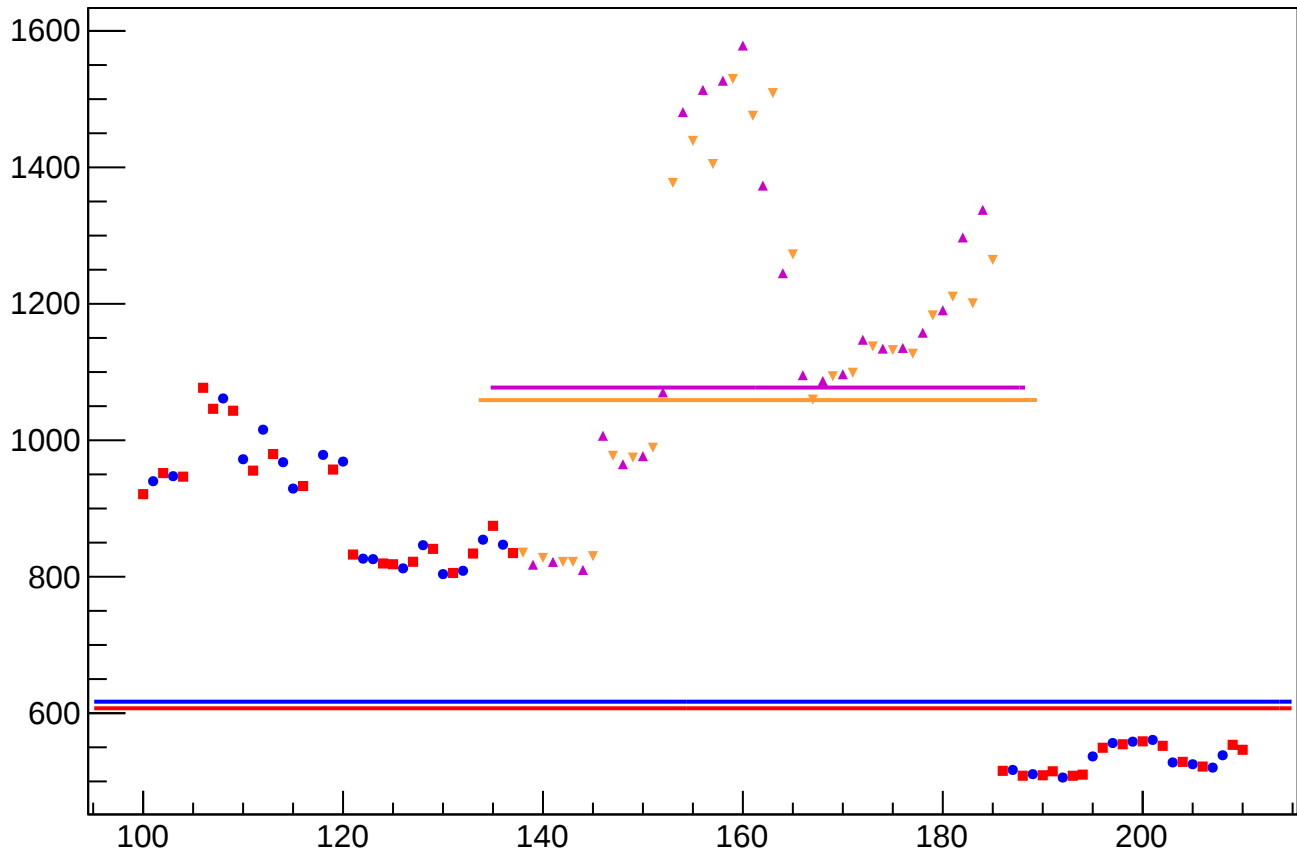
Left In:  $2.461 \pm 0.264$   $\chi^2/\text{NDF}: 928.0/22$

+ sign  $2.708 \pm 0.139$   $\chi^2/\text{NDF}: 1648.7/52$

All:  $-2.496 \pm 0.096$   $\chi^2/\text{NDF}: 22255.9/108$

- sign  $-7.229 \pm 0.133$   $\chi^2/\text{NDF}: 17947.1/55$

# diff\_bpm2i01X\_rms vs Slug



Right In: 616.867 $\pm$ 0.118  $\chi^2$ /NDF: 1772916.6/27

Left Out: 1058.941 $\pm$ 0.178  $\chi^2$ /NDF: 1403222.2/24

Right Out: 607.188 $\pm$ 0.109  $\chi^2$ /NDF: 2041871.1/32

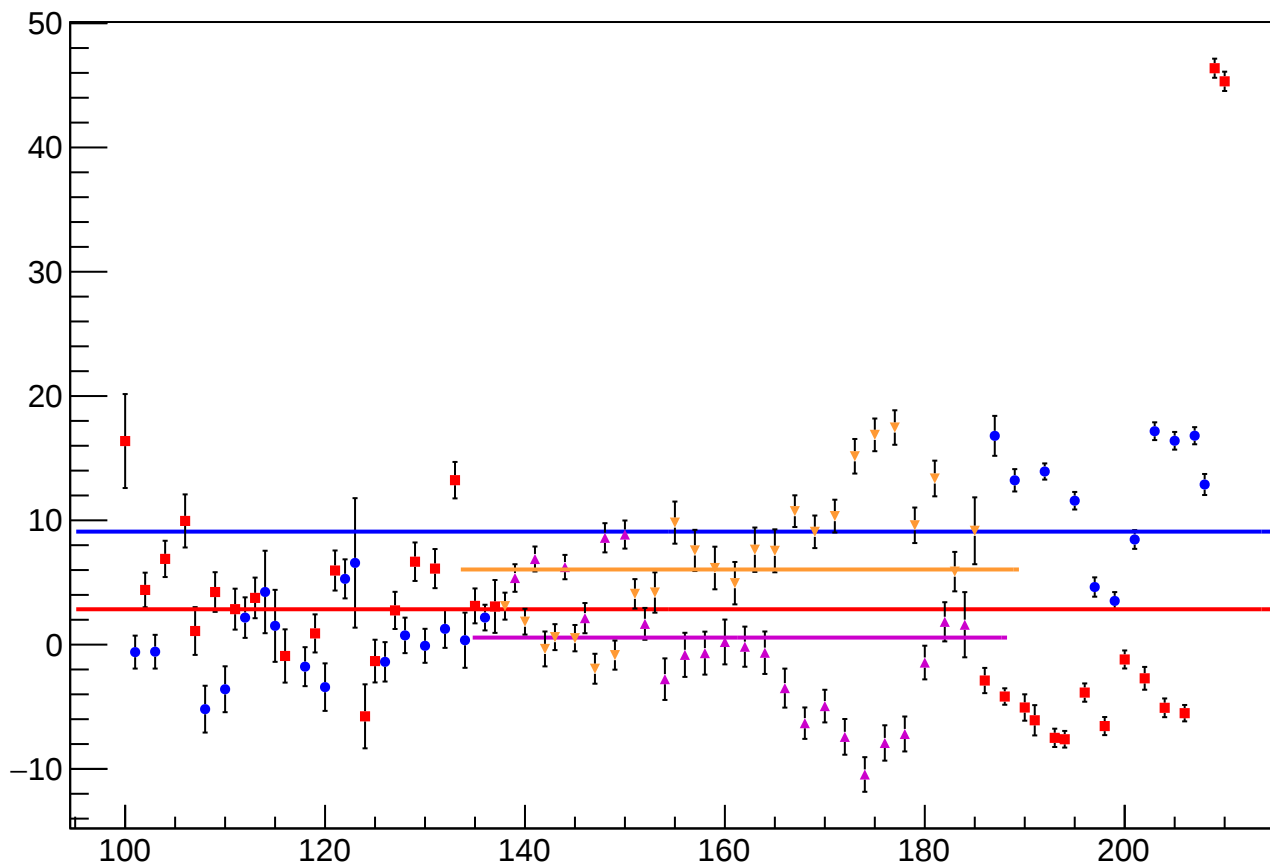
Left In: 1077.284 $\pm$ 0.187  $\chi^2$ /NDF: 1280349.9/22

+ sign 751.916 $\pm$ 0.099  $\chi^2$ /NDF: 7442160.2/52

All: 738.401 $\pm$ 0.068  $\chi^2$ /NDF: 15524488.6/10

- sign 726.110 $\pm$ 0.094  $\chi^2$ /NDF: 8046445.8/55

# diff\_bpm2i01Y\_mean vs Slug



Right In:  $9.092 \pm 0.199$   $\chi^2/\text{NDF}$ : 1127.3/27

Left Out:  $6.045 \pm 0.272$   $\chi^2/\text{NDF}$ : 430.8/24

Right Out:  $2.845 \pm 0.183$   $\chi^2/\text{NDF}$ : 7606.1/32

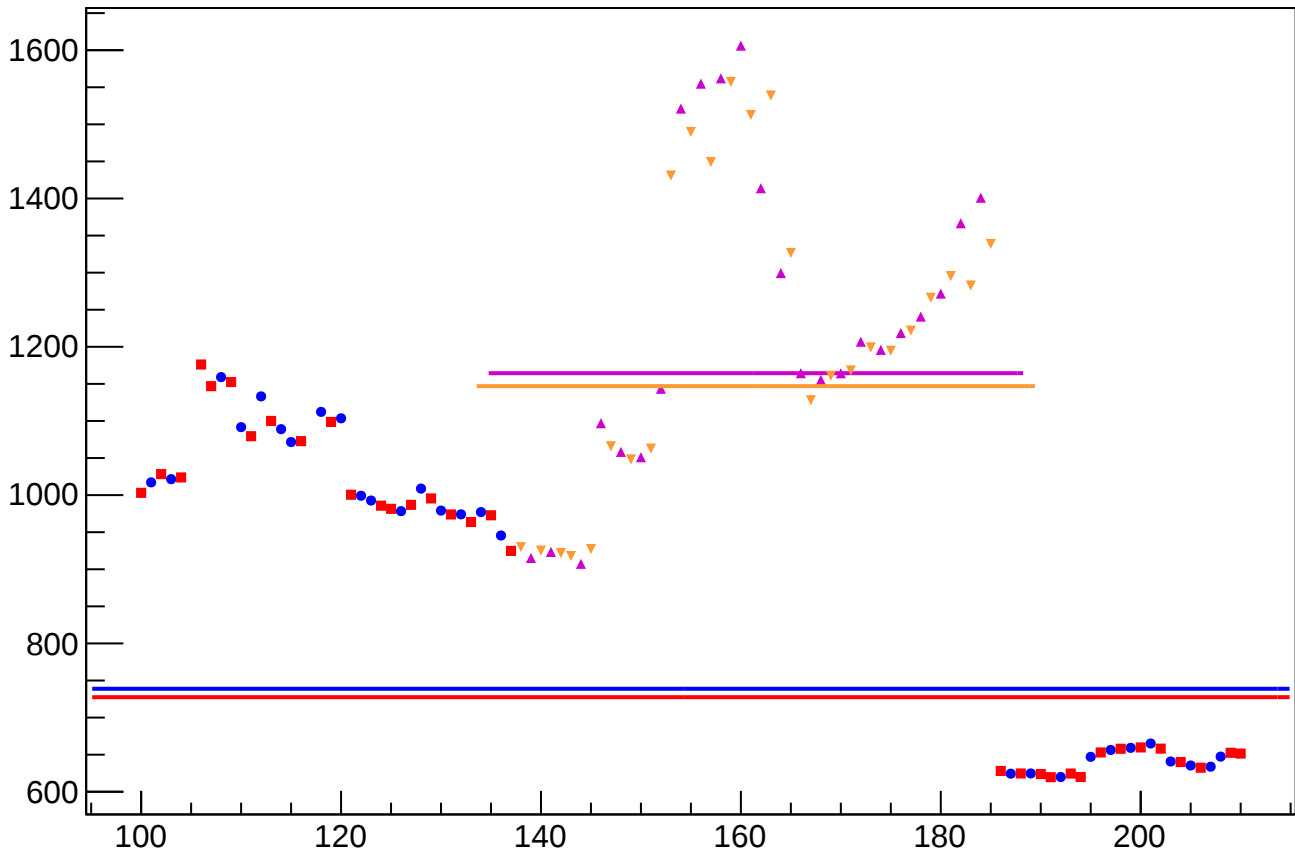
Left In:  $0.566 \pm 0.284$   $\chi^2/\text{NDF}$ : 417.0/22

+ sign  $8.027 \pm 0.161$   $\chi^2/\text{NDF}$ : 1640.0/52

All:  $4.977 \pm 0.111$   $\chi^2/\text{NDF}$ : 10399.8/108

- sign  $2.176 \pm 0.154$   $\chi^2/\text{NDF}$ : 8068.5/55

# diff\_bpm2i01Y\_rms vs Slug



Right In: 738.883 $\pm$ 0.141  $\chi^2$ /NDF: 1447667.0/27

Left Out: 1146.960 $\pm$ 0.192  $\chi^2$ /NDF:1045761.4/24

Right Out: 727.487 $\pm$ 0.130  $\chi^2$ /NDF: 1664378.5/32

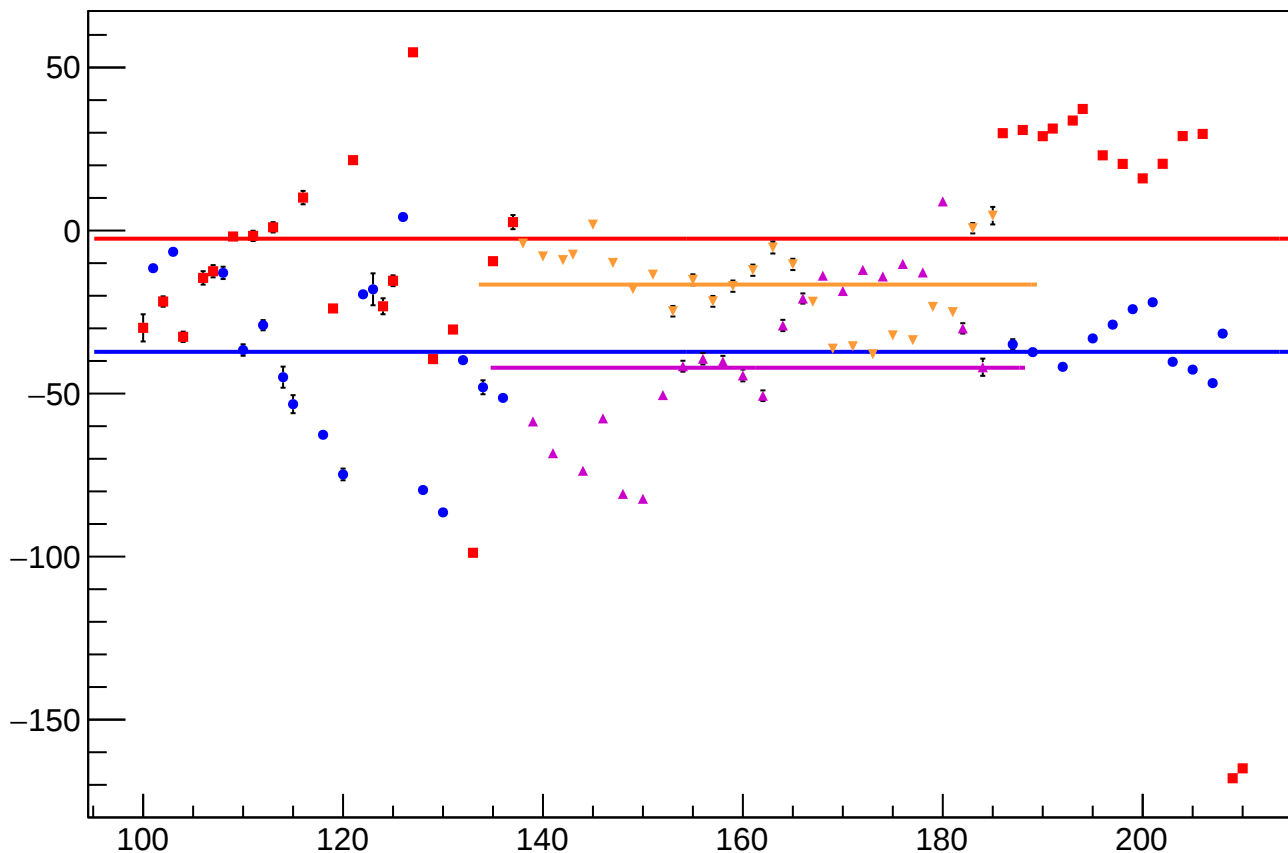
Left In: 1164.432 $\pm$ 0.201  $\chi^2$ /NDF:944112.0/22

+ sign 881.602 $\pm$ 0.114  $\chi^2$ /NDF: 5427807.9/52

All: 868.179 $\pm$ 0.079  $\chi^2$ /NDF: 11403658.7/10

- sign 855.847 $\pm$ 0.109  $\chi^2$ /NDF: 5949066.1/55

# diff\_bpm2i02X\_mean vs Slug



Right In:  $-37.198 \pm 0.196$   $\chi^2/\text{NDF}$ : 6540.0/27

Left Out:  $-16.567 \pm 0.275$   $\chi^2/\text{NDF}$ : 1931.2/24

Right Out:  $-2.495 \pm 0.180$   $\chi^2/\text{NDF}$ : 116288.5/32

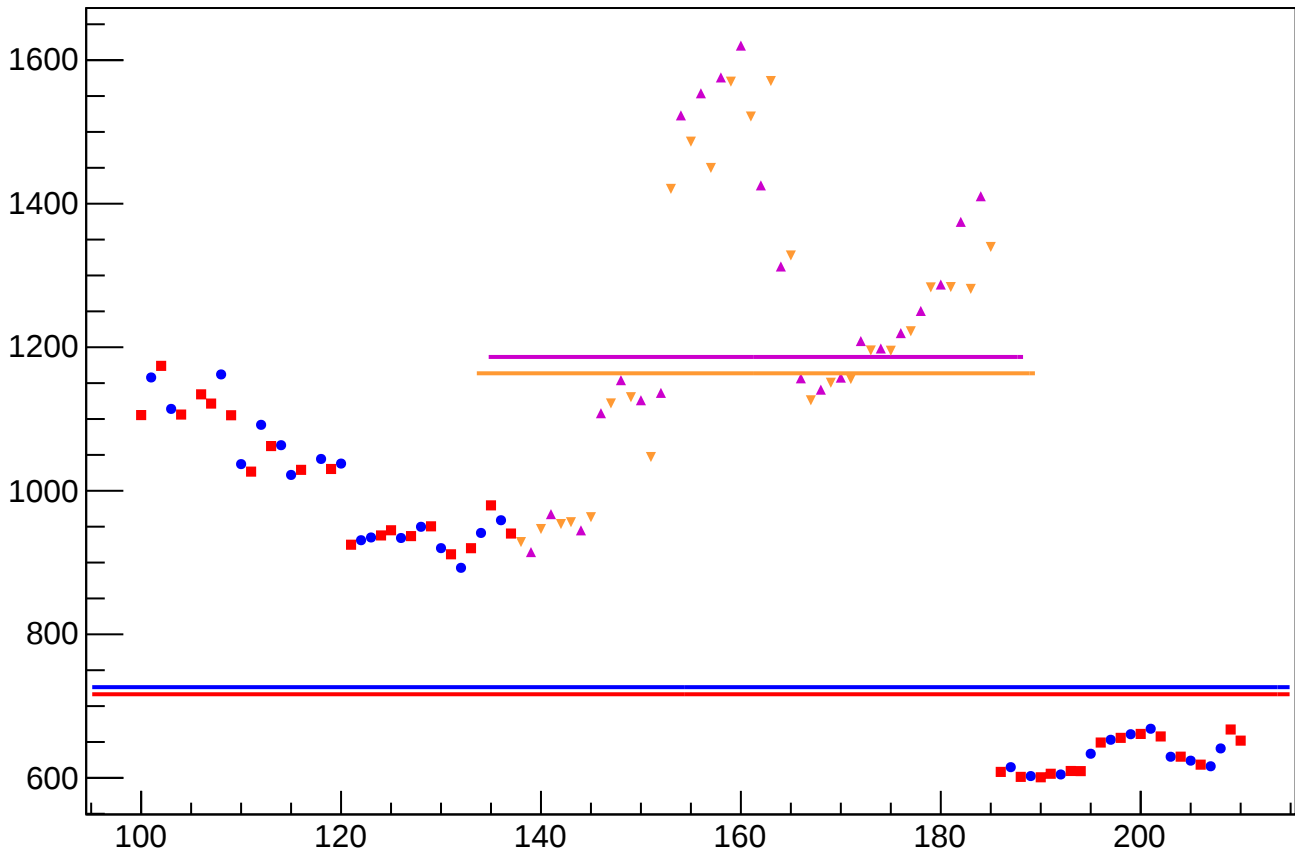
Left In:  $-42.077 \pm 0.289$   $\chi^2/\text{NDF}$ : 8332.3/22

+ sign  $-30.262 \pm 0.160$   $\chi^2/\text{NDF}$ : 12200.1/52

All:  $-21.578 \pm 0.110$   $\chi^2/\text{NDF}$ : 155994.2/108

- sign  $-13.591 \pm 0.153$   $\chi^2/\text{NDF}$ : 138111.6/55

# diff\_bpm2i02X\_rms vs Slug



Right In: 726.402 $\pm$ 0.139  $\chi^2$ /NDF: 1466899.5/27

Left Out: 1163.691 $\pm$ 0.195  $\chi^2$ /NDF: 936079.1/24

Right Out: 716.505 $\pm$ 0.128  $\chi^2$ /NDF: 1661960.9/32

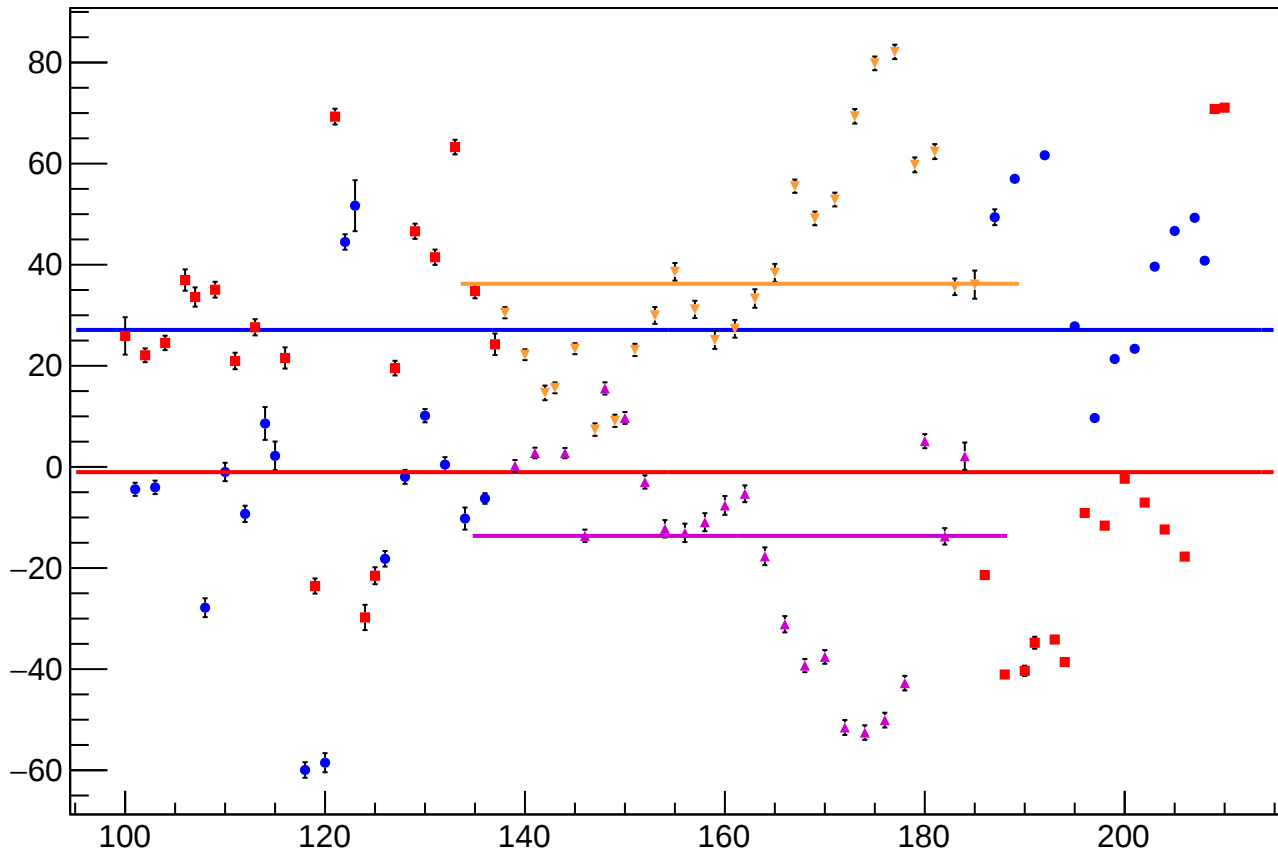
Left In: 1186.476 $\pm$ 0.204  $\chi^2$ /NDF: 833420.3/22

+ sign 873.421 $\pm$ 0.113  $\chi^2$ /NDF: 5753499.4/52

All: 860.313 $\pm$ 0.078  $\chi^2$ /NDF: 12078667.8/10

- sign 848.256 $\pm$ 0.108  $\chi^2$ /NDF: 6299267.7/55

# diff\_bpm2i02Y\_mean vs Slug



Right In:  $27.104 \pm 0.194$   $\chi^2/\text{NDF}: 18897.2/27$

Left Out:  $36.234 \pm 0.280$   $\chi^2/\text{NDF}: 5794.2/24$

Right Out:  $-1.031 \pm 0.178$   $\chi^2/\text{NDF}: 41424.4/32$

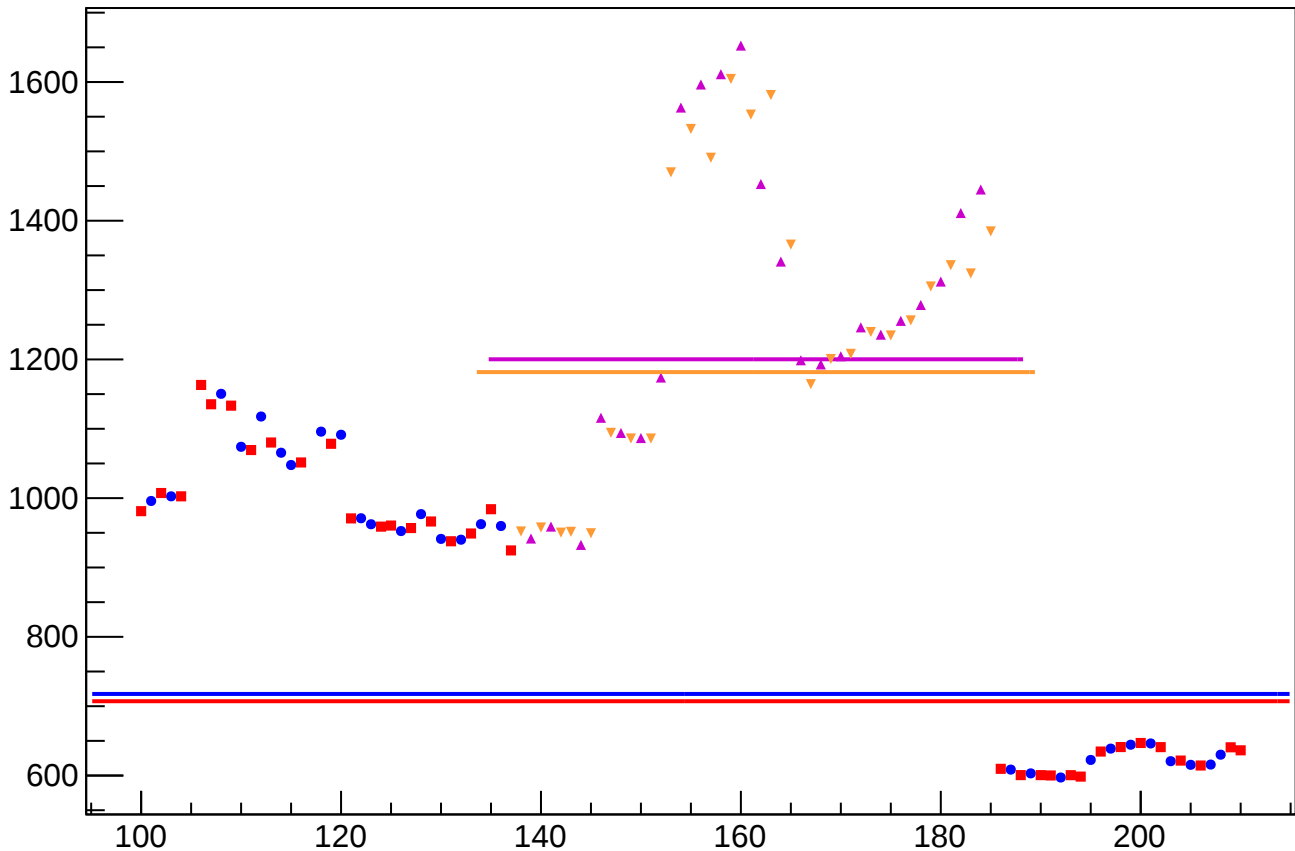
Left In:  $-13.640 \pm 0.293$   $\chi^2/\text{NDF}: 5178.0/22$

+ sign  $30.062 \pm 0.159$   $\chi^2/\text{NDF}: 25410.9/52$

All:  $12.034 \pm 0.110$   $\chi^2/\text{NDF}: 97880.0/108$

- sign  $-4.442 \pm 0.152$   $\chi^2/\text{NDF}: 47955.2/55$

# diff\_bpm2i02Y\_rms vs Slug



Right In: 717.664 $\pm$ 0.137  $\chi^2$ /NDF: 1523708.3/27

Left Out: 1181.732 $\pm$ 0.198  $\chi^2$ /NDF:1043520.8/24

Right Out: 707.164 $\pm$ 0.126  $\chi^2$ /NDF: 1739938.2/32

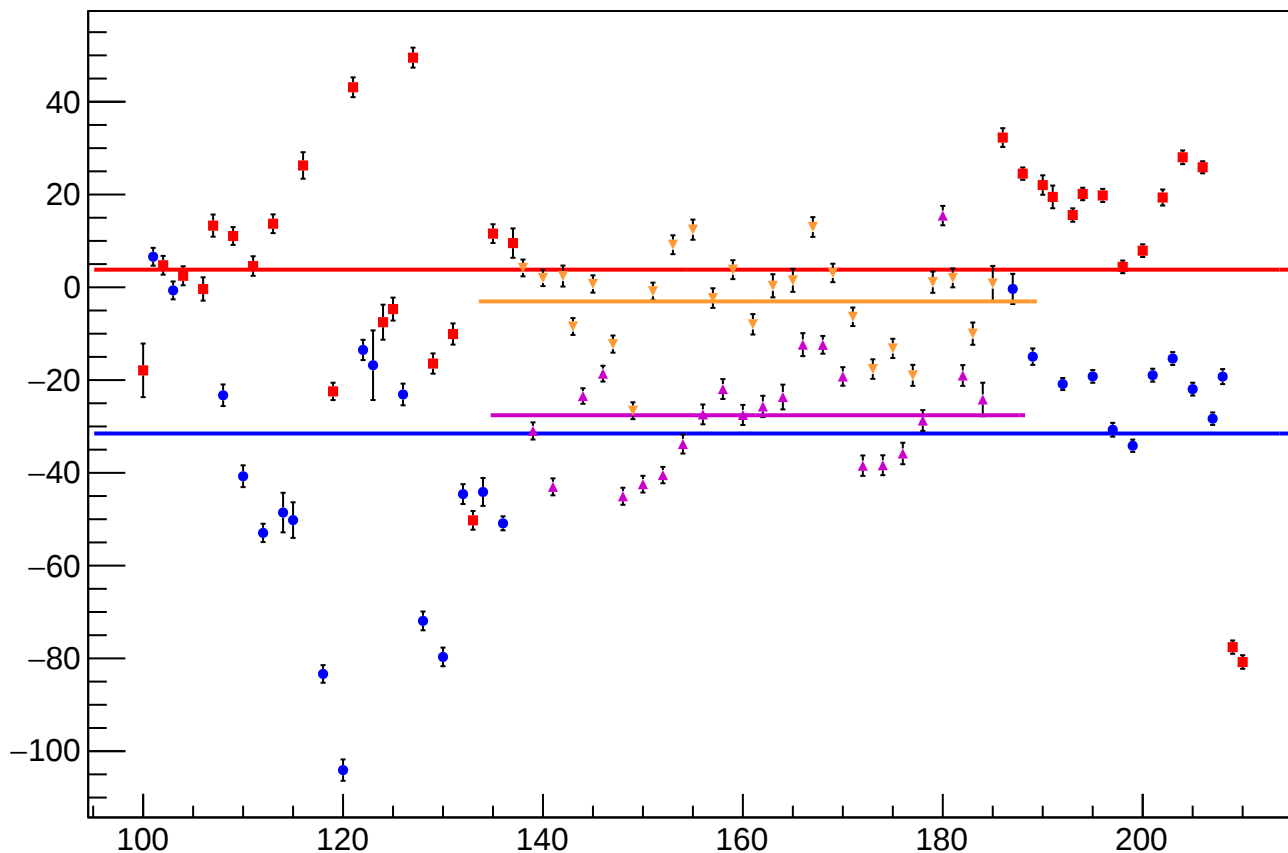
Left In: 1200.198 $\pm$ 0.207  $\chi^2$ /NDF:938224.7/22

+ sign 867.997 $\pm$ 0.113  $\chi^2$ /NDF: 6284721.1/52

All: 853.645 $\pm$ 0.078  $\chi^2$ /NDF: 13130982.5/10

- sign 840.529 $\pm$ 0.108  $\chi^2$ /NDF: 6815188.8/55

# diff\_bpm0i02X\_mean vs Slug



Right In:  $-31.515 \pm 0.344$   $\chi^2/\text{NDF}$ : 4509.4/27

Left Out:  $-3.037 \pm 0.415$   $\chi^2/\text{NDF}$ : 555.6/24

Right Out:  $3.802 \pm 0.319$   $\chi^2/\text{NDF}$ : 10074.2/32

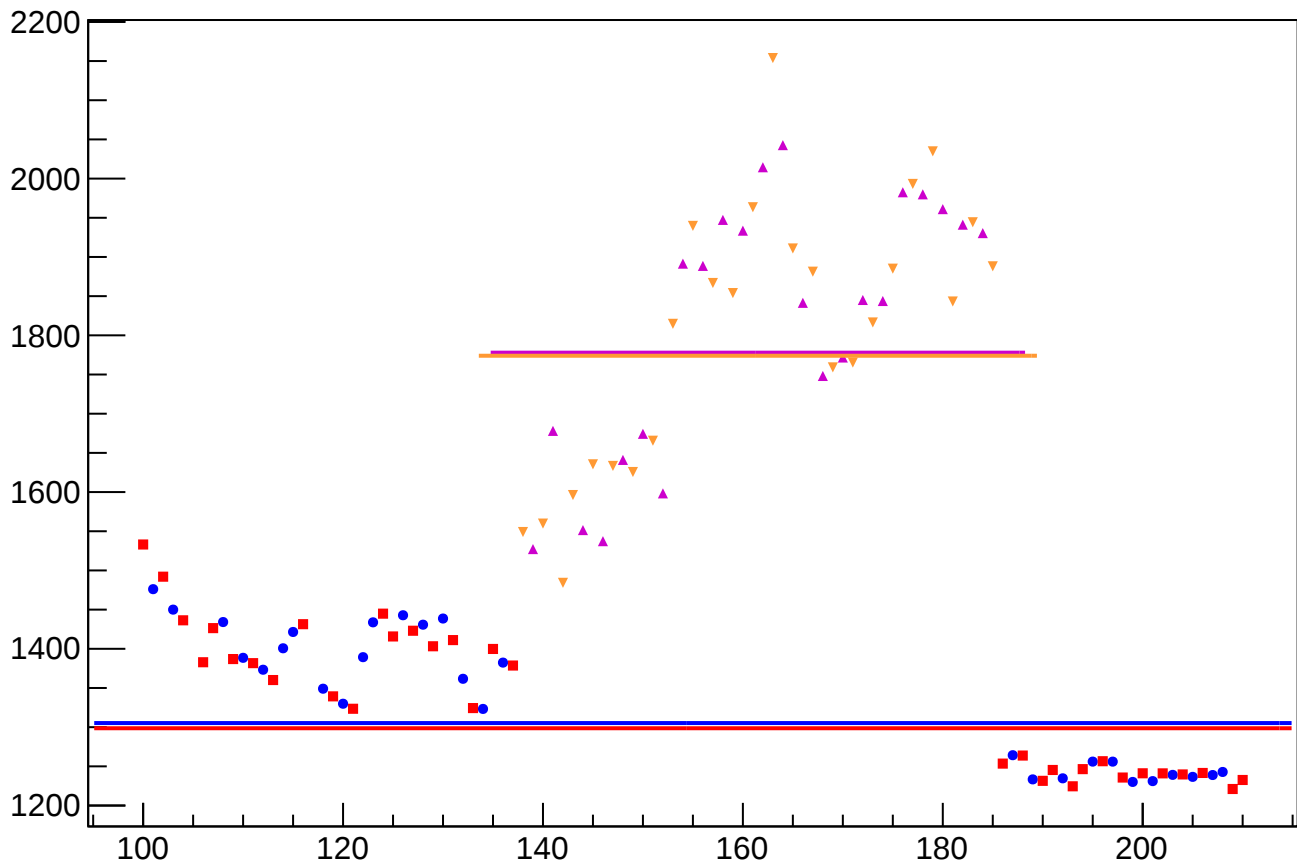
Left In:  $-27.583 \pm 0.429$   $\chi^2/\text{NDF}$ : 960.1/22

+ sign  $-19.936 \pm 0.265$   $\chi^2/\text{NDF}$ : 7858.3/52

All:  $-13.459 \pm 0.184$   $\chi^2/\text{NDF}$ : 23495.5/108

- sign  $-7.390 \pm 0.256$   $\chi^2/\text{NDF}$ : 14477.3/55

# diff\_bpm0i02X\_rms vs Slug



Right In: 1305.242 $\pm$ 0.243  $\chi^2$ /NDF: 119521.1/27

Left Out: 1773.965 $\pm$ 0.294  $\chi^2$ /NDF: 313031.1/24

Right Out: 1298.621 $\pm$ 0.226  $\chi^2$ /NDF: 126006.1/32

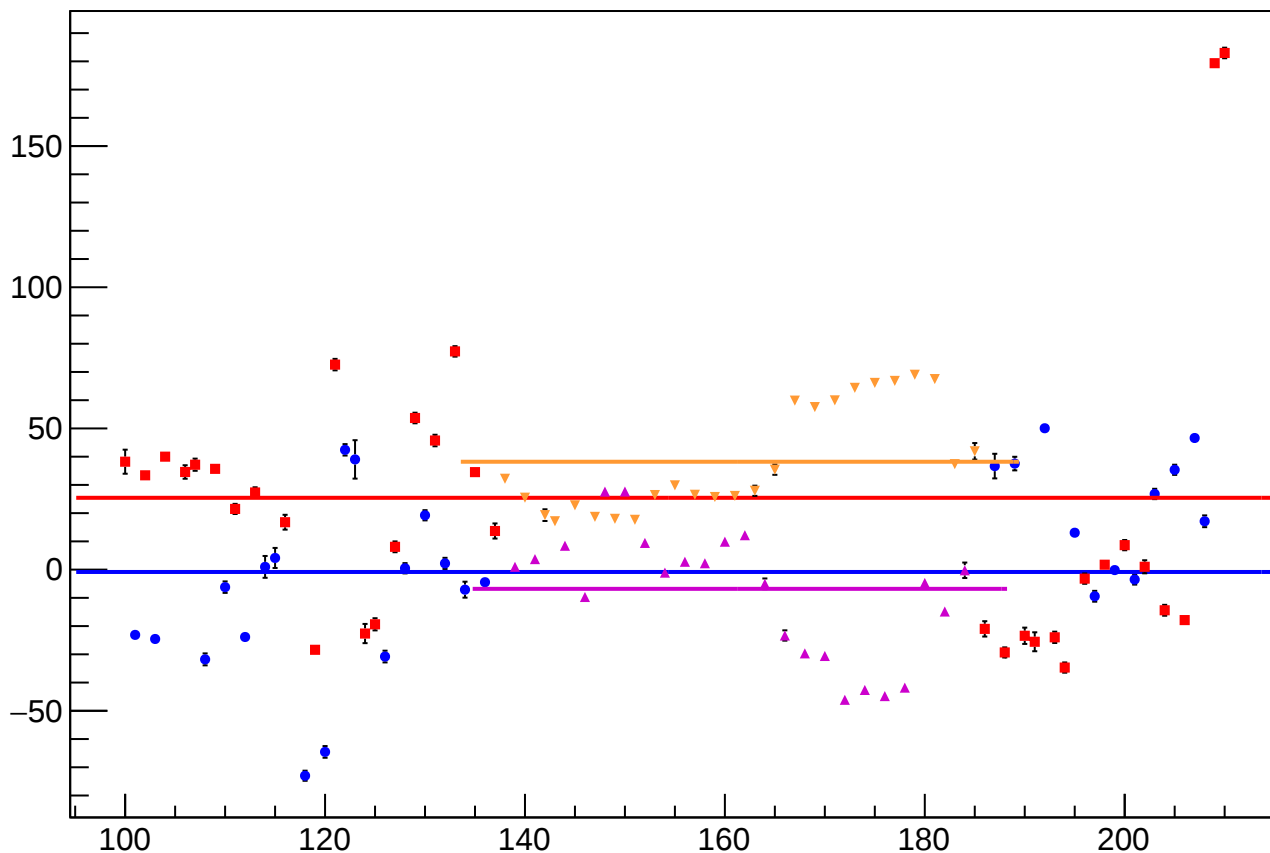
Left In: 1777.884 $\pm$ 0.303  $\chi^2$ /NDF: 299514.0/22

+ sign 1495.827 $\pm$ 0.187  $\chi^2$ /NDF: 1945888.5/52

All: 1482.254 $\pm$ 0.130  $\chi^2$ /NDF: 3987351.3/10

- sign 1469.537 $\pm$ 0.181  $\chi^2$ /NDF: 2031275.9/55

diff\_bpm0i02Y\_mean vs Slug



Right In:  $-0.833 \pm 0.368$   $\chi^2/\text{NDF}$ : 6921.4/27

Left Out:  $38.206 \pm 0.323$   $\chi^2/\text{NDF}$ : 3514.2/24

Right Out:  $25.436 \pm 0.346$   $\chi^2/\text{NDF}$ : 23720.7/32

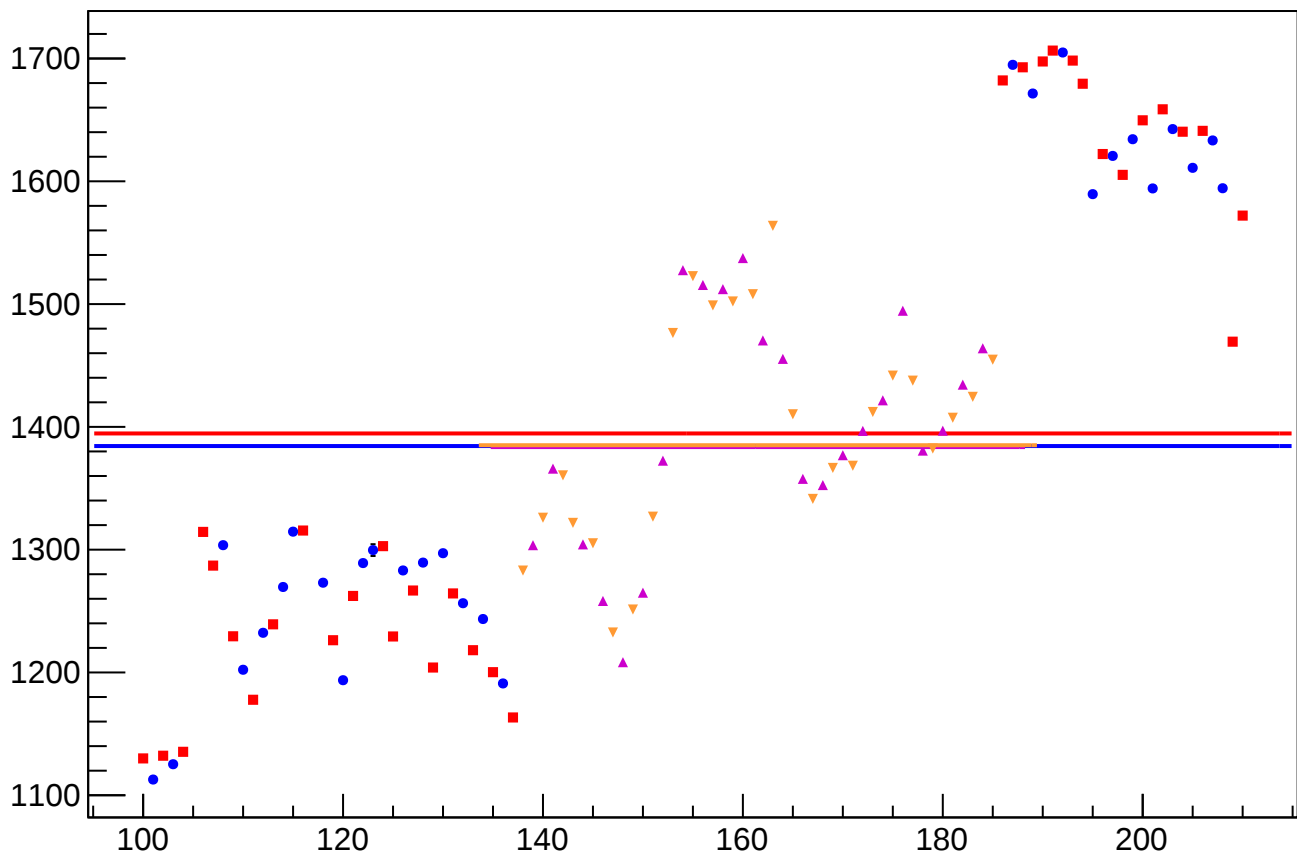
Left In:  $-6.808 \pm 0.333$   $\chi^2/\text{NDF}$ : 4494.5/22

+ sign  $21.187 \pm 0.243$   $\chi^2/\text{NDF}$ : 16789.4/52

All:  $14.860 \pm 0.171$   $\chi^2/\text{NDF}$ : 50850.1/108

- sign  $8.679 \pm 0.240$   $\chi^2/\text{NDF}$ : 32718.9/55

# diff\_bpm0i02Y\_rms vs Slug



Right In: 1384.390+/-0.260  $\chi^2/\text{NDF}$ : 627018.2/27

Left Out: 1385.063+/-0.229  $\chi^2/\text{NDF}$ : 146001.5/24

Right Out: 1394.646+/-0.245  $\chi^2/\text{NDF}$ : 758588.6/32

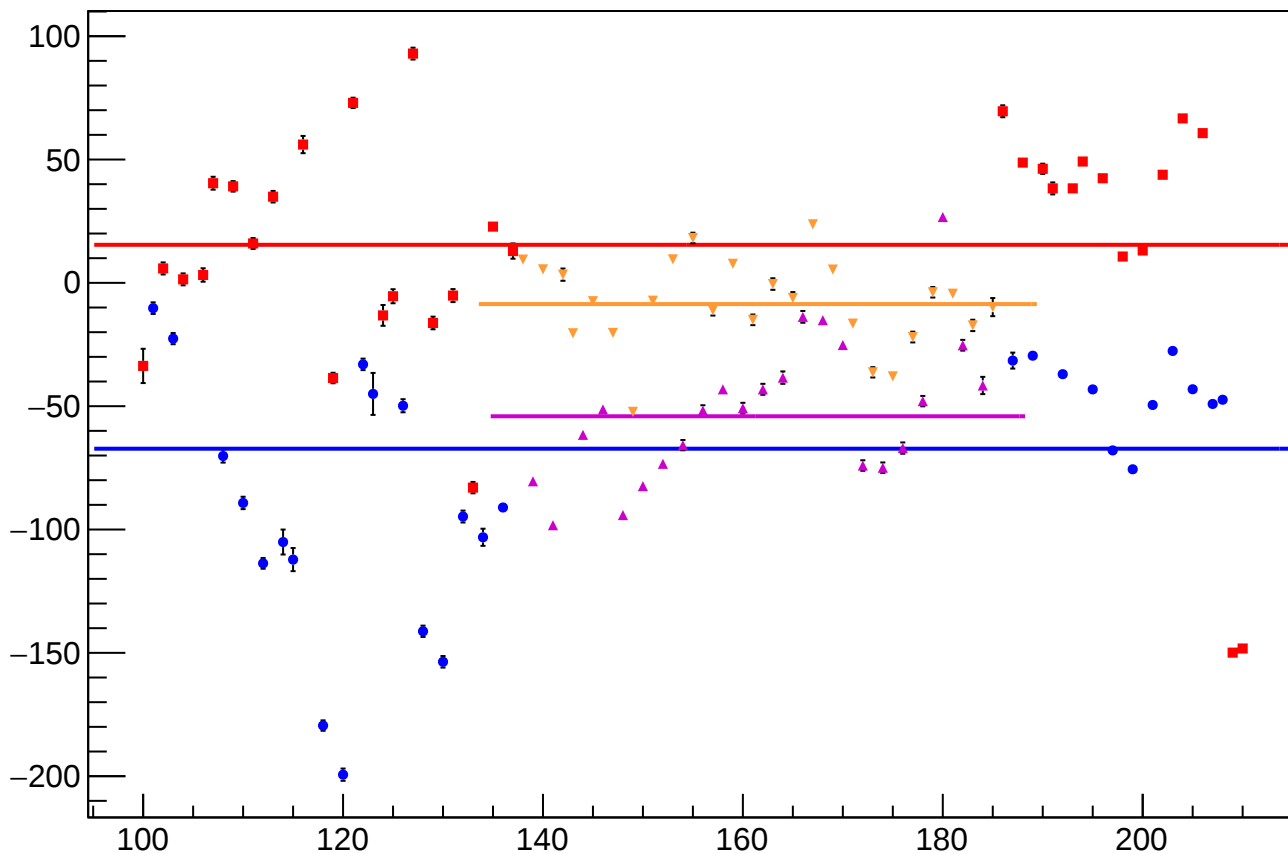
Left In: 1383.558+/-0.235  $\chi^2/\text{NDF}$ : 154696.0/22

+ sign 1384.770+/-0.172  $\chi^2/\text{NDF}$ : 773023.5/52

All: 1386.851+/-0.121  $\chi^2/\text{NDF}$ : 1687663.5/10

- sign 1388.883+/-0.170  $\chi^2/\text{NDF}$ : 914349.7/55

# diff\_bpm0i02aX\_mean vs Slug



Right In:  $-67.236 \pm 0.384$   $\chi^2/\text{NDF}: 13049.1/27$

Left Out:  $-8.606 \pm 0.410$   $\chi^2/\text{NDF}: 1930.5/24$

Right Out:  $15.427 \pm 0.354$   $\chi^2/\text{NDF}: 28265.8/32$

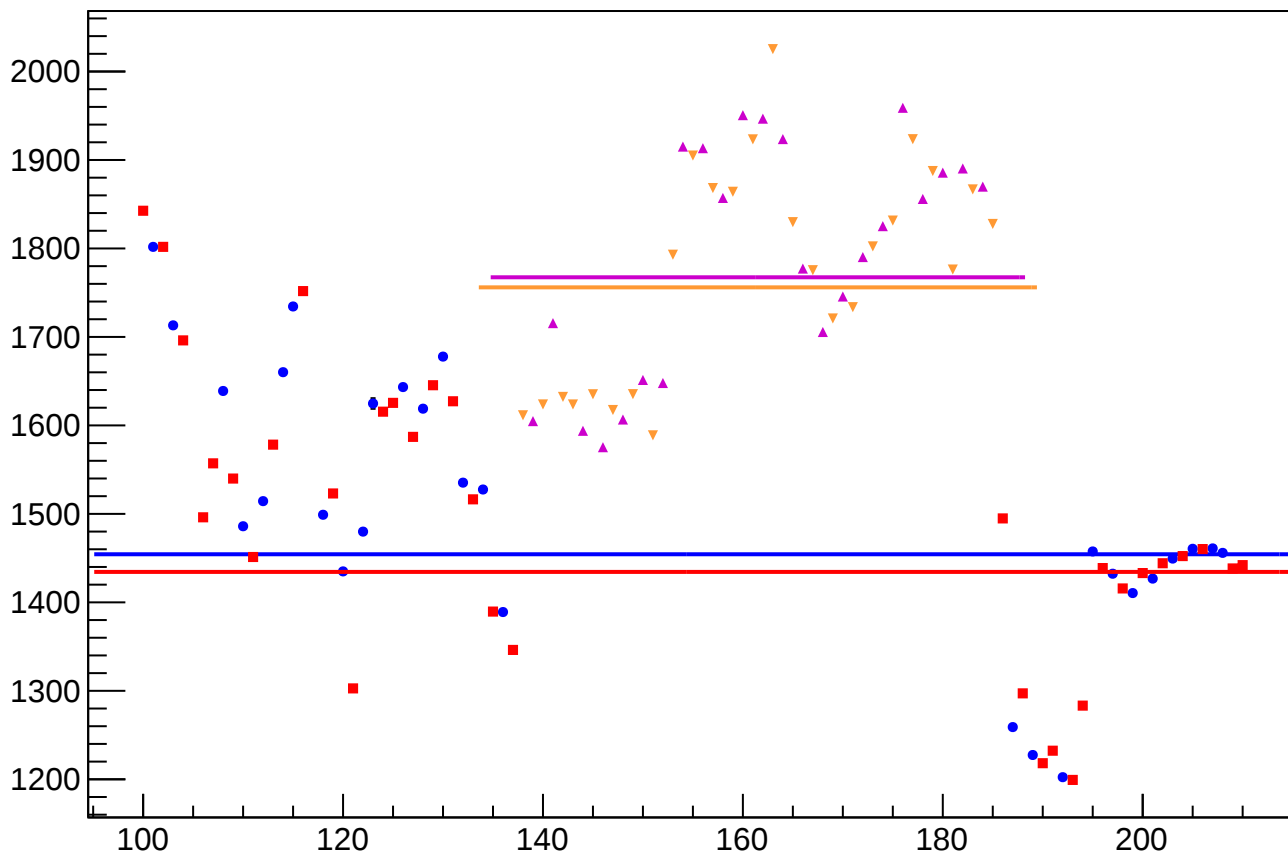
Left In:  $-54.089 \pm 0.426$   $\chi^2/\text{NDF}: 4721.6/22$

+ sign  $-39.865 \pm 0.280$   $\chi^2/\text{NDF}: 25870.6/52$

All:  $-26.019 \pm 0.195$   $\chi^2/\text{NDF}: 79372.8/108$

- sign  $-12.975 \pm 0.272$   $\chi^2/\text{NDF}: 48763.2/55$

# diff\_bpm0i02aX\_rms vs Slug



Right In: 1454.357 $\pm$ 0.271  $\chi^2$ /NDF: 261572.0/27

Left Out: 1756.034 $\pm$ 0.290  $\chi^2$ /NDF: 175762.3/24

Right Out: 1434.414 $\pm$ 0.250  $\chi^2$ /NDF: 308793.1/32

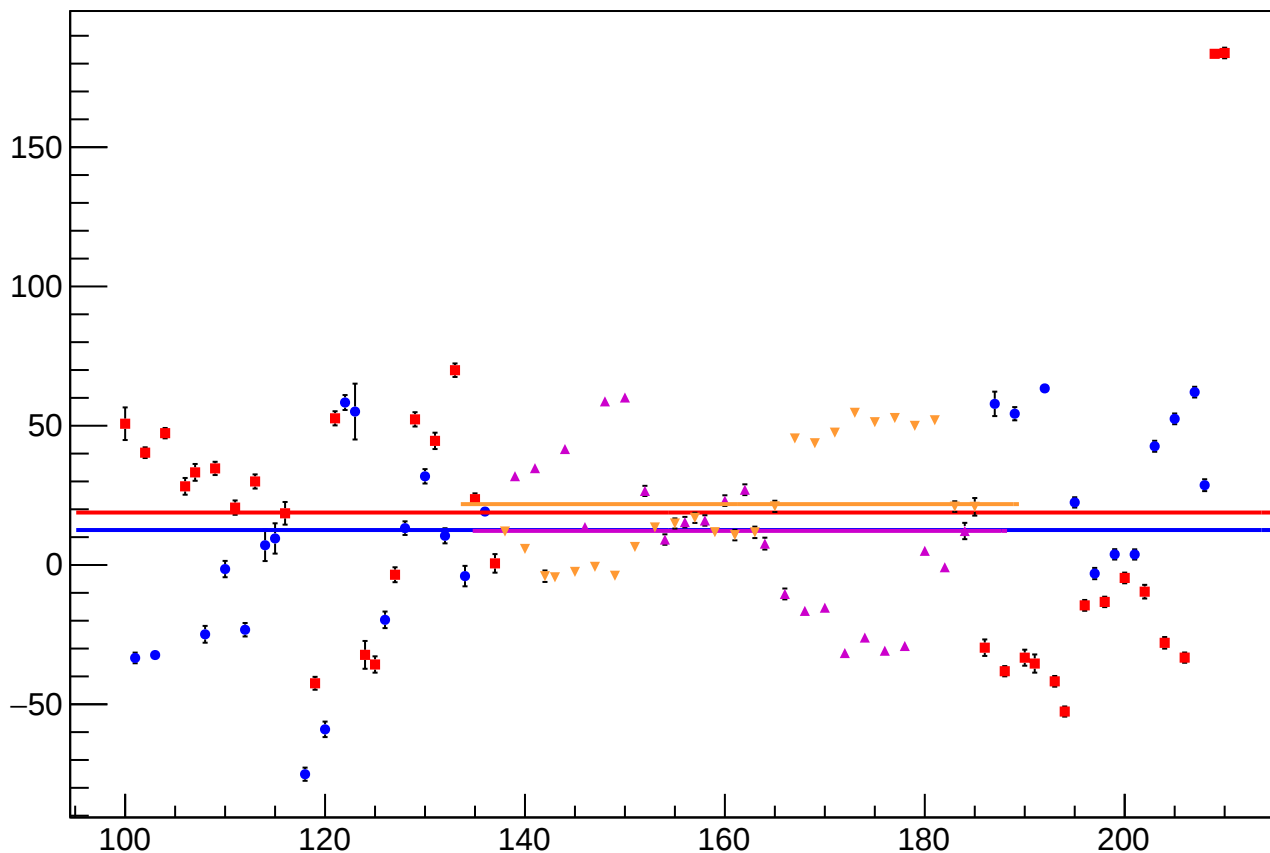
Left In: 1767.410 $\pm$ 0.301  $\chi^2$ /NDF: 187958.2/22

+ sign 1595.194 $\pm$ 0.198  $\chi^2$ /NDF: 1014012.6/52

All: 1582.461 $\pm$ 0.138  $\chi^2$ /NDF: 2242775.5/10

- sign 1570.464 $\pm$ 0.192  $\chi^2$ /NDF: 1220746.9/55

# diff\_bpm0i02aY\_mean vs Slug



Right In:  $12.555 \pm 0.437$   $\chi^2/\text{NDF}$ : 6940.8/27

Left Out:  $21.856 \pm 0.335$   $\chi^2/\text{NDF}$ : 4110.5/24

Right Out:  $18.836 \pm 0.405$   $\chi^2/\text{NDF}$ : 26651.8/32

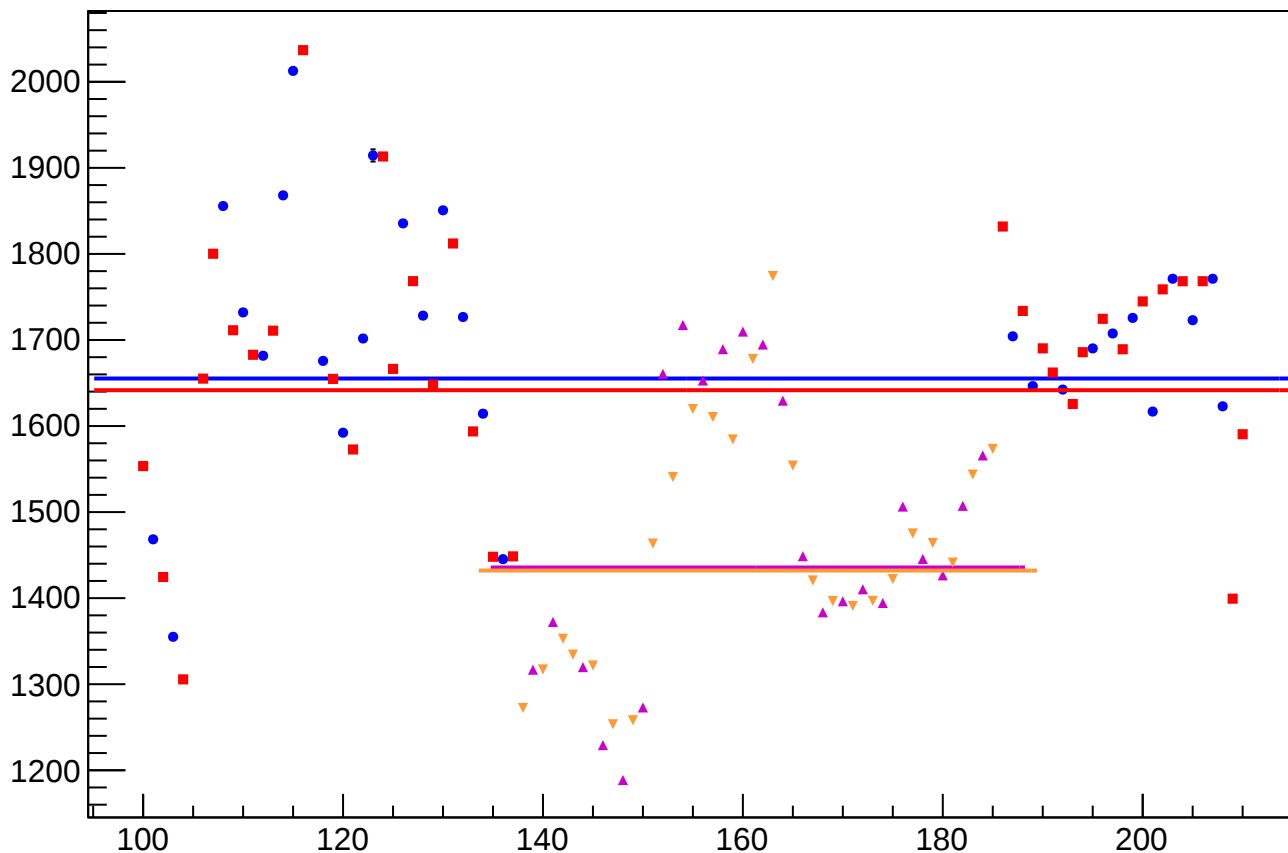
Left In:  $12.246 \pm 0.347$   $\chi^2/\text{NDF}$ : 6781.6/22

+ sign  $18.408 \pm 0.266$   $\chi^2/\text{NDF}$ : 11336.5/52

All:  $16.707 \pm 0.187$   $\chi^2/\text{NDF}$ : 45003.7/108

- sign  $15.037 \pm 0.264$   $\chi^2/\text{NDF}$ : 33586.2/55

# diff\_bpm0i02aY\_rms vs Slug



Right In: 1655.222+/-0.309  $\chi^2/\text{NDF}$ : 180379.6/27

Left Out: 1432.060+/-0.237  $\chi^2/\text{NDF}$ : 297360.3/24

Right Out: 1641.636+/-0.286  $\chi^2/\text{NDF}$ : 254779.5/32

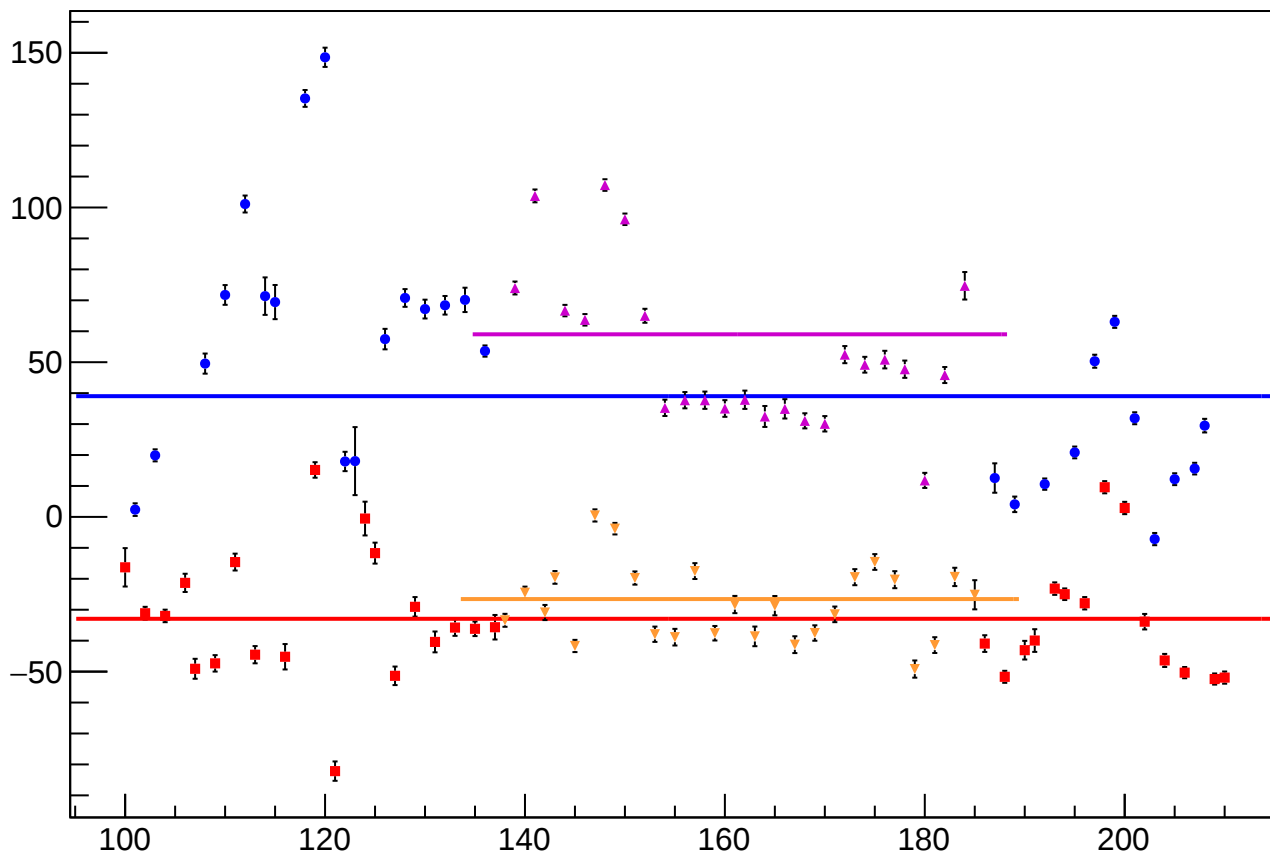
Left In: 1435.645+/-0.245  $\chi^2/\text{NDF}$ : 420835.0/22

+ sign 1514.786+/-0.188  $\chi^2/\text{NDF}$ : 806122.9/52

All: 1518.874+/-0.132  $\chi^2/\text{NDF}$ : 1781072.6/100

- sign 1522.885+/-0.186  $\chi^2/\text{NDF}$ : 974014.0/55

# diff\_bpm0i05X\_mean vs Slug



Right In:  $39.022 \pm 0.467$   $\chi^2/\text{NDF}: 5776.4/27$

Left Out:  $-26.554 \pm 0.488$   $\chi^2/\text{NDF}: 717.5/24$

Right Out:  $-32.930 \pm 0.432$   $\chi^2/\text{NDF}: 2183.4/32$

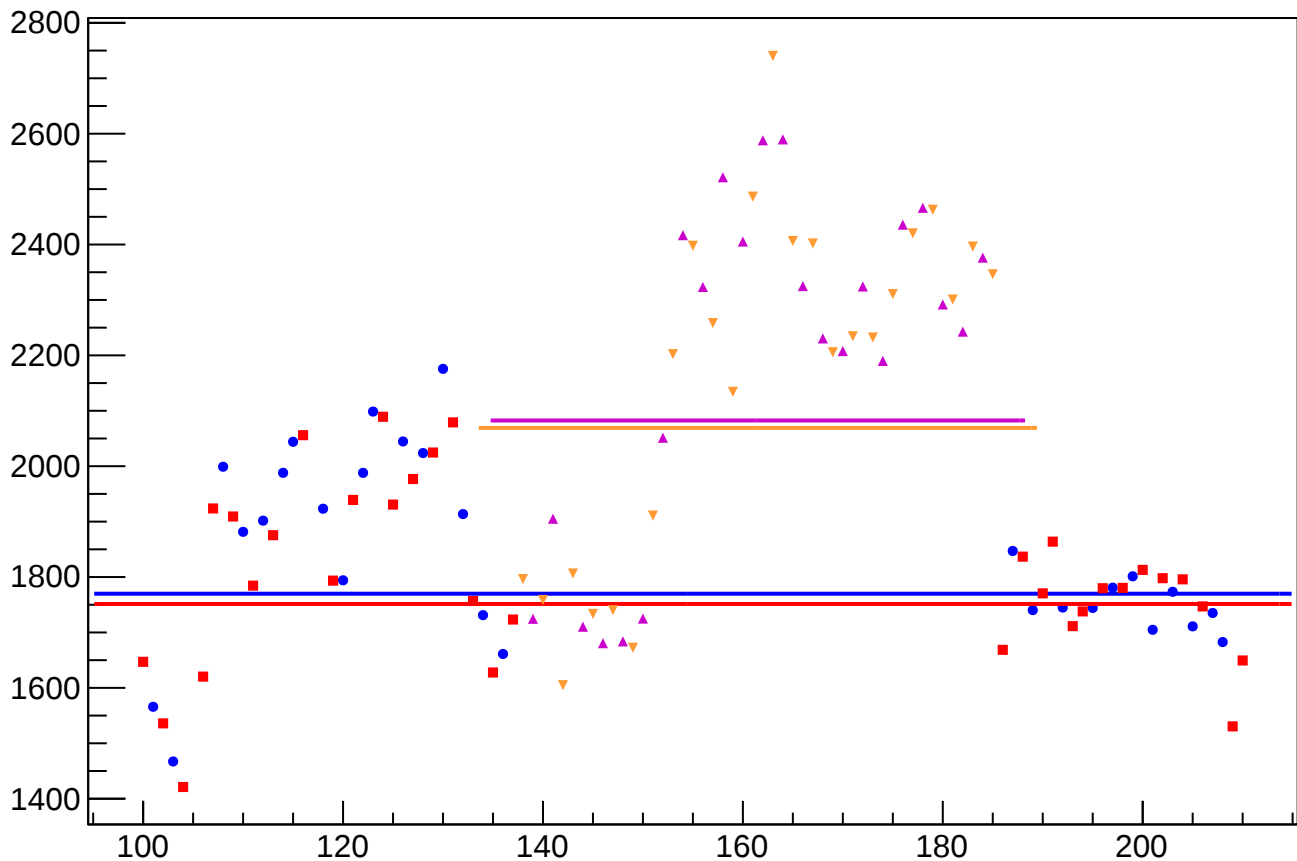
Left In:  $59.014 \pm 0.506$   $\chi^2/\text{NDF}: 2783.8/22$

+ sign  $7.662 \pm 0.337$   $\chi^2/\text{NDF}: 15920.9/52$

All:  $6.684 \pm 0.235$   $\chi^2/\text{NDF}: 39997.5/108$

- sign  $5.757 \pm 0.328$   $\chi^2/\text{NDF}: 24060.2/55$

# diff\_bpm0i05X\_rms vs Slug



Right In: 1769.911 $\pm$ 0.330  $\chi^2$ /NDF: 197816.9/27

Left Out: 2069.146 $\pm$ 0.345  $\chi^2$ /NDF: 799037.9/24

Right Out: 1751.418 $\pm$ 0.305  $\chi^2$ /NDF: 227581.9/32

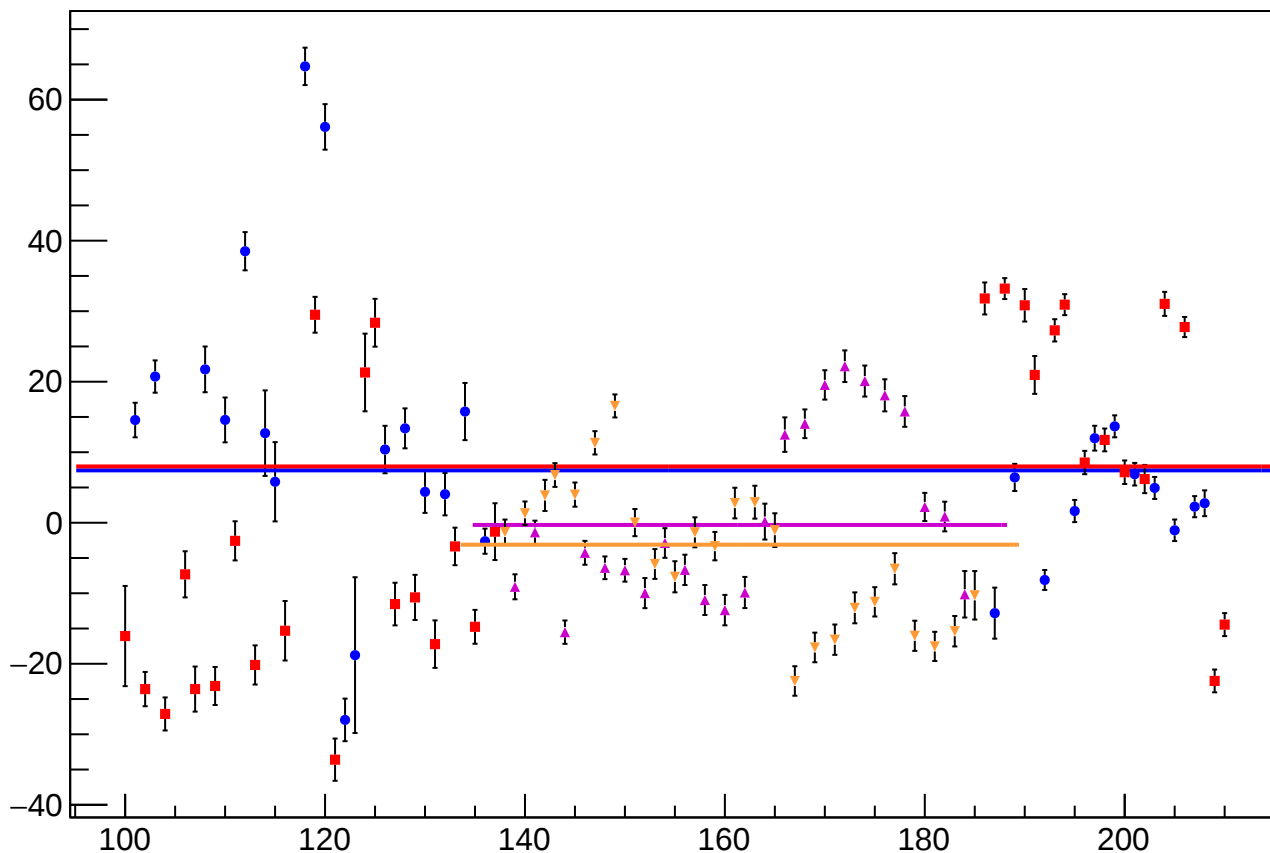
Left In: 2082.497 $\pm$ 0.358  $\chi^2$ /NDF: 785304.0/22

+ sign 1913.013 $\pm$ 0.239  $\chi^2$ /NDF: 1389449.5/52

All: 1901.571 $\pm$ 0.166  $\chi^2$ /NDF: 2901950.9/10

- sign 1890.724 $\pm$ 0.232  $\chi^2$ /NDF: 1508020.7/55

# diff\_bpm0i05Y\_mean vs Slug



Right In:  $7.427 \pm 0.413$   $\chi^2/\text{NDF}: 1320.4/27$

Left Out:  $-3.112 \pm 0.404$   $\chi^2/\text{NDF}: 643.7/24$

Right Out:  $7.982 \pm 0.382$   $\chi^2/\text{NDF}: 3189.3/32$

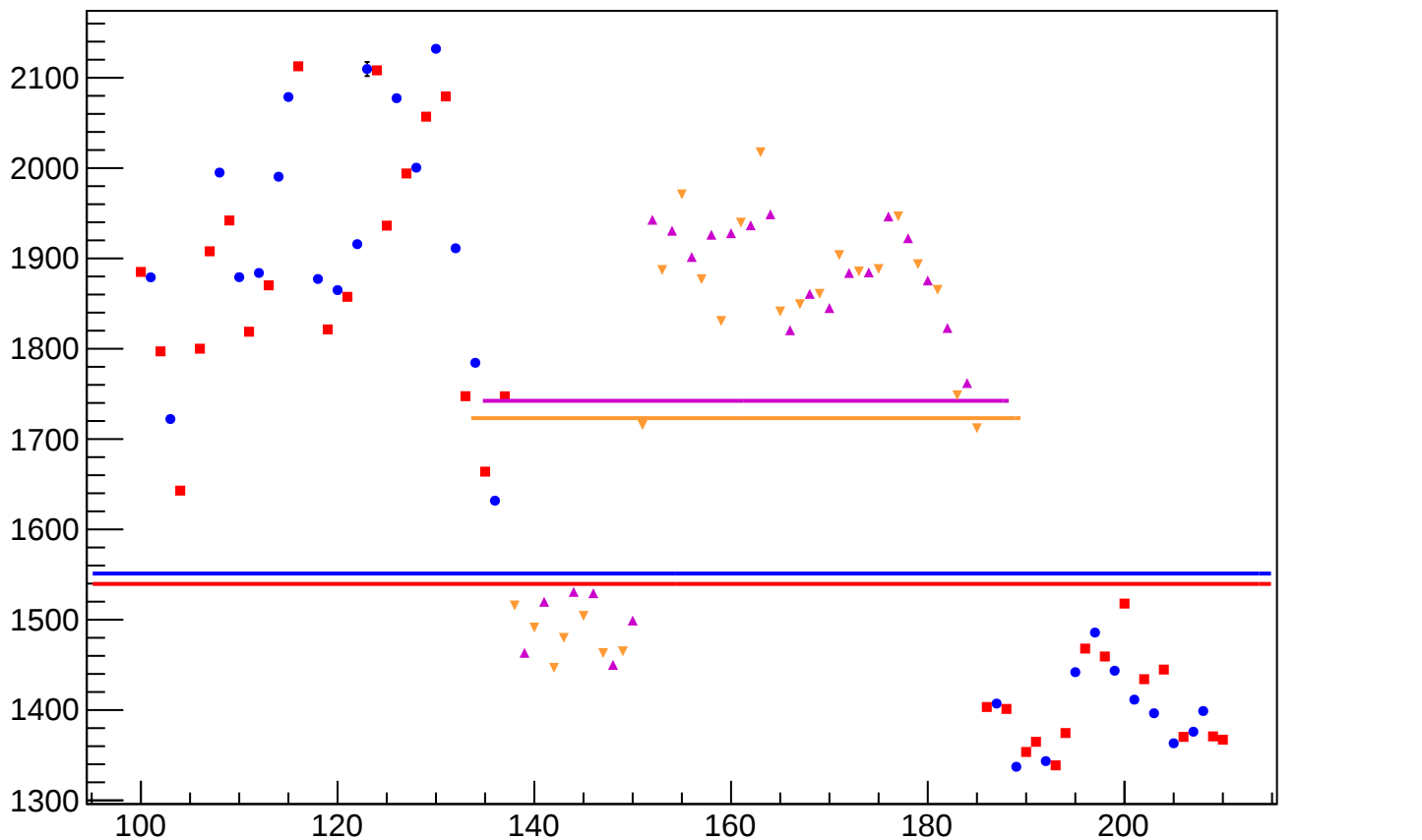
Left In:  $-0.312 \pm 0.421$   $\chi^2/\text{NDF}: 736.5/22$

+ sign  $2.050 \pm 0.289$   $\chi^2/\text{NDF}: 2297.1/52$

All:  $3.166 \pm 0.202$   $\chi^2/\text{NDF}: 6465.0/108$

- sign  $4.238 \pm 0.283$   $\chi^2/\text{NDF}: 4138.7/55$

# diff\_bpm0i05Y\_rms vs Slug



Right In: 1551.113 $\pm$ 0.292  $\chi^2$ /NDF: 661757.5/27

Left Out: 1723.168 $\pm$ 0.286  $\chi^2$ /NDF: 477441.1/24

Right Out: 1539.655 $\pm$ 0.270  $\chi^2$ /NDF: 664015.2/32

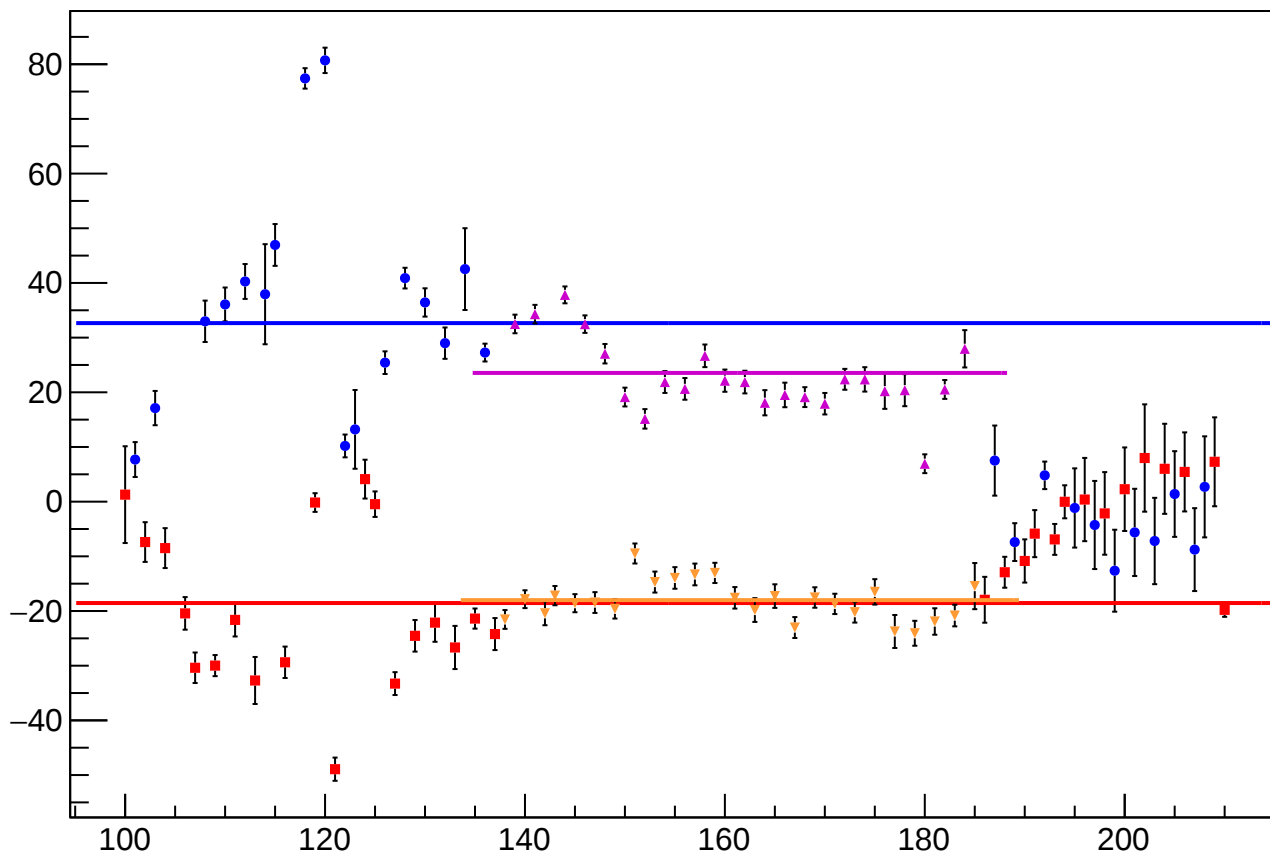
Left In: 1742.354 $\pm$ 0.298  $\chi^2$ /NDF: 435841.5/22

+ sign 1638.887 $\pm$ 0.204  $\chi^2$ /NDF: 1316679.1/52

All: 1634.947 $\pm$ 0.143  $\chi^2$ /NDF: 2671489.3/10

- sign 1631.165 $\pm$ 0.200  $\chi^2$ /NDF: 1354080.3/55

# diff\_bpm0i07X\_mean vs Slug



Right In:  $32.656 \pm 0.593$   $\chi^2/\text{NDF}$ : 1734.8/27

Left Out:  $-18.007 \pm 0.397$   $\chi^2/\text{NDF}$ : 73.8/24

Right Out:  $-18.541 \pm 0.503$   $\chi^2/\text{NDF}$ : 716.3/32

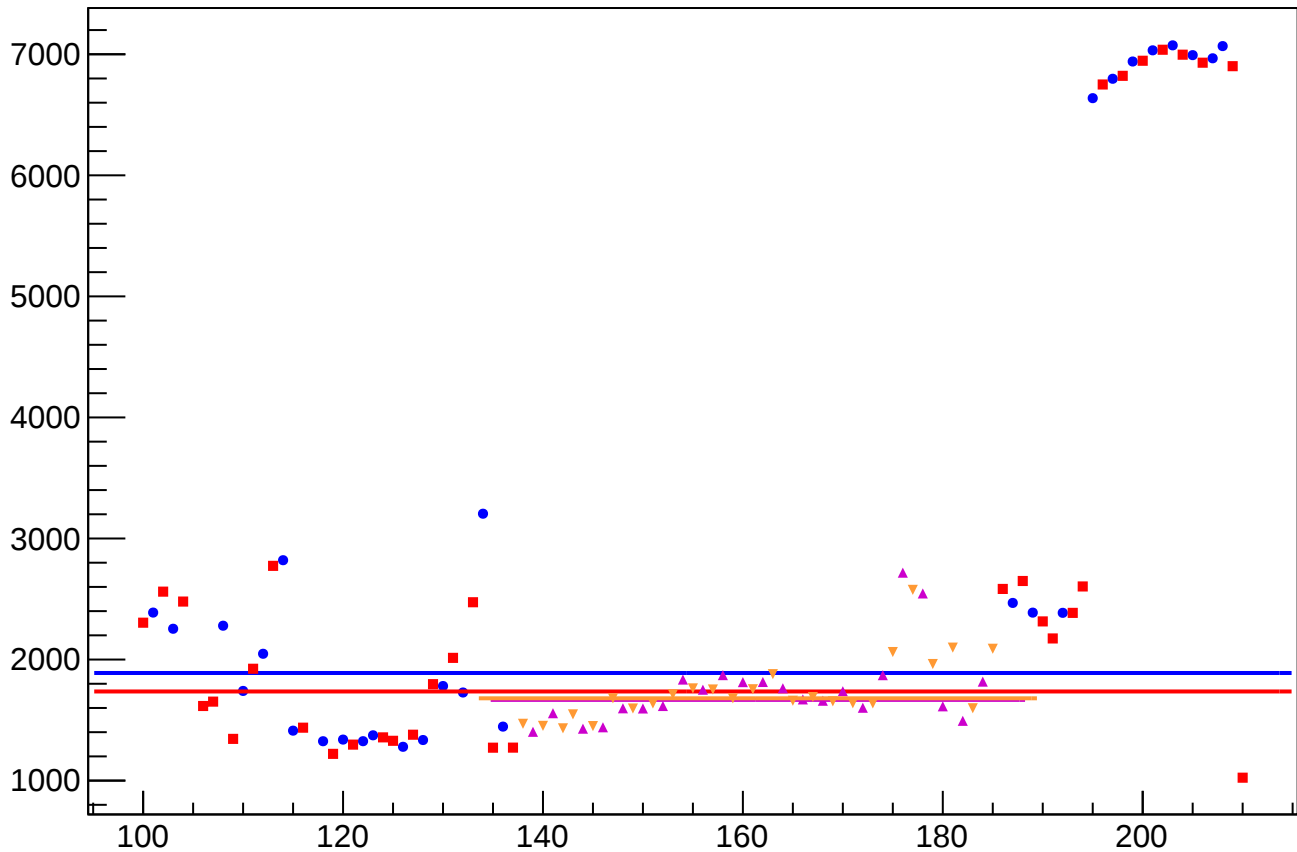
Left In:  $23.544 \pm 0.406$   $\chi^2/\text{NDF}$ : 346.7/22

+ sign  $-2.336 \pm 0.330$   $\chi^2/\text{NDF}$ : 6854.1/52

All:  $2.515 \pm 0.228$   $\chi^2/\text{NDF}$ : 12571.9/108

- sign  $6.967 \pm 0.316$   $\chi^2/\text{NDF}$ : 5302.6/55

# diff\_bpm0i07X\_rms vs Slug



Right In: 1889.013 $\pm$ 0.419  $\chi^2$ /NDF: 7885972.7/27

Left Out: 1679.814 $\pm$ 0.281  $\chi^2$ /NDF: 522795.6/24

+ sign 1744.527 $\pm$ 0.233  $\chi^2$ /NDF: 8580824.6/52

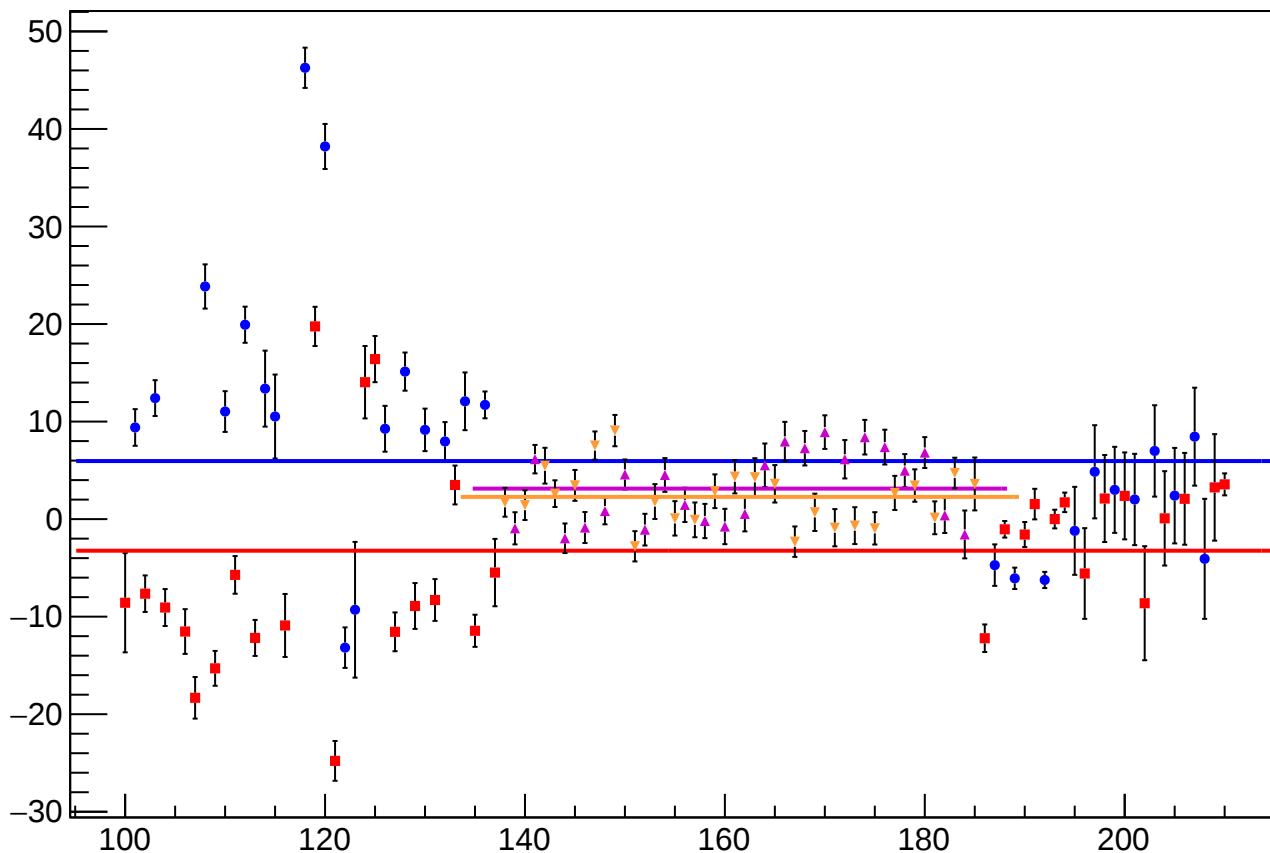
Right Out: 1736.293 $\pm$ 0.356  $\chi^2$ /NDF: 8284739.3/32

All: 1718.275 $\pm$ 0.161  $\chi^2$ /NDF: 17563980.6/1

- sign 1694.184 $\pm$ 0.223  $\chi^2$ /NDF: 8958836.8/55

Left In: 1666.819 $\pm$ 0.287  $\chi^2$ /NDF: 650990.8/22

# diff\_bpm0i07Y\_mean vs Slug



Right In:  $5.952 \pm 0.393$   $\chi^2/\text{NDF}$ : 1229.3/27

Left Out:  $2.280 \pm 0.338$   $\chi^2/\text{NDF}$ : 75.6/24

Right Out:  $-3.238 \pm 0.314$   $\chi^2/\text{NDF}$ : 691.6/32

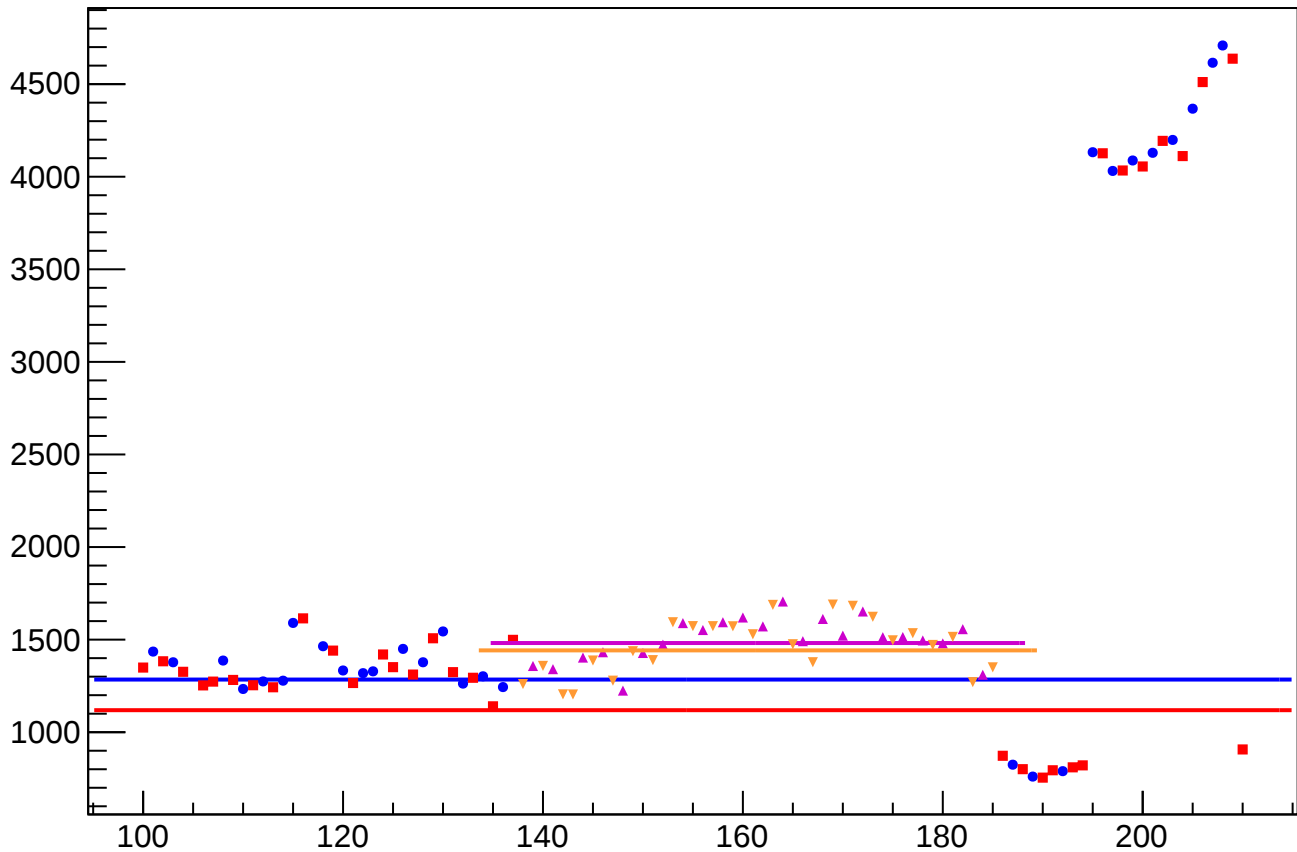
Left In:  $3.129 \pm 0.358$   $\chi^2/\text{NDF}$ : 103.4/22

+ sign  $3.845 \pm 0.256$   $\chi^2/\text{NDF}$ : 1355.1/52

All:  $1.510 \pm 0.174$   $\chi^2/\text{NDF}$ : 2482.5/108

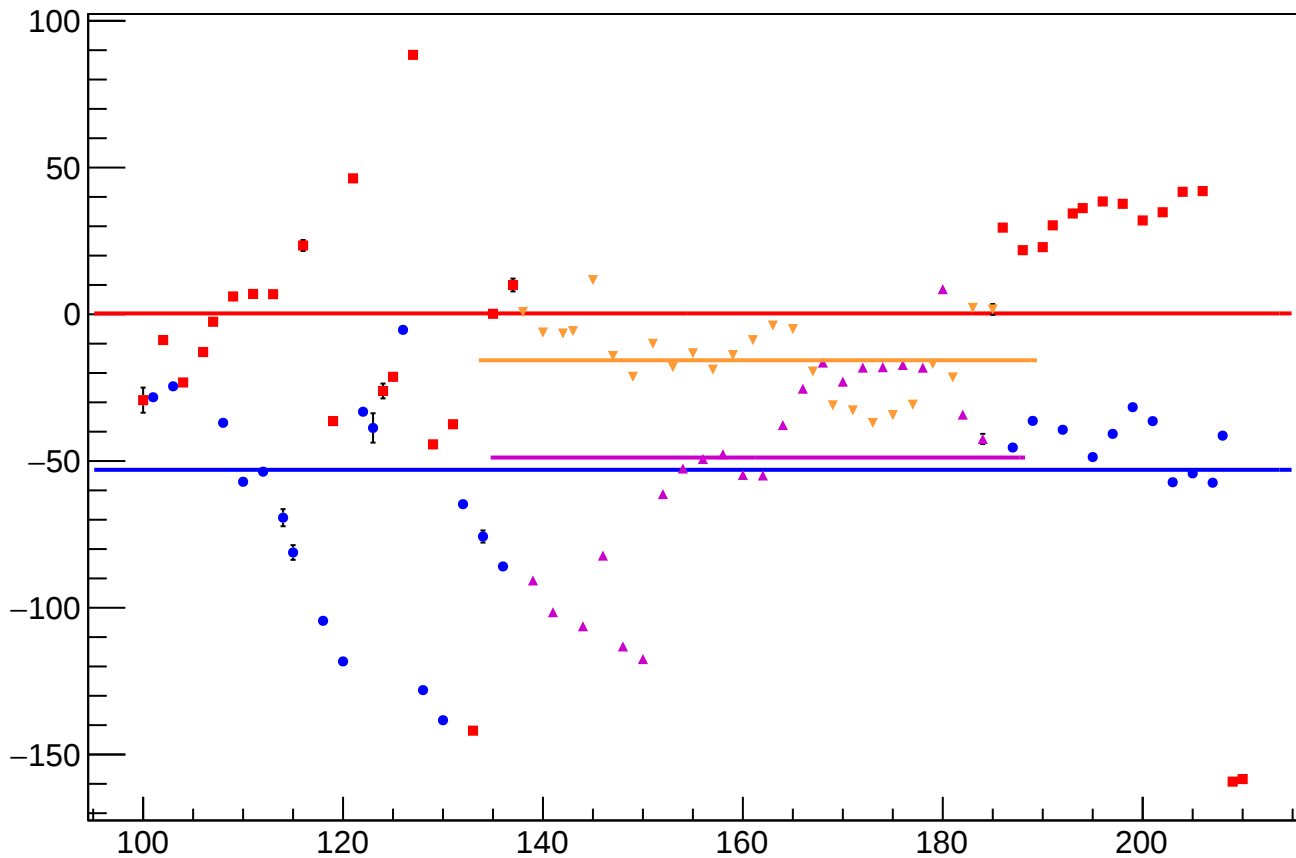
- sign  $-0.469 \pm 0.236$   $\chi^2/\text{NDF}$ : 974.0/55

# diff\_bpm0i07Y\_rms vs Slug



|                             |                                    |                         |                                    |
|-----------------------------|------------------------------------|-------------------------|------------------------------------|
| Right In: 1284.403+/-0.278  | $\chi^2/\text{NDF}$ : 7429595.9/27 | + sign 1374.830+/-0.181 | $\chi^2/\text{NDF}$ : 7985070.6/52 |
| Left Out: 1441.951+/-0.239  | $\chi^2/\text{NDF}$ : 370617.4/24  | All: 1321.734+/-0.123   | $\chi^2/\text{NDF}$ : 16699957.9/1 |
| Right Out: 1118.974+/-0.222 | $\chi^2/\text{NDF}$ : 7185395.6/32 | - sign 1276.749+/-0.167 | $\chi^2/\text{NDF}$ : 8556275.7/55 |
| Left In: 1481.695+/-0.253   | $\chi^2/\text{NDF}$ : 208470.6/22  |                         |                                    |

# diff\_bpm1i02X\_mean vs Slug



Right In:  $-52.990 \pm 0.194$   $\chi^2/\text{NDF}$ : 17268.5/27

Left Out:  $-15.666 \pm 0.212$   $\chi^2/\text{NDF}$ : 3518.1/24

Right Out:  $0.302 \pm 0.179$   $\chi^2/\text{NDF}$ : 135203.5/32

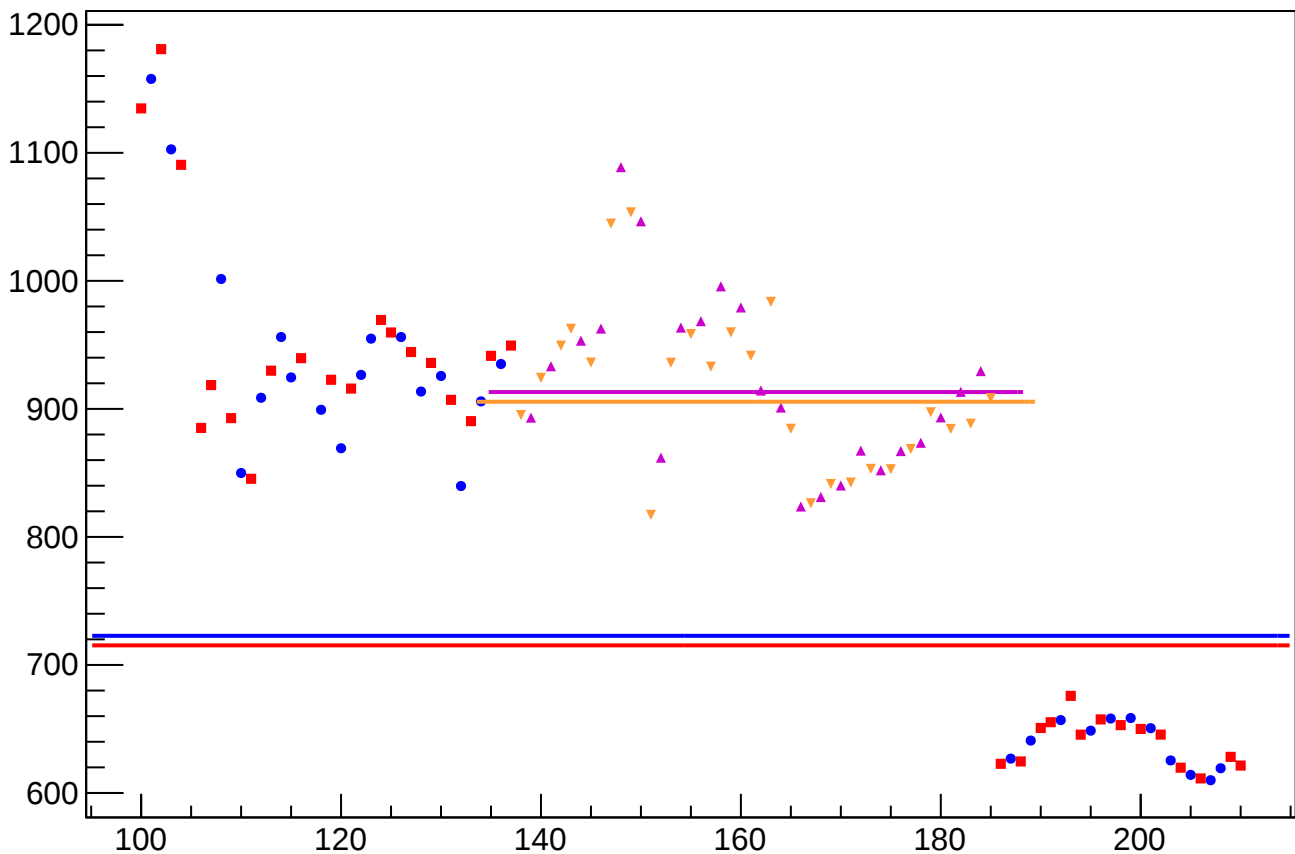
Left In:  $-48.812 \pm 0.220$   $\chi^2/\text{NDF}$ : 25260.8/22

+ sign  $-35.976 \pm 0.143$   $\chi^2/\text{NDF}$ : 37731.0/52

All:  $-27.369 \pm 0.100$   $\chi^2/\text{NDF}$ : 235290.4/108

- sign  $-19.248 \pm 0.139$   $\chi^2/\text{NDF}$ : 190499.4/55

# diff\_bpm1i02X\_rms vs Slug



Right In: 722.764 $\pm$ 0.137  $\chi^2$ /NDF: 1089869.9/27

Left Out: 905.578 $\pm$ 0.150  $\chi^2$ /NDF:162073.5/24

Right Out: 715.296 $\pm$ 0.126  $\chi^2$ /NDF: 1189599.3/32

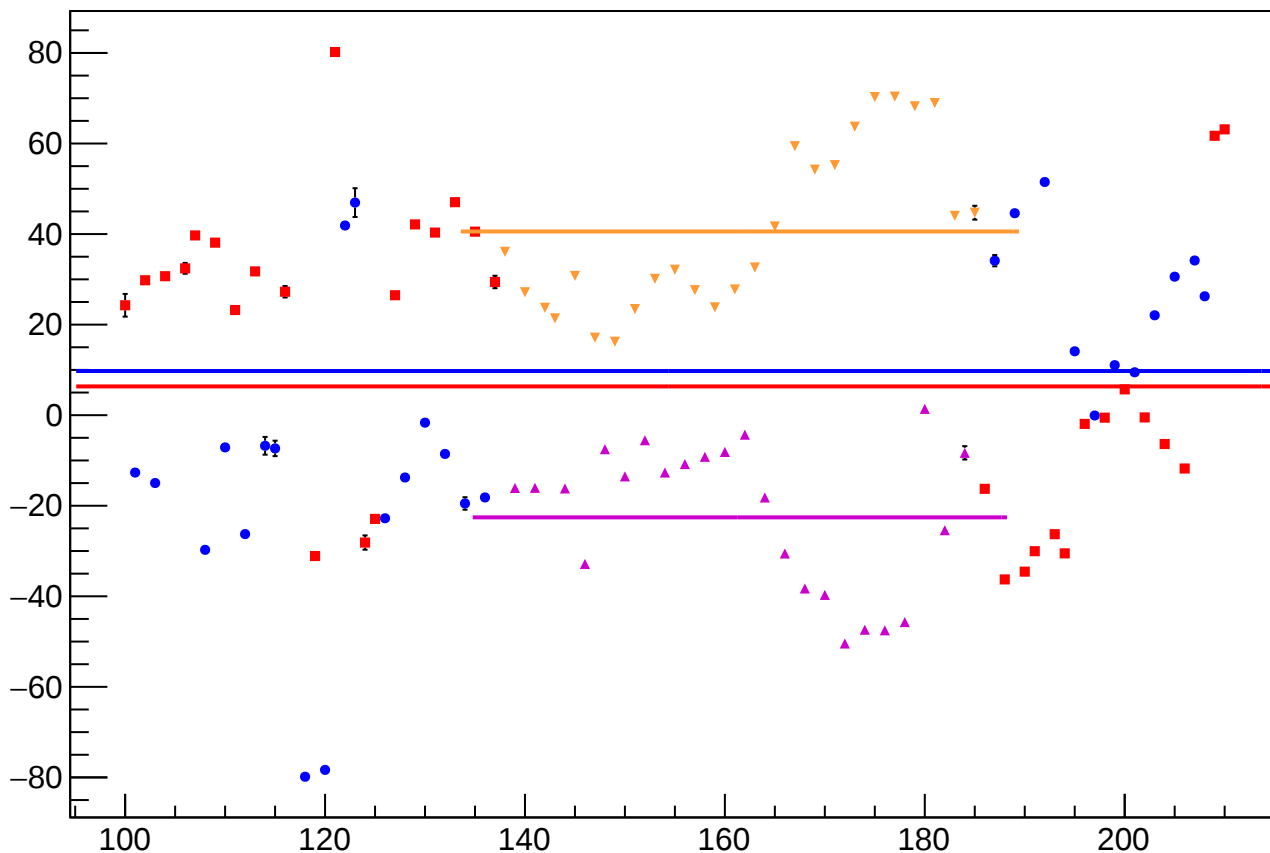
Left In: 913.165 $\pm$ 0.155  $\chi^2$ /NDF:174438.8/22

+ sign 806.098 $\pm$ 0.101  $\chi^2$ /NDF: 2064956.9/52

All: 799.903 $\pm$ 0.070  $\chi^2$ /NDF: 4411302.2/108

- sign 794.057 $\pm$ 0.098  $\chi^2$ /NDF: 2339029.6/55

# diff\_bpm1i02Y\_mean vs Slug



Right In: 9.756+/-0.142     $\chi^2/\text{NDF}$ : 41698.2/27

Left Out: 40.573+/-0.168     $\chi^2/\text{NDF}$ : 12079.0/24

Right Out: 6.352+/-0.132     $\chi^2/\text{NDF}$ : 62047.4/32

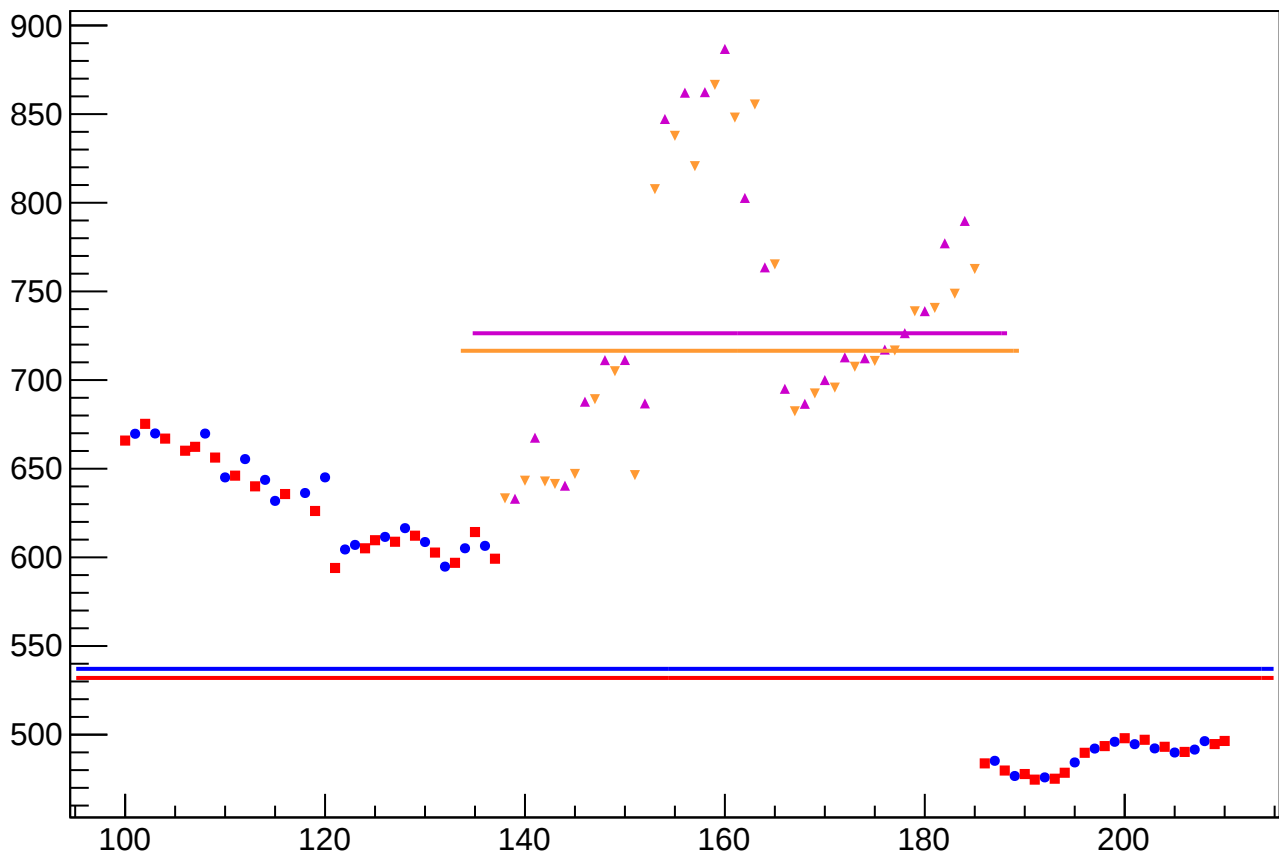
Left In: -22.565+/-0.175     $\chi^2/\text{NDF}$ : 8167.7/22

+ sign 22.639+/-0.109     $\chi^2/\text{NDF}$ : 73395.7/52

All: 8.873+/-0.076     $\chi^2/\text{NDF}$ : 192239.3/108

- sign -4.071+/-0.105     $\chi^2/\text{NDF}$ : 87621.9/55

# diff\_bpm1i02Y\_rms vs Slug



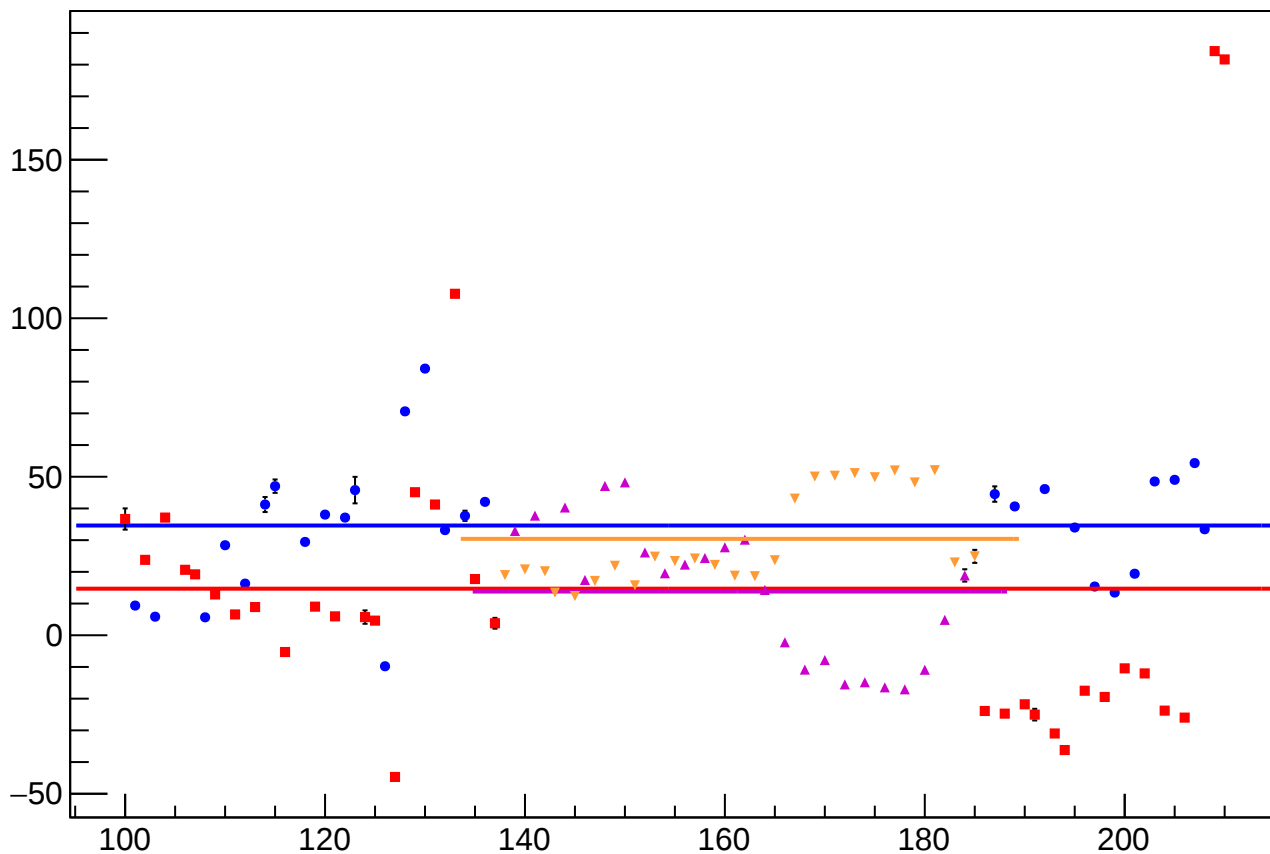
Right In: 537.119 $\pm$ 0.101  $\chi^2$ /NDF: 469046.2/27  
 Left Out: 716.515 $\pm$ 0.119  $\chi^2$ /NDF:342740.2/24  
 Right Out: 531.991 $\pm$ 0.093  $\chi^2$ /NDF: 525985.3/32  
 Left In: 726.390 $\pm$ 0.124  $\chi^2$ /NDF:289788.8/22

+ sign 612.119 $\pm$ 0.077  $\chi^2$ /NDF: 2141440.4/52

All: 606.936 $\pm$ 0.053  $\chi^2$ /NDF: 4539386.8/108

- sign 602.062 $\pm$ 0.074  $\chi^2$ /NDF: 2389094.6/55

# diff\_bpm1i04X\_mean vs Slug



Right In:  $34.616 \pm 0.224$   $\chi^2/\text{NDF}: 8284.2/27$

Left Out:  $30.408 \pm 0.237$   $\chi^2/\text{NDF}: 3808.0/24$

Right Out:  $14.693 \pm 0.211$   $\chi^2/\text{NDF}: 71839.9/32$

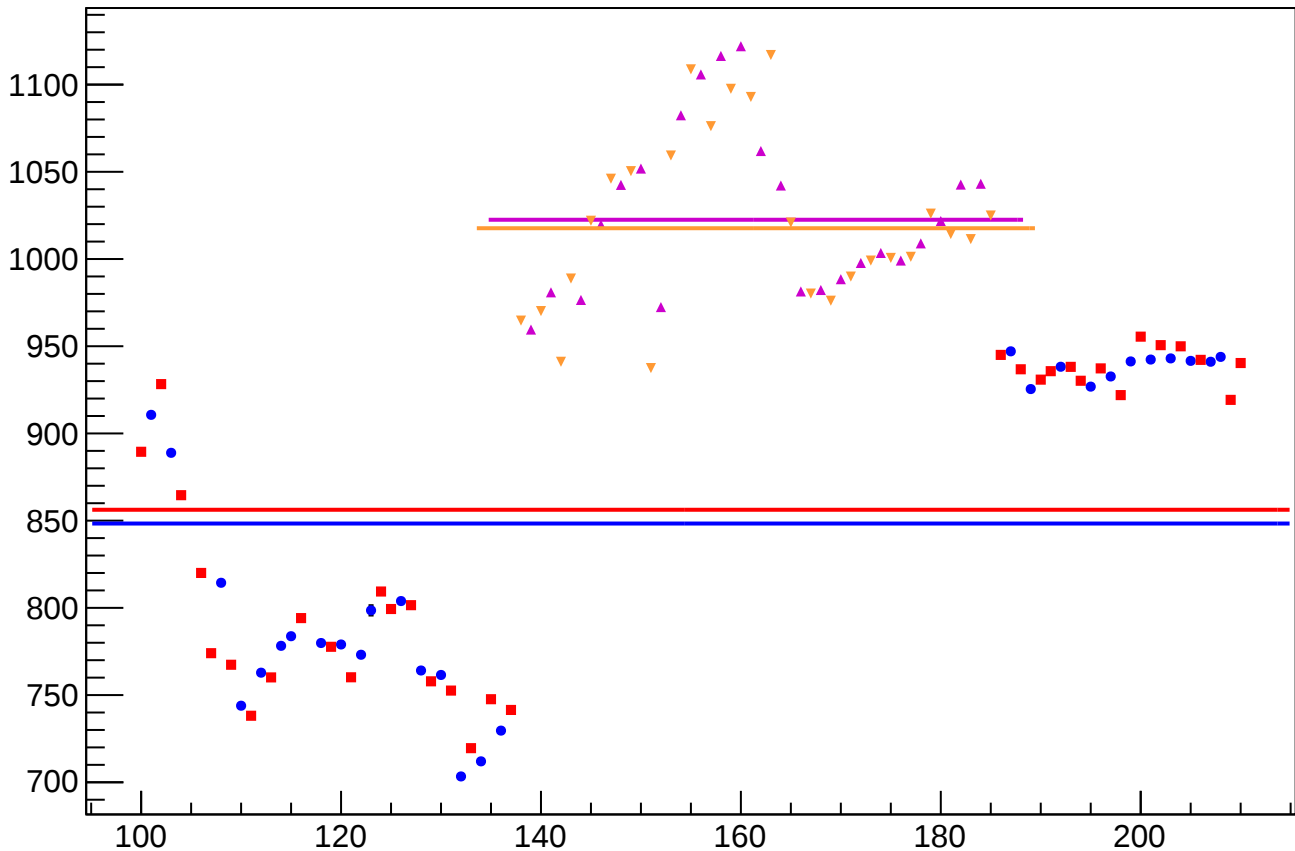
Left In:  $13.787 \pm 0.246$   $\chi^2/\text{NDF}: 7979.7/22$

+ sign  $32.633 \pm 0.163$   $\chi^2/\text{NDF}: 12258.3/52$

All:  $23.313 \pm 0.114$   $\chi^2/\text{NDF}: 98515.1/108$

- sign  $14.308 \pm 0.160$   $\chi^2/\text{NDF}: 79827.4/55$

# diff\_bpm1i04X\_rms vs Slug



Right In: 848.350 $\pm$ 0.159  $\chi^2$ /NDF: 323533.9/27

Left Out: 1017.653 $\pm$ 0.168  $\chi^2$ /NDF:83612.5/24

Right Out: 856.243 $\pm$ 0.149  $\chi^2$ /NDF: 335204.2/32

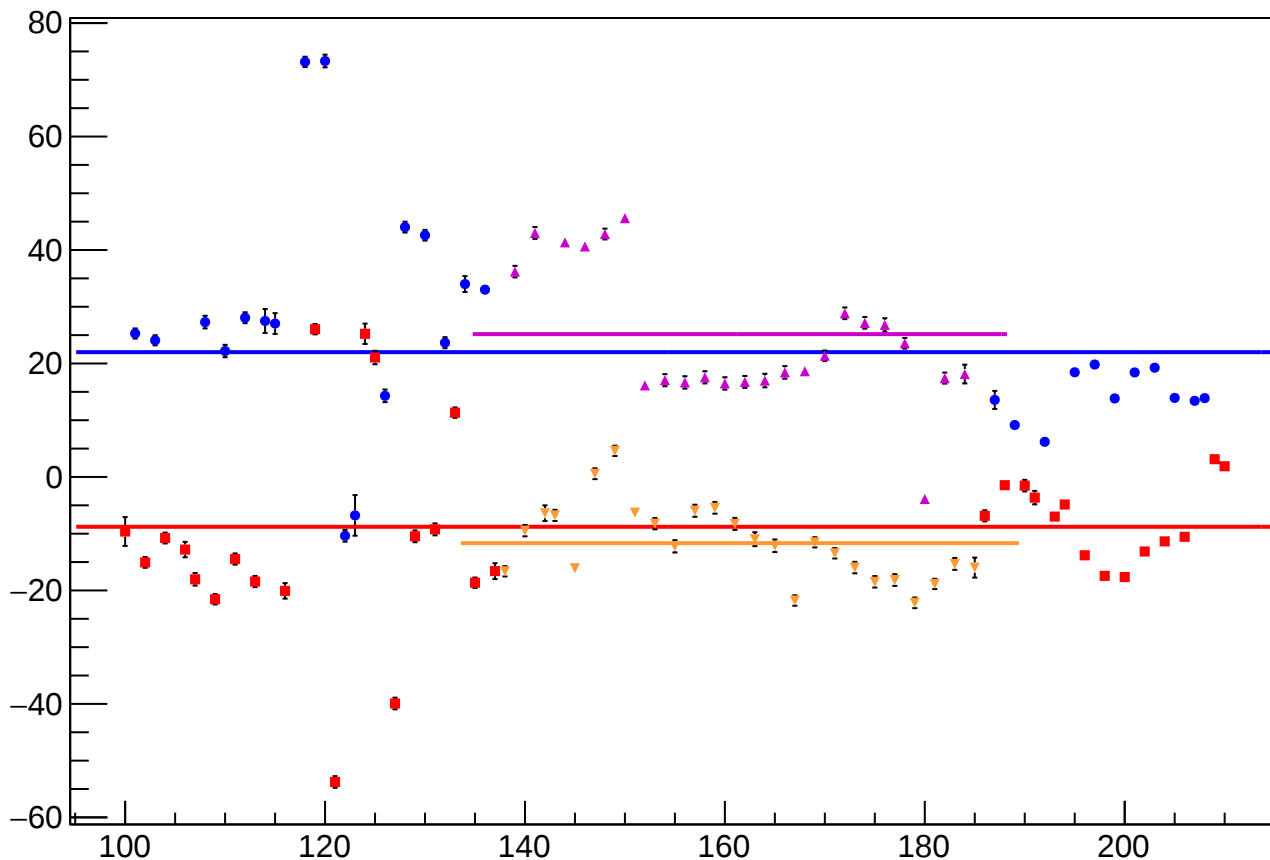
Left In: 1022.511 $\pm$ 0.174  $\chi^2$ /NDF:69635.5/22

+ sign 928.150 $\pm$ 0.115  $\chi^2$ /NDF: 944887.1/52

All: 927.491 $\pm$ 0.081  $\chi^2$ /NDF: 1876160.4/108

- sign 926.855 $\pm$ 0.113  $\chi^2$ /NDF: 931209.0/55

# diff\_bpm1i04Y\_mean vs Slug



Right In:  $21.999 \pm 0.162$   $\chi^2/\text{NDF}$ : 9420.9/27

Left Out:  $-11.664 \pm 0.200$   $\chi^2/\text{NDF}$ : 1147.4/24

Right Out:  $-8.779 \pm 0.150$   $\chi^2/\text{NDF}$ : 7946.1/32

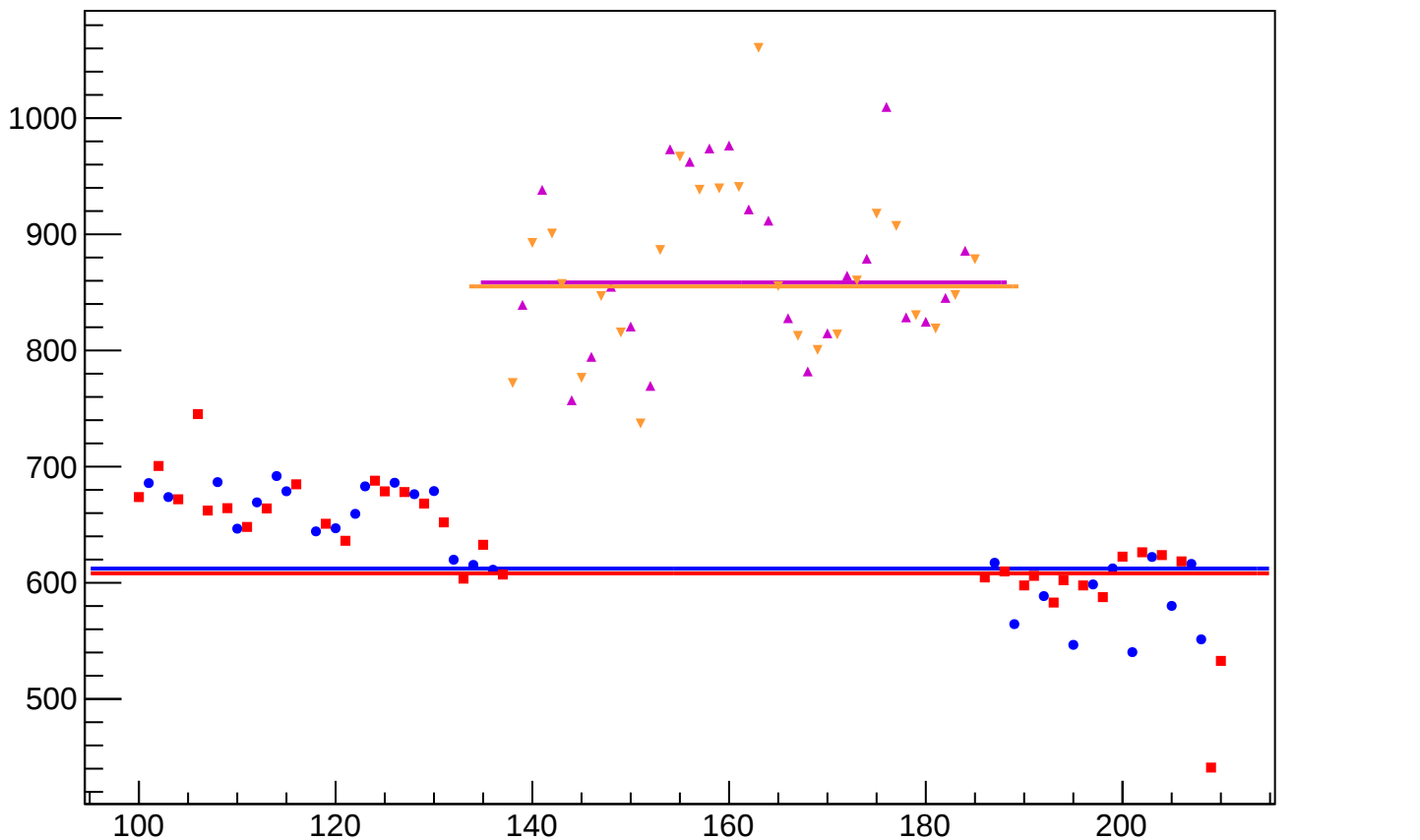
Left In:  $25.174 \pm 0.207$   $\chi^2/\text{NDF}$ : 3747.1/22

+ sign  $8.706 \pm 0.126$   $\chi^2/\text{NDF}$ : 27662.2/52

All:  $5.711 \pm 0.087$   $\chi^2/\text{NDF}$ : 58028.0/108

- sign  $2.911 \pm 0.122$   $\chi^2/\text{NDF}$ : 29270.2/55

# diff\_bpm1i04Y\_rms vs Slug



Right In: 612.243+/-0.114  $\chi^2/\text{NDF}$ : 163829.9/27

Left Out: 855.131+/-0.142  $\chi^2/\text{NDF}$ : 233746.7/24

Right Out: 608.170+/-0.106  $\chi^2/\text{NDF}$ : 359452.8/32

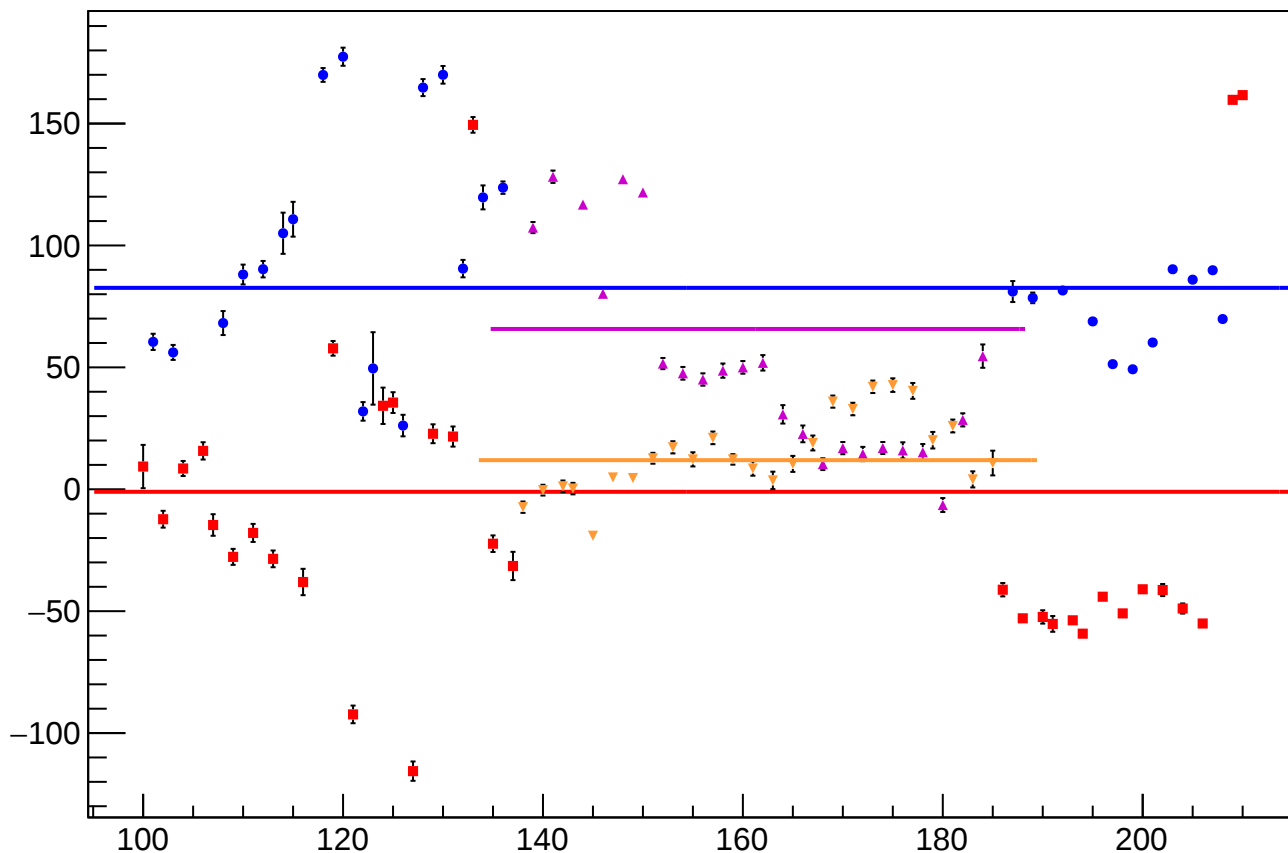
Left In: 858.563+/-0.147  $\chi^2/\text{NDF}$ : 239019.8/22

+ sign 708.160+/-0.089  $\chi^2/\text{NDF}$ : 2177412.7/52

All: 701.038+/-0.062  $\chi^2/\text{NDF}$ : 4700187.3/108

- sign 694.381+/-0.086  $\chi^2/\text{NDF}$ : 2510385.8/55

# diff\_bpm1i06X\_mean vs Slug



Right In: 82.613 $\pm$ 0.493  $\chi^2$ /NDF: 4444.7/27

Left Out: 11.938 $\pm$ 0.505  $\chi^2$ /NDF: 976.6/24

Right Out: -1.038 $\pm$ 0.449  $\chi^2$ /NDF: 33625.2/32

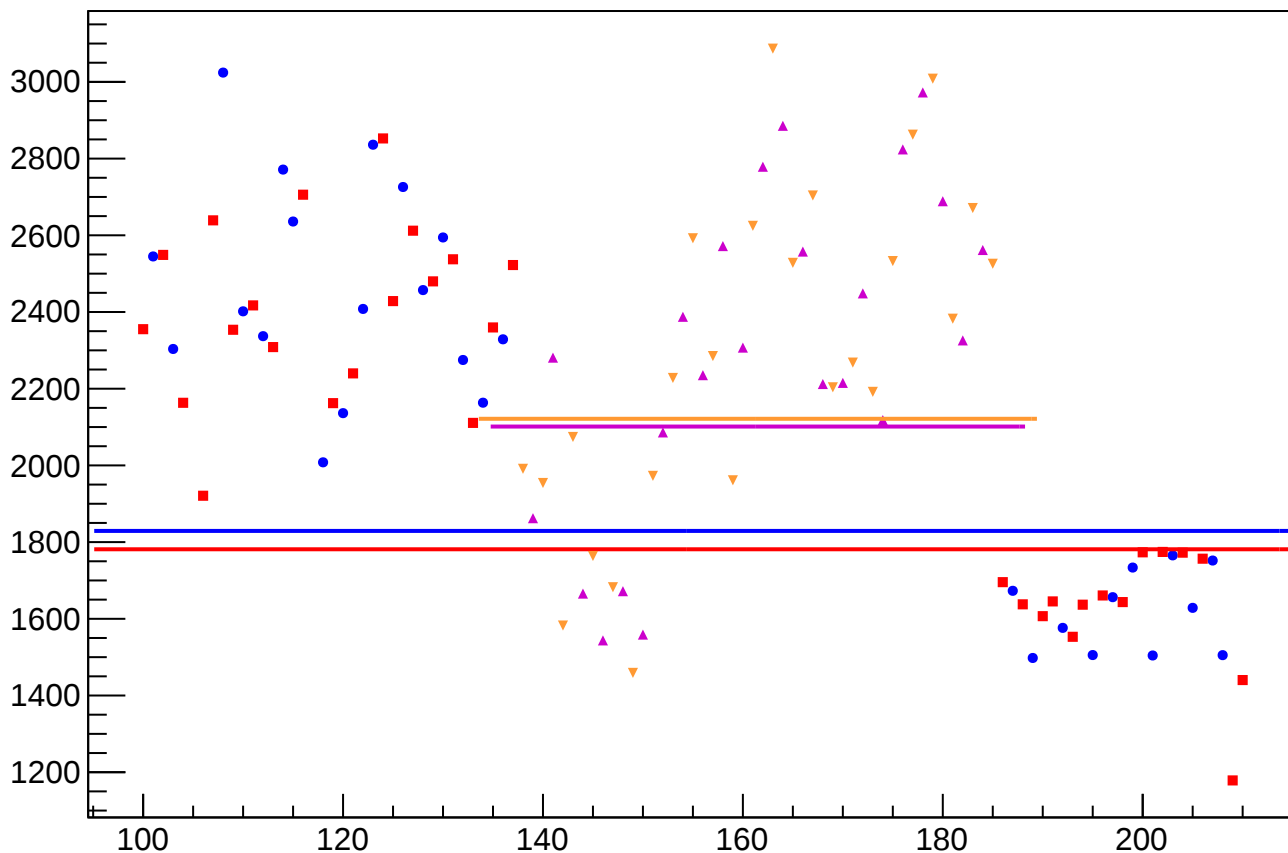
Left In: 65.752 $\pm$ 0.518  $\chi^2$ /NDF: 7335.8/22

+ sign 48.138 $\pm$ 0.353  $\chi^2$ /NDF: 15440.9/52

All: 37.460 $\pm$ 0.244  $\chi^2$ /NDF: 67668.7/108

- sign 27.606 $\pm$ 0.339  $\chi^2$ /NDF: 50467.6/55

# diff\_bpm1i06X\_rms vs Slug



Right In: 1829.172 $\pm$ 0.349  $\chi^2$ /NDF: 1167044.9/27

Left Out: 2121.567 $\pm$ 0.357  $\chi^2$ /NDF:1387847.6/24

Right Out: 1781.303 $\pm$ 0.317  $\chi^2$ /NDF: 1469391.1/32

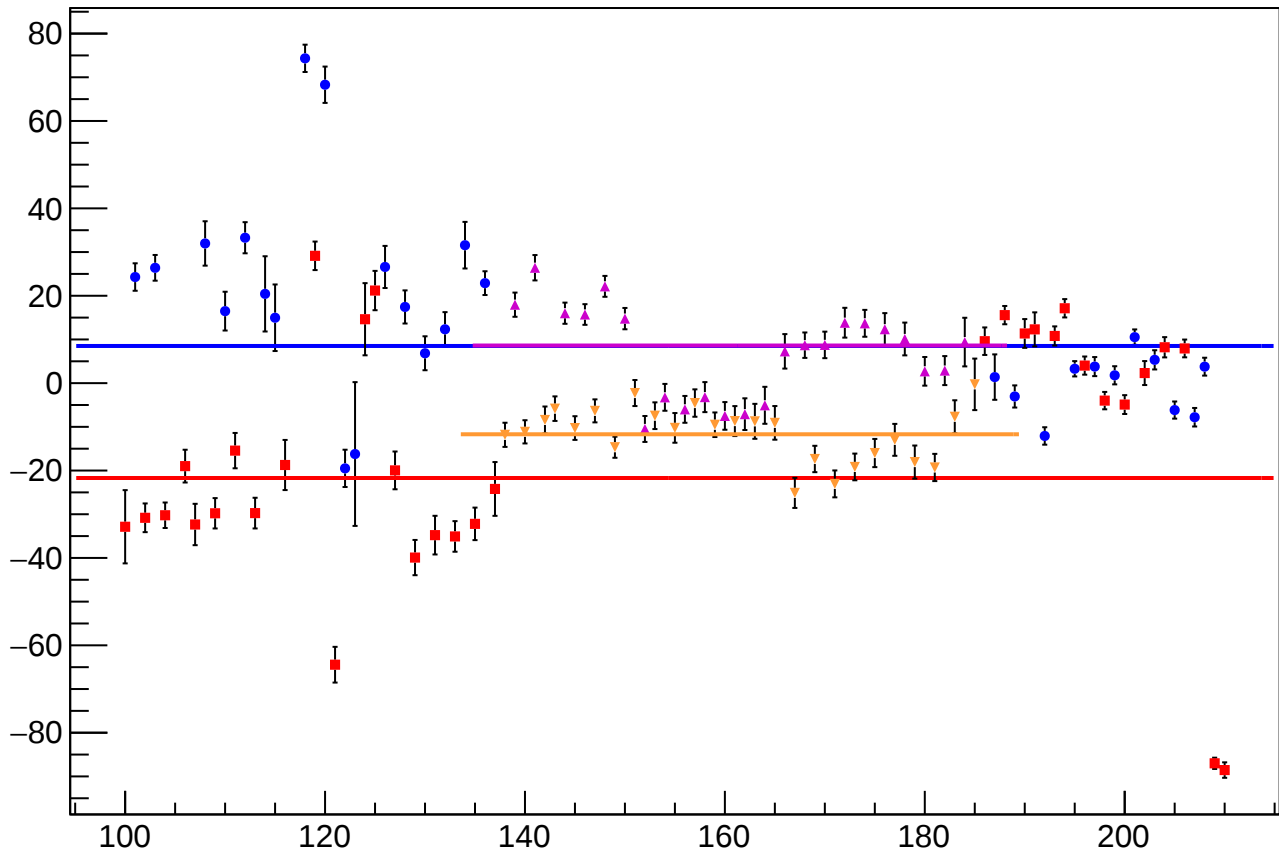
Left In: 2101.325 $\pm$ 0.366  $\chi^2$ /NDF:1360518.3/22

+ sign 1971.800 $\pm$ 0.250  $\chi^2$ /NDF: 2897885.8/52

All: 1944.106 $\pm$ 0.173  $\chi^2$ /NDF: 6187990.4/10

- sign 1918.551 $\pm$ 0.240  $\chi^2$ /NDF: 3266425.4/55

# diff\_bpm1i06Y\_mean vs Slug



Right In:  $8.508 \pm 0.534$   $\chi^2/\text{NDF}$ : 1177.9/27

Left Out:  $-11.700 \pm 0.625$   $\chi^2/\text{NDF}$ : 85.0/24

Right Out:  $-21.706 \pm 0.484$   $\chi^2/\text{NDF}$ : 6450.2/32

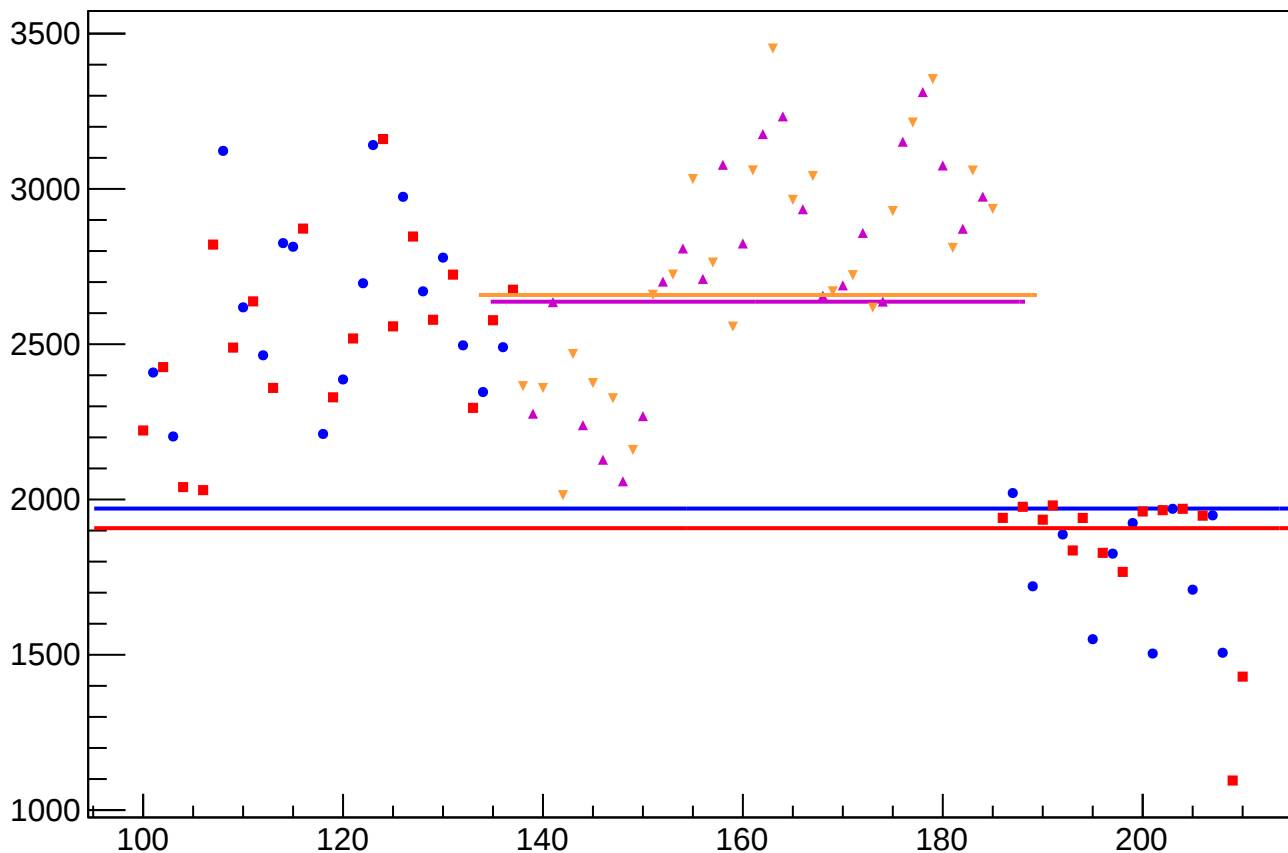
Left In:  $8.606 \pm 0.642$   $\chi^2/\text{NDF}$ : 264.2/22

+ sign  $-0.009 \pm 0.406$   $\chi^2/\text{NDF}$ : 1866.8/52

All:  $-5.624 \pm 0.280$   $\chi^2/\text{NDF}$ : 10366.8/108

- sign  $-10.713 \pm 0.387$   $\chi^2/\text{NDF}$ : 8135.5/55

# diff\_bpm1i06Y\_rms vs Slug



Right In: 1970.839+/-0.377  $\chi^2/\text{NDF}$ : 1165720.8/27

Left Out: 2658.486+/-0.442  $\chi^2/\text{NDF}$ : 618133.8/24

Right Out: 1907.707+/-0.342  $\chi^2/\text{NDF}$ : 1812164.7/32

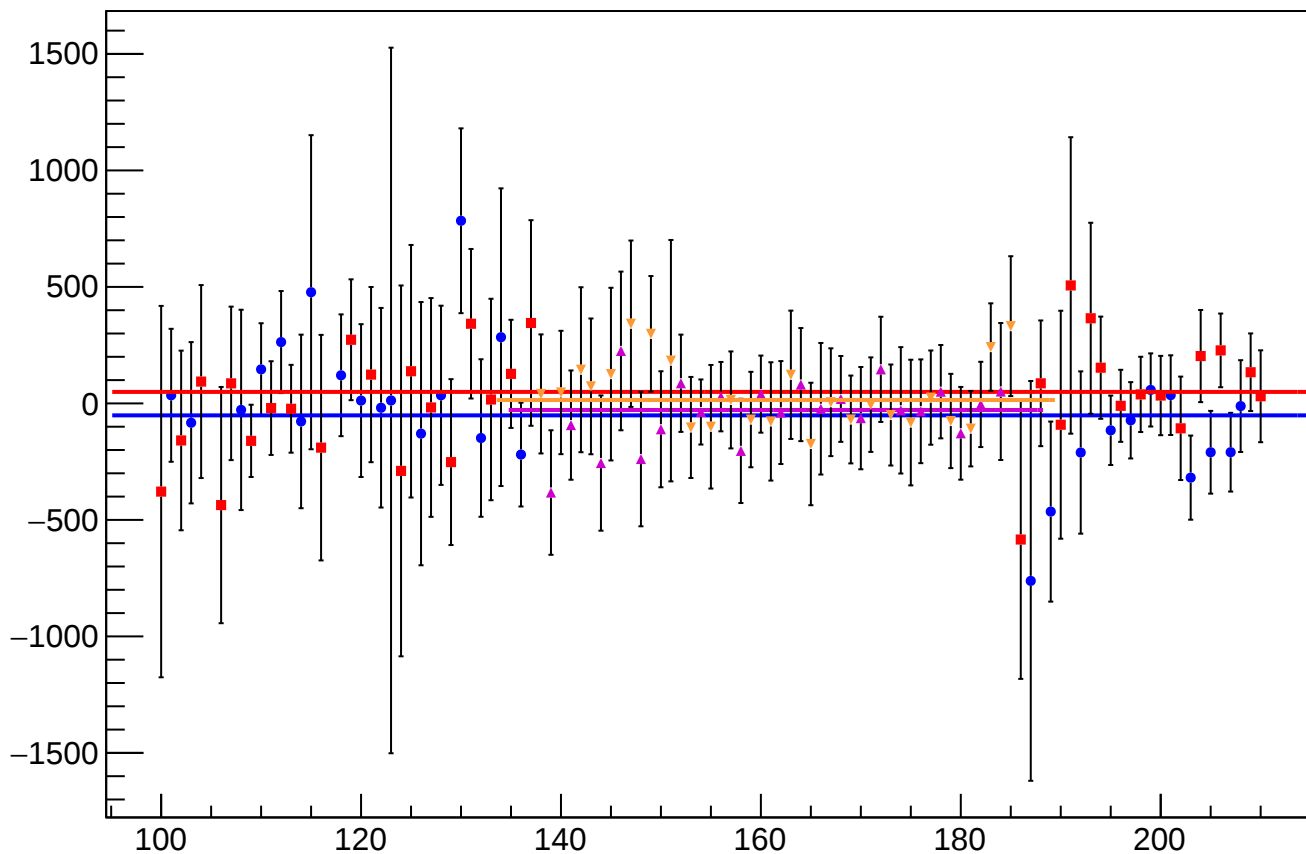
Left In: 2636.885+/-0.454  $\chi^2/\text{NDF}$ : 652894.5/22

+ sign 2260.674+/-0.287  $\chi^2/\text{NDF}$ : 3182464.9/52

All: 2214.244+/-0.198  $\chi^2/\text{NDF}$ : 7342088.1/10

- sign 2172.159+/-0.273  $\chi^2/\text{NDF}$ : 4109770.1/55

asym\_bcm\_an\_us\_bcm\_an\_ds\_agg\_avg\_mean vs Slug



Right In:  $-51.361 \pm 46.836$   $\chi^2/\text{NDF}$ : 16.6/27

Left Out:  $14.520 \pm 47.528$   $\chi^2/\text{NDF}$ : 7.8/24

Right Out:  $49.360 \pm 44.005$   $\chi^2/\text{NDF}$ : 12.4/32

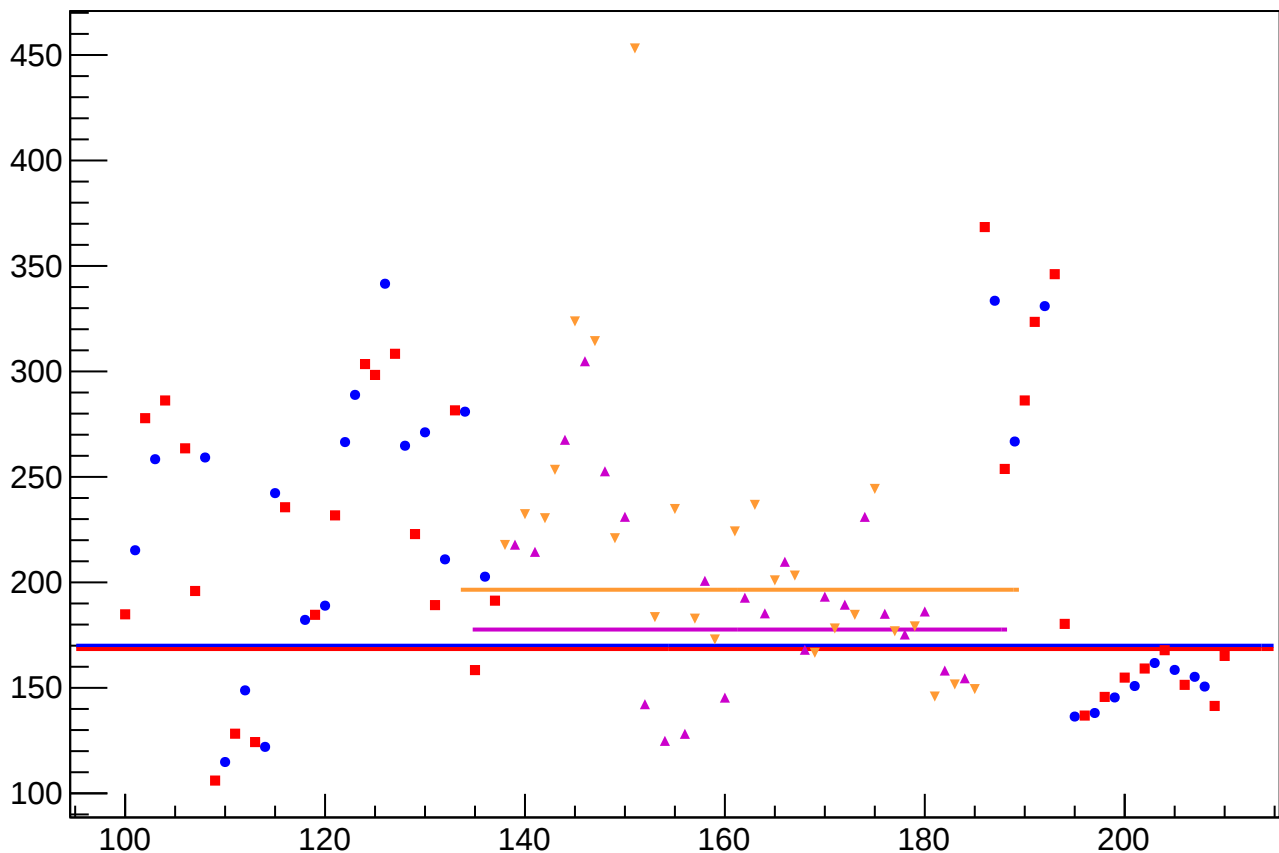
Left In:  $-28.310 \pm 44.638$   $\chi^2/\text{NDF}$ : 6.3/22

+ sign  $-18.904 \pm 33.360$   $\chi^2/\text{NDF}$ : 25.3/52

All:  $-2.976 \pm 22.841$   $\chi^2/\text{NDF}$ : 45.9/108

- sign  $11.080 \pm 31.338$   $\chi^2/\text{NDF}$ : 20.2/55

asym\_bcm\_an\_us\_bcm\_an\_ds\_agg\_avg\_rms vs Slug



Right In: 169.983 $\pm$ 0.033  $\chi^2/\text{NDF}$ : 2114957.1/27

Left Out: 196.514 $\pm$ 0.034  $\chi^2/\text{NDF}$ : 1789504.4/24

Right Out: 168.402 $\pm$ 0.031  $\chi^2/\text{NDF}$ : 2831633.6/32

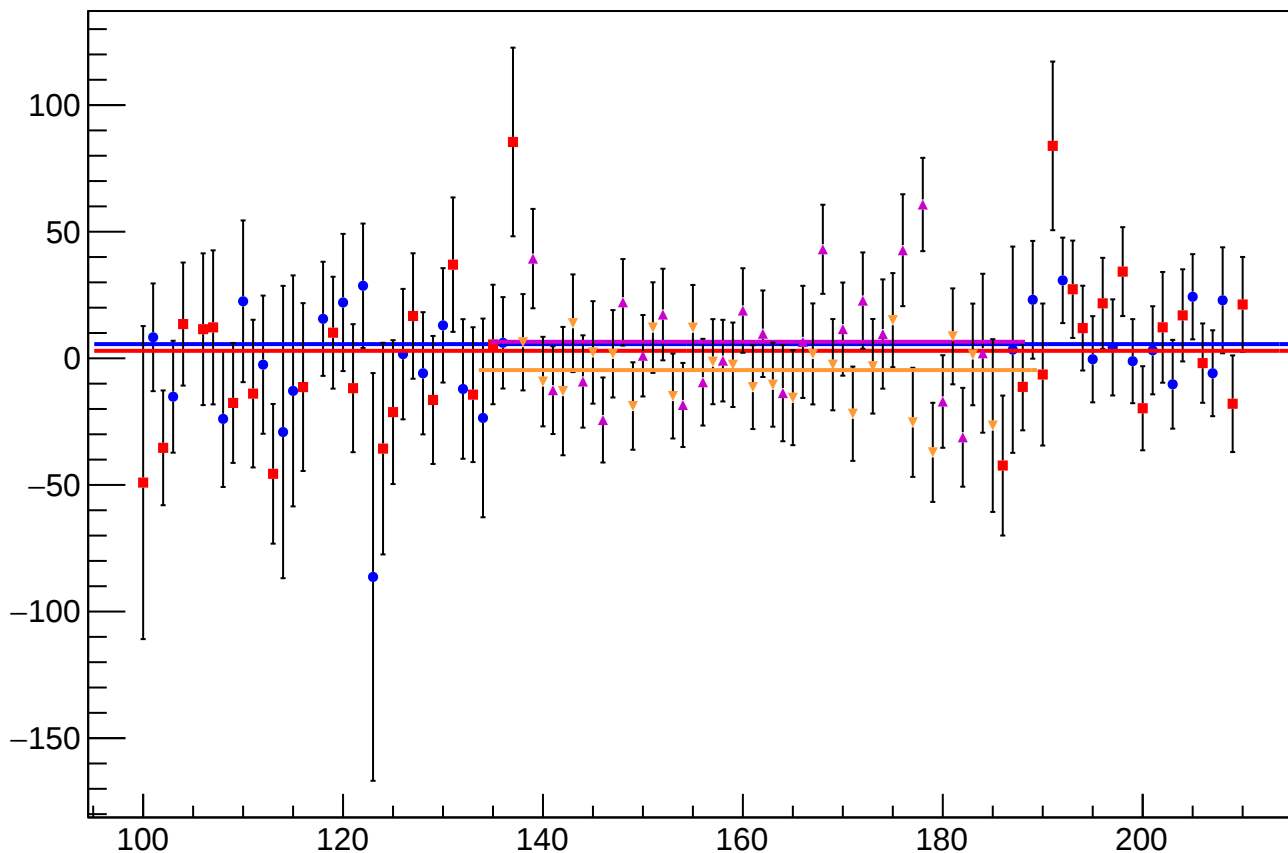
Left In: 177.643 $\pm$ 0.032  $\chi^2/\text{NDF}$ : 1630664.5/22

+ sign 183.054 $\pm$ 0.024  $\chi^2/\text{NDF}$ : 4220650.4/52

All: 177.690 $\pm$ 0.016  $\chi^2/\text{NDF}$ : 8823739.2/108

- sign 172.957 $\pm$ 0.022  $\chi^2/\text{NDF}$ : 4505764.6/55

asym\_bcm\_an\_avg\_bcm\_dg\_ds\_agg\_dd\_mean vs Slug



Right In:  $5.606 \pm 4.234$   $\chi^2/\text{NDF}$ : 13.4/27

Left Out:  $-4.646 \pm 3.728$   $\chi^2/\text{NDF}$ : 12.1/24

Right Out:  $2.964 \pm 3.980$   $\chi^2/\text{NDF}$ : 38.6/32

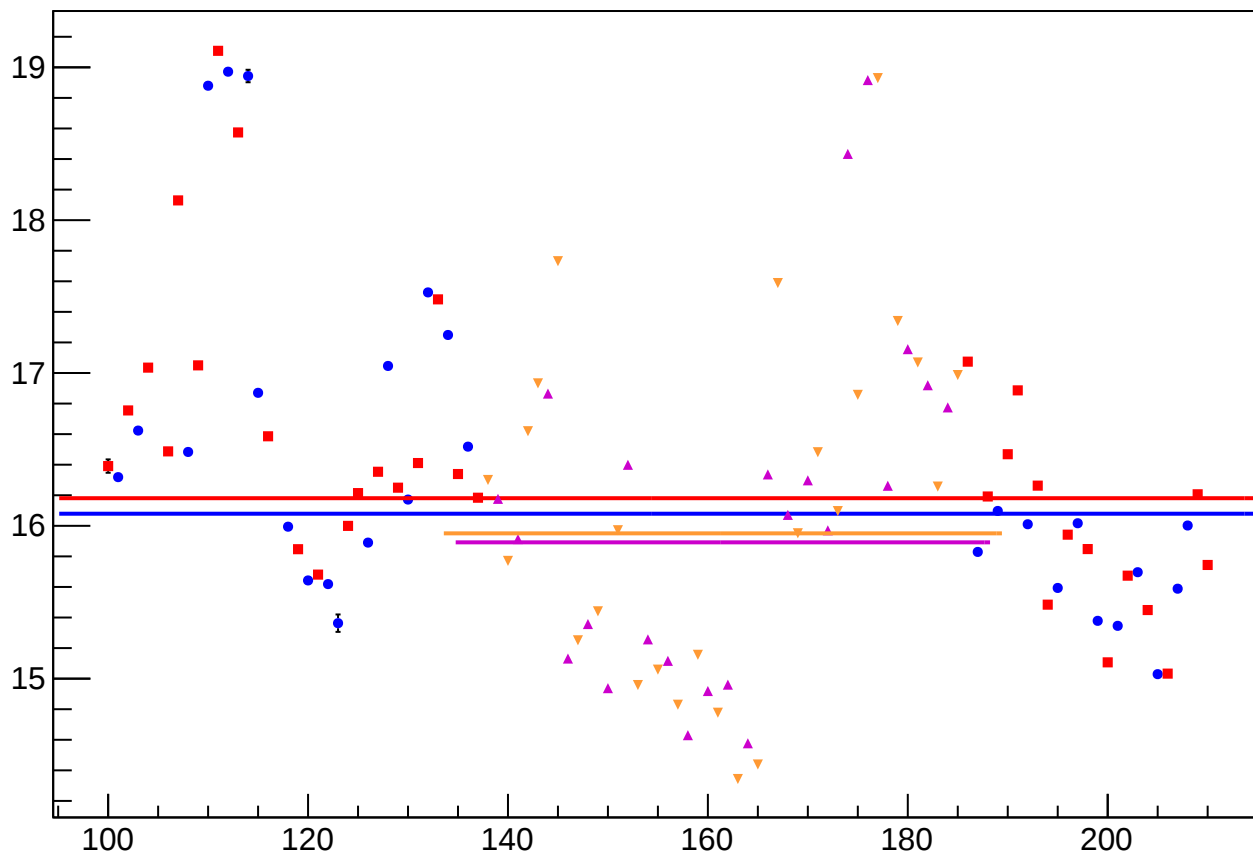
Left In:  $6.526 \pm 3.828$   $\chi^2/\text{NDF}$ : 36.4/22

+ sign  $-0.169 \pm 2.798$   $\chi^2/\text{NDF}$ : 28.7/52

All:  $2.358 \pm 1.964$   $\chi^2/\text{NDF}$ : 105.8/108

- sign  $4.815 \pm 2.759$   $\chi^2/\text{NDF}$ : 75.4/55

asym\_bcm\_an\_avg\_bcm\_dg\_ds\_agg\_dd\_rms vs Slug



Right In: 16.079 $\pm$ 0.003  $\chi^2$ /NDF: 77866.7/27

Left Out: 15.951 $\pm$ 0.003  $\chi^2$ /NDF:173458.5/24

Right Out: 16.181 $\pm$ 0.003  $\chi^2$ /NDF: 89079.3/32

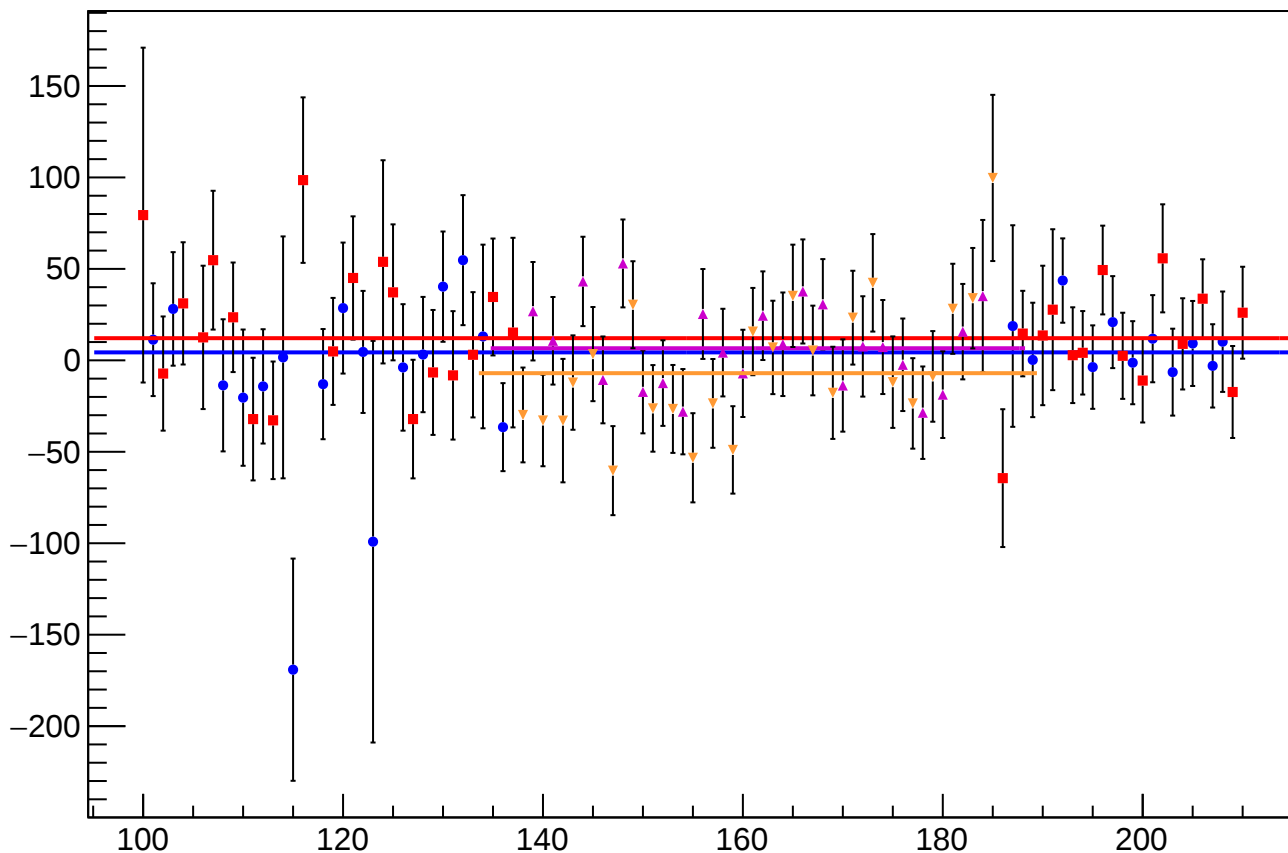
Left In: 15.892 $\pm$ 0.003  $\chi^2$ /NDF:147093.3/22

+ sign 16.007 $\pm$ 0.002  $\chi^2$ /NDF: 252362.9/52

All: 16.019 $\pm$ 0.001  $\chi^2$ /NDF: 494083.3/108

- sign 16.031 $\pm$ 0.002  $\chi^2$ /NDF: 241646.7/55

asym\_bcm\_an\_avg\_bcm\_dg\_us\_agg\_dd\_mean vs Slug



Right In:  $4.352 \pm 5.667$   $\chi^2/\text{NDF}: 22.0/27$

Left Out:  $-7.017 \pm 5.121$   $\chi^2/\text{NDF}: 37.4/24$

Right Out:  $12.115 \pm 5.317$   $\chi^2/\text{NDF}: 28.0/32$

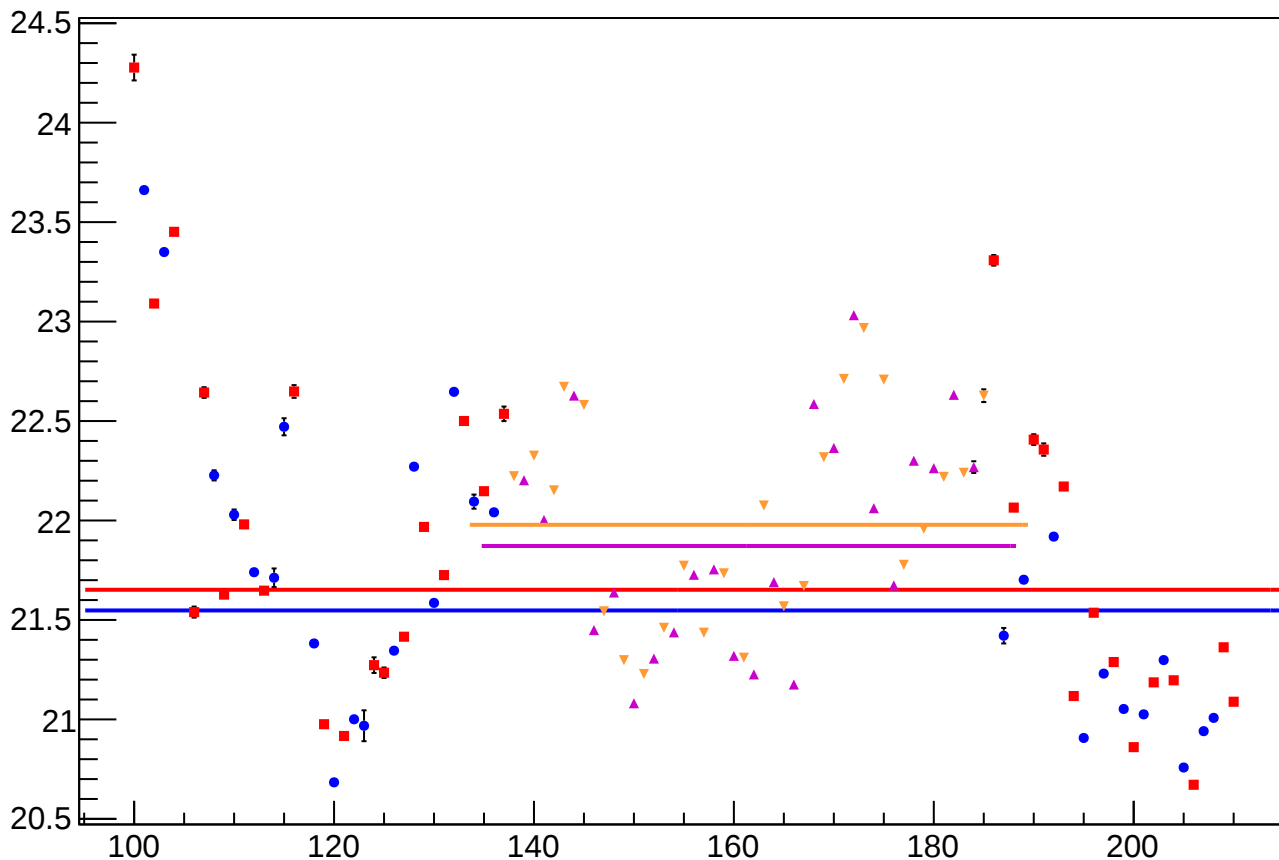
Left In:  $6.611 \pm 5.251$   $\chi^2/\text{NDF}: 19.1/22$

+ sign  $-1.907 \pm 3.800$   $\chi^2/\text{NDF}: 61.7/52$

All:  $3.805 \pm 2.664$   $\chi^2/\text{NDF}: 113.8/108$

- sign  $9.329 \pm 3.736$   $\chi^2/\text{NDF}: 47.7/55$

asym\_bcm\_an\_avg\_bcm\_dg\_us\_agg\_dd\_rms vs Slug



Right In: 21.548 $\pm$ 0.004  $\chi^2$ /NDF: 32776.2/27

Left Out: 21.978 $\pm$ 0.004  $\chi^2$ /NDF: 19430.2/24

Right Out: 21.652 $\pm$ 0.004  $\chi^2$ /NDF: 36329.4/32

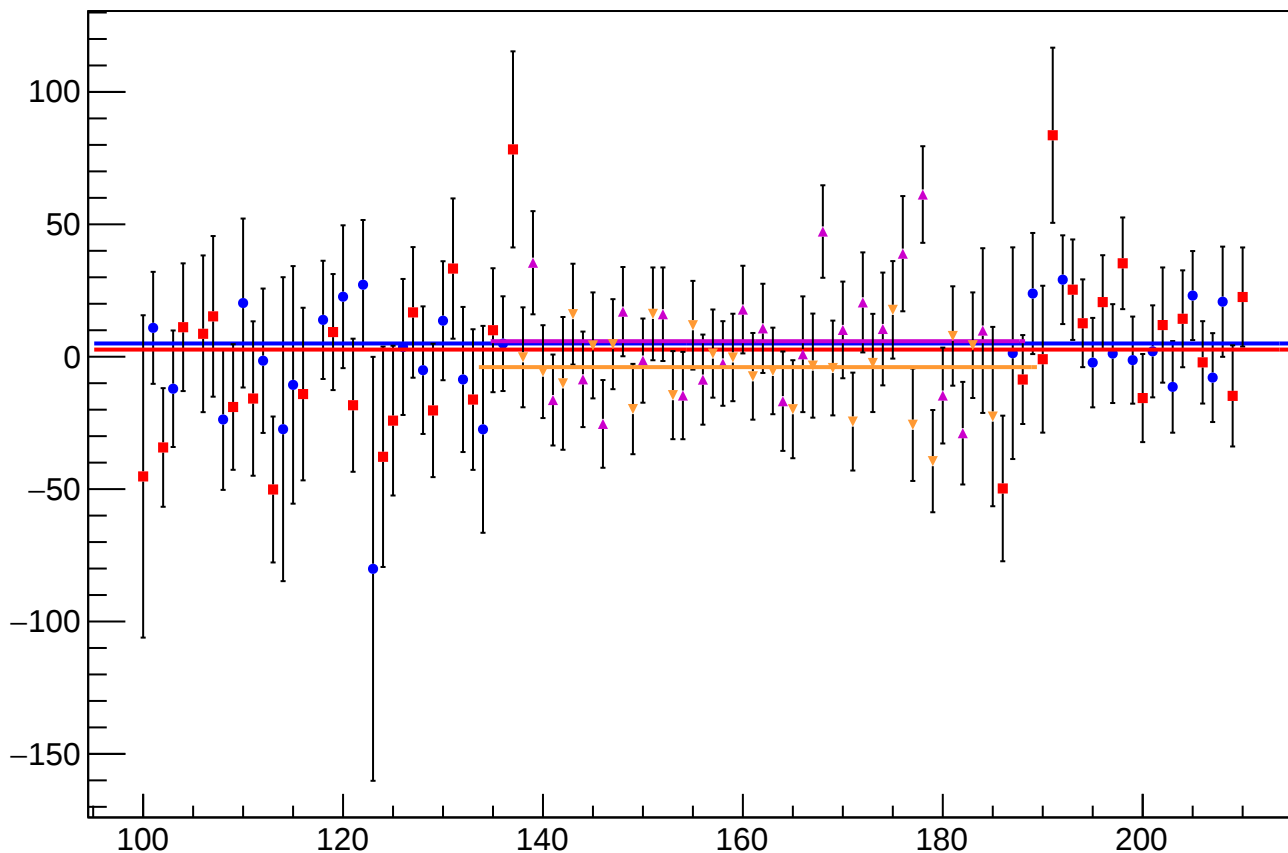
Left In: 21.872 $\pm$ 0.004  $\chi^2$ /NDF: 20524.9/22

+ sign 21.785 $\pm$ 0.003  $\chi^2$ /NDF: 58564.4/52

All: 21.774 $\pm$ 0.002  $\chi^2$ /NDF: 117185.7/108

- sign 21.763 $\pm$ 0.003  $\chi^2$ /NDF: 58588.3/55

asym\_bcm\_an\_us\_ds3\_avg\_bcm\_dg\_ds\_agg\_dd\_mean vs Slug



Right In:  $5.002 \pm 4.203$   $\chi^2/\text{NDF}$ : 12.8/27

Left Out:  $-3.927 \pm 3.688$   $\chi^2/\text{NDF}$ : 14.0/24

Right Out:  $2.695 \pm 3.953$   $\chi^2/\text{NDF}$ : 39.1/32

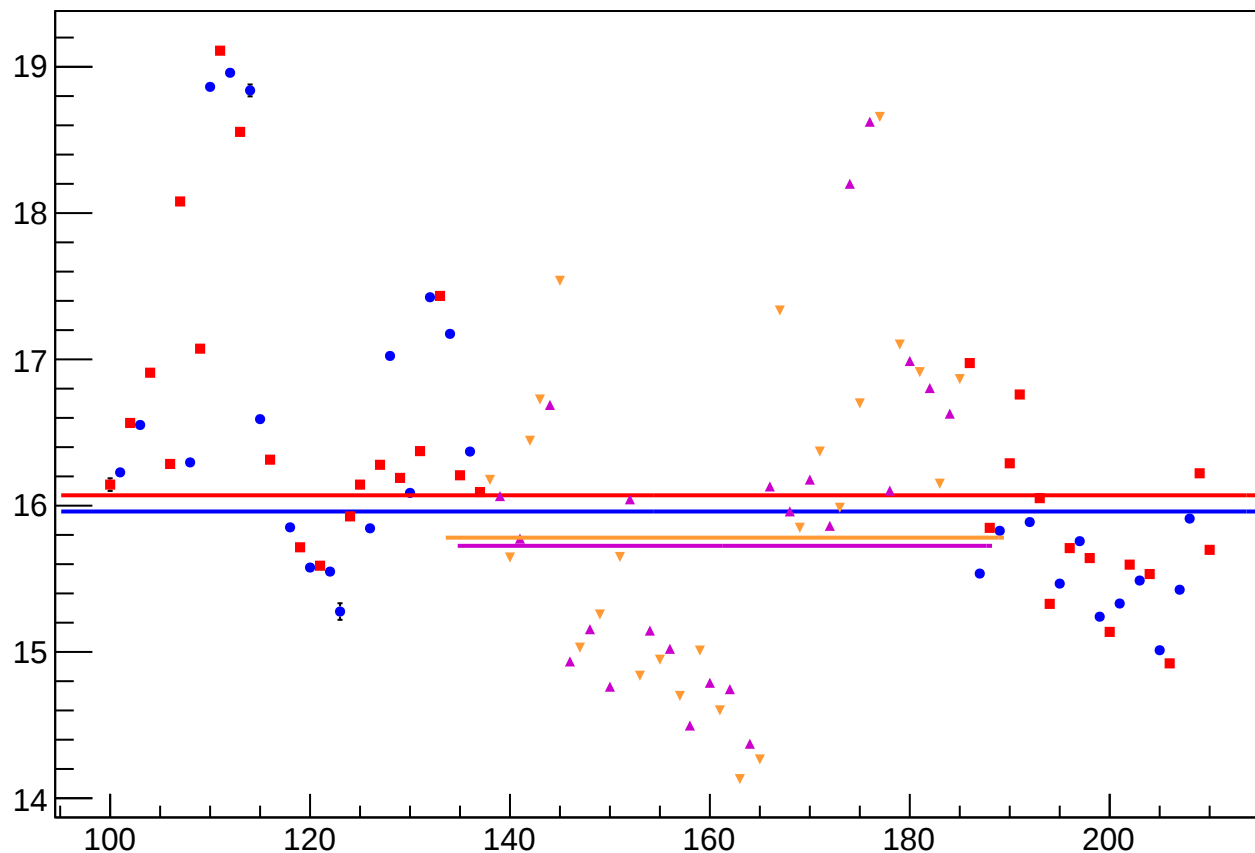
Left In:  $5.861 \pm 3.787$   $\chi^2/\text{NDF}$ : 36.2/22

+ sign  $-0.043 \pm 2.772$   $\chi^2/\text{NDF}$ : 29.3/52

All:  $2.181 \pm 1.947$   $\chi^2/\text{NDF}$ : 106.1/108

- sign  $4.346 \pm 2.735$   $\chi^2/\text{NDF}$ : 75.6/55

asym\_bcm\_an\_us\_ds3\_avg\_bcm\_dg\_ds\_agg\_dd\_rms vs Slug



Right In: 15.960 $\pm$ 0.003  $\chi^2$ /NDF: 80741.8/27

Left Out: 15.781 $\pm$ 0.003  $\chi^2$ /NDF: 172894.3/24

Right Out: 16.071 $\pm$ 0.003  $\chi^2$ /NDF: 91403.7/32

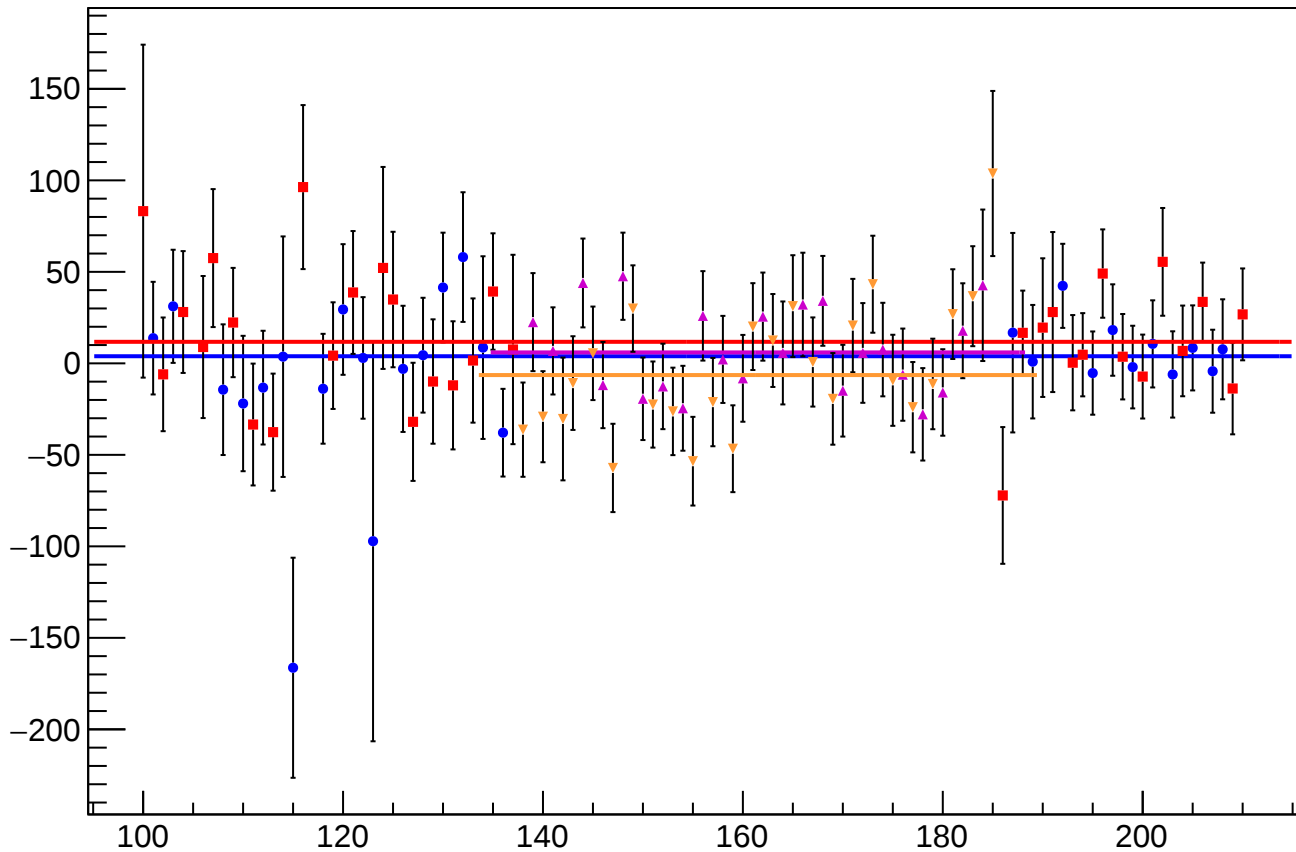
Left In: 15.725 $\pm$ 0.003  $\chi^2$ /NDF: 145830.9/22

+ sign 15.859 $\pm$ 0.002  $\chi^2$ /NDF: 255679.8/52

All: 15.875 $\pm$ 0.001  $\chi^2$ /NDF: 501007.1/108

- sign 15.891 $\pm$ 0.002  $\chi^2$ /NDF: 245195.3/55

asym\_bcm\_an\_us\_ds3\_avg\_bcm\_dg\_us\_agg\_dd\_mean vs Slug



Right In:  $3.887 \pm 5.641$   $\chi^2/\text{NDF}$ : 22.5/27

Left Out:  $-6.404 \pm 5.091$   $\chi^2/\text{NDF}$ : 37.4/24

Right Out:  $11.767 \pm 5.290$   $\chi^2/\text{NDF}$ : 29.2/32

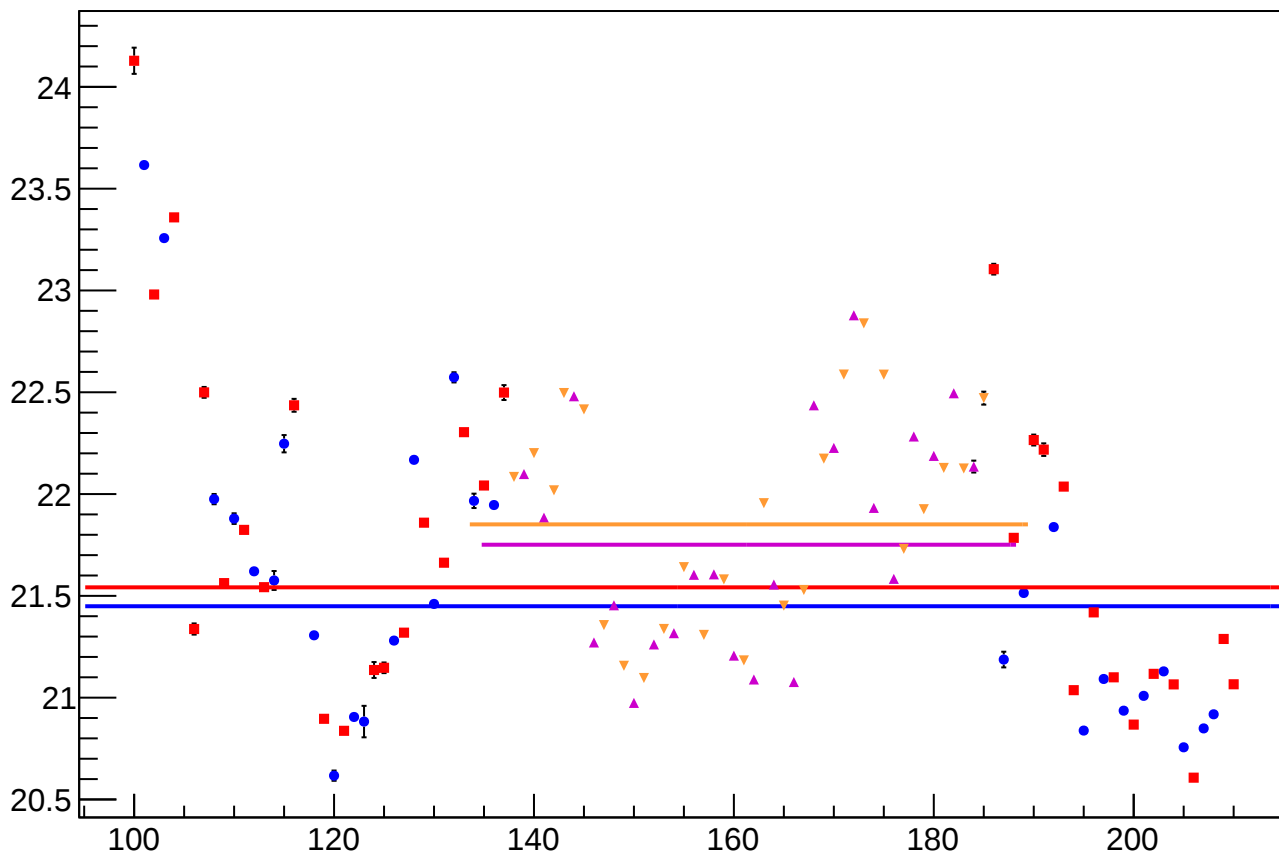
Left In:  $5.978 \pm 5.222$   $\chi^2/\text{NDF}$ : 18.5/22

+ sign  $-1.784 \pm 3.780$   $\chi^2/\text{NDF}$ : 61.8/52

All:  $3.615 \pm 2.650$   $\chi^2/\text{NDF}$ : 114.1/108

- sign  $8.835 \pm 3.717$   $\chi^2/\text{NDF}$ : 48.3/55

asym\_bcm\_an\_us\_ds3\_avg\_bcm\_dg\_us\_agg\_dd\_rms vs Slug



Right In: 21.449 $\pm$ 0.004  $\chi^2$ /NDF: 32293.9/27

Left Out: 21.851 $\pm$ 0.004  $\chi^2$ /NDF:19631.8/24

Right Out: 21.542 $\pm$ 0.004  $\chi^2$ /NDF: 33840.3/32

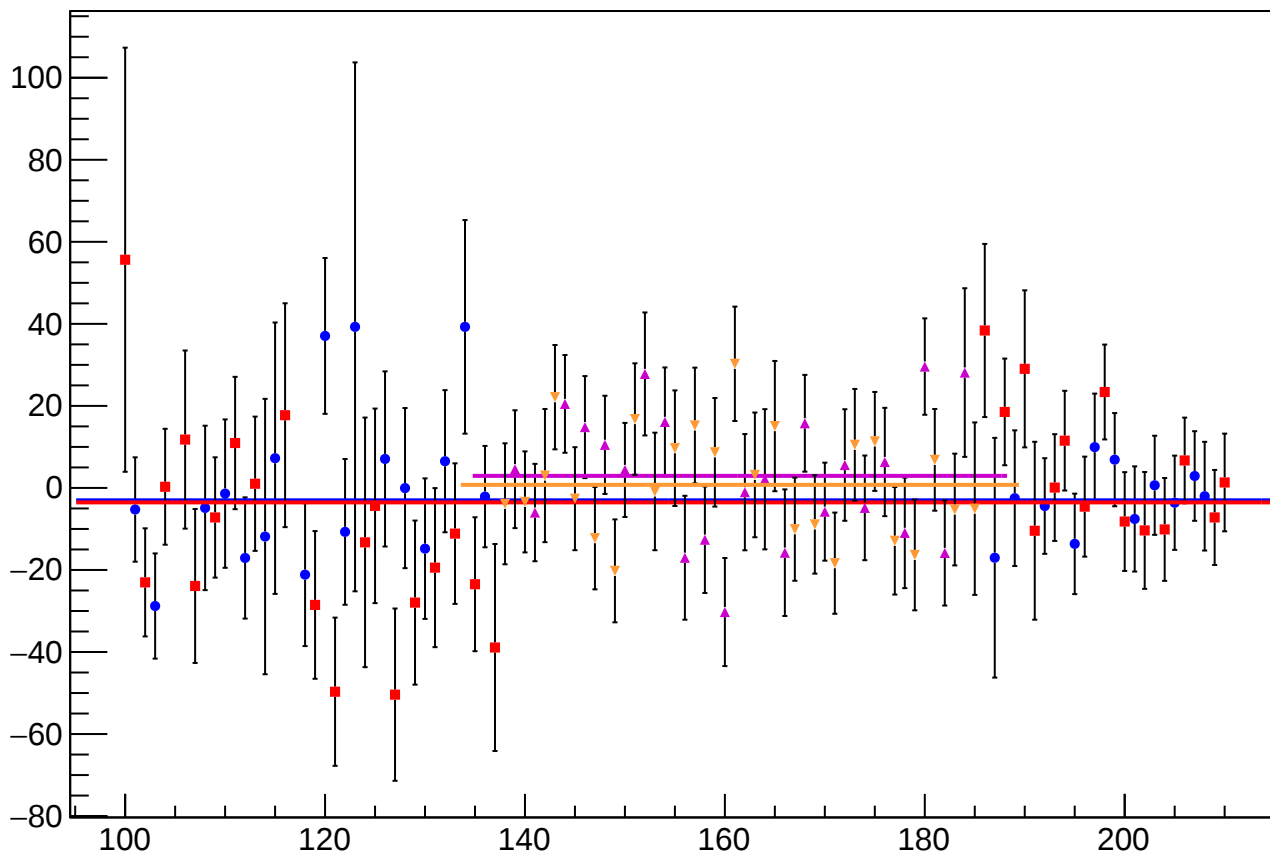
Left In: 21.751 $\pm$ 0.004  $\chi^2$ /NDF:20516.3/22

+ sign 21.671 $\pm$ 0.003  $\chi^2$ /NDF: 57525.8/52

All: 21.659 $\pm$ 0.002  $\chi^2$ /NDF: 113505.6/108

- sign 21.648 $\pm$ 0.003  $\chi^2$ /NDF: 55943.0/55

asym\_bcm\_an\_us\_bcm\_an\_ds\_agg\_dd\_mean vs Slug



Right In:  $-3.020 \pm 2.883$   $\chi^2/\text{NDF}$ : 18.2/27

Left Out:  $0.759 \pm 2.698$   $\chi^2/\text{NDF}$ : 23.8/24

Right Out:  $-3.525 \pm 2.706$   $\chi^2/\text{NDF}$ : 44.9/32

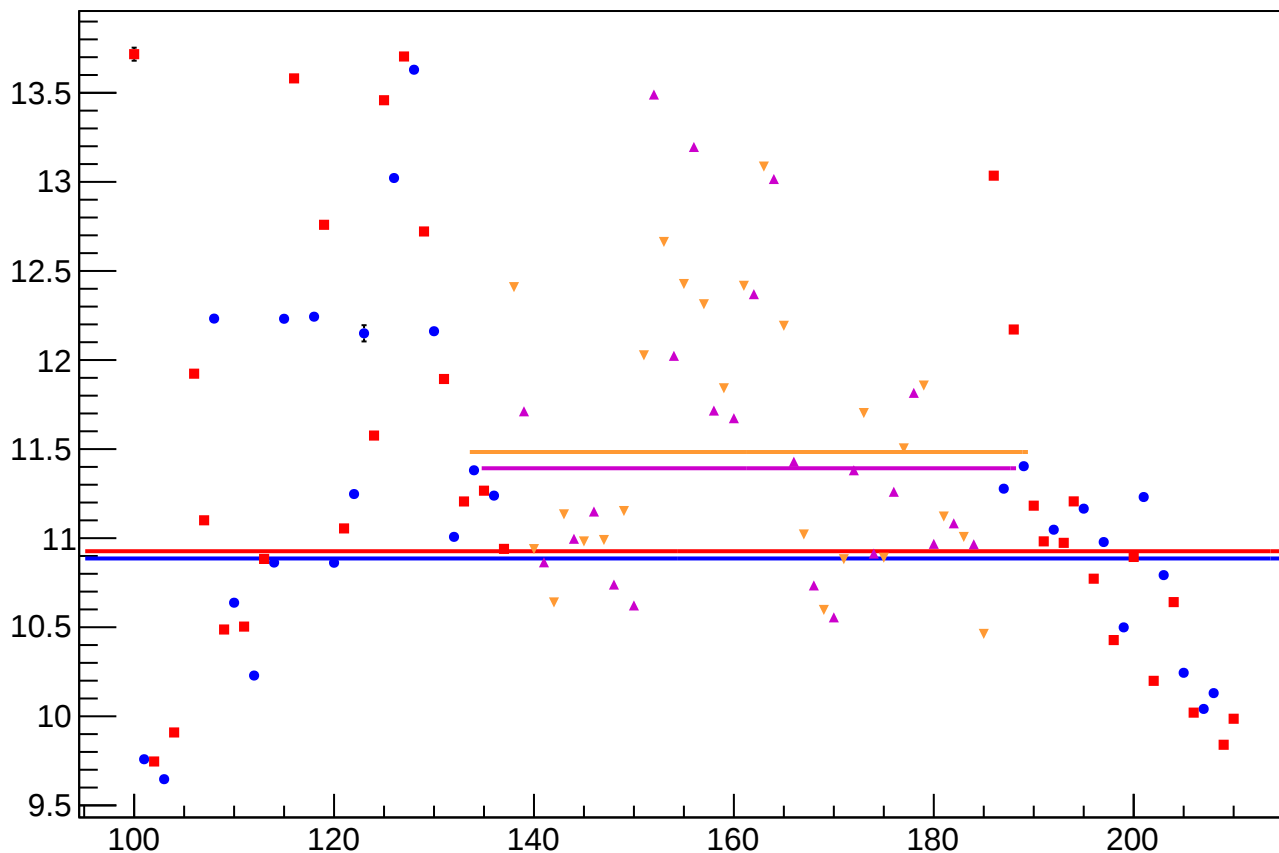
Left In:  $2.944 \pm 2.757$   $\chi^2/\text{NDF}$ : 30.9/22

+ sign  $-1.005 \pm 1.970$   $\chi^2/\text{NDF}$ : 43.0/52

All:  $-0.672 \pm 1.379$   $\chi^2/\text{NDF}$ : 121.7/108

- sign  $-0.351 \pm 1.931$   $\chi^2/\text{NDF}$ : 78.6/55

asym\_bcm\_an\_us\_bcm\_an\_ds\_agg\_dd\_rms vs Slug



Right In:  $10.886 \pm 0.002$   $\chi^2/\text{NDF}$ : 170288.1/27

Left Out:  $11.484 \pm 0.002$   $\chi^2/\text{NDF}$ : 129805.4/24

Right Out:  $10.927 \pm 0.002$   $\chi^2/\text{NDF}$ : 255873.2/32

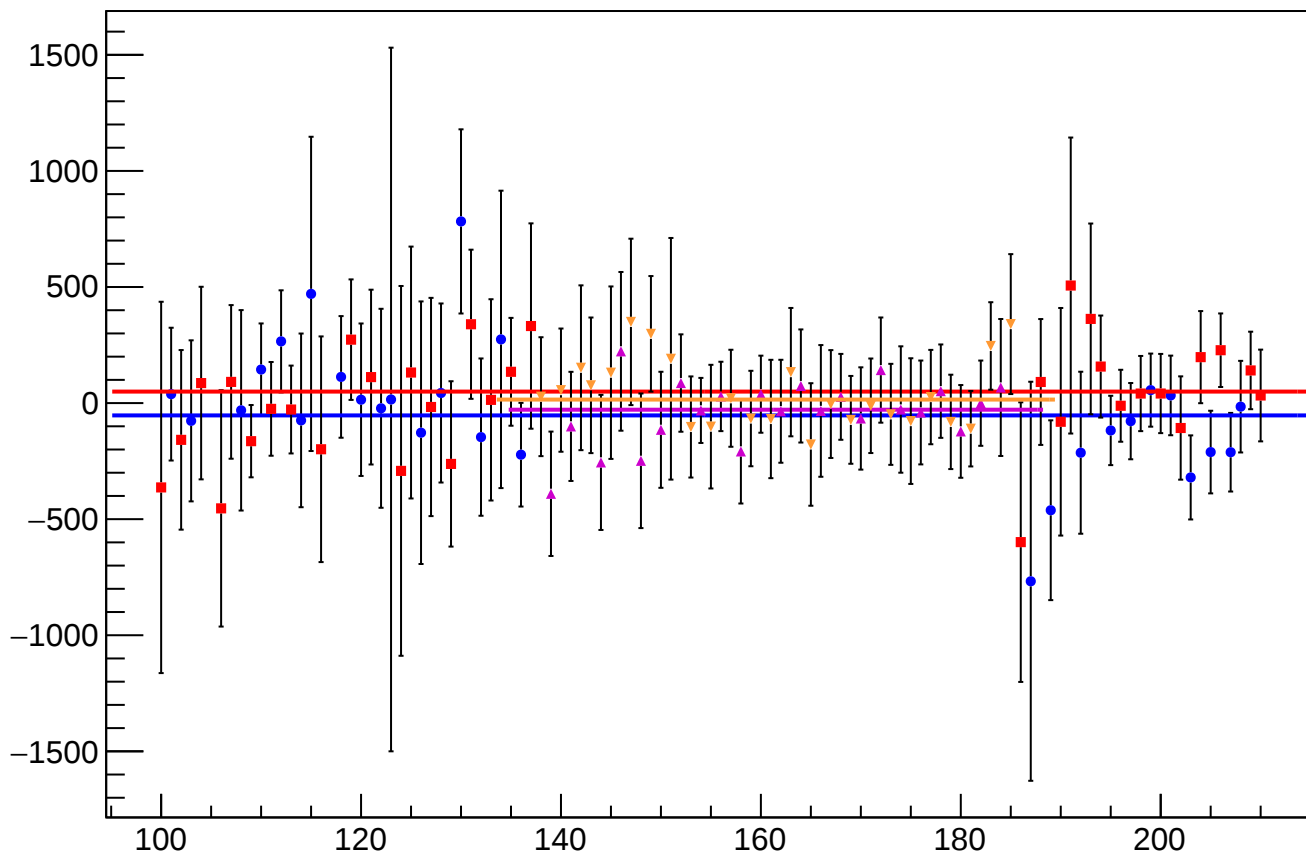
Left In:  $11.392 \pm 0.002$   $\chi^2/\text{NDF}$ : 150493.3/22

+ sign  $11.205 \pm 0.001$   $\chi^2/\text{NDF}$ : 345916.1/52

All:  $11.179 \pm 0.001$   $\chi^2/\text{NDF}$ : 781985.7/108

- sign  $11.155 \pm 0.001$   $\chi^2/\text{NDF}$ : 435426.1/55

asym\_bcm\_an\_us\_bcm\_an\_ds3\_agg\_avg\_mean vs Slug



Right In:  $-53.087 \pm 46.954$   $\chi^2/\text{NDF}: 16.5/27$

Left Out:  $15.130 \pm 47.705$   $\chi^2/\text{NDF}: 8.0/24$

Right Out:  $49.515 \pm 44.121$   $\chi^2/\text{NDF}: 12.5/32$

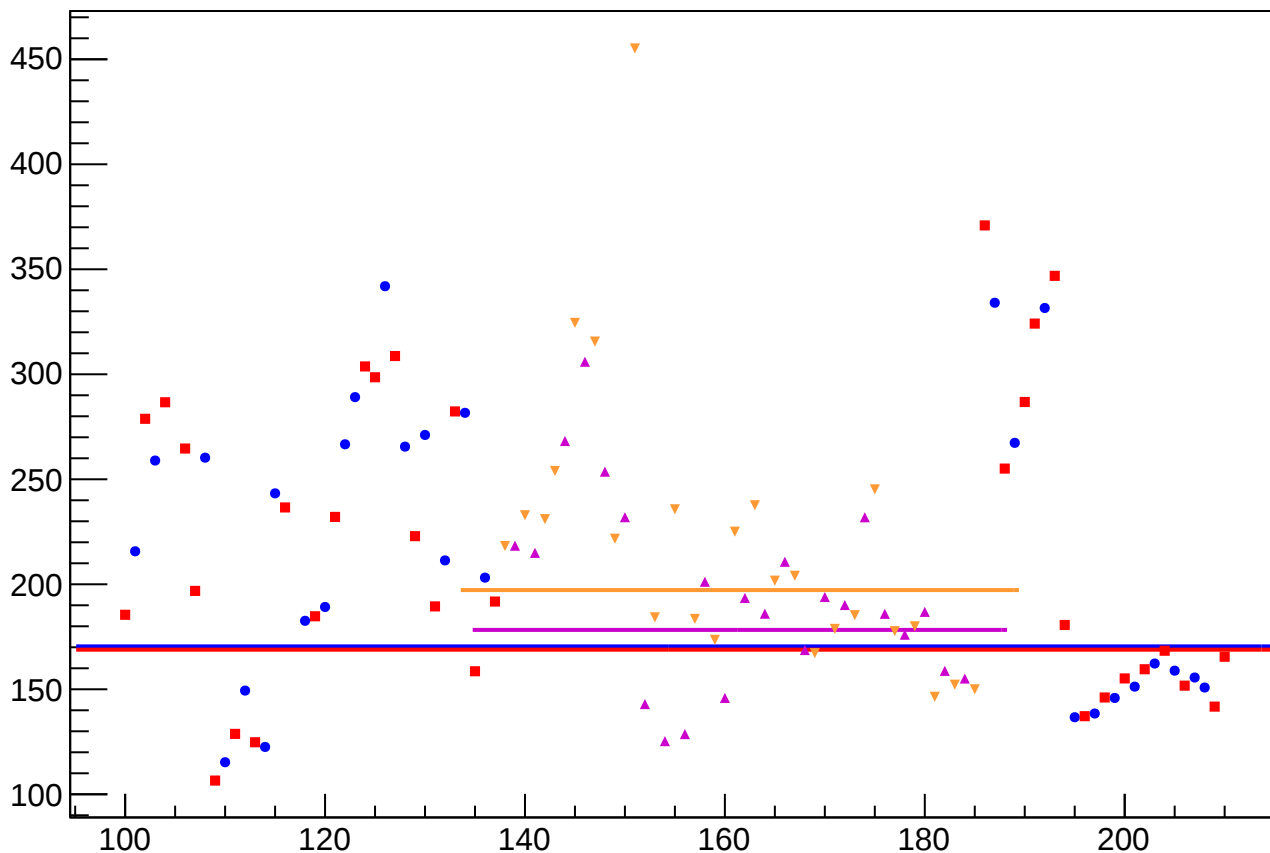
Left In:  $-28.500 \pm 44.797$   $\chi^2/\text{NDF}: 6.4/22$

+ sign  $-19.520 \pm 33.464$   $\chi^2/\text{NDF}: 25.6/52$

All:  $-3.254 \pm 22.911$   $\chi^2/\text{NDF}: 46.4/108$

- sign  $11.100 \pm 31.435$   $\chi^2/\text{NDF}: 20.4/55$

asym\_bcm\_an\_us\_bcm\_an\_ds3\_agg\_avg\_rms vs Slug



Right In: 170.424 $\pm$ 0.033  $\chi^2$ /NDF: 2110223.8/27

Left Out: 197.249 $\pm$ 0.034  $\chi^2$ /NDF: 1786808.1/24

Right Out: 168.857 $\pm$ 0.031  $\chi^2$ /NDF: 2828370.4/32

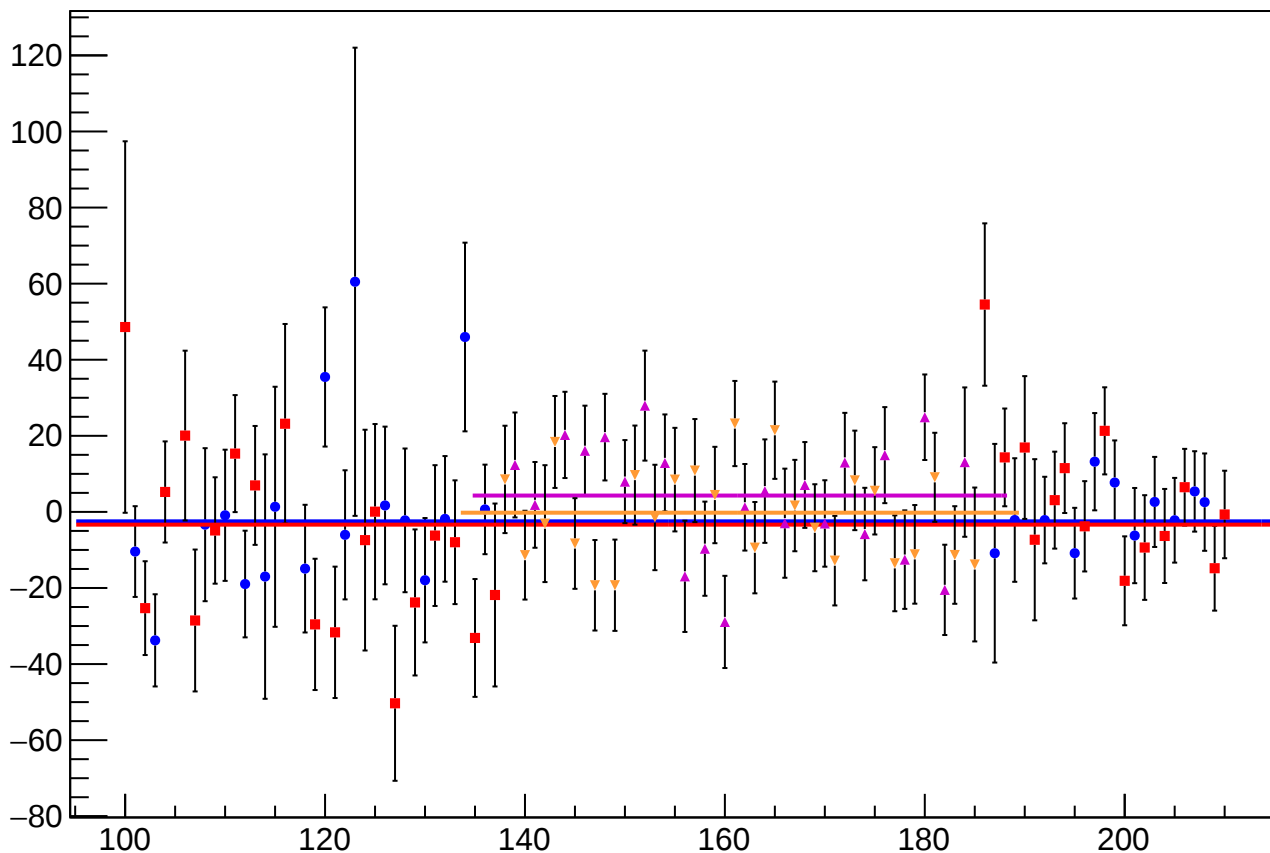
Left In: 178.277 $\pm$ 0.032  $\chi^2$ /NDF: 1628916.6/22

+ sign 183.624 $\pm$ 0.024  $\chi^2$ /NDF: 4218240.5/52

All: 178.243 $\pm$ 0.016  $\chi^2$ /NDF: 8817758.4/108

- sign 173.495 $\pm$ 0.022  $\chi^2$ /NDF: 4502180.3/55

asym\_bcm\_an\_us\_bcm\_an\_ds3\_agg\_dd\_mean vs Slug



Right In:  $-2.481 \pm 2.783$   $\chi^2/\text{NDF}$ : 23.4/27

Left Out:  $-0.211 \pm 2.523$   $\chi^2/\text{NDF}$ : 24.5/24

Right Out:  $-3.349 \pm 2.618$   $\chi^2/\text{NDF}$ : 47.3/32

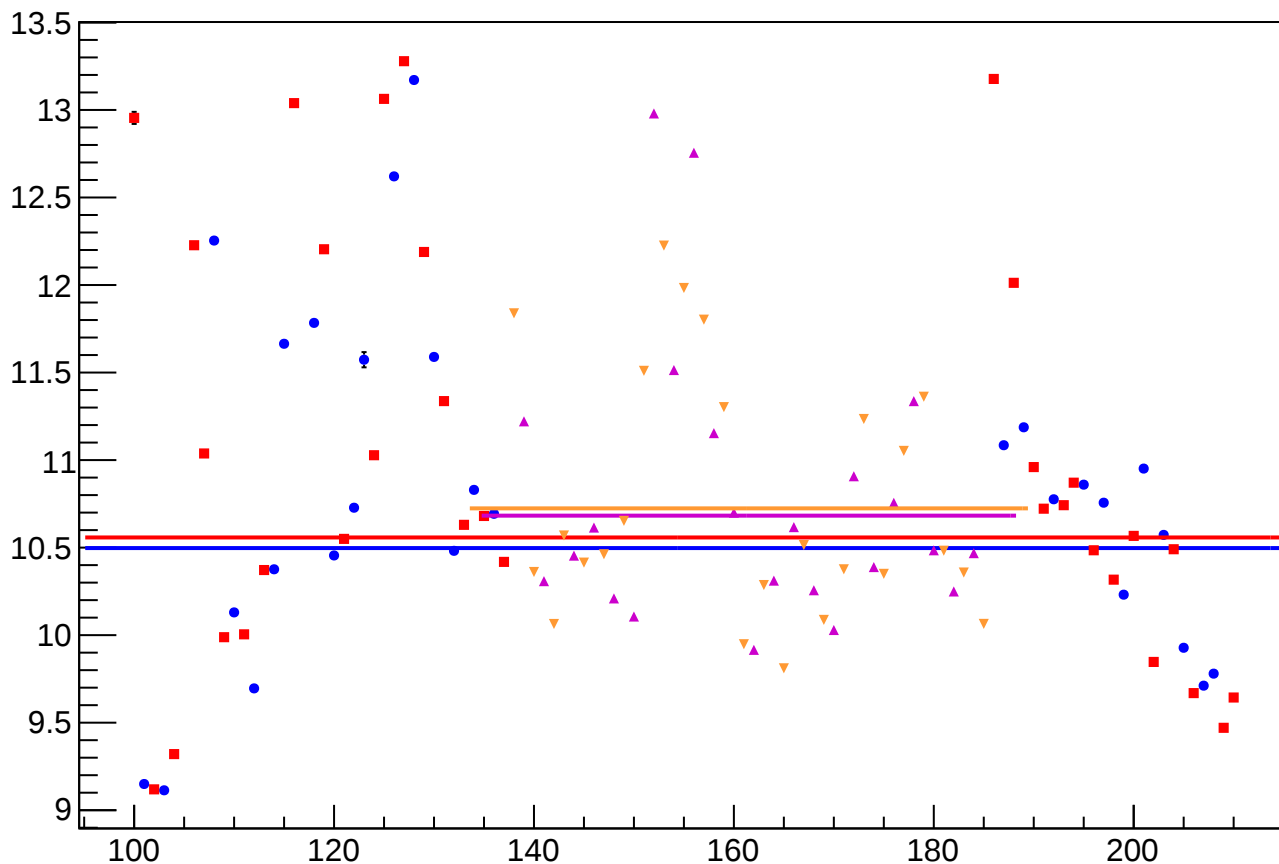
Left In:  $4.298 \pm 2.589$   $\chi^2/\text{NDF}$ : 31.6/22

+ sign  $-1.235 \pm 1.870$   $\chi^2/\text{NDF}$ : 48.3/52

All:  $-0.346 \pm 1.312$   $\chi^2/\text{NDF}$ : 131.9/108

- sign  $0.517 \pm 1.841$   $\chi^2/\text{NDF}$ : 83.2/55

asym\_bcm\_an\_us\_bcm\_an\_ds3\_agg\_dd\_rms vs Slug



Right In: 10.497 $\pm$ 0.002  $\chi^2$ /NDF: 195478.8/27

Left Out: 10.724 $\pm$ 0.002  $\chi^2$ /NDF:132558.9/24

Right Out: 10.558 $\pm$ 0.002  $\chi^2$ /NDF: 294468.3/32

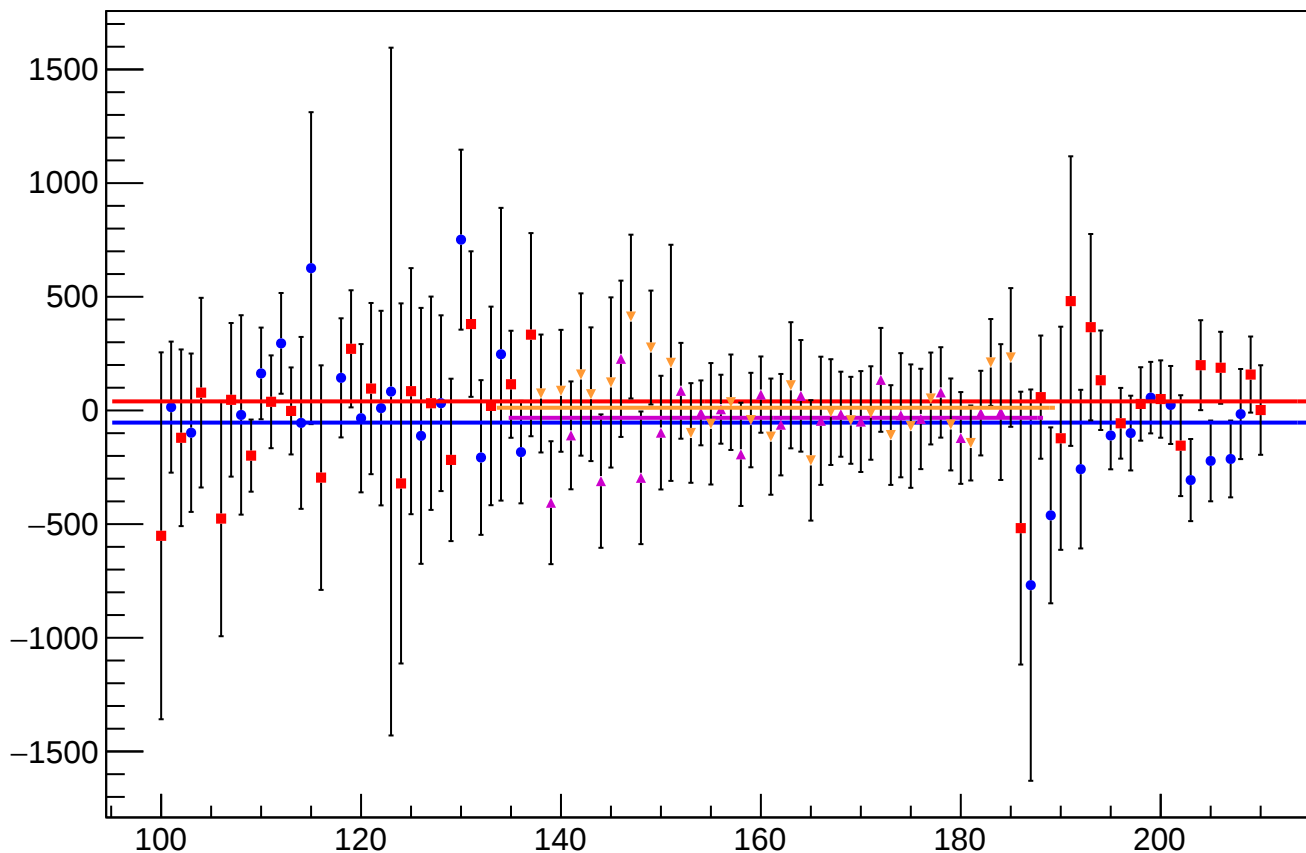
Left In: 10.683 $\pm$ 0.002  $\chi^2$ /NDF:147835.6/22

+ sign 10.622 $\pm$ 0.001  $\chi^2$ /NDF: 335324.1/52

All: 10.621 $\pm$ 0.001  $\chi^2$ /NDF: 779919.4/108

- sign 10.621 $\pm$ 0.001  $\chi^2$ /NDF: 444595.0/55

asym\_bcm\_dg\_us\_bcm\_an\_ds\_agg\_avg\_mean vs Slug



Right In:  $-53.440 \pm 47.033$   $\chi^2/\text{NDF}$ : 17.1/27

Left Out:  $11.891 \pm 48.022$   $\chi^2/\text{NDF}$ : 7.6/24

Right Out:  $39.865 \pm 44.262$   $\chi^2/\text{NDF}$ : 13.2/32

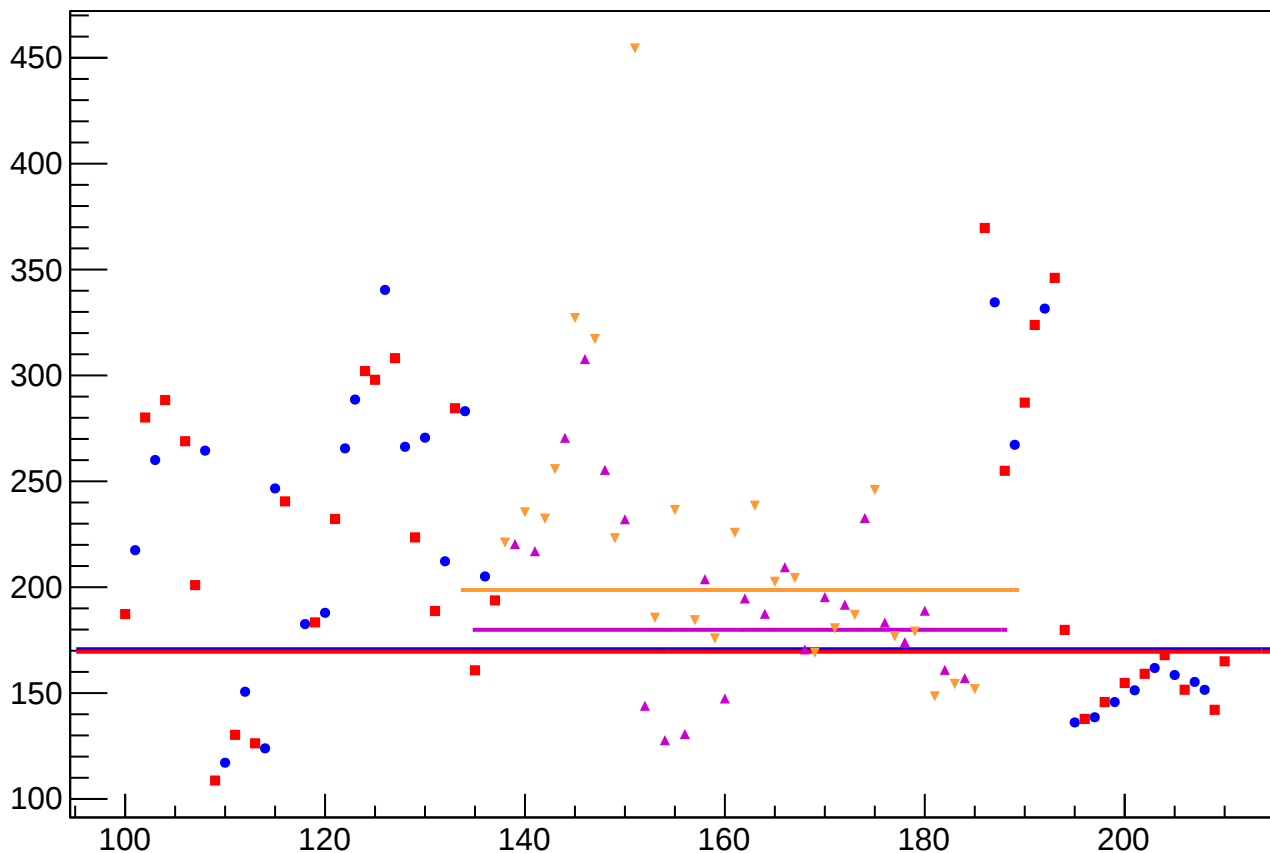
Left In:  $-32.413 \pm 45.155$   $\chi^2/\text{NDF}$ : 6.9/22

+ sign  $-21.455 \pm 33.601$   $\chi^2/\text{NDF}$ : 25.7/52

All:  $-7.713 \pm 23.023$   $\chi^2/\text{NDF}$ : 47.4/108

- sign  $4.448 \pm 31.609$   $\chi^2/\text{NDF}$ : 21.4/55

asym\_bcm\_dg\_us\_bcm\_an\_ds\_agg\_avg\_rms vs Slug



Right In: 170.713+/-0.033  $\chi^2/\text{NDF}$ : 2109113.9/27

Left Out: 198.695+/-0.034  $\chi^2/\text{NDF}$ : 1759311.9/24

Right Out: 169.534+/-0.031  $\chi^2/\text{NDF}$ : 2788436.8/32

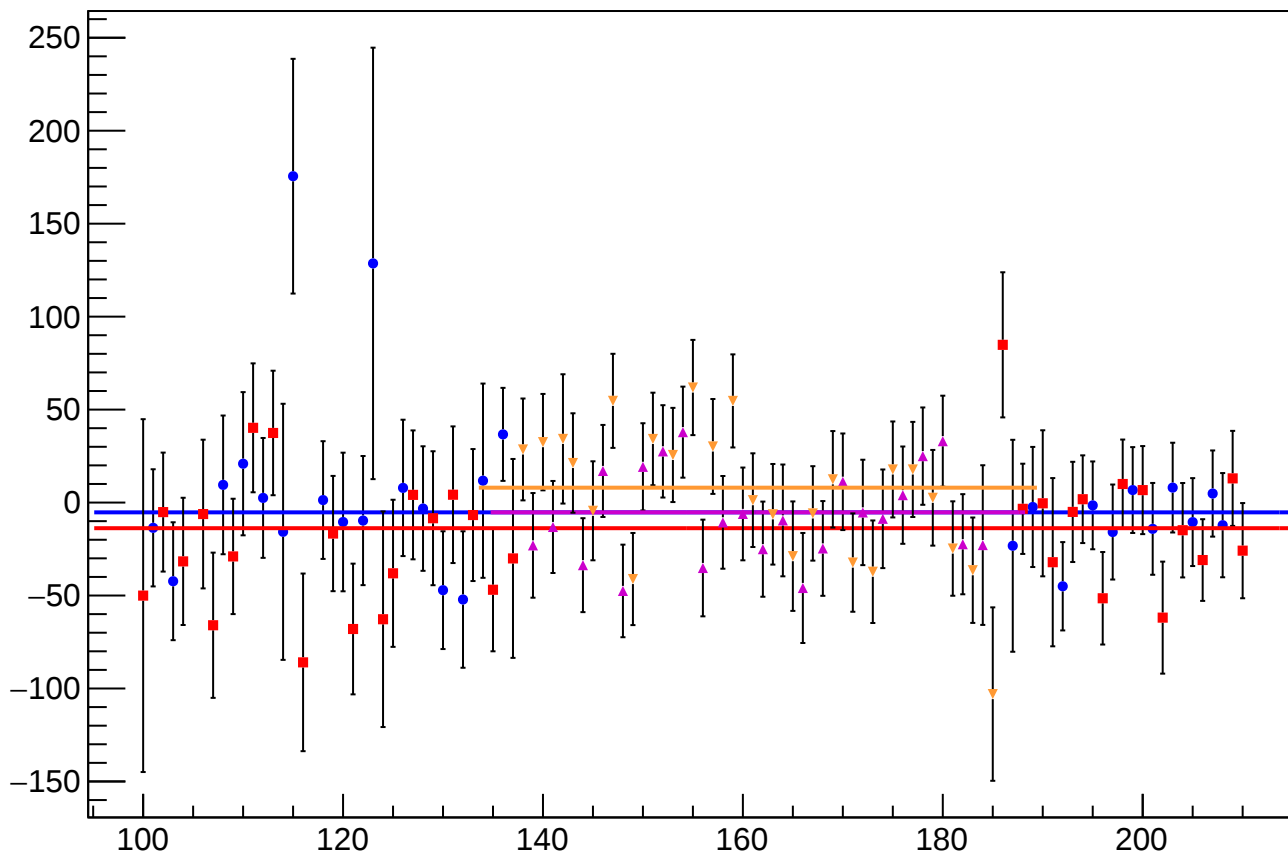
Left In: 179.886+/-0.032  $\chi^2/\text{NDF}$ : 1580636.4/22

+ sign 184.412+/-0.024  $\chi^2/\text{NDF}$ : 4215032.7/52

All: 179.210+/-0.016  $\chi^2/\text{NDF}$ : 8728076.0/108

- sign 174.607+/-0.022  $\chi^2/\text{NDF}$ : 4422684.6/55

asym\_bcm\_dg\_us\_bcm\_an\_ds\_agg\_dd\_mean vs Slug



Right In:  $-5.266 \pm 5.842$   $\chi^2/\text{NDF}$ : 22.3/27

Left Out:  $8.004 \pm 5.334$   $\chi^2/\text{NDF}$ : 37.4/24

Right Out:  $-13.786 \pm 5.488$   $\chi^2/\text{NDF}$ : 30.6/32

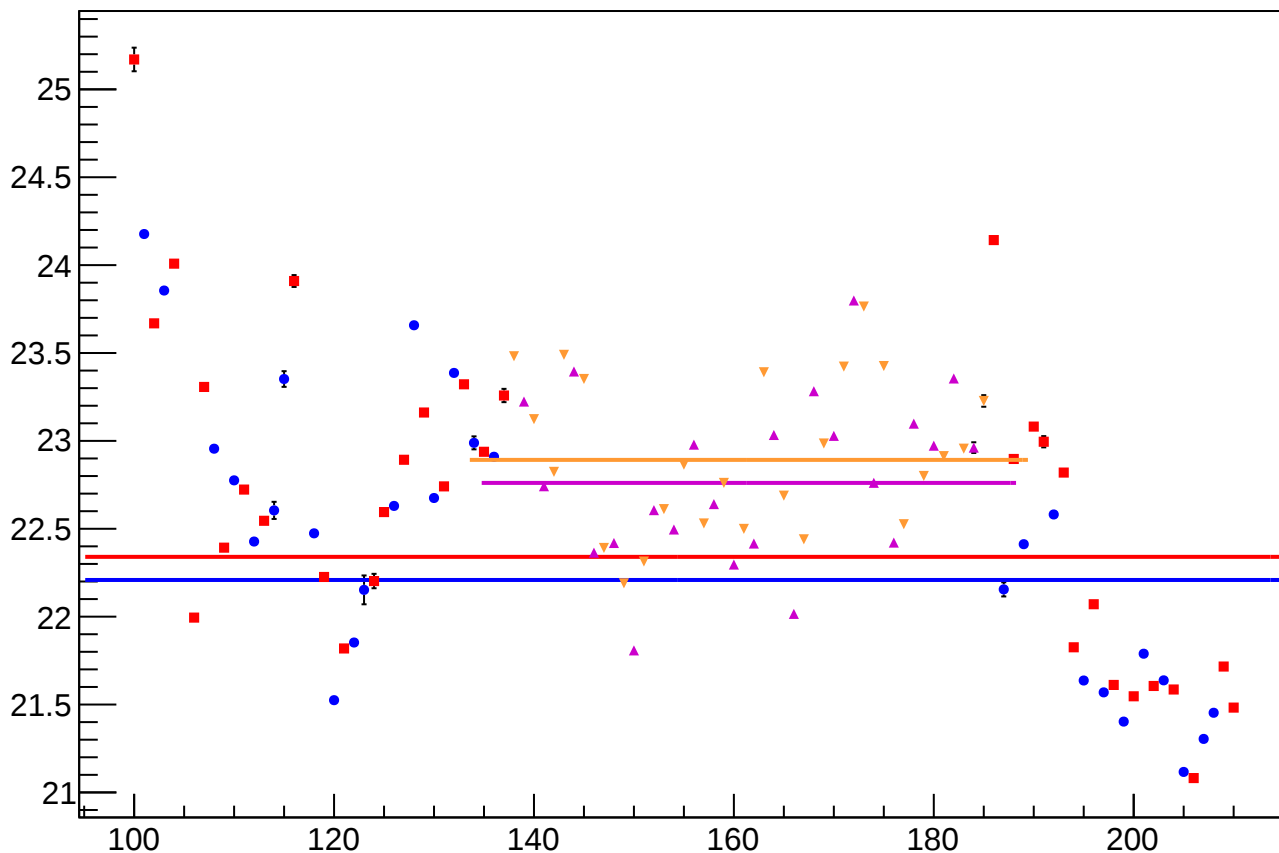
Left In:  $-5.261 \pm 5.465$   $\chi^2/\text{NDF}$ : 20.8/22

+ sign  $1.971 \pm 3.939$   $\chi^2/\text{NDF}$ : 62.5/52

All:  $-3.866 \pm 2.761$   $\chi^2/\text{NDF}$ : 119.5/108

- sign  $-9.506 \pm 3.872$   $\chi^2/\text{NDF}$ : 52.6/55

asym\_bcm\_dg\_us\_bcm\_an\_ds\_agg\_dd\_rms vs Slug



Right In: 22.209 $\pm$ 0.004  $\chi^2$ /NDF: 40692.3/27

Left Out: 22.892 $\pm$ 0.004  $\chi^2$ /NDF: 12995.5/24

Right Out: 22.340 $\pm$ 0.004  $\chi^2$ /NDF: 44287.7/32

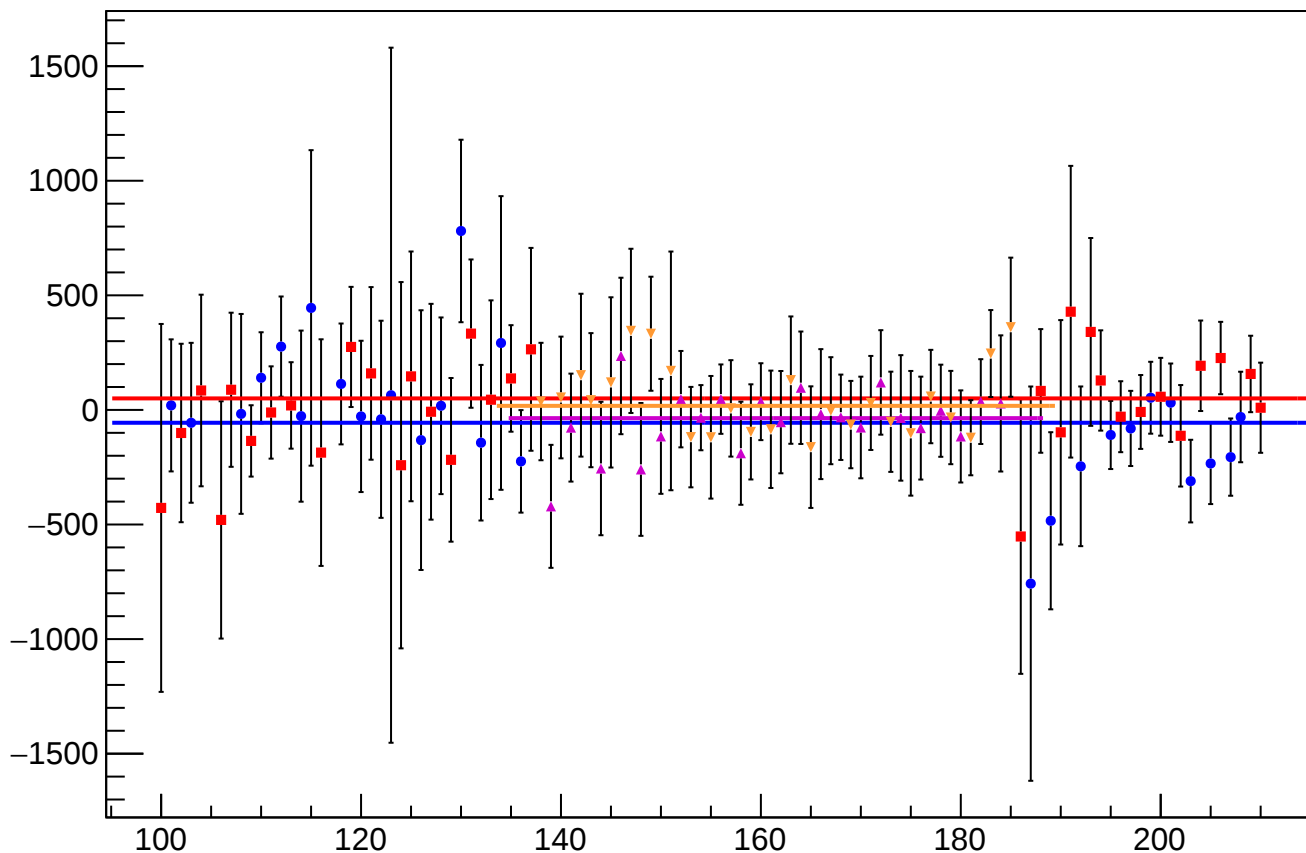
Left In: 22.761 $\pm$ 0.004  $\chi^2$ /NDF: 14550.0/22

+ sign 22.581 $\pm$ 0.003  $\chi^2$ /NDF: 68606.3/52

All: 22.566 $\pm$ 0.002  $\chi^2$ /NDF: 133403.6/108

- sign 22.551 $\pm$ 0.003  $\chi^2$ /NDF: 64739.0/55

asym\_bcm\_dg\_ds\_bcm\_an\_ds\_agg\_avg\_mean vs Slug



Right In:  $-56.037 \pm 46.897$   $\chi^2/\text{NDF}$ : 16.6/27

Left Out:  $17.777 \pm 47.941$   $\chi^2/\text{NDF}$ : 8.5/24

Right Out:  $50.244 \pm 44.070$   $\chi^2/\text{NDF}$ : 11.3/32

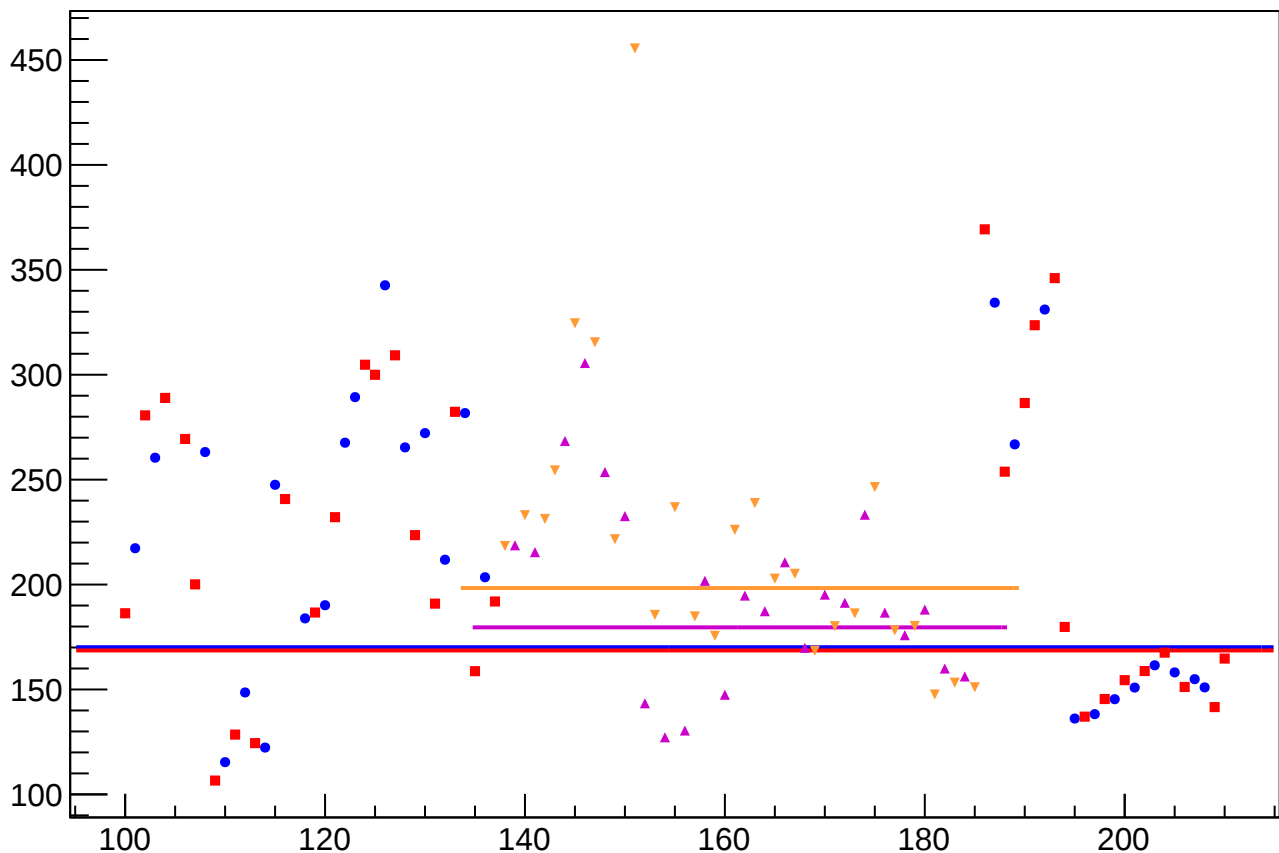
Left In:  $-35.879 \pm 45.087$   $\chi^2/\text{NDF}$ : 6.3/22

+ sign  $-19.943 \pm 33.524$   $\chi^2/\text{NDF}$ : 26.4/52

All:  $-5.022 \pm 22.962$   $\chi^2/\text{NDF}$ : 46.2/108

- sign  $8.165 \pm 31.516$   $\chi^2/\text{NDF}$ : 19.5/55

asym\_bcm\_dg\_ds\_bcm\_an\_ds\_agg\_avg\_rms vs Slug



Right In: 170.134+/-0.033  $\chi^2/\text{NDF}$ : 2139302.7/27

Left Out: 198.344+/-0.034  $\chi^2/\text{NDF}$ : 1757450.6/24

Right Out: 168.601+/-0.031  $\chi^2/\text{NDF}$ : 2855887.7/32

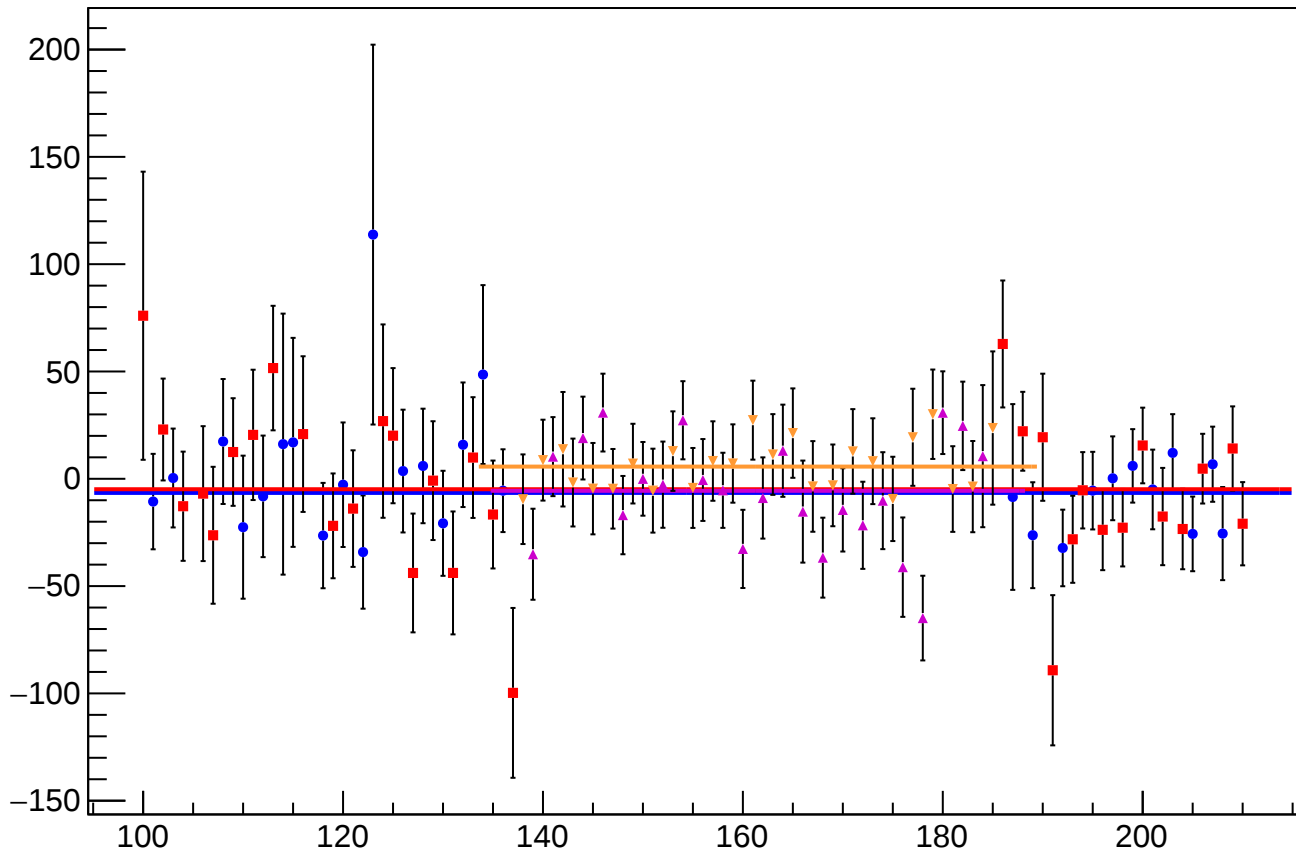
Left In: 179.605+/-0.032  $\chi^2/\text{NDF}$ : 1575744.0/22

+ sign 183.928+/-0.024  $\chi^2/\text{NDF}$ : 4250627.1/52

All: 178.646+/-0.016  $\chi^2/\text{NDF}$ : 8836718.8/100

- sign 173.977+/-0.022  $\chi^2/\text{NDF}$ : 4492556.0/55

asym\_bcm\_dg\_ds\_bcm\_an\_ds\_agg\_dd\_mean vs Slug



Right In:  $-6.579 \pm 4.465$   $\chi^2/\text{NDF}: 15.1/27$

Left Out:  $5.680 \pm 4.024$   $\chi^2/\text{NDF}: 7.7/24$

Right Out:  $-4.867 \pm 4.203$   $\chi^2/\text{NDF}: 42.5/32$

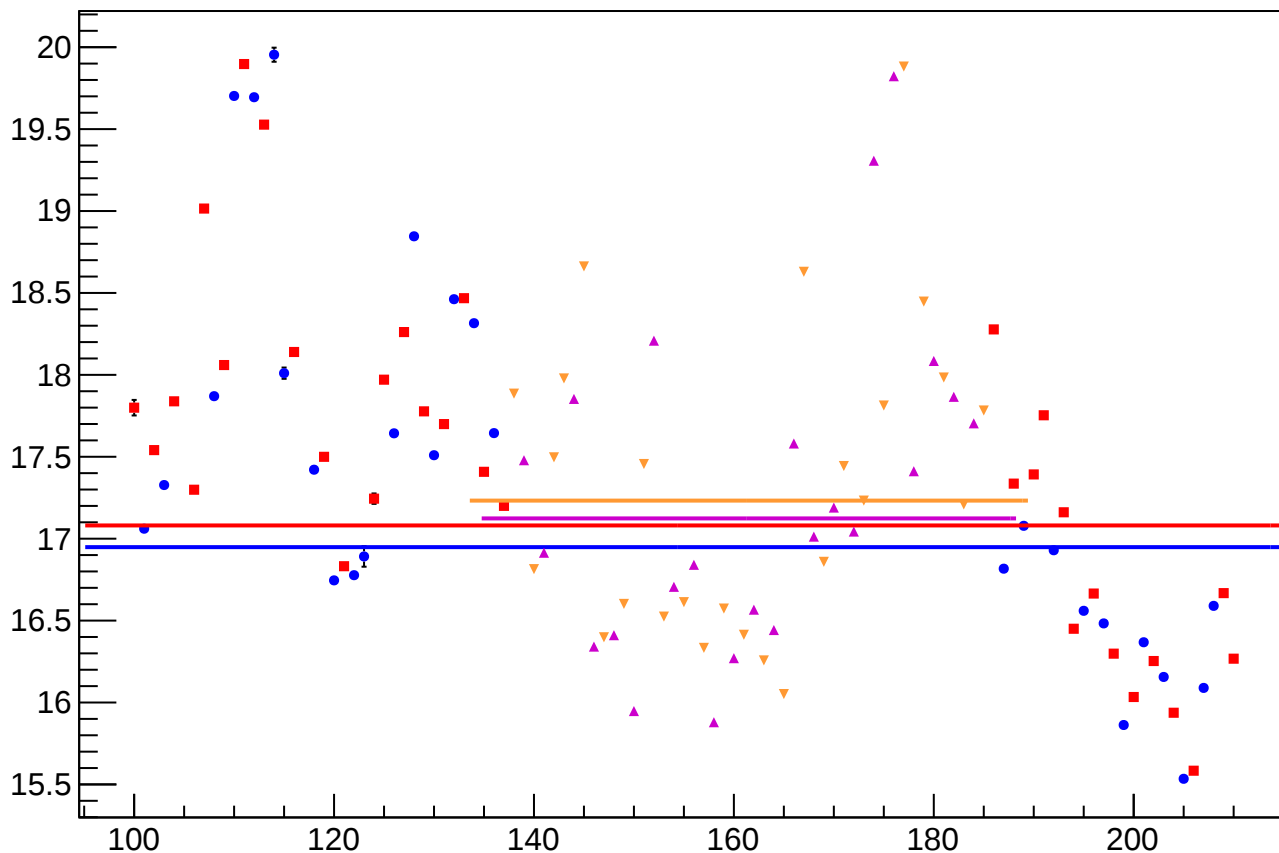
Left In:  $-5.595 \pm 4.121$   $\chi^2/\text{NDF}: 36.4/22$

+ sign  $0.186 \pm 2.989$   $\chi^2/\text{NDF}: 27.0/52$

All:  $-2.568 \pm 2.097$   $\chi^2/\text{NDF}: 107.5/108$

- sign  $-5.238 \pm 2.943$   $\chi^2/\text{NDF}: 78.9/55$

asym\_bcm\_dg\_ds\_bcm\_an\_ds\_agg\_dd\_rms vs Slug



Right In: 16.948 $\pm$ 0.003  $\chi^2/\text{NDF}$ : 98938.9/27

Left Out: 17.232 $\pm$ 0.003  $\chi^2/\text{NDF}$ : 98701.0/24

Right Out: 17.081 $\pm$ 0.003  $\chi^2/\text{NDF}$ : 110275.1/32

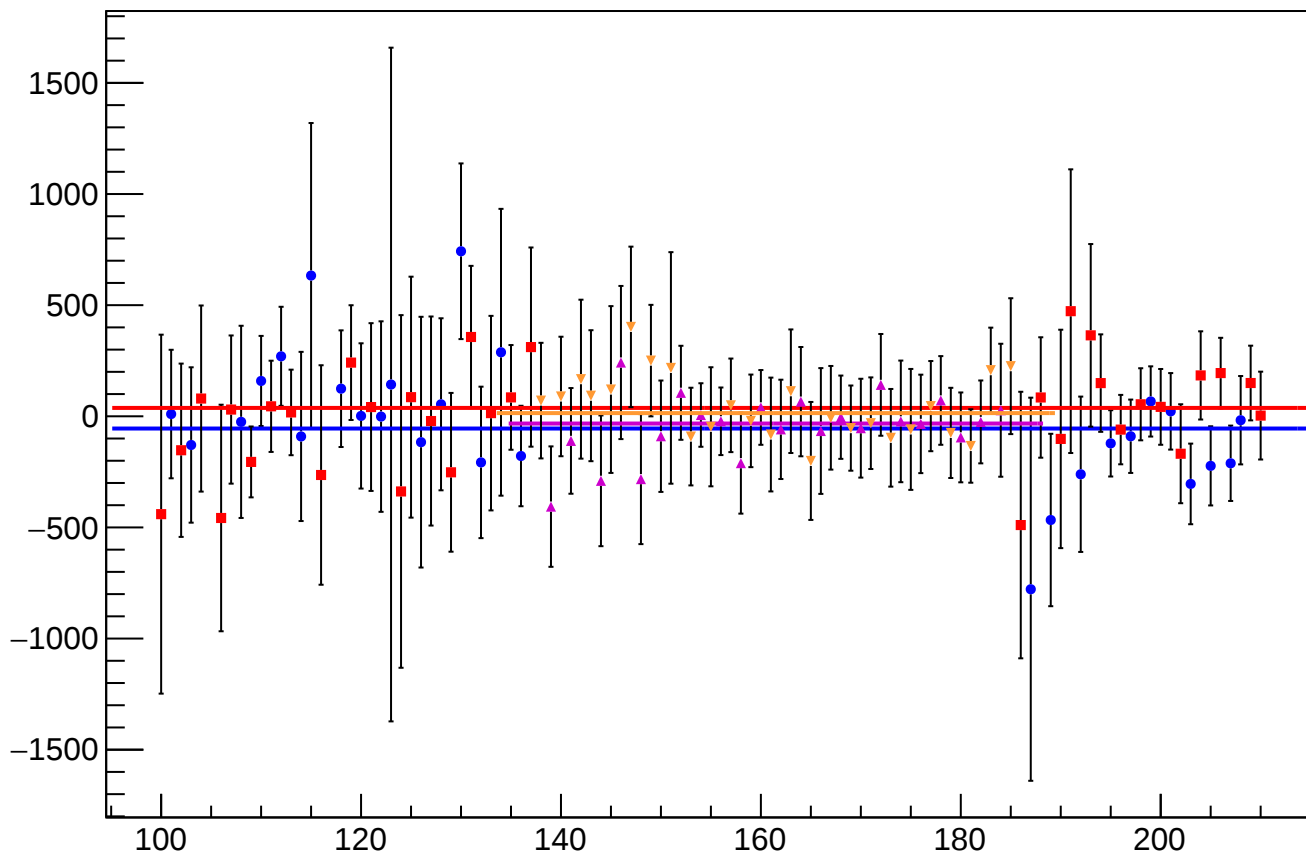
Left In: 17.124 $\pm$ 0.003  $\chi^2/\text{NDF}$ : 100747.0/22

+ sign 17.105 $\pm$ 0.002  $\chi^2/\text{NDF}$ : 202107.6/52

All: 17.104 $\pm$ 0.001  $\chi^2/\text{NDF}$ : 413236.7/108

- sign 17.103 $\pm$ 0.002  $\chi^2/\text{NDF}$ : 211128.4/55

asym\_bcm\_dg\_us\_bcm\_an\_us\_agg\_avg\_mean vs Slug



Right In: -55.044 $\pm$ 47.174  $\chi^2$ /NDF: 16.7/27

Left Out: 14.362 $\pm$ 48.130  $\chi^2$ /NDF: 6.9/24

Right Out: 37.698 $\pm$ 44.379  $\chi^2$ /NDF: 12.7/32

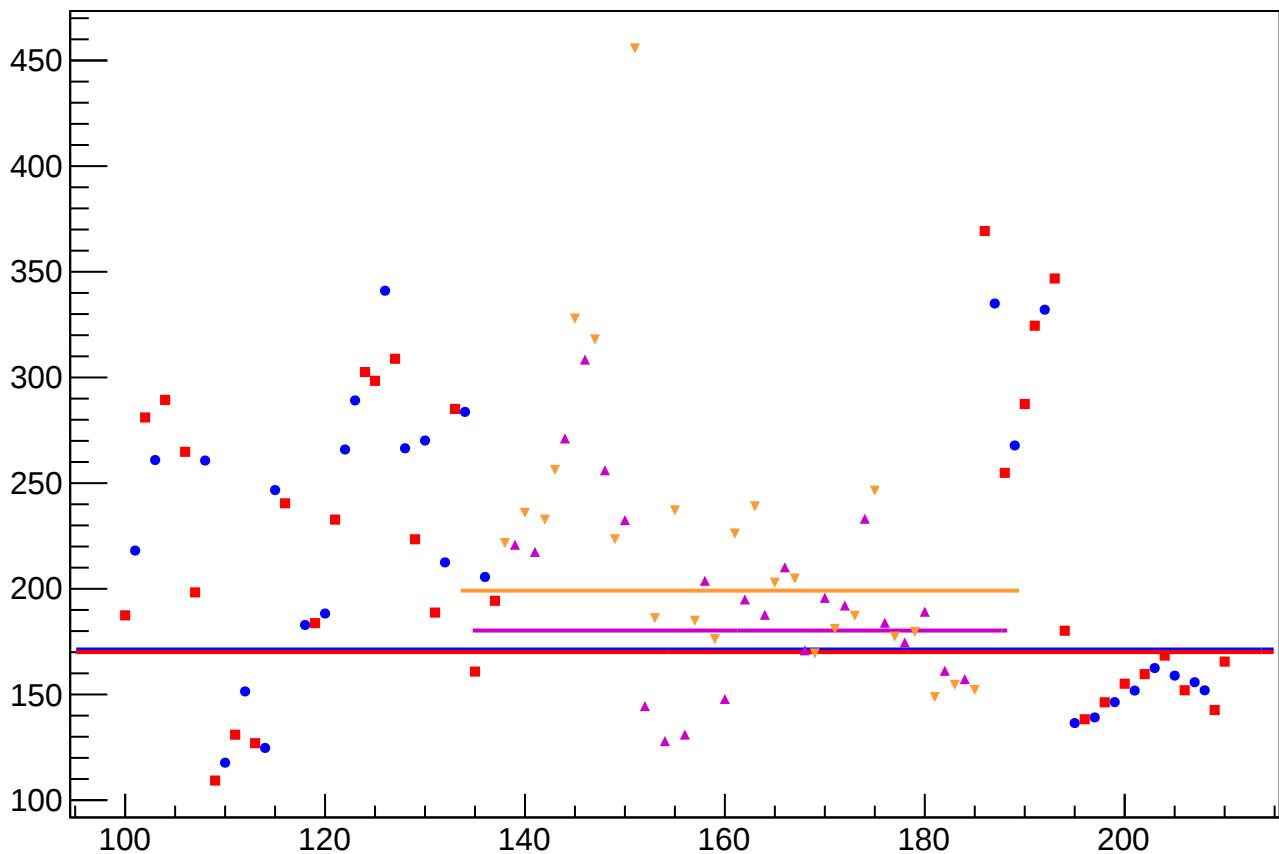
Left In: -32.571 $\pm$ 45.248  $\chi^2$ /NDF: 6.7/22

+ sign -21.037 $\pm$ 33.690  $\chi^2$ /NDF: 24.7/52

All: -8.152 $\pm$ 23.080  $\chi^2$ /NDF: 45.6/108

- sign 3.245 $\pm$ 31.683  $\chi^2$ /NDF: 20.6/55

asym\_bcm\_dg\_us\_bcm\_an\_us\_agg\_avg\_rms vs Slug



Right In: 171.281 $\pm$ 0.033  $\chi^2/\text{NDF}$ : 2091240.5/27

Left Out: 199.136 $\pm$ 0.034  $\chi^2/\text{NDF}$ : 1760298.1/24

Right Out: 170.049 $\pm$ 0.031  $\chi^2/\text{NDF}$ : 2763833.4/32

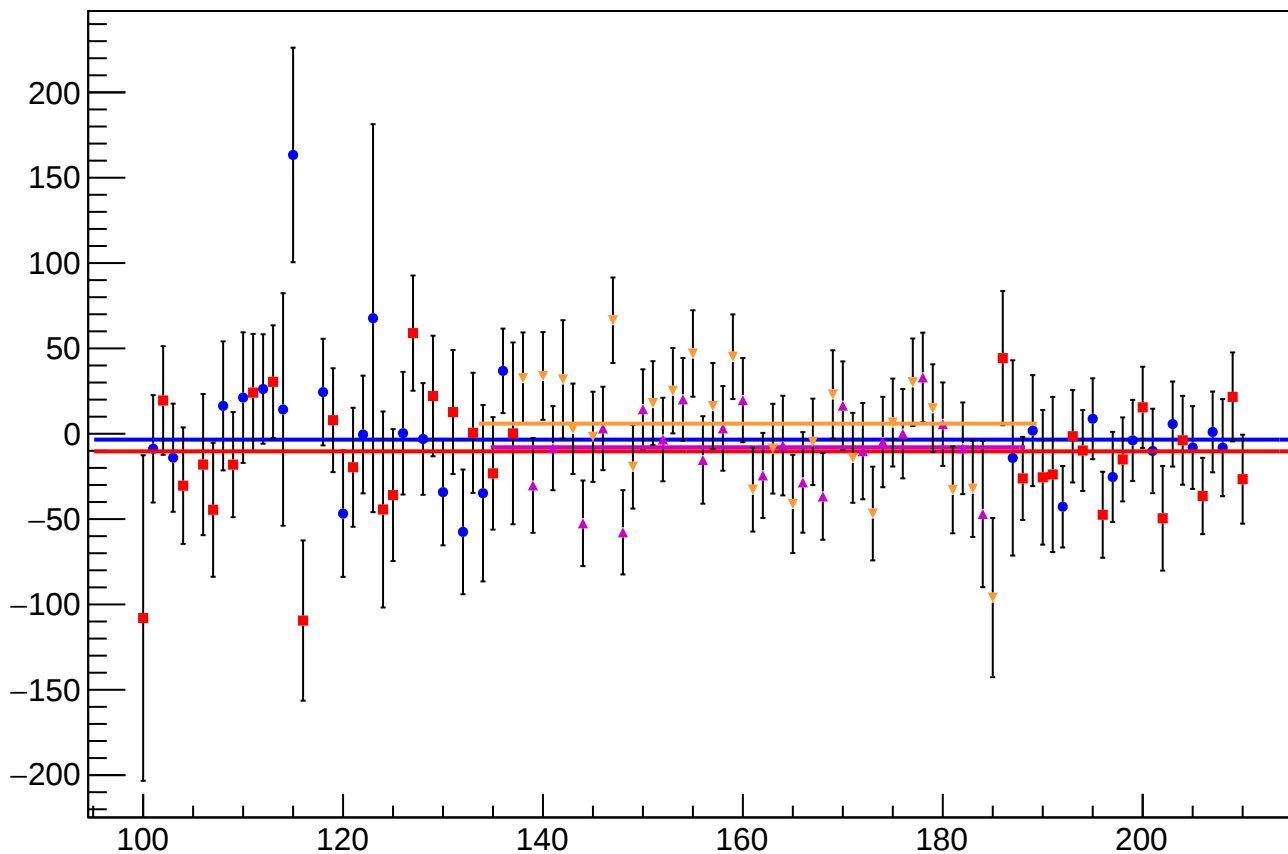
Left In: 180.256 $\pm$ 0.032  $\chi^2/\text{NDF}$ : 1580553.5/22

+ sign 184.929 $\pm$ 0.024  $\chi^2/\text{NDF}$ : 4193208.2/52

All: 179.689 $\pm$ 0.016  $\chi^2/\text{NDF}$ : 8680654.3/108

- sign 175.054 $\pm$ 0.022  $\chi^2/\text{NDF}$ : 4396259.9/55

asym\_bcm\_dg\_us\_bcm\_an\_us\_agg\_dd\_mean vs Slug



Right In:  $-3.439 \pm 5.876$   $\chi^2/\text{NDF}: 21.6/27$

Left Out:  $5.937 \pm 5.285$   $\chi^2/\text{NDF}: 36.1/24$

Right Out:  $-10.300 \pm 5.510$   $\chi^2/\text{NDF}: 28.1/32$

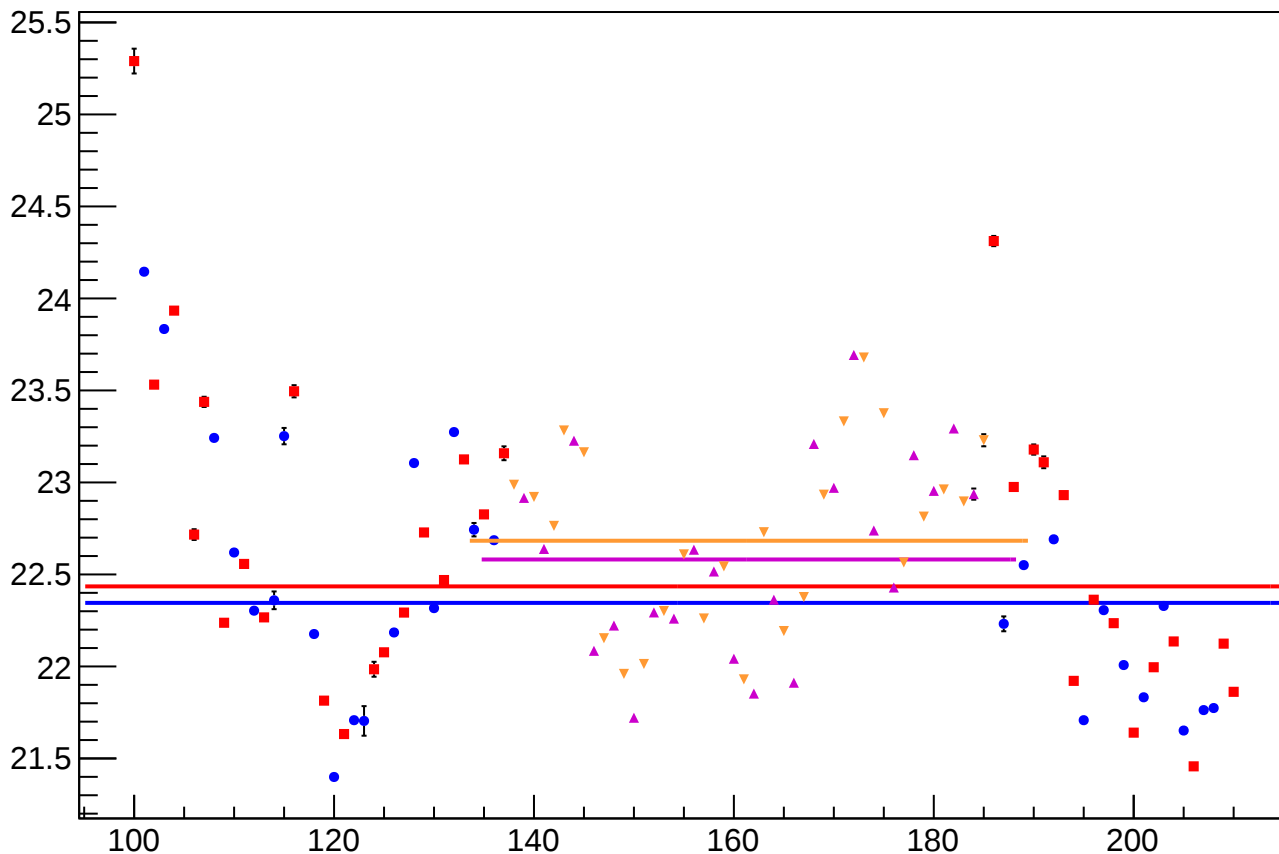
Left In:  $-7.915 \pm 5.422$   $\chi^2/\text{NDF}: 18.7/22$

+ sign  $1.745 \pm 3.930$   $\chi^2/\text{NDF}: 59.1/52$

All:  $-3.762 \pm 2.755$   $\chi^2/\text{NDF}: 109.9/108$

- sign  $-9.088 \pm 3.864$   $\chi^2/\text{NDF}: 46.9/55$

asym\_bcm\_dg\_us\_bcm\_an\_us\_agg\_dd\_rms vs Slug



Right In: 22.345+/-0.004  $\chi^2/\text{NDF}$ : 24509.5/27

Left Out: 22.683+/-0.004  $\chi^2/\text{NDF}$ : 16320.2/24

Right Out: 22.435+/-0.004  $\chi^2/\text{NDF}$ : 30834.8/32

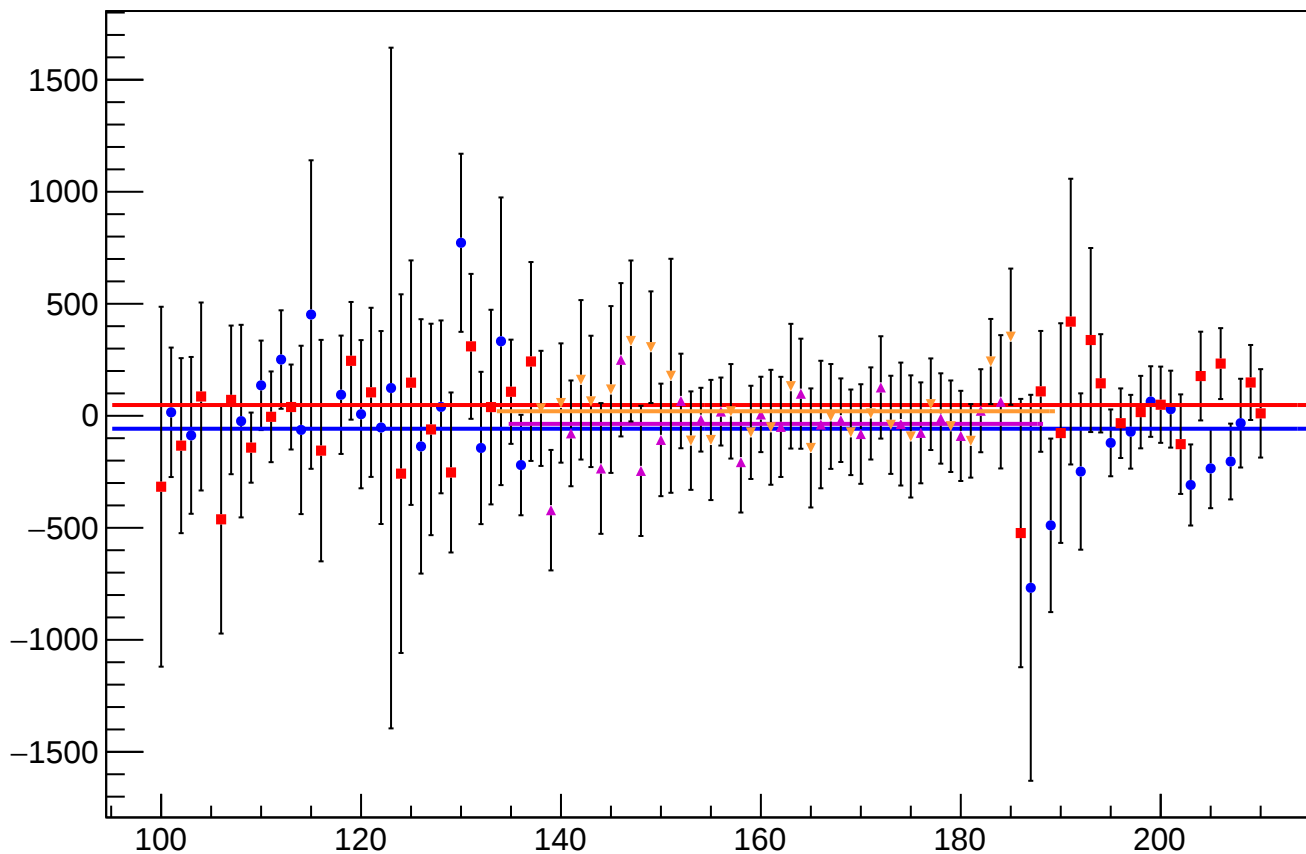
Left In: 22.581+/-0.004  $\chi^2/\text{NDF}$ : 17904.5/22

+ sign 22.532+/-0.003  $\chi^2/\text{NDF}$ : 44482.4/52

All: 22.521+/-0.002  $\chi^2/\text{NDF}$ : 93972.2/108

- sign 22.509+/-0.003  $\chi^2/\text{NDF}$ : 49455.5/55

asym\_bcm\_dg\_ds\_bcm\_an\_us\_agg\_avg\_mean vs Slug



Right In:  $-57.724 \pm 47.039$   $\chi^2/\text{NDF}$ : 16.3/27

Left Out:  $20.306 \pm 48.049$   $\chi^2/\text{NDF}$ : 7.7/24

Right Out:  $48.121 \pm 44.188$   $\chi^2/\text{NDF}$ : 10.8/32

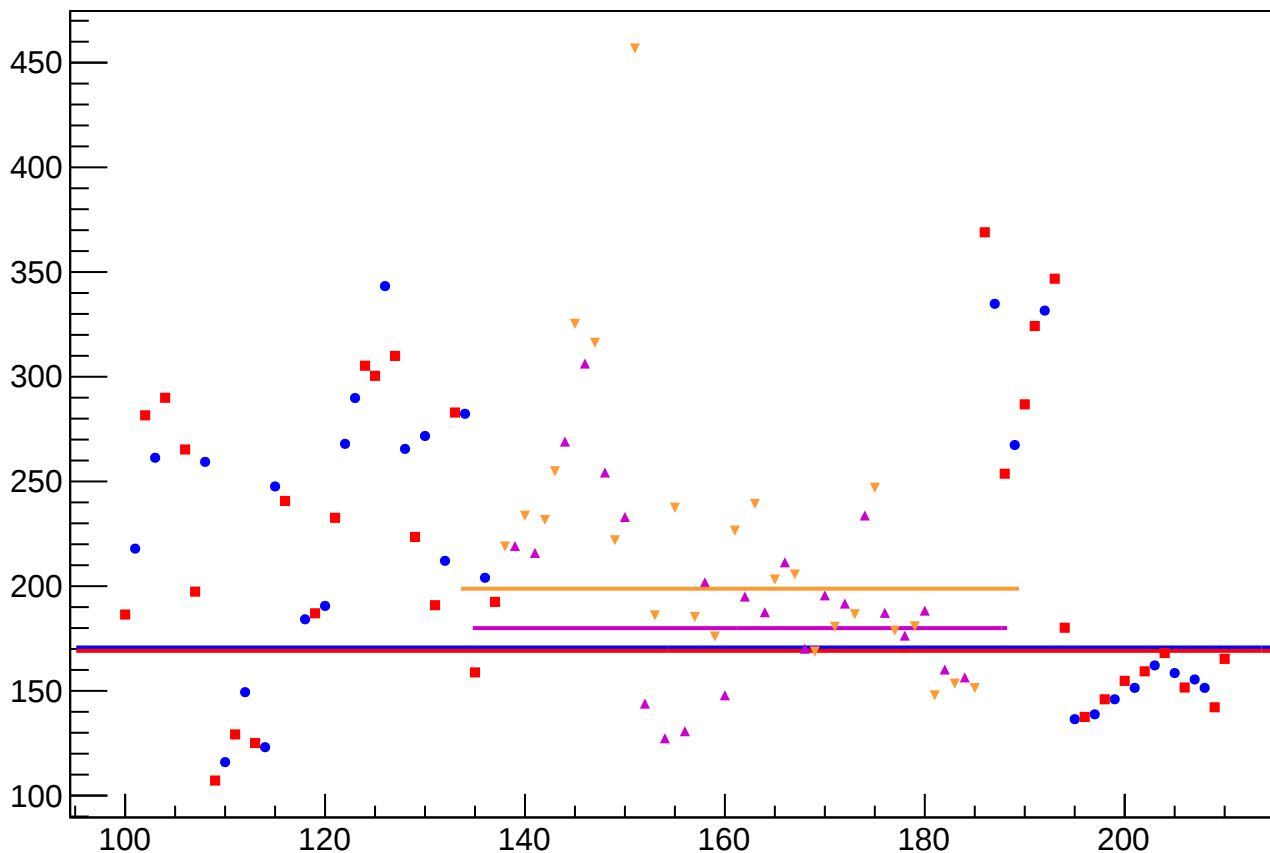
Left In:  $-35.996 \pm 45.180$   $\chi^2/\text{NDF}$ : 6.1/22

+ sign  $-19.538 \pm 33.613$   $\chi^2/\text{NDF}$ : 25.3/52

All:  $-5.449 \pm 23.020$   $\chi^2/\text{NDF}$ : 44.2/108

- sign  $6.996 \pm 31.591$   $\chi^2/\text{NDF}$ : 18.6/55

asym\_bcm\_dg\_ds\_bcm\_an\_us\_agg\_avg\_rms vs Slug



Right In: 170.708 $\pm$ 0.033  $\chi^2$ /NDF: 2120846.8/27

Left Out: 198.784 $\pm$ 0.034  $\chi^2$ /NDF:1758481.8/24

Right Out: 169.123 $\pm$ 0.031  $\chi^2$ /NDF: 2830396.2/32

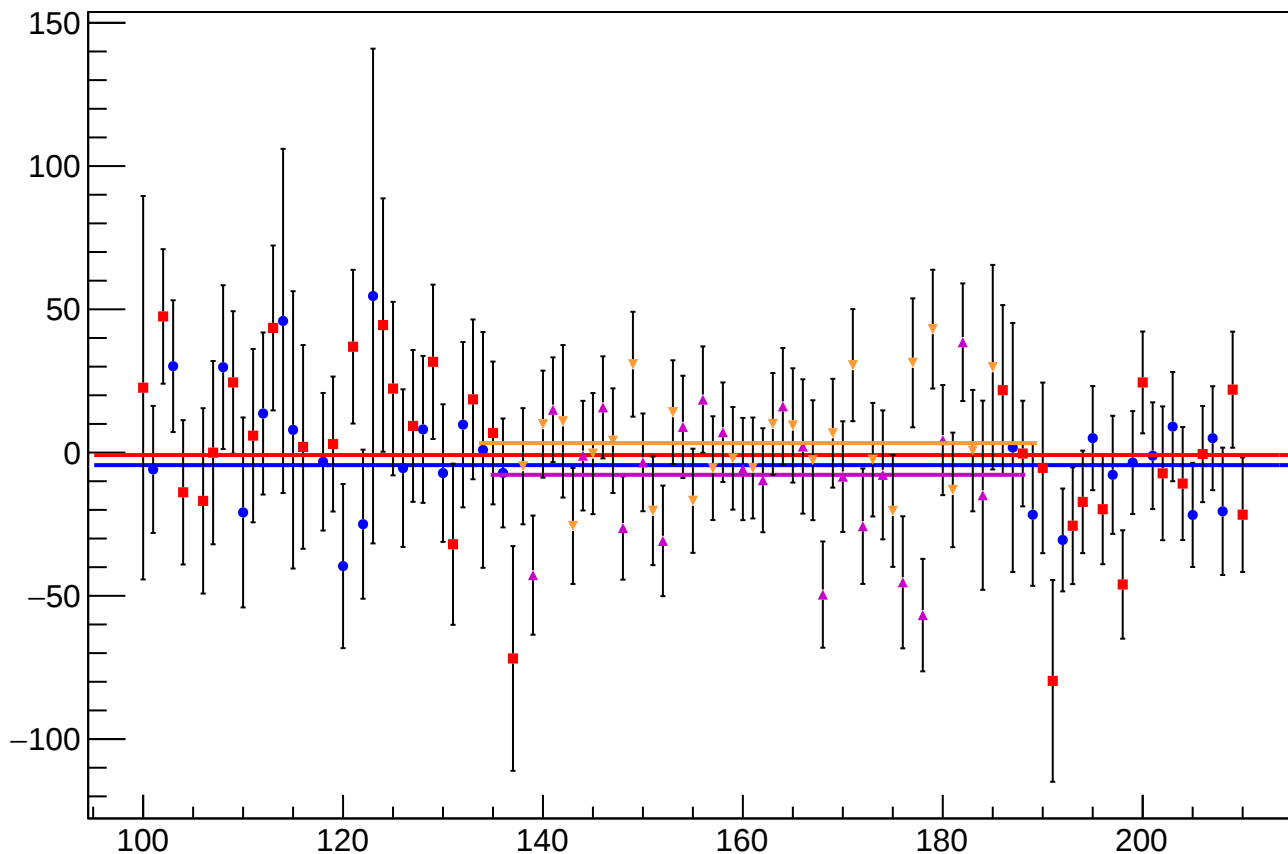
Left In: 179.972 $\pm$ 0.032  $\chi^2$ /NDF:1575888.3/22

+ sign 184.448 $\pm$ 0.024  $\chi^2$ /NDF: 4228032.4/52

All: 179.127 $\pm$ 0.016  $\chi^2$ /NDF: 8787641.4/100

- sign 174.427 $\pm$ 0.022  $\chi^2$ /NDF: 4465230.0/55

asym\_bcm\_dg\_ds\_bcm\_an\_us\_agg\_dd\_mean vs Slug



Right In:  $-4.382 \pm 4.509$   $\chi^2/\text{NDF}: 13.4/27$

Left Out:  $3.307 \pm 3.954$   $\chi^2/\text{NDF}: 18.7/24$

Right Out:  $-0.864 \pm 4.234$   $\chi^2/\text{NDF}: 38.0/32$

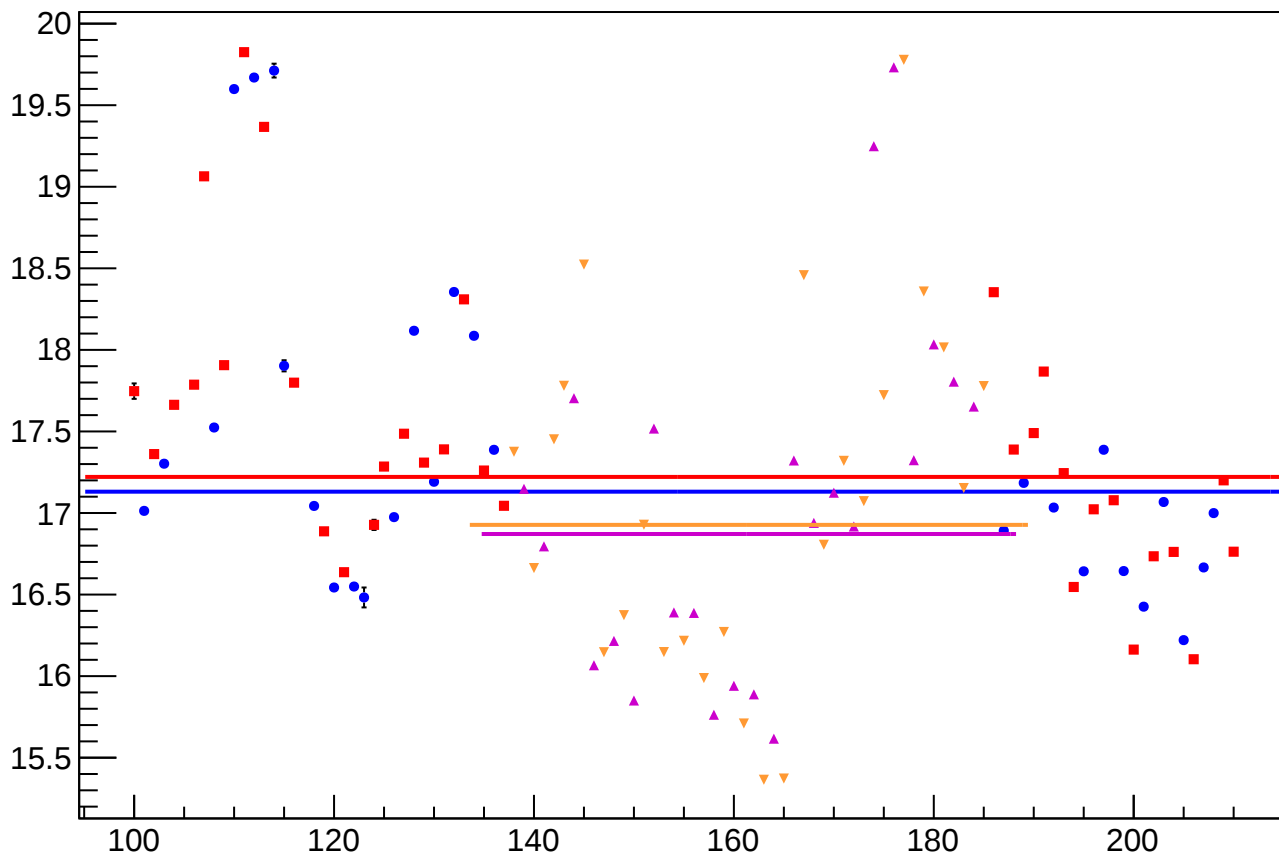
Left In:  $-7.756 \pm 4.061$   $\chi^2/\text{NDF}: 34.3/22$

+ sign  $-0.035 \pm 2.973$   $\chi^2/\text{NDF}: 33.8/52$

All:  $-2.276 \pm 2.087$   $\chi^2/\text{NDF}: 108.5/108$

- sign  $-4.454 \pm 2.931$   $\chi^2/\text{NDF}: 73.7/55$

asym\_bcm\_dg\_ds\_bcm\_an\_us\_agg\_dd\_rms vs Slug



Right In:  $17.131 \pm 0.003$   $\chi^2/\text{NDF}: 54646.5/27$

Left Out:  $16.927 \pm 0.003$   $\chi^2/\text{NDF}: 138533.2/24$

Right Out:  $17.221 \pm 0.003$   $\chi^2/\text{NDF}: 66945.8/32$

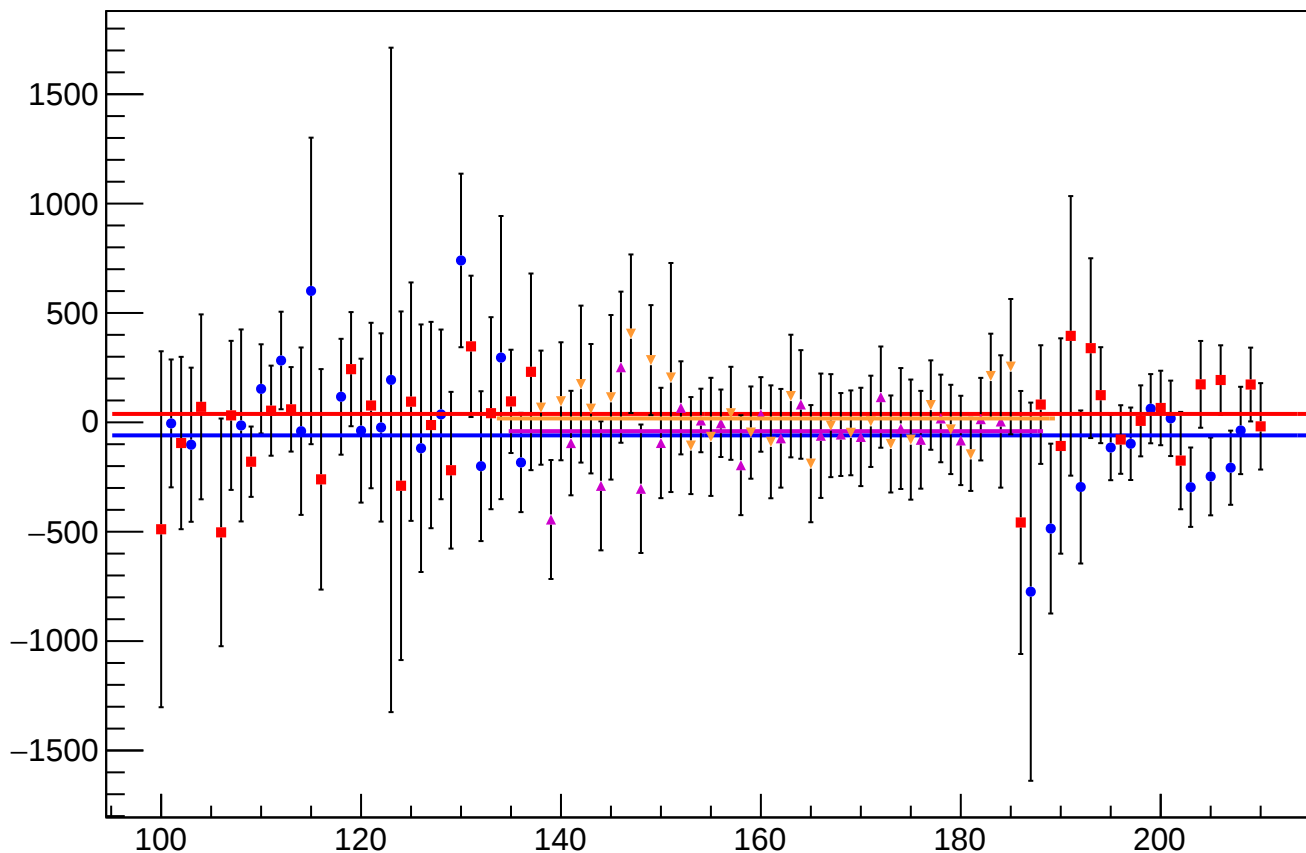
Left In:  $16.871 \pm 0.003$   $\chi^2/\text{NDF}: 117993.8/22$

+ sign  $17.016 \pm 0.002$   $\chi^2/\text{NDF}: 195482.3/52$

All:  $17.028 \pm 0.001$   $\chi^2/\text{NDF}: 387601.6/108$

- sign  $17.039 \pm 0.002$   $\chi^2/\text{NDF}: 192057.3/55$

asym\_bcm\_dg\_us\_bcm\_dg\_ds\_agg\_avg\_mean vs Slug



Right In: -59.606 $\pm$ 47.309  $\chi^2$ /NDF: 16.7/27

Left Out: 17.828 $\pm$ 48.547  $\chi^2$ /NDF: 7.5/24

Right Out: 38.469 $\pm$ 44.526  $\chi^2$ /NDF: 11.8/32

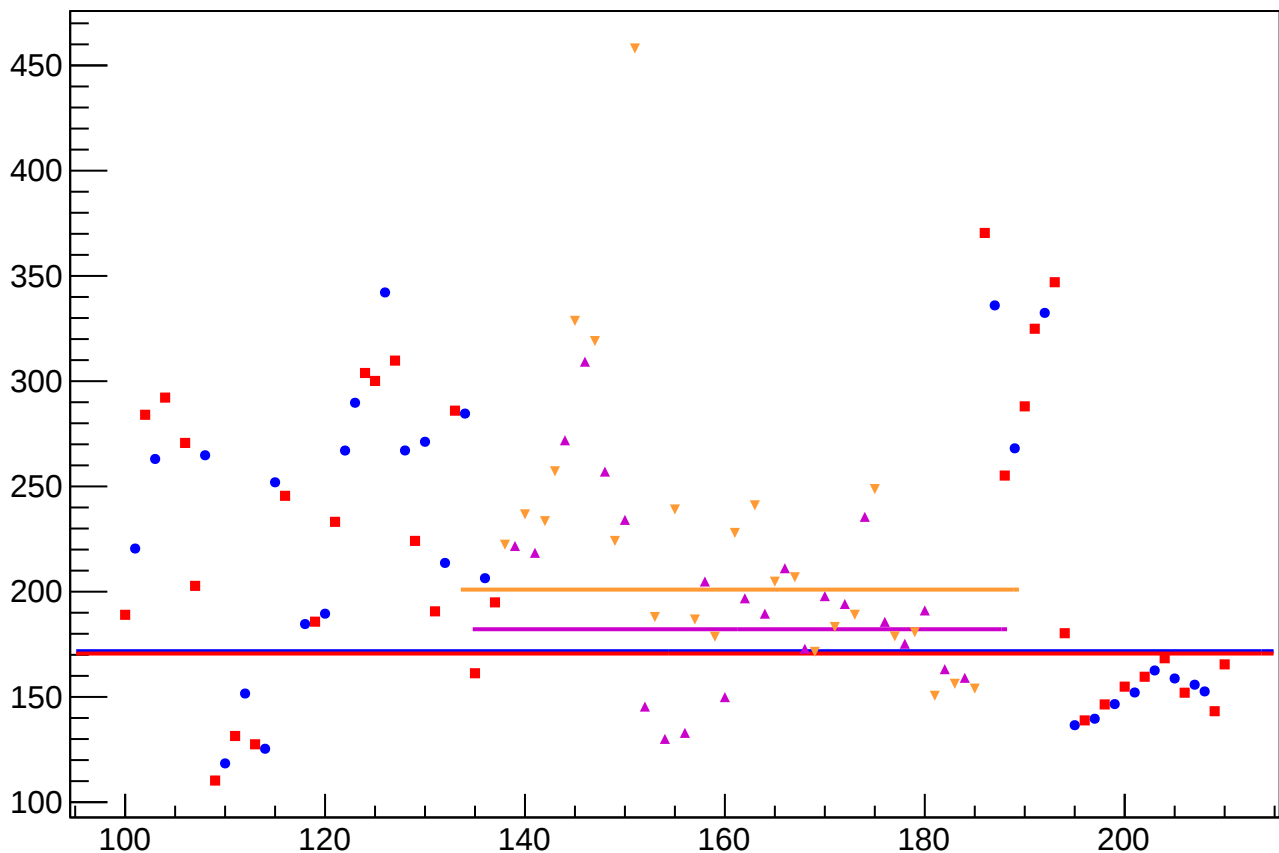
Left In: -40.355 $\pm$ 45.689  $\chi^2$ /NDF: 6.6/22

+ sign -21.889 $\pm$ 33.882  $\chi^2$ /NDF: 25.5/52

All: -10.243 $\pm$ 23.221  $\chi^2$ /NDF: 45.7/108

- sign 0.073 $\pm$ 31.888  $\chi^2$ /NDF: 20.0/55

asym\_bcm\_dg\_us\_bcm\_dg\_ds\_agg\_avg\_rms vs Slug



Right In: 171.733 $\pm$ 0.033  $\chi^2$ /NDF: 2106905.0/27

Left Out: 200.985 $\pm$ 0.034  $\chi^2$ /NDF: 1727291.4/24

Right Out: 170.613 $\pm$ 0.031  $\chi^2$ /NDF: 2774612.7/32

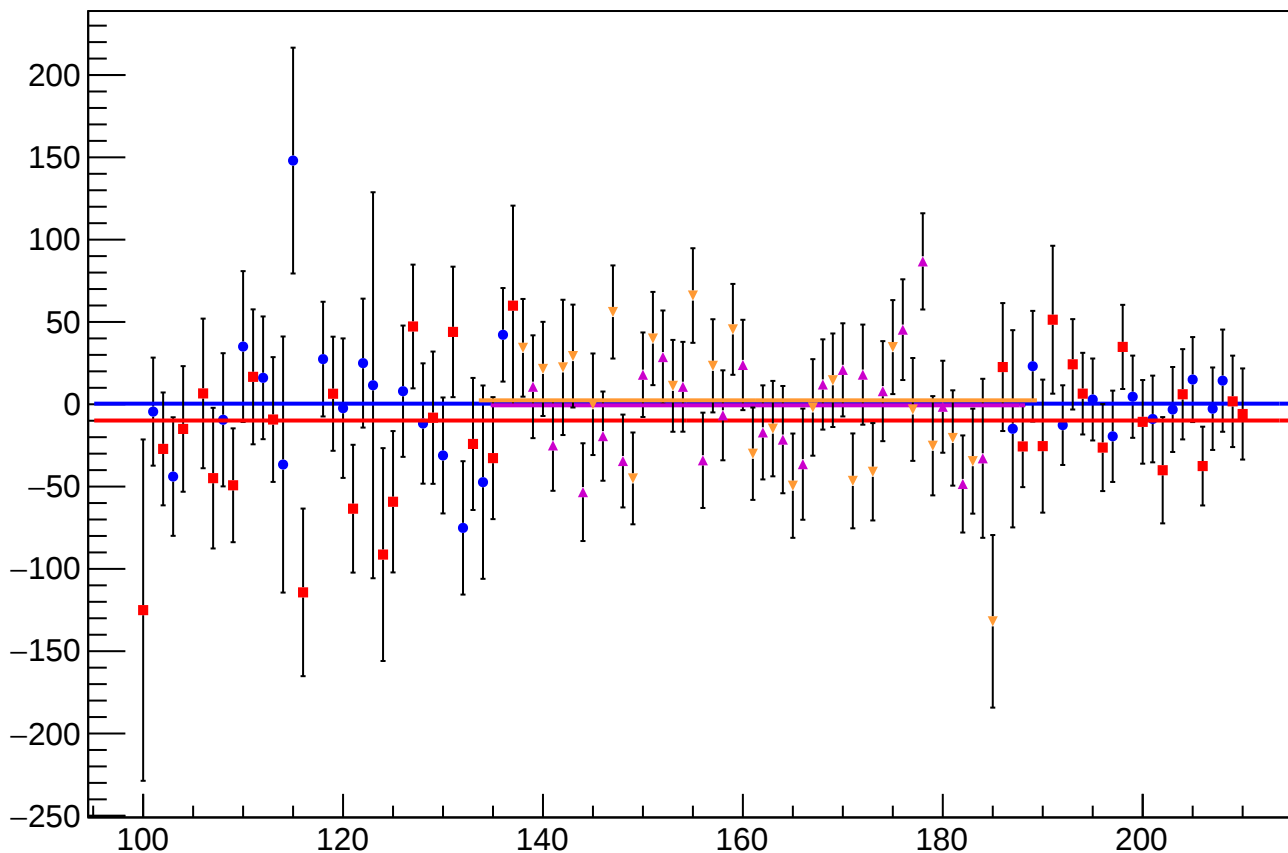
Left In: 182.158 $\pm$ 0.032  $\chi^2$ /NDF: 1535922.8/22

+ sign 185.981 $\pm$ 0.024  $\chi^2$ /NDF: 4206651.3/52

All: 180.814 $\pm$ 0.016  $\chi^2$ /NDF: 8670408.4/108

- sign 176.237 $\pm$ 0.023  $\chi^2$ /NDF: 4376034.3/55

asym\_bcm\_dg\_us\_bcm\_dg\_ds\_agg\_dd\_mean vs Slug



Right In:  $0.369 \pm 6.353$   $\chi^2/\text{NDF}: 17.5/27$

Left Out:  $2.390 \pm 5.980$   $\chi^2/\text{NDF}: 39.1/24$

Right Out:  $-9.873 \pm 5.919$   $\chi^2/\text{NDF}: 30.5/32$

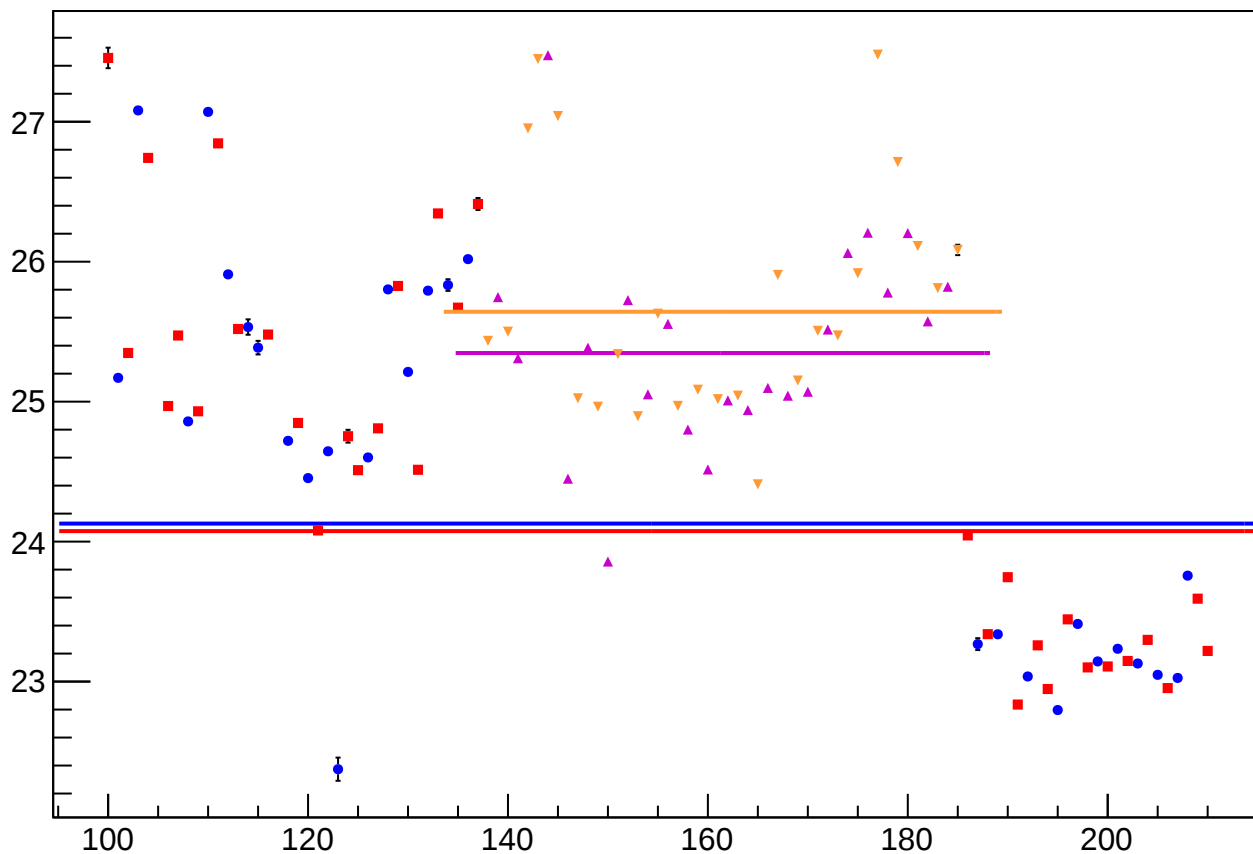
Left In:  $-0.641 \pm 6.091$   $\chi^2/\text{NDF}: 27.3/22$

+ sign  $1.441 \pm 4.355$   $\chi^2/\text{NDF}: 56.7/52$

All:  $-2.062 \pm 3.040$   $\chi^2/\text{NDF}: 116.9/108$

- sign  $-5.390 \pm 4.245$   $\chi^2/\text{NDF}: 59.0/55$

asym\_bcm\_dg\_us\_bcm\_dg\_ds\_agg\_dd\_rms vs Slug



Right In: 24.129 $\pm$ 0.004  $\chi^2$ /NDF: 80732.9/27

Left Out: 25.642 $\pm$ 0.004  $\chi^2$ /NDF: 34802.2/24

Right Out: 24.075 $\pm$ 0.004  $\chi^2$ /NDF: 78106.7/32

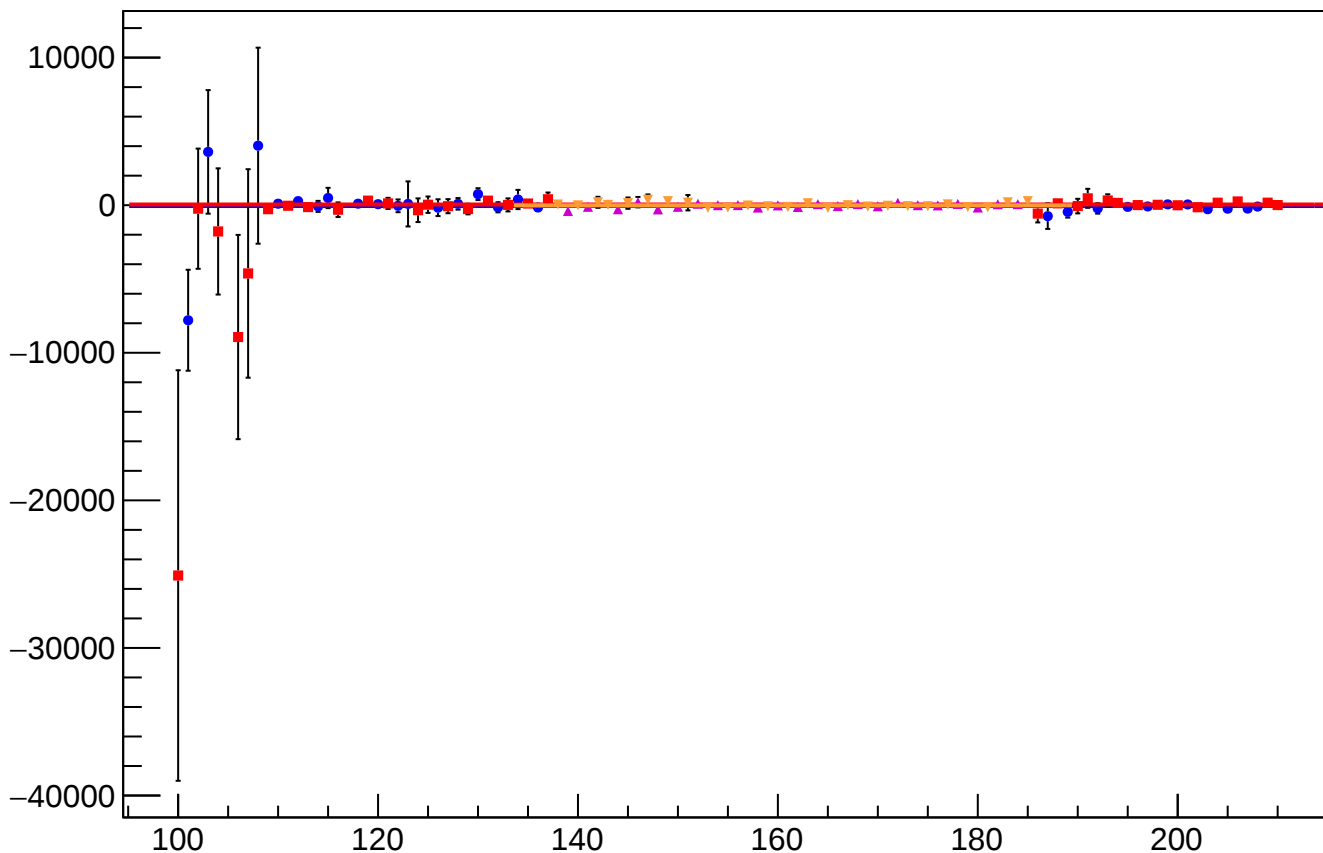
Left In: 25.347 $\pm$ 0.004  $\chi^2$ /NDF: 29389.5/22

+ sign 24.931 $\pm$ 0.003  $\chi^2$ /NDF: 175722.6/52

All: 24.809 $\pm$ 0.002  $\chi^2$ /NDF: 331181.1/108

- sign 24.693 $\pm$ 0.003  $\chi^2$ /NDF: 152385.1/55

asym\_bcm\_cav4cQ\_bcm\_an\_us\_agg\_avg\_mean vs Slug



Right In:  $-56.215 \pm 49.609$   $\chi^2/\text{NDF}$ : 21.4/27

Left Out:  $-11.432 \pm 48.263$   $\chi^2/\text{NDF}$ : 8.0/24

Right Out:  $46.811 \pm 47.287$   $\chi^2/\text{NDF}$ : 18.3/32

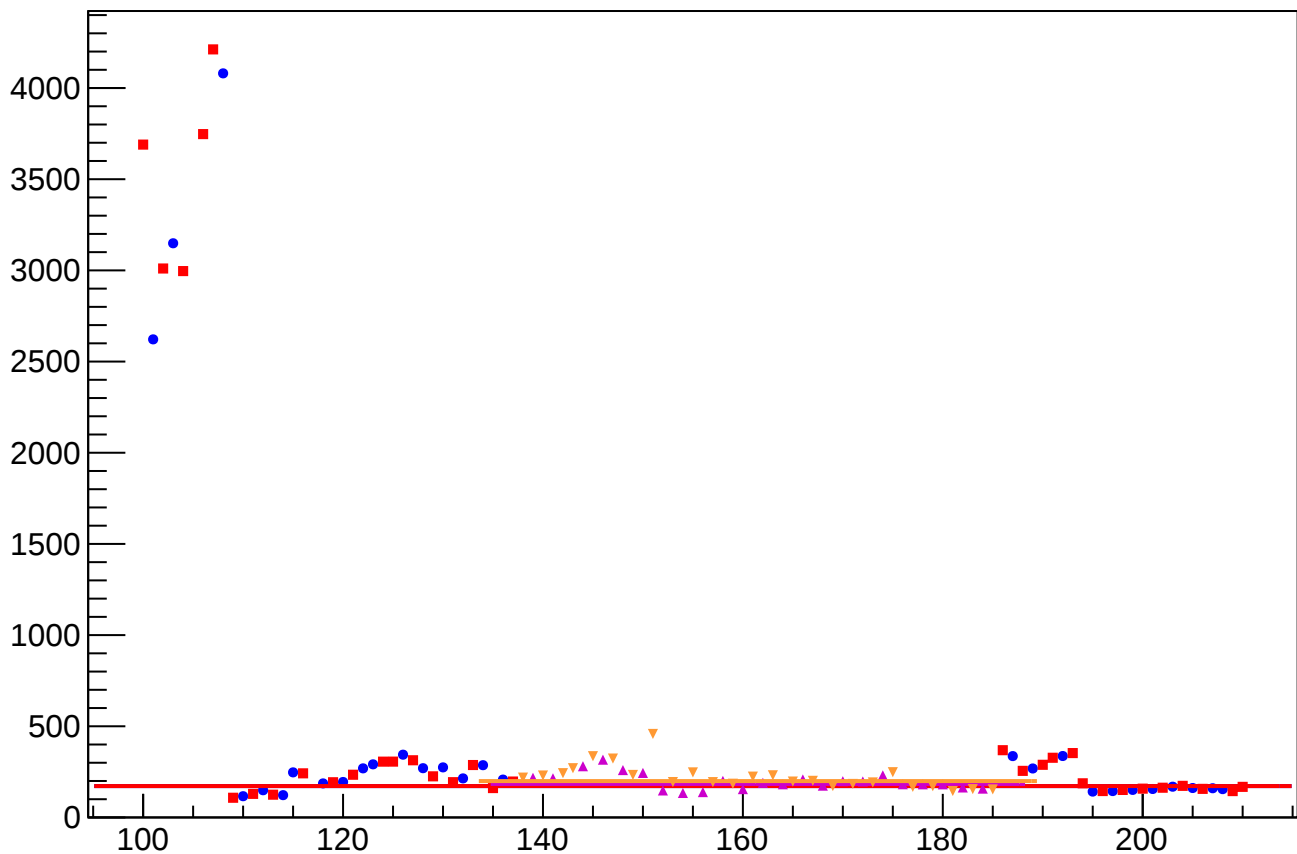
Left In:  $-27.098 \pm 45.999$   $\chi^2/\text{NDF}$ : 7.2/22

+ sign  $-33.207 \pm 34.593$   $\chi^2/\text{NDF}$ : 29.8/52

All:  $-11.177 \pm 23.867$   $\chi^2/\text{NDF}$ : 57.3/108

- sign  $8.836 \pm 32.972$   $\chi^2/\text{NDF}$ : 26.7/55

asym\_bcm\_cav4cQ\_bcm\_an\_us\_agg\_avg\_rms vs Slug



Right In: 171.996 $\pm$ 0.035  $\chi^2$ /NDF: 4505072.6/27

Left Out: 199.438 $\pm$ 0.034  $\chi^2$ /NDF:1877848.7/24

Right Out: 172.059 $\pm$ 0.033  $\chi^2$ /NDF: 5393658.8/32

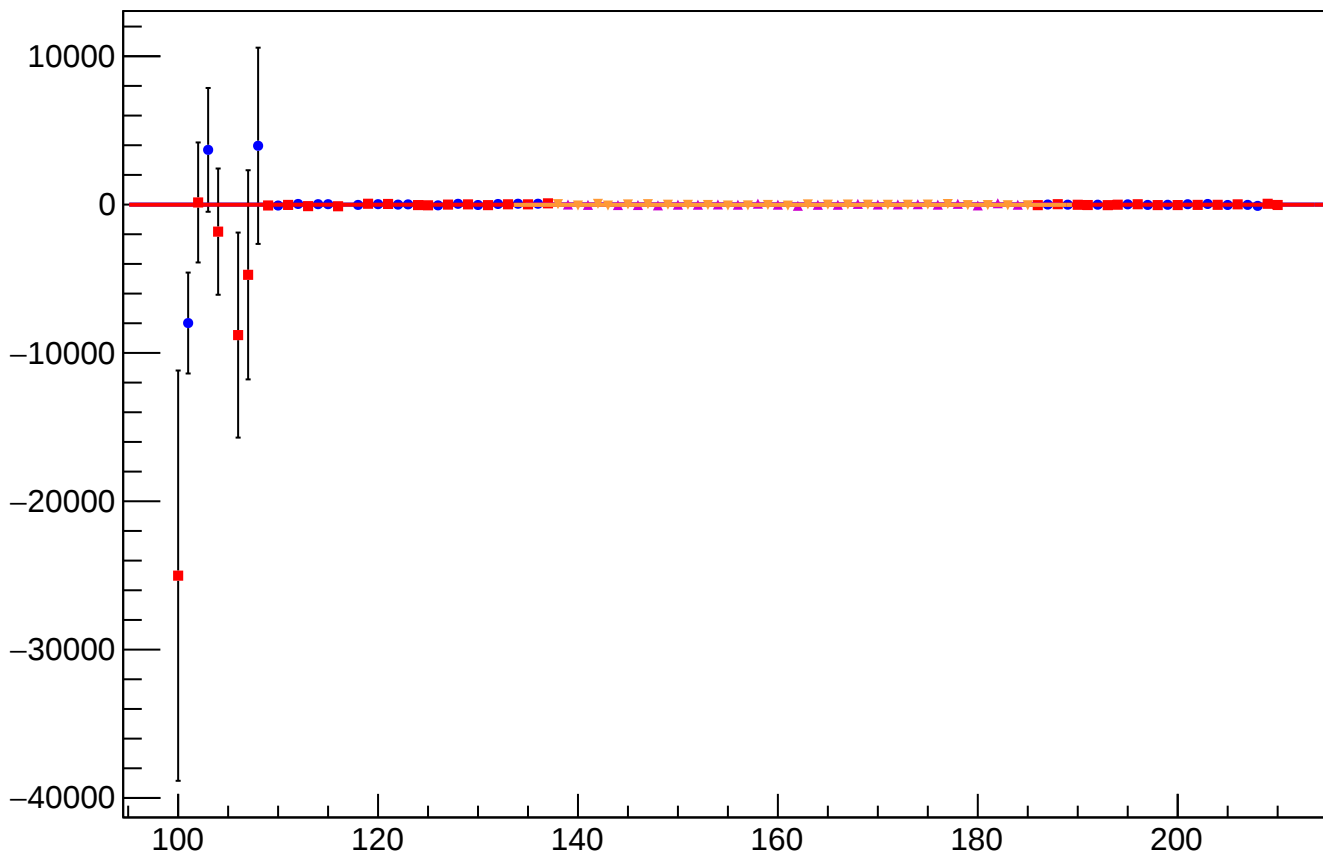
Left In: 183.805 $\pm$ 0.033  $\chi^2$ /NDF:1412869.6/22

+ sign 186.094 $\pm$ 0.024  $\chi^2$ /NDF: 6697336.2/52

All: 181.902 $\pm$ 0.017  $\chi^2$ /NDF: 13623321.6/10

- sign 178.094 $\pm$ 0.023  $\chi^2$ /NDF: 6869936.9/55

asym\_bcm\_cav4cQ\_bcm\_an\_us\_agg\_dd\_mean vs Slug



Right In:  $-0.456 \pm 7.645$   $\chi^2/\text{NDF}$ : 29.5/27

Left Out:  $-18.118 \pm 6.704$   $\chi^2/\text{NDF}$ : 21.7/24

Right Out:  $-8.529 \pm 7.198$   $\chi^2/\text{NDF}$ : 34.3/32

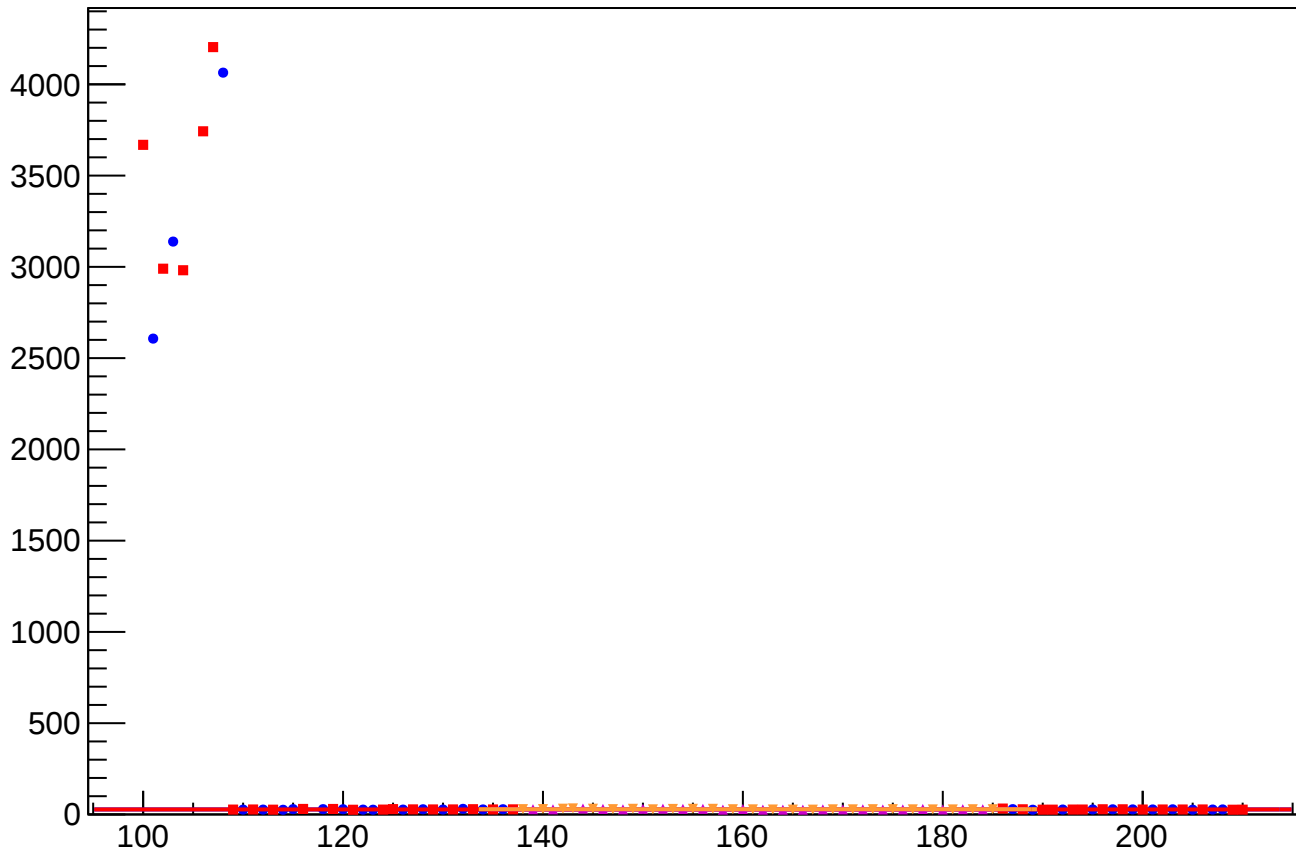
Left In:  $-1.267 \pm 6.908$   $\chi^2/\text{NDF}$ : 32.0/22

+ sign  $-10.441 \pm 5.040$   $\chi^2/\text{NDF}$ : 54.3/52

All:  $-7.563 \pm 3.544$   $\chi^2/\text{NDF}$ : 121.8/108

- sign  $-4.749 \pm 4.984$   $\chi^2/\text{NDF}$ : 66.9/55

asym\_bcm\_cav4cQ\_bcm\_an\_us\_agg\_dd\_rms vs Slug



Right In: 27.498 $\pm$ 0.005  $\chi^2$ /NDF: 3040403.2/27

Left Out: 28.694 $\pm$ 0.005  $\chi^2$ /NDF: 110466.9/24

Right Out: 27.427 $\pm$ 0.005  $\chi^2$ /NDF: 3512170.8/32

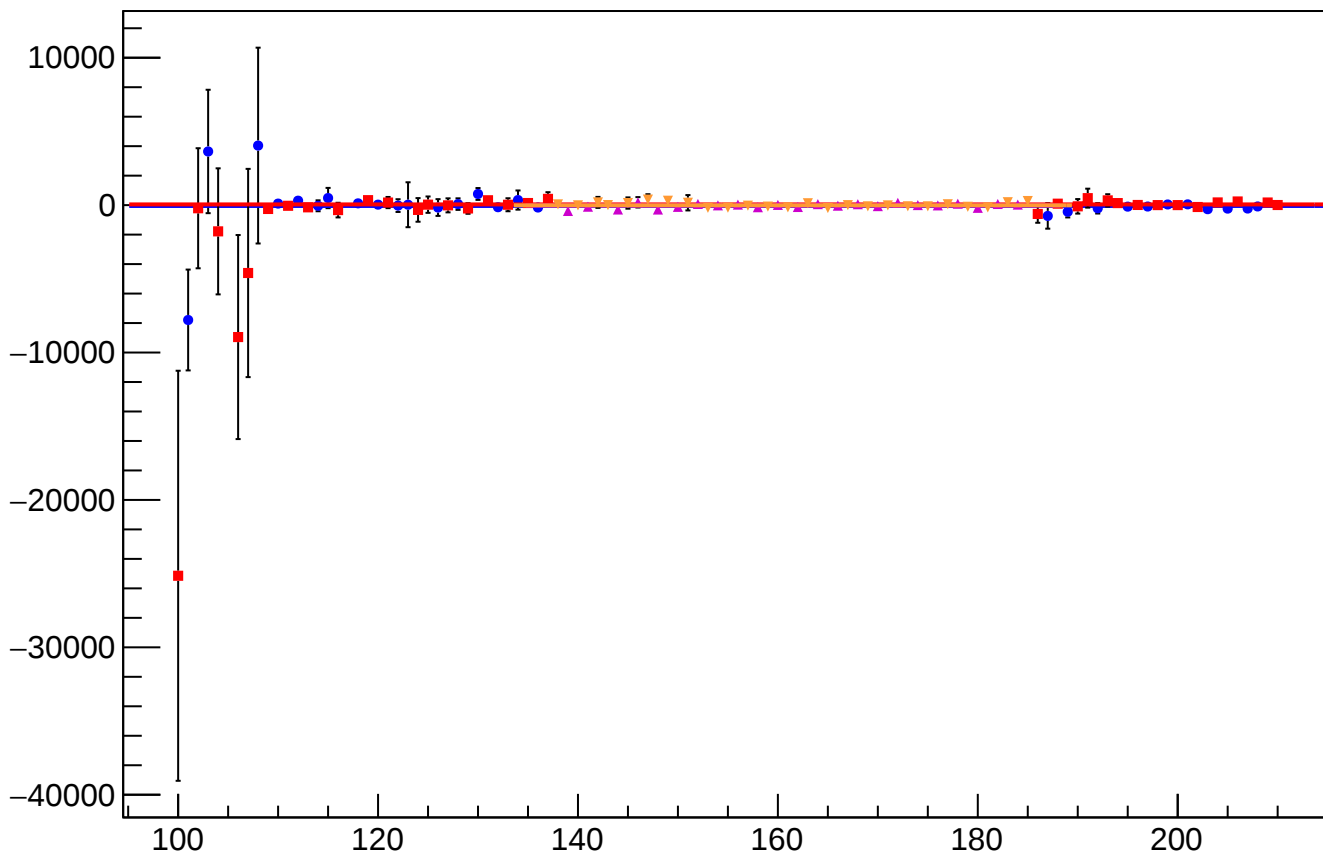
Left In: 28.677 $\pm$ 0.005  $\chi^2$ /NDF: 123814.4/22

+ sign 28.174 $\pm$ 0.004  $\chi^2$ /NDF: 3178526.4/52

All: 28.125 $\pm$ 0.003  $\chi^2$ /NDF: 6846243.6/108

- sign 28.078 $\pm$ 0.004  $\chi^2$ /NDF: 3667348.6/55

asym\_bcm\_cav4cQ\_bcm\_an\_ds\_agg\_avg\_mean vs Slug



Right In: -54.979 $\pm$ 49.455  $\chi^2$ /NDF: 21.7/27

Left Out: -13.878 $\pm$ 48.155  $\chi^2$ /NDF: 8.8/24

Right Out: 48.551 $\pm$ 47.149  $\chi^2$ /NDF: 18.9/32

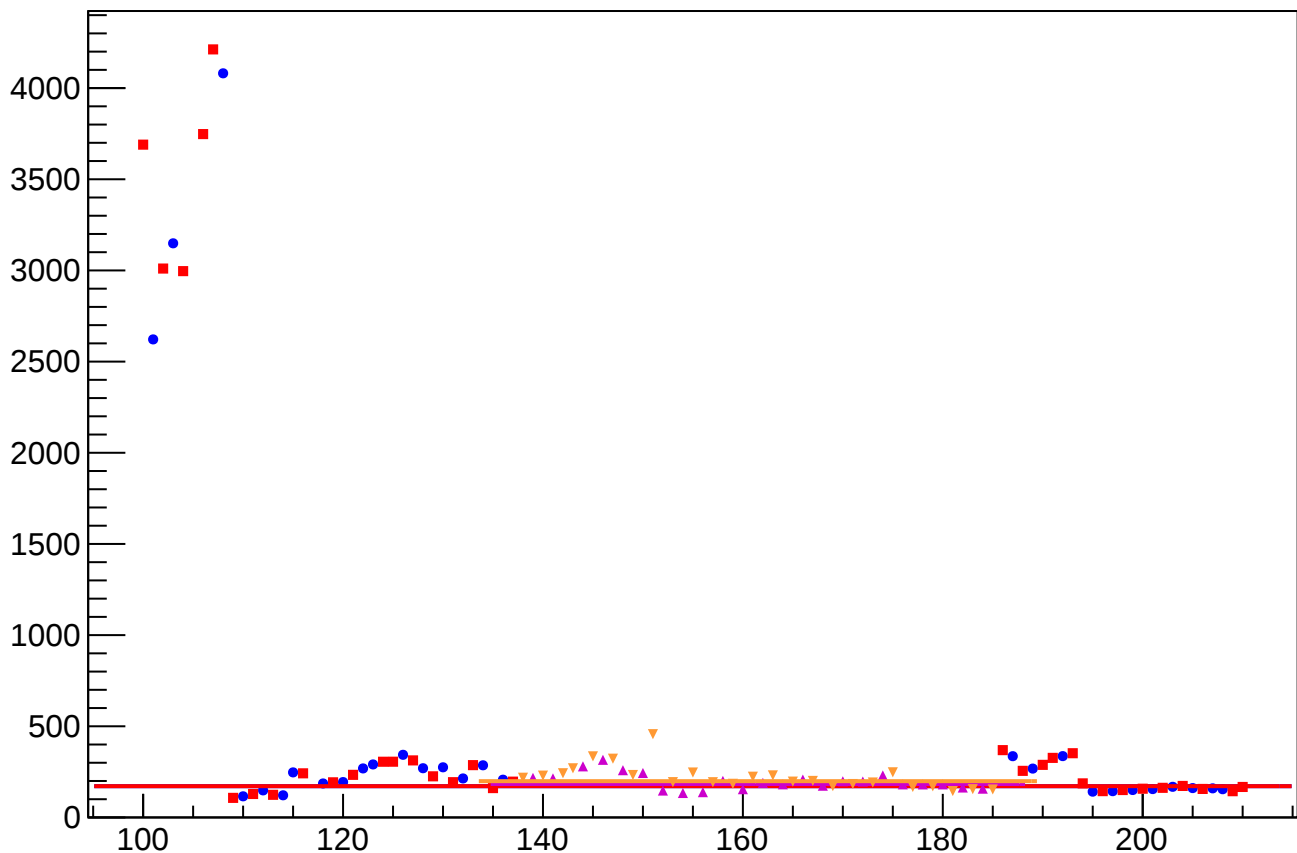
Left In: -27.286 $\pm$ 45.907  $\chi^2$ /NDF: 7.5/22

+ sign -33.881 $\pm$ 34.501  $\chi^2$ /NDF: 30.9/52

All: -11.092 $\pm$ 23.807  $\chi^2$ /NDF: 59.5/108

- sign 9.621 $\pm$ 32.891  $\chi^2$ /NDF: 27.7/55

asym\_bcm\_cav4cQ\_bcm\_an\_ds\_agg\_avg\_rms vs Slug



Right In: 171.417 $\pm$ 0.035  $\chi^2$ /NDF: 4518015.5/27

Left Out: 198.997 $\pm$ 0.034  $\chi^2$ /NDF:1877636.0/24

Right Out: 171.503 $\pm$ 0.033  $\chi^2$ /NDF: 5411301.5/32

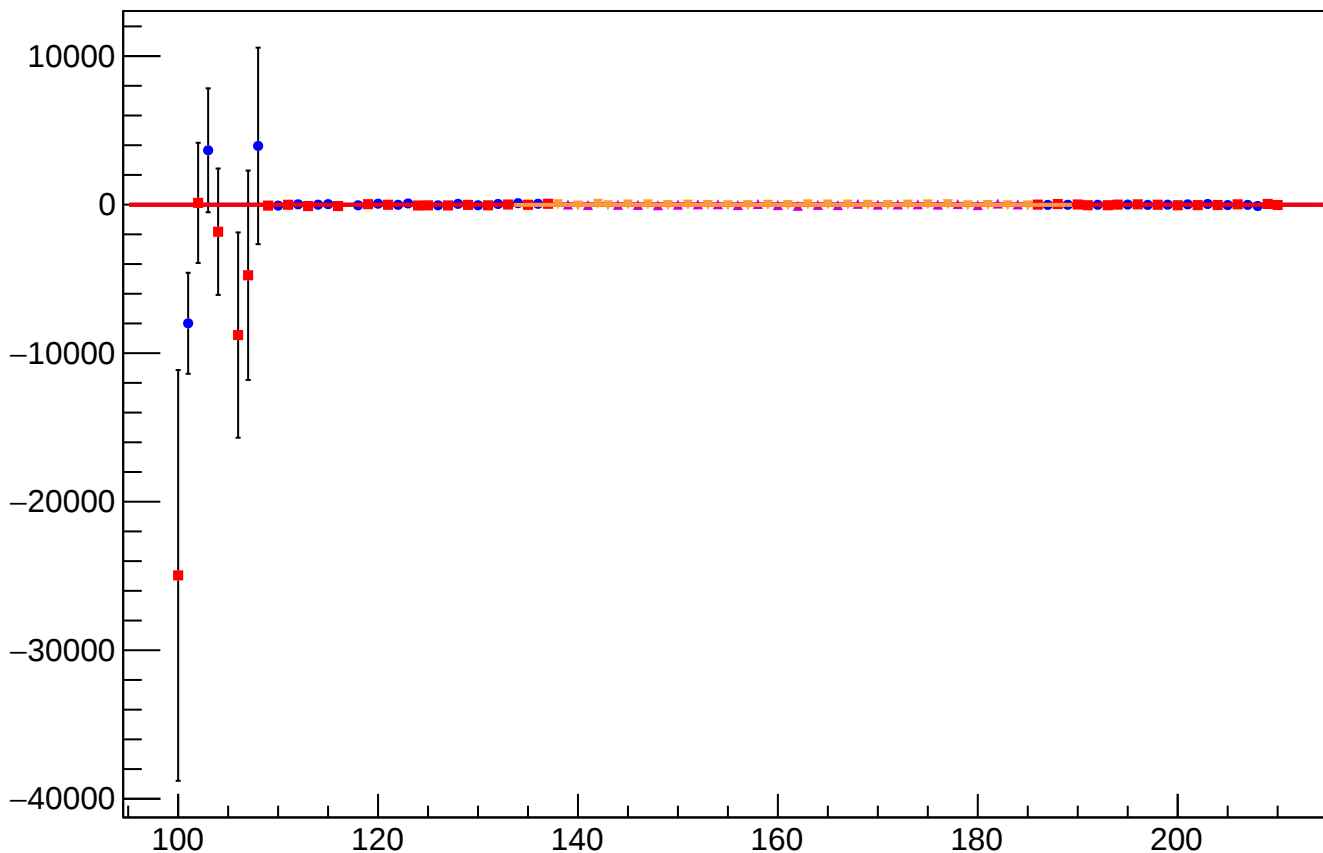
Left In: 183.442 $\pm$ 0.032  $\chi^2$ /NDF:1412341.8/22

+ sign 185.574 $\pm$ 0.024  $\chi^2$ /NDF: 6714915.9/52

All: 181.413 $\pm$ 0.017  $\chi^2$ /NDF: 13659916.2/10

- sign 177.631 $\pm$ 0.023  $\chi^2$ /NDF: 6889471.7/55

asym\_bcm\_cav4cQ\_bcm\_an\_ds\_agg\_dd\_mean vs Slug



Right In:  $-1.945 \pm 7.621$   $\chi^2/\text{NDF}$ : 34.1/27

Left Out:  $-15.829 \pm 6.733$   $\chi^2/\text{NDF}$ : 16.5/24

Right Out:  $-11.496 \pm 7.179$   $\chi^2/\text{NDF}$ : 30.3/32

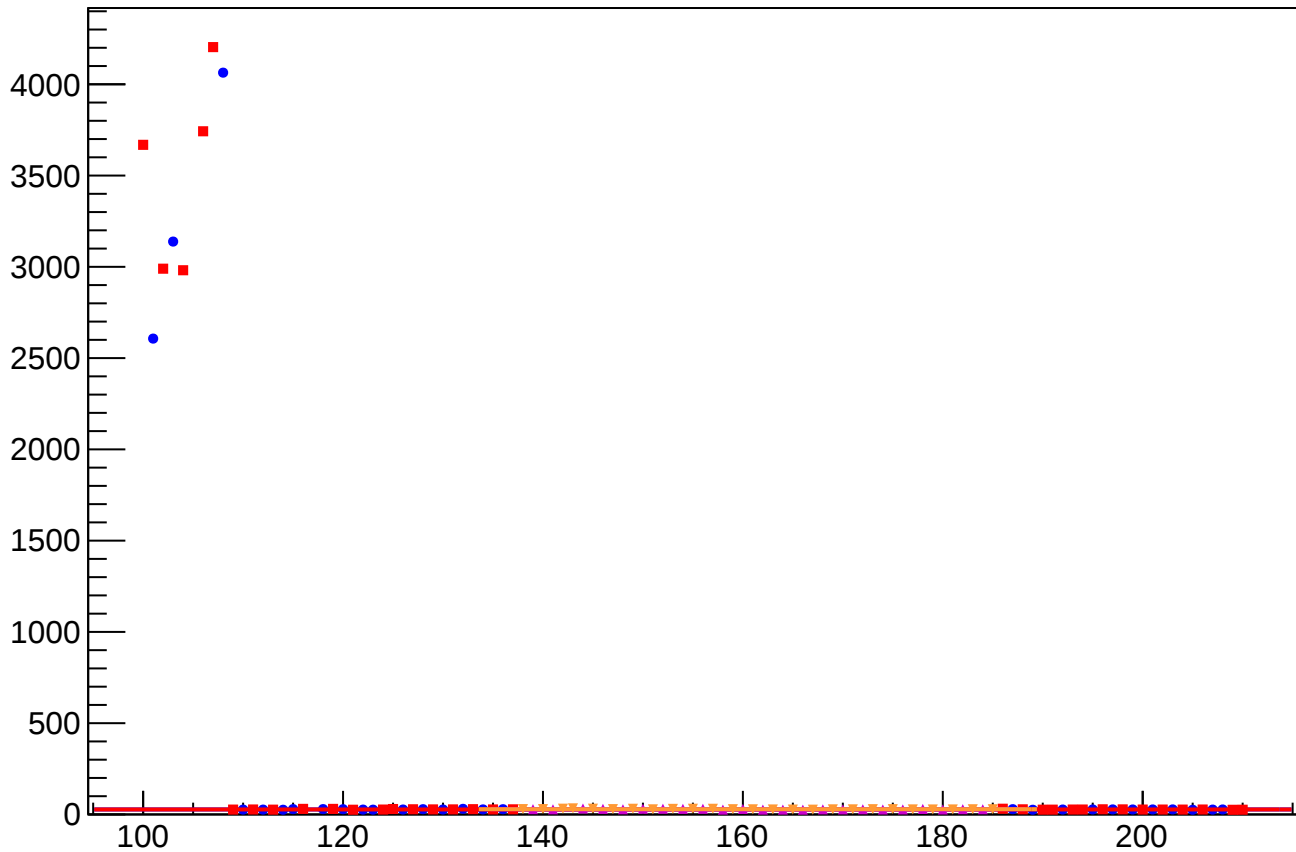
Left In:  $0.498 \pm 6.937$   $\chi^2/\text{NDF}$ : 26.1/22

+ sign  $-9.743 \pm 5.046$   $\chi^2/\text{NDF}$ : 52.5/52

All:  $-7.493 \pm 3.548$   $\chi^2/\text{NDF}$ : 110.7/108

- sign  $-5.293 \pm 4.989$   $\chi^2/\text{NDF}$ : 57.9/55

asym\_bcm\_cav4cQ\_bcm\_an\_ds\_agg\_dd\_rms vs Slug



Right In: 27.407 $\pm$ 0.005  $\chi^2$ /NDF: 3046425.5/27

Left Out: 28.814 $\pm$ 0.005  $\chi^2$ /NDF: 122153.6/24

Right Out: 27.353 $\pm$ 0.005  $\chi^2$ /NDF: 3516705.4/32

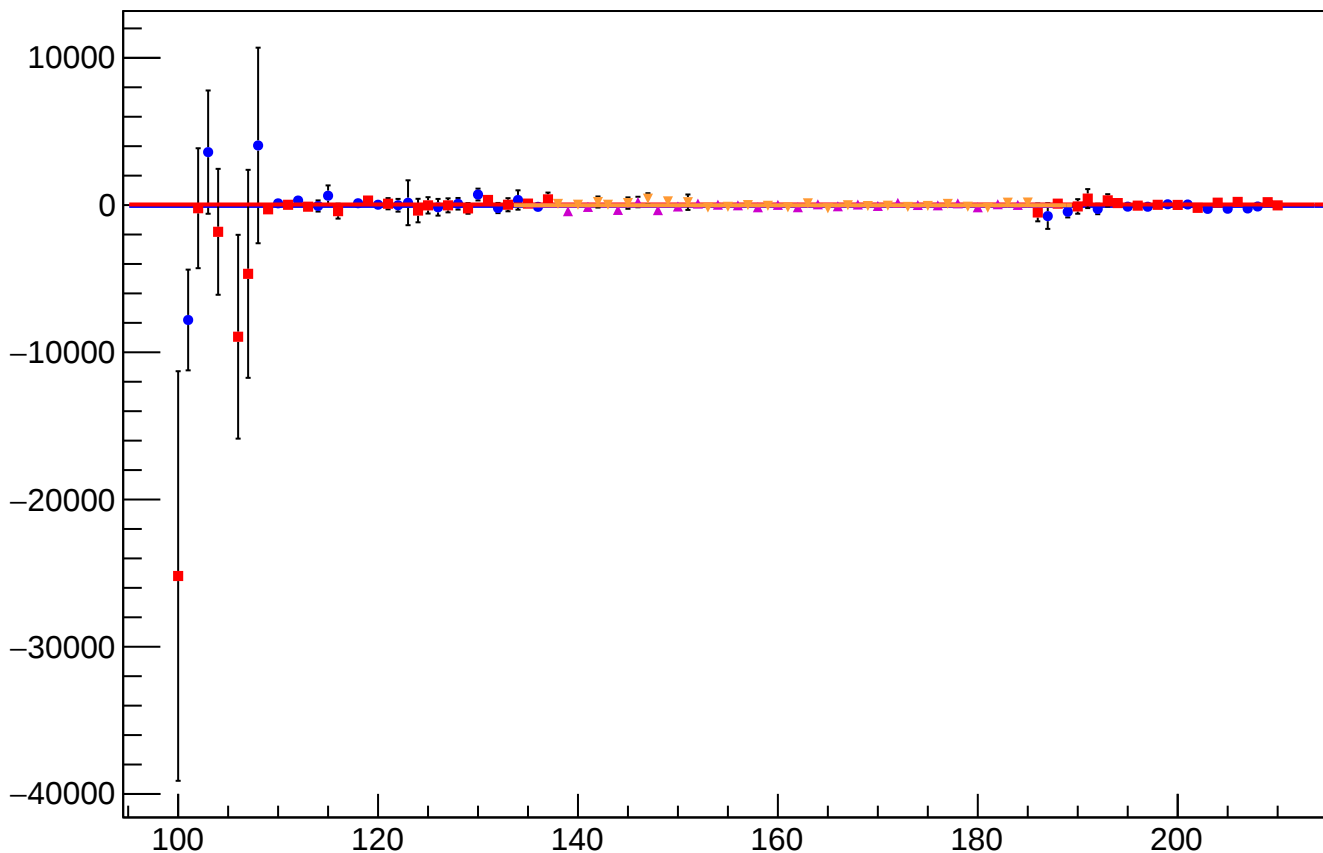
Left In: 28.797 $\pm$ 0.005  $\chi^2$ /NDF: 128279.2/22

+ sign 28.197 $\pm$ 0.004  $\chi^2$ /NDF: 3206873.7/52

All: 28.148 $\pm$ 0.003  $\chi^2$ /NDF: 6894099.0/108

- sign 28.100 $\pm$ 0.004  $\chi^2$ /NDF: 3686847.8/55

asym\_bcm\_cav4cQ\_bcm\_dg\_us\_agg\_avg\_mean vs Slug



Right In:  $-57.012 \pm 49.795$   $\chi^2/\text{NDF}$ : 22.0/27

Left Out:  $-13.966 \pm 48.735$   $\chi^2/\text{NDF}$ : 8.1/24

Right Out:  $40.411 \pm 47.497$   $\chi^2/\text{NDF}$ : 18.3/32

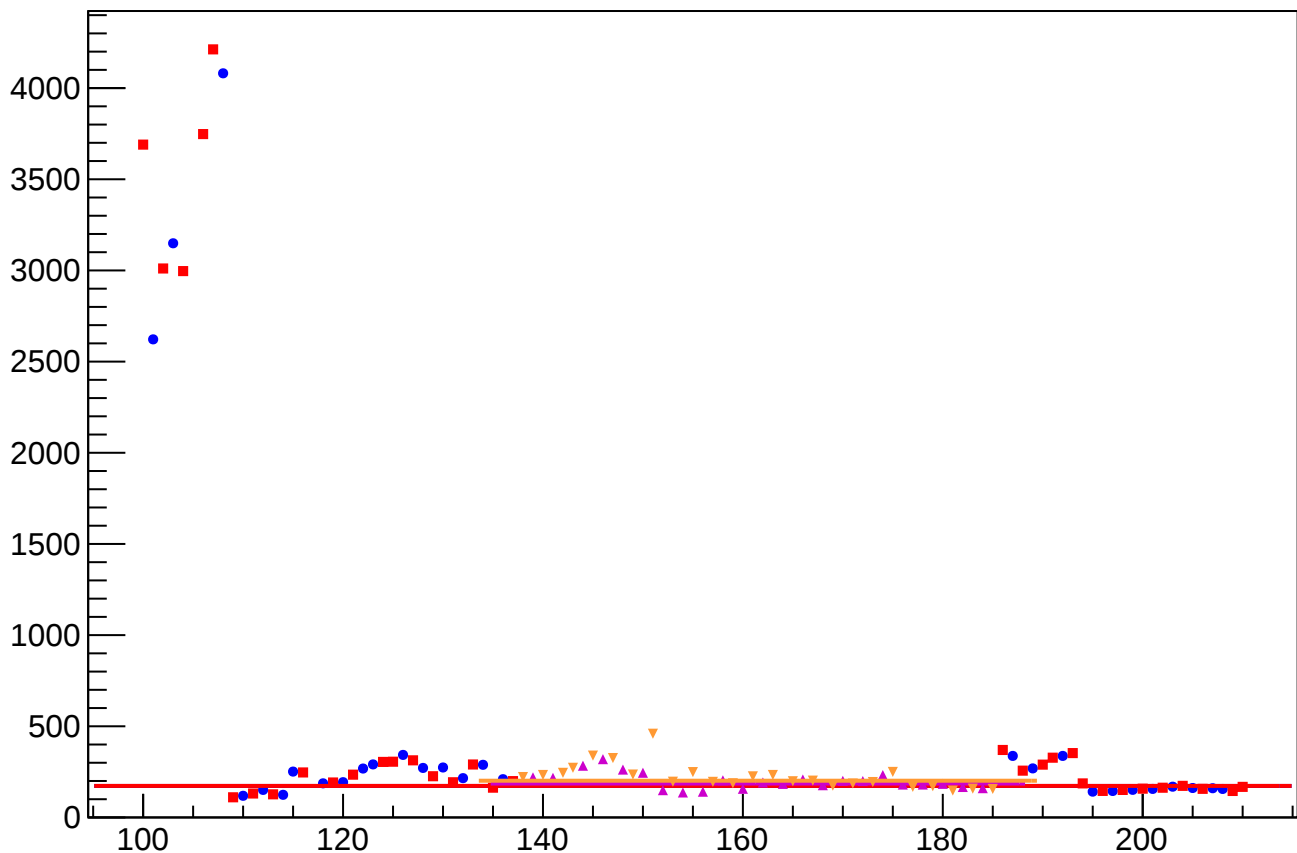
Left In:  $-31.477 \pm 46.483$   $\chi^2/\text{NDF}$ : 7.8/22

+ sign  $-35.026 \pm 34.830$   $\chi^2/\text{NDF}$ : 30.5/52

All:  $-14.753 \pm 24.040$   $\chi^2/\text{NDF}$ : 58.5/108

- sign  $3.691 \pm 33.221$   $\chi^2/\text{NDF}$ : 27.3/55

asym\_bcm\_cav4cQ\_bcm\_dg\_us\_agg\_avg\_rms vs Slug



Right In: 172.702 $\pm$ 0.035  $\chi^2$ /NDF: 4486983.9/27

Left Out: 201.503 $\pm$ 0.034  $\chi^2$ /NDF:1854905.1/24

Right Out: 172.978 $\pm$ 0.034  $\chi^2$ /NDF: 5352666.6/32

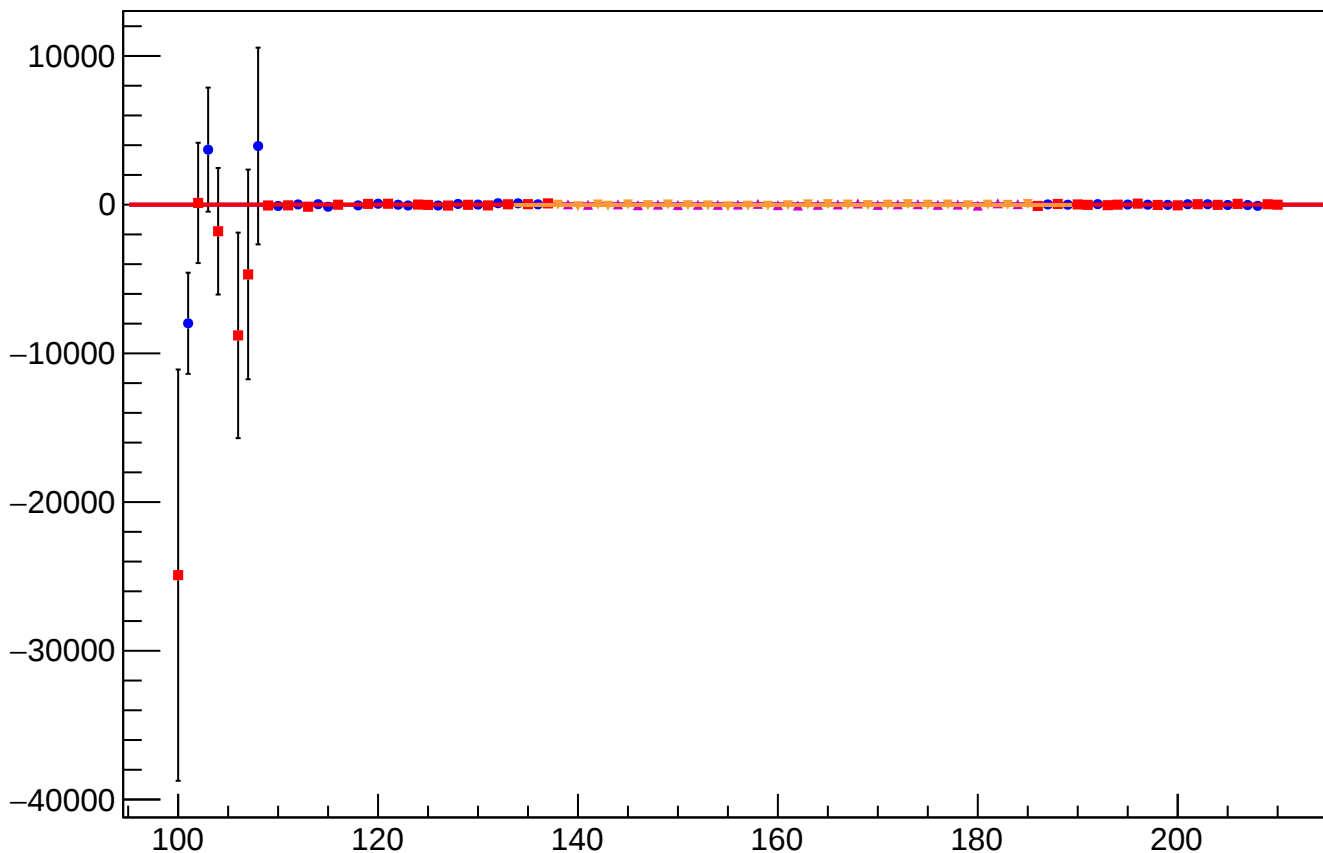
Left In: 185.878 $\pm$ 0.033  $\chi^2$ /NDF:1380877.6/22

+ sign 187.412 $\pm$ 0.025  $\chi^2$ /NDF: 6683614.5/52

All: 183.305 $\pm$ 0.017  $\chi^2$ /NDF: 13545640.8/10

- sign 179.568 $\pm$ 0.023  $\chi^2$ /NDF: 6808901.8/55

asym\_bcm\_cav4cQ\_bcm\_dg\_us\_agg\_dd\_mean vs Slug



Right In:  $1.720 \pm 9.299$   $\chi^2/\text{NDF}$ : 26.7/27

Left Out:  $-24.144 \pm 8.076$   $\chi^2/\text{NDF}$ : 24.9/24

Right Out:  $0.781 \pm 8.767$   $\chi^2/\text{NDF}$ : 34.9/32

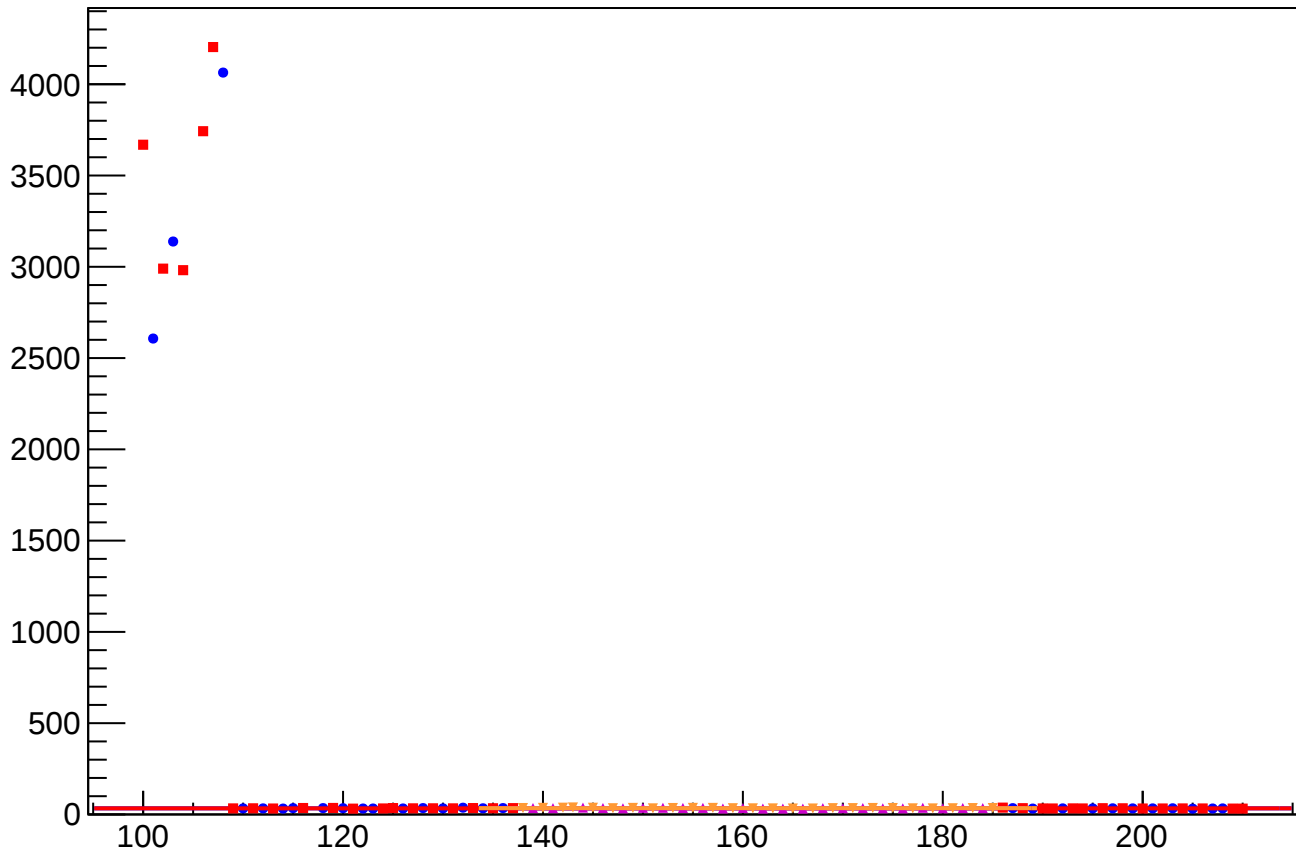
Left In:  $5.924 \pm 8.340$   $\chi^2/\text{NDF}$ : 21.0/22

+ sign  $-13.023 \pm 6.098$   $\chi^2/\text{NDF}$ : 56.1/52

All:  $-4.696 \pm 4.292$   $\chi^2/\text{NDF}$ : 115.8/108

- sign  $3.481 \pm 6.042$   $\chi^2/\text{NDF}$ : 56.0/55

asym\_bcm\_cav4cQ\_bcm\_dg\_us\_agg\_dd\_rms vs Slug



Right In: 33.463+/-0.007  $\chi^2/\text{NDF}$ : 3018812.2/27

Left Out: 34.617+/-0.006  $\chi^2/\text{NDF}$ : 57868.4/24

Right Out: 33.450+/-0.006  $\chi^2/\text{NDF}$ : 3474032.6/32

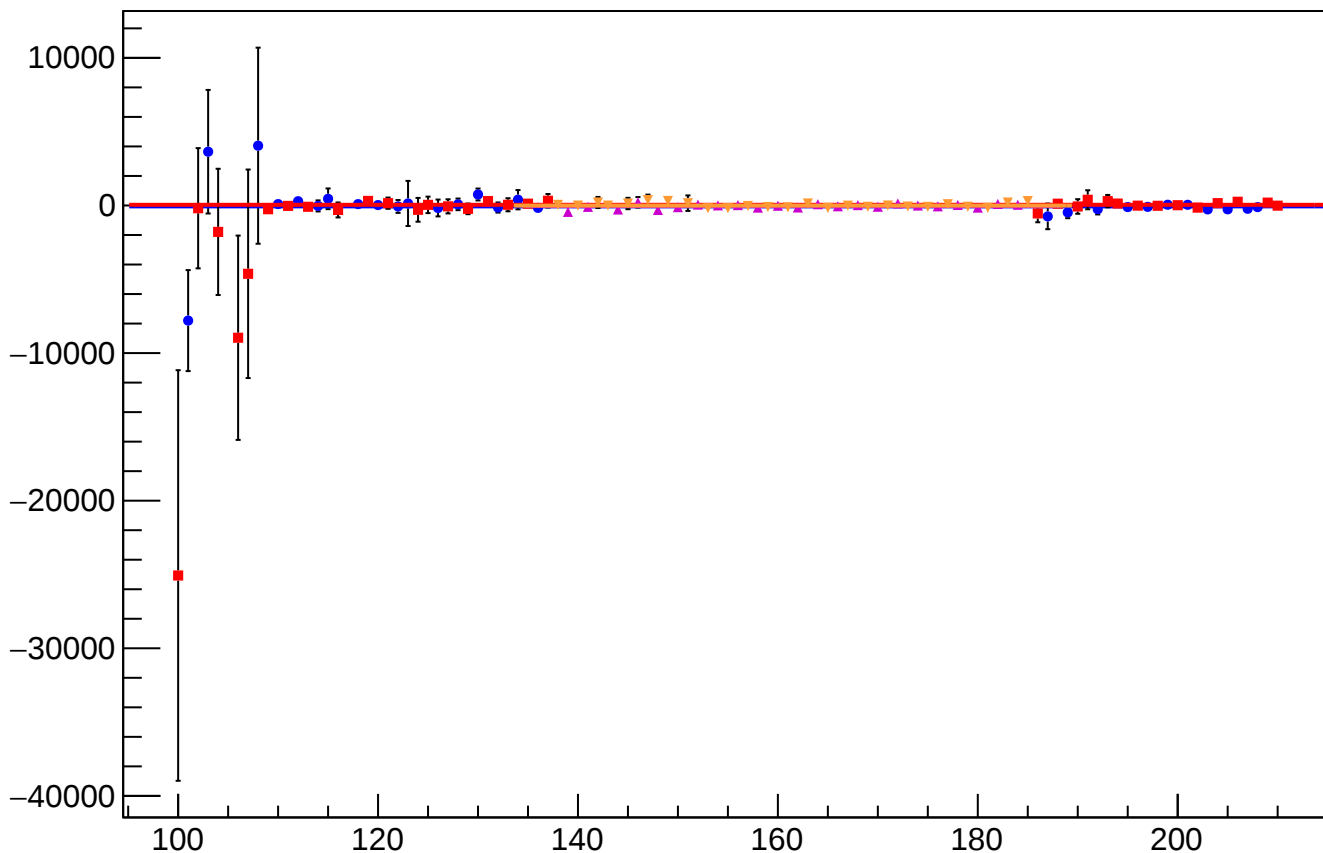
Left In: 34.682+/-0.006  $\chi^2/\text{NDF}$ : 59834.3/22

+ sign 34.121+/-0.004  $\chi^2/\text{NDF}$ : 3094246.1/52

All: 34.109+/-0.003  $\chi^2/\text{NDF}$ : 6648849.2/108

- sign 34.097+/-0.004  $\chi^2/\text{NDF}$ : 3554586.8/55

asym\_bcm\_cav4cQ\_bcm\_dg\_ds\_agg\_avg\_mean vs Slug



Right In: -61.280 $\pm$ 49.649  $\chi^2$ /NDF: 21.6/27

Left Out: -7.558 $\pm$ 48.662  $\chi^2$ /NDF: 8.8/24

Right Out: 46.360 $\pm$ 47.319  $\chi^2$ /NDF: 17.1/32

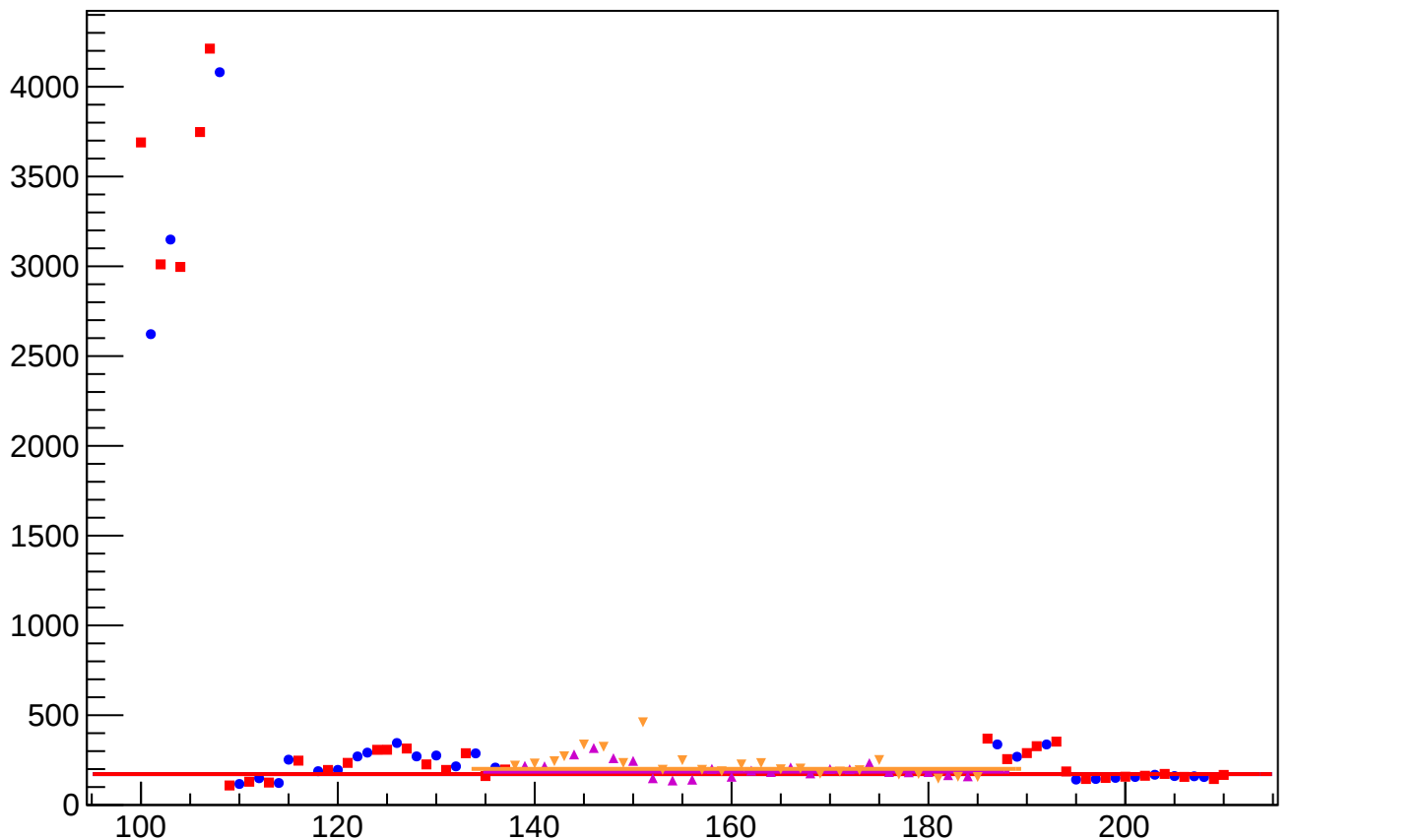
Left In: -34.977 $\pm$ 46.421  $\chi^2$ /NDF: 7.1/22

+ sign -33.880 $\pm$ 34.753  $\chi^2$ /NDF: 31.0/52

All: -13.561 $\pm$ 23.982  $\chi^2$ /NDF: 57.4/108

- sign 4.912 $\pm$ 33.137  $\chi^2$ /NDF: 25.7/55

asym\_bcm\_cav4cQ\_bcm\_dg\_ds\_agg\_avg\_rms vs Slug



Right In: 172.101 $\pm$ 0.035  $\chi^2$ /NDF: 4515596.9/27

Left Out: 201.198 $\pm$ 0.034  $\chi^2$ /NDF: 1848437.4/24

Right Out: 172.168 $\pm$ 0.033  $\chi^2$ /NDF: 5400163.3/32

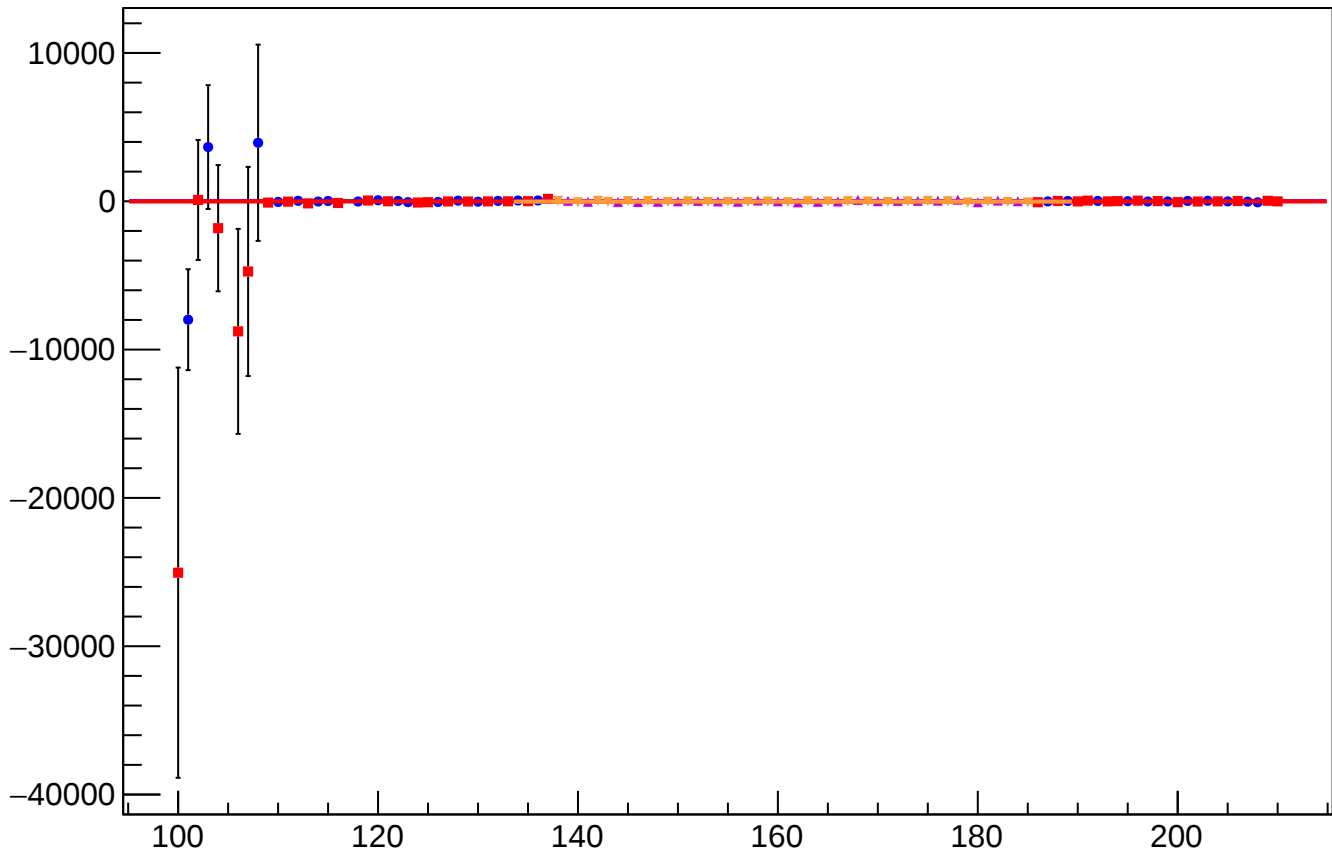
Left In: 185.627 $\pm$ 0.033  $\chi^2$ /NDF: 1371411.2/22

+ sign 186.942 $\pm$ 0.025  $\chi^2$ /NDF: 6714405.8/52

All: 182.796 $\pm$ 0.017  $\chi^2$ /NDF: 13622774.9/10

- sign 179.027 $\pm$ 0.023  $\chi^2$ /NDF: 6854032.6/55

asym\_bcm\_cav4cQ\_bcm\_dg\_ds\_agg\_dd\_mean vs Slug



Right In: 5.106+/-8.420  $\chi^2/\text{NDF}$ : 21.8/27

Left Out: -23.320+/-7.352  $\chi^2/\text{NDF}$ :18.3/24

Right Out: -5.347+/-7.936  $\chi^2/\text{NDF}$ : 38.3/32

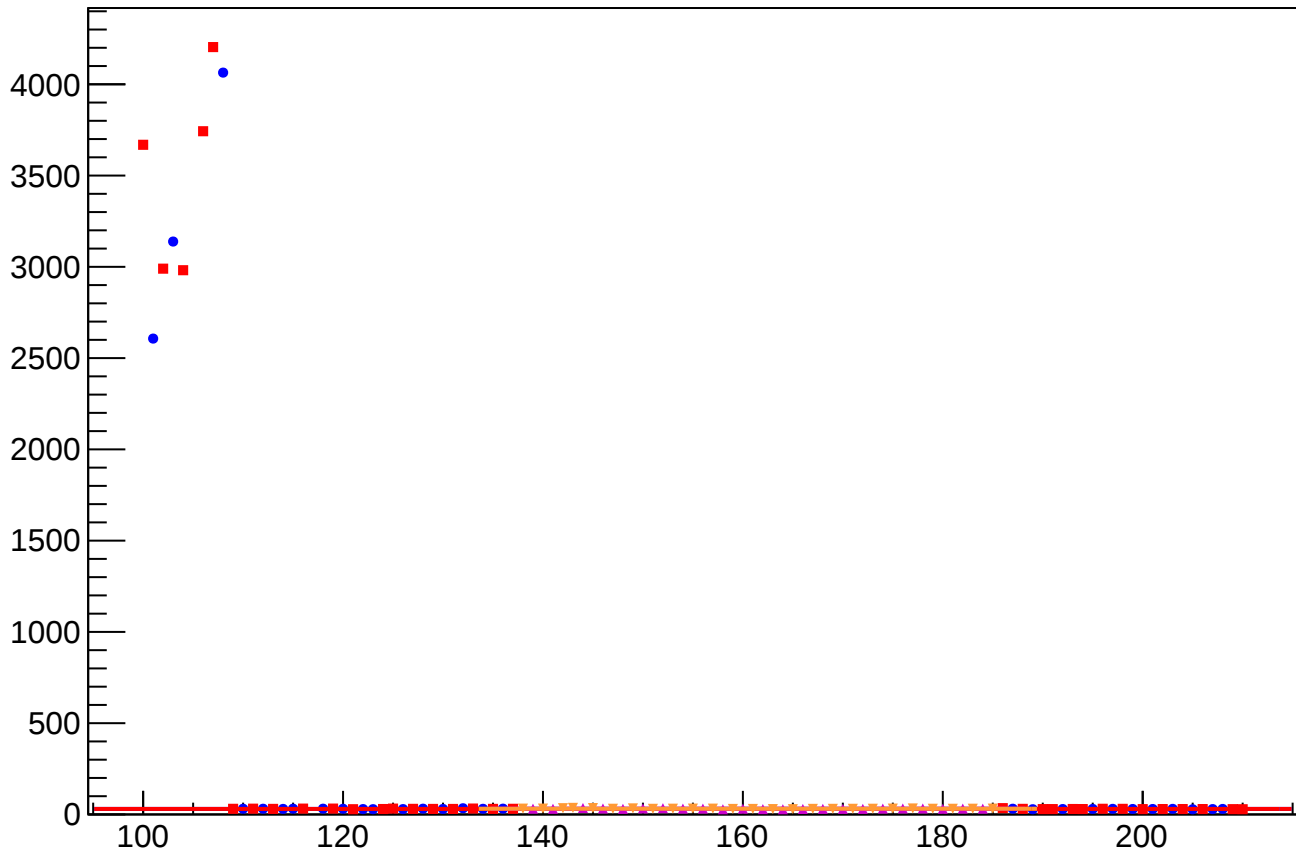
Left In: 6.386+/-7.577  $\chi^2/\text{NDF}$ :38.7/22

+ sign -11.023+/-5.538  $\chi^2/\text{NDF}$ : 46.6/52

All: -5.054+/-3.895  $\chi^2/\text{NDF}$ : 127.1/108

- sign 0.791+/-5.480  $\chi^2/\text{NDF}$ : 78.2/55

asym\_bcm\_cav4cQ\_bcm\_dg\_ds\_agg\_dd\_rms vs Slug



Right In: 30.289 $\pm$ 0.006  $\chi^2$ /NDF: 3036585.6/27

Left Out: 31.488 $\pm$ 0.005  $\chi^2$ /NDF: 81938.2/24

Right Out: 30.256 $\pm$ 0.006  $\chi^2$ /NDF: 3492114.9/32

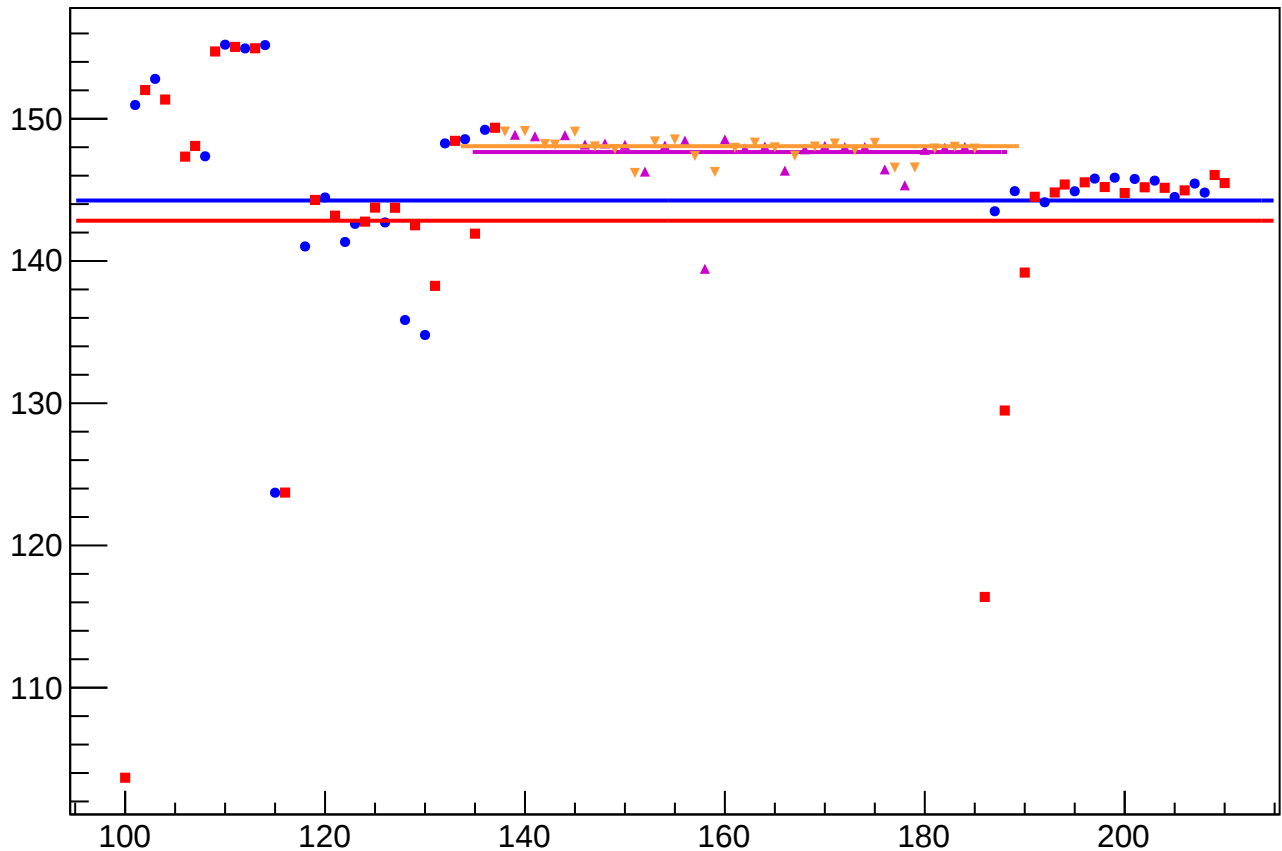
Left In: 31.475 $\pm$ 0.005  $\chi^2$ /NDF: 87797.5/22

+ sign 30.969 $\pm$ 0.004  $\chi^2$ /NDF: 3141571.8/52

All: 30.931 $\pm$ 0.003  $\chi^2$ /NDF: 6746375.6/108

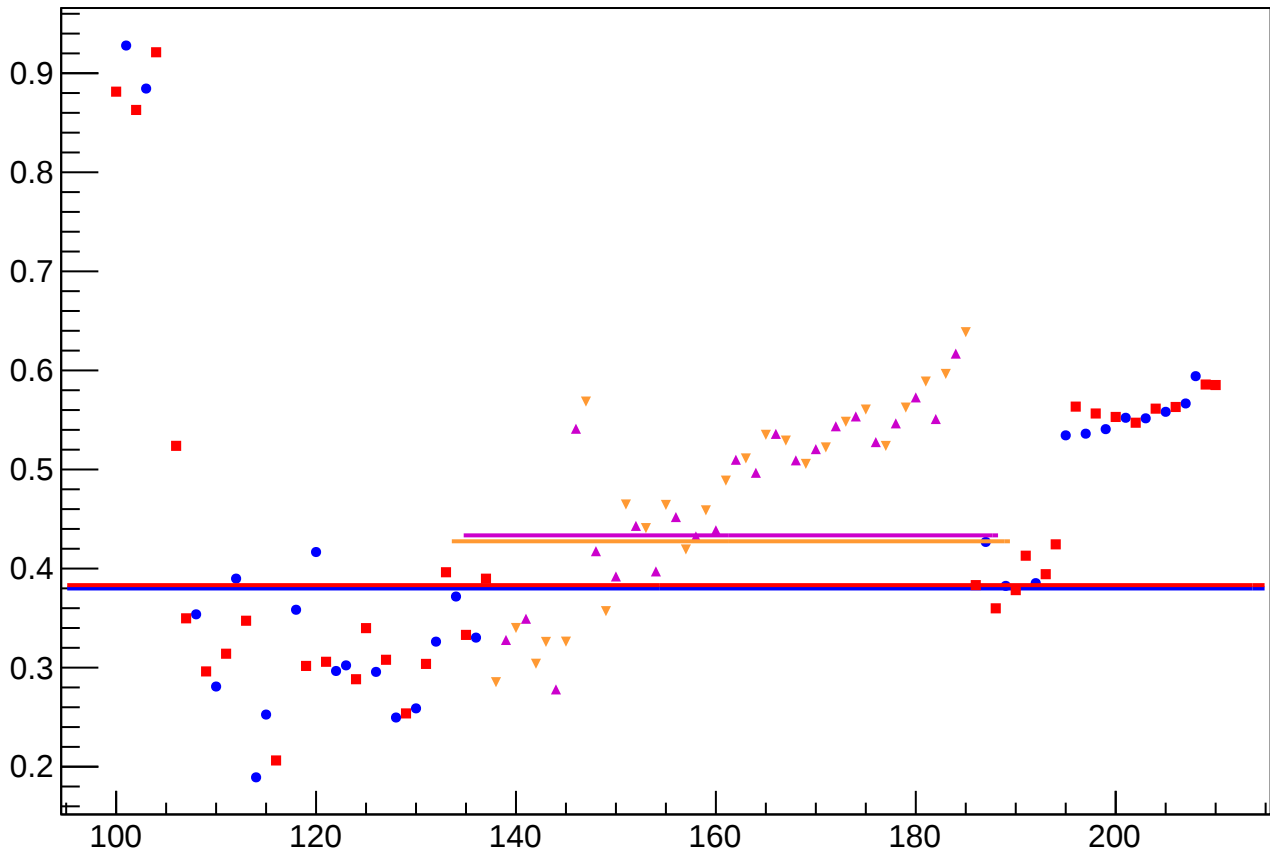
- sign 30.894 $\pm$ 0.004  $\chi^2$ /NDF: 3604616.1/55

# yield\_bcm\_an\_ds\_mean vs Slug



Right In:  $144.255 \pm 0.000$   $\chi^2/\text{NDF}$ : 3487320924.7/27  
 Left Out:  $148.074 \pm 0.000$   $\chi^2/\text{NDF}$ : 65673678.9/24  
 Right Out:  $142.833 \pm 0.000$   $\chi^2/\text{NDF}$ : 7444786274.1/32  
 Left In:  $147.660 \pm 0.000$   $\chi^2/\text{NDF}$ : 343892338.9/22  
 All:  $145.667 \pm 0.000$   $\chi^2/\text{NDF}$ : 13166138963.0

# yield\_bcm\_an\_ds\_rms vs Slug



Right In:  $0.380 \pm 0.000$   $\chi^2/\text{NDF}$ : 2881670.0/27

Left Out:  $0.428 \pm 0.000$   $\chi^2/\text{NDF}$ : 1892802.8/24

Right Out:  $0.383 \pm 0.000$   $\chi^2/\text{NDF}$ : 2883810.6/32

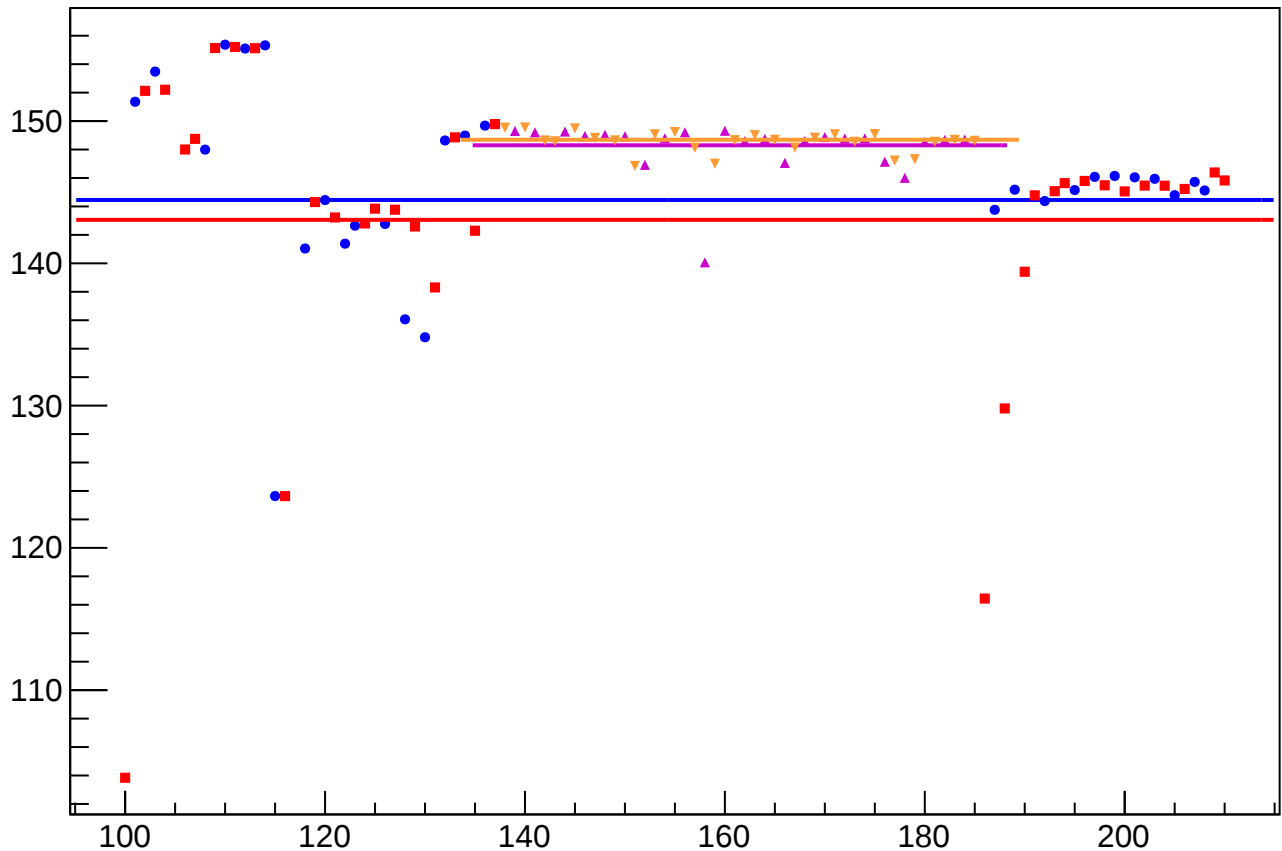
Left In:  $0.434 \pm 0.000$   $\chi^2/\text{NDF}$ : 1479367.0/22

+ sign  $0.405 \pm 0.000$   $\chi^2/\text{NDF}$ : 4975053.9/52

All:  $0.406 \pm 0.000$   $\chi^2/\text{NDF}$ : 9568768.2/108

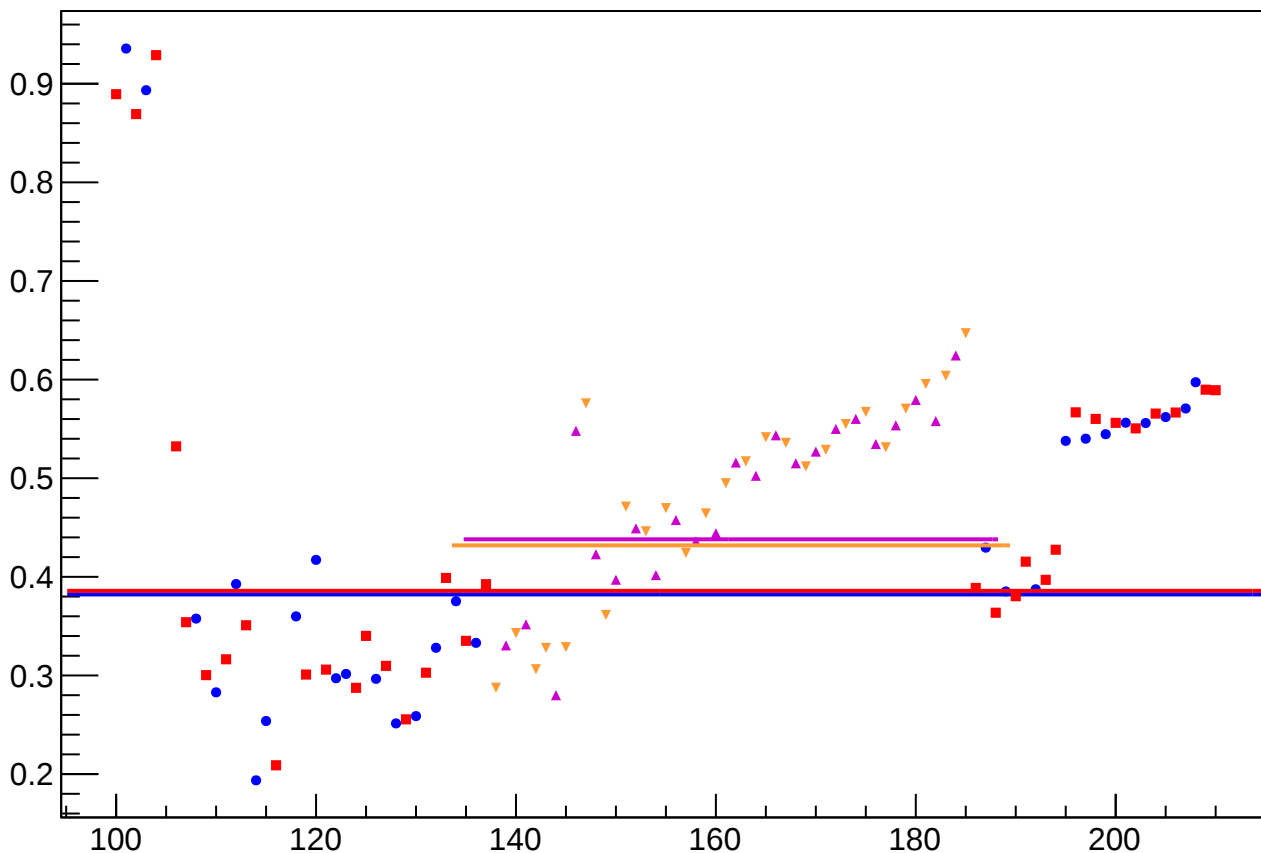
- sign  $0.407 \pm 0.000$   $\chi^2/\text{NDF}$ : 4592925.7/55

# yield\_bcm\_an\_ds3\_mean vs Slug



Right In:  $144.454 \pm 0.000$   $\chi^2/\text{NDF}$ : 3536155640.1/27  
 Left Out:  $148.687 \pm 0.000$   $\chi^2/\text{NDF}$ : 52285197.5/24  
 Right Out:  $143.058 \pm 0.000$   $\chi^2/\text{NDF}$ : 7395714203.8/32  
 Left In:  $148.298 \pm 0.000$   $\chi^2/\text{NDF}$ : 332527463.6/22  
 + sign  $146.657 \pm 0.000$   $\chi^2/\text{NDF}$ : 4367489578.3/52  
 All:  $146.074 \pm 0.000$   $\chi^2/\text{NDF}$ : 13439990650.0  
 - sign  $145.509 \pm 0.000$   $\chi^2/\text{NDF}$ : 8956038340.8/55

# yield\_bcm\_an\_ds3\_rms vs Slug



Right In: 0.382 $\pm$ 0.000  $\chi^2$ /NDF: 2889366.3/27

Left Out: 0.432 $\pm$ 0.000  $\chi^2$ /NDF:1924979.0/24

Right Out: 0.386 $\pm$ 0.000  $\chi^2$ /NDF: 2888002.2/32

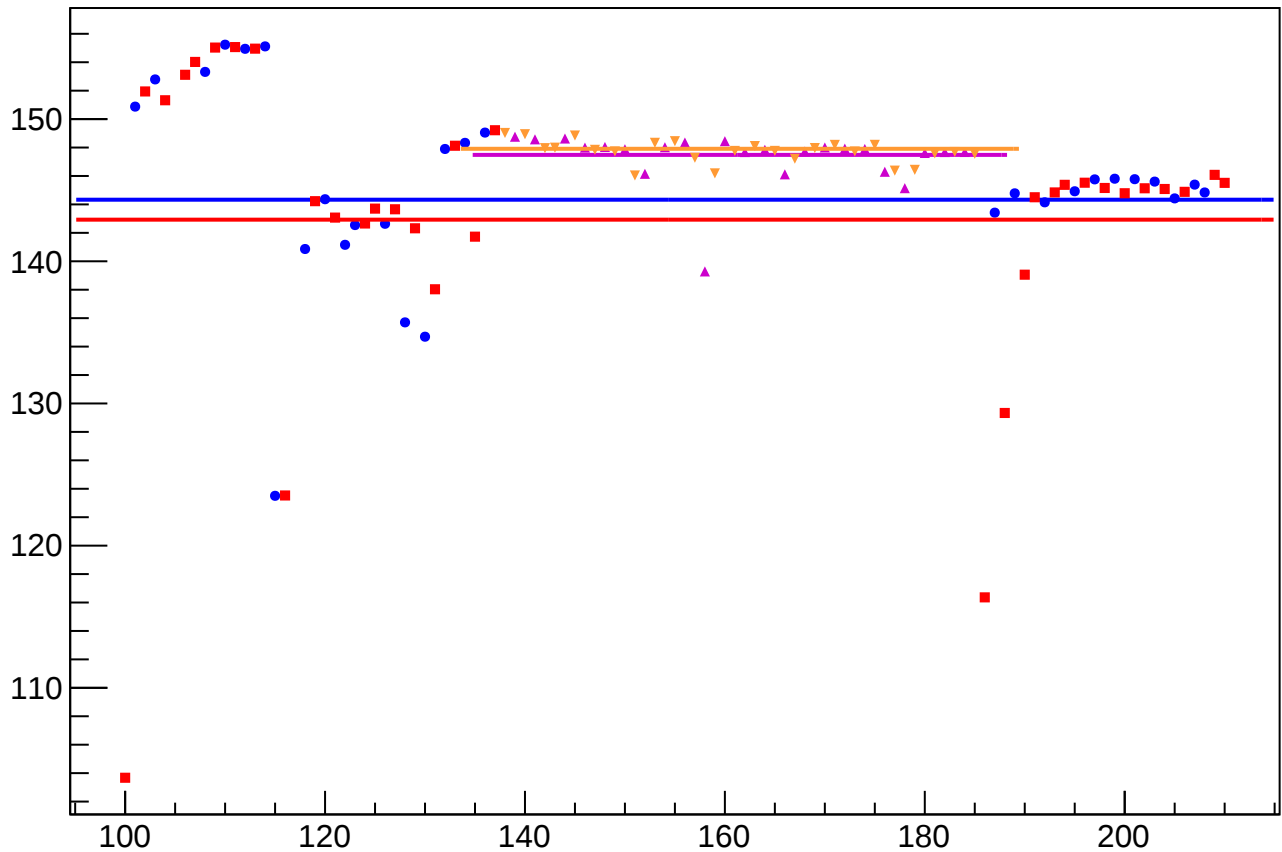
Left In: 0.438 $\pm$ 0.000  $\chi^2$ /NDF:1504635.6/22

+ sign 0.408 $\pm$ 0.000  $\chi^2$ /NDF: 5029667.5/52

All: 0.409 $\pm$ 0.000  $\chi^2$ /NDF: 9667270.4/108

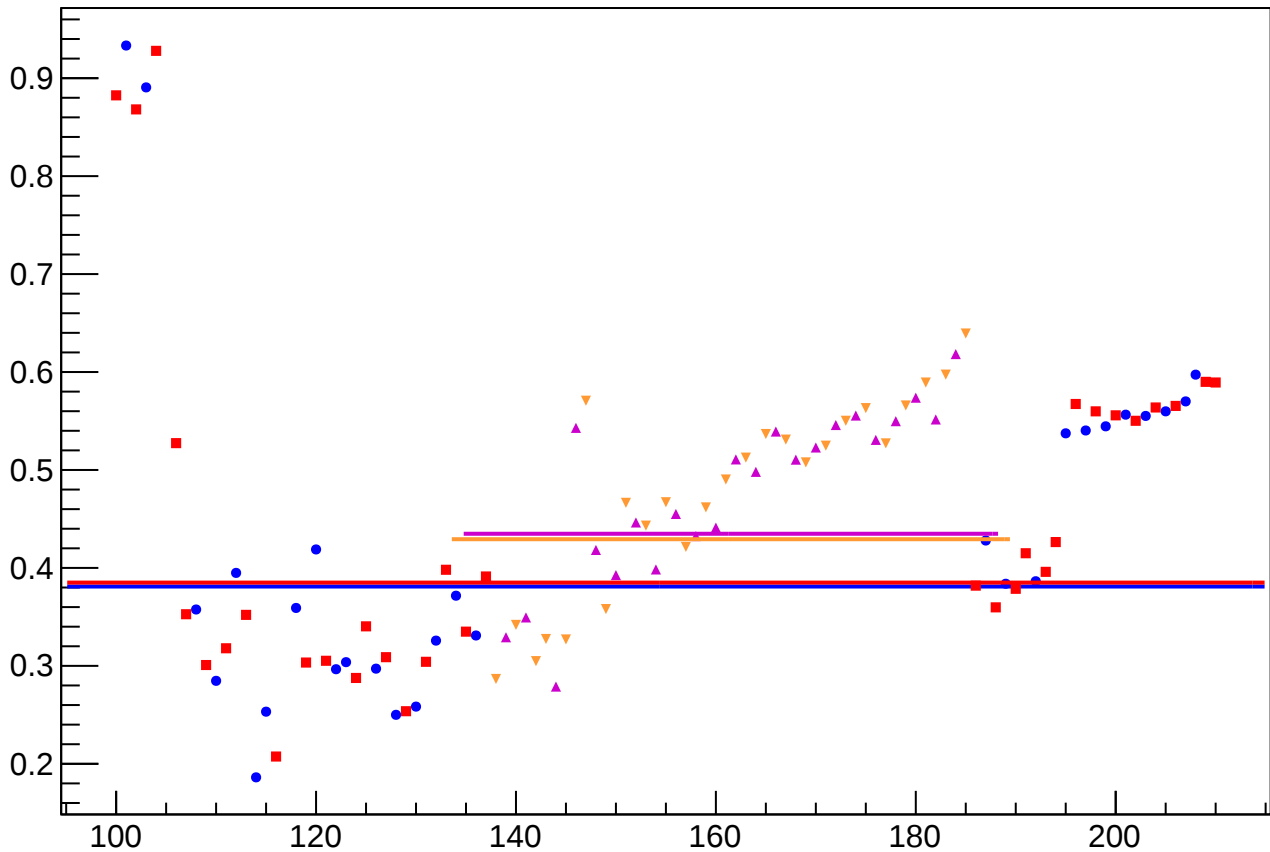
- sign 0.410 $\pm$ 0.000  $\chi^2$ /NDF: 4636743.7/55

# yield\_bcm\_an\_us\_mean vs Slug



|                                |                                |                            |                                |
|--------------------------------|--------------------------------|----------------------------|--------------------------------|
| Right In: 144.331 $\pm$ 0.000  | $\chi^2$ /NDF: 3693273946.5/27 | + sign 146.202 $\pm$ 0.000 | $\chi^2$ /NDF: 4320270910.3/52 |
| Left Out: 147.912 $\pm$ 0.000  | $\chi^2$ /NDF: 64463426.1/24   | All: 145.628 $\pm$ 0.000   | $\chi^2$ /NDF: 13534291088.    |
| Right Out: 142.928 $\pm$ 0.000 | $\chi^2$ /NDF: 7819808638.4/32 | - sign 145.071 $\pm$ 0.000 | $\chi^2$ /NDF: 9099972046.8/55 |
| Left In: 147.483 $\pm$ 0.000   | $\chi^2$ /NDF: 342674720.4/22  |                            |                                |

# yield\_bcm\_an\_us\_rms vs Slug



Right In: 0.381 $\pm$ 0.000  $\chi^2$ /NDF: 2915699.0/27

Left Out: 0.429 $\pm$ 0.000  $\chi^2$ /NDF:1891709.3/24

Right Out: 0.385 $\pm$ 0.000  $\chi^2$ /NDF: 2891613.2/32

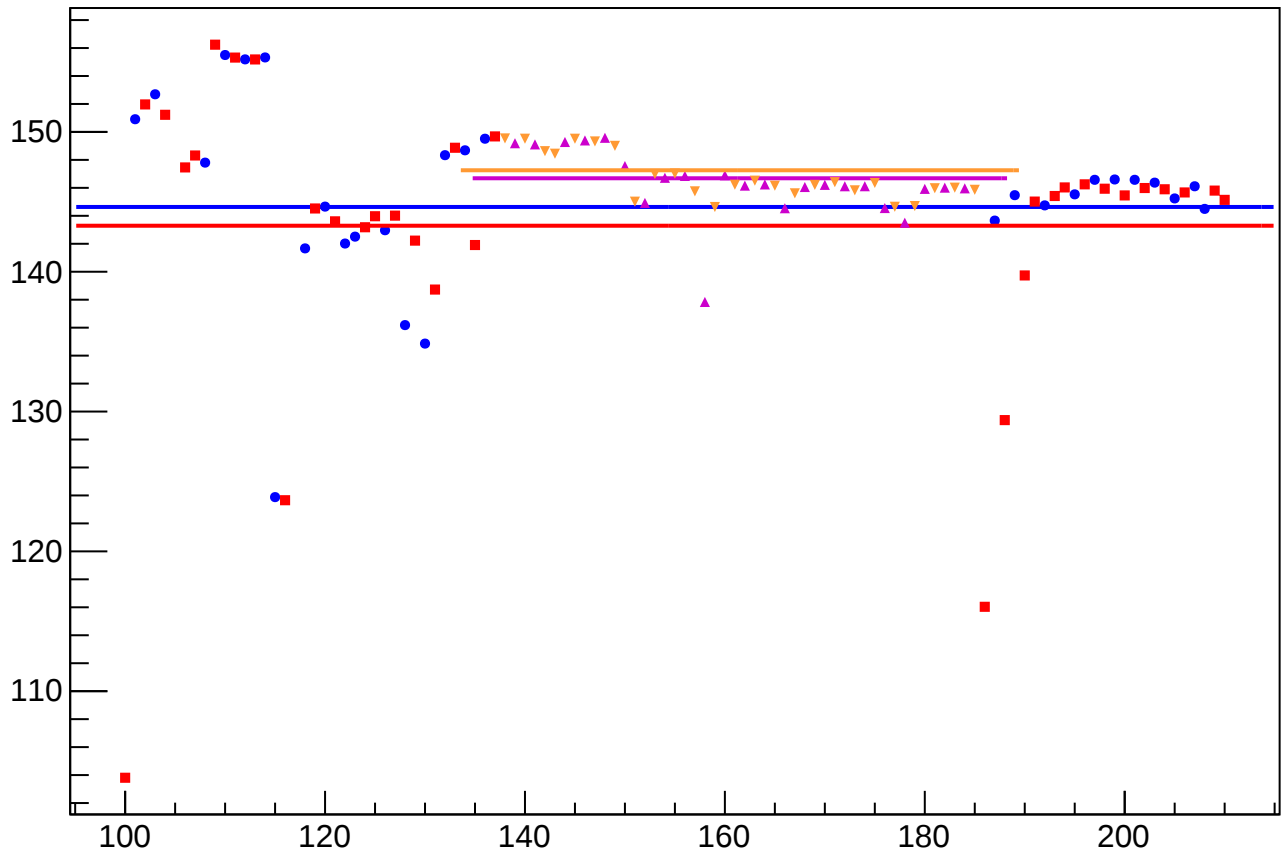
Left In: 0.435 $\pm$ 0.000  $\chi^2$ /NDF:1485915.1/22

+ sign 0.406 $\pm$ 0.000  $\chi^2$ /NDF: 5012064.0/52

All: 0.407 $\pm$ 0.000  $\chi^2$ /NDF: 9615068.0/108

- sign 0.408 $\pm$ 0.000  $\chi^2$ /NDF: 4602106.0/55

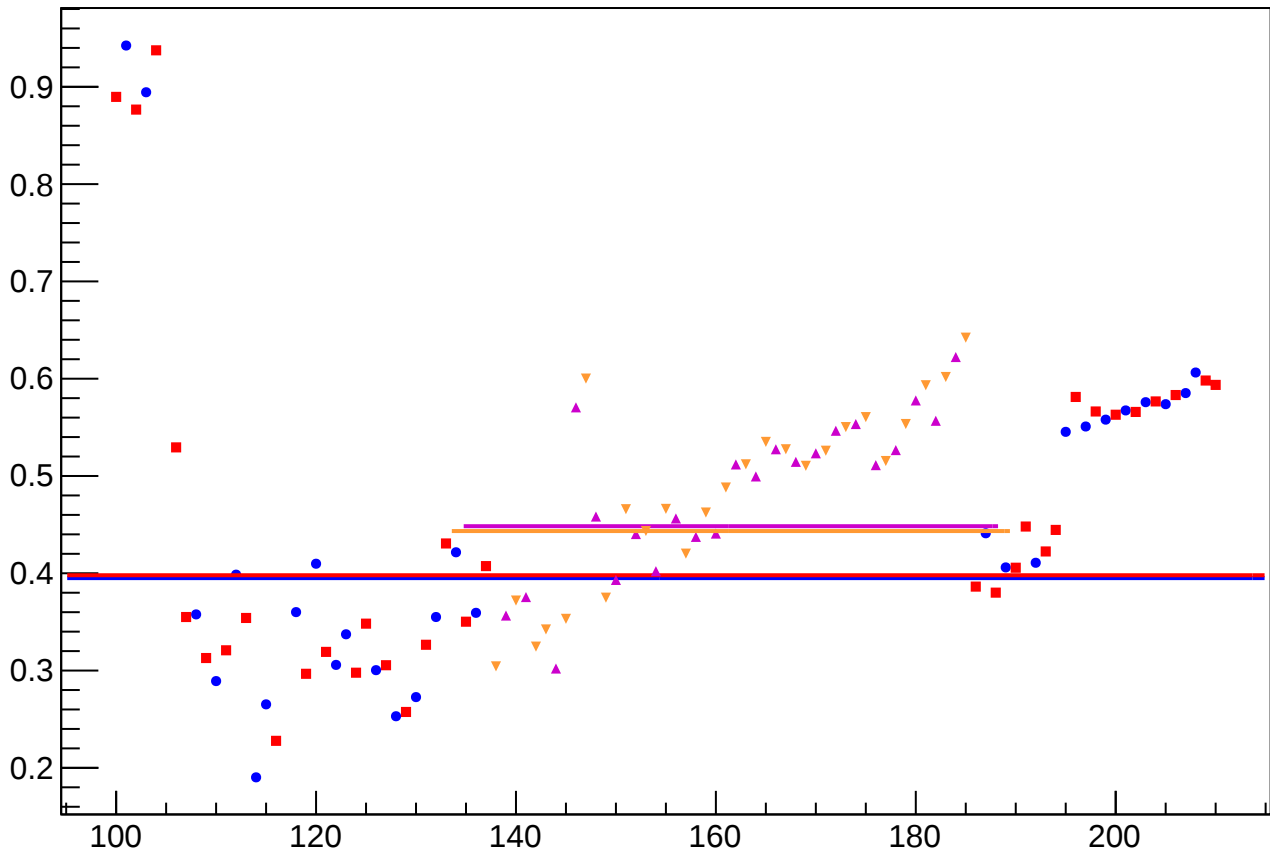
# yield\_bcm\_dg\_us\_mean vs Slug



Right In: 144.634 $\pm$ 0.000  $\chi^2$ /NDF: 3219145833.8/27  
 Left Out: 147.257 $\pm$ 0.000  $\chi^2$ /NDF: 261906278.3/24  
 Right Out: 143.291 $\pm$ 0.000  $\chi^2$ /NDF: 7141946334.2/32  
 Left In: 146.685 $\pm$ 0.000  $\chi^2$ /NDF: 554922388.0/22

+ sign 146.016 $\pm$ 0.000  $\chi^2$ /NDF: 3764309859.9/52  
 All: 145.449 $\pm$ 0.000  $\chi^2$ /NDF: 12056060094.  
 - sign 144.901 $\pm$ 0.000  $\chi^2$ /NDF: 8187540137.5/55

# yield\_bcm\_dg\_us\_rms vs Slug



Right In: 0.395 $\pm$ 0.000  $\chi^2$ /NDF: 2834911.0/27

Left Out: 0.443 $\pm$ 0.000  $\chi^2$ /NDF:1480479.3/24

Right Out: 0.398 $\pm$ 0.000  $\chi^2$ /NDF: 2799631.2/32

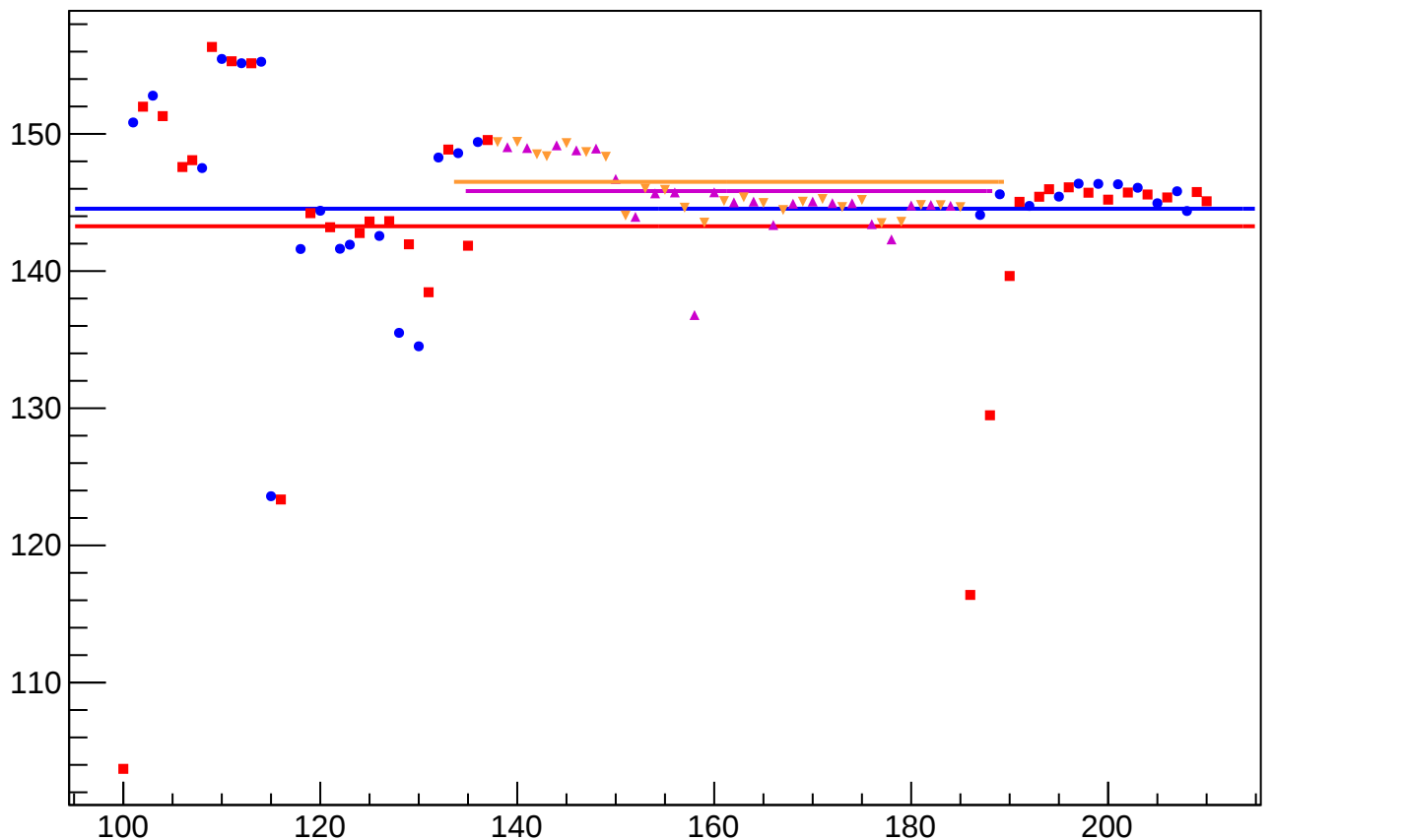
Left In: 0.448 $\pm$ 0.000  $\chi^2$ /NDF:1120261.8/22

+ sign 0.420 $\pm$ 0.000  $\chi^2$ /NDF: 4507847.1/52

All: 0.421 $\pm$ 0.000  $\chi^2$ /NDF: 8644612.4/108

- sign 0.422 $\pm$ 0.000  $\chi^2$ /NDF: 4136437.9/55

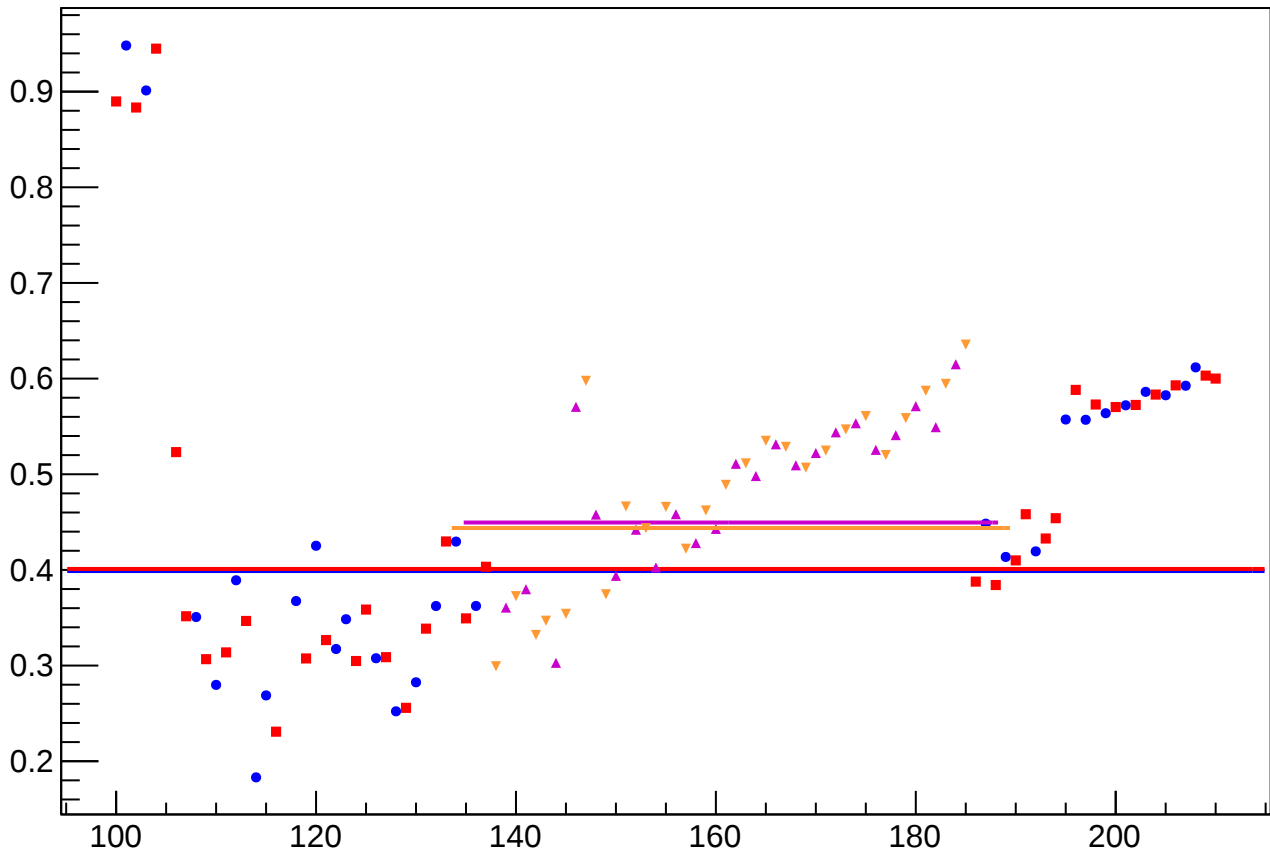
# yield\_bcm\_dg\_ds\_mean vs Slug



Right In: 144.547 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 3328951922.7/27  
 Left Out: 146.508 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 401248837.9/24  
 Right Out: 143.268 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7095019787.5/32  
 Left In: 145.834 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 690172810.0/22

+ sign 145.590 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 3886412117.8/52  
 All: 145.033 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 12048557582.  
 - sign 144.494 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 8062541042.6/55

# yield\_bcm\_dg\_ds\_rms vs Slug



Right In: 0.399 $\pm$ 0.000  $\chi^2$ /NDF: 2883886.5/27

Left Out: 0.444 $\pm$ 0.000  $\chi^2$ /NDF:1460383.7/24

Right Out: 0.401 $\pm$ 0.000  $\chi^2$ /NDF: 2834356.6/32

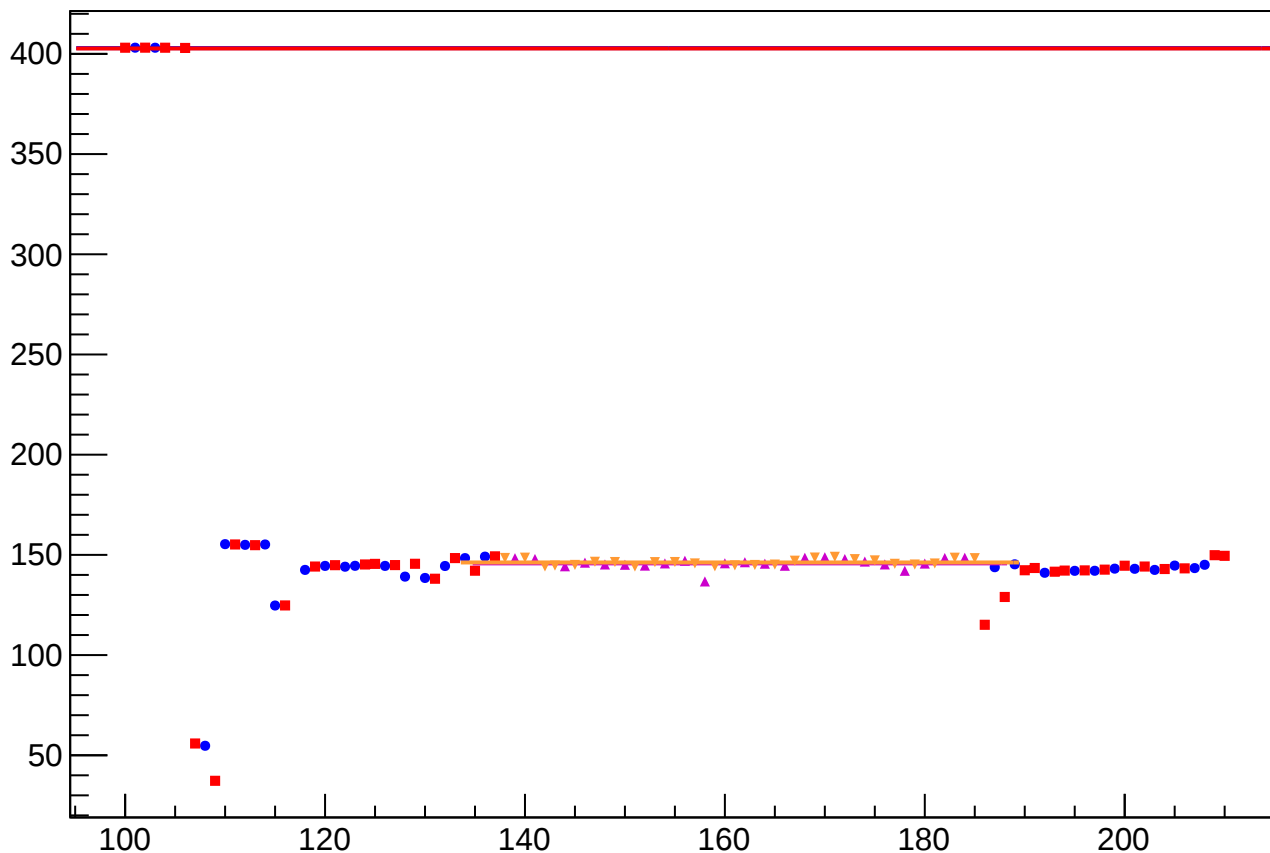
Left In: 0.450 $\pm$ 0.000  $\chi^2$ /NDF:1092776.5/22

+ sign 0.423 $\pm$ 0.000  $\chi^2$ /NDF: 4508578.8/52

All: 0.423 $\pm$ 0.000  $\chi^2$ /NDF: 8634395.9/108

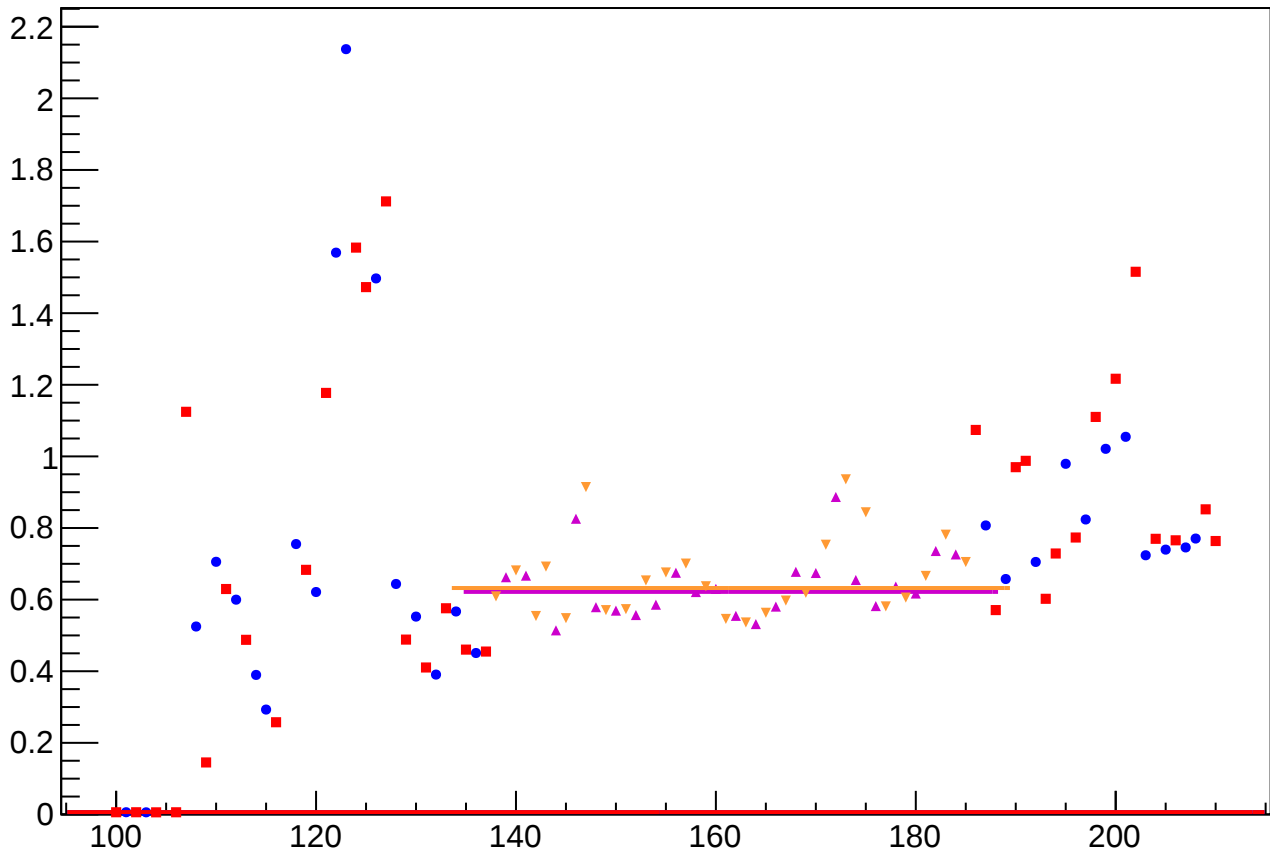
- sign 0.424 $\pm$ 0.000  $\chi^2$ /NDF: 4125469.8/55

# yield\_cav4bQ\_mean vs Slug



|                            |                                          |                        |                                       |
|----------------------------|------------------------------------------|------------------------|---------------------------------------|
| Right In: 402.876+/-0.000  | $\chi^2/\text{NDF}$ : 1752170815469.0/27 | + sign 402.581+/-0.000 | $\chi^2/\text{NDF}$ : 4111976246547.7 |
| Left Out: 146.216+/-0.000  | $\chi^2/\text{NDF}$ : 86042286.3/24      | All: 402.510+/-0.000   | $\chi^2/\text{NDF}$ : 10425264703     |
| Right Out: 402.703+/-0.000 | $\chi^2/\text{NDF}$ : 3985012436150.0/32 | - sign 402.447+/-0.000 | $\chi^2/\text{NDF}$ : 6312987965495.4 |
| Left In: 145.755+/-0.000   | $\chi^2/\text{NDF}$ : 206171532.0/22     |                        |                                       |

# yield\_cav4bQ\_rms vs Slug



Right In: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 21339507.9/27

Left Out: 0.632 $\pm$ 0.000  $\chi^2$ /NDF:613604.5/24

Right Out: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 24939016.7/32

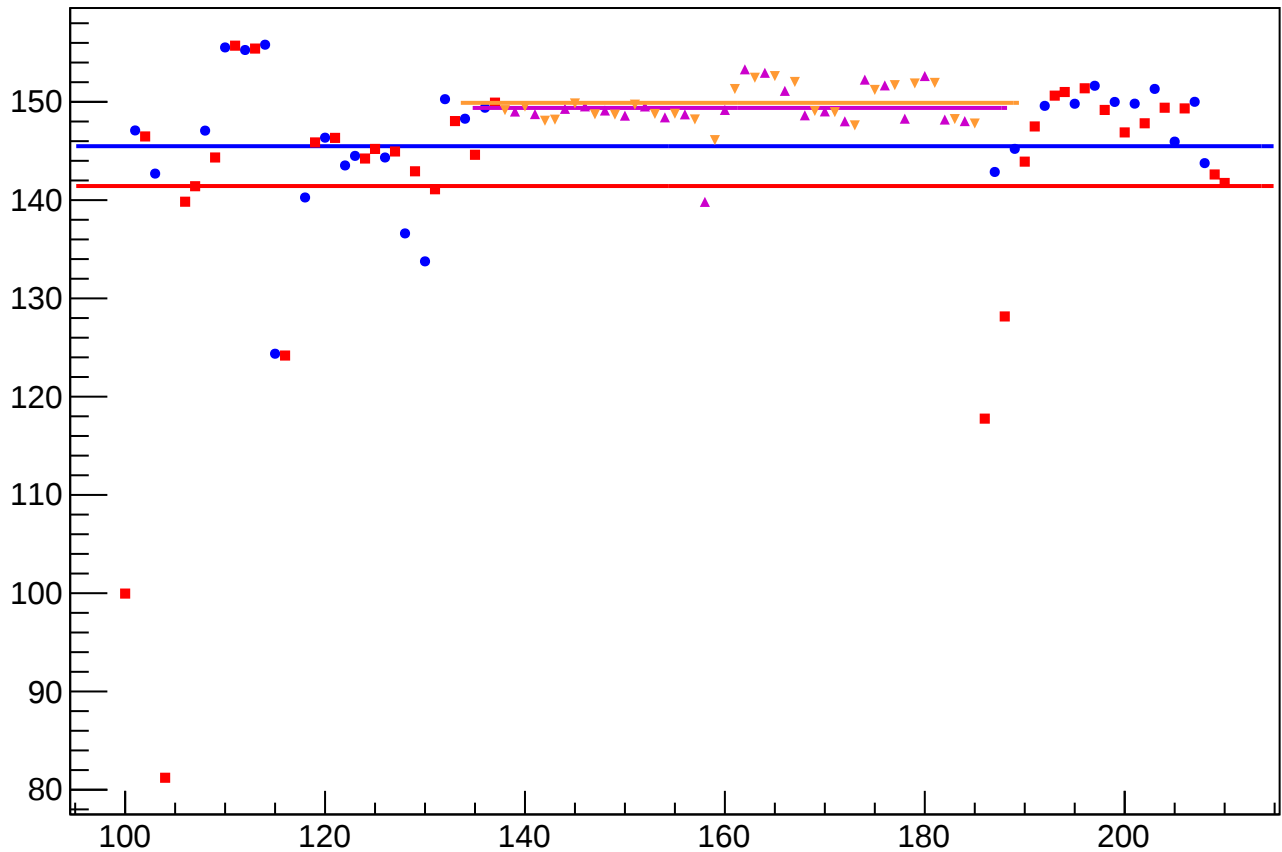
Left In: 0.622 $\pm$ 0.000  $\chi^2$ /NDF:399965.3/22

+ sign 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 50012557.9/52

All: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 102022128.1/108

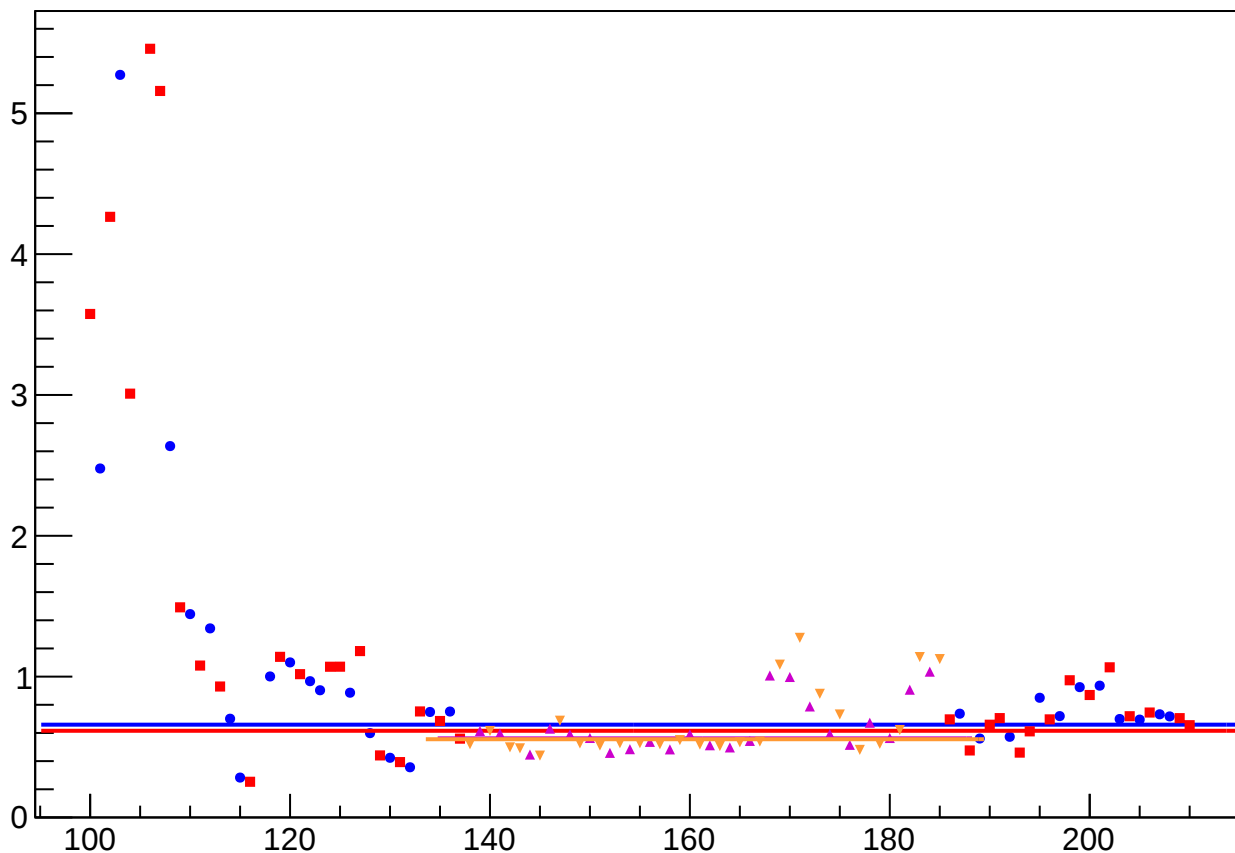
- sign 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 52009337.0/55

# yield\_cav4cQ\_mean vs Slug



|                            |                                       |                        |                                       |
|----------------------------|---------------------------------------|------------------------|---------------------------------------|
| Right In: 145.488+/-0.000  | $\chi^2/\text{NDF}$ : 1331995660.9/27 | + sign 148.543+/-0.000 | $\chi^2/\text{NDF}$ : 1798625926.6/52 |
| Left Out: 149.900+/-0.000  | $\chi^2/\text{NDF}$ : 162845622.6/24  | All: 147.416+/-0.000   | $\chi^2/\text{NDF}$ : 6808234175.9    |
| Right Out: 141.433+/-0.000 | $\chi^2/\text{NDF}$ : 3249494901.4/32 | - sign 146.339+/-0.000 | $\chi^2/\text{NDF}$ : 4827651756.1/55 |
| Left In: 149.382+/-0.000   | $\chi^2/\text{NDF}$ : 434657827.5/22  |                        |                                       |

# yield\_cav4cQ\_rms vs Slug



Right In: 0.659 $\pm$ 0.000  $\chi^2$ /NDF: 4014849.5/27

Left Out: 0.555 $\pm$ 0.000  $\chi^2$ /NDF:1773688.1/24

Right Out: 0.615 $\pm$ 0.000  $\chi^2$ /NDF: 5573392.2/32

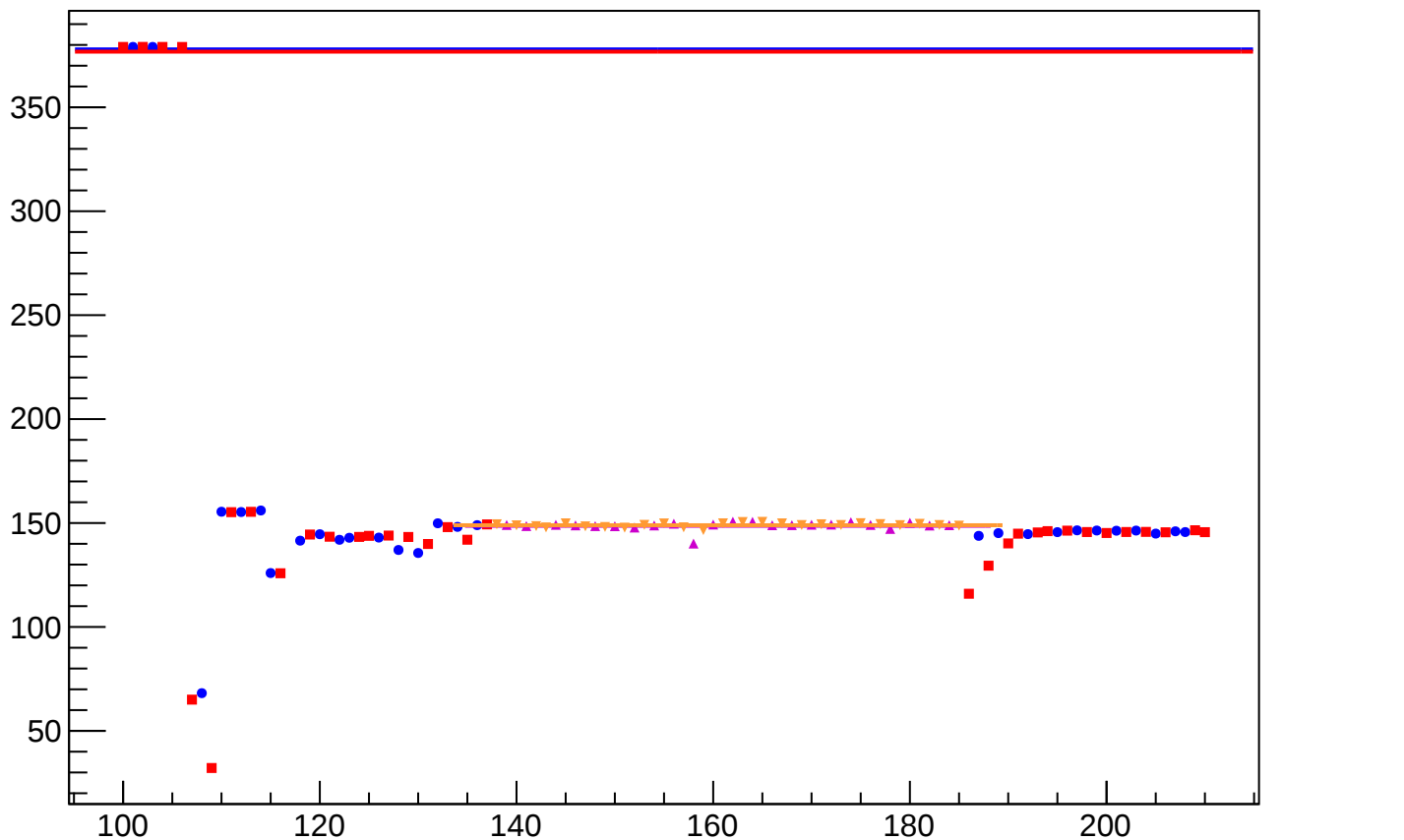
Left In: 0.562 $\pm$ 0.000  $\chi^2$ /NDF:1305573.4/22

+ sign 0.587 $\pm$ 0.000  $\chi^2$ /NDF: 6122130.8/52

All: 0.585 $\pm$ 0.000  $\chi^2$ /NDF: 13107387.9/108

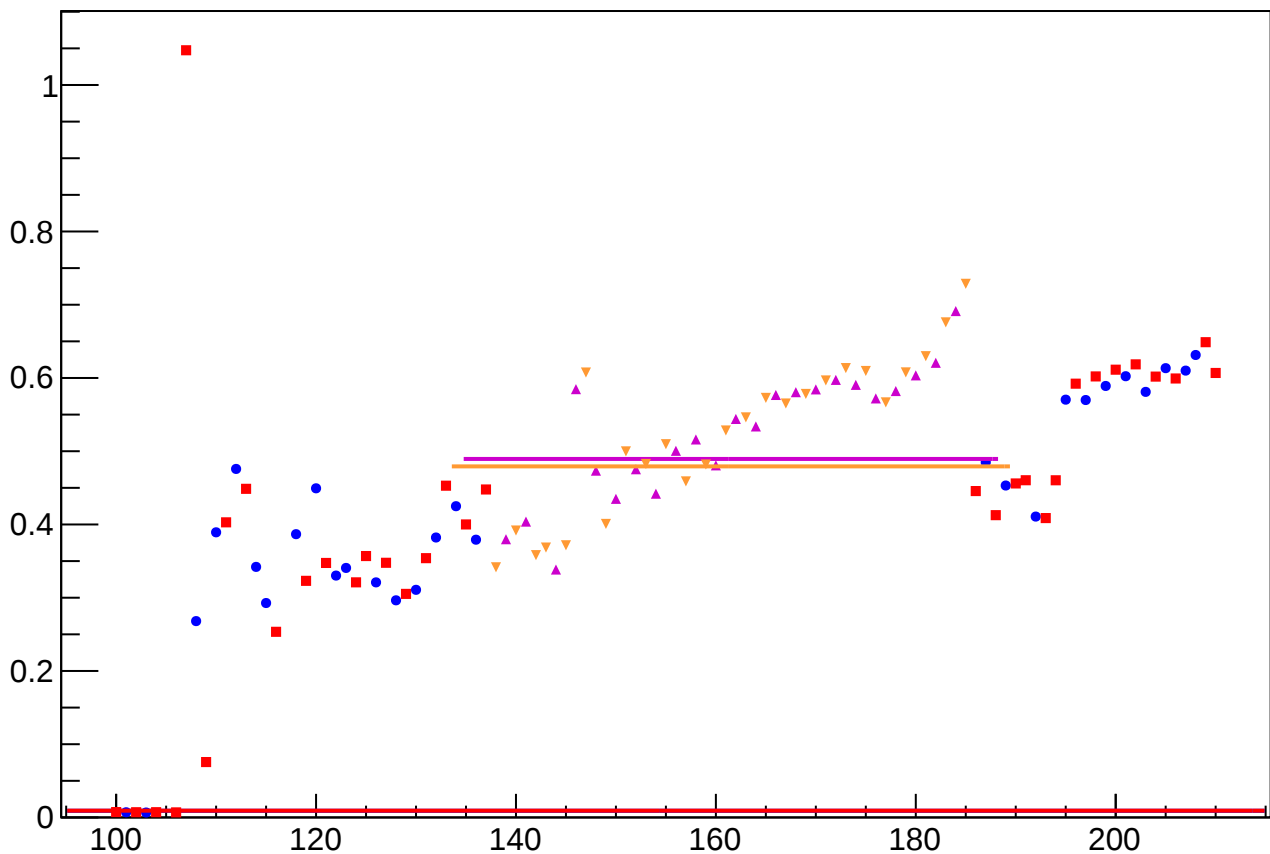
- sign 0.582 $\pm$ 0.000  $\chi^2$ /NDF: 6983419.5/55

# yield\_cav4dQ\_mean vs Slug



|                            |                                           |                        |                                        |
|----------------------------|-------------------------------------------|------------------------|----------------------------------------|
| Right In: 377.854+/-0.000  | $\chi^2/\text{NDF}$ : 3835978443304.9/27  | + sign 376.579+/-0.000 | $\chi^2/\text{NDF}$ : 7728625066057.9  |
| Left Out: 148.944+/-0.000  | $\chi^2/\text{NDF}$ : 63976941.3/24       | All: 376.137+/-0.000   | $\chi^2/\text{NDF}$ : 214166351183     |
| Right Out: 376.770+/-0.000 | $\chi^2/\text{NDF}$ : 10140194997071.3/32 | - sign 375.750+/-0.000 | $\chi^2/\text{NDF}$ : 13683091661552.0 |
| Left In: 148.672+/-0.000   | $\chi^2/\text{NDF}$ : 252846428.3/22      |                        |                                        |

# yield\_cav4dQ\_rms vs Slug



Right In: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 24237239.5/27

Left Out: 0.479 $\pm$ 0.000  $\chi^2$ /NDF:1516566.1/24

Right Out: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 27285444.5/32

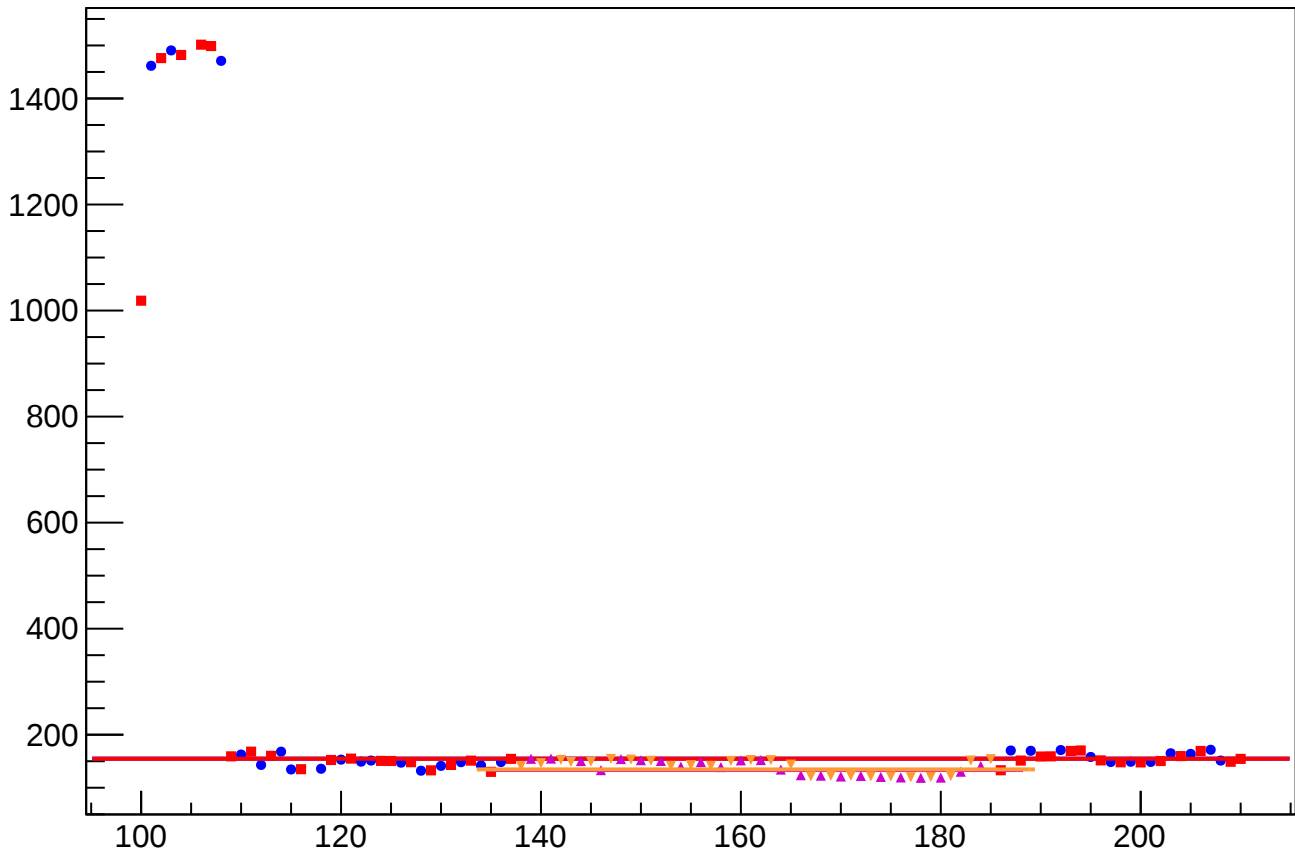
Left In: 0.489 $\pm$ 0.000  $\chi^2$ /NDF:1076134.2/22

+ sign 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 58600296.6/52

All: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 118365974.2/108

- sign 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 59764217.8/55

# yield\_bcm0l02\_mean vs Slug



Right In: 154.908+/-0.000  $\chi^2/\text{NDF}$ : 25941899492.8/27

Left Out: 134.554+/-0.000  $\chi^2/\text{NDF}$ : 4376966869.3/24

Right Out: 154.691+/-0.000  $\chi^2/\text{NDF}$ : 35042212341.7/32

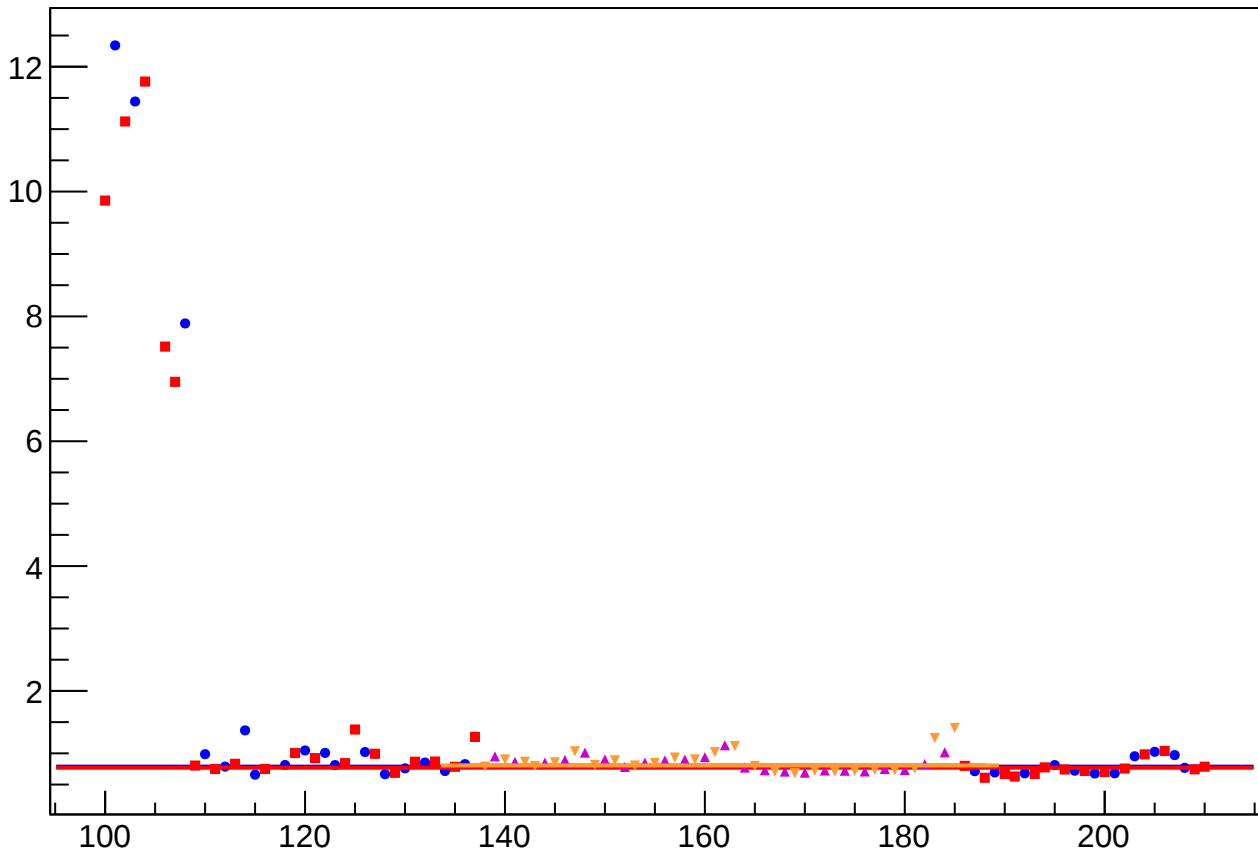
Left In: 133.337+/-0.000  $\chi^2/\text{NDF}$ : 4303812119.2/22

+ sign 143.006+/-0.000  $\chi^2/\text{NDF}$ : 34398210513.5/52

All: 143.243+/-0.000  $\chi^2/\text{NDF}$ : 78666835393.

- sign 143.466+/-0.000  $\chi^2/\text{NDF}$ : 44264198107.5/55

# yield\_bcm0l02\_rms vs Slug



Right In: 0.787 $\pm$ 0.000  $\chi^2$ /NDF: 3008112.8/27

Left Out: 0.806 $\pm$ 0.000  $\chi^2$ /NDF:690578.5/24

Right Out: 0.770 $\pm$ 0.000  $\chi^2$ /NDF: 3300100.3/32

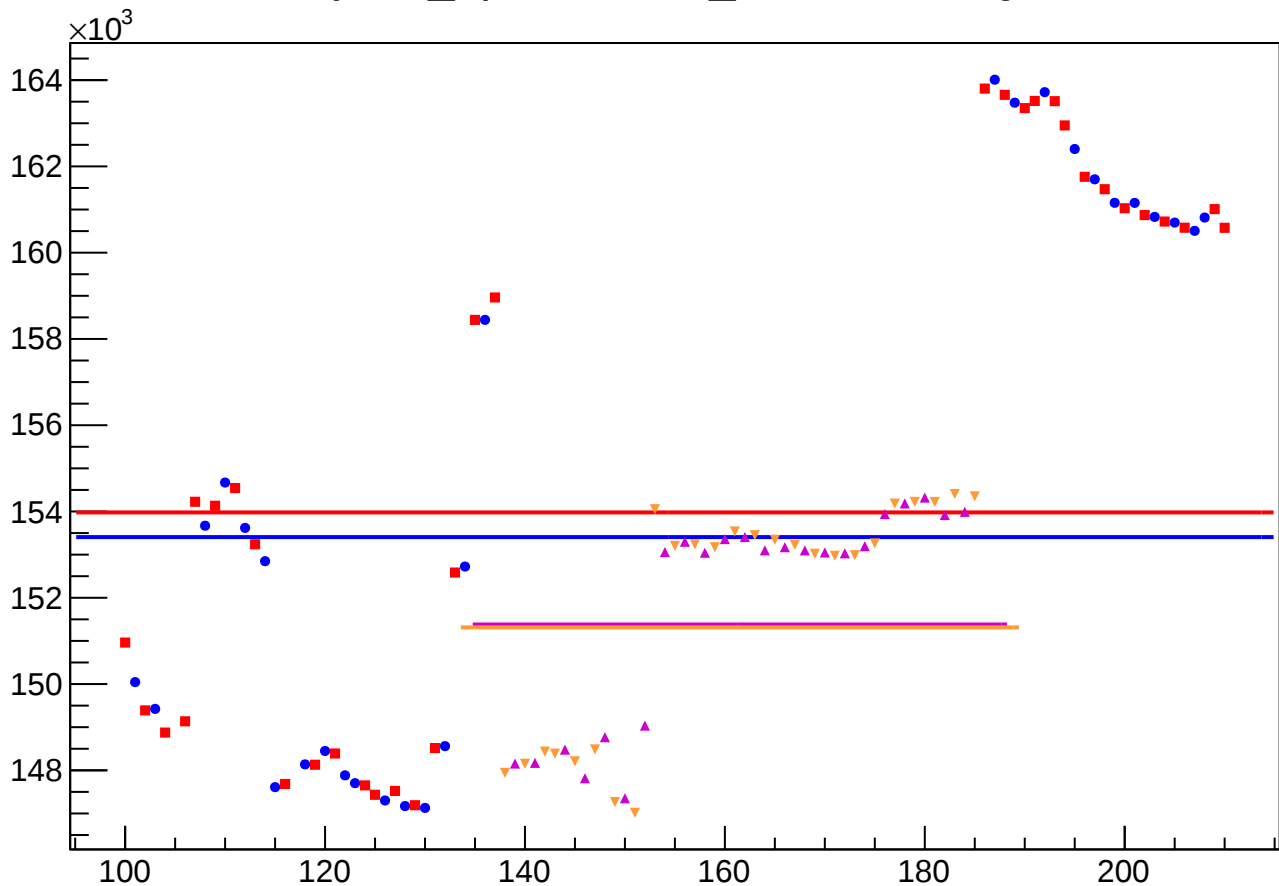
Left In: 0.805 $\pm$ 0.000  $\chi^2$ /NDF:480510.8/22

+ sign 0.798 $\pm$ 0.000  $\chi^2$ /NDF: 3705691.2/52

All: 0.793 $\pm$ 0.000  $\chi^2$ /NDF: 7517275.4/108

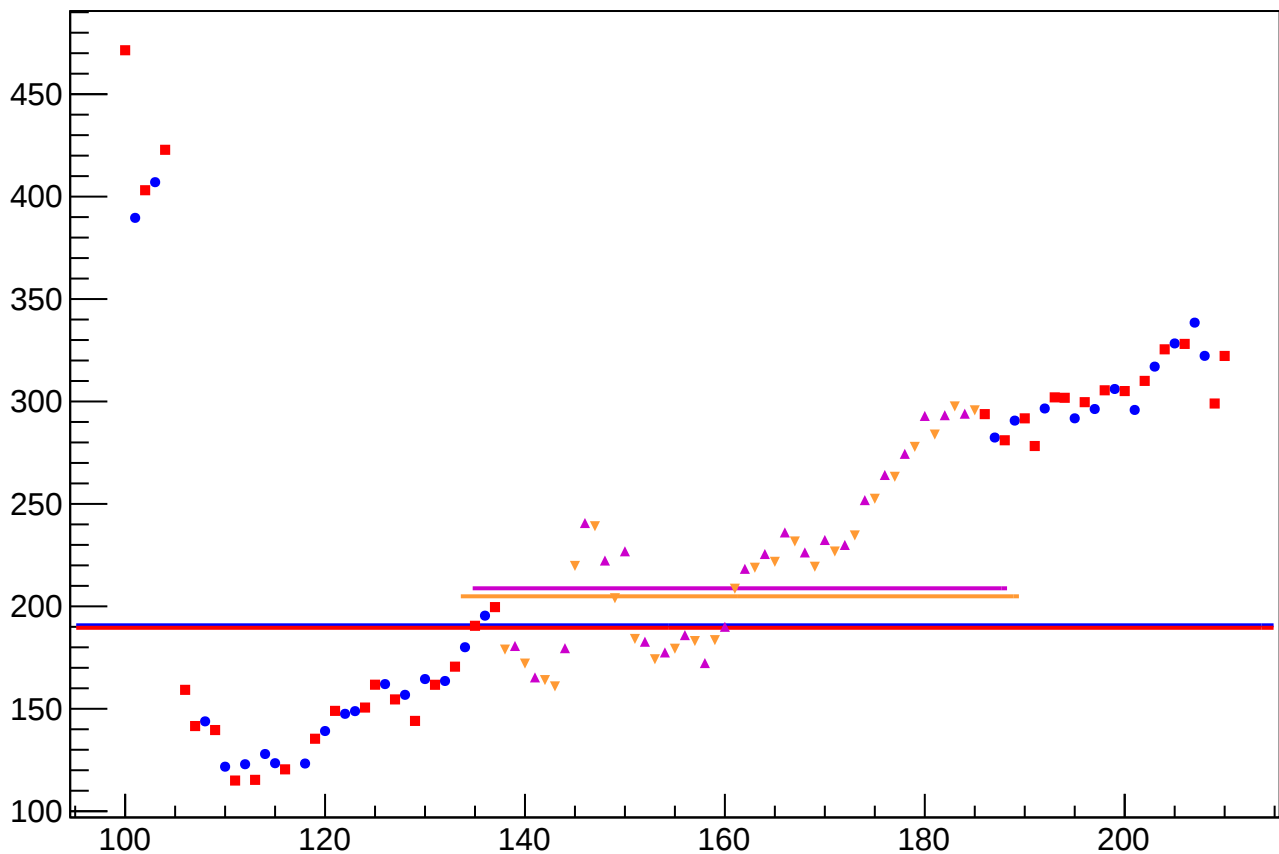
- sign 0.788 $\pm$ 0.000  $\chi^2$ /NDF: 3807242.9/55

# yield\_bpm0i01WS\_mean vs Slug



|                                   |                                 |                               |                              |
|-----------------------------------|---------------------------------|-------------------------------|------------------------------|
| Right In: 153406.781 $\pm$ 0.055  | $\chi^2$ /NDF: 10977859063.7/27 | + sign 152237.068 $\pm$ 0.036 | $\chi^2$ /NDF: 14947586497.  |
| Left Out: 151313.284 $\pm$ 0.049  | $\chi^2$ /NDF: 3153768134.8/24  | All: 152459.669 $\pm$ 0.026   | $\chi^2$ /NDF: 309646925     |
| Right Out: 153978.818 $\pm$ 0.051 | $\chi^2$ /NDF: 12289968129.5/32 | - sign 152679.844 $\pm$ 0.036 | $\chi^2$ /NDF: 15942679118.2 |
| Left In: 151380.236 $\pm$ 0.051   | $\chi^2$ /NDF: 2363895785.3/22  |                               |                              |

# yield\_bpm0i01WS\_rms vs Slug



Right In: 190.746 $\pm$ 0.039  $\chi^2$ /NDF: 4117286.0/27

Left Out: 204.900 $\pm$ 0.034  $\chi^2$ /NDF:1056380.8/24

Right Out: 189.536 $\pm$ 0.036  $\chi^2$ /NDF: 4831179.0/32

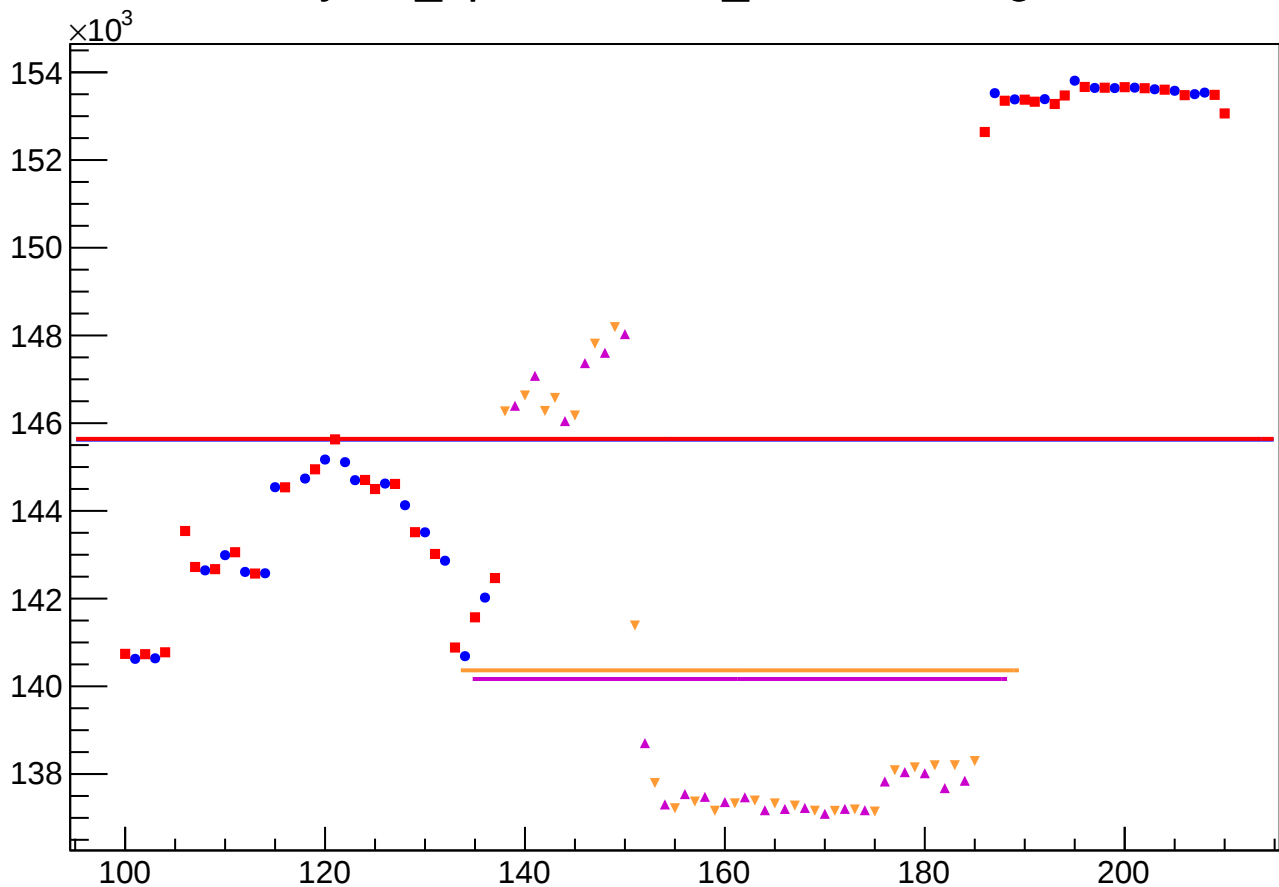
Left In: 208.813 $\pm$ 0.036  $\chi^2$ /NDF:1001936.6/22

+ sign 198.654 $\pm$ 0.026  $\chi^2$ /NDF: 5248255.8/52

All: 198.914 $\pm$ 0.018  $\chi^2$ /NDF: 11223420.5/10

- sign 199.172 $\pm$ 0.026  $\chi^2$ /NDF: 5974961.2/55

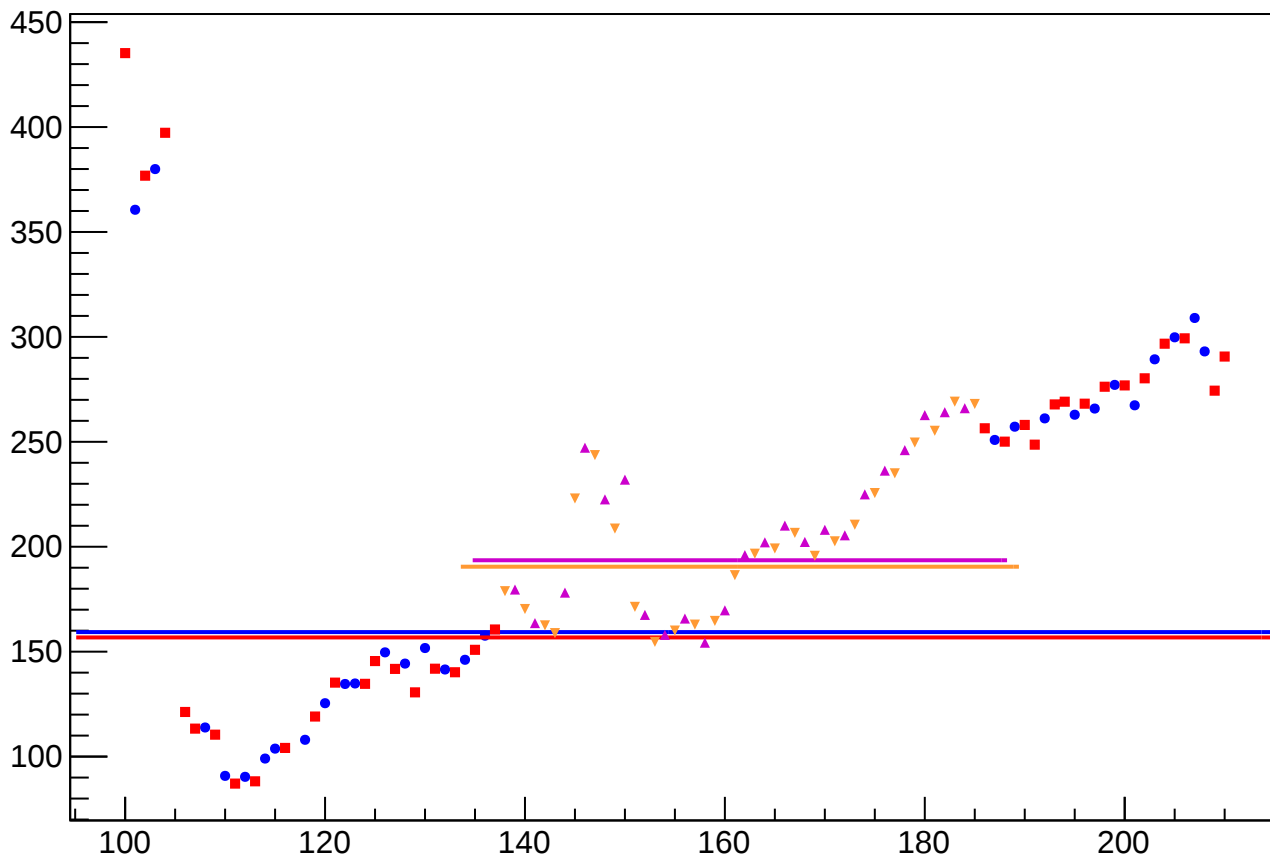
# yield\_bpm0i01aWS\_mean vs Slug



Right In: 145625.854+/-0.047  $\chi^2/\text{NDF}$ : 8715622355.1/27  
 Left Out: 140364.444+/-0.045  $\chi^2/\text{NDF}$ : 8677078677.7/24  
 Right Out: 145641.850+/-0.043  $\chi^2/\text{NDF}$ : 10539568330.7/32  
 Left In: 140166.971+/-0.047  $\chi^2/\text{NDF}$ : 8028464654.6/22

+ sign 142914.045+/-0.032  $\chi^2/\text{NDF}$ : 23953419412.  
 All: 143044.874+/-0.023  $\chi^2/\text{NDF}$ : 498583350  
 - sign 143171.014+/-0.032  $\chi^2/\text{NDF}$ : 25873014724.2

# yield\_bpm0i01aWS\_rms vs Slug



Right In: 159.326+/-0.033  $\chi^2/\text{NDF}$ : 5035258.4/27

Left Out: 190.486+/-0.032  $\chi^2/\text{NDF}$ : 950233.2/24

Right Out: 156.779+/-0.030  $\chi^2/\text{NDF}$ : 5926610.7/32

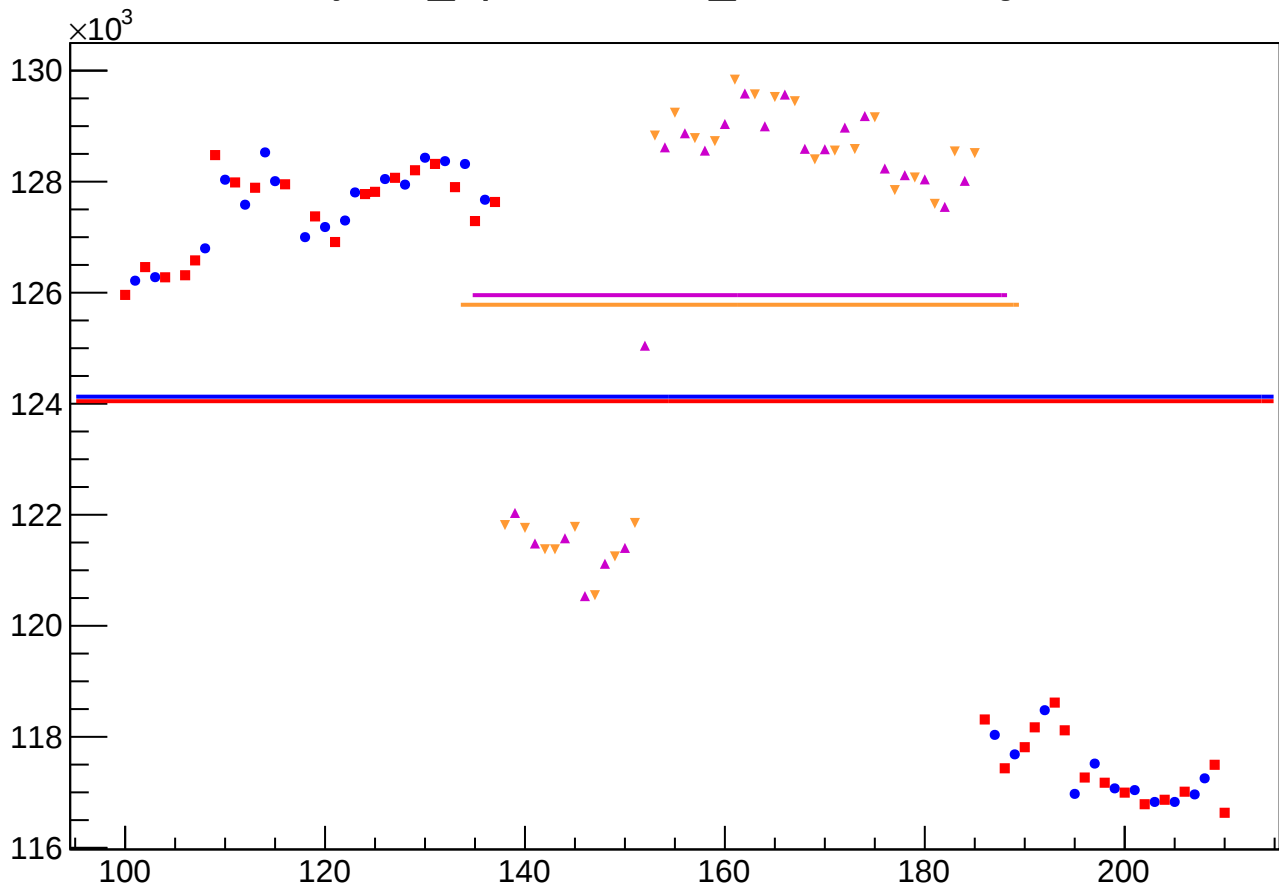
Left In: 193.558+/-0.034  $\chi^2/\text{NDF}$ : 963675.0/22

+ sign 175.386+/-0.023  $\chi^2/\text{NDF}$ : 6445714.8/52

All: 174.364+/-0.016  $\chi^2/\text{NDF}$ : 13999223.7/10

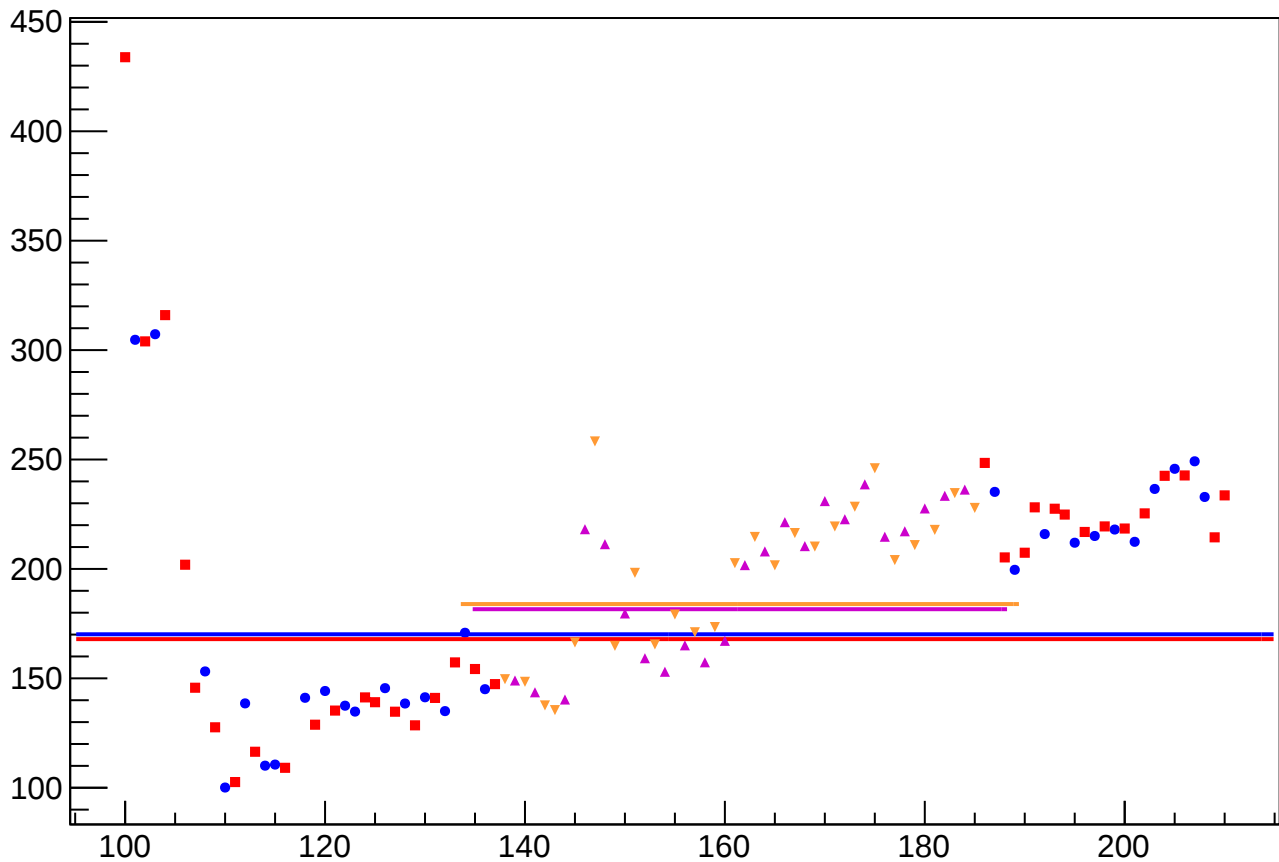
- sign 173.378+/-0.023  $\chi^2/\text{NDF}$ : 7549610.8/55

# yield\_bpm0l01WS\_mean vs Slug



|                                   |                                 |                               |                              |
|-----------------------------------|---------------------------------|-------------------------------|------------------------------|
| Right In: 124127.207 $\pm$ 0.047  | $\chi^2$ /NDF: 11137146761.5/27 | + sign 125011.619 $\pm$ 0.032 | $\chi^2$ /NDF: 18526245897.7 |
| Left Out: 125782.764 $\pm$ 0.044  | $\chi^2$ /NDF: 6729761889.8/24  | All: 124994.358 $\pm$ 0.022   | $\chi^2$ /NDF: 381798005.1   |
| Right Out: 124045.830 $\pm$ 0.044 | $\chi^2$ /NDF: 12918872774.0/32 | - sign 124978.007 $\pm$ 0.031 | $\chi^2$ /NDF: 19652993807.8 |
| Left In: 125955.637 $\pm$ 0.045   | $\chi^2$ /NDF: 5804088930.1/22  |                               |                              |

# yield\_bpm0l01WS\_rms vs Slug



Right In:  $170.133 \pm 0.033$   $\chi^2/\text{NDF}$ : 2212982.3/27

Left Out:  $183.947 \pm 0.031$   $\chi^2/\text{NDF}$ : 1123194.0/24

Right Out:  $167.921 \pm 0.031$   $\chi^2/\text{NDF}$ : 2806811.7/32

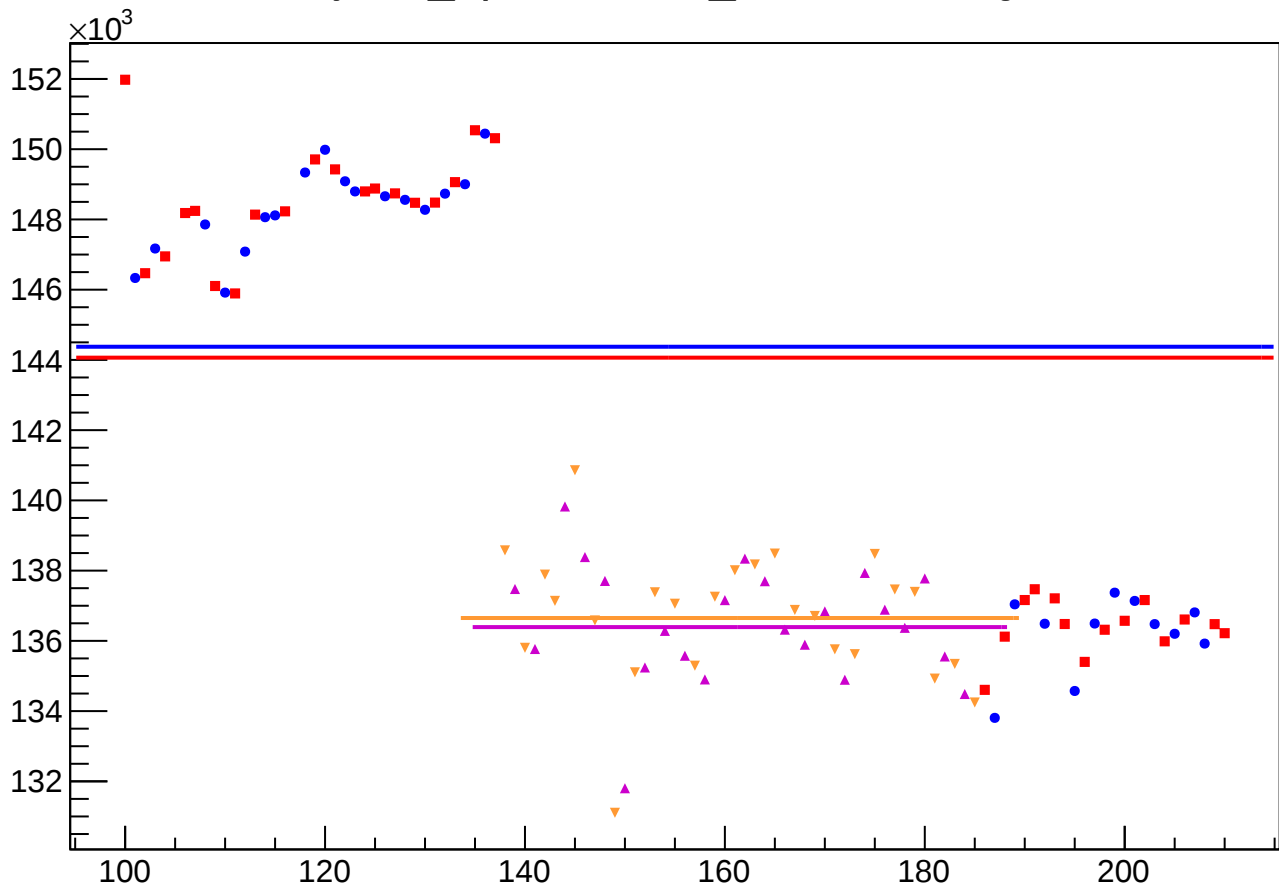
Left In:  $181.596 \pm 0.032$   $\chi^2/\text{NDF}$ : 1103524.3/22

+ sign  $177.512 \pm 0.023$   $\chi^2/\text{NDF}$ : 3427983.2/52

All:  $176.015 \pm 0.016$   $\chi^2/\text{NDF}$ : 7442124.1/108

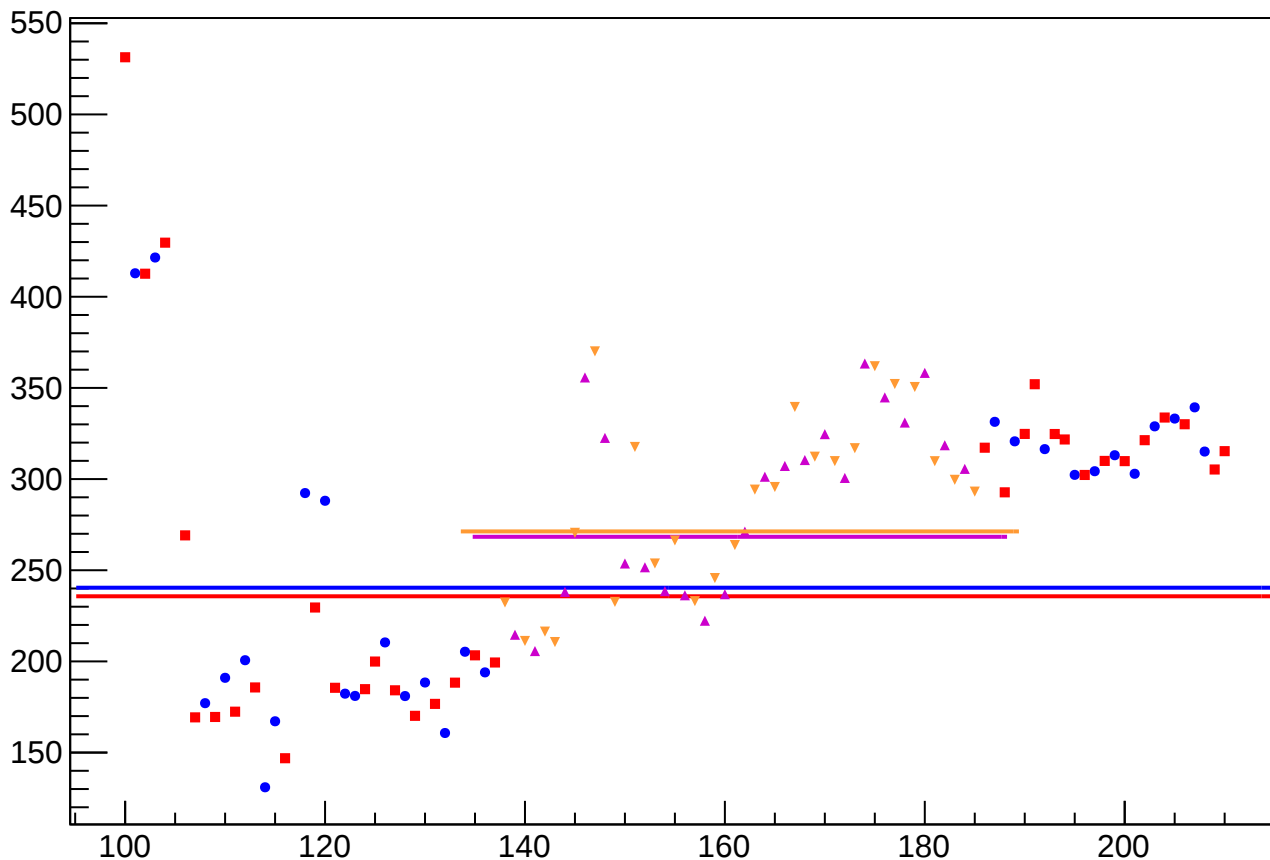
- sign  $174.596 \pm 0.022$   $\chi^2/\text{NDF}$ : 4005695.1/55

# yield\_bpm0l02WS\_mean vs Slug



Right In: 144375.156 $\pm$ 0.067  $\chi^2$ /NDF: 7723916429.5/27  
 Left Out: 136650.935 $\pm$ 0.065  $\chi^2$ /NDF: 930649595.5/24  
 Right Out: 144064.449 $\pm$ 0.061  $\chi^2$ /NDF: 8976333312.9/32  
 Left In: 136392.188 $\pm$ 0.066  $\chi^2$ /NDF: 701986841.4/22

# yield\_bpm0l02WS\_rms vs Slug



Right In: 240.420+/-0.047  $\chi^2/\text{NDF}$ : 2330444.6/27

Left Out: 271.295+/-0.046  $\chi^2/\text{NDF}$ :1064485.7/24

Right Out: 235.715+/-0.043  $\chi^2/\text{NDF}$ : 2718708.3/32

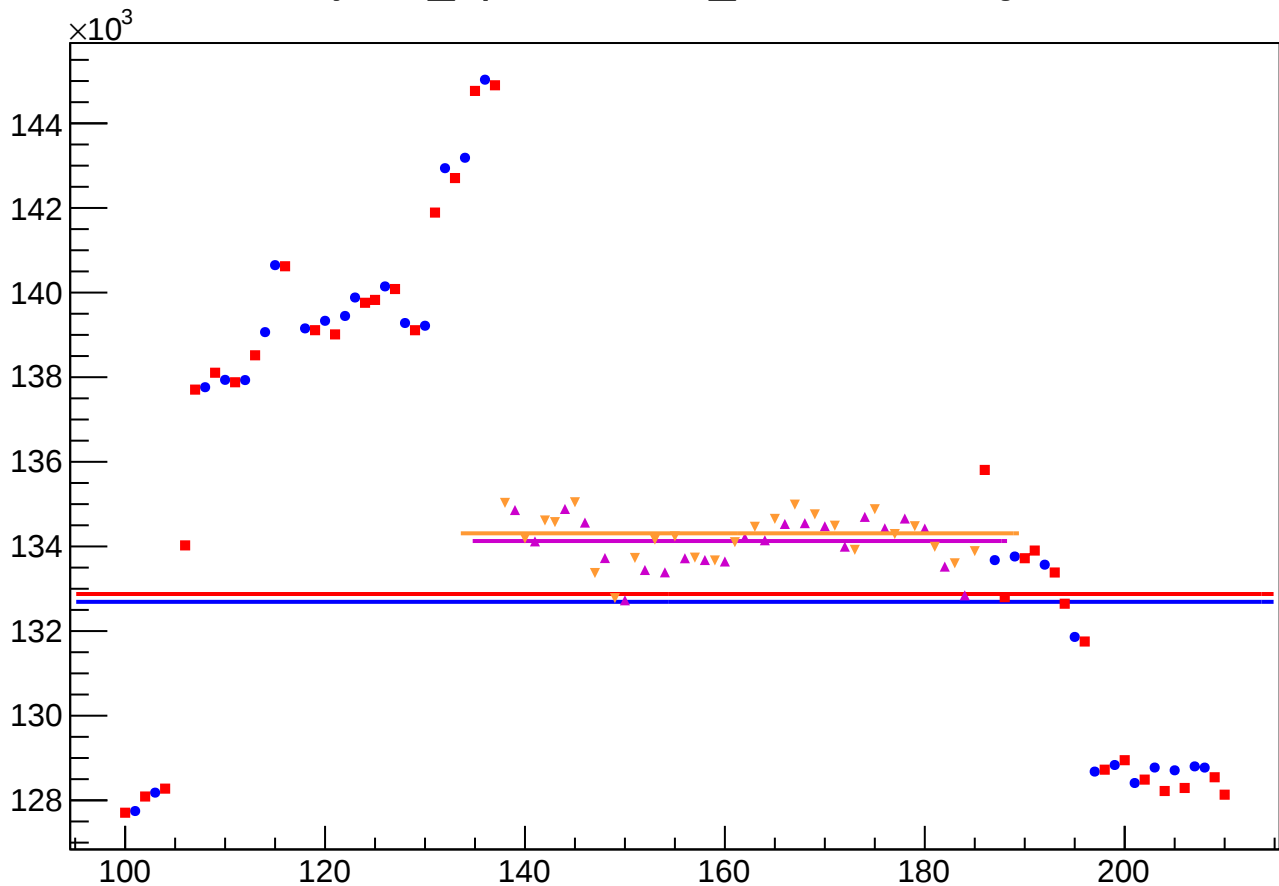
Left In: 268.344+/-0.047  $\chi^2/\text{NDF}$ :1077364.0/22

+ sign 256.353+/-0.033  $\chi^2/\text{NDF}$ : 3615852.0/52

All: 253.520+/-0.023  $\chi^2/\text{NDF}$ : 7688467.2/108

- sign 250.865+/-0.032  $\chi^2/\text{NDF}$ : 4058187.5/55

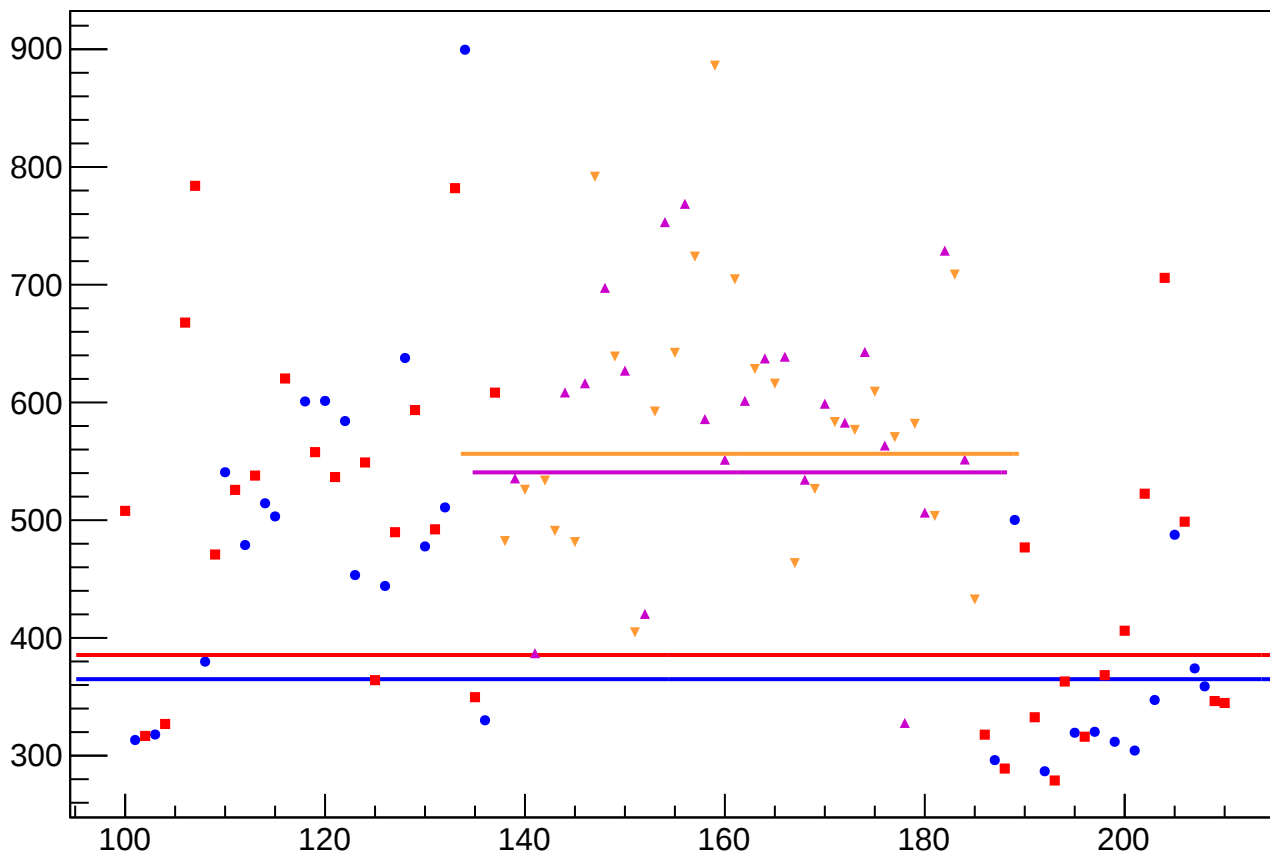
# yield\_bpm0l03WS\_mean vs Slug



Right In:  $132690.822 \pm 0.109$   $\chi^2/\text{NDF}: 2566152579.9/27$   
 Left Out:  $134310.250 \pm 0.139$   $\chi^2/\text{NDF}: 15518632.9/24$   
 Right Out:  $132876.156 \pm 0.109$   $\chi^2/\text{NDF}: 1841230104.2/32$   
 Left In:  $134128.172 \pm 0.142$   $\chi^2/\text{NDF}: 15533736.2/22$

+ sign  $133307.539 \pm 0.086$   $\chi^2/\text{NDF}: 2666254653.4$   
 All:  $133324.109 \pm 0.061$   $\chi^2/\text{NDF}: 457197504$   
 - sign  $133341.077 \pm 0.087$   $\chi^2/\text{NDF}: 1905644370.8/$

# yield\_bpm0l03WS\_rms vs Slug



Right In:  $364.964 \pm 0.077$   $\chi^2/\text{NDF}: 1337809.9/27$

Left Out:  $556.381 \pm 0.098$   $\chi^2/\text{NDF}: 1002064.0/24$

Right Out:  $385.495 \pm 0.077$   $\chi^2/\text{NDF}: 1933891.6/32$

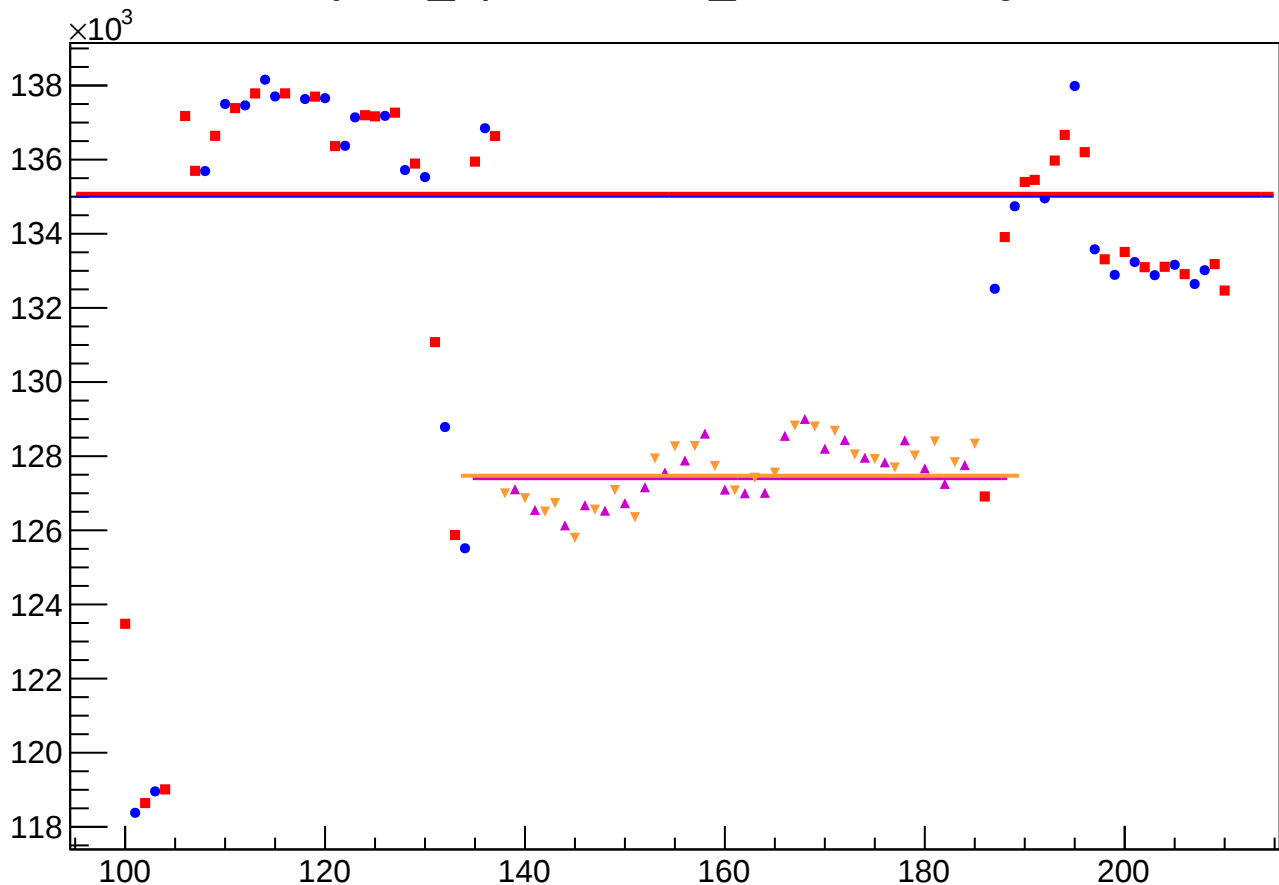
Left In:  $540.607 \pm 0.100$   $\chi^2/\text{NDF}: 1409015.2/22$

+ sign  $437.860 \pm 0.060$   $\chi^2/\text{NDF}: 4703369.3/52$

All:  $440.446 \pm 0.043$   $\chi^2/\text{NDF}: 9550471.8/108$

- sign  $443.094 \pm 0.061$   $\chi^2/\text{NDF}: 4843400.1/55$

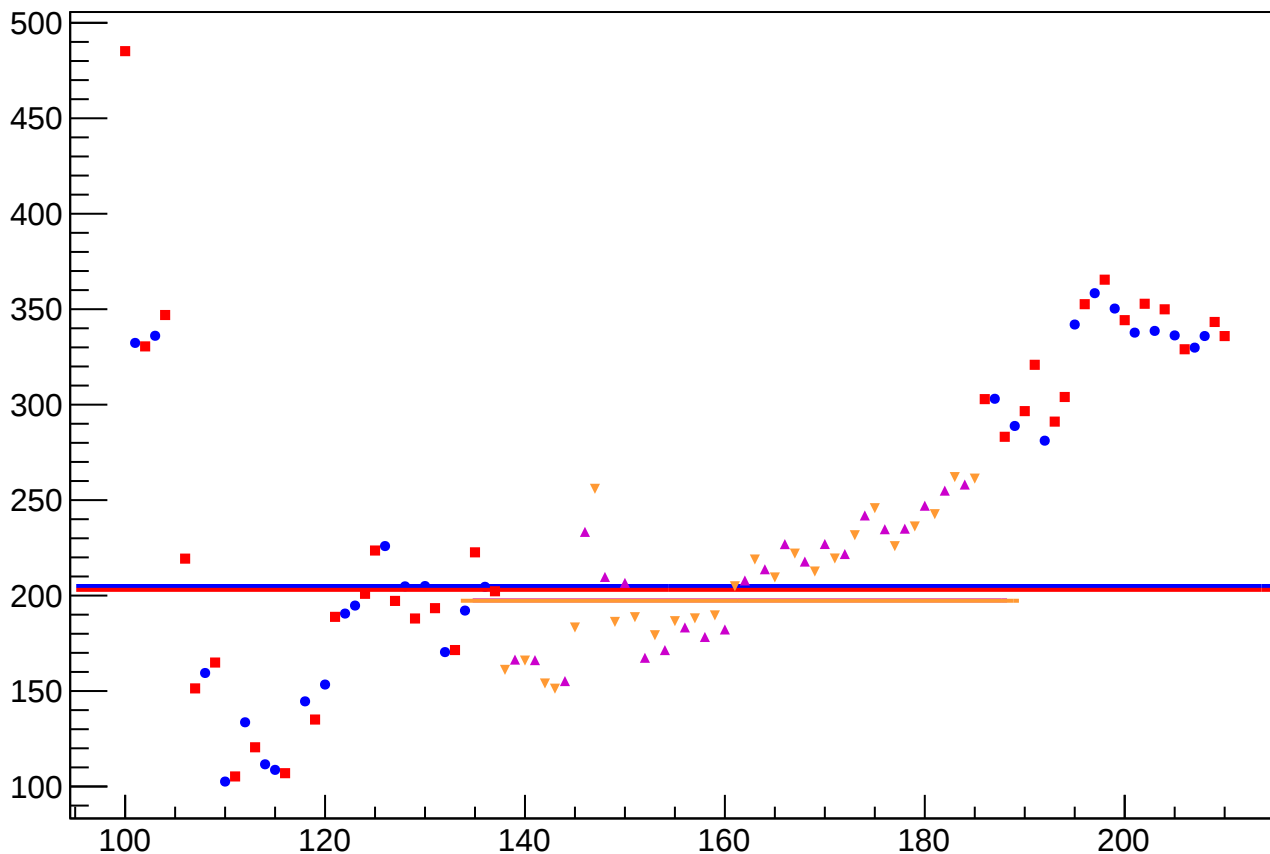
# yield\_bpm0l04WS\_mean vs Slug



Right In: 135027.393 $\pm$ 0.059  $\chi^2$ /NDF: 4864867878.4/27  
 Left Out: 127472.525 $\pm$ 0.047  $\chi^2$ /NDF: 303609315.6/24  
 Right Out: 135078.969 $\pm$ 0.055  $\chi^2$ /NDF: 5278515191.0/32  
 Left In: 127406.911 $\pm$ 0.048  $\chi^2$ /NDF: 269927988.0/22

+ sign 130386.182 $\pm$ 0.037  $\chi^2$ /NDF: 15194740559.  
 All: 130567.821 $\pm$ 0.026  $\chi^2$ /NDF: 317431303.  
 - sign 130745.735 $\pm$ 0.036  $\chi^2$ /NDF: 16499967607.4

# yield\_bpm0l04WS\_rms vs Slug



Right In: 205.016 $\pm$ 0.042  $\chi^2$ /NDF: 4149456.9/27

Left Out: 197.289 $\pm$ 0.033  $\chi^2$ /NDF: 852024.1/24

Right Out: 202.999 $\pm$ 0.039  $\chi^2$ /NDF: 5021380.9/32

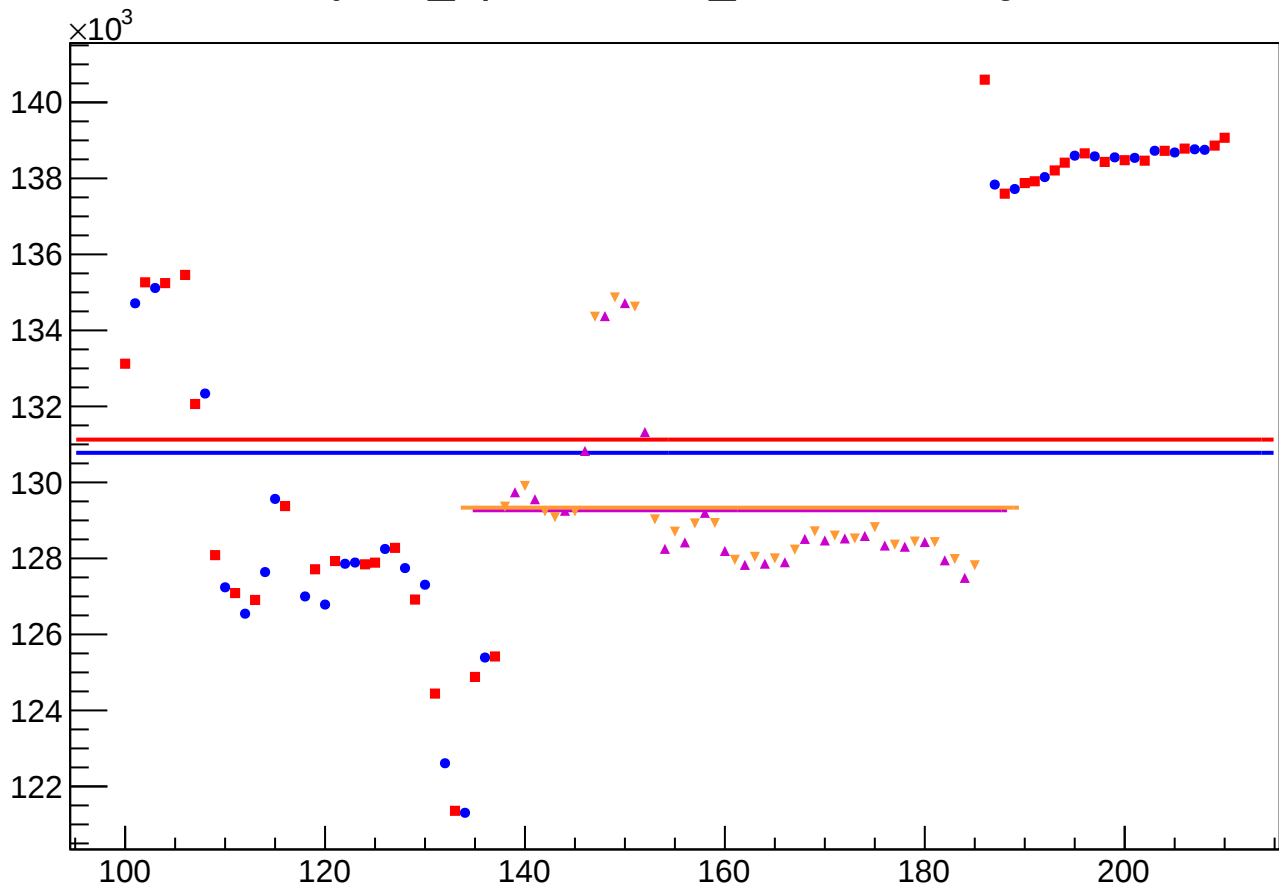
Left In: 197.471 $\pm$ 0.034  $\chi^2$ /NDF: 791577.5/22

+ sign 200.269 $\pm$ 0.026  $\chi^2$ /NDF: 5022455.1/52

All: 200.071 $\pm$ 0.018  $\chi^2$ /NDF: 10846898.9/10

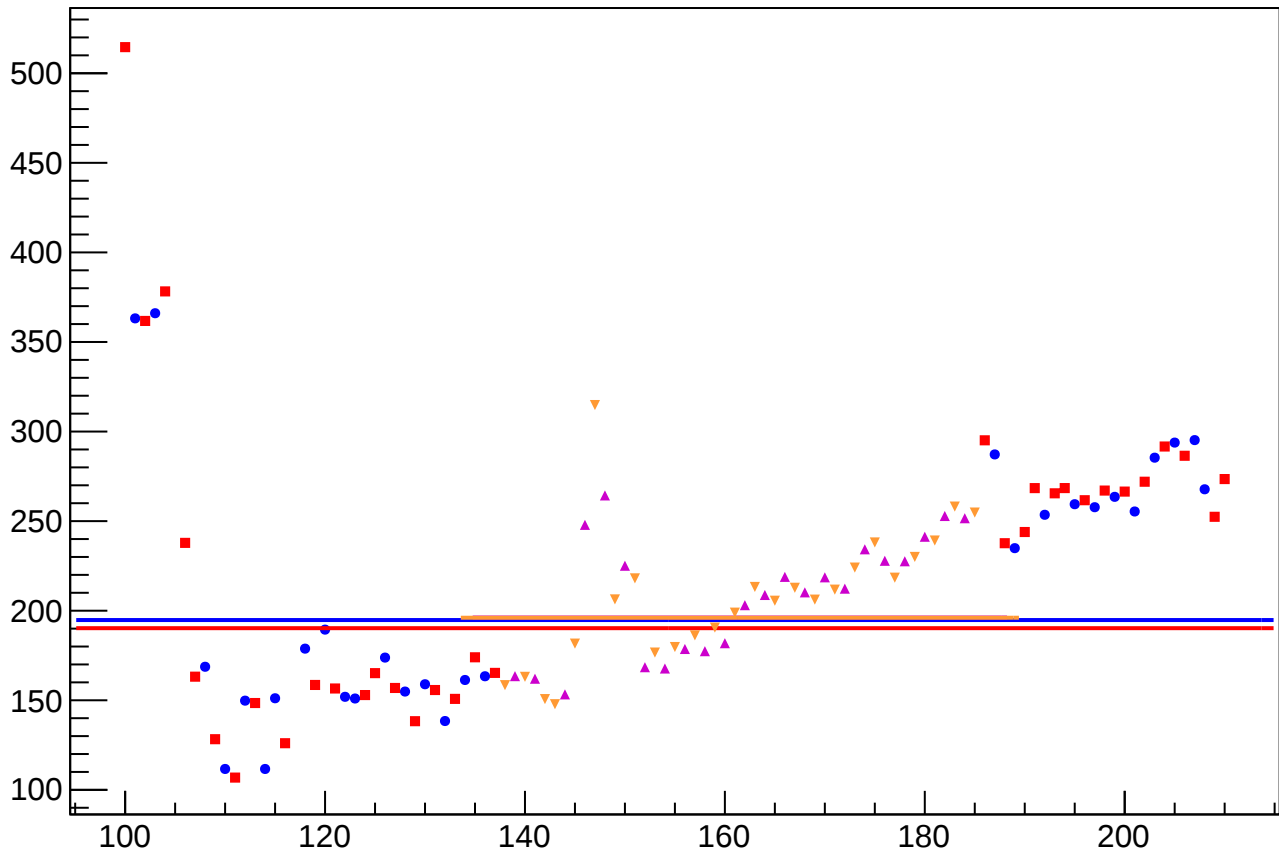
- sign 199.877 $\pm$ 0.026  $\chi^2$ /NDF: 5824328.3/55

# yield\_bpm0l05WS\_mean vs Slug



Right In: 130778.592 $\pm$ 0.055  $\chi^2$ /NDF: 11247641969.6/27  
 Left Out: 129335.946 $\pm$ 0.047  $\chi^2$ /NDF: 1450933621.0/24  
 Right Out: 131126.319 $\pm$ 0.050  $\chi^2$ /NDF: 12907177601.1/32  
 Left In: 129266.909 $\pm$ 0.048  $\chi^2$ /NDF: 1213762773.1/22  
 + sign 129945.596 $\pm$ 0.036  $\chi^2$ /NDF: 13101388817.7  
 All: 130053.409 $\pm$ 0.025  $\chi^2$ /NDF: 279539668.0  
 - sign 130156.805 $\pm$ 0.035  $\chi^2$ /NDF: 14834516133.6

# yield\_bpm0l05WS\_rms vs Slug



Right In: 194.788 $\pm$ 0.039  $\chi^2$ /NDF: 2644047.3/27

Left Out: 196.077 $\pm$ 0.033  $\chi^2$ /NDF: 975710.9/24

Right Out: 190.245 $\pm$ 0.036  $\chi^2$ /NDF: 3408314.2/32

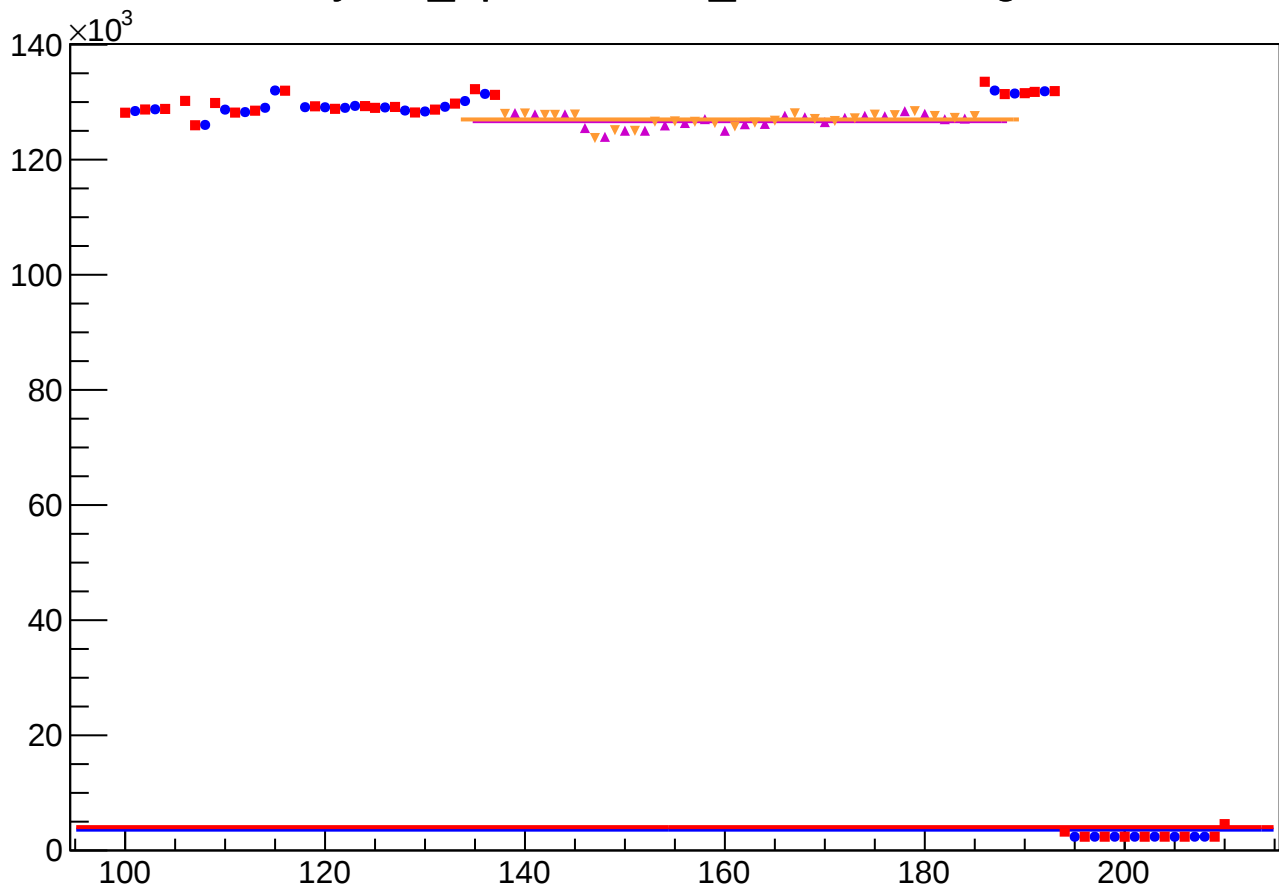
Left In: 196.186 $\pm$ 0.034  $\chi^2$ /NDF: 898058.0/22

+ sign 195.532 $\pm$ 0.025  $\chi^2$ /NDF: 3620401.9/52

All: 194.415 $\pm$ 0.018  $\chi^2$ /NDF: 7945229.3/108

- sign 193.343 $\pm$ 0.025  $\chi^2$ /NDF: 4320944.0/55

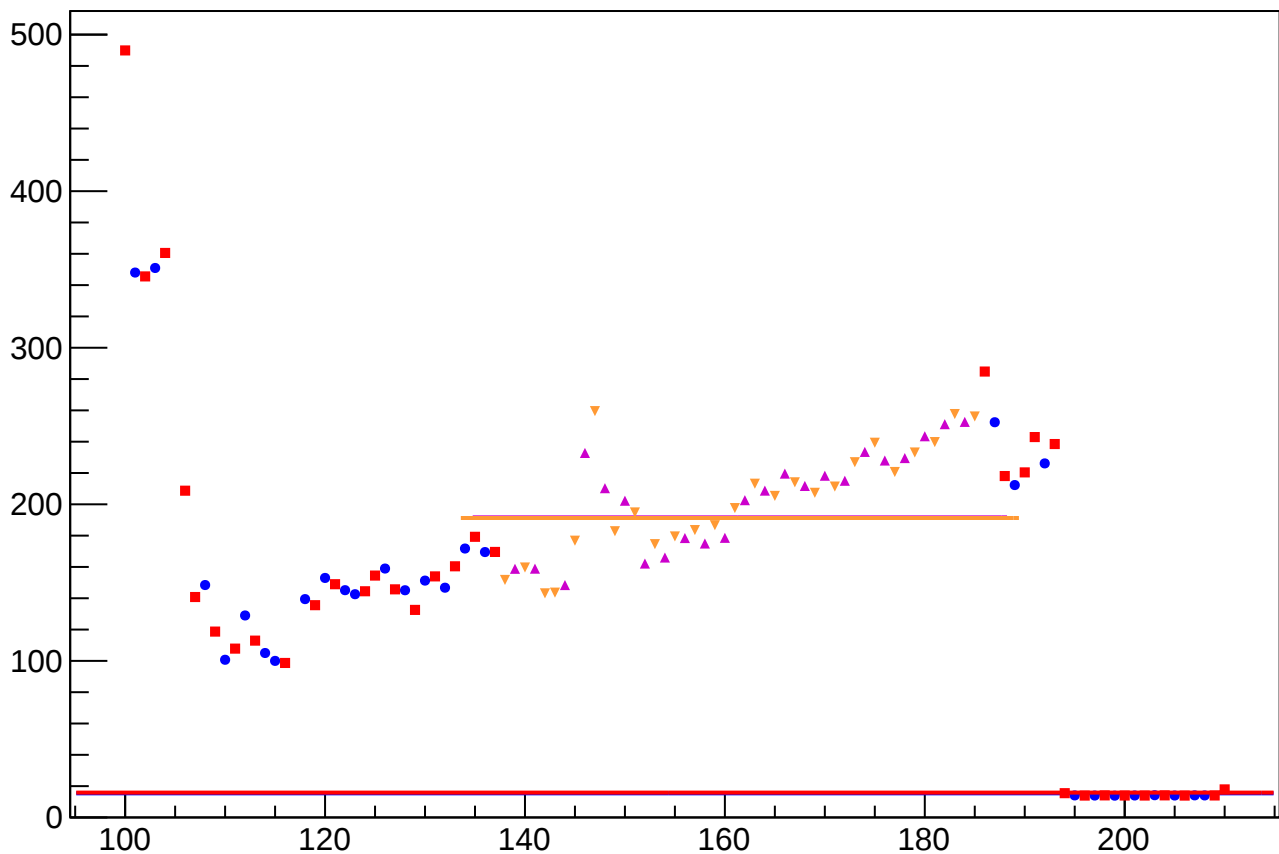
# yield\_bpm0l06WS\_mean vs Slug



Right In:  $3612.635 \pm 0.006$   $\chi^2/\text{NDF}: 4884050626210.3/27$   
 Left Out:  $126981.724 \pm 0.046$   $\chi^2/\text{NDF}: 530573115.8/24$   
 Right Out:  $4052.662 \pm 0.006$   $\chi^2/\text{NDF}: 5810046128673.9/32$   
 Left In:  $126682.659 \pm 0.047$   $\chi^2/\text{NDF}: 660415880.0/22$

+ sign  $5458.327 \pm 0.006$   $\chi^2/\text{NDF}: 12119135695524$   
 All:  $5681.158 \pm 0.004$   $\chi^2/\text{NDF}: 24639053472$   
 - sign  $5923.272 \pm 0.006$   $\chi^2/\text{NDF}: 12516576047710$

# yield\_bpm0l06WS\_rms vs Slug



Right In: 15.401 $\pm$ 0.004  $\chi^2$ /NDF: 13289508.8/27

Left Out: 191.263 $\pm$ 0.032  $\chi^2$ /NDF: 992566.2/24

Right Out: 15.876 $\pm$ 0.004  $\chi^2$ /NDF: 15578157.9/32

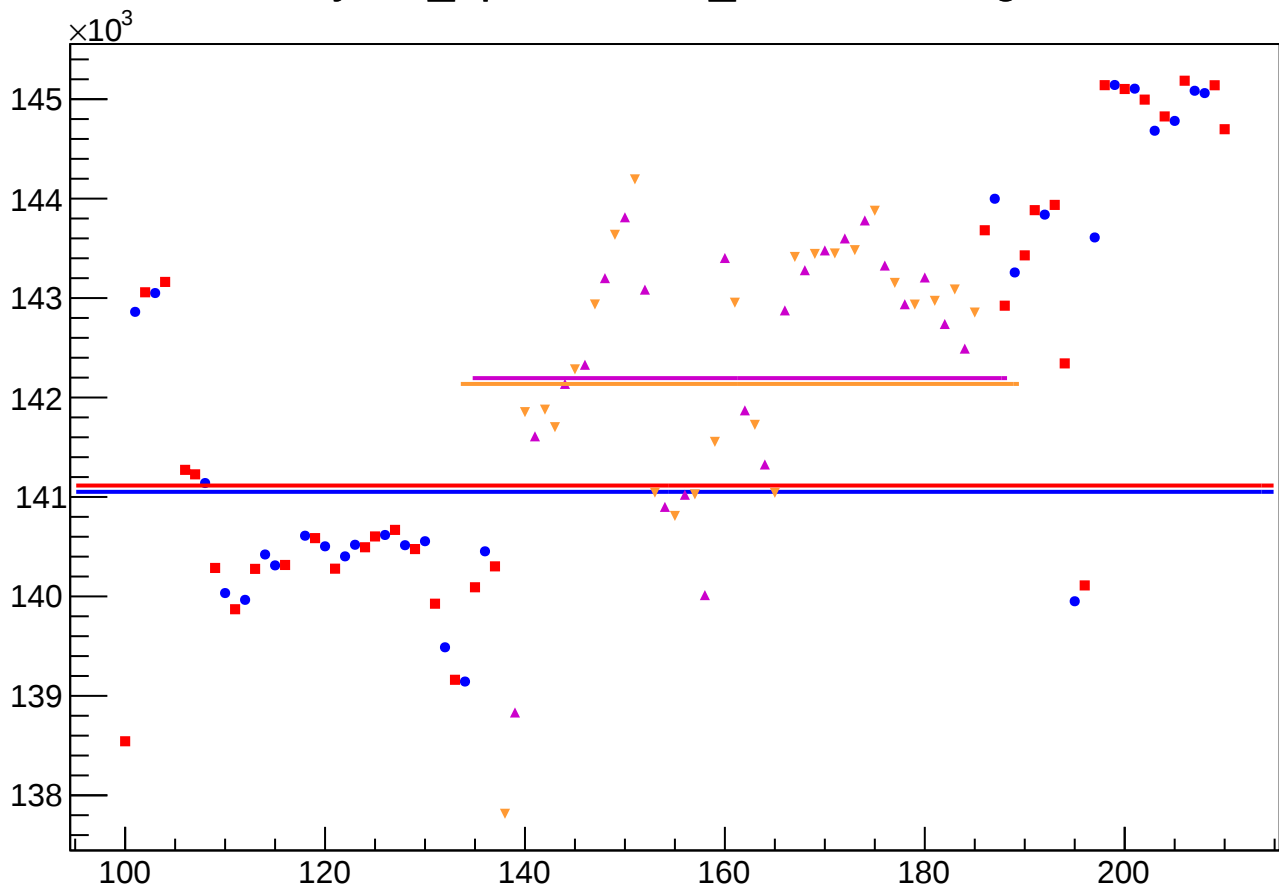
Left In: 191.683 $\pm$ 0.033  $\chi^2$ /NDF: 864384.9/22

+ sign 18.032 $\pm$ 0.004  $\chi^2$ /NDF: 43684007.9/52

All: 18.284 $\pm$ 0.003  $\chi^2$ /NDF: 87700356.7/108

- sign 18.558 $\pm$ 0.004  $\chi^2$ /NDF: 44007787.4/55

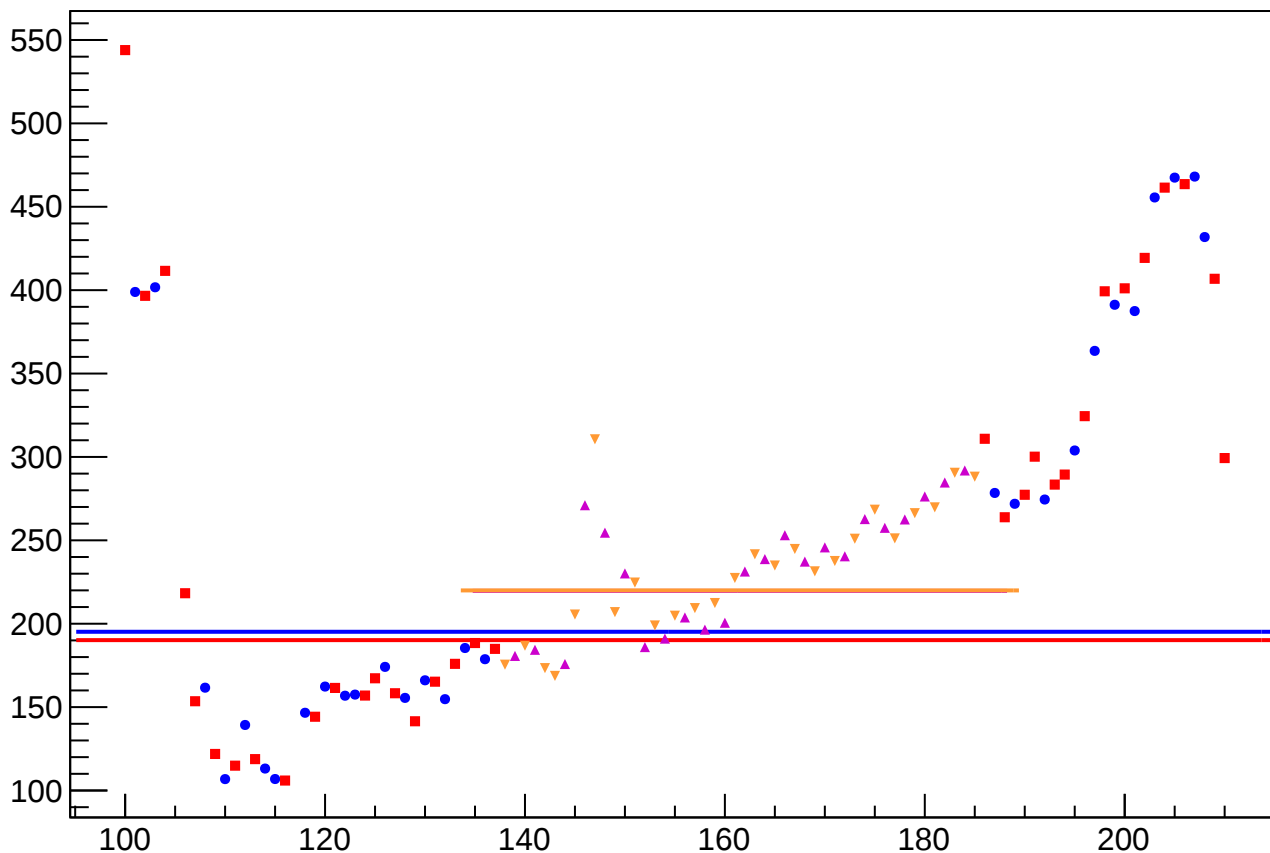
# yield\_bpm0l07WS\_mean vs Slug



Right In: 141051.616 $\pm$ 0.058  $\chi^2$ /NDF: 769057147.5/27  
 Left Out: 142136.579 $\pm$ 0.052  $\chi^2$ /NDF: 815573343.0/24  
 Right Out: 141114.937 $\pm$ 0.053  $\chi^2$ /NDF: 948672013.2/32  
 Left In: 142195.020 $\pm$ 0.054  $\chi^2$ /NDF: 644030906.9/22

+ sign 141646.894 $\pm$ 0.039  $\chi^2$ /NDF: 1778677548.5  
 All: 141644.550 $\pm$ 0.027  $\chi^2$ /NDF: 357714668  
 - sign 141642.340 $\pm$ 0.038  $\chi^2$ /NDF: 1798462026.1/

# yield\_bpm0l07WS\_rms vs Slug



Right In: 195.171+/-0.041  $\chi^2/\text{NDF}$ : 5437074.7/27

Left Out: 219.969+/-0.037  $\chi^2/\text{NDF}$ : 866616.3/24

Right Out: 190.163+/-0.037  $\chi^2/\text{NDF}$ : 6184042.7/32

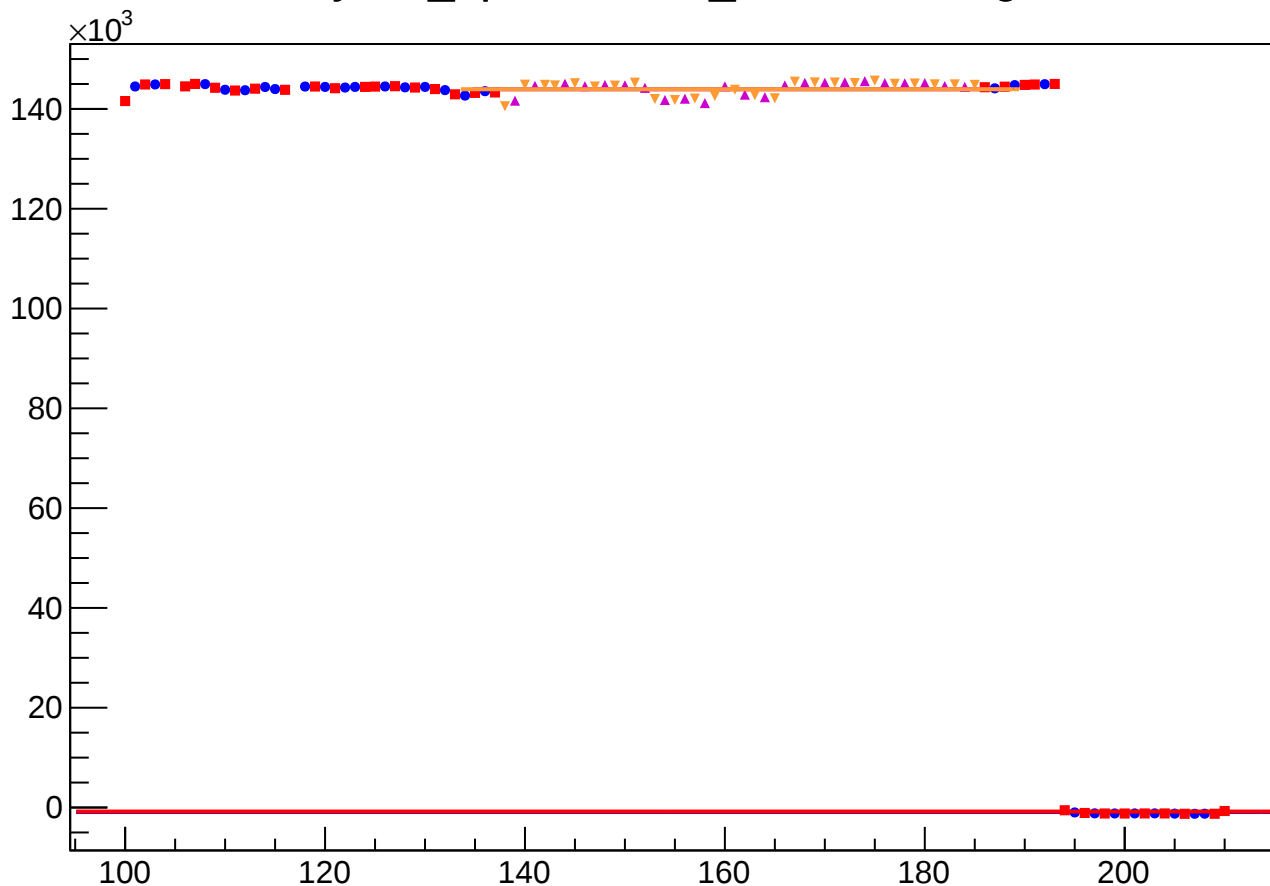
Left In: 219.685+/-0.038  $\chi^2/\text{NDF}$ : 812745.1/22

+ sign 208.777+/-0.027  $\chi^2/\text{NDF}$ : 6506437.8/52

All: 206.616+/-0.019  $\chi^2/\text{NDF}$ : 13822726.9/10

- sign 204.579+/-0.027  $\chi^2/\text{NDF}$ : 7304212.9/55

# yield\_bpm0l08WS\_mean vs Slug



Right In: -903.231 $\pm$ 0.003  $\chi^2$ /NDF: 5297596909411.1/27

Left Out: 143951.284 $\pm$ 0.052  $\chi^2$ /NDF: 864679545.2/24

Right Out: -808.306 $\pm$ 0.003  $\chi^2$ /NDF: 6401813486056.7/32

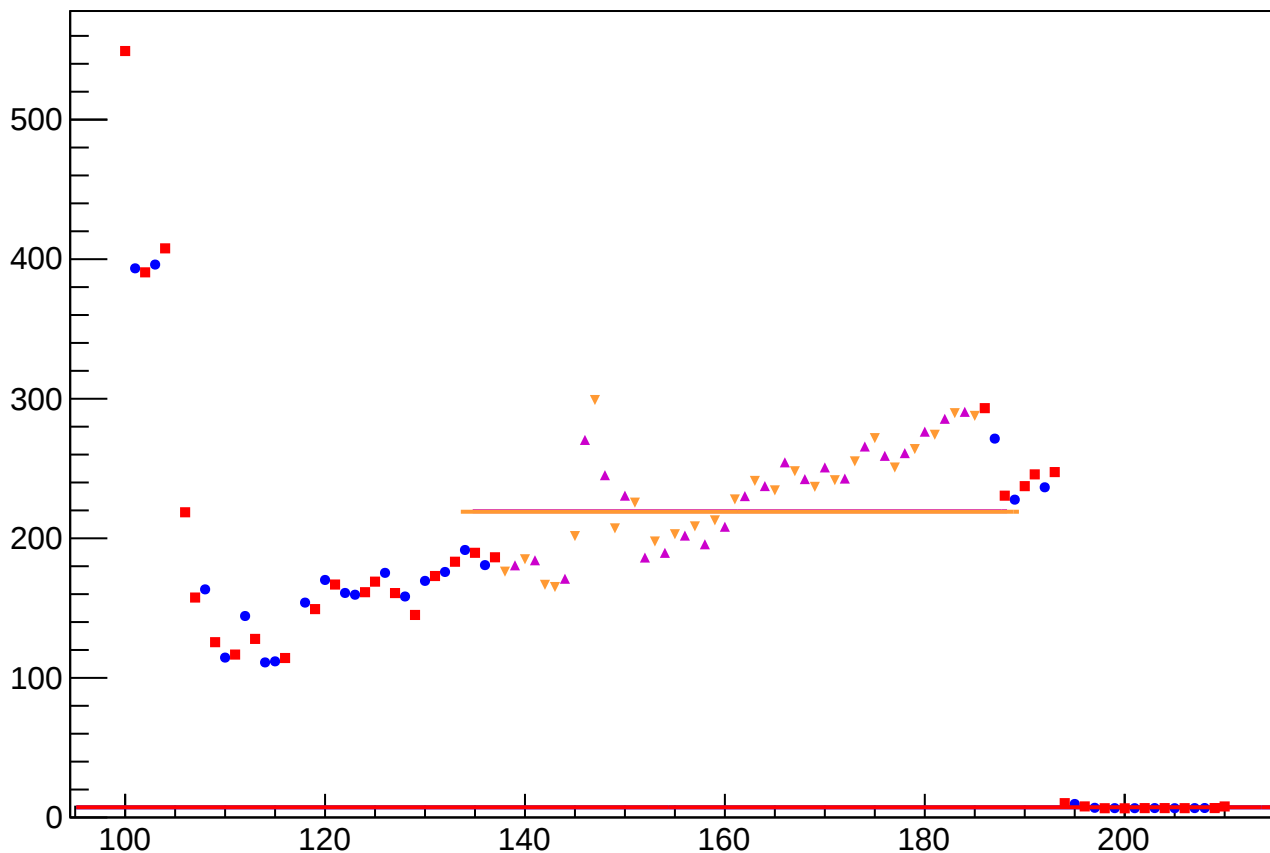
Left In: 143938.288 $\pm$ 0.054  $\chi^2$ /NDF: 719814685.6/22

+ sign -488.261 $\pm$ 0.003  $\chi^2$ /NDF: 12995933551398

All: -441.445 $\pm$ 0.002  $\chi^2$ /NDF: 26605710997

- sign -391.224 $\pm$ 0.003  $\chi^2$ /NDF: 13609194022265

# yield\_bpm0l08WS\_rms vs Slug



Right In:  $7.244 \pm 0.002$   $\chi^2/\text{NDF}$ : 14922108.5/27

Left Out:  $219.050 \pm 0.037$   $\chi^2/\text{NDF}$ : 934417.6/24

Right Out:  $7.302 \pm 0.002$   $\chi^2/\text{NDF}$ : 17461095.2/32

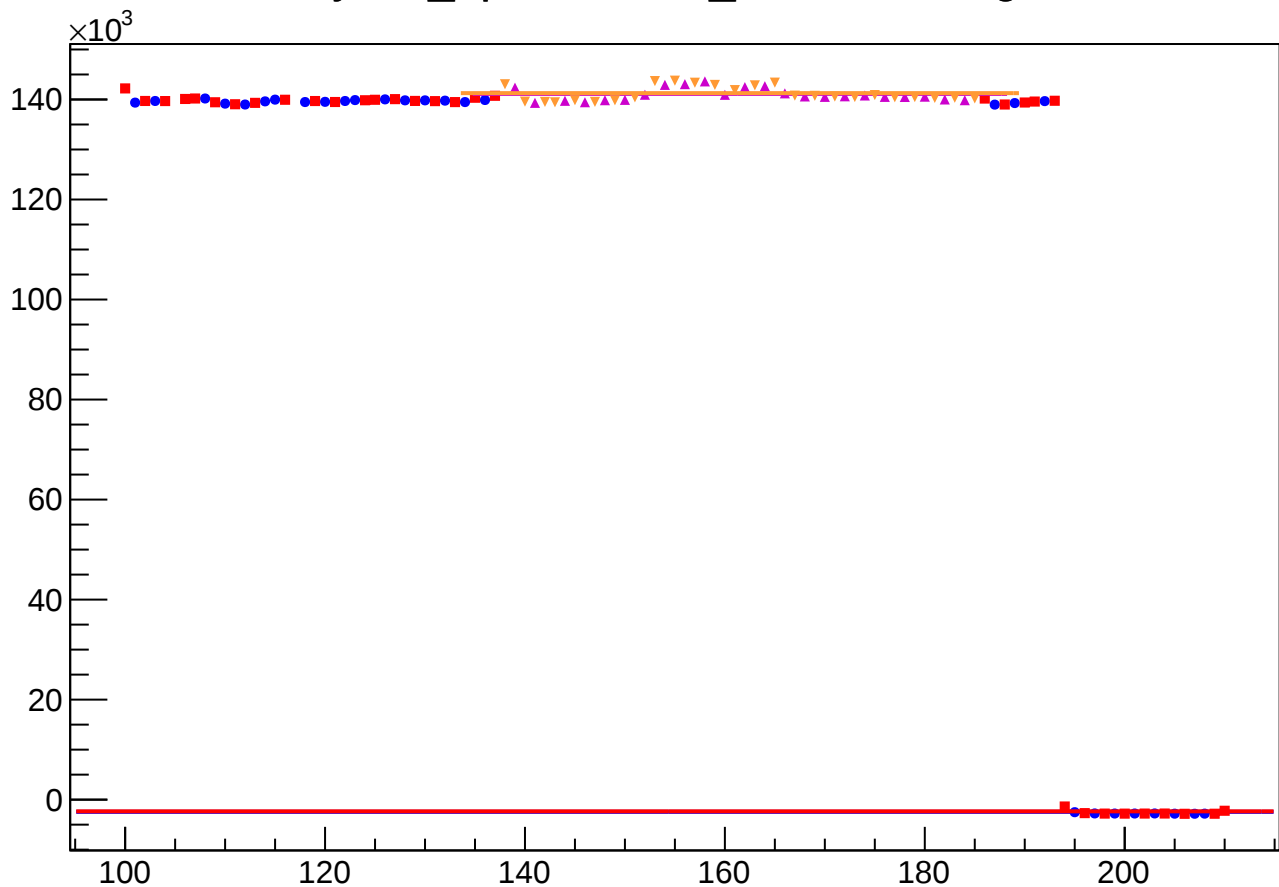
Left In:  $219.426 \pm 0.038$   $\chi^2/\text{NDF}$ : 850089.5/22

+ sign  $7.851 \pm 0.002$   $\chi^2/\text{NDF}$ : 48771118.7/52

All:  $7.881 \pm 0.001$   $\chi^2/\text{NDF}$ : 98037321.5/108

- sign  $7.914 \pm 0.002$   $\chi^2/\text{NDF}$ : 49265715.8/55

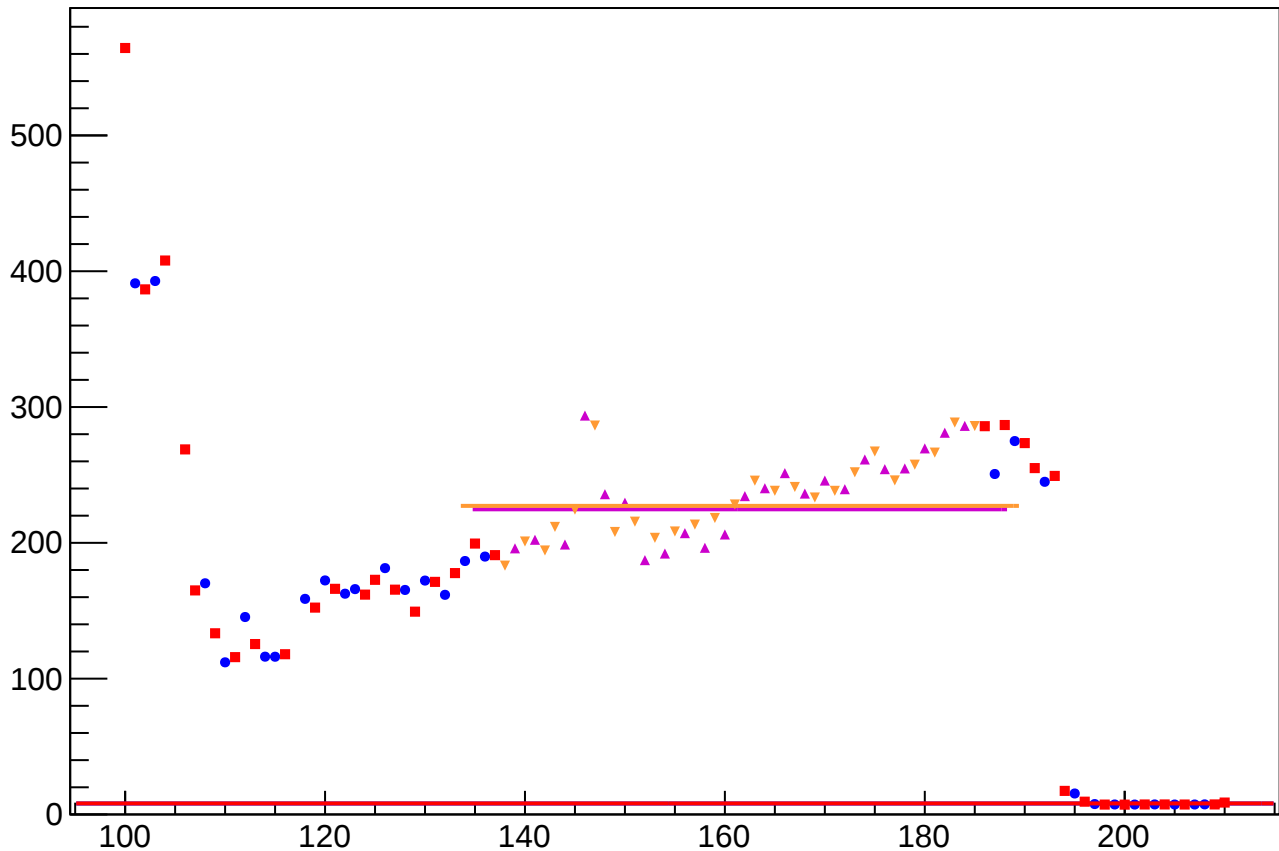
# yield\_bpm0l09WS\_mean vs Slug



Right In:  $-2439.074 \pm 0.003$   $\chi^2/\text{NDF}: 4865909847419.4/27$   
 Left Out:  $141268.791 \pm 0.054$   $\chi^2/\text{NDF}: 795989244.2/24$   
 Right Out:  $-2336.710 \pm 0.003$   $\chi^2/\text{NDF}: 5790471620910.5/32$   
 Left In:  $141119.484 \pm 0.055$   $\chi^2/\text{NDF}: 565312728.1/22$

+ sign  $-1950.800 \pm 0.003$   $\chi^2/\text{NDF}: 1200428473207$   
 All:  $-1896.787 \pm 0.002$   $\chi^2/\text{NDF}: 2459654904$   
 - sign  $-1839.122 \pm 0.003$   $\chi^2/\text{NDF}: 12591648634690$

# yield\_bpm0l09WS\_rms vs Slug



Right In:  $8.054 \pm 0.002$   $\chi^2/\text{NDF}$ : 15079846.2/27

Left Out:  $227.224 \pm 0.038$   $\chi^2/\text{NDF}$ : 484955.3/24

Right Out:  $8.122 \pm 0.002$   $\chi^2/\text{NDF}$ : 17502448.5/32

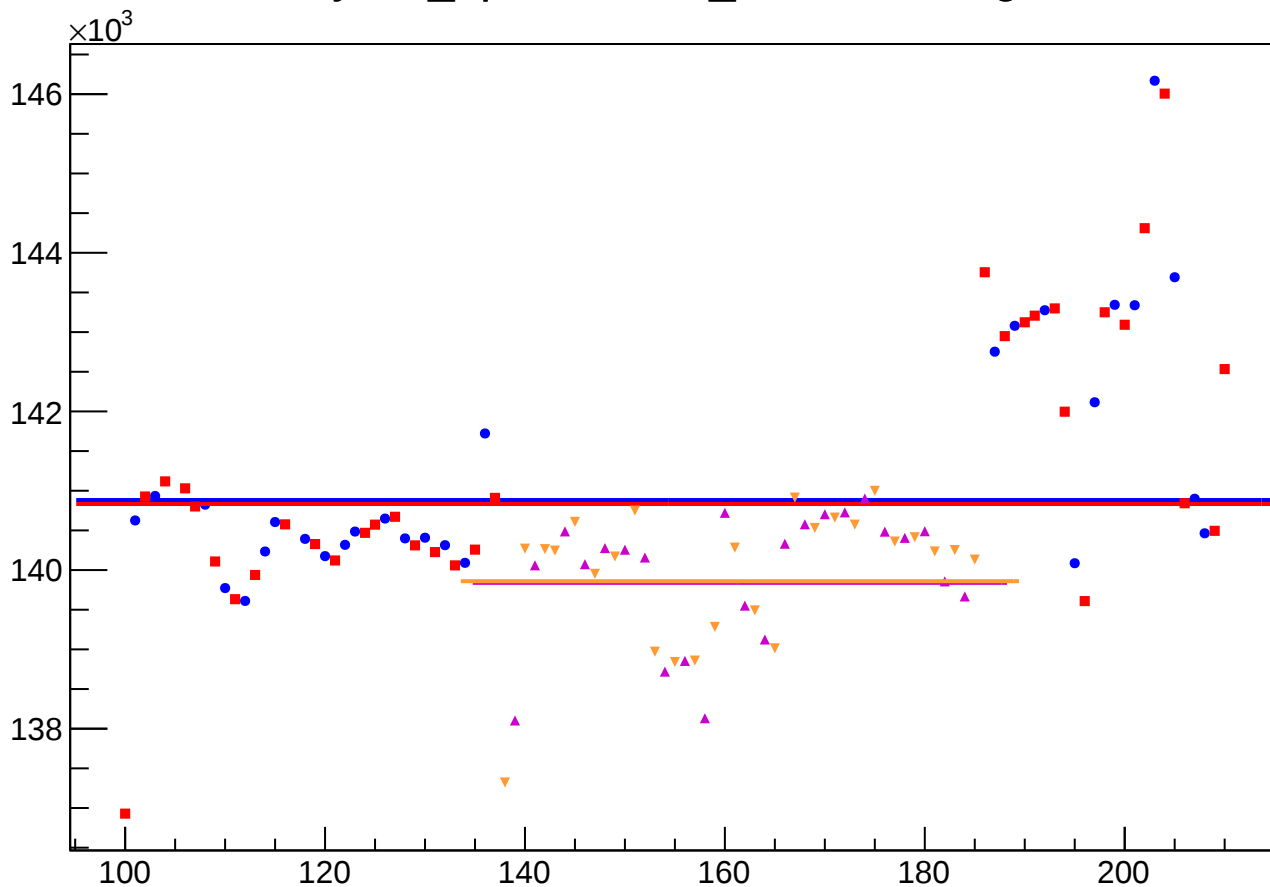
Left In:  $224.686 \pm 0.039$   $\chi^2/\text{NDF}$ : 578366.0/22

+ sign  $8.799 \pm 0.002$   $\chi^2/\text{NDF}$ : 48768147.7/52

All:  $8.835 \pm 0.002$   $\chi^2/\text{NDF}$ : 97845930.2/108

- sign  $8.874 \pm 0.002$   $\chi^2/\text{NDF}$ : 49077228.7/55

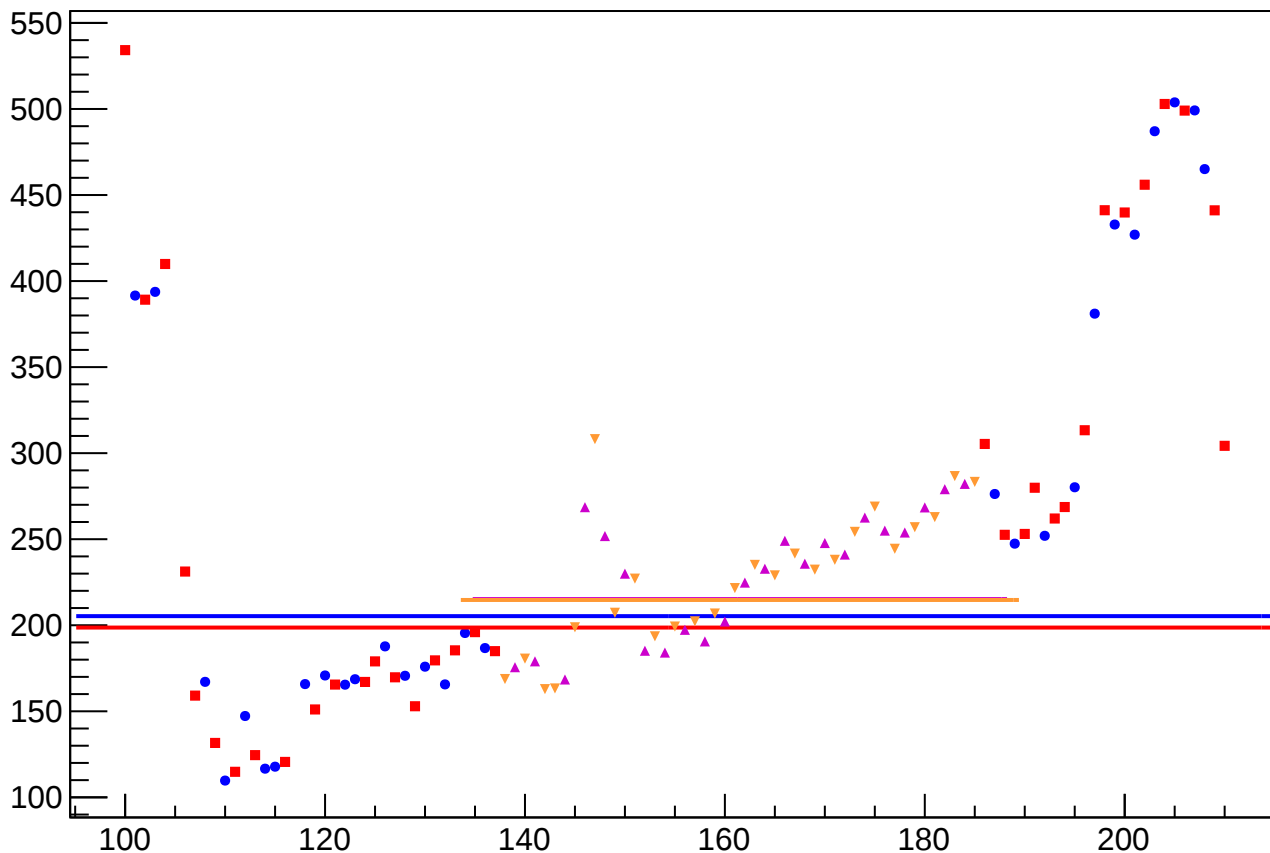
# yield\_bpm0l10WS\_mean vs Slug



Right In: 140883.116 $\pm$ 0.060  $\chi^2$ /NDF: 428740724.3/27  
 Left Out: 139859.696 $\pm$ 0.051  $\chi^2$ /NDF:330118281.5/24  
 Right Out: 140832.552 $\pm$ 0.055  $\chi^2$ /NDF: 525830057.4/32  
 Left In: 139838.724 $\pm$ 0.053  $\chi^2$ /NDF:279573689.3/22

+ sign 140286.209 $\pm$ 0.039  $\chi^2$ /NDF: 926043387.0/5  
 All: 140302.775 $\pm$ 0.027  $\chi^2$ /NDF: 190282718  
 - sign 140318.462 $\pm$ 0.038  $\chi^2$ /NDF: 976432930.4/5

# yield\_bpm0l10WS\_rms vs Slug



Right In: 205.295+/-0.043  $\chi^2/\text{NDF}$ : 5175910.2/27

Left Out: 214.693+/-0.036  $\chi^2/\text{NDF}$ : 981105.5/24

Right Out: 198.655+/-0.039  $\chi^2/\text{NDF}$ : 5823607.1/32

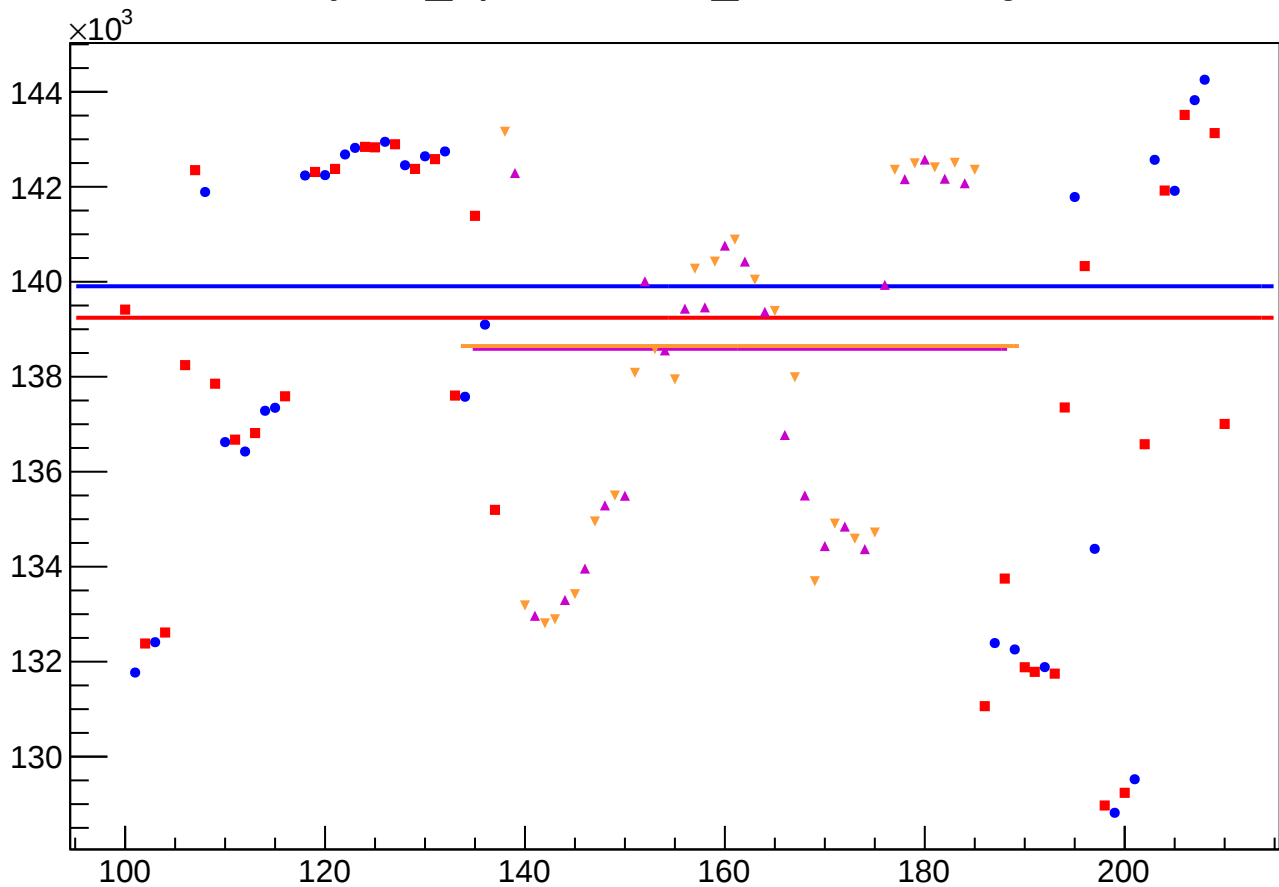
Left In: 215.222+/-0.037  $\chi^2/\text{NDF}$ : 881945.0/22

+ sign 210.776+/-0.028  $\chi^2/\text{NDF}$ : 6185209.6/52

All: 208.952+/-0.019  $\chi^2/\text{NDF}$ : 12994314.6/10

- sign 207.225+/-0.027  $\chi^2/\text{NDF}$ : 6800597.4/55

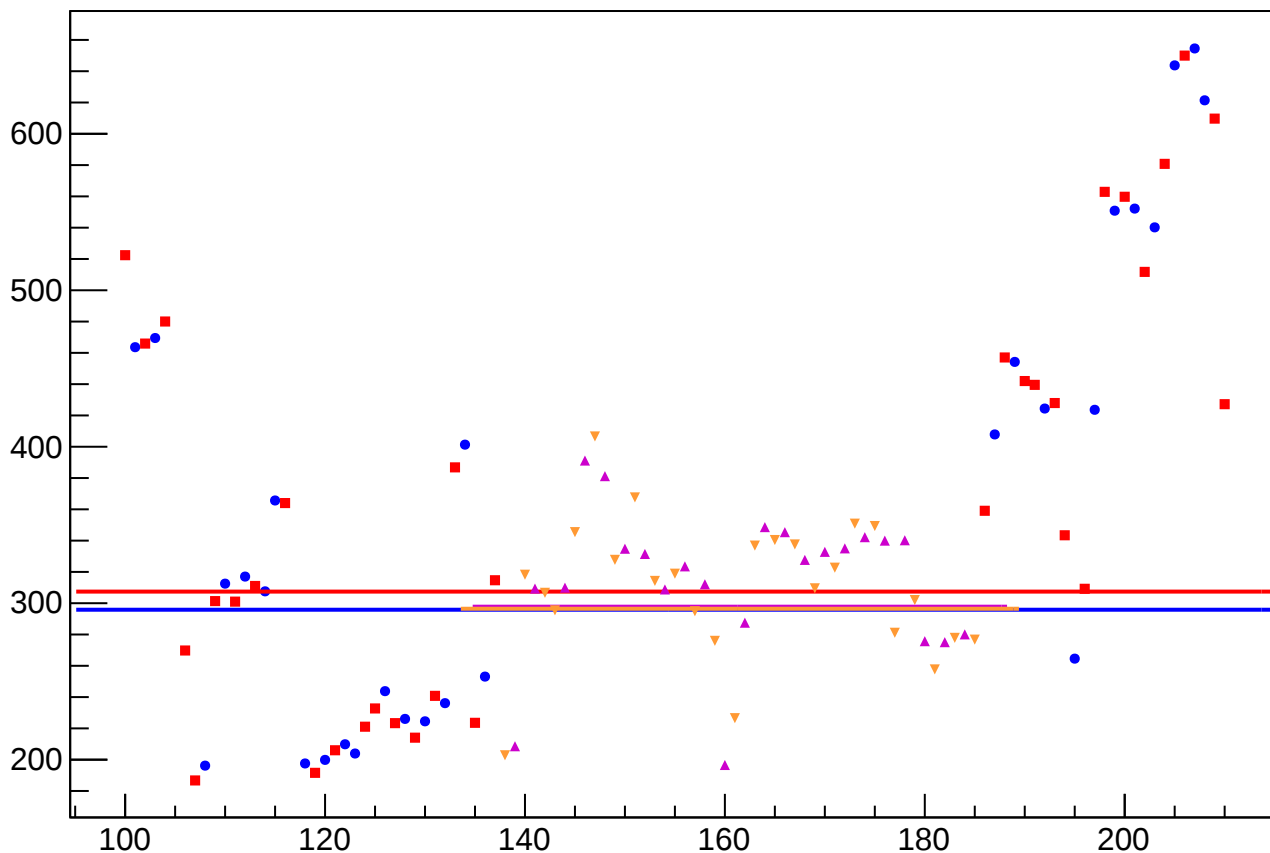
# yield\_bpm0r03WS\_mean vs Slug



Right In: 139905.186 $\pm$ 0.086  $\chi^2$ /NDF: 2257007313.8/27  
 Left Out: 138646.366 $\pm$ 0.071  $\chi^2$ /NDF: 2548637600.4/24  
 Right Out: 139242.507 $\pm$ 0.083  $\chi^2$ /NDF: 2435380043.8/32  
 Left In: 138588.711 $\pm$ 0.074  $\chi^2$ /NDF: 1948065195.1/22

+ sign 139157.940 $\pm$ 0.055  $\chi^2$ /NDF: 4933933641.2  
 All: 139019.209 $\pm$ 0.039  $\chi^2$ /NDF: 936531216  
 - sign 138878.590 $\pm$ 0.055  $\chi^2$ /NDF: 4418372701.5

# yield\_bpm0r03WS\_rms vs Slug



Right In: 295.833+/-0.061  $\chi^2/\text{NDF}$ : 4120698.5/27

Left Out: 296.464+/-0.050  $\chi^2/\text{NDF}$ : 893579.7/24

Right Out: 307.423+/-0.058  $\chi^2/\text{NDF}$ : 4260043.9/32

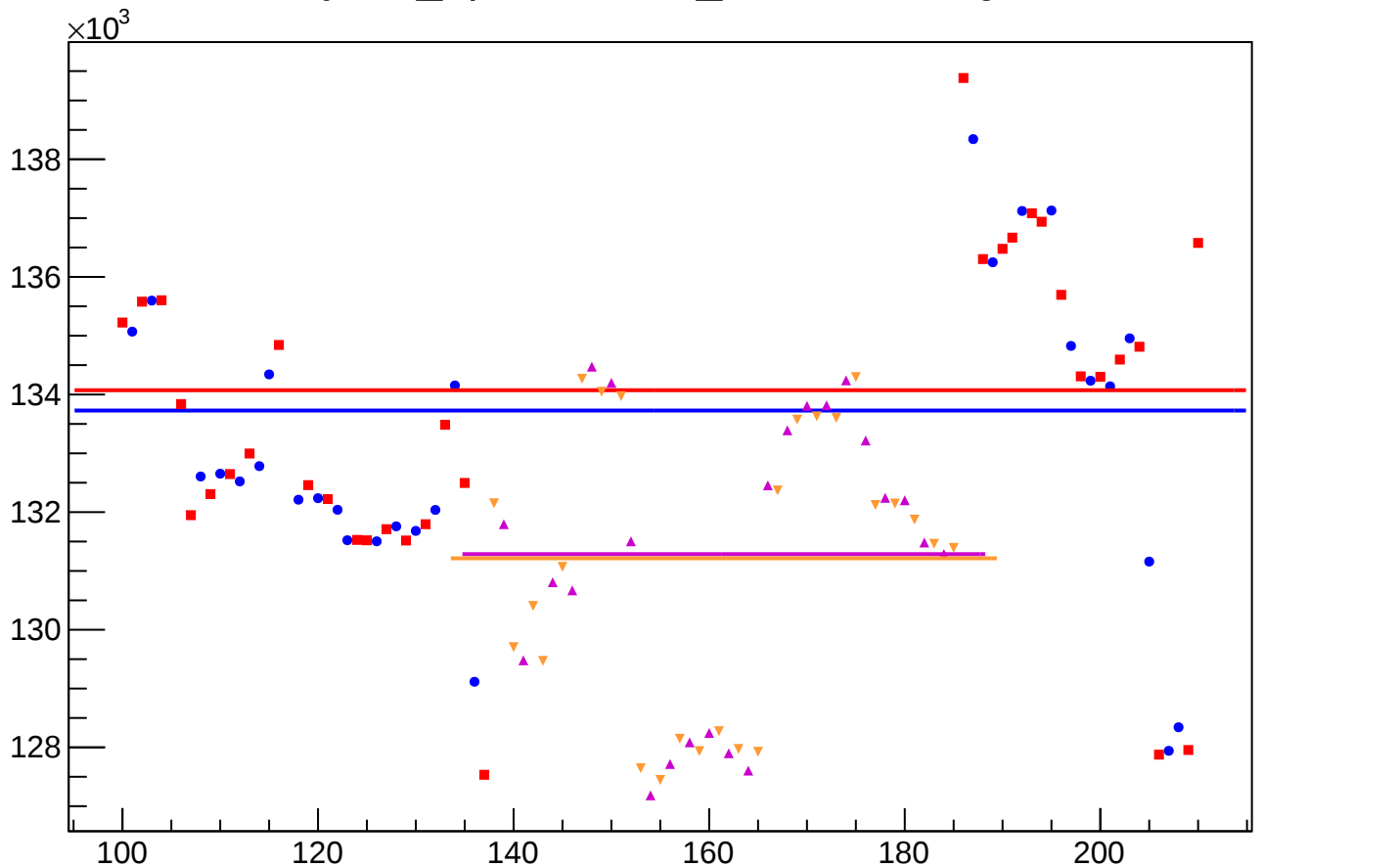
Left In: 297.774+/-0.052  $\chi^2/\text{NDF}$ : 1061489.5/22

+ sign 296.208+/-0.039  $\chi^2/\text{NDF}$ : 5014342.7/52

All: 299.111+/-0.027  $\chi^2/\text{NDF}$ : 10362477.5/10

- sign 302.053+/-0.039  $\chi^2/\text{NDF}$ : 5336748.8/55

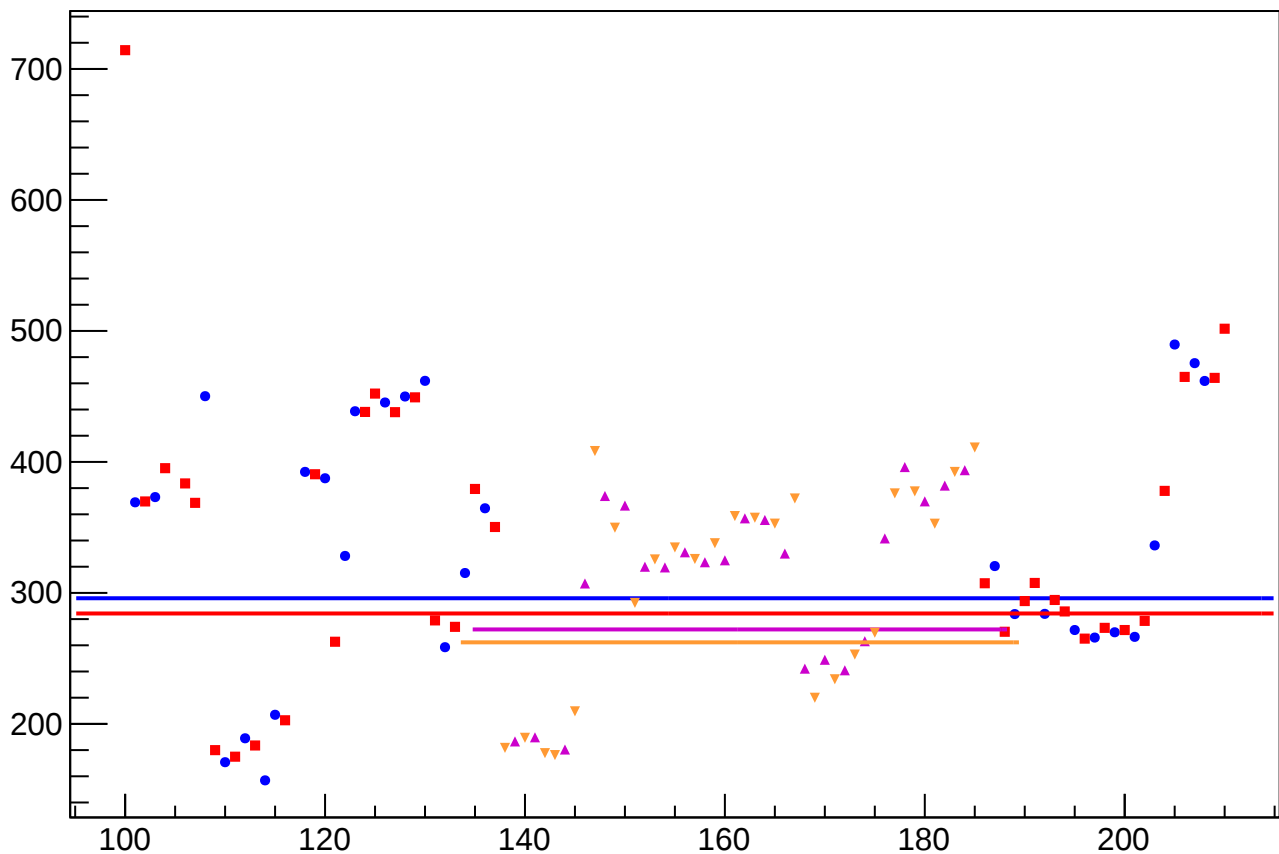
# yield\_bpm0r05WS\_mean vs Slug



Right In:  $133727.847 \pm 0.082$   $\chi^2/\text{NDF}: 837599697.4/27$   
 Left Out:  $131214.985 \pm 0.064$   $\chi^2/\text{NDF}: 1173424494.6/24$   
 Right Out:  $134073.216 \pm 0.074$   $\chi^2/\text{NDF}: 993388067.4/32$   
 Left In:  $131285.623 \pm 0.068$   $\chi^2/\text{NDF}: 1056232192.1/22$

+ sign  $132172.309 \pm 0.051$   $\chi^2/\text{NDF}: 2592578708.0/24$   
 All:  $132372.499 \pm 0.036$   $\chi^2/\text{NDF}: 543962498.0/24$   
 - sign  $132569.439 \pm 0.050$   $\chi^2/\text{NDF}: 2815998849.1/24$

# yield\_bpm0r05WS\_rms vs Slug



Right In: 295.922 $\pm$ 0.058  $\chi^2$ /NDF: 2261752.6/27

Left Out: 262.260 $\pm$ 0.045  $\chi^2$ /NDF: 2818169.1/24

Right Out: 284.299 $\pm$ 0.052  $\chi^2$ /NDF: 2567907.8/32

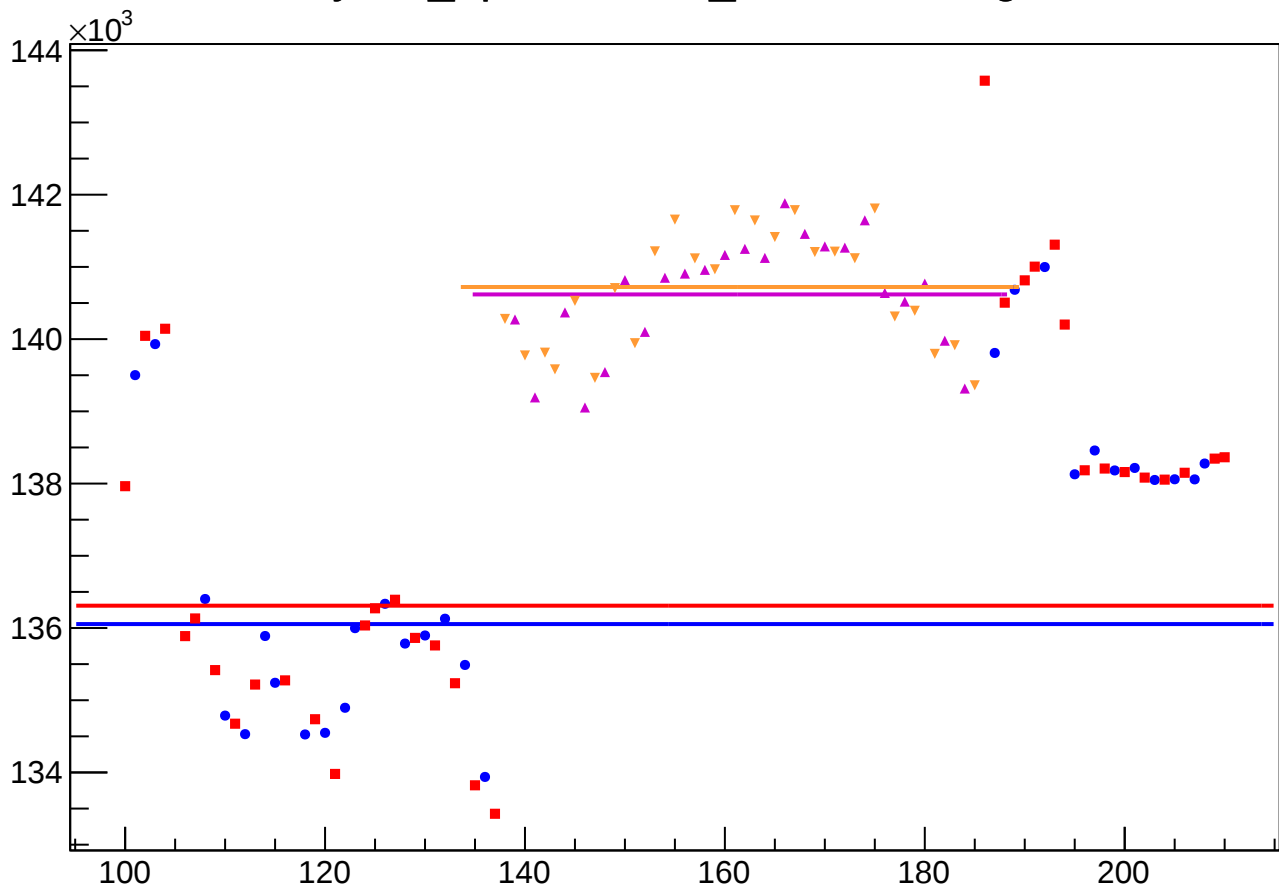
Left In: 272.115 $\pm$ 0.048  $\chi^2$ /NDF: 2221925.0/22

+ sign 275.084 $\pm$ 0.036  $\chi^2$ /NDF: 5288651.4/52

All: 276.416 $\pm$ 0.025  $\chi^2$ /NDF: 10110514.3/10

- sign 277.726 $\pm$ 0.035  $\chi^2$ /NDF: 4819114.9/55

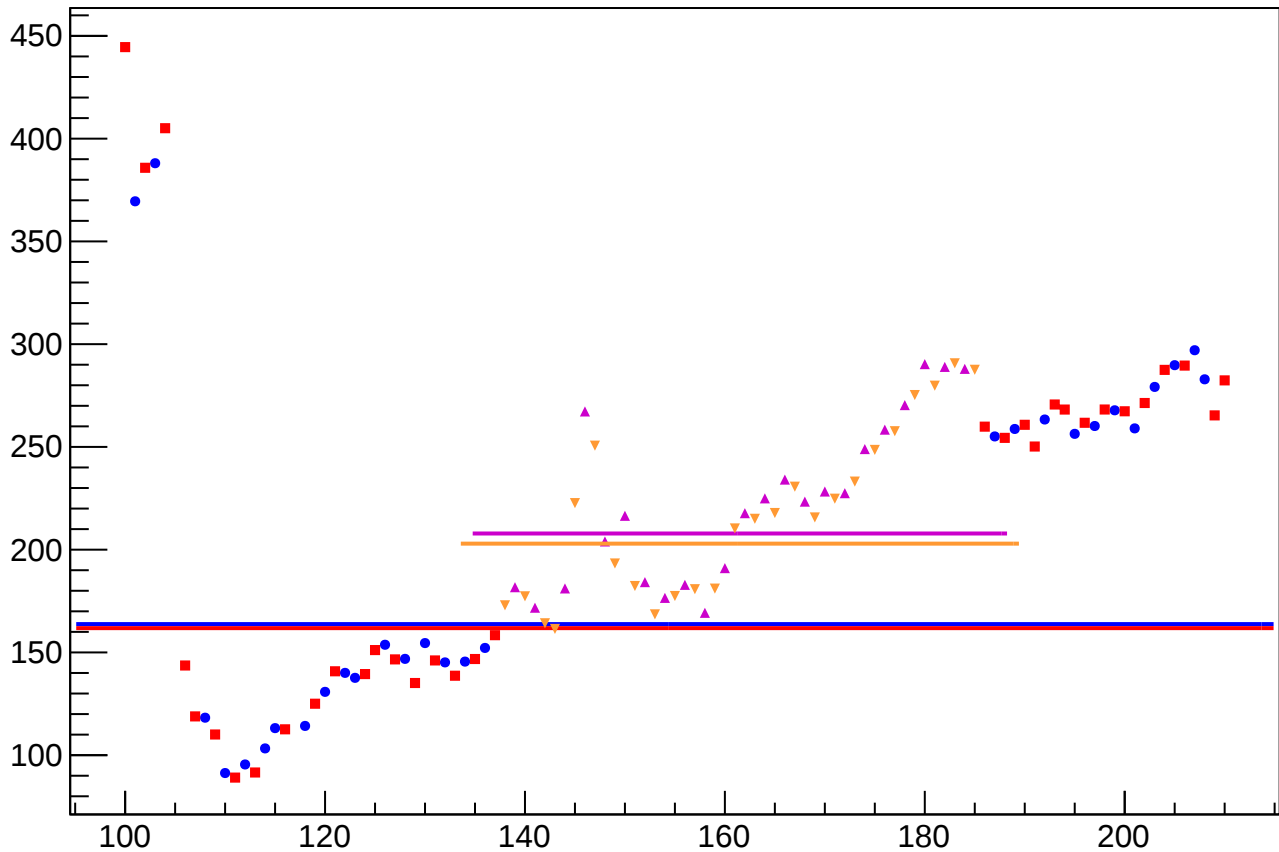
# yield\_bpm0i02WS\_mean vs Slug



Right In: 136054.553 $\pm$ 0.047  $\chi^2$ /NDF: 1489693557.7/27  
 Left Out: 140721.823 $\pm$ 0.048  $\chi^2$ /NDF: 247257762.8/24  
 Right Out: 136309.240 $\pm$ 0.044  $\chi^2$ /NDF: 2176744206.2/32  
 Left In: 140619.038 $\pm$ 0.051  $\chi^2$ /NDF: 200370178.0/22

+ sign 138343.852 $\pm$ 0.034  $\chi^2$ /NDF: 6473490824.0  
 All: 138248.465 $\pm$ 0.024  $\chi^2$ /NDF: 129343185  
 - sign 138155.672 $\pm$ 0.033  $\chi^2$ /NDF: 6445210003.9

# yield\_bpm0i02WS\_rms vs Slug



Right In: 163.785 $\pm$ 0.034  $\chi^2$ /NDF: 4550430.4/27

Left Out: 202.934 $\pm$ 0.034  $\chi^2$ /NDF:1052283.6/24

Right Out: 161.817 $\pm$ 0.031  $\chi^2$ /NDF: 5436132.0/32

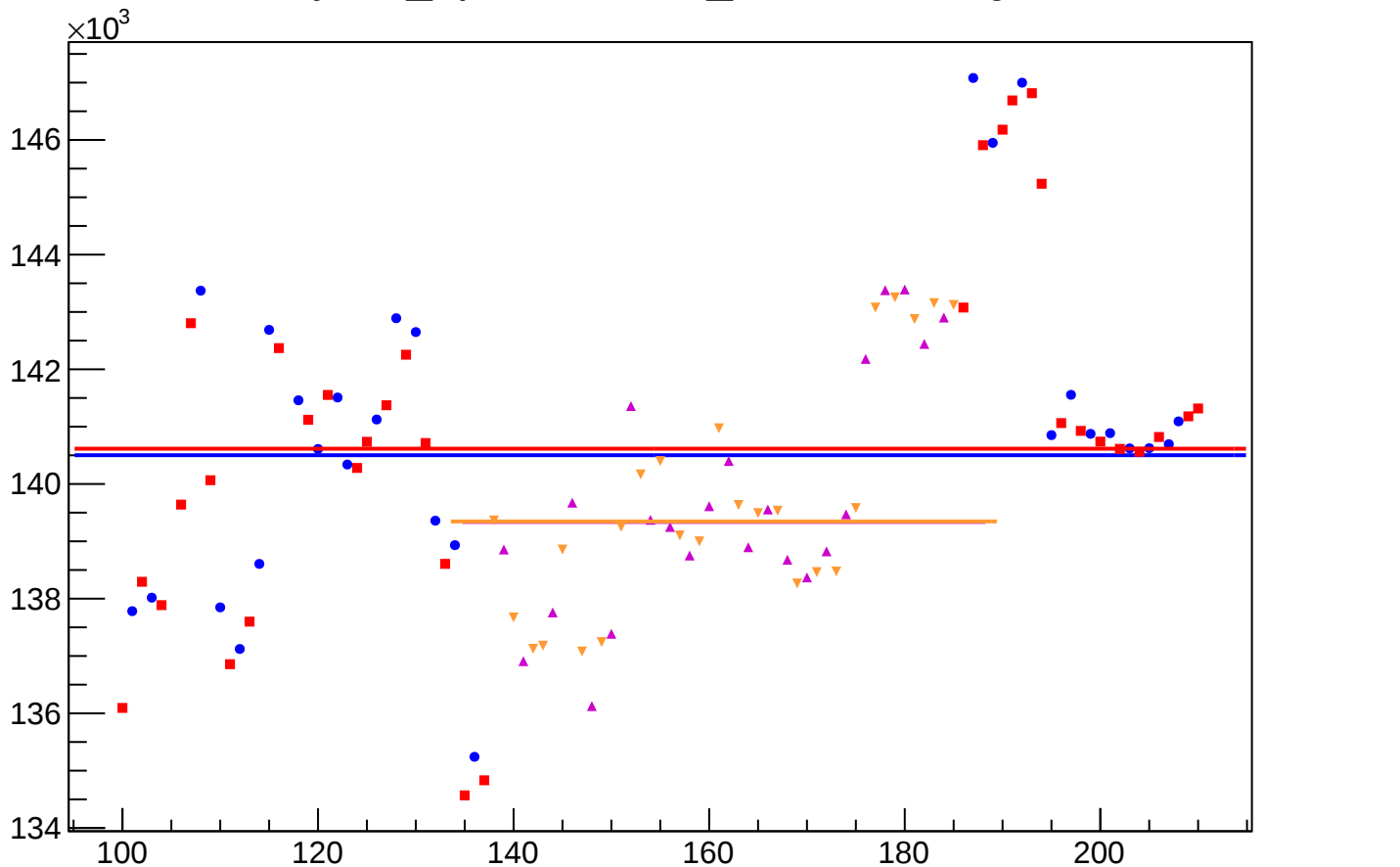
Left In: 207.872 $\pm$ 0.036  $\chi^2$ /NDF:949200.3/22

+ sign 182.987 $\pm$ 0.024  $\chi^2$ /NDF: 6269240.8/52

All: 182.258 $\pm$ 0.017  $\chi^2$ /NDF: 13585485.5/10

- sign 181.548 $\pm$ 0.024  $\chi^2$ /NDF: 7314417.7/55

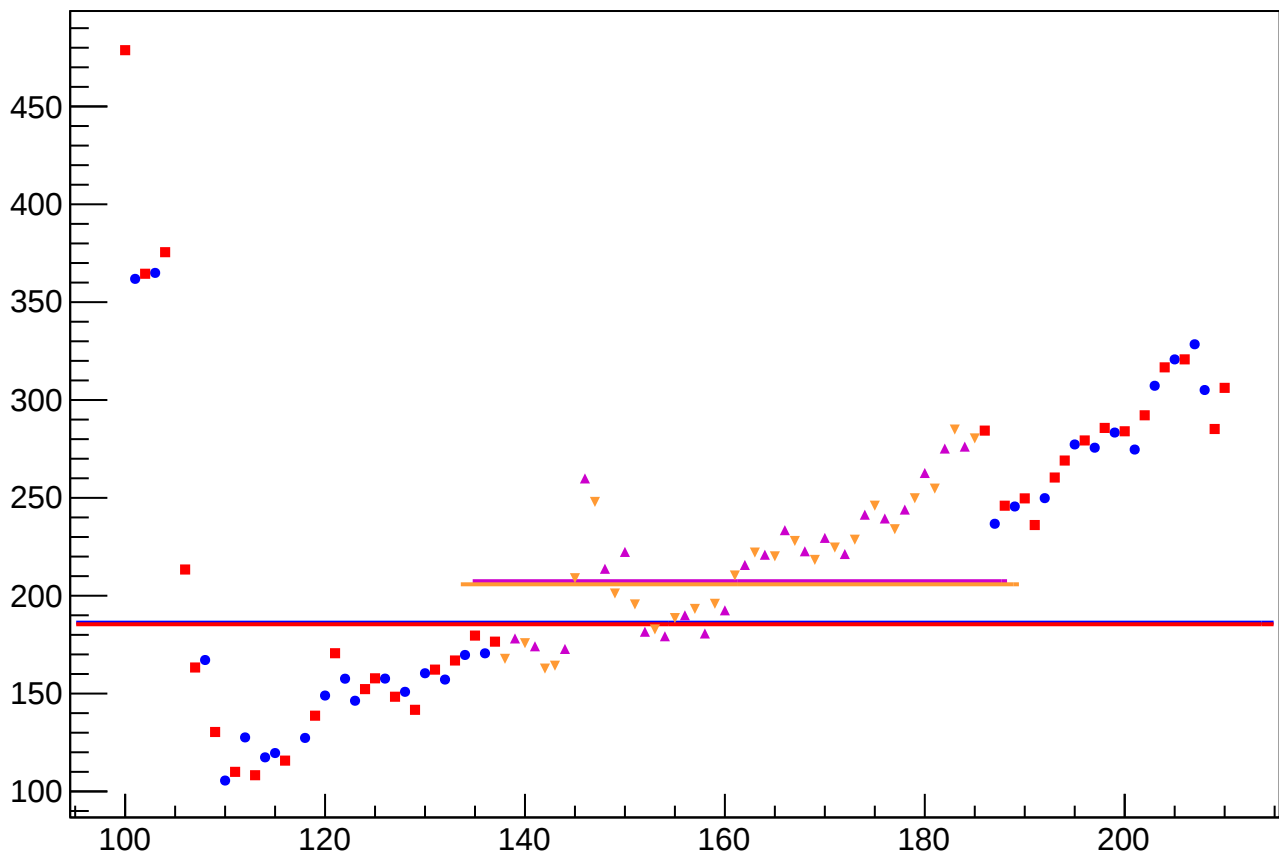
# yield\_bpm0i02aWS\_mean vs Slug



Right In:  $140501.959 \pm 0.053$   $\chi^2/\text{NDF}: 2773668870.2/27$   
 Left Out:  $139346.604 \pm 0.049$   $\chi^2/\text{NDF}: 1271172976.7/24$   
 Right Out:  $140615.121 \pm 0.050$   $\chi^2/\text{NDF}: 3218394680.9/32$   
 Left In:  $139337.874 \pm 0.051$   $\chi^2/\text{NDF}: 1293003954.9/22$

+ sign  $139878.669 \pm 0.036$   $\chi^2/\text{NDF}: 4301234735.0/24$   
 All:  $139936.006 \pm 0.025$   $\chi^2/\text{NDF}: 914086450.0/24$   
 - sign  $139991.910 \pm 0.036$   $\chi^2/\text{NDF}: 4834609942.8/24$

# yield\_bpm0i02aWS\_rms vs Slug



Right In: 186.233+/-0.037  $\chi^2/\text{NDF}$ : 3602209.2/27

Left Out: 205.833+/-0.035  $\chi^2/\text{NDF}$ : 738666.4/24

Right Out: 185.416+/-0.035  $\chi^2/\text{NDF}$ : 4282628.9/32

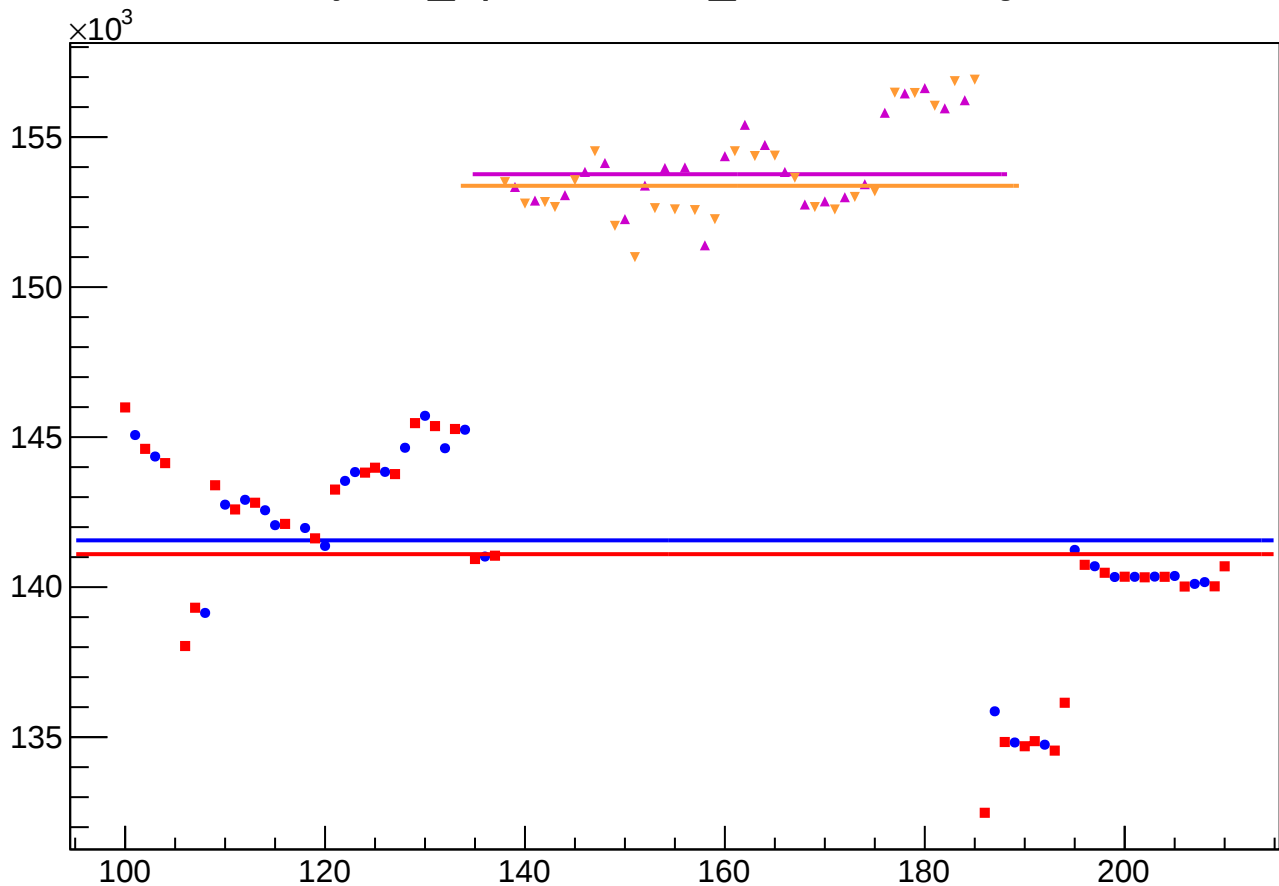
Left In: 207.416+/-0.036  $\chi^2/\text{NDF}$ : 701955.3/22

+ sign 196.807+/-0.025  $\chi^2/\text{NDF}$ : 4488449.6/52

All: 196.475+/-0.018  $\chi^2/\text{NDF}$ : 9665151.3/108

- sign 196.151+/-0.025  $\chi^2/\text{NDF}$ : 5176365.0/55

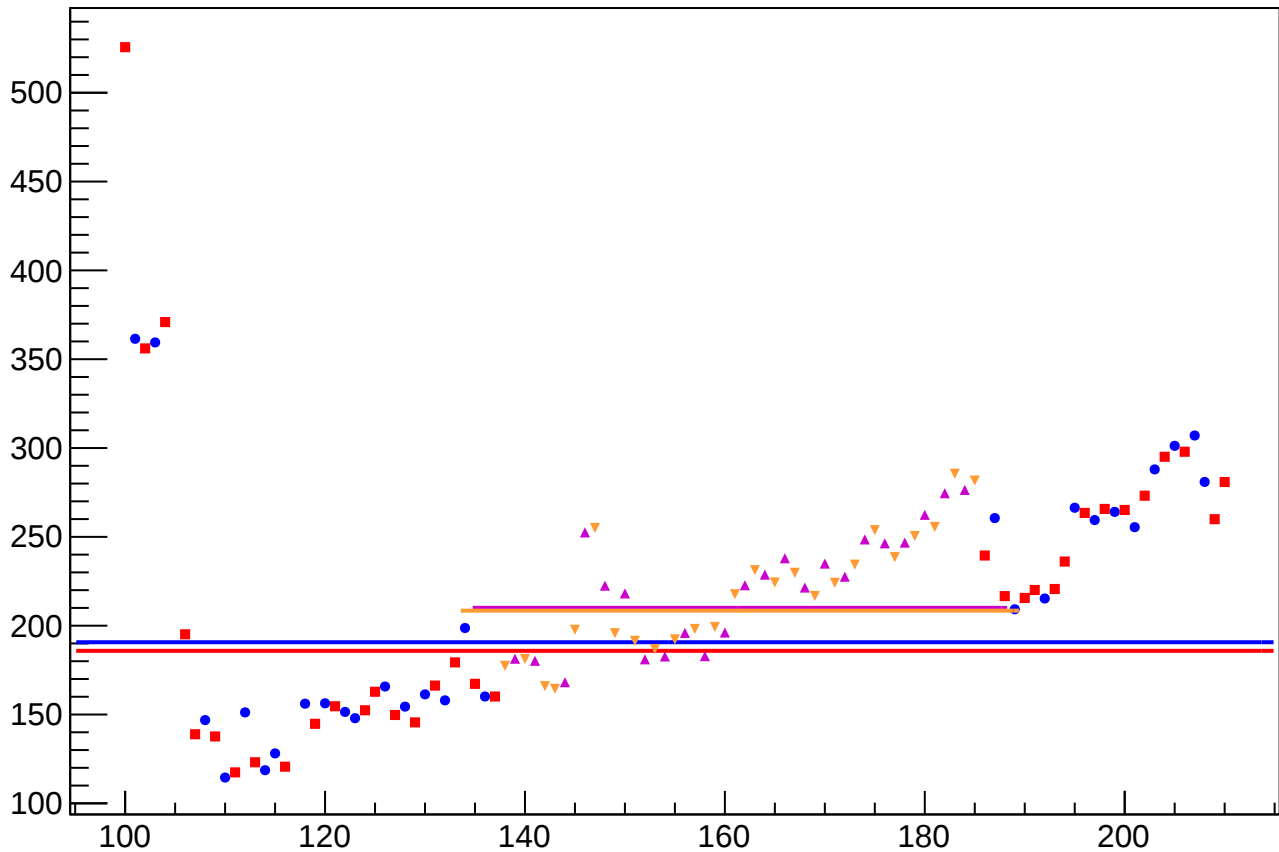
# yield\_bpm0i05WS\_mean vs Slug



Right In:  $141559.093 \pm 0.053$   $\chi^2/\text{NDF}: 2708513230.6/27$   
 Left Out:  $153376.698 \pm 0.050$   $\chi^2/\text{NDF}: 803848095.1/24$   
 Right Out:  $141098.986 \pm 0.049$   $\chi^2/\text{NDF}: 4444255192.1/32$   
 Left In:  $153762.419 \pm 0.051$   $\chi^2/\text{NDF}: 635075685.0/22$

+ sign  $147899.341 \pm 0.036$   $\chi^2/\text{NDF}: 29891608752.0/24$   
 All:  $147487.068 \pm 0.025$   $\chi^2/\text{NDF}: 671252011.0/24$   
 - sign  $147094.635 \pm 0.035$   $\chi^2/\text{NDF}: 36981588587.2/24$

# yield\_bpm0i05WS\_rms vs Slug



Right In: 190.690 $\pm$ 0.038  $\chi^2$ /NDF: 2663382.2/27

Left Out: 208.466 $\pm$ 0.035  $\chi^2$ /NDF: 720894.7/24

Right Out: 185.853 $\pm$ 0.034  $\chi^2$ /NDF: 3135513.1/32

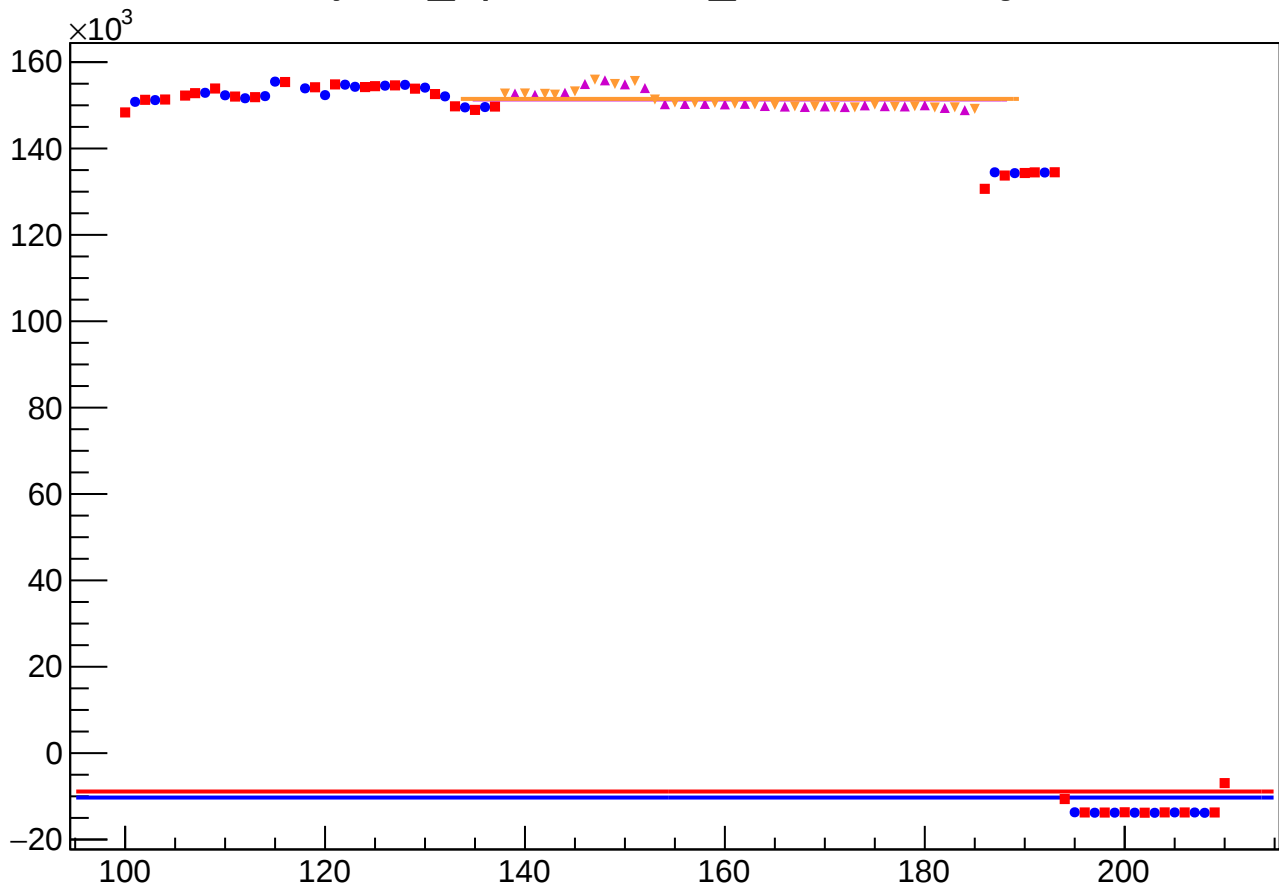
Left In: 210.038 $\pm$ 0.036  $\chi^2$ /NDF: 702369.5/22

+ sign 200.227 $\pm$ 0.026  $\chi^2$ /NDF: 3503648.9/52

All: 198.729 $\pm$ 0.018  $\chi^2$ /NDF: 7580912.6/108

- sign 197.303 $\pm$ 0.025  $\chi^2$ /NDF: 4070611.4/55

# yield\_bpm0i07WS\_mean vs Slug



Right In: -10283.567+/-0.010

$\chi^2/\text{NDF}$ : 5886267257225.0/27

Left Out: 151483.385+/-0.050

$\chi^2/\text{NDF}$ : 1481910066.9/24

Right Out: -8886.200+/-0.010

$\chi^2/\text{NDF}$ : 7166544264945.3/32

Left In: 151363.165+/-0.051

$\chi^2/\text{NDF}$ : 1421662089.0/22

+ sign -4254.161+/-0.010

$\chi^2/\text{NDF}$ : 1616032068354

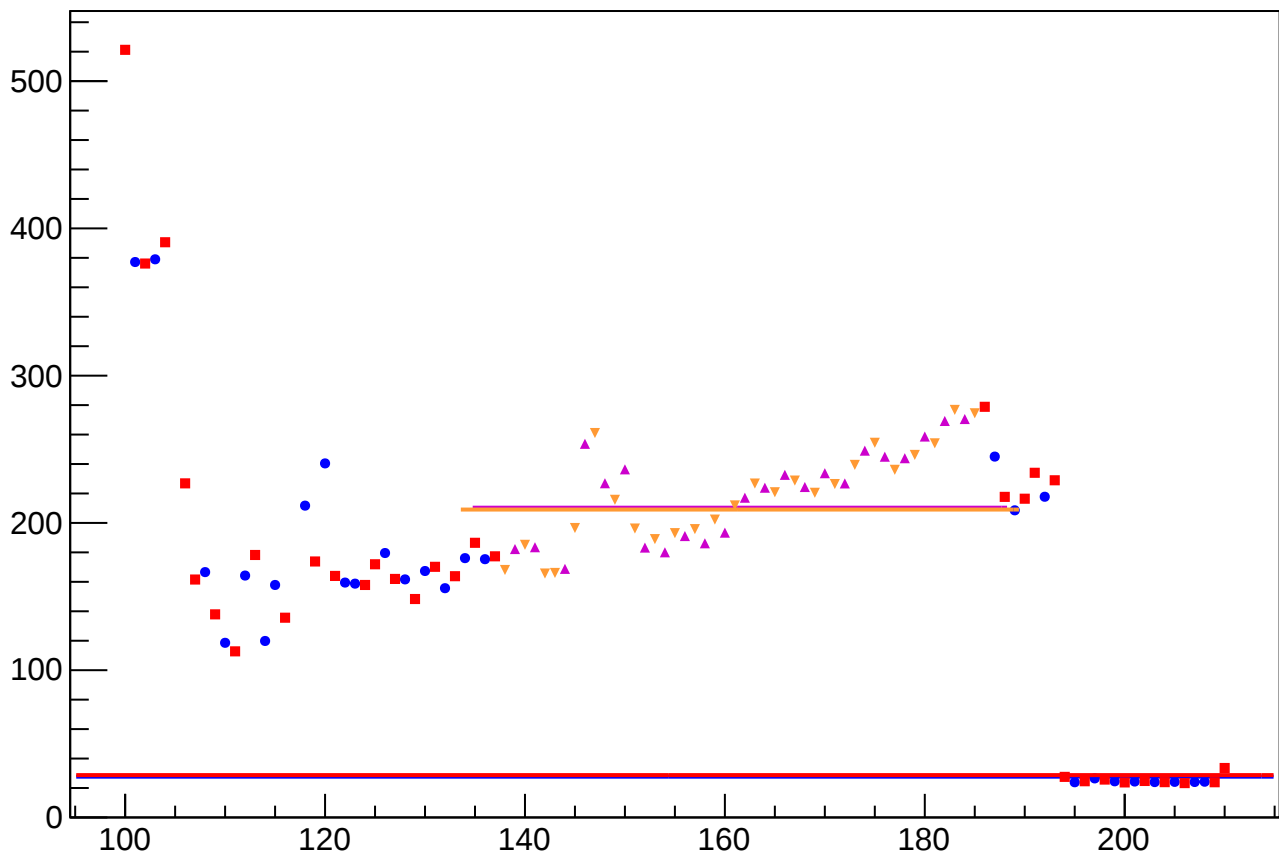
All: -3636.021+/-0.007

$\chi^2/\text{NDF}$ : 3269813126

- sign -2977.214+/-0.010

$\chi^2/\text{NDF}$ : 16529175423821

# yield\_bpm0i07WS\_rms vs Slug



Right In: 27.708 $\pm$ 0.007  $\chi^2$ /NDF: 11568555.9/27

Left Out: 209.076 $\pm$ 0.035  $\chi^2$ /NDF: 708260.3/24

Right Out: 28.759 $\pm$ 0.007  $\chi^2$ /NDF: 13536317.4/32

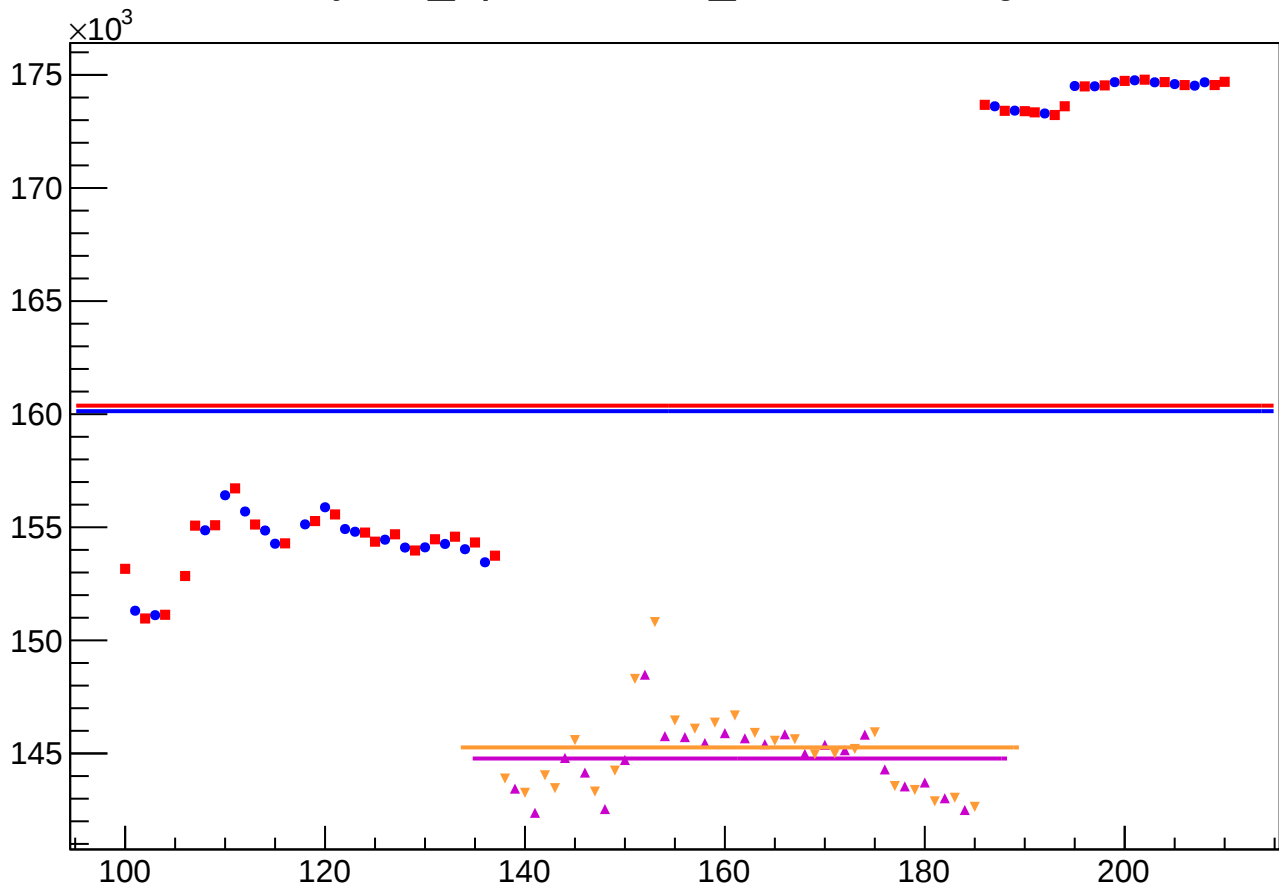
Left In: 210.345 $\pm$ 0.036  $\chi^2$ /NDF: 677747.7/22

+ sign 34.468 $\pm$ 0.007  $\chi^2$ /NDF: 38102534.8/52

All: 34.945 $\pm$ 0.005  $\chi^2$ /NDF: 76366958.8/108

- sign 35.454 $\pm$ 0.007  $\chi^2$ /NDF: 38254112.6/55

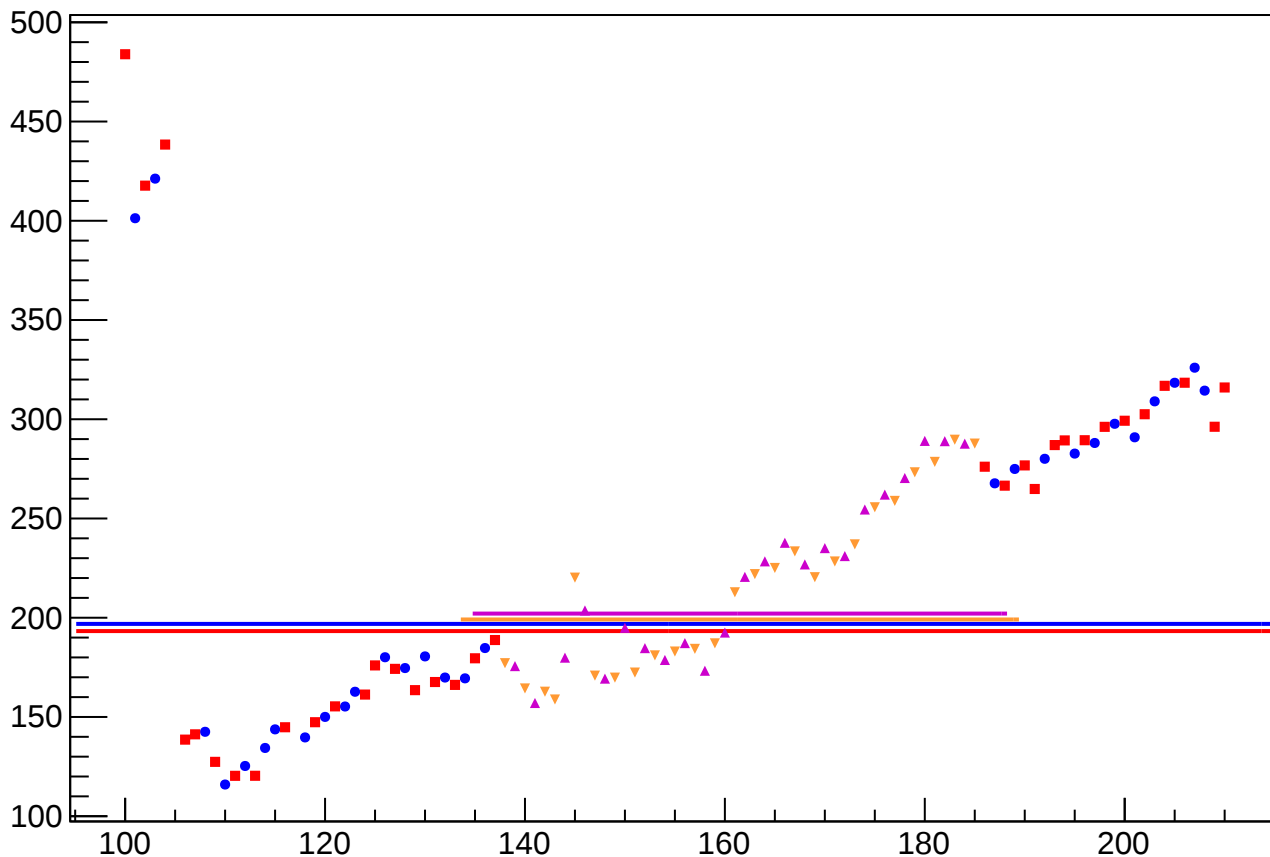
# yield\_bpm1i02WS\_mean vs Slug



Right In:  $160133.881 \pm 0.056$   $\chi^2/\text{NDF}: 24678503999.1/27$   
 Left Out:  $145266.717 \pm 0.047$   $\chi^2/\text{NDF}: 1717707352.7/24$   
 Right Out:  $160377.531 \pm 0.051$   $\chi^2/\text{NDF}: 29265370792.1/32$   
 Left In:  $144776.016 \pm 0.050$   $\chi^2/\text{NDF}: 918120275.4/22$

+ sign  $151497.194 \pm 0.036$   $\chi^2/\text{NDF}: 67635227131.1/27$   
 - sign  $152291.974 \pm 0.036$   $\chi^2/\text{NDF}: 77924605436.6/27$   
 All:  $151899.506 \pm 0.025$   $\chi^2/\text{NDF}: 145804879.1/27$

# yield\_bpm1i02WS\_rms vs Slug



Right In: 196.891+/-0.039  $\chi^2/\text{NDF}$ : 3569417.9/27

Left Out: 199.118+/-0.034  $\chi^2/\text{NDF}$ : 1152231.0/24

Right Out: 193.271+/-0.036  $\chi^2/\text{NDF}$ : 4275456.7/32

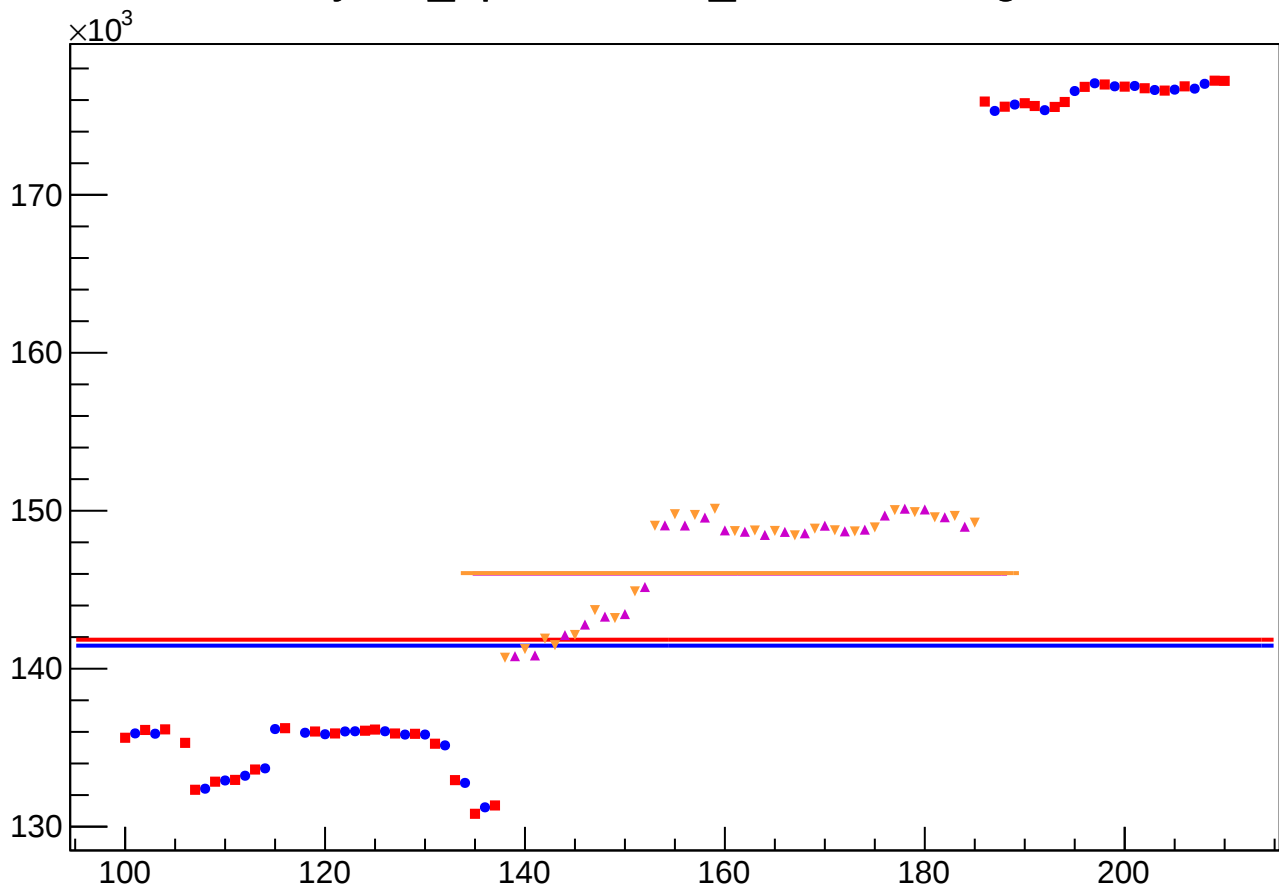
Left In: 202.090+/-0.035  $\chi^2/\text{NDF}$ : 1057833.2/22

+ sign 198.185+/-0.026  $\chi^2/\text{NDF}$ : 4723499.5/52

All: 198.011+/-0.018  $\chi^2/\text{NDF}$ : 10087387.8/10

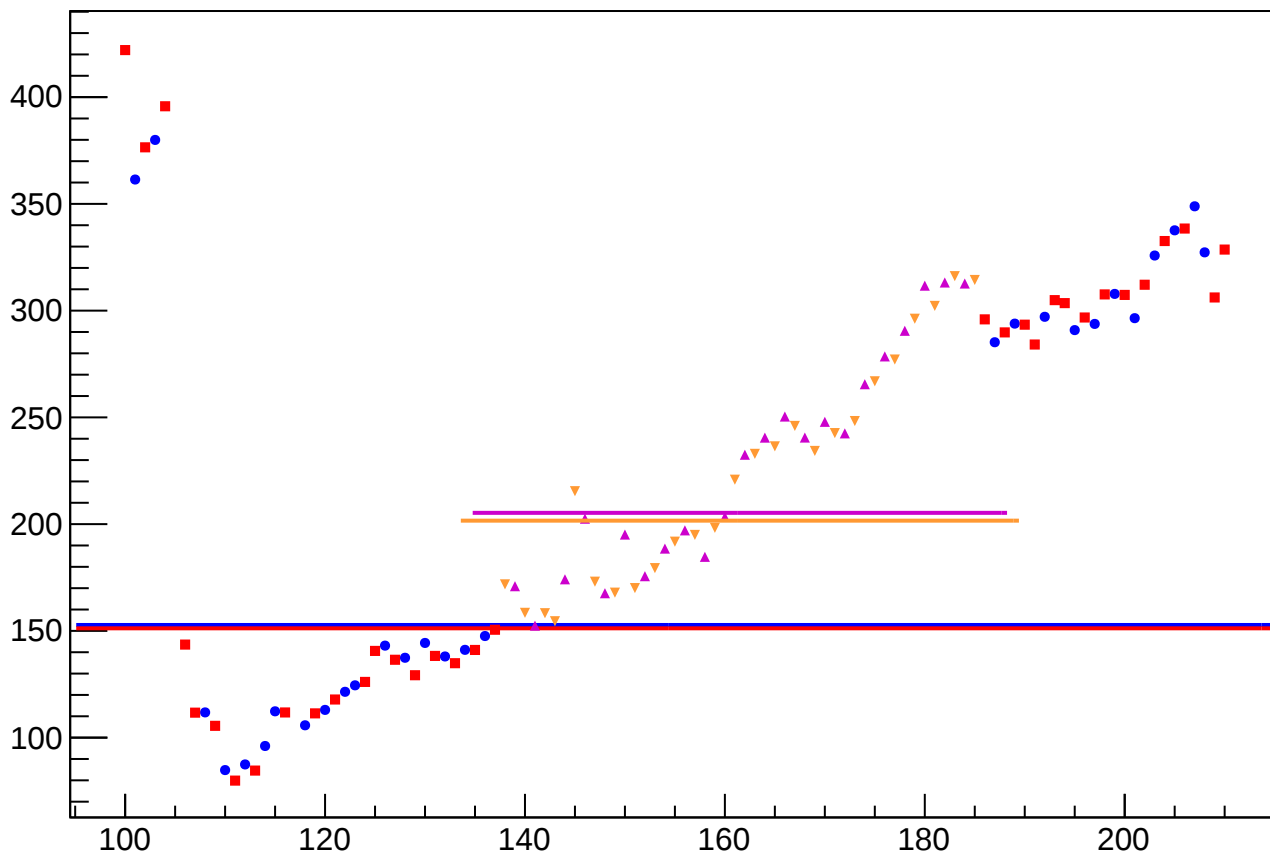
- sign 197.842+/-0.025  $\chi^2/\text{NDF}$ : 5363797.1/55

# yield\_bpm1i04WS\_mean vs Slug



Right In:  $141460.347 \pm 0.046$   $\chi^2/\text{NDF}$ : 120218324189.5/27  
 Left Out:  $146051.733 \pm 0.048$   $\chi^2/\text{NDF}$ : 5403300123.1/24  
 Right Out:  $141836.676 \pm 0.043$   $\chi^2/\text{NDF}$ : 145598816137.2/32  
 Left In:  $146020.015 \pm 0.051$   $\chi^2/\text{NDF}$ : 4591425371.4/22  
 All:  $143611.260 \pm 0.023$   $\chi^2/\text{NDF}$ : 284531820  
 + sign  $143640.055 \pm 0.033$   $\chi^2/\text{NDF}$ : 130367245180  
 - sign  $143583.411 \pm 0.033$   $\chi^2/\text{NDF}$ : 154163102548

# yield\_bpm1i04WS\_rms vs Slug



Right In: 152.765 $\pm$ 0.032  $\chi^2$ /NDF: 6282356.0/27

Left Out: 201.632 $\pm$ 0.034  $\chi^2$ /NDF:1589564.0/24

Right Out: 151.199 $\pm$ 0.030  $\chi^2$ /NDF: 7501942.6/32

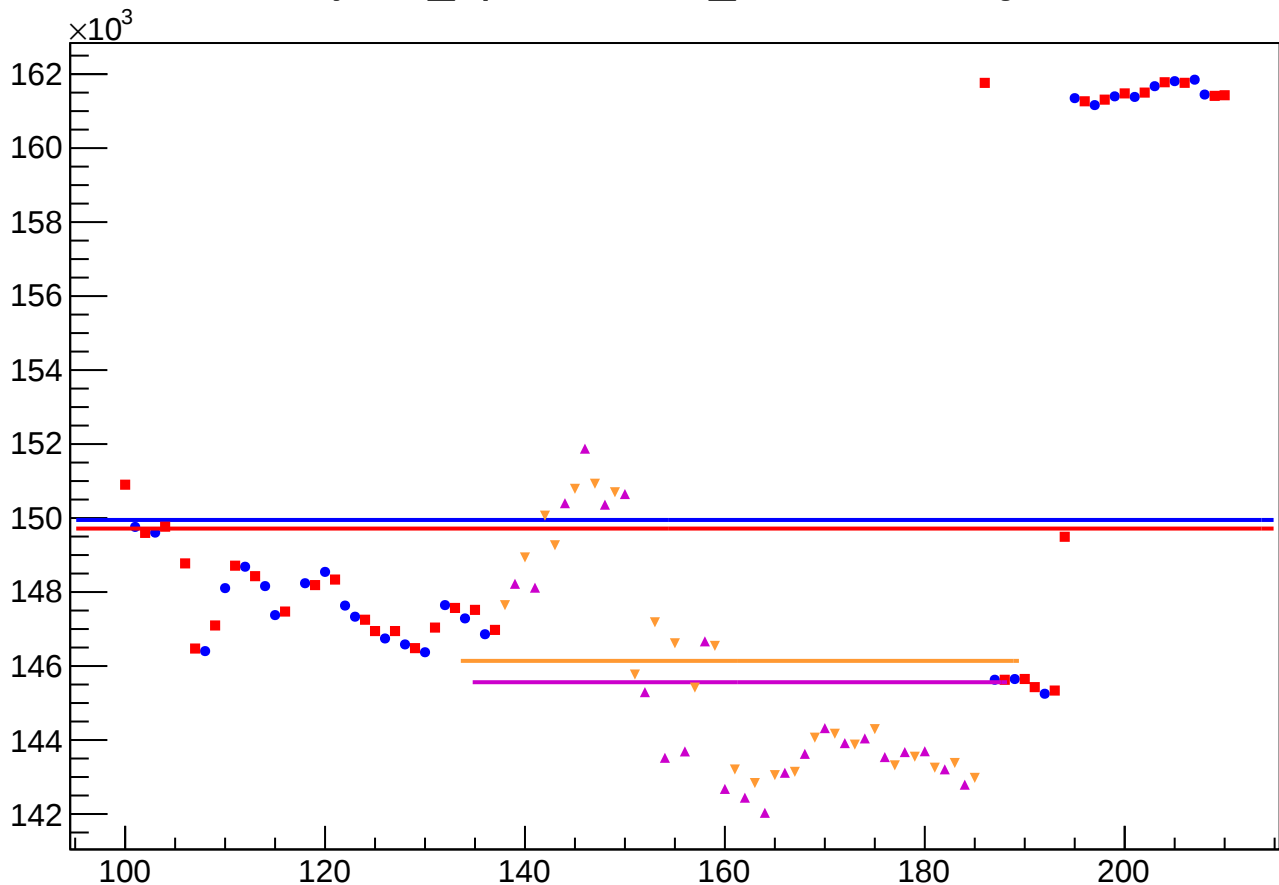
Left In: 205.286 $\pm$ 0.036  $\chi^2$ /NDF:1425292.7/22

+ sign 175.964 $\pm$ 0.024  $\chi^2$ /NDF: 8947030.9/52

All: 174.855 $\pm$ 0.017  $\chi^2$ /NDF: 19206850.8/10

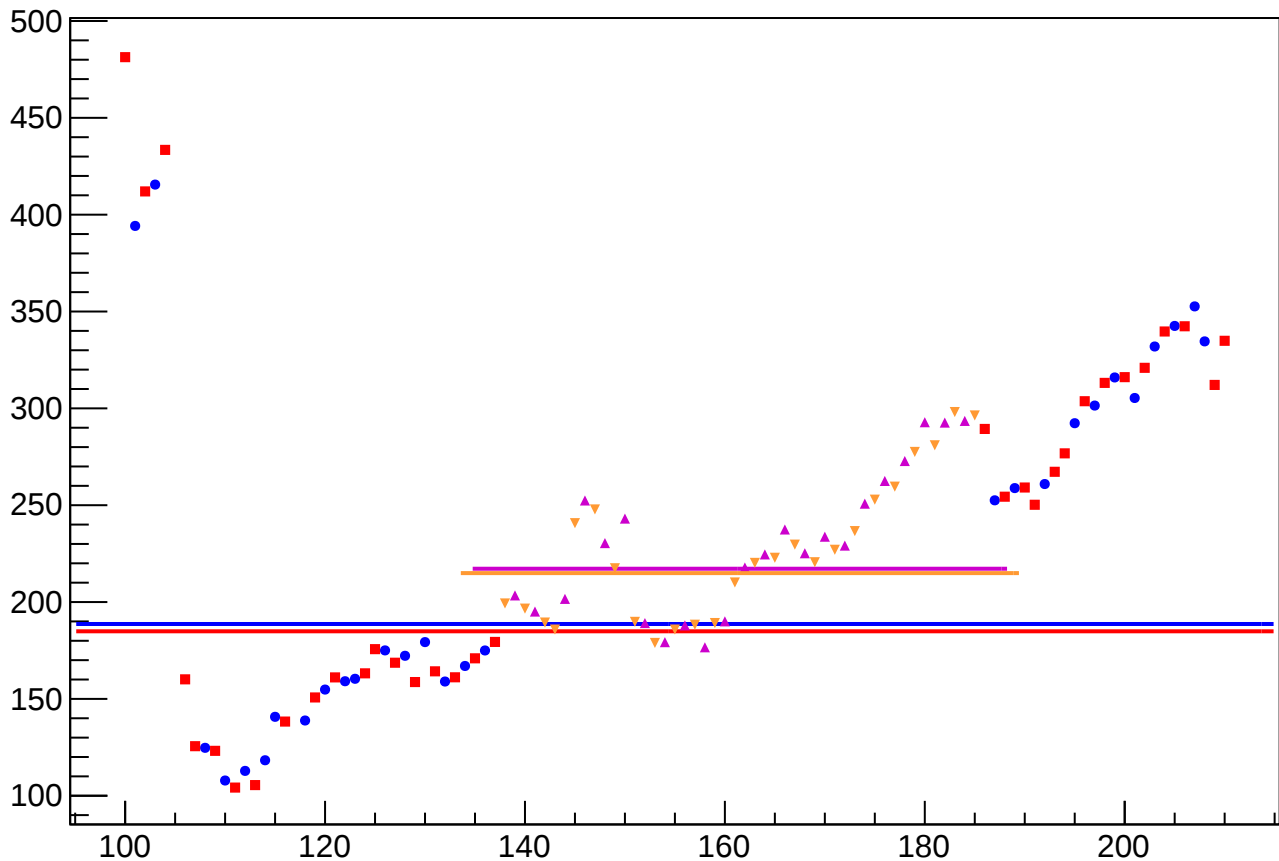
- sign 173.783 $\pm$ 0.023  $\chi^2$ /NDF: 10255454.5/55

# yield\_bpm1i06WS\_mean vs Slug



Right In: 149948.587 $\pm$ 0.054  $\chi^2$ /NDF: 10118135899.5/27  
 Left Out: 146139.326 $\pm$ 0.051  $\chi^2$ /NDF: 2699546907.6/24  
 Right Out: 149715.856 $\pm$ 0.050  $\chi^2$ /NDF: 10559933830.1/32  
 Left In: 145562.386 $\pm$ 0.053  $\chi^2$ /NDF: 3054641996.0/22  
 + sign 147919.566 $\pm$ 0.037  $\chi^2$ /NDF: 15434601351.  
 All: 147838.835 $\pm$ 0.026  $\chi^2$ /NDF: 323015378.  
 - sign 147761.324 $\pm$ 0.036  $\chi^2$ /NDF: 16857681270.2

# yield\_bpm1i06WS\_rms vs Slug



Right In: 188.673+/-0.038  $\chi^2/\text{NDF}$ : 4319194.1/27

Left Out: 214.945+/-0.036  $\chi^2/\text{NDF}$ : 728515.5/24

Right Out: 184.898+/-0.035  $\chi^2/\text{NDF}$ : 5130785.1/32

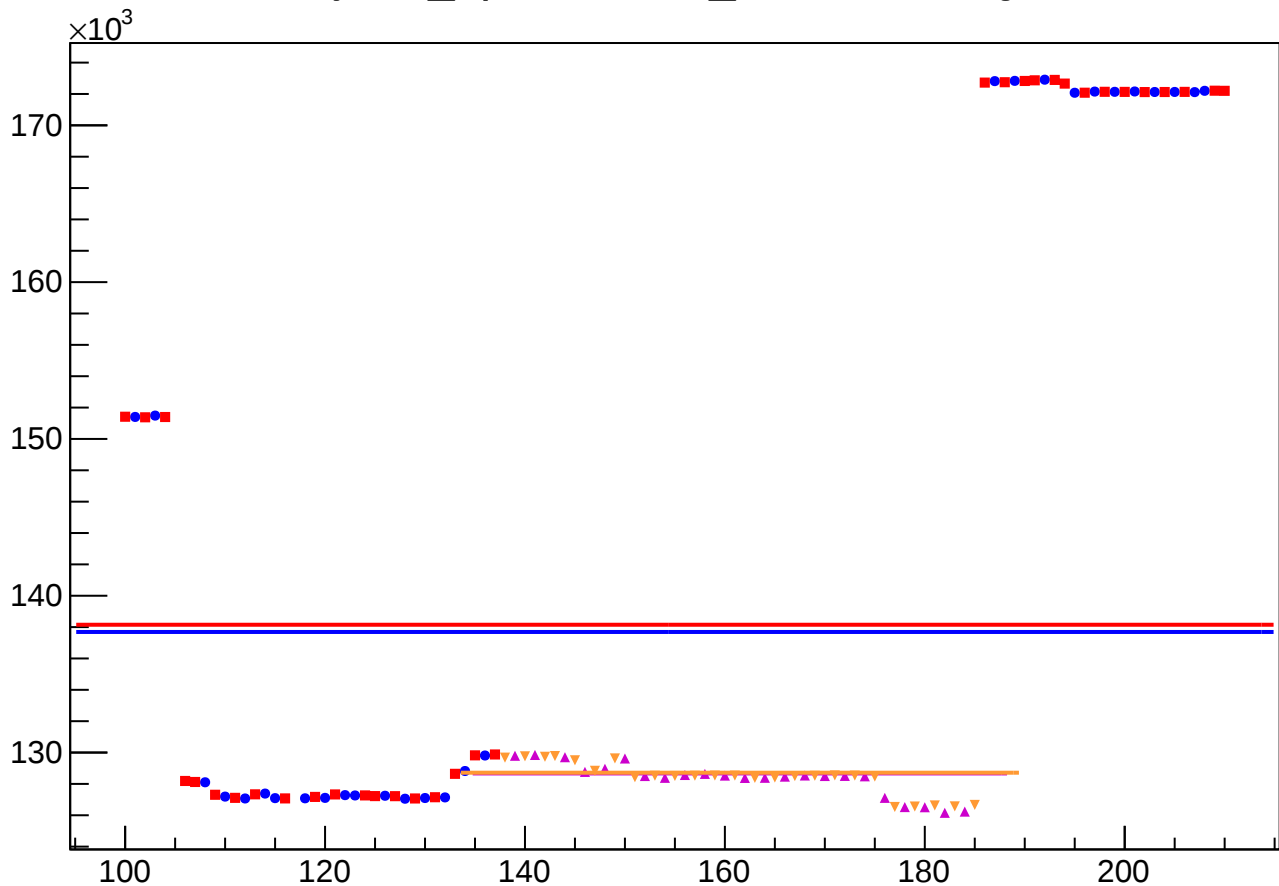
Left In: 217.203+/-0.038  $\chi^2/\text{NDF}$ : 764798.3/22

+ sign 202.667+/-0.026  $\chi^2/\text{NDF}$ : 5296673.4/52

All: 201.357+/-0.018  $\chi^2/\text{NDF}$ : 11589516.6/10

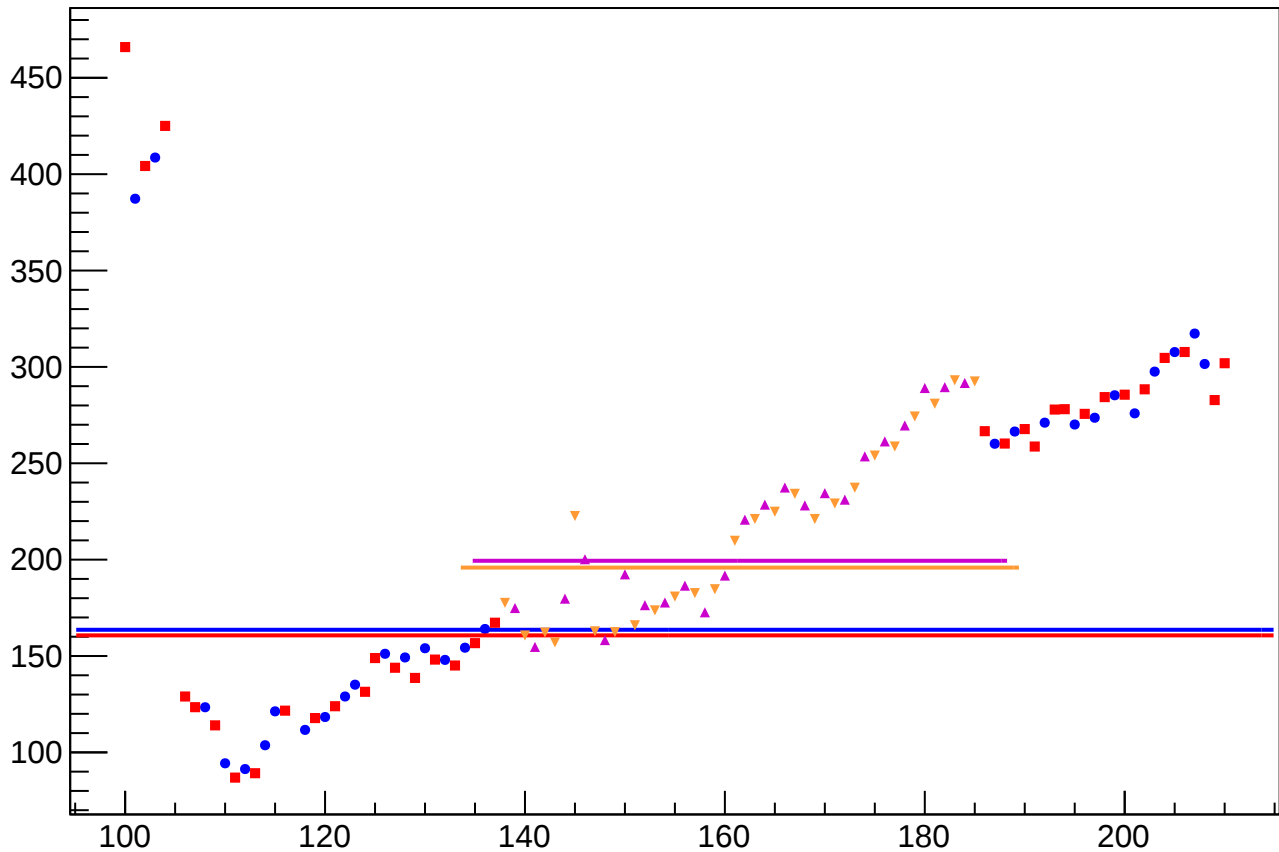
- sign 200.100+/-0.026  $\chi^2/\text{NDF}$ : 6287973.9/55

# yield\_bpm2i01WS\_mean vs Slug



Right In: 137689.751 $\pm$ 0.048  $\chi^2$ /NDF: 150195125937.2/27  
 Left Out: 128714.507 $\pm$ 0.047  $\chi^2$ /NDF: 348178101.1/24  
 Right Out: 138150.270 $\pm$ 0.044  $\chi^2$ /NDF: 182731010136.6/32  
 Left In: 128667.013 $\pm$ 0.049  $\chi^2$ /NDF: 333059477.6/22  
 + sign 133085.762 $\pm$ 0.033  $\chi^2$ /NDF: 168534273324  
 All: 133496.693 $\pm$ 0.023  $\chi^2$ /NDF: 372540500  
 - sign 133892.569 $\pm$ 0.033  $\chi^2$ /NDF: 203709845383

# yield\_bpm2i01WS\_rms vs Slug



Right In: 163.613 $\pm$ 0.034  $\chi^2$ /NDF: 5103947.9/27

Left Out: 195.883 $\pm$ 0.033  $\chi^2$ /NDF:1313361.5/24

Right Out: 160.708 $\pm$ 0.031  $\chi^2$ /NDF: 6074282.8/32

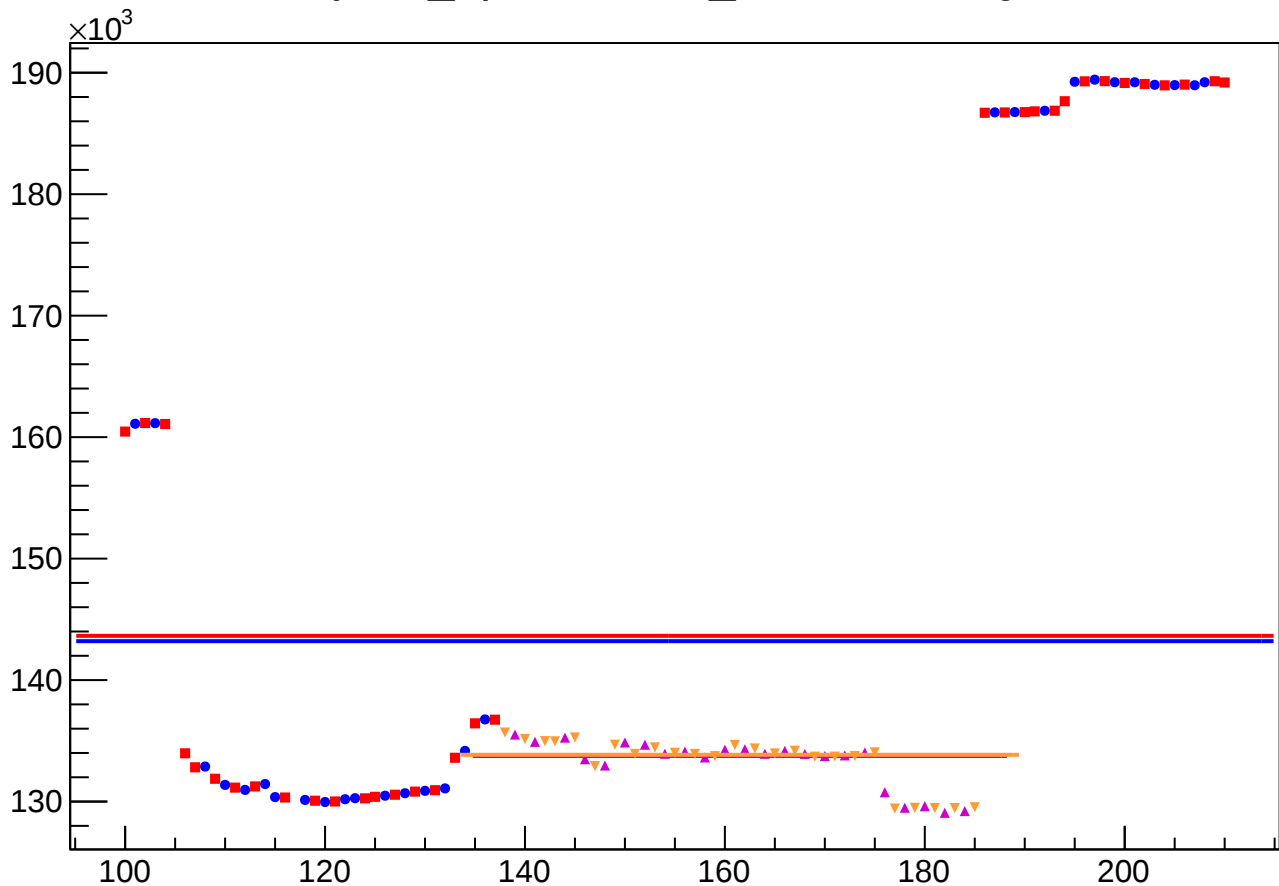
Left In: 199.413 $\pm$ 0.035  $\chi^2$ /NDF:1165698.7/22

+ sign 180.166 $\pm$ 0.024  $\chi^2$ /NDF: 6882437.4/52

All: 179.107 $\pm$ 0.017  $\chi^2$ /NDF: 14814223.5/10

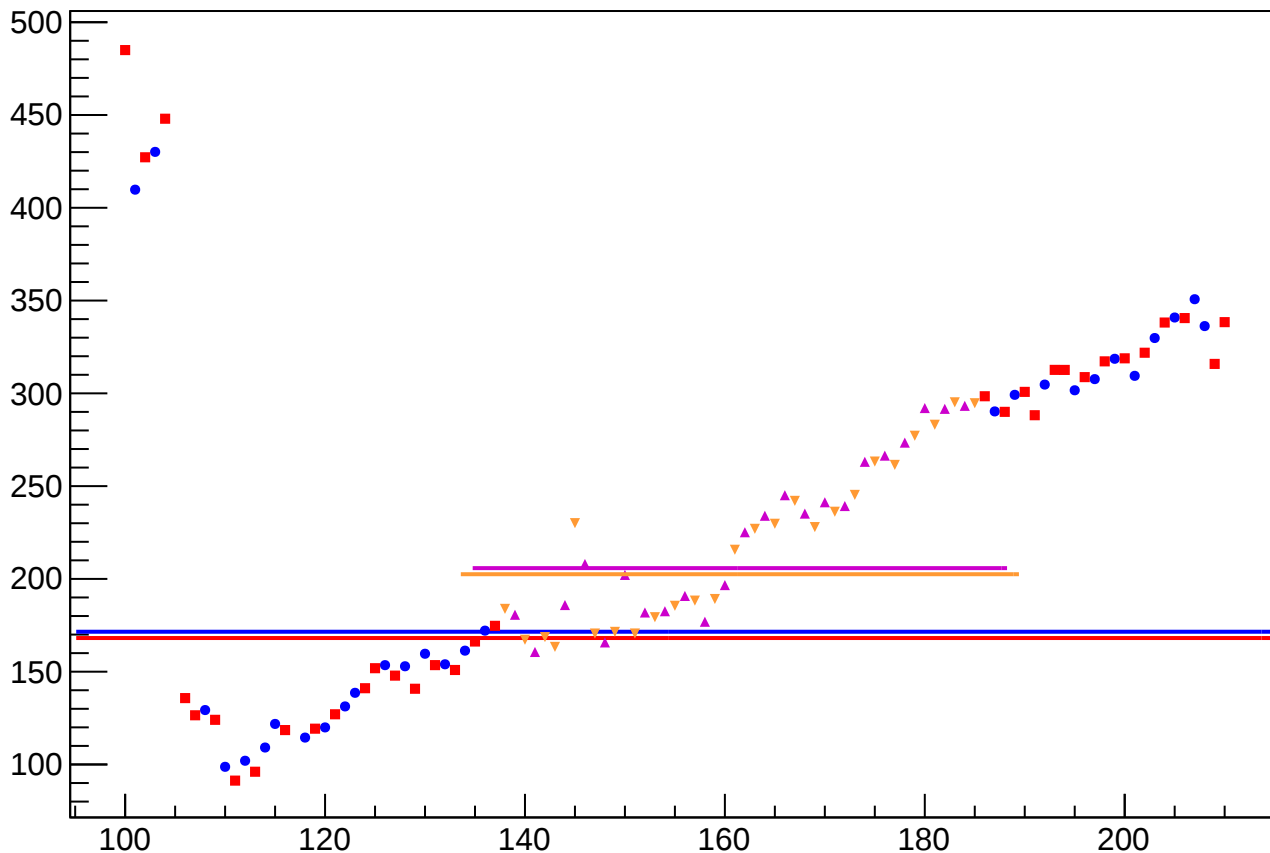
- sign 178.085 $\pm$ 0.023  $\chi^2$ /NDF: 7927842.4/55

# yield\_bpm2i02WS\_mean vs Slug



Right In:  $143204.610 \pm 0.051$   $\chi^2/\text{NDF}: 202957112598.9/27$   
 Left Out:  $133850.586 \pm 0.048$   $\chi^2/\text{NDF}: 1080107831.1/24$  + sign  $138289.274 \pm 0.035$   $\chi^2/\text{NDF}: 221893179086$   
 Right Out:  $143643.381 \pm 0.047$   $\chi^2/\text{NDF}: 242521466418.8/32$  All:  $138688.135 \pm 0.024$   $\chi^2/\text{NDF}: 486264689$   
 Left In:  $133749.630 \pm 0.051$   $\chi^2/\text{NDF}: 954069486.7/22$  - sign  $139072.925 \pm 0.034$   $\chi^2/\text{NDF}: 264115699099$

# yield\_bpm2i02WS\_rms vs Slug



Right In: 171.533 $\pm$ 0.036  $\chi^2$ /NDF: 5558387.9/27

Left Out: 202.527 $\pm$ 0.034  $\chi^2$ /NDF:1211991.5/24

Right Out: 168.140 $\pm$ 0.033  $\chi^2$ /NDF: 6678059.8/32

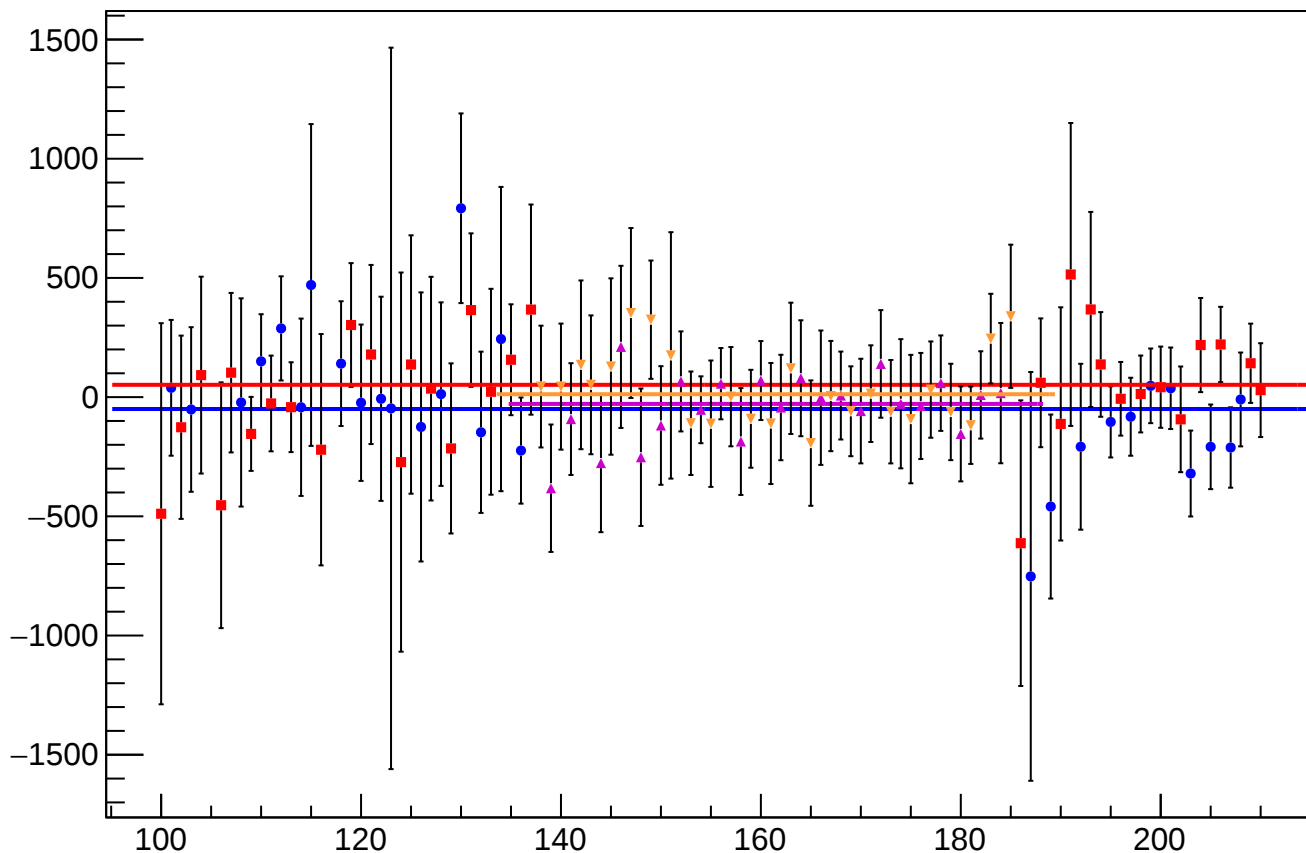
Left In: 205.808 $\pm$ 0.036  $\chi^2$ /NDF:1094330.7/22

+ sign 187.820 $\pm$ 0.025  $\chi^2$ /NDF: 7162457.5/52

All: 186.660 $\pm$ 0.017  $\chi^2$ /NDF: 15537537.9/10

- sign 185.541 $\pm$ 0.024  $\chi^2$ /NDF: 8370752.8/55

# asym\_bcm\_an\_ds\_mean vs Slug



Right In:  $-49.844 \pm 46.802$   $\chi^2/\text{NDF}$ : 16.9/27

Left Out:  $12.180 \pm 47.531$   $\chi^2/\text{NDF}$ : 8.6/24

Right Out:  $51.717 \pm 44.005$   $\chi^2/\text{NDF}$ : 13.0/32

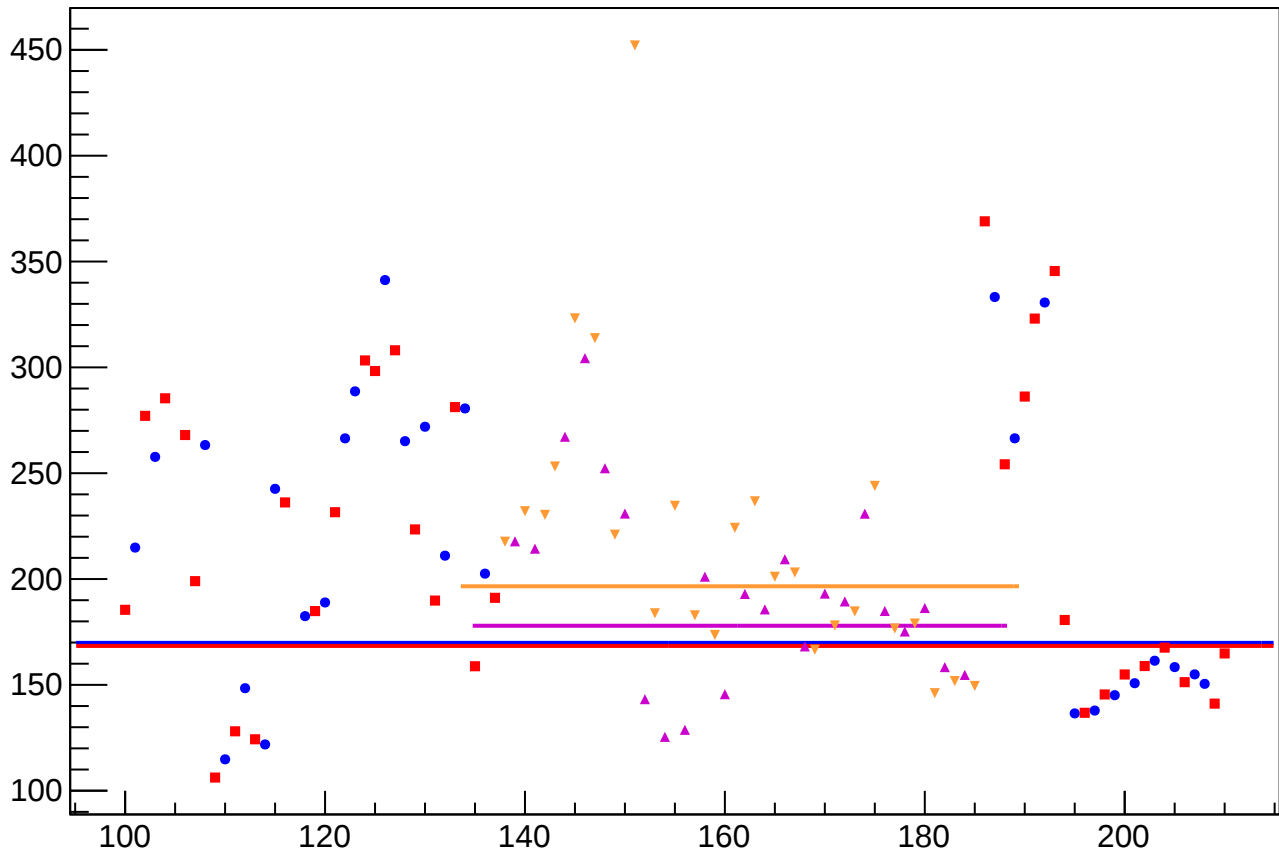
Left In:  $-28.452 \pm 44.688$   $\chi^2/\text{NDF}$ : 6.7/22

+ sign  $-19.311 \pm 33.349$   $\chi^2/\text{NDF}$ : 26.4/52

All:  $-2.559 \pm 22.844$   $\chi^2/\text{NDF}$ : 48.2/108

- sign  $12.250 \pm 31.355$   $\chi^2/\text{NDF}$ : 21.3/55

# asym\_bcm\_an\_ds\_rms vs Slug



Right In: 169.841 $\pm$ 0.033  $\chi^2$ /NDF: 2123141.4/27

Left Out: 196.576 $\pm$ 0.034  $\chi^2$ /NDF:1778719.0/24

Right Out: 168.398 $\pm$ 0.031  $\chi^2$ /NDF: 2839265.1/32

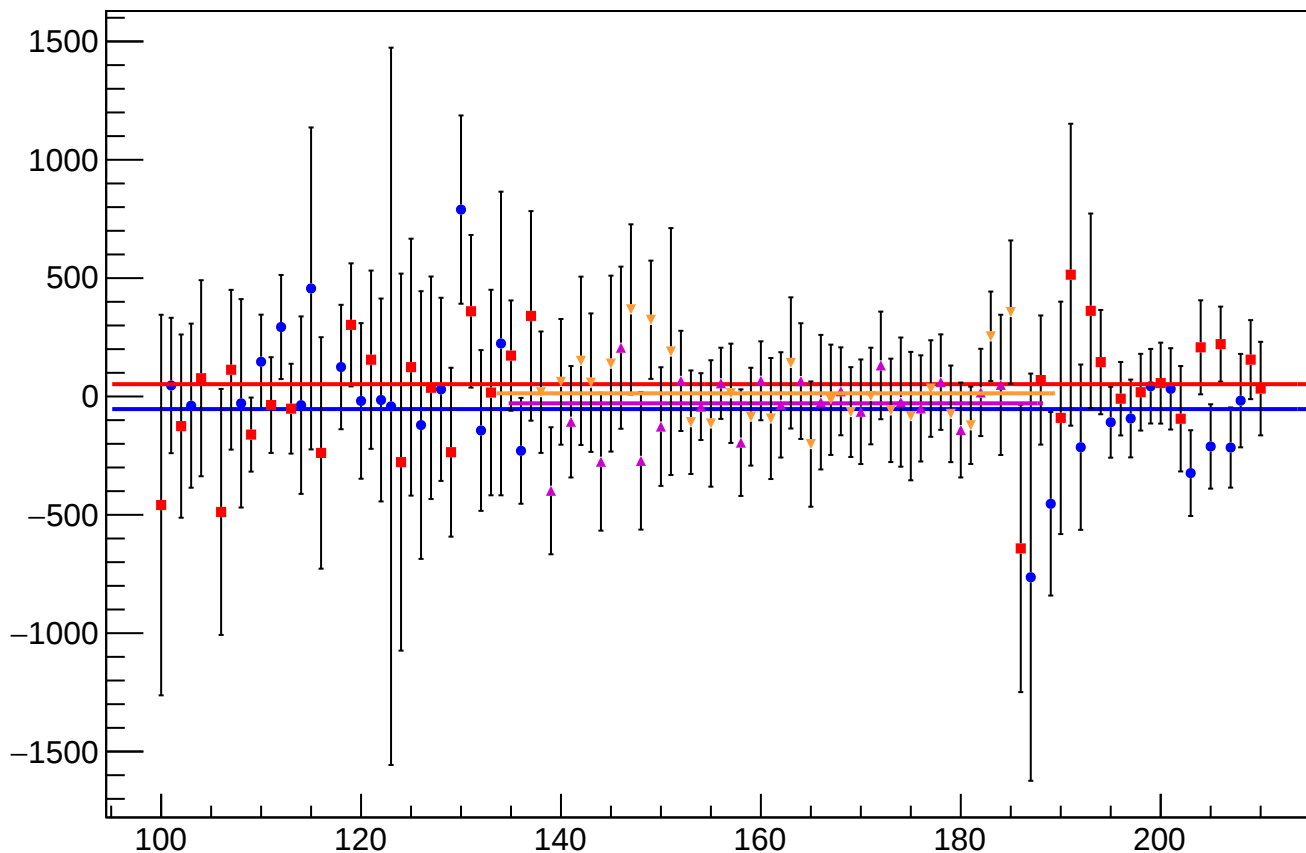
Left In: 177.933 $\pm$ 0.032  $\chi^2$ /NDF:1605780.8/22

+ sign 183.002 $\pm$ 0.024  $\chi^2$ /NDF: 4223144.0/52

All: 177.742 $\pm$ 0.016  $\chi^2$ /NDF: 8808146.2/108

- sign 173.092 $\pm$ 0.022  $\chi^2$ /NDF: 4491267.7/55

# asym\_bcm\_an\_ds3\_mean vs Slug



Right In: -53.259±47.023  $\chi^2/\text{NDF}$ : 16.8/27

Left Out: 13.395±47.862  $\chi^2/\text{NDF}$ : 9.0/24

Right Out: 52.036±44.221  $\chi^2/\text{NDF}$ : 13.3/32

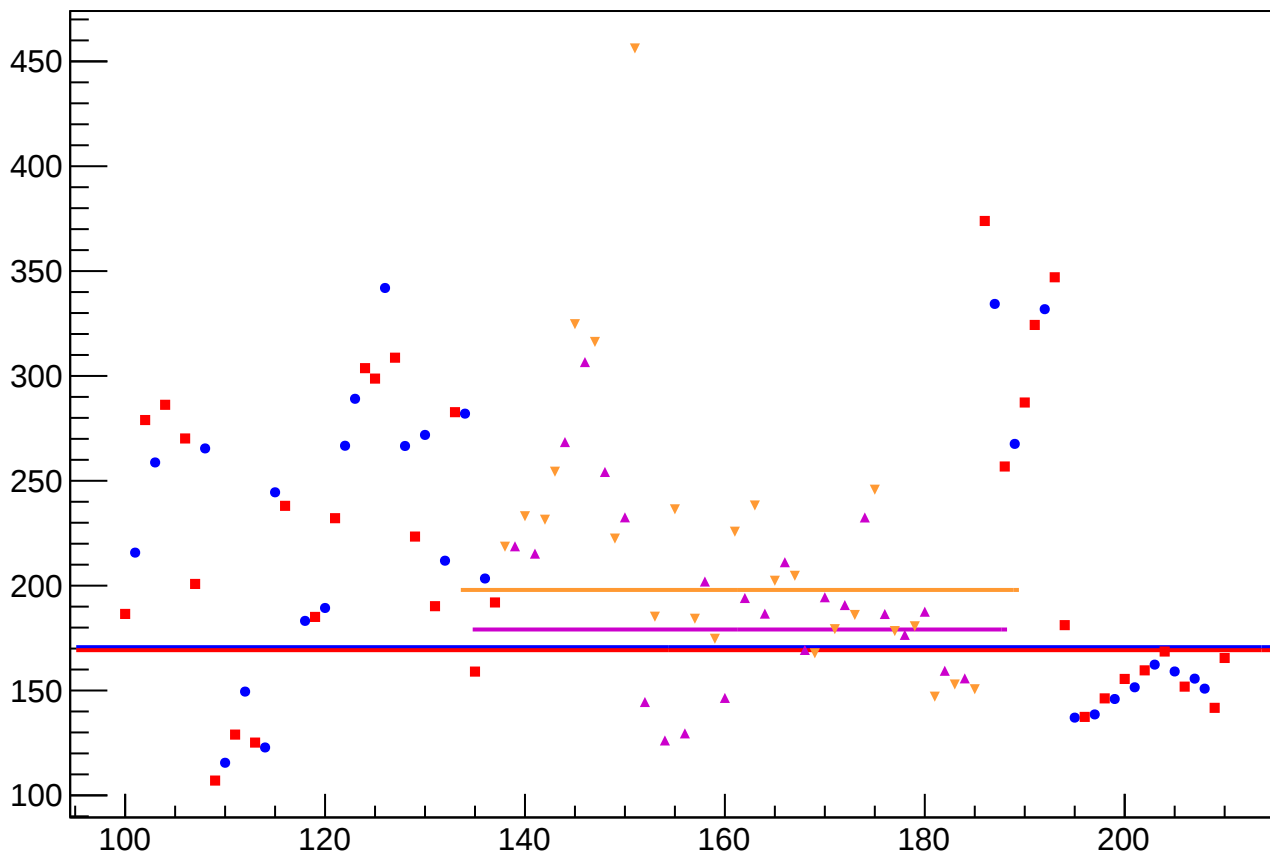
Left In: -28.806±44.980  $\chi^2/\text{NDF}$ : 6.8/22

+ sign -20.521±33.543  $\chi^2/\text{NDF}$ : 26.8/52

All: -3.097±22.975  $\chi^2/\text{NDF}$ : 49.1/108

- sign 12.302±31.534  $\chi^2/\text{NDF}$ : 21.8/55

# asym\_bcm\_an\_ds3\_rms vs Slug



Right In: 170.669 $\pm$ 0.033  $\chi^2$ /NDF: 2114873.0/27

Left Out: 197.953 $\pm$ 0.034  $\chi^2$ /NDF:1774524.3/24

Right Out: 169.235 $\pm$ 0.031  $\chi^2$ /NDF: 2835354.0/32

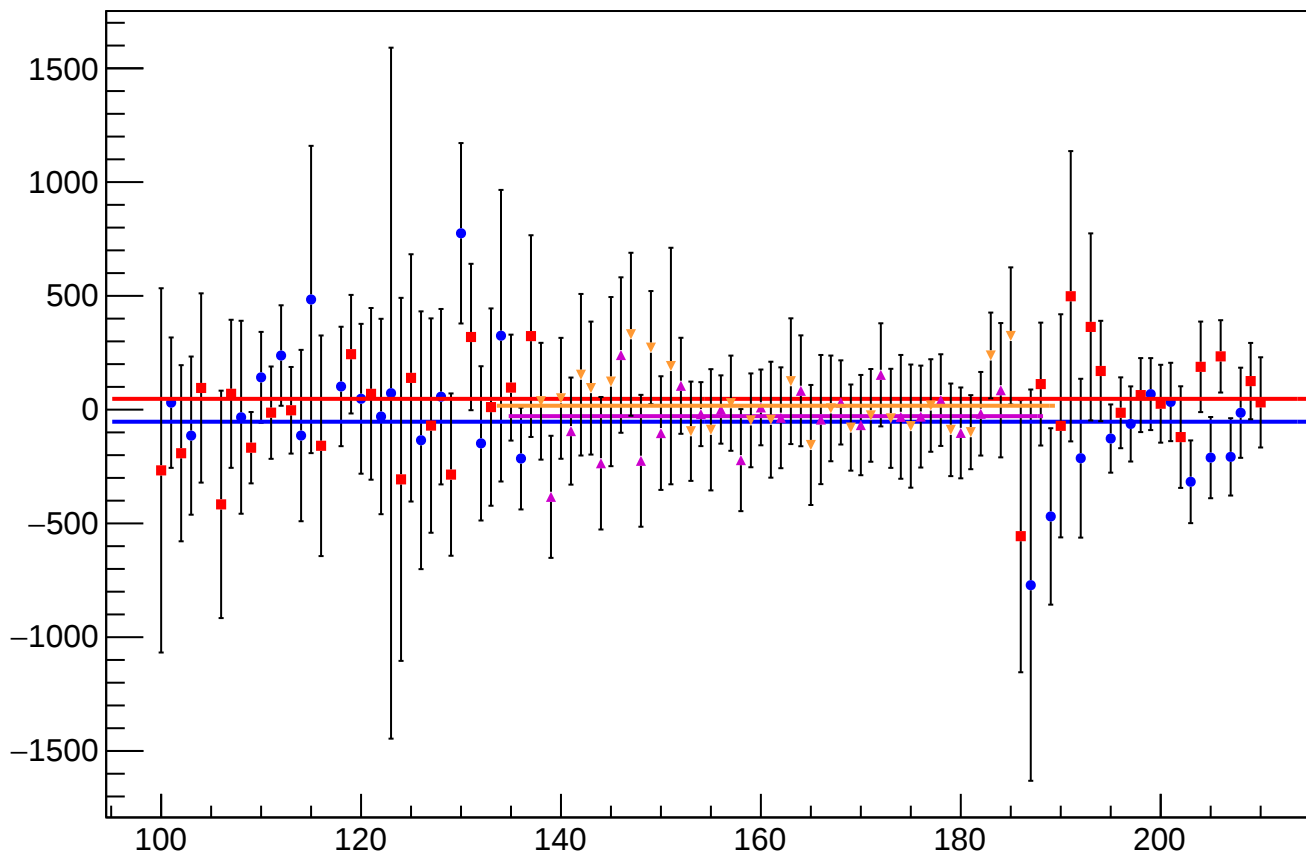
Left In: 179.090 $\pm$ 0.032  $\chi^2$ /NDF:1605113.3/22

+ sign 184.070 $\pm$ 0.024  $\chi^2$ /NDF: 4220103.3/52

All: 178.766 $\pm$ 0.016  $\chi^2$ /NDF: 8803569.4/100

- sign 174.079 $\pm$ 0.022  $\chi^2$ /NDF: 4489280.6/55

# asym\_bcm\_an\_us\_mean vs Slug



Right In:  $-53.111 \pm 47.105$   $\chi^2/\text{NDF}: 16.2/27$

Left Out:  $17.142 \pm 47.738$   $\chi^2/\text{NDF}: 7.1/24$

Right Out:  $47.435 \pm 44.249$   $\chi^2/\text{NDF}: 11.9/32$

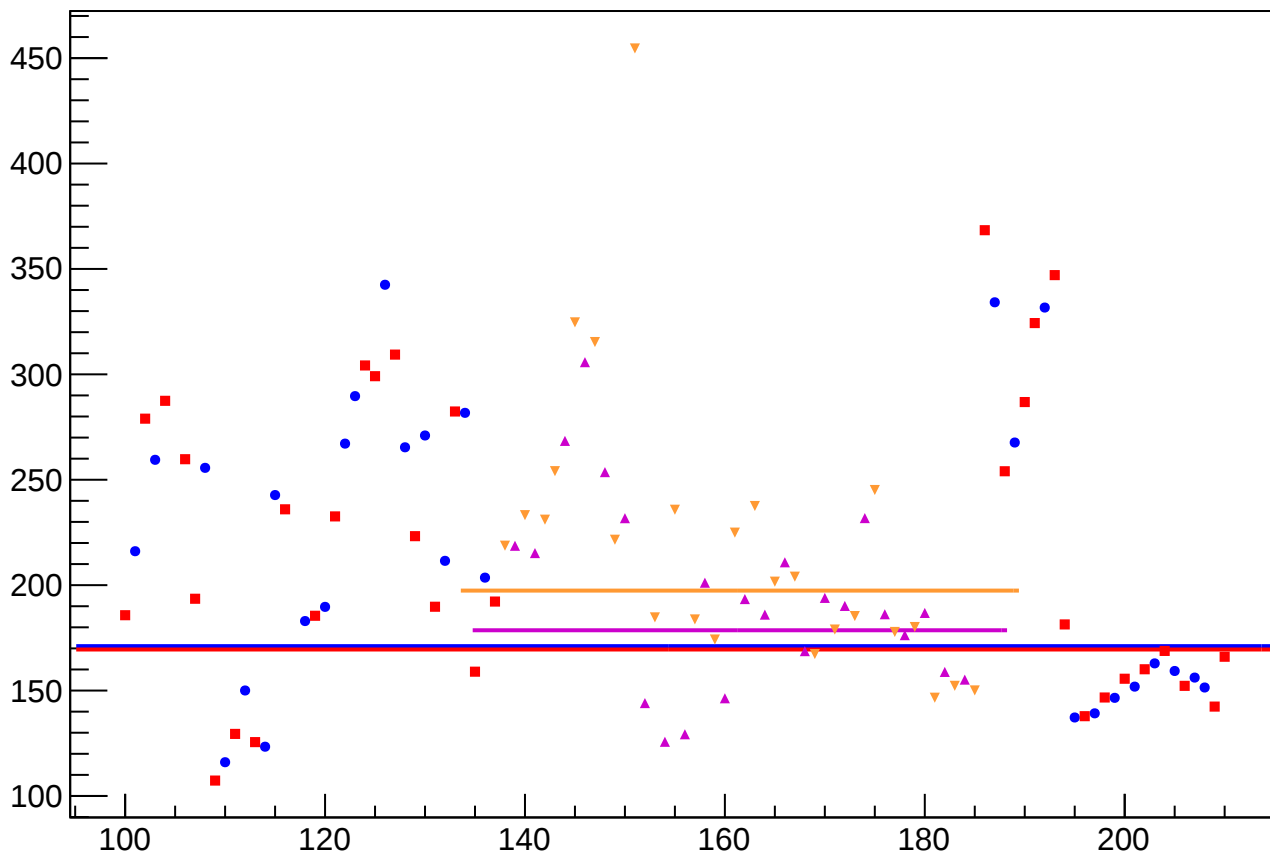
Left In:  $-28.655 \pm 44.859$   $\chi^2/\text{NDF}: 6.1/22$

+ sign  $-18.453 \pm 33.530$   $\chi^2/\text{NDF}: 24.4/52$

All:  $-3.388 \pm 22.959$   $\chi^2/\text{NDF}: 44.3/108$

- sign  $9.910 \pm 31.502$   $\chi^2/\text{NDF}: 19.5/55$

# asym\_bcm\_an\_us\_rms vs Slug



Right In: 171.069 $\pm$ 0.033  $\chi^2$ /NDF: 2083120.3/27

Left Out: 197.422 $\pm$ 0.034  $\chi^2$ /NDF:1780261.9/24

Right Out: 169.476 $\pm$ 0.031  $\chi^2$ /NDF: 2787630.1/32

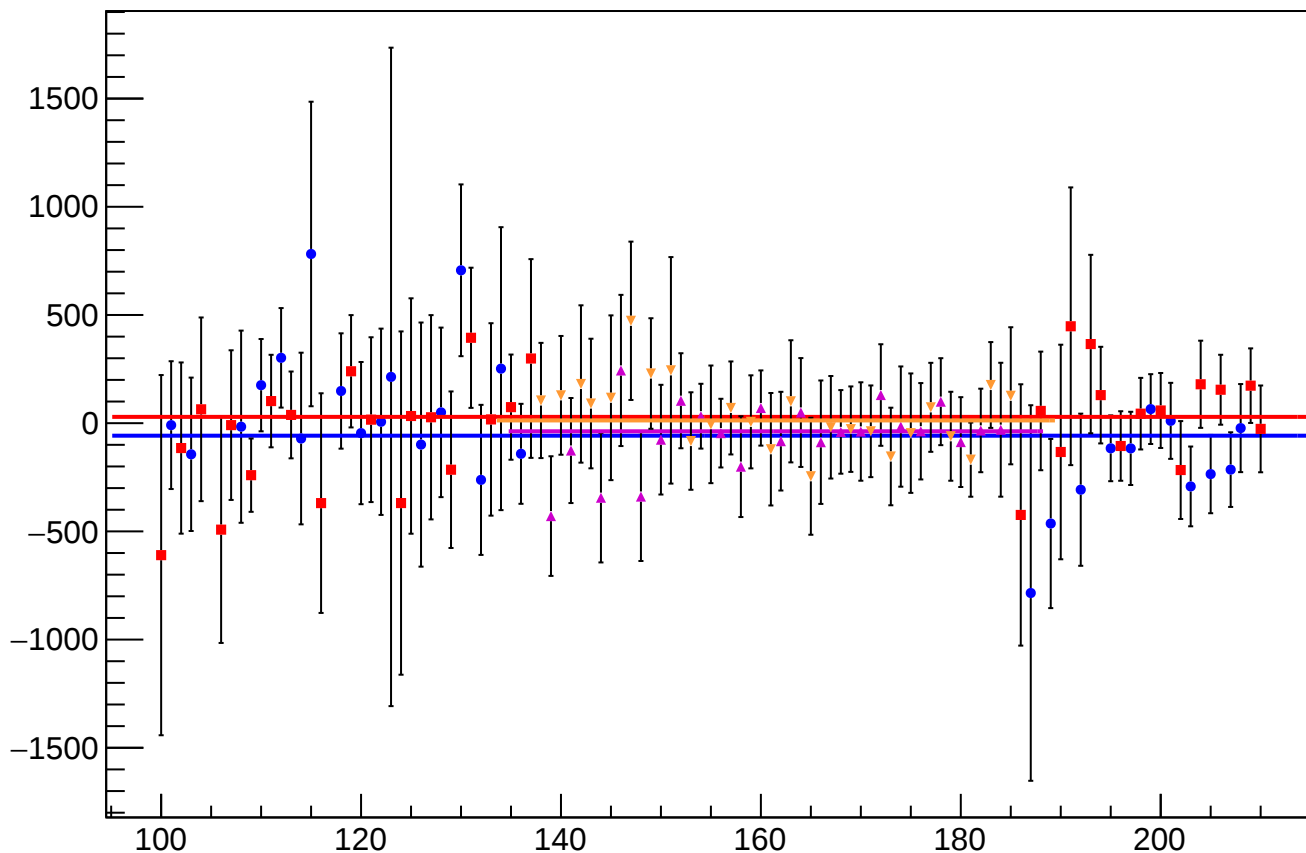
Left In: 178.601 $\pm$ 0.032  $\chi^2$ /NDF:1608998.1/22

+ sign 184.070 $\pm$ 0.024  $\chi^2$ /NDF: 4172191.0/52

All: 178.708 $\pm$ 0.016  $\chi^2$ /NDF: 8707026.1/108

- sign 173.976 $\pm$ 0.022  $\chi^2$ /NDF: 4438574.4/55

# asym\_bcm\_dg\_us\_mean vs Slug



Right In:  $-57.816 \pm 48.162$   $\chi^2/\text{NDF}$ : 17.0/27

Left Out:  $12.632 \pm 49.242$   $\chi^2/\text{NDF}$ : 7.5/24

Right Out:  $29.149 \pm 45.446$   $\chi^2/\text{NDF}$ : 13.9/32

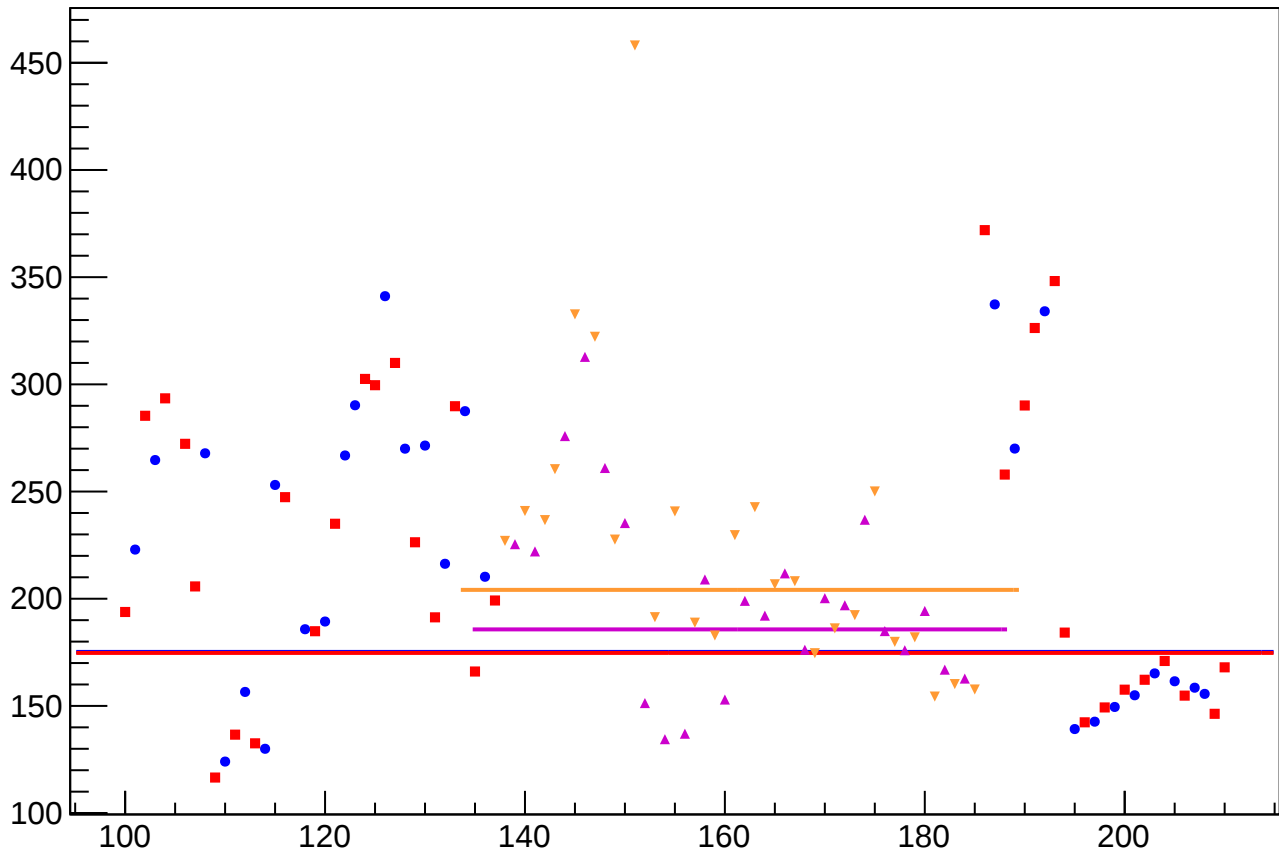
Left In:  $-37.460 \pm 46.479$   $\chi^2/\text{NDF}$ : 7.6/22

+ sign  $-23.373 \pm 34.431$   $\chi^2/\text{NDF}$ : 25.6/52

All:  $-12.813 \pm 23.632$   $\chi^2/\text{NDF}$ : 48.3/108

- sign  $-3.408 \pm 32.494$   $\chi^2/\text{NDF}$ : 22.5/55

# asym\_bcm\_dg\_us\_rms vs Slug



Right In: 175.186 $\pm$ 0.034  $\chi^2$ /NDF: 2009647.6/27

Left Out: 204.132 $\pm$ 0.035  $\chi^2$ /NDF:1672287.6/24

Right Out: 174.724 $\pm$ 0.032  $\chi^2$ /NDF: 2608336.1/32

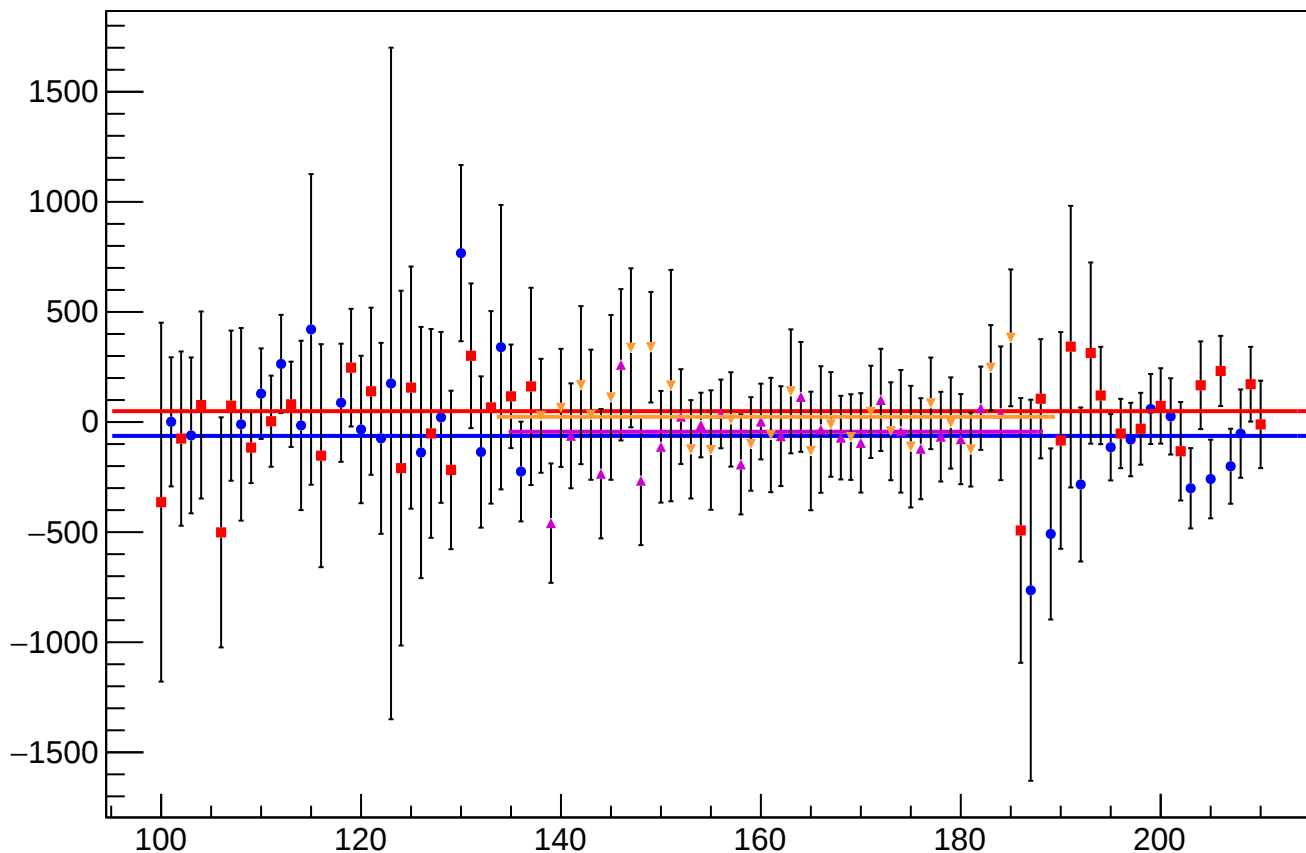
Left In: 185.694 $\pm$ 0.033  $\chi^2$ /NDF:1447767.0/22

+ sign 189.338 $\pm$ 0.024  $\chi^2$ /NDF: 4035127.8/52

All: 184.444 $\pm$ 0.017  $\chi^2$ /NDF: 8224570.1/108

- sign 180.086 $\pm$ 0.023  $\chi^2$ /NDF: 4113054.9/55

# asym\_bcm\_dg\_ds\_mean vs Slug



Right In:  $-62.941 \pm 47.554$   $\chi^2/\text{NDF}$ : 16.1/27

Left Out:  $23.843 \pm 48.783$   $\chi^2/\text{NDF}$ : 8.5/24

Right Out:  $49.445 \pm 44.735$   $\chi^2/\text{NDF}$ : 10.1/32

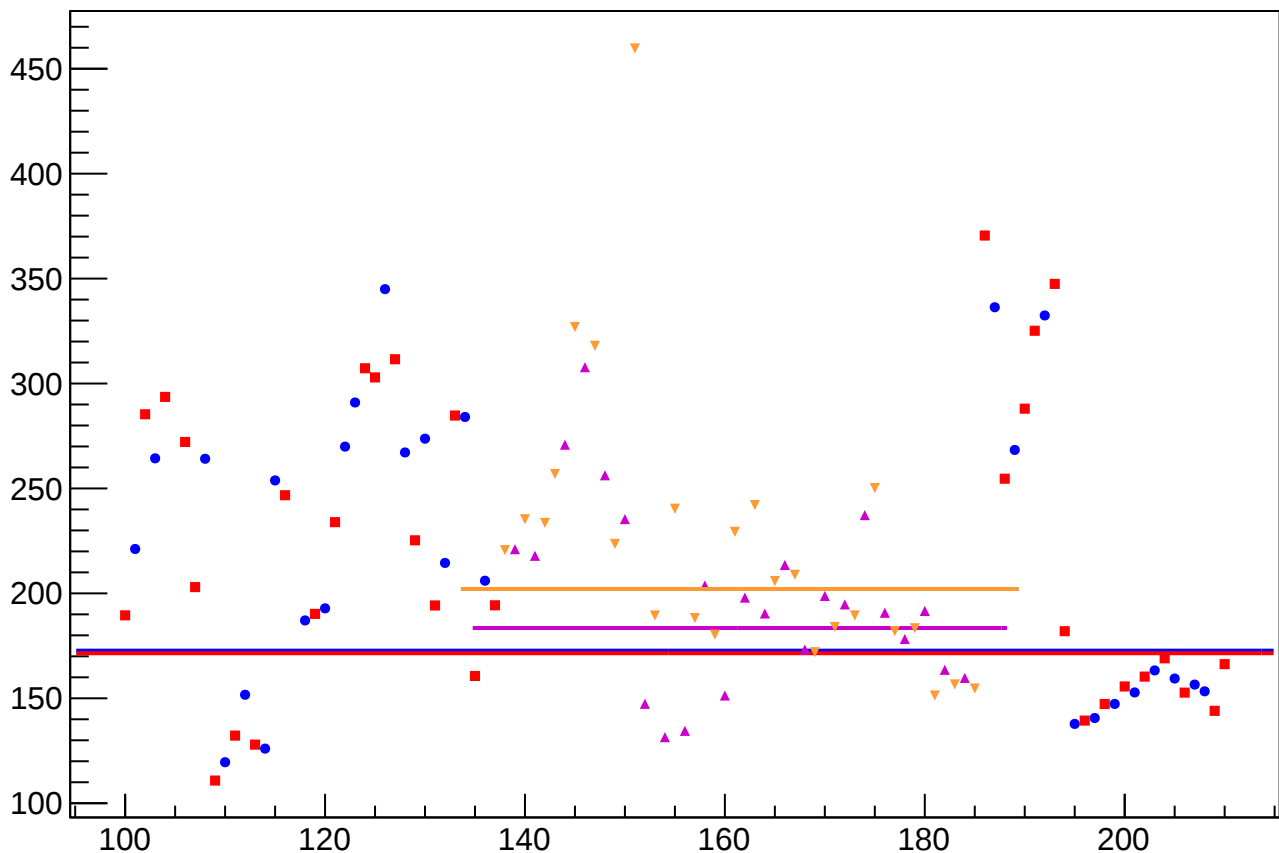
Left In:  $-43.978 \pm 45.981$   $\chi^2/\text{NDF}$ : 6.5/22

+ sign  $-20.656 \pm 34.052$   $\chi^2/\text{NDF}$ : 26.2/52

All:  $-7.579 \pm 23.344$   $\chi^2/\text{NDF}$ : 45.3/108

- sign  $4.016 \pm 32.064$   $\chi^2/\text{NDF}$ : 18.8/55

# asym\_bcm\_dg\_ds\_rms vs Slug



Right In: 172.707 $\pm$ 0.034  $\chi^2$ /NDF: 2091388.2/27

Left Out: 202.081 $\pm$ 0.034  $\chi^2$ /NDF:1692787.9/24

Right Out: 171.474 $\pm$ 0.032  $\chi^2$ /NDF: 2767958.3/32

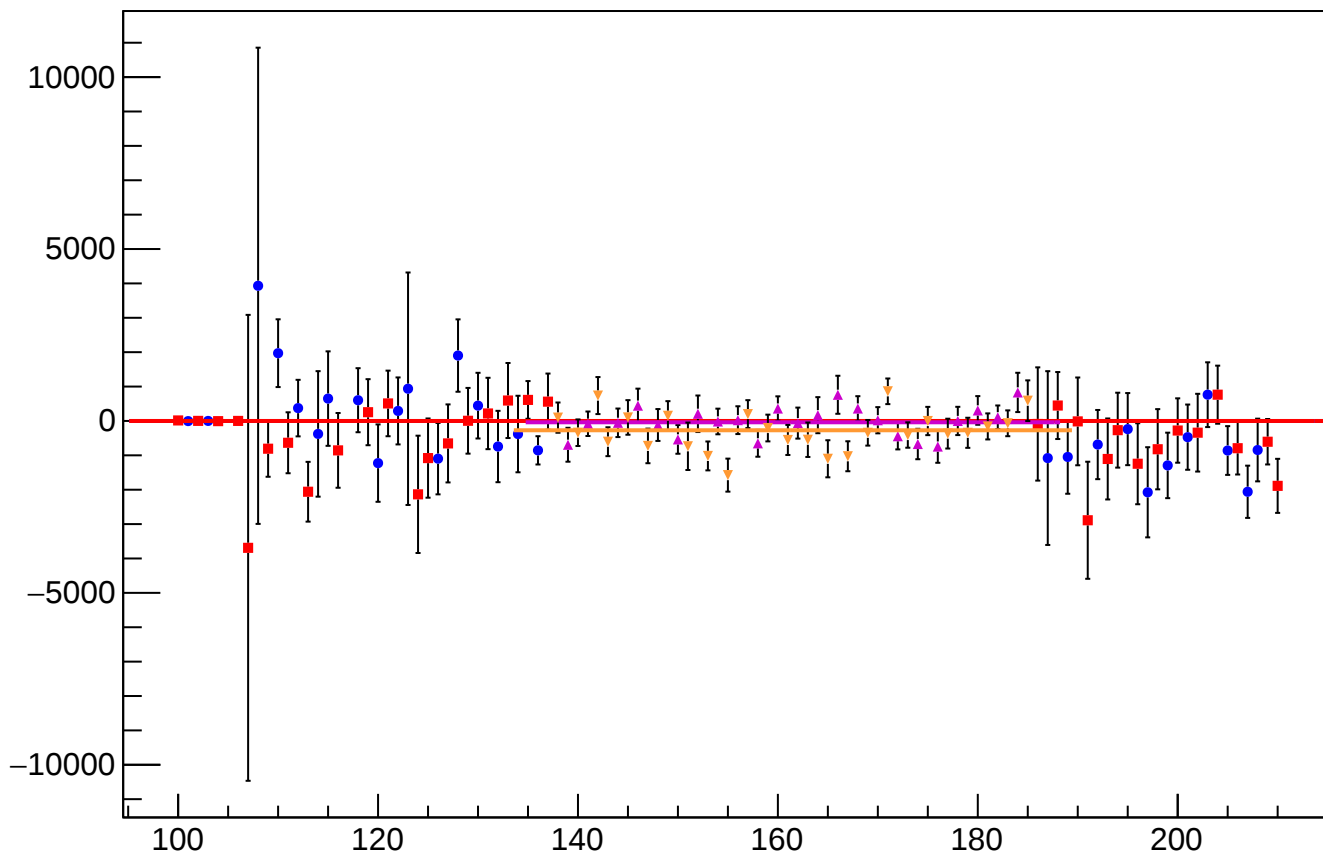
Left In: 183.498 $\pm$ 0.033  $\chi^2$ /NDF:1483383.4/22

+ sign 187.019 $\pm$ 0.024  $\chi^2$ /NDF: 4155989.6/52

All: 181.879 $\pm$ 0.017  $\chi^2$ /NDF: 8563573.4/108

- sign 177.321 $\pm$ 0.023  $\chi^2$ /NDF: 4321600.0/55

# asym\_cav4bQ\_mean vs Slug



Right In:  $-1.583 \pm 2.251$   $\chi^2/\text{NDF}$ : 34.0/27

Left Out:  $-270.969 \pm 86.967$   $\chi^2/\text{NDF}$ : 38.1/24

Right Out:  $-0.763 \pm 2.111$   $\chi^2/\text{NDF}$ : 33.4/32

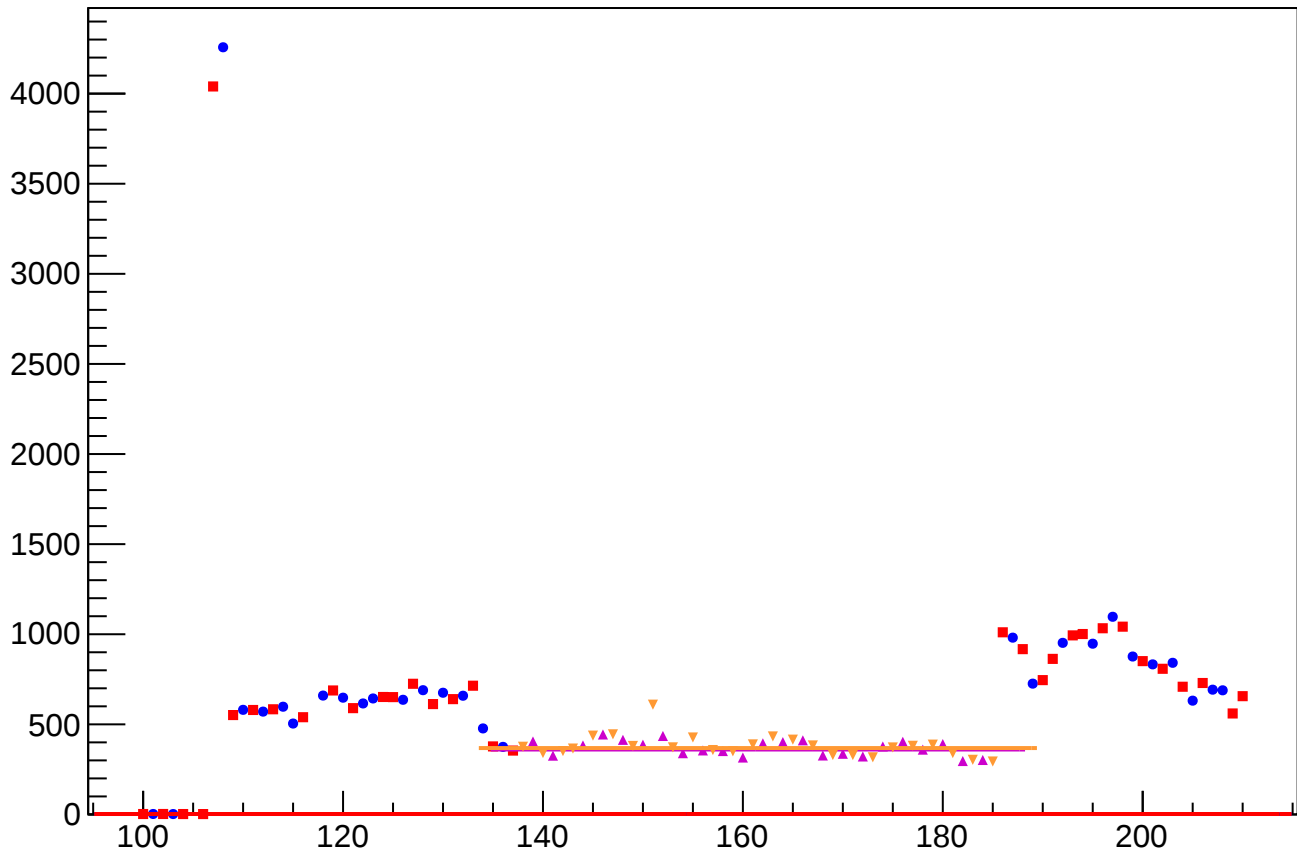
Left In:  $-39.078 \pm 87.769$   $\chi^2/\text{NDF}$ : 20.3/22

+ sign  $-1.763 \pm 2.251$   $\chi^2/\text{NDF}$ : 81.7/52

All:  $-1.243 \pm 1.539$   $\chi^2/\text{NDF}$ : 135.7/108

- sign  $-0.785 \pm 2.110$   $\chi^2/\text{NDF}$ : 53.9/55

# asym\_cav4bQ\_rms vs Slug



Right In: 2.504 $\pm$ 0.002  $\chi^2$ /NDF: 25985483.0/27

Left Out: 368.397 $\pm$ 0.061  $\chi^2$ /NDF:622466.1/24

Right Out: 2.487 $\pm$ 0.001  $\chi^2$ /NDF: 29695105.5/32

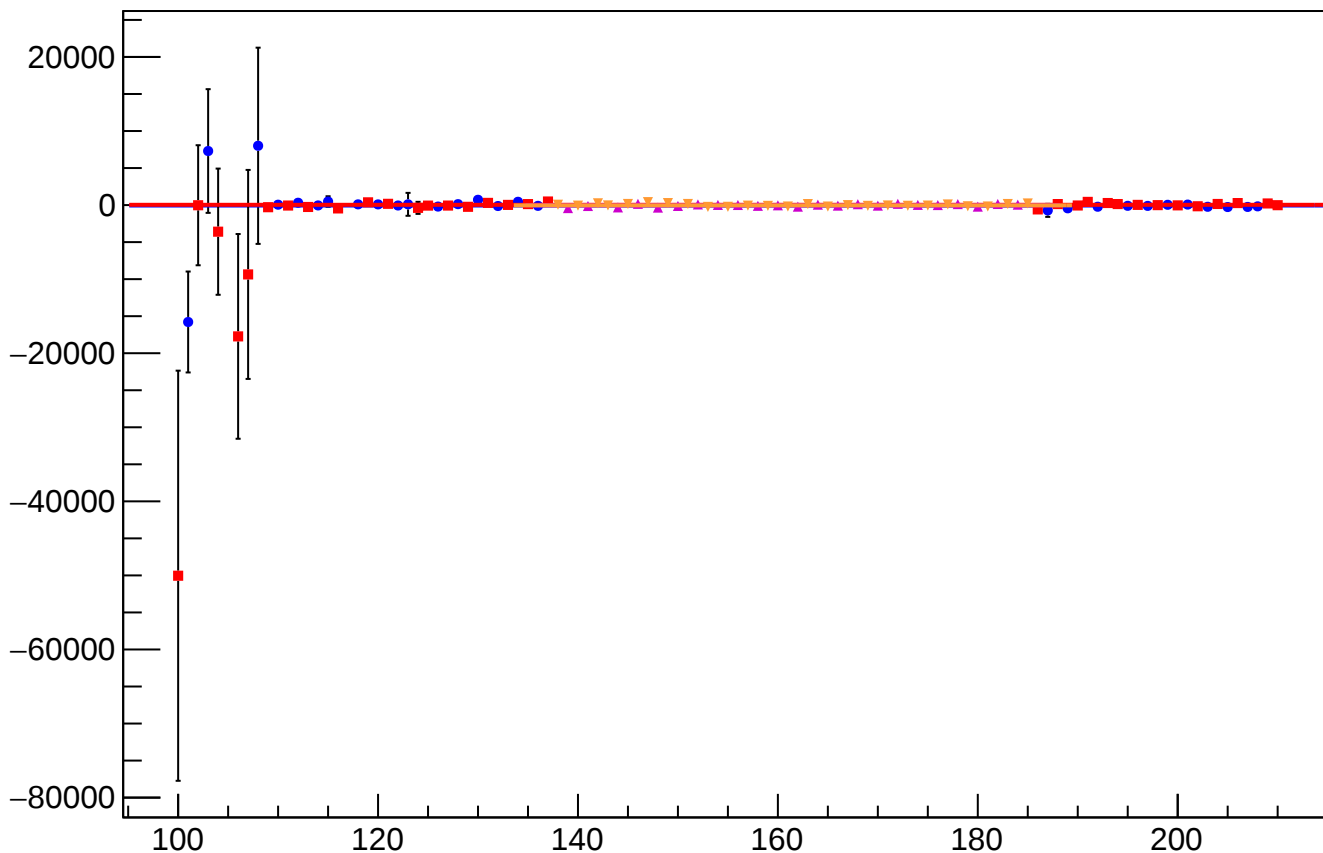
Left In: 360.408 $\pm$ 0.062  $\chi^2$ /NDF:417739.4/22

+ sign 2.749 $\pm$ 0.002  $\chi^2$ /NDF: 61986167.2/52

All: 2.720 $\pm$ 0.001  $\chi^2$ /NDF: 125340085.8/108

- sign 2.694 $\pm$ 0.001  $\chi^2$ /NDF: 63353288.3/55

# asym\_cav4cQ\_mean vs Slug



Right In:  $-57.197 \pm 52.064$   $\chi^2/\text{NDF}$ : 20.9/27

Left Out:  $-38.013 \pm 49.628$   $\chi^2/\text{NDF}$ : 9.3/24

Right Out:  $37.543 \pm 49.558$   $\chi^2/\text{NDF}$ : 21.1/32

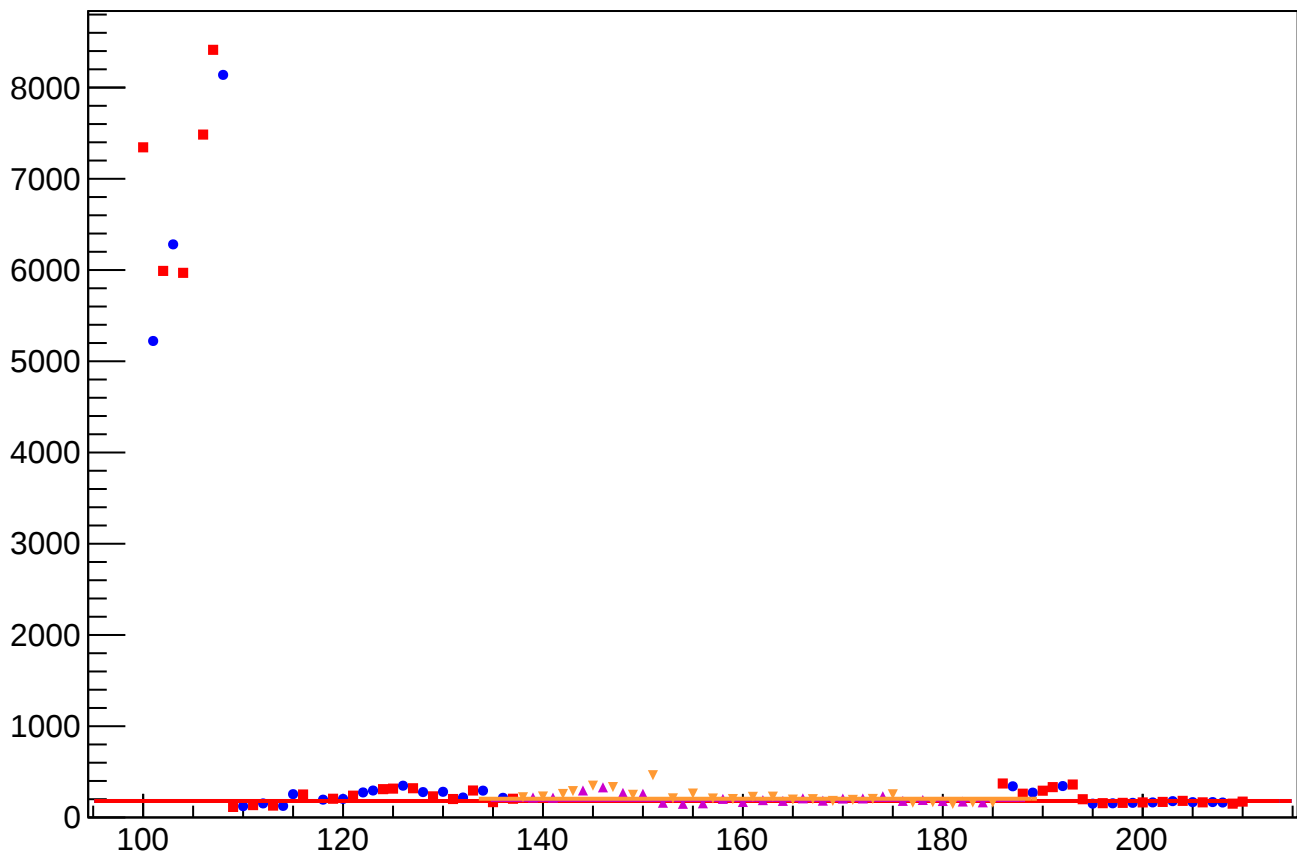
Left In:  $-28.205 \pm 48.167$   $\chi^2/\text{NDF}$ : 9.2/22

+ sign  $-47.146 \pm 35.923$   $\chi^2/\text{NDF}$ : 30.3/52

All:  $-20.709 \pm 24.898$   $\chi^2/\text{NDF}$ : 62.5/108

- sign  $3.733 \pm 34.540$   $\chi^2/\text{NDF}$ : 31.2/55

# asym\_cav4cQ\_rms vs Slug



Right In: 180.488 $\pm$ 0.037  $\chi^2$ /NDF: 4520870.2/27

Left Out: 205.027 $\pm$ 0.035  $\chi^2$ /NDF:1956045.1/24

Right Out: 180.382 $\pm$ 0.035  $\chi^2$ /NDF: 5416940.4/32

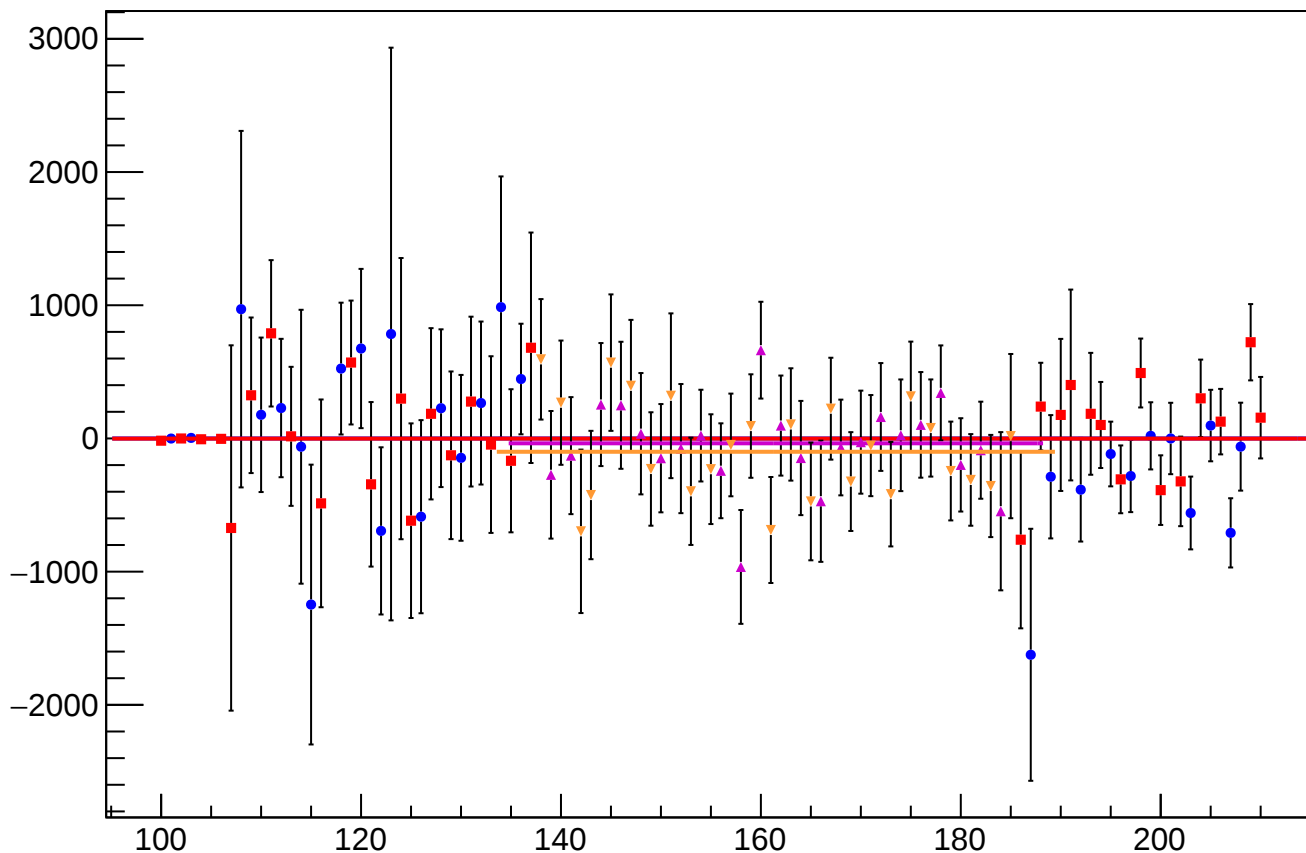
Left In: 193.405 $\pm$ 0.034  $\chi^2$ /NDF:1172169.3/22

+ sign 193.345 $\pm$ 0.025  $\chi^2$ /NDF: 6709693.9/52

All: 190.089 $\pm$ 0.018  $\chi^2$ /NDF: 13401449.4/10

- sign 187.078 $\pm$ 0.024  $\chi^2$ /NDF: 6660131.5/55

# asym\_cav4dQ\_mean vs Slug



Right In:  $-0.225 \pm 1.736$   $\chi^2/\text{NDF}$ : 27.5/27

Left Out:  $-100.058 \pm 84.190$   $\chi^2/\text{NDF}$ : 15.7/24

Right Out:  $-1.286 \pm 1.622$   $\chi^2/\text{NDF}$ : 28.1/32

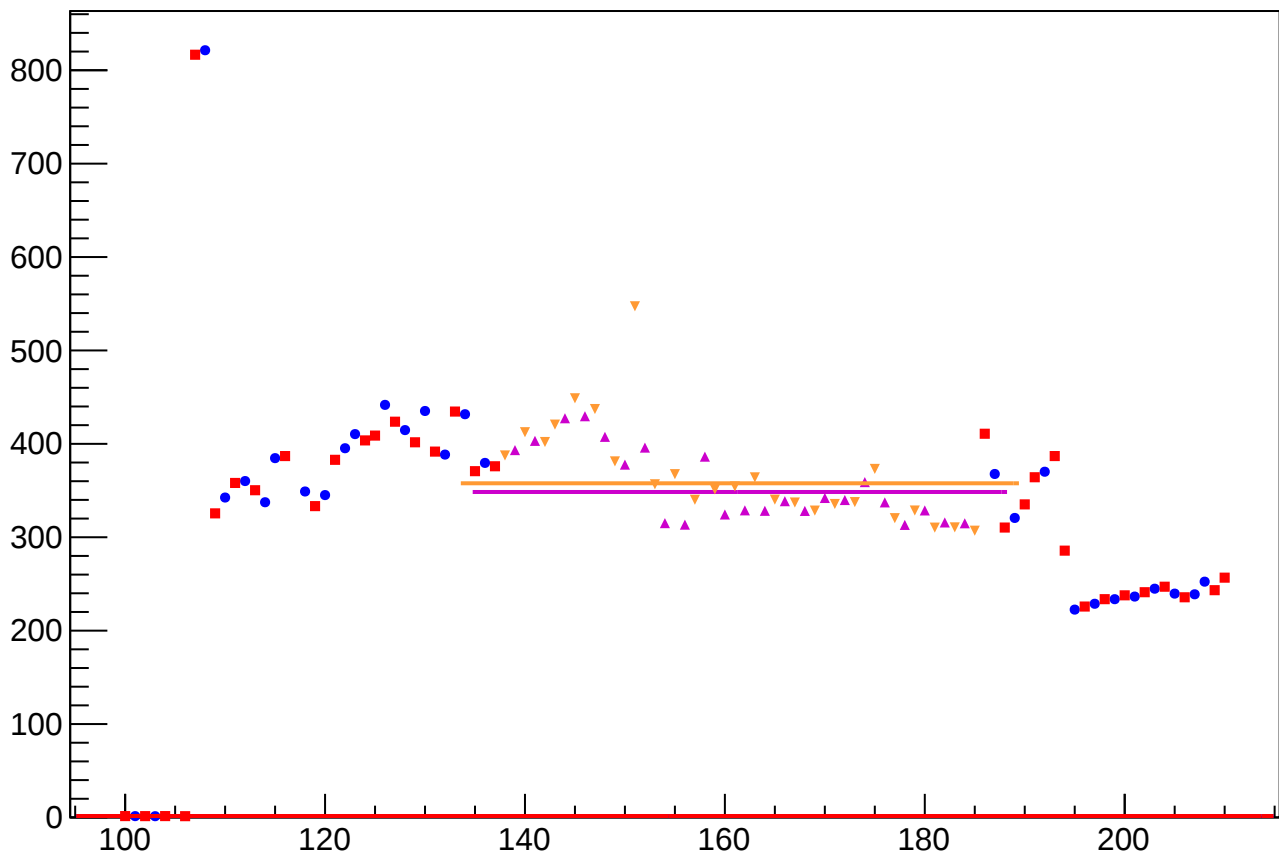
Left In:  $-36.497 \pm 84.675$   $\chi^2/\text{NDF}$ : 13.5/22

+ sign  $-0.268 \pm 1.736$   $\chi^2/\text{NDF}$ : 44.6/52

All:  $-0.818 \pm 1.185$   $\chi^2/\text{NDF}$ : 86.5/108

- sign  $-1.298 \pm 1.622$   $\chi^2/\text{NDF}$ : 41.8/55

# asym\_cav4dQ\_rms vs Slug



Right In: 1.545 $\pm$ 0.001  $\chi^2$ /NDF: 26246408.7/27

Left Out: 357.771 $\pm$ 0.060  $\chi^2$ /NDF: 547124.8/24

Right Out: 1.543 $\pm$ 0.001  $\chi^2$ /NDF: 29399786.0/32

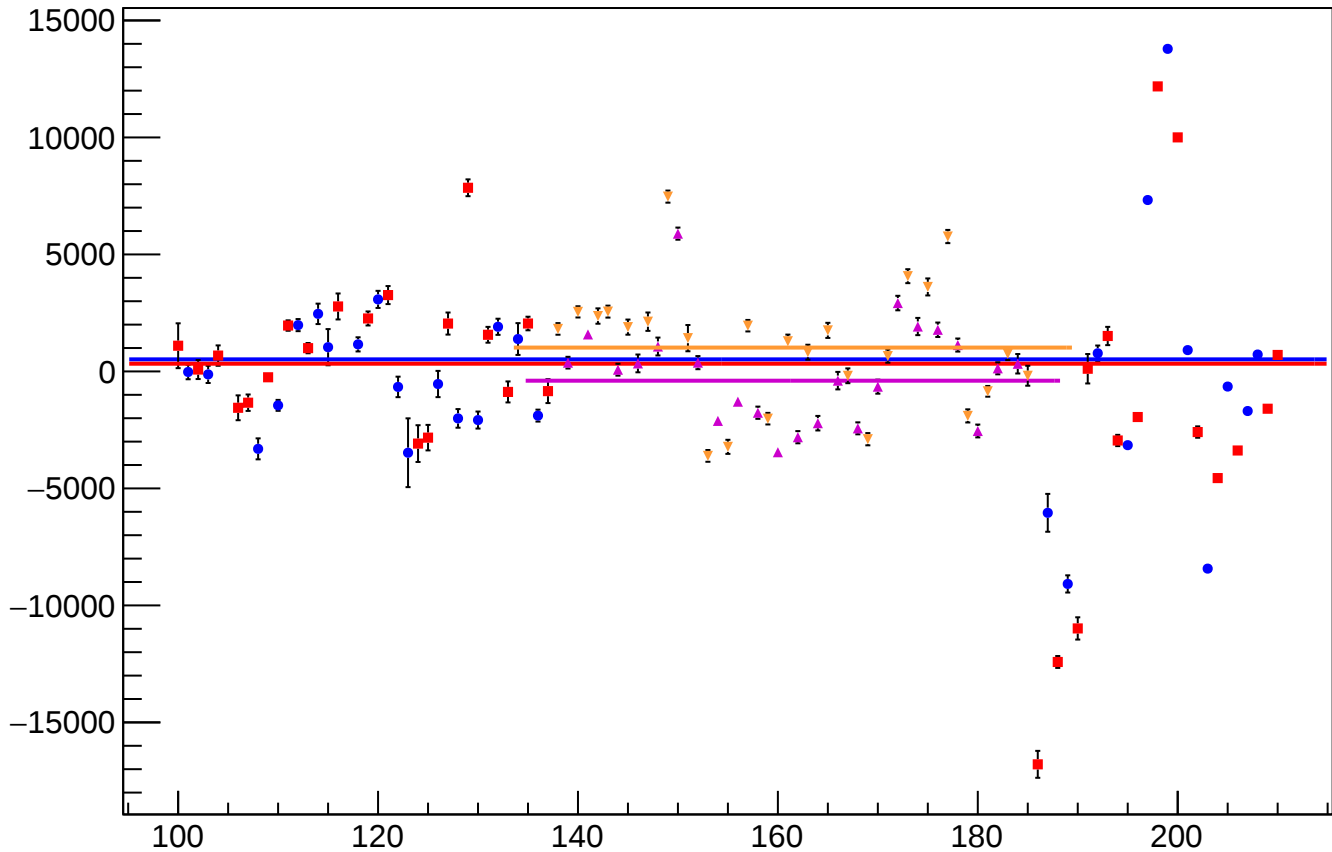
Left In: 348.464 $\pm$ 0.060  $\chi^2$ /NDF: 360425.7/22

+ sign 1.696 $\pm$ 0.001  $\chi^2$ /NDF: 62584997.1/52

All: 1.682 $\pm$ 0.001  $\chi^2$ /NDF: 125905149.4/108

- sign 1.670 $\pm$ 0.001  $\chi^2$ /NDF: 63319921.4/55

# asym\_bcm0l02\_mean vs Slug



Right In: 515.644 $\pm$ 51.727  $\chi^2$ /NDF: 10823.0/27

Left Out: 1018.965 $\pm$ 57.402  $\chi^2$ /NDF:2310.1/24

Right Out: 329.487 $\pm$ 48.329  $\chi^2$ /NDF: 13329.9/32

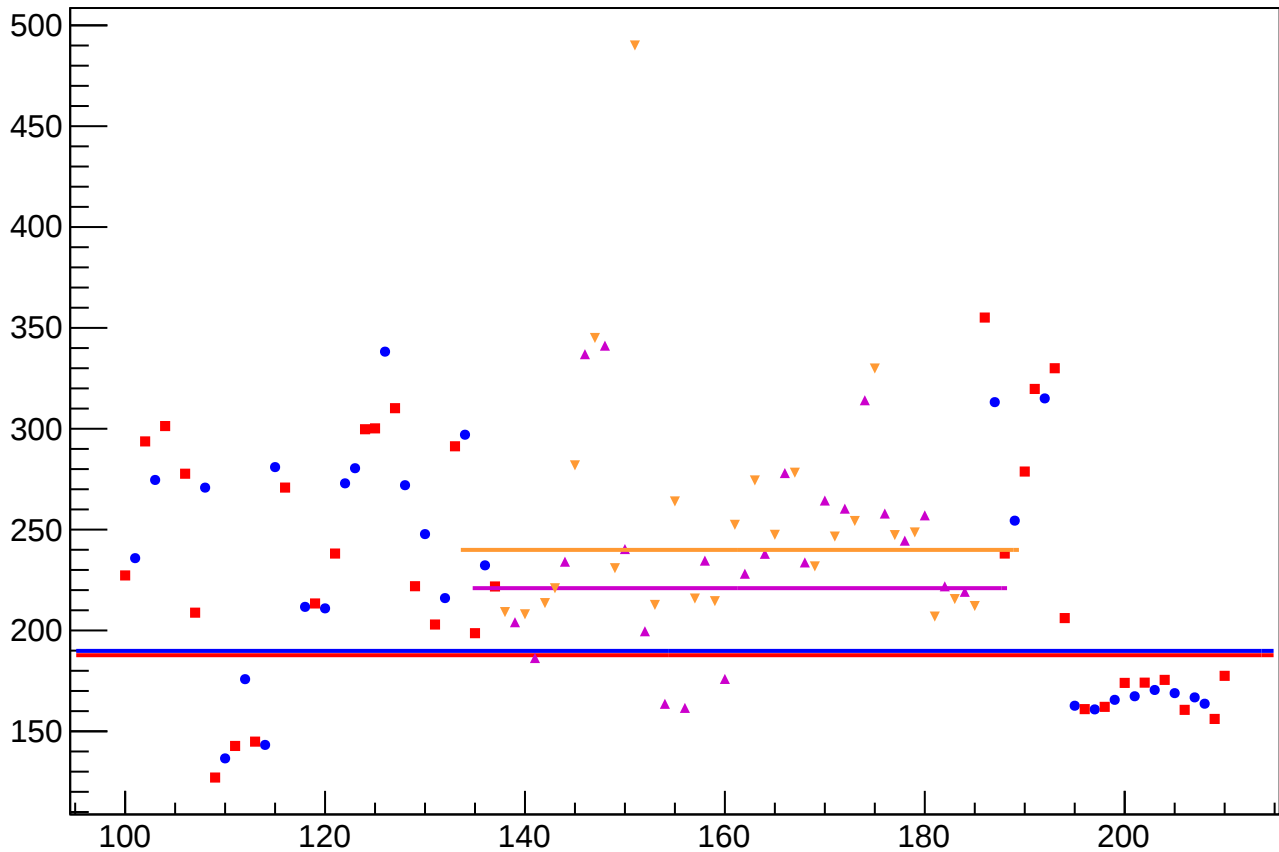
Left In: -396.609 $\pm$ 55.090  $\chi^2$ /NDF:1581.0/22

+ sign 741.201 $\pm$ 38.427  $\chi^2$ /NDF: 13175.5/52

All: 357.069 $\pm$ 26.399  $\chi^2$ /NDF: 28373.8/108

- sign 13.709 $\pm$ 36.330  $\chi^2$ /NDF: 15009.1/55

# asym\_bcm0l02\_rms vs Slug



Right In:  $189.871 \pm 0.037$   $\chi^2/\text{NDF}$ : 1522306.8/27

Left Out:  $239.942 \pm 0.041$   $\chi^2/\text{NDF}$ : 1000770.0/24

Right Out:  $187.727 \pm 0.034$   $\chi^2/\text{NDF}$ : 2121238.1/32

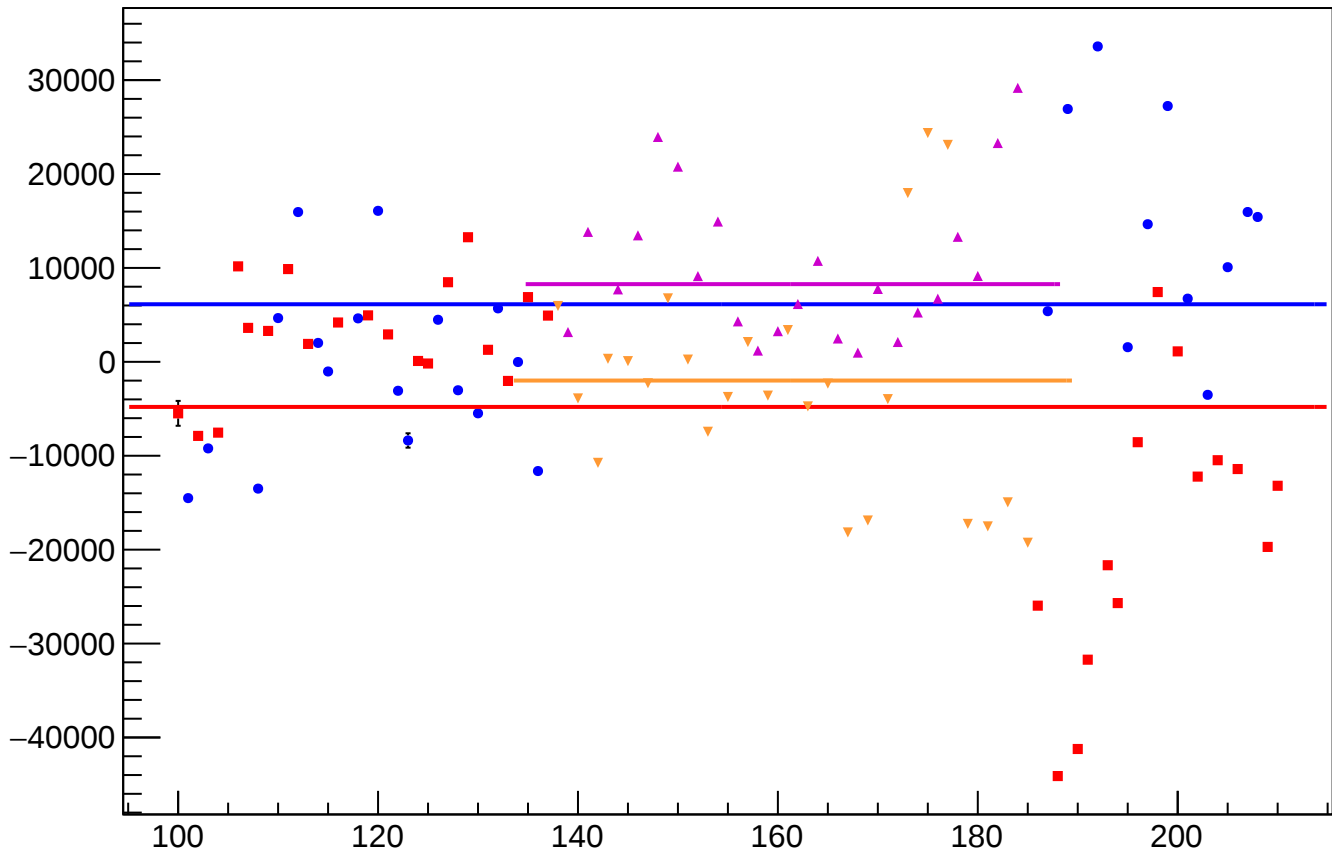
Left In:  $220.972 \pm 0.039$   $\chi^2/\text{NDF}$ : 1327680.6/22

+ sign  $212.309 \pm 0.027$   $\chi^2/\text{NDF}$ : 3362881.4/52

All:  $206.964 \pm 0.019$   $\chi^2/\text{NDF}$ : 7296687.3/100

- sign  $202.185 \pm 0.026$   $\chi^2/\text{NDF}$ : 3860495.6/55

# asym\_bpm0i02WS\_mean vs Slug



Right In: 6131.702 $\pm$ 42.020  $\chi^2$ /NDF: 90632.2/27

Left Out: -1991.788 $\pm$ 42.427  $\chi^2$ /NDF: 63766.6/24

+ sign 2109.106 $\pm$ 29.855  $\chi^2$ /NDF: 172906.0/52

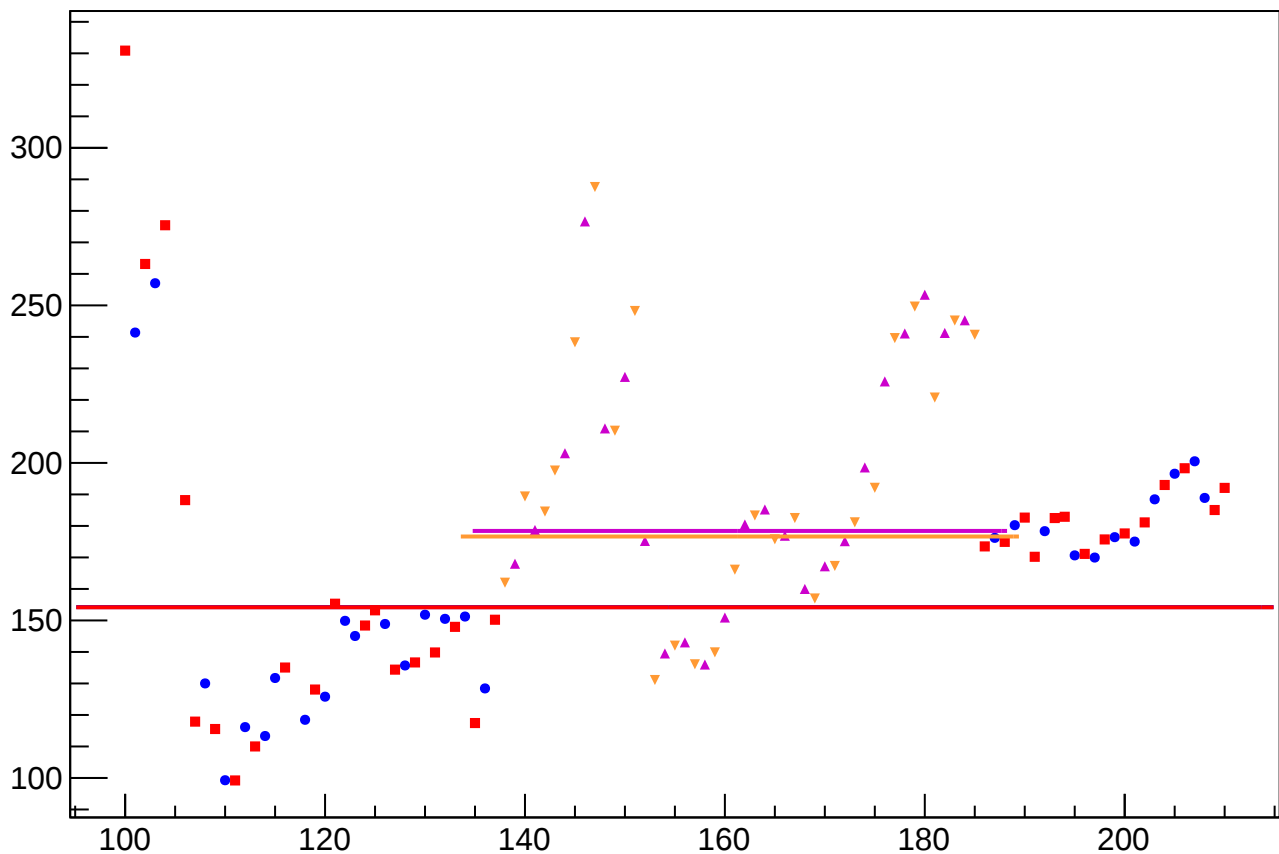
Right Out: -4800.731 $\pm$ 39.257  $\chi^2$ /NDF: 140649.7/32

All: 1520.172 $\pm$ 20.941  $\chi^2$ /NDF: 385977.4/10

Left In: 8273.228 $\pm$ 44.301  $\chi^2$ /NDF: 22870.2/22

- sign 949.804 $\pm$ 29.381  $\chi^2$ /NDF: 212305.4/55

# asym\_bpm0i02WS\_rms vs Slug



Right In: 154.232 $\pm$ 0.030  $\chi^2$ /NDF: 1290550.5/27

Left Out: 176.641 $\pm$ 0.030  $\chi^2$ /NDF:1551048.8/24

Right Out: 154.176 $\pm$ 0.028  $\chi^2$ /NDF: 1631280.8/32

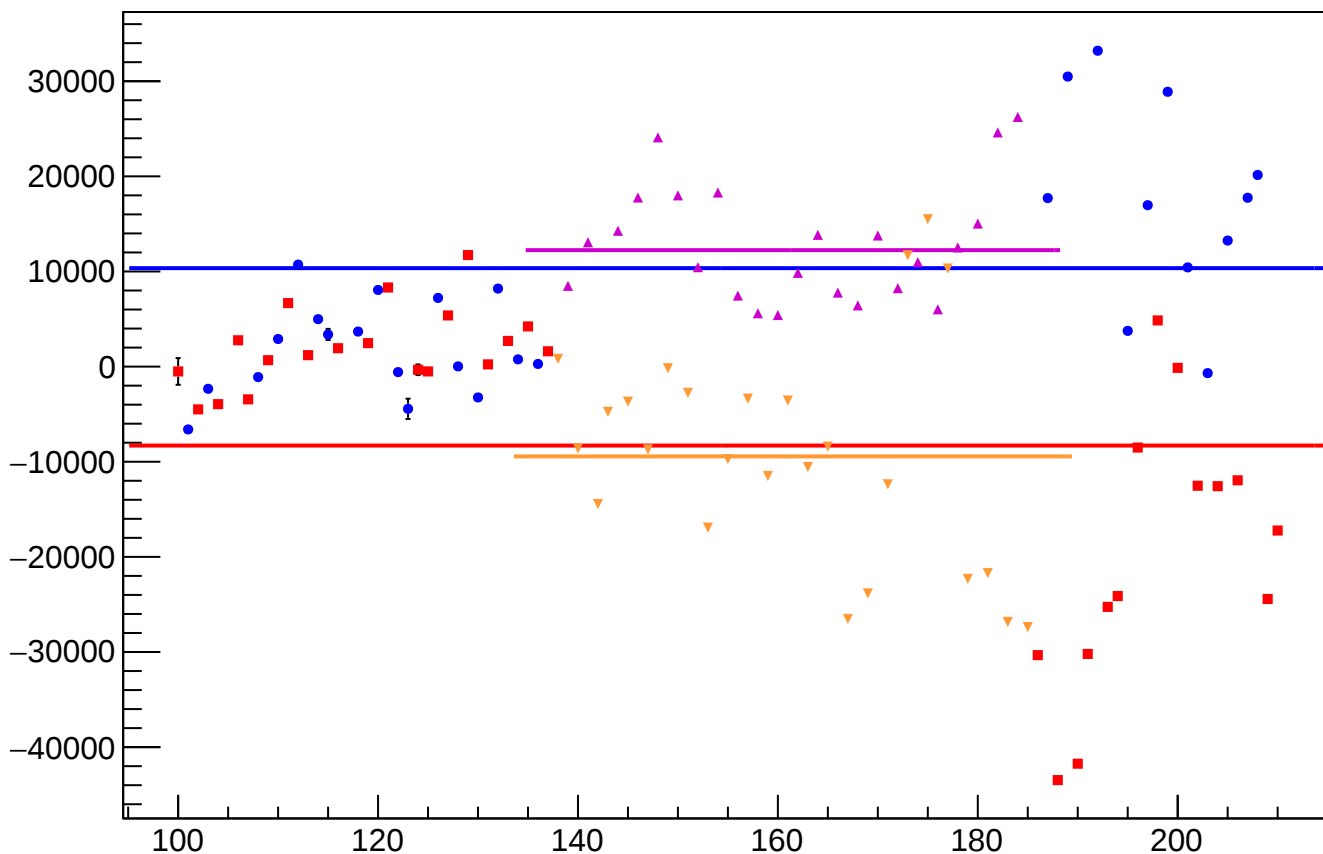
Left In: 178.413 $\pm$ 0.031  $\chi^2$ /NDF:1293736.2/22

+ sign 165.328 $\pm$ 0.021  $\chi^2$ /NDF: 3123259.6/52

All: 165.078 $\pm$ 0.015  $\chi^2$ /NDF: 6383895.8/100

- sign 164.836 $\pm$ 0.021  $\chi^2$ /NDF: 3260360.4/55

# asym\_bpm0i02aWS\_mean vs Slug



Right In: 10349.784 $\pm$ 47.160  $\chi^2$ /NDF: 52244.8/27

Left Out: -9437.408 $\pm$ 45.534  $\chi^2$ /NDF: 62220.4/24

Right Out: -8299.174 $\pm$ 43.675  $\chi^2$ /NDF: 112354.3/32

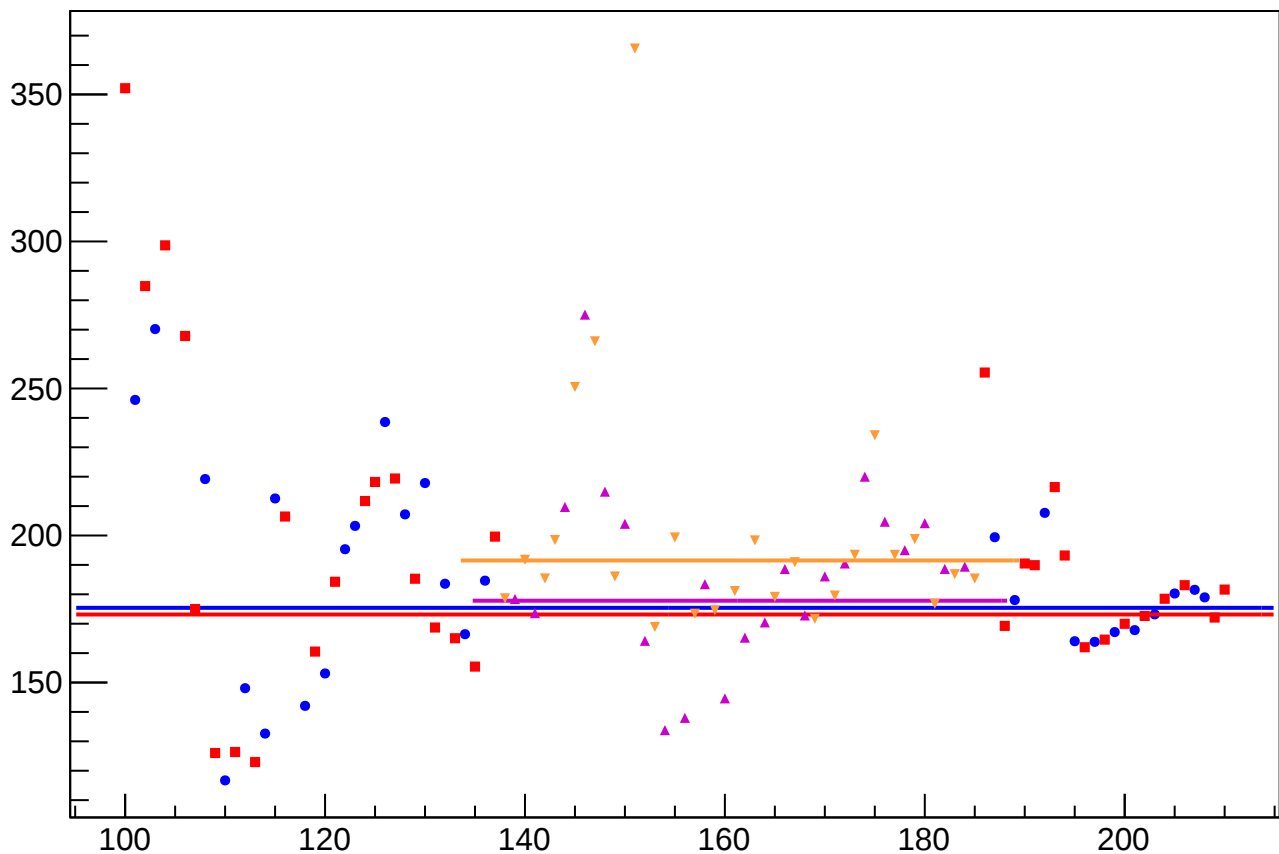
Left In: 12242.226 $\pm$ 43.944  $\chi^2$ /NDF: 16615.8/22

+ sign 109.340 $\pm$ 32.757  $\chi^2$ /NDF: 205574.2/52

All: 1059.022 $\pm$ 22.507  $\chi^2$ /NDF: 446059.0/10

- sign 1908.326 $\pm$ 30.978  $\chi^2$ /NDF: 238892.6/55

# asym\_bpm0i02aWS\_rms vs Slug



Right In: 175.401 $\pm$ 0.033  $\chi^2$ /NDF: 762306.7/27

Left Out: 191.507 $\pm$ 0.032  $\chi^2$ /NDF: 727251.6/24

Right Out: 173.132 $\pm$ 0.031  $\chi^2$ /NDF: 1134860.5/32

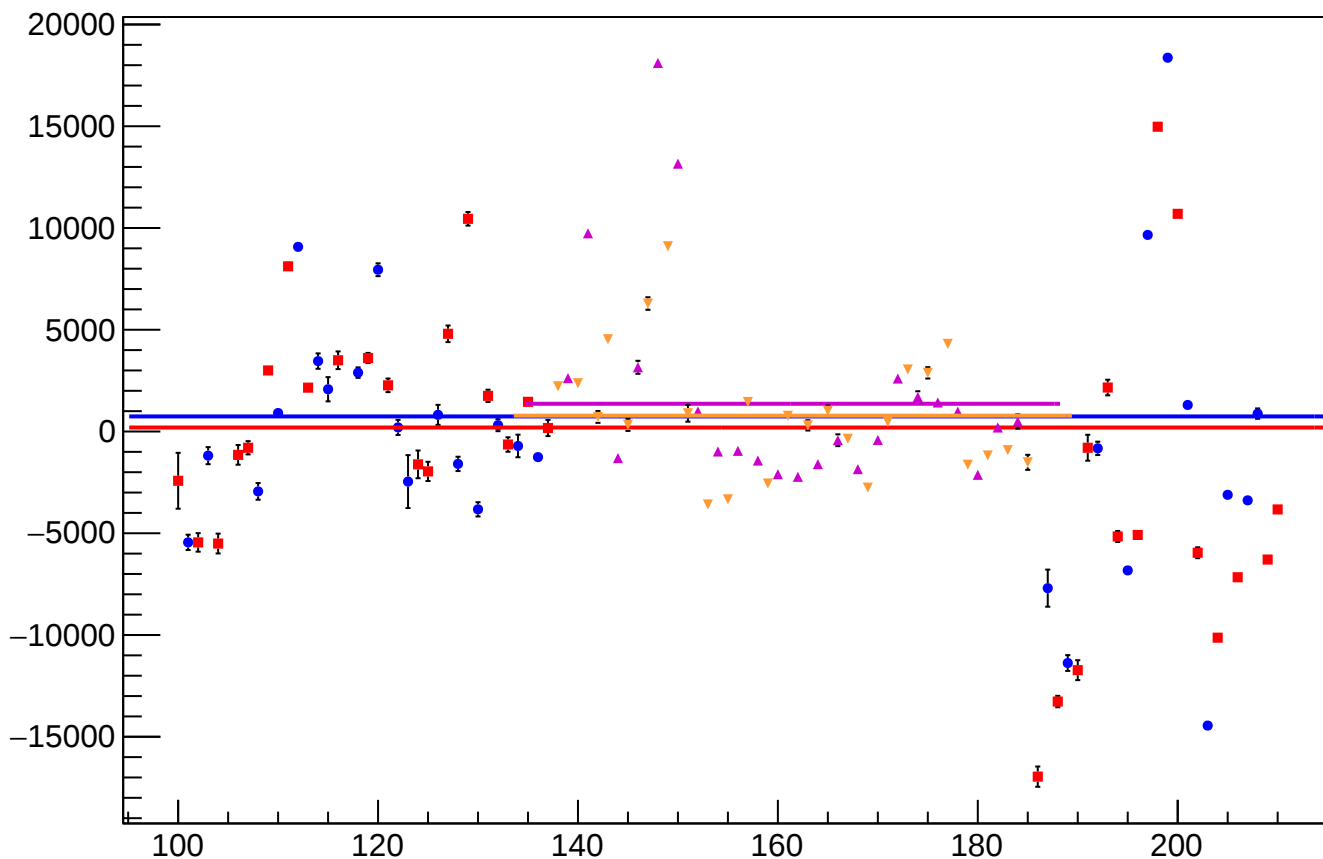
Left In: 177.821 $\pm$ 0.031  $\chi^2$ /NDF: 862494.4/22

+ sign 183.736 $\pm$ 0.023  $\chi^2$ /NDF: 1610281.0/52

All: 179.368 $\pm$ 0.016  $\chi^2$ /NDF: 3686453.5/108

- sign 175.462 $\pm$ 0.022  $\chi^2$ /NDF: 2008813.6/55

# asym\_bpm0i05WS\_mean vs Slug



Right In: 740.666 $\pm$ 52.968  $\chi^2$ /NDF: 20338.2/27

Left Out: 779.983 $\pm$ 47.457  $\chi^2$ /NDF:4260.8/24

Right Out: 196.651 $\pm$ 49.179  $\chi^2$ /NDF: 21662.5/32

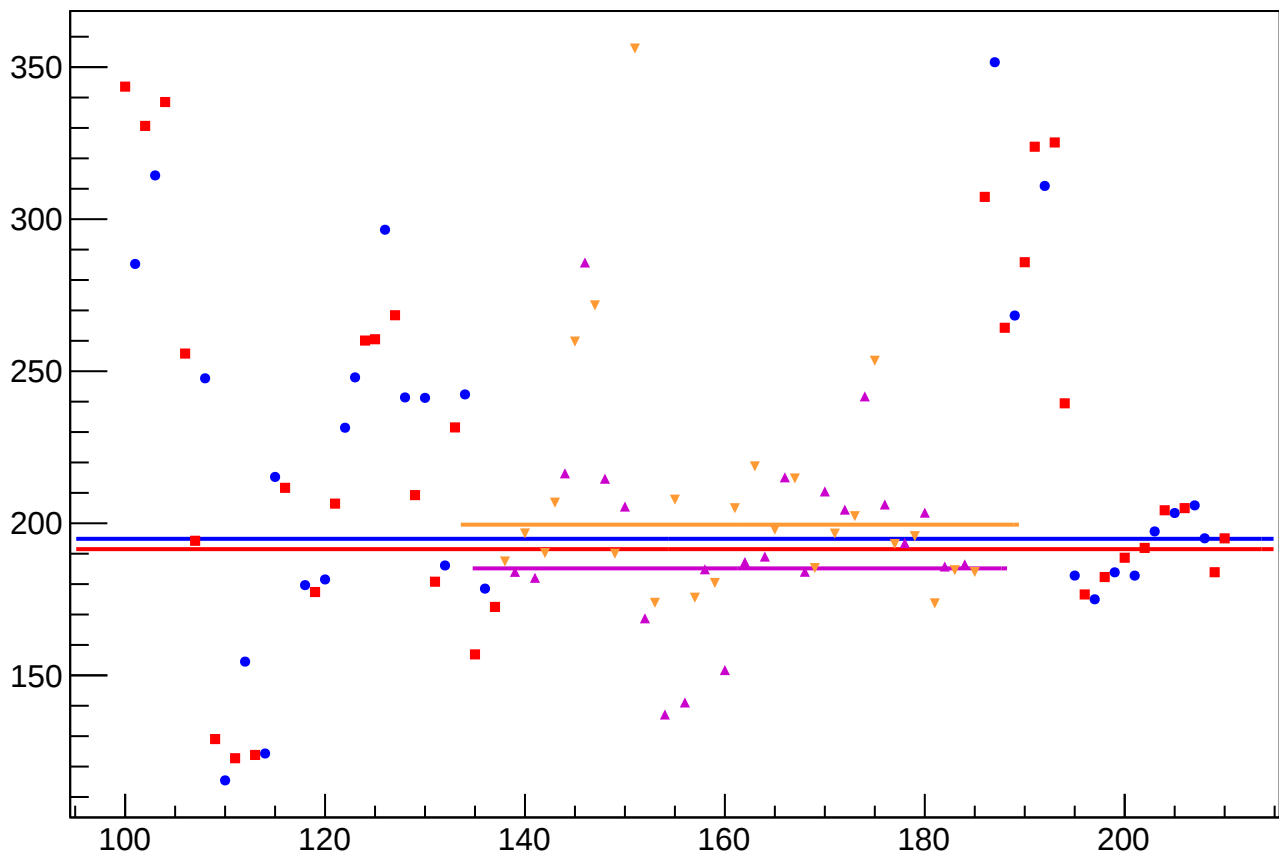
Left In: 1363.043 $\pm$ 45.807  $\chi^2$ /NDF:11632.9/22

+ sign 762.475 $\pm$ 35.346  $\chi^2$ /NDF: 24599.2/52

All: 793.397 $\pm$ 24.322  $\chi^2$ /NDF: 58197.3/108

- sign 821.206 $\pm$ 33.519  $\chi^2$ /NDF: 33596.6/55

# asym\_bpm0i05WS\_rms vs Slug



Right In:  $194.893 \pm 0.037$   $\chi^2/\text{NDF}$ : 1415382.7/27

Left Out:  $199.547 \pm 0.034$   $\chi^2/\text{NDF}$ : 729356.3/24

Right Out:  $191.495 \pm 0.035$   $\chi^2/\text{NDF}$ : 2145201.1/32

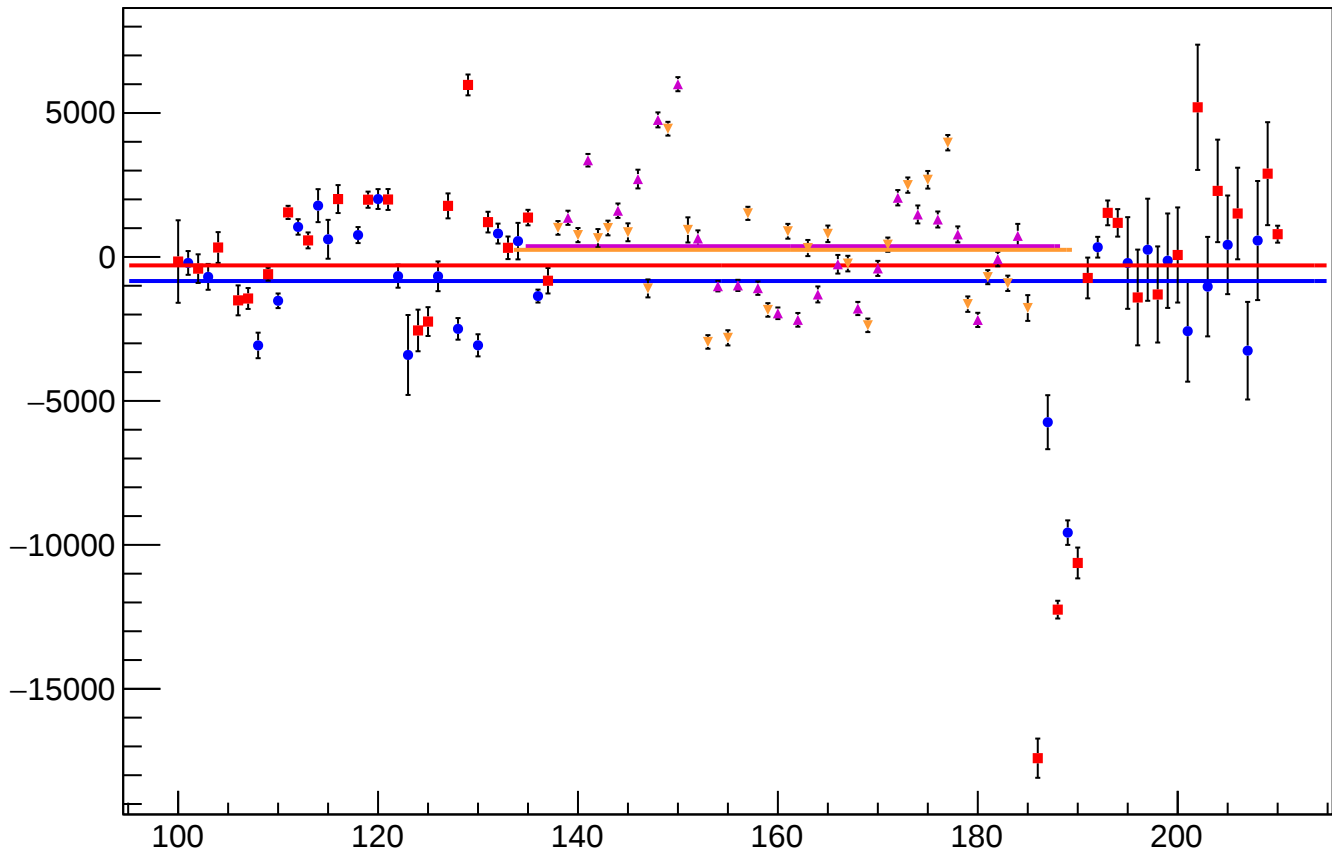
Left In:  $185.171 \pm 0.032$   $\chi^2/\text{NDF}$ : 882752.2/22

+ sign  $197.474 \pm 0.025$   $\chi^2/\text{NDF}$ : 2153304.1/52

All:  $192.543 \pm 0.017$   $\chi^2/\text{NDF}$ : 5272903.9/108

- sign  $188.109 \pm 0.024$   $\chi^2/\text{NDF}$ : 3045665.3/55

# asym\_bpm0i07WS\_mean vs Slug



Right In:  $-835.946 \pm 83.372$   $\chi^2/\text{NDF}$ : 764.2/27

Left Out:  $247.844 \pm 53.555$   $\chi^2/\text{NDF}$ : 1355.1/24

Right Out:  $-293.017 \pm 72.609$   $\chi^2/\text{NDF}$ : 3190.5/32

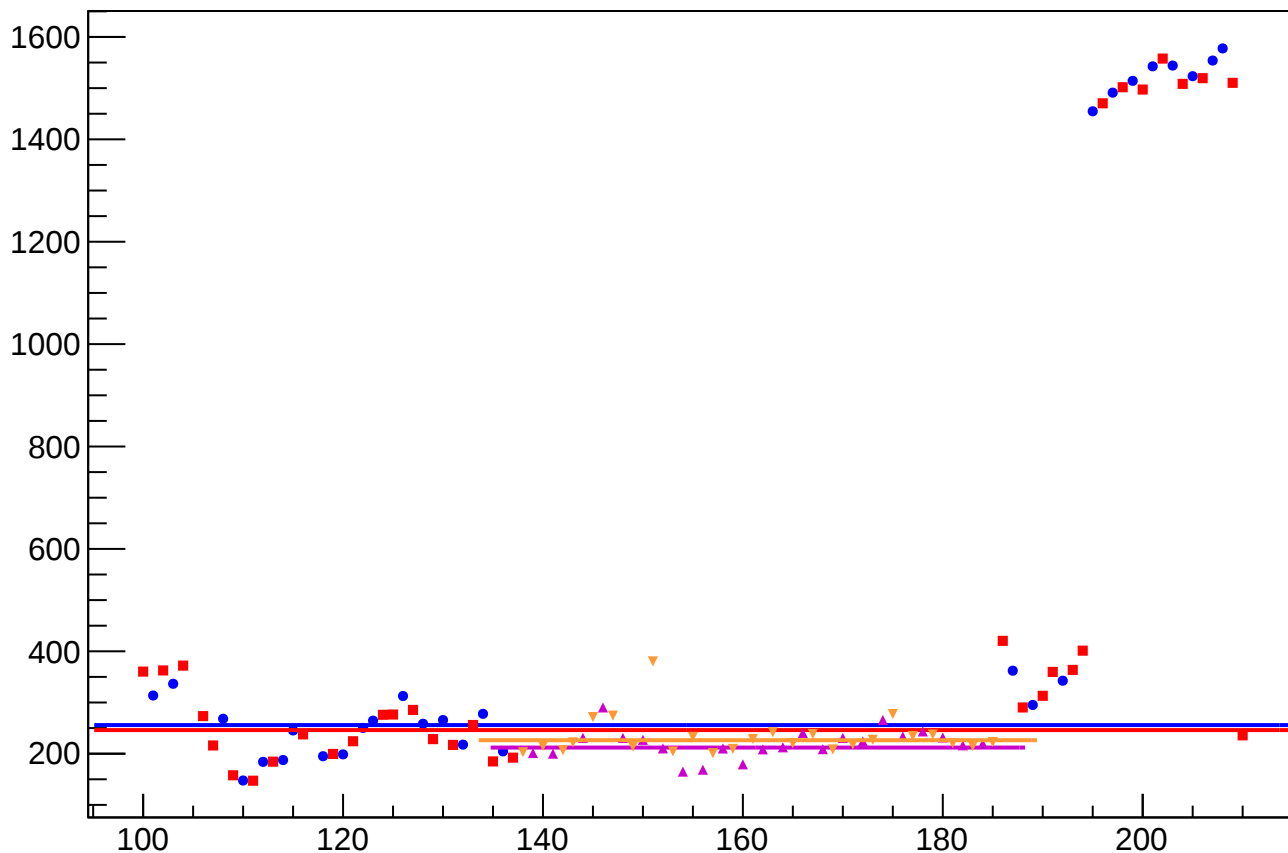
Left In:  $374.122 \pm 52.049$   $\chi^2/\text{NDF}$ : 1801.0/22

+ sign  $-68.730 \pm 45.059$   $\chi^2/\text{NDF}$ : 2238.9/52

All:  $46.291 \pm 30.841$   $\chi^2/\text{NDF}$ : 7298.5/108

- sign  $147.668 \pm 42.303$   $\chi^2/\text{NDF}$ : 5047.3/55

# asym\_bpm0i07WS\_rms vs Slug



Right In: 255.878 $\pm$ 0.059  $\chi^2$ /NDF: 9660935.2/27

Left Out: 226.322 $\pm$ 0.038  $\chi^2$ /NDF: 521041.8/24

Right Out: 246.105 $\pm$ 0.051  $\chi^2$ /NDF: 9273046.4/32

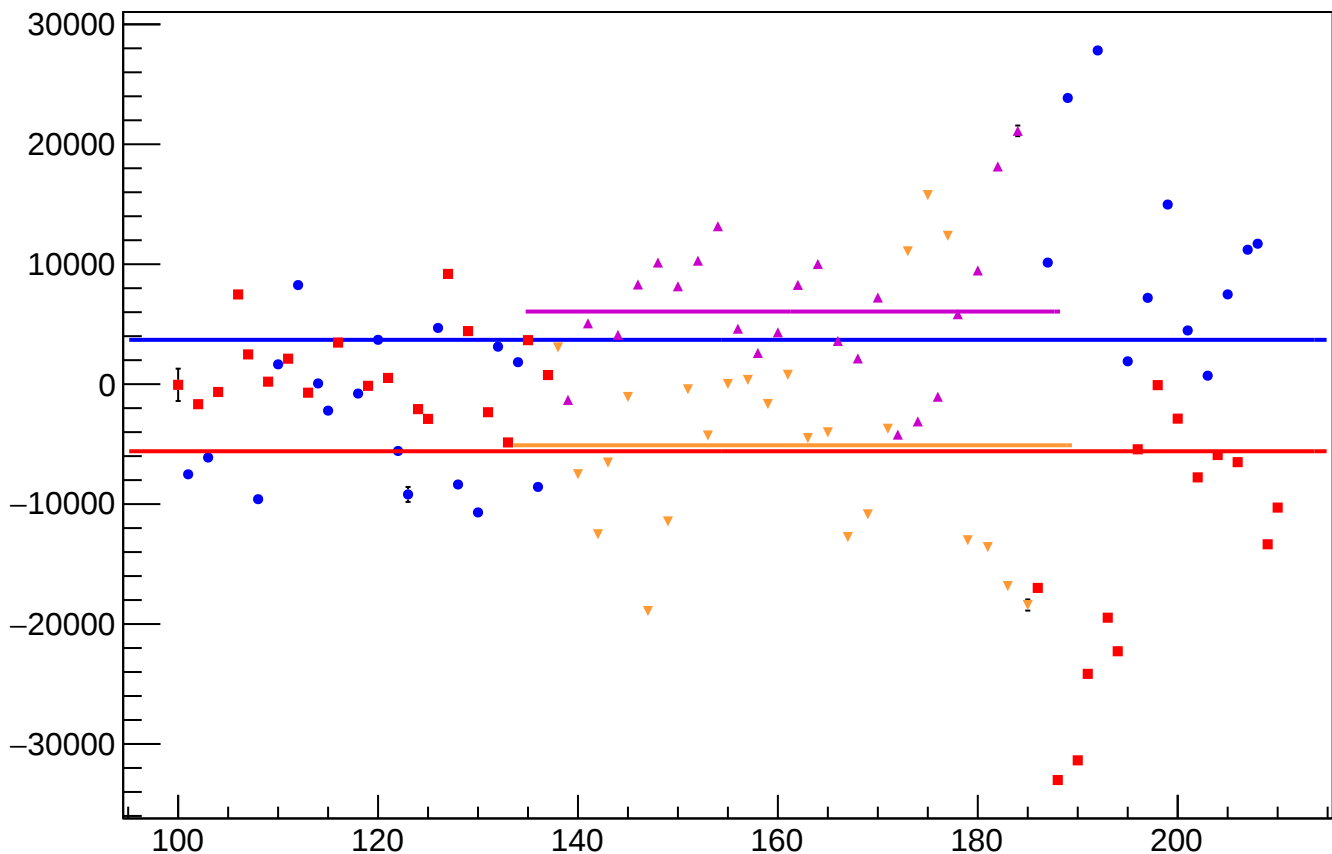
Left In: 211.970 $\pm$ 0.037  $\chi^2$ /NDF: 584344.5/22

+ sign 234.955 $\pm$ 0.032  $\chi^2$ /NDF: 10359912.7/52

All: 228.897 $\pm$ 0.022  $\chi^2$ /NDF: 20577314.1/10

- sign 223.557 $\pm$ 0.030  $\chi^2$ /NDF: 10149378.6/55

# asym\_bpm1i02WS\_mean vs Slug



Right In:  $3694.951 \pm 35.717$   $\chi^2/\text{NDF}: 77238.0/27$

Left Out:  $-5095.305 \pm 33.703$   $\chi^2/\text{NDF}: 54395.4/24$

Right Out:  $-5593.956 \pm 33.125$   $\chi^2/\text{NDF}: 103461.7/32$

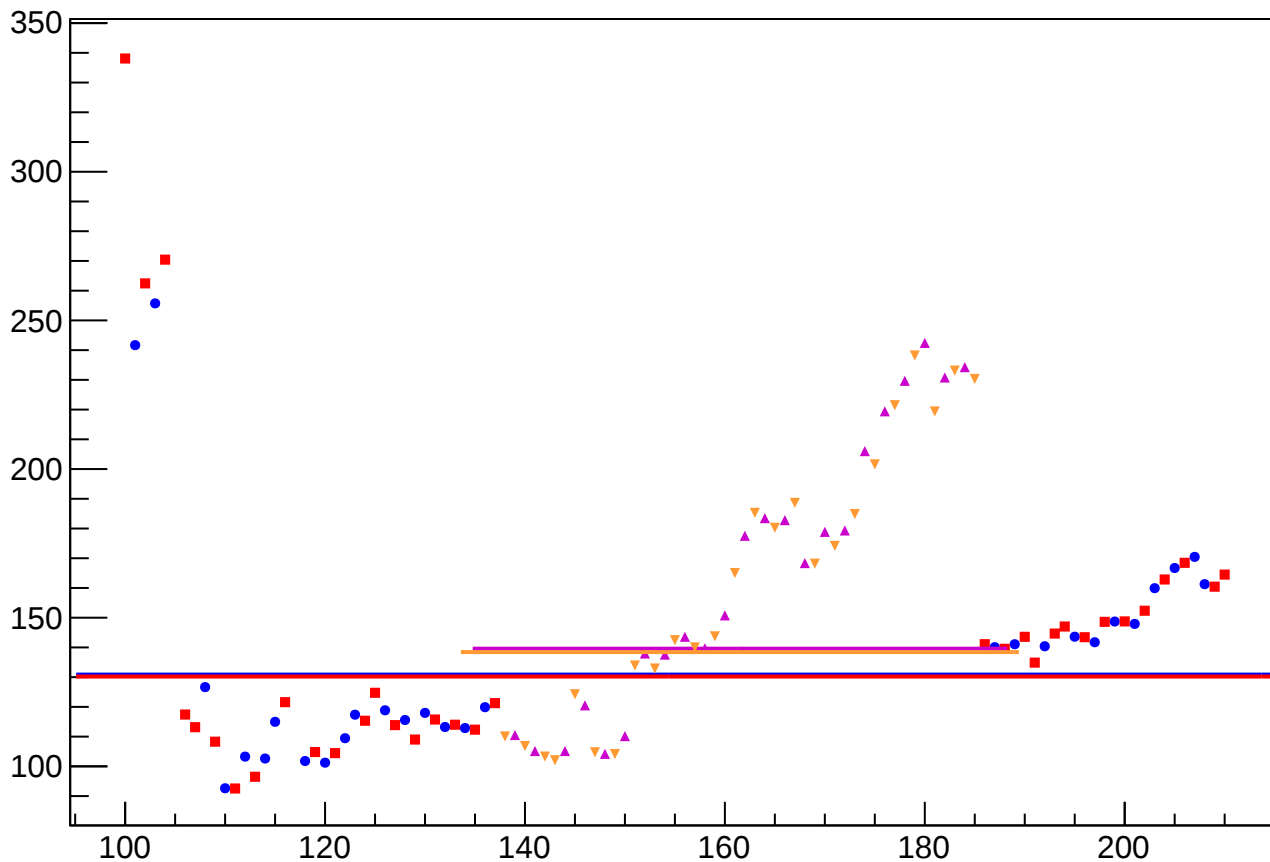
Left In:  $6053.569 \pm 34.998$   $\chi^2/\text{NDF}: 17590.3/22$

+ sign  $-954.957 \pm 24.513$   $\chi^2/\text{NDF}: 163673.1/52$

All:  $-514.470 \pm 17.170$   $\chi^2/\text{NDF}: 343781.6/10$

- sign  $-90.188 \pm 24.058$   $\chi^2/\text{NDF}: 179474.5/55$

# asym\_bpm1i02WS\_rms vs Slug



Right In: 130.866+/-0.025  $\chi^2/\text{NDF}$ : 1286966.5/27

Left Out: 138.436+/-0.024  $\chi^2/\text{NDF}$ : 2549435.8/24

Right Out: 130.210+/-0.023  $\chi^2/\text{NDF}$ : 1480201.6/32

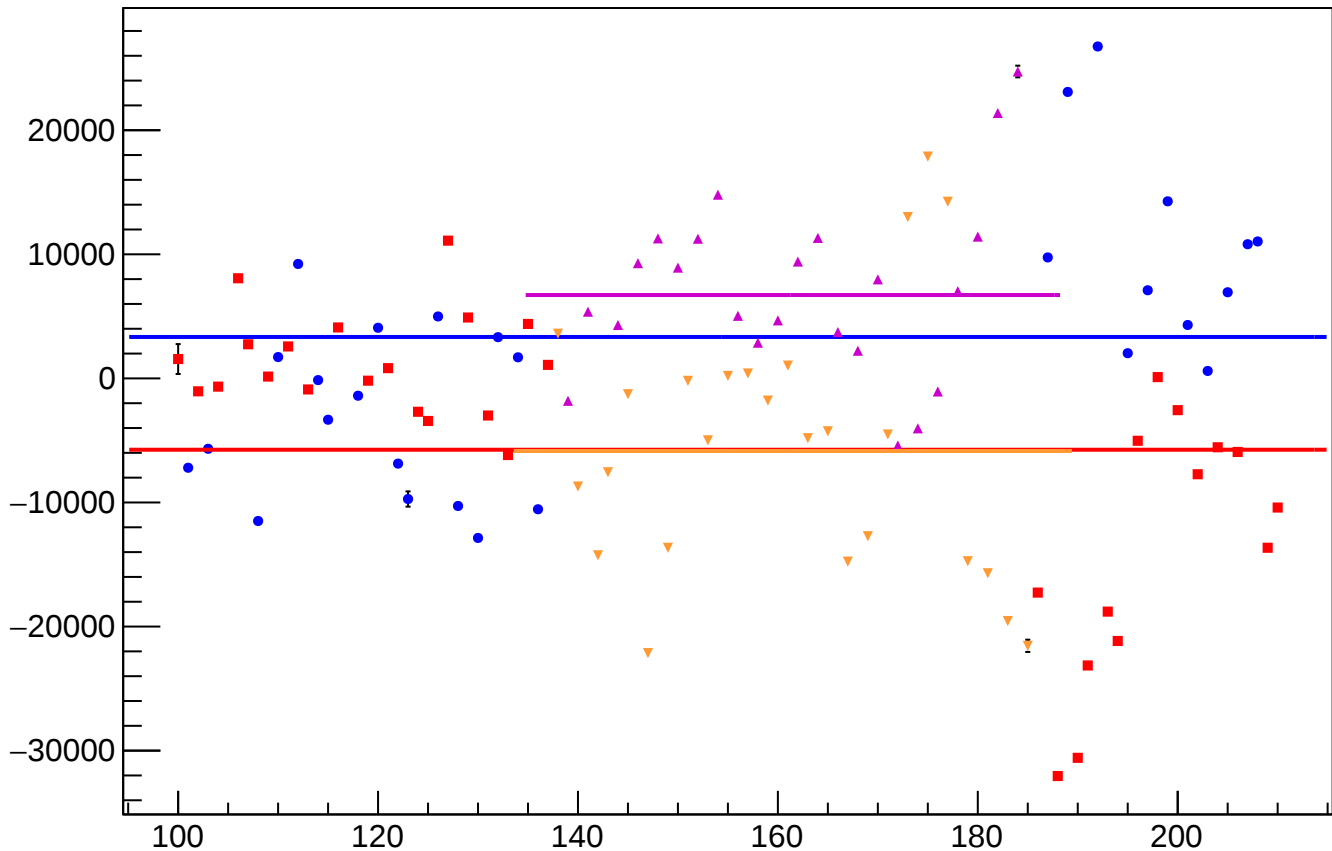
Left In: 139.578+/-0.025  $\chi^2/\text{NDF}$ : 2413658.9/22

+ sign 134.870+/-0.017  $\chi^2/\text{NDF}$ : 3883925.4/52

All: 134.751+/-0.012  $\chi^2/\text{NDF}$ : 7853457.0/108

- sign 134.637+/-0.017  $\chi^2/\text{NDF}$ : 3969439.1/55

# asym\_bpm2i01WS\_mean vs Slug



Right In:  $3338.979 \pm 35.795$   $\chi^2/\text{NDF}: 82360.4/27$

Left Out:  $-5852.544 \pm 35.880$   $\chi^2/\text{NDF}: 63411.4/24$

Right Out:  $-5748.676 \pm 33.293$   $\chi^2/\text{NDF}: 104140.5/32$

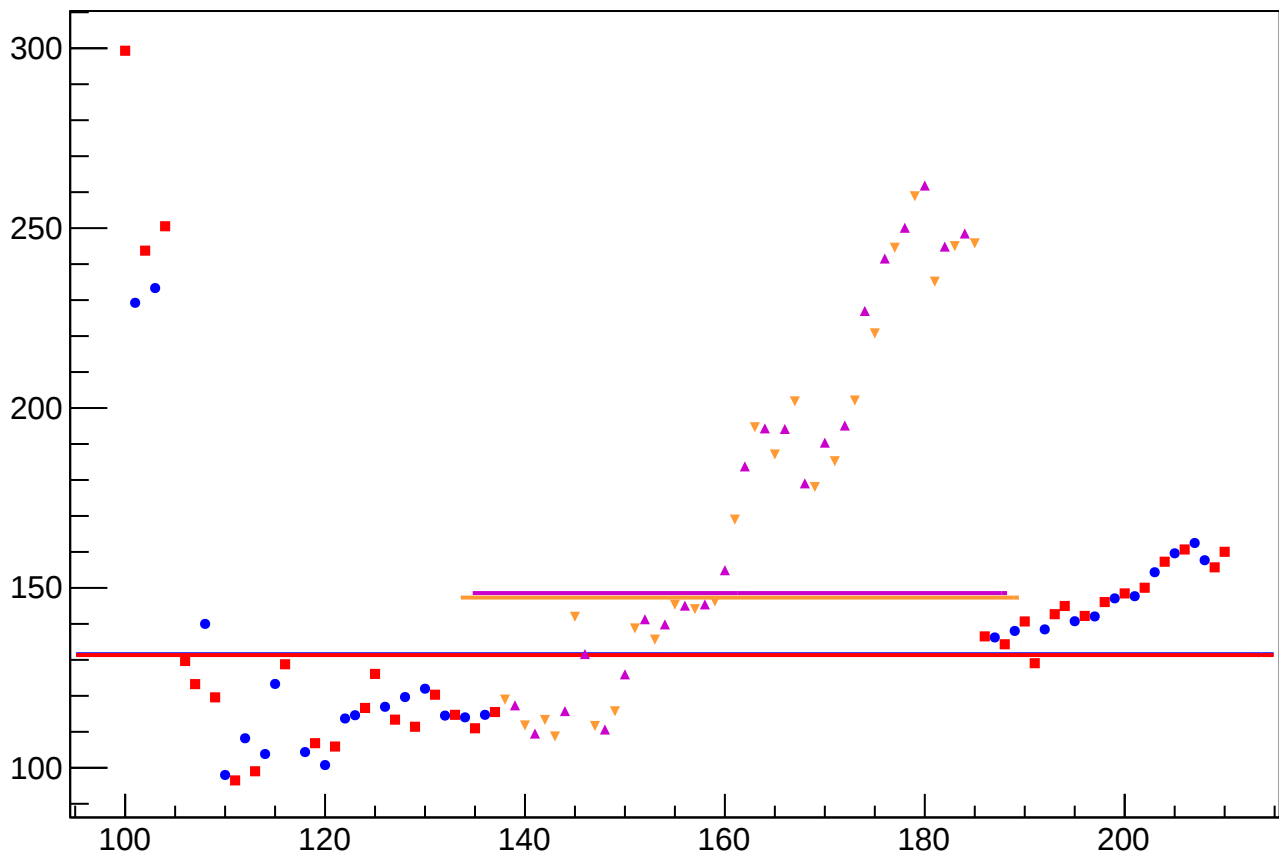
Left In:  $6718.475 \pm 37.276$   $\chi^2/\text{NDF}: 20934.3/22$

+ sign  $-1245.911 \pm 25.341$   $\chi^2/\text{NDF}: 178662.5/52$

All:  $-720.708 \pm 17.736$   $\chi^2/\text{NDF}: 366803.4/10$

- sign  $-216.431 \pm 24.831$   $\chi^2/\text{NDF}: 187298.9/55$

# asym\_bpm2i01WS\_rms vs Slug



Right In: 131.557+/-0.025  $\chi^2/\text{NDF}$ : 1026117.6/27

Left Out: 147.317+/-0.025  $\chi^2/\text{NDF}$ : 2511679.9/24

Right Out: 131.338+/-0.024  $\chi^2/\text{NDF}$ : 1155933.7/32

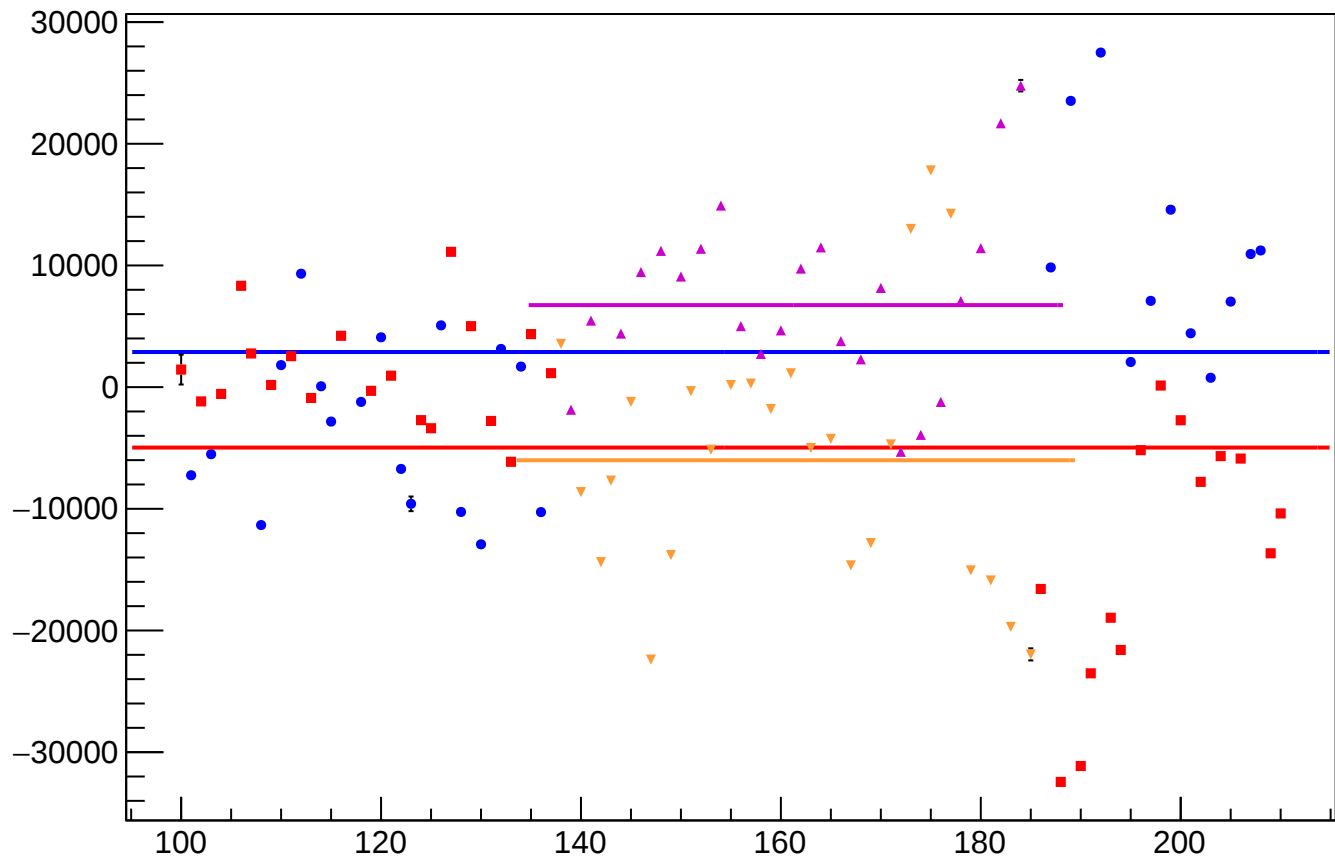
Left In: 148.569+/-0.026  $\chi^2/\text{NDF}$ : 2393185.0/22

+ sign 139.419+/-0.018  $\chi^2/\text{NDF}$ : 3731182.8/52

All: 139.197+/-0.013  $\chi^2/\text{NDF}$ : 7518311.4/100

- sign 138.984+/-0.018  $\chi^2/\text{NDF}$ : 3786828.4/55

# asym\_bpm2i02WS\_mean vs Slug



Right In: 2886.254+/-35.554  $\chi^2/\text{NDF}$ : 81899.0/27

Left Out: -6009.913+/-35.082  $\chi^2/\text{NDF}$ : 67852.2/24

Right Out: -4965.969+/-33.210  $\chi^2/\text{NDF}$ : 99155.8/32

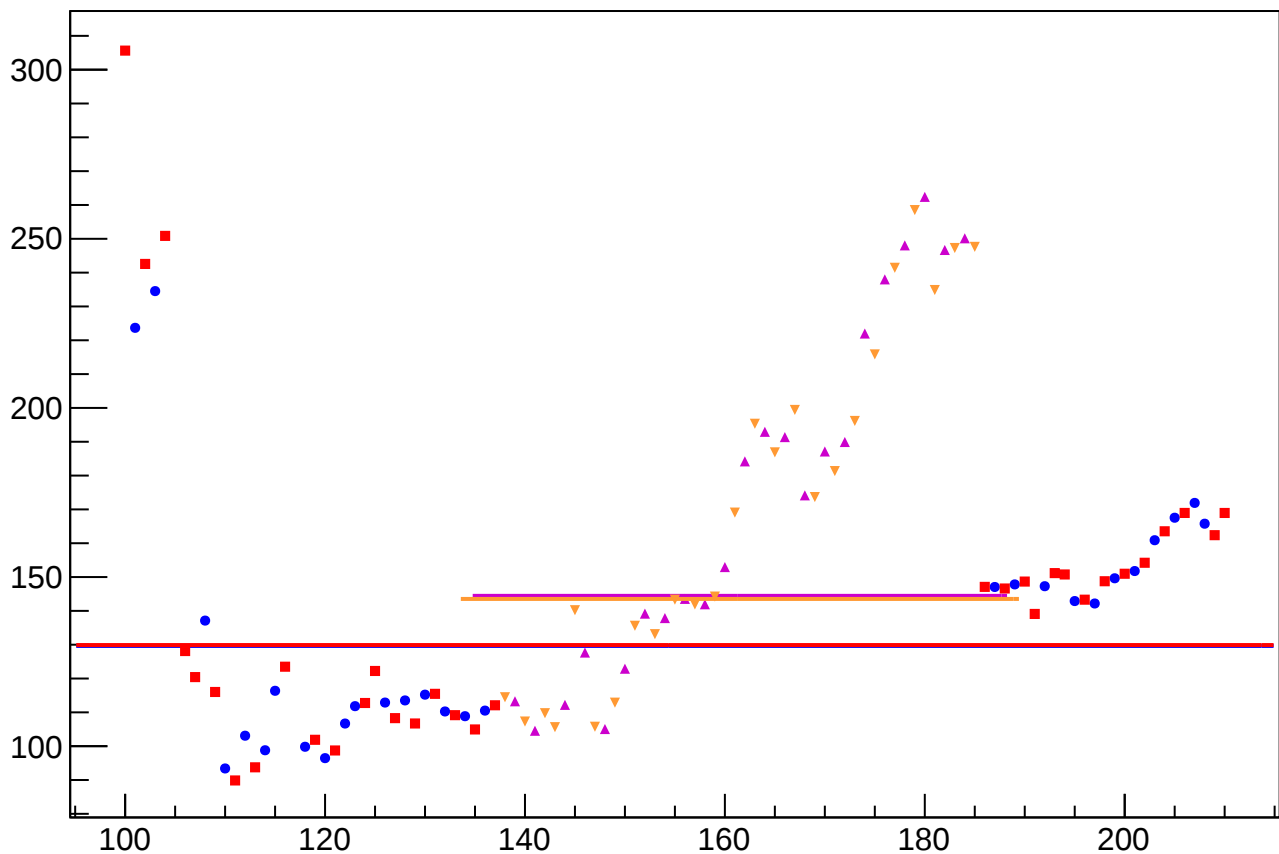
Left In: 6740.666+/-36.379  $\chi^2/\text{NDF}$ : 22071.8/22

+ sign -1621.283+/-24.972  $\chi^2/\text{NDF}$ : 181472.8/52

All: -615.260+/-17.498  $\chi^2/\text{NDF}$ : 362371.4/10

- sign 355.207+/-24.527  $\chi^2/\text{NDF}$ : 177710.0/55

# asym\_bpm2i02WS\_rms vs Slug



Right In:  $129.644 \pm 0.025$   $\chi^2/\text{NDF}$ : 1371623.7/27

Left Out:  $143.531 \pm 0.025$   $\chi^2/\text{NDF}$ : 2704790.3/24

Right Out:  $129.894 \pm 0.023$   $\chi^2/\text{NDF}$ : 1605621.7/32

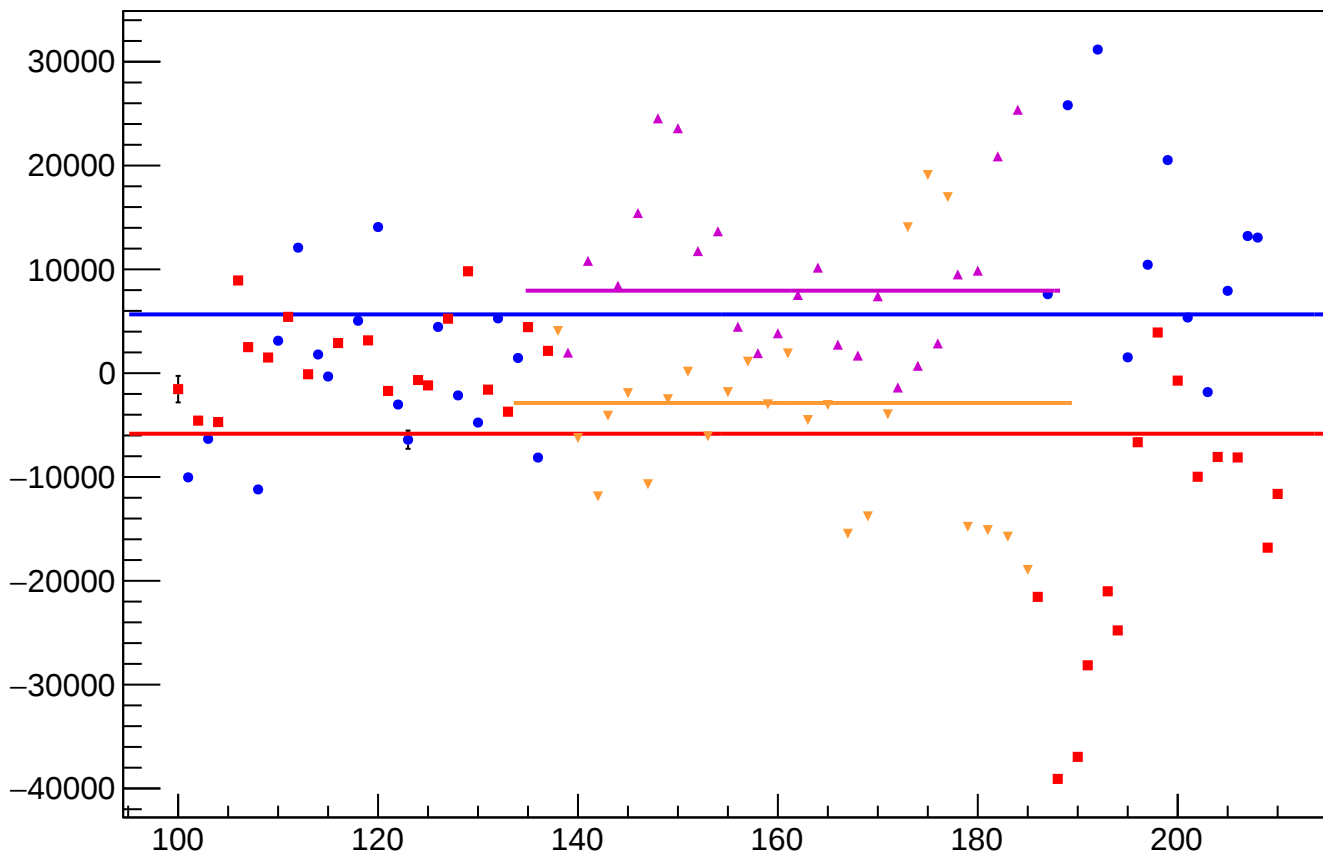
Left In:  $144.440 \pm 0.026$   $\chi^2/\text{NDF}$ : 2586926.1/22

+ sign  $136.680 \pm 0.018$   $\chi^2/\text{NDF}$ : 4231004.9/52

All:  $136.591 \pm 0.012$   $\chi^2/\text{NDF}$ : 8598010.4/108

- sign  $136.505 \pm 0.017$   $\chi^2/\text{NDF}$ : 4366955.8/55

# asym\_bpm0i01WS\_mean vs Slug



Right In: 5662.602 $\pm$ 43.014  $\chi^2$ /NDF: 61937.5/27

Left Out: -2870.473 $\pm$ 39.482  $\chi^2$ /NDF: 46420.3/24

Right Out: -5832.600 $\pm$ 40.141  $\chi^2$ /NDF: 98630.1/32

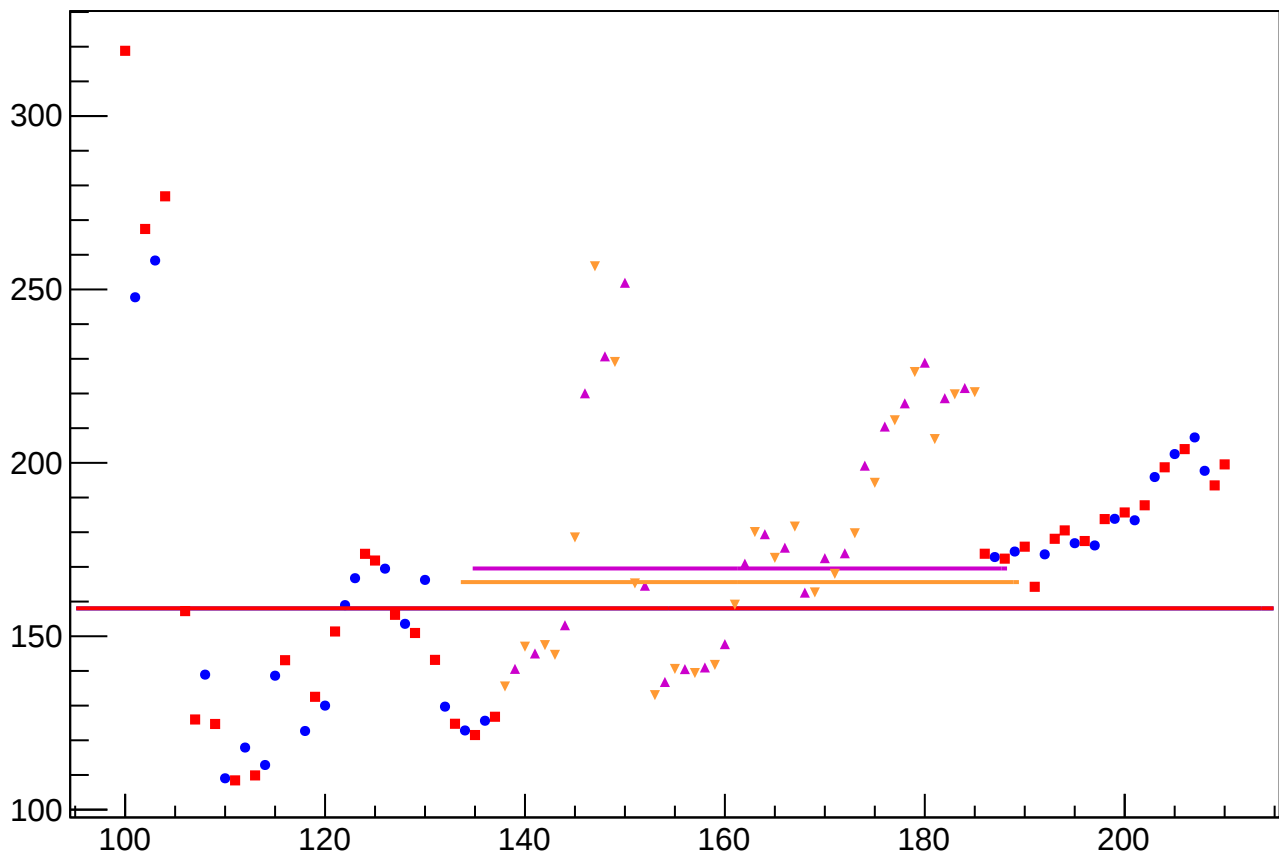
Left In: 7947.160 $\pm$ 41.726  $\chi^2$ /NDF: 23874.5/22

+ sign 1031.373 $\pm$ 29.087  $\chi^2$ /NDF: 129716.4/52

All: 910.319 $\pm$ 20.511  $\chi^2$ /NDF: 308897.6/108

- sign 790.584 $\pm$ 28.928  $\chi^2$ /NDF: 179146.7/55

# asym\_bpm0i01WS\_rms vs Slug



Right In: 158.011+/-0.030  $\chi^2/\text{NDF}$ : 1310132.6/27

Left Out: 165.616+/-0.028  $\chi^2/\text{NDF}$ : 1144779.3/24

Right Out: 158.060+/-0.028  $\chi^2/\text{NDF}$ : 1505443.6/32

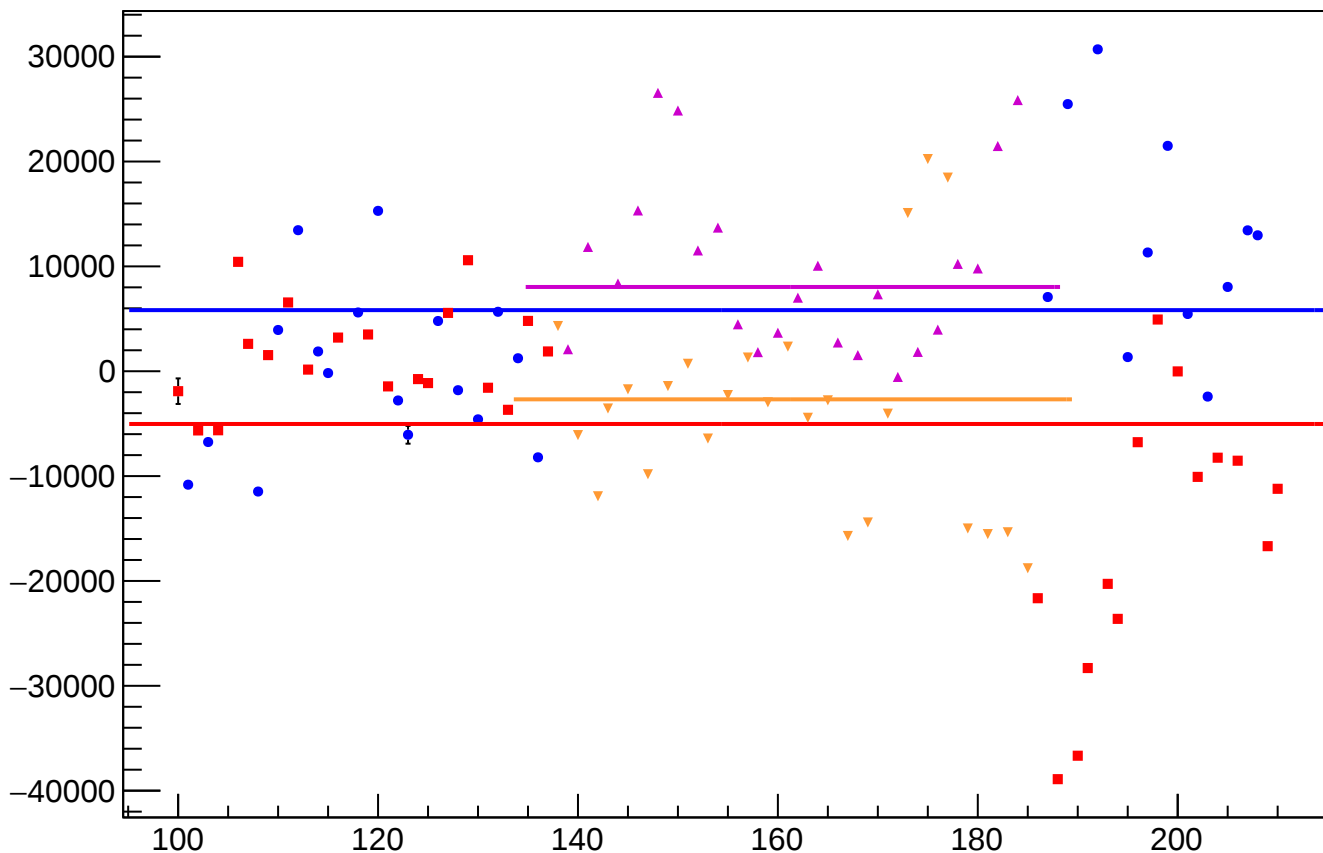
Left In: 169.542+/-0.030  $\chi^2/\text{NDF}$ : 1159241.9/22

+ sign 162.139+/-0.021  $\chi^2/\text{NDF}$ : 2488841.5/52

All: 162.863+/-0.015  $\chi^2/\text{NDF}$ : 5234642.9/108

- sign 163.578+/-0.020  $\chi^2/\text{NDF}$ : 2743338.7/55

# asym\_bpm0i01aWS\_mean vs Slug



Right In: 5827.688+/-36.310  $\chi^2/\text{NDF}$ : 87024.7/27

Left Out: -2680.012+/-35.764  $\chi^2/\text{NDF}$ : 56820.4/24

+ sign 1509.352+/-25.480  $\chi^2/\text{NDF}$ : 171711.3/52

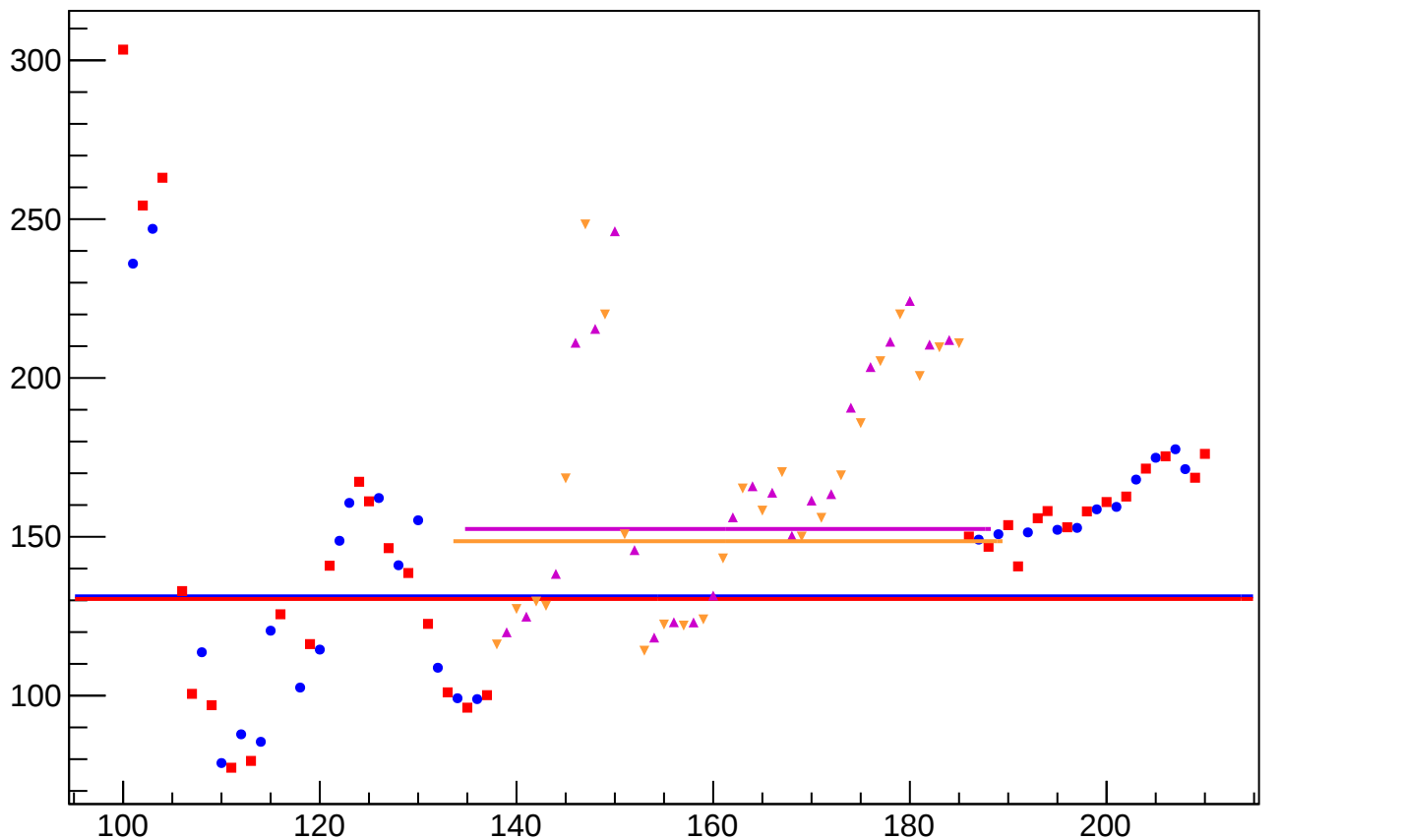
Right Out: -5029.703+/-33.728  $\chi^2/\text{NDF}$ : 137729.4/32

All: 1120.986+/-17.918  $\chi^2/\text{NDF}$ : 405444.1/10

- sign 741.007+/-25.203  $\chi^2/\text{NDF}$ : 233273.2/55

Left In: 8036.826+/-37.924  $\chi^2/\text{NDF}$ : 29261.6/22

# asym\_bpm0i01aWS\_rms vs Slug



Right In: 131.253 $\pm$ 0.026  $\chi^2/\text{NDF}$ : 2021339.7/27

Left Out: 148.611 $\pm$ 0.025  $\chi^2/\text{NDF}$ : 1685424.1/24

Right Out: 130.438 $\pm$ 0.024  $\chi^2/\text{NDF}$ : 2414595.7/32

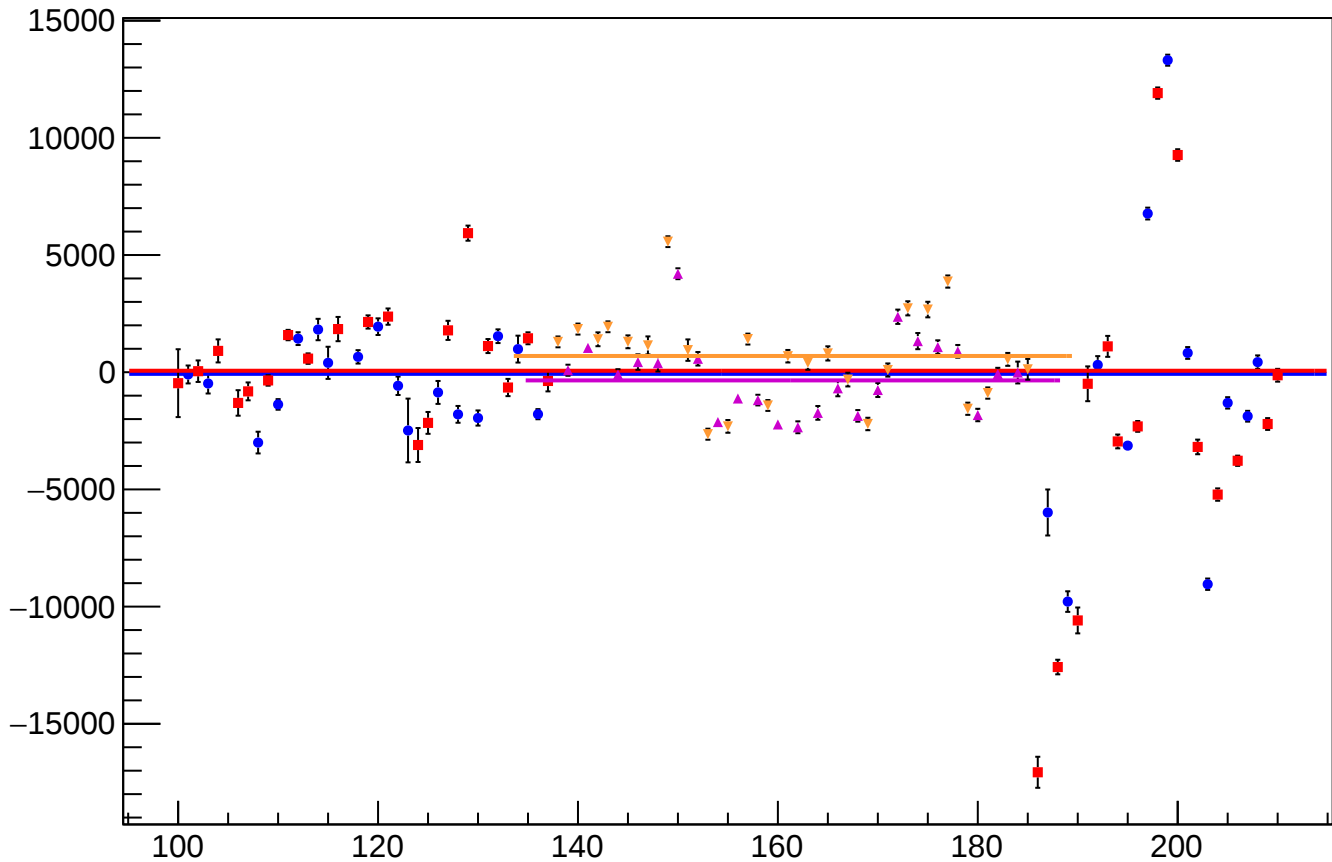
Left In: 152.463 $\pm$ 0.027  $\chi^2/\text{NDF}$ : 1691517.7/22

+ sign 140.063 $\pm$ 0.018  $\chi^2/\text{NDF}$ : 3938757.5/52

All: 140.115 $\pm$ 0.013  $\chi^2/\text{NDF}$ : 8421567.5/108

- sign 140.165 $\pm$ 0.018  $\chi^2/\text{NDF}$ : 4482794.0/55

# asym\_bpm0l01WS\_mean vs Slug



Right In:  $-69.682 \pm 58.573$   $\chi^2/\text{NDF}$ : 6488.1/27

Left Out:  $692.998 \pm 54.303$   $\chi^2/\text{NDF}$ : 1422.0/24

Right Out:  $62.819 \pm 55.286$   $\chi^2/\text{NDF}$ : 8216.4/32

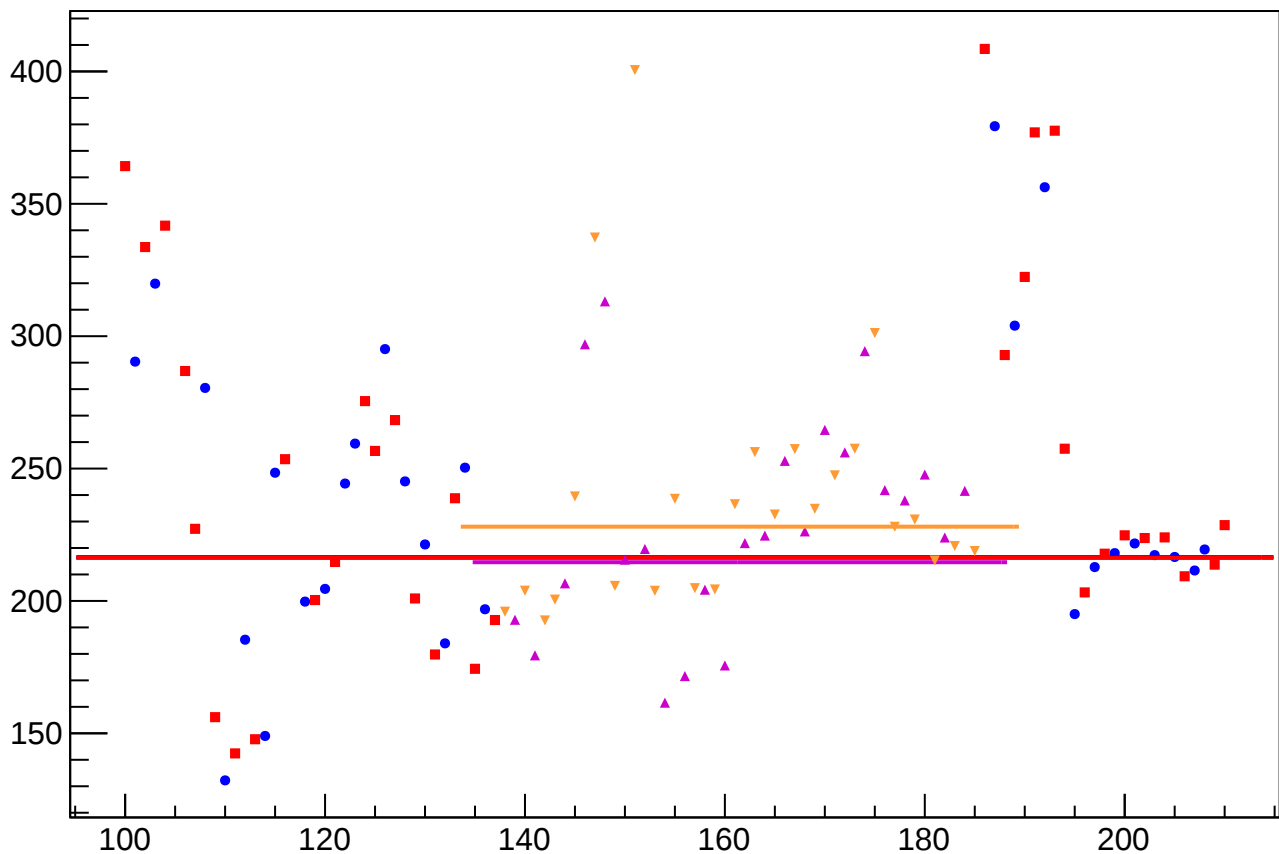
Left In:  $-349.623 \pm 53.094$   $\chi^2/\text{NDF}$ : 981.0/22

+ sign  $340.463 \pm 39.822$   $\chi^2/\text{NDF}$ : 8001.4/52

All:  $84.740 \pm 27.603$   $\chi^2/\text{NDF}$ : 17307.1/108

- sign  $-151.738 \pm 38.294$   $\chi^2/\text{NDF}$ : 9226.3/55

# asym\_bpm0l01WS\_rms vs Slug



Right In: 216.539 $\pm$ 0.041  $\chi^2$ /NDF: 1150967.2/27

Left Out: 228.061 $\pm$ 0.038  $\chi^2$ /NDF:826343.8/24

Right Out: 216.251 $\pm$ 0.039  $\chi^2$ /NDF: 1827024.1/32

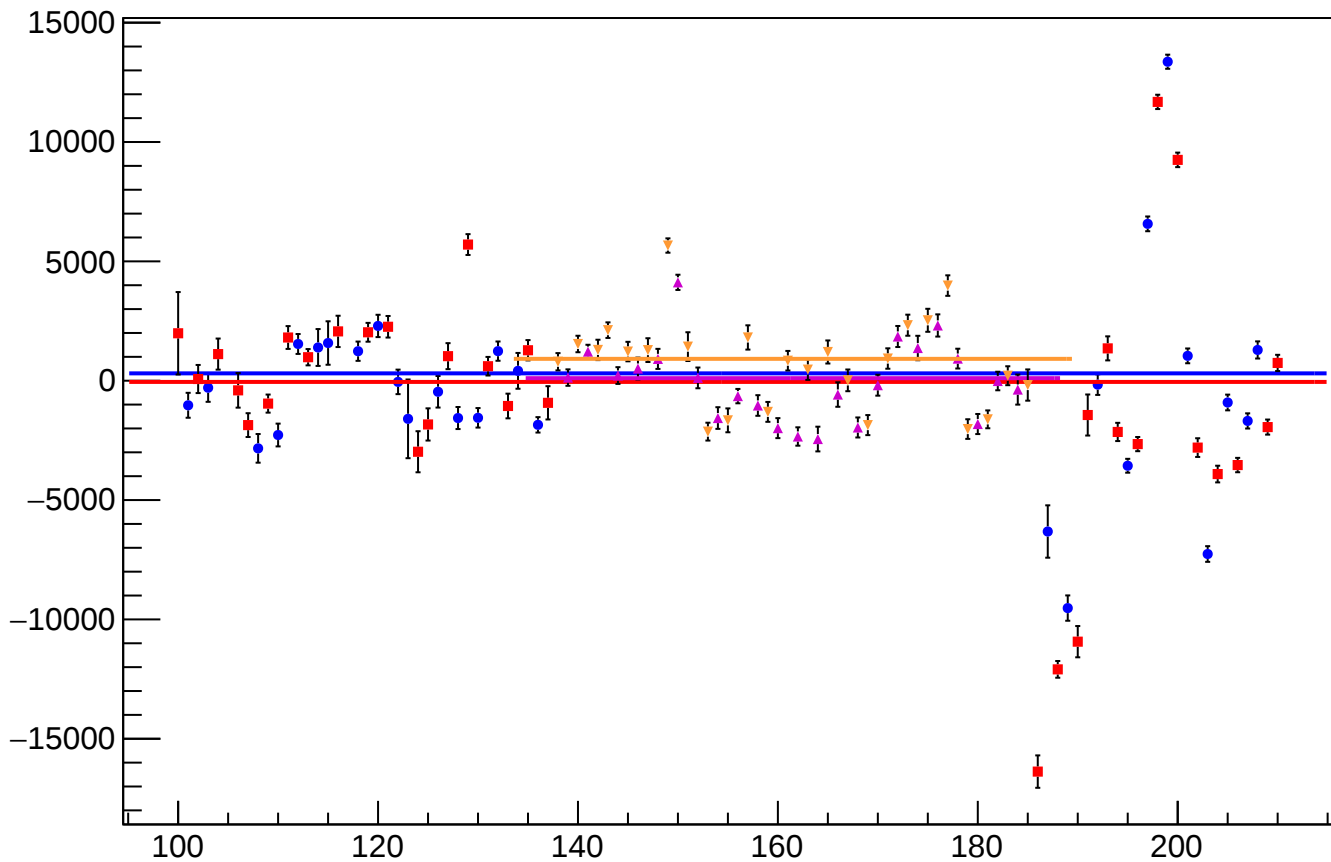
Left In: 214.627 $\pm$ 0.038  $\chi^2$ /NDF:1025683.3/22

+ sign 222.735 $\pm$ 0.028  $\chi^2$ /NDF: 2018929.1/52

All: 218.927 $\pm$ 0.020  $\chi^2$ /NDF: 4907728.3/108

- sign 215.406 $\pm$ 0.027  $\chi^2$ /NDF: 2853605.4/55

# asym\_bpm0l02WS\_mean vs Slug



Right In: 307.856 $\pm$ 79.625  $\chi^2$ /NDF: 3705.1/27

Left Out: 915.968 $\pm$ 83.398  $\chi^2$ /NDF: 618.3/24

Right Out: -50.578 $\pm$ 75.042  $\chi^2$ /NDF: 5290.4/32

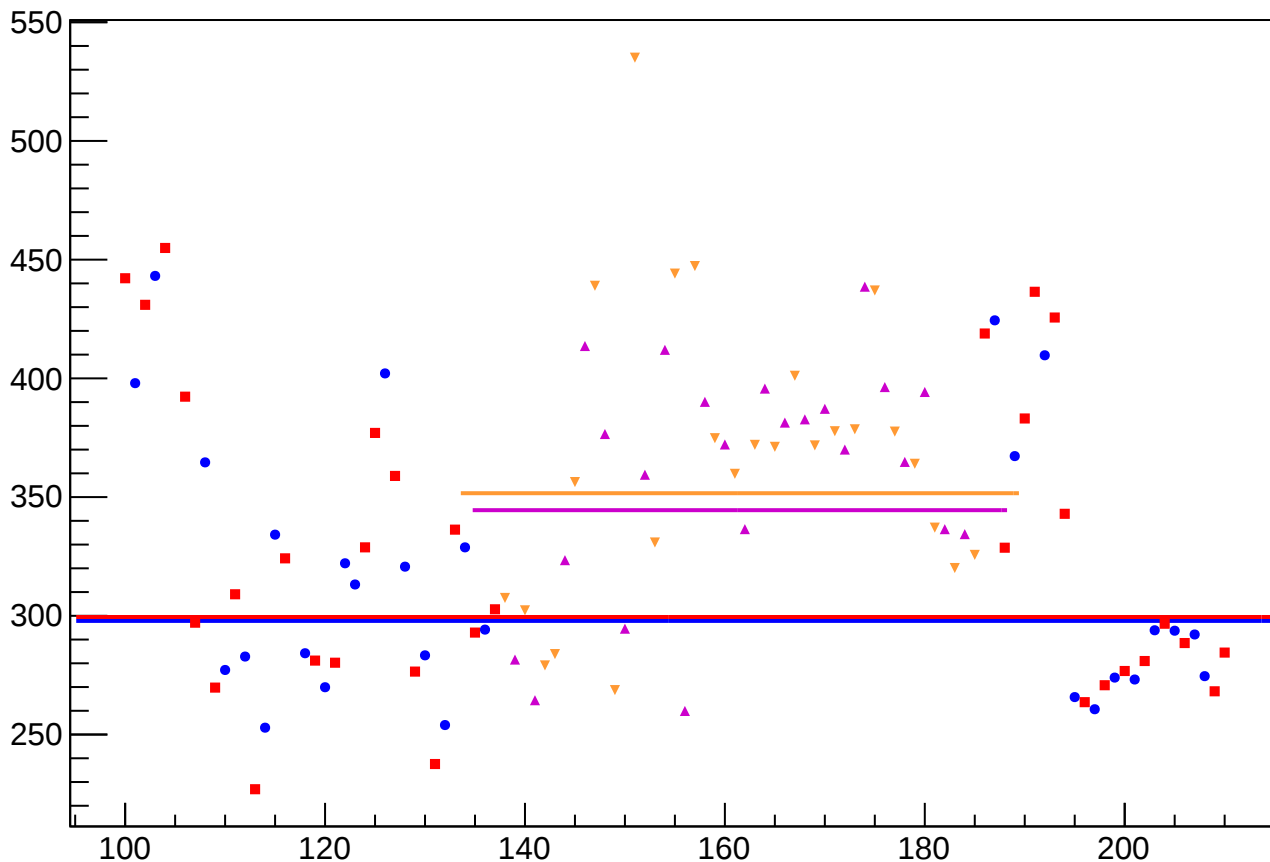
Left In: 106.116 $\pm$ 84.393  $\chi^2$ /NDF: 390.3/22

+ sign 597.843 $\pm$ 57.591  $\chi^2$ /NDF: 4351.3/52

All: 300.521 $\pm$ 40.178  $\chi^2$ /NDF: 10085.8/108

- sign 18.610 $\pm$ 56.079  $\chi^2$ /NDF: 5682.6/55

# asym\_bpm0l02WS\_rms vs Slug



Right In: 297.857 $\pm$ 0.056  $\chi^2$ /NDF: 618722.2/27

Left Out: 351.633 $\pm$ 0.059  $\chi^2$ /NDF: 907849.3/24

Right Out: 299.501 $\pm$ 0.053  $\chi^2$ /NDF: 893362.3/32

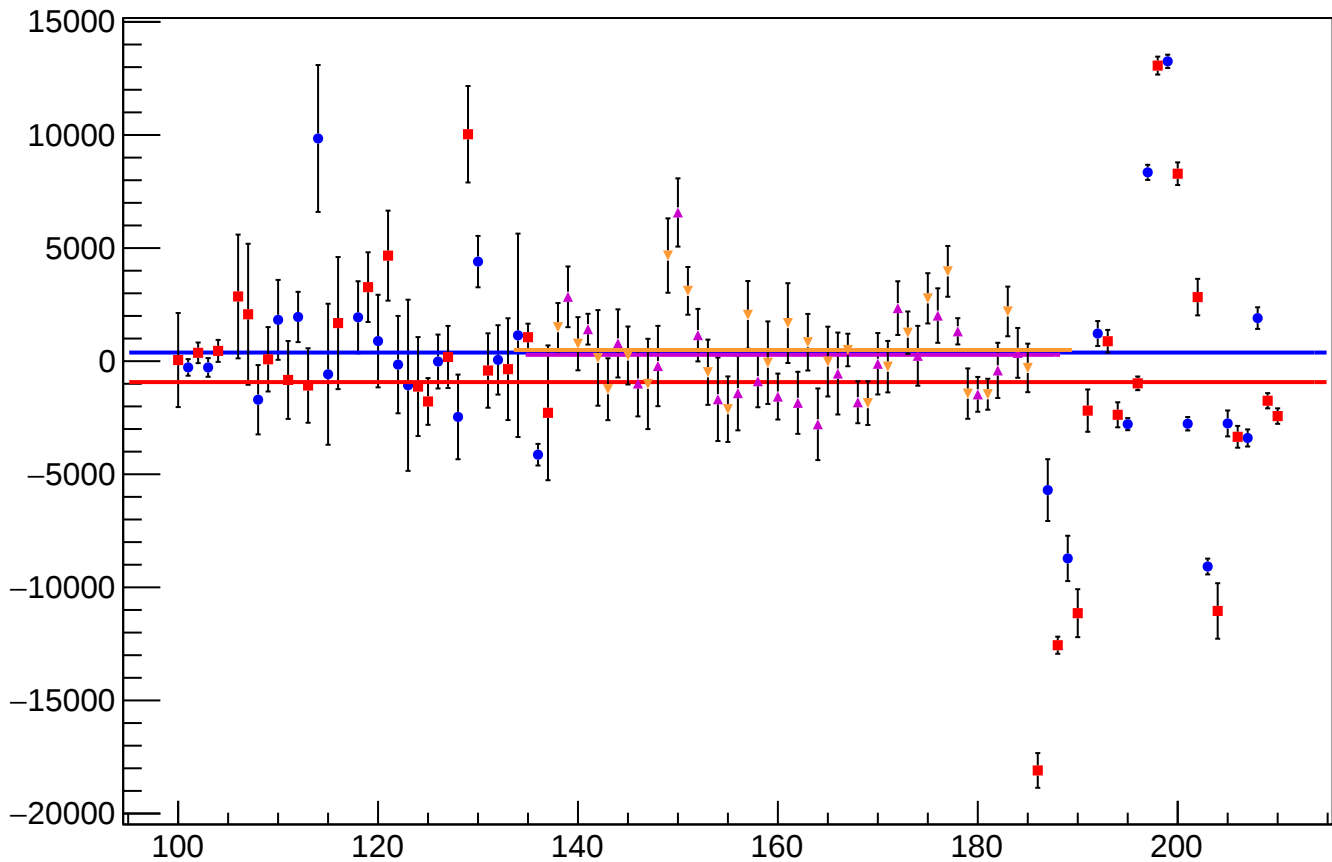
Left In: 344.491 $\pm$ 0.060  $\chi^2$ /NDF: 768885.4/22

+ sign 323.501 $\pm$ 0.041  $\chi^2$ /NDF: 1961587.8/52

All: 321.378 $\pm$ 0.028  $\chi^2$ /NDF: 3946546.3/108

- sign 319.366 $\pm$ 0.040  $\chi^2$ /NDF: 1979667.0/55

# asym\_bpm0l03WS\_mean vs Slug



Right In:  $381.162 \pm 102.253$   $\chi^2/\text{NDF}: 3833.6/27$

Left Out:  $495.014 \pm 231.058$   $\chi^2/\text{NDF}: 56.2/24$

Right Out:  $-925.301 \pm 111.781$   $\chi^2/\text{NDF}: 3360.2/32$

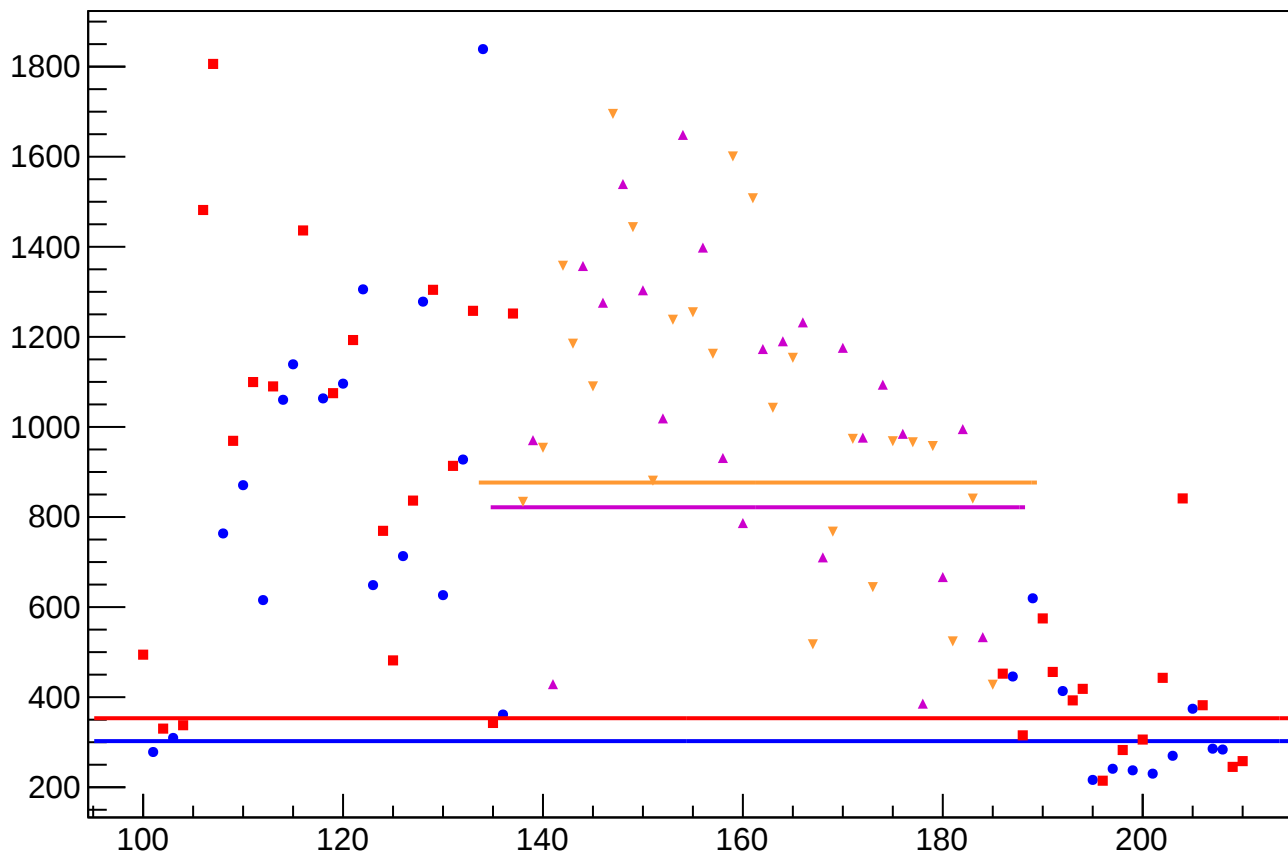
Left In:  $280.692 \pm 232.048$   $\chi^2/\text{NDF}: 57.2/22$

+ sign  $399.807 \pm 93.506$   $\chi^2/\text{NDF}: 3890.0/52$

All:  $-108.527 \pm 68.523$   $\chi^2/\text{NDF}: 7393.2/108$

- sign  $-698.159 \pm 100.706$   $\chi^2/\text{NDF}: 3439.3/55$

# asym\_bpm0l03WS\_rms vs Slug



Right In: 302.434+/-0.072  $\chi^2/\text{NDF}$ : 4406201.8/27

Left Out: 876.560+/-0.163  $\chi^2/\text{NDF}$ :3434698.7/24

Right Out: 353.269+/-0.079  $\chi^2/\text{NDF}$ : 5917308.0/32

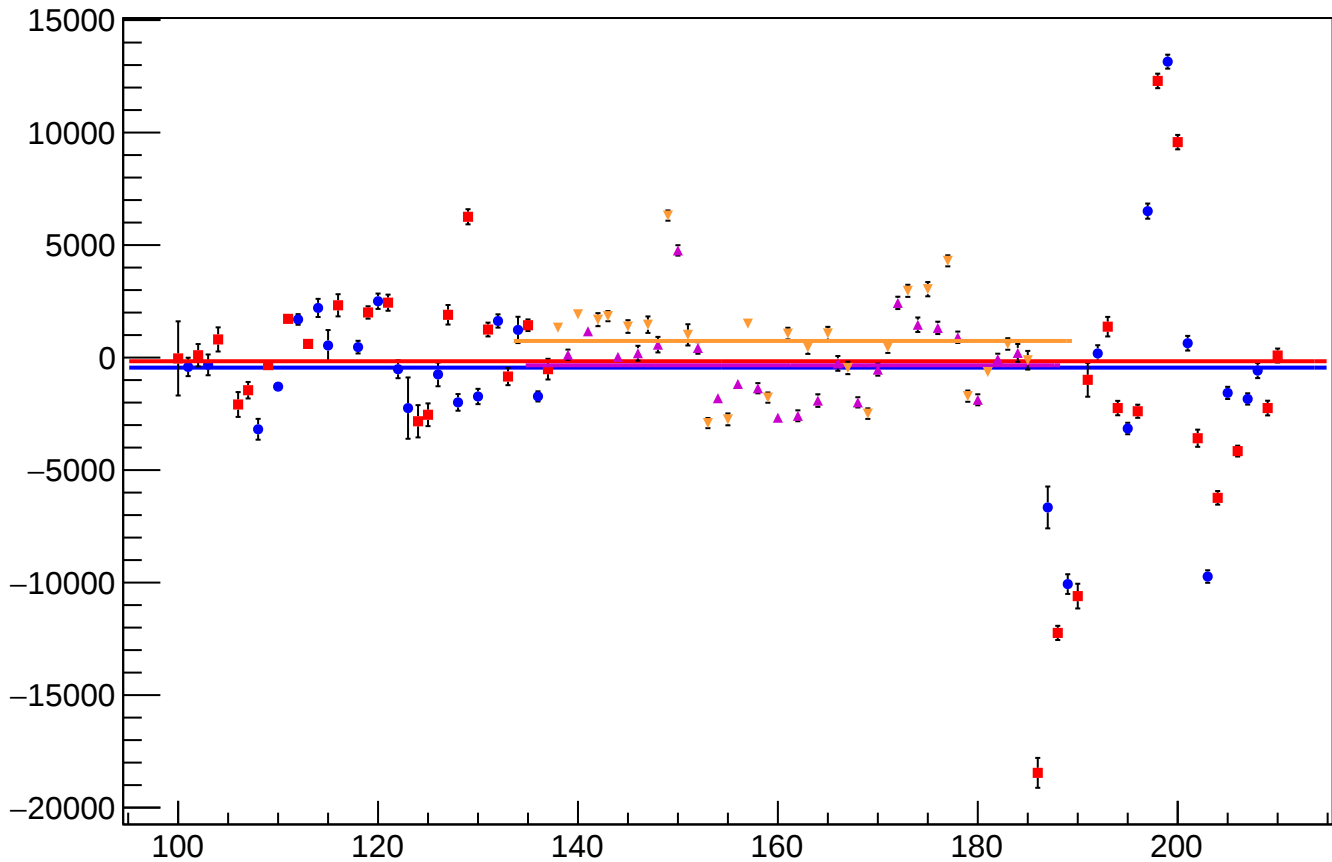
Left In: 821.657+/-0.164  $\chi^2/\text{NDF}$ :4443094.2/22

+ sign 396.459+/-0.066  $\chi^2/\text{NDF}$ : 18166797.0/52

All: 417.306+/-0.048  $\chi^2/\text{NDF}$ : 35355863.5/10

- sign 441.487+/-0.071  $\chi^2/\text{NDF}$ : 16974334.5/55

# asym\_bpm0l04WS\_mean vs Slug



Right In:  $-446.481 \pm 62.513$   $\chi^2/\text{NDF}: 4545.3/27$

Left Out:  $738.847 \pm 51.649$   $\chi^2/\text{NDF}: 1935.2/24$

Right Out:  $-162.530 \pm 58.179$   $\chi^2/\text{NDF}: 6667.3/32$

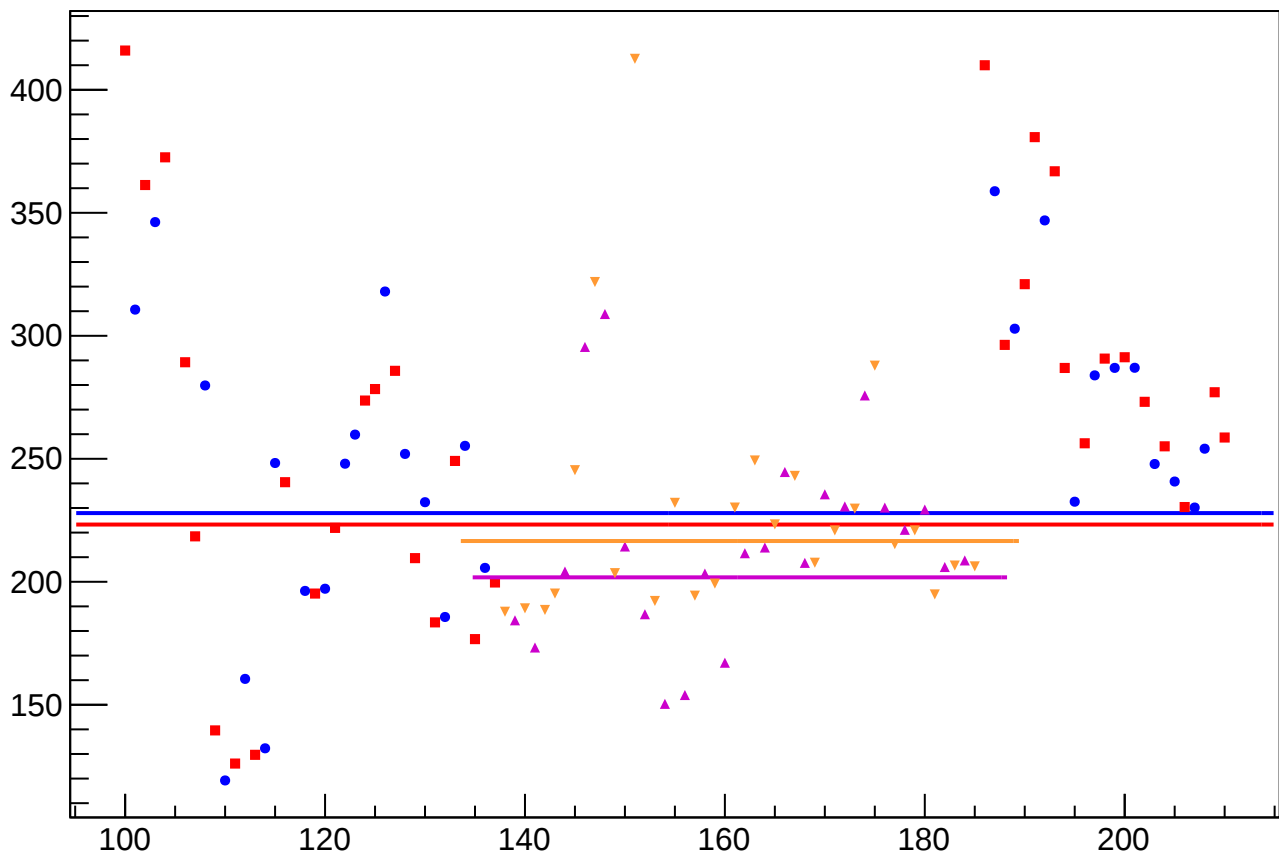
Left In:  $-342.465 \pm 50.044$   $\chi^2/\text{NDF}: 1254.9/22$

+ sign  $257.967 \pm 39.817$   $\chi^2/\text{NDF}: 6694.2/52$

All:  $-16.631 \pm 27.467$   $\chi^2/\text{NDF}: 14712.6/108$

- sign  $-265.947 \pm 37.940$   $\chi^2/\text{NDF}: 7927.7/55$

# asym\_bpm0l04WS\_rms vs Slug



Right In: 227.930 $\pm$ 0.044  $\chi^2$ /NDF: 1787896.9/27

Left Out: 216.574 $\pm$ 0.037  $\chi^2$ /NDF:886214.1/24

Right Out: 223.272 $\pm$ 0.041  $\chi^2$ /NDF: 2921684.0/32

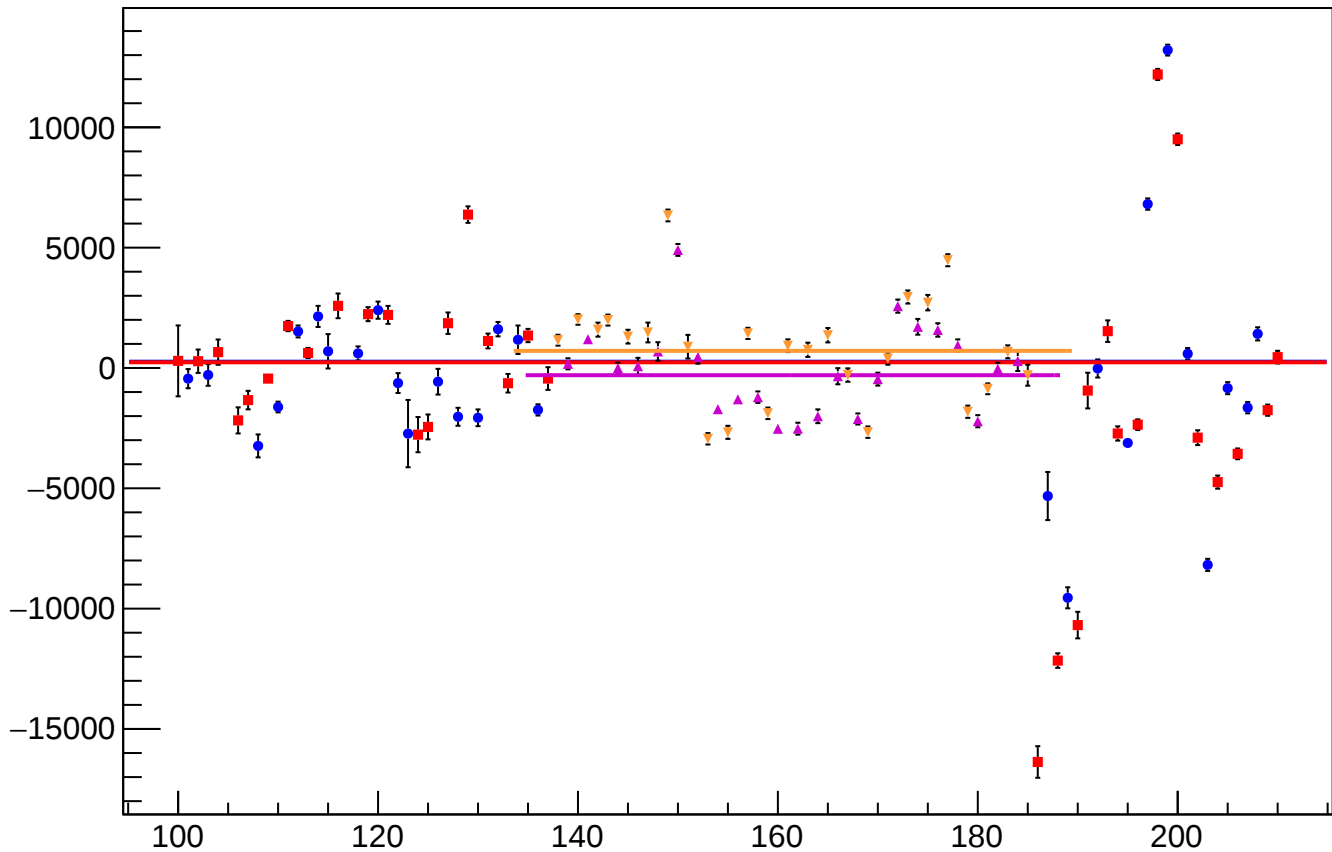
Left In: 201.805 $\pm$ 0.035  $\chi^2$ /NDF:1087243.4/22

+ sign 221.181 $\pm$ 0.028  $\chi^2$ /NDF: 2713332.5/52

All: 215.810 $\pm$ 0.019  $\chi^2$ /NDF: 6948177.9/108

- sign 210.934 $\pm$ 0.027  $\chi^2$ /NDF: 4165419.9/55

# asym\_bpm0l05WS\_mean vs Slug



Right In:  $260.538 \pm 58.661$   $\chi^2/\text{NDF}$ : 6488.8/27

Left Out:  $711.174 \pm 53.245$   $\chi^2/\text{NDF}$ : 1835.3/24

Right Out:  $235.757 \pm 54.965$   $\chi^2/\text{NDF}$ : 8530.3/32

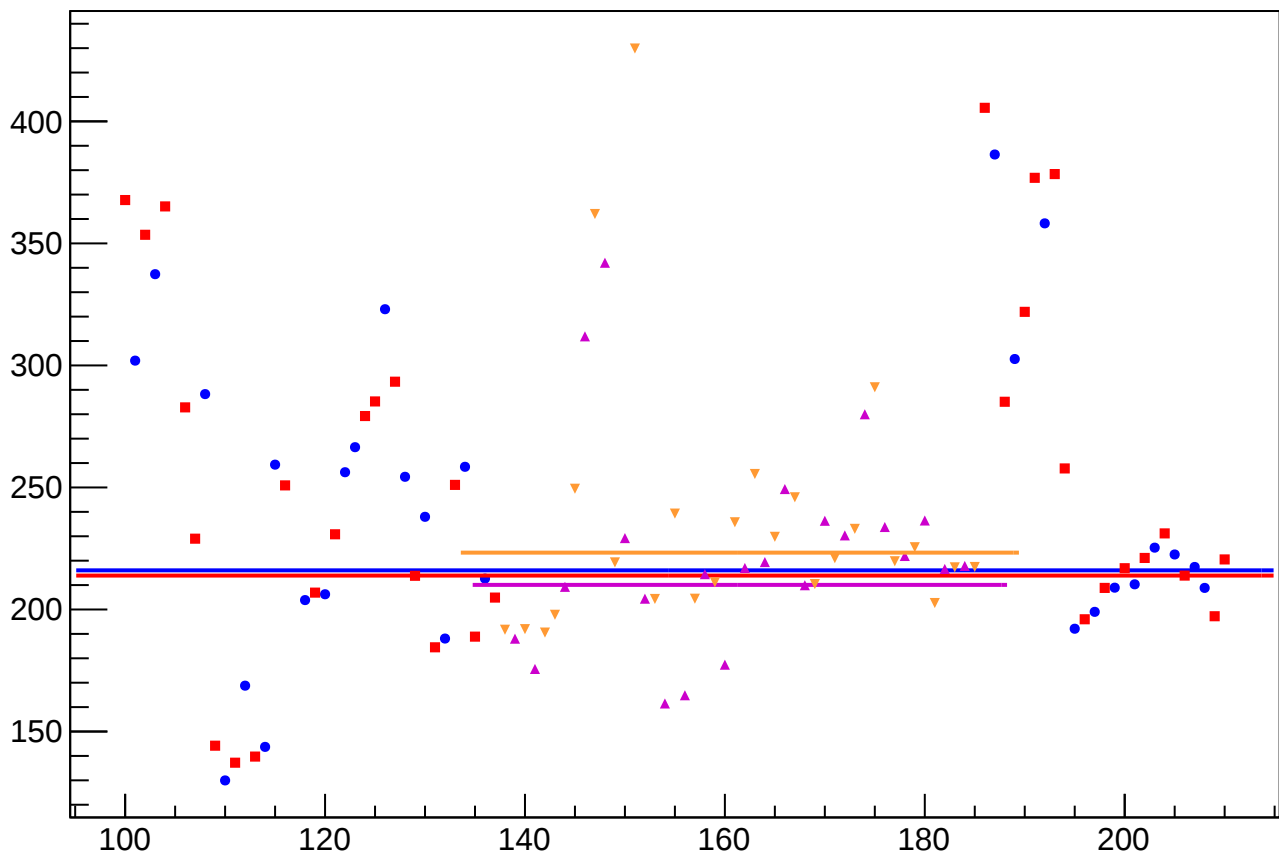
Left In:  $-300.516 \pm 51.984$   $\chi^2/\text{NDF}$ : 1208.6/22

+ sign  $507.616 \pm 39.426$   $\chi^2/\text{NDF}$ : 8356.5/52

All:  $218.237 \pm 27.273$   $\chi^2/\text{NDF}$ : 18248.9/108

- sign  $-47.317 \pm 37.768$   $\chi^2/\text{NDF}$ : 9789.1/55

# asym\_bpm0l05WS\_rms vs Slug



Right In: 216.039+/-0.041  $\chi^2/\text{NDF}$ : 1346894.4/27

Left Out: 223.296+/-0.038  $\chi^2/\text{NDF}$ : 922768.4/24

Right Out: 213.897+/-0.039  $\chi^2/\text{NDF}$ : 2105396.8/32

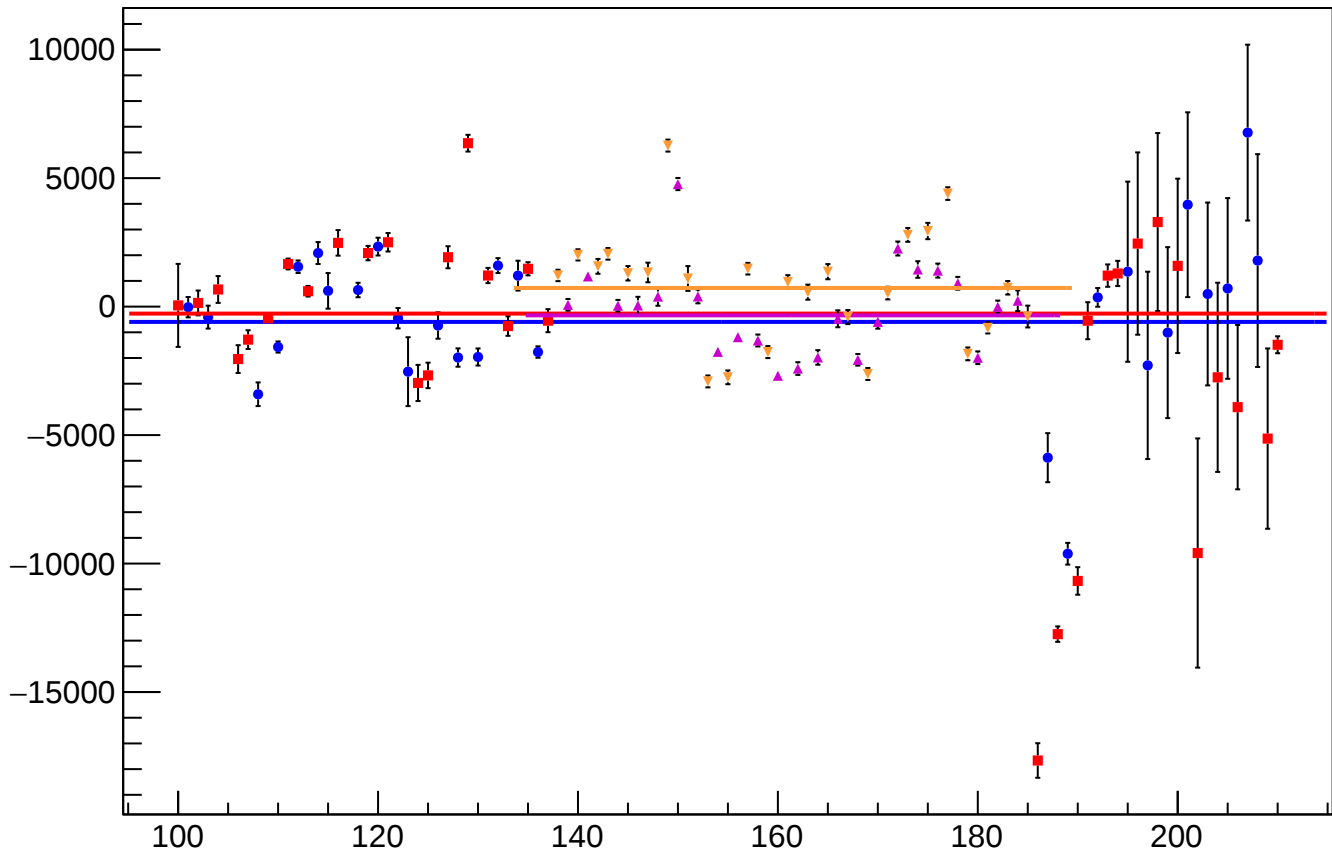
Left In: 210.080+/-0.037  $\chi^2/\text{NDF}$ : 1015274.5/22

+ sign 220.018+/-0.028  $\chi^2/\text{NDF}$ : 2286444.3/52

All: 215.776+/-0.019  $\chi^2/\text{NDF}$ : 5456621.6/108

- sign 211.882+/-0.027  $\chi^2/\text{NDF}$ : 3125763.3/55

# asym\_bpm0l06WS\_mean vs Slug



Right In:  $-595.215 \pm 79.044$   $\chi^2/\text{NDF}: 898.9/27$

Left Out:  $725.866 \pm 52.158$   $\chi^2/\text{NDF}: 1912.7/24$

Right Out:  $-271.839 \pm 68.441$   $\chi^2/\text{NDF}: 3655.8/32$

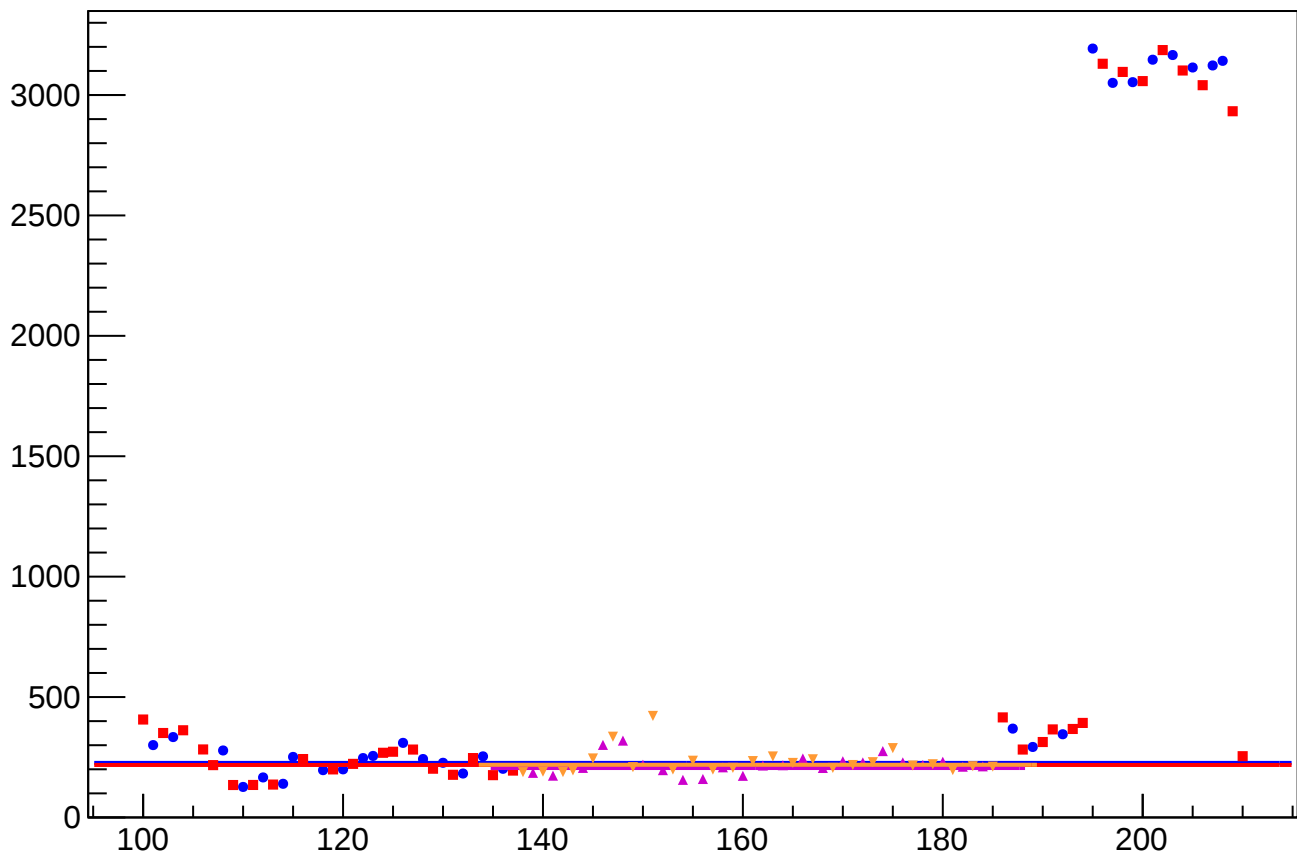
Left In:  $-340.502 \pm 50.802$   $\chi^2/\text{NDF}: 1201.8/22$

+ sign  $325.126 \pm 43.534$   $\chi^2/\text{NDF}: 3006.3/52$

All:  $-16.321 \pm 29.767$   $\chi^2/\text{NDF}: 7980.1/108$

- sign  $-316.110 \pm 40.792$   $\chi^2/\text{NDF}: 4858.3/55$

# asym\_bpm0l06WS\_rms vs Slug



Right In: 226.566 $\pm$ 0.056  $\chi^2$ /NDF: 11852774.2/27

Left Out: 218.768 $\pm$ 0.037  $\chi^2$ /NDF: 896914.5/24

Right Out: 217.949 $\pm$ 0.048  $\chi^2$ /NDF: 11477630.1/32

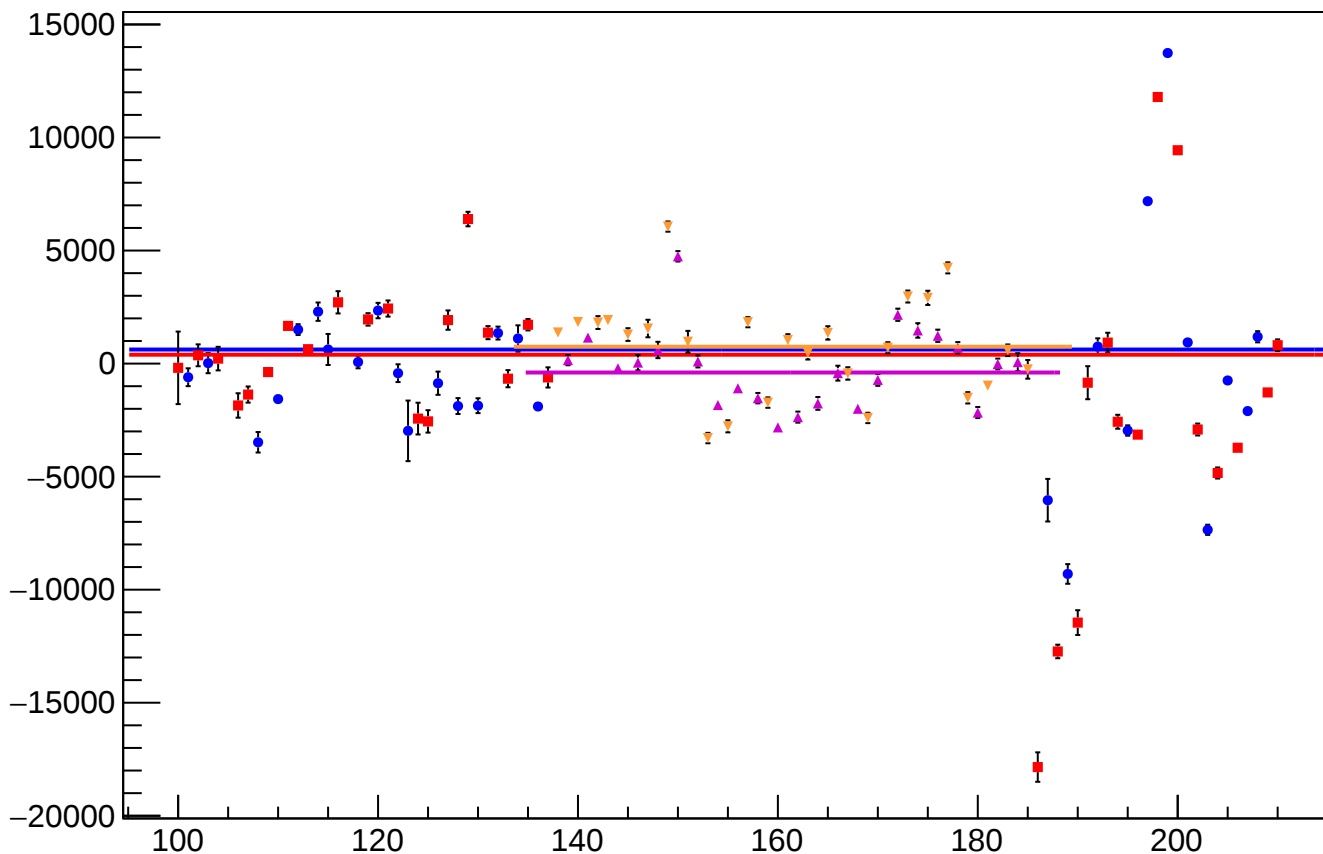
Left In: 205.249 $\pm$ 0.036  $\chi^2$ /NDF: 997168.8/22

+ sign 221.134 $\pm$ 0.031  $\chi^2$ /NDF: 12763248.6/52

All: 215.078 $\pm$ 0.021  $\chi^2$ /NDF: 25355131.8/10

- sign 209.761 $\pm$ 0.029  $\chi^2$ /NDF: 12519199.1/55

# asym\_bpm0l07WS\_mean vs Slug



Right In:  $622.048 \pm 54.615$   $\chi^2/\text{NDF}$ : 8452.9/27

Left Out:  $746.405 \pm 51.592$   $\chi^2/\text{NDF}$ : 1942.1/24

Right Out:  $393.698 \pm 51.321$   $\chi^2/\text{NDF}$ : 10371.7/32

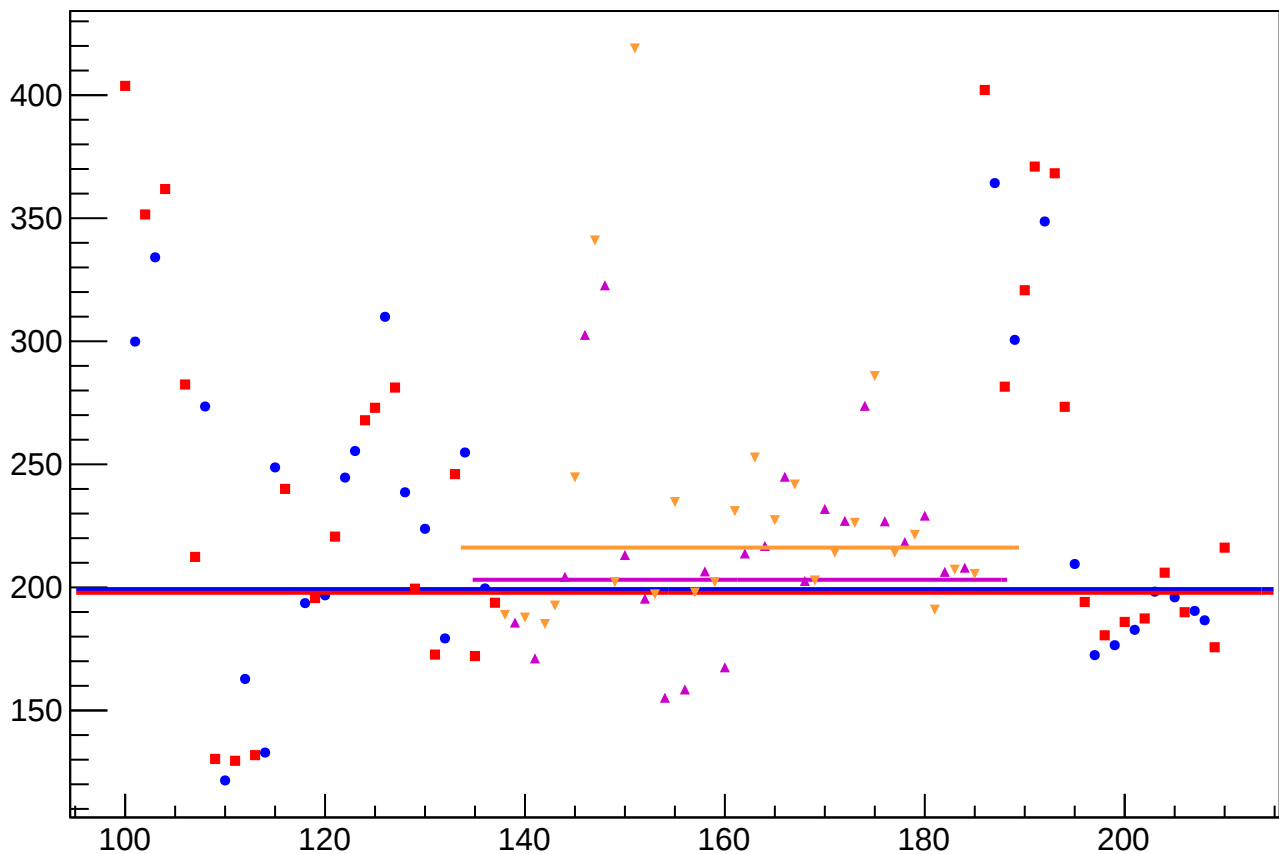
Left In:  $-394.379 \pm 50.311$   $\chi^2/\text{NDF}$ : 1236.4/22

+ sign  $687.764 \pm 37.504$   $\chi^2/\text{NDF}$ : 10397.7/52

All:  $324.858 \pm 25.944$   $\chi^2/\text{NDF}$ : 22305.6/108

- sign  $-8.171 \pm 35.927$   $\chi^2/\text{NDF}$ : 11728.3/55

# asym\_bpm0l07WS\_rms vs Slug



Right In:  $199.310 \pm 0.039$   $\chi^2/\text{NDF}: 1529523.9/27$

Left Out:  $216.178 \pm 0.036$   $\chi^2/\text{NDF}: 946050.8/24$

Right Out:  $197.808 \pm 0.036$   $\chi^2/\text{NDF}: 2474719.8/32$

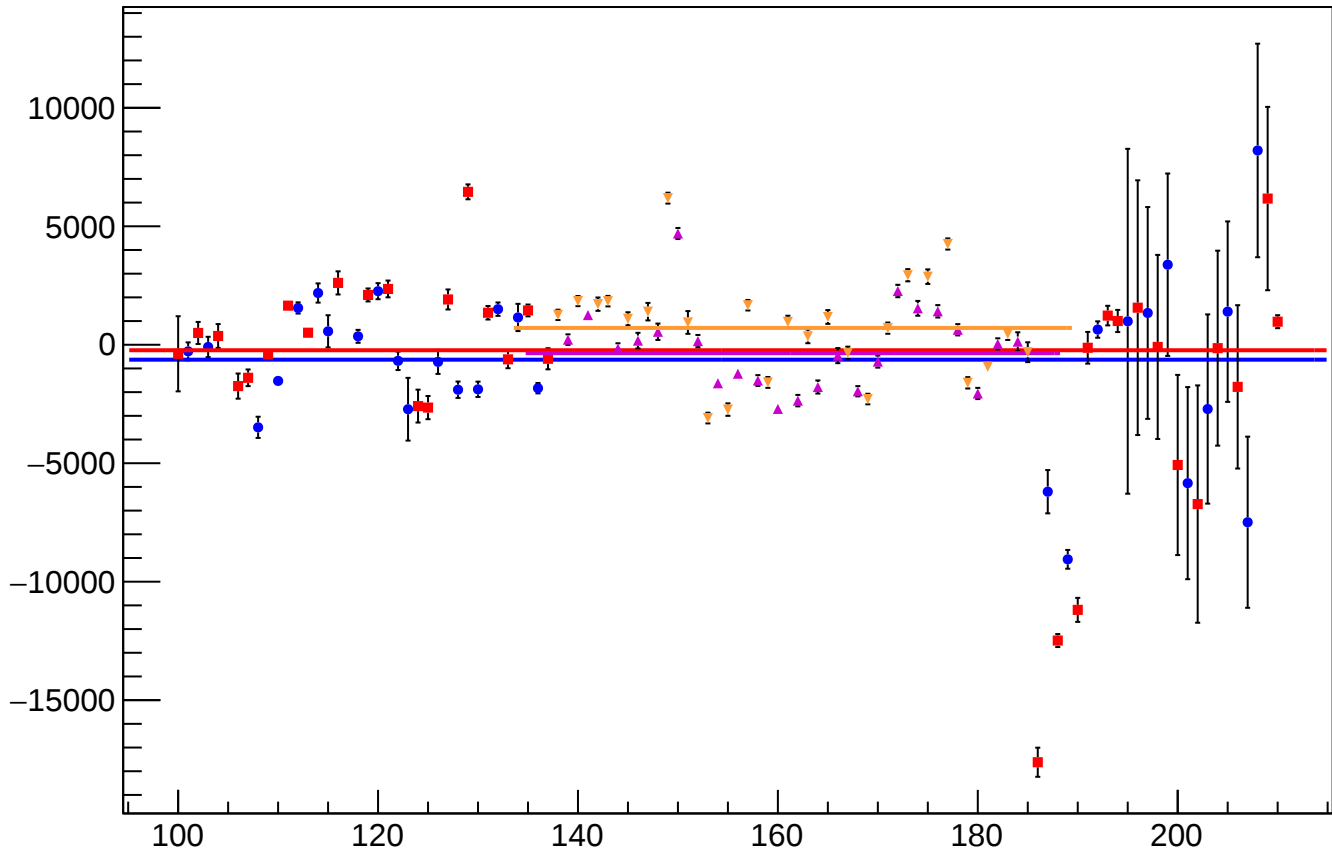
Left In:  $203.101 \pm 0.036$   $\chi^2/\text{NDF}: 1038013.0/22$

+ sign  $208.224 \pm 0.027$   $\chi^2/\text{NDF}: 2576391.5/52$

All:  $204.200 \pm 0.018$   $\chi^2/\text{NDF}: 6144121.5/108$

- sign  $200.507 \pm 0.025$   $\chi^2/\text{NDF}: 3523578.9/55$

# asym\_bpm0l08WS\_mean vs Slug



Right In:  $-629.893 \pm 76.418$   $\chi^2/\text{NDF}: 925.7/27$

Left Out:  $710.238 \pm 50.750$   $\chi^2/\text{NDF}: 1932.3/24$

Right Out:  $-231.162 \pm 65.177$   $\chi^2/\text{NDF}: 4188.0/32$

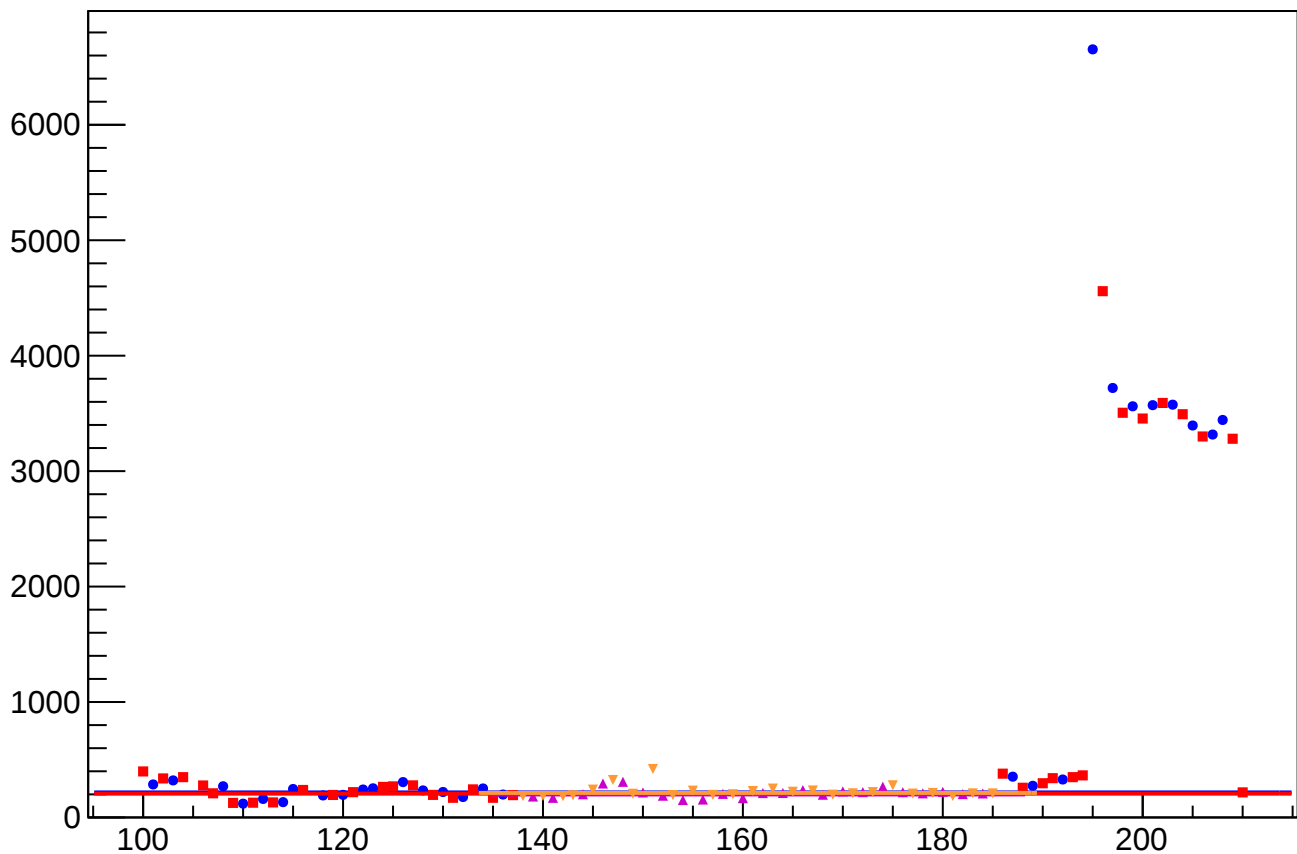
Left In:  $-352.432 \pm 49.316$   $\chi^2/\text{NDF}: 1233.1/22$

+ sign  $300.075 \pm 42.277$   $\chi^2/\text{NDF}: 3071.4/52$

All:  $-26.064 \pm 28.795$   $\chi^2/\text{NDF}: 8605.7/108$

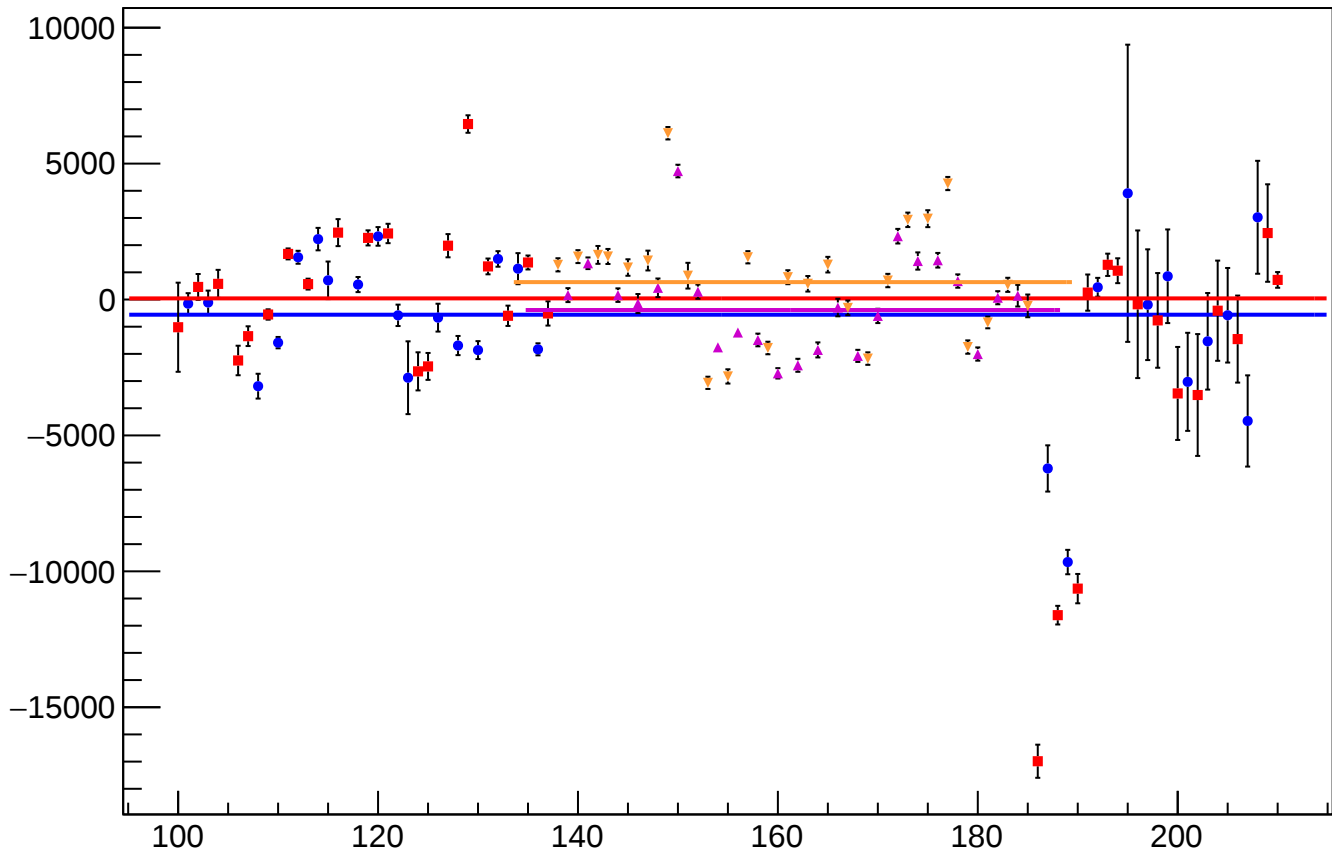
- sign  $-308.281 \pm 39.327$   $\chi^2/\text{NDF}: 5423.3/55$

# asym\_bpm0l08WS\_rms vs Slug



Right In: 216.684 $\pm$ 0.054     $\chi^2$ /NDF: 12304223.9/27    + sign 213.932 $\pm$ 0.030     $\chi^2$ /NDF: 13224187.7/52  
 Left Out: 212.718 $\pm$ 0.036     $\chi^2$ /NDF: 916225.9/24    All: 207.419 $\pm$ 0.020     $\chi^2$ /NDF: 26024324.6/10  
 Right Out: 206.397 $\pm$ 0.046     $\chi^2$ /NDF: 11709906.3/32    - sign 201.784 $\pm$ 0.028     $\chi^2$ /NDF: 12711599.2/55  
 Left In: 199.142 $\pm$ 0.035     $\chi^2$ /NDF: 985932.4/22

# asym\_bpm0l09WS\_mean vs Slug



Right In:  $-558.936 \pm 77.371$   $\chi^2/\text{NDF}$ : 870.9/27

Left Out:  $639.995 \pm 52.708$   $\chi^2/\text{NDF}$ : 1859.2/24

Right Out:  $41.305 \pm 66.906$   $\chi^2/\text{NDF}$ : 3111.3/32

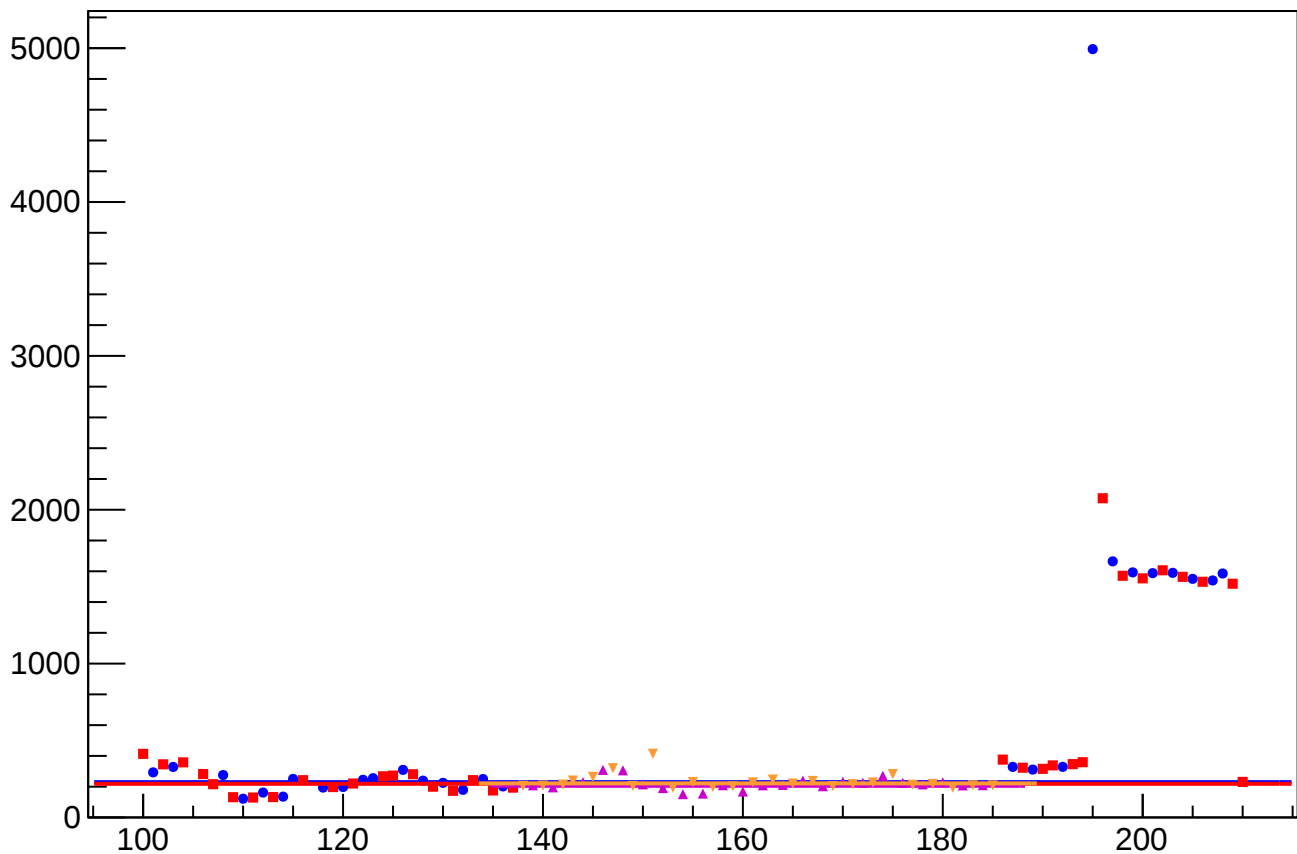
Left In:  $-386.248 \pm 50.994$   $\chi^2/\text{NDF}$ : 1238.0/22

+ sign  $259.953 \pm 43.561$   $\chi^2/\text{NDF}$ : 2894.2/52

All:  $-2.040 \pm 29.683$   $\chi^2/\text{NDF}$ : 7336.8/108

- sign  $-229.144 \pm 40.557$   $\chi^2/\text{NDF}$ : 4375.1/55

# asym\_bpm0l09WS\_rms vs Slug



Right In: 229.559 $\pm$ 0.055  $\chi^2$ /NDF: 10729817.6/27

Left Out: 221.398 $\pm$ 0.037  $\chi^2$ /NDF: 777833.8/24

Right Out: 218.795 $\pm$ 0.047  $\chi^2$ /NDF: 10161216.9/32

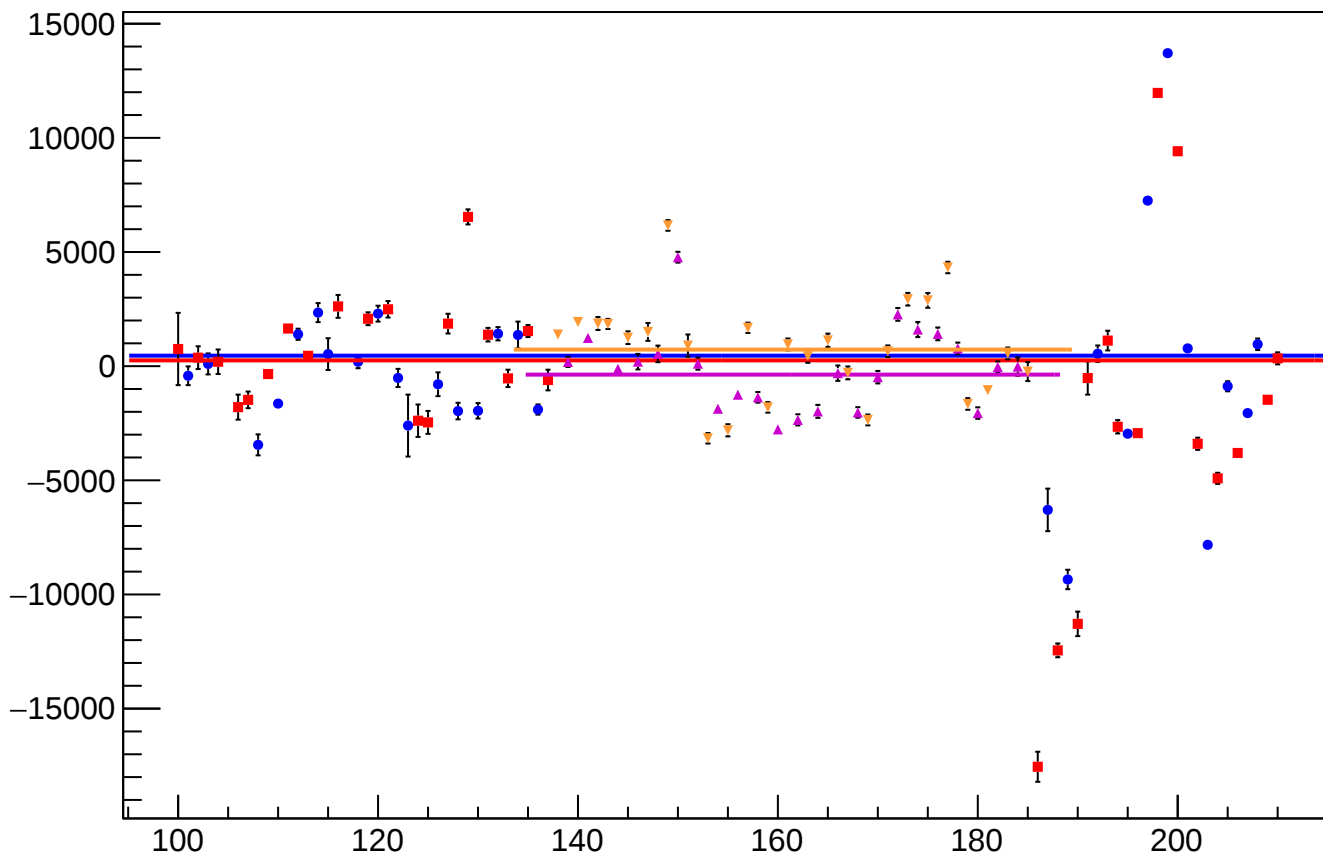
Left In: 205.803 $\pm$ 0.036  $\chi^2$ /NDF: 994903.5/22

+ sign 223.985 $\pm$ 0.031  $\chi^2$ /NDF: 11522851.2/52

All: 216.803 $\pm$ 0.021  $\chi^2$ /NDF: 22828170.3/10

- sign 210.577 $\pm$ 0.029  $\chi^2$ /NDF: 11203817.6/55

# asym\_bpm0l10WS\_mean vs Slug



Right In:  $459.718 \pm 55.119$   $\chi^2/\text{NDF}$ : 8441.0/27

Left Out:  $725.250 \pm 52.307$   $\chi^2/\text{NDF}$ : 1883.1/24

Right Out:  $254.105 \pm 52.121$   $\chi^2/\text{NDF}$ : 10045.8/32

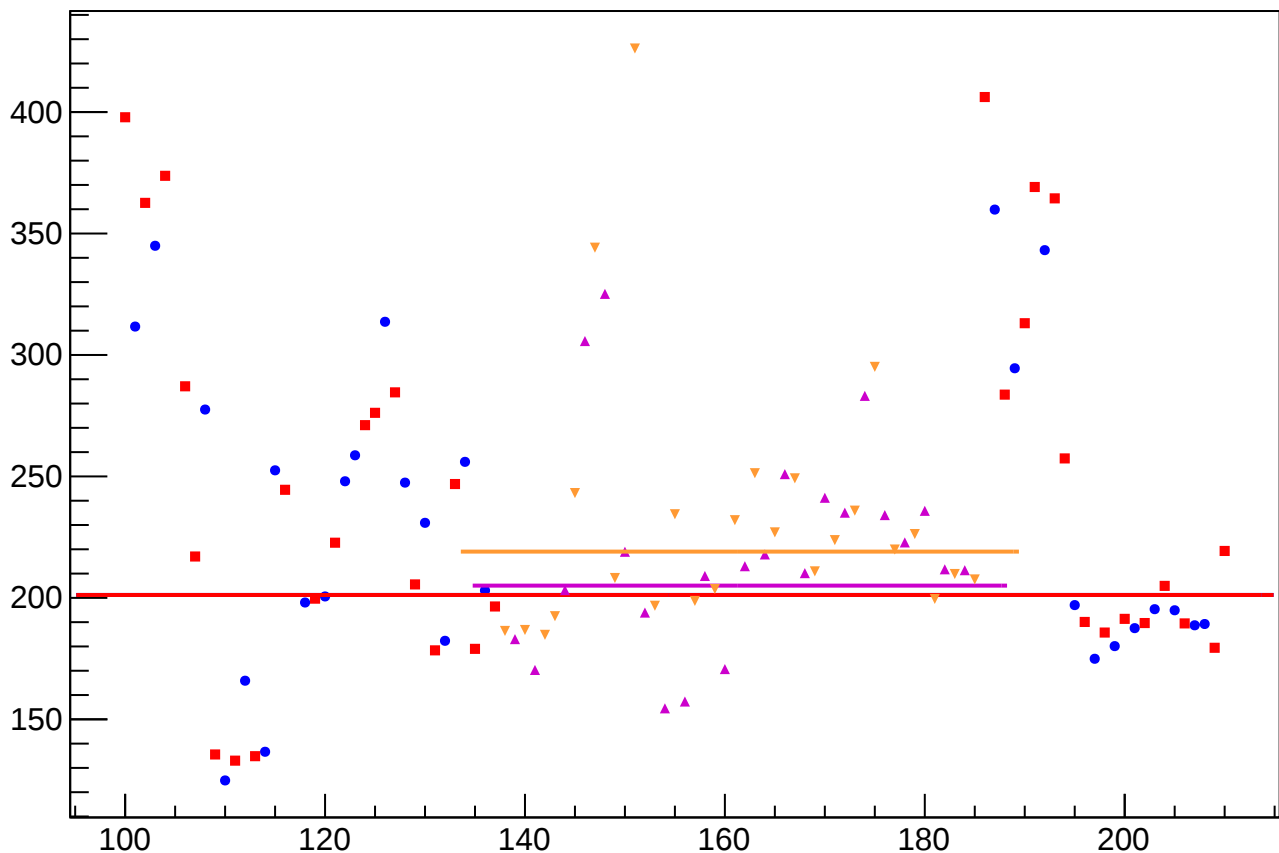
Left In:  $-370.408 \pm 50.884$   $\chi^2/\text{NDF}$ : 1223.2/22

+ sign  $599.430 \pm 37.942$   $\chi^2/\text{NDF}$ : 10336.3/52

All:  $253.194 \pm 26.271$   $\chi^2/\text{NDF}$ : 21838.7/108

- sign  $-65.645 \pm 36.410$   $\chi^2/\text{NDF}$ : 11342.4/55

# asym\_bpm0l10WS\_rms vs Slug



Right In: 201.208+/-0.039  $\chi^2/\text{NDF}$ : 1488308.7/27

Left Out: 219.049+/-0.037  $\chi^2/\text{NDF}$ : 975564.4/24

Right Out: 201.191+/-0.037  $\chi^2/\text{NDF}$ : 2325445.0/32

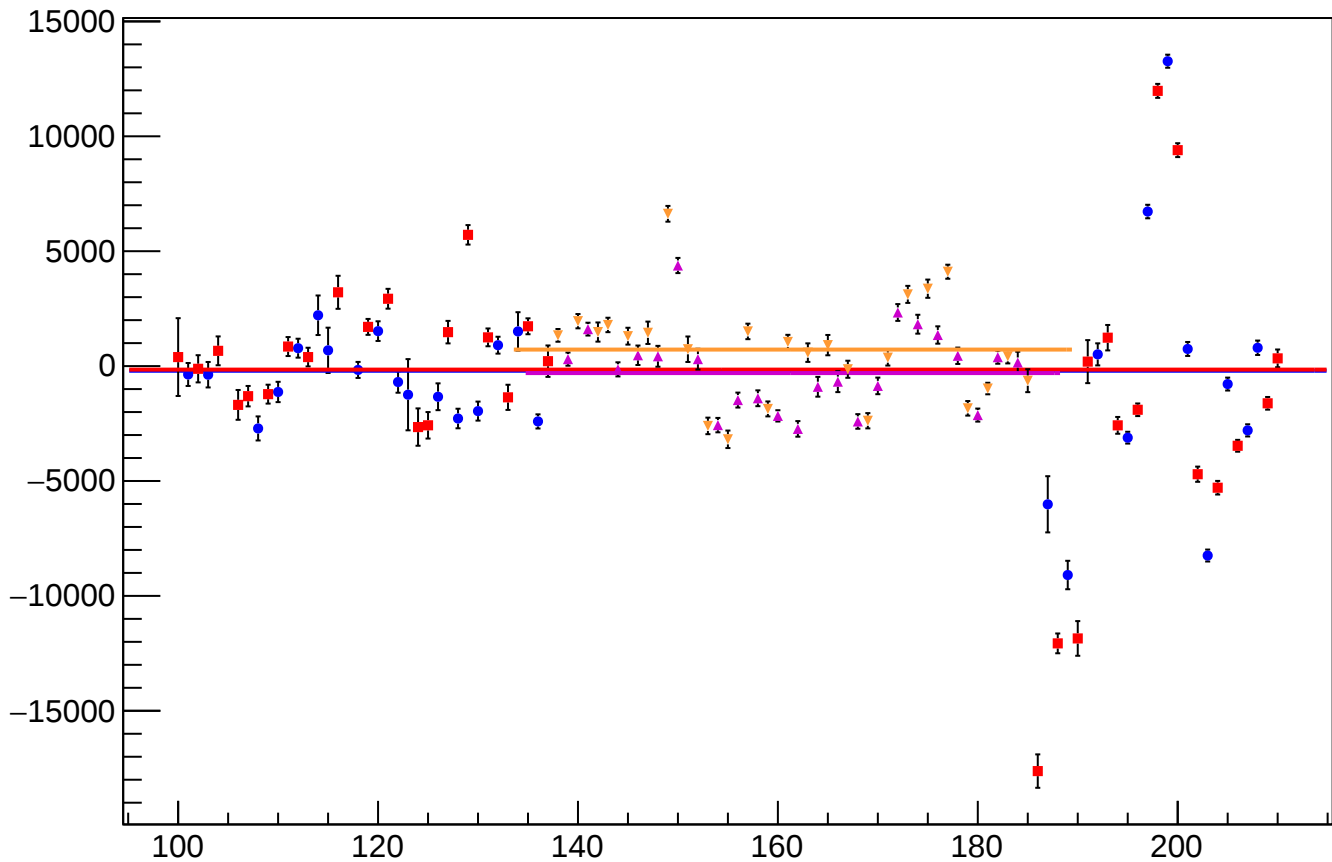
Left In: 205.046+/-0.036  $\chi^2/\text{NDF}$ : 1144197.1/22

+ sign 210.595+/-0.027  $\chi^2/\text{NDF}$ : 2574114.6/52

All: 206.727+/-0.019  $\chi^2/\text{NDF}$ : 6089289.0/108

- sign 203.165+/-0.026  $\chi^2/\text{NDF}$ : 3475245.5/55

# asym\_bpm0r03WS\_mean vs Slug



Right In:  $-202.599 \pm 73.324$   $\chi^2/\text{NDF}: 4399.8/27$

Left Out:  $718.705 \pm 69.601$   $\chi^2/\text{NDF}: 1018.5/24$

Right Out:  $-152.919 \pm 72.028$   $\chi^2/\text{NDF}: 5353.8/32$

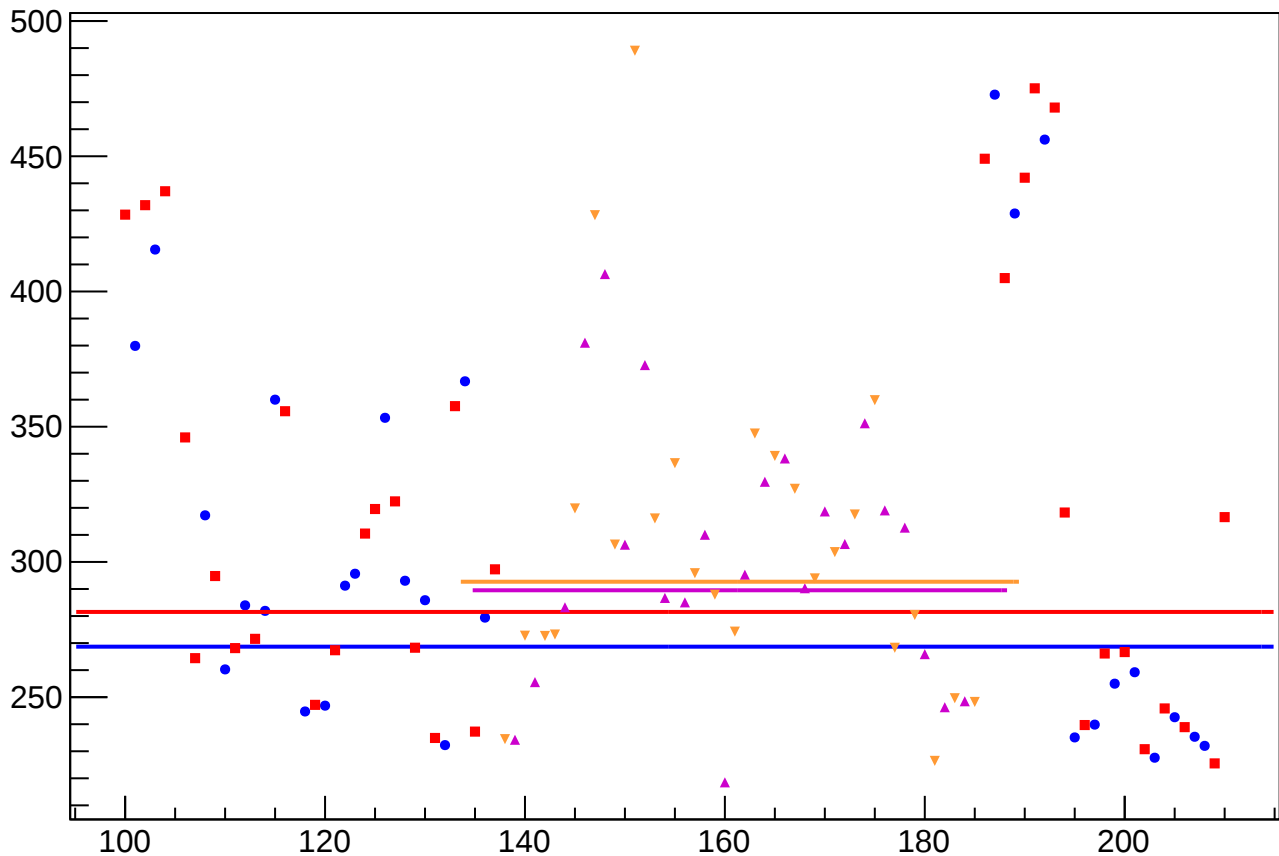
Left In:  $-304.161 \pm 70.958$   $\chi^2/\text{NDF}: 643.5/22$

+ sign  $282.036 \pm 50.480$   $\chi^2/\text{NDF}: 5501.4/52$

All:  $26.531 \pm 35.719$   $\chi^2/\text{NDF}: 11552.2/108$

- sign  $-229.672 \pm 50.549$   $\chi^2/\text{NDF}: 5999.5/55$

# asym\_bpm0r03WS\_rms vs Slug



Right In: 268.672 $\pm$ 0.052  $\chi^2$ /NDF: 1080317.0/27

Left Out: 292.686 $\pm$ 0.049  $\chi^2$ /NDF: 925193.6/24

Right Out: 281.515 $\pm$ 0.051  $\chi^2$ /NDF: 1446219.1/32

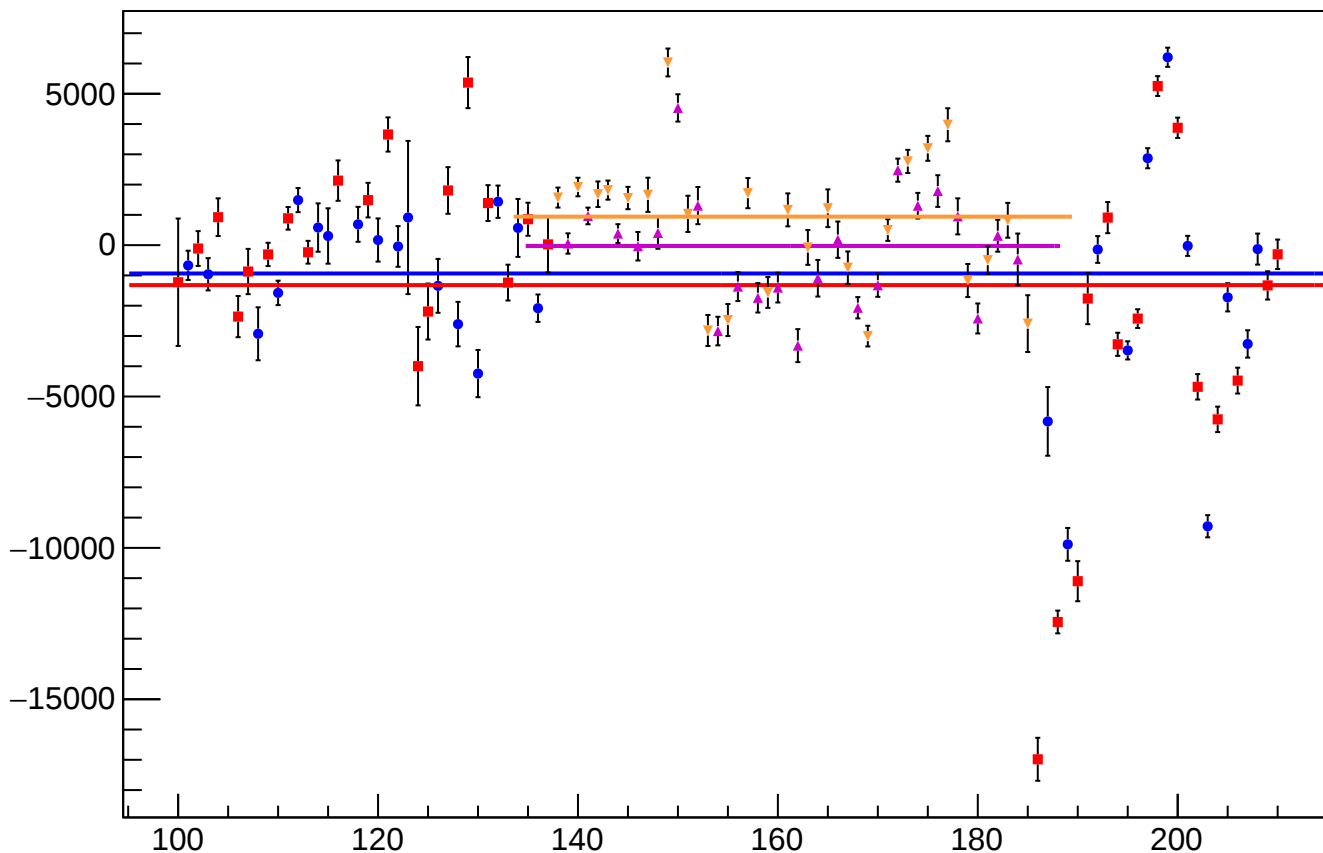
Left In: 289.522 $\pm$ 0.050  $\chi^2$ /NDF: 777901.0/22

+ sign 281.304 $\pm$ 0.036  $\chi^2$ /NDF: 2118357.9/52

All: 283.438 $\pm$ 0.025  $\chi^2$ /NDF: 4362179.6/108

- sign 285.578 $\pm$ 0.036  $\chi^2$ /NDF: 2236661.6/55

# asym\_bpm0r05WS\_mean vs Slug



Right In:  $-936.125 \pm 93.175$   $\chi^2/\text{NDF}: 1680.3/27$

Left Out:  $941.598 \pm 89.119$   $\chi^2/\text{NDF}: 544.6/24$

Right Out:  $-1319.816 \pm 87.081$   $\chi^2/\text{NDF}: 2838.2/32$

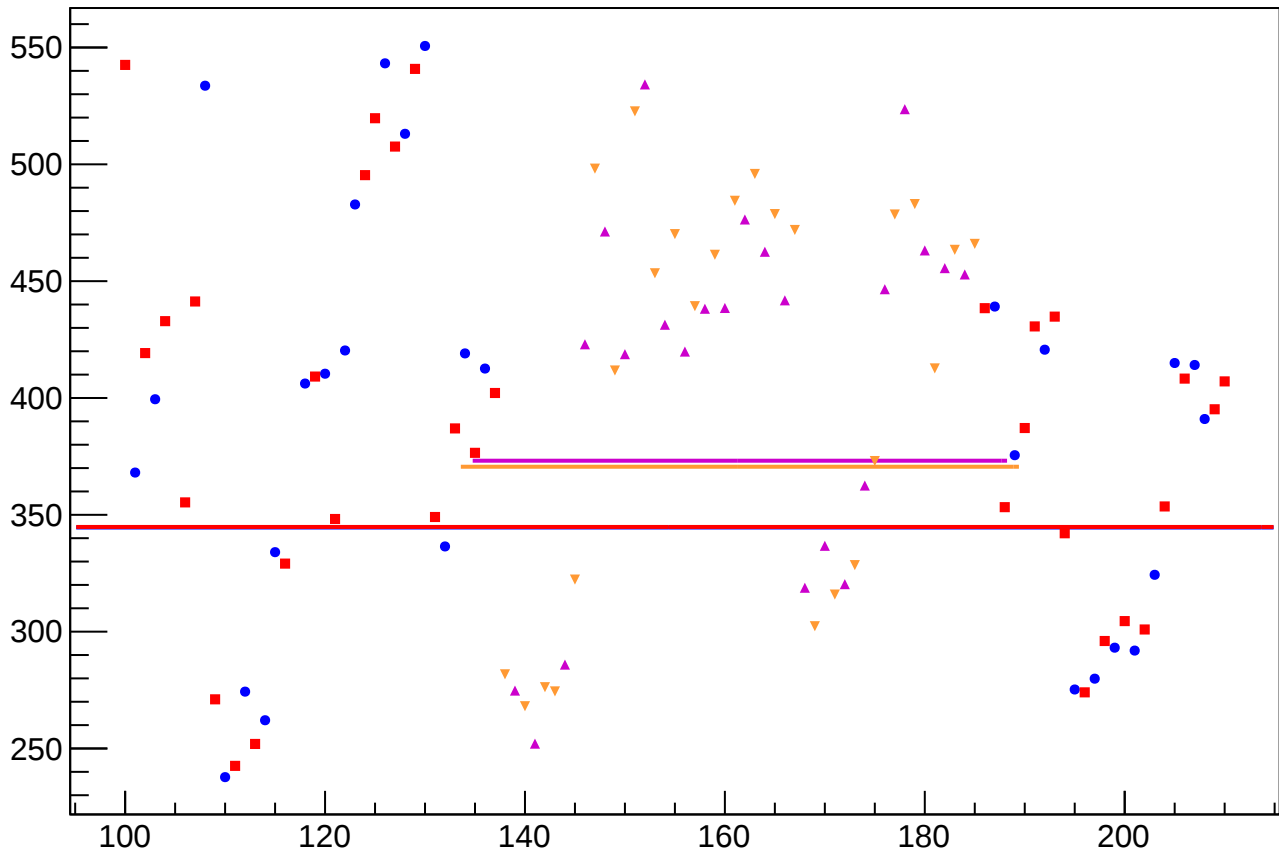
Left In:  $-27.763 \pm 92.331$   $\chi^2/\text{NDF}: 362.5/22$

+ sign  $44.496 \pm 64.403$   $\chi^2/\text{NDF}: 2437.0/52$

All:  $-339.767 \pm 45.163$   $\chi^2/\text{NDF}: 5811.4/108$

- sign  $-711.570 \pm 63.350$   $\chi^2/\text{NDF}: 3304.4/55$

# asym\_bpm0r05WS\_rms vs Slug



Right In: 344.575+/-0.066  $\chi^2/\text{NDF}$ : 1297712.5/27

Left Out: 370.580+/-0.063  $\chi^2/\text{NDF}$ : 1878118.9/24

Right Out: 344.810+/-0.062  $\chi^2/\text{NDF}$ : 1243536.9/32

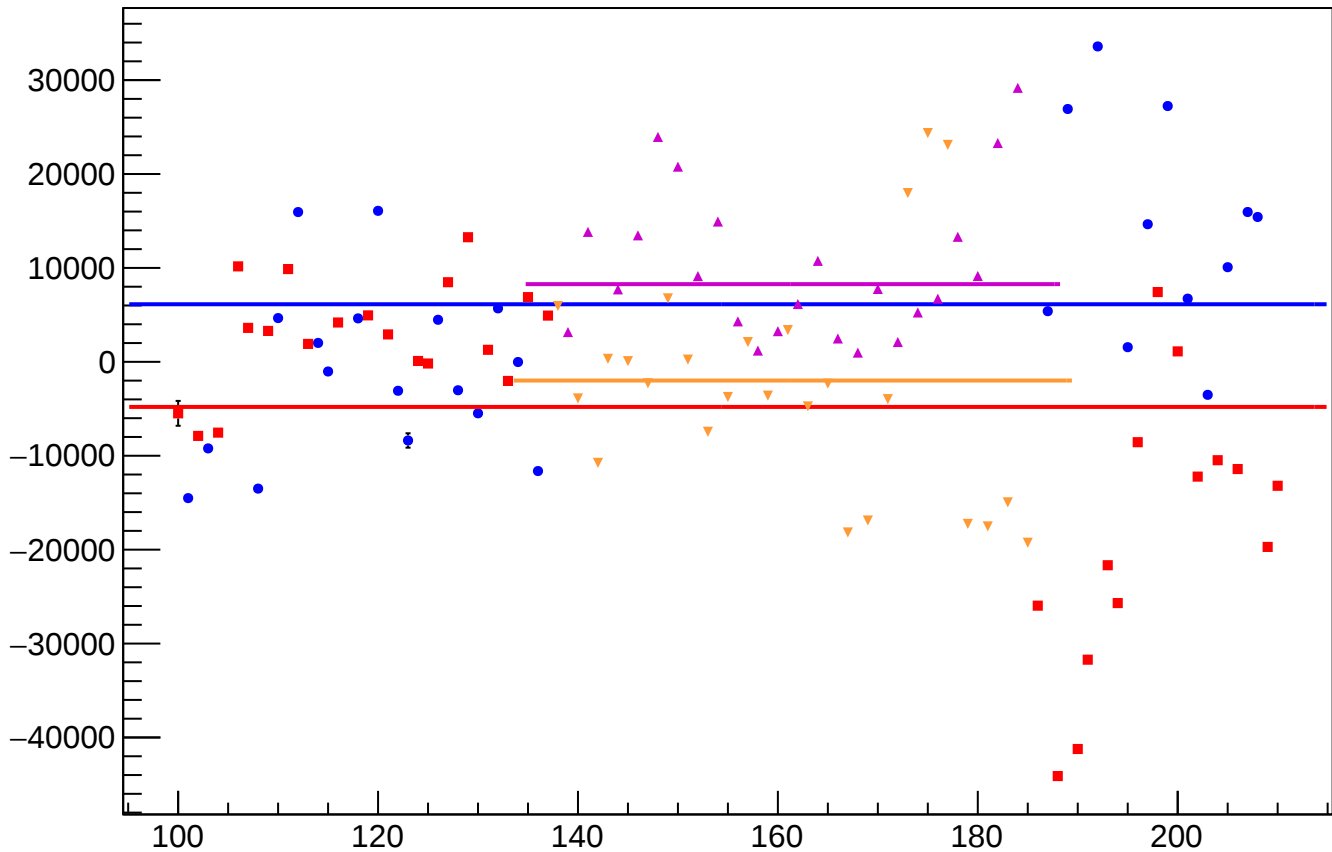
Left In: 373.161+/-0.065  $\chi^2/\text{NDF}$ : 1636244.2/22

+ sign 358.156+/-0.046  $\chi^2/\text{NDF}$ : 3257188.7/52

All: 358.156+/-0.032  $\chi^2/\text{NDF}$ : 6236769.7/108

- sign 358.156+/-0.045  $\chi^2/\text{NDF}$ : 2979581.0/55

# asym\_bpm0i02WS\_mean vs Slug



Right In: 6131.702 $\pm$ 42.020  $\chi^2$ /NDF: 90632.2/27

Left Out: -1991.788 $\pm$ 42.427  $\chi^2$ /NDF:63766.6/24

+ sign 2109.106 $\pm$ 29.855  $\chi^2$ /NDF: 172906.0/52

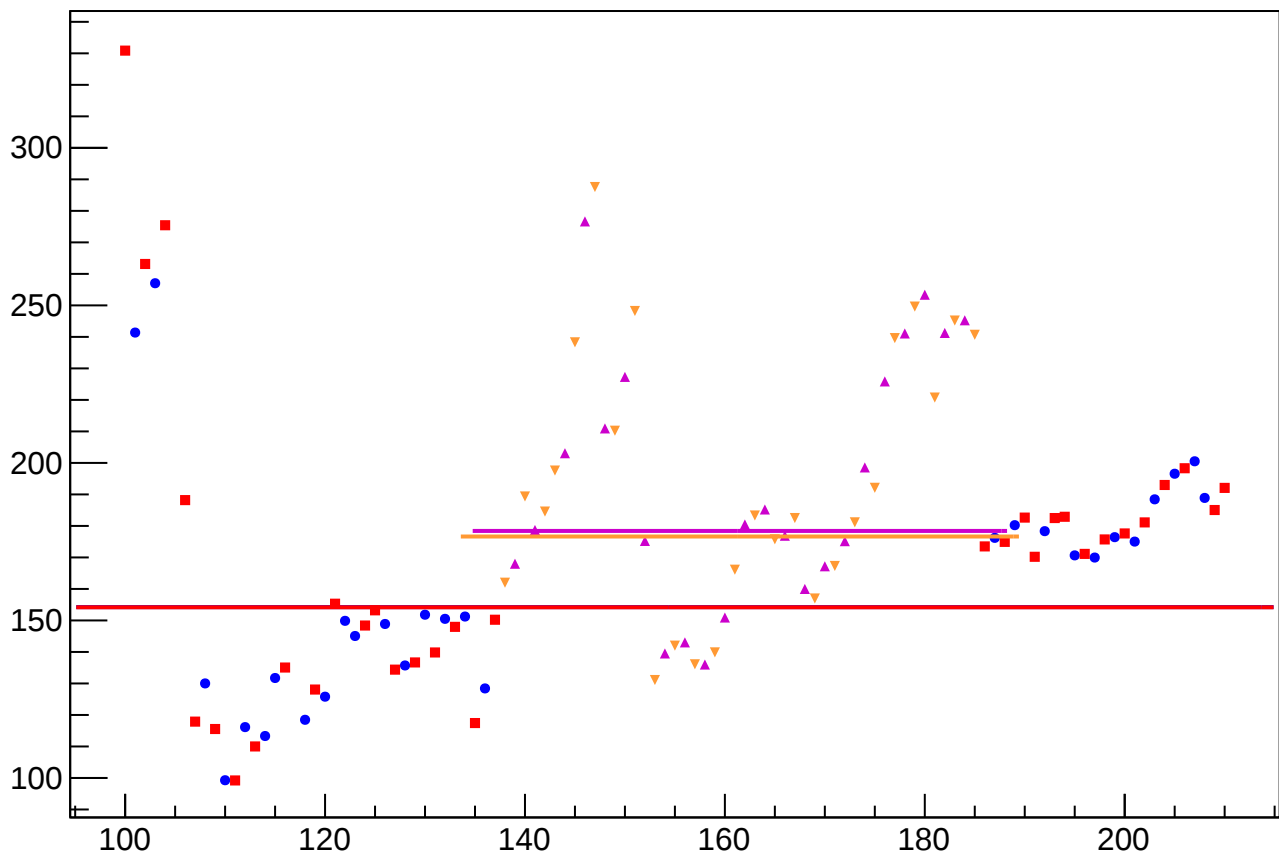
Right Out: -4800.731 $\pm$ 39.257  $\chi^2$ /NDF: 140649.7/32

All: 1520.172 $\pm$ 20.941  $\chi^2$ /NDF: 385977.4/10

- sign 949.804 $\pm$ 29.381  $\chi^2$ /NDF: 212305.4/55

Left In: 8273.228 $\pm$ 44.301  $\chi^2$ /NDF:22870.2/22

# asym\_bpm0i02WS\_rms vs Slug



Right In: 154.232 $\pm$ 0.030  $\chi^2$ /NDF: 1290550.5/27

Left Out: 176.641 $\pm$ 0.030  $\chi^2$ /NDF:1551048.8/24

Right Out: 154.176 $\pm$ 0.028  $\chi^2$ /NDF: 1631280.8/32

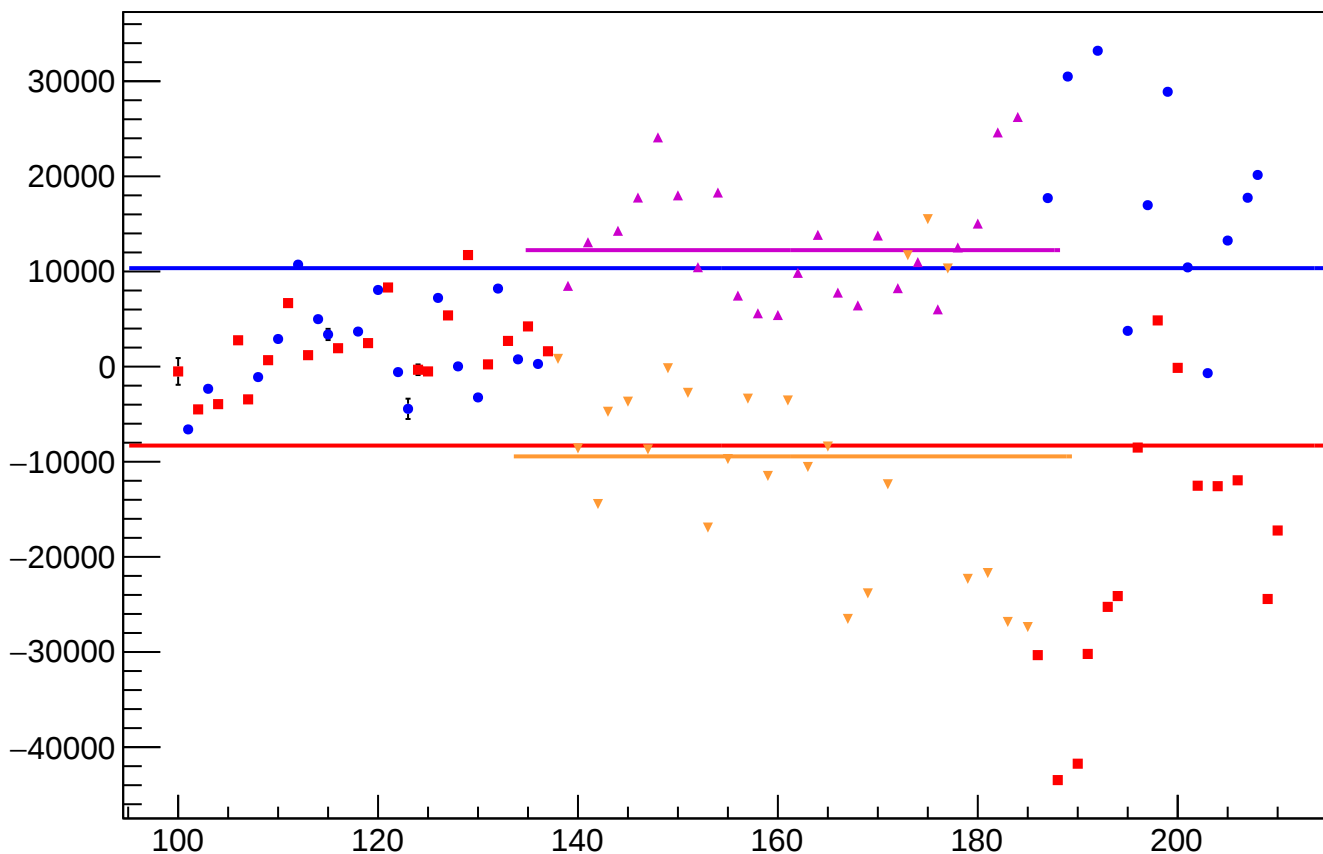
Left In: 178.413 $\pm$ 0.031  $\chi^2$ /NDF:1293736.2/22

+ sign 165.328 $\pm$ 0.021  $\chi^2$ /NDF: 3123259.6/52

All: 165.078 $\pm$ 0.015  $\chi^2$ /NDF: 6383895.8/100

- sign 164.836 $\pm$ 0.021  $\chi^2$ /NDF: 3260360.4/55

# asym\_bpm0i02aWS\_mean vs Slug



Right In: 10349.784 $\pm$ 47.160  $\chi^2$ /NDF: 52244.8/27

Left Out: -9437.408 $\pm$ 45.534  $\chi^2$ /NDF: 62220.4/24

Right Out: -8299.174 $\pm$ 43.675  $\chi^2$ /NDF: 112354.3/32

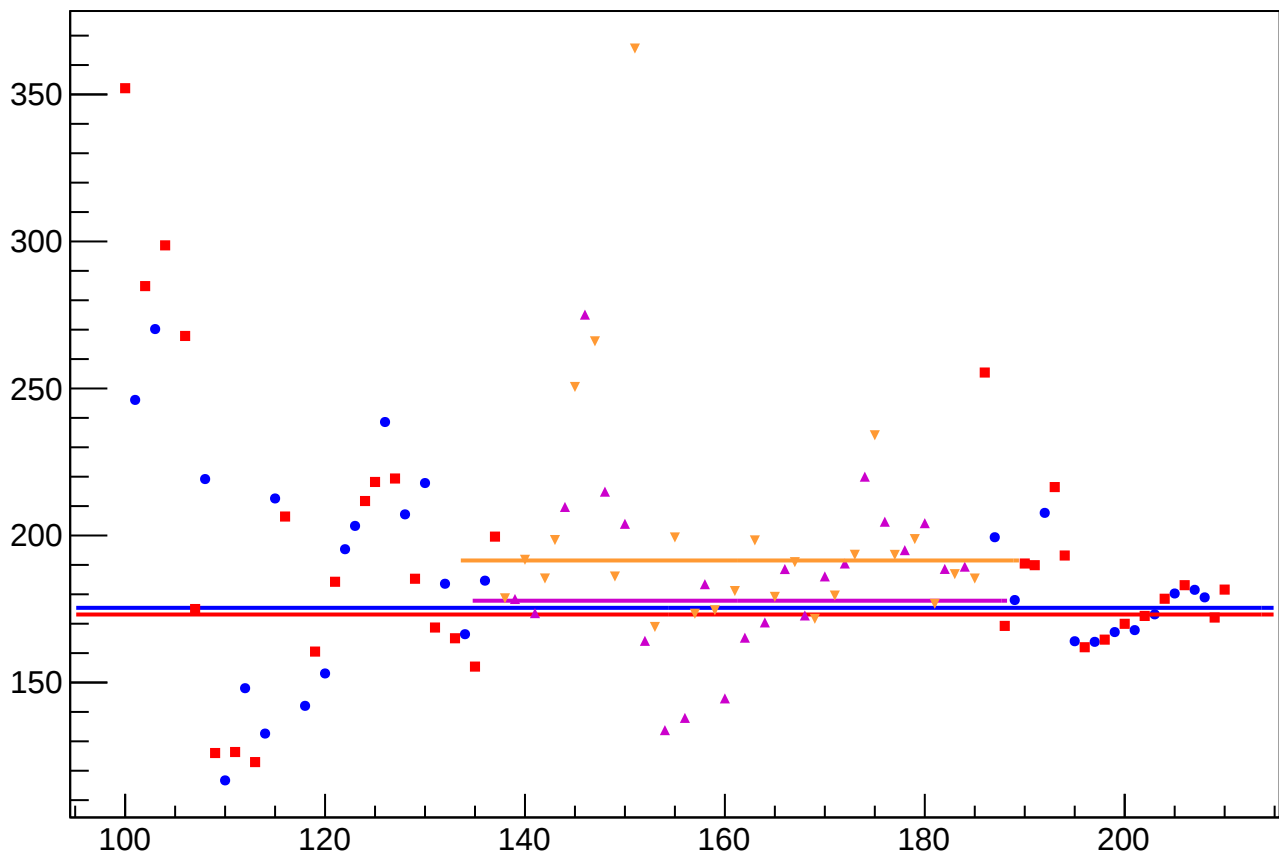
Left In: 12242.226 $\pm$ 43.944  $\chi^2$ /NDF: 16615.8/22

+ sign 109.340 $\pm$ 32.757  $\chi^2$ /NDF: 205574.2/52

All: 1059.022 $\pm$ 22.507  $\chi^2$ /NDF: 446059.0/10

- sign 1908.326 $\pm$ 30.978  $\chi^2$ /NDF: 238892.6/55

# asym\_bpm0i02aWS\_rms vs Slug



Right In: 175.401+/-0.033  $\chi^2/\text{NDF}$ : 762306.7/27

Left Out: 191.507+/-0.032  $\chi^2/\text{NDF}$ : 727251.6/24

Right Out: 173.132+/-0.031  $\chi^2/\text{NDF}$ : 1134860.5/32

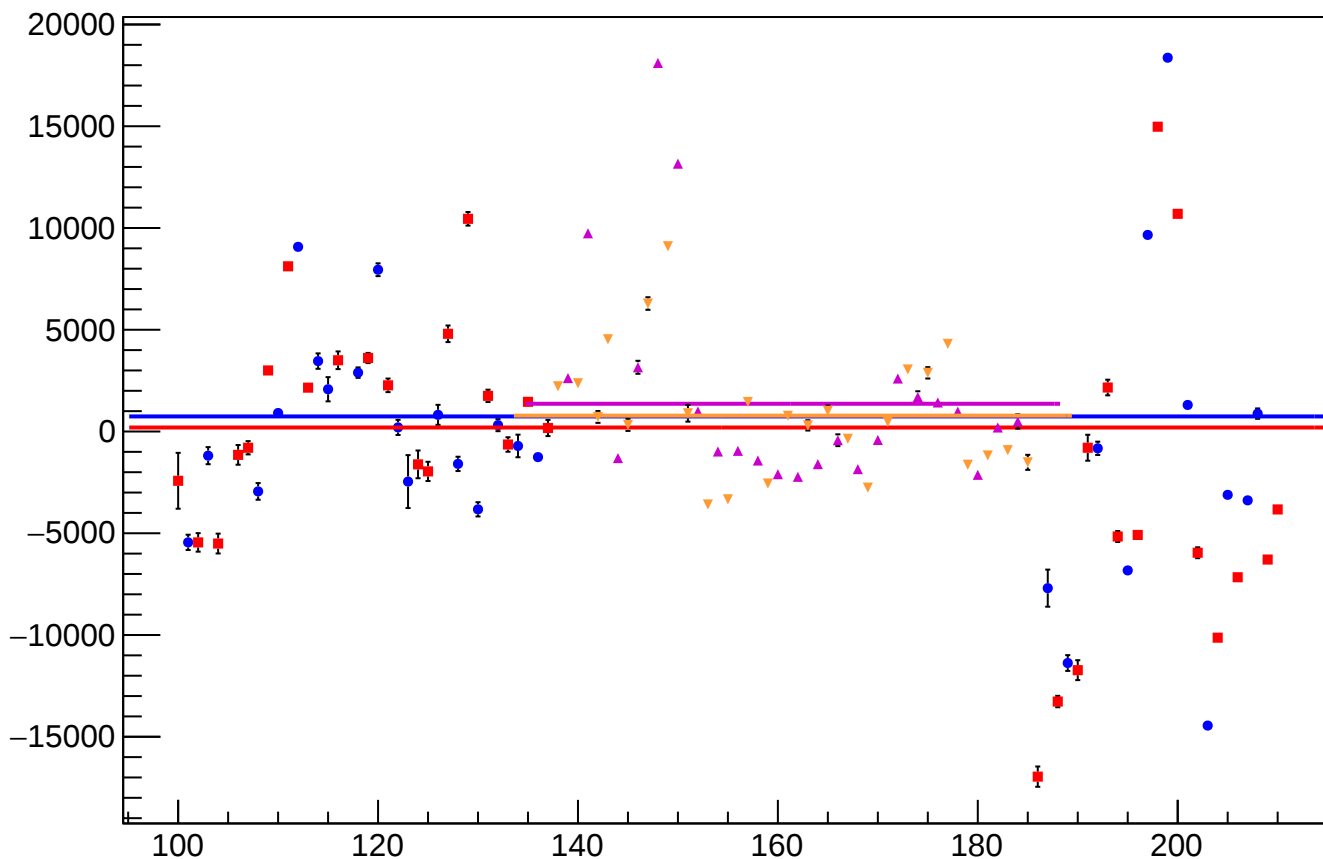
Left In: 177.821+/-0.031  $\chi^2/\text{NDF}$ : 862494.4/22

+ sign 183.736+/-0.023  $\chi^2/\text{NDF}$ : 1610281.0/52

All: 179.368+/-0.016  $\chi^2/\text{NDF}$ : 3686453.5/108

- sign 175.462+/-0.022  $\chi^2/\text{NDF}$ : 2008813.6/55

# asym\_bpm0i05WS\_mean vs Slug



Right In: 740.666 $\pm$ 52.968  $\chi^2$ /NDF: 20338.2/27

Left Out: 779.983 $\pm$ 47.457  $\chi^2$ /NDF:4260.8/24

Right Out: 196.651 $\pm$ 49.179  $\chi^2$ /NDF: 21662.5/32

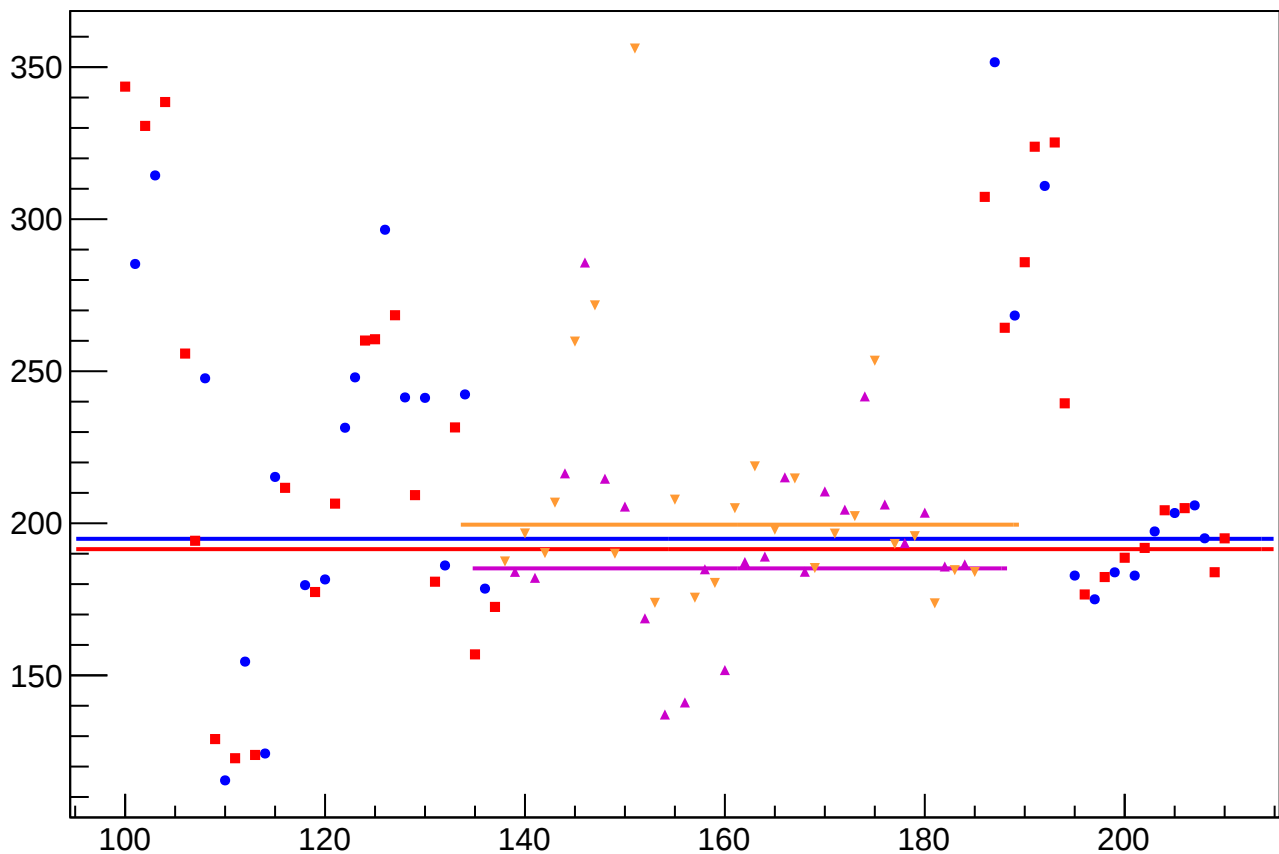
Left In: 1363.043 $\pm$ 45.807  $\chi^2$ /NDF:11632.9/22

+ sign 762.475 $\pm$ 35.346  $\chi^2$ /NDF: 24599.2/52

All: 793.397 $\pm$ 24.322  $\chi^2$ /NDF: 58197.3/108

- sign 821.206 $\pm$ 33.519  $\chi^2$ /NDF: 33596.6/55

# asym\_bpm0i05WS\_rms vs Slug



Right In:  $194.893 \pm 0.037$   $\chi^2/\text{NDF}$ : 1415382.7/27

Left Out:  $199.547 \pm 0.034$   $\chi^2/\text{NDF}$ : 729356.3/24

Right Out:  $191.495 \pm 0.035$   $\chi^2/\text{NDF}$ : 2145201.1/32

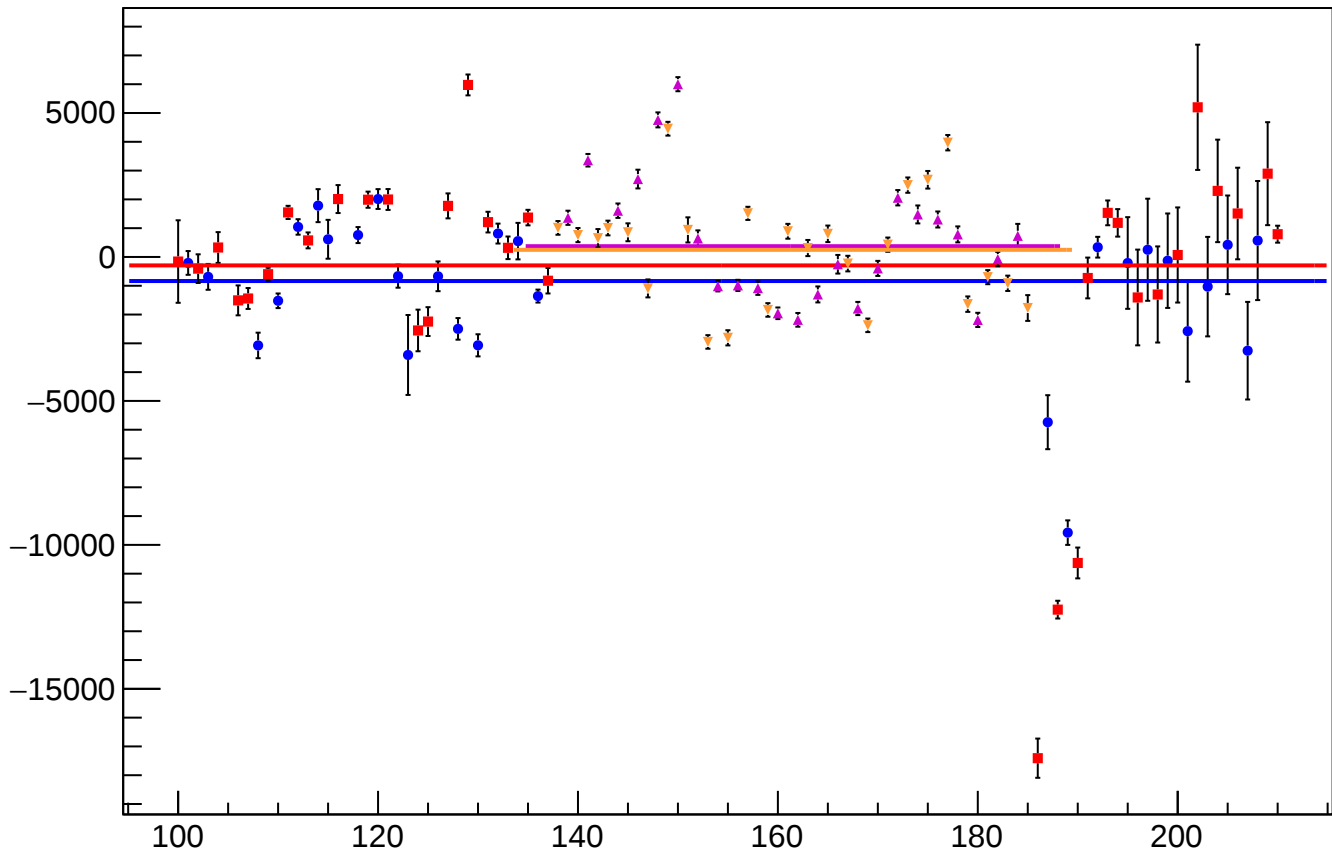
Left In:  $185.171 \pm 0.032$   $\chi^2/\text{NDF}$ : 882752.2/22

+ sign  $197.474 \pm 0.025$   $\chi^2/\text{NDF}$ : 2153304.1/52

All:  $192.543 \pm 0.017$   $\chi^2/\text{NDF}$ : 5272903.9/108

- sign  $188.109 \pm 0.024$   $\chi^2/\text{NDF}$ : 3045665.3/55

# asym\_bpm0i07WS\_mean vs Slug



Right In:  $-835.946 \pm 83.372$   $\chi^2/\text{NDF}$ : 764.2/27

Left Out:  $247.844 \pm 53.555$   $\chi^2/\text{NDF}$ : 1355.1/24

Right Out:  $-293.017 \pm 72.609$   $\chi^2/\text{NDF}$ : 3190.5/32

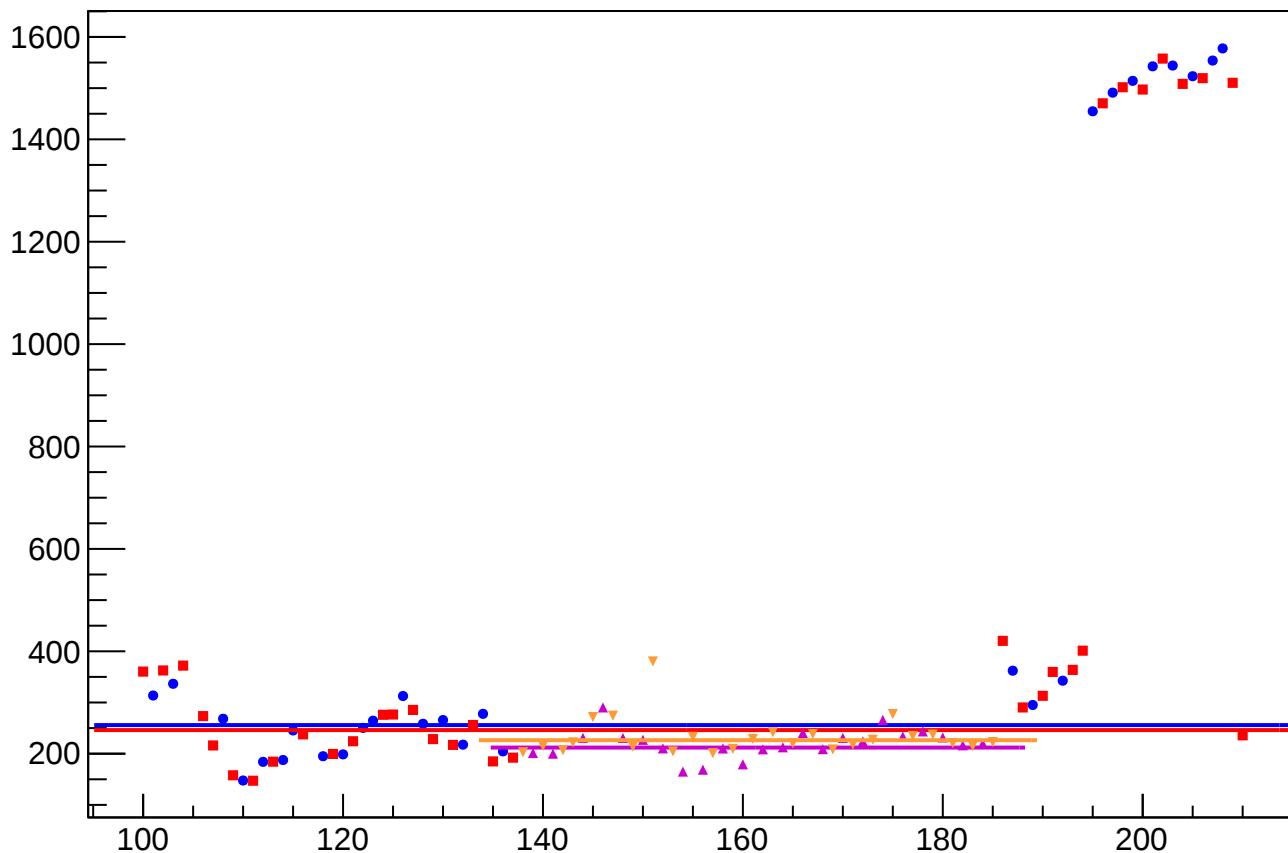
Left In:  $374.122 \pm 52.049$   $\chi^2/\text{NDF}$ : 1801.0/22

+ sign  $-68.730 \pm 45.059$   $\chi^2/\text{NDF}$ : 2238.9/52

All:  $46.291 \pm 30.841$   $\chi^2/\text{NDF}$ : 7298.5/108

- sign  $147.668 \pm 42.303$   $\chi^2/\text{NDF}$ : 5047.3/55

# asym\_bpm0i07WS\_rms vs Slug



Right In: 255.878 $\pm$ 0.059  $\chi^2$ /NDF: 9660935.2/27

Left Out: 226.322 $\pm$ 0.038  $\chi^2$ /NDF: 521041.8/24

Right Out: 246.105 $\pm$ 0.051  $\chi^2$ /NDF: 9273046.4/32

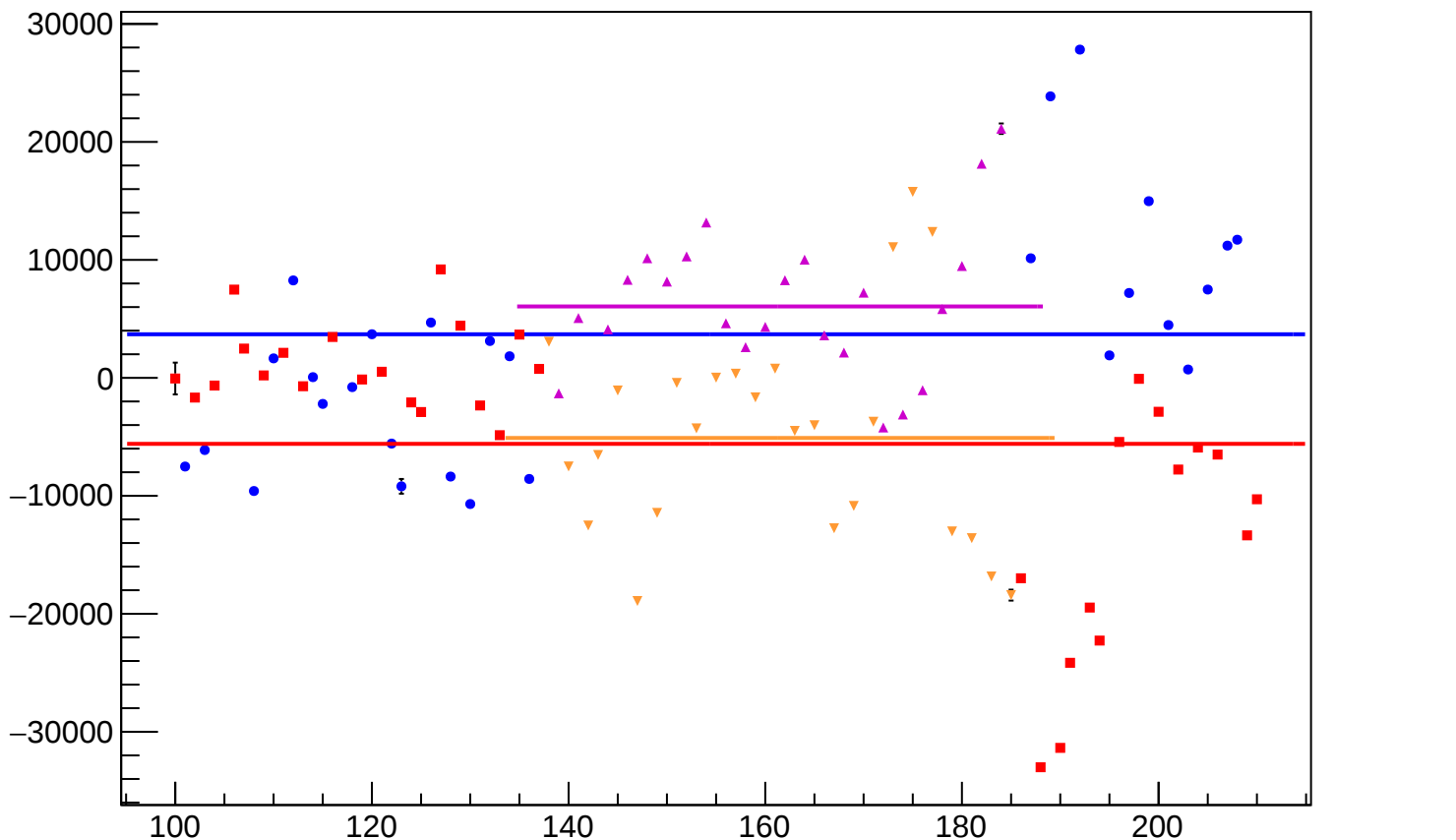
Left In: 211.970 $\pm$ 0.037  $\chi^2$ /NDF: 584344.5/22

+ sign 234.955 $\pm$ 0.032  $\chi^2$ /NDF: 10359912.7/52

All: 228.897 $\pm$ 0.022  $\chi^2$ /NDF: 20577314.1/10

- sign 223.557 $\pm$ 0.030  $\chi^2$ /NDF: 10149378.6/55

# asym\_bpm1i02WS\_mean vs Slug



Right In: 3694.951+/-35.717  $\chi^2/\text{NDF}$ : 77238.0/27

Left Out: -5095.305+/-33.703  $\chi^2/\text{NDF}$ : 54395.4/24

Right Out: -5593.956+/-33.125  $\chi^2/\text{NDF}$ : 103461.7/32

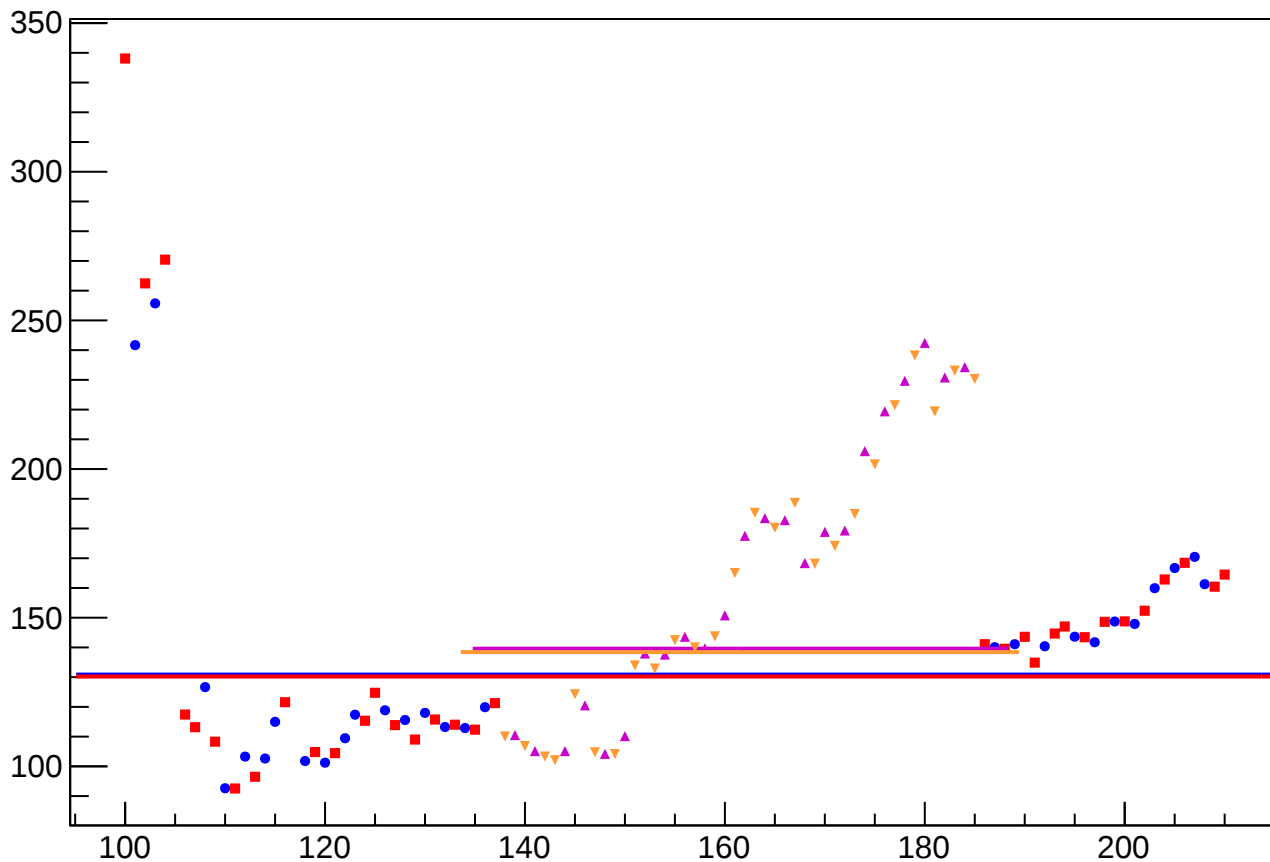
Left In: 6053.569+/-34.998  $\chi^2/\text{NDF}$ : 17590.3/22

+ sign -954.957+/-24.513  $\chi^2/\text{NDF}$ : 163673.1/52

All: -514.470+/-17.170  $\chi^2/\text{NDF}$ : 343781.6/10

- sign -90.188+/-24.058  $\chi^2/\text{NDF}$ : 179474.5/55

# asym\_bpm1i02WS\_rms vs Slug



Right In: 130.866+/-0.025  $\chi^2/\text{NDF}$ : 1286966.5/27

Left Out: 138.436+/-0.024  $\chi^2/\text{NDF}$ : 2549435.8/24

Right Out: 130.210+/-0.023  $\chi^2/\text{NDF}$ : 1480201.6/32

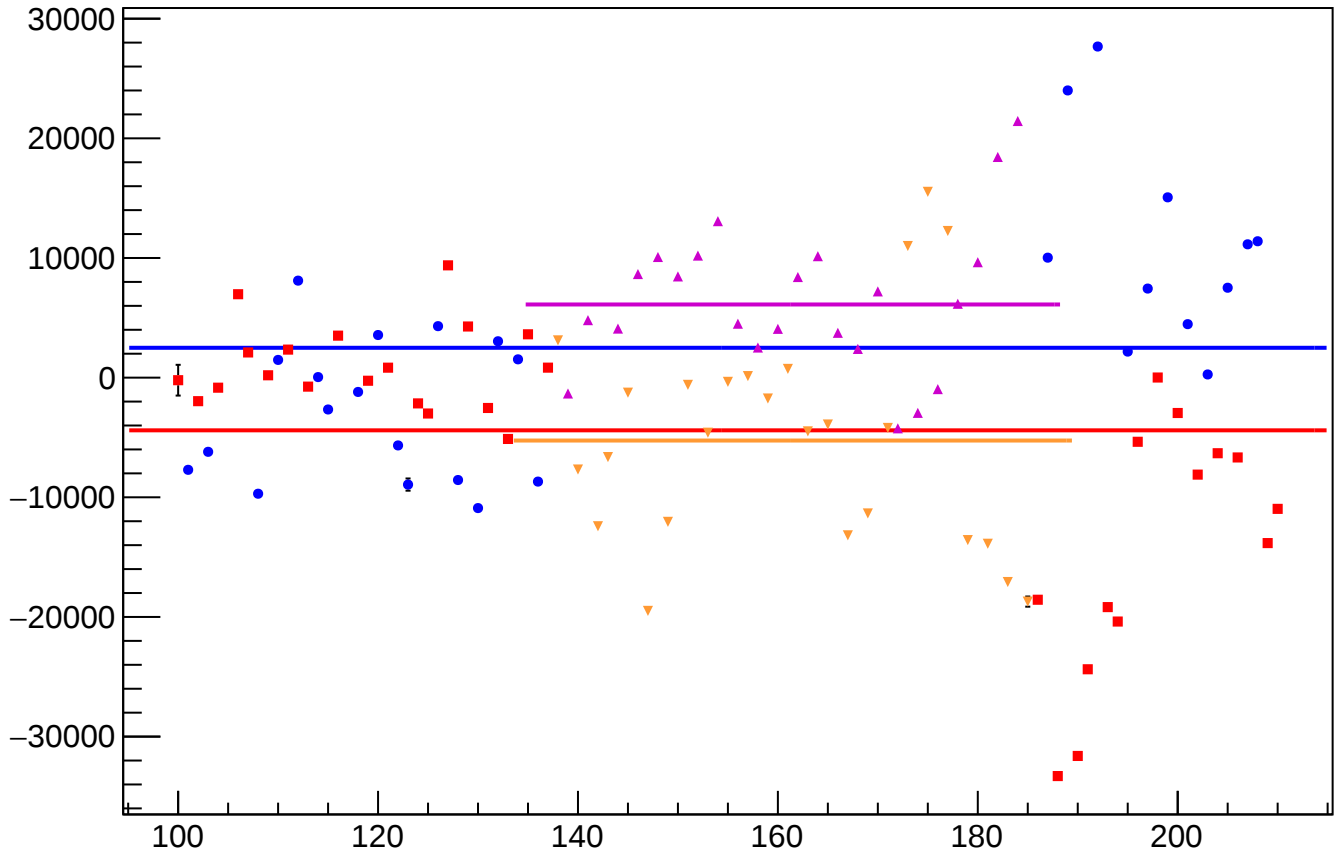
Left In: 139.578+/-0.025  $\chi^2/\text{NDF}$ : 2413658.9/22

+ sign 134.870+/-0.017  $\chi^2/\text{NDF}$ : 3883925.4/52

All: 134.751+/-0.012  $\chi^2/\text{NDF}$ : 7853457.0/108

- sign 134.637+/-0.017  $\chi^2/\text{NDF}$ : 3969439.1/55

# asym\_bpm1i04WS\_mean vs Slug



Right In: 2495.779+/-31.900  $\chi^2/\text{NDF}$ : 86438.2/27

Left Out: -5255.652+/-30.622  $\chi^2/\text{NDF}$ : 64324.6/24

+ sign -1538.349+/-22.091  $\chi^2/\text{NDF}$ : 181491.5/52

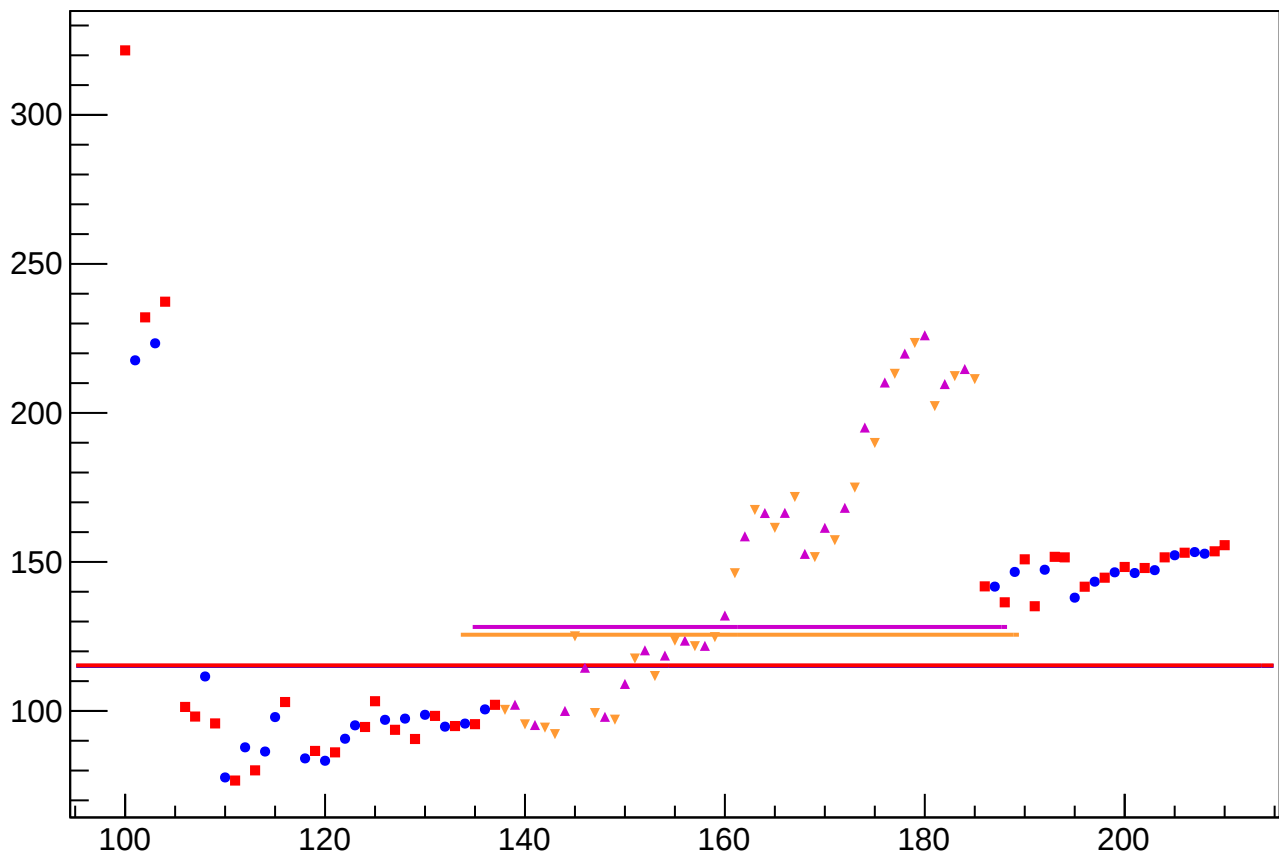
Right Out: -4403.588+/-29.824  $\chi^2/\text{NDF}$ : 112762.8/32

All: -525.834+/-15.537  $\chi^2/\text{NDF}$ : 377251.5/10

- sign 465.344+/-21.857  $\chi^2/\text{NDF}$ : 191602.8/55

Left In: 6114.901+/-32.126  $\chi^2/\text{NDF}$ : 21260.9/22

# asym\_bpm1i04WS\_rms vs Slug



Right In: 115.110 $\pm$ 0.023  $\chi^2$ /NDF: 1969918.7/27

Left Out: 125.577 $\pm$ 0.022  $\chi^2$ /NDF: 2595752.6/24

Right Out: 115.284 $\pm$ 0.021  $\chi^2$ /NDF: 2350414.4/32

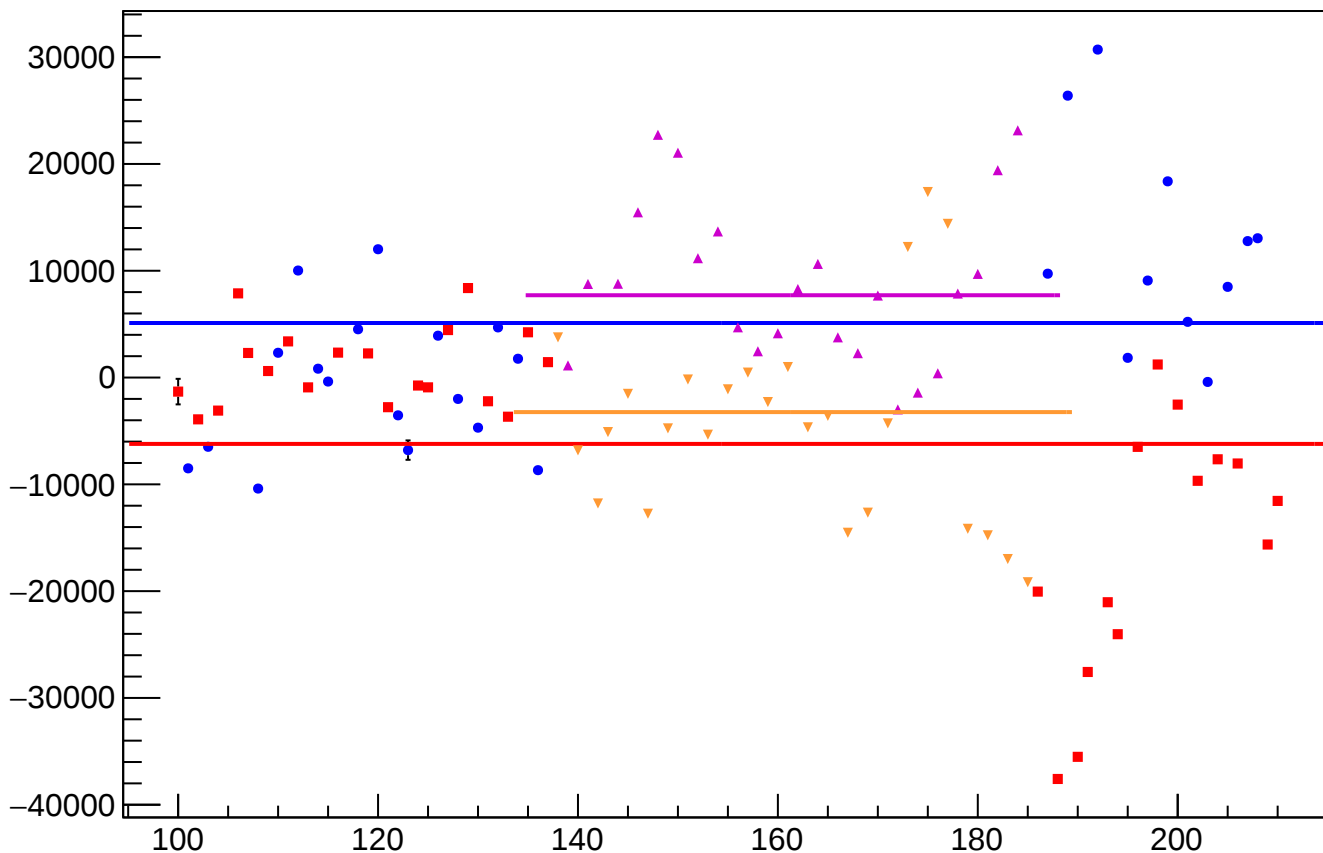
Left In: 128.184 $\pm$ 0.023  $\chi^2$ /NDF: 2332977.5/22

+ sign 120.558 $\pm$ 0.016  $\chi^2$ /NDF: 4677730.1/52

All: 120.910 $\pm$ 0.011  $\chi^2$ /NDF: 9535323.3/108

- sign 121.255 $\pm$ 0.015  $\chi^2$ /NDF: 4856585.6/55

# asym\_bpm1i06WS\_mean vs Slug



Right In: 5107.451+/-42.304     $\chi^2/\text{NDF}$ : 60976.7/27

Left Out: -3234.922+/-40.583     $\chi^2/\text{NDF}$ : 36739.9/24

Right Out: -6213.936+/-39.385     $\chi^2/\text{NDF}$ : 92789.1/32

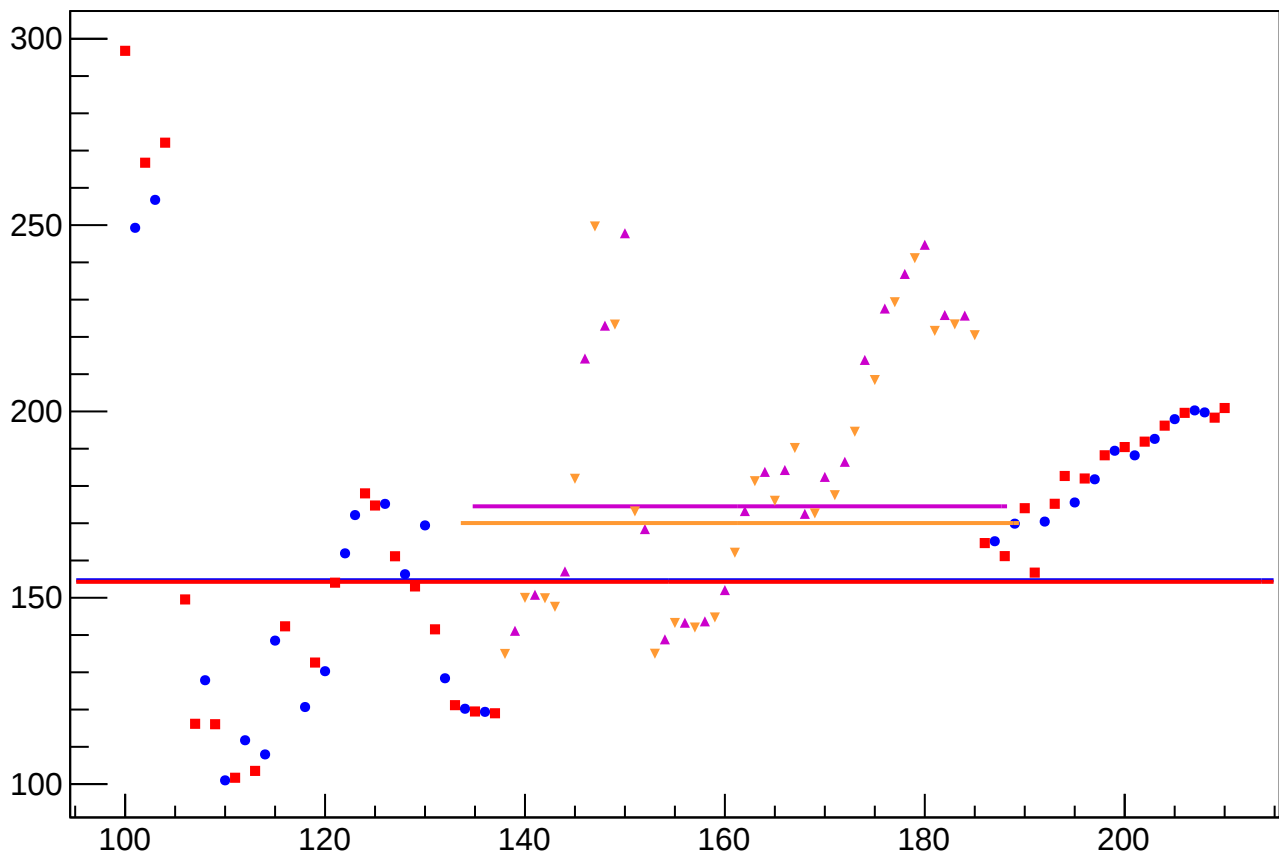
Left In: 7707.068+/-42.990     $\chi^2/\text{NDF}$ : 21268.3/22

+ sign 763.133+/-29.286     $\chi^2/\text{NDF}$ : 117968.2/52

All: 448.240+/-20.621     $\chi^2/\text{NDF}$ : 289264.1/108

- sign 138.598+/-29.041     $\chi^2/\text{NDF}$ : 171066.7/55

# asym\_bpm1i06WS\_rms vs Slug



Right In: 154.707 $\pm$ 0.030  $\chi^2$ /NDF: 1536888.3/27

Left Out: 170.050 $\pm$ 0.029  $\chi^2$ /NDF:1240866.9/24

Right Out: 154.279 $\pm$ 0.028  $\chi^2$ /NDF: 1794726.7/32

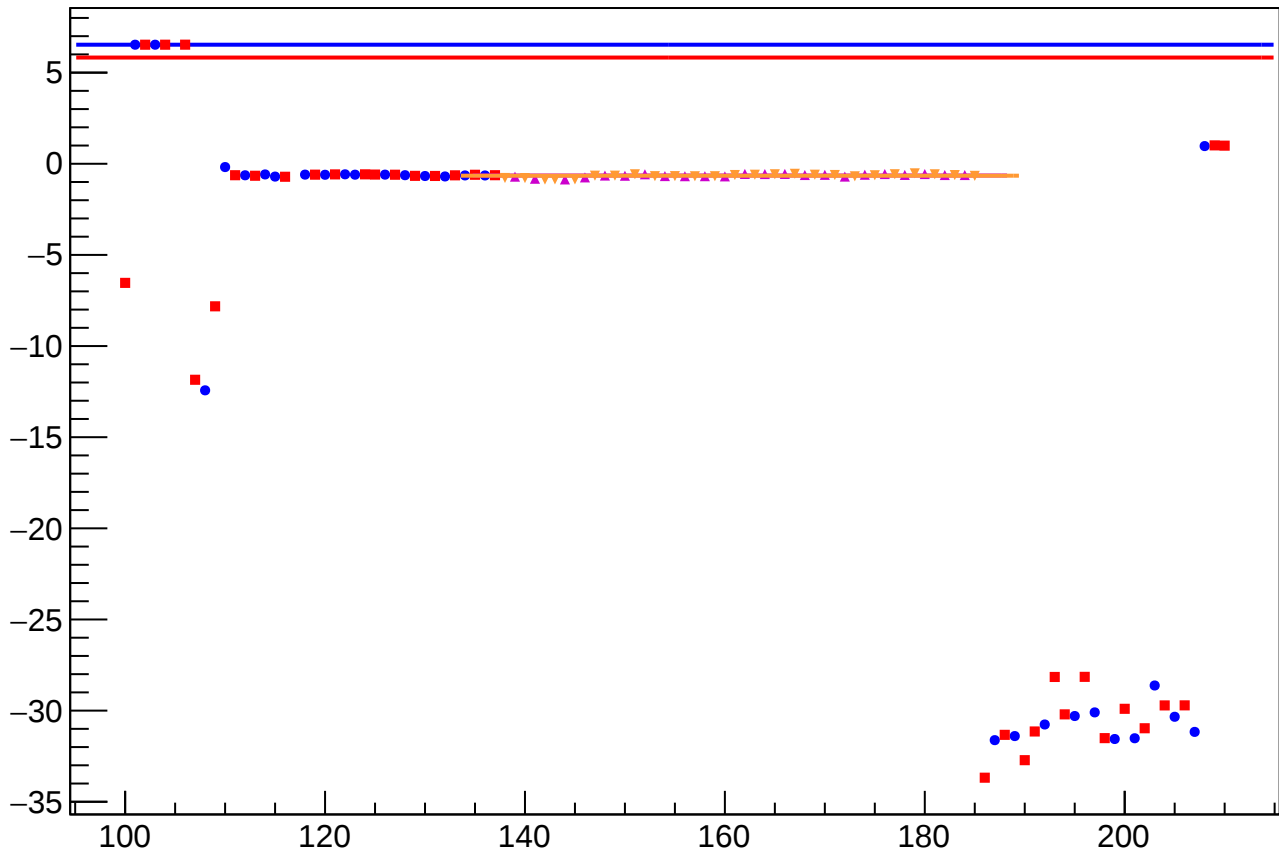
Left In: 174.539 $\pm$ 0.030  $\chi^2$ /NDF:1210071.2/22

+ sign 162.697 $\pm$ 0.021  $\chi^2$ /NDF: 2914742.6/52

All: 163.114 $\pm$ 0.015  $\chi^2$ /NDF: 6161857.1/108

- sign 163.524 $\pm$ 0.021  $\chi^2$ /NDF: 3246310.2/55

# yield\_cav4bX\_mean vs Slug



Right In: 6.532 $\pm$ 0.000  $\chi^2$ /NDF: 129910336814.7/27

Left Out: -0.654 $\pm$ 0.000  $\chi^2$ /NDF: 179109810.4/24

Right Out: 5.827 $\pm$ 0.000  $\chi^2$ /NDF: 755950426043838.8/32

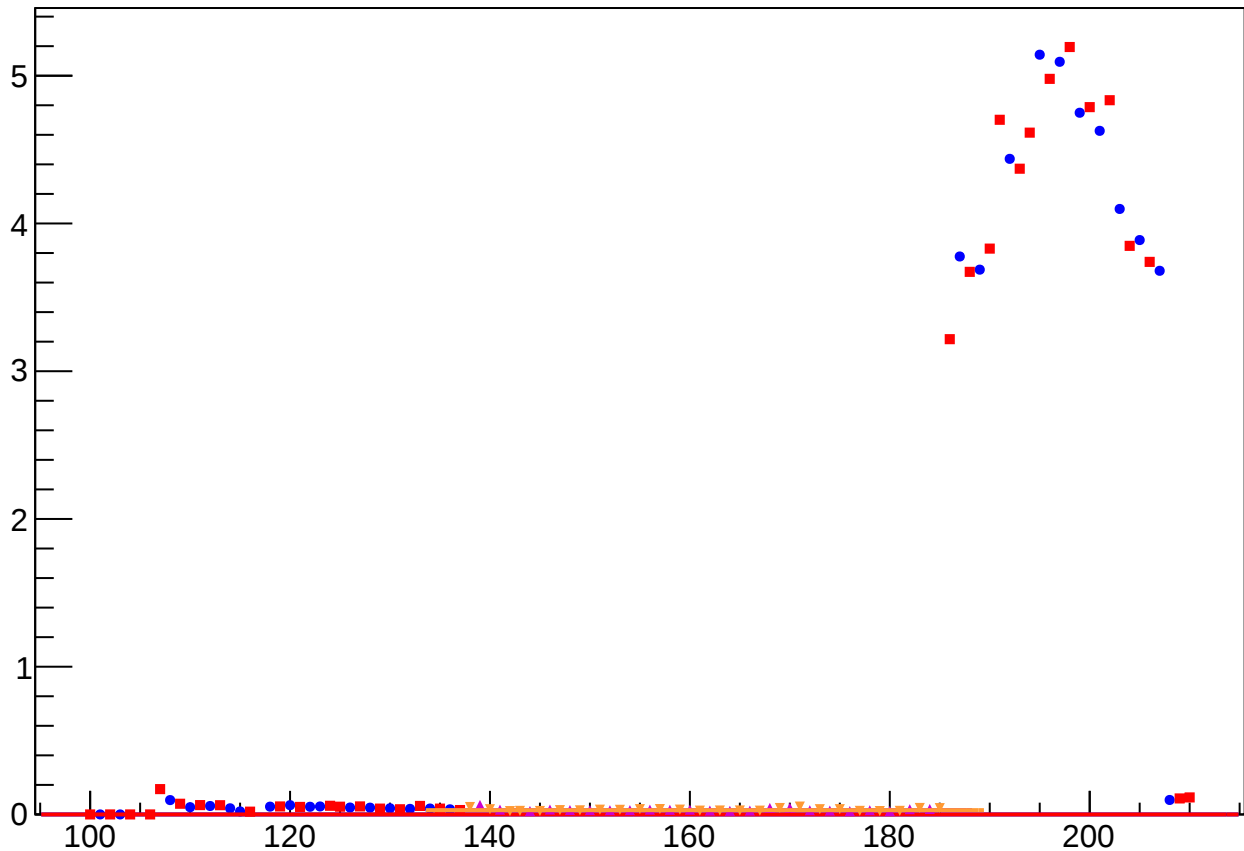
Left In: -0.644 $\pm$ 0.000  $\chi^2$ /NDF: 122913584.0/22

+ sign 6.530 $\pm$ 0.000  $\chi^2$ /NDF: 1001298544985.1/52

All: 6.153 $\pm$ 0.000  $\chi^2$ /NDF: 77760698748987.1/104

- sign 5.826 $\pm$ 0.000  $\chi^2$ /NDF: 756621769382585.8/64

# yield\_cav4bX\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 24080500.5/27

Left Out: 0.029+/-0.000  $\chi^2/\text{NDF}$ :1487017.7/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 27635673.2/32

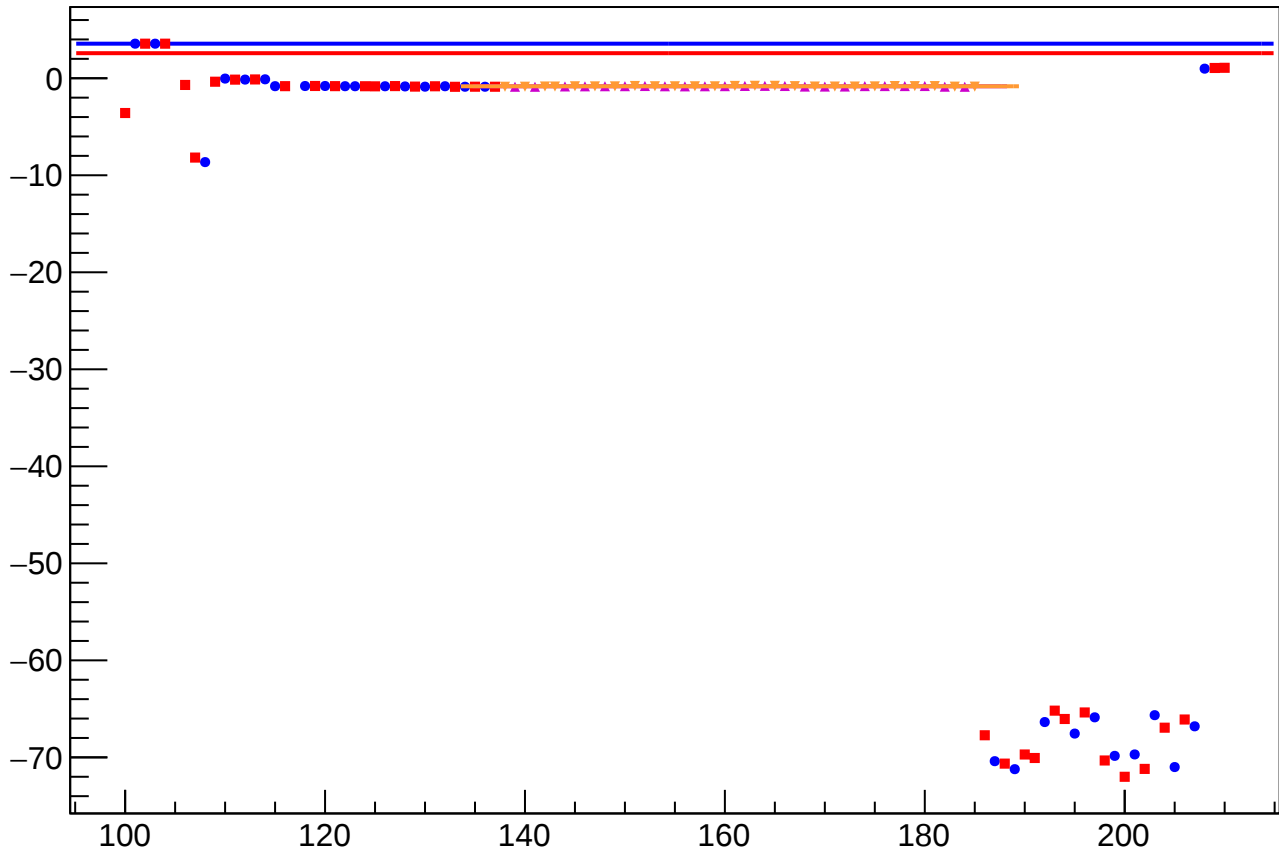
Left In: 0.029+/-0.000  $\chi^2/\text{NDF}$ :1164030.9/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 53951727.9/52

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 109553478.9/108

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 55601095.4/55

# yield\_cav4bY\_mean vs Slug



Right In: 3.563+/-0.000  $\chi^2/\text{NDF}$ : 530127462528.1/27

Left Out: -0.828+/-0.000  $\chi^2/\text{NDF}$ : 168178464.8/24

Right Out: 2.583+/-0.000  $\chi^2/\text{NDF}$ : 1253543143513050.0/32

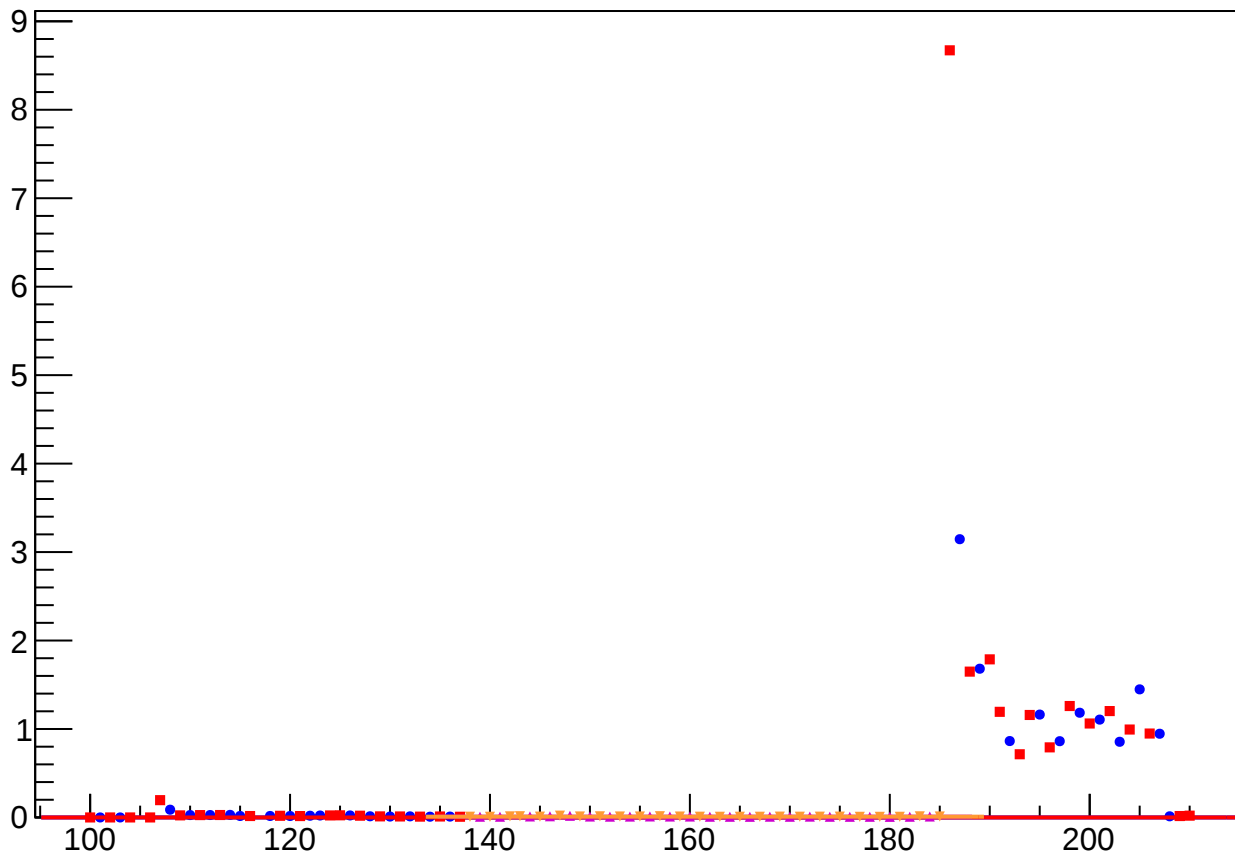
Left In: -0.827+/-0.000  $\chi^2/\text{NDF}$ : 172640246.1/22

+ sign 3.560+/-0.000  $\chi^2/\text{NDF}$ : 4212234061451.9/52

All: 3.038+/-0.000  $\chi^2/\text{NDF}$ : 13880305509530

- sign 2.581+/-0.000  $\chi^2/\text{NDF}$ : 1255743167359912.5

# yield\_cav4bY\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 22266807.8/27

Left Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ :1454710.9/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 25606310.1/32

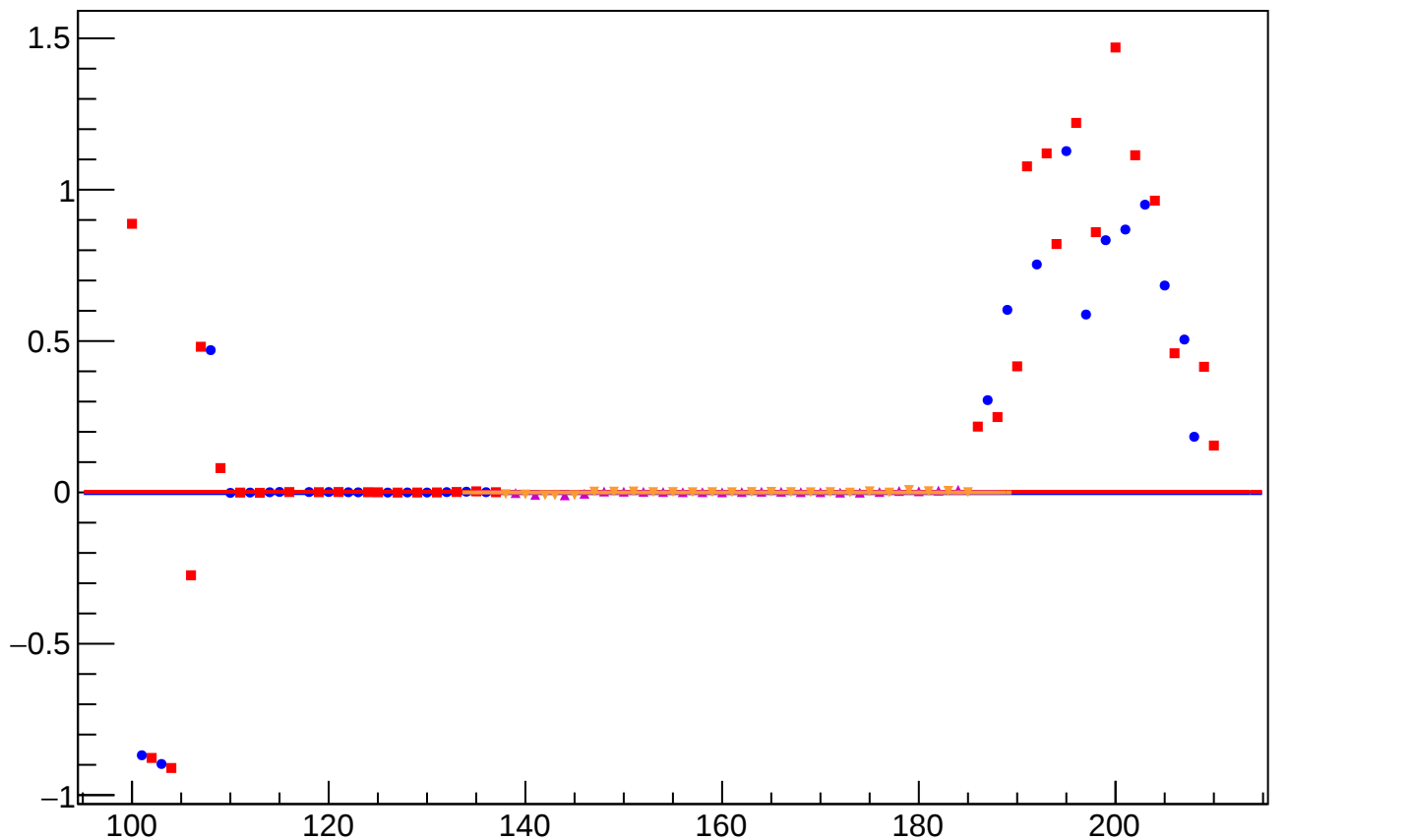
Left In: 0.009+/-0.000  $\chi^2/\text{NDF}$ :1041524.9/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 53674578.3/52

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 108825740.8/108

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 55150149.9/55

# yield\_cav4cX\_mean vs Slug



Right In:  $-0.002 \pm 0.000$   $\chi^2/\text{NDF}: 9797101725.2/27$

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 151482851.1/24$

Right Out:  $0.002 \pm 0.000$   $\chi^2/\text{NDF}: 3043703417.5/32$

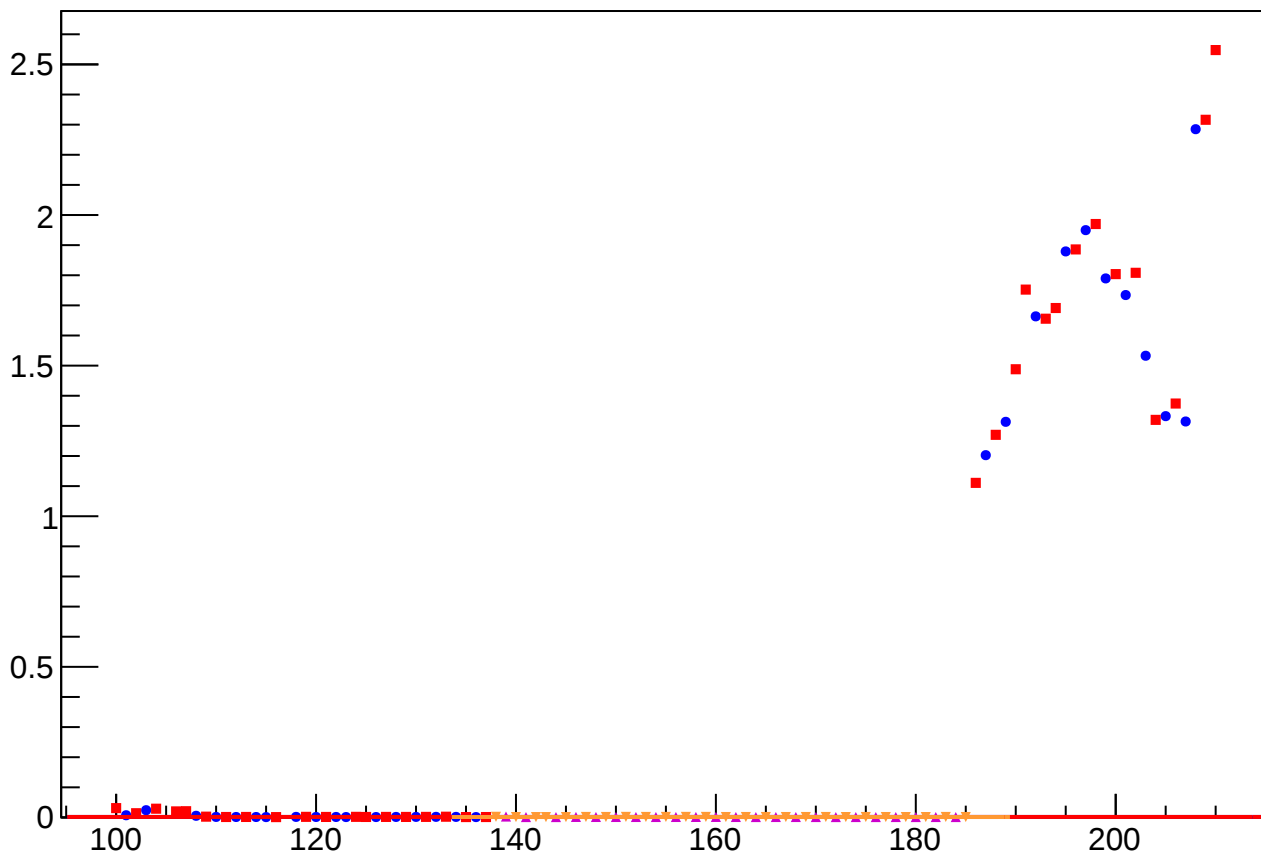
Left In:  $0.001 \pm 0.000$   $\chi^2/\text{NDF}: 101439617.3/22$

+ sign  $-0.001 \pm 0.000$   $\chi^2/\text{NDF}: 9955116127.7/52$

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 13109809199.6/100$

- sign  $0.001 \pm 0.000$   $\chi^2/\text{NDF}: 3147111660.7/55$

# yield\_cav4cX\_rms vs Slug



Right In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 16959569.2/27

Left Out: 0.001 $\pm$ 0.000  $\chi^2$ /NDF:539817.3/24

Right Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 21264689.8/32

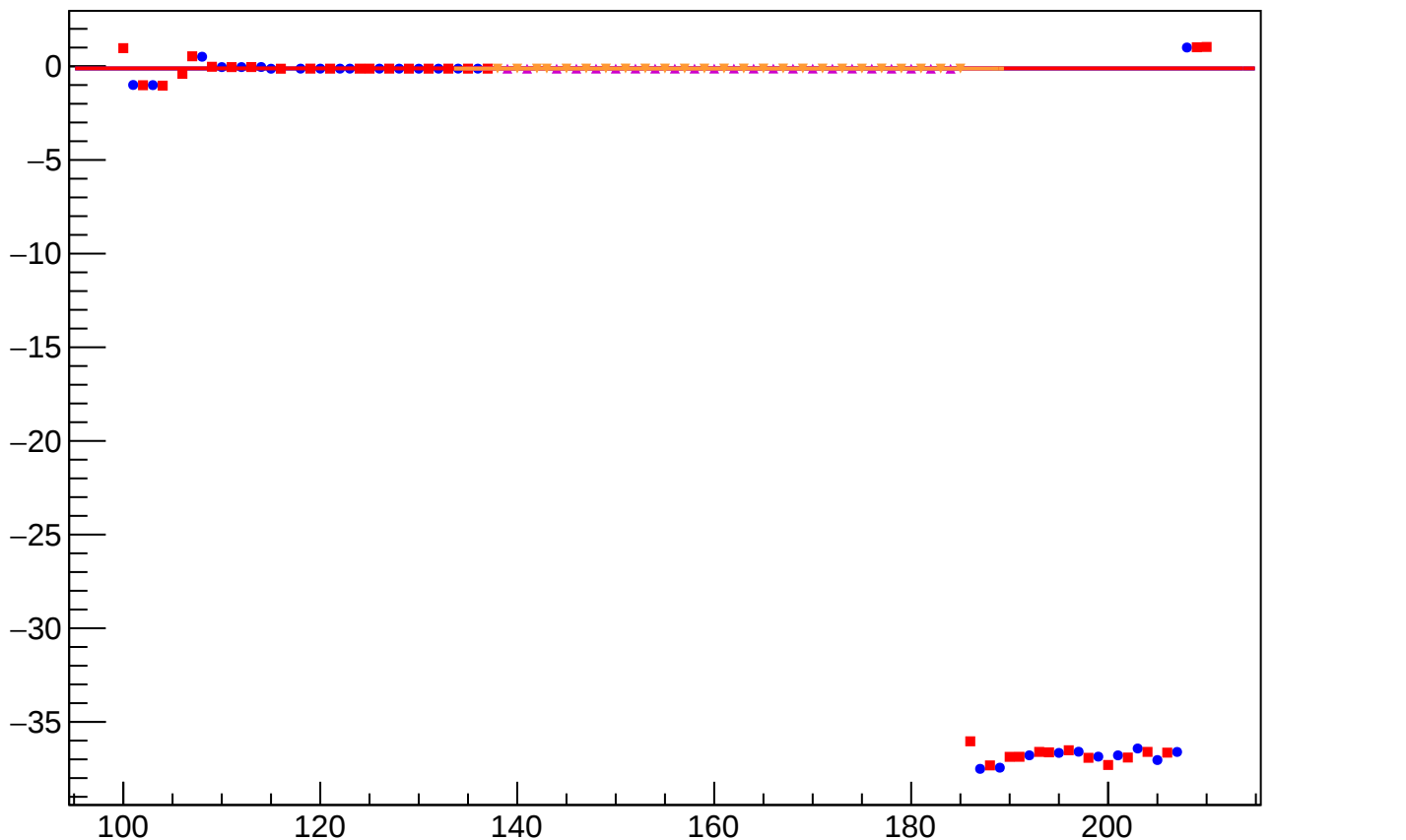
Left In: 0.001 $\pm$ 0.000  $\chi^2$ /NDF:626044.8/22

+ sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 17571988.2/52

All: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 39582627.7/108

- sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 22001659.7/55

# yield\_cav4cY\_mean vs Slug



Right In:  $-0.118 \pm 0.000$   $\chi^2/\text{NDF}: 73101868843.3/27$

Left Out:  $-0.121 \pm 0.000$   $\chi^2/\text{NDF}: 58120109.3/24$

Right Out:  $-0.110 \pm 0.000$   $\chi^2/\text{NDF}: 81528666918.4/32$

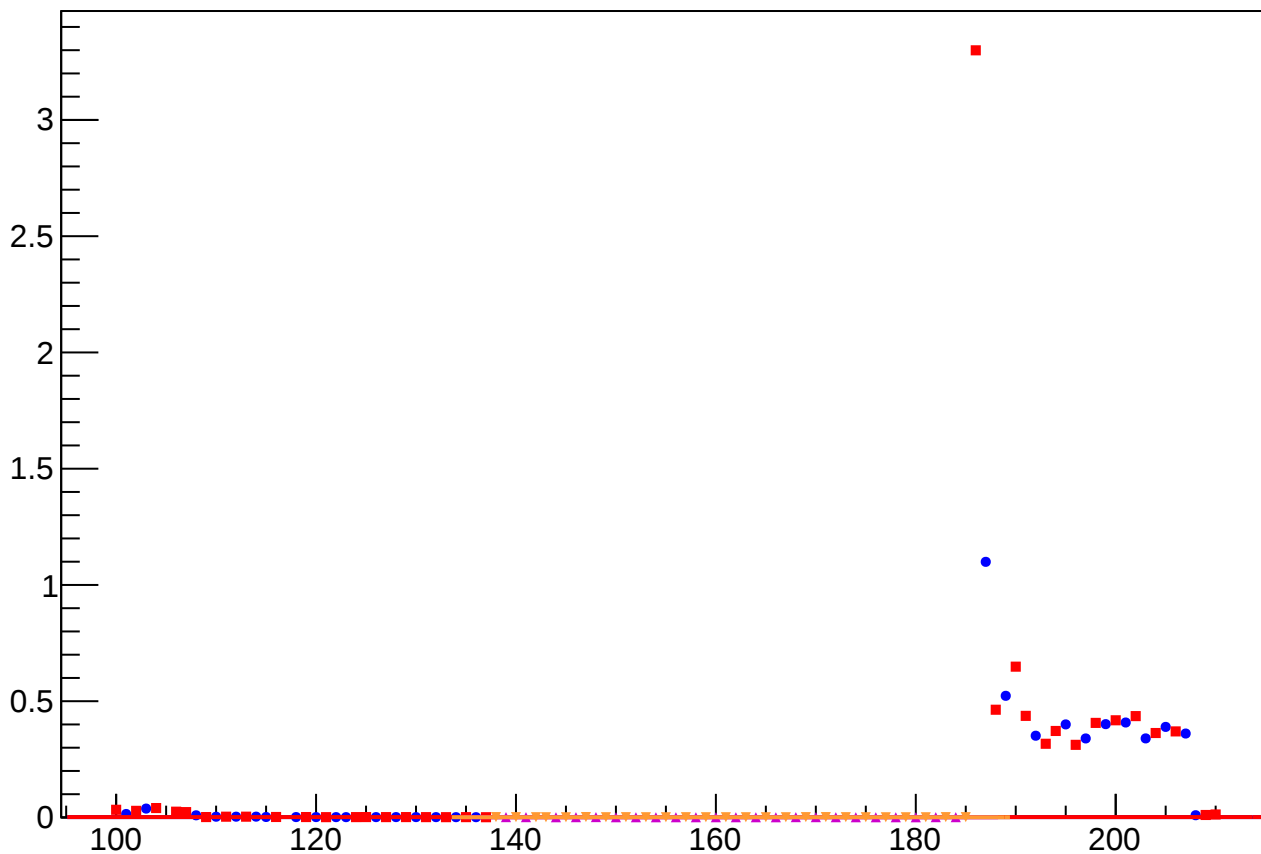
Left In:  $-0.121 \pm 0.000$   $\chi^2/\text{NDF}: 52113932.9/22$

+ sign  $-0.121 \pm 0.000$   $\chi^2/\text{NDF}: 73179798994.6/52$

All:  $-0.120 \pm 0.000$   $\chi^2/\text{NDF}: 154962050334.9$

- sign  $-0.120 \pm 0.000$   $\chi^2/\text{NDF}: 81773900525.9/55$

# yield\_cav4cY\_rms vs Slug



Right In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 16939731.4/27

Left Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ :1363316.8/24

Right Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 20525142.0/32

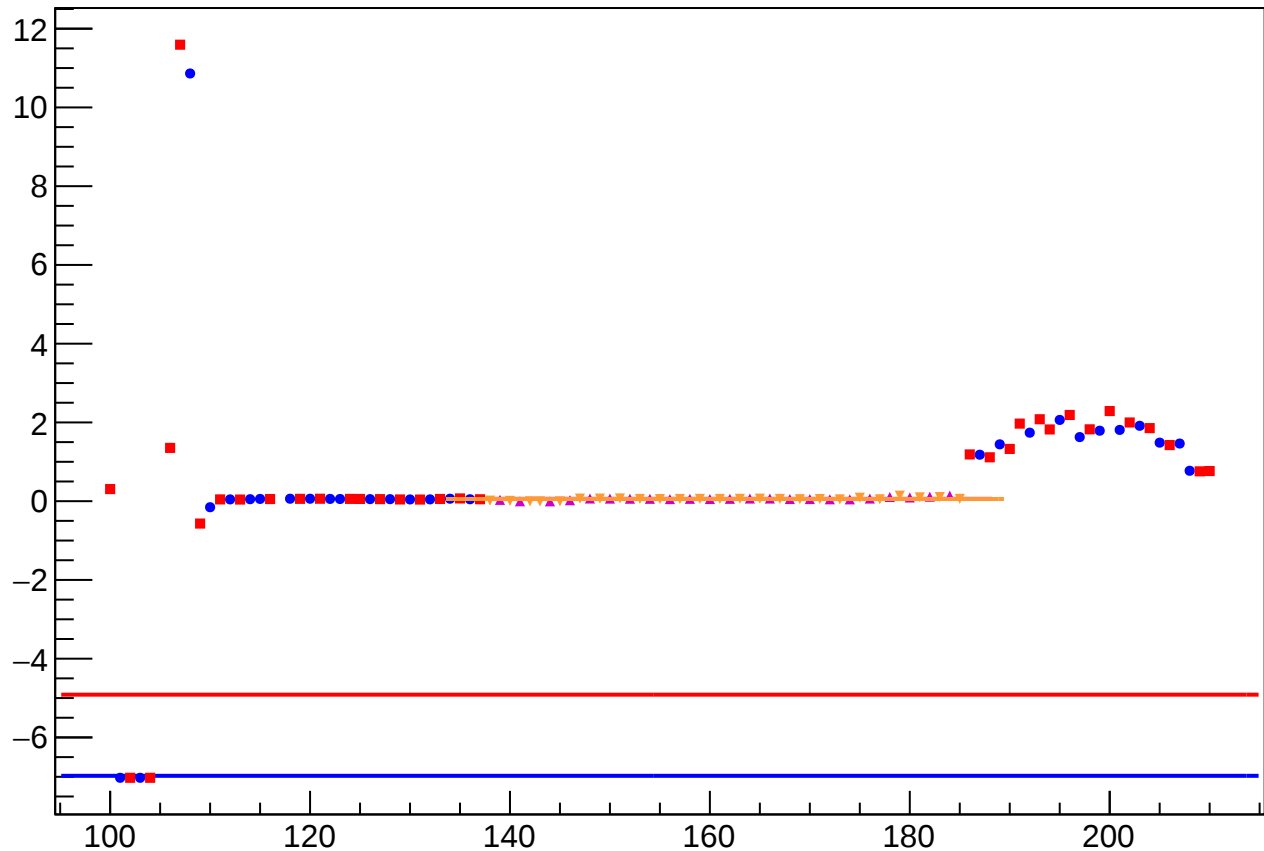
Left In: 0.001+/-0.000  $\chi^2/\text{NDF}$ :970801.8/22

+ sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 19628269.7/52

All: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 42495418.1/108

- sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 22863947.3/55

# yield\_cav4dX\_mean vs Slug



Right In:  $-6.975 \pm 0.000$   $\chi^2/\text{NDF}: 8797691932676.1/27$

Left Out:  $0.055 \pm 0.000$   $\chi^2/\text{NDF}: 243682351.4/24$

Right Out:  $-4.914 \pm 0.000$   $\chi^2/\text{NDF}: 365352909771694.1/32$

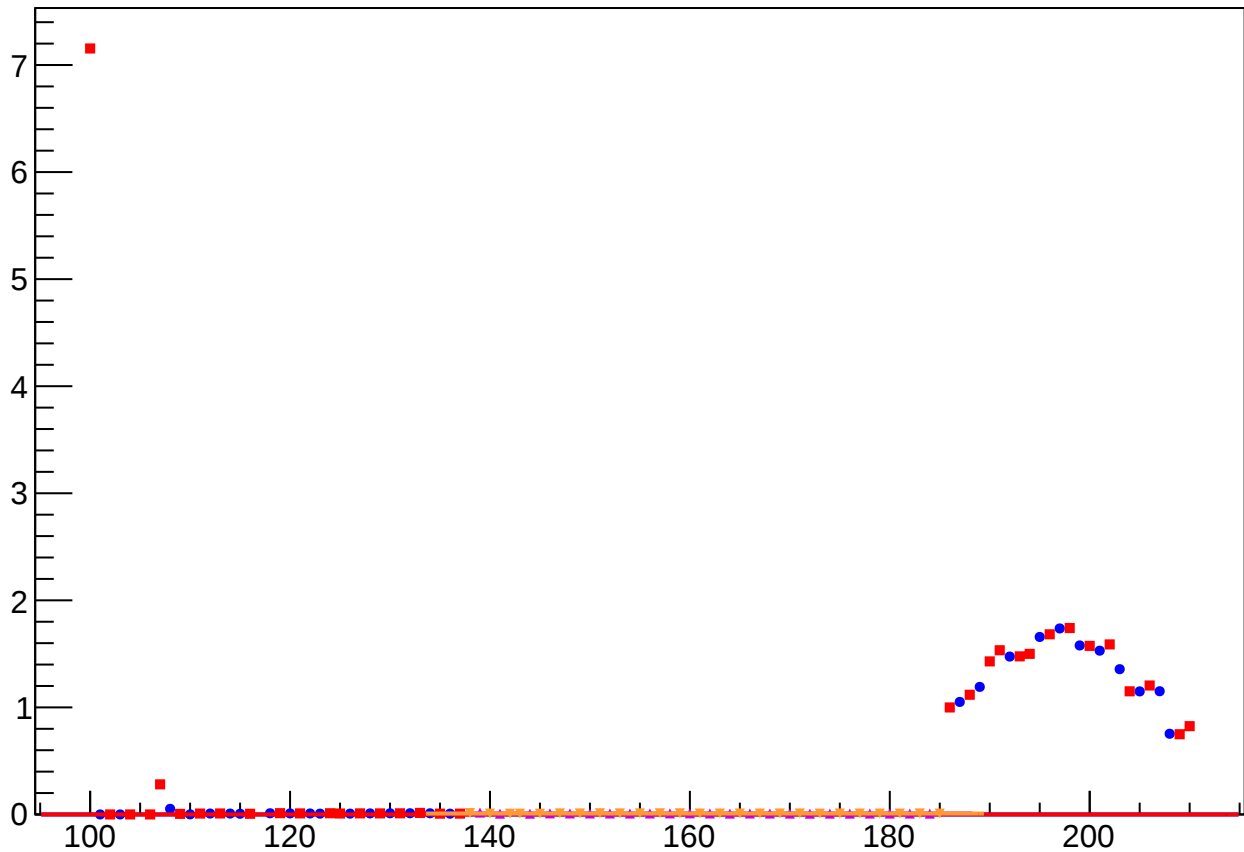
Left In:  $0.059 \pm 0.000$   $\chi^2/\text{NDF}: 178541521.9/22$

+ sign  $-6.921 \pm 0.000$   $\chi^2/\text{NDF}: 18424003010327.2/27$

All:  $-5.858 \pm 0.000$   $\chi^2/\text{NDF}: 4435291473830.1/27$

- sign  $-4.882 \pm 0.000$   $\chi^2/\text{NDF}: 369731928638095.2/27$

# yield\_cav4dX\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 23414474.2/27

Left Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 514432.8/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 27051825.1/32

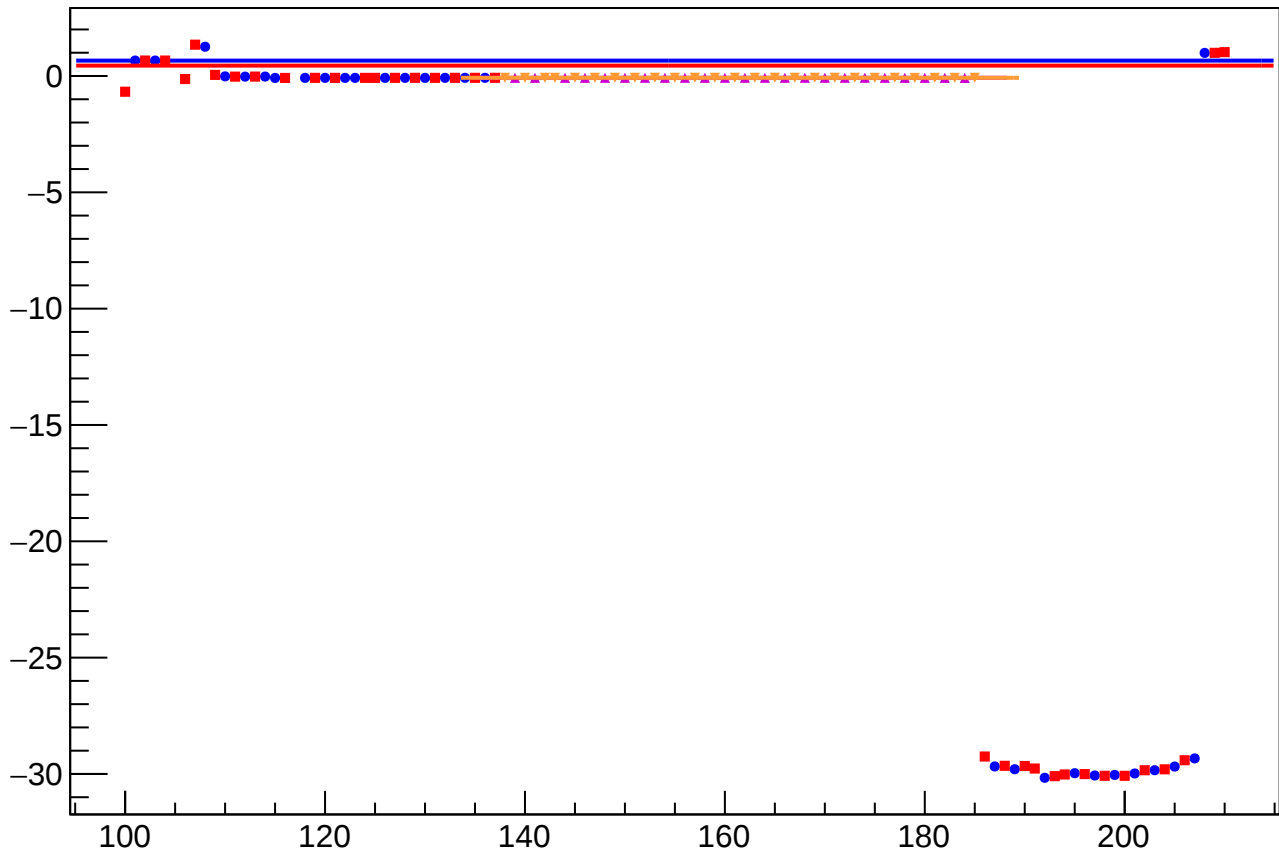
Left In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 602517.2/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 52315919.6/52

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 106827872.8/108

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 54507158.4/55

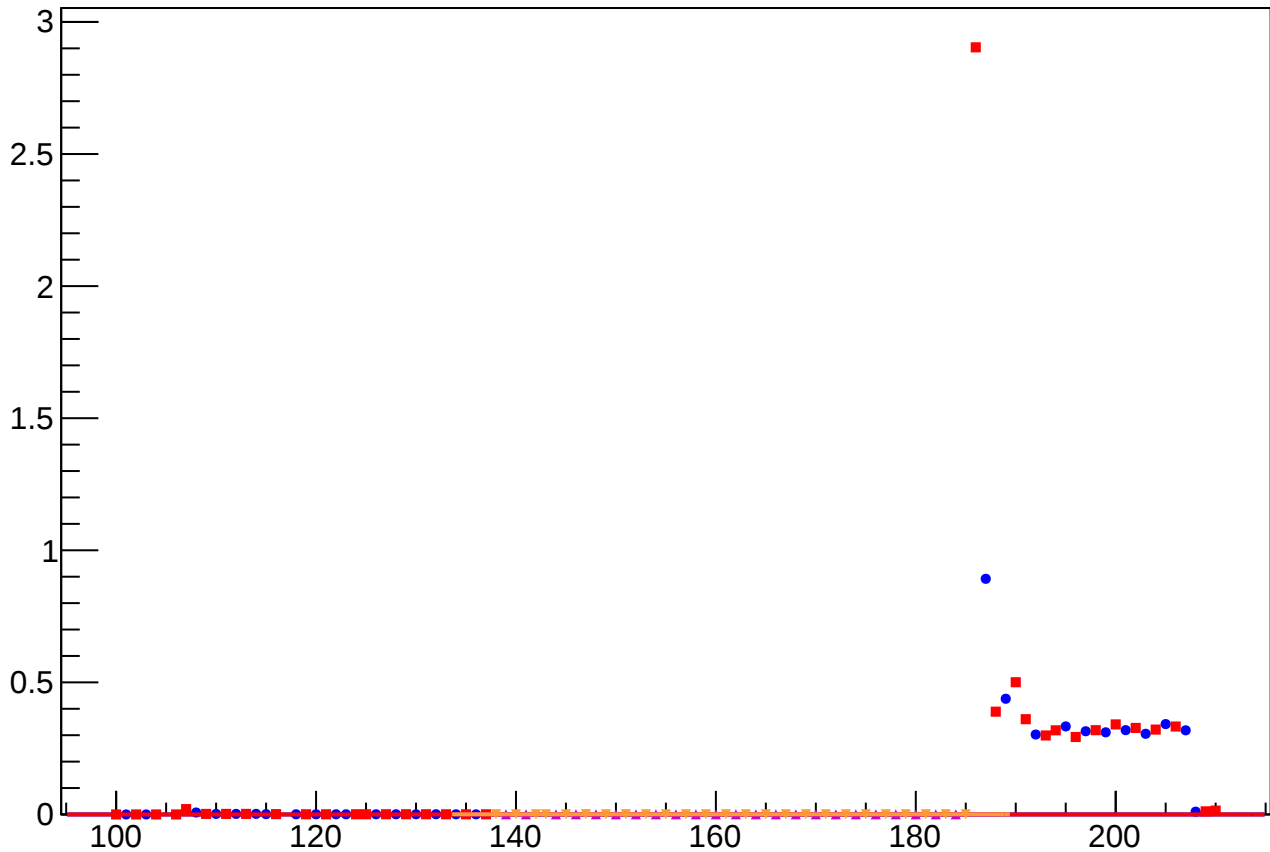
# yield\_cav4dY\_mean vs Slug



Right In: 0.661 $\pm$ 0.000  $\chi^2$ /NDF: 5719778964147.2/27  
 Left Out: -0.078 $\pm$ 0.000  $\chi^2$ /NDF: 156404795.7/24  
 Right Out: 0.446 $\pm$ 0.000  $\chi^2$ /NDF: 405493037676963.9/32  
 Left In: -0.077 $\pm$ 0.000  $\chi^2$ /NDF: 110762924.1/22

+ sign 0.646 $\pm$ 0.000  $\chi^2$ /NDF: 35818599173788.3/5  
 All: 0.537 $\pm$ 0.000  $\chi^2$ /NDF: 51597021428482  
 - sign 0.437 $\pm$ 0.000  $\chi^2$ /NDF: 419615144371439.4/

# yield\_cav4dY\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 24842362.8/27

Left Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 465981.8/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 27597171.8/32

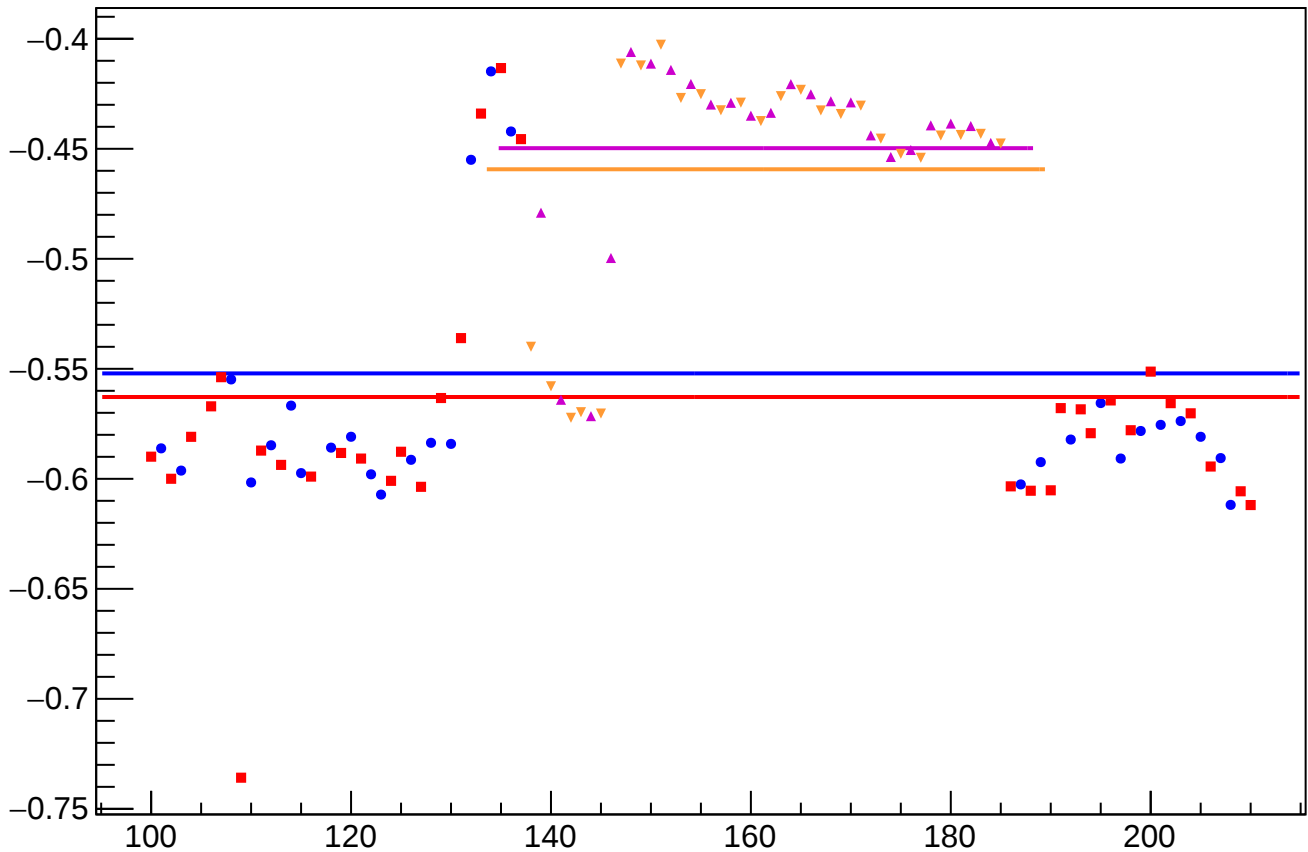
Left In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 355509.7/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 57393121.0/52

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 115786508.9/108

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 58385700.6/55

# yield\_bpm4aX\_mean vs Slug



Right In:  $-0.552 \pm 0.000$   $\chi^2/\text{NDF}: 49388432.0/27$

Left Out:  $-0.459 \pm 0.000$   $\chi^2/\text{NDF}: 113602161.0/24$

Right Out:  $-0.563 \pm 0.000$   $\chi^2/\text{NDF}: 67198799.4/32$

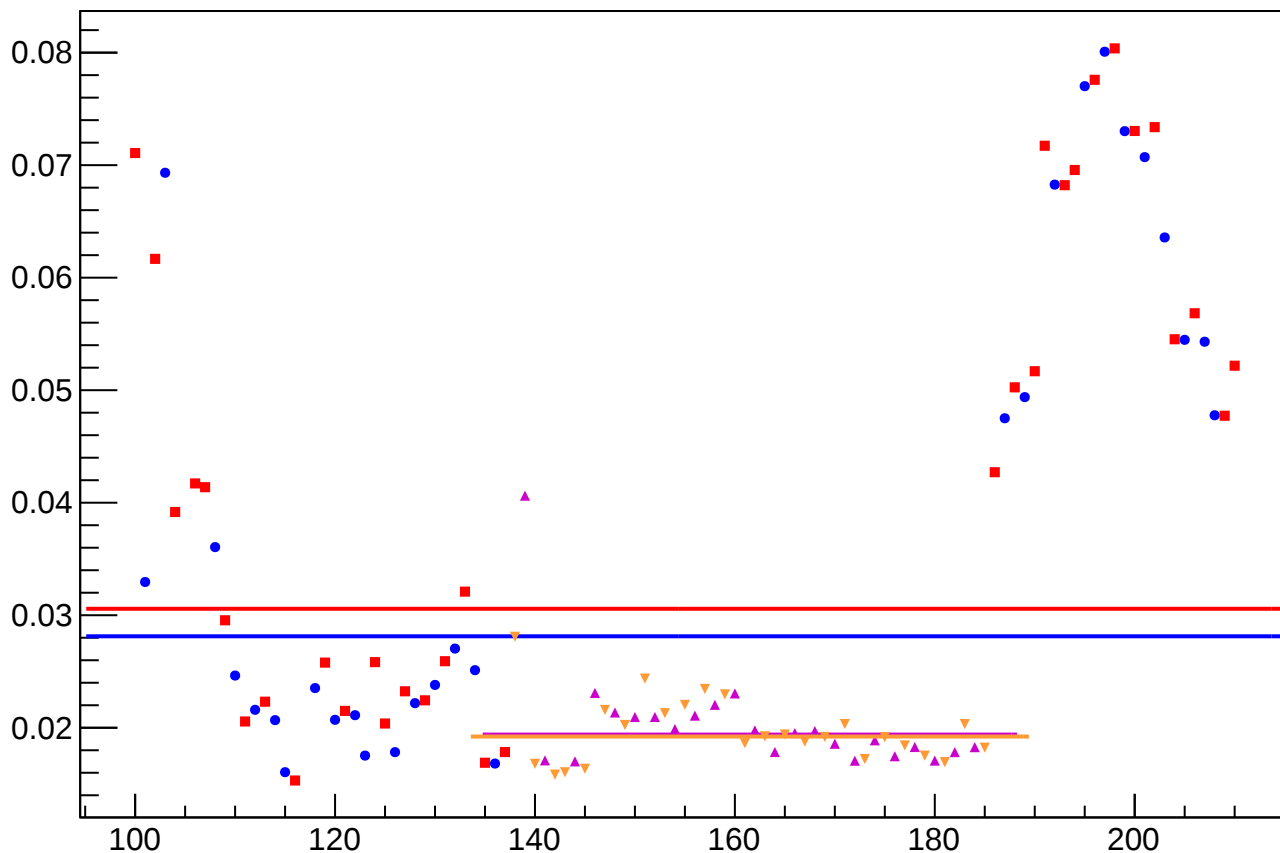
Left In:  $-0.450 \pm 0.000$   $\chi^2/\text{NDF}: 76117957.8/22$

+ sign  $-0.481 \pm 0.000$   $\chi^2/\text{NDF}: 245102952.4/52$

All:  $-0.480 \pm 0.000$   $\chi^2/\text{NDF}: 507583829.0/10$

- sign  $-0.478 \pm 0.000$   $\chi^2/\text{NDF}: 262206264.3/55$

# yield\_bpm4aX\_rms vs Slug



Right In:  $0.028 \pm 0.000$   $\chi^2/\text{NDF}$ : 6424984.7/27

Left Out:  $0.019 \pm 0.000$   $\chi^2/\text{NDF}$ : 501711.6/24

Right Out:  $0.031 \pm 0.000$   $\chi^2/\text{NDF}$ : 6872431.6/32

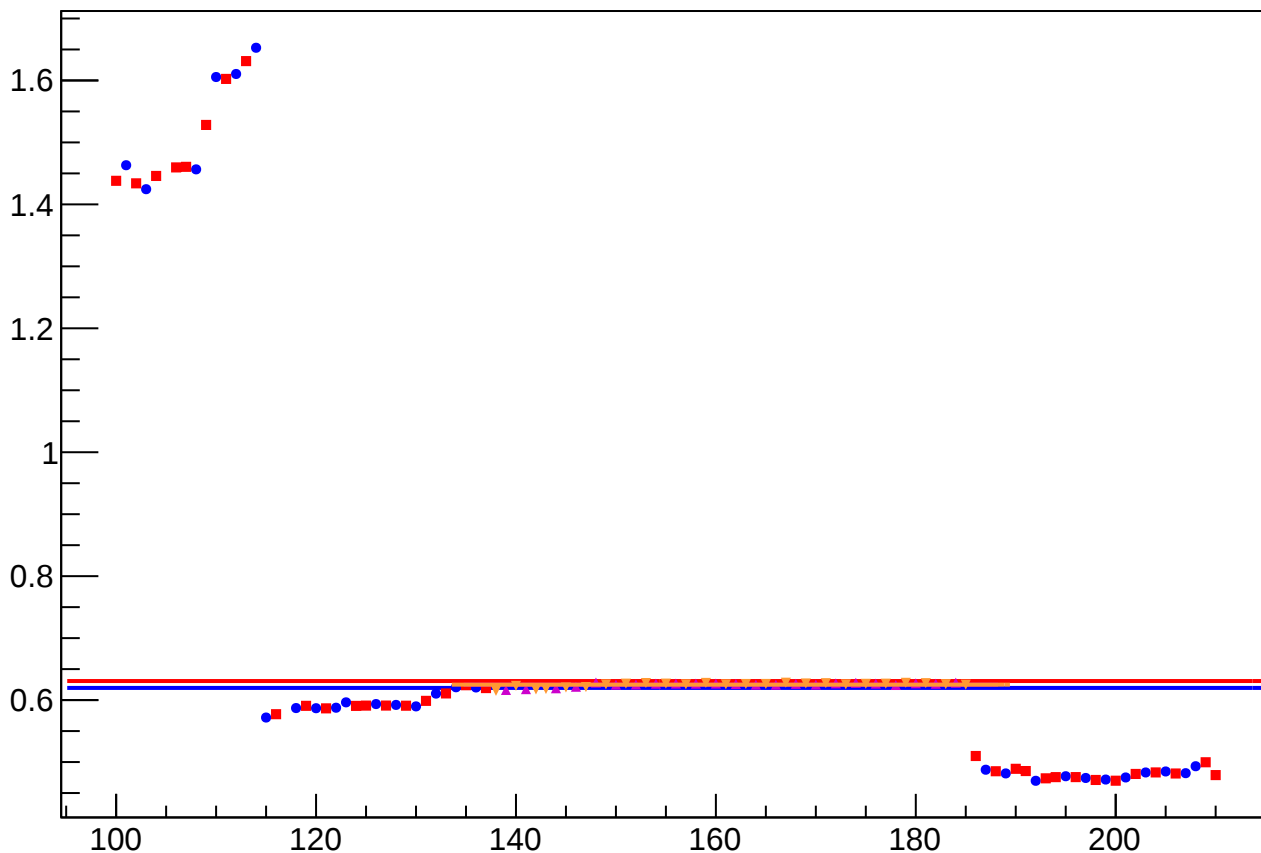
Left In:  $0.019 \pm 0.000$   $\chi^2/\text{NDF}$ : 626443.5/22

+ sign  $0.021 \pm 0.000$   $\chi^2/\text{NDF}$ : 8440897.9/52

All:  $0.022 \pm 0.000$   $\chi^2/\text{NDF}$ : 18301459.1/108

- sign  $0.022 \pm 0.000$   $\chi^2/\text{NDF}$ : 9822742.2/55

# yield\_bpm4aY\_mean vs Slug



Right In: 0.620 $\pm$ 0.000  $\chi^2$ /NDF: 5073804265.9/27

Left Out: 0.625 $\pm$ 0.000  $\chi^2$ /NDF:1445169.1/24

Right Out: 0.631 $\pm$ 0.000  $\chi^2$ /NDF: 6163822830.0/32

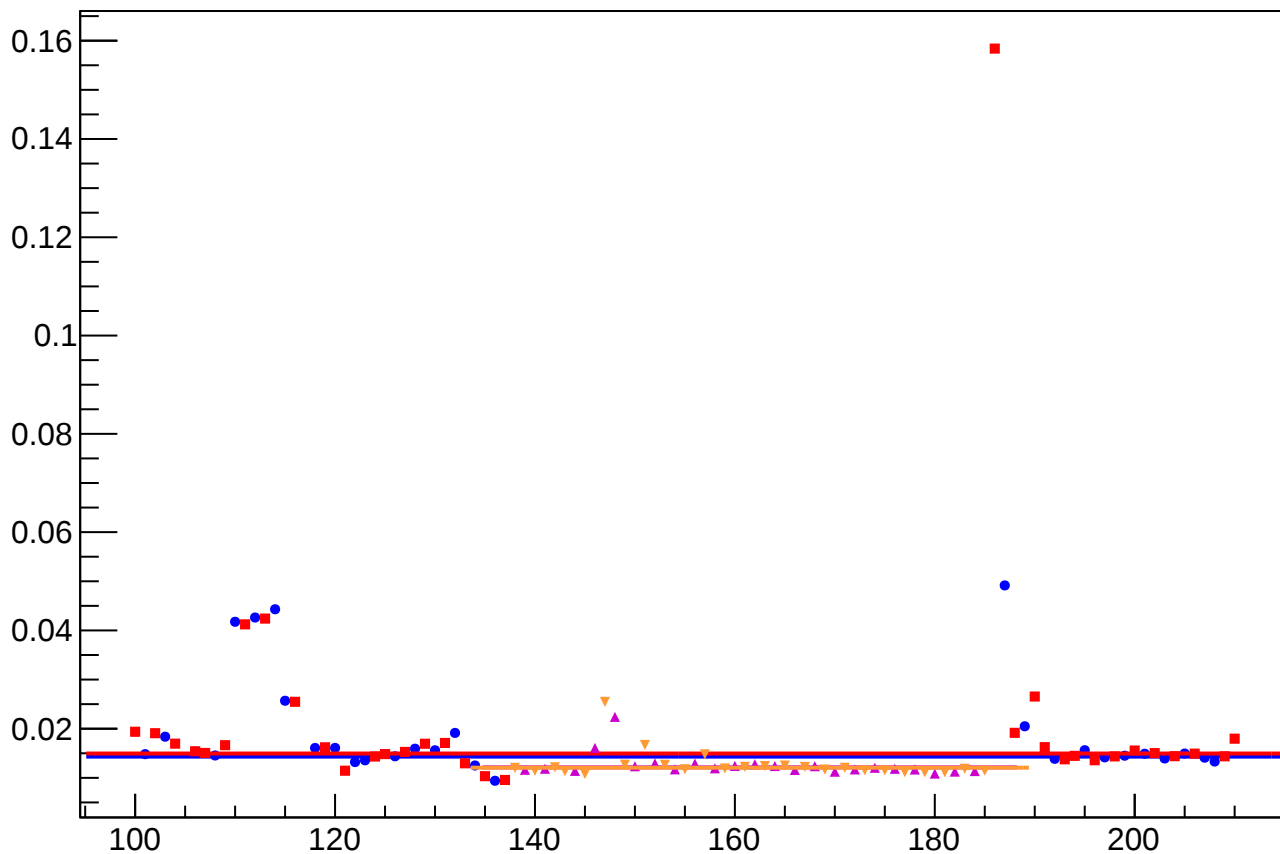
Left In: 0.625 $\pm$ 0.000  $\chi^2$ /NDF:1143954.1/22

+ sign 0.623 $\pm$ 0.000  $\chi^2$ /NDF: 5076402694.0/52

All: 0.625 $\pm$ 0.000  $\chi^2$ /NDF: 11244199520.5/1

- sign 0.627 $\pm$ 0.000  $\chi^2$ /NDF: 6166425048.8/55

# yield\_bpm4aY\_rms vs Slug



Right In: 0.014 $\pm$ 0.000  $\chi^2$ /NDF: 1648043.3/27

Left Out: 0.012 $\pm$ 0.000  $\chi^2$ /NDF:657199.9/24

Right Out: 0.015 $\pm$ 0.000  $\chi^2$ /NDF: 2119304.3/32

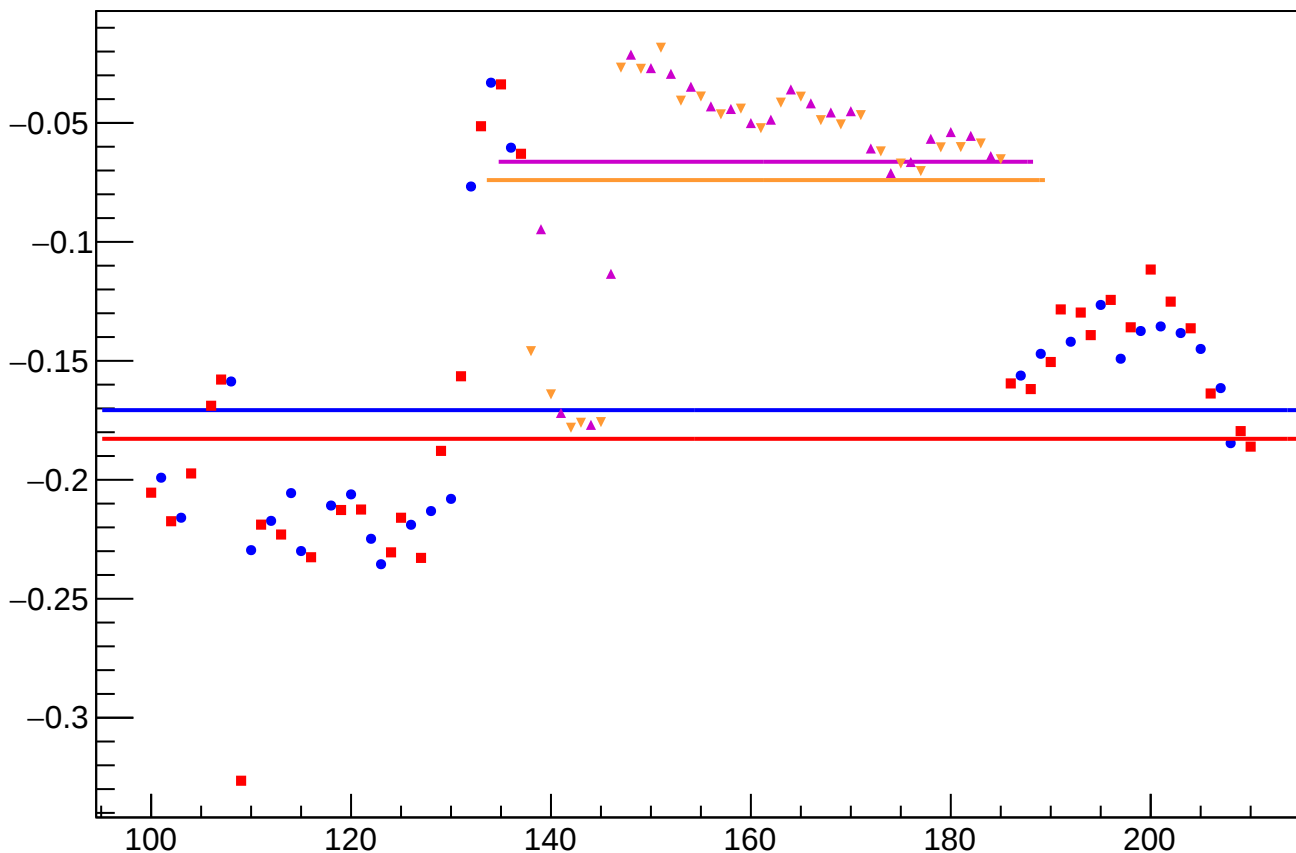
Left In: 0.012 $\pm$ 0.000  $\chi^2$ /NDF:488363.6/22

+ sign 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 2727583.0/52

All: 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 6010320.4/108

- sign 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 3264009.3/55

# yield\_bpm4eX\_mean vs Slug



Right In:  $-0.171 \pm 0.000$   $\chi^2/\text{NDF}$ : 68417026.8/27

Left Out:  $-0.074 \pm 0.000$   $\chi^2/\text{NDF}$ : 107676601.9/24

Right Out:  $-0.183 \pm 0.000$   $\chi^2/\text{NDF}$ : 86389704.0/32

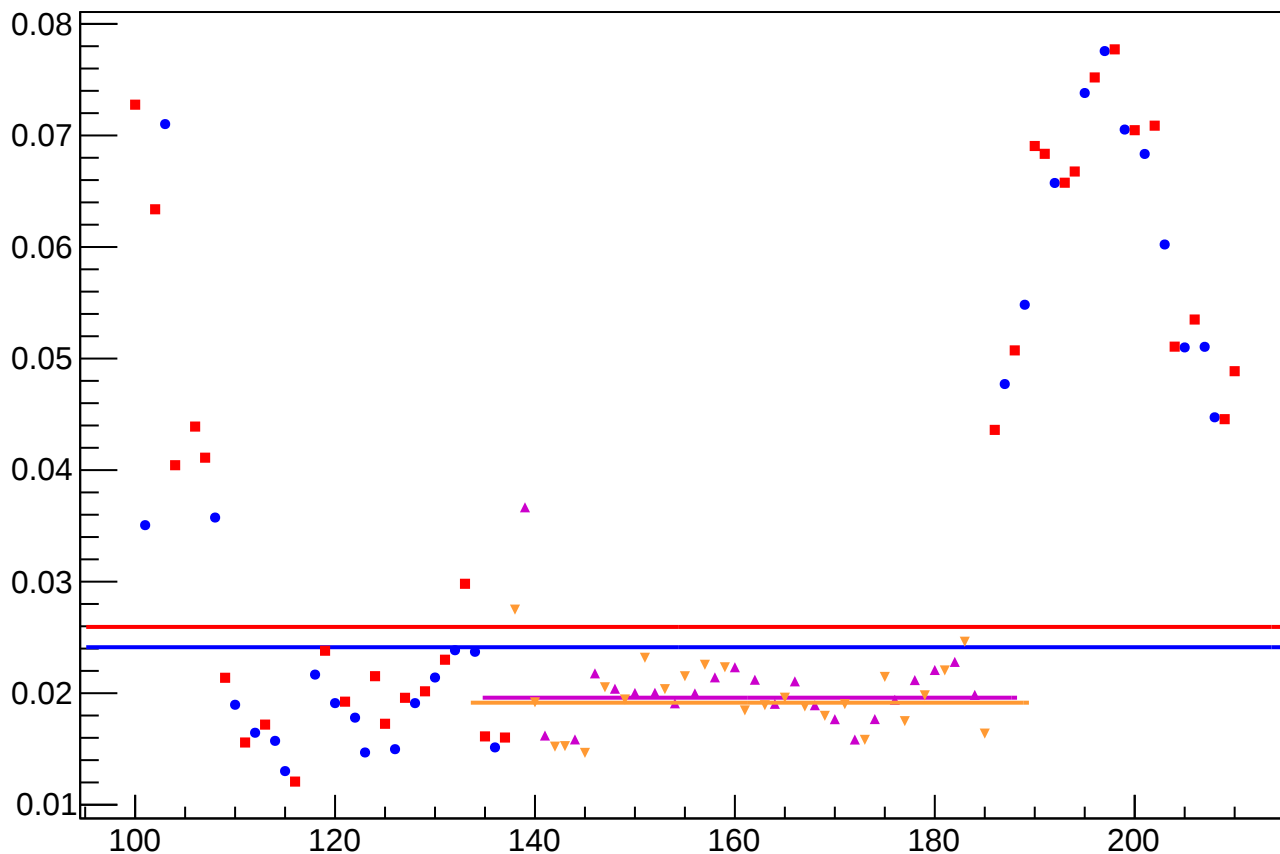
Left In:  $-0.066 \pm 0.000$   $\chi^2/\text{NDF}$ : 76243051.8/22

+ sign  $-0.101 \pm 0.000$   $\chi^2/\text{NDF}$ : 284454177.8/52

All:  $-0.101 \pm 0.000$   $\chi^2/\text{NDF}$ : 599521951.3/10

- sign  $-0.102 \pm 0.000$   $\chi^2/\text{NDF}$ : 315065216.3/55

# yield\_bpm4eX\_rms vs Slug



Right In: 0.024 $\pm$ 0.000  $\chi^2$ /NDF: 7491218.4/27

Left Out: 0.019 $\pm$ 0.000  $\chi^2$ /NDF:641277.0/24

Right Out: 0.026 $\pm$ 0.000  $\chi^2$ /NDF: 8392013.6/32

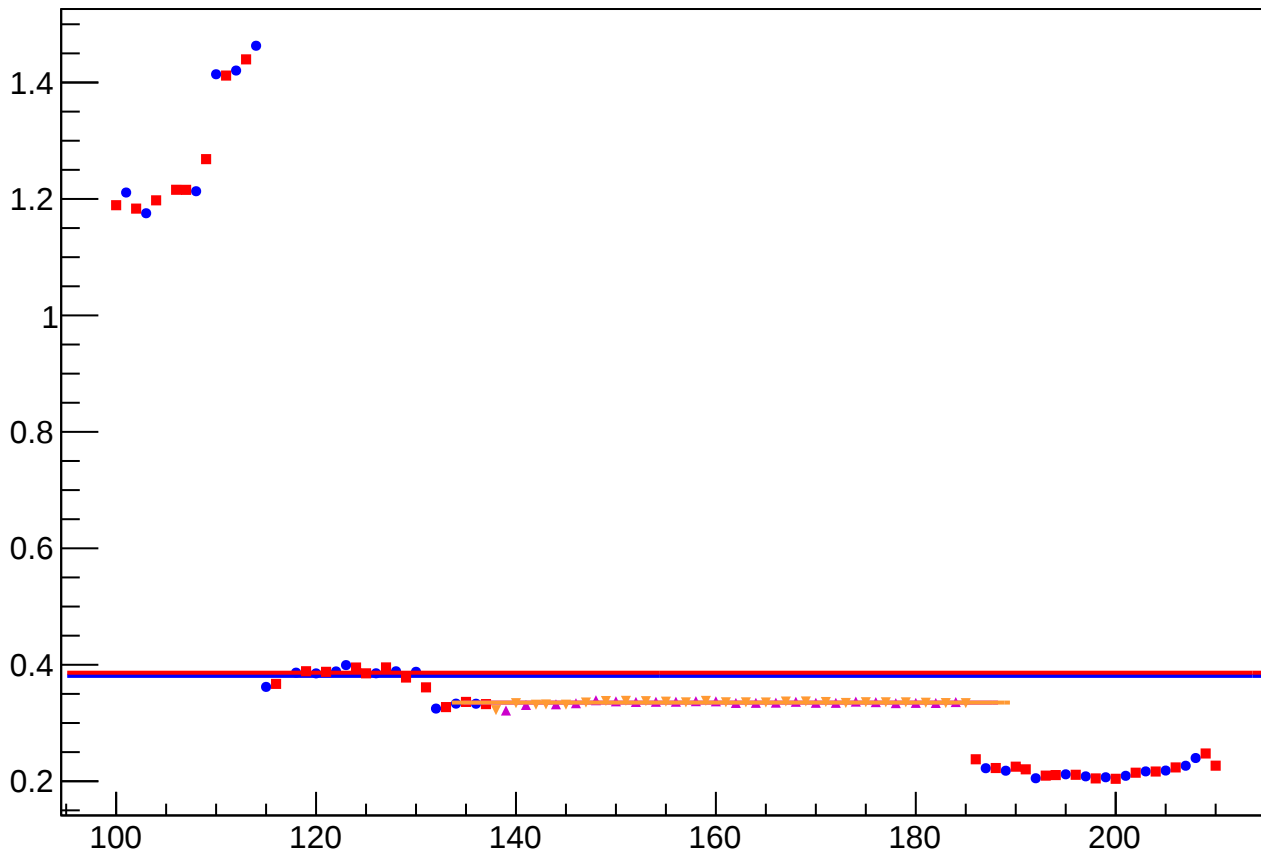
Left In: 0.020 $\pm$ 0.000  $\chi^2$ /NDF:623148.2/22

+ sign 0.021 $\pm$ 0.000  $\chi^2$ /NDF: 8705800.8/52

All: 0.021 $\pm$ 0.000  $\chi^2$ /NDF: 18677529.2/108

- sign 0.022 $\pm$ 0.000  $\chi^2$ /NDF: 9920139.7/55

# yield\_bpm4eY\_mean vs Slug



Right In: 0.381+/-0.000  $\chi^2/\text{NDF}$ : 7492037320.1/27

Left Out: 0.335+/-0.000  $\chi^2/\text{NDF}$ :1154310.3/24

Right Out: 0.386+/-0.000  $\chi^2/\text{NDF}$ : 8670974655.4/32

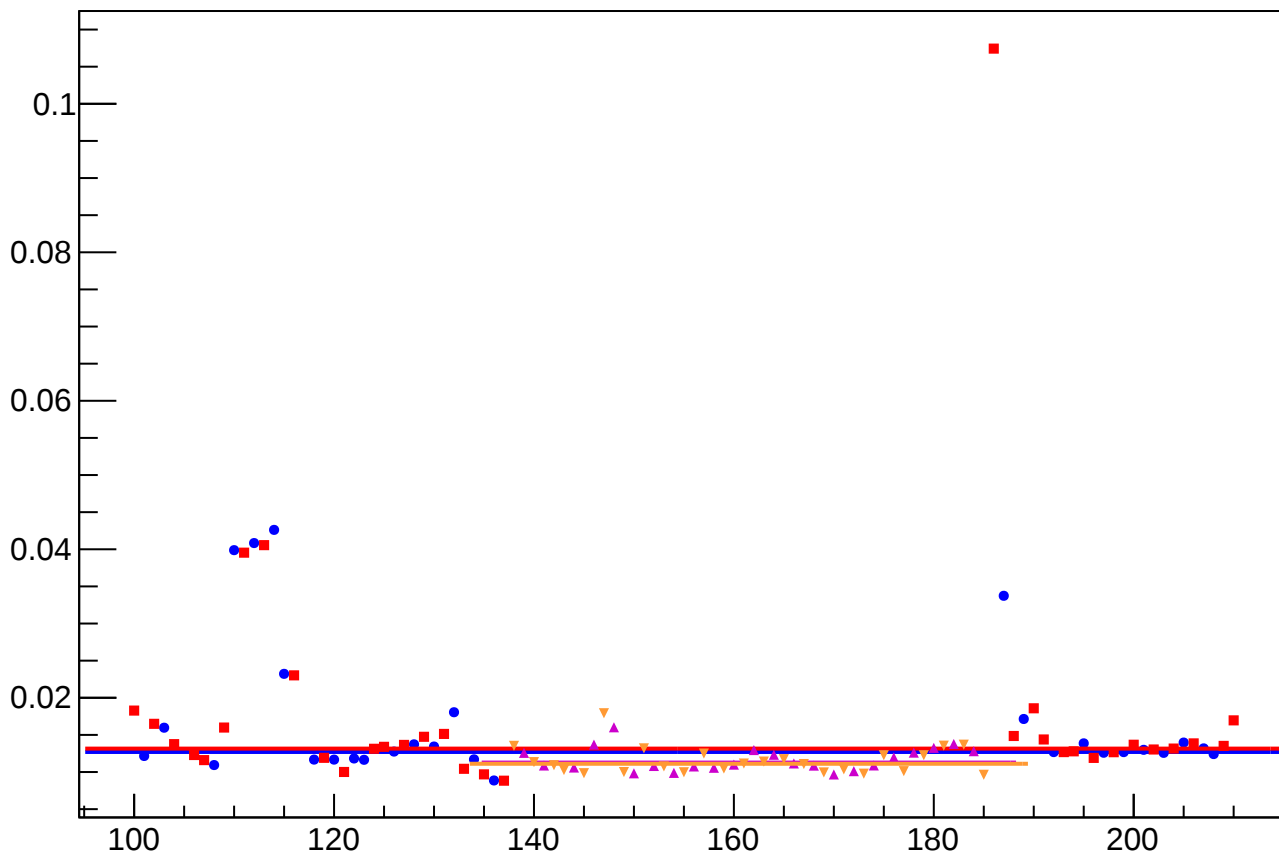
Left In: 0.335+/-0.000  $\chi^2/\text{NDF}$ :1202194.8/22

+ sign 0.352+/-0.000  $\chi^2/\text{NDF}$ : 7601022403.7/52

All: 0.353+/-0.000  $\chi^2/\text{NDF}$ : 16409400946.8/100

- sign 0.355+/-0.000  $\chi^2/\text{NDF}$ : 8807037427.0/55

# yield\_bpm4eY\_rms vs Slug



Right In: 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 1525354.5/27

Left Out: 0.011 $\pm$ 0.000  $\chi^2$ /NDF:607532.0/24

Right Out: 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 2014187.4/32

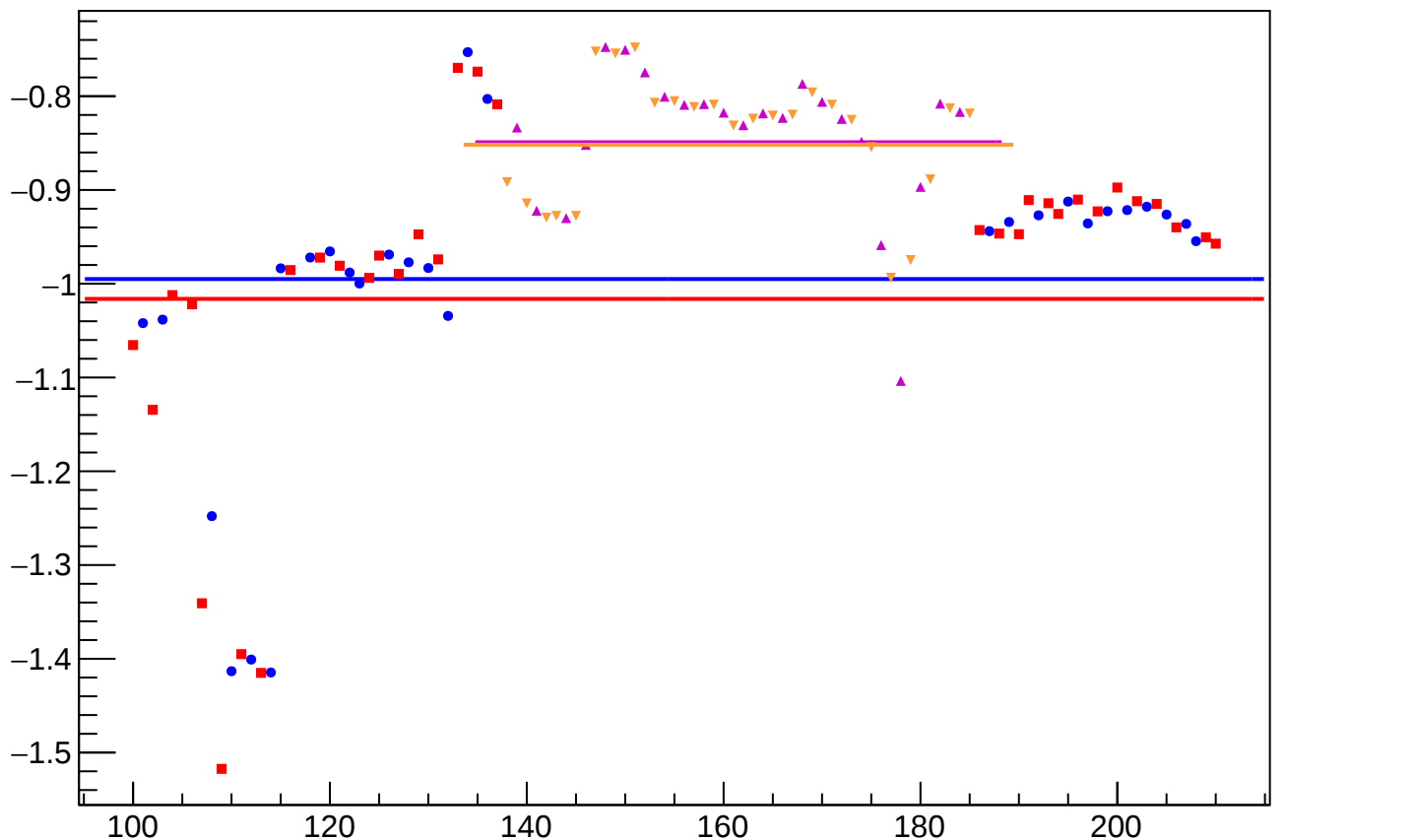
Left In: 0.011 $\pm$ 0.000  $\chi^2$ /NDF:502455.5/22

+ sign 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 2392096.0/52

All: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 5293060.7/108

- sign 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 2878105.4/55

# yield\_bpm4acX\_mean vs Slug



Right In:  $-0.995 \pm 0.000$   $\chi^2/\text{NDF}$ : 404129191.2/27

Left Out:  $-0.852 \pm 0.000$   $\chi^2/\text{NDF}$ : 189103962.4/24

Right Out:  $-1.016 \pm 0.000$   $\chi^2/\text{NDF}$ : 560194449.8/32

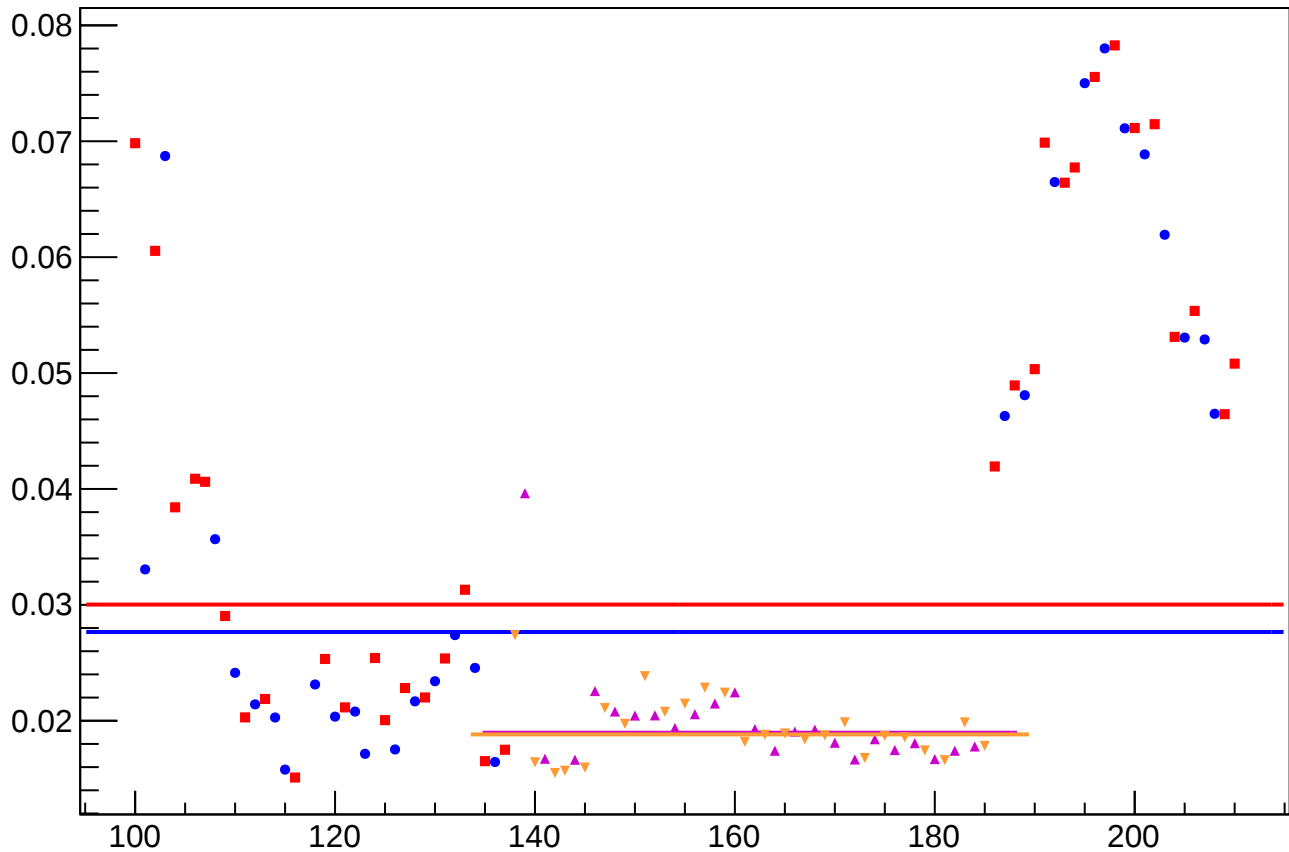
Left In:  $-0.849 \pm 0.000$   $\chi^2/\text{NDF}$ : 256391274.4/22

+ sign  $-0.886 \pm 0.000$   $\chi^2/\text{NDF}$ : 796407379.3/52

All:  $-0.888 \pm 0.000$   $\chi^2/\text{NDF}$ : 1883760169.1/1

- sign  $-0.891 \pm 0.000$   $\chi^2/\text{NDF}$ : 1086657244.4/55

# yield\_bpm4acX\_rms vs Slug



Right In:  $0.028 \pm 0.000$   $\chi^2/\text{NDF}$ : 6382084.7/27

Left Out:  $0.019 \pm 0.000$   $\chi^2/\text{NDF}$ : 490509.4/24

Right Out:  $0.030 \pm 0.000$   $\chi^2/\text{NDF}$ : 6797834.3/32

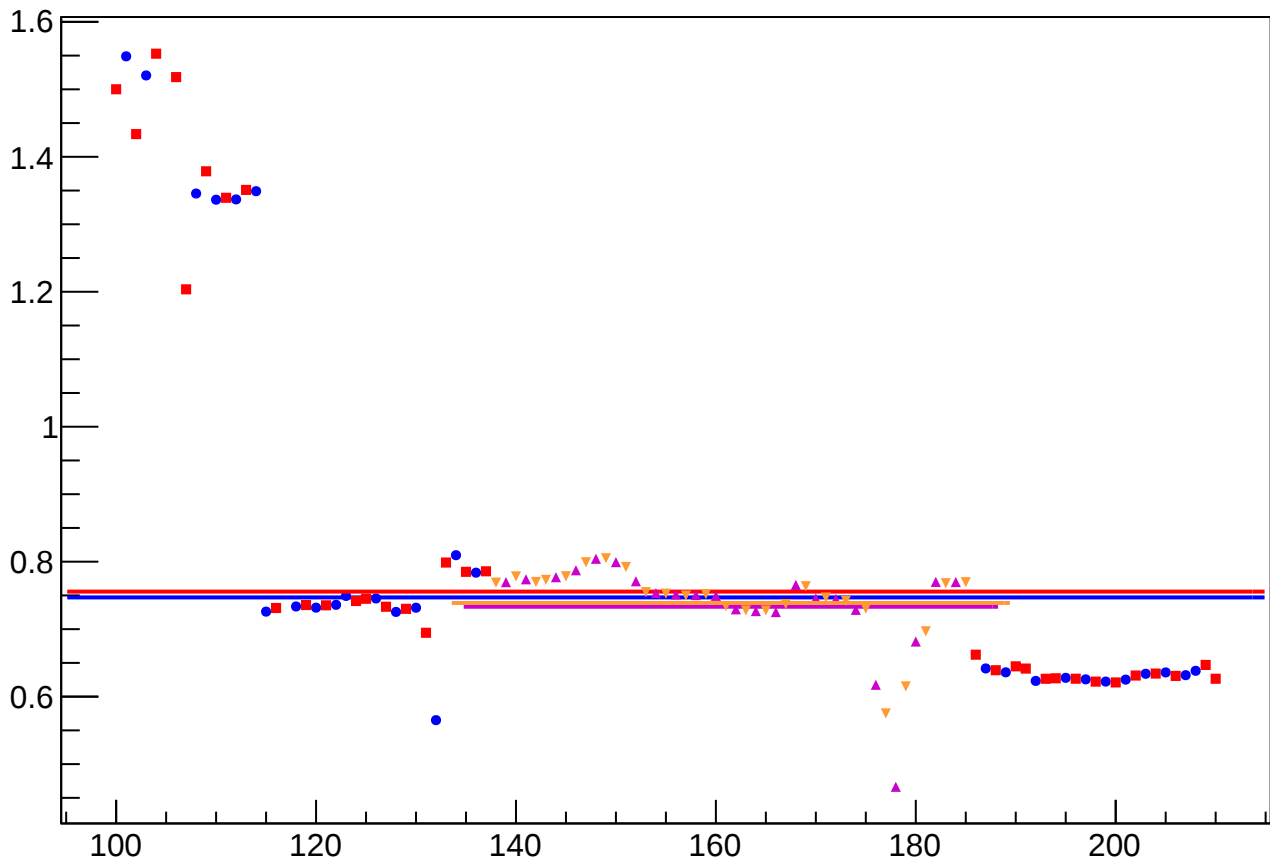
Left In:  $0.019 \pm 0.000$   $\chi^2/\text{NDF}$ : 615173.8/22

+ sign  $0.021 \pm 0.000$   $\chi^2/\text{NDF}$ : 8419104.0/52

All:  $0.021 \pm 0.000$   $\chi^2/\text{NDF}$ : 18233114.1/108

- sign  $0.022 \pm 0.000$   $\chi^2/\text{NDF}$ : 9779067.7/55

# yield\_bpm4acY\_mean vs Slug



Right In: 0.747 $\pm$ 0.000  $\chi^2$ /NDF: 3479864406.6/27

Left Out: 0.739 $\pm$ 0.000  $\chi^2$ /NDF:333013236.5/24

Right Out: 0.756 $\pm$ 0.000  $\chi^2$ /NDF: 3842208292.3/32

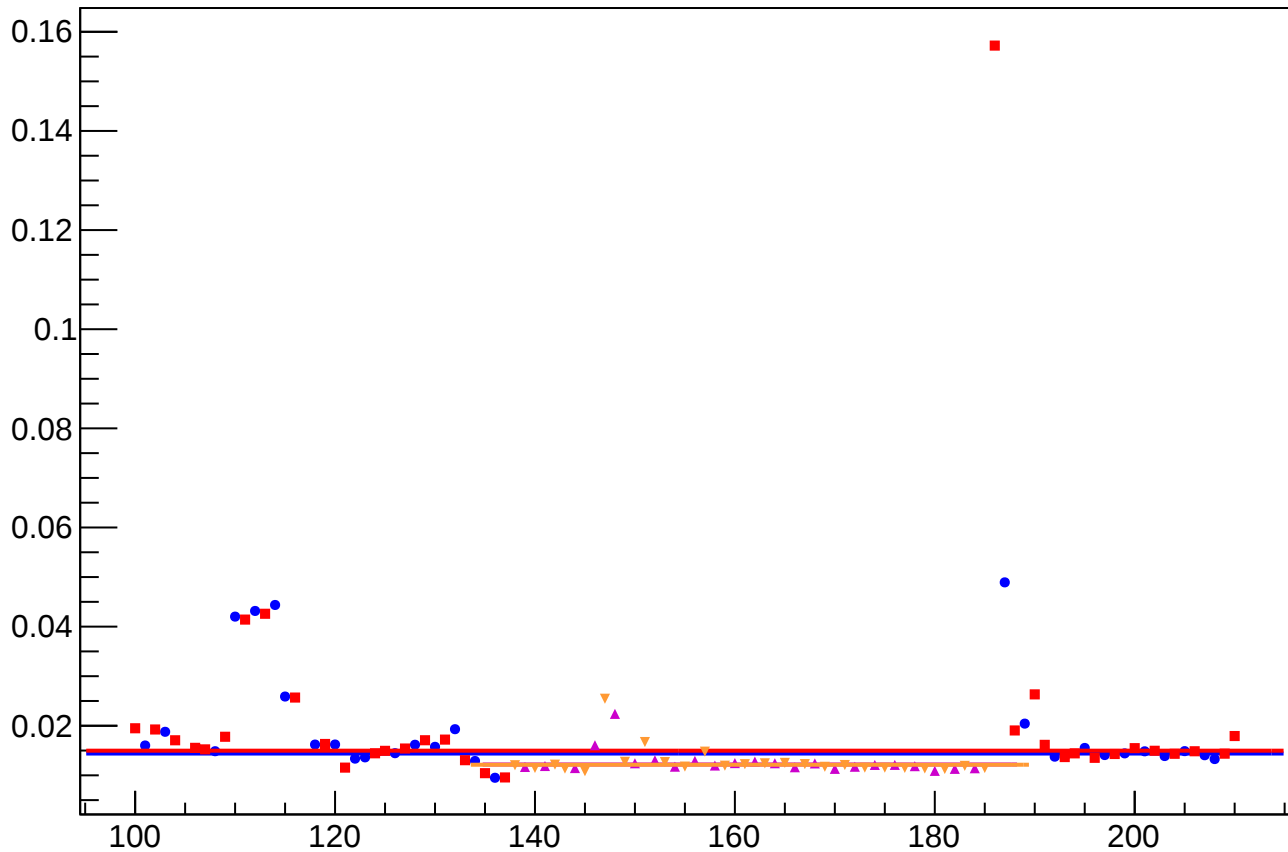
Left In: 0.733 $\pm$ 0.000  $\chi^2$ /NDF:569611347.7/22

+ sign 0.742 $\pm$ 0.000  $\chi^2$ /NDF: 3815622239.9/52

All: 0.742 $\pm$ 0.000  $\chi^2$ /NDF: 8248151240.7/10

- sign 0.741 $\pm$ 0.000  $\chi^2$ /NDF: 4432525206.8/55

# yield\_bpm4acY\_rms vs Slug



Right In: 0.014 $\pm$ 0.000  $\chi^2$ /NDF: 1650610.7/27

Left Out: 0.012 $\pm$ 0.000  $\chi^2$ /NDF:637986.2/24

Right Out: 0.015 $\pm$ 0.000  $\chi^2$ /NDF: 2121869.7/32

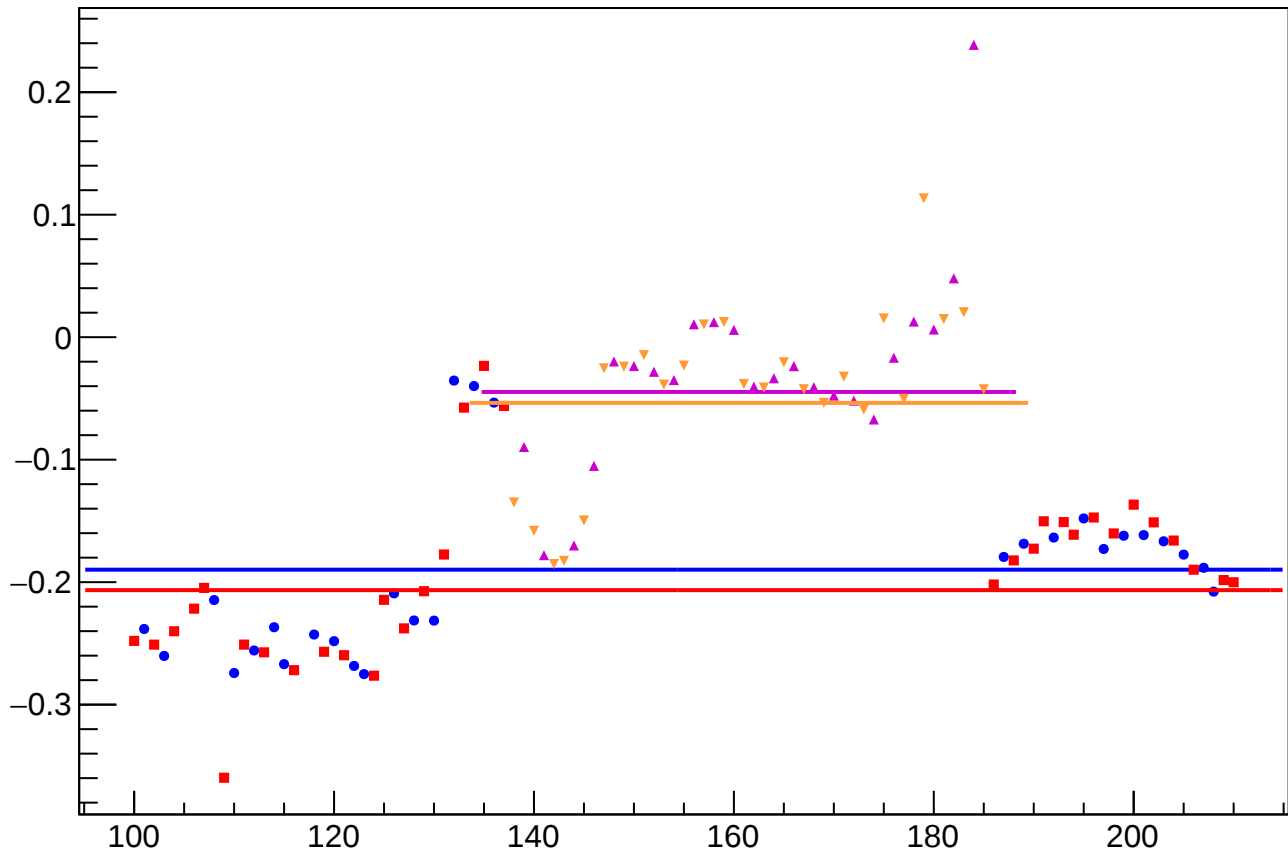
Left In: 0.012 $\pm$ 0.000  $\chi^2$ /NDF:481830.1/22

+ sign 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 2706177.8/52

All: 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 5963937.9/108

- sign 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 3241728.7/55

# yield\_bpm4ecX\_mean vs Slug



Right In:  $-0.190 \pm 0.000$   $\chi^2/\text{NDF}: 107260727.9/27$

Left Out:  $-0.054 \pm 0.000$   $\chi^2/\text{NDF}: 167834173.6/24$

Right Out:  $-0.207 \pm 0.000$   $\chi^2/\text{NDF}: 114715424.8/32$

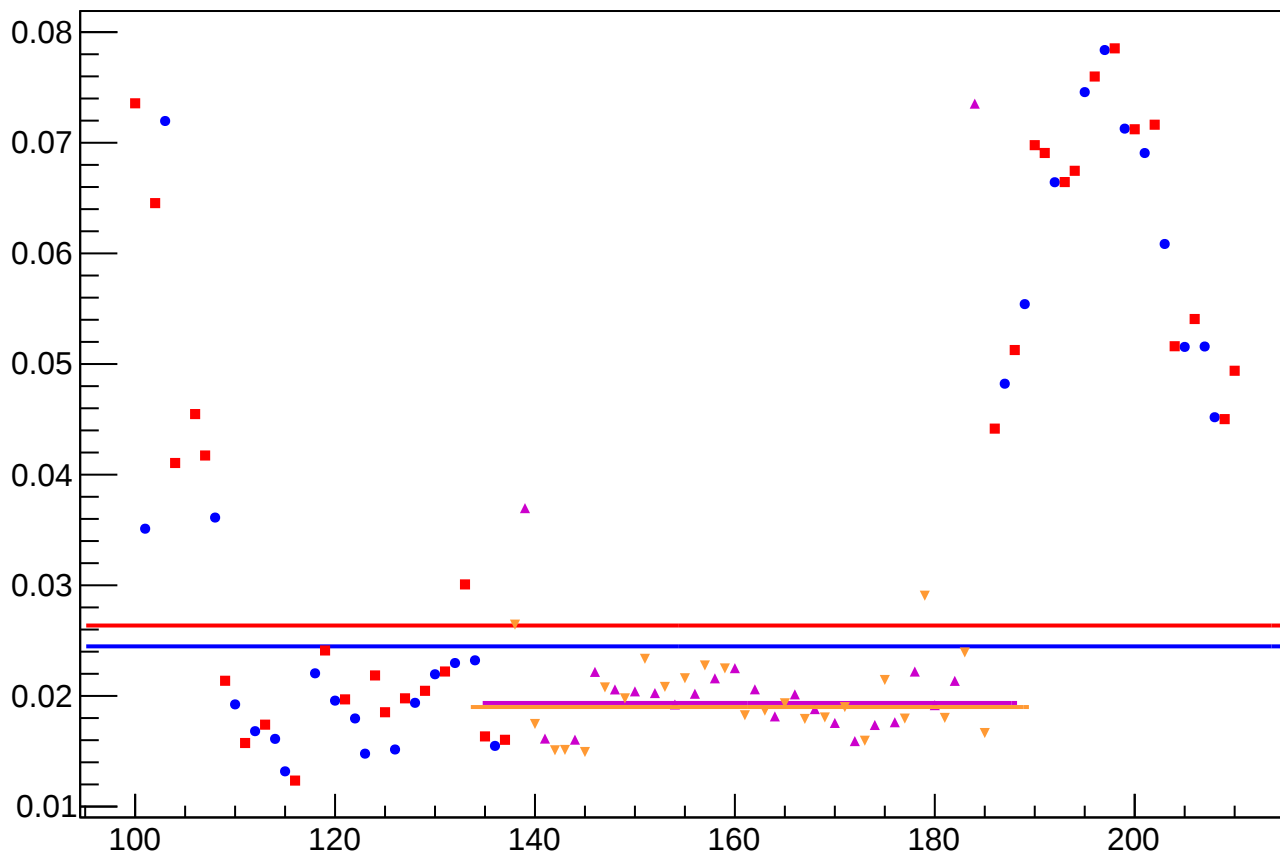
Left In:  $-0.045 \pm 0.000$   $\chi^2/\text{NDF}: 127192425.2/22$

+ sign  $-0.092 \pm 0.000$   $\chi^2/\text{NDF}: 484924135.9/52$

All:  $-0.092 \pm 0.000$   $\chi^2/\text{NDF}: 1014414012.9/1$

- sign  $-0.093 \pm 0.000$   $\chi^2/\text{NDF}: 529456177.5/55$

# yield\_bpm4ecX\_rms vs Slug



Right In: 0.024 $\pm$ 0.000  $\chi^2$ /NDF: 7433472.8/27

Left Out: 0.019 $\pm$ 0.000  $\chi^2$ /NDF:700229.7/24

Right Out: 0.026 $\pm$ 0.000  $\chi^2$ /NDF: 8337149.0/32

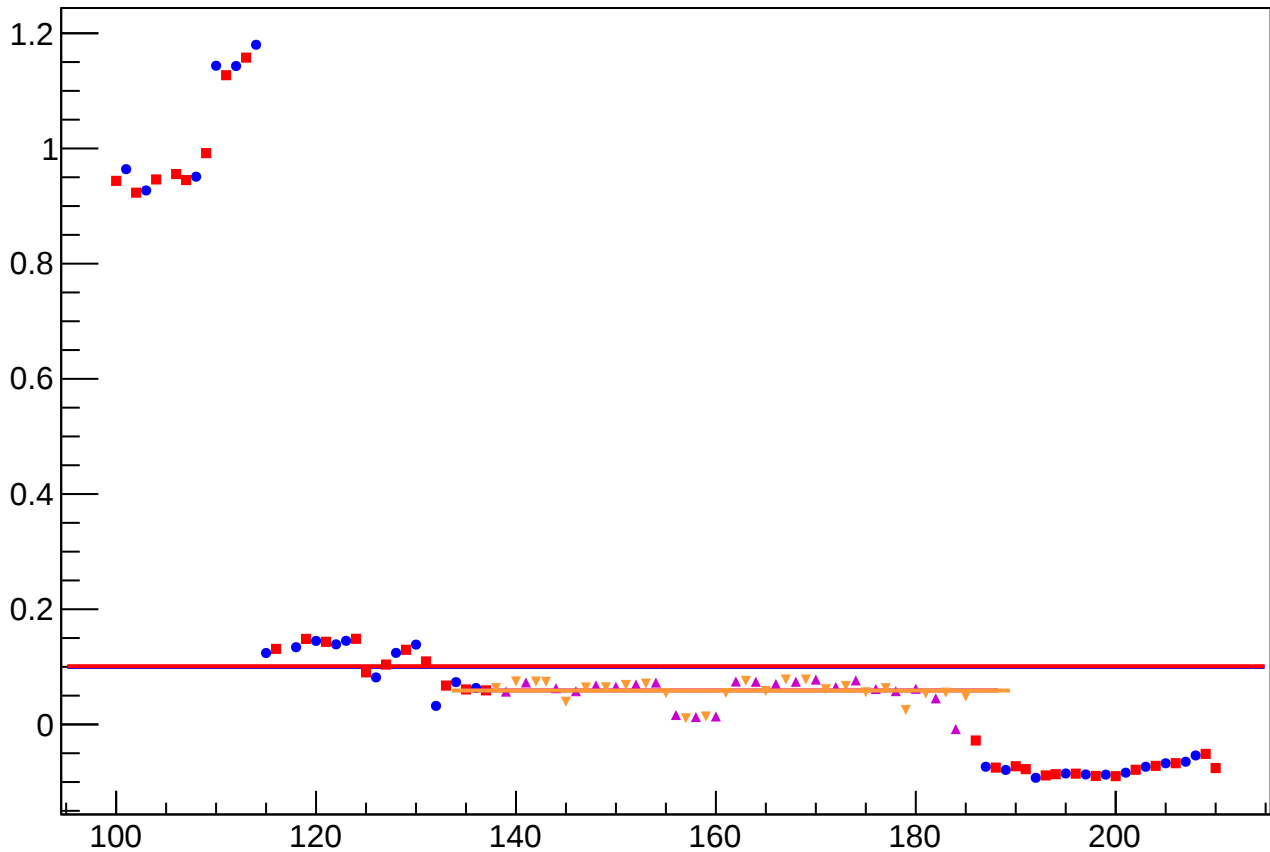
Left In: 0.019 $\pm$ 0.000  $\chi^2$ /NDF:858216.8/22

+ sign 0.021 $\pm$ 0.000  $\chi^2$ /NDF: 8814399.8/52

All: 0.021 $\pm$ 0.000  $\chi^2$ /NDF: 19131583.8/108

- sign 0.021 $\pm$ 0.000  $\chi^2$ /NDF: 10271523.3/55

# yield\_bpm4ecY\_mean vs Slug



Right In: 0.100 $\pm$ 0.000  $\chi^2$ /NDF: 8093261863.7/27

Left Out: 0.059 $\pm$ 0.000  $\chi^2$ /NDF: 46821236.8/24

Right Out: 0.101 $\pm$ 0.000  $\chi^2$ /NDF: 9167960990.6/32

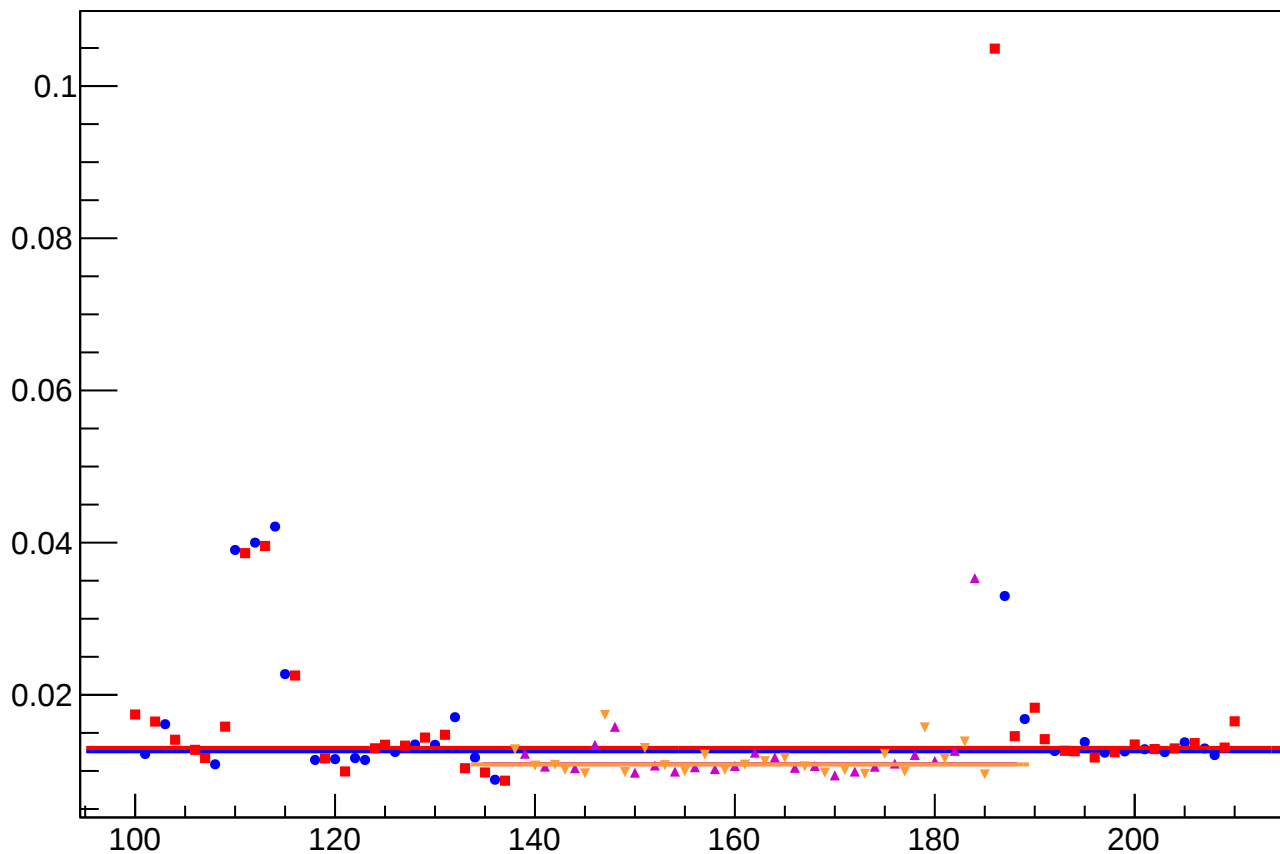
Left In: 0.059 $\pm$ 0.000  $\chi^2$ /NDF: 58518655.0/22

+ sign 0.074 $\pm$ 0.000  $\chi^2$ /NDF: 8227978674.3/52

All: 0.075 $\pm$ 0.000  $\chi^2$ /NDF: 17547390424.8/100

- sign 0.075 $\pm$ 0.000  $\chi^2$ /NDF: 9319129267.8/55

# yield\_bpm4ecY\_rms vs Slug



Right In: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 1490648.8/27

Left Out: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 604787.9/24

Right Out: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 1958884.2/32

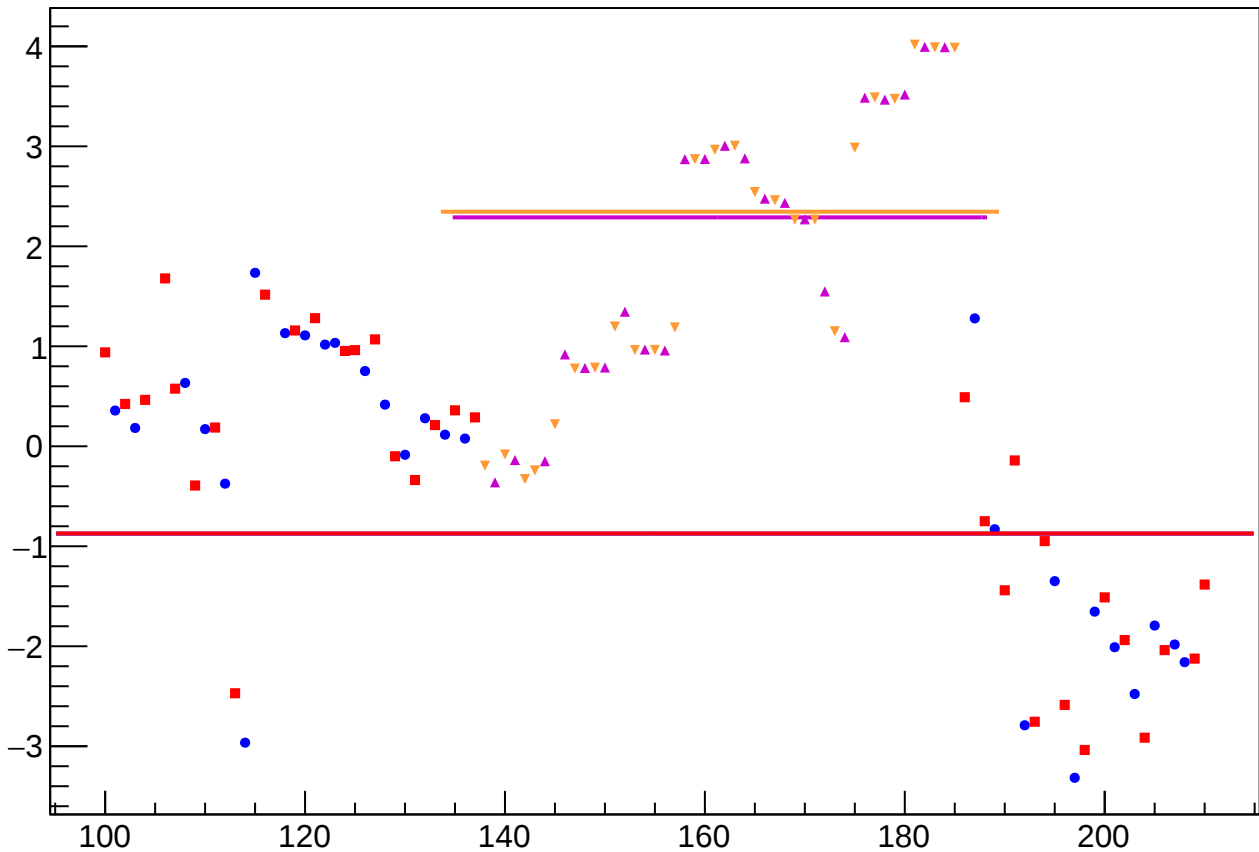
Left In: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 530077.5/22

+ sign 0.011+/-0.000  $\chi^2/\text{NDF}$ : 2404377.8/52

All: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 5387953.8/108

- sign 0.012+/-0.000  $\chi^2/\text{NDF}$ : 2971221.2/55

# yield\_bpm1X\_mean vs Slug



Right In:  $-0.873 \pm 0.000$   $\chi^2/\text{NDF}$ : 6762294179.2/27

Left Out:  $2.346 \pm 0.000$   $\chi^2/\text{NDF}$ : 63481331015.4/24

Right Out:  $-0.872 \pm 0.000$   $\chi^2/\text{NDF}$ : 8167290467.7/32

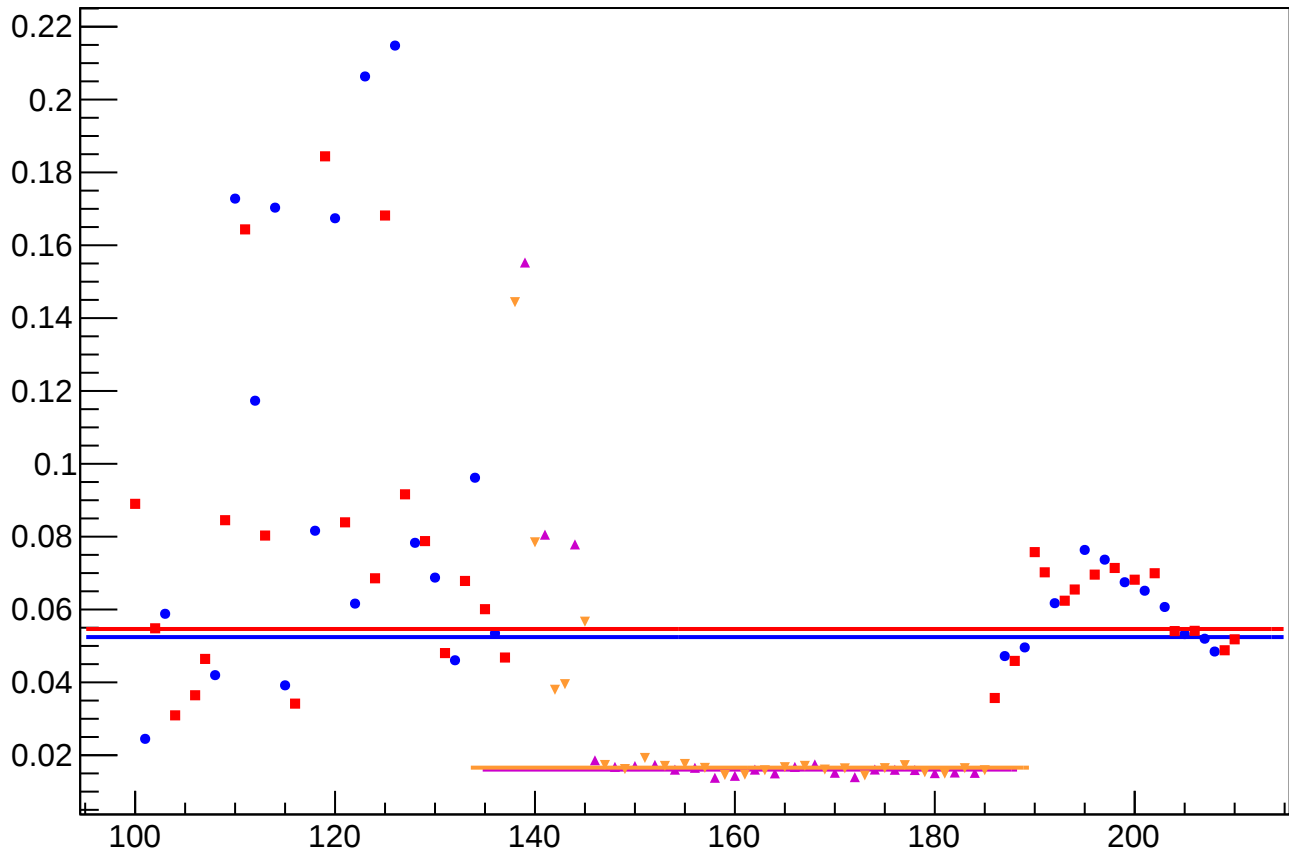
Left In:  $2.290 \pm 0.000$   $\chi^2/\text{NDF}$ : 60875537647.3/22

+ sign  $2.121 \pm 0.000$   $\chi^2/\text{NDF}$ : 107189284297.7/52

All:  $2.085 \pm 0.000$   $\chi^2/\text{NDF}$ : 215595715191.5

- sign  $2.050 \pm 0.000$   $\chi^2/\text{NDF}$ : 108268672457.6/55

# yield\_bpm1X\_rms vs Slug



Right In: 0.052 $\pm$ 0.000  $\chi^2$ /NDF: 3508264.3/27

Left Out: 0.017 $\pm$ 0.000  $\chi^2$ /NDF:2621162.1/24

Right Out: 0.055 $\pm$ 0.000  $\chi^2$ /NDF: 2863691.2/32

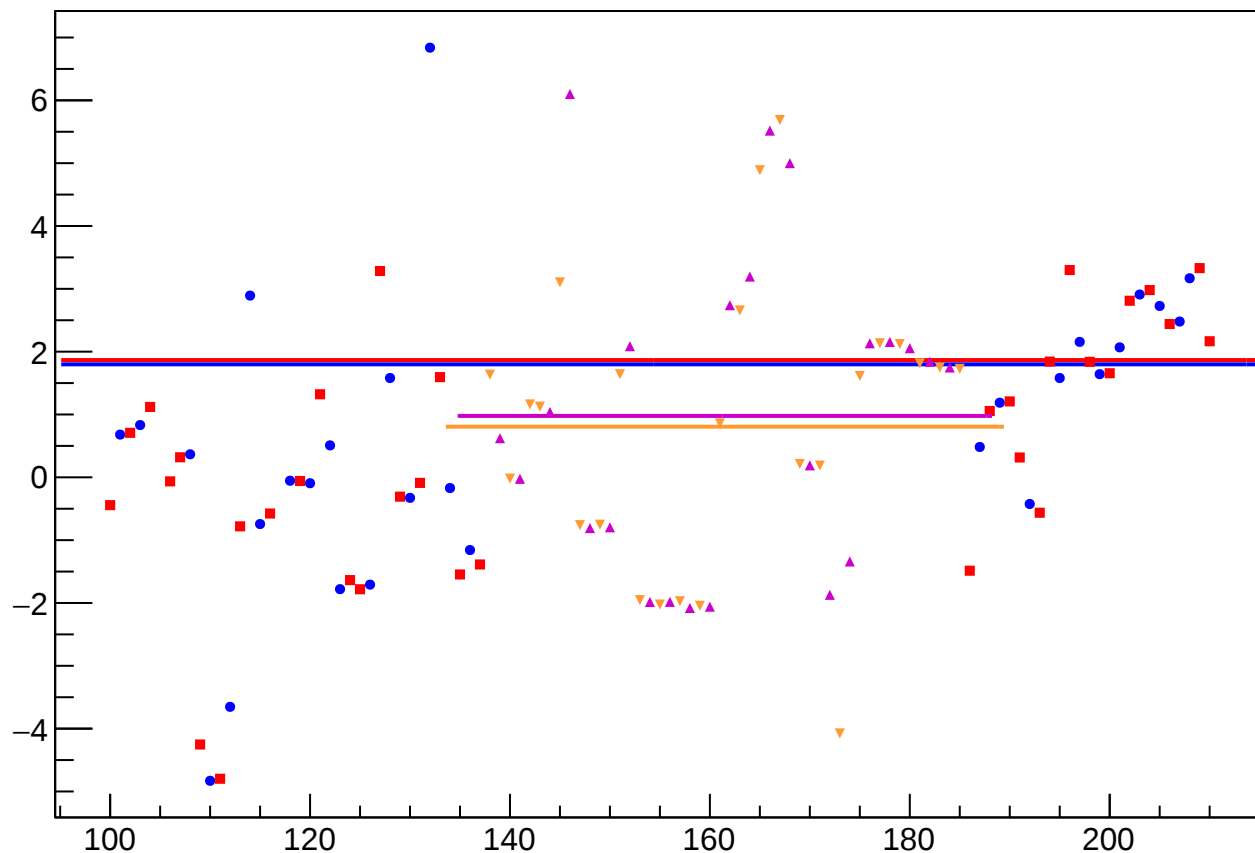
Left In: 0.016 $\pm$ 0.000  $\chi^2$ /NDF:2394376.5/22

+ sign 0.019 $\pm$ 0.000  $\chi^2$ /NDF: 15289033.1/52

All: 0.019 $\pm$ 0.000  $\chi^2$ /NDF: 32246946.1/108

- sign 0.019 $\pm$ 0.000  $\chi^2$ /NDF: 16957067.6/55

# yield\_bpm1Y\_mean vs Slug



Right In: 1.798 $\pm$ 0.000  $\chi^2$ /NDF: 36949959003.1/27

Left Out: 0.806 $\pm$ 0.000  $\chi^2$ /NDF: 507578952196.2/24

Right Out: 1.866 $\pm$ 0.000  $\chi^2$ /NDF: 39577199129.8/32

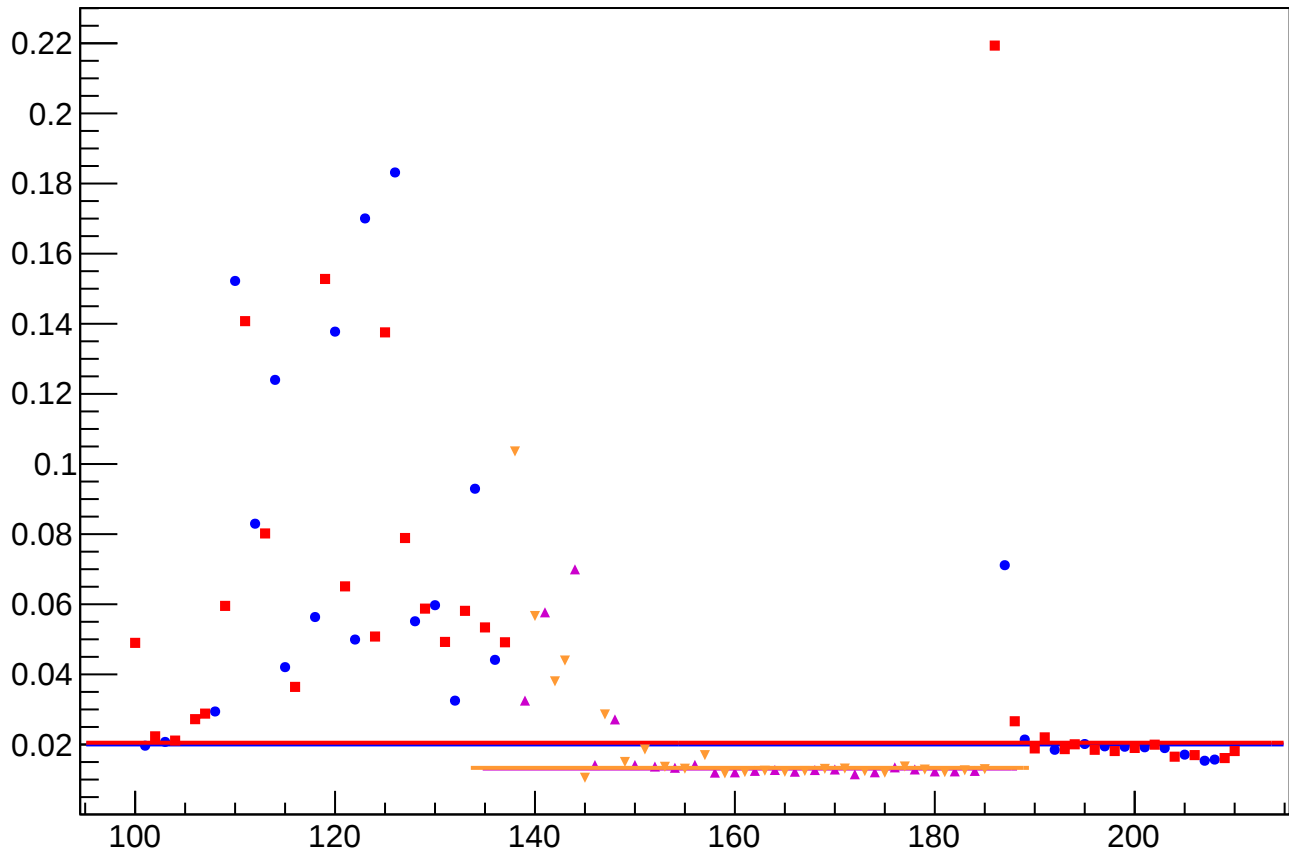
Left In: 0.977 $\pm$ 0.000  $\chi^2$ /NDF: 568209676597.4/22

+ sign 1.023 $\pm$ 0.000  $\chi^2$ /NDF: 562825515921.5/52

All: 1.106 $\pm$ 0.000  $\chi^2$ /NDF: 1187904419429.

- sign 1.187 $\pm$ 0.000  $\chi^2$ /NDF: 623612377730.7/55

# yield\_bpm1Y\_rms vs Slug



Right In: 0.020+/-0.000  $\chi^2/\text{NDF}$ : 4148797.9/27

Left Out: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 2829753.9/24

Right Out: 0.021+/-0.000  $\chi^2/\text{NDF}$ : 5166965.9/32

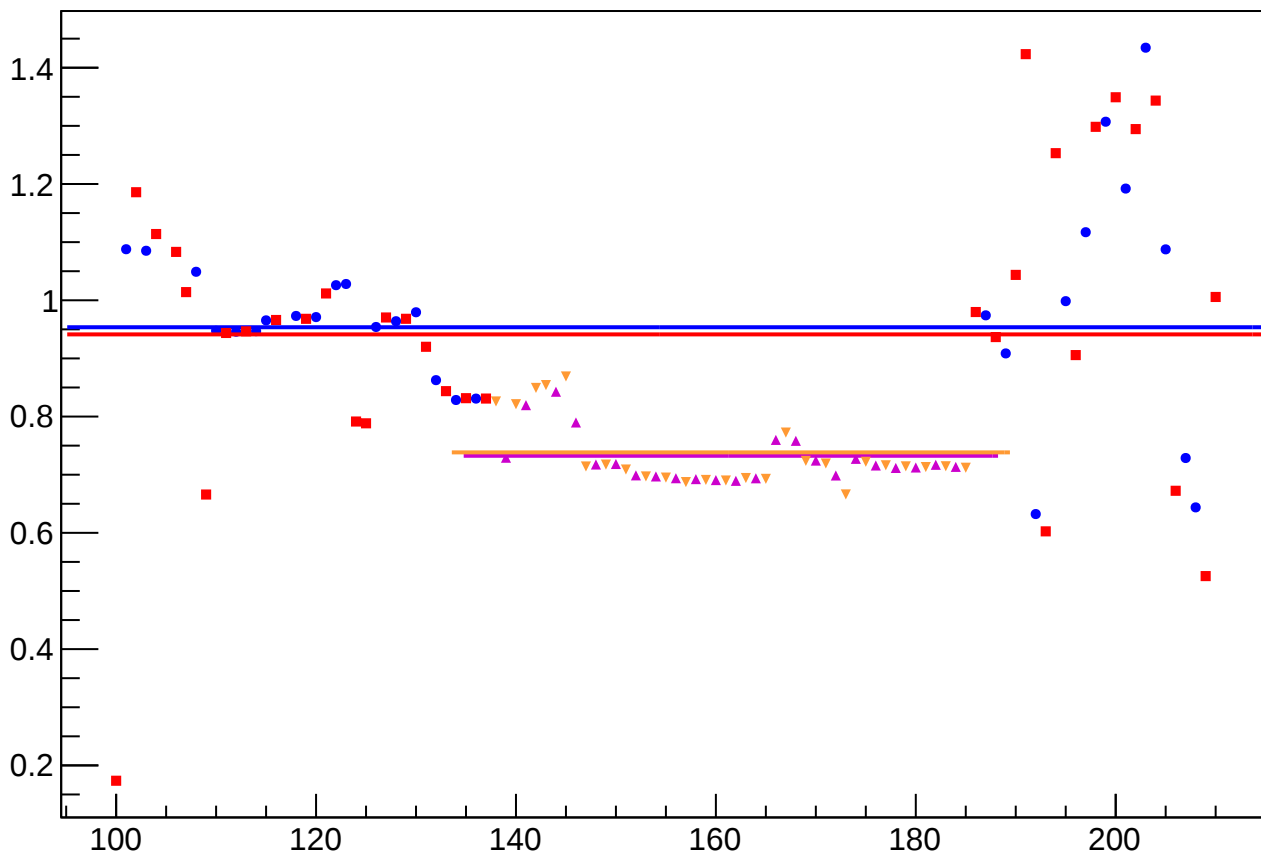
Left In: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 1946693.6/22

+ sign 0.015+/-0.000  $\chi^2/\text{NDF}$ : 8636912.7/52

All: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 17927156.1/108

- sign 0.015+/-0.000  $\chi^2/\text{NDF}$ : 9289695.9/55

# yield\_bpm11X\_mean vs Slug



Right In: 0.954 $\pm$ 0.000  $\chi^2$ /NDF: 673420113.3/27

Left Out: 0.738 $\pm$ 0.000  $\chi^2$ /NDF:310195180.4/24

Right Out: 0.941 $\pm$ 0.000  $\chi^2$ /NDF: 1131407400.8/32

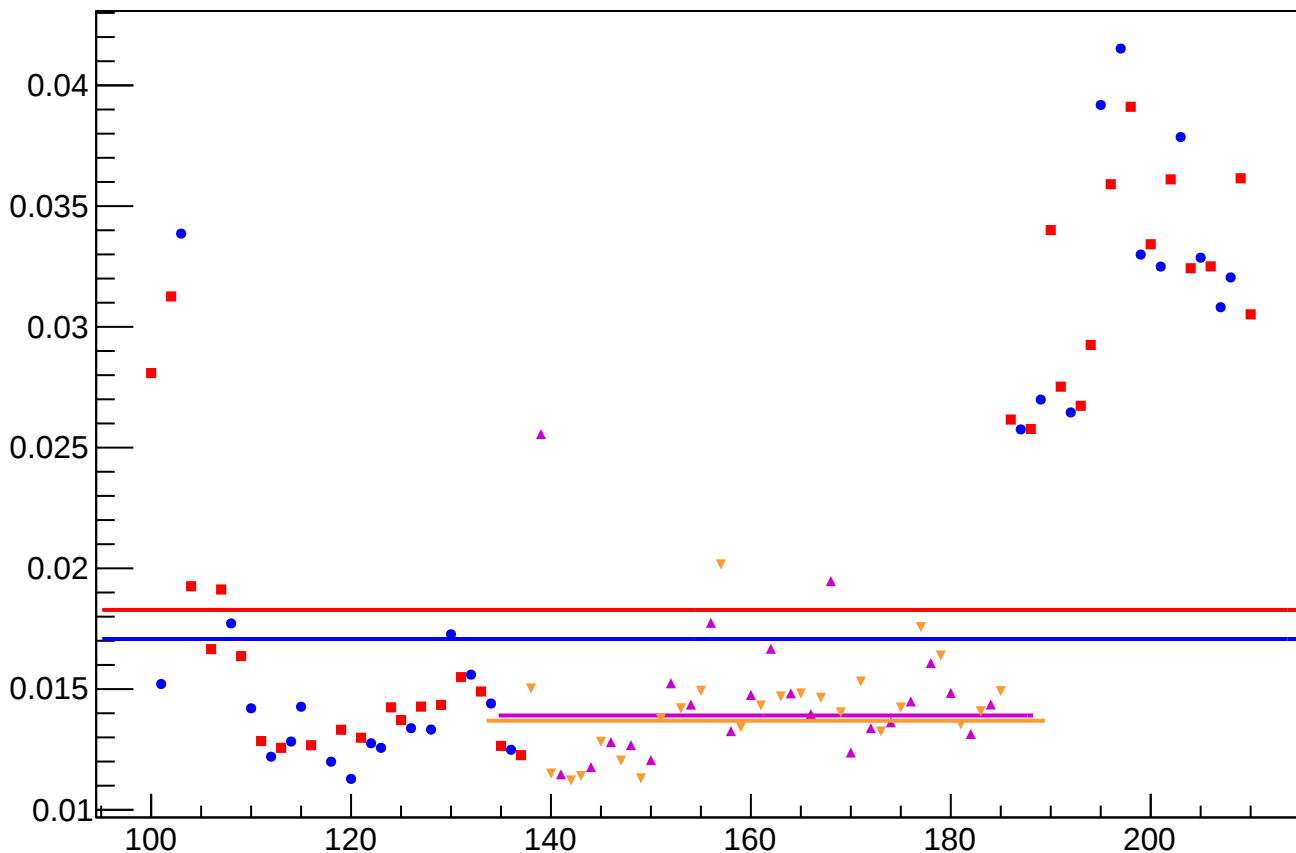
Left In: 0.733 $\pm$ 0.000  $\chi^2$ /NDF:170102394.7/22

+ sign 0.804 $\pm$ 0.000  $\chi^2$ /NDF: 2201853166.8/52

All: 0.802 $\pm$ 0.000  $\chi^2$ /NDF: 4630942093.4/10

- sign 0.800 $\pm$ 0.000  $\chi^2$ /NDF: 2428210411.0/55

# yield\_bpm11X\_rms vs Slug



Right In: 0.017 $\pm$ 0.000  $\chi^2$ /NDF: 4596193.1/27

Left Out: 0.014 $\pm$ 0.000  $\chi^2$ /NDF:528480.6/24

Right Out: 0.018 $\pm$ 0.000  $\chi^2$ /NDF: 4528802.7/32

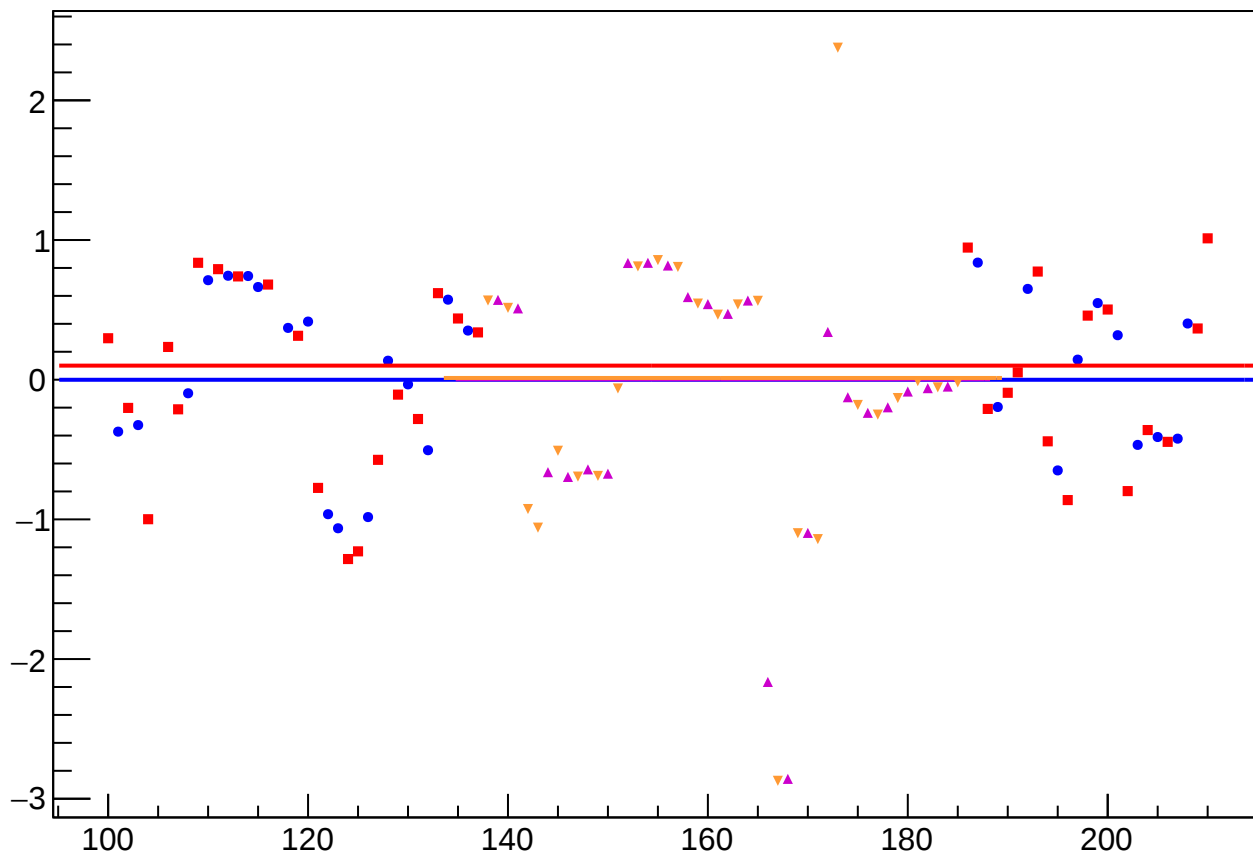
Left In: 0.014 $\pm$ 0.000  $\chi^2$ /NDF:768161.9/22

+ sign 0.015 $\pm$ 0.000  $\chi^2$ /NDF: 5726879.8/52

All: 0.015 $\pm$ 0.000  $\chi^2$ /NDF: 12055706.9/108

- sign 0.015 $\pm$ 0.000  $\chi^2$ /NDF: 6285021.3/55

# yield\_bpm11Y\_mean vs Slug



Right In: -0.001 $\pm$ 0.000  $\chi^2$ /NDF: 20234740039.1/27

Left Out: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 96383858927.1/24

Right Out: 0.101 $\pm$ 0.000  $\chi^2$ /NDF: 37825906228.4/32

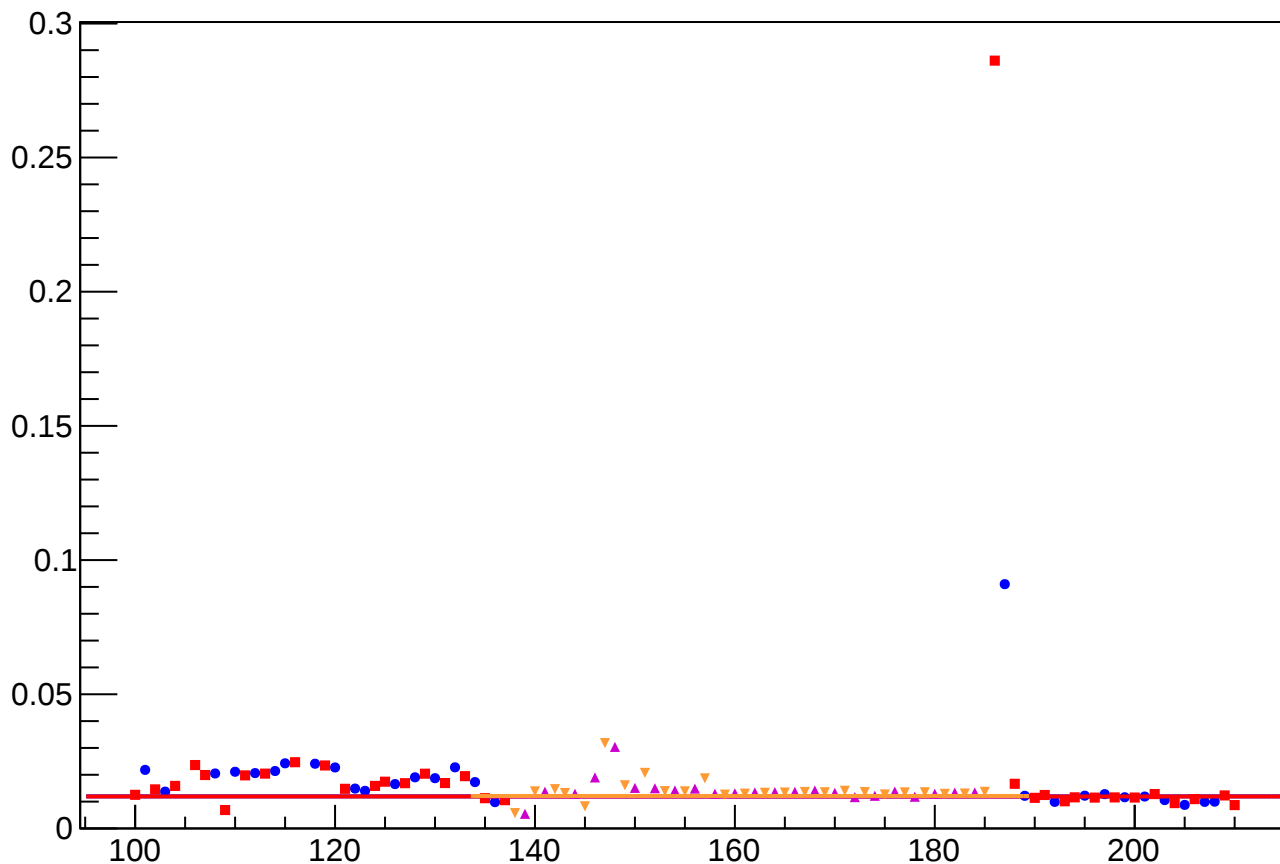
Left In: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 78826489573.0/22

+ sign 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 116626573511.2/52

All: 0.028 $\pm$ 0.000  $\chi^2$ /NDF: 233927986380.9

- sign 0.049 $\pm$ 0.000  $\chi^2$ /NDF: 117123533273.8/55

# yield\_bpm11Y\_rms vs Slug



Right In: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 2362321.9/27

Left Out: 0.012 $\pm$ 0.000  $\chi^2$ /NDF:3105238.9/24

Right Out: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 2874048.4/32

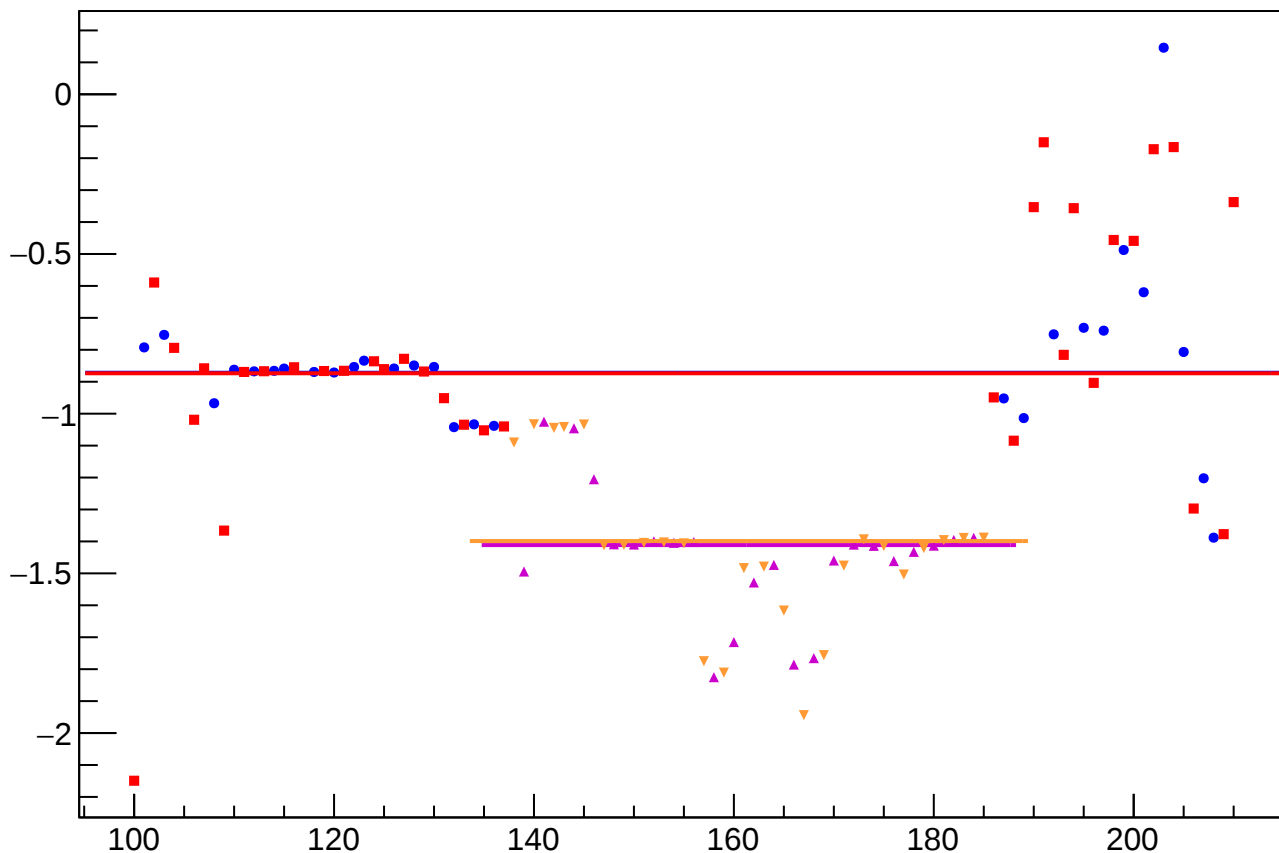
Left In: 0.012 $\pm$ 0.000  $\chi^2$ /NDF:3003502.9/22

+ sign 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 5469731.3/52

All: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 11349164.7/108

- sign 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 5878164.3/55

# yield\_bpm12X\_mean vs Slug



Right In: -0.872+/-0.000  $\chi^2/\text{NDF}$ : 211394767.0/27

Left Out: -1.399+/-0.000  $\chi^2/\text{NDF}$ : 738251911.1/24

Right Out: -0.874+/-0.000  $\chi^2/\text{NDF}$ : 449078954.7/32

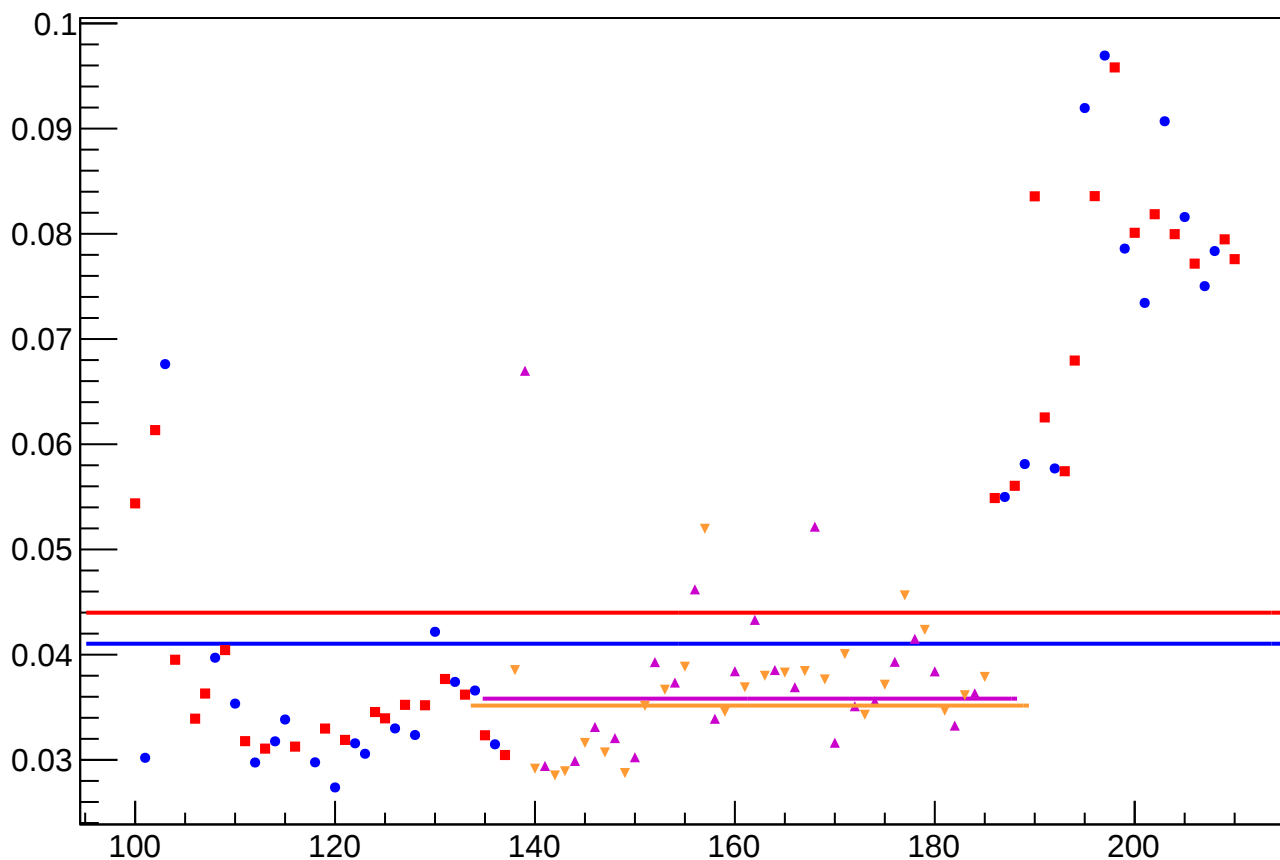
Left In: -1.411+/-0.000  $\chi^2/\text{NDF}$ : 512547995.0/22

+ sign -1.220+/-0.000  $\chi^2/\text{NDF}$ : 2171218262.3/52

All: -1.218+/-0.000  $\chi^2/\text{NDF}$ : 4379779922.0/1

- sign -1.217+/-0.000  $\chi^2/\text{NDF}$ : 2208459687.1/55

# yield\_bpm12X\_rms vs Slug



Right In:  $0.041 \pm 0.000$   $\chi^2/\text{NDF}$ : 4283912.9/27

Left Out:  $0.035 \pm 0.000$   $\chi^2/\text{NDF}$ : 595219.5/24

Right Out:  $0.044 \pm 0.000$   $\chi^2/\text{NDF}$ : 4042361.7/32

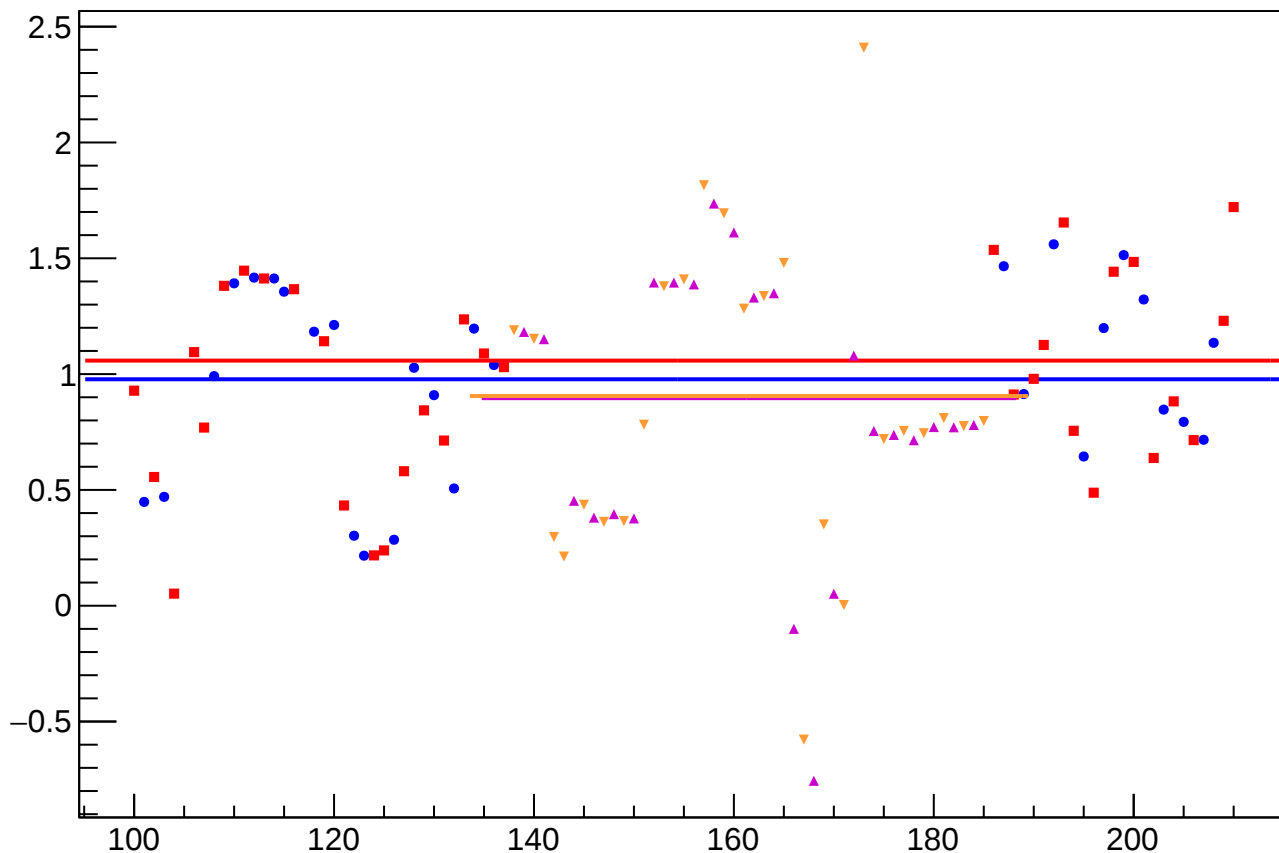
Left In:  $0.036 \pm 0.000$   $\chi^2/\text{NDF}$ : 864147.6/22

+ sign  $0.037 \pm 0.000$   $\chi^2/\text{NDF}$ : 5183266.5/52

All:  $0.038 \pm 0.000$   $\chi^2/\text{NDF}$ : 10715092.3/108

- sign  $0.039 \pm 0.000$   $\chi^2/\text{NDF}$ : 5481587.2/55

# yield\_bpm12Y\_mean vs Slug



Right In: 0.978 $\pm$ 0.000  $\chi^2$ /NDF: 22898691129.0/27

Left Out: 0.905 $\pm$ 0.000  $\chi^2$ /NDF: 84265726513.8/24

Right Out: 1.058 $\pm$ 0.000  $\chi^2$ /NDF: 38067403454.4/32

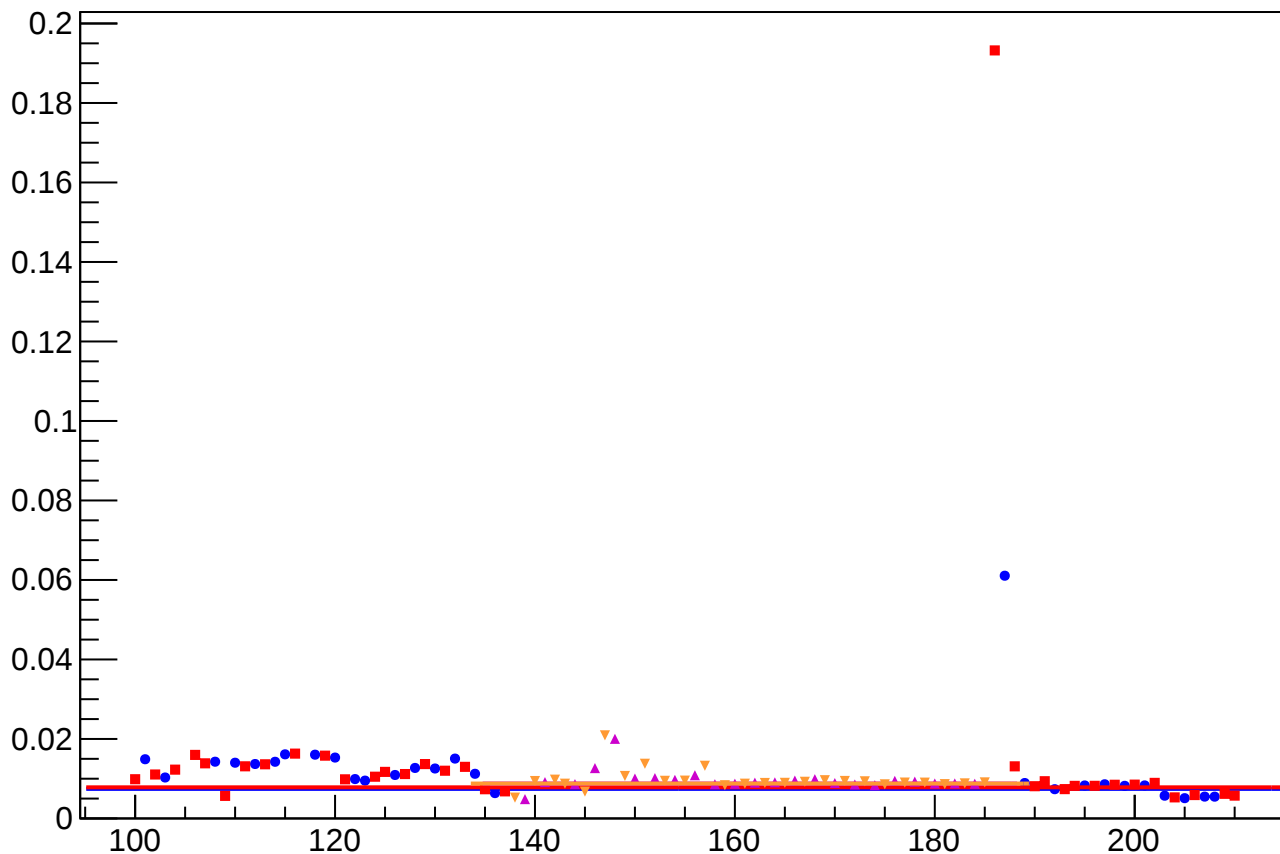
Left In: 0.896 $\pm$ 0.000  $\chi^2$ /NDF: 66594200889.6/22

+ sign 0.941 $\pm$ 0.000  $\chi^2$ /NDF: 107732867598.7/52

All: 0.960 $\pm$ 0.000  $\chi^2$ /NDF: 215511075670.9

- sign 0.980 $\pm$ 0.000  $\chi^2$ /NDF: 107450205577.0/55

# yield\_bpm12Y\_rms vs Slug



Right In: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 3206048.0/27

Left Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 1697568.1/24

Right Out: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 3438684.6/32

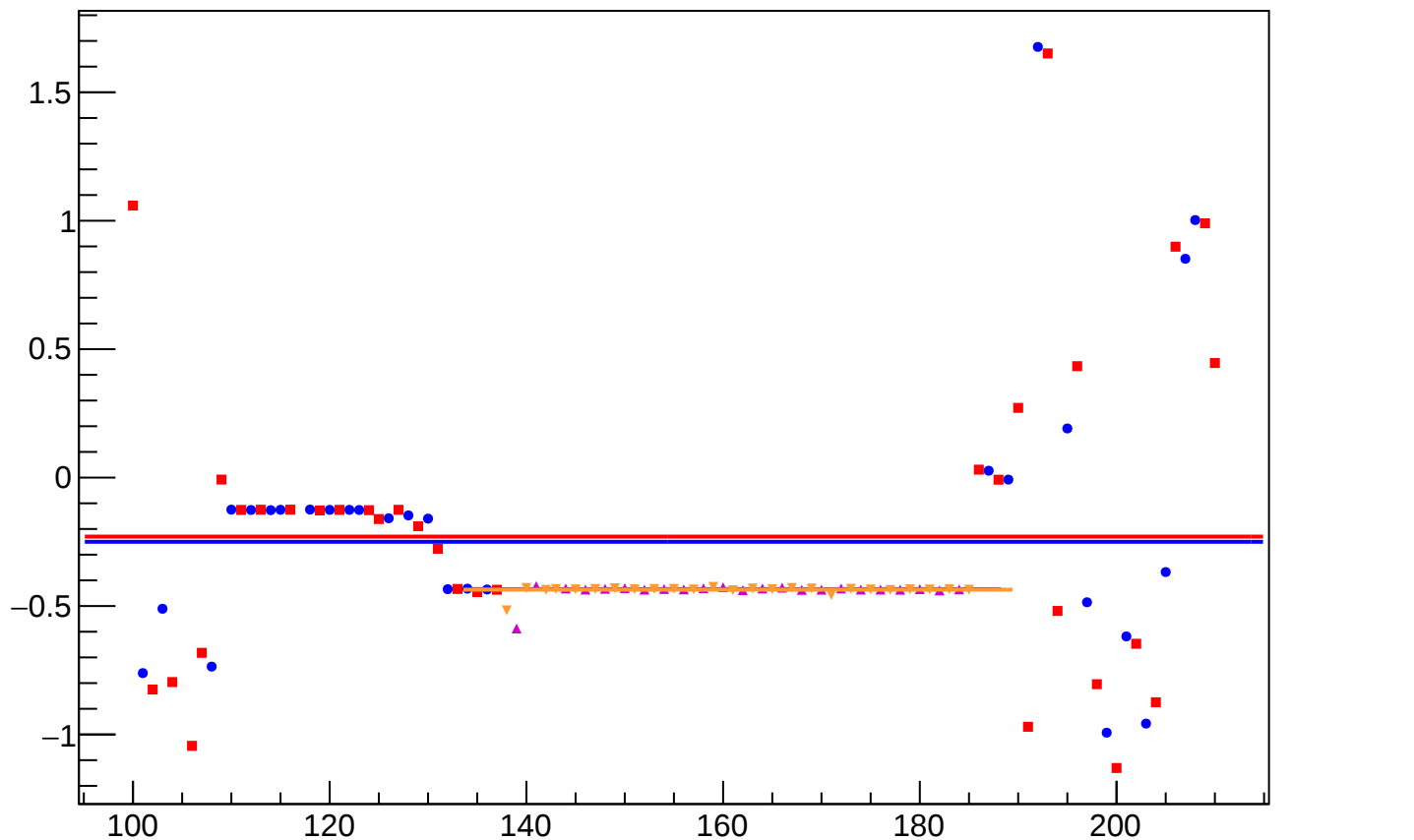
Left In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 1607939.0/22

+ sign 0.008+/-0.000  $\chi^2/\text{NDF}$ : 5291710.0/52

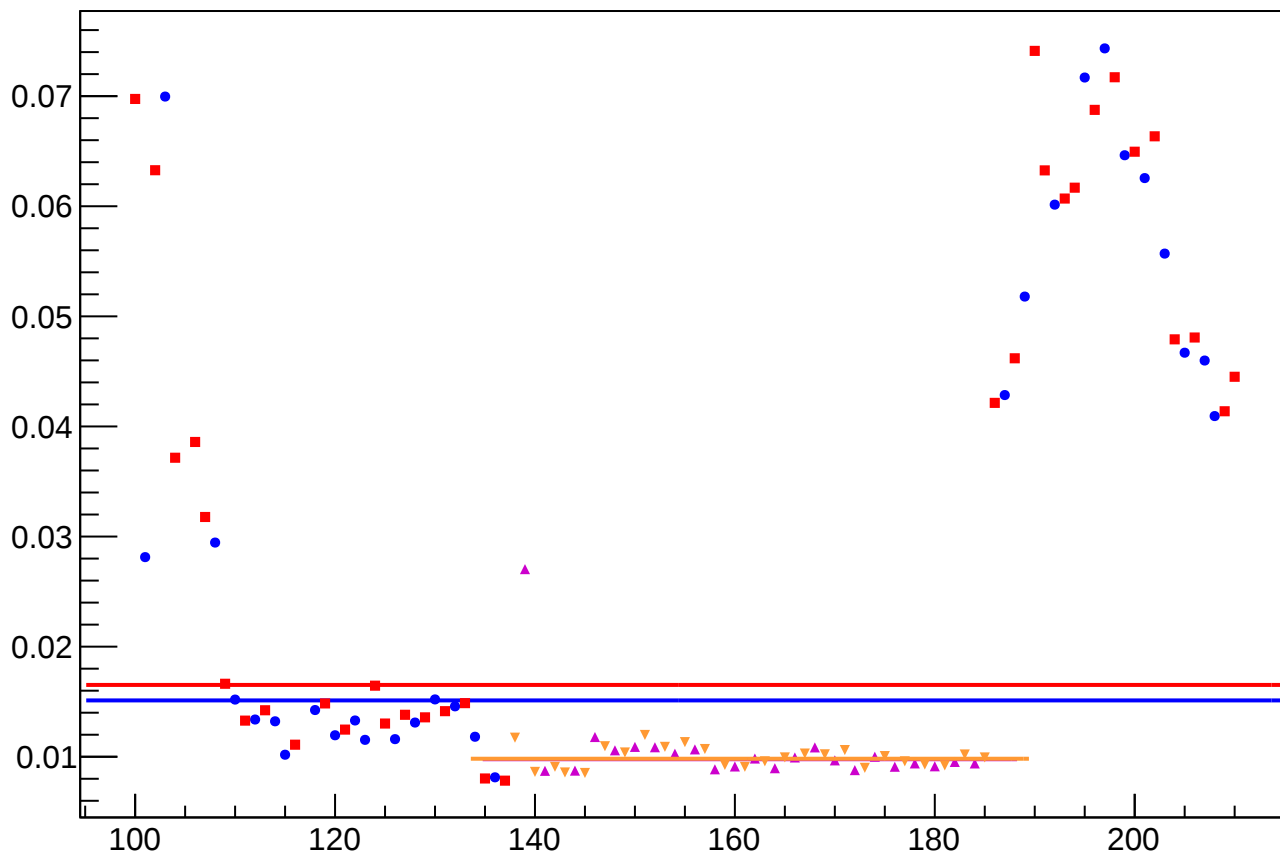
All: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 10539410.1/108

- sign 0.008+/-0.000  $\chi^2/\text{NDF}$ : 5235641.3/55

# yield\_bpm16X\_mean vs Slug



# yield\_bpm16X\_rms vs Slug



Right In: 0.015 $\pm$ 0.000  $\chi^2$ /NDF: 10203407.9/27

Left Out: 0.010 $\pm$ 0.000  $\chi^2$ /NDF: 269242.6/24

Right Out: 0.017 $\pm$ 0.000  $\chi^2$ /NDF: 11653777.7/32

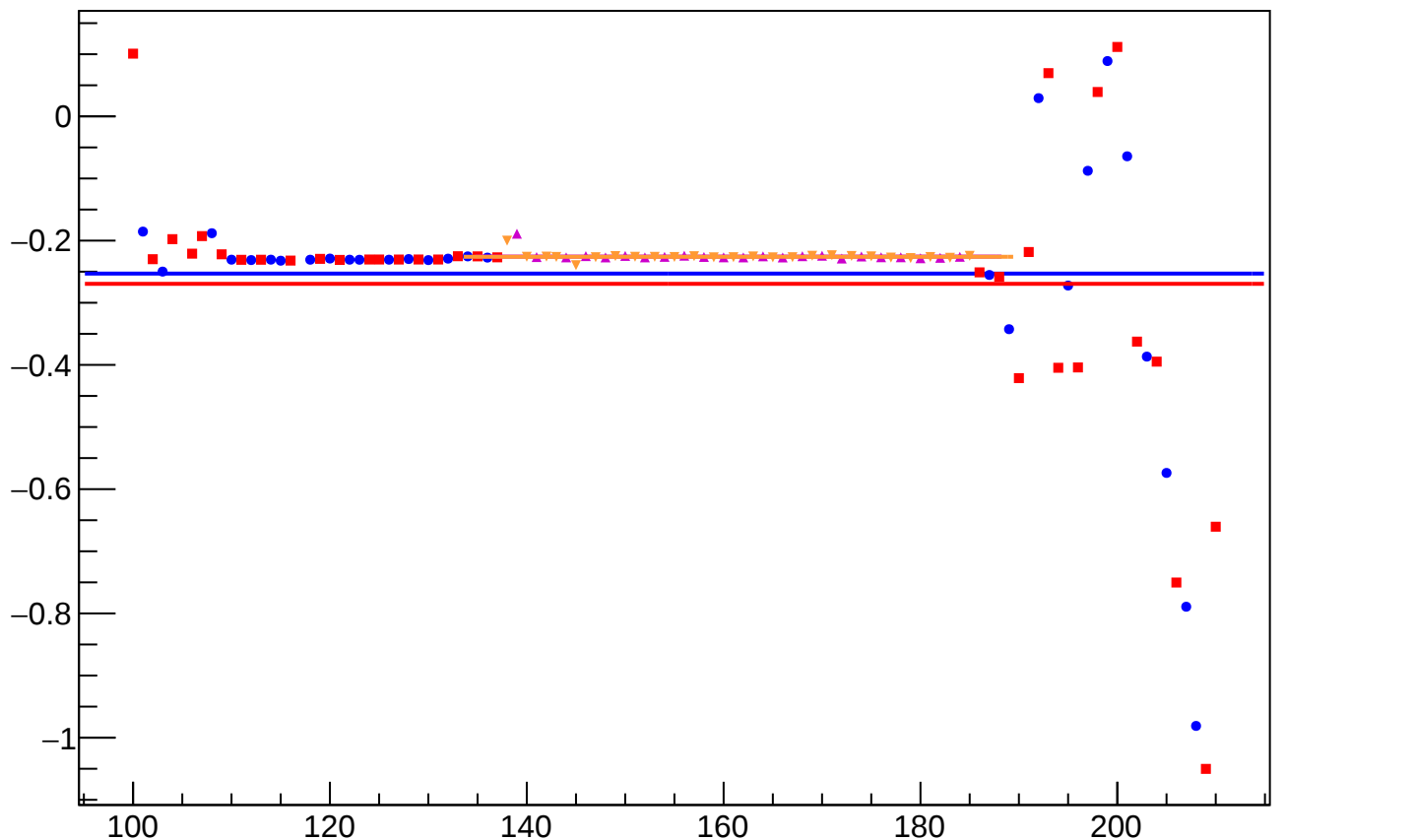
Left In: 0.010 $\pm$ 0.000  $\chi^2$ /NDF: 747550.0/22

+ sign 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 12066928.8/52

All: 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 26944368.3/108

- sign 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 14867702.2/55

# yield\_bpm16Y\_mean vs Slug



Right In: -0.253+/-0.000  $\chi^2/\text{NDF}$ : 22442082989.6/27

Left Out: -0.226+/-0.000  $\chi^2/\text{NDF}$ : 21205667.4/24

Right Out: -0.270+/-0.000  $\chi^2/\text{NDF}$ : 25183082549.0/32

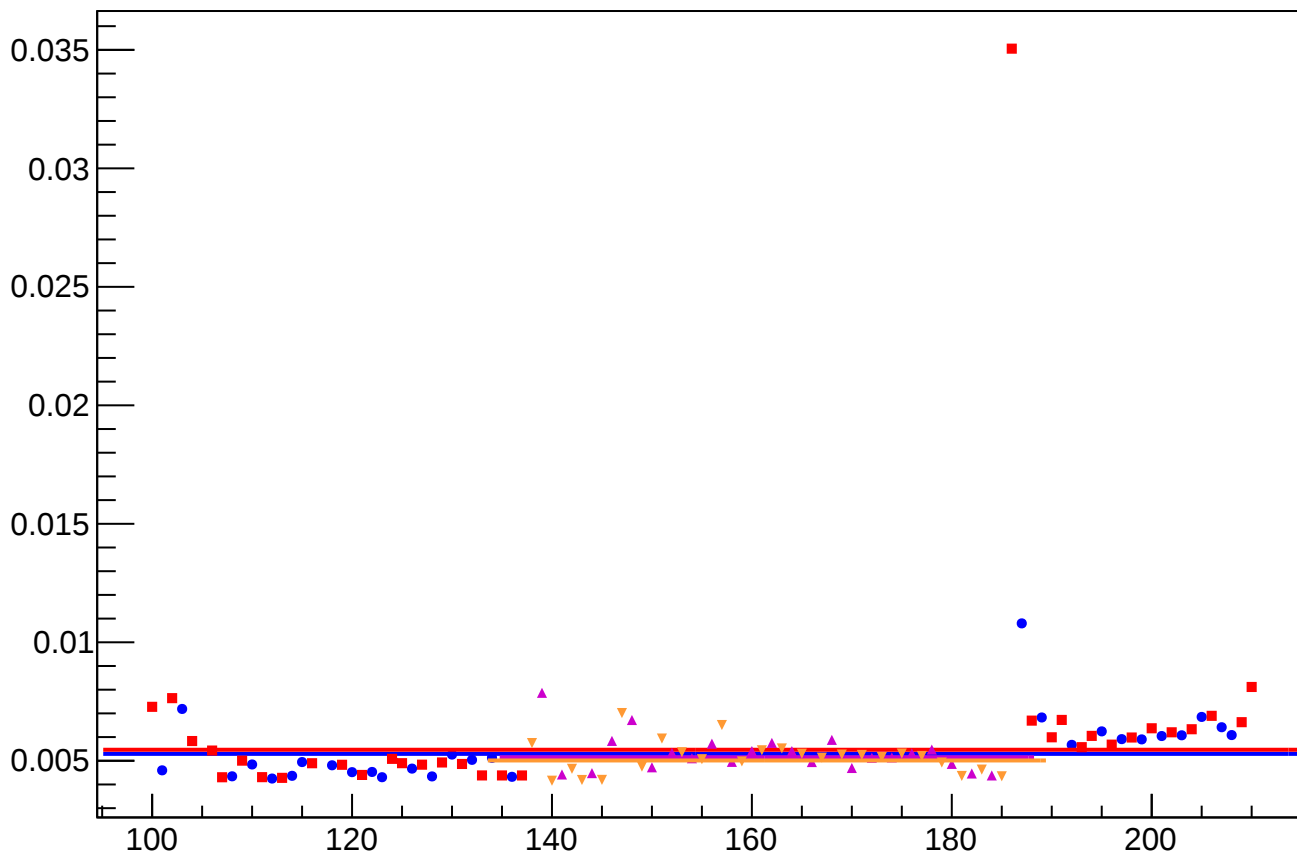
Left In: -0.226+/-0.000  $\chi^2/\text{NDF}$ : 15245251.1/22

+ sign -0.237+/-0.000  $\chi^2/\text{NDF}$ : 22666192167.7/52

All: -0.241+/-0.000  $\chi^2/\text{NDF}$ : 48429036678.4/100

- sign -0.245+/-0.000  $\chi^2/\text{NDF}$ : 25724271227.7/55

# yield\_bpm16Y\_rms vs Slug



Right In: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 776653.8/27

Left Out: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 530632.6/24

Right Out: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 1445939.2/32

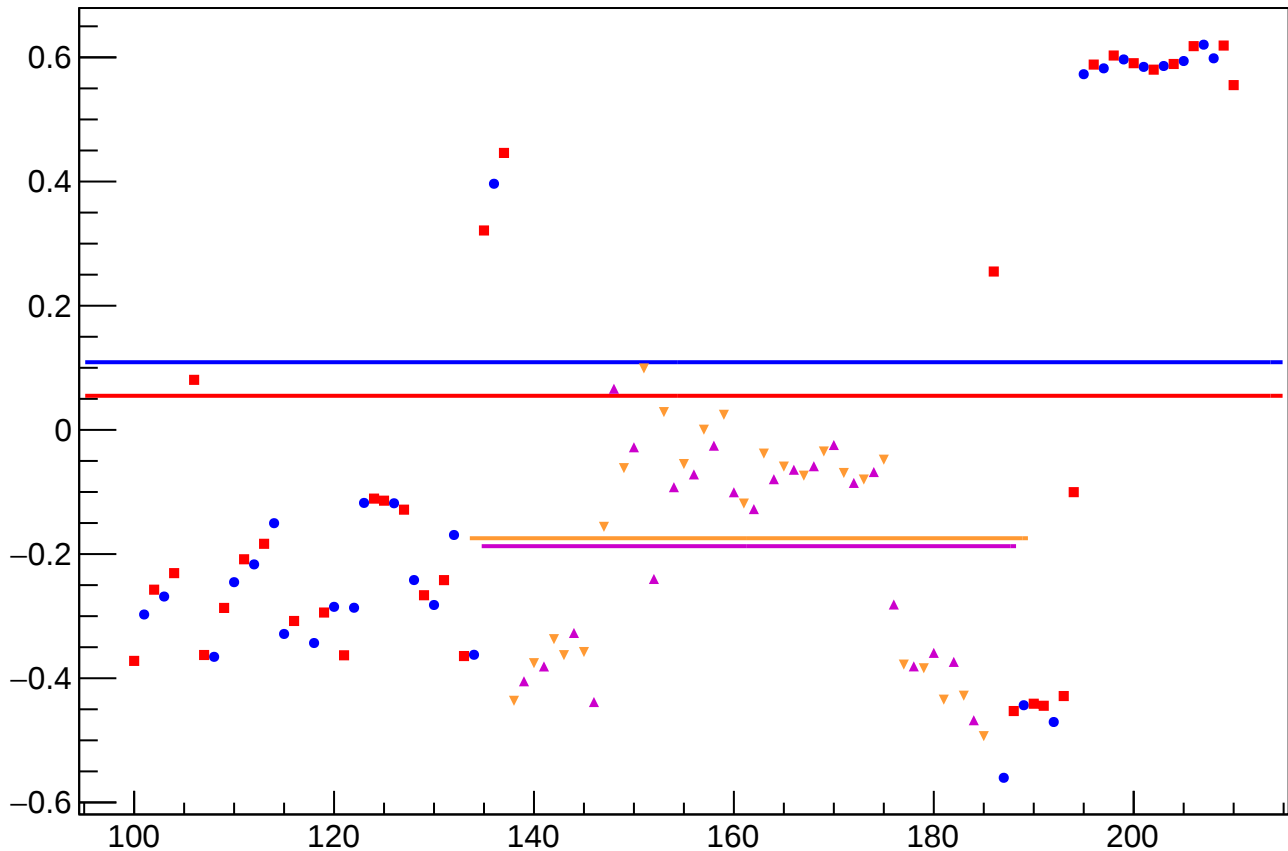
Left In: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 493107.7/22

+ sign 0.005+/-0.000  $\chi^2/\text{NDF}$ : 1350248.0/52

All: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 3374777.0/108

- sign 0.005+/-0.000  $\chi^2/\text{NDF}$ : 1994816.0/55

# yield\_bpm0i02X\_mean vs Slug



Right In: 0.109+/-0.000  $\chi^2/\text{NDF}$ : 60427656711.2/27

Left Out: -0.174+/-0.000  $\chi^2/\text{NDF}$ : 18025533236.1/24

Right Out: 0.055+/-0.000  $\chi^2/\text{NDF}$ : 63465374227.2/32

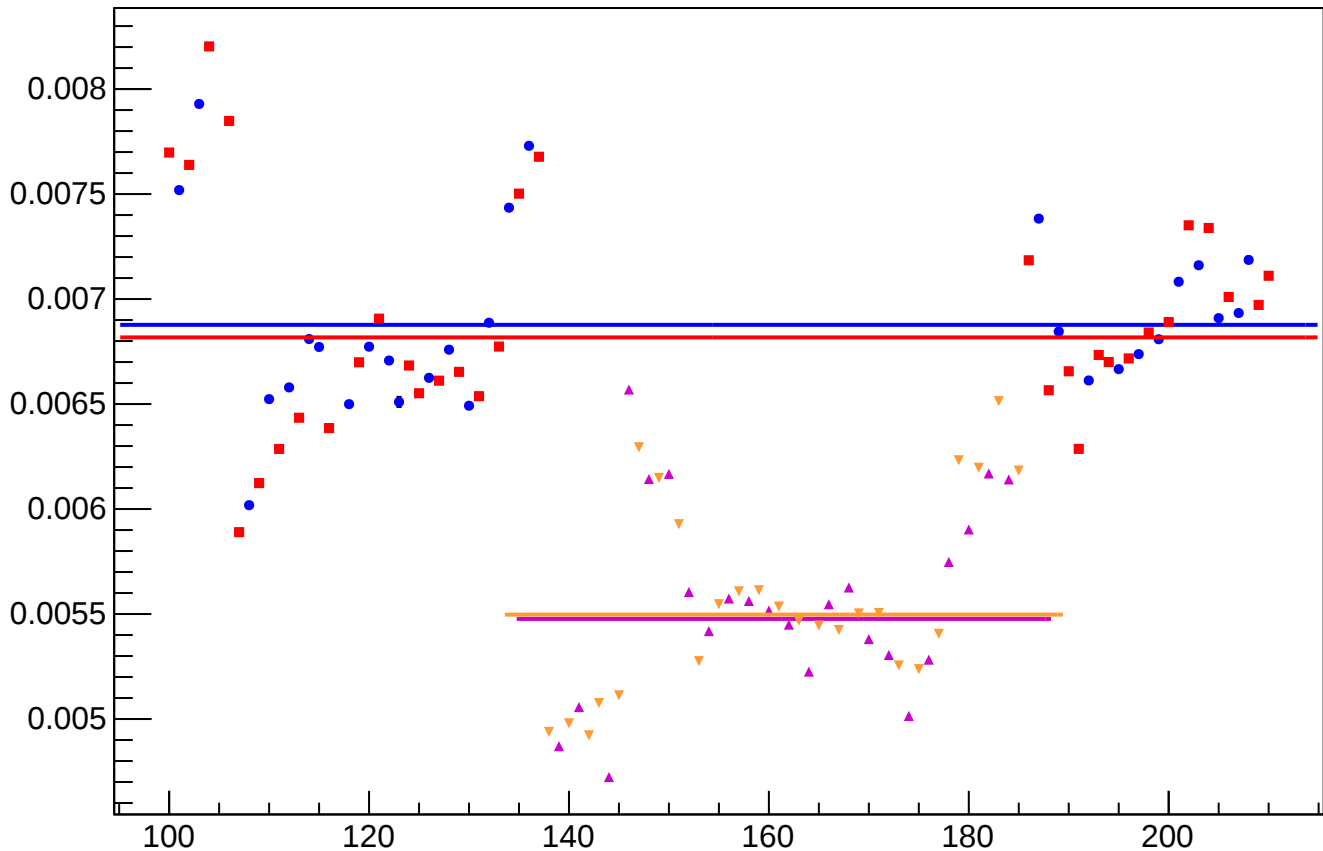
Left In: -0.187+/-0.000  $\chi^2/\text{NDF}$ : 12816646575.4/22

+ sign -0.077+/-0.000  $\chi^2/\text{NDF}$ : 94346613840.1/52

All: -0.085+/-0.000  $\chi^2/\text{NDF}$ : 183212797850.0

- sign -0.093+/-0.000  $\chi^2/\text{NDF}$ : 88757168744.5/55

# yield\_bpm0i02X\_rms vs Slug



Right In: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 91502.6/27

Left Out: 0.005 $\pm$ 0.000  $\chi^2$ /NDF:198746.4/24

Right Out: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 133398.8/32

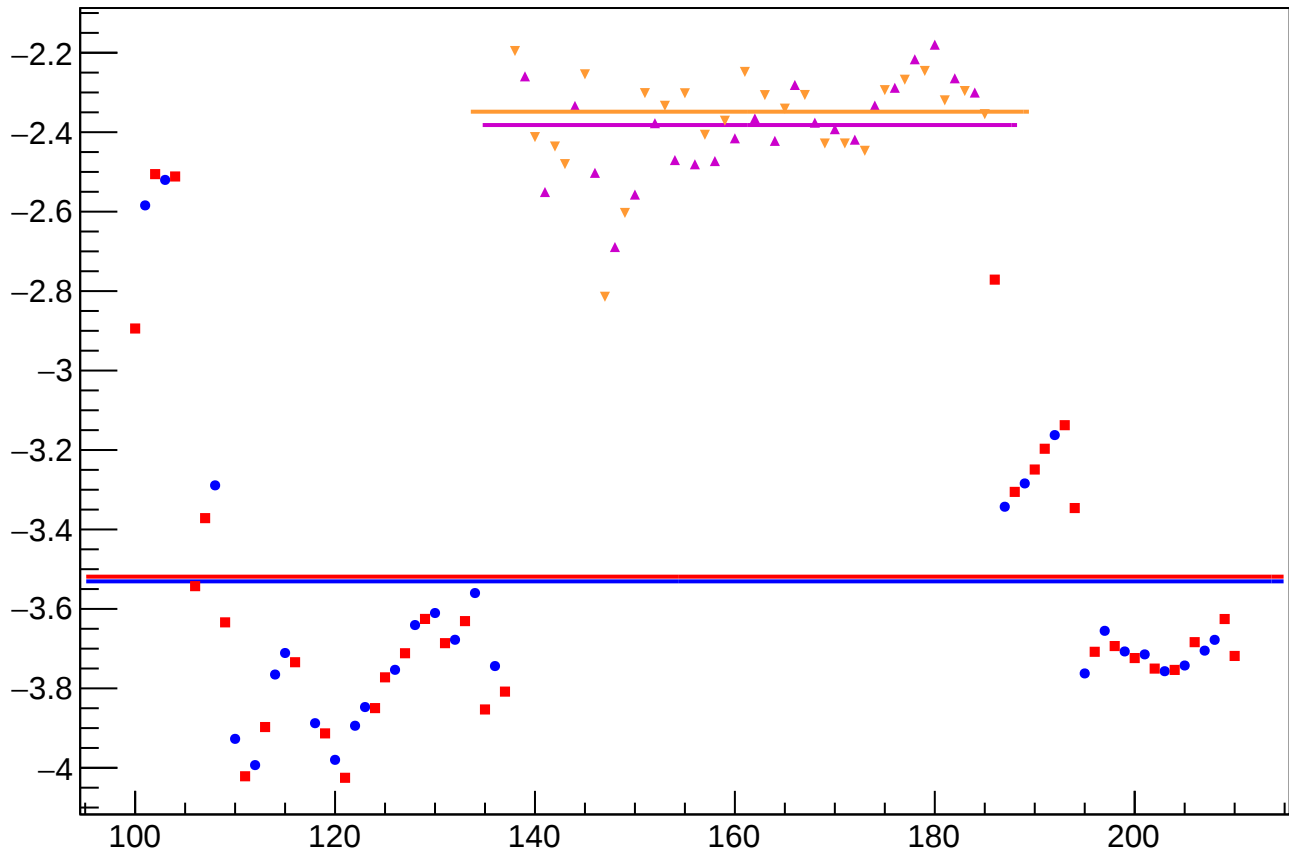
Left In: 0.005 $\pm$ 0.000  $\chi^2$ /NDF:202181.4/22

+ sign 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 1043313.3/52

All: 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 2143974.3/108

- sign 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 1099954.2/55

# yield\_bpm0i02Y\_mean vs Slug



Right In: -3.531+/-0.000  $\chi^2/\text{NDF}$ : 30026680080.3/27

Left Out: -2.348+/-0.000  $\chi^2/\text{NDF}$ : 2158686333.4/24

+ sign -2.828+/-0.000  $\chi^2/\text{NDF}$ : 159752130194.3/52

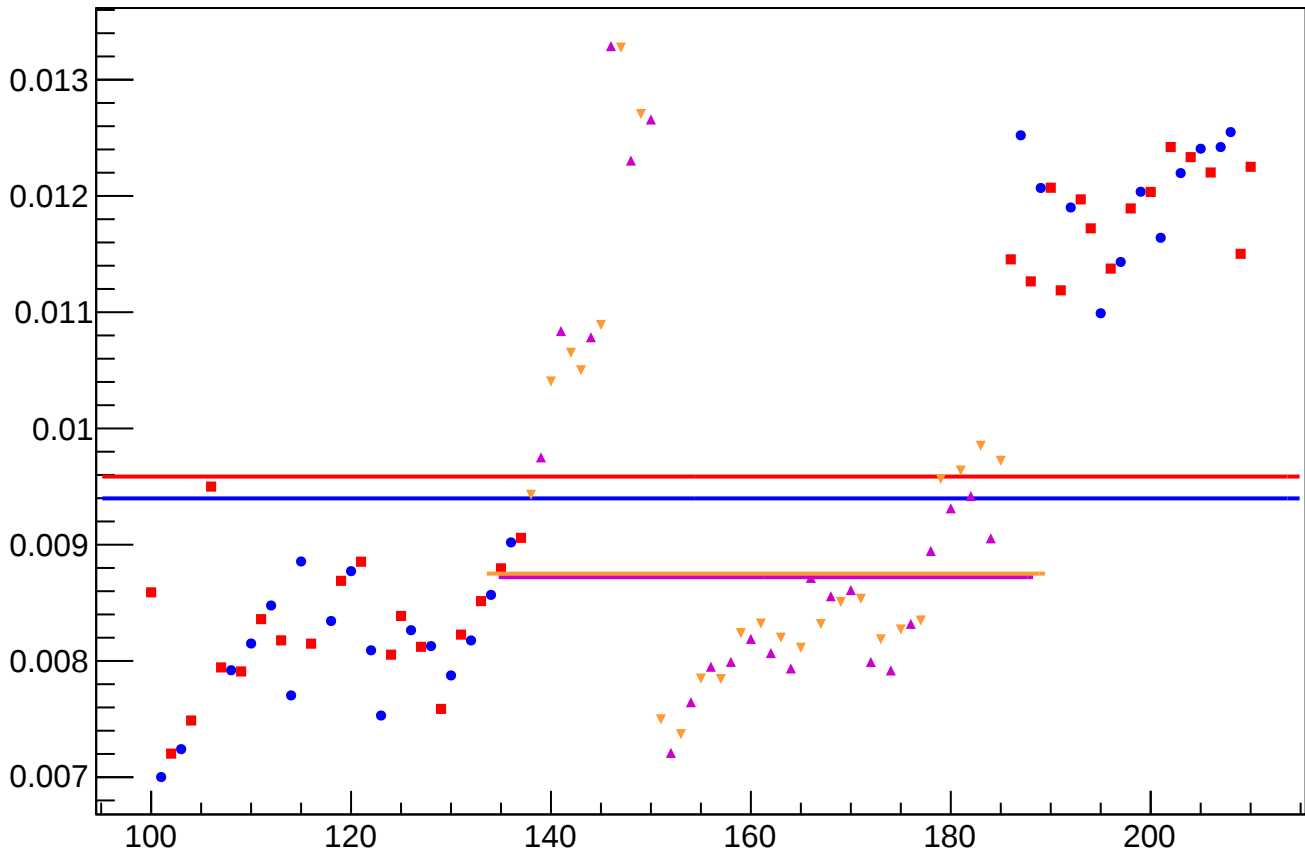
Right Out: -3.519+/-0.000  $\chi^2/\text{NDF}$ : 31073274346.8/32

All: -2.856+/-0.000  $\chi^2/\text{NDF}$ : 315442297587.4

Left In: -2.382+/-0.000  $\chi^2/\text{NDF}$ : 2318395228.4/22

- sign -2.884+/-0.000  $\chi^2/\text{NDF}$ : 155101042268.6/55

# yield\_bpm0i02Y\_rms vs Slug



Right In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 1143553.9/27

Left Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 663672.8/24

Right Out: 0.010+/-0.000  $\chi^2/\text{NDF}$ : 1178183.9/32

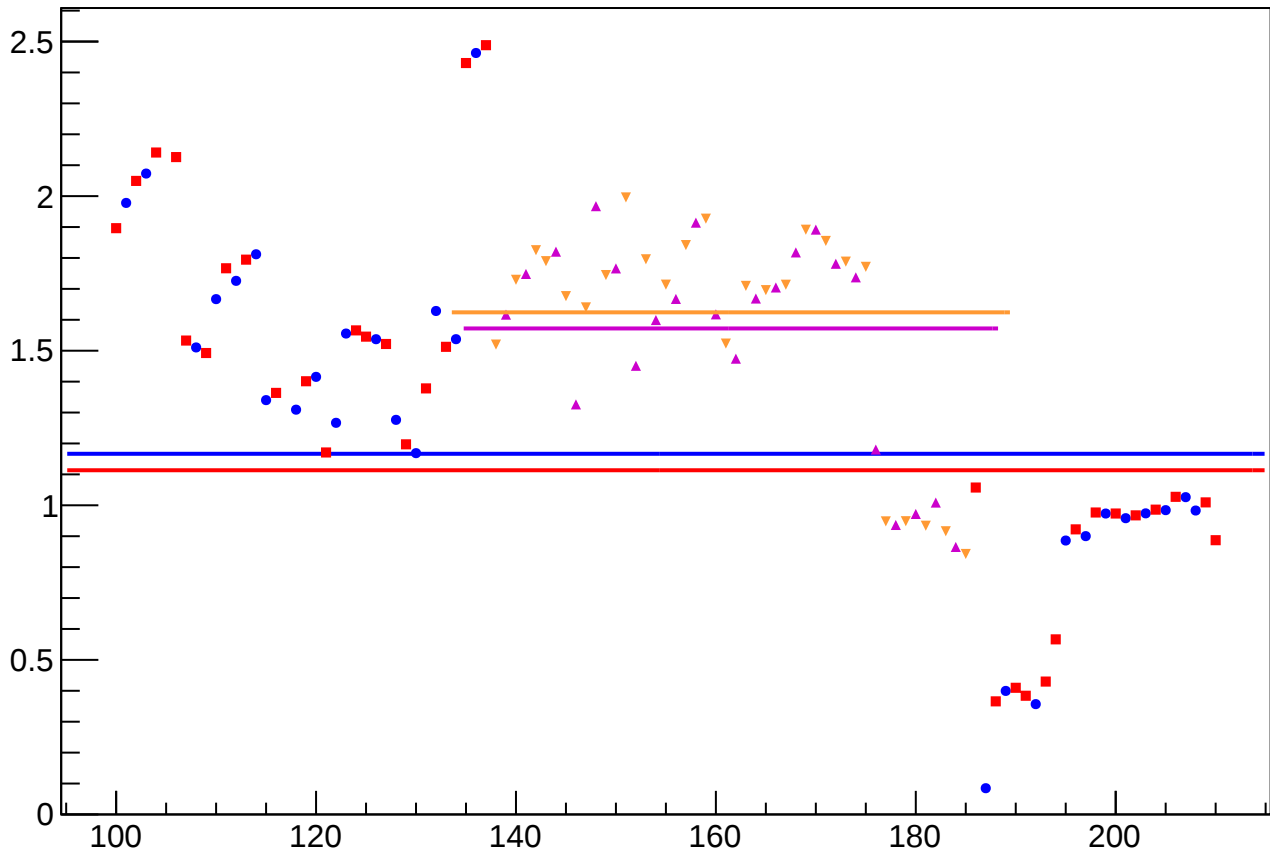
Left In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 747867.0/22

+ sign 0.009+/-0.000  $\chi^2/\text{NDF}$ : 1883606.4/52

All: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 3953786.4/108

- sign 0.009+/-0.000  $\chi^2/\text{NDF}$ : 2067188.9/55

# yield\_bpm0i02aX\_mean vs Slug



Right In: 1.167 $\pm$ 0.000  $\chi^2$ /NDF: 27574124337.8/27

Left Out: 1.624 $\pm$ 0.000  $\chi^2$ /NDF: 16631112386.4/24

Right Out: 1.113 $\pm$ 0.000  $\chi^2$ /NDF: 32947462035.1/32

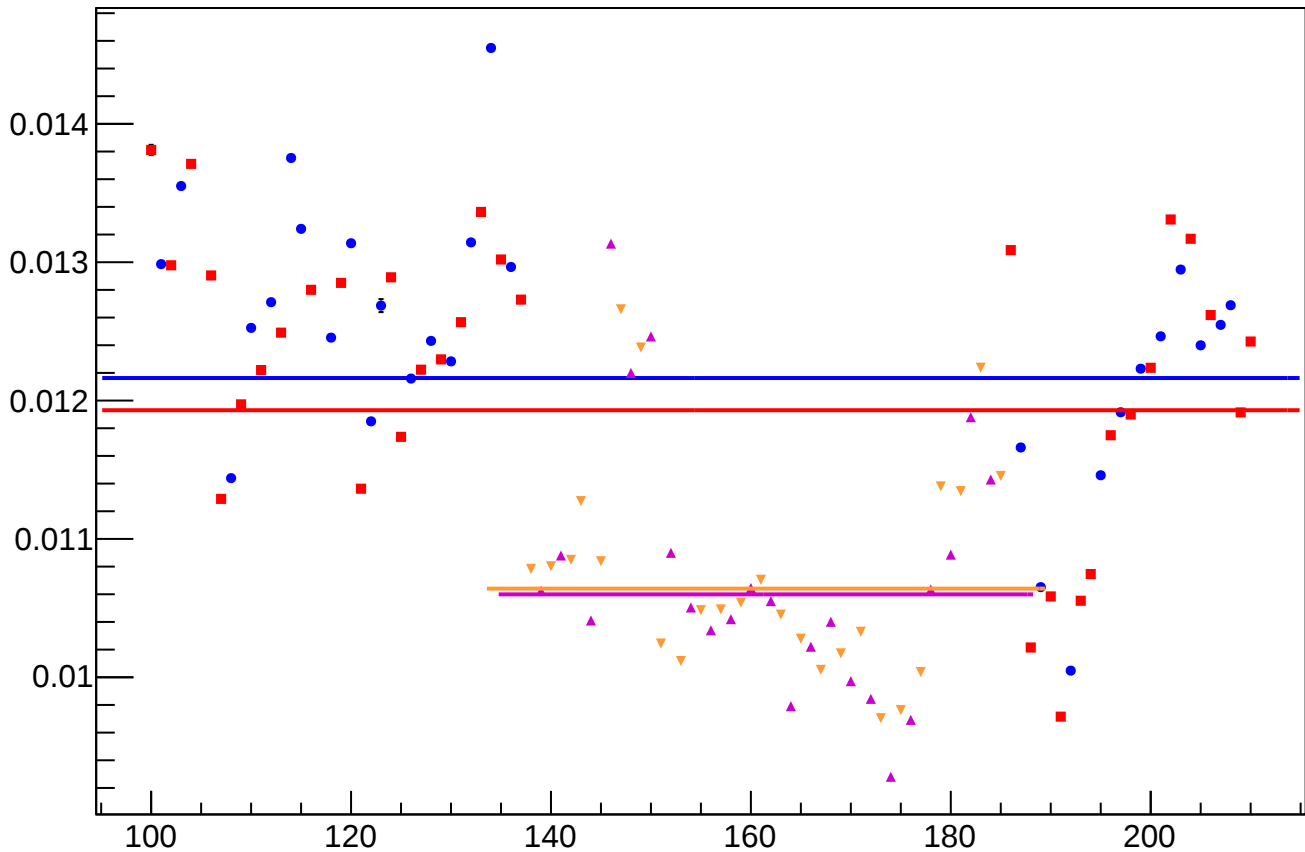
Left In: 1.572 $\pm$ 0.000  $\chi^2$ /NDF: 14230484809.4/22

+ sign 1.451 $\pm$ 0.000  $\chi^2$ /NDF: 56594141821.0/52

All: 1.411 $\pm$ 0.000  $\chi^2$ /NDF: 117976124120.3

- sign 1.374 $\pm$ 0.000  $\chi^2$ /NDF: 60623640627.2/55

# yield\_bpm0i02aX\_rms vs Slug



Right In: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 169147.9/27

Left Out: 0.011 $\pm$ 0.000  $\chi^2$ /NDF:159760.9/24

Right Out: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 233295.0/32

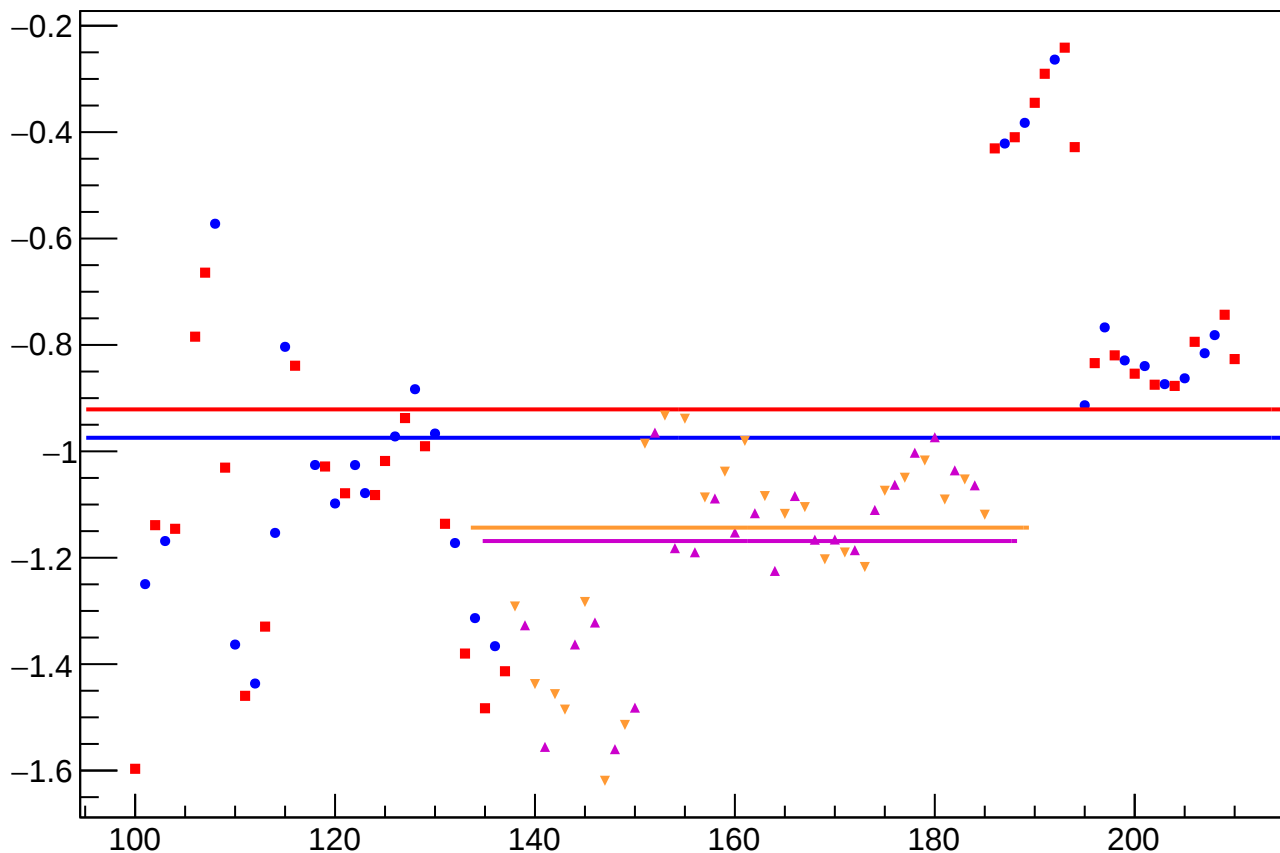
Left In: 0.011 $\pm$ 0.000  $\chi^2$ /NDF:204531.5/22

+ sign 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 603129.9/52

All: 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 1267928.4/108

- sign 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 664320.3/55

# yield\_bpm0i02aY\_mean vs Slug



Right In:  $-0.975 \pm 0.000$   $\chi^2/\text{NDF}: 11137407911.3/27$

Left Out:  $-1.143 \pm 0.000$   $\chi^2/\text{NDF}: 7976364534.0/24$

Right Out:  $-0.921 \pm 0.000$   $\chi^2/\text{NDF}: 16080452772.8/32$

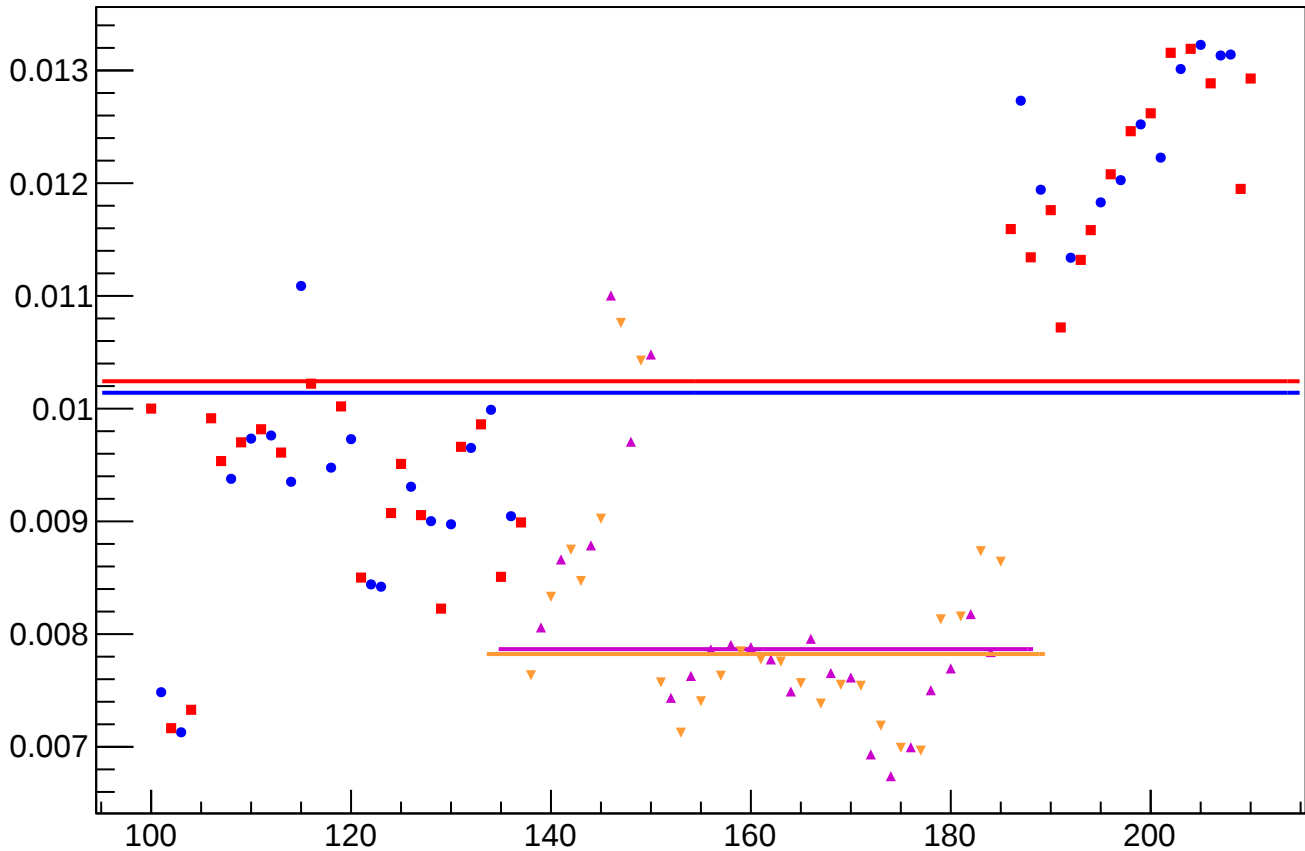
Left In:  $-1.169 \pm 0.000$   $\chi^2/\text{NDF}: 6362643368.6/22$

+ sign  $-1.089 \pm 0.000$   $\chi^2/\text{NDF}: 21663520369.2/52$

All:  $-1.085 \pm 0.000$   $\chi^2/\text{NDF}: 49892244515.4/100$

- sign  $-1.080 \pm 0.000$   $\chi^2/\text{NDF}: 28209052600.7/55$

# yield\_bpm0i02aY\_rms vs Slug



Right In: 0.010 $\pm$ 0.000  $\chi^2$ /NDF: 979236.1/27

Left Out: 0.008 $\pm$ 0.000  $\chi^2$ /NDF:336387.6/24

Right Out: 0.010 $\pm$ 0.000  $\chi^2$ /NDF: 1002054.8/32

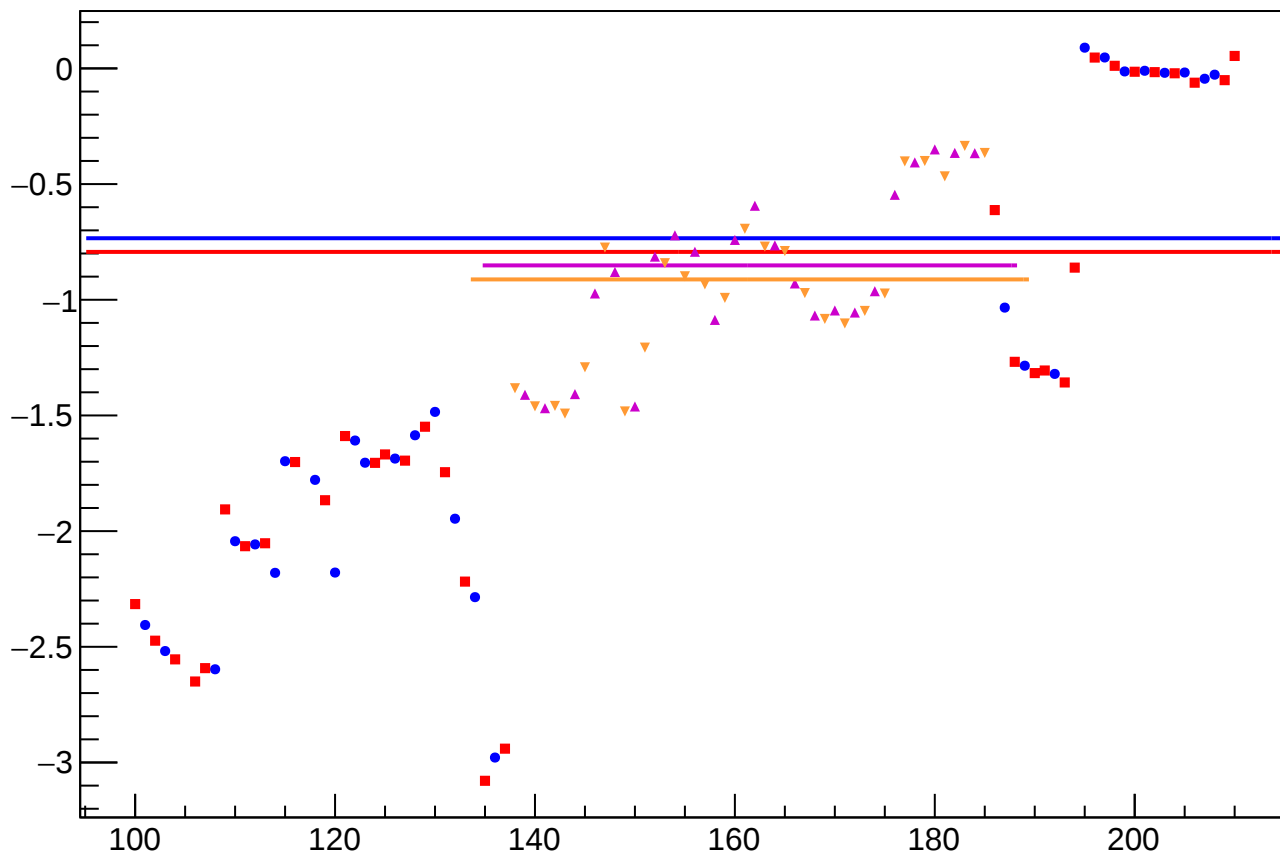
Left In: 0.008 $\pm$ 0.000  $\chi^2$ /NDF:379901.3/22

+ sign 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 2275954.2/52

All: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 4731485.3/108

- sign 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 2445356.3/55

# yield\_bpm0i05X\_mean vs Slug



Right In:  $-0.734 \pm 0.000$   $\chi^2/\text{NDF}$ : 361789732027.7/27

Left Out:  $-0.912 \pm 0.000$   $\chi^2/\text{NDF}$ : 49039425818.1/24

Right Out:  $-0.793 \pm 0.000$   $\chi^2/\text{NDF}$ : 404969159584.0/32

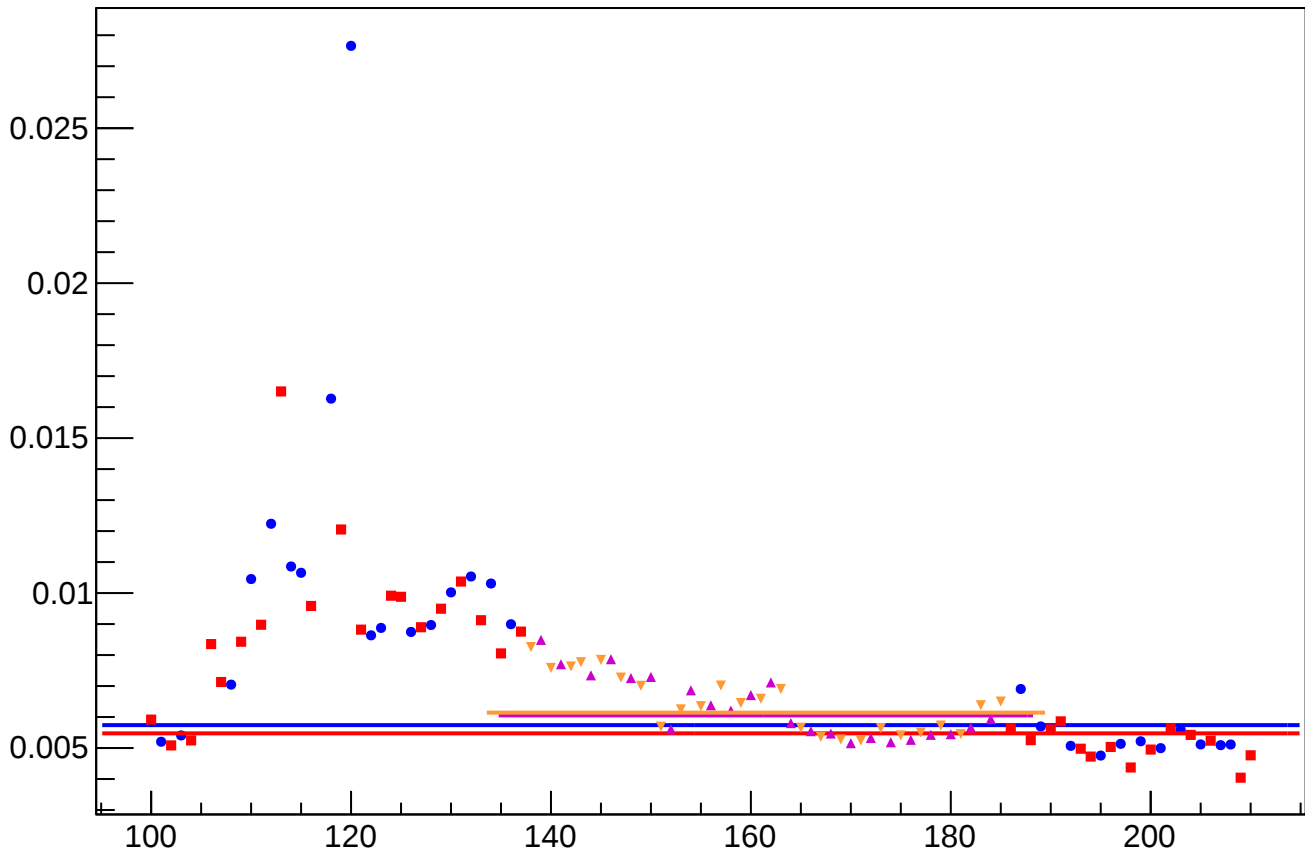
Left In:  $-0.851 \pm 0.000$   $\chi^2/\text{NDF}$ : 46438446008.2/22

+ sign  $-0.833 \pm 0.000$   $\chi^2/\text{NDF}$ : 417127347401.9/52

All:  $-0.827 \pm 0.000$   $\chi^2/\text{NDF}$ : 869348546588.5

- sign  $-0.821 \pm 0.000$   $\chi^2/\text{NDF}$ : 452168918987.5/55

# yield\_bpm0i05X\_rms vs Slug



Right In: 0.006 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2026123.7/27

Left Out: 0.006 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 637765.4/24

Right Out: 0.005 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2126640.0/32

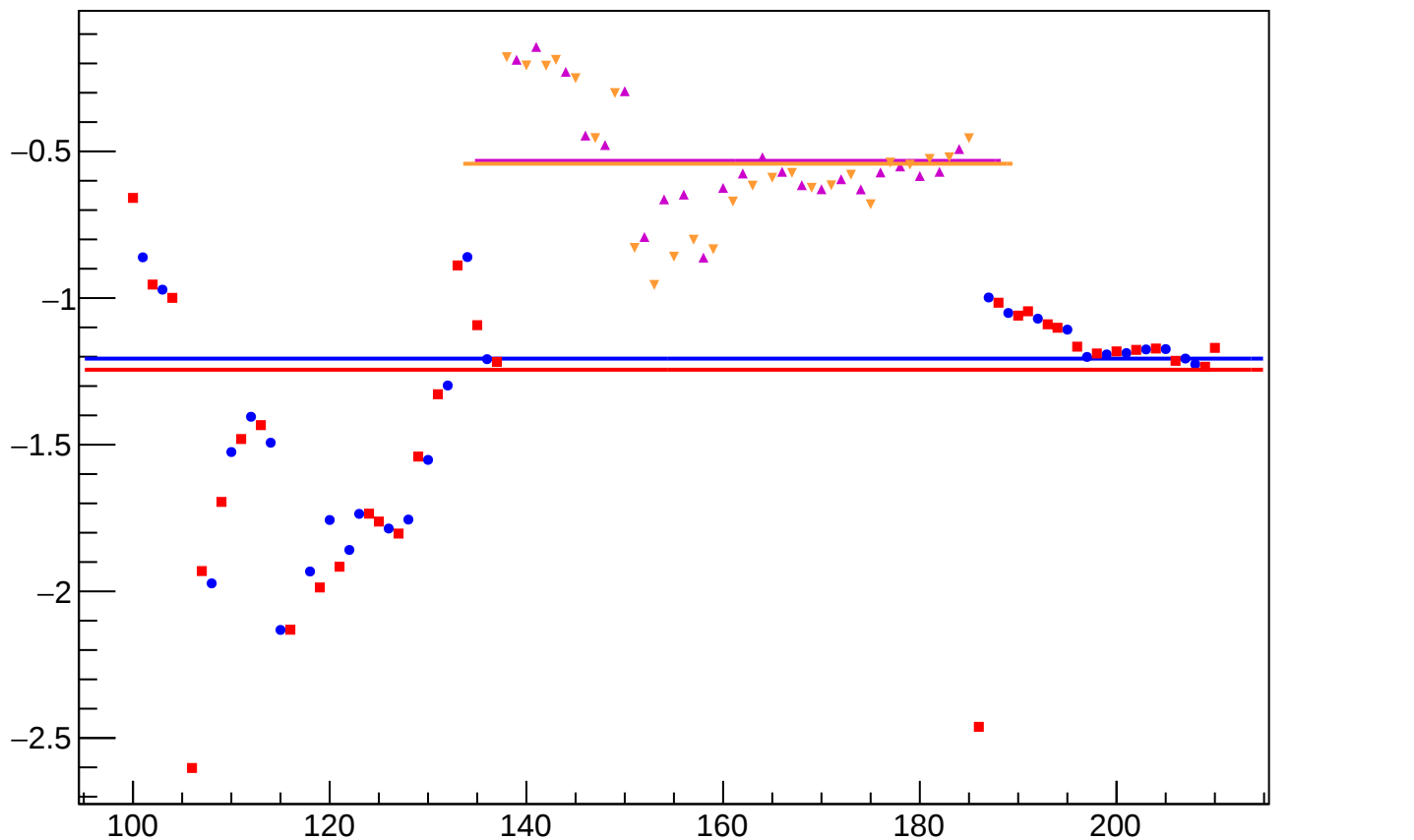
Left In: 0.006 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 697577.8/22

+ sign 0.006 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2728526.1/52

All: 0.006 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 5739355.8/108

- sign 0.006 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2974363.6/55

# yield\_bpm0i05Y\_mean vs Slug



Right In:  $-1.206 \pm 0.000$   $\chi^2/\text{NDF}: 26348214413.2/27$

Left Out:  $-0.542 \pm 0.000$   $\chi^2/\text{NDF}: 47268284910.3/24$

Right Out:  $-1.244 \pm 0.000$   $\chi^2/\text{NDF}: 79142747548.4/32$

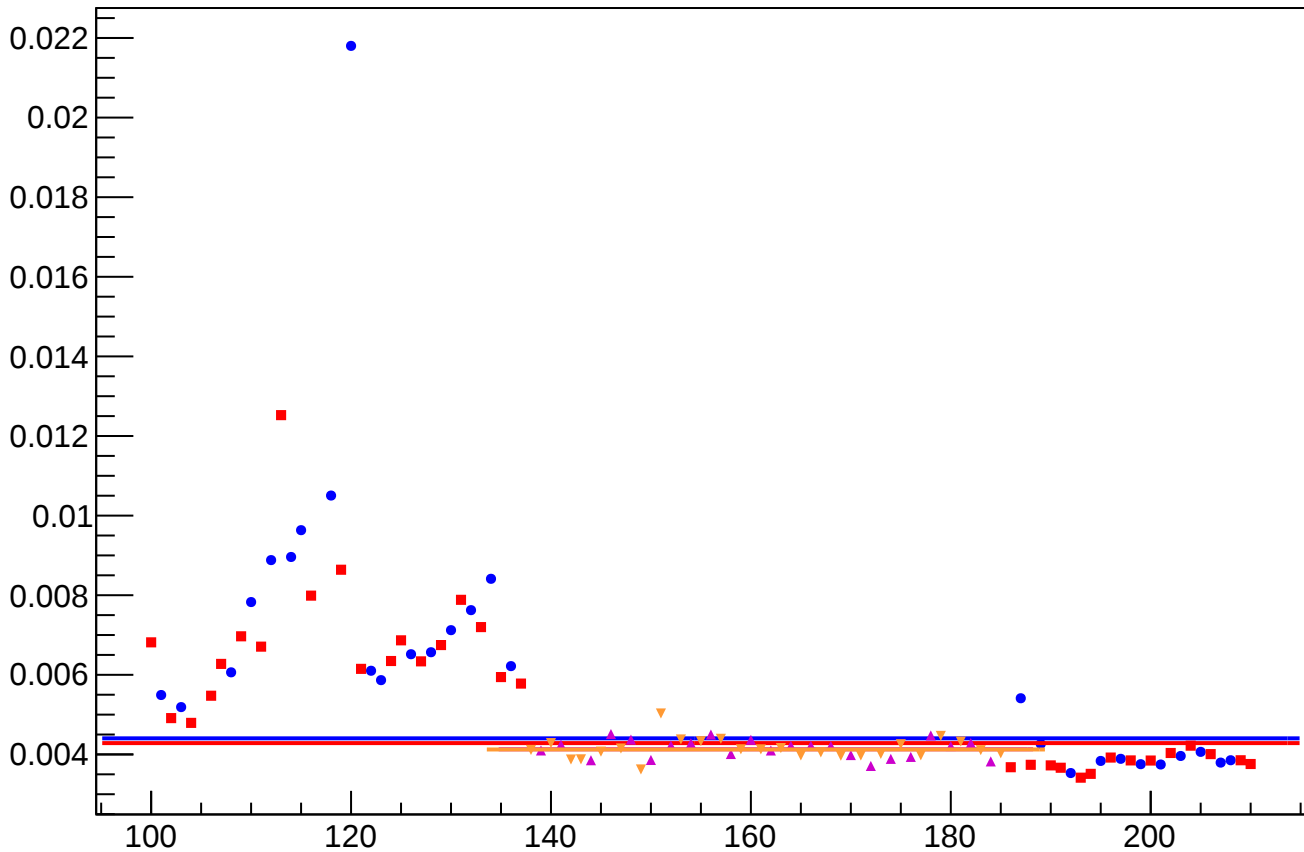
Left In:  $-0.532 \pm 0.000$   $\chi^2/\text{NDF}: 30715235426.8/22$

+ sign  $-0.794 \pm 0.000$   $\chi^2/\text{NDF}: 240043311857.1/52$

All:  $-0.822 \pm 0.000$   $\chi^2/\text{NDF}: 563088075841.3$

- sign  $-0.848 \pm 0.000$   $\chi^2/\text{NDF}: 320661882793.7/55$

# yield\_bpm0i05Y\_rms vs Slug



Right In: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 2028326.2/27

Left Out: 0.004 $\pm$ 0.000  $\chi^2$ /NDF:113033.9/24

Right Out: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 1889279.5/32

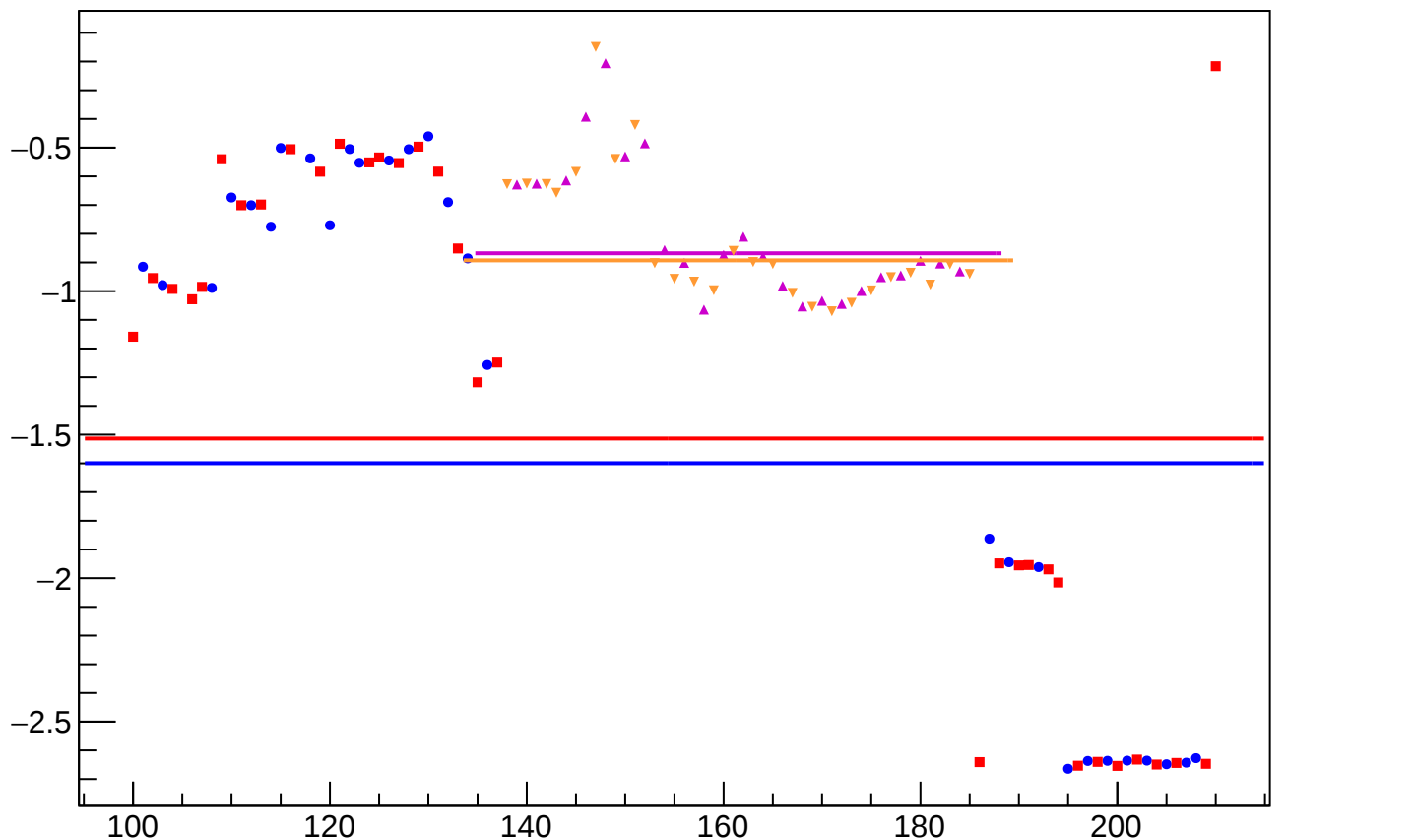
Left In: 0.004 $\pm$ 0.000  $\chi^2$ /NDF:93111.2/22

+ sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 2200318.1/52

All: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 4204347.0/108

- sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 2002322.8/55

# yield\_bpm0i07X\_mean vs Slug



Right In: -1.600 $\pm$ 0.000  $\chi^2$ /NDF: 254877841172.1/27

Left Out: -0.893 $\pm$ 0.000  $\chi^2$ /NDF: 40787012603.8/24

Right Out: -1.514 $\pm$ 0.000  $\chi^2$ /NDF: 480073095243.5/32

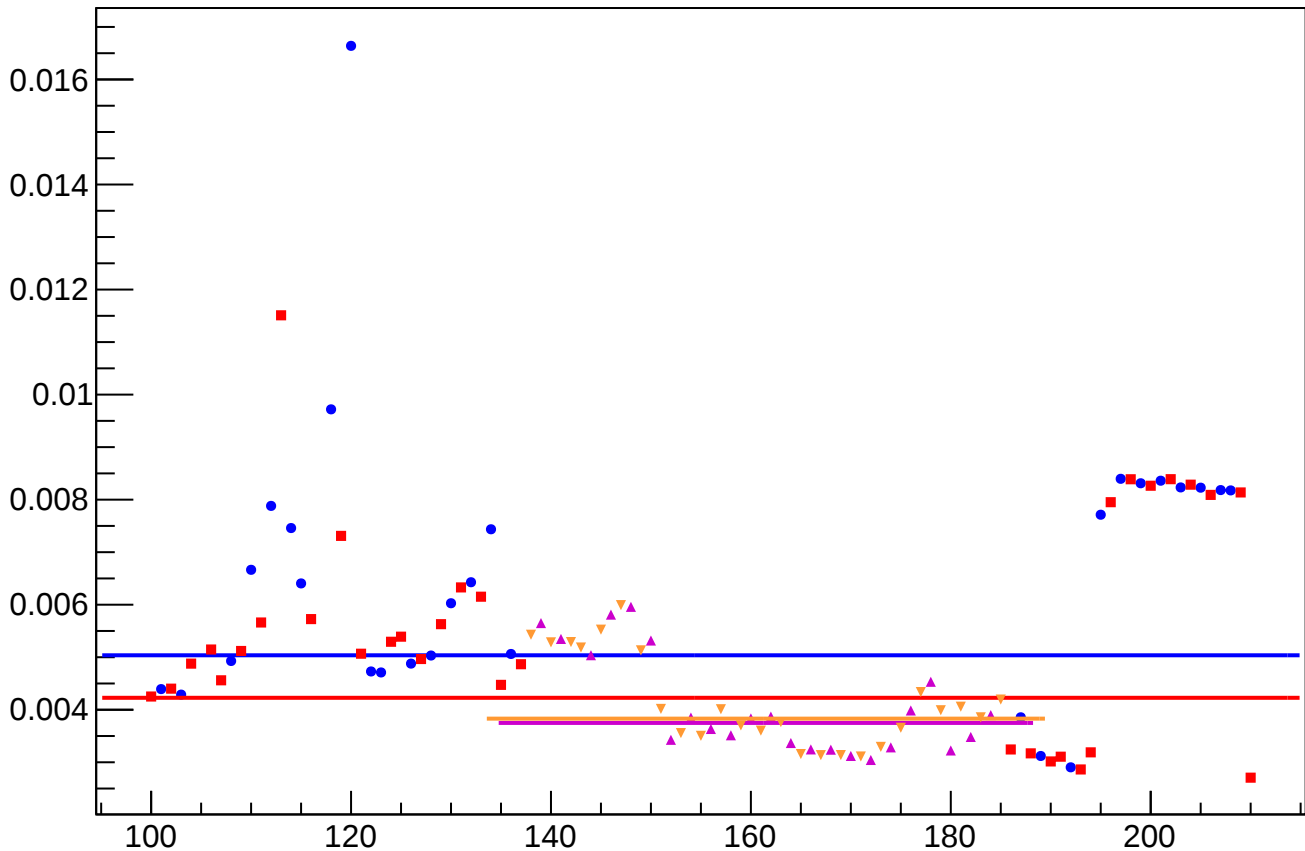
Left In: -0.868 $\pm$ 0.000  $\chi^2$ /NDF: 43853190177.2/22

+ sign -1.095 $\pm$ 0.000  $\chi^2$ /NDF: 456417336312.0/52

All: -1.110 $\pm$ 0.000  $\chi^2$ /NDF: 1164577094450

- sign -1.123 $\pm$ 0.000  $\chi^2$ /NDF: 707489594821.4/55

# yield\_bpm0i07X\_rms vs Slug



Right In: 0.005 $\pm$ 0.000  $\chi^2$ /NDF: 3848795.1/27

Left Out: 0.004 $\pm$ 0.000  $\chi^2$ /NDF:1179801.7/24

Right Out: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 4547802.4/32

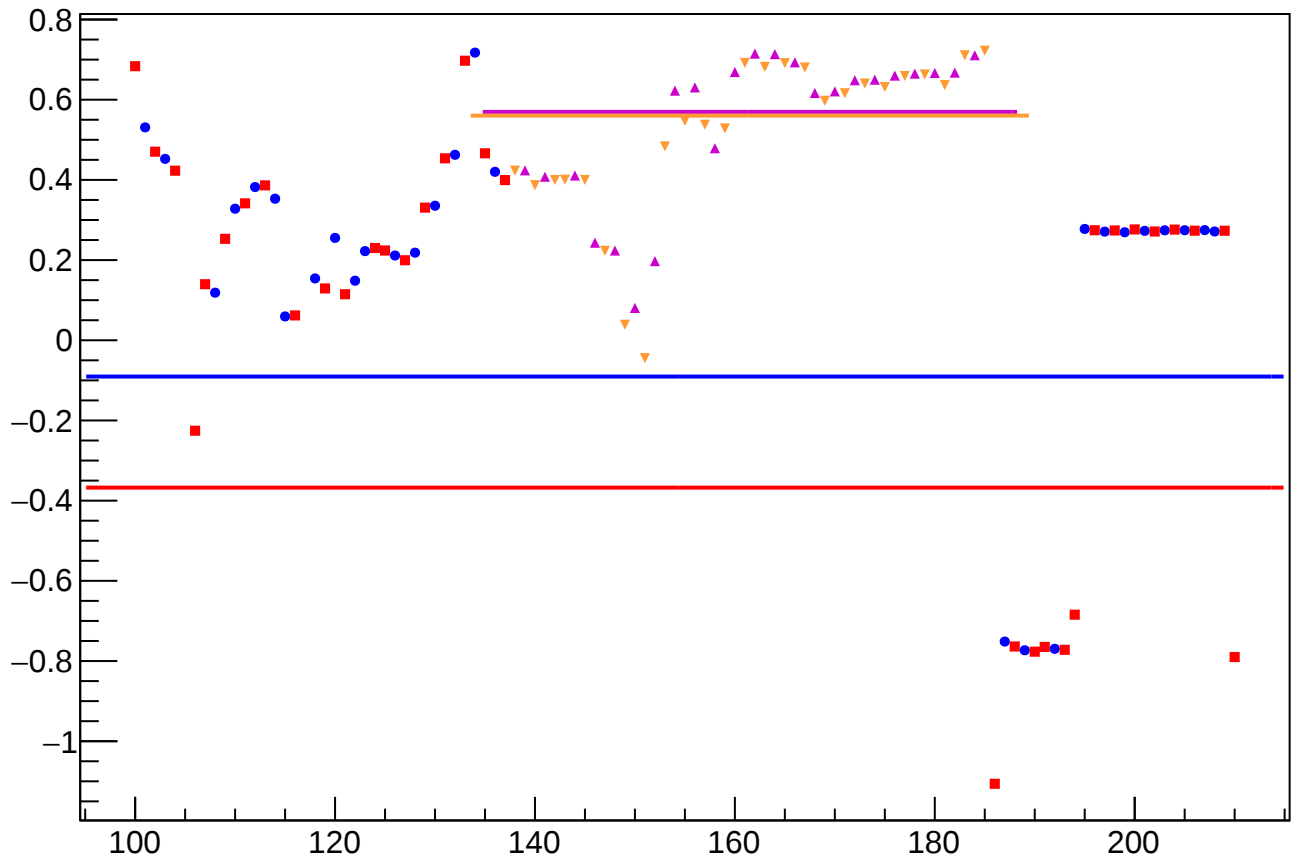
Left In: 0.004 $\pm$ 0.000  $\chi^2$ /NDF:1288490.4/22

+ sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 5964453.3/52

All: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 12098403.0/108

- sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 6037963.8/55

# yield\_bpm0i07Y\_mean vs Slug



Right In:  $-0.090 \pm 0.000$   $\chi^2/\text{NDF}$ : 285517875558.9/27

Left Out:  $0.560 \pm 0.000$   $\chi^2/\text{NDF}$ : 45205806387.2/24

Right Out:  $-0.367 \pm 0.000$   $\chi^2/\text{NDF}$ : 489832162713.4/32

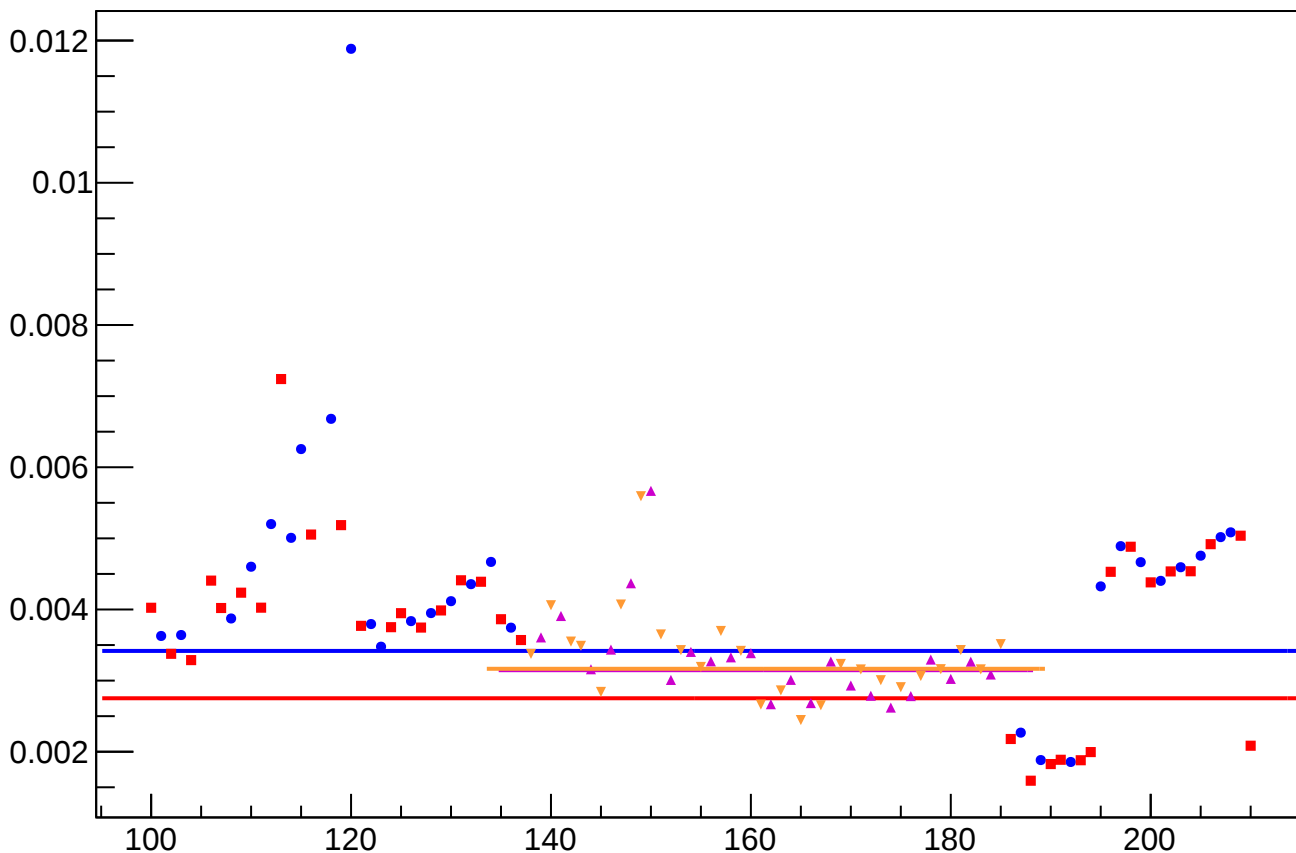
Left In:  $0.570 \pm 0.000$   $\chi^2/\text{NDF}$ : 42104067973.0/22

+ sign  $0.311 \pm 0.000$   $\chi^2/\text{NDF}$ : 593106582334.8/52

All:  $0.186 \pm 0.000$   $\chi^2/\text{NDF}$ : 1908119835413.

- sign  $0.084 \pm 0.000$   $\chi^2/\text{NDF}$ : 1240449124496.9/55

# yield\_bpm0i07Y\_rms vs Slug



Right In: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 3424088.2/27

Left Out: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 744886.7/24

Right Out: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 4927274.7/32

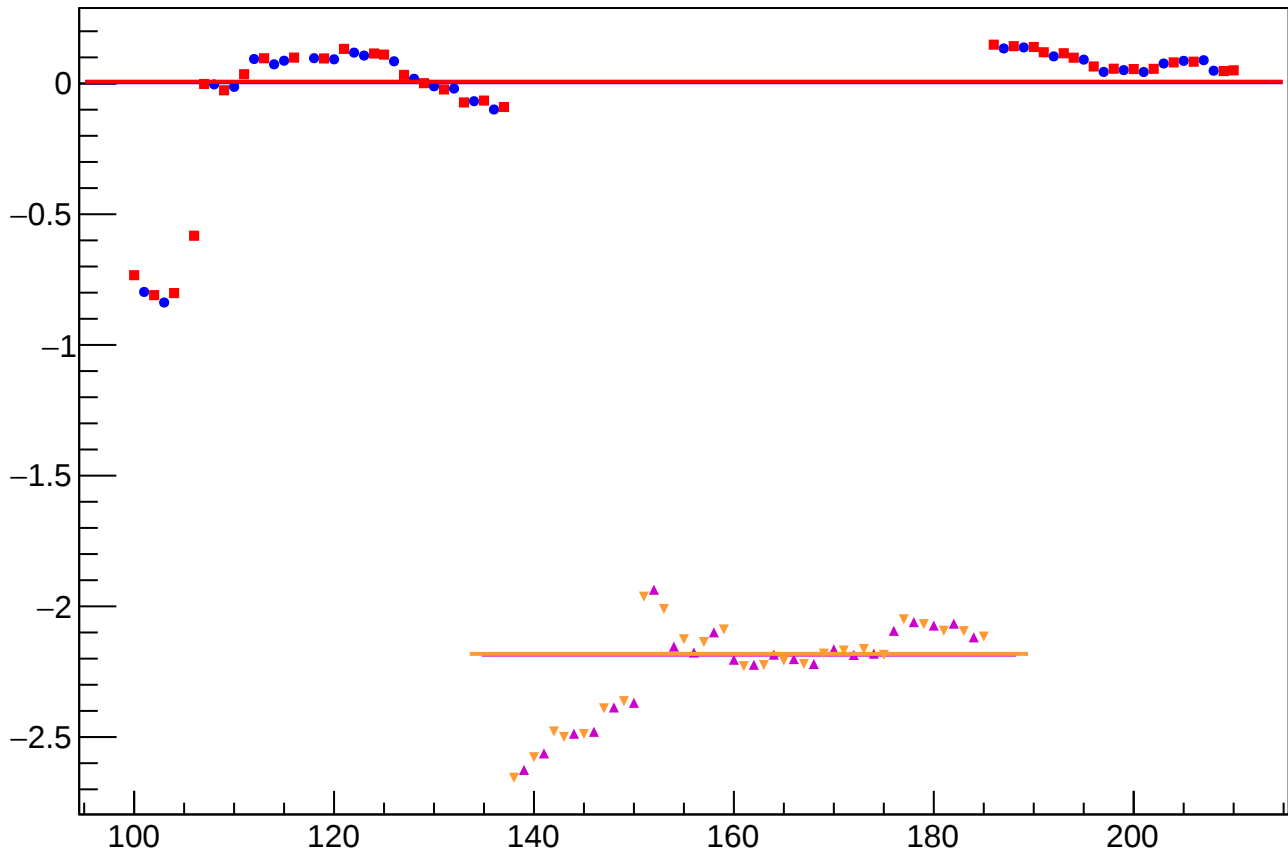
Left In: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 716402.8/22

+ sign 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 4247175.8/52

All: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 10439233.3/108

- sign 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 5895106.8/55

# yield\_bpm1i02X\_mean vs Slug



Right In:  $0.005 \pm 0.000$   $\chi^2/\text{NDF}: 5894125218.2/27$

Left Out:  $-2.182 \pm 0.000$   $\chi^2/\text{NDF}: 4008829567.0/24$

Right Out:  $0.007 \pm 0.000$   $\chi^2/\text{NDF}: 6975675354.4/32$

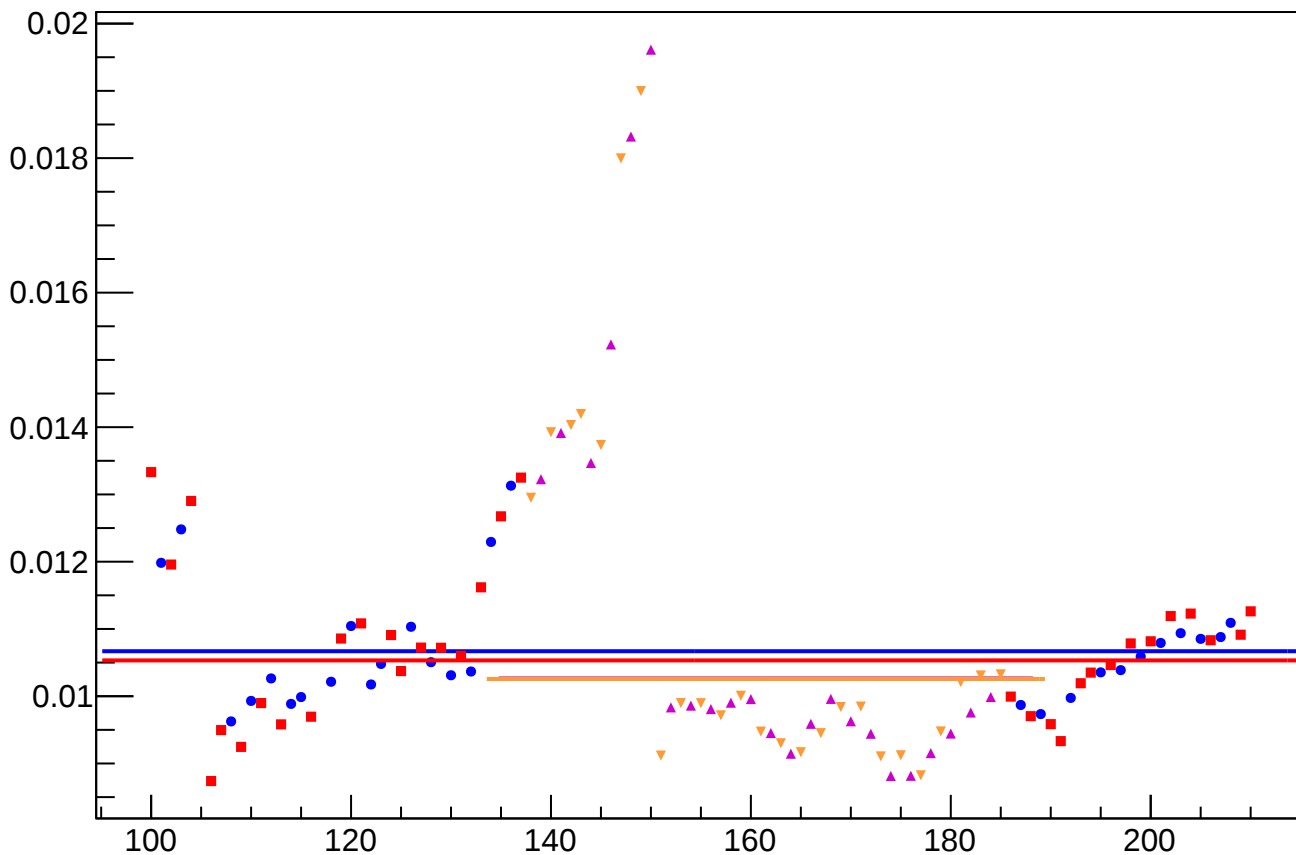
Left In:  $-2.185 \pm 0.000$   $\chi^2/\text{NDF}: 3372742534.3/22$

+ sign  $-1.245 \pm 0.000$   $\chi^2/\text{NDF}: 353551906495.8/52$

All:  $-1.184 \pm 0.000$   $\chi^2/\text{NDF}: 731634993000.4$

- sign  $-1.125 \pm 0.000$   $\chi^2/\text{NDF}: 375932505212.2/55$

# yield\_bpm1i02X\_rms vs Slug



Right In: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 153779.9/27

Left Out: 0.010+/-0.000  $\chi^2/\text{NDF}$ :1270617.6/24

Right Out: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 231398.7/32

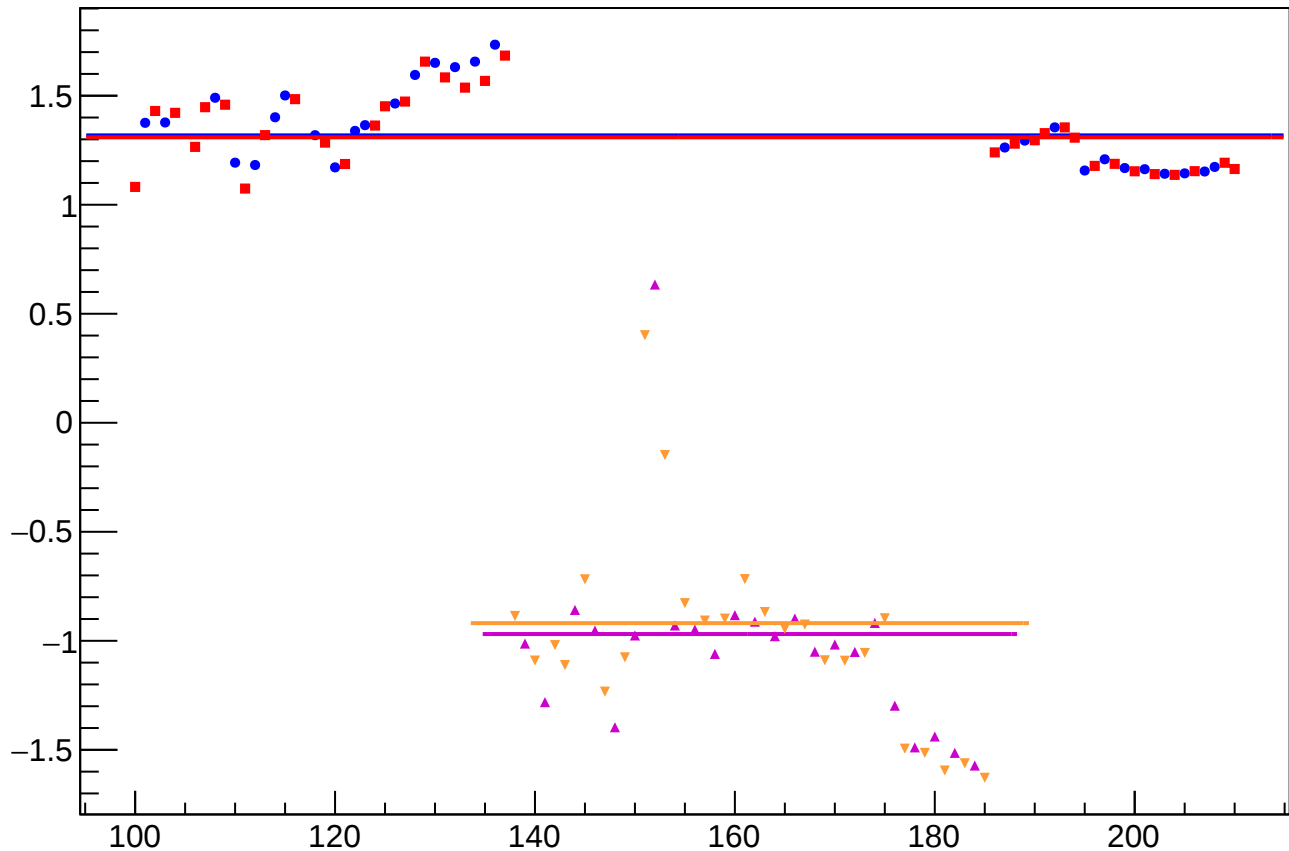
Left In: 0.010+/-0.000  $\chi^2/\text{NDF}$ :1340264.2/22

+ sign 0.010+/-0.000  $\chi^2/\text{NDF}$ : 1448922.1/52

All: 0.010+/-0.000  $\chi^2/\text{NDF}$ : 3031983.1/108

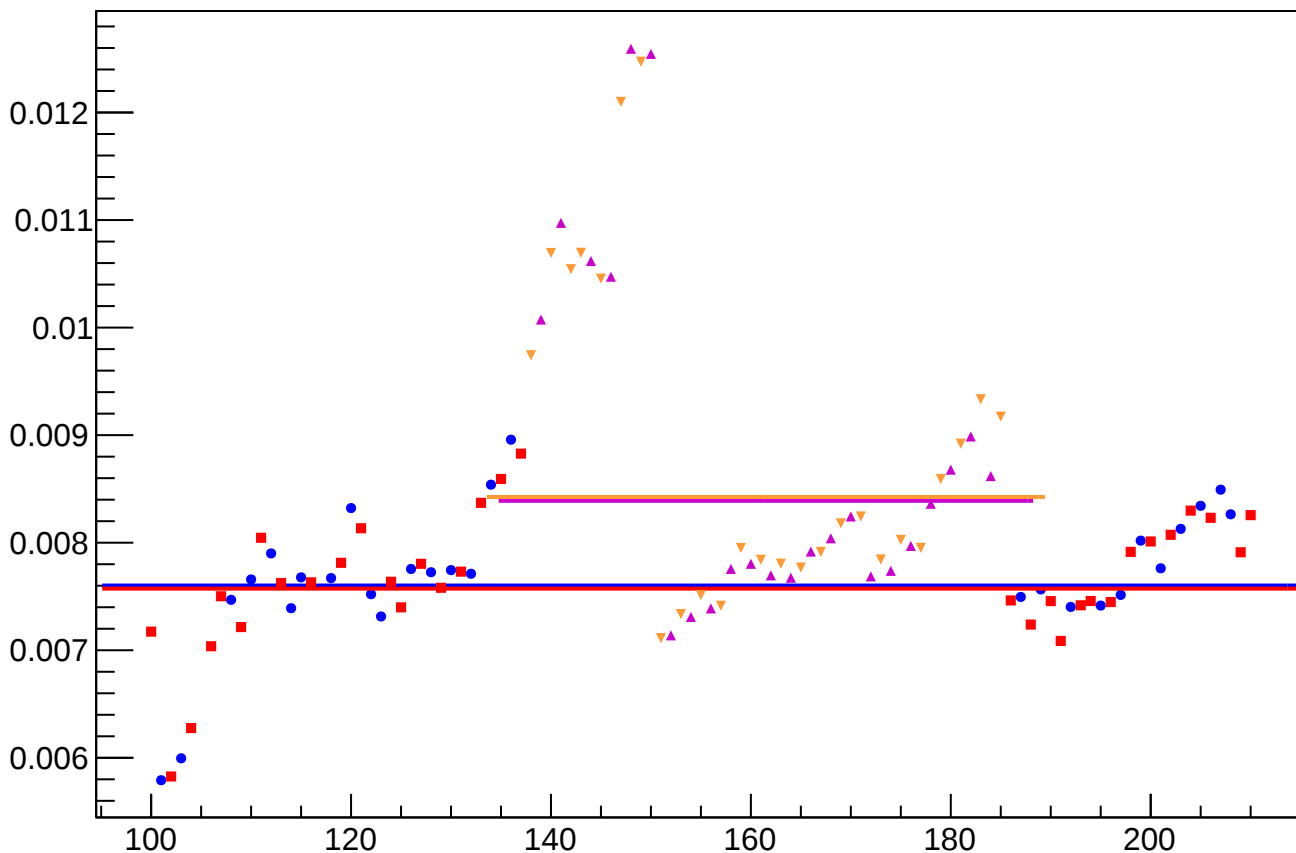
- sign 0.010+/-0.000  $\chi^2/\text{NDF}$ : 1582608.0/55

# yield\_bpm1i02Y\_mean vs Slug



|                              |                                 |                          |                                  |
|------------------------------|---------------------------------|--------------------------|----------------------------------|
| Right In: 1.318 $\pm$ 0.000  | $\chi^2$ /NDF: 7640841365.1/27  | + sign 0.186 $\pm$ 0.000 | $\chi^2$ /NDF: 686558572129.3/52 |
| Left Out: -0.919 $\pm$ 0.000 | $\chi^2$ /NDF: 55622252895.8/24 | All: 0.229 $\pm$ 0.000   | $\chi^2$ /NDF: 1425028032705.    |
| Right Out: 1.309 $\pm$ 0.000 | $\chi^2$ /NDF: 6202418428.2/32  | - sign 0.270 $\pm$ 0.000 | $\chi^2$ /NDF: 736696385782.4/55 |
| Left In: -0.969 $\pm$ 0.000  | $\chi^2$ /NDF: 54895002535.8/22 |                          |                                  |

# yield\_bpm1i02Y\_rms vs Slug



Right In: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 297408.7/27

Left Out: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 792337.0/24

Right Out: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 237834.0/32

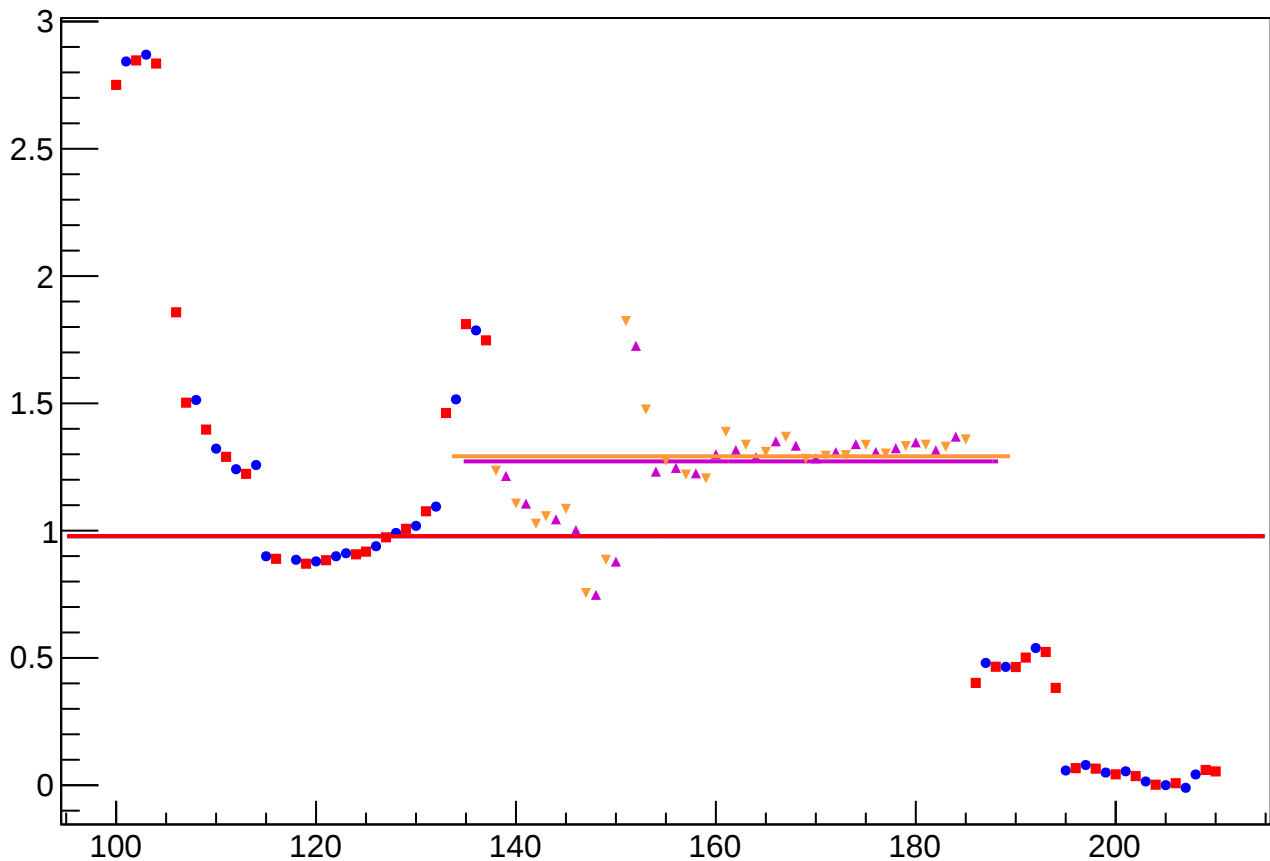
Left In: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 839880.4/22

+ sign 0.008+/-0.000  $\chi^2/\text{NDF}$ : 1258760.6/52

All: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 2512844.3/108

- sign 0.008+/-0.000  $\chi^2/\text{NDF}$ : 1251352.9/55

# yield\_bpm1i04X\_mean vs Slug



Right In: 0.978+/-0.000  $\chi^2/\text{NDF}$ : 126187796810.6/27

Left Out: 1.292+/-0.000  $\chi^2/\text{NDF}$ : 9305298695.5/24

Right Out: 0.979+/-0.000  $\chi^2/\text{NDF}$ : 128295843395.3/32

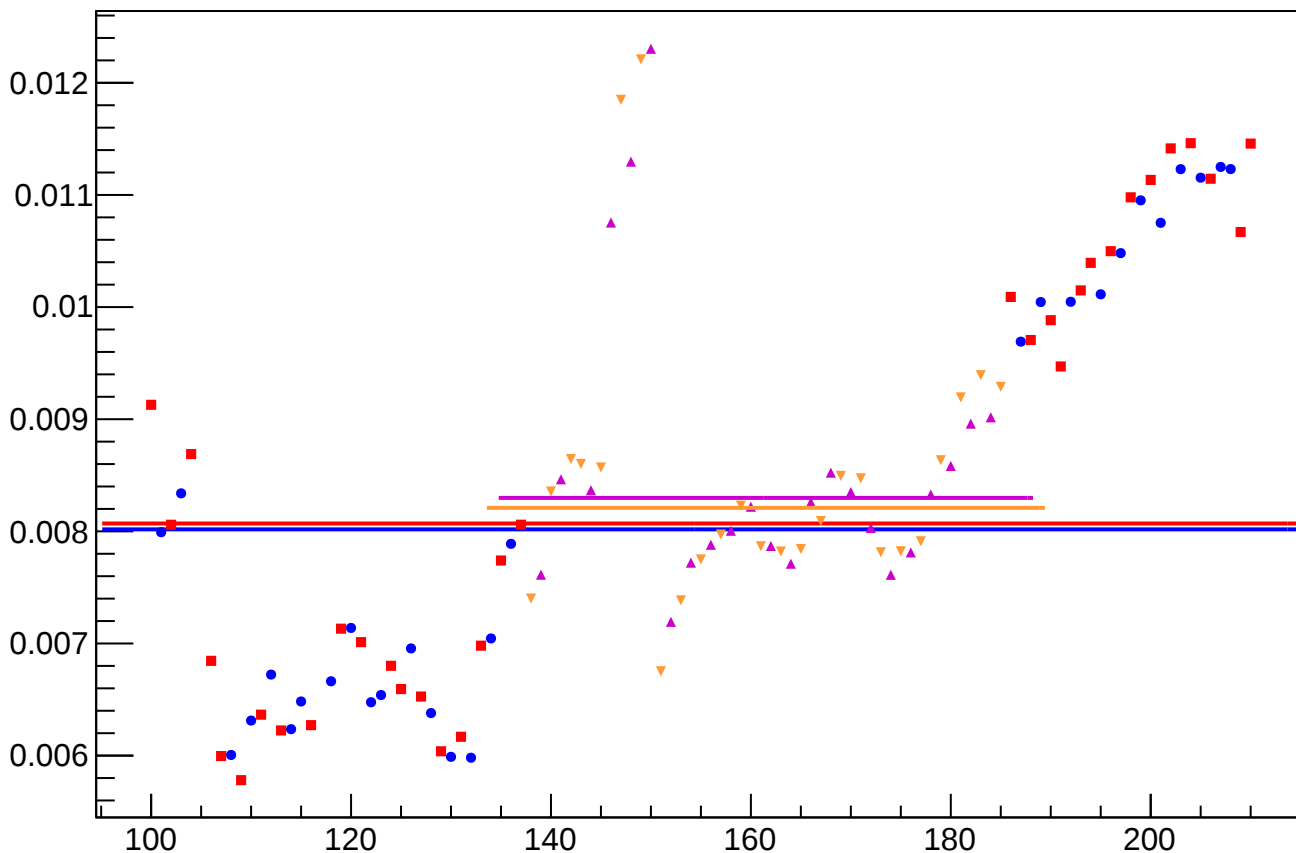
Left In: 1.272+/-0.000  $\chi^2/\text{NDF}$ : 7573930981.2/22

+ sign 1.152+/-0.000  $\chi^2/\text{NDF}$ : 147071522731.7/52

All: 1.139+/-0.000  $\chi^2/\text{NDF}$ : 293465035725.5

- sign 1.127+/-0.000  $\chi^2/\text{NDF}$ : 146242912882.7/55

# yield\_bpm1i04X\_rms vs Slug



Right In: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 1592051.4/27

Left Out: 0.008 $\pm$ 0.000  $\chi^2$ /NDF:478864.9/24

Right Out: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 1908387.3/32

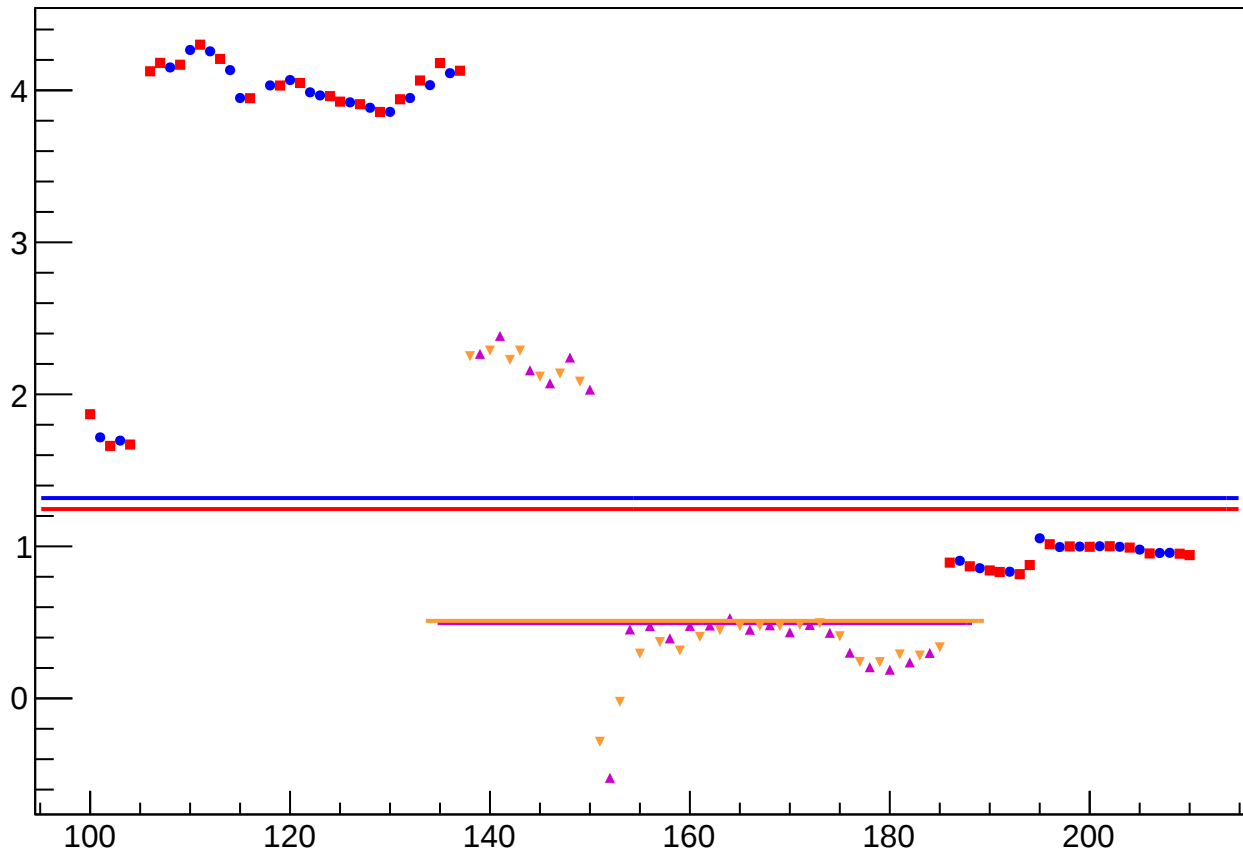
Left In: 0.008 $\pm$ 0.000  $\chi^2$ /NDF:462022.1/22

+ sign 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 2079547.5/52

All: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 4464309.2/108

- sign 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 2382958.8/55

# yield\_bpm1i04Y\_mean vs Slug



Right In: 1.318 $\pm$ 0.000  $\chi^2$ /NDF: 1487026980578.5/27

Left Out: 0.510 $\pm$ 0.000  $\chi^2$ /NDF: 274818814912.4/24

Right Out: 1.245 $\pm$ 0.000  $\chi^2$ /NDF: 1707486071787.1/32

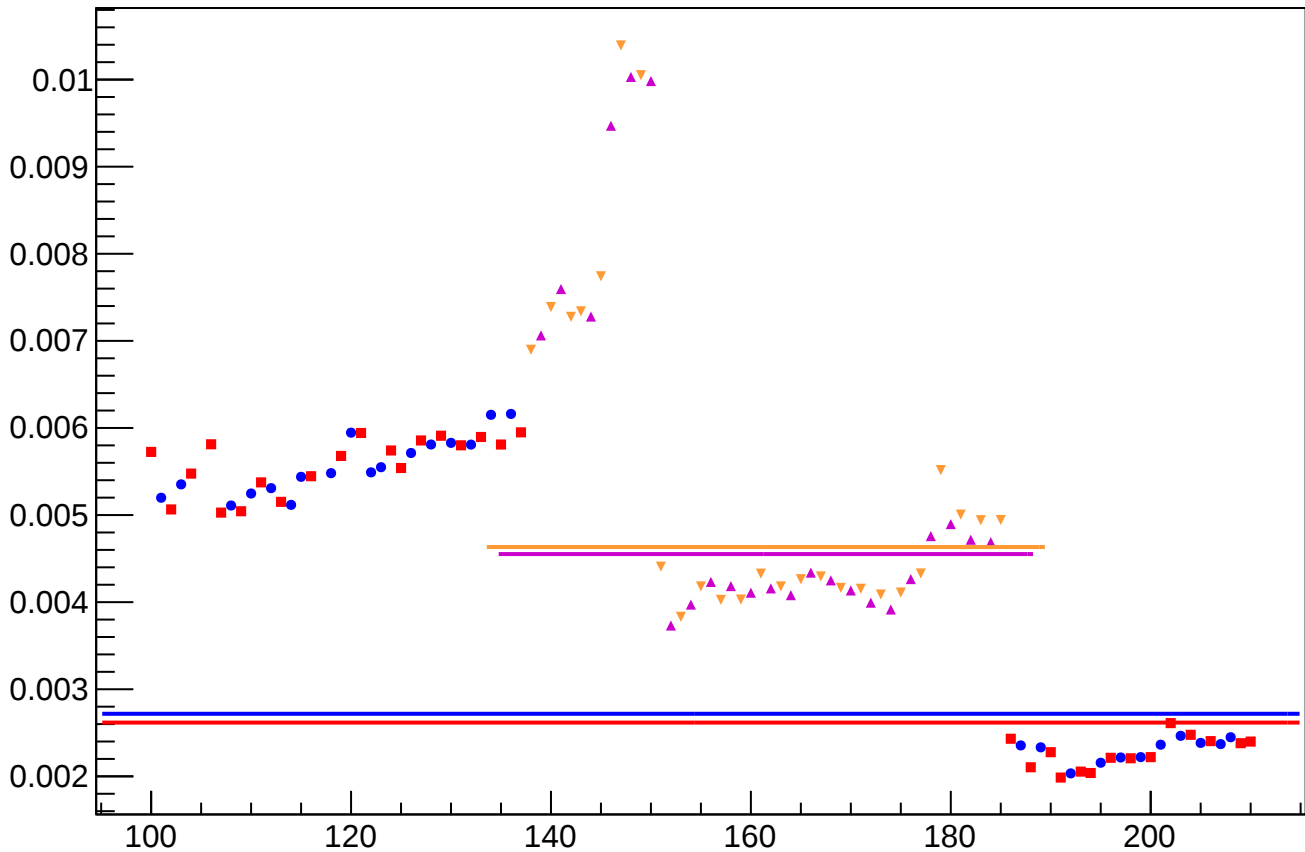
Left In: 0.495 $\pm$ 0.000  $\chi^2$ /NDF: 268863202792.4/22

+ sign 1.053 $\pm$ 0.000  $\chi^2$ /NDF: 2102617779508.3/52

All: 1.045 $\pm$ 0.000  $\chi^2$ /NDF: 4387817393722.0

- sign 1.038 $\pm$ 0.000  $\chi^2$ /NDF: 2284887955225.6/55

# yield\_bpm1i04Y\_rms vs Slug



Right In: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 4129693.4/27

Left Out: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 2114007.7/24

Right Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 4466076.6/32

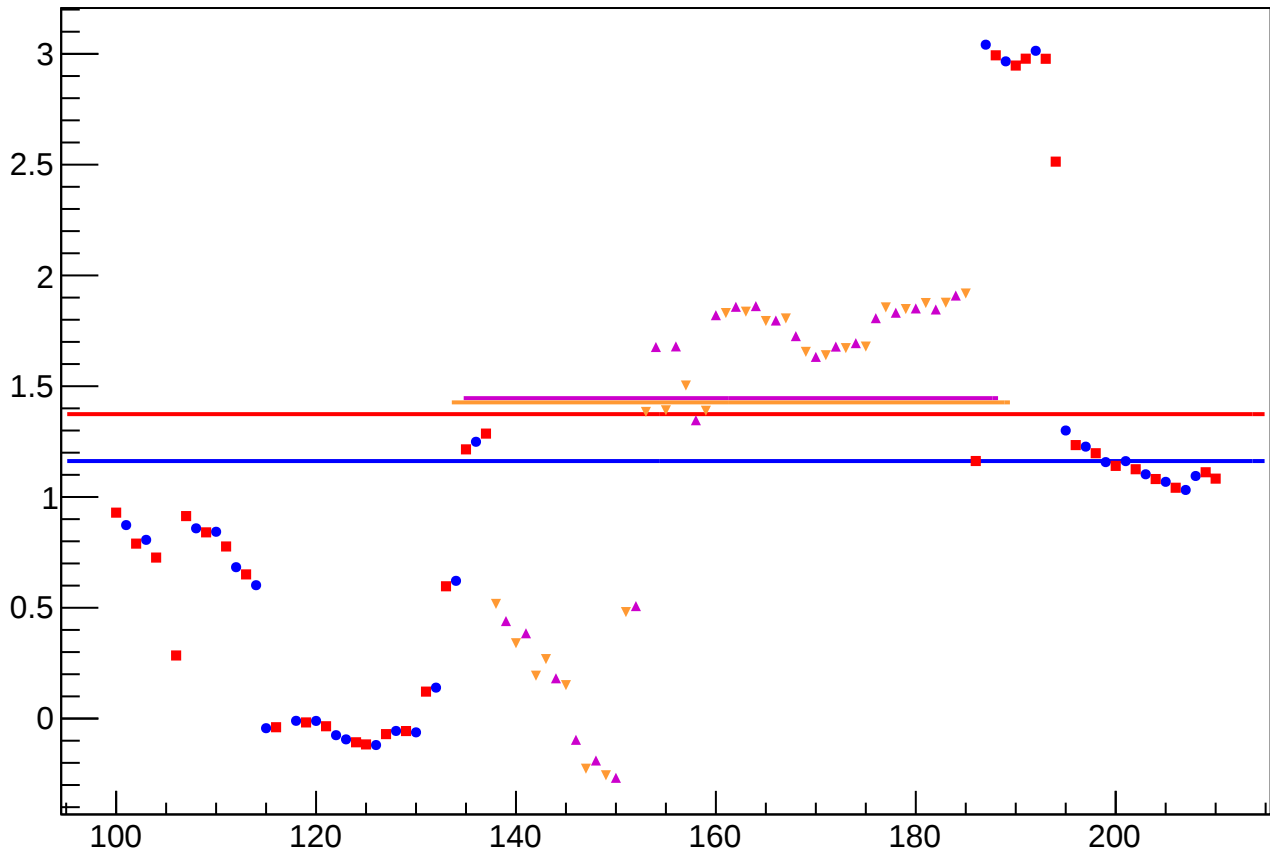
Left In: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 2237666.9/22

+ sign 0.003+/-0.000  $\chi^2/\text{NDF}$ : 10072859.8/52

All: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 20972445.5/108

- sign 0.003+/-0.000  $\chi^2/\text{NDF}$ : 10805941.3/55

# yield\_bpm1i06X\_mean vs Slug



Right In: 1.162 $\pm$ 0.000  $\chi^2$ /NDF: 72794159230.0/27

Left Out: 1.427 $\pm$ 0.000  $\chi^2$ /NDF: 49990787038.3/24

Right Out: 1.374 $\pm$ 0.000  $\chi^2$ /NDF: 100838454509.0/32

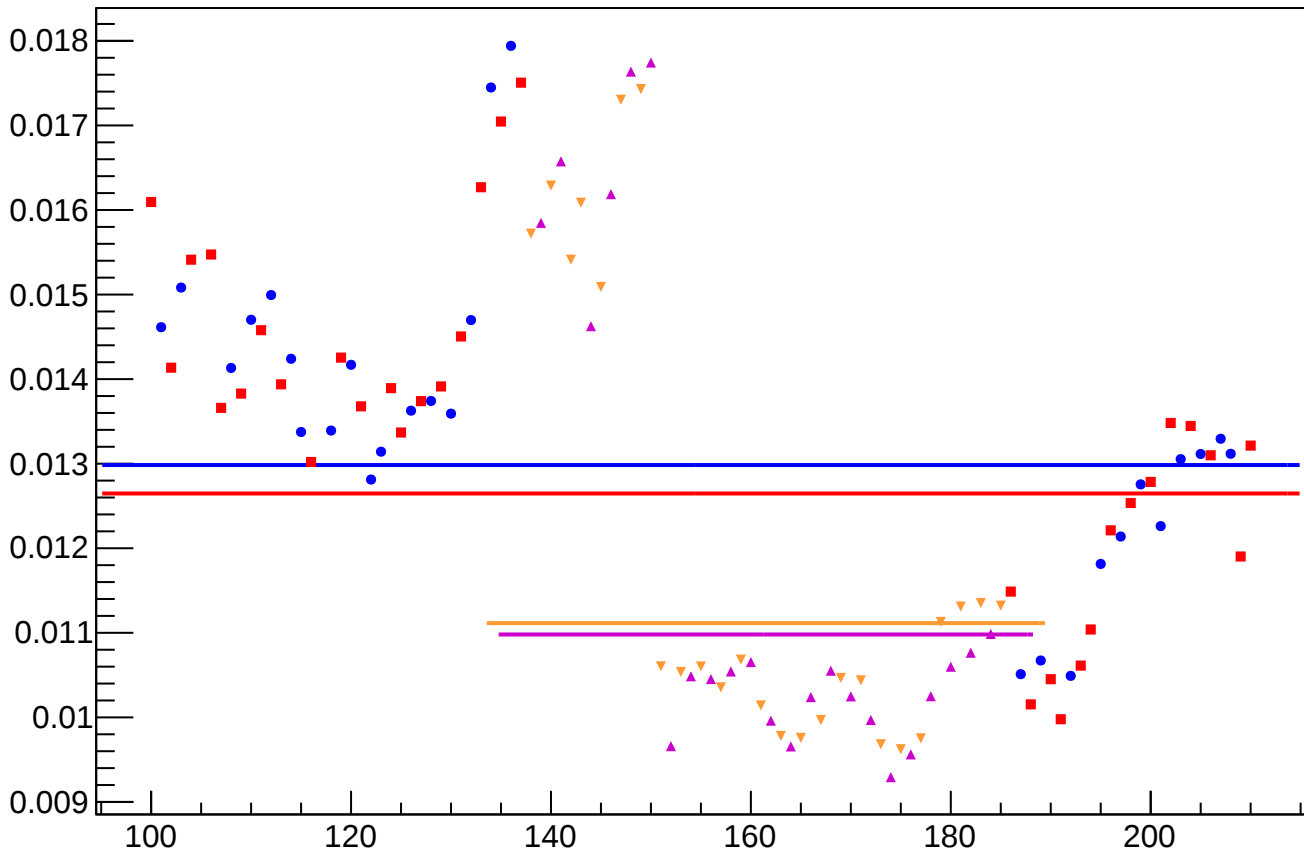
Left In: 1.446 $\pm$ 0.000  $\chi^2$ /NDF: 53752493130.3/22

+ sign 1.329 $\pm$ 0.000  $\chi^2$ /NDF: 126476655364.7/52

All: 1.373 $\pm$ 0.000  $\chi^2$ /NDF: 282240247696.6

- sign 1.416 $\pm$ 0.000  $\chi^2$ /NDF: 154892420246.4/55

# yield\_bpm1i06X\_rms vs Slug



Right In: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 436163.1/27

Left Out: 0.011+/-0.000  $\chi^2/\text{NDF}$ :1227493.2/24

Right Out: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 568714.1/32

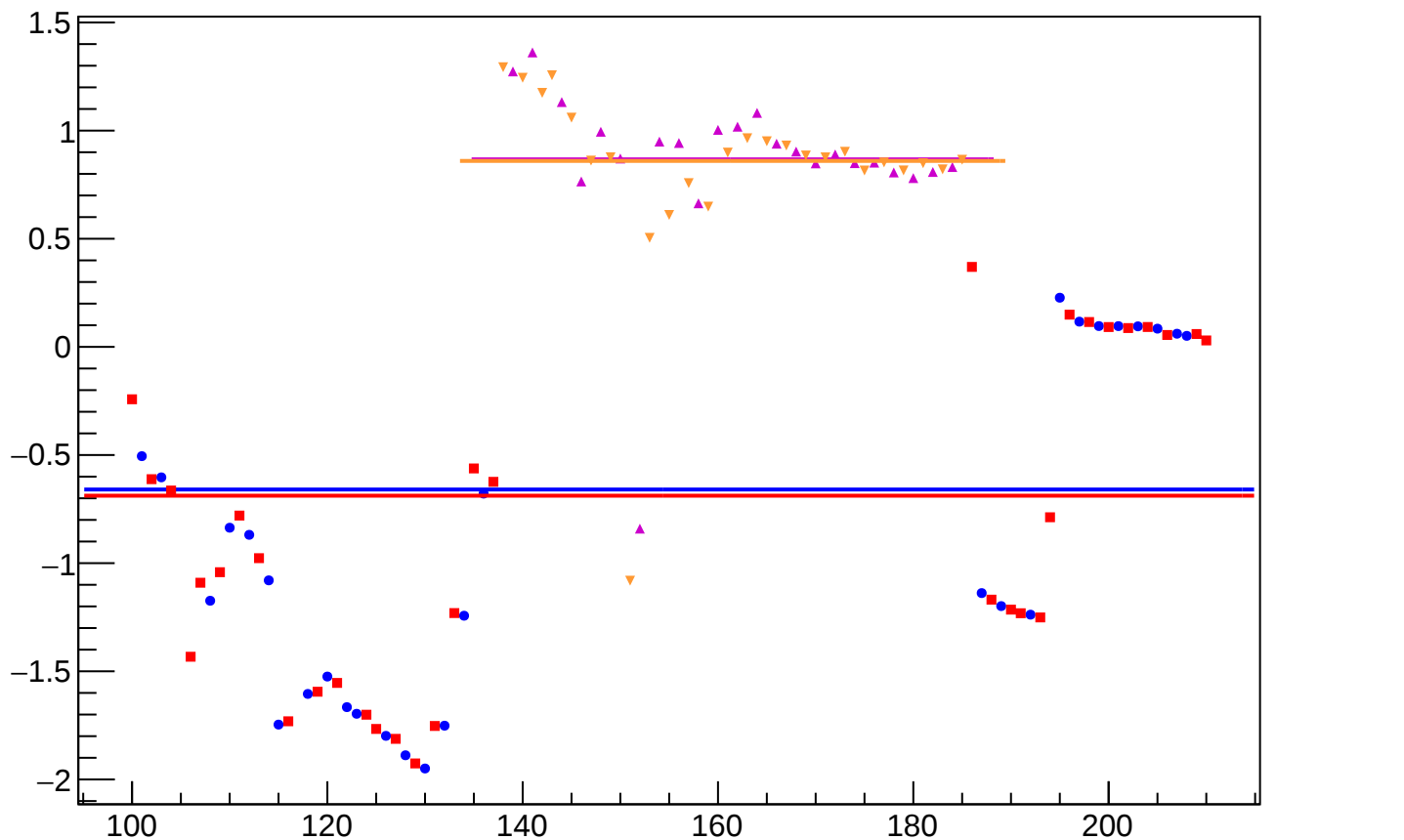
Left In: 0.011+/-0.000  $\chi^2/\text{NDF}$ :1264827.0/22

+ sign 0.012+/-0.000  $\chi^2/\text{NDF}$ : 2031597.6/52

All: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 4190600.6/108

- sign 0.012+/-0.000  $\chi^2/\text{NDF}$ : 2155453.6/55

# yield\_bpm1i06Y\_mean vs Slug



Right In: -0.659+/-0.000  $\chi^2/\text{NDF}$ : 177685317968.8/27

Left Out: 0.860+/-0.000  $\chi^2/\text{NDF}$ :126335891175.4/24

Right Out: -0.688+/-0.000  $\chi^2/\text{NDF}$ : 173610589560.0/32

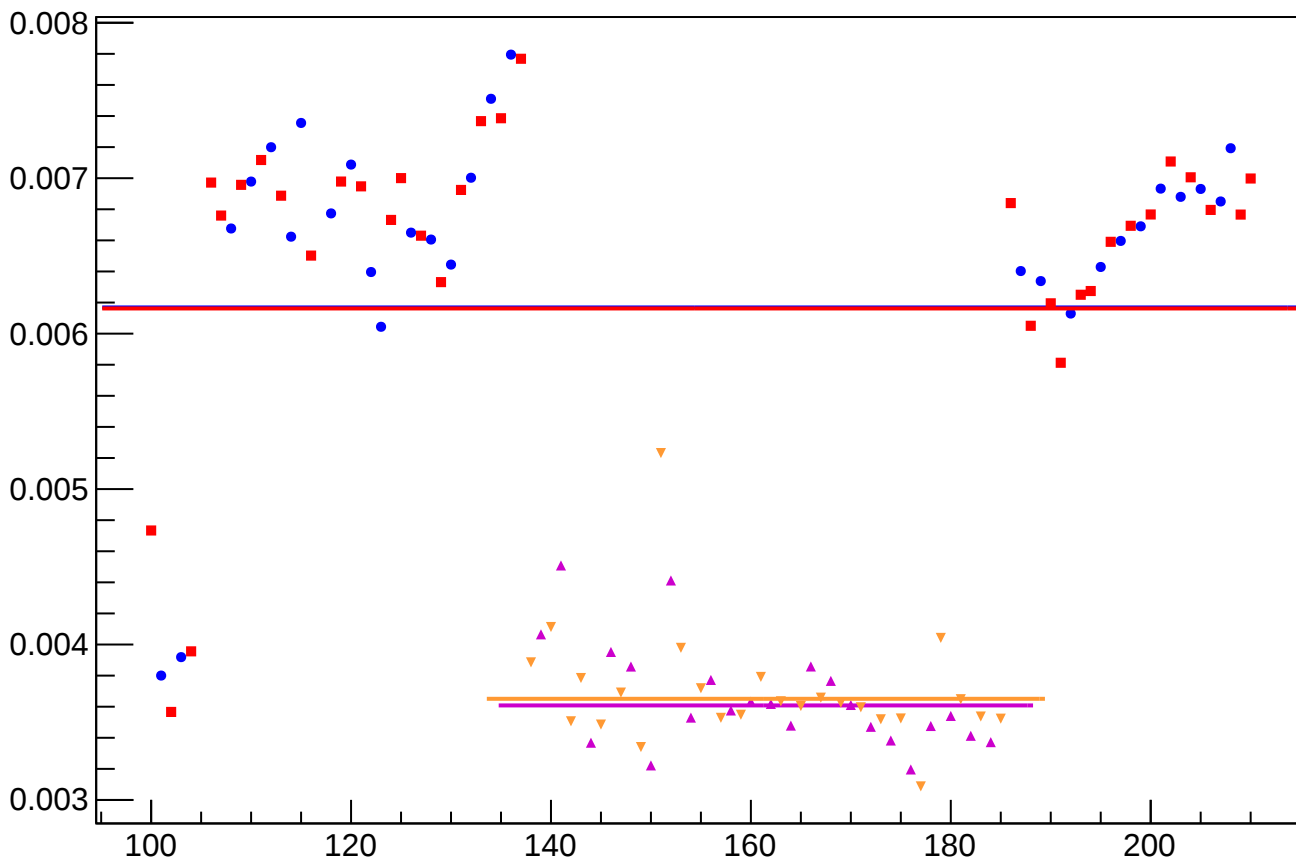
Left In: 0.867+/-0.000  $\chi^2/\text{NDF}$ :147039402944.6/22

+ sign 0.529+/-0.000  $\chi^2/\text{NDF}$ : 933529120569.4/52

All: 0.505+/-0.000  $\chi^2/\text{NDF}$ : 1982360283209.

- sign 0.480+/-0.000  $\chi^2/\text{NDF}$ : 1046903051569.8/55

# yield\_bpm1i06Y\_rms vs Slug



Right In: 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 1023551.3/27

Left Out: 0.004 $\pm$ 0.000  $\chi^2$ /NDF:237262.6/24

Right Out: 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 1121781.4/32

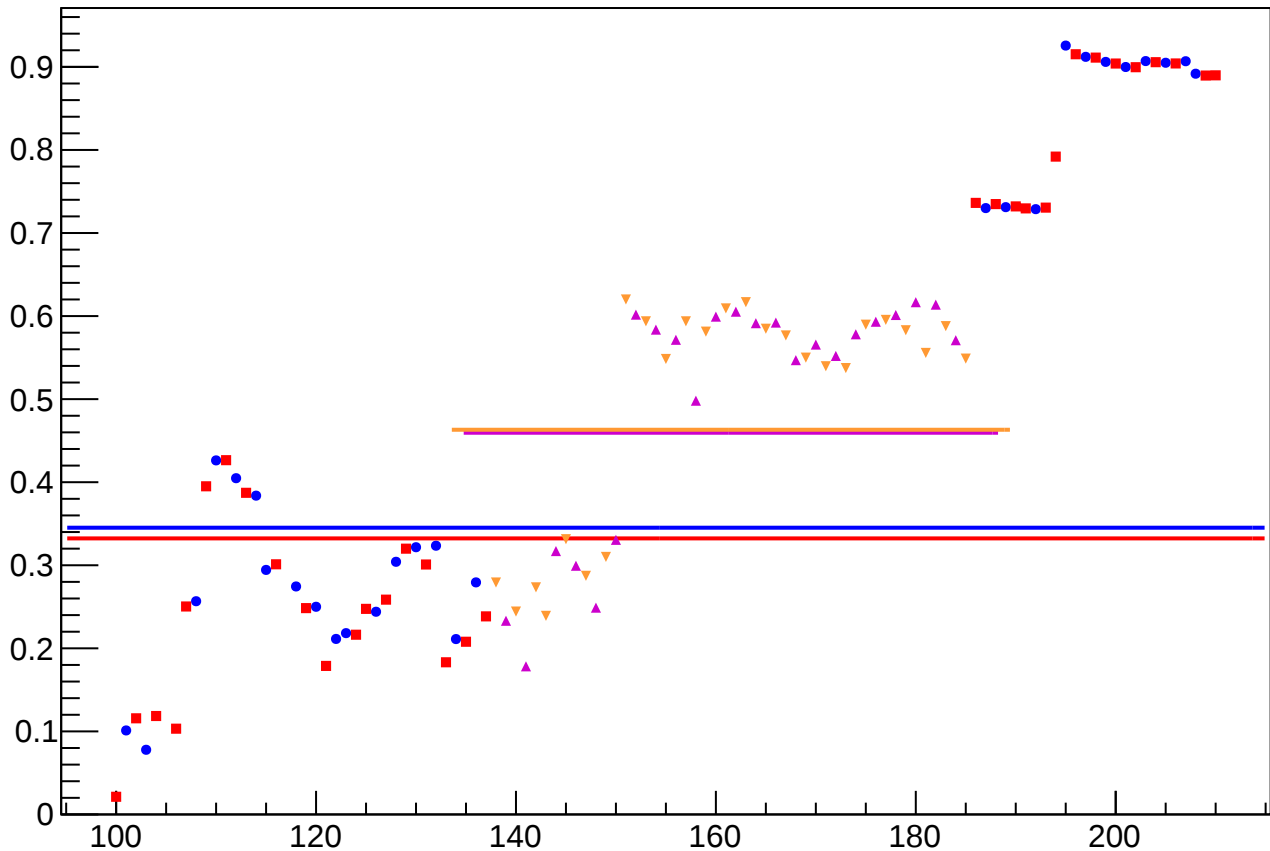
Left In: 0.004 $\pm$ 0.000  $\chi^2$ /NDF:227861.4/22

+ sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 4718097.8/52

All: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 9987864.1/108

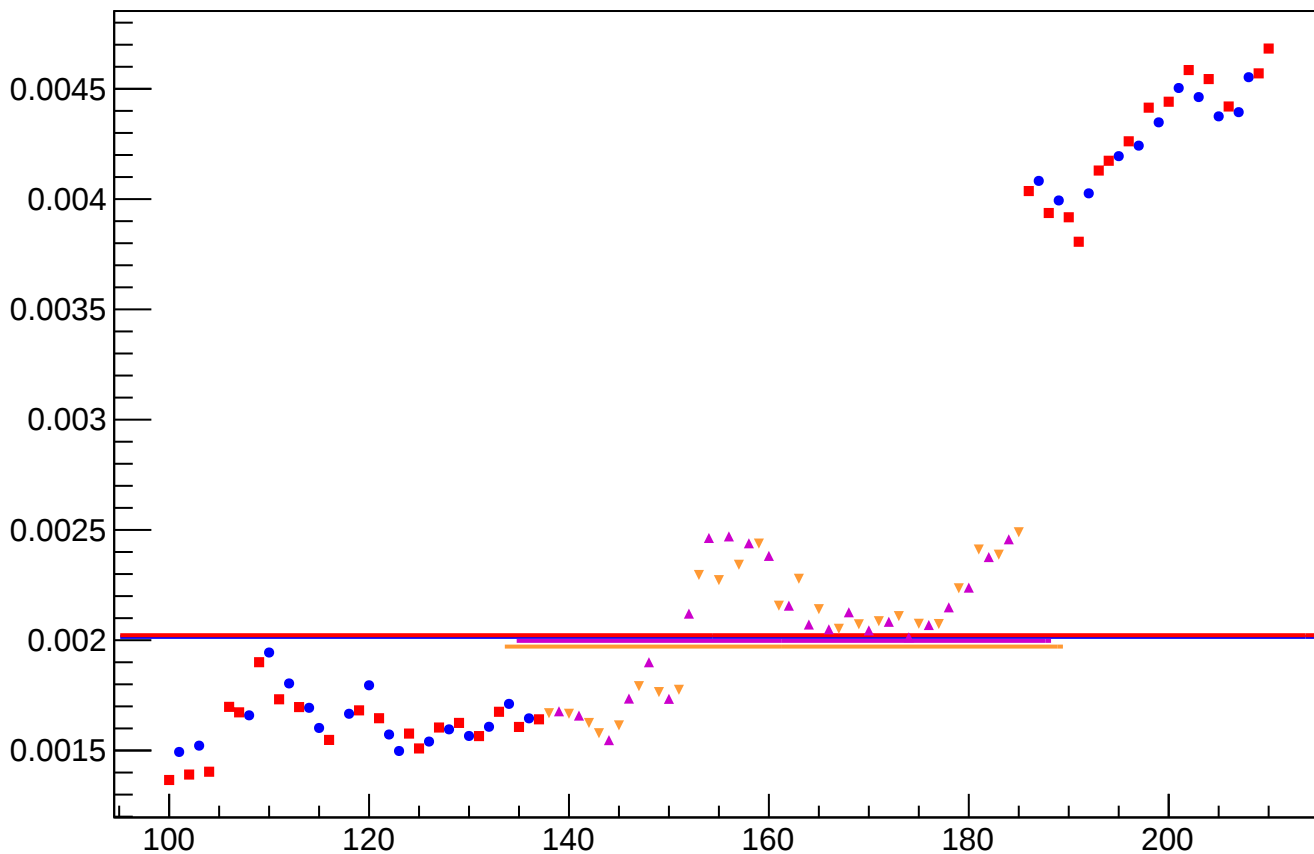
- sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 5266535.5/55

# yield\_bpm2i01X\_mean vs Slug



|                          |                                         |                      |                                         |
|--------------------------|-----------------------------------------|----------------------|-----------------------------------------|
| Right In: 0.345+/-0.000  | $\chi^2/\text{NDF}$ : 157307458986.8/27 | + sign 0.418+/-0.000 | $\chi^2/\text{NDF}$ : 284297539631.4/52 |
| Left Out: 0.463+/-0.000  | $\chi^2/\text{NDF}$ : 102506270538.7/24 | All: 0.411+/-0.000   | $\chi^2/\text{NDF}$ : 603125244043.9    |
| Right Out: 0.332+/-0.000 | $\chi^2/\text{NDF}$ : 184040582531.7/32 | - sign 0.404+/-0.000 | $\chi^2/\text{NDF}$ : 318134954647.5/55 |
| Left In: 0.460+/-0.000   | $\chi^2/\text{NDF}$ : 104559088628.4/22 |                      |                                         |

# yield\_bpm2i01X\_rms vs Slug



Right In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 5165046.5/27

Left Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 730203.8/24

Right Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 6359146.9/32

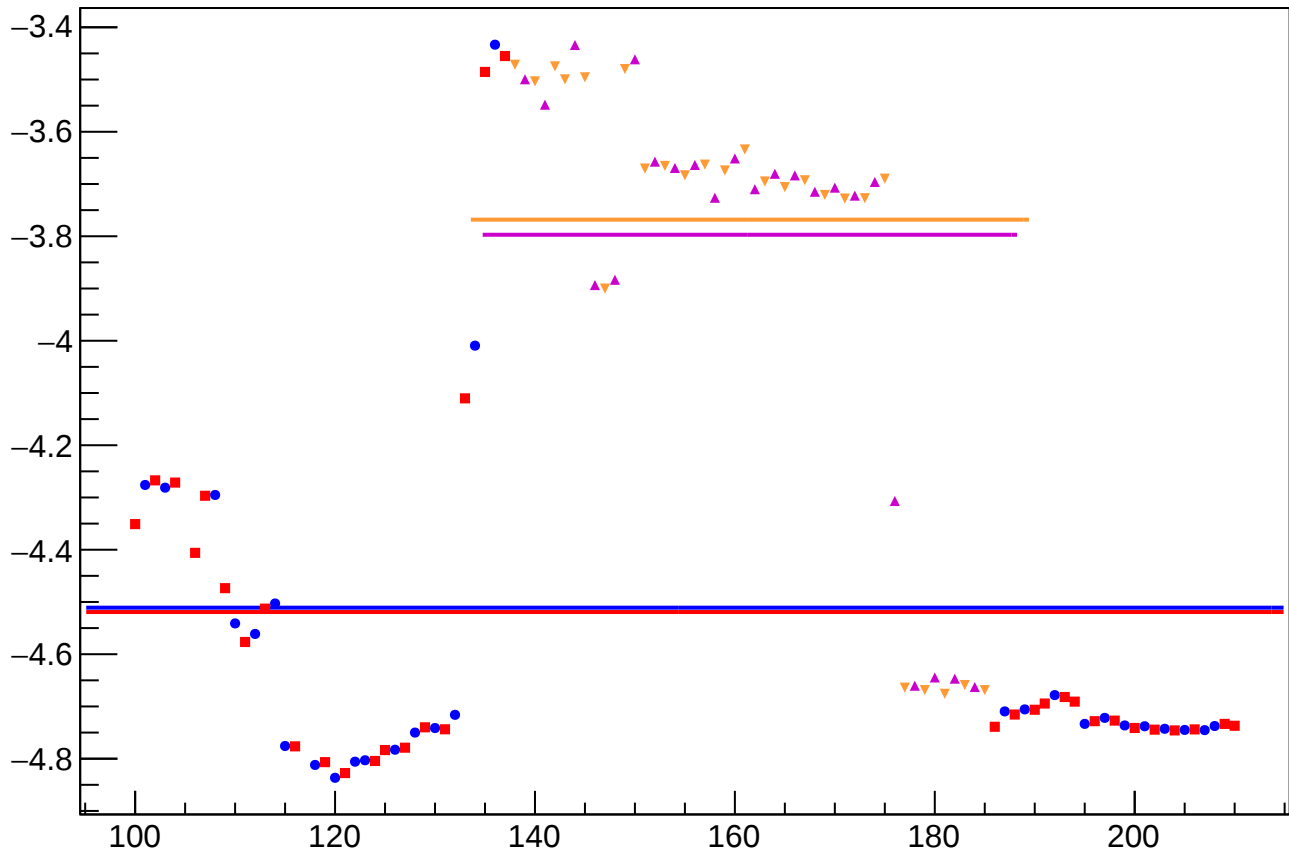
Left In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 666404.2/22

+ sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 5902110.5/52

All: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 12933094.9/108

- sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 7027944.3/55

# yield\_bpm2i01Y\_mean vs Slug



Right In: -4.511+/-0.000  $\chi^2/\text{NDF}$ : 436061110773.3/27

Left Out: -3.768+/-0.000  $\chi^2/\text{NDF}$ : 516780173940.8/24

Right Out: -4.519+/-0.000  $\chi^2/\text{NDF}$ : 376210196154.1/32

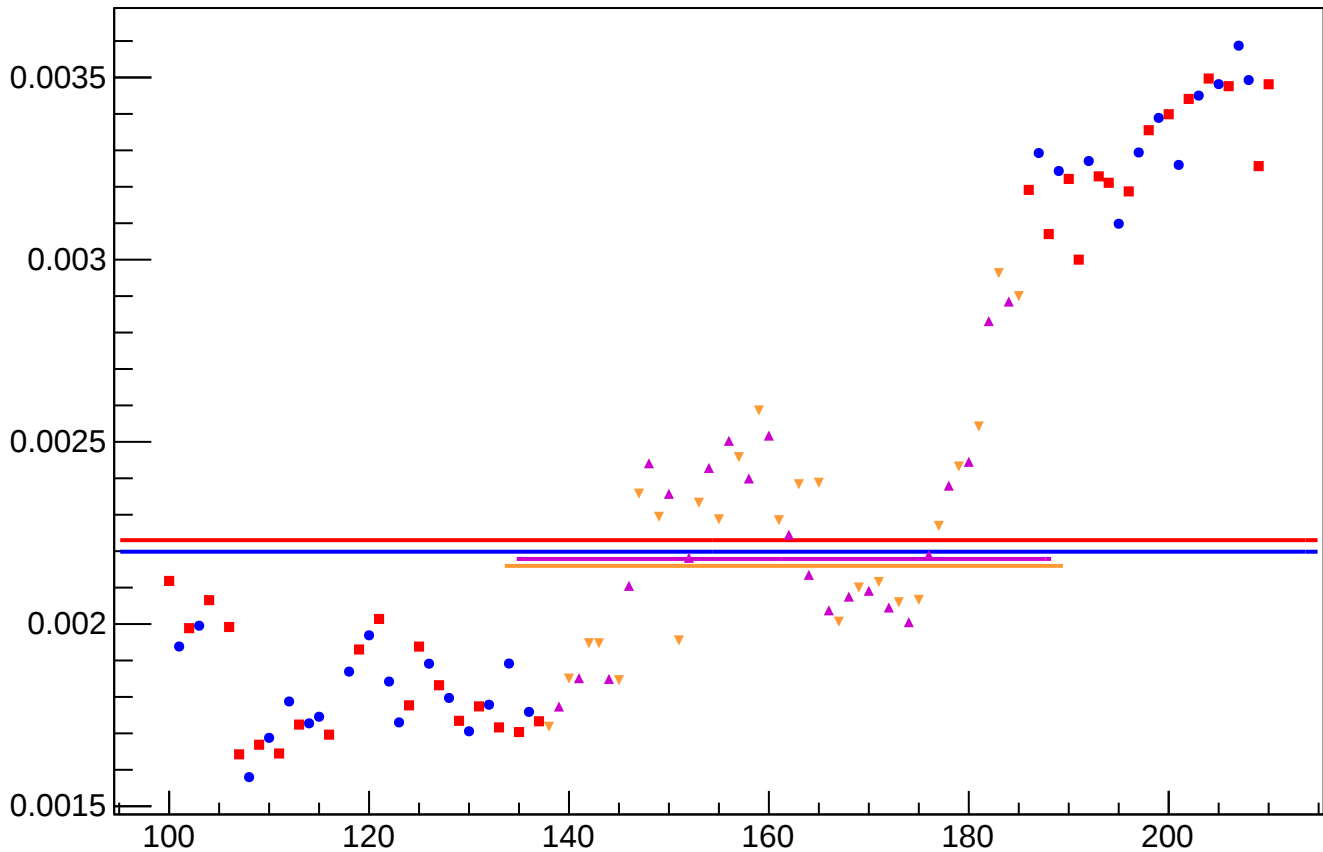
Left In: -3.797+/-0.000  $\chi^2/\text{NDF}$ : 444886272608.9/22

+ sign -4.075+/-0.000  $\chi^2/\text{NDF}$ : 1820671229412.4/5

All: -4.101+/-0.000  $\chi^2/\text{NDF}$ : 3496611368976

- sign -4.127+/-0.000  $\chi^2/\text{NDF}$ : 1666978139639.1/5

# yield\_bpm2i01Y\_rms vs Slug



Right In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 2499025.7/27

Left Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF:547831.5/24

Right Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 2862095.8/32

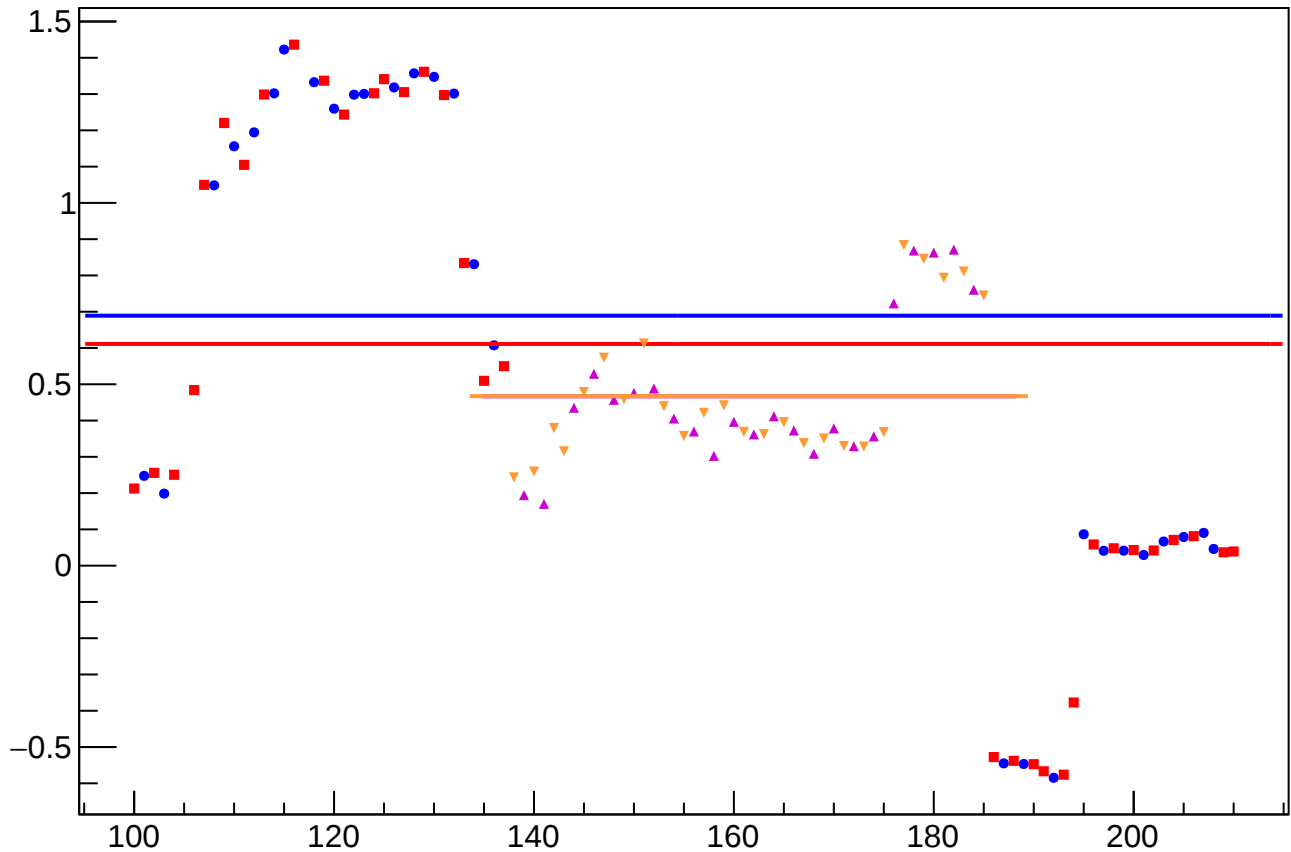
Left In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF:463279.7/22

+ sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 3051617.5/52

All: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 6390166.4/108

- sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 3333961.3/55

# yield\_bpm2i02X\_mean vs Slug



Right In: 0.689 $\pm$ 0.000  $\chi^2$ /NDF: 77190225365.5/27

Left Out: 0.467 $\pm$ 0.000  $\chi^2$ /NDF: 7359344143.3/24

Right Out: 0.611 $\pm$ 0.000  $\chi^2$ /NDF: 99278379606.8/32

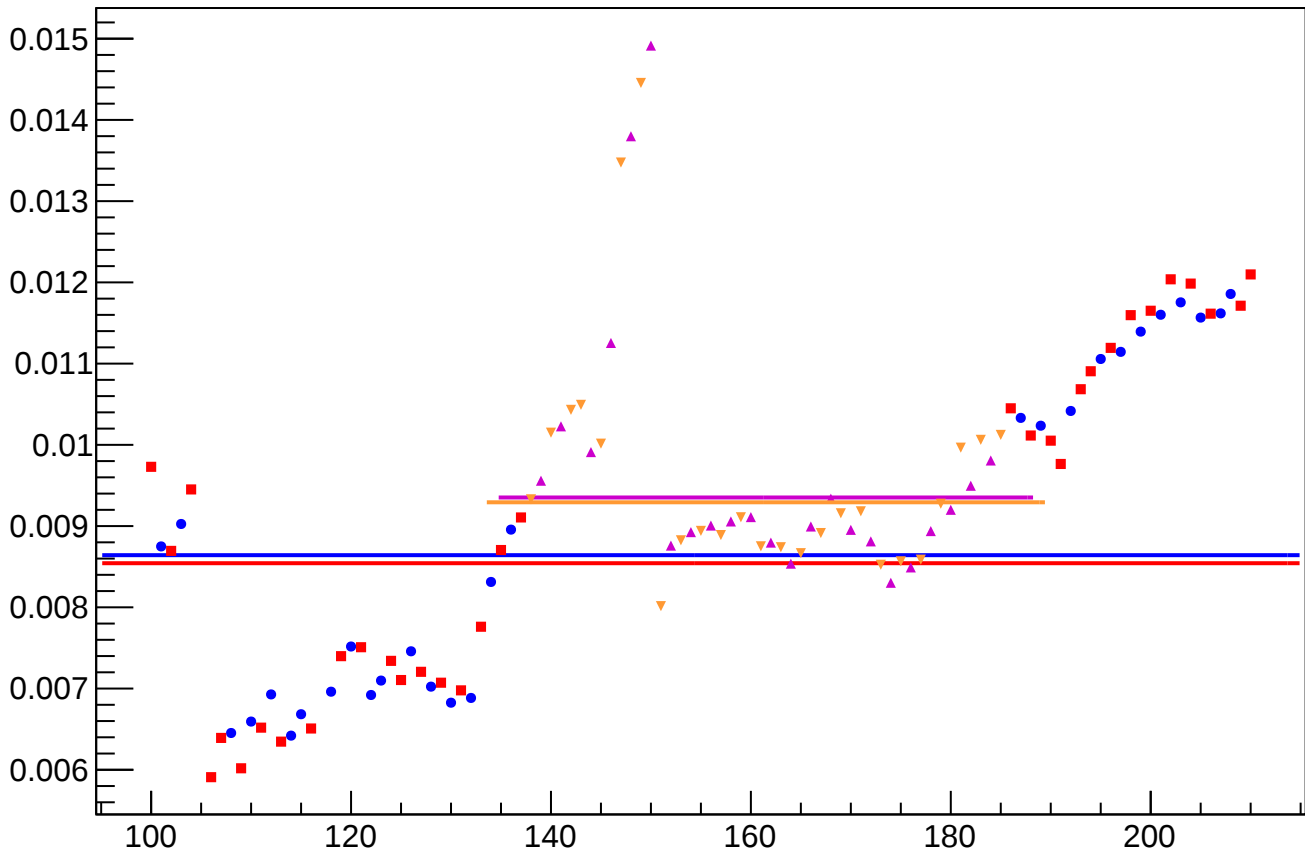
Left In: 0.467 $\pm$ 0.000  $\chi^2$ /NDF: 8036741308.0/22

+ sign 0.571 $\pm$ 0.000  $\chi^2$ /NDF: 89353553793.0/52

All: 0.556 $\pm$ 0.000  $\chi^2$ /NDF: 198946013352.5

- sign 0.542 $\pm$ 0.000  $\chi^2$ /NDF: 109428937788.3/55

# yield\_bpm2i02X\_rms vs Slug



Right In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 1433207.8/27

Left Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ :528279.5/24

Right Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 1921717.0/32

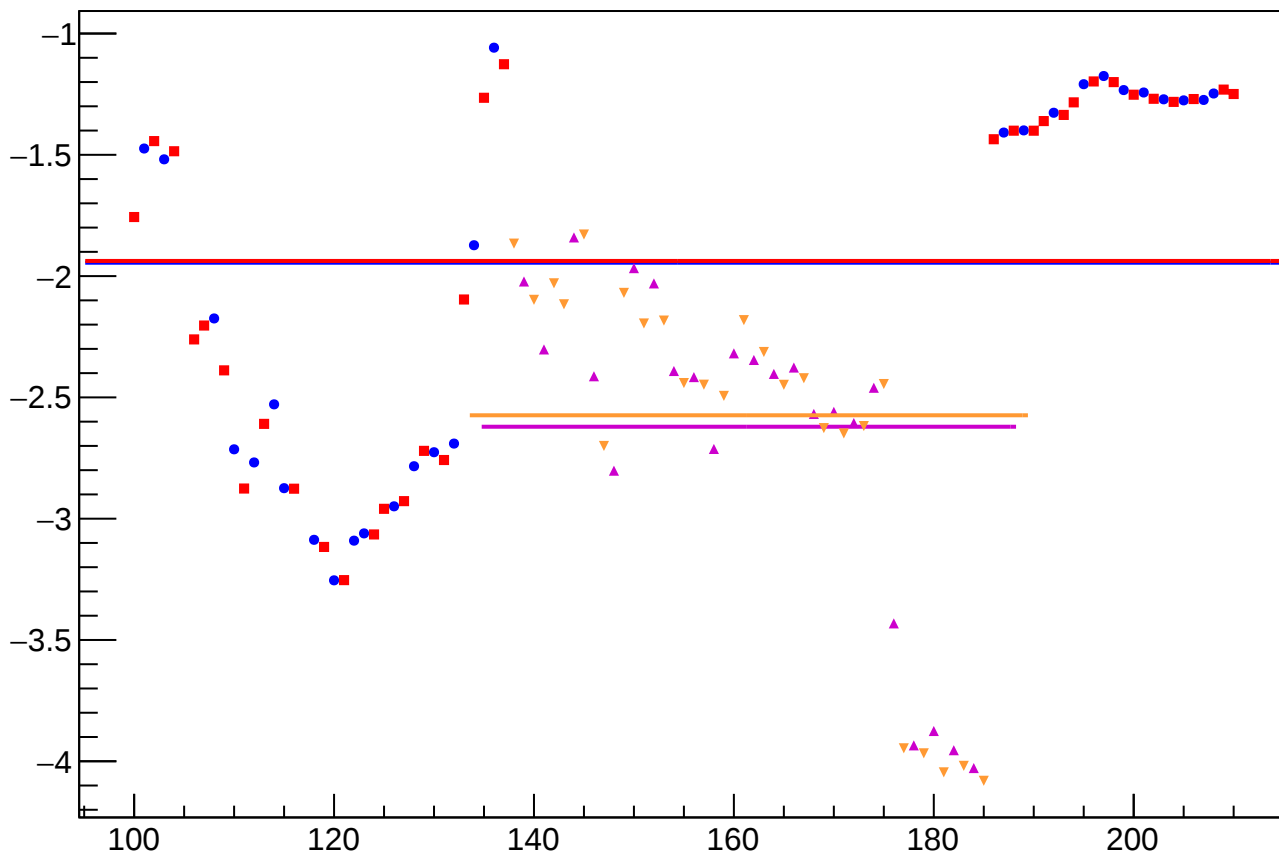
Left In: 0.009+/-0.000  $\chi^2/\text{NDF}$ :557555.2/22

+ sign 0.009+/-0.000  $\chi^2/\text{NDF}$ : 2044187.1/52

All: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 4657723.2/108

- sign 0.009+/-0.000  $\chi^2/\text{NDF}$ : 2612121.9/55

# yield\_bpm2i02Y\_mean vs Slug



Right In:  $-1.945 \pm 0.000$   $\chi^2/\text{NDF}: 126717272423.7/27$

Left Out:  $-2.574 \pm 0.000$   $\chi^2/\text{NDF}: 99176112704.9/24$

Right Out:  $-1.938 \pm 0.000$   $\chi^2/\text{NDF}: 128309893043.7/32$

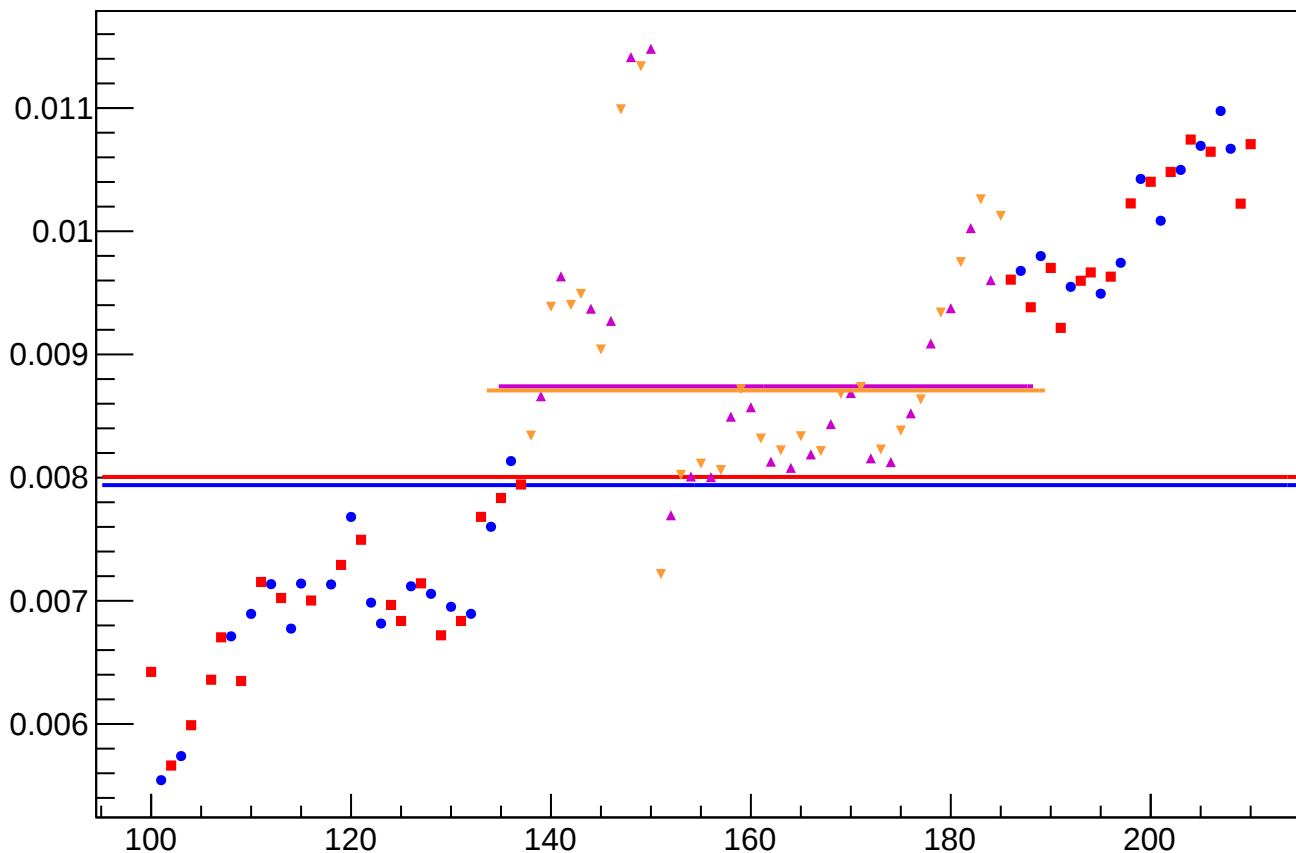
Left In:  $-2.621 \pm 0.000$   $\chi^2/\text{NDF}: 80862402796.4/22$

+ sign  $-2.274 \pm 0.000$   $\chi^2/\text{NDF}: 271096799624.4/52$

All:  $-2.268 \pm 0.000$   $\chi^2/\text{NDF}: 535195426062.7$

- sign  $-2.263 \pm 0.000$   $\chi^2/\text{NDF}: 264070206200.3/55$

# yield\_bpm2i02Y\_rms vs Slug



Right In: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 1306909.5/27

Left Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 369376.5/24

Right Out: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 1398940.4/32

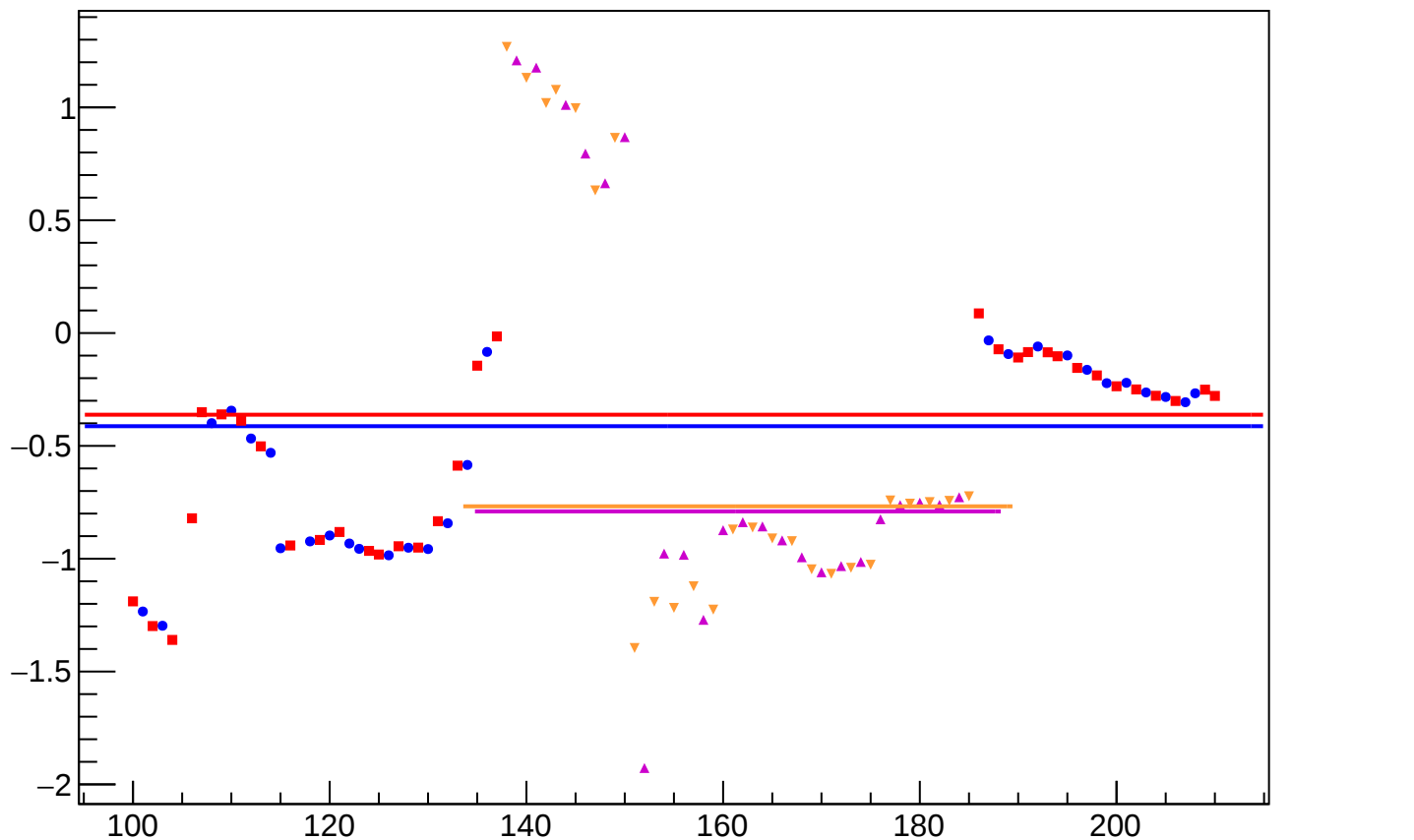
Left In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 353750.0/22

+ sign 0.008+/-0.000  $\chi^2/\text{NDF}$ : 1811147.7/52

All: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 3691241.1/108

- sign 0.008+/-0.000  $\chi^2/\text{NDF}$ : 1879996.6/55

# yield\_bpm0i01X\_mean vs Slug



Right In:  $-0.413 \pm 0.000$   $\chi^2/\text{NDF}: 22642238690.7/27$

Left Out:  $-0.768 \pm 0.000$   $\chi^2/\text{NDF}: 120774855982.9/24$

Right Out:  $-0.362 \pm 0.000$   $\chi^2/\text{NDF}: 25287656828.5/32$

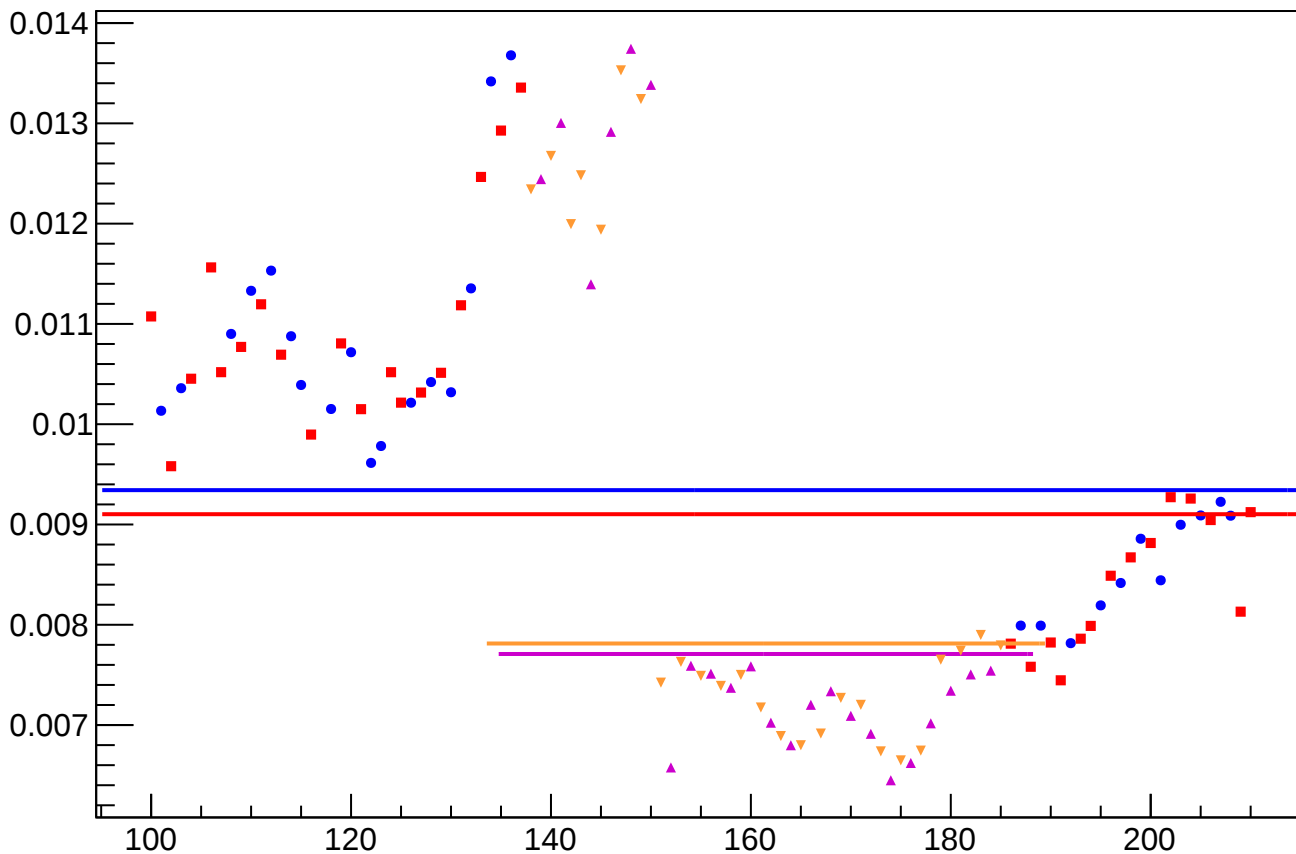
Left In:  $-0.790 \pm 0.000$   $\chi^2/\text{NDF}: 123452478408.2/22$

+ sign  $-0.639 \pm 0.000$   $\chi^2/\text{NDF}: 156272229679.8/52$

All:  $-0.626 \pm 0.000$   $\chi^2/\text{NDF}: 325824298670.6$

- sign  $-0.613 \pm 0.000$   $\chi^2/\text{NDF}: 169397868635.7/55$

# yield\_bpm0i01X\_rms vs Slug



Right In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 541988.8/27

Left Out: 0.008+/-0.000  $\chi^2/\text{NDF}$ :1705997.6/24

Right Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 650311.7/32

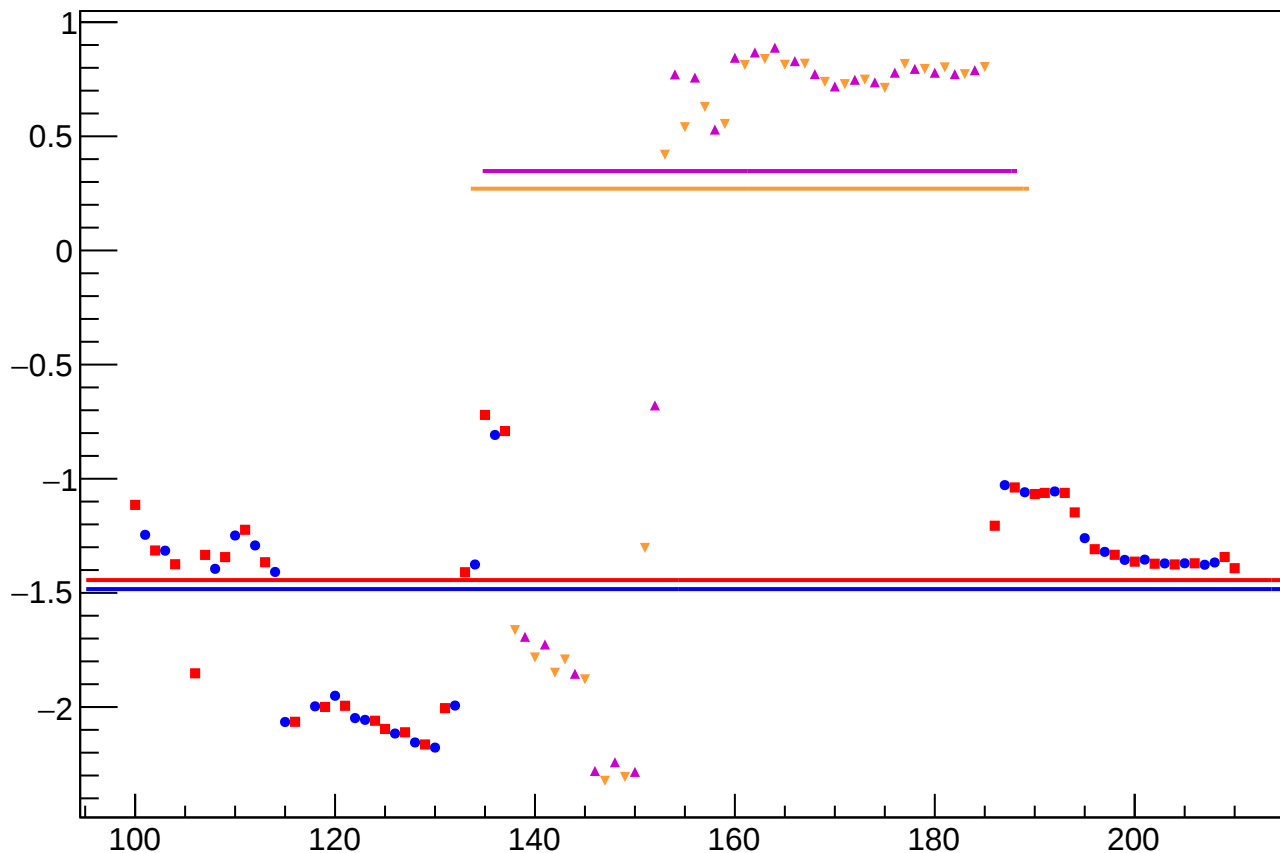
Left In: 0.008+/-0.000  $\chi^2/\text{NDF}$ :1746653.6/22

+ sign 0.008+/-0.000  $\chi^2/\text{NDF}$ : 2725025.3/52

All: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 5562371.4/108

- sign 0.008+/-0.000  $\chi^2/\text{NDF}$ : 2834321.9/55

# yield\_bpm0i01Y\_mean vs Slug



Right In:  $-1.483 \pm 0.000$   $\chi^2/\text{NDF}$ : 174591746133.1/27

Left Out:  $0.271 \pm 0.000$   $\chi^2/\text{NDF}$ : 2583233987355.9/24

Right Out:  $-1.444 \pm 0.000$   $\chi^2/\text{NDF}$ : 164511760603.6/32

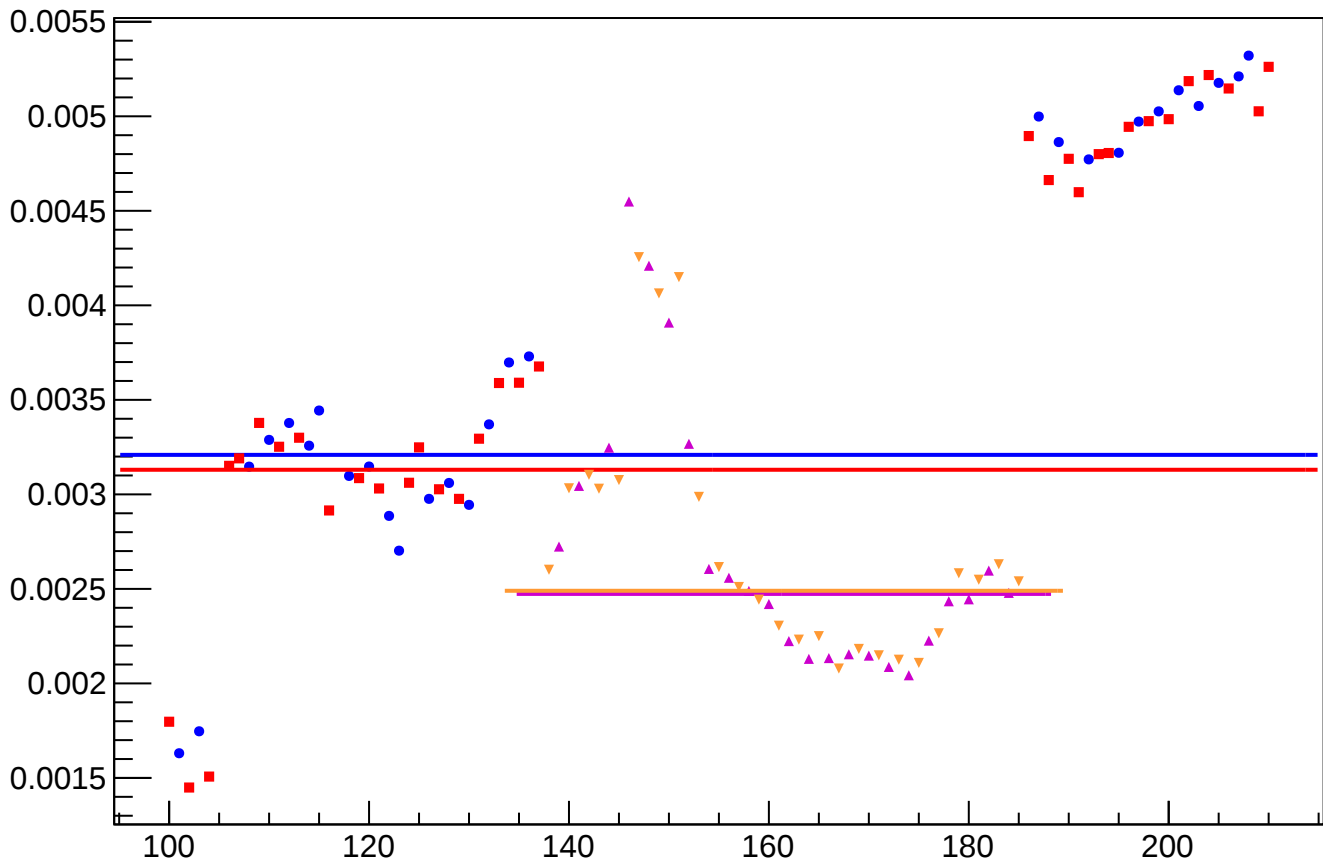
Left In:  $0.348 \pm 0.000$   $\chi^2/\text{NDF}$ : 2274004426513.8/22

+ sign  $-0.263 \pm 0.000$   $\chi^2/\text{NDF}$ : 5214152256078.8/5

All:  $-0.272 \pm 0.000$   $\chi^2/\text{NDF}$ : 1044807484707

- sign  $-0.280 \pm 0.000$   $\chi^2/\text{NDF}$ : 5233372993595.8/5

# yield\_bpm0i01Y\_rms vs Slug



Right In: 0.003 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 366607.7/27

Left Out: 0.002 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1070282.7/24

Right Out: 0.003 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 4976340.9/32

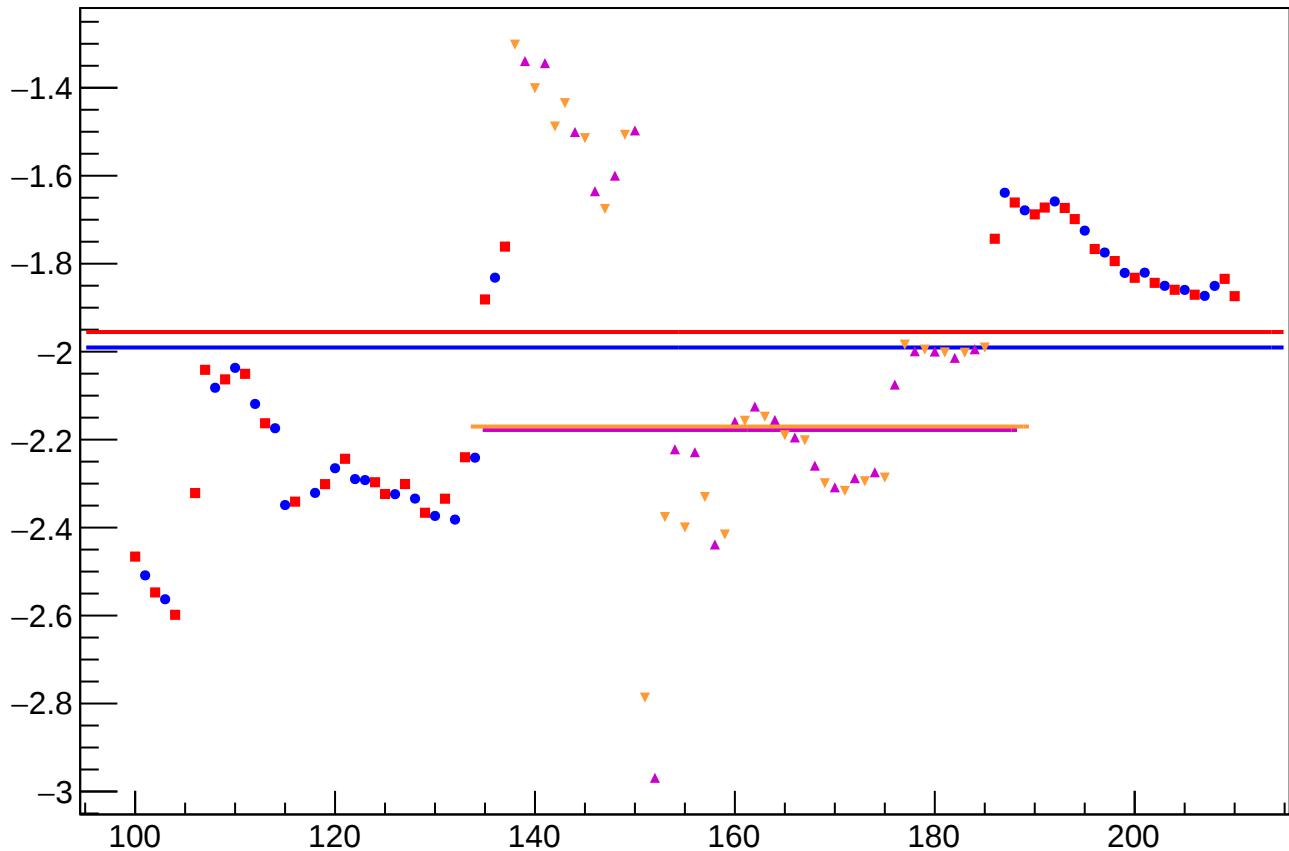
Left In: 0.002 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1135279.8/22

+ sign 0.003 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 5562198.5/52

All: 0.003 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 12424895.4/108

- sign 0.003 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 6862593.4/55

# yield\_bpm0i01aX\_mean vs Slug



Right In: -1.990+/-0.000  $\chi^2/\text{NDF}$ : 30839406064.9/27

Left Out: -2.170+/-0.000  $\chi^2/\text{NDF}$ : 59967315241.9/24

Right Out: -1.955+/-0.000  $\chi^2/\text{NDF}$ : 35264985082.1/32

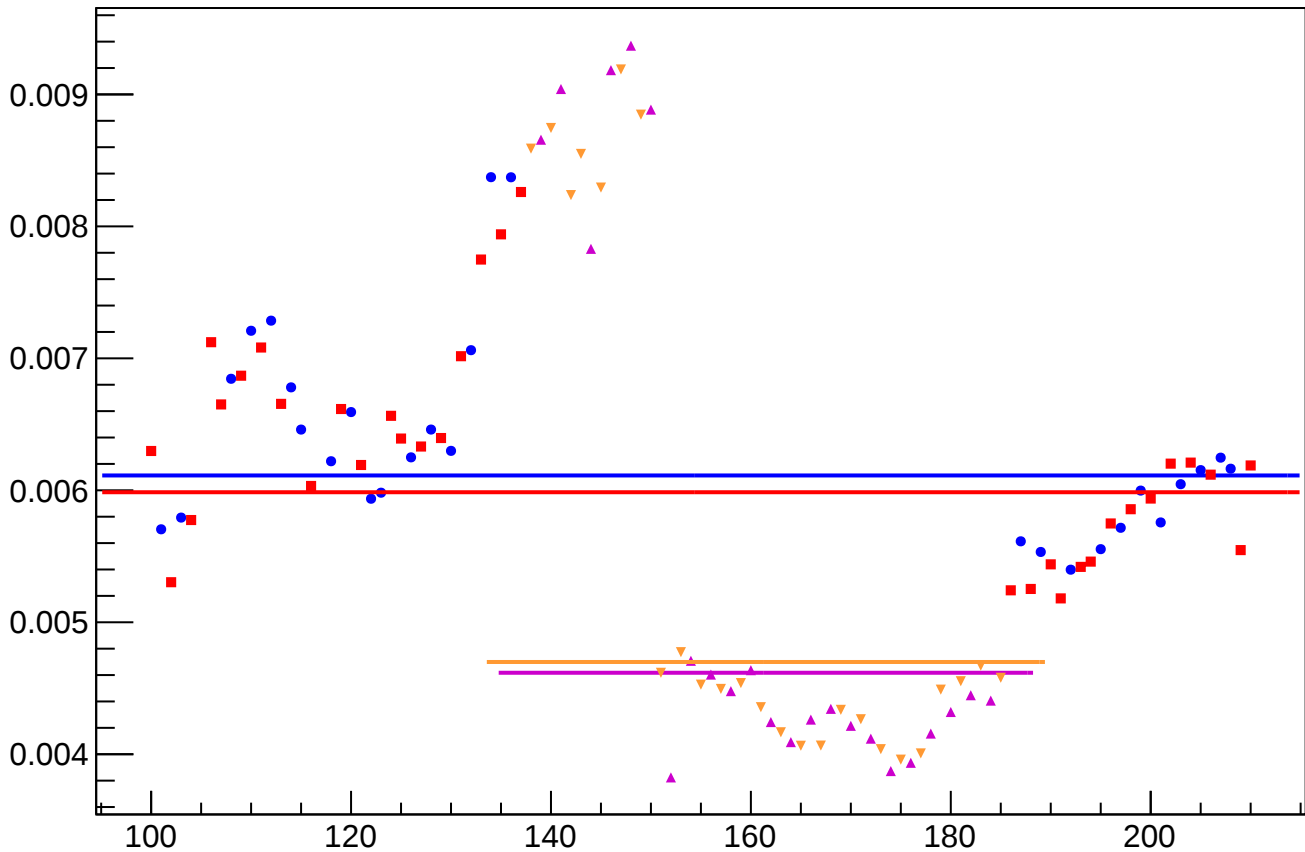
Left In: -2.178+/-0.000  $\chi^2/\text{NDF}$ : 73402051113.3/22

+ sign -2.111+/-0.000  $\chi^2/\text{NDF}$ : 98876656618.9/52

All: -2.102+/-0.000  $\chi^2/\text{NDF}$ : 221436093745.0

- sign -2.094+/-0.000  $\chi^2/\text{NDF}$ : 122394901169.8/55

# yield\_bpm0i01aX\_rms vs Slug



Right In: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 302819.6/27

Left Out: 0.005+/-0.000  $\chi^2/\text{NDF}$ :2319588.7/24

Right Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 364151.1/32

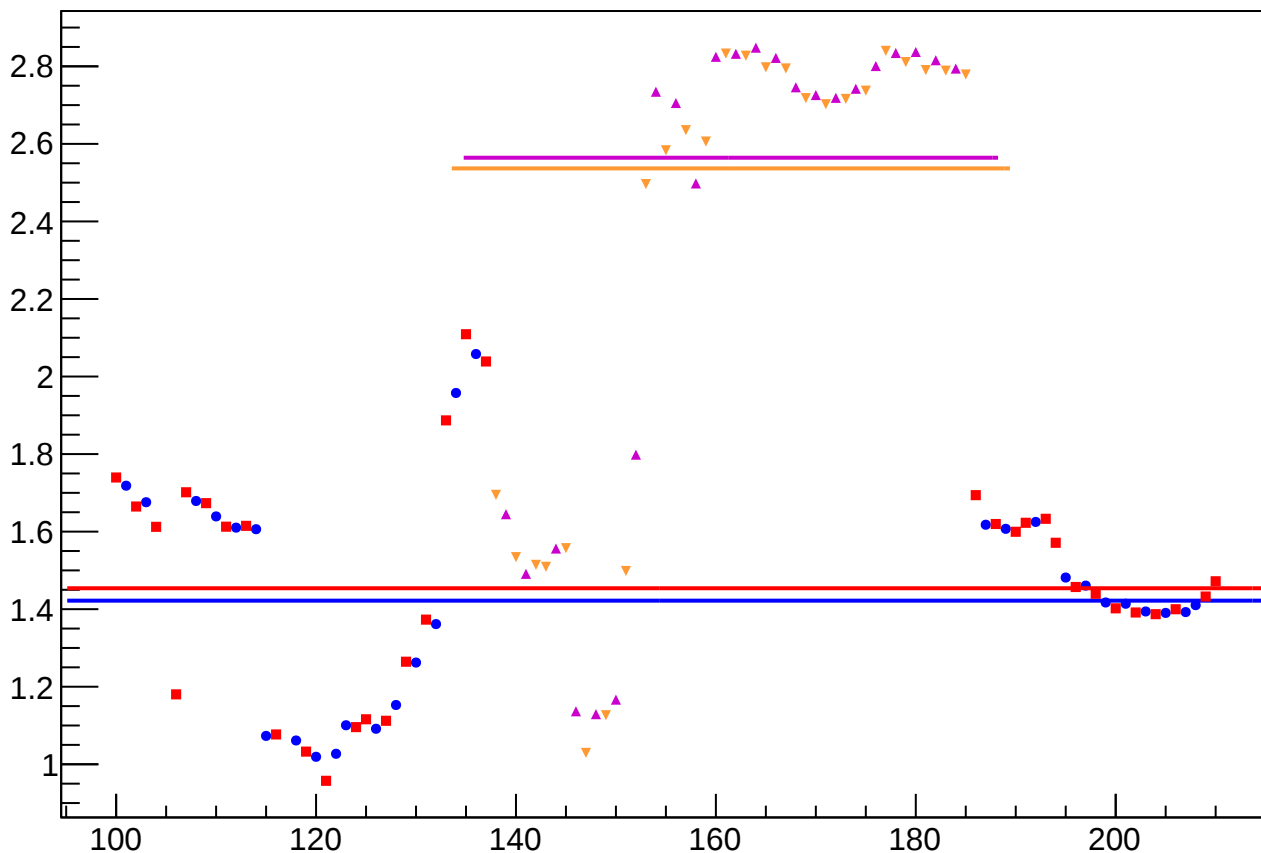
Left In: 0.005+/-0.000  $\chi^2/\text{NDF}$ :2367440.9/22

+ sign 0.005+/-0.000  $\chi^2/\text{NDF}$ : 3620519.3/52

All: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 7389090.7/108

- sign 0.005+/-0.000  $\chi^2/\text{NDF}$ : 3767368.6/55

# yield\_bpm0i01aY\_mean vs Slug



Right In: 1.422 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 174159204898.9/27

Left Out: 2.537 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 269554948115.3/24

Right Out: 1.454 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 176999680745.8/32

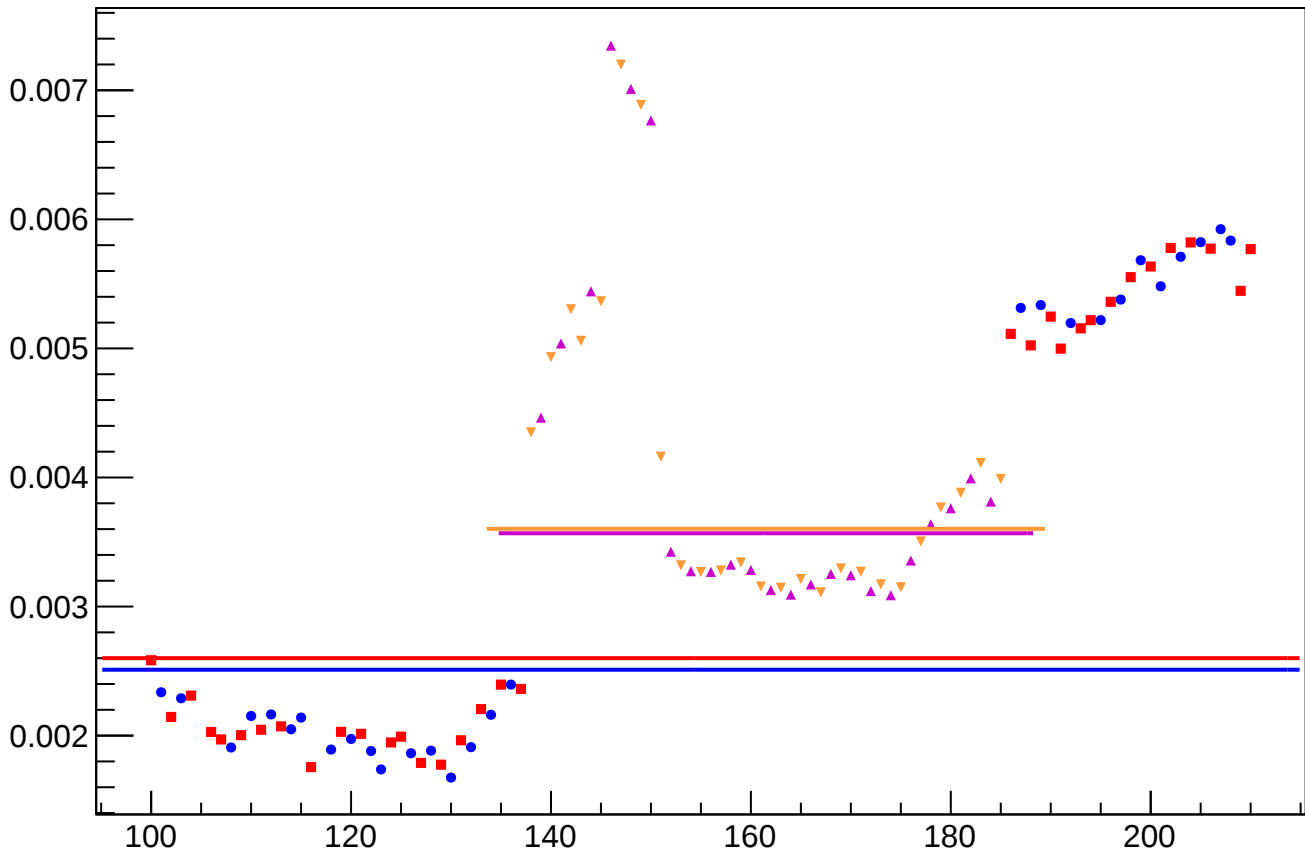
Left In: 2.564 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 260287937727.8/22

+ sign 1.892 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1369702595278.2/52

All: 1.891 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2723951519793.

- sign 1.891 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1354246766907.7/55

# yield\_bpm0i01aY\_rms vs Slug



Right In: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 5498292.5/27

Left Out: 0.004+/-0.000  $\chi^2/\text{NDF}$ :1410717.8/24

Right Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 6257163.3/32

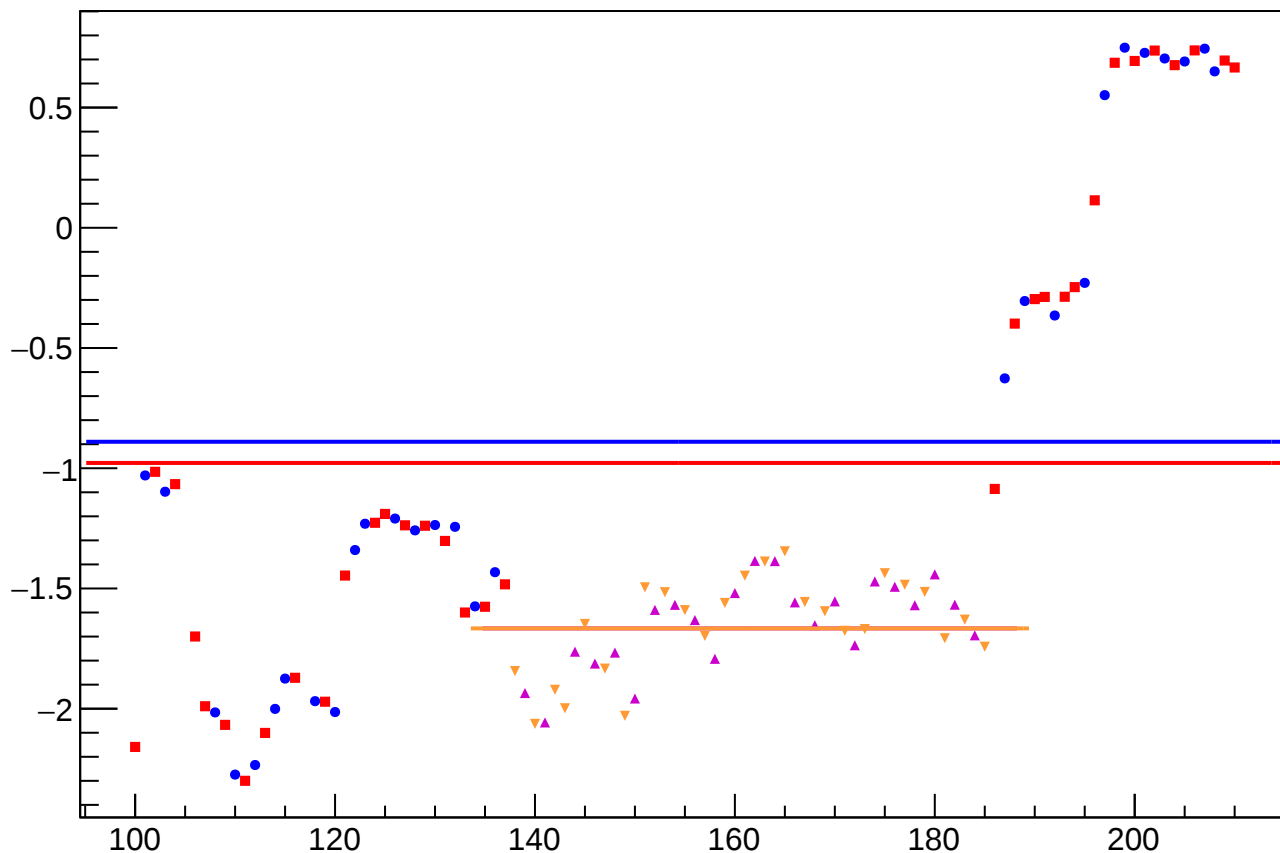
Left In: 0.004+/-0.000  $\chi^2/\text{NDF}$ :1563028.0/22

+ sign 0.003+/-0.000  $\chi^2/\text{NDF}$ : 8684899.9/52

All: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 17898646.4/108

- sign 0.003+/-0.000  $\chi^2/\text{NDF}$ : 9213435.0/55

# yield\_bpm0l01X\_mean vs Slug



Right In:  $-0.890 \pm 0.000$   $\chi^2/\text{NDF}$ : 193328540363.0/27

Left Out:  $-1.666 \pm 0.000$   $\chi^2/\text{NDF}$ : 18325162131.2/24

Right Out:  $-0.978 \pm 0.000$   $\chi^2/\text{NDF}$ : 239549417072.0/32

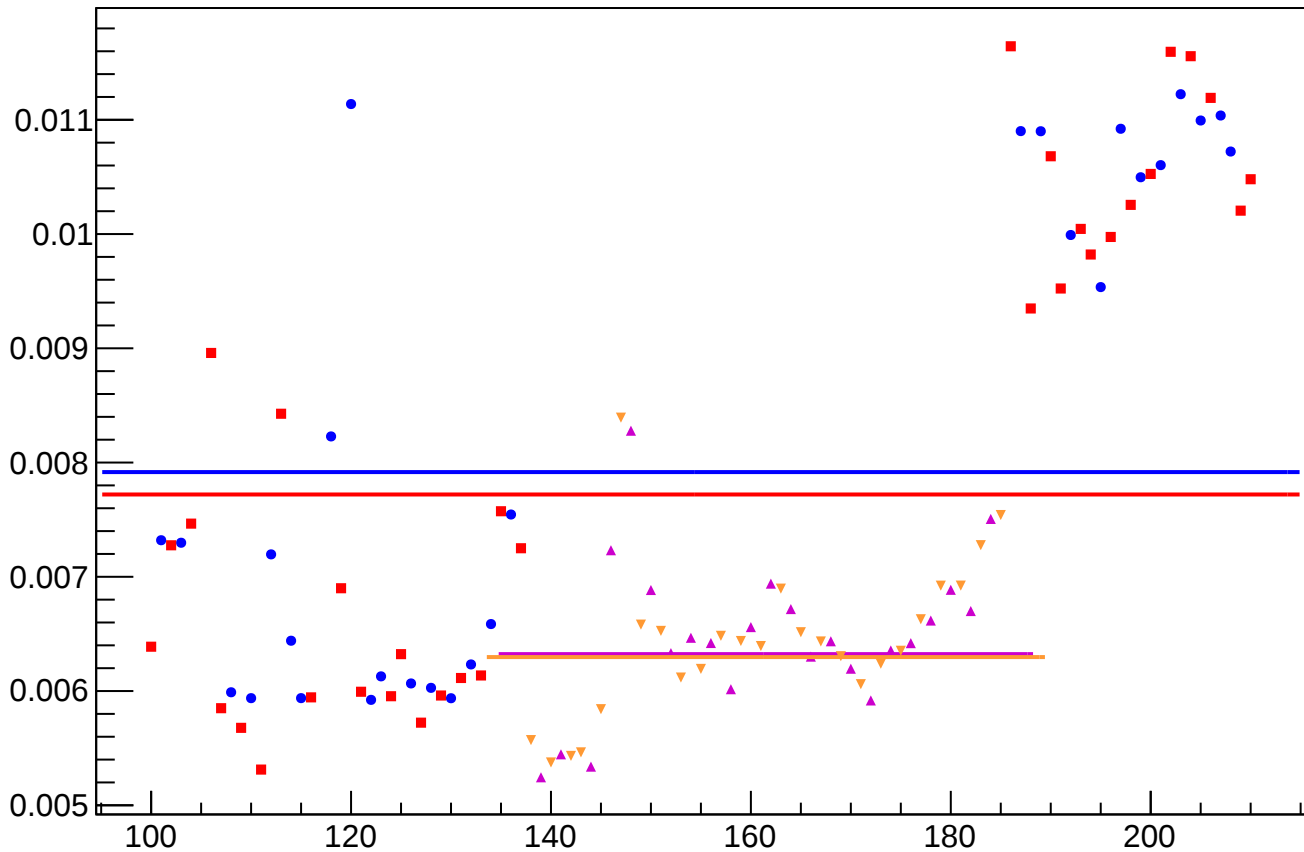
Left In:  $-1.666 \pm 0.000$   $\chi^2/\text{NDF}$ : 14292570816.9/22

+ sign  $-1.419 \pm 0.000$   $\chi^2/\text{NDF}$ : 296149142200.4/52

All:  $-1.413 \pm 0.000$   $\chi^2/\text{NDF}$ : 623361915499.9

- sign  $-1.406 \pm 0.000$   $\chi^2/\text{NDF}$ : 327158217716.9/55

# yield\_bpm0l01X\_rms vs Slug



Right In: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 1676132.2/27

Left Out: 0.006 $\pm$ 0.000  $\chi^2$ /NDF:310757.0/24

Right Out: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 2102188.1/32

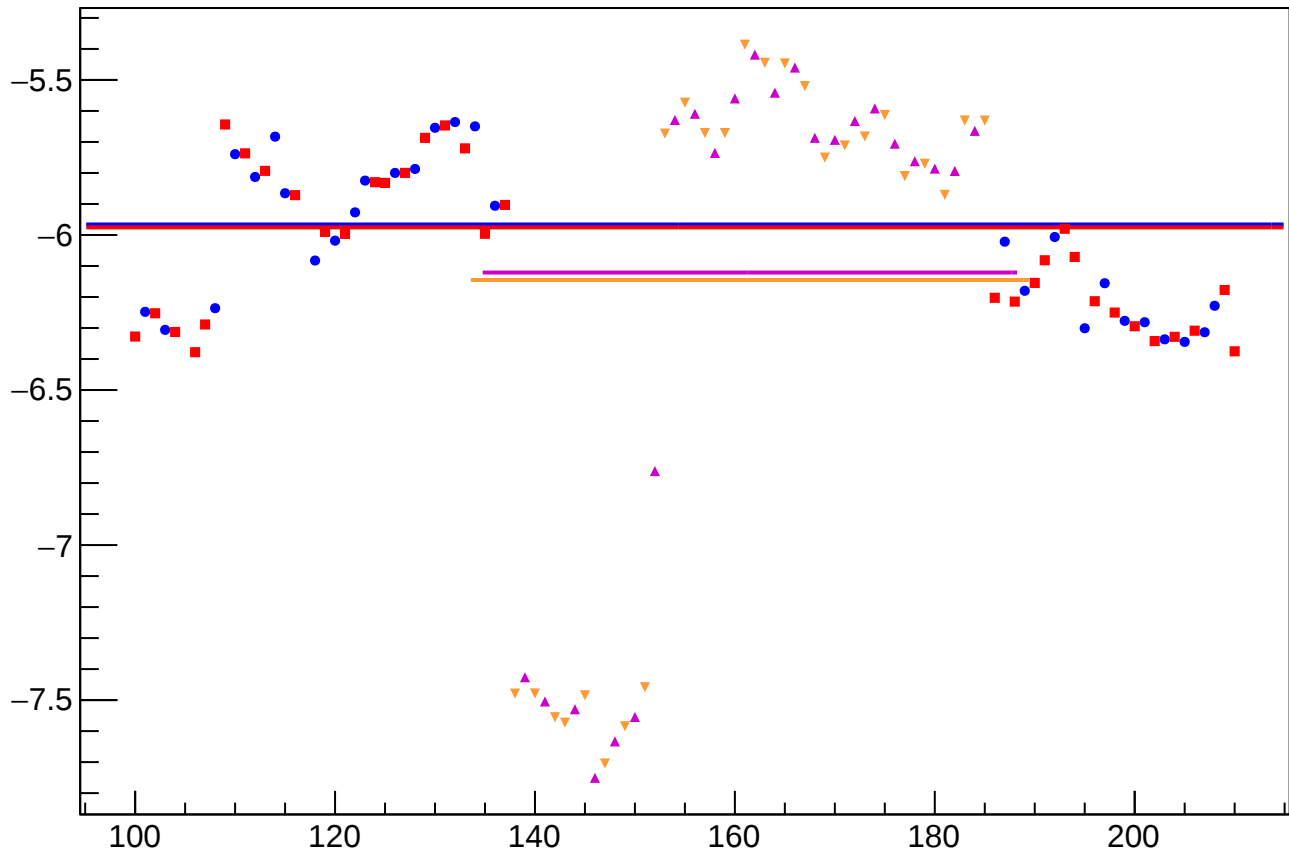
Left In: 0.006 $\pm$ 0.000  $\chi^2$ /NDF:330859.7/22

+ sign 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 2722227.3/52

All: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 5760814.6/108

- sign 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 3037621.4/55

# yield\_bpm0l01Y\_mean vs Slug



Right In: -5.966+/-0.000  $\chi^2/\text{NDF}$ : 15254370871.3/27

Left Out: -6.145+/-0.000  $\chi^2/\text{NDF}$ : 185364150237.7/24

Right Out: -5.975+/-0.000  $\chi^2/\text{NDF}$ : 17099659381.3/32

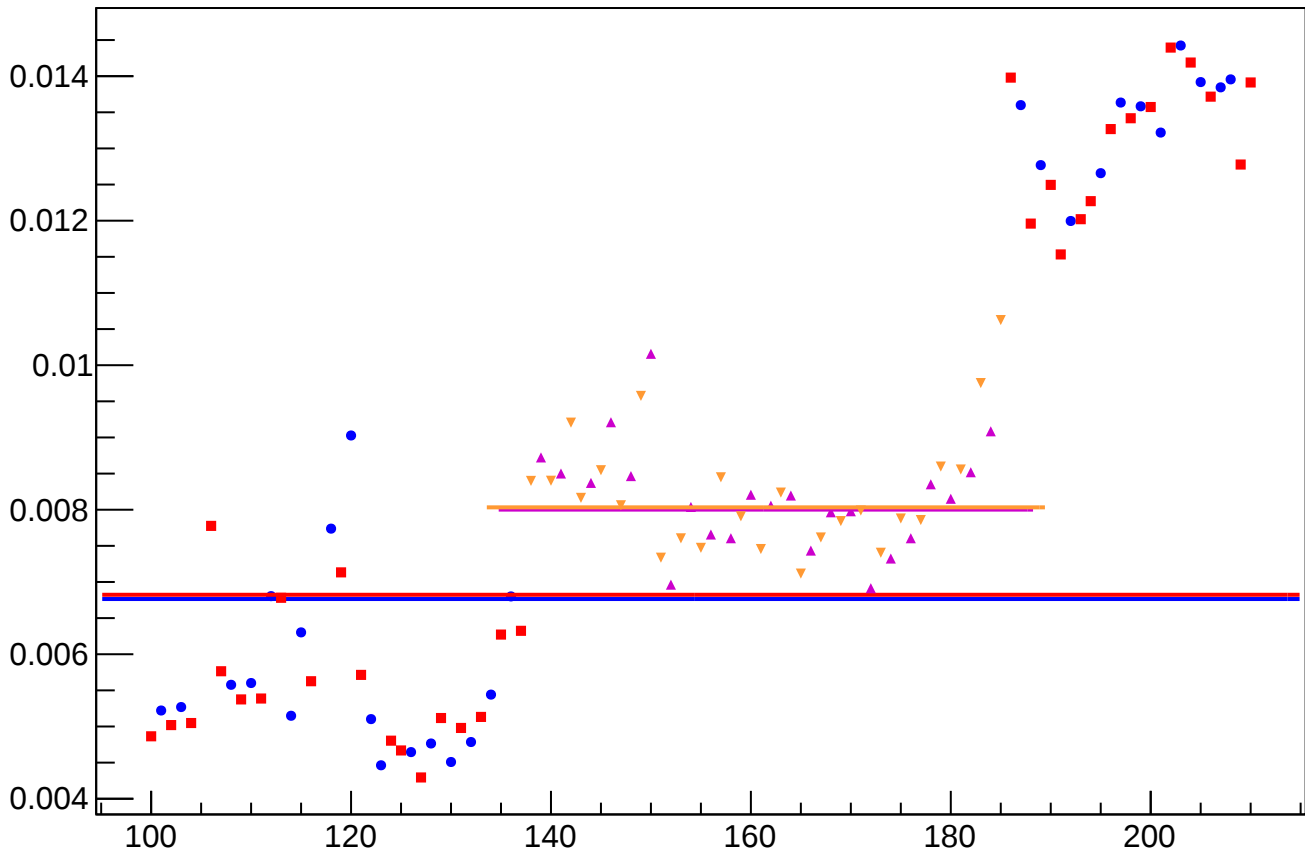
Left In: -6.121+/-0.000  $\chi^2/\text{NDF}$ : 158315913062.3/22

+ sign -6.058+/-0.000  $\chi^2/\text{NDF}$ : 204627036759.2/52

All: -6.051+/-0.000  $\chi^2/\text{NDF}$ : 382851791281.7

- sign -6.044+/-0.000  $\chi^2/\text{NDF}$ : 178175749956.5/55

# yield\_bpm0l01Y\_rms vs Slug



Right In: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 4777185.7/27

Left Out: 0.008+/-0.000  $\chi^2/\text{NDF}$ :205762.2/24

Right Out: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 5405597.4/32

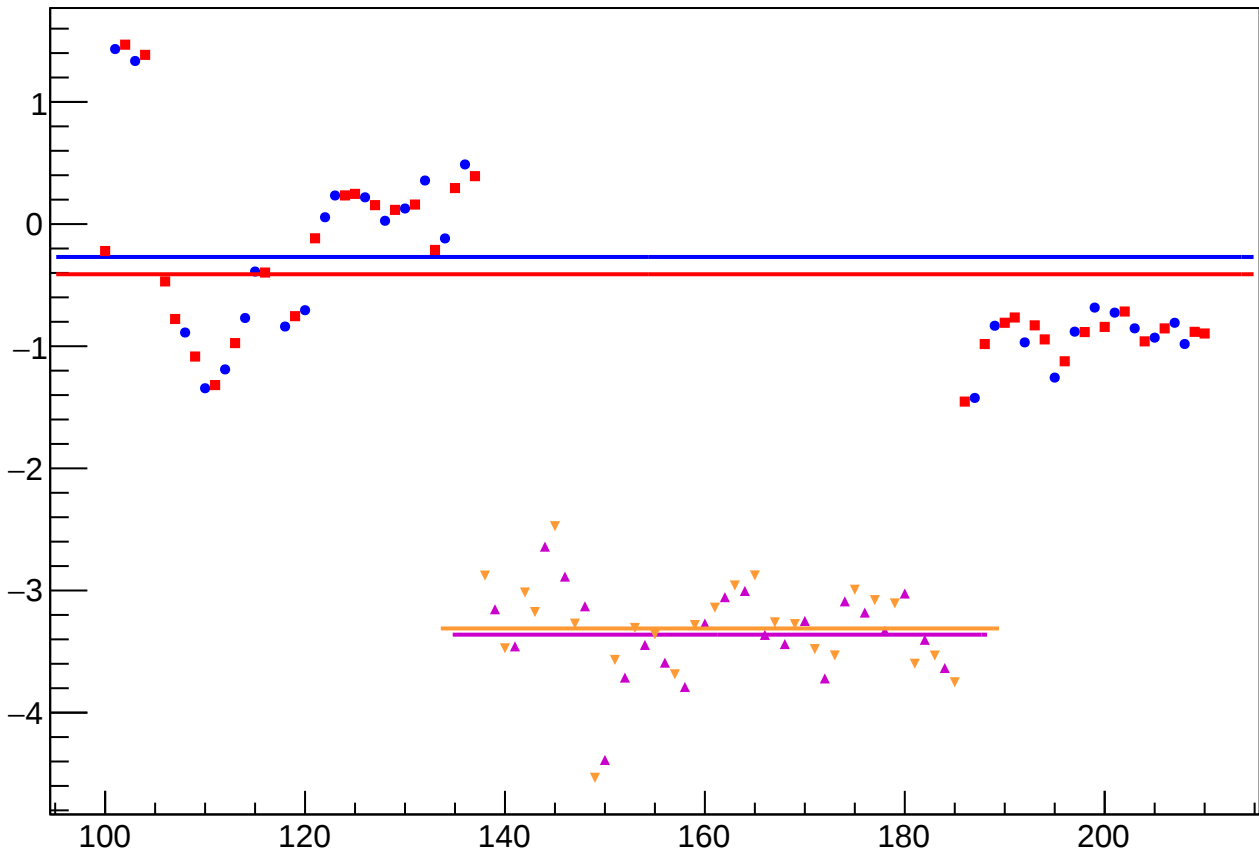
Left In: 0.008+/-0.000  $\chi^2/\text{NDF}$ :220756.1/22

+ sign 0.007+/-0.000  $\chi^2/\text{NDF}$ : 5385872.3/52

All: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 11374672.7/108

- sign 0.007+/-0.000  $\chi^2/\text{NDF}$ : 5988142.0/55

# yield\_bpm0l02X\_mean vs Slug



Right In: -0.269+/-0.000  $\chi^2/\text{NDF}$ : 31670588295.0/27

Left Out: -3.311+/-0.000  $\chi^2/\text{NDF}$ : 9354397456.2/24

Right Out: -0.411+/-0.000  $\chi^2/\text{NDF}$ : 33326031966.6/32

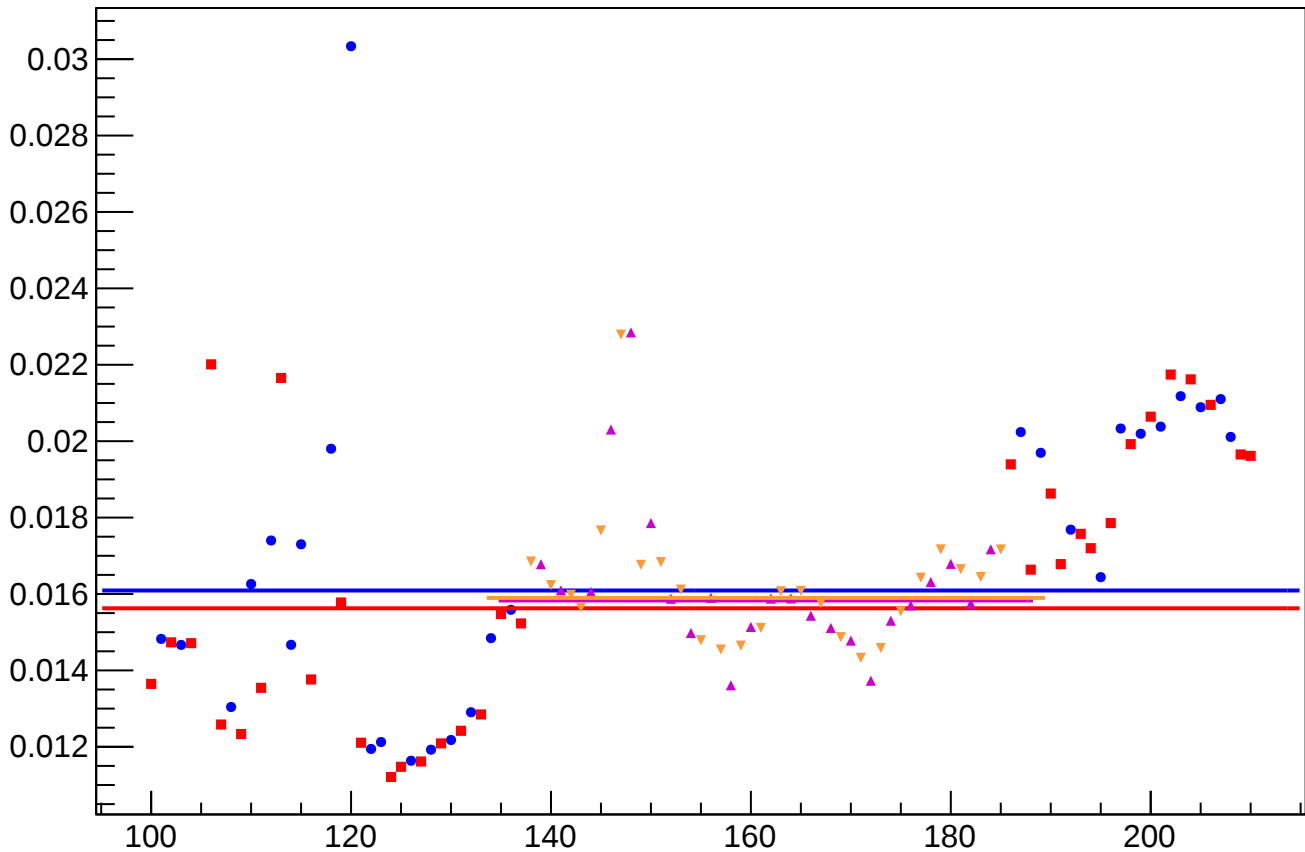
Left In: -3.362+/-0.000  $\chi^2/\text{NDF}$ : 8171803777.4/22

+ sign -2.037+/-0.000  $\chi^2/\text{NDF}$ : 311938773935.4/52

All: -1.985+/-0.000  $\chi^2/\text{NDF}$ : 632999398580.4

- sign -1.935+/-0.000  $\chi^2/\text{NDF}$ : 320413435351.9/55

# yield\_bpm0l02X\_rms vs Slug



Right In: 0.016+/-0.000  $\chi^2/\text{NDF}$ : 1265342.1/27

Left Out: 0.016+/-0.000  $\chi^2/\text{NDF}$ : 251912.7/24

Right Out: 0.016+/-0.000  $\chi^2/\text{NDF}$ : 1387786.0/32

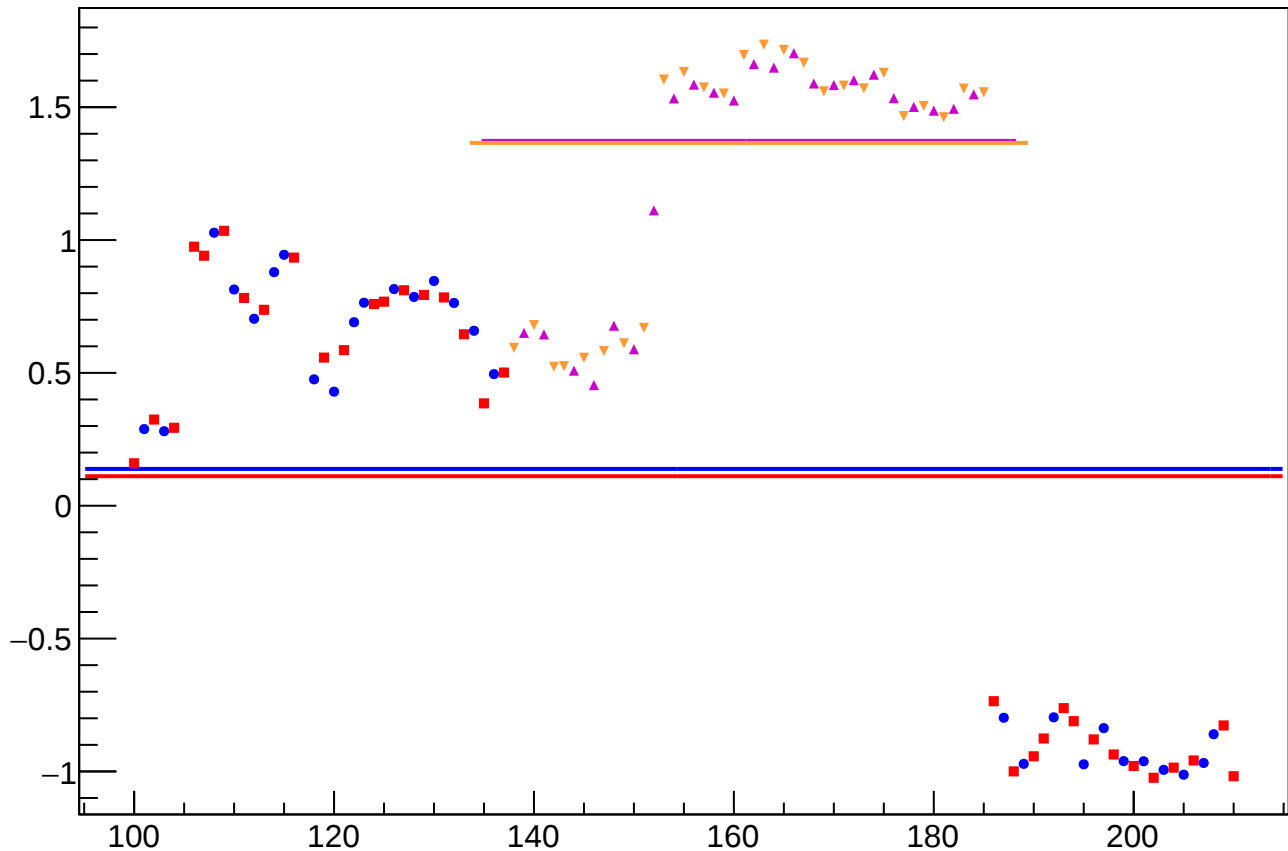
Left In: 0.016+/-0.000  $\chi^2/\text{NDF}$ : 339542.1/22

+ sign 0.016+/-0.000  $\chi^2/\text{NDF}$ : 1519448.1/52

All: 0.016+/-0.000  $\chi^2/\text{NDF}$ : 3257077.6/108

- sign 0.016+/-0.000  $\chi^2/\text{NDF}$ : 1730012.5/55

# yield\_bpm0l02Y\_mean vs Slug



Right In: 0.139 $\pm$ 0.000  $\chi^2$ /NDF: 75915188055.6/27

Left Out: 1.366 $\pm$ 0.000  $\chi^2$ /NDF: 74741956067.9/24

Right Out: 0.111 $\pm$ 0.000  $\chi^2$ /NDF: 92757752196.3/32

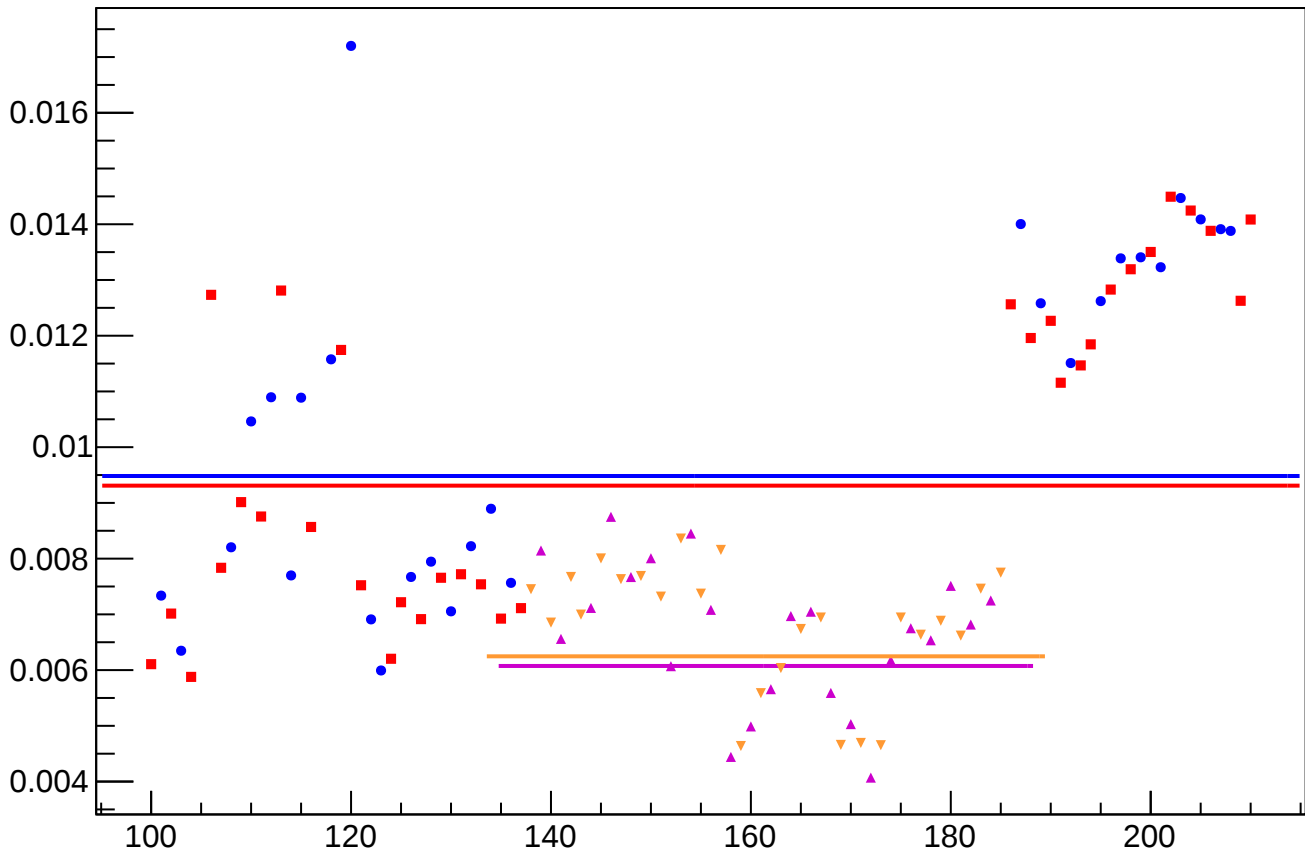
Left In: 1.373 $\pm$ 0.000  $\chi^2$ /NDF: 63413151416.3/22

+ sign 1.066 $\pm$ 0.000  $\chi^2$ /NDF: 307376818400.3/52

All: 1.044 $\pm$ 0.000  $\chi^2$ /NDF: 652548962647.6

- sign 1.024 $\pm$ 0.000  $\chi^2$ /NDF: 344663162433.9/55

# yield\_bpm0l02Y\_rms vs Slug



Right In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 2246406.4/27

Left Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ :1330867.5/24

Right Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 2565570.7/32

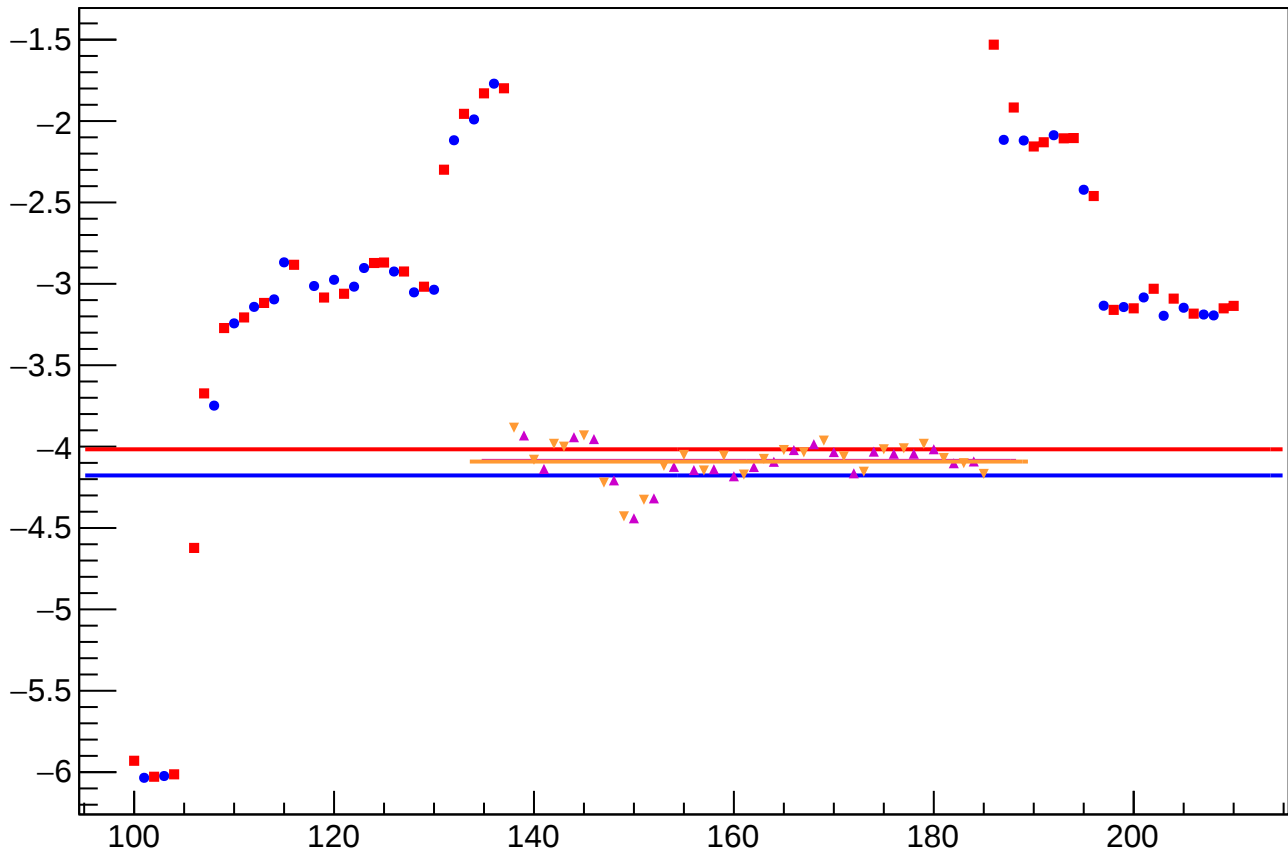
Left In: 0.006+/-0.000  $\chi^2/\text{NDF}$ :1431986.5/22

+ sign 0.007+/-0.000  $\chi^2/\text{NDF}$ : 5757129.2/52

All: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 12234934.7/108

- sign 0.007+/-0.000  $\chi^2/\text{NDF}$ : 6475151.3/55

# yield\_bpm0l03X\_mean vs Slug



Right In:  $-4.177 \pm 0.000$   $\chi^2/\text{NDF}$ : 280122231503.4/27

Left Out:  $-4.092 \pm 0.000$   $\chi^2/\text{NDF}$ : 39806766.7/24

Right Out:  $-4.017 \pm 0.000$   $\chi^2/\text{NDF}$ : 274244260241.6/32

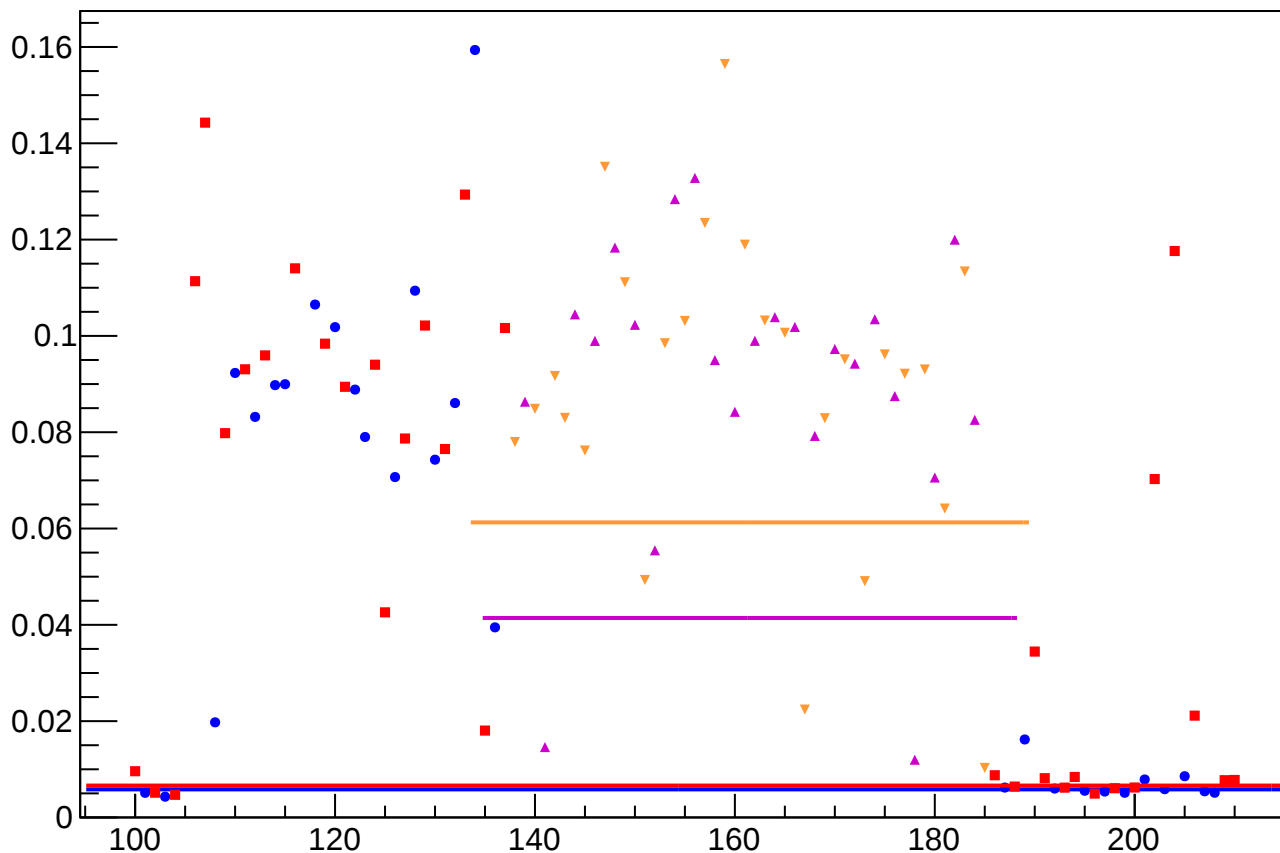
Left In:  $-4.088 \pm 0.000$   $\chi^2/\text{NDF}$ : 34412880.7/22

+ sign  $-4.175 \pm 0.000$   $\chi^2/\text{NDF}$ : 280183022138.7/52

All:  $-4.107 \pm 0.000$   $\chi^2/\text{NDF}$ : 555701238827.3

- sign  $-4.020 \pm 0.000$   $\chi^2/\text{NDF}$ : 274299227258.4/55

# yield\_bpm0l03X\_rms vs Slug



Right In: 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 8075910.6/27

Left Out: 0.061 $\pm$ 0.000  $\chi^2$ /NDF:8355266.0/24

Right Out: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 10348838.5/32

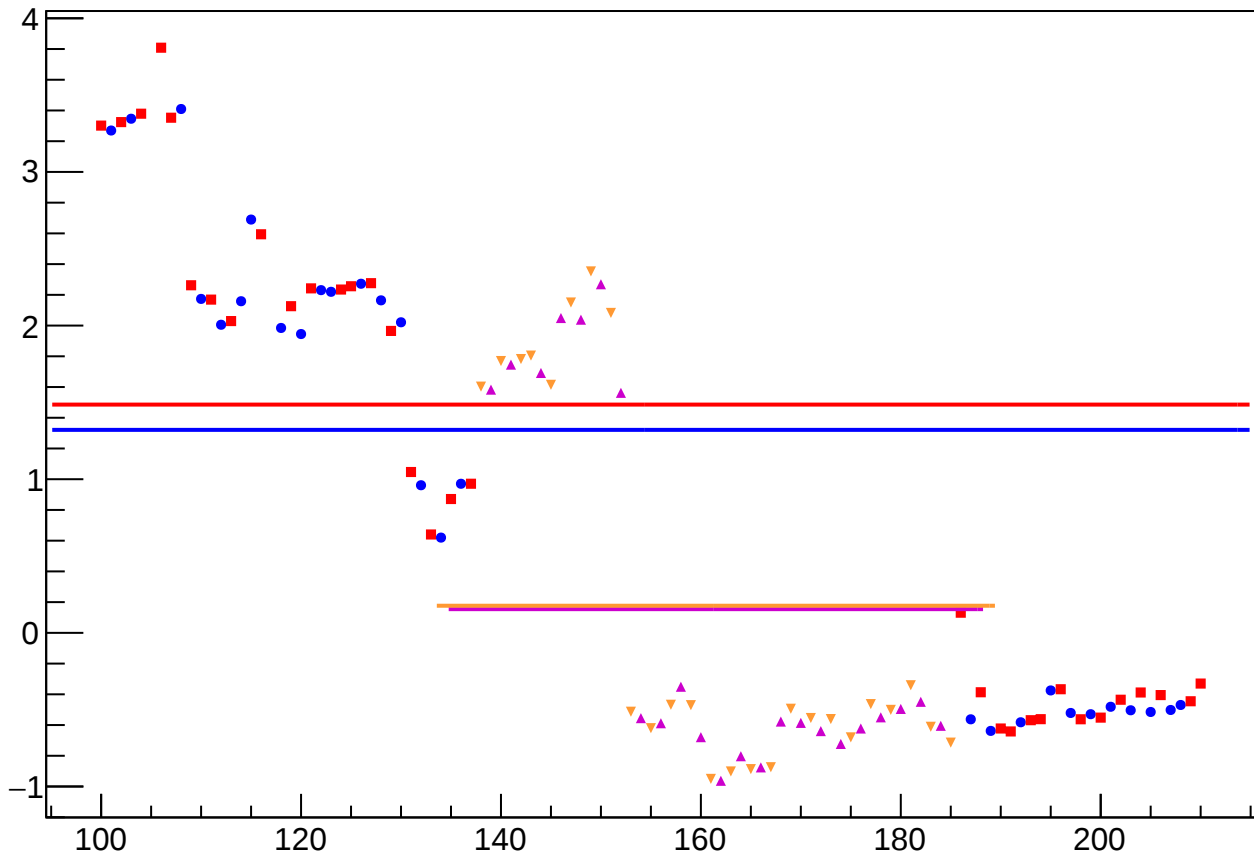
Left In: 0.041 $\pm$ 0.000  $\chi^2$ /NDF:13124468.7/22

+ sign 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 34128107.7/52

All: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 67550874.0/108

- sign 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 33313883.4/55

# yield\_bpm0l03Y\_mean vs Slug



Right In: 1.321+/-0.000  $\chi^2/\text{NDF}$ : 212823786877.7/27

Left Out: 0.177+/-0.000  $\chi^2/\text{NDF}$ : 3275313367.7/24

Right Out: 1.486+/-0.000  $\chi^2/\text{NDF}$ : 182022643572.9/32

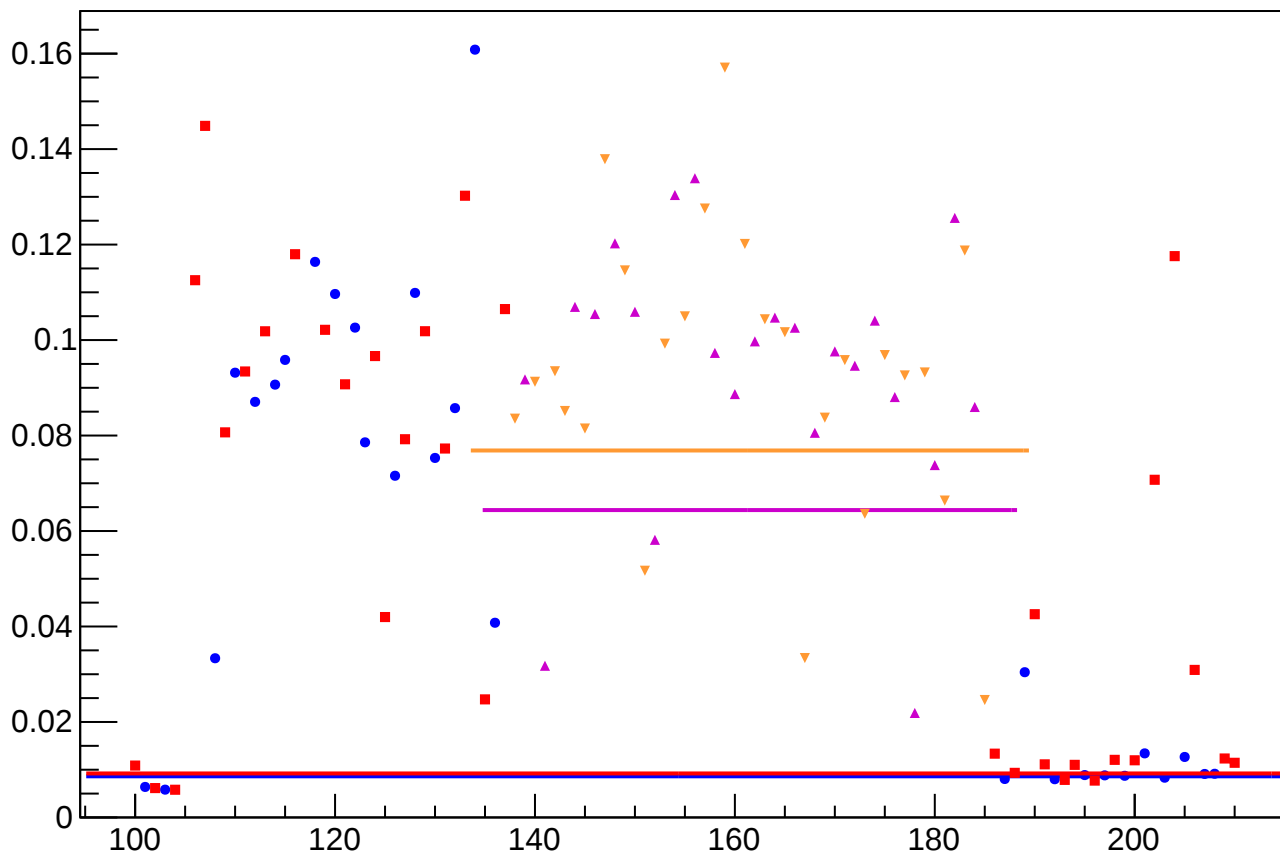
Left In: 0.154+/-0.000  $\chi^2/\text{NDF}$ : 3163553595.0/22

+ sign 1.279+/-0.000  $\chi^2/\text{NDF}$ : 218960041826.4/52

All: 1.346+/-0.000  $\chi^2/\text{NDF}$ : 409086230993.7

- sign 1.422+/-0.000  $\chi^2/\text{NDF}$ : 189539483514.5/55

# yield\_bpm0l03Y\_rms vs Slug



Right In: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 8030571.9/27

Left Out: 0.077 $\pm$ 0.000  $\chi^2$ /NDF:4217954.3/24

Right Out: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 10338445.4/32

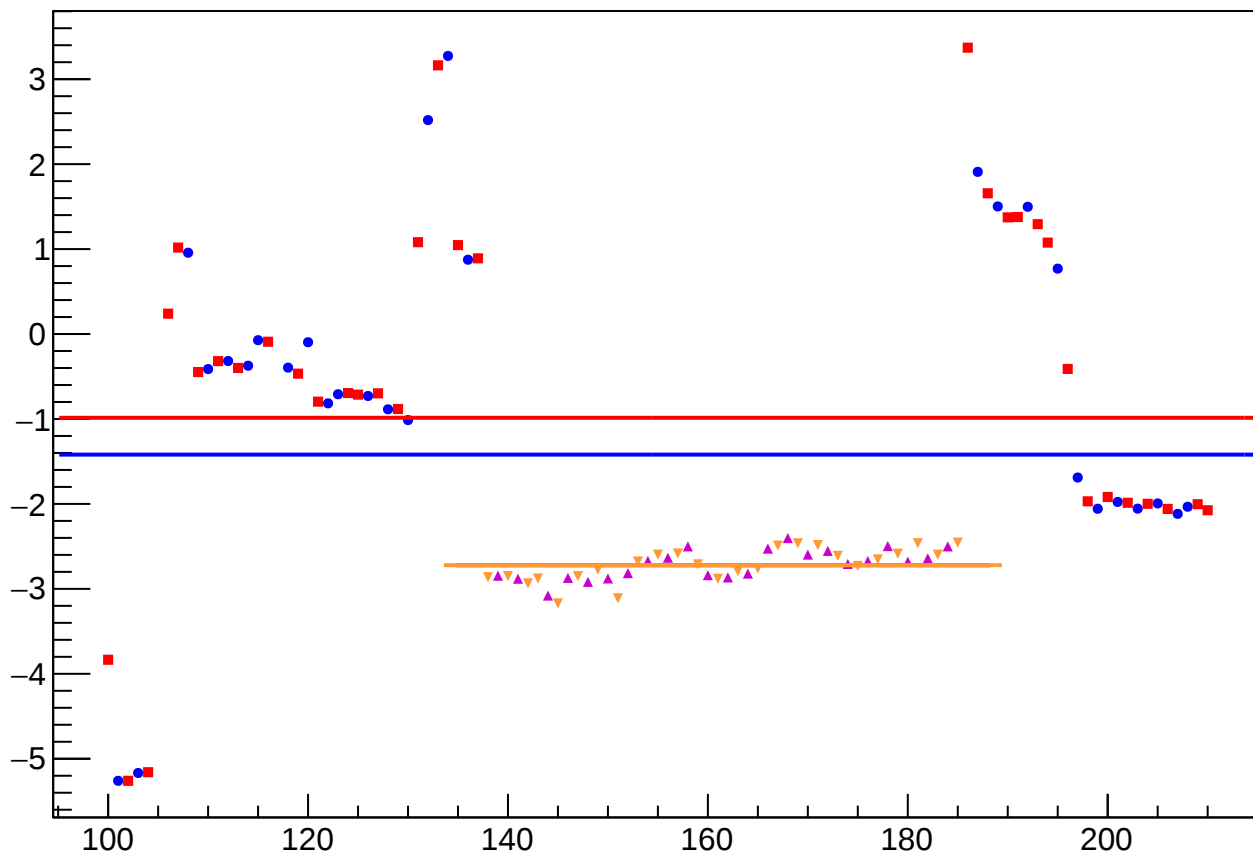
Left In: 0.064 $\pm$ 0.000  $\chi^2$ /NDF:6990231.5/22

+ sign 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 32591086.8/52

All: 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 64900057.9/108

- sign 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 32278549.2/55

# yield\_bpm0l04X\_mean vs Slug



Right In: -1.420+/-0.000  $\chi^2/\text{NDF}$ : 206178102980.1/27

Left Out: -2.721+/-0.000  $\chi^2/\text{NDF}$ : 10397156971.6/24

Right Out: -0.986+/-0.000  $\chi^2/\text{NDF}$ : 239270630474.4/32

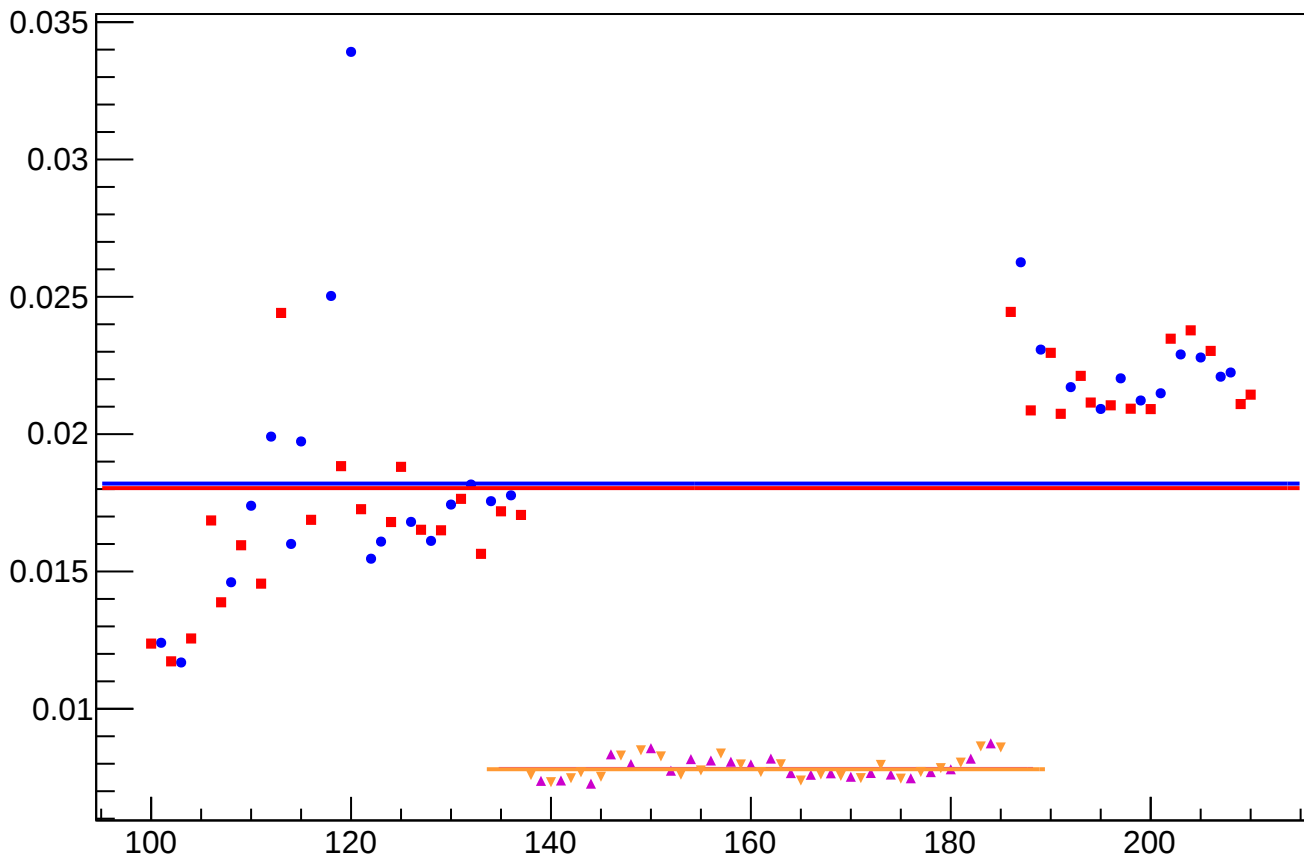
Left In: -2.722+/-0.000  $\chi^2/\text{NDF}$ : 8146484592.1/22

+ sign -2.569+/-0.000  $\chi^2/\text{NDF}$ : 274073147090.1/52

All: -2.522+/-0.000  $\chi^2/\text{NDF}$ : 640808001608.0

- sign -2.474+/-0.000  $\chi^2/\text{NDF}$ : 365257206982.3/55

# yield\_bpm0l04X\_rms vs Slug



Right In: 0.018 $\pm$ 0.000  $\chi^2$ /NDF: 1347585.1/27

Left Out: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 71164.4/24

Right Out: 0.018 $\pm$ 0.000  $\chi^2$ /NDF: 1306414.7/32

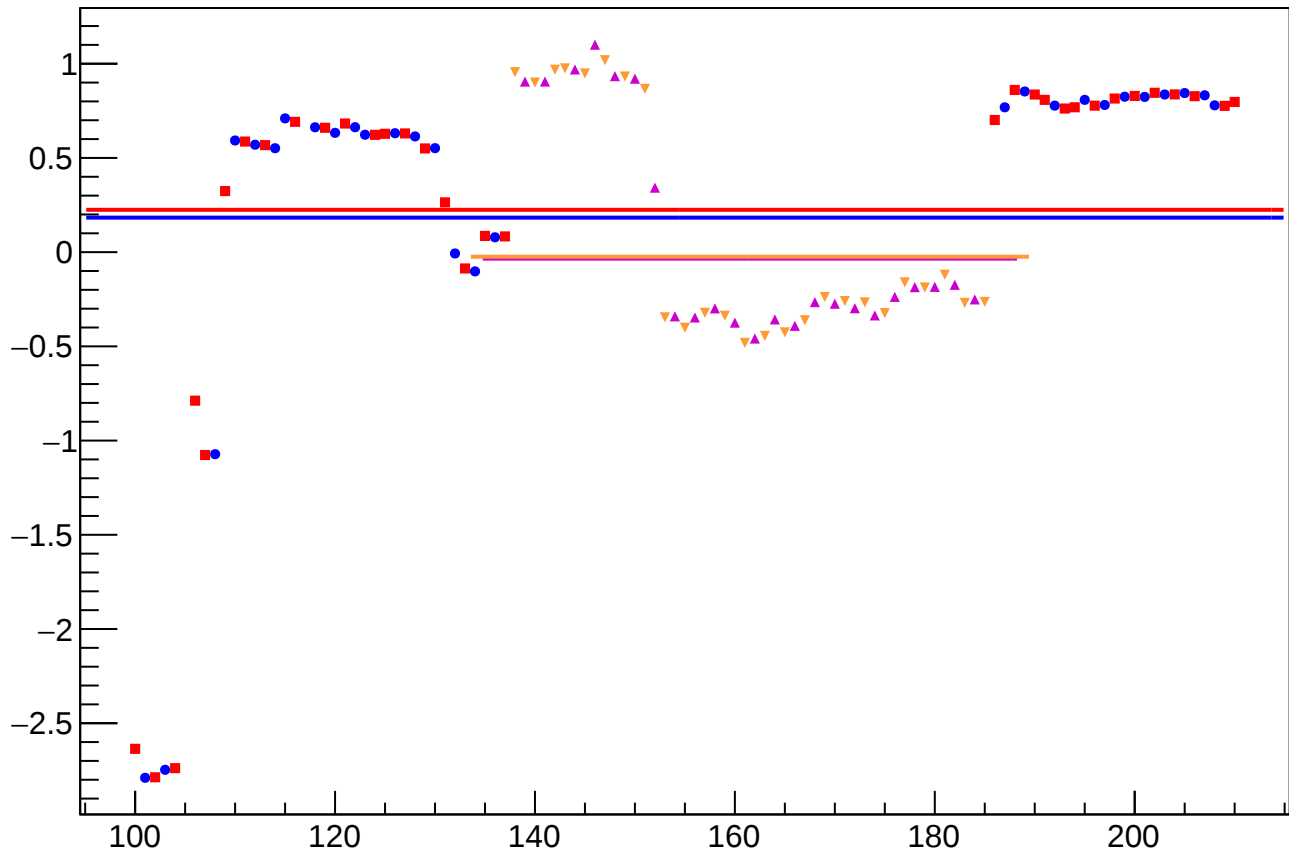
Left In: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 67610.2/22

+ sign 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 8761460.8/52

All: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 18333096.2/108

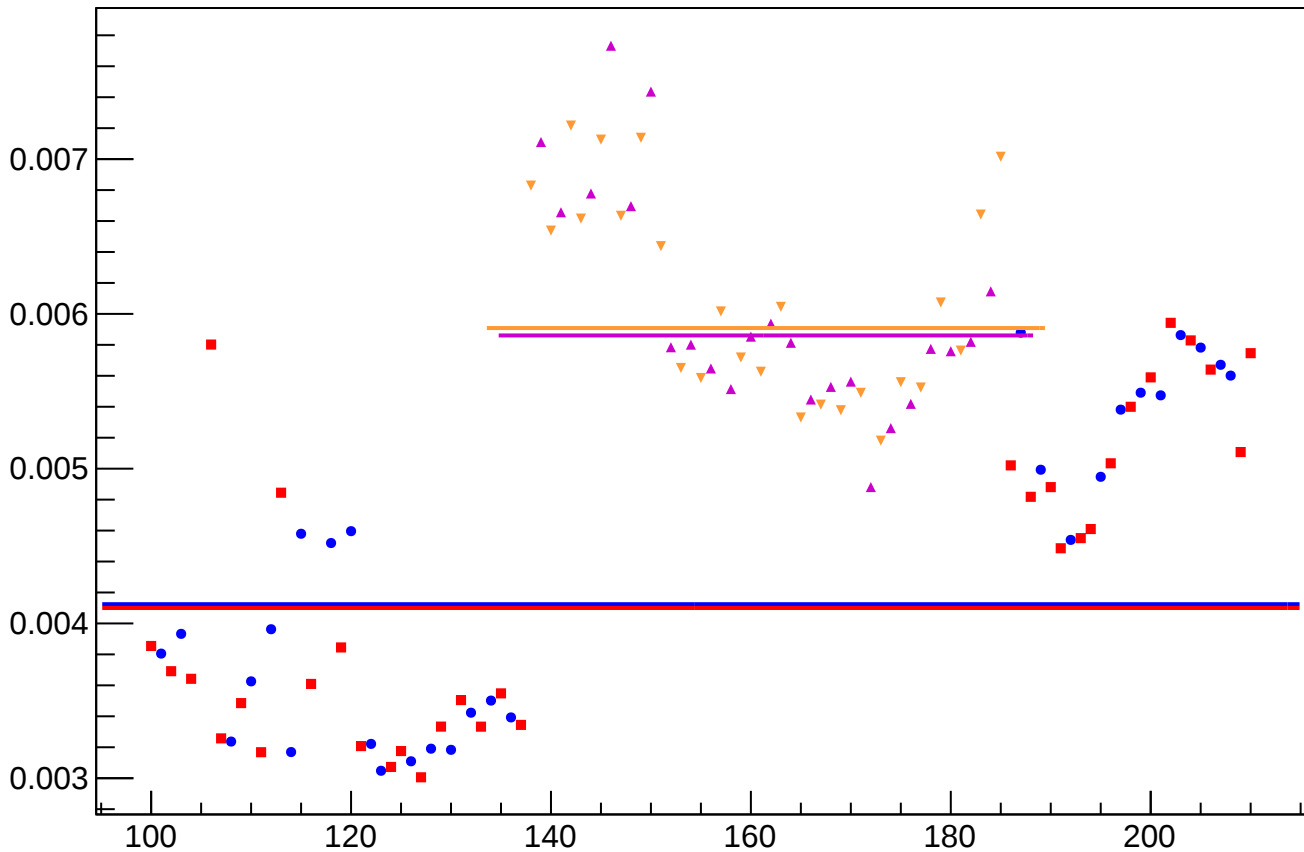
- sign 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 9550099.9/55

# yield\_bpm0l04Y\_mean vs Slug



|                          |                                         |                      |                                          |
|--------------------------|-----------------------------------------|----------------------|------------------------------------------|
| Right In: 0.183+/-0.000  | $\chi^2/\text{NDF}$ : 872393117164.5/27 | + sign 0.104+/-0.000 | $\chi^2/\text{NDF}$ : 1020638558658.3/52 |
| Left Out: -0.024+/-0.000 | $\chi^2/\text{NDF}$ : 135451649275.0/24 | All: 0.121+/-0.000   | $\chi^2/\text{NDF}$ : 2099871679758.0    |
| Right Out: 0.225+/-0.000 | $\chi^2/\text{NDF}$ : 944016909066.0/32 | - sign 0.136+/-0.000 | $\chi^2/\text{NDF}$ : 1078533059380.0/55 |
| Left In: -0.034+/-0.000  | $\chi^2/\text{NDF}$ : 113929060918.1/22 |                      |                                          |

# yield\_bpm0l04Y\_rms vs Slug



Right In: 0.004+/-0.000  $\chi^2/\text{NDF}$ : 1405140.9/27

Left Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ :314309.7/24

Right Out: 0.004+/-0.000  $\chi^2/\text{NDF}$ : 1553459.7/32

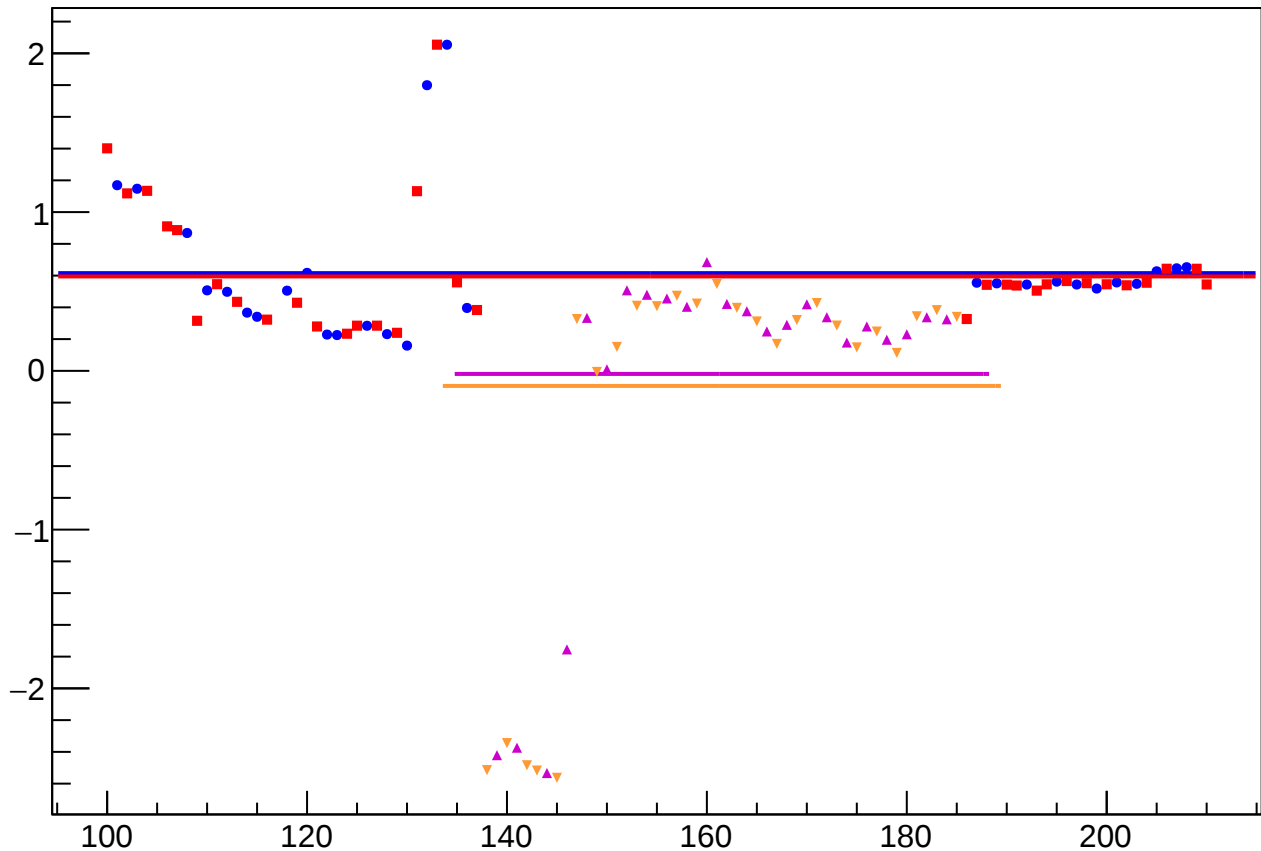
Left In: 0.006+/-0.000  $\chi^2/\text{NDF}$ :364512.1/22

+ sign 0.005+/-0.000  $\chi^2/\text{NDF}$ : 3612777.6/52

All: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 7448499.3/108

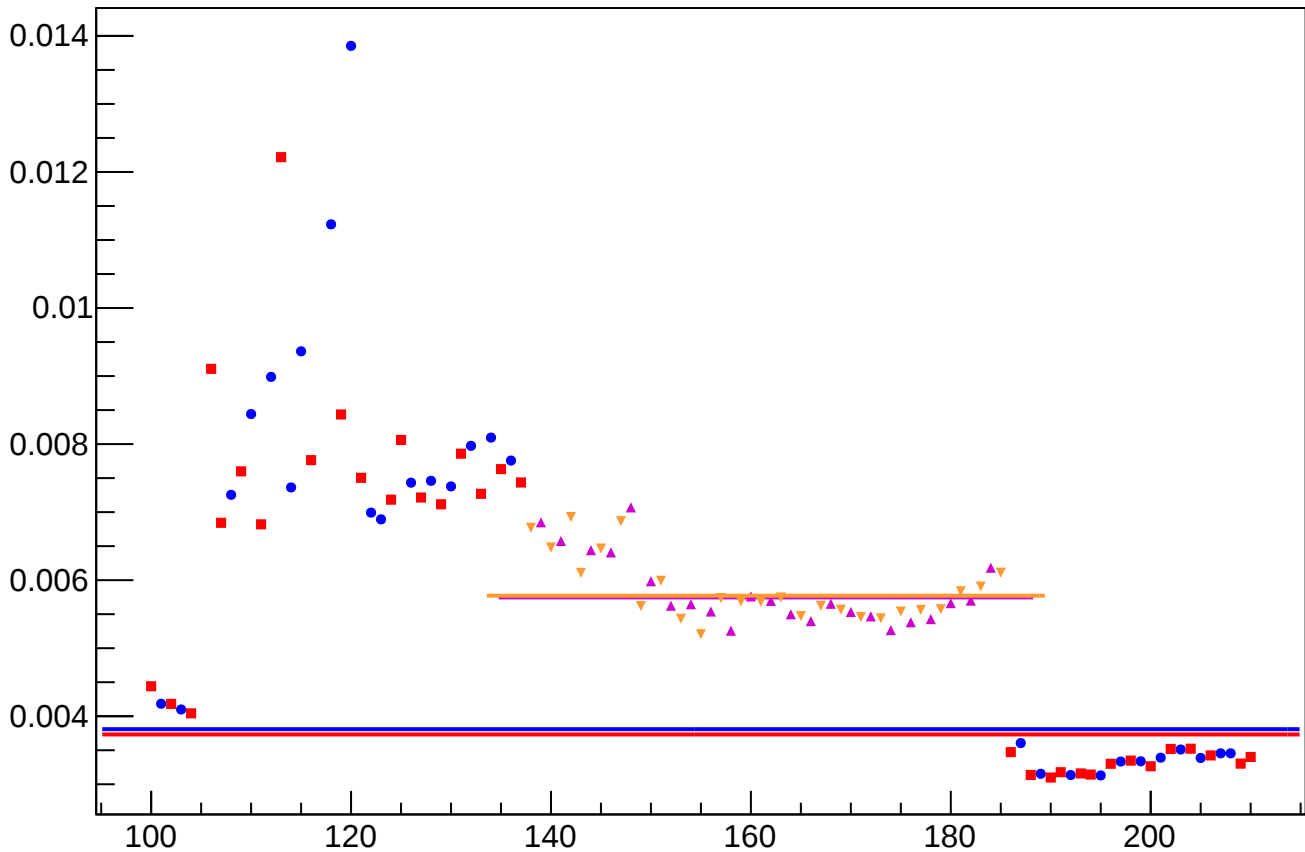
- sign 0.005+/-0.000  $\chi^2/\text{NDF}$ : 3820252.6/55

# yield\_bpm0l05X\_mean vs Slug



|                          |                                         |                      |                                         |
|--------------------------|-----------------------------------------|----------------------|-----------------------------------------|
| Right In: 0.616+/-0.000  | $\chi^2/\text{NDF}$ : 40613158150.1/27  | + sign 0.340+/-0.000 | $\chi^2/\text{NDF}$ : 705633080261.6/52 |
| Left Out: -0.095+/-0.000 | $\chi^2/\text{NDF}$ : 505606573631.9/24 | All: 0.368+/-0.000   | $\chi^2/\text{NDF}$ : 1295505644873.    |
| Right Out: 0.595+/-0.000 | $\chi^2/\text{NDF}$ : 46301568453.7/32  | - sign 0.392+/-0.000 | $\chi^2/\text{NDF}$ : 588014233519.4/55 |
| Left In: -0.019+/-0.000  | $\chi^2/\text{NDF}$ : 417104863944.5/22 |                      |                                         |

# yield\_bpm0l05X\_rms vs Slug



Right In: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 3125517.6/27

Left Out: 0.006 $\pm$ 0.000  $\chi^2$ /NDF:177680.7/24

Right Out: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 3193237.2/32

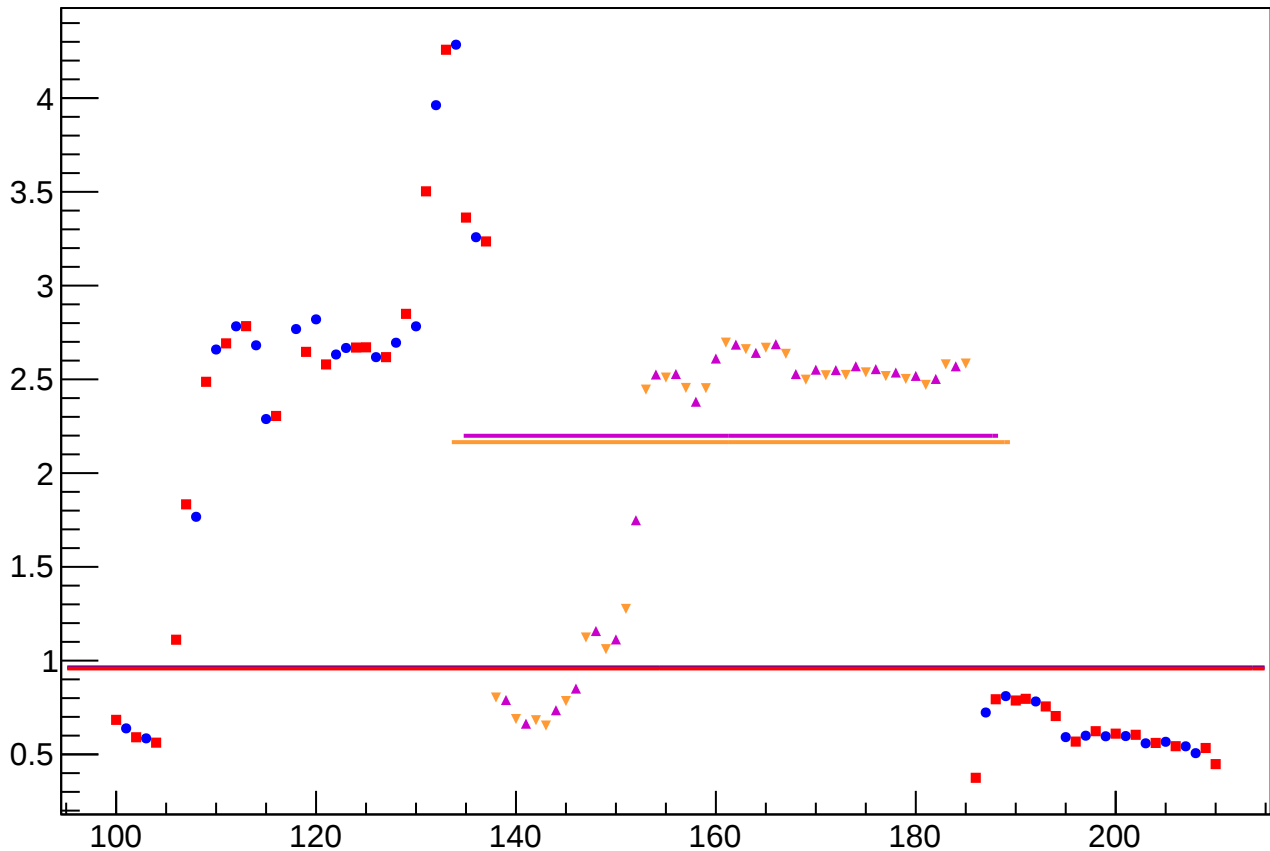
Left In: 0.006 $\pm$ 0.000  $\chi^2$ /NDF:204066.4/22

+ sign 0.005 $\pm$ 0.000  $\chi^2$ /NDF: 5736145.7/52

All: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 11855732.2/108

- sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 6078270.0/55

# yield\_bpm0l05Y\_mean vs Slug



Right In: 0.963 $\pm$ 0.000  $\chi^2$ /NDF: 297811750794.3/27

Left Out: 2.165 $\pm$ 0.000  $\chi^2$ /NDF: 292800056899.6/24

Right Out: 0.958 $\pm$ 0.000  $\chi^2$ /NDF: 353080138695.6/32

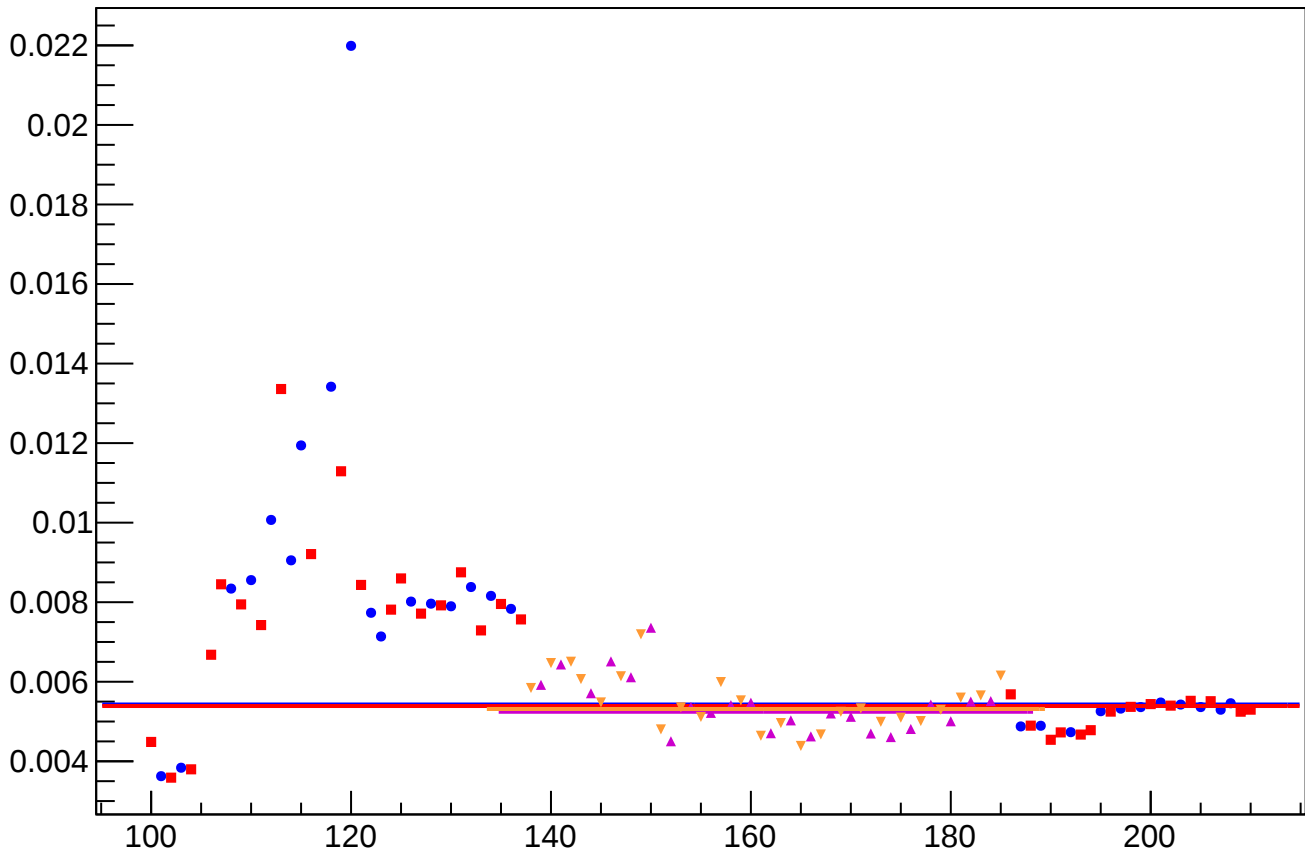
Left In: 2.199 $\pm$ 0.000  $\chi^2$ /NDF: 253166239065.4/22

+ sign 1.667 $\pm$ 0.000  $\chi^2$ /NDF: 942174806983.7/52

All: 1.644 $\pm$ 0.000  $\chi^2$ /NDF: 1958462330034.

- sign 1.623 $\pm$ 0.000  $\chi^2$ /NDF: 1015298770287.1/55

# yield\_bpm0l05Y\_rms vs Slug



Right In: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 2006199.8/27

Left Out: 0.005+/-0.000  $\chi^2/\text{NDF}$ :398795.0/24

Right Out: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 1879208.0/32

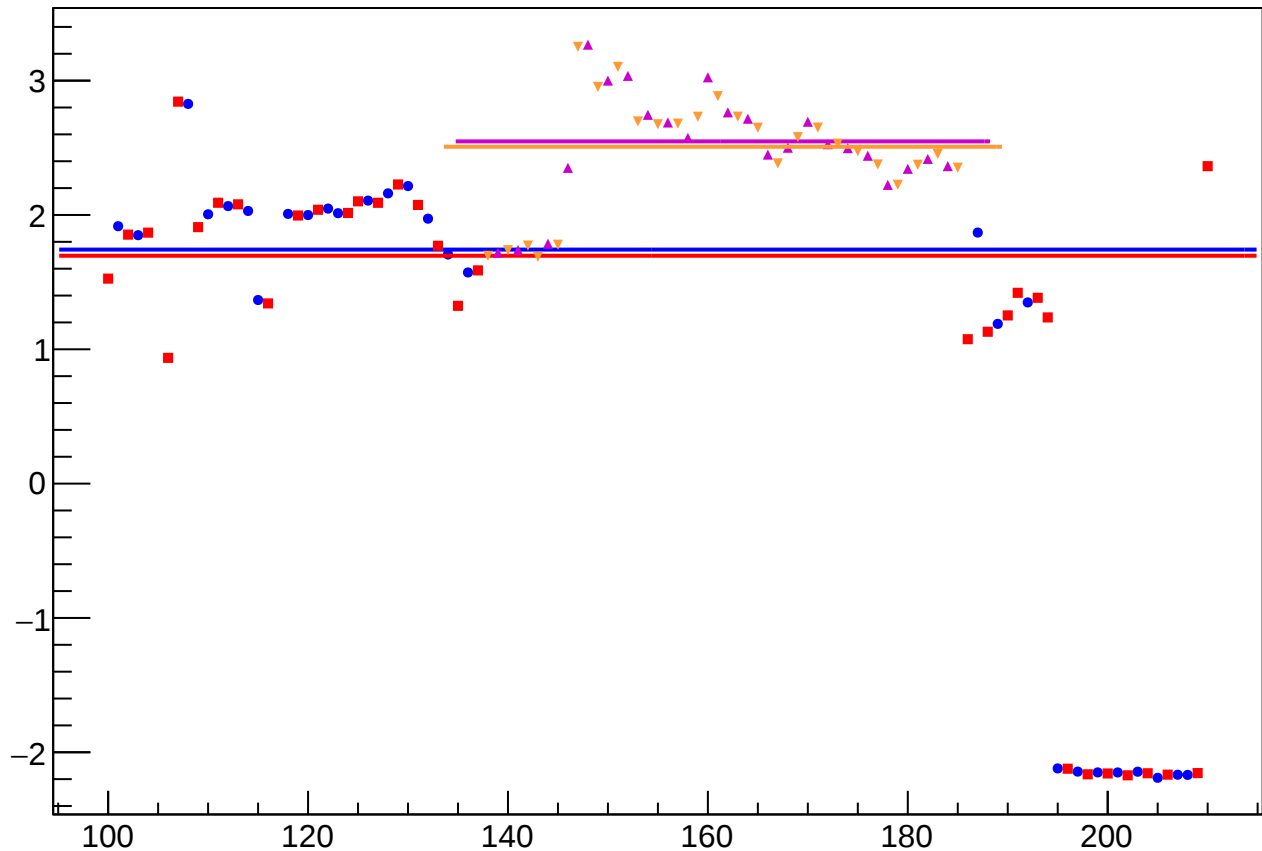
Left In: 0.005+/-0.000  $\chi^2/\text{NDF}$ :425864.8/22

+ sign 0.005+/-0.000  $\chi^2/\text{NDF}$ : 2411178.6/52

All: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 4729853.4/108

- sign 0.005+/-0.000  $\chi^2/\text{NDF}$ : 2316151.6/55

# yield\_bpm0l06X\_mean vs Slug



Right In: 1.742 $\pm$ 0.000  $\chi^2$ /NDF: 146053162422.0/27

Left Out: 2.508 $\pm$ 0.000  $\chi^2$ /NDF: 52355332406.0/24

Right Out: 1.696 $\pm$ 0.000  $\chi^2$ /NDF: 141967346986.6/32

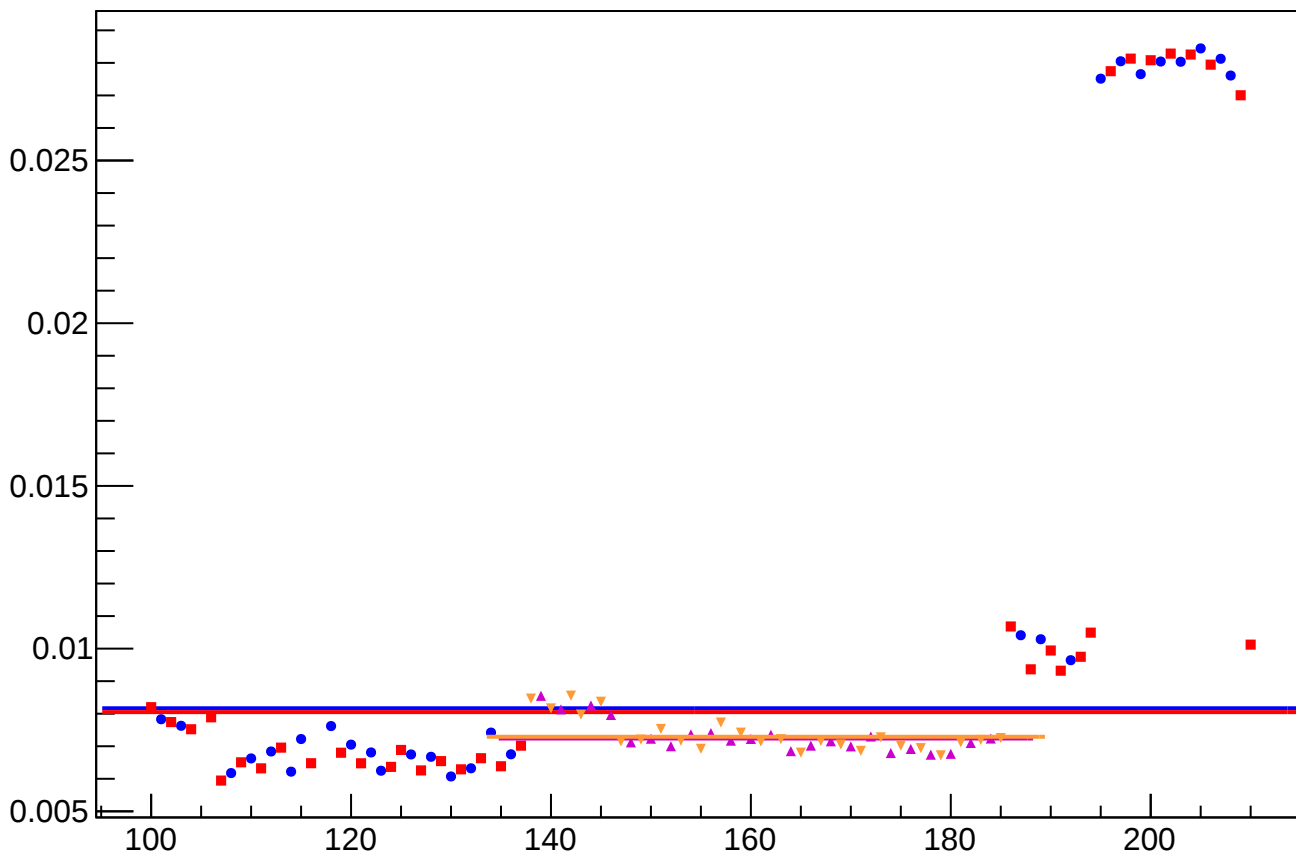
Left In: 2.548 $\pm$ 0.000  $\chi^2$ /NDF: 45350336058.7/22

+ sign 2.258 $\pm$ 0.000  $\chi^2$ /NDF: 261318692048.9/52

All: 2.238 $\pm$ 0.000  $\chi^2$ /NDF: 537378258289.2

- sign 2.220 $\pm$ 0.000  $\chi^2$ /NDF: 275708006060.9/55

# yield\_bpm0l06X\_rms vs Slug



Right In: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 6893780.4/27

Left Out: 0.007+/-0.000  $\chi^2/\text{NDF}$ :140788.4/24

Right Out: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 6313261.6/32

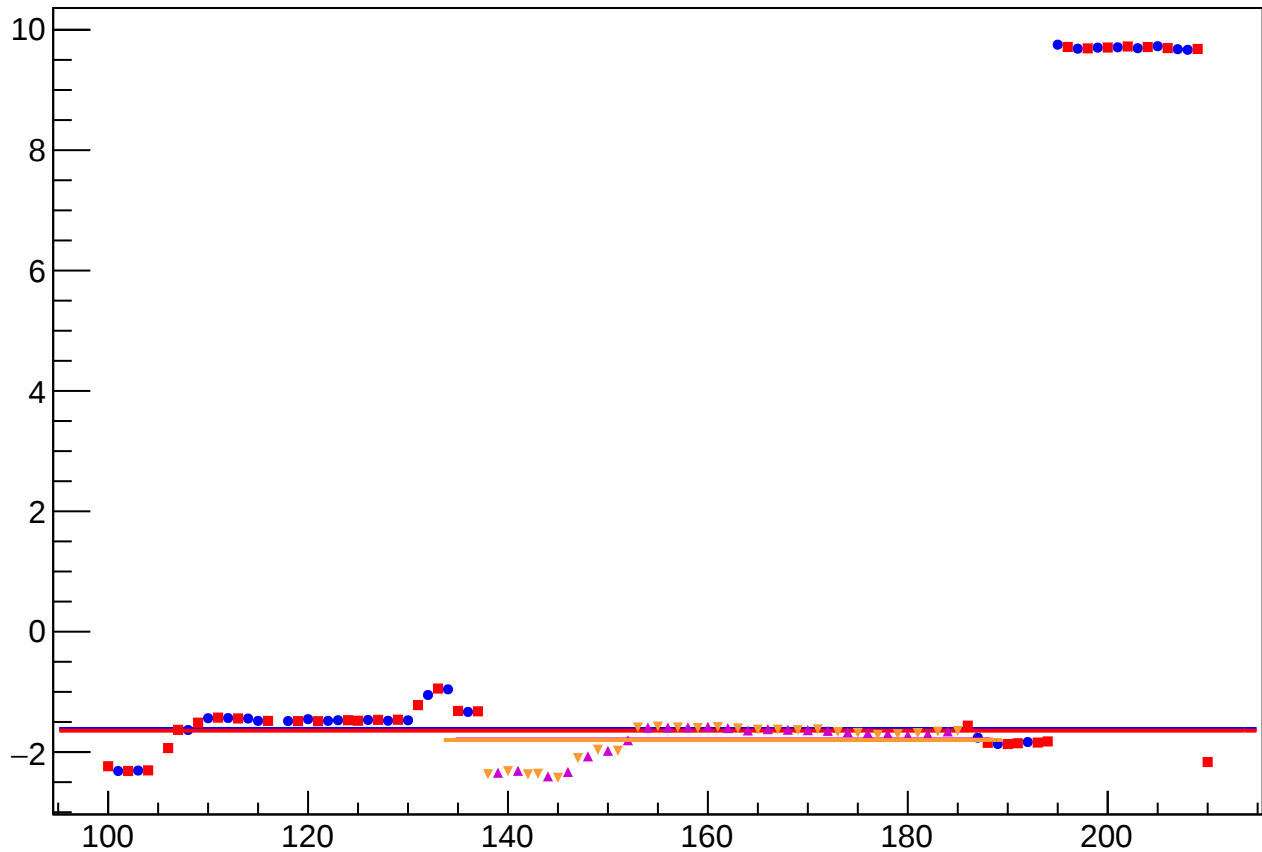
Left In: 0.007+/-0.000  $\chi^2/\text{NDF}$ :125233.2/22

+ sign 0.008+/-0.000  $\chi^2/\text{NDF}$ : 7198982.1/52

All: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 13797948.2/108

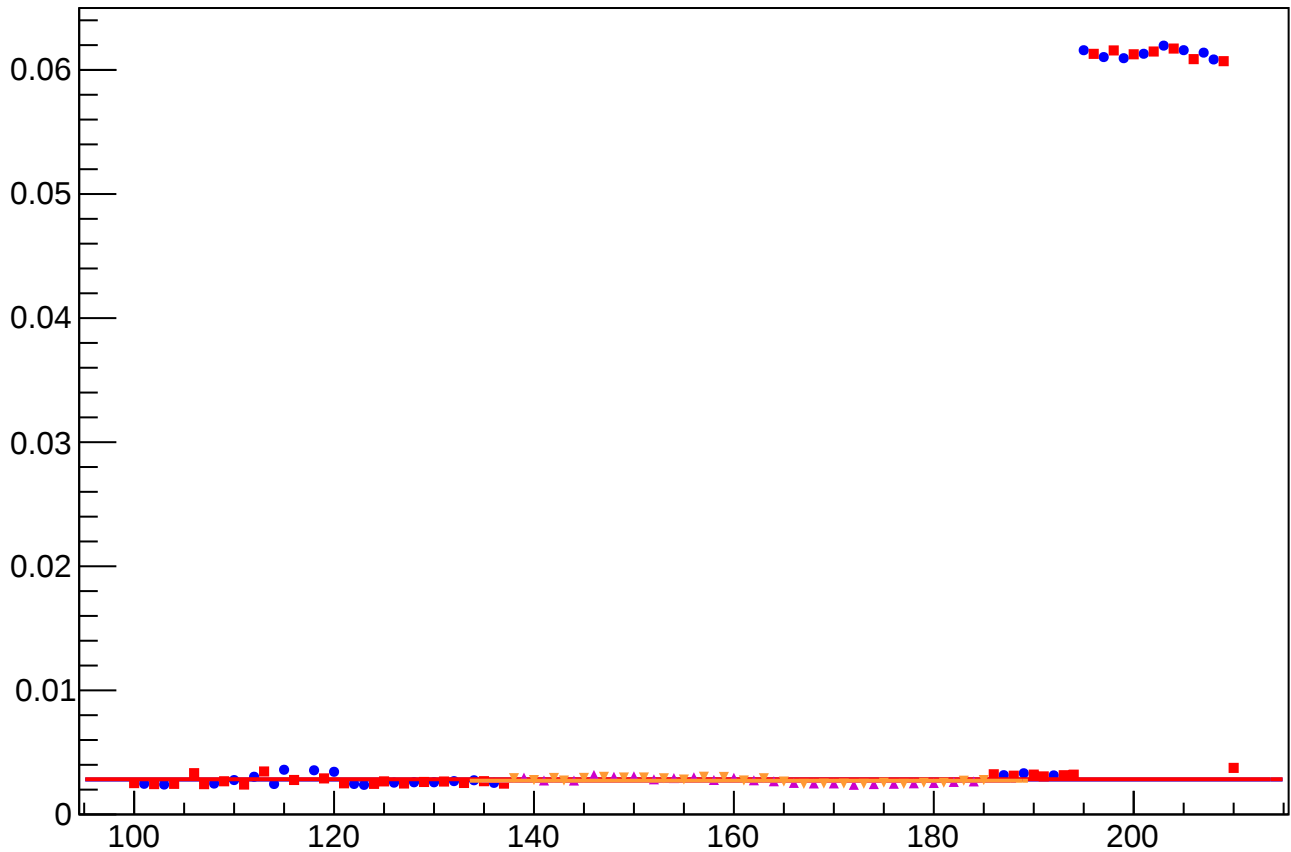
- sign 0.008+/-0.000  $\chi^2/\text{NDF}$ : 6598581.1/55

# yield\_bpm0l06Y\_mean vs Slug



Right In:  $-1.617 \pm 0.000$   $\chi^2/\text{NDF}$ : 359150240835.8/27  
 Left Out:  $-1.799 \pm 0.000$   $\chi^2/\text{NDF}$ : 185362087438.8/24  
 Right Out:  $-1.644 \pm 0.000$   $\chi^2/\text{NDF}$ : 352334305624.6/32  
 Left In:  $-1.790 \pm 0.000$   $\chi^2/\text{NDF}$ : 159648935510.8/22  
 + sign  $-1.743 \pm 0.000$   $\chi^2/\text{NDF}$ : 568534522214.3/52  
 All:  $-1.739 \pm 0.000$   $\chi^2/\text{NDF}$ : 1098623189555  
 - sign  $-1.736 \pm 0.000$   $\chi^2/\text{NDF}$ : 529998970865.1/55

# yield\_bpm0l06Y\_rms vs Slug



Right In: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 11570390.5/27

Left Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ :199695.2/24

Right Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 9999780.3/32

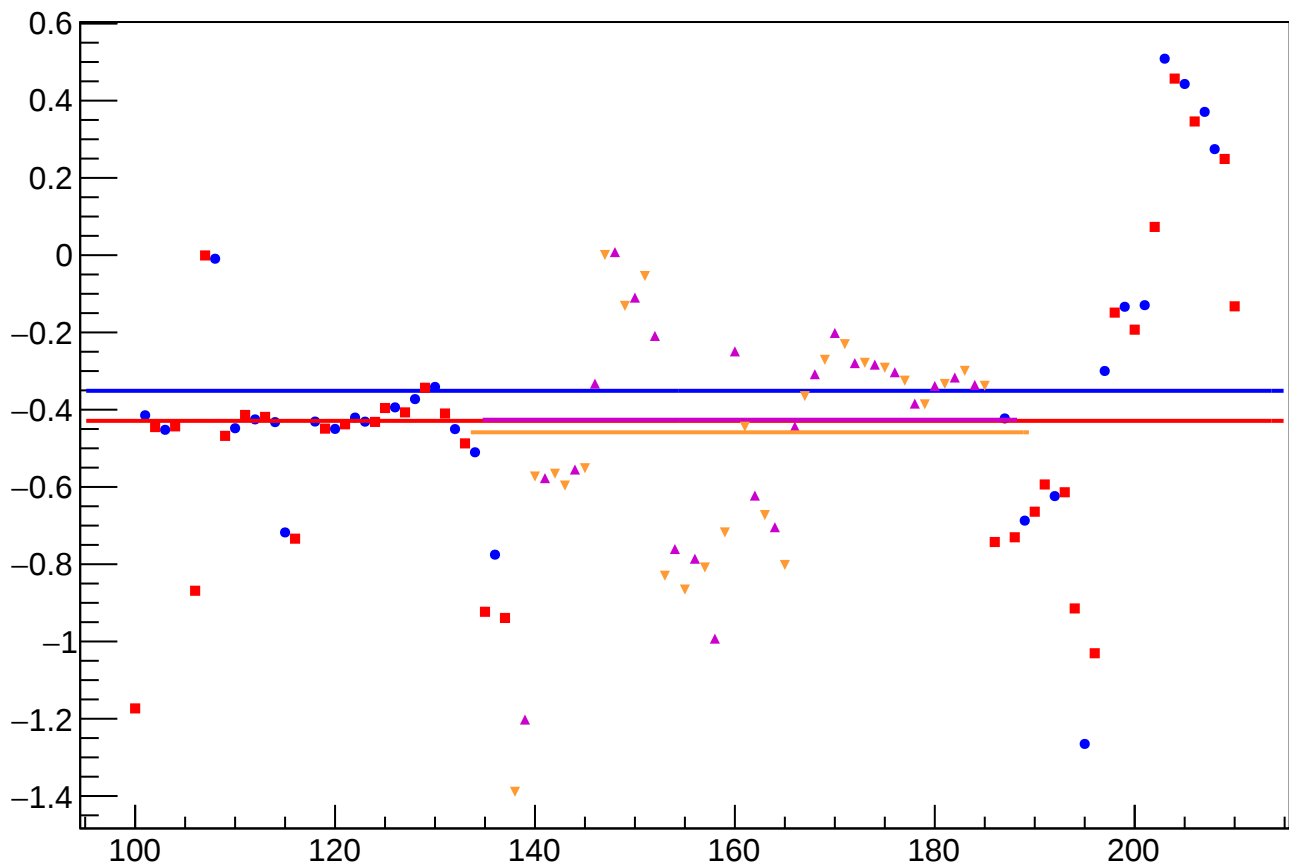
Left In: 0.003+/-0.000  $\chi^2/\text{NDF}$ :220327.9/22

+ sign 0.003+/-0.000  $\chi^2/\text{NDF}$ : 11783018.0/52

All: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 22034872.6/108

- sign 0.003+/-0.000  $\chi^2/\text{NDF}$ : 10251781.6/55

# yield\_bpm0l07X\_mean vs Slug



Right In: -0.351+/-0.000  $\chi^2$ /NDF: 10024211695.0/27

Left Out: -0.459+/-0.000  $\chi^2$ /NDF: 9916462814.9/24

Right Out: -0.429+/-0.000  $\chi^2$ /NDF: 10156759884.1/32

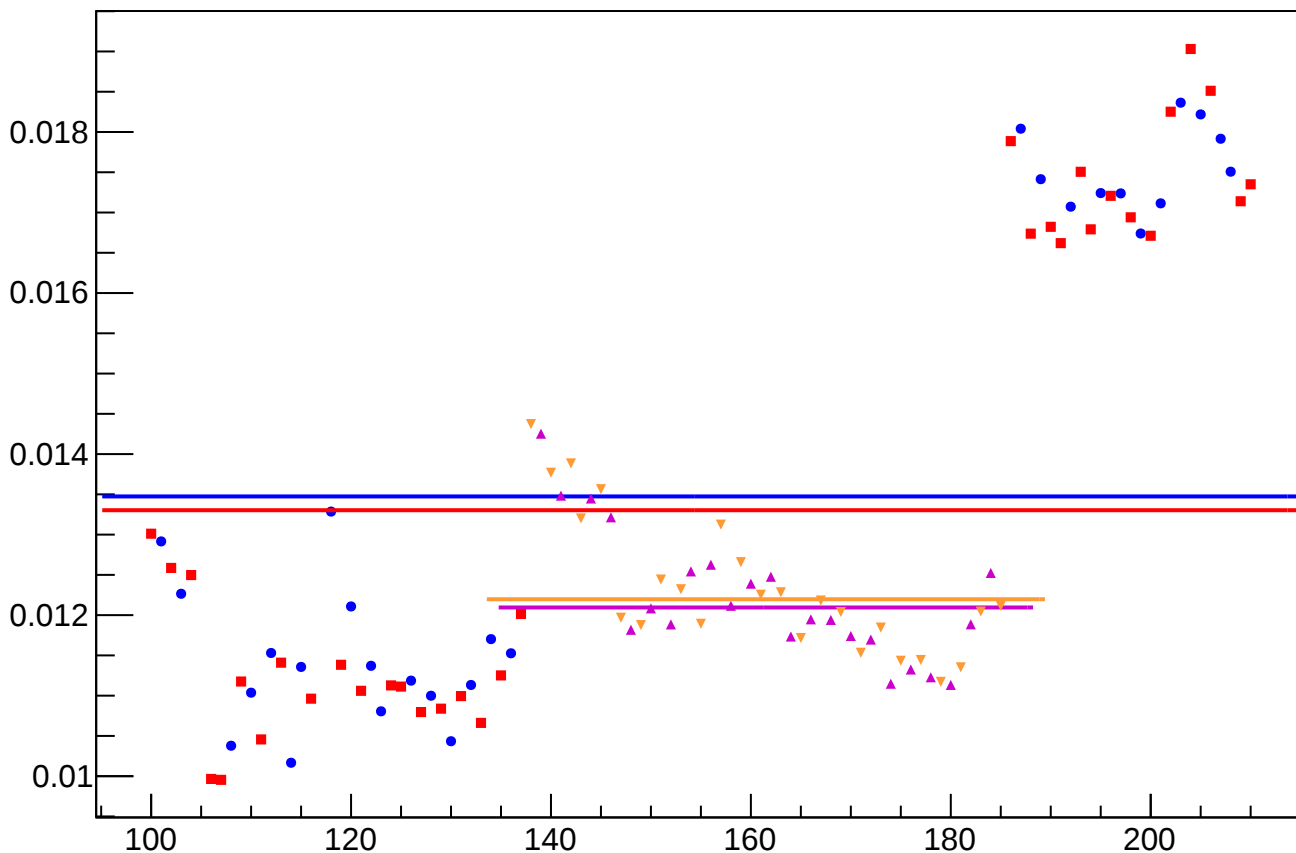
Left In: -0.426+/-0.000  $\chi^2$ /NDF: 8424222576.0/22

+ sign -0.417+/-0.000  $\chi^2$ /NDF: 20465393193.6/52

All: -0.422+/-0.000  $\chi^2$ /NDF: 39056792502.8/52

- sign -0.427+/-0.000  $\chi^2$ /NDF: 18581400648.6/55

# yield\_bpm0l07X\_rms vs Slug



Right In: 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 1263327.5/27

Left Out: 0.012 $\pm$ 0.000  $\chi^2$ /NDF:141850.9/24

Right Out: 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 1627953.3/32

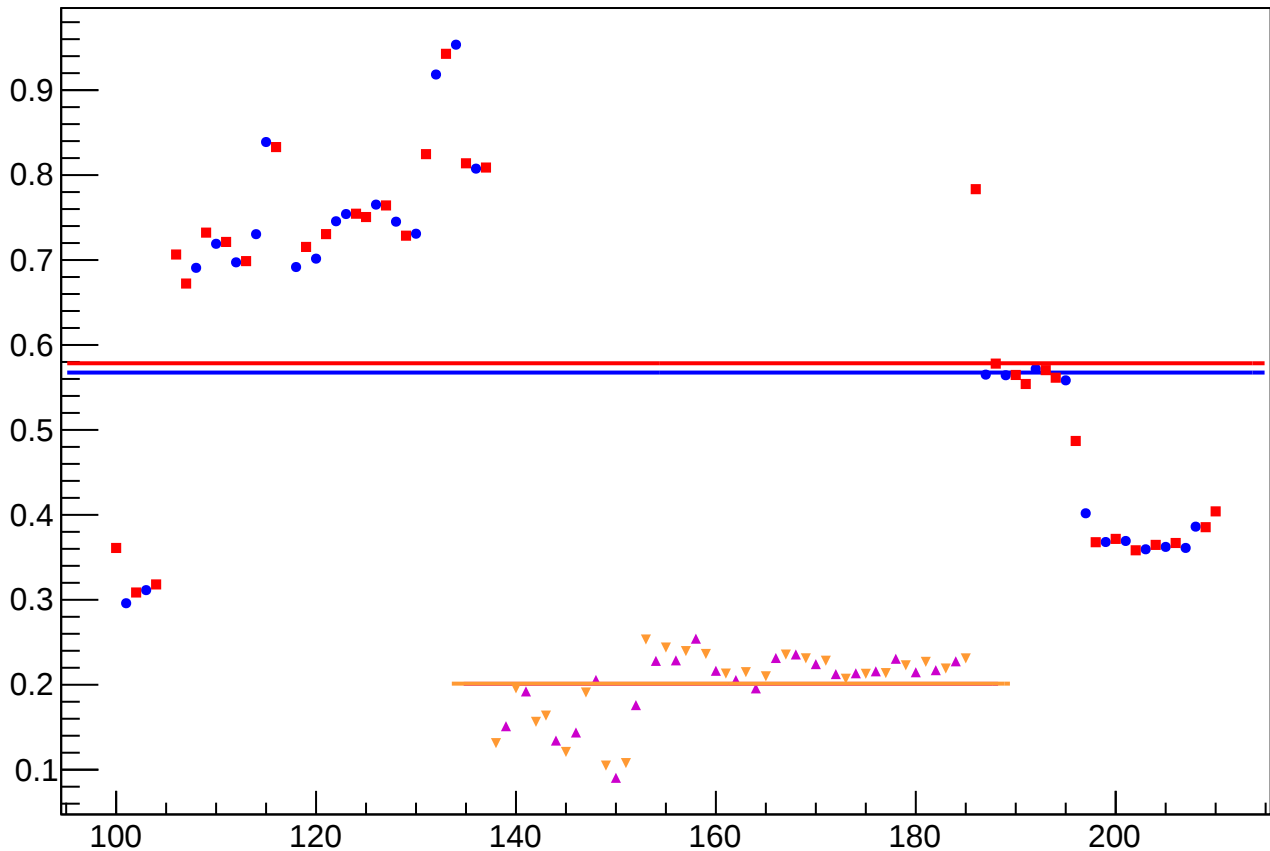
Left In: 0.012 $\pm$ 0.000  $\chi^2$ /NDF:127308.3/22

+ sign 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 1553534.4/52

All: 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 3453206.5/108

- sign 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 1898695.2/55

# yield\_bpm0l07Y\_mean vs Slug



Right In: 0.568 $\pm$ 0.000  $\chi^2$ /NDF: 72715260747.5/27

Left Out: 0.201 $\pm$ 0.000  $\chi^2$ /NDF: 7090760823.7/24

+ sign 0.317 $\pm$ 0.000  $\chi^2$ /NDF: 251471454280.6/52

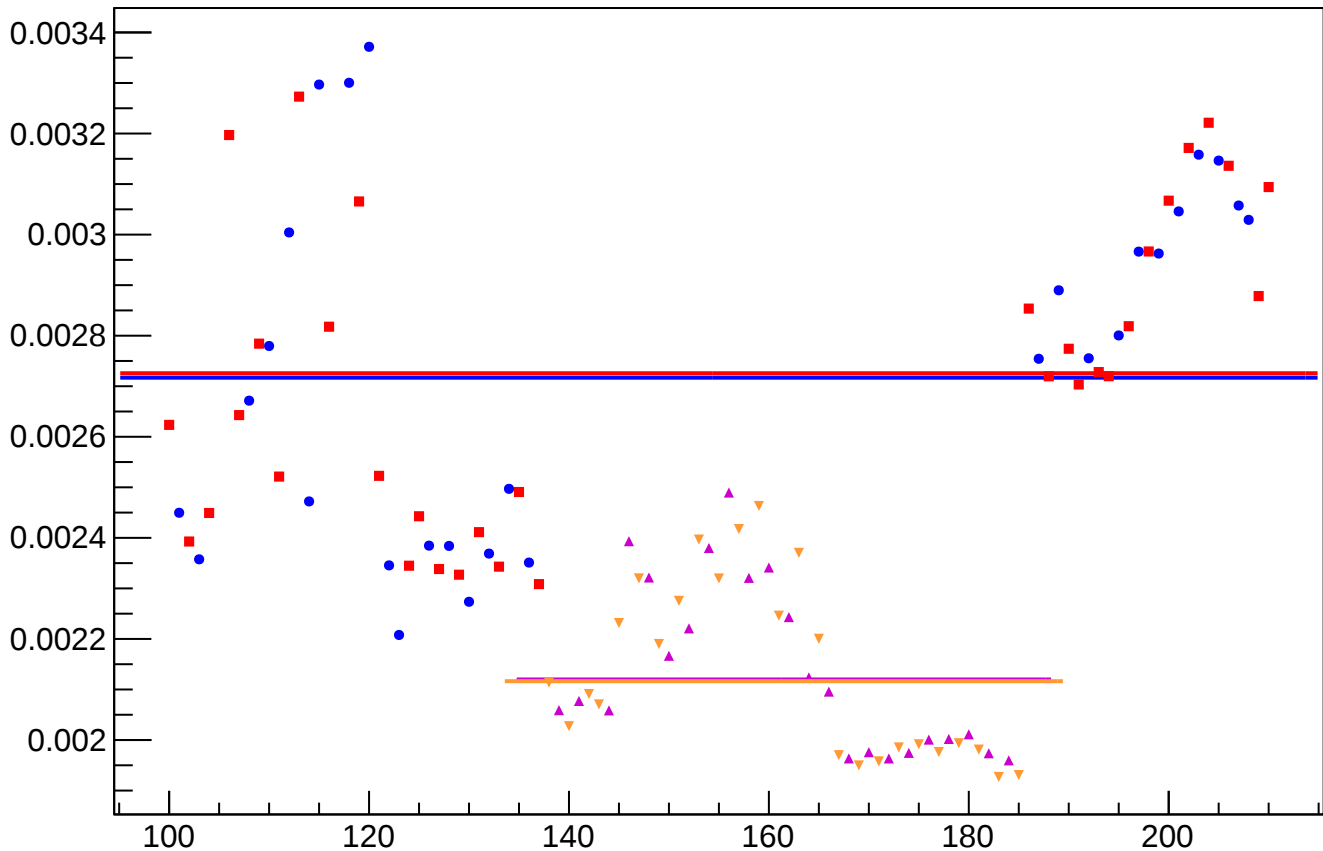
Right Out: 0.578 $\pm$ 0.000  $\chi^2$ /NDF: 73392302853.0/32

All: 0.327 $\pm$ 0.000  $\chi^2$ /NDF: 526034823277.0

Left In: 0.201 $\pm$ 0.000  $\chi^2$ /NDF: 5671770181.2/22

- sign 0.336 $\pm$ 0.000  $\chi^2$ /NDF: 273479785386.3/55

# yield\_bpm0l07Y\_rms vs Slug



Right In: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 400882.9/27

Left Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ :224498.3/24

Right Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 348158.4/32

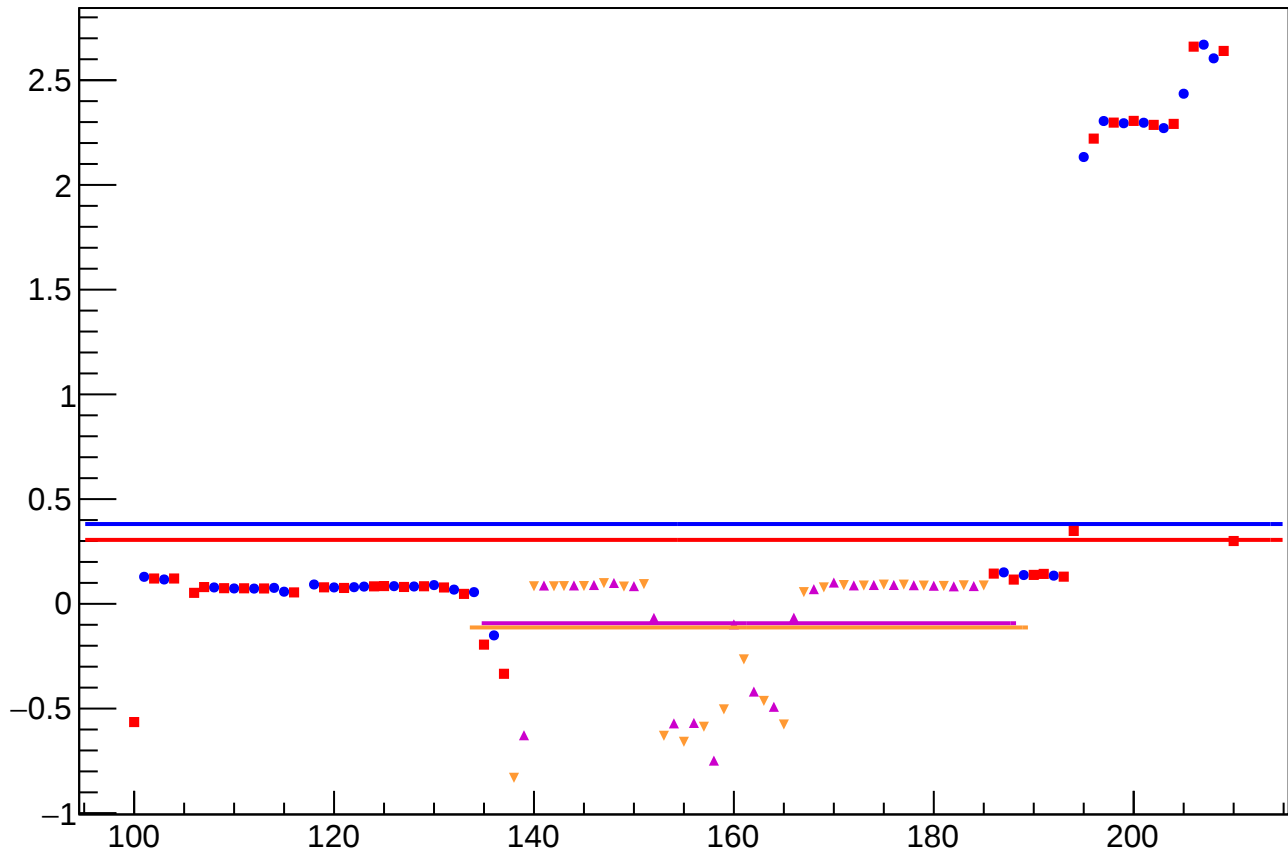
Left In: 0.002+/-0.000  $\chi^2/\text{NDF}$ :189228.6/22

+ sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 1548736.1/52

All: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 3093873.2/108

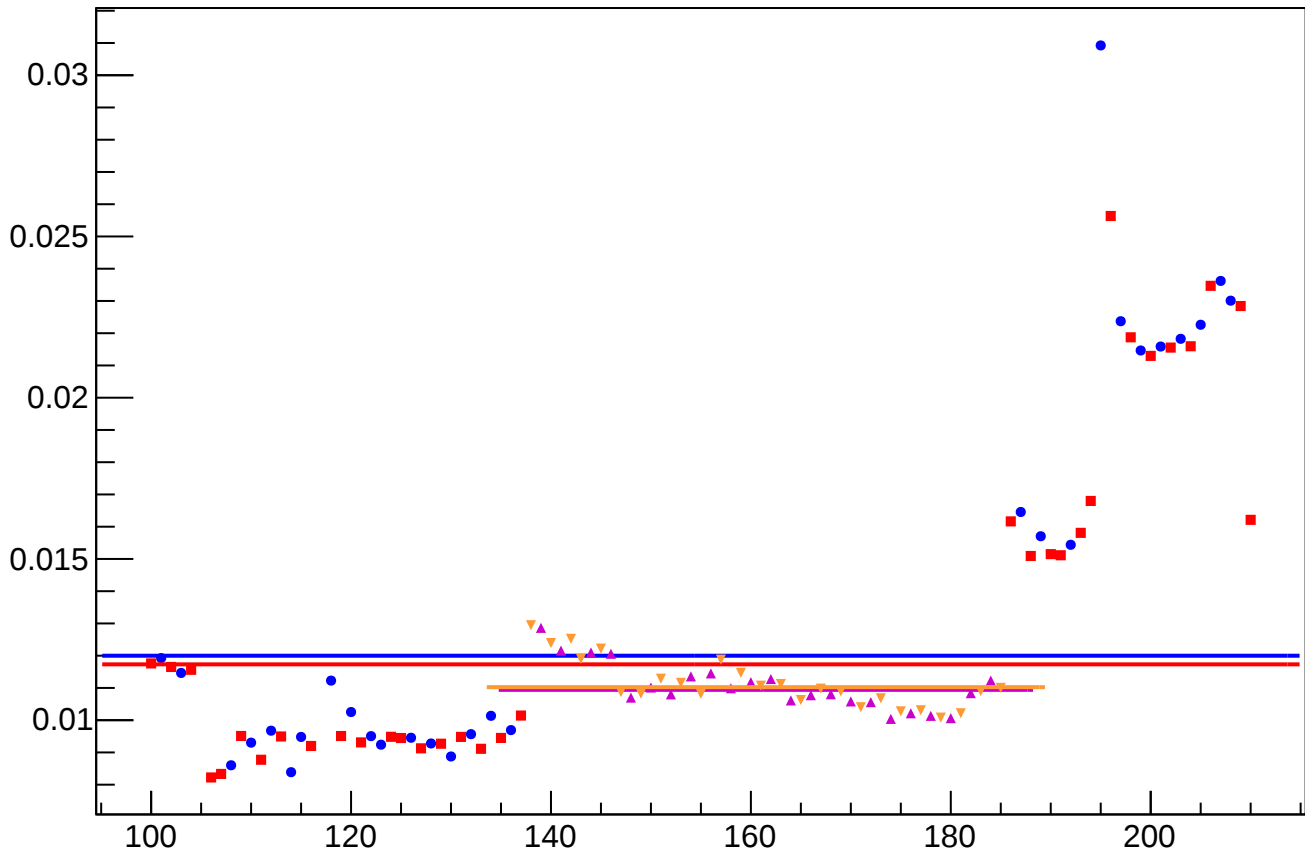
- sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 1539609.5/55

# yield\_bpm0l08X\_mean vs Slug



|                          |                                        |                      |                                        |
|--------------------------|----------------------------------------|----------------------|----------------------------------------|
| Right In: 0.381+/-0.000  | $\chi^2/\text{NDF}$ : 54856991333.1/27 | + sign 0.070+/-0.000 | $\chi^2/\text{NDF}$ : 81589535148.6/52 |
| Left Out: -0.113+/-0.000 | $\chi^2/\text{NDF}$ : 13667354077.1/24 | All: 0.074+/-0.000   | $\chi^2/\text{NDF}$ : 153871900150.8   |
| Right Out: 0.305+/-0.000 | $\chi^2/\text{NDF}$ : 51835280056.1/32 | - sign 0.077+/-0.000 | $\chi^2/\text{NDF}$ : 72275821871.0/55 |
| Left In: -0.093+/-0.000  | $\chi^2/\text{NDF}$ : 11051944893.7/22 |                      |                                        |

# yield\_bpm0l08X\_rms vs Slug



Right In: 0.012 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 3852924.6/27

Left Out: 0.011 $\pm$ 0.000  $\chi^2/\text{NDF}$ :141501.7/24

Right Out: 0.012 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 3908433.6/32

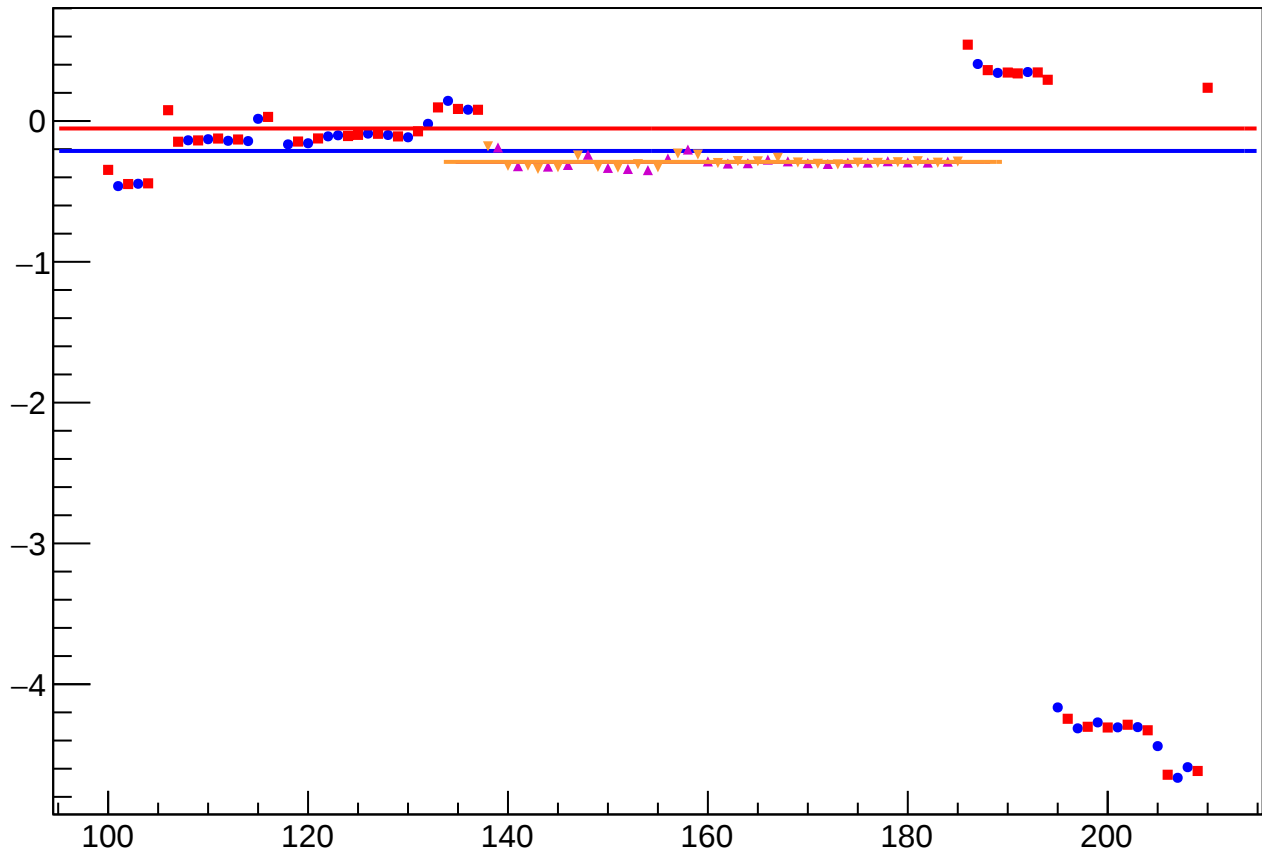
Left In: 0.011 $\pm$ 0.000  $\chi^2/\text{NDF}$ :128914.2/22

+ sign 0.011 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 4096341.3/52

All: 0.011 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 8210475.1/108

- sign 0.011 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 4111469.1/55

# yield\_bpm0l08Y\_mean vs Slug



Right In:  $-0.213 \pm 0.000$   $\chi^2/\text{NDF}$ : 338172374161.0/27

Left Out:  $-0.290 \pm 0.000$   $\chi^2/\text{NDF}$ : 2877519093.0/24

+ sign  $-0.278 \pm 0.000$   $\chi^2/\text{NDF}$ : 343234611809.5/52

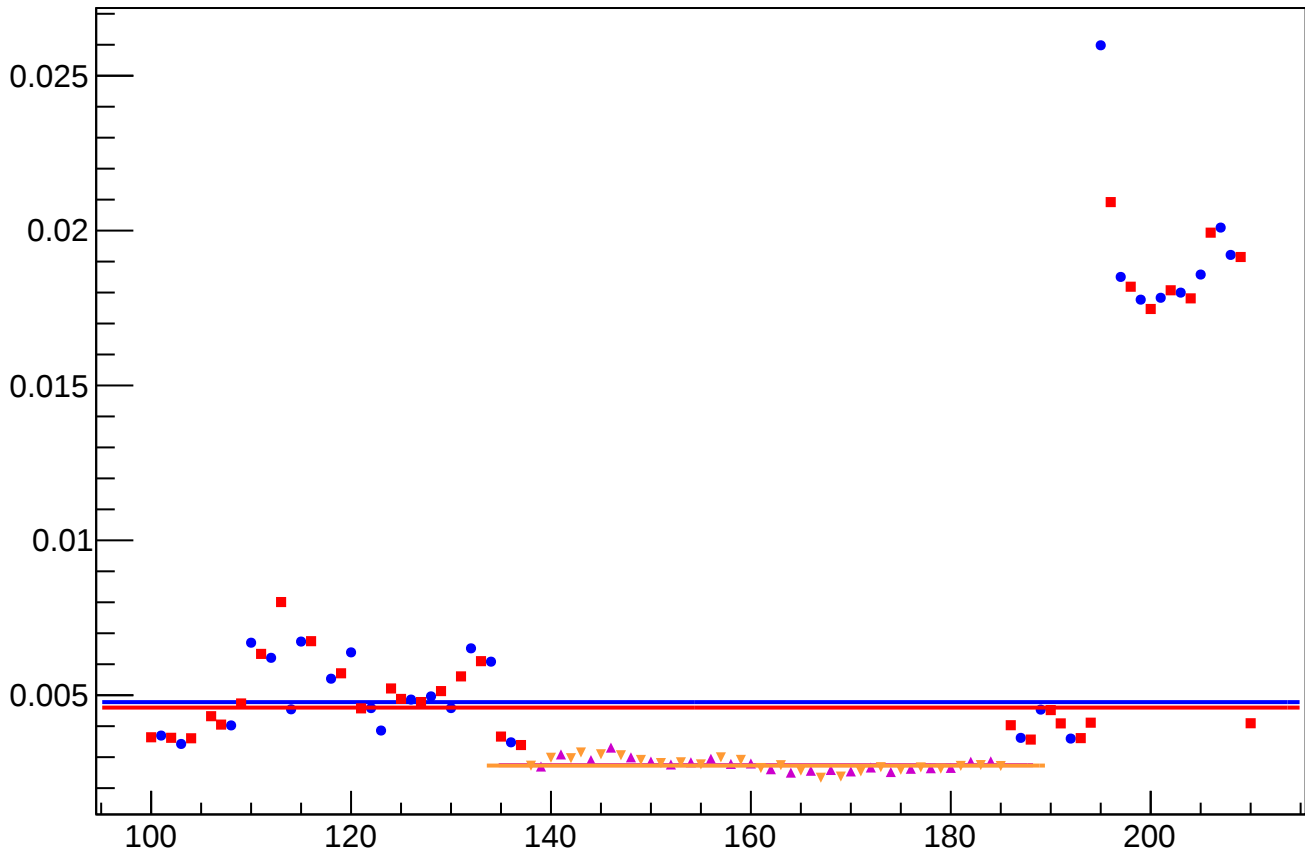
Right Out:  $-0.053 \pm 0.000$   $\chi^2/\text{NDF}$ : 337171318817.8/32

All:  $-0.260 \pm 0.000$   $\chi^2/\text{NDF}$ : 710923963488.5

Left In:  $-0.291 \pm 0.000$   $\chi^2/\text{NDF}$ : 3125402243.3/22

- sign  $-0.242 \pm 0.000$   $\chi^2/\text{NDF}$ : 365873001396.0/55

# yield\_bpm0l08Y\_rms vs Slug



Right In: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 7979409.5/27

Left Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 206527.1/24

Right Out: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 6956005.8/32

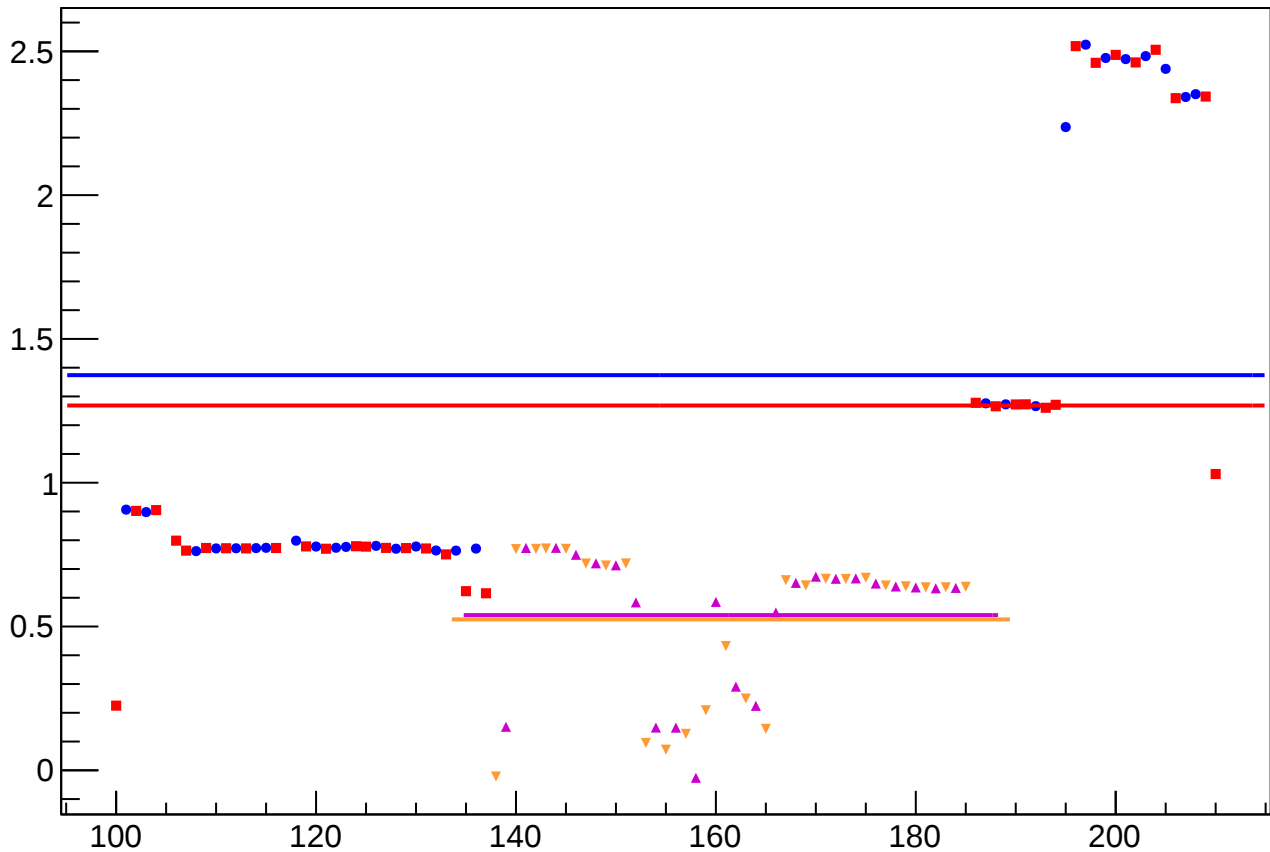
Left In: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 147778.8/22

+ sign 0.003+/-0.000  $\chi^2/\text{NDF}$ : 11224742.1/52

All: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 21466192.0/108

- sign 0.003+/-0.000  $\chi^2/\text{NDF}$ : 10223211.8/55

# yield\_bpm0l09X\_mean vs Slug



Right In: 1.374+/-0.000  $\chi^2/\text{NDF}$ : 52556812319.5/27

Left Out: 0.525+/-0.000  $\chi^2/\text{NDF}$ : 9623503169.9/24

Right Out: 1.268+/-0.000  $\chi^2/\text{NDF}$ : 53281733968.2/32

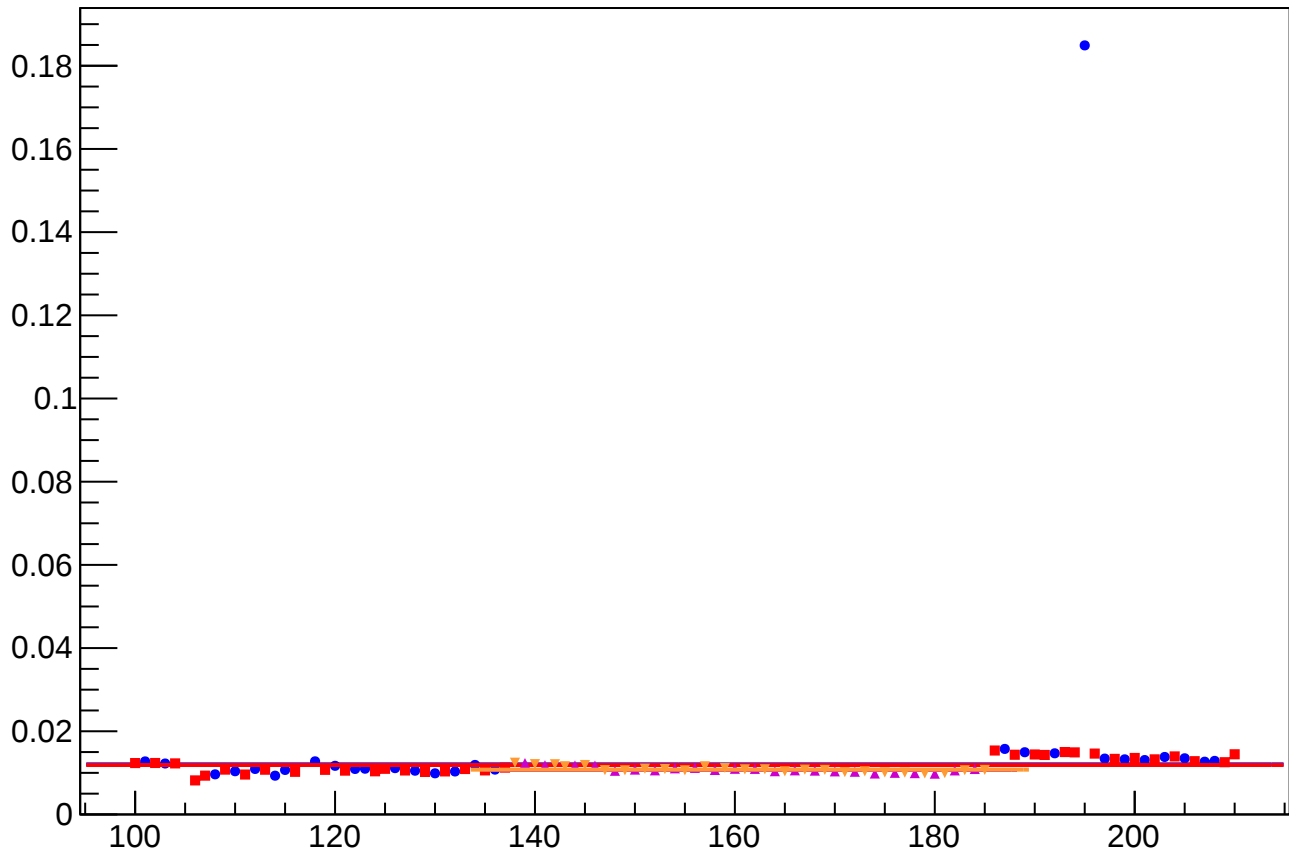
Left In: 0.540+/-0.000  $\chi^2/\text{NDF}$ : 7860539135.5/22

+ sign 0.841+/-0.000  $\chi^2/\text{NDF}$ : 103125545741.4/52

All: 0.845+/-0.000  $\chi^2/\text{NDF}$ : 197198355796.9

- sign 0.849+/-0.000  $\chi^2/\text{NDF}$ : 94064183481.4/55

# yield\_bpm0l09X\_rms vs Slug



Right In: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 1895180.6/27

Left Out: 0.011 $\pm$ 0.000  $\chi^2$ /NDF:131630.9/24

Right Out: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 769927.3/32

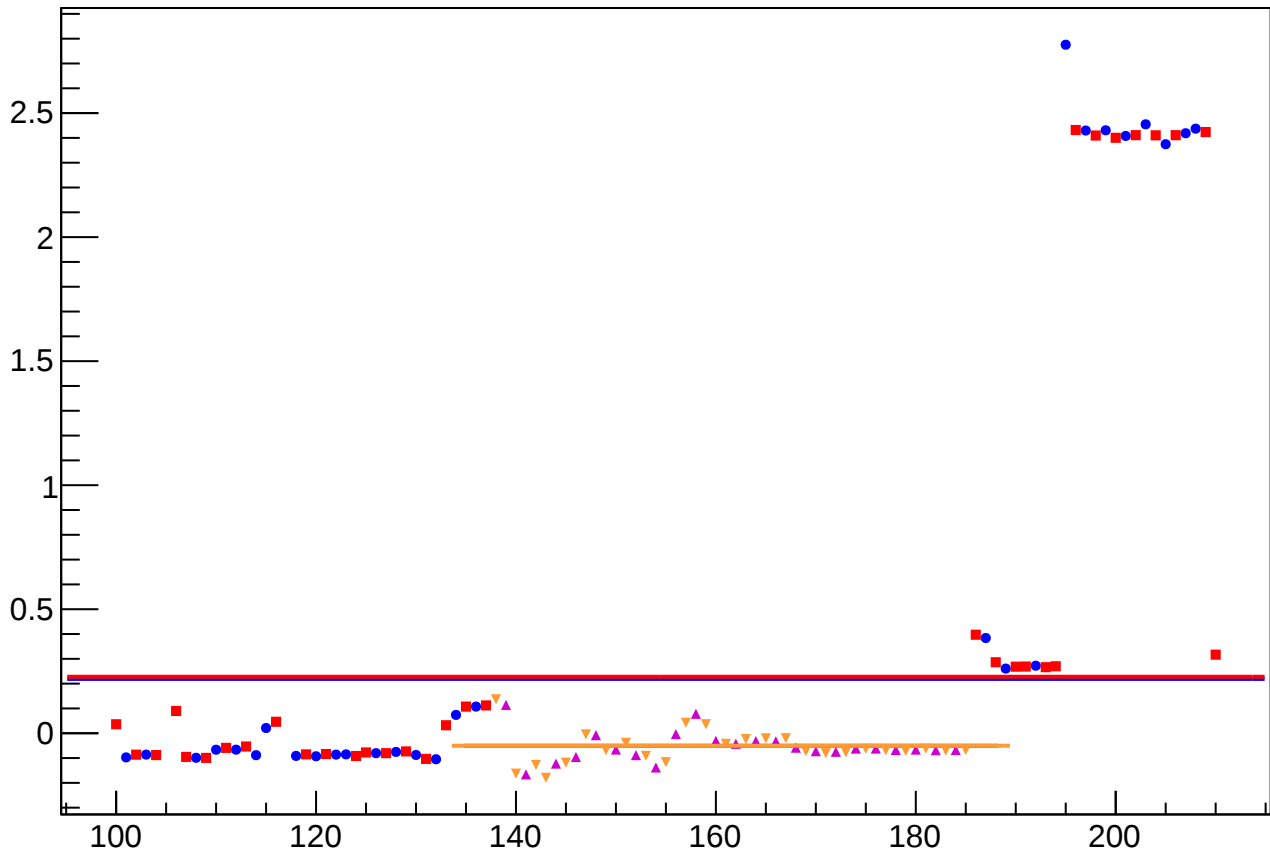
Left In: 0.011 $\pm$ 0.000  $\chi^2$ /NDF:119273.2/22

+ sign 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 2211006.9/52

All: 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 3279649.5/108

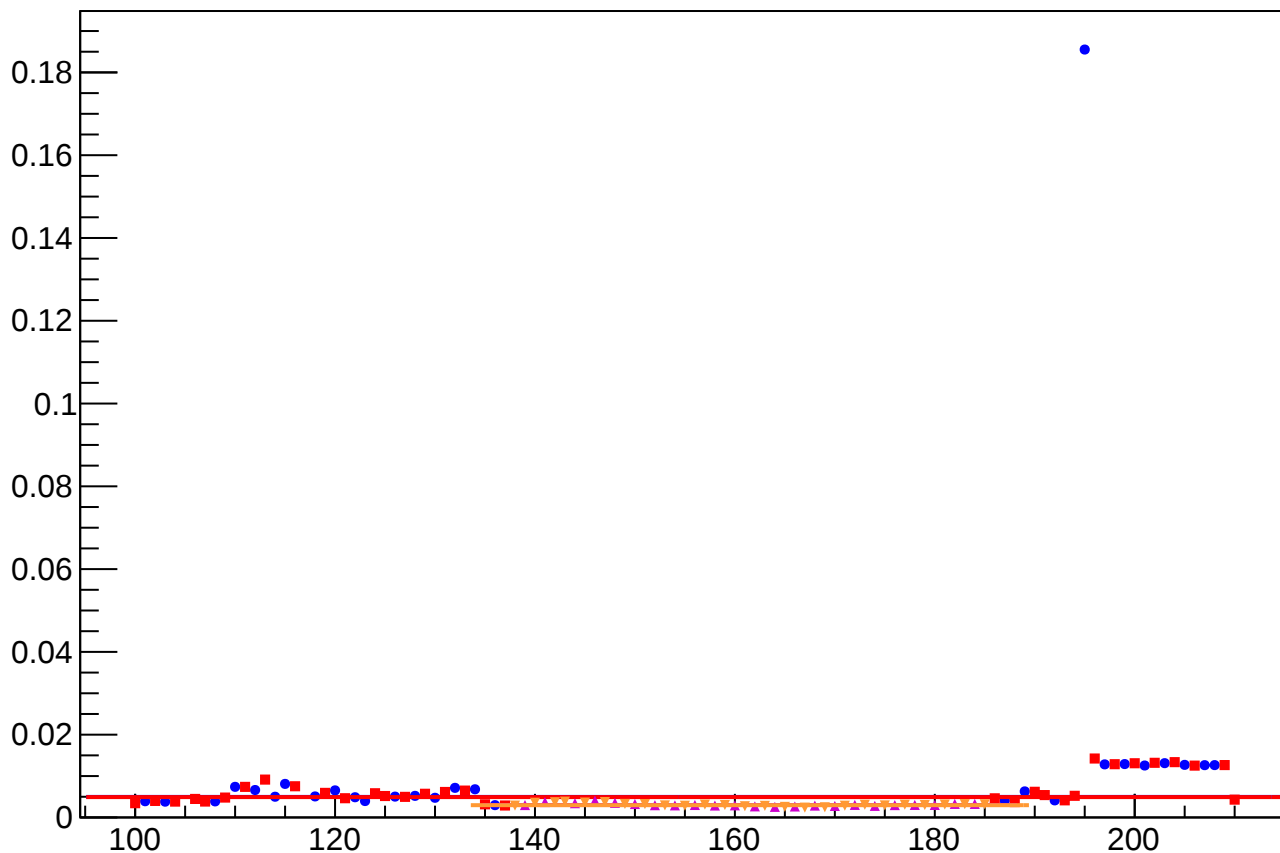
- sign 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 1068217.3/55

# yield\_bpm0l09Y\_mean vs Slug



|                          |                                         |                       |                                         |
|--------------------------|-----------------------------------------|-----------------------|-----------------------------------------|
| Right In: 0.219+/-0.000  | $\chi^2/\text{NDF}$ : 177790903331.3/27 | + sign -0.004+/-0.000 | $\chi^2/\text{NDF}$ : 209448699454.9/52 |
| Left Out: -0.050+/-0.000 | $\chi^2/\text{NDF}$ : 7271496478.6/24   | All: 0.003+/-0.000    | $\chi^2/\text{NDF}$ : 405879354744.0    |
| Right Out: 0.228+/-0.000 | $\chi^2/\text{NDF}$ : 159691740741.1/32 | - sign 0.011+/-0.000  | $\chi^2/\text{NDF}$ : 196191002619.7/55 |
| Left In: -0.051+/-0.000  | $\chi^2/\text{NDF}$ : 6128769990.8/22   |                       |                                         |

# yield\_bpm0l09Y\_rms vs Slug



Right In: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 6841743.6/27

Left Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ :499039.1/24

Right Out: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 5121938.9/32

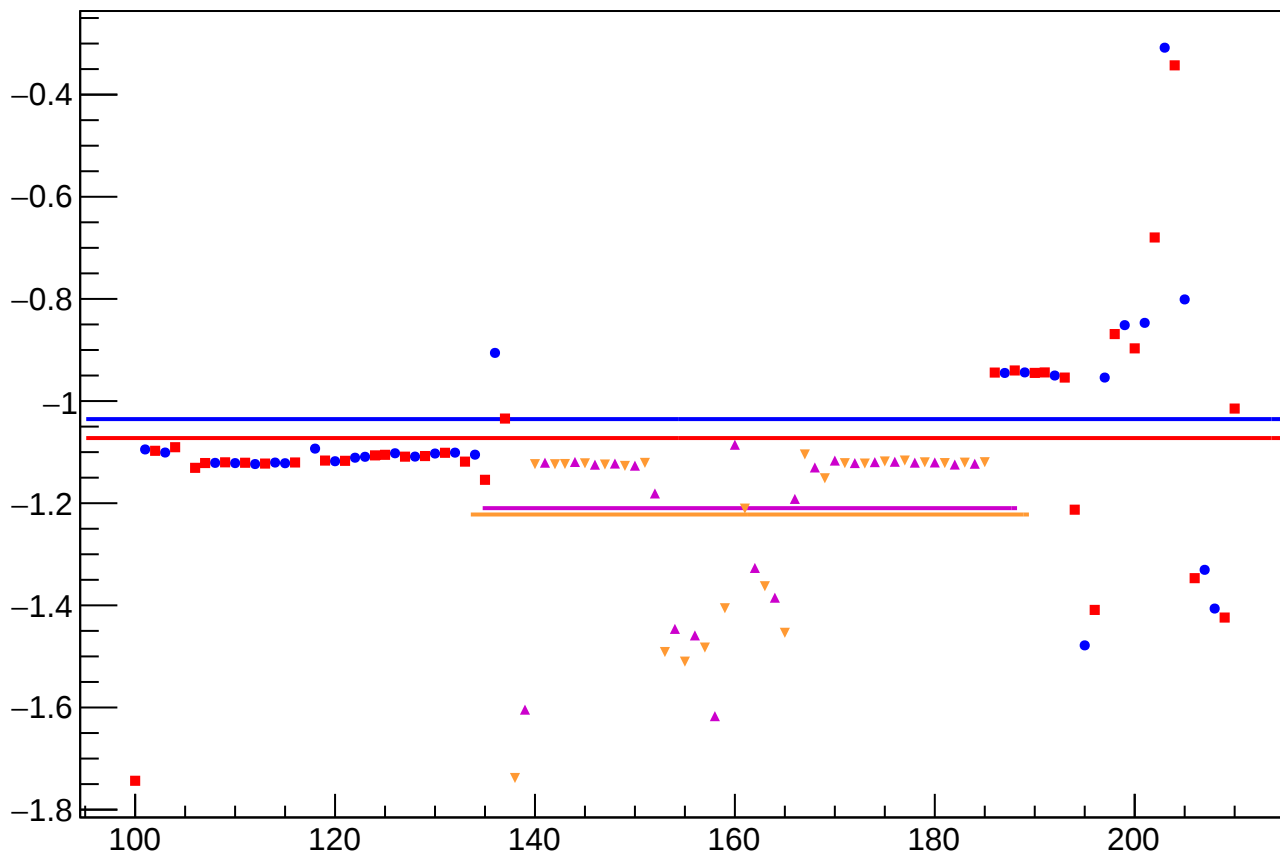
Left In: 0.003+/-0.000  $\chi^2/\text{NDF}$ :329068.1/22

+ sign 0.003+/-0.000  $\chi^2/\text{NDF}$ : 10014590.9/52

All: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 18363363.8/108

- sign 0.003+/-0.000  $\chi^2/\text{NDF}$ : 8317773.2/55

# yield\_bpm0l10X\_mean vs Slug



Right In:  $-1.035 \pm 0.000$   $\chi^2/\text{NDF}: 4945716891.4/27$

Left Out:  $-1.222 \pm 0.000$   $\chi^2/\text{NDF}: 5279548861.3/24$

Right Out:  $-1.072 \pm 0.000$   $\chi^2/\text{NDF}: 4647579802.5/32$

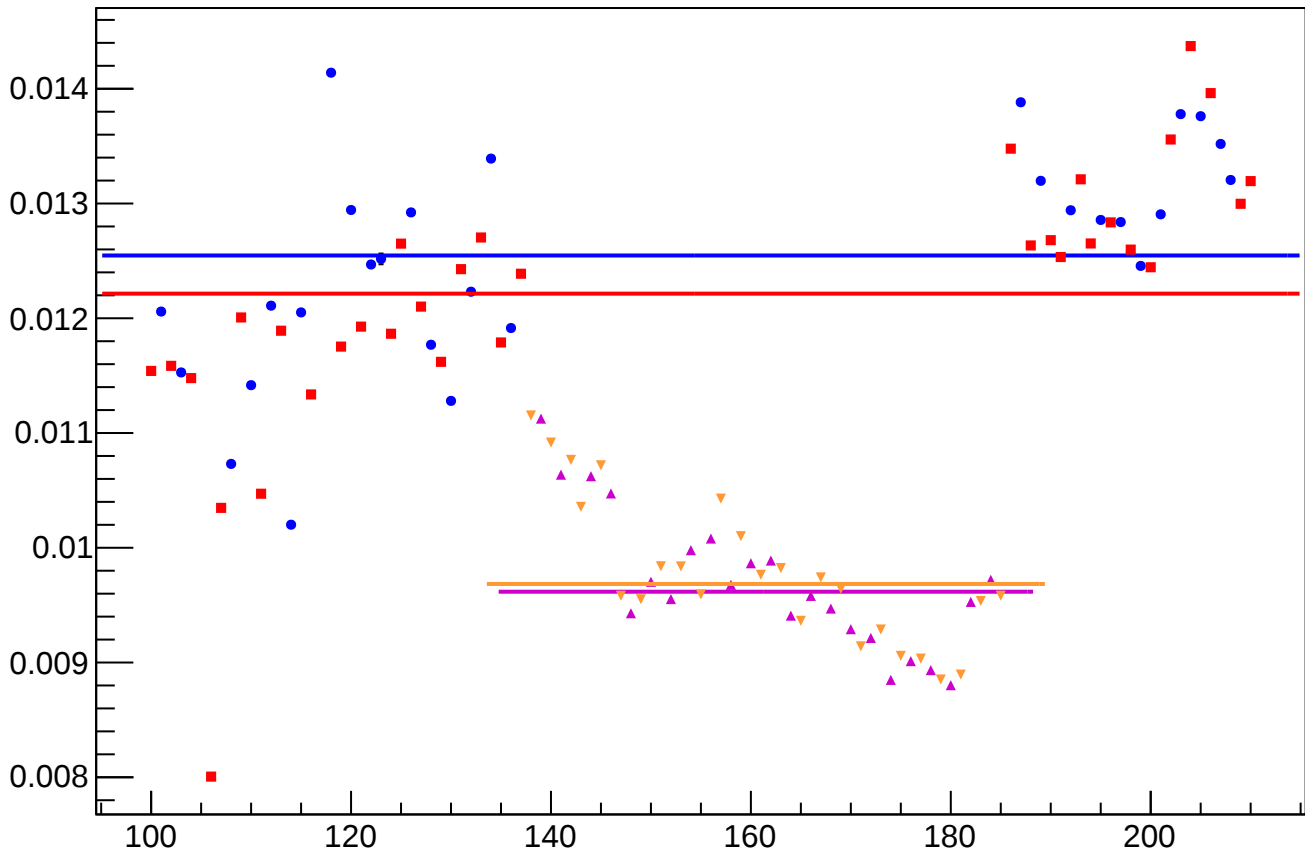
Left In:  $-1.210 \pm 0.000$   $\chi^2/\text{NDF}: 4502367902.8/22$

+ sign  $-1.163 \pm 0.000$   $\chi^2/\text{NDF}: 12333004996.2/52$

All:  $-1.161 \pm 0.000$   $\chi^2/\text{NDF}: 22752418510.0/100$

- sign  $-1.159 \pm 0.000$   $\chi^2/\text{NDF}: 10417343492.5/55$

# yield\_bpm0l10X\_rms vs Slug



Right In: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 132283.8/27

Left Out: 0.010+/-0.000  $\chi^2/\text{NDF}$ :134863.6/24

Right Out: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 333535.1/32

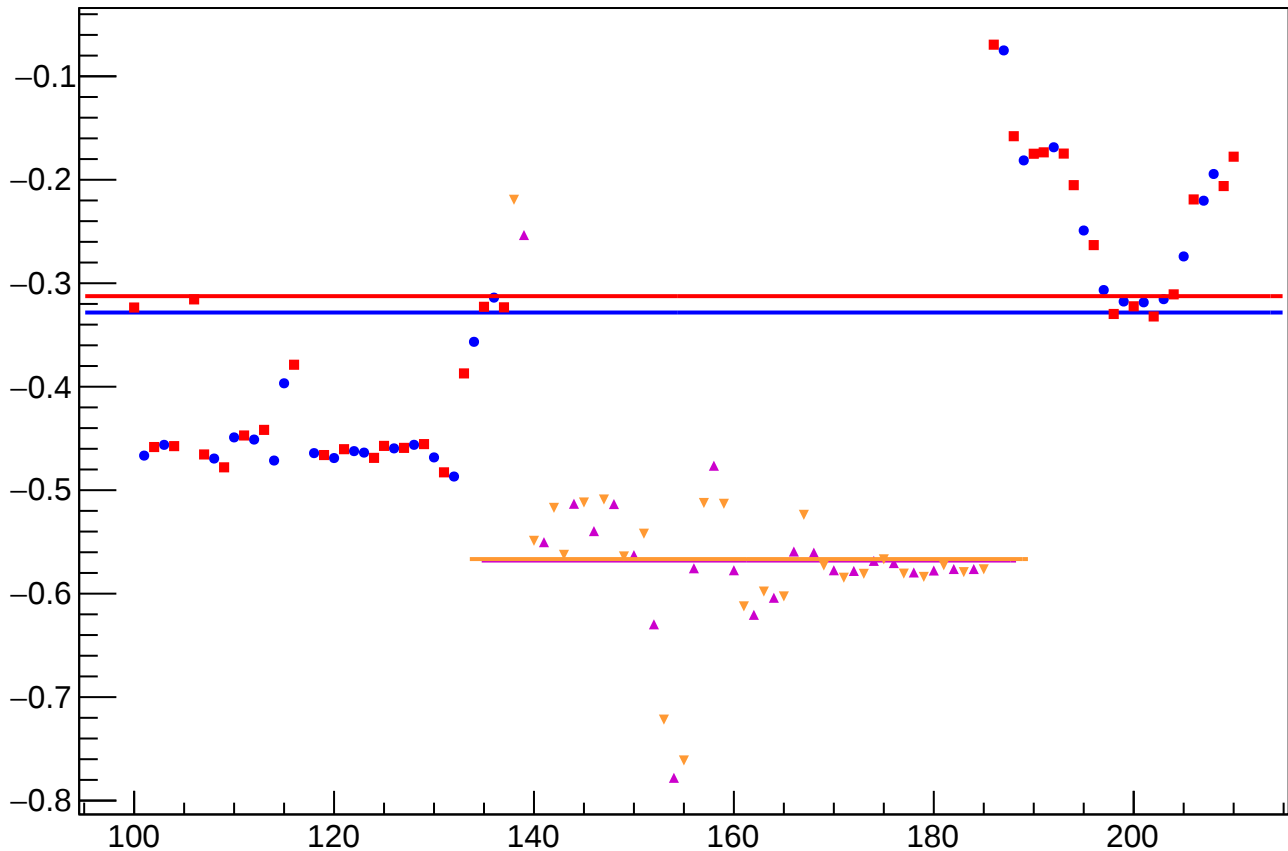
Left In: 0.010+/-0.000  $\chi^2/\text{NDF}$ :119823.1/22

+ sign 0.011+/-0.000  $\chi^2/\text{NDF}$ : 1257017.1/52

All: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 2618589.2/108

- sign 0.011+/-0.000  $\chi^2/\text{NDF}$ : 1361499.6/55

# yield\_bpm0l10Y\_mean vs Slug



Right In:  $-0.328 \pm 0.000$   $\chi^2/\text{NDF}$ : 9962241779.4/27

Left Out:  $-0.567 \pm 0.000$   $\chi^2/\text{NDF}$ : 13368458519.3/24

Right Out:  $-0.312 \pm 0.000$   $\chi^2/\text{NDF}$ : 12932458928.1/32

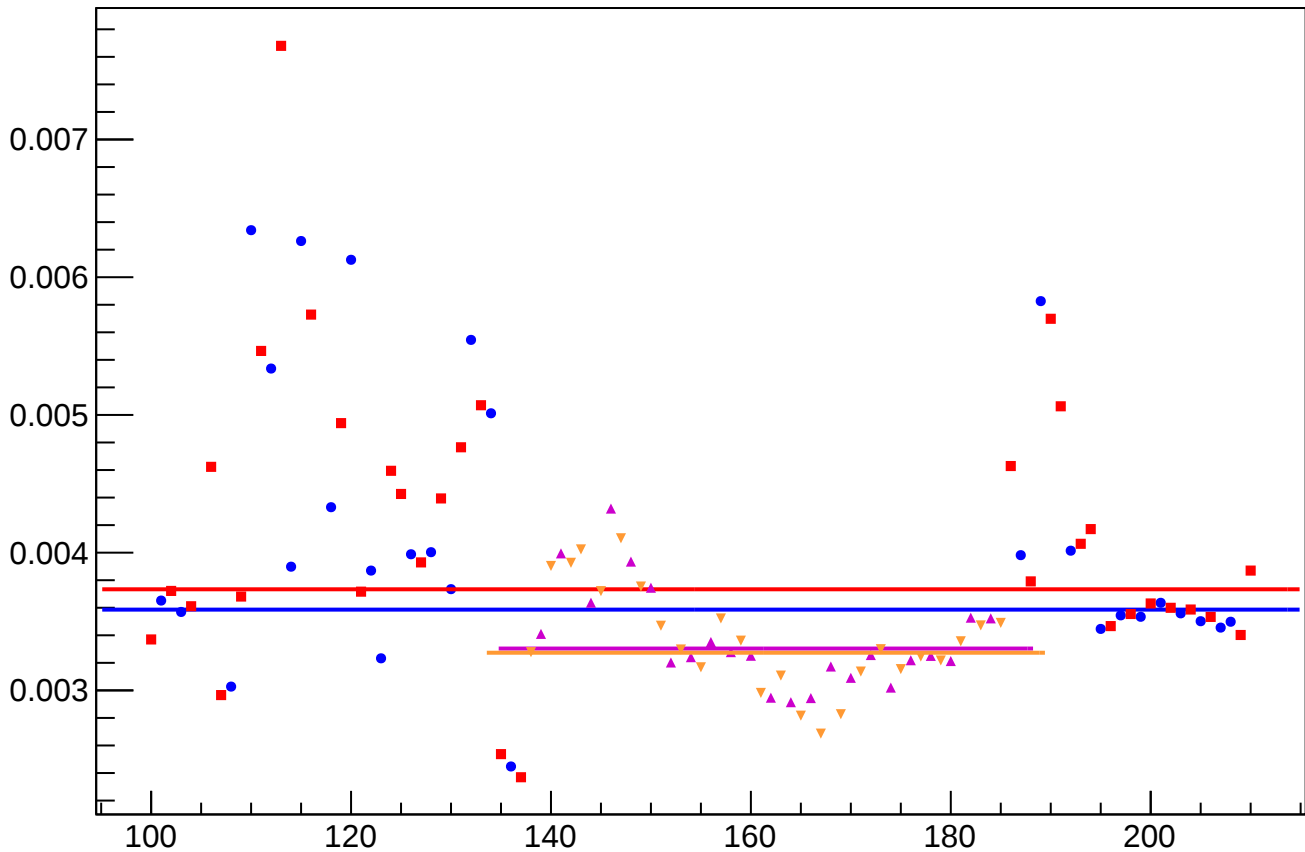
Left In:  $-0.568 \pm 0.000$   $\chi^2/\text{NDF}$ : 10458990019.9/22

+ sign  $-0.475 \pm 0.000$   $\chi^2/\text{NDF}$ : 58294344593.0/52

All:  $-0.468 \pm 0.000$   $\chi^2/\text{NDF}$ : 122314610440.8

- sign  $-0.461 \pm 0.000$   $\chi^2/\text{NDF}$ : 63773442244.0/55

# yield\_bpm0l10Y\_rms vs Slug



Right In: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 997939.1/27

Left Out: 0.003 $\pm$ 0.000  $\chi^2$ /NDF:394865.4/24

Right Out: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 1086990.2/32

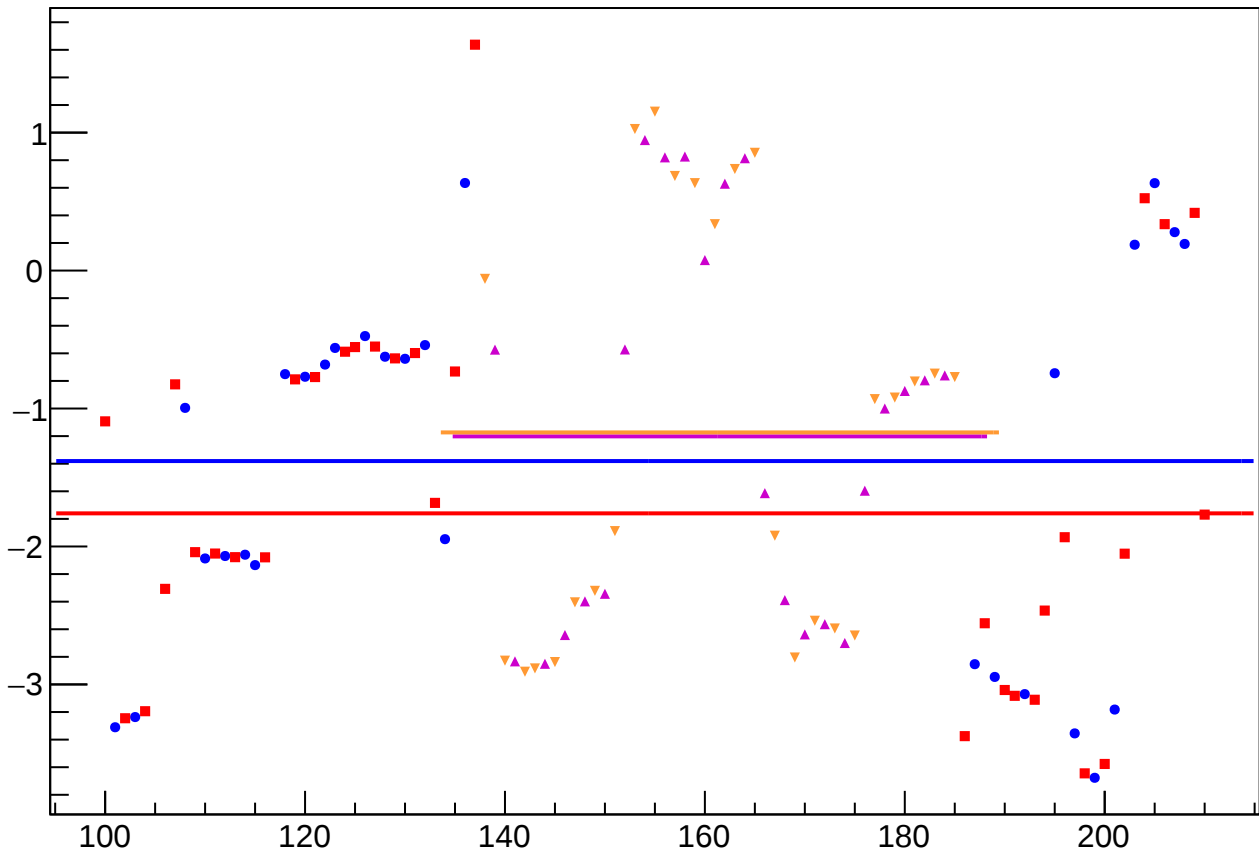
Left In: 0.003 $\pm$ 0.000  $\chi^2$ /NDF:286064.1/22

+ sign 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 1513449.7/52

All: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 3136306.6/108

- sign 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 1602051.9/55

# yield\_bpm0r03X\_mean vs Slug



Right In: -1.381+/-0.000  $\chi^2/\text{NDF}$ : 5776956239.3/27

Left Out: -1.173+/-0.000  $\chi^2/\text{NDF}$ : 6882684653.2/24

Right Out: -1.760+/-0.000  $\chi^2/\text{NDF}$ : 5216290127.8/32

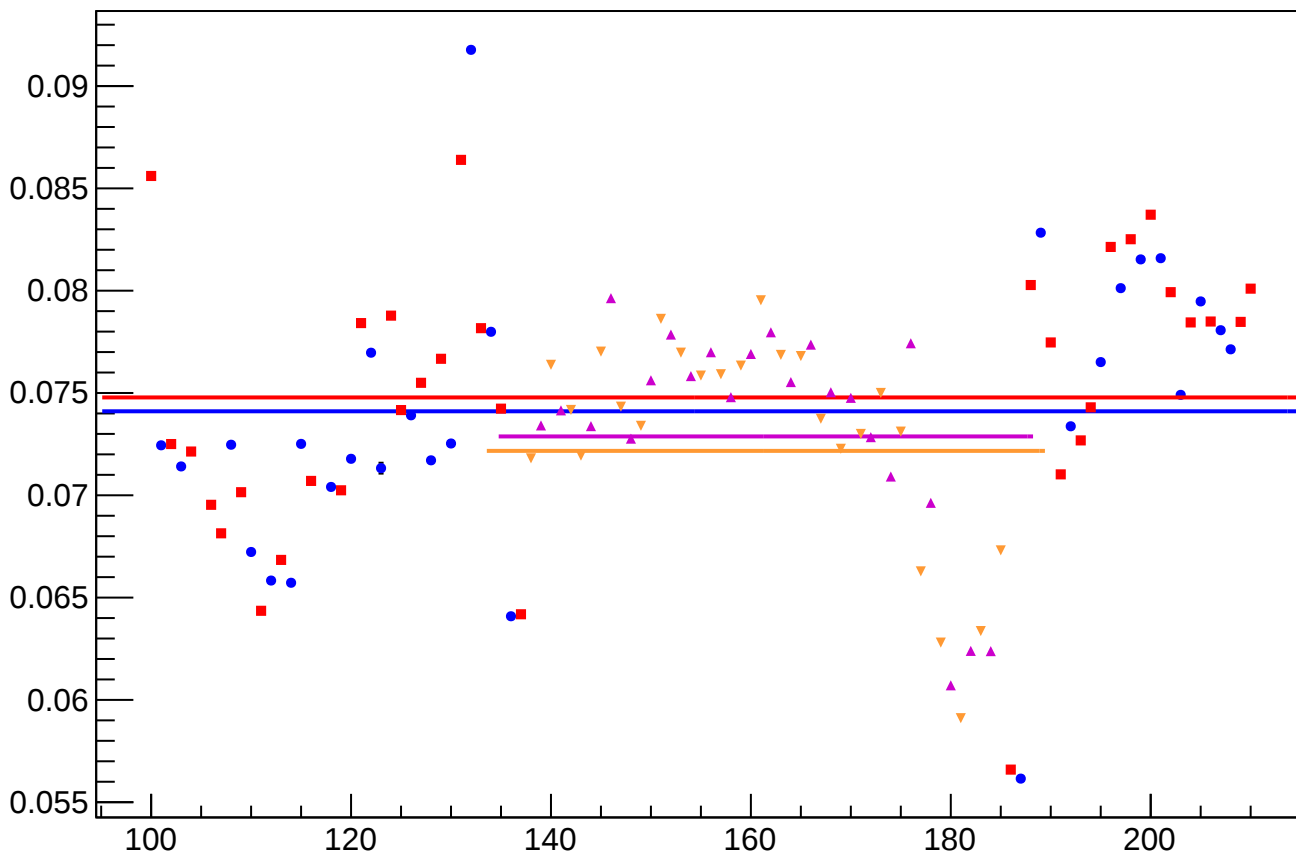
Left In: -1.202+/-0.000  $\chi^2/\text{NDF}$ : 5606782515.9/22

+ sign -1.262+/-0.000  $\chi^2/\text{NDF}$ : 12723348688.6/52

All: -1.365+/-0.000  $\chi^2/\text{NDF}$ : 24148948277.5/100

- sign -1.468+/-0.000  $\chi^2/\text{NDF}$ : 11296946083.0/55

# yield\_bpm0r03X\_rms vs Slug



Right In: 0.074 $\pm$ 0.000  $\chi^2$ /NDF: 191908.6/27

Left Out: 0.072 $\pm$ 0.000  $\chi^2$ /NDF:222263.8/24

Right Out: 0.075 $\pm$ 0.000  $\chi^2$ /NDF: 241620.4/32

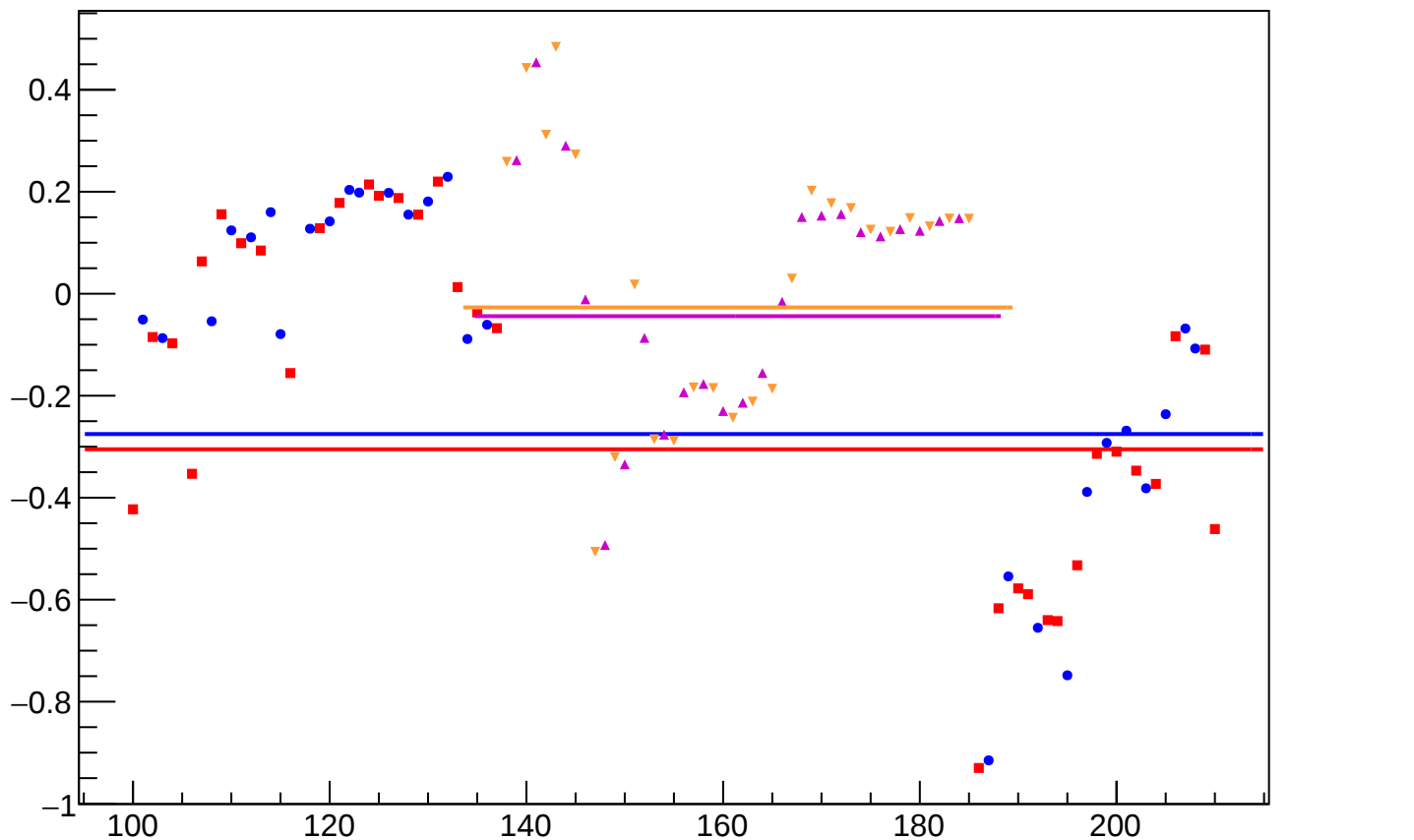
Left In: 0.073 $\pm$ 0.000  $\chi^2$ /NDF:183503.0/22

+ sign 0.073 $\pm$ 0.000  $\chi^2$ /NDF: 425231.8/52

All: 0.073 $\pm$ 0.000  $\chi^2$ /NDF: 865176.4/108

- sign 0.074 $\pm$ 0.000  $\chi^2$ /NDF: 436172.8/55

# yield\_bpm0r03Y\_mean vs Slug



Right In: -0.275+/-0.000  $\chi^2/\text{NDF}$ : 13770949046.0/27

Left Out: -0.027+/-0.000  $\chi^2/\text{NDF}$ : 20376761328.6/24

Right Out: -0.305+/-0.000  $\chi^2/\text{NDF}$ : 13193554565.0/32

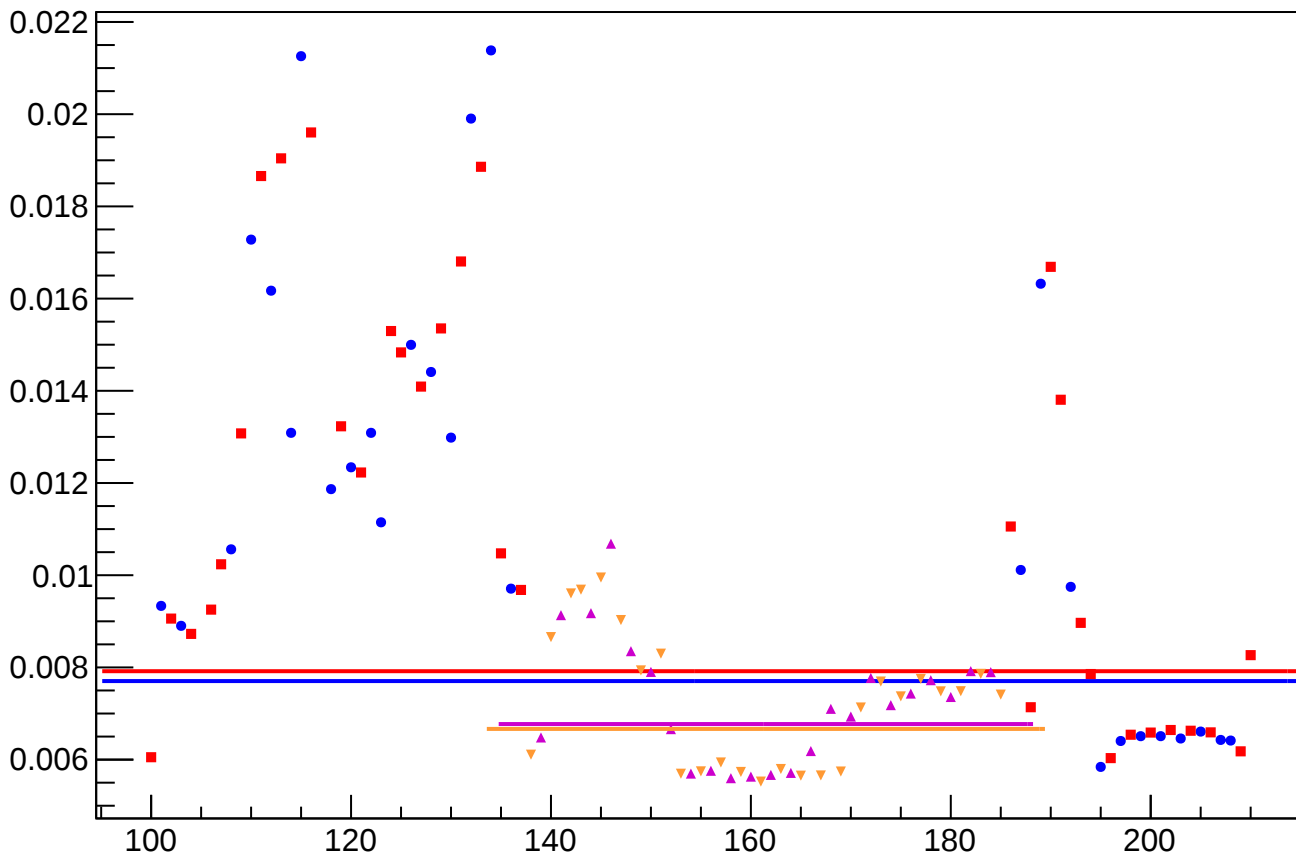
Left In: -0.044+/-0.000  $\chi^2/\text{NDF}$ : 15718556282.1/22

+ sign -0.115+/-0.000  $\chi^2/\text{NDF}$ : 42378718718.1/52

All: -0.130+/-0.000  $\chi^2/\text{NDF}$ : 80686167104.3/55

- sign -0.145+/-0.000  $\chi^2/\text{NDF}$ : 38036157460.3/55

# yield\_bpm0r03Y\_rms vs Slug



Right In: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 2786650.9/27

Left Out: 0.007 $\pm$ 0.000  $\chi^2$ /NDF:1143768.6/24

Right Out: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 3074345.1/32

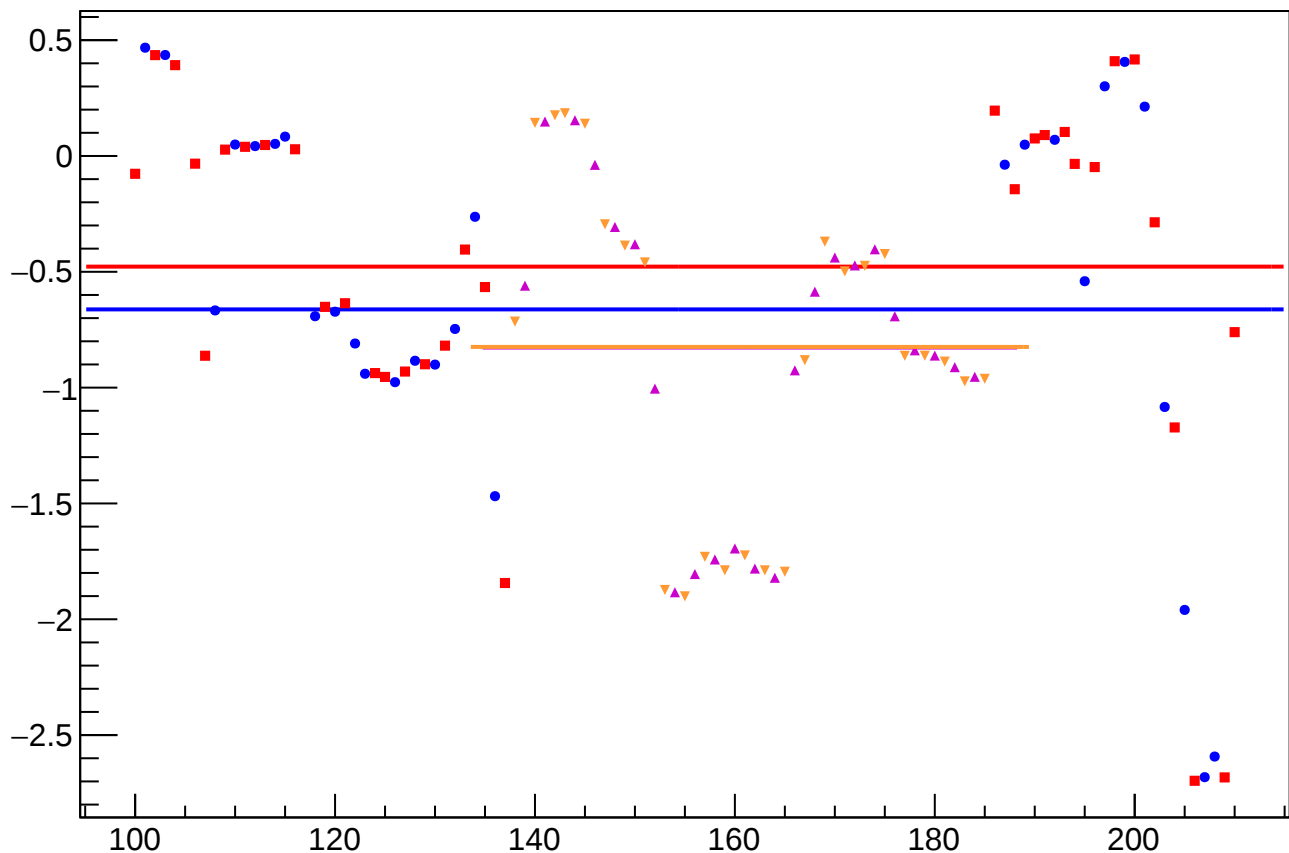
Left In: 0.007 $\pm$ 0.000  $\chi^2$ /NDF:934050.3/22

+ sign 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 4217917.4/52

All: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 8597688.4/108

- sign 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 4360362.0/55

# yield\_bpm0r05X\_mean vs Slug



Right In:  $-0.662 \pm 0.000$   $\chi^2/\text{NDF}: 1460755922.2/27$

Left Out:  $-0.824 \pm 0.000$   $\chi^2/\text{NDF}: 1103610806.5/24$

Right Out:  $-0.478 \pm 0.000$   $\chi^2/\text{NDF}: 1474546864.2/32$

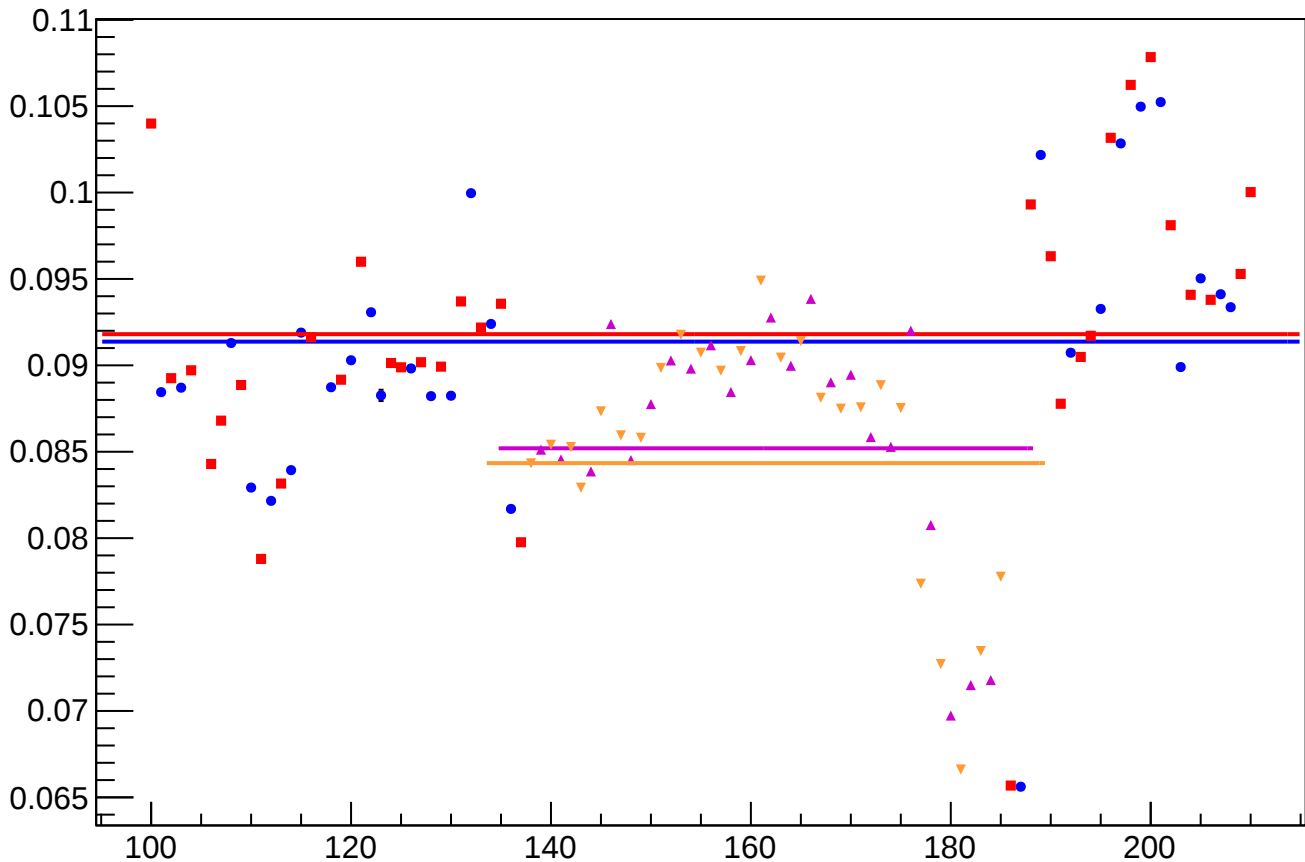
Left In:  $-0.827 \pm 0.000$   $\chi^2/\text{NDF}: 921651117.3/22$

+ sign  $-0.759 \pm 0.000$   $\chi^2/\text{NDF}: 2591256713.3/52$

All:  $-0.714 \pm 0.000$   $\chi^2/\text{NDF}: 5134804118.8/1$

- sign  $-0.669 \pm 0.000$   $\chi^2/\text{NDF}: 2526152563.4/55$

# yield\_bpm0r05X\_rms vs Slug



Right In: 0.091 $\pm$ 0.000  $\chi^2$ /NDF: 191261.7/27

Left Out: 0.084 $\pm$ 0.000  $\chi^2$ /NDF:288312.6/24

Right Out: 0.092 $\pm$ 0.000  $\chi^2$ /NDF: 293716.2/32

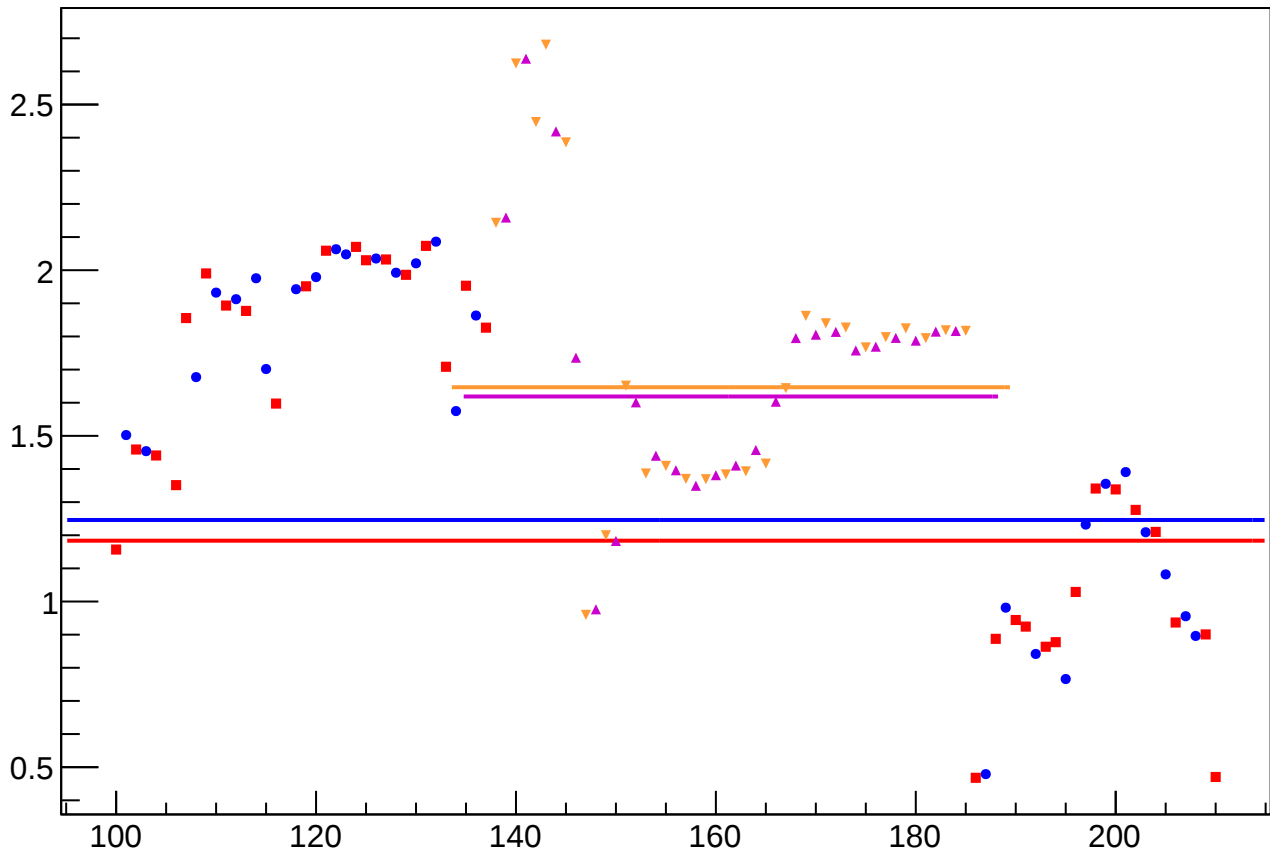
Left In: 0.085 $\pm$ 0.000  $\chi^2$ /NDF:238313.9/22

+ sign 0.087 $\pm$ 0.000  $\chi^2$ /NDF: 580904.8/52

All: 0.088 $\pm$ 0.000  $\chi^2$ /NDF: 1210330.2/108

- sign 0.088 $\pm$ 0.000  $\chi^2$ /NDF: 624975.2/55

# yield\_bpm0r05Y\_mean vs Slug



Right In: 1.246 $\pm$ 0.000  $\chi^2$ /NDF: 15573971432.7/27

Left Out: 1.647 $\pm$ 0.000  $\chi^2$ /NDF: 26535241545.7/24

Right Out: 1.184 $\pm$ 0.000  $\chi^2$ /NDF: 17174748257.0/32

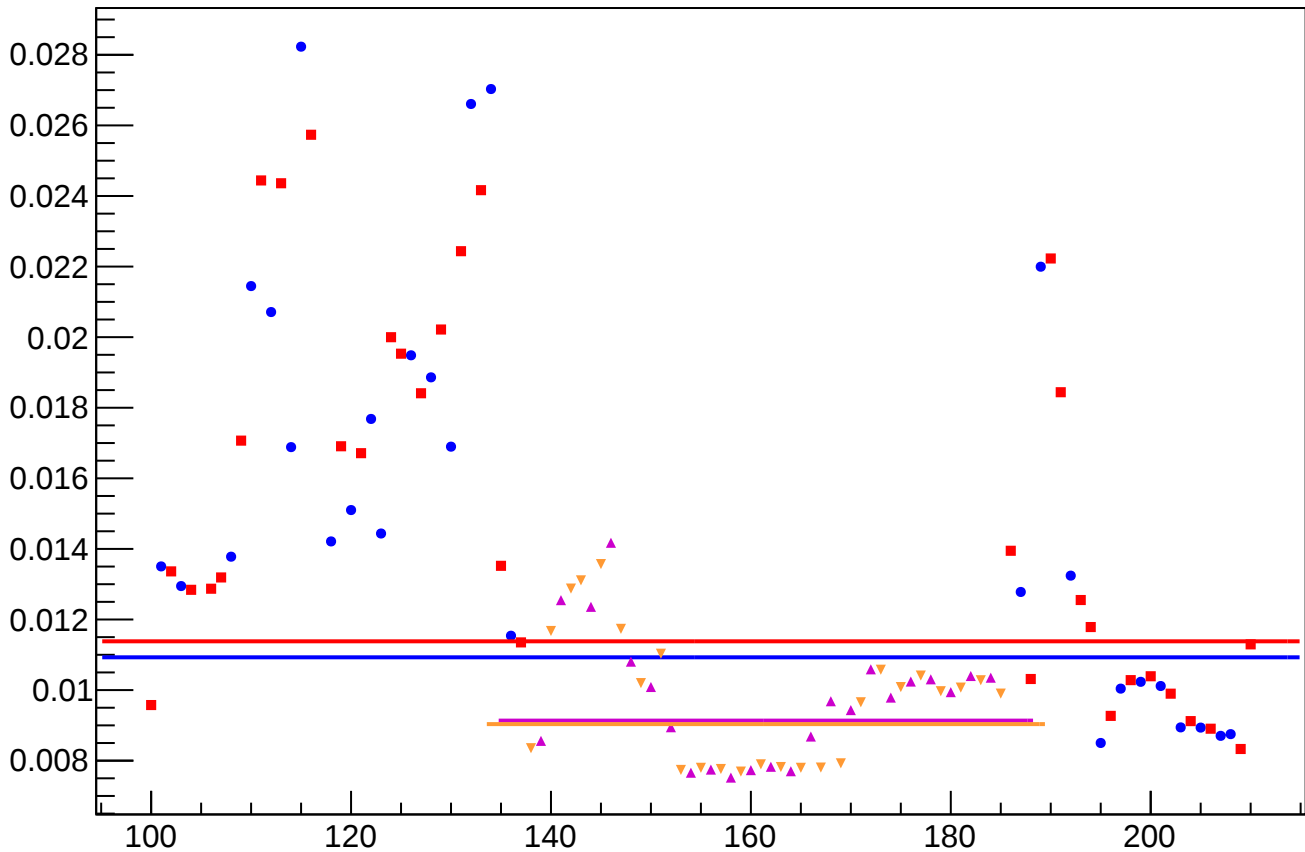
Left In: 1.619 $\pm$ 0.000  $\chi^2$ /NDF: 20618198188.1/22

+ sign 1.513 $\pm$ 0.000  $\chi^2$ /NDF: 53293467379.7/52

All: 1.488 $\pm$ 0.000  $\chi^2$ /NDF: 104601412213.7

- sign 1.461 $\pm$ 0.000  $\chi^2$ /NDF: 50906297468.6/55

# yield\_bpm0r05Y\_rms vs Slug



Right In: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 2243082.8/27

Left Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ :1042871.8/24

Right Out: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 2524550.9/32

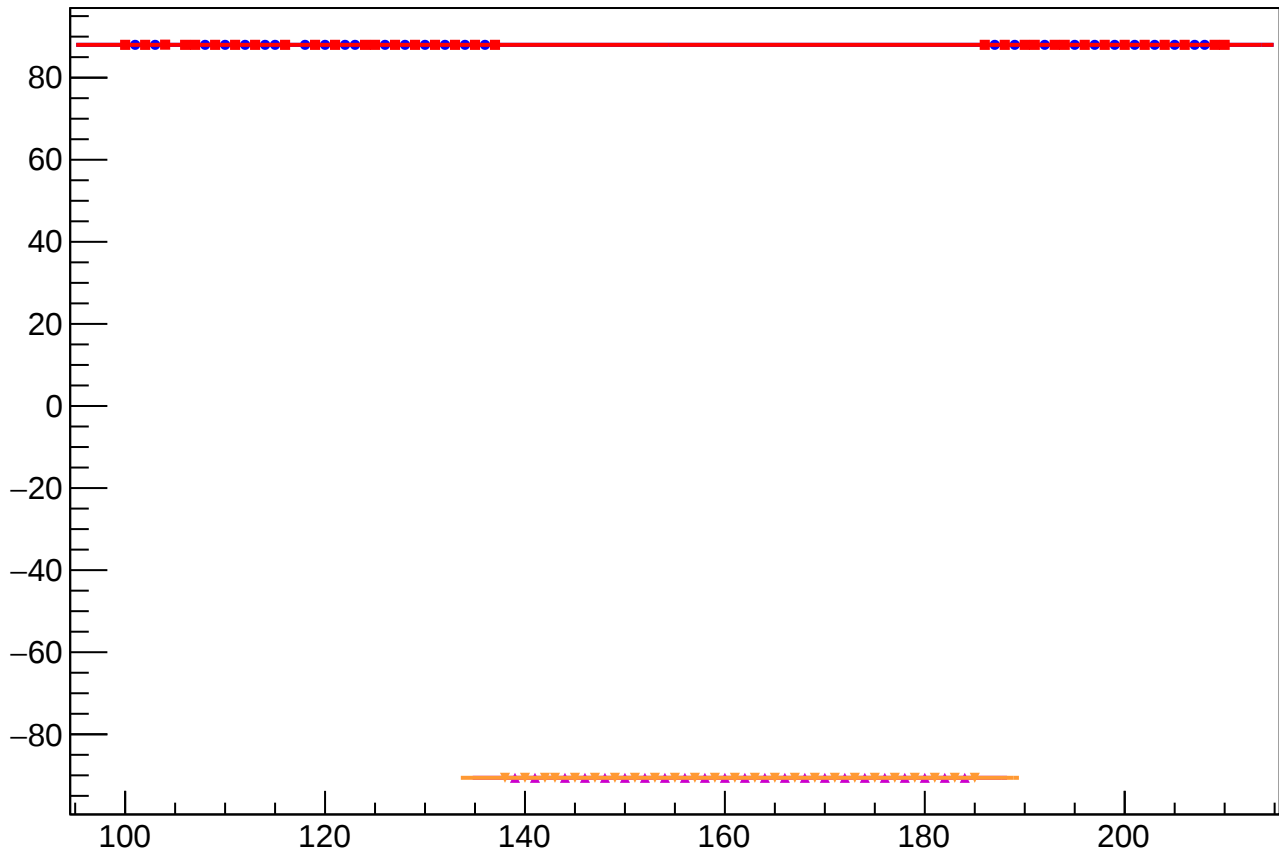
Left In: 0.009+/-0.000  $\chi^2/\text{NDF}$ :878356.2/22

+ sign 0.010+/-0.000  $\chi^2/\text{NDF}$ : 3785149.3/52

All: 0.010+/-0.000  $\chi^2/\text{NDF}$ : 7910799.4/108

- sign 0.010+/-0.000  $\chi^2/\text{NDF}$ : 4101984.7/55

# epics\_VWienAngles\_mean vs Slug



Right In: 88.001 $\pm$ 0.000  $\chi^2$ /NDF: 4263736.4/27

Left Out: -90.599 $\pm$ 0.000  $\chi^2$ /NDF: 5785821.4/24

Right Out: 88.002 $\pm$ 0.000  $\chi^2$ /NDF: 80929263638776774863165063168.0/32

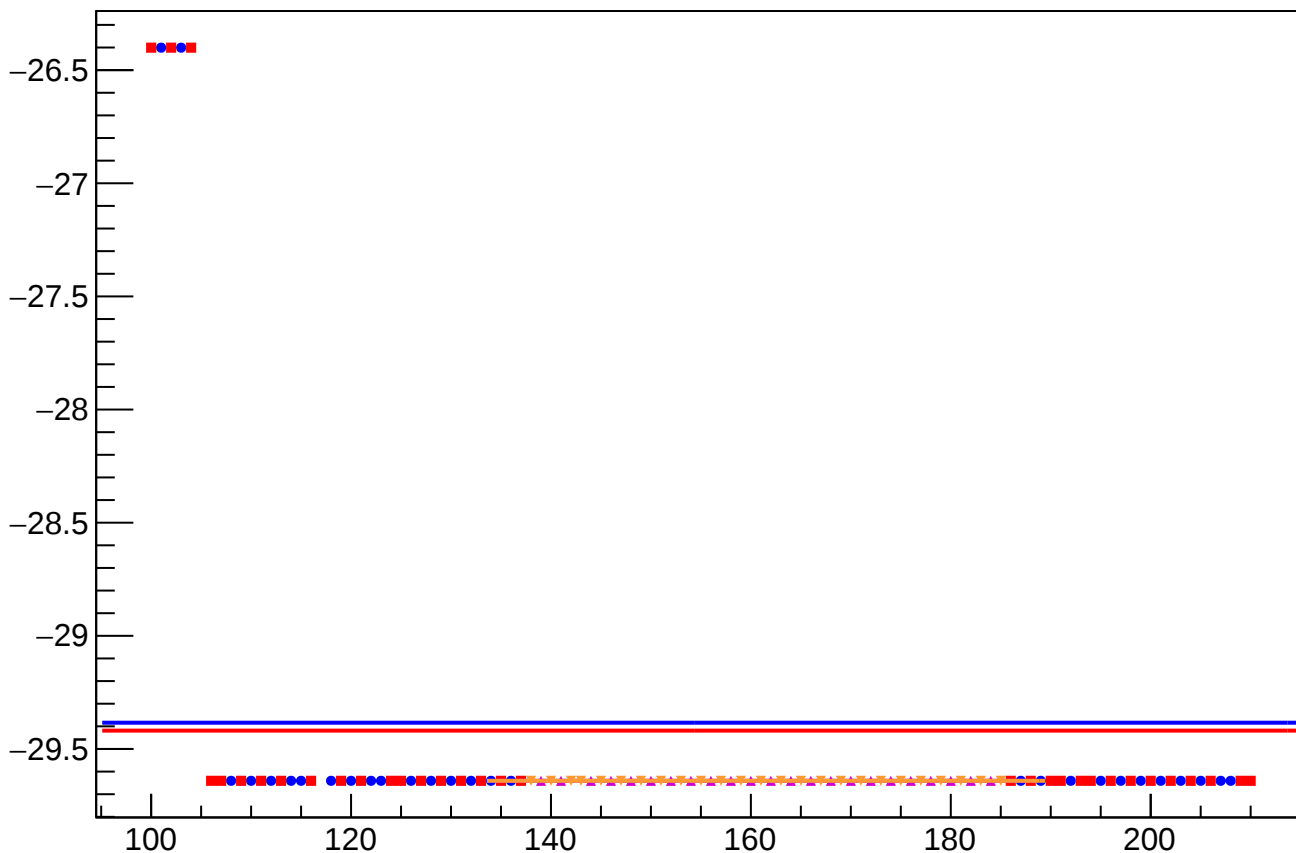
Left In: -90.599 $\pm$ 0.000  $\chi^2$ /NDF: 7134230.8/22

+ sign -12.245 $\pm$ 0.000  $\chi^2$ /NDF: 266588093542132

All: -8.005 $\pm$ 0.000  $\chi^2$ /NDF: 5459517472055

- sign -3.882 $\pm$ 0.000  $\chi^2$ /NDF: 27816021619478459

# epics\_HWienAngles\_mean vs Slug



Right In: -29.384+/-0.000  $\chi^2/\text{NDF}$ : 1140551197313627463837735861616640.0/27

Left Out: -29.641+/-0.000  $\chi^2/\text{NDF}$ : 530354.3/24

Right Out: -29.419+/-0.000  $\chi^2/\text{NDF}$ : 1134384900530959858814150844088320.0/32

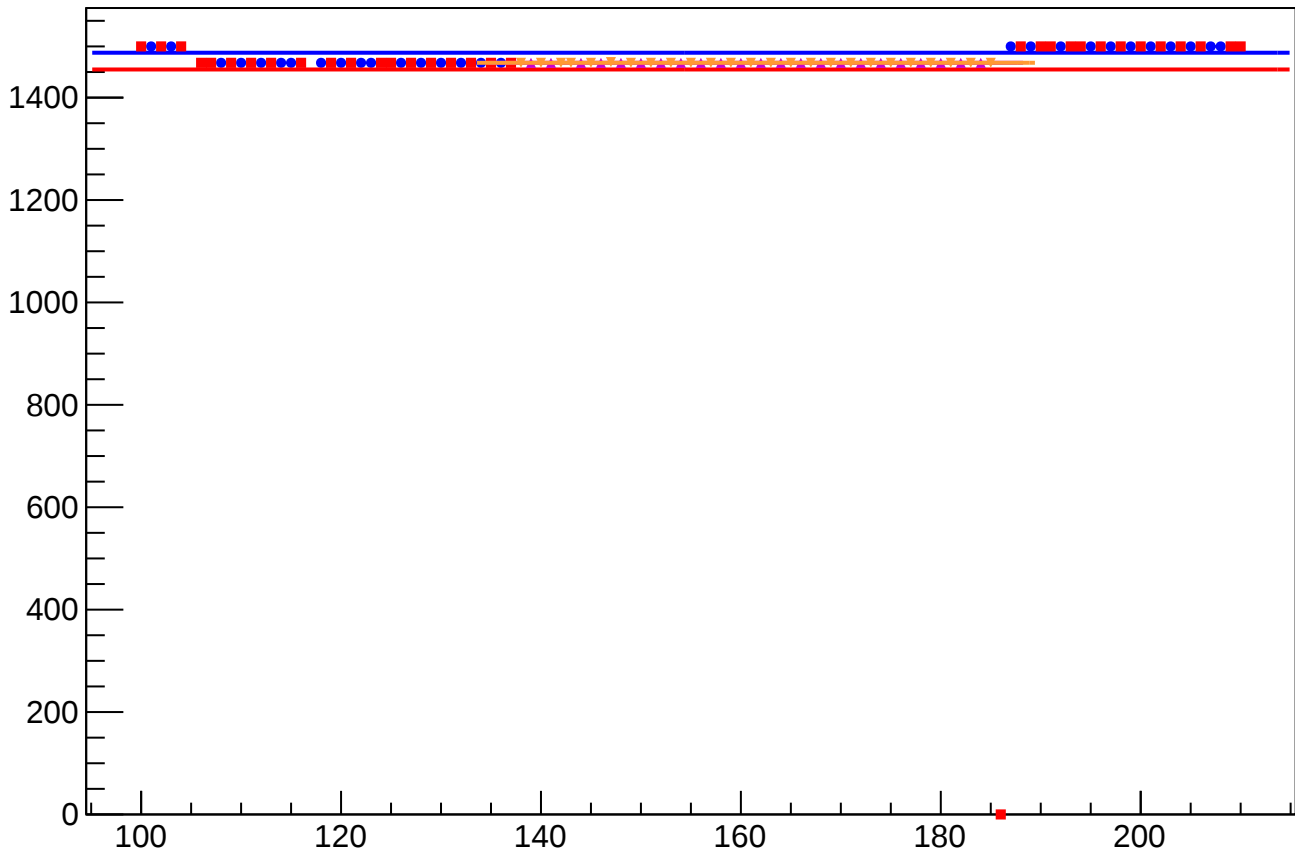
Left In: -29.641+/-0.000  $\chi^2/\text{NDF}$ : 382603.8/22

+ sign -29.528+/-0.000  $\chi^2/\text{NDF}$ : 119565004030640

All: -29.531+/-0.000  $\chi^2/\text{NDF}$ : 237295160470

- sign -29.533+/-0.000  $\chi^2/\text{NDF}$ : 1177258779719252

# epics\_psub\_pl\_poss\_mean vs Slug



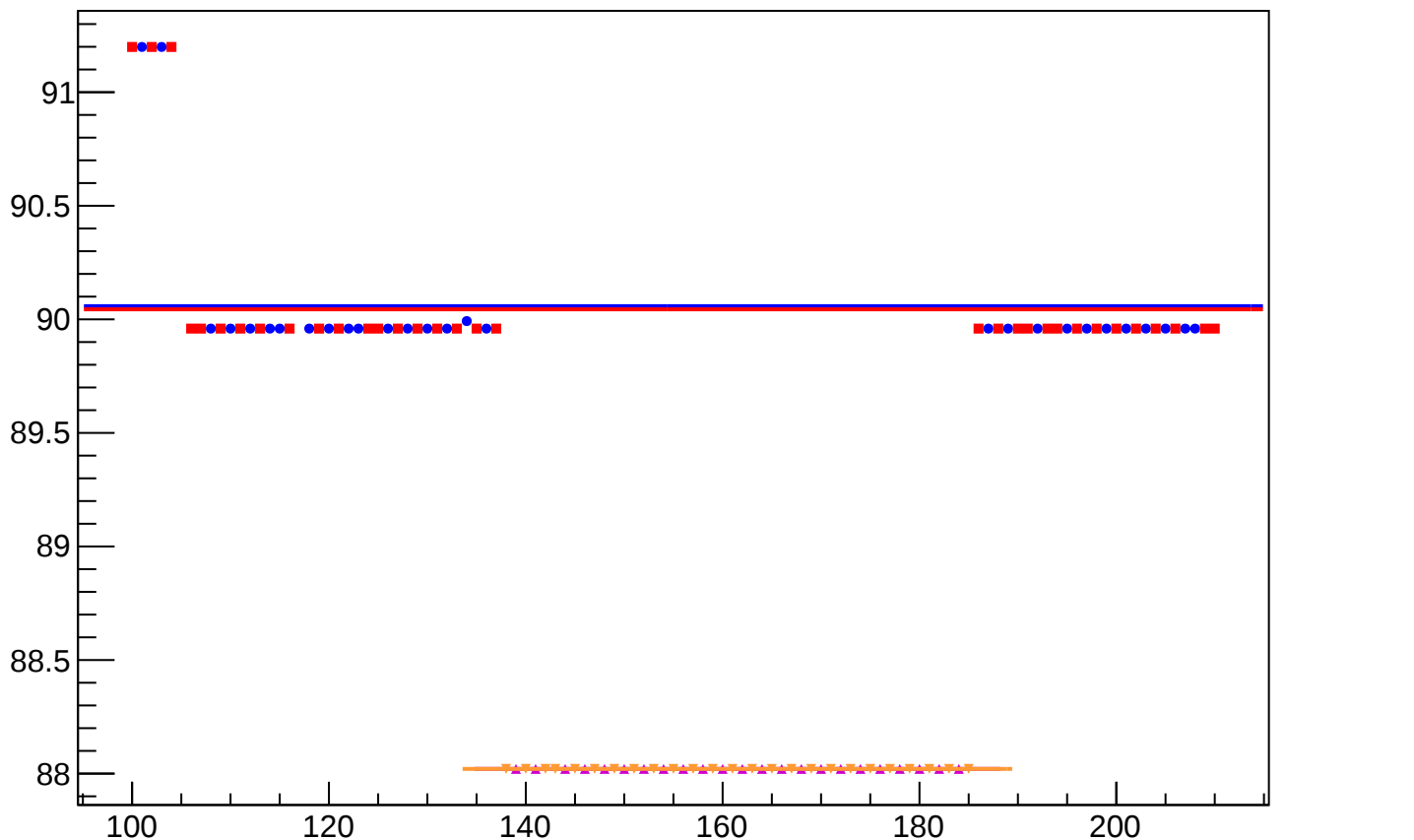
Right In: 1487.679+/-0.000  $\chi^2/\text{NDF}$ : 361452879704035848600871601530994688.0/27

Left Out: 1468.048+/-0.000  $\chi^2/\text{NDF}$ : 127949199501977668488138456039424.0/24

Right Out: 1454.962+/-0.000  $\chi^2/\text{NDF}$ : 82680053641095878558407747190036365312.0/32

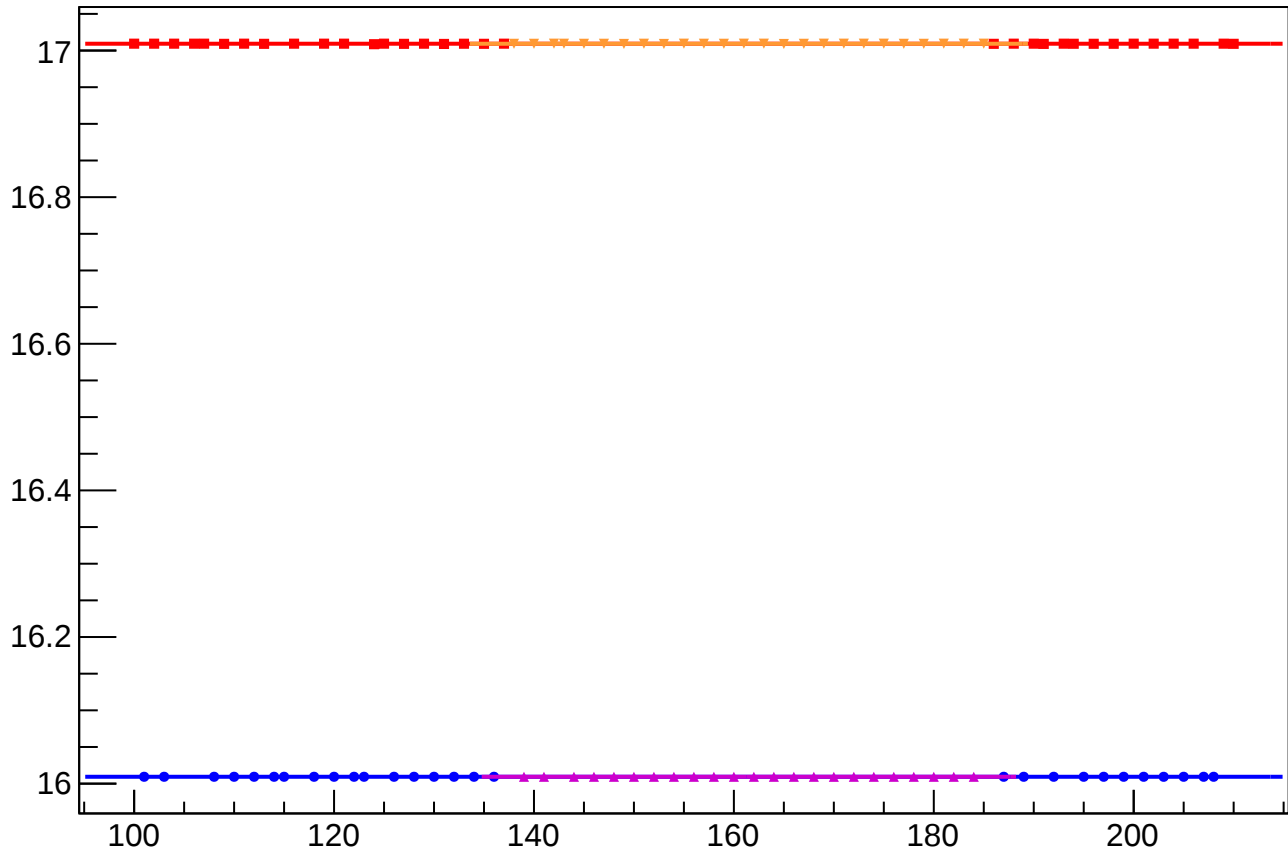
Left In: 1467.994+/-0.000  $\chi^2/\text{NDF}$ : 14449772795444989723550941184.0/22

# epics\_Phi\_FGs\_mean vs Slug



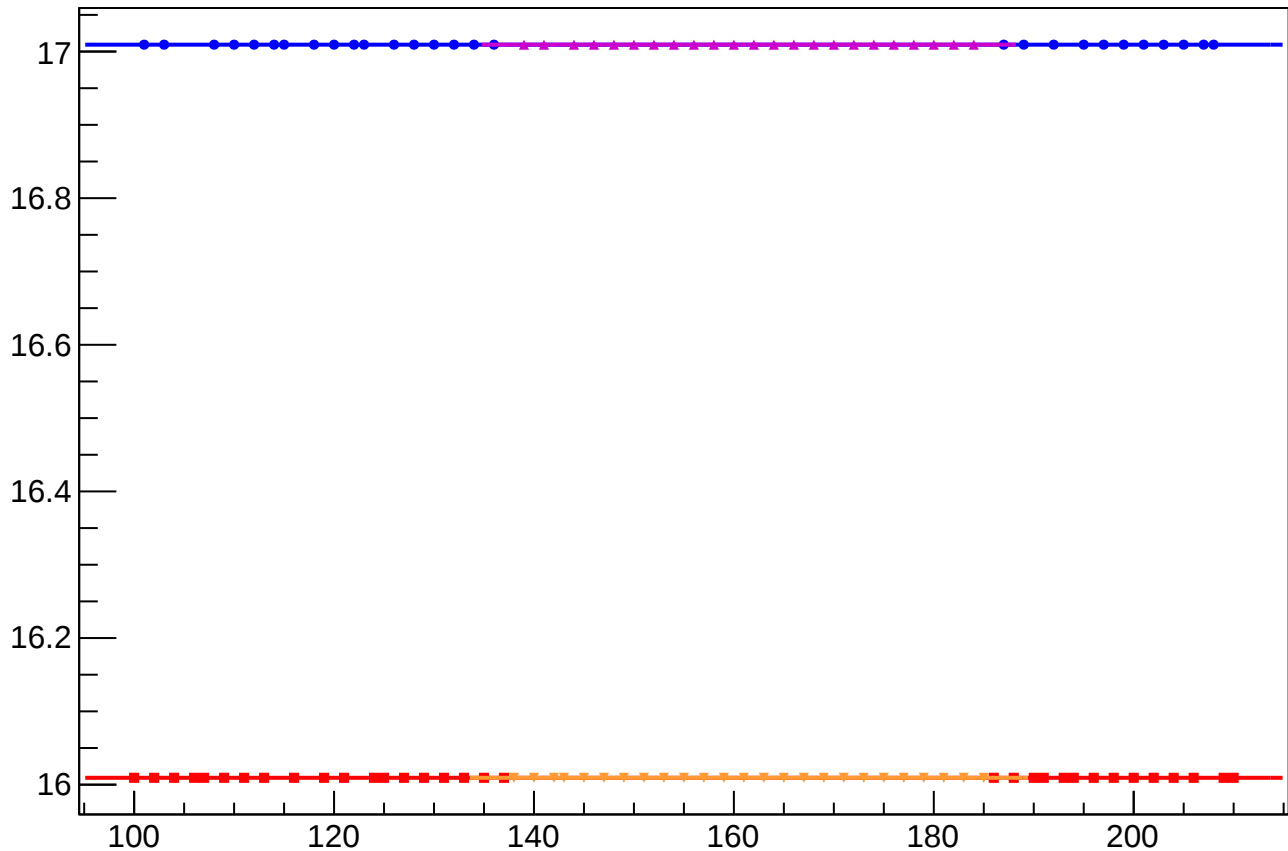
Right In: 90.058 $\pm$ 0.000  $\chi^2$ /NDF: 166944542206349386203750406815744.0/27  
 Left Out: 88.021 $\pm$ 0.000  $\chi^2$ /NDF: 5679798.5/24  
 Right Out: 90.044 $\pm$ 0.000  $\chi^2$ /NDF: 166155142418922836166826233167872.0/32  
 Left In: 88.021 $\pm$ 0.000  $\chi^2$ /NDF: 6257169.0/22  
 + sign 88.915 $\pm$ 0.000  $\chi^2$ /NDF: 3635905281608657  
 All: 88.959 $\pm$ 0.000  $\chi^2$ /NDF: 7385955616234  
 - sign 89.003 $\pm$ 0.000  $\chi^2$ /NDF: 3736526032108202

# epics\_IGL1I00DI24\_24Ms\_mean vs Slug



|                               |                                                |                           |                                 |
|-------------------------------|------------------------------------------------|---------------------------|---------------------------------|
| Right In: 16.009 $\pm$ 0.000  | $\chi^2$ /NDF: 113860715026345430614016.0/27   | + sign 16.558 $\pm$ 0.000 | $\chi^2$ /NDF: 7989887169507414 |
| Left Out: 17.009 $\pm$ 0.000  | $\chi^2$ /NDF: 26194929080144976634970112.0/24 | All: 16.530 $\pm$ 0.000   | $\chi^2$ /NDF: 1627594770265    |
| Right Out: 17.009 $\pm$ 0.000 | $\chi^2$ /NDF: 20096998506532480110034944.0/32 | - sign 16.503 $\pm$ 0.000 | $\chi^2$ /NDF: 8237552357094807 |
| Left In: 16.009 $\pm$ 0.000   | $\chi^2$ /NDF: 127920993667935400624128.0/22   |                           |                                 |

# epics\_IGL1I00OD16\_16s\_mean vs Slug



Right In: 17.009 $\pm$ 0.000  $\chi^2$ /NDF: 113860715070937223921664.0/27

Left Out: 16.009 $\pm$ 0.000  $\chi^2$ /NDF: 61253.5/24

Right Out: 16.009 $\pm$ 0.000  $\chi^2$ /NDF: 298706.9/32

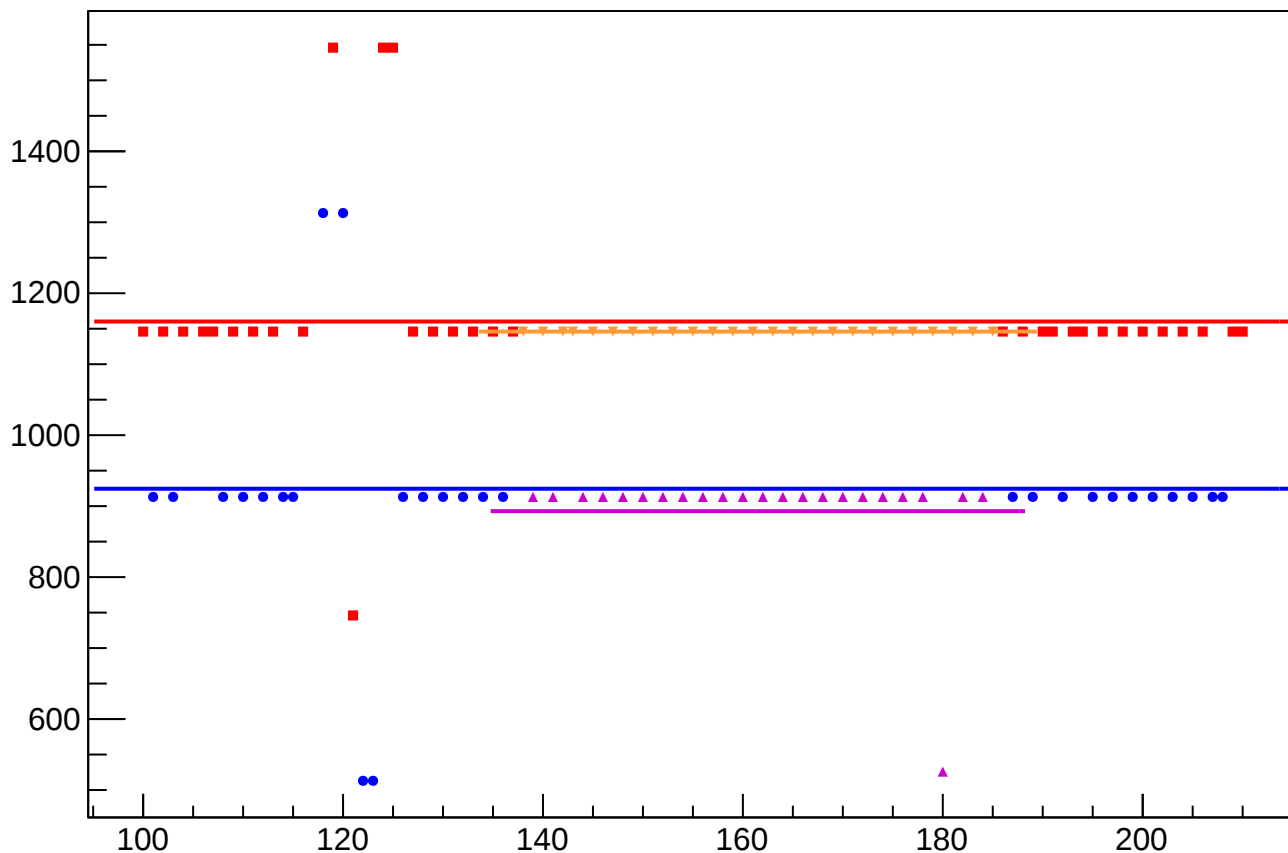
Left In: 17.009 $\pm$ 0.000  $\chi^2$ /NDF: 114986101427233622065152.0/22

+ sign 16.446 $\pm$ 0.000  $\chi^2$ /NDF: 8210321282632066

All: 16.483 $\pm$ 0.000  $\chi^2$ /NDF: 1689435943499

- sign 16.519 $\pm$ 0.000  $\chi^2$ /NDF: 8594584037233693

# epics\_RTPAPOSUCNTs\_mean vs Slug



Right In: 924.546+/-0.000  $\chi^2/\text{NDF}$ : 21082664331199014519694311233301774336.0/27

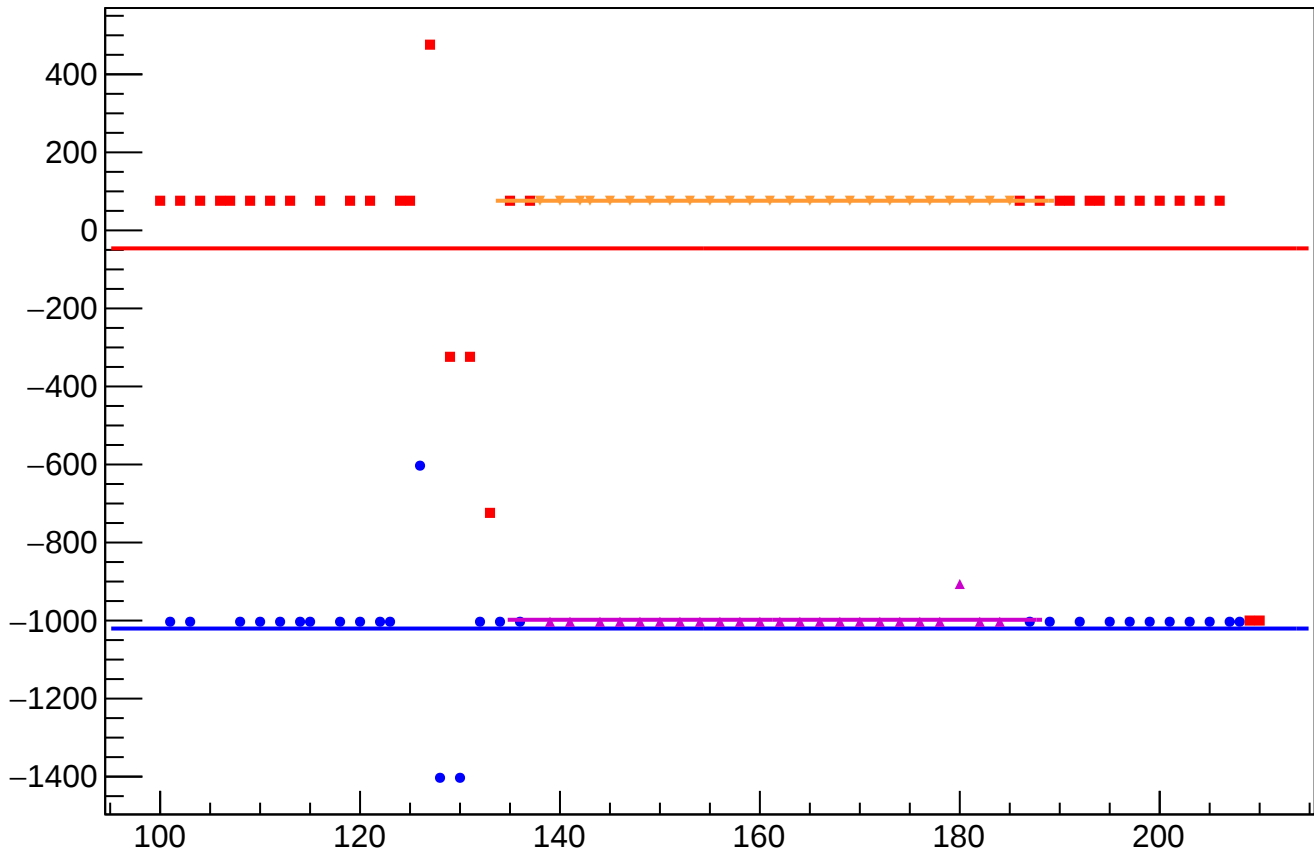
Left Out: 1146.011+/-0.000  $\chi^2/\text{NDF}$ : 8056834670270133849999540224.0/24

Right Out: 1160.169+/-0.000  $\chi^2/\text{NDF}$ : 21740905392925685554149615550064492544.0/32

Left In: 892.950+/-0.000  $\chi^2/\text{NDF}$ : 13213852485930520518972295012897783808.0/22

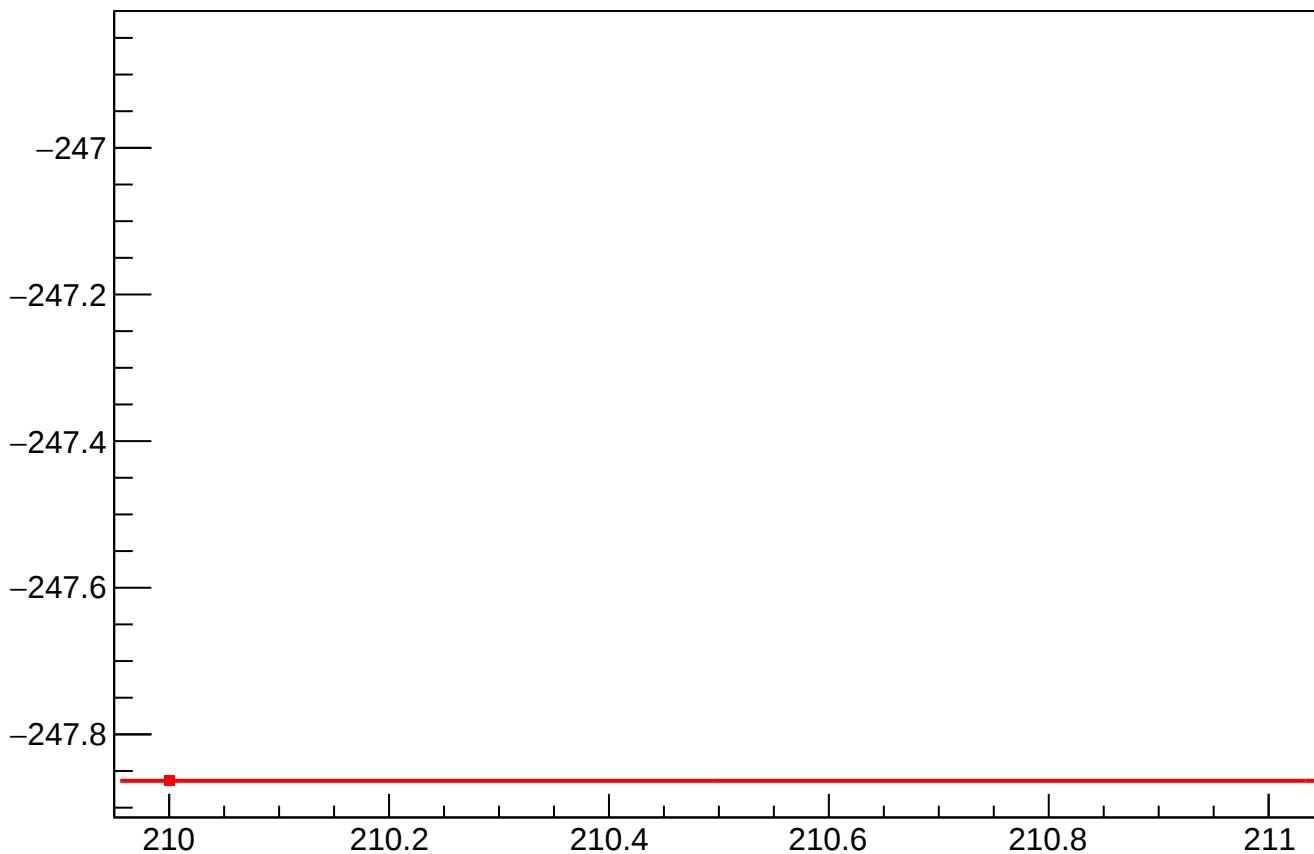
All: 1035.588+/-0.000  $\chi^2/\text{NDF}$ : 16047298336.0/100

# epics\_RTPAPOSVCNTs\_mean vs Slug



Right In: -1020.450+/-0.000  $\chi^2/\text{NDF}$ : 22745673140214995212111968669496508416.0/27  
 Left Out: 76.011+/-0.000  $\chi^2/\text{NDF}$ : 11479003589933272170007363584.0/24  
 Right Out: -46.096+/-0.000  $\chi^2/\text{NDF}$ : 191958611020214546778987585909666349056.0/32  
 Left In: -997.979+/-0.000  $\chi^2/\text{NDF}$ : 825858066518991041870194619245920256.0/22

# epics\_RTPPITA1CNTs\_mean vs Slug



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

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

Right Out: -247.863 $\pm$ 0.000  $\chi^2$ /NDF: 58161.1/0

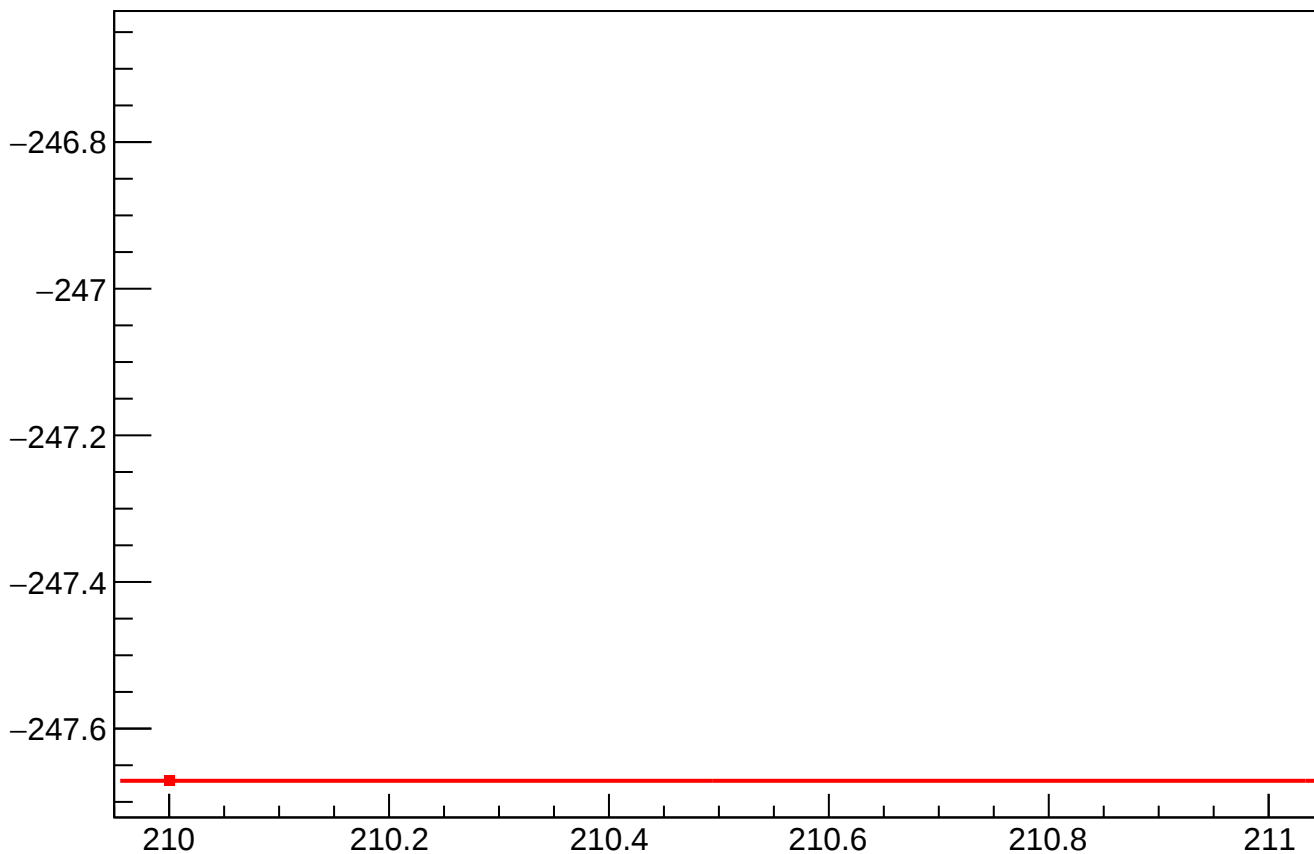
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

All: -247.863 $\pm$ 0.000  $\chi^2$ /NDF: 58161.1/0

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 0.0/0

# epics\_RTPPITA2CNTs\_mean vs Slug



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

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

Right Out: -247.671+/-0.000  $\chi^2/\text{NDF}$ : 58161.1/0

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

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

All: -247.671+/-0.000  $\chi^2/\text{NDF}$ : 58161.1/0

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