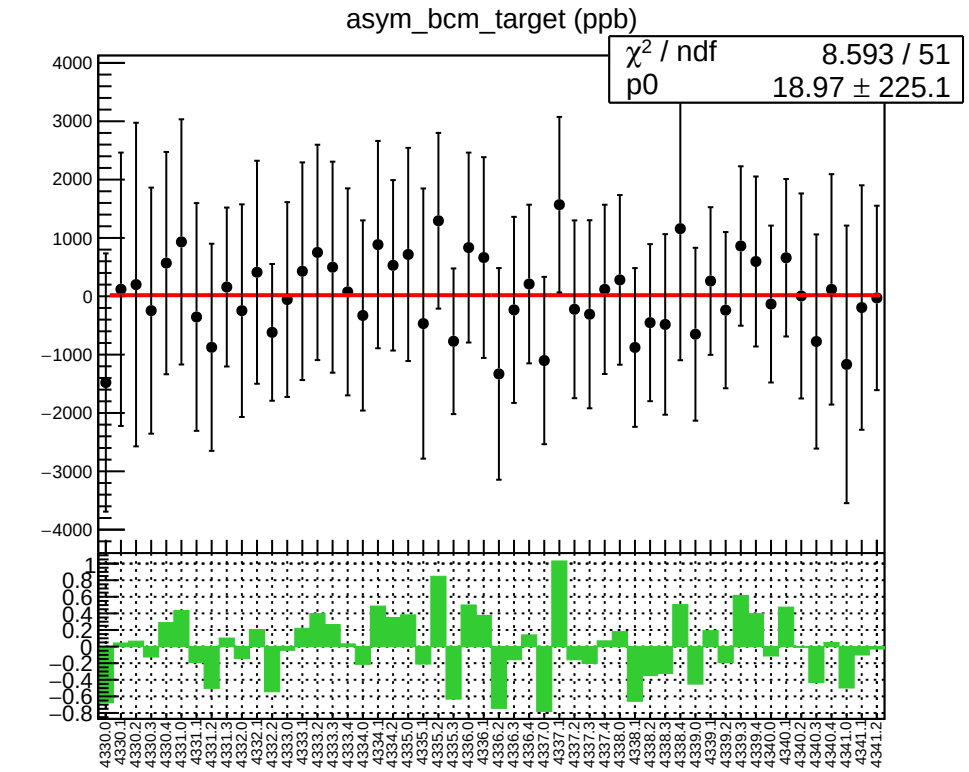
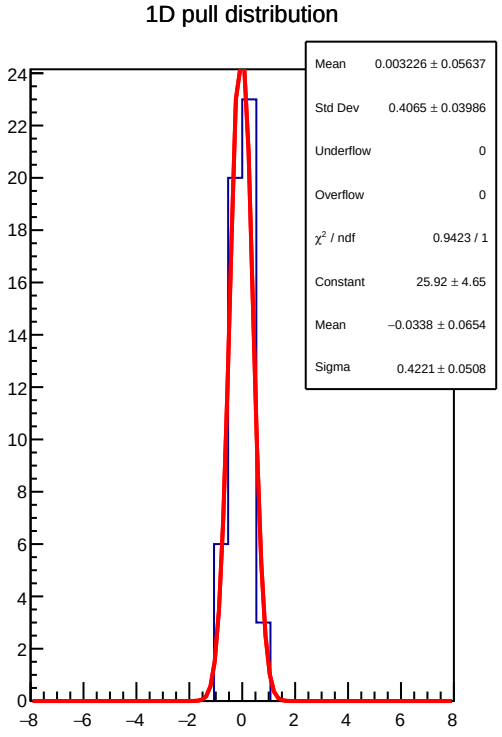
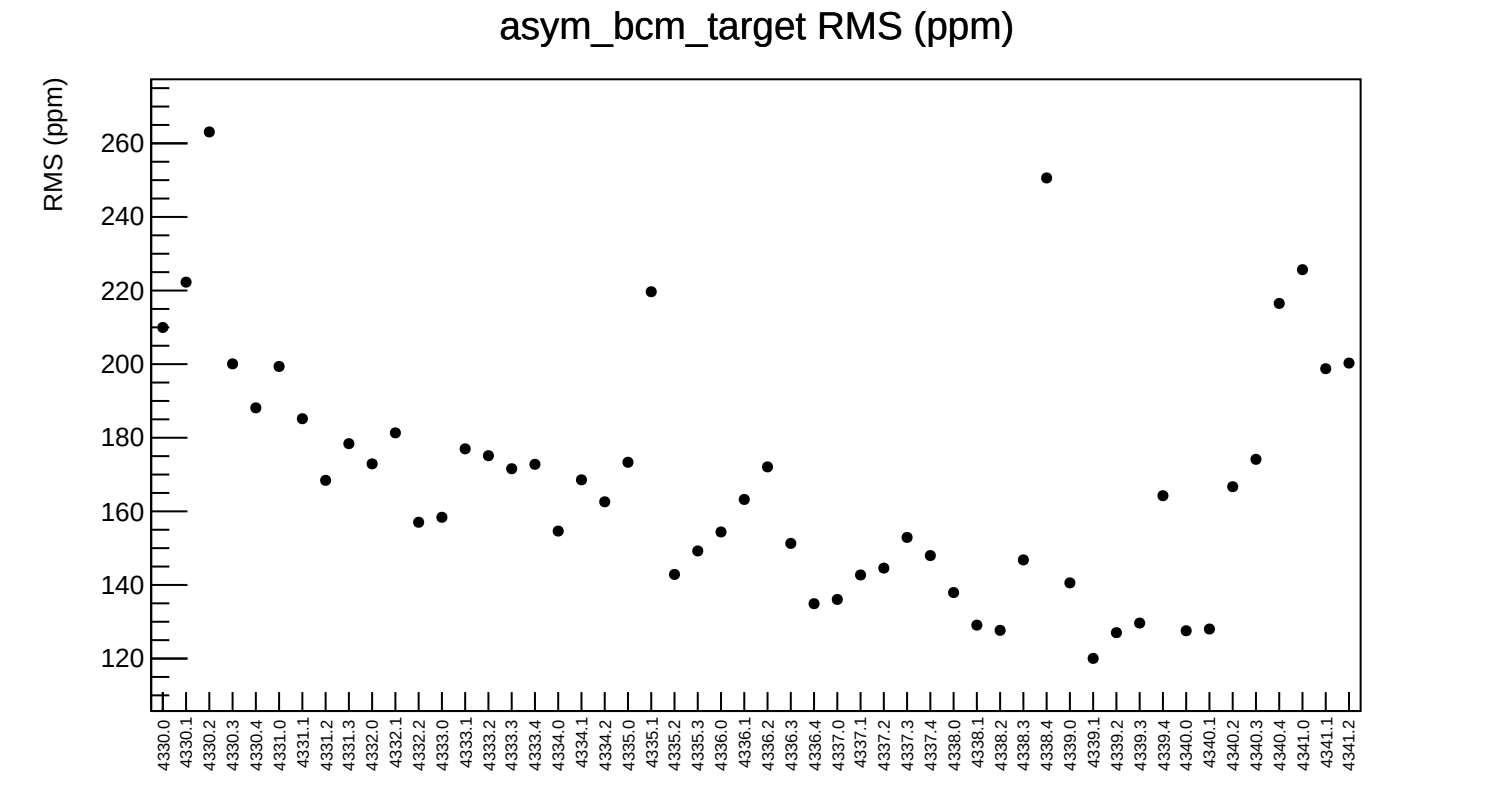
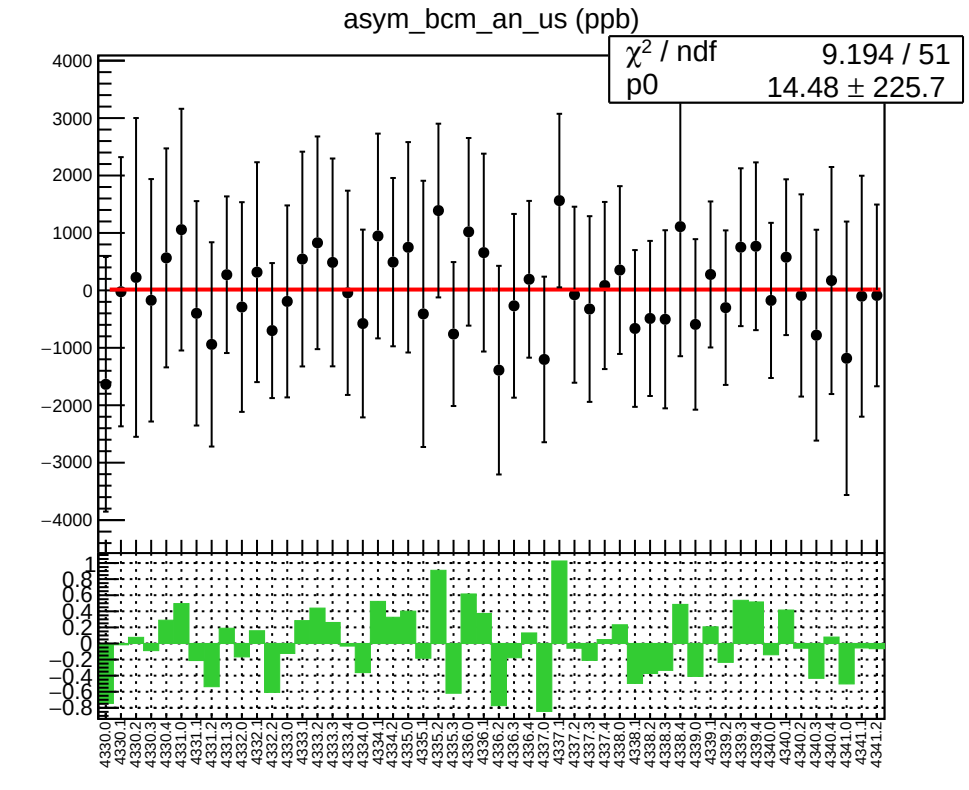
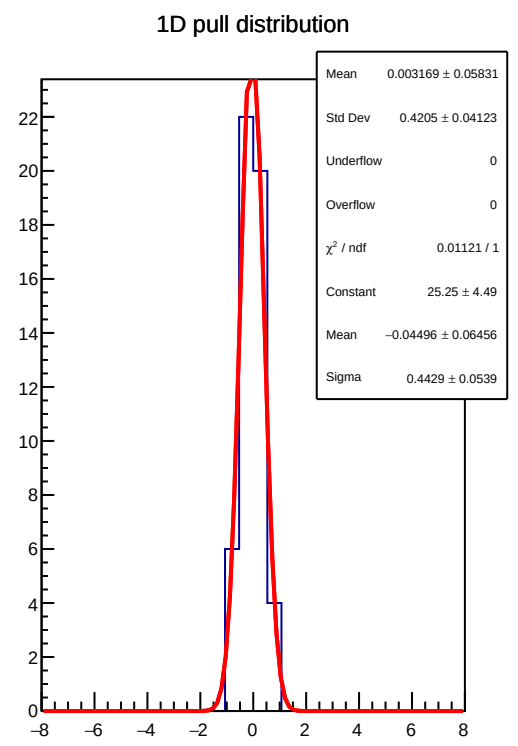
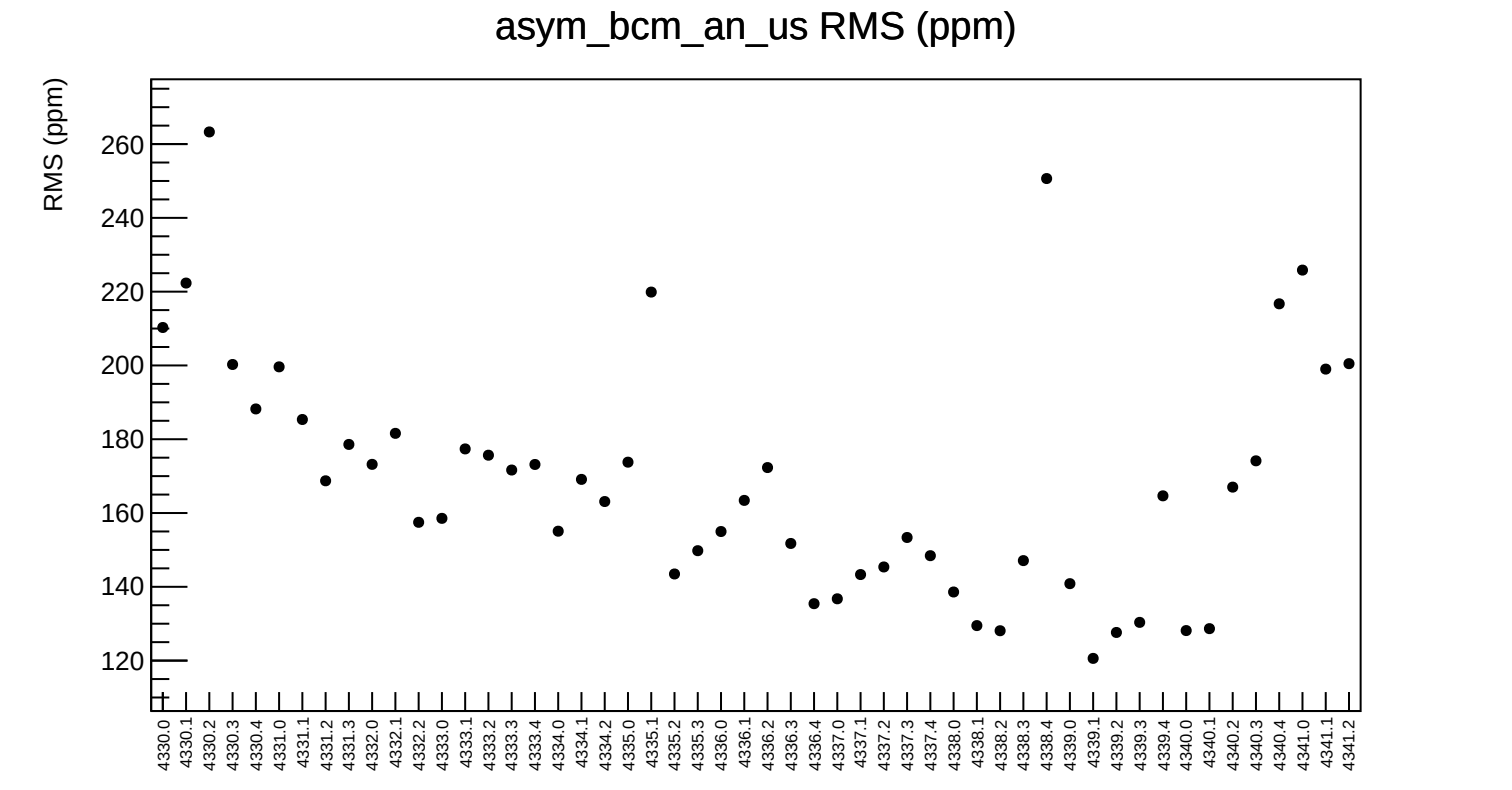

asym_bcm_target (ppb)
χ² / ndf 8.593 / 51
p0 18.97 ± 225.1
4000
3000
2000
1000
0
−1000
−2000
−3000
−4000
1
0.8
0.6
0.4
0.2
0
−0.2
−0.4
−0.6
−0.8
4330.0
4330.1
4330.2
4330.3
4330.4
4331.0
4331.1
4331.2
4331.3
4332.0
4332.1
4332.2
4333.0
4333.1
4333.2
4333.3
4333.4
4334.0
4334.1
4334.2
4335.0
4335.1
4335.2
4335.3
4336.0
4336.1
4336.2
4336.3
4336.4
4337.0
4337.1
4337.2
4337.3
4337.4
4338.0
4338.1
4338.2
4338.3
4338.4
4339.0
4339.1
4339.2
4339.3
4339.4
4340.0
4340.1
4340.2
4340.3
4340.4
4341.0
4341.1
4341.2

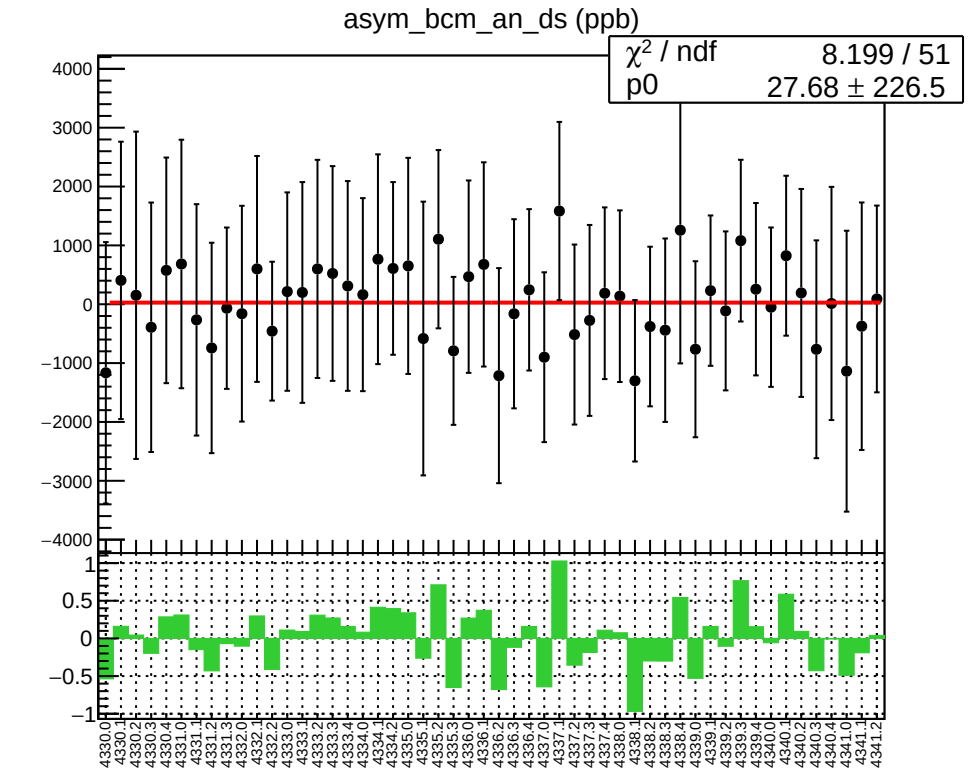

1D pull distribution
Mean 0.003226 ± 0.05637
Std Dev 0.4065 ± 0.03986
Underflow 0
Overflow 0
χ² / ndf 0.9423 / 1
Constant 25.92 ± 4.65
Mean −0.0338 ± 0.0654
Sigma 0.4221 ± 0.0508
24
22
20
18
16
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

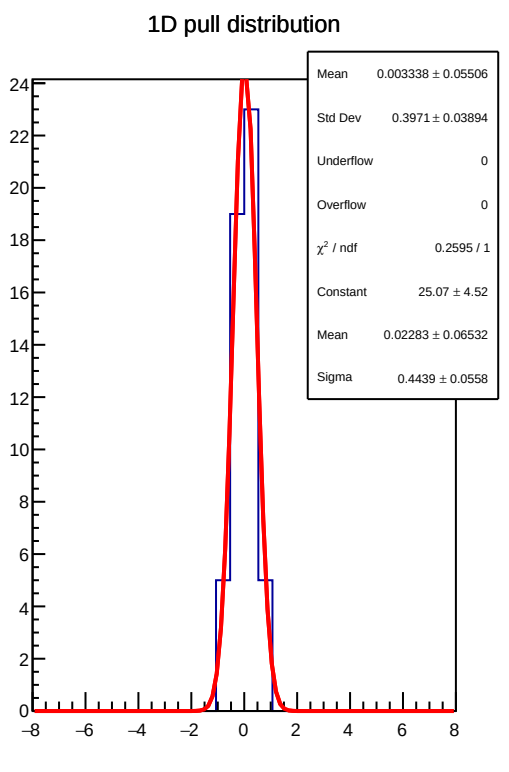

asym_bcm_target RMS (ppm)
RMS (ppm)
260
240
220
200
180
160
140
120
4330.0
4330.1
4330.2
4330.3
4330.4
4331.0
4331.1
4331.2
4331.3
4332.0
4332.1
4332.2
4333.0
4333.1
4333.2
4333.3
4333.4
4334.0
4334.1
4334.2
4335.0
4335.1
4335.2
4335.3
4336.0
4336.1
4336.2
4336.3
4336.4
4337.0
4337.1
4337.2
4337.3
4337.4
4338.0
4338.1
4338.2
4338.3
4338.4
4339.0
4339.1
4339.2
4339.3
4339.4
4340.0
4340.1
4340.2
4340.3
4340.4
4341.0
4341.1
4341.2

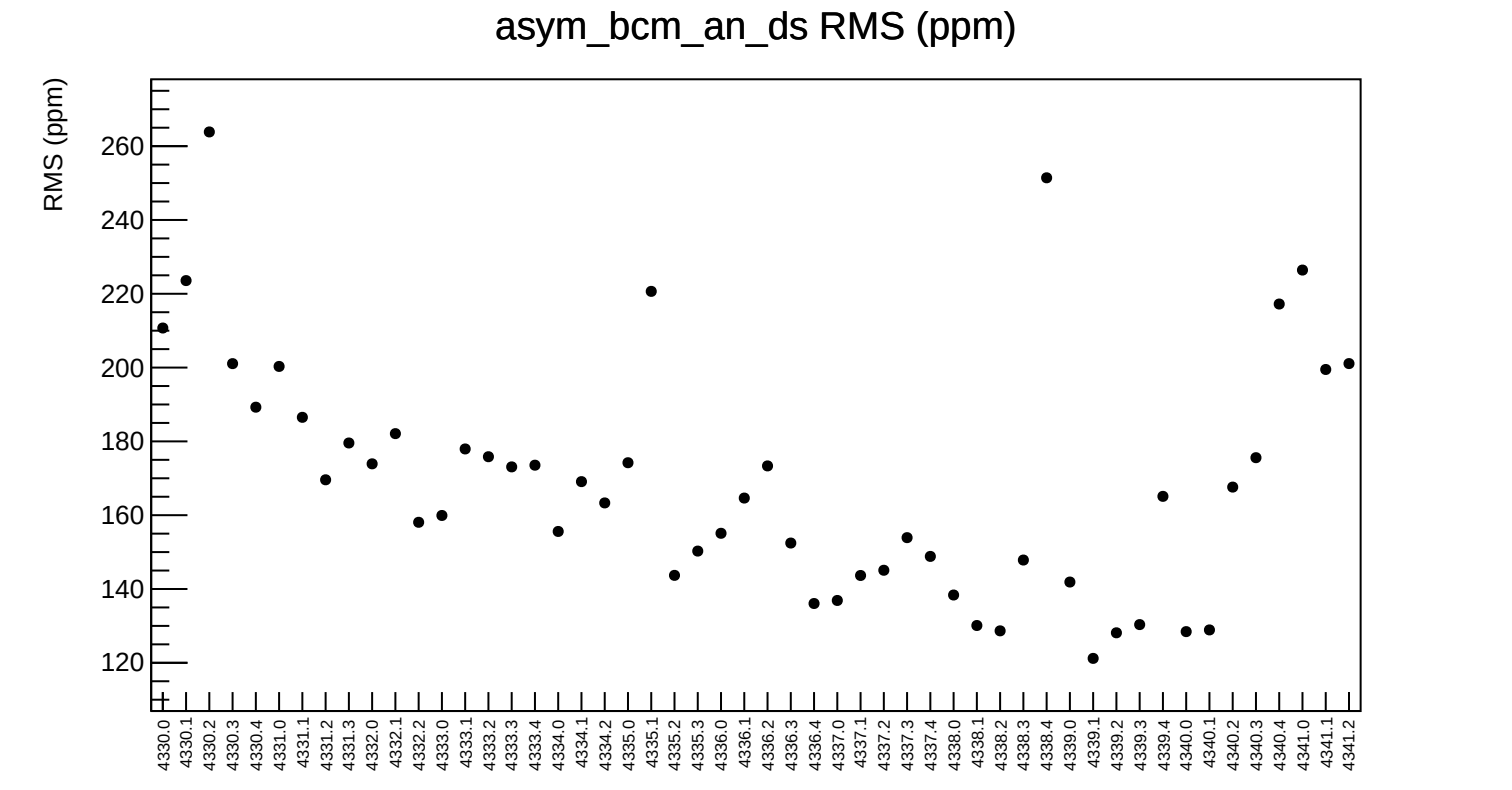

asym_bcm_an_us (ppb)
χ² / ndf 9.194 / 51
p0 14.48 ± 225.7
4000
3000
2000
1000
0
−1000
−2000
−3000
−4000
1
0.8
0.6
0.4
0.2
0
−0.2
−0.4
−0.6
−0.8
4330.0
4330.1
4330.2
4330.3
4330.4
4331.0
4331.1
4331.2
4331.3
4332.0
4332.1
4332.2
4333.0
4333.1
4333.2
4333.3
4333.4
4334.0
4334.1
4334.2
4335.0
4335.1
4335.2
4335.3
4336.0
4336.1
4336.2
4336.3
4336.4
4337.0
4337.1
4337.2
4337.3
4337.4
4338.0
4338.1
4338.2
4338.3
4338.4
4339.0
4339.1
4339.2
4339.3
4339.4
4340.0
4340.1
4340.2
4340.3
4340.4
4341.0
4341.1
4341.2

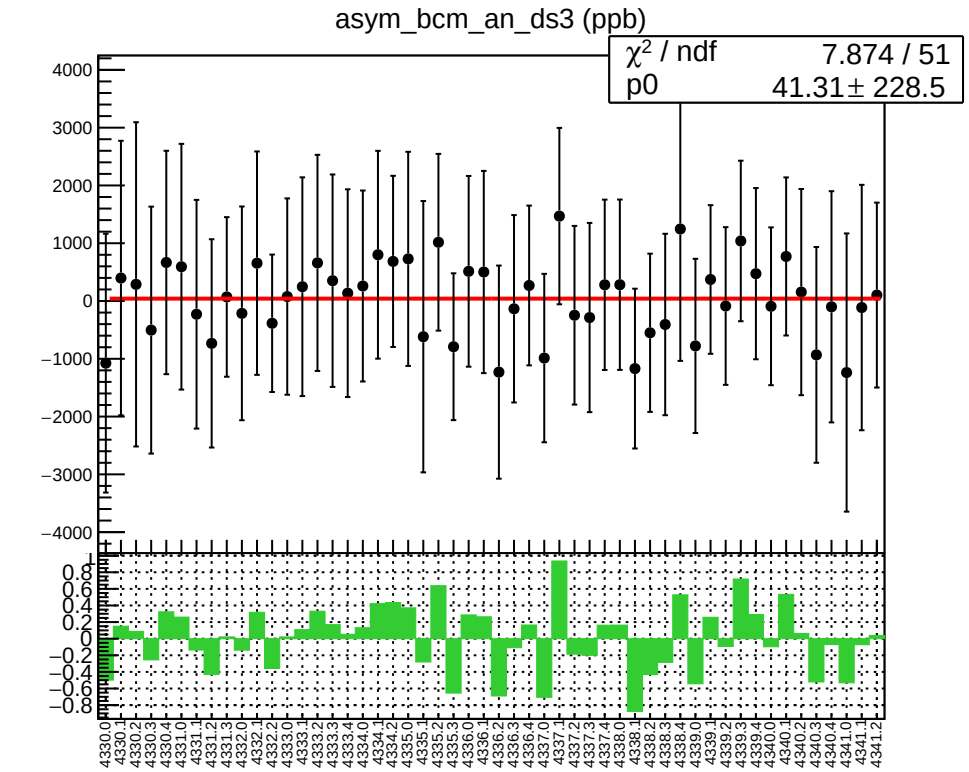

1D pull distribution
Mean 0.003169 ± 0.05831
Std Dev 0.4205 ± 0.04123
Underflow 0
Overflow 0
χ² / ndf 0.01121 / 1
Constant 25.25 ± 4.49
Mean −0.04496 ± 0.06456
Sigma 0.4429 ± 0.0539
22
20
18
16
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

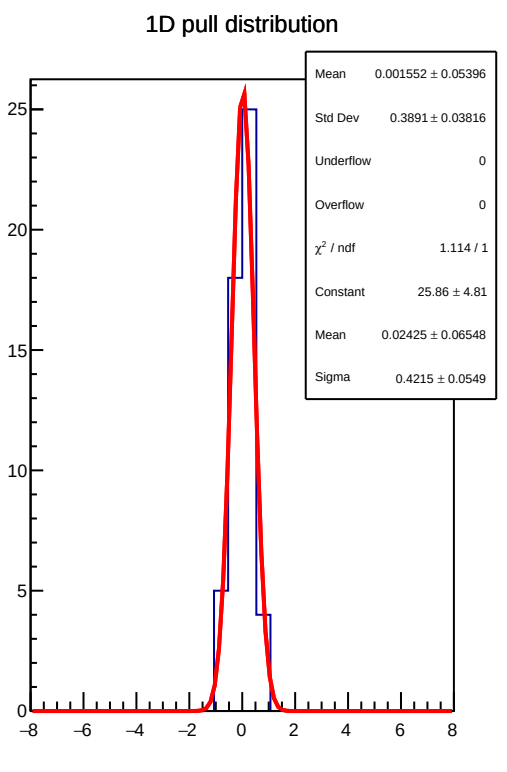

asym_bcm_an_us RMS (ppm)
RMS (ppm)
260
240
220
200
180
160
140
120
4330.0
4330.1
4330.2
4330.3
4330.4
4331.0
4331.1
4331.2
4331.3
4332.0
4332.1
4332.2
4333.0
4333.1
4333.2
4333.3
4333.4
4334.0
4334.1
4334.2
4335.0
4335.1
4335.2
4335.3
4336.0
4336.1
4336.2
4336.3
4336.4
4337.0
4337.1
4337.2
4337.3
4337.4
4338.0
4338.1
4338.2
4338.3
4338.4
4339.0
4339.1
4339.2
4339.3
4339.4
4340.0
4340.1
4340.2
4340.3
4340.4
4341.0
4341.1
4341.2

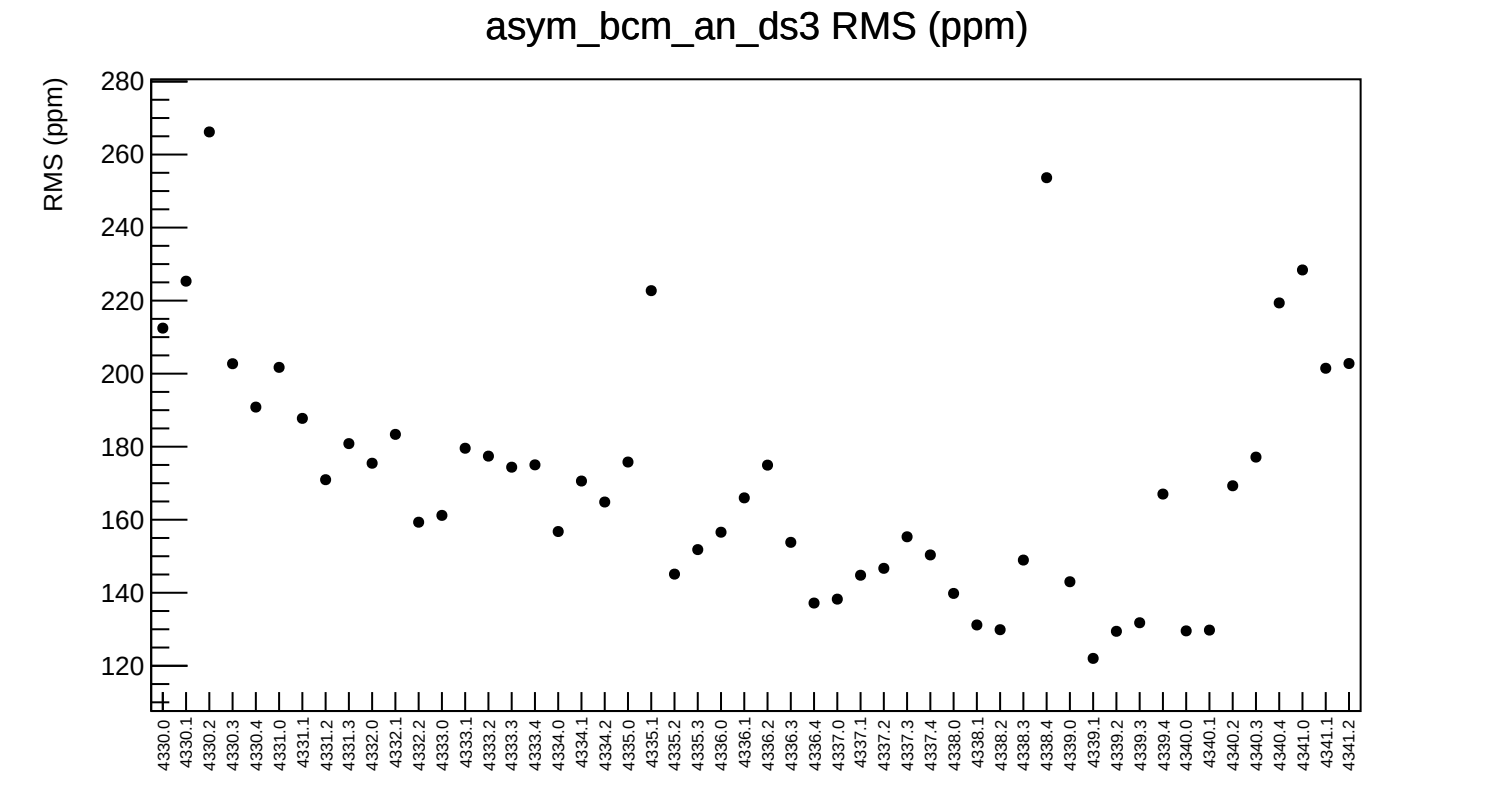

asym_bcm_an_ds (ppb)
χ² / ndf 8.199 / 51
p0 27.68 ± 226.5
4000
3000
2000
1000
0
−1000
−2000
−3000
−4000
1
0.5
0
−0.5
−1
4330.0
4330.1
4330.2
4330.3
4330.4
4331.0
4331.1
4331.2
4331.3
4332.0
4332.1
4332.2
4333.0
4333.1
4333.2
4333.3
4333.4
4334.0
4334.1
4334.2
4335.0
4335.1
4335.2
4335.3
4336.0
4336.1
4336.2
4336.3
4336.4
4337.0
4337.1
4337.2
4337.3
4337.4
4338.0
4338.1
4338.2
4338.3
4338.4
4339.0
4339.1
4339.2
4339.3
4339.4
4340.0
4340.1
4340.2
4340.3
4340.4
4341.0
4341.1
4341.2

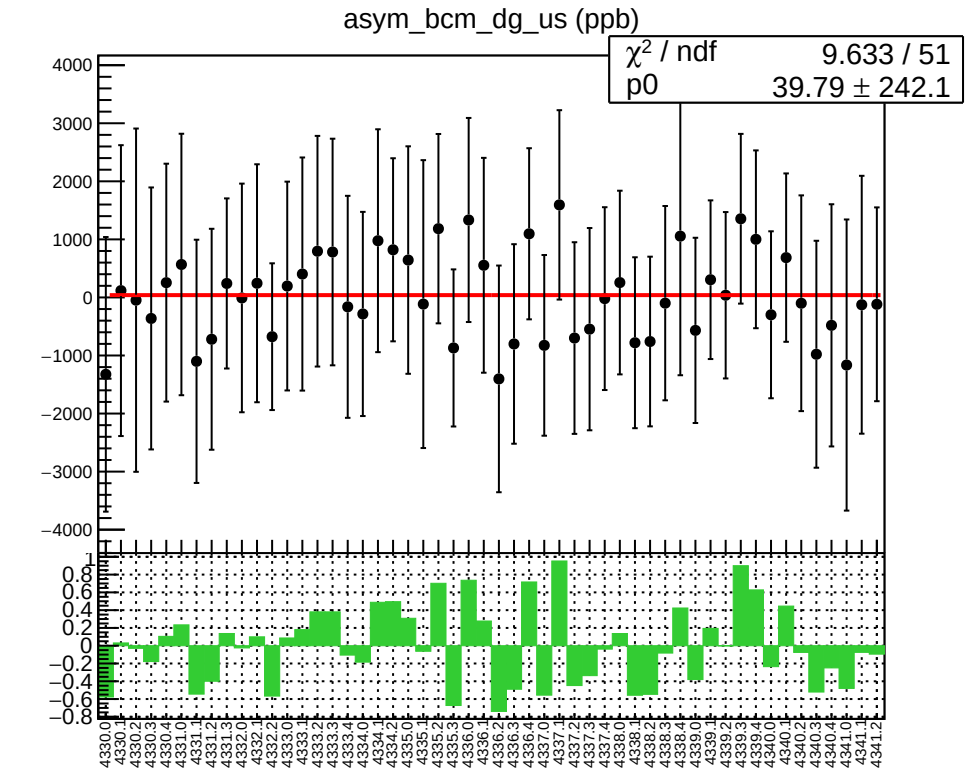

1D pull distribution
Mean 0.003338 ± 0.05506
Std Dev 0.3971 ± 0.03894
Underflow 0
Overflow 0
χ² / ndf 0.2595 / 1
Constant 25.07 ± 4.52
Mean 0.02283 ± 0.06532
Sigma 0.4439 ± 0.0558
24
22
20
18
16
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

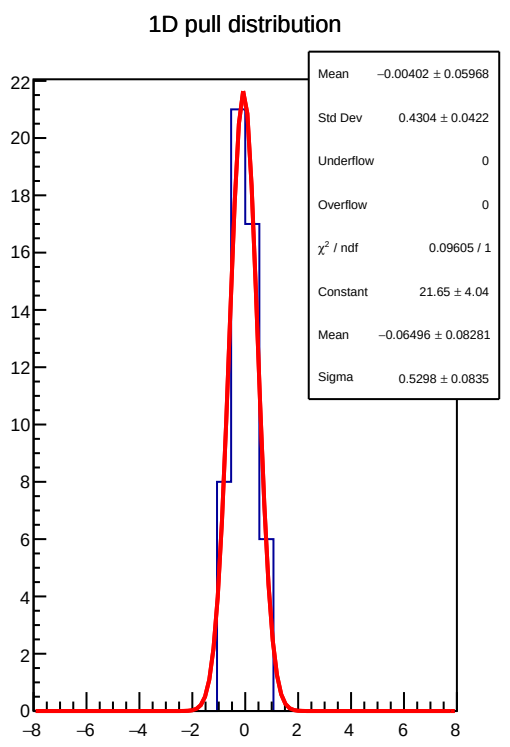

asym_bcm_an_ds RMS (ppm)
RMS (ppm)
260
240
220
200
180
160
140
120
4330.0
4330.1
4330.2
4330.3
4330.4
4331.0
4331.1
4331.2
4331.3
4332.0
4332.1
4332.2
4333.0
4333.1
4333.2
4333.3
4333.4
4334.0
4334.1
4334.2
4335.0
4335.1
4335.2
4335.3
4336.0
4336.1
4336.2
4336.3
4336.4
4337.0
4337.1
4337.2
4337.3
4337.4
4338.0
4338.1
4338.2
4338.3
4338.4
4339.0
4339.1
4339.2
4339.3
4339.4
4340.0
4340.1
4340.2
4340.3
4340.4
4341.0
4341.1
4341.2

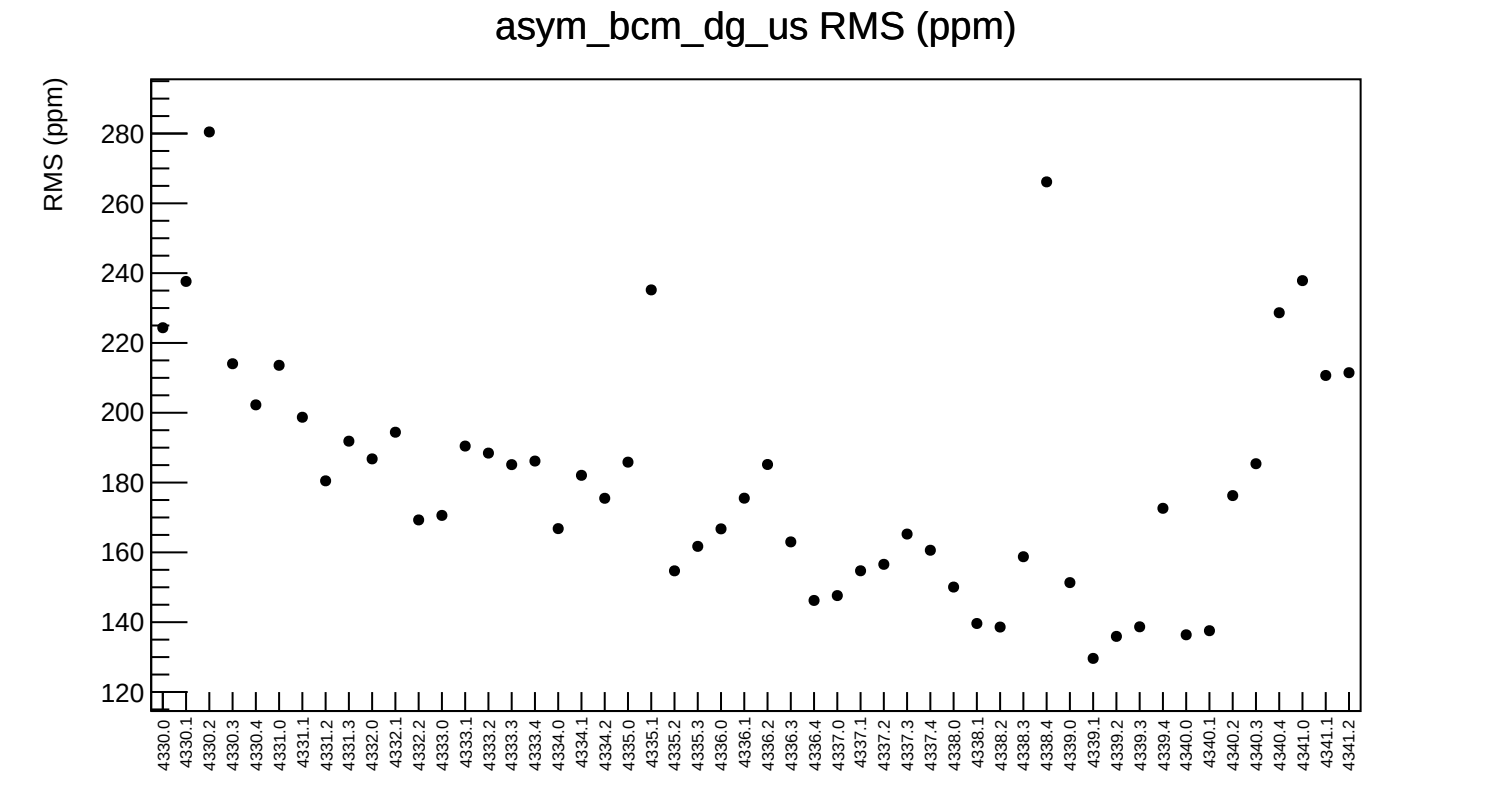

asym_bcm_an_ds3 (ppb)
χ² / ndf 7.874 / 51
p0 41.31 ± 228.5
4000
3000
2000
1000
0
−1000
−2000
−3000
−4000
0.8
0.6
0.4
0.2
0
−0.2
−0.4
−0.6
−0.8
4330.0
4330.1
4330.2
4330.3
4330.4
4331.0
4331.1
4331.2
4331.3
4332.0
4332.1
4332.2
4333.0
4333.1
4333.2
4333.3
4333.4
4334.0
4334.1
4334.2
4335.0
4335.1
4335.2
4335.3
4336.0
4336.1
4336.2
4336.3
4336.4
4337.0
4337.1
4337.2
4337.3
4337.4
4338.0
4338.1
4338.2
4338.3
4338.4
4339.0
4339.1
4339.2
4339.3
4339.4
4340.0
4340.1
4340.2
4340.3
4340.4
4341.0
4341.1
4341.2

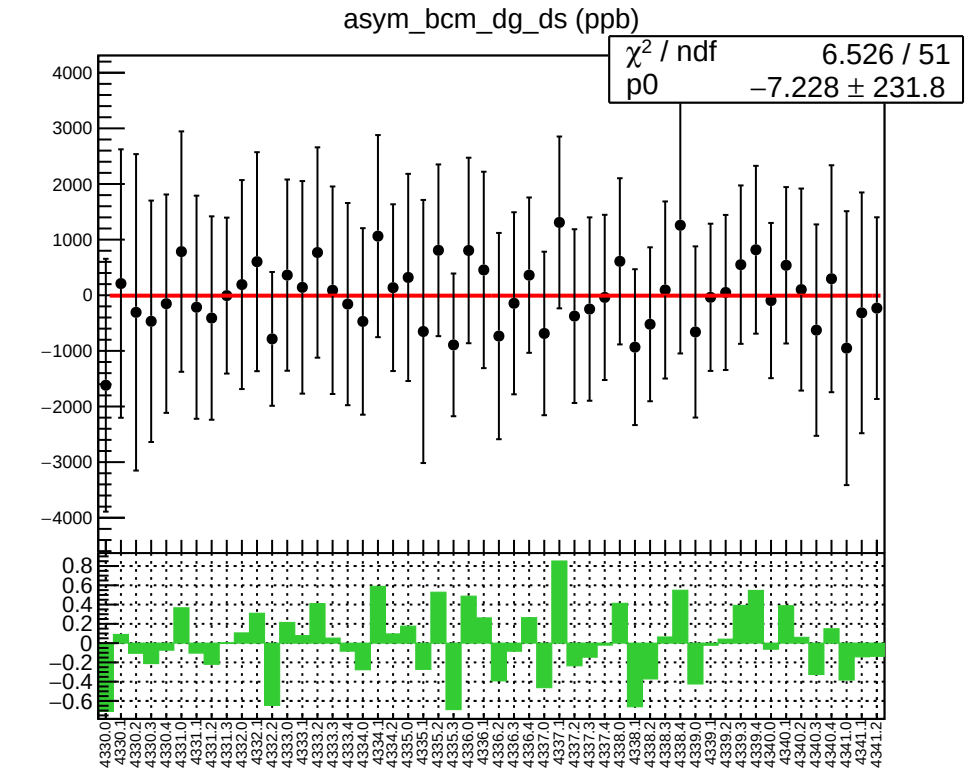

1D pull distribution
Mean 0.001552 ± 0.05396
Std Dev 0.3891 ± 0.03816
Underflow 0
Overflow 0
χ² / ndf 1.114 / 1
Constant 25.86 ± 4.81
Mean 0.02425 ± 0.06548
Sigma 0.4215 ± 0.0549
25
20
15
10
5
0
−8
−6
−4
−2
0
2
4
6
8

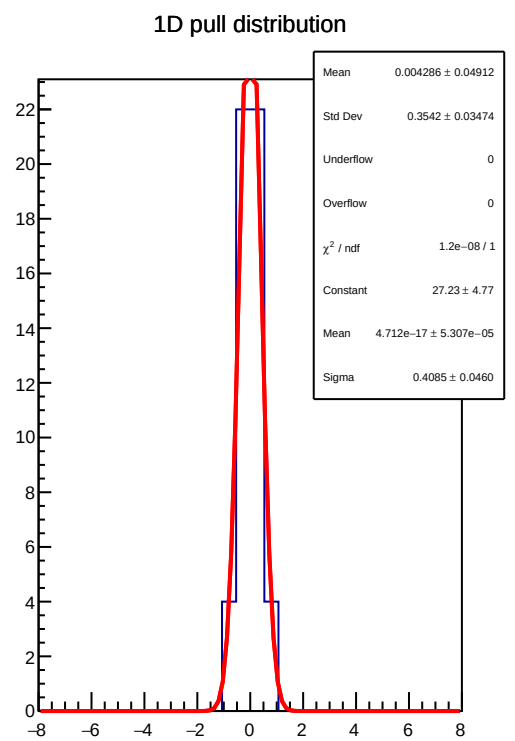

asym_bcm_an_ds3 RMS (ppm)
RMS (ppm)
280
260
240
220
200
180
160
140
120
4330.0
4330.1
4330.2
4330.3
4330.4
4331.0
4331.1
4331.2
4331.3
4332.0
4332.1
4332.2
4333.0
4333.1
4333.2
4333.3
4333.4
4334.0
4334.1
4334.2
4335.0
4335.1
4335.2
4335.3
4336.0
4336.1
4336.2
4336.3
4336.4
4337.0
4337.1
4337.2
4337.3
4337.4
4338.0
4338.1
4338.2
4338.3
4338.4
4339.0
4339.1
4339.2
4339.3
4339.4
4340.0
4340.1
4340.2
4340.3
4340.4
4341.0
4341.1
4341.2

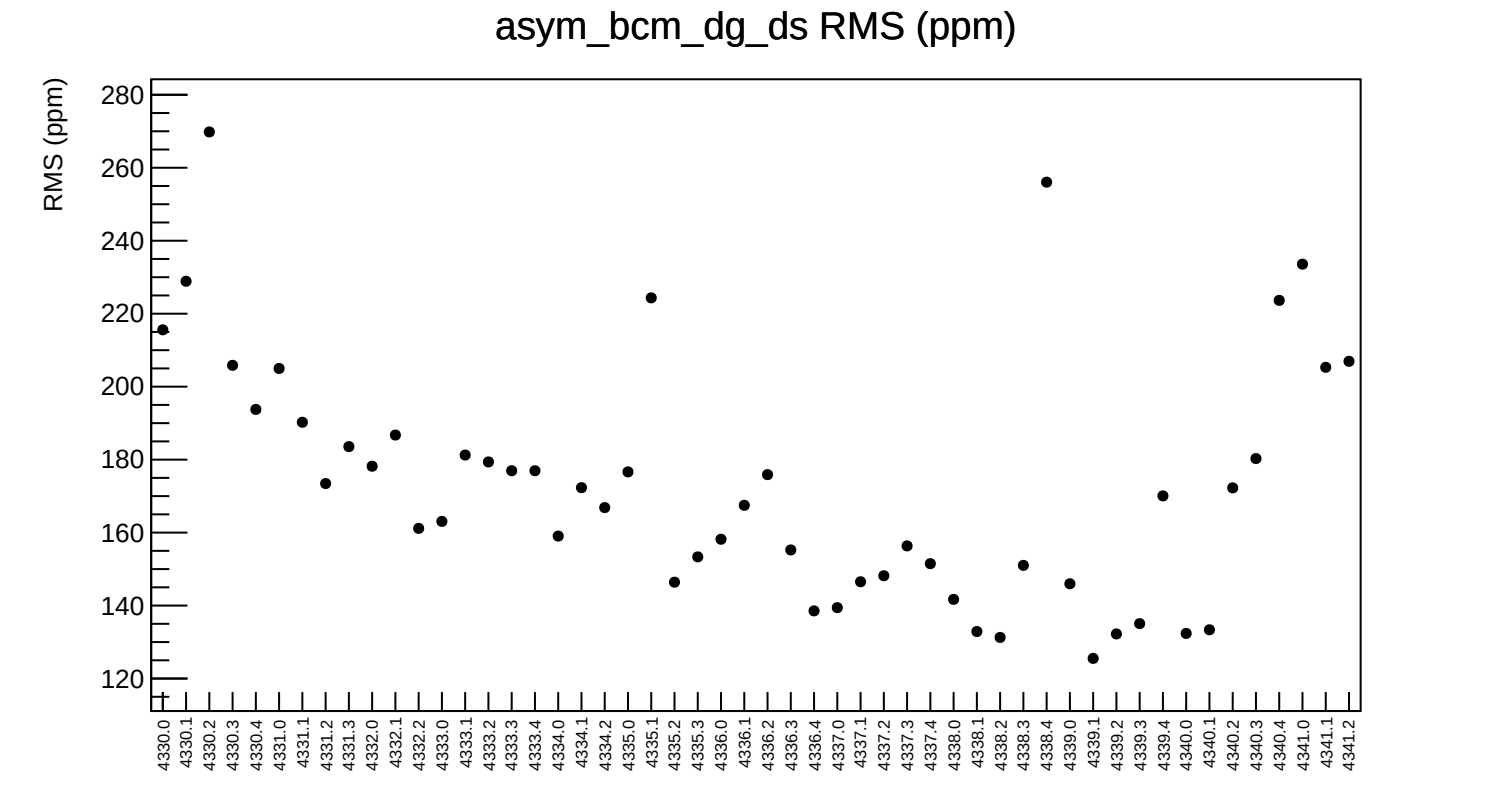

asym_bcm_dg_us (ppb)
χ² / ndf 9.633 / 51
p0 39.79 ± 242.1

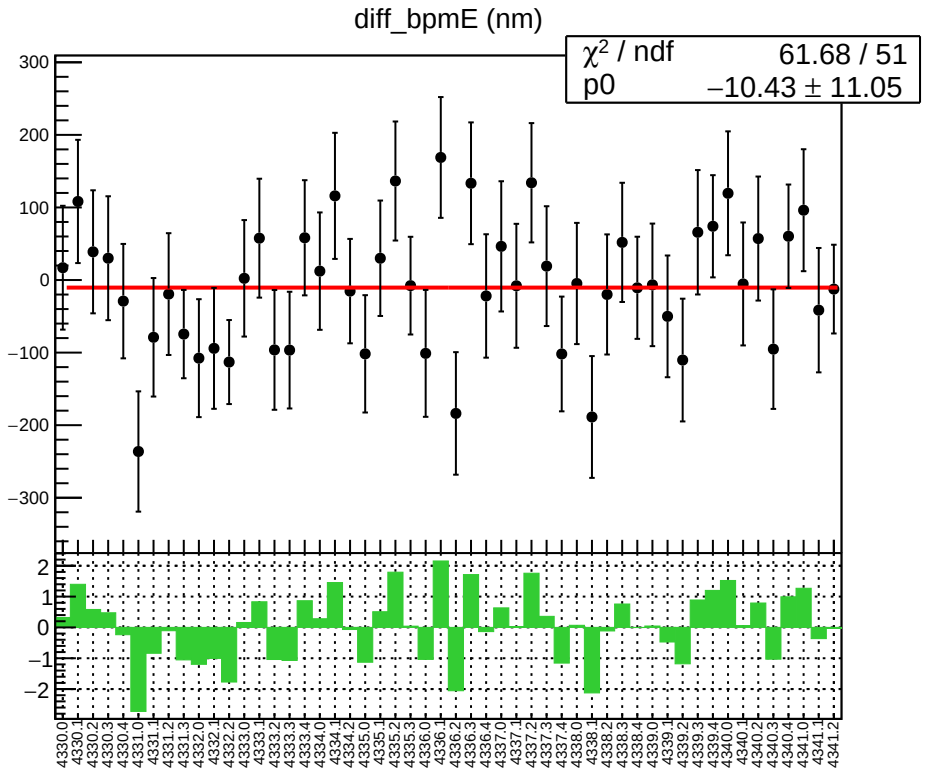

1D pull distribution
Mean −0.00402 ± 0.05968
Std Dev 0.4304 ± 0.0422
Underflow 0
Overflow 0
χ² / ndf 0.09605 / 1
Constant 21.65 ± 4.04
Mean −0.06496 ± 0.08281
Sigma 0.5298 ± 0.0835

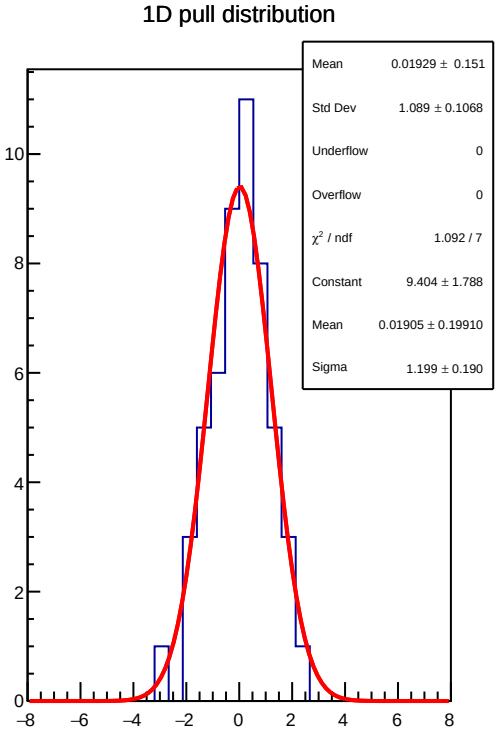

asym_bcm_dg_us RMS (ppm)
RMS (ppm)
280
260
240
220
200
180
160
140
120
4330.0
4330.1
4330.2
4330.3
4330.4
4331.0
4331.1
4331.2
4331.3
4332.0
4332.1
4332.2
4333.0
4333.1
4333.2
4333.3
4333.4
4334.0
4334.1
4334.2
4335.0
4335.1
4335.2
4335.3
4336.0
4336.1
4336.2
4336.3
4336.4
4337.0
4337.1
4337.2
4337.3
4337.4
4338.0
4338.1
4338.2
4338.3
4338.4
4339.0
4339.1
4339.2
4339.3
4339.4
4340.0
4340.1
4340.2
4340.3
4340.4
4341.0
4341.1
4341.2

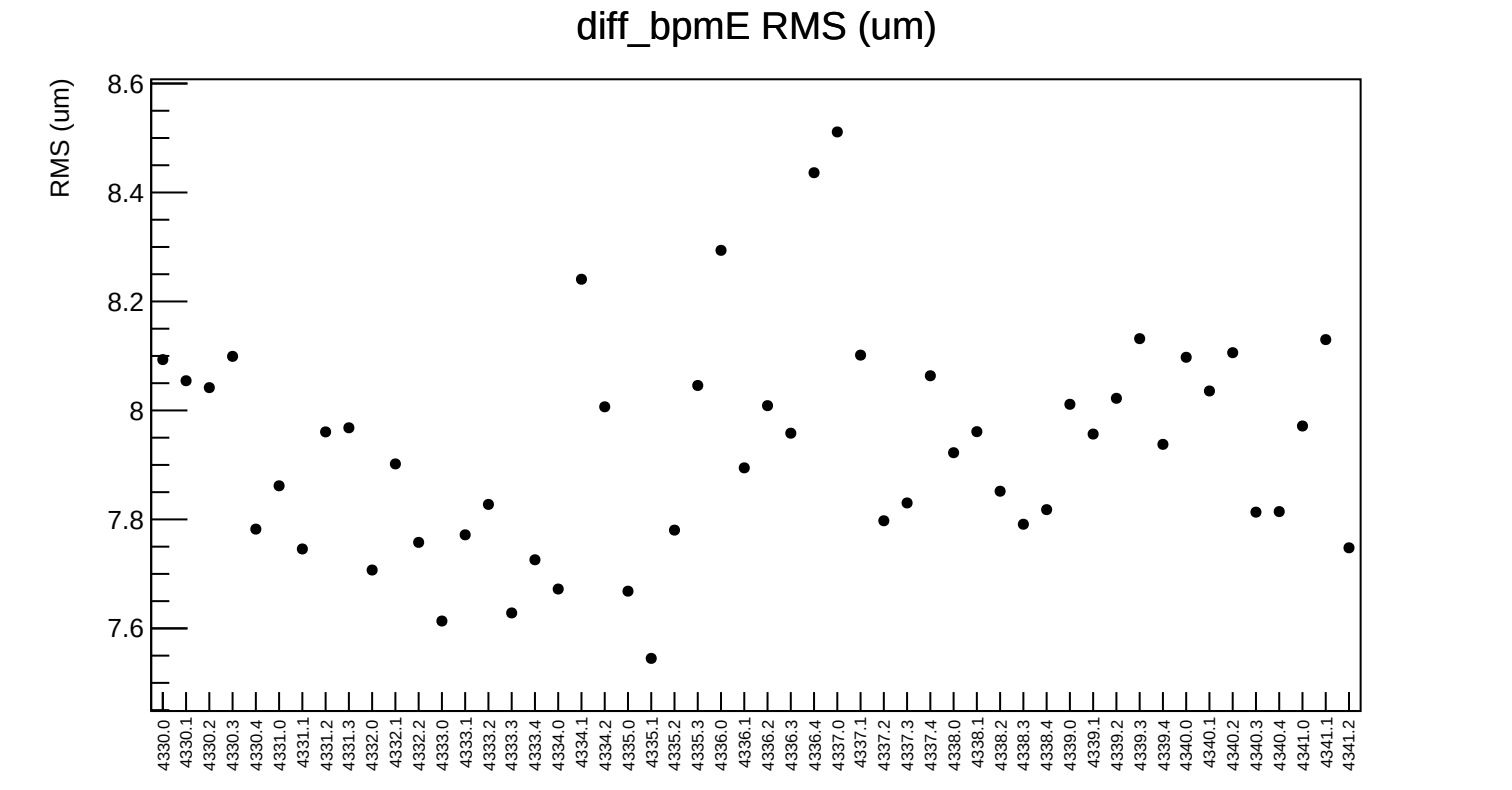

asym_bcm_dg_ds (ppb)
χ² / ndf 6.526 / 51
p0 −7.228 ± 231.8

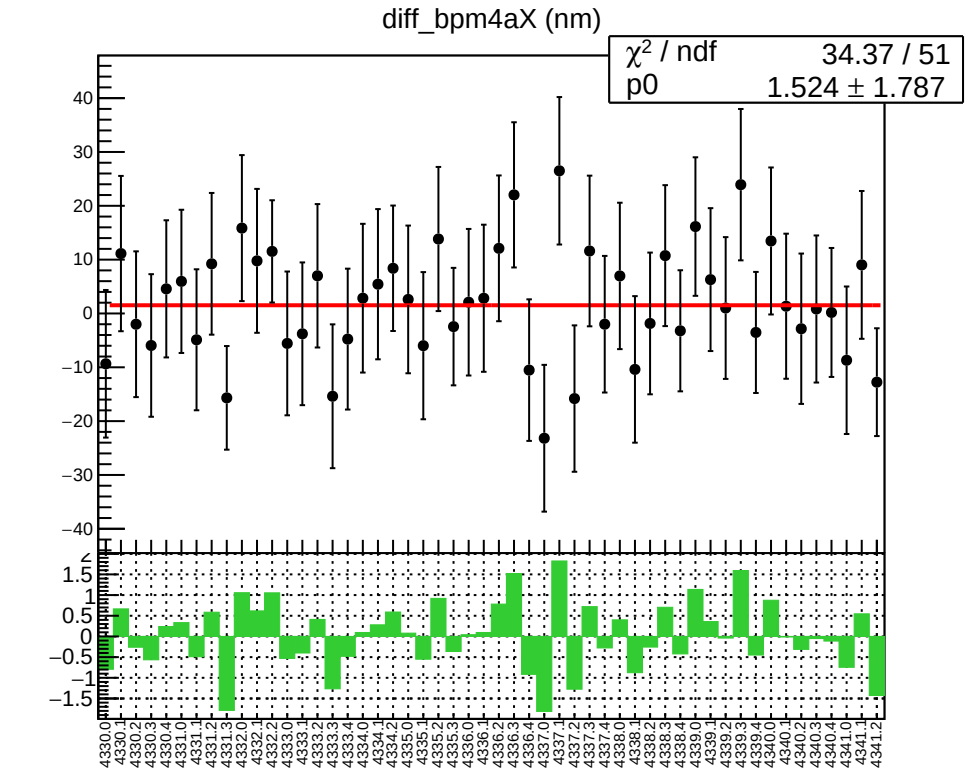

1D pull distribution
Mean 0.004286 ± 0.04912
Std Dev 0.3542 ± 0.03474
Underflow 0
Overflow 0
χ² / ndf 1.2e−08 / 1
Constant 27.23 ± 4.77
Mean −4.712e−17 ± 5.307e−05
Sigma 0.4085 ± 0.0460

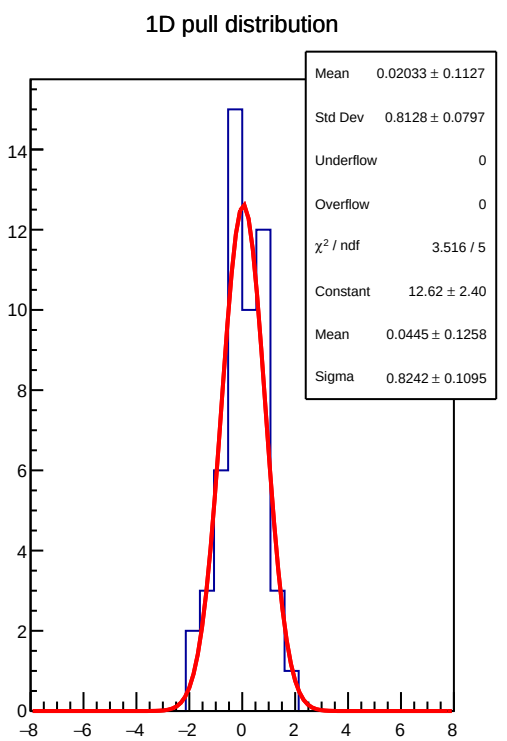

asym_bcm_dg_ds RMS (ppm)
RMS (ppm)
280
260
240
220
200
180
160
140
120
4330.0
4330.1
4330.2
4330.3
4330.4
4331.0
4331.1
4331.2
4331.3
4332.0
4332.1
4332.2
4333.0
4333.1
4333.2
4333.3
4333.4
4334.0
4334.1
4334.2
4335.0
4335.1
4335.2
4335.3
4336.0
4336.1
4336.2
4336.3
4336.4
4337.0
4337.1
4337.2
4337.3
4337.4
4338.0
4338.1
4338.2
4338.3
4338.4
4339.0
4339.1
4339.2
4339.3
4339.4
4340.0
4340.1
4340.2
4340.3
4340.4
4341.0
4341.1
4341.2

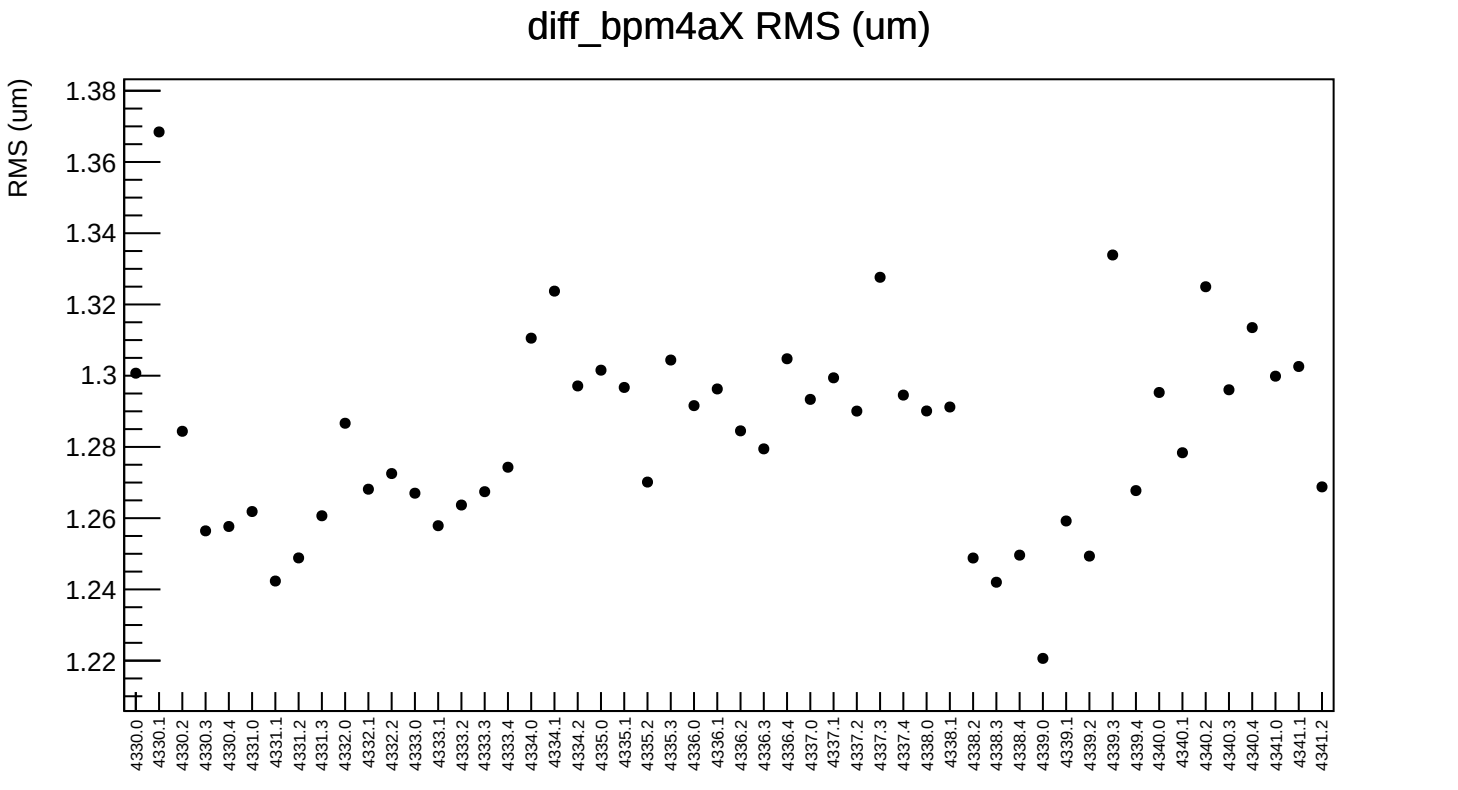

diff_bpmE (nm)
χ² / ndf 61.68 / 51
p0 −10.43 ± 11.05
300
200
100
0
−100
−200
−300
2
1
0
−1
−2
4330.0
4330.1
4330.2
4330.3
4330.4
4331.0
4331.1
4331.2
4331.3
4332.0
4332.1
4332.2
4333.0
4333.1
4333.2
4333.3
4333.4
4334.0
4334.1
4334.2
4335.0
4335.1
4335.2
4335.3
4336.0
4336.1
4336.2
4336.3
4336.4
4337.0
4337.1
4337.2
4337.3
4337.4
4338.0
4338.1
4338.2
4338.3
4338.4
4339.0
4339.1
4339.2
4339.3
4339.4
4340.0
4340.1
4340.2
4340.3
4340.4
4341.0
4341.1
4341.2

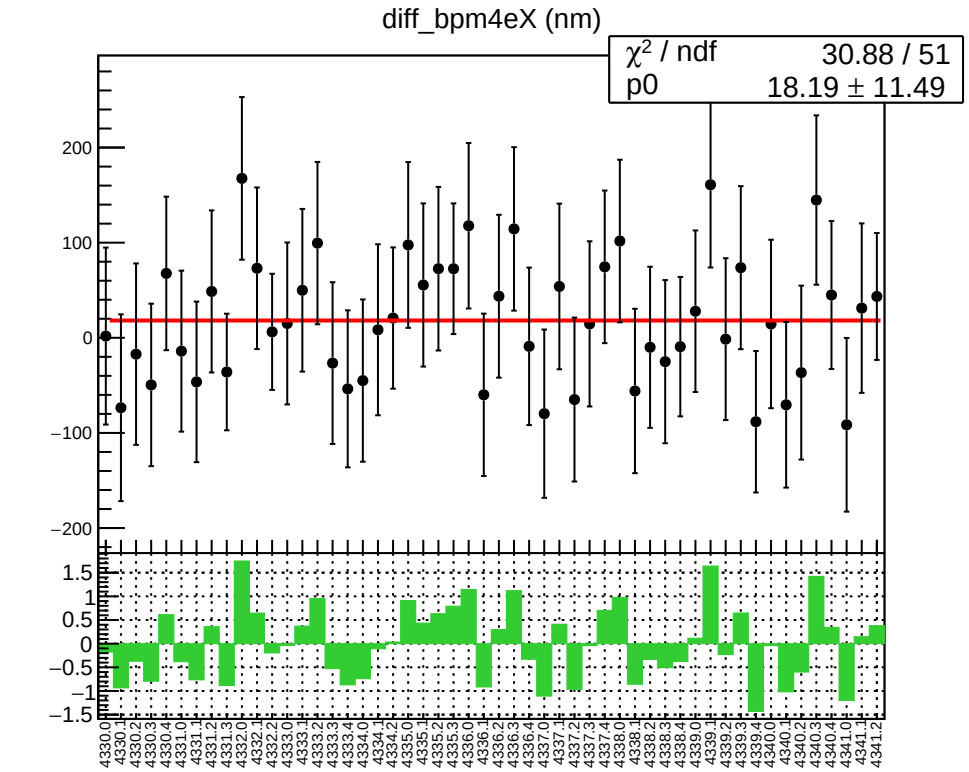

1D pull distribution
Mean 0.01929 ± 0.151
Std Dev 1.089 ± 0.1068
Underflow 0
Overflow 0
χ² / ndf 1.092 / 7
Constant 9.404 ± 1.788
Mean 0.01905 ± 0.19910
Sigma 1.199 ± 0.190
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

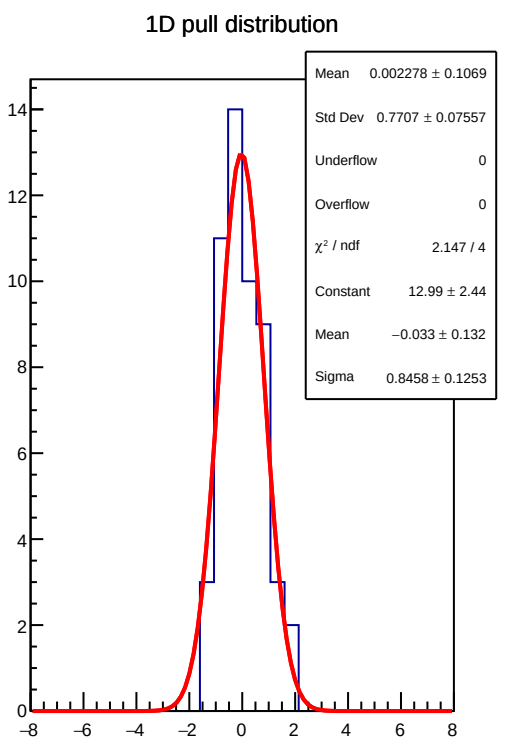

diff_bpmE RMS (um)
RMS (um)
8.6
8.4
8.2
8
7.8
7.6
4330.0
4330.1
4330.2
4330.3
4330.4
4331.0
4331.1
4331.2
4331.3
4332.0
4332.1
4332.2
4333.0
4333.1
4333.2
4333.3
4333.4
4334.0
4334.1
4334.2
4335.0
4335.1
4335.2
4335.3
4336.0
4336.1
4336.2
4336.3
4336.4
4337.0
4337.1
4337.2
4337.3
4337.4
4338.0
4338.1
4338.2
4338.3
4338.4
4339.0
4339.1
4339.2
4339.3
4339.4
4340.0
4340.1
4340.2
4340.3
4340.4
4341.0
4341.1
4341.2

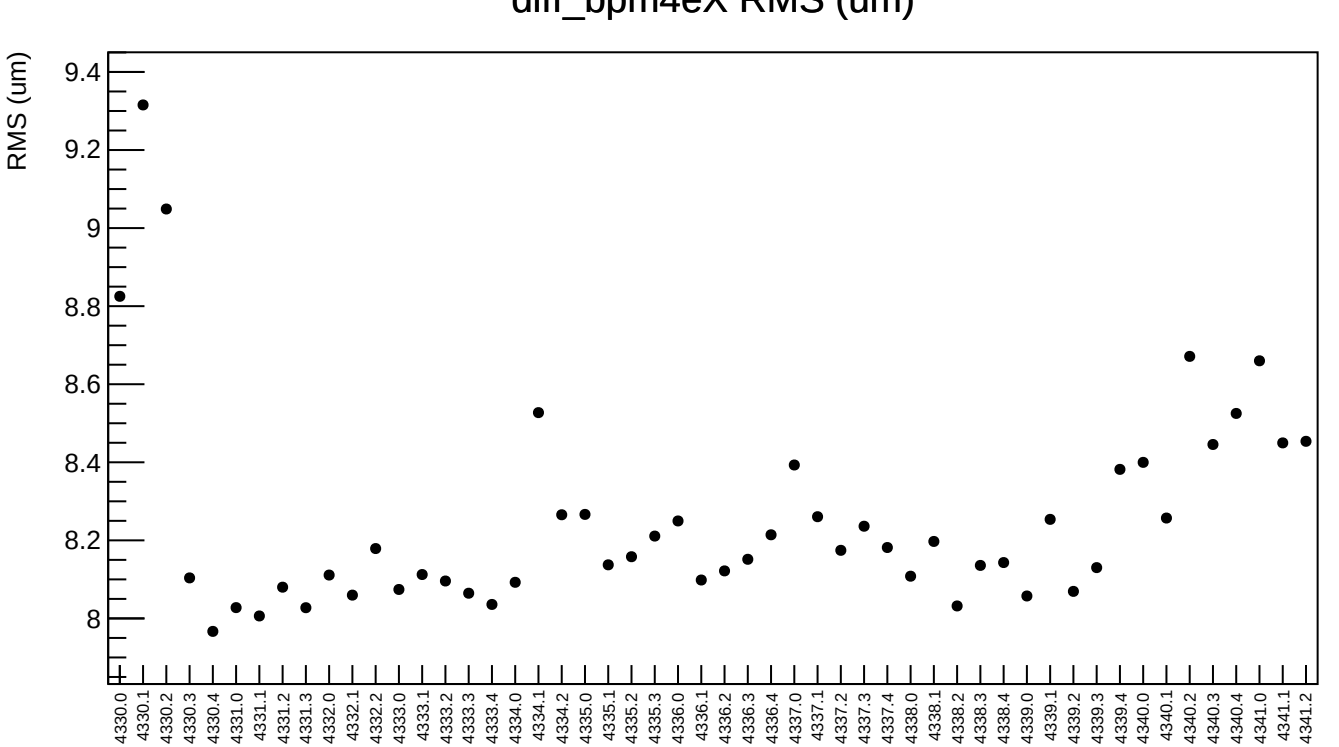

diff_bpm4aX (nm)
χ² / ndf 34.37 / 51
p0 1.524 ± 1.787

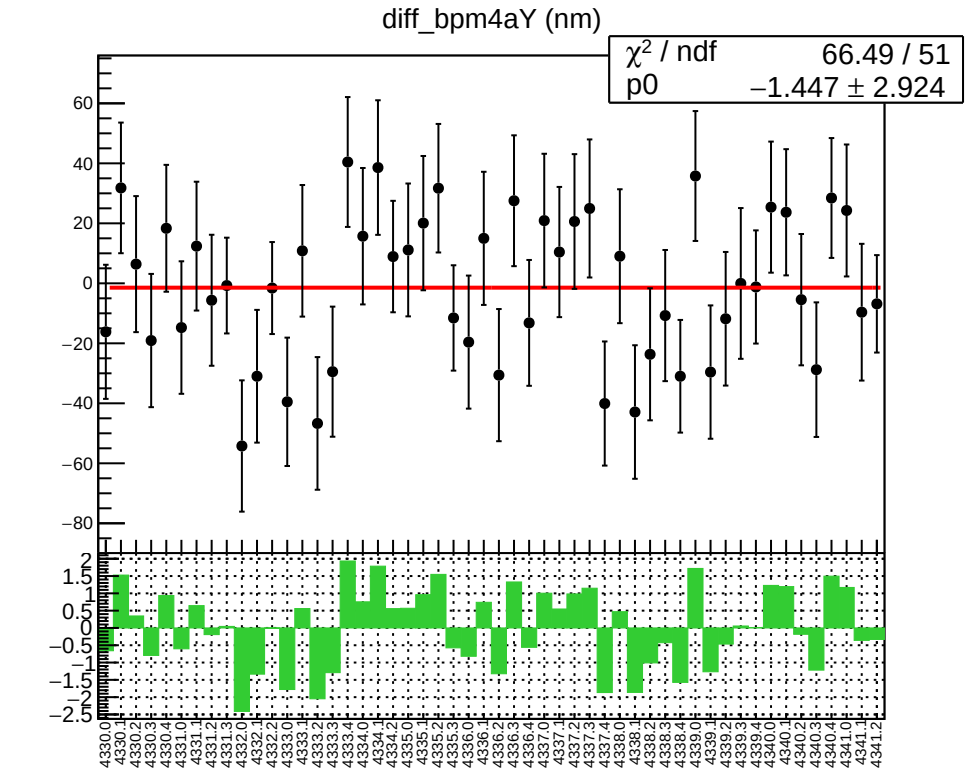

1D pull distribution
Mean 0.02033 ± 0.1127
Std Dev 0.8128 ± 0.0797
Underflow 0
Overflow 0
χ² / ndf 3.516 / 5
Constant 12.62 ± 2.40
Mean 0.0445 ± 0.1258
Sigma 0.8242 ± 0.1095

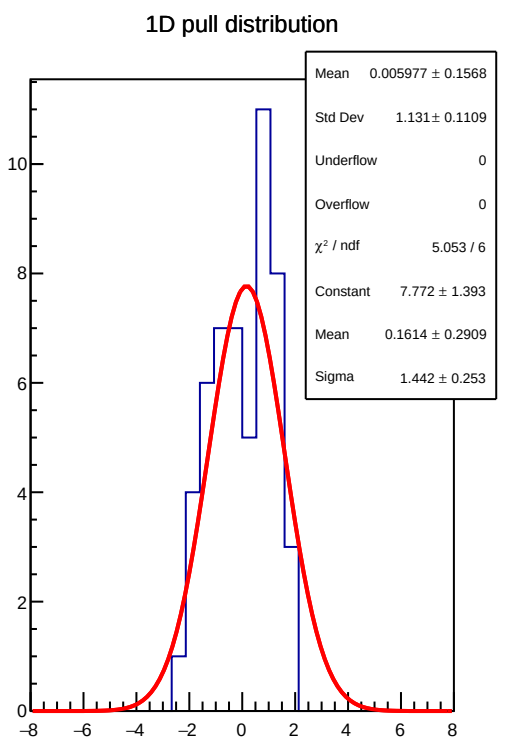

diff_bpm4aX RMS (um)
RMS (um)
1.38
1.36
1.34
1.32
1.3
1.28
1.26
1.24
1.22
4330.0
4330.1
4330.2
4330.3
4330.4
4331.0
4331.1
4331.2
4331.3
4332.0
4332.1
4332.2
4333.0
4333.1
4333.2
4333.3
4333.4
4334.0
4334.1
4334.2
4335.0
4335.1
4335.2
4335.3
4336.0
4336.1
4336.2
4336.3
4336.4
4337.0
4337.1
4337.2
4337.3
4337.4
4338.0
4338.1
4338.2
4338.3
4338.4
4339.0
4339.1
4339.2
4339.3
4339.4
4340.0
4340.1
4340.2
4340.3
4340.4
4341.0
4341.1
4341.2

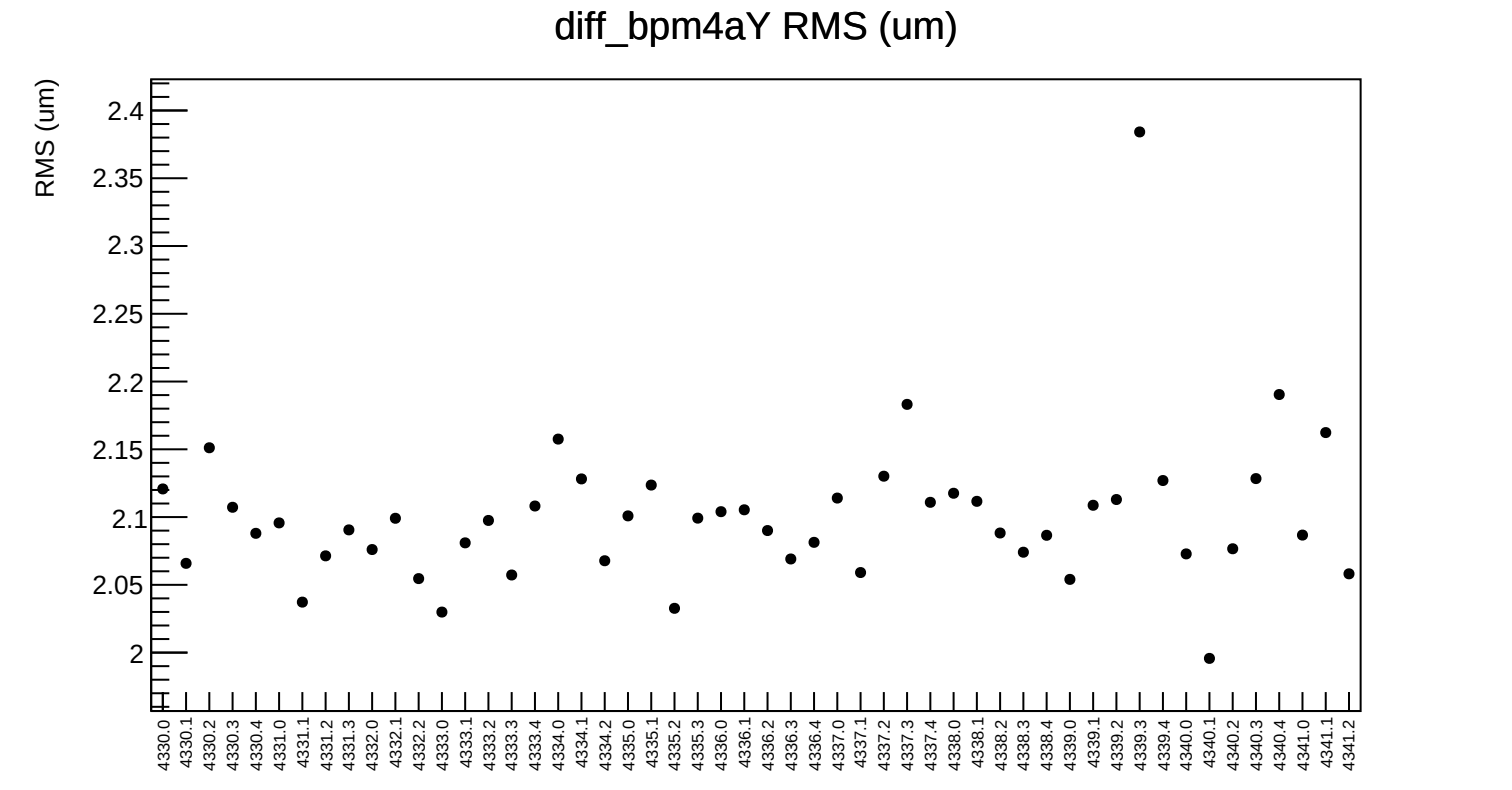

diff_bpm4eX (nm)
χ² / ndf 30.88 / 51
p0 18.19 ± 11.49

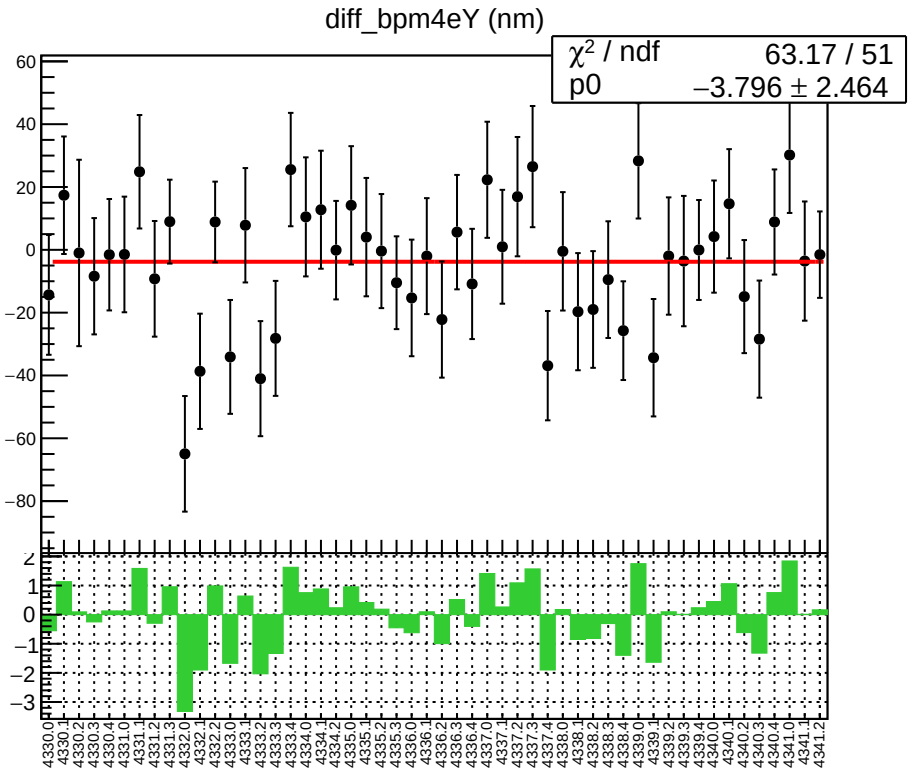

1D pull distribution
Mean 0.002278 ± 0.1069
Std Dev 0.7707 ± 0.07557
Underflow 0
Overflow 0
χ² / ndf 2.147 / 4
Constant 12.99 ± 2.44
Mean −0.033 ± 0.132
Sigma 0.8458 ± 0.1253

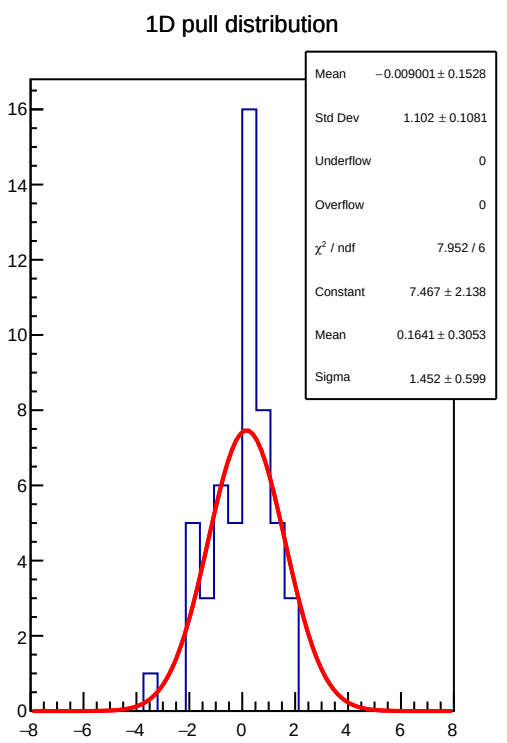

diff_bpm4eX RMS (um)
RMS (um)
9.4
9.2
9
8.8
8.6
8.4
8.2
8
4330.0
4330.1
4330.2
4330.3
4330.4
4331.0
4331.1
4331.2
4331.3
4332.0
4332.1
4332.2
4333.0
4333.1
4333.2
4333.3
4333.4
4334.0
4334.1
4334.2
4335.0
4335.1
4335.2
4335.3
4336.0
4336.1
4336.2
4336.3
4336.4
4337.0
4337.1
4337.2
4337.3
4337.4
4338.0
4338.1
4338.2
4338.3
4338.4
4339.0
4339.1
4339.2
4339.3
4339.4
4340.0
4340.1
4340.2
4340.3
4340.4
4341.0
4341.1
4341.2

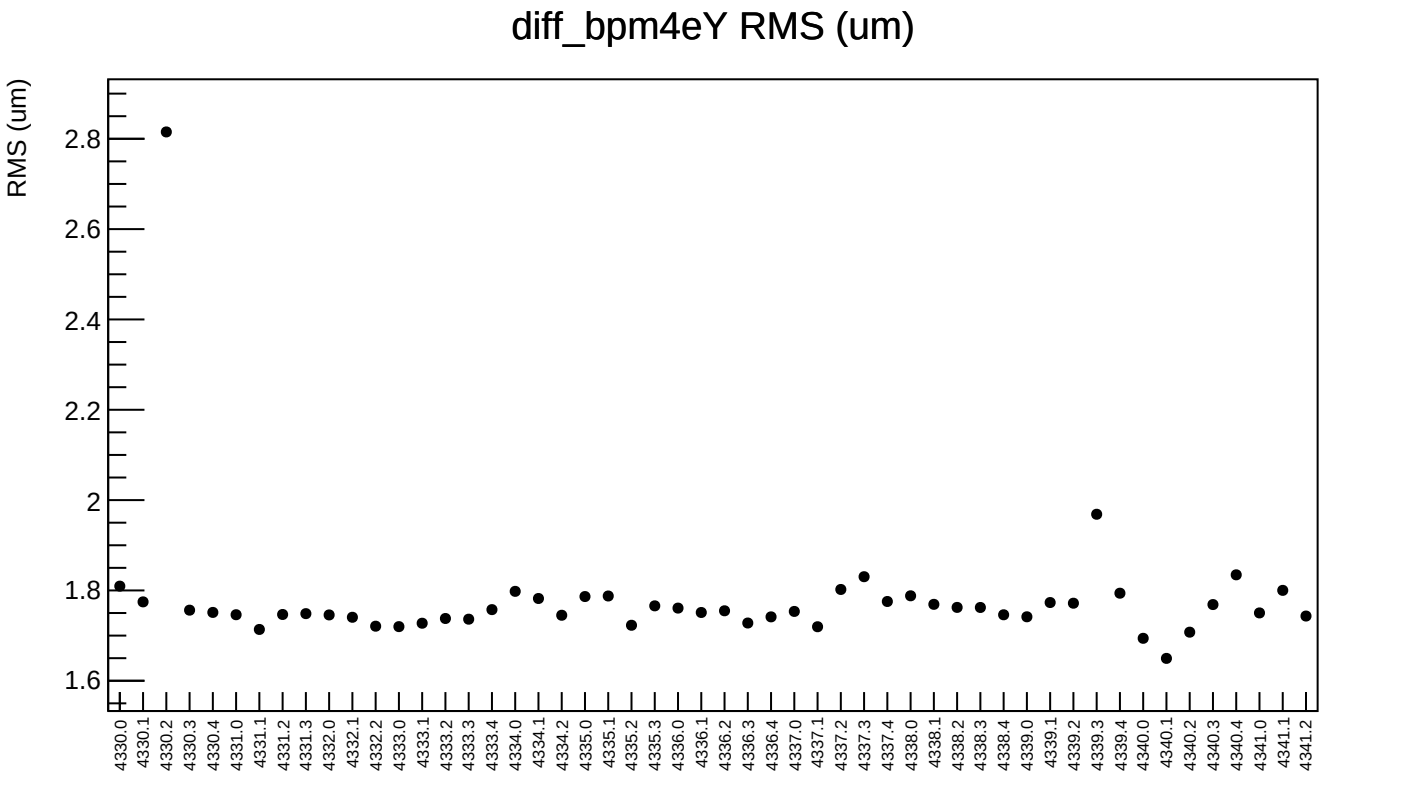

diff_bpm4aY (nm)
χ² / ndf 66.49 / 51
p0 −1.447 ± 2.924

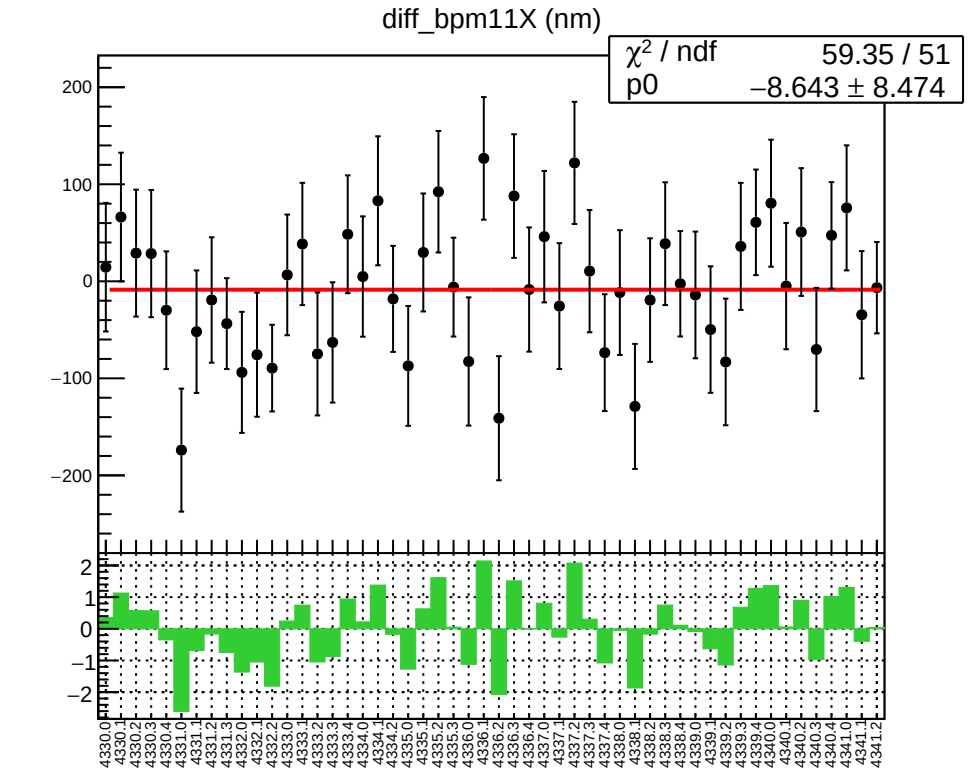

1D pull distribution
Mean 0.005977 ± 0.1568
Std Dev 1.131± 0.1109
Underflow 0
Overflow 0
χ² / ndf 5.053 / 6
Constant 7.772 ± 1.393
Mean 0.1614 ± 0.2909
Sigma 1.442 ± 0.253

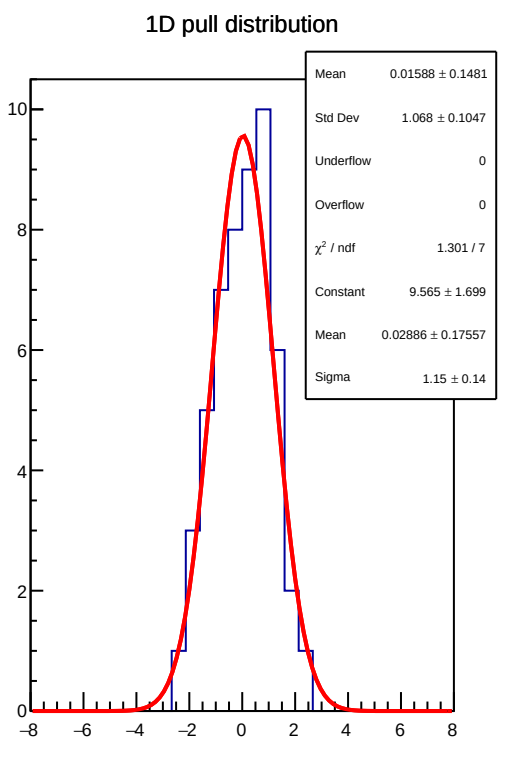

diff_bpm4aY RMS (um)
RMS (um)
2.4
2.35
2.3
2.25
2.2
2.15
2.1
2.05
2
4330.0
4330.1
4330.2
4330.3
4330.4
4331.0
4331.1
4331.2
4331.3
4332.0
4332.1
4332.2
4333.0
4333.1
4333.2
4333.3
4333.4
4334.0
4334.1
4334.2
4335.0
4335.1
4335.2
4335.3
4336.0
4336.1
4336.2
4336.3
4336.4
4337.0
4337.1
4337.2
4337.3
4337.4
4338.0
4338.1
4338.2
4338.3
4338.4
4339.0
4339.1
4339.2
4339.3
4339.4
4340.0
4340.1
4340.2
4340.3
4340.4
4341.0
4341.1
4341.2

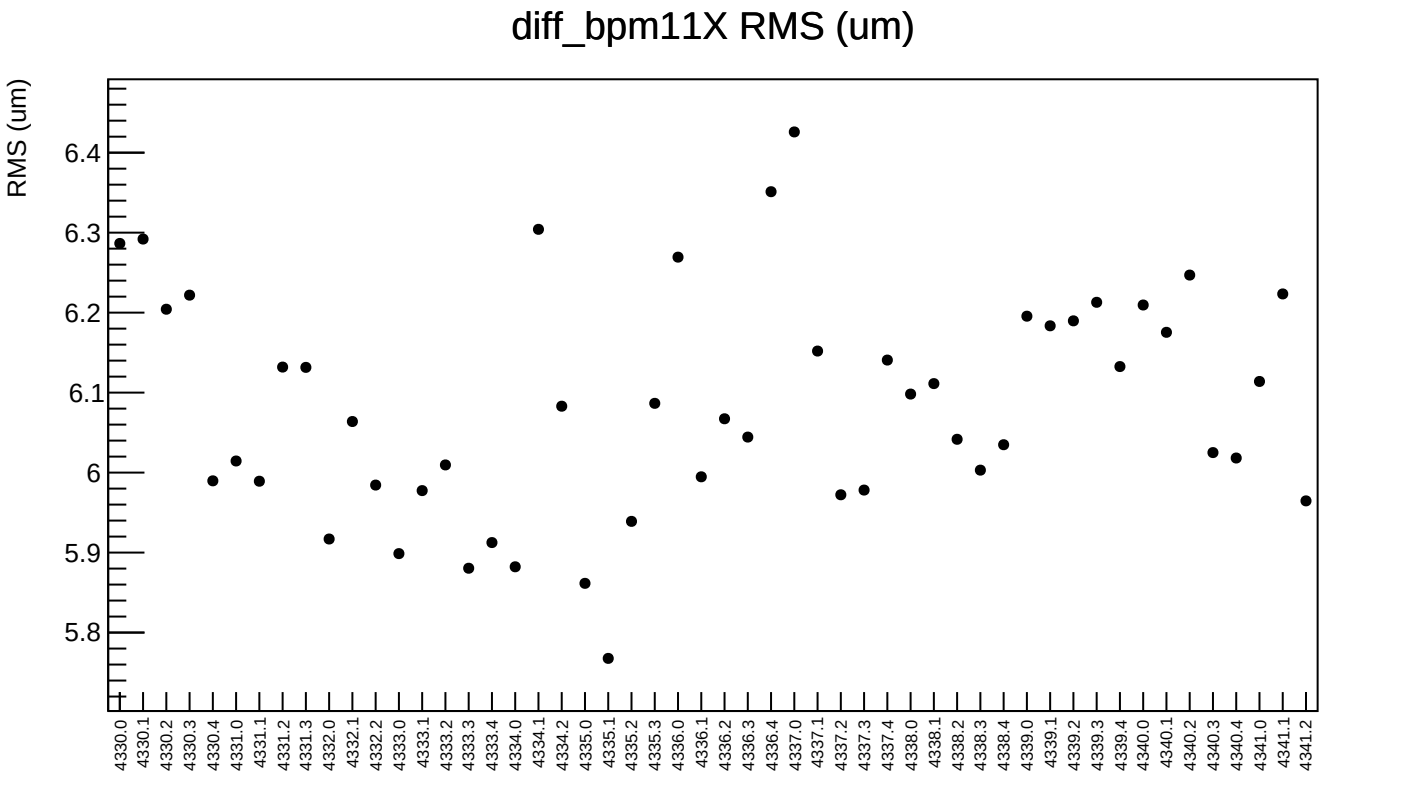

diff_bpm4eY (nm)
χ² / ndf 63.17 / 51
p0 −3.796 ± 2.464

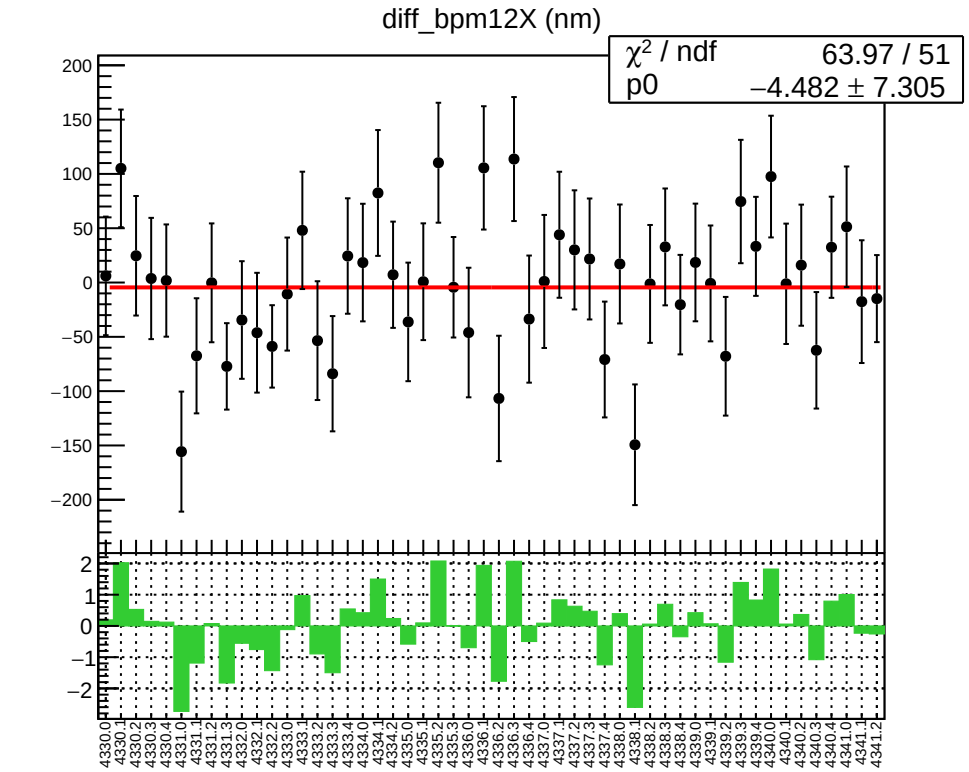

1D pull distribution
Mean −0.009001 ± 0.1528
Std Dev 1.102 ± 0.1081
Underflow 0
Overflow 0
χ² / ndf 7.952 / 6
Constant 7.467 ± 2.138
Mean 0.1641 ± 0.3053
Sigma 1.452 ± 0.599

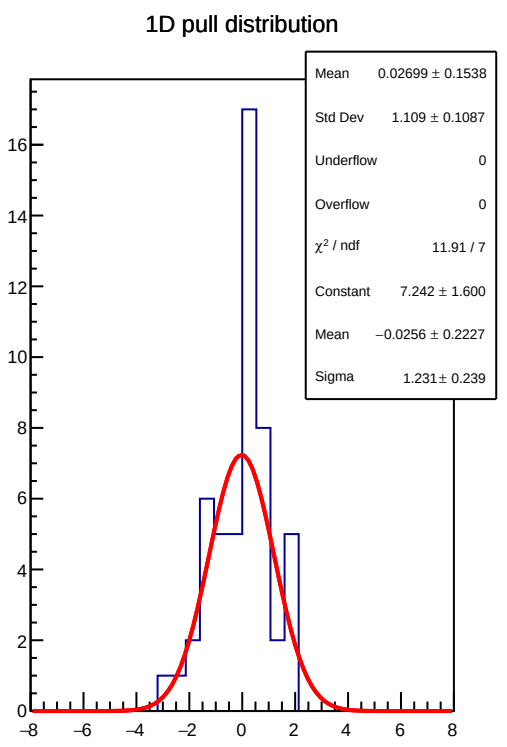

diff_bpm4eY RMS (um)
RMS (um)
2.8
2.6
2.4
2.2
2
1.8
1.6
4330.0
4330.1
4330.2
4330.3
4330.4
4331.0
4331.1
4331.2
4331.3
4332.0
4332.1
4332.2
4333.0
4333.1
4333.2
4333.3
4333.4
4334.0
4334.1
4334.2
4335.0
4335.1
4335.2
4335.3
4336.0
4336.1
4336.2
4336.3
4336.4
4337.0
4337.1
4337.2
4337.3
4337.4
4338.0
4338.1
4338.2
4338.3
4338.4
4339.0
4339.1
4339.2
4339.3
4339.4
4340.0
4340.1
4340.2
4340.3
4340.4
4341.0
4341.1
4341.2

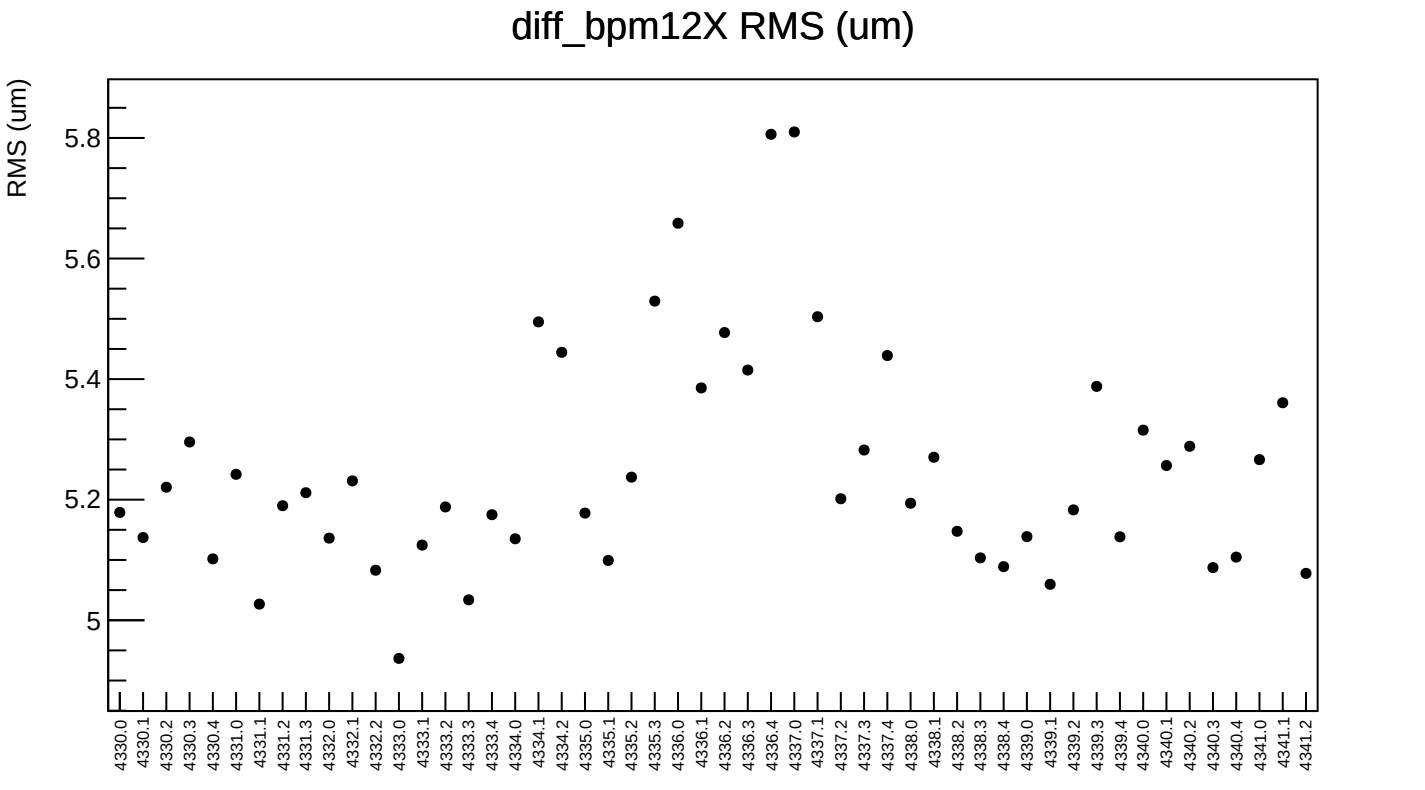

diff_bpm11X (nm)
χ² / ndf 59.35 / 51
p0 −8.643 ± 8.474
200
100
0
−100
−200
2
1
0
−1
−2
4330.0
4330.1
4330.2
4330.3
4330.4
4331.0
4331.1
4331.2
4331.3
4332.0
4332.1
4332.2
4333.0
4333.1
4333.2
4333.3
4333.4
4334.0
4334.1
4334.2
4335.0
4335.1
4335.2
4335.3
4336.0
4336.1
4336.2
4336.3
4336.4
4337.0
4337.1
4337.2
4337.3
4337.4
4338.0
4338.1
4338.2
4338.3
4338.4
4339.0
4339.1
4339.2
4339.3
4339.4
4340.0
4340.1
4340.2
4340.3
4340.4
4341.0
4341.1
4341.2

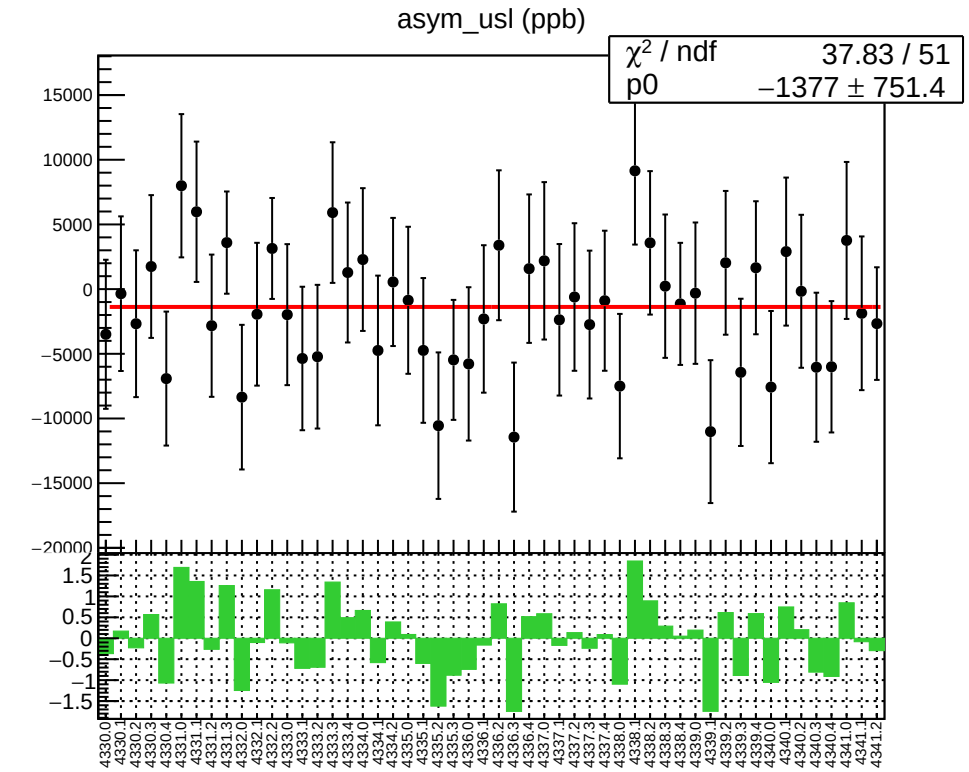

1D pull distribution
Mean 0.01588 ± 0.1481
Std Dev 1.068 ± 0.1047
Underflow 0
Overflow 0
χ² / ndf 1.301 / 7
Constant 9.565 ± 1.699
Mean 0.02886 ± 0.17557
Sigma 1.15 ± 0.14
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

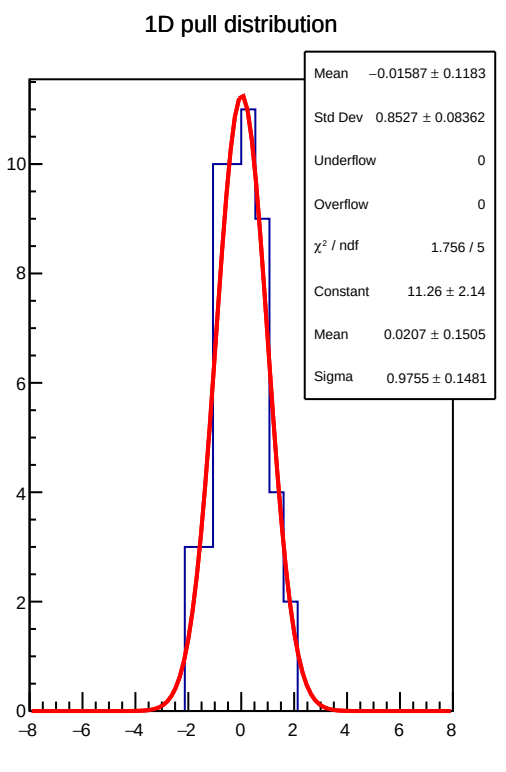

diff_bpm11X RMS (um)
RMS (um)
6.4
6.3
6.2
6.1
6
5.9
5.8
4330.0
4330.1
4330.2
4330.3
4330.4
4331.0
4331.1
4331.2
4331.3
4332.0
4332.1
4332.2
4333.0
4333.1
4333.2
4333.3
4333.4
4334.0
4334.1
4334.2
4335.0
4335.1
4335.2
4335.3
4336.0
4336.1
4336.2
4336.3
4336.4
4337.0
4337.1
4337.2
4337.3
4337.4
4338.0
4338.1
4338.2
4338.3
4338.4
4339.0
4339.1
4339.2
4339.3
4339.4
4340.0
4340.1
4340.2
4340.3
4340.4
4341.0
4341.1
4341.2

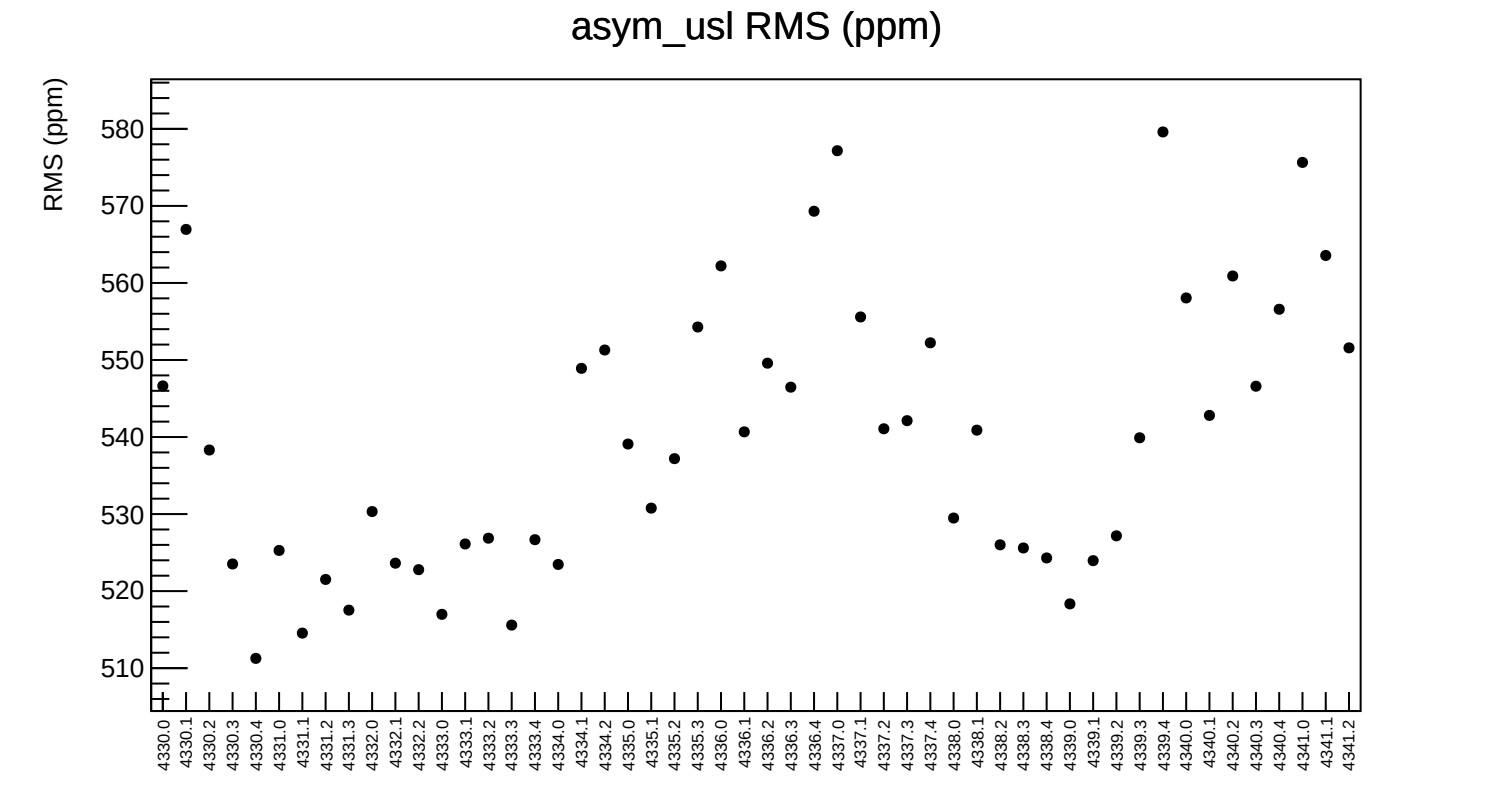

diff_bpm12X (nm)
χ² / ndf 63.97 / 51
p0 −4.482 ± 7.305

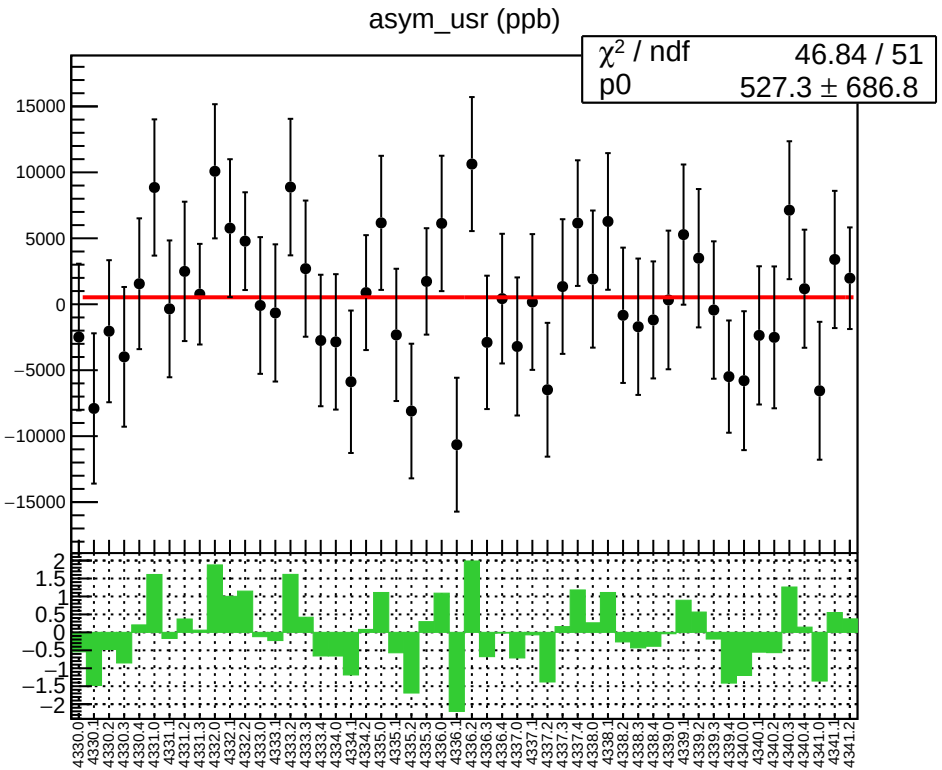

1D pull distribution
Mean 0.02699 ± 0.1538
Std Dev 1.109 ± 0.1087
Underflow 0
Overflow 0
χ² / ndf 11.91 / 7
Constant 7.242 ± 1.600
Mean −0.0256 ± 0.2227
Sigma 1.231 ± 0.239

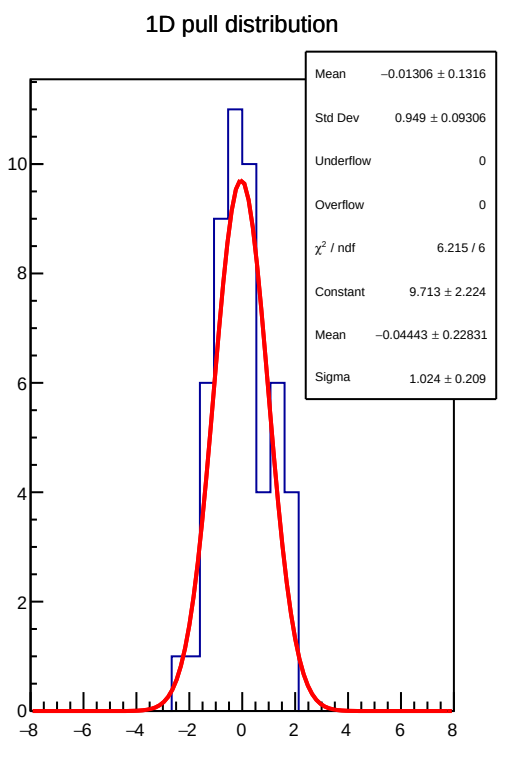

diff_bpm12X RMS (um)
RMS (um)
5.8
5.6
5.4
5.2
5
4330.0
4330.1
4330.2
4330.3
4330.4
4331.0
4331.1
4331.2
4331.3
4332.0
4332.1
4332.2
4333.0
4333.1
4333.2
4333.3
4333.4
4334.0
4334.1
4334.2
4335.0
4335.1
4335.2
4335.3
4336.0
4336.1
4336.2
4336.3
4336.4
4337.0
4337.1
4337.2
4337.3
4337.4
4338.0
4338.1
4338.2
4338.3
4338.4
4339.0
4339.1
4339.2
4339.3
4339.4
4340.0
4340.1
4340.2
4340.3
4340.4
4341.0
4341.1
4341.2

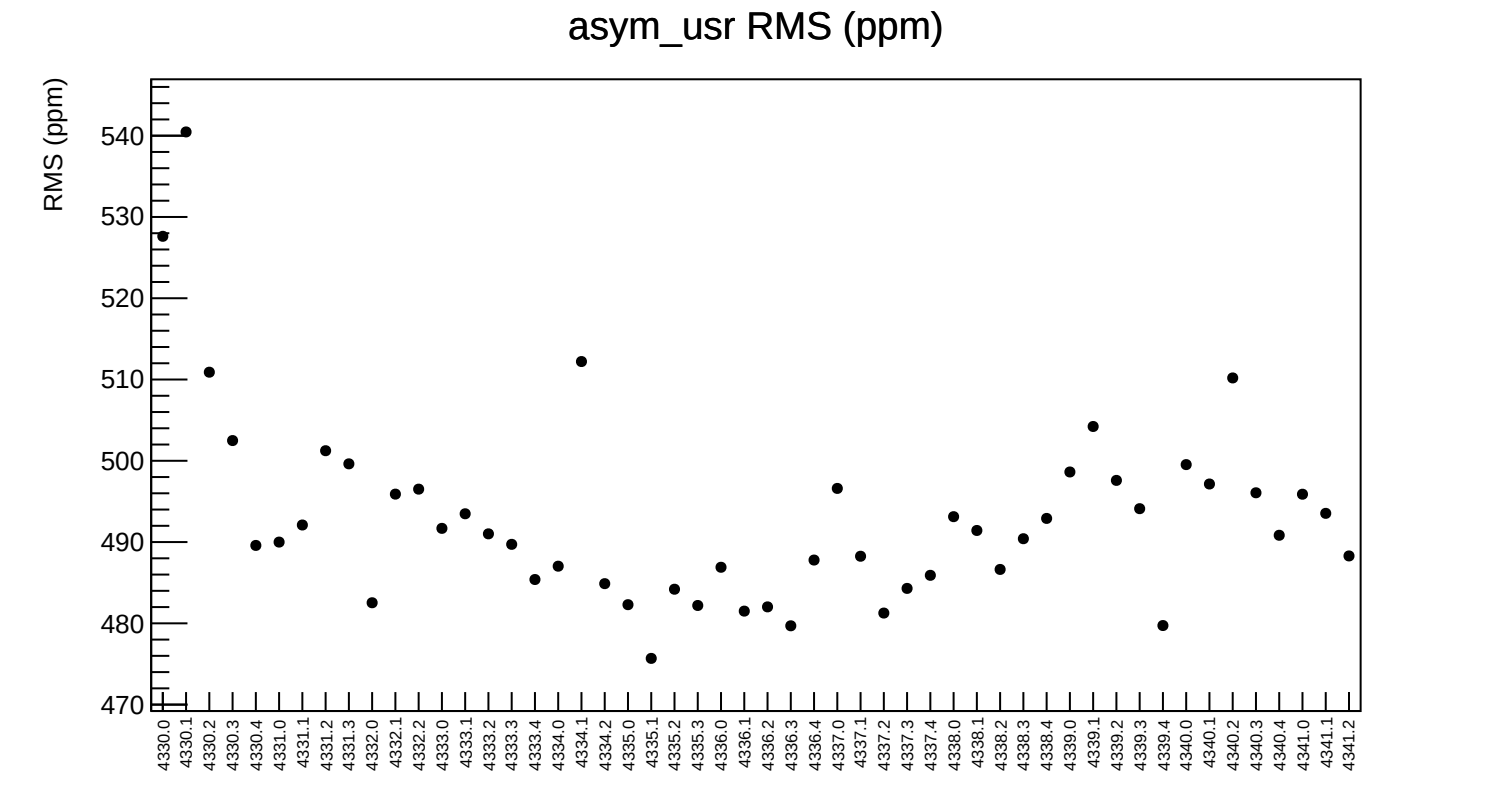

asym_usl (ppb)
χ² / ndf 37.83 / 51
p0 −1377 ± 751.4
15000
10000
5000
0
−5000
−10000
−15000
−20000
2
1.5
1
0.5
0
−0.5
−1
−1.5
4330.0
4330.1
4330.2
4330.3
4330.4
4331.0
4331.1
4331.2
4331.3
4332.0
4332.1
4332.2
4333.0
4333.1
4333.2
4333.3
4333.4
4334.0
4334.1
4334.2
4335.0
4335.1
4335.2
4335.3
4336.0
4336.1
4336.2
4336.3
4336.4
4337.0
4337.1
4337.2
4337.3
4337.4
4338.0
4338.1
4338.2
4338.3
4338.4
4339.0
4339.1
4339.2
4339.3
4339.4
4340.0
4340.1
4340.2
4340.3
4340.4
4341.0
4341.1
4341.2

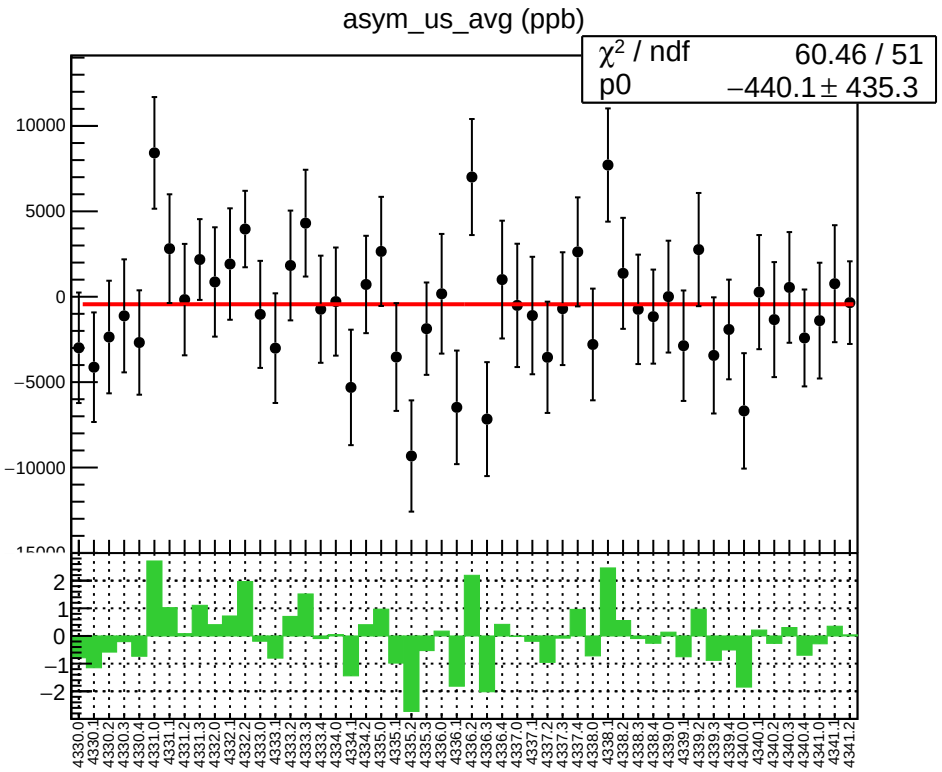

1D pull distribution
Mean −0.01587 ± 0.1183
Std Dev 0.8527 ± 0.08362
Underflow 0
Overflow 0
χ² / ndf 1.756 / 5
Constant 11.26 ± 2.14
Mean 0.0207 ± 0.1505
Sigma 0.9755 ± 0.1481
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

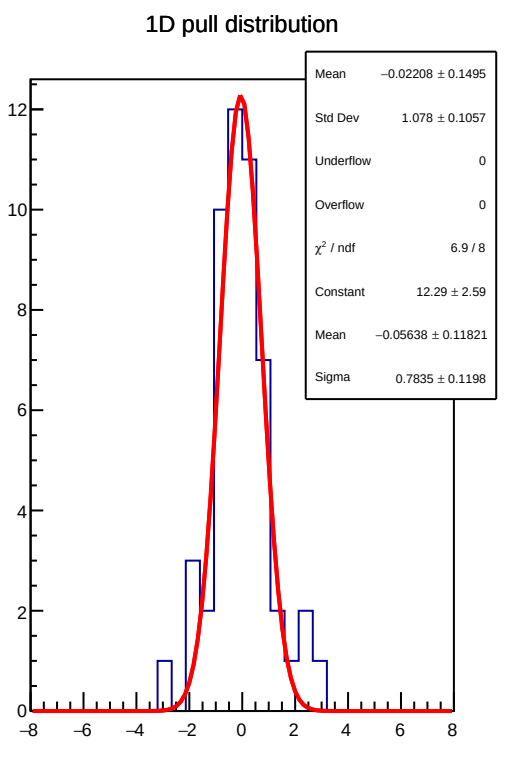

asym_usl RMS (ppm)
RMS (ppm)
580
570
560
550
540
530
520
510
4330.0
4330.1
4330.2
4330.3
4330.4
4331.0
4331.1
4331.2
4331.3
4332.0
4332.1
4332.2
4333.0
4333.1
4333.2
4333.3
4333.4
4334.0
4334.1
4334.2
4335.0
4335.1
4335.2
4335.3
4336.0
4336.1
4336.2
4336.3
4336.4
4337.0
4337.1
4337.2
4337.3
4337.4
4338.0
4338.1
4338.2
4338.3
4338.4
4339.0
4339.1
4339.2
4339.3
4339.4
4340.0
4340.1
4340.2
4340.3
4340.4
4341.0
4341.1
4341.2

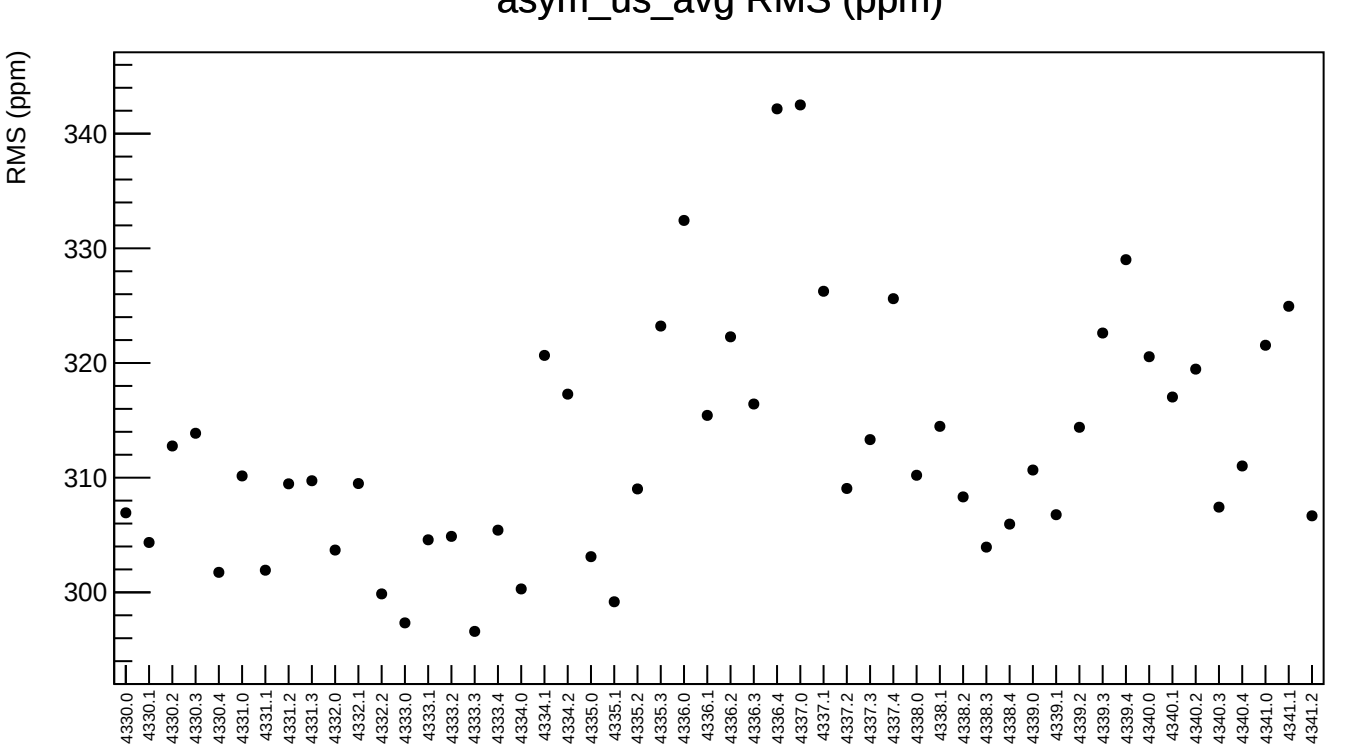

asym_usr (ppb)
χ² / ndf 46.84 / 51
p0 527.3 ± 686.8
15000
10000
5000
0
−5000
−10000
−15000
2
1.5
1
0.5
0
−0.5
−1
−1.5
−2
4330.0
4330.1
4330.2
4330.3
4330.4
4331.0
4331.1
4331.2
4331.3
4332.0
4332.1
4332.2
4333.0
4333.1
4333.2
4333.3
4333.4
4334.0
4334.1
4334.2
4335.0
4335.1
4335.2
4335.3
4336.0
4336.1
4336.2
4336.3
4336.4
4337.0
4337.1
4337.2
4337.3
4337.4
4338.0
4338.1
4338.2
4338.3
4338.4
4339.0
4339.1
4339.2
4339.3
4339.4
4340.0
4340.1
4340.2
4340.3
4340.4
4341.0
4341.1
4341.2

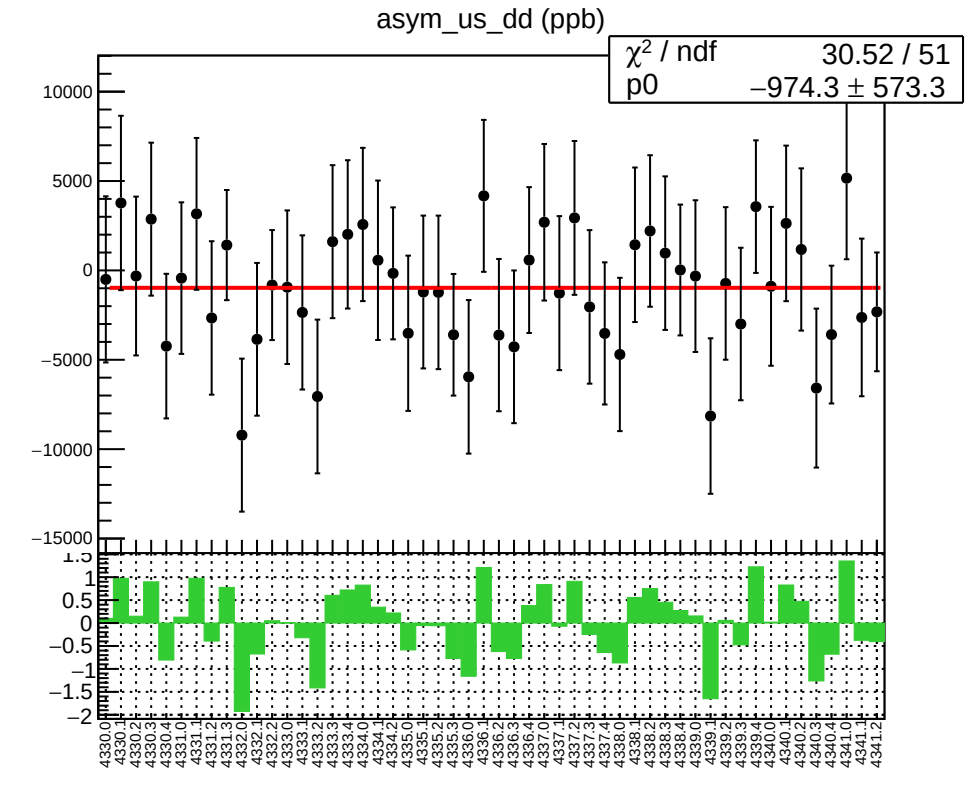

1D pull distribution
Mean −0.01306 ± 0.1316
Std Dev 0.949 ± 0.09306
Underflow 0
Overflow 0
χ² / ndf 6.215 / 6
Constant 9.713 ± 2.224
Mean −0.04443 ± 0.22831
Sigma 1.024 ± 0.209
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

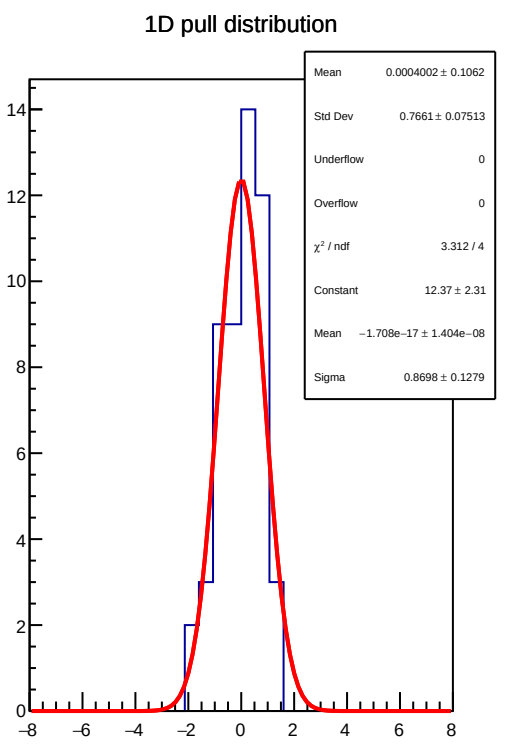

asym_usr RMS (ppm)
RMS (ppm)
540
530
520
510
500
490
480
470
4330.0
4330.1
4330.2
4330.3
4330.4
4331.0
4331.1
4331.2
4331.3
4332.0
4332.1
4332.2
4333.0
4333.1
4333.2
4333.3
4333.4
4334.0
4334.1
4334.2
4335.0
4335.1
4335.2
4335.3
4336.0
4336.1
4336.2
4336.3
4336.4
4337.0
4337.1
4337.2
4337.3
4337.4
4338.0
4338.1
4338.2
4338.3
4338.4
4339.0
4339.1
4339.2
4339.3
4339.4
4340.0
4340.1
4340.2
4340.3
4340.4
4341.0
4341.1
4341.2

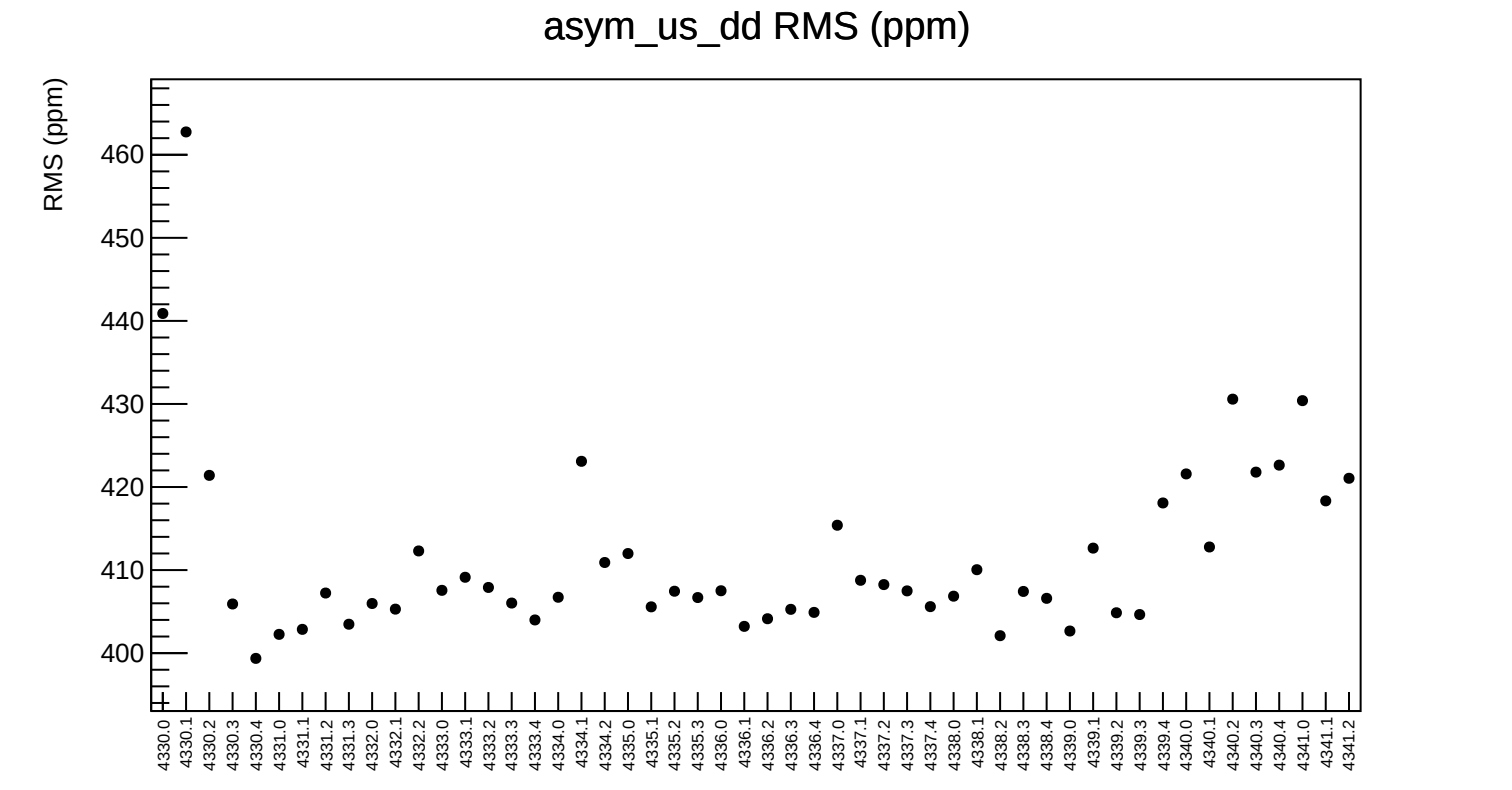

asym_us_avg (ppb)
χ² / ndf 60.46 / 51
p0 −440.1 ± 435.3
10000
5000
0
−5000
−10000
2
1
0
−1
−2
4330.0
4330.1
4330.2
4330.3
4330.4
4331.0
4331.1
4331.2
4331.3
4332.0
4332.1
4332.2
4333.0
4333.1
4333.2
4333.3
4333.4
4334.0
4334.1
4334.2
4335.0
4335.1
4335.2
4335.3
4336.0
4336.1
4336.2
4336.3
4336.4
4337.0
4337.1
4337.2
4337.3
4337.4
4338.0
4338.1
4338.2
4338.3
4338.4
4339.0
4339.1
4339.2
4339.3
4339.4
4340.0
4340.1
4340.2
4340.3
4340.4
4341.0
4341.1
4341.2

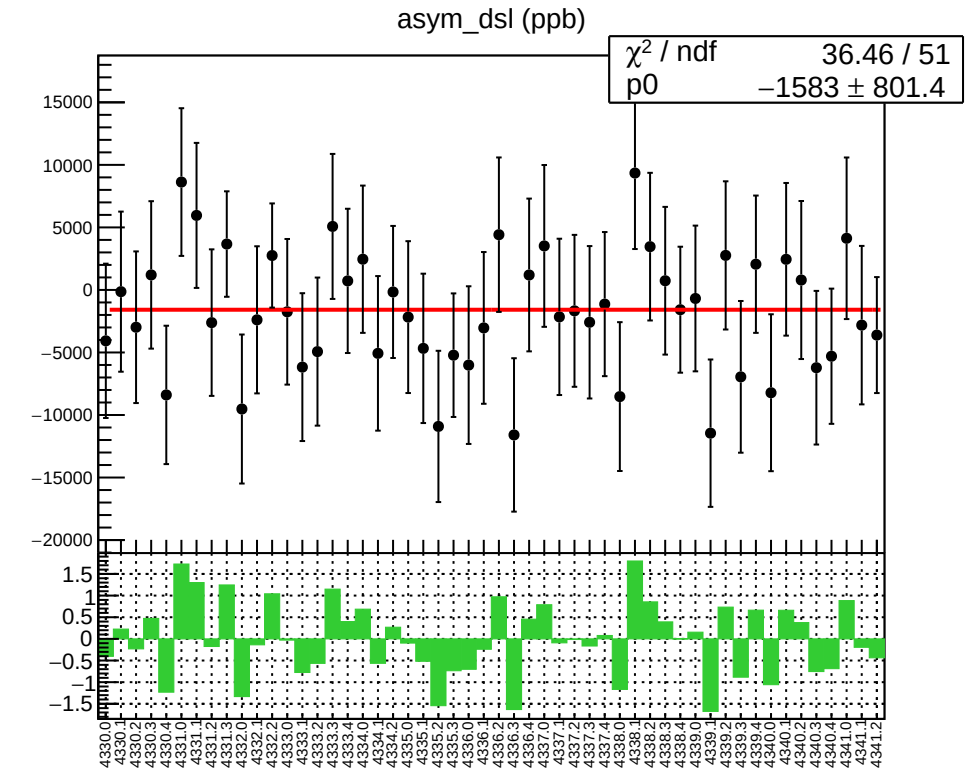

1D pull distribution
Mean −0.02208 ± 0.1495
Std Dev 1.078 ± 0.1057
Underflow 0
Overflow 0
χ² / ndf 6.9 / 8
Constant 12.29 ± 2.59
Mean −0.05638 ± 0.11821
Sigma 0.7835 ± 0.1198
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

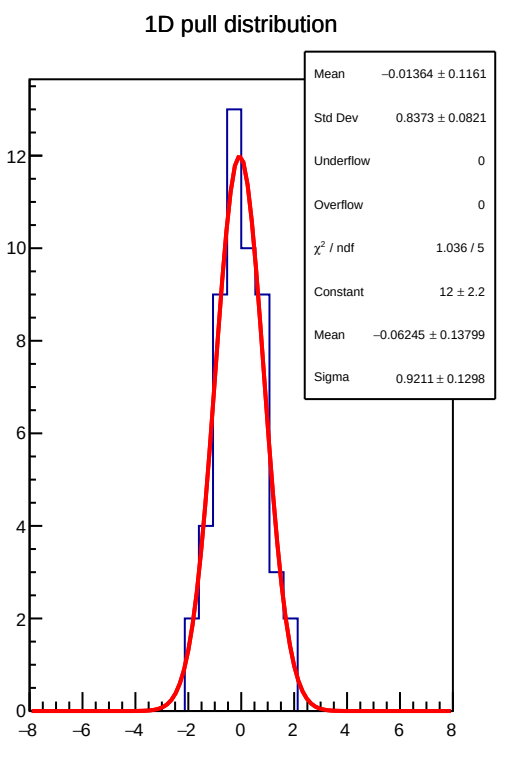

asym_us_avg RMS (ppm)
RMS (ppm)
340
330
320
310
300
4330.0
4330.1
4330.2
4330.3
4330.4
4331.0
4331.1
4331.2
4331.3
4332.0
4332.1
4332.2
4333.0
4333.1
4333.2
4333.3
4333.4
4334.0
4334.1
4334.2
4335.0
4335.1
4335.2
4335.3
4336.0
4336.1
4336.2
4336.3
4336.4
4337.0
4337.1
4337.2
4337.3
4337.4
4338.0
4338.1
4338.2
4338.3
4338.4
4339.0
4339.1
4339.2
4339.3
4339.4
4340.0
4340.1
4340.2
4340.3
4340.4
4341.0
4341.1
4341.2


asym_us_dd (ppb)
χ² / ndf 30.52 / 51
p0 −974.3 ± 573.3
10000
5000
0
−5000
−10000
−15000
1.5
1
0.5
0
−0.5
−1
−1.5
−2
4330.0
4330.1
4330.2
4330.3
4330.4
4331.0
4331.1
4331.2
4331.3
4332.0
4332.1
4332.2
4333.0
4333.1
4333.2
4333.3
4333.4
4334.0
4334.1
4334.2
4335.0
4335.1
4335.2
4335.3
4336.0
4336.1
4336.2
4336.3
4336.4
4337.0
4337.1
4337.2
4337.3
4337.4
4338.0
4338.1
4338.2
4338.3
4338.4
4339.0
4339.1
4339.2
4339.3
4339.4
4340.0
4340.1
4340.2
4340.3
4340.4
4341.0
4341.1
4341.2


1D pull distribution
Mean 0.0004002 ± 0.1062
Std Dev 0.7661 ± 0.07513
Underflow 0
Overflow 0
χ² / ndf 3.312 / 4
Constant 12.37 ± 2.31
Mean −1.708e−17 ± 1.404e−08
Sigma 0.8698 ± 0.1279
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8


asym_us_dd RMS (ppm)
RMS (ppm)
460
450
440
430
420
410
400
4330.0
4330.1
4330.2
4330.3
4330.4
4331.0
4331.1
4331.2
4331.3
4332.0
4332.1
4332.2
4333.0
4333.1
4333.2
4333.3
4333.4
4334.0
4334.1
4334.2
4335.0
4335.1
4335.2
4335.3
4336.0
4336.1
4336.2
4336.3
4336.4
4337.0
4337.1
4337.2
4337.3
4337.4
4338.0
4338.1
4338.2
4338.3
4338.4
4339.0
4339.1
4339.2
4339.3
4339.4
4340.0
4340.1
4340.2
4340.3
4340.4
4341.0
4341.1
4341.2


asym_dsl (ppb)
χ² / ndf 36.46 / 51
p0 −1583 ± 801.4
15000
10000
5000
0
−5000
−10000
−15000
−20000
1.5
1
0.5
0
−0.5
−1
−1.5
4330.0
4330.1
4330.2
4330.3
4330.4
4331.0
4331.1
4331.2
4331.3
4332.0
4332.1
4332.2
4333.0
4333.1
4333.2
4333.3
4333.4
4334.0
4334.1
4334.2
4335.0
4335.1
4335.2
4335.3
4336.0
4336.1
4336.2
4336.3
4336.4
4337.0
4337.1
4337.2
4337.3
4337.4
4338.0
4338.1
4338.2
4338.3
4338.4
4339.0
4339.1
4339.2
4339.3
4339.4
4340.0
4340.1
4340.2
4340.3
4340.4
4341.0
4341.1
4341.2

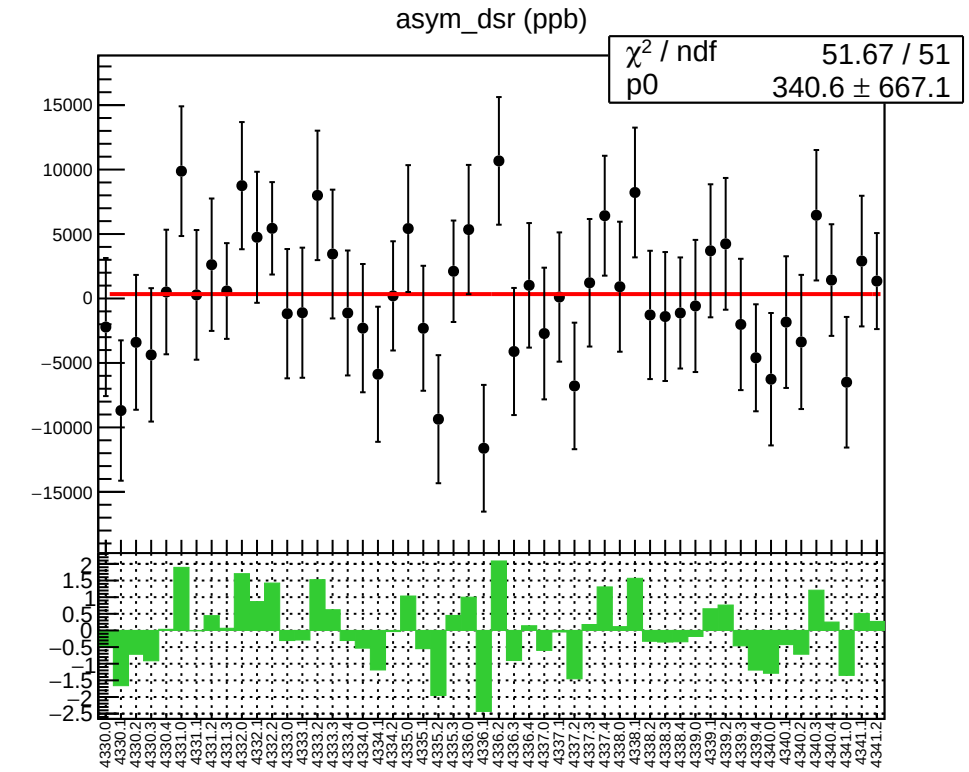

1D pull distribution
Mean −0.01364 ± 0.1161
Std Dev 0.8373 ± 0.0821
Underflow 0
Overflow 0
χ² / ndf 1.036 / 5
Constant 12 ± 2.2
Mean −0.06245 ± 0.13799
Sigma 0.9211 ± 0.1298
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

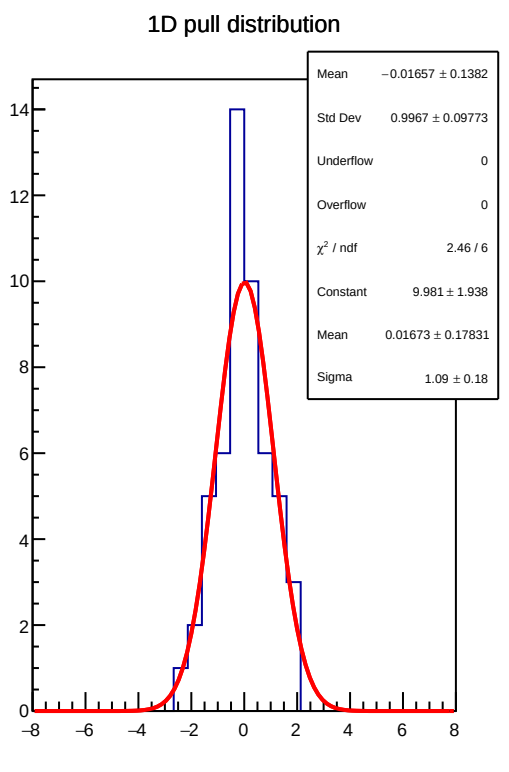
asym_dsl RMS (ppm)

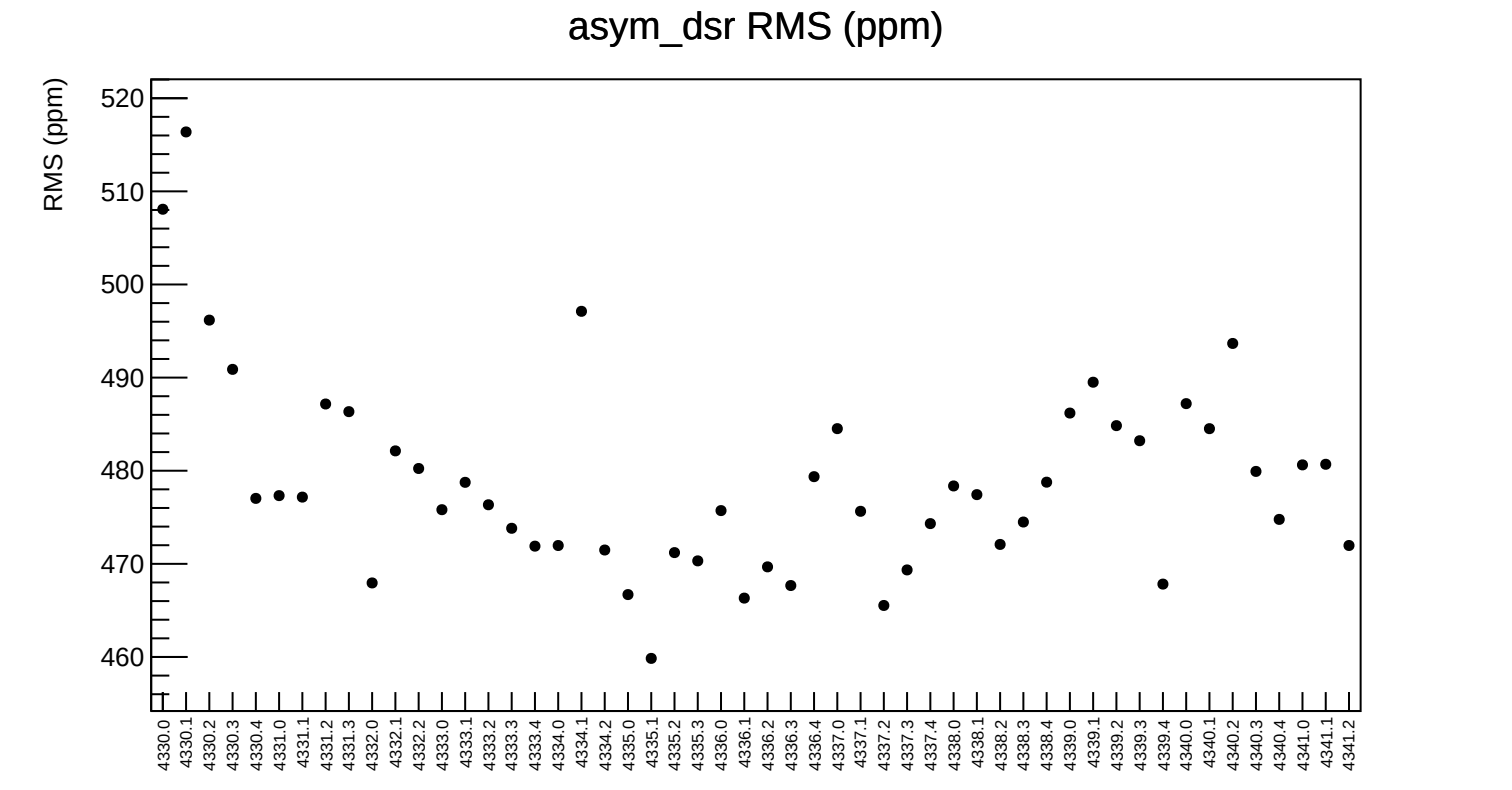
RMS (ppm)

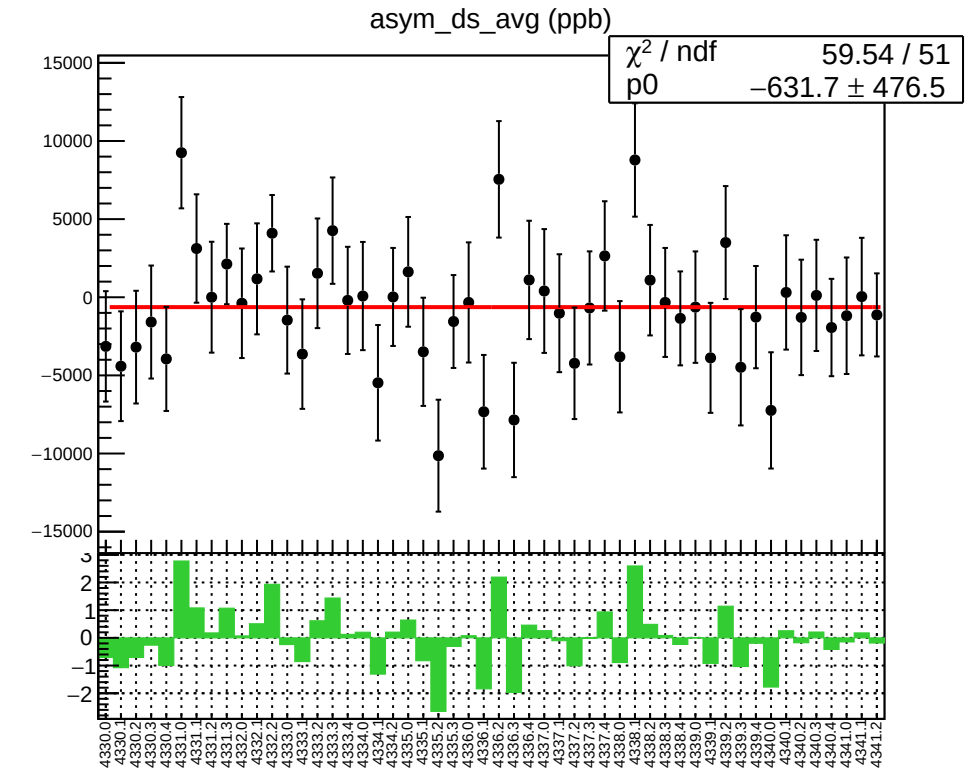
620
610
600
590
580
570
560
550
540

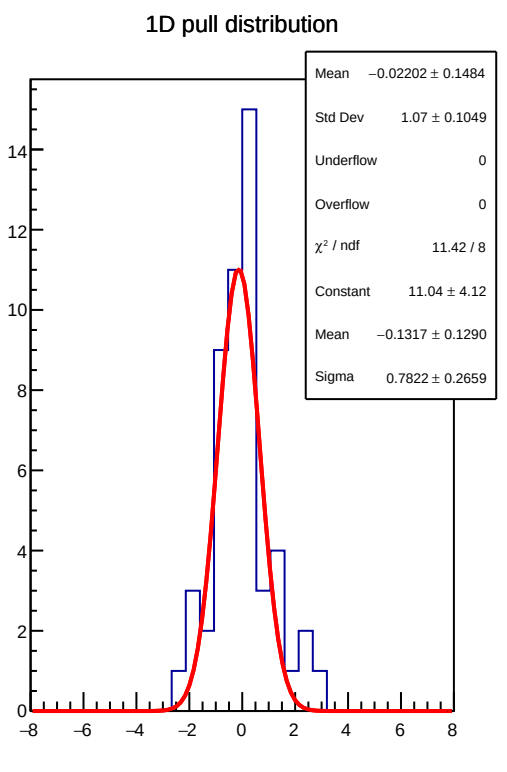
4330.0 4330.1 4330.2 4330.3 4330.4 4331.0 4331.1 4331.2 4331.3 4332.0 4332.1 4332.2 4333.0 4333.1 4333.2 4333.3 4333.4 4334.0 4334.1 4334.2 4335.0 4335.1 4335.2 4335.3 4336.0 4336.1 4336.2 4336.3 4336.4 4337.0 4337.1 4337.2 4337.3 4337.4 4338.0 4338.1 4338.2 4338.3 4338.4 4339.0 4339.1 4339.2 4339.3 4339.4 4340.0 4340.1 4340.2 4340.3 4340.4 4341.0 4341.1 4341.2

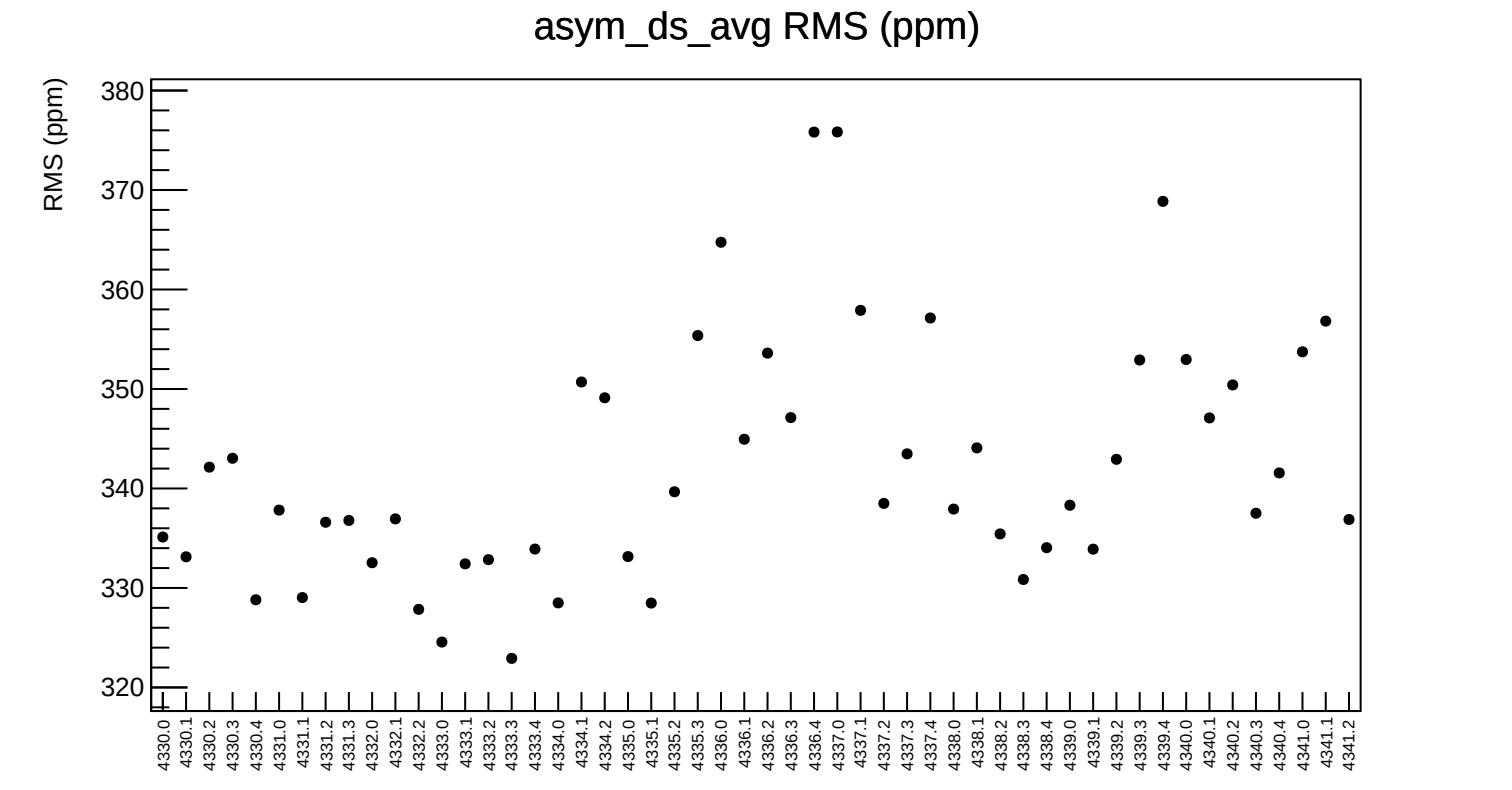

asym_dsr (ppb)
χ² / ndf 51.67 / 51
p0 340.6 ± 667.1
15000
10000
5000
0
−5000
−10000
−15000
2
1.5
1
0.5
0
−0.5
−1
−1.5
−2
−2.5
4330.0
4330.1
4330.2
4330.3
4330.4
4331.0
4331.1
4331.2
4331.3
4332.0
4332.1
4332.2
4333.0
4333.1
4333.2
4333.3
4333.4
4334.0
4334.1
4334.2
4335.0
4335.1
4335.2
4335.3
4336.0
4336.1
4336.2
4336.3
4336.4
4337.0
4337.1
4337.2
4337.3
4337.4
4338.0
4338.1
4338.2
4338.3
4338.4
4339.0
4339.1
4339.2
4339.3
4339.4
4340.0
4340.1
4340.2
4340.3
4340.4
4341.0
4341.1
4341.2

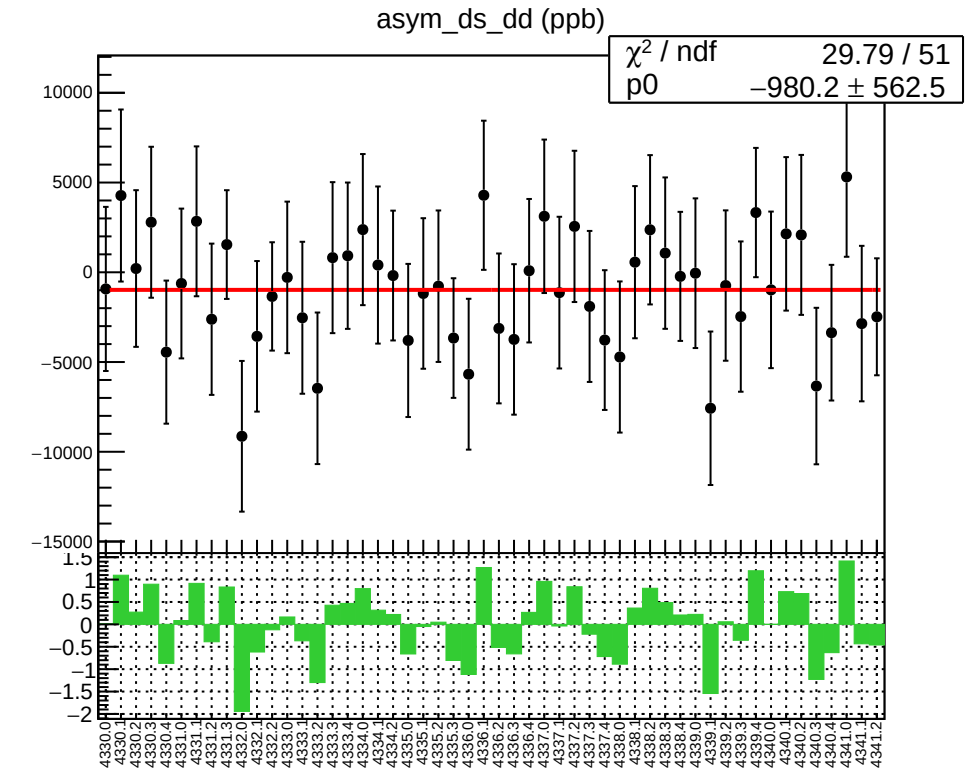

1D pull distribution
Mean −0.01657 ± 0.1382
Std Dev 0.9967 ± 0.09773
Underflow 0
Overflow 0
χ² / ndf 2.46 / 6
Constant 9.981 ± 1.938
Mean 0.01673 ± 0.17831
Sigma 1.09 ± 0.18
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

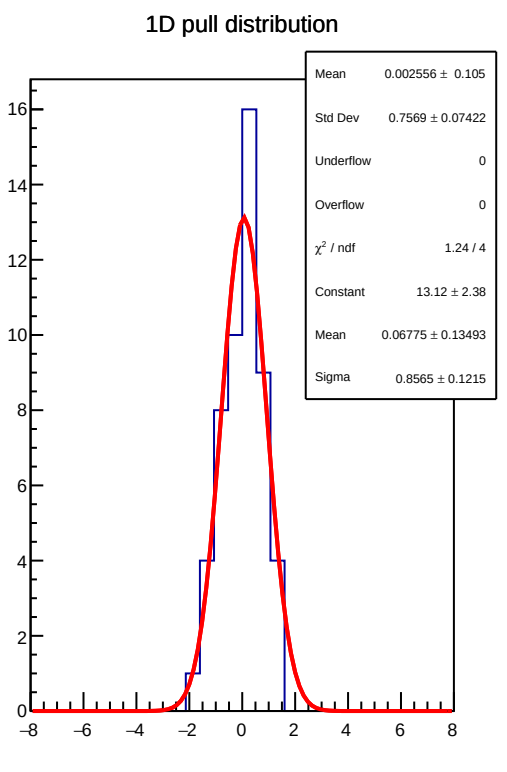

asym_dsr RMS (ppm)
RMS (ppm)
520
510
500
490
480
470
460
4330.0
4330.1
4330.2
4330.3
4330.4
4331.0
4331.1
4331.2
4331.3
4332.0
4332.1
4332.2
4333.0
4333.1
4333.2
4333.3
4333.4
4334.0
4334.1
4334.2
4335.0
4335.1
4335.2
4335.3
4336.0
4336.1
4336.2
4336.3
4336.4
4337.0
4337.1
4337.2
4337.3
4337.4
4338.0
4338.1
4338.2
4338.3
4338.4
4339.0
4339.1
4339.2
4339.3
4339.4
4340.0
4340.1
4340.2
4340.3
4340.4
4341.0
4341.1
4341.2

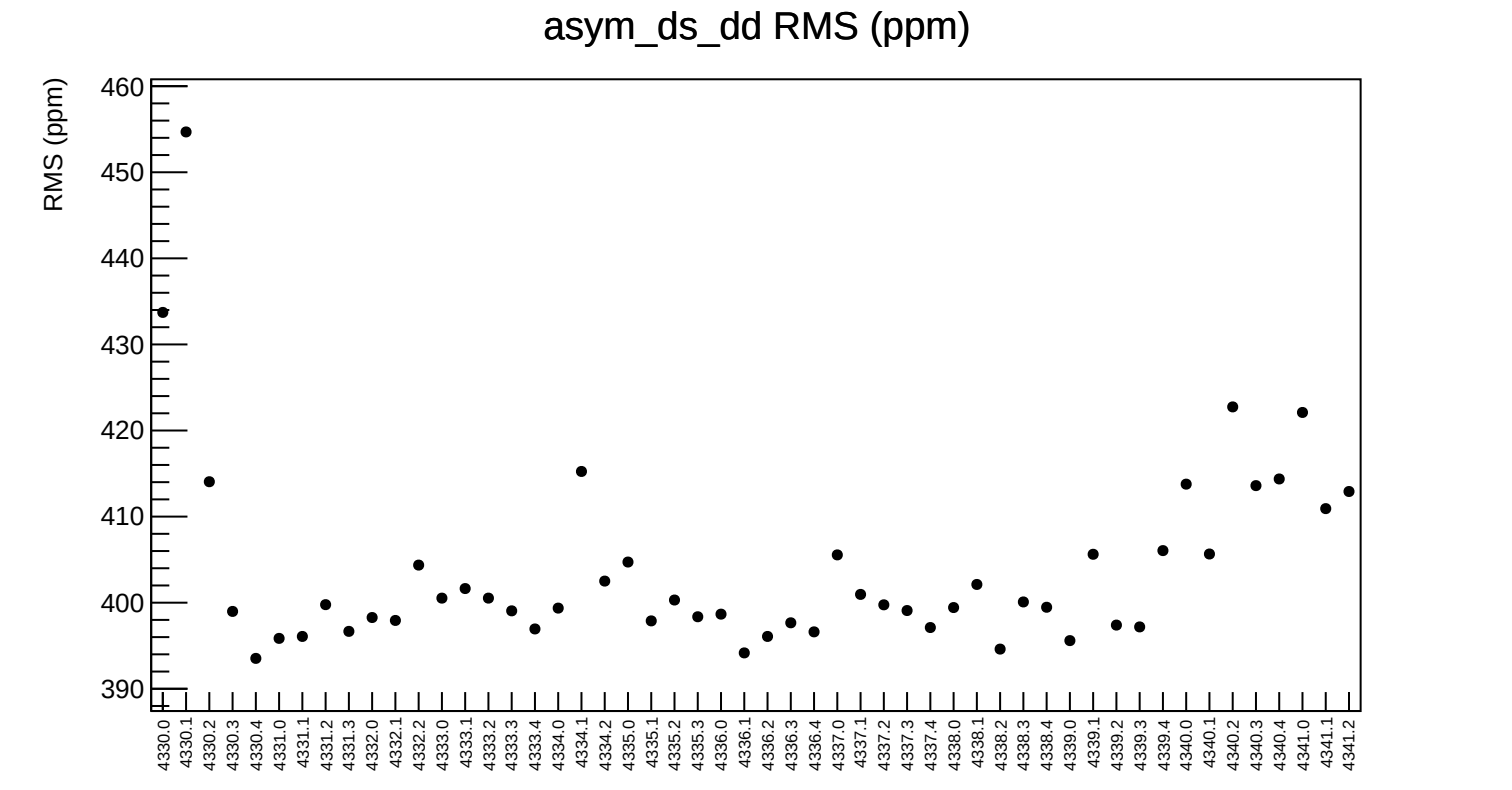

asym_ds_avg (ppb)
χ² / ndf 59.54 / 51
p0 −631.7 ± 476.5
15000
10000
5000
0
−5000
−10000
−15000
3
2
1
0
−1
−2
4330.0
4330.1
4330.2
4330.3
4330.4
4331.0
4331.1
4331.2
4331.3
4332.0
4332.1
4332.2
4333.0
4333.1
4333.2
4333.3
4333.4
4334.0
4334.1
4334.2
4335.0
4335.1
4335.2
4335.3
4336.0
4336.1
4336.2
4336.3
4336.4
4337.0
4337.1
4337.2
4337.3
4337.4
4338.0
4338.1
4338.2
4338.3
4338.4
4339.0
4339.1
4339.2
4339.3
4339.4
4340.0
4340.1
4340.2
4340.3
4340.4
4341.0
4341.1
4341.2

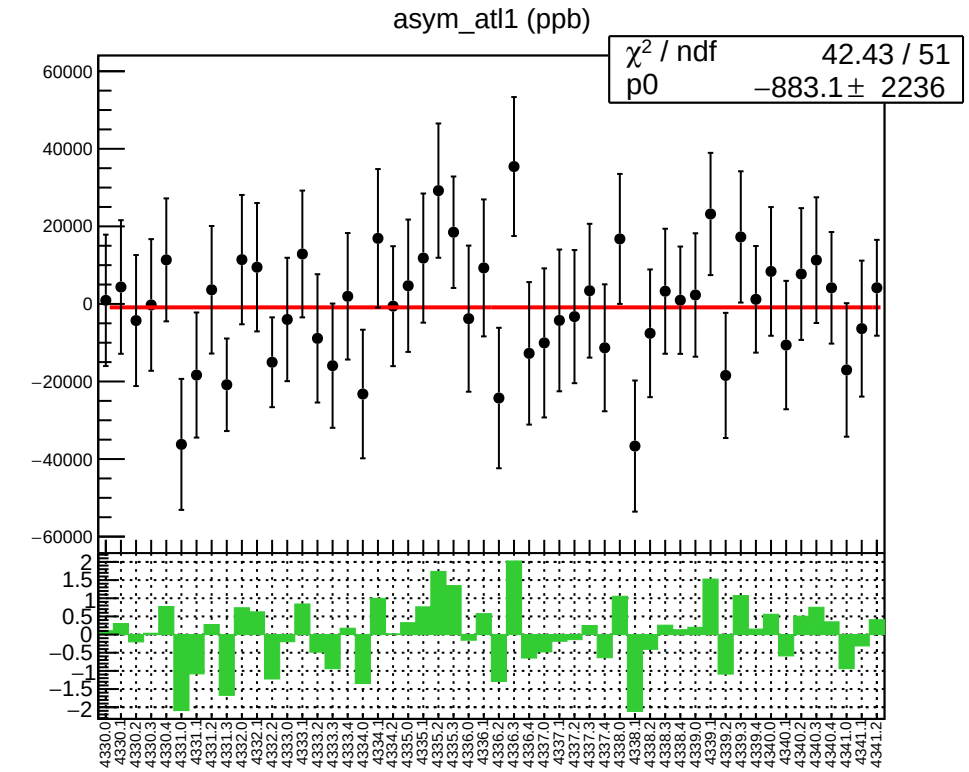

1D pull distribution
Mean −0.02202 ± 0.1484
Std Dev 1.07 ± 0.1049
Underflow 0
Overflow 0
χ² / ndf 11.42 / 8
Constant 11.04 ± 4.12
Mean −0.1317 ± 0.1290
Sigma 0.7822 ± 0.2659
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

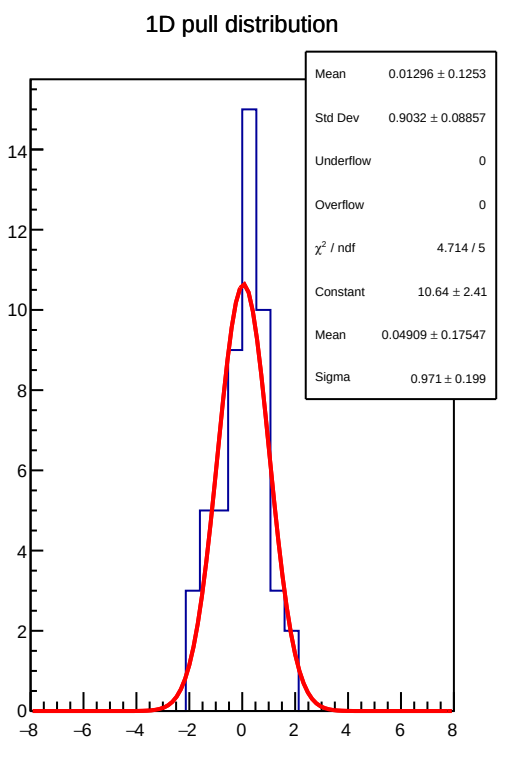

asym_ds_avg RMS (ppm)
RMS (ppm)
380
370
360
350
340
330
320
4330.0
4330.1
4330.2
4330.3
4330.4
4331.0
4331.1
4331.2
4331.3
4332.0
4332.1
4332.2
4333.0
4333.1
4333.2
4333.3
4333.4
4334.0
4334.1
4334.2
4335.0
4335.1
4335.2
4335.3
4336.0
4336.1
4336.2
4336.3
4336.4
4337.0
4337.1
4337.2
4337.3
4337.4
4338.0
4338.1
4338.2
4338.3
4338.4
4339.0
4339.1
4339.2
4339.3
4339.4
4340.0
4340.1
4340.2
4340.3
4340.4
4341.0
4341.1
4341.2

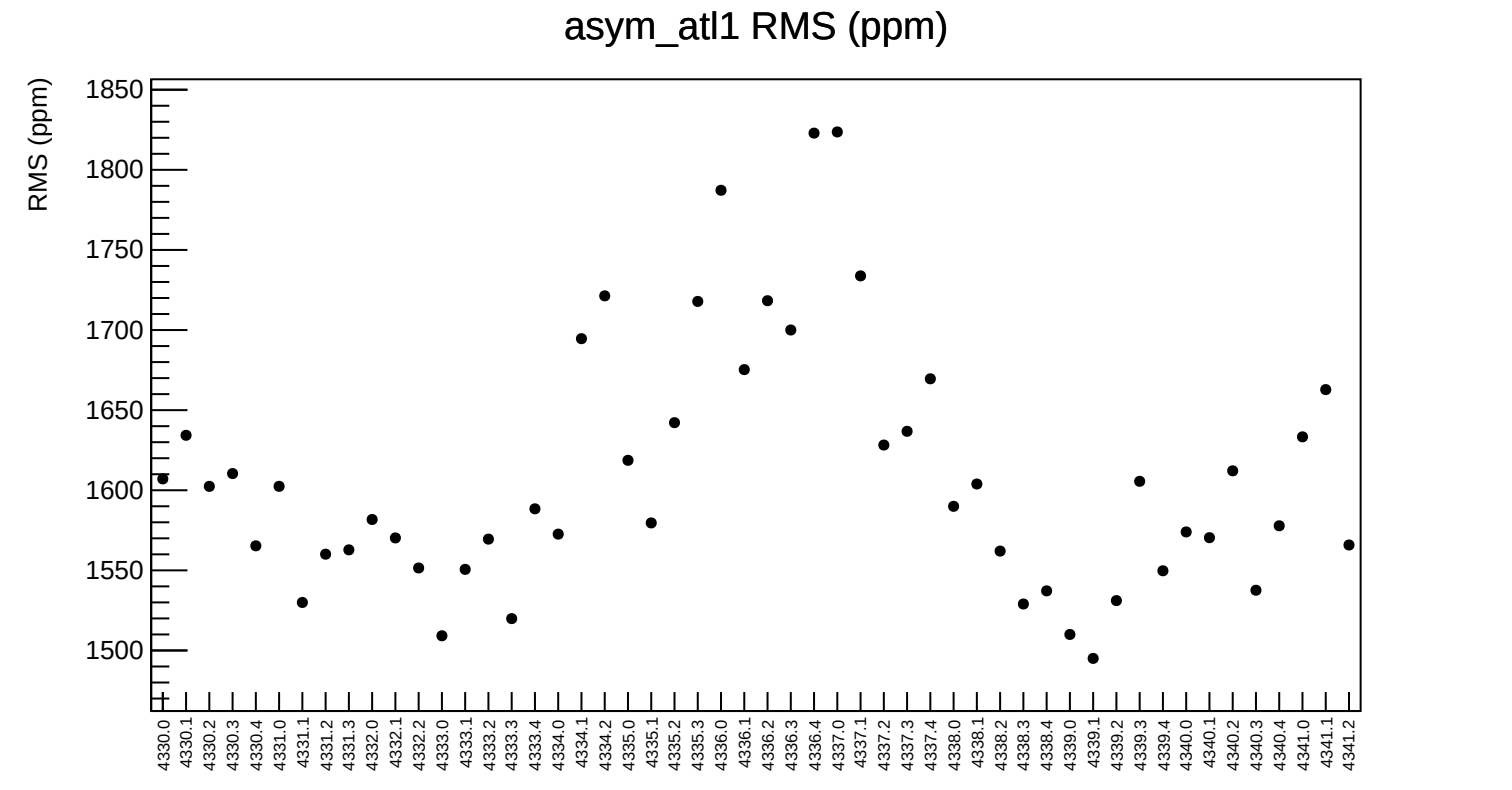

asym_ds_dd (ppb)
χ² / ndf 29.79 / 51
p0 −980.2 ± 562.5
10000
5000
0
−5000
−10000
−15000
1.5
1
0.5
0
−0.5
−1
−1.5
−2
4330.0
4330.1
4330.2
4330.3
4330.4
4331.0
4331.1
4331.2
4331.3
4332.0
4332.1
4332.2
4333.0
4333.1
4333.2
4333.3
4333.4
4334.0
4334.1
4334.2
4335.0
4335.1
4335.2
4335.3
4336.0
4336.1
4336.2
4336.3
4336.4
4337.0
4337.1
4337.2
4337.3
4337.4
4338.0
4338.1
4338.2
4338.3
4338.4
4339.0
4339.1
4339.2
4339.3
4339.4
4340.0
4340.2
4340.3
4340.4
4341.0
4341.1
4341.2

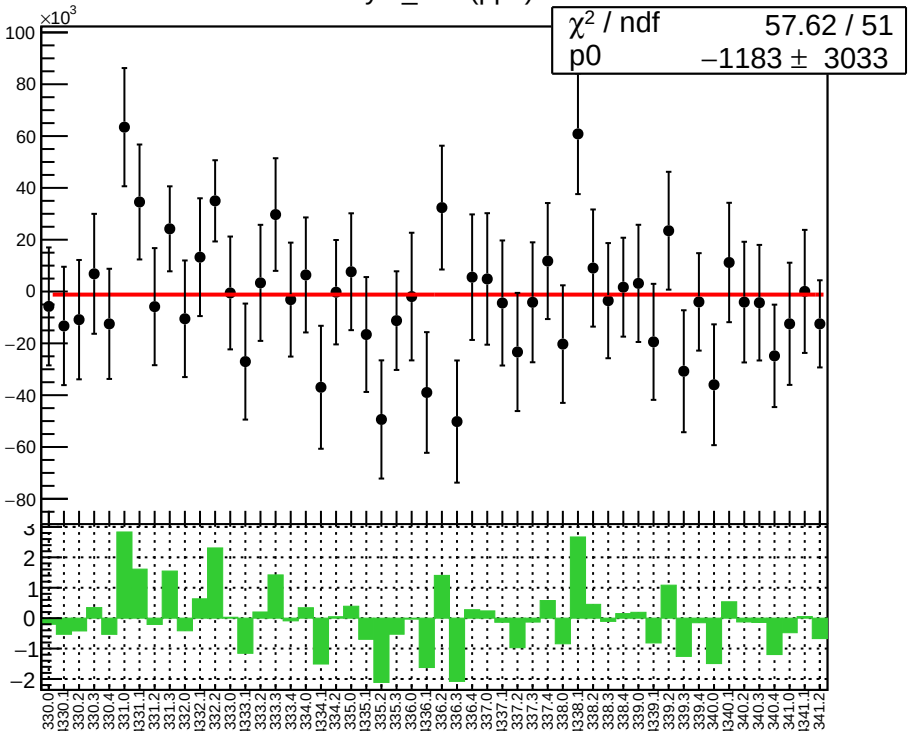

1D pull distribution
Mean 0.002556 ± 0.105
Std Dev 0.7569 ± 0.07422
Underflow 0
Overflow 0
χ² / ndf 1.24 / 4
Constant 13.12 ± 2.38
Mean 0.06775 ± 0.13493
Sigma 0.8565 ± 0.1215
16
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

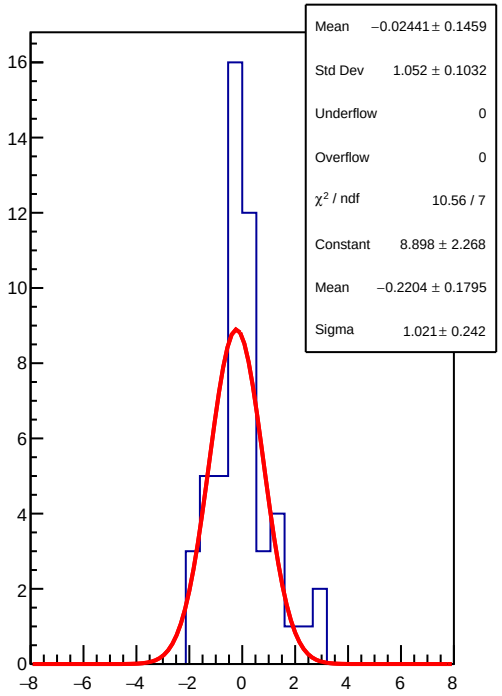

asym_ds_dd RMS (ppm)
RMS (ppm)
460
450
440
430
420
410
400
390
4330.0
4330.1
4330.2
4330.3
4330.4
4331.0
4331.1
4331.2
4331.3
4332.0
4332.1
4332.2
4333.0
4333.1
4333.2
4333.3
4333.4
4334.0
4334.1
4334.2
4335.0
4335.1
4335.2
4335.3
4336.0
4336.1
4336.2
4336.3
4336.4
4337.0
4337.1
4337.2
4337.3
4337.4
4338.0
4338.1
4338.2
4338.3
4338.4
4339.0
4339.1
4339.2
4339.3
4339.4
4340.0
4340.1
4340.2
4340.3
4340.4
4341.0
4341.1
4341.2

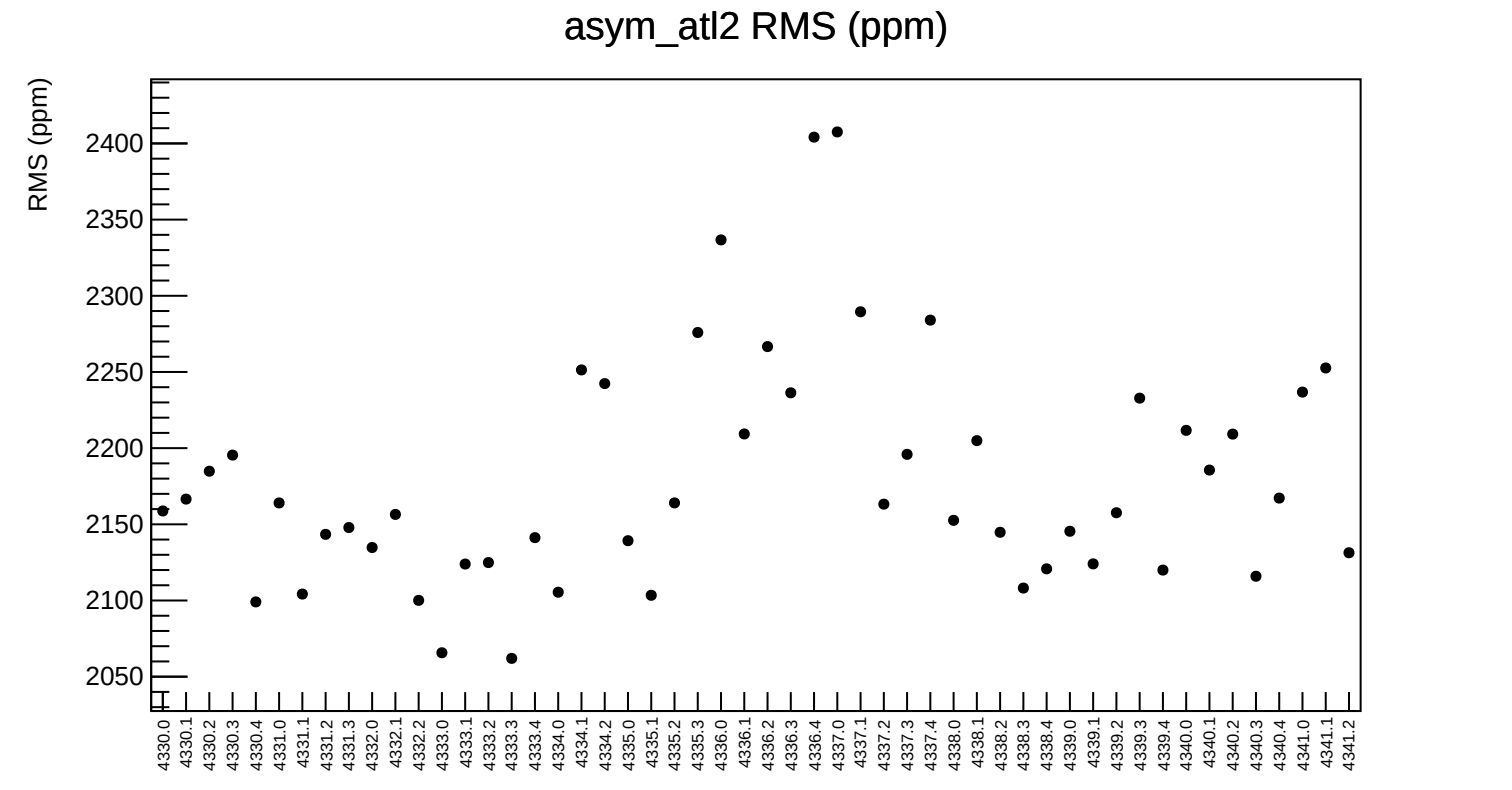

asym_atl1 (ppb)
χ² / ndf 42.43 / 51
p0 −883.1 ± 2236
60000
40000
20000
0
−20000
−40000
−60000
2
1.5
1
0.5
0
−0.5
−1
−1.5
−2
4330.0
4330.1
4330.2
4330.3
4330.4
4331.0
4331.1
4331.2
4331.3
4332.0
4332.1
4332.2
4333.0
4333.1
4333.2
4333.3
4333.4
4334.0
4334.1
4334.2
4335.0
4335.1
4335.2
4335.3
4336.0
4336.1
4336.2
4336.3
4336.4
4337.0
4337.1
4337.2
4337.3
4337.4
4338.0
4338.1
4338.2
4338.3
4338.4
4339.0
4339.1
4339.2
4339.3
4339.4
4340.0
4340.1
4340.2
4340.3
4340.4
4341.0
4341.1
4341.2

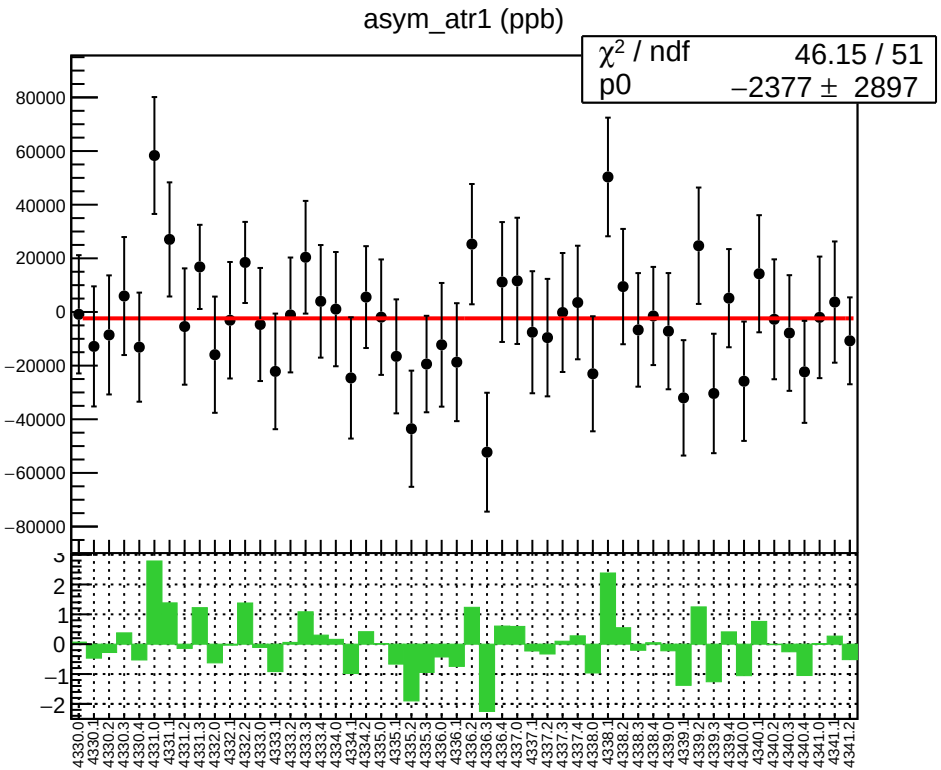

1D pull distribution
Mean 0.01296 ± 0.1253
Std Dev 0.9032 ± 0.08857
Underflow 0
Overflow 0
χ² / ndf 4.714 / 5
Constant 10.64 ± 2.41
Mean 0.04909 ± 0.17547
Sigma 0.971 ± 0.199
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8

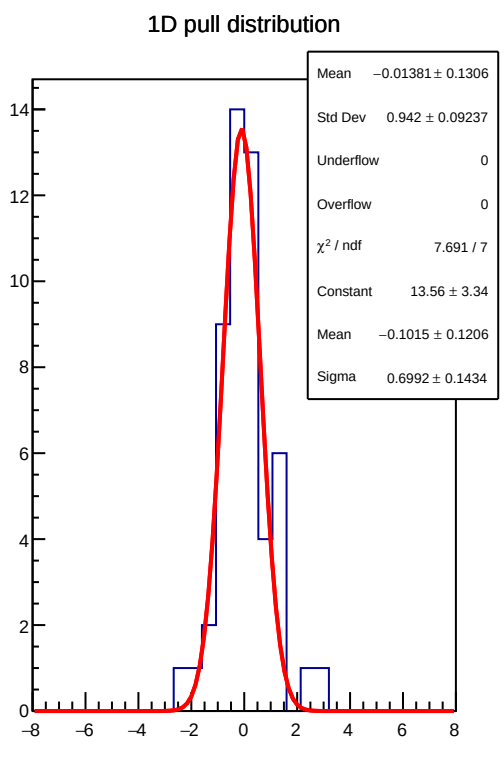

asym_atl1 RMS (ppm)
RMS (ppm)
1850
1800
1750
1700
1650
1600
1550
1500
4330.0
4330.1
4330.2
4330.3
4330.4
4331.0
4331.1
4331.2
4331.3
4332.0
4332.1
4332.2
4333.0
4333.1
4333.2
4333.3
4333.4
4334.0
4334.1
4334.2
4335.0
4335.1
4335.2
4335.3
4336.0
4336.1
4336.2
4336.3
4336.4
4337.0
4337.1
4337.2
4337.3
4337.4
4338.0
4338.1
4338.2
4338.3
4338.4
4339.0
4339.1
4339.2
4339.3
4339.4
4340.0
4340.1
4340.2
4340.3
4340.4
4341.0
4341.1
4341.2

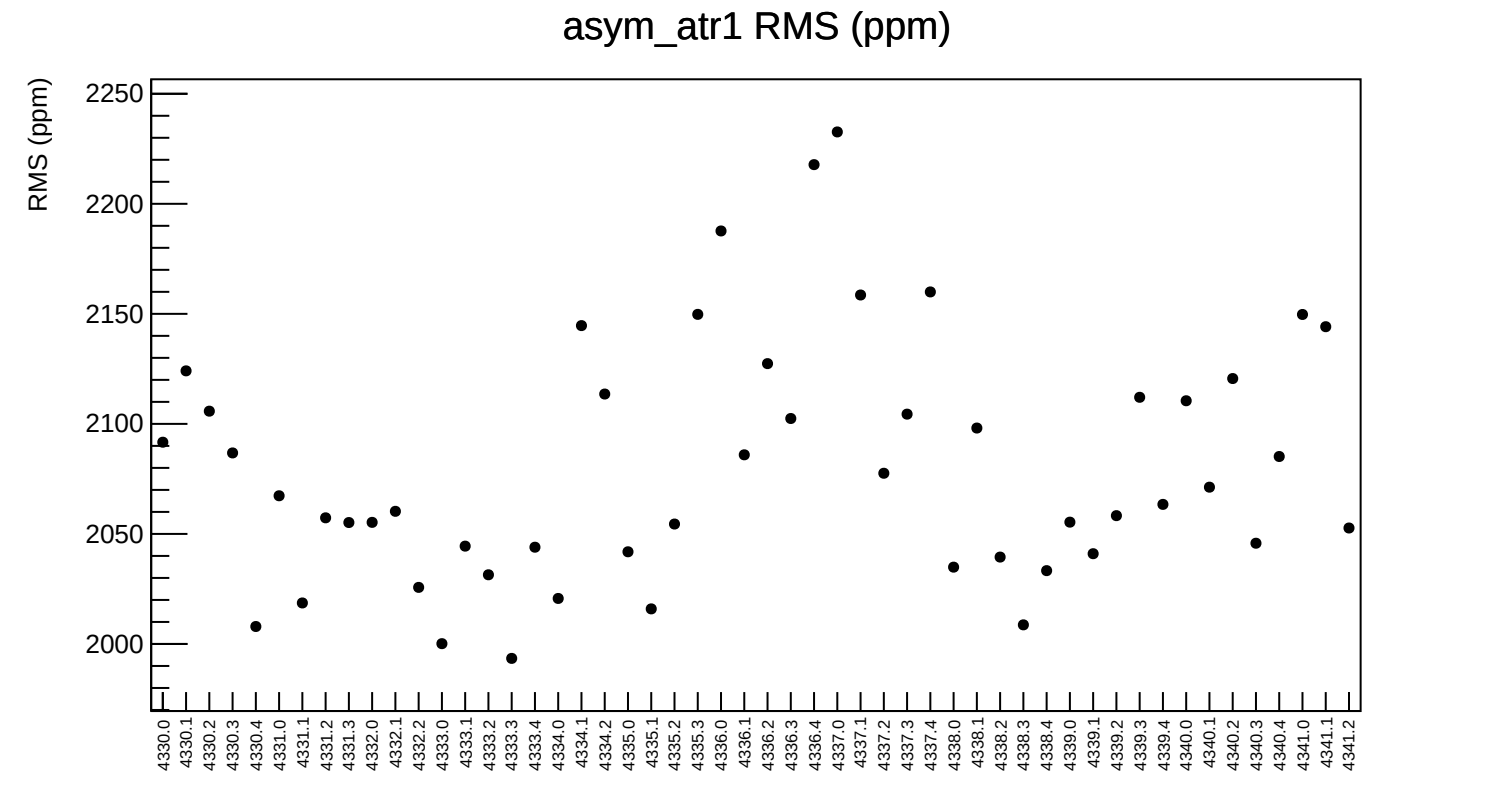

asym_atl2 (ppb)
×10^3
χ² / ndf 57.62 / 51
p0 −1183 ± 3033

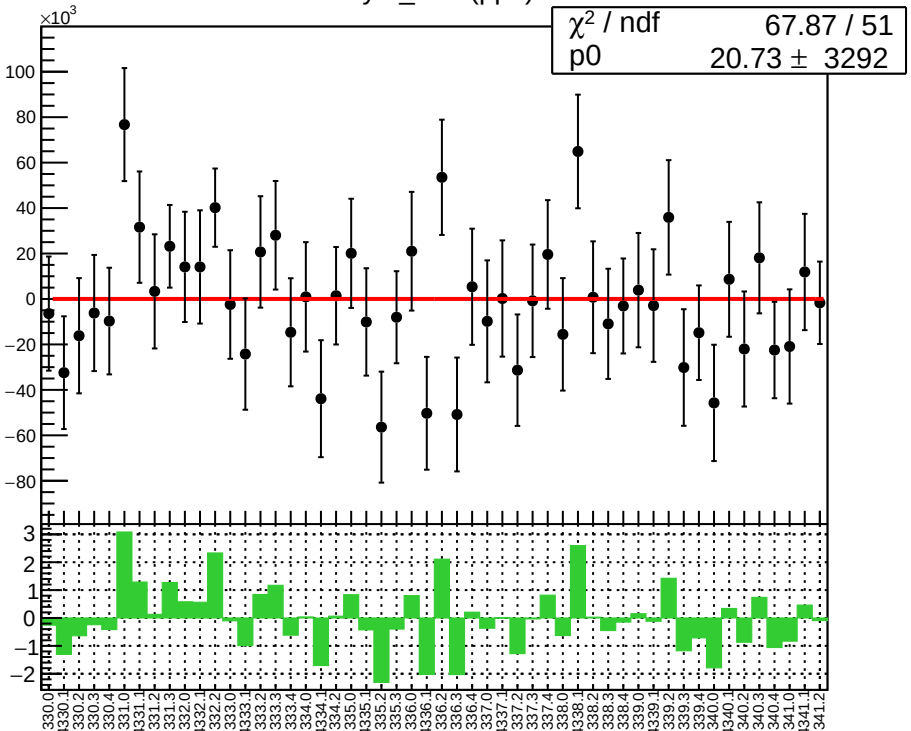

1D pull distribution
Mean −0.02441 ± 0.1459
Std Dev 1.052 ± 0.1032
Underflow 0
Overflow 0
χ² / ndf 10.56 / 7
Constant 8.898 ± 2.268
Mean −0.2204 ± 0.1795
Sigma 1.021 ± 0.242

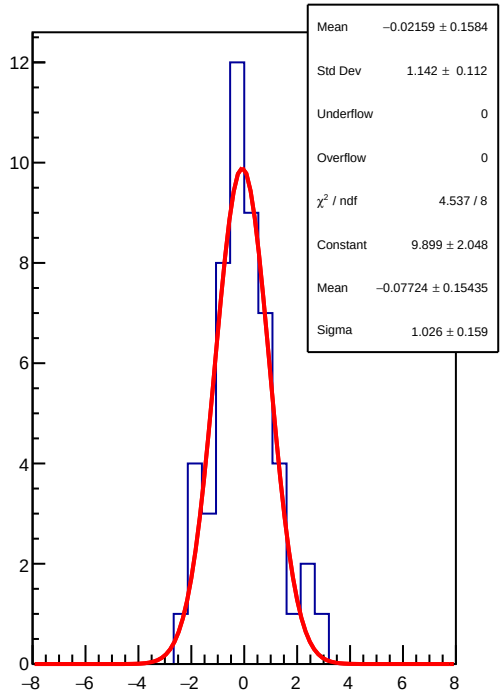

asym_atl2 RMS (ppm)
RMS (ppm)
2400
2350
2300
2250
2200
2150
2100
2050
4330.0
4330.1
4330.2
4330.3
4330.4
4331.0
4331.1
4331.2
4331.3
4332.0
4332.1
4332.2
4333.0
4333.1
4333.2
4333.3
4333.4
4334.0
4334.1
4334.2
4335.0
4335.1
4335.2
4335.3
4336.0
4336.1
4336.2
4336.3
4336.4
4337.0
4337.1
4337.2
4337.3
4337.4
4338.0
4338.1
4338.2
4338.3
4338.4
4339.0
4339.1
4339.2
4339.3
4339.4
4340.0
4340.1
4340.2
4340.3
4340.4
4341.0
4341.1
4341.2

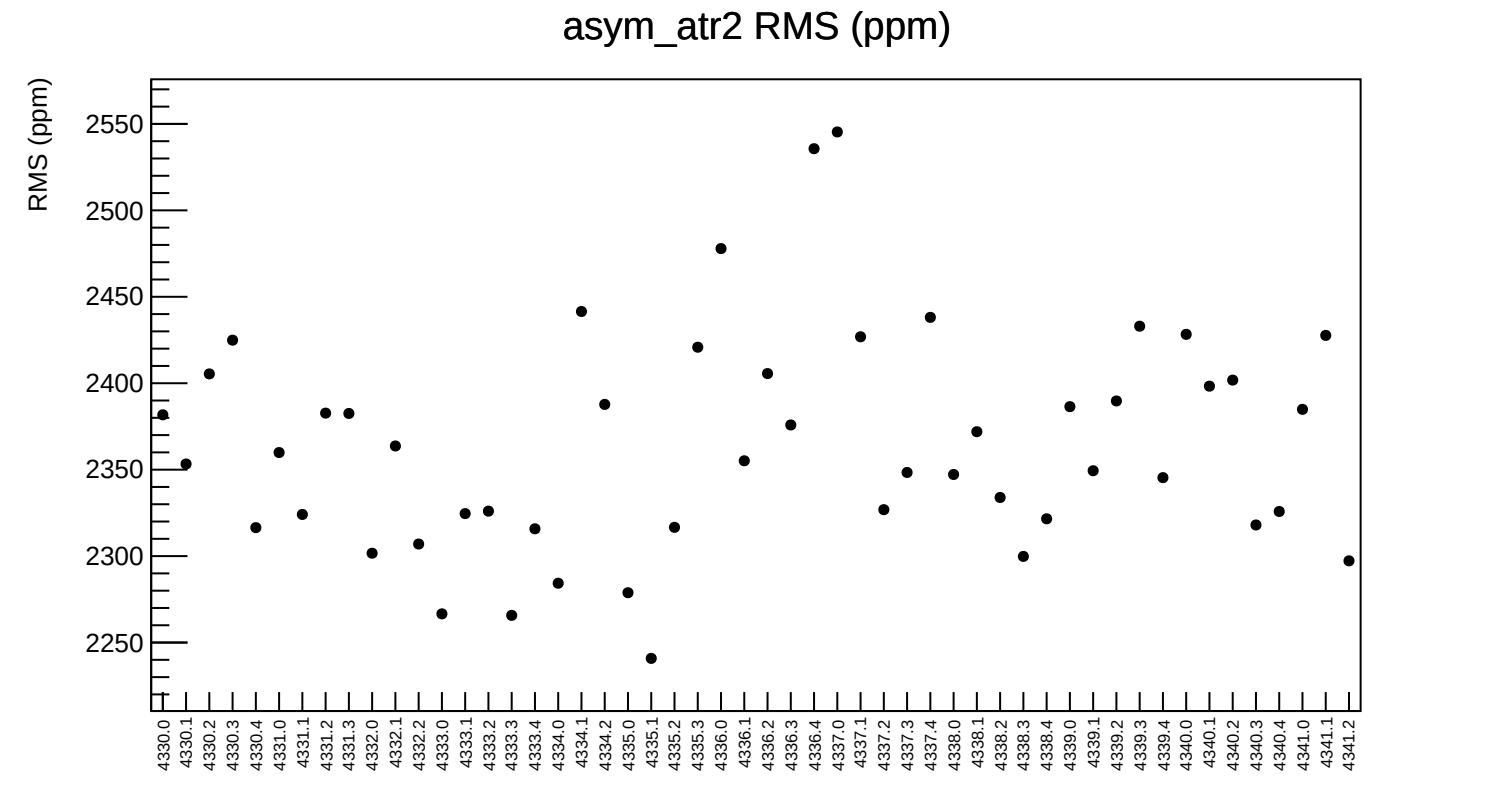

asym_atr1 (ppb)
χ² / ndf 46.15 / 51
p0 −2377 ± 2897
80000
60000
40000
20000
0
−20000
−40000
−60000
−80000
3
2
1
0
−1
−2
4330.0
4330.1
4330.2
4330.3
4330.4
4331.0
4331.1
4331.2
4331.3
4332.0
4332.1
4332.2
4333.0
4333.1
4333.2
4333.3
4333.4
4334.0
4334.1
4334.2
4335.0
4335.1
4335.2
4335.3
4336.0
4336.1
4336.2
4336.3
4336.4
4337.0
4337.1
4337.2
4337.3
4337.4
4338.0
4338.1
4338.2
4338.3
4338.4
4339.0
4339.1
4339.2
4339.3
4339.4
4340.0
4340.1
4340.2
4340.3
4340.4
4341.0
4341.1
4341.2


1D pull distribution
Mean −0.01381 ± 0.1306
Std Dev 0.942 ± 0.09237
Underflow 0
Overflow 0
χ² / ndf 7.691 / 7
Constant 13.56 ± 3.34
Mean −0.1015 ± 0.1206
Sigma 0.6992 ± 0.1434
14
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8


asym_atr1 RMS (ppm)
RMS (ppm)
2250
2200
2150
2100
2050
2000
4330.0
4330.1
4330.2
4330.3
4330.4
4331.0
4331.1
4331.2
4331.3
4332.0
4332.1
4332.2
4333.0
4333.1
4333.2
4333.3
4333.4
4334.0
4334.1
4334.2
4335.0
4335.1
4335.2
4335.3
4336.0
4336.1
4336.2
4336.3
4336.4
4337.0
4337.1
4337.2
4337.3
4337.4
4338.0
4338.1
4338.2
4338.3
4338.4
4339.0
4339.1
4339.2
4339.3
4339.4
4340.0
4340.1
4340.2
4340.3
4340.4
4341.0
4341.1
4341.2


asym_atr2 (ppb)
×10^3
χ² / ndf 67.87 / 51
p0 20.73 ± 3292
100
80
60
40
20
0
−20
−40
−60
−80
3
2
1
0
−1
−2
4330.0
4330.1
4330.2
4330.3
4330.4
4331.0
4331.1
4331.2
4331.3
4332.0
4332.1
4332.2
4333.0
4333.1
4333.2
4333.3
4333.4
4334.0
4334.1
4334.2
4335.0
4335.1
4335.2
4335.3
4336.0
4336.1
4336.2
4336.3
4336.4
4337.0
4337.1
4337.2
4337.3
4337.4
4338.0
4338.1
4338.2
4338.3
4338.4
4339.0
4339.1
4339.2
4339.3
4339.4
4340.0
4340.1
4340.2
4340.3
4340.4
4341.0
4341.1
4341.2


1D pull distribution
Mean −0.02159 ± 0.1584
Std Dev 1.142 ± 0.112
Underflow 0
Overflow 0
χ² / ndf 4.537 / 8
Constant 9.899 ± 2.048
Mean −0.07724 ± 0.15435
Sigma 1.026 ± 0.159
12
10
8
6
4
2
0
−8
−6
−4
−2
0
2
4
6
8


asym_atr2 RMS (ppm)
RMS (ppm)
2550
2500
2450
2400
2350
2300
2250
4330.0
4330.1
4330.2
4330.3
4330.4
4331.0
4331.1
4331.2
4331.3
4332.0
4332.1
4332.2
4333.0
4333.1
4333.2
4333.3
4333.4
4334.0
4334.1
4334.2
4335.0
4335.1
4335.2
4335.3
4336.0
4336.1
4336.2
4336.3
4336.4
4337.0
4337.1
4337.2
4337.3
4337.4
4338.0
4338.1
4338.2
4338.3
4338.4
4339.0
4339.1
4339.2
4339.3
4339.4
4340.0
4340.1
4340.2
4340.3
4340.4
4341.0
4341.1
4341.2