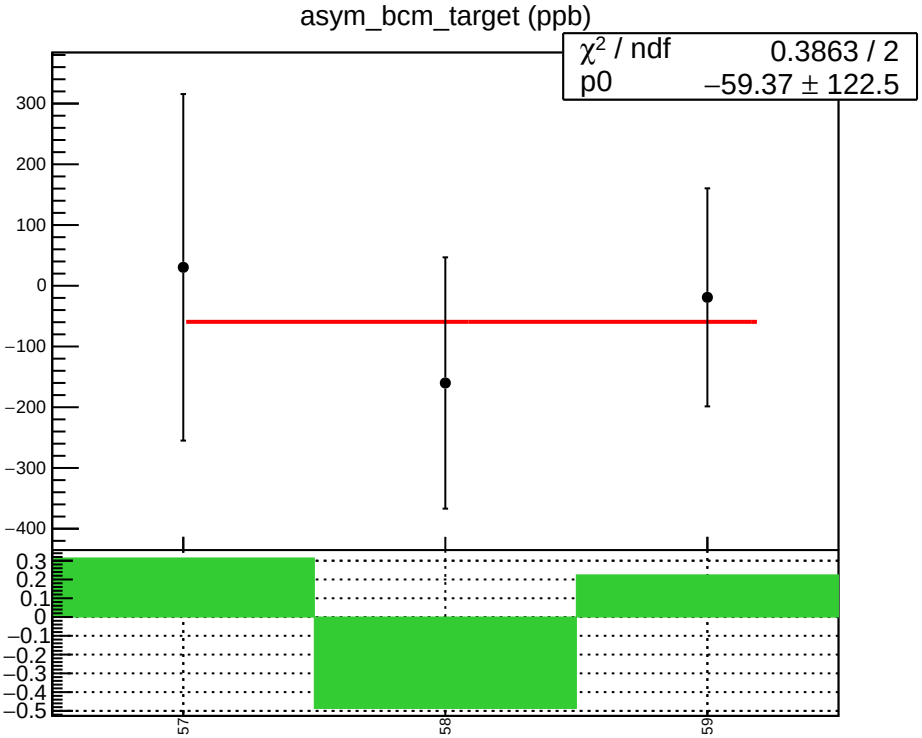
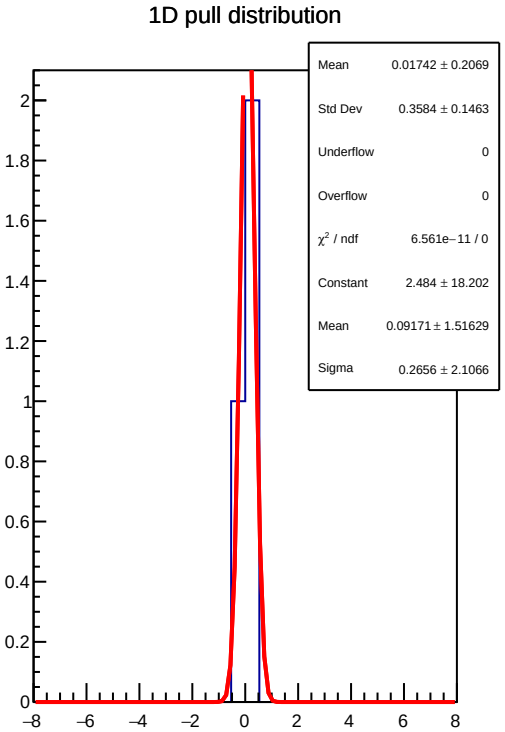
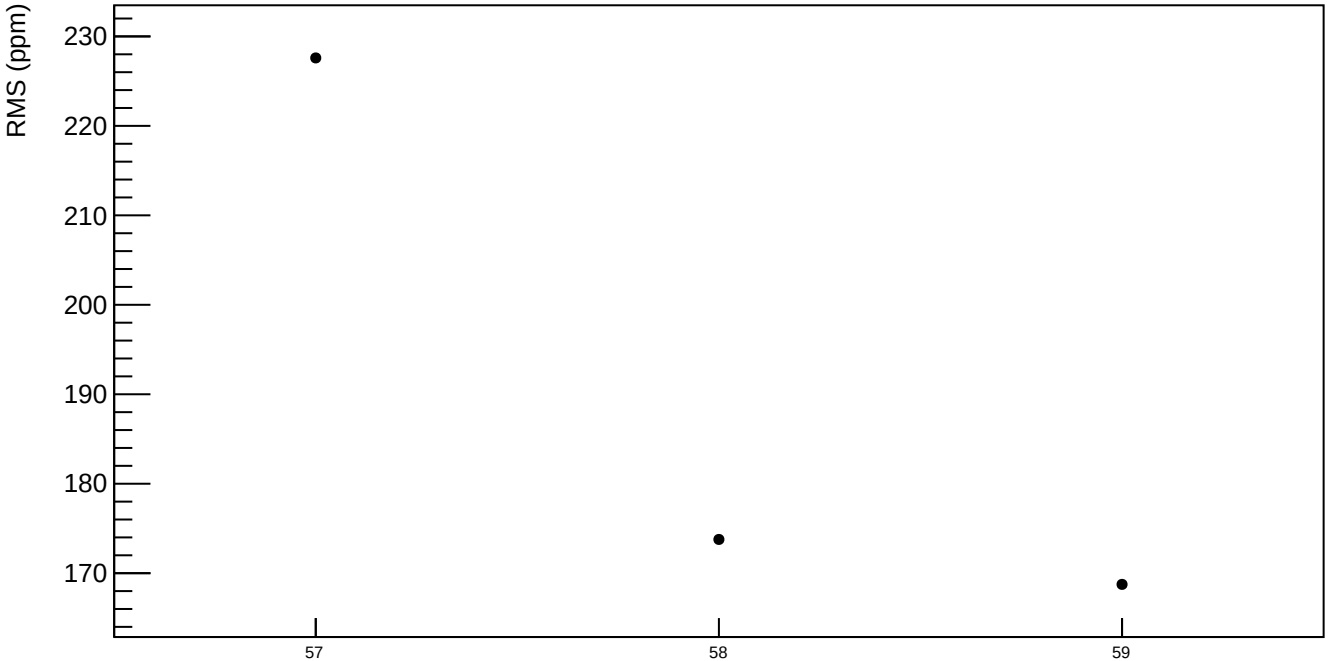
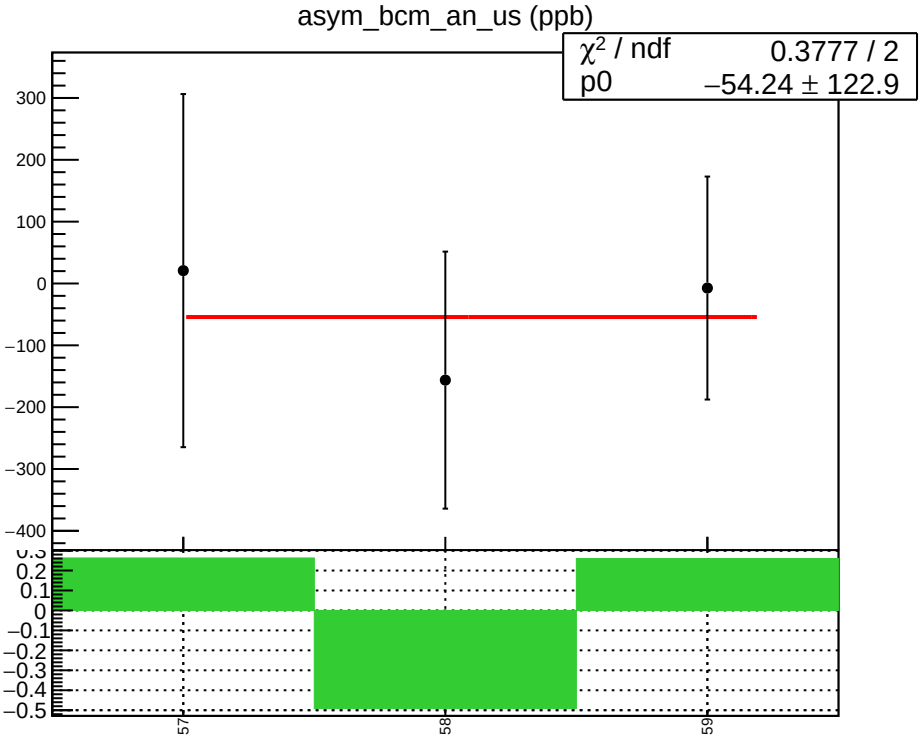
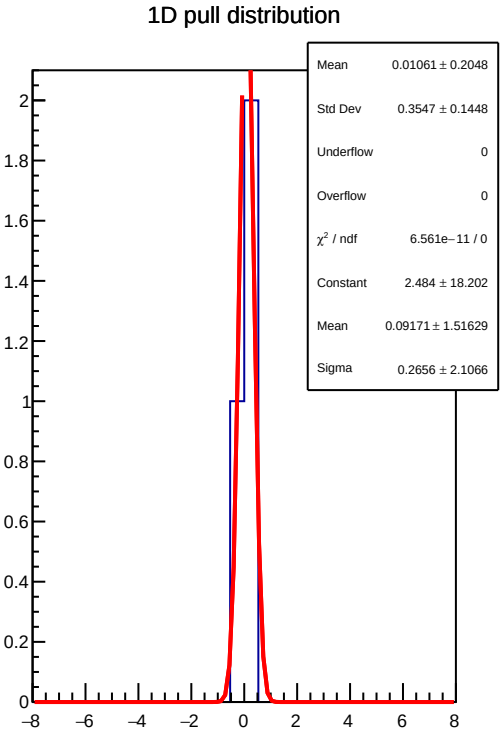

asym_bcm_target (ppb)
χ² / ndf 0.3863 / 2
p0 −59.37 ± 122.5
300
200
100
0
−100
−200
−300
−400
0.3
0.2
0.1
0
−0.1
−0.2
−0.3
−0.4
−0.5
57
58
59

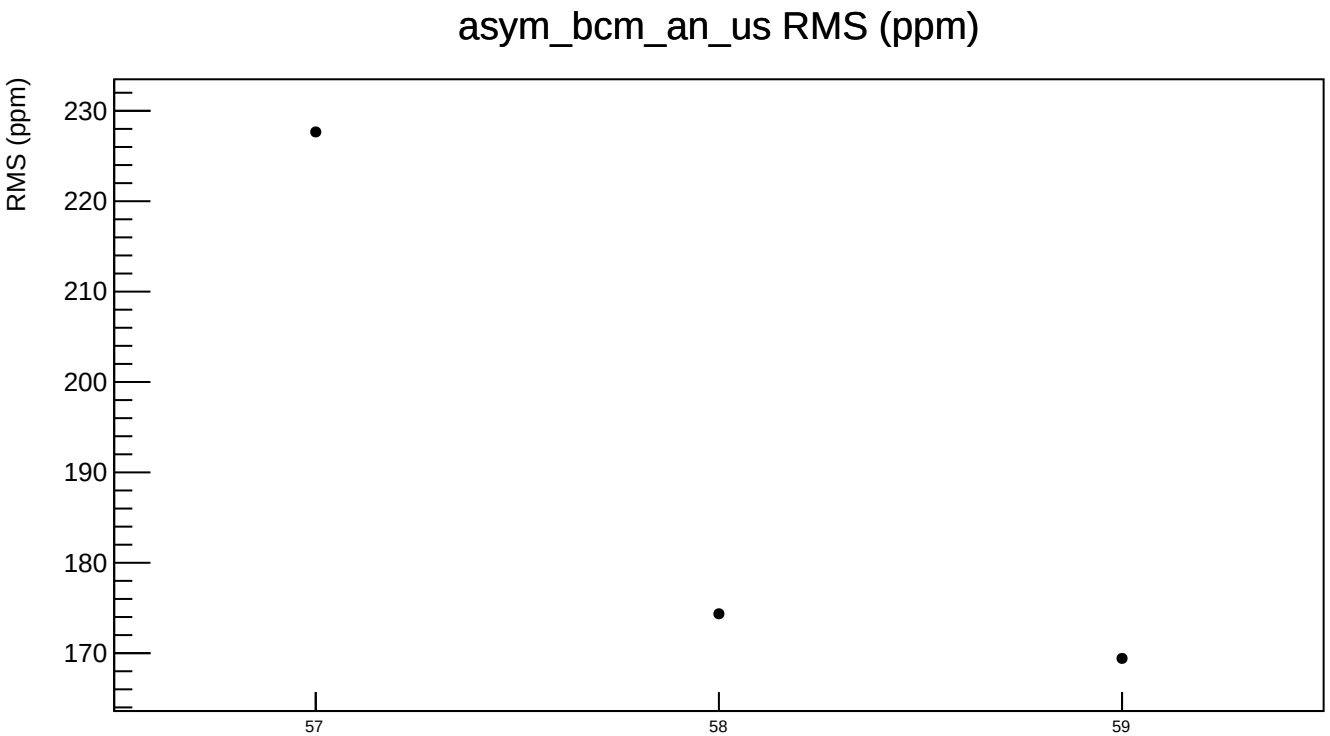

1D pull distribution
Mean 0.01742 ± 0.2069
Std Dev 0.3584 ± 0.1463
Underflow 0
Overflow 0
χ² / ndf 6.561e−11 / 0
Constant 2.484 ± 18.202
Mean 0.09171 ± 1.51629
Sigma 0.2656 ± 2.1066
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
−8
−6
−4
−2
0
2
4
6
8

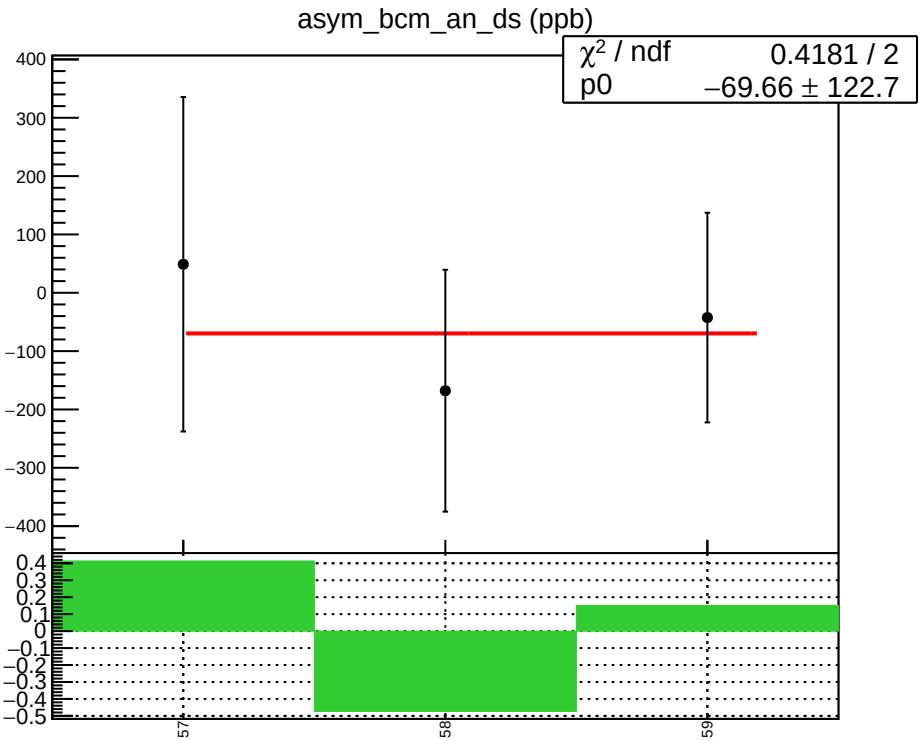
asym_bcm_target RMS (ppm)

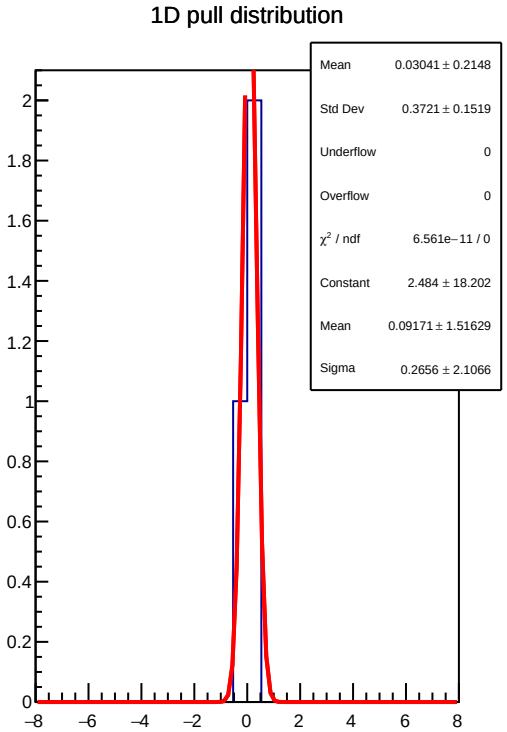


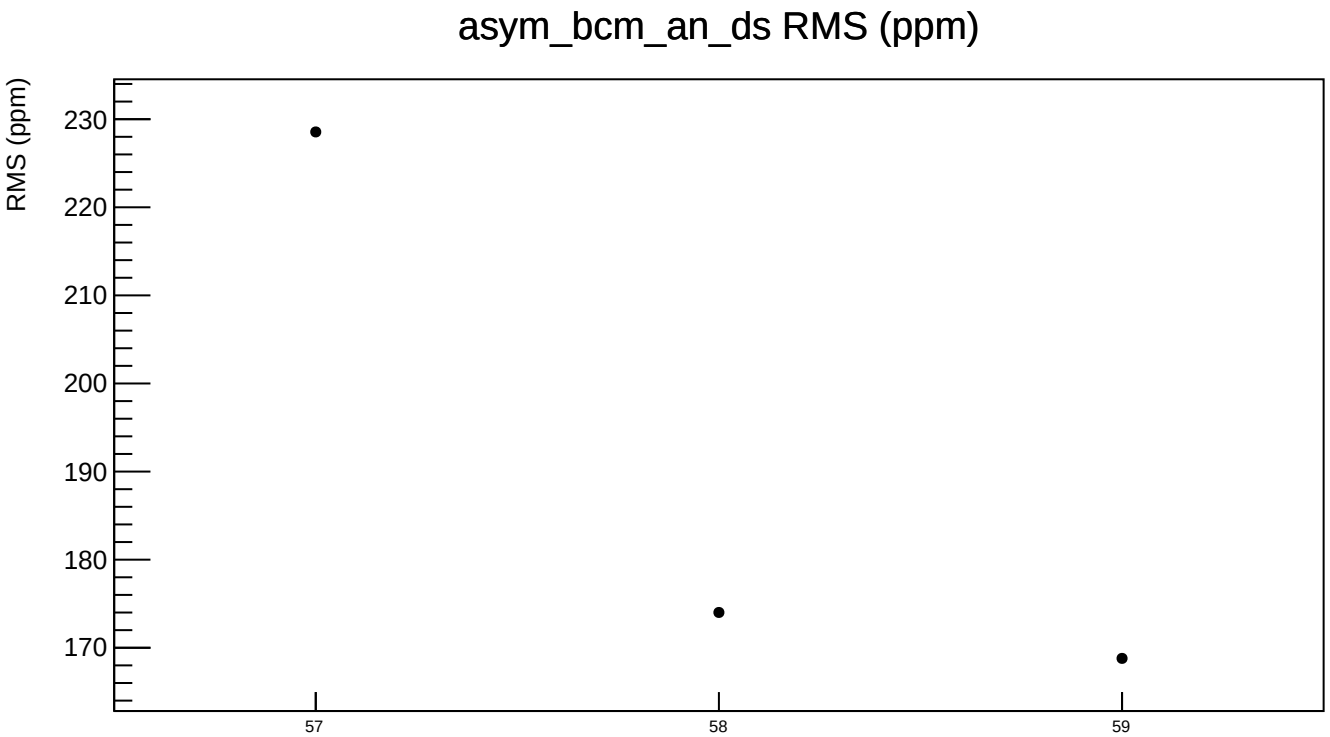

asym_bcm_an_us (ppb)
χ² / ndf 0.3777 / 2
p0 −54.24 ± 122.9
300
200
100
0
−100
−200
−300
−400
0.3
0.2
0.1
0
−0.1
−0.2
−0.3
−0.4
−0.5
57
58
59

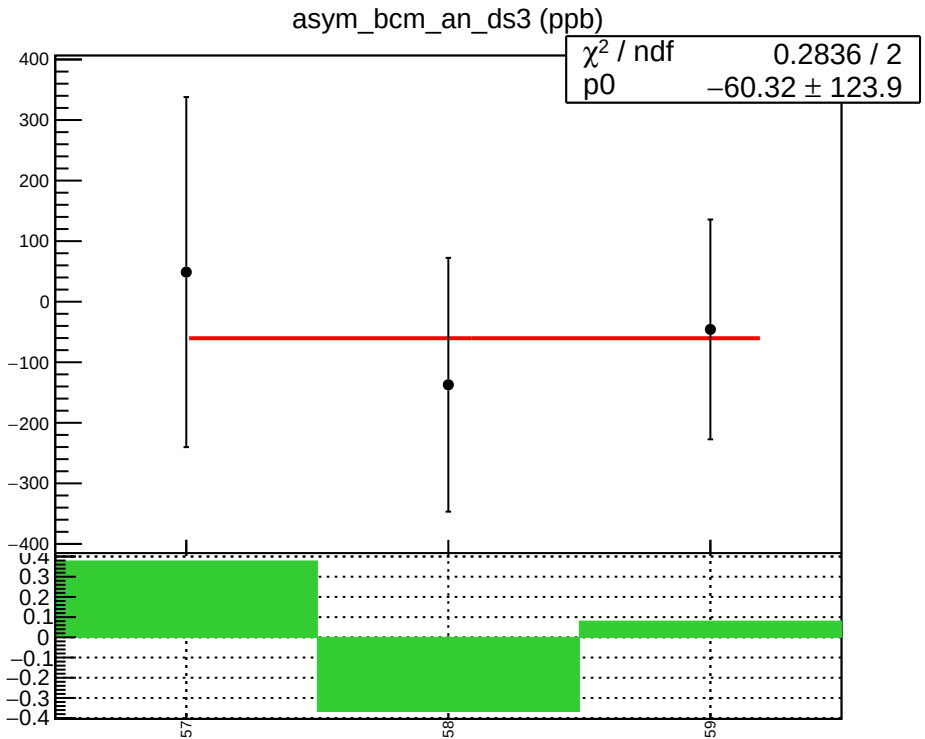

1D pull distribution
Mean 0.01061 ± 0.2048
Std Dev 0.3547 ± 0.1448
Underflow 0
Overflow 0
χ² / ndf 6.561e−11 / 0
Constant 2.484 ± 18.202
Mean 0.09171 ± 1.51629
Sigma 0.2656 ± 2.1066
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
−8
−6
−4
−2
0
2
4
6
8

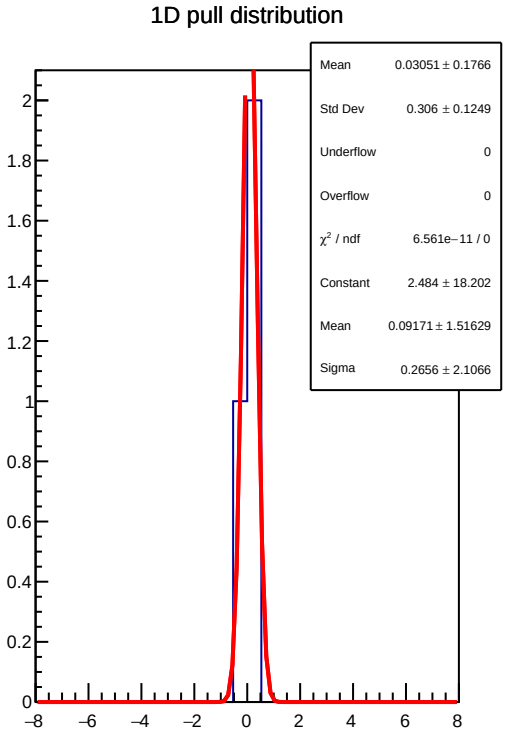

asym_bcm_an_us RMS (ppm)
RMS (ppm)
230
220
210
200
190
180
170
57
58
59

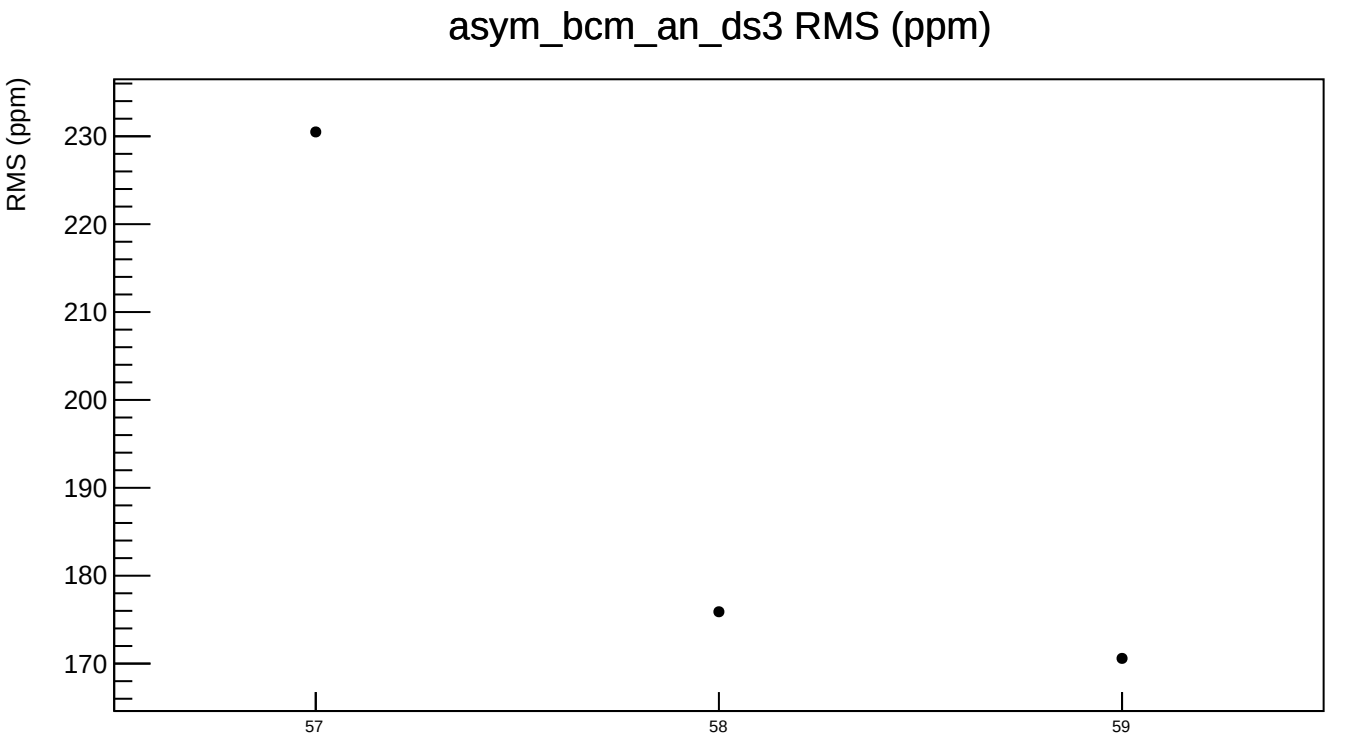

asym_bcm_an_ds (ppb)
χ² / ndf 0.4181 / 2
p0 −69.66 ± 122.7
400
300
200
100
0
−100
−200
−300
−400
0.4
0.3
0.2
0.1
0
−0.1
−0.2
−0.3
−0.4
−0.5
57
58
59

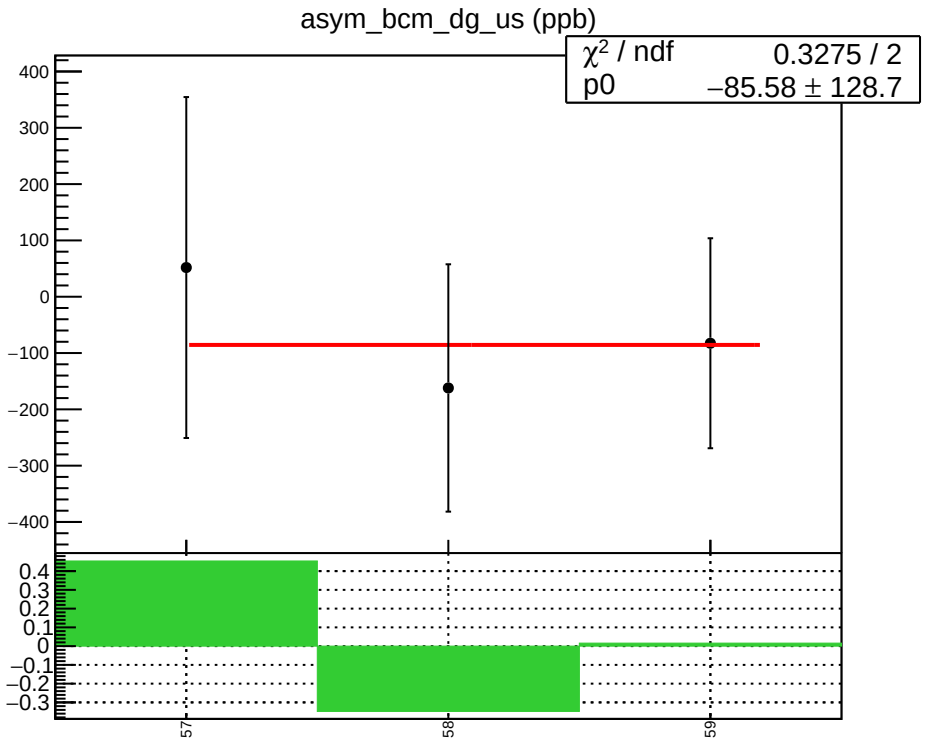

1D pull distribution
Mean 0.03041 ± 0.2148
Std Dev 0.3721 ± 0.1519
Underflow 0
Overflow 0
χ² / ndf 6.561e−11 / 0
Constant 2.484 ± 18.202
Mean 0.09171 ± 1.51629
Sigma 0.2656 ± 2.1066
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
−8
−6
−4
−2
0
2
4
6
8

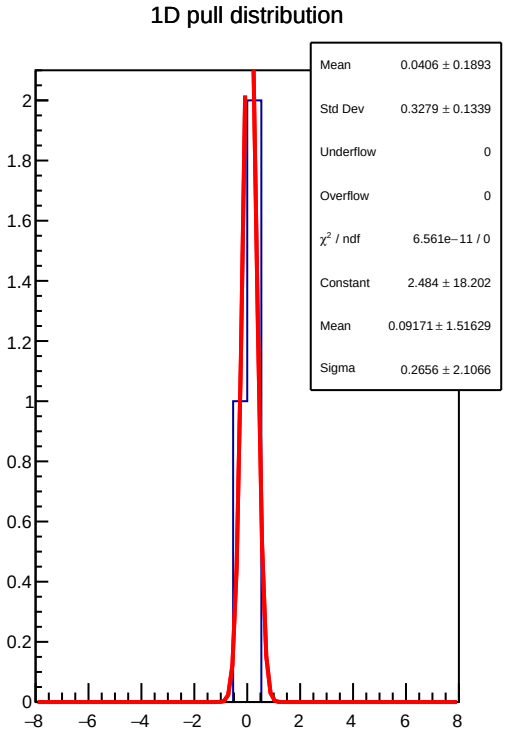

asym_bcm_an_ds RMS (ppm)
RMS (ppm)
230
220
210
200
190
180
170
57
58
59

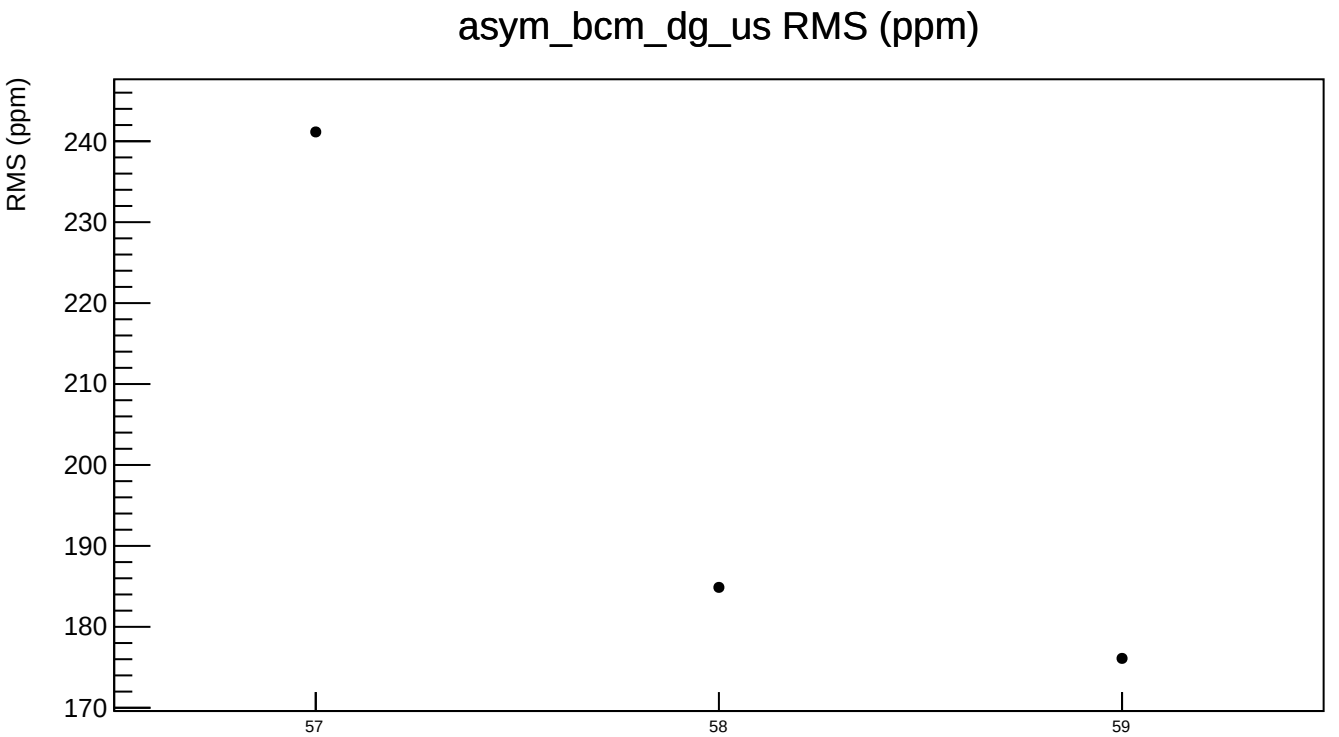

asym_bcm_an_ds3 (ppb)
χ² / ndf 0.2836 / 2
p0 −60.32 ± 123.9
400
300
200
100
0
−100
−200
−300
−400
0.4
0.3
0.2
0.1
0
−0.1
−0.2
−0.3
−0.4
57
58
59

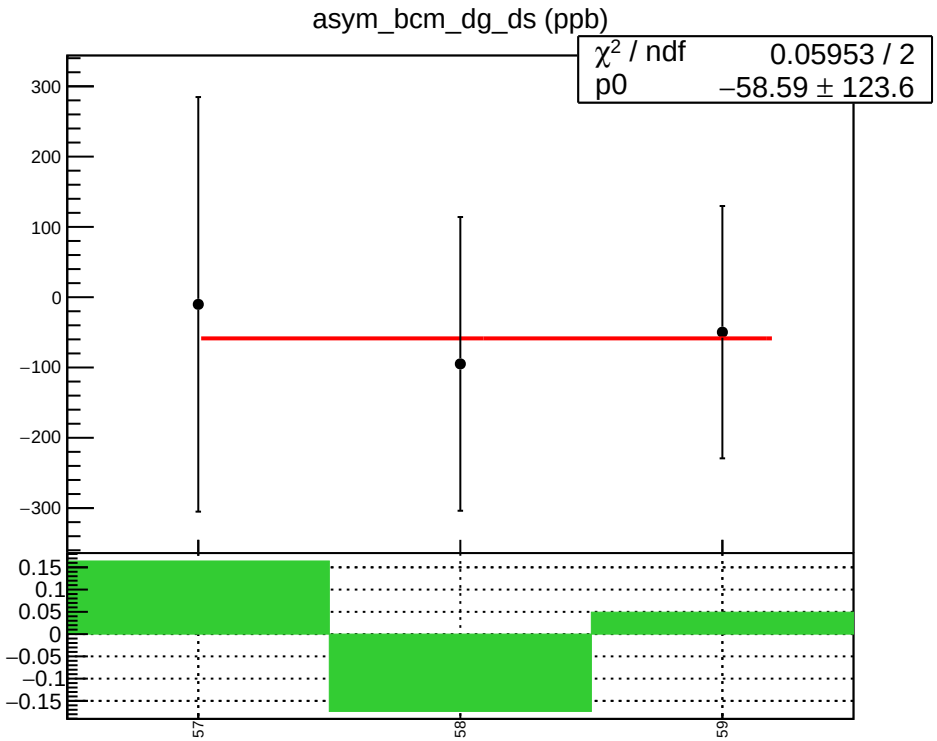

1D pull distribution
Mean 0.03051 ± 0.1766
Std Dev 0.306 ± 0.1249
Underflow 0
Overflow 0
χ² / ndf 6.561e−11 / 0
Constant 2.484 ± 18.202
Mean 0.09171 ± 1.51629
Sigma 0.2656 ± 2.1066
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
−8
−6
−4
−2
0
2
4
6
8

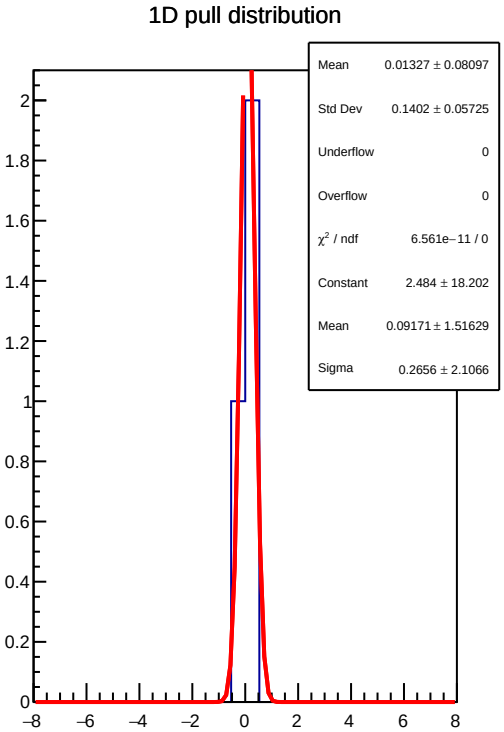

asym_bcm_an_ds3 RMS (ppm)
RMS (ppm)
230
220
210
200
190
180
170
57
58
59

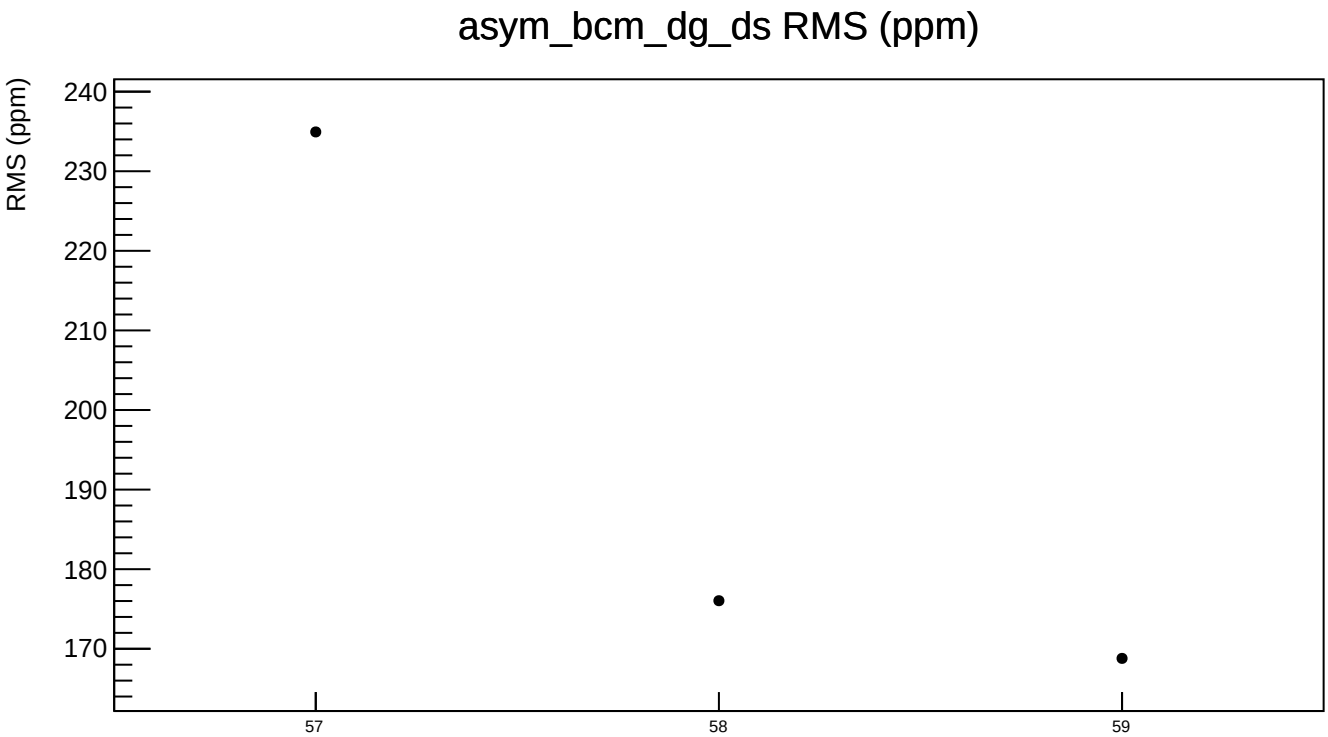

asym_bcm_dg_us (ppb)
χ² / ndf 0.3275 / 2
p0 −85.58 ± 128.7
400
300
200
100
0
−100
−200
−300
−400
0.4
0.3
0.2
0.1
0
−0.1
−0.2
−0.3
57
58
59

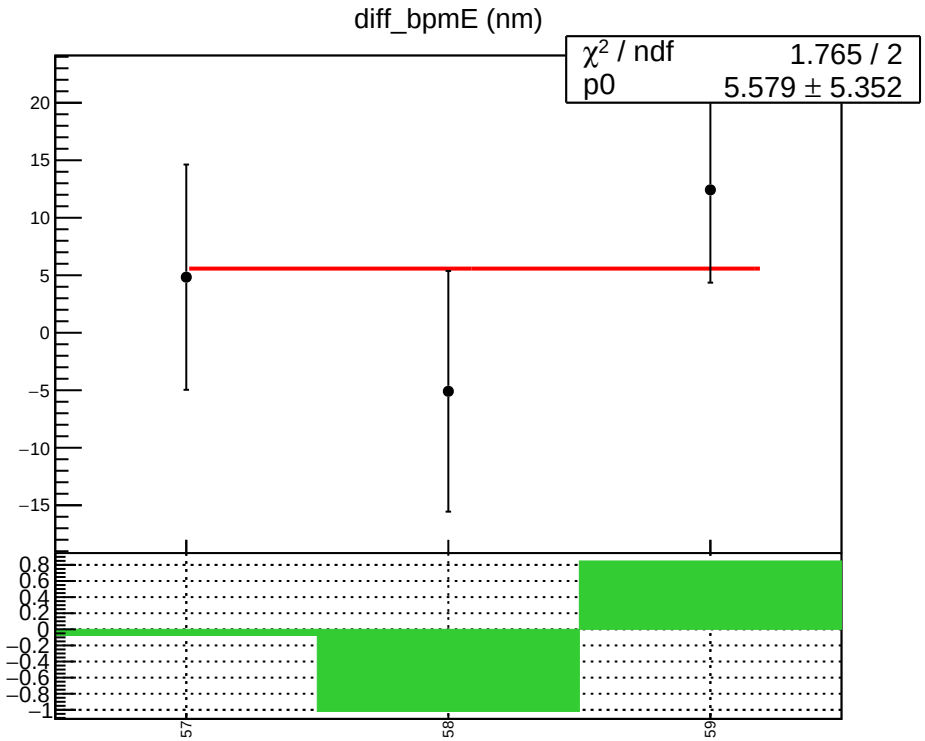

1D pull distribution
Mean 0.0406 ± 0.1893
Std Dev 0.3279 ± 0.1339
Underflow 0
Overflow 0
χ² / ndf 6.561e−11 / 0
Constant 2.484 ± 18.202
Mean 0.09171 ± 1.51629
Sigma 0.2656 ± 2.1066
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
−8
−6
−4
−2
0
2
4
6
8

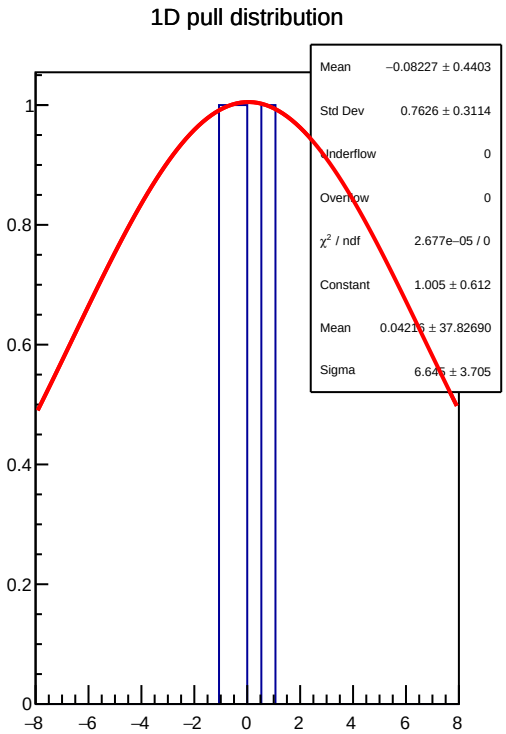

asym_bcm_dg_us RMS (ppm)
RMS (ppm)
240
230
220
210
200
190
180
170
57
58
59


asym_bcm_dg_ds (ppb)
χ² / ndf 0.05953 / 2
p0 −58.59 ± 123.6
300
200
100
0
−100
−200
−300
0.15
0.1
0.05
0
−0.05
−0.1
−0.15
57
58
59

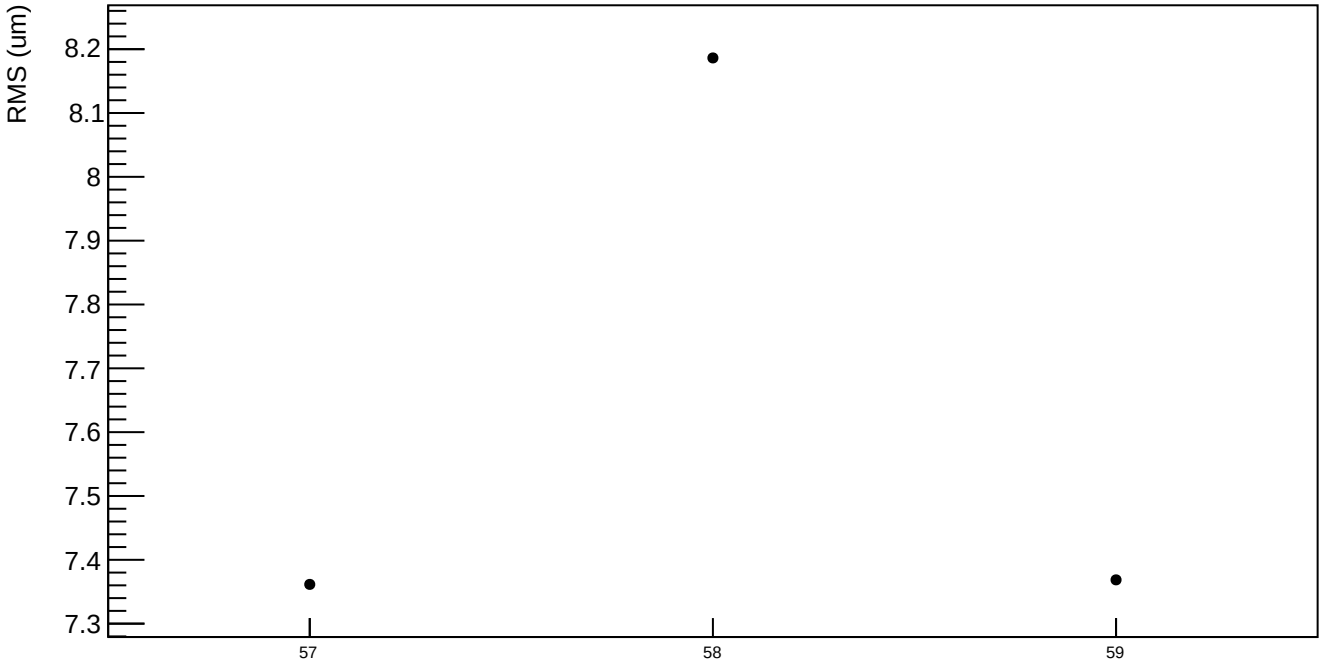

1D pull distribution
Mean 0.01327 ± 0.08097
Std Dev 0.1402 ± 0.05725
Underflow 0
Overflow 0
χ² / ndf 6.561e−11 / 0
Constant 2.484 ± 18.202
Mean 0.09171 ± 1.51629
Sigma 0.2656 ± 2.1066
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
−8
−6
−4
−2
0
2
4
6
8

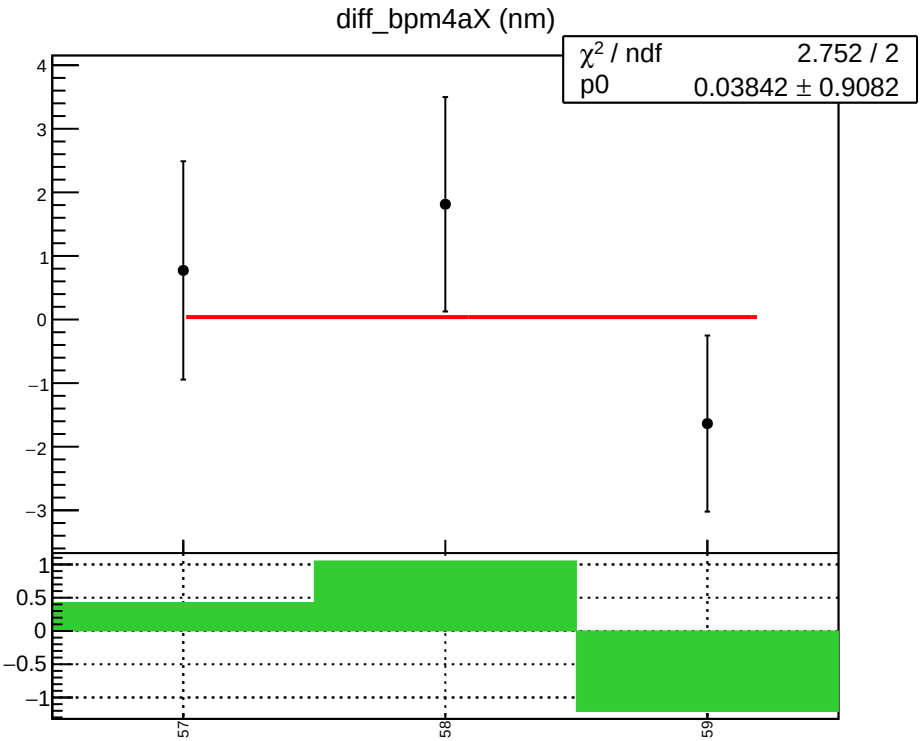

asym_bcm_dg_ds RMS (ppm)
RMS (ppm)
240
230
220
210
200
190
180
170
57
58
59

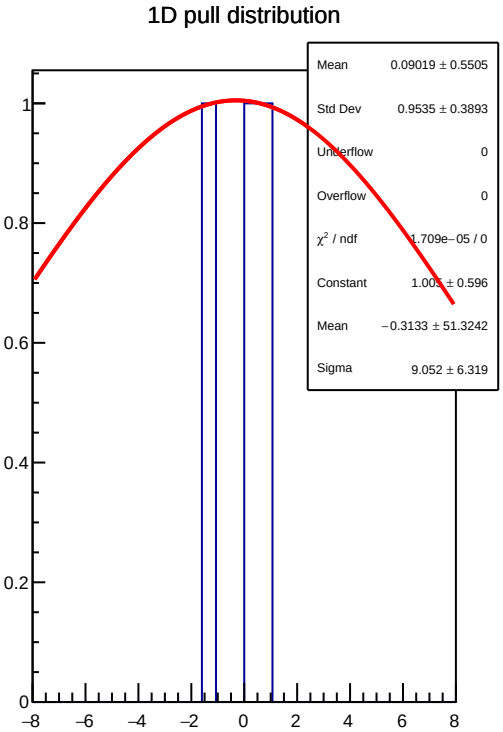

diff_bpmE (nm)
χ² / ndf 1.765 / 2
p0 5.579 ± 5.352
20
15
10
5
0
−5
−10
−15
0.8
0.6
0.4
0.2
0
−0.2
−0.4
−0.6
−0.8
−1
57
58
59


1D pull distribution
Mean −0.08227 ± 0.4403
Std Dev 0.7626 ± 0.3114
Underflow 0
Overflow 0
χ² / ndf 2.677e−05 / 0
Constant 1.005 ± 0.612
Mean 0.04216 ± 37.82690
Sigma 6.645 ± 3.705
1
0.8
0.6
0.4
0.2
0
−8
−6
−4
−2
0
2
4
6
8

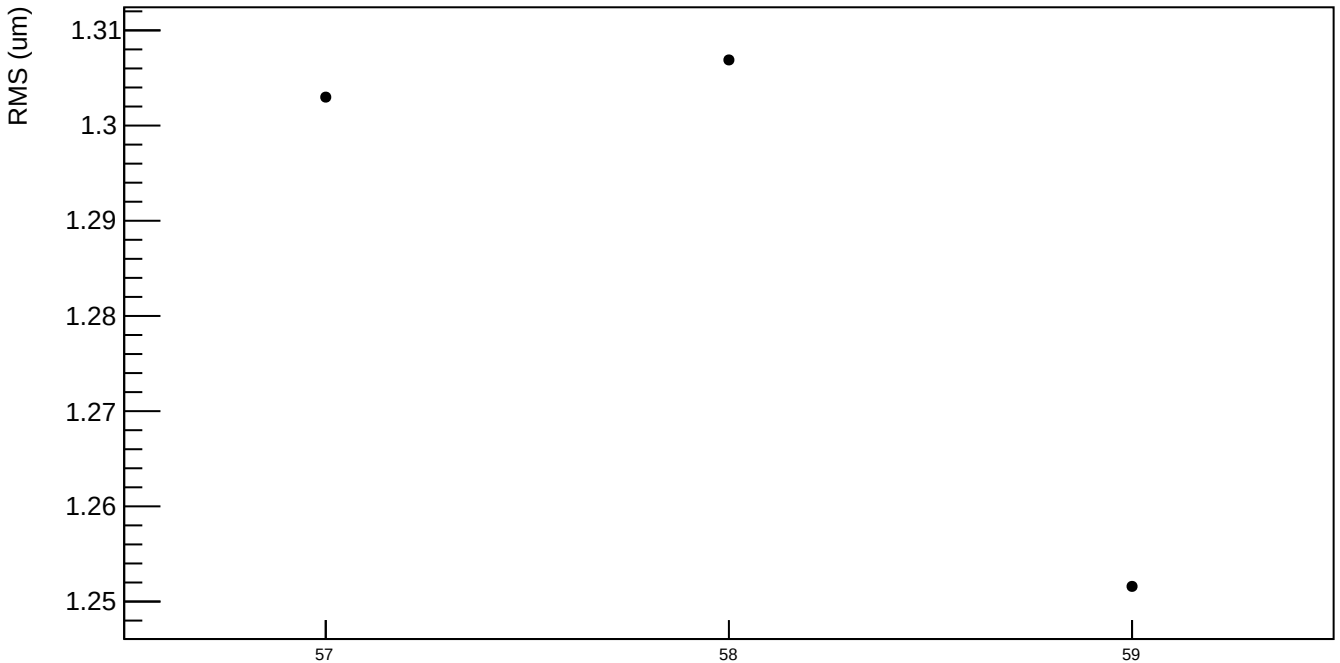
diff_bpmE RMS (um)

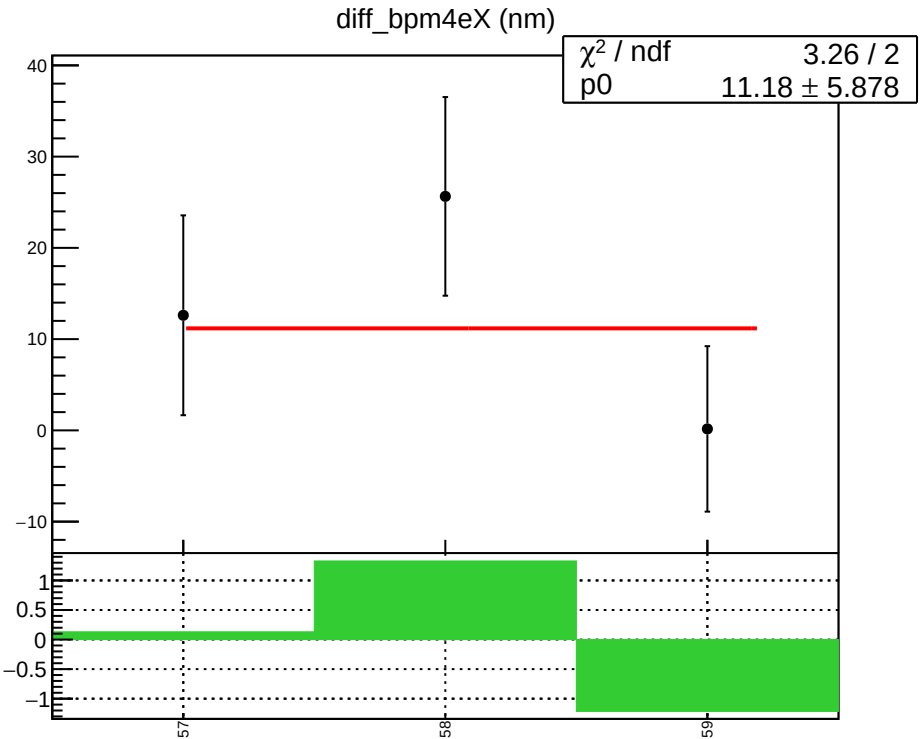


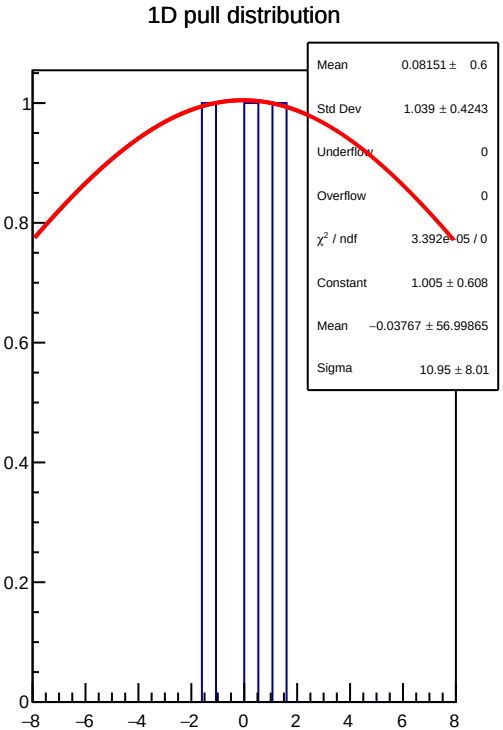

diff_bpm4aX (nm)
χ² / ndf 2.752 / 2
p0 0.03842 ± 0.9082
4
3
2
1
0
−1
−2
−3
1
0.5
0
−0.5
−1
57
58
59


1D pull distribution
Mean 0.09019 ± 0.5505
Std Dev 0.9535 ± 0.3893
Underflow 0
Overflow 0
χ² / ndf 1.709e−05 / 0
Constant 1.005 ± 0.596
Mean −0.3133 ± 51.3242
Sigma 9.052 ± 6.319
1
0.8
0.6
0.4
0.2
0
−8
−6
−4
−2
0
2
4
6
8

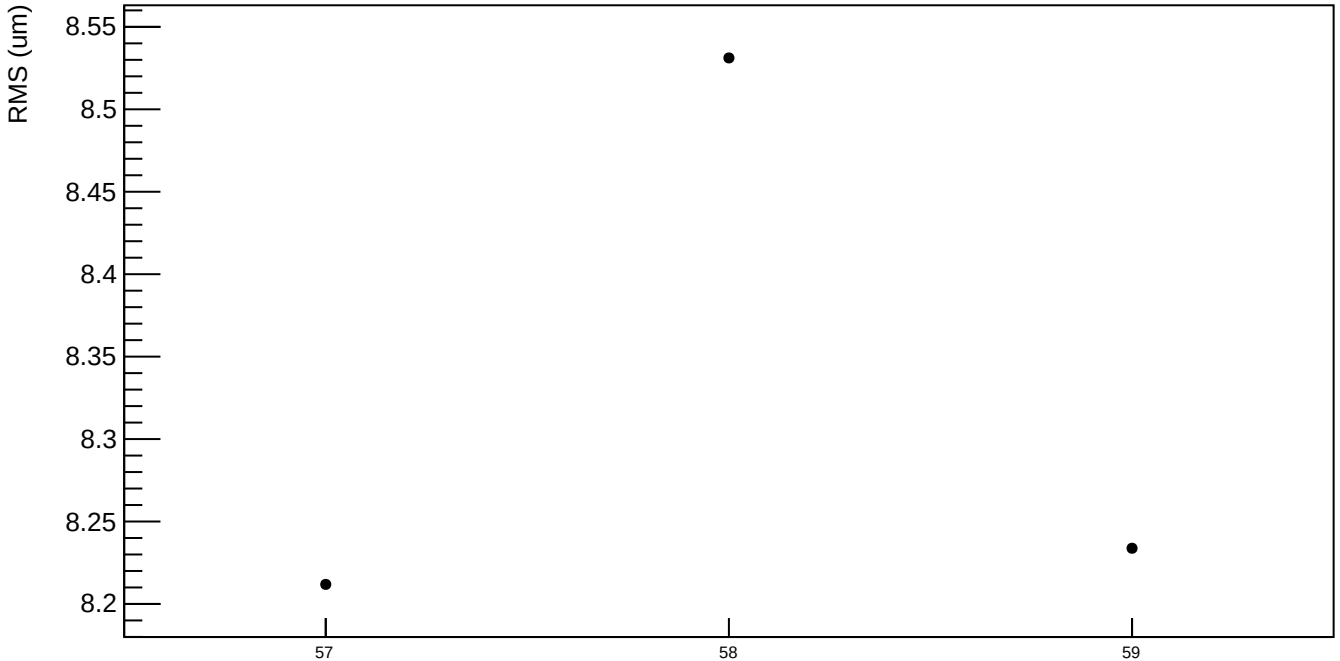
diff_bpm4aX RMS (um)

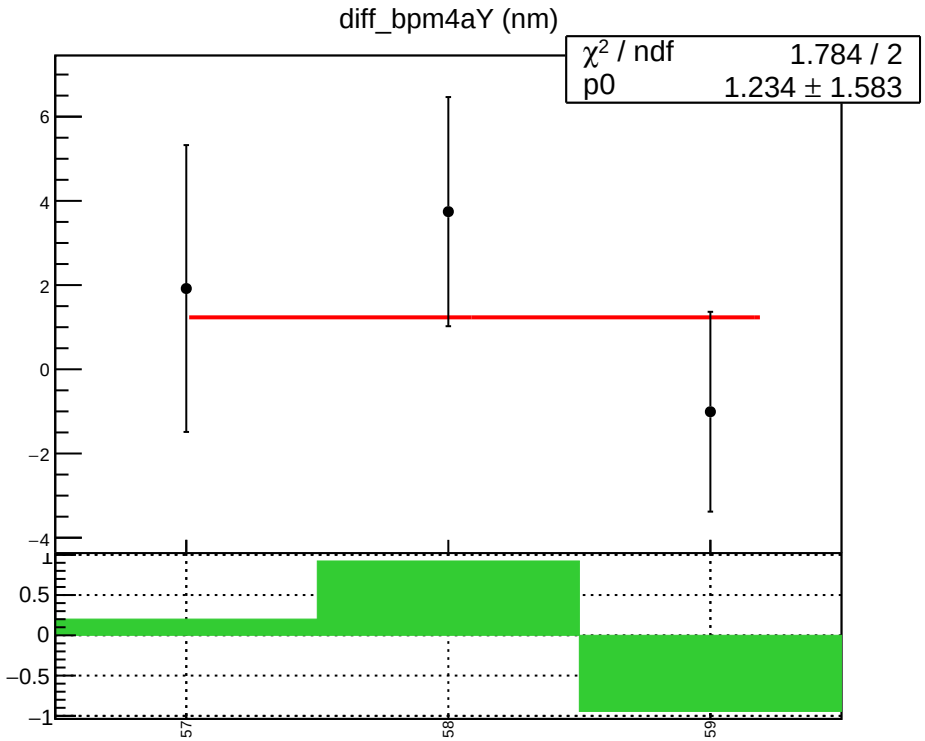


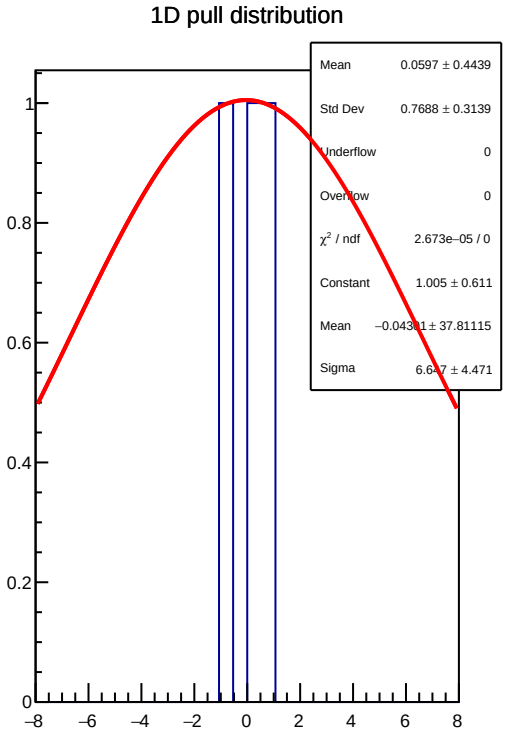

diff_bpm4eX (nm)
χ² / ndf 3.26 / 2
p0 11.18 ± 5.878
40
30
20
10
0
−10
1
0.5
0
−0.5
−1
57
58
59


1D pull distribution
Mean 0.08151 ± 0.6
Std Dev 1.039 ± 0.4243
Underflow 0
Overflow 0
χ² / ndf 3.392e−05 / 0
Constant 1.005 ± 0.608
Mean −0.03767 ± 56.99865
Sigma 10.95 ± 8.01
1
0.8
0.6
0.4
0.2
0
−8
−6
−4
−2
0
2
4
6
8

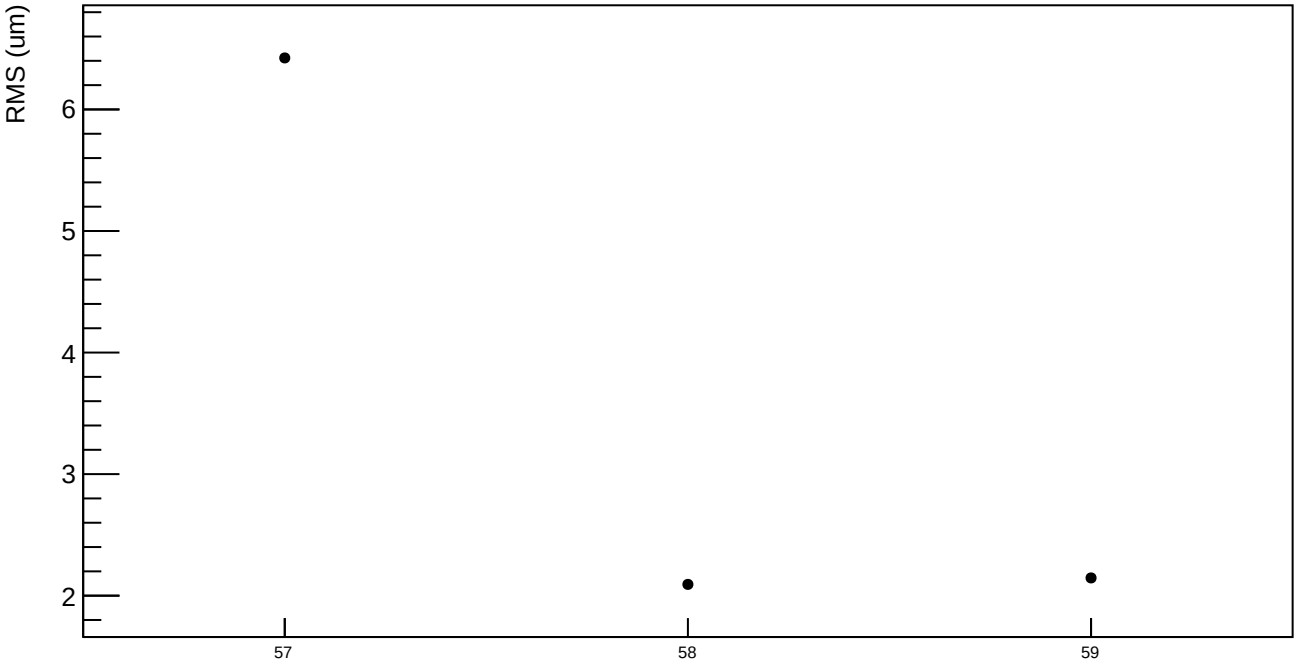
diff_bpm4eX RMS (um)

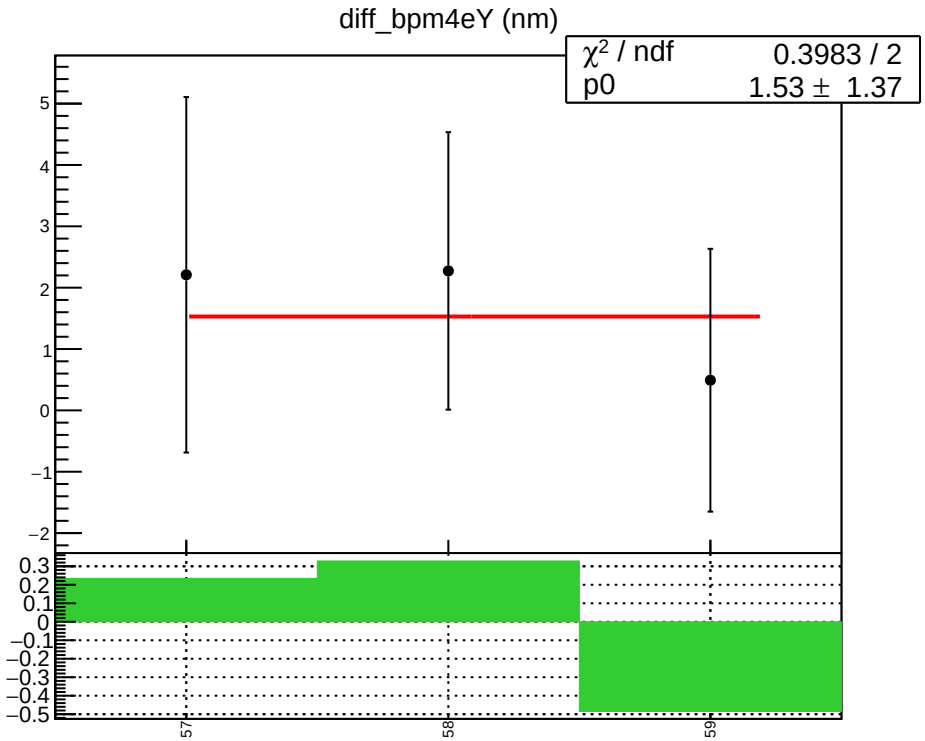


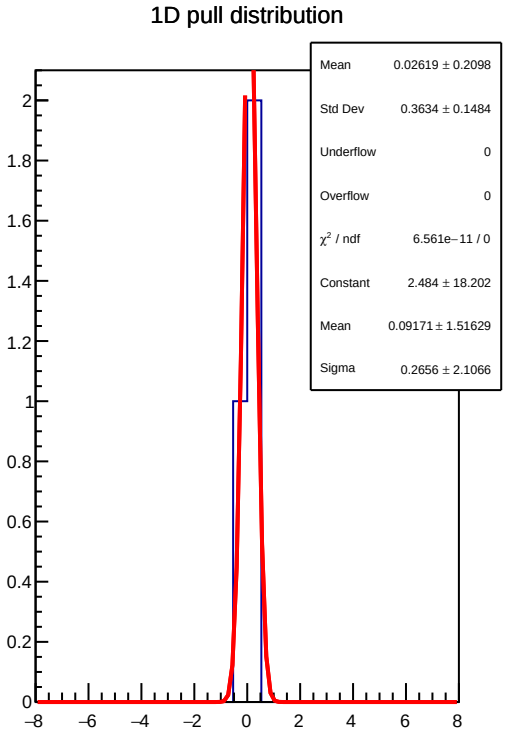

diff_bpm4aY (nm)
χ² / ndf 1.784 / 2
p0 1.234 ± 1.583
6
4
2
0
−2
−4
1
0.5
0
−0.5
−1
57
58
59

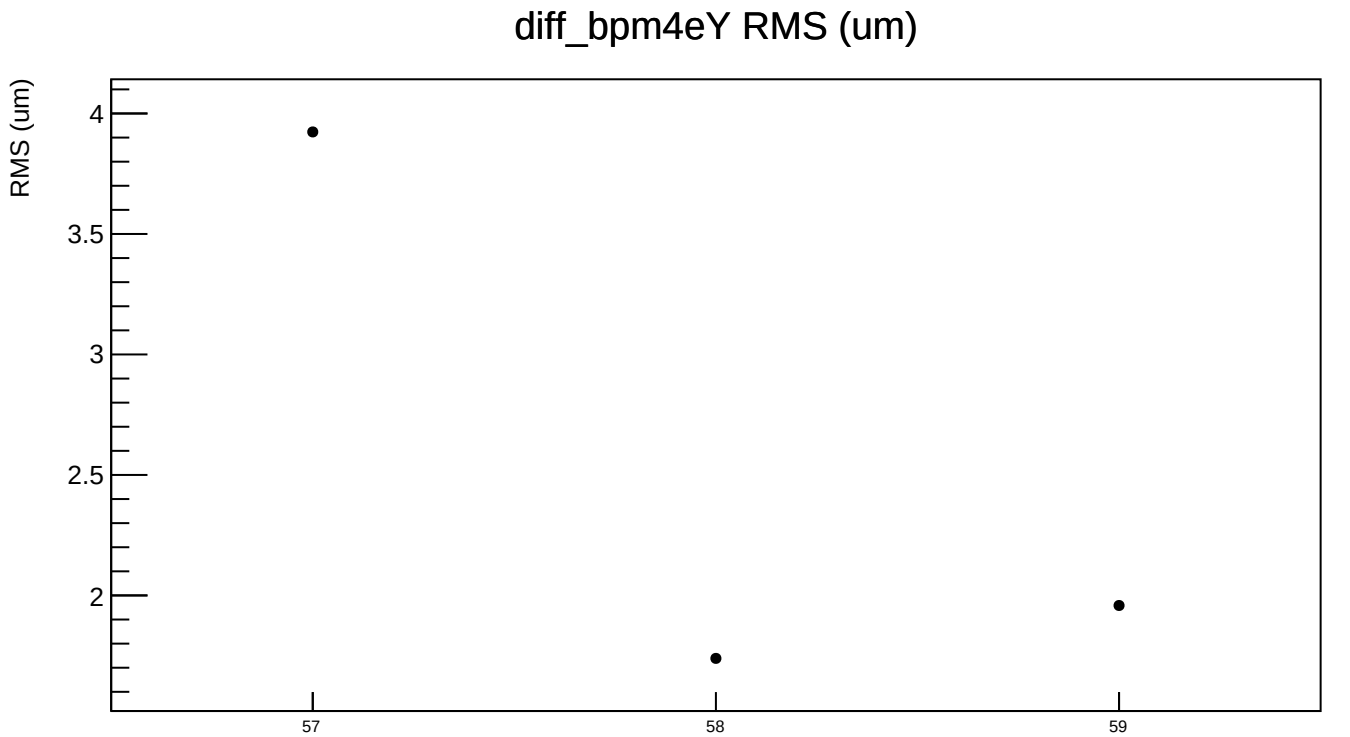

1D pull distribution
Mean 0.0597 ± 0.4439
Std Dev 0.7688 ± 0.3139
Underflow 0
Overflow 0
χ² / ndf 2.673e−05 / 0
Constant 1.005 ± 0.611
Mean −0.0431 ± 37.81115
Sigma 6.647 ± 4.471
1
0.8
0.6
0.4
0.2
0
−8
−6
−4
−2
0
2
4
6
8

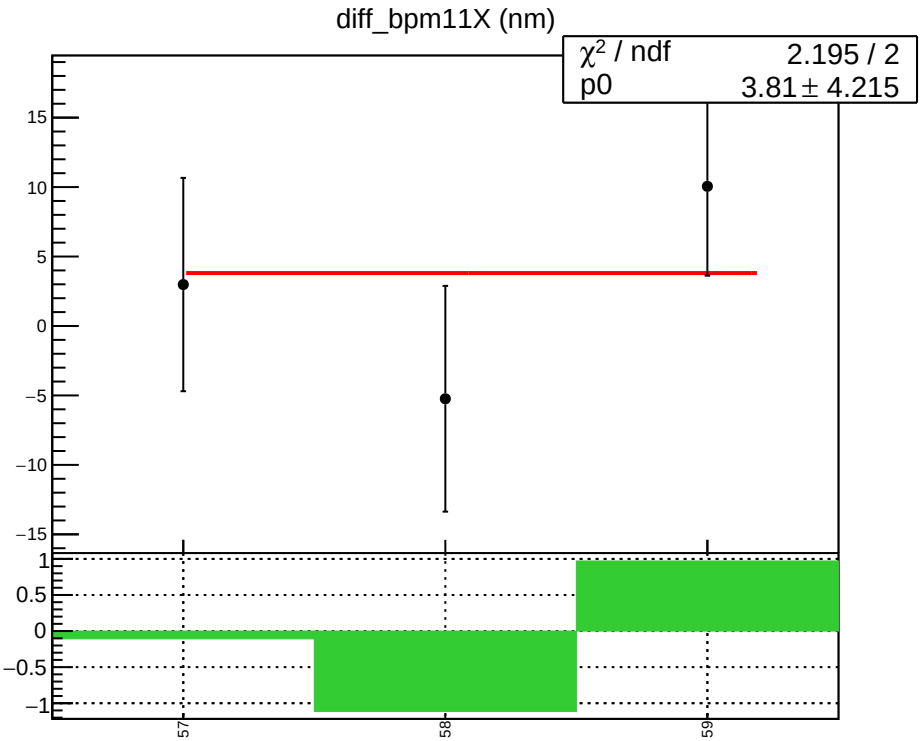
diff_bpm4aY RMS (um)

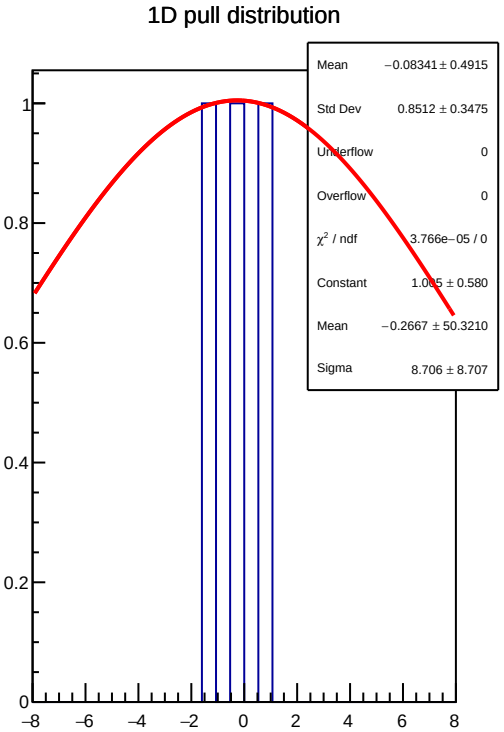



diff_bpm4eY (nm)
χ² / ndf 0.3983 / 2
p0 1.53 ± 1.37
5
4
3
2
1
0
−1
−2
0.3
0.2
0.1
0
−0.1
−0.2
−0.3
−0.4
−0.5
57
58
59

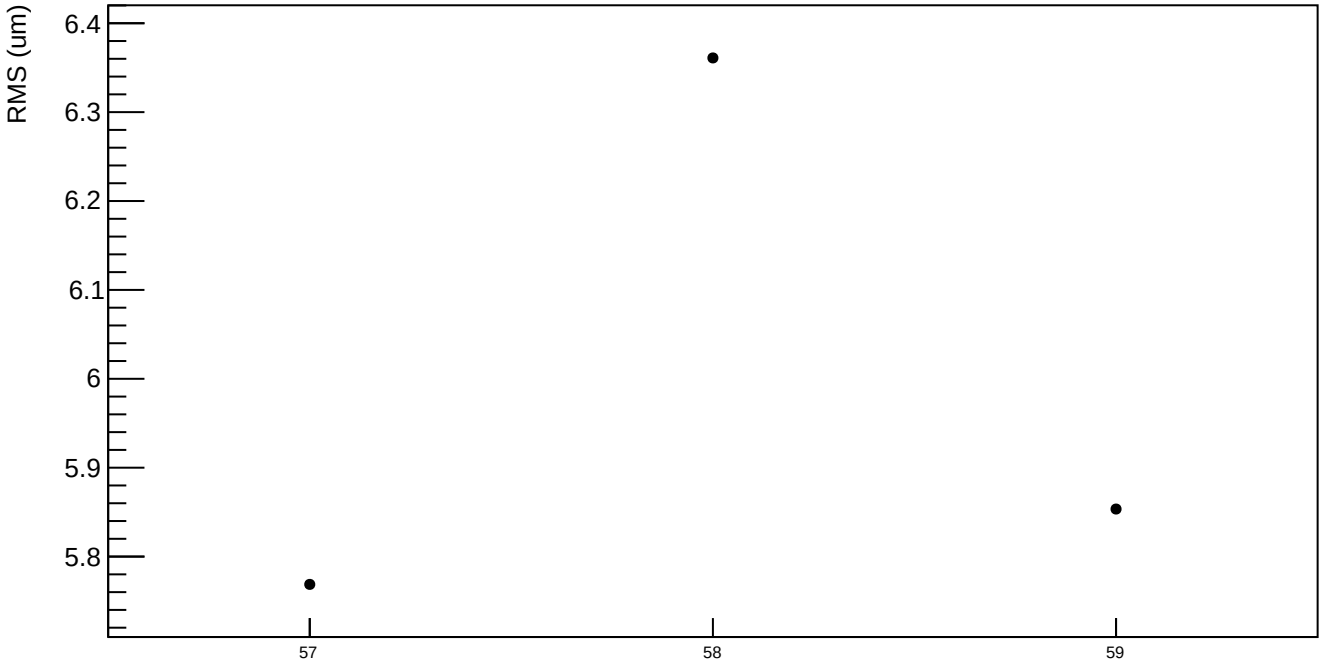

1D pull distribution
Mean 0.02619 ± 0.2098
Std Dev 0.3634 ± 0.1484
Underflow 0
Overflow 0
χ² / ndf 6.561e−11 / 0
Constant 2.484 ± 18.202
Mean 0.09171 ± 1.51629
Sigma 0.2656 ± 2.1066
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
−8
−6
−4
−2
0
2
4
6
8

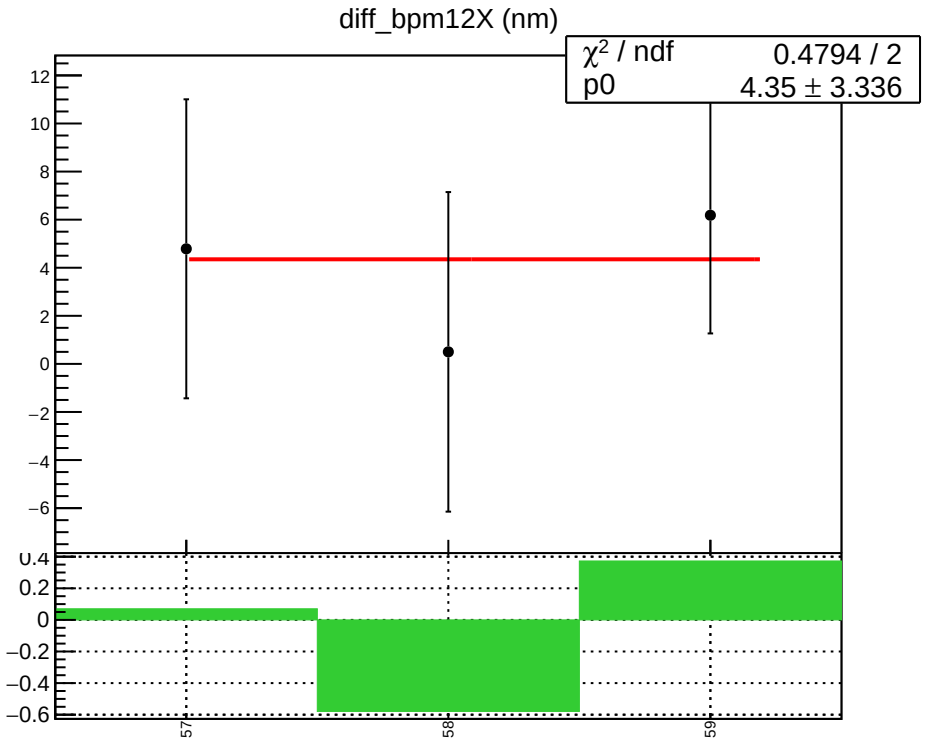

diff_bpm4eY RMS (um)
RMS (um)
4
3.5
3
2.5
2
57
58
59

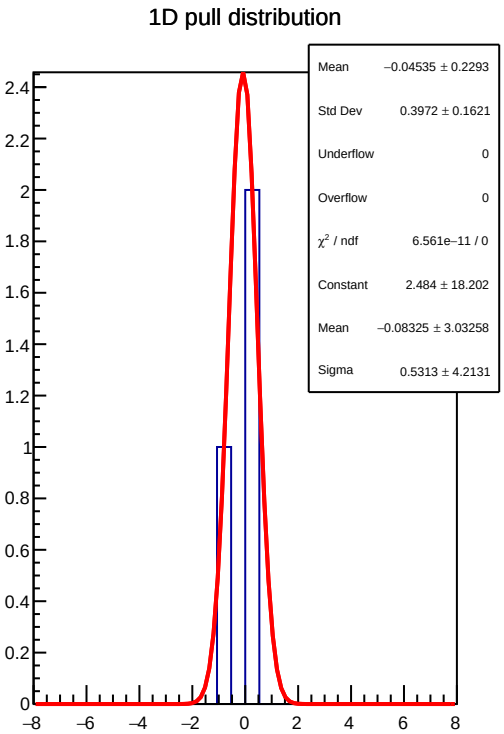

diff_bpm11X (nm)
χ² / ndf 2.195 / 2
p0 3.81 ± 4.215
15
10
5
0
−5
−10
−15
1
0.5
0
−0.5
−1
57
58
59

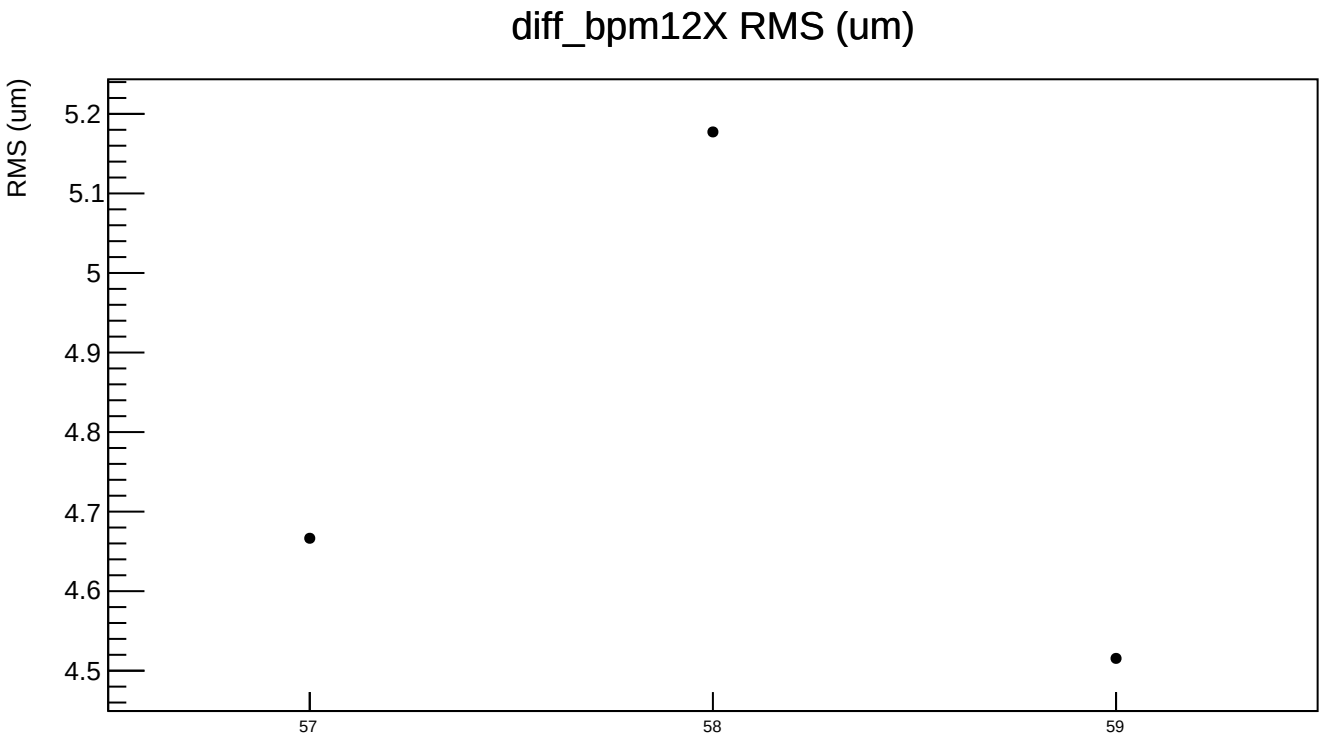

1D pull distribution
Mean −0.08341 ± 0.4915
Std Dev 0.8512 ± 0.3475
Underflow 0
Overflow 0
χ² / ndf 3.766e−05 / 0
Constant 1.085 ± 0.580
Mean −0.2667 ± 50.3210
Sigma 8.706 ± 8.707
1
0.8
0.6
0.4
0.2
0
−8
−6
−4
−2
0
2
4
6
8

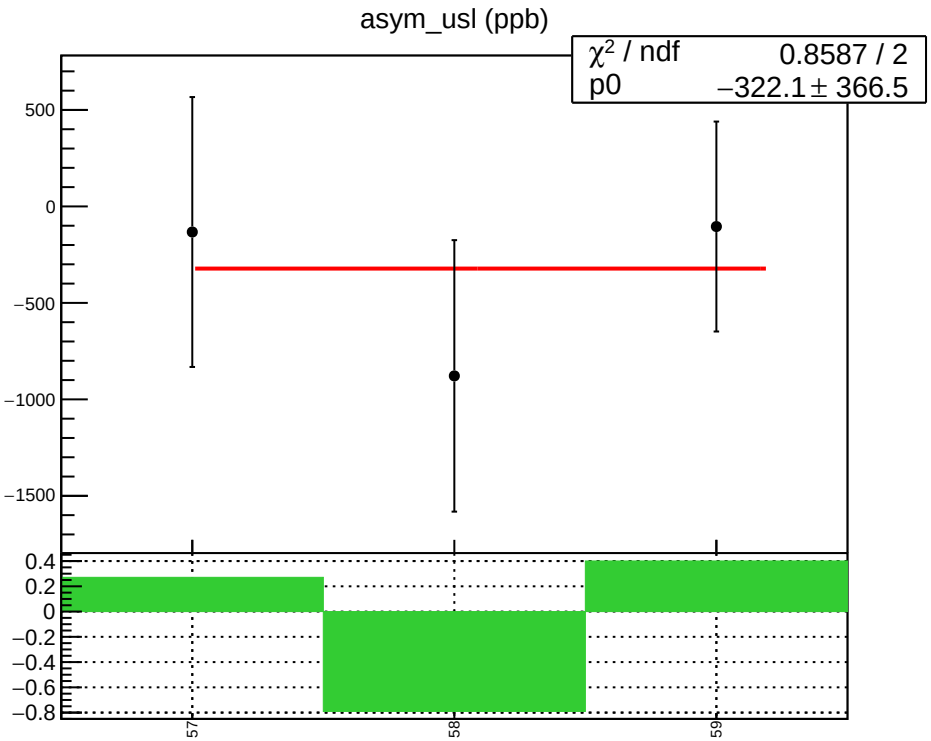
diff_bpm11X RMS (um)

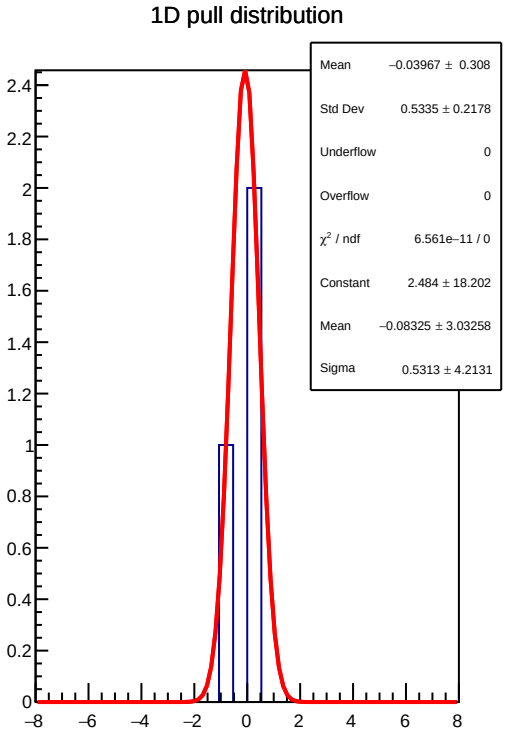


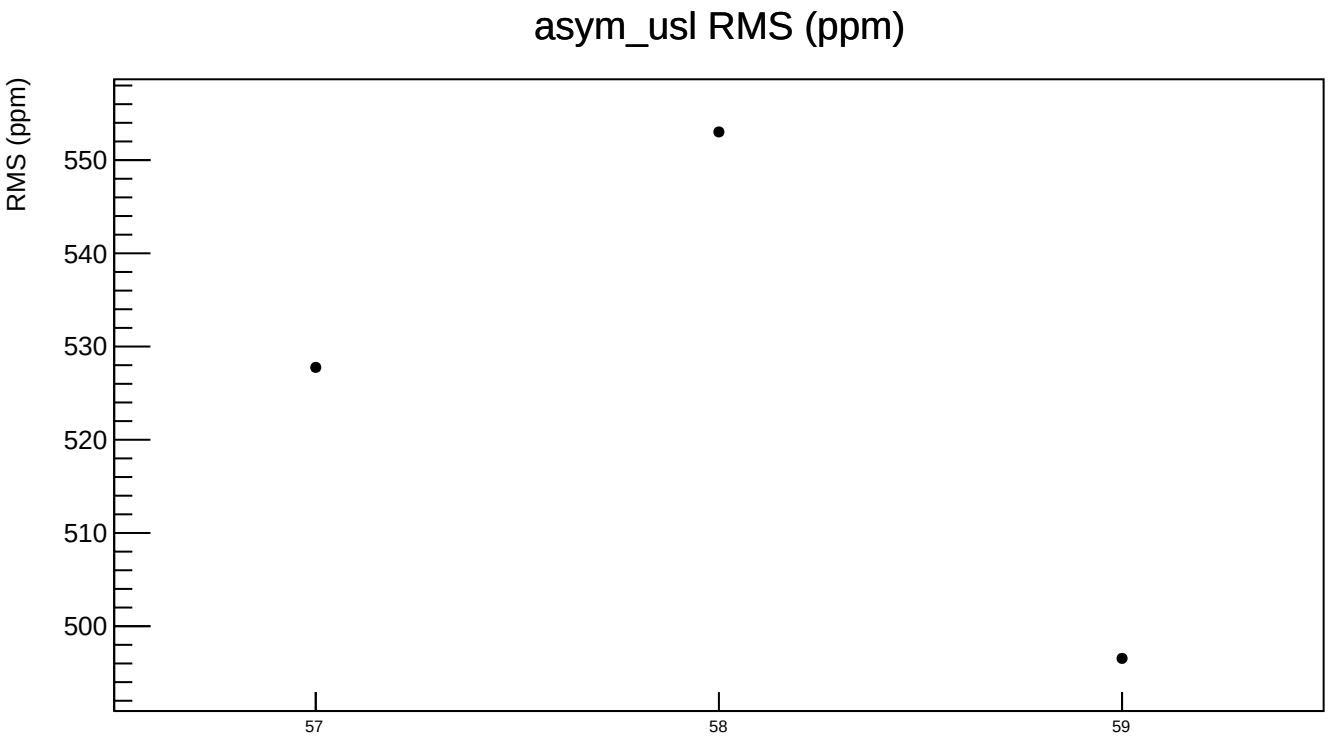

diff_bpm12X (nm)
χ² / ndf 0.4794 / 2
p0 4.35 ± 3.336
12
10
8
6
4
2
0
−2
−4
−6
0.4
0.2
0
−0.2
−0.4
−0.6
57
58
59

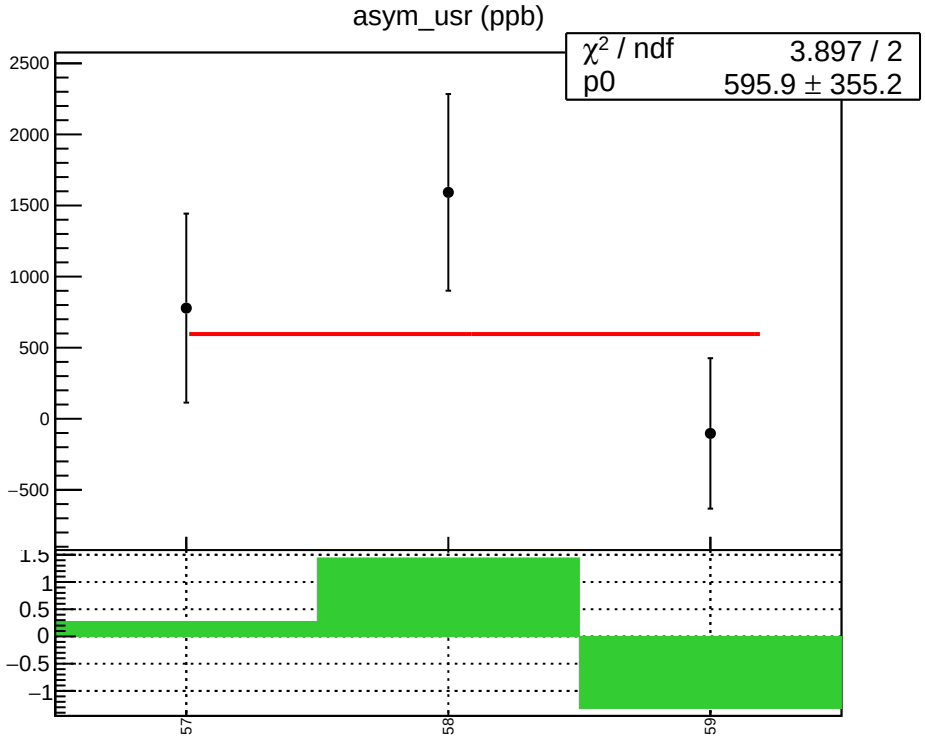

1D pull distribution
Mean −0.04535 ± 0.2293
Std Dev 0.3972 ± 0.1621
Underflow 0
Overflow 0
χ² / ndf 6.561e−11 / 0
Constant 2.484 ± 18.202
Mean −0.08325 ± 3.03258
Sigma 0.5313 ± 4.2131
2.4
2.2
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
−8
−6
−4
−2
0
2
4
6
8

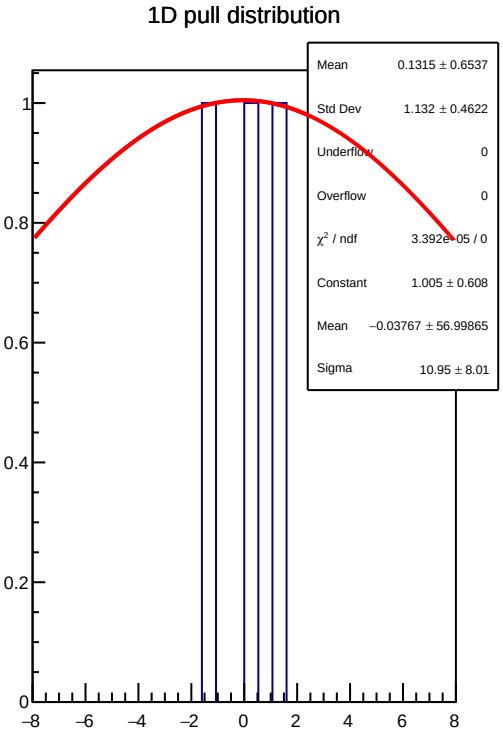

diff_bpm12X RMS (um)
RMS (um)
5.2
5.1
5
4.9
4.8
4.7
4.6
4.5
57
58
59


asym_usl (ppb)
χ^2 / ndf 0.8587 / 2
p0 −322.1 ± 366.5
500
0
−500
−1000
−1500
0.4
0.2
0
−0.2
−0.4
−0.6
−0.8
57
58
59

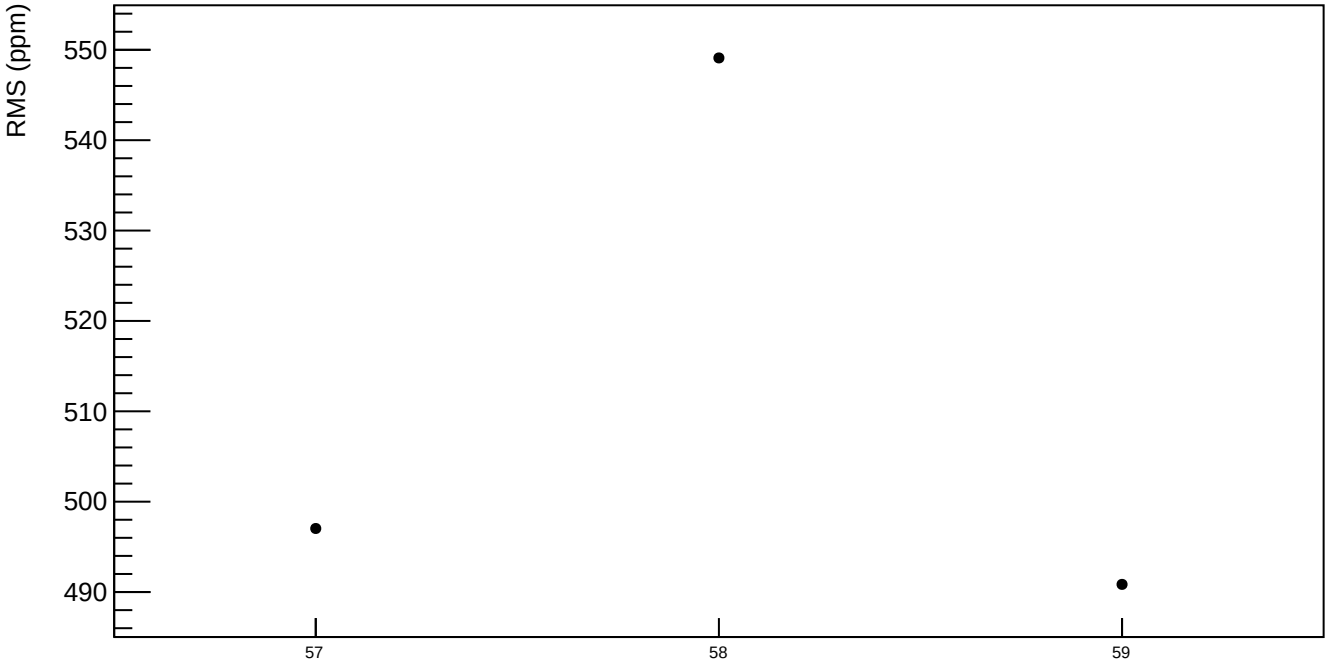

1D pull distribution
Mean −0.03967 ± 0.308
Std Dev 0.5335 ± 0.2178
Underflow 0
Overflow 0
χ^2 / ndf 6.561e−11 / 0
Constant 2.484 ± 18.202
Mean −0.08325 ± 3.03258
Sigma 0.5313 ± 4.2131
2.4
2.2
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
−8
−6
−4
−2
0
2
4
6
8

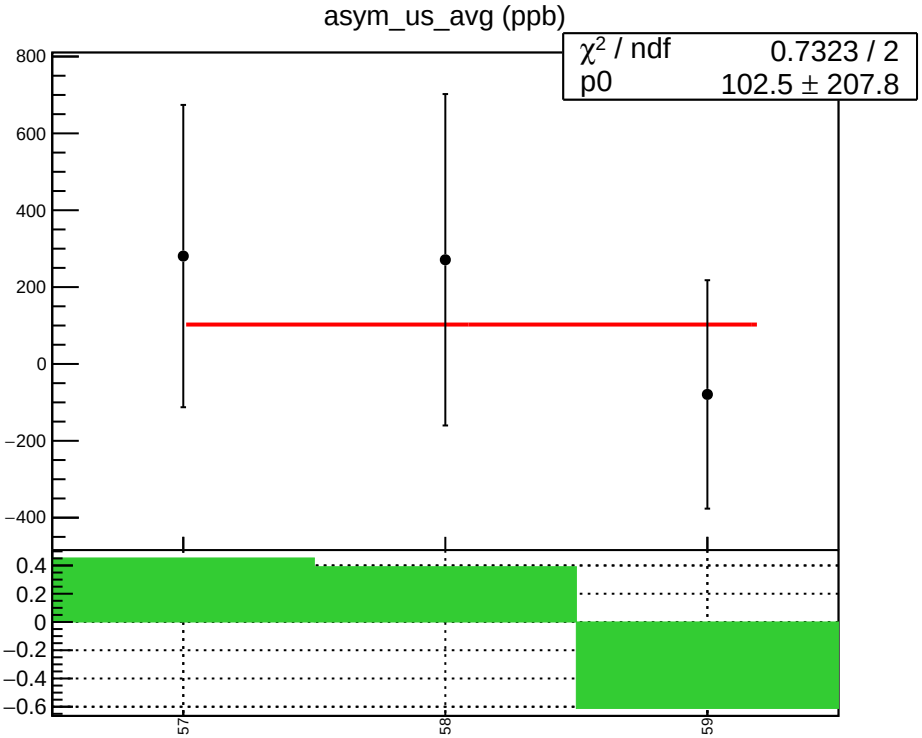

asym_usl RMS (ppm)
RMS (ppm)
550
540
530
520
510
500
57
58
59

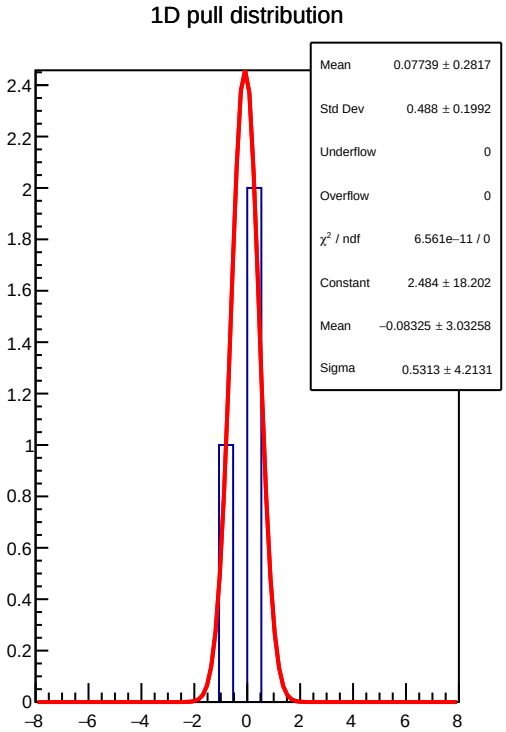

asym_usr (ppb)
χ² / ndf 3.897 / 2
p0 595.9 ± 355.2
2500
2000
1500
1000
500
0
−500
1.5
1
0.5
0
−0.5
−1
57
58
59

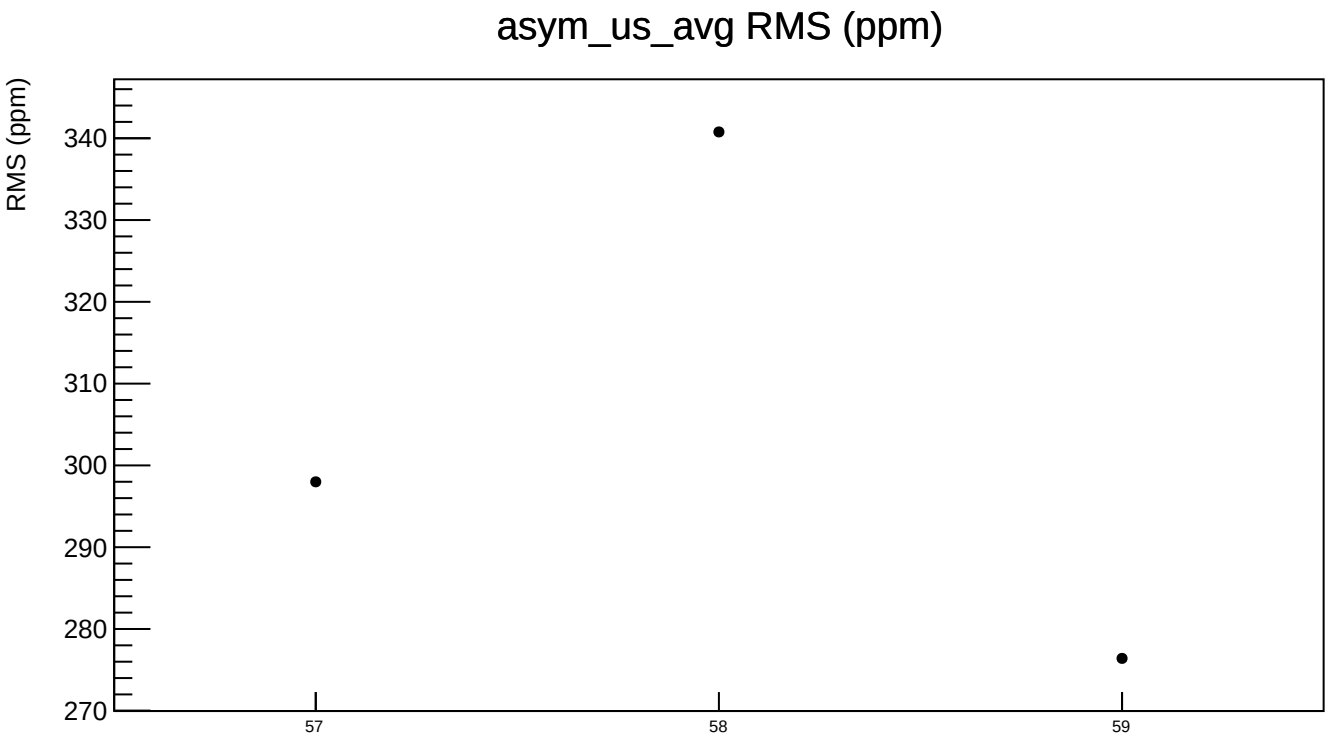

1D pull distribution
Mean 0.1315 ± 0.6537
Std Dev 1.132 ± 0.4622
Underflow 0
Overflow 0
χ² / ndf 3.392e−05 / 0
Constant 1.005 ± 0.608
Mean −0.03767 ± 56.99865
Sigma 10.95 ± 8.01
1
0.8
0.6
0.4
0.2
0
−8
−6
−4
−2
0
2
4
6
8

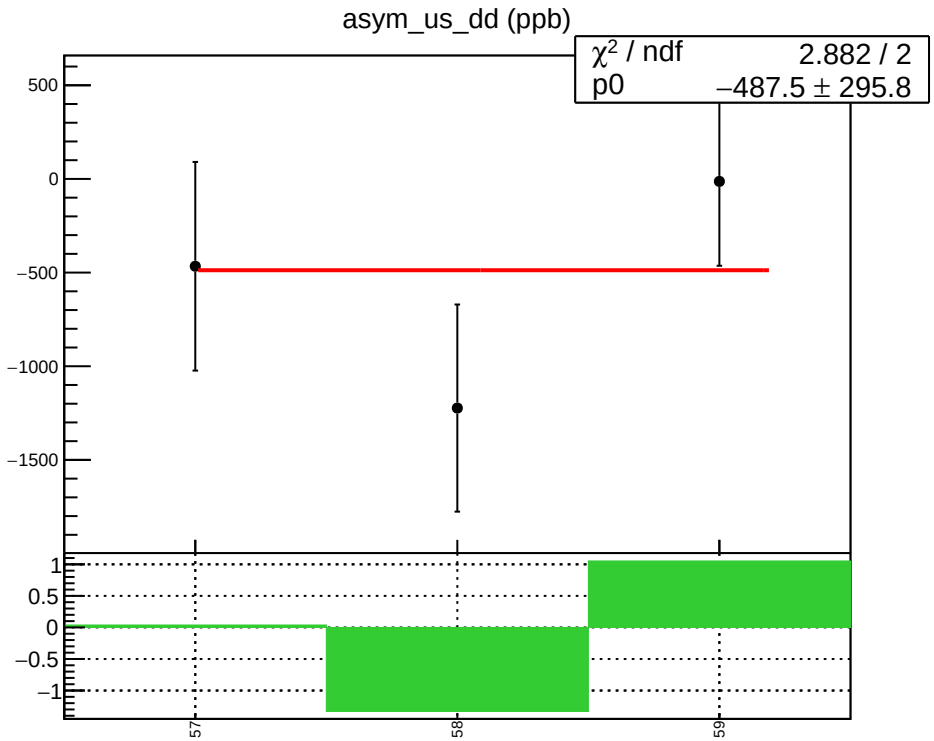
asym_usr RMS (ppm)

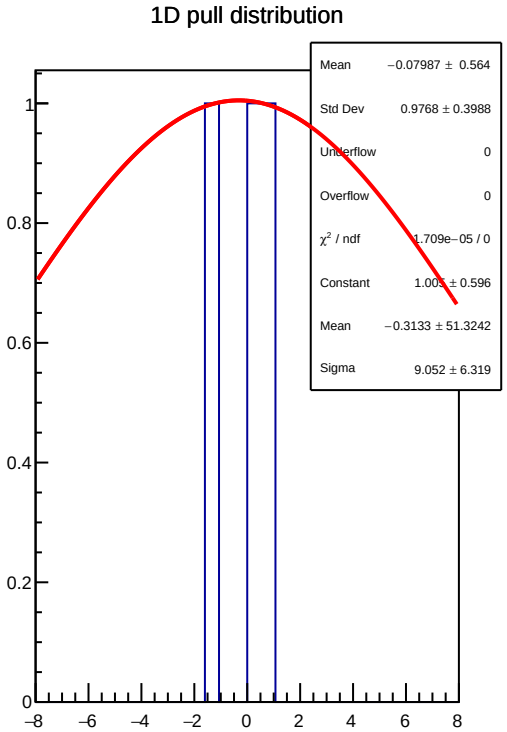


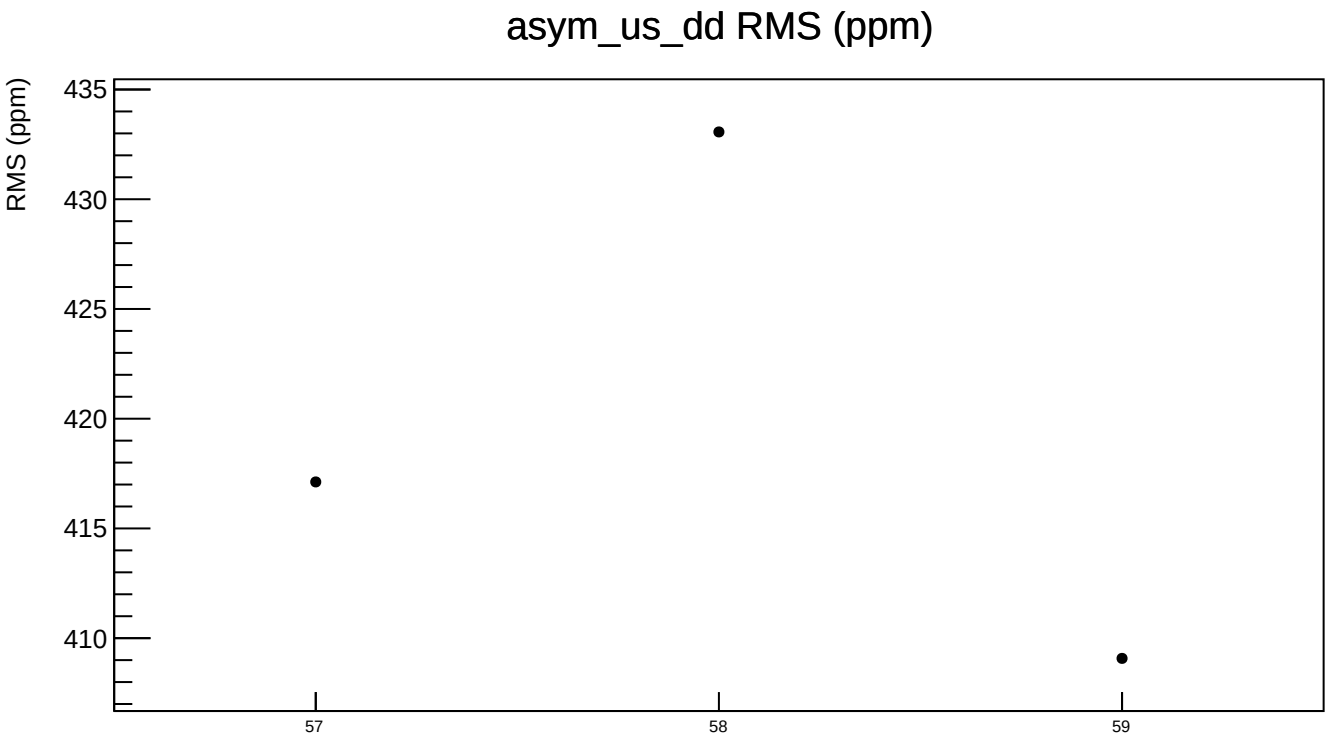

asym_us_avg (ppb)
χ² / ndf 0.7323 / 2
p0 102.5 ± 207.8
800
600
400
200
0
−200
−400
0.4
0.2
0
−0.2
−0.4
−0.6
57
58
59

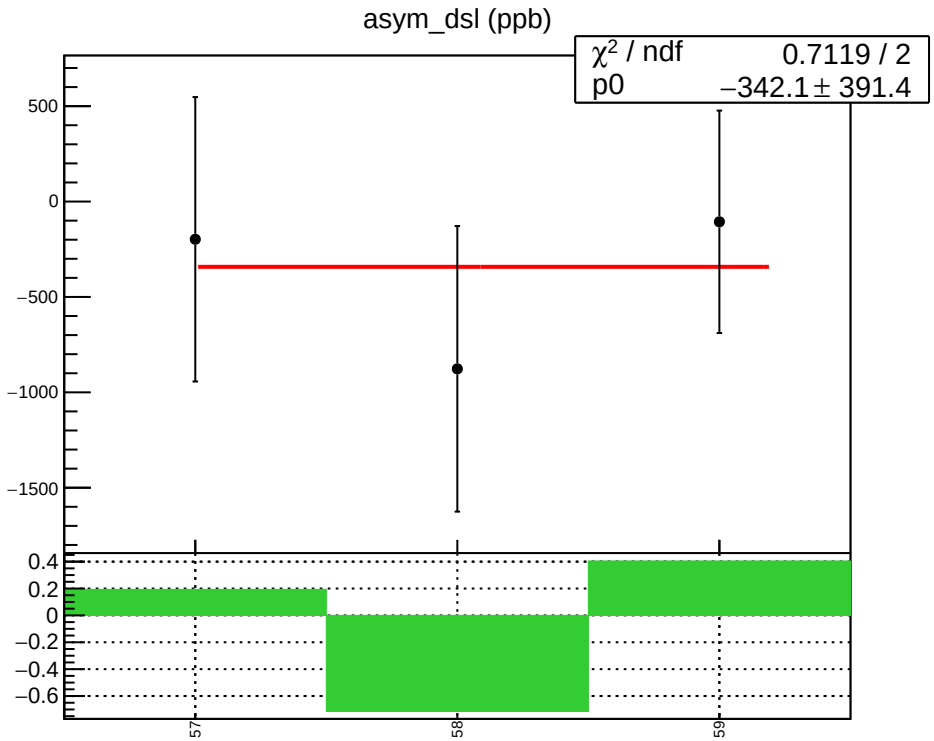

1D pull distribution
Mean 0.07739 ± 0.2817
Std Dev 0.488 ± 0.1992
Underflow 0
Overflow 0
χ² / ndf 6.561e−11 / 0
Constant 2.484 ± 18.202
Mean −0.08325 ± 3.03258
Sigma 0.5313 ± 4.2131
2.4
2.2
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
−8
−6
−4
−2
0
2
4
6
8

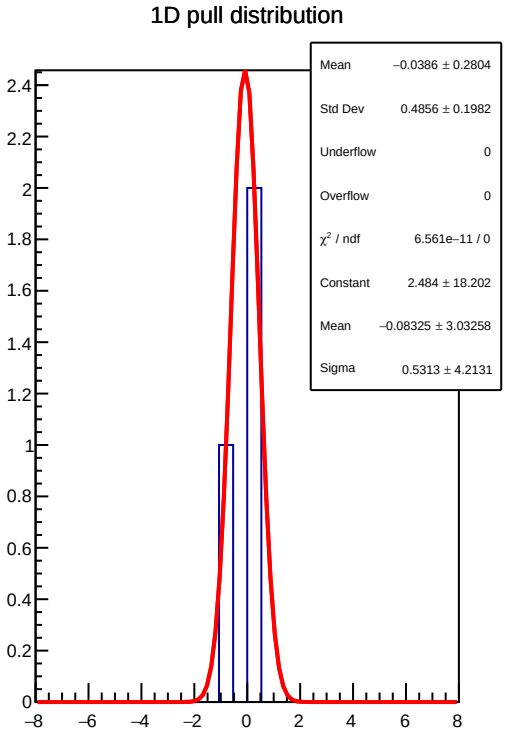

asym_us_avg RMS (ppm)
RMS (ppm)
340
330
320
310
300
290
280
270
57
58
59

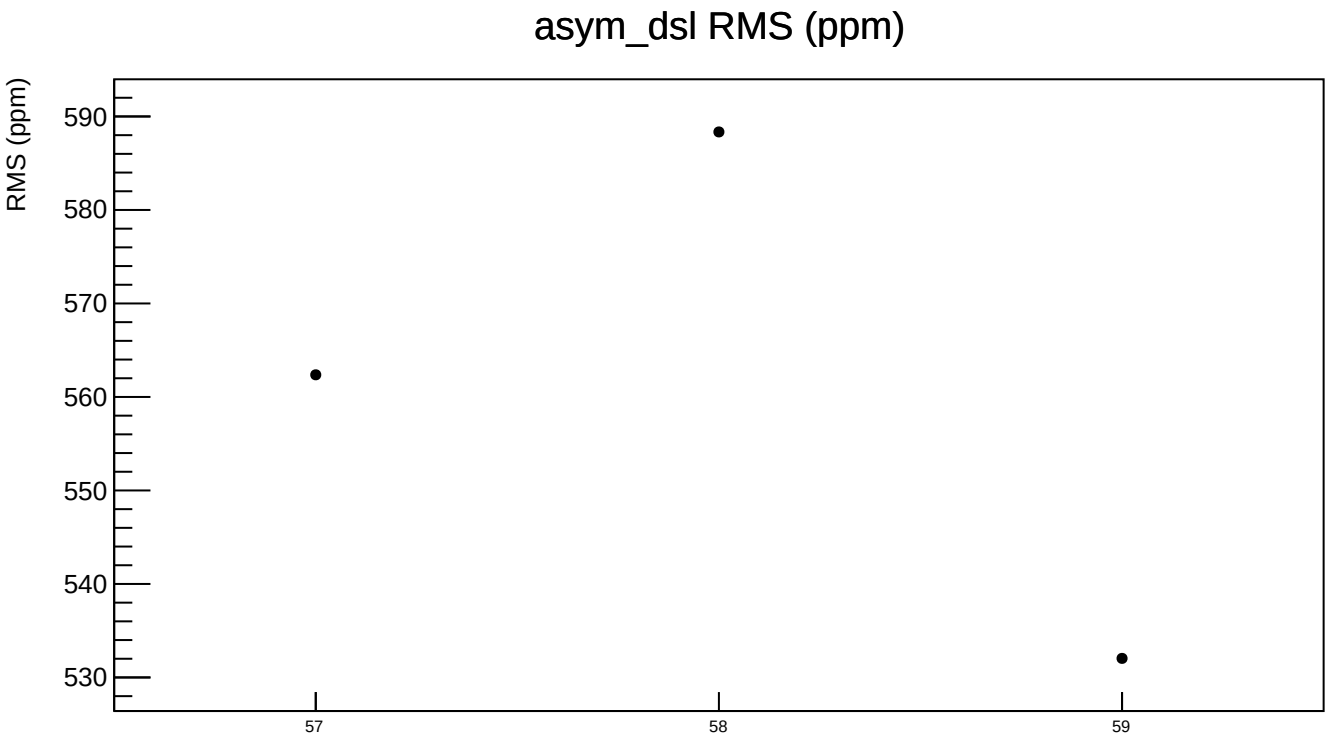

asym_us_dd (ppb)
χ² / ndf 2.882 / 2
p0 −487.5 ± 295.8
500
0
−500
−1000
−1500
1
0.5
0
−0.5
−1
57
58
59

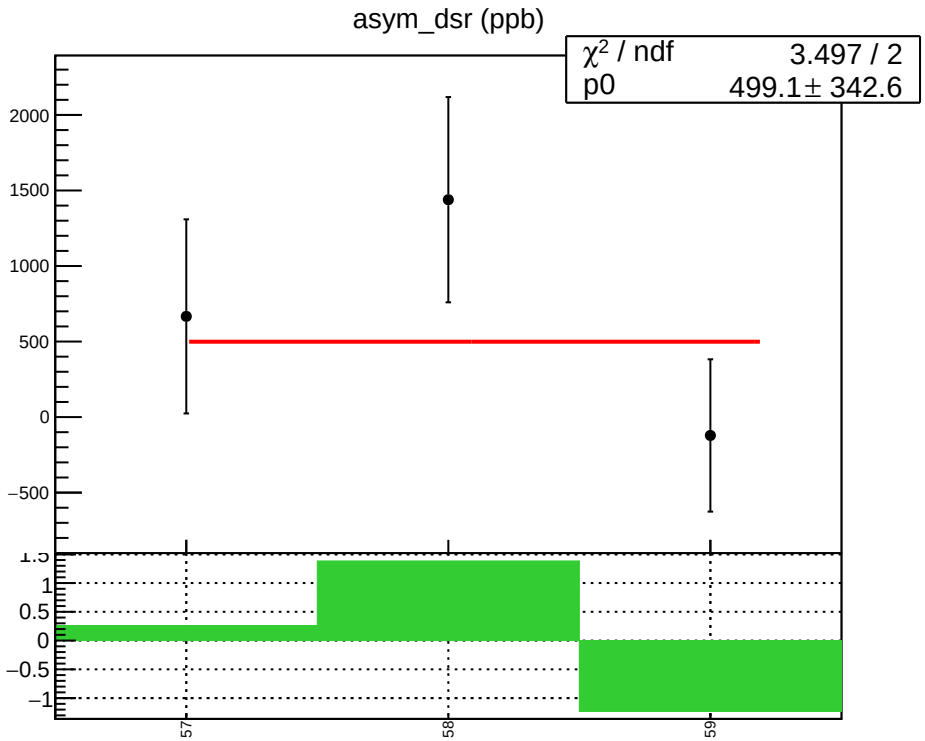

1D pull distribution
Mean −0.07987 ± 0.564
Std Dev 0.9768 ± 0.3988
Underflow 0
Overflow 0
χ² / ndf 1.709e−05 / 0
Constant 1.005 ± 0.596
Mean −0.3133 ± 51.3242
Sigma 9.052 ± 6.319
1
0.8
0.6
0.4
0.2
0
−8
−6
−4
−2
0
2
4
6
8

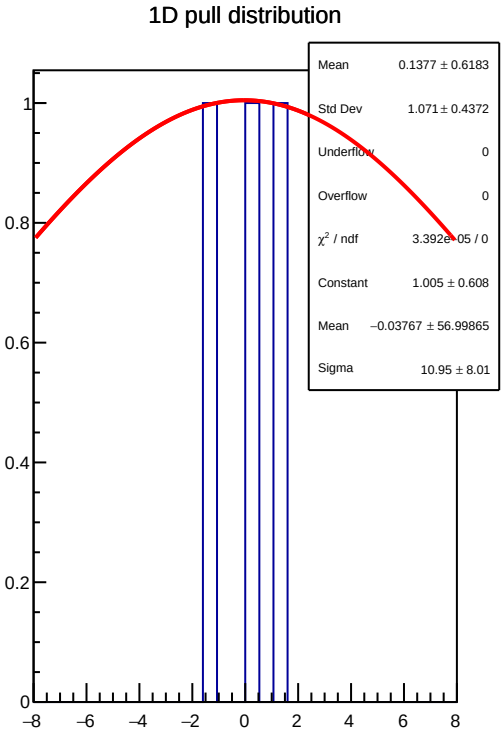

asym_us_dd RMS (ppm)
RMS (ppm)
435
430
425
420
415
410
57
58
59

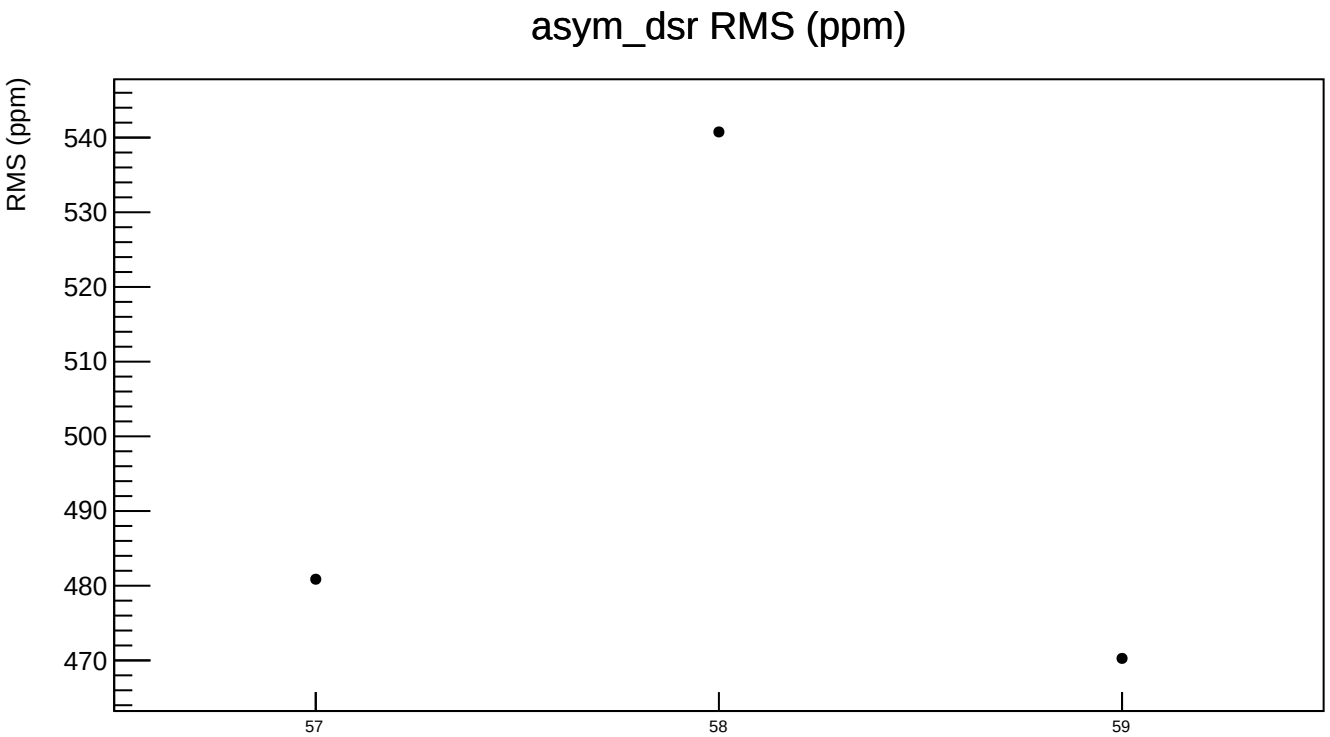

asym_dsl (ppb)
χ² / ndf 0.7119 / 2
p0 −342.1 ± 391.4
500
0
−500
−1000
−1500
0.4
0.2
0
−0.2
−0.4
−0.6
57
58
59

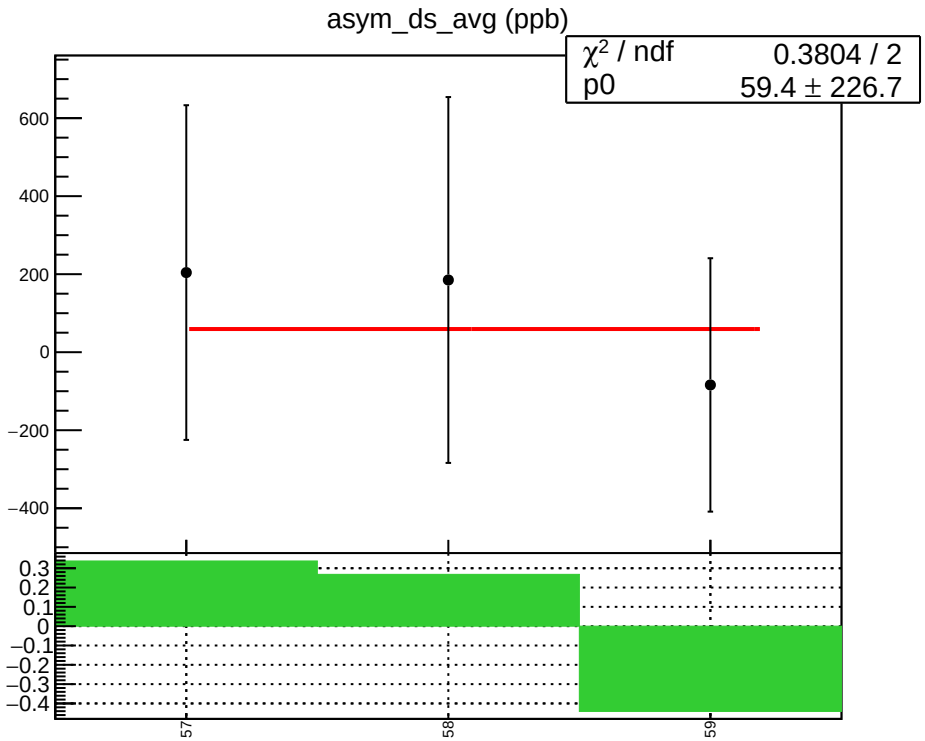

1D pull distribution
Mean −0.0386 ± 0.2804
Std Dev 0.4856 ± 0.1982
Underflow 0
Overflow 0
χ² / ndf 6.561e−11 / 0
Constant 2.484 ± 18.202
Mean −0.08325 ± 3.03258
Sigma 0.5313 ± 4.2131
2.4
2.2
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
−8
−6
−4
−2
0
2
4
6
8

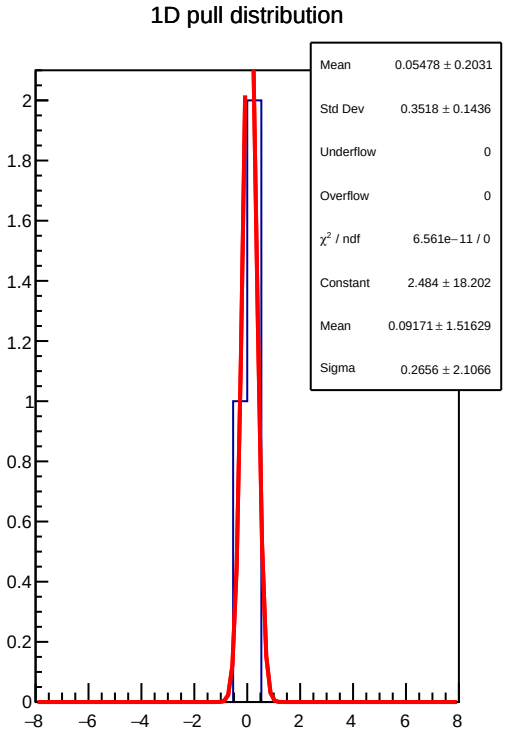

asym_dsl RMS (ppm)
RMS (ppm)
590
580
570
560
550
540
530
57
58
59

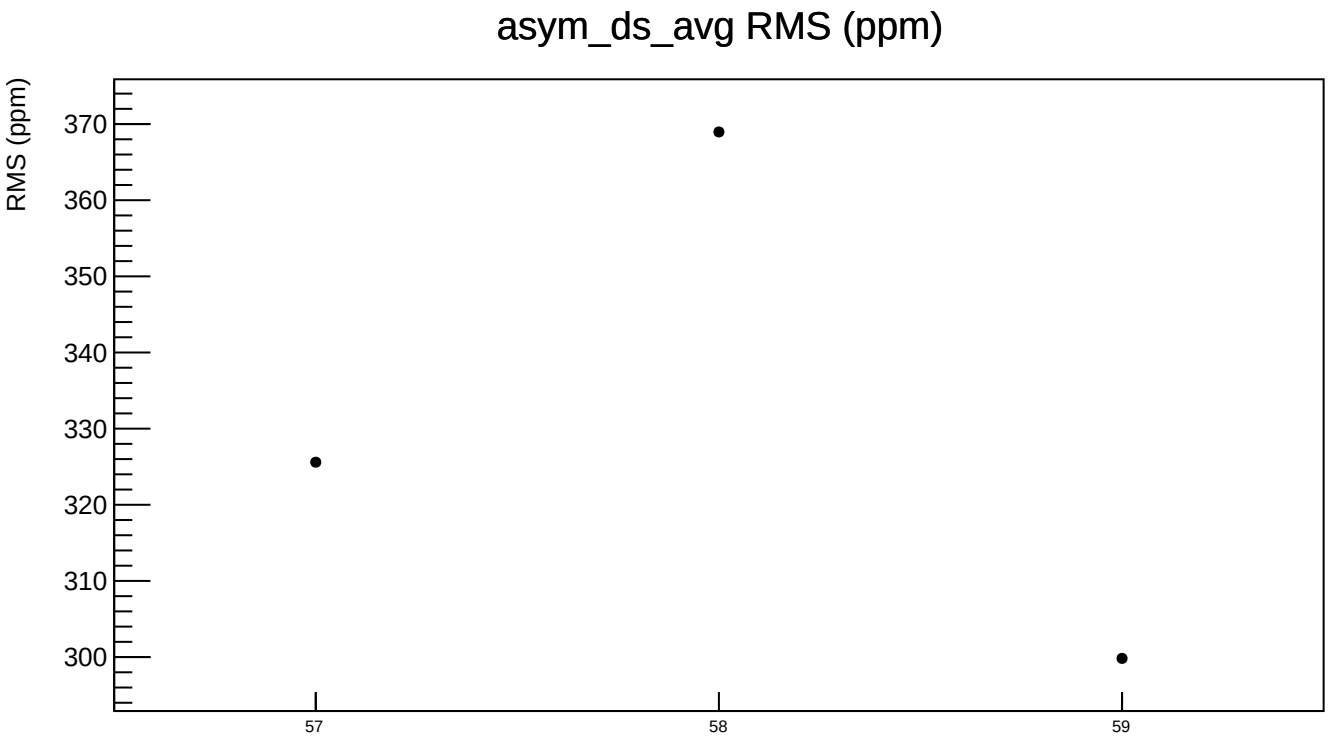

asym_dsr (ppb)
χ² / ndf 3.497 / 2
p0 499.1 ± 342.6
2000
1500
1000
500
0
−500
1.5
1
0.5
0
−0.5
−1
57
58
59

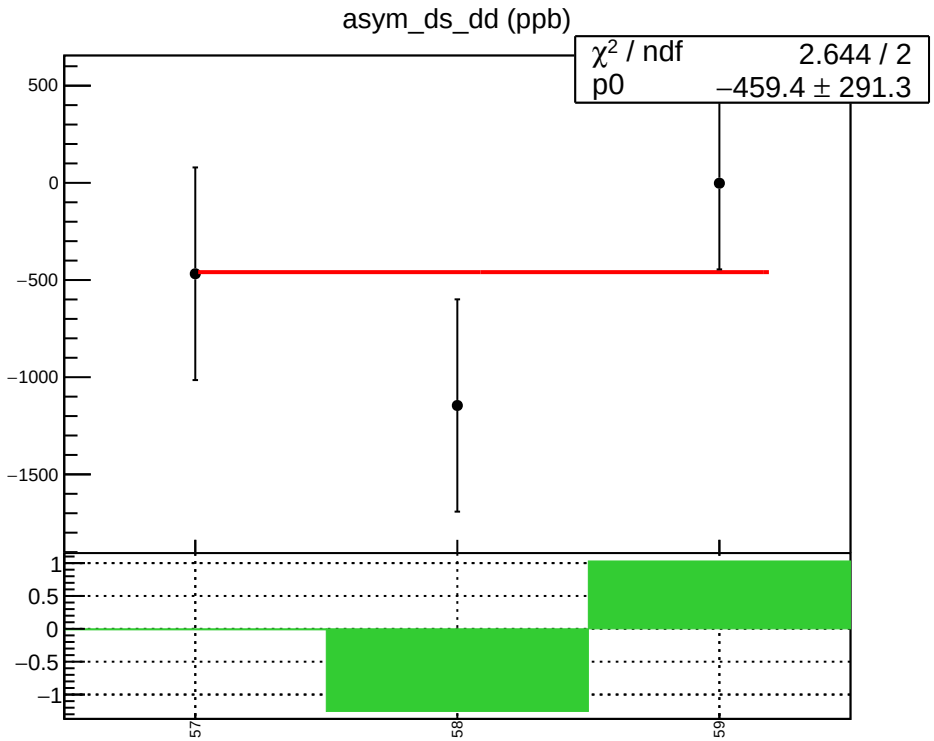

1D pull distribution
Mean 0.1377 ± 0.6183
Std Dev 1.071 ± 0.4372
Underflow 0
Overflow 0
χ² / ndf 3.392e−05 / 0
Constant 1.005 ± 0.608
Mean −0.03767 ± 56.99865
Sigma 10.95 ± 8.01
1
0.8
0.6
0.4
0.2
0
−8
−6
−4
−2
0
2
4
6
8

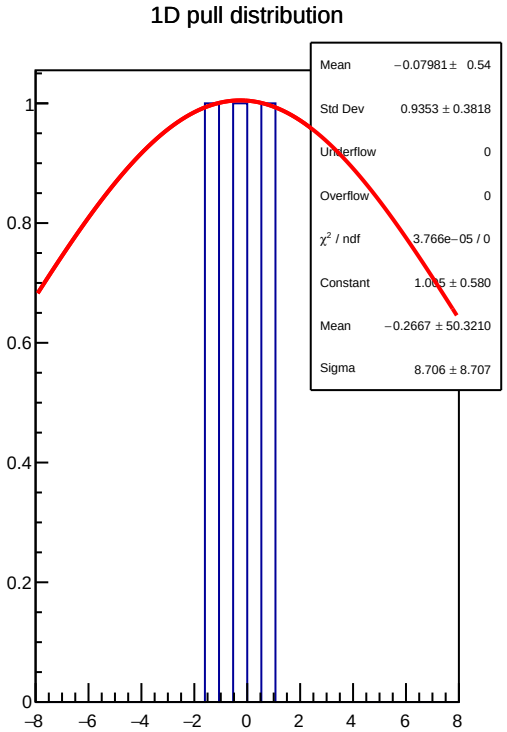

asym_dsr RMS (ppm)
RMS (ppm)
540
530
520
510
500
490
480
470
57
58
59

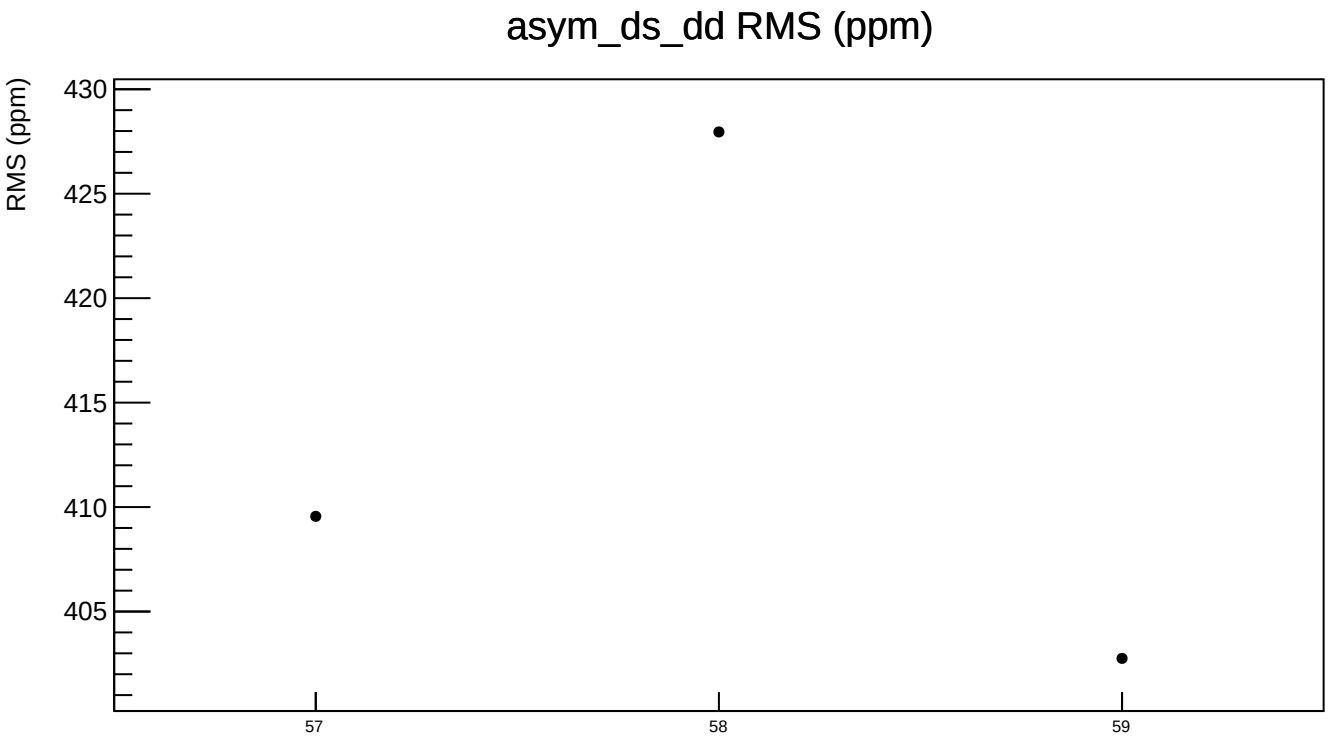

asym_ds_avg (ppb)
χ² / ndf 0.3804 / 2
p0 59.4 ± 226.7
600
400
200
0
−200
−400
0.3
0.2
0.1
0
−0.1
−0.2
−0.3
−0.4
57
58
59

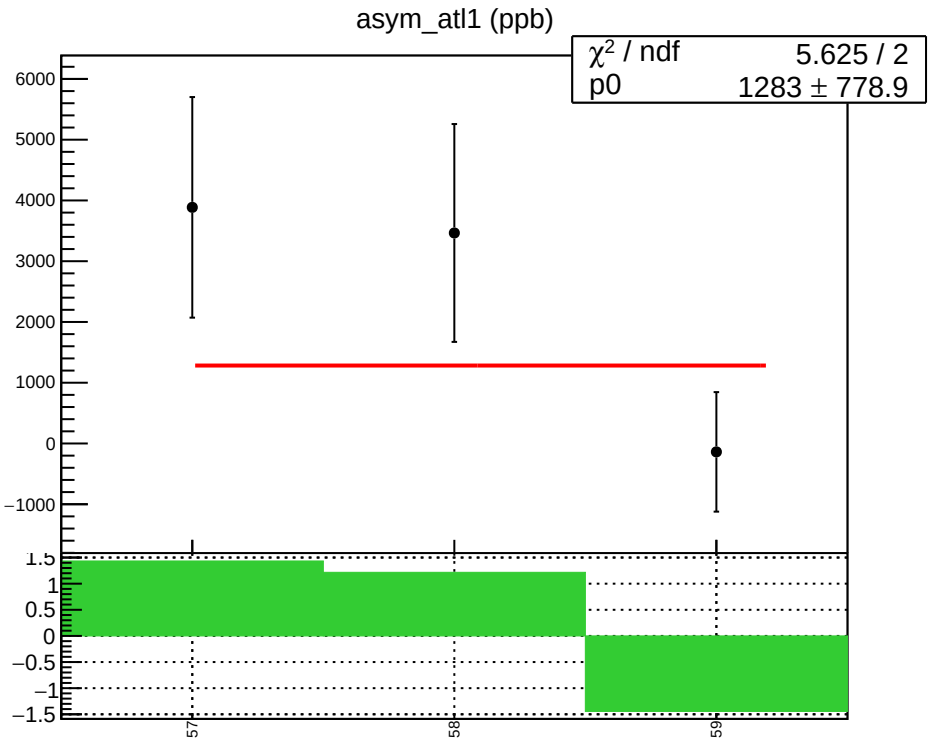

1D pull distribution
Mean 0.05478 ± 0.2031
Std Dev 0.3518 ± 0.1436
Underflow 0
Overflow 0
χ² / ndf 6.561e−11 / 0
Constant 2.484 ± 18.202
Mean 0.09171 ± 1.51629
Sigma 0.2656 ± 2.1066
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
−8
−6
−4
−2
0
2
4
6
8

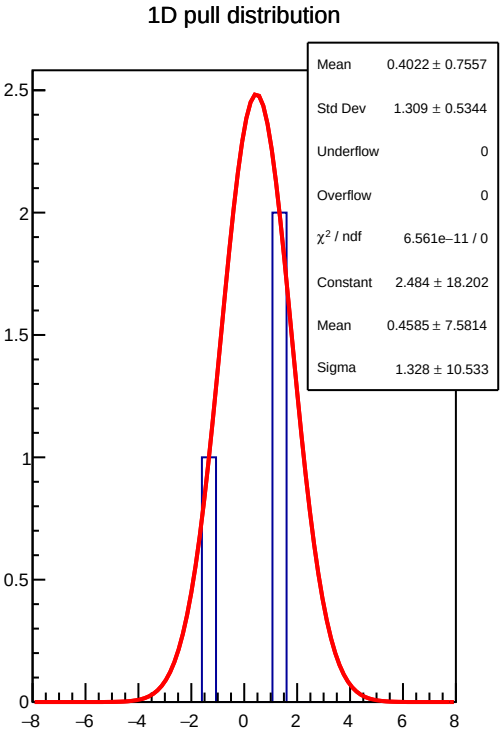

asym_ds_avg RMS (ppm)
RMS (ppm)
370
360
350
340
330
320
310
300
57
58
59

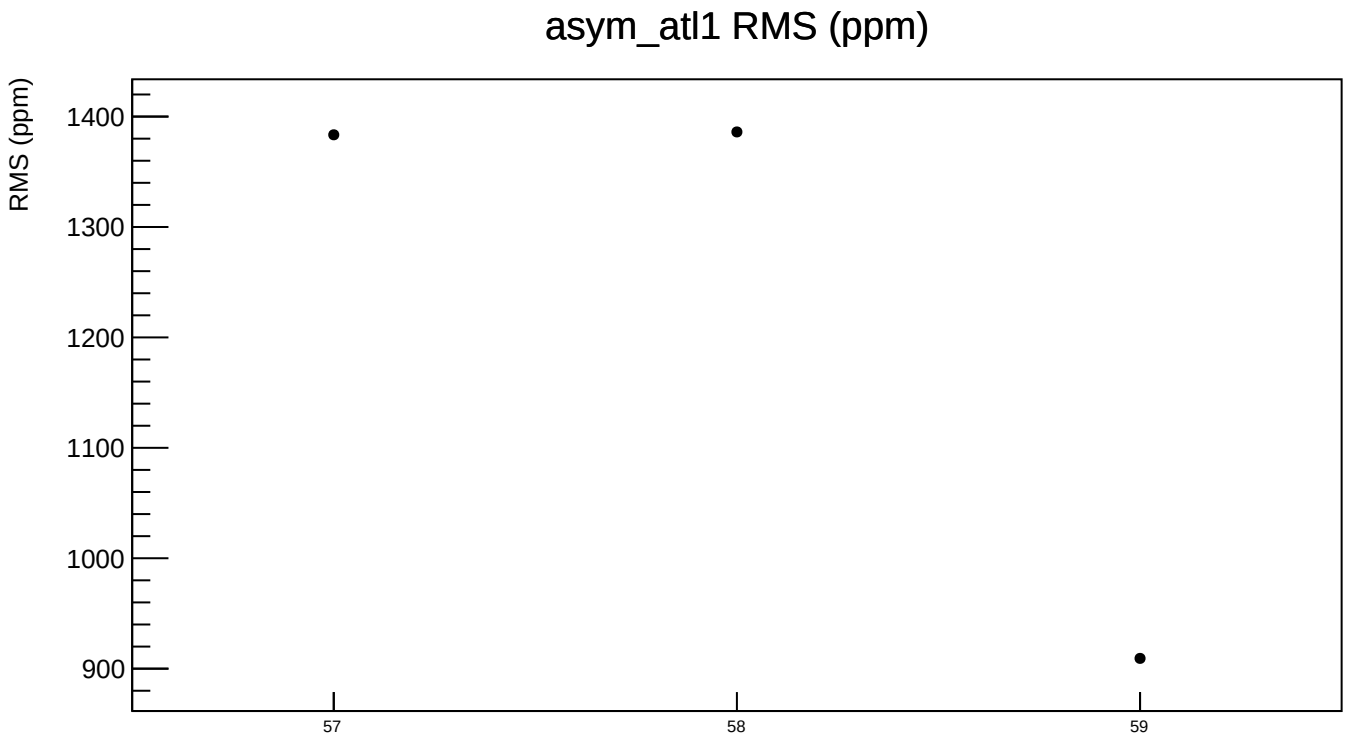

asym_ds_dd (ppb)
χ² / ndf 2.644 / 2
p0 −459.4 ± 291.3
500
0
−500
−1000
−1500
1
0.5
0
−0.5
−1
57
58
59

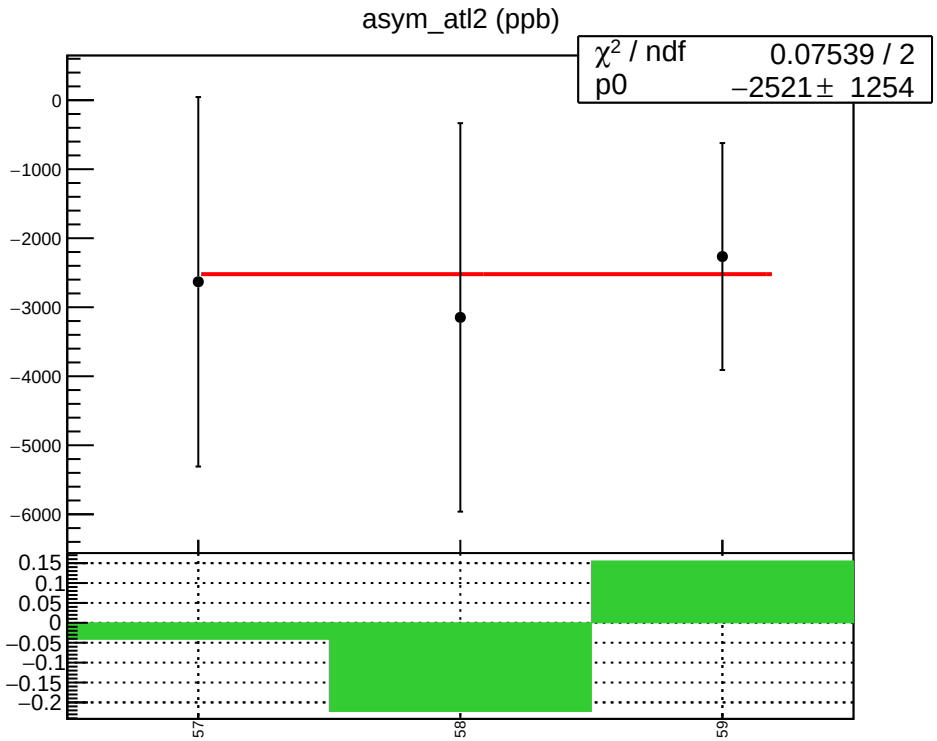

1D pull distribution
Mean −0.07981 ± 0.54
Std Dev 0.9353 ± 0.3818
Underflow 0
Overflow 0
χ² / ndf 3.766e−05 / 0
Constant 1.085 ± 0.580
Mean −0.2667 ± 50.3210
Sigma 8.706 ± 8.707
1
0.8
0.6
0.4
0.2
0
−8
−6
−4
−2
0
2
4
6
8

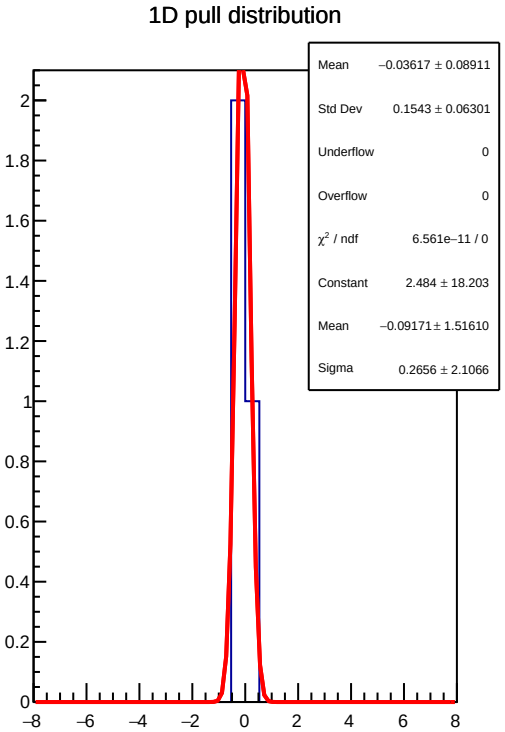

asym_ds_dd RMS (ppm)
RMS (ppm)
430
425
420
415
410
405
57
58
59

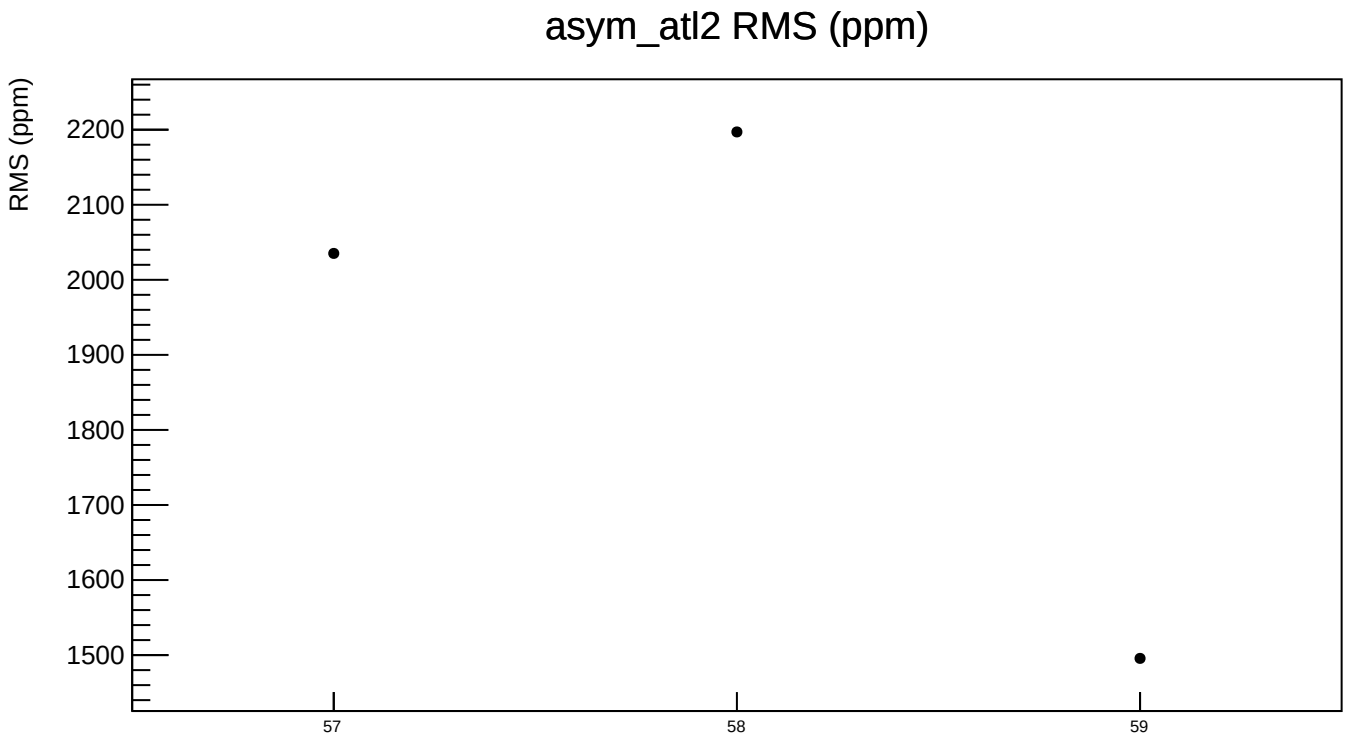

asym_atl1 (ppb)
χ² / ndf 5.625 / 2
p0 1283 ± 778.9
6000
5000
4000
3000
2000
1000
0
−1000
1.5
1
0.5
0
−0.5
−1
−1.5
57
58
59

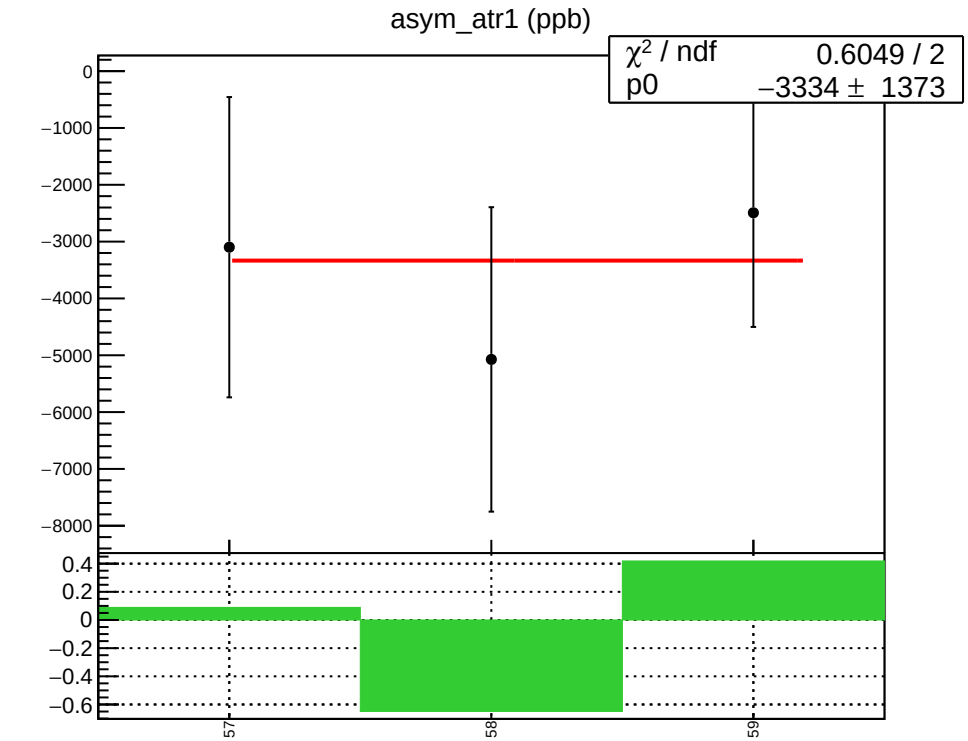

1D pull distribution
Mean 0.4022 ± 0.7557
Std Dev 1.309 ± 0.5344
Underflow 0
Overflow 0
χ² / ndf 6.561e−11 / 0
Constant 2.484 ± 18.202
Mean 0.4585 ± 7.5814
Sigma 1.328 ± 10.533
2.5
2
1.5
1
0.5
0
−8
−6
−4
−2
0
2
4
6
8

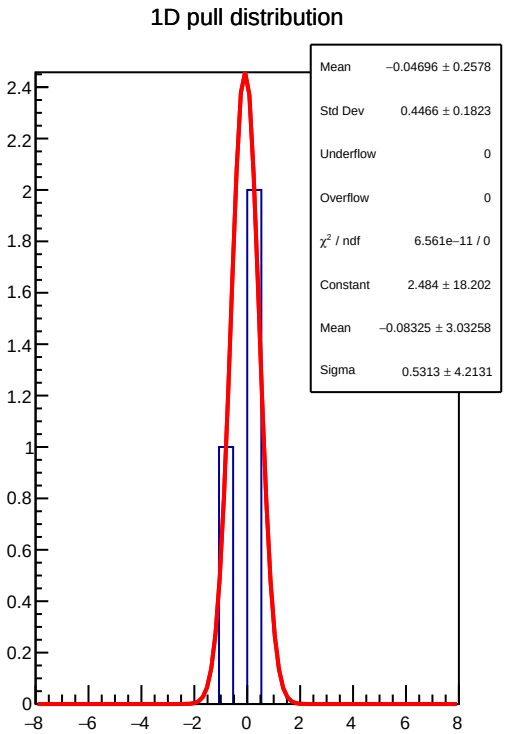

asym_atl1 RMS (ppm)
RMS (ppm)
1400
1300
1200
1100
1000
900
57
58
59

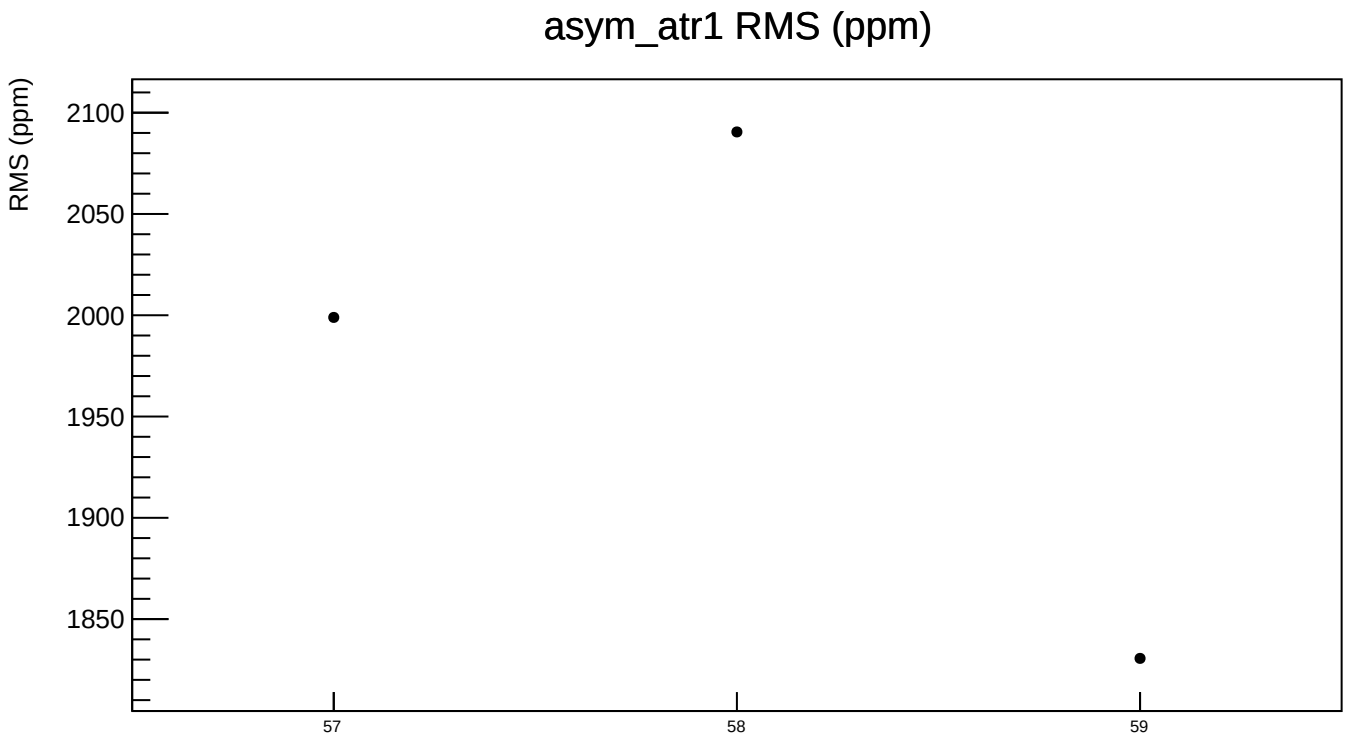

asym_atl2 (ppb)
χ² / ndf 0.07539 / 2
p0 −2521 ± 1254
0
−1000
−2000
−3000
−4000
−5000
−6000
0.15
0.1
0.05
0
−0.05
−0.1
−0.15
−0.2
57
58
59

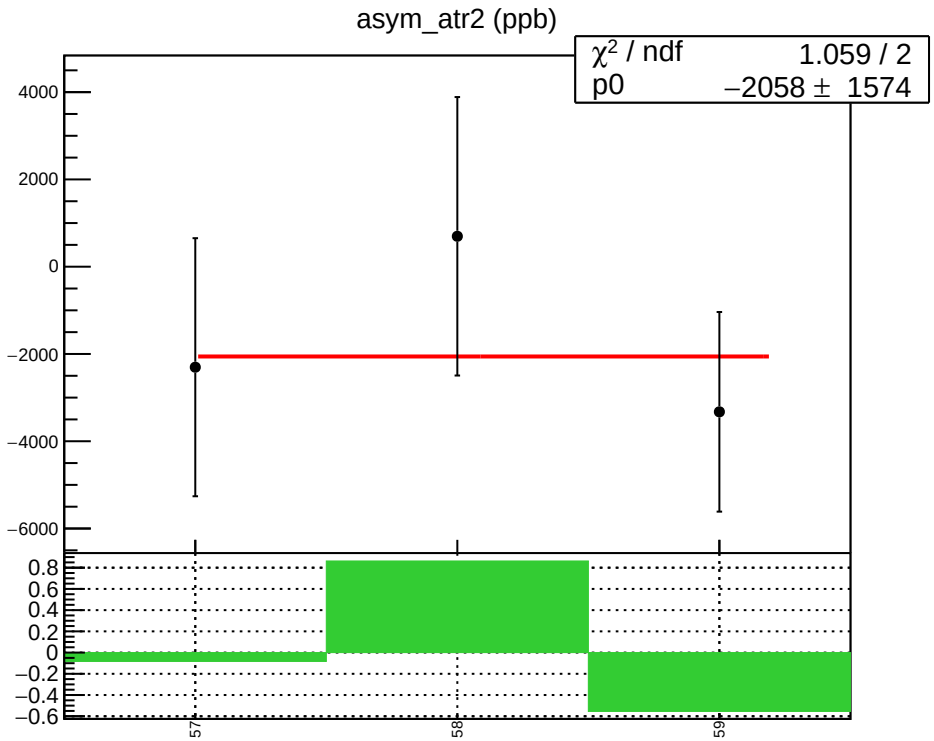

1D pull distribution
Mean −0.03617 ± 0.08911
Std Dev 0.1543 ± 0.06301
Underflow 0
Overflow 0
χ² / ndf 6.561e−11 / 0
Constant 2.484 ± 18.203
Mean −0.09171 ± 1.51610
Sigma 0.2656 ± 2.1066
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
−8
−6
−4
−2
0
2
4
6
8

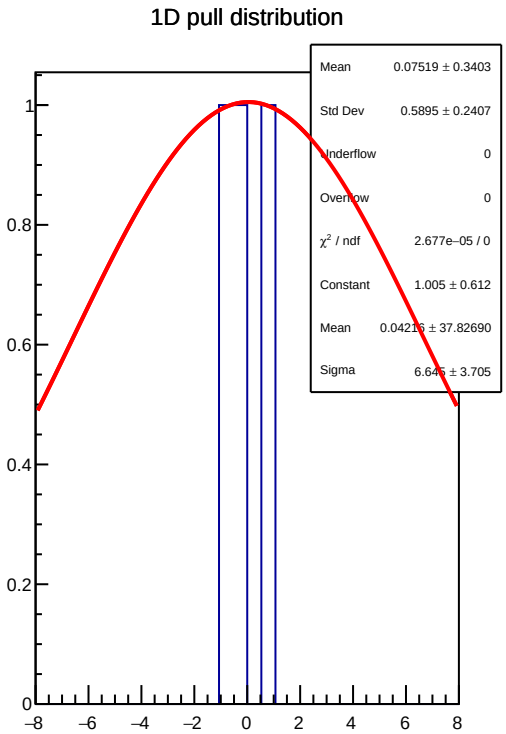

asym_atl2 RMS (ppm)
RMS (ppm)
2200
2100
2000
1900
1800
1700
1600
1500
57
58
59

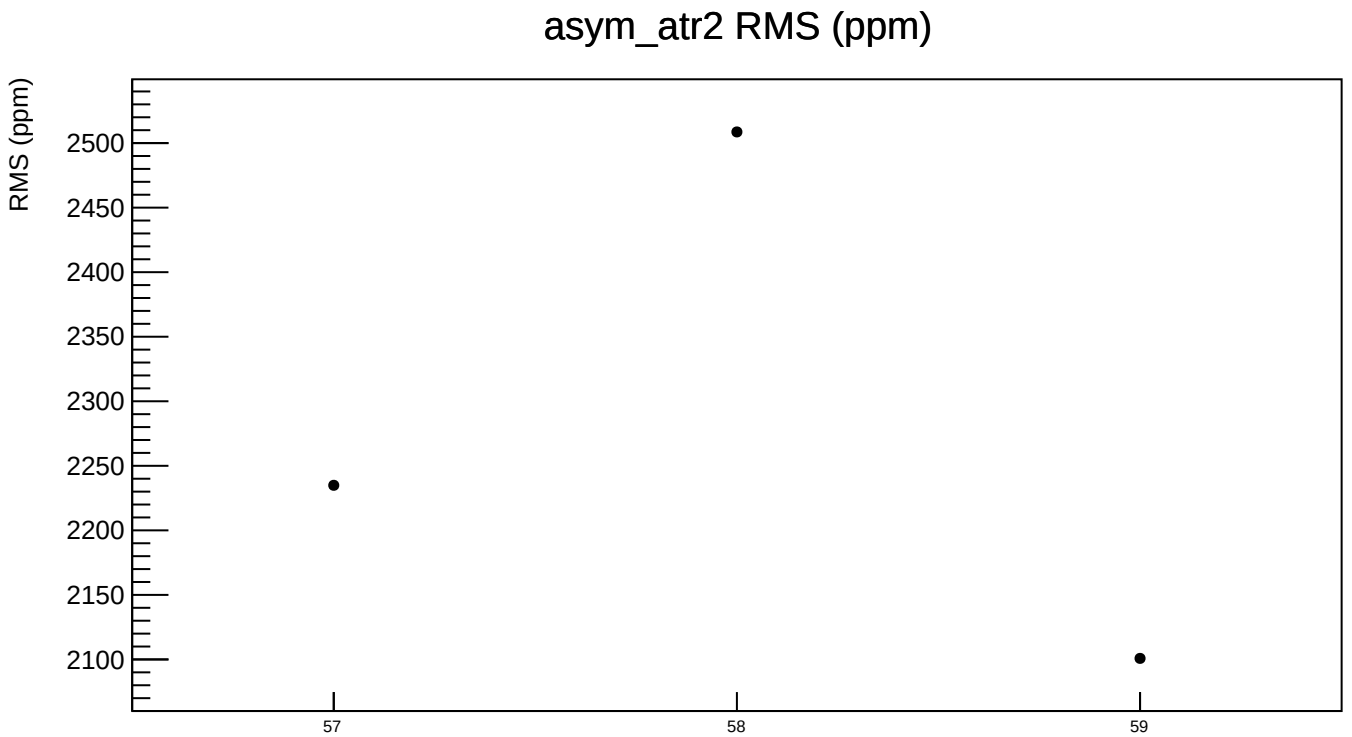

asym_atr1 (ppb)
χ² / ndf 0.6049 / 2
p0 −3334 ± 1373
0
−1000
−2000
−3000
−4000
−5000
−6000
−7000
−8000
0.4
0.2
0
−0.2
−0.4
−0.6
57
58
59


1D pull distribution
Mean −0.04696 ± 0.2578
Std Dev 0.4466 ± 0.1823
Underflow 0
Overflow 0
χ² / ndf 6.561e−11 / 0
Constant 2.484 ± 18.202
Mean −0.08325 ± 3.03258
Sigma 0.5313 ± 4.2131
2.4
2.2
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
−8
−6
−4
−2
0
2
4
6
8


asym_atr1 RMS (ppm)
RMS (ppm)
2100
2050
2000
1950
1900
1850
57
58
59


asym_atr2 (ppb)
χ² / ndf 1.059 / 2
p0 −2058 ± 1574
4000
2000
0
−2000
−4000
−6000
0.8
0.6
0.4
0.2
0
−0.2
−0.4
−0.6
57
58
59


1D pull distribution
Mean 0.07519 ± 0.3403
Std Dev 0.5895 ± 0.2407
Underflow 0
Overflow 0
χ² / ndf 2.677e−05 / 0
Constant 1.005 ± 0.612
Mean 0.04216 ± 37.82690
Sigma 6.645 ± 3.705
1
0.8
0.6
0.4
0.2
0
−8
−6
−4
−2
0
2
4
6
8


asym_atr2 RMS (ppm)
RMS (ppm)
2500
2450
2400
2350
2300
2250
2200
2150
2100
57
58
59